Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

WEL 01 00:06:21.5, 40°S±1°×17°5E±°, h42km±4km, M3.3/33, ML3.6/33, MLv3.3/33, Error ellipse: s-maj=0.0km s-min=0.0km az=36.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHWZ	Ohakea	0.38	95	P	Pn	00 06 31.2	+0.4
OHWZ				S	Sn	00 06 38.5	+1.2
WAZ	Wanganui	0.44	17	P	Pn	00 06 31.5	0.0
WAZ				S	Sn	00 06 39.0	+0.5
KIW	Kapiti Island	0.69	174	P	Pn	00 06 34.5	-0.4
KIW				S	Sn	00 06 43.6	-0.9
OGWZ	Otaki Gorge	0.69	158	P	Pn	00 06 34.8	-0.1
OGWZ				S	Sn	00 06 44.3	-0.2
MRZ	Mangatainoka R	0.76	130	P	Pn	00 06 36.4	+0.6
MRZ				S	Sn	00 06 46.4	+0.4
POWZ	Post Office Ro	0.76	107	P	Pn	00 06 36.3	+0.6
LREZ	Lake Rotokare	0.78	335	P	Pn	00 06 36.2	+0.2
LREZ				S	Sn	00 06 48.7	+2.0
TSZ	Takapari Road	0.88	83	P	Pn	00 06 37.9	+0.4
HOWZ	Holdsworth Sta	0.90	144	P	Pn	00 06 38.3	+0.6
HOWZ				S	Sn	00 06 50.6	+1.2
DUWZ	D'Urville Isla	0.93	227	P	Pn	00 06 37.2	-0.9
MTVZ	Mangateitei	0.93	33	P	Pn	00 06 38.3	+0.1
CAW	Cannon Point	0.95	169	P	Pn	00 06 38.6	+0.2
PRWZ	Pori Road	0.96	114	P	Pn	00 06 39.9	+1.4
PRWZ				S	Sn	00 06 52.7	+1.8
PKVZ	Pokaka	0.97	25	P	Pn	00 06 38.6	-0.1
PREZ	Palmer Road	0.97	328	P	Pn	00 06 39.4	+0.6
TIWZ	Tintock	1.01	127	P	Pn	00 06 40.1	+0.8
DVHZ	Dannevirke	1.04	97	P	Pn	00 06 40.7	+1.1
TRVZ	Turoa	1.04	33	P	Pn	00 06 39.8	0.0
MOVZ	Moawhango	1.05	43	P	Pn	00 06 39.6	-0.2
VRZ	Vera Road	1.05	357	P	Pn	00 06 40.0	+0.3
NMEZ	Namu Road	1.05	316	P	Pn	00 06 40.6	+0.8
WHVZ	Whangaehu Hut	1.07	34	P	Pn	00 06 40.5	+0.3
KHEZ	Kahui Hut	1.08	324	P	Pn	00 06 40.8	+0.6
FWVZ	Far West T-bar	1.08	32	P	Pn	00 06 40.5	+0.2
PNHZ	Pukenui	1.09	77	P	Pn	00 06 40.9	+0.6
DREZ	Durham Road	1.09	334	P	Pn	00 06 41.1	+0.7
TUVZ	Tukino	1.11	36	P	Pn	00 06 41.0	+0.3
WEL	Wellington	1.11	182	P	Pn	00 06 40.6	+0.1
MTW	Mount Morrison	1.11	152	P	Pn	00 06 40.9	+0.4
TCW	Tory Channel	1.12	202	P	Pn	00 06 40.1	-0.6
MHEZ	Mangahewa	1.16	340	P	Pn	00 06 42.4	+1.1
NGZ	Ngauruhoe	1.16	31	P	Pn	00 06 41.7	+0.2
NBEZ	Newall Road No	1.17	321	P	Pn	00 06 42.3	+1.0
PKE	Pukeiti	1.17	326	P	Pn	00 06 42.1	+0.6
BHHZ	Black Hill Sta	1.18	55	P	Pn	00 06 41.3	-0.2
TWVZ	Taurewa	1.20	24	P	Pn	00 06 41.4	-0.5
BFZ	Birch Farm	1.20	115	P	Pn	00 06 42.9	+1.1
WTVZ	West Tongariro	1.21	30	P	Pn	00 06 42.1	0.0
BHW	Baring Head	1.23	178	P	Pn	00 06 42.6	+0.3
TMWZ	Te Maipa	1.24	139	P	Pn	00 06 43.4	+1.1
WPHZ	Waipukurau	1.25	86	P	Pn	00 06 44.6	+2.2
KRVZ	Karewarewa	1.25	31	P	Pn	00 06 42.6	0.0
CPWZ	Castlepoint	1.28	125	P	Pn	00 06 45.7	+2.8
MSWZ	Moikau Station	1.28	165	P	Pn	00 06 44.2	+1.2
PAWZ	Paruwai Farm	1.29	159	P	Pn	00 06 44.2	+1.1
KATZ	Kakaramea	1.37	30	P	Pn	00 06 44.6	+0.3
TRWZ	Traveller	1.39	152	P	Pn	00 06 45.5	+1.1
PRHZ	Porangahau	1.39	94	P	Pn	00 06 45.4	+0.9
TUWZ	Tuamarina	1.42	208	P	Pn	00 06 43.8	-1.0
PLWZ	Palliser	1.43	167	P	Pn	00 06 45.5	+0.5
RITZ	Rihia Road	1.44	34	P	Pn	00 06 46.3	+1.2
KWHZ	Kaweka Forest	1.44	59	P	Pn	00 06 46.2	+1.0
RATZ	Rangitukua	1.50	30	P	Pn	00 06 47.0	+1.1
NNZ	Nelson	1.51	226	P	Pn	00 06 45.6	-0.5
PXZ	Pawanui	1.57	85	P	Pn	00 06 47.4	+0.5
KAHZ	Kahuranaki	1.62	77	P	Pn	00 06 48.9	+1.2
WATZ	Wairara	1.62	26	P	Pn	00 06 49.2	+1.5
BKZ	Black Stump Fm	1.64	53	P	Pn	00 06 49.2	+1.4
CMWZ	Cape Campbell	1.64	196	P	Pn	00 06 50.2	+2.3
HIZ	Hauiti	1.66	1	P	Pn	00 06 48.6	+0.5
BSWZ	Blackbirch Sta	1.70	205	P	Pn	00 06 49.0	+0.3
MRHZ	Matea Rd	1.82	43	P	Pn	00 06 52.6	+2.2
KUTZ	Kaahu Road	1.85	25	P	Pn	00 06 53.9	+3.1
QRZ	Quartz Range	1.87	249	P	Pn	00 06 50.4	-0.5
TLZ	Tolley Road	1.92	17	P	Pn	00 06 51.8	0.0
MTHZ	Maungataniwha	2.04	50	P	Pn	00 06 56.3	+2.8
THZ	Tophouse	2.15	222	P	Pn	00 06 55.4	+0.5
RTZ	Ruatahuna	2.28	48	P	Pn	00 06 59.1	+2.3
TOZ	Tahuroa Road	2.50	12	P	Pn	00 07 00.1	+0.5
DSZ	Denniston Nort	2.77	235	P	Pn	00 07 03.7	+0.3
MWZ	Matawai	2.79	50	P	Pn	00 07 05.1	+1.5
MKAZ	Moumakai	3.08	5	P	Pn	00 07 07.7	+0.2
GVZ	Greta Valley S	3.10	205	P	Pn	00 07 07.1	-0.7
LTZ	Lake Taylor	3.23	216	P	Pn	00 07 09.3	-0.5
WIAZ	Waiheke Island	3.38	4	P	Pn	00 07 13.5	+1.8
PKGZ	Pakihiroa	3.41	49	P	Pn	00 07 12.3	+0.1
INZ	Inchbonnie	3.60	224	P	Pn	00 07 15.0	+0.3
OKCZ	Okains Bay	3.78	200	P	Pn	00 07 15.5	-1.8
AKCZ	Akaroa Harbour	3.96	200	P	Pn	00 07 18.0	-1.8
FOZ	Fox Glacier	5.02	226	P	Pn	00 07 34.1	-0.2
JCZ	Jackson Bay	5.94	227	P	Pn	00 07 46.3	-0.7

*IDC **01** 00:27:32.3±2.7, 48.°73N×152.°99E, h148km±24km, mb3.0/5, mb1 3.2/8, mb1mx3.0/43, mbtmp3.5/8, Error ellipse: s-maj=56.7km s-min=17.1km az=149.0*

ISC 01 00:27:34.0±1.7, 48.°8N±0.°3×152.°9E±0.°2, h174km, n11, σ1.s65/8, mb3.2/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	5.29	33	P	Pn	00 28 49.0	-2.6
	0.3nm,0.3s,baz=173,slow=13,SNR=13						
ASAJ	Asahikawa	8.51	241	P	Pn	00 29 32.7	-1.3
	1.0nm,0.3s,baz=60,slow=13,SNR=5.5						
KLR	Kul'dur	13.91	280	P	P	00 30 45.5	-0.8
	0.1nm,0.3s,baz=108,slow=16,SNR=2.6						
KSRS	Korea Array	21.37	247	P	P	00 32 08.1	+0.5
	0.6nm,0.4s,baz=51,slow=9.6,SNR=1.9						
H11N2	WAKE ISLAND Hy	31.07	154	T	T	01 05 31.2	
	baz=342,slow=76,SNR=5.0						
H11N1	WAKE ISLAND Hy	31.09	154	T	T	01 05 39.2	
	baz=342,slow=76,SNR=4.6						
H11N3	WAKE ISLAND Hy	31.09	154	T	T	01 05 44.4	
	baz=342,slow=76,SNR=5.3						
ILAR	Eielson Array	35.07	40	P	P	00 34 11.0	+1.1
	0.4nm,0.7s,baz=269,slow=7.9,SNR=4.4						
MKAR	Makanchi Array	45.94	296	P	P	00 35 40.4	+1.3
	0.3nm,0.5s,baz=72,slow=7.1,SNR=2.2						
YKA	Yellowknife Ar	49.40	38	P	P	00 36 06.3	+0.9
	0.3nm,0.8s,baz=296,slow=6.6,SNR=4.5						
FINES	FINESS Array B	62.17	334	P	P	00 37 37.1	+0.9
	1.1nm,0.8s,baz=30,slow=9.6,SNR=6.3						

*SJA **01** 00:52:18.7±1.1, 19.°46S×69.°98W, h61km±5km, ML3.9, MW4.0*
*NEIC **01** 00:52:19.3±2.2, 19.°48S±0.°03×69.°99W±0.°06, h63km±4km, Error ellipse: s-maj=7.6km s-min=4.7km az=79.0*
*GUC **01** 00:52:19.4±0.7, 19.°49S×69.°98W, h60km±3km, ML3.9*
*IDC **01** 00:52:20.6±0.8, 19.°19S×69.°73W, h61km±6km, mb3.5/4, mb1 3.9/7, mb1mx3.6/30, mbtmp3.9/7, MS2.3/1, Ms1 2.4/1, ms1mx2.2/19, Error ellipse: s-maj=26.4km s-min=11.4km az=78.0*

ISC 01 00:52:19.1±0.6, 19.°48S±0.°02×70.°02W±0.°05, h58km±4km, n56, σ1.s60/81, mb3.9/4, 10C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.15	220	⇑iP	Pn	00 52 29.2	+0.9
PSGC				eS	Sn	00 52 36.0	+1.2
PSGC				IAML		00 52 36.5	
	comp=N,26µm,0.4s						
PSGCX	Pisagua	0.15	220		Pn	00 52 28.6	+0.3
PSGCX					Sn	00 52 36.0	+1.2
PSGCX	Pisagua	0.15	220	eP	Pn	00 52 29.3	+1.1
PSGCX				eS	Sn	00 52 36.6	+1.8
PSGCX				IAML		00 52 36.9	
	comp=Z,5µm,0.3s						
PB11	IPOC Station P	0.44	129	⇑iP	Pn	00 52 31.1	+0.6
PB11				eS	Sn	00 52 39.4	+0.7
PB11				IAML		00 52 40.4	
	comp=E,9µm,0.3s						
PB11	IPOC Station P	0.44	129		Pn	00 52 30.6	+0.1
PB11	IPOC Station P	0.44	129	eP	Pn	00 52 31.2	+0.6
PB11				eS	Sn	00 52 39.3	+0.6
PB11				IAML		00 52 40.5	
	comp=Z,3µm,0.4s						
MNMC	Minye Minye	0.53	49	⇓eP	Pn	00 52 32.4	+0.8
MNMC				eS	Sn	00 52 41.6	+1.0
MNMC	Minye Minye	0.53	49		Pn	00 52 32.1	+0.6
MNMC					Sn	00 52 41.6	+1.0
MNMCX	Minye Minye	0.53	49	eP	Pn	00 52 32.4	+0.8
MNMCX				eS	Sn	00 52 41.1	+0.6
MNMCX				IAML		00 52 42.5	
	comp=Z,11µm,0.3s						
TA02	Huaiquique	0.79	188	⇑iP	Pn	00 52 35.2	+0.8
TA02				eS	Sn	00 52 46.3	+0.7
TA02				IAML		00 52 47.6	
	comp=N,14µm,0.5s						
GO01	Chusmiza	0.80	104	⇑iP	Pn	00 52 35.9	+0.9
GO01				eS	Sn	00 52 47.7	+1.1
GO01	Chusmiza	0.80	104		Pn	00 52 35.9	+0.9
PB12	IPOC Station P	0.91	341	⇑iP	Pn	00 52 36.6	+0.6
PB12				eS	Sn	00 52 49.5	+1.0
PB12				IAML		00 52 50.1	
	comp=E,8µm,0.4s						
PB12	IPOC Station P	0.91	341		Pn	00 52 36.6	+0.6
PB12					Sn	00 52 49.3	+0.9
PB12	IPOC Station P	0.91	341	eP	Pn	00 52 36.9	+0.8
PB12				eS	Sn	00 52 49.4	+1.0
PB12				IAML		00 52 50.5	
	comp=Z,4µm,0.3s						
PB08	IPOC Station P	1.05	129	⇓eP	Pn	00 52 39.0	+0.9
PB08				eS	Sn	00 52 53.4	+1.3
PB08	IPOC Station P	1.05	129		Pn	00 52 38.5	+0.4
TA01	Diego Aracena	1.09	188	⇑iP	Pn	00 52 38.9	+0.6
TA01				eS	Sn	00 52 53.1	+0.6
TA01				IAML		00 52 58.5	
	comp=N,5µm,0.3s						
AP01	Chacalluta	1.15	344	⇑iP	Pn	00 52 39.8	+0.8
AP01				eS	Sn	00 52 55.8	+2.0
PB16	IPOC Station P	1.24	23	⇓iP	Pn	00 52 41.8	+1.0
PB16				IAML		00 52 58.8	
	comp=E,2µm,0.3s						
PB16	IPOC Station P	1.24	23		Pn	00 52 40.9	+0.1
PB16					Sn	00 52 57.2	+0.3
PATCX	Punta Patache	1.34	185	⇑iP	Pn	00 52 42.2	+0.5
PATCX				eS	Sn	00 53 00.1	+1.5
PATCX				IAML		00 53 06.1	
	comp=E,4µm,0.5s						
PATCX	Punta Patache	1.34	185		Pn	00 52 42.4	+0.7
PB01	IPOC Station P	1.63	162	⇑iP	Pn	00 52 46.5	+0.8
PB01				i S	Sn	00 53 06.8	+1.1
PB01				IAML		00 53 14.4	
	comp=N,1µm,0.4s						
PB01	IPOC Station P	1.63	162		Pn	00 52 46.6	+0.9
PB02	IPOC Station P	1.83	176	⇑iP	Pn	00 52 49.5	+1.1
PB02				i S	Sn	00 53 12.5	+1.9
PB02				IAML		00 53 17.2	
	comp=E,2µm,0.3s						
PB02	IPOC Station P	1.83	176	eP	Pn	00 52 49.7	+1.3
PB02				eS	Sn	00 53 13.4	+2.8
PB02				IAML		00 53 19.6	
	comp=Z,2µm,0.3s						
PB07	IPOC Station P	2.24	177		Pn	00 52 55.5	+1.5
PB09	IPOC Station P	2.42	163		Pn	00 52 59.2	+2.7
PB09	IPOC Station P	2.42	163	i P	Pn	00 52 58.6	+2.2
PB09				IAML		00 53 32.9	
	comp=Z,839nm,1.1s						
PB04	IPOC Station P	2.84	182		Pn	00 53 03.2	+1.0
PB04	IPOC Station P	2.84	182	i P	Pn	00 53 04.0	+1.7
PB04				IAML		00 53 49.6	
	comp=Z,537nm,0.4s						
PB06	IPOC Station P	3.24	173		Pn	00 53 08.6	+0.9
PB06	IPOC Station P	3.24	173	eP	Pn	00 53 09.4	+1.7
PB06				IAML		00 53 58.2	
	comp=Z,270nm,0.5s						
LVC	Limon Verde	3.28	162	P	Pn	00 53 13.6	+5.1
	comp=Z,12nm,0.3s,baz=339,slow=9.0,SNR=66						
LVC				S	Sn	00 53 53.8	+7.4
	comp=Z,9.7nm,0.3s,baz=36,slow=22,SNR=7.4						
LVC	Limon Verde	3.28	162		Pn	00 53 11.2	+2.8
LVC	Limon Verde	3.28	162	i P	Pn	00 53 10.3	+1.8
LVC				IAML		00 54 02.7	
	comp=Z,174nm,0.6s						
LPAZ	La Paz	3.65	30	P	Pn	00 53 17.6	+3.9
	comp=Z,3.6nm,0.3s,baz=213,slow=3.7,SNR=52						
LPAZ				LR	LR	00 54 27.2	
	comp=Z,41nm,18.2s,baz=246,slow=39						
LPAZ	La Paz	3.65	30	Pn	Pn	00 53 17.2	+3.5
PB10	IPOC Station P	4.04	187	Pn	Pn	00 53 18.4	-0.2
PB14	IPOC Station P	5.13	184		Pn	00 53 32.6	-1.2
PB14				Sn	Sn	00 54 30.2	-1.7
GO02	Mina Guanaco	5.67	176		Pn	00 53 41.2	+0.2
SIV	San Ignacio	9.20	69	P	Pn	00 54 27.9	-1.4
	comp=Z,1.2nm,0.3s,baz=271,slow=9.1,SNR=29						
GO04	Tololo Observa	10.67	184	Pn	Pn	00 54 46.8	-2.6
CPUP	Villa Florida	13.53	123	P	Pn	00 55 27.9	-0.3
	comp=Z,0.1nm,0.3s,baz=309,slow=13,SNR=3.5						
CPUP	Villa Florida	13.53	123		Pn	00 55 26.3	-2.0
PEL	Peldehue	13.62	182	Pn	Pn	00 55 28.5	-1.1
PTGA	Pitinga	21.08	29	P	P	00 56 57.0	-1.8
	comp=Z,2.1nm,0.4s,baz=193,slow=13,SNR=6.6						
PTGA	Pitinga	21.08	29	IAmb	IAmb	00 57 01.0	
	comp=Z,3.3nm,0.7s						
RUSC	La Rusia	25.39	353	P	P	00 57 41.2	-0.6
NVAR	Mina Array Bea	73.27	322	P	P	01 03 46.1	+1.4
	comp=Z,0.2nm,0.5s,baz=148,slow=5.3,SNR=2.4						
NVAR				pP	pP	01 04 02.2	+1.1
	comp=Z,0.4nm,0.7s,baz=138,slow=6.8,SNR=3.1						
TORD	Torodi Ar. Bea	77.68	71	P	P	01 04 08.4	-1.6
	comp=Z,0.8nm,0.5s,baz=248,slow=5.3,SNR=14						
TORD				pP	pP	01 04 26.1	-0.6
	comp=Z,0.3nm,0.4s,baz=243,slow=5.7,SNR=2.4						
YKA	Yellowknife Ar	88.95	341	P	P	01 05 07.1	+0.2
	comp=Z,0.6nm,0.8s,baz=137,slow=5.3,SNR=13						
YKA				pP	pP	01 05 24.2	+0.4
	comp=Z,1.3nm,0.9s,baz=136,slow=5.3,SNR=11						
ZALV	Zalesovo Beam	140.55	23	PKP	PKPdf	01 11 41.3	-0.4
	comp=Z,0.3nm,0.3s,baz=328,slow=5.1,SNR=2.2						
MKAR	Makanchi Array	144.57	33	PKP	PKPab	01 11 47.5	-0.3
	comp=Z,0.3nm,0.6s,baz=325,slow=2.9,SNR=2.0						
SONM	Songino Array	151.57	5	PKPbc	PKiKP	01 12 07.7	+0.3
	comp=Z,0.7nm,0.5s,baz=292,slow=1.5,SNR=6.2						
SONM				pPKPbc	pPKPbc	01 12 24.8	+0.4
	comp=Z,0.2nm,0.4s,baz=194,slow=33,SNR=2.1						

*IDC **01** 00:56:07.2±0.5, 13.°47N×92.°84E, h0km, mb4.1/21, mb1 4.2/22, mb1mx4.1/37, mbtmp4.1/22, ML3.8/1, MS3.3/13, Ms1 3.3/13, ms1mx3.1/36, Error ellipse: s-maj=20.6km s-min=12.2km az=59.0*
*NEIC **01** 00:56:11.7±2.6, 13.°61N±0.°06×92.°94E±0.°09, h29km±5km, mb4.1/16, Error ellipse: s-maj=13.2km s-min=8.3km az=103.0*
*NDI **01** 00:56:13.6±2.3, 13.°63N×92.°82E, h39km±11km, ML4.4, mb4.1(NEIC)*

ISC 01 00:56:11.6±0.4, 13.°64N±0.°05×92.°87E±0.°06, h29km, n83, σ1.s30/78, mb4.1/27, MS3.3/10, 12C, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGPR	DIGLIPUR	0.47	173	⇑iP	Pn	00 56 23.7	+1.4
DGPR				eS	Sn	00 56 31.1	+1.6
DGPR				IAML		00 56 33.1	
	comp=N,39µm,0.2s						
DGPR				IAML		00 56 34.0	
	comp=E,35µm,0.3s						
PBA	Port Blair	1.98	184	eP	Pn	00 56 43.8	+0.6
PBA				eS	Sn	00 57 06.2	-0.8
PBA				eS	Sb	00 57 06.5	-4.6
PBA	Port Blair	1.98	184		Pn	00 56 44.1	+1.0
CM31	Chiang Mai Arr	7.55	50	Pn	Pn	00 58 00.9	+1.2
CM31				Sn	Sn	00 59 23.9	-0.5
CMAR	Chiang Mai Arr	7.55	50	Pn	Pn	00 58 01.4	+1.7
	comp=E,0.4nm,0.3s,baz=240,slow=16,SNR=5.4						
CMAR				Sn	Sn	00 59 24.4	0.0
	comp=E,1.2nm,0.3s,baz=239,slow=28,SNR=12						
CMAR				LR	LR	01 01 41.6	
	comp=E,182nm,20.1s,baz=236,slow=44						
CHTO	Chiang Mai	7.77	48		Pn	00 58 06.0	+3.2
CHTO					Sn	00 59 26.3	-3.6
BRDH	Bariadhala	9.06	353	LR	LR	01 02 53.5	
	comp=E,306nm,18.9s,baz=172,slow=44						
LHMI	Lhok Sumawe	9.28	154	Pn	Pn	00 58 23.2	-0.2
BWNR	Bhubaneshwar	9.46	315	eP	Pn	00 58 25.6	-0.3
BWNR				eS	Sn	01 00 00.5	-11
BWNR				IAML		01 00 06.4	
	comp=N,199nm,0.3s						
BWNR				IAML		01 00 08.1	
	comp=E,174nm,0.2s						
SHL	Shillong	11.90	356	Pn	Pn	00 58 57.8	-1.7
BOK	Bokaro	12.07	328	eP	Pn	00 59 02.6	+0.9
BOK				ex	x	01 01 07.5	
BOK				IAML		01 01 12.9	
	comp=Z,13nm,0.5s						
PSI	Prapat	12.32	150	LR	LR	01 03 49.9	
	comp=Z,160nm,18.9s,baz=79,slow=38						
TEZP	TEZPUR	12.91	360	eP	Pn	00 59 12.9	-0.2
ODAN	Odare	14.12	340	eP	Pn	00 59 29.3	-0.6
HYB	Hyderabad	14.30	287	i P	Pn	00 59 31.0	-1.2
HYB				eS	S	01 02 25.0	-4.8
HYB	Hyderabad	14.30	287	eP	Pn	00 59 31.6	-0.6
HYB				eS	Sn	01 01 56.6	-13
TAPN	Taplejung	14.47	341	eP	Pn	00 59 35.2	+0.5
	comp=Z,18nm,0.3s						
RAMN	Ramite	14.48	337	eP	Pn	00 59 34.6	-0.3
	comp=Z,23nm,0.3s						
JIRN	Jiri	15.28	337	eP	Pn	00 59 46.0	+0.3
	comp=Z,27nm,0.3s						
JBP	Jabalpur	15.46	310	eP	Pn	00 59 49.5	+1.8
JBP				ex	x	01 02 31.2	
PKI	Pulchoki	15.51	334	eP	Pn	00 59 48.5	-0.2
	comp=Z,14nm,0.3s						
PKIN	Phulchoki	15.52	334	eP	Pn	00 59 48.5	-0.2
	comp=Z,20nm,0.3s						
GUN	Gumba	15.62	336	eP	Pn	00 59 50.4	+0.3
	comp=Z,18nm,0.5s						
DMN	Daman	15.67	334	eP	Pn	00 59 51.0	+0.3
	comp=Z,11nm,0.3s						
LSA	Lhasa	16.06	355	Pn	Pn	00 59 53.4	-2.4
GKN	Gorkha	16.22	333	eP	Pn	00 59 58.3	+0.7
	comp=Z,41nm,0.2s						
KOLN	Koldanda	16.50	330	eP	P	01 00 02.8	-0.9
	comp=Z,10nm,0.2s						
DANN	Dangsing	16.91	331	eP	P	01 00 08.1	-0.2
	comp=Z,14nm,0.3s						
PYUN	Piuthan	17.08	329	eP	P	01 00 10.9	+0.8
BHPL	Bhopal	17.48	305	eP	P	01 00 15.2	+0.9
ENH	Enshi	22.56	40	P	P	01 01 07.2	-2.4
ENH				IAmb	IAmb	01 01 14.1	
	comp=Z,13nm,1.1s						
XAN	Xi'an	24.99	33	P	P	01 01 31.8	-1.1
XAN				IAmb	IAmb	01 01 35.6	
	comp=Z,2.8nm,0.6s						
CISI	Cisompet, Garu	25.76	144	P	P	01 01 38.8	-1.3
NIL	Nilore	26.73	321	P	P	01 01 47.9	-0.9
NIL				IAmb	IAmb	01 01 53.4	
	comp=Z,3.7nm,1.0s						
H08S3	Diego Garcia H	29.27	225	T	T	01 32 06.7	
	baz=43,slow=76,SNR=31						
H08S2	Diego Garcia H	29.27	225	T	T	01 32 26.6	
	baz=43,slow=76,SNR=25						
H08S1	Diego Carcia H	29.28	225	T	T	01 32 14.0	
	baz=43,slow=76,SNR=24						
MK31	Makanchi Array	34.22	347	P	P	01 02 54.8	+0.1
MK31				IAmb	IAmb	01 03 03.1	
	comp=Z,2.3nm,1.0s						
MKAR	Makanchi Array	34.22	347	P	P	01 02 56.5	+1.8
	comp=Z,1.2nm,0.7s,baz=172,slow=7.9,SNR=8.3						
MKAR				LR	LR	01 20 20.9	
	comp=Z,38nm,19.7s,baz=160,slow=42						
SONM	Songino Array	35.90	16	P	P	01 03 11.2	+1.9
	comp=Z,0.6nm,0.7s,baz=188,slow=6.0,SNR=4.8						
SONM				PcP	PcP	01 05 36.9	+0.8
	comp=Z,0.5nm,0.6s,baz=199,slow=3.6,SNR=2.9						
SONM				LR	LR	01 19 54.9	
	comp=Z,39nm,21.3s,baz=158,slow=40						
KURK	Kurchatov	38.75	346	P	P	01 03 33.5	+0.3
KURK				IAmb	IAmb	01 03 42.1	
	comp=Z,2.1nm,0.9s						
KSRS	Korea Array	39.17	46	P	P	01 03 37.8	+0.8
	comp=Z,0.9nm,0.6s,baz=254,slow=8.5,SNR=4.1						
KSRS				LR	LR	01 22 20.8	
	comp=Z,59nm,18.5s,baz=227,slow=40						
GEYT	Alibeck	39.19	314	P	P	01 03 37.0	-0.2
	comp=Z,1.6nm,0.9s,baz=6.3,slow=39,SNR=2.2						
GEYT				LR	LR	01 22 01.1	
	comp=Z,27nm,18.1s,baz=130,slow=40						
ZAA0	Zalesovo Array	40.71	353	P	P	01 03 48.4	-1.0
ZAA0				IAmb	IAmb	01 03 51.8	
	comp=Z,2.2nm,0.6s						
ZALV	Zalesovo Beam	40.71	353	P	P	01 03 50.9	+1.4
	comp=Z,2.4nm,0.5s,baz=182,slow=8.3,SNR=18						
ZALV				LR	LR	01 24 25.0	
	comp=Z,33nm,19.4s,baz=74,slow=42						
FITZ	Fitzroy Crossi	45.16	133	P	P	01 04 24.8	-1.2
	comp=Z,2.6nm,0.6s,baz=321,slow=6.5,SNR=10						
FITZ	Fitzroy Crossi	45.16	133	IAmb	IAmb	01 04 25.2	
	comp=Z,2.2nm,0.6s						
MJAR	Matsushiro Arr	46.43	52	LR	LR	01 26 30.4	
	comp=Z,42nm,18.6s,baz=250,slow=39						
NWAO	Narrogin (SRO)	51.83	154	P	P	01 05 15.1	-2.0
	comp=Z,22nm,1.2s,baz=131,slow=20,SNR=1.9						
NWAO	Narrogin (SRO)	51.83	154	IAmb	IAmb	01 05 22.6	
	comp=Z,21nm,1.1s						
WRA	Warramunga Arr	52.71	128	P	P	01 05 23.1	-0.8
	comp=Z,3.6nm,0.5s,baz=312,slow=7.9,SNR=32						
WRA				PcP	PcP	01 06 33.4	-0.1
	comp=Z,0.9nm,0.4s,baz=319,slow=3.2,SNR=7.3						
WB2	Warramunga Arr	52.72	128	P	P	01 05 21.7	-2.3
ASAR	Alice Springs	54.63	132	P	P	01 05 37.4	-0.7
	comp=Z,2.7nm,0.5s,baz=308,slow=6.7,SNR=49						
ASAR				PcP	PcP	01 06 40.9	0.0
	comp=Z,0.9nm,0.8s,baz=313,slow=4.7,SNR=4.8						
NRIK	Noril'sk	55.76	358	P	P	01 05 46.9	+1.5
	comp=Z,1.1nm,0.5s,baz=119,slow=6.5,SNR=2.5						
BRTR	Keskin Array B	57.81	308	P	P	01 06 01.1	+0.5
	comp=Z,0.9nm,0.7s,baz=122,slow=8.6,SNR=2.9						
BRTR				LR	LR	01 34 08.6	
	comp=Z,19nm,18.5s,baz=147,slow=39						
TOPG	Topolog	62.45	314	⇑P	P	01 06 32.1	-0.2
CFR	Carcaliu	62.67	314	⇑P	P	01 06 34.5	+0.9
HARR	Harsova	62.74	313	⇑P	P	01 06 34.8	+0.6
VRI	Vrincioaia	63.74	315	⇑P	P	01 06 41.7	+0.9
PLOR	Plostina	63.80	315	⇑P	P	01 06 43.0	+1.8
TESR	Tescani	63.88	315	⇑P	P	01 06 42.4	+0.7
PETK	Petropavlovsk-	64.13	37	LR	LR	01 36 35.7	
	comp=Z,21nm,19.7s,baz=234,slow=38						
MLR	Muntele Rosu	64.24	314	⇑P	P	01 06 45.7	+1.5
BURAR	Bucovina Array	65.00	316	⇑P	P	01 06 50.4	+1.3
STKA	Stephens Creek	65.01	135	P	P	01 06 48.8	-0.4
	comp=Z,0.7nm,0.4s,baz=336,slow=6.6,SNR=5.6						
STKA	Stephens Creek	65.01	135	P	P	01 06 47.8	-1.4
BUR08	Bucovina Ar. S	65.01	316	P	P	01 06 49.5	+0.3
ARR	Arges	65.15	314	⇑P	P	01 06 50.7	+0.6
TRPA	Tarpa	66.85	317	⇑P	P	01 07 00.6	-0.2
FINES	FINESS Array B	67.07	331	P	P	01 07 02.4	+0.4
	comp=Z,1.5nm,0.7s,baz=90,slow=6.9,SNR=5.9						
ARCES	ARCESS Array B	69.45	340	P	P	01 07 17.9	+1.1
	comp=Z,2.9nm,1.0s,baz=82,slow=9.1,SNR=10						
ARCES				LR	LR	01 41 09.8	
	comp=Z,33nm,18.3s,baz=257,slow=39						
MORC	Moravsky Berou	70.24	318	⇑P	P	01 07 23.1	+1.1
GERES	GERESS Array B	72.75	317	P	P	01 07 38.1	+0.8
	comp=Z,0.9nm,0.5s,baz=86,slow=6.3,SNR=13						
NB2	NORSAR Subarra	74.13	330	P	P	01 07 44.8	-0.3
	comp=Z,0.6nm,0.6s,baz=90,slow=5.9						
NOA	NORSAR Array B	74.13	330	P	P	01 07 45.3	+0.2
	comp=Z,0.6nm,0.6s,baz=91,slow=5.7,SNR=4.7						
NOA				LR	LR	01 43 19.8	
	comp=Z,17nm,19.9s,baz=175,slow=38						
BOSA	Boshof	77.66	236	P	P	01 08 06.4	+0.5
	comp=Z,3.9nm,0.5s,baz=72,slow=3.4,SNR=17						
BOSA	Boshof	77.66	236	IAmb	IAmb	01 08 07.1	
	comp=Z,4.7nm,0.7s						
MAW	Mawson	83.91	191	P	P	01 08 38.5	+0.2
	comp=Z,2.8nm,0.8s,baz=91,slow=22,SNR=2.5						
MAW	Mawson	83.91	191	IAmb	IAmb	01 08 42.7	
	comp=Z,0.7nm,0.9s						
ESDC	Sonseca Array	86.58	310	P	P	01 08 53.1	+0.6
	comp=Z,0.2nm,0.9s,baz=344,slow=39,SNR=3.1						
TORD	Torodi Ar. Bea	88.08	283	P	P	01 09 00.3	+0.2
	comp=Z,0.6nm,0.7s,baz=107,slow=4.7,SNR=6.1						
ILAR	Eielson Array	89.89	22	P	P	01 09 08.2	+0.5
	comp=Z,0.4nm,0.6s,baz=300,slow=4.6,SNR=5.4						
NVAR	Mina Array Bea	120.54	28	PKP	PKiKP	01 15 02.3	+1.0
	comp=Z,0.3nm,0.5s,baz=318,slow=1.2,SNR=2.5						

*MEX **01** 01:01:17.1±0.6, 14.°68N×92.°22W, h80km±5km, MD3.8*
*GCG **01** 01:01:17.4±0.7, 15.°02N×92.°05W, h82km±10km, MD3.7*

ISC 01 01:01:17.1±2.1, 14.°7N±0.°1×92.°28W±0.°10, h73km±12km, n7,

σ0^{s}47/14, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.18**	**5**	*i* P	**Pn**	**01 01 27.7**	**-0.3**
THIG				*e*S	**Sn**	**01 01 36.3**	**+0.2**
STG3	**Santiaguito 3,**	**0.69**	**91**	*e*P	**Pn**	**01 01 32.0**	**-0.3**
STG3				*e*S	**Sn**	**01 01 44.5**	**+0.9**
PCIG		**1.33**	**317**	*e*P	**Pn**	**01 01 39.7**	**-0.3**
PCIG				*e*S	**Sn**	**01 01 57.4**	**+0.3**
FUG	**Fuego 3**	**1.42**	**101**	*e*P	**Pn**	**01 01 41.2**	**-0.1**
FUG				*e*S	**Sn**	**01 01 59.1**	**-0.4**
CCIG	**Comitan**	**1.55**	**5**	*i* P	**Pn**	**01 01 43.1**	**0.0**
CCIG				*i* S	**Sn**	**01 02 02.2**	**-0.5**
IXG	**Ixpaco**	**1.87**	**107**	*e*P	**Pn**	**01 01 47.2**	**0.0**
IXG				*e*S	**Sn**	**01 02 10.3**	**+0.2**
TGIG		**2.19**	**338**	*i* P	**Pn**	**01 01 51.4**	**-0.2**
TGIG				*i* S	**Sn**	**01 02 18.5**	**+0.7**

MAN 01 01:02:27.1, 9.82°N×123.97°E, h6^{km}, mb4.6, ML3.5, MS3.5, 1C-2D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.16**	**221**	*e*P	Pg	01 02 31.1	+0.7
TBP				*i* S	Sg	01 02 34.1	+1.4
LLP	**Lapu-Lapu**	**0.50**	**359**	⇓*e*P	Pg	01 02 37.2	+0.4
LLP				*e*S	Sg	01 02 44.5	+1.2
SNPH	**Sibulan**	**0.86**	**237**	⇓*i*P	Pg	01 02 44.0	+0.2
SNPH				*i* S	Sb	01 02 56.0	-0.4
MSLP	**Maasin**	**0.93**	**70**	*e*P	Pg	01 02 44.8	-0.2
MSLP				*e*S	Sn	01 02 59.8	-0.6
CNOP	**Candoni, Negro**	**1.31**	**271**	*e*P	Pn	01 02 49.6	-2.4
CNOP				*e*S	Sb	01 03 08.4	-0.9
OCLP	**Ormoc**	**1.38**	**27**	*e*P	Pn	01 02 52.5	-0.4
OCLP				*e*S	Sn	01 03 12.5	+1.0
GUIM	**Jordan**	**1.58**	**301**	*e*P	Pn	01 02 54.4	-1.3
GUIM				*e*S	Sn	01 03 15.7	-0.8
PAGZ	**Pagadian**	**2.04**	**197**	*e*P	Pn	01 03 03.2	+1.2
PAGZ				*e*S	Sb	01 03 29.3	-1.0
RCP	**Roxas**	**2.11**	**325**	⇑*e*P	Pn	01 03 03.4	+0.4
RCP				*i* S	Sb	01 03 31.6	-0.7
BUKP	**Musuan**	**2.21**	**151**	*e*P	Pn	01 03 05.3	+0.9
BUKP				*e*S	Sn	01 03 31.8	-0.2

IDC 01 01:17:15.1±2.4**, 6.83°S×155.74°E, h0^{km}, mb3.4**/4**, mb1 3.7**/5**, mb1mx3.5**/33**, mbtmp3.5**/5**, ML3.5**/1**, Error ellipse: s-maj=52.9km s-min=34.2km az=84.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**4.47**	**304**	Pn	Pn	01 18 24.5	+0.4
	2.4nm,0.3s,baz=213,slow=21,SNR=1.4						
KRVT				Sn	Sn	01 19 17.1	+0.2
	5.0nm,0.3s,baz=68,slow=21,SNR=1.6						
WRA	**Warramunga Arr**	**24.52**	**236**	P	P	01 22 36.5	-0.1
	0.2nm,0.4s,baz=60,slow=9.2,SNR=3.0						
ASAR	**Alice Springs**	**26.84**	**229**	P	P	01 22 57.6	0.0
	0.2nm,0.6s,baz=67,slow=8.7,SNR=1.7						
CMAR	**Chiang Mai Arr**	**61.38**	**295**	P	P	01 27 33.9	+0.4
	1.0nm,0.6s,baz=124,slow=5.9,SNR=5.9						
SONM	**Songino Array**	**69.60**	**327**	P	P	01 28 26.2	-0.1
	0.3nm,0.5s,baz=123,slow=5.3,SNR=2.1						
TORD	**Torodi Ar. Bea**	**153.69**	**286**	PKPbc	PKPbc	01 37 16.8	-0.4
	0.3nm,0.9s,baz=54,slow=1.5,SNR=2.0						

*IDC **01** 01:19:30.4±1.6, 11.33°S×161.36°E, h0^{km}, mb3.7/6, mb1 3.8/7, mb1mx3.6/39, mbtmp3.6/7, ML3.4/1, MS3.0/4, Ms1 3.0/4, ms1mx2.6/36, Error ellipse: s-maj=38.5km s-min=27.8km az=119.0*

*NEIC **01** 01:19:31.3±1.9, 11.3°S±0.1×161.4°E±0.1, h10^{km}±2^{km}, mb4.1/3, Error ellipse: s-maj=18.9km s-min=15.6km az=226.0*

ISC 01 01:19:35.1±1.0**, 11.3°S**±0.1×**161.4°E**±0.1**, h35^{km}, n13, σ1^{s}16**/13**, mb3.7**/9**, MS3.3**/3**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.34**	**323**	Pn	**Pn**	**01 20 11.0**	**-0.1**
	9.8nm,0.3s,baz=302,slow=5.4,SNR=1.7						
HNR				Sn	**Sn**	**01 20 39.7**	**+0.9**
	25nm,0.3s,baz=324,slow=23,SNR=2.9						
HNR				LR	LR	01 21 11.9	
	comp=Z,99nm,20.3s,baz=116,slow=43						
HNR	**Honiara**	**2.34**	**323**		**Pn**	**01 20 09.3**	**-1.8**
HNR					**Sn**	**01 20 38.3**	**-0.5**
WB0	**Warramunga Arr**	**27.29**	**249**	P	**P**	**01 25 15.6**	**-1.0**
WB0				IAmb	IAmb	01 25 18.3	
	comp=Z,2.4nm,0.8s						
WB2	**Warramunga Arr**	**27.37**	**248**	P	**P**	**01 25 17.3**	**-0.1**
WB2				IAmb	IAmb	01 25 19.6	
	comp=Z,5.1nm,1.1s						
WRA	**Warramunga Arr**	**27.38**	**248**	P	**P**	**01 25 17.8**	**+0.4**
	comp=Z,1.4nm,0.9s,baz=72,slow=9.3,SNR=6.0						
WRA				LR	LR	01 34 42.0	
	comp=Z,38nm,21.9s,baz=325,slow=33						
STKA	**Stephens Creek**	**27.42**	**219**	LR	LR	01 35 13.8	
	comp=Z,87nm,18.2s,baz=13,slow=34						
KNTN	**Kanton**	**27.99**	**74**	P	**P**	**01 25 21.6**	**-1.2**
KNTN				IAmb	IAmb	01 25 31.1	
	comp=Z,3.8nm,0.7s						
ASAR	**Alice Springs**	**28.88**	**241**	P	**P**	**01 25 30.9**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=68,slow=10,SNR=7.4						
SONM	**Songino Array**	**76.40**	**325**	P	**P**	**01 31 22.2**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=128,slow=4.0,SNR=2.1						
ILAR	**Eielson Array**	**85.17**	**20**	P	**P**	**01 32 09.5**	**+2.1**
	comp=Z,0.1nm,0.7s,baz=249,slow=4.5,SNR=1.5						
MKAR	**Makanchi Array**	**90.81**	**318**	P	**P**	**01 32 34.1**	**-0.7**
	comp=Z,0.4nm,0.9s,baz=87,slow=6.1,SNR=1.8						
YKA	**Yellowknife Ar**	**97.19**	**28**	P	**P**	**01 33 03.6**	**-0.2**
	comp=Z,0.2nm,0.8s,baz=257,slow=4.9,SNR=2.8						
TXAR	**Lajitas Array**	**99.73**	**62**	LR	LR	02 14 44.4	
	comp=Z,7.9nm,18.0s,baz=0.0,slow=33						

*NIED **01** 02:21:00, 34.20°N×133.40°E, h17^{km}, Mw3.3 Best double couple: $M_0$9.53000×10^{13} NP1:ϕ_s213.00000°, δ78.00000°, λ-164.00000°. NP2:ϕ_s120.00000°, δ74.00000°, λ-13.00000°.*

JMA 01 02:21:30.7, 34.22°N×133.40°E, h15^{km}±1^{km}**, M3.6, 2C-1D Broadband fault plane solution: P waves. NP1:** ϕ_s217.00000°**,** δ65.00000°**,** λ-162.00000°. **NP2:** ϕ_s119.00000°**,** δ74.00000°**,** λ-26.00000°. **Principal axes:** T Plg6.0000°**,** Azm169.0000°**;** N Plg59.0000°**,** Azm269.0000°**;** P Plg30.0000°**,** Azm76.0000°**; Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJS	**Sakaide**	**0.47**	**71**	⇓P	Pg	02 21 39.8	-0.2
JJS				S	Sg	02 21 46.1	-0.2
JJG	**Jouge**	**0.47**	**334**	⇑P	Pg	02 21 40.1	+0.1
JJG				S	Sg	02 21 46.7	+0.3
JET	**Tanbara**	**0.53**	**214**	⇑P	Pg	02 21 40.7	-0.5
JET				S	Sg	02 21 47.4	-0.8

IDC 01 02:23:08.5±8.3**, 15.83°S×175.28°W, h0^{km}, mb3.8**/3**, mb1 4.1**/3**, mb1mx3.6**/28**, mbtmp3.8**/3 **Error ellipse: s-maj=368.8km s-min=36.6km az=140.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.98**	**257**	P	P	02 31 49.6	0.0
	0.2nm,0.3s,baz=92,slow=7.5,SNR=11						
ASAR	**Alice Springs**	**48.26**	**252**	P	P	02 31 51.5	-0.2
	1.3nm,0.4s,baz=88,slow=8.2,SNR=20						
ILAR	**Eielson Array**	**83.23**	**12**	P	P	02 35 36.4	0.0
	0.2nm,0.5s,baz=224,slow=5.3,SNR=5.4						

*ISK **01** 02:25:08.8, 36.68°N×44.60°E, h5^{km}, ML3.4/14*

*DDA **01** 02:25:09.6, 36.82°N×44.97°E, h7^{km}±4^{km}, ML2.8*

*TEH **01** 02:25:10.9, 36.94°N×44.72°E, h10^{km}, ML3.1*

*ISN **01** 02:25:10.7±0.6, 36.78°N×44.82°E, h14^{km}±4^{km}, ML3.2*

*ATA **01** 02:25:50.6±2.0, 38.40°N×42.41°E, h6^{km}±660^{km}, ML1.3, MW3.1*

ISC 01 02:25:10.3±1.2**, 36.79°N**±0.03×**44.70°E**±0.02**, h3^{km}**±11^{km}**, n63, σ1^{s}38**/74**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAHB	**Mahabad**	**0.81**	**91**	*e*Pg	**Pg**	**02 25 24.9**	**-0.9**
MAHB				*e*Sg	**Sg**	**02 25 36.4**	**+0.2**
MAHB				*e*		02 25 43.0	
CUKT	**Cukurca**	**0.98**	**298**	PG	**Pg**	**02 25 28.3**	**-0.9**
CUKT				SG	**Sn**	**02 25 43.7**	**-1.9**
CUKT	**Cukurca**	**0.98**	**298**	*i* P	**Pg**	**02 25 28.2**	**-0.9**
CUKT				*i* S	**Sb**	**02 25 42.6**	**-0.9**
CUKT	**Cukurca**	**0.98**	**298**	*e*Pg	**Pg**	**02 25 28.7**	**-0.5**
MSL	**Mosul**	**1.34**	**253**	*e*Pg	**Pg**	**02 25 36.8**	**+0.9**
MSL				*e*Sg	**Sg**	**02 25 56.0**	**+2.8**
MSL				AML	AML	02 25 58.5	
	comp=E,411nm,0.2s						
MSL				AML	AML	02 25 59.3	
	comp=N,591nm,0.4s						
IKRK	**Kirkuk**	**1.42**	**192**	*e*Pg	**Pb**	**02 25 36.5**	**-0.9**
IKRK				*e*Sg	**Sg**	**02 25 55.5**	**-0.3**
IKRK				AML	AML	02 26 03.6	
	comp=N,1μm,0.4s						
IKRK				AML	AML	02 26 04.6	
	comp=E,723nm,0.4s						
ITBZ	**Tabriz**	**1.84**	**38**	*e*Pn	**Pn**	**02 25 42.6**	**-0.4**
ITBZ				*e*		02 26 15.4	
SIRT	**Sirnak**	**1.94**	**292**	PN	**Pn**	**02 25 44.2**	**0.0**
SIRT	**Sirnak**	**1.94**	**292**	*e*Pn	**Pb**	**02 25 44.6**	**-1.7**
TVAN	**Van**	**2.02**	**330**	*e*P	Pg	02 26 04.9	+16
TVAN				*e*S	**Sg**	**02 26 18.2**	**+3.2**
AKDM	**Akdamar-Van**	**2.05**	**319**	PN	**Pb**	**02 25 46.7**	**-1.6**
AKDM	**Akdamar-Van**	**2.05**	**319**	*e*Pn	**Pn**	**02 25 46.3**	**+0.4**
VANB	**Van**	**2.08**	**330**	PN	**Pn**	**02 25 46.4**	**+0.3**
VANB	**Van**	**2.08**	**330**	*e*Pn	**Pn**	**02 25 45.5**	**-0.6**
ORD	**Ordubad**	**2.37**	**25**	*e*Pn	**Pb**	**02 25 53.9**	**+0.3**
IHRS	**Heris**	**2.41**	**50**	*e*Pn	**Pn**	**02 25 51.5**	**+0.8**
IHRS				*e*		02 26 29.6	
CLDR	**Caldiran**	**2.43**	**345**	PN	**Pb**	**02 25 52.8**	**-1.9**
CLDR	**Caldiran**	**2.43**	**345**	*i* P	**Pb**	**02 25 52.6**	**-2.1**
CLDR	**Caldiran**	**2.43**	**345**	*e*Pn	**Pn**	**02 25 51.9**	**+0.9**
NAX	**Nakhchivan**	**2.46**	**15**	*e*Pn	**Pb**	**02 25 56.1**	**+0.9**
IDHR	**Dehrash**	**2.50**	**146**	*e*Pn	**Pb**	**02 25 55.2**	**-0.7**
IDHR				*e*		02 26 35.5	
IDHR				*e*		02 26 35.6	
SRTM	**Siirt_Merkez**	**2.52**	**299**	*i* P	**Pb**	**02 25 56.0**	**-0.2**
SRTM				*i* S	**Sg**	**02 26 31.3**	**+0.3**
SRTM	**Siirt_Merkez**	**2.52**	**299**	*e*Pn	**Pb**	**02 25 55.9**	**-0.2**
ISRB	**Sarab**	**2.58**	**66**	*e*Pn	**Pn**	**02 25 54.2**	**+1.1**
ISRB				*e*		02 26 35.6	
BLIS	**Bitlis-Merkez**	**2.62**	**309**	*e*P	**Pb**	**02 25 56.2**	**-1.7**
BLIS				*e*P	**Pg**	**02 25 57.6**	**-2.8**
BLIS				*e*S	**Sg**	**02 26 34.2**	**-0.1**
BLIS	**Bitlis-Merkez**	**2.62**	**309**	*i* P	**Pb**	**02 25 57.0**	**-0.8**
BLIS	**Bitlis-Merkez**	**2.62**	**309**	*e*Pn	**Pb**	**02 25 57.0**	**-0.8**
SBZ	**Shahbuz**	**2.69**	**14**	*e*Pn	**Pb**	**02 26 00.0**	**+0.9**
GURO	**Guroymak-BITLI**	**2.75**	**310**	PN	**Pn**	**02 25 55.5**	**+0.1**
GURO	**Guroymak-BITLI**	**2.75**	**310**	*e*Pn	**Pn**	**02 25 55.5**	**+0.1**
IGHG	**Ghaleghazi**	**2.89**	**148**	*e*Pn	**Pb**	**02 26 01.1**	**-1.5**
MLAZ	**Malazgirt-MUS**	**2.90**	**325**	PN	**Pn**	**02 25 58.6**	**+1.2**
MLAZ	**Malazgirt-MUS**	**2.90**	**325**	*e*Pn	**Pn**	**02 25 58.6**	**+1.2**
AGRB	**Hanur-Agry**	**3.09**	**335**	PN	**Pn**	**02 26 01.2**	**+1.1**
AGRB	**Hanur-Agry**	**3.09**	**335**	*e*Pn	**Pn**	**02 26 01.1**	**+1.0**
SVAN	**Silvan-Diyarba**	**3.10**	**297**	PN	**Pn**	**02 26 00.3**	**+0.2**
SVAN	**Silvan-Diyarba**	**3.10**	**297**	*i* P	**Pn**	**02 25 59.2**	**-0.9**
SVAN				*i* S	**Sb**	**02 26 44.9**	**+0.7**
SVAN				IAML		02 26 56.0	
	comp=N,26nm,0.9s						
SVAN	**Silvan-Diyarba**	**3.10**	**297**	*e*Pn	**Pn**	**02 25 59.6**	**-0.5**
KER	**Kermanshah**	**3.11**	**140**	*e*Pn	**Pb**	**02 26 06.4**	**+0.1**
KCHF	**Cheshme Sefid,**	**3.15**	**142**	*e*Pn	**Pb**	**02 26 06.0**	**-1.1**
MUSM	**Mu-Merkez**	**3.18**	**308**	*e*P	**Pb**	**02 26 06.4**	**-1.0**
MUSM				*e*S	**Sb**	**02 26 48.8**	**+2.2**
MUSM	**Mu-Merkez**	**3.18**	**308**	*i* P	**Pb**	**02 26 06.4**	**-1.0**
MUSM				*i* S	**Sb**	**02 26 48.0**	**+1.3**
MUSM	**Mu-Merkez**	**3.18**	**308**	*e*Pn	**Pb**	**02 26 06.4**	**-1.0**
LRK	**Lerik**	**3.43**	**56**	*e*Pn	**Pn**	**02 26 04.9**	**+0.2**
MAZI	**Mazidag**	**3.46**	**282**	PN	**Pn**	**02 26 05.1**	**-0.1**
MAZI	**Mazidag**	**3.46**	**282**	*e*Pn	**Pn**	**02 26 05.0**	**-0.1**
IKOM	**Komasi**	**3.48**	**138**	*e*Pn	**Pb**	**02 26 09.1**	**-3.4**
VRTB	**Varto-Mus**	**3.49**	**314**	*i* P	Pg	02 26 34.5	+17
YRD	**Yardimli**	**3.52**	**52**	*e*Pn	**Pn**	**02 26 06.8**	**+0.8**
BHD	**Baghdad**	**3.52**	**184**	*e*Pn	**Pn**	**02 26 07.0**	**+1.1**
BHD				*e*Sn	**Sn**	**02 26 48.0**	**0.0**
ASTR	**Astara**	**3.69**	**60**	*e*Pn	**Pn**	**02 26 08.2**	**0.0**
HANI	**Diyarbakir_Han**	**3.78**	**297**	*i* P	**Pb**	**02 26 18.9**	**+1.2**
IBDR	**Badra**	**3.81**	**164**	*e*Pn	**Pn**	**02 26 10.0**	**+0.2**
IBDR				*e*Sn	**Sn**	**02 26 54.0**	**-1.1**
IBDR				AML	AML	02 27 23.4	
	comp=N,35nm,0.6s						
IBDR				AML	AML	02 27 27.0	
	comp=E,28nm,0.7s						
DYBB	**Diyarbakir**	**3.81**	**289**	PN	**Pn**	**02 26 10.8**	**+0.9**
QABG	**Abgarm-Qazvin**	**4.09**	**104**	*e*Pn	**Pn**	**02 26 16.6**	**+2.7**
HSAM	**Samen**	**4.09**	**128**	*e*Pn	Pb	02 26 18.0	-5.1
HAGD	**Aghdareh**	**4.11**	**117**	*e*Pn	**Pn**	**02 26 17.2**	**+3.0**
IDOB	**Doab**	**4.13**	**135**	*e*Pn	**Pn**	**02 26 18.1**	**+3.6**
IKFM	**Kafar-mosalman**	**4.16**	**141**	*e*Pn	**Pn**	**02 26 16.6**	**+2.0**
IKFM				*e*		02 27 39.3	
SVRC	**Sivrice-ELAZID**	**4.57**	**292**	PN	**Pn**	**02 26 20.9**	**+0.5**
PTK	**Pertek**	**4.70**	**298**	PN	**Pn**	**02 26 23.6**	**+1.4**
URFA	**Urfa**	**4.74**	**280**	PN	**Pn**	**02 26 23.9**	**+1.2**
MALT	**Malatya**	**5.21**	**289**	PN	**Pn**	**02 26 30.4**	**+1.2**

IDC 01 02:41:02.9±1.4**, 7.14°S×155.33°E, h0^{km}, mb3.8**/6**, mb1 4.0**/6**, mb1mx3.7**/20**, mbtmp3.7**/6**, Error ellipse: s-maj=59.6km s-min=25.6km az=125.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.01**	**236**	P	P	02 46 18.9	-0.7
	0.7nm,0.6s,baz=59,slow=9.5,SNR=1.1						
ASAR	**Alice Springs**	**26.33**	**229**	P	P	02 46 39.6	-1.1
	0.4nm,0.6s,baz=61,slow=8.5,SNR=5.7						
STKA	**Stephens Creek**	**27.75**	**206**	P	P	02 46 55.3	+1.9
	1.6nm,0.9s,baz=358,slow=20,SNR=2.1						
CMAR	**Chiang Mai Arr**	**61.14**	**296**	P	P	02 51 20.9	+1.2
	0.4nm,0.3s,baz=116,slow=6.1,SNR=4.5						
ILAR	**Eielson Array**	**83.39**	**21**	P	P	02 53 30.9	-0.8
	0.4nm,0.9s,baz=266,slow=5.2,SNR=4.9						
YKA	**Yellowknife Ar**	**96.31**	**28**	P	P	02 54 34.2	+1.1
	0.3nm,0.9s,baz=241,slow=4.1,SNR=4.3						
TORD	**Torodi Ar. Bea**	**153.38**	**285**	PKPbc	PKPbc	03 01 02.8	-1.5
	0.4nm,0.8s,baz=98,slow=0.9,SNR=5.7						

IDC 01 03:19:52.4±2.4**, 6.59°S×129.45°E, h0^{km}, mb3.7**/1**, mb1 3.7**/3**, mb1mx3.4**/32**, mbtmp3.6**/3**, ML3.8**/2**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.3**/27**, Error ellipse: s-maj=176.2km s-min=31.6km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.96**	**18**	LR	LR	03 23 57.4	
	comp=Z,73nm,21.4s,baz=64,slow=41						
WRA	**Warramunga Arr**	**14.10**	**161**	Pn	Pn	03 23 12.7	-0.9
	0.6nm,0.3s,baz=343,slow=13,SNR=31						
WRA				Sn	Sn	03 25 38.0	-13
	1.2nm,0.3s,baz=344,slow=21,SNR=13						
ASAR	**Alice Springs**	**17.51**	**166**	P	P	03 23 58.9	-0.6
	0.2nm,0.3s,baz=341,slow=8.8,SNR=10						
ASAR				S	Sn	03 27 02.2	-12
	0.3nm,0.3s,baz=352,slow=26,SNR=5.5						
MKAR	**Makanchi Array**	**67.58**	**327**	P	P	03 30 51.0	0.0
	0.3nm,0.3s,baz=116,slow=7.5,SNR=5.6						

*NIED **01** 03:25:00, 39.60°N×142.40°E, h50^{km}, Mw3.8 Best double couple: $M_0$5.55000×10^{14} NP1:ϕ_s206.00000°, δ74.00000°, λ95.00000°. NP2:ϕ_s9.00000°, δ17.00000°, λ73.00000°.*

*JMA **01** 03:25:00.5, 39.62°N×142.31°E, h53^{km}±1^{km}, M4.0*

JMA Felt II J1.

*NEIC **01** 03:25:00.7±0.7, 39.52°N±0.07×142.25°E±0.06, h57^{km}±8^{km}, mb4.2/11, Error ellipse: s-maj=10.9km s-min=4.9km az=155.0*

*IDC **01** 03:25:00.9±2.3, 39.52°N×142.33°E, h56^{km}±21^{km}, mb3.5/13, mb1 3.8/17, mb1mx3.6/46, mbtmp3.8/17, ML3.4/3, MS2.8/7, Ms1 2.8/7, ms1mx2.6/45, Error ellipse: s-maj=19.6km s-min=15.1km az=101.0*

ISC 01 03:25:00.5±1.0**, 39.58°N**±0.04×**142.28°E**±0.08**, h52^{km}**±8^{km}**, n57, σ1^{s}11**/63**, mb4.0**/20**, MS2.9**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.36**	**270**	P	**Pn**	**03 25 10.7**	**+0.3**
MIYJ				S	**Sn**	**03 25 17.8**	**+0.4**
JTH	**Tanohata**	**0.48**	**318**	P	**Pn**	**03 25 11.7**	**0.0**
JTH				S	**Sn**	**03 25 19.6**	**-0.2**
OFUJ	**Ofunato**	**0.69**	**224**	P	**Pn**	**03 25 14.7**	**+0.5**
OFUJ				S	**Sn**	**03 25 25.0**	**+0.9**
JOM	**Ohasama**	**0.77**	**263**	P	**Pn**	**03 25 15.9**	**+0.6**
JOM				S	**Sn**	**03 25 27.0**	**+0.9**
JKZ	**Kuzumaki**	**0.84**	**299**	P	**Pn**	**03 25 16.4**	**+0.2**
JKZ				S	**Sn**	**03 25 27.8**	**+0.1**
JANG	**Nango**	**0.99**	**324**	P	**Pn**	**03 25 17.8**	**-0.4**
JANG				S	**Sn**	**03 25 30.7**	**-0.5**
JKMT	**Kesennumamotoy**	**0.99**	**220**	P	**Pn**	**03 25 18.7**	**+0.5**
JKMT				S	**Sn**	**03 25 31.9**	**+0.7**
JMK	**Ichinoseki**	**1.03**	**233**	P	**Pn**	**03 25 19.4**	**+0.6**
JMK				S	**Sn**	**03 25 33.3**	**+1.1**
JRG	**Rokugo**	**1.29**	**262**	P	**Pn**	**03 25 22.8**	**+0.6**
JIO	**Ouri**	**1.34**	**213**	P	**Pn**	**03 25 23.3**	**+0.5**
JIO				*e*S	**Sn**	**03 25 40.0**	**+0.5**
JAH	**Hinai**	**1.41**	**296**	P	**Pn**	**03 25 24.2**	**+0.4**
JAH				S	**Sn**	**03 25 42.4**	**+1.2**
JTM	**Tenmabayashi**	**1.52**	**323**	P	**Pn**	**03 25 25.2**	**-0.2**
ERM	**Erimo**	**2.52**	**15**	Pn	**Pn**	**03 25 38.8**	**-0.2**
ERM				Sn	**Sn**	**03 26 10.8**	**+2.2**
MJAR	**Matsushiro Arr**	**4.42**	**228**	P	**Pn**	**03 26 06.8**	**+1.7**
	0.3nm,0.3s,baz=36,slow=14,SNR=19						
MAJO	**Matsushiro**	**4.42**	**228**		**Pn**	**03 26 03.9**	**-1.2**
MAT	**Matsushiro**	**4.42**	**228**	P	**Pn**	**03 26 07.4**	**+2.3**
MAT				*e*S	**Sn**	**03 26 57.9**	**+2.7**
MJB9	**Matsu-Tunnel**	**4.42**	**228**		**Pn**	**03 26 04.6**	**-0.5**
ASAJ	**Asahikawa**	**4.54**	**3**	P	**Pn**	**03 26 07.2**	**+0.5**
	2.8nm,0.3s,baz=240,slow=12,SNR=12						
ASAJ				S	**Sn**	**03 26 57.8**	**-0.3**
	1.2nm,0.3s,baz=48,slow=33,SNR=4.8						
ASAJ				LR	LR	03 28 07.9	
	comp=Z,60nm,18.8s,baz=118,slow=41						
JKA	**Kamikawa-asahi**	**4.54**	**3**		**Pn**	**03 26 07.2**	**+0.5**
JKA					**Sn**	**03 26 57.8**	**-0.3**
INU	**Inuyama**	**5.95**	**226**	Pn	**Pn**	**03 26 26.2**	**+0.2**
JHJ	**Hachijo jima 2**	**6.75**	**198**	P	**Pn**	**03 26 36.3**	**-0.7**
	3.2nm,0.3s,baz=17,slow=11,SNR=2.0						
JHJ				S	**Sn**	**03 27 48.1**	**-4.5**
	2.5nm,0.3s,baz=6.5,slow=8.9,SNR=1.2						
USRK	**Ussuriysk Ar.**	**8.96**	**304**	P	**Pn**	**03 27 08.5**	**+1.3**
	baz=110,slow=14,SNR=2.4						
USRK				LR	LR	03 30 23.7	
	comp=Z,51nm,21.4s,baz=184,slow=36						
KSRS	**Korea Array**	**11.45**	**264**	P	Pn	03 27 46.2	+4.9
	0.5nm,0.3s,baz=70,slow=14,SNR=4.9						
KSRS				LR	LR	03 31 36.6	
	comp=Z,42nm,18.6s,baz=130,slow=34						
KLR	**Kul'dur**	**12.23**	**326**	LR	LR	03 32 17.2	
	comp=Z,30nm,19.8s,baz=208,slow=36						
SONM	**Songino Array**	**27.03**	**300**	P	**P**	**03 30 37.5**	**-0.3**
	0.8nm,0.5s,baz=91,slow=7.4,SNR=4.1						
SONM				LR	LR	03 41 56.2	
	comp=Z,24nm,20.6s,baz=45,slow=38						
ENH	**Enshi**	**28.32**	**261**	P	**P**	**03 30 48.8**	**-0.6**
H11N2	**WAKE ISLAND Hy**	**28.97**	**126**	T	T	04 01 30.9	
	baz=318,slow=75,SNR=386						
H11N1	**WAKE ISLAND Hy**	**28.98**	**126**	T	T	04 01 31.7	
	baz=318,slow=75,SNR=348						
H11N3	**WAKE ISLAND Hy**	**28.99**	**126**	T	T	04 01 33.6	
	baz=318,slow=75,SNR=344						
TLY	**Talaya**	**29.26**	**307**	LR	LR	03 42 47.0	
	comp=Z,29nm,18.5s,baz=117,slow=36						
H11S1	**WAKE ISLAND Hy**	**29.77**	**128**	T	T	04 02 29.5	
	baz=320,slow=76,SNR=31						
H11S3	**WAKE ISLAND Hy**	**29.77**	**128**	T	T	04 02 29.4	
	baz=320,slow=76,SNR=19						
H11S2	**WAKE ISLAND Hy**	**29.79**	**128**	T	T	04 02 27.9	
	baz=320,slow=76,SNR=25						
ZAA0	**Zalesovo Array**	**40.75**	**310**	P	**P**	**03 32 35.4**	**-0.7**
ZAA0				IAmb	IAmb	03 32 37.1	
	comp=Z,3.3nm,0.5s						
ZALV	**Zalesovo Beam**	**40.75**	**310**	P	**P**	**03 32 35.9**	**-0.3**
	comp=Z,3.4nm,0.4s,baz=95,slow=8.0,SNR=19						
MK31	**Makanchi Array**	**43.39**	**300**	P	**P**	**03 32 57.4**	**-0.4**
MKAR	**Makanchi Array**	**43.39**	**300**	P	**P**	**03 32 57.5**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=82,slow=10,SNR=11						
MKAR				LR	LR	03 51 21.4	
	comp=Z,30nm,18.2s,baz=94,slow=36						
PPLA	**Purkeypile**	**44.70**	**36**	P	**P**	**03 33 07.8**	**-0.5**
PPLA				IAmb	IAmb	03 33 15.0	
	comp=Z,3.6nm,1.2s						
KURK	**Kurchatov**	**44.94**	**306**	P	**P**	**03 33 09.6**	**-0.5**
RC01	**Rabbit Creek A**	**45.94**	**39**	P	**P**	**03 33 18.1**	**+0.2**
RC01				IAmb	IAmb	03 33 34.9	
	comp=Z,4.0nm,1.2s						
GHO	**Glory Hole Cre**	**46.27**	**38**	P	**P**	**03 33 20.8**	**+0.1**
GHO				IAmb	IAmb	03 33 24.2	
	comp=Z,1.7nm,0.9s						
ILAR	**Eielson Array**	**46.99**	**34**	P	**P**	**03 33 26.4**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=258,slow=6.0,SNR=10						
SCM	**Sheep Creek Mo**	**47.02**	**38**	P	**P**	**03 33 26.9**	**+0.4**
INK	**Inuvik**	**51.82**	**28**	P	**P**	**03 34 00.9**	**-1.8**
	comp=Z,1.2nm,0.6s,baz=256,slow=8.0,SNR=2.3						
ABKAR	**Akbulak array**	**56.84**	**309**	P	**P**	**03 34 39.2**	**-0.3**
ABKAR				IAmb	IAmb	03 34 39.9	
	comp=Z,1.4nm,0.6s						
WB0	**Warramunga Arr**	**59.49**	**189**	P	**P**	**03 34 56.7**	**-1.6**
WB0				IAmb	IAmb	03 34 58.1	
	comp=Z,5.5nm,1.1s						
WB2	**Warramunga Arr**	**59.67**	**189**	P	**P**	**03 34 57.7**	**-1.8**
WB2				IAmb	IAmb	03 35 03.3	
	comp=Z,2.9nm,1.1s						
WRA	**Warramunga Arr**	**59.67**	**189**	P	**P**	**03 34 58.7**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=8.1,slow=6.9,SNR=8.5						
YKA	**Yellowknife Ar**	**61.27**	**31**	P	**P**	**03 35 10.1**	**+0.1**
	comp=Z,0.1nm,0.5s,baz=299,slow=5.7,SNR=5.0						
ASAR	**Alice Springs**	**63.40**	**189**	P	**P**	**03 35 24.0**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=13,slow=4.6,SNR=6.6						
FINES	**FINESS Array B**	**66.89**	**332**	P	**P**	**03 35 48.6**	**+1.8**
	comp=Z,1.2nm,0.6s,baz=35,slow=10,SNR=7.3						
AKASG	**Malin Array Be**	**72.71**	**322**	P	**P**	**03 36 23.2**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=45,slow=6.5,SNR=6.3						
NVAR	**Mina Array Bea**	**72.93**	**54**	P	**P**	**03 36 24.7**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=313,slow=7.1,SNR=4.0						
PDAR	**Pinedale Array**	**75.41**	**46**	P	**P**	**03 36 39.4**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=334,slow=2.2,SNR=5.0						
GERES	**GERESS Array B**	**80.91**	**328**	P	**P**	**03 37 10.1**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=42,slow=4.5,SNR=1.8						
LPAZ	**La Paz**	**144.78**	**57**	PKP	**PKPab**	**03 44 31.4**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=326,slow=5.8,SNR=2.0						
LPAZ	**La Paz**	**144.78**	**57**		**PKPab**	**03 44 30.2**	**-1.5**

*NIED **01** 04:28:00, 38.10°N×141.70°E, h53^{km}, Mw3.7 Best double couple: $M_0$3.97000×10^{14} NP1:ϕ_s61.00000°, δ63.00000°, λ128.00000°. NP2:ϕ_s180.00000°, δ46.00000°, λ39.00000°.*

*JMA **01** 04:28:40.3, 38.15°N×141.74°E, h55^{km}±1^{km}, M3.8*

JMA Felt I J1.

*IDC **01** 04:28:42.8±2.9, 37.99°N×141.85°E, h84^{km}±27^{km}, mb3.0/7, mb1 3.3/10, mb1mx3.1/63, mbtmp3.4/10, MS2.1/1, Ms1 2.1/1, ms1mx1.8/12, Error ellipse: s-maj=25.6km s-min=18.1km az=100.0*

ISC 01 04:28:39.2±1.3**, 38.11°N**±0.04×**141.91°E**±0.08**, h45^{km}**±12^{km}**, n32, σ1^{s}50**/40**, mb3.4**/7**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.40**	**300**	P	**Pn**	**04 28 49.7**	**+0.7**
JIKH				S	**Sn**	**04 28 56.3**	**+0.4**
JIO	**Ouri**	**0.56**	**308**	P	**Pn**	**04 28 51.2**	**+0.3**
JIO				S	**Sn**	**04 28 58.9**	**-0.4**
JKMT	**Kesennumamotoy**	**0.78**	**334**	P	**Pn**	**04 28 54.2**	**+0.4**
JKMT				S	**Sn**	**04 29 04.1**	**-0.3**
JMM	**Marumori**	**0.92**	**255**	P	**Pn**	**04 28 55.2**	**-0.4**
JMM				S	**Sn**	**04 29 06.1**	**-1.6**
JMK	**Ichinoseki**	**1.00**	**327**	P	**Pn**	**04 28 57.1**	**+0.3**
JMK				S	**Sn**	**04 29 09.3**	**-0.4**
JOU	**Okura**	**1.01**	**285**	P	**Pn**	**04 28 56.8**	**-0.2**
JOU				S	**Sn**	**04 29 08.8**	**-1.3**
JFK	**Kawauchi**	**1.11**	**228**	P	**Pn**	**04 28 58.5**	**+0.2**
JFK				S	**Sn**	**04 29 12.1**	**-0.3**
JFT	**Otama**	**1.38**	**245**	P	**Pn**	**04 29 02.4**	**+0.4**
JFT				S	**Sn**	**04 29 18.4**	**-0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOM	Ohasama	1.45	341	P	Pn	04 29 03.5	+0.6
JOM				S	Sn	04 29 20.6	0.0
JYS	Shirataka	1.46	275	P	Pn	04 29 03.0	0.0
JYS				S	Sn	04 29 20.0	-1.0
JYK	Kaneyama	1.46	304	P	Pn	04 29 02.9	-0.2
JYK				S	Sn	04 29 20.2	-0.8
JRG	Rokugo	1.63	323	P	Pn	04 29 05.9	+0.5
JYA	Atsumi	1.79	286	P	Pn	04 29 07.4	-0.2
JYA				S	Sn	04 29 28.0	-1.2
MJAR	Matsushiro Arr	3.34	243	P	Pn	04 29 30.1	+1.2
	0.2nm,0.3s,baz=27,slow=8.8,SNR=3.0						
MJAR				S	Sn	04 30 10.3	+3.1
	0.3nm,0.3s,baz=83,slow=33,SNR=4.9						
MAT	Matsushiro	3.34	243	P	Pn	04 29 31.6	+2.7
MAT				eS	Sn	04 30 12.6	+5.3
JHJ	Hachijo jima 2	5.27	200	P	Pn	04 29 56.5	+1.1
	3.9nm,0.3s,baz=60,slow=20,SNR=1.8						
JHJ				S	Sn	04 30 52.8	-2.1
	11nm,0.3s,baz=246,slow=20,SNR=2.9						
USRK	Ussuriysk Ar.	9.64	312	P	Pn	04 30 58.5	+3.2
	baz=117,slow=14,SNR=6.7						
KSRS	Korea Array	11.09	271	LR	LR	04 34 53.1	
	comp=Z,9.6nm,19.7s,baz=175,slow=33						
H11N2	WAKE ISLAND Hy	28.38	123	T	T	05 04 41.2	
	baz=316,slow=75,SNR=143						
H11N1	WAKE ISLAND Hy	28.39	123	T	T	05 04 40.9	
	baz=316,slow=75,SNR=204						
H11N3	WAKE ISLAND Hy	28.40	123	T	T	05 04 42.2	
	baz=316,slow=75,SNR=101						
H11S1	WAKE ISLAND Hy	29.13	125	T	T	05 05 44.4	
	baz=313						
H11S3	WAKE ISLAND Hy	29.14	125	T	T	05 05 45.0	
	baz=313,SNR=3.2						
H11S2	WAKE ISLAND Hy	29.15	125	T	T	05 05 44.4	
	baz=313						
MKAR	Makanchi Array	43.89	301	P	P	04 36 40.8	-0.4
	0.3nm,0.7s,baz=83,slow=13,SNR=2.3						
KURBB	Kurchatov Arra	45.66	307	P	P	04 36 54.2	-0.9
	0.5nm,0.4s,baz=82,slow=8.8,SNR=9.5						
ILAR	Eielson Array	48.38	33	P	P	04 37 16.5	+0.4
	0.2nm,0.7s,baz=260,slow=6.6,SNR=4.1						
WRA	Warramunga Arr	58.18	188	P	P	04 38 26.4	-2.2
	0.3nm,0.5s,baz=4.6,slow=7.1,SNR=8.4						
ASAR	Alice Springs	61.91	188	P	P	04 38 52.8	-1.3
	0.4nm,0.7s,baz=356,slow=3.7,SNR=2.5						
YKA	Yellowknife Ar	62.68	31	P	P	04 38 59.4	+0.5
	0.1nm,0.7s,baz=302,slow=5.8,SNR=2.7						
PDAR	Pinedale Array	76.63	46	P	P	04 40 26.1	+0.7
	0.2nm,0.5s,baz=298,slow=3.9,SNR=2.3						
LPAZ	La Paz	145.80	59	PKPbc	PKPbc	04 48 14.3	-0.2
	0.6nm,0.6s,baz=116,slow=6.1,SNR=2.8						

*ATH **01** 04:40:38.4, 37°.42N×19°.60E, h5km±2km, ML3.5/22, Error ellipse: s-maj=3.2km s-min=1.4km az=54.0*
*IDC **01** 04:40:42.4±1.1, 37°.63N×20°.01E, h0km, mb3.7/8, mb1 3.7/14, mb1mx3.6/47, mbtmp3.6/14, ML3.4/5, MS2.6/6, Ms1 2.6/6, ms1mx2.3/56, Error ellipse: s-maj=19.8km s-min=18.9km az=173.0*
*THE **01** 04:40:43.0, 37°.57N×19°.79E, h0km±2km, ML3.5/9, Error ellipse: s-maj=3.6km s-min=2.1km az=254.0*
ISC 01 04:40:40.0±1.4**, 37°.46N**±0°.04×**19°.66E**±0°.03**, h3**km±9km**, n96,** σ1s.55/110**, mb3.8**/8**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.92	36	P	Pg	04 40 57.1	-0.5
KEF3				S	Sb	04 41 10.8	-0.4
KEF2	Argostoli. Kep	0.96	43	P	Pg	04 40 57.6	-0.9
KEF2				S	Sg	04 41 11.4	+0.4
ARGA	Argostoli. Kep	0.97	42	P	Pg	04 40 58.1	-0.5
KEF4	Livadi, Kephal	1.00	37	P	Pg	04 40 58.5	-0.6
KEF4				S	Sb	04 41 13.3	-0.2
KEF1	Kardakata, Kep	1.04	38	P	Pg	04 40 59.0	-0.9
ZAK2	Zakynthos	1.04	71	P	Pb	04 40 59.7	-0.9
ZAK2				S	Sb	04 41 14.4	-0.2
	23µm,0.6s						
KFL	Anninata	1.11	54	P	Pg	04 41 00.0	-1.2
KFL				S	Sg	04 41 14.7	-0.9
	5µm,0.7s						
KFL	Anninata	1.11	54	P	Pg	04 40 59.8	-1.4
KFL				S	Sg	04 41 15.5	-0.1
KFL				AML	AML	04 41 20.6	
	comp=E,10081µm,0.6s						
KFL				AML	AML	04 41 22.9	
	comp=N,10818µm,0.4s						
VSK1	VASILIKIADES	1.19	37	P	Pg	04 41 01.8	-1.0
VSK1				S	Sg	04 41 18.0	-0.2
	comp=N,3µm,0.6s						
FSK	Fiskardo	1.23	35	P	Pn	04 41 02.3	-1.7
FSK	Fiskardo	1.23	35	P	Pn	04 41 02.1	-1.8
FSK				AML	AML	04 41 24.5	
	comp=E,2836µm,0.6s						
FSK				AML	AML	04 41 28.4	
	comp=N,2935µm,0.7s						
VTN	Vitineika	1.30	69	P	Pg	04 41 05.6	+0.8
VTN	Vitineika	1.30	69	P	Pn	04 41 03.3	-1.6
EVGI	Lefkada island	1.40	34	P	Pn	04 41 05.4	-1.0
EVGI	Lefkada island	1.40	34	P	Pn	04 41 05.4	-1.0
MGNA	Meganis	1.49	37	P	Pg	04 41 08.0	-0.6
MGNA				AML	AML	04 41 32.5	
	comp=N,1532µm,0.6s						
MGNA				AML	AML	04 41 36.5	
	comp=E,1510µm,0.6s						
LKD2	Lefkada island	1.54	30	P	Pg	04 41 09.6	0.0
LKD2				S	Sb	04 41 29.3	+0.1
	comp=E,1µm,0.6s						
LKD2	Lefkada island	1.54	30	P	Pg	04 41 09.2	-0.4
LKD2				AML	AML	04 41 40.4	
	comp=N,2226µm,0.7s						
LKD2				AML	AML	04 41 44.0	
	comp=E,1988µm,0.6s						
RLS	Riolos of Patr	1.56	67	P	Pb	04 41 08.6	-0.7
RLS				S	Sb	04 41 29.7	+0.3
	comp=E,1µm,0.7s						
RLS	Riolos of Patr	1.56	67	P	Pb	04 41 08.6	-0.7
RLS				S	Sg	04 41 30.6	+0.6
RLS				AML	AML	04 41 36.3	
	comp=N,2096µm,0.5s						
RLS				AML	AML	04 41 37.9	
	comp=E,1930µm,0.7s						
AMT	Artemida-Makis	1.64	87	P	Pb	04 41 09.9	-0.8
AMT	Artemida-Makis	1.64	87	P	Pb	04 41 10.2	-0.6
AMT				AML	AML	04 41 43.5	
	comp=N,3166µm,0.6s						
AMT				AML	AML	04 41 47.0	
	comp=E,4479µm,0.9s						
DRO	Drossia	1.70	73	P	Pb	04 41 11.4	-0.5
DRO				S	Sb	04 41 33.5	-0.2
	comp=E,2µm,0.6s						
DRO	Drossia	1.70	73	P	Pb	04 41 11.3	-0.5
DRO				S	Sg	04 41 35.6	+0.9
DRO				AML	AML	04 41 44.0	
	comp=E,3853µm,0.6s						
DRO				AML	AML	04 41 47.2	
	comp=N,4144µm,0.6s						
PYL	PYLOS	1.76	108	P	Pg	04 41 12.5	-1.2
ITM	Ithomi	1.83	98	P	Pb	04 41 13.0	-1.1
ITM	Ithomi	1.83	98	P	Pb	04 41 13.1	-1.0
ITM				AML	AML	04 41 52.3	
	comp=N,1058µm,0.8s						
ITM				AML	AML	04 41 54.1	
	comp=E,1039µm,0.8s						
LAKA	Lakka	2.00	66	P	Pb	04 41 16.1	-0.9
LAKA	Lakka	2.00	66	P	Pb	04 41 16.0	-0.9
LAKA				AML	AML	04 41 52.5	
	comp=N,1214µm,1.0s						
LAKA				AML	AML	04 42 00.3	
	comp=E,1023µm,1.0s						
EFP	Efpalio	2.02	61	P	Pb	04 41 16.3	-1.0
EFP				S	Sn	04 41 40.9	+0.2
	comp=E,722nm,0.7s						
EFP	Efpalio	2.02	61	P	Pb	04 41 16.3	-1.0
EFP				AML	AML	04 41 52.5	
	comp=N,1458µm,0.5s						
EFP				AML	AML	04 41 55.7	
	comp=E,1303µm,0.9s						
KLV	Kalavryta, Ach	2.06	73	P	Pb	04 41 16.9	-1.1
KLV	Kalavryta, Ach	2.06	73	P	Pb	04 41 16.9	-1.1
KLV				AML	AML	04 42 00.0	
	comp=N,1128µm,0.7s						
KLV				AML	AML	04 42 09.8	
	comp=E,824µm,0.9s						
TRIP	Tripoli	2.08	87	P	Pb	04 41 16.9	-1.5
TRIP	Tripoli	2.08	87	P	Pb	04 41 16.8	-1.5
TRIP				AML	AML	04 42 04.9	
	comp=N,782µm,0.7s						
TRIP				AML	AML	04 42 06.1	
	comp=E,950µm,0.6s						
TRIZ	Trizonia	2.12	64	P	Pb	04 41 17.7	-1.2
TRIZ	Trizonia	2.12	64	P	Pb	04 41 17.7	-1.2
ANX	Ano Chora	2.12	57	P	Pb	04 41 18.0	-1.0
ANX				S	Sn	04 41 42.6	-0.6
	comp=E,1µm,0.6s						
ANX	Ano Chora	2.12	57	P	Pb	04 41 18.0	-1.0
ANX				AML	AML	04 41 55.5	
	comp=N,2385µm,0.7s						
ANX				AML	AML	04 42 00.4	
	comp=E,2830µm,0.5s						
SERG	Sergoula	2.12	63	P	Pb	04 41 17.6	-1.5
SERG				S	Sn	04 41 43.8	+0.6
	comp=E,670nm,0.5s						
SERG	Sergoula	2.12	63	P	Pb	04 41 17.4	-1.7
SERG				AML	AML	04 41 56.0	
	comp=E,1455µm,0.5s						
SERG				AML	AML	04 42 01.0	
	comp=N,1233µm,0.6s						
IGT	Igoumenitsa	2.14	14	P	Pb	04 41 17.1	-2.2
IGT	Igoumenitsa	2.14	14	P	Pn	04 41 16.8	+0.3
IGT				AML	AML	04 42 01.3	
	comp=N,552µm,0.7s						
IGT				AML	AML	04 42 07.2	
	comp=E,757µm,0.7s						
VLX	Vlachokerasia	2.17	92	P	Pb	04 41 17.8	-2.1
VLX	Vlachokerasia	2.17	92	P	Pb	04 41 17.7	-2.3
VLX				AML	AML	04 42 05.0	
	comp=N,1518µm,0.7s						
VLX				AML	AML	04 42 08.6	
	comp=E,1331µm,0.9s						
KALE	Kalithea	2.17	64	P	Pb	04 41 18.3	-1.7
KALE	Kalithea	2.17	64	P	Pb	04 41 18.3	-1.7
KALE				AML	AML	04 42 01.3	
	comp=N,1475µm,0.5s						
KALE				AML	AML	04 42 01.8	
	comp=E,1186µm,0.6s						
EVR	Evrytania	2.23	49	P	Pb	04 41 19.7	-1.4
EVR	Evrytania	2.23	49	P	Pb	04 41 19.6	-1.4
EVR				AML	AML	04 42 03.3	
	comp=E,720µm,0.7s						
EVR				AML	AML	04 42 08.6	
	comp=N,850µm,0.7s						
KEK	Kerkira	2.25	3	P	Pb	04 41 19.5	-1.8
KEK	Kerkira	2.25	3	P	Pb	04 41 18.8	-2.4
KEK				AML	AML	04 42 10.1	
	comp=E,927µm,0.9s						
KEK				AML	AML	04 42 28.8	
	comp=N,587µm,0.8s						
MAKR	Makrakomi, Fth	2.49	51	P	Pb	04 41 23.4	-2.0
MAKR	Makrakomi, Fth	2.49	51	P	Pb	04 41 23.4	-2.0
MAKR				AML	AML	04 42 17.0	
	comp=E,1285µm,1.0s						
MAKR				AML	AML	04 42 21.1	
	comp=N,1195µm,0.7s						
AGG	Agios Georgios	2.62	53	P	Pn	04 41 24.4	+1.2
AGG	Agios Georgios	2.62	53	P	Pn	04 41 24.3	+1.1
AGG				AML	AML	04 42 17.1	
	comp=N,590µm,0.6s						
AGG				AML	AML	04 42 21.0	
	comp=E,618µm,1.1s						
LTK	Loutraki	2.69	77	P	Pn	04 41 24.6	+0.5
THL	Klokotos Trika	2.80	41	P	Pn	04 41 27.3	+1.7
THL	Klokotos Trika	2.80	41	P	Pn	04 41 27.2	+1.7
THL				AML	AML	04 42 19.0	
	comp=E,380µm,1.1s						
THL				AML	AML	04 42 19.6	
	comp=N,392µm,0.8s						
KPRO	Kipourio	2.83	28	P	Pb	04 41 29.0	-2.1
LIT	Litokhoron	3.44	39	P	Pn	04 41 35.6	+1.1
OHR	Ohrid	3.75	13	iPn	Pg	04 41 53.8	+1.9
OHR	Ohrid	3.75	13	iPn	Pg	04 41 53.8	+1.9
VAE	Valguarnera	4.17	272	Pn	Pb	04 41 53.0	-0.9
	comp=N,1.6nm,0.3s,baz=131,slow=11,SNR=2.8						
VAE				Sn	Sb	04 42 43.9	-0.9
	comp=N,1.2nm,0.3s,baz=221,slow=17,SNR=2.5						
VAY	Valandovo	4.47	29	iPn	Pn	04 41 49.5	+0.9
VAY	Valandovo	4.47	29	iPn	Pn	04 41 49.5	+0.9
KNT	Kendrikon	4.47	33	P	Pn	04 41 49.4	+0.8
STIP	Stip	4.66	24	iPn	Pn	04 41 53.5	+2.3
STIP	Stip	4.66	24	iPn	Pn	04 41 53.5	+2.3
SKO	Skopje	4.71	16	iPn	Pn	04 41 53.2	+1.3
SKO	Skopje	4.71	16	iPn	Pn	04 41 53.2	+1.3
IDI	Anoyia	4.75	116	Pn	Pn	04 41 54.7	+2.2
	comp=N,1.8nm,0.3s,baz=241,slow=10,SNR=20						
IDI				Sn	Sn	04 42 44.2	-3.8
	comp=N,1.2nm,0.3s,baz=317,slow=19,SNR=1.7						
IDI				LR	LR	04 43 40.4	
	comp=N,43nm,20.1s,baz=264,slow=39						
SRS	Serrai	4.76	39	P	Pn	04 41 52.9	+0.3
DBRK	Dubrovnik	5.33	348	ePn	Pn	04 42 01.1	+0.7
DBRK				Sn	Sn	04 42 59.2	-3.0
MAKA	Makarska	6.16	342	ePn	Pn	04 42 13.1	+1.3
MAKA				Sn	Sn	04 43 19.8	-2.9
ZIRJ	Zirje	6.90	335	ePn	Pn	04 42 26.6	+4.7
KIJV	Kijevo	6.99	340	ePn	Pn	04 42 25.7	+2.5
KIJV				Sn	Sn	04 43 39.4	-3.7
MORI	Morici	7.07	336	ePn	Pn	04 42 27.2	+3.0
MORI				Sn	Sn	04 43 42.6	-2.4
DUGI	Dugi Otok	7.40	333	ePn	Pn	04 42 32.7	+3.9
DUGI				Sn	Sn	04 43 49.2	-4.0
UDBI	Udbina	7.65	339	ePn	Pn	04 42 36.0	+3.8
MOSL	Moslavina	8.43	346	ePn	Pn	04 42 42.5	-0.5
MLR	Muntele Rosu	9.31	28	Pn	Pn	04 42 56.1	+1.0
	comp=N,0.1nm,0.3s,baz=163,slow=11,SNR=2.6						
MLR				LR	LR	04 46 56.1	
	comp=N,43nm,19.1s,baz=114,slow=41						
BRTR	Keskin Array B	11.18	74	LR	LR	04 47 41.4	
	comp=N,39nm,19.9s,baz=264,slow=39						
VRAC	Vranov	12.05	350	LR	LR	04 49 10.2	
	comp=N,20nm,19.1s,baz=320,slow=43						
GERES	GERESS Array B	12.18	341	Pn	Pn	04 43 37.2	+2.9
	comp=N,0.1nm,0.3s,baz=158,slow=14,SNR=5.1						
AKASG	Malin Array Be	14.90	24	Pn	Pn	04 44 10.9	-0.4
	baz=210,slow=11,SNR=1.1						
EIL	Elat	14.92	117	Pn	Pn	04 44 11.2	-0.5
	comp=N,0.4nm,0.3s,baz=316,slow=11,SNR=3.6						
MDT	Midelt	20.36	264	LR	LR	04 55 09.8	
	comp=N,18nm,19.9s,baz=118,slow=42						
HFS	Hagfors	23.01	352	P	P	04 45 47.7	+1.9
	comp=N,2.0nm,0.6s,baz=168,slow=8.3,SNR=5.9						
EKA	Eskdalemuir Ar	23.63	326	P	P	04 45 54.5	+2.5
	comp=N,3.8nm,1.0s,baz=121,slow=14,SNR=3.4						
NOA	NORSAR Array B	24.20	350	P	P	04 45 59.3	+1.9
	comp=N,1.2nm,1.1s,baz=172,slow=11,SNR=3.0						
FINES	FINESS Array B	24.34	7	P	P	04 45 59.8	+1.1
	comp=N,2.0nm,0.8s,baz=179,slow=12,SNR=3.4						
TORD	Torodi Ar. Bea	29.04	218	P	P	04 46 47.3	+5.9
	comp=N,0.5nm,0.8s,baz=30,slow=9.1,SNR=3.3						
AKTO	Aktyubinsk	30.16	52	LR	LR	05 01 14.2	
	comp=N,11nm,20.7s,baz=315,slow=41						
MKAR	Makanchi Array	46.26	58	P	P	04 49 06.1	-0.4
	comp=N,0.8nm,0.5s,baz=272,slow=7.1,SNR=8.2						
ZALV	Zalesovo Beam	46.68	48	P	P	04 49 08.8	-0.8
	comp=N,1.2nm,0.3s,baz=294,slow=8.0,SNR=4.0						
YKA	Yellowknife Ar	73.83	340	P	P	04 52 18.5	+3.1
	comp=N,0.1nm,0.6s,baz=46,slow=5.4,SNR=2.7						

*IDC **01** 04:58:47.3±2.0, 9°.28S×125°.29E, h0km, mb3.6/1, mb1 3.8/4, mb1mx3.4/51, mbtmp3.7/4, ML3.7/3, Error ellipse: s-maj=30.9km s-min=29.3km az=72.0*
*DJA **01** 04:58:49.7±0.7, 9°S±5°×12°5E±°, h11km±6km, M3.7/6, mb4.0/1, MLv3.5/6*
ISC 01 04:58:50.9±1.3**, 9°.48S**±0°.10×**125°.25E**±0°.08**, h33**km**, n8,** σ2s.28/12**, Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOEI	Soe	1.00	254	P	Pn	04 59 08.0	-0.7
BATI	Baumata	1.72	245	Pn	Pb	04 59 20.9	-0.9
	55nm,0.3s,baz=134,slow=2.0,SNR=26						
BATI				Sn	Sb	04 59 44.3	+1.2
	48nm,0.3s,baz=72,slow=23,SNR=8.9						
BATI	Baumata	1.72	245	P	Pn	04 59 19.1	+0.6
EDFI	Ende, Flores	3.58	281	P	Pn	04 59 43.1	-1.2
FITZ	Fitzroy Crossi	8.57	177	Pn	Pn	05 00 55.8	+3.0
	1.2nm,0.3s,baz=4.4,slow=11,SNR=26						
FITZ				Sn	Sn	05 02 28.1	-0.3
	1.4nm,0.3s,baz=114,slow=14,SNR=8.3						
WRA	Warramunga Arr	13.61	141	Pn	Pn	05 02 03.9	+2.1
	0.3nm,0.3s,baz=318,slow=11,SNR=2.4						
WRA				Sn	Sn	05 04 29.6	-2.3
	0.4nm,0.3s,baz=321,slow=25,SNR=1.4						
ASAR	Alice Springs	16.35	151	Pn	Pn	05 02 39.9	+1.8
	0.2nm,0.3s,baz=330,slow=13,SNR=9.6						
ASAR				Sn	Sn	05 05 34.3	-4.4
	0.1nm,0.3s,baz=320,slow=22,SNR=3.0						
MKAR	Makanchi Array	67.84	330	P	P	05 09 46.4	+0.5
	0.3nm,0.5s,baz=139,slow=7.5,SNR=2.8						

*SVSA **01** 04:59:54.6±0.3, 37°.39N×20°.60W, h10km, ML3.5, Error ellipse: s-maj=4.1km s-min=3.6km az=39.0*
ISC 01 04:59:37.9±1.0**, 37°.68N**±0°.08×**20°.47W**±0°.05**, h10**km**, n27,** σ2s.34/33**, 1C, Azores Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	3.72	261	eP	Pb	05 00 44.4	+0.7
PSMN				eS	Sn	05 01 21.6	+2.3
PSMN				A	A	05 01 26.3	
	11nm,0.5s						
PSMA	Santa Maria	3.77	261	eP	Pb	05 00 44.9	+0.3
PSMA				eS	Sn	05 01 22.7	+2.2
PSMA				A	A	05 01 28.3	
	12nm,0.2s						
ADH	Angra Heroismo	5.42	282	eP	Pb	05 01 08.8	-3.8
PMOZ	Porto Moniz, M	5.54	150	eP	Pb	05 01 12.5	-2.2
PMPST	Porto Santo, M	5.70	142	eP	Pb	05 01 14.0	-3.4
PMPST				eS	Sn	05 02 11.5	+3.4
PMPS	Porto Santo	5.72	143	eP	Pb	05 01 14.2	-3.5
PMPS				eS	Sn	05 02 12.0	+3.5
PMPS				A	A	05 02 18.4	
	16nm,0.8s						
PMAR	Madeira	5.74	148⇑	eP	Pb	05 01 15.0	-3.2
PMAR				eS	Sn	05 02 12.8	+3.5
PMAR				A	A	05 02 16.9	
	15nm,0.7s						
FUL	Funchal	5.81	149	eP	Pb	05 01 15.8	-3.5
PMAFR	Mafra	8.89	78	eS	Sn	05 03 29.7	+3.1
PFVI	Vila Bisbo	9.29	90	eS	Sn	05 03 38.6	+2.3
PSBE	So Bento	9.33	75	eS	Sn	05 03 40.5	+3.2
PTEO	Sao Teotonio	9.33	87	eS	Sn	05 03 38.5	+1.2
PNCL	Nicolau / Gran	9.45	84	eS	Sn	05 03 41.6	+1.2
PCAS	Casmilo, Conde	9.64	72	eS	Sn	05 03 46.2	+1.3
MESJ	Messejana	9.71	85	eS	Sn	05 03 47.5	+0.9
PMTG	Montargil	9.72	78	eS	Sn	05 03 49.3	+2.4
EVO	Evora	9.86	81	eS	Sn	05 03 52.4	+2.0
PCVE	Castro Verde	9.86	86	eS	Sn	05 03 50.4	-0.1
PBEJ	Beja	9.98	84	eS	Sn	05 03 55.0	+1.7
PVAQ	Vaqueiros	10.14	88	eS	Sn	05 03 58.1	+0.9
PESTR	Estremoz	10.20	79	eS	Sn	05 04 00.8	+2.0
PGAV	Gavieira, Arco	10.32	62	eP	Pn	05 02 15.7	+10
PGAV				eS	Sn	05 04 01.8	+0.1
PCBR	Castelo Branco	10.38	74	eS	Sn	05 04 04.0	+0.9
PMRV	Marv??o	10.40	76	eS	Sn	05 04 04.5	+0.9
PCAB	Cabril	10.40	63	eS	Sn	05 04 04.6	+0.9
MVO	Moncorvo	10.97	67	eS	Sn	05 04 17.8	+0.1
PBRG	Braganca	11.35	64	eP	Pn	05 02 19.4	-0.7
PBRG				eS	Sn	05 04 26.1	-0.8

*IDC **01** 04:59:34.8±2.0, 36°.21N×73°.35E, h0km, mb3.7/4, mb1 3.8/6, mb1mx3.4/65, mbtmp3.7/6, ML3.5/2, Error ellipse: s-maj=40.6km s-min=29.0km az=135.0*
*NNC **01** 04:59:53.9±5.3, 37°.11N×72°.12E, h223km±79km, mb2.4, mpv3.5, Error ellipse: s-maj=53.0km s-min=35.2km az=25.0*
ISC 01 04:59:47.7±1.6**, 36°.8N**±0°.1×**71°.7E**±0°.1**, h35**km**, n10,** σ2s.96/13**, 4C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	6.24	19	Pn	Pn	05 01 17.9	+0.6
	0.6nm,0.3s,baz=192,slow=7.5,SNR=9.5						
AAK				Sn	Sn	05 02 29.5	+2.0
	0.3nm,0.3s,baz=323,slow=20,SNR=10						
AAK	Ala-Archa	6.24	19	P	Pn	05 01 18.4	+1.1
	4.7nm,0.7s						
AAK				⇑S	Sn	05 02 30.0	+2.6
	8.9nm,0.8s						
KK31	Karatay Array	6.40	352	⇓P	Pn	05 01 22.6	+3.1
	1.9nm,0.4s,baz=169,slow=12,SNR=16						
KK31				⇑S	Sn	05 02 33.9	+2.7
	5.9nm,0.9s,baz=172,slow=30,SNR=4.2						
TKM2	Tokmak 2	6.83	25	⇓P	Pn	05 01 27.1	+1.6
	3.4nm,1.1s						
TKM2				⇑S	Sn	05 02 38.6	-3.5
	1.9nm,0.6s						
AB31	Akbulak array	15.15	329	⇑P	Pn	05 03 17.5	-1.4
	0.3nm,0.4s,baz=143,slow=8.8,SNR=8.7						
AB31				⇓S	Sn	05 06 00.3	-5.0
	1.3nm,0.8s,baz=146,slow=23,SNR=3.5						
AKTO	Aktyubinsk	16.85	328	P	P	05 03 45.1	+2.6
	0.2nm,0.3s,baz=145,slow=8.7,SNR=7.6						
SONM	Songino Array	27.70	56	P	P	05 05 17.2	-15
	0.5nm,0.4s,baz=269,slow=10,SNR=4.2						
HFS	Hagfors	43.22	322	P	P	05 07 46.8	+1.7
	11nm,1.3s,baz=82,slow=11,SNR=2.0						
TORD	Torodi Ar. Bea	66.31	269	P	P	05 10 33.9	+1.0
	0.6nm,1.1s,baz=57,slow=5.3,SNR=1.8						
YKA	Yellowknife Ar	80.95	3	P	P	05 11 54.1	-4.0
	0.1nm,0.7s,baz=348,slow=6.4,SNR=3.0						

*IDC **01** 05:02:32.0±1.0, 7°.16S×154°.83E, h0km, mb4.0/12, mb1 4.2/13, mb1mx3.9/52, mbtmp4.0/13, ML3.6/1, MS3.2/4, Ms1 3.2/4, ms1mx2.7/34, Error ellipse: s-maj=32.0km s-min=20.3km az=138.0*
*NEIC **01** 05:02:37.3±1.4, 7°.3S±0°.1×154°.95E±0°.08, h35km±2km, mb4.4/12, Error ellipse: s-maj=19.2km s-min=13.1km az=194.0*
ISC 01 05:02:38.4±0.8**, 7°.14S**±0°.09×**154°.8E**±0°.1**, h41**km**, n31,** σ0s.79/31**, mb4.2**/18**, MS3.3**/3**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.90	318	Pn	Pn	05 03 36.6	+0.7
KRVT	Keravat (AS076	3.91	316	Pn	Pn	05 03 34.4	-1.7
	4.3nm,0.3s,baz=337,slow=13,SNR=1.5						
KRVT				Sn	Sn	05 04 20.8	+0.1
	9.1nm,0.3s,baz=198,slow=15,SNR=2.4						
HNR	Honiara	5.62	114	LR	LR	05 06 12.7	
	comp=Z,144nm,18.5s,baz=232,slow=40						
HNR	Honiara	5.62	114	Pn	Pn	05 03 52.8	-6.7
PMG	Port Moresby	7.85	253	Pn	Pn	05 04 29.9	-0.3
PMG				Sn	Sn	05 05 58.6	+0.8
WB0	Warramunga Arr	23.41	236	P	P	05 07 43.8	-0.3
WB2	Warramunga Arr	23.53	235	P	P	05 07 45.7	+0.5
WB2				IAmb	IAmb	05 07 49.9	
	comp=Z,19nm,1.4s						
WRA	Warramunga Arr	23.54	235	P	P	05 07 45.1	-0.2
	comp=Z,4.3nm,0.8s,baz=60,slow=9.6,SNR=5.1						
WRA				LR	LR	05 15 55.3	
	comp=Z,39nm,20.7s,baz=185,slow=34						
ASAR	Alice Springs	25.90	228	P	P	05 08 06.5	-0.4
	comp=Z,1.3nm,0.8s,baz=58,slow=8.7,SNR=6.2						
ASAR				LR	LR	05 17 09.6	
	comp=Z,80nm,18.8s,baz=58,slow=34						
STKA	Stephens Creek	27.51	205	LR	LR	05 18 51.0	
	comp=Z,82nm,19.1s,baz=223,slow=36						
FITZ	Fitzroy Crossi	30.38	246	P	P	05 08 45.2	-1.7
	comp=Z,3.1nm,1.0s,baz=56,slow=7.1,SNR=3.8						
CMAR	Chiang Mai Arr	60.63	296	P	P	05 12 47.2	+1.4
	comp=Z,0.8nm,0.3s,baz=126,slow=6.4,SNR=1.6						
SONM	Songino Array	69.33	327	P	P	05 13 42.4	+0.5
	comp=Z,0.8nm,0.6s,baz=120,slow=2.3,SNR=4.4						
GLB	Gilahina Butte	83.12	25	P	P	05 15 00.1	+0.3
GLB				IAmb	IAmb	05 15 10.3	
	comp=Z,4.6nm,1.1s						
CCB	Clear Creek Bu	83.19	21	P	P	05 14 59.0	-1.0
CCB				IAmb	IAmb	05 15 00.7	
	comp=Z,3.6nm,1.3s						
MKAR	Makanchi Array	83.35	319	P	P	05 15 01.8	+0.5
	comp=Z,0.9nm,0.7s,baz=76,slow=5.1,SNR=7.1						
ILAR	Eielson Array	83.59	22	P	P	05 15 00.4	-1.7
	comp=Z,0.3nm,0.4s,baz=237,slow=5.7,SNR=5.7						
RIDG	Independent Ri	83.83	23	P	P	05 15 03.4	0.0
BARN	Barnard Glacie	83.86	26	P	P	05 15 04.3	+0.5
BARN				IAmb	IAmb	05 15 04.8	
	comp=Z,2.9nm,0.8s						
CTGM	Chitina Glacie	83.96	26	P	P	05 15 05.0	+0.7
DOT	Dot Lake	84.08	23	P	P	05 15 04.5	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DOT				IAmb	IAmb	05 15 05.8	
	comp=Z,2.1nm,0.9s						
SCRK	**Sand Creek**	**84.28**	**23**	P	**P**	**05 15 05.8**	**0.0**
SCRK				IAmb	IAmb	05 15 20.9	
	comp=Z,3.9nm,1.3s						
HYT	**Haines Junctio**	**85.61**	**27**	P	**P**	**05 15 13.3**	**+0.8**
KURBB	**Kurchatov Arra**	**86.83**	**322**	P	**P**	**05 15 18.1**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=95,slow=5.2,SNR=2.1						
EPYK	**Eagle Plains**	**88.08**	**22**	P	**P**	**05 15 25.0**	**+0.7**
DLBC	**Dease Lake**	**88.38**	**31**	P	**P**	**05 15 26.6**	**+0.6**
	comp=Z,2.0nm,1.0s,baz=323,slow=5.1,SNR=4.0						
INK	**Inuvik**	**89.93**	**21**	P	**P**	**05 15 32.0**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=281,slow=4.7,SNR=5.4						
INK	**Inuvik**	**89.93**	**21**	P	**P**	**05 15 32.7**	**-0.2**
NVAR	**Mina Array Bea**	**91.99**	**52**	P	**P**	**05 15 44.1**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=256,slow=7.3,SNR=2.8						
YKA	**Yellowknife Ar**	**96.57**	**28**	P	**P**	**05 16 03.4**	**-0.2**
	comp=Z,1.6nm,0.9s,baz=262,slow=4.3,SNR=17						
TORD	**Torodi Ar. Bea**	**152.83**	**285**	PKPbc	**PKiKP**	**05 22 32.2**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=92,slow=2.1,SNR=5.2						
TORD				PKPab	**pPKPbc**	**05 22 42.5**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=107,slow=2.4,SNR=4.6						

IDC 01 05:12:37.1±7.1**, 22°.43S×179°.49E, h0km, mb3.7**/2**, mb1 4.0**/2**, mb1mx3.6**/31**, mbtmp3.7**/2**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.7**/35**, Error ellipse: s-maj=336.5km s-min=62.9km az=151.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.91**	**187**	LR	LR	05 21 52.7	
	comp=Z,59nm,18.7s,baz=166,slow=35						
ASAR	**Alice Springs**	**41.83**	**259**	P	P	05 20 27.5	-1.6
	0.7nm,0.6s,baz=92,slow=6.5,SNR=7.4						
WRA	**Warramunga Arr**	**42.05**	**265**	P	P	05 20 32.2	+1.3
	0.4nm,0.5s,baz=100,slow=7.7,SNR=7.0						
PMSA	**Palmer Station**	**80.44**	**157**	LR	LR	05 55 17.5	
	comp=Z,39nm,20.8s,baz=94,slow=32						
BRTR	**Keskin Array B**	**146.31**	**309**	PKPbc	PKPdf	05 32 19.4	+0.3
	2.9nm,0.7s,baz=99,slow=4.0,SNR=14						

*IDC **01** 05:27:07.8±5.2, 18°.81N×95°.12E, h84km±42km, mb3.4/9, mb1 3.6/10, mb1mx3.4/46, mbtmp3.7/10, MS2.7/2, Ms1 2.8/2, ms1mx2.4/28, Error ellipse: s-maj=45.3km s-min=16.6km az=59.0*

ISC 01 05:27:01.9±0.8**, 18°.68N**±0°.09×**94°.69E**±0°.08**, h35km, n39, σ1s69**/40**, mb3.7**/9**, Myanmar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MHMT	**Maesarieng**	**3.12**	**99**	P	**Pn**	**05 27 50.1**	**+1.6**
CM32	**Chiang Mai Arr**	**3.94**	**90**	P	**Pn**	**05 28 02.3**	**+2.5**
CM13	**Chiang Mai Arr**	**4.01**	**93**	P	**Pn**	**05 28 02.5**	**+1.7**
CM15	**Chiang Mai Arr**	**4.02**	**93**	P	**Pn**	**05 28 02.5**	**+1.5**
CM33	**Chiang Mai Arr**	**4.03**	**87**	P	**Pn**	**05 28 02.4**	**+1.3**
CM31	**Chiang Mai Arr**	**4.04**	**92**	P	**Pn**	**05 28 02.7**	**+1.5**
CMAR	**Chiang Mai Arr**	**4.04**	**92**	P	**Pn**	**05 28 02.4**	**+1.2**
	5.3nm,0.3s,baz=272,slow=15,SNR=26						
CMAR				S	**Sn**	**05 28 44.0**	**-3.3**
	24nm,0.3s,baz=354,slow=14,SNR=12						
CMAR				LR	LR	05 29 48.7	
	comp=Z,82nm,21.9s,baz=260,slow=44						
CM02	**Chiang Mai Arr**	**4.04**	**93**	P	**Pn**	**05 28 03.1**	**+1.8**
CM36	**Chiang Mai Arr**	**4.18**	**92**	P	**Pn**	**05 28 05.8**	**+2.6**
CM34	**Chiang Mai Arr**	**4.23**	**87**	P	**Pn**	**05 28 04.5**	**+0.7**
CM35	**Chiang Mai Arr**	**4.23**	**89**	P	**Pn**	**05 28 04.4**	**+0.6**
UMPA	**Umpang Tak**	**4.68**	**121**	P	**Pn**	**05 28 12.0**	**+1.9**
LAMP	**Lampang**	**4.69**	**91**	P	**Pn**	**05 28 12.7**	**+2.6**
PAYA	**Payao**	**4.94**	**81**	P	**Pn**	**05 28 16.0**	**+2.4**
PHRA	**Phrae**	**5.25**	**91**	P	**Pn**	**05 28 20.1**	**+2.2**
PHIT	**Phitsanulok**	**5.65**	**104**	P	**Pn**	**05 28 25.4**	**+2.1**
UTTA	**Uttaradit**	**5.65**	**99**	P	**Pn**	**05 28 24.9**	**+1.6**
SRDT	**SRDT**	**6.05**	**135**	P	**Pn**	**05 28 29.8**	**+0.9**
PHET	**Kaeng Krachan**	**7.45**	**140**	P	**Pn**	**05 28 49.0**	**+0.9**
ODAN	**Odare**	**10.56**	**322**	*e*P	**Pn**	**05 29 32.3**	**+1.3**
	21nm,0.2s						
ODAN				*e*S	**Sn**	**05 31 24.4**	**-3.8**
TAPN	**Taplejung**	**10.76**	**325**	*e*P	**Pn**	**05 29 34.5**	**+0.8**
	18nm,0.4s						
RAMN	**Ramite**	**11.11**	**319**	*e*P	**Pn**	**05 29 39.6**	**+1.2**
	31nm,0.3s						
JIRN	**Jiri**	**11.87**	**320**	*e*P	**Pn**	**05 29 50.0**	**+1.0**
	34nm,0.3s						
GUN	**Gumba**	**12.24**	**320**	*e*P	**Pn**	**05 29 55.5**	**+1.4**
	12nm,0.3s						
PKI	**Pulchoki**	**12.29**	**318**	*e*P	**Pn**	**05 29 56.1**	**+1.3**
	15nm,0.2s						
PKIN	**Phulchoki**	**12.30**	**318**	*e*P	**Pn**	**05 29 56.1**	**+1.2**
	18nm,0.2s						
GKN	**Gorkha**	**13.08**	**317**	*e*P	**Pn**	**05 30 06.7**	**+1.3**
	113nm,0.2s						
KOLN	**Koldanda**	**13.62**	**314**	*e*P	**Pn**	**05 30 13.3**	**+0.5**
	30nm,0.3s						
DANN	**Dangsing**	**13.89**	**316**	*e*P	**Pn**	**05 30 17.2**	**+0.7**
	24nm,0.3s						
MKAR	**Makanchi Array**	**29.84**	**343**	P	**P**	**05 33 07.2**	**+1.5**
	0.5nm,0.7s,baz=142,slow=7.2,SNR=3.9						
SONM	**Songino Array**	**30.61**	**16**	P	**P**	**05 33 11.9**	**-0.8**
	0.2nm,0.3s,baz=200,slow=11,SNR=1.5						
DAV	**Davao City (W)**	**32.18**	**107**	LR	LR	05 46 34.8	
	comp=Z,22nm,19.1s,baz=158,slow=37						
ZALV	**Zalesovo Beam**	**36.02**	**350**	P	**P**	**05 34 00.8**	**+1.3**
	0.4nm,0.3s,baz=180,slow=4.3,SNR=1.5						
FITZ	**Fitzroy Crossi**	**47.55**	**138**	P	**P**	**05 35 33.5**	**-0.6**
	1.1nm,0.7s,baz=309,slow=6.5,SNR=1.7						
WRA	**Warramunga Arr**	**54.64**	**133**	P	**P**	**05 36 26.6**	**-0.9**
	0.5nm,0.6s,baz=321,slow=7.2,SNR=8.2						
ASAR	**Alice Springs**	**56.88**	**136**	P	**P**	**05 36 43.1**	**-0.4**
	0.5nm,0.5s,baz=316,slow=6.9,SNR=6.7						
GERES	**GERESS Array B**	**70.30**	**316**	P	**P**	**05 38 12.8**	**+0.8**
	0.3nm,0.5s,baz=57,slow=7.2,SNR=3.6						
ILAR	**Eielson Array**	**84.59**	**22**	P	**P**	**05 39 30.1**	**-1.3**
	0.8nm,0.7s,baz=298,slow=4.4,SNR=10						
YKA	**Yellowknife Ar**	**95.85**	**13**	P	**P**	**05 40 23.9**	**-0.6**
	0.1nm,0.6s,baz=204,slow=29,SNR=2.2						

*IDC **01** 05:43:47.7±1.8, 22°.88S×179°.26W, h0km, mb4.5/7, mb1 4.7/7, mb1mx4.1/36, mbtmp4.5/7, Error ellipse: s-maj=64.7km s-min=26.9km az=151.0*

*NEIC **01** 05:44:26.6±1.3, 23°.2S±0°.1×179°.8W±0°.1, h348km±10km, mb4.4/21, Error ellipse: s-maj=19.0km s-min=17.7km az=66.0*

ISC 01 05:44:26.7±0.8**, 23°.26S**±0°.09×**179°.7W**±0°.1**, h350km, n34, σ1s24**/33**, mb4.3**/17**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.88**	**339**	Pn	**Pn**	**05 45 56.6**	**+0.2**
MSVF				S	**S**	**05 47 09.0**	**0.0**
NIUE	**Niue**	**10.05**	**67**		**P**	**05 46 46.6**	**-0.3**
DZM	**Mont Dzumac**	**12.82**	**273**	P	**P**	**05 47 15.3**	**-2.3**
QRZ	**Quartz Range**	**18.68**	**199**	P	**P**	**05 48 22.4**	**+1.6**
NNZ	**Nelson**	**18.81**	**196**	P	**P**	**05 48 22.6**	**+0.4**
LTZ	**Lake Taylor**	**20.57**	**197**	P	**P**	**05 48 40.0**	**+0.1**
LTZ				IAmb	IAmb	05 49 09.8	
	comp=Z,51nm,1.9s						
ARMA	**Armidale**	**26.48**	**248**	P	**P**	**05 49 35.9**	**+2.5**
ARMA				IAmb	IAmb	05 50 24.4	
	comp=Z,58nm,1.9s						
EIDS	**Eidsvold**	**26.66**	**260**	P	**P**	**05 49 37.2**	**+2.3**
CAN	**Canberra**	**29.67**	**239**	P	**P**	**05 50 03.0**	**+1.5**
CAN				IAmb	IAmb	05 50 20.0	
	comp=Z,58nm,1.8s						
CTAO	**Charters Tower**	**31.73**	**269**	P	**P**	**05 50 22.1**	**+2.6**
TOO	**Toolangi**	**33.00**	**236**	P	**P**	**05 50 30.1**	**-0.2**
TOO				IAmb	IAmb	05 51 30.4	
	comp=Z,25nm,1.4s						
TAU	**Tasmania Unive**	**33.55**	**226**	P	**P**	**05 50 35.3**	**+0.5**
STKA	**Stephens Creek**	**35.19**	**247**	P	**P**	**05 50 49.0**	**0.0**
	comp=Z,1.6nm,0.4s,baz=115,slow=14,SNR=5.7						
STKA	**Stephens Creek**	**35.19**	**247**	P	**P**	**05 50 49.4**	**+0.4**
COEN	**Coen**	**36.26**	**278**	P	**P**	**05 51 00.7**	**+2.4**
COEN				IAmb	IAmb	05 51 45.5	
	comp=Z,16nm,1.6s						
BBOO	**Buckleboo**	**39.92**	**246**	P	**P**	**05 51 27.1**	**-1.1**
BBOO				IAmb	IAmb	05 51 33.6	
	comp=Z,34nm,1.4s						
AS31	**Alice Springs**	**42.38**	**260**	P	**P**	**05 51 48.1**	**-0.2**
ASAR	**Alice Springs**	**42.38**	**260**	P	**P**	**05 51 48.0**	**-0.3**
	comp=Z,8.6nm,0.8s,baz=96,slow=7.8,SNR=65						
WR0	**Warramunga Arr**	**42.51**	**265**	P	**P**	**05 51 49.0**	**-0.3**
WB2	**Warramunga Arr**	**42.69**	**265**	P	**P**	**05 51 50.4**	**-0.3**
WB2				IAmb	IAmb	05 51 50.9	
	comp=Z,13nm,0.7s						
WB0	**Warramunga Arr**	**42.69**	**266**	P	**P**	**05 51 50.3**	**-0.4**
WB0				IAmb	IAmb	05 51 50.9	
	comp=Z,14nm,0.6s						
WRAB	**Tennant Creek**	**42.69**	**265**	P	**P**	**05 51 50.3**	**-0.5**
WRAB				IAmb	IAmb	05 51 50.7	
	comp=Z,12nm,0.9s						
WRA	**Warramunga Arr**	**42.70**	**265**	P	**P**	**05 51 50.2**	**-0.5**
	comp=Z,8.3nm,0.4s,baz=103,slow=8.6,SNR=34						
FORT	**Forrest**	**46.77**	**249**	P	**P**	**05 52 20.8**	**-1.6**
KNRA	**Kununurra**	**48.94**	**269**	P	**P**	**05 52 38.6**	**-0.4**
KNRA				IAmb	IAmb	05 52 39.5	
	comp=Z,8.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**51.12**	**265**	P	**P**	**05 52 54.8**	**-0.6**
SIJI	**Sorong**	**52.47**	**288**	P	**P**	**05 53 05.5**	**+0.2**
	comp=Z,18nm,0.6s,baz=86,slow=5.7,SNR=11						
MORW	**Morawa**	**57.32**	**249**	P	**P**	**05 53 37.4**	**-2.2**
MORW				IAmb	IAmb	05 55 38.4	
	comp=Z,28nm,1.3s						
MAJO	**Matsushiro**	**71.52**	**325**		pP	05 56 23.3	-4.1
MJB9	**Matsu-Tunnel**	**71.52**	**325**		pP	05 56 23.4	-4.1
KSRS	**Korea Array**	**77.92**	**320**	P	**P**	**05 55 47.6**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=131,slow=6.1,SNR=2.1						
PETK	**Petropavlovsk-**	**78.54**	**346**	P	**P**	**05 55 49.7**	**0.0**
	comp=Z,4.6nm,1.0s,baz=149,slow=9.6,SNR=2.0						
TXAR	**Lajitas Array**	**89.89**	**58**	P	**P**	**05 56 47.0**	**0.0**
	comp=Z,0.6nm,0.7s,baz=219,slow=6.3,SNR=5.8						
BRTR	**Keskin Array B**	**147.39**	**308**	PKPbc	**PKiKP**	**06 03 31.2**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=87,slow=3.5,SNR=7.2						

*ISU **01** 05:54:22.1, 40°.96N×72°.93E, h25km*

*KRNET **01** 05:54:24.6±0.1, 41°.29N×72°.53E, h16km, mb2.9*

*SOME **01** 05:54:26.2, 41°.40N×72°.48E, h5km*

*NNC **01** 05:54:27.3±1.1, 41°.34N×72°.51E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=10.1km s-min=4.3km az=172.0*

ISC 01 05:54:23.9±1.2**, 41°.25N**±0°.03×**72°.54E**±0°.02**, h1km**±11km**, n56, σ1s30**/88**, 25C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.34**	**77**	⇑*i*P	**Pg**	**05 54 31.0**	**+0.6**
	baz=85						
ARSB				⇑*i*S	**Sg**	**05 54 36.2**	**+1.3**
	baz=85						
ARSB	**Arslanbob**	**0.34**	**77**	*e*P	**Pg**	**05 54 30.7**	**+0.3**
ARSB				*e*S	**Sg**	**05 54 36.7**	**+1.8**
ANR	**Andizhan**	**0.51**	**195**	*e*P	Pg	05 54 32.4	-1.3
ANR				*e*S	**Sg**	**05 54 39.6**	**-0.7**
ARK	**Arkit**	**0.70**	**322**	⇑*i*P	**Pg**	**05 54 36.9**	**-0.4**
	baz=20						
ARK				⇑*i*S	**Sg**	**05 54 45.8**	**-0.5**
	baz=20						
AML	**Almayashu**	**1.23**	**44**	⇓*i*P	**Pn**	**05 54 47.6**	**-1.1**
	baz=46						
AML				⇓*i*S	**Sb**	**05 55 03.8**	**-1.1**
	baz=46						
AML	**Almayashu**	**1.23**	**44**	P	**Pn**	**05 54 47.9**	**-0.8**
	SNR=35						
CHMI	**Chimion**	**1.25**	**219**	*i* P	**Pn**	**05 54 46.1**	**-2.4**
CHMI				*i* S	**Sn**	**05 55 05.3**	**-0.7**
MRKS	**Merke**	**1.58**	**19**	*e*P	**Pg**	**05 54 56.0**	**+1.8**
	14nm,0.1s						
MRKS				*e*S	**Sg**	**05 55 17.3**	**+2.6**
	89nm,0.3s						
MRKS	**Merke**	**1.58**	**19**	P	**Pg**	**05 54 55.8**	**+1.7**
	24nm,0.4s						
MRKS				S	**Sg**	**05 55 16.8**	**+2.1**
	94nm,0.4s						
EKS2	**Erkin-Say**	**1.69**	**33**	⇑*i*P	**Pn**	**05 54 54.8**	**+0.1**
	baz=34						
EKS2				⇑*i*S	**Sb**	**05 55 17.0**	**-0.6**
	baz=34						
EKS2	**Erkin-Say**	**1.69**	**33**	P	**Pb**	**05 54 56.2**	**+0.4**
	SNR=8.1						
BTK	**Batken**	**1.77**	**228**	⇑*i*P	**Pn**	**05 54 57.4**	**+1.7**
	baz=27						
BTK				⇑*i*S	**Sb**	**05 55 21.6**	**+1.7**
	baz=27						
BTK	**Batken**	**1.77**	**228**	*i* P	**Pn**	**05 54 55.1**	**-0.6**
BTK				*i* S	**Sn**	**05 55 18.1**	**-0.8**
UCH	**Uchtor**	**1.77**	**56**	⇑*i*P	**Pb**	**05 54 57.0**	**-0.5**
	baz=57						
UCH				⇑*i*S	**Sb**	**05 55 20.4**	**0.0**
	baz=57						
UCH	**Uchtor**	**1.77**	**56**	P	**Pb**	**05 54 58.1**	**+0.7**
	SNR=30						
CHRV	**Charvak**	**1.98**	**282**	*e*P	**Pb**	**05 55 01.8**	**+1.0**
CHRV				*e*S	**Sg**	**05 55 28.2**	**+0.6**
AAK	**Ala-Archa**	**2.01**	**46**	⇓*i*P	**Pb**	**05 55 00.6**	**-0.8**
	baz=47						
AAK				⇓*i*S	**Sb**	**05 55 26.6**	**-0.4**
	baz=47						
AAK	**Ala-Archa**	**2.01**	**46**	P	**Pb**	**05 55 01.9**	**+0.5**
	SNR=9.3						
AAK	**Ala-Archa**	**2.01**	**46**	⇑Pn	**Pb**	**05 55 01.5**	**+0.1**
	6.2nm,0.6s						
AAK				Sn	**Sg**	**05 55 29.7**	**+1.2**
	12nm,0.4s						
IUG	**Iuzhnay**	**2.08**	**296**	*e*P	**Pb**	**05 55 03.8**	**+1.3**
	1.7nm,0.3s						
IUG				*e*S	**Sg**	**05 55 30.6**	**-0.1**
	127nm,0.3s						
IUG	**Iuzhnay**	**2.08**	**296**	Pg	**Pb**	**05 55 03.6**	**+1.0**
	4.0nm,0.4s						
IUG				Lg	Lg	05 55 29.7	
	57nm,0.3s						
KZA	**Kyzart**	**2.19**	**67**	⇑*i*P	**Pn**	**05 55 03.5**	**+1.6**
	baz=68						
KZA				⇑*i*S	**Sb**	**05 55 31.5**	**-1.0**
	baz=68						
KZA	**Kyzart**	**2.19**	**67**	P	**Pb**	**05 55 04.9**	**+0.3**
	SNR=13						
KBK	**Karagaybulak**	**2.28**	**51**	⇓*e*P	**Pb**	**05 55 04.6**	**-1.4**
	baz=52						
KBK				⇓*i*S	**Sb**	**05 55 33.3**	**-1.5**
	baz=52						
KK31	**Karatay Array**	**2.39**	**322**	⇑Pn	**Pb**	**05 55 06.4**	**-1.3**
	1.7nm,0.3s,baz=136,slow=15,SNR=46						
KK31				⇑Lg	Lg	05 55 40.0	
	24nm,0.6s,baz=135,slow=27,SNR=17						
CHMS	**Chumysh**	**2.40**	**43**	⇑*i*P	**Pn**	**05 55 05.6**	**+1.2**
	baz=43						
CHMS				⇑*i*S	**Sb**	**05 55 35.9**	**-2.2**
	baz=43						
CHMS	**Chumysh**	**2.40**	**43**	P	**Pb**	**05 55 09.5**	**+1.6**
	SNR=5.9						
USP	**Ospenovka**	**2.49**	**35**	⇑*i*P	**Pn**	**05 55 06.9**	**+1.3**
	baz=36						
USP				⇑*i*S	**Sb**	**05 55 38.1**	**-2.5**
	baz=36						
USP	**Ospenovka**	**2.49**	**35**	P	**Pb**	**05 55 08.2**	**-1.2**
	SNR=9.2						
BRLS	**Borolday**	**2.68**	**312**	Pg	**Pb**	**05 55 13.8**	**+1.0**
	4.1nm,0.4s						
BRLS				Lg	Lg	05 55 47.4	
	3.2nm,0.3s						
SGDS	**Sogindy**	**2.69**	**34**	Pg	**Pg**	**05 55 15.2**	**-0.2**
	6.0nm,0.4s						
SGDS				Lg	Lg	05 55 49.5	
	22nm,0.5s						
TKM2	**Tokmak 2**	**2.82**	**53**	⇑*i*P	**Pn**	**05 55 12.0**	**+1.6**
	baz=53						
TKM2				⇑*i*S	**Sn**	**05 55 46.3**	**+1.1**
	baz=53						
TKM2	**Tokmak 2**	**2.82**	**53**	⇑Pn	**Pn**	**05 55 12.5**	**+2.1**
	6.0nm,0.6s						
TKM2				⇑Lg	Lg	05 55 53.4	
	20nm,0.6s						
ULHL	**Ulahol**	**2.94**	**69**	⇑*i*P	**Pn**	**05 55 13.8**	**+1.8**
	baz=70						
ULHL				⇑*i*S	**Sn**	**05 55 49.4**	**+1.3**
	baz=70						
KST	**Kastek**	**3.11**	**54**	*e*P	**Pg**	**05 55 22.8**	**-0.7**
	4.2nm,0.2s						
KST				*e*S	**Sg**	**05 56 03.1**	**-0.8**
	17nm,0.4s						
KST	**Kastek**	**3.11**	**54**	Pg	**Pg**	**05 55 23.4**	**-0.2**
	8.9nm,0.6s						
KST				Lg	Lg	05 56 03.2	
	13nm,0.6s						
KRBS	**Karabastau**	**3.37**	**42**	*e*P	**Pg**	**05 55 27.3**	**-1.2**
	2.1nm,0.2s						
KRBS				*e*S	**Sg**	**05 56 10.9**	**-1.3**
	5.1nm,0.3s						
KRBS	**Karabastau**	**3.37**	**42**	Pg	**Pg**	**05 55 28.4**	**-0.1**
	3.5nm,0.5s						
KRBS				Lg	Lg	05 56 11.8	
	6.1nm,0.6s						
MTBS	**Maitube**	**3.45**	**56**	*e*P	**Pg**	**05 55 29.1**	**-0.9**
	1.8nm,0.1s						
MTBS				*e*S	**Sg**	**05 56 13.7**	**-1.0**
	11nm,0.2s						
MTBS	**Maitube**	**3.45**	**56**	Pg	**Pg**	**05 55 29.7**	**-0.3**
	3.3nm,0.2s						
MTBS				Lg	Lg	05 56 14.0	
	13nm,0.4s						
IZV	**Izvestkoviy**	**3.52**	**58**	*e*P	**Pg**	**05 55 30.7**	**-0.6**
	1.7nm,0.2s						
IZV				*e*S	**Sg**	**05 56 16.8**	**-0.1**
	11nm,0.3s						
IZV	**Izvestkoviy**	**3.52**	**58**	Pg	**Pg**	**05 55 31.7**	**+0.4**
	5.4nm,0.6s						
IZV				Lg	Lg	05 56 17.4	
	12nm,0.5s						
TNSS	**Tian-Shan**	**3.73**	**60**	*e*P	**Pb**	**05 55 33.7**	**+2.9**
	2.5nm,0.5s						
TNSS				*e*S	**Sg**	**05 56 21.5**	**-2.3**
	5.5nm,0.4s						
TNSS	**Tian-Shan**	**3.73**	**60**	Pg	**Pg**	**05 55 35.8**	**+0.4**
	3.3nm,0.4s						
TNSS				Lg	Lg	05 56 24.7	
	6.8nm,0.5s						
KUU	**Kurty**	**3.85**	**45**	*e*P	**Pg**	**05 55 36.4**	**-1.3**
	0.9nm,0.1s						
KUU				*e*S	**Sg**	**05 56 26.3**	**-1.4**
	5.5nm,0.1s						
KUU	**Kurty**	**3.85**	**45**	Pg	**Pg**	**05 55 36.3**	**-1.4**
	1.7nm,0.3s						
KUU				Lg	Lg	05 56 25.5	
	11nm,0.3s						
MDOK	**Medeo**	**3.86**	**59**	*e*P	**Pg**	**05 55 36.5**	**-1.3**
	2.2nm,0.2s						
MDOK				*e*S	**Sg**	**05 56 26.3**	**-1.5**
	3.9nm,0.4s						
MDOK	**Medeo**	**3.86**	**59**	Pg	**Pg**	**05 55 37.3**	**-0.5**
	1.9nm,0.3s						
MDOK				Lg	Lg	05 56 27.3	
	5.5nm,0.7s						
KTBS	**Karatobe**	**3.93**	**50**	*e*P	**Pg**	**05 55 37.6**	**-1.5**
	1.1nm,0.2s						
KTBS				*e*S	**Sg**	**05 56 28.5**	**-1.6**
	22nm,0.5s						
KTBS	**Karatobe**	**3.93**	**50**	Pg	**Pg**	**05 55 37.6**	**-1.5**
	1.3nm,0.3s						
KTBS				Lg	Lg	05 56 27.6	
	23nm,0.5s						
KOTS	**Kotyrbulak**	**3.93**	**58**	*e*P	**Pg**	**05 55 38.3**	**-0.9**
	4.0nm,0.2s						
KOTS				*e*S	**Sg**	**05 56 29.7**	**-0.5**
	23nm,0.2s						
KOTS	**Kotyrbulak**	**3.93**	**58**	Pg	**Pg**	**05 55 38.7**	**-0.5**
	11nm,0.3s						
KOTS				Lg	Lg	05 56 29.4	
	23nm,0.4s						
BTLS	**Baital**	**3.95**	**16**	*e*P	**Pg**	**05 55 38.2**	**-1.3**
	1.4nm,0.3s						
BTLS				*e*S	**Sg**	**05 56 29.7**	**-0.9**
	8.7nm,0.4s						
BTLS	**Baital**	**3.95**	**16**	Pg	**Pg**	**05 55 39.1**	**-0.4**
	2.3nm,0.4s						
BTLS				Lg	Lg	05 56 30.8	
	2.5nm,0.4s						
CHKK	**Chushkaly**	**4.19**	**50**	*e*P	**Pg**	**05 55 42.1**	**-2.1**
	0.9nm,0.0s						
CHKK				*e*S	**Sg**	**05 56 36.2**	**-2.3**
	5.0nm,0.0s						
CHKK	**Chushkaly**	**4.19**	**50**	Pg	**Pg**	**05 55 43.2**	**-1.0**
	1.5nm,0.1s						
CHKK				Lg	Lg	05 56 35.3	
	8.3nm,0.2s						

JMA 01 05:55:43.8±0.1**, 35°.52N×140°.14E, h23km**±1km**, M2.6, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.11**	**154**	P	Pb	05 55 48.2	-0.1
JCN				S	Sb	05 55 52.2	+0.9
JSMT	**Sammumatsuo**	**0.28**	**64**	P	Pb	05 55 50.6	+0.2
JKUC	**kamogawauchiur**	**0.36**	**172**	P	Pb	05 55 51.4	-0.2
KTR	**Katsuura**	**0.40**	**159**	P	Pb	05 55 51.7	-0.5
KTR				*e*S	Sb	05 55 57.8	-0.1
BSO4	**Boso 4**	**0.55**	**163**	P	Pb	05 55 54.7	-0.1
BSO3	**Boso 3**	**0.78**	**157**	P	Pb	05 55 56.7	-1.8
MAT	**Matsushiro**	**1.87**	**304**	P	Pn	05 56 13.8	-0.6
MAT				*e*S	Sb	05 56 44.6	+4.4

IDC 01 06:25:02.0±2.4**, 7°.40S×154°.78E, h0km, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.4**/36**, mbtmp3.4**/4**, Error ellipse: s-maj=102.1km s-min=33.6km az=128.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.41**	**236**	P	P	06 30 11.2	-1.7
	0.3nm,0.8s,baz=57,slow=9.3,SNR=2.3						
ASAR	**Alice Springs**	**25.75**	**229**	P	P	06 30 35.0	+0.5
	0.2nm,0.6s,baz=64,slow=9.4,SNR=1.7						
MKAR	**Makanchi Array**	**83.56**	**319**	P	P	06 37 32.6	+0.5
	0.5nm,0.7s,baz=92,slow=4.6,SNR=4.1						
YKA	**Yellowknife Ar**	**96.79**	**28**	P	P	06 38 33.6	-0.9
	0.1nm,0.6s,baz=264,slow=3.7,SNR=2.9						
TORD	**Torodi Ar. Bea**	**152.92**	**284**	PKPbc	PKiKP	06 45 02.5	0.0
	0.7nm,0.7s,baz=75,slow=1.6,SNR=4.1						
TORD				PKPab	PKPab	06 45 13.6	+0.1
	0.5nm,0.7s,baz=74,slow=4.4,SNR=3.8						

*MEX **01** 06:26:16.9±0.4, 17°.20N×100°.96W, h10km±4km, MD4.1*

ISC 01 06:26:15.4±1.2**, 17°.18N**±0°.06×**100°.94W**±0°.03**, h14km**±8km**, n23, σ1s46**/38**, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.65**	**310**		**Pg**	**06 26 27.8**	**-0.4**
ZIIG					**Sg**	**06 26 36.6**	**-0.3**
ZIIG	**Zihuatanejo**	**0.65**	**310**	*e*P	**Pg**	**06 26 27.8**	**-0.4**
ZIIG				*i* S	**Sg**	**06 26 36.6**	**-0.3**
CAIG	**El Cayaco**	**0.66**	**101**		**Pg**	**06 26 28.4**	**+0.1**
CAIG					**Sg**	**06 26 37.4**	**+0.4**
CAIG	**El Cayaco**	**0.66**	**101**	*e*P	**Pg**	**06 26 28.4**	**+0.1**
CAIG				*i* S	**Sg**	**06 26 37.4**	**+0.4**
ARIG	**Puente Sto Nin**	**1.23**	**27**		**Pn**	**06 26 36.3**	**-2.0**
ARIG					**Sb**	**06 26 51.5**	**-2.8**
ARIG	**Puente Sto Nin**	**1.23**	**27**	*i* P	**Pn**	**06 26 36.3**	**-2.0**
ARIG				*i* S	**Sb**	**06 26 51.5**	**-2.8**
CRIG	**Cruz Grande**	**1.79**	**104**	*e*P	**Pn**	**06 26 44.8**	**-1.1**
CRIG				*i* S	**Sn**	**06 27 06.5**	**-2.0**
TLIG	**Tlapa**	**2.30**	**80**		**Pn**	**06 26 53.1**	**0.0**
TLIG					**Sn**	**06 27 23.1**	**+1.8**
TLIG	**Tlapa**	**2.30**	**80**	*e*P	**Pn**	**06 26 52.3**	**-0.8**
TLIG				*i* S	**Sn**	**06 27 20.2**	**-1.1**
MOIG	**Morelia**	**2.50**	**355**		**Pn**	**06 26 57.5**	**+1.6**
MOIG				Sn	**Sn**	**06 27 29.0**	**+2.8**
MMIG	**Aquila**	**2.54**	**296**		**Pn**	**06 26 55.7**	**-0.6**
MMIG	**Aquila**	**2.54**	**296**	*e*P	**Pn**	**06 26 55.7**	**-0.6**
MMIG				*i* S	**Sn**	**06 27 24.5**	**-2.5**
UNM	**Universidad Na**	**2.72**	**38**		**Pn**	**06 27 00.4**	**+1.4**
TXIG	**Tlaxiaco**	**3.04**	**88**	*e*P	**Pn**	**06 27 02.7**	**-0.6**
TXIG				*i* S	**Sn**	**06 27 39.1**	**-0.6**
HLIG	**Huajuapan de L**	**3.06**	**77**	*e*P	**Pn**	**06 27 03.6**	**0.0**
HLIG				*i* S	**Sn**	**06 27 38.1**	**-2.2**
TOIG	**Toxpalan**	**3.81**	**76**	*e*P	**Pn**	**06 27 13.4**	**-0.4**
TOIG				*i* S	**Sn**	**06 27 58.3**	**-0.2**
PEIG	**Puerto Escondi**	**3.83**	**107**	*e*P	**Pn**	**06 27 14.5**	**+0.5**
PEIG				*i* S	**Sn**	**06 27 57.9**	**-0.9**
ZAIG	**Zacatecas**	**5.76**	**345**	Pn	**Pn**	**06 27 41.7**	**+0.8**
NATX	**Nacogdoches**	**15.59**	**20**	Pn	**Pn**	**06 29 57.2**	**+2.3**
NATX				IAmb	IAmb	06 30 08.6	
	comp=Z,18nm,0.8s						
W35A	**Tecumseh**	**18.26**	**11**	P	**Pn**	**06 30 28.7**	**+0.1**
ANMO	**Albuquerque**	**18.37**	**345**	P	**Pn**	**06 30 30.3**	**+0.3**
PAYG	**Puerto Ayora**	**20.62**	**148**	P	**P**	**06 30 56.6**	**+2.1**
SDCO	**Great Sand Dun**	**20.88**	**350**	P	**P**	**06 30 58.0**	**+0.5**
SDCO				IAmb	IAmb	06 31 07.2	
	comp=Z,3.2nm,1.4s						

NNC 01 06:26:52.9±4.5, 38°.49N×69°.63E, h0^{km}, mb3.7, mpv3.3, 3C-5D, Error ellipse: s-maj=34.4km s-min=21.8km az=7.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	4.66	8	⇑Pn	Pn	06 28 06.7	+2.2
	1.3nm,0.4s,baz=186,slow=17,SNR=12						
KK31				⇑Sn	Sn	06 29 00.1	+0.8
	4.2nm,0.3s						
KK31				⇓Lg	Lg	06 29 17.8	
	6.7nm,0.5s,baz=189,slow=34,SNR=5.5						
AAK	Ala-Archa	5.55	40	⇓Pn	Pn	06 28 16.0	-1.0
	1.7nm,0.5s						
AAK				⇑Sn	Sn	06 29 24.8	+3.1
	13nm,0.8s						
TKM2	Tokmak 2	6.33	44	⇓Pn	Pn	06 28 25.8	-1.9
	2.4nm,0.5s						
TKM2				⇓Sn	Sn	06 29 40.9	0.0
	4.7nm,0.5s						
AB31	Akbulak array	12.82	330	Pn	Pn	06 29 56.0	-0.3
	0.5nm,0.4s,baz=321,slow=72,SNR=22						
AB31				⇓Sn	Sn	06 32 20.0	+0.3
	0.5nm,0.5s,baz=154,slow=24,SNR=4.5						

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*NEIC **01** 06:33:10.8±1.3, 18°.92S±0°.08×169°.6E±0°.1, h246^{km}±6^{km}, mb4.4/21, Error ellipse: s-maj=18.4km s-min=10.1km az=112.0*

*IDC **01** 06:33:13.7±4.4, 19°.40S×169°.63E, h276^{km}±31^{km}, mb3.9/5, mb1 4.0/5, mb1mx3.3/36, mbtmp4.5/5, Error ellipse: s-maj=66.0km s-min=45.2km az=161.0*

ISC 01 06:33:10.9±0.8, 18°.94S±0°.10×169°.6E±0°.1, h246^{km}, n30, σ0^{s}80/31, mb4.4/13, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.26	223	P	Pn	06 34 18.7	+1.0
	0.6nm,0.3s,baz=52,slow=16,SNR=7.3						
DZM				S	S	06 35 10.8	0.0
	1.0nm,0.3s,baz=151,slow=19,SNR=2.1						
DZM	Mont Dzumac	4.26	223		Pn	06 34 18.0	+0.3
OUZ	Omahuta	16.61	168	Pn	Pn	06 36 50.3	0.0
OUZ				IAmb	IAmb	06 36 52.4	
	comp=Z,22nm,1.4s						
EIDS	Eidsvold	18.25	246	P	Pn	06 37 08.2	-1.5
ARMA	Armidale	19.86	231	P	P	06 37 24.5	+0.7
TARA	Tarawa	20.44	10		S	06 41 05.9	+1.4
BKZ	Black Stump Fm	21.03	165	P	P	06 37 36.9	+0.8
BKZ				IAmb	IAmb	06 38 33.5	
	comp=Z,24nm,1.3s						
CTA	Charters Tower	21.98	263	P	P	06 37 46.5	+1.2
	comp=Z,2.1nm,0.4s,baz=92,slow=11,SNR=6.8						
CTAO	Charters Tower	21.98	263	P	P	06 37 46.8	+1.5
STKA	Stephens Creek	28.25	237	P	P	06 38 40.1	-1.4
	comp=Z,4.1nm,0.6s,baz=79,slow=10,SNR=14						
STKA	Stephens Creek	28.25	237	P	P	06 38 42.4	+0.8
BBOO	Buckleboo	32.99	239	P	P	06 39 23.1	0.0
WR0	Warramunga Arr	32.99	262	P	P	06 39 22.8	-0.5
WR0				IAmb	IAmb	06 39 46.5	
	comp=Z,25nm,1.9s						
WB0	Warramunga Arr	33.14	263	P	P	06 39 24.0	-0.6
WB0				IAmb	IAmb	06 39 24.2	
	comp=Z,5.2nm,0.8s						
WB2	Warramunga Arr	33.17	262	P	P	06 39 24.0	-0.7
WRAB	Tennant Creek	33.17	262	P	P	06 39 24.0	-0.8
WRAB				IAmb	IAmb	06 39 55.3	
	comp=Z,28nm,1.9s						
WRA	Warramunga Arr	33.18	262	P	P	06 39 24.1	-0.8
	comp=Z,1.4nm,0.3s,baz=84,slow=6.6,SNR=20						
AS31	Alice Springs	33.48	256	P	P	06 39 27.4	-0.1
ASAR	Alice Springs	33.48	256	P	P	06 39 27.2	-0.2
	comp=Z,18nm,0.6s,baz=83,slow=9.0,SNR=346						
MTN	Manton Dam	37.39	274	P	P	06 40 00.9	+0.2
KNRA	Kununurra	39.02	268	P	P	06 40 13.6	-0.6
KNRA				IAmb	IAmb	06 40 14.3	
	comp=Z,9.0nm,0.9s						
FITZ	Fitzroy Crossi	41.56	264	P	P	06 40 35.7	+0.7
	comp=Z,4.7nm,0.6s,baz=98,slow=6.1,SNR=20						
FITZ	Fitzroy Crossi	41.56	264	P	P	06 40 35.6	+0.7
PSA00	Pilbara Seismi	46.55	258	P	P	06 41 14.8	+0.3
PSA00				IAmb	IAmb	06 42 06.3	
	comp=Z,24nm,1.2s						
GIRL	Giralia	51.60	256	P	P	06 41 52.2	-0.5
QSPA	South Pole Qui	71.11	180	P	P	06 44 02.2	-0.3
QSPA				IAmb	IAmb	06 46 24.1	
	comp=Z,10nm,1.4s						
YKU2	Yakutat	88.42	23	P	P	06 45 34.5	-0.3
SNAA	Sanae	89.47	182	P	P	06 45 39.3	-0.5
HDA	Harding Lake	89.57	17	P	P	06 45 39.3	-0.8
HDA				IAmb	IAmb	06 46 20.9	
	comp=Z,13nm,1.9s						
ARCES	ARCESS Array B	124.86	345	PKP	PKPdf	06 51 40.7	-0.2
	comp=Z,2.1nm,0.8s,baz=72,slow=2.9,SNR=2.4						

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*BJI **01** 06:36:33.5±0.0, 21°.51S×170°.35E, h100^{km}, mB6.7/83, mb6.0/89*

*NEIC **01** 06:36:35.5±1.8, 21°.45S±0°.07×170°.36E±0°.07, h106^{km}±1^{km}, mb5.9/367, Mwb6.6/79, Mwc6.6/147, Mww6.6, Mwc6.7(GCMT), Error ellipse: s-maj=12.5km s-min=10.3km az=162.0*

*NEIC **01** 06:36:35.5, 21°.45S×170°.36E, h106^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}0.19; $M_{\theta\theta}$0.03; $M_{\phi\phi}$-0.22; $M_{r\theta}$0.82; $M_{\theta\phi}$0.74; $M_{\phi r}$0.12; Fault plane solution: $M_0$1.13000×10^{19} NP1:ϕ_s96.84000°, δ82.29000°, λ46.57000°. NP2:ϕ_s358.77000°, δ43.98000°, λ168.85000°. Principal axes: T 1.1975, Plg37.0000°, Azm329.0000°; N -0.1481, Plg43.0000°, Azm104.0000°; P -1.0494, Plg24.0000°, Azm219.0000°;*

*IDC **01** 06:36:36.5±1.0, 21°.47S×170°.33E, h110^{km}±7^{km}, mb5.6/44, mb1 5.6/48, mb1mx5.6/49, mbtmp6.0/48, MS5.6/25, Ms1 5.6/25, ms1mx5.4/38 Error ellipse: s-maj=8.5km s-min=8.2km az=42.0*

*BGR **01** 06:36:36.0±0.0, 22°.17S×171°.69E, h124^{km}±1^{km}*

*HON **01** 06:36:37±1.8, 21°.46S±0°.07×170°.26E±0°.07, h112^{km}±3^{km}, Error ellipse: s-maj=10.6km s-min=8.5km az=161.0*

*MOS **01** 06:36:37.0±0.9, 21°.43S×170°.30E, h127^{km}, mb6.0/57, Error ellipse: s-maj=6.6km s-min=5.9km az=91.0*

*PMR **01** 06:36:38±1.7, 21°.50S±0°.06×170°.30E±0°.06, h112^{km}±1^{km}, Error ellipse: s-maj=11.0km s-min=9.9km az=179.0*

*GCMT **01** 06:36:41.5±0.0, 21°.52S×170°.12E, h120^{km}, MW6.6/177, Moment Tensor Solution. s177,c477; s176,c772; Duration: 4^{s}9 Moment tensor: Scale 10^{19}Nm; M_{rr}0.08±.00; $M_{\theta\theta}$0.15±.00; $M_{\phi\phi}$-0.22±.00; $M_{r\theta}$0.78±.00; $M_{\theta\phi}$0.66±.00; $M_{\phi r}$0.04±.00; Best double couple: $M_0$1.03300×10^{19} NP1:ϕ_s4.00000°, δ42.00000°, λ174.00000°. NP2:ϕ_s98.00000°, δ86.00000°, λ48.00000°. Principal axes: T 1.1000, Plg35.0000°, Azm333.0000°; N -0.1340, Plg42.0000°, Azm101.0000°; P -0.9660, Plg29.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **01** 06:36:42, 21°.51S×170°.15E, h120^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}0.08; $M_{\theta\theta}$0.19; $M_{\phi\phi}$-0.26; $M_{r\theta}$0.87; $M_{\theta\phi}$0.65; $M_{\phi r}$0.05; Fault plane solution: $M_0$1.11000×10^{19} NP1:ϕ_s98.00000°, δ87.00000°, λ51.00000°. NP2:ϕ_s4.00000°, δ39.00000°, λ175.00000°. Principal axes: T 1.1931, Plg36.0000°, Azm335.0000°; N -0.1783, Plg39.0000°, Azm101.0000°; P -1.0148, Plg31.0000°, Azm219.0000°;*

*NEIC **01** 06:36:43, 21°.51S×170°.32E, h120^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.14; $M_{\theta\theta}$1.84; $M_{\phi\phi}$-1.98; $M_{r\theta}$7.90; $M_{\theta\phi}$5.60; $M_{\phi r}$1.15; Fault plane solution: $M_0$9.94000×10^{18} NP1:ϕ_s95.00000°, δ89.00000°, λ53.00000°. NP2:ϕ_s3.00000°, δ37.00000°, λ178.00000°. Principal axes: T 10.8976, Plg35.0000°, Azm333.0000°; N -2.3365, Plg37.0000°, Azm95.0000°; P -8.5611, Plg34.0000°, Azm215.0000°;*

*NEIC **01** 06:36:58.1, 21°.07S×170°.34E, h96^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}-0.10; $M_{\theta\theta}$0.26; $M_{\phi\phi}$-0.17; $M_{r\theta}$0.81; $M_{\theta\phi}$0.59; $M_{\phi r}$0.04; Fault plane solution: $M_0$1.02000×10^{19} NP1:ϕ_s8.10000°, δ36.88000°, λ-174.67000°. NP2:ϕ_s273.84000°, δ86.80000°, λ-53.23000°. Principal axes: T 1.1144, Plg32.0000°, Azm334.0000°; N -0.1845, Plg37.0000°, Azm91.0000°; P -0.9299, Plg37.0000°, Azm216.0000°;*

ISC 01 06:36:36.8±0.2, 21°.44S±0°.03×170°.31E±0°.03, h116^{km}±1^{km}, h116^{km}:pP-P, n2330, σ1^{s}68/2680, mb5.9/248, 186C-15D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I22FR	PORTLAGUERRE I	3.30	256	P	Pn	06 37 26.6	-0.5
	baz=73,slow=12,SNR=4.2						
I22FR				S	Sn	06 38 06.2	+0.3
	baz=59,slow=12						
DZM	Mont Dzumac	3.65	259	*e*Pn	Pn	06 37 31.6	-0.1
	21µm,1.6s						
DZM				*e*Sn	Sn	06 38 14.6	+0.5
	154µm,1.1s						
DZM	Mont Dzumac	3.65	259	P	Pn	06 37 31.4	-0.2
	628nm,0.3s,baz=116,slow=5.4,SNR=956						
DZM				LR	LR	06 38 13.0	
	comp=Z,48µm,22.0s,baz=80,slow=26						
DZM				S	Sn	06 38 13.3	-0.8
	3µm,0.3s,baz=128,slow=19,SNR=16						
DZM	Mont Dzumac	3.65	259		Pn	06 37 31.5	-0.1
DZM				Sn	Sn	06 38 12.4	-1.7
MSVF	Nonsavu	8.17	65	P	Pn	06 38 34.8	+2.0
MSVF	Nonsavu	8.17	65		Pn	06 38 34.8	+2.0
RAO	Raoul Island	13.18	129	P	Pn	06 39 40.9	+1.5
	245nm,0.3s,baz=234,slow=21,SNR=5.5						
RAO				LR	LR	06 42 33.9	
	comp=Z,22µm,21.7s,baz=298,slow=27						
RAO	Raoul Island	13.18	129		Pn	06 39 39.2	-0.3
OUZ	Omahuta	14.03	169		Pn	06 39 48.3	-2.1
LHI	Lord Howe Isla	14.21	223		Pn	06 39 51.2	-1.6
WCZ	Waipu Caves	14.87	167	P	P	06 40 04.0	+0.1
GRZ	Great Barrier	15.43	164	P	P	06 40 12.5	+2.5
FUNA	Funafuti	15.43	35	P	P	06 40 09.8	-0.5
FUNA				IAmb	IAmb	06 40 19.6	
	comp=Z,2µm,1.3s						
HNR	Honiara	15.55	319	P	Pn	06 40 10.0	+0.1
	comp=Z,51nm,0.3s,baz=153,slow=9.3,SNR=56						
HNR				S	Sn	06 43 02.2	0.0
	comp=Z,17nm,0.3s,baz=307,slow=20,SNR=1.1						
HNR	Honiara	15.55	319	P	P	06 40 10.9	-0.7
KUZ	Kuaotunu	15.96	164	P	P	06 40 19.3	+3.4
TLZ	Tolley Road	17.43	166	P	Pn	06 40 36.6	+3.9
HIZ	Hauiti	17.46	168	P	Pn	06 40 34.2	+1.1
HIZ				IAmb	IAmb	06 40 37.8	
	comp=Z,1µm,1.1s						
MXZ	Matakaoa Point	17.50	158	P	P	06 40 32.6	-0.3
MXZ				IAmb	IAmb	06 40 40.5	
	comp=Z,442nm,1.1s						
MXZ	Matakaoa Point	17.50	158	P	Pn	06 40 34.7	+1.3
HAZ	Te Kaha	17.50	160	P	Pn	06 40 35.0	+1.5
RUGZ	Raukumara Rang	17.66	160	P	Pn	06 40 37.3	+1.7
URZ	Urewera	17.76	162	P	Pn	06 40 37.1	+0.5
	comp=Z,24nm,0.3s,baz=358,slow=5.9,SNR=138						
URZ				S	Sn	06 43 58.1	+3.1
	comp=Z,1.0nm,0.3s,baz=84,slow=19,SNR=1.2						
URZ				LR	LR	06 46 04.3	
	comp=Z,34µm,20.7s,baz=352,slow=32						
URZ				ScP	ScP	06 48 31.5	-0.9
	comp=Z,0.5nm,0.3s,baz=25,slow=4.4,SNR=9.0						
URZ	Urewera	17.76	162	P	Pn	06 40 36.9	+0.3
URZ				IAmb	IAmb	06 40 40.0	
	comp=Z,2µm,1.0s						
URZ	Urewera	17.76	162	P	Pn	06 40 36.5	-0.1
WMGZ	Waiomatatini S	17.77	159	P	Pn	06 40 37.7	+1.0
MUGZ	Murupara	17.87	163	P	Pn	06 40 40.2	+2.2
PUZ	Puketiti	17.94	159	P	Pn	06 40 39.3	+0.5
EIDS	Eidsvold	18.07	254	P	Pn	06 40 42.4	+1.9
	baz=18,SNR=101						
EIDS	Eidsvold	18.07	254	P	Pn	06 40 42.2	+1.7
TKGZ	Te Karaka	18.15	161	P	Pn	06 40 42.6	+1.4
CNGZ	Carnagh Statio	18.30	160	P	Pn	06 40 43.8	+0.7
RIGZ	Rimuhau	18.36	161	P	Pn	06 40 45.2	+1.3
BKZ	Black Stump Fm	18.45	165		Pn	06 40 44.5	-0.3
BKZ				IAmb	IAmb	06 41 03.4	
	comp=Z,1µm,1.3s						
BKZ	Black Stump Fm	18.45	165	P	Pn	06 40 44.2	-0.6
AFI	Afiamalu	18.63	69	P	P	06 40 44.1	-1.4
AFI				pmax	pmax		
	comp=Z,444nm,0.9s						
AFI	Afiamalu	18.63	69	P	P	06 40 44.1	-1.4
AFI				IAmb	IAmb	06 40 50.3	
	comp=Z,444nm,0.8s						
NIUE	Niue	18.69	86	P	P	06 40 44.2	-2.0
	baz=18,SNR=15						
NIUE	Niue	18.69	86	P	P	06 40 45.3	-0.8
ARMA	Armidale	19.01	238	P	Pn	06 40 52.6	+0.9
	baz=19,SNR=345						
ARMA	Armidale	19.01	238	P	Pn	06 40 52.5	+0.9
QRZ	Quartz Range	19.42	175	P	Pn	06 40 55.5	-0.8
QRZ				IAmb	IAmb	06 40 58.9	
	comp=Z,1µm,1.4s						
BFZ	Birch Farm	19.84	167	P	P	06 40 58.0	-0.4
NNZ	Nelson	19.89	173	P	P	06 41 00.1	+1.1
NNZ				IAmb	IAmb	06 41 18.8	
	comp=Z,456nm,0.8s						
MTW	Mount Morrison	20.14	169	P	P	06 41 01.6	-0.1
SNZO	South Karori	20.16	170	P	P	06 41 01.3	-0.5
SNZO				IAmb	IAmb	06 41 10.2	
	comp=Z,451nm,0.8s						
TUWZ	Tuamarina	20.17	172	P	P	06 41 02.4	+0.4
BHW	Baring Head	20.28	170	P	P	06 41 02.5	-0.6
RMQ	Roma	20.32	251	P	Pn	06 41 06.8	-0.1
	baz=20,SNR=594						
MSWZ	Moikau Station	20.35	169	P	P	06 41 03.1	-0.8
THZ	Tophouse	20.38	174	P	P	06 41 04.6	+0.2
THZ				IAmb	IAmb	06 41 18.9	
	comp=Z,486nm,1.0s						
BSWZ	Blackbirch Sta	20.44	172	P	P	06 41 05.0	+0.1
PLWZ	Palliser	20.50	169	P	P	06 41 04.3	-1.3
CMWZ	Cape Campbell	20.52	172	P	P	06 41 06.1	+0.3
MGCD	Mangrove Creek	20.66	231	P	Pn	06 41 10.2	-0.6
	baz=21,SNR=74						
RIV	Riverview	20.94	230	P	Pn	06 41 12.5	-1.6
	baz=21,SNR=31						
RIV	Riverview	20.94	230	P	Pn	06 41 12.8	-1.2
RIV				pmax	pmax		
	comp=Z,1µm,1.6s						
KHZ	Kahutara	21.09	173	P	P	06 41 11.1	-0.8
KHZ				IAmb	IAmb	06 41 13.4	
	comp=Z,1µm,1.3s						
LTZ	Lake Taylor	21.35	176	P	P	06 41 14.5	-0.2
LTZ				IAmb	IAmb	06 41 17.7	
	comp=Z,2µm,1.5s						
OXZ	Oxford	21.87	177	P	P	06 41 19.5	-0.7
OXZ				IAmb	IAmb	06 41 22.6	
	comp=Z,1µm,1.4s						
FOZ	Fox Glacier	22.04	181	P	P	06 41 22.2	+0.3
FOZ	Fox Glacier	22.04	181	P	P	06 41 24.0	+2.1
RPZ	Rata Peaks	22.22	179	P	P	06 41 23.8	-0.1
	comp=Z,262nm,0.8s,baz=358,slow=3.6,SNR=68						
RPZ				ScP	ScP	06 48 42.7	0.0
	comp=Z,41nm,1.1s,baz=170,slow=2.2,SNR=6.7						
RPZ				LR	LR	06 49 03.4	
	comp=Z,19µm,18.9s,baz=357,slow=34						
RPZ	Rata Peaks	22.22	179	P	P	06 41 23.1	-0.8
RPZ				IAmb	IAmb	06 41 26.4	
	comp=Z,2µm,1.5s						
MQZ	McQueen's Vall	22.29	176	P	P	06 41 23.4	-1.1
CTA	Charters Tower	22.53	269	P	P	06 41 28.1	+0.9
	comp=Z,237nm,0.5s,baz=90,slow=12,SNR=267						
CTA				LR	LR	06 49 52.6	
	comp=Z,14µm,20.1s,baz=91,slow=35						
CTAO	Charters Tower	22.53	269	P	P	06 41 28.0	+0.8
CTAO				pmax	pmax		
	comp=Z,427nm,0.8s						
CTAO	Charters Tower	22.53	269	P	P	06 41 28.0	+0.8
CTAO				IAmb	IAmb	06 41 32.1	
	comp=Z,427nm,0.8s						
TARA	Tarawa	22.80	7	P	P	06 41 30.2	+0.4
LBZ	Lake Benmore	22.89	180	P	P	06 41 29.8	-0.6
LBZ				IAmb	IAmb	06 41 32.4	
	comp=Z,1µm,1.4s						
CNB	Canberra Magne	22.98	229	P	P	06 41 32.8	+1.3
	baz=23,SNR=696						
YNG	Young	23.16	232	P	P	06 41 34.8	+1.6
	baz=23,SNR=169						
CAN	Canberra	23.23	229	P	P	06 41 34.9	+1.0
CAN				pmax	pmax		
	comp=Z,1µm,0.7s						
CAN	Canberra	23.23	229	P	P	06 41 34.9	+1.0
WKZ	Wanaka	23.35	182	P	P	06 41 34.2	-0.6
WKZ				IAmb	IAmb	06 41 39.0	
	comp=Z,690nm,1.4s						
ODZ	Otahua Downs	23.55	179	P	P	06 41 36.2	-0.3
ODZ				IAmb	IAmb	06 41 41.1	
	comp=Z,613nm,1.4s						
MLZ	Mavora Lakes	23.93	184	P	P	06 41 40.5	+0.4
MLZ				IAmb	IAmb	06 41 42.2	
	comp=Z,563nm,1.1s						
MILA	Mila	24.06	225	P	P	06 41 42.5	+1.1
	baz=24,SNR=147						
DCZ	Deep Cove	24.11	185	P	P	06 41 42.0	+0.5
CMSA	Cobar Meteorol	24.17	240	P	P	06 41 43.6	+1.2
	baz=24,SNR=904						
QLP	Quilpie	24.34	253	P	P	06 41 44.8	+0.9
	baz=24,SNR=297						
WHZ	Wether Hill Ro	24.47	184	P	P	06 41 45.1	+0.3
WHZ				IAmb	IAmb	06 41 49.2	
	comp=Z,469nm,0.9s						
RABL	Rabaul	24.58	312	P	P	06 41 46.2	-0.1
KRVT	Keravat (AS076	24.60	311	P	P	06 41 46.5	+0.2
	comp=Z,1µm,0.6s,baz=147,slow=3.1,SNR=74						
MTSU	Mount Surprise	24.67	273	P	P	06 41 48.6	+1.6
	baz=25,SNR=1000						
PYZ	Puysegur Point	24.84	186	P	P	06 41 47.8	-0.5
PYZ				IAmb	IAmb	06 42 02.7	
	comp=Z,232nm,0.9s						
PMG	Port Moresby	25.28	295*c*	*i*P	P	06 41 53.4	+0.9
PMG				pmax	pmax		
	comp=Z,5µm,0.9s						
PMG	Port Moresby	25.28	295	P	P	06 41 53.4	+0.9
KNTN	Kanton	25.49	46	P	P	06 41 55.0	+0.6
KNTN				IAmb	IAmb	06 41 59.6	
	comp=Z,1µm,1.4s						
TOO	Toolangi	26.81	228	P	P	06 42 07.1	+0.9
	baz=27,SNR=216						
TOO	Toolangi	26.81	228	P	P	06 42 07.0	+0.9
TOO				pmax	pmax		
	comp=Z,698nm,1.1s						
TOO	Toolangi	26.81	228	P	P	06 42 07.0	+0.9
TOO				IAmb	IAmb	06 42 10.7	
	comp=Z,698nm,1.1s						
COEN	Coen	26.87	282	P	P	06 42 08.5	+1.6
	baz=27,SNR=277						
COEN	Coen	26.87	282	P	P	06 42 08.5	+1.6
COEN				IAmb	IAmb	06 42 15.4	
	comp=Z,262nm,1.0s						
STKA	Stephens Creek	27.61	242	P	P	06 42 14.5	+1.2
	baz=28,SNR=313						
STKA	Stephens Creek	27.61	242	P	P	06 42 14.5	+1.2
	comp=Z,332nm,0.8s,baz=86,slow=11,SNR=232						
STKA				PcP	PcP	06 45 29.4	+1.3
	comp=Z,37nm,0.7s,baz=24,slow=5.2,SNR=3.1						
STKA				ScP	ScP	06 49 01.0	+2.9
	comp=Z,76nm,1.2s,baz=48,slow=4.1,SNR=6.2						
STKA				LR	LR	06 52 41.2	
	comp=Z,7µm,18.7s,baz=70,slow=35						
STKA	Stephens Creek	27.61	242	P	P	06 42 14.6	+1.2
STKA				pmax	pmax		
	comp=Z,92nm,0.9s						
STKA	Stephens Creek	27.61	242	P	P	06 42 14.6	+1.2
RAR	Rarotonga	27.85	95	P	P	06 42 15.0	-0.6
	comp=Z,47nm,1.1s,baz=220,slow=2.8,SNR=4.2						
RAR				LR	LR	06 50 54.9	
	comp=Z,9µm,21.6s,baz=264,slow=31						
MOO	Moorlands	28.53	217	P	P	06 42 22.5	+1.1
	baz=29,SNR=83						
QIS	Mount Isa	28.66	266	P	P	06 42 23.2	+0.4
	baz=29,SNR=142						
TAU	Tasmania Unive	28.76	217	P	P	06 42 23.4	0.0
TAU				pmax	pmax		
	comp=Z,193nm,0.8s						
TAU	Tasmania Unive	28.76	217	P	P	06 42 23.4	0.0
TAU				IAmb	IAmb	06 42 26.5	
	comp=Z,193nm,0.8s						
ARPS	Mount Arapiles	29.05	232	P	P	06 42 27.2	+1.1
	baz=29,SNR=97						
KWAJ	Kwajalein Atol	30.17	355	P	P	06 42 36.0	-0.1
KWAJ				pmax	pmax		
	comp=Z,376nm,1.0s						
KWAJ	Kwajalein Atol	30.17	355	P	P	06 42 36.0	-0.1
KWAJ				IAmb	IAmb	06 42 44.9	
	comp=Z,376nm,1.0s						
HTT	Hallett	30.19	240	P	P	06 42 37.2	+0.9
	baz=30,SNR=184						
PATS	Pohnpei	30.47	336	P	P	06 42 38.8	+0.1
PATS				IAmb	IAmb	06 42 43.4	
	comp=Z,163nm,0.7s						
BBOO	Buckleboo	32.39	242	P	P	06 42 56.0	+0.5
	baz=32,SNR=160						
BBOO	Buckleboo	32.39	242	P	P	06 42 56.2	+0.7
WR0	Warramunga Arr	33.45	266	P	P	06 43 04.3	-0.6
WB0	Warramunga Arr	33.62	266	P	P	06 43 05.7	-0.7
WB2	Warramunga Arr	33.63	266	P	P	06 43 05.7	-0.8
WRAB	Tennant Creek	33.63	266*c*	*i*P	P	06 43 05.7	-0.8
WRAB				pmax	pmax		
	comp=Z,2µm,1.5s						
WRAB				MLR	MLR		
	comp=Z,14µm,14.0s						
WRAB	Tennant Creek	33.63	266	P	P	06 43 05.5	-1.0
AS31	Alice Springs	33.64	259	P	P	06 43 06.4	-0.2
AS31				IAmb	IAmb	06 43 08.7	
	comp=Z,300nm,1.2s						
ASAR	Alice Springs	33.64	259	P	P	06 43 06.3	-0.2
	comp=Z,168nm,0.5s,baz=86,slow=8.4,SNR=422						
ASAR				S	S	06 48 19.6	-1.5
	comp=Z,16nm,1.1s,baz=82,slow=14,SNR=4.2						
ASAR				ScP	ScP	06 49 19.3	+1.1
	comp=Z,16nm,0.8s,baz=94,slow=3.6,SNR=7.8						
ASAR				PKiKP	PKiKP	06 53 07.7	-1.4
	comp=Z,1.8nm,0.7s,baz=77,slow=1.0,SNR=5.9						
WRA	Warramunga Arr	33.64	266	P	P	06 43 06.0	-0.6
	comp=Z,442nm,1.1s,baz=98,slow=8.0,SNR=180						
WRA				S	S	06 48 17.1	-4.0
	comp=Z,21nm,1.0s,baz=99,slow=15,SNR=5.4						
WRA				ScP	ScP	06 49 19.4	+1.2
	comp=Z,35nm,1.2s,baz=90,slow=3.7,SNR=4.6						
WRA				PKiKP	PKiKP	06 53 08.5	-0.6
	comp=Z,3.1nm,1.1s,baz=34,slow=0.2,SNR=1.5						
WRA				LR	LR	06 56 06.6	
	comp=Z,19µm,20.6s,baz=75,slow=35						
WRA	Warramunga Arr	33.64	266	P	P	06 43 06.0	-0.6
MCQ	Macquarie Isla	34.11	192	P	P	06 43 11.6	+1.4
	baz=34,SNR=6.4						
MCQ	Macquarie Isla	34.11	192	P	P	06 43 09.6	-0.6
MCQ				pmax	pmax		
	comp=Z,118nm,1.1s						
MCQ	Macquarie Isla	34.11	192	P	P	06 43 09.6	-0.6
MCQ				IAmb	IAmb	06 43 23.0	
	comp=Z,118nm,1.1s						
JAY	Jayapura	34.40	299	P	P	06 43 13.8	+0.5
	comp=Z,744nm,0.6s,baz=120,slow=5.0,SNR=214						
JAY				S	S	06 48 34.3	+1.4
	comp=Z,32nm,1.2s,baz=52,slow=20,SNR=3.0						
JAY				LR	LR	06 55 42.8	
	comp=Z,19µm,21.6s,baz=106,slow=33						
KDU	Kakadu	37.12	277	P	P	06 43 36.6	+0.2
	baz=37,SNR=217						
TBI	Tubuai	37.16	101	*e*S	S	06 49 15.9	+1.0
	comp=Z,26µm,27.2s						
TBI				*e*LQ	LQ	06 52 12.1	
	comp=Z,69µm,29.5s						
TBI				*e*LR	LR	06 53 48.2	
	comp=Z,38µm,29.5s						
PAE	Paea	37.91	91	*e*pP	pP	06 44 06.1	-2.3
	comp=Z,57nm,1.4s						
PPT2	Papeete2	37.93	91	*e*pP	pP	06 44 07.0	-1.7
	comp=Z,402nm,1.5s						
PPT2				*e*S	S	06 49 26.9	+0.1
	comp=Z,33µm,27.0s						
PPT2				*e*LQ	LQ	06 52 31.6	
	comp=Z,107µm,25.0s						
PPT2				*e*LR	LR	06 54 07.0	
	comp=Z,46µm,32.0s						
PPT	Papeete	37.94	91	LR	LR	06 55 22.9	
	comp=Z,6µm,21.8s,baz=258,slow=30						
TIAR	Tiarei	38.15	91	*e*pP	pP	06 44 08.8	-1.7
	comp=Z,113nm,1.3s						
MTN	Manton Dam	38.31	276	P	P	06 43 46.4	-0.1
	baz=38,SNR=72						
MTN	Manton Dam	38.31	276	P	P	06 43 46.2	-0.2
WRKA	Warakurna	38.66	256	P	P	06 43 49.4	0.0
	baz=39,SNR=681						
FORT	Forrest	38.87	247	P	P	06 43 51.2	+0.3
	baz=39,SNR=152						
FORT	Forrest	38.87	247	P	P	06 43 50.8	-0.2
XMAS	Kiritimati	39.23	57	P	P	06 43 54.7	+0.6
XMAS				IAmb	IAmb	06 44 00.5	
	comp=Z,308nm,1.3s						

KNRA **Kununurra** 39.72 271 P **P** 06 43 57.9 -0.2
baz=40,SNR=141
KNRA **Kununurra** 39.72 271 P **P** 06 43 57.9 -0.2
H11S2 **WAKE ISLAND Hy** 39.84 355 P **P** 06 43 59.5 +0.7
H11S3 **WAKE ISLAND Hy** 39.84 355 P **P** 06 43 59.5 +0.7
H11S1 **WAKE ISLAND Hy** 39.86 355 P **P** 06 43 59.6 +0.7
SAUI **Saumlaki** 39.90 284 P **P** 06 44 01.1 +1.4
PMOR **Pomariorio Ree** 40.12 88 *e*P **P** 06 44 01.4 -0.1
comp=Z,285nm,1.3s
PMOR *e*pP **pP** 06 44 23.7 -3.4
comp=Z,1000nm,1.2s
VAH **Vaihoa** 40.31 88 *e*P **P** 06 44 03.1 +0.1
comp=Z,237nm,1.4s
VAH *e*pP **pP** 06 44 25.0 -3.6
comp=Z,618nm,1.2s
WAKE **Wake Island** 40.63 355 P **P** 06 44 05.4 -0.1
FAKI **Fak Fak** 41.33 291 P **P** 06 44 11.5 +0.1
FITZ **Fitzroy Crossi** 42.06 266 P **P** 06 44 18.0 +0.6
baz=42,SNR=813
FITZ **Fitzroy Crossi** 42.06 266 P **P** 06 44 17.9 +0.6
comp=Z,661nm,0.9s,baz=111,slow=7.4,SNR=292
FITZ PKPPKP **P'P'df** 07 16 23.8 +1.0
comp=Z,2.5nm,0.9s,baz=287,slow=6.2,SNR=3.8
FITZ **Fitzroy Crossi** 42.06 266 P **P** 06 44 18.0 +0.6
JOHN **Johnston Islan** 42.78 29 P **P** 06 44 22.7 -0.3
JOHN IAmb IAmb 06 44 28.2
comp=Z,220nm,0.8s
SIJI **Sorong** 43.20 293 PcP **PcP** 06 46 14.9 +0.8
baz=82,slow=5.9
SIJI S **S** 06 50 45.7 +0.7
comp=Z,10nm,1.0s,baz=291,slow=15,SNR=9.5
KMBL **Kambalda** 44.19 247 P **P** 06 44 34.3 0.0
baz=44,SNR=90
SOEI **Soe** 45.68 277 P **P** 06 44 47.7 +1.1
BATI **Baumata** 46.09 276 LR LR 07 04 19.6
comp=Z,23µm,19.2s,baz=132,slow=36
PSAD2 **Pilbara Seismi** 46.66 260 P **P** 06 44 54.2 +0.2
PSAB3 **Pilbara Seismi** 46.77 260 P **P** 06 44 54.6 -0.2
PSAA3 **Pilbara Seismi** 46.77 260 P **P** 06 44 54.9 +0.1
PSA00 **Pilbara Seismi** 46.78 260 P **P** 06 44 55.0 +0.1
MBWA **Marble Bar** 46.95 261 P **P** 06 44 56.2 0.0
MEEK **Meekatharra** 47.24 253 P **P** 06 44 58.2 -0.2
baz=47,SNR=143
TNTI **Ternate** 47.38 292 P **P** 06 45 00.4 +0.8
TNTI IAmb IAmb 06 45 14.5
comp=Z,520nm,1.5s
KLBR **Kellerberrin** 47.72 246 P **P** 06 45 01.9 -0.2
baz=48,SNR=164
MMRI **Maumere** 47.95 278 P **P** 06 45 04.1 +0.1
NWAO **Narrogin (SRO)** 48.14 245 P **P** 06 45 05.5 +0.2
baz=48,SNR=164
NWAO **Narrogin (SRO)** 48.14 245 P **P** 06 45 05.7 +0.4
comp=Z,784nm,0.9s,baz=94,slow=7.5,SNR=152
NWAO LR LR 07 04 28.0
comp=Z,13µm,18.4s,baz=94,slow=35
NWAO **Narrogin (SRO)** 48.14 245 P **P** 06 45 05.5 +0.2
NWAO **Narrogin (SRO)** 48.14 245 P **P** 06 45 05.5 +0.2
NWAO IAmb IAmb 06 45 07.5
comp=Z,844nm,0.9s
RKGY **Rocky Gully** 48.37 242 P **P** 06 45 07.6 +0.6
baz=48,SNR=26
BLDU **Balliduˋ** 48.64 248 P **P** 06 45 08.8 -0.4
baz=49,SNR=164
MUN **Mundaring** 49.02 246 P **P** 06 45 12.3 +0.3
baz=49,SNR=23
TAOE **Nuku Hiva Isla** 49.23 83 P **P** 06 45 14.8 +0.8
TAOE IAmb IAmb 06 45 16.5
comp=Z,105nm,0.8s
MORW **Morawa** 49.31 250 P **P** 06 45 14.2 -0.1
baz=49,SNR=131
MORW **Morawa** 49.31 250 P **P** 06 45 13.9 -0.5
LUWI **Luwuk** 50.55 287 P **P** 06 45 24.9 +1.1
H01W1 **Cape Leeuwin H** 50.70 242 P **P** 06 45 27.3 +3.0
baz=111,slow=9.5,SNR=24
H01W3 **Cape Leeuwin H** 50.71 242 P **P** 06 45 27.5 +3.0
baz=111,slow=9.5,SNR=29
H01W2 **Cape Leeuwin H** 50.71 242 P **P** 06 45 27.0 +2.5
baz=111,slow=9.5,SNR=24
DDMP **Don Marcelino,** 51.59 297 *e*P **P** 06 45 31.2 -0.3
KAPI **Kappang** 51.60 281 PP PP 06 47 28.4 -1.9
comp=Z,56nm,1.1s,baz=263,slow=6.7,SNR=1.7
KAPI S **S** 06 52 45.2 +1.2
comp=Z,1.4nm,0.3s,baz=207,slow=21,SNR=7.0
KAPI **Kappang** 51.60 281 P **P** 06 45 33.0 +1.3
KAPI **Kappang** 51.60 281 P **P** 06 45 32.4 +0.8
KAPI pmax pmax
comp=Z,2µm,1.4s
KAPI **Kappang** 51.60 281 P **P** 06 45 32.4 +0.8
GIRL **Giralia** 51.73 258 P **P** 06 45 34.6 +2.1
baz=52,SNR=18
GIRL **Giralia** 51.73 258 P **P** 06 45 33.4 +0.9
KEKH **Kekaha** 52.14 36 P **P** 06 45 35.6 +0.2
KEKH IAmb IAmb 06 45 39.6
comp=Z,251nm,0.9s
DAV **Davao City (W)** 52.23 298 P **P** 06 45 37.0 +0.8
comp=Z,308nm,0.5s,baz=83,slow=2.7,SNR=39
DAV **Davao City (W)** 52.23 298⇑ *e*P P 06 45 28.2 -8.1
DAV **Davao City (W)** 52.23 298 P **P** 06 45 37.1 +0.8
DAV **Davao City (W)** 52.23 298 P **P** 06 45 36.6 +0.3
DMPH **Davao City--Mi** 52.30 298⇑ *e*P **P** 06 45 37.0 +0.2
KHU **Kahuku** 52.41 42 P **P** 06 45 37.8 0.0
KHU pmax pmax
comp=Z,161nm,0.8s
KHU **Kahuku** 52.41 42 P **P** 06 45 37.8 0.0
KHU IAmb IAmb 06 45 41.2
comp=Z,161nm,0.8s
KHLU **Kahaluˋu** 52.50 41 P **P** 06 45 38.2 -0.1
KHLU IAmb IAmb 06 45 45.2
comp=Z,120nm,0.8s
AIN **Ainahou** 52.60 42 P **P** 06 45 40.1 +1.0
AIN IAmb IAmb 06 45 43.5
comp=Z,218nm,0.7s
KIP **Kipapa** 52.64 38⇑ *e*P **P** 06 45 39.6 +0.4
MLOA **Mauna Loa Obse** 52.65 42 P **P** 06 45 40.4 +0.7
MLOA IAmb IAmb 06 45 44.2
comp=Z,182nm,0.8s
SDHHI **Sand Hill** 52.72 42 P **P** 06 45 40.4 +0.5
SDHHI IAmb IAmb 06 45 44.2
comp=Z,170nm,0.6s
WRMHI **West Rim** 52.73 42 P **P** 06 45 40.0 +0.1
WRMHI IAmb IAmb 06 45 44.3
comp=Z,185nm,0.7s
RIM **Rim** 52.73 42 P **P** 06 45 40.2 +0.2
RIM IAmb IAmb 06 45 43.0
comp=Z,220nm,1.1s
MLH **Mauna Loa** 52.74 42 P **P** 06 45 42.3 +2.1
MLH IAmb IAmb 06 45 44.7
comp=Z,192nm,0.7s
NPH **North Pit** 52.74 42 P **P** 06 45 40.4 +0.3
NPH IAmb IAmb 06 45 44.5
comp=Z,62nm,0.6s
UWB **Uwekahuna B** 52.75 42 P **P** 06 45 40.2 +0.1
UWB IAmb IAmb 06 45 55.4
comp=Z,90nm,0.7s
PUH **Pauahi** 52.75 42 P **P** 06 45 40.1 -0.1
PUH IAmb IAmb 06 45 44.9
comp=Z,165nm,0.6s
HMH **Humu'ula Sheep** 52.76 42 P **P** 06 45 41.0 +0.5
SKMP **Bagumbayan, Su** 52.79 297 *e*P **P** 06 45 40.4 0.0
POHA **Pohakuloa** 52.84 42 P **P** 06 45 43.9 +2.9
POHA IAmb IAmb 06 45 45.0
comp=Z,181nm,0.7s
OPA **Opana** 52.85 38 P **P** 06 45 43.3 +2.6
OPA pmax pmax
comp=Z,170nm,0.7s
OPA **Opana** 52.85 38 P **P** 06 45 43.3 +2.6
OPA IAmb IAmb 06 45 44.9
comp=Z,170nm,0.7s
HPAH **Hawaii Prepara** 52.95 41 P **P** 06 45 43.5 +1.9
BUKP **Musuan** 53.11 298 *e*P **P** 06 45 43.4 +0.6
HLK **Haleakala** 53.16 40 P **P** 06 45 46.7 +3.3
HLK IAmb IAmb 06 45 50.9
comp=Z,273nm,1.1s
BUTP **Butuan** 53.27 300 *e*P **P** 06 45 44.4 +0.5
CGP **Cagayan de Oro** 53.73 299 *e*P **P** 06 45 48.8 +1.5
PAGZ **Pagadian** 54.48 297 *e*P **P** 06 45 53.5 +0.8
MSLP **Maasin** 54.55 301 *e*P **P** 06 45 53.5 +0.3
TBP **Tagbilaran** 55.10 299 *e*P **P** 06 45 55.6 -1.7
OCLP **Ormoc** 55.28 301 *e*P **P** 06 45 58.8 +0.3
JCJ **Chichijima** 55.40 329 P **P** 06 45 59.3 +0.2
comp=Z,398nm,0.7s,baz=96,slow=16,SNR=22
JAGI **Jajag, Banyuwa** 55.50 274 P **P** 06 45 59.7 -0.5
BKB **Balikpapan** 55.73 284 P **P** 06 46 04.4 +2.6
CNP **Catarman** 56.09 303 *e*P **P** 06 46 04.4 +0.1
CNOP **Candoni, Negro** 56.17 299 *e*P **P** 06 46 03.9 -1.0

VNDA **Vanda** 56.28 182 P **P** 06 46 04.5 -0.3
comp=Z,34nm,0.9s,baz=360,slow=7.5,SNR=99
VNDA LR LR 07 05 51.6
comp=Z,9µm,21.9s,baz=17,slow=31
VNDA PKPPKP **P'P'df** 07 15 59.5 -2.2
comp=Z,1.4nm,1.1s,baz=178,slow=1.2,SNR=4.4
VNDA PKP2bc 07 16 18.2
comp=Z,1.6nm,1.1s,baz=315,slow=5.7,SNR=3.8
VNDA **Vanda** 56.28 182 P **P** 06 46 04.3 -0.5
VNDA IAmb IAmb 06 46 05.6
comp=Z,228nm,1.5s
GUIM **Jordan** 56.66 299 *e*P **P** 06 46 07.7 -0.7
RCP **Roxas** 57.06 300⇑ *i*P **P** 06 46 12.1 +0.9
PVCP **Virac** 57.14 303 *e*P **P** 06 46 12.7 +1.0
OTRP **Odiongan** 58.10 301 *e*P **P** 06 46 18.4 0.0
CASY **Casey** 58.53 204 P **P** 06 46 20.0 -0.6
SPMM **Sapulut** 58.79 290 P **P** 06 46 24.0 +0.7
BOAC **Boac** 58.87 302 *e*P **P** 06 46 24.5 +0.8
SJMP **San Jose** 58.88 300 *e*P **P** 06 46 24.3 +0.5
UGM **Wanagama** 59.06 274 P **P** 06 46 25.7 +0.4
BUSP **Coron** 59.37 299 *e*P **P** 06 46 27.7 +0.5
SMRI **Semarang** 59.44 274 P **P** 06 46 28.9 +1.1
LQP **Lukban** 59.49 302 *e*P **P** 06 46 28.1 -0.2
POLP **Polilio Island** 59.53 303 *e*P **P** 06 46 28.3 0.0
ENPP **El Nido** 59.57 298 *e*P **P** 06 46 29.2 +0.6
KKM **Kota Kinabalu** 59.65 291 P **P** 06 46 30.3 +1.0
BATP **Bataraza** 59.65 295 *e*P **P** 06 46 30.4 +1.2
LUBP **Lubang** 60.30 301 *e*P **P** 06 46 32.5 -1.1
BALP **Baler** 60.41 304 *e*P **P** 06 46 33.8 -0.5
PALP **Palanan** 60.55 305 *e*P **P** 06 46 35.9 +0.7
CAUP **Cauayan** 60.94 305 *e*P **P** 06 46 39.0 +1.2
SMPP **San Manuel, Pa** 61.35 303 *e*P **P** 06 46 40.4 -0.3
SBUM **Sibu** 61.54 285 P **P** 06 46 43.2 +1.1
SBUM **Sibu** 61.54 285 P **P** 06 46 43.0 +0.9
JHJ2 **Mitsune** 61.56 331 P **P** 06 46 42.0 +0.3
JHJ **Hachijo jima 2** 61.58 331 P **P** 06 46 42.7 +0.7
comp=Z,360nm,0.8s,baz=154,slow=9.9,SNR=6.2
CISI **Cisompet, Garu** 61.70 273 P **P** 06 46 43.0 -0.3
APYP **Conner** 61.93 305 *e*P **P** 06 46 44.4 -0.1
LEM **Lembang** 62.14 274 S **S** 06 55 04.6 +1.6
comp=Z,10nm,0.4s,baz=312,slow=21,SNR=2.1
LEM PKP2bc 07 16 01.1
comp=Z,22nm,0.5s,baz=199,slow=5.0,SNR=8.1
XMIS **Christmas Isla** 62.75 269 P **P** 06 46 50.2 0.0
KSM **Kuching** 62.85 283 P **P** 06 46 51.2 +0.4
KSM **Kuching** 62.85 283 P **P** 06 46 52.0 +1.2
JOW **Kunigami** 62.92 318 P **P** 06 46 52.7 +1.7
comp=Z,18nm,0.8s,baz=119,slow=12,SNR=53
JOW **Kunigami** 62.92 318 P **P** 06 46 51.8 +0.8
JOW IAmb IAmb 06 46 56.8
comp=Z,96nm,1.0s
BBP **Basco** 62.97 308 *e*P **P** 06 46 50.2 -1.2
INU **Inuyama** 64.70 330 P **P** 06 47 03.4 +0.9
YOJ **Yonaguni jima** 64.78 312 P **P** 06 47 03.7 +0.5
YOJ pmax pmax
comp=Z,726nm,1.0s
YOJ **Yonaguni jima** 64.78 312 P **P** 06 47 03.7 +0.5
TWG **Pinlang** 65.10 310 P **P** 06 47 04.3 -1.0
MJAR **Matsushiro Arr** 65.16 332 P **P** 06 47 05.7 +0.3
comp=Z,140nm,0.9s,baz=164,slow=7.0,SNR=207
MJAR S **S** 06 55 40.1 +0.9
comp=Z,1.1nm,0.4s,baz=48,slow=3.4,SNR=4.9
MJAR LR LR 07 14 06.3
comp=Z,2µm,20.9s,baz=135,slow=34
MJAR PKP2bc 07 15 49.2
comp=Z,2.9nm,0.9s,baz=333,slow=3.9,SNR=6.3
MAJO **Matsushiro** 65.16 332 *c i*P **P** 06 47 05.9 +0.5
MAJO pmax pmax
comp=Z,1µm,1.8s
MAJO MLR MLR
comp=Z,2µm,18.0s
MAJO **Matsushiro** 65.16 332 P **P** 06 47 05.6 +0.1
MAT **Matsushiro** 65.16 332 P **P** 06 47 05.6 +0.2
MAT S **S** 06 55 40.8 +1.6
MJB9 **Matsu-Tunnel** 65.16 332 P **P** 06 47 05.7 +0.3
YULB **Yu-li** 65.29 310 P **P** 06 47 05.9 -0.7
YULB IAmb IAmb 06 47 13.5
comp=Z,274nm,1.5s
NACB **Ninganchiao** 65.58 311 P **P** 06 47 08.4 0.0
TPUB **Ta-pu** 65.71 310 P **P** 06 47 09.0 -0.3
SSLB **Suanglung** 65.79 310 P **P** 06 47 09.5 -0.3
SSLB IAmb IAmb 06 47 13.7
comp=Z,312nm,1.0s
JNU **Nakatsue** 66.03 324 P **P** 06 47 11.7 +0.5
comp=Z,247nm,0.9s,baz=98,slow=2.5,SNR=80
JNU S **S** 06 55 52.4 +2.3
comp=Z,1.9nm,0.6s,baz=26,slow=23,SNR=7.1
JNU LR LR 07 12 58.2
comp=Z,2µm,21.8s,baz=132,slow=33
JNU PKP2bc 07 15 48.0
comp=Z,4.2nm,0.8s,baz=24,slow=7.2,SNR=2.1
JNU **Nakatsue** 66.03 324 P **P** 06 47 11.8 +0.5
YHNB **Yeheng** 66.05 311 P **P** 06 47 11.8 +0.3
TATO **Taipei** 66.16 312 P **P** 06 47 12.9 +0.7
TATO **Taipei** 66.16 312 P **P** 06 47 12.5 +0.4
PMBI **Palembang** 66.19 276 P **P** 06 47 13.2 +0.7
MNAI **Manna** 67.35 274 P **P** 06 47 19.3 -0.7
ERM **Erimo** 67.95 338 *c i*P **P** 06 47 24.2 +1.2
ERM pmax pmax
comp=Z,373nm,2.4s
ERM **Erimo** 67.95 338 P **P** 06 47 23.7 +0.7
ERM IAmb IAmb 06 47 31.0
comp=Z,140nm,1.2s
KNMB **Chin-men Tao** 68.04 309 P **P** 06 47 24.8 +0.8
KNMB IAmb IAmb 06 47 28.5
comp=Z,536nm,1.5s
QZH **Quanzhou** 68.19 310⇓ *i*P **P** 06 47 24.9 0.0
QZH S **S** 06 56 18.3 +2.2
QZH pmax pmax
comp=Z,450nm,2.1s
QZH pmax pmax
comp=Z,12µm,4.7s
QZH LR LR
comp=Z,4µm,27.9s
QZH LR LR
comp=Z,3µm,18.0s
QZH LR LR
comp=Z,11µm,35.1s
QSPA **South Pole Qui** 68.63 180 P **P** 06 47 26.9 -0.3
QSPA IAmb IAmb 06 47 28.5
comp=Z,454nm,1.1s
MYKOM **Kota Tinggi** 68.86 281 P **P** 06 47 30.4 +1.0
MYKOM **Kota Tinggi** 68.86 281 P **P** 06 47 31.0 +1.6
YUK **Yuzh-Kuril'sk** 68.90 341 *e*P **P** 06 47 29.8 +0.9
YUK *i* *PP **pP** 06 47 58.1 +0.5
YUK *e* 06 50 00.5
YUK *i* S **S** 06 56 24.1 +0.3
YUK *i* *SS **sS** 06 57 14.7 +2.1
YUK pmax pmax
comp=Z,448nm,1.1s
YUK pmax pmax
comp=N,222nm,0.7s
YUK pmax pmax
comp=E,255nm,1.1s
YUK pmax pmax
comp=Z,659nm,1.5s
DLV **T Lat** 69.16 293 P **P** 06 47 33.0 +1.6
DLV IAmb IAmb 06 47 37.3
comp=Z,489nm,1.4s
KUR **Kuril'sk** 69.43 343 *c i*P **P** 06 47 33.7 +1.6
KUR *e* 06 47 55.9
KUR *i* 06 50 06.0
KUR *e*PPP PPP 06 51 48.5
KUR *e*S **S** 06 56 32.1 +2.1
KUR *e* 06 57 23.3
KUR pmax pmax
comp=Z,1µm,1.5s
KUR pmax pmax
comp=N,230nm,1.4s
KUR pmax pmax
comp=E,272nm,1.3s
KUR pmax pmax
comp=Z,11µm,7.0s
HKC **Hong Kong Obse** 69.90 305 ⇑P **P** 06 47 37.0 +1.5
HKPS **Hong Kong Po S** 69.91 305 P **P** 06 47 36.8 +1.2
HKPS IAmb IAmb 06 47 41.5
comp=Z,424nm,1.2s
JKA **Kamikawa-asahi** 70.00 339 P **P** 06 47 37.6 +2.0
ASAJ **Asahikawa** 70.00 339 P **P** 06 47 37.6 +1.9
comp=Z,128nm,0.6s,baz=209,slow=8.7,SNR=90
ASAJ PKP2bc 07 15 36.7
comp=Z,16nm,1.1s,baz=274,slow=13,SNR=6.3
SSE **Sheshan** 70.35 316 P **P** 06 47 38.3 +0.2
SSE sP **sP** 06 48 13.7 -5.0

SSE PP **PP** 06 50 14.7 -0.9
SSE S **S** 06 56 41.9 +0.6
SSE sS **SKSac** 06 57 25.0 -4.0
SSE pmax pmax
comp=Z,160nm,1.5s
SSE pmax pmax
comp=Z,4µm,3.6s
SSE **Sheshan** 70.35 316 P **P** 06 47 38.1 0.0
SSE IAmb IAmb 06 47 42.1
comp=Z,137nm,0.7s
TJN **Taejon** 70.38 324 *c i*P **P** 06 47 38.7 +0.5
COCO **West Island** 70.41 264 P **P** 06 47 39.8 +1.0
COCO pmax pmax
comp=Z,1µm,1.3s
COCO **West Island** 70.41 264 P **P** 06 47 39.8 +1.0
BKNI **Bangkinang** 70.87 278 P **P** 06 47 42.0 +0.3
KSRS **Korea Array** 70.88 325 P **P** 06 47 42.2 +1.1
comp=Z,85nm,0.8s,baz=139,slow=7.1,SNR=159
KSRS PKP2ab 07 15 36.1
comp=Z,0.7nm,0.5s,baz=332,slow=3.9,SNR=4.2
KSRS LR LR 07 18 20.2
comp=Z,2µm,18.9s,baz=140,slow=35
KS19 **Wonju Array Si** 70.94 325 P **P** 06 47 42.1 +0.6
KS19 IAmb IAmb 06 47 46.9
comp=Z,132nm,0.8s
GZH **Guangzhou** 70.97 305 P **P** 06 47 44.4 +2.3
GZH sP **sP** 06 48 22.8 +0.1
GZH PP **PP** 06 50 23.2 +2.1
GZH S **S** 06 56 52.6 +3.8
GZH pmax pmax
comp=Z,10µm,3.2s
QIZ **Qiongzhong** 71.54 300 P **P** 06 47 47.3 +1.7
QIZ pP **pP** 06 48 14.4 +0.6
QIZ S **S** 06 56 59.8 +4.3
QIZ sS **sS** 06 57 44.2 +1.1
QIZ SS **SS** 07 01 37.8 +4.5
QIZ pmax pmax
comp=Z,300nm,1.6s
QIZ pmax pmax
comp=Z,8µm,4.5s
QIZ **Qiongzhong** 71.54 300 P **P** 06 47 47.2 +1.6
QIZ IAmb IAmb 06 47 51.5
comp=Z,233nm,1.0s
INCN **Inchon** 71.59 325 P **P** 06 47 46.8 +1.3
INCN **Inchon** 71.59 325 P **P** 06 47 46.6 +1.1
INCN pmax pmax
comp=Z,1µm,1.4s
INCN **Inchon** 71.59 325 P **P** 06 47 46.6 +1.1
RPN **Rapa Nui** 72.31 113 P **P** 06 47 51.9 +1.8
comp=Z,44nm,0.9s,baz=14,slow=4.2,SNR=2.3
YSS **Yuzh-Sakhalins** 72.48 341 *α i*P **P** 06 47 52.5 +2.0
YSS *e**SP **sP** 06 48 33.2 +1.4
YSS *e* 06 50 31.9
YSS *e*PPP PPP 06 52 18.9
YSS *e*S **S** 06 57 06.4 +1.3
YSS *e*PPS PPS 06 57 52.3
YSS pmax pmax
comp=Z,440nm,0.8s
YSS pmax pmax
comp=Z,6µm,5.6s
YSS pmax pmax
comp=E,1µm,4.6s
YSS smax smax
comp=N,7µm,10.8s
YSS **Yuzh-Sakhalins** 72.48 341 P **P** 06 47 52.3 +1.8
YSS IAmb IAmb 06 47 57.0
comp=Z,318nm,0.7s
NJ2 **Nanjing** 72.48 316⇑ *i*P **P** 06 47 51.9 +1.0
NJ2 PcP **PcP** 06 48 06.1 -1.9
NJ2 pP **pP** 06 48 17.9 -1.4
NJ2 sP **sP** 06 48 30.1 -1.5
NJ2 S **S** 06 57 06.9 +1.1
NJ2 sS **sS** 06 57 57.4 +2.3
NJ2 pmax pmax
comp=Z,390nm,1.5s
NJ2 pmax pmax
comp=Z,10µm,6.8s
NJ2 LR LR
comp=Z,4µm,17.7s
NJ2 LR LR
comp=Z,5µm,17.1s
NJ2 LR LR
comp=Z,5µm,19.9s
IPM **Ipoh** 72.52 282 P **P** 06 47 52.2 +0.6
IPM **Ipoh** 72.52 282 P **P** 06 47 52.0 +0.4
SKR **Severo-Kuril's** 72.89 351 *e*P **P** 06 47 52.1 -0.8
SKR *e**PP **pP** 06 48 24.8 +3.1
SKR *e*PPP PPP 06 52 23.2
SKR *e*S **SKiKP** 06 57 14.4 -0.1
SKR *e**SS **sS** 06 58 02.6 +3.8
SKR pmax pmax
comp=Z,5µm,8.5s
SKR pmax pmax
comp=Z,4µm,16.9s
SKR MLR MLR
comp=Z,2µm,19.0s
TEY **Ternei** 72.95 336⇑ *e*P **P** 06 47 54.2 +0.9
TEY *e*S **S** 06 57 11.3 +0.8
TEY pmax pmax
comp=Z,90nm,1.7s
TEY pmax pmax
comp=N,40nm,1.7s
TEY pmax pmax
comp=Z,1µm,7.8s
TEY smax smax
comp=N,4µm,7.8s
KULM **Kulim** 73.19 283 P **P** 06 47 56.1 +0.5
KULM **Kulim** 73.19 283 P **P** 06 47 56.0 +0.5
MSHR **Mys Shultsa** 73.22 331 *c i*P **P** 06 47 56.6 +1.6
VLA **Vladivostok** 73.33 332 *c i*P **P** 06 47 56.6 +1.0
VLA pmax pmax
comp=Z,1µm,2.1s
RPSI **Rantau Prapat** 73.73 280 P **P** 06 47 58.4 -0.3
RPSI **Rantau Prapat** 73.73 280 P **P** 06 47 58.5 -0.2
PSI **Prapat** 73.78 280 P **P** 06 47 58.5 -0.6
comp=Z,270nm,1.1s,baz=179,slow=2.8,SNR=203
PSI PP **PP** 06 50 43.5 -1.8
comp=Z,64nm,1.2s,baz=178,slow=2.9,SNR=7.9
PSI S **SKiKP** 06 57 17.1 -0.1
comp=Z,1.4nm,0.3s,baz=180,slow=8.9,SNR=13
PSI LR LR 07 21 48.6
comp=Z,5µm,20.4s,baz=91,slow=37
ADK **Adak** 73.89 8 P **P** 06 47 58.9 +0.2
ADK pmax pmax
comp=Z,308nm,1.2s
ADK **Adak** 73.89 8 P **P** 06 47 58.9 +0.2
ADK IAmb IAmb 06 47 60.0
comp=Z,308nm,1.2s
SMY **Shemya** 73.92 2 P **P** 06 47 59.1 +0.2
SMY pmax pmax
comp=Z,166nm,0.8s
SMY **Shemya** 73.92 2 P **P** 06 47 59.1 +0.2
SMY IAmb IAmb 06 48 04.7
comp=Z,166nm,0.8s
USA0B **Ussuriysk Arra** 74.14 332 P **P** 06 48 01.5 +1.1
USA0B pmax pmax
comp=Z,565nm,1.4s
USA0B **Ussuriysk Arra** 74.14 332 P **P** 06 48 01.5 +1.1
USA0B IAmb IAmb 06 48 06.3
comp=Z,565nm,1.4s
USRK **Ussuriysk Ar.** 74.14 332 P **P** 06 48 01.5 +1.1
comp=Z,82nm,0.7s,baz=144,slow=3.5,SNR=195
USRK S **S** 06 57 28.1 +4.0
comp=Z,1.9nm,0.8s,baz=136,slow=40,SNR=1.5
USRK LR LR 07 16 59.6
comp=Z,3µm,21.2s,baz=135,slow=33
GSTR **Great Sitkin T** 74.18 9 P **P** 06 48 00.9 +0.4
GSI **Gunungsitoli** 74.44 278 P **P** 06 48 03.5 +0.7
WHN **Wuhan** 74.56 312⇑ *i*P **P** 06 48 03.9 +0.8
WHN pP **pwP** 06 48 34.8 +0.6
WHN PP **PP** 06 50 51.4 -0.2
WHN S **S** 06 57 31.8 +2.5
WHN pmax pmax
comp=Z,3µm,1.9s
WHN pmax pmax
comp=Z,15µm,3.8s
WHN LR LR
comp=Z,14µm,23.0s
WHN LR LR
comp=Z,19µm,26.9s
WHN LR LR
comp=Z,22µm,22.9s
ATKA **Atka Island** 74.57 10 P **P** 06 48 02.5 -0.1
PET **Petropavlovsk** 74.84 353 *α i*P **P** 06 48 04.8 +0.7
PET *e* 06 48 18.3

PET e*PP pP 06 48 32.8 -0.3
PET e*SP sP 06 48 45.7 +0.2
PET eS S 06 57 32.5 +1.1
PET e*SS sS 06 58 22.6 +2.0
PET pmax pmax
comp=Z,215nm,1.5s
PET pmax pmax
comp=Z,9µm,8.2s
PET pmax pmax
comp=Z,8µm,11.7s
PET smax smax
comp=E,5µm,9.5s
PET smax smax
comp=N,7µm,10.4s
PET smax smax
comp=E,5µm,11.2s
PET smax smax
comp=N,10µm,17.2s
PET Petropavlovsk 74.84 353 P **P 06 48 04.9 +0.7**
PET IAmb IAmb 06 48 05.8
comp=Z,454nm,1.5s
PEA0B Petropavlovsk- 75.04 352 P **P 06 48 06.2 +0.9**
PEA0B pmax pmax
comp=Z,723nm,1.3s
PEA0B Petropavlovsk- 75.04 352 P **P 06 48 06.2 +0.9**
PETK Petropavlovsk- 75.04 352 P **P 06 48 06.5 +1.1**
comp=Z,238nm,1.1s,baz=115,slow=6.7,SNR=82
PETK S **S 06 57 35.7 +2.0**
comp=Z,4.2nm,0.9s,baz=246,slow=25,SNR=1.9
DL2 Dalian 75.37 323 P **P 06 48 08.7 +1.2**
DL2 pP **pP 06 48 38.3 +1.5**
DL2 sP **sP 06 48 47.8 -1.4**
DL2 PP **PP 06 50 57.2 -1.0**
DL2 S **S 06 57 38.7 +0.8**
DL2 ScS **ScS 06 58 08.6 -1.5**
DL2 sS **sS 06 58 24.4 -3.3**
DL2 pmax pmax
comp=Z,540nm,1.2s
DL2 pmax pmax
comp=Z,11µm,4.7s
MDJ Mudanjiang 75.53 331 P **P 06 48 09.4 +1.1**
MDJ pP pP 06 48 35.5 -1.8
MDJ sP sP 06 48 50.6 +0.9
MDJ S **S 06 57 44.7 +5.3**
MDJ pmax pmax
comp=Z,310nm,1.3s
MDJ pmax pmax
comp=Z,12µm,5.1s
MDJ LR LR
comp=Z,12µm,31.9s
MDJ Mudanjiang 75.53 331 P **P 06 48 09.5 +1.1**
MDJ IAmb IAmb 06 48 10.6
comp=Z,594nm,1.5s
TIA Tai'an 76.25 318 P **P 06 48 13.5 +0.8**
TIA sP **sP 06 48 51.9 -1.6**
TIA PP **PP 06 51 08.0 +2.2**
TIA S **S 06 57 45.6 -2.1**
TIA pmax pmax
comp=Z,370nm,0.9s
TIA pmax pmax
comp=Z,9µm,5.1s
TIA LR LR
comp=Z,4µm,20.7s
TIA LR LR
comp=Z,4µm,20.6s
TIA LR LR
comp=Z,7µm,28.9s
NIKH Nikolski High 76.28 13 P **P 06 48 12.4 0.0**
SNY Shenyang 76.36 326 ⇑P **P 06 48 13.7 +0.6**
SNY sP **sP 06 48 50.3 -4.4**
SNY PP **PP 06 51 04.6 -2.0**
SNY S **S 06 57 53.0 +4.3**
SNY pmax pmax
comp=Z,8µm,10.8s
SNY LR LR
comp=Z,4µm,21.4s
SNY LR LR
comp=Z,3µm,22.7s
SNY LR LR
comp=Z,12µm,37.7s
LHMI Lhok Sumawe 76.54 281 P **P 06 48 15.4 +0.6**
MAW Mawson 76.78 202 P **P 06 48 15.9 +0.7**
baz=77,SNR=78
MAW Mawson 76.78 202 P **P 06 48 15.9 +0.7**
comp=Z,159nm,0.8s,baz=116,slow=6.9,SNR=106
MAW PKKPbc **PKKPbc 07 07 22.6 -3.1**
comp=Z,4.1nm,0.9s,baz=230,slow=3.3,SNR=4.2
MAW Mawson 76.78 202 P **P 06 48 15.6 +0.4**
CN2 Changchun 76.85 328 ⇑*i*P **P 06 48 16.6 +0.7**
CN2 *e*pP pP 06 48 45.9 +0.9
CN2 *e*sP sP 06 48 55.3 -2.1
CN2 *e*S **S 06 57 55.5 +1.5**
CN2 pmax pmax
comp=Z,390nm,1.2s
CN2 pmax pmax
comp=Z,9µm,5.0s
CN2 LR LR
comp=Z,5µm,24.0s
CN2 LR LR
comp=Z,4µm,24.0s
CN2 LR LR
comp=Z,9µm,24.0s
SLVN Son La 77.51 299 P **P 06 48 21.9 +1.7**
SLVN IAmb IAmb 06 48 26.4
comp=Z,126nm,1.1s
UNV Unalaska Valle 77.60 14 P **P 06 48 19.8 0.0**
ENH Enshi 77.84 309 P **P 06 48 21.9 +0.2**
ENH IAmb IAmb 06 48 31.5
comp=Z,450nm,1.4s
GRNR Gornyy 77.86 339 ⇑*i*P **P 06 48 23.3 +2.0**
GRNR *e* 06 51 16.6
GRNR *e*S **S 06 58 08.3 +3.7**
GRNR pmax pmax
comp=Z,180nm,1.1s
GRNR smax smax
comp=E,20nm,1.0s
GYA Guiyang 77.89 305 ⇑*i*P **P 06 48 23.1 +0.8**
GYA PcP **PcP 06 48 35.4 +3.7**
GYA pP pP 06 48 51.5 +0.5
GYA sP sP 06 49 01.4 -1.7
GYA PP **PP 06 51 19.6 -0.3**
GYA S **S 06 58 07.2 +1.0**
GYA SKS **SKSac 06 58 17.2 -8.6**
GYA ScS **SKKSac 06 58 27.5 +0.7**
GYA SS **SS 07 03 13.8 +3.9**
GYA pmax pmax
comp=E,290nm,1.5s
GYA pmax pmax
comp=E,7µm,5.7s
GYA LR LR
comp=E,2µm,19.7s
GYA LR LR
comp=E,2µm,23.0s
GYA LR LR
comp=E,2µm,22.0s
AKUT Akutan 78.03 14 P **P 06 48 21.8 -0.4**
AKUT IAmb IAmb 06 48 24.4
comp=Z,216nm,0.8s
KLR Kul'dur 78.28 335 P **P 06 48 25.1 +1.4**
comp=Z,77nm,1.0s,baz=140,slow=4.4,SNR=173
KLR S **S 06 58 11.9 +2.7**
comp=Z,2.2nm,1.0s,baz=289,slow=15,SNR=8.4
KLR Kul'dur 78.28 335 *c i*P **P 06 48 24.9 +1.2**
KLR pmax pmax
comp=Z,806nm,2.0s
NKL Nikolayevsk 78.60 342 *e*P **P 06 48 27.3 +2.0**
NKL *e*S **S 06 58 04.5 -7.8**
NKL pmax pmax
comp=Z,238nm,1.3s
NKL pmax pmax
comp=Z,270nm,4.7s
FALS False Pass 79.25 15 P **P 06 48 29.0 +0.2**
FALS IAmb IAmb 06 48 35.9
comp=Z,223nm,0.6s
BJT Baijiatuau 79.26 321 P **P 06 48 30.3 +1.0**
BJT pmax pmax
comp=Z,174nm,1.0s
BJT Baijiatuau 79.26 321 P **P 06 48 30.3 +1.0**
BJT IAmb IAmb 06 48 34.7
comp=Z,174nm,1.0s
BJI Beijing 79.27 321 ⇑*i*P **P 06 48 30.3 +1.0**
BJI sP **sP 06 49 10.4 -0.1**
BJI PP **PP 06 51 28.3 -2.6**
BJI S **S 06 58 23.4 +3.4**
BJI sS **sS 06 59 10.3 +0.1**
BJI pmax pmax
comp=Z,220nm,1.9s
BJI pmax pmax
comp=Z,9µm,6.4s
TIY Taiyuan 80.12 317 *e*P **P 06 48 35.4 +1.3**
TIY S **S 06 58 34.2 +4.9**
TIY sS **sS 06 59 17.4 -1.9**
TIY pmax pmax
comp=Z,270nm,1.2s
TIY pmax pmax
comp=Z,7µm,5.9s
CNBA Chernabura Isl 80.20 17 P **P 06 48 34.0 +0.1**
CNBA IAmb IAmb 06 48 36.7
comp=Z,172nm,1.0s
KMI Kunming 80.28 302 P **P 06 48 37.5 +2.1**
KMI PP **PP 06 51 39.8 -0.1**
KMI S **S 06 58 31.5 -0.3**
KMI sS sS 06 59 24.0 +2.8
KMI SS **SS 07 03 47.6 +1.6**
KMI pmax pmax
comp=Z,520nm,1.2s
KMI pmax pmax
comp=Z,10µm,4.2s
KMI LR LR
comp=Z,6µm,24.2s
KMI LR LR
comp=Z,4µm,22.0s
KMI LR LR
comp=Z,9µm,33.2s
KMI Kunming 80.28 302 P **P 06 48 37.3 +1.9**
KMI pmax pmax
comp=Z,832nm,1.3s
KMI Kunming 80.28 302 P **P 06 48 37.3 +1.9**
CMAR Chiang Mai Arr 80.32 294 P **P 06 48 37.8 +2.3**
comp=Z,126nm,0.8s,baz=120,slow=3.2,SNR=163
CMAR PP **PP 06 51 41.7 +1.7**
comp=Z,11nm,1.0s,baz=122,slow=6.9,SNR=3.4
CMAR PKKPbc **PKKPbc 07 07 18.4 +1.1**
comp=Z,7.5nm,0.7s,baz=302,slow=5.2,SNR=14
CMAR PKPPKP **P'P'df 07 15 22.4 +0.4**
comp=Z,1.5nm,0.3s,baz=290,slow=4.1,SNR=5.7
PAF Port-aux-Franc 80.32 221 P **P 06 48 38.3 +3.3**
XAN Xi'an 80.33 312 P **P 06 48 36.4 +1.1**
XAN pP pP 06 49 04.7 +0.4
XAN sP sP 06 49 17.4 +0.9
XAN PP **PP 06 51 40.7 +0.8**
XAN S **S 06 58 33.4 +1.8**
XAN sS sS 06 59 23.0 +1.5
XAN SS **SS 07 03 51.3 +5.2**
XAN pmax pmax
comp=Z,410nm,1.3s
XAN pmax pmax
comp=Z,10µm,7.6s
XAN LR LR
comp=Z,3µm,22.2s
XAN LR LR
comp=Z,3µm,23.3s
XAN LR LR
comp=Z,6µm,24.7s
XAN Xi'an 80.33 312 P **P 06 48 36.0 +0.8**
XAN pmax pmax
comp=Z,246nm,0.9s
XAN Xi'an 80.33 312 P **P 06 48 36.0 +0.8**
XAN IAmb IAmb 06 48 40.7
comp=Z,246nm,0.9s
SDPT Sand Point 80.44 16 P **P 06 48 35.0 -0.2**
SDPT IAmb IAmb 06 48 37.6
comp=Z,308nm,0.8s
CHTO Chiang Mai 80.47 294 P **P 06 48 38.3 +2.0**
CHTO Chiang Mai 80.47 294 P **P 06 48 38.2 +1.9**
CHTO pmax pmax
comp=Z,370nm,1.1s
CHTO Chiang Mai 80.47 294 P **P 06 48 38.1 +1.9**
CHTO IAmb IAmb 06 48 42.5
comp=Z,370nm,1.1s
CHGN Chignik 81.83 17 P **P 06 48 42.6 0.0**
CHGN IAmb IAmb 06 48 48.2
comp=Z,223nm,0.6s
MA2 Magadan 82.30 350 P **P 06 48 44.7 -0.3**
comp=Z,27nm,0.7s,baz=161,slow=7.0,SNR=11
MA2 Magadan 82.30 350 *c i*P **P 06 48 44.5 -0.5**
MA2 pmax pmax
comp=Z,148nm,1.9s
MA2 Magadan 82.30 350 P **P 06 48 44.4 -0.5**
CD2 Chengdu 82.36 307 ⇑P **P 06 48 46.9 +0.8**
CD2 sP sP 06 49 25.5 -1.7
CD2 PP **PP 06 51 54.5 -2.3**
CD2 S **S 06 58 53.8 +1.0**
CD2 ScS **ScS 06 59 10.5 +2.9**
CD2 sS sS 06 59 44.3 +1.7
CD2 SS **SS 07 04 20.9 +4.4**
CD2 pmax pmax
comp=Z,290nm,1.4s
CD2 pmax pmax
comp=Z,12µm,6.9s
CD2 LR LR
comp=Z,7µm,24.5s
CD2 LR LR
comp=Z,8µm,26.0s
CD2 LR LR
comp=Z,10µm,27.5s
HHC Hu-ho-hao-te 82.53 319 P **P 06 48 48.3 +1.5**
HHC sP sP 06 49 27.2 -1.1
HHC PP **PP 06 51 56.3 -1.8**
HHC S **S 06 58 56.2 +2.0**
HHC pmax pmax
comp=Z,190nm,1.8s
HHC pmax pmax
comp=Z,3µm,8.9s
PBA Port Blair 82.90 285 ⇑*i*P P 06 48 49.9 +0.8
PBA Port Blair 82.90 285 P P 06 48 50.4 +1.3
SNR=44
PBA Port Blair 82.90 285 P P 06 48 49.5 +0.4
PBA IAmb IAmb 06 49 01.7
comp=Z,255nm,1.0s
SYO Syowa Base 83.11 196 ⇑*i*P **P 06 48 47.0 -2.2**
SYO Syowa Base 83.11 196 ⇓*i*X **P 06 48 50.2 +1.0**
BTO Baotou 83.34 318 *e*P **P 06 48 52.1 +1.1**
DGPR DIGLIPUR 83.34 287 ⇑*i*P **P 06 48 52.1 +0.7**
HIA Hailar 83.51 329 P **P 06 48 51.7 +0.2**
HIA pmax pmax
comp=Z,144nm,1.4s
HIA Hailar 83.51 329 P **P 06 48 51.6 +0.2**
HIA IAmb IAmb 06 48 55.7
comp=Z,144nm,1.4s
ZEA Zeya 83.56 336 ⇑*e*P **P 06 48 52.8 +1.2**
ZEA *e* 06 52 02.0
ZEA *e*S **S 06 59 05.0 +1.2**
ZEA *e*PS 07 00 08.0
ZEA pmax pmax
comp=E,190nm,1.8s
ZEA pmax pmax
comp=N,440nm,1.6s
ZEA pmax pmax
comp=Z,2µm,2.0s
ZEA pmax pmax
comp=E,2µm,8.0s
ZEA pmax pmax
comp=Z,10µm,8.0s
ZEA pmax pmax
comp=N,4µm,7.0s
ZEA pmax pmax
comp=Z,2µm,9.0s
ZEA smax smax
comp=N,8µm,11.0s
ZEA smax smax
comp=Z,4µm,11.0s
ZEA smax smax
comp=E,8µm,10.0s
OHAK Old Harbor 84.09 19 P **P 06 48 55.1 +0.9**
OHAK IAmb IAmb 06 48 57.7
comp=Z,285nm,0.8s
PMSA Palmer Station 84.51 160 P **P 06 48 56.1 -0.3**
comp=Z,117nm,1.0s,baz=227,slow=6.2,SNR=9.4
PMSA Palmer Station 84.51 160 P **P 06 48 56.0 -0.5**
PMSA IAmb IAmb 06 48 57.5
comp=Z,219nm,1.1s
PMSA Palmer Station 84.51 160 *e*P **P 06 48 56.7 +0.2**
KDAK Kodiak Island 84.77 19 P **P 06 48 58.1 +0.5**
comp=Z,88nm,0.7s,baz=234,slow=2.7,SNR=80
KDAK S **S 06 59 13.1 -2.5**
comp=Z,15nm,1.2s,baz=56,slow=18,SNR=2.9
KDAK LR LR 07 20 40.9
comp=Z,7µm,21.2s,baz=213,slow=31
KDAK Kodiak Island 84.77 19 P **P 06 48 57.9 +0.3**
KDAK **PcP 06 48 58.8 -2.0**
KDAK IAmb IAmb 06 49 01.2
comp=Z,121nm,0.8s
LZH Lanzhou 84.94 312 ⇑P **P 06 49 01.1 +1.8**
LZH pP pP 06 49 29.0 +0.6
LZH sP sP 06 49 40.2 -0.3
LZH PP **PP 06 52 19.6 +1.8**
LZH SKS **S 06 59 13.6 -5.0**
LZH S **SKKSac 06 59 22.3 +2.7**
LZH sS sS 07 00 06.8 -2.2
LZH SS **SS 07 04 59.5 +4.9**
LZH pmax pmax
comp=Z,440nm,1.3s
LZH pmax pmax
comp=Z,9µm,8.0s
LZH LR LR
comp=Z,4µm,17.9s
LZH LR LR
comp=Z,4µm,18.0s
LZH LR LR
comp=Z,6µm,19.2s
SEY Seymchan 85.28 352 P **P 06 49 00.5 +0.5**
comp=Z,74nm,0.7s,baz=160,slow=4.7,SNR=108
SEY S **S 06 59 13.2 -7.2**
comp=Z,1.2nm,0.7s,baz=310,slow=18,SNR=2.4
GAMB Gambell 86.09 8 P **P 06 49 05.0 +0.9**
GAMB **PcP 06 49 05.7 -0.8**
GAMB IAmb IAmb 06 49 08.0
comp=Z,195nm,0.8s
SNCC San Nicolas Is 86.18 52 P **P 06 49 05.6 +0.3**
baz=241
MCCM Marconi Confer 86.23 47 P **P 06 49 05.5 +0.1**
SCZ2 Santa Cruz Isl 86.46 51 P **P 06 49 07.5 +0.9**
baz=241
SAO San Andreas Ge 86.52 48 P **P 06 49 06.9 0.0**
SAO pmax pmax
comp=Z,89nm,1.4s
SAO San Andreas Ge 86.52 48 P **P 06 49 06.9 0.0**
SAO **PcP 06 49 08.2 -0.9**
SAO IAmb IAmb 06 49 13.4
comp=Z,89nm,1.4s
HOPS Hopland Field 86.54 46 P **P 06 49 07.7 +0.8**
HOPS **PcP 06 49 08.0 -1.1**
KCPM Cahto Peak 86.56 45 P **P 06 49 05.3 -1.8**
KCPM **PcP 06 49 07.1 -2.3**
KCPM IAmb IAmb 06 49 11.6
comp=Z,62nm,0.7s
HOM Homer 86.59 18 P **P 06 49 06.3 -0.3**
CNPM China Poot 86.61 19 P **P 06 49 06.3 -0.4**
CNPM IAmb IAmb 06 49 13.5
comp=Z,109nm,0.8s
SBC Santa Barbara 86.61 51 P **P 06 49 08.1 +0.7**
baz=241
GDXM Geysers 86.63 46 P **P 06 49 08.4 +0.9**
GDXM IAmb IAmb 06 49 14.3
comp=Z,96nm,1.5s
PMPB Monarch Peak 86.70 49 P **P 06 49 09.2 +1.4**
KMRM Mail Ridge 86.75 44 P **P 06 49 08.7 +0.7**
KMRM IAmb IAmb 06 49 12.7
comp=Z,62nm,0.8s
PKM Mcpherson Peak 86.76 51 P **P 06 49 09.0 +0.7**
baz=241,SNR=14
SCI2 San Clemente I 86.78 53 P **P 06 49 08.7 +0.5**
baz=242
NVL N'lazarevskaya 86.81 187 *e*P **P 06 49 04.8 -2.9**
NVL *e* 06 52 39.1
NVL *e*PPP PPP 06 54 27.6
NVL *e*S **SKSac 06 59 18.7 -4.9**
NVL *e*SS **SS 07 05 20.8 +2.1**
NVL pmax pmax
comp=Z,230nm,1.1s
SMMC Simmler 86.83 50 P **P 06 49 09.4 +0.9**
baz=241,SNR=14
PAGB Antelope Grade 86.85 50 P **P 06 49 09.3 +0.8**
JCC Jacoby Creek, 86.86 44 P **P 06 49 08.8 +0.5**
BRLK Bradley Lake 86.90 19 P **P 06 49 07.6 -0.6**
BRLK IAmb IAmb 06 49 12.7
comp=Z,84nm,0.7s
SNAA Sanae 87.02 182 P **P 06 49 08.0 -0.8**
SNAA Sanae 87.02 182 P **P 06 49 08.1 -0.7**
comp=Z,176nm,1.0s,baz=186,slow=6.4
SNAA S **SKSac 06 59 22.2 -2.8**
comp=Z,1.2nm,0.9s,baz=23,slow=18,SNR=6.1
SNAA PKKPbc **PKKPbc 07 06 58.8 -4.0**
comp=Z,3.4nm,0.7s,baz=218,slow=1.7,SNR=16
SNAA PKPPKP **P'P'df 07 15 06.1 -2.8**
comp=Z,2.0nm,0.7s,baz=231,slow=3.5,SNR=10
SNAA Sanae 87.02 182 *d i*P **P 06 49 07.8 -1.0**
SNAA Sanae 87.02 182 PKKPdf 07 06 59.5 +4.8
SNAA Sanae 87.02 182 P **P 06 49 07.5 -1.3**
SNAA IAmb IAmb 06 49 09.3
comp=Z,209nm,1.0s
CIS Catalina Islan 87.07 52 P **P 06 49 10.1 +0.5**
baz=242
CIS S **S 06 59 43.8 +4.5**
baz=242
KHMM Horse Mountain 87.08 44 P **P 06 49 10.7 +1.0**
KHMM IAmb IAmb 06 49 27.1
comp=Z,108nm,1.4s
FMP Fort Macarthur 87.31 52 P **P 06 49 10.7 0.0**
baz=242
FMP S **S 06 59 46.1 +4.7**
baz=242
KRMB Red Mountain 87.31 43 P **P 06 49 11.7 +1.0**
KRMB IAmb IAmb 06 49 23.6
comp=Z,72nm,1.2s
O02D Mt. Diablo Mer 87.33 45 P **P 06 49 12.2 +1.4**
baz=239
O02D S **S 06 59 46.2 +4.6**
baz=239
OSI Osito Audit: C 87.41 51 P **P 06 49 12.0 +0.7**
baz=242
OSI S **S 06 59 47.6 +5.0**
baz=242
OSI Osito Audit: C 87.41 51 P **P 06 49 11.9 +0.6**
DECC Green Verdugo 87.53 52 P **P 06 49 11.9 0.0**
baz=242
VNA3 Neumayer Olymp 87.57 180 P **P 06 49 10.4 -1.0**
ARVC Arvin 87.58 51 P **P 06 49 12.7 +0.7**
baz=242,SNR=9.3
ARVC S **S 06 59 49.5 +5.6**
baz=242
PASC Pasadena Art C 87.60 52 P **P 06 49 12.3 +0.2**
SEW Seward 87.61 19 P **P 06 49 11.0 -0.4**
WDC Whiskeytown Da 87.70 45 P **P 06 49 12.9 +0.4**
WDC pmax pmax
comp=Z,100nm,1.3s
WDC Whiskeytown Da 87.70 45 P **P 06 49 12.9 +0.4**
WDC IAmb IAmb 06 49 19.0
comp=Z,100nm,1.3s
VES Vestal, Richgr 87.73 50 P **P 06 49 13.3 +0.6**
baz=241,SNR=14
VES S **S 06 59 48.9 +3.5**
baz=241
VOG Valley Oaks Go 87.75 50 P **P 06 49 12.8 +0.1**
baz=241
VOG S **S 06 59 49.8 +4.3**
baz=241
N02D Trinity Center 87.80 44 P **P 06 49 14.2 +1.2**
baz=239,SNR=81
N02D S **S 06 59 50.3 +4.4**
baz=239
109C Camp Elliot, M 87.81 53 P **P 06 49 13.4 +0.3**
baz=243
109C S **S 06 59 50.4 +4.1**
baz=243
109C Camp Elliot, M 87.81 53 P **P 06 49 13.5 +0.3**
ORV Oroville 87.87 46 P **P 06 49 13.7 +0.4**
ORV pmax pmax
comp=Z,66nm,1.3s
ORV Oroville 87.87 46 P **P 06 49 13.7 +0.4**
VNA2 Neumayer--Watz 87.87 181 P **P 06 49 12.1 -0.7**
baz=185,slow=4.1
CMB Columbia Colle 87.88 48 P **P 06 49 14.0 +0.6**
CMB pmax pmax
comp=Z,28nm,0.9s
CMB Columbia Colle 87.88 48 P **P 06 49 14.0 +0.6**
M02C Callahan 87.92 44 P **P 06 49 15.2 +1.6**
baz=239,SNR=68
M02C S **S 06 59 51.5 +4.4**
baz=239
AFDM Forest Hills D 87.93 47 P **P 06 49 14.3 +0.7**
BFSC Mount Baldy Ra 88.02 52 P **P 06 49 14.6 +0.3**
baz=242
BFSC S **S 06 59 52.7 +4.2**
baz=242

BAR Barrett 88.04 54 P P 06 49 14.4 +0.1
MURC Murrieta 88.07 53 P P 06 49 14.8 +0.4
baz=243
MURC S S 06 59 53.3 +4.6
baz=243
EDW2 Edwards Air Fo 88.07 51 P P 06 49 15.1 +0.7
baz=242
EDW2 S S 06 59 52.8 +4.0
baz=242
K02D Willamette Mer 88.08 42 P P 06 49 15.4 +1.1
baz=238
K02D S S 06 59 52.6 +4.1
baz=238
ISA Isabella, Lake 88.09 50 P P 06 49 14.9 +0.4
ISA pmax pmax
comp=Z,48nm,0.9s
ISA Isabella, Lake 88.09 50 P P 06 49 15.2 +0.7
baz=242,SNR=46
ISA S S 06 59 52.9 +3.9
baz=242
ISA Isabella, Lake 88.09 50 P P 06 49 14.9 +0.4
J01E Myrtle Point 88.15 42 P P 06 49 15.3 +0.8
baz=238,SNR=8.9
J01E S S 06 59 53.0 +4.0
baz=238
VNA1 Neumayer--Stat 88.16 180 P P 06 49 13.4 -0.7
YBH Yreka Blue Hor 88.18 44 PKPPKP 07 15 04.7
comp=Z,1.0nm,0.9s,baz=54,slow=13,SNR=3.6
YBH LR LR 07 21 47.3
comp=Z,6μm,20.7s,baz=244,slow=31
YBH Yreka Blue Hor 88.18 44 P P 06 49 15.8 +1.0
YBH pmax pmax
comp=Z,70nm,1.4s
YBH Yreka Blue Hor 88.18 44 P P 06 49 15.8 +1.0
TTA Tatalina 88.19 15 P P 06 49 14.5 +0.2
TTA Tatalina 88.19 15 P P 06 49 14.5 +0.2
CIT Chita 88.29 329 *e*P **P 06 49 15.8 +0.8**
CIT *e* 06 49 59.0
CIT *e*S **SKSac 06 59 33.5 +0.6**
CIT pmax pmax
comp=Z,1μm,2.9s
BRDH Bariadhala 88.29 295 P P 06 49 17.0 +1.4
comp=Z,233nm,0.6s,baz=98,slow=4.8,SNR=18
RC01 Rabbit Creek A 88.31 18 P P 06 49 14.3 -0.6
RC01 IAmb IAmb 06 49 20.4
comp=Z,43nm,0.7s
MONP2 Monument Peak 88.32 54 P P 06 49 16.8 +1.0
baz=243,SNR=13
MONP2 S S 06 59 57.4 +5.8
baz=243
IKP In-Ko-Pah, Jac 88.45 54 P P 06 49 17.3 +1.0
baz=243,SNR=12
HUMO Hull Mountain 88.48 43 P P 06 49 17.3 +1.2
HUMO IAmb IAmb 06 49 29.0
comp=Z,67nm,1.2s
RUBR Rubicon Trail 88.53 47 P P 06 49 17.3 +0.6
RUBR IAmb IAmb 06 49 23.2
comp=Z,61nm,0.8s
BBRC Big Bear Solar 88.57 52 P P 06 49 17.7 +0.6
baz=243
BBRC S S 06 59 58.4 +4.5
baz=243
LRMC Laurel Mtn Rad 88.57 51 P P 06 49 17.8 +0.9
baz=242,SNR=10
MDPB Devils Postpil 88.59 49 P P 06 49 18.0 +0.9
MDPB IAmb IAmb 06 49 25.3
comp=Z,80nm,1.3s
PFO Pinyon Flats O 88.62 53 P P 06 49 17.7 +0.6
comp=Z,11nm,0.8s,baz=236,slow=2.9,SNR=25
PFO Pinyon Flats O 88.62 53 P P 06 49 17.6 +0.6
baz=243,SNR=16
PFO S S 06 59 58.8 +4.6
baz=243
PFO Pinyon Flats O 88.62 53 P P 06 49 17.7 +0.6
XPFO Pion Flat 88.62 53 P P 06 49 18.1 +1.0
L04D Klamath Falls 88.69 43 P P 06 49 18.1 +0.9
baz=239,SNR=25
L04D S S 06 59 57.8 +3.3
baz=239
I02D Swisshome 88.70 41 P P 06 49 18.4 +1.4
baz=238
I02D S S 06 59 57.5 +3.4
baz=238
CWC Cottonwood Cre 88.73 50 P P 06 49 18.3 +0.7
baz=242
CWC S S 06 59 60.0 +4.8
baz=242
HIN Hinchinbrook I 88.75 20 P P 06 49 16.3 -0.7
HIN IAmb IAmb 06 49 19.0
comp=Z,50nm,0.9s
MLAC Mammoth, Mammo 88.76 49 P P 06 49 18.9 +1.1
baz=242,SNR=6.6
MLAC S S 07 00 02.1 +6.5
baz=242
WAKR Walker 88.76 48 P P 06 49 18.9 +1.1
WAKR IAmb IAmb 06 49 30.3
comp=Z,84nm,1.3s
M04C Macdoel 88.77 44 P P 06 49 18.4 +0.7
baz=240,SNR=34
M04C S S 06 59 59.1 +3.9
baz=240
GO10 Punta Arenas 88.79 148 P P 06 49 18.9 +1.3
RRX Edison Barstow 88.80 52 P P 06 49 18.5 +0.7
baz=243
RRX S S 07 00 00.0 +4.5
baz=243
I03D Drain, OR 88.80 42 P P 06 49 18.8 +1.3
baz=238
I03D S S 06 59 58.7 +3.7
baz=238
SWSC Sam W. Stewart 88.81 54 P P 06 49 18.3 +0.4
baz=243,SNR=12
PMR Palmer 88.89 18 P P 06 49 16.8 -0.7
PMR pmax pmax
comp=Z,50nm,0.8s
PMR Palmer 88.89 18 P P 06 49 16.8 -0.7
PMR IAmb IAmb 06 49 22.2
comp=Z,50nm,0.8s
TIN Tinemaha, Big 88.91 49 P P 06 49 19.3 +0.9
baz=242,SNR=8.3
TIN S S 07 00 01.8 +5.1
baz=242
PNTR Pine Nut 88.93 47 P P 06 49 19.5 +0.9
PNTR IAmb IAmb 06 49 22.8
comp=Z,38nm,0.8s
GLI Glacier Island 88.94 19 P P 06 49 17.0 -0.8
GLI IAmb IAmb 06 49 23.1
comp=Z,51nm,0.7s
KNK Knik Glacier 88.94 18 P P 06 49 17.5 -0.4
KNK IAmb IAmb 06 49 22.7
comp=Z,44nm,0.7s
MPMC Manual Prospec 88.98 51 P P 06 49 19.7 +0.9
baz=242,SNR=41
MPMC S S 07 00 02.5 +4.9
baz=242
VCNR Virginia City 88.99 47 P P 06 49 19.6 +0.8
FID Port Fidalgo 89.03 20 P P 06 49 17.3 -0.9
FID IAmb IAmb 06 49 20.1
comp=Z,51nm,1.0s
GHO Glory Hole Cre 89.09 18 P P 06 49 17.9 -0.7
GHO IAmb IAmb 06 49 20.7
comp=Z,50nm,0.8s
EYAK Cordova Ski Ar 89.11 20 P P 06 49 17.8 -0.7
PPLA Purkeypile 89.11 16 P P 06 49 18.8 +0.1
YERR Yerington 89.12 47 P P 06 49 20.1 +0.6
GSC Goldstone, Bar 89.13 51 P P 06 49 19.6 +0.2
GSC pmax pmax
comp=Z,57nm,1.4s
GSC Goldstone, Bar 89.13 51 P P 06 49 20.4 +1.0
baz=243,SNR=14
GSC S S 07 00 03.5 +4.8
baz=243
GSC Goldstone, Bar 89.13 51 P P 06 49 19.6 +0.2
BELC Belle Mtn. Jos 89.14 53 P P 06 49 20.4 +0.8
baz=243,SNR=33
BELC S S 07 00 04.3 +5.3
baz=243
GO09 Cerro Castillo 89.21 146 P P 06 49 20.2 +0.7
GO09 IAmb IAmb 06 49 22.3
comp=Z,128nm,0.8s
ULN Ulaanbaatar 89.22 323 P P 06 49 20.5 +0.8
ULN Ulaanbaatar 89.22 323 *c i*P **P 06 49 20.4 +0.8**
ULN pmax pmax
comp=Z,493nm,2.0s
ULN Ulaanbaatar 89.22 323 P P 06 49 20.4 +0.8
ULN IAmb IAmb 06 49 25.0
comp=Z,187nm,1.1s
DIB Dawson Inlet, 89.24 30 P P 06 49 20.2 +0.8
DIB IAmb IAmb 06 49 24.7
comp=Z,201nm,1.3s
H02S1 DAWSON INLET T 89.24 30 P P 06 49 20.1 +0.8
K04D Chiloquin, OR 89.25 43 P P 06 49 20.7 +0.9
baz=240
K04D S S 07 00 03.5 +3.9
baz=240
HEC Hector,Ludlow 89.26 52 P P 06 49 20.4 +0.4
baz=243,SNR=10
HEC S S 07 00 03.8 +3.7
baz=243
YAK Yakutsk 89.26 342 P P 06 49 19.3 +0.1
comp=Z,94nm,0.6s,baz=310,slow=0.6,SNR=31
YAK S **SKSac 06 59 35.8 -2.2**
comp=Z,5.9nm,0.4s,baz=312,slow=23,SNR=13
YAK ScS **S 07 00 00.4 +1.8**
comp=Z,12nm,0.3s,baz=183,slow=1.1,SNR=2.7
YAK Yakutsk 89.26 342 *c i*P **P 06 49 18.6 -0.6**
YAK *e* 06 52 48.8
YAK *e*S **SKSac 06 59 33.6 -4.4**
YAK *e* 06 59 57.4
YAK pmax pmax
comp=Z,148nm,1.0s
YAK pmax pmax
comp=N,42nm,1.1s
YAK pmax pmax
comp=E,29nm,1.1s
YAK pmax pmax
comp=Z,656nm,4.0s
YAK pmax pmax
comp=E,568nm,4.6s
YAK pmax pmax
comp=N,802nm,4.8s
YAK smax smax
comp=E,2μm,3.3s
YAK smax smax
comp=N,4μm,3.2s
YAK Yakutsk 89.26 342 P P 06 49 19.2 -0.1
BILL Bilibino 89.26 358 *c i*P **P 06 49 19.4 +0.3**
BILL *e* 06 53 01.5
BILL pmax pmax
comp=Z,367nm,1.5s
BILL Bilibino 89.26 358 P P 06 49 19.8 +0.7
SHL Shillong 89.26 298 *i*P **P 06 49 21.1 +0.8**
SHL IAmb IAmb 06 49 24.8
comp=Z,85nm,0.8s
SHL Shillong 89.26 298 P P 06 49 21.2 +0.8
SNR=125
SHL Shillong 89.26 298 P P 06 49 20.9 +0.5
SHL pmax pmax
comp=Z,274nm,1.1s
SHL Shillong 89.26 298 P P 06 49 20.9 +0.5
COR Corvallis 89.29 41 P P 06 49 21.6 +1.8
COR pmax pmax
comp=Z,78nm,1.4s
COR Corvallis 89.29 41 P P 06 49 21.6 +1.8
COR IAmb IAmb 06 49 40.7
comp=Z,78nm,1.4s
SML Sawmill 89.29 18 P P 06 49 19.0 -0.5
SML IAmb IAmb 06 49 28.5
comp=Z,46nm,0.9s
RAGM Ragged Mountai 89.33 21 P P 06 49 19.5 -0.1
RAGM IAmb IAmb 06 49 24.6
comp=Z,83nm,1.2s
J04D Umpqua Nationa 89.33 42 P P 06 49 21.0 +0.7
baz=239
GTA Gaotai 89.36 313 ⇑P **P 06 49 21.4 +1.0**
GTA pP pP 06 49 49.2 -0.7
GTA sP sP 06 50 01.0 -0.9
GTA PP **PP 06 52 51.5 -1.8**
GTA SKS **SKSac 06 59 39.8 -0.2**
GTA S **ScS 07 00 03.2 -2.0**
GTA SS **SS 07 05 59.9 +1.0**
GTA pmax pmax
comp=Z,130nm,1.7s
GTA pmax pmax
comp=Z,5μm,6.1s
GTA LR LR
comp=Z,2μm,23.5s
GTA LR LR
comp=Z,5μm,24.4s
GTA LR LR
comp=Z,7μm,24.1s
PAHR Pah Rah Range 89.37 47 P P 06 49 21.0 +0.5
BC3 Big Chuckawall 89.39 53 P P 06 49 21.3 +0.6
baz=244
BC3 S S 07 00 07.9 +6.6
baz=244
HMT Hamilton 89.43 21 P P 06 49 20.0 -0.1
HMT IAmb IAmb 06 49 22.6
comp=Z,83nm,0.8s
I04A Tendick Farm, 89.43 42 P P 06 49 21.1 +0.6
baz=239
I04A S S 07 00 03.6 +2.5
baz=239
RYN Ryan 89.45 48 P P 06 49 21.5 +0.6
RYN IAmb IAmb 06 49 27.3
comp=Z,48nm,1.0s
LPIG La Paz 89.47 64 P P 06 49 21.7 +0.6
comp=Z,14nm,0.3s,baz=180,slow=2.0
GRAC Grapevine Rang 89.50 50 P P 06 49 22.0 +1.0
baz=242
GRAC S S 07 00 07.2 +5.1
baz=242
NVAR Mina Array Bea 89.51 48 P P 06 49 21.9 +0.6
comp=Z,28nm,0.7s,baz=227,slow=8.6,SNR=97
NVAR PKKPbc **PKKPbc 07 06 56.5 -0.2**
comp=Z,1.2nm,0.8s,baz=99,slow=3.9,SNR=6.8
NVAR PKPPKP **P'P'df 07 15 02.7 -1.3**
comp=Z,3.0nm,0.9s,baz=52,slow=3.9,SNR=10
NVAR LR LR 07 21 08.8
comp=Z,8μm,21.6s,baz=262,slow=30
SONM Songino Array 89.57 323 P P 06 49 21.8 +0.5
comp=Z,91nm,0.8s,baz=139,slow=4.3,SNR=253
SONM S **SKSac 06 59 41.0 +0.1**
comp=Z,1.3nm,0.9s,baz=160,slow=5.7,SNR=3.7
SONM PKKPbc **PKKPbc 07 06 55.9 -1.1**
comp=Z,4.7nm,0.8s,baz=265,slow=3.2,SNR=9.3
SONM PKPPKP **P'P'df 07 15 05.3 +2.4**
comp=Z,1.2nm,0.8s,baz=302,slow=2.8,SNR=4.5
SONM LR LR 07 26 35.2
comp=Z,2μm,21.9s,baz=125,slow=34
GLA Glamis 89.59 54 P P 06 49 22.4 +0.8
GLA pmax pmax
comp=Z,55nm,1.0s
GLA Glamis 89.59 54 P P 06 49 22.6 +1.0
baz=244,SNR=8.5
GLA S S 07 00 10.1 +7.0
baz=244
GLA Glamis 89.59 54 P P 06 49 22.4 +0.8
GLA IAmb IAmb 06 49 25.4
comp=Z,55nm,0.9s
H04D Lebanon 89.60 41 P P 06 49 22.6 +1.4
baz=239
H04D S S 07 00 06.0 +3.5
baz=239
NV11 Mina Array Sit 89.61 48 P P 06 49 22.5 +0.8
NV11 IAmb IAmb 06 49 28.1
comp=Z,44nm,0.9s
SCM Sheep Creek Mo 89.61 19 P P 06 49 20.6 -0.4
SCM pmax pmax
comp=Z,58nm,0.6s
SCM Sheep Creek Mo 89.61 19 P P 06 49 20.6 -0.4
SCM IAmb IAmb 06 49 27.9
comp=Z,58nm,0.6s
FURC Furnace Creek, 89.62 50 P P 06 49 22.2 +0.7
baz=243,SNR=22
FURC S S 07 00 07.7 +4.7
baz=243
G03D McMinnville, O 89.64 40 P P 06 49 22.5 +1.1
baz=238
G03D S S 07 00 06.1 +3.2
baz=238
GMRC Granite Mounta 89.74 52 P P 06 49 23.0 +0.6
baz=243,SNR=22
SHOC Shoshone, Teco 89.78 51 P P 06 49 23.0 +0.6
baz=243,SNR=18
SHOC S S 07 00 10.3 +5.6
baz=243
MOD Modoc Plateau 89.82 44 P P 06 49 23.3 +0.7
TUQ Turquoise Moun 89.83 52 P P 06 49 23.3 +0.5
baz=243
TUQ S S 07 00 10.5 +5.1
baz=243
F03A Seaside 89.83 40 P P 06 49 22.6 +0.3
F03A IAmb IAmb 06 49 26.1
comp=Z,62nm,0.9s
IRM Iron Mountain 89.84 53 P P 06 49 23.3 +0.6
baz=244,SNR=8.7
IRM S S 07 00 10.5 +5.1
baz=244
K05A Summer Lake 89.85 43 P P 06 49 23.5 +0.8
K05A IAmb IAmb 06 49 28.4
comp=Z,38nm,0.8s
J05D Fort Rock, OR 89.91 43 P P 06 49 24.0 +1.1
baz=240,SNR=87
J05D S S 07 00 09.7 +3.9
baz=240
KVN Kaiserville 89.94 48 P P 06 49 23.8 +0.6
KVN pmax pmax
comp=Z,51nm,0.9s
KVN Kaiserville 89.94 48 P P 06 49 23.8 +0.6
KVN IAmb IAmb 06 49 29.5
comp=Z,51nm,0.9s
KTH Kantishna Hill 89.98 16 P P 06 49 21.4 -1.3
WAX Waxell Ridge 89.98 21 P P 06 49 22.7 -0.1
H04A Detroit Lake 90.02 41 P P 06 49 23.2 -0.1
TRF Thorofare Moun 90.06 17 P P 06 49 21.9 -1.3
TRF IAmb IAmb 06 49 25.8
comp=Z,58nm,0.8s
MESA MESA 90.09 22 P P 06 49 23.5 +0.1
MESA IAmb IAmb 06 49 26.3
comp=Z,153nm,0.7s
CRQM Cirque 90.11 21 P P 06 49 23.3 -0.2
CRQM IAmb IAmb 06 49 26.0
comp=Z,98nm,0.8s
Y12C Blythe 90.13 54 P P 06 49 25.2 +1.2
baz=244,SNR=16
Y12C S S 07 00 14.2 +6.3
baz=244
Y12C Blythe 90.13 54 P P 06 49 24.9 +0.9
E03A Lebam 90.16 39 P P 06 49 24.5 +0.8
E03A IAmb IAmb 06 49 27.5
comp=Z,88nm,0.8s
TGL Tana Glacier 90.21 21 P P 06 49 23.7 -0.2
TGL IAmb IAmb 06 49 26.4
comp=Z,106nm,0.8s
F04D Rainier, OR 90.24 40 P P 06 49 25.2 +0.9
baz=239
F04D S S 07 00 11.8 +3.4
baz=239
TPNV Topopah Spring 90.27 50 P P 06 49 25.4 +0.6
TPNV pmax pmax
comp=Z,72nm,1.3s
TPNV Topopah Spring 90.27 50 P P 06 49 25.6 +0.8
baz=243
TPNV S S 07 00 14.5 +5.0
baz=243
TPNV Topopah Spring 90.27 50 P P 06 49 25.4 +0.6
TPNV IAmb IAmb 06 49 33.1
comp=Z,72nm,1.2s
113A Mohawk Valley, 90.28 55 P P 06 49 25.6 +0.9
PINE Pine Mountain 90.35 42 P P 06 49 26.1 +1.0
PINE IAmb IAmb 06 49 30.7
comp=Z,52nm,0.8s
VRDI Verde Repeater 90.36 20 P P 06 49 24.2 -0.4
VRDI IAmb IAmb 06 49 26.9
comp=Z,59nm,0.8s
I05D Terrebonne, OR 90.37 42 P P 06 49 25.7 +0.8
baz=240,SNR=26
I05D S S 07 00 13.0 +3.2
baz=240
GLB Gilahina Butte 90.40 20 P P 06 49 24.4 -0.3
GLB IAmb IAmb 06 49 27.0
comp=Z,76nm,0.8s
BPAW Bear Paw Mtn. 90.41 16 P P 06 49 23.0 -1.7
RND Reindeer 90.42 17 P P 06 49 23.7 -1.0
RND pmax pmax
comp=Z,59nm,1.0s
RND Reindeer 90.42 17 P P 06 49 23.7 -1.0
RND IAmb IAmb 06 49 30.0
comp=Z,59nm,1.0s
NLWA Neilton Lookou 90.42 38 P P 06 49 24.7 -0.4
NLWA IAmb IAmb 06 49 31.7
comp=Z,101nm,1.4s
SIT Sitka 90.44 26 P P 06 49 24.9 0.0
SIT pmax pmax
comp=Z,104nm,1.4s
SIT Sitka 90.44 26 P P 06 49 24.9 0.0
SIT IAmb IAmb 06 49 30.8
comp=Z,104nm,1.4s
NEE2 Needles Airpor 90.50 53 P P 06 49 26.4 +0.7
baz=244
NEE2 S S 07 00 17.3 +6.0
baz=244
F04A Amboy 90.52 40 P P 06 49 26.0 +0.5
F04A IAmb IAmb 06 49 28.7
comp=Z,56nm,0.8s
DHY Denali Highway 90.57 18 P P 06 49 25.0 -0.6
DHY IAmb IAmb 06 49 30.3
comp=Z,33nm,0.7s
BALM Baldy 90.58 21 P P 06 49 25.4 -0.2
BALM pmax pmax
comp=Z,119nm,0.7s
BALM Baldy 90.58 21 P P 06 49 25.4 -0.2
BALM IAmb IAmb 06 49 28.0
comp=Z,119nm,0.7s
MCARA McCarthy VSAT 90.61 20 P P 06 49 25.5 -0.1
MCARA IAmb IAmb 06 49 29.8
comp=Z,88nm,0.9s
PDMCI Parker Dam,Lak 90.65 53 P P 06 49 27.5 +1.1
baz=244
PDMCI S S 07 00 19.0 +6.3
baz=244
MCK McKinley 90.65 17 P P 06 49 24.7 -1.1
MCK pmax pmax
comp=Z,37nm,0.9s
MCK McKinley 90.65 17 P P 06 49 24.7 -1.1
MCK IAmb IAmb 06 49 28.5
comp=Z,37nm,0.9s
214A Organ Pipe Nat 90.67 56 P P 06 49 27.0 +0.4
baz=245
214A S S 07 00 19.5 +6.4
baz=245
214A Organ Pipe Nat 90.67 56 P P 06 49 26.4 -0.2
DHAK Deception Hill 90.67 24 P P 06 49 25.9 0.0
E04D Cinebar 90.75 39 P P 06 49 27.2 +0.6
baz=239,SNR=20
E04D S S 07 00 15.3 +2.3
baz=239
BBB Bella Bella 90.76 33 P P 06 49 27.5 +1.1
comp=Z,24nm,0.7s,baz=297,slow=6.0,SNR=21
BBB Bella Bella 90.76 33 P P 06 49 26.6 +0.2
BBB IAmb IAmb 06 49 30.0
comp=Z,36nm,0.8s
BARN Barnard Glacie 90.83 21 P P 06 49 26.7 -0.2
G05D Wamic, OR 90.84 41 P P 06 49 27.5 +0.5
baz=240,SNR=9.3
G05D S S 07 00 17.5 +3.5
baz=240
SHPR Sheep Range 90.86 51 P P 06 49 28.0 +0.4
BWN Browne 90.86 16 P P 06 49 26.0 -0.7
BWN IAmb IAmb 06 49 40.5
comp=Z,99nm,0.8s
CTGM Chitina Glacie 90.87 21 P P 06 49 26.9 0.0
HSIG 90.92 59 P P 06 49 26.9 -1.0
D03D Eldon 90.95 38 P P 06 49 28.3 +0.9
baz=239,SNR=25
D03D S S 07 00 17.5 +2.8
baz=239
D04E Lakebay 90.95 39 P P 06 49 28.9 +1.4
baz=239,SNR=6.0
F05D White Salmon 91.07 40 P P 06 49 28.9 +0.8
baz=240
F05D S S 07 00 18.9 +2.9
baz=240
WVOR Wild Horse Val 91.17 44 P P 06 49 28.6 -0.2
WVOR pmax pmax
comp=Z,70nm,1.4s
WVOR Wild Horse Val 91.17 44 P P 06 49 28.6 -0.2
WVOR IAmb IAmb 06 49 40.8
comp=Z,70nm,1.4s
W13A Hualapai Mount 91.18 53 P P 06 49 29.7 +0.6
MLY Manley 91.23 15 P P 06 49 27.5 -1.0
G06A Carlson Farm, 91.25 41 P P 06 49 28.7 -0.3
G06A **PcP 06 49 29.5 -0.4**
NEA Nenana 91.29 16 P P 06 49 27.5 -1.1
LON Longmire 91.30 40 P P 06 49 28.9 -0.3
LON pmax pmax
comp=Z,13nm,0.8s
LON Longmire 91.30 40 P P 06 49 28.9 -0.3

LON PcP 06 49 29.4 -0.7
WRAK Wrangell Islan 91.30 28 P P 06 49 29.0 +0.1
WRAK PcP 06 49 29.8 0.0
WRAK IAmb IAmb 06 49 32.7
comp=Z,67nm,0.8s
PGC Sidney 91.32 37 P P 06 49 29.3 +0.2
PGC PcP 06 49 30.3 +0.3
PGC IAmb IAmb 06 49 32.5
comp=Z,37nm,0.8s
R11A Troy Canyon, C 91.37 49 P P 06 49 30.2 +0.3
baz=244
R11A S S 07 00 23.4 +3.9
baz=244
R11A Troy Canyon, C 91.37 49 P P 06 49 29.9 0.0
R11A P 06 49 30.2 +0.3
RDOG Red Dog Mine 91.38 10 P P 06 49 29.5 +0.5
RDOG PcP 06 49 30.5 +0.6
RDOG IAmb IAmb 06 49 33.4
comp=Z,42nm,0.8s
I07A Izee 91.39 43 P P 06 49 30.6 +0.8
D05A Enumclaw 91.41 39 P P 06 49 30.4 +0.8
D05A PcP 06 49 31.2 +0.7
D05A IAmb IAmb 06 49 33.5
comp=Z,91nm,1.2s
WRH Wood River Hil 91.47 17 P P 06 49 28.4 -1.1
WRH IAmb IAmb 06 49 34.6
comp=Z,62nm,1.1s
LSA Lhasa 91.53 301 P P 06 49 31.6 +0.4
LSA pmax pmax
comp=Z,420nm,1.6s
LSA LR LR
comp=Z,12µm,18.5s
LSA LR LR
comp=Z,29µm,18.5s
LSA LR LR
comp=Z,17µm,28.5s
LSA Lhasa 91.53 301 P P 06 49 32.3 +1.1
LSA Lhasa 91.53 301 P P 06 49 32.3 +1.1
LSA Lhasa 91.53 301 PcP PcP 06 49 32.2 +0.1
LSA Lhasa 91.53 301 P P 06 49 32.0 +0.8
LSA pmax pmax
comp=Z,113nm,1.2s
LSA Lhasa 91.53 301 P P 06 49 32.0 +0.8
LSA IAmb IAmb 06 49 33.0
comp=Z,113nm,1.2s
MENT Mentasta 91.55 19 P P 06 49 29.8 -0.1
MENT IAmb IAmb 06 49 32.5
comp=Z,53nm,0.8s
JIS Juneau Island 91.62 26 P P 06 49 30.1 -0.2
JIS IAmb IAmb 06 49 33.5
comp=Z,36nm,0.9s
BESE Bessie Mountai 91.63 25 P P 06 49 30.9 +0.5
BESE IAmb IAmb 06 49 33.9
comp=Z,93nm,0.9s
CCB Clear Creek Bu 91.68 17 P P 06 49 29.1 -1.3
CCB IAmb IAmb 06 49 32.8
comp=Z,25nm,0.8s
J08A Circle Bar Ran 91.71 44 P P 06 49 30.7 -0.6
J08A IAmb IAmb 06 49 34.5
comp=Z,26nm,0.7s
HDA Harding Lake 91.73 17 P P 06 49 30.0 -0.8
baz=219
HDA Harding Lake 91.73 17 P P 06 49 29.9 -0.8
HDA IAmb IAmb 06 49 37.9
comp=Z,76nm,0.8s
BOD Bodaibo 91.74 334 *e*P P 06 49 29.6 -1.3
BOD *e* 06 59 49.7
BOD pmax pmax
comp=Z,143nm,1.8s
A04D Lummi Island 91.78 38 P P 06 49 32.2 +0.9
baz=239
A04D S S 07 00 24.0 +1.8
baz=239
RIDG Independent Ri 91.81 18 P P 06 49 30.8 -0.4
RIDG IAmb IAmb 06 49 33.4
comp=Z,51nm,0.9s
MDM Murphy Dome 91.81 16 P P 06 49 30.1 -1.0
MDM IAmb IAmb 06 49 35.8
comp=Z,61nm,0.8s
TCOL CIGO, UAF Yank 91.84 17 P P 06 49 30.4 -0.8
baz=218
COLA College 91.85 17*c i*P P 06 49 30.0 -1.2
COLA pmax pmax
comp=Z,67nm,0.9s
COLA College 91.85 17 P P 06 49 30.1 -1.0
COLA IAmb IAmb 06 49 33.5
comp=Z,62nm,0.8s
B05A Bryant 91.89 38 P P 06 49 32.7 +0.9
baz=239
B05A S S 07 00 24.5 +1.3
baz=239
DOT Dot Lake 91.97 19 P P 06 49 31.5 -0.4
DOT IAmb IAmb 06 49 34.2
comp=Z,59nm,0.8s
F07A Phinny Hill Vi 92.01 41 P P 06 49 32.6 +0.2
F07A IAmb IAmb 06 49 36.5
comp=Z,21nm,0.7s
SKAG Skagway 92.02 25 P P 06 49 32.7 +0.6
SKAG IAmb IAmb 06 49 38.9
comp=Z,68nm,1.0s
IL31 92.03 17 P P 06 49 30.6 -1.4
IL31 IAmb IAmb 06 49 36.9
comp=Z,55nm,0.8s
ILAR Eielson Array 92.03 17 P P 06 49 30.9 -1.1
comp=Z,25nm,0.6s,baz=233,slow=5.7,SNR=72
ILAR PKiKP **PKiKP** 06 54 22.4 +0.9
comp=Z,3.5nm,0.6s,baz=276,slow=3.0,SNR=12
ILAR S **SKSac** 06 59 48.5 -5.4
comp=Z,1.3nm,1.0s,baz=338,slow=6.2,SNR=4.1
ILAR PKKPbc **PKKPdf** 07 06 48.7 -0.1
comp=Z,2.9nm,0.9s,baz=0.1,slow=2.4,SNR=12
ILAR PKPPKP 07 14 57.7
comp=Z,1.5nm,1.0s,baz=335,slow=1.3,SNR=6.5
ILAR LR LR 07 28 24.0
comp=Z,4µm,18.6s,baz=226,slow=34
ILAR Eielson Array 92.03 17 P P 06 49 31.0 -1.1
HYT Haines Junctio 92.11 23 P P 06 49 32.4 -0.4
HYT IAmb IAmb 06 49 35.4
comp=Z,53nm,0.9s
POKR Poker Plat Res 92.15 17 P P 06 49 31.5 -1.2
baz=219
LTY Liberty 92.22 40 P P 06 49 33.5 0.0
SCRK Sand Creek 92.24 18 P P 06 49 33.0 -0.3
SCRK IAmb IAmb 06 49 35.7
comp=Z,42nm,0.8s
G08A Pilot Rock 92.31 42 P P 06 49 34.5 +0.5
E07A Sunnyside 92.37 40 P P 06 49 34.2 0.0
TUC Tucson 92.38 56 P P 06 49 34.6 0.0
TUC pmax pmax
comp=Z,11nm,0.9s
TUC Tucson 92.38 56 P P 06 49 34.5 0.0
baz=246
TUC S S 07 00 36.1 +7.6
baz=246
TUC Tucson 92.38 56 P P 06 49 34.6 0.0
BWNR Bhubaneshwar 92.38 291⇑*i*x P 06 49 34.5 -0.2
BWNR *e*S **SKSac** 06 59 54.8 -2.9
C06D Leavenworth 92.42 39 P P 06 49 34.4 +0.1
baz=240
LCMT Little Creek M 92.47 51 P P 06 49 35.0 0.0
HAWA Hanford 92.49 41 P P 06 49 34.7 +0.1
CCUT Cedar City 92.61 51 P P 06 49 35.8 +0.1
ZAK Zakamensk 92.66 324 *e*P P 06 49 35.1 -0.4
ZAK pmax pmax
comp=Z,125nm,1.7s
ELK Elko 92.67 47 P P 06 49 35.5 -0.4
ELK Elko 92.67 47 P P 06 49 35.5 -0.4
PSUT Pine Spring 92.67 50 P P 06 49 35.5 -0.5
KNB Kanab 92.78 51 P P 06 49 35.3 -1.1
KNB pmax pmax
comp=Z,61nm,1.4s
KNB Kanab 92.78 51 P P 06 49 35.3 -1.1
E08A Dider Farm, El 92.82 41 P P 06 49 36.1 0.0
SZCU Shurtz Canyon 92.83 51 P P 06 49 37.5 +0.8
U15A North Rim 92.92 52 P P 06 49 37.9 +0.6
U15A IAmb IAmb 06 49 41.8
comp=Z,29nm,0.8s
PRP Porcupine Dome 92.97 17 P P 06 49 35.4 -1.2
PRP IAmb IAmb 06 49 39.4
comp=Z,35nm,1.0s
WHY Whitehorse 92.97 24 P P 06 49 36.3 -0.4
WHY IAmb IAmb 06 49 39.3
comp=Z,41nm,1.2s
IRK Irkutsk 93.09 326 *e*P P 06 49 36.0 -1.3
IRK *e*S **SKSac** 06 59 58.0 -2.3

IRK pmax pmax
comp=Z,275nm,2.2s
TLY Talaya 93.13 325 P P 06 49 37.9 +0.4
comp=Z,40nm,0.7s,baz=169,slow=3.8,SNR=15
TLY PP PP 06 53 22.0 -0.7
comp=Z,2.0nm,0.3s,baz=240,slow=12,SNR=1.3
TLY Talaya 93.13 325 P P 06 49 37.7 +0.2
TLY Talaya 93.13 325*c i*P P 06 49 37.7 +0.2
TLY *e* 07 00 01.2
TLY *e* 07 00 34.4
TLY *e*PS **PS** **07 01 50.7 -12**
TLY *e* 07 02 05.4
TLY *e* 07 02 40.5
TLY *e*SS SS 07 07 00.4 +7.9
TLY pmax pmax
comp=Z,296nm,1.5s
TLY MLR MLR
comp=Z,2µm,13.0s
TLY Talaya 93.13 325 P P 06 49 37.9 +0.4
TLY IAmb IAmb 06 49 42.3
comp=Z,54nm,0.8s
COLD Coldfoot 93.14 14 P P 06 49 38.0 +0.9
COLD IAmb IAmb 06 49 40.5
comp=Z,28nm,1.0s
BMO Blue Mountains 93.14 43 P P 06 49 38.0 +0.1
BMO pmax pmax
comp=Z,6.0nm,0.9s
BMO Blue Mountains 93.14 43 P P 06 49 38.0 +0.1
D08A Wollman Farm, 93.17 40 P P 06 49 38.3 +0.5
LLLB Lillooet 93.20 36 P P 06 49 37.6 -0.3
WUAZ Wupatki 93.22 53 P P 06 49 39.3 +0.7
baz=246
WUAZ S S 07 00 43.5 +7.4
baz=246
WUAZ Wupatki 93.22 53 P P 06 49 38.8 +0.2
PKCU Pink Cliffs 93.32 51 P P 06 49 39.9 +0.7
E09A Wood Farm, Sta 93.39 41 P P 06 49 38.3 -0.5
TAPN Taplejung 93.40 298 *e*P P 06 49 39.8 +0.1
comp=Z,619nm,1.7s
TAPN Taplejung 93.40 298 *e*P **SKSac** 07 00 02.5 -1.3
comp=Z,564nm,2.2s
TAPN Taplejung 93.40 298 *e*P **PKKPbc** 07 06 44.9 -1.5
comp=Z,10nm,0.6s
MFID Camas Ranch 93.45 45 P P 06 49 39.0 -0.3
ODAN Odare 93.48 297 *e*P P 06 49 40.4 +0.4
ODAN Odare 93.48 297 *e*P **SKSac** 07 00 03.6 -0.5
comp=Z,674nm,2.1s
ODAN Odare 93.48 297 *e*P **PKKPbc** 07 06 46.9 +0.8
comp=Z,31nm,0.9s
DLBC Dease Lake 93.53 27 P P 06 49 40.0 +0.7
comp=Z,17nm,0.9s,baz=242,slow=5.7,SNR=26
DLBC PKiKP **PKiKP** 06 54 25.1 +0.6
comp=Z,2.5nm,0.7s,baz=320,slow=2.0,SNR=5.1
DLBC Dease Lake 93.53 27 P P 06 49 39.1 -0.1
DLBC IAmb IAmb 06 49 42.5
comp=Z,46nm,1.2s
B08A Colville Reser 93.55 39 P P 06 49 38.9 -0.6
BOK Bokaro 93.60 294⇑*i*P P 06 49 41.2 +0.8
BOK IAmb IAmb 06 49 43.0
comp=Z,148nm,1.1s
MTPU Mount Pierson 93.66 51 P P 06 49 40.1 -0.7
EGAK Eagle 93.67 19 P P 06 49 39.5 -0.2
F10A Beach Ranch, E 93.71 42 P P 06 49 40.0 -0.4
TCRU Three Creeks R 93.71 50 P P 06 49 41.1 +0.3
DAWY Dawson 93.71 20 P P 06 49 39.8 -0.1
DAWY IAmb IAmb 06 49 42.5
comp=Z,59nm,0.8s
FYU Fort Yukon 93.85 16 P P 06 49 39.8 -0.5
FYU IAmb IAmb 06 49 43.3
comp=Z,28nm,0.8s
MSU Marysvale 93.86 50 P P 06 49 40.4 -1.0
MSU Marysvale 93.86 50 P P 06 49 40.4 -1.0
X18A Snowflake 93.90 55 P P 06 49 41.6 -0.1
DUG Dugway, Tooele 94.10 48 P P 06 49 42.4 0.0
DUG pmax pmax
comp=Z,10.0nm,1.0s
DUG Dugway, Tooele 94.10 48 P P 06 49 42.9 +0.4
baz=245
DUG S S 07 00 47.6 +4.1
baz=245
DUG Dugway, Tooele 94.10 48 P P 06 49 42.4 0.0
RAMN Ramite 94.17 297 *e*P P 06 49 43.5 +0.3
comp=Z,107nm,0.8s
RAMN Ramite 94.17 297 *e*P **SKSac** 07 00 08.2 +0.3
comp=Z,48nm,1.2s
RAMN Ramite 94.17 297 *e*P **PKKPbc** 07 06 45.0 +0.7
comp=Z,23nm,0.6s
BGU Big Grassy Mou 94.26 48 P P 06 49 43.0 -0.2
W18A Petrified Fore 94.29 54 P P 06 49 44.1 +0.6
baz=247
W18A S S 07 00 52.3 +6.8
baz=247
TOLK Toolik Lake Re 94.42 14 P P 06 49 43.7 +0.6
baz=217
TOLK Toolik Lake Re 94.42 14 P P 06 49 43.3 +0.2
TOLK IAmb IAmb 06 49 48.7
comp=Z,66nm,1.2s
NLU North Lily Min 94.52 49 P P 06 49 44.9 -0.4
MOY Mondy 94.55 324 *e*P P 06 49 44.4 +0.2
MOY pmax pmax
comp=Z,529nm,3.3s
Q16A Castle Valley 94.74 50 P P 06 49 45.5 0.0
JIRN Jiri 94.77 298 *e*P P 06 49 46.5 +0.4
121A Cookes Peak, D 94.80 57 P P 06 49 46.1 +0.3
baz=248
121A S S 07 00 58.3 +8.3
baz=248
NEW Newport 94.81 40 P P 06 49 44.6 -0.7
NEW Newport 94.81 40 P P 06 49 45.5 +0.2
baz=243
NEW S S 07 00 50.3 +1.2
baz=243
NEW Newport 94.81 40 P P 06 49 44.6 -0.7
MPU Maple Canyon 94.86 49 P P 06 49 45.2 -0.8
TMUT Trail Mountain 94.87 50 P P 06 49 47.0 +0.8
PVM Polavaram 94.97 286 *e*P P 06 49 47.2 +0.5
PVM IVMs_BB IVMs_BB 07 23 14.9
comp=Z,763nm,30.6s
CTU Camp Tracy 95.05 48 P P 06 49 46.7 -0.1
GUN Gumba 95.12 298 *e*P P 06 49 47.5 -0.1
comp=Z,706nm,1.7s
GUN Gumba 95.12 298 *e*P **SKSac** 07 00 12.0 -1.2
GUN Gumba 95.12 298 *e*P **PKKPbc** 07 06 40.6 -1.3
comp=Z,44nm,0.7s
JLU Jordanelle 95.22 48 P P 06 49 46.9 -0.8
SRU San Rafael Swe 95.28 50 P P 06 49 47.9 0.0
SRU pmax pmax
comp=Z,8.0nm,0.9s
SRU San Rafael Swe 95.28 50 P P 06 49 47.9 0.0
PKI Pulchoki 95.38 297 *e*P P 06 49 48.8 0.0
comp=Z,154nm,0.9s
PKI Pulchoki 95.38 297 *e*P **SKSac** 07 00 13.2 -1.3
comp=Z,336nm,1.9s
PKI Pulchoki 95.38 297 *e*P **PKKPbc** 07 06 40.7 -0.5
PKIN Phulchoki 95.39 297 *e*P P 06 49 48.8 0.0
comp=Z,145nm,0.8s
PKIN Phulchoki 95.39 297 *e*P **SKSac** 07 00 13.1 -1.4
comp=Z,540nm,2.0s
PKIN Phulchoki 95.39 297 *e*P **PKKPbc** 07 06 40.6 -0.5
TCUT Toone Canyon 95.46 48 P P 06 49 48.9 +0.1
SKHT Srikalahasti 95.47 283 *e*P P 06 49 50.2 +1.2
SKHT IVMs_BB IVMs_BB 07 25 36.9
comp=Z,809nm,24.8s
HWUT Hardware Ranch 95.54 48 P P 06 49 50.6 +1.6
KKN Kakani 95.57 298 *e*P P 06 49 49.2 -0.3
comp=Z,5.9nm,0.9s
DMN Daman 95.65 297 *e*P P 06 49 50.4 +0.5
comp=Z,155nm,0.6s
MYLAV Mylavaram 95.68 286 *e*P P 06 49 50.9 +1.0
MYLAV IVMs_BB IVMs_BB 07 24 52.3
comp=Z,1µm,40.7s
ADKI Addanki 95.97 285 *e*P P 06 49 52.2 +1.0
ADKI IVMs_BB IVMs_BB 07 24 33.5
comp=Z,1µm,40.0s
MCMT McKenzie Canyo 95.99 44 P P 06 49 51.5 +0.4
MVCO Mesa Verde 96.02 52 P P 06 49 51.4 0.0
baz=248
MVCO S S 07 01 06.2 +5.6
baz=248
Y22D IRIS PASSCAL I 96.05 56 P P 06 49 52.1 +0.7
baz=248
EPYK Eagle Plains 96.11 19 P P 06 49 51.0 +0.2
baz=228
EPYK S S 07 00 57.9 -1.6
baz=228

EPYK Eagle Plains 96.11 19 P P 06 49 50.5 -0.3
EPYK PcP 06 49 50.7 -0.2
PV23 Carpenter Ridg 96.12 51 P P 06 49 50.4 -1.5
MSO Missoula 96.13 42 P P 06 49 51.9 +0.4
baz=245
MSO S S 07 01 01.9 +1.2
baz=245
TRD Trivandrum 96.16 277⇑*i*P P 06 49 53.4 +1.1
TRD *i*x x 06 53 41.2
PV04 Paradox Valley 96.17 51 P P 06 49 51.9 -0.1
GKN Gorkha 96.17 298 *e*P P 06 49 52.0 -0.2
comp=Z,185nm,1.1s
PV21 Cone Mtn., Par 96.19 51 P P 06 49 51.5 -0.6
PV12 Saucer Basin, 96.22 51 P P 06 49 52.0 -0.2
PLCA Paso Flores 96.23 138 P P 06 49 52.1 -0.1
comp=Z,12nm,0.7s,baz=253,slow=4.7,SNR=25
PLCA PKKPbc **PKKPbc** 07 06 37.8 -0.8
comp=Z,5.4nm,0.8s,baz=64,slow=3.0,SNR=9.4
PLCA LR LR 07 27 07.3
comp=Z,1µm,18.7s,baz=225,slow=32
PLCA Paso Flores 96.23 138 P P 06 49 52.1 -0.1
PLCA PcP 06 49 52.5 +0.1
PLCA IAmb IAmb 06 49 55.1
comp=Z,35nm,1.0s
PLCA Paso Flores 96.23 138 *e*P P 06 49 51.9 -0.3
PV01 Paradox Valley 96.32 52 P P 06 49 52.6 -0.1
DLMT Dillon 96.37 44 P P 06 49 52.6 -0.1
MNTX Cornudas Mount 96.39 59 P P 06 49 53.2 +0.3
baz=249
MNTX S S 07 01 10.6 +7.2
baz=249
MNTX Cornudas Mount 96.39 59 P P 06 49 53.0 +0.1
RDMU Red Mountain 96.53 49 P P 06 49 53.5 -0.1
LRM Limekiln Ridge 96.65 43 P P 06 49 54.9 +0.9
TPAW Teton Pass 96.71 46 P P 06 49 54.9 +0.5
FXWY Fox Creek 96.71 46 P P 06 49 54.9 +0.6
ANMO Albuquerque 96.72 55 P P 06 49 56.6 +2.0
baz=227,slow=4.4
ANMO Albuquerque 96.72 55⇑*e*P P 06 49 55.6 +1.0
ANMO pmax pmax
comp=Z,13nm,1.9s
ANMO Albuquerque 96.72 55 P P 06 49 54.7 +0.1
baz=248
ANMO S S 07 01 13.5 +6.9
baz=248
ANMO Albuquerque 96.72 55 P P 06 49 56.0 +1.5
REDW Red Top Meadow 96.72 46 P P 06 49 54.1 -0.3
NJS Nagarjunasagar 96.81 285 *e*P P 06 49 55.7 +0.6
NJS IVMs_BB IVMs_BB 07 24 58.2
comp=Z,1µm,39.8s
SNOW Snow King Moun 96.83 46 P P 06 49 54.8 -0.2
IMW Indian Meadow 96.87 46 P P 06 49 55.8 +0.6
TX31 Lajitas Ar. Si 96.93 61 P P 06 49 55.6 +0.1
TX31 IAmb IAmb 06 49 58.0
comp=Z,43nm,1.5s
TX32 Lajitas Array 96.93 61 P P 06 49 55.3 -0.2
TXAR Lajitas Array 96.93 61 P P 06 49 56.6 +1.1
comp=Z,3.7nm,1.2s,baz=215,slow=4.1,SNR=13
TXAR PKiKP **PKiKP** 06 54 35.5 +4.2
comp=Z,1.4nm,0.7s,baz=212,slow=3.2,SNR=4.6
TXAR PKKPbc **PKKPdf** 07 06 38.0 -0.7
comp=Z,1.2nm,0.5s,baz=96,slow=3.8,SNR=18
TXAR SKKPbc SKKPbc 07 10 08.7 +1.5
comp=Z,0.9nm,0.9s,baz=109,slow=5.0,SNR=3.3
TXAR PKPPKP 07 14 51.3
comp=Z,0.4nm,0.9s,baz=26,slow=3.2,SNR=3.4
TXAR LR LR 07 25 20.1
comp=Z,6µm,21.6s,baz=0.0,slow=30
KOLN Koldanda 96.95 297 *e*P P 06 49 55.3 -0.5
comp=Z,34nm,0.5s
KOLN Koldanda 96.95 297 *e*P **SKSac** 07 00 22.0 -0.5
comp=Z,17nm,0.7s
DANN Dangsing 97.02 298 *e*P P 06 49 55.5 -0.7
comp=Z,53nm,0.5s
SRLM Srisailam 97.03 284 *e*P Pdif 06 49 56.8 +0.6
SRLM IVMs_BB IVMs_BB 07 24 59.8
comp=Z,971nm,38.2s
YHB Horse Butte 97.04 45 P Pdif 06 49 56.0 +0.1
YHL Hebgen Lake 97.09 45 P Pdif 06 49 56.9 +0.7
TIXI Tiksi 97.09 348 P P 06 49 53.9 -1.1
comp=Z,8.9nm,0.9s,baz=126,slow=6.7,SNR=22
TIXI PKiKP **PKiKP** 06 54 30.4 +0.3
comp=Z,2.6nm,0.6s,baz=138,slow=4.3,SNR=1.5
TIXI Tiksi 97.09 348 *i*P P 06 49 53.9 -1.1
TIXI pmax pmax
comp=Z,29nm,1.3s
TIXI Tiksi 97.09 348 P P 06 49 53.9 -1.1
TIXI IAmb IAmb 06 49 54.9
comp=Z,32nm,1.3s
YHH Holmes Hill 97.28 45 P Pdif 06 49 57.5 +0.4
O20A White River Ci 97.30 50 P Pdif 06 49 57.3 +0.1
baz=248
O20A S S 07 01 15.5 +4.2
baz=248
O20A White River Ci 97.30 50 P Pdif 06 49 57.2 0.0
H17A Grant Village 97.31 45 P Pdif 06 49 58.0 +0.9
baz=247
H17A Grant Village 97.31 45 P Pdif 06 49 57.8 +0.6
BW06 Boulder Array 97.37 47 P Pdif 06 49 57.6 +0.2
baz=248
BW06 S S 07 01 14.4 +2.6
baz=248
BW06 Boulder Array 97.37 47 P P 06 49 56.9 -0.4
PDAR Pinedale Array 97.37 47 P Pdif 06 49 58.9 +1.5
comp=Z,2.6nm,0.8s,baz=207,slow=2.4,SNR=14
PDAR PP PP 06 53 55.5 -0.5
comp=Z,8.5nm,1.1s,baz=250,slow=3.9,SNR=7.0
PDAR PKiKP **PKiKP** 06 54 34.6 +2.8
comp=Z,3.7nm,0.7s,baz=215,slow=2.4,SNR=5.9
PDAR PKKPbc **PKKPbc** 07 06 36.0 -0.3
comp=Z,2.5nm,0.7s,baz=86,slow=6.1,SNR=13
PDAR PKPPKP **P'P'df** 07 14 48.2 -0.9
comp=Z,0.6nm,0.8s,baz=62,slow=3.5,SNR=6.4
S22A 4UR Ranch, Cre 97.45 52 P Pdif 06 49 58.4 +0.4
baz=249
S22A S S 07 01 19.6 +6.7
baz=249
RPR Rampur 97.61 287 *e*P P 06 49 58.6 -0.1
HYB Hyderabad 97.78 286 *i*P P 06 49 59.0 -0.5
HYB *es*P **sP** 06 50 40.0 -0.9
HYB *e*PP **PP** **06 53 59.0** -0.4
HYB *e*PPP PPP 06 56 06.0
HYB *e*SKS **SKSac** **07 00 25.0** -1.7
HYB *e*ScS **S** **07 01 14.0** -1.9
HYB *e* 07 02 52.0
HYB Hyderabad 97.78 286⇑*i*P Pdif 06 49 59.7 +0.2
HYB IAmb IAmb 06 50 02.4
comp=Z,39nm,0.9s
HYBB Hyderabad (bro 97.78 286 *e*P Pdif 06 49 59.8 +0.2
HYBB IVMs_BB IVMs_BB 07 25 49.1
comp=Z,1µm,31.0s
YNE Yellowstone No 97.92 45 P Pdif 06 50 00.1 +0.3
URV Uravakonda 98.11 283 *e*P Pdif 06 50 01.6 +0.6
URV IVMs_BB IVMs_BB 07 24 37.1
comp=Z,1µm,29.1s
INK Inuvik 98.31 18 P P 06 49 59.9 -0.7
comp=Z,21nm,0.9s,baz=226,slow=5.0,SNR=57
INK PKiKP **PKiKP** 06 54 32.0 -0.4
comp=Z,8.3nm,0.6s,baz=198,slow=1.4,SNR=8.2
INK S **SKSac** 07 00 25.3 -1.7
comp=Z,6.2nm,1.2s,baz=19,slow=31,SNR=24
INK PKPPKP **P'P'df** 07 14 43.3 -1.8
comp=Z,1.6nm,1.1s,baz=18,slow=11,SNR=3.7
INK Inuvik 98.31 18 P P 06 49 59.9 -0.7
INK IAmb IAmb 06 50 02.2
comp=Z,19nm,0.8s
SDCO Great Sand Dun 98.44 53 P Pdif 06 50 02.6 +0.2
baz=249
RLMT Red Lodge 98.45 45 P Pdif 06 50 02.5 +0.4
baz=248
RLMT S S 07 01 25.4 +4.6
baz=248
SRSP Sriramsagar 98.48 287 *e*P P 06 50 02.5 -0.1
SRSP IVMs_BB IVMs_BB 07 26 46.4
comp=Z,693nm,35.2s
NGP Nagpur 98.60 289 *i*x **SKSac** 07 00 28.4 -2.3
NGP *ex* S 07 01 18.0 -4.7
T25A Trinidad 99.04 54 P **Pdif** 06 50 05.0 +0.1
baz=250
ISCO Idaho Springs 99.07 51 P **Pdif** 06 50 05.3 +0.2
baz=250
Q24A Divide 99.12 52 P **Pdif** 06 50 05.3 -0.1
baz=250
EGMT Eagleton 99.21 42 P **Pdif** 06 50 05.2 -0.1
baz=248

N23A	Red Feather La	99.21	50	P	Pdif	06 50 05.9	+0.2
	baz=250						
MSTX	Muleshoe	99.23	57	P	Pdif	06 50 05.6	-0.2
	baz=250						
MSTX	Muleshoe	99.23	57	P	Pdif	06 50 05.4	-0.4
K22A	Casper	99.41	48	P	Pdif	06 50 06.3	-0.1
	baz=250						
WMQ	Urumqi	99.44	313	P	Pdif	06 50 06.7	+0.3
WMQ				sP	pwP	06 50 42.4	+3.5
WMQ				PP	PP	06 54 17.7	+6.1
WMQ				SKS	SKSac	07 00 34.3	+0.3
WMQ				SS	SS	07 08 20.8	-1.3
WMQ				pmax	pmax		
	comp=Z,55nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,1μm,6.7s						
WMQ				LR	LR		
	comp=Z,1μm,20.1s						
WMQ				LR	LR		
	comp=Z,2μm,28.8s						
WMQ				LR	LR		
	comp=Z,8μm,28.9s						
KLRI	Killari	99.75	286	eP	Pdif	06 50 08.3	0.0
KLRI				IVMs_BB	IVMs_BB	07 26 37.0	
	comp=Z,2μm,39.8s						
833A	Chaparral WMA,	100.12	64	P	Pdif	06 50 09.9	+0.2
	baz=251						
AMTX	Amarillo	100.39	57	P	Pdif	06 50 10.9	+0.1
	baz=251						
JCT	Junction City	100.48	61	P	Pdif	06 50 11.4	+0.1
	baz=251						
BHPL	Bhopal	100.70	291⇑	iP	Pdif	06 50 12.1	-0.4
LAO	LASA Array	100.99	44	P	Pdif	06 50 13.6	+0.4
	baz=250						
KSCO	Kaye Shedlock'	100.99	52	P	Pdif	06 50 14.2	+0.8
	baz=251						
ABTX	Abilene, Hawle	101.28	59	P	Pdif	06 50 14.8	0.0
	baz=252						
GOA	Goa	101.41	282⇑	iP	Pdif	06 50 15.8	+0.2
GOA				IAmb	IAmb	06 50 18.2	
	comp=Z,39nm,1.0s						
RSSD	Black Hills	101.61	47	P	Pdif	06 50 16.5	+0.3
	baz=251						
DGZ	Jazzator, Alta	101.62	319c	iP	Pdif	06 50 16.3	+0.3
C36M	Paulatuk	101.73	19	P	Pdif	06 50 15.7	-0.1
	baz=240						
OGNE	Ogallala	102.03	51	P	Pdif	06 50 19.5	+1.5
	baz=252						
YKA	Yellowknife Ar	102.15	27	P	Pdif	06 50 17.5	-0.4
	comp=Z,6.4nm,0.7s,baz=246,slow=4.3,SNR=51						
YKA				PP	PP	06 54 28.4	-3.0
	comp=Z,2.4nm,1.0s,baz=246,slow=7.0,SNR=4.3						
YKA				PKiKP	PKiKP	06 54 39.4	-0.1
	comp=Z,5.6nm,0.7s,baz=230,slow=1.3,SNR=25						
YKA				PKKPbc	PKKPbc	07 06 20.9	-2.2
	comp=Z,1.5nm,0.7s,baz=74,slow=2.9,SNR=12						
YKA				PKPPKP	P'P'df	07 14 37.2	-1.1
	comp=Z,0.7nm,1.1s,baz=65,slow=2.4,SNR=4.3						
DDI	Dehra Dun	102.37	298⇑	iP	Pdif	06 50 19.1	-0.7
POO	Poona	102.37	285⇑	iP	Pdif	06 50 20.0	+0.1
435B	Jarrell	102.39	62	P	Pdif	06 50 20.3	+0.6
	baz=252						
ZSN	Zaisan	102.51	316⇑	iP	Pdif	06 50 20.1	+0.2
	comp=Z,173nm,2.9s						
ZSN				ePP	PP	06 54 34.1	-0.5
ZSN				eS	SKSac	07 00 46.9	-1.7
ZSN	Zaisan	102.51	316c	iP	Pdif	06 50 20.0	+0.2
ZSN				e		06 54 34.0	
ZSN				eS	SKSac	07 00 46.9	-1.7
ZSN				pmax	pmax		
	comp=Z,173nm,2.9s						
WMOK	Wichita Mounta	102.61	58	P	Pdif	06 50 21.5	+0.9
	baz=252						
A36M	Sachs Harbour	102.73	17	P	Pdif	06 50 20.8	+0.6
	baz=239						
WHTX	Lake Whitney,	102.85	61	P	Pdif	06 50 19.1	-2.7
	baz=253						
DGMT	Dagmar	102.86	43	P	Pdif	06 50 20.6	-0.8
	baz=252						
CBKS	Cedar Bluff	103.08	53	P	Pdif	06 50 21.5	-1.1
	baz=253						
SMLA	Simla	103.34	298⇑	iP	Pdif	06 50 24.0	+0.1
APG	El Apazote	103.76	79	PKiKP	PKiKP	06 54 43.9	-0.1
	comp=Z,5.7nm,0.8s,baz=318,slow=8.3,SNR=4.9						
APG				PKKPbc	PKKPbc	07 06 19.1	+2.1
	comp=Z,3.3nm,0.7s,baz=12,slow=12,SNR=5.4						
MKAR	Makanchi Array	104.00	315	Pdiff	Pdif	06 50 26.9	+0.4
	comp=Z,13nm,0.6s,baz=95,slow=6.1,SNR=59						
MKAR				PKiKP	PKiKP	06 54 43.8	+0.4
	comp=Z,14nm,1.0s,baz=92,slow=7.3,SNR=5.0						
MKAR				PKKPbc	PKKPbc	07 06 14.9	-2.2
	comp=Z,6.6nm,0.6s,baz=273,slow=2.2,SNR=35						
MKAR				PKPPKP	P'P'df	07 14 36.8	+0.7
	comp=Z,1.0nm,0.8s,baz=261,slow=3.2,SNR=5.5						
DHRM	DHARAMSHALA	104.37	299⇑	iP	Pdif	06 50 28.4	-0.4
DHRM				IAmb	IAmb	06 50 31.8	
	comp=Z,16nm,1.0s						
ZALV	Zalesovo Beam	104.47	323	Pdiff	Pdif	06 50 27.8	-0.6
	comp=Z,7.6nm,0.5s,baz=114,slow=4.1,SNR=23						
ZALV				PKiKP	PKiKP	06 54 46.0	+2.0
	comp=Z,3.3nm,0.6s,baz=142,slow=0.8,SNR=5.1						
ZALV				PKKPbc	PKKPbc	07 06 13.8	-2.0
	comp=Z,2.6nm,0.5s,baz=275,slow=3.7,SNR=7.3						
SHLS	Shalkode	104.94	311	ePdif	Pdif	06 50 28.7	-2.2
SHLS				ePP	PKiKP	06 54 48.9	+3.5
SHLS	Shalkode	104.94	311	eP	Pdif	06 50 28.7	-2.2
SHLS				e		06 54 48.8	
BGNE	Belgrade	104.97	51	P	PKiKP	06 54 45.2	-0.1
	baz=254						
NATX	Nacogdoches	105.06	61	P	PKiKP	06 54 44.2	-1.5
	baz=254						
SUSD	Miller	105.20	48	P	PKiKP	06 54 44.3	-1.3
	baz=255						
TUL1	Leonard	105.28	57	P	PKiKP	06 54 45.8	-0.2
	baz=254						
KSU1	Kansas State U	105.50	54	P	PKiKP	06 54 47.0	+0.6
	baz=255						
MDND	Maddock	105.64	44	P	PKiKP	06 54 47.4	+1.1
	baz=255						
SATY	Saty	105.66	310	ePdif	Pdif	06 50 34.1	-0.1
SATY				ePP	PP	06 54 56.6	-1.6
SATY	Saty	105.66	310	eP	Pdif	06 50 34.0	-0.1
SATY				e		06 54 56.5	
TDK	Taldyqorghan	106.14	312	ePdif	Pdif	06 50 34.6	-1.6
TDK				ePP	PP	06 54 59.5	-2.1
TDK				eSS	SS	07 09 51.5	-2.8
TDK	Taldyqorghan	106.14	312	eP	Pdif	06 50 34.5	-1.6
TDK				e		06 54 59.4	
TDK				eSS	SS	07 09 51.4	-2.9
MDOK	Medeo	106.65	310	i Pdif	Pdif	06 50 38.4	-0.2
MDOK				ePP	PP	06 55 02.7	-2.8
MDOK				eSKS	SKSac	07 01 07.0	-0.9
MDOK				ePS	PS	07 04 22.3	-4.9
MDOK				eSS	SS	07 10 03.9	+2.4
MDOK	Medeo	106.65	310	i P	Pdif	06 50 38.3	-0.2
MDOK				e		06 55 02.6	
MDOK				e		07 01 06.9	
MDOK				ePS	PS	07 04 22.3	-4.9
MDOK				eSS	SS	07 10 03.8	+2.3
ECSD	EROS Data Cent	106.65	49	P	PKiKP	06 54 48.5	+0.2
	baz=256						
MIAR	Mount Ida	106.68	59	P	PKiKP	06 54 48.2	-0.5
	baz=255						
TNSS	Tian-Shan	106.69	310	ePdif	Pdif	06 50 38.0	-1.1
TNSS	Tian-Shan	106.69	310	eP	Pdif	06 50 37.9	-1.1
AAA	Alma-Ata	106.75	310	ePP	PP	06 55 03.0	-3.1
AAA	Alma-Ata	106.75	310	eP	Pdif	06 50 38.0	-0.9
AAA				e		06 55 03.0	
AAA				ePS	PS	07 04 14.0	-14
AAA				eSS	SS	07 10 06.0	+3.3
AAA				pmax	pmax		
	comp=Z,400nm,9.9s						
KUU	Kurty	107.32	311⇑	iPdif	Pdif	06 50 40.4	-1.0
KUU				ePP	PP	06 55 06.5	-3.7
KUU				eSKS	SKSdf	07 01 58.2	+7.4
KUU				ePS	PS	07 04 19.6	-14
KUU				eSS	SS	07 10 10.2	-0.1
KUU	Kurty	107.32	311c	iP	Pdif	06 50 40.3	-1.0
KUU				e		06 55 06.5	
KUU				ePS	PS	07 04 19.6	-14
KUU				eSS	SS	07 10 10.1	-0.2
KURK	Kurchatov	107.33	318c	iP	Pdif	06 50 40.6	-0.6
KURK	Kurchatov	107.33	318		Pdif	06 50 40.5	-0.6
KURK					PKiKP	06 54 52.2	+2.8
NRIK	Noril'sk	107.34	338	Pdiff	Pdif	06 50 40.6	-0.1
	comp=Z,4.1nm,0.5s,baz=114,slow=5.1,SNR=21						
NRIK				PKiKP	PKiKP	06 54 49.4	+0.5
	comp=Z,4.1nm,0.5s,baz=97,slow=2.5,SNR=5.4						
NRIK				PKKPbc	PKKPbc	07 06 06.0	-1.4
	comp=Z,1.1nm,0.3s,baz=51,slow=4.7,SNR=4.4						
KURBB	Kurchatov Arra	107.37	318	Pdiff	Pdif	06 50 41.1	-0.2
	comp=Z,4.1nm,0.6s,baz=99,slow=4.3,SNR=38						
KURBB				PKiKP	PKiKP	06 54 47.8	-1.6
	comp=Z,5.2nm,0.7s,baz=100,slow=2.1,SNR=11						
U40A	Yellville	107.70	57	P	PKiKP	06 54 49.6	-0.9
	baz=256						
W41B	Gary Mavity, V	107.89	59	P	PKiKP	06 54 49.8	-1.0
	baz=256						
AGMN	Agassiz Nation	108.18	45	P	PKiKP	06 54 49.6	-1.5
	baz=258						
AAK	Ala-Archa	108.36	309c	iP	Pdif	06 50 46.3	+0.1
SGDS	Sogindy	108.43	310⇑	iPdif	Pdif	06 50 45.8	-0.6
SGDS				ePP	PP	06 55 13.8	-4.7
SGDS				eSKS	SKSdf	07 02 05.0	+12
SGDS				i PS	PS	07 04 40.8	-4.4
SGDS				eSS	SS	07 10 26.0	+0.5
ULM	Lac du Bonnet	108.57	43	PKiKP	PKiKP	06 54 50.5	-1.1
	comp=Z,14nm,0.6s,baz=266,slow=2.0,SNR=34						
ULM				PKKPbc	PKKPbc	07 06 02.2	-0.8
	comp=Z,1.8nm,0.7s,baz=59,slow=4.7,SNR=6.4						
ULM				PKPPKP		07 14 29.4	
	comp=Z,0.7nm,0.4s,baz=204,slow=7.8,SNR=3.0						
ULM	Lac du Bonnet	108.57	43		PKiKP	06 54 49.9	-1.8
VBMS	Vicksburg	108.58	62	P	PKiKP	06 54 45.5	-6.7
	baz=256						
BTLS	Baital	109.17	312⇑	iPdif	Pdif	06 50 49.0	-0.5
BTLS				ePP	PP	06 55 21.4	-2.2
BTLS				eSKS	SKSdf	07 02 10.5	+16
BTLS				i PS	PS	07 04 46.2	-6.1
BTLS				eSS	SS	07 10 34.9	-0.2
BTLS	Baital	109.17	312c	iP	Pdif	06 50 49.0	-0.5
BTLS				e		06 55 21.4	
BTLS				i PS	PS	07 04 46.2	-6.1
BTLS				eSS	SS	07 10 34.9	-0.2
CCM	Cathedral Cave	109.33	56	P	PKiKP	06 54 53.1	-0.4
	baz=258						
SPMN	Marine on St.	109.64	48	P	PKiKP	06 54 53.3	-0.5
	baz=259						
EYMN	Ely	111.00	45	P	PKiKP	06 54 56.2	-0.1
	baz=261						
JFWS	Jewell Farm	111.03	51	P	PKiKP	06 54 55.7	-0.9
	baz=260						
HDIL	Hopedale	111.31	54	P	PKiKP	06 54 56.5	-0.7
	baz=260						
IUG	Iuzhnay	111.50	308	ePdif	Pdif	06 50 59.5	-0.6
IUG				ePP	PP	06 55 35.7	-5.0
IUG	Iuzhnay	111.50	308	eP	Pdif	06 50 59.5	-0.6
IUG				e		06 55 35.6	
LPAZ	La Paz	111.53	118	PKiKP	PKiKP	06 54 59.2	+0.1
	comp=Z,5.1nm,0.9s,baz=215,slow=2.8,SNR=8.0						
LPAZ				PKKPbc	PKKPbc	07 05 53.5	+0.4
	comp=Z,3.4nm,0.7s,baz=325,slow=1.8,SNR=12						
LPAZ	La Paz	111.53	118		PKiKP	06 55 00.0	+0.9
LPAZ					PKKPbc	07 05 54.1	+1.0
OPO	Ambohidratompo	111.58	239	PKiKP	PKiKP	06 55 00.4	+1.8
	comp=Z,9.7nm,0.7s,baz=205,slow=1.4,SNR=12						
OPO				PP	PP	06 55 40.0	-1.1
	comp=Z,4.3nm,0.8s,baz=97,slow=10.0,SNR=3.2						
WVT	Waverly	111.61	58	P	PKiKP	06 54 57.7	-0.2
	baz=259						
LRAL	Lakeview Retre	111.66	62	P	PKiKP	06 54 57.8	-0.2
	baz=258						
BRLS	Borolday	111.79	309	ePS	PS	07 05 03.5	-13
BRLS				eSS	SS	07 11 09.9	-0.5
SOTA	Rioblanco	112.24	97	eP	PKiKP	06 55 01.7	+1.3
Z50A	Ashland	112.59	62	P	PKiKP	06 54 58.8	-1.0
	baz=258						
L44A	Lake County Fo	112.61	52	P	PKiKP	06 54 59.0	-0.6
	baz=261						
BRVK	Borovoye	112.81	320c	iP	Pdif	06 51 04.6	-0.9
SFIN	Lafayette	112.93	54	P	PKiKP	06 54 59.9	-0.3
	baz=261						
YOTC	Yotoco, Valle	113.17	95	eP	PKiKP	06 55 01.0	-0.7
WCI	Wyandotte Cave	113.20	56	P	PKiKP	06 55 00.2	-0.6
	baz=260						
GARC	Garzon, Huila	113.29	97	eP	PKKPbc	07 05 47.5	+0.8
Q48A	North Vernon	113.75	56	P	PKiKP	06 55 01.3	-0.5
	baz=261						
CPUP	Villa Florida	113.77	134	PKiKP	PKiKP	06 55 02.1	-0.2
	comp=Z,4.9nm,0.8s,baz=296,slow=1.8,SNR=11						
CPUP				PKKPbc	PKKPbc	07 05 44.9	-0.3
	comp=Z,3.4nm,1.0s,baz=40,slow=8.2,SNR=3.4						
CPUP	Villa Florida	113.77	134	i PKIKP	PKiKP	06 55 02.6	+0.2
CPUP	Villa Florida	113.77	134		PKiKP	06 55 02.6	+0.2
L46A	Eue Claire	113.77	52	P	PKiKP	06 55 01.6	-0.2
	baz=262						
P48A	Milroy	114.06	55	P	PKiKP	06 55 02.5	0.0
	baz=261						
N47A	Urbana	114.06	54	P	PKPdf	06 55 02.0	-0.4
	baz=262						
CBOC	Ciudad Bolivar	114.15	93	eP	PKiKP	06 55 03.6	+0.1
TIGA	Tifton	114.17	64	P	PKPdf	06 55 01.9	-0.9
	baz=259						
M47A	Cromwell	114.19	53	P	PKPdf	06 55 01.9	-0.8
	baz=262						
Y52A	Lilburn	114.23	61	P	PKPdf	06 55 02.7	-0.2
	baz=260,SNR=5.8						
K46A	Dorr	114.24	52	P	PKPdf	06 55 02.3	-0.3
	baz=262						
H45A	Beulah	114.29	50	P	PKPdf	06 55 02.3	-0.4
	baz=263						
DBBC	Dabeiba	114.37	92	eP	PKiKP	06 55 04.3	+0.4
O48A	Farmland	114.38	54	P	PKPdf	06 55 02.9	-0.1
	baz=262						
Q49A	Aurora	114.40	56	P	PKPdf	06 55 02.5	-0.6
	baz=261						
PRAC	Prado	114.42	96	eP	PKiKP	06 55 04.3	+0.4
GUY2C	Guyana, Caldas	114.52	94	eP	PKPdf	06 55 04.3	-0.4
GUY2C	Guyana, Caldas	114.52	94	eP	PKKPbc	07 05 43.3	+0.5
N48A	Decatur	114.56	54	P	PKPdf	06 55 02.9	-0.5
	baz=262						
E44A	Grand Marais A	114.59	47	P	PKPdf	06 55 03.1	-0.2
	baz=264						
G45A	Suttons Bay	114.61	49	P	PKPdf	06 55 03.1	-0.2
	baz=264						
P49A	Miami Univ. Ec	114.62	55	P	PKPdf	06 55 03.2	-0.3
	baz=262,SNR=10						
I46A	Reed City	114.64	50	P	PKPdf	06 55 02.6	-0.8
	baz=263						
GOGA	Godfrey	114.64	62	P	PKPdf	06 55 03.1	-0.7
	baz=260						
HELC	Santa Helena	114.71	93	eP	PKiKP	06 55 05.0	+0.1
F45A	CMU Biological	114.78	48	P	PKPdf	06 55 02.6	-1.0
	baz=264						
MACC	Macarena, Meta	114.79	98	eP	PKPdf	06 55 04.3	-0.3
K47A	Vermontville	114.81	52	P	PKPdf	06 55 02.7	-1.1
	baz=263						
LCBC	Los crdobas,	114.84	90	eP	PKKPab	07 05 49.7	+1.9
M48A	Edgerton	114.88	53	P	PKPdf	06 55 02.7	-1.2
	baz=263						
O49A	Covington	115.00	55	P	PKPdf	06 55 02.9	-1.3
	baz=262,SNR=8.3						
J47A	Sunmer	115.01	51	P	PKPdf	06 55 03.1	-1.0
	baz=263						
Q50A	Georgetown	115.09	56	P	PKPdf	06 55 03.5	-0.9
	baz=262,SNR=5.3						
NORC	Norcasia	115.10	94	eP	PKKPbc	07 05 41.6	+1.3
L48A	N Adams	115.14	53	P	PKPdf	06 55 03.7	-0.7
	baz=263						
G46A	Petoskey	115.20	49	P	PKPdf	06 55 03.2	-1.2
	baz=264						
N49A	Columbus Grove	115.20	54	P	PKPdf	06 55 03.7	-0.9
	baz=263						
N49A	Columbus Grove	115.20	54		PKPdf	06 55 04.0	-0.6
S51A	Beattyville	115.22	57		PKPdf	06 55 03.6	-1.1
I47A	Gladwin	115.32	50	P	PKPdf	06 55 04.1	-0.6
	baz=264						
GLMI	Grayling	115.32	49	P	PKPdf	06 55 03.6	-1.1
	baz=264						
GLMI	Grayling	115.32	49		PKPdf	06 55 03.8	-0.9
P50A	Jamestown	115.33	55	P	PKPdf	06 55 03.7	-1.2
	baz=262						
DWPF	Disney Wildern	115.35	68	P	PKPdf	06 55 04.0	-1.2
	baz=258						
DWPF	Disney Wildern	115.35	68		PKPdf	06 55 04.4	-0.9
ROSC	El Rosal	115.36	95	PKP	PKPdf	06 55 05.9	-0.3
	comp=Z,18nm,0.7s,baz=188,slow=3.2,SNR=18						
ROSC				PKKPbc	PKKPbc	07 05 41.5	+1.7
	comp=Z,7.0nm,0.5s,baz=158,slow=10.0,SNR=7.4						
ROSC	El Rosal	115.36	95	eP	PKiKP	06 55 06.3	+0.1
ROSC	El Rosal	115.36	95		PKPdf	06 55 05.5	-0.6
ROSC					PKKPbc	07 05 41.2	+1.3
M49A	Liberty Center	115.43	53	P	PKPdf	06 55 03.9	-1.1
	baz=263						
K48A	Perry	115.47	52	P	PKPdf	06 55 04.4	-0.7
	baz=264						
O50A	Cable	115.53	55	P	PKPdf	06 55 04.5	-0.7
	baz=263,SNR=10						
V53A	Saluda	115.54	60		PKPdf	06 55 05.0	-0.4
H47A	Mio	115.59	50	P	PKPdf	06 55 04.6	-0.6
	baz=264						
Q51A	Peebles	115.60	56	P	PKPdf	06 55 04.7	-0.8
	baz=262,SNR=11						
Q51A	Peebles	115.60	56		PKPdf	06 55 04.9	-0.6
E46A	Sault Ste Mari	115.68	48		PKPdf	06 55 03.1	-2.2
X54A	Belton	115.72	61	P	PKPdf	06 55 04.8	-0.9
	baz=261						
AAM	Ann Arbor	115.76	52	PKIKP	PKPdf	06 55 04.6	-1.0
AAM	Ann Arbor	115.76	52	P	PKPdf	06 55 04.9	-0.7
	baz=264						
AAM	Ann Arbor	115.76	52		PKPdf	06 55 04.6	-1.0
J48A	Bridge Port	115.77	51	P	PKPdf	06 55 04.9	-0.7
	baz=264						
J48A	Bridge Port	115.77	51		PKPdf	06 55 05.2	-0.4
ZARC	Zaragoza, Cauc	115.79	92	eP	PKPdf	06 55 06.3	-0.2
CHIC	Chingaza	115.83	95	eP	PKPdf	06 55 05.7	-1.5
PTBC	PUERTO BERRIO;	115.83	93	eP	PKPdf	06 55 04.4	-2.2
PTBC	PUERTO BERRIO;	115.83	93	eP	PKKPbc	07 05 39.1	+1.4
SPBC	San Pablo de B	115.88	94	eP	PKPdf	06 55 06.3	-0.5
SPBC	San Pablo de B	115.88	94	eP	PKKPbc	07 05 37.9	+0.3
P51A	Williamsport	115.88	56	P	PKPdf	06 55 04.6	-1.3
	baz=263,SNR=7.2						
P51A	Williamsport	115.88	56		PKPdf	06 55 04.5	-1.5
G47A	Hillman	115.89	49	P	PKPdf	06 55 04.9	-0.9
	baz=265						
D46A	Sault St. Mari	115.90	47	P	PKPdf	06 55 04.9	-0.8
	baz=266						
I48A	Sherman Twp	115.91	50	P	PKPdf	06 55 05.2	-0.6
	baz=265						
K49A	Clarkson	115.95	52	P	PKPdf	06 55 05.2	-0.8
	baz=264						
T53A	Wise	115.96	58	P	PKPdf	06 55 05.0	-1.3
	baz=262,SNR=19						
W54A	Cherokee Point	115.96	60	P	PKPdf	06 55 04.8	-1.4
	baz=261						
N50A	Nevada	115.97	54	P	PKPdf	06 55 05.1	-1.0
	baz=263						
ACSO	Alum Creek Sta	116.03	55	P	PKPdf	06 55 05.9	-0.3
	baz=263,SNR=8.7						
ACSO	Alum Creek Sta	116.03	55		PKPdf	06 55 04.9	-1.3
Y55A	Saluda	116.05	62	P	PKPdf	06 55 05.4	-1.0
	baz=261						
M50A	Fremont	116.12	53	P	PKPdf	06 55 05.7	-0.6
	baz=264						
H48A	Harrisville	116.23	50	P	PKPdf	06 55 06.0	-0.5
	baz=265						
J49A	Marlette	116.24	51	P	PKPdf	06 55 06.0	-0.5
	baz=265						
V54A	Nebo	116.25	60	P	PKPdf	06 55 06.1	-0.7
	baz=262						
O51A	Pataskala	116.31	55	P	PKPdf	06 55 06.3	-0.4
	baz=263,SNR=6.9						
X55A	Gracelyn & Ava	116.31	61	P	PKPdf	06 55 06.3	-0.6
	baz=261						
Z56A	Williston	116.35	62	P	PKPdf	06 55 06.8	-0.2
	baz=261						
Z56A	Williston	116.35	62		PKPdf	06 55 06.5	-0.6
L50A	Kingsville	116.36	53	P	PKPdf	06 55 06.1	-0.6
	baz=264						
E47A	Iron Bridge	116.39	48	P	PKPdf	06 55 06.1	-0.6
	baz=266						
Q52A	Bidwell	116.43	56	P	PKPdf	06 55 06.0	-1.0
	baz=263,SNR=7.1						
U54A	Nelsons Funny	116.46	59	P	PKPdf	06 55 06.9	-0.4
	baz=262,SNR=6.0						
U54A	Nelsons Funny	116.46	59		PKPdf	06 55 06.3	-1.0
I49A	Point Hope	116.52	51	P	PKPdf	06 55 06.7	-0.3
	baz=265						
I49A	Point Hope	116.52	51		PKPdf	06 55 06.9	-0.1
D47A	Chapleau	116.55	47	P	PKPdf	06 55 06.5	-0.5
	baz=266						
N51A	Ashland	116.57	54	P	PKPdf	06 55 06.4	-0.8
	baz=264						
N51A	Ashland	116.57	54		PKiKP	06 55 07.4	+0.2
R53A	Hurricane	116.59	57	P	PKPdf	06 55 06.6	-0.8
	baz=263,SNR=5.5						
R53A	Hurricane	116.59	57		PKPdf	06 55 07.2	-0.2
P52A	Corning	116.61	55	P	PKPdf	06 55 06.4	-0.9
	baz=263,SNR=14						
KMSC	Kings Mountain	116.66	61	P	PKPdf	06 55 06.6	-1.0
	baz=262,SNR=5.4						
KMSC	Kings Mountain	116.66	61		PKPdf	06 55 07.2	-0.4
T54A	Tazewell	116.73	58	P	PKPdf	06 55 06.7	-1.1
	baz=262,SNR=6.1						
M51A	Elyria	116.75	54	P	PKPdf	06 55 06.8	-0.8
	baz=264						
F48A	Evansville	116.81	48	P	PKPdf	06 55 06.5	-1.0
	baz=266						
V55A	Taylorsville	116.86	60	P	PKPdf	06 55 06.2	-1.8
	baz=262						
V55A	Taylorsville	116.86	60		PKPdf	06 55 07.3	-0.7
RUSC	La Rusia	116.88	94	eP	PKPdf	06 55 07.6	-1.6
RUSC	La Rusia	116.88	94		PKPdf	06 55 07.7	-1.6
O52A	Adamsville	116.89	55	P	PKPdf	06 55 06.7	-1.2
	baz=264,SNR=5.6						
O52A	Adamsville	116.89	55		PKPdf	06 55 06.0	-1.9
Z57A	Bowman	116.90	63	P	PKPdf	06 55 07.2	-0.8
	baz=261						
SMLC	San Martn de	116.96	91	eP	PKiKP	06 55 09.0	+0.2
Q53A	Leroy	116.99	56	P	PKPdf	06 55 07.1	-1.0
	baz=263,SNR=8.4						
S54A	Dingess, Beckl	117.03	58	P	PKPdf	06 55 07.0	-1.3
	baz=263,SNR=6.8						
S54A	Dingess, Beckl	117.03	58		PKiKP	06 55 08.6	+0.3
N52A	McGinn's Farm,	117.07	54	P	PKPdf	06 55 07.4	-0.8
	baz=264						
U55A	TA2, Sparta	117.08	59	P	PKPdf	06 55 07.4	-1.1
	baz=262,SNR=14						
E48A	Lockeyer	117.16	48	P	PKPdf	06 55 06.9	-1.3
	baz=267						
P53A	Whipple	117.16	56	P	PKPdf	06 55 07.6	-0.8
	baz=264						
P53A	Whipple	117.16	56		PKPdf	06 55 07.5	-0.9
F49A	Sandfield	117.21	49	P	PKPdf	06 55 07.0	-1.2
	baz=266						
W56A	Indian Trail	117.27	61	P	PKPdf	06 55 07.4	-1.3
	baz=262						
NHSC	New Hope	117.30	63	P	PKPdf	06 55 07.4	-1.4
	baz=261						
R54A	Victor	117.33	57	P	PKPdf	06 55 07.6	-1.2
	baz=263						
WSAR	Wadi Sarin	117.33	286	PKP	PKiKP	06 55 09.8	+0.6
	comp=Z,5.3nm,0.8s,baz=208,slow=5.1,SNR=5.9						
WSAR				PP	PP	06 56 19.9	-2.3
	comp=Z,6.5nm,1.1s,baz=176,slow=6.4,SNR=2.2						
WSAR				PKKPbc	PKKPbc	07 05 33.4	+0.6
	comp=Z,5.2nm,0.7s,baz=204,slow=0.7,SNR=4.6						
T55A	Pulaski	117.36	58	P	PKPdf	06 55 08.0	-1.0
	baz=263						
SIV	San Ignacio	117.37	122	PKKPbc	PKKPbc	07 05 33.9	+1.4
	comp=Z,2.9nm,0.7s,baz=90,slow=5.0,SNR=12						
O53A	New Philadelph	117.38	55	P	PKPdf	06 55 07.4	-1.4
	baz=264,SNR=10						
K51A	Iona Station	117.38	52	P	PKPdf	06 55 07.2	-1.5
	baz=265						
M52A	Chesterland	117.39	53	P	PKPdf	06 55 07.6	-1.2
	baz=265						
M52A	Chesterland	117.39	53		PKPdf	06 55 08.3	-0.5
V56A	Mocksville	117.43	60	P	PKPdf	06 55 07.8	-1.2
	baz=262						
D48A	Paudash Townsh	117.44	47	P	PKPdf	06 55 07.8	-0.9
	baz=267						
Q54A	Coxs Mills	117.54	56	P	PKPdf	06 55 08.0	-1.1
	baz=264,SNR=12						
Q54A	Coxs Mills	117.54	56		PKPdf	06 55 08.1	-1.1
X57A	Johnson Farm,	117.57	61	P	PKPdf	06 55 07.7	-1.6
	baz=262						
SMRC	Santa Marta, M	117.58	88	eP	PKPdf	06 55 09.6	-0.3
U56A	King	117.59	59	P	PKPdf	06 55 07.9	-1.5
	baz=263,SNR=5.6						
U56A	King	117.59	59		PKPdf	06 55 08.7	-0.6
Z58A	St. Stephen	117.64	63	P	PKPdf	06 55 08.4	-1.1
	baz=261						
BLA	Blacksburg	117.66	58	PKIKP	PKPdf	06 55 08.9	-0.6
BLA	Blacksburg	117.66	58	P	PKPdf	06 55 08.6	-0.9
	baz=263,SNR=7.9						
BLA	Blacksburg	117.66	58		PKPdf	06 55 08.8	-0.6

S55A Lewisburg 117.67 58 P PKPdf 06 55 08.1 -1.4
baz=263
N53A Lisbon 117.72 54 P PKPdf 06 55 08.1 -1.3
baz=265,SNR=8.8
N53A Lisbon 117.72 54 PKPdf 06 55 08.1 -1.3
TULEG Thule 117.73 13 PKPdf 06 55 07.9 -0.5
PAMC Pamplona, Colo 117.74 93 eP PKPdf 06 55 10.3 -0.6
W57A Gilead 117.75 61 P PKPdf 06 55 08.1 -1.6
baz=262,SNR=7.3
W57A Gilead 117.75 61 PKPdf 06 55 08.6 -1.1
D49A Beulah Townshi 117.75 47 P PKPdf 06 55 08.1 -1.2
baz=268,SNR=16
I51A Listowel 117.81 51 P PKPdf 06 55 08.5 -1.0
baz=266
Y58A Scranton 117.84 62 P PKPdf 06 55 08.4 -1.5
baz=262
P54A Burton 117.88 56 P PKPdf 06 55 08.4 -1.4
baz=264,SNR=5.8
M53A Wi Miller and 117.89 54 P PKPdf 06 55 08.5 -1.3
baz=265,SNR=11
T56A Rocky Mt 117.95 59 P PKPdf 06 55 08.9 -1.1
baz=263
K52A Tillsonburg 117.97 52 P PKPdf 06 55 08.9 -0.9
baz=266
O54A Avella 118.01 55 P PKPdf 06 55 08.8 -1.2
baz=265,SNR=19
O54A Avella 118.01 55 PKPdf PKPdf 06 55 09.7 -0.3
V57A Coltrane Farms 118.02 60 P PKPdf 06 55 09.3 -0.9
baz=263,SNR=7.9
R55A Marlinton 118.02 57 P PKPdf 06 55 09.6 -0.6
baz=264,SNR=14
R55A Marlinton 118.02 57 PKPdf 06 55 09.1 -1.1
Q55A Buckhannon 118.12 56 P PKPdf 06 55 10.3 -0.1
baz=264,SNR=6.6
J52A Paris 118.17 52 P PKPdf 06 55 09.6 -0.6
baz=266
L53A Girard 118.24 53 P PKPdf 06 55 10.0 -0.5
baz=266
ALLY Alegheny Colle 118.31 53 PKPdf 06 55 09.7 -0.9
W58A Raeford 118.35 61 P PKPdf 06 55 10.1 -0.7
baz=263
MCWV Mont Chateau 118.37 56 P PKPdf 06 55 09.9 -0.8
baz=265
N54A Moraine State 118.37 54 P PKPdf 06 55 09.8 -0.9
baz=265,SNR=13
N54A Moraine State 118.37 54 PKPdf 06 55 09.3 -1.4
P55A Reedsville 118.37 56 P PKPdf 06 55 09.8 -0.9
baz=265
S56A Natural Bridge 118.39 58 P PKPdf 06 55 10.0 -0.8
baz=264,SNR=5.8
SVE Sverdlovsk 118.42 324 ePKIKP PKPdf 06 55 10.0 -0.3
SVE pmax pmax
comp=Z,67nm,1.7s
I52A Shelburne 118.44 51 P PKPdf 06 55 09.9 -0.9
baz=267
U57A Blanch 118.44 59 P PKPdf 06 55 10.0 -1.0
baz=263
ERPA Erie 118.45 53 P PKPdf 06 55 09.6 -1.2
baz=266
ERPA Erie 118.45 53 PKPdf 06 55 09.1 -1.7
Y59A Loris 118.51 62 P PKPdf 06 55 10.2 -1.0
baz=262
V58A Windy Hill, Pi 118.54 60 P PKPdf 06 55 10.4 -0.7
baz=263
V58A Windy Hill, Pi 118.54 60 PKiKP 06 55 11.3 +0.2
T57A Hurt 118.57 59 P PKPdf 06 55 10.1 -1.1
baz=264,SNR=8.3
T57A Hurt 118.57 59 PKPdf 06 55 09.8 -1.4
M54A Oil Creek Stat 118.65 54 P PKPdf 06 55 10.2 -1.1
baz=266,SNR=11
M54A Oil Creek Stat 118.65 54 PKPdf 06 55 10.4 -0.9
H52A Wyevale 118.67 50 P PKPdf 06 55 10.4 -0.7
baz=267,SNR=15
SOCY Socotra 118.69 272 PKPdf 06 55 11.3 -0.8
F51A Arnstein 118.70 48 P PKPdf 06 55 10.5 -0.7
baz=268,SNR=18
D50A G1974 Best Tow 118.78 47 P PKPdf 06 55 10.7 -0.6
baz=269,SNR=19
X59A McDuffie Farm, 118.81 61 P PKPdf 06 55 10.5 -1.2
baz=263
Q56A Snyder Ridge, 118.82 56 P PKPdf 06 55 10.6 -1.1
baz=265,SNR=7.5
Q56A Snyder Ridge, 118.82 56 PKPdf 06 55 11.6 0.0
O55A Ligonier 118.83 55 P PKPdf 06 55 11.0 -0.6
baz=265,SNR=11
I53A Kortright Cn E 118.85 51 P PKPdf 06 55 10.9 -0.6
baz=267
S57A Dark Hollow, R 118.88 58 P PKPdf 06 55 10.5 -1.3
baz=264
L54A Sinclairville 118.96 53 P PKPdf 06 55 11.1 -0.7
baz=266,SNR=14
E51A G1948 Merrick 119.01 48 P PKPdf 06 55 11.0 -0.7
baz=269,SNR=16
W59A Clinton 119.01 61 P PKPdf 06 55 11.0 -1.0
baz=263
SUR Sutherland 119.05 209 PKP PKiKP 06 55 13.6 +0.9
comp=Z,32nm,0.9s,baz=184,slow=1.8,SNR=32
SUR PP PP 06 56 33.6 +1.0
comp=Z,20nm,1.0s,baz=8.4,slow=3.6,SNR=2.3
SUR PKKPbc PKKPbc 07 05 25.9 -1.4
comp=Z,9.6nm,0.8s,baz=256,slow=2.3,SNR=9.3
SUR Sutherland 119.05 209 PKPdf 06 55 11.7 -0.9
Y60A Bolivia 119.05 62 P PKPdf 06 55 11.5 -0.7
baz=262
U58A Oxford 119.06 59 P PKPdf 06 55 11.0 -1.1
baz=264
D51A Lot 18 Range I 119.10 47 P PKPdf 06 55 10.8 -1.1
baz=269,SNR=13
F52A Sundridge 119.11 49 P PKPdf 06 55 10.9 -1.1
baz=268,SNR=12
N55A Marion Center 119.11 54 P PKPdf 06 55 11.5 -0.7
baz=266,SNR=6.3
P56A Dayton Farm, R 119.13 56 P PKPdf 06 55 11.1 -1.1
baz=265,SNR=6.8
T58A Grand View Acr 119.13 59 P PKPdf 06 55 11.0 -1.3
baz=264
ABKAR Akbulak array 119.14 315 PKPdf 06 55 11.7 -0.2
SADO Sadowa 119.21 50 PKPdf 06 55 10.9 -1.3
V59A Middlesex 119.24 60 P PKPdf 06 55 11.1 -1.4
baz=264
R57A Stanardsville 119.27 57 P PKPdf 06 55 11.0 -1.5
baz=265
X60A Albert Glenn T 119.32 62 P PKPdf 06 55 11.8 -0.9
baz=263,SNR=5.2
M55A Ridgway 119.33 54 P PKPdf 06 55 11.5 -1.0
baz=266,SNR=16
M55A Ridgway 119.33 54 PKPdf 06 55 11.6 -0.9
O56A Blue Knob Stat 119.40 55 P PKPdf 06 55 12.0 -0.7
baz=266,SNR=8.8
O56A Blue Knob Stat 119.40 55 PKPdf 06 55 12.4 -0.3
Q57A Strasburg 119.42 56 P PKPdf 06 55 11.8 -1.0
baz=265
K54A Basiliko Farm, 119.44 52 P PKPdf 06 55 11.9 -0.8
baz=267,SNR=25
CNNC Cliffs of the 119.47 61 P PKPdf 06 55 11.6 -1.3
baz=263
WVNY West Valley, N 119.50 53 PKPdf 06 55 11.6 -1.3
J54A Appleton 119.51 52 P PKPdf 06 55 11.9 -0.8
baz=268,SNR=6.6
J54A Appleton 119.51 52 PKPdf 06 55 12.0 -0.8
S58A Poland Farm, P 119.58 58 P PKPdf 06 55 12.4 -0.7
baz=265,SNR=9.1
S58A Poland Farm, P 119.58 58 PKPdf 06 55 11.8 -1.3
E52A Mattawa 119.58 48 P PKPdf 06 55 12.0 -0.8
baz=269,SNR=24
G53A Haliburton 119.58 49 P PKPdf 06 55 12.1 -0.8
baz=268,SNR=16
W60A Pink Hill 119.59 61 P PKPdf 06 55 11.7 -1.5
baz=263
ARU Arti 119.60 324 i PKIKP PKPdf 06 55 11.8 -0.7
ARU 07 01 56.2
ARU SP SP 07 06 07.6 -5.1
ARU PS PS 07 06 22.7 -4.4
ARU Arti 119.60 324 PKPdf 06 55 12.3 -0.3
H53A Bobcaygeon 119.60 50 P PKPdf 06 55 12.1 -0.9
baz=268,SNR=8.2
L55A Hinsdale 119.61 53 P PKPdf 06 55 12.3 -0.8
baz=267,SNR=13
MEDO Medina 119.64 52 PKPdf 06 55 11.8 -1.2
N56A West Decatur 119.65 54 P PKPdf 06 55 12.4 -0.8
baz=266,SNR=11
U59A Littleton 119.67 60 P PKPdf 06 55 12.2 -1.1
baz=264
R58A Rapidan 119.68 57 P PKPdf 06 55 12.4 -0.8
baz=265,SNR=6.8
NOR Nord 119.70 1 i PKIKP PKPdf 06 55 11.1 -1.0
NOR Nord 119.70 1 i P PKPdf 06 55 11.1 -1.0
NOR i 06 56 28.7
R58B Mineral 119.75 58 P PKPdf 06 55 12.8 -0.6
baz=265,SNR=5.6
R58B Mineral 119.75 58 PKPdf 06 55 12.8 -0.6
M56A Emporium 119.76 54 P PKPdf 06 55 12.5 -0.9
baz=267,SNR=8.1
M56A Emporium 119.76 54 PKiKP 06 55 13.5 +0.1
P57A Homestead Farm 119.77 56 P PKPdf 06 55 12.2 -1.2
baz=266
P57A Homestead Farm 119.77 56 PKPdf 06 55 12.4 -1.0
UOSS Minazif 119.86 287 P PKPdf 06 55 13.6 -0.4
UOSS Minazif 119.86 287 PKPdf PKPdf 06 55 13.6 -0.4
UOSS Minazif 119.86 287 PKPdf 06 55 12.8 -1.2
BOSA Boshof 119.89 216 PKP PKPdf 06 55 14.2 -0.1
comp=Z,11nm,0.7s,baz=127,slow=1.6,SNR=18
BOSA PKKPbc PKKPbc 07 05 22.1 -2.0
comp=Z,2.9nm,0.7s,baz=300,slow=4.5,SNR=5.3
HATD Hatta, Dubai 119.90 287 i P PKPdf 06 55 13.8 -0.4
SNR=5.4
HATD Hatta, Dubai 119.90 287 i PKPdf PKPdf 06 55 13.8 -0.4
SNR=5.4
K55A Perry 119.91 52 P PKPdf 06 55 12.4 -1.2
baz=268,SNR=10
T59A Double "B" Far 119.92 59 P PKPdf 06 55 12.4 -1.3
baz=264,SNR=5.3
T59A Double "B" Far 119.92 59 PKPdf 06 55 12.5 -1.3
ASHO Ashiyiah 119.94 287 i P PKPdf 06 55 14.0 -0.3
SNR=8.7
ASHO Ashiyiah 119.94 287 i PKPdf PKPdf 06 55 14.0 -0.3
SNR=8.7
SSPA Standing Stone 119.94 55 P PKPdf 06 55 12.7 -1.0
baz=266
SSPA Standing Stone 119.94 55 PKPdf 06 55 13.5 -0.2
G54A Lake Saint Pet 119.97 49 P PKPdf 06 55 12.9 -0.8
baz=269,SNR=22
MSFE Esma-Masafi 119.98 288 P PKiKP 06 55 14.4 0.0
MSFE Esma-Masafi 119.98 288 PKPdf PKiKP 06 55 14.4 0.0
ALGO Algonquin Park 120.00 48 P PKPdf 06 55 12.7 -0.9
baz=269,SNR=33
MMNY Mt. Morris Dam 120.03 52 PKPdf PKPdf 06 55 12.9 -0.9
V60A Jim Taylor Roa 120.03 60 P PKPdf 06 55 12.8 -1.2
baz=264
V60A Jim Taylor Roa 120.03 60 PKPdf 06 55 13.4 -0.6
GEYT Alibeck 120.05 302 PKP PKPdf 06 55 13.6 -0.4
comp=Z,9.3nm,0.7s,baz=204,slow=3.3,SNR=12
GEYT PP PP 06 56 41.0 +0.4
comp=Z,14nm,1.1s,baz=60,slow=6.0,SNR=5.6
GEYT PKKPbc PKKPbc 07 05 22.9 -0.4
comp=Z,3.7nm,0.7s,baz=261,slow=7.4,SNR=5.1
GYA0B ALIBECK ARRAY 120.05 302 PKPdf 06 55 13.9 -0.2
ALNE Al Ain 120.08 286 P PKiKP 06 55 14.6 0.0
ALNE Al Ain 120.08 286 PKPdf PKiKP 06 55 14.6 0.0
O57A Amberson 120.10 55 P PKPdf 06 55 13.0 -1.1
baz=266,SNR=7.9
J55A Hilton 120.11 52 P PKPdf 06 55 12.9 -1.0
baz=268,SNR=6.0
J55A Hilton 120.11 52 PKPdf 06 55 12.9 -1.0
CBN Corbin Frederi 120.17 57 P PKPdf 06 55 13.3 -0.9
baz=265,SNR=5.4
CBN Corbin Frederi 120.17 57 PKiKP 06 55 14.4 +0.2
U60A Pendleton 120.19 59 P PKPdf 06 55 13.4 -0.8
baz=264
SDV Santo Domingo 120.19 92 eP PKPdf 06 55 14.3 -0.9
SDV Santo Domingo 120.19 92 PKPdf 06 55 13.7 -1.5
S59A Mechanicsville 120.19 58 P PKPdf 06 55 13.2 -1.0
baz=265
N57A Milroy 120.20 55 P PKPdf 06 55 13.4 -0.8
baz=267,SNR=7.5
MATQ Matagami 120.23 44 P PKPdf 06 55 12.5 -1.5
baz=272
I55A Frankford 120.24 50 P PKPdf 06 55 13.1 -1.1
baz=269
D53A Lac Vacive, Po 120.24 47 P PKPdf 06 55 13.4 -0.7
baz=270,SNR=25
D53A Lac Vacive, Po 120.24 47 PKPdf 06 55 13.0 -1.1
L56A Greenwood 120.26 53 P PKPdf 06 55 13.1 -1.3
baz=268,SNR=18
L56A Greenwood 120.26 53 PKPdf 06 55 13.4 -1.0
E53A Dumoine, Ponti 120.27 48 P PKPdf 06 55 13.0 -1.1
baz=270
DELO Deloro Mine 120.29 50 PKPdf 06 55 14.1 -0.1
P58A Pank, Wackersv 120.32 56 P PKPdf 06 55 13.8 -0.7
baz=266,SNR=7.9
NAZ Nazwa, Dubai 120.35 287 P PiKiP 06 55 15.2 +0.1
NAZ Nazwa, Dubai 120.35 287 PKPdf PiKiP 06 55 15.2 +0.1
R59A King George, V 120.37 57 P PKPdf 06 55 13.6 -0.9
baz=266,SNR=5.1
VLDQ Val d'Or 120.40 46 PKPdf 06 55 12.3 -2.0
K56A Middlesex 120.45 52 P PKPdf 06 55 14.0 -0.7
baz=268,SNR=7.0
M57A Sunshine Farm, 120.55 54 P PKPdf 06 55 14.0 -0.8
baz=267,SNR=19
M57A Sunshine Farm, 120.55 54 PKPdf 06 55 13.7 -1.2
T60A Surry 120.58 59 P PKPdf 06 55 13.7 -1.3
baz=265
T60A Surry 120.58 59 PKPdf 06 55 12.7 -2.3
H55A Tweed 120.60 50 P PKPdf 06 55 13.7 -1.1
baz=269,SNR=9.0
E54A Lac Daplat, Po 120.60 48 P PKPdf 06 55 13.5 -1.3
baz=270
O58A Lewisberry 120.64 55 P PKPdf 06 55 13.9 -1.2
baz=267,SNR=10
SDMD Soldier's Deli 120.67 56 PKPdf 06 55 15.0 -0.1
PLVO Plevna 120.68 50 PKPdf 06 55 13.7 -1.3
PECO Prince Edward 120.73 51 PKPdf 06 55 14.6 -0.5
L57A Andrews Acres 120.78 53 P PKPdf 06 55 13.5 -1.8
baz=268,SNR=13
J56A Wolcott 120.81 52 P PKPdf 06 55 14.0 -1.2
baz=269,SNR=19
J56A Wolcott 120.81 52 PKPdf 06 55 14.2 -1.1
N58A Sunbury 120.84 54 P PKPdf 06 55 14.2 -1.3
baz=267,SNR=12
N58A Sunbury 120.84 54 PKPdf 06 55 14.5 -0.9
FRTB Fartura 120.93 137 eP PKPdf 06 55 15.9 -0.4
G55A Calabogie 120.93 49 P PKPdf 06 55 13.7 -1.8
baz=270,SNR=9.9
D54A Lac Fusel, La 120.95 47 P PKPdf 06 55 14.2 -1.3
baz=271,SNR=19
P59A Jarrettsville 120.99 56 P PKPdf 06 55 14.3 -1.5
baz=267
PCMB Pacaembu 121.03 134 eP PiKiP 06 55 16.6 0.0
K57A Scipio Center 121.05 52 P PKPdf 06 55 14.6 -1.2
baz=269
M58A Price's Panora 121.05 54 P PKPdf 06 55 14.7 -1.2
baz=268,SNR=9.8
MVL Millersville 121.08 55 PKPdf 06 55 15.1 -0.8
F55A Otter Lake 121.19 49 P PKPdf 06 55 15.0 -1.0
baz=271,SNR=12
O59A Robesonia 121.22 55 P PKPdf 06 55 14.5 -1.7
baz=267
KULLO Kullorsuaq 121.23 13⇑ i PKIKP PKPdf 06 55 13.9 -1.3
KULLO pmax pmax
comp=Z,81nm,0.7s
KULLO Kullorsuaq 121.23 13⇑ i P PKPdf 06 55 13.9 -1.3
comp=Z,81nm,0.7s
H56A Elgin 121.26 50 P PKPdf 06 55 15.2 -0.9
baz=270,SNR=11
E55A Montcerf-Lytto 121.38 48 P PKPdf 06 55 15.5 -0.8
baz=271,SNR=24
Q60A Greensboro 121.42 57 P PKPdf 06 55 14.4 -1.1
baz=267
Q60A Greensboro 121.42 57 PKiKP 06 55 16.6 -0.1
PAPH Port-au-Prince 121.43 81 PKPdf 06 55 16.1 -1.1
BINY Binghamton 121.43 53 P PKPdf 06 55 16.0 -0.6
baz=269,SNR=6.3
BINY Binghamton 121.43 53 PKPdf 06 55 15.1 -1.5
J57A Williamstown 121.44 51 P PKPdf 06 55 16.3 -0.2
baz=269,SNR=17
J57A Williamstown 121.44 51 PKPdf 06 55 15.7 -0.8
L58A Harry Jones Me 121.53 53 P PKPdf 06 55 15.9 -0.8
baz=269,SNR=16
N59A State Game Lan 121.56 54 P PKPdf 06 55 16.2 -0.6
baz=268,SNR=7.9
N59A State Game Lan 121.56 54 PKPdf 06 55 16.1 -0.8
KSPA Keystone Colle 121.58 54 PKPdf 06 55 16.1 -0.8
SALV Santo Antonio 121.58 126 eP PiKiP 06 55 17.8 0.0
KBS Kingsbay 121.60 355 PKIKP PKPdf 06 55 15.6 -0.2
KBS Kingsbay 121.60 355 PKPdf 06 55 15.6 -0.2
KBS Kingsbay 121.60 355 ePdif Pdif 06 51 44.8 +0.7
KBS IVmBBB 06 51 45.9
comp=Z,380nm,2.3s
KBS ePKPdf PKPdf 06 55 15.7 -0.2
KBS ePP PP 06 56 49.6 0.0
KBS eSKSac SKSac 07 02 03.1 -0.9
KBS eSP SP 07 06 29.2 0.0
KBS eSS SS 07 13 17.9 +2.2
KBS IVMs_BB IVMs_BB 07 34 25.9
comp=Z,2µm,42.6s
P60A Greenville 121.62 56 P PKPdf 06 55 16.0 -0.9
baz=267
P60A Greenville 121.62 56 PKPdf 06 55 15.9 -1.1
PET01 Itanhaem-SP 121.67 139 eP PiKiP 06 55 18.0 +0.2
I57A Carthage 121.69 51 P PKPdf 06 55 16.5 -0.5
baz=270,SNR=26
K58A Earlville 121.69 52 P PKPdf 06 55 16.7 -0.3
baz=269,SNR=8.4
K58A Earlville 121.69 52 PKPdf 06 55 16.3 -0.8
PSUB Penn St. - Bra 121.76 56 PKPdf 06 55 16.3 -0.9
D55A Sainte-Anne-du 121.77 47 P PKPdf 06 55 16.5 -0.5
baz=272,SNR=33
R61A Willards 121.77 57 P PKPdf 06 55 16.9 -0.4
baz=267
ORIO Orleans, Innes 121.78 49 P PKPdf 06 55 16.6 -0.5
baz=271,SNR=19
ORIO Orleans, Innes 121.78 49 PKPdf 06 55 15.7 -1.4
O60A Telford 121.81 55 P PKPdf 06 55 16.6 -0.7
baz=268
M59A Waymart 121.83 54 P PKPdf 06 55 16.5 -0.8
baz=269,SNR=14
LUPA Lehigh Univers 121.85 55 PiKiP 06 55 17.5 -0.1
C2SB Chapadao do Su 121.86 130 eP PiKiP 06 55 19.3 +1.0
SPA0 Spitsbergen Ar 121.88 354 PKPdf 06 55 15.7 -0.7
SPA0 Spitsbergen Ar 121.88 354 ePdif Pdif 06 51 45.8 +0.5
SPA0 ePKPdf PKPdf 06 55 16.2 -0.2
SPA0 epPKPdf pPKPdf 06 55 48.7 +1.6
SPA0 ePP PP 06 56 50.5 -1.1
SPA0 eSKSac SKSac 07 02 03.3 -1.7
SPITS Spitsbergen Ar 121.88 354 PKP PKPdf 06 55 15.8 -0.7
comp=Z,57nm,0.7s,baz=79,slow=4.3,SNR=67
J58A Remsen 121.96 52 P PKPdf 06 55 16.9 -0.6
baz=270,SNR=15
J58A Remsen 121.96 52 PKPdf 06 55 16.9 -0.6
N60A Cedar Hill Far 122.06 54 P PKPdf 06 55 16.7 -1.0
baz=268,SNR=6.7
E56A St. Veronique 122.09 48 P PKPdf 06 55 17.1 -0.5
baz=272,SNR=12
SPB Sao Paulo 122.09 138 PKPdf 06 55 17.4 -1.0
SPB Sao Paulo 122.09 138 eP PiKiP 06 55 18.9 +0.3
L59A Walton 122.13 53 P PKPdf 06 55 17.6 -0.3
baz=269,SNR=7.6
L59A Walton 122.13 53 PKPdf 06 55 17.1 -0.8
G57A Newington 122.16 49 P PKPdf 06 55 17.2 -0.6
baz=271,SNR=7.4
I58A Old Forge 122.19 51 P PKPdf 06 55 17.1 -0.9
baz=270,SNR=11
HOPEN Hopen 122.21 351 ePdif Pdif 06 51 47.3 +0.5
HOPEN IVmB_BB 06 51 49.3
comp=Z,434nm,2.0s
HOPEN ePKPdf PKPdf 06 55 17.6 +0.4
HOPEN epPKPdf pPKPdf 06 55 49.8 +2.0
HOPEN ePP PP 06 56 53.0 -0.9
HOPEN eSKSac SKSac 07 02 05.2 -0.9
HOPEN eSP SP 07 06 33.5 -1.2
HOPEN eSS SS 07 13 24.4 +0.9
HOPEN IVMs_BB IVMs_BB 07 35 29.8
comp=Z,3µm,40.6s
D56A ZEC Mazanza, M 122.26 47 P PKPdf 06 55 17.5 -0.5
baz=272,SNR=26
K59A Cooperstown 122.28 52 P PKPdf 06 55 17.4 -0.8
baz=270,SNR=9.3
CHGQ Chibougamau 122.33 44 P PKPdf 06 55 17.2 -0.8
baz=275,SNR=30
F57A Harrington 122.35 49 P PKPdf 06 55 17.3 -0.9
baz=272
TRQ Mont Tremblant 122.43 48 PKPdf 06 55 17.4 -1.0
M60A Port Jervis 122.43 54 P PKPdf 06 55 18.0 -0.5
baz=269
ODNJ Ogdensburg 122.44 54 PKPdf 06 55 18.0 -0.5
LONY Lake Ozonia 122.46 50 P PKPdf 06 55 17.6 -0.8
baz=271
LONY Lake Ozonia 122.46 50 PKPdf 06 55 17.4 -1.0
O61A Allentown 122.46 55 P PKPdf 06 55 17.9 -0.6
baz=268
BRNJ Basking Ridge 122.46 55 PKPdf 06 55 18.2 -0.4
SDDR Presa de Saban 122.47 81 PKPdf 06 55 19.0 -0.3
LBTB Lobatse 122.49 218 PKP PKPdf 06 55 19.3 0.0
comp=Z,16nm,0.8s,baz=157,slow=3.3,SNR=19
LBTB PKKPbc PKKPbc 07 05 14.7 +0.5
comp=Z,3.7nm,0.9s,baz=272,slow=7.7,SNR=2.8
LBTB Lobatse 122.49 218 PKPdf 06 55 19.1 -0.2
J59A Piesco 122.53 51 P PKPdf 06 55 18.0 -0.7
baz=270,SNR=13
J59A Piesco 122.53 51 PKPdf 06 55 17.9 -0.7
N61A South Mountain 122.67 55 P PKPdf 06 55 18.3 -0.6
baz=269
E57A Chemin Saint G 122.70 48 P PKPdf 06 55 18.4 -0.5
baz=273
NCB Newcomb 122.73 51 PKPdf 06 55 18.3 -0.7
L60A Shokan 122.74 53 P PKPdf 06 55 18.8 -0.3
baz=270,SNR=6.0
H58A Gabriels 122.75 50 P PKPdf 06 55 18.6 -0.4
baz=271,SNR=11
VAO Valinhos 122.81 138 eP PiKiP 06 55 20.2 0.0
D57A Chemin Vers le 122.85 47 P PKPdf 06 55 18.9 -0.2
baz=273,SNR=19
RCLB Rio Claro- Sao 122.89 137 eP PiKiP 06 55 20.9 +0.6
CPNY Central Park 122.93 55 PiKiP 06 55 19.8 +0.1
ITRB Iturama 122.95 133 eP PiKiP 06 55 20.4 0.0
F58A St-Lin Laurent 122.96 49 P PKPdf 06 55 18.6 -0.7
baz=272
PAL Palisades 122.97 54 PKIKP PKPdf 06 55 18.9 -0.6
PAL Palisades 122.97 54 P PKPdf 06 55 19.1 -0.4
baz=269
PAL Palisades 122.97 54 PKPdf 06 55 18.9 -0.6
I59A Olmsteadville 122.98 51 P PKPdf 06 55 19.0 -0.5
baz=271,SNR=15
K60A Five Rivers En 122.99 52 P PKPdf 06 55 18.9 -0.6
baz=270
HSPB Hornsund (broa 123.00 353 ePP PP 06 56 57.5 -1.6
HSPB eSKSac SKSac 07 02 08.3 -0.4
HSPB eSS SS 07 13 37.8 +4.3
HSPB LMZ LR 07 40 11.6
comp=Z,4.6nm,29.1s
HSPB Hornsund (broa 123.00 353 ePdif Pdif 06 51 50.5 +0.1
HSPB IVmB_BB 06 51 51.4
comp=Z,315nm,3.5s
HSPB ePKPdf PKPdf 06 55 17.9 -0.7
HSPB ePP PP 06 56 58.5 -0.6
HSPB eSKSac SKSac 07 02 08.0 -0.7
HSPB eSS SS 07 13 34.4 +0.9
HSPB IVMs_BB IVMs_BB 07 35 25.0
comp=Z,2µm,56.2s
M61A Granite Spring 123.08 54 P PKPdf 06 55 19.4 -0.3
baz=270
SC01 Santiago de lo 123.09 80 PKPdf 06 55 19.8 -0.6
H59A Cadyville 123.09 50 P PKPdf 06 55 19.3 -0.3
baz=272
ACCN Adirondack Com 123.14 51 PKPdf 06 55 18.6 -1.2
TRY Troy 123.15 52 PiKiP 06 55 20.6 +0.6
FRNY Flat Rock 123.16 50 PKPdf 06 55 18.6 -1.1
BANI BANI 123.18 82 PKPdf 06 55 20.0 -0.7
BB19B Bebedouro 123.22 136 eP PiKiP 06 55 21.0 0.0
L61A Hillsdale 1, H 123.24 53 P PKPdf 06 55 19.7 -0.4
baz=270
KSCT Kent School, K 123.29 53 PKPdf 06 55 19.8 -0.3
E58A La Victoria 123.31 48 P PKPdf 06 55 19.7 -0.3
baz=273,SNR=27
J60A Lant Hill Farm 123.32 52 P PKPdf 06 55 20.2 0.0
baz=271,SNR=7.4
PARB Paraibuna 123.38 140 eP PiKiP 06 55 21.8 +0.5
I60A Shoreham 123.40 51 P PKPdf 06 55 20.2 0.0
baz=272,SNR=13
WSPT Westport, CT 123.41 54 PiKiP 06 55 21.2 +0.6
K61A Williamstown 123.45 52 P PKPdf 06 55 20.0 -0.4
baz=271,SNR=10.0
D58A Chemin du LacG 123.53 47 P PKPdf 06 55 20.2 -0.2
baz=274,SNR=36
LATQ La Tuque 123.58 47 P PKPdf 06 55 20.2 -0.3
baz=274,SNR=14
LATQ La Tuque 123.58 47 PKPdf 06 55 19.3 -1.2
F59A Saint Guilaume 123.68 49 P PKPdf 06 55 20.2 -0.4
baz=273
M62A Hamden 123.74 54 P PKPdf 06 55 20.4 -0.6
baz=270
VT1 Waterbury 123.78 50 PKPdf 06 55 20.4 -0.5
H60A Morristown 123.81 50 P PKPdf 06 55 20.7 -0.3
baz=272,SNR=6.6
E59A St. Maurice 123.83 48 P PKPdf 06 55 20.4 -0.6
baz=274
L61B Northampton 123.88 53 P PKPdf 06 55 20.8 -0.5

	baz=271,SNR=14						
J61A	Chester	123.95	52	P	PKPdf	06 55 20.9	-0.4
	baz=272,SNR=16						
G60A	Masonville	124.04	49	P	PKPdf	06 55 21.0	-0.4
	baz=273						
MATP	Matopo	124.10	224	PKhKP	PKPpre	06 55 19.4	
	comp=Z,42nm,1.0s,baz=126,slow=2.1,SNR=49						
MATP				PKKPbc	PKKPbc	07 05 06.1	-1.7
	comp=Z,1.8nm,0.6s,baz=321,slow=3.6,SNR=5.9						
QUA2	Belchertown	124.13	53		PKPdf	06 55 20.9	-0.8
HNH	Hanover	124.14	51		PKiKP	06 55 21.9	0.0
I61A	Oroboro, Fairl	124.18	51	P	PKPdf	06 55 21.1	-0.7
	baz=272,SNR=6.9						
K62A	Royalston	124.21	52	P	PKPdf	06 55 21.3	-0.5
	baz=271						
K62A	Royalston	124.21	52		PKPdf	06 55 21.6	-0.3
F60A	Warwick	124.25	48	P	PKPdf	06 55 21.5	-0.4
	baz=274						
D59A	Saint-Raymond	124.25	47	P	PKPdf	06 55 21.1	-0.7
	baz=275						
ESAR	Angra dos Reis	124.33	141	eP	PKiKP	06 55 23.6	+0.6
H61A	Lyndonville	124.36	50	P	PKPdf	06 55 22.1	0.0
	baz=273,SNR=6.4						
LBNH	Lisbon	124.37	50	PKIKP	PKPdf	06 55 21.6	-0.5
LBNH	Lisbon	124.37	50	P	PKPdf	06 55 22.2	+0.1
	baz=273,SNR=7.2						
LBNH	Lisbon	124.37	50		PKPdf	06 55 21.6	-0.5
M63A	Gales Ferry	124.37	54	P	PKPdf	06 55 22.1	-0.1
	baz=271						
DAG	Danmarks Havn	124.44	2⇑	iPKIKP	PKPdf	06 55 19.7	-1.6
DAG				pmax	pmax		
	comp=Z,79nm,0.6s						
DAG	Danmarks Havn	124.44	2⇑	iP	PKPdf	06 55 19.7	-1.6
	comp=Z,79nm,0.6s						
DAG				i		06 57 04.0	
MACA	Manacapuru-AM	124.44	110	eP	PKiKP	06 55 23.5	0.0
CLDB	Colider	124.50	121	eP	PKPdf	06 55 22.3	-1.0
J62A	Henniker	124.50	52	P	PKPdf	06 55 22.3	-0.1
	baz=272,SNR=8.8						
E60A	Ste Agathe de	124.57	48	P	PKPdf	06 55 22.2	-0.2
	baz=275						
ARAG	Araguaiana, MT	124.60	128	eP	PKiKP	06 55 23.8	+0.1
G61A	St-Isidore-de-	124.60	49	P	PKPdf	06 55 22.1	-0.4
	baz=274,SNR=10						
L63A	North Scituate	124.69	53	P	PKPdf	06 55 22.2	-0.6
	baz=271						
HRV	Adam Dziewonsk	124.71	52	P	PKPdf	06 55 22.7	-0.1
	baz=272						
K63A	Dunstable	124.73	52	P	PKPdf	06 55 22.5	-0.3
	baz=272						
MAN01	Angra dos Reis	124.73	141	eP	PKPdf	06 55 23.7	+0.1
BJO1	Bjornoya	124.73	351	ePdif	Pdif	06 51 57.2	-0.8
BJO1				IVmB_BB		06 51 58.6	
	comp=Z,455nm,1.3s						
BJO1				ePKPdf	PKPdf	06 55 21.3	-0.6
BJO1				ePP	PP	06 57 09.5	-1.3
BJO1				eSP	SP	07 06 57.5	+0.5
BJO1				IVMs_BB	IVMs_BB	07 36 34.1	
	comp=Z,3µm,53.8s						
BRYW	Bryant College	124.74	53		PKPdf	06 55 22.1	-0.9
I62A	Tamworth	124.82	51	P	PKPdf	06 55 22.9	0.0
	baz=273,SNR=6.8						
I62A	Tamworth	124.82	51		PKPdf	06 55 23.0	0.0
D60A	Saint Jean D'O	124.88	47	P	PKPdf	06 55 22.8	-0.1
	baz=275						
WES	Weston	124.89	53	PKIKP	PKPdf	06 55 21.4	-1.7
WES	Weston	124.89	53		PKPdf	06 55 21.4	-1.7
H62A	Milan	124.91	50	P	PKPdf	06 55 23.1	-0.1
	baz=274,SNR=17						
H62A	Milan	124.91	50		PKPdf	06 55 22.9	-0.2
F61A	St Evariste	124.92	48	P	PKPdf	06 55 23.1	0.0
	baz=275						
PRGR	Permogore	124.92	331	ePKIKP	PKPdf	06 55 19.9	-2.7
PRGR				pmax	pmax		
	comp=Z,43nm,0.8s						
M64A	Tiverton	125.00	54	P	PKPdf	06 55 23.2	-0.2
	baz=271						
BCX	Boston College	125.00	53		PKiKP	06 55 23.8	+0.1
J63A	Strafford	125.03	52	P	PKPdf	06 55 23.2	-0.1
	baz=273,SNR=6.9						
E61A	Lac Etchemin	125.23	48	P	PKPdf	06 55 23.7	0.0
	baz=275						
L64A	Middleborough	125.27	53	P	PKPdf	06 55 23.7	-0.1
	baz=272						
G62A	West of Eustis	125.30	49	P	PKPdf	06 55 23.8	-0.1
	baz=274,SNR=16						
G62A	West of Eustis	125.30	49		PKPdf	06 55 23.0	-0.9
I63A	Otisfield	125.35	51	P	PKPdf	06 55 24.0	0.0
	baz=274,SNR=7.5						
I63A	Otisfield	125.35	51		PKPdf	06 55 23.5	-0.5
D61A	St Aubert, Com	125.36	47	P	PKPdf	06 55 23.9	0.0
	baz=276						
M65A	Busby, Falmout	125.42	54	P	PKPdf	06 55 23.9	-0.3
	baz=272						
IPMB	Ipameri, GO	125.61	133	eP	PKPdf	06 55 25.5	+0.1
BSCB	Bom Sucesso	125.66	139	eP	PKPdf	06 55 25.2	-0.3
H63A	New Sharon	125.70	50	P	PKPdf	06 55 24.2	-0.4
	baz=274						
G63A	Kingsbury	125.95	49	P	PKPdf	06 55 25.0	-0.1
	baz=275,SNR=22						
WVL	Waterville	125.97	50		PKPdf	06 55 24.7	-0.5
I64A	Boothbay	126.04	51	P	PKPdf	06 55 25.1	-0.2
	baz=274,SNR=10						
LVZ	Lovozero	126.05	341c	iPKIKP	PKPdf	06 55 23.6	-1.1
LVZ	Lovozero	126.05	341		PKPdf	06 55 23.1	-1.6
SCHQ	Schefferville	126.07	37	PKP	PKPdf	06 55 23.4	-1.6
	comp=Z,31nm,0.7s,baz=28,slow=2.0,SNR=21						
SCHQ	Schefferville	126.07	37		PKPdf	06 55 24.1	-1.0
ILULI	Ilulissat	126.08	17	i PKIKP	PKPdf	06 55 24.4	-0.2
ILULI				pmax	pmax		
	comp=Z,120nm,0.7s						
ILULI	Ilulissat	126.08	17	i P	PKPdf	06 55 24.4	-0.2
	comp=Z,119nm,0.7s						
CRPR	Cabo Rojo, PR	126.09	83		PKPdf	06 55 25.7	-0.4
D62A	Allapoint, All	126.14	47	P	PKPdf	06 55 25.2	-0.2
	baz=277,SNR=38						
D62A	Allapoint, All	126.14	47		PKPdf	06 55 24.2	-1.2
PKME	Peaks-Kenny Pk	126.17	49	P	PKPdf	06 55 25.7	+0.2
	baz=275,SNR=24						
PKME	Peaks-Kenny Pk	126.17	49		PKPdf	06 55 24.8	-0.7
PTGA	Pitinga	126.21	108		PKPdf	06 55 25.9	-0.7
PTGA	Pitinga	126.21	108	eP	PKPdf	06 55 25.4	-1.2
F63A	Nahmakanta, Br	126.26	48	P	PKPdf	06 55 25.5	-0.2
	baz=276,SNR=18						
F63A	Nahmakanta, Br	126.26	48		PKPdf	06 55 25.1	-0.6
H64A	Troy	126.28	50	P	PKPdf	06 55 25.4	-0.3
	baz=275,SNR=20						
SUMG	Summit	126.34	10⇑	iPKIKP	PKPdf	06 55 25.1	-0.5
SUMG				pmax	pmax		
	comp=Z,260nm,1.3s						
SUMG	Summit	126.34	10		PKPdf	06 55 25.1	-0.5
SUMG	Summit	126.34	10⇑	iP	PKPdf	06 55 25.1	-0.5
	comp=Z,255nm,1.3s						
AOPR	Arecibo Observ	126.50	83		PKPdf	06 55 26.1	-0.9
G64A	Maxfield	126.55	49	P	PKPdf	06 55 25.7	-0.5
	baz=276,SNR=30						
OBIP	Obispado Ponce	126.56	83		PKPdf	06 55 26.1	-1.0
ICMP	Isla Caja de M	126.60	83		PKPdf	06 55 26.3	-0.8
APA	Apatity	126.63	341⇑	iPKIKP	PKPdf	06 55 24.3	-1.4
APA				i *PP	pPKPdf	06 55 57.2	+0.8
APA				pmax	pmax		
	comp=Z,31nm,0.7s						
E63A	Oxbow	126.65	47	P	PKPdf	06 55 25.9	-0.5
	baz=277,SNR=16						
E63A	Oxbow	126.65	47		PKPdf	06 55 25.6	-0.8
EMPR	Esperanza - Ma	126.73	82		PKiKP	06 55 28.2	+0.4
F64A	Sherman	126.77	48	P	PKPdf	06 55 26.3	-0.3
	baz=277,SNR=17						
F64A	Sherman	126.77	48		PKPdf	06 55 25.8	-0.8
D63A	Stockholm	126.79	47	P	PKPdf	06 55 26.3	-0.4
	baz=278,SNR=24						
PQI	Presque Isle	126.89	47		PKPdf	06 55 26.0	-0.8
KEV	Kevo	126.92	345	PKIKP	PKPdf	06 55 26.0	-0.2
KEV	Kevo	126.92	345		PKPdf	06 55 26.0	-0.2
TMCR	Tamitsa	126.96	336	ePKIKP	PKPdf	06 55 25.4	-1.0
TMCR				pmax	pmax		
	comp=Z,54nm,0.6s						
H65A	Eastbrook	126.97	50	P	PKPdf	06 55 27.2	+0.1
	baz=276,SNR=9.6						
SJG	San Juan	127.00	83	eP	PKiKP	06 55 28.2	-0.1
SJG	San Juan	127.00	83	PKIKP	PKPdf	06 55 27.0	-0.8
SJG	San Juan	127.00	83		PKPdf	06 55 27.0	-0.8
IGPR	InterUniversit	127.01	83		PKiKP	06 55 28.2	-0.1
HAMF	Hammerfest	127.01	347	ePKPdf	PKPdf	06 55 26.0	-0.4
HAMF				ePP	PP	06 57 23.0	-3.0
HAMF				eSP	SP	07 07 16.5	-0.6
HAMF				eSS	SS	07 14 29.4	+5.5
HAMF				IVMs_BB	IVMs_BB	07 42 16.5	
	comp=Z,2µm,38.0s						
E64A	Bridgewater	127.06	47	P	PKPdf	06 55 27.0	-0.2
	baz=277,SNR=15						
PDPR	Patillas Dam,	127.10	83		PKPdf	06 55 26.8	-1.3
HUMP	Col San Antoni	127.29	83		PKPdf	06 55 27.4	-1.0
CBYP	Canovanas	127.31	83		PKPdf	06 55 28.4	-0.1
BDFB	Brasilia	127.36	131	PKP	PKPdf	06 55 28.7	-0.1
	comp=Z,36nm,0.8s,baz=225,slow=2.2,SNR=40						
BDFB	Brasilia	127.36	131		PKPdf	06 55 28.3	-0.5
G65A	Princeton	127.39	49	P	PKiKP	06 55 28.1	-0.3
	baz=277,SNR=29						
G65A	Princeton	127.39	49		PKPdf	06 55 27.2	-0.6
ARCES	ARCESS Array B	127.44	345	PKP	PKPdf	06 55 26.2	-1.1
	comp=Z,49nm,0.6s,baz=76,slow=2.4,SNR=139						
ARCES				SKPbc	SKPbc	06 58 33.7	
	comp=Z,9.1nm,0.9s,baz=86,slow=1.6,SNR=4.9						
ARE0	ARCESS Array S	127.44	345		PKPdf	06 55 26.8	-0.4
ARE0	ARCESS Array S	127.44	345	ePdif	Pdif	06 52 10.6	+0.4
ARE0				ePKPdf	PKPdf	06 55 27.2	-0.1
ARE0				ePP	PP	06 57 26.8	-2.0
ARE0				eSP	SP	07 07 20.4	-0.5
ARE0				eSS	SS	07 14 30.9	+1.6
ARE0				IVMs_BB	IVMs_BB	07 38 28.8	
	comp=Z,2µm,50.7s						
EMMW	East Machias	127.52	50		PKPdf	06 55 27.6	-0.4
MTP	Monte Pirata	127.55	83		PKPdf	06 55 27.9	-1.0
H66A	Whiting	127.62	49	P	PKPdf	06 55 28.3	0.0
	baz=277,SNR=8.3						
SFJD	Kangerlussuaq	127.64	19	PKP	PKPdf	06 55 27.0	-0.7
	comp=Z,36nm,0.7s,baz=199,slow=1.2,SNR=30						
SFJD				SKPbc	SKPbc	06 58 34.8	
	comp=Z,16nm,0.9s,baz=324,slow=5.9,SNR=3.7						
SFJD	Kangerlussuaq	127.64	19	i PKIKP	PKPdf	06 55 26.7	-1.0
SFJD	Kangerlussuaq	127.64	19		PKPdf	06 55 26.4	-1.3
SFJD	Kangerlussuaq	127.64	19	i P	PKPdf	06 55 26.7	-1.0
KIBK	Kibwezi	127.69	249	PKiKP	PKiKP	06 55 30.4	+0.3
	SNR=12						
CUPR	Culebra, Puert	127.85	83		PKPdf	06 55 29.7	+0.2
GGN	Saint George	127.91	49		PKPdf	06 55 27.9	-0.9
LSZ	Lusaka	127.92	229	PKP	PKiKP	06 55 30.6	+0.1
	comp=Z,22nm,0.9s,baz=113,slow=2.8,SNR=24						
LSZ	Lusaka	127.92	229		PKPdf	06 55 30.0	0.0
KLMR	Klimovskoe	127.94	332c	iPKIKP	PKPdf	06 55 27.5	-0.9
KLMR				e		06 55 57.1	
KLMR				pmax	pmax		
	comp=Z,137nm,1.2s						
KLMR				MLR	MLR		
	comp=Z,5µm,21.0s						
KLMR	Klimovskoe	127.94	332⇑	iPKPdf	PKPdf	06 55 27.5	-0.9
KLMR				ePKPdf	PKPdf	06 55 27.5	-0.9
KLMR				ePKPdf	PKPdf	06 55 27.5	-0.9
KLMR				AMP		06 55 32.5	
	comp=Z,137nm,1.2s						
KLMR				epPKPdf	pPKPdf	06 55 57.2	-1.9
KLMR				i PP	PP	06 57 27.6	-4.8
KLMR				eSKP		06 58 35.6	
KLMR				SKKSac	SKKSac	07 04 15.0	-3.2
KLMR				SKKSac	SKKSac	07 04 15.0	-3.2
KLMR				SS	SS	07 14 27.6	-8.4
KLMR				SS	SS	07 14 27.6	-8.4
KLMR				LR	LR	07 37 18.7	
KLMR				AMP		07 49 56.6	
	comp=Z,5µm,21.3s						
AKT	Akhty	128.08	306	ePKIKP	PKPdf	06 55 29.3	-0.2
AKT				e		06 56 03.1	
AKT				e		06 57 31.4	
AKT				ePPP	PPP	07 00 19.2	
AKT				pmax	pmax		
	comp=Z,19nm,0.7s						
MAK	Makhachkala	128.12	308	eP	Pdif	06 52 13.9	+0.1
MAK				i		06 55 30.1	
MAK				e		06 56 02.0	
MAK				e		06 57 31.7	
MAK				ePPP	PPP	07 00 21.4	
MAK				e		07 02 26.2	
MAK				ePS	PS	07 07 36.0	-6.8
MAK				eSS	SS	07 14 37.9	-1.7
MAK				eSSS	SSS	07 19 32.3	
MAK				pmax	pmax		
	comp=Z,196nm,1.5s						
BATG	Bathurst New B	128.13	46		PKPdf	06 55 28.4	-0.8
STVI	Saint Thomas	128.16	83		PKPdf	06 55 29.8	-0.3
CDVI	St. Croix	128.20	84		PKPdf	06 55 29.4	-0.8
DAMY	Dhamar	128.32	272	PKiKP	PKiKP	06 55 32.4	+0.9
	SNR=14						
KTK1	Kautokeino	128.37	346	ePKPdf	PKPdf	06 55 28.7	-0.3
KTK1				ePP	PP	06 57 35.1	+0.2
TRO	Tromso	128.81	348	ePKPdf	PKPdf	06 55 28.9	-0.9
TRO				ePP	PP	06 57 33.6	-4.0
TRO				eSS	SS	07 14 47.3	+1.3
TRO				IVMs_BB	IVMs_BB	07 42 52.6	
	comp=Z,3µm,29.9s						
ATD	Arta Tunnel	128.87	268	PKP	PKiKP	06 55 33.7	+1.4
	comp=Z,4.1nm,0.3s,baz=19,slow=1.3,SNR=10						
ATD	Arta Tunnel	128.87	268	PKiKP	PKiKP	06 55 33.1	+0.8
	SNR=7.1						
ATD	Arta Tunnel	128.87	268		PKPdf	06 55 31.5	-0.1
KMBO	Kilima Mbogo	128.97	250	PKP	PKiKP	06 55 34.0	+1.1
	comp=Z,15nm,0.9s,baz=106,slow=2.1,SNR=24						
KMBO				PP	PP	06 57 44.7	+4.1
	comp=Z,18nm,1.3s,baz=76,slow=5.0,SNR=4.4						
KMBO				SKPbc	SKiKP	06 58 47.0	-11
	comp=Z,4.8nm,0.9s,baz=129,slow=2.3,SNR=4.1						
KMBO	Kilima Mbogo	128.97	250	i P	PKiKP	06 55 33.6	+0.7
	SNR=14						
KMBO	Kilima Mbogo	128.97	250	i PKPdf	PKiKP	06 55 33.6	+0.7
	SNR=14						
KMBO	Kilima Mbogo	128.97	250	PKIKP	PKiKP	06 55 32.8	-0.1
KMBO						06 57 44.7	
KMBO	Kilima Mbogo	128.97	250		PKiKP	06 55 32.8	-0.1
ITZ	Itezhi-Tezhi	129.09	226	eP	PKiKP	06 55 33.1	+0.3
LMN	Caledonia Moun	129.22	48		PKPdf	06 55 30.9	-0.5
RAYN	Ar Rayn	129.22	283	PKIKP	PKPdf	06 55 31.3	-0.8
RAYN	Ar Rayn	129.22	283		PKPdf	06 55 31.3	-0.8
GROC	Groznyy	129.34	309	i PKIKP	PKPdf	06 55 31.1	-0.5
GROC				e		06 57 41.6	
GROC				pmax	pmax		
	comp=Z,129nm,1.5s						
SJMB	Sao Joao De Ma	129.58	140	eP	PKPdf	06 55 33.2	+0.3
SABA	Saba	129.58	84	eP	PKiKP	06 55 34.5	+0.9
SABA	Saba	129.58	84		PKPdf	06 55 32.3	-0.5
GRGR	Grenville	129.59	92		PKPdf	06 55 32.2	-0.7
BSFB	Barra de Sao F	129.68	140	eP	PKPdf	06 55 32.4	-0.6
SEUS	St. Eustatius	129.79	85	eP	PKiKP	06 55 34.9	+0.9
SEUS	St. Eustatius	129.79	85		PKPdf	06 55 32.6	-0.6
SMRT	St. Maarten	129.84	84		PKPdf	06 55 32.5	-0.8
SKI	Saint Kitts	129.98	85	eP	PKPdf	06 55 33.9	+0.3
SKI	Saint Kitts	129.98	85	PKIKP	PKPdf	06 55 33.0	-0.6
SKI	Saint Kitts	129.98	85		PKPdf	06 55 33.0	-0.6
NVDO	Nevis, Disaste	130.04	85	eP	PKiKP	06 55 35.2	+0.8
BBSR	BB Station	130.22	65		PKPdf	06 55 33.6	0.0
HAL	Halifax	130.26	49	PKIKP	PKPdf	06 55 33.3	0.0
HAL	Halifax	130.26	49		PKPdf	06 55 33.3	0.0
TBLG	Delisi	130.29	307	P	PKiKP	06 55 34.3	-0.1
TBLG	Delisi	130.29	307	PKIKP	PKPdf	06 55 33.7	+0.2
TBLG	Delisi	130.29	307		PKPdf	06 55 33.7	+0.2
SVB	Belmont	130.30	91	eP	PKPdf	06 55 32.1	-2.2
SVB	Belmont	130.30	91		PKPdf	06 55 33.5	-0.7
MLYT	Lee's Yard	130.34	86	eP	PKiKP	06 55 35.4	+0.3
TOSP	Speyside	130.37	93	eP	PKiKP	06 55 35.8	+0.6
TOSP	Speyside	130.37	93		PKiKP	06 55 35.6	+0.3
VRH	Novokhopyorsk	130.39	320	i PKIKP	PKPdf	06 55 33.0	-0.3
VRH				e		06 57 46.2	
VRH				eSPP	SPP	07 09 30.2	
VRH				pmax	pmax		
	comp=Z,40nm,0.6s						
SCO	Scoresbysund	130.41	5	PKIKP	PKPdf	06 55 32.9	+0.1
SCO	Scoresbysund	130.41	5		PKPdf	06 55 32.9	+0.1
SCO	Scoresbysund	130.41	5	i P	PKPdf	06 55 32.7	-0.1
	comp=Z,40nm,0.9s						
SCO				i		06 57 42.3	
JMIC	Jan Mayen	130.44	359	ePdif	Pdif	06 52 21.9	-1.6
JMIC				IVmB_BB		06 52 22.5	
	comp=Z,1µm,1.2s						
JMIC				ePKPdf	PKPdf	06 55 32.0	-0.9
JMIC				ePP	PP	06 57 48.8	+0.6
JMIC				e		06 58 45.5	
JMIC				eSP	SP	07 07 41.3	-5.3
JMIC				eSS	SS	07 15 12.0	+6.1
JMIC				IVMs_BB	IVMs_BB	07 38 41.1	
	comp=Z,1µm,19.0s						
MCLT	Moule a Chique	130.72	90	eP	PKiKP	06 55 39.2	+3.2
ZEI	Tsey	130.77	309	i PKIKP	PKPdf	06 55 34.9	+0.2
ZEI				pmax	pmax		
	comp=Z,58nm,2.0s						
SLBI	Saint Lucia, B	130.77	90	eP	PKPdf	06 55 29.7	-5.4
FDF	Fort de France	130.80	89	eP	PKiKP	06 55 36.0	-0.2
FDF	Fort de France	130.80	89	PKIKP	PKiKP	06 55 35.8	-0.4
FDF	Fort de France	130.80	89		PKiKP	06 55 35.8	-0.4
SLAC	Saint Lucia, A	130.81	90	eP	PKPdf	06 55 35.0	-0.2
TASB	TASBURUN-IGDIR	130.85	305	P	PKPdf	06 55 34.6	-0.1
DWS	Wesley	130.87	88	eP	PKiKP	06 55 37.1	+0.9
NCK	Nalchik	130.88	310⇓	iPKIKP	PKiKP	06 55 35.1	-0.4
ANWB	Willy Bob	130.94	85	eP	PKiKP	06 55 36.4	+0.1
ANWB	Willy Bob	130.94	85		PKPdf	06 55 34.9	-0.5
STEI	Steigen	130.97	348	ePKPdf	PKPdf	06 55 33.3	-0.6
STEI				ePP	PP	06 57 51.0	-0.7
STEI				i		06 58 47.0	
STEI				eSKPdf	SKiKP	06 58 58.6	-1.6
STEI				eSP	SP	07 07 52.0	+0.6
STEI				IVMs_BB	IVMs_BB	07 43 24.4	
	comp=Z,3µm,34.5s						
MOS	Moscow	131.06	327	i PKIKP	PKPdf	06 55 32.2	-2.3
MOS				e		06 56 06.0	
MOS				e		06 57 49.9	
MOS				e		07 02 29.3	
MOS				ePS	PS	07 07 58.6	-9.1
MOS				ePPS	PPS	07 09 43.5	
MOS				eSS	SS	07 15 09.8	-4.9
MOS				pmax	pmax		
	comp=Z,117nm,1.3s						
LOF	Lofoten	131.12	349	ePKPdf	PKPdf	06 55 33.3	-0.9
LOF				ePP	PP	06 57 50.2	-2.5
LOF				eSP	SP	07 07 45.1	-7.5
ONI	Oni	131.12	308	P	PKiKP	06 55 35.9	-0.2
ANKE	Ethiopia-Afar	131.13	264	eP	PKiKP	06 55 37.7	+0.4
CLDR	Caldiran	131.17	304	P	PKiKP	06 55 36.4	-0.1
BGD	Bogdanovka	131.19	307	P	PKPdf	06 55 34.8	-0.7
AKH	Akhalkalaki	131.25	307	P	PKiKP	06 55 36.9	+0.4
AKH	Akhalkalaki	131.25	307	PKIKP	PKiKP	06 55 36.3	-0.3
AKH	Akhalkalaki	131.25	307		PKiKP	06 55 36.2	-0.3
H05N1	Guadeloupe/Mar	131.30	87	PKP	PKPdf	06 55 36.5	+0.4
KBZ	Khabaz	131.35	310	PKP	PKiKP	06 55 36.5	+0.1
	comp=Z,6.9nm,0.8s,baz=79,slow=3.4,SNR=20						
KBZ				PP	PP	06 57 48.5	-6.8
	comp=Z,10nm,1.1s,baz=80,slow=10,SNR=7.7						
KBZ				SKPbc	SKPbc	06 58 49.8	-0.1
	comp=Z,15nm,1.0s,baz=69,slow=5.3,SNR=4.6						
KIV	Kislovodsk	131.46	310	i P	PKPdf	06 55 35.7	-0.1
	SNR=18						
KIV	Kislovodsk	131.46	310	i PKPdf	PKPdf	06 55 35.7	-0.1
	SNR=18						
KIV	Kislovodsk	131.46	310	P	PKPdf	06 55 35.9	+0.1
KIV	Kislovodsk	131.46	310	eP	Pdif	06 52 27.2	-1.6
KIV				i		06 55 35.4	
KIV				e		06 57 54.6	
KIV				ePPP	PPP	07 00 45.4	
KIV				e		07 02 33.3	
KIV				ePS	PS	07 08 09.5	-2.4
KIV				eSS	SS	07 15 19.7	-1.1
KIV				pmax	pmax		
	comp=Z,54nm,1.1s						
CUKT	Cukurca	131.55	301	P	PKPdf	06 55 35.4	-0.8
NEY	Neytrino	131.55	309c	iPKIKP	PKPdf	06 55 36.4	+0.3
LPSR	Galich'ya Gora	131.57	322	i PKIKP	PKPdf	06 55 34.9	-0.6
LPSR				e		07 09 41.6	
LPSR				pmax	pmax		
	comp=Z,100nm,1.2s						
TSUM	Tsumeb	131.59	215	PKP	PKPdf	06 55 36.9	+0.1
	comp=Z,19nm,0.9s,baz=122,slow=4.0,SNR=17						
TSUM				SKPbc	SKPab	06 58 53.5	+1.0
	comp=Z,5.6nm,0.7s,baz=138,slow=3.9,SNR=7.2						
TSUM				PKKP	PKKPdf	07 05 33.8	+1.1
	comp=Z,5.2nm,0.7s,baz=258,slow=6.2,SNR=7.6						
TSUM	Tsumeb	131.59	215		PKPdf	06 55 36.8	-0.1
TSUM	Tsumeb	131.59	215		PKKPdf	07 05 33.4	+0.7
VANB	Van	131.63	303	P	PKPdf	06 55 36.6	+0.3
KARS	Kars	131.66	306	P	PKiKP	06 55 37.3	0.0
DESE	Dese	131.73	266	eP	PKiKP	06 55 40.6	+2.2
DESE				eS	PP	06 58 02.6	+3.7
VORR	Voronezh	131.74	321	ePKIKP	PKPdf	06 55 34.0	-1.9
VORR				pmax	pmax		
	comp=Z,400nm,1.8s						
AGRB	Hanur-Agry	131.84	304	P	PKiKP	06 55 37.8	0.0
OBN	Obninsk	131.87	326c	iPKIKP	PKPdf	06 55 35.3	-0.7
OBN				e		06 56 09.2	
OBN				e		06 57 56.8	
OBN				pmax	pmax		
	comp=Z,222nm,2.1s						
OBN	Obninsk	131.87	326		PKPdf	06 55 35.8	-0.2
VSR	Storozhevoye	131.91	320	i PKIKP	PKPdf	06 55 35.7	-0.5
VSR				eSPP	SPP	07 09 40.7	
VSR				pmax	pmax		
	comp=Z,40nm,1.0s						
VORD	Divnogorie	131.92	320	i PKIKP	PKPdf	06 55 34.9	-1.3
VORD				pmax	pmax		
	comp=Z,50nm,1.6s						
AKDM	Akdamar-Van	131.97	303	P	PKPdf	06 55 36.7	-0.3
IVI	Ivigtut	132.15	24		PKPdf	06 55 35.8	-0.6
SENK	Senkaya-Erzuru	132.22	306	P	PKiKP	06 55 38.5	-0.1
MLAZ	Malazgirt-MUS	132.23	304	P	PKiKP	06 55 38.3	-0.3
ANGG	Ammassalik, Gr	132.24	15		PKPdf	06 55 36.5	+0.1
PUL	Pulkovo	132.41	334d	iPKIKP	PKiKP	06 55 38.4	+0.4
SIRT	Sirnak	132.46	302	P	PKiKP	06 55 47.1	+8.1
BATM	Batumi	132.56	307	P	PKPdf	06 55 38.1	+0.3
KONS	Konsvik	132.63	348	ePKPdf	PKPdf	06 55 36.1	-1.0
KONS				eSKPdf	SKPab	06 58 58.0	+2.9
BCA	Borcka	132.64	307	P	PKPdf	06 55 38.1	+0.1
MOR8	Moi Rana	132.65	347	ePKPdf	PKPdf	06 55 36.1	-1.1
MOR8				ePP	PP	06 57 58.1	-4.5
MOR8				eSKPdf	SKPab	06 58 57.1	+1.8
MOR8				eSP	SKKPbc	07 08 06.4	-13
MOR8				IVMs_BB	IVMs_BB	07 45 22.0	
	comp=Z,2µm,31.1s						
KOPR	Koprukoy-ERZUR	132.67	305	P	PKiKP	06 55 39.1	-0.3
GURO	Guroymak-BITLI	132.69	303	P	PKiKP	06 55 39.4	-0.1
STOK	Stokkvaagen	132.80	348	ePKPdf	PKPdf	06 55 33.8	-3.7
STOK				ePP	PP	06 58 02.7	-0.7
STOK				eSKPdf	SKiKP	06 59 00.3	-3.6
FIA1	FINESS Array S	132.99	337		PKPdf	06 55 37.0	-1.0
FINES	FINESS Array B	132.99	337	PKhKP	PKPpre	06 55 18.9	
	comp=Z,2.0nm,0.5s,baz=66,slow=4.8,SNR=5.1						
FINES				PKP	PKPdf	06 55 37.7	-0.3
	comp=Z,31nm,0.8s,baz=101,slow=2.4,SNR=18						
FINES				SKPbc	SKPbc	06 58 54.3	-0.8
	comp=Z,118nm,1.1s,baz=64,slow=4.4,SNR=23						
VRTB	Varto-Mus	133.07	304	P	PKiKP	06 55 40.6	+0.3
DRLN	Deer Lake	133.19	42		PKPdf	06 55 38.8	+0.1
NRS	Narsarsuaq	133.20	23	PKIKP	PKPdf	06 55 37.9	-0.4
NRS	Narsarsuaq	133.20	23	PKPdf	PKPdf	06 55 37.9	-0.4
NRS	Narsarsuaq	133.20	23	i P	PKPdf	06 55 37.5	-0.8
	comp=Z,94nm,0.8s						
SVAN	Silvan-Diyarba	133.38	303	P	PKiKP	06 55 40.3	-0.5
SOC	Sochi	133.64	310c	iPKIKP	PKPdf	06 55 38.9	-0.9
SOC				e		06 58 09.4	
SOC				ePPP	PPP	07 01 01.1	
SOC				e		07 02 32.2	
SOC				eSS	SS	07 15 41.1	-5.9
SOC				eSSS	SSS	07 20 46.6	
SOC				pmax	pmax		
	comp=Z,9.0nm,0.4s						
BNGB	Bingl	133.69	304	P	PKiKP	06 55 41.0	-0.5
YEDI	Yedisu-Bingol	133.74	305	P	PKPdf	06 55 40.5	+0.2
MAZI	Mazidag	134.05	302	P	PKPdf	06 55 41.3	+0.4
KTUT	Trabzon	134.10	307	P	PKPdf	06 55 40.7	0.0
DYBB	Diyarbakir	134.24	303	P	PKiKP	06 55 42.0	-0.5
ERZN	Erzincan	134.35	305	P	PKiKP	06 55 42.1	-0.7
NSS	Namsos	134.59	347	ePKPdf	PKPdf	06 55 36.3	-4.5
NSS				ePP	PP	06 58 12.4	-2.5
NSS				eSKPdf	SKPab	06 59 03.8	+0.1
NSS				eSP	SKKPbc	07 08 21.8	+9.2
NSS				eSS	SS	07 15 57.1	+0.7
NSS				IVMs_BB	IVMs_BB	07 46 40.4	
	comp=Z,3µm,32.6s						
VSU	Vasula	134.68	334	eP	PKPdf	06 55 41.5	+0.4
VSU				ePP	PP	06 58 16.9	+1.2
VSU	Vasula	134.68	334c	iPKIKP	PKPdf	06 55 40.1	-1.1
PTK	Pertek	134.70	304	P	PKiKP	06 55 43.3	-0.3
SVRC	Sivrice-ELAZID	134.84	303	P	PKPdf	06 55 42.6	+0.2
ESPY	Espiye-Giresun	134.88	307	P	PKPdf	06 55 40.7	-1.5
ANN	Anapa	134.95	313	eP	Pdif	06 52 38.8	-5.3
ANN				i		06 55 40.0	

ANN e 07 02 41.4
ANN pmax pmax
comp=Z,11nm,0.5s
ANN pmax pmax
comp=Z,16nm,1.0s
URFA Urfa 135.33 302 P **PKiKP 06 55 44.5 -0.3**
MDP Montagnes des 135.34 105 PKP **PKPdf 06 55 43.9 0.0**
comp=Z,51nm,0.8s,baz=233,slow=3.3,SNR=18
MDP SKPbc **SKPbc 06 59 03.8 -0.6**
comp=Z,40nm,0.9s,baz=238,slow=6.8,SNR=7.2
ARPR Arapgir-MALATY 135.49 304 P **PKiKP 06 55 44.8 -0.4**
MALT Malatya 135.53 303 P **PKPdf 06 55 44.2 +0.6**
BORG Borgarnes 136.03 7 PKhKP PKPpre 06 55 37.5
comp=Z,24nm,0.9s,baz=70,slow=5.5,SNR=5.6
BORG PKP **PKPdf 06 55 44.0 +0.5**
comp=Z,26nm,0.9s,baz=3.4,slow=3.5,SNR=4.5
BORG SKPbc **SKPbc 06 59 04.7 -0.1**
comp=Z,121nm,1.2s,baz=343,slow=1.1,SNR=8.1
BORG Borgarnes 136.03 7 **SKPbc 06 59 05.1 +0.4**
TBLU Trondheim 136.08 347 *e*PKPdf **PKPdf 06 55 41.5 -2.2**
TBLU *e*PP **PP 06 58 19.0 -5.2**
TBLU IVMs_BB IVMs_BB 07 46 31.9
comp=Z,2µm,34.7s
SVSK Karacayir 136.37 306 P **PiKiP 06 55 45.9 -0.8**
MICGM Minsk 136.54 329‖ *e*PKP **PKPdf 06 55 44.0 -0.8**
MICGM ‖*e*PKP **PKPdf 06 55 44.0 -0.8**
MICGM PKPM 06 55 46.0
comp=Z,5.2nm,4.0s
MICGM PKPM 06 55 46.0
comp=Z,0.2nm,1.0s
MICGM *e*pPKP **pPKPdf 06 56 19.0 +3.5**
MICGM *e*PP **PP 06 58 28.0 +0.5**
MICGM PPM 06 58 40.0
comp=Z,10nm,6.0s
MICGM *e*SKP 06 59 06.0
MICGM *e*PKS **PKSdf 06 59 18.0 -2.8**
MICGM *e*PPP PPP 07 01 00.0
MICGM *e*SKS **SKSdf 07 02 36.0 -8.8**
MICGM *e*SKKS **SKKSac 07 05 10.0 -1.0**
MICGM *e*SP SP 07 08 24.0 -16
MICGM *e*PS **SP 07 08 30.0 -10**
MICGM *e*SPP SPP 07 10 34.0
MICGM *e*PPS PPS 07 10 40.0
MICGM *e*SS **SS 07 16 18.0 -2.5**
MICGM *e*SSS SSS 07 21 22.0
MICGM *e*LQ LQ 07 42 32.0
MICGM LQM 07 45 00.0
comp=N,7.7nm,20.0s
MICGM LQM 07 45 16.0
comp=E,5.1nm,20.0s
MICGM *e*LR LR 07 46 30.0
MICGM LRM MLR 07 54 56.0
comp=Z,9.7nm,20.0s
MICGM LRM MLR 07 55 04.0
comp=Z,9.6nm,22.0s
MNK Minsk 136.54 329‖ *e*PKIKP **PKPdf 06 55 44.0 -0.8**
MNK *e* 06 56 19.0
MNK *e* 06 58 28.0
MNK *e* 07 02 36.0
MNK *e* 07 08 30.0
MNK *e* 07 10 40.0
MNK *e* 07 16 18.0
MNK *e* 07 21 22.0
MNK pmax pmax
comp=Z,5µm,4.0s
MNK pmax pmax
comp=Z,210nm,1.0s
MNK pmax pmax
comp=Z,10µm,6.0s
MNK MLR MLR
comp=Z,10µm,20.0s
IZAR Zarasai 136.57 331 *e*P **PKPdf 06 55 45.1 +0.3**
IZAR *e*PP **PP 06 58 29.0 +1.3**
TOKT Tokat 136.63 306 P **PKPdf 06 55 44.8 -0.7**
GAZ Gaziantep 136.64 302 P **PKPdf 06 55 45.3 -0.4**
GAZ Gaziantep 136.64 302 **PKPdf 06 55 44.7 -1.0**
ISAL Salakas 136.73 331 *e*P **PKPdf 06 55 42.9 -2.2**
ISAL *e*PP **PP 06 58 29.6 +0.9**
IIGN Ignalina 136.82 331 *e*P **PKPdf 06 55 42.4 -2.9**
IIGN *e*PP **PP 06 58 29.8 +0.5**
NACGM Naroch 136.83 330 *e*PKHKP PKPpre 06 55 34.0
NACGM *e*PKIKP **PKPdf 06 55 44.0 -1.3**
NACGM *e*PP PP 06 58 15.0 -14
NACGM *e*SKP 06 59 06.0
NACGM *e*PPP PPP 07 01 22.0
NACGM *e*SKS **SKSdf 07 02 50.0 +4.7**
NACGM *e*SKKS **SKKSac 07 05 10.0 -2.8**
NACGM *e*SKSP 07 08 00.0
NACGM *e*SS SS 07 16 42.0 +18
NACGM *e*SSS SSS 07 21 52.0
NACGM *e*LQ LQ 07 39 00.0
NACGM *e*LR LR 07 52 36.0
NACGM LRM MLR 08 01 27.0
comp=Z,4.6nm,19.0s
KVT Kavak 136.84 308 P **PKPdf 06 55 46.3 +0.4**
KMRS Kahramanmaras 136.84 302 P **PKPdf 06 55 46.5 +0.5**
SLIT Slitere, Latvi 137.01 335 *e*P **PKPdf 06 55 43.2 -2.4**
SARI SarD1z-Kayseri 137.08 304 P **PKPdf 06 55 47.2 +0.6**
SIM Simferopol' 137.16 314*c i*PKIKP **PKPdf 06 55 46.3 0.0**
SIM *e* 06 58 32.0
SIM *e*SS SS 07 16 33.0 +4.1
SIM pmax pmax
comp=Z,643µm,9.7s
SIM pmax pmax
comp=Z,2µm,10.8s
MOL Molde 137.23 348 *e*PKPdf **PKPdf 06 55 40.4 -5.5**
MOL *e*PP **PP 06 58 28.5 -2.9**
MOL *e*SP SP 07 08 43.1 -1.6
MOL IVMs_BB IVMs_BB 07 42 52.9
comp=Z,2µm,41.1s
DIKM Dikmen 137.28 309 P **PKPdf 06 55 43.9 -2.7**
ASF Jabal al Asfar 137.35 295 PKP **PKPdf 06 55 47.1 0.0**
comp=Z,7.5nm,0.9s,baz=61,slow=0.9,SNR=4.1
ASF PP **PP 06 58 33.5 -0.5**
comp=Z,34nm,1.4s,baz=75,slow=2.9,SNR=6.8
DOMB Dombas 137.41 347 *e*PKPdf PKPpre 06 55 35.6
DOMB *e*PP **PP 06 58 25.1 -7.5**
DOMB *e*SP SP 07 08 36.5 -10
BNN Bunyan 137.44 305 P **PKPdf 06 55 47.4 +0.2**
TAHT Tahtakopru-Hat 137.56 301 P **PKPdf 06 55 47.8 +0.5**
YOZ Yozgat 137.69 306 P **PKPdf 06 55 46.6 -1.0**
AKN Aaknes 137.70 348 *e*PKPdf **PKPdf 06 55 40.3 -6.5**
AKN *e*PP **PP 06 58 31.2 -3.2**
AKN *e*SP SP 07 08 47.5 -1.2
AKN *i* 07 10 41.0
AKN IVMs_BB IVMs_BB 07 42 54.9
comp=Z,3µm,58.1s
PABE Paberze 137.73 332 *e*P **PKPdf 06 55 46.8 -0.2**
PABE *e*PP **PP 06 58 35.3 +0.5**
NB2 NORSAR Subarra137.82 345 PKP PKPpre 06 55 37.1
comp=Z,565nm,3.3s,baz=28,slow=3.0
NB2 NORSAR Subarra137.82 345 PKPab PKPpre 06 55 37.1
baz=28,slow=3.0
NOA NORSAR Array B137.82 345 PKhKP PKPpre 06 55 36.4
comp=Z,4.9nm,0.6s,baz=29,slow=3.0,SNR=25
NOA PKP **PKPdf 06 55 47.7 +0.7**
comp=Z,11nm,0.6s,baz=59,slow=1.8,SNR=14
NOA SKPbc **SKPbc 06 59 09.0 -1.3**
comp=Z,57nm,1.2s,baz=18,slow=4.2,SNR=12
NOA SKKPbc **SKKPbc 07 07 57.6 -2.6**
comp=Z,1.3nm,0.8s,baz=148,slow=3.2,SNR=3.8
CEYT Ceyhan 137.82 302 P **PKPdf 06 55 48.3 +0.6**
AKASG Malin Array Be 137.85 323 PKhKP PKPpre 06 55 36.5
comp=Z,8.2nm,0.6s,baz=42,slow=4.0,SNR=25
AKASG PKP **PKPdf 06 55 47.5 +0.2**
comp=Z,16nm,0.6s,baz=51,slow=2.4,SNR=15
AKASG PP **PP 06 58 35.1 -0.8**
comp=Z,9.1nm,0.9s,baz=50,slow=7.4,SNR=10
AKASG SKPbc **SKPbc 06 59 09.9 -0.7**
comp=Z,18nm,0.8s,baz=47,slow=3.7,SNR=11
AKASG SKKPbc **SKKPbc 07 07 58.9 -0.5**
comp=Z,2.2nm,0.7s,baz=254,slow=4.0,SNR=7.4
NC602 NORSAR Array S 138.00 345 *e*Pdif **Pdif 06 52 57.9 +0.5**
NC602 *e*PKPdf PKPpre 06 55 35.2
NC602 *e*PKPdf **PKPdf 06 55 43.3 -4.1**
NC602 *e*PP **PP 06 58 31.2 -5.1**
NC602 *e*SP SP 07 08 45.0 -6.3
NC602 IVMs_BB IVMs_BB 07 48 06.1
comp=Z,2µm,30.6s
CORM Corum 138.09 307 P **PKPdf 06 55 49.1 +0.8**
BZK Bozkurt 138.11 309 P **PKPdf 06 55 47.2 -0.9**
SHBL Chebaa 138.25 296 *e*P **PKPdf 06 55 49.1 +0.3**
PBUR Paburge 138.25 334 *e*P **PKPdf 06 55 47.5 -0.4**
PBUR *e*PP **PP 06 58 38.9 +0.9**
BHL Bhannes 138.28 297 *e*P **PKPdf 06 55 48.9 +0.1**
CMRD Camardi-Nigde 138.31 303 P **PKPdf 06 55 48.9 +0.1**
ILGA Ilgaz 138.56 308 **PKPdf 06 55 49.2 -0.1**
MMAI Mount Meron Ar 138.56 296 PKhKP PKPpre 06 55 40.3
comp=Z,0.8nm,0.3s,baz=46,slow=4.2,SNR=0.7
MMAI PP **PP 06 58 42.1 +0.8**
comp=Z,1.6nm,0.3s,baz=38,slow=7.3,SNR=2.1
MMAI SKPbc **SKPbc 06 59 14.7 +1.3**
comp=Z,5.4nm,0.5s,baz=72,slow=4.7,SNR=3.5
FOO Floro 138.59 349 *e*PKPdf PKPpre 06 55 42.9
FOO *e*PP **PP 06 58 39.8 +0.1**
FOO IVMs_BB IVMs_BB 07 47 00.1
comp=Z,2µm,12.5s
MMLI Mount Malkishu 138.59 295 P **PiKiP 06 55 50.5 -1.0**
CANT Cankiri 138.74 308 P **PKPdf 06 55 49.8 +0.4**
HYA Hoyanger 138.78 348 *e*PKPdf PKPpre 06 55 42.0
HYA *e*PP **PP 06 58 40.3 -0.7**
HYA *e*SKSdf **SKSdf 07 02 46.5 -1.7**
SKAR Skarslia 138.80 347 *e*PKPdf PKPpre 06 55 43.3
SKAR *e*PP **PP 06 58 40.4 -0.8**
SKAR IVMs_BB IVMs_BB 07 48 24.1
comp=Z,2µm,29.2s
MERS Mersin 138.81 302 P **PKPdf 06 55 49.3 -0.4**
OSL Oslo 138.90 345 *e*PKPdf PKPpre 06 55 40.2
OSL *e*PP **PP 06 58 36.6 -5.2**
OSL *e*SS SS 07 16 44.4 -3.2
OSL IVMs_BB IVMs_BB 07 51 49.5
comp=Z,2µm,26.7s
BR131 Keskin Array S 138.94 306 PKPdf PKPpre 06 55 42.7
SNR=14
BRTR Keskin Array B 138.94 306 PKhKP PKPpre 06 55 42.8
comp=Z,6.4nm,0.8s,baz=123,slow=3.4,SNR=18
BRTR PP **PP 06 58 44.4 +1.0**
comp=Z,4.7nm,0.9s,baz=333,slow=3.3,SNR=6.0
BRTR SKPbc **SKPbc 06 59 13.7 -0.7**
comp=Z,5.8nm,0.8s,baz=131,slow=2.5,SNR=3.8
BRTR SKKPbc **SKKPbc 07 07 52.8 -2.0**
comp=Z,1.5nm,0.9s,baz=195,slow=4.5,SNR=2.3
BRTR Keskin Array B 138.94 306 P **PKPdf 06 55 49.9 0.0**
YAYX Yaylak 138.98 305 P **PKPdf 06 55 49.9 -0.1**
SUW Suwalki 139.04 331 *e*PKPdf **PKPdf 06 55 49.3 -0.2**
SUW *e*PP **PP 06 58 40.3 -2.7**
SUW *e*SKKSac SKKSac 07 05 25.2 -0.7
SUW LMZ LR 07 54 36.4
comp=Z,8.1nm,25.4s
KURC Kurucasile-Bar 139.05 310 P **PKPdf 06 55 48.8 -1.0**
EIL Elat 139.10 291 PKhKP PKPpre 06 55 40.2
comp=Z,2.3nm,0.5s,baz=42,slow=6.2,SNR=2.5
EIL PKP **PKPdf 06 55 50.5 +0.2**
comp=Z,16nm,0.8s,baz=84,slow=1.1,SNR=8.6
EIL PP PP 06 58 35.6 -9.2
comp=Z,5.7nm,0.9s,baz=353,slow=2.7,SNR=3.9
EIL Elat 139.10 291 P **PKPdf 06 55 49.9 -0.4**
SUE Sulen 139.14 349 *e*PKPdf PKPpre 06 55 44.2
SUE *e*PP **PP 06 58 40.5 -2.7**
SERE Sereflikochisa 139.17 305 P **PKPdf 06 55 50.7 +0.4**
KIZK Mersin 139.18 301 P **PKPdf 06 55 50.4 +0.1**
EREN Erenkoy 139.30 300 P **PKPdf 06 55 50.1 -0.4**
SILI Silifke-Mersin 139.37 301 P **PKPdf 06 55 50.4 -0.2**
AFSR Afar-Bala (An 139.43 306 P **PKPdf 06 55 49.9 -0.9**
KONO Kongsberg 139.43 345 *e*PKPdf PKPpre 06 55 42.8
KONO *e*PP **PP 06 58 43.4 -1.6**
KONO *i* 07 10 51.3
KONO *e*SS SS 07 16 56.9 +3.1
KONO IVMs_BB IVMs_BB 07 51 52.2
comp=Z,2µm,22.2s
KEBE Keben-Mersin 139.53 301 P **PKPdf 06 55 49.6 -1.4**
ANTO Ankara 139.53 307 P PKPpre 06 55 43.4
ANTO Ankara 139.53 307 PKIKP **PKPdf 06 55 50.7 -0.2**
ANTO Ankara 139.53 307 **PKPdf 06 55 50.7 -0.2**
KZIT Kziot 139.54 293 P **PKPdf 06 55 51.5 +0.4**
LOD Lodumlu 139.55 307 P PKPpre 06 55 43.7
KULU Kulu 139.57 305 P **PKPdf 06 55 49.6 -1.4**
IKL Isikli 139.58 301 P **PKPdf 06 55 50.6 -0.4**
ASK Askoy 139.60 349 *e*PKPdf PKPpre 06 55 44.2
ASK *e*PP **PP 06 58 47.9 +1.9**
BER Bergen 139.67 349 *e*PKPdf PKPpre 06 55 44.2
BER *e*PP **PP 06 58 44.5 -1.9**
BER *i* 07 08 50.4
AKKU Akkuyu-Mersin 139.70 301 P PKPpre 06 55 41.3
TEVE Tevekalti-Mers 139.74 301 P **PKPdf 06 55 51.2 -0.2**
KIS Kishinev 139.81 319 *e*PKP PKPpre 06 55 47.0
KIS Kishinev 139.81 319 *e*PsP 06 55 52.0
KIS Kishinev 139.81 319 *e*PP PP 06 58 43.0 -5.2
KIS Kishinev 139.81 319 *i* PKS 06 59 25.0
KIS *i* SKKS 07 05 33.0
KIS Kishinev 139.81 319 *e*PKIKP PKPpre 06 55 47.0
KIS *i* PS 07 10 54.0
KIS MLR MLR
comp=Z,5µm,24.0s
ODD1 Odda 139.85 347 *e*PKPdf PKPpre 06 55 45.6
ODD1 *e*PP **PP 06 58 46.7 -1.0**
BERE Bereket-Mersin 139.93 301 P **PKPdf 06 55 52.2 +0.4**
KLNR Kaliningrad 139.94 333*c i*PKIKP **PKPdf 06 55 51.0 0.0**
TEKE Tekeli-Mersin 140.05 301 P PKPpre 06 55 43.4
CSS Mathiatis 140.06 299 P PKPpre 06 55 45.2
LADK Ladik-KONYA 140.25 304 P PKPpre 06 55 45.4
KONT Konya--Tatoy 140.30 304 P **PKPdf 06 55 52.3 0.0**
BLS5 Blasjo 140.34 347 *e*PKPdf PKPpre 06 55 45.9
BLS5 *e*PP **PP 06 58 50.2 -0.4**
BLS5 *i* 07 10 58.8
BLS5 *e*SS SS 07 17 08.0 +3.5
BLS5 IVMs_BB IVMs_BB 07 48 16.1
comp=Z,2µm,30.4s
KIZT Kizilcal 140.46 306 P **PKPdf 06 55 53.0 +0.3**
AUMIH MIHALICIK 140.51 307 P **PKiKP 06 55 59.2 +3.8**
AUSIV SIVRIHISAR 140.58 307 P PKPpre 06 55 46.8
TLCR 140.58 316 ‖P **PKPdf 06 55 49.6 -2.9**
TLCR 140.58 316 ‖PKIKP **PKPdf 06 55 49.6 -2.9**
GAZI Gazipasa 140.67 301 P PKPpre 06 55 46.8
JURR Jurilovca 140.71 315 ‖P PKPpre 06 55 48.5
KMY Karmoy 140.77 348 *e*PKPdf PKPpre 06 55 47.5
KMY *e*PP **PP 06 58 53.2 +0.1**
HOMB Homborsund 140.91 345 *e*PKPdf PKPpre 06 55 46.5
HOMB *e*PP **PP 06 58 53.5 -0.5**
HOMB *e*SS SS 07 17 15.6 +4.4
HOMB IVMs_BB IVMs_BB 07 50 12.6
comp=Z,2µm,31.2s
CIFT Cifteler, Eski 140.96 307 P PKPpre 06 55 46.1
CFR Carcaliu 141.02 316 ‖P **PKPdf 06 55 51.4 -1.9**
CFR Carcaliu 141.02 316 ‖PKIKP **PKPdf 06 55 51.4 -1.9**
GULT Gulveren 141.07 308 P PKPpre 06 55 47.2
SRCK Saricakaya, Es 141.10 308 P PKPpre 06 55 47.2
GHRR 141.10 318 ‖P **PKPdf 06 55 53.4 0.0**
SAUV Serdivan-Sakar 141.11 309 P PKPpre 06 55 46.6
TIRR Tirgusor 141.13 315 ‖P **PKPdf 06 55 51.7 -1.8**
TIRR Tirgusor 141.13 315 ‖P **PKPdf 06 55 51.7 -1.8**
TIRR Tirgusor 141.13 315 ‖PKIKP **PKPdf 06 55 51.7 -1.8**
SPNC Sapanca-Adapaz 141.14 309 P PKPpre 06 55 48.5
LVV L'vov 141.15 325 *e*PKHKP PKPpre 06 55 47.0
LVV *e* 06 58 54.0
LVV *e*SS SS 07 17 12.0 -3.0
LVV MLR MLR
comp=Z,2µm,21.0s
SNART Snartemo 141.16 346 *e*PKPdf **PKPdf 06 55 49.7 -3.4**
BORA Eskisehir 141.27 308 P PKPpre 06 55 46.9
HARR Harsova 141.35 316 ‖P **PKPdf 06 55 50.2 -3.7**
HARR Harsova 141.35 316 ‖PKIKP PKPpre 06 55 50.2
TESR Tescani 141.36 319 ‖P **PKPdf 06 55 50.1 -3.8**
SILT Sile 141.48 310 P PKPpre 06 55 49.0
BIZ Bicaz 141.49 320 ‖P PKPpre 06 55 50.5
SHUT Suhut-Afyon 141.55 305 P PKPpre 06 55 50.1
BEL Belsk 141.55 330 *e*PKPdf PKPpre 06 55 49.6
BEL *e*PP **PP 06 58 57.2 -1.2**
BEL *e*SKKSac SKKSac 07 05 39.8 -0.8
BEL *e*SS **SS 07 17 28.8 +9.5**
BEL LMZ LR 07 52 13.3
comp=Z,7.1nm,29.1s
PSN Preselentsi 141.59 314 *i* P PKPpre 06 55 47.9
VRI Vrincioaia 141.61 318 ‖P **PKPdf 06 55 54.1 -0.3**
VRI Vrincioaia 141.61 318 ‖P PKPpre 06 55 47.7
VRI Vrincioaia 141.61 318 ‖PKIKP **PKPdf 06 55 54.1 -0.3**
CAVI Cavuskoy 141.62 308 P PKPpre 06 55 49.0
ADVT Abdulvahap 141.63 309 P PKPpre 06 55 47.7
BSD Bornholm Skovb 141.63 337 *i* PKIKP **PKPdf 06 55 49.9 -4.2**
BSD pmax pmax
comp=Z,39nm,0.7s
BSD Bornholm Skovb 141.63 337 *i* P PKPpre 06 55 49.9
comp=Z,39nm,0.7s
PLOR Plostina 141.66 318 ‖P PKPpre 06 55 50.4
PLOR Plostina 141.66 318 ‖PKIKP **PKPdf 06 55 50.4 -4.1**
ICOR Ion Corvin 141.67 315 ‖P **PKPdf 06 55 52.8 -1.7**
BURAR Bucovina Array 141.68 321 ‖P **PKPdf 06 55 52.2 -2.4**
BURAR Bucovina Array 141.68 321 ‖PKIKP **PKPdf 06 55 52.2 -2.4**
ISP Isparta 141.75 304 P PKPpre 06 55 48.6
GOET G??ttrup 141.82 343 *i* P **PKPdf 06 55 50.8 -3.5**
comp=Z,91nm,0.6s
YLV Yalova 141.86 309 P PKPpre 06 55 47.2
KLYT Kilyos 141.88 310 P PKPpre 06 55 47.4
ISK Istanbul-Kandi 141.92 310 P PKPpre 06 55 50.7
KAVV Kandilli-Istan 141.92 310 P PKPpre 06 55 49.6
KWP Kalwaria Pacla 141.96 326 *e*PKPdf **PKPdf 06 55 51.5 -3.3**
KWP *e*PP **PP 06 59 00.0 -1.0**
KWP *e*SKKSac SKKSac 07 05 43.6 +0.4
KWP *e*SS **SS 07 17 25.4 +1.0**
KWP LMZ LR 07 51 00.5
comp=Z,4.5nm,35.1s
GEMT Gemlik 142.03 309 P **PKPdf 06 55 49.9 -5.4**
ISR Istrita 142.06 317 ‖P **PKPdf 06 55 53.5 -1.8**
ISR Istrita 142.06 317 ‖PKIKP **PKPdf 06 55 53.5 -1.8**
KORT Korkueli 142.07 303 P **PKPdf 06 55 52.5 -3.2**
OZUR 142.08 319 ‖P **PKPdf 06 55 52.3 -3.0**
BGKT Bogazkoy 142.09 310 P **PKPdf 06 55 49.9 -5.4**
TVSB Tavsanli 142.12 307 P **PKPdf 06 55 50.4 -5.2**
GKP Gorka Klasztor 142.13 334 *e*PKPdf **PKPdf 06 55 51.2 -3.8**
GKP *e*PP **PP 06 58 59.7 -2.1**
GKP *e*SKKSac SKKSac 07 05 43.8 -0.1
GKP LMZ LR 07 49 19.4
comp=Z,12nm,31.8s
ARMT Armutlu 142.23 309 P **PKPdf 06 55 49.9 -5.8**
CTKS Kestanelik-??a 142.26 310 P **PKPdf 06 55 49.3 -6.3**
MLR Muntele Rosu 142.27 318 PKP **PKPdf 06 55 55.0 -0.7**
comp=Z,18nm,0.6s,baz=356,slow=3.3,SNR=54
MLR PP **PP 06 59 03.6 +0.3**
comp=Z,4.2nm,0.6s,baz=9.3,slow=6.4,SNR=5.0
MLR Muntele Rosu 142.27 318 ‖P **PKPdf 06 55 55.4 -0.3**
MLR Muntele Rosu 142.27 318 ‖PKIKP **PKPdf 06 55 55.4 -0.3**
MDNY Mudanya-Bursa 142.27 309 P **PKPdf 06 55 50.4 -5.3**
GEDZ Gediz 142.28 307 P **PKPdf 06 55 51.2 -4.7**
PRD Provadia 142.31 314 *i* P **PKPdf 06 55 50.7 -5.0**
MUD Monsted U'grnd 142.34 343 *i* PKHKP PKPpre 06 55 50.3
MUD *i* 06 59 00.7
MUD pmax pmax
comp=Z,61nm,0.7s
MUD Monsted U'grnd 142.34 343 *i* P **PKPdf 06 55 50.3 -5.0**
comp=Z,60nm,0.7s
MUD *i* 06 59 00.7
DOPR Dopca 142.39 319 ‖P **PKPdf 06 55 56.1 +0.3**
SECR 142.40 317 ‖P **PKPdf 06 55 54.1 -1.7**
ARCR ARCALIA 142.45 321 ‖P **PKPdf 06 55 53.8 -2.0**
ELL Elmali 142.47 303 P **PKPdf 06 55 53.2 -3.2**
SLVT Silivri 142.47 310 P **PKPdf 06 55 53.2 -2.8**
SIMA Simav-Kutahya 142.59 307 P **PKPdf 06 55 51.9 -4.5**
KOLS Kolonicke sedl 142.60 325 *e*PKIKP **PKPdf 06 55 53.6 -2.5**
KOLS *e* 06 59 04.2
KOLS *e*SS SS 07 17 38.0 +6.2
KOLS Kolonicke sedl 142.60 325 *e*PKP **PKPdf 06 55 53.6 -2.5**
KOLS *e*PP **PP 06 59 04.2 -0.7**
KOLS *e*SS SS 07 17 38.0 +6.2
KOLS *e*L L 07 47 02.4
RGN Rugen 142.65 338 *e*P **PKPdf 06 55 53.1 -2.8**
RGN *e*PP **PP 06 59 05.5 +0.7**
RCBR Riachuelo 142.65 134 PKhKP PKPpre 06 55 52.3
comp=Z,137nm,0.9s,baz=245,slow=3.6,SNR=35
UZH Uzhgorod 142.76 325 *i* PKIKP **PKPdf 06 55 52.0 -4.3**
UZH *e**PP **pPKPdf 06 56 25.0 -2.1**
PHSR Pinarhisar 142.81 311 P **PKPdf 06 55 52.3 -4.3**
AKAS Kas 142.82 302 P **PKPdf 06 55 52.8 -4.2**
CRLT Corlu 142.84 311 P **PKPdf 06 55 54.1 -2.6**
VOIR 142.85 318 ‖P **PKPdf 06 55 54.8 -1.9**
VOIR 142.85 318 ‖PKIKP **PKPdf 06 55 54.8 -1.9**
TRPA Tarpa 142.91 324 ‖P **PKPdf 06 55 54.6 -2.0**
KULA Kula-Manisa 142.99 306 P **PKPdf 06 55 53.8 -3.4**
EDC Edincik 143.02 309 P PKPab 06 55 52.5 0.0
OJC Ojcow 143.07 328 *e*PKPdf PKPab 06 55 52.7 +0.2
OJC *e*PP **PP 06 59 04.7 -3.0**
OJC *e*SKKSac SKKSac 07 05 48.6 -0.9
OJC LMZ LR 07 53 44.1
comp=Z,5.1nm,26.4s
CJR Cluj-Napoca 143.09 321 ‖P PKPbc 06 55 54.3 +0.1
CJR Cluj-Napoca 143.09 321 ‖PKIKP PKPbc 06 55 54.3 +0.1
MRMT Marmara Adasi 143.12 310 P PKPab 06 55 53.2 +0.1
ARR Arges 143.14 318 ‖P PKPbc 06 55 55.8 +1.3
FETY Fethiye 143.14 303 P **PiKiP 06 56 00.6 -0.1**
JMB Yambol 143.15 313 *i* P PKPab 06 55 53.1 +0.1
BALB Balikesir 143.23 308 P PKPab 06 55 53.3 -0.1
SZH Strazhica 143.26 315 *i* P PKPab 06 55 53.4 0.0
EDRB Edirne 143.28 312 P PKPbc 06 55 54.6 -0.2
HUMR Humele 143.32 317 ‖P PKPbc 06 55 55.3 +0.4
NIE Niedzica 143.34 327 *e*PKPdf PKPbc 06 55 54.2 -0.6
NIE *e*PP **PP 06 59 06.4 -2.9**
NIE *e*SKKSac SKKSac 07 05 50.5 -0.6
NIE *e*SS **SS 07 17 45.1 +4.9**
NIE LMZ LR 07 51 43.6
comp=Z,2.1nm,28.4s
COPA Copaceanca 143.35 316 ‖P PKPbc 06 55 55.8 +0.9
RKY Sarkoy-Tekirda 143.39 310 P PKPbc 06 55 54.9 -0.4
KRBG Karabiga-Canak 143.41 310 P PKPab 06 55 54.1 0.0
DALY Dalyan (Mula) 143.44 303 P PKPbc 06 55 54.8 -0.6
ELND Elena 143.44 314 ‖P **PKPdf 06 55 56.5 -1.2**
TURN Turunc 143.46 303 P PKPbc 06 55 56.6 +1.1
DRGR 143.56 322 ‖P PKPbc 06 55 56.0 +0.4
DRGR 143.56 322 ‖PKIKP PKPbc 06 55 56.0 +0.4
UKOP Uzunkopru-Edir 143.62 311 P PKPbc 06 55 56.6 +0.8
YER Yerkesik 143.64 304 P PKPab 06 55 55.2 0.0
PVL Pavlikeni 143.68 315 *i* P PKPbc 06 55 56.2 +0.3
AYDB Zeytinkoy-Aydi 143.73 305 P PKPbc 06 55 56.3 -0.1
LPK Lapseki 143.80 310 P PKPbc 06 55 56.4 0.0
KECS Kecovo 143.82 325 *e*PKIKP **PKPdf 06 55 57.2 -1.0**
KECS Kecovo 143.82 325 *e*PKP **PKPdf 06 55 57.2 -1.0**
ERIK Erikli-Kesan 143.87 310 P PKPbc 06 55 56.7 +0.1
LANS Liptovska Anna 143.93 327 *e*PKIKP **PKPdf 06 55 59.0 +0.6**
LANS Liptovska Anna 143.93 327 *e*PKP **PKPdf 06 55 59.0 +0.6**
DEV Deva 143.93 320 ‖P PKPbc 06 55 57.1 +0.6
DEV Deva 143.93 320 ‖PKIKP PKPbc 06 55 57.1 +0.5
VLAD Vladila 143.93 317 ‖P PKPbc 06 55 57.4 +0.8
ARG Arkhangelos 143.99 303 P PKPab 06 55 56.7 +0.2
GELI Tayfur-Gelibol 144.00 310 P PKPab 06 55 56.3 -0.1
PLVB Pleven 144.07 316 ‖P **PKPdf 06 55 57.9 -0.9**
ENEZ Enez 144.10 311 P PKPbc 06 55 57.2 -0.1
RUE Ruedersdorf 144.11 335 *e*P PKPbc 06 55 57.3 +0.5
RUE *e*PP **PP 06 59 14.6 +1.0**
RUE Ruedersdorf 144.11 335 *e*PKPbc PKPbc 06 55 57.2 +0.3
baz=35,slow=2.8
ALN Alexandroupoli 144.12 311 P PKPbc 06 55 57.1 -0.2
OKC Ostrava-Krasne 144.13 329 *e*PKIKP **PKPdf 06 55 57.9 -0.8**
OKC Ostrava-Krasne 144.13 329 *e*PKP **PKPdf 06 55 57.9 -0.8**
DKL Dikili 144.13 308 P PKPbc 06 55 57.1 -0.3
BSEG Bad Segeberg 144.16 340 *e*PKPbc PKPbc 06 55 57.3 +0.3
baz=35,slow=2.8
GZR Gura Zlata 144.26 320 ‖P PKPbc 06 55 58.0 +0.3
GZR Gura Zlata 144.26 320 ‖PKHKP PKPpre 06 55 58.0
KDZ Kurdzhali 144.27 312 *i* P **PKPab 06 55 57.5 +0.1**
KDZ Kurdzhali 144.27 312 *i* P **PKPab 06 55 56.8 -0.6**
KSP Ksiaz 144.29 332 *e*PKPdf PKPbc 06 55 57.8 +0.3
KSP *e*PP **PP 06 59 11.0 -3.8**
KSP *e*SKKSac SKKSac 07 05 54.5 -1.9
KSP LMZ LR 07 50 57.5
comp=Z,15nm,31.3s
DAT Datca 144.29 304 P **PKPab 06 55 57.6 -0.2**
GCAM G?zelcaml? 144.30 305 P PKPbc 06 55 58.2 +0.3
EZN Ezine 144.30 309 P PKPbc 06 55 58.2 +0.3
SRE Strehaia 144.37 318 ‖P **PKPdf 06 56 00.1 +0.8**
SRE Strehaia 144.37 318 ‖PKIKP **PKPdf 06 56 00.1 +0.8**
RDO Rodhopi 144.38 312 P **PKPab 06 55 57.9 +0.1**
BODT Bodrum 144.41 304 P PKPbc 06 55 58.3 -0.1
SIRR Siria 144.46 322 ‖P **PKPdf 06 56 00.1 +0.7**
MORC Moravsky Berou 144.46 329 *e*PKP PKPbc 06 55 58.0 -0.1
MORC *e*PP **PP 06 59 15.1 -0.9**
MORC *e* 07 02 25.8
MORC *e* 07 05 56.9
MORC *e* 07 07 30.3
MORC Moravsky Berou 144.46 329 ‖P **PKPdf 06 55 58.8 -0.5**
MORC Moravsky Berou 144.46 329 ‖PKIKP **PKPdf 06 55 58.8 -0.5**
MORC Moravsky Berou 144.46 329 PKPbc 06 55 58.5 +0.3
PSZ Piszkesteto 144.47 325 ‖P **PKPdf 06 55 59.2 -0.3**
PSZ Piszkesteto 144.47 325 ‖PKIKP **PKPdf 06 55 59.2 -0.3**
PSZ Piszkesteto 144.47 325 **PKPdf 06 55 59.0 -0.4**
GADA Gvkgeada 144.48 310 P PKPbc 06 55 58.5 +0.1
BOZC Bozcaada 144.50 309 P PKPbc 06 55 58.5 0.0
OSTC Ostas 144.53 331 *e*PKP **PKPdf 06 55 59.0 -0.4**
OSTC *ex* x 06 56 40.0

PLD	Plovdiv	144.57 314	*i* P	PKPab	06 55 58.5	0.0
PLD	Plovdiv	144.57 314	P	PKPbc	06 55 58.9	+0.2
CHVC	Chvalec	144.58 331	*e*PKP	PKPbc	06 55 58.9	+0.4
CHVC			*e*PP	PP	06 59 12.8	-3.8
URLA	Izmir	144.58 307	P	PKPbc	06 55 58.8	-0.1
EDU	Dundee	144.59 354	*e*P	PKPab	06 55 57.6	-0.5
BAIL	Bailesti	144.60 317	⇓P	PKPdf	06 56 00.5	+0.8
KRLC	Kraliky	144.61 330	*e*PKIKP	PKPbc	06 55 58.8	+0.2
KRLC			*e*		06 56 38.0	
KRLC			MLR	MLR		
	comp=Z,7µm,27.5s					
KRLC	Kraliky	144.61 330	*e*PKP	PKPbc	06 55 58.8	+0.2
KRLC			*e*x	x	06 56 38.0	
KRLC			*e*PP	PP	06 59 11.8	-5.1
KRLC			AMS	AMS	07 54 00.0	
	comp=Z,7µm,27.5s					
DPC	Dobruska-Polom	144.63 331	*e*PKIKP	PKPdf	06 55 59.3	-0.3
DPC			*e*		06 59 14.7	
DPC	Dobruska-Polom	144.63 331	*e*PKP	PKPdf	06 55 59.3	-0.3
DPC			*e*PP	PP	06 59 14.7	-2.2
DPC			*e*x	x	07 02 25.6	
DPC			AMS	AMS	07 52 00.0	
	comp=Z,11µm,30.2s					
UPC	Upice	144.65 331	*e*PKIKP	PKPdf	06 55 59.3	-0.3
UPC	Upice	144.65 331	*e*PKP	PKPdf	06 55 59.3	-0.3
UPC			*e*sPKP		06 56 39.3	
VYHS	Vyhne	144.67 327	*e*PKIKP	PKPdf	06 55 59.5	-0.2
VYHS			*e*		06 59 14.2	
VYHS			*e*SS	SS	07 17 55.7	+0.2
VYHS	Vyhne	144.67 327	*e*PKP	PKPdf	06 55 59.5	-0.2
VYHS			*e*PP	PP	06 59 14.2	-3.1
VYHS			*e*SS	SS	07 17 55.7	+0.2
VYHS			*e*L	L	07 47 34.4	
HLG	Helgoland	144.69 342	*e*PKPbc	PKPdf	06 55 59.3	-0.2
	baz=35,slow=2.8					
PUNG	Punghina	144.73 318	⇑P	PKPdf	06 56 00.7	+0.8
RZN	Rozhen	144.73 313	*i* P	PKPab	06 55 59.3	-0.1
PGB	Panagyurishte	144.74 315	*i* P	PKPab	06 55 58.8	-0.4
HERR	Herculane	144.75 319	⇑P	PKPdf	06 55 59.7	-0.3
KOSK	Kos Island	144.75 304	P	PKPab	06 55 58.4	-0.9
INVG	Invergeldie, C	144.81 355	*e*P	PKPab	06 55 56.3	-2.5
INVG			IAMs_20	IAMs_20	07 45 27.8	
	comp=Z,12µm,40.1s					
KOLL	Kolacno	144.83 327	*e*PKP	PKPdf	06 56 00.6	+0.7
BZS	Buzias	144.84 321	⇑P	PKPdf	06 56 00.1	+0.1
BZS	Buzias	144.84 321	⇑PKIKP	PKPdf	06 56 00.1	+0.1
SIGR	SIGRI	144.86 308	P	PKPab	06 55 59.2	-0.4
KARP	Karpathos	144.91 302	P	PKPdf	06 56 00.4	-0.2
KARP	Karpathos	144.91 302		PKPbc	06 55 59.7	-0.3
CHOS	Chios island	144.98 307	P	PKPbc	06 55 59.9	-0.3
TIM	Timisoara	145.00 321	⇑P	PKPdf	06 56 01.5	+1.2
TIM	Timisoara	145.00 321	⇑PKIKP	PKPdf	06 56 01.5	+1.2
JAVC	Velka Javorina	145.01 328	*e*PKP	PKPdf	06 56 01.4	+1.1
JAVC			*e*PP	PP	06 59 19.2	-0.1
JAVC			*e*		07 02 32.8	
JAVC			*e*		07 06 04.3	
JAVC			*e*		07 07 28.1	
EAB	Aberfoyle	145.07 355	*e*P	PKPbc	06 55 58.6	-1.1
ESY	Stoneypath	145.17 353	*e*P	PKPbc	06 55 58.1	-2.0
EDI	Edinburgh	145.22 354	*e*P	PKPbc	06 55 57.6	-2.7
EDI			IAMs_20	IAMs_20	07 45 43.5	
	comp=Z,10µm,38.3s					
MDVR	Moldovita	145.22 319	⇑P	PKPab	06 56 01.3	+0.4
VRAC	Vranov	145.23 329	PKPbc	PKPab	06 56 01.4	+0.7
	comp=Z,165nm,0.8s,baz=54,slow=3.1,SNR=283					
VRAC	Vranov	145.23 329	*e*PKP	PKPab	06 56 01.0	+0.3
VRAC			*e*PP	PP	06 59 18.1	-2.4
VRAC			*e*		07 02 29.8	
VRAC			*e*		07 06 02.3	
VRAC			*e*		07 07 26.9	
VRAC	Vranov	145.23 329	⇑P	PKPab	06 56 01.6	+0.9
BANR	Banloc	145.25 321	⇑P	PKPab	06 56 02.2	+1.3
PVCC	Panska Ves	145.27 333	*e*PKIKP	PKPab	06 56 01.4	+0.6
PVCC			*e*		06 56 40.5	
PVCC			*e*		06 59 18.1	
PVCC			MLR	MLR		
	comp=Z,6µm,24.0s					
PVCC	Panska Ves	145.27 333	*e*PKP	PKPab	06 56 01.4	+0.6
PVCC			*e*sPKP		06 56 40.5	
PVCC			*e*PP	PP	06 59 18.1	-2.5
PVCC			AMS	AMS	07 58 20.0	
	comp=Z,6µm,24.0s					
BRG	Berggiesshubel	145.28 334	*i* PKP	PKPab	06 56 01.4	+0.5
	comp=Z,1µm,1.1s					
BRG			*e*pPKP	pPKPdf	06 56 32.3	+0.9
	comp=Z,317nm,1.4s					
BRG			PP	PP	06 59 17.0	-3.6
BRG			*i* SKP		06 59 29.8	
	comp=Z,154nm,1.6s					
BRG			*e*SKKS		07 06 01.9	
	comp=Z,11nm,1.4s					
BRG			*e*SKKP		07 07 25.9	
	comp=Z,25nm,1.4s					
BRG			SS	SS	07 17 58.0	-4.0
	comp=N,3µm,23.5s					
	comp=E,3µm,25.9s					
	comp=Z,6µm,28.1s					
BRG	Berggiesshubel	145.28 334	*e*PKPbc	PKPab	06 56 01.4	+0.5
	baz=35,slow=2.8					
BRG	Berggiesshubel	145.28 334	*i* PKIKP	PKPab	06 56 01.4	+0.5
BRG			*e*		06 56 32.3	
BRG					06 59 17.0	
BRG			SS	SS	07 17 58.0	-4.0
BRG			pmax	pmax		
	comp=Z,1µm,1.1s					
BRG			pmax	pmax		
	comp=Z,317nm,1.4s					
BRG			MLR	MLR		
	comp=N,25µm,23.5s					
BRG			MLR	MLR		
	comp=E,3µm,25.9s					
BRG			MLR	MLR		
	comp=Z,3µm,28.1s					
VTS	Vitosha	145.32 315	⇓P	PKPab	06 56 01.5	0.0
VTS	Vitosha	145.32 315	*i* P	PKPab	06 56 01.6	0.0
VTS	Vitosha	145.32 315	⇓PKP2	PKPab	06 56 01.5	0.0
VTS	Vitosha	145.32 315		PKPdf	06 56 00.7	-0.5
CLL	Collm	145.32 335	⇑*i*PKPbc	PKPab	06 56 02.2	+1.2
	comp=Z,954nm,1.1s					
CLL			*i* (PKPab)	PKiKP	06 56 03.6	-1.1
CLL			*i* PKiKP	PKPbc	06 56 05.9	+5.2
	comp=Z,764nm,0.9s					
CLL			*e*sPKPdf	sPKPab	06 56 41.0	-1.8
CLL			*e*PP	PP	06 59 22.0	+1.1
CLL			*i* SKPbc	SKiKP	06 59 30.8	+0.6
	comp=Z,84nm,1.3s					
CLL			*e*(pPP)		06 59 55.0	
CLL			*e*PPP	PPP	07 02 42.0	
CLL			*e*SKKSac	SKKSac	07 06 01.0	-1.2
CLL			*e*		07 06 35.0	
CLL			*e*SKKPbc	SKKPab	07 07 28.0	+0.7
	comp=Z,43nm,1.8s					
CLL			*e*		07 07 56.0	
CLL			*e*SKSP		07 09 22.0	
CLL			*e*PSKS		07 09 33.0	
CLL			*e*PPS	PPS	07 11 59.0	
CLL			*e*		07 13 18.0	
CLL			*e*SS	SS	07 17 54.0	-8.4
CLL			*e*SSS	SSS	07 23 30.0	
CLL	Collm	145.32 335	⇑*i*PKP2	PKPab	06 56 02.2	+1.2
CLL			*i*		06 59 30.8	
CLL			pmax	pmax		
	comp=Z,954nm,1.1s					
CLL	Collm	145.32 335		PKPab	06 56 01.1	+0.1
EBL	Broad Law	145.35 353	*e*P	PKPdf	06 56 00.4	-0.2
SRO2	Moca	145.36 326	*e*PKP2	PKPab	06 56 01.5	+0.3
SRO2	Moca	145.36 326	*e*PKP	PKPab	06 56 01.5	+0.3
SMOL	Smolenice	145.36 328	*e*PKP2	PKPab	06 56 02.1	+0.8
SMOL	Smolenice	145.36 328	*e*PKP	PKPab	06 56 02.0	+0.8
SRO	Srobarova	145.37 326	*e*PKP2	PKPab	06 56 02.3	+1.0
SRO	Srobarova	145.37 326	*e*	PKPab	06 56 02.3	+1.0
NRDL	Niedersach Rie	145.44 339	*e*PKPbc	PKPab	06 56 01.6	+0.4
	baz=35,slow=2.8					
MMB	Musomiste	145.45 313	*i* P	PKPdf	06 56 00.1	-1.2
FBE	Freiberg	145.48 334	*e*PKPdf	PKPdf	06 56 00.9	-0.1
	baz=37,slow=1.6					
FBE			*e*PKPbc	PKPab	06 56 02.3	+0.7
	baz=35,slow=2.8					
KRUC	Moravsky	145.50 329	*e*PKP	PKPdf	06 56 01.0	-0.1
KRUC			*e*PP	PP	06 59 20.3	-1.8
KRUC			*e*		07 06 04.0	
KRUC			*e*		07 07 25.6	
KRUC	Moravsky	145.50 329	PKP2	PKPdf	06 56 00.7	-0.4

MODS	Modra-Piesok	145.53 328	*e*PKIKP	PKPdf	06 56 00.3	-0.9
MODS	Modra-Piesok	145.53 328	*e*PKP	PKPdf	06 56 00.3	-0.9
ASSE	Asse, Remlinge	145.54 338	*e*PKPdf	PKPdf	06 56 00.6	-0.3
	baz=37,slow=1.6					
ASSE			*e*PKPbc	PKPab	06 56 02.1	+0.4
	baz=35,slow=2.8					
GOPC	GO Pecny, Ondr	145.63 332	*e*PKP2	PKPab	06 56 02.4	+0.2
GOPC			*e*		06 59 22.3	
GOPC	GO Pecny, Ondr	145.63 332	*e*PKP	PKPab	06 56 02.4	+0.2
GOPC			*e*PP	PP	06 59 22.3	-0.5
GOPC			AMS	AMS	07 51 50.0	
	comp=Z,10µm,30.7s					
PRA	Prague	145.67 332	*e*PKP2	PKPab	06 56 02.6	+0.3
PRA			MLR	MLR		
	comp=Z,3µm,23.8s					
PRA	Prague	145.67 332	*e*PKP	PKPab	06 56 02.6	+0.3
PRA			AMS	AMS	07 56 50.0	
	comp=Z,3µm,23.8s					
PRU	Pruhonice	145.68 332	*e*PKP2	PKPab	06 56 02.3	-0.1
PRU			*e*		06 59 22.8	
PRU			MLR	MLR		
	comp=Z,6µm,24.4s					
PRU	Pruhonice	145.68 332	*e*PKP	PKPab	06 56 02.3	-0.1
PRU			*e*sPKP		06 56 40.9	
PRU			*e*PP	PP	06 59 22.8	-0.3
PRU			AMS	AMS	07 57 40.0	
	comp=Z,6µm,24.4s					
ZST	Bratislava	145.74 328	*e*PKP2	PKPdf	06 56 01.1	-0.4
ZST			*e*		06 59 20.2	
ZST			*e*SS	SS	07 18 09.5	+1.9
ZST	Bratislava	145.74 328	*e*PKP	PKPdf	06 56 01.1	-0.4
ZST			*e*PP	PP	06 59 20.2	-3.4
ZST			*e*SS	SS	07 18 09.5	+1.9
TREC	Trest	145.76 330	*e*PKP2	PKPab	06 56 02.9	+0.2
TREC	Trest	145.76 330	*e*PKP	PKPab	06 56 02.9	+0.2
KKB	Krupnik	145.76 314	*i* P	PKPbc	06 56 02.2	-0.3
ZKR	Zakros	145.76 301	P	PKPdf	06 56 00.6	-1.4
APE	Apeiranthos	145.78 305	⇑P	PKPdf	06 56 01.5	-0.5
APE	Apeiranthos	145.78 305	P	PKPdf	06 56 00.7	-1.3
APE	Apeiranthos	145.78 305	⇑PKP2	PKPdf	06 56 01.5	-0.5
OUR	Ouranopolis	145.79 311	P	PKPdf	06 56 00.7	-1.1
EKA	Eskdalemuir Ar	145.80 353	PKPbc	PKPbc	06 56 01.8	-0.3
	comp=Z,132nm,0.6s,baz=355,slow=2.3,SNR=161					
ESK	Eskdalemuir	145.82 353	*e*P	PKPdf	06 55 59.5	-1.9
ESK			IAMs_20	IAMs_20	07 45 54.5	
	comp=Z,12µm,44.2s					
ESK	Eskdalemuir	145.82 353	PKP2	PKPbc	06 56 01.9	-0.2
ESK	Eskdalemuir	145.82 353		PKPbc	06 56 01.9	-0.2
NEUB	Neuenburg	145.88 336	*e*PKPdf	PKPdf	06 56 01.5	-0.2
	baz=37,slow=1.6					
NEUB			*e*PKPbc	PKPab	06 56 03.2	+0.1
	baz=35,slow=2.8					
CLZ	Clausthal	145.88 338	*e*PKPdf	PKPdf	06 56 01.5	-0.2
	baz=37,slow=1.6					
CLZ			*e*PKPbc	PKPab	06 56 03.3	+0.1
	baz=35,slow=2.8					
SANT	Santorini	146.03 304	⇑P	PKPdf	06 56 02.6	+0.2
SANT	Santorini	146.03 304	P	PKPbc	06 56 03.1	-0.4
SANT	Santorini	146.03 304		PKPdf	06 56 02.6	+0.2
THT2	Imerovigli	146.04 304	P	PKPdf	06 56 02.7	+0.3
PBCC	Pribram	146.14 332	*e*PKP	PKPab	06 56 03.8	-0.4
FRGS	Fruska Gora	146.15 321	⇑*i*P	PKPdf	06 56 01.4	-1.0
MORH	Mrgy, Hungar	146.19 324	⇑*i*P	PKPdf	06 56 01.7	-0.6
KNT	Kendrikon	146.19 313	P	PKPdf	06 56 01.3	-1.2
TANN	Tannenbergstha	146.23 334	*e*PKPdf	PKPdf	06 56 01.9	-0.4
	baz=37,slow=1.6					
TANN			*e*PKPbc	PKPab	06 56 04.3	-0.2
	baz=35,slow=2.8					
GTTG	Gottingen	146.27 338	*e*PKPdf	PKPdf	06 56 02.1	-0.3
	baz=37,slow=1.6					
GTTG			*e*PKPbc	PKPab	06 56 04.4	-0.2
	baz=35,slow=2.8					
HORT	Hortiatis	146.30 312	P	PKPbc	06 56 03.6	-0.6
PLN	Plauen	146.30 335	*e*PKPdf	PKPdf	06 56 01.9	-0.5
	baz=37,slow=1.6					
PLN			*e*PKPbc	PKPab	06 56 04.4	-0.3
	baz=35,slow=2.8					
GUNZ	Gunzen	146.33 334	*e*PKPdf	PKPdf	06 56 02.1	-0.4
	baz=37,slow=1.6					
GUNZ			*e*PKPbc	PKPab	06 56 04.6	-0.3
	baz=35,slow=2.8					
VAY	Valandovo	146.35 313	*i* P	PKPdf	06 56 01.9	-0.9
VAY	Valandovo	146.35 313	*i* P	PKPdf	06 56 01.9	-0.9
IBBN	Ibbenburen	146.36 341	*e*PKPdf	PKPdf	06 56 02.1	-0.3
	baz=37,slow=1.6					
IBBN			*e*PKPbc	PKPab	06 56 04.4	-0.5
	baz=35,slow=2.8					
WERN	Wernitzgruen	146.37 334	*e*PKPdf	PKPdf	06 56 02.3	-0.3
	baz=37,slow=1.6					
WERN			*e*PKPbc	PKPab	06 56 04.8	-0.3
	baz=35,slow=2.8					
NKC	Novy Kostel	146.38 334	*e*PKP2	PKPab	06 56 04.9	-0.2
NKC			MLR	MLR		
	comp=Z,3µm,23.4s					
NKC	Novy Kostel	146.38 334	*e*PKP	PKPab	06 56 04.9	-0.2
NKC			AMS	AMS	07 58 10.0	
	comp=Z,3µm,23.4s					
MOX	Moxa	146.39 335	*e*PKPdf	PKPdf	06 56 02.1	-0.5
	baz=37,slow=1.6					
MOX			*e*PKPbc	PKPab	06 56 04.5	-0.5
	baz=35,slow=2.8					
MOX	Moxa	146.39 335	PKIKP	PKPdf	06 56 02.1	-0.5
GAL1	Galloway	146.41 355	*e*P	PKPdf	06 56 01.8	-0.6
GAL1			IAMs_20	IAMs_20	07 46 13.8	
	comp=Z,12µm,38.3s					
STIP	Stip	146.44 314	*i* P	PKPdf	06 56 01.0	-1.9
STIP	Stip	146.44 314	*i* P	PKPdf	06 56 01.0	-1.9
KESW	Keswick, Cumbr	146.53 353	*e*P	PKPdf	06 56 02.2	-0.4
CONA	Conrad Observa	146.53 328	*i* PKPdf	PKPdf	06 56 02.7	-0.3
	comp=Z,38nm,1.7s,SNR=273					
CONA			*i* PKPab	PKPab	06 56 05.4	-0.4
	comp=Z,450nm,1.3s					
CONA			*i* pPKiKP	pPKPab	06 56 39.2	+3.4
	comp=Z,213nm,1.1s					
HRKL	Herakleio	146.60 302	P	PKPab	06 56 06.6	+0.2
DIVS	Divibare	146.63 320	⇑*i*P	PKPdf	06 56 02.8	-0.5
TEKS	Tekeris	146.66 321	⇑*i*P	PKPbc	06 56 05.3	+0.3
MANZ	Manzenberg	146.71 334	*e*PKPdf	PKPdf	06 56 02.9	-0.3
	baz=37,slow=1.6					
MANZ			*e*PKPbc	PKPbc	06 56 05.6	+0.6
	baz=35,slow=2.8					
MANZ			*e*pPKPbc	pPKPab	06 56 38.8	+2.5
KHC	Kasperske Hory	146.74 332	*e*PKIKP	PKPdf	06 56 03.3	+0.1
KHC			*e*		06 56 36.3	
KHC			*e*		06 59 28.7	
KHC			MLR	MLR		
	comp=Z,6µm,26.6s					
KHC	Kasperske Hory	146.74 332	*e*PKP	PKPdf	06 56 03.3	+0.1
KHC			*e*pPKP	pPKPab	06 56 36.3	-0.1
KHC			*e*PP	PP	06 59 28.7	-0.7
KHC			*e*x	x	07 02 40.7	
KHC			*e*SKKS		07 06 11.8	
KHC			AMS	AMS	07 59 00.0	
	comp=Z,6µm,26.6s					
KHC	Kasperske Hory	146.74 332		PKPdf	06 56 03.0	-0.3
IDI	Anoyia	146.77 302	PKPbc	PKPdf	06 56 03.1	-0.7
	comp=Z,84nm,0.4s,baz=326,slow=6.4,SNR=99					
IDI	Anoyia	146.77 302	⇓P	PKPbc	06 56 05.9	+0.2
IDI	Anoyia	146.77 302	P	PKPab	06 56 06.4	-0.8
IDI	Anoyia	146.77 302		PKPdf	06 56 02.0	-1.8
SKO	Skopje	146.80 315	*i* P	PKPdf	06 56 02.9	-0.6
SKO	Skopje	146.80 315	*i* P	PKPdf	06 56 02.9	-0.6
ROTZ	Rotzenmuhle	146.84 334	*e*PKPdf	PKPdf	06 56 02.6	-0.8
	baz=37,slow=1.6					
ROTZ			*e*PKPbc	PKPbc	06 56 06.0	+0.6
	baz=35,slow=2.8					
ROTZ			*e*pPKPbc	pPKPab	06 56 38.9	+2.2
UBBA	Unterbreizbach	146.86 337	*e*PKPdf	PKPdf	06 56 02.7	-0.5
	baz=37,slow=1.6					
UBBA			*e*PKPbc	PKPbc	06 56 05.8	+0.6
	baz=35,slow=2.8					
UBBA			*e*pPKPbc	pPKPab	06 56 38.8	+2.2
GEC2	GERESS Array S	146.89 331	*e*PKPdf	PKPdf	06 56 03.1	-0.4
	baz=37,slow=1.6					
GEC2			*e*PKPbc	PKPbc	06 56 06.1	+0.4
	baz=35,slow=2.8					
GEC2			*e*pPKPbc	pPKPab	06 56 39.2	+2.1
GEC2	GERESS Array S	146.89 331		PKPdf	06 56 03.2	-0.4
GERES	GERESS Array B	146.89 331	PKPbc	PKPab	06 56 06.4	-0.8
	comp=Z,297nm,0.6s,baz=74,slow=1.4,SNR=334					
LIT	Litokhoron	146.93 312	PKP2	PKPbc	06 56 05.9	-0.1
LIT	Litokhoron	146.93 312		PKPdf	06 56 03.2	-0.6
LIT			PKPbc	PKPbc	06 56 05.8	-0.1
HPK	Haverah Park	146.96 351	*e*P	PKPdf	06 56 03.0	-0.4

HPK			IAMs_20	IAMs_20	07 48 20.5	
	comp=Z,10µm,35.3s					
IOMK	Kirk Michael	147.00 354	*e*P	PKPdf	06 56 01.8	-1.6
IOMK			IAMs_20	IAMs_20	07 46 31.2	
	comp=Z,26µm,38.9s					
WET	Wettzell	147.03 332	*e*PKPdf	PKPdf	06 56 03.4	-0.3
	baz=37,slow=1.6					
WET			*e*PKPbc	PKPbc	06 56 06.5	+0.6
	baz=35,slow=2.8					
WET			*e*pPKPbc	pPKPab	06 56 39.5	+1.9
WET	Wettzell	147.03 332	PKIKP	PKPdf	06 56 03.2	-0.5
BEHE	Becsehely	147.04 326	⇑*i*P	PKPdf	06 56 03.4	-0.4
BBLS	Lazići	147.11 320	⇑*i*P	PKPdf	06 56 03.8	-0.3
WIM	Isle of Man	147.12 355	*e*P	PKPdf	06 56 03.0	-0.6
ARSA	Arzberg	147.16 328	*i* PKPdf	PKPdf	06 56 03.2	-0.8
	comp=Z,24nm,1.7s,SNR=141					
ARSA			*i* PKPab	PKPbc	06 56 06.6	+0.3
	comp=Z,100nm,0.7s					
BUG	Bochum--Univer	147.26 340	*e*PKPdf	PKPdf	06 56 03.3	-0.6
	baz=37,slow=1.6					
BUG			*e*PKPbc	PKPbc	06 56 06.6	+0.2
	baz=35,slow=2.8					
BUG			*e*pPKPbc	pPKPab	06 56 39.7	+1.0
HAPS	Han Pijesak,Bl	147.26 320	*e*P	PKPbc	06 56 06.1	-0.7
RUDO	Rudo	147.27 319	⇑*i*P	PKPbc	06 56 06.5	-0.3
GRA1	Grafenberg Arr	147.30 335		PKPdf	06 56 03.9	-0.3
GRA1			PKPbc	PKPbc	06 56 07.5	+0.9
GRF	Grafenberg Arr	147.30 335	*e*PKPdf	PKPdf	06 56 03.8	-0.3
	baz=37,slow=1.6					
GRF			*e*PKPbc	PKPbc	06 56 07.5	+0.9
	baz=35,slow=2.8					
GRF			*e*pPKPbc	pPKPab	06 56 40.5	+1.9
GRF	Grafenberg Arr	147.30 335	PKIKP	PKPdf	06 56 03.9	-0.3
GRF					06 56 07.6	
IVA	Berane	147.35 318	⇑*i*PKP	PKPdf	06 56 05.0	+0.5
MOA	Molln	147.36 330	*i* PKPdf	PKPdf	06 56 03.2	-1.1
	comp=Z,29nm,1.9s,SNR=178					
MOA			*i* PKPab	PKPbc	06 56 07.4	+0.5
	comp=Z,123nm,0.5s					
DOB	Doboj	147.39 322	*e*P	PKPbc	06 56 06.8	-0.2
FNA	Florina	147.40 313	P	PKPdf	06 56 03.5	-1.1
FNA	Florina	147.40 313	PKP2	PKPbc	06 56 07.0	-0.2
FNA	Florina	147.40 313		PKPdf	06 56 03.9	-0.8
FNA			PKPbc	PKPbc	06 56 07.0	-0.2
PLE	Pljevlja	147.41 319	⇑*i*PKP	PKPdf	06 56 04.9	+0.2
IMMV	Iera Moni Meta	147.44 303	P	PKPdf	06 56 04.9	+0.1
PVY	Plav	147.45 317	⇓*i*PKP	PKPdf	06 56 05.0	+0.2
AGG	Agios Georgios	147.48 310	P	PKPdf	06 56 03.7	-1.1
AGG	Agios Georgios	147.48 310	PKP2	PKPbc	06 56 06.9	-0.6
AGG	Agios Georgios	147.48 310		PKPdf	06 56 04.1	-0.7
AGG			PKPbc	PKPbc	06 56 06.9	-0.6
LBWR	Ladybower, Pea	147.51 351	*e*P	PKPdf	06 56 03.6	-0.8
LBWR			IAMs_20	IAMs_20	07 47 06.5	
	comp=Z,15µm,48.8s					
GVD	Gavdhos	147.52 302	P	PKPdf	06 56 05.1	+0.2
RODP	Rodopos	147.59 303	P	PKiKP	06 56 09.6	-0.3
KOME	Kolasin	147.59 318	⇑*i*PKP	PKPdf	06 56 05.3	+0.4
MOSL	Moslavina	147.60 324	*i* P	PKPdf	06 56 04.0	-0.8
OHR	Ohrid	147.63 314	*i* P	PKPdf	06 56 03.9	-1.1
OHR	Ohrid	147.63 314	*i* P	PKPdf	06 56 03.9	-1.1
UPM	Unac-Piva	147.78 319	⇑*i*P	PKPbc	06 56 07.9	-0.5
UPM	Unac-Piva	147.78 319	⇑*i*PKP	PKPdf	06 56 05.5	+0.1
PERS	Pernice	147.79 327	*i* PKPdf	PKPdf	06 56 04.2	-0.9
PERS			*i* PKPbc	PKPbc	06 56 08.0	-0.1
PERS			*i* PKPab	PKPab	06 56 11.4	+0.6
PERS			*e*SKPdf	SKPdf	06 59 24.7	-3.7
PERS			*e*PP	PP	06 59 38.3	+2.6
PERS			*i* SKKSac	SKKSac	07 06 14.6	-1.9
PERS			*e*		07 12 06.7	
PERS			*e*		07 13 50.1	
PERS			*e*		07 32 46.3	
SOKA	Soboth	147.80 327	*i* PKPdf	PKPdf	06 56 04.4	-0.8
	comp=Z,34nm,1.5s,SNR=129					
SOKA			*i* PKPbc	PKPbc	06 56 08.4	+0.2
	comp=Z,276nm,1.4s					
WME	Myndd Eilian	147.83 354	*e*P	PKPdf	06 56 04.0	-0.9
PTJ	Puntijarka	147.83 325	P	PKPdf	06 56 04.6	-0.6
WPS	Cemaes, Angles	147.84 354	*e*P	PKPdf	06 56 04.3	-0.6
WPS			IAMs_20	IAMs_20	07 46 53.3	
	comp=Z,13µm,47.0s					
ZAG	Zagreb	147.87 325	⇑*i*P	PKPdf	06 56 05.1	0.0
ZAG	Zagreb	147.87 325	P	PKPdf	06 56 05.2	0.0
BLY	Banja Luka	147.90 323	⇓P	PKPbc	06 56 08.8	+0.4
BLY	Banja Luka	147.90 323	⇑*i*P	PKPdf	06 56 04.7	-0.5
BLY	Banja Luka	147.90 323		PKPdf	06 56 05.4	+0.2
BLY			PKPbc	PKiKP	06 56 09.4	-0.8
TNS	Taunus Mts	147.91 338	*e*PKPdf	PKPdf	06 56 04.9	-0.3
	baz=37,slow=1.6					
TNS			*e*PKPbc	PKPbc	06 56 08.8	+0.5
	baz=35,slow=2.8					
TNS			*e*pPKPbc	pPKPab	06 56 42.0	+0.7
NKY	Niksic	147.94 318	⇑*i*PKP	PKPdf	06 56 05.9	+0.4
WLF1	Llynfaes	147.94 354	*e*P	PKPdf	06 56 04.2	-0.8
WLF1			IAMs_20	IAMs_20	07 46 56.1	
	comp=Z,20µm,40.0s					
PDG	Podgorica	147.98 317	⇑P	PKPbc	06 56 08.4	-0.3
PDG	Podgorica	147.98 317	⇑*i*P	PKPdf	06 56 04.3	-1.1
PDG	Podgorica	147.98 317		PKPbc	06 56 09.1	+0.4
TTG	Podgorica	147.98 317	⇑*i*PKP	PKPdf	06 56 05.0	-0.4
NKME	Niksic	147.99 318	⇑*i*PKP	PKPdf	06 56 06.1	+0.6
IGLA	Glengowla, Co	148.07 360	*e*P	PKPdf	06 56 02.3	-2.9
IGLA			IAMs_20	IAMs_20	07 46 49.8	
	comp=Z,19µm,47.8s					
CWF	Charnwood Fore	148.09 350	*e*P	PKPdf	06 56 04.5	-0.8
CWF			IAMs_20	IAMs_20	07 47 45.3	
	comp=Z,11µm,38.1s					
AHRW	Bad Neuenahr-A	148.10 340	*e*PKPdf	PKPdf	06 56 04.9	-0.4
	baz=37,slow=1.6					
AHRW			*e*PKPbc	PKPbc	06 56 09.1	+0.4
	baz=35,slow=2.8					
RJOB	Jochberg	148.12 331	*e*PKPdf	PKPdf	06 56 04.7	-0.9
	baz=37,slow=1.6					
RJOB			*e*PKPbc	PKPbc	06 56 09.1	+0.1
	baz=35,slow=2.8					
CEME	Cevo	148.13 318	⇑*i*PKP	PKPdf	06 56 06.2	+0.4
TIR	Tirane	148.14 315	⇑P	PKPbc	06 56 09.8	+0.7
TIR	Tirane	148.14 315	⇑PKP2	PKPbc	06 56 09.8	+0.7
TIR	Tirane	148.14 315		PKPbc	06 56 09.4	+0.2
DSB	Dublin	148.15 356		PKPdf	06 56 04.7	-0.7
DSB			PKPbc	PKPbc	06 56 09.2	+0.5
DRME	Dracevica, Mon	148.15 317	⇑*i*P	PKPdf	06 56 05.0	-0.8
DRME	Dracevica, Mon	148.15 317	⇑*i*PKP	PKPdf	06 56 06.4	+0.6
CRES	Cresnjev	148.15 326	⇑*i*P	PKPdf	06 56 04.6	-1.1
MGRS	Mrkonjic Grad	148.16 322	⇑*i*P	PKPbc	06 56 09.5	+0.4
OBKA	Obir	148.16 327	*i* PKPdf	PKPdf	06 56 04.7	-1.0
	comp=Z,27nm,1.8s,SNR=38					
OBKA			*i* PKPbc	PKPbc	06 56 08.9	-0.3
	comp=Z,103nm,1.1s					
BRY	Bratogost	148.17 319	⇑*i*P	PKPbc	06 56 09.0	-0.4
BRY	Bratogost	148.17 319	⇑*i*PKP	PKPdf	06 56 06.3	+0.3
FOEL	Foel Wylfa	148.21 353	*e*P	PKPdf	06 56 05.1	-0.4
FOEL			IAMs_20	IAMs_20	07 47 26.7	
	comp=Z,13µm,46.0s					
ULC	Ulcinj	148.23 317	⇑*i*PKP	PKPdf	06 56 06.5	+0.6
BUM	Brajici-Budva	148.27 318	⇑*i*PKP	PKPdf	06 56 06.5	+0.5
OZLJ	Ozalj	148.29 325	*i* P	PKPdf	06 56 05.1	-0.7
LLW	Llanuwychllyn	148.30 353	*e*P	PKPdf	06 56 04.6	-1.0
LLW			IAMs_20	IAMs_20	07 47 06.8	
	comp=Z,5µm,39.8s					
KBA	Koelnbreinsper	148.34 329	*e*PKPdf	PKPdf	06 56 04.7	-1.5
	comp=Z,22nm,1.4s,SNR=122					
KBA			*i* PKPbc	PKPbc	06 56 09.2	-0.5
	comp=Z,376nm,0.8s					
MEM	Membach	148.38 341	PKIKP	PKPdf	06 56 06.5	+0.7
TREB	Trebinje	148.39 319	⇑*i*P	PKPbc	06 56 08.9	-0.8
HCY	Herceg Novi	148.45 318	⇑*i*P	PKPbc	06 56 09.5	-0.4
HCY	Herceg Novi	148.45 318	⇑*i*PKP	PKPdf	06 56 06.9	+0.7
ITM	Ithomi	148.46 307	P	PKPdf	06 56 05.7	-0.8
ITM	Ithomi	148.46 307		PKPdf	06 56 06.3	-0.1
ITM			PKPbc	PKPbc	06 56 10.3	+0.2
FUR	Furstenfeldbru	148.47 333	*e*PKPdf	PKPdf	06 56 05.4	-0.7
	baz=37,slow=1.6					
FUR			*e*PKPbc	PKPbc	06 56 10.1	+0.3
	baz=35,slow=2.8					
BOJS	Bojanci	148.47 325	*i* PKPdf	PKPdf	06 56 05.9	-0.2
BOJS			*i* PKPbc	PKPbc	06 56 10.5	+0.7
BOJS			*i* PKPab	PKPab	06 56 13.8	+0.3
BOJS			*e*pPKPbc	pPKPab	06 56 42.1	-1.2
BOJS			*e*PP	PP	06 59 42.2	+2.5
BOJS			*i* SKKSac	SKKSac	07 06 19.6	-0.6
BOJS			*e*		07 06 57.7	
BOJS			*e*		07 09 38.0	
BOJS			*e*		07 24 44.3	

LJU	Ljubljana	148.49	327	i PKPdf	PKPdf	06 56 05.8	-0.4
LJU				i PKPbc	PKPbc	06 56 10.2	+0.3
LJU				i PKPab	PKPab	06 56 13.5	0.0
LJU				i pPKPbc	pPKPab	06 56 42.3	-1.1
LJU				ePP	PP	06 59 40.7	+1.0
LJU				epPP		07 00 03.7	
LJU				ePPP	PPP	07 02 48.7	
LJU				e		07 04 01.5	
LJU				i SKKSac	SKKSac	07 06 18.6	-1.7
LJU				eSS	SS	07 18 42.1	+3.4
LJU	Ljubljana	148.49	327	⇑iP	PKPdf	06 56 05.8	-0.4
MYKA	Terra Mystica	148.52	328	i PKPdf	PKPdf	06 56 05.2	-1.1
	comp=Z,15nm,1.3s,SNR=147						
MYKA				i PKPbc	PKPbc	06 56 09.7	-0.4
	comp=Z,239nm,0.6s						
HLM1	Long Mynd	148.53	352	eP	PKPdf	06 56 05.4	-0.7
HLM1				IAMs_20	IAMs_20	07 49 04.1	
	comp=Z,10µm,33.0s						
DBRK	Dubrovnik	148.54	319	i P	PKPdf	06 56 05.7	-0.6
UCC	Uccle	148.69	343	PKP2	PKPbc	06 56 10.7	+0.5
UCC	Uccle	148.69	343		PKPbc	06 56 10.7	+0.5
STON	Ston	148.70	319	⇑iP	PKPdf	06 56 05.3	-1.3
STON	Ston	148.70	319	i P	PKPdf	06 56 05.1	-1.5
CEY	Cerknica	148.75	327	⇑iP	PKPdf	06 56 05.7	-1.0
KIJV	Kijevo	148.79	322	i P	PKPdf	06 56 05.9	-0.9
UDBI	Udbina	148.83	324	i P	PKPdf	06 56 05.5	-1.4
STU	Stuttgart	148.83	336	ePKPdf	PKPdf	06 56 06.0	-0.7
	baz=37,slow=1.6						
STU				ePKPbc	PKPbc	06 56 11.1	+0.4
	baz=35,slow=2.8						
STU				epPKPbc	pPKPab	06 56 44.5	-0.5
STU	Stuttgart	148.83	336	PKIKP	PKPdf	06 56 06.8	+0.1
STU						06 56 11.2	
STU	Stuttgart	148.83	336		PKPdf	06 56 06.8	+0.1
STU				PKPbc	PKPbc	06 56 11.2	+0.4
MAKA	Makarska	148.87	321	i P	PKPdf	06 56 05.1	-1.8
WATA	Walderalm	148.97	331	i PKPdf	PKPdf	06 56 06.1	-1.0
	comp=Z,36nm,1.6s,SNR=178						
WATA				i PKPbc	PKPbc	06 56 11.1	-0.2
	comp=Z,401nm,1.3s						
WATA				i sPKPdf	pPKPab	06 56 45.5	0.0
	comp=Z,371nm,1.9s						
ABTA	Abfaltersbach	148.98	330	i PKPdf	PKPdf	06 56 05.9	-1.1
	comp=Z,52nm,1.4s,SNR=151						
ABTA				i PKPbc	PKPbc	06 56 10.9	-0.3
	comp=Z,337nm,0.7s						
ABTA				i sPKPdf	pPKPab	06 56 45.2	-0.2
	comp=Z,296nm,1.4s						
WTTA	Wattenberg	149.00	331	i PKPdf	PKPdf	06 56 07.0	-0.2
	comp=Z,62nm,1.5s,SNR=202						
WTTA				i PKiKP	PKPbc	06 56 11.8	+0.4
	comp=Z,915nm,1.4s						
RIY	Rijeka	149.00	326	⇑iP	PKPdf	06 56 06.1	-0.9
RIY	Rijeka	149.00	326	P	PKPdf	06 56 04.9	-2.1
IWEX	Carrickbyrne,	149.04	357	eP	PKPdf	06 56 05.6	-1.2
IWEX				IAMs_20	IAMs_20	07 47 17.8	
	comp=Z,15µm,43.8s						
MCH1	Michaelchurch	149.06	352	eP	PKPdf	06 56 05.9	-1.0
MCH1				IAMs_20	IAMs_20	07 47 49.4	
	comp=Z,14µm,43.6s						
TRI	Trieste	149.11	327	PKHKP	PKPpre	06 56 06.2	
TRI						06 56 11.5	
TRI	Trieste	149.11	327		PKPdf	06 56 06.2	-1.0
TRI				PKPbc	PKPbc	06 56 11.5	0.0
STRD	Stroud	149.16	351	eP	PKPdf	06 56 05.8	-1.3
STRD				IAMs_20	IAMs_20	07 48 12.4	
	comp=Z,14µm,46.1s						
WLF	Walferdange	149.16	340	ePKPdf	PKPdf	06 56 06.9	-0.2
	baz=37,slow=1.6						
WLF				ePKPbc	PKiKP	06 56 12.4	-0.2
	baz=35,slow=2.8						
WLF				epPKPbc	pPKPab	06 56 45.7	-0.6
WLF	Walferdange	149.16	340	PKP2	PKiKP	06 56 12.9	+0.3
WLF	Walferdange	149.16	340		PKPdf	06 56 07.9	+0.8
WLF				PKPbc	PKiKP	06 56 12.9	+0.3
ELSH	Elham, Standar	149.16	347	eP	PKPdf	06 56 06.9	-0.2
ELSH				IAMs_20	IAMs_20	07 48 40.1	
	comp=Z,12µm,42.4s						
MOTA	Moosalm	149.17	332	i PKPdf	PKPdf	06 56 06.4	-1.0
	comp=Z,29nm,1.5s,SNR=173						
MOTA				i PKPbc	PKPbc	06 56 11.9	+0.1
	comp=Z,459nm,0.8s						
MOTA				i sPKPdf	pPKPab	06 56 45.4	-0.9
	comp=Z,496nm,1.9s						
RETA	Reutte	149.21	332	i PKPdf	PKPdf	06 56 06.8	-0.7
	comp=Z,21nm,1.6s,SNR=83						
RETA				i PKPbc	PKPbc	06 56 11.9	+0.1
	comp=Z,161nm,0.7s						
RETA				i pPKPab	pPKPab	06 56 45.1	-1.2
	comp=Z,229nm,1.6s						
SQTA	Sankt Quirin	149.22	332	i PKPdf	PKPdf	06 56 06.7	-0.8
	comp=Z,33nm,1.6s,SNR=136						
SQTA				i PKiKP	PKPbc	06 56 12.0	+0.2
	comp=Z,424nm,0.6s						
STAL	STALIGIAL	149.24	329		PKPdf	06 56 06.4	-1.0
STAL				PKPbc	PKPbc	06 56 11.7	-0.1
MORI	Morici	149.28	323	i P	PKPdf	06 56 07.5	0.0
NVLJ	Novalja	149.30	324	i P	PKPdf	06 56 05.9	-1.6
OLDB	Oldbury-Upon-S	149.32	351	eP	PKPdf	06 56 06.7	-0.6
OLDB				IAMs_20	IAMs_20	07 49 44.8	
	comp=Z,10µm,32.2s						
UBR	Ueberruh	149.34	333	ePKPdf	PKPdf	06 56 06.5	-1.1
	baz=37,slow=1.6						
UBR				ePKPbc	PKPbc	06 56 12.2	+0.1
	baz=35,slow=2.8						
UBR				epPKPbc	pPKPab	06 56 45.4	-2.0
H10S2	ASCENSION HYDR	149.40	170	PKPbc	PKiKP	06 56 14.1	+0.2
H10S3	ASCENSION HYDR	149.41	170	PKPbc	PKiKP	06 56 14.1	+0.2
ZIRJ	Zirje	149.44	322	i P	PKPdf	06 56 06.5	-1.3
BFO	Black Forest	149.52	336	ePKPdf	PKPdf	06 56 06.9	-1.0
	baz=37,slow=1.6						
BFO				ePKPbc	PKPbc	06 56 12.4	0.0
	baz=35,slow=2.8						
BFO	Black Forest	149.52	336	PKP2	PKiKP	06 56 13.0	-0.5
BFO	Black Forest	149.52	336		PKPdf	06 56 07.5	-0.4
BFO				PKPbc	PKiKP	06 56 12.9	-0.5
DUGI	Dugi Otok	149.56	323	i P	PKPdf	06 56 08.1	+0.1
FETA	Feichten	149.58	332	i PKPdf	PKPdf	06 56 07.4	-0.7
	comp=Z,31nm,1.5s,SNR=164						
FETA				i PKiKP	PKPbc	06 56 13.2	+0.4
	comp=Z,582nm,0.9s						
SCTE	Santa Cesarea	149.69	314		PKPbc	06 56 13.3	+0.2
DAVA	Damuels	149.74	333	i PKPdf	PKPdf	06 56 07.8	-0.6
	comp=Z,17nm,1.3s,SNR=72						
DAVA				i PKiKP	PKPbc	06 56 13.6	+0.4
	comp=Z,318nm,1.0s,SNR=31						
DAVA				i pPKPab	pPKPbc	06 56 44.7	+1.0
	comp=Z,503nm,1.7s						
CTI	Castel Tesino	149.90	330	PKP2	PKPbc	06 56 13.8	+0.3
CTI	Castel Tesino	149.90	330		PKPdf	06 56 08.2	-0.4
CTI				PKPbc	PKPbc	06 56 13.8	+0.3
ECH	Echery	150.05	337	PKIKP	PKPbc	06 56 14.1	+0.3
ECH	Echery	150.05	337		PKPdf	06 56 08.2	-0.4
ECH				PKPbc	PKPbc	06 56 14.1	+0.3
FUORN	Ofenpass-Fuorn	150.10	332		PKPdf	06 56 09.0	-0.1
DAVOX	Davos/Dischmat	150.14	332	PKP	PKPdf	06 56 08.4	-0.6
	comp=Z,13nm,0.7s,baz=74,slow=2.7,SNR=21						
DAVOX				PKPbc	PKiKP	06 56 14.6	-0.4
	comp=Z,399nm,0.6s,baz=127,slow=2.8,SNR=133						
BAI	Bari	150.19	317	⇑iP	PKPbc	06 56 14.0	-0.2
HTL	Hartland	150.22	353	eP	PKPdf	06 56 08.3	-0.4
HTL				IAMs_20	IAMs_20	07 48 23.1	
	comp=Z,16µm,51.9s						
TAR1	Taranto	150.24	316	⇑iP	PKPbc	06 56 13.9	-0.5
SG1	Sgolgore (BA)	150.46	317	⇑iP	PKPbc	06 56 14.9	-0.1
H10N1	ASCENSION HYDR	150.52	170	PKPbc	PKiKP	06 56 17.5	+1.3
	baz=195,slow=4.5,SNR=11						
H10N3	ASCENSION HYDR	150.52	170	PKPbc	PKiKP	06 56 17.8	+1.6
	baz=195,slow=4.5,SNR=14						
SGRT	San Giovanni R	150.53	319		PKPbc	06 56 14.9	-0.2
H10N2	ASCENSION HYDR	150.54	170	PKPbc	PKiKP	06 56 17.8	+1.6
	baz=195,slow=4.5,SNR=16						
MATE	Matera	150.55	317	⇓P	PKPbc	06 56 14.0	-1.1
TUE	Stuetta	150.61	333		PKPdf	06 56 09.3	-0.6
TUE				PKPbc	PKiKP	06 56 15.9	-0.1
SALO	Salr	150.74	330		PKPdf	06 56 09.0	-0.8
SALO					PKPbc	06 56 15.6	+0.1
ACER	Acerenza	150.96	317	PKPdf	PKPdf	06 56 09.9	-0.5
ACER					PKPbc	06 56 16.0	-0.1
ACER				PKPab	PKPab	06 56 24.9	+1.0
TIP	Timpagrande	151.28	314	⇑P	PKPdf	06 56 10.3	-0.6
TIP	Timpagrande	151.28	314		PKPdf	06 56 10.2	-0.7
TIP				PKPbc	PKiKP	06 56 17.6	+0.2
MURB	Monte Urbino	151.43	325		PKPdf	06 56 10.2	-0.8
MURB				PKPbc	PKPbc	06 56 17.3	+0.1
ZCCA	Zocca	151.46	328		PKPdf	06 56 10.9	0.0
ZCCA				PKPbc	PKiKP	06 56 18.9	+1.2
INTR	Introdacqua	151.47	321		PKPdf	06 56 10.8	-0.3
PRMA	PARMA	151.48	329		PKPdf	06 56 10.8	-0.1
AQU	L'Aquila	151.54	322	⇑iP	PKPdf	06 56 09.8	-1.4
AQU	L'Aquila	151.54	322	PKIKP	PKPbc	06 56 17.4	-0.1
AQU	L'Aquila	151.54	322		PKPbc	06 56 17.4	-0.1
JSA	Saint Aubin	151.67	350	eP	PKPdf	06 56 10.5	-0.5
JSA				IAMs_20	IAMs_20	07 51 27.9	
	comp=Z,8µm,37.4s						
PAOL	Paolisi	151.67	319		PKPbc	06 56 17.2	-0.6
CLF	Chambon-Foret	151.78	343		PKPdf	06 56 11.5	+0.3
CLF				PKPbc	PKiKP	06 56 18.6	+0.5
OSSC	Osservatorio P	151.92	326		PKPdf	06 56 10.3	-1.4
OSSC				PKPbc	PKPbc	06 56 17.6	-0.6
MSSA	Maissana	152.19	330		PKPbc	06 56 18.1	-0.8
MSSA				PKPab	PKPab	06 56 29.2	+0.3
CEL	Celeste	152.32	313		PKPbc	06 56 19.3	-0.1
CEL				PKPab	PKPab	06 56 31.5	+1.8
CASP	Castiglione de	152.63	326		PKPbc	06 56 19.2	-0.6
BNI	Bardonecchia	152.86	334	PKIKP	PKiKP	06 56 21.1	+0.5
BNI	Bardonecchia	152.86	334		PKPdf	06 56 12.9	-0.3
BNI				PKPbc	PKiKP	06 56 21.1	+0.5
SSB	Saint Sauveur	153.50	337	PKIKP	PKPdf	06 56 13.5	-0.4
SSB						06 56 34.8	
SSB	Saint Sauveur	153.50	337		PKPdf	06 56 13.5	-0.4
SSB				PKPab	PKPab	06 56 34.8	+0.4
VAE	Valguarnera	153.73	313	PKP	PKPdf	06 56 15.1	+0.6
	comp=Z,3.3nm,0.4s,baz=174,slow=23,SNR=4.5						
VAE				PP	PP	07 00 11.7	+1.3
	comp=Z,7.4nm,0.7s,baz=114,slow=8.4,SNR=3.6						
CORL	Corleone	154.26	315		PKPdf	06 56 14.1	-1.1
H07S1	FLORES T-PHASE	154.34	41	ePKP	PKPdf	06 56 16.9	+1.6
H07S1	FLORES T-PHASE	154.34	41	ePP	PP	07 00 15.1	+1.6
CLTB	Caltabellotta	154.49	314		PKiKP	06 56 24.5	+0.3
VSL	Villasalto	155.71	322	PKPdf	PKPdf	06 56 16.9	-0.2
VSL					PKPab	06 56 44.7	+0.6
PCED	Cedros	156.32	39	ePKP	PKPdf	06 56 18.8	+0.8
PGRA	Graciosa	156.47	38	ePKP	PKPdf	06 56 18.8	+0.6
PGRA	Graciosa	156.47	38	ePP	PP	07 00 09.2	-16
ROSA	Rosais	156.53	39	ePKP	PKPdf	06 56 17.6	-0.6
ROSA	Rosais	156.53	39	ePP	PP	07 00 25.3	-0.2
PCAN	Candelaria	156.56	39	ePKP	PKPdf	06 56 18.3	0.0
PICO	Pico	156.57	39	ePKP	PKPdf	06 56 18.9	+0.5
KEST	Kesra	158.10	315	PKP	PKPdf	06 56 18.3	-2.1
	comp=Z,3.6nm,0.8s,baz=100,slow=6.1,SNR=1.9						
KEST				PKPab	PKPab	06 56 55.3	+0.8
	comp=Z,18nm,0.6s,baz=81,slow=7.5,SNR=7.0						
KEST				PP	PP	07 00 35.3	+0.8
	comp=Z,13nm,1.0s,baz=310,slow=0.5,SNR=6.8						
KEST	Kesra	158.10	315		PKPdf	06 56 19.9	-0.6
KEST					PKPab	06 56 55.0	+0.4
KEST					PP	07 00 35.9	+1.4
PSET	Sete Cidades	158.59	37	ePKP	PKPdf	06 56 20.6	-0.3
PSET	Sete Cidades	158.59	37	ePP	PP	07 00 36.5	-0.3
PDA	Ponta Delgada	158.67	37	ePKP	PKPdf	06 56 21.3	+0.4
PCALD	Caldeiras da R	158.74	36	ePKP	PKPdf	06 56 21.6	+0.6
CMLA	Cha da Macela	158.74	37	ePKP	PKPdf	06 56 21.9	+0.9
CMLA	Cha da Macela	158.74	37	ePP	PP	07 00 37.7	+0.1
BART	Pico Bartolome	158.93	36	ePKP	PKPdf	06 56 21.5	+0.2
PGAV	Gavieira, Arco	159.50	357	ePKPdf	PKPdf	06 56 21.1	-0.8
PGAV	Gavieira, Arco	159.50	357	ePKPab	PKPab	06 57 00.2	-0.1
PGAV	Gavieira, Arco	159.50	357	ePP	PP	07 00 42.8	+1.8
PGAV	Gavieira, Arco	159.50	357	eSS	SS	07 20 42.3	+4.9
PSMA	Santa Maria	159.50	37	ePKP	PKPdf	06 56 21.8	-0.1
PSMN	Pico do Norte,	159.53	37	ePKP	PKPdf	06 56 21.9	-0.1
PSMN	Pico do Norte,	159.53	37	ePP	PP	07 00 43.0	+1.1
PBRG	Braganca	159.54	354	ePKPdf	PKPdf	06 56 21.3	-0.6
PBRG	Braganca	159.54	354	ePKPab	PKPab	06 57 00.2	-0.2
PBRG	Braganca	159.54	354	ePP	PP	07 00 42.8	+1.6
PBRG	Braganca	159.54	354	eSS	SS	07 20 45.6	+7.9
PCAB	Cabril	159.74	356	ePKPdf	PKPdf	06 56 21.8	-0.3
PCAB	Cabril	159.74	356	ePKPab	PKPab	06 57 01.7	+0.4
PCAB	Cabril	159.74	356	ePP	PP	07 00 45.2	+3.0
PVRL	Vila Real	160.15	356	ePKPdf	PKPdf	06 56 21.6	-1.0
PVRL	Vila Real	160.15	356	ePKPab	PKPab	06 57 03.3	+0.2
PVRL	Vila Real	160.15	356	ePP	PP	07 00 45.8	+1.3
MVO	Moncorvo	160.21	354	ePKPdf	PKPdf	06 56 22.4	-0.3
MVO	Moncorvo	160.21	354	ePKPab	PKPab	06 57 03.1	-0.3
MVO	Moncorvo	160.21	354	ePP	PP	07 00 46.3	+1.5
MVO	Moncorvo	160.21	354	eSS	SS	07 20 50.6	+5.8
PVIS	Viseu	160.72	356	ePKPdf	PKPdf	06 56 23.5	+0.3
PVIS	Viseu	160.72	356	ePKPab	PKPab	06 57 06.0	+0.4
PVIS	Viseu	160.72	356	ePP	PP	07 00 48.9	+1.4
MTE	Manteigas	161.01	355	ePKPdf	PKPdf	06 56 22.9	-0.7
MTE	Manteigas	161.01	355	ePKPab	PKPab	06 57 07.1	+0.2
MTE	Manteigas	161.01	355	ePP	PP	07 00 50.3	+1.2
MTE	Manteigas	161.01	355	eSS	SS	07 20 58.1	+4.9
MTE	Manteigas	161.01	355		PKPdf	06 56 22.9	-0.7
ESDC	Sonseca Array	161.17	346	PKP	PKPdf	06 56 23.1	-0.7
	comp=Z,1.3nm,0.8s,baz=359,slow=3.1,SNR=11						
ESDC				PKPab	PKPab	06 57 07.3	-0.3
	comp=Z,15nm,1.0s,baz=19,slow=2.2,SNR=4.3						
ESDC				PP	PP	07 00 50.2	+0.1
	comp=Z,5.0nm,1.2s,baz=20,slow=6.7,SNR=4.0						
COI	Coimbra	161.26	357	PKP2	PKPab	06 57 08.4	+0.6
COI	Coimbra	161.26	357	ePKPdf	PKPdf	06 56 23.4	-0.3
COI	Coimbra	161.26	357	ePKPab	PKPab	06 57 07.9	0.0
COI	Coimbra	161.26	357	ePP	PP	07 00 51.7	+1.4
COI	Coimbra	161.26	357		PKPab	06 57 08.4	+0.6
PAB	San Pablo	161.38	347	PKIKP	PKPdf	06 56 23.0	-1.0
PAB	San Pablo	161.38	347		PKPdf	06 56 23.0	-1.0
PCAS	Casmilo, Conde	161.42	357	ePKPdf	PKPdf	06 56 23.2	-0.7
PCAS	Casmilo, Conde	161.42	357	ePKPab	PKPab	06 57 08.7	+0.1
PCAS	Casmilo, Conde	161.42	357	ePP	PP	07 00 52.7	+1.5
PCBR	Castelo Branco	161.56	355	ePKPdf	PKPdf	06 56 23.5	-0.6
PCBR	Castelo Branco	161.56	355	ePKPab	PKPab	06 57 09.4	+0.2
PCBR	Castelo Branco	161.56	355	ePP	PP	07 00 53.2	+1.3
PMRV	Marv??o	161.96	354	ePKPdf	PKPdf	06 56 23.8	-0.7
PMRV	Marv??o	161.96	354	ePKPab	PKPab	06 57 11.2	+0.2
PMRV	Marv??o	161.96	354	ePP	PP	07 00 55.5	+1.4
PMRV	Marv??o	161.96	354	eSS	SS	07 21 09.5	+6.5
PSBE	So Bento	161.97	358	ePKPdf	PKPdf	06 56 23.6	-0.9
PSBE	So Bento	161.97	358	ePKPab	PKPab	06 57 11.2	+0.2
PSBE	So Bento	161.97	358	ePP	PP	07 00 56.3	+2.2
PSBE	So Bento	161.97	358	eSS	SS	07 21 10.7	+7.7
CART	Cartagena	162.24	337	i PKP	PKPdf	06 56 21.8	-3.0
CART	Cartagena	162.24	337	i PKS	PP	07 00 52.8	-3.0
SESP	Santiago Espad	162.27	341	P	PKPdf	06 56 26.4	+1.3
	SNR=8.2						
SESP	Santiago Espad	162.27	341	P	PP	07 00 59.2	+3.0
	SNR=8.4						
PMTG	Montargil	162.38	356	ePKPdf	PKPdf	06 56 25.1	+0.2
PMTG	Montargil	162.38	356	ePKPab	PKPab	06 57 13.8	+1.0
PMTG	Montargil	162.38	356	ePP	PP	07 00 57.4	+1.1
PMTG	Montargil	162.38	356	eSS	SS	07 21 13.9	+6.6
PESTR	Estremoz	162.53	355	P	PKPab	06 57 14.0	+0.5
	SNR=6.0						
PESTR	Estremoz	162.53	355	eSS	SS	07 21 15.1	+6.2
PESTR	Estremoz	162.53	355		PKPab	06 57 13.4	-0.1
PMAFR	Mafra	162.54	359	ePKPdf	PKPdf	06 56 24.6	-0.5
PMAFR	Mafra	162.54	359	ePKPab	PKPab	06 57 13.7	+0.2
PMAFR	Mafra	162.54	359	ePP	PP	07 00 58.8	+1.7
LIS	Lisbon	162.77	359	ePKPdf	PKPdf	06 56 24.9	-0.4
LIS				ePP	PP	07 01 00.1	+1.8
LIS				AMS	AMS	08 06 02.4	
	comp=Z,3µm,19.2s						
LIS	Lisbon	162.77	359	ePKIKP	PKPdf	06 56 24.9	-0.4
LIS				e		07 01 00.1	
LIS	Lisbon	162.77	359	ePKPdf	PKPdf	06 56 25.3	0.0
LIS	Lisbon	162.77	359	ePKPab	PKPab	06 57 14.7	+0.2
LIS	Lisbon	162.77	359	ePP	PP	07 00 59.9	+1.6
EVO	Evora	162.90	356	i PKP	PKPdf	06 56 23.0	-2.5
EVO	Evora	162.90	356	i PKS	PP	07 00 59.0	-0.1
EVO	Evora	162.90	356	ePKPdf	PKPdf	06 56 24.6	-0.9
EVO	Evora	162.90	356	ePKPab	PKPab	06 57 15.3	+0.2
EVO	Evora	162.90	356	ePP	PP	07 01 00.5	+1.4
HORN	Hornachuelos	163.20	348	P	PKPdf	06 56 26.1	+0.3
	SNR=6.6						
HORN	Hornachuelos	163.20	348	P	PP	07 01 05.9	+5.1
	SNR=7.9						
PNCL	Nicolau / Gran	163.35	357	ePKPdf	PKPdf	06 56 25.8	-0.1
PNCL	Nicolau / Gran	163.35	357	ePKPab	PKPab	06 57 17.8	+0.7
PNCL	Nicolau / Gran	163.35	357	ePP	PP	07 01 02.6	+1.2
PNCL	Nicolau / Gran	163.35	357	eSS	SS	07 21 25.4	+8.1
PBEJ	Beja	163.39	355	ePKPdf	PKPdf	06 56 25.8	-0.2
PBEJ	Beja	163.39	355	ePKPab	PKPab	06 57 17.6	+0.3
PBEJ	Beja	163.39	355	ePP	PP	07 01 03.3	+1.6
MESJ	Messejana	163.60	356	ePKPdf	PKPdf	06 56 25.7	-0.4
MESJ				ePP	PP	07 01 04.5	+1.8
MESJ				AMS	AMS	08 05 57.2	
	comp=Z,4µm,16.2s						
MESJ	Messejana	163.60	356	ePKIKP	PKPdf	06 56 25.7	-0.4
MESJ				e		07 01 04.5	
MESJ	Messejana	163.60	356	ePKPdf	PKPdf	06 56 25.7	-0.4
MESJ	Messejana	163.60	356	ePKPab	PKPab	06 57 18.6	+0.4
PCVE	Castro Verde	163.80	355	ePKPdf	PKPdf	06 56 25.8	-0.5
PCVE	Castro Verde	163.80	355	ePKPab	PKPab	06 57 19.5	+0.4
PCVE	Castro Verde	163.80	355	ePP	PP	07 01 05.3	+1.5
PCVE	Castro Verde	163.80	355	eSS	SS	07 21 27.7	+5.8
PTEO	Sao Teotonio	163.93	357	ePKPdf	PKPdf	06 56 25.6	-0.8
PTEO	Sao Teotonio	163.93	357	ePKPab	PKPab	06 57 20.0	+0.4
PTEO	Sao Teotonio	163.93	357	ePP	PP	07 01 06.5	+2.1
PVAQ	Vaqueiros	164.00	354	P	PKPdf	06 56 26.7	+0.2
	SNR=5.1						
PVAQ	Vaqueiros	164.00	354	P	PKPab	06 57 20.8	+0.8
	SNR=6.1						
PVAQ	Vaqueiros	164.00	354	ePKPdf	PKPdf	06 56 26.3	-0.2
PVAQ	Vaqueiros	164.00	354	ePKPab	PKPab	06 57 20.0	0.0
PVAQ	Vaqueiros	164.00	354	ePP	PP	07 01 06.3	+1.5
PVAQ	Vaqueiros	164.00	354	eSS	SS	07 21 31.2	+7.2
PVAQ	Vaqueiros	164.00	354		PKPab	06 57 20.1	+0.2
EMAL	Malaga-Limoner	164.06	344	i PKP	PKPdf	06 56 25.0	-1.6
EMAL	Malaga-Limoner	164.06	344	i PKS	PP	07 01 06.9	+1.6
MORF	Marmelete	164.16	357	ePKPdf	PKPdf	06 56 26.2	-0.6
MORF				ePP	PP	07 01 07.5	+1.7
MORF				AMS	AMS	08 04 34.1	
	comp=Z,4µm,19.3s						
MORF	Marmelete	164.16	357	ePKIKP	PKPdf	06 56 26.2	-0.6
MORF				e		07 01 07.4	
MORF	Marmelete	164.16	357	ePKPdf	PKPdf	06 56 26.2	-0.6
MORF	Marmelete	164.16	357	ePKPab	PKPab	06 57 21.0	+0.3
MORF	Marmelete	164.16	357	ePP	PP	07 01 06.8	+1.1
PBDV	Barranco-do-Ve	164.18	355	ePKPdf	PKPdf	06 56 26.7	0.0
PBDV	Barranco-do-Ve	164.18	355	ePKPab	PKPab	06 57 21.1	+0.3
PBDV	Barranco-do-Ve	164.18	355	ePP	PP	07 01 07.1	+1.3
LIC	Lamto	164.22	197	ePKIKP	PKPdf	06 56 26.7	-0.7
	comp=Z,236nm,1.8s						
KIC	Kosan Boka	164.26	198	ePKIKP	PKPdf	06 56 26.9	-0.6
	comp=Z,352nm,2.0s						
PFVI	Vila Bisbo	164.34	357	P	PKPab	06 57 22.5	+1.0
	SNR=5.2						
PFVI	Vila Bisbo	164.34	357	ePKPdf	PKPdf	06 56 26.8	0.0
PFVI	Vila Bisbo	164.34	357	ePKPab	PKPab	06 57 21.6	+0.1
PFVI	Vila Bisbo	164.34	357	ePP	PP	07 01 07.8	+1.2
DBIC	Dimbokro	164.59	198	PKP	PKPdf	06 56 27.2	-0.6
	comp=Z,23nm,0.9s,baz=119,slow=0.9,SNR=14						
DBIC				PKPab	PKPab	06 57 23.4	+0.2
	comp=Z,137nm,1.0s,baz=147,slow=5.2,SNR=28						
DBIC				PP	PP	07 01 10.0	+1.9
	comp=Z,26nm,1.1s,baz=159,slow=6.1,SNR=5.1						
TIC	Toumodi	164.62	198	ePKIKP	PKPdf	06 56 27.2	-0.6
SFS	San Fernando	164.72	349	i PKP	PKPdf	06 56 26.7	-0.5
SFS	San Fernando	164.72	349	i PKS	PP	07 01 10.5	+1.9
MELI	Melilla	164.98	338	i PKP	PKPdf	06 56 25.9	-1.5
MELI	Melilla	164.98	338	i PKS		07 01 09.7	
GOG	Mont Gurugu	165.06	338	P	PKPdf	06 56 29.0	+1.3
	SNR=8.9						
GOG	Mont Gurugu	165.06	338	P	PKPab	06 57 27.1	+2.2
	SNR=6.4						
GOG	Mont Gurugu	165.06	338	P	PP	07 01 13.0	+2.2
	SNR=8.7						
CEU	Ceuta	165.10	346	i PKP	PKPdf	06 56 26.1	-1.4
CEU	Ceuta	165.10	346	i PKS	PP	07 01 12.6	+2.0
TAF	Taforalt	165.22	336	P	PKPdf	06 56 30.0	+2.2
	SNR=13						
TAF	Taforalt	165.22	336	P	PP	07 01 15.0	+3.3
	SNR=9.3						
PALE	Palemas	165.37	341	P	PKPdf	06 56 28.0	+0.1
	SNR=5.4						
PALE	Palemas	165.37	341	P	PP	07 01 16.0	+3.7
	SNR=6.3						
PVLZ	Peæn de	165.52	342	i PKP	PKPdf	06 56 25.1	-2.7
PVLZ	Peæn de	165.52	342	i PKS	PP	07 01 12.0	-0.9
TAM	Tamanrasset	165.84	278	PKIKP	PKPdf	06 56 29.2	+0.4
TAM						06 57 30.4	
TAM	Tamanrasset	165.84	278		PKPdf	06 56 29.1	+0.4
TAM					PKPab	06 57 30.4	+1.4
RSA	Sarsar	166.18	347	P	PKPdf	06 56 31.0	+2.4
	SNR=8.0						
RSA	Sarsar	166.18	347	P	PP	07 01 22.0	+5.6
	SNR=7.7						
TOA0	Torodi Ar. Sit	166.36	235	PKPdf	PKPdf	06 56 28.6	-0.5
	SNR=9.5						
TOA0	Torodi Ar. Sit	166.36	235		PKPdf	06 56 28.2	-0.9
TOA0				PKPab	PKPab	06 57 31.6	+0.5
TORD	Torodi Ar. Bea	166.36	235	PKP	PKPdf	06 56 28.5	-0.7
	comp=Z,8.6nm,0.7s,baz=346,slow=0.4,SNR=39						
TORD				PKPab	PKPab	06 57 31.2	+0.1
	comp=Z,52nm,1.0s,baz=122,slow=3.4,SNR=18						
TORD				PP	PP	07 01 16.6	-2.1
	comp=Z,15nm,1.2s,baz=116,slow=3.4,SNR=5.1						
TDRA	Tendrara	166.59	331	P	PKPdf	06 56 31.1	+2.0
	SNR=9.5						
TDRA	Tendrara	166.59	331	P	PP	07 01 23.0	+3.9
	SNR=8.5						
SICH	Sidi Chahed	166.81	344	P	PKPdf	06 56 32.0	+3.0
	SNR=5.8						
PMOZ	Porto Moniz, M	166.84	29	ePKPdf	PKPdf	06 56 30.0	+0.8
PMOZ	Porto Moniz, M	166.84	29	ePKPab	PKPab	06 57 32.7	-0.1
PMOZ	Porto Moniz, M	166.84	29	ePP	PP	07 01 25.4	+5.1
PMOZ	Porto Moniz, M	166.84	29	eSS	SS	07 22 02.6	+8.5
PMPST	Porto Santo, M	166.99	26	ePKPdf	PKPdf	06 56 29.8	+0.7
PMPST	Porto Santo, M	166.99	26	ePKPab	PKPab	06 57 33.6	+0.3
PMPST	Porto Santo, M	166.99	26	ePP	PP	07 01 21.5	+0.7
PMPS	Porto Santo	167.01	26	ePKPdf	PKPdf	06 56 28.9	-0.2
PMAR	Madeira	167.05	28	ePKPdf	PKPdf	06 56 29.9	+0.5
FUL	Funchal	167.13	28	ePKPdf	PKPdf	06 56 30.9	+1.7
RTC	Rabat Centre	167.25	349	P	PP	07 01 27.0	+5.3
	SNR=5.8						
IFR	Ifrane	167.31	342	i PKP	PKPdf	06 56 29.0	-0.6
IFR	Ifrane	167.31	342	i PKS	PP	07 01 22.9	+0.6
CZD	Col de Zad	167.74	341	P	PKPdf	06 56 32.0	+1.9
	SNR=7.9						
MDT	Midelt	167.80	339	PKP	PKPdf	06 56 29.2	-0.7
	comp=Z,9.7nm,0.9s,baz=61,slow=2.0,SNR=12						
MDT				PKPab	PKPab	06 57 37.8	+0.8
	comp=Z,8.7nm,0.6s,baz=93,slow=1.7,SNR=11						
MDT				PP	PP	07 01 26.8	+1.9
	comp=Z,6.7nm,1.0s,baz=53,slow=6.1,SNR=5.6						
AVE	Averroes	168.01	351	P	PKPab	06 57 38.9	+1.1
	SNR=5.4						
AVE	Averroes	168.01	351	i PKP	PKPdf	06 56 28.9	-0.9
SRHM	Skhour des Reh	168.90	352	P	PKPdf	06 56 33.0	+2.4
	SNR=6.2						
SRHM	Skhour des Reh	168.90	352	P	PKPab	06 57 45.0	+3.2
	SNR=6.0						
ARF	Arif	168.91	335	P	PKPdf	06 56 33.0	+2.3
	SNR=7.6						
ARF	Arif	168.91	335	P	PKPab	06 57 46.0	+4.0
	SNR=5.2						
GOLM	Goulmima	168.93	338	P	PKPdf	06 56 33.0	+2.3
	SNR=6.3						
GOLM	Goulmima	168.93	338	P	PP	07 01 36.0	+5.3
	SNR=5.5						
TZRR	Tazzarine	169.98	339	P	PKPdf	06 56 34.0	+2.7
	SNR=6.8						
OUK	Oukaimeden	170.13	351	P	PKPdf	06 56 34.0	+2.3
	SNR=9.2						
OUK	Oukaimeden	170.13	351	P	PKPab	06 57 49.1	+1.4
	SNR=12						
OUK	Oukaimeden	170.13	351	P	PP	07 01 41.1	+4.4
	SNR=6.4						
OUZM	OUZ	170.21	345	P	PP	07 01 42.0	+5.0
	SNR=7.0						
ZGR	Zagora	170.61	338	P	PKPdf	06 56 34.0	+2.3
	SNR=6.7						
ZGR	Zagora	170.61	338	P	PKPab	06 57 52.0	+2.4
	SNR=6.3						
TTIG	Tnine Tigouga,	170.86	353	P	PKPab	06 57 51.2	+0.6
	SNR=5.8						

IDC 01 07:06:34.1±2.2, 5°.34S×153°.83E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/41, mbtmp3.4/3, Error ellipse: s-maj=149.7km s-min=32.5km az=131.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.88	231	P	P	07 11 50.8	+1.1
	0.4nm,0.4s,baz=57,slow=10,SNR=9.5						
ASAR	Alice Springs	26.47	225	P	P	07 12 12.4	-0.8
	0.2nm,0.3s,baz=57,slow=9.1,SNR=2.6						
YKA	Yellowknife Ar	95.42	28	P	P	07 20 00.1	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.2nm,0.7s,baz=269,slow=5.2,SNR=4.5						
TORD	Torodi Ar. Bea	151.44	288	PKPbc	PKPbc	07 26 30.6	-0.6
	0.1nm,0.3s,baz=52,slow=0.8,SNR=1.9						

IDC ***01*** *07:28:33.9±1.2, 40°00N×77°51E, h0km, mb3.7/15, mb1 3.8/21, mb1mx3.7/80, mbtmp3.7/21, ML3.1/6, Error ellipse: s-maj=22.0km s-min=16.1km az=151.0*
SOME ***01*** *07:28:33.2, 40°30N×77°33E, h0km, MS3.7*
BJI ***01*** *07:28:37.2±0.0, 40°45N×77°25E, h8km, mb3.8/2, ML4.2/9*
KRNET ***01*** *07:28:38.3±0.1, 40°26N×77°48E, h30km, mb4.5*
NEIC ***01*** *07:28:39.7±1.8, 40°10N±0°07×77°50E±0°09, h36km±8km, mb4.2/8, Error ellipse: s-maj=12.2km s-min=8.0km az=137.0*
NNC ***01*** *07:28:41.9±1.0, 40°52N×77°23E, h0km, mb4.8, mpv4.5, Error ellipse: s-maj=7.1km s-min=5.1km az=163.0*
ISC 01 07:28:38.1±1.3**, 40°45N**±0°03×**77°20E**±0°02**, h8**km±8km**, n134,** σ1**s75**/172**, mb3.9**/17**, 21C-33D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	1.32	226	Pg	Pg	07 29 11.2	+7.7
KSH				Sg	Sn	07 29 36.0	+15
KSH				smax	smax		
	comp=N,2µm,0.4s						
KSH				smax	smax		
	comp=E,2µm,0.4s						
KSH	Kashi	1.32	226	⇓iP	Pg	07 29 03.8	+0.3
	baz=39						
KSH				⇓iS	Sn	07 29 22.4	+1.6
	baz=39						
KDJ	Kajisay	1.68	360	⇓iP	Pg	07 29 10.6	+0.3
	baz=54						
KDJ				⇓iS	Sg	07 29 33.4	+1.3
	baz=54						
KDJ	Kajisay	1.68	360		Pg	07 29 10.6	+0.3
KDJ				Sn	Sg	07 29 33.8	+1.7
ULHL	Ulahol	1.94	338	⇓eP	Pg	07 29 14.3	-0.9
	baz=35						
ULHL				⇓iS	Sg	07 29 40.8	+0.5
	baz=35						
ULHL	Ulahol	1.94	338	P	Pg	07 29 15.2	0.0
	SNR=175						
KZA	Kyzart	2.19	319	⇓iP	Pb	07 29 18.5	+0.3
	baz=18						
KZA				⇓iS	Sg	07 29 47.8	-0.8
	baz=18						
KZA	Kyzart	2.19	319	P	Pg	07 29 20.1	0.0
	SNR=112						
PRZ	Przheval'sk	2.22	24	⇑iP	Pb	07 29 17.0	-1.6
	baz=17						
PRZ				⇑iS	Sb	07 29 44.4	-2.0
	baz=17						
PRZ	Przheval'sk	2.22	24		Pb	07 29 18.3	-0.3
PRZ				Sn	Sg	07 29 47.3	-2.2
BOOM	Boomskoye usch	2.25	336	⇓eP	Pb	07 29 19.1	+0.1
	baz=33						
BOOM				⇓iS	Sg	07 29 48.5	-1.8
	baz=33						
BOOM	Boomskoye usch	2.25	336		Pg	07 29 20.6	-0.6
BOOM				Sn	Sg	07 29 52.4	+2.1
ANVS	Anan'yevo	2.36	8	⇑eP	Pb	07 29 19.4	-1.5
	baz=3.0						
ANVS				⇑iS	Sb	07 29 49.0	-1.3
	baz=3.0						
TNSS	Tian-Shan	2.59	356	eP	Pb	07 29 24.8	-0.2
	294nm,0.6s						
TNSS				eS	Sg	07 30 02.3	+0.9
	2µm,0.5s						
IZV	Izvestkoviy	2.62	351	eP	Pb	07 29 25.8	+0.4
	24nm,0.3s						
IZV				eS	Sg	07 30 04.1	+1.8
	790nm,0.4s						
IZV	Izvestkoviy	2.62	351	Pg	Pg	07 29 28.2	-0.1
	249nm,0.8s						
IZV				Lg	Lg	07 30 03.5	
	1µm,0.5s						
UCH	Uchtor	2.69	312	⇓iP	Pb	07 29 25.5	-1.3
	baz=12						
UCH				⇓iS	Sb	07 29 59.9	-0.2
	baz=12						
UCH	Uchtor	2.69	312	P	Pb	07 29 27.4	+0.7
	SNR=42						
MDOK	Medeo	2.71	358	eP	Pb	07 29 27.5	+0.5
	75nm,0.4s						
MDOK				eS	Sg	07 30 06.6	+1.3
	1µm,0.3s						
MDOK	Medeo	2.71	358	⇓Pg	Pg	07 29 33.4	+3.3
	396nm,0.8s						
MDOK				⇑Lg	Lg	07 30 07.2	
	1µm,0.8s						
MDOK	Medeo	2.71	358	Pg	Pg	07 29 30.3	+0.2
	330nm,0.8s						
MDOK				Lg	Lg	07 30 06.2	
	2µm,0.6s						
MTBS	Maitube	2.74	348	eP	Pb	07 29 27.8	+0.5
	67nm,0.2s						
MTBS				eS	Sg	07 30 07.2	+1.1
	553nm,0.3s						
MTBS	Maitube	2.74	348	Pg	Pg	07 29 30.1	-0.5
	146nm,0.6s						
MTBS				Lg	Lg	07 30 06.5	
	536nm,0.5s						
TKM2	Tokmak 2	2.75	335	⇓eP	Pb	07 29 26.6	-0.9
	baz=33						
TKM2				⇓iS	Sb	07 30 00.5	-0.9
	baz=33						
TKM2	Tokmak 2	2.75	335	P	Pb	07 29 27.3	-0.2
	SNR=116						
TKM2	Tokmak 2	2.75	335	⇓Pn	Pb	07 29 27.6	+0.1
	138nm,0.6s						
TKM2				⇑Lg	Lg	07 30 07.4	
	641nm,0.9s						
KST	Kastek	2.75	341	eP	Pb	07 29 28.3	+0.7
	170nm,0.4s						
KST				eS	Sg	07 30 08.1	+1.6
	493nm,0.3s						
KST	Kastek	2.75	341	Pg	Pg	07 29 31.4	+0.6
	187nm,0.7s						
KST				Lg	Lg	07 30 08.0	
	518nm,0.7s						
SATY	Saty	2.76	19	eP	Pb	07 29 28.2	+0.5
	116nm,0.7s						
SATY				eS	Sg	07 30 07.8	+1.1
	970nm,0.4s						
SATY	Saty	2.76	19	Pg	Pg	07 29 31.2	+0.2
	199nm,0.7s						
SATY				Lg	Lg	07 30 07.6	
	969nm,0.4s						
AAA	Alma-Ata	2.77	356	eP	Pg	07 29 29.0	-2.1
	56nm,0.4s						
AAA				eS	Sg	07 30 09.1	+2.1
	2µm,0.5s						
AAA	Alma-Ata	2.77	356	Pg	Pg	07 29 31.7	+0.6
	191nm,0.4s						
AAA				Lg	Lg	07 30 09.2	
	2µm,0.6s						
KNDC	Almaty	2.77	356	⇓Pg	Pg	07 29 31.7	+0.5
	212nm,0.5s						
KNDC				⇓Lg	Lg	07 30 08.1	
	3µm,0.8s						
KBK	Karagaybulak	2.78	323	⇑iP	Pb	07 29 27.3	-0.8
	baz=22						
KBK				⇑iS	Sb	07 30 01.5	-0.8
	baz=22						
KBK	Karagaybulak	2.78	323	P	Pb	07 29 28.2	+0.1
	SNR=59						
KOTS	Kotyrbulak	2.78	359	eP	Pb	07 29 28.6	+0.5
	124nm,0.2s						
KOTS				eS	Sg	07 30 09.0	+1.5
	1µm,0.5s						
KOTS	Kotyrbulak	2.78	359	Pg	Pg	07 29 31.6	+0.2
	599nm,0.6s						
KOTS				Lg	Lg	07 30 08.7	
	1µm,0.5s						
AAK	Ala-Archa	2.98	318	Pn	Pb	07 29 31.5	0.0
	4.7nm,0.3s,baz=104,slow=7.5,SNR=35						
AAK				Sn	Sg	07 30 13.3	-0.7
	25nm,0.3s,baz=1.2,slow=20,SNR=12						
AAK	Ala-Archa	2.98	318	⇓eP	Pb	07 29 30.5	-1.1
	baz=18						
AAK				⇓iS	Sb	07 30 06.5	-1.7
	baz=18						
AAK	Ala-Archa	2.98	318	P	Pb	07 29 30.7	-0.8
	SNR=84						
AAK	Ala-Archa	2.98	318	⇑Pg	Pg	07 29 37.0	+1.8
	179nm,0.6s						
AAK				⇓Lg	Lg	07 30 15.4	
	377nm,0.7s						
AAK	Ala-Archa	2.98	318		Pb	07 29 30.4	-1.1
FRU1	Bishkek	3.05	322	⇓iP	Pb	07 29 31.2	-1.3
	baz=21						
FRU1				⇓iS	Sb	07 30 07.8	-2.1
	baz=21						
FRU1	Bishkek	3.05	322		Pb	07 29 32.6	0.0
KURS	Kuram	3.12	13	eP	Pb	07 29 34.4	+0.6
	40nm,0.3s						
KURS				eS	Sg	07 30 18.5	+0.1
	390nm,0.6s						
KURS	Kuram	3.12	13	Pg	Pg	07 29 37.4	-0.5
	192nm,0.9s						
KURS				Lg	Lg	07 30 18.4	
	386nm,0.7s						
AML	Almayashu	3.13	304	⇑eP	Pb	07 29 32.9	-1.3
	baz=4.0						
AML				⇑iS	Sb	07 30 10.3	-2.4
	baz=4.0						
AML	Almayashu	3.13	304	P	Pb	07 29 33.9	-0.3
	SNR=60						
CHMS	Chumysh	3.14	325	⇓iP	Pb	07 29 32.3	-1.8
	baz=24						
CHMS				⇓iS	Sb	07 30 09.9	-2.6
	baz=24						
CHMS	Chumysh	3.14	325	P	Pb	07 29 32.8	-1.3
	SNR=21						
SHLS	Shalkode	3.19	31	eP	Pg	07 29 38.5	-0.7
	13nm,0.1s						
SHLS				eS	Sg	07 30 25.6	+5.1
	520nm,0.4s						
SHLS	Shalkode	3.19	31	Pg	Pg	07 29 41.3	+2.1
	99nm,0.5s						
SHLS				Lg	Lg	07 30 24.9	
	292nm,0.6s						
KTBS	Karatobe	3.28	353	eP	Pb	07 29 37.5	+0.9
	39nm,0.4s						
KTBS				eS	Sg	07 30 23.8	+0.3
	1µm,0.5s						
KTBS	Karatobe	3.28	353	Pg	Pg	07 29 40.4	-0.6
	298nm,0.5s						
KTBS				Lg	Lg	07 30 23.5	
	1µm,0.6s						
ARSB	Arslanbob	3.31	287	⇓iP	Pb	07 29 34.9	-2.3
	baz=89						
ARSB				⇓iS	Sb	07 30 14.2	-3.5
	baz=89						
PDGK	Podgornoye	3.35	30	Pg	Pg	07 29 41.1	-1.1
	48nm,0.4s						
PDGK				Lg	Lg	07 30 24.5	
	351nm,0.8s						
PDGK	Podgornoye	3.35	30	⇑Pn	Pb	07 29 34.5	-3.2
	83nm,0.5s						
PDGK				⇑Lg	Lg	07 30 24.4	
	514nm,0.7s						
EKS2	Erkin-Say	3.39	312	⇑iP	Pb	07 29 36.2	-2.2
	baz=12						
EKS2				⇑iS	Sb	07 30 16.4	-3.4
	baz=12						
EKS2	Erkin-Say	3.39	312	P	Pb	07 29 37.2	-1.2
	SNR=65						
CHKK	Chushkaly	3.41	357	eP	Pb	07 29 39.8	+1.1
	38nm,0.3s						
CHKK				eS	Sg	07 30 27.7	+0.3
	1µm,0.3s						
CHKK	Chushkaly	3.41	357	Pg	Pg	07 29 42.5	-0.8
	171nm,0.7s						
CHKK				Lg	Lg	07 30 27.4	
	1µm,0.4s						
KRBS	Karabastau	3.44	341	eP	Pb	07 29 39.9	+0.7
	67nm,0.4s						
KRBS				eS	Sg	07 30 27.8	-0.7
	188nm,0.4s						
KRBS	Karabastau	3.44	341	Pg	Pg	07 29 43.2	-0.7
	152nm,0.9s						
KRBS				Lg	Lg	07 30 28.1	
	189nm,0.6s						
USP	Ospenovka	3.46	325	⇑eP	Pb	07 29 36.8	-2.9
	baz=24						
USP				⇑iS	Sb	07 30 17.7	-4.2
	baz=24						
USP	Ospenovka	3.46	325	P	Pb	07 29 37.0	-2.6
	SNR=13						
KUU	Kurty	3.50	350	eP	Pb	07 29 40.8	+0.5
	34nm,0.4s						
KUU				eS	Sg	07 30 29.4	-1.1
	400nm,0.8s						
KUU	Kurty	3.50	350	Pg	Pg	07 29 43.9	-1.2
	86nm,1.0s						
KUU				Lg	Lg	07 30 29.6	
	979nm,0.9s						
SGDS	Sogindy	3.56	328	Pg	Pg	07 29 45.3	-1.0
	244nm,0.5s						
SGDS				Lg	Lg	07 30 31.7	
	222nm,0.7s						
MNBS	Baschi	3.74	13	eP	Pb	07 29 45.5	+1.1
	9.2nm,0.2s						
MNBS				eS	Sg	07 30 37.4	-0.6
	483nm,0.2s						
MNBS	Baschi	3.74	13	Pg	Pg	07 29 48.3	-1.3
	65nm,0.5s						
MNBS				Lg	Lg	07 30 37.1	
	482nm,0.3s						
MRKS	Merke	3.76	309	eP	Pg	07 29 47.6	-2.5
	37nm,0.3s						
MRKS				eS	Sg	07 30 41.0	+2.2
	108nm,0.4s						
MRKS	Merke	3.76	309	Pg	Pg	07 29 50.4	+0.3
	134nm,0.7s						
MRKS				Lg	Lg	07 30 40.7	
	111nm,0.6s						
ARXS	Arharly	3.79	7	eP	Pb	07 29 46.0	+0.7
	58nm,0.4s						
ARXS				eS	Sg	07 30 38.4	-1.4
	220nm,0.3s						
ARXS	Arharly	3.79	7	Pg	Pg	07 29 48.7	-2.0
	146nm,0.6s						
ARXS				Lg	Lg	07 30 38.2	
	222nm,0.4s						
KTMS	Ketmen	3.81	37	eP	Pb	07 29 45.9	+0.3
	0.4nm,0.1s						
KTMS				eS	Sg	07 30 38.0	-2.4
	252nm,0.4s						
KTMS	Ketmen	3.81	37	Pg	Pg	07 29 48.8	-2.3
	1.2nm,0.2s						
KTMS				Lg	Lg	07 30 37.9	
	194nm,0.6s						
DJR	Jarkent	4.33	25	eP	Pb	07 29 55.0	+0.6
	13nm,0.2s						
DJR				eS	Sg	07 30 53.8	-3.2
	118nm,0.4s						
DJR	Jarkent	4.33	25	Pg	Pg	07 29 57.6	-3.4
	45nm,0.9s						
DJR				Lg	Lg	07 30 53.3	
	137nm,0.5s						
TDK	Taldyqorghan	4.64	11	eP	Pb	07 30 00.3	+0.7
	50nm,0.3s						
TDK				eS	Sg	07 31 02.8	-4.2
	463nm,0.5s						
TDK	Taldyqorghan	4.64	11	Pg	Pg	07 30 04.0	-2.9
	208nm,0.6s						
TDK				Lg	Lg	07 31 03.8	
	468nm,0.6s						
DZA	Taraz	5.03	301	Pg	Pg	07 30 14.3	-0.1
	130nm,0.1s						
DZA				Lg	Lg	07 31 21.3	
	65nm,0.3s						
KAPS	Kapalarasan	5.09	17	eP	Pb	07 30 09.3	+2.0
	6.4nm,0.4s						
KAPS				eS	Sg	07 31 18.5	-2.9
	107nm,0.4s						
KAPS	Kapalarasan	5.09	17	Pg	Pg	07 30 12.5	-3.0
	34nm,0.5s						
KAPS				Lg	Lg	07 31 18.9	
	108nm,0.7s						
BTLS	Baital	5.14	334	Pg	Pg	07 30 14.3	-2.3
	116nm,1.1s						
BTLS				Lg	Lg	07 31 21.4	
	29nm,0.8s						
GAR	Garm	5.50	257		Pn	07 30 02.4	+2.1
IUG	Iuzhnay	5.66	290	Pg	Pg	07 30 26.1	-0.4
	26nm,1.0s						
IUG				Lg	Lg	07 31 42.3	
	181nm,1.1s						
KK31	Karatay Array	5.66	300	⇑Pn	Pn	07 30 06.2	+3.8
	2.5nm,0.7s,baz=116,slow=14,SNR=28						
KK31				⇓Pg	Pg	07 30 23.6	-2.8
	43nm,0.8s,baz=123,slow=16,SNR=13						
KK31				⇓Lg	Lg	07 31 39.0	
	9.5nm,0.5s,baz=124,slow=29,SNR=4.9						
KK31	Karatay Array	5.66	300		Pn	07 30 06.2	+3.8
KKAR	Karatay Array	5.66	300		Pn	07 30 06.7	+4.2
BRLS	Boroldаy	6.08	297	Pg	Pg	07 30 33.9	-0.7
	11nm,0.9s						
BRLS				Lg	Lg	07 31 54.9	
	4.6nm,0.8s						
CHGR	Chuyangaron	6.47	257		Pn	07 30 13.6	0.0
CHGR				Sn	Sn	07 31 26.6	-1.0
MAKZ	Makanchi	7.24	27	⇓Pn	Pn	07 30 30.3	+6.2
	7.9nm,0.5s						
MAKZ				⇑Lg	Lg	07 32 31.3	
	21nm,0.8s						
MK31	Makanchi Array	7.34	29	Pn	Pn	07 30 28.2	+2.8
	1.5nm,0.4s,baz=200,slow=13,SNR=19						
MK31				⇓Lg	Lg	07 32 34.7	
	5.1nm,0.5s,baz=215,slow=28,SNR=2.5						
MK31	Makanchi Array	7.34	29		Pn	07 30 28.6	+3.1
MKAR	Makanchi Array	7.34	29	Pn	Pn	07 30 28.5	+3.0
	0.7nm,0.3s,baz=202,slow=16,SNR=25						
MKAR				Sn	Sn	07 31 50.2	+1.3
	1.0nm,0.3s,baz=230,slow=16,SNR=5.1						
MKAR				Lg	Lg	07 32 30.9	
	1.8nm,0.3s,baz=208,slow=26,SNR=4.1						
CHCP	Chirah Chowk	7.47	206	P	Pn	07 30 29.8	+2.4
CEP	Cherat	7.84	214	P	Pn	07 30 34.3	+1.7
THN	Thein Dam	8.09	189	eS	Sn	07 32 07.5	+0.2
WMQ	Urumqi	8.49	63	eP	Pn	07 30 42.6	+1.2
WMQ				smax	smax		
	comp=N,15nm,1.1s						
WMQ				smax	smax		
	comp=E,19nm,0.9s						
OTUK	Ortayu	8.54	338	⇓Pn	Pn	07 30 45.5	+3.6
	1.1nm,0.6s						
OTUK				⇓Lg	Lg	07 33 08.5	
	48nm,0.9s						
KBL	Kabul	8.76	230	Pn	Pn	07 30 41.8	-3.4
KURBB	Kurchatov Arra	10.22	5	Pn	Pn	07 31 06.2	+1.3
	0.1nm,0.3s,baz=192,slow=12,SNR=9.8						
KURBB				Lg	Lg	07 33 59.8	
	0.1nm,0.3s,baz=194,slow=29,SNR=2.9						
KURBB	Kurchatov Arra	10.22	5	⇑Lg	Lg	07 34 07.5	
	47nm,0.9s						
KURK	Kurchatov	10.32	5	⇑Lg	Lg	07 34 10.8	
	57nm,0.9s						
KURK	Kurchatov	10.32	5		Pn	07 31 07.1	+0.9
BVAR	Borovoye Array	13.41	342	Pn	Pn	07 31 49.1	+0.6
	0.1nm,0.3s,baz=134,slow=13,SNR=5.0						
BVAR				Sn	Sn	07 34 26.4	+8.7
	0.1nm,0.3s,baz=236,slow=37,SNR=2.1						
BVAR				Lg	Lg	07 35 43.0	
	0.3nm,0.3s,baz=148,slow=31,SNR=6.0						
BRVK	Borovoye	13.47	342	Pn	P	07 31 53.7	-5.0
ZAA0	Zalesovo Array	14.45	18	Pn	Pn	07 32 05.1	+2.4
ZALV	Zalesovo Beam	14.45	18	Pn	Pn	07 32 05.1	+2.4
	0.1nm,0.3s,baz=218,slow=8.9,SNR=3.2						
ZALV				Sn	S	07 34 52.6	-10
	0.2nm,0.3s,baz=212,slow=24,SNR=1.5						
ZALV				Lg	Lg	07 36 23.4	
	0.1nm,0.3s,baz=199,slow=22,SNR=4.5						
ABKAR	Akbulak array	15.05	312	Pn	Pn	07 32 10.7	-0.2
AKTO	Aktyubinsk	16.71	313	P	P	07 32 34.7	-0.1
	0.1nm,0.3s,baz=126,slow=14,SNR=6.5						
ARU	Arti	20.11	329	P	Pn	07 33 13.8	0.0
	0.5nm,0.3s,baz=106,slow=20,SNR=1.5						
ARU	Arti	20.11	329	P	Pn	07 33 13.8	0.0
SONM	Songino Array	22.12	61	P	P	07 33 30.0	-4.0
	0.3nm,0.4s,baz=148,slow=26,SNR=3.5						
KMI	Kunming	26.23	118	P	P	07 34 16.4	+2.7
BRTR	Keskin Array B	33.09	283	P	P	07 35 14.4	+0.1
	0.8nm,0.6s,baz=93,slow=9.2,SNR=4.5						
AKASG	Malin Array Be	34.55	304	P	P	07 35 27.6	+0.8
	0.3nm,0.4s,baz=80,slow=8.0,SNR=1.9						
FINES	FINESS Array B	37.16	322	P	P	07 35 50.4	+1.3
	1.2nm,0.6s,baz=108,slow=12,SNR=5.0						
ARCES	ARCESS Array B	39.53	334	P	P	07 36 10.1	+1.2
	2.0nm,0.7s,baz=98,slow=9.1,SNR=10						
NOA	NORSAR Array B	44.30	320	P	P	07 36 49.2	+1.1
	0.8nm,0.8s,baz=87,slow=7.9,SNR=2.1						
GERES	GERESS Array B	44.76	303	P	P	07 36 53.0	+1.1
	1.4nm,0.8s,baz=79,slow=6.9,SNR=9.5						
ESDC	Sonseca Array	59.91	298	P	P	07 38 44.0	-0.5
	0.3nm,0.5s,baz=50,slow=7.0,SNR=3.5						
INK	Inuvik	69.14	12	P	P	07 39 43.8	-0.5
	0.5nm,0.5s,baz=342,slow=5.1,SNR=6.7						
INK	Inuvik	69.14	12	P	P	07 39 43.6	-0.7
INK				IAmb	IAmb	07 39 47.9	
	comp=Z,3.5nm,1.4s						
C36M	Paulatuk	69.40	8	P	P	07 39 45.5	-0.3
C36M				IAmb	IAmb	07 40 01.8	
	comp=Z,3.7nm,1.4s						
ILAR	Eielson Array	69.58	19	P	P	07 39 46.1	-0.9
	comp=Z,0.3nm,0.7s,baz=337,slow=3.3,SNR=4.0						
TOA0	Torodi Ar. Sit	70.60	271	P	P	07 39 53.7	-0.4
TOA0				IAmb	IAmb	07 40 01.4	
	comp=Z,1.5nm,0.8s						
TORD	Torodi Ar. Bea	70.60	271	P	P	07 39 53.0	-1.2
	comp=Z,0.4nm,0.4s,baz=45,slow=5.5,SNR=8.9						
DHY	Denali Highway	70.86	20	P	P	07 39 54.7	-0.5
DHY				IAmb	IAmb	07 40 08.6	
	comp=Z,2.5nm,1.1s						
KDAK	Kodiak Island	73.64	25	P	P	07 40 11.0	-0.6
	comp=Z,2.8nm,0.6s,baz=318,slow=5.5,SNR=2.4						
KDAK	Kodiak Island	73.64	25	P	P	07 40 09.9	-1.7
YKA	Yellowknife Ar	76.97	6	P	P	07 40 30.2	-0.4
	comp=Z,0.4nm,0.5s,baz=347,slow=5.6,SNR=19						
DBIC	Dimbokro	79.67	270	P	P	07 40 44.5	-2.0
	comp=Z,1.1nm,0.6s,baz=243,slow=4.5,SNR=1.0						
DBIC	Dimbokro	79.67	270	P	P	07 40 44.8	-1.6

IDC ***01*** *07:32:41.1±0.8, 5°39S×148°00E, h0km, mb3.9/13, mb1 4.0/16, mb1mx3.9/52, mbtmp3.9/16, ML3.9/3, Error ellipse: s-maj=29.2km s-min=16.0km az=105.0*
NEIC ***01*** *07:32:44.8±2.5, 5°46S±0°10×148°41E±0°09, h35km±2km, mb4.3/10, Error ellipse: s-maj=20.5km s-min=7.8km az=139.0*
ISC 01 07:32:45.8±0.6**, 5°48S**±0°08×**148°1E**±0°1**, h35**km**, n30,** σ1**s09**/31**, mb3.8**/13**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.01	193		Pn	07 33 45.3	+0.5
KRVT	Keravat (AS076	4.07	74	Pn	Pn	07 33 46.1	+0.5
	16nm,0.3s,baz=250,slow=5.8,SNR=5.3						
RABL	Rabaul	4.24	73	Pn	Pn	07 33 42.1	-5.8
COEN	Coen	9.73	210	Pn	Pn	07 35 04.6	+1.3
COEN				Sn	Sn	07 36 51.6	+0.2
CTA	Charters Tower	14.63	187	Pn	Pn	07 36 12.0	+1.6
	0.1nm,0.3s,baz=352,slow=11,SNR=6.2						
WB0	Warramunga Arr	19.49	222	P	P	07 37 09.9	-0.1
WB0				IAmb	IAmb	07 37 24.4	
	comp=Z,16nm,1.1s						
WR0	Warramunga Arr	19.53	221	P	P	07 37 10.1	-0.3
WR0				IAmb	IAmb	07 37 25.5	
	comp=Z,15nm,1.1s						
WRAB	Tennant Creek	19.64	222	P	Pn	07 37 12.3	-0.8
WRAB				IAmb	IAmb	07 37 19.6	
	comp=Z,11nm,0.7s						
WB2	Warramunga Arr	19.64	222	P	P	07 37 11.2	-0.5
WB2				IAmb	IAmb	07 37 20.0	
	comp=Z,11nm,0.6s						
WRA	Warramunga Arr	19.65	222	P	P	07 37 11.1	-0.6
	comp=Z,0.4nm,0.3s,baz=46,slow=12,SNR=16						
WRA				S	S	07 40 49.0	-2.7
	comp=Z,0.1nm,0.3s,baz=42,slow=21,SNR=6.7						
EIDS	Eidsvold	19.98	172	P	P	07 37 14.2	-1.2
EIDS				IAmb	IAmb	07 37 23.7	
	comp=Z,16nm,1.1s						
KNRA	Kununurra	21.52	240	P	P	07 37 31.5	-0.5
KNRA				IAmb	IAmb	07 37 47.0	
	comp=Z,8.5nm,0.8s						
AS31	Alice Springs	22.67	216	P	P	07 37 44.2	-0.2
ASAR	Alice Springs	22.68	216	P	P	07 37 44.2	-0.2
	comp=Z,2.7nm,0.8s,baz=51,slow=8.6,SNR=32						
ASAR				S	S	07 41 50.7	+0.2
	comp=Z,3.3nm,1.1s,baz=32,slow=22,SNR=9.3						
DZM	Mont Dzumac	24.22	135	P	P	07 37 56.7	-2.9
FITZ	Fitzroy Crossi	25.27	238	P	P	07 38 08.7	-0.3
	comp=Z,8.4nm,1.0s,baz=57,slow=9.6,SNR=14						
FITZ	Fitzroy Crossi	25.27	238	P	P	07 38 09.0	0.0
STKA	Stephens Creek	26.96	192	P	P	07 38 25.2	+1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,3.0nm,0.8s,baz=20,slow=11,SNR=2.9						
STKA	Stephens Creek	26.96	192	P	P	07 38 24.6	+0.4
MJAR	Matsushiro Arr	42.81	348	P	P	07 40 40.9	+0.5
	comp=Z,0.6nm,0.4s,baz=174,slow=8.1,SNR=2.1						
KSRS	Korea Array	46.67	338	P	P	07 41 11.5	+0.5
	comp=Z,0.5nm,0.4s,baz=146,slow=9.9,SNR=1.4						
SONM	Songino Array	64.49	330	P	P	07 43 19.5	+0.3
	comp=Z,0.3nm,0.3s,baz=145,slow=5.3,SNR=2.2						
TLY	Talaya	68.40	332	P	P	07 43 43.9	0.0
	comp=Z,1.8nm,0.4s,baz=71,slow=18,SNR=1.6						
VNDA	Vanda	72.37	177	P	P	07 44 09.6	+1.9
	comp=Z,0.3nm,0.5s,baz=270,slow=1.0,SNR=3.3						
MKAR	Makanchi Array	77.80	320	P	P	07 44 40.0	+0.4
	comp=Z,0.3nm,0.6s,baz=115,slow=6.8,SNR=2.2						
ZALV	Zalesovo Beam	79.16	327	P	P	07 44 45.4	-1.5
	comp=Z,0.7nm,0.6s,baz=103,slow=3.3,SNR=1.7						
KURBB	Kurchatov Arra	81.48	323	P	P	07 44 60.0	+0.5
	comp=Z,0.3nm,0.5s,baz=100,slow=3.2,SNR=2.3						
ILAR	Eielson Array	84.57	23	P	P	07 45 14.0	-1.2
	comp=Z,0.9nm,0.8s,baz=259,slow=4.7,SNR=4.1						
YKA	Yellowknife Ar	98.20	28	P	Pdif	07 46 20.1	+1.0
	comp=Z,0.3nm,1.0s,baz=264,slow=4.5,SNR=2.3						
TORD	Torodi Ar. Bea	146.02	285	PKPbc	PKPbc	07 52 23.4	+0.4
	comp=Z,0.4nm,0.7s,baz=70,slow=4.4,SNR=1.4						

*MOS **01** 07:36:08.9±1.1, 39.°41N×37.°29E, h9km, mb4.3/7, Error ellipse: s-maj=6.3km s-min=4.8km az=90.0*
*ISK **01** 07:36:08.8, 39.°47N×37.°35E, h5km, ML4.3/38*
*DDA **01** 07:36:09.0, 39.°46N×37.°35E, h7km±2km, MW4.2*
*IDC **01** 07:36:09.7±0.9, 39.°42N×37.°30E, h0km, mb3.8/13, mb1 3.9/23, mb1mx3.7/73, mbtmp3.8/23, ML3.7/10, Error ellipse: s-maj=17.2km s-min=9.4km az=165.0*
*NEIC **01** 07:36:09.4±2.8, 39.°44N±0.°04×37.°32E±0.°03, h3km±5km, Error ellipse: s-maj=6.0km s-min=1.8km az=152.0*
ISC 01 07:36:09.3±1.1**, 39.°45N**±0.°01×**37.°35E**±0.°01**, h3**km±7km**, n208, σ**1s58/246**, mb4.2**/19**, 20C-24D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUKAN	kangal_SIVAS	0.17	146	⇑iP	Pg	07 36 12.9	+0.3
CUKAN				iS	Sg	07 36 16.0	+1.2
CUKAN				IAML		07 36 16.0	
	comp=E,144µm,0.4s						
CUKAN				IAML		07 36 17.0	
	comp=N,67µm,0.5s						
SCER	sogukcermik	0.44	337	⇓iP	Pg	07 36 17.6	-0.3
SCER				iS	Sg	07 36 24.2	+0.6
SCER				IAML		07 36 32.0	
	comp=N,18µm,0.4s						
SCER				IAML		07 36 34.0	
	comp=E,22µm,0.7s						
CUALT	Altinyayla-SIV	0.50	249	⇓iP	Pg	07 36 18.7	-0.1
CUALT				iS	Sb	07 36 27.2	-1.4
CUALT				IAML		07 36 31.0	
	comp=N,13µm,0.6s						
CUALT				IAML		07 36 36.0	
	comp=E,13µm,0.6s						
SVSK	Karacayir	0.54	330	PG	Pg	07 36 19.7	+0.1
SVSK				SG	Sb	07 36 27.7	-1.8
SVSK	Karacayir	0.54	330	Pg	Pg	07 36 19.5	-0.2
CUZAR	Zara_SIVAS	0.54	37	⇓iP	Pg	07 36 20.2	+0.4
CUZAR				iS	Sb	07 36 29.1	-0.8
CUGUR	Gurin_SVAS	0.73	185	⇓iP	Pg	07 36 23.1	-0.2
CUGUR				iS	Sb	07 36 34.6	-0.7
CUGUR				IAML		07 36 35.0	
	comp=E,40µm,0.7s						
HEKM	Malatya_Hekimh	0.74	140	⇑iP	Pg	07 36 23.3	-0.3
HEKM				iS	Sb	07 36 34.5	-1.2
HEKM				IAML		07 36 42.0	
	comp=N,9µm,0.6s						
HEKM				IAML		07 36 42.0	
	comp=E,12µm,0.6s						
ARPR	Arapgir-MALATY	0.85	115	PG	Pb	07 36 25.9	-0.9
ARPR				SG	Sn	07 36 39.4	-2.0
ARPR	Arapgir-MALATY	0.85	115	Pg	Pb	07 36 25.9	-0.9
CUSAR	Sarkisla-SIVAS	0.86	268	⇓iP	Pg	07 36 25.2	-0.6
CUSAR				iS	Sb	07 36 38.9	-0.1
DARE	Darende-Malaty	0.89	173	PG	Pn	07 36 27.5	-1.4
DARE				SG	Sn	07 36 40.2	-2.1
DARE	Darende-Malaty	0.89	173	Pg	Pb	07 36 26.7	-0.7
KEMA	Kemaliye	0.91	101	⇑iP	Pg	07 36 25.7	-1.0
KEMA				iS	Sb	07 36 40.2	-0.1
KEMA				IAML		07 36 44.0	
	comp=N,6µm,0.4s						
KEMA				IAML		07 36 44.0	
	comp=E,6µm,0.4s						
RSDY	Resadiye-TOKAT	0.94	359	PG	Pg	07 36 26.7	-0.7
RSDY	Resadiye-TOKAT	0.94	359	Pg	Pg	07 36 26.7	-0.7
SUSE	Susehri	1.00	41	⇓iP	Pg	07 36 28.2	-0.4
SUSE				iS	Sn	07 36 43.5	-1.7
SUSE				IAML		07 36 48.0	
	comp=E,3µm,0.8s						
TOKT	Tokat	1.06	325	PG	Pg	07 36 29.4	-0.3
TOKT	Tokat	1.06	325	Pg	Pb	07 36 29.7	-0.8
TOKA	Tokat	1.10	323	⇑iP	Pg	07 36 29.1	-1.3
TOKA				iS	Sb	07 36 45.0	-0.8
REFA	Refahiye_ERZN	1.10	93	⇑iP	Pn	07 36 31.2	-0.6
REFA				iS	Sn	07 36 50.2	+2.5
ELBS	KAHRAMANMARAS	1.14	189	⇓iP	Pg	07 36 30.6	-0.7
ELBS				iS	Sn	07 36 47.6	-1.0
ELBS				IAML		07 36 53.0	
	comp=N,15µm,0.5s						
SARI	SarD1z-Kayseri	1.27	215	PN	Pg	07 36 34.2	+0.5
SARI	SarD1z-Kayseri	1.27	215	Pn	Pg	07 36 33.5	-0.2
ERBA	Erbaa	1.31	340	⇓iP	Pn	07 36 33.5	-1.1
ERBA				iS	Sn	07 36 53.1	+0.4
BNN	Bunyan	1.31	243	PN	Pg	07 36 34.2	-0.3
BNN	Bunyan	1.31	243	Pn	Pn	07 36 33.8	-1.0
MALT	Malatya	1.42	143	PN	Pg	07 36 36.0	-0.5
MALT	Malatya	1.42	143	P	Pg	07 36 36.0	-0.5
MALT	Malatya	1.42	143	Pn	Pg	07 36 36.0	-0.5
GUNE	Kayseri	1.45	248	⇑iP	Pb	07 36 36.4	-0.6
GUNE				iS	Sg	07 37 00.2	+4.3
EZC	Erzincan	1.58	78	P	Pg	07 36 43.0	+3.4
YOZ	Yozgat	1.58	277	PN	Pb	07 36 38.4	-0.9
YOZ	Yozgat	1.58	277	Pn	Pb	07 36 38.6	-0.7
ORDU	Ordu-Boztepe	1.58	14	⇓iP	Pb	07 36 38.2	-1.1
ORDU				iS	Sg	07 37 02.6	+2.4
ELZG	Elazig	1.59	126	⇑iP	Pn	07 36 38.2	-0.4
ELZG				iS	Sg	07 37 00.9	+0.4
ELZG				IAML		07 37 04.0	
	comp=N,6µm,0.4s						
KELT	Kelkit	1.62	64	⇑iP	Pb	07 36 38.9	-1.2
KELT				iS	Sg	07 37 02.7	+1.1
KELT				IAML		07 37 05.0	
	comp=E,1µm,0.4s						
AMSY	Amasya-Merkez	1.66	316	iP	Pb	07 36 39.5	-1.1
PTK	Pertek	1.69	109	PN	Pb	07 36 39.8	-1.3
PTK	Pertek	1.69	109	Pn	Pb	07 36 40.0	-1.1
SIRC	Yozgat	1.71	267	⇑iP	Pn	07 36 39.8	-0.4
SIRC				iS	Sg	07 37 07.9	+3.7
KUPE	Kupecik-Ladik(	1.73	325	PN	Pb	07 36 41.7	-0.2
TNCL	Tunceli-Merkez	1.74	101	⇑iP	Pn	07 36 40.4	-0.1
TNCL				iS	Sg	07 37 08.2	+3.1
TNCL				IAML		07 37 09.0	
	comp=E,5µm,0.6s						
HKOY	Hamitkoy-Ladik	1.77	324	PN	Pb	07 36 42.3	-0.3
SAIM	ADANA	1.78	214	⇓iP	Pn	07 36 41.0	-0.1
SAIM				iS	Sg	07 37 09.2	+2.8
ESPY	Espiye-Giresun	1.80	35	PN	Pb	07 36 41.7	-1.3
ESPY	Espiye-Giresun	1.80	35	Pn	Pb	07 36 42.2	-0.9
EUZM	Uzumlu	1.83	81	iP	Pb	07 36 42.7	-0.9
EUZM				iS	Sg	07 37 12.1	+3.8
ERZN	Erzincan	1.84	85	PN	Pb	07 36 43.1	-0.7
ERZN	Erzincan	1.84	85	Pn	Pb	07 36 43.1	-0.7
GULF	Gulfidan-Ladik	1.84	323	PN	Pb	07 36 42.9	-0.8
YARM	Yarimca-Ladik(	1.87	322	PN	Pb	07 36 43.2	-1.1
KVT	Kavak	1.91	329	PN	Pb	07 36 43.9	-0.9
KVT	Kavak	1.91	329	P	Pb	07 36 43.9	-0.9
KVT	Kavak	1.91	329	Pn	Pb	07 36 43.9	-0.9
KAYA	Kayacik-Havza(	1.93	321	PN	Pb	07 36 44.5	-0.7
KMRS	Kahramanmaras	1.98	190	PN	Pb	07 36 45.2	-0.8
KMRS	Kahramanmaras	1.98	190	Pn	Pb	07 36 45.2	-0.8
COAL	Corum-Alaca	1.99	294	iP	Pb	07 36 44.4	-1.8
COAL				iS	Sg	07 37 12.1	-1.1
ANDN	Andirin	2.03	203	iP	Pn	07 36 44.8	+0.2
ANDN				iS	Sg	07 37 14.0	-0.6
HAVZ	Havza	2.04	323	iP	Pb	07 36 45.9	-1.3
HAVZ				iS	Sg	07 37 15.8	+0.8
HAVZ				IAML		07 37 21.0	
	comp=N,918nm,0.8s						
AVNS	Nevsehir-Avano	2.05	252	iP	Pb	07 36 46.3	-1.0
AVNS				iS	Sg	07 37 18.8	+3.6
YAHY	KAYSERI_Yahyal	2.06	229	iP	Pb	07 36 45.6	-1.9
YAHY				iS	Sg	07 37 16.3	+0.8
KHMN	Narli-Kahraman	2.06	184	PN	Pb	07 36 46.8	-0.7
KHMN	Narli-Kahraman	2.06	184	Pn	Pb	07 36 46.8	-0.7
AYKD	Aykdinkavak	2.08	192	iP	Pb	07 36 46.5	-1.3
AYKD				iS	Sg	07 37 16.9	+0.8
SAMS	Samsun-Alacam	2.10	335	iP	Pb	07 36 46.8	-1.3
SAMS				iS	Sb	07 37 14.1	-0.5
ATAB	Bozova	2.12	159	iP	Pb	07 36 46.6	-1.7
ATAB				iS	Sg	07 37 18.3	+1.0
HCB	Kahramanmara	2.13	189	iP	Pn	07 36 46.5	+0.5
HCB				iS	Sg	07 37 18.0	+0.1
CORM	Corum	2.21	290	PN	Pb	07 36 48.6	-1.5
CORM	Corum	2.21	290	Pn	Pb	07 36 48.6	-1.5
GAZ	Gaziantep	2.28	183	PN	Pb	07 36 49.3	-1.9
GAZ	Gaziantep	2.28	183		Pn	07 36 47.0	-1.0
CTAK	Corum_Osmancik	2.30	302	iP	Pb	07 36 50.2	-1.3
CTAK				iS	Sg	07 37 23.8	+0.7
CDAG	Cicekdag	2.31	275	iP	Pb	07 36 50.0	-1.7
CDAG				iS	Sb	07 37 19.9	-0.8
URFA	Urfa	2.32	150	PN	Pb	07 36 49.9	-2.0
KAMA	Osmaniye	2.33	194	iP	Pn	07 36 49.5	+0.9
KAMA				iS	Sg	07 37 24.6	+0.5
BAYT	Aydıntepe-Bayb	2.34	66	PN	Pn	07 36 49.5	+0.5
MACK	Trabzon	2.38	50	iP	Pb	07 36 51.3	-1.5
MACK				iS	Sg	07 37 25.4	-0.3
KTUT	Trabzon	2.40	50	⇓P	Pb	07 36 52.5	-0.7
KTUT				⇓S	Sb	07 37 22.9	-0.4
KTUT	Trabzon	2.40	50	PN	Pb	07 36 51.5	-1.7
YEDI	Yedisu-Bingol	2.47	89	PN	Pb	07 36 52.2	-2.4
AKO	Adana	2.49	217	iP	Pb	07 36 53.7	-1.0
AKO				iS	Sg	07 37 33.7	+4.4
BINT	Bingol	2.51	102	P	Pb	07 36 53.9	-1.2
NIG	Nigde	2.53	239	PN	Pb	07 36 52.9	-2.6
CMRD	Camardi-Nigde	2.57	227	PN	Pb	07 36 53.5	-2.7
HANI	Diyarbakir_Han	2.60	113	iP	Pb	07 36 53.8	-2.8
HANI				iS	Sg	07 37 30.6	-2.1
BNGB	Bingl	2.63	99	PN	Pn	07 36 53.9	+1.1
DYBB	Diyarbakir	2.65	124	PN	Pn	07 36 54.3	+1.2
GULA	Gulagac	2.67	246	PN	Pn	07 36 54.7	+1.3
KIRS	Kırehir-Merke	2.68	264	iP	Pn	07 36 54.7	+1.2
KIRS				iS	Sb	07 37 32.2	+0.8
DELI	KIRIKKALE	2.70	283	iP	Pn	07 36 54.5	+0.7
DELI				iS	Sg	07 37 34.8	-1.3
DIKM	Dikmen	2.71	325	⇓P	Pb	07 36 55.6	-2.9
DIKM	Dikmen	2.71	325	PN	Pb	07 36 55.6	-2.9
CEYT	Ceyhan	2.75	208	PN	Pb	07 36 56.2	-2.9
SURC	SANLIURFA_SURC	2.76	158	iP	Pn	07 36 55.3	+0.8
SURC				iS	Sn	07 37 28.8	+0.4
YAYX	Yaylak	2.80	261	PN	Pn	07 36 56.2	+1.1
KARA	Karaisali	2.84	220	PN	Pb	07 36 57.4	-3.3
KARO	Karliova-Bingo	2.87	92	PN	Pn	07 36 56.9	+0.7
BR131	Keskin Array S	2.88	277	P	Pn	07 36 57.5	+1.2
BR131	Keskin Array S	2.88	277		Pn	07 36 57.5	+1.2
BRTR	Keskin Array B	2.88	277	Pn	Pn	07 36 57.0	+0.7
	comp=N,28nm,0.3s,baz=104,slow=15,SNR=232						
BRTR				Sn	Sn	07 37 32.1	+0.6
	comp=N,12nm,0.3s,baz=98,slow=19,SNR=3.8						
BRTR	Keskin Array B	2.88	277	PN	Pn	07 36 57.8	+1.5
SERE	Sereflikochisa	2.98	261	PN	Pn	07 36 59.4	+1.7
TOS	Tosya	3.00	303	PN	Pn	07 36 59.7	+1.8
CHOM	Cayeli-Rize	3.08	57	PN	Pn	07 37 00.8	+1.8
CANT	Cankiri	3.08	293	PN	Pn	07 37 00.5	+1.4
VRTB	Varto-Mus	3.20	94	PN	Pn	07 37 01.5	+0.8
ILGA	Ilgaz	3.21	301		Pn	07 37 02.1	+1.2
TAHT	Tahtakopru-Hat	3.21	197	PN	Pn	07 37 02.3	+1.6
AFSR	Afar-Bala (An	3.31	271	PN	Pn	07 37 04.1	+1.9
ANTO	Ankara	3.54	278	⇓P	Pn	07 37 07.4	+2.1
ANTO	Ankara	3.54	278	PN	Pn	07 37 06.9	+1.6
ANTO	Ankara	3.54	278	P	Pn	07 37 04.9	-0.4
ANTO	Ankara	3.54	278		Pn	07 37 04.9	-0.4
BR231	Keskin MP Arra	3.55	278		Pn	07 37 05.4	-0.1
LOD	Lodumlu	3.56	278	PN	Pn	07 37 07.6	+1.9
BZK	Bozkurt	3.57	316	⇑P	Pn	07 37 07.3	+1.8
BZK	Bozkurt	3.57	316	PN	Pn	07 37 07.4	+1.8
BCA	Borcka	3.82	57	⇑P	Pn	07 37 11.8	+2.7
BATM	Batumi	3.95	56	⇓P	Pn	07 37 14.0	+3.1
BATM	Batumi	3.95	56	P	Pn	07 37 13.9	+3.1
SOC	Sochi	4.49	23	eP	Pn	07 37 18.1	-0.2
SOC				e		07 38 10.1	
SOC				pmax	pmax		
	comp=Z,15nm,0.6s						
AKH	Akhalkalaki	5.08	65	⇓P	Pn	07 37 30.6	+4.0
AKH	Akhalkalaki	5.08	65	P	Pn	07 37 25.3	-1.3
AKH	Akhalkalaki	5.08	65	Pn	Pn	07 37 25.3	-1.3
ANN	Anapa	5.34	1	eP	Pn	07 37 35.0	+5.0
ANN				eS	Sb	07 38 41.3	-6.5
ANN				pmax	pmax		
	comp=Z,11nm,0.7s						
CSS	Mathiatis	5.51	217	Pn	Pn	07 37 31.6	-0.8
NEY	Neytrino	5.54	45	⇓eP	Pn	07 37 36.3	+3.4
ISP	Isparta	5.59	255	P	Pn	07 37 31.5	-2.0
ISP	Isparta	5.59	255	Pn	Pn	07 37 31.5	-2.0
KBZ	Khabaz	5.96	42	Pn	Pn	07 37 41.1	+2.7
	comp=Z,0.3nm,0.3s,baz=238,slow=15,SNR=4.6						
KBZ				Sn	Sb	07 38 56.0	-10
	comp=Z,0.2nm,0.3s,baz=344,slow=16,SNR=1.1						
ZEI	Tsey	5.96	54	eP	Pn	07 37 39.9	+1.2
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SIM	Simferopol'	5.99	337	P	Pn	07 37 41.6	+2.7
SIM				eS	Sn	07 38 46.0	-2.1
SIM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SIM				smax	smax		
	comp=N,30µm,1.1s						
KIV	Kislovodsk	6.01	40	eP	Pn	07 37 43.2	+3.9
KIV				pmax	pmax		
	comp=Z,24nm,1.0s						
KIV	Kislovodsk	6.01	40	Pn	Pn	07 37 38.8	-0.5
KVAR	Kislovodsk Arr	6.02	40	Pn	Pn	07 37 41.7	+2.3
	baz=261,slow=19,SNR=3.9						
TBLG	Delisi	6.07	66	P	Pn	07 37 40.3	+0.3
TBLG	Delisi	6.07	66	Pn	Pn	07 37 40.3	+0.3
NCK	Nalchik	6.19	47	⇓eP	Pn	07 37 48.4	+6.7
ELL	Elmali	6.46	248	P	Pn	07 37 45.2	-0.3
ELL	Elmali	6.46	248	Pn	Pn	07 37 45.2	-0.3
MMAI	Mount Meron Ar	6.62	194	Pn	Pn	07 37 48.5	+1.0
	comp=Z,3.4nm,0.3s,baz=358,slow=10,SNR=5.6						
MMAI				Lg	Lg	07 39 44.2	
	comp=Z,1.3nm,0.3s,baz=15,slow=28,SNR=1.8						
ASF	Jabal al Asfar	7.28	183	Pn	Pn	07 37 57.1	+0.4
	comp=Z,0.5nm,0.3s,baz=20,slow=5.6,SNR=7.5						
ASF				Lg	Lg	07 40 03.4	
	comp=Z,0.8nm,0.3s,baz=139,slow=24,SNR=3.5						
JURR	Jurilovca	8.23	313	⇑P	Pn	07 38 09.8	+0.1
TIRR	Tirgusor	8.32	310	⇑P	Pn	07 38 12.0	+1.1
TIRR	Tirgusor	8.32	310	P	Pn	07 38 10.1	-0.8
TIRR	Tirgusor	8.32	310		Pn	07 38 10.1	-0.8
TLCR		8.53	315	⇓P	Pn	07 38 13.8	+0.1
TLCR		8.53	315	P	Pn	07 38 13.8	+0.1
TOPG	Topolog	8.58	312	⇓P	Pn	07 38 15.2	+0.7
HARR	Harsova	8.74	310	⇑P	Pn	07 38 18.4	+1.7
HARR	Harsova	8.74	310	P	Pn	07 38 18.3	+1.7
ALN	Alexandroupoli	8.77	283	P	Pn	07 38 14.1	-3.0
ALN	Alexandroupoli	8.77	283	Pn	Pn	07 38 14.1	-3.0
CFR	Carcaliu	8.90	313	⇓P	Pn	07 38 20.1	+1.3
VRI	Vrincioaia	10.11	313	⇓P	Pn	07 38 35.5	+0.1
PLOR	Plostina	10.14	313	⇑P	Pn	07 38 36.0	+0.1
MLR	Muntele Rosu	10.36	309	Pn	Pn	07 38 41.6	+2.7
	comp=Z,0.2nm,0.3s,baz=12,slow=9.3,SNR=2.1						
MLR	Muntele Rosu	10.36	309	⇑P	Pn	07 38 39.0	+0.1
MLR	Muntele Rosu	10.36	309		Pn	07 38 37.5	-1.4
VOIR		10.87	307	⇑P	Pn	07 38 47.9	+2.0
VSR	Storozhevoye	11.83	6	⇓eP	Pn	07 38 59.9	+1.0
VSR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BURAR	Bucovina Array	11.99	317	⇑P	Pn	07 39 02.7	+1.5
BUR08	Bucovina Ar. S	12.02	317		Pn	07 39 00.9	-0.7
VRH	Novokhopyorsk	12.14	13	eP	Pn	07 39 03.3	+0.2
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
AKASG	Malin Array Be	12.62	336	Pn	Pn	07 39 10.0	+0.4
	comp=Z,0.6nm,0.3s,baz=147,slow=10,SNR=1.5						
AKBB	Malin Array Si	12.62	336	P	Pn	07 39 07.7	-1.9
AKBB	Malin Array Si	12.62	336	Pn	Pn	07 39 07.7	-1.9
LPSR	Galich'ya Gora	13.20	4	eP	Pn	07 39 21.6	+4.1
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
VYHS	Vyhne	16.07	310	eP	P	07 39 59.9	+0.2
GEYT	Alibeck	16.29	89	Pn	P	07 40 01.2	-1.0
	comp=Z,0.3nm,0.3s,baz=311,slow=12,SNR=5.1						
MOS	Moscow	16.30	1	eP	P	07 39 59.9	-2.2
AKTO	Aktyubinsk	18.23	46	P	P	07 40 25.2	+1.7
	comp=Z,0.1nm,0.3s,baz=247,slow=15,SNR=2.6						
GEC2	GERESS Array S	19.32	307	P	P	07 40 35.1	-0.6
GERES	GERESS Array B	19.32	307	P	Pn	07 40 37.2	+0.5
	comp=Z,0.1nm,0.3s,baz=106,slow=9.8,SNR=7.9						
KHC	Kasperske Hory	19.50	308	⇑eP	Pn	07 40 39.3	+0.5
KHC				pmax	pmax		
	comp=Z,18nm,2.6s						
KHC	Kasperske Hory	19.50	308	eP	Pn	07 40 39.5	+0.7
MOTA	Moosalm	20.57	301	eP	Pn	07 40 51.9	+0.4
	comp=Z,0.5nm,0.2s						
KIRV	Kirov	20.66	18	P	Pn	07 40 51.8	-0.4
	comp=Z,7.7nm,0.5s,baz=232,slow=23,SNR=5.2						
CLL	Collm	20.70	313	e(P)	Pn	07 40 53.0	+0.2
	comp=Z,10.0nm,1.3s						
CLL				e		07 41 00.0	
CLL				ePPP	PPP	07 41 13.0	
CLL	Collm	20.70	313	eP	Pn	07 40 53.0	+0.2
CLL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
FETA	Feichten	20.75	300	ipP	pP	07 40 54.5	+2.0
	comp=Z,0.8nm,0.4s						
FUORN	Ofenpass-Fuorn	20.98	299	P	P	07 40 52.2	-1.7
FUORN				IAmb	IAmb	07 41 00.6	
	comp=Z,8.2nm,1.1s						
DAVOX	Davos/Dischmat	21.27	299	P	P	07 40 57.5	+0.5
	comp=Z,0.9nm,0.4s,baz=63,slow=9.0,SNR=1.9						
KLMR	Klimovskoe	21.47	3	eP	P	07 40 58.0	-0.7
KLMR				pmax	pmax		
	comp=Z,16nm,1.3s						
KLMR	Klimovskoe	21.47	3	eP	P	07 40 58.1	-0.7
KLMR				AMP		07 41 05.3	
	comp=Z,16nm,1.3s						
PRGR	Permogore	22.79	10	eP	P	07 41 11.5	-1.3
PRGR				pmax	pmax		
	comp=Z,17nm,1.3s						
FINES	FINESS Array B	23.09	346	P	P	07 41 17.0	+1.1
	comp=Z,1.7nm,0.8s,baz=140,slow=15,SNR=6.6						
ECH	Echery	23.35	302	P	P	07 41 17.5	-1.3
ECH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ECH	Echery	23.35	302	P	P	07 41 17.5	-1.3
ECH				IAmb	IAmb	07 41 25.2	
	comp=Z,9.6nm,1.2s						
KK31	Karatay Array	25.09	71	P	P	07 41 34.7	-0.5
KK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KK31	Karatay Array	25.09	71	P	P	07 41 34.6	-0.5
KK31				IAmb	IAmb	07 41 38.8	
	comp=Z,4.4nm,0.8s						
KKAR	Karatay Array	25.09	71	P	P	07 41 34.4	-0.8
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KKAR	Karatay Array	25.09	71	P	P	07 41 34.4	-0.8
KKAR				IAmb	IAmb	07 41 38.8	
	comp=Z,4.4nm,0.8s						
HFS	Hagfors	25.46	332	P	P	07 41 39.2	+0.9
	comp=Z,1.7nm,0.5s,baz=152,slow=12,SNR=2.0						
KSH	Kashi	29.66	77	P	P	07 42 13.4	-2.9
KSH				pP	pP	07 42 17.5	-0.2
KSH				sP	sP	07 42 20.0	+1.7
KSH				PP	PnPn	07 43 06.7	-4.2
KSH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KURBB	Kurchatov Arra	30.79	55	P	P	07 42 27.5	+1.4
	comp=Z,3.4nm,0.7s,baz=271,slow=9.1,SNR=26						
ARCES	ARCESS Array B	30.80	352	P	P	07 42 27.5	+1.6
	comp=Z,1.2nm,0.9s,baz=156,slow=8.9,SNR=1.7						
KURK	Kurchatov	30.85	55	⇓eP	P	07 42 27.8	+1.2
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURK	Kurchatov	30.85	55	P	P	07 42 25.9	-0.7
ESDC	Sonseca Array	31.65	284	P	P	07 42 34.8	+0.9
	comp=Z,1.0nm,0.6s,baz=72,slow=8.0,SNR=6.3						
ZALV	Zalesovo Beam	34.93	50	P	P	07 43 03.3	+1.1
	comp=Z,0.5nm,0.4s,baz=246,slow=11,SNR=2.0						
SPITS	Spitsbergen Ar	39.79	353	P	P	07 43 44.4	+1.3
	comp=Z,4.6nm,0.8s,baz=143,slow=12,SNR=5.0						
TORD	Torodi Ar. Bea	40.90	240	P	P	07 43 52.8	-0.2
	comp=Z,0.7nm,0.8s,baz=31,slow=8.1,SNR=3.6						
SONM	Songino Array	49.14	56	P	P	07 44 59.6	+1.2
	comp=Z,0.4nm,0.6s,baz=306,slow=9.8,SNR=1.8						
FRB	Frobisher Bay	61.80	331	P	P	07 46 30.1	+1.0
	comp=Z,1.4nm,0.8s,baz=61,slow=10,SNR=2.2						
YKA	Yellowknife Ar	75.92	347	P	P	07 47 58.5	+1.5
	comp=Z,0.2nm,0.5s,baz=28,slow=5.0,SNR=5.8						

JMA 01 07:44:37.8±0.1**, 30.°03N×139.°91E, h427**km**, M3.5, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.54	145	P	P	07 45 47.8	+0.3
CBIJ				eS	S	07 46 43.4	-0.7
JAG	Ashikaga	6.39	357	P	P	07 46 16.1	+0.9
JAG				eS	S	07 47 31.6	-3.5

*CNRM **01** 07:46:20.9±0.9, 34.°45N×10.°60W, h64km±139km, Error ellipse: s-maj=11.0km s-min=8.2km az=103.0*
*IGIL **01** 07:46:23.9, 34.°57N×10.°50W, h26km, ML3.1*
*INMG **01** 07:46:24.9±0.8, 34.°47N×10.°60W, h10km, ML2.9, Error ellipse: s-maj=2.5km s-min=1.6km az=111.0*
*NEIC **01** 07:46:26.5±2.1, 34.°95N±0.°09×10.°12W±0.°10, h10km±2km, mb4.2/1, Error ellipse: s-maj=16.9km s-min=11.9km az=144.0*
ISC 01 07:46:17.6±1.4**, 34.°57N**±0.°05×**10.°52W**±0.°07**, h10**km**, n85, σ2s89**/124**, 1C-2D, Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AVE	Averroes	2.87	115	eS	Sn	07 47 33.8	-4.3
PFVI	Vila Bisbo	2.91	28	P	Pn	07 47 06.8	+2.9
PFVI	Vila Bisbo	2.91	28	⇓ePn	Pn	07 47 06.9	+2.9
PFVI				eSn	Sn	07 47 38.5	-0.4
PFVI				A	A	07 47 39.8	
	25nm,0.1s						
PFVI	Vila Bisbo	2.91	28		Pn	07 47 06.9	+2.9
PFVI				Sn	Sn	07 47 38.4	-0.6
SRHM	Skhour des Reh	3.02	133	P	Pn	07 47 07.3	+1.6
MORF	Marmelete	3.12	28	eP	Pn	07 47 10.1	+3.0
MORF				eS	Sn	07 47 43.6	-0.8
MORF				AML	AML	07 47 44.8	
	comp=E,71nm,0.1s						
MORF	Marmelete	3.12	28	ePn	Pn	07 47 10.0	+3.0
MORF				eSn	Sn	07 47 43.6	-0.8
MORF				A	A	07 47 44.8	
	comp=E,42nm,0.1s						
PTEO	Sao Teotonio	3.31	26	ePn	Pn	07 47 12.5	+3.0
PTEO				eSn	Sn	07 47 48.0	-0.9
PTEO				A	A	07 47 51.4	
	comp=E,34nm,0.5s						
PBDV	Barranco-do-Ve	3.40	37	⇑ePn	Pn	07 47 13.9	+3.2
PBDV				eSn	Sn	07 47 50.4	-0.7
PBDV				A	A	07 47 59.0	
	comp=E,12nm,0.5s						
PVAQ	Vaqueiros	3.63	38	P	Pn	07 47 16.1	+2.2
PVAQ	Vaqueiros	3.63	38	ePn	Pn	07 47 16.9	+3.0
PVAQ				eSn	Sn	07 47 55.8	-1.0
PVAQ				A	A	07 48 01.7	
	comp=E,12nm,0.2s						
PVAQ	Vaqueiros	3.63	38	Pn	Pn	07 47 16.8	+3.0
PVAQ				Sn	Sn	07 47 55.0	-1.8
PCVE	Castro Verde	3.66	33	ePn	Pn	07 47 17.5	+3.2
PCVE				eSn	Sn	07 47 56.8	-0.7
PCVE				A	A	07 48 01.3	
	comp=E,16nm,0.3s						
MESJ	Messejana	3.76	29	eP	Pn	07 47 18.8	+3.1
MESJ				eS	Sn	07 47 58.8	-1.1
MESJ				AML	AML	07 48 01.5	
	comp=N,35nm,0.3s						
MESJ	Messejana	3.76	29	⇓ePn	Pn	07 47 18.9	+3.2
MESJ				eSn	Sn	07 47 59.4	-0.5
MESJ				A	A	07 48 00.7	
	comp=N,13nm,0.2s						
EGRO	El Granado	3.85	39		Pn	07 47 20.0	+3.1
EGRO					Sn	07 48 00.5	-1.6
RSA	Sarsar	3.88	84	P	Pn	07 47 17.2	-0.2
PNCL	Nicolau / Gran	3.88	24	ePn	Pn	07 47 20.2	+2.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNCL				eSn	Sn	07 48 01.8	-1.3
PNCL				A	A	07 48 04.4	
	comp=N,13nm,0.2s						
OUK	Oukaimeden	4.02	146	P	Pn	07 47 20.9	+1.3
PBEJ	Beja	4.06	31	ePn	Pn	07 47 22.9	+3.0
PBEJ				eSn	Sn	07 48 06.5	-1.0
PBEJ				A	A	07 48 08.2	
	comp=N,12nm,0.2s						
CHEFC	Chefchaouen	4.29	81	P	Pn	07 47 25.7	+2.6
SMIR	Smir Dam	4.35	74	P	Pn	07 47 27.1	+3.2
TTIG	Tnine Tigouga,	4.37	156	P	Pn	07 47 21.5	-2.8
CEU	Ceuta	4.41	71	eP	Pn	07 47 29.2	+4.5
CEU				eS	Sn	07 48 17.2	+1.1
ESPR	Espera	4.43	57		Pn	07 47 27.2	+2.3
ESPR					Sn	07 48 15.7	-0.9
EVO	Evora	4.44	26	eP	Pn	07 47 27.9	+2.8
EVO				eS	Sn	07 48 14.9	-1.9
EVO	Evora	4.44	26	ePn	Pn	07 47 28.0	+2.9
EVO				eSn	Sn	07 48 15.0	-1.9
EVO				A	A	07 48 17.8	
	comp=N,21nm,0.5s						
EMIN	Mina Concepcio	4.46	43		Pn	07 47 27.8	+2.5
EMIN					Sn	07 48 13.8	-3.4
PMAFR	Mafra	4.49	12	eSn	Sn	07 48 16.1	-2.0
PMAFR				A	A	07 48 19.9	
	comp=N,28nm,0.3s						
PMAFR	Mafra	4.49	12		Sn	07 48 15.3	-2.7
EJIF	Jimena Fronter	4.53	64		Pn	07 47 28.2	+2.0
PBAR	Barrancos	4.56	37	ePn	Pn	07 47 29.7	+2.9
IFR	Ifrane	4.59	102	eS	Sn	07 48 16.3	-4.6
OUZM	OUZ	4.83	138	P	Pn	07 47 31.8	+1.3
PMTG	Montargil	4.86	22	ePn	Pn	07 47 35.1	+4.4
PMTG				eSn	Sn	07 48 26.4	-0.6
PMTG				A	A	07 48 31.6	
	comp=N,8.4nm,0.5s						
PESTR	Estremoz	4.89	28	eSn	Sn	07 48 26.1	-1.9
PESTR	Estremoz	4.89	28	Pn	Pn	07 47 31.0	-0.3
PESTR				Sn	Sn	07 48 25.7	-2.3
EBAD	Badajoz	5.04	33		Pn	07 47 35.7	+2.4
EBAD					Sn	07 48 29.5	-2.1
PMPST	Porto Santo, M	5.06	255	ePn	Pn	07 47 33.3	-0.3
PMPST				eSn	Sn	07 48 25.6	-6.6
PMPST				A	A	07 48 30.4	
	comp=N,22nm,0.6s						
PMPS	Porto Santo	5.07	254	ePn	Pn	07 47 33.3	-0.4
PMPS				eSn	Sn	07 48 26.3	-6.0
PMPS				A	A	07 48 28.0	
	comp=N,9.7nm,0.3s						
EMIJ	Mijas	5.09	65		Pn	07 47 35.7	+1.7
EMIJ					Sn	07 48 29.6	-3.2
MD31	MD31	5.09	108	P	Pn	07 47 35.1	+1.0
PSBE	So Bento	5.13	15	eSn	Sn	07 48 31.6	-2.2
PSBE				A	A	07 48 36.0	
	comp=N,8.1nm,0.4s						
MDT	Midelt	5.23	108	P	Pn	07 47 37.7	+1.7
HORN	Hornachuelos	5.37	51	P	Pn	07 47 39.2	+1.4
ECAB	El Cabril	5.40	48		Pn	07 47 40.3	+2.0
ECAB					Sn	07 48 37.8	-2.8
PMRV	Marv??o	5.46	26	ePn	Pn	07 47 41.6	+2.5
PMRV				eSn	Sn	07 48 39.3	-2.6
PMRV				A	A	07 48 41.8	
	comp=N,18nm,0.5s						
AKLM	AKL	5.49	89	P	Pn	07 47 41.1	+1.5
TZRR	Tazzarine	5.62	131	P	Pn	07 47 42.7	+1.3
PMAR	Madeira	5.64	253	P	Pn	07 47 41.6	-0.2
PMAR	Madeira	5.64	253	ePn	Pn	07 47 41.7	-0.1
PMAR				eSn	Sn	07 48 38.1	-8.6
PMAR				A	A	07 48 47.9	
	comp=N,22nm,0.8s						
PCAS	Casmilo, Conde	5.71	16	eSn	Sn	07 48 45.2	-2.8
PCAS				A	A	07 48 48.8	
	comp=N,7.2nm,0.3s						
EGOR	Sierra Gorda,	5.79	62		Pn	07 47 47.1	+3.4
EGOR					Sn	07 48 49.9	-0.4
PCBR	Castelo Branco	5.80	24	ePn	Pn	07 47 46.6	+2.9
PCBR				eSn	Sn	07 48 47.7	-2.5
PCBR				A	A	07 48 50.5	
	comp=N,8.3nm,0.4s						
PMOZ	Porto Moniz, M	5.83	255	ePn	Pn	07 47 44.3	0.0
EADA	Adamuz	5.99	51		Pn	07 47 48.5	+2.1
EADA					Sn	07 48 52.0	-3.0
EFAM	Famara	6.00	206		Sn	07 48 46.2	-9.0
ELGU	Los Guajares,	6.06	66		Pn	07 47 49.8	+2.5
ELGU					Sn	07 48 52.1	-4.6
ZGR	Zagora	6.07	136	P	Pn	07 47 46.4	-1.2
MTE	Manteigas	6.28	21	ePn	Pn	07 47 54.1	+3.7
MTE				eSn	Sn	07 48 59.4	-2.9
MTE				A	A	07 49 01.9	
	comp=N,7.6nm,0.3s						
MTE	Manteigas	6.28	21	Pn	Pn	07 47 53.4	+2.9
MTE				Sn	Sn	07 48 59.3	-3.1
PVIS	Viseu	6.48	18	eSn	Sn	07 49 03.9	-3.3
PVIS				A	A	07 49 08.1	
	comp=N,4.5nm,0.1s						
EPLA	Plasencia	6.53	31		Pn	07 47 56.5	+2.8
EPLA					Sn	07 49 05.4	-2.8
CFUE	Fuerteventura	6.58	207		Sn	07 48 58.6	-11
EBER	Berja	6.62	67		Pn	07 47 57.5	+2.2
EBER					Sn	07 49 08.6	-2.3
EQES	Quesada	6.83	60		Pn	07 48 00.2	+2.2
PAB	San Pablo	7.00	43		Pn	07 48 01.7	+1.4
PAB				Sn	Sn	07 49 14.2	-5.8
PVRL	Vila Real	7.05	17	eSn	Sn	07 49 17.0	-4.2
PVRL				A	A	07 49 21.6	
	comp=N,7.2nm,0.3s						
MVO	Moncorvo	7.14	22	eSn	Sn	07 49 19.2	-4.2
MVO				A	A	07 49 22.2	
	comp=N,4.4nm,0.4s						
MVO	Moncorvo	7.14	22		Pn	07 48 04.3	+2.1
MVO					Sn	07 49 19.3	-4.1
ESDC	Sonseca Array	7.31	44		Pn	07 48 07.0	+2.5
ESDC					Sn	07 49 22.8	-4.7
SESP	Santiago Espad	7.34	59	P	Pn	07 48 06.4	+1.3
SESP	Santiago Espad	7.34	59		Pn	07 48 06.6	+1.5
SESP					Sn	07 49 25.1	-3.5
ELOB	Lobios	7.54	14		Pn	07 48 10.7	+3.0
ELOB					Sn	07 49 27.2	-6.1
PGAV	Gavieira, Arco	7.59	13	eSn	Sn	07 49 30.9	-3.7
PGAV				A	A	07 49 44.8	
	comp=N,3.2nm,0.5s						
EZAM	Zamans	7.71	10		Sn	07 49 31.5	-5.7
PBRG	Braganca	7.81	21	eSn	Sn	07 49 35.9	-4.0
PBRG				A	A	07 49 39.3	
	comp=N,3.0nm,0.4s						
GUD	Guadarrama	7.89	38		Pn	07 48 15.2	+2.6
GUD					Sn	07 49 38.1	-3.9
ECAL	Calabor	7.94	21		Sn	07 49 39.4	-3.7
EMUR	La Murta	8.18	64		Pn	07 48 18.3	+1.9
CART	Cartagena	8.27	66	Pn	Pn	07 48 19.6	+2.0
ETOB	Tobarra	8.28	58		Pn	07 48 18.9	+1.1
ETOB					Sn	07 49 45.8	-5.7
EAGO	Agolada(Pontev	8.44	12		Pn	07 48 22.4	+2.4
EAGO					Sn	07 49 49.0	-6.3
EMAZ	Mazaricos	8.46	8		Sn	07 49 47.9	-7.8
CASP	Castiglione de	18.57	57	P	Pn	07 50 37.6	+2.7
CASP				IAmb	IAmb	07 50 41.0	
	comp=Z,23nm,1.1s						

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*SOME **01** 08:03:39.1, 40°.48N×77°.27E, h0^{km}*
*KRNET **01** 08:03:41.1±0.1, 40°.47N×77°.14E, mb3.4*
*NNC **01** 08:03:44.1±1.4, 40°.56N×77°.24E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=9.8km s-min=7.7km az=170.0*
ISC 01 08:03:44.6±1.5**, 40°.61N**±0°.07×**77°.19E**±0°.03**, h10**^{km}**, n73, σ1^{s}57**/109**, 24C-15D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	Kajisay	1.52	360	⇑iP	Pb	08 04 12.1	-0.9
	baz=1.0						
KDJ				⇑iS	Sg	08 04 35.0	+1.5
	baz=1.0						
ULHL	Ulahol	1.78	337	⇓iP	Pb	08 04 16.5	-1.0
	baz=39						
ULHL				⇓iS	Sg	08 04 42.4	+0.5
	baz=39						
ULHL	Ulahol	1.78	337	P	Pb	08 04 16.7	-0.8
	SNR=86						
KZA	Kyzart	2.07	316	⇑iP	Pb	08 04 20.5	-2.0
	baz=19						
KZA				⇑iS	Sb	08 04 49.4	+1.0
	baz=19						
KZA	Kyzart	2.07	316	P	Pb	08 04 21.5	-1.0
	SNR=57						
PRZ	Przheval'sk	2.08	26	⇑iP	Pb	08 04 21.5	-1.1
	baz=25						
PRZ				⇑iS	Sg	08 04 51.0	-0.5
	baz=25						
BOOM	Boomskoye usch	2.10	334	⇑iP	Pb	08 04 21.2	-1.6
	baz=36						
BOOM				⇑iS	Sg	08 04 50.6	-1.4
	baz=36						
ANVS	Anan'yevo	2.20	9	⇓iP	Pb	08 04 23.2	-1.4
	baz=10.0						
ANVS				⇓iS	Sg	08 04 53.8	-1.6
	baz=10.0						
TNSS	Tian-Shan	2.43	356	eP	Pb	08 04 29.0	+0.3
	26nm,0.3s						
TNSS				eS	Sg	08 05 05.2	+2.4
	142nm,0.4s						
TNSS	Tian-Shan	2.43	356	Pg	Pb	08 04 28.8	+0.1
	28nm,0.6s						
TNSS				Lg	Lg	08 05 04.8	
	143nm,0.5s						
IZV	Izvestkoviy	2.46	350	eP	Pb	08 04 29.4	+0.3
	14nm,0.2s						
IZV				eS	Sg	08 05 05.7	+2.0
	74nm,0.3s						
IZV	Izvestkoviy	2.46	350	Pg	Pb	08 04 29.8	+0.8
	25nm,0.5s						
IZV				Lg	Lg	08 05 05.8	
	74nm,0.3s						
MDOK	Medeo	2.55	358	eP	Pb	08 04 30.8	+0.2
	6.9nm,0.2s						
MDOK				eS	Sg	08 05 08.1	+1.5
	191nm,0.6s						
MDOK	Medeo	2.55	358	Pn	Pb	08 04 30.4	-0.2
	19nm,0.7s						
MDOK				Lg	Lg	08 05 07.3	
	175nm,0.6s						
MDOK	Medeo	2.55	358	Pg	Pb	08 04 31.2	+0.6
	19nm,0.5s						
MDOK				Lg	Lg	08 05 07.8	
	193nm,0.6s						
UCH	Uchtor	2.58	310	⇑iP	Pn	08 04 27.3	+0.5
	baz=12						
UCH				⇑iS	Sb	08 05 01.3	-1.8
	baz=12						
UCH	Uchtor	2.58	310	P	Pn	08 04 28.2	+1.3
	SNR=13						
MTBS	Maitube	2.58	348	eP	Pb	08 04 31.4	+0.4
	20nm,0.1s						
MTBS				eS	Sg	08 05 08.8	+1.2
	35nm,0.3s						
MTBS	Maitube	2.58	348	Pg	Pb	08 04 31.6	+0.6
	20nm,0.2s						
MTBS				Lg	Lg	08 05 08.7	
	35nm,0.3s						
KST	Kastek	2.60	340	eP	Pb	08 04 31.7	+0.4
	15nm,0.1s						
KST				eS	Sg	08 05 09.5	+1.5
	33nm,0.3s						
KST	Kastek	2.60	340	Pg	Pb	08 04 31.7	+0.4
	25nm,0.3s						
KST				Lg	Lg	08 05 08.7	
	32nm,0.3s						
TKM2	Tokmak 2	2.60	333	⇓iP	Pn	08 04 28.3	+1.4
	baz=35						
TKM2				⇓iS	Sb	08 05 02.7	-0.7
	baz=35						
TKM2	Tokmak 2	2.60	333	P	Pb	08 04 28.9	-2.5
	SNR=11						
TKM2	Tokmak 2	2.60	333	⇑Pn	Pn	08 04 28.4	+1.6
	7.9nm,0.5s						
TKM2				⇓Lg	Lg	08 05 08.6	
	37nm,0.9s						
AAA	Alma-Ata	2.60	356	eP	Pg	08 04 32.6	-1.9
	11nm,0.0s						
AAA				eS	Sg	08 05 11.1	+2.8
	43nm,0.1s						
AAA	Alma-Ata	2.60	356	Pg	Pb	08 04 32.4	+1.0
	33nm,0.1s						
AAA				Lg	Lg	08 05 10.7	
	105nm,0.3s						
KNDC	Almaty	2.61	356	⇑Pn	Pb	08 04 32.1	+0.6
	21nm,0.6s						
KNDC				⇑Lg	Lg	08 05 09.0	
	131nm,0.6s						
SATY	Saty	2.61	20	eP	Pb	08 04 31.6	0.0
	3.2nm,0.1s						
SATY				eS	Sg	08 05 09.1	+0.6
	91nm,0.3s						
SATY	Saty	2.61	20	Pg	Pb	08 04 31.7	+0.1
	7.5nm,0.4s						
SATY				Lg	Lg	08 05 08.7	
	95nm,0.5s						
KOTS	Kotyrbulak	2.62	359	eP	Pb	08 04 32.1	+0.4
	21nm,0.2s						
KOTS				eS	Sg	08 05 10.4	+1.5
	264nm,0.3s						
KOTS	Kotyrbulak	2.62	359	Pg	Pb	08 04 32.5	+0.8
	55nm,0.4s						
KOTS				Lg	Lg	08 05 10.4	
	290nm,0.6s						
KBK	Karagaybulak	2.64	321	⇓iP	Pn	08 04 28.7	+1.2
	baz=24						
KBK				⇓iS	Sb	08 05 03.2	-1.6
	baz=24						
KBK	Karagaybulak	2.64	321	P	Pb	08 04 31.9	-0.3
	SNR=10						
AAK	Ala-Archa	2.86	316	⇓iP	Pn	08 04 31.2	+0.8
	baz=18						
AAK				⇓iS	Sb	08 05 07.9	-3.0
	baz=18						
AAK	Ala-Archa	2.86	316	P	Pb	08 04 36.0	+0.2
	SNR=7.1						
AAK	Ala-Archa	2.86	316	⇓Pg	Pb	08 04 34.8	-1.0
	7.1nm,0.5s						
AAK				Lg	Lg	08 05 16.6	
	29nm,0.8s						
KURS	Kuram	2.97	14	eP	Pb	08 04 37.8	+0.2
	5.8nm,0.3s						
KURS				eS	Sg	08 05 20.0	+0.1
	27nm,0.4s						
KURS	Kuram	2.97	14	Pg	Pb	08 04 37.9	+0.3
	11nm,0.5s						
KURS				Lg	Lg	08 05 19.4	
	27nm,0.7s						
CHMS	Chumysh	3.00	323	⇑eP	Pn	08 04 33.4	+1.2
	baz=25						
CHMS				⇑iS	Sb	08 05 11.5	-3.4
	baz=25						
AML	Almayashu	3.04	301	⇑eP	Pn	08 04 33.1	+0.1
	baz=4.0						
AML				⇑iS	Sn	08 05 11.7	+2.1
	baz=4.0						
AML	Almayashu	3.04	301	P	Pn	08 04 34.5	+1.5
	SNR=19						
SHLS	Shalkode	3.06	33	eP	Pg	08 04 42.7	-0.5
	4.6nm,0.1s						
SHLS				eS	Sg	08 05 28.2	+5.3
	39nm,0.5s						
SHLS	Shalkode	3.06	33	Pg	Pg	08 04 42.9	-0.4
	10nm,0.2s						
SHLS				Lg	Lg	08 05 27.7	
	40nm,0.5s						
KTBS	Karatobe	3.12	353	eP	Pb	08 04 40.9	+0.7
	2.7nm,0.2s						
KTBS				eS	Sg	08 05 25.1	+0.2
	69nm,0.4s						
KTBS	Karatobe	3.12	353	Pg	Pb	08 04 41.1	+0.9
	30nm,0.5s						
KTBS				Lg	Lg	08 05 24.9	
	79nm,0.6s						
PDGK	Podgornoye	3.21	32	Pg	Pb	08 04 42.0	+0.1
	3.0nm,0.4s						
PDGK				Lg	Lg	08 05 26.4	
	20nm,0.7s						
PDGK	Podgornoye	3.21	32	⇑Pg	Pg	08 04 45.0	-1.2
	5.0nm,0.5s						
PDGK				⇑Lg	Lg	08 05 25.3	
	42nm,0.7s						
CHKK	Chushkaly	3.25	357	eP	Pb	08 04 43.1	+0.8
	5.6nm,0.2s						
CHKK				eS	Sg	08 05 29.0	+0.2
	71nm,0.2s						
CHKK	Chushkaly	3.25	357	Pg	Pb	08 04 42.9	+0.6
	16nm,0.4s						
CHKK				Lg	Lg	08 05 28.4	
	76nm,0.4s						
ARSB	Arslanbob	3.26	284	⇑iP	Pn	08 04 36.1	+0.2
	baz=86						
ARSB				⇑iS	Sn	08 05 16.0	+1.1
	baz=86						
EKS2	Erkin-Say	3.27	310	⇓iP	Pn	08 04 36.6	+0.5
	baz=12						
EKS2				⇓iS	Sn	08 05 17.3	+2.1
	baz=12						
EKS2	Erkin-Say	3.27	310	P	Pb	08 04 39.4	-3.5
	SNR=7.3						
KRBS	Karabastau	3.28	340	eP	Pb	08 04 43.1	+0.2
	4.9nm,0.4s						
KRBS				eS	Sg	08 05 29.1	-0.9
	15nm,0.6s						
KRBS	Karabastau	3.28	340	Pg	Pg	08 04 45.5	-2.0
	13nm,0.5s						
KRBS				Lg	Lg	08 05 30.9	
	15nm,0.6s						
USP	Ospenovka	3.33	324	⇑eP	Pn	08 04 38.1	+1.4
	baz=26						
USP				⇑eS	Sn	08 05 19.1	+2.8
	baz=26						
USP	Ospenovka	3.33	324	P	Pb	08 04 44.7	+1.0
	SNR=11						
KUU	Kurty	3.34	349	eP	Pb	08 04 44.3	+0.4
	0.8nm,0.1s						
KUU				eS	Sg	08 05 31.0	-0.9
	51nm,0.5s						
KUU	Kurty	3.34	349	Pg	Pb	08 04 44.5	+0.6
	9.6nm,0.5s						
KUU				Lg	Lg	08 05 30.7	
	58nm,0.9s						
SGDS	Sogindy	3.42	327	Pg	Pg	08 04 48.9	-1.2
	18nm,0.6s						
SGDS				Lg	Lg	08 05 36.4	
	13nm,0.7s						
MNBS	Baschi	3.58	14	eP	Pb	08 04 49.0	+0.9
	0.1nm,0.2s						
MNBS				eS	Sg	08 05 38.9	-0.7
	0.6nm,0.2s						
ARXS	Arharly	3.63	7	eP	Pb	08 04 49.3	+0.3
	5.6nm,0.2s						
ARXS				eS	Sg	08 05 39.9	-1.3
	15nm,0.3s						
ARXS	Arharly	3.63	7	Pg	Pb	08 04 49.7	+0.8
	7.3nm,0.6s						
ARXS				Lg	Lg	08 05 40.3	
	15nm,0.4s						
MRKS	Merke	3.65	307	eP	Pb	08 04 50.7	+1.4
	4.1nm,0.1s						
MRKS				eS	Sg	08 05 41.8	-0.1
	7.4nm,0.3s						
MRKS	Merke	3.65	307	Pg	Pb	08 04 50.8	+1.5
	12nm,0.6s						
MRKS				Lg	Lg	08 05 41.4	
	8.7nm,0.5s						
KTMS	Ketmen	3.69	39	eP	Pb	08 04 49.6	-0.3
	0.1nm,0.1s						
KTMS				eS	Sg	08 05 40.0	-3.0
	12nm,0.2s						
KTMS	Ketmen	3.69	39	Pg	Pb	08 04 49.9	0.0
	0.4nm,0.1s						
KTMS				Lg	Lg	08 05 40.0	
	17nm,0.5s						
DJR	Jarkent	4.19	27	eP	Pb	08 04 57.8	-0.6
	0.6nm,0.1s						
DJR				eS	Sg	08 05 54.4	-4.7
	6.9nm,0.4s						
DJR	Jarkent	4.19	27	Pg	Pb	08 04 58.6	+0.2
	2.7nm,0.3s						
DJR				Lg	Lg	08 05 55.3	
	8.0nm,0.5s						
KAPS	Kapalarasan	4.94	18	eP	Pb	08 05 12.9	+1.8
	0.8nm,0.1s						
KAPS				eS	Sg	08 06 20.1	-3.0
	2.6nm,0.2s						
KAPS	Kapalarasan	4.94	18	Pg	Pb	08 05 13.9	+2.8
	3.1nm,0.5s						
KAPS				Lg	Lg	08 06 22.3	
	7.4nm,0.7s						
BTLS	Baital	4.99	334	eP	Pb	08 05 14.7	+2.6
	0.6nm,0.1s						
BTLS				eS	Sg	08 06 22.9	-1.9
	3.9nm,0.2s						
BTLS	Baital	4.99	334	Pg	Pg	08 05 17.6	-2.6
	7.6nm,0.7s						
BTLS				Lg	Lg	08 06 28.3	
	2.0nm,0.4s						
KK31	Karatay Array	5.57	299	⇑Pg	Pb	08 05 25.1	+3.2
	1.7nm,0.6s,baz=123,slow=16,SNR=16						
KK31				⇓Lg	Lg	08 06 40.2	
	0.8nm,0.4s,baz=117,slow=29,SNR=4.2						

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*NEIC **01** 08:17:32.5±2.9, 22°.87S±0°.05×68°.22W±0°.05, h129^{km}±5^{km}, Error ellipse: s-maj=7.9km s-min=6.0km az=156.0*
*VAO **01** 08:17:32.9±0.5, 22°.70S×68°.06W, h123^{km}±5^{km}, mb4.6*
*IDC **01** 08:17:32.3±1.0, 22°.80S×67°.96W, h119^{km}±9^{km}, mb4.0/9, mb1 4.0/13, mb1mx3.8/33, mbtmp4.3/13, Error ellipse: s-maj=18.7km s-min=16.5km az=6.0*
*GUC **01** 08:17:33.5±0.6, 22°.85S×68°.47W, h143^{km}±4^{km}, ML4.1*
ISC 01 08:17:32.0±0.6**, 22°.86S**±0°.04×**68°.10W**±0°.06**, h123**^{km}±6^{km}**, n95, σ1^{s}39**/107**, mb4.2**/13**, 12C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.79	288	P	Pn	08 17 53.5	+0.6
	409nm,0.3s,baz=214,slow=12,SNR=2190						
LVC				S	Sn	08 18 08.5	-0.1
	1μm,0.3s,baz=209,slow=24,SNR=28						
LVC	Limon Verde	0.79	288		Pn	08 17 53.4	+0.6
LVC				Sn	Sn	08 18 09.1	+0.5
LVC	Limon Verde	0.79	288	eP	Pn	08 17 53.3	+0.4
PB15	IPOC Station P	1.32	254	⇑iP	Pn	08 17 58.1	+0.3
PB15				eS	Sn	08 18 17.2	-0.2
PB15	IPOC Station P	1.32	254		Pn	08 17 57.8	0.0
PB15				Sn	Sn	08 18 17.9	+0.6
PB06	IPOC Station P	1.37	276	⇑iP	Pn	08 17 58.7	+0.3
PB06				i S	Sn	08 18 18.0	-0.4
PB06				IAML		08 18 22.9	
	comp=E,5μm,0.3s						
PB06	IPOC Station P	1.37	276		Pn	08 17 58.3	0.0
PB06				Sn	Sn	08 18 18.1	-0.3
PB09	IPOC Station P	1.50	315	⇑iP	Pn	08 18 01.1	+1.3
PB09				i S	Sn	08 18 22.2	+1.2
PB09	IPOC Station P	1.50	315		Pn	08 18 01.0	+1.2
PB09				Sn	Sn	08 18 22.6	+1.7
PB03	IPOC Station P	1.73	297	⇑iP	Pn	08 18 03.0	+0.4
PB03				i S	Sn	08 18 24.9	-0.9
PB03				IAML		08 18 26.6	
	comp=N,4μm,0.3s						
PB05	IPOC Station P	1.94	270	⇑iP	Pn	08 18 04.6	-0.4
PB05				i S	Sn	08 18 28.1	-2.2
PB05				IAML		08 18 37.9	
	comp=E,1μm,0.2s						
PB04	IPOC Station P	1.97	285	⇑iP	Pn	08 18 05.4	0.0
PB04				i S	Sn	08 18 28.9	-2.0
PB04				IAML		08 18 43.2	
	comp=N,2μm,0.4s						
PB04	IPOC Station P	1.97	285		Pn	08 18 04.9	-0.5
PB07	IPOC Station P	2.00	304	⇑iP	Pn	08 18 06.3	+0.5
PB07				i S	Sn	08 18 30.9	-0.8
PB07				IAML		08 18 33.9	
	comp=E,2μm,0.3s						
PB07	IPOC Station P	2.00	304		Pn	08 18 06.0	+0.1
PB01	IPOC Station P	2.22	324	⇑iP	Pn	08 18 09.4	+0.9
PB01				i S	Sn	08 18 36.7	+0.3
PB01				IAML		08 18 39.2	
	comp=N,864nm,0.3s						
PB01	IPOC Station P	2.22	324		Pn	08 18 09.4	+0.9
PB02	IPOC Station P	2.26	312	⇑iP	Pn	08 18 09.5	+0.5
PB02				i S	Sn	08 18 36.6	-0.8
PB10	IPOC Station P	2.36	253	⇑iP	Pn	08 18 09.2	-0.9
PB10				IAML		08 18 47.2	
	comp=E,791nm,0.2s						
PB10	IPOC Station P	2.36	253		Pn	08 18 09.2	-0.9
GO02	Mina Guanaco	2.67	210		Pn	08 18 14.0	-0.5
PB14	IPOC Station P	2.75	230		Pn	08 18 13.7	-1.8
PATCX	Punta Patache	2.79	316	⇑iP	Pn	08 18 15.3	-0.4
PATCX	Punta Patache	2.79	316		Pn	08 18 15.4	-0.4
PB08	IPOC Station P	2.88	340	⇓iP	Pn	08 18 19.1	+1.9
PB08	IPOC Station P	2.88	340		Pn	08 18 18.4	+1.3
GO01	Chusmiza	3.33	342	⇑iP	Pn	08 18 24.6	+1.4
GO01	Chusmiza	3.33	342		Pn	08 18 24.7	+1.5
PB11	IPOC Station P	3.41	334		Pn	08 18 23.9	0.0

PSGCX	Pisagua	3.75	329		Pn	08 18 28.1	-0.4
MNMC	Minye Minye	3.96	339		Pn	08 18 31.6	+0.2
PB16	IPOC Station P	4.69	343		Pn	08 18 42.8	+1.4
PB12	IPOC Station P	4.71	333		Pn	08 18 40.1	-1.1
LPAZ	La Paz	6.53	360	P	Pn	08 19 07.8	+1.6
	comp=E,1.5nm,0.3s,baz=179,slow=4.0,SNR=49						
LPAZ	La Paz	6.53	360		Pn	08 19 08.1	+1.8
GO04	Tololo Observa	7.68	198		Pn	08 19 17.3	-4.0
SIV	San Ignacio	9.51	45	P	Pn	08 19 43.7	-2.2
	comp=E,22nm,0.3s,baz=242,slow=12,SNR=249						
SIV				S	Sn	08 21 23.6	-7.6
	comp=E,1.2nm,0.3s,baz=159,slow=14,SNR=3.7						
CPUP	Villa Florida	10.39	112	P	Pn	08 19 57.4	-0.3
	comp=E,0.1nm,0.3s,baz=275,slow=9.3,SNR=5.5						
CPUP	Villa Florida	10.39	112		Pn	08 19 58.5	+0.9
CPUP	Villa Florida	10.39	112	eP	Pn	08 19 58.9	+1.2
VILB	Vilhena	12.38	39	eP	Pn	08 20 23.6	-0.6
GO05	Huala	12.57	195	Pn	Pn	08 20 23.0	-3.4
SALV	Santo Antonio	13.59	62	eP	Pn	08 20 39.1	-0.7
TRCB	Terra Rica	14.26	93	eP	Pn	08 20 49.6	+1.2
SAML	Samuel	14.61	20	Pn	Pn	08 20 52.8	-0.1
PTGB	Pitanga	14.79	100	eP	P	08 20 58.1	+0.2
CPSB	Cacapava Do Su	15.10	123	eP	Pn	08 20 59.9	+1.0
ITAB	Concordia	15.11	110	eP	P	08 21 01.6	+0.3
PLTB	Pedras Altas	15.63	128	eP	Pn	08 21 06.8	+1.3
CLDB	Colider	16.73	47	eP	Pn	08 21 18.1	-1.1
ITRB	Iturama	16.82	83	eP	P	08 21 21.2	+0.8
ARAG	Araguaiana, MT	16.93	68	eP	Pn	08 21 21.6	+0.1
FRTB	Fartura	17.06	95	eP	P	08 21 23.3	+0.3
PLCA	Paso Flores	17.95	186	P	P	08 21 33.8	+1.2
	comp=E,0.1nm,0.3s,baz=279,slow=16,SNR=2.3						
PLCA	Paso Flores	17.95	186		P	08 21 33.5	+1.0
RCLB	Rio Claro- Sao	18.99	93	eP	P	08 21 43.9	-0.2
IPMB	Ipameri, GO	19.25	79	eP	P	08 21 47.2	+0.2
VAO	Valinhos	19.46	95	eP	P	08 21 49.0	-0.2
BDFB	Brasilia	20.26	73	P	P	08 21 57.2	-0.7
	comp=E,6.5nm,0.5s,baz=239,slow=11,SNR=13						
BDFB	Brasilia	20.26	73	P	P	08 21 58.5	+0.6
BDFB				IAmb	IAmb	08 21 59.9	
	comp=Z,8.8nm,0.7s						
PTGA	Pitinga	23.37	21	P	P	08 22 28.6	-1.1
	comp=Z,4.0nm,0.3s,baz=202,slow=13,SNR=14						
PTGA	Pitinga	23.37	21	P	P	08 22 28.7	-1.0
PTGA				IAmb	IAmb	08 22 32.9	
	comp=Z,20nm,1.4s						
PTGA	Pitinga	23.37	21	eP	P	08 22 28.8	-0.9
JANB	Januaria	23.77	75	eP	P	08 22 31.5	-1.9
SJMB	Sao Joao De Ma	25.48	86	eP	P	08 22 49.3	+0.4
BSFB	Barra de Sao F	25.76	86	eP	P	08 22 50.0	-1.4
BOAV	Boa Vista	26.16	17	eP	P	08 22 55.5	+0.6
FDF	Fort de France	37.97	11	P	P	08 24 40.6	+2.6
SNAA	Sanae	60.76	161	P	P	08 27 31.0	+0.6
SNAA				IAmb	IAmb	08 27 32.1	
	comp=Z,2.8nm,0.8s						
QSPA	South Pole Qui	67.34	180	P	P	08 28 15.0	+1.4
DBIC	Dimbokro	68.41	73	P	P	08 28 21.3	+0.4
	comp=Z,7.7nm,0.7s,baz=224,slow=6.9,SNR=11						
DBIC	Dimbokro	68.41	73	P	P	08 28 21.6	+0.8
I42A	Draeger Farm,	69.11	344	P	P	08 28 22.8	-1.8
I42A				IAmb	IAmb	08 28 25.9	
	comp=Z,3.4nm,0.6s						
RDMU	Red Mountain	73.96	328	P	P	08 28 52.0	-2.1
GSC	Goldstone, Bar	74.00	320	P	P	08 28 50.5	-3.8
PDAR	Pinedale Array	75.66	330	P	P	08 29 05.2	+1.4
	comp=Z,0.5nm,0.6s,baz=137,slow=7.9,SNR=7.3						
HWUT	Hardware Ranch	75.73	328	P	P	08 29 02.4	-1.7
HWUT				IAmb	IAmb	08 29 06.9	
	comp=Z,3.8nm,1.2s						
SNOW	Snow King Moun	76.75	330	P	P	08 29 11.3	+1.3
SNOW				IAmb	IAmb	08 29 12.5	
	comp=Z,2.8nm,0.9s						
ULM	Lac du Bonnet	76.83	342	P	P	08 29 10.2	+0.2
	comp=Z,2.6nm,0.5s,baz=174,slow=4.6,SNR=6.6						
ULM	Lac du Bonnet	76.83	342	P	P	08 29 09.5	-0.4
ULM				IAmb	IAmb	08 29 11.5	
	comp=Z,2.8nm,0.8s						
OMMB	Old Mammoth Mi	76.87	321	P	P	08 29 12.5	+1.6
NVAR	Mina Array Bea	77.02	322	P	P	08 29 13.3	+1.7
	comp=Z,0.6nm,0.7s,baz=166,slow=6.7,SNR=5.1						
TOA0	Torodi Ar. Sit	77.11	70	P	P	08 29 12.5	+0.2
TOA0				IAmb	IAmb	08 29 14.7	
	comp=Z,6.5nm,0.9s						
TORD	Torodi Ar. Bea	77.11	70	P	P	08 29 12.6	+0.3
	comp=Z,4.0nm,0.4s,baz=253,slow=5.5,SNR=43						
YHH	Holmes Hill	77.81	330	P	P	08 29 18.0	+2.1
MCMT	McKenzie Canyo	78.77	329	P	P	08 29 19.1	-2.1
MAW	Mawson	82.82	163	P	P	08 29 43.3	+1.2
	comp=Z,1.2nm,0.5s,baz=275,slow=5.8,SNR=1.7						
MAW	Mawson	82.82	163	IAmb	IAmb	08 29 52.8	
	comp=Z,1.0nm,1.1s						
YKA	Yellowknife Ar	92.71	340	P	P	08 30 30.6	+1.0
	comp=Z,0.8nm,0.6s,baz=135,slow=5.0,SNR=26						
ASAR	Alice Springs	129.05	206	PKP	PKPdf	08 36 26.3	+0.2
	comp=Z,0.7nm,0.7s,baz=126,slow=1.8,SNR=7.9						
WRA	Warramunga Arr	132.16	209	PKP	PKPdf	08 36 32.9	+0.8
	comp=Z,97nm,0.3s,baz=154,slow=1.8,SNR=280						
KSH	Kashi	145.34	53	PKPbc	PKPdf	08 36 52.4	-3.1
KSH				pPKP	pPKPdf	08 37 33.6	+3.3
MKAR	Makanchi Array	146.26	38	PKPbc	PKPbc	08 36 57.6	-0.5
	comp=Z,0.7nm,0.8s,baz=20,slow=1.8,SNR=4.9						
KLR	Kul'dur	149.36	334	PKPbc	PKiKP	08 37 07.0	-0.4
	comp=Z,0.7nm,0.6s,baz=138,slow=13,SNR=2.2						
SONM	Songino Array	154.69	9	PKPab	PKPab	08 37 33.8	+0.1
	comp=Z,0.3nm,0.5s,baz=342,slow=3.2,SNR=1.5						

HLW ***01*** *08:20:54.9, 34.°51N×26.°32E, h8km±14km, Md4.0, Ml4.5*
IDC ***01*** *08:20:55.8±1.2, 34.°28N×26.°23E, h0km, mb3.9/7, mb1 3.9/13, mb1mx3.7/59, mbtmp3.8/13, ML3.6/6, MS4.5/2, Ms1 4.5/2, ms1mx3.6/52, Error ellipse: s-maj=24.4km s-min=15.6km az=16.0*
NIC ***01*** *08:20:56.8±0.0, 34.°16N×26.°22E, h11km±1km, Ml3.3/2*
ISK ***01*** *08:20:59.5, 34.°35N×26.°21E, h18km, ML3.5/11*
THE ***01*** *08:20:59.7, 34.°32N×26.°15E, h0km±3km, ML3.0/4, Error ellipse: s-maj=6.1km s-min=1.4km az=145.0*
GII ***01*** *08:21:04.8±0.0, 34.°13N×26.°98E, h1km, MD2.9/2, Mm3.6/3*
DDA ***01*** *08:21:04.5, 34.°63N×26.°57E, h7km±5km, ML3.2*
ATH ***01*** *08:21:04.1, 34.°63N×26.°10E, h40km±2km, ML3.0/7, Error ellipse: s-maj=8.8km s-min=2.5km az=347.0*
ISC 01 08:20:57.5±1.4**, 34.°21N**±0.°04×**26.°31E**±0.°04**, h17**km±9km**, n102, σ1.s91**/126**, mb3.9**/7**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	Zakros	0.91	355	P	Pg	08 21 14.8	-0.5
ZKR				S	Sn	08 21 28.5	+0.1
	1µm,0.4s						
ZKR	Zakros	0.91	355	P	Pg	08 21 14.8	-0.5
ZKR				AML	AML	08 21 32.6	
	comp=N,2174µm,0.3s						
ZKR				AML	AML	08 21 40.2	
	comp=E,3466µm,0.5s						
ZKR	Zakros	0.91	355	PG	Pg	08 21 14.5	-0.8
ZKR				SG	Sb	08 21 26.4	-0.4
ZKR	Zakros	0.91	355	P	Pg	08 21 14.8	-0.5
ZKR				S	Sn	08 21 29.0	+0.6
ZKR				AML	AML	08 21 32.2	
	comp=E,2.2nm,0.3s						
ZKR				AML	AML	08 21 32.2	
	comp=E,2.2nm,0.3s						
ZKR				AML	AML	08 21 33.0	
	comp=E,3.1nm,0.6s						
ZKR				AML	AML	08 21 33.0	
	comp=E,3.1nm,0.6s						
FRMA	Ierapetra Chan	0.94	330	P	Pb	08 21 14.2	-1.2
FRMA				S	Sg	08 21 26.6	-1.5
	comp=E,730nm,0.5s						
STIA	Sitia Lasithi	1.01	350	P	Pb	08 21 16.8	+0.2
STIA				S	Sn	08 21 30.3	-0.5
LAST	Lasithi	1.18	324	P	Pb	08 21 18.7	-0.8
LAST				S	Sb	08 21 34.0	-0.5
	comp=E,1µm,0.6s						
LAST	Lasithi	1.18	324	P	Pb	08 21 18.8	-0.8
LAST				AML	AML	08 21 43.9	
	comp=N,2228µm,0.5s						
LAST				AML	AML	08 21 50.7	
	comp=E,1812µm,0.7s						
NPS	Neapolis	1.20	332	P	Pb	08 21 19.5	-0.4
NPS	Neapolis	1.20	332	P	Pb	08 21 19.5	-0.4
NPS				AML	AML	08 21 46.5	
	comp=N,1216µm,0.6s						
NPS				AML	AML	08 21 49.5	
	comp=E,2071µm,0.6s						
SIVA	Sivas	1.48	304	P	Pn	08 21 24.4	+1.0
SIVA				S	Sn	08 21 42.5	+0.1
	comp=E,1µm,0.5s						
SIVA	Sivas	1.48	304	P	Pn	08 21 24.4	+1.0
SIVA				AML	AML	08 21 57.1	
	comp=N,1715µm,0.5s						
SIVA				AML	AML	08 21 58.0	
	comp=E,2798µm,0.6s						
HRKL	Herakleio	1.49	318	PN	Pn	08 21 23.4	-0.1
KARP	Karpathos	1.51	27	P	Pg	08 21 27.1	+0.4
KARP	Karpathos	1.51	27	P	Pg	08 21 27.1	+0.4
KARP				AML	AML	08 22 04.0	
	comp=E,1109µm,0.6s						
KARP				AML	AML	08 22 08.8	
	comp=N,1289µm,0.7s						
KARP	Karpathos	1.51	27	PN	Pg	08 21 26.8	+0.2
KARP				SN	Sn	08 21 44.0	+0.8
KARP	Karpathos	1.51	27	P	Pb	08 21 25.6	+0.5
KARP				S	Sg	08 21 46.3	0.0
KARP				AML	AML	08 22 03.6	
	comp=N,1.1nm,0.6s						
KARP				AML	AML	08 22 03.6	
	comp=N,1.1nm,0.6s						
KARP				AML	AML	08 22 08.4	
	comp=N,1.3nm,0.7s						
KARP				AML	AML	08 22 08.4	
	comp=N,1.3nm,0.7s						
IDI	Anoyia	1.59	313	Pn	Pn	08 21 25.8	+0.7
	comp=N,9.2nm,0.3s,baz=131,slow=9.5,SNR=50						
IDI				Sn	Sn	08 21 45.7	+0.3
	comp=N,15nm,0.3s,baz=306,slow=17,SNR=8.4						
IDI	Anoyia	1.59	313	P	Pn	08 21 25.9	+0.9
IDI				AML	AML	08 22 03.8	
	comp=N,595µm,0.5s						
IDI				AML	AML	08 22 07.7	
	comp=E,530µm,0.6s						
IDI	Anoyia	1.59	313	PN	Pn	08 21 25.5	+0.4
IDI				SN	Sn	08 21 44.3	-1.0
GVD	Gavdhos	1.94	290	PN	Pn	08 21 31.0	+1.2
VAM	Vamos	2.11	305	P	Pn	08 21 33.7	+1.6
SANT	Santorini	2.27	342	PN	Pn	08 21 34.4	0.0
SANT	Santorini	2.27	342	i P	Pn	08 21 32.0	-2.3
IMMV	Iera Moni Meta	2.29	304	P	Pn	08 21 36.4	+1.9
IMMV				AML	AML	08 22 31.4	
	comp=E,786µm,0.6s						
IMMV				AML	AML	08 22 35.6	
	comp=N,479µm,1.0s						
IMMV	Iera Moni Meta	2.29	304	PN	Pn	08 21 35.6	+1.0
ARG	Arkhangelos	2.50	36	PN	Pn	08 21 39.9	+2.5
AMGA	Amorgos Island	2.64	353	P	Pn	08 21 40.1	+0.6
IOSP	Ios island	2.65	342	P	Pn	08 21 39.8	+0.3
DAT	Datca	2.72	22	PN	Pn	08 21 42.7	+2.1
DAT	Datca	2.72	22	i P	Pn	08 21 42.7	+2.1
APE	Apeiranthos	2.93	348	P	Pn	08 21 43.6	+0.2
APE	Apeiranthos	2.93	348	PN	Pn	08 21 43.9	+0.5
APE				SN	Sn	08 22 16.8	-1.4
APE	Apeiranthos	2.93	348	i P	Pn	08 21 43.6	+0.2
APE	Apeiranthos	2.93	348	P	Pn	08 21 43.8	+0.5
BDRM	Kayabasi	3.00	18	i P	Pn	08 21 45.2	+0.9
BDRM				i P	Pb	08 21 45.2	-5.3
BDRM				IAML		08 21 46.0	
	comp=E,868nm,0.4s						
BDRM				i S	Sn	08 21 46.6	-33
DALY	Dalyan (Mula)	3.23	36	PN	Pn	08 21 50.3	+2.8
DALY	Dalyan (Mula)	3.23	36	i P	Pn	08 21 50.7	+3.2
SERI	Serifos	3.30	334	P	Pn	08 21 48.6	0.0
FETY	Fethiye	3.32	42	PN	Pn	08 21 51.2	+2.5
FETY	Fethiye	3.32	42	i P	Pn	08 21 50.6	+1.9
YER	Yerkesik	3.33	28	PN	Pn	08 21 51.2	+2.2
AKAS	Kas	3.37	52	PN	Pn	08 21 52.2	+2.6
AKAS	Kas	3.37	52	i P	Pn	08 21 51.9	+2.3
AKAS				i S	Sn	08 22 25.9	-3.3
AKAS				IAML		08 22 36.0	
	comp=N,67nm,0.6s						
AYDN	Tasoluk	3.68	20	i P	Pn	08 21 55.4	+1.7
AYDN				IAML		08 22 40.0	
	comp=N,13nm,0.8s						
AYDN				IAML		08 22 43.0	
	comp=E,15nm,0.6s						
ELL	Elmali	3.88	48	PN	Pn	08 21 59.6	+3.1
TAVA	DENIZLI_Tavas	3.88	32	i P	Pn	08 21 58.6	+2.1
AKUM	Antalya-Kumluc	3.92	56	i P	Pn	08 21 58.2	+1.3
AKUM				i S	Sn	08 22 42.0	-0.5
AKUM				IAML		08 22 46.0	
	comp=E,46nm,0.7s						
AKUM				IAML		08 22 47.0	
	comp=N,31nm,0.3s						
AYDB	Zeytinkoy-Aydi	3.95	18	PN	Pn	08 21 59.6	+2.1
GOLH	Golhisar	4.02	40	i P	Pn	08 22 01.3	+2.9
OSC1	CSNet OBS 1	4.19	98	P	Pn	08 22 02.3	+1.6
OSC1				S	Sn	08 22 51.8	+2.6
KORT	Korkueli	4.31	49	PN	Pn	08 22 05.9	+3.4
KORT	Korkueli	4.31	49	i P	Pn	08 22 07.1	+4.6
KORT				i S	Sn	08 22 57.3	+4.8
ITM	Ithomi	4.64	311	PN	Pn	08 22 09.0	+2.1
MANT	Manisa	4.64	22	i P	Pn	08 22 07.8	+0.6
KHAL	Karahalli	4.89	31	i P	Pn	08 22 11.2	+0.8
KHAL				i S	Sn	08 23 02.6	-4.0
USAK	Uak-Merkez	5.00	25	i P	Pn	08 22 13.4	+1.5
AKMS	Akamas	5.03	79	P	Pn	08 22 14.0	+1.7
KEPZ	Antalya-Kepez	5.08	57	i P	Pn	08 22 15.0	+2.0
KEPZ				i S	Sn	08 23 09.5	-1.8
KEPZ				IAML		08 23 49.0	
	comp=E,21nm,1.8s						
KZIL	AFYON_Kizioren	5.09	36	i P	Pn	08 22 16.1	+2.9
NATA	Nata	5.20	82	P	Pn	08 22 16.2	+1.6
BAGO	Egridir - ISPA	5.24	43	i S	Sn	08 22 51.5	-24
ALFC	Alefka	5.27	78	P	Pn	08 22 17.2	+1.7
SZAC	Souni	5.45	82	P	Pn	08 22 19.6	+1.5
ASGA	Asgata	5.76	82	P	Pn	08 22 24.6	+2.4
CSS	Mathiatis	5.84	81	Pn	Pn	08 22 25.4	+2.0
CSS	Mathiatis	5.84	81	P	Pn	08 22 25.2	+1.8
MVOU	Mavrovouni	6.09	80	P	Pn	08 22 29.6	+2.8
HSAF	As Saff	6.38	134	P	Pn	08 22 33.5	+2.6
	baz=136						
GLL	Jalalah	6.50	134	P	Pn	08 22 34.3	+1.8
	baz=135						
GLL				S	Sn	08 23 44.2	-2.3
	baz=135						
SUZ	Suez	7.04	126	P	Pn	08 22 43.1	+3.3
	baz=128						
SLTI	Sal'it	7.57	103	Sn	Sn	08 24 10.2	-2.4
KZIT	Kziot	7.58	114	Sn	Sn	08 24 10.3	-2.4
MMAI	Mount Meron Ar	7.68	96	Pn	Pn	08 22 50.2	+1.5
	comp=E,1.5nm,0.3s,baz=284,slow=12,SNR=3.2						
MMAI				Sn	Sn	08 24 11.6	-3.7
	comp=E,1.9nm,0.3s,baz=296,slow=17,SNR=2.0						
AMAZ	Amatzia	7.71	108	Pn	Pn	08 22 51.1	+2.0
MMLI	Mount Malkishu	7.83	100	Sn	Sn	08 24 15.7	-3.2
KSDI	Kefar Szold	7.85	95	Pn	Pn	08 22 53.3	+2.3
GEM	Giv'at Ha'Em	7.86	95	Pn	Pn	08 22 53.6	+2.6
HMDT	Nahal Hemdat	7.96	102	Pn	Pn	08 22 54.9	+2.4
HMDT				Sn	Sn	08 24 19.4	-2.8
DSI	Dead Sea	8.06	107	Pn	Pn	08 22 55.6	+1.7
DSI				Sn	Sn	08 24 22.9	-1.9
GRB	Gharib	8.10	135	P	Pn	08 22 56.0	+1.4
	baz=136						
PRNI	Paran	8.30	115	Pn	Pn	08 22 59.9	+2.7
PRNI				Sn	Sn	08 24 28.6	-2.0
GHAJ	Ghor Haditha	8.31	108	Pn	Pn	08 22 58.7	+1.4
HRFI	Mount Harif	8.48	117	Sn	Sn	08 24 33.4	-1.7
MBRI	Mt Berech	8.52	119	Pn	Pn	08 23 02.6	+2.3
EIL	Elat	8.62	119	Pn	Pn	08 23 03.8	+2.2
	comp=E,0.4nm,0.3s,baz=319,slow=20,SNR=2.2						
EIL				Sn	Sn	08 24 35.2	-3.2
	comp=E,1.8nm,0.3s,baz=128,slow=4.8,SNR=5.9						
EIL	Elat	8.62	119	Pn	Pn	08 23 04.3	+2.8
HBST	Basata	8.73	122	P	Pn	08 23 04.2	+1.2
	baz=124						
HBST				AMP		08 24 00.0	
	baz=124						
HBST				S	Sn	08 24 39.0	-2.0
	baz=124						
HDK1	Dakhla	9.04	162	P	Pn	08 23 10.2	+2.8
	baz=162						
ASF	Jabal al Asfar	9.10	100	Pn	Pn	08 23 09.5	+1.3
	comp=E,0.2nm,0.3s,baz=236,slow=7.3,SNR=2.5						
ASF				Sn	Sn	08 24 47.8	-2.5
	comp=E,0.3nm,0.3s,baz=140,slow=22,SNR=1.9						
VYHS	Vyhne	15.33	341	ePN	Pn	08 24 32.6	-0.5
KBZ	Khabaz	16.00	49	Pn	P	08 24 45.4	+0.2
	comp=E,0.2nm,0.3s,baz=264,slow=5.8,SNR=6.5						
AKASG	Malin Array Be	16.62	6	Pn	Pn	08 24 49.0	-0.7
	comp=E,0.9nm,0.3s,baz=194,slow=11,SNR=7.9						
GERES	GERESS Array B	17.37	331	P	Pn	08 24 58.9	-0.3
	comp=E,0.1nm,0.3s,baz=144,slow=12,SNR=4.3						
ESDC	Sonseca Array	24.74	292	P	P	08 26 17.9	-0.3
	comp=E,1.6nm,0.6s,baz=81,slow=9.1,SNR=12						
FINES	FINESS Array B	27.26	360	P	P	08 26 40.3	-0.3
	comp=E,3.8nm,1.0s,baz=203,slow=10,SNR=3.4						
TORD	Torodi Ar. Bea	30.64	233	P	P	08 27 11.7	+0.6
	comp=E,0.3nm,0.4s,baz=34,slow=8.6,SNR=2.4						
ARCES	ARCESS Array B	35.39	360	P	P	08 27 50.3	-1.7
	comp=E,1.0nm,0.7s,baz=176,slow=9.5,SNR=4.7						
MKAR	Makanchi Array	43.52	56	P	P	08 29 02.0	+1.9
	comp=E,2.6nm,0.7s,baz=279,slow=6.6,SNR=19						
MKAR				LR	LR	08 50 22.4	
	comp=E,554nm,18.9s,baz=292,slow=41						
ZALV	Zalesovo Beam	44.99	45	P	P	08 29 12.7	+0.9
	comp=E,1.2nm,0.4s,baz=265,slow=12,SNR=4.6						
YKA	Yellowknife Ar	78.64	343	P	P	08 32 58.3	+0.1
	comp=E,0.1nm,0.4s,baz=33,slow=5.8,SNR=4.7						
LEM	Lembang	86.66	100	LR	LR	09 16 33.1	
	comp=E,228nm,20.7s,baz=202,slow=38						

PRU ***01*** *08:29:40.1±0.0, 53.°74N×7.°01E, h0km*
IDC ***01*** *08:29:56.0±1.2, 52.°83N×8.°35E, h0km, mb3.0/1, mb1 3.5/8, mb1mx3.2/56, mbtmp3.3/8, ML2.9/6, Error ellipse: s-maj=22.5km s-min=11.1km az=72.0*
BGS ***01*** *08:29:57.5±0.6, 52.°98N×8.°78E, h10km, ML3.5, ML3.5*
BGR ***01*** *08:29:58.0±0.5, 52.°89N×8.°76E, h4km±2km, ML3.2/18, Error ellipse: s-maj=2.2km s-min=2.2km az=155.0*
BNS ***01*** *08:29:59.4±0.3, 52.°86N×8.°72E, h5km, ML3.1*
LDG ***01*** *08:29:59.4±0.1, 52.°88N×8.°70E, h9km, Ml3.3/23, Error ellipse: s-maj=2.1km s-min=1.8km az=177.0*
BUG ***01*** *08:29:59.0±0.0, 52.°88N×8.°80E, h15km±6km, ML3.3/14*
NAO ***01*** *08:30:00.6±3.6, 53.°28N×8.°25E, ML2.1*
UPP ***01*** *08:30:01.5±2.5, 53.°20N×9.°09E, h0km, ML2.4, Suspected explosion*
ISC 01 08:29:54.0±0.6**, 52.°97N**±0.°02×**8.°50E**±0.°02**, h0**km**, n161, σ2.s77**/264**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBBE	Ibbenbueren Ea	0.80	213	Pg	Pn	08 30 14.3	+1.8
IBBE				Sg	Sn	08 30 27.7	+2.6
IBBN	Ibbenburen	0.81	214	ePg	Pn	08 30 14.5	+1.9
IBBN				eSg	Sn	08 30 28.1	+2.8
IBBS	Ibbenbueren So	0.83	214	Pg	Pn	08 30 14.9	+2.0
IBBS				Sg	Sn	08 30 28.8	+3.0
NRDL	Niedersach Rie	1.09	115	ePg	Pn	08 30 16.6	+0.2
NRDL				eSg	Sb	08 30 30.9	+0.6
HLG	Helgoland	1.27	343	ePn	Pn	08 30 23.5	+4.6
HLG				eSg	Sn	08 30 42.4	+5.7
BSEG	Bad Segeberg	1.45	48	ePn	Pb	08 30 22.6	+0.7
BSEG				ePg	Pg	08 30 24.2	+2.3
BSEG				eSg	Sn	08 30 41.3	+0.1
BAVN	Auguste-Victor	1.50	215	Pn	Pg	08 30 25.9	+3.2
ZARR	Zarrentin	1.56	67	ePg	Pg	08 30 26.5	+2.5
ASSE	Asse, Remlinge	1.57	122	ePg	Pn	08 30 23.3	+0.2
ASSE				eSg	Sn	08 30 40.7	-3.4
CLZ	Clausthal	1.61	134	ePn	Pn	08 30 24.2	+0.5
CLZ				eSg	Sn	08 30 43.0	-2.2
SORT	Sorpetalsperre	1.66	192	ePn	Pg	08 30 26.2	+0.5
SORT				eSg	Sn	08 30 45.8	-0.5
	190nm,0.4s						
BZER	Hlnxe	1.68	217	Pn	Pg	08 30 29.0	+2.8
GTTG	Gottingen	1.69	147	ePg	Pb	08 30 25.8	-0.1
GTTG				eSg	Sn	08 30 46.2	-0.9
BTEZ	Ruhr-Universit	1.70	207	Pn	Pg	08 30 28.0	+1.4
BULI	Ruhr-Universit	1.70	207	Pn	Pg	08 30 28.7	+2.1
BUG	Bochum--Univer	1.71	207	ePn	Pg	08 30 27.9	+1.1
BUG				ePg	Pb	08 30 30.7	+4.4
BKLB	Ruhr-Universit	1.71	207	Pn	Pg	08 30 27.9	+1.1
ENTS	Ennepetalsperr	1.86	202	ePn	Pg	08 30 29.4	-0.2
ENTS				ePg	Pb	08 30 32.7	+3.9
ENTS				eSg	Sn	08 30 51.5	+0.2
CHRS	Christianenhau	1.97	133	ePn	Pn	08 30 29.1	+0.4
HOBG	Hohbusch	2.12	200	ePn	Pb	08 30 33.5	+0.3
POSS	Possen	2.20	137	ePn	Pn	08 30 32.2	+0.4
PLH	Pulheim	2.23	208	ePn	Pb	08 30 34.7	-0.4
PLH				eSn	Sn	08 31 00.5	+0.2
WBS	Wahnbachtalspe	2.30	200	ePn	Pb	08 30 35.5	-0.8
WBS				eSn	Sn	08 31 01.6	-0.4
	156nm,0.4s						
UBBA	Unterbreizbach	2.35	156	ePn	Pn	08 30 34.5	+0.8
WIMM	Wimmelburg	2.35	127	ePn	Pn	08 30 33.9	0.0
TDN	Todenfeld	2.59	203	ePn	Pb	08 30 39.6	-1.7
TDN				eSn	Sn	08 31 08.5	-0.8
	75nm,0.4s						
AHRW	Bad Neuenahr-A	2.59	201	ePn	Pb	08 30 42.2	+0.9
KOE	Koeppel	2.59	191	ePn	Pb	08 30 39.6	-1.8
STB	Steinbach	2.59	204	ePn	Pb	08 30 39.8	-1.6
STB				eSn	Sn	08 31 10.5	+1.1
	63nm,1.1s						
GSH	Grosshau	2.60	211	ePn	Pb	08 30 40.3	-1.1
GSH				eSn	Sn	08 31 10.3	+0.8
	95nm,0.3s						
KLL	Kalltalsperre	2.70	211	ePn	Pb	08 30 41.4	-1.7
HGN	Heimansgroeve	2.72	217	ePn	Pb	08 30 42.4	-1.1
HGN				Sn	Sn	08 31 13.8	+1.2
BHE	Schloss Buerre	2.75	198	ePn	Pn	08 30 41.3	+2.0
BHE				eSn	Sn	08 31 12.0	-1.2
	48nm,0.5s						
TNS	Taunus Mts	2.75	181	ePn	Pn	08 30 41.1	+1.6
BGG	Burgeitz	2.86	195	ePn	Pn	08 30 43.0	+2.1
HILG	Hillesheim	2.91	204	ePn	Pb	08 30 44.4	-2.4
MOX	Moxa	3.03	139	ePn	Pn	08 30 44.8	+1.6
LOH	Wallersheim-Lo	3.05	204	ePn	Pn	08 30 46.2	+2.7
LOH				eSn	Sn	08 31 19.9	-0.8
	78nm,0.5s						
CLL	Collm	3.24	119	ePn	Pn	08 30 49.0	+3.0
CLL				ePg	Pb	08 30 54.0	+1.7
CLL				e		08 30 57.0	
CLL				i		08 31 01.5	
CLL				eSn	Sn	08 31 25.0	-0.2
CLL				eSg	Sg	08 31 38.0	+0.1
	comp=Z,21nm,0.9s						
MUD	Monsted U'grnd	3.51	6	i P	Pn	08 30 52.7	+2.9
MUD	Monsted U'grnd	3.51	6	i P	Pn	08 30 52.7	+2.9
MUD				IAML		08 31 26.6	
	comp=Z,14nm,0.4s						
WLF	Walferdange	3.62	205	ePn	Pb	08 30 57.2	-1.7
GIVF	Givet	3.68	220	ePn	Pn	08 30 54.2	+2.1
GIVF				eSn	Sn	08 31 35.4	-0.7
	comp=Z,15nm,0.3s						
GIVF				eSg	Sg	08 31 53.8	+1.7
	comp=Z,36nm,0.5s						
NKC	Novy Kostel	3.69	137	ePN	Pn	08 30 53.6	+1.4
NKC				eSN	Sg	08 31 50.3	-2.0
GRF	Grafenberg Arr	3.70	151	ePn	Pn	08 30 54.0	+1.6
MANZ	Manzenberg	3.75	142	ePn	Pn	08 30 54.1	+1.0
DOU	Dourbes	3.77	222	eP	Pn	08 30 56.5	+3.1
DOU				eS	Sn	08 31 39.9	+1.5
LUNU	Lund	3.94	45	P	Pn	08 30 57.0	+1.4
LUNU				S	Sn	08 31 39.4	-3.1
LUNU	Lund	3.94	45	i P	Pn	08 30 56.0	+0.4
LUNU				i S	Sn	08 31 40.2	-2.3
BAIF	Baives	3.96	224	ePn	Pn	08 30 59.2	+3.2
BAIF				eSn	Sn	08 31 42.2	-0.9
	comp=Z,5.6nm,0.3s						
BAIF				eSg	Sg	08 32 03.6	+2.4
	comp=Z,19nm,0.5s						
BRG	Berggiesshubel	3.97	120	PN	Pn	08 30 57.3	+1.2
BRG				PG	Pg	08 31 16.4	+6.3
BRG				SG	Sg	08 32 01.4	-0.1
	comp=Z,9.1nm,0.7s						
BRG	Berggiesshubel	3.97	120	ePn	Pn	08 30 57.2	+1.1
BSD	Bornholm Skovb	4.35	58	i P	Pn	08 31 01.2	-0.1
BSD				eS	Sn	08 31 49.6	-3.0
BSD	Bornholm Skovb	4.35	58	e	Pn	08 31 00.8	-0.5
	baz=228,slow=14						
BSD				i P	Pn	08 31 01.2	-0.1
BSD				eS	Sn	08 31 49.6	-3.0
BSD				IAML		08 31 51.9	
	comp=Z,3.3nm,0.3s						
CDF	Champ du Feu	4.63	190	ePn	Pn	08 31 06.0	+0.7
CDF				eSn	Sn	08 31 54.1	-5.7
	comp=Z,4.8nm,0.4s						
CDF				eSg	Sg	08 32 19.7	-3.0
	comp=Z,17nm,0.6s						
DEL	Delary	4.69	39	P	Pn	08 31 07.4	+1.4
DEL				S	Sn	08 31 57.4	-3.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DEL	**Delary**	**4.69**	**39**	*i* P	**Pn**	**08 31 07.6**	**+1.7**
FABU	**Falkenberg**	**4.71**	**29**	*i* P	**Pn**	**08 31 07.3**	**+1.0**
FABU				*i* S	**Sn**	**08 31 57.6**	**-3.9**
PAGF	**Fort de Pagny**	**4.76**	**203**	*e*Pn	**Pn**	**08 31 09.1**	**+2.1**
PAGF				*e*Sn	**Sn**	**08 31 58.9**	**-3.9**
PAGF				*e*Sg	**Sg**	**08 32 25.4**	**-1.4**
	comp=Z,31nm,0.6s						
WACR	**West Acre**	**4.78**	**270**	*e*P	**Pn**	**08 31 11.7**	**+4.5**
WACR				*e*S	**Sn**	**08 32 05.7**	**+2.5**
WACR				IAML		08 32 08.3	
	comp=N,33nm,0.5s						
WACR				IAML		08 32 09.7	
	comp=E,20nm,0.2s						
PRU	**Pruhonice**	**4.81**	**126**	*e*PN	**Pn**	**08 31 08.8**	**+1.1**
ONAU	**Onsala**	**4.85**	**22**	*i* P	**Pn**	**08 31 09.3**	**+1.2**
MEZF	**Maizieres J'vi**	**4.98**	**207**	*e*Pn	**Pn**	**08 31 11.3**	**+1.3**
MEZF				*e*Sn	**Sn**	**08 32 05.0**	**-3.3**
	comp=E,7.6nm,0.5s						
MEZF				*e*Sg	**Sg**	**08 32 31.7**	**-2.3**
	comp=E,13nm,0.5s						
KHC	**Kasperske Hory**	**5.00**	**138**	*e*PN	**Pn**	**08 31 12.2**	**+1.8**
KHC				*e*x	x	08 31 39.5	
KHC				*e*SN	**Sb**	**08 32 19.8**	**-3.4**
KHC				*e*x	x	08 32 43.0	
HAU	**Haudompre**	**5.16**	**196**	*e*Pn	**Pn**	**08 31 13.0**	**+0.5**
HAU				*e*Sg	**Sg**	**08 32 37.0**	**-2.6**
	comp=E,15nm,0.6s						
SFTF	**Sexfontaines**	**5.26**	**206**	*e*Pn	**Pn**	**08 31 14.2**	**+0.4**
SFTF				*e*Sg	**Sg**	**08 32 41.8**	**-1.0**
HINF	**Hinteralfeld**	**5.27**	**192**	*e*Pn	**Pn**	**08 31 14.2**	**+0.2**
HINF				*e*Sn	**Sn**	**08 32 11.0**	**-4.4**
	comp=E,5.2nm,0.4s						
HINF				*e*Sg	**Sg**	**08 32 41.0**	**-2.1**
	comp=E,14nm,0.6s						
BORU	**Boraas**	**5.27**	**26**	P	**Pn**	**08 31 15.4**	**+1.4**
BORU				S	**Sn**	**08 32 11.6**	**-3.7**
BORU	**Boraas**	**5.27**	**26**	*i* P	**Pn**	**08 31 15.7**	**+1.8**
BORU				*e*S	**Sn**	**08 32 12.0**	**-3.4**
GERES	**GERESS Array B**	**5.28**	**139**	Pn	**Pn**	**08 31 15.7**	**+1.5**
	comp=E,0.7nm,0.3s,baz=317,slow=13,SNR=24						
GERES				Lg	Lg	08 32 43.5	
	comp=E,0.6nm,0.3s,baz=320,slow=26,SNR=2.2						
HOMB	**Homborsund**	**5.31**	**0**	Pn	**Pn**	**08 31 16.9**	**+2.4**
HOMB				Sn	**Sn**	**08 32 13.9**	**-2.4**
HOMB	**Homborsund**	**5.31**	**0**	*e*P	**Pn**	**08 31 17.4**	**+2.9**
HOMB				*e*S	**Sn**	**08 32 14.1**	**-2.1**
HOMB				IAML		08 32 17.5	
	comp=Z,5.6nm,0.3s						
TJOU	**Tjoern**	**5.37**	**18**	*i* P	**Pn**	**08 31 16.9**	**+1.6**
TJOU				*i* S	**Sn**	**08 32 14.9**	**-2.9**
BLEU	**Blekinge**	**5.40**	**49**	P	**Pn**	**08 31 16.3**	**+0.6**
BLEU				S	**Sn**	**08 32 13.7**	**-4.9**
VXJU	**Vaexsjoe**	**5.42**	**41**	P	**Pn**	**08 31 17.4**	**+1.3**
SNART	**Snartemo**	**5.43**	**353**	*e*P	**Pn**	**08 31 18.2**	**+2.1**
SNART				*e*S	**Sn**	**08 32 17.9**	**-1.3**
SNART				IAML		08 32 21.1	
	comp=Z,5.6nm,0.2s						
DPC	**Dobruska-Polom**	**5.53**	**115**	*e*PN	**Pn**	**08 31 19.1**	**+1.5**
DAVA	**Damuels**	**5.76**	**171**	*e*Pn	**Pn**	**08 31 24.0**	**+3.2**
	comp=Z,2.4nm,0.3s						
MOTA	**Moosalm**	**5.88**	**162**	*i* Pn	**Pn**	**08 31 23.5**	**+1.1**
	comp=Z,2.2nm,0.1s,SNR=9.7						
CWF	**Charnwood Fore**	**5.95**	**272**	*e*P	**Pn**	**08 31 27.8**	**+4.5**
WATA	**Walderalm**	**5.98**	**159**	Pn	**Pn**	**08 31 26.2**	**+2.3**
	comp=Z,1.0nm,0.1s,SNR=4.2						
SQTA	**Sankt Quirin**	**6.02**	**162**	*i* Pn	**Pn**	**08 31 26.9**	**+2.6**
	comp=Z,2.9nm,0.3s						
EKSU	**Eksjoe**	**6.03**	**37**	P	**Pn**	**08 31 25.8**	**+1.5**
EKSU				S	**Sn**	**08 32 29.5**	**-4.5**
WTTA	**Wattenberg**	**6.06**	**159**	*i* Pn	**Pn**	**08 31 26.8**	**+1.8**
	comp=Z,2.5nm,0.3s						
WTTA				Sg	**Sg**	**08 33 14.7**	**+6.2**
	comp=Z,4.8nm,0.6s						
OSKU	**Oskarshamn**	**6.08**	**43**	P	**Pn**	**08 31 26.1**	**+1.1**
HPK	**Haverah Park**	**6.13**	**283**	*e*P	**Pn**	**08 31 30.4**	**+4.7**
FETA	**Feichten**	**6.13**	**166**	Pn	**Pn**	**08 31 27.2**	**+1.3**
	comp=Z,0.6nm,0.2s,SNR=4.8						
LBWR	**Ladybower, Pea**	**6.16**	**278**	*e*P	**Pn**	**08 31 30.8**	**+4.6**
STAV	**Stavanger**	**6.18**	**346**	Pn	**Pn**	**08 31 27.8**	**+1.4**
STAV				Sn	**Sn**	**08 32 36.0**	**-1.7**
STRU	**Stroemstad**	**6.26**	**13**	*e*P	**Pn**	**08 31 28.9**	**+1.4**
STRU				*e*S	**Sn**	**08 32 34.8**	**-4.8**
DAVOX	**Davos/Dischmat**	**6.26**	**171**	Pn	**Pn**	**08 31 29.2**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=352,slow=10,SNR=2.3						
DAVOX				Lg	Lg	08 33 17.3	
	comp=Z,0.3nm,0.3s,baz=185,slow=21,SNR=1.6						
MOA	**Molln**	**6.31**	**142**	*i* Pn	**Pn**	**08 31 31.1**	**+2.8**
	comp=Z,0.6nm,0.1s						
MOA				*e*Sg	**Sg**	**08 33 20.7**	**+4.0**
	comp=Z,4.2nm,0.6s						
LOR	**Lormes**	**6.44**	**209**	*e*Pn	**Pn**	**08 31 31.5**	**+1.4**
LOR				*e*Sn	**Sn**	**08 32 40.7**	**-3.6**
	comp=Z,2.6nm,0.3s						
EDMD	**Edmundbyers**	**6.46**	**291**	*e*P	**Pn**	**08 31 34.6**	**+4.3**
EDMD				*e*S	**Sn**	**08 32 43.6**	**-0.9**
EDMD				IAML		08 32 48.6	
	comp=E,13nm,0.4s						
EDMD				IAML		08 32 50.0	
	comp=N,12nm,0.3s						
EDMD	**Edmundbyers**	**6.46**	**291**	*e*P	**Pn**	**08 31 34.8**	**+4.5**
EDMD				*e*S	**Sn**	**08 32 42.2**	**-2.4**
KMY	**Karmoy**	**6.51**	**345**	*e*P	**Pn**	**08 31 32.7**	**+1.7**
KMY				*e*S	**Sn**	**08 32 42.6**	**-3.3**
KMY				IAML		08 32 48.8	
	comp=Z,5.8nm,0.4s						
CABF	**La Chapelle**	**6.56**	**195**	*e*Pn	**Pn**	**08 31 32.8**	**+1.1**
CABF				*e*Sg	**Sg**	**08 33 22.5**	**-2.0**
	comp=Z,31nm,1.0s						
BLS5	**Blasjo**	**6.57**	**351**	Pn	**Pn**	**08 31 33.4**	**+1.6**
BLS5				Sn	**Sn**	**08 32 45.4**	**-1.9**
BLS5	**Blasjo**	**6.57**	**351**	*e*P	**Pn**	**08 31 33.7**	**+2.0**
BLS5				*e*S	**Sn**	**08 32 45.2**	**-2.1**
BLS5				IAML		08 32 46.6	
	comp=Z,2.6nm,0.6s						
STRD	**Stroud**	**6.64**	**264**	*e*P	**Pn**	**08 31 37.4**	**+4.7**
KBA	**Koelnbreinsper**	**6.67**	**150**	Pn	**Pn**	**08 31 36.0**	**+2.6**
	comp=Z,3.6nm,0.4s,SNR=9.8						
KBA				*e*Sn	**Sn**	**08 32 50.5**	**+0.3**
	comp=Z,0.7nm,0.3s						
KONO	**Kongsberg**	**6.72**	**5**	*e*P	**Pn**	**08 31 35.1**	**+1.2**
KONO				*e*S	**Sn**	**08 32 46.0**	**-5.0**
SSF	**Saint Saulge**	**6.73**	**210**	*e*Pn	**Pn**	**08 31 35.4**	**+1.3**
SSF				*e*Sn	**Sn**	**08 32 47.4**	**-4.0**
	comp=Z,1.8nm,0.3s						
SSF				*e*Sg	**Sg**	**08 33 28.1**	**-2.0**
	comp=Z,11nm,0.7s						
ABTA	**Abfaltersbach**	**6.75**	**156**	*e*Pn	**Pn**	**08 31 38.0**	**+3.7**
	comp=Z,5.5nm,0.5s						
HYF	**Humbligny**	**6.84**	**216**	*e*Pn	**Pn**	**08 31 38.8**	**+3.3**
CONA	**Conrad Observa**	**6.90**	**134**	Sg	**Sg**	**08 33 39.5**	**+4.1**
	comp=Z,1.6nm,0.5s						
HLM1	**Long Mynd**	**6.93**	**271**	*e*P	**Pn**	**08 31 40.8**	**+4.1**
HLM1				*e*S	**Sn**	**08 32 56.7**	**+0.6**
HLM1				IAML		08 33 00.2	
	comp=N,8.0nm,0.6s						
HLM1				IAML		08 33 05.0	
	comp=E,6.9nm,0.4s						
LDF	**La Druitiere**	**7.00**	**235**	*e*Pn	**Pn**	**08 31 39.6**	**+1.8**
LDF				*e*Sn	**Sn**	**08 32 54.7**	**-3.4**
	comp=E,3.3nm,0.3s						
SMF	**Signal de Mont**	**7.01**	**207**	*e*Pn	**Pn**	**08 31 38.6**	**+0.7**
SMF				*e*Sn	**Sn**	**08 32 53.4**	**-4.9**
SMF				*e*Sg	**Sg**	**08 33 36.9**	**-2.2**
	comp=E,7.0nm,0.5s						
AVF	**Avril sur Loir**	**7.02**	**210**	*e*Pn	**Pn**	**08 31 38.8**	**+0.8**
AVF				*e*Sn	**Sn**	**08 32 54.6**	**-3.9**
	comp=E,1.2nm,0.4s						
ODD1	**Odda**	**7.03**	**352**	*e*	**Sn**	**08 32 54.2**	**-4.6**
FLN	**La Foliniere**	**7.07**	**237**	*e*Pn	**Pn**	**08 31 40.0**	**+1.3**
FLN				*e*Sn	**Sn**	**08 32 58.0**	**-1.8**
	comp=E,3.9nm,0.3s						
FLN				*e*Sg	**Sg**	**08 33 40.7**	**-0.3**
FOEL	**Foel Wylfa**	**7.08**	**274**	*e*P	**Pn**	**08 31 43.4**	**+4.7**
MCH1	**Michaelchurch**	**7.09**	**267**	*e*P	**Pn**	**08 31 42.6**	**+3.7**
MCH1				*e*S	**Sn**	**08 32 59.8**	**-0.4**
MCH1				IAML		08 33 04.1	
	comp=E,12nm,0.3s						
MCH1				IAML		08 33 09.5	
	comp=N,8.5nm,0.3s						
ESY	**Stoneypath**	**7.12**	**299**	*e*P	**Pn**	**08 31 43.5**	**+4.2**
EKA	**Eskdalemuir Ar**	**7.24**	**294**	Pn	**Pn**	**08 31 45.0**	**+4.0**
EKA				Sn	**Sn**	**08 33 04.6**	**+0.7**
EKA	**Eskdalemuir Ar**	**7.24**	**294**	Pn	**Pn**	**08 31 44.2**	**+3.2**
	baz=107,slow=14,SNR=19						
EKA				Sn	**Sn**	**08 33 04.6**	**+0.7**
	baz=112,slow=26,SNR=3.4						
EKA	**Eskdalemuir Ar**	**7.24**	**294**	Pn	**Pn**	**08 31 45.0**	**+4.0**
EKA				Sn	**Sn**	**08 33 04.6**	**+0.7**
ESK	**Eskdalemuir**	**7.26**	**294**	*e*P	**Pn**	**08 31 45.3**	**+4.0**
ESK				*e*S	**Sn**	**08 33 04.3**	**-0.1**
ESK				IAML		08 33 06.7	
	comp=N,4.9nm,0.3s						
ESK				IAML		08 33 07.8	
	comp=E,5.7nm,0.3s						
ARSA	**Arzberg**	**7.29**	**139**	*e*Pn	**Pn**	**08 31 45.7**	**+3.9**
	comp=E,0.8nm,0.2s						
EBL	**Broad Law**	**7.30**	**297**	*e*P	Pn	08 31 46.7	+4.8
BGF	**Bois d'Agland**	**7.39**	**212**	*e*Pn	**Pn**	**08 31 42.6**	**-0.5**
BGF				*e*Sn	**Sn**	**08 33 03.3**	**-4.2**
	comp=E,9.4nm,0.5s						
BGF				*e*Sg	**Sg**	**08 33 48.8**	**-2.3**
	comp=E,13nm,0.6s						
EDI	**Edinburgh**	**7.43**	**298**	*e*P	**Pn**	**08 31 48.2**	**+4.7**
DRUM	**Mains of Drumt**	**7.46**	**306**	*e*P	**Pn**	**08 31 48.1**	**+4.2**
DRUM	**Mains of Drumt**	**7.46**	**306**	*e*P	**Pn**	**08 31 47.9**	**+4.0**
GRR	**Gorron**	**7.51**	**236**	*e*Pn	**Pn**	**08 31 46.0**	**+1.3**
GRR				*e*Sn	**Sn**	**08 33 07.5**	**-2.9**
	comp=E,4.8nm,0.2s						
SOKA	**Soboth**	**7.58**	**144**	*i* Pn	**Pn**	**08 31 48.3**	**+2.5**
	comp=E,0.6nm,0.2s						
WME	**Myndd Eilian**	**7.71**	**278**	*e*P	**Pn**	**08 31 50.8**	**+3.5**
HFS	**Hagfors**	**7.73**	**20**	Pn	**Pn**	**08 31 47.9**	**+0.3**
	baz=210,slow=14						
HFS				Sn	**Sn**	**08 33 10.7**	**-5.2**
	baz=203,slow=28						
HFS	**Hagfors**	**7.73**	**20**	Pn	**Pn**	**08 31 48.0**	**+0.3**
	comp=E,0.3nm,0.3s,baz=206,slow=12,SNR=17						
HFS				Sn	**Sn**	**08 33 10.6**	**-5.2**
	comp=E,0.8nm,0.3s,baz=197,slow=25,SNR=8.3						
HFS	**Hagfors**	**7.73**	**20**	Pn	**Pn**	**08 31 47.9**	**+0.3**
	baz=210,slow=14						
HFS				Sn	**Sn**	**08 33 10.7**	**-5.2**
	baz=203,slow=28						
SKAR	**Skarslia**	**7.73**	**359**	*e*S	**Sn**	**08 33 11.4**	**-4.6**
SKAR				IAML		08 33 26.7	
	comp=Z,1.9nm,0.4s						
NEWG	**New Galloway**	**7.80**	**291**	*e*P	**Pn**	**08 31 52.3**	**+3.7**
TCF	**Toulx Ste Croi**	**7.83**	**214**	*e*Pn	**Pn**	**08 31 50.0**	**+0.8**
IOMK	**Kirk Michael**	**7.88**	**285**	*e*P	**Pn**	**08 31 53.6**	**+3.9**
NRA0	**NORESS Array S**	**7.96**	**11**	Pn	**Pn**	**08 31 51.8**	**+1.0**
	baz=193,slow=12						
NRA0				Sn	**Sn**	**08 33 15.7**	**-5.8**
	baz=184,slow=22						
NRA0	**NORESS Array S**	**7.96**	**11**	Pn	**Pn**	**08 31 51.8**	**+1.0**
	baz=193,slow=12						
NRA0				Sn	**Sn**	**08 33 15.7**	**-5.8**
	baz=184,slow=22						
NAO01	**NORSAR Array S**	**8.00**	**8**	*e*P	**Pn**	**08 31 50.4**	**-1.0**
NAO01				*e*S	**Sn**	**08 33 16.2**	**-6.3**
NAO01				IAML		08 33 20.1	
	comp=Z,3.4nm,0.5s						
GAL1	**Galloway**	**8.03**	**289**	*e*P	**Pn**	**08 31 55.6**	**+3.8**
INVG	**Invergeldie, C**	**8.05**	**300**	*e*P	**Pn**	**08 31 56.5**	**+4.4**
RSBS	**Rosebush, Pemb**	**8.15**	**268**	*e*P	**Pn**	**08 31 57.0**	**+3.5**
NB2	**NORSAR Subarra**	**8.22**	**9**	Pn	**Pn**	**08 31 54.7**	**+0.2**
	baz=192,slow=16						
NB2				Sn	**Sn**	**08 33 23.6**	**-4.5**
	baz=179,slow=22						
NB2	**NORSAR Subarra**	**8.22**	**9**	Pn	**Pn**	**08 31 54.7**	**+0.2**
	baz=192,slow=16						
NB2				Sn	**Sn**	**08 33 23.6**	**-4.5**
	baz=179,slow=22						
NOA	**NORSAR Array B**	**8.22**	**9**	Pn	**Pn**	**08 31 54.3**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=197,slow=13,SNR=8.4						
NOA				Sn	**Sn**	**08 33 21.3**	**-6.8**
	comp=Z,0.0nm,0.3s,baz=181,slow=18,SNR=4.4						
NB201	**NORSAR Array S**	**8.24**	**10**	*e*P	**Pn**	**08 31 55.0**	**+0.3**
NB201				*e*S	**Sn**	**08 33 21.8**	**-6.7**
NB201				IAML		08 33 27.8	
	comp=Z,4.4nm,0.6s						
NC204	**NORSAR Array S**	**8.42**	**7**	*e*P	**Pn**	**08 31 57.5**	**+0.3**
NC204				*e*S	**Sn**	**08 33 25.0**	**-7.8**
NC204				IAML		08 33 30.2	
	comp=Z,2.5nm,0.5s						
NC303	**NORSAR Array S**	**8.42**	**10**	*e*P	**Pn**	**08 31 57.3**	**+0.1**
NC303				IAML		08 33 33.0	
	comp=Z,1.9nm,0.6s						
SGMF	**Saint Gilles**	**8.47**	**241**	*e*Pn	**Pn**	**08 31 58.5**	**+0.7**
SGMF				*e*Sn	**Sn**	**08 33 30.2**	**-3.8**
MFF	**Saint Martin d**	**8.48**	**225**	*e*Pn	**Pn**	**08 31 59.0**	**+1.0**
MFF				*e*Sn	**Sn**	**08 33 30.1**	**-4.2**
ROSF	**Rostrenen**	**8.80**	**243**	*e*Pn	**Pn**	**08 32 04.2**	**+1.8**
ROSF				*e*Sn	**Sn**	**08 33 38.1**	**-4.1**
BIGH	**Upper Bighouse**	**8.91**	**313**	*e*P	**Pn**	**08 32 06.7**	**+2.8**
BIGH	**Upper Bighouse**	**8.91**	**313**	*e*P	**Pn**	**08 32 06.7**	**+2.8**
QUIF	**Quistinic**	**9.00**	**240**	*e*Pn	**Pn**	**08 32 05.4**	**+0.3**
KAC	**Achnashellach**	**9.09**	**305**	*e*P	**Pn**	**08 32 09.5**	**+3.2**
KPL	**Plockton**	**9.20**	**304**	*e*P	**Pn**	**08 32 11.5**	**+3.7**
KPL	**Plockton**	**9.20**	**304**	*e*P	**Pn**	**08 32 11.5**	**+3.7**
KPL				*e*S	**Sn**	**08 33 50.1**	**-1.9**
FINES	**FINESS Array B**	**12.72**	**41**	Pn	**Pn**	**08 32 56.7**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=232,slow=23,SNR=0.8						
ARA0	**ARCESS Array S**	**18.39**	**19**	P	**Pn**	**08 34 09.0**	**-1.1**
	baz=212,slow=14						
ARA0	**ARCESS Array S**	**18.39**	**19**	P	**Pn**	**08 34 09.0**	**-1.1**
	baz=212,slow=14						
ARCES	**ARCESS Array B**	**18.39**	**19**	Pn	**Pn**	**08 34 07.6**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=210,slow=12,SNR=1.0						
YKA	**Yellowknife Ar**	**56.50**	**332**	P	**P**	**08 39 40.5**	**+3.2**
	comp=Z,0.1nm,0.6s,baz=54,slow=7.6,SNR=3.7						

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*NEIC **01** 08:30:45.8±1.0, 32°.32N±0°.05×138°.63E±0°.09, h83km±5km, mb4.5/7, Error ellipse: s-maj=11.2km s-min=7.8km az=93.0*
*IDC **01** 08:30:47.0±1.7, 32°.38N×138°.89E, h95km±24km, mb3.5/4, mb1 3.6/6, mb1mx3.2/56, mbtmp3.9/6, Error ellipse: s-maj=40.5km s-min=13.1km az=72.0*
*JMA **01** 08:30:48.5±0.1, 32°.96N×140°.16E, h144km±1km, M3.7*
ISC 01 08:30:47.0±0.9, **32°.85N**±0°.05×**140°.23E**±0°.10, **h148**km±7km, **n35**, σ**1s.16**/42, **mb4.1**/9, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**0.43**	**301**	P	**Pn**	**08 31 08.4**	**+0.7**
JHCJ				*e*S	**Sn**	**08 31 23.2**	**-0.2**
JHJ2	**Mitsune**	**0.44**	**307**	P	**Pn**	**08 31 08.6**	**+0.9**
JHJ2				*e*S	**Sn**	**08 31 23.8**	**+0.3**
JHJ2	**Mitsune**	**0.44**	**307**		**Pn**	**08 31 08.5**	**+0.8**
JHJ2				Sn	**Sn**	**08 31 23.6**	**+0.1**
JHJ	**Hachijo jima 2**	**0.46**	**305**	P	**Pn**	**08 31 08.7**	**+0.8**
	465nm,0.3s,baz=223,slow=19,SNR=341						
JHJ				S	**Sn**	**08 31 23.6**	**-0.1**
	558nm,0.3s,baz=252,slow=20,SNR=52						
JAOM	**Aogashimamukai**	**0.55**	**226**	P	**Pn**	**08 31 09.7**	**+1.4**
JMKN	**Mikurajimanish**	**1.17**	**333**	P	**Pn**	**08 31 12.9**	**-0.1**
JKO	**Kozu shima**	**1.62**	**326**	P	**Pn**	**08 31 17.8**	**+0.3**
BSO1	**Boso 1**	**1.90**	**19**	P	**Pn**	**08 31 21.4**	**+1.2**
BSO3	**Boso 3**	**1.96**	**7**	P	**Pn**	**08 31 22.0**	**+0.9**
BSO3				*e*S	**Sn**	**08 31 47.3**	**-0.2**
JIM2	**Oshima 3**	**1.98**	**340**	P	**Pn**	**08 31 22.0**	**+0.3**
JIM2				*e*S	**Sn**	**08 31 46.4**	**-2.0**
JIZS	**Izushimoda**	**2.18**	**329**	P	**Pn**	**08 31 24.3**	**+0.3**
JIZS				*e*S	**Sn**	**08 31 51.5**	**-1.0**
TK02	**Tokai 2**	**2.34**	**298**	P	**Pn**	**08 31 26.2**	**+0.4**
TK04	**Tokai 4**	**2.49**	**308**	P	**Pn**	**08 31 28.4**	**+0.7**
JOD2	**Odawara 2**	**2.59**	**339**	P	**Pn**	**08 31 29.8**	**+0.8**
JOD2				*e*S	**Sn**	**08 32 00.8**	**-0.7**
SHZ3	**Shizuoka 3**	**2.78**	**323**	P	**Pn**	**08 31 32.0**	**+0.6**
JYN	**Shimob**	**2.99**	**333**	P	**Pn**	**08 31 34.8**	**+0.7**
JYN				*e*S	**Sn**	**08 32 11.1**	**+0.5**
INU	**Inuyama**	**3.65**	**314**	Pn	Pn	08 31 34.9	-7.6
MJAR	**Matsushiro Arr**	**4.04**	**336**	P	**Pn**	**08 31 47.3**	**-0.3**
	0.4nm,0.3s,baz=168,slow=12,SNR=10						
MJAR				S	**Sn**	**08 32 36.2**	**+1.4**
	0.4nm,0.3s,baz=143,slow=25,SNR=5.2						
MAJO	**Matsushiro**	**4.04**	**336**	Pn	**Pn**	**08 31 47.2**	**-0.4**
MAT	**Matsushiro**	**4.04**	**336**	P	**Pn**	**08 31 48.0**	**+0.3**
MAT				*e*S	**Sn**	**08 32 36.7**	**+1.8**
MJB9	**Matsu-Tunnel**	**4.05**	**336**	Pn	**Pn**	**08 31 48.1**	**+0.4**
JCJ	**Chichijima**	**5.98**	**163**	P	**Pn**	**08 32 12.7**	**-0.7**
	5.6nm,0.3s,baz=0.0,slow=20,SNR=27						
JCJ				S	**Sn**	**08 33 16.8**	**-4.2**
	21nm,0.3s,baz=148,slow=22,SNR=13						
JNU	**Nakatsue**	**7.87**	**274**	Pn	Pn	08 32 19.2	-19
USA0B	**Ussuriysk Arra**	**13.03**	**333**	Pn	**Pn**	**08 33 44.1**	**-2.4**
SEY	**Seymchan**	**31.07**	**11**	P	P	08 37 01.7	+11
	0.3nm,0.3s,baz=313,slow=3.0,SNR=3.7						
LSA	**Lhasa**	**41.77**	**279**	P	P	08 38 17.8	-4.6
LSA				IAmb	IAmb	08 38 19.8	
	comp=Z,4.3nm,0.6s						
MKAR	**Makanchi Array**	**45.63**	**305**	P	**P**	**08 38 53.2**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=81,slow=9.5,SNR=4.7						
WB0	**Warramunga Arr**	**52.62**	**187**	P	**P**	**08 39 46.6**	**+0.9**
WB0				IAmb	IAmb	08 39 48.3	
	comp=Z,5.4nm,1.5s						
WRAB	**Tennant Creek**	**52.79**	**187**	P	**P**	**08 39 46.9**	**-0.1**
WRAB				IAmb	IAmb	08 39 57.0	
	comp=Z,8.0nm,1.4s						
WR0	**Warramunga Arr**	**52.79**	**187**	P	**P**	**08 39 47.9**	**+0.8**
WR0				IAmb	IAmb	08 39 58.5	
	comp=Z,7.4nm,1.5s						
WB2	**Warramunga Arr**	**52.80**	**187**	P	**P**	**08 39 48.0**	**+0.9**
WRA	**Warramunga Arr**	**52.80**	**187**	P	**P**	**08 39 48.0**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=0.5,slow=7.8,SNR=8.8						
AS31	**Alice Springs**	**56.52**	**187**	P	**P**	**08 40 15.1**	**+1.2**
ASAR	**Alice Springs**	**56.52**	**187**	P	**P**	**08 40 15.2**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=2.6,slow=6.2,SNR=19						
DGMT	**Dagmar**	**80.72**	**37**	P	P	08 42 56.4	+13
DGMT				IAmb	IAmb	08 43 04.2	
	comp=Z,10nm,1.4s						

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*TAP **01** 08:31:43.9, 24°.81N×122°.73E, h5km±1km, ML2.7, C*
*JMA **01** 08:31:44.9±0.3, 24°.16N×122°.94E, h38km, M1.7*
ISC 01 08:31:41.2±1.7, **24°.82N**±0°.06×**122°.93E**±0°.05, **h12**km±13km, **n24**, σ**1s.46**/29, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.37**	**168**	P	**Pn**	**08 31 53.1**	**+0.7**
	baz=143						
YOJ	**Yonaguni jima**	**0.37**	**168**	P	**Pn**	**08 31 53.0**	**+0.7**
YOJ				S	**Sb**	**08 31 59.4**	**+4.0**
JYNG	**Yonagunijimaku**	**0.37**	**177**	P	**Pn**	**08 31 52.7**	**+0.3**
JYNG				*e*S	**Sb**	**08 31 57.6**	**+2.2**
EOS1	**EOS1**	**0.78**	**250**	P	**Pb**	**08 31 56.5**	**-0.2**
	baz=230						
EOS1				*e*S	**Sg**	**08 32 05.9**	**-0.5**
	baz=230						
TWC	**Suao**	**1.00**	**258**	*e*P	**Pg**	**08 31 59.2**	**-1.4**
	baz=244						
TIPB	**Shuangxi**	**1.01**	**279**	*e*P	**Pg**	**08 32 00.0**	**-0.7**
	baz=281						
PCYT	**Pengchaiyu**	**1.12**	**316**	*e*P	**Pn**	**08 32 04.9**	**+2.2**
	baz=324						
JKRS	**Kuro-shima**	**1.15**	**120**	*e*S	**Sn**	**08 32 15.5**	**-3.1**
ENA	**Nanau**	**1.15**	**250**	*e*P	**Pg**	**08 32 03.7**	**+0.3**
	baz=247						
TWE	**Neicheng**	**1.15**	**265**	*e*P	**Pn**	**08 32 02.7**	**-0.4**
	baz=265						
JIJ	**Ishigaki jima**	**1.20**	**112**	P	**Pn**	**08 32 04.7**	**+0.9**
JIJ				*e*S	**Sn**	**08 32 16.9**	**-3.1**
ENTT	**Nioudou**	**1.25**	**262**	*e*P	**Pg**	**08 32 05.0**	**-0.3**
	baz=261						
YM11	**YM11**	**1.27**	**286**	*e*P	**Pg**	**08 32 05.5**	**-0.2**
	baz=288						
NDT	**Datong Townshi**	**1.30**	**261**	*e*P	**Pg**	**08 32 06.0**	**-0.3**
	baz=259						
ANP	**Anpu**	**1.33**	**286**	*e*P	**Pg**	**08 32 06.7**	**0.0**
	baz=289						
NACB	**Ninganchiao**	**1.37**	**242**	*e*P	**Pn**	**08 32 06.2**	**0.0**
	baz=238						
NACB				*e*S	**Sn**	**08 32 23.0**	**-1.3**
	baz=238						
YHNB	**Yeheng**	**1.42**	**264**	*e*P	**Pb**	**08 32 07.3**	**-0.4**
	baz=263						
NSK	**Sanguang**	**1.43**	**264**	*e*P	**Pb**	**08 32 07.7**	**-0.2**
	baz=264						
ETLH	**Xiulin Townshi**	**1.45**	**245**	*e*P	**Pb**	**08 32 07.9**	**-0.3**
	baz=242						
NNSB	**Datong**	**1.46**	**255**	*e*P	**Pg**	**08 32 08.9**	**-0.4**
	baz=253						
NNS	**Nan Shan**	**1.46**	**255**	*e*P	**Pg**	**08 32 08.9**	**-0.5**
	baz=253						
WHF	**Hehuan Shan**	**1.66**	**246**	*e*P	**Pb**	**08 32 12.3**	**+0.3**
	baz=243						
TWT	**Tachien**	**1.69**	**251**	*e*P	**Pg**	**08 32 14.0**	**+0.3**
	baz=249						
WHP	**Taichung City**	**1.88**	**254**	*e*P	**Pg**	**08 32 16.8**	**-0.6**
	baz=252						

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*JMA **01** 08:33:55.0±0.2, 24°.78N×122°.70E, h2km, M2.2*
*TAP **01** 08:33:55.9, 24°.42N×122°.72E, h31km±1km, ML2.7, D*
ISC 01 08:33:56.4±1.0, **24°.6N**±0°.1×**122°.70E**±0°.03, **h28**km±10km, **n17**, σ**0s.75**/23, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.26**	**119**	P	**Pb**	**08 34 03.1**	**+0.1**
JYNG				*e*S	**Sb**	**08 34 08.2**	**+0.7**
YOJ	**Yonaguni jima**	**0.31**	**111**	*i* P	**Pb**	**08 34 03.2**	**-0.5**
	baz=69						
YOJ				S	**Sb**	**08 34 08.4**	**-0.3**
	baz=69						
YOJ	**Yonaguni jima**	**0.31**	**111**	P	**Pb**	**08 34 03.4**	**-0.3**
YOJ				*e*S	**Sn**	**08 34 09.7**	**-1.0**
EOS1	**EOS1**	**0.52**	**267**	*i* P	**Pb**	**08 34 07.0**	**0.0**
	baz=289						
EOS1				S	**Sn**	**08 34 15.8**	**0.0**
	baz=289						
TWC	**Suao**	**0.77**	**273**	*e*P	**Pb**	**08 34 10.3**	**-0.9**
	baz=285						
TWC				*e*S	**Sb**	**08 34 20.9**	**-0.4**
	baz=285						
ENA	**Nanau**	**0.88**	**261**	*e*P	**Pb**	**08 34 12.3**	**-0.8**
	baz=265						
TIPB	**Shuangxi**	**0.89**	**297**	*e*P	**Pn**	**08 34 13.7**	**+0.7**
	baz=306						
NWF	**Wu-fen Shan**	**0.97**	**301**	*e*P	**Pn**	**08 34 14.9**	**+0.7**
	baz=309						
WFSB	**Wu-fen Shan**	**0.97**	**301**	*e*P	**Pn**	**08 34 15.5**	**+1.3**
	baz=309						
ENTT	**Nioudou**	**1.03**	**274**	*e*P	**Pn**	**08 34 16.0**	**+0.9**
	baz=295						
NDT	**Datong Townshi**	**1.08**	**272**	*e*P	**Pb**	**08 34 16.2**	**-0.2**
	baz=281						
NACB	**Ninganchiao**	**1.08**	**249**	P	**Pb**	**08 34 17.4**	**+0.9**
	baz=258						
NACB				*e*S	**Sb**	**08 34 28.8**	**-1.4**
	baz=258						
NWLT	**Wulai**	**1.10**	**281**	*e*P	**Pb**	**08 34 16.7**	**-0.2**
	baz=290						
YHNB	**Yeheng**	**1.21**	**275**	*e*P	**Pn**	**08 34 17.8**	**+0.3**
	baz=295						
NSK	**Sanguang**	**1.22**	**275**	*e*P	**Pb**	**08 34 18.6**	**-0.3**
	baz=295						
JIJ	**Ishigaki jima**	**1.33**	**99**	P	**Pb**	**08 34 20.9**	**+0.2**
JISG	**Ishigakijimahi**	**1.47**	**89**	P	**Pb**	**08 34 22.3**	**-0.7**

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*UCR **01** 08:46:35.0±1.6, 8°.33N×82°.93W, h0km±3km, MD3.5, MW3.5*
*UPA **01** 08:46:36.0±2.3, 8°.30N×82°.93W, h9km±5km, MW4.0*
ISC 01 08:46:35.1±1.3, **8°.22N**±0°.05×**82°.96W**±0°.03, **h14**km±8km, **n35**, σ**1s.23**/49, **5C-2D**, **Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBAR3	**San Bartolo, C**	**0.13**	**40**	⇑*i*P	**Pg**	**08 46 39.0**	**+0.4**
LESP3	**La Esperanza,**	**0.25**	**43**	*e*P	**Pg**	**08 46 40.4**	**-0.1**
PIRO	**Carate, Puerto**	**0.41**	**296**	*e*P	**Pg**	**08 46 42.8**	**-0.6**
PTJ1	**Puerto Jimnez**	**0.46**	**313**	*e*P	**Pg**	**08 46 44.0**	**-0.2**
PTJ1				*e*S	**Sb**	**08 46 52.5**	**+0.8**
PTJ1	**Puerto Jimnez**	**0.46**	**313**	*e*P	**Pg**	**08 46 43.9**	**-0.2**
PTJ1				*e*S	**Sb**	**08 46 52.5**	**+0.8**
DVD	**David**	**0.55**	**67**	⇓*i*P	**Pg**	**08 46 45.8**	**-0.2**
DVD				*e*S	**Sb**	**08 46 53.2**	**-1.1**
PEDE3	**Pedregal, Chir**	**0.56**	**73**	⇑*i*P	**Pg**	**08 46 46.0**	**-0.1**
LOCO3	**Loma Colorada,**	**0.57**	**71**	*e*P	**Pg**	**08 46 46.1**	**-0.3**
LOCO3				*e*S	**Sb**	**08 46 55.7**	**+0.8**
EDSV	**San Vito**	**0.60**	**359**	*e*P	**Pg**	**08 46 46.3**	**-0.5**
EDSV				*i* S	**Sb**	**08 46 54.9**	**-0.9**
LOMA3	**Las Lomas, Chi**	**0.60**	**70**	⇑*i*P	**Pg**	**08 46 46.6**	**-0.3**
BRU2	**Volcan**	**0.63**	**25**	⇑*i*P	**Pg**	**08 46 47.0**	**-0.5**
BRU2				*e*S	**Sb**	**08 46 56.4**	**-0.4**
BRU2	**Volcan**	**0.63**	**25**	*e*P	**Pg**	**08 46 47.0**	**-0.5**
BRU2				*e*S	**Sb**	**08 46 56.7**	**-0.1**
CHIR3	**Chiriqui UPA,**	**0.65**	**75**	⇑*i*P	**Pg**	**08 46 47.4**	**-0.4**
BCO2	**Palmira**	**0.66**	**41**	⇓*i*P	**Pg**	**08 46 47.6**	**-0.4**
BCO2				*e*S	**Sb**	**08 46 57.1**	**-0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
EDPN	**Palmar Norte**	**0.88**	**327**	*i* P	**Pg**	**08 46 50.4**	**-1.8**
EDPN				*i* S	**Sb**	**08 47 03.6**	**-0.3**
EDBA	**Buenos Aires**	**0.99**	**342**	*e*P	**Pg**	**08 46 52.8**	**-1.4**
CHGR2	**Aguacate**	**1.08**	**49**	*e*P	**Pg**	**08 46 54.0**	**-2.0**
CHGR2				*e*S	**Sg**	**08 47 08.5**	**-1.6**
REME3	**Remedios, Chir**	**1.12**	**90**	*e*P	**Pg**	**08 46 55.0**	**-1.8**
EDLM	**Las Mercedes**	**1.22**	**330**	*e*P	**Pb**	**08 46 56.3**	**-1.7**
EDLM				*i* S	**Sb**	**08 47 12.7**	**-0.9**
NANC3	**Nancito, Chiri**	**1.22**	**89**	*e*P	**Pb**	**08 46 56.7**	**-1.3**
EDDO	**Dominical**	**1.36**	**319**	*e*P	**Pn**	**08 46 58.6**	**-1.1**
RGM0	**Gandoca**	**1.41**	**15**	*e*S	**Sg**	**08 47 23.1**	**+2.6**
GMAL	**Guarumal, Vera**	**1.77**	**105**	*e*P	**Pn**	**08 47 04.3**	**-1.1**
GMAL	**Guarumal, Vera**	**1.77**	**105**	*e*P	**Pn**	**08 47 04.4**	**-1.0**
LCR2	**La Lucha 2**	**1.83**	**326**	*e*P	**Pn**	**08 47 05.9**	**-0.5**
CVTR	**Volcan Turrial**	**1.95**	**336**	*e*P	**Pn**	**08 47 08.8**	**+0.6**
HDC	**Heredia**	**2.10**	**327**	*e*P	**Pn**	**08 47 11.4**	**+1.3**
HDC				*e*S	**Sb**	**08 47 38.6**	**-0.5**
HDC	**Heredia**	**2.10**	**327**	*e*P	**Pn**	**08 47 11.1**	**+1.1**
CACAO	**El Cacao, Vera**	**2.26**	**113**	*e*P	**Pn**	**08 47 11.8**	**-0.3**
CACAO				*e*S	**Sn**	**08 47 41.4**	**+1.7**
SRA1	**San Ramn**	**2.38**	**321**	*e*P	**Pn**	**08 47 15.3**	**+1.4**
AZU	**Azuero**	**2.70**	**99**	*e*P	**Pn**	**08 47 19.6**	**+1.5**
AZU				*e*S	**Sn**	**08 47 53.8**	**+3.2**
AZU	**Azuero**	**2.70**	**99**	*e*P	**Pn**	**08 47 19.6**	**+1.5**
JTS	**Las Juntas de**	**2.84**	**316**	*e*P	**Pn**	**08 47 21.7**	**+1.6**
BCIP	**Isla Barro Col**	**3.23**	**73**	*e*P	**Pn**	**08 47 26.9**	**+1.5**
CUI	**Cuipilapa**	**3.25**	**318**	*e*P	**Pn**	**08 47 27.5**	**+1.7**

ATH 01 08:56:09.9, 35°.42N×26°.84E, h25km±2km, ML2.1/2, Error ellipse: s-maj=6.4km s-min=1.2km az=155.0, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.29**	**63**	P	Pb	08 56 16.9	0.0
KARP				S	Sb	08 56 22.1	+0.4
KARP				AML	AML	08 56 23.3	
	comp=N,936μm,0.2s						
KARP				AML	AML	08 56 25.4	
	comp=E,1038μm,0.3s						
ZKR	**Zakros**	**0.59**	**240**	P	Pb	08 56 21.2	-0.4
ZKR				S	Sn	08 56 30.6	-0.9
ZKR				AML	AML	08 56 31.4	
	comp=N,251μm,0.4s						
ZKR				AML	AML	08 56 31.9	
	comp=E,350μm,0.2s						
NPS	**Neapolis**	**1.01**	**262**	P	Pb	08 56 29.6	+0.8
NPS				S	Sn	08 56 44.1	+2.1
LAST	**Lasithi**	**1.14**	**258**	P	Pb	08 56 32.0	+1.0
LAST				S	Sb	08 56 47.1	+1.7
ARG	**Arkhangelos**	**1.32**	**52**	P	Pb	08 56 35.5	+1.5
IDI	**Anoyia**	**1.60**	**266**	P	Pb	08 56 38.9	+0.2
AMGA	**Amorgos Island**	**1.61**	**332**	P	Pb	08 56 38.1	-0.8

ISK 01 08:56:23.9, 37°.13N×27°.88E, h5km, ML2.0/4, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.32**	**88**	PG	Pg	08 56 31.0	+0.8
YER				SG	Sg	08 56 35.6	+1.2
BODT	**Bodrum**	**0.46**	**262**	PG	Pg	08 56 33.3	+0.5
BODT				SG	Sb	08 56 40.4	-1.3
AYDB	**Zeytinkoy-Aydi**	**0.82**	**1**	PG	Pb	08 56 40.3	-0.4
ARG	**Arkhangelos**	**0.93**	**168**	PG	Pb	08 56 42.5	0.0
ARG				SG	Sb	08 56 55.5	+0.4

IDC 01 09:17:15.3±2.8, 6°.94S×126°.93E, h437km±33km, mb3.0/3, mb1 3.1/6, mb1mx2.8/31, mbtmp3.9/6, Error ellipse: s-maj=53.9km s-min=14.4km az=61.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.58**	**225**	P	P	09 18 35.6	+0.6
	7.0nm,0.3s,baz=102,slow=16,SNR=3.8						
BATI				S	S	09 19 39.6	-0.3
	5.2nm,0.3s,baz=63,slow=2.3,SNR=2.2						
WRA	**Warramunga Arr**	**14.80**	**152**	P	P	09 20 23.1	-1.5
	0.4nm,0.3s,baz=330,slow=11,SNR=7.1						
WRA				S	S	09 22 56.4	-4.7
	0.1nm,0.3s,baz=331,slow=21,SNR=7.2						
ASAR	**Alice Springs**	**17.93**	**159**	P	P	09 20 57.9	-0.1
	0.4nm,0.3s,baz=337,slow=7.7,SNR=23						
ASAR				S	S	09 24 02.0	+0.9
	0.1nm,0.3s,baz=337,slow=22,SNR=4.5						
STKA	**Stephens Creek**	**28.34**	**153**	P	P	09 22 32.5	+0.5
	0.7nm,0.4s,baz=321,slow=9.2,SNR=5.4						
MKAR	**Makanchi Array**	**66.53**	**328**	P	P	09 27 21.1	+0.6
	0.3nm,0.4s,baz=132,slow=8.0,SNR=4.2						
ZALV	**Zalesovo Beam**	**70.21**	**335**	P	P	09 27 41.8	-0.9
	0.6nm,0.4s,baz=126,slow=7.4,SNR=2.5						

*IDC **01** 09:35:27.6±1.7, 2°.52S×138°.84E, h0km, mb3.5/2, mb1 3.9/3, mb1mx3.5/32, mbtmp3.7/3, ML4.2/1, Error ellipse: s-maj=31.2km s-min=24.9km az=162.0*
*DJA **01** 09:35:34.6±0.6, 3°S±5°×13°9E±°, h90km±7km, M3.5/4, mb4.0/2, MLv3.2/4*
ISC 01 09:35:36.1±1.1, 2°.48S±0°.08×139°.26E±0°.06, h100km, n8, σ1s.56/11, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.73**	**312**	P	**Pn**	**09 35 52.9**	**-1.0**
SMPI				S	**Sn**	**09 36 05.4**	**-1.8**
GENI	**Genyem**	**0.91**	**97**	P	**Pn**	**09 35 54.6**	**-1.0**
JAY	**Jayapura**	**1.44**	**91**	Pg	**Pn**	**09 36 01.9**	**+0.1**
	14nm,0.3s,baz=234,slow=12,SNR=33						
JAY				Lg	Lg	09 36 19.8	
	12nm,0.3s,baz=324,slow=19,SNR=7.5						
JAY	**Jayapura**	**1.44**	**91**	P	**Pn**	**09 36 00.8**	**-1.0**
JAY				S	**Sn**	**09 36 20.8**	**-0.4**
WAMI	**Wamena**	**1.50**	**201**	P	**Pn**	**09 36 02.3**	**-0.1**
WAMI				S	**Sn**	**09 36 22.0**	**-0.3**
WRA	**Warramunga Arr**	**18.01**	**195**	P	**P**	**09 39 37.3**	**-2.0**
	0.7nm,0.3s,baz=17,slow=12,SNR=40						
ASAR	**Alice Springs**	**21.69**	**193**	P	**P**	**09 40 18.7**	**-0.4**
	1.1nm,0.5s,baz=14,slow=10,SNR=34						
MKAR	**Makanchi Array**	**69.94**	**322**	P	**P**	**09 46 39.8**	**+3.0**
	0.2nm,0.4s,baz=118,slow=8.5,SNR=2.8						

*IDC **01** 09:49:29.1±1.5, 5°.96S×149°.46E, h0km, mb3.9/3, mb1 4.3/4, mb1mx3.6/43, mbtmp4.1/4, ML3.8/1, MS3.6/4, Ms1 3.6/4, ms1mx3.1/43, Error ellipse: s-maj=84.2km s-min=21.5km az=143.0*
*NEIC **01** 09:49:34.7±0.7, 6°.2S±0°.1×149°.8E±0°.1, h56km±10km, mb4.2/8, Error ellipse: s-maj=20.9km s-min=11.2km az=138.0*
ISC 01 09:49:35.2±1.0, 6°.2S±0°.2×149°.8E±0°.2, h58km, n20, σ1s.31/17, mb4.2/4, MS3.6/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.97**	**50**	Pn	**Pn**	**09 50 18.4**	**-1.5**
	12nm,0.3s,baz=179,slow=3.9,SNR=11						
KRVT				Sn	**Sn**	**09 50 58.3**	**+3.9**
	9.1nm,0.3s,baz=204,slow=20,SNR=1.8						
RABL	**Rabaul**	**3.15**	**50**	Pn	**Pn**	**09 50 21.0**	**-1.3**
PMG	**Port Moresby**	**4.06**	**219**		**Pn**	**09 50 34.9**	**+0.1**
COEN	**Coen**	**10.03**	**220**	Pn	**Pn**	**09 51 56.1**	**-0.6**
WB0	**Warramunga Arr**	**20.09**	**227**	P	**P**	**09 54 04.4**	**+0.3**
WB0				IAmb	IAmb	09 54 05.2	
	comp=Z,4.8nm,0.6s						
WR0	**Warramunga Arr**	**20.11**	**226**	P	**P**	**09 54 04.2**	**-0.2**
WRAB	**Tennant Creek**	**20.23**	**226**	P	**P**	**09 54 04.3**	**-1.3**
WB2	**Warramunga Arr**	**20.23**	**226**	P	**P**	**09 54 06.0**	**+0.3**
WB2				IAmb	IAmb	09 54 06.7	
	comp=Z,7.8nm,0.5s						
WRA	**Warramunga Arr**	**20.24**	**226**	P	**P**	**09 54 06.1**	**+0.3**
	comp=Z,5.2nm,0.5s,baz=50,slow=10,SNR=5.6						
KNRA	**Kununurra**	**22.61**	**244**	P	**P**	**09 54 31.8**	**+0.5**
ASAR	**Alice Springs**	**23.08**	**220**	P	**P**	**09 54 36.1**	**0.0**
	comp=Z,1.3nm,0.8s,baz=55,slow=9.5,SNR=8.1						
ARMA	**Armidale**	**24.12**	**176**	P	**P**	**09 54 46.0**	**+0.3**
ARMA				IAmb	IAmb	09 54 53.3	
	comp=Z,13nm,1.2s						
FITZ	**Fitzroy Crossi**	**26.31**	**241**	P	**P**	**09 55 06.7**	**+1.0**
	comp=Z,3.7nm,0.7s,baz=69,slow=9.0,SNR=8.7						
FITZ	**Fitzroy Crossi**	**26.31**	**241**	P	**P**	**09 55 06.5**	**+0.9**
URZ	**Urewera**	**40.39**	**146**	LR	LR	10 12 19.7	
	comp=Z,96nm,21.2s,baz=2.0,slow=34						
RPZ	**Rata Peaks**	**41.76**	**157**	LR	LR	10 13 12.9	
	comp=Z,114nm,18.1s,baz=282,slow=34						
SONM	**Songino Array**	**65.97**	**330**	LR	LR	10 28 10.5	
	comp=Z,39nm,21.4s,baz=254,slow=35						
QSPA	**South Pole Qui**	**83.73**	**180**	P	**P**	**10 01 57.6**	**-0.2**
QSPA				IAmb	IAmb	10 02 08.0	
	comp=Z,4.9nm,1.5s						
NRIK	**Noril'sk**	**86.35**	**342**	LR	LR	10 40 20.3	
	comp=Z,25nm,21.3s,baz=124,slow=36						
TORD	**Torodi Ar. Bea**	**147.80**	**285**	PKPbc	**PKPbc**	**10 09 14.8**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=79,slow=2.7,SNR=2.9						

*TUL **01** 10:04:07.9±1.3, 35°.81N±0°.04×96°.94W±0°.05, h4km±7km, ML3.6, Mwr3.4/32(NEIC), Error ellipse: s-maj=6.3km s-min=5.2km az=169.0*
*NEIC **01** 10:04:07.9, 35°.81N×96°.94W, h7km, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr-0.33; Mθθ1.20; Mφφ-0.87; Mrθ0.75; Mθφ0.72; Mφr-0.24; Fault plane solution: M0 1.52000×10^14 NP1:φs293.91000°, δ83.96000°, λ-34.01000°. NP2:φs27.97000°, δ56.20000°, λ-172.72000°. Principal axes: T 1.6477, Plg19.0000°, Azm346.0000°; N -0.3081, Plg56.0000°, Azm105.0000°; P -1.3395, Plg28.0000°, Azm245.0000°;*
*ANF **01** 10:04:08.1±0.4, 35°.78N×96°.92W, h0km, ML4.3/9 Error ellipse: s-maj=9.2km s-min=2.3km az=170.0*
*NEIC **01** 10:04:08.2±1.5, 35°.85N±0°.04×96°.94W±0°.04, h5km±2km, Error ellipse: s-maj=6.9km s-min=4.8km az=189.0*
*IDC **01** 10:04:10.9±1.9, 36°.05N×97°.47W, h0km, mb3.3/1, mb1 3.5/5, mb1mx3.2/49, mbtmp3.1/5, ML3.3/4, Error ellipse: s-maj=26.6km s-min=12.6km az=107.0*
ISC 01 10:04:07.7±1.1, 35°.84N±0°.04×96°.94W±0°.03, h7km±9km, n78, σ1s.15/87, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.28**	**229**	Pg	**Pg**	**10 04 13.4**	**+0.2**
ADOK	**Arcadia Dam**	**0.40**	**242**		**Pg**	**10 04 15.9**	**+0.4**
ADOK				Sg	**Sg**	**10 04 21.3**	**+0.5**
OK001	**Jones High Sch**	**0.40**	**226**	Pg	**Pg**	**10 04 15.8**	**+0.3**
OK009	**Oakdale Elemen**	**0.47**	**237**		**Pg**	**10 04 17.0**	**+0.2**
OKCSW	**OKLAHOMA CITY**	**0.59**	**224**		**Pg**	**10 04 19.0**	**-0.2**
OKCSW				Sg	**Sg**	**10 04 27.3**	**+0.3**
OKCFA	**Oklahoma City**	**0.60**	**225**		**Pg**	**10 04 19.0**	**-0.2**
OKCFA				Sg	**Sg**	**10 04 27.3**	**+0.3**
W35A	**Tecumseh**	**0.69**	**176**		**Pg**	**10 04 20.6**	**-0.3**
W35A				Sg	**Sg**	**10 04 30.0**	**+0.1**
FNO	**Franklin**	**0.69**	**213**		**Pg**	**10 04 21.1**	**+0.1**
FNO				Sg	**Sg**	**10 04 30.6**	**+0.6**
TUL1	**Leonard**	**0.93**	**85**	P	**Pg**	**10 04 25.5**	**-0.1**
	baz=265						
TUL1				S	**Sg**	**10 04 38.3**	**+0.6**
	baz=265						
TUL1	**Leonard**	**0.93**	**85**		**Pg**	**10 04 25.3**	**-0.3**
T35A	**Sooner Cattle**	**1.13**	**18**		**Pg**	**10 04 29.7**	**+0.3**
U32A	**Winter Ranch,**	**1.76**	**288**		**Pn**	**10 04 39.8**	**+1.1**
X37A	**Clayton**	**1.79**	**134**		**Pn**	**10 04 39.9**	**+1.0**
WMOK	**Wichita Mounta**	**1.87**	**234**	P	**Pn**	**10 04 40.7**	**+0.6**
	baz=54						
WMOK				S	**Sb**	**10 05 06.0**	**+0.3**
	baz=54						
WMOK	**Wichita Mounta**	**1.87**	**234**		**Pn**	**10 04 40.5**	**+0.4**
U38A	**Gravette**	**2.15**	**73**		**Pn**	**10 04 45.2**	**+1.2**
HHAR	**Hobbs**	**2.47**	**79**		**Pn**	**10 04 49.3**	**+0.9**
Z35A	**Perchaven, San**	**2.52**	**186**		**Pn**	**10 04 49.9**	**+0.9**
W39A	**Magazine**	**2.65**	**103**	P	**Pn**	**10 04 52.2**	**+1.3**
	baz=284						
W39A				S	**Sn**	**10 05 25.5**	**+2.3**
	baz=284						
R32A	**Long Quarter,**	**2.94**	**332**		**Pn**	**10 04 56.7**	**+1.7**
Z38A	**Mt. Pleasant**	**3.04**	**147**		**Pn**	**10 04 57.1**	**+1.0**
MIAR	**Mount Ida**	**3.04**	**114**	P	**Pn**	**10 04 57.7**	**+1.5**
	baz=296						
MIAR				S	**Sn**	**10 05 34.3**	**+1.5**
	baz=296						
MIAR	**Mount Ida**	**3.04**	**114**		**Pn**	**10 04 57.7**	**+1.5**
KSU1	**Kansas State U**	**3.27**	**4**		**Pn**	**10 05 00.6**	**+1.2**
X40A	**Basin Creek Fa**	**3.62**	**111**	P	**Pn**	**10 05 05.7**	**+1.5**
	baz=293						
X40A	**Basin Creek Fa**	**3.62**	**111**		**Pn**	**10 05 05.5**	**+1.4**
CBKS	**Cedar Bluff**	**3.72**	**324**	Pn	**Pn**	**10 05 06.1**	**+0.6**
WLAR	**White Oak Lake**	**3.81**	**123**	Pn	**Pn**	**10 05 08.2**	**+1.4**
WHAR	**Wooly Hollow**	**3.83**	**97**		**Pn**	**10 05 07.7**	**+0.6**
WHTX	**Lake Whitney,**	**3.86**	**187**	Pn	**Pn**	**10 05 08.4**	**+0.9**
W41B	**Gary Mavity, V**	**3.88**	**98**	P	**Pn**	**10 05 08.8**	**+1.0**
	baz=281						
W41B				S	**Sn**	**10 05 54.8**	**+1.2**
	baz=281						
FCAR	**Ozark Folk Cen**	**3.91**	**88**	Pn	**Pn**	**10 05 08.5**	**+0.3**
ABTX	**Abilene, Hawle**	**3.91**	**216**	Pn	**Pn**	**10 05 09.9**	**+1.6**
237A	**Washetta, Mont**	**3.94**	**166**		**Pn**	**10 05 08.9**	**+0.4**
AMTX	**Amarillo**	**3.99**	**258**	P	**Pn**	**10 05 11.0**	**+1.6**
	baz=75						
AMTX	**Amarillo**	**3.99**	**258**		**Pn**	**10 05 11.1**	**+1.6**
Z41A	**Richland Creek**	**4.27**	**126**	S	**Sn**	**10 06 03.2**	**-0.1**
	baz=308						
NATX	**Nacogdoches**	**4.49**	**154**	Pn	**Pn**	**10 05 17.6**	**+1.5**
P38A	**Dawn**	**4.64**	**35**	Pn	**Pn**	**10 05 19.9**	**+1.6**
CCAR	**Cane Creek**	**4.66**	**113**	Pn	**Pn**	**10 05 19.3**	**+0.8**
LCAR	**Lake Charles**	**4.70**	**86**	Pn	**Pn**	**10 05 18.9**	**0.0**
T42A	**Van Buren**	**4.86**	**74**	Pn	**Pn**	**10 05 22.4**	**+1.2**
N33A	**J Bar K, Exete**	**4.91**	**355**	Pn	**Pn**	**10 05 22.0**	**+0.1**
CCM	**Cathedral Cave**	**5.07**	**62**	Pn	**Pn**	**10 05 25.2**	**+1.2**
N35A	**Tabor**	**5.12**	**11**		**Pn**	**10 05 25.3**	**+0.6**
HBAR	**Harrisburg**	**5.12**	**91**	Pn	**Pn**	**10 05 25.7**	**+1.0**
MSTX	**Muleshoe**	**5.15**	**250**	P	**Pn**	**10 05 26.0**	**+0.7**
	baz=67						
MSTX	**Muleshoe**	**5.15**	**250**		**Pn**	**10 05 25.9**	**+0.6**
PBMO	**Poplar Bluff**	**5.34**	**78**	Pn	**Pn**	**10 05 29.3**	**+1.5**
P40A	**Paris**	**5.35**	**45**	Pn	**Pn**	**10 05 30.1**	**+2.1**
KSCO	**Kaye Shedlock'**	**5.53**	**307**	Pn	**Pn**	**10 05 31.8**	**+1.3**
GNAR	**Gosnell**	**5.62**	**87**	Pn	**Pn**	**10 05 31.7**	**+0.1**
BGNE	**Belgrade**	**5.64**	**351**	Pn	**Pn**	**10 05 32.1**	**+0.1**
JCT	**Junction City**	**5.86**	**205**	Pn	**Pn**	**10 05 34.7**	**-0.3**
L34A	**Svendsen Farm,**	**6.13**	**4**	Pn	**Pn**	**10 05 41.4**	**+2.6**
W45A	**Hickory Valley**	**6.36**	**94**	Pn	**Pn**	**10 05 41.7**	**-0.1**
Y45A	**Yeager Farm, C**	**6.39**	**106**	Pn	**Pn**	**10 05 42.9**	**+0.7**
S44A	**Carbondale**	**6.44**	**71**	Pn	**Pn**	**10 05 43.1**	**+0.3**
SIUC	**Southern Illin**	**6.47**	**71**	Pn	**Pn**	**10 05 43.5**	**+0.2**
OGNE	**Ogallala**	**6.48**	**323**	Pn	**Pn**	**10 05 44.6**	**+1.0**
K31A	**O'Neill**	**6.92**	**349**	Pn	**Pn**	**10 05 50.3**	**+0.7**
Q44A	**Meyer Farm, Va**	**7.01**	**62**	Pn	**Pn**	**10 05 52.5**	**+1.8**
SDCO	**Great Sand Dun**	**7.13**	**288**		**Pn**	**10 05 54.4**	**+1.6**
PLAL	**Pickwick Lake**	**7.29**	**94**	Pn	**Pn**	**10 05 54.3**	**-0.2**
WVT	**Waverly**	**7.39**	**85**	Pn	**Pn**	**10 05 56.6**	**+0.6**
HDIL	**Hopedale**	**7.64**	**50**	Pn	**Pn**	**10 06 00.5**	**+1.1**
L40A	**Anamosa**	**7.64**	**34**	Pn	**Pn**	**10 06 00.4**	**+1.0**
ANMO	**Albuquerque**	**7.83**	**266**	Pn	**Pn**	**10 06 00.4**	**-1.7**
	0.2nm,0.3s,baz=82,slow=17,SNR=2.8						
ANMO				Pg	Pb	10 06 29.8	+6.0
	1.0nm,0.3s,baz=84,slow=16,SNR=16						
ANMO				Lg	Lg	10 08 07.8	
	1.1nm,0.3s,baz=55,slow=16,SNR=2.4						
ISCO	**Idaho Springs**	**7.92**	**303**		**Pn**	**10 06 05.1**	**+1.5**
PHWY	**Pilot Hill**	**8.62**	**312**	Pn	**Pn**	**10 06 13.4**	**+0.3**
TXAR	**Lajitas Array**	**8.62**	**223**	Pn	**Pn**	**10 06 13.6**	**+0.6**
	0.2nm,0.3s,baz=45,slow=11,SNR=7.0						
TXAR				Pg	Pg	10 06 38.0	-15
	0.4nm,0.3s,baz=43,slow=16,SNR=3.7						
TXAR				Lg	Lg	10 08 31.9	
	0.9nm,0.3s,baz=43,slow=33,SNR=3.4						
LRAL	**Lakeview Retre**	**8.67**	**106**	Pn	**Pn**	**10 06 12.5**	**-1.1**
JFWS	**Jewell Farm**	**8.76**	**34**	Pn	**Pn**	**10 06 13.3**	**-1.4**
RSSD	**Black Hills**	**9.90**	**329**		**Pn**	**10 06 31.2**	**+0.6**
TKL	**Tuckaleechee C**	**10.70**	**87**	Lg	Lg	10 09 41.1	
	1.5nm,0.3s,baz=232,slow=10,SNR=8.0						
PDAR	**Pinedale Array**	**11.97**	**309**	Pn	**Pn**	**10 06 58.9**	**0.0**
	0.1nm,0.3s,baz=125,slow=17,SNR=2.9						
PDAR				Lg	Lg	10 10 06.0	
	0.3nm,0.3s,baz=113,slow=36,SNR=3.0						
ULM	**Lac du Bonnet**	**14.43**	**3**	Pn	**Pn**	**10 07 28.1**	**-4.2**
	0.3nm,0.3s,baz=178,slow=15,SNR=2.3						
ULM				Sn	Sn	10 09 59.0	-13
	0.2nm,0.3s,baz=264,slow=15,SNR=1.7						
ULM				Lg	Lg	10 11 36.0	
	0.2nm,0.3s,baz=270,slow=20,SNR=1.8						
ILAR	**Eielson Array**	**41.35**	**330**	P	**P**	**10 11 54.4**	**+0.5**
	0.4nm,0.8s,baz=118,slow=7.4,SNR=4.1						

*NIC **01** 10:07:13.6±0.0, 35°.53N×27°.10E, h16km, Ml3.3/2*
*DDA **01** 10:07:13.7, 35°.58N×27°.14E, h10km±1km, ML2.5*
*ATH **01** 10:07:13.9, 35°.57N×27°.08E, h17km±3km, ML3.1/9, Error ellipse: s-maj=6.3km s-min=1.1km az=145.0*
*ISK **01** 10:07:14.1, 35°.60N×27°.04E, h7km, ML3.0/12*
*THE **01** 10:07:14.7, 35°.46N×27°.19E, h7km±1km, ML2.9/8, Error ellipse: s-maj=2.0km s-min=0.7km az=332.0*
ISC 01 10:07:14.3±0.8, 35°.57N±0°.03×27°.11E±0°.02, h16km±4km, n62, σ1s.03/85, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.04**	**118**	P	**Pg**	**10 07 17.1**	**-0.1**
KARP				S	**Sg**	**10 07 18.8**	**-0.3**
	44μm,0.2s						
KARP	**Karpathos**	**0.04**	**118**	P	**Pg**	**10 07 17.2**	**-0.1**
KARP				S	**Sg**	**10 07 19.0**	**-0.2**
KARP				AML	AML	10 07 19.1	
	comp=E,68396μm,0.2s						
KARP				AML	AML	10 07 19.1	
KARP	**Karpathos**	**0.04**	**118**	PG	**Pg**	**10 07 17.0**	**-0.1**
KARP				SG	**Sg**	**10 07 19.1**	**0.0**
KARP	**Karpathos**	**0.04**	**118**	P	**Pg**	**10 07 17.1**	**-0.1**
KARP				AML	AML	10 07 18.7	
	comp=E,68nm,0.2s						
KARP				AML	AML	10 07 18.7	
	comp=E,68nm,0.2s						
KARP				S	**Sg**	**10 07 18.8**	**-0.3**
ZKR	**Zakros**	**0.86**	**239**	P	**Pg**	**10 07 30.4**	**-0.6**
ZKR				S	**Sn**	**10 07 44.5**	**+0.5**
	comp=E,698nm,0.3s						
ZKR	**Zakros**	**0.86**	**239**	P	**Pg**	**10 07 30.4**	**-0.6**
ZKR				AML	AML	10 07 44.6	
	comp=N,594μm,0.4s						
ZKR				AML	AML	10 07 48.0	
	comp=E,2199μm,0.3s						
ZKR	**Zakros**	**0.86**	**239**	PG	**Pg**	**10 07 30.4**	**-0.6**
ZKR				SG	**Sb**	**10 07 42.4**	**+0.2**
ZKR	**Zakros**	**0.86**	**239**	P	**Pg**	**10 07 30.1**	**-0.9**
ZKR				S	**Sg**	**10 07 41.8**	**-0.5**
ZKR				AML	AML	10 07 47.5	
	comp=E,2.2nm,0.3s						
ZKR				AML	AML	10 07 47.5	
	comp=E,2.2nm,0.3s						
STIA	**Sitia Lasithi**	**0.91**	**247**	P	**Pb**	**10 07 31.6**	**-0.1**
STIA				S	**Sn**	**10 07 46.1**	**+0.9**
ARG	**Arkhangelos**	**1.05**	**52**	P	**Pb**	**10 07 34.5**	**+0.5**
ARG				S	**Sn**	**10 07 49.3**	**+0.6**
	comp=E,785nm,0.4s						
ARG	**Arkhangelos**	**1.05**	**52**	P	**Pb**	**10 07 34.6**	**+0.5**
ARG				S	**Sn**	**10 07 49.2**	**+0.6**
ARG				AML	AML	10 07 51.3	
	comp=E,1734μm,0.4s						
ARG				AML	AML	10 07 51.5	
	comp=N,1217μm,0.3s						
ARG	**Arkhangelos**	**1.05**	**52**	PG	**Pn**	**10 07 35.5**	**+1.2**
ARG				SG	**Sn**	**10 07 49.5**	**+0.8**
ARG	**Arkhangelos**	**1.05**	**52**	P	**Pg**	**10 07 34.2**	**-0.3**
ARG				S	**Sn**	**10 07 49.4**	**+0.8**
KOSK	**Kos Island**	**1.19**	**355**	PN	**Pg**	**10 07 36.7**	**-0.5**
DAT	**Datca**	**1.22**	**18**	PN	**Pg**	**10 07 37.7**	**-0.1**
DAT	**Datca**	**1.22**	**18**	*i* P	**Pg**	**10 07 37.7**	**-0.1**
DAT				*i* S	**Sn**	**10 07 53.6**	**+0.6**
DAT				IAML		10 08 00.0	
	comp=N,77nm,0.2s						
FRMA	**Ierapetra Chan**	**1.26**	**244**	P	**Pn**	**10 07 35.9**	**-1.3**
FRMA				S	**Sb**	**10 07 52.7**	**-0.8**
	comp=N,240nm,0.4s						
NPS	**Neapolis**	**1.26**	**256**	P	**Pg**	**10 07 38.3**	**-0.3**
NPS				S	**Sn**	**10 07 55.1**	**+1.1**
	comp=N,632nm,0.5s						
NPS	**Neapolis**	**1.26**	**256**	P	**Pg**	**10 07 38.1**	**-0.5**
NPS				AML	AML	10 07 59.0	
	comp=N,1126μm,0.3s						
NPS				AML	AML	10 07 59.6	
	comp=E,1383μm,0.4s						
DATC	**Datca-Mugla**	**1.27**	**20**	PN	**Pg**	**10 07 39.1**	**+0.4**
ANAF	**Anafi Island**	**1.34**	**306**	P	**Pb**	**10 07 39.2**	**+0.2**
ANAF				AML	AML	10 08 01.2	
	comp=E,8985μm,0.4s						
ANAF				AML	AML	10 08 03.2	
	comp=N,4889μm,0.2s						
LAST	**Lasithi**	**1.40**	**254**	P	**Pb**	**10 07 40.2**	**+0.2**
LAST				S	**Sn**	**10 07 58.1**	**+0.7**
	comp=N,300nm,0.5s						
LAST	**Lasithi**	**1.40**	**254**	P	**Pg**	**10 07 40.4**	**-0.8**
LAST				AML	AML	10 08 00.3	
	comp=E,517μm,0.3s						
LAST				AML	AML	10 08 01.8	
	comp=N,658μm,0.6s						
BODT	**Bodrum**	**1.50**	**6**	PN	**Pg**	**10 07 42.4**	**-0.7**
BDRM	**Kayabasi**	**1.52**	**10**	*i* P	**Pn**	**10 07 41.3**	**+0.5**
SANT	**Santorini**	**1.56**	**301**	P	**Pb**	**10 07 42.9**	**0.0**
SANT				S	**Sg**	**10 08 04.5**	**-0.2**
	comp=N,392nm,0.3s						
SANT	**Santorini**	**1.56**	**301**	PN	**Pb**	**10 07 42.4**	**-0.5**
THR6	**Thira Island,**	**1.60**	**300**	P	**Pb**	**10 07 43.3**	**-0.1**
AMGA	**Amorgos Island**	**1.60**	**322**	P	**Pn**	**10 07 42.9**	**+0.9**
AMGA				AML	AML	10 08 12.8	
	comp=N,814μm,0.4s						
AMGA				AML	AML	10 08 15.1	
	comp=E,784μm,0.3s						
THT2	**Imerovigli**	**1.62**	**303**	PN	**Pn**	**10 07 42.4**	**+0.2**
THR3	**Thira Island,**	**1.62**	**302**	P	**Pb**	**10 07 43.7**	**-0.1**
CMBO	**Columbo, Santo**	**1.65**	**304**	P	**Pb**	**10 07 43.9**	**-0.5**
CMBO	**Columbo, Santo**	**1.65**	**304**	P	**Pb**	**10 07 43.8**	**-0.5**
CMBO				AML	AML	10 08 10.8	
	comp=N,1320μm,0.4s						
CMBO				AML	AML	10 08 13.5	
	comp=E,1620μm,0.7s						
HRKL	**Herakleio**	**1.66**	**262**	PN	**Pn**	**10 07 43.4**	**+0.6**
DALY	**Dalyan (Mula)**	**1.76**	**45**	PN	**Pb**	**10 07 46.5**	**+0.3**
DALY	**Dalyan (Mula)**	**1.76**	**45**	*i* P	**Pb**	**10 07 46.1**	**-0.1**
DALY				*i* S	**Sg**	**10 08 10.5**	**-0.5**
TURN	**Turunc**	**1.77**	**42**	PN	**Pn**	**10 07 42.6**	**-1.7**
TURN	**Turunc**	**1.77**	**42**	*i* P	**Pn**	**10 07 41.5**	**-2.8**
TURN				*i* S	**Sn**	**10 08 02.3**	**-4.3**
TURN				IAML		10 08 08.0	
	comp=E,139nm,0.3s						
YER	**Yerkesik**	**1.83**	**31**	PN	**Pn**	**10 07 46.5**	**+1.4**
IDI	**Anoyia**	**1.84**	**262**	P	**Pn**	**10 07 45.8**	**+0.5**
IDI				S	**Sb**	**10 08 10.4**	**+0.1**
	comp=E,228nm,0.6s						
IDI	**Anoyia**	**1.84**	**262**	P	**Pn**	**10 07 45.8**	**+0.5**
IDI				AML	AML	10 08 13.4	
	comp=N,410μm,0.4s						
IDI				AML	AML	10 08 14.1	
	comp=E,413μm,0.2s						
IDI	**Anoyia**	**1.84**	**262**	PN	**Pn**	**10 07 46.2**	**+1.0**
IOSP	**Ios island**	**1.87**	**309**	P	**Pb**	**10 07 47.1**	**-1.0**
FETY	**Fethiye**	**1.92**	**56**	PN	**Pb**	**10 07 48.5**	**-0.4**
FETY	**Fethiye**	**1.92**	**56**	*i* P	**Pb**	**10 07 49.7**	**+0.8**
FETY				*i* S	**Sg**	**10 08 15.3**	**-0.8**
FETY				IAML		10 08 21.0	
	comp=E,40nm,0.5s						
APE	**Apeiranthos**	**1.97**	**320**	PN	**Pn**	**10 07 47.4**	**+0.3**
APE	**Apeiranthos**	**1.97**	**320**	P	**Pn**	**10 07 46.2**	**-0.8**
TAVA	**DENIZLI_Tavas**	**2.39**	**37**	*i* P	**Pb**	**10 07 56.1**	**-0.8**
TAVA				*i* S	**Sb**	**10 08 26.1**	**-0.1**
TAVA				IAML		10 08 31.0	
	comp=N,43nm,0.5s						
ELL	**Elmali**	**2.55**	**62**	PN	**Pb**	**10 07 58.1**	**-1.6**
IMMV	**Iera Moni Meta**	**2.56**	**269**	P	**Pn**	**10 07 57.0**	**+1.9**
IMMV	**Iera Moni Meta**	**2.56**	**269**	PN	**Pn**	**10 07 56.6**	**+1.5**
GVD	**Gavdhos**	**2.58**	**255**	PN	**Pn**	**10 07 57.2**	**+1.8**
GOLH	**Golhisar**	**2.58**	**49**	*i* P	**Pn**	**10 07 57.9**	**+2.3**
AKUM	**Antalya-Kumluc**	**2.73**	**73**	*i* P	**Pn**	**10 07 59.7**	**+2.3**
RODP	**Rodopos**	**2.73**	**271**	PN	**Pn**	**10 07 58.6**	**+1.1**
CHOS	**Chios island**	**2.94**	**344**	P	**Pn**	**10 08 01.7**	**+1.3**
KORT	**Korkueli**	**2.98**	**60**	PN	**Pn**	**10 08 03.0**	**+2.0**
KHAL	**Karahalli**	**3.38**	**34**	*i* P	**Pn**	**10 08 08.7**	**+2.1**
KHAL				*i* S	**Sn**	**10 08 47.1**	**+0.7**
AKMS	**Akamas**	**4.31**	**96**	P	**Pn**	**10 08 19.3**	**+0.1**
SZAC	**Souni**	**4.79**	**98**	P	**Pn**	**10 08 25.6**	**-0.3**
ASGA	**Asgata**	**5.08**	**97**	P	**Pn**	**10 08 29.8**	**0.0**
MVOU	**Mavrovouni**	**5.36**	**94**	P	**Pn**	**10 08 33.8**	**+0.2**

*IDC **01** 10:12:36.0±0.9, 41°.44S×89°.06W, h0km, mb3.9/5, mb1 4.2/5, mb1mx4.0/33, mbtmp3.9/5, MS4.4/21, Ms1 4.4/21, ms1mx4.3/30, Error ellipse: s-maj=46.5km s-min=25.2km az=116.0*

*NEIC **01** 10:12:37.1±2.4, 41.°42S±0.°03×88.°9W±0.°2, h10km±1km, mb4.8/27, Mwc5.4(GCMT), Error ellipse: s-maj=26.9km s-min=4.8km az=277.0*

*GCMT **01** 10:12:39.1±0.2, 41.°29S±0.°01×89.°57W±0.°01, h13km±1km, MW5.3/129, Moment Tensor Solution. s42,c46; s129,c216; Duration: 1s1 Moment tensor: Scale 10^{17} Nm; Mrr-0.18±.04; Mθθ0.22±.03; Mφφ-0.04±.03; Mrθ-0.48±.09; Mθφ-1.18±.03; Mφr-0.20±.07; Best double couple: Mo1.30600×10^{17} NP1:φs355.00000°, δ67.00000°, λ-10.00000°. NP2:φs89.00000°, δ80.00000°, λ-157.00000°. Principal axes: T 1.3120, Plg9.0000°, Azm220.0000°; N -0.0120, Plg65.0000°, Azm110.0000°; P -1.3000, Plg23.0000°, Azm314.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 10:12:37.4±0.5**, 41.°42S**±0.°10×**88.°9W**±0.°1**, h10**km**, n75, σ1s45**/47**, mb4.8**/17**, MS4.5**/23**, 1D, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**10.95**	**49**	T	T	10 26 52.3	
	baz=225,slow=73,SNR=415						
H03S1	**Juan Fernandez**	**10.96**	**50**	T	T	10 26 53.5	
	baz=225,slow=73,SNR=593						
H03S3	**Juan Fernandez**	**10.97**	**49**	T	T	10 26 52.6	
	baz=225,slow=73,SNR=355						
H03N3	**Juan Fernandez**	**11.23**	**48**	T	T	10 27 09.2	
	baz=225,slow=72,SNR=1957						
H03N2	**Juan Fernandez**	**11.24**	**48**	T	T	10 27 08.2	
	baz=225,slow=72,SNR=2222						
H03N1	**Juan Fernandez**	**11.25**	**48**	T	T	10 27 08.3	
	baz=225,slow=72,SNR=712						
PLCA	**Paso Flores**	**13.87**	**93**	LR	LR	10 20 12.4	
	comp=Z,990nm,21.9s,baz=262,slow=33						
PLCA	**Paso Flores**	**13.87**	**93**		**Pn**	**10 15 54.2**	**+0.1**
ROC1	**El Roble**	**16.54**	**65**	Pn	**Pn**	**10 16 29.0**	**-0.7**
PEL	**Peldehue**	**16.67**	**66**		**Pn**	**10 16 30.1**	**-1.0**
PMSA	**Palmer Station**	**27.39**	**157**	LR	LR	10 26 20.7	
	comp=Z,910nm,20.6s,baz=296,slow=30						
PB12	**IPOC Station P**	**27.73**	**40**	P	**P**	**10 18 27.3**	**+1.1**
CPUP	**Villa Florida**	**30.04**	**70**	LR	LR	10 30 04.0	
	comp=Z,1μm,18.6s,baz=242,slow=35						
LPAZ	**La Paz**	**30.80**	**42**	P	**P**	**10 18 54.5**	**+0.5**
	1.6nm,0.8s,baz=221,slow=11,SNR=5.4						
LPAZ				LR	LR	10 28 42.0	
	comp=Z,1μm,18.3s,baz=202,slow=31						
LPAZ	**La Paz**	**30.80**	**42**	P	**P**	**10 18 56.0**	**+2.0**
LPAZ				IAmb	IAmb	10 19 09.7	
	comp=Z,26nm,1.4s						
SIV	**San Ignacio**	**34.91**	**52**	P	**P**	**10 19 30.1**	**+0.8**
	comp=Z,1.6nm,0.9s,baz=240,slow=12,SNR=4.2						
SAML	**Samuel**	**39.54**	**42**	P	**P**	**10 20 08.7**	**+0.2**
BDFB	**Brasilia**	**43.59**	**66**	LR	LR	10 38 29.7	
	comp=Z,1μm,19.0s,baz=237,slow=36						
ROSC	**El Rosal**	**47.93**	**20**	LR	LR	10 38 43.2	
	comp=Z,928nm,21.8s,baz=191,slow=33						
VNA3	**Neumayer Olymp**	**48.00**	**155**	P	**P**	**10 21 17.5**	**+1.4**
VNA1	**Neumayer--Stat**	**48.54**	**154**	P	**P**	**10 21 21.9**	**+1.8**
VNA2	**Neumayer--Watz**	**48.78**	**154**	P	**P**	**10 21 22.1**	**+0.1**
	baz=277,slow=9.1						
QSPA	**South Pole Qui**	**48.81**	**180**	P	**P**	**10 21 23.0**	**+0.4**
QSPA				IAmb	IAmb	10 21 28.2	
	comp=Z,6.8nm,1.2s						
SNAA	**Sanae**	**50.09**	**156**	P	**P**	**10 21 31.6**	**-0.5**
SNAA					**sP**	**10 21 35.7**	**+0.5**
SNAA				IAmb	IAmb	10 21 46.0	
	comp=Z,29nm,1.8s						
TBI	**Tubuai**	**53.16**	**270**	*e*S	S	10 28 58.4	-28
	comp=Z,497nm,31.0s						
TBI				*e*LQ	LQ	10 34 28.4	
	comp=Z,987nm,30.2s						
TBI				*e*LR	LR	10 36 42.0	
	comp=Z,1μm,26.8s,baz=125						
VNDA	**Vanda**	**53.88**	**195**	P	**P**	**10 21 59.1**	**-1.1**
	comp=Z,2.0nm,0.9s,baz=114,slow=6.0,SNR=10						
VNDA				LR	LR	10 39 49.0	
	comp=Z,608nm,21.9s,baz=112,slow=30						
VNDA	**Vanda**	**53.88**	**195**	P	**P**	**10 21 59.9**	**-0.3**
TAOE	**Nuku Hiva Isla**	**55.52**	**291**	*e*S	S	10 29 28.7	-30
	comp=Z,361nm,25.3s						
PPT2	**Papeete2**	**56.67**	**276**	*e*S	S	10 29 45.3	-28
	comp=Z,521nm,26.8s						
PPT2				*e*LQ	LQ	10 35 55.6	
	comp=Z,545nm,25.2s						
PPT2				*e*LR	LR	10 38 17.6	
	comp=Z,551nm,25.8s						
PPT	**Papeete**	**56.69**	**276**	LR	LR	10 39 53.7	
	comp=Z,261nm,18.3s,baz=134,slow=29						
SYO	**Syowa Base**	**63.51**	**162**⇓	*e*P	**P**	**10 23 03.6**	**-3.6**
URZ	**Urewera**	**68.57**	**238**	LR	LR	10 47 14.5	
	comp=Z,782nm,18.4s,baz=184,slow=30						
RPZ	**Rata Peaks**	**68.97**	**230**	LR	LR	10 45 53.5	
	comp=Z,916nm,21.6s,baz=190,slow=29						
MAW	**Mawson**	**69.22**	**169**	LR	LR	10 52 35.7	
	comp=Z,356nm,19.7s,baz=212,slow=35						
HPIG		**69.76**	**344**	P	**P**	**10 23 48.9**	**+1.0**
HPIG				IAmb	IAmb	10 24 07.7	
	comp=Z,9.6nm,1.2s						
TXAR	**Lajitas Array**	**71.71**	**346**	P	**P**	**10 23 59.2**	**-0.3**
	comp=Z,1.8nm,0.9s,baz=172,slow=8.3,SNR=9.9						
MNTX	**Cornudas Mount**	**74.33**	**345**	P	**P**	**10 24 14.8**	**-0.1**
ABTX	**Abilene, Hawle**	**74.34**	**351**	P	**P**	**10 24 15.2**	**+0.2**
ABTX				IAmb	IAmb	10 24 25.1	
	comp=Z,18nm,1.4s						
MSTX	**Muleshoe**	**76.10**	**348**	P	**P**	**10 24 26.4**	**+1.2**
MSTX				IAmb	IAmb	10 24 39.2	
	comp=Z,12nm,1.2s						
AMTX	**Amarillo**	**76.84**	**349**	P	**P**	**10 24 30.1**	**+0.7**
AMTX				IAmb	IAmb	10 24 36.2	
	comp=Z,6.8nm,0.8s						
ANMO	**Albuquerque**	**77.69**	**345**	LR	LR	10 53 00.2	
	comp=Z,123nm,20.4s,baz=205,slow=31						
ANMO	**Albuquerque**	**77.69**	**345**	P	**P**	**10 24 33.2**	**-1.0**
ANMO				IAmb	IAmb	10 24 44.4	
	comp=Z,7.2nm,1.4s						
T35A	**Sooner Cattle**	**78.27**	**354**	P	**P**	**10 24 37.5**	**+0.3**
T35A				IAmb	IAmb	10 24 47.4	
	comp=Z,27nm,1.7s						
PFO	**Pinyon Flats O**	**78.86**	**337**	LR	LR	10 52 12.9	
	comp=Z,138nm,18.1s,baz=150,slow=30						
CCM	**Cathedral Cave**	**79.13**	**358**	P	**P**	**10 24 40.3**	**-1.5**
CCM				IAmb	IAmb	10 24 51.0	
	comp=Z,20nm,1.5s						
WCI	**Wyandotte Cave**	**79.31**	**2**	P	**P**	**10 24 42.2**	**-0.6**
Q16A	**Castle Valley**	**82.50**	**343**	P	**P**	**10 24 58.9**	**-1.2**
TMUT	**Trail Mountain**	**82.87**	**343**	P	**P**	**10 25 02.9**	**+0.7**
NLU	**North Lily Min**	**83.69**	**342**	P	**P**	**10 25 05.5**	**-0.8**
NVAR	**Mina Array Bea**	**83.88**	**337**	LR	LR	10 56 06.2	
	comp=Z,101nm,18.8s,baz=176,slow=31						
DUG	**Dugway, Tooele**	**84.09**	**342**	P	**P**	**10 25 07.9**	**-0.3**
DUG				IAmb	IAmb	10 25 25.0	
	comp=Z,5.7nm,1.1s						
PNTR	**Pine Nut**	**84.87**	**336**	P	**P**	**10 25 13.0**	**+0.7**
ECSD	**EROS Data Cent**	**85.06**	**354**	P	**P**	**10 25 10.5**	**-2.4**
K22A	**Casper**	**85.19**	**347**	P	**P**	**10 25 12.0**	**-1.7**
K22A				IAmb	IAmb	10 25 25.9	
	comp=Z,5.6nm,0.9s						
ELK	**Elko**	**85.20**	**340**	LR	LR	10 55 58.5	
	comp=Z,125nm,21.0s,baz=145,slow=31						
PDAR	**Pinedale Array**	**85.85**	**345**	P	**P**	**10 25 16.6**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=168,slow=4.6,SNR=2.8						
H48A	**Harrisville**	**85.89**	**4**	P	**P**	**10 25 14.6**	**-2.3**
DZM	**Mont Dzumac**	**85.99**	**244**	*e*LR	LR	10 51 57.9	
	comp=Z,1μm,28.9s						
TPAW	**Teton Pass**	**86.83**	**344**	P	**P**	**10 25 19.4**	**-2.6**
FLWY	**Flagg Ranch**	**87.34**	**344**	P	**P**	**10 25 23.4**	**-1.0**
FLWY				IAmb	IAmb	10 25 26.5	
	comp=Z,16nm,1.6s						
BOSA	**Boshof**	**87.52**	**127**	LR	LR	10 59 02.2	
	comp=Z,194nm,20.0s,baz=165,slow=32						
YHH	**Holmes Hill**	**88.05**	**345**	P	**P**	**10 25 27.2**	**-0.6**
DBIC	**Dimbokro**	**89.92**	**81**	LR	LR	11 05 06.0	
	comp=Z,102nm,18.2s,baz=214,slow=35						
ULM	**Lac du Bonnet**	**91.50**	**356**	LR	LR	11 03 23.1	
	comp=Z,84nm,20.6s,baz=156,slow=33						
NEW	**Newport**	**92.73**	**342**	LR	LR	11 00 49.5	
	comp=Z,106nm,20.8s,baz=156,slow=31						
SCHQ	**Schefferville**	**97.72**	**13**	LR	LR	11 07 41.8	
	comp=Z,155nm,21.1s,baz=279,slow=34						
TORD	**Torodi Ar. Bea**	**99.02**	**80**	LR	LR	11 07 35.1	
	comp=Z,118nm,21.9s,baz=245,slow=33						
GERES	**GERESS Array B**	**127.11**	**54**	PKP	**PKiKP**	**10 31 42.1**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=216,slow=8.2,SNR=5.1						
TIXI	**Tiksi**	**144.43**	**341**		PKPbc	10 32 10.7	-0.5
KBZ	**Khabaz**	**144.83**	**70**	PKP	**PKPdf**	**10 32 14.9**	**+0.8**
	comp=Z,2.8nm,0.9s,baz=280,slow=1.6,SNR=5.4						
KSRS	**Korea Array**	**151.42**	**274**	PKPbc	**PKiKP**	**10 32 32.2**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=122,slow=3.0,SNR=5.5						
NRIK	**Noril'sk**	**151.96**	**3**	PKPbc	**PKiKP**	**10 32 31.9**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=262,slow=2.7,SNR=3.6						
HHC	**Hu-ho-hao-te**	**164.56**	**275**	PKP	**PKPdf**	**10 32 43.4**	**+2.2**
HHC				PP	**PP**	**10 37 25.0**	**+1.8**
CD2	**Chengdu**	**165.36**	**228**	PKP	**PKPdf**	**10 32 41.0**	**-1.1**
KSH	**Kashi**	**168.33**	**94**	PKP	**PKPdf**	**10 32 48.9**	**+4.7**

IDC 01 10:16:36.5±2.0**, 15.°62S**×**173.°09W, h0**km**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/46**, mbtmp3.6**/4**, Error ellipse: s-maj=211.5km s-min=32.8km az=154.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**44.19**	**240**	P	P	10 24 47.1	-0.3
	1.9nm,0.9s,baz=63,slow=11,SNR=1.4						
WRA	**Warramunga Arr**	**50.08**	**257**	P	P	10 25 33.9	+0.1
	0.4nm,0.9s,baz=92,slow=7.0,SNR=6.2						
ASAR	**Alice Springs**	**50.33**	**252**	P	P	10 25 35.4	-0.2
	0.6nm,0.6s,baz=87,slow=8.7,SNR=12						
TXAR	**Lajitas Array**	**80.49**	**56**	P	P	10 28 50.9	0.0
	0.2nm,0.7s,baz=215,slow=7.5,SNR=2.0						

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*SNET **01** 10:47:32.5±1.2, 16.°22N×87.°71W, h10km±27km, ML3.5*

*UCR **01** 10:47:32.7±1.4, 16.°24N×87.°70W, h13km±33km, ML3.3*

ISC 01 10:47:31.0±2.7**, 16.°3N**±0.°1×**87.°6W**±0.°1**, h10**km**, n18, σ0s57**/20**, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**2.25**	**172**	*e*P	**Pn**	**10 48 08.3**	**-0.1**
TGUH	**Tegucigalpa,Un**	**2.25**	**172**	*e*P	**Pn**	**10 48 08.3**	**-0.1**
PETF	**Flores**	**2.26**	**286**	*e*P	**Pn**	**10 48 08.5**	**+0.1**
ESQI	**Esquipulas**	**2.41**	**224**	*e*S	**Sn**	**10 48 39.4**	**-0.8**
LLGN	**La Laguna**	**2.49**	**212**	*e*S	**Sn**	**10 48 42.1**	**0.0**
LLGN	**La Laguna**	**2.49**	**212**	*e*S	**Sn**	**10 48 42.1**	**0.0**
MTO3	**Montecristo**	**2.54**	**222**	*e*P	**Pn**	**10 48 12.4**	**-0.1**
MTO3				*e*S	**Sn**	**10 48 43.3**	**-0.2**
MTO3	**Montecristo**	**2.54**	**222**	*e*P	**Pn**	**10 48 12.4**	**-0.1**
MTO3				*e*S	**Sn**	**10 48 43.3**	**-0.2**
FAGO	**Alcalda de S**	**2.63**	**191**	IAML		10 48 16.9	
	comp=Z,105nm,0.3s						
FAGO	**Alcalda de S**	**2.63**	**191**	IAML		10 48 16.9	
	comp=Z,105nm,0.3s						
TECA	**Tecapa**	**2.92**	**197**	*e*P	**Pn**	**10 48 18.1**	**+0.4**
TECA	**Tecapa**	**2.92**	**197**	*e*P	**Pn**	**10 48 18.1**	**+0.4**
COEB	**Comit de Eme**	**2.92**	**198**	IAML		10 49 01.7	
	comp=Z,136nm,0.4s						
COEB	**Comit de Eme**	**2.92**	**198**	IAML		10 49 01.7	
	comp=Z,136nm,0.4s						
BOQS	**Boqueron**	**3.02**	**213**	*e*P	**Pn**	**10 48 18.5**	**-0.6**
BOQS				*e*S	**Sn**	**10 48 56.4**	**+0.9**
BOQS	**Boqueron**	**3.02**	**213**	*e*P	**Pn**	**10 48 18.5**	**-0.6**
BOQS				*e*S	**Sn**	**10 48 56.4**	**+0.9**
CEVE	**Cerro Verde**	**3.14**	**219**	*e*P	**Pn**	**10 48 21.6**	**+0.8**
CEVE				*e*S	**Sn**	**10 48 57.8**	**-0.6**
CEVE				IAML		10 49 03.8	
	comp=Z,324nm,0.4s						
CEVE	**Cerro Verde**	**3.14**	**219**	*e*P	**Pn**	**10 48 21.6**	**+0.8**
CEVE				*e*S	**Sn**	**10 48 57.8**	**-0.6**
CEVE				IAML		10 49 03.8	
	comp=Z,324nm,0.4s						

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*IDC **01** 11:11:39.1±0.6, 11.°52S×166.°35E, h54km±4km, mb4.5/22, mb1 4.7/25, mb1mx4.6/30, mbtmp4.8/25, MS4.4/32, Ms1 4.4/32, ms1mx4.4/37, Error ellipse: s-maj=14.8km s-min=11.4km az=97.0*

*NEIC **01** 11:11:39.9±1.9, 11.°59S±0.°07×166.°32E±0.°08, h63km±5km, mb5.2/139, Error ellipse: s-maj=11.3km s-min=10.0km az=46.0*

*BJI **01** 11:11:40.3±0.0, 11.°07S×166.°83E, h82km, mB5.2/52, mb5.0/59, Ms4.8/43, Ms7 4.7/44*

*GCMT **01** 11:11:40.9±0.2, 11.°58S±0.°01×166.°00E±0.°01, h48km, MW5.4/101, Moment Tensor Solution. s99,c137; s101,c153; Duration: 1s2 Moment tensor: Scale 10^{17} Nm; Mrr1.39±.04; Mθθ-0.10±.03; Mφφ-1.29±.03; Mrθ-0.09±.02; Mθφ0.25±.02; Mφr0.45±.02; Best double couple: Mo1.44000×10^{17} NP1:φs168.00000°, δ36.00000°, λ90.00000°. NP2:φs349.00000°, δ54.00000°, λ90.00000°. Principal axes: T 1.4640, Plg81.0000°, Azm259.0000°; N -0.0500, Plg0.0000°, Azm168.0000°; P -1.4150, Plg9.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 11:11:39.9±0.4**, 11.°55S**±0.°04×**166.°31E**±0.°05**, h60**km±3km**, h61**km**:pP-P, n328, σ1s44**/260**, mb5.1**/112**, 6C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.60**	**288**	P	**Pn**	**11 13 15.9**	**+1.5**
	195nm,0.3s,baz=174,slow=3.7,SNR=54						
HNR				S	**Sn**	**11 14 28.0**	**-0.3**
	10nm,0.3s,baz=70,slow=22,SNR=2.2						
HNR	**Honiara**	**6.60**	**288**		**Pn**	**11 13 16.0**	**+1.5**
HNR				Sn	**Sn**	**11 14 29.9**	**+1.6**
DZM	**Mont Dzumac**	**10.46**	**179**	*e*Pn	**Pn**	**11 14 08.6**	**+1.3**
	141nm,1.4s						
DZM				*e*Sn	**Sn**	**11 16 02.0**	**-1.1**
	121nm,0.9s						
DZM				*e*LR	LR	11 16 41.2	
	comp=Z,8μm,25.8s						
DZM	**Mont Dzumac**	**10.46**	**179**	P	**Pn**	**11 14 08.5**	**+1.2**
	3.1nm,0.3s,baz=318,slow=14,SNR=55						
DZM				S	**Sn**	**11 15 59.3**	**-3.8**
	3.6nm,0.3s,baz=351,slow=23,SNR=2.0						
DZM	**Mont Dzumac**	**10.46**	**179**		**Pn**	**11 14 08.4**	**+1.1**
MSVF	**Nonsavu**	**12.91**	**120**		**Pn**	**11 14 44.5**	**+3.7**
FUNA	**Funafuti**	**13.04**	**78**		**Pn**	**11 14 42.6**	**+0.2**
TARA	**Tarawa**	**14.41**	**28**	Pn	**Pn**	**11 15 02.5**	**+1.7**
RABL	**Rabaul**	**15.80**	**296**	P	**P**	**11 15 23.4**	**+1.9**
RABL				IAmb	IAmb	11 15 29.9	
	comp=Z,88nm,0.6s						
KRVT	**Keravat (AS076**	**15.87**	**296**	P	**Pn**	**11 15 20.7**	**+1.1**
	comp=Z,2.4nm,0.3s,baz=149,slow=18,SNR=3.1						
KRVT				LR	LR	11 21 54.0	
	comp=Z,2μm,20.3s,baz=118,slow=39						
PMG	**Port Moresby**	**18.95**	**275**	P	**Pn**	**11 15 57.5**	**-0.1**
EIDS	**Eidsvold**	**19.91**	**224**	P	**P**	**11 16 07.5**	**+0.8**
	baz=20,SNR=16						
EIDS	**Eidsvold**	**19.91**	**224**	P	**Pn**	**11 16 08.2**	**-0.6**
PATS	**Pohnpei**	**19.93**	**336**	P	**Pn**	**11 16 08.3**	**-0.7**
	baz=20,SNR=9.7						
PATS	**Pohnpei**	**19.93**	**336**	P	**Pn**	**11 16 08.2**	**-0.9**
CTA	**Charters Tower**	**21.06**	**244**	P	**P**	**11 16 20.1**	**+0.9**
	comp=Z,26nm,0.7s,baz=73,slow=13,SNR=32						
CTA				LR	LR	11 23 21.4	
	comp=Z,2μm,20.7s,baz=66,slow=33						
CTAO	**Charters Tower**	**21.06**	**244**	P	**P**	**11 16 20.5**	**+1.2**
CTAO				IAmb	IAmb	11 16 38.9	
	comp=Z,127nm,1.1s						
AFI	**Afiamalu**	**21.50**	**99**	P	**P**	**11 16 26.6**	**+2.6**
AFI				IAmb	IAmb	11 16 44.2	
	comp=Z,162nm,1.3s						
RMQ	**Roma**	**22.23**	**226**	P	**P**	**11 16 33.1**	**+1.4**
	baz=22,SNR=52						
MTSU	**Mount Surprise**	**22.23**	**250**	P	**P**	**11 16 33.2**	**+1.4**
	baz=22,SNR=57						
COEN	**Coen**	**22.69**	**261**	P	**P**	**11 16 37.3**	**+0.6**
	baz=23,SNR=28						
COEN	**Coen**	**22.69**	**261**	P	**P**	**11 16 36.4**	**-0.3**
COEN				IAmb	IAmb	11 16 56.3	
	comp=Z,70nm,1.0s						
RAO	**Raoul Island**	**22.95**	**142**	LR	LR	11 24 33.2	
	comp=Z,558nm,18.7s,baz=176,slow=34						
ARMA	**Armidale**	**23.20**	**214**	P	**P**	**11 16 42.9**	**+1.1**
	baz=23,SNR=20						
ARMA	**Armidale**	**23.20**	**214**	P	**P**	**11 16 40.3**	**-1.5**
ARMA				IAmb	IAmb	11 16 44.8	
	comp=Z,98nm,0.9s						
KNTN	**Kanton**	**23.46**	**70**	P	**P**	**11 16 43.6**	**-0.7**
OUZ	**Omahuta**	**24.48**	**165**	P	**P**	**11 16 52.7**	**-0.6**
QLP	**Quilpie**	**25.60**	**231**	P	**P**	**11 17 04.6**	**+0.8**
	baz=26,SNR=11						
MGCD	**Mangrove Creek**	**25.67**	**210**	P	**P**	**11 17 05.9**	**+1.6**
	baz=26,SNR=5.5						
JAY	**Jayapura**	**26.93**	**288**	P	**P**	**11 17 15.1**	**-0.7**
	comp=Z,7.9nm,0.7s,baz=161,slow=5.6,SNR=2.1						
JAY				LR	LR	11 29 24.5	
	comp=Z,835nm,18.3s,baz=101,slow=40						
JAY	**Jayapura**	**26.93**	**288**	P	pP	11 17 32.7	+3.2
QIS	**Mount Isa**	**27.14**	**247**	P	**P**	**11 17 17.9**	**+0.1**
	baz=27,SNR=8.1						
CMSA	**Cobar Meteorol**	**27.53**	**221**	P	**P**	**11 17 21.6**	**+0.6**
	baz=28,SNR=19						
CNB	**Canberra Magne**	**28.22**	**210**	P	**P**	**11 17 28.0**	**+0.8**
	baz=28,SNR=11						
URZ	**Urewera**	**28.30**	**162**	P	**P**	**11 17 27.3**	**-0.4**
	comp=Z,5.6nm,0.5s,baz=127,slow=1.4,SNR=7.1						
URZ				LR	LR	11 27 14.4	
	comp=Z,986nm,21.9s,baz=344,slow=33						
URZ	**Urewera**	**28.30**	**162**	IAmb	IAmb	11 18 06.0	
	comp=Z,106nm,1.8s						
CAN	**Canberra**	**28.40**	**211**	P	**P**	**11 17 27.3**	**-1.5**
BKZ	**Black Stump Fm**	**28.95**	**164**	P	**P**	**11 17 33.1**	**-0.5**
BKZ				IAmb	IAmb	11 18 26.4	
	comp=Z,54nm,1.4s						
SMPI	**Sarmi**	**28.97**	**287**	P	**P**	**11 17 34.6**	**+0.5**
	comp=Z,2μmcomp=Z,36nm,1.1s						
QRZ	**Quartz Range**	**29.67**	**170**	P	**P**	**11 17 38.4**	**-1.5**
QRZ				IAmb	IAmb	11 17 41.6	
	comp=Z,42nm,1.3s						
MILA	**Mila**	**29.71**	**208**	P	**P**	**11 17 41.3**	**+0.9**
	baz=30,SNR=7.3						
H11S2	**WAKE ISLAND Hy**	**29.85**	**1**	T	T	11 48 31.7	
	baz=181,slow=76,SNR=38						
H11S3	**WAKE ISLAND Hy**	**29.86**	**1**	T	T	11 48 21.3	
	baz=181,slow=76,SNR=56						
H11S1	**WAKE ISLAND Hy**	**29.87**	**1**	T	T	11 48 41.0	
	baz=181,slow=76,SNR=22						
BFZ	**Birch Farm**	**30.31**	**165**	P	**P**	**11 17 44.5**	**-1.0**
STKA	**Stephens Creek**	**30.46**	**225**	P	**P**	**11 17 48.1**	**+1.0**
	baz=30,SNR=38						
STKA	**Stephens Creek**	**30.46**	**225**	P	**P**	**11 17 47.9**	**+0.8**
	comp=Z,31nm,0.7s,baz=50,slow=9.1,SNR=65						
STKA				LR	LR	11 29 10.7	
	comp=Z,2μm,21.3s,baz=47,slow=34						
TUWZ	**Tuamarina**	**30.51**	**169**	P	**P**	**11 17 46.5**	**-0.8**
SNZO	**South Karori**	**30.55**	**168**	P	**P**	**11 17 46.5**	**-1.1**
THZ	**Tophouse**	**30.64**	**170**	P	**P**	**11 17 47.9**	**-0.7**
BHW	**Baring Head**	**30.68**	**167**	P	**P**	**11 17 46.7**	**-2.1**
MSWZ	**Moikau Station**	**30.77**	**167**	P	**P**	**11 17 48.1**	**-1.6**
BSWZ	**Blackbirch Sta**	**30.77**	**169**	P	**P**	**11 17 49.6**	**0.0**
PLWZ	**Palliser**	**30.91**	**167**	P	**P**	**11 17 50.2**	**-0.8**
KHZ	**Kahutara**	**31.39**	**170**	P	**P**	**11 17 53.3**	**-1.8**
LTZ	**Lake Taylor**	**31.54**	**172**	P	**P**	**11 17 56.0**	**-0.5**
LTZ				IAmb	IAmb	11 17 57.1	
	comp=Z,29nm,0.9s						
WRA	**Warramunga Arr**	**31.83**	**251**	P	**P**	**11 17 58.4**	**-0.9**
	comp=Z,33nm,0.8s,baz=85,slow=8.9,SNR=110						
WRA				PcP	**PcP**	**11 20 48.6**	**-0.6**
	comp=Z,4.1nm,0.9s,baz=71,slow=2.5,SNR=5.1						
WRA				LR	LR	11 29 34.3	
	comp=Z,1μm,21.7s,baz=70,slow=34						
TOO	**Toolangi**	**31.93**	**212**	P	**P**	**11 18 00.8**	**+0.8**
	baz=32,SNR=15						
TOO	**Toolangi**	**31.93**	**212**	P	**P**	**11 18 00.9**	**+0.9**
TOO				IAmb	IAmb	11 18 01.5	
	comp=Z,23nm,0.8s						
FOZ	**Fox Glacier**	**32.01**	**175**	P	**P**	**11 18 00.6**	**+0.1**
FOZ				IAmb	IAmb	11 18 16.1	
	comp=Z,36nm,1.0s						
OXZ	**Oxford**	**32.05**	**172**	P	**P**	**11 17 60.0**	**-0.9**
OXZ				IAmb	IAmb	11 18 01.1	
	comp=Z,25nm,0.7s						
RPZ	**Rata Peaks**	**32.31**	**174**	P	**P**	**11 18 03.2**	**+0.1**
	comp=Z,24nm,0.5s,baz=326,slow=3.4,SNR=34						
RPZ				LR	LR	11 29 47.0	
	comp=Z,940nm,21.7s,baz=345,slow=34						
RPZ	**Rata Peaks**	**32.31**	**174**	P	**P**	**11 18 03.0**	**-0.1**
LBZ	**Lake Benmore**	**32.89**	**175**	IAmb	IAmb	11 18 40.5	
	comp=Z,58nm,1.6s						
ASAR	**Alice Springs**	**33.07**	**244**	P	**P**	**11 18 09.4**	**-0.7**
	comp=Z,26nm,0.7s,baz=72,slow=9.5,SNR=242						
ASAR				PcP	**PcP**	**11 20 52.3**	**-0.3**
	comp=Z,3.1nm,0.5s,baz=74,slow=2.3,SNR=8.9						
ASAR				pPcP		11 21 06.5	
	comp=Z,3.9nm,0.7s,baz=77,slow=2.5,SNR=7.1						
ASAR				LR	LR	11 30 38.3	
	comp=Z,1μm,20.9s,baz=70,slow=34						
KDU	**Kakadu**	**33.09**	**264**	P	**P**	**11 18 10.4**	**+0.1**
	baz=33,SNR=10						
HTT	**Hallett**	**33.20**	**225**	P	**P**	**11 18 11.9**	**+0.7**
	baz=33,SNR=15						
RAR	**Rarotonga**	**33.86**	**111**	LR	LR	11 29 16.1	
	comp=Z,800nm,21.1s,baz=284,slow=31						
MTN	**Manton Dam**	**34.39**	**264**	P	**P**	**11 18 21.8**	**+0.2**
	baz=34,SNR=10						
MTN	**Manton Dam**	**34.39**	**264**	IAmb	IAmb	11 18 38.6	
	comp=Z,41nm,1.1s						
FAKI	**Fak Fak**	**34.82**	**282**	P	**P**	**11 18 26.6**	**+1.2**
	comp=Z,20nm,2.2s						
FAKI	**Fak Fak**	**34.82**	**282**	P	**P**	**11 18 26.4**	**+1.0**
FAKI				IAmb	IAmb	11 18 26.7	
	comp=Z,76nm,1.9s						
BBOO	**Buckleboo**	**34.90**	**228**	P	**P**	**11 18 26.2**	**+0.4**
	baz=35,SNR=9.6						
MOO	**Moorlands**	**35.00**	**205**	P	**P**	**11 18 27.6**	**+1.0**
	baz=35,SNR=4.2						
SIJI	**Sorong**	**36.37**	**284**	LR	LR	11 34 49.9	
	comp=Z,767nm,21.1s,baz=100,slow=38						
BNDI	**Bandanaira**	**36.69**	**278**	P	**P**	**11 18 42.1**	**+0.7**
	comp=Z,12μmcomp=Z,277nm,1.4s						
KNRA	**Kununurra**	**36.69**	**259**	P	**P**	**11 18 41.5**	**+0.1**
	baz=37,SNR=17						
MSAI	**Masohi**	**37.91**	**279**	P	pP	11 19 08.1	+2.3
WRKA	**Warakurna**	**38.36**	**244**	P	**P**	**11 18 54.9**	**-0.6**
	baz=38,SNR=17						
NLAI	**Namlea**	**39.71**	**279**	P	**P**	**11 19 08.0**	**+1.2**
	comp=Z,2μmcomp=Z,124nm,1.7s						
FITZ	**Fitzroy Crossi**	**39.79**	**256**	P	**P**	**11 19 07.5**	**+0.1**
	baz=40,SNR=27						
FITZ	**Fitzroy Crossi**	**39.79**	**256**	LR	LR	11 34 45.4	
	comp=Z,1μm,19.8s,baz=87,slow=35						
FITZ	**Fitzroy Crossi**	**39.79**	**256**	P	**P**	**11 19 07.5**	**+0.1**
FITZ				IAmb	IAmb	11 19 08.6	
	comp=Z,26nm,0.7s						
LBMI	**Labuha**	**40.02**	**283**	P	**P**	**11 19 10.4**	**+1.0**
	comp=Z,3μmcomp=Z,103nm,1.0s						
TNTI	**Ternate**	**40.58**	**285**	P	**P**	**11 19 14.6**	**+0.6**
	comp=Z,904nmcomp=Z,20nm,0.8s						
TNTI	**Ternate**	**40.58**	**285**	P	**P**	**11 19 15.1**	**+1.1**
SANI	**Sanana**	**41.08**	**280**	P	**P**	**11 19 18.5**	**+0.4**
	comp=Z,1μmcomp=Z,65nm,2.4s						
BATI	**Baumata**	**41.87**	**268**	LR	LR	11 36 34.9	
	comp=Z,1μm,21.5s,baz=127,slow=36						
BATI	**Baumata**	**41.87**	**268**	P	**P**	**11 19 25.8**	**+1.1**
	comp=Z,1μmcomp=Z,97nm,0.8s						
PPT	**Papeete**	**43.04**	**103**	LR	LR	11 34 59.5	
	comp=Z,418nm,18.4s,baz=269,slow=33						
PPT2	**Papeete2**	**43.04**	**103**	*e*S	S	11 26 12.7	+17
	comp=Z,332nm,28.2s						
PPT2				*e*LQ	LQ	11 30 01.3	
	comp=Z,2μm,32.0s						
PPT2				*e*LR	LR	11 31 54.5	
	comp=Z,3μm,29.2s,baz=278						
MMRI	**Maumere**	**43.45**	**270**	P	pP	11 19 51.0	-0.6
TBI	**Tubuai**	**43.63**	**112**	*e*S	S	11 26 21.5	+17
	comp=Z,171nm,26.0s						
TBI				*e*LQ	LQ	11 30 24.9	
	comp=Z,1μm,30.2s						
TBI				*e*LR	LR	11 32 33.8	
	comp=Z,3μm,29.2s,baz=283						
KMSI	**Cibinong**	**43.74**	**283**	P	P	11 19 45.9	+6.2
EDFI	**Ende, Flores**	**43.98**	**269**	P	**P**	**11 19 42.3**	**+0.5**
	comp=Z,849nmcomp=Z,23nm,1.2s						
LUWI	**Luwuk**	**44.45**	**280**	P	**P**	**11 19 46.7**	**+1.3**
	comp=Z,93nm,1.5s						
DAV	**Davao City (W)**	**44.54**	**293**	LR	LR	11 39 09.2	
	comp=Z,176nm,18.9s,baz=106,slow=37						
KCP	**Kidapawan**	**44.96**	**292**⇓	*e*P	**P**	**11 19 50.1**	**+0.6**
KCP				*i* S	**pP**	**11 20 05.6**	**+1.3**
KMBL	**Kambalda**	**45.44**	**237**	P	**P**	**11 19 53.6**	**+0.5**
	baz=46,SNR=6.6						
PSA00	**Pilbara Seismi**	**45.49**	**251**	P	**P**	**11 19 54.4**	**+0.8**
APSI	**Ampana**	**45.56**	**280**	P	pP	11 20 08.8	+0.2
MRSI	**Marisa**	**45.66**	**282**	P	P	11 20 07.2	+12
WBSI	**Waikabubak, Su**	**46.12**	**268**	P	P	11 20 14.8	+16
BNSI	**Bone**	**46.25**	**275**	P	**P**	**11 20 01.1**	**+1.4**
	comp=Z,1μmcomp=Z,93nm,1.0s						
KAPI	**Kappang**	**46.48**	**274**	LR	LR	11 38 50.9	
	comp=Z,227nm,22.0s,baz=302,slow=35						
SPSI	**Sidrap Palu**	**46.67**	**275**	P	P	11 20 15.8	+13

MEEK **Meekatharra** **47.23 244** P **P** **11 20 08.0 +0.8**
baz=47,SNR=84
MPSI **Mapaga** **47.58 281** P **P** **11 20 10.0 -0.1**
comp=Z,856nmcomp=Z,47nm,1.6s
PLAI **Plampang** **47.80 269** P pP 11 20 27.9 +1.8
OPA **Opana** **48.14 47** pP 11 20 31.1 +1.5
KLBR **Kellerberrin** **48.91 238** P **P** **11 20 20.0 -0.1**
baz=49,SNR=24
BLDU **Balliduu** **49.58 240** P **P** **11 20 25.3 +0.1**
baz=50,SNR=15
NWAO **Narrogin (SRO)** **49.64 237** P **P** **11 20 25.9 +0.2**
baz=50,SNR=12
NWAO **Narrogin (SRO)** **49.64 237** LR LR 11 41 07.3
comp=Z,1μm,20.9s,baz=83,slow=36
NWAO **Narrogin (SRO)** **49.64 237** P **P** **11 20 25.9 +0.2**
NWAO **Narrogin (SRO)** **49.64 237** P **P** **11 20 25.9 +0.2**
MORW **Morawa** **49.87 242** P **P** **11 20 27.9 +0.5**
baz=50,SNR=16
MORW **Morawa** **49.87 242** P **P** **11 20 28.0 +0.5**
MUN **Mundaring** **50.28 238** P **P** **11 20 31.2 +0.7**
baz=50,SNR=5.3
JHJ **Hachijo jima 2** **51.12 331** LR LR 11 40 49.1
comp=Z,140nm,19.6s,baz=118,slow=34
JAGI **Jajag, Banyuwa** **51.40 268** P P 11 20 52.0 +13
TAOE **Nuku Hiva Isla** **52.70 92** *e*LR LR 11 36 11.4
comp=Z,1μm,27.4s
KKM **Kota Kinabalu** **52.81 287** P **P** **11 20 50.6 +0.8**
PWJI **Pagerwojo** **53.76 268** P pP 11 21 10.1 -1.6
PCJI **Pacitan** **54.35 268** P pP 11 21 15.1 -0.9
WOJI **Wonogiri, Jawa** **54.65 269** P pP 11 21 17.4 -0.8
MJAR **Matsushiro Arr** **54.67 332** P **P** **11 21 00.9 -1.9**
comp=Z,5.4nm,1.0s,baz=150,slow=8.1,SNR=11
MJAR pP **pP** **11 21 16.4 -2.0**
comp=Z,3.7nm,0.6s,baz=162,slow=7.4,SNR=6.2
MAT **Matsushiro** **54.67 332** P **P** **11 21 01.5 -1.4**
MAT S **S** **11 28 37.2 -1.4**
SBUM **Sibu** **55.54 281** P **P** **11 21 10.5 +0.9**
SBUM **Sibu** **55.54 281** P **P** **11 21 08.0 -1.5**
JNU **Nakatsue** **55.81 324** LR LR 11 43 10.0
comp=Z,154nm,20.4s,baz=144,slow=34
JNU **Nakatsue** **55.81 324** P **P** **11 21 10.4 -0.7**
JNU IAmb IAmb 11 21 27.7
comp=Z,34nm,1.2s
KSM **Kuching** **57.13 279** P **P** **11 21 20.9 0.0**
KSM **Kuching** **57.13 279** P **P** **11 21 19.0 -1.9**
CISI **Cisompet, Garu** **57.74 268** P pP 11 21 38.9 -1.5
LEM **Lembang** **58.05 269** LR LR 11 49 02.8
comp=Z,174nm,18.1s,baz=126,slow=39
CNJI **Cibinong** **58.45 268** P pP 11 21 43.9 -1.4
DBJI **Dramaga** **58.94 269** P pP 11 21 48.9 +0.1
QZH **Quanzhou** **58.99 308**⇑ *i*P **P** **11 21 33.9 +0.2**
QZH *e*S **S** **11 29 37.9 +1.9**
QZH LR LR
comp=Z,250nm,18.5s
SKJI **Sukabumi** **59.06 269** P pP 11 21 51.7 +2.1
ASAJ **Asahikawa** **59.45 340** LR LR 11 42 15.9
comp=Z,512nm,22.0s,baz=172,slow=31
KSRS **Korea Array** **60.60 325** P **P** **11 21 44.2 -0.2**
comp=Z,1.7nm,0.5s,baz=128,slow=7.3,SNR=11
KASI **Kota Agung** **61.33 270** P pP 11 22 03.9 -1.2
MDSI **Maura Dua** **61.82 271** P **P** **11 21 52.9 -0.3**
comp=Z,25nm,1.3s
DLV **T Lat** **61.98 290** P **P** **11 21 55.6 +1.2**
DLV IAmb IAmb 11 22 12.1
comp=Z,16nm,0.8s
QIZ **Qiongzhong** **63.41 298** P **P** **11 22 04.0 +0.3**
QIZ S **S** **11 30 34.8 +2.5**
QIZ pmax pmax
comp=Z,260nm,5.1s
QIZ LR LR
comp=Z,230nm,19.1s
QIZ LR LR
comp=Z,280nm,22.6s
QIZ LR LR
comp=Z,520nm,21.1s
MYKOM **Kota Tinggi** **63.47 278** IAmb IAmb 11 22 22.0
comp=Z,31nm,1.2s
USRK **Ussuriysk Ar.** **63.65 333** P **P** **11 22 05.2 +0.5**
comp=Z,3.2nm,0.8s,baz=116,slow=4.4,SNR=8.4
USRK pP **pP** **11 22 19.2 -1.3**
comp=Z,3.9nm,0.7s,baz=126,slow=5.2,SNR=6.2
USRK LR LR 11 47 16.3
comp=Z,96nm,21.2s,baz=125,slow=34
PETK **Petropavlovsk-** **64.82 354** P **P** **11 22 11.9 -0.3**
comp=Z,5.4nm,0.9s,baz=145,slow=5.7,SNR=7.2
PETK pP **pP** **11 22 27.0 -1.2**
comp=Z,2.2nm,0.6s,baz=150,slow=6.5,SNR=2.2
PETK LR LR 11 45 26.3
comp=Z,311nm,21.5s,baz=212,slow=31
MDJ **Mudanjiang** **65.05 332** P **P** **11 22 14.0 +0.1**
MDJ pP sP 11 22 34.8 -1.6
MDJ pmax pmax
comp=Z,12nm,0.8s
MDJ pmax pmax
comp=Z,190nm,7.1s
WHN **Wuhan** **65.14 312** P **P** **11 22 18.4 +3.6**
DL2 **Dalian** **65.21 323** P **P** **11 22 14.7 -0.4**
DL2 S **S** **11 30 51.1 -2.8**
DL2 pmax pmax
comp=Z,110nm,5.9s
DL2 LR LR
comp=Z,210nm,19.2s
DL2 LR LR
comp=Z,270nm,24.7s
DL2 LR LR
comp=Z,320nm,25.0s
SDSI **Sungai Dareh** **65.22 274** P pP 11 22 32.3 +1.4
BKNI **Bangkinang** **65.87 276** P pP 11 22 34.9 -0.2
VNDA **Vanda** **66.00 181** P **P** **11 22 19.1 -0.5**
comp=Z,2.9nm,0.6s,baz=349,slow=7.8,SNR=25
VNDA LR LR 11 47 15.7
comp=Z,277nm,20.9s,baz=358,slow=32
CASY **Casey** **66.11 201** P **P** **11 22 20.0 -0.4**
CASY IAmb IAmb 11 22 20.5
comp=Z,48nm,1.5s
TIA **Tai'an** **66.36 318** P **P** **11 22 21.9 -0.7**
TIA S **S** **11 31 09.9 +1.9**
TIA pmax pmax
comp=Z,7.0nm,0.8s
TIA pmax pmax
comp=Z,140nm,4.3s
TIA LR LR
comp=Z,180nm,20.8s
TIA LR LR
comp=Z,280nm,22.9s
TIA LR LR
comp=Z,360nm,25.7s
CN2 **Changchun** **66.46 329** *e*P **P** **11 22 22.7 -0.3**
CN2 *e*S **S** **11 31 07.0 -1.9**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 LR LR
comp=Z,220nm,20.0s
CN2 LR LR
comp=Z,230nm,20.0s
CN2 LR LR
comp=Z,370nm,22.0s
IPM **Ipoh** **66.85 280** P **P** **11 22 26.0 -0.2**
IPM **Ipoh** **66.85 280** P **P** **11 22 26.0 -0.2**
MNSI **Mandailing Nat** **67.39 276** P **P** **11 22 29.1 -0.5**
comp=Z,1μmcomp=Z,56nm,0.9s
KULM **Kulim** **67.42 281** P **P** **11 22 29.8 0.0**
KULM IAmb IAmb 11 22 46.6
comp=Z,22nm,0.9s
KULM **Kulim** **67.42 281** P **P** **11 22 30.0 +0.3**
RPSI **Rantau Prapat** **68.46 278** P **P** **11 22 36.0 -0.3**
RPSI IAmb IAmb 11 22 53.0
comp=Z,32nm,0.9s
PSI **Prapat** **68.48 278** LR LR 11 57 25.7
comp=Z,113nm,18.4s,baz=90,slow=40
GYA **Guiyang** **69.16 304**⇑ *i*P **P** **11 22 40.9 +0.4**
GYA pP sP 11 23 03.3 +0.4
GYA sP PcP 11 23 13.9 +10
GYA PP **PP** **11 25 13.5 -0.6**
GYA S **S** **11 31 45.8 +3.7**
GYA sS SKiKP 11 32 22.3 -3.5
GYA SS **SS** **11 36 09.3 -0.4**
GYA pmax pmax
comp=Z,10.0nm,0.9s
GYA pmax pmax
comp=Z,200nm,4.3s
GYA LR LR
comp=Z,90nm,4.0s
GYA LR LR
comp=Z,70nm,5.1s
GYA LR LR
comp=Z,60nm,4.4s
BJI **Beijing** **69.22 321** P **P** **11 22 40.4 0.0**
BJI pmax pmax
comp=Z,11nm,1.0s
BJI pmax pmax
comp=Z,230nm,5.5s
BJI LR LR
comp=Z,170nm,18.1s
BJI LR LR
comp=Z,160nm,26.5s
BJI LR LR
comp=Z,500nm,36.0s
GSI **Gunungsitoli** **69.46 276** P **P** **11 22 43.1 +0.6**
comp=Z,272nm,1.0s
GSI **Gunungsitoli** **69.46 276** P **P** **11 22 42.9 +0.3**
KCSI **Kotacane, Aceh** **69.77 278** P **P** **11 22 43.7 -0.7**
comp=Z,60nm,1.3s
XAN **Xi'an** **70.87 312** P **P** **11 22 51.0 +0.2**
XAN PP **PP** **11 25 32.3 +3.6**
XAN S **S** **11 32 01.8 +0.1**
XAN sS SKSac 11 32 38.6 -10
XAN pmax pmax
comp=Z,24nm,1.2s
XAN pmax pmax
comp=Z,230nm,5.8s
XAN LR LR
comp=Z,220nm,21.4s
XAN LR LR
comp=Z,340nm,22.8s
XAN LR LR
comp=Z,530nm,24.7s
XAN **Xi'an** **70.87 312** IAmb IAmb 11 22 51.5
comp=Z,18nm,0.8s
MLSI **Meulaboh, Aceh** **71.27 279** P P 11 23 09.7 +16
KMI **Kunming** **71.86 301** P **P** **11 22 58.9 +1.8**
KMI sP sP 11 23 25.0 +5.4
KMI PP **PP** **11 25 37.6 +0.1**
KMI S **S** **11 32 09.4 -4.4**
KMI pmax pmax
comp=Z,51nm,1.5s
KMI pmax pmax
comp=Z,220nm,4.3s
KMI LR LR
comp=Z,210nm,22.4s
KMI LR LR
comp=Z,350nm,22.5s
KMI LR LR
comp=Z,530nm,24.4s
HHC **Hu-ho-hao-te** **72.57 320** P **P** **11 23 02.2 +1.3**
HHC pP pwP 11 23 19.6 -0.4
HHC S **S** **11 32 19.2 -2.0**
HHC sS sS 11 32 53.8 +6.3
HHC SKS **SKSac** **11 32 54.8 -6.1**
HHC pmax pmax
comp=Z,13nm,0.8s
HHC pmax pmax
comp=Z,100nm,8.5s
HHC LR LR
comp=Z,120nm,17.3s
HHC LR LR
comp=Z,250nm,21.2s
HHC LR LR
comp=Z,330nm,21.0s
CMAR **Chiang Mai Arr** **72.82 294** P **P** **11 23 04.0 +1.2**
comp=Z,11nm,0.8s,baz=125,slow=4.5,SNR=50
CMAR pP **pP** **11 23 18.3 -0.5**
comp=Z,16nm,0.8s,baz=122,slow=4.4,SNR=12
CHTO **Chiang Mai** **72.93 294** P **P** **11 23 04.3 +0.9**
CHTO IAmb IAmb 11 23 21.2
comp=Z,48nm,1.2s
CD2 **Chengdu** **73.35 307** P **P** **11 23 06.0 +0.3**
CD2 S **S** **11 32 29.7 -0.5**
CD2 SS **SS** **11 37 14.5 +0.8**
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,280nm,6.5s
CD2 LR LR
comp=Z,590nm,20.6s
CD2 LR LR
comp=Z,650nm,22.6s
BTO **Baotou** **73.43 319** *e*P **P** **11 23 03.8 -2.2**
BTO S **SKiKP** **11 32 34.6 +2.9**
LZH **Lanzhou** **75.50 312**⇑ P **P** **11 23 19.4 +1.2**
LZH pP sP 11 23 40.8 +0.2
LZH sP pwP 11 23 50.8 +13
LZH sS sS 11 33 32.1 +11
LZH SS **SS** **11 37 48.1 +1.5**
LZH pmax pmax
comp=Z,45nm,1.3s
LZH pmax pmax
comp=Z,250nm,5.4s
LZH LR LR
comp=Z,220nm,16.2s
LZH LR LR
comp=Z,430nm,16.0s
LZH LR LR
comp=Z,690nm,18.0s
QSPA **South Pole Qui** **78.46 180** P **P** **11 23 33.6 -0.6**
QSPA IAmb IAmb 11 23 51.2
comp=Z,35nm,0.9s
ULN **Ulaanbaatar** **79.03 324** P **P** **11 23 38.1 +0.4**
ULN IAmb IAmb 11 23 54.9
comp=Z,61nm,1.6s
BILL **Bilibino** **79.38 360** P **P** **11 23 38.0 -0.9**
BILL IAmb IAmb 11 23 54.5
comp=Z,60nm,1.8s
SONM **Songino Array** **79.40 324** P **P** **11 23 39.7 0.0**
comp=Z,3.3nm,0.5s,baz=135,slow=5.7,SNR=21
SONM pP **pP** **11 23 55.3 -0.7**
comp=Z,5.4nm,0.8s,baz=137,slow=4.8,SNR=8.9
SONM LR LR 11 58 29.8
comp=Z,119nm,19.6s,baz=84,slow=35
GTA **Gaotai** **79.81 314**⇑ P **P** **11 23 43.0 +0.9**
GTA S **S** **11 33 43.0 +2.3**
GTA pmax pmax
comp=Z,20nm,1.1s
GTA pmax pmax
comp=Z,220nm,6.6s
GTA LR LR
comp=Z,180nm,24.1s
GTA LR LR
comp=Z,210nm,24.1s
GTA LR LR
comp=Z,390nm,23.5s
RC01 **Rabbit Creek A** **80.27 20** IAmb IAmb 11 24 13.3
comp=Z,34nm,1.7s
PMR **Palmer** **80.84 20** IAmb IAmb 11 24 05.4
comp=Z,44nm,1.9s
KNK **Knik Glacier** **80.94 20** IAmb IAmb 11 24 21.7
comp=Z,33nm,1.6s
GHO **Glory Hole Cre** **81.04 20** IAmb IAmb 11 24 36.6
comp=Z,34nm,1.6s
WAX **Waxell Ridge** **82.30 23** IAmb IAmb 11 24 26.2
comp=Z,27nm,1.2s
TGL **Tana Glacier** **82.51 23** IAmb IAmb 11 24 33.6
comp=Z,26nm,1.3s
KMRM **Mail Ridge** **82.59 47** IAmb IAmb 11 24 14.1
comp=Z,28nm,1.1s
GDXM **Geysers** **82.74 48** IAmb IAmb 11 24 15.4
comp=Z,49nm,1.8s
KHMM **Horse Mountain** **82.82 46** IAmb IAmb 11 24 16.2
comp=Z,26nm,1.4s
TLY **Talaya** **82.85 326** P **P** **11 23 56.8 -1.0**
BALM **Baldy** **82.87 23** IAmb IAmb 11 24 28.6
comp=Z,34nm,1.7s
BARN **Barnard Glacie** **83.14 23** IAmb IAmb 11 24 28.2
comp=Z,23nm,1.1s
CTGM **Chitina Glacie** **83.21 23** IAmb IAmb 11 24 27.8
comp=Z,28nm,1.2s
O02D **Mt. Diablo Mer** **83.23 47** P **P** **11 24 02.2 +2.1**
baz=249
CCB **Clear Creek Bu** **83.45 18** P **P** **11 23 59.0 -1.5**
J01E **Myrtle Point** **83.54 44** P **P** **11 24 03.6 +2.1**
baz=248
HDA **Harding Lake** **83.54 19** P **P** **11 24 00.3 -0.8**
baz=226
HDA **Harding Lake** **83.54 19** IAmb IAmb 11 24 37.4
comp=Z,18nm,0.9s
K02D **Willamette Mer** **83.55 44** P **P** **11 24 03.7 +2.1**
baz=248
WDC **Whiskeytown Da** **83.56 47** IAmb IAmb 11 24 19.4
comp=Z,32nm,1.6s
N02D **Trinity Center** **83.58 46** P **P** **11 24 04.0 +2.1**
baz=249
COLA **College** **83.59 18** P **P** **11 24 01.3 +0.1**
COLA IAmb IAmb 11 24 38.5
comp=Z,14nm,0.8s
MENT **Mentasta** **83.61 21** IAmb IAmb 11 24 29.4
comp=Z,27nm,1.4s
M02C **Callahan** **83.63 46** P **P** **11 24 04.2 +2.0**
baz=249
RIDG **Independent Ri** **83.76 20** IAmb IAmb 11 24 21.6
comp=Z,43nm,1.4s
ILAR **Eielson Array** **83.81 18** P **P** **11 24 02.1 -0.3**
comp=Z,1.9nm,0.5s,baz=240,slow=5.3,SNR=20
ILAR pP **pP** **11 24 17.1 -1.9**
comp=Z,2.8nm,0.6s,baz=216,slow=6.2,SNR=8.1
ILAR LR LR 11 54 32.6
comp=Z,129nm,22.0s,baz=224,slow=31
YBH **Yreka Blue Hor** **83.85 45** IAmb IAmb 11 24 21.1
comp=Z,52nm,1.9s
ORV **Oroville** **83.94 48** P **P** **11 24 04.8 +1.1**
ORV IAmb IAmb 11 24 20.9
comp=Z,50nm,1.9s
DOT **Dot Lake** **83.96 20** IAmb IAmb 11 24 19.9
comp=Z,34nm,1.3s
AFDM **Forest Hills D** **84.12 48** P **P** **11 24 04.3 -0.3**
I03D **Drain, OR** **84.14 43** P **P** **11 24 06.3 +1.8**
baz=248
SCRK **Sand Creek** **84.20 20** P **P** **11 24 04.2 -0.4**
CMB **Columbia Colle** **84.25 49** IAmb IAmb 11 24 21.7
comp=Z,33nm,1.6s
MAW **Mawson** **84.46 202** P **P** **11 24 05.6 -0.1**
comp=Z,4.9nm,0.9s,baz=62,slow=9.7,SNR=4.0
MAW LR LR 11 55 26.6
comp=Z,305nm,21.8s,baz=66,slow=31
VES **Vestal, Richgr** **84.53 52** P **P** **11 24 07.7 +1.0**
baz=252
H04D **Lebanon** **84.85 43** P **P** **11 24 09.7 +1.6**
baz=248
ISA **Isabella, Lake** **84.94 52** P **P** **11 24 10.5 +1.6**
baz=252
EDW2 **Edwards Air Fo** **85.08 53** P **P** **11 24 11.3 +1.7**
baz=252
MDPB **Devils Postpil** **85.10 50** IAmb IAmb 11 24 27.1
comp=Z,42nm,1.6s
WAKR **Walker** **85.11 49** P **P** **11 24 10.8 +1.0**
WAKR IAmb IAmb 11 24 27.6
comp=Z,38nm,1.4s
OMMB **Old Mammoth Mi** **85.15 50** IAmb IAmb 11 24 27.6
comp=Z,23nm,1.4s
BFSC **Mount Baldy Ra** **85.15 54** P **P** **11 24 11.6 +1.5**
baz=252
PNTR **Pine Nut** **85.17 49** IAmb IAmb 11 24 27.8
comp=Z,43nm,1.6s
VCNR **Virginia City** **85.20 48** P **P** **11 24 10.8 +0.5**
H04A **Detroit Lake** **85.28 43** IAmb IAmb 11 24 28.2
comp=Z,33nm,1.8s
TAPN **Taplejung** **85.33 299** *e*P **P** **11 24 11.5 +0.2**
YERR **Yerington** **85.41 49** IAmb IAmb 11 24 27.9
comp=Z,34nm,1.7s
J05D **Fort Rock, OR** **85.42 44** P **P** **11 24 13.2 +2.0**
baz=250
ODAN **Odare** **85.48 298** *e*P **P** **11 24 12.3 +0.3**
CWC **Cottonwood Cre** **85.48 52** P **P** **11 24 13.0 +1.3**
baz=252
LRMC **Laurel Mtn Rad** **85.50 53** P **P** **11 24 12.6 +0.8**
baz=252
PAHR **Pah Rah Range** **85.53 48** P **P** **11 24 12.5 +0.6**
PAHR IAmb IAmb 11 24 29.3
comp=Z,31nm,1.4s
MOD **Modoc Plateau** **85.60 46** IAmb IAmb 11 24 29.5
comp=Z,22nm,1.5s
EGAK **Eagle** **85.66 20** IAmb IAmb 11 24 28.7
comp=Z,28nm,1.3s
I05D **Terrebonne, OR** **85.72 43** P **P** **11 24 14.0 +1.4**
baz=249
D03D **Eldon** **85.74 40** P **P** **11 24 13.5 +1.0**
baz=248
PINE **Pine Mountain** **85.80 44** IAmb IAmb 11 24 31.7
comp=Z,43nm,1.9s
MPMC **Manual Prospec** **85.83 52** P **P** **11 24 14.1 +0.7**
baz=252
RYN **Ryan** **85.83 49** IAmb IAmb 11 24 30.7
comp=Z,35nm,1.6s
PFO **Pinyon Flats O** **85.92 55** P **P** **11 24 15.3 +1.4**
baz=253
NVAR **Mina Array Bea** **85.93 50** P **P** **11 24 13.5 -0.5**
comp=Z,2.3nm,0.6s,baz=234,slow=8.3,SNR=28
NVAR LR LR 11 54 23.6
comp=Z,751nm,21.7s,baz=217,slow=30
G05D **Wamic, OR** **86.05 42** P **P** **11 24 16.3 +2.1**
baz=249
KVN **Kaiserville** **86.27 49** IAmb IAmb 11 24 32.1
comp=Z,20nm,1.4s
B05A **Bryant** **86.63 39** P **P** **11 24 18.6 +1.8**
baz=249
JIRN **Jiri** **86.72 299** *e*P **P** **11 24 17.9 -0.3**
GMRC **Granite Mounta** **86.89 54** P **P** **11 24 19.3 +0.6**
baz=254
TPNV **Topopah Spring** **87.04 52** P **P** **11 24 20.8 +1.5**
baz=253
GUN **Gumba** **87.05 299** *e*P **P** **11 24 19.3 -0.5**
comp=Z,28nm,0.8s
J08A **Circle Bar Ran** **87.35 45** IAmb IAmb 11 24 37.2
comp=Z,20nm,1.5s
PKI **Pulchoki** **87.36 299** *e*P **P** **11 24 20.9 -0.4**
comp=Z,26nm,0.7s
PKIN **Phulchoki** **87.38 299** *e*P **P** **11 24 20.7 -0.6**
KKN **Kakani** **87.53 299** *e*P **P** **11 24 21.5 -0.5**
DMN **Daman** **87.63 299** *e*P **P** **11 24 22.0 -0.5**
comp=Z,51nm,0.9s
SHPR **Sheep Range** **87.76 52** pP 11 24 37.5 -2.1
113A **Mohawk Valley,** **87.86 56** pP 11 24 39.9 -0.1
EPYK **Eagle Plains** **88.09 20** pP 11 24 40.2 -0.2
GKN **Gorkha** **88.13 299** *e*P **P** **11 24 24.2 -0.6**
W13A **Hualapai Mount** **88.38 54** pP 11 24 42.3 -0.3
214A **Organ Pipe Nat** **88.44 57** pP 11 24 43.0 +0.3
BMO **Blue Mountains** **88.61 44** pP 11 24 40.5 -2.9
DANN **Dangsing** **88.97 299** *e*P **P** **11 24 28.1 -0.8**
comp=Z,25nm,0.5s
MFID **Camas Ranch** **89.20 45** pP 11 24 45.6 -0.6
PSUT **Pine Spring** **89.30 51** pP 11 24 44.7 -2.2
CCUT **Cedar City** **89.42 52** P **P** **11 24 30.9 +0.2**
NEW **Newport** **89.77 41** P **P** **11 24 33.2 +1.4**
baz=252
WMQ **Urumqi** **89.84 315** *e*P **P** **11 24 32.9 +0.6**
WMQ pmax pmax
comp=Z,16nm,0.7s
WMQ pmax pmax
comp=Z,100nm,4.3s
WMQ LR LR
comp=Z,110nm,21.3s
WMQ LR LR
comp=Z,140nm,29.2s
WMQ LR LR
comp=Z,470nm,24.7s
U15A **North Rim** **89.97 53** pP 11 24 50.2 0.0
WUAZ **Wupatki** **90.47 54** P **P** **11 24 37.0 +1.4**
baz=256
WUAZ **Wupatki** **90.47 54** pP 11 24 52.4 0.0
DUG **Dugway, Tooele** **90.51 49** P **P** **11 24 37.0 +1.3**
baz=255
DUG **Dugway, Tooele** **90.51 49** IAmb IAmb 11 24 53.1
comp=Z,12nm,1.2s
BGU **Big Grassy Mou** **90.53 48** pP 11 24 52.0 -0.5
HVU **Hansel Valley** **90.94 48** pP 11 24 54.8 +0.3
NLU **North Lily Min** **91.00 50** pP 11 24 54.4 -0.4
MSO **Missoula** **91.43 43** P **P** **11 24 40.6 +0.9**
baz=255
SYO **Syowa Base** **91.46 197**⇑ *e*P **P** **11 24 37.5 -1.8**
SYO **Syowa Base** **91.46 197**⇑ *e*PcP **PcP** **11 24 40.3 +0.1**
FXWY **Fox Creek** **92.64 46** IAmb IAmb 11 24 49.3
comp=Z,14nm,1.8s
TPAW **Teton Pass** **92.65 46** P **P** **11 24 45.9 +0.3**
TPAW IAmb IAmb 11 26 03.2
comp=Z,24nm,2.0s
121A **Cookes Peak, D** **92.72 58** P **P** **11 24 47.7 +1.6**
baz=258
YHL **Hebgen Lake** **92.81 45** pP 11 25 02.5 -0.7
PV22 **Blue Mesa, Par** **93.16 51** IAmb IAmb 11 25 12.3
comp=Z,15nm,1.6s
PDAR **Pinedale Array** **93.49 47** P **P** **11 24 51.0 +1.6**
comp=Z,0.6nm,0.5s,baz=222,slow=2.0,SNR=8.7
O20A **White River Ci** **93.91 50** P **P** **11 24 52.5 +1.1**
baz=258
MKAR **Makanchi Array** **94.27 317** P **P** **11 24 52.4 -0.3**
comp=Z,8.4nm,0.6s,baz=88,slow=5.8,SNR=69
MKAR pP **pP** **11 25 08.4 -0.9**
comp=Z,15nm,0.8s,baz=96,slow=5.3,SNR=16
ZALV **Zalesovo Beam** **94.29 324** P **P** **11 24 51.3 -1.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,2.2nm,0.6s,baz=92,slow=3.9,SNR=10						
ZALV				pP	pP	11 25 07.7	-1.5
	comp=Z,3.4nm,0.8s,baz=119,slow=3.4,SNR=5.4						
EGMT	Eagleton	94.47	42	P	P	11 24 54.9	+1.2
	baz=258						
MAKZ	Makanchi	94.48	317		pP	11 25 09.0	-1.3
S22A	4UR Ranch, Cre	94.52	53	P	P	11 24 55.1	+0.7
	baz=259						
YKA	Yellowknife Ar	95.17	27	P	P	11 24 55.3	-1.1
	comp=Z,0.8nm,0.5s,baz=254,slow=4.4,SNR=28						
YKA				LR	LR	12 00 47.0	
	comp=Z,139nm,21.7s,baz=0.0,slow=31						
TXAR	Lajitas Array	95.58	61	P	P	11 24 59.4	+0.2
	comp=Z,0.5nm,0.6s,baz=216,slow=5.2,SNR=6.3						
TXAR				LR	LR	12 00 21.9	
	comp=Z,327nm,20.6s,baz=0.0,slow=31						
SNAA	Sanae	96.65	183	P	P	11 25 01.4	-1.8
NRIK	Noril'sk	96.79	339	LR	LR	12 05 39.0	
	comp=Z,227nm,21.7s,baz=107,slow=34						
KDJ	Kajisay	97.00	311		pP	11 25 20.4	-1.7
KDJ				IAmb	IAmb	11 25 22.1	
	comp=Z,5.7nm,1.1s						
KURK	Kurchatov	97.38	320		pP	11 25 19.0	-4.4
KSH	Kashi	97.50	309	P	P	11 25 07.7	0.0
KSH				sP	sP	11 25 36.9	+6.1
KSH				PP	PP	11 29 12.1	+6.3
KSH				S	S	11 36 19.9	-8.0
KSH				SS	SS	11 43 05.9	-2.6
KSH				pmax	pmax		
	comp=Z,36nm,1.4s						
KSH				pmax	pmax		
	comp=Z,110nm,4.1s						
KSH				LR	LR		
	comp=Z,310nm,11.2s						
KSH				LR	LR		
	comp=Z,310nm,14.0s						
KSH				LR	LR		
	comp=Z,310nm,12.3s						
VNA2	Neumayer--Watz	97.61	182	P	P	11 25 05.8	-1.6
	baz=178,slow=4.1						
ARCES	ARCESS Array B	116.96	346	PKP	PKPdf	11 30 17.2	-0.2
	comp=Z,2.2nm,0.6s,baz=67,slow=3.2,SNR=18						
LPAZ	La Paz	119.47	116	PKP	PKiKP	11 30 24.6	+0.1
	comp=Z,1.4nm,0.6s,baz=260,slow=6.1,SNR=1.8						
FINES	FINESS Array B	122.44	339	PKP	PKPdf	11 30 27.2	-0.9
	comp=Z,4.8nm,1.1s,baz=318,slow=2.6,SNR=11						
BOSA	Boshof	125.12	223	PKP	PKPdf	11 30 33.9	-0.5
	comp=Z,3.0nm,0.6s,baz=116,slow=1.8,SNR=7.8						
NB2	NORSAR Subarra	127.33	345	PKPdf	PKiKP	11 30 38.9	+0.9
	comp=Z,3.2nm,1.2s,baz=31,slow=1.9						
NOA	NORSAR Array B	127.33	345	PKP	PKiKP	11 30 38.2	+0.1
	comp=Z,0.6nm,0.6s,baz=37,slow=2.0,SNR=4.1						
OKC	Ostrava-Krasne	133.69	332	AMS	AMS	12 26 50.0	
	comp=Z,300nm,23.5s						
OSTC	Ostas	134.03	334	AMS	AMS	12 28 20.0	
	comp=Z,400nm,23.4s						
CHVC	Chvalec	134.08	334	AMS	AMS	12 28 20.0	
	comp=Z,300nm,25.2s						
KRLC	Kraliky	134.14	333	AMS	AMS	12 29 40.0	
	comp=Z,300nm,23.1s						
DPC	Dobruska-Polom	134.14	333	AMS	AMS	12 29 10.0	
	comp=Z,300nm,22.3s						
UPC	Upice	134.16	334	AMS	AMS	12 28 40.0	
	comp=Z,300nm,22.6s						
PVCC	Panska Ves	134.76	335	AMS	AMS	12 27 40.0	
	comp=Z,200nm,16.9s						
CLL	Collm	134.79	337	*e*pPKPdf	pPKPdf	11 31 07.0	-2.2
CLL				LmV		12 34 00.0	
	comp=Z,200nm,21.4s						
TREC	Trest	135.28	333	AMS	AMS	12 29 50.0	
	comp=Z,500nm,22.1s						
KHC	Kasperske Hory	136.24	334	*e*PKPDF	PKiKP	11 30 55.6	-0.8
KHC				*e*x	x	11 31 07.7	
KHC				AMS	AMS	12 30 10.0	
	comp=Z,300nm,21.6s						
GERES	GERESS Array B	136.40	334	PKP	PKPdf	11 30 55.6	+0.5
	comp=Z,0.3nm,0.6s,baz=54,slow=2.3,SNR=3.6						
MOTA	Moosalm	138.67	334	*e*pPKPdf	pPKPdf	11 31 13.9	-2.9
	comp=Z,6.4nm,1.3s						
FETA	Feichten	139.08	334	pPKPdf	pPKPdf	11 31 18.5	+1.0
	comp=Z,4.6nm,1.1s						
KEST	Kesra	148.15	323	PKPbc	PKPbc	11 31 19.2	-0.4
	comp=Z,5.0nm,0.8s,baz=272,slow=0.5,SNR=5.0						
ESDC	Sonseca Array	150.69	345	PKPbc	PKPbc	11 31 24.4	-1.4
	comp=Z,1.3nm,0.9s,baz=16,slow=2.3,SNR=9.1						
MTE	Manteigas	150.76	350		PKPbc	11 31 24.8	-1.0
TORD	Torodi Ar. Bea	164.88	278	PKP	PKPdf	11 31 37.2	-1.0
	comp=Z,0.7nm,0.6s,baz=179,slow=1.3,SNR=4.3						
TORD				PKPab	PKPab	11 32 34.6	0.0
	comp=Z,2.9nm,0.9s,baz=80,slow=4.6,SNR=7.5						
KIC	Kosan Boka	169.77	240	*e*PKP2	PKPab	11 32 55.7	-0.4
	comp=Z,17nm,0.9s						
LIC	Lamto	169.94	239	*e*PKP2	PKPab	11 32 56.6	-0.3
	comp=Z,34nm,1.0s						
TIC	Toumodi	170.15	241	*e*PKP2	PKPab	11 32 57.3	-0.6

*SNET **01** 11:15:15.8±0.6, 13°.54N×89°.95W, h57km±5km, ML3.2*
*GCG **01** 11:15:17.4±0.5, 13°.54N×90°.09W, h26km±3km, MD3.7*
ISC 01 11:15:16.1±1.9, **13°.5N**±0°.1×**89°.97W**±0°.07, **h53**km±19km, **n20**, σ**0ˢ.61**/27, **3C-9D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEVE	Cerro Verde	0.50	42⇓	*i*P	Pn	11 15 27.5	-0.3
CEVE				*e*S	Sn	11 15 37.1	+0.8
SBLS	San Blas	0.51	41⇓	*i*P	Pn	11 15 27.6	-0.4
SBLS				*e*S	Sn	11 15 37.0	+0.6
RTR	El Retiro	0.54	35⇓	*i*P	Pn	11 15 28.0	-0.2
SNJE	San Jose	0.55	40⇓	*i*P	Pn	11 15 27.9	-0.4
SNJE				*e*S	Sn	11 15 36.7	-0.4
LALI	Alcalda de L	0.63	86	*e*P	Pn	11 15 28.6	-0.5
BOQS	Boqueron	0.73	67⇑	*e*P	Pn	11 15 30.2	-0.3
BOQS				*e*S	Sn	11 15 41.7	+0.7
SNET	Serv Nac Est T	0.75	72	*e*P	Pn	11 15 30.4	-0.3
SNET				IAML		11 15 45.5	
	comp=Z,730nm,0.3s						
UEES	Universidad Ev	0.76	69	*e*P	Pn	11 15 30.5	-0.3
UEES				IAML		11 15 44.1	
	comp=Z,1μm,0.2s						
IXG	Ixpaco	0.85	327⇓	*e*P	Pn	11 15 31.7	-0.4
IXG	Ixpaco	0.85	327⇓	*i*P	Pn	11 15 30.9	-1.3
LFRS	El Faro	0.90	79⇓	*i*P	Pn	11 15 32.4	-0.2
LFRS				*e*S	Sn	11 15 45.4	+0.6
COEG	Centro de Oper	1.07	81⇑	*e*P	Pn	11 15 34.6	-0.3
COEG				IAML		11 15 56.1	
	comp=Z,418nm,0.4s						
MTO3	Montecristo	1.11	32⇓	*i*P	Pn	11 15 34.6	-1.0
PCG	Pacaya	1.12	327	*e*S	Sn	11 15 50.4	0.0
NBG	Las Nubes	1.19	342	*e*P	Pn	11 15 37.2	+0.5
NBG				*e*S	Sn	11 15 53.2	+1.2
ESQI	Esquipulas	1.26	29⇓	*i*P	Pn	11 15 36.7	-0.8
FUG	Fuego 3	1.31	320	*e*P	Pn	11 15 38.3	+0.1
FUG				*e*S	Sn	11 15 54.7	+0.1
COEB	Comit de Eme	1.40	88⇑	*e*P	Pn	11 15 39.2	-0.2
COEB				IAML		11 16 02.9	
	comp=Z,215nm,0.3s						
TECA	Tecapa	1.43	88	*e*P	Pn	11 15 39.6	-0.2
LCND	La Caada	2.03	94	*e*P	Pn	11 15 47.4	-0.4

*IDC **01** 11:26:23.7±0.6, 7°.45S×154°.67E, h0km, mb4.4/20, mb1 4.5/21, mb1mx4.4/45, mbtmp4.4/21, ML4.5/1, MS3.9/1, Ms1 3.9/1, ms1mx3.1/32, Error ellipse: s-maj=20.4km s-min=14.4km az=110.0*
*DJA **01** 11:26:26.2±0.7, 7°S±5°×15°5E±°, h23km±4km, M4.6/13, mb4.5/13, mB4.6/2, MLv4.7/1, Mw(mB)3.8/2*
*NEIC **01** 11:26:29.9±2.1, 7°.37S±0°.08×154°.6E±0°.1, h40km±3km, mb4.8/65, Error ellipse: s-maj=14.9km s-min=12.1km az=105.0*
ISC 01 11:26:27.7±0.5, **7°.39S**±0°.06×**154°.70E**±0°.08, **h27**km, **n82**, σ**1ˢ.33**/60, **mb4.7**/52, **2C, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	4.06	319	Pn	Pn	11 27 28.9	+0.7
	33nm,0.3s,baz=194,slow=2.0,SNR=49						
KRVT				Sn	Sn	11 28 16.0	+1.1
	22nm,0.3s,baz=103,slow=23,SNR=6.5						
RABL	Rabaul	4.06	321		Pn	11 27 28.9	+0.7
PMG	Port Moresby	7.73	254		Pn	11 28 20.5	+2.0
COEN	Coen	13.07	239	Pn	Pn	11 29 33.6	+1.8
PATS	Pohnpei	14.59	14	Pn	P	11 29 55.3	-3.4
CTA	Charters Tower	15.04	212	Pn	P	11 30 00.5	-3.3
	0.2nm,0.3s,baz=46,slow=12,SNR=8.8						
CTAO	Charters Tower	15.04	212	P	P	11 30 04.5	+0.8
DZM	Mont Dzumac	18.47	143	P	Pn	11 30 42.7	+0.8
FAKI	Fak Fak	22.80	280	P	P	11 31 27.8	-0.8
	23nm,1.4s						
FAKI				pP	pP	11 31 32.6	-2.1
	23nm,1.4s						
FAKI	Fak Fak	22.80	280	P	P	11 31 28.6	-0.1
ARMA	Armidale	23.09	187	P	P	11 31 30.7	-0.9
WR0	Warramunga Arr	23.20	235	P	P	11 31 31.9	-0.8
WRAB	Tennant Creek	23.34	236	P	P	11 31 33.2	-1.0
WRA	Warramunga Arr	23.35	236	P	P	11 31 33.1	-1.1
	10nm,0.9s,baz=58,slow=9.3,SNR=14						
WRA				LR	LR	11 39 52.3	
	comp=Z,305nm,18.9s,baz=25,slow=35						
MTN	Manton Dam	23.82	255	P	P	11 31 39.4	+0.6
ASAR	Alice Springs	25.69	229	P	P	11 31 54.8	-1.1
	1.5nm,0.8s,baz=61,slow=9.1,SNR=20						
KNRA	Kununurra	26.69	250	P	P	11 32 05.6	+0.7
KNRA				IAmb	IAmb	11 32 07.0	
	comp=Z,14nm,0.8s						
STKA	Stephens Creek	27.25	205	P	P	11 32 09.1	-0.7
	comp=Z,2.4nm,0.8s,baz=239,slow=14,SNR=2.8						
STKA	Stephens Creek	27.25	205	IAmb	IAmb	11 32 19.0	
	comp=Z,2.1nm,1.2s						
FITZ	Fitzroy Crossi	30.23	247	P	P	11 32 35.5	-0.9
	comp=Z,4.7nm,0.6s,baz=83,slow=7.8,SNR=18						
FITZ	Fitzroy Crossi	30.23	247	P	P	11 32 35.3	-1.1
KAPI	Kappang	34.82	272	P	P	11 33 16.1	-0.7
	comp=Z,5.8nm,0.6s,baz=81,slow=10.0,SNR=4.5						
KAPI	Kappang	34.82	272	IAmb	IAmb	11 33 17.7	
	comp=Z,17nm,1.1s						
JOW	Kunigami	42.59	324	P	P	11 34 22.9	+1.2
	comp=Z,1.1nm,0.6s,baz=126,slow=12,SNR=3.8						
JOW	Kunigami	42.59	324	IAmb	IAmb	11 34 32.7	
	comp=Z,8.8nm,0.7s						
KSM	Kuching	45.16	279	P	P	11 34 41.9	-0.7
KSM				IAmb	IAmb	11 34 43.8	
	comp=Z,8.0nm,0.9s						
JNU	Nakatsue	46.22	332	P	P	11 34 51.0	+0.3
	comp=Z,9.4nm,0.8s,baz=82,slow=3.6,SNR=7.7						
JNU	Nakatsue	46.22	332	P	P	11 34 49.1	-1.6
JNU				IAmb	IAmb	11 35 00.9	
	comp=Z,13nm,0.8s						
KSRS	Korea Array	51.16	333	P	P	11 35 29.1	+0.7
	comp=Z,3.6nm,0.8s,baz=147,slow=7.8,SNR=13						
WHN	Wuhan	54.03	316 ⇑	P	P	11 35 51.6	+1.7
USRK	Ussuriysk Ar.	55.31	340	P	P	11 35 59.1	+0.1
	comp=Z,2.3nm,0.7s,baz=182,slow=7.1,SNR=6.7						
KLR	Kul'dur	59.86	343	P	P	11 36 30.5	-0.4
	comp=Z,3.2nm,0.8s,baz=167,slow=2.9,SNR=9.3						
PETK	Petropavlovsk-	60.32	2	P	P	11 36 34.1	+0.1
	comp=Z,4.5nm,0.7s,baz=170,slow=9.0,SNR=4.8						
CMAR	Chiang Mai Arr	60.70	296	P	P	11 36 38.5	+1.3
	comp=Z,4.5nm,0.9s,baz=124,slow=5.4,SNR=19						
CHTO	Chiang Mai	60.82	296	P	P	11 36 36.7	-1.4
CHTO				IAmb	IAmb	11 36 40.0	
	comp=Z,8.5nm,1.1s						
SONM	Songino Array	69.52	328	P	P	11 37 35.7	+1.5
	comp=Z,4.8nm,0.9s,baz=133,slow=6.2,SNR=15						
VNDA	Vanda	70.19	178	P	P	11 37 38.1	+0.5
	comp=Z,1.3nm,0.9s,baz=328,slow=5.5,SNR=7.1						
YAK	Yakutsk	71.88	348	P	P	11 37 45.4	-2.7
HOM	Homer	79.15	25	P	P	11 38 30.1	+0.3
RSO	Redoubt South	79.17	24	P	P	11 38 30.1	-0.1
CNPM	China Poot	79.24	25	P	P	11 38 31.2	+0.8
BRLK	Bradley Lake	79.52	25	IAmb	IAmb	11 38 33.6	
	comp=Z,13nm,0.8s						
SEW	Seward	80.31	25	IAmb	IAmb	11 38 38.0	
	comp=Z,14nm,0.8s						
RC01	Rabbit Creek A	80.75	24	P	P	11 38 39.1	+0.7
RC01				IAmb	IAmb	11 38 39.6	
	comp=Z,11nm,0.7s						
PPLA	Purkeypile	80.85	22	P	P	11 38 39.3	+0.1
PPLA				IAmb	IAmb	11 38 56.6	
	comp=Z,12nm,1.3s						
PMR	Palmer	81.27	24	P	P	11 38 41.7	+0.5
PMR				IAmb	IAmb	11 38 42.7	
	comp=Z,9.4nm,0.7s						
GHO	Glory Hole Cre	81.45	24	P	P	11 38 42.5	+0.2
GHO				IAmb	IAmb	11 38 52.8	
	comp=Z,12nm,0.8s						
KTH	Kantishna Hill	81.70	22	IAmb	IAmb	11 38 44.3	
	comp=Z,6.3nm,0.8s						
TRF	Thorofare Moun	81.87	22	IAmb	IAmb	11 38 46.7	
	comp=Z,6.5nm,0.7s						
FID	Port Fidalgo	81.90	25	IAmb	IAmb	11 38 46.3	
	comp=Z,11nm,0.8s						
RND	Reindeer	82.38	22	IAmb	IAmb	11 38 47.8	
	comp=Z,7.6nm,0.8s						
QSPA	South Pole Qui	82.58	180	P	P	11 38 49.1	+0.8
QSPA				IAmb	IAmb	11 38 49.7	
	comp=Z,12nm,1.1s						
MLY	Manley	82.62	20	IAmb	IAmb	11 38 49.5	
	comp=Z,5.1nm,0.7s						
DHY	Denali Highway	82.76	23	IAmb	IAmb	11 38 51.8	
	comp=Z,6.7nm,0.8s						
NEA	Nenana	82.95	21	IAmb	IAmb	11 38 50.9	
	comp=Z,5.1nm,0.7s						
WAX	Waxell Ridge	83.32	26	IAmb	IAmb	11 38 54.5	
	comp=Z,9.5nm,0.8s						
VRDI	Verde Repeater	83.42	25	P	P	11 38 53.0	+0.3
VRDI				IAmb	IAmb	11 38 54.8	
	comp=Z,10.0nm,0.8s						
CCB	Clear Creek Bu	83.45	21	IAmb	IAmb	11 38 53.7	
	comp=Z,4.7nm,0.8s						
TGL	Tana Glacier	83.47	26	IAmb	IAmb	11 38 55.1	
	comp=Z,8.8nm,0.8s						
MKAR	Makanchi Array	83.51	319	P	P	11 38 53.5	+0.2
	comp=Z,6.1nm,0.8s,baz=101,slow=6.3,SNR=18						
HDA	Harding Lake	83.63	22	IAmb	IAmb	11 38 56.1	
	comp=Z,6.1nm,1.0s						
HDA					pP	11 39 03.2	+3.2
BALM	Baldy	83.81	26	IAmb	IAmb	11 38 56.7	
	comp=Z,9.4nm,0.8s						
ILAR	Eielson Array	83.85	22	P	P	11 38 54.0	-0.5
	comp=Z,4.4nm,0.8s,baz=250,slow=5.3,SNR=47						
RIDG	Independent Ri	84.08	23	IAmb	IAmb	11 38 57.3	
	comp=Z,6.1nm,0.8s						
MENT	Mentasta	84.13	24	IAmb	IAmb	11 38 57.9	
	comp=Z,4.3nm,0.7s						
ZALV	Zalesovo Beam	84.35	326	P	P	11 38 56.4	-1.0
	comp=Z,3.6nm,0.6s,baz=116,slow=5.8,SNR=9.3						
SCRK	Sand Creek	84.53	23	IAmb	IAmb	11 38 59.7	
	comp=Z,6.2nm,0.8s						
TOLK	Toolik Lake Re	85.09	18	IAmb	IAmb	11 39 03.4	
	comp=Z,6.7nm,0.8s						
KDJ	Kajisay	85.76	313	IAmb	IAmb	11 39 07.1	
	comp=Z,7.1nm,1.0s						
KSH	Kashi	86.05	310	P	P	11 39 06.1	-0.3
KSH				pP	pwP	11 39 21.7	+1.5
KSH				sP	sP	11 39 26.2	+11
KSH				pmax	pmax		
	comp=Z,29nm,1.2s						
DAWY	Dawson	86.38	24	IAmb	IAmb	11 39 10.2	
	comp=Z,4.3nm,0.9s						
DLBC	Dease Lake	88.63	31	P	P	11 39 19.2	+0.9
	comp=Z,0.6nm,0.5s,baz=94,slow=20,SNR=4.0						
DLBC	Dease Lake	88.63	31		pP	11 39 29.9	+4.7
DLBC				IAmb	IAmb	11 39 30.9	
	comp=Z,6.6nm,1.2s						
INK	Inuvik	90.19	21	P	P	11 39 26.1	+0.8
	comp=Z,1.4nm,0.8s,baz=216,slow=9.7,SNR=6.9						
SYO	Syowa Base	91.86	199⇑	*e*P	P	11 39 33.1	0.0
NVAR	Mina Array Bea	92.19	52	P	P	11 39 37.0	+1.4
	comp=Z,2.2nm,0.9s,baz=250,slow=5.7,SNR=14						
SHPR	Sheep Range	94.45	54	P	P	11 39 48.6	+2.6
YKA	Yellowknife Ar	96.82	28	P	P	11 39 56.6	+0.7
	comp=Z,0.5nm,0.8s,baz=264,slow=4.6,SNR=7.1						
AKASG	Malin Array Be	117.69	324	PKP	PKiKP	11 45 10.9	-0.5
	comp=Z,0.3nm,0.3s,baz=48,slow=2.4,SNR=4.7						
GERES	GERESS Array B	127.24	329	PKP	PKiKP	11 45 30.9	+0.3
	comp=Z,0.6nm,0.6s,baz=323,slow=2.0,SNR=6.0						
BDFB	Brasilia	147.90	136	PKPbc	PKPab	11 46 12.3	-1.8
	comp=Z,4.7nm,0.7s,baz=144,slow=2.0,SNR=5.9						
TORD	Torodi Ar. Bea	152.85	284	PKPbc	PKiKP	11 46 23.6	-0.1
	comp=Z,4.6nm,0.7s,baz=72,slow=2.6,SNR=25						

*IDC **01** 11:28:16.9±0.7, 7°.43S×154°.66E, h0km, mb4.4/19, mb1 4.5/20, mb1mx4.3/45, mbtmp4.4/20, ML4.6/1, Error ellipse: s-maj=23.2km s-min=14.9km az=107.0*
*NEIC **01** 11:28:22.4±1.6, 7°.34S±0°.10×154°.5E±0°.1, h35km±1km, mb4.9/51, Error ellipse: s-maj=20.9km s-min=11.6km az=228.0*
ISC 01 11:28:21.0±0.6, **7°.45S**±0°.07×**154°.6E**±0°.1, **h27**km, **n65**, σ**1ˢ.04**/53, **mb4.8**/45, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	4.03	321	Pn	Pn	11 29 22.4	+1.3
	38nm,0.3s,baz=183,slow=1.7,SNR=8.0						
KRVT				Sn	Sn	11 30 09.0	+1.6
	26nm,0.3s,baz=53,slow=24,SNR=1.2						
RABL	Rabaul	4.04	323	Pn	Pn	11 29 18.8	-2.3
PATS	Pohnpei	14.67	15	Pn	Pn	11 31 45.9	-1.0
CTA	Charters Tower	14.94	212	Pn	P	11 31 54.0	-1.9
	0.2nm,0.3s,baz=42,slow=14,SNR=6.6						
CTAO	Charters Tower	14.94	212	P	P	11 31 54.4	-1.5
WR0	Warramunga Arr	23.07	235	P	P	11 33 25.3	+0.5
WB0	Warramunga Arr	23.10	236	P	P	11 33 25.5	+0.5
WRAB	Tennant Creek	23.22	236	P	P	11 33 23.5	-2.6
WB2	Warramunga Arr	23.22	236	P	P	11 33 25.9	-0.4
WRA	Warramunga Arr	23.23	236	P	P	11 33 25.8	-0.5
	8.5nm,0.9s,baz=60,slow=9.7,SNR=9.9						
WRA				PcP	PcP	11 37 14.8	+0.8
	1.0nm,0.7s,baz=50,slow=2.4,SNR=3.3						
ASAR	Alice Springs	25.57	229	P	P	11 33 48.1	+0.1
	1.2nm,0.5s,baz=59,slow=9.7,SNR=6.6						
KNRA	Kununurra	26.57	250	P	P	11 33 58.8	+1.8
STKA	Stephens Creek	27.16	205	P	P	11 34 03.0	+0.7
	6.1nm,1.1s,baz=26,slow=12,SNR=5.4						
FITZ	Fitzroy Crossi	30.11	247	P	P	11 34 28.9	+0.3
	4.2nm,0.6s,baz=84,slow=6.4,SNR=9.9						
FITZ	Fitzroy Crossi	30.11	247	P	P	11 34 28.7	0.0
KAPI	Kappang	34.71	272	P	P	11 35 09.6	+0.5
	8.4nm,0.8s,baz=140,slow=6.6,SNR=4.1						
KAPI	Kappang	34.71	272	P	P	11 35 08.9	-0.2
KAPI				IAmb	IAmb	11 35 10.9	
	comp=Z,11nm,0.9s						
YULB	Yu-li	44.70	314	P	P	11 36 29.3	-2.8
YULB				IAmb	IAmb	11 36 34.1	
	comp=Z,23nm,1.3s						
JNU	Nakatsue	46.22	332	P	P	11 36 43.8	-0.1
	comp=Z,8.0nm,0.7s,baz=21,slow=2.4,SNR=4.9						
JNU	Nakatsue	46.22	332	P	P	11 36 43.2	-0.8
JNU				IAmb	IAmb	11 36 54.9	
	comp=Z,15nm,0.8s						
KSRS	Korea Array	51.15	333	P	P	11 37 22.4	+0.6
	comp=Z,3.0nm,0.8s,baz=147,slow=8.1,SNR=10						
NJ2	Nanjing	52.01	321	*e*P	P	11 37 30.3	+2.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
USRK	Ussuriysk Ar.	55.32	340	P	P	11 37 52.9	+0.6
	comp=Z,2.5nm,0.7s,baz=181,slow=5.2,SNR=4.1						
KLR	Kul'dur	59.88	343	P	P	11 38 24.0	-0.3
	comp=Z,2.0nm,0.6s,baz=154,slow=2.6,SNR=6.0						
PETK	Petropavlovsk-	60.38	2	P	P	11 38 27.6	-0.1
	comp=Z,4.7nm,0.7s,baz=185,slow=7.2,SNR=3.7						
CMAR	Chiang Mai Arr	60.62	296	P	P	11 38 30.4	+0.5
	comp=Z,3.7nm,0.8s,baz=128,slow=5.6,SNR=9.7						
CHTO	Chiang Mai	60.74	296	P	P	11 38 29.1	-1.8
CHTO				IAmb	IAmb	11 38 33.2	
	comp=Z,6.1nm,0.9s						
MA2	Magadan	66.88	358	P	P	11 39 10.2	-0.2
	comp=Z,1.4nm,0.4s,baz=127,slow=20,SNR=1.5						
MA2	Magadan	66.88	358	IAmb	IAmb	11 39 19.4	
	comp=Z,29nm,1.4s						
SONM	Songino Array	69.50	328	P	P	11 39 28.9	+1.5
	comp=Z,4.1nm,0.8s,baz=133,slow=6.2,SNR=8.6						
VNDA	Vanda	70.14	178	P	P	11 39 31.6	+1.0
	comp=Z,1.5nm,0.9s,baz=333,slow=7.4,SNR=4.7						
BRLK	Bradley Lake	79.62	25	IAmb	IAmb	11 40 36.8	
	comp=Z,12nm,0.8s						
PMR	Palmer	81.36	24	IAmb	IAmb	11 40 44.9	
	comp=Z,12nm,0.8s						
GHO	Glory Hole Cre	81.54	24	IAmb	IAmb	11 40 46.1	
	comp=Z,13nm,0.8s						
TRF	Thorofare Moun	81.96	22	IAmb	IAmb	11 40 49.2	
	comp=Z,7.8nm,0.7s						
FID	Port Fidalgo	82.00	25	IAmb	IAmb	11 40 48.4	
	comp=Z,7.8nm,0.8s						
SCM	Sheep Creek Mo	82.22	24	P	P	11 40 39.4	-0.2
SCM				IAmb	IAmb	11 40 49.7	
	comp=Z,11nm,0.8s						
RND	Reindeer	82.47	22	P	P	11 40 40.2	-0.7
RND				IAmb	IAmb	11 40 50.4	
	comp=Z,8.1nm,0.7s						
QSPA	South Pole Qui	82.53	180	P	P	11 40 41.8	+0.6
MLY	Manley	82.71	20	P	P	11 40 41.3	-0.8
MLY				IAmb	IAmb	11 40 52.1	
	comp=Z,5.3nm,0.6s						
DHY	Denali Highway	82.86	23	IAmb	IAmb	11 40 57.1	
	comp=Z,7.0nm,0.8s						
WAX	Waxell Ridge	83.41	26	IAmb	IAmb	11 40 56.6	
	comp=Z,12nm,0.8s						
CRQM	Cirque	83.43	26	IAmb	IAmb	11 40 47.3	
	comp=Z,10nm,0.9s						
GLB	Gilahina Butte	83.47	25	P	P	11 40 45.9	-0.2
GLB				IAmb	IAmb	11 40 56.6	
	comp=Z,11nm,0.8s						
MKAR	Makanchi Array	83.48	319	P	P	11 40 46.2	-0.2
	comp=Z,5.5nm,0.8s,baz=101,slow=5.2,SNR=13						
VRDI	Verde Repeater	83.52	25	P	P	11 40 46.6	+0.1
VRDI				IAmb	IAmb	11 40 57.0	
	comp=Z,8.2nm,0.8s						
CCB	Clear Creek Bu	83.54	21	P	P	11 40 45.1	-1.1
COLA	College	83.64	21	P	P	11 40 46.2	-0.5
COLA				IAmb	IAmb	11 40 56.0	
	comp=Z,7.9nm,0.7s						
HDA	Harding Lake	83.72	22	P	P	11 40 46.8	-0.4
HDA				IAmb	IAmb	11 40 57.0	
	comp=Z,6.4nm,1.0s						
MCARA	McCarthy VSAT	83.78	25	P	P	11 40 47.5	-0.1
MCARA				IAmb	IAmb	11 40 49.5	
	comp=Z,8.5nm,0.8s						
BALM	Baldy	83.91	26	IAmb	IAmb	11 40 50.0	
	comp=Z,6.9nm,0.8s						
ILAR	Eielson Array	83.94	22	P	P	11 40 47.3	-1.0
	comp=Z,3.1nm,0.8s,baz=252,slow=5.3,SNR=12						
RIDG	Independent Ri	84.17	23	IAmb	IAmb	11 40 59.4	
	comp=Z,5.6nm,0.7s						
MENT	Mentasta	84.23	24	IAmb	IAmb	11 41 04.2	
	comp=Z,4.7nm,0.7s						
CTGM	Chitina Glacie	84.31	26	P	P	11 40 50.9	+0.4
ZALV	Zalesovo Beam	84.33	326	P	P	11 40 50.4	-0.1
	comp=Z,4.1nm,0.6s,baz=116,slow=4.8,SNR=11						
SCRK	Sand Creek	84.62	23	IAmb	IAmb	11 41 02.3	
	comp=Z,5.9nm,0.7s						
TOLK	Toolik Lake Re	85.17	18	P	P	11 40 54.4	-0.2
TOLK				IAmb	IAmb	11 41 05.5	
	comp=Z,5.6nm,0.7s						
KDJ	Kajisay	85.72	313	IAmb	IAmb	11 41 01.9	
	comp=Z,7.5nm,1.1s						
EGAK	Eagle	86.09	23	P	P	11 40 59.4	+0.3
EGAK				IAmb	IAmb	11 41 01.0	
	comp=Z,6.3nm,0.8s						
INK	Inuvik	90.28	21	P	P	11 41 19.0	0.0
	comp=Z,0.9nm,0.6s,baz=244,slow=3.0,SNR=2.3						
NVAR	Mina Array Bea	92.31	52	P	P	11 41 29.9	+0.4
	comp=Z,0.6nm,0.6s,baz=262,slow=5.9,SNR=5.0						
GERES	GERESS Array B	127.23	328	PKP	PKiKP	11 47 23.6	-0.2
	comp=Z,0.7nm,0.6s,baz=127,slow=0.7,SNR=5.4						
BDFB	Brasilia	147.94	136	PKPbc	PKPbc	11 48 05.5	+0.5
	comp=Z,2.4nm,0.6s,baz=339,slow=2.3,SNR=4.3						
TORD	Torodi Ar. Bea	152.75	284	PKPbc	PKPbc	11 48 15.7	-0.8
	comp=Z,4.2nm,0.7s,baz=66,slow=2.5,SNR=15						

*IDC **01** 11:28:49.6±3.6, 15°.23N×146°.27E, h51km±31km, mb3.8/15, mb1 3.9/15, mb1mx3.7/53, mbtmp4.0/15, MS3.9/5, Ms1 3.8/5, ms1mx3.4/36, Error ellipse: s-maj=28.1km s-min=14.5km az=95.0*
*NEIC **01** 11:28:50.7±1.3, 15°.19N±0°.10×146°.3E±0°.1, h61km±7km, mb4.6/17, Error ellipse: s-maj=19.0km s-min=13.7km az=104.0*
ISC 01 11:28:50.2±0.5, **15°.19N**±0°.08×**146°.3E**±0°.1, **h58**km, **n39**, σ**0ˢ.62**/33, **mb4.2**/21, **MS3.8**/5, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.12	222		Pn	11 29 23.2	-0.1
KRVT	Keravat (AS076	20.17	163	LR	LR	11 40 39.4	
	comp=Z,177nm,20.3s,baz=16,slow=35						
JNU	Nakatsue	22.70	325	P	P	11 33 46.5	-0.5
	6.0nm,0.9s,baz=104,slow=17,SNR=2.0						
JNU	Nakatsue	22.70	325	P	P	11 33 47.6	+0.5
JNU				IAmb	IAmb	11 34 06.0	
	comp=Z,24nm,1.3s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	27.54	327	P	P	11 34 31.4	0.0
	comp=Z,1.1nm,0.7s,baz=147,slow=9.9,SNR=6.1						
COEN	Coen	29.12	186	P	P	11 34 46.0	+0.2
KLR	Kul'dur	35.99	344	P	P	11 35 44.1	-1.3
	comp=Z,1.5nm,0.8s,baz=86,slow=5.0,SNR=5.7						
WB0	Warramunga Arr	36.66	199	P	P	11 35 51.8	+0.4
WB0				IAmb	IAmb	11 35 52.5	
	comp=Z,13nm,1.1s						
WR0	Warramunga Arr	36.80	199	P	P	11 35 52.5	-0.1
WR0				IAmb	IAmb	11 35 53.6	
	comp=Z,9.9nm,1.1s						
WRAB	Tennant Creek	36.83	199	P	P	11 35 53.2	+0.4
WB2	Warramunga Arr	36.84	199	P	P	11 35 53.3	+0.3
WB2				IAmb	IAmb	11 35 54.2	
	comp=Z,10nm,0.8s						
WRA	Warramunga Arr	36.84	199	P	P	11 35 53.2	+0.2
	comp=Z,6.6nm,0.8s,baz=27,slow=8.7,SNR=18						
ENH	Enshi	36.95	300	P	P	11 35 54.4	+0.4
ENH				IAmb	IAmb	11 35 55.7	
	comp=Z,6.8nm,0.8s						
ASAR	Alice Springs	40.48	198	P	P	11 36 23.4	0.0
	comp=Z,0.9nm,0.6s,baz=22,slow=10,SNR=8.6						
ASAR				ScP	ScP	11 42 09.9	0.0
	comp=Z,0.6nm,0.9s,baz=26,slow=4.5,SNR=4.8						
MA2	Magadan	44.44	3	P	P	11 36 55.8	+0.6
	comp=Z,4.6nm,0.8s,baz=132,slow=7.9,SNR=4.0						
MA2	Magadan	44.44	3	IAmb	IAmb	11 37 09.1	
	comp=Z,13nm,1.2s						
CMAR	Chiang Mai Arr	45.37	281	P	P	11 37 04.2	+1.0
	comp=Z,1.6nm,0.6s,baz=83,slow=7.0,SNR=2.8						
SONM	Songino Array	46.27	323	P	P	11 37 09.6	-0.5
	comp=Z,1.2nm,0.8s,baz=120,slow=8.8,SNR=4.8						
STKA	Stephens Creek	47.01	185	P	P	11 37 14.9	-0.8
	comp=Z,2.7nm,0.8s,baz=38,slow=8.4,SNR=2.8						
STKA	Stephens Creek	47.01	185	IAmb	IAmb	11 37 16.3	
	comp=Z,2.8nm,1.2s						
BBOO	Buckleboo	48.72	192	P	P	11 37 29.4	+0.4
BILL	Bilibino	54.37	9	P	P	11 38 11.0	+0.3
BILL				IAmb	IAmb	11 38 12.2	
	comp=Z,6.5nm,0.8s						
BKZ	Black Stump Fm	60.98	153	P	P	11 38 56.5	-1.0
KURK	Kurchatov	64.29	319	P	P	11 39 19.1	-0.4
ILAR	Eielson Array	66.53	25	P	P	11 39 33.0	-0.7
	comp=Z,0.5nm,0.7s,baz=248,slow=5.7,SNR=4.5						
BRVK	Borovoye	69.63	321	P	P	11 39 53.5	+0.2
BRVK				IAmb	IAmb	11 39 55.0	
	comp=Z,5.9nm,0.9s						
INK	Inuvik	72.36	23	P	P	11 40 09.3	-0.2
	comp=Z,1.4nm,0.8s,baz=255,slow=8.5,SNR=4.1						
INK	Inuvik	72.36	23	IAmb	IAmb	11 40 13.0	
	comp=Z,2.0nm,1.0s						
GEYT	Alibeck	79.44	306	LR	LR	12 20 47.4	
	comp=Z,29nm,18.2s,baz=25,slow=39						
YKA	Yellowknife Ar	80.80	28	P	P	11 40 57.9	+0.5
	comp=Z,0.5nm,0.6s,baz=283,slow=4.9,SNR=5.0						
RES	Resolute Bay	82.68	14	P	P	11 41 07.5	+0.5
NVAR	Mina Array Bea	84.83	52	P	P	11 41 20.1	+1.0
	comp=Z,0.4nm,0.5s,baz=262,slow=5.0,SNR=1.5						
ARCES	ARCESS Array B	86.00	342	P	P	11 41 23.4	-0.6
	comp=Z,0.6nm,0.5s,baz=81,slow=7.5,SNR=3.5						
KBZ	Khabaz	89.04	315	LR	LR	12 26 12.9	
	comp=Z,78nm,19.9s,baz=54,slow=39						
P17A	Butcher Ranch,	90.14	49	P	P	11 41 45.1	+0.5
FINES	FINESS Array B	90.31	335	P	P	11 41 43.4	-1.2
	comp=Z,0.9nm,0.6s,baz=85,slow=4.4,SNR=4.2						
FINES				LR	LR	12 23 49.5	
	comp=Z,196nm,20.8s,baz=19,slow=37						
BRTR	Keskin Array B	96.98	314	LR	LR	12 30 40.4	
	comp=Z,36nm,21.9s,baz=16,slow=38						
LPAZ	La Paz	146.84	97	PKPbc	PKPab	11 48 29.0	-0.1
	comp=Z,0.8nm,0.5s,baz=31,slow=5.9,SNR=6.7						
LPAZ	La Paz	146.84	97		PKPbc	11 48 28.5	+0.8

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*KRNET **01** 11:30:30.0±0.1, 42°.02N×80°.84E, h7^{km}, mb4.3*
*SOME **01** 11:30:31.8, 42°.15N×80°.68E, h0^{km}*
*IDC **01** 11:30:32.8±5.7, 42°.14N×81°.14E, h0^{km}, mb1 3.7/3, mb1mx3.3/53, mbtmp3.7/3, ML3.5/3, Error ellipse: s-maj=73.5km s-min=39.4km az=78.0*
*BJI **01** 11:30:33.0±0.0, 42°.05N×80°.75E, h7^{km}, ML3.7/10*
*NNC **01** 11:30:33.4±0.8, 42°.11N×80°.67E, h0^{km}, mb4.6, mpv4.3, Error ellipse: s-maj=5.2km s-min=4.1km az=135.0*
ISC 01 11:30:33.5±1.6**, 42°.19N**±0°.04×**80°.59E**±0°.04**, h8^{km}**±10^{km}**, n72,** σ**2s.30**/103**, 18C-18D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.27	352	eP	Pg	11 30 58.0	+0.1
	51nm,0.1s						
KTMS				eS	Sg	11 31 16.9	+2.5
	402nm,0.4s						
KTMS	Ketmen	1.27	352	P	Pg	11 30 58.0	+0.1
	51nm,0.1s						
KTMS				S	Sg	11 31 16.8	+2.5
	402nm,0.4s						
SHLS	Shalkode	1.28	320	eP	Pn	11 30 56.0	-1.8
	239nm,0.2s						
SHLS				eS	Sb	11 31 14.0	-0.5
	2μm,0.2s						
SHLS	Shalkode	1.28	320	P	Pn	11 30 56.0	-1.8
	441nm,0.2s						
SHLS				S	Sb	11 31 14.0	-0.5
	2μm,0.2s						
PDGK	Podgornoye	1.40	325	P	Pg	11 31 00.8	+0.5
	40nm,0.2s						
PDGK				S	Sg	11 31 21.7	+3.2
	131nm,0.3s						
PDGK	Podgornoye	1.40	325	⇓P	Pg	11 31 00.9	+0.5
	59nm,0.4s						
PDGK				⇓S	Sg	11 31 21.5	+3.0
	145nm,0.3s						
PRZ	Przheval'sk	1.65	281	⇑iP	Pg	11 31 05.1	-0.1
	baz=85						
PRZ				⇑iS	Sg	11 31 30.1	+3.5
	baz=85						
SATY	Saty	1.83	299	eP	Pg	11 31 08.7	+0.1
	114nm,0.3s						
SATY				eS	Sg	11 31 35.6	+3.2
	575nm,0.3s						
SATY	Saty	1.83	299	Pg	Pg	11 31 08.7	+0.1
	114nm,0.3s						
SATY				Lg	Lg	11 31 35.6	
	575nm,0.3s						
KURS	Kuram	2.20	307	eP	Pg	11 31 15.3	-0.4
	77nm,0.4s						
KURS				eS	Sg	11 31 46.6	+2.3
	228nm,0.7s						
KURS	Kuram	2.20	307	Pg	Pg	11 31 15.4	-0.4
	77nm,0.4s						
KURS				Lg	Lg	11 31 46.6	
	228nm,0.7s						
DJR	Jarkent	2.22	345	eP	Pg	11 31 15.2	-0.9
	57nm,0.3s						
DJR				eS	Sg	11 31 46.4	+1.5
	437nm,0.5s						
DJR	Jarkent	2.22	345	Pg	Pg	11 31 15.2	-0.9
	57nm,0.3s						
DJR				Lg	Lg	11 31 46.4	
	437nm,0.5s						
ANVS	Anan'yevo	2.24	286	⇑iP	Pb	11 31 14.2	-0.2
	baz=89						
ANVS				⇑iS	Sg	11 31 45.3	-0.3
	baz=89						
MNBS	Baschi	2.48	320	eP	Pg	11 31 20.4	-0.6
	103nm,0.3s						
MNBS				eS	Sg	11 31 55.0	+1.9
	1μm,0.3s						
MNBS	Baschi	2.48	320	Pg	Pg	11 31 20.4	-0.6
	103nm,0.3s						
MNBS				Lg	Lg	11 31 55.0	
	1μm,0.3s						
KOTS	Kotyrbulak	2.77	293	eP	Pg	11 31 26.3	-0.3
	118nm,0.3s						
KOTS				eS	Sg	11 32 05.5	+3.0
	394nm,0.5s						
KOTS	Kotyrbulak	2.77	293	Pg	Pg	11 31 26.3	-0.3
	118nm,0.3s						
KOTS				Lg	Lg	11 32 05.5	
	394nm,0.5s						
MDOK	Medeo	2.79	292	eP	Pg	11 31 26.1	-0.9
	43nm,0.3s						
MDOK				eS	Sg	11 32 04.8	+1.7
	158nm,0.5s						
MDOK	Medeo	2.79	292	⇑Pg	Pb	11 31 24.9	+1.2
	26nm,0.4s						
MDOK				⇑Lg	Lg	11 32 04.1	
	127nm,0.5s						
MDOK	Medeo	2.79	292	Pg	Pg	11 31 26.0	-0.9
	43nm,0.3s						
MDOK				Lg	Lg	11 32 04.7	
	158nm,0.5s						
TNSS	Tian-Shan	2.82	289	eP	Pg	11 31 26.5	-1.1
	62nm,0.4s						
TNSS				eS	Sg	11 32 05.5	+1.3
	159nm,0.4s						
TNSS	Tian-Shan	2.82	289	Pg	Pg	11 31 26.5	-1.1
	62nm,0.4s						
TNSS				Lg	Lg	11 32 05.5	
	159nm,0.4s						
ARXS	Arharly	2.86	316	eP	Pg	11 31 26.7	-1.6
	61nm,0.4s						
ARXS				eS	Sg	11 32 06.2	+0.8
	215nm,0.4s						
ARXS	Arharly	2.86	316	Pg	Pg	11 31 26.7	-1.6
	61nm,0.4s						
ARXS				Lg	Lg	11 32 06.2	
	215nm,0.4s						
KNDC	Almaty	2.86	292	⇑Pg	Pb	11 31 25.2	+0.3
	38nm,0.4s						
KNDC				⇑Lg	Lg	11 32 07.5	
	201nm,0.6s						
AAA	Alma-Ata	2.90	292	eP	Pg	11 31 28.2	-0.8
	85nm,0.3s						
AAA				eS	Sg	11 32 08.7	+2.2
	165nm,0.4s						
AAA	Alma-Ata	2.90	292	Pg	Pg	11 31 28.2	-0.8
	85nm,0.3s						
AAA				Lg	Lg	11 32 08.7	
	165nm,0.4s						
IZV	Izvestkoviy	3.06	287	eP	Pg	11 31 30.3	-1.8
	64nm,0.4s						
IZV				eS	Sg	11 32 12.3	+0.6
	459nm,0.4s						
IZV	Izvestkoviy	3.06	287	Pg	Pg	11 31 30.3	-1.8
	64nm,0.4s						
IZV				Lg	Lg	11 32 12.3	
	459nm,0.4s						
CHKK	Chushkaly	3.12	303	eP	Pg	11 31 31.1	-2.2
	22nm,0.4s						
CHKK				eS	Sg	11 32 13.8	-0.1
	251nm,0.4s						
CHKK	Chushkaly	3.12	303	Pg	Pg	11 31 31.1	-2.2
	22nm,0.4s						
CHKK				Lg	Lg	11 32 13.7	
	251nm,0.4s						
MTBS	Maitube	3.21	288	eP	Pg	11 31 32.8	-2.2
	29nm,0.4s						
MTBS				eS	Sg	11 32 16.3	-0.4
	148nm,0.4s						
MTBS	Maitube	3.21	288	Pg	Pg	11 31 32.8	-2.2
	29nm,0.4s						
MTBS				Lg	Lg	11 32 16.3	
	148nm,0.4s						
KAPS	Kapalarasan	3.22	344	eP	Pg	11 31 32.8	-2.4
	27nm,0.3s						
KAPS				eS	Sg	11 32 16.6	-0.3
	121nm,0.4s						
KAPS	Kapalarasan	3.22	344	Pg	Pg	11 31 32.8	-2.4
	27nm,0.3s						
KAPS				Lg	Lg	11 32 16.6	
	121nm,0.4s						
TDK	Taldyqorghan	3.23	331	eP	Pb	11 31 32.4	+1.3
	30nm,0.2s						
TDK				eS	Sg	11 32 15.6	-1.6
	218nm,0.3s						
ULHL	Ulahol	3.23	272	⇑iP	Pb	11 31 27.4	-3.9
	baz=75						
ULHL				⇑iS	Sb	11 32 08.2	-2.7
	baz=75						
ULHL	Ulahol	3.23	272	P	Pg	11 31 34.1	-1.3
	SNR=7.0						
KTBS	Karatobe	3.25	299	eP	Pg	11 31 34.4	-1.3
	27nm,0.3s						
KTBS				eS	Sg	11 32 19.1	+1.3
	339nm,0.4s						
KTBS	Karatobe	3.25	299	Pg	Pg	11 31 34.4	-1.3
	27nm,0.3s						
KTBS				Lg	Lg	11 32 19.1	
	339nm,0.4s						
BOOM	Boomskoye usch	3.46	277	⇓eP	Pn	11 31 30.6	+2.7
	baz=79						
BOOM				⇓iS	Sb	11 32 13.9	-3.5
	baz=79						
KST	Kastek	3.52	286	eP	Pg	11 31 38.6	-2.4
	45nm,0.5s						
KST				eS	Sg	11 32 26.3	-0.3
	75nm,0.6s						
KST	Kastek	3.52	286	Pg	Pg	11 31 38.6	-2.4
	45nm,0.5s						
KST				Lg	Lg	11 32 26.3	
	75nm,0.6s						
KUU	Kurty	3.55	300	eP	Pg	11 31 38.9	-2.7
	22nm,0.4s						
KUU				eS	Sg	11 32 26.7	-0.9
	166nm,0.5s						
KUU	Kurty	3.55	300	Pg	Pg	11 31 38.9	-2.7
	22nm,0.4s						
KUU				Lg	Lg	11 32 26.7	
	166nm,0.5s						
TKM2	Tokmak 2	3.76	283	⇑eP	Pn	11 31 35.1	+3.1
	baz=85						
TKM2				⇑iS	Sb	11 32 21.4	-4.7
	baz=85						
TKM2	Tokmak 2	3.76	283	P	Pb	11 31 36.4	-4.0
	SNR=28						
TKM2	Tokmak 2	3.76	283	⇓Pn	Pb	11 31 35.9	-4.4
	15nm,0.5s						
TKM2				⇓Lg	Lg	11 32 34.6	
	52nm,0.3s						
KRBS	Karabastau	3.91	294	eP	Pg	11 31 45.6	-2.8
	6.4nm,0.1s						
KRBS				eS	Sg	11 32 38.2	-0.9
	64nm,0.2s						
KZA	Kyzart	3.98	270	⇓eP	Pn	11 31 37.9	+2.8
	baz=73						
KZA				⇓iS	Sn	11 32 26.0	+3.9
	baz=73						
KZA	Kyzart	3.98	270	P	Pb	11 31 45.2	+1.1
	SNR=17						
KBK	Karagaybulak	4.21	278	⇓eP	Pn	11 31 41.2	+3.1
	baz=80						
KBK				⇓iS	Sn	11 32 31.8	+4.3
	baz=80						
KBK	Karagaybulak	4.21	278	P	Pn	11 31 42.1	+4.0
	SNR=5.9						
KSH	Kashi	4.41	234	Pg	Pg	11 32 00.6	+2.7
KSH				smax	smax		
	comp=N,140nm,0.8s						
KSH				smax	smax		
	comp=E,350nm,1.4s						
UCH	Uchtor	4.52	273	⇑eP	Pn	11 31 45.4	+2.8
	baz=75						
UCH				⇑iS	Sn	11 32 39.3	+3.8
	baz=75						
UCH	Uchtor	4.52	273	P	Pg	11 31 56.3	-3.7
	SNR=16						
AAK	Ala-Archa	4.54	278	P	Pg	11 31 59.4	-1.0
	SNR=8.9						
AAK	Ala-Archa	4.54	278	⇓Pg	Pg	11 31 57.8	-2.6
	22nm,0.5s						
AAK				⇓Lg	Lg	11 32 57.0	
	27nm,0.5s						
USP	Ospenovka	4.62	286	P	Pg	11 31 59.3	-2.6
	SNR=6.2						
MAKZ	Makanchi	4.72	12	⇓Pn	Pn	11 31 47.2	+2.2
	20nm,0.5s						
MAKZ				⇑Lg	Lg	11 33 04.7	
	23nm,0.6s						
MK31	Makanchi Array	4.76	14	⇓Pn	Pn	11 31 48.1	+2.5
	7.4nm,0.5s,baz=200,slow=12,SNR=211						
MK31				⇓Sn	Sn	11 32 46.2	+5.2
	30nm,0.7s,baz=186,slow=16,SNR=6.8						
MK31				⇑Lg	Lg	11 33 05.1	
	44nm,0.5s,baz=192,slow=28,SNR=10						
MKAR	Makanchi Array	4.76	14	Pn	Pn	11 31 48.1	+2.5
	4.5nm,0.3s,baz=195,slow=13,SNR=237						
MKAR				Sn	Sn	11 32 43.6	+2.7
	11nm,0.3s,baz=185,slow=15,SNR=8.6						
MKAR				Lg	Lg	11 33 02.0	
	25nm,0.3s,baz=193,slow=32,SNR=15						
EKS2	Erkin-Say	5.07	278	P	Pg	11 32 07.2	-3.3
	SNR=19						
AML	Almayashu	5.13	272	P	Pb	11 32 07.0	+3.4
	SNR=37						
WMQ	Urumqi	5.46	70	ePn	Pn	11 31 53.6	-1.6
WMQ				Sn	Sn	11 32 56.0	-2.2
WMQ				smax	smax		
	comp=N,19nm,0.7s						
WMQ				smax	smax		
	comp=E,19nm,0.7s						
KK31	Karatay Array	7.49	280	⇑Pg	Pg	11 32 52.6	-4.3
	4.3nm,0.7s,baz=96,slow=15,SNR=19						
KK31				⇓Lg	Lg	11 34 30.6	
	7.6nm,0.6s,baz=97,slow=27,SNR=8.1						
OTUK	Ortayu	8.40	319	⇑Lg	Lg	11 35 06.5	
	7.8nm,0.5s						
KURBB	Kurchatov Arra	8.55	351	⇓Lg	Lg	11 35 10.2	
	22nm,0.8s						
KURK	Kurchatov	8.64	352	⇓Lg	Lg	11 35 10.6	
	23nm,0.7s						
ZALV	Zalesovo Beam	12.10	12	Pn	Pn	11 33 24.8	-1.3
	0.3nm,0.3s,baz=193,slow=9.8,SNR=1.7						
SONM	Songino Array	19.05	64	Pn	P	11 34 52.5	-3.7
	0.3nm,0.3s,baz=262,slow=10,SNR=4.1						

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*IDC **01** 11:47:19.6±1.2, 0°.72S×92°.18W, h0^{km}, mb3.8/7, mb1 4.1/8, mb1mx3.9/24, mbtmp3.8/8, ML3.5/1, MS3.4/4, Ms1 3.4/4, ms1mx3.0/28, Error ellipse: s-maj=60.5km s-min=22.3km az=56.0*
ISC 01 11:47:20.9±1.2**, 0°.8S**±0°.3×**92°.3W**±0°.3**, h10^{km}, n16,** σ**0s.81**/11**, mb3.8**/7**, Galapagos Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	Las Juntas de	13.18	33	LR	LR	11 54 20.6	
	comp=Z,136nm,19.5s,baz=276,slow=32						
ATAH	Atahualpa	15.21	115	Pn	Pn	11 50 57.0	+0.6
	0.2nm,0.3s,baz=291,slow=14,SNR=2.1						
ATAH				LR	LR	11 55 30.7	
	comp=Z,136nm,20.7s,baz=301,slow=32						
NNA	Nana	18.94	127	LR	LR	11 57 21.1	
	comp=Z,64nm,19.4s,baz=302,slow=32						
SDV	Santo Domingo	23.59	66	LR	LR	12 00 22.0	
	comp=Z,150nm,21.0s,baz=256,slow=33						
LPAZ	La Paz	28.36	124	P	P	11 53 16.1	0.0
	0.8nm,0.7s,baz=299,slow=7.2,SNR=5.2						
TXAR	Lajitas Array	31.85	341	P	P	11 53 47.4	+1.0
	0.6nm,0.9s,baz=154,slow=11,SNR=3.5						
H03N2	Juan Fernandez	34.83	160	T	T	12 30 39.4	
	baz=338,slow=77,SNR=6.0						
H03N1	Juan Fernandez	34.84	160	T	T	12 30 24.9	
	baz=338,slow=77,SNR=9.3						
H03N3	Juan Fernandez	34.85	160	T	T	12 30 38.6	
	baz=338,slow=77,SNR=7.0						
NVAR	Mina Array Bea	45.78	331	P	P	11 55 44.2	+1.1
	0.9nm,0.7s,baz=162,slow=9.1,SNR=9.4						
PDAR	Pinedale Array	46.05	342	P	P	11 55 45.1	0.0
	0.4nm,0.6s,baz=165,slow=6.2,SNR=4.8						
PDAR				PcP	PcP	11 57 21.6	-0.1
	1.2nm,1.2s,baz=108,slow=4.8,SNR=3.9						
ULM	Lac du Bonnet	50.91	357	P	P	11 56 21.0	-1.2
	1.2nm,0.7s,baz=148,slow=5.3,SNR=3.6						
YKA	Yellowknife Ar	65.31	349	P	P	11 58 02.2	-0.7
	0.8nm,0.8s,baz=149,slow=6.6,SNR=10						
ILAR	Eielson Array	76.34	339	P	P	11 59 10.4	+0.4
	1.7nm,0.9s,baz=144,slow=5.0,SNR=19						
ASAR	Alice Springs	129.02	238	PKP	PKPdf	12 06 29.8	-0.4
	1.3nm,1.1s,baz=126,slow=1.2,SNR=5.0						
WRA	Warramunga Arr	129.92	243	PKP	PKiKP	12 06 32.0	-0.6
	0.5nm,0.8s,baz=92,slow=1.6,SNR=2.7						

IDC 01 12:29:25.2±4.0**, 19°.54S**×**177°.22W, h0^{km}, mb3.9**/4**, mb1 4.2**/4**, mb1mx3.8**/31**, mbtmp3.9**/4**, Error ellipse: s-maj=127.6km s-min=35.2km az=137.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	45.46	256	P	P	12 37 46.0	-0.4
	1.1nm,0.6s,baz=90,slow=8.0,SNR=23						
WRA	Warramunga Arr	45.47	261	P	P	12 37 46.6	0.0
	0.8nm,0.3s,baz=97,slow=7.6,SNR=27						
MJAR	Matsushiro Arr	69.88	323	P	P	12 40 38.2	+0.1
	0.8nm,0.5s,baz=137,slow=6.0,SNR=4.7						
ILAR	Eielson Array	87.22	13	P	P	12 42 12.8	-0.2
	0.4nm,0.7s,baz=213,slow=5.7,SNR=5.0						

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*DJA **01** 12:37:51.0±0.7, 9°S±3°×12°5E±°, h12^{km}±6^{km}, M4.3/9, mB5.0/3, mb4.5/7, MLv4.2/9, Mw(mB)4.3/3*
*IDC **01** 12:37:53.5±4.2, 9°.59S×125°.25E, h74^{km}±47^{km}, mb3.6/2, mb1 3.8/5, mb1mx3.3/38, mbtmp3.9/5, ML3.8/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/34, Error ellipse: s-maj=46.8km s-min=14.6km az=36.0*
ISC 01 12:37:51.6±0.8**, 9°.57S**±0°.06×**125°.18E**±0°.06**, h33^{km}, n20,** σ**2s.05**/27**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.92	258	P	Pn	12 38 06.6	-1.7
BATI	Baumata	1.62	247	P	Pb	12 38 19.6	-1.3
	103nm,0.3s,baz=118,slow=2.6,SNR=78						
BATI				S	Sb	12 38 42.3	+1.2
	126nm,0.3s,baz=143,slow=23,SNR=9.6						
BATI				LR	LR	12 38 48.9	
	comp=Z,223nm,21.1s,baz=134,slow=33						
BATI	Baumata	1.62	247	P	Pb	12 38 19.4	-1.6
BATI				S	Sb	12 38 42.3	+1.2
MMRI	Maumere	3.05	287	P	Pn	12 38 36.7	-0.8
MMRI				S	Sn	12 39 11.4	-1.5
EDFI	Ende, Flores	3.54	283	P	Pn	12 38 44.0	-0.4
EDFI				S	Sn	12 39 23.3	-1.9
BASI	Baing, Sumba	4.58	261	P	Pn	12 39 00.6	+2.0
WBSI	Waikabubak, Su	5.71	269	P	Pn	12 39 12.0	-2.2
	0.2nm36nm,0.7s						
BNSI	Bone	7.19	315	P	Pn	12 39 32.5	-2.0
	0.1nm21nm,0.8s						
PLAI	Plampang	7.34	275	P	Pn	12 39 36.0	-0.6
	0.1nm20nm,0.5s						
SANI	Sanana	7.51	6	P	Pn	12 39 40.0	+1.0
	0.1nm712nm32nm,0.5s						
FITZ	Fitzroy Crossi	8.49	177	P	Pn	12 39 53.6	+1.2
	0.8nm,0.3s,baz=357,slow=10.0,SNR=28						
FITZ				S	Sn	12 41 27.5	+0.4
	2.0nm,0.3s,baz=90,slow=9.9,SNR=8.5						
LUWI	Luwuk	8.80	344	P	Pn	12 39 56.7	0.0
	2μm54nm,1.1s						
LBMI	Labuha	9.17	15	P	Pn	12 39 58.9	-2.8
SIJI	Sorong	10.55	35	LR	LR	12 44 48.4	
	comp=Z,55nm,20.7s,baz=100,slow=39						
WRA	Warramunga Arr	13.59	140	P	Pn	12 41 01.6	-0.6
	0.4nm,0.3s,baz=317,slow=13,SNR=24						
WRA				S	Sn	12 43 31.5	-0.7
	0.5nm,0.3s,baz=319,slow=24,SNR=6.1						
ASAR	Alice Springs	16.31	150	P	Pn	12 41 38.8	+0.4
	0.3nm,0.3s,baz=316,slow=11,SNR=45						
ASAR				S	Sn	12 44 37.2	-1.2
	0.3nm,0.3s,baz=316,slow=21,SNR=6.6						
KSH	Kashi	66.81	320	P	P	12 48 43.8	+3.4
KSH				pP	pP	12 48 47.5	-3.0
KSH				PP	PP	12 51 12.9	+5.0
KSH				S	S	12 57 33.9	+3.1
KSH	Kashi	66.81	320	SS	SS	13 01 54.0	+4.5
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,200nm,4.3s						
KSH				LR	LR		
	comp=N,25nm,5.3s						
KSH				LR	LR		
	comp=E,37nm,4.6s						
KSH				LR	LR		
	comp=Z,160nm,11.2s						
MKAR	Makanchi Array	67.88	330	P	P	12 48 45.2	-1.7
	comp=Z,0.8nm,0.5s,baz=134,slow=5.4,SNR=2.6						
ZALV	Zalesovo Beam	71.88	336	P	P	12 49 08.3	-2.9
	comp=Z,0.8nm,0.7s,baz=152,slow=4.3,SNR=2.4						

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*NEIC **01** 13:01:36.5±1.2, 10°.2S±0°.1×161°.11E±0°.07, h10^{km}±1^{km}, mb4.6/9, Error ellipse: s-maj=21.3km s-min=4.0km az=34.0*
*IDC **01** 13:01:42.0±0.8, 10°.25S×161°.02E, h48^{km}±6^{km}, mb3.9/15, mb1 4.1/17, mb1mx3.9/41, mbtmp4.2/17, MS3.4/10, Ms1 3.4/10, ms1mx3.2/35, Error ellipse: s-maj=16.2km*

s-min=8.4km az=37.0

ISC 01 13:01:40.8±0.5**, 10°.27S**±0°.07×**161°.09E**±0°.09**, h35km, n40, σ1s.48**/36**, mb4.4**/18**, MS3.5**/12**, 1C, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.40**	**306**	P	**Pn**	**13 02 04.9**	**+1.1**
	118nm,0.3s,baz=171,slow=3.7,SNR=80						
HNR				S	**Sn**	**13 02 20.8**	**-0.2**
	740nm,0.3s,baz=176,slow=20,SNR=15						
HNR				LR	LR	13 02 22.1	
	comp=Z,116nm,20.0s,baz=158,slow=30						
HNR	**Honiara**	**1.40**	**306**	*e*P	Pn	13 02 12.0	+8.2
HNR	**Honiara**	**1.40**	**306**		**Pn**	**13 02 04.5**	**+0.7**
HNR					**Sn**	**13 02 20.4**	**-0.7**
DZM	**Mont Dzumac**	**12.81**	**157**	*e*Pn	Pn	13 04 46.0	+5.5
	6.5nm,0.2s						
DZM				*e*Sn	**Sn**	**13 06 57.7**	**-4.4**
	2.8nm,0.3s						
DZM				*e*LR	LR	13 07 39.9	
	comp=Z,429nm,25.2s						
DZM	**Mont Dzumac**	**12.81**	**157**	P	**Pn**	**13 04 44.2**	**+3.6**
	1.4nm,0.3s,baz=315,slow=10,SNR=66						
DZM				S	**Sn**	**13 07 01.3**	**-0.7**
	0.2nm,0.3s,baz=86,slow=15,SNR=2.0						
DZM	**Mont Dzumac**	**12.81**	**157**		Pn	13 04 46.1	+5.5
CTA	**Charters Tower**	**17.31**	**234**	P	**Pn**	**13 05 41.0**	**+1.0**
	0.4nm,0.3s,baz=57,slow=16,SNR=15						
CTAO	**Charters Tower**	**17.31**	**234**	P	**P**	**13 05 42.7**	**+1.7**
EIDS	**Eidsvold**	**17.77**	**211**	P	**Pn**	**13 05 45.1**	**-0.4**
WRA	**Warramunga Arr**	**27.52**	**246**	P	**P**	**13 07 24.1**	**-0.2**
	2.6nm,1.1s,baz=76,slow=9.0,SNR=11						
WRA				LR	LR	13 18 52.7	
	comp=Z,75nm,18.3s,baz=185,slow=38						
STKA	**Stephens Creek**	**28.07**	**217**	LR	LR	13 17 59.1	
	comp=Z,155nm,20.9s,baz=40,slow=35						
ASAR	**Alice Springs**	**29.14**	**239**	P	**P**	**13 07 38.3**	**-0.5**
	2.0nm,0.9s,baz=68,slow=9.4,SNR=13						
ASAR				LR	LR	13 19 17.8	
	comp=Z,204nm,18.5s,baz=60,slow=36						
RPZ	**Rata Peaks**	**34.43**	**167**	LR	LR	13 20 49.2	
	comp=Z,94nm,18.7s,baz=342,slow=33						
FITZ	**Fitzroy Crossi**	**35.19**	**253**	P	**P**	**13 08 31.0**	**-0.8**
	4.2nm,0.9s,baz=89,slow=7.1,SNR=9.7						
FITZ	**Fitzroy Crossi**	**35.19**	**253**	P	**P**	**13 08 31.0**	**-0.8**
FITZ				IAmb	IAmb	13 08 32.1	
	comp=Z,6.6nm,1.1s						
BATI	**Baumata**	**36.81**	**267**	P	**P**	**13 08 45.3**	**-0.5**
	comp=Z,17nm,0.6s,baz=107,slow=11,SNR=2.4						
DAV	**Davao City (W)**	**39.33**	**295**	LR	LR	13 24 34.2	
	comp=Z,16nm,21.5s,baz=203,slow=35						
KAPI	**Kappang**	**41.27**	**274**	LR	LR	13 26 55.0	
	comp=Z,17nm,20.4s,baz=116,slow=37						
PPT2	**Papeete2**	**48.33**	**104**	*e*LR	LR	13 24 09.6	
	comp=Z,78nm,23.0s						
TBI	**Tubuai**	**48.87**	**112**	*e*LR	LR	13 24 29.1	
	comp=Z,82nm,29.2s						
LEM	**Lembang**	**52.94**	**269**	P	**P**	**13 10 53.6**	**-0.8**
	comp=Z,15nm,0.5s,baz=323,slow=16,SNR=4.2						
LEM				LR	LR	13 35 34.2	
	comp=Z,33nm,19.8s,baz=246,slow=38						
JKA	**Kamikawa-asahi**	**56.67**	**344**	P	**P**	**13 11 20.9**	**+0.3**
ASAJ	**Asahikawa**	**56.67**	**344**	P	**P**	**13 11 20.9**	**+0.3**
	comp=Z,3.7nm,0.8s,baz=180,slow=5.1,SNR=2.9						
KSRS	**Korea Array**	**56.74**	**329**	P	**P**	**13 11 20.3**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=134,slow=6.9,SNR=3.2						
KSRS				LR	LR	13 34 07.2	
	comp=Z,25nm,20.2s,baz=133,slow=34						
USRK	**Ussuriysk Ar.**	**60.30**	**336**	P	**P**	**13 11 45.5**	**-0.4**
	comp=Z,2.9nm,0.8s,baz=164,slow=6.6,SNR=6.3						
PETK	**Petropavlovsk-**	**63.19**	**358**	LR	LR	13 35 33.2	
	comp=Z,43nm,21.7s,baz=71,slow=32						
CMAR	**Chiang Mai Arr**	**67.62**	**295**	P	**P**	**13 12 33.4**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=145,slow=6.5,SNR=1.4						
CMAR				pP	**pP**	**13 12 46.6**	**+1.7**
	comp=Z,3.0nm,1.1s,baz=118,slow=4.4,SNR=2.8						
SONM	**Songino Array**	**75.38**	**325**	P	**P**	**13 13 20.0**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=135,slow=5.5,SNR=4.0						
SONM				pP	**pP**	**13 13 33.6**	**+2.4**
	comp=Z,2.1nm,0.7s,baz=143,slow=7.0,SNR=6.4						
BILL	**Bilibino**	**78.20**	**2**	P	**P**	**13 13 36.2**	**0.0**
BILL				IAmb	IAmb	13 13 37.3	
	comp=Z,9.2nm,1.2s						
QSPA	**South Pole Qui**	**79.73**	**180**	P	**P**	**13 13 45.5**	**+0.5**
QSPA				IAmb	IAmb	13 13 46.6	
	comp=Z,5.4nm,0.8s						
PMR	**Palmer**	**81.47**	**22**	P	**P**	**13 13 53.0**	**-1.1**
PMR				IAmb	IAmb	13 14 11.5	
	comp=Z,5.5nm,0.7s						
GHO	**Glory Hole Cre**	**81.66**	**22**	P	**P**	**13 13 54.5**	**-0.7**
FID	**Port Fidalgo**	**81.93**	**23**	P	P	13 13 54.5	-2.1
MAW	**Mawson**	**83.70**	**202**	P	**P**	**13 14 05.6**	**-0.1**
	comp=Z,6.6nm,0.8s,baz=96,slow=6.3,SNR=7.7						
MAW				LR	LR	13 45 57.4	
	comp=Z,56nm,21.4s,baz=64,slow=32						
MAW	**Mawson**	**83.70**	**202**	IAmb	IAmb	13 14 07.5	
	comp=Z,2.1nm,0.9s						
ILAR	**Eielson Array**	**84.29**	**20**	P	**P**	**13 14 08.7**	**0.0**
	comp=Z,0.3nm,0.7s,baz=242,slow=5.2,SNR=4.9						
ILAR				pP	**pwP**	**13 14 24.2**	**+2.6**
	comp=Z,0.5nm,0.5s,baz=246,slow=5.1,SNR=4.3						
NVAR	**Mina Array Bea**	**89.06**	**51**	P	**P**	**13 14 32.5**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=244,slow=6.0,SNR=6.3						
MKAR	**Makanchi Array**	**89.85**	**318**	P	**P**	**13 14 34.2**	**-1.9**
	comp=Z,0.4nm,0.8s,baz=114,slow=4.4,SNR=3.6						
MKAR				pP	**pP**	**13 14 48.5**	**+2.0**
	comp=Z,1.1nm,0.8s,baz=101,slow=6.3,SNR=7.0						
SYO	**Syowa Base**	**91.15**	**198**	⇑*e*P	**P**	**13 14 40.2**	**-1.5**
YKA	**Yellowknife Ar**	**96.41**	**28**	P	**P**	**13 15 05.3**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=258,slow=6.5,SNR=3.5						

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*IDC **01** 13:18:54.6±1.0, 11°.25S×161°.34E, h0km, mb3.9/7, mb1 4.0/9, mb1mx3.8/39, mbtmp3.9/9, ML3.3/2, Error ellipse: s-maj=30.4km s-min=20.8km az=76.0*

*NEIC **01** 13:18:56.5±2.5, 11°.40S±0°.09×161°.26E±0°.10, h10km±1km, mb4.1/7, Error ellipse: s-maj=17.9km s-min=13.9km az=46.0*

ISC 01 13:18:59.4±0.8**, 11°.36S**±0°.09×**161°.2E**±0°.1**, h35km, n17, σ1s.58**/18**, mb4.0**/11**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.29**	**327**	Pn	**Pn**	**13 19 33.1**	**-1.5**
	26nm,0.3s,baz=155,slow=7.9,SNR=12						
HNR				Sn	**Sn**	**13 20 01.1**	**-0.6**
	24nm,0.3s,baz=14,slow=20,SNR=5.5						
HNR	**Honiara**	**2.29**	**327**		**Pn**	**13 19 34.5**	**-0.2**
DZM	**Mont Dzumac**	**11.76**	**156**	Pn	**Pn**	**13 21 44.5**	**-0.4**
	0.1nm,0.3s,baz=323,slow=20,SNR=2.0						
EIDS	**Eidsvold**	**16.92**	**213**	Pn	**Pn**	**13 22 52.4**	**-1.2**
EIDS				IAmb	IAmb	13 23 01.2	
	comp=Z,8.4nm,1.2s						
WR0	**Warramunga Arr**	**27.05**	**248**	P	**P**	**13 24 35.6**	**-3.1**
WR0				IAmb	IAmb	13 24 49.5	
	comp=Z,5.4nm,1.4s						
WB0	**Warramunga Arr**	**27.13**	**249**	P	**P**	**13 24 41.3**	**+1.8**
WB0				IAmb	IAmb	13 24 42.4	
	comp=Z,6.5nm,1.2s						
WRAB	**Tennant Creek**	**27.21**	**248**	P	**P**	**13 24 42.0**	**+1.8**
WRAB				IAmb	IAmb	13 24 48.4	
	comp=Z,7.4nm,1.2s						
WB2	**Warramunga Arr**	**27.21**	**248**	P	**P**	**13 24 41.9**	**+1.7**
WB2				IAmb	IAmb	13 24 47.7	
	comp=Z,8.3nm,1.4s						
WRA	**Warramunga Arr**	**27.23**	**248**	P	**P**	**13 24 41.8**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=77,slow=9.1,SNR=6.3						
STKA	**Stephens Creek**	**27.29**	**219**	P	**P**	**13 24 40.7**	**-0.1**
ASAR	**Alice Springs**	**28.72**	**241**	P	**P**	**13 24 55.0**	**+1.3**
	comp=Z,0.4nm,0.9s,baz=70,slow=11,SNR=2.5						
TOO	**Toolangi**	**29.68**	**206**	P	**P**	**13 24 60.0**	**-2.0**
VNDA	**Vanda**	**66.15**	**180**	P	**P**	**13 29 44.2**	**+1.4**
	comp=Z,0.7nm,0.8s,baz=345,slow=7.0,SNR=5.3						
SONM	**Songino Array**	**76.35**	**325**	P	**P**	**13 30 46.7**	**+1.6**
	comp=Z,1.6nm,0.7s,baz=142,slow=5.7,SNR=9.0						
ILAR	**Eielson Array**	**85.26**	**20**	P	**P**	**13 31 32.2**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=238,slow=5.7,SNR=6.3						
MKAR	**Makanchi Array**	**90.74**	**318**	P	**P**	**13 31 59.5**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=96,slow=5.3,SNR=12						
YKA	**Yellowknife Ar**	**97.30**	**28**	P	**P**	**13 32 27.4**	**-1.1**
	comp=Z,0.1nm,0.4s,baz=260,slow=4.3,SNR=4.4						

JMA 01 13:20:09.8, 35°.59N×135°.05E, h10km, M3.1, 1C-4D

Broadband fault plane solution: P waves. NP1: φs27.00000°, δ33.00000°, λ139.00000°. **NP2:** φs154.00000°, δ69.00000°, λ64.00000°. **Principal axes:** T Plg58.0000°, Azm28.0000°; N Plg24.0000°, Azm164.0000°; P Plg20.0000°, Azm263.0000°; **Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKY	**Yasaka**	**0.06**	**49**	⇓P	Pg	13 20 11.9	0.0
JKY				S	Sg	13 20 13.3	-0.2
JKSM	**Kasumi**	**0.32**	**270**	⇓P	Pg	13 20 16.2	+0.1
JKSM				S	Sg	13 20 20.5	+0.2
JWT	**Wachi**	**0.42**	**137**	⇓P	Pg	13 20 17.9	-0.1
JWT				S	Sg	13 20 23.4	-0.2
JKS	**Kasai**	**0.63**	**196**	⇑P	Pg	13 20 21.9	-0.1
JKS				S	Sg	13 20 30.1	-0.1
JAD	**Aida**	**0.97**	**228**	⇓P	Pg	13 20 27.5	-1.0
JAD				S	Sg	13 20 40.4	-0.7
MAT	**Matsushiro**	**2.73**	**69**	P	Pg	13 21 02.0	-0.1
MAT				S	Sg	13 21 38.0	+0.5

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*IDC **01** 13:25:26.4±1.4, 12°.28N×86°.38W, h0km, mb3.6/7, mb1 4.0/10, mb1mx3.8/34, mbtmp3.7/10, ML3.5/3, MS3.7/16, Ms1 3.7/16, ms1mx3.5/32 Error ellipse: s-maj=42.8km s-min=21.0km az=42.0*

*SNET **01** 13:25:27.7±1.5, 12°.21N×86°.57W, h6km±165km, ML4.3*

*INET **01** 13:25:27.5, 12°.37N×86°.45W, h3km, ML4.7*

*UCR **01** 13:25:27.4±2.0, 12°.31N×86°.51W, h4km±6km, ML4.1, mb4.8(NEIC)*

*NEIC **01** 13:25:28.2±2.2, 12°.50N±0°.05×86°.27W±0°.06, h9km±5km, mb4.8/2, Error ellipse: s-maj=10.4km s-min=2.9km az=53.0*

ISC 01 13:25:27.2±1.2**, 12°.45N**±0°.04×**86°.36W**±0°.04**, h3km**±9km**, n73, σ1s.16**/79**, MS3.8**/13**, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**0.33**	**278**	*e*P	**Pg**	**13 25 33.1**	**-0.5**
MASN	**Masaya**	**0.51**	**156**	*e*P	**Pg**	**13 25 36.8**	**-0.2**
MATN	**Matagalpa**	**0.64**	**42**	*e*P	**Pn**	**13 25 42.4**	**-0.8**
MATN	**Matagalpa**	**0.64**	**42**		**Pn**	**13 25 42.6**	**-0.6**
CRIN	**San Cristobal**	**0.72**	**290**	*e*P	**Pg**	**13 25 40.4**	**-0.6**
CRIN	**San Cristobal**	**0.72**	**290**		**Pg**	**13 25 40.5**	**-0.4**
ACON	**Acoyapa**	**1.26**	**112**	*e*P	**Pb**	**13 25 51.3**	**-0.2**
ACON	**Acoyapa**	**1.26**	**112**		**Pg**	**13 25 50.9**	**-0.4**
CNCH	**Conchagua**	**1.65**	**300**	*e*P	**Pn**	**13 25 55.8**	**-1.4**
CNCH				*e*S	**Sg**	**13 26 20.2**	**-0.2**
CNCH	**Conchagua**	**1.65**	**300**	*e*P	**Pn**	**13 25 55.8**	**-1.4**
CNCH				*e*S	**Sg**	**13 26 20.2**	**-0.2**
LCND	**La Caada**	**1.72**	**300**	*e*P	**Pn**	**13 25 57.3**	**-0.7**
LCND				*e*S	**Sn**	**13 26 19.6**	**-0.8**
LCND				IAML		13 26 25.0	
	comp=Z,5μm,0.6s						
LCND	**La Caada**	**1.72**	**300**	*e*P	**Pn**	**13 25 57.3**	**-0.7**
LCND				*e*S	**Sn**	**13 26 19.6**	**-0.8**
LCND				IAML		13 26 25.0	
	comp=Z,5μm,0.6s						
TGUH	**Tegucigalpa,Un**	**1.82**	**331**	*e*P	**Pb**	**13 26 00.8**	**-0.5**
TGUH				*e*S	**Sg**	**13 26 26.8**	**+0.9**
TGUH	**Tegucigalpa,Un**	**1.82**	**331**		**Pb**	**13 26 00.6**	**-0.7**
TGUH	**Tegucigalpa,Un**	**1.82**	**331**	*e*P	**Pb**	**13 26 00.8**	**-0.5**
TGUH				*e*S	**Sg**	**13 26 26.8**	**+0.9**
GB1A	**Borinquen Arri**	**1.88**	**150**	*e*P	**Pn**	**13 26 00.2**	**0.0**
GB1A				*i* S	**Sn**	**13 26 24.8**	**+0.3**
GBS3	**Finca Las Img**	**1.88**	**152**	*i* P	**Pn**	**13 25 59.5**	**-0.8**
BUEV	**Buena Vista**	**1.89**	**150**	*e*P	**Pn**	**13 26 00.1**	**-0.3**
NY14	**Universidad de**	**1.97**	**156**	*i* P	**Pn**	**13 26 00.3**	**-1.1**
NY14				*i* S	**Sn**	**13 26 25.3**	**-1.3**
JUCU	**Jucuar¡n**	**2.01**	**294**	*e*P	**Pn**	**13 26 00.2**	**-1.8**
JUCU				*e*S	**Sn**	**13 26 26.4**	**-1.3**
JUCU				IAML		13 26 33.1	
	comp=Z,2μm,0.4s						
JUCU	**Jucuar¡n**	**2.01**	**294**	*e*P	**Pn**	**13 26 00.2**	**-1.8**
JUCU				*e*S	**Sn**	**13 26 26.4**	**-1.3**
JUCU				IAML		13 26 33.1	
	comp=Z,2μm,0.4s						
ESPN	**Las Esperanzas**	**2.03**	**97**	*e*P	**Pb**	**13 26 03.8**	**-0.9**
ESPN	**Las Esperanzas**	**2.03**	**97**		**Pn**	**13 26 02.6**	**+0.4**
LIM1	**Limonal**	**2.06**	**148**	*i* P	**Pn**	**13 26 01.8**	**-0.8**
BLLM	**Bellamira**	**2.08**	**298**	*e*P	**Pn**	**13 26 03.1**	**+0.2**
BLLM	**Bellamira**	**2.08**	**298**	*e*P	**Pn**	**13 26 03.1**	**+0.2**
FAGO	**Alcalda de S**	**2.10**	**306**	*e*P	**Pn**	**13 26 02.6**	**-0.6**
FAGO	**Alcalda de S**	**2.10**	**306**	*e*P	**Pn**	**13 26 02.6**	**-0.6**
COLC	**Colonia**	**2.11**	**147**	*i* P	**Pn**	**13 26 02.9**	**-0.5**
COLC				*i* P	**Pn**	**13 26 02.9**	**-0.5**
CUI	**Cuipilapa**	**2.14**	**147**	*i* P	**Pn**	**13 26 03.5**	**-0.3**
PACA	**Pacayal**	**2.16**	**298**	*e*P	**Pn**	**13 26 02.8**	**-1.4**
PACA				*e*S	**Sn**	**13 26 31.1**	**-0.5**
PACA	**Pacayal**	**2.16**	**298**	*e*P	**Pn**	**13 26 02.8**	**-1.4**
PACA				*e*S	**Sn**	**13 26 31.1**	**-0.5**
ACAL	**Aguas Claras**	**2.23**	**144**	*i* P	**Pn**	**13 26 04.2**	**-0.8**
PLVR	**Palo Verde**	**2.31**	**155**	*e*P	**Pn**	**13 26 05.8**	**-0.6**
TECA	**Tecapa**	**2.33**	**297**	*e*P	**Pn**	**13 26 06.3**	**-0.2**
TECA				*e*S	**Sn**	**13 26 36.2**	**+0.4**
TECA	**Tecapa**	**2.33**	**297**	*e*P	**Pn**	**13 26 06.3**	**-0.2**
TECA				*e*S	**Sn**	**13 26 36.2**	**+0.4**
COEB	**Comit de Eme**	**2.36**	**296**	*e*P	**Pn**	**13 26 06.4**	**-0.5**
COEB	**Comit de Eme**	**2.36**	**296**	*e*P	**Pn**	**13 26 06.4**	**-0.5**
JTS	**Las Juntas de**	**2.56**	**147**	Pn	**Pn**	**13 26 08.6**	**-0.9**
	comp=Z,50nm,0.3s,baz=16,slow=12,SNR=103						
JTS				Sn	**Sn**	**13 26 41.1**	**0.0**
	comp=Z,46nm,0.3s,baz=3.3,slow=20,SNR=7.5						
JTS				LR	LR	13 26 59.1	
	comp=Z,401nm,19.2s,baz=30,slow=38						
JTS	**Las Juntas de**	**2.56**	**147**	*e*P	**Pn**	**13 26 09.0**	**-0.5**
JTS				*e*P	**Pn**	**13 26 09.0**	**-0.5**
COEG	**Centro de Oper**	**2.72**	**296**	*e*P	**Pn**	**13 26 11.7**	**-0.1**
COEG				IAML		13 26 52.6	
	comp=Z,710nm,0.4s						
COEG	**Centro de Oper**	**2.72**	**296**	*e*P	**Pn**	**13 26 11.7**	**-0.1**
COEG				IAML		13 26 52.6	
	comp=Z,710nm,0.4s						
SNET	**Serv Nac Est T**	**3.06**	**294**		**Pn**	**13 26 17.1**	**+0.7**
HDC	**Heredia**	**3.29**	**138**		**Pn**	**13 26 22.5**	**+2.8**
CVTR	**Volcan Turrial**	**3.52**	**133**	*e*P	**Pn**	**13 26 24.4**	**+1.3**
LCR2	**La Lucha 2**	**3.55**	**139**	*e*P	**Pn**	**13 26 24.8**	**+1.4**
APG	**El Apazote**	**4.72**	**303**	Pn	**Pn**	**13 26 40.4**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=186,slow=2.5,SNR=10						
CCIG	**Comitan**	**6.77**	**305**		**Pn**	**13 27 07.8**	**+0.1**
BCIP	**Isla Barro Col**	**7.19**	**116**	Pn	**Pn**	**13 27 12.6**	**-0.7**
CMIG	**Matias Romero**	**9.44**	**300**	Pn	**Pn**	**13 27 45.8**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=106,slow=6.1,SNR=4.1						
CMIG				Sn	**Sn**	**13 29 32.1**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=67,slow=22,SNR=1.7						
PAYG	**Puerto Ayora**	**13.61**	**197**	Pn	**Pn**	**13 28 43.3**	**+2.0**
ROSC	**El Rosal**	**14.10**	**121**	LR	LR	13 35 25.6	
	comp=Z,214nm,18.3s,baz=20,slow=43						
SDV	**Santo Domingo**	**15.86**	**101**	LR	LR	13 36 07.4	
	comp=Z,196nm,20.9s,baz=258,slow=40						
GRTK	**Grand Turk**	**17.11**	**56**	Pn	**Pn**	**13 29 24.3**	**-3.2**
GRTK				IAmb	IAmb	13 29 41.6	
	comp=Z,119nm,1.1s						
SJG	**San Juan**	**20.28**	**71**	LR	LR	13 38 14.9	
	comp=Z,459nm,19.6s,baz=278,slow=38						
ATAH	**Atahualpa**	**21.01**	**157**	LR	LR	13 37 22.3	
	comp=Z,439nm,21.9s,baz=332,slow=34						
TKL	**Tuckaleechee C**	**23.22**	**5**	P	**P**	**13 30 38.4**	**+3.0**
	comp=Z,3.6nm,0.9s,baz=157,slow=6.0,SNR=2.5						
TKL				LR	LR	13 39 23.3	
	comp=Z,112nm,21.5s,baz=180,slow=36						
TKL	**Tuckaleechee C**	**23.22**	**5**	IAmb	IAmb	13 30 41.8	
	comp=Z,26nm,1.4s						
TXAR	**Lajitas Array**	**23.26**	**319**	P	**P**	**13 30 36.8**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=138,slow=10.0,SNR=5.1						
LPIG	**La Paz**	**25.47**	**300**	LR	LR	13 40 45.4	
	comp=Z,299nm,20.8s,baz=116,slow=36						
NNA	**Nana**	**26.05**	**158**	LR	LR	13 40 22.4	
	comp=Z,72nm,20.8s,baz=315,slow=35						
PTGA	**Pitinga**	**29.29**	**115**	LR	LR	13 45 00.7	
	comp=Z,89nm,18.8s,baz=293,slow=40						
LPAZ	**La Paz**	**33.77**	**147**	LR	LR	13 46 50.6	
	comp=Z,151nm,20.3s,baz=316,slow=38						
PDAR	**Pinedale Array**	**36.28**	**331**	P	**P**	**13 32 33.7**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=150,slow=9.3,SNR=2.0						
NVAR	**Mina Array Bea**	**38.41**	**318**	P	**P**	**13 32 52.2**	**+1.9**
	comp=Z,0.4nm,0.7s,baz=130,slow=7.9,SNR=3.7						
NVAR				LR	LR	13 51 27.2	
	comp=Z,203nm,19.8s,baz=151,slow=41						
SCHQ	**Schefferville**	**44.98**	**16**	LR	LR	13 51 58.4	
	comp=Z,86nm,19.7s,baz=24,slow=35						
BDFB	**Brasilia**	**47.11**	**125**	LR	LR	13 56 35.4	
	comp=Z,131nm,18.5s,baz=290,slow=40						
YKA	**Yellowknife Ar**	**53.89**	**344**	P	**P**	**13 34 51.6**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=140,slow=7.9,SNR=12						
PLCA	**Paso Flores**	**54.91**	**165**	LR	LR	13 53 37.8	
	comp=Z,46nm,18.6s,baz=6.0,slow=31						
ILAR	**Eielson Array**	**66.45**	**336**	P	**P**	**13 36 17.0**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=136,slow=4.0,SNR=5.4						
ILAR				LR	LR	14 09 02.5	
	comp=Z,74nm,19.9s,baz=118,slow=39						
ESDC	**Sonseca Array**	**76.35**	**52**	P	**P**	**13 37 18.3**	**+0.3**
	comp=Z,1.4nm,0.9s,baz=285,slow=5.1,SNR=6.4						
ESDC				LR	LR	14 08 25.0	
	comp=Z,40nm,18.7s,baz=0.0,slow=34						
ASAR	**Alice Springs**	**140.26**	**248**	PKP	**PKPdf**	**13 44 55.0**	**-3.4**
	comp=Z,0.3nm,0.8s,baz=94,slow=3.0,SNR=1.9						
WRA	**Warramunga Arr**	**140.29**	**254**	PKP	**PKPdf**	**13 44 55.6**	**-2.9**
	comp=Z,0.3nm,0.9s,baz=98,slow=2.5,SNR=1.8						

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*IDC **01** 13:36:51.3±1.4, 5°.58S×153°.52E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/23, mbtmp3.9/5, MS3.4/1, Ms1 3.3/1, ms1mx2.5/31, Error ellipse: s-maj=44.4km s-min=22.5km az=117.0*

*NEIC **01** 13:36:57.1±2.1, 5°.5S±0°.1×153°.4E±0°.1, h35km±2km, mb4.1/9, Error ellipse: s-maj=23.9km s-min=16.9km az=228.0*

ISC 01 13:36:58.2±0.8**, 5°.4S**±0°.1×**153°.3E**±0°.1**, h43km, n19, σ0s.95**/18**, mb4.0**/8**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.68**	**317**		**Pn**	**13 37 25.0**	**-0.2**
KRVT	**Keravat (AS076**	**1.70**	**311**	Pn	**Pn**	**13 37 25.2**	**-0.2**
	159nm,0.3s,baz=164,slow=1.4,SNR=251						
KRVT				Sn	**Sn**	**13 37 46.2**	**+0.2**
	240nm,0.3s,baz=51,slow=18,SNR=16						
KRVT				LR	LR	13 38 18.4	
	comp=Z,433nm,18.4s,baz=130,slow=45						
EIDS	**Eidsvold**	**19.94**	**186**	P	**P**	**13 41 27.0**	**+0.3**
EIDS				IAmb	IAmb	13 41 29.3	
	comp=Z,4.5nm,0.8s						
DZM	**Mont Dzumac**	**20.86**	**144**	P	Pn	13 41 39.6	+0.1
	comp=Z,2.6nm,0.5s,baz=187,slow=19,SNR=7.4						
DZM	**Mont Dzumac**	**20.86**	**144**	P	**P**	**13 41 37.0**	**+0.3**
DZM				IAmb	IAmb	13 41 56.6	
	comp=Z,16nm,1.5s						
WR0	**Warramunga Arr**	**23.29**	**230**	P	**P**	**13 42 01.8**	**-0.6**
WR0				IAmb	IAmb	13 42 14.1	
	comp=Z,8.3nm,1.2s						
WB0	**Warramunga Arr**	**23.29**	**231**	P	**P**	**13 42 02.2**	**-0.2**
WRAB	**Tennant Creek**	**23.42**	**230**	P	**P**	**13 42 03.2**	**-0.5**
WRAB				IAmb	IAmb	13 42 10.7	
	comp=Z,7.7nm,1.4s						
WB2	**Warramunga Arr**	**23.42**	**230**	P	**P**	**13 42 03.1**	**-0.6**
WB2				IAmb	IAmb	13 42 10.9	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	**23.43**	**230**	P	**P**	**13 42 03.1**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=53,slow=9.7,SNR=17						
AS31	**Alice Springs**	**26.05**	**224**	P	**P**	**13 42 30.2**	**+2.5**
ASAR	**Alice Springs**	**26.05**	**224**	P	**P**	**13 42 26.7**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=63,slow=9.0,SNR=13						
KNRA	**Kununurra**	**26.17**	**245**	P	**P**	**13 42 28.8**	**-0.1**
MSVF	**Nonsavu**	**27.09**	**119**	P	**P**	**13 42 37.0**	**-0.2**
STKA	**Stephens Creek**	**28.51**	**201**	LR	LR	13 55 26.6	
	comp=Z,74nm,18.3s,baz=204,slow=39						
PETK	**Petropavlovsk-**	**58.43**	**3**	P	**P**	**13 46 50.8**	**+1.4**
	comp=Z,5.0nm,0.8s,baz=165,slow=8.6,SNR=8.8						
ZALV	**Zalesovo Beam**	**81.96**	**326**	P	**P**	**13 49 13.7**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=114,slow=5.6,SNR=3.1						
ILAR	**Eielson Array**	**82.54**	**22**	P	**P**	**13 49 14.7**	**-1.6**
	comp=Z,0.2nm,0.7s,baz=242,slow=6.0,SNR=4.5						
TORD	**Torodi Ar. Bea**	**150.99**	**287**	PKPbc	**PKiKP**	**13 56 48.4**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=88,slow=2.7,SNR=7.4						

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*NDI **01** 13:40:03.4±2.5, 31°.84N×69°.31E, h10km, mb4.5, mb4.8(NEIC)*

*IDC **01** 13:40:08.1±0.5, 31°.76N×69°.96E, h0km, mb4.6/27, mb1 4.7/32, mb1mx4.6/46, mbtmp4.6/32, ML4.0/5, MS3.9/19, Ms1 3.9/19, ms1mx3.6/55, Error ellipse: s-maj=12.4km s-min=11.1km az=19.0*

*BJI **01** 13:40:09.9±0.0, 32°.03N×69°.96E, h13km, mB4.7/23, mb4.7/33, Ms4.2/23, Ms7 4.0/23*

*MOS **01** 13:40:12.5±1.0, 31°.86N×70°.04E, h41km, mb4.9/65, MS4.1/7, Error ellipse: s-maj=5.7km s-min=3.5km az=107.2*

*NEIC **01** 13:40:12.3±1.4, 31°.74N±0°.07×69°.93E±0°.09, h28km±4km, mb4.8/65, Error ellipse: s-maj=12.0km s-min=9.2km az=137.0*

*NNC **01** 13:40:16.8±8.3, 32°.15N×69°.89E, h52km±68km, mb4.7, Error ellipse: s-maj=67.3km s-min=57.5km az=147.0*

ISC 01 13:40:13.2±0.3**, 31°.73N**±0°.04×**70°.04E**±0°.04**, h35km, n336, σ1s.65**/330**, mb4.7**/124**, MS4.0**/34**, 26C-14D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THW	**Thamme Wali**	**1.79**	**53**	P	**Pn**	**13 40 42.4**	**+0.7**
SARP	**Sargodha**	**2.25**	**84**	P	**Pn**	**13 40 48.9**	**+1.0**
CEP	**Cherat**	**2.62**	**36**	P	**Pn**	**13 40 54.1**	**+1.0**
CEP				S	**Sn**	**13 41 27.0**	**+3.2**
KBL	**Kabul**	**2.93**	**344**	P	**Pn**	**13 40 59.1**	**+1.6**
KBL	**Kabul**	**2.93**	**344**	Pn	**Pn**	**13 40 59.0**	**+1.6**
THN	**Thein Dam**	**4.87**	**80**	*e*P	**Pn**	**13 41 26.0**	**+2.1**
THN				*e*S	**Sn**	**13 42 25.5**	**+6.5**
DHRM	**DHARAMSHALA**	**5.34**	**83**	*e*P	**Pn**	**13 41 31.8**	**+1.1**
DHRM				*e*x	**Sn**	**13 42 27.9**	**-3.3**
BHK	**Bhakra**	**5.45**	**92**	*e*P	**Pn**	**13 41 32.0**	**0.0**
SMLA	**Simla**	**6.12**	**94**	*e*P	**Pn**	**13 41 42.4**	**+1.3**
SMLA				*e*x	Pn	13 41 47.4	+6.3
AJM	**Ajmer**	**6.60**	**141**	*e*P	**Pn**	**13 41 48.0**	**+0.3**
AJM				*i* x	Sn	13 43 37.0	+35
CHGR	**Chuyangaron**	**6.95**	**354**		**Pn**	**13 41 52.9**	**+0.3**
DDI	**Dehra Dun**	**7.02**	**99**	*e*P	**Pn**	**13 41 54.5**	**+0.9**
DDI				*e*P	**Pn**	**13 41 55.2**	**+1.6**
GAR	**Garm**	**7.26**	**2**		**Pn**	**13 41 57.5**	**+0.5**
BTK	**Batken**	**8.34**	**4**	P	**Pn**	**13 42 12.9**	**+1.2**
BTK	**Batken**	**8.34**	**4**	Pn	**Pn**	**13 42 12.9**	**+1.2**
KSH	**Kashi**	**9.15**	**30**	P	**Pn**	**13 42 18.7**	**-4.1**
KSH				sP		13 42 25.0	
KSH				S	Sn	13 43 52.1	-12
KSH				pmax	pmax		
	comp=Z,97nm,0.8s						
KSH				pmax	pmax		
	comp=Z,310nm,3.4s						
KSH				LR	LR		
	comp=N,950nm,4.8s						
KSH				LR	LR		
	comp=E,1μm,5.0s						
KSH				LR	LR		
	comp=Z,1μm,11.2s						
TAS	**Tashkent**	**9.60**	**357**	P	**Pn**	**13 42 29.1**	**+0.2**
TAS	**Tashkent**	**9.60**	**357**		**Pn**	**13 42 29.1**	**+0.2**
ARSB	**Arslanbob**	**9.87**	**13**	P	**Pn**	**13 42 32.5**	**-0.1**
ARSB	**Arslanbob**	**9.87**	**13**		**Pn**	**13 42 32.5**	**-0.1**
BHPL	**Bhopal**	**10.69**	**140**	*e*P	**Pn**	**13 42 41.3**	**-2.6**
BHPL				*e*x	P	13 44 33.2	
AML	**Almayashu**	**10.79**	**15**	P	**Pn**	**13 42 44.6**	**-0.9**
	SNR=129						
UCH	**Uchtor**	**11.07**	**18**	P	**Pn**	**13 42 48.3**	**-1.1**
	SNR=78						
KZA	**Kyzart**	**11.14**	**20**	P	**Pn**	**13 42 49.3**	**-1.0**
	SNR=7.9						
EKS2	**Erkin-Say**	**11.31**	**14**	P	**Pn**	**13 42 52.0**	**-0.4**
	SNR=17						
KK31	**Karatay Array**	**11.37**	**2**	⇑P	**Pn**	**13 42 51.5**	**-1.5**
	42nm,0.7s,baz=193,slow=13,SNR=278						
KK31				⇑S	**Sn**	**13 44 52.1**	**-6.6**
	43nm,0.7s,baz=192,slow=21,SNR=8.1						
KK31	**Karatay Array**	**11.37**	**2**	P	**Pn**	**13 42 51.4**	**-1.6**
KK31				*i* S	**Sn**	**13 44 53.3**	**-5.4**
KKAR	**Karatay Array**	**11.37**	**2**	P	**Pn**	**13 42 51.6**	**-1.4**
KKAR	**Karatay Array**	**11.37**	**2**		**Pn**	**13 42 51.6**	**-1.4**
AAK	**Ala-Archa**	**11.45**	**17**	Pn	**Pn**	**13 42 53.9**	**-0.4**
	7.2nm,0.3s,baz=183,slow=7.7,SNR=71						
AAK				Sn	**Sn**	**13 44 56.0**	**-5.1**
	1.9nm,0.3s,baz=318,slow=22,SNR=9.6						
AAK	**Ala-Archa**	**11.45**	**17**	P	**Pn**	**13 42 53.7**	**-0.7**
	SNR=56						
AAK	**Ala-Archa**	**11.45**	**17**	⇑P	**Pn**	**13 42 53.2**	**-1.2**
	52nm,0.7s						
AAK				S	**Sn**	**13 44 56.6**	**-4.5**

25nm,0.7s
AAK Ala-Archa 11.45 17 *ce*P **Pn** 13 42 53.8 **-0.6**
GEYT Alibeck 11.58 306 Pn **Pn** 13 42 55.7 **-0.4**
0.6nm,0.3s,baz=93,slow=12,SNR=15
KBK Karagaybulak 11.59 18 P **Pn** 13 42 56.4 **+0.2**
SNR=12
BOOM Boomskoye usch 11.73 22 P **Pn** 13 42 57.4 **-0.7**
BOOM Boomskoye usch 11.73 22 **Pn** 13 42 57.4 **-0.7**
KDJ Kajisay 11.85 27 P **Pn** 13 43 00.4 **+0.7**
KDJ Kajisay 11.85 27 **Pn** 13 43 00.4 **+0.7**
CHMS Chumysh 11.86 17 P **Pn** 13 42 58.6 **-1.1**
SNR=21
TKM2 Tokmak 2 12.01 20 P **Pn** 13 43 01.1 **-1.0**
SNR=30
TKM2 Tokmak 2 12.01 20 ⇑P **Pn** 13 43 01.2 **-0.9**
30nm,0.8s
TKM2 ⇓S **Sn** 13 45 10.5 **-4.4**
25nm,0.8s
TKM2 Tokmak 2 12.01 20 P **Pn** 13 43 01.2 **-0.9**
TKM2 S **Sn** 13 45 10.5 **-4.4**
USP Ospenovka 12.05 16 P **Pn** 13 43 00.6 **-1.8**
SNR=14
MDOK Medeo 12.70 24 ⇓P **Pn** 13 43 09.1 **-2.2**
18nm,0.6s
MDOK Medeo 12.70 24 P **Pn** 13 43 09.9 **-1.4**
WSAR Wadi Sarin 13.18 233 Pn **Pn** 13 43 16.8 **-1.2**
0.3nm,0.3s,baz=4.3,slow=5.8,SNR=1.6
WSAR Sn Sn 13 45 33.6 -10
0.4nm,0.3s,baz=328,slow=13,SNR=1.7
NGP Nagpur 13.26 140 *ex* **Pn** 13 43 16.9 **-2.1**
NGP *i x* **P** 13 43 27.8 **-0.5**
BANOM Banah 13.36 248 P **Pn** 13 43 19.9 **-0.5**
PDGK Podgornoye 13.79 30 ⇓P **Pn** 13 43 24.5 **-1.8**
28nm,0.8s
PDGK Podgornoye 13.79 30 P **Pn** 13 43 24.4 **-1.8**
HOQ Hoqain 13.88 237 P **Pn** 13 43 26.3 **-1.3**
UOSS Minazif 13.93 244 P **Pn** 13 43 28.3 **+0.2**
UOSS Minazif 13.93 244 **Pn** 13 43 28.3 **+0.2**
ASHO Ashiyiah 14.18 244 P **Pn** 13 43 32.3 **+0.8**
MHTO MHTO 15.20 228 P **Pn** 13 43 46.4 **+1.1**
BOK Bokaro 16.09 115 *ex* **Pn** 13 43 51.9 **-4.8**
BOK *ex* x 13 46 37.5
HYB Hyderabad 16.20 150 *ex* **Pn** 13 43 55.9 **-2.4**
OTUK Ortayu 16.59 5 ⇓P **Pn** 13 43 58.8 **-4.2**
9.2nm,0.6s
OTUK Ortayu 16.59 5 P **Pn** 13 43 58.8 **-4.2**
GTK Tadong 16.74 100 *ex* **Pn** 13 44 01.8 **-3.4**
MAKZ Makanchi 17.64 28 ⇑P **Pn** 13 44 14.3 **-1.8**
26nm,0.8s
MAKZ Makanchi 17.64 28 P **Pn** 13 44 14.2 **-1.8**
MAKZ Makanchi 17.64 28 **Pn** 13 44 13.3 **-2.7**
MK31 Makanchi Array 17.75 29 ⇑P **Pn** 13 44 16.4 **-1.2**
16nm,0.8s,baz=208,slow=10,SNR=62
MK31 Makanchi Array 17.75 29 *eP* **Pn** 13 44 16.3 **-1.2**
MKAR Makanchi Array 17.75 29 P **Pn** 13 44 16.5 **-1.0**
0.7nm,0.3s,baz=211,slow=11,SNR=48
MKAR LR LR 13 51 59.5
comp=Z,315nm,18.2s,baz=216,slow=40
BWNR Bhubaneshwar 18.15 125 *ex* **Pn** 13 44 20.4 **-2.1**
BWNR IAmb IAmb 13 44 20.7
comp=Z,16nm,0.8s
BWNR *ex* **Sn** 13 47 35.9 **-8.2**
WMQ Urumqi 18.41 44 P **P** 13 44 25.3 **0.0**
WMQ pmax pmax
comp=Z,55nm,0.3s
WMQ Urumqi 18.41 44 P **P** 13 44 25.3 **0.0**
AB31 Akbulak array 19.09 339 ⇓P **P** 13 44 31.8 **-0.9**
comp=Z,13nm,0.5s,baz=152,slow=11,SNR=379
AB31 Akbulak array 19.09 339 *i* P **P** 13 44 31.8 **-0.9**
ABKAR Akbulak array 19.09 339 P **P** 13 44 32.4 **-0.3**
ABKAR IAmb IAmb 13 44 34.3
comp=Z,24nm,0.5s
KURBB Kurchatov Arra 19.91 16 P **P** 13 44 40.2 **-1.4**
comp=Z,0.3nm,0.3s,baz=199,slow=11,SNR=34
KURBB S **Sn** 13 48 31.9 **+5.8**
baz=209,slow=18,SNR=4.8
KURBB Kurchatov Arra 19.91 16 ⇓P **P** 13 44 39.3 **-2.3**
comp=Z,14nm,0.6s
KURBB Kurchatov Arra 19.91 16 P **P** 13 44 39.2 **-2.3**
KURK Kurchatov 20.01 16 ⇑P **P** 13 44 38.5 **-4.2**
comp=Z,13nm,1.1s
KURK Kurchatov 20.01 16 *ce*P **P** 13 44 40.7 **-2.0**
KURK pmax pmax
comp=Z,14nm,1.1s
KURK Kurchatov 20.01 16 P **P** 13 44 41.4 **-1.4**
SHL Shillong 20.11 102 *eP* **P** 13 44 43.8 **-0.4**
SHL IAmb IAmb 13 44 45.8
comp=Z,29nm,1.1s
SHL Shillong 20.11 102 P **P** 13 44 45.1 **+0.9**
SNR=14
SHL Shillong 20.11 102 P **P** 13 44 44.5 **+0.3**
SHL pmax pmax
comp=Z,36nm,1.0s
SHL Shillong 20.11 102 P **P** 13 44 44.5 **+0.3**
SHL IAmb IAmb 13 44 54.6
comp=Z,36nm,1.0s
WHFO Wadi Hawf 20.14 231 P **P** 13 44 44.9 **+0.5**
SNR=7.1
AKT Akhty 20.34 305 *eP* **P** 13 44 47.1 **+0.6**
AKT *e* 13 45 05.1
AKT pmax pmax
comp=Z,58nm,0.9s
AKTO Aktyubinsk 20.72 338 P **P** 13 44 49.7 **-0.8**
comp=Z,84nm,0.8s,baz=159,slow=11,SNR=34
AKTO Aktyubinsk 20.72 338 ⇓P **P** 13 44 49.6 **-0.9**
comp=Z,118nm,0.9s
ZIRO ZIRO 21.10 95 *eP* **P** 13 44 55.8 **+0.8**
ZIRO IAmb IAmb 13 44 57.7
comp=Z,28nm,0.7s
BVAR Borovoye Array 21.29 1 P **P** 13 44 55.8 **-0.7**
comp=Z,54nm,0.7s,baz=171,slow=10,SNR=359
BRVK Borovoye 21.32 0 ⇓P **P** 13 44 55.3 **-1.6**
comp=Z,97nm,0.8s
BRVK Borovoye 21.32 0 *c i*P **P** 13 44 55.9 **-1.0**
BRVK pmax pmax
comp=Z,87nm,0.7s
BRVK Borovoye 21.32 0 P **P** 13 44 56.1 **-0.8**
DDFL Dedoflistskaro 21.46 304 P **P** 13 45 00.5 **+1.9**
LGD Lagodekhi 21.50 305 P **P** 13 44 59.4 **+0.4**
DGZ Jazzator, Alta 22.18 31 *ce*P **P** 13 45 06.3 **0.0**
DGZ pmax pmax
comp=Z,26nm,1.1s
GROC Groznyy 22.32 308 *eP* **P** 13 45 07.0 **-0.6**
GROC *eS* **S** 13 49 11.1 **+0.2**
GROC pmax pmax
comp=Z,123nm,1.4s
TBLG Delisi 22.53 303 P **P** 13 45 11.0 **+1.0**
KZRT Kazreti 22.67 302 P **P** 13 45 13.8 **+2.3**
GUDG Gudauri 22.95 305 P **P** 13 45 16.7 **+2.1**
RAYN Ar Rayn 23.19 255 P **P** 13 45 16.0 **-1.0**
RAYN pmax pmax
comp=Z,7.0nm,0.7s
RAYN Ar Rayn 23.19 255 P **P** 13 45 16.0 **-1.0**
ZEI Tsey 23.46 305 *eP* **P** 13 45 18.6 **-1.1**
ZEI pmax pmax
comp=Z,19nm,0.9s
ONI Oni 23.71 305 P **P** 13 45 26.1 **+4.2**
NCK Nalchik 23.91 307 ⇓*eP* **P** 13 45 24.2 **+0.4**
NCK pmax pmax
comp=Z,39nm,1.6s
NEY Neytrino 24.43 306 ⇑*eP* **P** 13 45 31.3 **+2.6**
NEY pmax pmax
comp=Z,7.0nm,0.7s
SOCY Socotra 24.43 221 P **P** 13 45 28.5 **-0.3**
KBZ Khabaz 24.47 307 P **P** 13 45 27.8 **-1.1**
comp=Z,5.4nm,0.7s,baz=128,slow=9.6,SNR=15
KBZ LR LR 13 57 56.5
comp=Z,158nm,20.4s,baz=110,slow=44
ZALV Zalesovo Beam 24.61 21 P **P** 13 45 29.6 **-0.4**
baz=220,slow=11
ZALV S **S** 13 49 50.9 **+2.1**
comp=Z,5.8nm,1.1s,baz=207,slow=16,SNR=4.1
ZALV LR LR 13 54 40.2
comp=Z,45nm,20.1s,baz=216,slow=35
KIV Kislovodsk 24.69 307 *eP* **P** 13 45 31.4 **+0.4**
KIV pmax pmax
comp=Z,66nm,1.1s
KIV MLR MLR
comp=Z,581nm,15.0s
KIV Kislovodsk 24.69 307 P **P** 13 45 29.9 **-1.1**
KIV IAmb IAmb 13 45 35.0
comp=Z,16nm,0.8s
GOF Gofitskoye 24.86 310 ⇑*eP* **P** 13 45 33.4 **+1.0**
GTA Gaotai 25.32 64 P **P** 13 45 38.3 **+1.5**
GTA pP pP 13 45 42.4 -4.5
GTA sP sP 13 45 45.4 -5.8
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA pmax pmax
comp=Z,64nm,4.1s
GTA LR LR
comp=Z,160nm,11.7s
GTA LR LR
comp=Z,150nm,12.1s
GTA LR LR
comp=Z,140nm,8.9s
SVE Sverdlovsk 25.93 348 *eP* **P** 13 45 42.1 **+0.1**
SVE pmax pmax
comp=Z,21nm,1.1s
SVE MLR MLR
comp=Z,674nm,14.0s
ARU Arti 25.97 345 P **P** 13 45 41.5 **-0.7**
comp=Z,6.1nm,0.8s,baz=145,slow=8.1,SNR=8.7
ARU Arti 25.97 345 *c i*P **P** 13 45 42.8 **+0.5**
ARU 13 46 19.1
ARU PPP PPP 13 46 28.3
ARU S **S** 13 50 13.9 **+3.7**
ARU SS **SnSn** 13 51 07.9 **-1.0**
ARU pmax pmax
comp=Z,26nm,0.9s
ARU MLR MLR
comp=Z,310nm,15.0s
ARU Arti 25.97 345 P **P** 13 45 41.0 **-1.2**
ARU IAmb IAmb 13 45 45.8
comp=Z,24nm,0.9s
MALT Malatya 26.63 293 P **P** 13 45 50.1 **+1.5**
VRH Novokhopyorsk 28.51 321 *eP* **P** 13 46 04.4 **-0.7**
VRH pmax pmax
comp=Z,10.0nm,0.7s
CHTO Chiang Mai 29.03 109 P **P** 13 46 11.1 **+1.0**
CHTO pmax pmax
comp=Z,5.0nm,0.9s
CHTO Chiang Mai 29.03 109 P **P** 13 46 11.1 **+1.0**
MMAI Mount Meron Ar 29.21 282 LR LR 14 00 24.2
comp=Z,317nm,18.5s,baz=65,slow=42
CMAR Chiang Mai Arr 29.21 110 P **P** 13 46 12.7 **+0.9**
comp=Z,1.3nm,0.5s,baz=292,slow=9.3,SNR=9.7
CMAR LR LR 14 00 56.0
comp=Z,112nm,18.4s,baz=305,slow=43
KMI Kunming 29.43 95 P P 13 46 19.4 +5.6
KMI pP pP 13 46 25.1 +1.2
KMI pmax pmax
comp=Z,17nm,0.7s
KMI pmax pmax
comp=Z,62nm,3.8s
KMI LR LR
comp=Z,150nm,10.0s
KMI LR LR
comp=Z,220nm,13.8s
KMI LR LR
comp=Z,240nm,19.2s
VSR Storozhevoye 29.91 320 ⇑*eP* **P** 13 46 17.4 **-0.1**
VSR pmax pmax
comp=Z,8.0nm,0.5s
EIL Elat 30.17 275 LR LR 14 00 46.7
comp=Z,267nm,18.1s,baz=102,slow=41
BRTR Kekin Array B 30.45 295 P **P** 13 46 22.2 **-0.4**
comp=Z,2.8nm,0.5s,baz=113,slow=9.3,SNR=10
BRTR LR LR 14 01 48.7
comp=Z,153nm,18.2s,baz=91,slow=43
LPSR Galich'ya Gora 30.72 322 *eP* **P** 13 46 23.2 **-1.5**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
CSS Mathiatis 30.73 286 P **P** 13 46 25.4 **+0.4**
CSS IAmb IAmb 13 46 42.3
comp=Z,17nm,1.3s
SONM Songino Array 31.89 49 P **P** 13 46 36.2 **+1.0**
comp=Z,2.2nm,0.8s,baz=243,slow=9.1,SNR=10
SONM LR LR 14 01 17.2
comp=Z,458nm,18.9s,baz=252,slow=40
SLVN Son La 31.90 101 P **P** 13 46 37.3 **+1.8**
SLVN IAmb IAmb 13 46 44.1
comp=Z,7.7nm,1.0s
ATD Arta Tunnel 32.14 237 LR LR 14 01 54.2
comp=Z,123nm,18.1s,baz=18,slow=41
ULN Ulaanbaatar 32.32 49 ⇓*eP* **P** 13 46 41.0 **+2.0**
ULN pmax pmax
comp=Z,5.0nm,1.0s
MOS Moscow 33.03 326 *eP* **P** 13 46 43.3 **-1.6**
OBN Obninsk 33.21 325 ⇓*eP* **P** 13 46 46.7 **+0.2**
OBN *e* 13 48 00.4
OBN *i* S **S** 13 52 05.8 **+2.0**
OBN *e*SS **SnSn** 13 54 10.2 **+5.2**
OBN pmax pmax
comp=Z,26nm,1.3s
OBN MLR MLR
comp=Z,218nm,18.0s
ELL Elmali 33.38 290 P **P** 13 46 48.0 **-0.4**
ELL pmax pmax
comp=Z,79nm,0.8s
ELL Elmali 33.38 290 P **P** 13 46 48.0 **-0.4**
PRGR Permogore 33.87 339 *eP* **P** 13 46 51.2 **-0.9**
PRGR *e* 13 48 16.4
PRGR pmax pmax
comp=Z,27nm,0.8s
TIRR Tirgusor 34.78 303 P **P** 13 46 59.2 **-1.0**
TIRR pmax pmax
comp=Z,32nm,1.5s
TIRR Tirgusor 34.78 303 P **P** 13 46 59.2 **-1.0**
CFR Carcaliu 35.06 305 ⇑P **P** 13 47 01.5 **-1.2**
CFR Carcaliu 35.06 305 P **P** 13 47 02.3 **-0.4**
CFR pmax pmax
comp=Z,6.0nm,1.1s
KLMR Klimovskoe 35.35 335 *eP* **P** 13 47 01.2 **-3.7**
KLMR *e* 13 48 18.3
KLMR pmax pmax
comp=Z,30nm,1.7s
KLMR Klimovskoe 35.35 335 *eP* **P** 13 47 01.2 **-3.7**
KLMR AMP 13 47 05.8
comp=Z,30nm,1.7s
KLMR *e*PP **PnPn** 13 48 18.4 **-5.3**
AKASG Malin Array Be 35.52 314 P **P** 13 47 06.0 **-0.5**
comp=Z,14nm,0.6s,baz=97,slow=7.5,SNR=54
AKASG LR LR 14 04 57.3
comp=Z,316nm,18.4s,baz=100,slow=42
AKASG Malin Array Be 35.52 314 P **P** 13 47 06.0 **-0.5**
AKBB Malin Array Si 35.52 314 P **P** 13 47 06.0 **-0.5**
AKBB pmax pmax
comp=Z,16nm,0.7s
AKBB Malin Array Si 35.52 314 P **P** 13 47 06.0 **-0.5**
BURAR Bucovina Array 37.41 308 ⇑P **P** 13 47 22.7 **-0.2**
BURAR Bucovina Array 37.41 308 P **P** 13 47 24.8 **+1.9**
BUR08 Bucovina Ar. S 37.43 308 P **P** 13 47 22.8 **-0.3**
IDI Anoyia 37.57 280 P **P** 13 47 22.1 **-2.3**
TMCR Tamitsa 38.09 338 *eP* **P** 13 47 26.6 **-1.6**
TMCR pmax pmax
comp=Z,22nm,0.6s
PAIG Paliouri 38.12 296 P **P** 13 47 28.8 **0.0**
PAIG pmax pmax
comp=Z,24nm,0.9s
VTS Vitosha 38.41 300 P **P** 13 47 30.7 **-0.8**
VTS pmax pmax
comp=Z,3.0nm,0.6s
VTS Vitosha 38.41 300 P **P** 13 47 30.6 **-0.8**
NRIK Noril'sk 38.95 10 P **P** 13 47 36.1 **+0.7**
comp=Z,14nm,0.8s,baz=204,slow=5.5,SNR=19
NRIK LR LR 14 06 04.1
comp=Z,265nm,18.3s,baz=198,slow=40
LIT Litokhoron 39.02 296 P **P** 13 47 35.6 **-0.9**
LIT pmax pmax
comp=Z,6.0nm,1.1s
VSU Vasula 39.55 326 *ce*P **P** 13 47 40.0 **-0.5**
VSU pmax pmax
comp=Z,29nm,0.7s
KOLS Kolonicke sedl 39.55 310 *eP* **P** 13 47 41.5 **+0.8**
KOLS Kolonicke sedl 39.55 310 *eP* **P** 13 47 41.5 **+0.8**
MDVR Moldovita 39.57 303 ⇑P **P** 13 47 40.9 **-0.1**
BZS Buzias 39.68 305 P **P** 13 47 42.0 **+0.2**
BZS pmax pmax
comp=Z,6.0nm,1.1s
JOF Joensuu 39.69 333 P **P** 13 47 42.0 **+0.4**
JOF pmax pmax
comp=Z,16nm,0.8s
SIRR Siria 39.69 306 ⇑P **P** 13 47 40.0 **-2.0**
ITM Ithomi 39.71 291 P **P** 13 47 40.5 **-1.7**
ITM IAmb IAmb 13 47 51.7
comp=Z,13nm,0.9s
IPM Ipoh 39.74 127 P **P** 13 47 42.3 **-0.4**
IPM IAmb IAmb 13 47 45.0
comp=Z,8.6nm,0.7s
FNA Florina 39.84 297 P **P** 13 47 41.2 **-2.1**
FNA pmax pmax
comp=Z,7.0nm,0.6s
FNA Florina 39.84 297 P **P** 13 47 41.2 **-2.1**
SUW Suwalki 39.98 318 P **P** 13 47 43.5 **-0.6**
SUW pmax pmax
comp=Z,24nm,0.8s
NIE Niedzica 40.89 310 P **P** 13 47 53.0 **+1.1**
NIE pmax pmax
comp=Z,5.0nm,1.5s
PSZ Piszkesteto 41.02 308 P **P** 13 47 53.3 **+0.4**
PSZ pmax pmax
comp=Z,7.0nm,1.0s
FINES FINESS Array B 41.09 330 P **P** 13 47 52.6 **-0.6**
comp=Z,6.9nm,0.7s,baz=117,slow=12,SNR=15
FINES LR LR 14 06 55.4
comp=Z,150nm,18.9s,baz=129,slow=39
FINES FINESS Array B 41.09 330 *i* P **P** 13 47 53.2 **-0.1**
FINES pmax pmax
comp=Z,7.0nm,0.7s
OJC Ojcow 41.31 312 P **P** 13 47 54.7 **-0.6**
OJC pmax pmax
comp=Z,3.0nm,0.7s
OJC Ojcow 41.31 312 P **P** 13 47 54.7 **-0.6**
MNSI Mandailing Nat 41.54 132 P **P** 13 48 01.6 **+4.2**
comp=Z,26nm,0.4s
SUF Sumiainen 41.63 331 P **P** 13 47 58.1 **+0.4**
SUF pmax pmax
comp=Z,26nm,1.0s
LVZ Lovozero 41.65 341 P **P** 13 47 57.6 **-0.2**
LVZ pmax pmax
comp=Z,28nm,1.2s
LVZ Lovozero 41.65 341 P **P** 13 47 57.6 **-0.2**
LVZ IAmb IAmb 13 48 00.2
comp=Z,28nm,1.2s
VYHS Vyhne 41.77 309 *eP* **P** 13 47 59.4 **+0.4**
VYHS Vyhne 41.77 309 *eP* **P** 13 47 59.4 **+0.4**
MORC Moravsky Berou 42.71 311 P **P** 13 48 07.2 **+0.4**
MORC pmax pmax
comp=Z,7.0nm,0.9s
MORC Moravsky Berou 42.71 311 P **P** 13 48 03.6 **-3.2**
OUL Oulu 42.86 334 P **P** 13 48 07.8 **+0.2**
OUL pmax pmax
comp=Z,36nm,0.8s
KRLC Kraliky 43.23 311 AMS AMS 14 09 30.0
comp=Z,100nm,19.5s
VRAC Vranov 43.30 310 LR LR 14 09 41.5
comp=Z,104nm,19.1s,baz=62,slow=41
DPC Dobruska-Polom 43.54 311 *eP* **P** 13 48 13.9 **+0.4**
DPC MLR MLR
comp=Z,200nm,17.8s
DPC Dobruska-Polom 43.54 311 *eP* **P** 13 48 13.9 **+0.4**
DPC AMS AMS 14 09 20.0
comp=Z,200nm,17.8s
CHVC Chvalec 43.73 312 *eP* **P** 13 48 15.2 **+0.2**
UPC Upice 43.75 312 AMS AMS 14 09 40.0
comp=Z,200nm,15.1s
SGRT San Giovanni R 44.01 299 P **P** 13 48 14.9 **-2.4**
SGRT IAmb IAmb 13 48 18.5
comp=Z,26nm,1.1s
PRU Pruhonice 44.66 311 *eP* **P** 13 48 22.9 **+0.5**
PRU MLR MLR
comp=Z,200nm,14.1s
PRU Pruhonice 44.66 311 *eP* **P** 13 48 22.9 **+0.5**
PRU AMS AMS 14 10 00.0
comp=Z,200nm,14.1s
PVCC Panska Ves 44.67 312 AMS AMS 14 10 10.0
comp=Z,200nm,20.1s
PRA Prague 44.74 311 AMS AMS 14 10 30.0
comp=Z,100nm,18.7s
MOA Molln 44.80 308 *i* P **P** 13 48 22.0 **-1.5**
KEV Kevo 44.98 340 P **P** 13 48 24.5 **-0.1**
KEV pmax pmax
comp=Z,12nm,0.8s
KEV Kevo 44.98 340 P **P** 13 48 24.5 **-0.1**
KEV IAmb IAmb 13 48 25.6
comp=Z,12nm,0.8s
KMBO Kilima Mbogo 45.09 230 P **P** 13 48 27.8 **+1.4**
comp=Z,3.9nm,0.7s,baz=37,slow=12,SNR=10.0
BRG Berggiesshubel 45.09 312 *eP* **P** 13 48 25.8 **+0.1**
comp=Z,4.4nm,0.8s
BRG *e* 13 48 45.6
comp=Z,21nm,1.8s
BRG Berggiesshubel 45.09 312 *eP* **P** 13 48 25.8 **+0.1**
BRG *e* 13 48 45.7
BRG pmax pmax
comp=Z,3.0nm,0.8s
BRG pmax pmax
comp=Z,4.0nm,1.8s
GEC2 GERESS Array S 45.18 309 P **P** 13 48 26.4 **-0.2**
GEC2 pmax pmax
comp=Z,4.0nm,1.0s
GERES GERESS Array B 45.18 309 P **P** 13 48 26.3 **-0.3**
comp=Z,1.7nm,0.8s,baz=97,slow=7.3,SNR=17
GERES PcP **PcP** 13 50 06.9 **+0.4**
comp=Z,0.7nm,0.7s,baz=92,slow=3.1,SNR=4.3
KHC Kasperske Hory 45.27 310 ⇓*eP* **P** 13 48 26.7 **-0.5**
KHC pmax pmax
comp=Z,7.0nm,1.0s
KHC Kasperske Hory 45.27 310 *eP* **P** 13 48 26.3 **-0.9**
KHC AMS AMS 14 10 20.0
comp=Z,100nm,18.8s
ARCES ARCESS Array B 45.29 340 P **P** 13 48 27.2 **+0.1**
comp=Z,17nm,0.6s,baz=123,slow=8.1,SNR=139
ARCES LR LR 14 09 02.1
comp=Z,184nm,18.2s,baz=47,slow=38
ARE0 ARCESS Array S 45.29 340 *eP* **P** 13 48 27.4 **+0.3**
KBA Koelnbreinsper 45.43 307 *i* P **P** 13 48 28.3 **-0.4**
comp=Z,1.8nm,0.6s
CLL Collm 45.70 313 *eP* **P** 13 48 31.0 **+0.4**
comp=Z,5.0nm,0.9s
CLL *e*PP **PP** 13 50 19.0 **+1.2**
CLL *e*SS SS 13 58 36.0 **+0.5**
CLL Collm 45.70 313 *eP* **P** 13 48 31.0 **+0.4**
CLL pmax pmax
comp=Z,5.0nm,0.9s
KTK1 Kautokeino 45.71 338 *eP* **P** 13 48 30.4 **0.0**
WDD Wied Dalam 45.81 291 P **P** 13 48 30.2 **-1.4**
NKC Novy Kostel 46.02 311 AMS AMS 14 11 00.0
comp=Z,200nm,15.4s
HAMF Hammerfest 46.41 341 *eP* **P** 13 48 36.4 **+0.5**
TJN Taejon 47.13 68 *ce*P **P** 13 48 43.5 **+1.5**
TRO Tromso 47.35 338 *eP* **P** 13 48 43.7 **+0.5**
KSRS Korea Array 47.36 66 P **P** 13 48 45.2 **+1.5**
comp=Z,2.2nm,0.8s,baz=276,slow=7.0,SNR=12
NC602 NORSAR Array S 47.58 325 *eP* **P** 13 48 44.7 **-0.5**
NORES NORESS Array B 47.58 325 P **P** 13 48 44.2 **-1.0**
MOR8 Moi Rana 47.64 333 *eP* **P** 13 48 44.9 **-0.7**
NB2 NORSAR Subarra 47.79 326 P **P** 13 48 45.6 **-1.3**
comp=Z,5.1nm,0.8s,baz=104,slow=7.9
NB2 NORSAR Subarra 47.79 326 P **P** 13 48 45.6 **-1.3**
baz=104,slow=7.9
NOA NORSAR Array B 47.79 326 P **P** 13 48 45.8 **-1.1**
comp=Z,2.4nm,0.6s,baz=104,slow=7.8,SNR=16
STEI Steigen 47.92 335 *eP* **P** 13 48 47.4 **-0.3**
NC204 NORSAR Array S 48.05 326 *eP* **P** 13 48 47.6 **-1.3**
NSS Namsos 48.19 331 *eP* **P** 13 48 49.3 **-0.5**
KONS Konsvik 48.25 333 *eP* **P** 13 48 49.9 **-0.3**
YAK Yakutsk 48.35 33 *eP* **P** 13 48 51.3 **+0.2**
YAK pmax pmax
comp=Z,26nm,0.7s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK Yakutsk 48.35 33 P **P** 13 48 51.6 **+0.6**
KSM Kuching 48.44 120 P **P** 13 48 53.8 **+1.4**
KSM IAmb IAmb 13 48 55.1
comp=Z,5.3nm,0.6s
KLR Kul'dur 48.71 50 ⇑*eP* **P** 13 48 54.6 **+0.6**
KLR pmax pmax
comp=Z,4.0nm,0.9s
DOMB Dombas 48.98 327 *eP* **P** 13 48 55.7 **-0.3**
USRK Ussuriysk Ar. 49.32 57 LR LR 14 12 43.6
comp=Z,195nm,18.6s,baz=244,slow=40
HOPEN Hopen 49.45 347 *eP* **P** 13 48 59.8 **+0.5**
HINF Hinteralfeld 49.79 308 *eP* **P** 13 49 01.6 **-0.8**
HINF pmax pmax
comp=Z,6.0nm,1.2s
KEST Kesra 49.94 292 P **P** 13 49 04.5 **+0.7**
comp=Z,28nm,0.7s,baz=1.7,slow=1.6,SNR=30
LPG La Plagne 50.10 305 *eP* **P** 13 49 03.6 **-1.5**
LPG pmax pmax
comp=Z,8.0nm,0.8s
HAU Haudompre 50.11 308 *eP* **P** 13 49 03.3 **-1.5**

HAU pmax pmax
comp=Z,9.0nm,1.1s
LPL La Plagne 50.12 305 *e*P **P 13 49 02.9 -2.2**
LPL pmax pmax
comp=Z,7.0nm,0.6s
MBDF Montbardon 50.19 304 *e*P **P 13 49 03.9 -1.7**
MBDF pmax pmax
comp=Z,5.0nm,0.8s
CABF La Chapelle 50.43 307 *e*P **P 13 49 06.4 -0.9**
CABF pmax pmax
comp=Z,26nm,1.5s
TIXI Tiksi 50.50 21 *ce*P **P 13 49 07.1 -0.2**
TIXI pmax pmax
comp=Z,14nm,0.8s
TIXI Tiksi 50.50 21 P **P 13 49 06.6 -0.7**
TIXI IAmb IAmb 13 49 08.9
comp=Z,13nm,0.8s
JNU Nakatsue 50.72 71 LR LR 14 14 00.5
comp=Z,103nm,18.1s,baz=257,slow=40
ORIF Oris-en-Rattie 50.79 304 *e*P **P 13 49 10.5 +0.4**
ORIF pmax pmax
comp=Z,7.0nm,1.2s
GIVF Givet 50.92 311 *e*P **P 13 49 11.4 +0.5**
GIVF pmax pmax
comp=Z,16nm,1.2s
BAIF Baives 51.32 311 *e*P **P 13 49 13.6 -0.2**
BAIF pmax pmax
comp=Z,14nm,1.1s
VIVF Saint-Julien-l 51.65 304 *e*P **P 13 49 16.1 -0.4**
VIVF pmax pmax
comp=Z,11nm,1.2s
SMF Signal de Mont 51.96 307 *e*P **P 13 49 17.4 -1.3**
SMF pmax pmax
comp=Z,9.0nm,0.8s
SPA0 Spitsbergen Ar 51.97 348 *e*P **P 13 49 19.7 +1.4**
SPITS Spitsbergen Ar 51.97 348 P **P 13 49 19.2 +0.9**
SPITS pmax pmax
comp=Z,5.0nm,0.4s
SSF Saint Saulge 52.13 307 *e*P **P 13 49 18.6 -1.3**
SSF pmax pmax
comp=Z,8.0nm,1.0s
KBS Kingsbay 53.10 348⇓ *e*P **P 13 49 27.2 +0.6**
KBS Kingsbay 53.10 348 P **P 13 49 28.4 +1.8**
KBS Kingsbay 53.10 348 *e*P **P 13 49 27.5 +0.9**
CAF Calviac 53.47 305 *e*P **P 13 49 29.8 -0.1**
CAF pmax pmax
comp=Z,5.0nm,0.9s
MAJO Matsushiro 55.57 65⇑ *e*P **P 13 49 45.6 +0.3**
MAJO pmax pmax
comp=Z,9.0nm,1.1s
MJAR Matsushiro Arr 55.57 65 P **P 13 49 45.7 +0.5**
comp=Z,1.7nm,0.9s,baz=337,slow=12,SNR=4.9
YSS Yuzh-Sakhalins 56.31 52 *e*P **P 13 49 50.2 -0.2**
YSS *e* 13 49 57.5
YSS pmax pmax
comp=Z,20nm,0.8s
YSS MLR MLR
comp=E,200nm,15.0s
YSS MLR MLR
comp=Z,200nm,15.0s
YSS MLR MLR
comp=N,100nm,13.0s
YSS Yuzh-Sakhalins 56.31 52 P **P 13 49 50.8 +0.5**
MPSI Mapaga 56.47 113 P P 13 50 04.7 +13
NOR Nord 58.35 350 *i* P **P 13 50 05.1 +0.9**
NOR pmax pmax
comp=Z,9.0nm,1.0s
NOR Nord 58.35 350 *i* P **P 13 50 05.1 +0.9**
comp=Z,9.3nm,1.0s
SESP Santiago Espad 58.48 298 P **P 13 50 05.8 -0.2**
SNR=8.5
SESP Santiago Espad 58.48 298 P **P 13 50 05.8 -0.2**
SNR=8.5
ESDC Sonseca Array 59.07 300 P **P 13 50 09.2 -0.8**
comp=Z,3.9nm,0.7s,baz=64,slow=7.3,SNR=35
DAG Danmarks Havn 59.09 344 *i* P **P 13 50 09.5 +0.1**
DAG pmax pmax
comp=Z,12nm,0.7s
DAG Danmarks Havn 59.09 344 *i* P **P 13 50 09.5 +0.1**
comp=Z,12nm,0.7s
PAB San Pablo 59.39 300 P **P 13 50 11.9 -0.3**
PAB pmax pmax
comp=Z,5.0nm,0.9s
PAB San Pablo 59.39 300 P **P 13 50 11.9 -0.3**
PAB IAmb IAmb 13 50 12.0
comp=Z,4.8nm,0.8s
TAF Taforalt 59.42 294 P **P 13 50 13.0 +0.5**
SNR=9.9
TAF Taforalt 59.42 294 P **P 13 50 13.0 +0.5**
SNR=9.9
TDRA Tendrara 59.71 292 P **P 13 50 15.0 +0.3**
SNR=8.3
TDRA Tendrara 59.71 292 P **P 13 50 15.0 +0.3**
SNR=8.3
PALE Palemas 60.46 295 P **P 13 50 19.0 -0.6**
SNR=7.5
PALE Palemas 60.46 295 P **P 13 50 19.0 -0.6**
SNR=7.5
HORN Hornachuelos 60.60 298 P **P 13 50 19.6 -0.8**
SNR=7.4
HORN Hornachuelos 60.60 298 P **P 13 50 19.6 -0.8**
SNR=7.4
AKLM AKL 60.65 294 P **P 13 50 21.0 +0.1**
SNR=12
AKLM AKL 60.65 294 P **P 13 50 21.0 +0.1**
SNR=12
PCBR Castelo Branco 61.59 301 *e*P **P 13 50 27.3 +0.2**
LSZ Lusaka 61.60 227 LR LR 14 18 27.7
comp=Z,80nm,18.8s,baz=64,slow=37
MDT Midelt 61.82 293 P **P 13 50 28.8 -0.1**
SNR=9.9
MDT Midelt 61.82 293 P **P 13 50 28.8 -0.1**
SNR=9.9
EVO Evora 62.42 300 *e*P **P 13 50 32.6 -0.1**
comp=Z,15nm,1.5s
PVAQ Vaqueiros 62.59 299 *e*P **P 13 50 33.4 -0.5**
comp=Z,16nm,2.3s
PNCL Nicolau / Gran 62.95 300 *e*P **P 13 50 36.5 +0.3**
BILL Bilibino 63.25 25 *d* iP **P 13 50 39.0 +1.2**
BILL *e* 13 51 14.2
BILL *e* 13 52 57.0
BILL pmax pmax
comp=Z,12nm,1.3s
BILL MLR MLR
comp=Z,176nm,16.0s
BILL Bilibino 63.25 25 P **P 13 50 38.7 +0.9**
BILL IAmb IAmb 13 50 39.7
comp=Z,9.3nm,0.9s
PETK Petropavlovsk- 63.99 42 LR LR 14 21 15.8
comp=Z,160nm,19.0s,baz=240,slow=38
TOA0 Torodi Ar. Sit 64.88 270 P **P 13 50 48.6 -0.6**
SNR=19
TORD Torodi Ar. Bea 64.88 270 P **P 13 50 48.4 -0.8**
comp=Z,15nm,0.8s,baz=56,slow=6.0,SNR=82
SUMG Summit 65.32 342 *i* P **P 13 50 52.4 +0.7**
SUMG Summit 65.32 342 P **P 13 50 52.0 +0.3**
SUMG IAmb IAmb 13 50 53.3
comp=Z,7.3nm,0.7s
SUMG Summit 65.32 342 *i* P **P 13 50 52.4 +0.7**
TSUM Tsumeb 71.36 232 P **P 13 51 31.7 +1.8**
TSUM IAmb IAmb 13 51 32.4
comp=Z,9.0nm,0.8s
FITZ Fitzroy Crossi 72.76 125 P **P 13 51 38.6 +0.5**
comp=Z,3.0nm,0.8s,baz=249,slow=3.8,SNR=6.1
BOSA Boshof 73.59 220 P **P 13 51 42.4 -0.6**
comp=Z,4.4nm,0.6s,baz=16,slow=4.5,SNR=12
DBIC Dimbokro 73.69 268 P **P 13 51 42.3 -1.5**
comp=Z,8.7nm,0.7s,baz=19,slow=7.0,SNR=14
DBIC LR LR 14 27 52.5
comp=Z,90nm,18.4s,baz=36,slow=39
DBIC Dimbokro 73.69 268 IAmb IAmb 13 51 44.5
comp=Z,15nm,0.9s
KIC Kosan Boka 73.75 267 *e*PKP2 **P 13 51 43.9 -0.3**
comp=Z,45nm,1.0s
TIC Toumodi 73.84 268 *e*PKP2 **P 13 51 43.9 -0.8**
LIC Lamto 74.06 267 *e*PKP2 **P 13 51 45.2 -0.8**
comp=Z,15nm,0.5s
TOLK Toolik Lake Re 75.73 14 IAmb IAmb 13 51 56.3
comp=Z,12nm,0.8s
COLD Coldfoot 76.77 15 IAmb IAmb 13 52 02.7
comp=Z,5.1nm,0.8s
FYU Fort Yukon 78.38 14 IAmb IAmb 13 52 11.8
comp=Z,13nm,1.2s
MLY Manley 78.47 16 P **P 13 52 10.9 +0.6**
MLY IAmb IAmb 13 52 11.4
comp=Z,9.6nm,1.3s

C36M Paulatuk 78.69 5 IAmb IAmb 13 52 12.2
comp=Z,12nm,0.8s
INK Inuvik 78.73 9 P **P 13 52 12.1 +0.6**
INK pmax pmax
comp=Z,14nm,0.9s
INK Inuvik 78.73 9 IAmb IAmb 13 52 13.2
comp=Z,11nm,0.9s
NEA Nenana 79.24 16 IAmb IAmb 13 52 15.3
comp=Z,7.9nm,0.8s
COLA College 79.28 15 *ce*P **P 13 52 14.6 0.0**
COLA pmax pmax
comp=Z,6.0nm,0.9s
ILAR Eielson Array 79.58 15 P **P 13 52 15.1 -1.2**
comp=Z,2.0nm,0.9s,baz=315,slow=4.1,SNR=17
ILAR PP **PP 13 55 16.7 +0.3**
comp=Z,1.7nm,1.1s,baz=316,slow=8.0,SNR=6.5
WRA Warramunga Arr 80.20 121 P **P 13 52 20.8 +0.5**
comp=Z,12nm,0.8s,baz=318,slow=5.2,SNR=69
WRAB Tennant Creek 80.20 121⇑ *e*P **P 13 52 21.1 +0.8**
WRAB pmax pmax
comp=Z,14nm,0.7s
WRAB Tennant Creek 80.20 121 P **P 13 52 21.3 +1.0**
RND Reindeer 80.28 17 IAmb IAmb 13 52 20.2
comp=Z,5.6nm,0.6s
SCRK Sand Creek 80.90 14 IAmb IAmb 13 52 24.7
comp=Z,11nm,1.5s
DHY Denali Highway 80.92 16 IAmb IAmb 13 52 24.8
comp=Z,6.1nm,0.6s
GHO Glory Hole 81.64 18 IAmb IAmb 13 52 28.3
comp=Z,7.0nm,0.8s
SCM Sheep Creek Mo 81.99 17 IAmb IAmb 13 52 30.0
comp=Z,7.2nm,0.6s
KNK Knik Glacier 82.07 18 IAmb IAmb 13 52 30.7
comp=Z,6.0nm,0.8s
ASAR Alice Springs 82.22 124 P **P 13 52 31.4 +0.4**
comp=Z,6.5nm,0.8s,baz=313,slow=5.7,SNR=50
VRDI Verde Repeater 83.45 16 P **P 13 52 37.3 +0.3**
BALM Baldy 83.87 15 IAmb IAmb 13 52 40.4
comp=Z,4.3nm,0.8s
HYT Haines Junctio 85.07 13 IAmb IAmb 13 52 46.9
comp=Z,4.5nm,1.1s
YKA Yellowknife Ar 86.04 2 P **P 13 52 49.6 -0.2**
comp=Z,5.2nm,0.6s,baz=351,slow=4.7,SNR=87
YKA PP **PP 13 56 11.3 +2.1**
comp=Z,0.3nm,0.8s,baz=356,slow=7.3,SNR=4.5
CTA Charters Tower 89.30 114 P **P 13 53 07.4 +1.2**
comp=Z,24nm,0.9s,baz=282,slow=2.7,SNR=3.6
FFC Flin Flon 93.63 355 P **P 13 53 26.0 +0.3**
FFC pmax pmax
comp=Z,4.0nm,0.8s
FFC Flin Flon 93.63 355 P **P 13 53 26.0 +0.3**
FFC IAmb IAmb 13 53 26.9
comp=Z,4.3nm,0.8s
NVAR Mina Array Bea 109.77 7 PKiKP **PKiKP 13 58 42.8 +1.8**
comp=Z,0.2nm,0.5s,baz=341,slow=1.8,SNR=4.9
CPUP Villa Florida 134.03 263 PKP **PKPdf 13 59 27.0 -0.1**
comp=Z,1.4nm,0.7s,baz=102,slow=2.5,SNR=4.5
GO04 Toldo Observa 146.50 262 PKPbc 13 59 51.7 +0.4
PEL Peldehue 146.95 257 PKP2 **PKPab 13 59 53.1 -0.6**
PEL Peldehue 146.95 257 PKPab 13 59 53.1 -0.6
PLCA Paso Flores 147.19 243 PKPbc **PKPab 13 59 54.4 -0.1**
comp=Z,3.1nm,0.9s,baz=136,slow=5.0,SNR=7.7

MAN 01 13:53:50.5,6.00N×125.66E, h18km, mb4.4, ML3.3, MS3.1, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.11**	**29**	*e*P	Pg	13 53 55.0	+0.6
DDMP				*e*S	Sg	13 54 00.7	+3.7
DMPH	**Davao City--Mi**	**1.08**	**352**⇑	*e*P	Pb	13 54 10.1	-0.7
DMPH				*e*S	Sg	13 54 25.8	+0.1
KCP	**Kidapawan**	**1.15**	**331**⇓	*i*P	Pn	13 54 11.5	-0.2
KCP				*i* S	Sg	13 54 30.4	+2.6
SKMP	**Bagumbayan, Su**	**1.22**	**295**	*e*P	Pn	13 54 12.0	-0.7
SKMP				*e*S	Sn	13 54 29.0	+0.2
BUKP	**Musuan**	**1.95**	**342**	*e*P	Pn	13 54 22.5	-0.4
BUKP				*e*S	Sb	13 54 49.8	+0.1

*IDC **01** 13:55:58.8±2.9, 7.°41S×155.°49E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/29, mbtmp3.6/3, MS4.3/2, Ms1 4.3/2, ms1mx2.9/45, Error ellipse: s-maj=231.2km s-min=35.8km az=136.0*
*NEIC **01** 13:56:03.7±1.9, 7.°7S±0.°1×155.°6E±0.°1, h35km±2km, mb4.1/9, Error ellipse: s-maj=23.8km s-min=7.6km az=137.0*
ISC 01 13:56:03.1±1.4, 7.°7S±0.°1×155.°7E±0.°2, h35km, n16, σ1§28/14, mb3.9/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**4.94**	**315**		**Pn**	**13 57 15.2**	**+0.3**
PMG	**Port Moresby**	**8.58**	**258**	Pn	**Pn**	**13 58 04.6**	**-0.3**
CTAO	**Charters Tower**	**15.31**	**216**	Pn	**Pn**	**13 59 39.0**	**+2.3**
ARMA	**Armidale**	**22.90**	**189**	P	**P**	**14 01 04.9**	**+0.9**
ARMA				IAmb	IAmb	14 01 23.3	
comp=Z,15nm,1.2s							
WR0	**Warramunga Arr**	**23.81**	**237**	P	**P**	**14 01 14.1**	**+1.1**
WR0				IAmb	IAmb	14 01 18.7	
comp=Z,11nm,1.4s							
WB0	**Warramunga Arr**	**23.84**	**238**	P	**P**	**14 01 13.0**	**-0.4**
WRAB	**Tennant Creek**	**23.95**	**237**	P	**P**	**14 01 14.0**	**-0.4**
WRAB				IAmb	IAmb	14 01 27.5	
comp=Z,2.9nm,0.8s							
WB2	**Warramunga Arr**	**23.96**	**237**	P	**P**	**14 01 14.8**	**+0.3**
WB2				IAmb	IAmb	14 01 17.7	
comp=Z,4.1nm,1.1s							
WRA	**Warramunga Arr**	**23.97**	**237**	P	**P**	**14 01 15.8**	**+1.3**
comp=Z,1.6nm,0.8s,baz=59,slow=9.5,SNR=13							
ASAR	**Alice Springs**	**26.21**	**230**	P	**P**	**14 01 35.7**	**+0.8**
comp=Z,0.7nm,0.9s,baz=65,slow=9.3,SNR=6.2							
CAN	**Canberra**	**28.14**	**192**	P	**P**	**14 01 50.5**	**-1.6**
FITZ	**Fitzroy Crossi**	**30.98**	**248**	P	**P**	**14 02 15.9**	**-1.5**
FITZ				IAmb	IAmb	14 02 16.3	
comp=Z,4.0nm,1.2s							
URZ	**Urewera**	**36.05**	**151**	LR	LR	14 16 11.7	
comp=Z,358nm,20.6s,baz=169,slow=33							
MORW	**Morawa**	**42.88**	**235**	P	**P**	**14 03 56.9**	**-1.6**
PFO	**Pinyon Flats O**	**92.46**	**57**	LR	LR	14 47 09.7	
comp=Z,178nm,18.2s,baz=102,slow=33							
YKA	**Yellowknife Ar**	**96.66**	**28**	P	**P**	**14 09 29.8**	**+0.4**
comp=Z,0.1nm,0.5s,baz=254,slow=4.4,SNR=2.4							

IDC 01 13:57:12.6±86.0, 20.°15N×144.°92E, h0km, Error ellipse: s-maj=170.8km s-min=14.9km az=101.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H11S3	**WAKE ISLAND Hy 20.60**		**91**	H	H	14 22 59.8	
baz=279,slow=75,SNR=557							
H11S1	**WAKE ISLAND Hy 20.61**		**91**	H	H	14 23 00.5	
baz=279,slow=75,SNR=703							
H11S2	**WAKE ISLAND Hy 20.62**		**91**	H	H	14 23 01.2	
baz=279,slow=75,SNR=580							
H11N1	**WAKE ISLAND Hy 20.66**		**87**	H	H	14 23 02.6	
baz=276,slow=75,SNR=387							
H11N2	**WAKE ISLAND Hy 20.66**		**87**	H	H	14 23 02.9	
baz=276,slow=75,SNR=392							
H11N3	**WAKE ISLAND Hy 20.67**		**87**	H	H	14 23 03.8	
baz=276,slow=75,SNR=419							
H03N2	**Juan Fernandez**	**138.96**	**118**	H	H	16 51 00.0	
baz=267,slow=74,SNR=18							
H03N3	**Juan Fernandez**	**138.97**	**118**	H	H	16 51 00.0	
baz=267,slow=74,SNR=27							
H03N1	**Juan Fernandez**	**138.98**	**118**	H	H	16 51 00.0	
baz=267,slow=74,SNR=30							

*IDC **01** 14:10:19.4±1.2, 9.°20S×125.°35E, h0km, mb3.8/3, mb1 4.1/6, mb1mx3.7/41, mbtmp4.0/6, ML4.1/3, MS3.4/3, Ms1 3.4/3, ms1mx2.9/43, Error ellipse: s-maj=31.6km s-min=21.7km az=60.0*
*DJA **01** 14:10:23.9±0.4, 9.°5S±3.°×12.°5E±.°, h10km, M4.3/9, mb4.6/4, MLv4.2/9*
*NEIC **01** 14:10:26.1±2.3, 9.°6S±0.°1×125.°00E±0.°07, h67km±10km, mb4.5/6, Error ellipse: s-maj=16.5km s-min=10.1km az=190.0*
ISC 01 14:10:23.0±0.8, 9.°38S±0.°07×125.°35E±0.°06, h35km, n31, σ1§82/31, mb4.1/5, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.13**	**251**	P	**Pn**	**14 10 41.3**	**-1.2**
SOEI				S	**Sn**	**14 10 58.2**	**+1.3**
SOEI	**Soe**	**1.13**	**251**		**Pn**	**14 10 41.6**	**-0.9**
BATI	**Baumata**	**1.85**	**244**	Pn	**Pn**	**14 10 53.8**	**+1.4**
93nm,0.3s,baz=119,slow=2.6,SNR=97							
BATI				Sn	**Sn**	**14 11 15.6**	**+0.9**
138nm,0.3s,baz=287,slow=21,SNR=13							
BATI				LR	LR	14 11 32.2	
comp=Z,409nm,19.5s,baz=119,slow=38							
BATI	**Baumata**	**1.85**	**244**	P	**Pn**	**14 10 53.3**	**+0.9**
MMRI	**Maumere**	**3.16**	**283**	P	**Pn**	**14 11 11.9**	**+1.5**
MMRI	**Maumere**	**3.16**	**283**		**Pn**	**14 11 11.3**	**+1.0**
EDFI	**Ende, Flores**	**3.67**	**280**	P	**Pn**	**14 11 18.3**	**+0.9**
BBSI	**Bau Bau**	**4.75**	**324**	P	**Pn**	**14 11 32.9**	**+0.7**
BASI	**Baing, Sumba**	**4.78**	**260**	P	**Pn**	**14 11 34.8**	**+2.2**
MTN	**Manton Dam**	**6.64**	**122**	Pn	Pn	14 12 07.1	+8.9
KNRA	**Kununurra**	**7.09**	**152**		Pn	14 12 09.6	+5.2
PLAI	**Plampang**	**7.50**	**274**	P	**Pn**	**14 12 10.7**	**+0.7**
0.2nm28nm,1.0s							
FITZ	**Fitzroy Crossi**	**8.67**	**178**	Pn	**Pn**	**14 12 28.4**	**+2.3**
3.0nm,0.3s,baz=0.6,slow=9.2,SNR=78							
FITZ				Sn	**Sn**	**14 14 02.1**	**-0.6**
3.6nm,0.3s,baz=110,slow=9.8,SNR=9.0							
FITZ	**Fitzroy Crossi**	**8.67**	**178**		**Pn**	**14 12 28.8**	**+2.7**
SIJI	**Sorong**	**10.30**	**35**	LR	LR	14 17 21.4	
comp=Z,84nm,18.6s,baz=228,slow=42							
WRA	**Warramunga Arr**	**13.63**	**141**	Pn	**Pn**	**14 13 36.7**	**+2.7**
0.7nm,0.3s,baz=316,slow=13,SNR=38							
WRA				Sn	**Sn**	**14 16 02.7**	**-1.5**
0.7nm,0.3s,baz=322,slow=24,SNR=5.8							
WRAB	**Tennant Creek**	**13.63**	**141**		**Pn**	**14 13 36.3**	**+2.3**
WB2	**Warramunga Arr**	**13.64**	**141**	Pn	**Pn**	**14 13 37.0**	**+2.9**
WR0	**Warramunga Arr**	**13.77**	**141**	Pn	**Pn**	**14 13 37.0**	**+1.1**
AS31	**Alice Springs**	**16.39**	**151**	P	**P**	**14 14 13.4**	**+0.3**
ASAR	**Alice Springs**	**16.39**	**151**	Pn	**P**	**14 14 13.3**	**+0.2**
0.4nm,0.3s,baz=320,slow=11,SNR=35							
ASAR				Sn	**Sn**	**14 17 10.8**	**-0.8**
0.3nm,0.3s,baz=311,slow=18,SNR=5.7							
CISI	**Cisompet, Garu**	**17.44**	**275**	P	**Pn**	**14 14 21.2**	**-2.6**
CISI				IAmb	IAmb	14 14 34.5	
comp=Z,40nm,1.3s							
LEM	**Lembang**	**17.74**	**277**	LR	LR	14 22 05.3	
comp=Z,135nm,18.4s,baz=102,slow=40							
COEN	**Coen**	**18.04**	**106**	P	**Pn**	**14 14 30.6**	**-0.5**
COEN				IAmb	IAmb	14 14 39.1	
comp=Z,5.1nm,1.1s							
CTA	**Charters Tower**	**22.82**	**120**	P	**P**	**14 15 24.8**	**+1.6**
comp=Z,1.4nm,1.0s,baz=307,slow=17,SNR=2.0							
NWAO	**Narrogin (SRO)**	**24.60**	**197**	P	**P**	**14 15 36.8**	**-3.3**
NWAO	**Narrogin (SRO)**	**24.60**	**197**	P	**P**	**14 15 36.6**	**-3.5**
NWAO				IAmb	IAmb	14 15 53.1	
comp=Z,59nm,1.5s							
CAN	**Canberra**	**33.66**	**144**	P	**P**	**14 16 59.0**	**-1.7**
CAN				IAmb	IAmb	14 17 00.5	
comp=Z,16nm,1.2s							
HNR	**Honiara**	**34.12**	**93**	LR	LR	14 32 12.8	
comp=Z,141nm,18.9s,baz=136,slow=38							
MKAR	**Makanchi Array**	**67.81**	**330**	P	**P**	**14 21 18.7**	**+1.2**
comp=Z,1.4nm,0.7s,baz=134,slow=7.5,SNR=11							
ZALV	**Zalesovo Beam**	**71.77**	**336**	P	**P**	**14 21 42.1**	**+0.4**
comp=Z,0.4nm,0.4s,baz=120,slow=5.7,SNR=3.9							

DJA 01 14:13:33.1±1.3, 2.°S±10.°×13.°9E±.°, h89km±13km, M3.0/4, MLv3.0/4, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.78**	**304**	P	Pn	14 13 51.3	+1.0
SMPI				S	Sn	14 14 04.8	+1.7
SMPI	**Sarmi**	**0.78**	**304**	P	Pn	14 13 51.1	+0.8
GENI	**Genyem**	**0.83**	**101**	P	Pn	14 13 51.1	+0.2
GENI				S	Sn	14 14 05.9	+1.7
GENI	**Genyem**	**0.83**	**101**	P	Pn	14 13 50.5	-0.4
JAY	**Jayapura**	**1.36**	**94**	P	Pn	14 13 57.3	+0.3
WAMI	**Wamena**	**1.58**	**204**	P	Pn	14 14 01.5	+1.7

*ATH **01** 14:16:09.6, 38.°12N×27.°12E, h6km±1km, ML4.1/14, Error ellipse: s-maj=2.4km s-min=1.0km az=258.0*
*IDC **01** 14:16:11.3±0.8, 38.°00N×27.°17E, h0km, mb3.7/7, mb1 3.8/14, mb1mx3.6/54, mbtmp3.7/14, ML3.5/7, MS3.3/8, Ms1 3.3/8, ms1mx2.9/64, Error ellipse: s-maj=16.3km s-min=13.1km az=121.0*
*ISK **01** 14:16:11.6, 38.°04N×27.°04E, h20km, ML4.0/46*
*DDA **01** 14:16:12.0, 38.°02N×27.°05E, h8km±1km, MW4.1*
*THE **01** 14:16:13.2, 38.°01N×26.°99E, h0km±1km, ML4.1/7, Error ellipse: s-maj=2.0km s-min=0.7km az=82.0*
ISC 01 14:16:12.3±0.9, 38.°03N±0.°01×27.°04E±0.°01, h10km±6km, n223, σ1§21/258, mb3.6/7, MS3.2/5, 23C-15D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGB	**zmir**	**0.12**	**283**⇓	*i*P	**Pg**	**14 16 15.8**	**+0.6**
DGB				IAML		14 16 18.0	
comp=N,73μm,0.3s							
DGB				*i* S	**Sg**	**14 16 18.0**	**+0.8**
SMG	**Samos**	**0.35**	**207**	P	**Pb**	**14 16 19.6**	**-1.1**
SMG				S	**Sb**	**14 16 25.4**	**-0.9**
comp=N,43μm,0.3s							
SMG	**Samos**	**0.35**	**207**	P	**Pg**	**14 16 18.3**	**-0.9**
SMG				S	**Sb**	**14 16 25.2**	**-1.1**
SMG				AML	AML	14 16 26.6	
comp=N,94592μm,0.3s							
SMG				AML	AML	14 16 27.3	
comp=E,74855μm,0.3s							
GCAM	**G?zelcami?**	**0.36**	**154**⇑	*i*P	**Pb**	**14 16 19.6**	**-1.2**
GCAM				*i* S	**Sb**	**14 16 24.9**	**-1.6**
GCAM				IAML		14 16 25.0	
comp=N,20μm,0.4s							
GCAM				IAML		14 16 25.0	
comp=E,14μm,0.5s							
URLA	**Izmir**	**0.48**	**314**⇓	*i*P	**Pg**	**14 16 21.9**	**+0.2**
URLA				*i* S	**Sg**	**14 16 28.8**	**+0.7**
URLA				IAML		14 16 29.0	
comp=N,11μm,0.4s							
CESE	**eme**	**0.66**	**298**	PG	**Pb**	**14 16 25.2**	**-0.7**
CESE				SG	**Sb**	**14 16 34.5**	**-0.6**
AYDB	**Zeytinkoy-Aydi**	**0.68**	**96**	PG	**Pb**	**14 16 25.7**	**-0.6**
AYDB				SG	**Sb**	**14 16 34.9**	**-1.0**
KRBN	**Karaburun**	**0.68**	**326**	PG	**Pb**	**14 16 25.8**	**-0.7**
KRBN				SG	**Sb**	**14 16 35.4**	**-0.5**
AYDN	**Tasoluk**	**0.76**	**118**	*i*P	**Pb**	**14 16 27.4**	**-0.3**
AYDN				*i* S	**Sb**	**14 16 36.8**	**-1.3**
CHOS	**Chios island**	**0.85**	**295**	P	**Pb**	**14 16 29.2**	**-0.1**
CHOS				S	**Sb**	**14 16 41.8**	**+0.9**
comp=N,18μm,0.5s							
CHOS	**Chios island**	**0.85**	**295**	P	**Pg**	**14 16 25.8**	**-2.9**
CHOS				S	**Sg**	**14 16 38.8**	**-1.1**
CHOS				AML	AML	14 16 42.9	
comp=E,45439μm,0.5s							
CHOS				AML	AML	14 16 45.9	
comp=N,24990μm,0.5s							
CHOS	**Chios island**	**0.85**	**295**	PG	**Pb**	**14 16 28.9**	**-0.4**
YKAV	**Yalikavak-Bodr**	**0.92**	**168**	PG	**Pb**	**14 16 30.2**	**-0.1**
ZEDA	**zmir-Bergama**	**0.94**	**2**⇑	*i*P	**Pb**	**14 16 30.3**	**-0.4**
ZEDA				*i* S	**Sg**	**14 16 42.1**	**-0.6**
GOMA	**Golmarmara-Man**	**0.97**	**45**	PG	**Pb**	**14 16 30.8**	**-0.5**
BODT	**Bodrum**	**0.98**	**167**	PG	**Pb**	**14 16 30.9**	**-0.6**
BDRM	**Kayabasi**	**1.01**	**161**	*i*P	**Pg**	**14 16 30.9**	**-0.8**
BDRM				*i* P	**Pb**	**14 16 31.1**	**-0.8**
BDRM				*i* S	**Sn**	**14 16 46.0**	**-0.9**
BDRM				IAML		14 16 48.0	
comp=N,4μm,0.7s							
BDRM				IAML		14 16 48.0	
comp=E,2μm,0.9s							
AKS	**Akhisar**	**1.05**	**35**	PG	**Pg**	**14 16 31.7**	**-0.8**
AKHS	**Akhisar**	**1.05**	**35**⇑	*i*P	**Pg**	**14 16 31.6**	**-0.8**
AKHS				*i* S	**Sn**	**14 16 47.0**	**-0.9**
DKL	**Dikili**	**1.05**	**354**	PG	**Pg**	**14 16 31.5**	**-1.0**
PSRA	**Psara**	**1.27**	**294**	P	**Pn**	**14 16 34.9**	**-1.2**
PSRA				AML	AML	14 16 56.5	
comp=N,13546μm,0.3s							
PSRA				AML	AML	14 16 58.3	
comp=E,13912μm,0.2s							
KOSK	**Kos Island**	**1.27**	**182**	P	**Pg**	**14 16 36.6**	**-0.1**
KOSK				S	**Sn**	**14 16 54.4**	**+1.1**
comp=E,8μm,0.5s							
KOSK	**Kos Island**	**1.27**	**182**	PN	**Pn**	**14 16 35.3**	**-0.8**
MANT	**Manisa**	**1.28**	**68**	*i*P	**Pn**	**14 16 37.2**	**+0.6**
MANT				*i* S	**Sg**	**14 16 51.8**	**-1.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AYVA	**Ayvalik**	**1.31**	**348**	⇑*i*P	**Pn**	**14 16 35.2**	**-1.5**
AYVA				*i*S	**Sn**	**14 16 54.1**	**-0.2**
AYVA				IAML		14 16 56.0	
	comp=E,5µm,0.6s						
AYVA				IAML		14 16 57.0	
	comp=N,4µm,0.5s						
YER	**Yerkesik**	**1.33**	**132**	PN	**Pn**	**14 16 35.8**	**-1.2**
DATC	**Datca-Mugla**	**1.36**	**158**	PN	**Pn**	**14 16 36.1**	**-1.2**
PRK	**Paraskevi**	**1.36**	**334**	P	**Pg**	**14 16 39.4**	**+1.0**
PRK				S	**Sn**	**14 16 58.1**	**+2.6**
	comp=N,23µm,0.9s						
PRK	**Paraskevi**	**1.36**	**334**	P	**Pn**	**14 16 34.6**	**-2.8**
PRK				AML	AML	14 16 59.8	
	comp=E,34286µm,1.2s						
PRK				AML	AML	14 17 02.8	
	comp=N,28424µm,0.6s						
DAT	**Datca**	**1.36**	**161**	PN	**Pn**	**14 16 35.8**	**-1.7**
DAT	**Datca**	**1.36**	**161**	*i*P	**Pn**	**14 16 35.0**	**-2.5**
DAT				*i*S	**Sn**	**14 16 58.0**	**+2.2**
KULA	**Kula-Manisa**	**1.37**	**69**	PN	**Pn**	**14 16 36.3**	**-1.3**
NISR	**Nisiros**	**1.41**	**177**	P	**Pg**	**14 16 39.2**	**-0.2**
NISR	**Nisiros**	**1.41**	**177**	P	**Pn**	**14 16 37.9**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.45**	**21**	⇑*i*P	**Pg**	**14 16 39.3**	**-0.9**
STEP				*i*S	**Sg**	**14 16 59.6**	**+0.6**
STEP				IAML		14 17 05.0	
	comp=E,2µm,0.6s						
AMGA	**Amorgos Island**	**1.50**	**218**	P	**Pn**	**14 16 39.5**	**+0.2**
AMGA				S	**Sg**	**14 17 00.4**	**-0.1**
	comp=E,6µm,0.6s						
AMGA	**Amorgos Island**	**1.50**	**218**	P	**Pb**	**14 16 40.0**	**-0.2**
AMGA				AML	AML	14 17 03.8	
	comp=E,13612µm,0.6s						
AMGA				AML	AML	14 17 05.4	
	comp=N,11791µm,0.6s						
SIGR	**SIGRI**	**1.50**	**322**	P	**Pg**	**14 16 41.5**	**+0.4**
SIGR				S	**Sg**	**14 17 00.6**	**-0.1**
	comp=N,4µm,0.6s						
SIGR	**SIGRI**	**1.50**	**322**	P	**Pn**	**14 16 37.7**	**-1.6**
SIGR				AML	AML	14 17 03.0	
	comp=E,6840µm,0.5s						
SIGR				AML	AML	14 17 06.0	
	comp=N,8842µm,0.7s						
SIGR	**SIGRI**	**1.50**	**322**	PN	**Pn**	**14 16 38.3**	**-1.0**
APE	**Apeiranthos**	**1.53**	**232**	P	**Pb**	**14 16 40.5**	**-0.3**
APE	**Apeiranthos**	**1.53**	**232**	P	**Pb**	**14 16 40.4**	**-0.5**
APE				AML	AML	14 17 05.6	
	comp=N,5861µm,0.2s						
APE				AML	AML	14 17 08.2	
	comp=E,3176µm,0.5s						
APE	**Apeiranthos**	**1.53**	**232**	⇓P	**Pg**	**14 16 41.6**	**-0.1**
APE				⇑S	**Sn**	**14 16 57.4**	**-2.4**
APE	**Apeiranthos**	**1.53**	**232**	PN	**Pn**	**14 16 38.2**	**-1.6**
TNSA	**Tinos**	**1.56**	**253**	P	**Pn**	**14 16 38.7**	**-1.4**
TNSA				AML	AML	14 17 03.2	
	comp=N,2351µm,0.3s						
TNSA				AML	AML	14 17 05.1	
	comp=E,2710µm,0.5s						
TAVA	**DENIZLI_Tavas**	**1.59**	**110**	⇓*i*P	**Pn**	**14 16 39.9**	**-0.8**
TAVA				*i*S	**Sg**	**14 17 05.1**	**+1.7**
DENT	**Denizli**	**1.60**	**99**	PN	**Pn**	**14 16 38.8**	**-2.0**
DEMI	**Demirci**	**1.66**	**52**	⇑*i*P	**Pg**	**14 16 43.5**	**-0.8**
DEMI				*i*S	**Sb**	**14 17 04.1**	**0.0**
TURN	**Turunc**	**1.70**	**132**	*i*P	**Pb**	**14 16 43.2**	**-0.4**
TURN				*i*S	**Sb**	**14 17 04.9**	**-0.1**
USAK	**Uak-Merkez**	**1.70**	**66**	*i*P	**Pg**	**14 16 44.1**	**-0.9**
USAK				*i*S	**Sg**	**14 17 08.3**	**+1.3**
BALB	**Balikesir**	**1.74**	**22**	PN	**Pn**	**14 16 41.5**	**-1.1**
BAYC	**CANAKKALE_Bayr**	**1.76**	**348**	⇑*i*P	**Pn**	**14 16 41.7**	**-1.2**
BAYC				*i*S	**Sg**	**14 17 08.4**	**-0.4**
DALY	**Dalyan (Mula)**	**1.76**	**133**	PN	**Pn**	**14 16 42.2**	**-0.7**
DALY	**Dalyan (Mula)**	**1.76**	**133**	*i*P	**Pg**	**14 16 46.7**	**+0.6**
DALY				*i*S	**Sg**	**14 17 11.1**	**+2.1**
BALY	**Balya**	**1.77**	**15**	*i*P	**Pb**	**14 16 44.8**	**-0.2**
BALY				*i*S	**Sg**	**14 17 09.0**	**-0.3**
SIMA	**Simav-Kutahya**	**1.86**	**55**	PN	**Pn**	**14 16 43.2**	**-1.1**
SMAA	**Simav-Kutahya**	**1.86**	**54**	PN	**Pn**	**14 16 42.7**	**-1.7**
EZN	**Ezine**	**1.88**	**343**	PN	**Pn**	**14 16 43.1**	**-1.5**
IOSP	**Ios island**	**1.90**	**228**	P	**Pb**	**14 16 46.3**	**-0.8**
IOSP				S	**Sb**	**14 17 10.9**	**-0.1**
	comp=E,5µm,0.4s						
IOSP	**Ios island**	**1.90**	**228**	P	**Pb**	**14 16 47.2**	**+0.1**
IOSP				AML	AML	14 17 17.4	
	comp=E,11026µm,0.3s						
IOSP				AML	AML	14 17 18.3	
	comp=N,7549µm,0.3s						
DURS	**Dursunbey**	**1.93**	**35**	*i*P	**Pn**	**14 16 44.0**	**-1.4**
DURS				*i*S	**Sg**	**14 17 15.3**	**+0.8**
ANAF	**Anafi Island**	**1.95**	**212**	P	**Pn**	**14 16 46.3**	**+0.8**
ANAF	**Anafi Island**	**1.95**	**212**	P	**Pb**	**14 16 47.6**	**-0.3**
KHAL	**Karahalli**	**1.96**	**79**	*i*P	**Pg**	**14 16 49.8**	**-0.2**
KHAL				*i*S	**Sb**	**14 17 13.3**	**+0.4**
BOZC	**Bozcaada**	**1.97**	**337**	*i*P	**Pg**	**14 16 49.4**	**-0.7**
BOZC				*i*S	**Sg**	**14 17 16.0**	**+0.4**
BOZC				IAML		14 17 17.0	
	comp=N,2µm,0.6s						
KHL	**Karahalli**	**1.98**	**81**	PN	**Pn**	**14 16 45.2**	**-0.8**
SHAP	**Saphane-Kutahy**	**1.98**	**59**	PN	**Pn**	**14 16 45.1**	**-0.9**
ARG	**Arkhangelos**	**2.00**	**154**	P	**Pb**	**14 16 47.4**	**-1.4**
ARG	**Arkhangelos**	**2.00**	**154**	P	**Pn**	**14 16 46.0**	**-0.2**
ARG	**Arkhangelos**	**2.00**	**154**	PN	**Pn**	**14 16 45.5**	**-0.7**
DST	**Dursunbey**	**2.00**	**38**	PN	**Pn**	**14 16 45.2**	**-1.1**
CMBO	**Columbo, Santo**	**2.02**	**221**	P	**Pb**	**14 16 48.6**	**-0.6**
SAP4	**Santorini-Oia**	**2.04**	**221**	P	**Pb**	**14 16 49.3**	**-0.2**
THT2	**Imerovigli**	**2.04**	**220**	PN	**Pn**	**14 16 46.0**	**-0.8**
SAP2K	**Karterados**	**2.05**	**219**	P	**Pb**	**14 16 49.5**	**-0.2**
KARY	**Karystos**	**2.05**	**271**	P	**Pn**	**14 16 47.4**	**+0.5**
KARY	**Karystos**	**2.05**	**271**	P	**Pn**	**14 16 46.6**	**-0.3**
THR3	**Thira Island,**	**2.08**	**220**	P	**Pb**	**14 16 48.5**	**-1.5**
SANT	**Santorini**	**2.08**	**218**	P	**Pb**	**14 16 49.0**	**-1.1**
SANT				AML	AML	14 17 25.4	
	comp=N,1794µm,0.3s						
SANT				AML	AML	14 17 26.9	
	comp=E,6912µm,0.4s						
SANT	**Santorini**	**2.08**	**218**	⇑P	**Pg**	**14 16 50.7**	**-1.4**
SANT				⇓S	**Sg**	**14 17 22.4**	**+3.3**
SANT	**Santorini**	**2.08**	**218**	PN	**Pn**	**14 16 46.9**	**-0.4**
GONE	**Gonen-Balikesi**	**2.08**	**14**	PN	**Pn**	**14 16 46.3**	**-1.0**
SAP3	**Santorini-Thir**	**2.08**	**221**	P	**Pb**	**14 16 49.5**	**-0.7**
SAP1	**Santorini-Akro**	**2.12**	**219**	P	**Pb**	**14 16 50.2**	**-0.6**
GEDZ	**Gediz**	**2.12**	**61**	PN	**Pn**	**14 16 47.3**	**-0.6**
SKY	**Skiros Island**	**2.13**	**294**	P	**Pn**	**14 16 48.8**	**+0.9**
FETY	**Fethiye**	**2.14**	**130**	PN	**Pn**	**14 16 47.6**	**-0.6**
FETY	**Fethiye**	**2.14**	**130**	*i*P	**Pn**	**14 16 48.3**	**+0.2**
GOLH	**Golhisar**	**2.15**	**111**	*i*P	**Pg**	**14 16 51.8**	**-1.8**
GOLH				*i*S	**Sg**	**14 17 26.9**	**+5.4**
SERI	**Serifos**	**2.20**	**248**	P	**Pn**	**14 16 50.2**	**+1.2**
SERI				AML	AML	14 17 24.6	
	comp=E,1072µm,0.3s						
SERI				AML	AML	14 17 25.4	
	comp=N,1363µm,0.5s						
KNL	**Balıkesir**	**2.27**	**9**	*i*P	**Pg**	**14 16 54.7**	**-1.2**
KNL				*i*S	**Sb**	**14 17 22.3**	**+0.6**
KNL				IAML		14 17 26.0	
	comp=E,2µm,0.7s						
GADA	**Gvkgeada**	**2.34**	**338**	PN	**Pn**	**14 16 50.1**	**-0.7**
LPK	**Lapseki**	**2.35**	**355**	PN	**Pn**	**14 16 49.8**	**-1.3**
LIA	**Limnos Island**	**2.36**	**323**	P	**Pn**	**14 16 50.9**	**-0.3**
LIA	**Limnos Island**	**2.36**	**323**	P	**Pn**	**14 16 50.8**	**-0.3**
LIA				AML	AML	14 17 36.0	
	comp=N,1785µm,0.6s						
LIA				AML	AML	14 17 36.2	
	comp=E,1777µm,0.9s						
TVSB	**Tavsanli**	**2.37**	**52**	PN	**Pn**	**14 16 50.6**	**-0.8**
KRBG	**Karabiga-Canak**	**2.37**	**5**	PN	**Pn**	**14 16 50.0**	**-1.3**
BASM	**Basmaki-Afyon**	**2.38**	**92**	PN	**Pn**	**14 16 50.8**	**-0.7**
KYMI	**Kymi, Euboea I**	**2.39**	**286**	P	**Pn**	**14 16 53.2**	**+1.7**
EDC	**Edincik**	**2.41**	**15**	PN	**Pn**	**14 16 50.6**	**-1.2**
GELI	**Tayfur-Gelibol**	**2.41**	**350**	PN	**Pn**	**14 16 50.9**	**-0.9**
MHLA	**Plaka, Milos I**	**2.44**	**239**	P	**Pn**	**14 16 53.6**	**+1.4**
MHLA				AML	AML	14 17 38.5	
	comp=N,3788µm,0.7s						
MHLA				AML	AML	14 17 40.5	
	comp=E,5499µm,0.8s						
DION	**Dionisos Attik**	**2.45**	**272**	P	**Pn**	**14 16 53.1**	**+0.6**
KARP	**Karpathos**	**2.48**	**178**	P	**Pn**	**14 16 53.2**	**+0.5**
KARP	**Karpathos**	**2.48**	**178**	PN	**Pn**	**14 16 51.9**	**-0.8**
ORLT	**Orhaneli**	**2.48**	**35**	PN	**Pn**	**14 16 51.8**	**-1.1**
MHLO	**Agia Marina, M**	**2.49**	**238**	P	**Pb**	**14 16 54.8**	**-2.3**
MHLO				AML	AML	14 17 37.7	
	comp=N,7005µm,0.6s						
MHLO				AML	AML	14 17 42.5	
	comp=E,6555µm,0.8s						
PTL	**Penteli**	**2.50**	**272**	P	**Pn**	**14 16 53.3**	**+0.1**
PTL	**Penteli**	**2.50**	**272**	P	**Pn**	**14 16 53.2**	**+0.1**
VLY	**Voula,Athens**	**2.57**	**267**	P	**Pn**	**14 16 54.9**	**+0.8**
ATHU	**Athens Univers**	**2.57**	**270**	P	**Pn**	**14 16 53.8**	**-0.2**
MRMT	**Marmara Adasi**	**2.61**	**9**	PN	**Pn**	**14 16 53.4**	**-1.3**
ELL	**Elmali**	**2.62**	**118**	PN	**Pn**	**14 16 54.3**	**-0.5**
ATH	**Athens Observa**	**2.62**	**270**	P	**Pn**	**14 16 55.0**	**+0.3**
RKY	**Sarkoy-Tekirda**	**2.66**	**2**	PN	**Pn**	**14 16 54.6**	**-0.7**
ENZZ	**Sultanice-Enez**	**2.67**	**345**	PN	**Pn**	**14 16 54.8**	**-0.6**
ULDT	**Uludag**	**2.67**	**37**	*i*P	**Pg**	**14 17 02.4**	**-1.1**
ERIK	**Erikli-Kesan**	**2.67**	**351**	PN	**Pn**	**14 16 54.4**	**-1.0**
SMTH	**Samothraki Isl**	**2.71**	**335**	P	**Pn**	**14 16 55.2**	**-0.8**
SMTH	**Samothraki Isl**	**2.71**	**335**	P	**Pn**	**14 16 55.2**	**-0.8**
AKAS	**Kas**	**2.72**	**130**	*i*P	**Pn**	**14 16 57.6**	**+1.3**
MDNY	**Mudanya-Bursa**	**2.75**	**31**	PN	**Pn**	**14 16 56.1**	**-0.3**
ISP	**Isparta**	**2.76**	**93**	PN	**Pn**	**14 16 55.9**	**-0.9**
ENEZ	**Enez**	**2.79**	**346**	PN	**Pn**	**14 16 56.3**	**-0.8**
MRKA	**Markates**	**2.79**	**285**	P	**Pn**	**14 16 57.6**	**+0.5**
KESN	**Edirne-Kesan**	**2.81**	**354**	*i*P	**Pn**	**14 16 56.7**	**-1.0**
SHUT	**Suhut-Afyon**	**2.81**	**78**	PN	**Pn**	**14 16 56.9**	**-0.6**
ARMT	**Armutlu**	**2.91**	**29**	PN	**Pn**	**14 16 58.1**	**-0.6**
GEMT	**Gemlik**	**2.93**	**34**	PN	**Pn**	**14 16 58.7**	**-0.3**
ALN	**Alexandroupoli**	**2.97**	**345**	P	**Pn**	**14 16 58.9**	**-0.6**
ALN	**Alexandroupoli**	**2.97**	**345**	P	**Pn**	**14 16 58.9**	**-0.6**
ALN	**Alexandroupoli**	**2.97**	**345**	PN	**Pn**	**14 16 58.9**	**-0.6**
VIL2	**Platees**	**2.98**	**275**	P	**Pn**	**14 17 00.5**	**+0.9**
ZKR	**Zakros**	**2.98**	**193**	P	**Pn**	**14 17 00.8**	**+1.2**
ZKR	**Zakros**	**2.98**	**193**	PN	**Pn**	**14 16 59.3**	**-0.3**
NPS	**Neapolis**	**2.98**	**203**	P	**Pn**	**14 17 01.1**	**+1.4**
SKIA	**Skiathos**	**3.02**	**293**	P	**Pn**	**14 17 00.3**	**0.0**
DID	**Didima**	**3.06**	**261**	P	**Pn**	**14 17 00.0**	**-0.7**
CAVI	**Cavuskoy**	**3.08**	**44**	PN	**Pn**	**14 17 00.4**	**-0.7**
UKOP	**Uzunkopru-Edir**	**3.12**	**354**	PN	**Pn**	**14 17 01.2**	**-0.3**
YLV	**Yalova**	**3.12**	**35**	PN	**Pn**	**14 17 01.2**	**-0.4**
LAST	**Lasithi**	**3.12**	**204**	P	**Pn**	**14 17 01.4**	**-0.3**
LAST	**Lasithi**	**3.12**	**204**	P	**Pn**	**14 17 02.9**	**+1.2**
HRKL	**Herakleio**	**3.12**	**210**	PN	**Pn**	**14 17 01.4**	**-0.2**
THAS	**Thassos island**	**3.14**	**326**	P	**Pn**	**14 17 01.2**	**-0.7**
THAS	**Thassos island**	**3.14**	**326**	P	**Pn**	**14 17 01.3**	**-0.7**
LOUT	**Loutraki**	**3.21**	**271**	P	**Pn**	**14 17 04.5**	**+1.7**
IDI	**Anoyia**	**3.23**	**213**	P	**Pn**	**14 17 02.3**	**-0.9**
IDI	**Anoyia**	**3.23**	**213**	Pn	**Pn**	**14 17 02.3**	**-0.9**
	comp=E,3.1nm,0.3s,baz=28,slow=15,SNR=12						
IDI				Sn	**Sn**	**14 17 38.1**	**-3.6**
	comp=E,14nm,0.3s,baz=305,slow=14,SNR=4.8						
IDI				Lg	Lg	14 17 57.1	
	comp=E,26nm,0.3s,baz=295,slow=22,SNR=5.3						
IDI	**Anoyia**	**3.23**	**213**	P	**Pn**	**14 17 04.8**	**+1.7**
IDI	**Anoyia**	**3.23**	**213**	⇑P	**Pb**	**14 17 07.1**	**-2.7**
IDI				⇑S	**Sg**	**14 17 53.2**	**-2.8**
PAIG	**Paliouri**	**3.23**	**307**	P	**Pn**	**14 17 03.5**	**+0.4**
RDO	**Rodhopi**	**3.33**	**340**	P	**Pn**	**14 17 04.2**	**-0.2**
RDO	**Rodhopi**	**3.33**	**340**	P	**Pn**	**14 17 04.4**	**0.0**
VAM	**Vamos**	**3.47**	**222**	P	**Pn**	**14 17 07.9**	**+1.5**
SIVA	**Sivas**	**3.50**	**212**	P	**Pn**	**14 17 08.9**	**+2.1**
IMMV	**Iera Moni Meta**	**3.54**	**225**	P	**Pn**	**14 17 10.1**	**+2.7**
KAVA	**Kavala**	**3.55**	**327**	P	**Pn**	**14 17 07.2**	**-0.3**
AGG	**Agios Georgios**	**3.82**	**287**	P	**Pn**	**14 17 12.9**	**+1.6**
KDZ	**Kurdzhali**	**3.83**	**342**	*i*P	**Pn**	**14 17 10.8**	**-0.6**
KLV	**Kalavryta, Ach**	**3.86**	**272**	P	**Pn**	**14 17 12.3**	**+0.5**
KALE	**Kalithea**	**3.88**	**277**	P	**Pn**	**14 17 13.1**	**+1.1**
TRIZ	**Trizonia**	**3.93**	**276**	P	**Pn**	**14 17 13.1**	**+0.5**
LAKA	**Lakka**	**3.99**	**275**	P	**Pn**	**14 17 14.3**	**+0.7**
ANX	**Ano Chora**	**4.06**	**280**	P	**Pn**	**14 17 15.7**	**+1.1**
RZN	**Rozhen**	**4.07**	**335**	*i*P	**Pn**	**14 17 14.9**	**+0.1**
SRS	**Serrai**	**4.08**	**320**	P	**Pn**	**14 17 14.6**	**-0.1**
NVR	**Nevrokopi**	**4.13**	**325**	P	**Pn**	**14 17 15.3**	**-0.1**
NVR	**Nevrokopi**	**4.13**	**325**	P	**Pn**	**14 17 15.3**	**-0.1**
DIM	**Dimitrovgrad**	**4.18**	**344**	*i*P	**Pn**	**14 17 15.8**	**-0.4**
MMB	**Musomiste**	**4.38**	**325**	*i*P	**Pn**	**14 17 18.6**	**-0.3**
JMB	**Yambol**	**4.45**	**356**	*i*P	**Pn**	**14 17 19.0**	**-0.9**
PLD	**Plovdiv**	**4.45**	**337**	*i*P	**Pn**	**14 17 19.8**	**-0.1**
VAY	**Valandovo**	**4.77**	**315**	*i*Pn	**Pn**	**14 17 28.6**	**+4.4**
VAY	**Valandovo**	**4.77**	**315**	*i*Pn	**Pn**	**14 17 28.6**	**+4.4**
KKB	**Krupnik**	**4.89**	**323**	*i*P	**Pg**	**14 17 43.7**	**-2.3**
STIP	**Stip**	**5.23**	**316**	*i*Pn	**Pn**	**14 17 30.3**	**-0.3**
STIP	**Stip**	**5.23**	**316**	*i*Pn	**Pn**	**14 17 30.3**	**-0.3**
SZH	**Strazhica**	**5.30**	**351**	*i*P	**Pn**	**14 17 30.8**	**-0.8**
BRTR	**Keskin Array B**	**5.42**	**70**	Pn	**Pn**	**14 17 34.4**	**+1.0**
	comp=E,0.3nm,0.3s,baz=246,slow=14,SNR=7.4						
BRTR				Pg	**Pg**	**14 17 53.6**	**-2.6**
	comp=E,1.1nm,0.3s,baz=247,slow=16,SNR=24						
BRTR				LR	LR	14 19 20.1	
	comp=E,17nm,21.0s,baz=278,slow=35						
VTS	**Vitosha**	**5.43**	**329**	⇑P	**Pn**	**14 17 34.0**	**+0.5**
VTS	**Vitosha**	**5.43**	**329**	*i*P	**Pn**	**14 17 33.8**	**+0.3**
RAZG	**Razgrad**	**5.55**	**356**	⇓P	**Pn**	**14 17 34.7**	**-0.3**
PLVB	**Pleven**	**5.66**	**342**	⇑P	**Pn**	**14 17 37.1**	**+0.6**
SKO	**Skopje**	**5.83**	**314**	⇓*i*Pn	**Pn**	**14 17 40.3**	**+1.5**
SKO	**Skopje**	**5.83**	**314**	⇓*i*Pn	**Pn**	**14 17 40.3**	**+1.5**
ICOR	**Ion Corvin**	**6.11**	**5**	⇑P	**Pn**	**14 17 43.2**	**+0.5**
RASA	**Rasa**	**6.18**	**1**	⇑P	**Pn**	**14 17 44.0**	**+0.3**
TIRR	**Tirgusor**	**6.51**	**9**	⇓P	**Pn**	**14 17 48.5**	**+0.4**
HARR	**Harsova**	**6.69**	**5**	⇑P	**Pn**	**14 17 50.8**	**+0.1**
TOPG	**Topolog**	**6.92**	**8**	⇓P	**Pn**	**14 17 53.2**	**-0.5**
CFR	**Carcaliu**	**7.20**	**6**	⇓P	**Pn**	**14 17 57.0**	**-0.5**
MLR	**Muntele Rosu**	**7.50**	**354**	Pn	**Pn**	**14 18 02.3**	**+0.4**
	comp=E,0.8nm,0.3s,baz=199,slow=4.5,SNR=10						
MLR				Lg	Lg	14 20 13.9	
	comp=E,0.3nm,0.3s,baz=258,slow=18,SNR=3.5						
MLR				LR	LR	14 21 11.5	
	comp=E,97nm,18.7s,baz=293,slow=40						
MLR	**Muntele Rosu**	**7.50**	**354**	⇓P	**Pn**	**14 18 02.7**	**+0.7**
BISRR	**Bisoca**	**7.52**	**358**	⇑P	**Pn**	**14 18 02.6**	**+0.5**
VOIR		**7.55**	**349**	⇑P	**Pn**	**14 18 02.7**	**+0.2**
HERR	**Herculane**	**7.68**	**335**	⇑P	**Pn**	**14 18 03.7**	**-0.5**
PLOR	**Plostina**	**7.83**	**358**	⇑P	**Pn**	**14 18 07.1**	**+0.8**
VRI	**Vrincioaia**	**7.84**	**358**	⇑P	**Pn**	**14 18 06.6**	**+0.2**
GZR	**Gura Zlata**	**8.02**	**338**	⇑P	**Pn**	**14 18 07.8**	**-1.1**
MMAI	**Mount Meron Ar**	**8.45**	**124**	Pn	**Pn**	**14 18 12.5**	**-2.4**
	comp=E,2.7nm,0.3s,baz=320,slow=14,SNR=8.3						
MMAI				LR	LR	14 22 12.0	
	comp=E,93nm,18.6s,baz=335,slow=43						
TESR	**Tescani**	**8.49**	**358**	⇓P	**Pn**	**14 18 14.9**	**-0.3**
BZS	**Buzias**	**8.60**	**334**	⇓P	**Pn**	**14 18 16.4**	**-0.3**
BIZ	**Bicaz**	**8.94**	**356**	⇓P	**Pn**	**14 18 21.3**	**-0.1**
BURAR	**Bucovina Array**	**9.68**	**353**	⇑P	**Pn**	**14 18 32.7**	**+1.0**
ASF	**Jabal al Asfar**	**9.96**	**123**	Pn	**Pn**	**14 18 34.3**	**-1.3**
	comp=E,0.3nm,0.3s,baz=305,slow=1.3,SNR=2.4						
EIL	**Elat**	**10.61**	**139**	Pn	**Pn**	**14 18 43.6**	**-0.9**
	comp=E,0.4nm,0.3s,baz=253,slow=3.7,SNR=2.3						
VYHS	**Vyhne**	**12.04**	**333**	*e*PN	**Pn**	**14 19 04.1**	**+0.1**
GERES	**GERESS Array B**	**14.50**	**323**	Pn	**Pn**	**14 19 39.2**	**+1.6**
	comp=E,0.0nm,0.3s,baz=126,slow=10.0,SNR=1.8						
KHC	**Kasperske Hory**	**14.75**	**323**	*e*P	**P**	**14 19 46.5**	**-0.6**
KHC				*e*pP	Pn	14 19 52.0	+11
DAVOX	**Davos/Dischmat**	**15.38**	**310**	LR	LR	14 26 13.7	
	comp=E,40nm,21.4s,baz=80,slow=39						
HFS	**Hagfors**	**23.70**	**343**	LR	LR	14 31 03.5	
	comp=E,46nm,18.8s,baz=336,slow=38						
ESDC	**Sonseca Array**	**24.14**	**284**	P	**P**	**14 21 31.5**	**+3.0**
	comp=E,1.2nm,1.0s,baz=72,slow=8.8,SNR=6.2						
NOA	**NORSAR Array B**	**25.09**	**342**	LR	LR	14 33 15.1	
	comp=E,38nm,18.1s,baz=155,slow=41						
AKTO	**Aktyubinsk**	**25.23**	**51**	P	**P**	**14 21 38.1**	**-0.2**
	comp=E,1.8nm,0.7s,baz=255,slow=14,SNR=4.3						
ARCES	**ARCESS Array B**	**31.58**	**359**	LR	LR	14 35 48.2	
	comp=E,52nm,18.1s,baz=36,slow=37						
TORD	**Torodi Ar. Bea**	**33.50**	**229**	P	**P**	**14 22 51.8**	**-0.2**
	comp=E,1.1nm,0.4s,baz=37,slow=9.1,SNR=9.5						
MKAR	**Makanchi Array**	**40.98**	**59**	P	**P**	**14 23 55.2**	**-0.1**
	comp=E,0.7nm,0.7s,baz=291,slow=5.6,SNR=4.1						
ZALV	**Zalesovo Beam**	**41.95**	**48**	P	**P**	**14 24 03.9**	**+0.7**
	comp=E,0.4nm,0.3s,baz=267,slow=8.4,SNR=2.3						
MATP	**Matopo**	**58.16**	**178**	LR	LR	14 52 13.2	
	comp=E,94nm,19.0s,baz=180,slow=37						
SADO	**Sadowa**	**74.11**	**315**	LR	LR	15 01 01.7	
	comp=E,63nm,18.0s,baz=176,slow=36						
YKA	**Yellowknife Ar**	**75.18**	**343**	P	**P**	**14 27 56.5**	**+1.9**
	comp=E,0.1nm,0.4s,baz=28,slow=6.7,SNR=3.8						
KSRS	**Korea Array**	**75.36**	**54**	P	**P**	**14 27 56.3**	**+0.3**
	comp=E,1.1nm,0.8s,baz=290,slow=4.7,SNR=4.8						

ATH ***01*** *14:31:24.8, 40°.14N×19°.79E, h11km±3km, ML2.0/3, Error ellipse: s-maj=3.8km s-min=1.5km az=156.0*
THE ***01*** *14:31:25.4, 40°.11N×19°.84E, h13km±4km, ML2.1/5, Error ellipse: s-maj=4.3km s-min=0.8km az=9.0*
TIR ***01*** *14:31:25.6, 40°.10N×20°.10E, h7km, Md2.6/3*
ISC 01 14:31:25.3±1.4**, 40°.10N**±0°.03×**19°.84E**±0°.07**, h14**km±8km**, n20,** σ**0s.56**/32**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.23**	**34**	P	**Pg**	**14 31 30.2**	**-0.2**
TPE				S	**Sg**	**14 31 34.0**	**+0.2**
	712nm,0.1s						
TPE	**Tepelena**	**0.23**	**34**	*i*PG	**Pg**	**14 31 30.1**	**-0.2**
TPE				*i*SG	**Sg**	**14 31 33.5**	**-0.3**
SRN	**Sarande**	**0.26**	**151**	P	**Pg**	**14 31 30.3**	**-0.4**
SRN				S	**Sg**	**14 31 34.9**	**+0.5**
	930nm,0.2s						
SRN	**Sarande**	**0.26**	**151**	*i*PG	**Pg**	**14 31 30.3**	**-0.4**
SRN				*i*SG	**Sg**	**14 31 34.9**	**+0.5**
KASA	**Kassiopi**	**0.36**	**168**	P	**Pg**	**14 31 32.4**	**-0.3**
KASA				S	**Sg**	**14 31 38.4**	**+0.7**
KEK	**Kerkira**	**0.39**	**185**	P	**Pg**	**14 31 33.2**	**0.0**
KEK				S	**Sb**	**14 31 40.1**	**+0.2**
	375nm,0.2s						
KEK	**Kerkira**	**0.39**	**185**	P	**Pg**	**14 31 33.2**	**0.0**
KEK				S	**Sb**	**14 31 39.9**	**-0.1**
KEK				AML	AML	14 31 40.6	
	comp=E,874µm,0.1s						
KEK				AML	AML	14 31 41.4	
	comp=N,457µm,0.2s						
IGT	**Igoumenitsa**	**0.69**	**146**	P	**Pg**	**14 31 38.2**	**-0.5**
IGT				S	**Sb**	**14 31 48.9**	**+0.5**
	comp=N,92nm,0.4s						
IGT	**Igoumenitsa**	**0.69**	**146**	*i*PG	**Pg**	**14 31 38.1**	**-0.5**
IGT				*i*SG	**Sg**	**14 31 46.1**	**-1.6**
IGT	**Igoumenitsa**	**0.69**	**146**	P	**Pg**	**14 31 38.4**	**-0.3**
IGT				S	**Sb**	**14 31 48.9**	**+0.5**
IGT				AML	AML	14 31 53.1	
	comp=E,168µm,0.4s						
IGT				AML	AML	14 31 58.3	
	comp=N,165µm,0.3s						
JAN	**Janina**	**0.90**	**120**	P	**Pb**	**14 31 43.1**	**+0.4**
JAN				S	**Sn**	**14 31 56.1**	**-0.3**
	comp=N,120nm,0.4s						
JAN	**Janina**	**0.90**	**120**	P	**Pb**	**14 31 43.0**	**+0.4**
JAN				S	**Sb**	**14 31 55.9**	**+1.4**
JAN				AML	AML	14 32 00.4	
	comp=E,263µm,0.3s						
JAN				AML	AML	14 32 02.3	
	comp=N,216µm,0.3s						
NEST	**Nestorio**	**0.98**	**71**	P	**Pg**	**14 31 43.7**	**-0.5**
MEV	**Metsovon**	**1.11**	**106**	P	**Pb**	**14 31 46.6**	**+0.2**
KPRO	**Kipourio**	**1.18**	**97**	P	**Pg**	**14 31 48.2**	**+0.2**
LKD2	**Lefkada island**	**1.46**	**154**	P	**Pg**	**14 31 53.1**	**-0.2**
THL	**Klokotos Trika**	**1.76**	**107**	P	**Pb**	**14 31 57.1**	**-0.2**
EVR	**Evrytania**	**1.93**	**127**	P	**Pb**	**14 32 00.7**	**+0.4**
AGG	**Agios Georgios**	**2.21**	**119**	P	**Pb**	**14 32 04.5**	**-0.6**
ANX	**Ano Chora**	**2.21**	**132**	P	**Pb**	**14 32 04.6**	**-0.5**

BJI ***01*** *14:35:36.4±0.0, 1°.82N×98°.03E, h60km, mB5.5/81, mb5.5/83, Ms5.7/96, Ms7 5.5/90*
IDC ***01*** *14:35:36.8±1.2, 1°.96N×98°.03E, h34km±8km, mb5.2/54, mb1 5.2/56, mb1mx5.2/57, mbtmp5.4/56, ML4.9/2, MS5.2/37, Ms1 5.2/37, ms1mx5.1/46, Error ellipse: s-maj=8.5km s-min=7.0km az=25.0*
NEIC ***01*** *14:35:37.1±2.0, 1°.96N±0°.06×97°.97E±0°.06, h37km±1km, mb5.7/189, Ms_20 5.6/644, Mwb5.8/110, Mww5.9, Mwc6.0(GCMT), Error ellipse: s-maj=11.5km s-min=9.5km az=53.0*
NEIC ***01*** *14:35:37.5, 1°.96N×97°.94E, h42km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.66; $M_{\theta\theta}$-0.62; $M_{\phi\phi}$-3.04; $M_{r\theta}$4.63; $M_{\theta\phi}$1.39; $M_{\phi r}$-2.14; Fault plane solution: $M_0$6.28000×10^{17} NP1:ϕ_s352.01000°, δ23.48000°, λ134.20000°. NP2:ϕ_s125.34000°, δ73.40000°, λ73.15000°. Principal axes: T 6.7388, Plg58.0000°, Azm12.0000°; N -1.0462, Plg16.0000°, Azm130.0000°; P -5.6926, Plg27.0000°, Azm229.0000°;*
MOS ***01*** *14:35:37.6±0.9, 2°.02N×98°.01E, h54km, mb6.0/138, MS5.2/53 Error ellipse: s-maj=5.9km s-min=3.1km az=119.6*
DJA ***01*** *14:35:39.5±0.2, 2°N±2°×9°8E±°, h58km±2km, M5.5/90, mb5.7/90, mB5.8/70, MLv6.0/20, Mw(mB)5.4/70, Mwp5.6/38*
KLM ***01*** *14:35:40.0, 1°.87N×97°.80E, h45km, mb5.8*
BGR ***01*** *14:35:41.4±0.0, 1°.82N×96°.42E, h33km, mb5.7, Ms5.1*
GCMT ***01*** *14:35:42.1±0.1, 1°.88N±0°.01×97°.72E±0°.01, h44km, MW5.8/157, Moment Tensor Solution. s157, c328; s153, c412; Duration: 2s.0 Moment tensor: Scale 10^{17} Nm; M_{rr}5.28±.06; $M_{\theta\theta}$-1.64±.04; $M_{\phi\phi}$-3.64±.05; $M_{r\theta}$4.50±.06; $M_{\theta\phi}$2.66±.04; $M_{\phi r}$-2.40±.06; Best double couple: $M_0$7.40900×10^{17} NP1:ϕ_s341.00000°, δ27.00000°, λ121.00000°. NP2:ϕ_s128.00000°, δ67.00000°, λ76.00000°. Principal axes: T 7.5900, Plg65.0000°, Azm13.0000°; N -0.3620, Plg13.0000°, Azm133.0000°; P -7.2280, Plg21.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NEIC ***01*** *14:35:42, 1°.90N×97°.75E, h27km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.38; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$-0.28; $M_{r\theta}$0.92; $M_{\theta\phi}$0.29; $M_{\phi r}$-0.54; Fault plane solution: $M_0$1.16000×10^{18} NP1:ϕ_s122.00000°, δ80.00000°, λ79.00000°. NP2:ϕ_s349.00000°, δ15.00000°, λ136.00000°. Principal axes: T 1.1432, Plg54.0000°, Azm19.0000°; N 0.0359, Plg10.0000°, Azm124.0000°; P -1.1791, Plg34.0000°, Azm221.0000°;*
NEIC ***01*** *14:35:43, 1°.64N×97°.65E, h30km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}4.19; $M_{\theta\theta}$-1.83; $M_{\phi\phi}$-2.36; $M_{r\theta}$5.52; $M_{\theta\phi}$1.99; $M_{\phi r}$-3.79; Fault plane solution: $M_0$7.88000×10^{17} NP1:ϕ_s127.00000°, δ74.00000°, λ84.00000°. NP2:ϕ_s329.00000°, δ17.00000°, λ111.00000°. Principal axes: T 8.0085, Plg60.0000°, Azm28.0000°; N -0.2643, Plg6.0000°, Azm129.0000°; P -7.7442, Plg29.0000°, Azm222.0000°;*
ISC 01 14:35:38.7±0.3**, 1°.97N**±0°.03×**97°.96E**±0°.03**, h50**km±2km**, h51**km**:pP-P, n1690,** σ**1s.64**/1565**, mb5.6**/370**, MS5.5**/434**, 155C-25D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.76**	**210**	P	**Pn**	**14 35 52.0**	**-1.3**
GSI				S	**Sn**	**14 36 04.0**	**+0.2**
GSI	**Gunungsitoli**	**0.76**	**210**		**Pn**	**14 35 51.7**	**-1.6**
RPSI	**Rantau Prapat**	**1.21**	**53**		**Pn**	**14 36 01.5**	**+2.2**
RPSI	**Rantau Prapat**	**1.21**	**53**		**Pn**	**14 36 00.6**	**+1.3**
PSI	**Prapat**	**1.27**	**49**	Pg	**Pn**	**14 36 00.6**	**+0.3**
	869nm,0.3s,baz=179,slow=6.2,SNR=2068						
PSI				Lg	Lg	14 36 14.0	
	2µm,0.3s,baz=180,slow=8.8,SNR=19						
TPTI		**1.50**	**329**	P	**Pn**	**14 36 04.0**	**+0.8**
KCSI	**Kotacane, Aceh**	**1.56**	**353**	P	**Pn**	**14 36 05.1**	**+1.1**
SNSI	**Sinabang, Aceh**	**1.69**	**285**	P	**Pn**	**14 36 06.6**	**+0.8**
SNSI				S	**Sn**	**14 36 25.7**	**-0.5**
MNSI	**Mandailing Nat**	**2.00**	**126**	P	**Pn**	**14 36 11.0**	**+1.0**
PBSI	**Pulau Batu**	**2.03**	**171**	P	**Pn**	**14 36 10.1**	**-0.4**
MLSI	**Meulaboh, Aceh**	**2.76**	**326**	P	**Pn**	**14 36 22.0**	**+1.5**
LHMI	**Lhok Sumawe**	**3.39**	**343**	P	**Pn**	**14 36 31.1**	**+1.9**
LHMI	**Lhok Sumawe**	**3.39**	**343**		**Pn**	**14 36 30.8**	**+1.6**
SISI	**Saibi**	**3.46**	**161**	P	**Pn**	**14 36 29.2**	**-0.9**
BKNI	**Bangkinang**	**3.49**	**118**	P	**Pn**	**14 36 32.0**	**+1.6**
BKNI	**Bangkinang**	**3.49**	**118**		**Pn**	**14 36 32.1**	**+1.6**
IPM	**Ipoh**	**3.95**	**51**		**Pn**	**14 36 39.6**	**+2.7**
IPM	**Ipoh**	**3.95**	**51**	P	**Pn**	**14 36 41.0**	**+4.1**
KULM	**Kulim**	**4.26**	**39**		**Pn**	**14 36 43.1**	**+2.0**
KULM	**Kulim**	**4.26**	**39**	P	**Pn**	**14 36 45.0**	**+3.9**
SDSI	**Sungai Dareh**	**4.51**	**130**	P	**Pn**	**14 36 45.0**	**+0.5**
PPSI	**Pulau Pagai**	**5.13**	**156**	P	Pn	14 37 00.9	+7.9
KRJI	**Kerinci**	**5.34**	**139**	P	**Pn**	**14 36 57.7**	**+1.7**
	51nm18µm75µm7µm,0.8s						
SKLT	**Songkhla**	**5.81**	**27**	P	**Pn**	**14 37 05.6**	**+3.2**
MYKOM	**Kota Tinggi**	**5.89**	**92**		**Pn**	**14 37 04.4**	**+0.9**
MYKOM	**Kota Tinggi**	**5.89**	**92**	P	**Pn**	**14 37 06.0**	**+2.5**
PKDT	**Phuket**	**5.90**	**4**	P	**Pn**	**14 37 05.7**	**+2.1**
TRTT	**Trang**	**6.08**	**16**	P	**Pn**	**14 37 08.3**	**+2.2**
KRAB	**Krabi**	**6.34**	**11**	P	**Pn**	**14 37 13.4**	**+3.8**
MASI	**Maura Aman, Be**	**6.64**	**140**	P	Pn	14 37 21.5	+7.7
TPRI	**Tanjung Pinang**	**6.65**	**99**	P	**Pn**	**14 37 16.5**	**+2.6**
	3.8nm9µm634nm,0.8s						
SRIT	**Nakonsritamara**	**6.79**	**14**	P	**Pn**	**14 37 18.1**	**+2.3**
SURT	**Suratani**	**7.00**	**7**	P	**Pn**	**14 37 20.7**	**+2.1**
KSI	**Kapahiang**	**7.25**	**140**	P	**Pn**	**14 37 24.3**	**+2.1**
	4.7nm11µm655nm,0.8s						
KSI	**Kapahiang**	**7.25**	**140**	P	**Pn**	**14 37 24.5**	**+2.3**

KSI pmax pmax
comp=Z,655nm,0.8s
MNAI Manna 8.03 142 P Pn 14 37 40.1 +7.3
MNAI Manna 8.03 142 **Pn** **14 37 30.9 -1.9**
PMBI Palembang 8.37 125 P Pn 14 37 47.2 +10
PMBI Palembang 8.37 125 Pn **Pn** **14 37 38.3 +0.8**
MDSI Maura Dua 8.93 136 P **Pn** **14 37 45.6 +0.4**
comp=Z,8µmcomp=Z,3µmcomp=Z,1.0nmcomp=Z,299nm,0.8s
LWLI Liwa 9.24 139 P **Pn** **14 37 51.0 +1.5**
comp=Z,9µmcomp=Z,636nm,0.7s
KASI Kota Agung 9.90 139 P **Pn** **14 37 59.4 +0.9**
comp=Z,7µmcomp=Z,3µmcomp=Z,223nm,0.6s
BLSI Bandar Lampung 10.30 135 P Pn 14 38 16.8 +13
PBA Port Blair 10.93 332 *eP* Pn 14 38 09.3 -3.2
PBA Port Blair 10.93 332 P Pn 14 38 09.7 -2.8
SNR=18
PBA S Sn 14 40 26.6 +13
PBA Port Blair 10.93 332 Pn 14 38 09.6 -2.9
PHET Kaeng Krachan 11.00 9 P **Pn** **14 38 16.6 +3.1**
PATY Pattaya 11.26 15 P **Pn** **14 38 20.3 +3.2**
DBJI Dramaga 12.19 134 P **P** **14 38 36.4 -4.6**
DGPR DIGLIPUR 12.20 336 *eP* **Pn** **14 38 27.5 -2.3**
KSM Kuching 12.36 92 **Pn** **14 38 34.4 +2.3**
KSM Kuching 12.36 92 P Pn 14 38 37.0 +4.9
SRDT SRDT 12.36 5 P **Pn** **14 38 34.3 +2.2**
SKJI Sukabumi 12.37 136 P **P** **14 38 47.3 +4.4**
SRAK Srakaew 12.63 18 P **P** **14 38 42.3 -3.6**
CNJI Cibinong 12.99 135 P **P** **14 38 48.3 -1.5**
LEM Lembang 13.01 132 Pn **Pn** **14 38 40.3 -0.9**
comp=Z,2.2nm,0.3s,baz=257,slow=14,SNR=2.7
CISI Cisompet, Garu 13.65 134 P **Pn** **14 38 50.3 +0.6**
comp=Z,6µmcomp=Z,3µmcomp=Z,320nm,0.8s
CISI Cisompet, Garu 13.65 134 **Pn** **14 38 45.5 -4.2**
COCO West Island 14.11 184 P **Pn** **14 38 52.2 -3.7**
COCO West Island 14.11 184 **Pn** **14 38 52.2 -3.7**
UMPA Umpang Tak 14.18 4 P **Pn** **14 38 58.8 +1.9**
SBUM Sibu 14.26 88 P P **14 39 01.3 -2.7**
SBUM Sibu 14.26 88 P **P** **14 39 02.0 -2.0**
DLV T Lat 14.40 46 P **Pn** **14 39 02.8 +2.8**
CHAI Chaiyaphum 14.41 16 P **Pn** **14 39 01.3 +1.4**
PHIT Phitsanulok 15.32 9 P **Pn** **14 39 13.3 +1.5**
SMRI Semarang 15.35 126 P P 14 39 25.7 +10
UWJI Ujung Watu 15.41 123 P **P** **14 39 20.3 +3.5**
UTTA Uttaradit 15.89 9 P **Pn** **14 39 20.2 +1.2**
MHMT Maesarieng 16.11 360 P **Pn** **14 39 22.8 +0.9**
WOJI Wonogiri, Jawa 16.19 127 P **Pn** **14 39 22.4 -0.6**
comp=Z,4µmcomp=Z,62nm,1.0s
CM04 Chiang Mai Arr 16.36 3 P **P** **14 39 26.8 -0.5**
CM05 Chiang Mai Arr 16.36 3 P **P** **14 39 26.7 -0.6**
CM01 Chiang Mai Arr 16.38 3 P **P** **14 39 26.8 -0.7**
CM02 Chiang Mai Arr 16.40 3 P **P** **14 39 26.9 -0.7**
CM09 Chiang Mai Arr 16.41 3 P **P** **14 39 27.0 -0.8**
CM15 Chiang Mai Arr 16.41 3 P **Pn** **14 39 26.8 +1.0**
CMAR Chiang Mai Arr 16.42 3 Pn **Pn** **14 39 26.4 +0.6**
comp=Z,3.1nm,0.3s,baz=196,slow=13,SNR=204
CMAR LR LR 14 46 11.6
comp=Z,12µm,18.3s,baz=190,slow=39
LAMP Lampang 16.54 6 P **P** **14 39 28.9 -0.3**
PHRA Phrae 16.58 8 P **P** **14 39 29.1 -0.6**
CMMT Chiang Mai 16.77 3 P **P** **14 39 31.6 -0.2**
CHTO Chiang Mai 16.77 3 P **Pn** **14 39 30.5 +0.2**
CHTO Chiang Mai 16.77 3 P **Pn** **14 39 30.5 +0.2**
CHTO pmax pmax
comp=Z,191nm,0.9s
CHTO Chiang Mai 16.77 3 P **Pn** **14 39 30.5 +0.2**
NONG Nongkai 16.79 17 P **Pn** **14 39 30.6 +0.1**
GRJI Gresik 16.97 121 P **P** **14 39 34.7 +0.7**
comp=Z,2µmcomp=Z,249nm,0.9s
PWJI Pagerwojo 17.01 126 P **Pn** **14 39 30.6 -2.6**
comp=Z,2µmcomp=Z,136nm,0.9s
KMMI Kalianget 18.32 119 P **P** **14 39 48.7 -0.2**
comp=Z,4µmcomp=Z,436nm,1.0s
KKM Kota Kinabalu 18.66 77 IAmb IAmb 14 40 01.8
comp=Z,529nm,1.0s
SPMM Sapulut 18.68 81 P **Pn** **14 39 57.0 +3.3**
JAGI Jajag, Banyuwa 19.19 123 P **P** **14 39 58.6 +0.1**
comp=Z,5µmcomp=Z,3µmcomp=Z,146nm,1.2s
BKB Balikpapan 19.21 99 P **Pn** **14 40 01.0 +1.0**
comp=Z,18µmcomp=Z,11µmcomp=Z,546nm,1.1s
BKB Balikpapan 19.21 99 P **Pn** **14 40 01.6 +1.6**
BKB IAmb IAmb 14 40 33.5
comp=Z,587nm,0.9s
SMKI Samarinda 19.40 97 P **Pn** **14 40 02.1 -0.2**
comp=Z,20µmcomp=Z,8µmcomp=Z,427nm,0.8s
SRBI Singaraja 19.90 120 P **P** **14 40 06.9 +0.7**
comp=Z,5µmcomp=Z,6µmcomp=Z,584nm,1.2s
SLVN Son La 20.11 16 P **P** **14 40 08.3 -0.1**
SLVN IAmb IAmb 14 40 16.2
comp=Z,390nm,0.9s
DNP Denpasar 20.19 122 P Pn 14 40 27.1 +15
QIZ Qiongzhong 20.57 34 P **P** **14 40 14.7 +1.2**
QIZ sP **sP** **14 40 29.3 -2.2**
QIZ S **S** **14 44 02.2 +1.3**
QIZ pmax pmax
comp=Z,170nm,1.3s
QIZ pmax pmax
comp=Z,2µm,10.0s
QIZ LR LR
comp=Z,5µm,27.5s
QIZ LR LR
comp=Z,5µm,18.6s
QIZ LR LR
comp=Z,9µm,29.9s
BATP Bataraza 20.88 70 *eP* **P** **14 40 17.9 +1.0**
BRDH Bariadhala 21.48 344 P **P** **14 40 22.6 -0.6**
comp=Z,185nm,0.4s,baz=53,slow=5.1,SNR=12
BRDH LR LR 14 50 39.5
comp=Z,10µm,20.0s,baz=170,slow=42
SKHT Srikalahasti 21.50 304 *eP* **P** **14 40 26.3 +2.8**
SKHT IAmb IAmb 14 40 36.8
comp=Z,90nm,1.0s
SKHT IVMs_BB IVMs_BB 14 46 53.4
comp=Z,1µm,28.3s
TRD Trivandrum 21.89 288 *eP* **P** **14 40 28.0 +0.4**
TRD IAmb IAmb 14 40 41.8
comp=Z,59nm,0.9s
MPSI Mapaga 22.00 94 P **P** **14 40 29.9 +1.0**
comp=Z,13µmcomp=Z,3µmcomp=Z,223nm,1.1s
PVM Polavaram 22.10 314 *eP* **P** **14 40 32.2 +2.3**
PVM IAmb IAmb 14 40 40.9
comp=Z,242nm,0.9s
PVM IVMs_BB IVMs_BB 14 48 22.4
comp=Z,1µm,23.4s
TTSI Tana Toraja 22.42 103 P **P** **14 40 36.4 +3.0**
comp=Z,8µmcomp=Z,4µmcomp=Z,344nm,1.0s
ADKI Addanki 22.46 309 *eP* **P** **14 40 36.5 +2.7**
ADKI IAmb IAmb 14 40 45.6
comp=Z,251nm,1.1s
ADKI IVMs_BB IVMs_BB 14 48 04.1
comp=Z,1µm,22.4s
PLAI Plampang 22.48 119 P **P** **14 40 35.8 +1.8**
comp=Z,4µmcomp=Z,2µmcomp=Z,192nm,0.7s
MYLAV Mylavaram 22.50 312 *eP* **P** **14 40 36.8 +2.6**
MYLAV IAmb IAmb 14 40 40.1
comp=Z,317nm,1.0s
MYLAV IVMs_BB IVMs_BB 14 48 21.8
comp=Z,1µm,23.4s
SPSI Sidrap Palu 22.58 105 P **P** **14 40 37.8 +2.6**
comp=Z,7µmcomp=Z,2µmcomp=Z,195nm,1.0s
KAPI Kappang 22.85 108 P **P** **14 40 36.8 -1.1**
comp=Z,205nm,0.9s,baz=280,slow=6.4,SNR=32
KAPI LR LR 14 50 36.4
comp=Z,9µm,20.4s,baz=118,slow=40
KAPI Kappang 22.85 108 P **P** **14 40 39.0 +1.0**
KAPI P **P** **14 40 39.0 +1.0**
KAPI P **P** **14 40 39.0 +1.0**
KAPI S **S** **14 44 45.7 +1.7**
KAPI S **S** **14 44 45.7 +1.7**
KAPI S **S** **14 44 45.7 +1.7**
KAPI Kappang 22.85 108 P **P** **14 40 38.4 +0.4**
KAPI pmax pmax
comp=Z,207nm,0.9s
KAPI MLR MLR
comp=Z,10µm,20.0s
KAPI Kappang 22.85 108 P **P** **14 40 38.4 +0.4**
KAPI IAmb IAmb 14 40 42.2
comp=Z,207nm,0.9s
BNSI Bone 23.02 106 P **P** **14 40 41.5 +1.8**
comp=Z,3µmcomp=Z,264nm,1.3s
ENPP El Nido 23.20 66 *eP* **P** **14 40 41.6 +0.1**
BKSI Bulukumba 23.30 108 P **P** **14 40 43.4 +1.0**
comp=Z,6µmcomp=Z,3µmcomp=Z,305nm,1.1s
NJS Nagarjunasagar 23.39 309 *eP* **P** **14 40 45.0 +1.8**
NJS IAmb IAmb 14 40 50.1
comp=Z,186nm,0.9s
NJS IVMs_BB IVMs_BB 14 48 40.0
comp=Z,1µm,26.5s
SRLM Srisailam 23.45 308 *eP* **P** **14 40 45.6 +1.8**
SRLM IAmb IAmb 14 40 54.4
comp=Z,118nm,0.9s
SRLM IVMs_BB IVMs_BB 14 48 44.0
comp=Z,941nm,23.0s
KMI Kunming 23.48 11 P **P** **14 40 44.7 +0.4**
KMI pP sP 14 41 00.4 -2.4
KMI sP pP 14 41 06.1 +9.5
KMI S **S** **14 44 49.0 -5.6**
KMI pmax pmax
comp=Z,170nm,1.4s
KMI pmax pmax
comp=Z,2µm,6.0s
KMI LR LR
comp=Z,20µm,16.0s
KMI LR LR
comp=Z,7µm,16.2s
KMI LR LR
comp=Z,22µm,17.0s
KMI Kunming 23.48 11 IAmb IAmb 14 40 49.5
comp=Z,195nm,1.1s
KMI Kunming 23.48 11 IAMs_20 IAMs_20 14 50 54.4
comp=Z,19µm,19.0s
APSI Ampana 23.86 97 P **P** **14 40 49.1 +1.4**
comp=Z,5µmcomp=Z,8µmcomp=Z,1µm,1.0s
MRSI Marisa 24.02 93 P **P** **14 40 49.1 -0.1**
comp=Z,7µmcomp=Z,4µmcomp=Z,307nm,0.8s
URV Uravakonda 24.16 303 *eP* **P** **14 40 51.9 +1.5**
URV IAmb IAmb 14 41 03.1
comp=Z,292nm,0.9s
URV IVMs_BB IVMs_BB 14 50 53.9
comp=Z,2µm,16.6s
SHL Shillong 24.18 347 *eP* **P** **14 40 49.6 -1.2**
SHL IAmb IAmb 14 40 54.3
comp=Z,238nm,0.7s
SHL Shillong 24.18 347 P **P** **14 40 49.5 -1.2**
SNR=166
SHL Shillong 24.18 347 P **P** **14 40 49.1 -1.7**
SHL pmax pmax
comp=Z,382nm,0.8s
SHL Shillong 24.18 347 P **P** **14 40 49.0 -1.7**
BUSP Coron 24.20 65 *eP* **P** **14 40 50.2 -0.6**
WBSI Waikabubak, Su 24.27 119 P **P** **14 40 49.5 -2.0**
comp=Z,3µmcomp=Z,385nm,0.8s
HYB Hyderabad 24.48 310 *i P* **P** **14 40 55.0 +1.6**
comp=Z,400nm,1.0s
HYB *epP* **pP** **14 41 04.0 -2.3**
HYB *eS* **S** **14 45 13.0 +2.6**
HYB Hyderabad 24.48 310 ⇑ *i P* **P** **14 40 54.8 +1.5**
HYBB Hyderabad (bro 24.48 310 *eP* **P** **14 40 54.8 +1.4**
HYBB IAmb IAmb 14 40 60.0
comp=Z,232nm,0.8s
HYBB IVMs_BB IVMs_BB 14 50 00.1
comp=Z,763nm,23.0s
BOK Bokaro 24.65 333 ⇑ *i P* **P** **14 40 55.3 +0.5**
BOK IAmb IAmb 14 40 59.8
comp=Z,867nm,0.7s
RPR Rampur 24.82 314 *eP* **P** **14 40 58.2 +1.8**
RPR IVMsBB 14 49 55.3
comp=Z,1µm,24.6s
LUBP Lubang 24.95 61 *eP* **P** **14 40 57.8 +0.2**
LUWI Luwuk 24.99 97 P **P** **14 40 58.7 +0.7**
comp=Z,8µmcomp=Z,10µmcomp=Z,835nm,0.7s
LUWI Luwuk 24.99 97 P **P** **14 40 58.1 +0.1**
SJMP San Jose 25.21 64 *eP* **P** **14 41 02.8 +2.9**
LKP Lekhapani 25.30 356 ⇑ *i P* **P** **14 40 59.9 -0.8**
JAP San Jose, Anti 25.37 69 ⇑ *eP* P 14 40 53.3 -8.1
SRSP Sriramsagar 25.56 313 *eP* **P** **14 41 04.7 +1.6**
SRSP IAmb IAmb 14 41 08.8
comp=Z,99nm,0.7s
SRSP IVMs_BB IVMs_BB 14 49 35.0
comp=Z,986nm,33.4s
BASI Baing, Sumba 25.57 119 P P 14 41 12.9 +10
HKPS Hong Kong Po S 25.60 37 P **P** **14 41 04.1 +0.7**
HKPS IAmb IAmb 14 41 09.6
comp=Z,186nm,1.3s
BBSI Bau Bau 25.68 107 P **P** **14 41 05.9 +1.6**
comp=Z,1µmcomp=Z,106nm,0.8s
CNOP Candoni, Negro 25.75 71 *eP* **P** **14 41 05.4 +0.5**
GYA Guiyang 25.75 18 ⇓ *iP* **P** **14 41 04.7 -0.2**
GYA pP pP 14 41 20.2 +2.4
GYA PP **PnPn** **14 41 45.5 +1.8**
GYA PcP **PcP** **14 44 35.0 +1.0**
GYA S **S** **14 45 29.4 -1.3**
GYA sS sS 14 45 51.0 -1.5
GYA pmax pmax
comp=Z,30nm,1.2s
GYA pmax pmax
comp=Z,950nm,8.1s
GYA LR LR
comp=Z,6µm,19.2s
GYA LR LR
comp=Z,5µm,16.3s
GYA LR LR
comp=Z,9µm,18.5s
GUIM Jordan 25.93 70 *eP* **P** **14 41 06.8 +0.3**
BOLP Bolinao 25.93 55 *eP* **P** **14 41 09.4 +2.9**
EDFI Ende, Flores 25.94 115 P **P** **14 41 04.3 -2.5**
comp=Z,2µmcomp=Z,502nmcomp=Z,45nm,0.6s
PAGZ Pagadian 25.99 76 *eP* **P** **14 41 06.9 -0.2**
KMSI Cibinong 26.05 93 P **P** **14 41 08.0 +0.3**
comp=Z,3µmcomp=Z,460nm,0.9s
SNPH Sibulan 26.19 73 *eP* **P** **14 41 13.9 +5.0**
BOAC Boac 26.25 63 *eP* **P** **14 41 11.2 +1.9**
LQP Lukban 26.25 61 *eP* **P** **14 41 09.1 -0.6**
KLRI Killari 26.37 309 *eP* **P** **14 41 11.7 +1.2**
KLRI IAmb IAmb 14 41 19.1
comp=Z,130nm,0.9s
KLRI IVMs_BB IVMs_BB 14 51 14.9
comp=Z,949nm,19.8s
RCP Roxas 26.37 68 ⇓ *eP* **P** **14 41 11.6 +1.0**
MMRI Maumere 26.40 114 P **P** **14 41 10.6 -0.2**
comp=Z,4µmcomp=Z,2µmcomp=Z,130nm,0.7s
MMRI Maumere 26.40 114 IAmb IAmb 14 41 55.4
comp=Z,178nm,1.2s
SMPP San Manuel, Pa 26.45 56 *eP* **P** **14 41 10.2 -1.0**
LATR Latur 26.60 309 AMb AMB 14 40 24.8
comp=Z,286nm,1.6s
ODAN Odare 26.75 339 *eP* **P** **14 41 14.2 +0.1**
comp=Z,493nm,0.8s
GTK Tadong 26.76 341 ⇑ *iP* **P** **14 41 14.7 +0.6**
MNI Manado 26.88 91 P **P** **14 41 18.2 +3.1**
MNI pmax pmax
comp=Z,367nm,0.9s
SKMP Bagumbayan, Su 26.89 79 *eP* **P** **14 41 14.8 -0.4**
BALP Baler 27.01 58 *eP* **P** **14 41 18.4 +2.2**
TAPN Taplejung 27.08 340 *eP* **P** **14 41 17.7 +0.6**
comp=Z,1µm,0.9s
DGAR Diego Garcia 27.10 250 IAMs_20 IAMs_20 14 49 41.5
comp=Z,13µm,22.0s
RAMN Ramite 27.13 337 *eP* **P** **14 41 18.2 +0.7**
comp=Z,220nm,0.6s
GOA Goa 27.32 301 *eP* **P** **14 41 20.1 +1.1**
GOA IAmb IAmb 14 41 24.6
comp=Z,102nm,1.3s
JBP Jabalpur 27.35 322 ⇑ *eP* **P** **14 41 20.6 +1.4**
JBP AMB AMB 14 41 23.8
comp=Z,155nm,1.2s
JBP *eS* **S** **14 45 59.9 +4.2**
KCP Kidapawan 27.50 79 ⇓ *eP* **P** **14 41 21.7 +0.9**
BUKP Musuan 27.63 77 *eP* **P** **14 41 22.8 +0.9**
APYP Conner 27.79 54 *eP* **P** **14 41 22.7 -0.5**
CAUP Cauayan 27.79 56 *eP* **P** **14 41 25.0 +1.7**
JIRN Jiri 27.92 337 *eP* **P** **14 41 25.2 +0.5**
comp=Z,786nm,0.9s
MSLP Maasin 27.93 72 *eP* **P** **14 41 25.6 +1.1**
OCLP Ormoc 27.95 70 *eP* **P** **14 41 28.3 +3.6**
DAV Davao City (W) 27.99 79 P **P** **14 41 23.4 -1.7**
comp=Z,126nm,0.4s,baz=100,slow=7.1,SNR=1.3
DAV LR LR 14 53 55.6
comp=Z,2µm,20.5s,baz=234,slow=39
DAV Davao City (W) 27.99 79 P **P** **14 41 27.2 +2.0**
PKI Pulchoki 28.15 336 *eP* **P** **14 41 26.9 +0.2**
comp=Z,549nm,0.9s
PKIN Phulchoki 28.16 336 *eP* **P** **14 41 26.9 +0.1**
comp=Z,486nm,0.8s
GUN Gumba 28.27 337 *eP* **P** **14 41 28.3 +0.5**
comp=Z,1µm,0.7s
BATI Baumata 28.31 116 P **P** **14 41 25.4 -2.6**
comp=Z,108nm,0.7s,baz=306,slow=1.2,SNR=16
BATI S **S** **14 46 03.8 -7.3**
comp=Z,109nm,0.9s,baz=26,slow=19,SNR=5.9
BATI Baumata 28.31 116 P **P** **14 41 26.7 -1.2**
comp=Z,915nmcomp=Z,85nm,0.8s
SANI Sanana 28.31 98 P **P** **14 41 27.1 -0.8**
comp=Z,978nmcomp=Z,50nm,1.2s
DMN Daman 28.31 335 *eP* **P** **14 41 28.3 +0.2**
comp=Z,287nm,0.7s
LSA Lhasa 28.33 347 *i P* **P** **14 41 28.9 +0.4**
SNR=81
LSA Lhasa 28.33 347 P **P** **14 41 29.1 +0.7**
LSA pmax pmax
comp=Z,218nm,0.9s
LSA Lhasa 28.33 347 IAmb IAmb 14 41 33.8
comp=Z,168nm,0.8s
PVCP Virac 28.37 65 *eP* **P** **14 41 29.5 +1.0**
BUTP Butuan 28.39 75 *eP* **P** **14 41 31.5 +2.9**
KKN Kakani 28.40 336 *eP* **P** **14 41 29.0 +0.2**
comp=Z,558nm,1.0s
CNP Catarman 28.45 67 *eP* **P** **14 41 32.3 +3.2**
SOEI Soe 28.68 114 P **P** **14 41 30.4 -0.9**
comp=Z,2µmcomp=Z,156nm,1.1s
SOEI Soe 28.68 114 IAmb IAmb 14 42 08.4
comp=Z,424nm,1.4s
GKN Gorkha 28.85 335 *eP* **P** **14 41 33.2 +0.4**
comp=Z,975nm,0.9s
BHPL Bhopal 29.04 318 ⇑ *iP* **P** **14 41 35.9 +1.5**
BHPL IAmb IAmb 14 41 39.0
comp=Z,149nm,0.5s
KOLN Koldanda 29.10 333 *eP* **P** **14 41 35.9 +0.8**
comp=Z,1µm,0.8s
GIRL Giralia 29.16 148 P **P** **14 41 38.7 +3.4**
baz=29,SNR=3.2
CD2 Chengdu 29.31 10 P **P** **14 41 36.0 -0.6**
CD2 sP sP 14 41 55.2 -0.4
CD2 S **S** **14 46 20.4 -6.1**
CD2 sS sS 14 46 53.5 +5.1
CD2 pmax pmax
comp=Z,120nm,0.7s
CD2 pmax pmax
comp=Z,1µm,9.3s
CD2 LR LR
comp=Z,18µm,16.7s
CD2 LR LR
comp=Z,15µm,16.2s
CD2 LR LR
comp=Z,26µm,17.7s
TNTI Ternate 29.43 92 P **P** **14 41 40.5 +2.6**
comp=Z,2µmcomp=Z,644nmcomp=Z,36nm,1.0s
TNTI Ternate 29.43 92 P **P** **14 41 35.7 -2.2**
DANN Dangsing 29.53 334 *eP* **P** **14 41 39.4 +0.5**
comp=Z,535nm,0.7s
NLAI Namlea 29.59 100 P **P** **14 41 39.3 0.0**
comp=Z,2µmcomp=Z,355nm,0.7s
LBMI Labuha 29.65 95 P **P** **14 41 41.2 +1.3**
comp=Z,3µmcomp=Z,267nm,1.2s
PYUN Piuthan 29.66 333 *eP* **P** **14 41 40.8 +0.8**
comp=Z,725nm,0.9s
BOM Bombay 29.83 306 *eS* S 14 46 17.5 -17
KNMB Chin-men Tao 29.84 40 P **P** **14 41 40.0 -1.3**
KNMB IAMs_20 IAMs_20 14 54 49.5
comp=Z,8µm,19.0s
ENH Enshi 30.20 20 IAMs_20 IAMs_20 14 55 04.2
comp=Z,9µm,19.0s
QZH Quanzhou 30.30 39 ⇑ *iP* **P** **14 41 45.5 0.0**
QZH S **S** **14 46 42.4 +0.2**
QZH pmax pmax
comp=Z,650nm,9.7s
QZH LR LR
comp=Z,6µm,16.1s
QZH LR LR
comp=Z,3µm,15.6s
QZH LR LR
comp=Z,7µm,14.2s
TPUB Ta-pu 30.54 44 P **P** **14 41 46.0 -1.6**
TPUB IAmb IAmb 14 42 09.3
comp=Z,114nm,1.1s
TWG Pinlang 30.55 45 P **P** **14 41 46.8 -0.9**
TWG IAmb IAmb 14 42 01.5
comp=Z,107nm,0.7s
TWG IAMs_20 IAMs_20 14 54 54.4
comp=Z,10µm,19.0s
AAI Ambon 30.74 101 P **P** **14 41 48.9 -0.6**
comp=Z,4µmcomp=Z,3µmcomp=Z,287nm,0.8s
AAI Ambon 30.74 101 P **P** **14 41 49.2 -0.3**
AAI pmax pmax
comp=Z,286nm,1.0s
SSLB Suanglung 31.09 44 P **P** **14 41 52.4 0.0**
MBWA Marble Bar 31.34 138 P **P** **14 41 54.7 0.0**
MBWA P **P** **14 41 54.7 0.0**
MSAI Masohi 31.41 100 P **P** **14 41 54.7 -0.7**
comp=Z,5µmcomp=Z,45nm,0.9s
PSAC1 Pilbara Seismi 31.66 139 IAMs_20 IAMs_20 14 55 27.8
comp=Z,9µm,21.0s
PSAB1 Pilbara Seismi 31.69 139 IAMs_20 IAMs_20 14 55 07.7
comp=Z,8µm,20.0s
PSAA1 Pilbara Seismi 31.71 139 IAMs_20 IAMs_20 14 55 29.1
comp=Z,8µm,21.0s
PSA00 Pilbara Seismi 31.71 139 P **P** **14 41 57.6 -0.3**
PSA00 IAMs_20 IAMs_20 14 55 19.2
comp=Z,7µm,20.0s
PSAD3 Pilbara Seismi 31.72 139 IAMs_20 IAMs_20 14 55 18.4
comp=Z,9µm,21.0s
PSAA3 Pilbara Seismi 31.72 139 IAMs_20 IAMs_20 14 55 18.4
comp=Z,8µm,20.0s
PSAB3 Pilbara Seismi 31.73 139 IAMs_20 IAMs_20 14 55 29.7
comp=Z,8µm,20.0s
PSAC2 Pilbara Seismi 31.74 139 IAMs_20 IAMs_20 14 55 20.0
comp=Z,8µm,20.0s
NACB Ninganchiao 31.78 44 P **P** **14 41 58.5 0.0**
NACB IAmb IAmb 14 42 18.5
comp=Z,120nm,1.4s
YHNB Yeheng 31.95 43 P **P** **14 42 01.0 +0.9**
YHNB IAmb IAmb 14 42 04.3
comp=Z,47nm,0.7s
WHN Wuhan 32.39 27 ⇑ P **P** **14 42 03.5 -0.3**
WHN S **S** **14 47 13.4 -1.3**
WHN sS **sS** **14 47 34.5 -2.1**
WHN pmax pmax
comp=Z,940nm,9.7s
WHN LR LR
comp=Z,9µm,12.9s
WHN LR LR
comp=Z,10µm,16.3s
WHN LR LR
comp=Z,15µm,14.7s
SIJI Sorong 33.42 95 P **P** **14 42 11.0 -2.1**
comp=Z,83nm,0.8s,baz=311,slow=8.7,SNR=23
SIJI LR LR 14 56 29.0
comp=Z,2µm,21.4s,baz=274,slow=38
XAN Xi'an 33.52 17 P **P** **14 42 12.3 -1.3**
XAN pP pP 14 42 26.4 -0.3
XAN sP sP 14 42 30.4 -2.2
XAN PP **PP** **14 43 28.5 -1.7**
XAN S **S** **14 47 31.2 -1.0**
XAN sS sS 14 47 51.8 -2.4
XAN SS **SnSn** **14 49 35.8 -2.7**
XAN ScS **ScS** **14 52 34.9 -0.5**
XAN pmax pmax
comp=Z,75nm,1.0s
XAN pmax pmax
comp=Z,670nm,8.1s
XAN LR LR
comp=Z,4µm,18.4s
XAN LR LR
comp=Z,5µm,17.1s
XAN LR LR
comp=Z,8µm,21.4s
XAN Xi'an 33.52 17 IAMs_20 IAMs_20 14 56 43.6
comp=Z,9µm,21.0s
FITZ Fitzroy Crossi 33.77 127 P **P** **14 42 14.2 -1.8**
baz=34,SNR=53
FITZ Fitzroy Crossi 33.77 127 P **P** **14 42 14.1 -1.9**
comp=Z,29nm,0.9s,baz=311,slow=6.5,SNR=83
FITZ PcP **PcP** **14 44 56.1 +1.5**
comp=Z,12nm,0.4s,baz=334,slow=4.4,SNR=6.1
FITZ S **S** **14 47 33.3 -3.1**
comp=Z,8.6nm,1.0s,baz=241,slow=11,SNR=3.1
FITZ Fitzroy Crossi 33.77 127 P **P** **14 42 13.7 -2.3**
DDI Dehra Dun 33.93 328 ⇑ *iP* **P** **14 42 18.1 +0.8**
DDI IAmb IAmb 14 42 21.7
comp=Z,390nm,0.8s
DDI IAMs_20 IAMs_20 14 56 15.4
comp=Z,11µm,22.3s
LZH Lanzhou 34.39 8 ⇑ P **P** **14 42 21.0 -0.3**
LZH pP pP 14 42 35.0 +0.6
LZH sP sP 14 42 40.9 +0.6
LZH PcP **PcP** **14 44 57.2 +1.0**
LZH S **S** **14 47 44.4 -1.4**

LZH sS sS 14 48 05.5 -2.4
LZH SS **SnSn** **14 49 57.7 -2.1**
LZH ScS **ScS** **14 52 39.2 -1.0**
LZH pmax pmax
comp=Z,160nm,1.3s
LZH pmax pmax
comp=Z,830nm,4.6s
LZH LR LR
comp=Z,9μm,15.0s
LZH LR LR
comp=Z,8μm,15.2s
LZH LR LR
comp=Z,10μm,17.0s
FAKI Fak Fak 34.62 98 P **P** **14 42 22.6 -0.9**
comp=Z,4μmcomp=Z,1μmcomp=Z,98nm,0.8s
FAKI Fak Fak 34.62 98 IAmb IAmb 14 42 30.5
comp=Z,99nm,1.0s
MEEK Meekatharra 34.73 146 P **P** **14 42 25.5 +1.3**
baz=35,SNR=37
SMLA Simla 35.04 328⇑*i*P **P** **14 42 27.1 +0.4**
KNRA Kununurra 35.14 121 P **P** **14 42 25.5 -2.4**
baz=35,SNR=43
KNRA Kununurra 35.14 121 P **P** **14 42 25.0 -2.8**
KNRA IAmb IAmb 14 42 37.8
comp=Z,61nm,0.8s
MORW Morawa 35.39 152 P **P** **14 42 32.3 +2.5**
baz=36,SNR=9.8
MORW Morawa 35.39 152 IAmb IAmb 14 42 57.8
comp=Z,143nm,1.4s
BHK Bhakra 35.66 327 *e*P **P** **14 42 31.2 -1.0**
NJ2 Nanjing 35.82 31⇑*i*P **P** **14 42 35.8 +2.3**
NJ2 pP **pP** **14 42 48.6 +1.9**
NJ2 sP **sP** **14 42 52.3 -0.3**
NJ2 PcP **PcP** **14 45 03.7 +3.4**
NJ2 S **S** **14 48 09.5 +1.8**
NJ2 sS **sS** **14 48 33.2 +3.4**
NJ2 pmax pmax
comp=Z,61nm,0.8s
NJ2 pmax pmax
comp=Z,570nm,7.7s
NJ2 LR LR
comp=Z,7μm,22.6s
NJ2 LR LR
comp=Z,5μm,22.7s
NJ2 LR LR
comp=Z,8μm,16.0s
MTN Manton Dam 36.07 115 P **P** **14 42 34.0 -1.8**
baz=36,SNR=31
SSE Sheshan 36.36 35 P **P** **14 42 40.7 +2.6**
SSE sP **pP** **14 42 53.8 +2.5**
SSE S **S** **14 48 17.6 +1.7**
SSE sS **ScP** **14 48 44.3 -0.1**
SSE pmax pmax
comp=Z,31nm,0.8s
SSE pmax pmax
comp=Z,270nm,6.6s
SSE Sheshan 36.36 35 IAMs_20 IAMs_20 14 59 04.5
comp=Z,7μm,19.0s
DHRM DHARAMSHALA 36.37 328⇑*i*P **P** **14 42 38.8 +0.3**
DHRM IAMs_20 IAMs_20 14 58 15.6
comp=Z,11μm,21.5s
THN Thein Dam 36.83 328⇑*i*x **P** **14 42 43.5 +1.5**
BLDU Ballidu 37.00 153 P **P** **14 42 45.3 +1.7**
baz=37,SNR=5.9
KDU Kakadu 37.23 114 P **P** **14 42 43.8 -1.9**
baz=37,SNR=21
GTA Gaotai 37.31 2⇑P **P** **14 42 45.7 -0.5**
GTA pP pP 14 43 00.9 +1.5
GTA sP sP 14 43 08.9 +3.5
GTA PP **PnPn** **14 44 16.7 +3.6**
GTA PcP **PcP** **14 45 05.7 +0.9**
GTA S **S** **14 48 28.6 -1.8**
GTA sS ScP 14 48 50.1 +2.1
GTA ScS **ScS** **14 52 52.9 -3.1**
GTA pmax pmax
comp=Z,72nm,1.3s
GTA pmax pmax
comp=Z,800nm,5.6s
GTA LR LR
comp=Z,2μm,18.1s
GTA LR LR
comp=Z,3μm,16.5s
GTA LR LR
comp=Z,3μm,18.4s
MUN Mundaring 37.94 154 P **P** **14 42 54.0 +2.5**
baz=38,SNR=5.9
JOW Kunigami 38.17 47 P **P** **14 42 52.2 -1.3**
comp=Z,11nm,0.7s,baz=157,slow=22,SNR=27
JOW Kunigami 38.17 47 IAmb IAmb 14 42 58.3
comp=Z,66nm,0.5s
KLBR Kellerberrin 38.31 152 P **P** **14 42 56.5 +1.8**
baz=38,SNR=7.7
TIA Tai'an 38.42 25 P **P** **14 42 54.5 -1.0**
TIA S S 14 48 37.0 -10
TIA pmax pmax
comp=Z,10.0nm,0.7s
TIA pmax pmax
comp=Z,530nm,8.4s
TIA LR LR
comp=Z,6μm,14.5s
TIA LR LR
comp=Z,4μm,13.9s
TIA LR LR
comp=Z,10μm,14.3s
NWAO Narrogin (SRO) 39.20 154 P **P** **14 43 04.0 +2.0**
baz=39,SNR=11
NWAO Narrogin (SRO) 39.20 154 P **P** **14 43 02.8 +0.7**
comp=Z,53nm,1.0s,baz=333,slow=6.5,SNR=11
NWAO LR LR 14 57 03.3
comp=Z,5μm,21.9s,baz=340,slow=33
NWAO Narrogin (SRO) 39.20 154 P **P** **14 43 01.7 -0.3**
NWAO IAmb IAmb 14 43 19.5
comp=Z,133nm,1.1s
NWAO Narrogin (SRO) 39.20 154 P **P** **14 43 01.8 -0.3**
NWAO IAmb IAmb 14 43 19.5
comp=Z,106nm,1.1s
NWAO IAMs_20 IAMs_20 14 58 05.5
comp=Z,4μm,20.0s
WRKA Warakurna 39.82 134 P **P** **14 43 06.7 -0.7**
baz=40,SNR=12
BTO Baotou 39.99 14 *e*P **P** **14 43 08.6 0.0**
BTO *e*PP **PP** **14 44 41.9 +0.5**
BTO S **S** **14 49 07.0 -3.7**
BTO SS **SS** **14 52 06.3 -3.0**
KMBL Kambalda 40.20 147 P **P** **14 43 12.0 +1.5**
baz=40,SNR=15
HHC Hu-ho-hao-te 40.62 16 P **P** **14 43 14.7 +0.8**
HHC sP sP 14 43 34.2 +1.1
HHC pmax pmax
comp=Z,46nm,1.0s
HHC pmax pmax
comp=Z,460nm,9.3s
HHC LR LR
comp=Z,4μm,15.7s
HHC LR LR
comp=Z,2μm,14.6s
HHC LR LR
comp=Z,4μm,19.1s
SMPI Sarmi 40.94 95 P **P** **14 43 18.0 +1.2**
comp=Z,1μmcomp=Z,135nm,1.2s
BJT Baijiatuau 41.33 21 P **P** **14 43 20.4 +0.8**
BJT pmax pmax
comp=Z,221nm,0.8s
BJT Baijiatuau 41.33 21 IAmb IAmb 14 43 25.2
comp=Z,152nm,0.7s
BJI Beijing 41.35 21⇑*i*P **P** **14 43 20.3 +0.5**
BJI sP **sP** **14 43 39.9 +0.9**
BJI PP **PnPn** **14 45 00.5 -0.5**
BJI S **S** **14 49 35.5 +4.6**
BJI pmax pmax
comp=Z,53nm,0.8s
BJI pmax pmax
comp=Z,740nm,7.7s
BJI LR LR
comp=Z,2μm,22.7s
BJI LR LR
comp=Z,2μm,17.1s
BJI LR LR
comp=Z,3μm,30.3s
WRA Warramunga Arr 41.81 123 P **P** **14 43 22.4 -1.4**
comp=Z,119nm,0.8s,baz=301,slow=9.0,SNR=395
WRA PcP **PcP** **14 45 19.9 +0.6**
comp=Z,40nm,0.9s,baz=303,slow=3.2,SNR=8.2
WRA S **S** **14 49 32.4 -5.8**
comp=Z,16nm,1.1s,baz=296,slow=16,SNR=11
WRA LR LR 15 01 47.6
comp=Z,4μm,21.8s,baz=285,slow=38
WRAB Tennant Creek 41.81 123*c i*P **P** **14 43 22.5 -1.4**
WRAB pmax pmax
comp=Z,161nm,0.8s
WRAB MLR MLR
comp=Z,4μm,21.0s
WRAB Tennant Creek 41.81 123 P **P** **14 43 22.3 -1.6**
WRAB IAmb IAmb 14 43 37.3
comp=Z,148nm,0.7s
WR0 Warramunga Arr 41.98 123 P **P** **14 43 24.1 -1.2**
KBL Kabul 42.15 324 P **P** **14 43 26.3 -0.3**
KBL pmax pmax
comp=Z,81nm,1.0s
KBL Kabul 42.15 324 P **P** **14 43 26.3 -0.3**
KSH Kashi 42.40 335 P **P** **14 43 27.4 -1.1**
KSH pP pP 14 43 42.6 +0.7
KSH sP sP 14 43 50.3 +2.5
KSH S **S** **14 49 42.1 -4.5**
KSH SS **SS** **14 52 50.0 -7.2**
KSH pmax pmax
comp=Z,72nm,0.8s
KSH pmax pmax
comp=Z,2μm,4.8s
KSH LR LR
comp=Z,3μm,16.3s
KSH LR LR
comp=Z,2μm,16.4s
KSH LR LR
comp=Z,3μm,16.3s
GENI Genyem 42.44 96 P **P** **14 43 27.8 -1.3**
comp=Z,3μmcomp=Z,363nm,0.8s
DL2 Dalian 42.65 28⇑*i*P **P** **14 43 30.2 -0.2**
DL2 PcP **PcP** **14 45 22.6 +0.9**
DL2 S **S** **14 49 49.8 -0.3**
DL2 sS **sS** **14 50 15.9 +3.4**
DL2 ScS **ScS** **14 53 24.0 -3.4**
DL2 pmax pmax
comp=Z,58nm,0.9s
DL2 pmax pmax
comp=Z,800nm,5.6s
DL2 LR LR
comp=Z,3μm,18.1s
DL2 LR LR
comp=Z,2μm,16.1s
DL2 LR LR
comp=Z,4μm,27.9s
WMQ Urumqi 42.66 349 *e*P **P** **14 43 31.3 +0.8**
WMQ pP pP 14 43 42.3 -1.6
WMQ sP sP 14 43 55.7 +5.9
WMQ PP **PP** **14 45 06.9 -3.4**
WMQ S **S** **14 49 53.2 +2.9**
WMQ sS sS 14 50 10.4 -2.3
WMQ ScS **ScS** **14 53 26.4 -1.1**
WMQ pmax pmax
comp=Z,160nm,1.7s
WMQ pmax pmax
comp=Z,960nm,3.8s
WMQ LR LR
comp=Z,880nm,29.2s
WMQ LR LR
comp=Z,1μm,18.3s
WMQ LR LR
comp=Z,5μm,28.9s
WMQ Urumqi 42.66 349 P **P** **14 43 31.7 +1.2**
WMQ pmax pmax
comp=Z,637nm,1.1s
WMQ MLR MLR
comp=Z,3μm,21.0s
WMQ Urumqi 42.66 349 P **P** **14 43 31.7 +1.2**
MSEY Mahe Island 42.95 261 IAMs_20 IAMs_20 14 57 15.5
comp=Z,6μm,22.0s
JAY Jayapura 42.97 96 P **P** **14 43 31.4 -2.1**
comp=Z,53nm,0.9s,baz=78,slow=22,SNR=22
JAY Jayapura 42.97 96 P **P** **14 43 33.0 -0.4**
comp=Z,1μmcomp=Z,453nmcomp=Z,44nm,0.9s
WBK Wadi Bani Khal 43.04 302 P **P** **14 43 35.7 +1.9**
SNR=11
WBK P **P** **14 43 35.7 +1.9**
SNR=11
WBK P **P** **14 43 35.7 +1.9**
SNR=11
WBK S **S** **14 49 59.2 +2.9**
WBK S **S** **14 49 59.2 +2.9**
WBK S **S** **14 49 59.2 +2.9**
ASAR Alice Springs 43.26 128 P **P** **14 43 34.4 -1.3**
comp=Z,51nm,1.0s,baz=299,slow=7.9,SNR=215
ASAR PcP **PcP** **14 45 25.1 +1.0**
comp=Z,38nm,0.9s,baz=307,slow=2.9,SNR=12
ASAR ScP **ScP** **14 49 13.6 +2.1**
comp=Z,2.8nm,0.8s,baz=319,slow=3.8,SNR=4.7
ASAR S **S** **14 49 54.9 -4.7**
comp=Z,11nm,0.7s,baz=297,slow=15,SNR=15
ASAR PKiKP **PKiKP** **14 52 26.4 -0.9**
comp=Z,0.3nm,0.4s,baz=357,slow=1.1,SNR=4.7
ASAR LR LR 15 02 12.5
comp=Z,3μm,21.8s,baz=304,slow=37
MHTO MHTO 43.31 299 P **P** **14 43 36.2 +0.3**
SNR=5.5
MHTO P **P** **14 43 36.2 +0.3**
SNR=5.5
MHTO P **P** **14 43 36.2 +0.3**
SNR=5.5
MHTO S **S** **14 50 00.9 +0.7**
MHTO S **S** **14 50 00.9 +0.7**
MHTO S **S** **14 50 00.9 +0.7**
FORT Forrest 43.38 141 P **P** **14 43 37.6 +1.2**
baz=44,SNR=40
FORT Forrest 43.38 141 P **P** **14 43 36.6 +0.2**
FORT IAmb IAmb 14 43 49.2
comp=Z,150nm,0.7s
FORT IAMs_20 IAMs_20 15 00 28.4
comp=Z,7μm,22.0s
WSAR Wadi Sarin 43.57 302 P **P** **14 43 39.3 +1.2**
comp=Z,6.9nm,0.6s,baz=156,slow=8.9,SNR=12
WSAR Wadi Sarin 43.57 302 P **P** **14 43 39.9 +1.7**
SNR=10
JMDO Jabal Madar 43.69 301 P **P** **14 43 40.4 +1.4**
SNR=5.5
JMDO P **P** **14 43 40.4 +1.4**
SNR=5.5
JMDO S **S** **14 50 08.2 +2.4**
JMDO S **S** **14 50 08.2 +2.4**
TJN Taejon 43.72 35*c i*P **P** **14 43 38.5 -0.5**
JNU Nakatsue 43.74 41 P **P** **14 43 39.4 +0.1**
comp=Z,50nm,0.7s,baz=264,slow=2.9,SNR=31
JNU LR LR 15 04 13.8
comp=Z,4μm,18.2s,baz=204,slow=39
NRN Naryn 43.99 336 IAMs_20 IAMs_20 15 03 35.0
comp=Z,9μm,21.0s
SMDO Samad 44.00 302 P **P** **14 43 43.1 +1.4**
SNR=17
SMDO P **P** **14 43 43.1 +1.4**
SNR=17
SMDO P **P** **14 43 43.1 +1.4**
SNR=17
INCN Inchon 44.10 33 P **P** **14 43 40.6 -1.5**
INCN pmax pmax
comp=Z,51nm,0.7s
INCN MLR MLR
comp=Z,5μm,22.0s
INCN Inchon 44.10 33 P **P** **14 43 40.6 -1.5**
INCN Inchon 44.10 33 IAMs_20 IAMs_20 15 02 09.9
comp=Z,5μm,22.0s
BIDO Bidbid 44.11 302 P **P** **14 43 44.3 +1.9**
SNR=20
BIDO P **P** **14 43 44.3 +1.9**
SNR=20
BIDO S **S** **14 50 14.7 +2.9**
BIDO S **S** **14 50 14.7 +2.9**
SHLS Shalkode 44.21 341⇑*i*P **P** **14 43 43.0 0.0**
comp=Z,207nm,0.7s
SHLS *e*S **S** **14 50 12.9 -0.1**
SHLS *e*LR LR 15 01 25.1
SHLS Shalkode 44.21 341*c i*P **P** **14 43 43.0 0.0**
SHLS *e*S **S** **14 50 12.9 -0.1**
SHLS pmax pmax
comp=Z,207nm,0.7s
SATY Saty 44.48 340⇑*i*P **P** **14 43 46.3 +1.1**
comp=Z,242nm,1.0s
SATY *e*S **S** **14 50 17.4 +0.4**
SATY *e*LR LR 15 02 09.8
SATY Saty 44.48 340*c i*P **P** **14 43 46.3 +1.1**
SATY *e*S **S** **14 50 17.4 +0.4**
SATY pmax pmax
comp=Z,242nm,1.0s
ULHL Ulahol 44.58 337 P **P** **14 43 46.8 +0.7**
SNR=110
BSY Bisya 44.60 301 P **P** **14 43 48.1 +1.7**
SNR=26
BSY P **P** **14 43 48.1 +1.7**
SNR=26
BSY P **P** **14 43 48.1 +1.7**
SNR=26
GAR Garm 44.66 329 P **P** **14 43 46.5 -0.2**
GAR IAMs_20 IAMs_20 15 03 02.9
comp=Z,7μm,22.0s
SOCY Socotra 44.73 285 P **P** **14 43 48.4 +0.8**
SOCY IAmb IAmb 14 44 09.9
comp=Z,82nm,1.0s
KSRS Korea Array 44.79 34 P **P** **14 43 47.0 -0.6**
comp=Z,113nm,0.7s,baz=222,slow=8.9,SNR=83
KSRS ScP **ScP** **14 49 18.9 +1.5**
comp=Z,3.7nm,1.1s,baz=224,slow=4.0,SNR=4.3
KSRS LR LR 15 03 02.0
comp=Z,3μm,21.4s,baz=234,slow=37
KSRS Korea Array 44.79 34 P **P** **14 43 47.0 -0.6**
HOQ Hoqain 44.82 302 P **P** **14 43 49.5 +1.4**
SNR=12
HOQ P **P** **14 43 49.5 +1.4**
SNR=12
HOQ P **P** **14 43 49.5 +1.4**
SNR=12
HOQ S **S** **14 50 24.2 +1.9**
HOQ S **S** **14 50 24.2 +1.9**
HOQ S **S** **14 50 24.2 +1.9**
KZA Kyzart 44.84 336 P **P** **14 43 49.3 +0.9**
SNR=75
BOOM Boomskoye usch 44.91 337 P **P** **14 43 49.0 +0.3**
BOOM pmax pmax
comp=Z,98nm,0.9s
BOOM Boomskoye usch 44.91 337 P **P** **14 43 49.0 +0.3**
BOOM IAmb IAmb 14 43 53.3
comp=Z,98nm,0.8s
CHGR Chuyangaron 45.02 328 P **P** **14 43 48.4 -1.2**
CHGR IAMs_20 IAMs_20 15 04 06.2
comp=Z,7μm,21.0s
MDOK Medeo 45.06 338 *i*P **P** **14 43 50.8 +0.9**
MDOK *i*S **S** **14 50 26.6 +1.2**
MDOK Medeo 45.06 338 *i*P **P** **14 43 50.8 +0.9**
MDOK *i*S **S** **14 50 26.6 +1.2**
KNDC Almaty 45.14 338 P **P** **14 43 51.1 +0.7**
AAA Alma-Ata 45.15 338⇑*i*P **P** **14 43 51.0 +0.5**
comp=Z,848nm,1.9s
AAA *e*LR LR 15 05 17.4
AAA Alma-Ata 45.15 338 *e*P **P** **14 43 51.7 +1.2**
AAA *e*S **S** **14 50 28.0 +1.4**
AAA pmax pmax
comp=Z,1μm,3.6s
AAA smax smax
comp=N,600nm,6.1s
MTBS Maitube 45.26 338⇑*i*P **P** **14 43 52.0 +0.6**
MTBS Maitube 45.26 338⇑*i*P **P** **14 43 52.0 +0.6**
UCH Uchtor 45.26 335 P **P** **14 43 52.8 +0.9**
SNR=248
ARQ Araqi 45.40 301 P **P** **14 43 54.3 +1.6**
SNR=9.7
ARQ P **P** **14 43 54.3 +1.6**
SNR=9.7
ARQ P **P** **14 43 54.3 +1.6**
SNR=9.7
TKM2 Tokmak 2 45.41 337 P **P** **14 43 53.5 +0.8**
SNR=166
KBK Karagaybulak 45.44 336 P **P** **14 43 54.5 +1.6**
SNR=145
AML Almayashu 45.53 335 P **P** **14 43 55.0 +1.1**
SNR=174
AAK Ala-Archa 45.61 336 P **P** **14 43 55.4 +1.1**
comp=N,50nm,0.6s,baz=145,slow=6.2,SNR=62
AAK Ala-Archa 45.61 336 P **P** **14 43 55.4 +1.1**
SNR=59
AAK Ala-Archa 45.61 336 *i*P **P** **14 43 55.3 +1.1**
SNR=108
AAK Ala-Archa 45.61 336 P **P** **14 43 55.2 +1.0**
AAK P **P** **14 43 55.2 +1.0**
AAK Ala-Archa 45.61 336 P **P** **14 43 54.7 +0.4**
AAK IAmb IAmb 14 43 59.9
comp=Z,119nm,0.9s
AAK Ala-Archa 45.61 336 IAMs_20 IAMs_20 15 04 24.4
comp=Z,8μm,22.0s
RBK Rabkut 45.65 293 P **P** **14 43 56.6 +1.9**
SNR=9.8
RBK P **P** **14 43 56.6 +1.9**
SNR=9.8
CHKK Chushkaly 45.68 339⇑*i*P **P** **14 43 54.5 -0.2**
CHKK Chushkaly 45.68 339⇑*i*P **P** **14 43 54.4 -0.2**
SOHO SOHO 45.69 302 P **P** **14 43 56.3 +1.3**
SNR=16
SOHO P **P** **14 43 56.3 +1.3**
SNR=16
SOHO P **P** **14 43 56.3 +1.3**
SNR=16
FRU1 Bishkek 45.70 336 IAMs_20 IAMs_20 15 04 30.3
comp=Z,8μm,21.0s
CHMS Chumysh 45.81 336 P **P** **14 43 56.4 +0.8**
SNR=41
SNY Shenyang 45.88 27⇑P **P** **14 43 55.3 -0.9**
SNY S **S** **14 50 35.3 -1.7**
SNY pmax pmax
comp=Z,49nm,0.9s
SNY pmax pmax
comp=Z,670nm,9.1s
SNY LR LR
comp=Z,4μm,17.9s
SNY LR LR
comp=Z,4μm,16.3s
SNY LR LR
comp=Z,8μm,15.9s
EKS2 Erkin-Say 45.93 335 P **P** **14 43 58.0 +1.3**
SNR=61
KUU Kurty 45.95 338⇑*i*P **P** **14 43 57.0 +0.2**
comp=Z,548nm,1.6s
KUU *e*S **S** **14 50 37.3 -0.7**
KUU *e*LR LR 15 05 31.1
comp=Z,1μm,17.2s
KUU Kurty 45.95 338*c i*P **P** **14 43 56.9 +0.2**
KUU *e*S **S** **14 50 37.3 -0.7**
KUU pmax pmax
comp=Z,548nm,1.6s
KUU MLR MLR
comp=Z,1μm,17.0s
WHFO Wadi Hawf 46.15 293 P **P** **14 43 60.0 +1.2**
SNR=8.8
WHFO P **P** **14 43 60.0 +1.2**
SNR=8.8
WHFO P **P** **14 43 60.0 +1.2**
SNR=8.8
TDK Taldyqorghan 46.20 341 *i*P **P** **14 43 58.7 0.0**
comp=Z,328nm,1.2s
TDK *e*LR LR 15 02 46.3
comp=Z,3μm,26.0s
TDK Taldyqorghan 46.20 341 *i*P **P** **14 43 58.6 0.0**
TDK pmax pmax
comp=Z,328nm,1.2s
TDK MLR MLR
comp=Z,3μm,26.0s
SGDS Sogindy 46.23 336⇑*i*P **P** **14 43 59.5 +0.4**
comp=Z,264nm,2.3s
SGDS *e*S **S** **14 50 41.8 -0.4**
SGDS *e*LR LR 15 03 25.8
comp=Z,3μm,22.1s
SONM Songino Array 46.27 8 P **P** **14 43 59.7 +0.4**
comp=Z,194nm,0.8s,baz=192,slow=8.6,SNR=230
SONM PcP **PcP** **14 45 35.2 +1.0**
comp=Z,26nm,0.7s,baz=192,slow=4.3,SNR=6.1
SONM ScP **ScP** **14 49 23.8 +0.4**
comp=Z,6.9nm,1.0s,baz=219,slow=3.8,SNR=4.2
SONM LR LR 15 05 37.3
comp=Z,7μm,19.6s,baz=184,slow=39
UOSS Minazif 46.28 303 *i*P **P** **14 43 59.6 0.0**
SNR=7.9
UOSS Minazif 46.28 303 P **P** **14 43 59.2 -0.4**
HATD Hatta, Dubai 46.29 303 *i*P **P** **14 44 00.6 +0.9**
SNR=14
HATD Hatta, Dubai 46.29 303 P **P** **14 44 01.1 +1.3**
SNR=22
HATD P **P** **14 44 01.1 +1.3**
SNR=22
ASHO Ashiyiah 46.30 303 *i*P **P** **14 44 00.8 +1.0**
SNR=23
ASHO Ashiyiah 46.30 303 P **P** **14 44 01.1 +1.3**
SNR=9.3
ASHO P **P** **14 44 01.1 +1.3**
SNR=9.3

ASHO P P 14 44 01.1 +1.3
SNR=9.3
ASHO S S 14 50 44.3 +0.7
ASHO S S 14 50 44.3 +0.7
ASHO S S 14 50 44.3 +0.7
ALNE Al Ain 46.32 302 *i* P P 14 44 02.3 +2.3
SNR=7.6
MDH Madha 46.34 304 *i* P P 14 43 59.1 -1.0
SNR=5.6
MDH Madha 46.34 304 P P 14 43 60.0 -0.1
MDH SNR=5.4 14 43 60.0 -0.1
MDH P P 14 43 60.0 -0.1
SNR=5.4
ULN Ulaanbaatar 46.40 8*c* *i*P P 14 44 00.3 0.0
ULN pmax pmax
comp=Z,181nm,0.8s
ULN MLR MLR
comp=Z,5µm,17.0s
ULN Ulaanbaatar 46.40 8 P P 14 44 00.5 +0.2
ULN Ulaanbaatar 46.40 8 IAMs_20 IAMs_20 15 05 53.6
comp=Z,5µm,19.0s
ABTO Aybut 46.45 292 P P 14 44 02.3 +1.2
SNR=10
ABTO P P 14 44 02.3 +1.2
SNR=10
ABTO S S 14 50 46.3 +0.4
ABTO S S 14 50 46.3 +0.4
MSFE Esma-Masafi 46.48 304 *i* P P 14 44 02.5 +1.3
SNR=6.7
QIS Mount Isa 46.53 121 P P 14 44 01.2 -0.5
baz=46,SNR=48
BANOM Banah 46.59 305 P P 14 44 02.8 +0.8
MK31 Makanchi Array 46.69 345 *i* P P 14 44 02.6 +0.1
MKAR Makanchi Array 46.69 345 P P 14 44 02.9 +0.4
comp=Z,344nm,0.7s,baz=158,slow=7.3,SNR=643
MKAR LR LR 15 08 30.3
comp=Z,2µm,18.6s,baz=168,slow=42
ZSN Zaisan 46.71 348⇑ *i*P P 14 44 03.7 +1.1
comp=Z,301nm,1.2s
ZSN *e*S S 14 50 48.9 +0.2
ZSN *e*LR LR 15 04 59.5
ZSN Zaisan 46.71 348*c* *i*P P 14 44 03.6 +1.0
ZSN *e*S S 14 50 48.9 +0.2
ZSN pmax pmax
comp=Z,301nm,1.2s
FAQ Al Faqa, Dubai 46.72 303 P P 14 44 03.8 +0.8
NAZ Nazwa, Dubai 46.75 303 P P 14 44 04.0 +0.7
NAZ Nazwa, Dubai 46.75 303 P P 14 44 04.8 +1.5
SNR=5.9
NAZ P P 14 44 04.8 +1.5
SNR=5.9
SHME Shamm 46.77 305 P P 14 44 03.9 +0.4
MAKZ Makanchi 46.79 345 P P 14 44 03.3 +0.1
MAKZ pmax pmax
comp=Z,300nm,0.8s
MAKZ Makanchi 46.79 345 P P 14 44 03.3 +0.1
TAS Tashkent 46.93 330 P P 14 44 05.2 +0.8
TAS pmax pmax
comp=Z,251nm,0.7s
TAS MLR MLR
comp=Z,2µm,22.0s
TAS Tashkent 46.93 330 P P 14 44 05.2 +0.8
AJN Ajban 47.16 302 *i* P P 14 44 06.8 +0.3
SNR=6.6
AJN Ajban 47.16 302 P P 14 44 07.3 +0.8
SNR=6.0
AJN P P 14 44 07.3 +0.8
SNR=6.0
JBG Jabagly 47.17 332*c* *i*P P 14 44 07.4 +0.9
JBG *e*S S 14 50 58.4 +2.7
JBG pmax pmax
comp=Z,103nm,0.9s
IUG Iuzhnay 47.20 332⇑ *i*P P 14 44 07.4 +0.8
IUG *e*S S 14 50 54.5 -1.6
IUG *e*LR LR 15 04 06.2
IUG Iuzhnay 47.20 332*c* *i*P P 14 44 07.4 +0.8
IUG *e*S S 14 50 54.4 -1.6
COEN Coen 47.52 111 P P 14 44 08.2 -1.3
baz=48,SNR=30
COEN Coen 47.52 111 P P 14 44 08.0 -1.5
COEN IAmb IAmb 14 44 11.8
comp=Z,57nm,0.9s
KK31 Karatay Array 47.72 333 *i* P P 14 44 10.5 -0.1
KKAR Karatay Array 47.72 333 P P 14 44 10.6 +0.1
KKAR pmax pmax
comp=Z,110nm,1.2s
KKAR Karatay Array 47.72 333 P P 14 44 10.6 +0.1
KKAR IAmb IAmb 14 44 14.8
comp=Z,110nm,1.1s
BTLS Baital 47.80 337⇑ *i*P P 14 44 11.2 +0.1
comp=Z,52nm,0.7s
BTLS *e*S S 14 51 01.3 -3.0
BTLS *e*LR LR 15 04 17.1
BTLS Baital 47.80 337*c* *i*P P 14 44 11.2 +0.1
BTLS *e*S S 14 51 01.2 -3.0
BTLS pmax pmax
comp=Z,52nm,0.7s
BRLS Borolday 47.97 332 *e*S S 14 51 04.9 -1.9
CN2 Changchun 48.29 27 *e*P P 14 44 13.7 -1.2
CN2 *ep*P pP 14 44 27.5 -1.0
CN2 *e*PP PP 14 46 04.4 -3.4
CN2 *e*S S 14 51 08.8 -2.4
CN2 pmax pmax
comp=Z,60nm,1.0s
CN2 pmax pmax
comp=Z,640nm,10.0s
CN2 LR LR
comp=Z,4µm,17.0s
CN2 LR LR
comp=Z,3µm,17.0s
CN2 LR LR
comp=Z,9µm,17.0s
DGZ Jazzator, Alta 48.40 351*c* *i*P P 14 44 16.8 +0.9
DGZ pmax pmax
comp=Z,257nm,1.2s
DGZ MLR MLR
comp=Z,2µm,21.0s
ZAK Zakamensk 48.45 5 *e*P P 14 44 16.6 +0.4
ZAK pmax pmax
comp=Z,100nm,1.0s
INU Inuyama 49.16 43 IAmb IAmb 14 44 26.1
comp=Z,94nm,1.1s
JCJ Chichijima 49.17 55 P P 14 44 21.2 -0.8
comp=Z,563nm,0.6s,baz=285,slow=3.7,SNR=32
MOY Mondy 49.59 2 *e*P P 14 44 24.9 0.0
MOY pmax pmax
comp=Z,229nm,2.4s
TLY Talaya 49.77 5*c* *i*P P 14 44 26.9 +0.7
TLY *e* 14 46 24.5
TLY *e*S S 14 51 31.6 -0.3
TLY *e* 14 54 15.0
TLY pmax pmax
comp=Z,278nm,0.7s
TLY MLR MLR
comp=Z,21µm,17.0s
TLY Talaya 49.77 5 P P 14 44 26.5 +0.3
MTSU Mount Surprise 49.81 116 P P 14 44 27.0 0.0
baz=50,SNR=101
BBOO Buckleboo 49.92 137 P P 14 44 27.3 -0.2
baz=50,SNR=16
BBOO Buckleboo 49.92 137 P P 14 44 28.0 +0.4
BBOO IAmb IAmb 14 44 40.0
comp=Z,41nm,0.7s
BBOO IAMs_20 IAMs_20 15 06 16.7
comp=Z,6µm,21.0s
JHJ Hachijo jima 2 49.95 47 P P 14 44 27.6 -0.2
comp=Z,176nm,0.8s,baz=49,slow=21,SNR=3.6
JHJ LR LR 15 05 42.0
comp=Z,1µm,20.7s,baz=248,slow=36
MSHR Mys Shultsa 50.16 32*ce*P P 14 44 29.5 +0.3
PMG Port Moresby 50.30 104*ce*P P 14 44 30.1 -0.7
PMG pmax pmax
comp=Z,95nm,0.7s
PMG MLR MLR
comp=Z,7µm,23.0s
PMG Port Moresby 50.30 104 P P 14 44 29.4 -1.3
PMG IAmb IAmb 14 44 34.1
comp=Z,96nm,0.8s
IRK Irkutsk 50.38 5 *e*P P 14 44 30.8 0.0
IRK pmax pmax
comp=Z,311nm,2.2s
SEM Semipalatinsk 50.55 345 *i* P P 14 44 32.1 -0.3
comp=Z,94nm,0.6s
SEM pmax pmax
comp=Z,94nm,0.6s
MAJO Matsushiro 50.62 42⇓ *e*P P 14 44 32.6 -0.3
MAJO pmax pmax
comp=Z,86nm,1.1s
MAJO MLR MLR
comp=Z,2µm,17.0s
MAJO Matsushiro 50.62 42 P P 14 44 32.1 -0.7
MAJO IAmb IAmb 14 44 39.7
comp=Z,54nm,0.8s
MAT Matsushiro 50.62 42 P P 14 44 31.7 -1.2
MAT S S 14 51 42.8 -1.4
MJAR Matsushiro Arr 50.62 42 P P 14 44 32.5 -0.4
comp=Z,52nm,0.8s,baz=222,slow=5.7,SNR=44
MJAR ScP ScP 14 49 43.2 +1.1
comp=Z,6.2nm,1.1s,baz=222,slow=4.0,SNR=6.2
MJAR LR LR 15 08 07.6
comp=Z,2µm,19.1s,baz=240,slow=39
HIA Hailar 50.68 18 IAmb IAmb 14 44 36.6
comp=Z,65nm,0.7s
HIA Hailar 50.68 18 IAMs_20 IAMs_20 15 08 08.3
comp=Z,4µm,19.0s
MDJ Mudanjiang 50.84 29 P P 14 44 34.2 -0.1
MDJ pP pP 14 44 46.3 -1.7
MDJ sP sP 14 44 54.2 +0.4
MDJ S S 14 51 48.7 +1.9
MDJ sS sS 14 52 12.1 +2.3
MDJ pmax pmax
comp=Z,17nm,1.1s
MDJ pmax pmax
comp=Z,1µm,6.9s
MDJ LR LR
comp=Z,6µm,17.9s
MDJ LR LR
comp=Z,2µm,16.7s
MDJ LR LR
comp=Z,9µm,16.9s
MDJ Mudanjiang 50.84 29 IAmb IAmb 14 44 39.6
comp=Z,54nm,0.8s
MDJ IAMs_20 IAMs_20 15 08 56.3
comp=Z,7µm,18.0s
VLA Vladivostok 50.92 32*c* *i*P P 14 44 35.1 +0.1
VLA pmax pmax
comp=Z,45nm,0.6s
VLA MLR MLR
comp=Z,2µm,15.0s
ASHT Ashkhabad 50.95 320 P P 14 44 37.6 +2.3
ASHT pmax pmax
comp=Z,210nm,0.8s
OTUK Ortayu 51.12 338 P P 14 44 36.6 +0.2
GEYT Alibeck 51.12 319 P P 14 44 37.1 +0.4
comp=Z,55nm,0.8s,baz=147,slow=8.3,SNR=70
GEYT LR LR 15 08 13.0
comp=Z,2µm,21.5s,baz=125,slow=38
KURBB Kurchatov Arra 51.20 344 S S 14 51 51.8 +0.2
comp=Z,4.1nm,1.1s,baz=171,slow=15,SNR=6.8
KURBB Kurchatov Arra 51.20 344 P P 14 44 36.3 -0.6
KURK Kurchatov 51.26 344*c* *i*P P 14 44 37.8 +0.5
KURK pmax pmax
comp=Z,175nm,1.0s
KURK MLR MLR
comp=Z,5µm,23.0s
KURK Kurchatov 51.26 344 P P 14 44 37.6 +0.3
KURK Kurchatov 51.26 344 IAMs_20 IAMs_20 15 08 37.4
comp=Z,4µm,22.0s
CIT Chita 51.56 12 *e*P P 14 44 40.5 +0.8
CIT *e* 14 44 56.5
CIT *e* 14 45 56.9
CIT pmax pmax
comp=Z,529nm,1.5s
USRK Ussuriysk Ar. 51.73 31 P P 14 44 40.6 -0.4
comp=Z,24nm,0.6s,baz=231,slow=8.0,SNR=44
USRK LR LR 15 09 28.0
comp=Z,4µm,18.8s,baz=212,slow=39
CTA Charters Tower 52.17 117 P P 14 44 45.0 +0.2
CTA pmax pmax
comp=Z,121nm,1.0s
CTAO Charters Tower 52.17 117 P P 14 44 44.5 -0.2
CTAO pmax pmax
comp=Z,120nm,1.1s
CTAO MLR MLR
comp=Z,2µm,20.0s
CTAO Charters Tower 52.17 117 P P 14 44 44.5 -0.2
CTAO IAmb IAmb 14 44 48.3
comp=Z,120nm,1.1s
HTT Hallett 52.24 136 P P 14 44 45.2 +0.1
baz=52,SNR=5.8
QLP Quilpie 52.89 126 P P 14 44 50.4 +0.5
baz=53,SNR=28
ZALV Zalesovo Beam 52.93 350 P P 14 44 49.9 +0.1
comp=Z,264nm,0.3s,baz=175,slow=7.0,SNR=470
ZALV S S 14 52 16.0 +0.7
comp=Z,7.8nm,0.7s,baz=174,slow=14,SNR=7.9
ZALV LR LR 15 10 04.8
comp=Z,2µm,22.0s,baz=170,slow=39
ZALV PKPPKP **P'P'df** **15 15 17.4 +1.9**
comp=Z,0.3nm,0.3s,baz=245,slow=3.1,SNR=3.5
STKA Stephens Creek 53.31 133 P P 14 44 53.0 0.0
baz=53,SNR=45
STKA Stephens Creek 53.31 133 P P 14 44 52.7 -0.3
comp=Z,15nm,0.6s,baz=315,slow=7.7,SNR=52
STKA LR LR 15 08 15.4
comp=Z,3µm,21.2s,baz=299,slow=37
OPO Ambohidratompo 53.93 245 P P 14 44 58.8 +1.0
comp=Z,7.1nm,0.7s,baz=69,slow=7.4,SNR=7.4
ABPO Ambohimpanom 54.02 245 P P 14 45 00.2 +1.7
ABPO pmax pmax
comp=Z,55nm,1.0s
ABPO Ambohimpanom 54.02 245 P P 14 45 00.2 +1.7
ABPO IAmb IAmb 14 45 13.9
comp=Z,55nm,0.9s
ABPO Ambohimpanom 54.02 245 IAMs_20 IAMs_20 15 02 28.1
comp=Z,7µm,22.0s
DAMY Dhamar 54.32 286 P P 14 45 03.3 +2.4
SNR=32
DAMY Dhamar 54.32 286 P P 14 45 01.8 +0.8
DAMY IAMs_20 IAMs_20 15 04 01.1
comp=Z,3µm,22.0s
KRVT Keravat (AS076 54.39 97 P P 14 45 01.1 0.0
comp=Z,34nm,0.9s,baz=53,slow=8.2,SNR=6.9
RABL Rabaul 54.52 97 P P 14 45 01.2 -0.9
RABL IAmb IAmb 14 45 11.0
comp=Z,80nm,0.6s
TEY Ternei 54.73 33⇓ *e*P P 14 45 01.1 -1.9
TEY *e* 14 46 07.5
TEY pmax pmax
comp=E,10.0nm,1.2s
TEY pmax pmax
comp=N,10.0nm,0.9s
TEY pmax pmax
comp=Z,10.0nm,1.5s
TEY pmax pmax
comp=Z,40nm,0.9s
TEY MLR MLR
comp=E,100nm,13.0s
TEY MLR MLR
comp=N,100nm,15.0s
RAYN Ar Rayn 55.07 297 P P 14 45 06.0 0.0
RAYN pmax pmax
comp=Z,55nm,0.9s
RAYN Ar Rayn 55.07 297 P P 14 45 06.0 0.0
RAYN IAmb IAmb 14 45 22.0
comp=Z,55nm,0.8s
KLR Kul'dur 55.24 26*c* *i*P P 14 45 07.0 +0.4
KLR pmax pmax
comp=Z,77nm,1.4s
KLR MLR MLR
comp=Z,3µm,16.0s
ATD Arta Tunnel 55.45 283 P P 14 45 09.7 +0.8
comp=Z,3.9nm,0.3s,baz=60,slow=3.5,SNR=5.0
ATD LR LR 15 05 12.6
comp=Z,1µm,21.0s,baz=94,slow=32
ATD Arta Tunnel 55.45 283 IAmb IAmb 14 45 29.4
comp=Z,151nm,1.6s
BVAR Borovoye Array 55.78 340 P P 14 45 10.2 -0.4
comp=Z,148nm,0.8s,baz=142,slow=7.5,SNR=373
BVAR S S 14 52 56.2 +2.4
comp=Z,3.2nm,0.8s,baz=135,slow=17,SNR=4.5
BRVK Borovoye 55.85 340*c* *i*P P 14 45 09.8 -1.2
BRVK pmax pmax
comp=Z,153nm,0.8s
BRVK MLR MLR
comp=Z,3µm,20.0s
BRVK Borovoye 55.85 340 P P 14 45 10.2 -0.7
BRVK Borovoye 55.85 340 IAMs_20 IAMs_20 15 12 21.8
comp=Z,3µm,20.0s
ARPS Mount Arapiles 56.08 138 P P 14 45 14.5 +1.7
baz=56,SNR=14
CMSA Cobar Meteorol 56.21 131 P P 14 45 14.2 +0.3
baz=56,SNR=58
RMQ Roma 56.57 124 P P 14 45 16.8 +0.2
baz=57,SNR=46
ERM Erimo 56.80 39 P P 14 45 19.0 +1.1
ERM pmax pmax
comp=Z,87nm,0.8s
ERM Erimo 56.80 39 P P 14 45 19.0 +1.1
ERM IAmb IAmb 14 45 36.7
comp=Z,87nm,0.8s
ZEA Zeya 56.96 20 *e*P P 14 45 19.0 +0.1
ZEA *e* 14 47 25.0
ZEA *e*S S 14 53 05.0 -4.3
ZEA *e*SSS SSS 14 59 16.0
ZEA pmax pmax
comp=N,100nm,1.0s
ZEA pmax pmax
comp=E,71nm,1.0s
ZEA pmax pmax
comp=Z,160nm,0.9s
ZEA pmax pmax
comp=Z,900nm,10.0s
ZEA pmax pmax
comp=Z,400nm,10.0s
ZEA smax smax
comp=Z,200nm,9.0s
ZEA smax smax
comp=E,200nm,10.0s
ZEA smax smax
comp=N,500nm,12.0s
BOD Bodaibo 57.13 10⇓ *i*P P 14 45 20.2 +0.3
BOD pmax pmax
comp=Z,253nm,1.0s
AB31 Akbulak array 57.20 331 *i* P P 14 45 19.9 -0.8
ABKAR Akbulak array 57.20 331 P P 14 45 20.4 -0.2
ASAJ Asahikawa 57.60 37 P P 14 45 24.1 +0.5
comp=Z,60nm,0.5s,baz=273,slow=8.7,SNR=27
EIDS Eidsvold 58.13 122 P P 14 45 27.6 0.0
baz=58,SNR=38
EIDS Eidsvold 58.13 122 P P 14 45 27.4 -0.2
GRNR Gornyy 58.45 28⇑ *i*P P 14 45 29.9 +0.5
GRNR *e*S S 14 53 37.4 +8.4
GRNR pmax pmax
comp=Z,90nm,1.0s
GRNR smax smax
comp=N,1.0nm,1.0s
AKTO Aktyubinsk 58.92 331 P P 14 45 32.0 -0.7
comp=N,38nm,0.7s,baz=128,slow=7.5,SNR=52
TOO Toolangi 58.97 137 P P 14 45 33.1 -0.3
baz=59,SNR=7.9
TOO Toolangi 58.97 137 P P 14 45 34.7 +1.4
TOO pmax pmax
comp=Z,54nm,1.1s
TOO Toolangi 58.97 137 P P 14 45 34.7 +1.4
TOO IAmb IAmb 14 45 55.3
comp=Z,54nm,1.1s
TOO IAMs_20 IAMs_20 15 09 49.4
comp=Z,3µm,21.0s
YSS Yuzh-Sakhalins 59.30 34*ce*P P 14 45 36.0 +0.7
YSS *e* 14 46 29.0
YSS *e* 14 47 51.6
YSS *e*S S 14 53 40.7 +0.7
YSS *e*PS PnS 14 53 53.0 -5.4
YSS pmax pmax
comp=Z,180nm,1.1s
YSS MLR MLR
comp=Z,3µm,16.0s
YSS MLR MLR
comp=N,900nm,14.0s
YSS MLR MLR
comp=E,2µm,15.0s
YSS Yuzh-Sakhalins 59.30 34 P P 14 45 35.5 +0.2
FURI Furi 59.35 279 IAMs_20 IAMs_20 15 07 57.2
comp=Z,3µm,21.0s
YNG Young 59.48 132 P P 14 45 37.6 +0.7
baz=60,SNR=11
YUK Yuzh-Kuril'sk 59.55 38*d* *i*P P 14 45 27.0 -10
YUK *i* S S 14 53 37.9 -5.4
YUK pmax pmax
comp=Z,640nm,1.4s
YUK pmax pmax
comp=E,59nm,0.6s
YUK pmax pmax
comp=N,32nm,0.8s
YUK pmax pmax
comp=Z,641nm,1.4s
AKT Akhty 59.81 318 *e*P P 14 45 38.8 -0.3
AKT *e* 14 46 24.3
AKT pmax pmax
comp=Z,127nm,1.4s
PATS Pohnpei 60.34 83 P P 14 45 42.8 -0.3
baz=60,SNR=6.0
PATS Pohnpei 60.34 83 P P 14 45 42.0 -1.1
ARMA Armidale 60.38 127 P P 14 45 43.6 +0.3
baz=60,SNR=20
ARMA Armidale 60.38 127 P P 14 45 44.5 +1.3
ARMA IAmb IAmb 14 46 24.4
comp=Z,88nm,1.1s
ARMA IAMs_20 IAMs_20 15 12 20.9
comp=Z,4µm,22.0s
CAN Canberra 60.38 133 P P 14 45 43.5 +0.4
CAN pmax pmax
comp=Z,67nm,0.9s
CAN MLR MLR
comp=Z,4µm,20.0s
CAN Canberra 60.38 133 P P 14 45 43.5 +0.4
CAN IAmb IAmb 14 46 08.0
comp=Z,67nm,0.9s
CAN IAMs_20 IAMs_20 15 13 41.8
comp=Z,4µm,20.0s
MAK Makhachkala 60.64 319 *e*P P 14 45 41.2 -3.4
MAK *e* 14 47 56.2
MAK *e*S S 14 53 51.9 -5.5
MAK *e*SS SS 14 57 49.0 -7.6
MAK pmax pmax
comp=Z,167nm,1.2s
KMBO Kilima Mbogo 60.77 268 P P 14 45 47.2 +0.8
comp=Z,6.4nm,0.9s,baz=62,slow=9.6,SNR=15
KMBO LR LR 15 07 40.7
comp=Z,3µm,20.8s,baz=86,slow=32
KMBO Kilima Mbogo 60.77 268 *i* P P 14 45 47.0 +0.6
SNR=7.5
KMBO Kilima Mbogo 60.77 268 *e*P P 14 45 47.6 +1.2
KMBO Kilima Mbogo 60.77 268 P P 14 45 47.6 +1.2
KMBO Kilima Mbogo 60.77 268 IAMs_20 IAMs_20 15 07 27.0
comp=Z,3µm,20.0s
DDFL Dedoflistskaro 60.87 317 P P 14 45 48.2 +1.8
LGD Lagodekhi 60.96 318 P P 14 45 46.9 0.0
MGCD Mangrove Creek 61.06 130 P P 14 45 48.4 +0.8
baz=61,SNR=6.4
KUR Kuril'sk 61.39 38 *e*P P 14 45 50.3 +0.7
KUR *e* 14 48 12.8
KUR *e*S S 14 54 14.9 +8.1
KUR pmax pmax
comp=Z,483nm,1.1s
KUR pmax pmax
comp=Z,892nm,3.2s
KUR MLR MLR
comp=E,1µm,17.0s
KUR MLR MLR
comp=Z,1µm,17.0s
TYV Tymovskoe 61.54 30 *e*P P 14 45 51.8 +1.2
TYV *e*S S 14 54 17.3 +8.7
TYV pmax pmax
comp=Z,140nm,1.8s
TYV pmax pmax
comp=Z,1µm,3.5s
TYV smax smax
comp=E,300nm,2.8s
TYV smax smax
comp=E,20nm,1.8s
GROC Groznyy 61.86 319 *e*P P 14 45 52.6 -0.3
GROC *e* 14 46 31.8
GROC *e*S S 14 54 09.8 -3.2
GROC pmax pmax
comp=Z,195nm,1.1s
NKL Nikolayevsk 62.01 28 *e*P P 14 45 53.1 -0.5
NKL *e* 14 46 36.8
NKL *e*S S 14 54 15.6 +1.3
NKL pmax pmax
comp=E,3.0nm,1.2s
NKL pmax pmax
comp=Z,82nm,1.2s
NKL pmax pmax

comp=N,8.0nm,1.3s
NKL pmax pmax
comp=Z,199nm,11.3s
KZRT Kazreti 62.02 317 P P 14 45 54.2 +0.1
SVE Sverdlovsk 62.26 338 *de*P **P 14 45 55.3 0.0**
SVE *e*S **S 14 54 16.2 -1.3**
SVE *e* 14 55 39.2
SVE *e*SS **SS 14 58 15.5 -6.1**
SVE pmax pmax
comp=Z,270nm,0.9s
SVE MLR MLR
comp=Z,4μm,22.0s
GUDG Gudauri 62.42 318 P P 14 45 57.3 +0.4
BGD Bogdanovka 62.52 316 P P 14 45 57.2 -0.4
LODK Lodwar 62.53 273 P P 14 46 00.3 +2.3
SNR=22
KARS Kars 62.63 315 P P 14 45 59.3 +1.0
AKH Akhalkalaki 62.65 316 ⇑P **P 14 45 59.0 +0.6**
AKH Akhalkalaki 62.65 316 P P 14 45 59.0 +0.6
AKH pmax pmax
comp=Z,83nm,1.1s
AKH MLR MLR
comp=Z,600nm,19.0s
AKH Akhalkalaki 62.65 316 P P 14 45 59.0 +0.6
AKH IAmb IAmb 14 46 22.1
comp=Z,82nm,1.1s
HNR Honiara 62.77 102 P P 14 45 58.8 -0.7
comp=Z,68nm,0.8s,baz=205,slow=3.9,SNR=15
HNR Honiara 62.77 102 P P 14 45 57.2 -2.3
ARU Arti 62.78 337 *c i*P **P 14 45 58.1 -0.7**
ARU 14 46 35.6
ARU 14 48 13.5
ARU S **S 14 54 28.5 +4.5**
ARU SS **SS 14 58 33.5 +3.8**
ARU pmax pmax
comp=Z,180nm,1.4s
ARU MLR MLR
comp=Z,3μm,21.0s
ARU Arti 62.78 337 P P 14 45 58.0 -0.7
ARU IAMs_20 IAMs_20 15 15 12.1
comp=Z,3μm,21.0s
ZEI Tsey 62.94 318 *e*P **P 14 45 57.7 -2.7**
ZEI *e*S **S 14 54 25.2 -1.8**
ZEI pmax pmax
comp=Z,61nm,0.6s
ONI Oni 63.16 318 P P 14 46 02.4 +0.7
NCK Nalchik 63.44 319⇑ *e*P **P 14 46 03.4 0.0**
NCK pmax pmax
comp=Z,50nm,0.8s
NCK MLR MLR
comp=Z,1μm,20.0s
NEY Neytrino 63.92 318 *ce*P **P 14 46 07.6 +0.8**
NEY pmax pmax
comp=Z,18nm,1.7s
NEY MLR MLR
comp=Z,505nm,21.0s
BCA Borcka 63.96 316 ⇑P **P 14 46 07.7 +0.8**
BATM Batumi 63.97 316 ⇑P **P 14 46 07.9 +1.0**
BATM Batumi 63.97 316 P P 14 46 07.9 +1.0
KBZ Khabaz 64.00 319 P P 14 46 07.0 0.0
comp=Z,83nm,0.8s,baz=112,slow=5.3,SNR=110
KBZ PKPPKP **P'P'df 15 15 03.2 +3.2**
comp=Z,1.9nm,0.9s,baz=249,slow=7.2,SNR=4.5
KBZ LR LR 15 17 47.0
comp=Z,1μm,20.9s,baz=120,slow=40
KIV Kislovodsk 64.23 319 ⇑P **P 14 46 09.1 +0.3**
KIV Kislovodsk 64.23 319 *i*P **P 14 46 08.3 -0.4**
SNR=30
KIV Kislovodsk 64.23 319 *e*P **P 14 46 08.5 -0.2**
KIV *e* 14 48 29.9
KIV *e*S **S 14 54 42.8 +0.1**
KIV *e*SS **SS 14 58 57.9 +4.9**
KIV pmax pmax
comp=Z,422nm,4.4s
KIV pmax pmax
comp=Z,322nm,1.1s
KIV MLR MLR
comp=Z,2μm,17.0s
KIV Kislovodsk 64.23 319 P P 14 46 08.6 -0.1
GOF Gofitskoye 64.45 320⇑ *e*P **P 14 46 09.7 -0.4**
GOF pmax pmax
comp=Z,115nm,0.9s
YAK Yakutsk 64.48 16 *c i*P **P 14 46 09.5 -0.3**
YAK *e*S **S 14 54 42.2 -2.7**
YAK pmax pmax
comp=Z,565nm,0.9s
YAK pmax pmax
comp=N,143nm,0.9s
YAK pmax pmax
comp=E,193nm,1.1s
YAK smax smax
comp=N,113nm,2.4s
YAK smax smax
comp=E,82nm,2.5s
YAK MLR MLR
comp=N,3μm,26.0s
YAK MLR MLR
comp=E,2μm,29.0s
YAK Yakutsk 64.48 16 P P 14 46 08.6 -1.2
ASF Jabal al Asfar 64.65 305 P P 14 46 12.7 +1.1
comp=E,9.0nm,0.8s,baz=64,slow=5.4,SNR=12
KTUT Trabzon 65.10 315 ⇓P **P 14 46 15.3 +1.0**
MALT Malatya 65.18 312 P P 14 46 15.6 +0.5
EIL Elat 65.69 302 P P 14 46 18.9 +0.5
comp=E,22nm,0.6s,baz=139,slow=4.0,SNR=20
GAZ Gaziantep 65.75 310 P P 14 46 18.9 +0.2
SOC Sochi 66.06 317 *c i*P **P 14 46 19.7 -0.8**
SOC *e* 14 48 43.6
SOC *e*S **S 14 55 07.2 +2.1**
SOC *e*SS **SS 14 59 16.7 -4.7**
SOC pmax pmax
comp=Z,100nm,0.7s
SOC MLR MLR
comp=Z,1μm,21.0s
MMAI Mount Meron Ar 66.08 305 P P 14 46 21.6 +0.7
comp=Z,10nm,0.6s,baz=102,slow=7.8,SNR=22
MBAR Mbarara 67.25 269 P P 14 46 30.1 +1.2
MBAR pmax pmax
comp=Z,133nm,1.6s
MBAR MLR MLR
comp=Z,300nm,18.0s
MBAR Mbarara 67.25 269 P P 14 46 30.1 +1.2
MBAR IAmb IAmb 14 46 46.6
comp=Z,133nm,1.6s
NRIK Noril'sk 67.62 356 S **S 14 55 23.9 +0.9**
comp=Z,1.6nm,0.6s,baz=314,slow=21,SNR=7.8
NRIK LR LR 15 19 45.4
comp=Z,2μm,20.5s,baz=166,slow=39
VRH Novokhopyorsk 67.92 326 *e*P **P 14 46 30.6 -1.5**
VRH pmax pmax
comp=Z,180nm,0.8s
CSS Mathiatis 68.21 307 P P 14 46 32.1 -2.2
CSS IAmb IAmb 14 47 08.1
comp=Z,106nm,1.1s
CSS IAMs_20 IAMs_20 15 21 47.3
comp=Z,2μm,19.0s
CASY Casey 68.69 175 P P 14 46 37.1 +0.5
CASY Casey 68.69 175 IAMs_20 IAMs_20 15 13 23.1
comp=Z,3μm,18.0s
BR131 Keskin Array S 69.16 312 P P 14 46 39.2 -1.1
SNR=21
BR131 P P **14 46 39.2 -1.1**
SNR=21
BRTR Keskin Array B 69.16 312 P P 14 46 39.4 -0.9
comp=Z,14nm,0.7s,baz=129,slow=6.9,SNR=58
BRTR PKPPKP **P'P'df 15 14 52.5 +0.5**
comp=Z,1.0nm,0.8s,baz=357,slow=2.5,SNR=7.3
BRTR LR LR 15 21 18.1
comp=Z,570nm,19.4s,baz=88,slow=40
VORD Divnogorie 69.20 325 *e*P **P 14 46 38.7 -1.4**
VORD pmax pmax
comp=Z,50nm,0.8s
VSR Storozhevoye 69.38 325 *c i*P **P 14 46 39.8 -1.4**
VSR pmax pmax
comp=Z,80nm,0.8s
VSR MLR MLR
comp=Z,2μm,20.0s
ILGA Ilgaz 69.46 313 P P 14 46 42.2 -0.1
BZK Bozkurt 69.51 314 ⇑P **P 14 46 42.6 +0.4**
VORR Voronezh 69.54 325 *e*P **P 14 46 42.0 -0.2**
VORR pmax pmax
comp=Z,350nm,1.6s
ANTO Ankara 69.83 312 ⇑P **P 14 46 44.1 -0.2**
ANTO Ankara 69.83 312 P P 14 46 43.6 -0.7
ANTO pmax pmax
comp=Z,179nm,1.6s
ANTO Ankara 69.83 312 P P 14 46 43.6 -0.7
ANTO IAmb IAmb 14 47 04.2
comp=Z,179nm,1.6s
LPSR Galich'ya Gora 70.08 326 *e*P **P 14 46 44.6 -0.9**
LPSR pmax pmax
comp=Z,180nm,0.9s
SIM Simferopol' 70.31 317 *c i*P **P 14 46 46.7 -0.4**
SIM *e* 14 49 20.0
SIM *e*S **S 14 55 52.0 -3.7**
SIM pmax pmax
comp=Z,50nm,0.8s
SIM pmax pmax
comp=Z,280nm,10.5s
MA2 Magadan 70.32 26 *c i*P **P 14 46 47.1 +0.2**
MA2 pmax pmax
comp=Z,58nm,0.8s
MA2 MLR MLR
comp=Z,2μm,17.0s
MA2 Magadan 70.32 26 P P 14 46 47.0 +0.2
MA2 Magadan 70.32 26 IAMs_20 IAMs_20 15 22 05.9
comp=Z,2μm,18.0s
PETK Petropavlovsk- 70.68 33 P P 14 46 48.8 -0.4
comp=Z,51nm,0.7s,baz=206,slow=6.8,SNR=43
PETK LR LR 15 21 22.1
comp=Z,2μm,18.1s,baz=237,slow=39
DZM Mont Dzumac 70.90 114 *e*P **P 14 46 52.2 +1.0**
comp=Z,123nm,1.1s
DZM *e*S **S 14 56 00.5 -3.0**
comp=Z,2μm,31.1s
DZM Mont Dzumac 70.90 114 *e*LR LR 15 08 33.4
comp=Z,3μm,27.4s
DZM Mont Dzumac 70.90 114 IAmb IAmb 14 46 55.3
comp=Z,46nm,0.9s
LSZ Lusaka 71.06 253 P P 14 46 52.3 0.0
comp=Z,8.5nm,0.7s,baz=78,slow=4.3,SNR=11
LSZ Lusaka 71.06 253 P P 14 46 53.5 +1.2
LSZ pmax pmax
comp=Z,40nm,1.0s
LSZ Lusaka 71.06 253 P P 14 46 53.5 +1.2
ISP Isparta 71.06 309 P P 14 46 50.6 -1.4
ISP pmax pmax
comp=Z,298nm,1.8s
ISP Isparta 71.06 309 P P 14 46 50.6 -1.4
PET Petropavlovsk 71.18 34 *e*P **P 14 46 51.3 -0.9**
PET *e* 14 47 09.1
PET *e* 14 49 33.0
PET *e*S **S 14 56 04.8 -0.6**
PET *e*SS **SS 15 00 33.6 -6.3**
PET pmax pmax
comp=Z,1μm,9.9s
PET pmax pmax
comp=Z,289nm,0.6s
PET pmax pmax
comp=Z,800nm,11.5s
PET Petropavlovsk 71.18 34 P P 14 46 51.0 -1.2
PRGR Permogore 71.24 336 *e*P **P 14 46 51.9 -0.5**
PRGR *e* 14 47 11.1
PRGR *e* 14 49 26.4
PRGR *e*S **S 14 56 06.8 +1.1**
PRGR pmax pmax
comp=Z,197nm,0.6s
ELL Elmali 71.31 308 P P 14 46 53.1 -0.4
ELL pmax pmax
comp=Z,582nm,1.2s
ELL Elmali 71.31 308 P P 14 46 53.1 -0.4
MATP Matopo 71.51 248 *i*P **P 14 46 53.5 -1.5**
MATP Matopo 71.51 248 P P 14 46 53.6 -1.5
comp=Z,50nm,0.9s,baz=79,slow=5.6,SNR=65
MATP Matopo 71.51 248 *i*P **P 14 46 53.5 -1.5**
MOS Moscow 72.07 329 *e*P **P 14 46 53.7 -3.8**
MOS *e* 14 47 13.1
MOS *e*PPP PPP 14 51 16.9
MOS *e*S **S 14 56 08.3 -7.2**
MOS pmax pmax
comp=Z,200nm,0.9s
MOS pmax pmax
comp=Z,600nm,1.6s
MOS smax smax
comp=N,800nm,2.8s
MOS MLR MLR
comp=N,1μm,21.0s
MOS MLR MLR
comp=Z,2μm,21.0s
MOS MLR MLR
comp=E,2μm,22.0s
TIXI Tiksi 72.31 10 *c i*P **P 14 46 57.6 -1.0**
TIXI pmax pmax
comp=Z,70nm,1.0s
TIXI MLR MLR
comp=Z,4μm,17.0s
TIXI Tiksi 72.31 10 P P 14 46 57.5 -1.1
OBN Obninsk 72.37 328 ⇑P **P 14 46 59.1 -0.2**
OBN Obninsk 72.37 328 *c i*P **P 14 46 58.7 -0.6**
OBN *e* 14 47 16.1
OBN *e* 14 49 43.1
OBN *i*S S 14 56 09.1 -10
OBN pmax pmax
comp=Z,119nm,1.3s
OBN MLR MLR
comp=Z,1μm,19.0s
OBN Obninsk 72.37 328 P P 14 46 58.7 -0.6
MANT Manisa 72.72 310 P P 14 47 01.5 -0.5
MANT IAMs_20 IAMs_20 15 24 16.2
comp=Z,2μm,20.0s
SEY Seymchan 72.77 23⇑ *e*P **P 14 47 01.8 +0.3**
KARP Karpathos 73.27 306 P P 14 47 05.5 +0.4
KARP Karpathos 73.27 306 P P 14 47 05.0 -0.1
KLMR Klimovskoe 73.39 334 *c i*P **P 14 47 04.5 -0.7**
KLMR S **S 14 56 29.9 -0.5**
KLMR pmax pmax
comp=Z,165nm,1.5s
KLMR MLR MLR
comp=Z,2μm,22.0s
KLMR Klimovskoe 73.39 334⇑ *i*P **P 14 47 04.5 -0.7**
KLMR *e*P **P 14 47 04.5 -0.7**
KLMR ⇓ *i*P **P 14 47 04.5 -0.7**
KLMR AMP 14 47 08.7
comp=Z,165nm,1.5s
KLMR *e*PP PP 14 49 40.4 -8.9
KLMR S **S 14 56 30.0 -0.5**
KLMR S **S 14 56 30.0 -0.5**
KLMR LQ LQ 15 13 12.9
KLMR LQ LQ 15 13 12.9
KLMR LR LR 15 14 03.3
KLMR AMP 15 21 33.7
comp=Z,2μm,21.7s
MAW Mawson 73.62 193 P P 14 47 08.5 +2.1
baz=74,SNR=6.9
MAW Mawson 73.62 193 P P 14 47 06.9 +0.5
comp=Z,12nm,1.0s,baz=83,slow=5.8,SNR=9.9
MAW LR LR 15 13 24.8
comp=Z,3μm,20.9s,baz=22,slow=31
JURR Jurilovca 73.85 316⇑P **P 14 47 08.5 +0.2**
SMG Samos 73.90 309 P P 14 47 08.7 -0.1
TLCR 73.99 317⇑P **P 14 47 08.7 -0.4**
TLCR 73.99 317 P P 14 47 08.7 -0.4
MFTR Murfatlar 74.03 315⇑P **P 14 47 09.7 +0.4**
PSN Preselentsi 74.09 315 *i*P **P 14 47 09.5 -0.2**
TIRR Tirgusor 74.10 316⇑P **P 14 47 09.7 0.0**
TIRR Tirgusor 74.10 316 P P 14 47 09.0 -0.7
TIRR pmax pmax
comp=Z,186nm,0.8s
TIRR Tirgusor 74.10 316 P P 14 47 09.0 -0.7
TOPG Topolog 74.22 316⇑P **P 14 47 10.1 -0.3**
MILM Milestii Mici 74.41 318⇑P **P 14 47 11.2 -0.3**
KIS Kishinev 74.43 318 *e*P **P 14 47 12.0 +0.4**
KIS Kishinev 74.43 318 *e*PP PP 14 50 04.0 +5.6
KIS Kishinev 74.43 318 *e*P **P 14 47 12.0 +0.4**
KIS *e* 14 50 04.0
KIS *e*PPP PPP 14 51 48.0
KIS *e*S **SKiKP 14 56 38.0 +4.0**
KIS *e*PS PnS 14 57 07.0 -15
KIS smax smax
comp=N,800nm,13.0s
KIS MLR MLR
comp=Z,700nm,22.0s
CFR Carcaliu 74.46 316⇑P **P 14 47 11.6 -0.2**
CFR Carcaliu 74.46 316 P P 14 47 11.3 -0.5
CFR pmax pmax
comp=Z,43nm,2.0s
HARR Harsova 74.49 316⇑P **P 14 47 12.1 +0.1**
HARR Harsova 74.49 316 P P 14 47 12.0 +0.1
PRD Provadia 74.54 314 *i*P **P 14 47 12.0 -0.3**
PRK Paraskevi 74.61 310 P P 14 47 13.4 +0.6
CHOS Chios island 74.63 309 P P 14 47 13.2 +0.1
LBTB Lobatse 74.90 244 P P 14 47 16.1 +1.2
comp=Z,15nm,0.9s,baz=104,slow=7.4,SNR=16
JMB Yambol 74.98 313 *i*P **P 14 47 14.9 0.0**
SORM Soroca 75.01 319 ⇓P **P 14 47 14.7 -0.2**
SORM Soroca 75.01 319 P P 14 47 14.7 -0.2
VASR Vaslui 75.03 318⇑P **P 14 47 15.6 +0.6**
IDI Anoyia 75.06 306 P P 14 47 15.6 0.0
IDI Anoyia 75.06 306 P P 14 47 15.4 -0.2
comp=Z,30nm,0.6s,baz=73,slow=4.7,SNR=13
IDI Anoyia 75.06 306 ⇓P **P 14 47 16.1 +0.5**
IDI Anoyia 75.06 306 P P 14 47 15.1 -0.5
IDI IAmb IAmb 14 47 35.8
comp=Z,57nm,0.8s
ALN Alexandroupoli 75.08 312 P P 14 47 14.9 -0.6
ALN Alexandroupoli 75.08 312 P P 14 47 14.8 -0.7
ALN pmax pmax
comp=Z,29nm,1.0s
ALN MLR MLR
comp=Z,700nm,21.0s
ALN Alexandroupoli 75.08 312 P P 14 47 14.8 -0.7
AKASG Malin Array Be 75.12 322 P P 14 47 14.6 -0.9
comp=Z,41nm,0.6s,baz=89,slow=4.8,SNR=107
AKASG PP **PP 14 50 04.2 0.0**
comp=Z,7.0nm,0.8s,baz=87,slow=6.8,SNR=5.9
AKASG S **S 14 56 47.1 -3.0**
comp=Z,1.7nm,0.9s,baz=96,slow=10,SNR=6.6
AKASG LR LR 15 26 18.1
comp=Z,655nm,18.3s,baz=85,slow=40
AKBB Malin Array Si 75.12 322 P P 14 47 14.5 -1.0
AKBB pmax pmax
comp=Z,59nm,0.7s
AKBB Malin Array Si 75.12 322 P P 14 47 14.5 -1.0
AKBB IAmb IAmb 14 47 18.2
comp=Z,59nm,0.7s
KIEV Kiev 75.12 322 P P 14 47 14.0 -1.5
RAZG Razgrad 75.25 315⇑P **P 14 47 16.6 +0.1**
ODBI Odobesti 75.33 317⇑P **P 14 47 17.7 +0.9**
SMTH Samothraki Isl 75.39 311 P P 14 47 16.4 -0.9
RDO Rodhopi 75.50 312 P P 14 47 17.0 -0.9
TMCR Tamitsa 75.52 337 *e*P **P 14 47 17.3 -0.2**
TMCR pmax pmax
comp=Z,120nm,0.7s
BISRR Bisoca 75.52 317⇑P **P 14 47 18.8 +0.7**
ISR Istrita 75.55 316 ⇓P **P 14 47 19.5 +1.3**
ISR Istrita 75.55 316 P P 14 47 19.3 +1.1
ISR pmax pmax
comp=Z,79nm,0.7s
LIA Limnos Island 75.55 311 P P 14 47 17.4 -0.8
VRI Vrincioaia 75.58 317⇑P **P 14 47 19.0 +0.7**
VRI Vrincioaia 75.58 317 P P 14 47 18.7 +0.4
VRI pmax pmax
comp=Z,158nm,1.4s
ELND Elena 75.58 314⇑P **P 14 47 18.2 -0.2**
SZH Strazhica 75.61 314 *i*P **P 14 47 17.5 -1.0**
PLOR Plostina 75.62 317⇑P **P 14 47 19.3 +0.6**
PLOR Plostina 75.62 317 P P 14 47 19.2 +0.6
VAM Vamos 75.64 306 P P 14 47 19.0 +0.2
TESR Tescani 75.77 318⇑P **P 14 47 19.8 +0.4**
BOSA Boshof 75.81 240 *i*P **P 14 47 21.6 +1.4**
BOSA Boshof 75.81 240 P P 14 47 19.8 -0.4
comp=Z,10nm,0.9s,baz=97,slow=6.6,SNR=10
BOSA LR LR 15 15 29.7
comp=Z,3μm,21.0s,baz=58,slow=32
BOSA Boshof 75.81 240 *i*P **P 14 47 21.6 +1.4**
IMMV Iera Moni Meta 75.82 306 P P 14 47 19.2 -0.7
SECR 75.86 316⇑P **P 14 47 20.8 +0.9**
THAS Thassos island 76.02 311 P P 14 47 19.5 -1.4
MLR Muntele Rosu 76.03 316 P P 14 47 21.3 +0.3
comp=Z,41nm,0.8s,baz=80,slow=2.0,SNR=46
MLR PP **PP 14 50 16.9 +4.7**
comp=Z,18nm,1.0s,baz=84,slow=3.1,SNR=3.8
MLR Muntele Rosu 76.03 316⇑P **P 14 47 21.6 +0.6**
MLR Muntele Rosu 76.03 316 IAmb IAmb 14 47 47.7
comp=Z,182nm,1.3s
ZIMR 76.08 314⇑P **P 14 47 21.6 +0.4**
BIZ Bicaz 76.22 318⇑P **P 14 47 21.6 -0.3**
KAVA Kavala 76.24 312 P P 14 47 21.5 -0.6
OZUR 76.27 317 ⇓P **P 14 47 21.7 -0.5**
PLD Plovdiv 76.29 313 *i*P **P 14 47 21.1 -1.3**
PLD Plovdiv 76.29 313 P P 14 47 22.1 -0.3
PLD pmax pmax
comp=Z,156nm,2.0s
KMPD K-Podol'skiy 76.34 320 P P 14 47 21.0 -1.5
HORU Horodok 76.50 320 P P 14 47 22.6 -0.9
HUMR Humele 76.52 315⇑P **P 14 47 23.7 0.0**
OUR Ouranopolis 76.53 311 P P 14 47 23.1 -0.7
PLVB Pleven 76.57 314 ⇓P **P 14 47 24.3 +0.4**
MTUR Matau 76.59 316⇑P **P 14 47 25.1 +0.9**
MTUR Matau 76.59 316 P P 14 47 25.0 +0.9
VOIR 76.64 316⇑P **P 14 47 23.8 -0.6**
VOIR 76.64 316 P P 14 47 23.8 -0.6
VOIR pmax pmax
comp=Z,28nm,0.7s
DID Didima 76.69 308 P P 14 47 23.1 -1.7
PAIG Paliouri 76.70 310 P P 14 47 23.6 -1.1
PAIG Paliouri 76.70 310 P P 14 47 24.6 -0.1
PAIG pmax pmax
comp=Z,84nm,0.9s
VILL Villia 76.73 309 P P 14 47 23.0 -2.0
NVR Nevrokopi 76.78 312 P P 14 47 24.3 -1.0
ARR Arges 76.92 316⇑P **P 14 47 25.5 -0.5**
MICGM Minsk 76.92 326 ⇓ *e*P **P 14 47 25.0 -0.6**
MICGM PM 14 47 26.0
comp=Z,0.3nm,1.0s
MICGM *e*PcP **PcP 14 47 37.0 +0.4**
MICGM *e*S **S 14 57 13.0 +3.2**
MICGM *e*LQ LQ 15 18 00.0
MICGM *e*LR LR 15 20 00.0
MNK Minsk 76.92 326 ⇓ *e*P **P 14 47 25.0 -0.6**
MNK *e* 14 47 37.0
MNK *e*S **S 14 57 13.0 +3.2**
MNK pmax pmax
comp=Z,330nm,1.0s
MMB Musomiste 76.92 312 *i*P **P 14 47 25.0 -1.0**
SRS Serrai 76.95 312 P P 14 47 24.4 -1.8
SRS Serrai 76.95 312 P P 14 47 25.2 -1.0
SRS pmax pmax
comp=Z,37nm,2.5s
BURAR Bucovina Array 76.95 318 ⇓P **P 14 47 27.6 +1.4**
BURAR Bucovina Array 76.95 318 P P 14 47 27.5 +1.4
DCZ Deep Cove 76.96 138 IAMs_20 IAMs_20 15 17 19.6
comp=Z,2μm,19.0s
LKR Lokris 77.04 309 P P 14 47 24.1 -2.6
PUL Pulkovo 77.18 331⇑ *e*P **P 14 47 28.0 +1.0**
PUL pmax pmax
comp=Z,114nm,0.5s
PUL MLR MLR
comp=Z,3μm,24.0s
KSV Kosov 77.19 319 P P 14 47 25.6 -1.8
HORT Hortiatis 77.24 311 P P 14 47 26.9 -1.0
DYR Agios Nikonas 77.31 307 P P 14 47 28.1 -0.2
THE Thessaloniki 77.34 311 P P 14 47 26.5 -1.8
VTS Vitosha 77.44 313 P P 14 47 27.8 -1.3
VTS Vitosha 77.44 313⇑P **P 14 47 28.7 -0.4**
VTS Vitosha 77.44 313 *i*P **P 14 47 28.4 -0.7**
VTS Vitosha 77.44 313 P P 14 47 28.3 -0.8
VTS pmax pmax
comp=Z,37nm,0.8s
VTS Vitosha 77.44 313 P P 14 47 28.3 -0.8
VTS IAmb IAmb 14 47 32.4
comp=Z,37nm,0.8s
KNT Kendrikon 77.47 312 P P 14 47 28.0 -1.1
KNT Kendrikon 77.47 312 P P 14 47 28.3 -0.8
KNT pmax pmax
comp=Z,33nm,1.8s
MLZ Mavora Lakes 77.59 137 IAMs_20 IAMs_20 15 18 03.1
comp=Z,2μm,21.0s
AGG Agios Georgios 77.61 309 P P 14 47 27.9 -2.0
AGG Agios Georgios 77.61 309 P P 14 47 27.7 -2.2
AGG pmax pmax
comp=Z,31nm,0.9s
AGG Agios Georgios 77.61 309 P P 14 47 27.7 -2.2
KLV Kalavryta, Ach 77.62 308 P P 14 47 28.8 -1.3
LIT Litokhoron 77.63 311 P P 14 47 27.9 -2.1
LIT Litokhoron 77.63 311 P P 14 47 28.4 -1.6
LIT pmax pmax
comp=Z,55nm,0.7s
LIT Litokhoron 77.63 311 P P 14 47 28.4 -1.6
LIT IAmb IAmb 14 47 32.3
comp=Z,55nm,0.7s
NACGM Naroch 77.64 326 *e*P **P 14 47 28.0 -1.7**

NACGM eS S 14 57 12.0 -5.6
NACGM eLQ LQ 15 15 06.0
NACGM eLR LR 15 20 12.0
ITM Ithomi 77.69 308 P P **14 47 29.7 -0.7**
ITM Ithomi 77.69 308 P P **14 47 29.3 -1.1**
ITM IAmb IAmb 14 47 52.1
comp=Z,102nm,1.0s
TRIZ Trizonia 77.72 309 P P **14 47 29.3 -1.2**
SERG Sergoula 77.74 309 P P **14 47 29.5 -1.2**
VAY Valandovo 77.74 312 *i* Pn P **14 47 29.6 -0.9**
VAY Valandovo 77.74 312 *i* Pn P **14 47 29.6 -0.9**
VAY Valandovo 77.74 312 P P **14 47 32.5 +1.9**
VAY pmax pmax
comp=Z,35nm,1.2s
LAKA Lakka 77.78 309 P P **14 47 30.0 -0.9**
JOF Joensuu 77.78 335 P P **14 47 30.6 +0.3**
JOF pmax pmax
comp=Z,47nm,1.2s
PYL PYLOS 77.80 307 P P **14 47 29.8 -1.2**
ANX Ano Chora 77.87 309 P P **14 47 30.2 -1.3**
CJR Cluj-Napoca 77.87 317 ⇑P P **14 47 32.4 +1.2**
CJR Cluj-Napoca 77.87 317 P P **14 47 32.4 +1.2**
THL Klokotos Trika 77.92 310 P P **14 47 29.2 -2.4**
DRO Drossia 77.95 308 P P **14 47 31.4 -0.5**
EVR Evrytania 78.00 309 P P **14 47 31.2 -1.0**
IIGN Ignalina 78.06 326 *eP* P **14 47 32.2 +0.2**
WKZ Wanaka 78.06 137 IAMs_20 IAMs_20 15 18 33.6
comp=Z,3µm,22.0s
STIP Stip 78.08 312 *i* Pn P **14 47 30.3 -2.1**
STIP Stip 78.08 312 *i* Pn P **14 47 30.3 -2.1**
IZAR Zarasai 78.14 327 *eP* P **14 47 32.6 +0.1**
RLS Riolos of Patr 78.16 308 P P **14 47 32.9 0.0**
LVV L'vov 78.16 321 *eP* P **14 47 32.2 -0.5**
LVV *e* 14 50 30.0
LVV *eS* S **14 57 19.3 -4.2**
LVV *ePS* **SKSac 14 57 49.1 +6.2**
LVV *eSS* SS **15 02 34.4 +8.3**
LVV pmax pmax
comp=Z,220nm,1.7s
ISAL Salakas 78.17 327 *eP* P **14 47 32.7 +0.1**
DEV Deva 78.20 316 ⇓P P **14 47 34.1 +1.1**
DEV Deva 78.20 316 P P **14 47 33.8 +0.8**
DEV pmax pmax
comp=Z,139nm,1.1s
GZR Gura Zlata 78.21 316 ⇑P P **14 47 32.6 -0.6**
FOZ Fox Glacier 78.29 135 IAMs_20 IAMs_20 15 18 55.8
comp=Z,3µm,22.0s
LVZ Lovozero 78.38 340*c* *iP* P **14 47 33.1 -0.5**
LVZ pmax pmax
comp=Z,68nm,0.7s
LVZ MLR MLR
comp=Z,5µm,22.0s
LVZ Lovozero 78.38 340 P P **14 47 32.6 -1.0**
LVZ IAmb IAmb 14 47 40.0
comp=Z,65nm,0.6s
HERR Herculane 78.38 315 ⇑P P **14 47 33.5 -0.6**
KPRO Kipourio 78.47 310 P P **14 47 32.9 -1.8**
DRGR 78.48 317 ⇑P P **14 47 35.3 +0.6**
DRGR 78.48 317 P P **14 47 35.3 +0.6**
DRGR pmax pmax
comp=Z,161nm,1.1s
TRSU Trosnyk 78.54 319 P P **14 47 34.6 -0.2**
FNA Florina 78.56 311 P P **14 47 33.6 -1.6**
FNA Florina 78.56 311 P P **14 47 33.3 -1.9**
FNA pmax pmax
comp=Z,42nm,1.1s
FNA Florina 78.56 311 P P **14 47 33.3 -1.9**
VSU Vasula 78.57 329 *eP* P **14 47 34.7 0.0**
VSU Vasula 78.57 329*c* *iP* P **14 47 34.3 -0.5**
VSU pmax pmax
comp=Z,64nm,0.7s
VSU MLR MLR
comp=Z,3µm,23.0s
SKO Skopje 78.67 312 *i* Pn P **14 47 34.6 -1.1**
SKO Skopje 78.67 312 *i* Pn P **14 47 34.6 -1.1**
APA Apatity 78.68 339 ⇓*iP* P **14 47 34.7 -0.5**
APA *i* 14 47 48.0
APA *i* 14 50 32.0
APA *i* PPP PPP 14 52 23.0
APA *i* S S **14 57 25.0 -3.4**
APA *i* 14 57 34.0
APA *i* PS **SKSac 14 57 46.0 +0.1**
APA pmax pmax
comp=Z,60nm,0.8s
LBZ Lake Benmore 78.76 136 IAMs_20 IAMs_20 15 18 47.1
comp=Z,2µm,21.0s
TRPA Tarpa 78.82 319 ⇓P P **14 47 37.0 +0.7**
JAN Janina 78.82 310 P P **14 47 36.1 -0.5**
MDVR Moldovita 78.86 315 ⇑P P **14 47 36.8 0.0**
LKD2 Lefkada island 78.87 309 P P **14 47 36.3 -0.6**
KWP Kalwaria Pacla 78.97 320 *eS* S **14 57 34.0 +1.9**
KWP LMZ LR 15 28 12.4
comp=Z,1.2nm,24.2s
KWP Kalwaria Pacla 78.97 320 P P **14 47 37.1 -0.1**
KWP pmax pmax
comp=Z,119nm,1.1s
KWP MLR MLR
comp=Z,700nm,22.0s
KWP Kalwaria Pacla 78.97 320 P P **14 47 37.0 -0.1**
KWP IAmb IAmb 14 47 57.5
comp=Z,119nm,1.1s
OHR Ohrid 79.04 311 *i* Pn P **14 47 36.2 -1.6**
OHR Ohrid 79.04 311 *i* Pn P **14 47 36.2 -1.6**
BZS Buzias 79.05 316 ⇑P P **14 47 37.9 +0.2**
BZS Buzias 79.05 316 P P **14 47 37.7 0.0**
BZS pmax pmax
comp=Z,73nm,1.4s
UZH Uzhgorod 79.07 319 *eP* P **14 47 39.4 +1.7**
UZH *e* 14 47 47.8
UZH *e* 14 47 52.2
UZH *e* 14 50 39.6
UZH *eS* S **14 57 32.2 -1.0**
UZH *e* 15 02 35.0
SIRR Siria 79.12 317 ⇑P P **14 47 38.6 +0.5**
KOLS Kolonicke sedl 79.13 319 *eP* P **14 47 38.6 +0.5**
KOLS pmax pmax
comp=Z,61nm,1.1s
KOLS Kolonicke sedl 79.13 319 *eP* P **14 47 38.6 +0.5**
IGT Igoumenitsa 79.21 310 P P **14 47 37.9 -0.8**
IGT Igoumenitsa 79.21 310 P P **14 47 38.2 -0.5**
IGT pmax pmax
comp=Z,74nm,1.0s
RPZ Rata Peaks 79.21 135 P P **14 47 38.1 -0.6**
comp=Z,51nm,0.8s,baz=266,slow=3.4,SNR=16
RPZ Rata Peaks 79.21 135 P P **14 47 38.0 -0.6**
RPZ IAmb IAmb 14 47 42.4
comp=Z,73nm,0.9s
RPZ IAMs_20 IAMs_20 15 22 56.1
comp=Z,3µm,22.0s
PABE Paberze 79.35 326 *eP* P **14 47 38.9 -0.2**
PHP Peshkopia 79.37 312 P P **14 47 37.8 -1.8**
OUZ Omahuta 79.43 126 IAMs_20 IAMs_20 15 22 48.4
comp=Z,3µm,20.0s
SUW Suwalki 79.49 325 *eP* P **14 47 39.5 -0.3**
SUW *eS* S **14 57 39.4 +1.9**
SUW LMZ LR 15 28 43.1
comp=Z,0.8nm,20.1s
SUW Suwalki 79.49 325 P **14 47 39.1 -0.8**
QRZ Quartz Range 79.66 132 P P **14 47 41.7 +0.6**
QRZ IAmb IAmb 14 48 03.4
comp=Z,134nm,1.0s
QRZ IAMs_20 IAMs_20 15 22 10.0
comp=Z,3µm,21.0s
FINES FINESS Array B 79.67 332 P P **14 47 40.5 -0.2**
comp=Z,36nm,0.4s,baz=104,slow=5.8,SNR=267
FINES PKKPbc **PKKPbc 15 06 30.3 -0.5**
comp=Z,1.6nm,0.8s,baz=315,slow=0.5,SNR=4.2
FINES LR LR 15 28 04.5
comp=Z,2µm,20.9s,baz=113,slow=40
OXZ Oxford 79.82 135 P P **14 47 41.6 -0.3**
OXZ IAMs_20 IAMs_20 15 20 19.3
comp=Z,2µm,20.0s
PVY Plav 79.84 313 ⇑*iP* P **14 47 39.5 -2.7**
LTZ Lake Taylor 79.87 134 IAMs_20 IAMs_20 15 20 55.6
comp=Z,4µm,22.0s
IVA Berane 79.92 313 *iP* P **14 47 39.8 -2.8**
SUF Sumiainen 79.98 334 P P **14 47 42.4 0.0**
SUF pmax pmax
comp=Z,75nm,0.9s
DIVS Divibare 79.99 314 ⇑*iP* P **14 47 42.6 -0.4**
THZ Tophouse 80.12 133 P P **14 47 42.8 -0.9**
THZ IAmb IAmb 14 48 04.2
comp=Z,84nm,0.9s
THZ IAMs_20 IAMs_20 15 22 33.3
comp=Z,3µm,21.0s
BILL Bilibino 80.19 21*c* ⇑*iP* P **14 47 42.4 -1.0**
BILL *e* 14 50 45.9
BILL *ePPP* PPP 14 52 37.5
BILL *eS* S 14 57 58.5 +14
BILL pmax pmax
comp=Z,40nm,1.3s
BILL MLR MLR
comp=Z,3µm,23.0s
BILL Bilibino 80.19 21 P P **14 47 42.0 -1.4**
BILL IAMs_20 IAMs_20 15 24 21.6
comp=Z,2µm,22.0s
KOME Kolasin 80.19 313 ⇑*iP* P **14 47 43.5 -0.6**
SUR Sutherland 80.21 237 P P **14 47 46.4 +1.8**
SUR IAmb IAmb 14 48 00.2
comp=Z,87nm,1.4s
KECS Kecovo 80.23 319 *eP* P **14 47 44.1 0.0**
KECS pmax pmax
comp=Z,12nm,0.7s
KECS Kecovo 80.23 319 *eP* P **14 47 44.0 0.0**
FRGS Fruska Gora 80.25 315 ⇑*iP* P **14 47 43.7 -0.6**
ULC Ulcinj 80.29 312 ⇑*iP* P **14 47 42.7 -1.9**
PDG Podgorica 80.33 313 ⇑P P **14 47 44.2 -0.6**
PDG Podgorica 80.33 313 ⇑*iP* P **14 47 44.1 -0.6**
PDG Podgorica 80.33 313 IAmb IAmb 14 47 47.7
comp=Z,94nm,0.7s
TTG Podgorica 80.33 313 ⇑*iP* P **14 47 42.7 -2.0**
PLE Pljevlja 80.34 313 P P **14 47 46.0 +1.1**
PLE Pljevlja 80.34 313 ⇑*iP* P **14 47 42.2 -2.7**
MQZ McQueen's Vall 80.34 135 IAMs_20 IAMs_20 15 20 33.8
comp=Z,2µm,22.0s
DRME Dracevica, Mon 80.36 312 ⇑*iP* P **14 47 44.1 -0.8**
DRME Dracevica, Mon 80.36 312 ⇑*iP* P **14 47 42.9 -2.0**
NNZ Nelson 80.36 132 IAMs_20 IAMs_20 15 22 54.8
comp=Z,3µm,21.0s
TEKS Tekeris 80.38 315 ⇑*iP* P **14 47 43.9 -1.1**
RUDO Rudo 80.38 314 *eP* P **14 47 44.5 -0.5**
BBLS Lazići 80.39 314 ⇑*iP* P **14 47 45.1 0.0**
NIE Niedzica 80.48 320 *eP* P **14 47 45.9 +0.5**
NIE *ePP* PP **14 50 48.9 -0.3**
NIE *eS* S **14 57 51.8 +3.6**
NIE LMZ LR 15 31 14.3
comp=Z,0.7nm,21.7s
NIE Niedzica 80.48 320 P P **14 47 45.9 +0.5**
NIE pmax pmax
comp=Z,21nm,1.3s
BEL Belsk 80.53 322 P P **14 47 46.1 +0.5**
BEL pmax pmax
comp=Z,140nm,1.1s
PSZ Piszkesteto 80.54 318 ⇑P P **14 47 46.1 +0.2**
PSZ Piszkesteto 80.54 318 P P **14 47 46.0 +0.2**
PSZ pmax pmax
comp=Z,71nm,1.2s
PSZ Piszkesteto 80.54 318 IAmb IAmb 14 48 15.7
comp=Z,59nm,1.0s
NKY Niksic 80.57 313 ⇓*iP* P **14 47 43.7 -2.4**
PBUR Paburge 80.58 326 *eP* P **14 47 45.9 +0.2**
NKME Niksic 80.59 313 ⇑*iP* P **14 47 43.9 -2.3**
CEME Cevo 80.59 313 ⇑*iP* P **14 47 44.1 -2.1**
UPM Unac-Piva 80.67 313 ⇑*iP* P **14 47 45.7 -1.1**
UPM Unac-Piva 80.67 313 ⇓*iP* P **14 47 44.2 -2.6**
KHZ Kahutara 80.71 133 IAmb IAmb 14 47 50.2
comp=Z,82nm,1.2s
KHZ IAMs_20 IAMs_20 15 22 17.0
comp=Z,3µm,21.0s
OUL Oulu 80.72 336 P P **14 47 46.6 +0.3**
OUL pmax pmax
comp=Z,121nm,1.4s
HAPS Han Pijesak,Bl 80.74 314 *eP* P **14 47 46.1 -0.9**
HCY Herceg Novi 80.90 313 *eP* P **14 47 45.5 -2.3**
HCY Herceg Novi 80.90 313 ⇑*iP* P **14 47 45.9 -1.9**
BRY Bratogost 80.91 313 ⇑*iP* P **14 47 47.0 -1.0**
BRY Bratogost 80.91 313 P P **14 47 47.9 -0.1**
BRY Bratogost 80.91 313 ⇑*iP* P **14 47 45.6 -2.4**
OJC Ojcow 80.92 320 *eP* P **14 47 47.7 0.0**
OJC *eS* S **14 57 53.9 +1.2**
OJC LMZ LR 15 31 31.0
comp=Z,0.8nm,23.3s
OJC Ojcow 80.92 320 IAmb IAmb 14 48 13.5
comp=Z,62nm,1.2s
SYO Syowa Base 80.96 198 ⇑*eP* P **14 47 47.2 -0.3**
SYO Syowa Base 80.96 198 ⇑*iPcP* **PcP 14 47 55.0 +1.2**
SYO Syowa Base 80.96 198 ⇓*iSP* SP 14 48 06.0 -1.4
LANS Liptovska Anna 80.99 319 *eP* P **14 47 48.7 +0.5**
LANS pmax pmax
comp=Z,24nm,1.7s
LANS Liptovska Anna 80.99 319 *eP* P **14 47 48.7 +0.5**
HIZ Hauiti 80.99 129 IAMs_20 IAMs_20 15 23 47.5
comp=Z,2µm,21.0s
TREB Trebinje 81.03 313 *eP* P **14 47 47.8 -0.7**
SGF Sodankyl 81.13 338 P P **14 47 48.8 +0.4**
SGF pmax pmax
comp=Z,105nm,1.3s
MSVF Nonsavu 81.17 108 P P **14 47 53.0 +3.2**
MSVF pmax pmax
comp=Z,55nm,0.9s
MORH Mrgy, Hungar 81.19 316 ⇑*iP* P **14 47 49.1 -0.1**
KLNR Kaliningrad 81.31 325 ⇑*eP* P **14 47 49.6 0.0**
KLNR pmax pmax
comp=Z,151nm,0.8s
KLNR MLR MLR
comp=Z,954nm,24.0s
VYHS Vyhne 81.32 319 *eP* P **14 47 49.8 -0.1**
VYHS pmax pmax
comp=Z,89nm,2.1s
VYHS Vyhne 81.32 319 *eP* P **14 47 49.8 -0.1**
VYHS Vyhne 81.32 319 *eS* S **14 57 54.5 -2.4**
SNZO South Karori 81.36 132 IAMs_20 IAMs_20 15 23 25.2
comp=Z,3µm,22.0s
STON Ston 81.52 313 ⇑*iP* P **14 47 49.8 -1.2**
SRO2 Moca 81.53 318 *eP* P **14 47 50.9 -0.1**
SRO2 pmax pmax
comp=Z,36nm,0.9s
SRO2 Moca 81.53 318 *eP* P **14 47 50.9 -0.1**
TSUM Tsumeb 81.56 250 P P **14 47 52.1 +0.2**
SRO Srobarova 81.59 318 *eP* P **14 47 51.9 +0.6**
SRO pmax pmax
comp=Z,199nm,2.1s
SRO Srobarova 81.59 318 *eP* P **14 47 51.9 +0.6**
VAF Ylistaro 81.60 334 P P **14 47 51.1 +0.1**
VAF pmax pmax
comp=Z,134nm,1.6s
KEV Kevo 81.63 341 P P **14 47 52.5 +1.4**
KEV pmax pmax
comp=Z,56nm,0.8s
KEV MLR MLR
comp=Z,3µm,22.0s
KEV Kevo 81.63 341 P P **14 47 52.5 +1.4**
KEV IAmb IAmb 14 47 54.9
comp=Z,56nm,0.8s
KEV IAMs_20 IAMs_20 15 27 10.5
comp=Z,3µm,22.0s
OKC Ostrava-Krasne 81.92 320 *eP* P **14 47 53.7 +0.7**
OKC *e* 14 50 00.6
OKC MLR MLR
comp=Z,600nm,22.1s
OKC Ostrava-Krasne 81.92 320 *eP* P **14 47 53.7 +0.7**
OKC *eS* S **14 58 00.6 -2.5**
OKC AMS AMS 15 33 50.0
comp=Z,600nm,22.1s
TIP Timpagrande 81.93 309 P P **14 47 52.9 -0.5**
TIP Timpagrande 81.93 309 ⇑P P **14 47 53.9 +0.5**
TIP Timpagrande 81.93 309 IAmb IAmb 14 48 19.4
comp=Z,46nm,1.0s
BLY Banja Luka 82.06 315 ⇑P P **14 47 54.2 +0.3**
BLY Banja Luka 82.06 315 ⇑*iP* P **14 47 53.9 0.0**
BLY Banja Luka 82.06 315 IAmb IAmb 14 47 57.8
comp=Z,96nm,1.1s
ARCES ARCESS Array B 82.07 340 P P **14 47 53.5 +0.1**
comp=Z,33nm,0.7s,baz=96,slow=4.9,SNR=163
ARCES PP PP **14 51 04.6 +2.8**
comp=Z,13nm,0.8s,baz=83,slow=9.9,SNR=4.0
ARCES LR LR 15 27 56.1
comp=Z,3µm,21.4s,baz=112,slow=38
ARE0 ARCESS Array S 82.07 340 *eP* P **14 47 53.7 +0.3**
MATE Matera 82.08 311 ⇑P P **14 47 54.0 0.0**
MGRS Mrkonjic Grad 82.10 314 *eP* P **14 47 53.7 -0.4**
JAVC Velka Javorina 82.13 319 *eP* P **14 47 54.9 +0.7**
JAVC Velka Javorina 82.13 319 *eS* S **14 58 03.9 -1.5**
SMOL Smolenice 82.25 319 *eP* P **14 47 55.0 +0.2**
SMOL pmax pmax
comp=Z,74nm,2.9s
SMOL Smolenice 82.25 319 *eP* P **14 47 55.0 +0.2**
MORC Moravsky Berou 82.31 320 *eP* P **14 47 55.2 +0.1**
MORC Moravsky Berou 82.31 320 *eS* S **14 58 06.2 -0.9**
MORC Moravsky Berou 82.31 320 ⇑P P **14 47 55.6 +0.5**
MORC Moravsky Berou 82.31 320 IAmb IAmb 14 47 59.5
comp=Z,149nm,1.9s
MODS Modra-Piesok 82.34 318 *eP* P **14 47 54.4 -0.9**
MODS pmax pmax
comp=Z,244nm,2.3s
MODS Modra-Piesok 82.34 318 *eP* P **14 47 54.4 -0.9**
BKZ Black Stump Fm 82.36 130 IAmb IAmb 14 47 58.8
comp=Z,80nm,0.7s
BKZ IAMs_20 IAMs_20 15 25 07.5
comp=Z,3µm,20.0s
ZST Bratislava 82.44 318 *eP* P **14 47 55.2 -0.5**
ZST pmax pmax
comp=Z,238nm,2.0s
ZST Bratislava 82.44 318 *eP* P **14 47 55.2 -0.5**
ZST Bratislava 82.44 318 *eS* S **14 58 06.4 -2.0**
BEHE Becsehely 82.50 316 ⇑*iP* P **14 47 56.6 +0.5**
URZ Urewera 82.70 129 IAmb IAmb 14 48 17.4
comp=Z,138nm,1.4s
URZ IAMs_20 IAMs_20 15 26 39.7
comp=Z,2µm,20.0s
KTK1 Kautokeino 82.72 339 *eP* P **14 47 57.1 +0.3**
SOP Sopron 82.75 318 P P **14 47 57.7 +0.3**
SOP pmax pmax
comp=Z,22nm,1.3s
KRLC Kraliky 82.83 320 *eP* P **14 47 58.4 +0.6**
KRLC *e* 14 58 10.4
KRLC MLR MLR
comp=Z,600nm,16.5s
KRLC Kraliky 82.83 320 *eP* P **14 47 58.4 +0.6**
KRLC *eS* S **14 58 10.4 -2.0**
KRLC AMS AMS 15 31 00.0
comp=Z,600nm,16.5s
KOGS Kog 82.86 316 *i* P P **14 47 58.2 +0.2**
KOGS *i* PcP **PcP 14 48 00.3 -2.4**
KOGS *i* S S **14 58 09.5 -3.2**
GKP Gorka Klasztor 82.87 323 *eP* P **14 47 57.9 0.0**
GKP *eS* S **14 58 13.3 +0.7**
GKP LMZ LR 15 29 23.4
comp=Z,1.3nm,22.1s
VRAC Vranov 82.88 319 *eP* P **14 47 57.9 -0.1**
VRAC Vranov 82.88 319 *eS* S **14 58 11.3 -1.6**
VRAC Vranov 82.88 319 ⇓P P **14 47 58.3 +0.2**
VRAC Vranov 82.88 319 P P **14 47 58.1 +0.1**
VRAC pmax pmax
comp=Z,19nm,1.2s
SGRT San Giovanni R 82.88 312 IAmb IAmb 14 48 23.4
comp=Z,55nm,1.2s
HAMF Hammerfest 82.97 341 *eP* P **14 47 57.7 -0.3**
KRUC Moravsky 82.98 319 *eP* P **14 47 58.4 -0.2**
KRUC Moravsky 82.98 319 *eS* S **14 58 12.3 -1.7**
KRUC Moravsky 82.98 319 P P **14 47 58.7 +0.1**
KRUC pmax pmax
comp=Z,16nm,1.1s
ZAG Zagreb 82.99 316 ⇑*iP* P **14 47 58.9 +0.2**
DPC Dobruska-Polom 83.15 320 *eP* P **14 48 00.4 +0.9**
DPC *e* 14 58 15.1
DPC MLR MLR
comp=Z,800nm,20.0s
DPC Dobruska-Polom 83.15 320 *eP* P **14 48 00.4 +0.9**
DPC *eS* S **14 58 15.1 -0.6**
DPC AMS AMS 15 31 20.0
comp=Z,800nm,20.0s
KSP Ksiaz 83.21 321 *eP* P **14 48 00.2 +0.5**
KSP *eS* S **14 58 16.2 +0.1**
KSP LMZ LR 15 30 05.6
comp=Z,1.0nm,22.6s
OSTC Ostas 83.23 321 *eP* P **14 48 00.6 +0.7**
OSTC *eS* S **14 58 16.1 -0.4**
OSTC AMS AMS 15 31 20.0
comp=Z,1µm,17.9s
CONA Conrad Observa 83.24 318 *i* P P **14 47 59.9 -0.2**
comp=Z,14nm,0.8s,SNR=14
CHVC Chvalec 83.34 321 *eP* P **14 48 01.1 +0.7**
CHVC *eS* S **14 58 16.3 -1.3**
CHVC AMS AMS 15 31 20.0
comp=Z,1µm,20.2s
UPC Upice 83.36 320 *eP* P **14 48 01.1 +0.6**
UPC *e* 14 58 16.7
UPC MLR MLR
comp=Z,1µm,19.4s
UPC Upice 83.36 320 *eP* P **14 48 01.1 +0.6**
UPC *eS* S **14 58 16.7 -1.0**
UPC AMS AMS 15 32 40.0
comp=Z,1µm,19.4s
CRES Cresnjev 83.36 316 ⇑*iP* P **14 48 00.4 -0.2**
ARSA Arzberg 83.42 317 *i* P P **14 48 01.2 +0.3**
comp=Z,37nm,0.9s,SNR=27
BOJS Bojanci 83.48 315 *eP* P **14 48 01.1 -0.1**
BOJS *eS* S **14 58 15.1 -4.0**
MXZ Matakaoa Point 83.55 128 IAMs_20 IAMs_20 15 25 20.0
comp=Z,2µm,20.0s
TREC Trest 83.60 319 P P **14 48 02.2 +0.4**
TREC pmax pmax
comp=Z,9.0nm,1.0s
TREC Trest 83.60 319 AMS AMS 15 30 10.0
comp=Z,700nm,21.5s
SOKA Soboth 83.71 317 *i* P P **14 48 02.8 +0.3**
comp=Z,53nm,0.9s,SNR=28
LJU Ljubljana 84.02 316 *i* P P **14 48 04.2 +0.2**
LJU *i* PcP **PcP 14 48 06.5 -1.3**
LJU *eS* S **14 58 21.0 -3.6**
LJU Ljubljana 84.02 316 ⇑*iP* P **14 48 04.2 +0.2**
OBKA Obir 84.04 316 *i* P P **14 48 04.5 +0.4**
comp=Z,35nm,0.9s,SNR=16
CEY Cerknica 84.08 316 ⇑*iP* P **14 48 03.9 -0.4**
GOPC GO Pecny, Ondr 84.10 320 *eP* P **14 48 04.5 +0.2**
GOPC MLR MLR
comp=Z,700nm,19.8s
GOPC GO Pecny, Ondr 84.10 320 *eP* P **14 48 04.5 +0.2**
GOPC AMS AMS 15 32 00.0
comp=Z,700nm,19.8s
HOPEN Hopen 84.15 347 *eP* P **14 48 03.3 -0.7**
PRU Pruhonice 84.26 320 *eP* P **14 48 04.7 -0.4**
PRU *e* 14 58 24.6
PRU MLR MLR
comp=Z,700nm,18.9s
PRU Pruhonice 84.26 320 *eP* P **14 48 04.7 -0.4**
PRU *epP* **pP 14 48 14.6 -5.1**
PRU *eS* S **14 58 24.6 -2.2**
PRU AMS AMS 15 32 00.0
comp=Z,700nm,18.9s
INTR Introdacqua 84.27 312 IAmb IAmb 14 48 46.3
comp=Z,133nm,1.3s
PVCC Panska Ves 84.28 320 *eP* P **14 48 06.0 +0.8**
PVCC *e* 14 58 28.8
PVCC MLR MLR
comp=Z,1µm,19.8s
PVCC Panska Ves 84.28 320 *eP* P **14 48 06.0 +0.8**
PVCC *eS* S **14 58 28.8 +1.9**
PVCC AMS AMS 15 32 00.0
comp=Z,1µm,19.8s
MOA Molln 84.31 318 *i* P P **14 48 05.2 -0.2**
comp=Z,17nm,0.8s,SNR=11
PRA Prague 84.33 320 *eP* P **14 48 06.3 +0.8**
PRA *e* 14 58 26.0
PRA MLR MLR
comp=Z,400nm,18.3s
PRA Prague 84.33 320 *eP* P **14 48 06.3 +0.8**
PRA *eS* S **14 58 26.0 -1.5**
PRA AMS AMS 15 33 10.0
comp=Z,400nm,18.3s
TRO Tromso 84.35 340 *eP* P **14 48 04.7 -0.4**
BSD Bornholm Skovb 84.41 325 *i* P P **14 48 07.4 +1.7**
BSD Bornholm Skovb 84.41 325 *i* P P **14 48 07.4 +1.7**
TRI Trieste 84.54 316 IAmb IAmb 14 48 25.9
comp=Z,31nm,0.8s
CORL Corleone 84.58 308 IAmb IAmb 14 48 28.1
comp=Z,105nm,1.2s
PBCC Pribram 84.59 320 *eP* P **14 48 07.2 +0.4**
AQU L'Aquila 84.65 312 ⇑*iP* P **14 48 07.4 +0.1**
AQU L'Aquila 84.65 312 P P **14 48 07.7 +0.4**
AQU pmax pmax
comp=Z,159nm,1.2s
MYKA Terra Mystica 84.67 316 *i* P P **14 48 07.3 0.0**
comp=Z,24nm,0.7s,SNR=16
BRG Berggiesshubel 84.70 321 *i* P P **14 48 07.4 +0.1**
comp=Z,24nm,1.2s
BRG PP PP **14 51 18.0 -5.7**
BRG SKS S 14 58 20.0 -11
BRG S **ScS 14 58 40.0 -2.1**
BRG SS SS **15 03 55.0 -8.4**

comp=N,657nm,20.8s
comp=E,942nm,22.1s
comp=Z,1µm,22.2s
BRG Berggiesshubel 84.70 321 *e*P **P 14 48 07.6 +0.3**
comp=Z,182nm,2.4s,baz=92,slow=4.9
BRG Berggiesshubel 84.70 321 *i* P **P 14 48 07.4 +0.1**
BRG 14 51 18.0
BRG 14 58 20.0
BRG pmax pmax
comp=Z,21nm,1.2s
BRG MLR MLR
comp=N,24µm,20.8s
BRG MLR MLR
comp=E,657nm,22.1s
BRG MLR MLR
comp=Z,942nm,22.2s
GEC2 GERESS Array S 84.74 319 *e*P **P 14 48 07.9 +0.2**
comp=Z,132nm,1.8s,baz=92,slow=4.9
GERES GERESS Array B 84.74 319 P **P 14 48 07.7 0.0**
comp=Z,13nm,0.8s,baz=97,slow=5.5,SNR=101
GERES LR LR 15 31 30.5
comp=Z,456nm,20.3s,baz=84,slow=40
KHC Kasperske Hory 84.84 319⇑ *i*P **P 14 48 08.0 -0.1**
KHC pmax pmax
comp=Z,36nm,0.8s
KHC MLR MLR
comp=Z,1µm,23.0s
KHC Kasperske Hory 84.84 319 *e*P **P 14 48 08.2 +0.1**
KHC *ex* x 14 48 23.5
KHC *eS* **S 14 58 31.2 -1.4**
KHC AMS AMS 15 31 00.0
comp=Z,700nm,18.7s
NRCA Norcia 84.88 313 IAmb IAmb 14 48 21.4
comp=Z,67nm,1.2s
KBA Koelnbreinsper 84.89 317 *i* P **P 14 48 08.0 -0.6**
comp=Z,18nm,0.9s,SNR=11
KBA Koelnbreinsper 84.89 317 P **P 14 48 08.0 -0.6**
KBA pmax pmax
comp=Z,34nm,0.8s
RUE Ruedersdorf 84.89 322 *e*P **P 14 48 08.5 +0.3**
RUE Ruedersdorf 84.89 322 *e*P **P 14 48 08.5 +0.3**
comp=Z,352nm,2.0s,baz=92,slow=4.9
FBE Freiberg 85.07 321 *e*P **P 14 48 09.6 +0.5**
comp=Z,279nm,2.4s,baz=92,slow=4.9
RJOB Jochberg 85.29 318 *e*P **P 14 48 09.7 -0.7**
comp=Z,28nm,0.9s,baz=92,slow=4.9
WET Wettzell 85.30 319 *e*P **P 14 48 10.5 +0.2**
comp=Z,38nm,1.1s,baz=92,slow=4.9
WET Wettzell 85.30 319 P **P 14 48 10.6 +0.2**
WET pmax pmax
comp=Z,43nm,1.1s
CLL Collm 85.31 321⇑ *i*P **P 14 48 10.9 +0.6**
comp=Z,83nm,2.0s
CLL *e*pP **pP 14 48 23.0 -2.0**
CLL *e*sP **sP 14 48 29.0 -1.6**
comp=Z,29nm,1.1s
CLL *e*PP **PP 14 51 30.0 +1.4**
CLL *e*PPPP 14 55 00.0
CLL *eS* **S 14 58 35.0 -2.1**
CLL *e*PS **PnS 14 59 37.0 -1.5**
CLL *e*SS **SS 15 04 06.0 -6.4**
CLL *e*SSS SSS 15 07 48.0
CLL *e*SSSS 15 10 30.0
CLL LmV 15 31 00.0
comp=Z,900nm,21.4s
CLL Collm 85.31 321 *e*P **P 14 48 11.2 +0.9**
comp=Z,83nm,2.0s,baz=92,slow=4.9
CLL Collm 85.31 321⇑ *i*P **P 14 48 10.9 +0.6**
CLL *e**SP **sP 14 48 29.0 -1.6**
CLL *eS* **S 14 58 35.0 -2.1**
CLL pmax pmax
comp=Z,83nm,2.0s
CLL MLR MLR
comp=Z,900nm,21.4s
STEI Steigen 85.44 338 *e*P **P 14 48 10.8 +0.2**
ABTA Abfaltersbach 85.45 317 *i* P **P 14 48 10.7 -0.6**
comp=Z,19nm,0.9s,SNR=8.9
MOR8 Moi Rana 85.58 336 *e*P **P 14 48 11.2 -0.2**
TANN Tannenbergstha 85.62 320 *e*P **P 14 48 12.1 +0.1**
comp=Z,45nm,1.2s,baz=92,slow=4.9
NKC Novy Kostel 85.62 320 *e*P **P 14 48 12.4 +0.5**
NKC MLR MLR
comp=Z,900nm,17.2s
NKC Novy Kostel 85.62 320 *e*P **P 14 48 12.4 +0.5**
NKC AMS AMS 15 32 50.0
comp=Z,900nm,17.2s
WERN Wernitzgruen 85.67 320 *e*P **P 14 48 12.5 +0.3**
comp=Z,21nm,1.0s,baz=92,slow=4.9
GUNZ Gunzen 85.70 320 *e*P **P 14 48 12.6 +0.2**
comp=Z,27nm,1.2s,baz=92,slow=4.9
ROTZ Rotzenmuhle 85.76 320 *e*P **P 14 48 13.1 +0.5**
comp=Z,37nm,1.0s,baz=92,slow=4.9
PLN Plauen 85.81 320 *e*P **P 14 48 13.0 +0.1**
comp=Z,54nm,1.7s,baz=92,slow=4.9
MANZ Manzenberg 85.83 320 *e*P **P 14 48 13.6 +0.6**
comp=Z,203nm,2.1s,baz=92,slow=4.9
WTTA Wattenberg 86.06 317 *i* P **P 14 48 13.8 -0.6**
comp=Z,32nm,1.0s,SNR=18
WTTA Wattenberg 86.06 317 P **P 14 48 13.8 -0.6**
WTTA pmax pmax
comp=Z,52nm,0.9s
NEUB Neuenburg 86.08 321 *e*P **P 14 48 14.2 0.0**
comp=Z,32nm,0.9s,baz=92,slow=4.9
LOF Lofoten 86.10 338 *e*P **P 14 48 13.2 -0.7**
WATA Walderalm 86.11 317 *i* P **P 14 48 13.6 -1.0**
comp=Z,24nm,1.1s,SNR=14
KONS Konsvik 86.14 336 *e*P **P 14 48 14.2 +0.1**
FUR Furstenfeldbru 86.33 318 *e*P **P 14 48 15.1 -0.4**
comp=Z,94nm,1.7s,baz=92,slow=4.9
SQTA Sankt Quirin 86.35 317 *i* P **P 14 48 15.3 -0.5**
comp=Z,28nm,0.6s,SNR=17
SPA0 Spitsbergen Ar 86.36 348 *e*P **P 14 48 14.5 -0.6**
SPITS Spitsbergen Ar 86.36 348 P **P 14 48 14.8 -0.3**
SPITS pmax pmax
comp=Z,7.0nm,0.5s
HSPB Hornsund (broa 86.39 347 *e*P **P 14 48 16.7 +1.5**
HSPB *eS* **S 14 58 44.6 -2.1**
HSPB LMZ LR 15 30 30.9
comp=Z,5.4nm,24.0s
GRA1 Grafenberg Arr 86.39 319 IAmb IAmb 14 48 34.7
comp=Z,42nm,1.0s
GRF Grafenberg Arr 86.39 319 *e*P **P 14 48 16.3 +0.5**
comp=Z,39nm,0.9s,baz=92,slow=4.9
GRF *eL* L 15 35 04.5
comp=Z,910nm,20.8s
VNDA Vanda 86.42 169 P **P 14 48 15.5 +0.2**
comp=Z,1.9nm,0.8s,baz=330,slow=3.4,SNR=7.5
VNDA LR LR 15 21 22.9
comp=Z,2µm,21.1s,baz=306,slow=32
MOTA Moosalm 86.43 317 *i* P **P 14 48 15.5 -0.7**
comp=Z,31nm,1.0s,SNR=14
ZCCA Zocca 86.47 314 IAmb IAmb 14 48 37.4
comp=Z,90nm,1.2s
NSS Namsos 86.50 334 *e*P **P 14 48 15.9 0.0**
NC602 NORSAR Array S 86.54 331 *e*P **P 14 48 16.0 -0.2**
NORES NORESS Array B 86.54 331 P **P 14 48 19.0 +2.8**
NORES pmax pmax
comp=Z,77nm,0.6s
RETA Reutte 86.66 317 *i* P **P 14 48 16.9 -0.3**
comp=Z,27nm,1.0s,SNR=21
FETA Feichten 86.68 317 *i* P **P 14 48 17.3 -0.1**
comp=Z,22nm,0.8s,SNR=16
NB2 NORSAR Subarra 86.71 331 P **P 14 48 16.8 -0.3**
comp=Z,64nm,0.8s,baz=96,slow=4.8
NB2 NORSAR Subarra 86.71 331 P **P 14 48 16.8 -0.3**
baz=96,slow=4.8
NOA NORSAR Array B 86.71 331 P **P 14 48 16.8 -0.3**
comp=Z,32nm,0.7s,baz=94,slow=4.9,SNR=76
NOA PP **PP 14 51 41.0 +1.3**
comp=Z,5.9nm,0.9s,baz=92,slow=7.6,SNR=4.8
NOA LR LR 15 30 09.1
comp=Z,1µm,21.4s,baz=115,slow=38
ASSE Asse, Remlinge 86.79 322 *e*P **P 14 48 17.7 +0.2**
comp=Z,243nm,2.2s,baz=92,slow=4.9
OSL Oslo 86.92 330 *e*P **P 14 48 18.0 -0.1**
CLZ Clausthal 86.97 322 *e*P **P 14 48 18.9 +0.3**
comp=Z,242nm,2.2s,baz=92,slow=4.9
FUORN Ofenpass-Fuorn 86.99 316 IAmb IAmb 14 48 39.4
comp=Z,64nm,1.1s
BSEG Bad Segeberg 87.03 324 *e*P **P 14 48 19.4 +0.7**
comp=Z,314nm,2.1s,baz=92,slow=4.9
UBR Ueberruh 87.11 317 *e*P **P 14 48 18.9 -0.5**
comp=Z,25nm,0.9s,baz=92,slow=4.9
NRDL Niedersach Rie 87.14 322 *e*P **P 14 48 20.1 +0.9**
comp=Z,327nm,2.1s,baz=92,slow=4.9
UBBA Unterbreizbach 87.19 321 *e*P **P 14 48 20.1 +0.6**
comp=Z,106nm,2.0s,baz=92,slow=4.9

GTTG Gottingen 87.22 321 *e*P **P 14 48 20.1 +0.4**
comp=Z,203nm,2.0s,baz=92,slow=4.9
DAVA Damuels 87.26 317 *i* P **P 14 48 20.2 0.0**
comp=Z,32nm,0.9s,SNR=20
KBS Kingsbay 87.31 349*ce*P **P 14 48 18.6 -1.1**
KBS pmax pmax
comp=E,81nm,1.3s
KBS Kingsbay 87.31 349 IAMs_20 IAMs_20 15 32 16.3
comp=Z,3µm,22.0s
KBS Kingsbay 87.31 349 *e*P **P 14 48 18.6 -1.1**
KONO Kongsberg 87.48 329*c i*P **P 14 48 20.8 0.0**
KONO pmax pmax
comp=Z,127nm,1.7s
KONO MLR MLR
comp=Z,2µm,23.0s
KONO Kongsberg 87.48 329 IAMs_20 IAMs_20 15 33 23.4
comp=Z,2µm,20.0s
KONO Kongsberg 87.48 329 *e*P **P 14 48 20.9 +0.1**
VSL Villasalto 87.66 309 IAmb IAmb 14 48 49.8
comp=Z,33nm,0.9s
MUD Monsted U'grnd 87.70 326 *i* P **P 14 48 22.9 +1.0**
MUD pmax pmax
comp=Z,62nm,1.1s
MUD Monsted U'grnd 87.70 326 *i* P **P 14 48 22.9 +1.0**
comp=Z,62nm,1.1s
STU Stuttgart 87.72 319 *e*P **P 14 48 22.2 0.0**
comp=Z,32nm,1.2s,baz=92,slow=4.9
KEST Kesra 87.73 306 P **P 14 48 22.8 +0.1**
comp=Z,29nm,0.9s,baz=302,slow=1.9,SNR=22
KEST LR LR 15 34 42.1
comp=Z,323nm,18.4s,baz=35,slow=40
KEST Kesra 87.73 306 IAmb IAmb 14 48 39.3
comp=Z,40nm,0.8s
DOMB Dombas 87.75 332 *e*P **P 14 48 22.1 -0.1**
HOMB Homborsund 88.05 328 *e*P **P 14 48 26.8 +3.3**
SKAR Skarslia 88.13 330 *e*P **P 14 48 24.4 +0.5**
TNS Taunus Mts 88.19 320 *e*P **P 14 48 25.0 +0.5**
comp=Z,84nm,1.6s,baz=92,slow=4.9
SLE Schleitheim 88.20 318 P **P 14 48 24.0 -0.6**
SLE pmax pmax
comp=Z,18nm,1.7s
BFO Black Forest 88.30 318 *e*P **P 14 48 24.7 -0.3**
comp=Z,24nm,1.1s,baz=92,slow=4.9
BFO Black Forest 88.30 318 *e*P **P 14 48 24.7 -0.3**
BFO Black Forest 88.30 318 P **P 14 48 24.0 -1.0**
BFO IAmb IAmb 14 48 27.9
comp=Z,79nm,1.8s
KTD Kalmit 88.44 319 P **P 14 48 26.9 +1.2**
MOL Molde 88.46 332 *e*P **P 14 48 25.5 +0.1**
IBBN Ibbenburen 88.58 322 *e*P **P 14 48 26.8 +0.7**
comp=Z,90nm,0.9s,baz=92,slow=4.9
AKN Aaknes 88.72 332 *e*P **P 14 48 27.5 +0.8**
SNART Snartemo 88.73 328 *e*P **P 14 48 27.6 +0.9**
BUG Bochum--Univer 88.91 321 *e*P **P 14 48 28.3 +0.6**
comp=Z,82nm,0.9s,baz=92,slow=4.9
BUG Bochum--Univer 88.91 321 P **P 14 48 28.4 +0.7**
BUG pmax pmax
comp=Z,104nm,1.4s
AHRW Bad Neuenahr-A 89.06 320 *e*P **P 14 48 29.3 +0.8**
comp=Z,267nm,2.1s,baz=92,slow=4.9
ECH Echery 89.08 318 P **P 14 48 28.6 -0.1**
ECH pmax pmax
comp=Z,28nm,1.6s
BLS5 Blasjo 89.09 329 *e*P **P 14 48 29.7 +1.2**
CMAH Djebel Manchou 89.27 306 P **P 14 48 30.9 +1.0**
HINF Hinteralfeld 89.30 318 *e*P **P 14 48 30.7 +0.9**
HINF pmax pmax
comp=Z,63nm,2.0s
LPG La Plagne 89.46 315 *e*P **P 14 48 31.2 +0.3**
LPG pmax pmax
comp=Z,24nm,0.7s
LPL La Plagne 89.47 315 *e*P **P 14 48 30.4 -0.4**
LPL pmax pmax
comp=Z,27nm,0.8s
BNI Bardonecchia 89.53 315 P **P 14 48 30.1 -0.9**
BNI pmax pmax
comp=Z,22nm,0.8s
FRF La Foret Royal 89.61 313 *e*P **P 14 48 30.9 -0.3**
FRF pmax pmax
comp=Z,66nm,1.2s
HAU Haudompre 89.63 318 *e*P **P 14 48 30.5 -0.8**
HAU pmax pmax
comp=Z,48nm,1.0s
WLF Walferdange 89.69 319 *e*P **P 14 48 32.4 +0.9**
comp=Z,32nm,1.2s,baz=92,slow=4.9
WLF Walferdange 89.69 319 IAmb IAmb 14 48 36.1
comp=Z,64nm,1.1s
MEM Membach 89.74 320 P **P 14 48 32.3 +0.7**
CABF La Chapelle 89.87 316 *e*P **P 14 48 32.2 -0.3**
CABF pmax pmax
comp=Z,54nm,1.3s
CASM Ain Smara 90.03 306 P **P 14 48 34.6 +1.1**
ORIF Oris-en-Rattie 90.10 315 P **P 14 48 33.9 +0.3**
ORIF pmax pmax
comp=Z,33nm,1.6s
CTEI Djebel Teioual 90.11 306 P **P 14 48 35.4 +1.5**
DFRA Djebel Bou Aff 90.52 306 P **P 14 48 37.2 +1.4**
GIVF Givet 90.52 320 *e*P **P 14 48 35.1 -0.2**
GIVF pmax pmax
comp=Z,30nm,0.8s
NVL N'lazarevskaya 90.56 199 *e*P P 14 48 49.0 +14
NVL pmax pmax
comp=Z,47nm,1.0s
BAIF Baives 90.92 320 *e*P **P 14 48 37.2 0.0**
BAIF pmax pmax
comp=Z,60nm,0.8s
VIVF Saint-Julien-l 90.96 315 *e*P **P 14 48 37.2 -0.4**
VIVF pmax pmax
comp=Z,24nm,1.0s
SSB Saint Sauveur 91.03 315 IAmb IAmb 14 48 41.9
comp=Z,32nm,0.9s
LOR Lormes 91.36 317 P **P 14 48 39.7 +0.4**
LOR pmax pmax
comp=Z,75nm,1.6s
TAM Tamanrasset 91.49 293 P **P 14 48 42.1 +1.5**
TAM pmax pmax
comp=Z,25nm,0.9s
TAM Tamanrasset 91.49 293 IAmb IAmb 14 48 57.0
comp=Z,23nm,1.0s
NOR Nord 91.58 352⇑ *i*P **P 14 48 39.0 -0.7**
NOR pmax pmax
comp=Z,15nm,0.7s
NOR Nord 91.58 352⇑ *i*P **P 14 48 39.0 -0.7**
comp=Z,15nm,0.7s
SSF Saint Saulge 91.61 317 *e*P **P 14 48 40.4 -0.1**
SSF pmax pmax
comp=Z,67nm,1.4s
AVF Avril sur Loir 91.74 317 *e*P **P 14 48 40.6 -0.5**
AVF pmax pmax
comp=Z,50nm,1.0s
QSPA South Pole Qui 91.90 180 P **P 14 48 42.4 +0.9**
CAF Calviac 92.80 315 *e*P **P 14 48 46.1 0.0**
CAF pmax pmax
comp=Z,31nm,1.4s
DAG Danmarks Havn 94.01 348⇑ *i*P **P 14 48 50.0 -0.9**
DAG Danmarks Havn 94.01 348⇑ *i*P **P 14 48 50.0 -0.9**
GRR Gorron 94.40 319 *e*P **P 14 48 54.6 +1.3**
GRR pmax pmax
comp=Z,17nm,1.1s
EKA Eskdalemuir Ar 94.71 326 P **P 14 48 54.8 +0.3**
SNAA Sanae 95.25 198 P **P 14 48 59.0 +2.2**
SNAA Sanae 95.25 198 P **P 14 48 57.4 +0.6**
comp=Z,1.2nm,1.1s,baz=153,slow=12,SNR=8.0
SNAA Sanae 95.25 198 IAMs_20 IAMs_20 15 29 03.2
comp=Z,2µm,19.0s
TORD Torodi Ar. Bea 95.65 283 P **P 14 48 59.3 -0.4**
comp=Z,2.2nm,0.6s,baz=108,slow=6.1,SNR=17
TORD PP **PP 14 52 57.7 +6.0**
comp=Z,2.1nm,1.0s,baz=62,slow=6.2,SNR=3.1
TORD PKKPbc **PKKPdf 15 05 50.6 -0.2**
comp=Z,1.9nm,0.4s,baz=312,slow=2.7,SNR=16
TORD LR LR 15 31 06.9
comp=Z,2µm,19.2s,baz=90,slow=35
TOLK Toolik Lake Re 96.21 20 P **P 14 49 01.8 +0.6**
baz=292
TOLK Toolik Lake Re 96.21 20 IAmb IAmb 14 49 05.5
comp=Z,36nm,1.2s
COLD Coldfoot 96.51 21 IAMs_20 IAMs_20 15 38 00.6
comp=Z,2µm,19.0s
VNA2 Neumayer--Watz 96.84 199 P **P 14 49 04.1 +0.2**
baz=82,slow=4.9
PPLA Purkeypile 97.19 26 IAmb IAmb 14 49 35.9
comp=Z,20nm,1.1s
PPLA IAMs_20 IAMs_20 15 39 38.9
comp=Z,1µm,20.0s
BPAW Bear Paw Mtn. 97.30 24 IAmb IAmb 14 49 10.1
comp=Z,39nm,1.0s
BPAW IAMs_20 IAMs_20 15 40 37.7
comp=Z,2µm,19.0s
KTH Kantishna Hill 97.52 25 IAMs_20 IAMs_20 15 38 21.0
comp=Z,1µm,19.0s
TRF Thorofare Moun 97.82 25 IAmb IAmb 14 49 37.9
comp=Z,18nm,0.9s
TRF IAMs_20 IAMs_20 15 38 29.4
comp=Z,1µm,20.0s
BWN Browne 97.90 24 IAMs_20 IAMs_20 15 38 41.3
comp=Z,1µm,19.0s
NEA Nenana 97.91 24 IAMs_20 IAMs_20 15 40 17.6
comp=Z,2µm,18.0s
ESDC Sonseca Array 97.91 310 P **P 14 49 09.0 -0.5**
comp=Z,1.2nm,0.8s,baz=53,slow=4.6,SNR=7.0
ESDC PKKPbc **PKKPbc 15 05 44.9 +0.1**
comp=Z,1.2nm,0.9s,baz=323,slow=3.1,SNR=5.7
ESDC LR LR 15 36 03.2
comp=Z,831nm,21.6s,baz=75,slow=37
MCK McKinley 98.28 24 IAmb IAmb 14 49 13.8
comp=Z,31nm,1.1s
MCK IAMs_20 IAMs_20 15 38 52.6
comp=Z,1µm,19.0s
COLA College 98.28 23 IAMs_20 IAMs_20 15 40 28.5
comp=Z,1µm,19.0s
WRH Wood River Hil 98.34 24 IAMs_20 IAMs_20 15 40 30.2
comp=Z,2µm,18.0s
CCB Clear Creek Bu 98.39 23 IAMs_20 IAMs_20 15 40 32.0
comp=Z,2µm,18.0s
OHAK Old Harbor 98.41 31 IAmb IAmb 14 49 14.7
comp=Z,17nm,0.9s
RND Reindeer 98.44 25 IAmb IAmb 14 49 27.6
comp=Z,19nm,1.2s
RND IAMs_20 IAMs_20 15 38 58.7
comp=Z,2µm,19.0s
FYU Fort Yukon 98.57 21 IAMs_20 IAMs_20 15 41 09.1
comp=Z,1µm,19.0s
KDAK Kodiak Island 98.60 31 P **P 14 49 11.4 -0.7**
comp=Z,9.8nm,0.8s,baz=203,slow=4.7,SNR=8.4
KDAK LR LR 15 36 03.3
comp=Z,507nm,20.5s,baz=305,slow=37
KDAK Kodiak Island 98.60 31 P Pdif 14 49 13.0 +0.9
KDAK pmax pmax
comp=Z,93nm,1.9s
KDAK Kodiak Island 98.60 31 P Pdif 14 49 13.0 +0.9
KDAK Kodiak Island 98.60 31 IAMs_20 IAMs_20 15 39 41.7
comp=Z,1µm,21.0s
ILAR Eielson Array 98.70 23 P **P 14 49 10.8 -1.6**
comp=Z,1.6nm,0.8s,baz=300,slow=4.7,SNR=14
ILAR PP **PP 14 53 11.9 -1.7**
comp=Z,3.0nm,0.9s,baz=293,slow=7.1,SNR=4.4
ILAR PKKPbc **PKKPbc 15 05 40.6 -2.7**
comp=Z,0.8nm,0.6s,baz=129,slow=2.2,SNR=9.0
ILAR LR LR 15 40 21.1
comp=Z,724nm,18.8s,baz=296,slow=39
CNPM China Poot 98.72 29 P **P 14 49 12.6 0.0**
CNPM IAmb IAmb 14 49 15.6
comp=Z,21nm,1.0s
CNPM IAMs_20 IAMs_20 15 39 59.5
comp=Z,1µm,20.0s
BRLK Bradley Lake 98.81 29 IAmb IAmb 14 49 16.0
comp=Z,26nm,0.9s
HDA Harding Lake 98.83 23 P Pdif 14 49 13.6 +0.6
baz=294
HDA Harding Lake 98.83 23 IAMs_20 IAMs_20 15 40 44.9
comp=Z,2µm,18.0s
RC01 Rabbit Creek A 98.89 27 IAmb IAmb 14 49 17.0
comp=Z,20nm,0.9s
PRP Porcupine Dome 98.92 22 IAMs_20 IAMs_20 15 40 09.3
comp=Z,1µm,18.0s
DHY Denali Highway 99.18 25 IAMs_20 IAMs_20 15 39 23.4
comp=Z,1µm,20.0s
SML Sawmill 99.26 26 IAmb IAmb 14 49 38.6
comp=Z,22nm,0.9s
SEW Seward 99.37 28 IAmb IAmb 14 49 18.7
comp=Z,20nm,1.0s
MVO Moncorvo 99.95 312 *e*Pdif **Pdif 14 49 18.8 +0.2**
MVO Moncorvo 99.95 312 *e*PP **PP 14 53 30.5 +6.5**
MVO *eS* **pSKSac 15 00 04.4 -9.4**
MVO Moncorvo 99.95 312 *e*LR LR 15 25 40.1
comp=Z,755nm,20.0s
SCRK Sand Creek 100.18 23 IAMs_20 IAMs_20 15 41 46.8
comp=Z,2µm,19.0s
DOT Dot Lake 100.30 24 IAMs_20 IAMs_20 15 41 43.0
comp=Z,1µm,18.0s
HARP HAARP 100.39 25 IAMs_20 IAMs_20 15 37 24.4
comp=Z,1µm,19.0s
MTE Manteigas 100.48 312 *e*Pdif **Pdif 14 49 22.4 +1.4**
MTE Manteigas 100.48 312 *e*PP **PP 14 53 33.5 +5.5**
MTE *eS* **pSKSac 15 00 19.8 +3.4**
MTE Manteigas 100.48 312 *e*LR LR 15 25 28.1
comp=Z,564nm,20.0s
PMRV Marv??o 100.56 311 *e*Pdif **Pdif 14 49 24.9 +3.6**
PMRV Marv??o 100.56 311 *e*PP PP 14 53 36.5 +7.9
PMRV *eS* **Sdif 15 00 56.0 +1.4**
PMRV Marv??o 100.56 311 *e*LR LR 15 25 59.0
comp=Z,481nm,22.0s
PGAV Gavieira, Arco 100.69 313 *e*Pdif **Pdif 14 49 29.1 +7.1**
PGAV Gavieira, Arco 100.69 313 *e*PP **PP 14 53 37.3 +7.7**
PGAV *eS* **SKSac 15 00 02.9 +5.7**
PGAV Gavieira, Arco 100.69 313 *e*LR LR 15 24 25.1
comp=Z,537nm,22.0s
EGAK Eagle 100.90 22 IAMs_20 IAMs_20 15 42 44.6
comp=Z,2µm,19.0s
EYAK Cordova Ski Ar 100.91 27 IAMs_20 IAMs_20 15 34 55.1
comp=Z,2µm,22.0s
COI Coimbra 101.17 311 *e*Pdif **Pdif 14 49 30.1 +6.1**
COI Coimbra 101.17 311 *e*PP **PP 14 53 36.7 +3.6**
A36M Sachs Harbour 101.20 13 P **Pdif 14 49 23.8 +0.4**
baz=316
PVAQ Vaqueiros 101.21 309 *e*Pdif **Pdif 14 49 30.3 +6.1**
PVAQ Vaqueiros 101.21 309 *e*PP **PP 14 53 37.0 +3.5**
PVAQ *eS* **Sdif 15 00 57.6 -2.4**
PVAQ Vaqueiros 101.21 309 *e*LR LR 15 28 37.2
comp=Z,1µm,22.0s
PVAQ Vaqueiros 101.21 309 IAMs_20 IAMs_20 15 36 50.8
comp=Z,1µm,21.0s
PCAS Casmilo, Conde 101.27 311 *e*Pdif **Pdif 14 49 28.1 +3.6**
PCAS Casmilo, Conde 101.27 311 *e*PP **PP 14 53 38.4 +4.5**
PCAS *eS* **pSKSac 15 00 17.4 -2.7**
PBDV Barranco-do-Ve 101.41 308 *e*Pdif **Pdif 14 49 28.8 +3.7**
PBDV Barranco-do-Ve 101.41 308 *e*PP **PP 14 53 36.6 +1.5**
PBDV *eS* **pSKSac 15 00 23.7 +2.8**
PCVE Castro Verde 101.42 309 *e*P **Pdif 14 49 28.2 +3.1**
PCVE Castro Verde 101.42 309 *e*PP **PP 14 53 37.0 +1.9**
RAGM Ragged Mountai 101.46 27 IAMs_20 IAMs_20 15 35 09.7
comp=Z,2µm,22.0s
MESJ Messejana 101.51 309 *e*Pdif **Pdif 14 49 27.2 +1.7**
MESJ *e*PP **PP 14 53 37.9 +2.1**
MESJ AMS AMS 15 37 28.4
comp=Z,922nm,19.3s
MESJ Messejana 101.51 309 *e*P **Pdif 14 49 27.2 +1.7**
MESJ *e* **PP 14 53 37.9 +2.1**
INK Inuvik 101.52 17 P **Pdif 14 49 24.6 -0.3**
comp=Z,4.1nm,0.6s,baz=319,slow=6.2,SNR=12
INK PP **PP 14 53 29.9 -4.9**
comp=Z,6.7nm,1.1s,baz=358,slow=10,SNR=3.7
INK Inuvik 101.52 17 IAMs_20 IAMs_20 15 38 55.1
comp=Z,2µm,22.0s
PSBE So Bento 101.61 311 *e*Pdif **Pdif 14 49 29.5 +3.5**
PSBE So Bento 101.61 311 *e*PP **PP 14 53 39.7 +3.2**
EPYK Eagle Plains 101.64 20 P **Pdif 14 49 25.0 -0.5**
baz=304
EPYK Eagle Plains 101.64 20 IAMs_20 IAMs_20 15 39 55.3
comp=Z,2µm,22.0s
HMT Hamilton 101.66 27 IAMs_20 IAMs_20 15 43 18.2
comp=Z,1µm,18.0s
PNCL Nicolau / Gran 101.70 309 *e*Pdif **Pdif 14 49 29.6 +3.2**
PNCL Nicolau / Gran 101.70 309 *e*PP **PP 14 53 38.5 +1.3**
PNCL *eS* **Sdif 15 01 03.6 -0.4**
MCARA McCarthy VSAT 101.75 25 IAMs_20 IAMs_20 15 43 34.2
comp=Z,1µm,22.0s
DAWY Dawson 101.92 22 IAMs_20 IAMs_20 15 43 16.6
comp=Z,2µm,20.0s
MORF Marmelete 101.96 309 *e*Pdif **Pdif 14 49 29.5 +1.9**
MORF *e*PP **PP 14 53 41.2 +2.0**
MORF AMS AMS 15 37 53.5
comp=E,849nm,19.8s
MORF Marmelete 101.96 309 *e*P **Pdif 14 49 29.5 +1.9**
MORF *e* 14 53 41.2
CRQM Cirque 101.98 26 IAMs_20 IAMs_20 15 36 07.0
comp=Z,1µm,22.0s
SUCK Suckling Hills 102.00 27 IAMs_20 IAMs_20 15 42 36.0
comp=Z,1µm,19.0s
LIS Lisbon 102.05 310 *e*PP **PP 14 53 42.1 +2.3**
LIS AMS AMS 15 39 32.9

comp=N,1µm,20.8s
PMAFR Mafra 102.10 310 ePdif Pdif 14 49 29.9 +1.7
PMAFR Mafra 102.10 310 ePP PP 14 53 43.3 +3.1
TGL Tana Glacier 102.11 26 IAMs_20 IAMs_20 15 41 12.0
comp=Z,1µm,20.0s
PFVI Vila Bisbo 102.13 308 ePdif PKiKP 14 53 41.1 -9.4
WAX Waxell Ridge 102.24 26 IAMs_20 IAMs_20 15 43 01.4
comp=Z,1µm,20.0s
MESA MESA 102.77 26 IAMs_20 IAMs_20 15 36 40.3
comp=Z,1µm,22.0s
RES Resolute Bay 103.07 3 P Pdif 14 49 33.0 +1.4
RES pmax pmax
comp=Z,6.0nm,0.8s
RES Resolute Bay 103.07 3 IAMs_20 IAMs_20 15 45 08.3
comp=Z,1µm,20.0s
C36M Paulatuk 103.39 14 P Pdif 14 49 33.3 +0.1
baz=317,SNR=8.9
YKU2 Yakutat 104.10 26 IAMs_20 IAMs_20 15 42 38.4
comp=Z,1µm,20.0s
HYT Haines Junctio 104.36 25 IAMs_20 IAMs_20 15 43 18.2
comp=Z,2µm,21.0s
DHAK Deception Hill 104.95 26 IAMs_20 IAMs_20 15 44 30.1
comp=Z,1µm,20.0s
ANGG Ammassalik, Gr 105.39 342 IAMs_20 IAMs_20 15 44 22.2
comp=Z,2µm,20.0s
WHY Whitehorse 105.53 24 IAMs_20 IAMs_20 15 42 44.1
comp=Z,2µm,22.0s
SKAG Skagway 106.01 25 IAMs_20 IAMs_20 15 42 58.0
comp=Z,2µm,22.0s
BESE Bessie Mountai 106.71 26 IAMs_20 IAMs_20 15 45 46.4
comp=Z,1µm,20.0s
JIS Juneau Island 107.08 26 IAMs_20 IAMs_20 15 45 46.3
comp=Z,1µm,21.0s
SIT Sitka 107.33 27 IAMs_20 IAMs_20 15 44 41.2
comp=Z,964nm,19.0s
SFJD Kangerlussuaq 107.69 348 IAMs_20 IAMs_20 15 41 57.7
comp=Z,2µm,22.0s
DLBC Dease Lake 108.84 24 PP PP 14 54 26.6 -2.6
comp=Z,5.3nm,0.9s,baz=282,slow=9.5,SNR=6.5
WRAK Wrangell Islan 109.05 27 IAMs_20 IAMs_20 15 46 26.5
comp=Z,1µm,20.0s
PMOZ Porto Moniz, M 109.83 306 ePP PP 14 54 38.0 +0.5
PMOZ Porto Moniz, M 109.83 306 eLR LR 15 30 10.1
comp=Z,646nm,20.0s
MOBC Moresby Island 111.12 30 IAMs_20 IAMs_20 15 44 56.5
comp=Z,1µm,19.0s
YKA Yellowknife Ar 111.16 16 Pdiff Pdif 14 50 08.1 +0.3
comp=Z,0.3nm,0.7s,baz=331,slow=5.0,SNR=4.3
YKA PKiKP PKiKP 14 54 07.3 +0.8
comp=Z,0.4nm,0.4s,baz=339,slow=1.9,SNR=9.7
YKA PP PP 14 54 42.9 -2.7
comp=Z,6.9nm,0.9s,baz=329,slow=7.0,SNR=13
YKA PKKPbc PKKPbc 15 05 05.8 +0.3
comp=Z,0.9nm,0.9s,baz=141,slow=3.6,SNR=6.2
TBI Tubuai 111.48 114 ePdif Pdif 14 50 07.9 -2.2
comp=Z,47nm,29.2s
TBI Tubuai 111.48 114 ePP PP 14 54 46.6 -3.0
comp=Z,151nm,28.0s
TBI eSdif Sdif 15 02 22.4 -3.8
comp=Z,419nm,34.0s
TBI Tubuai 111.48 114 ePS PS 15 04 19.0 -3.6
comp=Z,532nm,35.8s
TBI Tubuai 111.48 114 eLQ LQ 15 22 38.0
comp=Z,2µm,41.0s
TBI eLR LR 15 27 22.5
comp=Z,2µm,24.5s
PPT2 Papeete2 112.00 108 ePdif Pdif 14 50 14.4 +1.8
comp=Z,89nm,26.8s
PPT2 Papeete2 112.00 108 ePP PP 14 54 44.4 -9.2
comp=Z,213nm,28.0s
PPT2 eSdif Sdif 15 02 27.9 -2.9
comp=Z,760nm,31.0s
PPT2 Papeete2 112.00 108 ePS PS 15 04 26.9 -0.8
comp=Z,1µm,29.2s
PPT2 Papeete2 112.00 108 eLQ LQ 15 22 50.5
comp=Z,2µm,37.5s
PPT2 eLR LR 15 27 36.0
comp=Z,2µm,29.5s
HOPE Hope Point 115.97 208 IAMs_20 IAMs_20 15 32 05.1
comp=Z,2µm,20.0s
A04D Lummi Island 118.46 29 P PKPdf 14 54 20.3 -0.6
baz=312
D03D Eldon 119.06 31 P PKPdf 14 54 22.1 0.0
baz=311
B05A Bryant 119.07 29 P PKPdf 14 54 22.0 -0.1
baz=313
D04E Lakebay 119.46 31 P PKPdf 14 54 22.9 0.0
baz=312
D05A Enumclaw 119.85 30 IAMs_20 IAMs_20 15 54 42.5
comp=Z,904nm,21.0s
E04D Cinebar 119.97 31 P PKiKP 14 54 24.2 +0.2
baz=312
B08A Colville Reser 120.33 28 IAMs_20 IAMs_20 15 56 35.8
comp=Z,864nm,19.0s
G03D McMinnville, O 120.48 33 P PKPdf 14 54 24.9 0.0
baz=310
I02D Swisshome 120.87 34 P PKPdf 14 54 25.7 0.0
baz=309
FFC Flin Flon 121.15 13 IAMs_20 IAMs_20 15 51 31.0
comp=Z,1µm,22.0s
H04D Lebanon 121.21 33 P PKPdf 14 54 26.1 -0.2
baz=310,SNR=6.0
C09A Chrisman Ranch 121.22 28 IAMs_20 IAMs_20 15 54 54.5
comp=Z,793nm,18.0s
I03D Drain, OR 121.41 34 P PKPdf 14 54 26.6 -0.2
baz=310,SNR=14
NEW Newport 121.41 27 PKP PKiKP 14 54 27.1 +0.2
comp=Z,7.1nm,0.8s,baz=114,slow=3.4,SNR=8.9
NEW Newport 121.41 27 P PKPdf 14 54 26.1 -0.6
baz=318
NEW Newport 121.41 27 IAMs_20 IAMs_20 15 53 59.4
comp=Z,1µm,20.0s
J01E Myrtle Point 121.41 35 P PKPdf 14 54 26.6 -0.2
baz=309,SNR=7.7
G05D Wamic, OR 121.50 32 P PKiKP 14 54 27.1 0.0
baz=312
TAOE Nuku Hiva Isla 121.81 99 eLR LR 15 31 57.0
comp=Z,954nm,30.6s
K02D Willamette Mer 121.86 35 P PKiKP 14 54 27.9 0.0
baz=309,SNR=6.5
I04A Tendick Farm, 121.87 34 P PKPdf 14 54 27.7 0.0
baz=310,SNR=6.2
SCHQ Schefferville 122.02 350 PKP PKPdf 14 54 27.3 -0.3
comp=Z,8.6nm,0.7s,baz=34,slow=5.6,SNR=11
SCHQ PP PP 14 56 04.7 +3.3
comp=Z,26nm,0.9s,baz=26,slow=5.5,SNR=11
I05D Terrebonne, OR 122.09 32 P PKPdf 14 54 28.2 0.0
baz=312,SNR=5.3
WALA Waterton Lakes 122.19 24 IAMs_20 IAMs_20 15 57 01.7
comp=Z,1µm,19.0s
J04D Umpqua Nationa 122.39 34 P PKPdf 14 54 28.4 -0.6
baz=310,SNR=6.5
PINE Pine Mountain 122.67 33 IAMs_20 IAMs_20 15 54 52.4
comp=Z,956nm,22.0s
J05D Fort Rock, OR 122.85 33 P PKPdf 14 54 29.8 0.0
baz=311,SNR=22
L04D Klamath Falls 122.94 35 P PKPdf 14 54 29.6 -0.4
baz=310,SNR=16
K04D Chiloquin, OR 122.99 34 P PKPdf 14 54 29.7 -0.3
baz=310
YBH Yreka Blue Hor 123.01 36 PKP PKPdf 14 54 29.9 -0.1
comp=Z,2.9nm,0.7s,baz=107,slow=5.6,SNR=7.8
F10A Beach Ranch, E 123.04 29 IAMs_20 IAMs_20 15 56 04.7
comp=Z,888nm,21.0s
JTMT Jette 123.05 25 IAMs_20 IAMs_20 15 55 17.6
comp=Z,1µm,22.0s
M02C Callahan 123.14 36 P PKiKP 14 54 30.4 -0.1
baz=309,SNR=28
K05A Summer Lake 123.40 34 IAMs_20 IAMs_20 15 54 49.9
comp=Z,976nm,21.0s
M04C Macdoel 123.48 35 P PKiKP 14 54 31.2 0.0
baz=310,SNR=6.9
N02D Trinity Center 123.49 36 P PKiKP 14 54 31.2 -0.1
baz=309,SNR=19
MSO Missoula 123.91 26 P PKPdf 14 54 31.1 -0.6
baz=321
O02D Mt. Diablo Mer 123.94 37 P PKPdf 14 54 31.9 0.0
baz=308,SNR=18
MOD Modoc Plateau 124.28 34 IAMs_20 IAMs_20 15 54 57.1
comp=Z,863nm,20.0s
EGMT Eagleton 124.66 22 P PKPdf 14 54 32.8 -0.2
baz=326,SNR=15
EGMT Eagleton 124.66 22 IAMs_20 IAMs_20 16 00 57.0
comp=Z,850nm,20.0s
WVOR Wild Horse Val 124.83 33 IAMs_20 IAMs_20 15 57 25.6
comp=Z,706nm,18.0s
DLMT Dillon 125.64 26 IAMs_20 IAMs_20 15 56 51.1
comp=Z,1µm,20.0s
DGMT Dagmar 126.20 18 P PKPdf 14 54 35.7 -0.1
baz=332
DGMT Dagmar 126.20 18 IAMs_20 IAMs_20 15 57 12.5
comp=Z,1µm,18.0s
ULM Lac du Bonnet 126.65 11 PKP PKPdf 14 54 35.9 -0.7
comp=Z,24nm,0.8s,baz=345,slow=2.3,SNR=18
ULM PP PP 14 56 33.5 +1.2
comp=Z,7.8nm,0.9s,baz=342,slow=7.1,SNR=3.8
LAO LASA Array 127.08 21 P PKiKP 14 54 38.0 -0.2
baz=329
LAO LASA Array 127.08 21 IAMs_20 IAMs_20 16 01 33.9
comp=Z,1µm,21.0s
RLMT Red Lodge 127.24 24 P PKPdf 14 54 37.4 -0.8
baz=325
RLMT Red Lodge 127.24 24 IAMs_20 IAMs_20 16 02 38.3
comp=Z,1µm,19.0s
H17A Grant Village 127.28 25 P PKPdf 14 54 37.1 -1.2
baz=323
H17A Grant Village 127.28 25 IAMs_20 IAMs_20 16 02 45.5
comp=Z,1µm,20.0s
FXWY Fox Creek 127.68 26 IAMs_20 IAMs_20 15 58 20.3
comp=Z,906nm,20.0s
NVAR Mina Array Bea 127.72 36 PKP PKPdf 14 54 39.1 -0.2
comp=Z,20nm,0.9s,baz=269,slow=1.6,SNR=34
NVAR PP PP 14 56 43.4 +2.8
comp=Z,4.0nm,0.8s,baz=298,slow=4.2,SNR=4.4
NVAR SKKPbc SKKPbc 15 08 04.0 +12
comp=Z,0.8nm,0.9s,baz=142,slow=4.6,SNR=1.8
ELK Elko 127.83 32 PKP PKPdf 14 54 39.8 +0.2
comp=Z,10.0nm,0.8s,baz=295,slow=5.8,SNR=29
ELK PP PP 14 56 45.3 +4.2
comp=Z,4.5nm,1.0s,baz=326,slow=4.1,SNR=3.2
TPAW Teton Pass 127.83 26 IAMs_20 IAMs_20 15 58 13.3
comp=Z,1µm,20.0s
SNOW Snow King Moun 127.94 26 IAMs_20 IAMs_20 15 58 27.2
comp=Z,941nm,20.0s
REDW Red Top Meadow 127.98 26 IAMs_20 IAMs_20 15 58 28.2
comp=Z,1µm,20.0s
MDND Maddock 128.07 15 IAMs_20 IAMs_20 15 58 43.8
comp=Z,1µm,20.0s
MATQ Matagami 128.34 356 P PKPdf 14 54 39.0 -0.9
baz=5.6,SNR=8.2
AHID Auburn Hatcher 128.34 27 IAMs_20 IAMs_20 15 59 57.7
comp=Z,1µm,19.0s
AGMN Agassiz Nation 128.51 12 P PKPdf 14 54 39.4 -0.8
baz=342
AGMN Agassiz Nation 128.51 12 IAMs_20 IAMs_20 15 57 22.4
comp=Z,2µm,21.0s
SMMC Simmler 128.68 40 P PKPdf 14 54 40.4 -0.6
baz=308
B35A Bob, Littlefor 128.85 10 IAMs_20 IAMs_20 15 58 08.3
comp=Z,2µm,21.0s
E28A Huff 128.94 16 IAMs_20 IAMs_20 15 58 25.4
comp=Z,1µm,20.0s
BATG Bathurst New B 129.00 346 IAMs_20 IAMs_20 15 55 52.1
comp=Z,1µm,19.0s
HWUT Hardware Ranch 129.03 28 IAMs_20 IAMs_20 16 00 36.0
comp=Z,976nm,20.0s
BW06 Boulder Array 129.03 26 P PKPdf 14 54 40.4 -1.3
baz=324
BW06 Boulder Array 129.03 26 IAMs_20 IAMs_20 15 58 44.8
comp=Z,808nm,20.0s
PDAR Pinedale Array 129.03 26 PKP PKPdf 14 54 41.5 -0.2
comp=Z,7.0nm,0.8s,baz=90,slow=1.5,SNR=20
PDAR PP PP 14 56 52.1 +3.4
comp=Z,6.5nm,0.9s,baz=335,slow=8.2,SNR=6.9
PDAR SKKPbc SKKPbc 15 07 54.6 +6.5
comp=Z,1.0nm,1.0s,baz=168,slow=2.9,SNR=3.6
PKM Mcpherson Peak 129.05 40 P PKPdf 14 54 41.9 0.0
baz=308,SNR=5.4
CWC Cottonwood Cre 129.16 38 P PKPdf 14 54 41.2 -0.9
baz=311
GRAC Grapevine Rang 129.23 37 P PKPdf 14 54 42.0 0.0
baz=312,SNR=12
R11A Troy Canyon, C 129.34 34 P PKPdf 14 54 42.6 +0.2
baz=315
ISA Isabella, Lake 129.42 39 P PKPdf 14 54 42.5 0.0
baz=310
DUG Dugway, Tooele 129.49 31 P PKPdf 14 54 42.7 +0.1
baz=319
EYMN Ely 129.61 8 P PKPdf 14 54 41.8 -0.6
baz=348
MPMC Manual Prospec 129.78 38 P PKPdf 14 54 43.6 +0.3
baz=311,SNR=21
D62A Allapoint, All 129.84 348 P PKPdf 14 54 42.7 -0.1
baz=17
D62A Allapoint, All 129.84 348 IAMs_20 IAMs_20 15 58 22.4
comp=Z,2µm,20.0s
FURC Furnace Creek, 129.88 37 P PKiKP 14 54 44.2 +0.3
baz=312,SNR=5.3
TPNV Topopah Spring 129.92 36 IAMs_20 IAMs_20 15 59 43.8
comp=Z,782nm,20.0s
D61A St Aubert, Com 129.94 349 P PKiKP 14 54 43.6 -0.2
baz=16
VLDQ Val d'Or 129.97 356 IAMs_20 IAMs_20 15 55 53.0
comp=Z,966nm,20.0s
LMN Caledonia Moun 130.00 344 IAMs_20 IAMs_20 15 57 16.8
comp=Z,1µm,21.0s
PQI Presque Isle 130.01 347 IAMs_20 IAMs_20 15 58 11.1
comp=Z,1µm,20.0s
LRMC Laurel Mtn Rad 130.03 38 P PKPdf 14 54 43.8 +0.1
baz=311
RSSD Black Hills 130.07 21 P PKPdf 14 54 43.2 -0.5
baz=331
RSSD Black Hills 130.07 21 IAMs_20 IAMs_20 15 59 16.1
comp=Z,1µm,20.0s
LATQ La Tuque 130.19 352 P PKiKP 14 54 44.0 -0.2
baz=12
E64A Bridgewater 130.21 347 P PKPdf 14 54 43.5 0.0
baz=19
EDW2 Edwards Air Fo 130.22 39 P PKiKP 14 54 44.5 -0.3
baz=310,SNR=10.0
E63A Oxbow 130.34 348 P PKPdf 14 54 43.2 -0.6
baz=18
K22A Casper 130.40 24 P PKiKP 14 54 44.7 -0.4
baz=327,SNR=7.1
K22A Casper 130.40 24 IAMs_20 IAMs_20 16 03 58.8
comp=Z,1µm,21.0s
D58A Chemin du LacG 130.49 352 P PKPdf 14 54 43.8 -0.3
baz=12
GSC Goldstone, Bar 130.69 38 P PKPdf 14 54 45.0 +0.1
baz=311,SNR=9.8
D57A Chemin Vers le 130.70 353 P PKPdf 14 54 44.2 -0.3
baz=11
E61A Lac Etchemin 130.74 349 P PKPdf 14 54 44.6 0.0
baz=15
F33A 5 Mile Ranch, 130.75 13 IAMs_20 IAMs_20 15 56 48.7
comp=Z,2µm,22.0s
D56A ZEC Mazanza, M 130.77 353 P PKPdf 14 54 44.8 +0.2
baz=9.6
F64A Sherman 130.85 347 P PKPdf 14 54 44.9 +0.2
baz=18
F64A Sherman 130.85 347 IAMs_20 IAMs_20 15 58 47.3
comp=Z,1µm,21.0s
D54A Lac Fusel, La 130.86 355 P PKPdf 14 54 44.5 -0.3
baz=7.1
D55A Sainte-Anne-du 130.88 354 P PKPdf 14 54 44.8 0.0
baz=8.7
E38A The Farm, Brul 130.91 9 IAMs_20 IAMs_20 15 59 46.7
comp=Z,1µm,20.0s
RWWY Rawlins 130.91 25 IAMs_20 IAMs_20 16 01 01.7
comp=Z,1µm,20.0s
D49A Beulah Townshi 130.96 359 P PKPdf 14 54 44.7 -0.3
baz=0.9
D53A Lac Vacive, Po 131.01 356 IAMs_20 IAMs_20 15 56 55.4
comp=Z,835nm,20.0s
D50A G1974 Best Tow 131.03 358 P PKPdf 14 54 44.5 -0.6
baz=2.9
D48A Paudash Townsh 131.06 360 P PKPdf 14 54 44.8 -0.4
baz=0.3
D51A Lot 18 Range I 131.09 358 P PKPdf 14 54 44.5 -0.7
baz=3.6
F63A Nahmakanta, Br 131.17 348 P PKPdf 14 54 44.9 -0.5
baz=17
F63A Nahmakanta, Br 131.17 348 IAMs_20 IAMs_20 15 59 14.6
comp=Z,2µm,20.0s
D47A Chapleau 131.18 1 P PKPdf 14 54 44.5 -0.9
baz=359
E58A La Victoria 131.25 352 P PKPdf 14 54 45.0 -0.5
baz=12
F61A St Evariste 131.27 350 P PKPdf 14 54 45.3 -0.3
baz=15
HEC Hector,Ludlow 131.29 38 P PKPdf 14 54 45.0 -1.0
baz=312
E56A St. Veronique 131.30 354 P PKPdf 14 54 44.9 -0.7
baz=9.3
G65A Princeton 131.30 346 IAMs_20 IAMs_20 15 59 46.2
comp=Z,1µm,20.0s
D46A Sault St. Mari 131.32 2 P PKPdf 14 54 45.2 -0.4
baz=357
E57A Chemin Saint G 131.33 353 P PKPdf 14 54 45.3 -0.4
baz=10
SUSD Miller 131.39 16 IAMs_20 IAMs_20 16 02 18.7
comp=Z,1µm,20.0s
F60A Warwick 131.44 351 P PKPdf 14 54 45.2 -0.6
baz=14
E44A Grand Marais A 131.50 4 P PKPdf 14 54 45.8 -0.2
baz=355
E44A Grand Marais A 131.50 4 IAMs_20 IAMs_20 15 58 52.4
comp=Z,2µm,22.0s
PKME Peaks-Kenny Pk 131.63 348 P PKPdf 14 54 45.8 -0.4
baz=17
PKME Peaks-Kenny Pk 131.63 348 IAMs_20 IAMs_20 15 59 26.7
comp=Z,1µm,20.0s
H66A Whiting 131.63 346 P PKPdf 14 54 45.7 -0.5
baz=20
E51A G1948 Merrick 131.65 358 P PKPdf 14 54 45.8 -0.5
baz=3.4
O20A White River Ci 131.73 27 P PKPdf 14 54 47.4 +0.5
baz=324,SNR=24
O20A White River Ci 131.73 27 IAMs_20 IAMs_20 16 04 18.5
comp=Z,879nm,20.0s
GMRC Granite Mounta 131.74 38 P PKPdf 14 54 47.3 +0.4
baz=312,SNR=16
EMMW East Machias 131.74 346 IAMs_20 IAMs_20 15 59 48.9
comp=Z,1µm,20.0s
E48A Lockeyer 131.76 0 P PKPdf 14 54 46.9 +0.4
baz=360
E47A Iron Bridge 131.77 1 P PKPdf 14 54 46.9 +0.4
baz=358
E46A Sault Ste Mari 131.83 2 IAMs_20 IAMs_20 15 58 38.9
comp=Z,1µm,21.0s
E52A Mattawa 131.86 357 P PKPdf 14 54 46.8 +0.2
baz=4.6
G62A West of Eustis 131.92 349 IAMs_20 IAMs_20 15 57 37.3
comp=Z,1µm,22.0s
PHWY Pilot Hill 131.96 24 IAMs_20 IAMs_20 15 56 14.2
comp=Z,826nm,21.0s
PFO Pinyon Flats O 132.01 39 PKhKP PKPpre 14 54 42.9
comp=Z,3.6nm,0.7s,baz=262,slow=4.7,SNR=5.3
PFO SKPbc SKPab 14 58 10.3 -0.2
comp=Z,6.6nm,0.9s,baz=276,slow=5.4,SNR=5.8
SPMN Marine on St. 132.05 10 IAMs_20 IAMs_20 16 00 22.9
comp=Z,2µm,22.0s
N23A Red Feather La 132.10 24 P PKPdf 14 54 47.2 -0.4
baz=327
H64A Troy 132.21 348 P PKPdf 14 54 47.6 +0.2
baz=17
F51A Arnstein 132.27 358 P PKPdf 14 54 47.4 -0.1
baz=2.9
G60A Masonville 132.35 351 P PKPdf 14 54 47.1 -0.6
baz=13
F52A Sundridge 132.38 357 P PKPdf 14 54 47.9 +0.2
baz=3.7
F48A Evansville 132.41 1 P PKPdf 14 54 48.0 +0.3
baz=359
G40A Rib Lake 132.41 8 IAMs_20 IAMs_20 16 01 54.4
comp=Z,1µm,21.0s
ORIO Orleans, Innes 132.43 354 P PKPdf 14 54 47.7 -0.1
baz=8.9
F45A CMU Biological 132.46 3 P PKPdf 14 54 47.9 +0.1
baz=355,SNR=12
IRM Iron Mountain 132.47 38 P PKPdf 14 54 48.2 0.0
baz=312
F49A Sandfield 132.48 360 P PKPdf 14 54 47.4 -0.4
baz=0.0
MONP2 Monument Peak 132.50 40 P PKPdf 14 54 48.3 -0.3
baz=310
H62A Milan 132.66 349 P PKPdf 14 54 48.2 0.0
baz=15
H62A Milan 132.66 349 IAMs_20 IAMs_20 15 57 58.8
comp=Z,1µm,20.0s
ECSD EROS Data Cent 132.66 14 P PKPdf 14 54 48.2 -0.1
baz=340
ECSD EROS Data Cent 132.66 14 IAMs_20 IAMs_20 16 01 33.3
comp=Z,1µm,21.0s
G54A Lake Saint Pet 132.71 356 P PKPdf 14 54 48.1 -0.3
baz=5.4
G57A Newington 132.72 353 P PKPdf 14 54 48.1 -0.2
baz=9.6
G55A Calabogie 132.75 355 P PKPdf 14 54 48.0 -0.3
baz=7.3
PV14 Lion Creek, Pa 132.77 29 IAMs_20 IAMs_20 16 02 16.1
comp=Z,1µm,19.0s
FRNY Flat Rock 132.80 352 IAMs_20 IAMs_20 16 03 17.5
comp=Z,872nm,20.0s
H61A Lyndonville 132.83 350 P PKPdf 14 54 48.9 +0.3
baz=14
G46A Petoskey 132.86 3 P PKiKP 14 54 49.4 -0.3
baz=356
H60A Morristown 132.93 351 P PKPdf 14 54 49.2 +0.4
baz=13
PLVO Plevna 132.99 355 IAMs_20 IAMs_20 15 56 29.6
comp=Z,998nm,20.0s
G47A Hillman 133.04 2 P PKPdf 14 54 49.5 +0.6
baz=358
I63A Otisfield 133.05 349 P PKiKP 14 54 49.7 -0.4
baz=16
PV15 Paradox Valley 133.05 29 IAMs_20 IAMs_20 16 05 39.2
comp=Z,1µm,21.0s
SMCO Snowmass 133.08 27 IAMs_20 IAMs_20 16 03 25.1
comp=Z,1µm,21.0s
G45A Suttons Bay 133.09 4 P PKPdf 14 54 48.9 -0.1
baz=355
LBNH Lisbon 133.12 350 P PKPdf 14 54 49.0 -0.2
baz=14
LBNH Lisbon 133.12 350 IAMs_20 IAMs_20 15 56 55.0
comp=Z,1µm,19.0s
K31A O'Neill 133.12 17 IAMs_20 IAMs_20 16 01 29.6
comp=Z,2µm,22.0s
LONY Lake Ozonia 133.14 353 IAMs_20 IAMs_20 15 58 18.4
comp=Z,1µm,22.0s
ISCO Idaho Springs 133.16 25 P PKPdf 14 54 49.6 -0.2
baz=327
ISCO Idaho Springs 133.16 25 IAMs_20 IAMs_20 15 59 32.1
comp=Z,808nm,21.0s
VT1 Waterbury 133.16 351 IAMs_20 IAMs_20 15 56 48.5
comp=Z,1µm,22.0s
GLMI Grayling 133.36 3 IAMs_20 IAMs_20 16 00 17.3
comp=Z,1µm,20.0s
H56A Elgin 133.36 354 P PKPdf 14 54 49.5 0.0
baz=8.0
I62A Tamworth 133.37 349 IAMs_20 IAMs_20 15 58 08.6
comp=Z,1µm,22.0s
SADO Sadowa 133.40 357 PKPdf 14 54 49.1 -0.5
SADO IAMs_20 IAMs_20 15 58 08.3
comp=Z,1µm,21.0s
GLA Glamis 133.41 39 P PKPdf 14 54 49.8 -0.3
baz=312
H55A Tweed 133.49 355 P PKPdf 14 54 50.1 +0.3
baz=6.7
H48A Harrisville 133.53 1 P PKPdf 14 54 49.9 +0.1
baz=358
H48A Harrisville 133.53 1 IAMs_20 IAMs_20 15 58 39.7
comp=Z,1µm,21.0s
DELO Deloro Mine 133.55 356 IAMs_20 IAMs_20 16 00 17.4
comp=Z,1µm,21.0s
H52A Wyevale 133.56 358 P PKPdf 14 54 49.9 0.0
baz=3.0
H53A Bobcaygeon 133.56 357 P PKPdf 14 54 50.0 +0.1
baz=4.8
OGNE Ogallala 133.57 21 IAMs_20 IAMs_20 16 05 15.6
comp=Z,1µm,20.0s
H47A Mio 133.60 2 P PKPdf 14 54 50.0 0.0
baz=357
H46A Fife Lake 133.61 3 P PKPdf 14 54 49.2 -0.8
baz=356,SNR=6.1
HNH Hanover 133.70 350 IAMs_20 IAMs_20 15 57 53.4
comp=Z,1µm,22.0s
I40A Norwalk 133.71 9 IAMs_20 IAMs_20 16 01 49.9
comp=Z,1µm,20.0s
WUAZ Wupatki 133.72 34 P PKPdf 14 54 50.2 -0.6
baz=318,SNR=7.0
I60A Shoreham 133.72 351 P PKPdf 14 54 49.7 -0.5
baz=12
I59A Olmsteadville 133.86 352 P PKPdf 14 54 49.8 -0.8
baz=11
I55A Frankford 133.86 356 P PKPdf 14 54 50.3 -0.1
baz=6.1
MVCO Mesa Verde 133.94 30 P PKPdf 14 54 50.6 -0.6
baz=322
MVCO Mesa Verde 133.94 30 IAMs_20 IAMs_20 16 07 03.1
comp=Z,1µm,22.0s
I57A Carthage 133.94 354 P PKPdf 14 54 50.5 -0.2
baz=8.9
I48A Sherman Twp 134.03 2 P PKPdf 14 54 50.4 -0.4

baz=358
J59A Piesco 134.27 352 P PKPdf 14 54 51.2 -0.1
baz=11
J59A Piesco 134.27 352 IAMs_20 IAMs_20 16 04 18.4
comp=Z,842nm,20.0s
I49A Point Hope 134.29 1 IAMs_20 IAMs_20 15 58 58.3
comp=Z,1µm,21.0s
BGNE Belgrade 134.41 17 P PKPdf 14 54 51.2 -0.5
baz=337
I51A Listowel 134.43 359 P PKPdf 14 54 52.2 +0.6
baz=1.5
J58A Remsen 134.47 353 P PKPdf 14 54 51.9 +0.2
baz=9.5
J58A Remsen 134.47 353 IAMs_20 IAMs_20 15 59 42.8
comp=Z,1µm,22.0s
J57A Williamstown 134.50 354 P PKPdf 14 54 51.9 +0.2
baz=8.5
J57A Williamstown 134.50 354 IAMs_20 IAMs_20 15 59 07.6
comp=Z,1µm,22.0s
JFWS Jewell Farm 134.72 8 P PKPdf 14 54 52.3 +0.1
baz=348
JFWS Jewell Farm 134.72 8 IAMs_20 IAMs_20 16 00 03.4
comp=Z,1µm,22.0s
J56A Wolcott 134.72 355 IAMs_20 IAMs_20 15 57 40.4
comp=Z,2µm,22.0s
HRV Adam Dziewonsk 134.73 349 P PKPdf 14 54 52.0 -0.2
baz=15
J54A Appleton 134.86 356 IAMs_20 IAMs_20 15 58 59.1
comp=Z,1µm,22.0s
TRY Troy 134.87 351 IAMs_20 IAMs_20 16 04 00.3
comp=Z,1µm,21.0s
W18A Petrified Fore 134.91 33 P PKPdf 14 54 53.1 +0.1
baz=319,SNR=21
SDCO Great Sand Dun 134.91 26 P PKPdf 14 54 52.4 -0.7
baz=326
SDCO Great Sand Dun 134.91 26 IAMs_20 IAMs_20 16 03 41.7
comp=Z,1µm,21.0s
J48A Bridge Port 134.91 2 P PKPdf 14 54 52.6 +0.1
baz=358
J48A Bridge Port 134.91 2 IAMs_20 IAMs_20 16 00 40.4
comp=Z,1µm,21.0s
J47A Sunmer 134.93 3 P PKPdf 14 54 52.7 +0.1
baz=356
MEDO Medina 134.96 356 IAMs_20 IAMs_20 16 01 25.6
comp=Z,1µm,20.0s
J52A Paris 134.98 358 P PKPdf 14 54 52.1 -0.6
baz=2.2
L61B Northampton 134.99 350 P PKPdf 14 54 52.4 -0.2
baz=13
KSCO Kaye Shedlock' 135.04 23 IAMs_20 IAMs_20 16 06 30.6
comp=Z,1µm,19.0s
K58A Earlville 135.10 353 P PKPdf 14 54 52.4 -0.5
baz=9.1
L64A Middleborough 135.14 348 P PKPdf 14 54 52.4 -0.6
baz=16
SCIA State Center 135.17 12 IAMs_20 IAMs_20 16 03 25.5
comp=Z,1µm,21.0s
K57A Scipio Center 135.23 354 P PKPdf 14 54 52.6 -0.5
baz=7.9
K56A Middlesex 135.34 355 P PKPdf 14 54 52.8 -0.5
baz=6.7
K55A Perry 135.37 356 P PKPdf 14 54 53.1 -0.3
baz=5.7
L40A Anamosa 135.39 10 IAMs_20 IAMs_20 16 00 13.7
comp=Z,1µm,21.0s
K50A Casco 135.46 1 IAMs_20 IAMs_20 16 06 30.9
comp=Z,743nm,19.0s
K54A Basiliko Farm, 135.53 356 P PKPdf 14 54 53.2 -0.5
baz=4.8
L59A Walton 135.59 353 IAMs_20 IAMs_20 16 01 16.5
comp=Z,1µm,22.0s
L42A Oliver, Polo 135.69 8 IAMs_20 IAMs_20 16 03 43.2
comp=Z,2µm,21.0s
BINY Binghamton 135.70 354 IAMs_20 IAMs_20 16 02 34.2
comp=Z,1µm,20.0s
WVNY West Valley, N 135.72 356 IAMs_20 IAMs_20 15 58 19.8
comp=Z,2µm,22.0s
L44A Lake County Fo 135.74 6 IAMs_20 IAMs_20 16 02 09.4
comp=Z,1µm,22.0s
KSCT Kent School, K 135.82 351 IAMs_20 IAMs_20 16 04 19.6
comp=Z,1µm,20.0s
M63A Gales Ferry 135.89 349 P PKPdf 14 54 53.9 -0.5
baz=14
AAM Ann Arbor 135.91 2 IAMs_20 IAMs_20 16 03 27.9
comp=Z,1µm,21.0s
L55A Hinsdale 135.93 356 P PKPdf 14 54 53.7 -0.8
baz=5.2
L54A Sinclairville 135.94 357 P PKPdf 14 54 53.7 -0.7
baz=3.9
L57A Andrews Acres 135.99 354 P PKPdf 14 54 54.4 -0.2
baz=7.5
M62A Hamden 136.00 350 P PKPdf 14 54 54.5 0.0
baz=13
L46A Eue Claire 136.06 5 IAMs_20 IAMs_20 16 05 14.7
comp=Z,1µm,20.0s
ERPA Erie 136.08 358 P PKPdf 14 54 54.1 -0.6
baz=3.0
ERPA Erie 136.08 358 IAMs_20 IAMs_20 15 59 42.3
comp=Z,1µm,20.0s
L50A Kingsville 136.19 1 P PKPdf 14 54 54.2 -0.7
baz=359
L48A N Adams 136.24 3 P PKPdf 14 54 54.6 -0.4
baz=357
L53A Girard 136.25 358 P PKPdf 14 54 55.0 -0.1
baz=2.6
CBKS Cedar Bluff 136.27 20 IAMs_20 IAMs_20 16 04 38.0
comp=Z,1µm,21.0s
TUC Tucson 136.38 36 P PKPdf 14 54 55.8 +0.1
baz=316
M60A Port Jervis 136.39 352 P PKPdf 14 54 55.7 +0.4
baz=11
M44A Midewin, Midew 136.51 7 IAMs_20 IAMs_20 16 02 32.7
comp=Z,1µm,21.0s
M58A Price's Panora 136.57 354 P PKPdf 14 54 55.7 0.0
baz=8.1
PAL Palisades 136.59 351 P PKPdf 14 54 56.2 +0.5
baz=12
PAL Palisades 136.59 351 IAMs_20 IAMs_20 16 05 42.0
comp=Z,1µm,20.0s
N62A Caumsett State 136.60 351 P PKPdf 14 54 56.2 +0.5
baz=12
M56A Emporium 136.61 356 P PKPdf 14 54 55.1 -0.7
baz=5.6
M55A Ridgway 136.67 356 P PKPdf 14 54 55.2 -0.7
baz=4.8
M57A Sunshine Farm, 136.67 355 P PKPdf 14 54 55.6 -0.2
baz=7.2
M57A Sunshine Farm, 136.67 355 IAMs_20 IAMs_20 16 00 05.9
comp=Z,1µm,21.0s
M54A Oil Creek Stat 136.68 357 P PKPdf 14 54 55.2 -0.7
baz=3.5
M54A Oil Creek Stat 136.68 357 IAMs_20 IAMs_20 16 00 06.1
comp=Z,939nm,20.0s
M48A Edgerton 136.69 3 IAMs_20 IAMs_20 16 04 12.3
comp=Z,1µm,21.0s
M52A Chesterland 136.69 359 P PKPdf 14 54 55.1 -0.8
baz=1.0
M52A Chesterland 136.69 359 IAMs_20 IAMs_20 15 59 09.5
comp=Z,1µm,22.0s
M49A Liberty Center 136.73 2 P PKPdf 14 54 55.3 -0.6
baz=357
ANMO Albuquerque 136.74 30 PKhKP PKPpre 14 54 49.8
comp=Z,2.8nm,0.8s,baz=308,slow=1.5,SNR=8.1
ANMO PKP PKPdf 14 54 56.5 +0.1
comp=Z,11nm,1.1s,baz=305,slow=0.5,SNR=5.9
ANMO PP PP 14 57 42.6 +4.4
comp=Z,5.6nm,0.9s,baz=306,slow=5.4,SNR=5.0
ANMO SKPbc SKPbc 14 58 25.2 +0.1
comp=Z,6.4nm,1.0s,baz=211,slow=1.4,SNR=3.7
ANMO Albuquerque 136.74 30 P PKPdf 14 54 55.3 -1.1
baz=323
ANMO Albuquerque 136.74 30 IAMs_20 IAMs_20 16 01 16.2
comp=Z,986nm,22.0s
M53A Wi Miller and 136.78 358 P PKPdf 14 54 55.5 -0.5
baz=2.0
M50A Fremont 136.82 1 P PKPdf 14 54 55.3 -0.9
baz=359
M50A Fremont 136.82 1 IAMs_20 IAMs_20 16 02 06.0
comp=Z,1µm,21.0s
N60A Cedar Hill Far 136.90 352 P PKPdf 14 54 56.2 -0.1
baz=10
N59A State Game Lan 136.94 353 IAMs_20 IAMs_20 16 02 17.1
comp=Z,1µm,21.0s
KSU1 Kansas State U 136.99 17 P PKPdf 14 54 56.5 0.0
baz=338
KSU1 Kansas State U 136.99 17 IAMs_20 IAMs_20 16 05 52.0
comp=Z,1µm,20.0s
BRNJ Basking Ridge 137.01 352 IAMs_20 IAMs_20 16 00 48.0
comp=Z,1µm,22.0s

N58A Sunbury 137.12 354 IAMs_20 IAMs_20 16 02 40.9
comp=Z,1µm,20.0s
HDIL Hopedale 137.17 8 IAMs_20 IAMs_20 16 01 52.2
comp=Z,2µm,22.0s
N54A Moraine State 137.24 358 IAMs_20 IAMs_20 16 01 33.8
comp=Z,1µm,20.0s
N49A Columbus Grove 137.27 2 P PKPdf 14 54 57.0 0.0
baz=357
N57A Milroy 137.28 355 P PKPdf 14 54 57.2 +0.2
baz=6.6
N48A Decatur 137.29 3 P PKPdf 14 54 57.4 +0.4
baz=356
N51A Ashland 137.32 0 P PKPdf 14 54 56.4 -0.7
baz=360
N51A Ashland 137.32 0 IAMs_20 IAMs_20 16 03 41.0
comp=Z,1µm,21.0s
N55A Marion Center 137.37 357 P PKPdf 14 54 56.6 -0.6
baz=4.5
N53A Lisbon 137.42 359 P PKPdf 14 54 56.6 -0.7
baz=1.8
SSPA Standing Stone 137.43 355 IAMs_20 IAMs_20 15 58 09.1
comp=Z,1µm,22.0s
N50A Nevada 137.46 1 P PKPdf 14 54 57.1 -0.2
baz=358
O60A Telford 137.48 352 P PKPdf 14 54 57.1 -0.2
baz=9.8
O59A Robesonia 137.59 353 P PKPdf 14 54 57.9 +0.3
baz=8.7
SFIN Lafayette 137.61 6 P PKPdf 14 54 57.4 -0.2
baz=353
PAGS Pennsylvania G 137.73 354 IAMs_20 IAMs_20 16 06 25.9
comp=Z,1µm,22.0s
O57A Amberson 137.83 355 P PKPdf 14 54 58.3 +0.3
baz=6.6
O56A Blue Knob Stat 137.85 356 P PKPdf 14 54 58.1 0.0
baz=5.2
O58A Lewisberry 137.85 354 P PKPdf 14 54 58.2 +0.1
baz=7.7
PSUB Penn St. - Bra 137.87 352 IAMs_20 IAMs_20 16 02 44.8
comp=Z,1µm,21.0s
O48A Farmland 137.88 4 P PKPdf 14 54 57.9 -0.2
baz=355
MVL Millersville 137.91 353 IAMs_20 IAMs_20 16 01 05.8
comp=Z,1µm,22.0s
121A Cookes Peak, D 137.92 33 P PKPdf 14 54 57.7 -0.9
baz=320
121A Cookes Peak, D 137.92 33 IAMs_20 IAMs_20 16 10 02.2
comp=Z,1µm,21.0s
O55A Ligonier 137.96 357 P PKPdf 14 54 58.1 -0.2
baz=4.1
O53A New Philadelph 137.98 359 P PKPdf 14 54 58.4 +0.1
baz=1.3
ACSO Alum Creek Sta 138.00 1 P PKPdf 14 54 58.4 +0.1
baz=359
ACSO Alum Creek Sta 138.00 1 IAMs_20 IAMs_20 16 04 11.0
comp=Z,1µm,20.0s
O49A Covington 138.00 3 P PKPdf 14 54 58.4 +0.1
baz=357
O49A Covington 138.00 3 IAMs_20 IAMs_20 16 05 21.0
comp=Z,1µm,20.0s
P60A Greenville 138.01 353 P PKPdf 14 54 58.6 +0.2
baz=9.6
P60A Greenville 138.01 353 IAMs_20 IAMs_20 16 02 47.5
comp=Z,1µm,20.0s
O54A Avella 138.03 358 P PKPdf 14 54 58.6 +0.2
baz=2.5
P43A Skaggs, Pawnee 138.03 9 IAMs_20 IAMs_20 16 03 31.1
comp=Z,1µm,20.0s
O51A Pataskala 138.09 1 P PKPdf 14 54 59.0 +0.5
baz=359
O52A Adamsville 138.12 360 P PKPdf 14 54 59.1 +0.5
baz=0.3
O52A Adamsville 138.12 360 IAMs_20 IAMs_20 16 01 37.3
comp=Z,1µm,21.0s
P59A Jarrettsville 138.31 353 P PKPdf 14 54 59.7 +0.8
baz=8.5
P58A Pank, Wackersv 138.52 354 P PKPdf 14 54 59.9 +0.7
baz=7.2
MCWV Mont Chateau 138.53 357 P PKPdf 14 55 00.1 +0.7
baz=3.3
MCWV Mont Chateau 138.53 357 IAMs_20 IAMs_20 15 59 39.1
comp=Z,994nm,22.0s
P57A Homestead Farm 138.59 355 P PKPdf 14 54 59.7 +0.3
baz=6.1
P57A Homestead Farm 138.59 355 IAMs_20 IAMs_20 15 58 42.6
comp=Z,1µm,22.0s
P50A Jamestown 138.60 2 P PKPdf 14 55 00.1 +0.6
baz=357
P52A Corning 138.60 0 P PKPdf 14 54 59.9 +0.4
baz=360
P54A Burton 138.61 358 P PKPdf 14 55 00.2 +0.7
baz=2.4
P56A Dayton Farm, R 138.63 356 P PKPdf 14 55 00.1 +0.6
baz=4.9
P49A Miami Univ. Ec 138.63 3 P PKPdf 14 54 59.7 +0.2
baz=356
P48A Milroy 138.66 4 P PKPdf 14 54 59.5 -0.1
baz=355
P55A Reedsville 138.68 357 P PKPdf 14 55 00.0 +0.4
baz=4.4
P51A Williamsport 138.74 1 P PKPdf 14 55 00.5 +0.8
baz=358
P51A Williamsport 138.74 1 IAMs_20 IAMs_20 16 05 12.8
comp=Z,846nm,20.0s
P53A Whipple 138.75 359 P PKPdf 14 55 00.3 +0.6
baz=1.0
P53A Whipple 138.75 359 IAMs_20 IAMs_20 16 02 04.8
comp=Z,1µm,22.0s
Q44A Meyer Farm, Va 138.83 8 IAMs_20 IAMs_20 16 01 49.2
comp=Z,2µm,22.0s
Q60A Greensboro 138.84 353 P PKPdf 14 54 59.9 +0.1
baz=9.4
Q60A Greensboro 138.84 353 IAMs_20 IAMs_20 15 59 30.3
comp=Z,1µm,21.0s
R40A Maddies Statio 138.84 12 IAMs_20 IAMs_20 16 03 13.8
comp=Z,1µm,20.0s
Q61A Milford 138.89 352 P PKPdf 14 54 59.7 -0.3
baz=1.9
AMTX Amarillo 138.98 25 P PKPdf 14 55 01.2 +0.8
baz=329
AMTX Amarillo 138.98 25 IAMs_20 IAMs_20 16 06 14.1
comp=Z,1µm,21.0s
Q57A Strasburg 139.06 356 P PKPdf 14 55 00.9 +0.6
baz=5.6
Q58A Fox Den Farm, 139.10 355 P PKPdf 14 55 01.0 +0.6
baz=6.7
Q56A Snyder Ridge, 139.11 357 P PKPdf 14 55 01.0 +0.6
baz=4.4
Q49A Aurora 139.15 3 P PKPdf 14 55 01.0 +0.5
baz=356
Q48A North Vernon 139.16 4 P PKPdf 14 55 01.3 +0.9
baz=354
S39A Bolivar 139.18 14 IAMs_20 IAMs_20 16 03 55.8
comp=Z,1µm,21.0s
Q51A Peebles 139.19 2 P PKPdf 14 55 01.3 +0.7
baz=358
Q51A Peebles 139.19 2 IAMs_20 IAMs_20 16 03 04.6
comp=Z,1µm,20.0s
Q55A Buckhannon 139.20 358 P PKPdf 14 55 00.9 +0.3
baz=3.0
Q54A Coxs Mills 139.24 359 P PKPdf 14 55 01.0 +0.4
baz=1.9
Q54A Coxs Mills 139.24 359 IAMs_20 IAMs_20 15 59 36.8
comp=Z,1µm,22.0s
Q52A Bidwell 139.27 0 P PKPdf 14 55 01.2 +0.5
baz=360
MSTX Muleshoe 139.28 27 P PKPdf 14 55 01.3 +0.3
baz=327
MSTX Muleshoe 139.28 27 IAMs_20 IAMs_20 16 08 20.2
comp=Z,1µm,21.0s
CCM Cathedral Cave 139.28 11 P PKPdf 14 55 00.5 -0.2
baz=346
Q50A Georgetown 139.35 2 P PKPdf 14 55 01.9 +1.1
baz=357
Q53A Leroy 139.37 359 P PKiKP 14 55 02.1 -1.1
baz=0.8
R58A Rapidan 139.76 355 P PKiKP 14 55 03.0 -1.0
baz=6.3
CBN Corbin Frederi 139.80 354 P PKiKP 14 55 02.9 -1.1
baz=7.2
CBN Corbin Frederi 139.80 354 IAMs_20 IAMs_20 16 02 10.7
comp=Z,1µm,22.0s
R57A Stanardsville 139.81 356 P PKPdf 14 55 02.8 +1.1
baz=5.5
WCI Wyandotte Cave 139.81 5 P PKPdf 14 55 02.7 +1.0
baz=354
R49A Shelbyville 139.84 4 IAMs_20 IAMs_20 16 04 56.8
comp=Z,1µm,20.0s

MNTX Cornudas Mount 139.85 32 P PKPdf 14 55 02.9 +0.9
baz=322
MNTX Cornudas Mount 139.85 32 IAMs_20 IAMs_20 16 07 40.2
comp=Z,911nm,21.0s
R53A Hurricane 139.90 360 P PKPdf 14 55 02.2 +0.3
baz=0.2
R53A Hurricane 139.90 360 IAMs_20 IAMs_20 16 05 31.5
comp=Z,1µm,22.0s
USIN University of 139.93 7 IAMs_20 IAMs_20 16 04 58.3
comp=Z,1µm,21.0s
S44A Carbondale 139.98 9 IAMs_20 IAMs_20 16 04 39.6
comp=Z,1µm,20.0s
PLCA Paso Flores 140.03 194 PKhKP PKPpre 14 54 57.4
comp=Z,4.7nm,1.1s,baz=204,slow=4.2,SNR=5.5
PLCA PKP PKPdf 14 55 02.6 +0.5
comp=Z,3.2nm,0.7s,baz=334,slow=4.8,SNR=9.0
R54A Victor 140.04 359 P PKPdf 14 55 02.7 +0.5
baz=1.7
R58B Mineral 140.08 355 P PKPdf 14 55 03.0 +0.8
baz=6.5
R58B Mineral 140.08 355 IAMs_20 IAMs_20 16 00 25.3
comp=Z,1µm,22.0s
S61A Accomac 140.11 352 P PKPdf 14 55 02.8 +0.6
baz=10.0
SPB Sao Paulo 140.19 234 IAMs_20 IAMs_20 15 50 06.4
comp=Z,1µm,21.0s
TUL1 Leonard 140.19 18 P PKPdf 14 55 03.2 +0.8
baz=338
WMOK Wichita Mounta 140.25 22 P PKPdf 14 55 03.8 +1.2
baz=333
WMOK Wichita Mounta 140.25 22 IAMs_20 IAMs_20 16 04 19.6
comp=Z,975nm,21.0s
T42A Van Buren 140.30 11 IAMs_20 IAMs_20 16 05 00.3
comp=Z,721nm,22.0s
S57A Dark Hollow, R 140.37 356 P PKPdf 14 55 03.9 +1.1
baz=4.9
S58A Poland Farm, P 140.45 355 P PKPdf 14 55 03.8 +0.9
baz=6.3
S58A Poland Farm, P 140.45 355 IAMs_20 IAMs_20 16 00 35.9
comp=Z,1µm,22.0s
S53A Williamson 140.55 0 P PKPdf 14 55 03.7 +0.6
baz=360
U40A Yellville 140.57 14 P PKPdf 14 55 04.3 +1.2
baz=343
U40A Yellville 140.57 14 IAMs_20 IAMs_20 16 05 33.4
comp=Z,1µm,21.0s
S51A Beattyville 140.57 2 IAMs_20 IAMs_20 16 04 04.1
comp=Z,1µm,20.0s
T60A Surry 140.78 353 IAMs_20 IAMs_20 16 02 52.8
comp=Z,1µm,22.0s
T47A Sharon Grove 140.96 6 IAMs_20 IAMs_20 16 05 39.5
comp=Z,1µm,20.0s
BLA Blacksburg 140.99 358 P PKPdf 14 55 04.6 +0.7
baz=2.6
T59A Double "B" Far 141.04 354 P PKPdf 14 55 04.8 +0.9
baz=7.2
T59A Double "B" Far 141.04 354 IAMs_20 IAMs_20 16 02 35.5
comp=Z,1µm,22.0s
T55A Pulaski 141.10 358 P PKiKP 14 55 05.6 -1.2
baz=2.0
T57A Hurt 141.15 356 P PKPdf 14 55 05.5 +1.3
baz=4.5
T58A Grand View Acr 141.15 356 P PKPdf 14 55 05.4 +1.2
baz=5.6
T56A Rocky Mt 141.16 357 P PKPdf 14 55 04.9 +0.7
baz=3.2
T54A Tazewell 141.17 359 P PKPdf 14 55 05.3 +1.0
baz=0.8
LCAR Lake Charles 141.22 12 IAMs_20 IAMs_20 16 05 39.6
comp=Z,1µm,22.0s
T53A Wise 141.25 1 P PKPdf 14 55 05.0 +0.5
baz=359
W39A Magazine 141.43 16 P PKPdf 14 55 05.6 +0.8
baz=341
U61A Possum Corner 141.54 353 P PKPdf 14 55 06.1 +1.2
baz=9.0
U59A Littleton 141.67 354 P PKPdf 14 55 06.5 +1.4
baz=6.9
U59A Littleton 141.67 354 IAMs_20 IAMs_20 16 05 24.4
comp=Z,1µm,20.0s
U58A Oxford 141.70 355 P PKPdf 14 55 05.5 +0.4
baz=5.7
HALT Halls 141.71 10 IAMs_20 IAMs_20 16 04 34.5
comp=Z,1µm,20.0s
U54A Nelsons Funny 141.71 360 P PKPdf 14 55 05.7 +0.4
baz=0.4
U54A Nelsons Funny 141.71 360 IAMs_20 IAMs_20 16 02 11.3
comp=Z,1µm,22.0s
U57A Blanch 141.72 356 P PKPdf 14 55 05.9 +0.7
baz=4.4
WHAR Woolly Hollow 141.72 14 IAMs_20 IAMs_20 16 04 55.9
comp=Z,1µm,20.0s
U55A TA2, Sparta 141.72 359 P PKPdf 14 55 06.6 +1.3
baz=1.6
WVT Waverly 141.72 8 P PKPdf 14 55 06.0 +0.8
baz=351
WVT Waverly 141.72 8 IAMs_20 IAMs_20 16 05 53.7
comp=Z,1µm,21.0s
ABTX Abilene, Hawle 141.78 24 P PKiKP 14 55 07.2 -1.1
baz=331
ABTX Abilene, Hawle 141.78 24 IAMs_20 IAMs_20 16 11 56.2
comp=Z,774nm,19.0s
HBAR Harrisburg 141.81 11 IAMs_20 IAMs_20 16 00 45.4
comp=Z,1µm,22.0s
LPAR Lepanto 141.84 11 IAMs_20 IAMs_20 16 04 12.0
comp=Z,1µm,22.0s
W41B Gary Mavity, V 141.84 14 P PKiKP 14 55 07.4 -0.9
baz=343
U56A Ing 141.85 358 IAMs_20 IAMs_20 16 05 44.1
comp=Z,1µm,22.0s
CLTN Cedars of Leba 141.93 6 IAMs_20 IAMs_20 16 05 36.2
comp=Z,1µm,21.0s
V61A Roper 142.09 353 P PKPdf 14 55 07.0 +1.2
baz=8.9
MIAR Mount Ida 142.10 16 P PKiKP 14 55 07.9 -1.0
baz=341
BBSR BB Station 142.10 336 IAMs_20 IAMs_20 16 07 34.3
comp=Z,926nm,21.0s
V60A Jim Taylor Roa 142.20 354 P PKPdf 14 55 07.0 +1.0
baz=7.8
V60A Jim Taylor Roa 142.20 354 IAMs_20 IAMs_20 16 08 53.3
comp=Z,1µm,21.0s
V48A Smith Brothers 142.22 6 IAMs_20 IAMs_20 16 03 00.0
comp=Z,1µm,22.0s
V57A Coltrane Farms 142.28 357 P PKiKP 14 55 07.9 -1.3
baz=3.7
V59A Middlesex 142.30 355 P PKPdf 14 55 07.7 +1.5
baz=6.2
V52A Sevierville 142.36 2 IAMs_20 IAMs_20 16 05 16.5
comp=Z,1µm,22.0s
V51A Loudon 142.37 3 IAMs_20 IAMs_20 16 08 03.7
comp=Z,1µm,21.0s
V55A Taylorsville 142.37 359 P PKPdf 14 55 07.9 +1.5
baz=1.4
V56A Mocksville 142.39 358 P PKiKP 14 55 08.2 -1.2
baz=2.6
V54A Nebo 142.45 360 P PKiKP 14 55 08.4 -1.3
baz=0.2
W45A Hickory Valley 142.47 10 IAMs_20 IAMs_20 16 06 16.6
comp=Z,1µm,21.0s
TXAR Lajitas Array 142.62 32 PKP PKPdf 14 55 05.6 -1.6
comp=Z,16nm,1.0s,baz=285,slow=1.2,SNR=18
TXAR PP PP 14 58 18.8 +4.5
comp=Z,7.9nm,1.0s,baz=303,slow=5.3,SNR=6.5
W61A Ground Anchor 142.75 353 P PKPdf 14 55 07.9 +0.8
baz=8.4
X43A Marvell 142.77 12 P PKPdf 14 55 08.6 +1.5
baz=345
W50A Signal Mountai 142.90 4 IAMs_20 IAMs_20 16 04 52.9
comp=Z,1µm,22.0s
W60A Pink Hill 142.95 354 P PKPdf 14 55 08.8 +1.4
baz=7.2
W57A Gilead 143.03 357 P PKiKP 14 55 09.2 -1.5
baz=3.4
W57A Gilead 143.03 357 IAMs_20 IAMs_20 16 04 42.1
comp=Z,1µm,21.0s
OXF Oxford 143.06 10 P PKPbc 14 55 05.5 +1.0
baz=348
KMSC Kings Mountain 143.08 359 P PKPdf 14 55 06.3 -1.4
baz=1.2
W52A Murphy 143.09 3 IAMs_20 IAMs_20 16 06 49.9
comp=Z,1µm,20.0s
WHTX Lake Whitney, 143.20 22 P PKPbc 14 55 06.3 +1.4
baz=334
WHTX Lake Whitney, 143.20 22 IAMs_20 IAMs_20 16 08 15.7
comp=Z,1µm,22.0s
BG3 Lake Jocassee 143.23 1 IAMs_20 IAMs_20 16 04 13.4
comp=Z,1µm,22.0s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HPIG		143.33	37	IAMs_20	IAMs_20	16 03 19.0	
	comp=Z,935nm,21.0s						
X60A	Albert Glenn T	143.45	354	P	PKPdf	14 55 07.0	-1.3
	baz=6.8						
X59A	McDuffie Farm,	143.51	355	P	PKPbc	14 55 06.6	+0.9
	baz=5.8						
FPAL	Fort Paine	143.53	5	IAMs_20	IAMs_20	16 06 44.6	
	comp=Z,1μm,21.0s						
JCT	Junction City	143.56	26	P	PKPdf	14 55 07.8	-0.9
	baz=329						
JCT	Junction City	143.56	26	IAMs_20	IAMs_20	16 09 01.6	
	comp=Z,1μm,20.0s						
X58A	Rowland	143.58	356	IAMs_20	IAMs_20	16 06 23.9	
	comp=Z,996nm,20.0s						
BDFB	Brasilia	143.81	246	PKP	PKPbc	14 55 07.6	+0.3
	comp=Z,8.5nm,0.4s,baz=118,slow=3.6,SNR=14						
HODGE	Hodges	143.99	0	IAMs_20	IAMs_20	16 06 05.8	
	comp=Z,946nm,20.0s						
Y60A	Bolivia	144.04	355	IAMs_20	IAMs_20	16 08 34.0	
	comp=Z,1μm,20.0s						
Y59A	Loris	144.11	356	IAMs_20	IAMs_20	16 09 41.9	
	comp=Z,1μm,20.0s						
Y49A	Blount Mountai	144.13	6	IAMs_20	IAMs_20	16 07 46.5	
	comp=Z,1μm,21.0s						
Y57A	Sumter	144.18	358	IAMs_20	IAMs_20	16 06 37.5	
	comp=Z,1μm,21.0s						
435B	Jarrell	144.23	23	P	PKPab	14 55 07.8	+0.2
	baz=333						
Y58A	Scranton	144.25	357	IAMs_20	IAMs_20	16 05 18.5	
	comp=Z,1μm,20.0s						
Y55A	Saluda	144.29	360	P	PKPbc	14 55 07.9	-0.2
	baz=0.4						
Y52A	Lilburn	144.31	3	P	PKPab	14 55 07.8	0.0
	baz=357						
Y52A	Lilburn	144.31	3	IAMs_20	IAMs_20	16 10 22.2	
	comp=Z,932nm,21.0s						
NATX	Nacogdoches	144.38	19	P	PKPbc	14 55 08.5	0.0
	baz=338						
Y56A	Pelion	144.43	359	P	PKPbc	14 55 08.5	0.0
	baz=1.3						
Z50A	Ashland	144.78	6	P	PKPab	14 55 08.0	-1.6
	baz=353						
GOGA	Godfrey	144.79	2	P	PKPab	14 55 09.4	-0.2
	baz=358,SNR=15						
GOGA	Godfrey	144.79	2	IAMs_20	IAMs_20	16 04 50.8	
	comp=Z,1μm,21.0s						
Z58A	St. Stephen	144.83	357	P	PKPab	14 55 08.9	-0.7
	baz=3.9						
LRAL	Lakeview Retre	144.88	7	P	PKPab	14 55 09.0	-0.9
	baz=351						
Z59A	Georgetown, SC	144.88	356	P	PKPab	14 55 08.7	-1.2
	baz=4.8						
Z56A	Williston	144.89	359	P	PKPab	14 55 09.3	-0.7
	baz=1.2						
Z57A	Bowman	144.90	358	P	PKPab	14 55 09.5	-0.4
	baz=2.4						
VBMS	Vicksburg	145.07	13	P	PKPbc	14 55 10.2	-0.3
	baz=345						
VBMS	Vicksburg	145.07	13	IAMs_20	IAMs_20	16 06 48.5	
	comp=Z,1μm,21.0s						
NHSC	New Hope	145.07	357	P	PKPbc	14 55 10.2	-0.4
	baz=3.3						
158A	Hollywood	145.44	357	P	PKPbc	14 55 10.5	-1.3
	baz=3.3						
833A	Chaparral WMA,	145.58	28	P	PKPab	14 55 12.6	-0.1
	baz=328						
HKT	Hockley	145.64	21	PKP2	PKPab	14 55 12.6	-0.1
HKT	Hockley	145.64	21		PKPab	14 55 12.6	-0.1
250A	Grady	146.00	6	IAMs_20	IAMs_20	16 10 41.1	
	comp=Z,1μm,20.0s						
CPUP	Villa Florida	146.08	222	PKPbc	PKPbc	14 55 14.2	+0.2
	comp=Z,27nm,0.8s,baz=100,slow=1.2,SNR=52						
255A	Hazlehurst	146.29	1	IAMs_20	IAMs_20	16 12 19.6	
	comp=Z,1μm,20.0s						
TIGA	Tifton	146.75	2	P	PKPbc	14 55 15.5	-0.3
	baz=357						
656A	Willston	148.84	1	IAMs_20	IAMs_20	16 11 07.1	
	comp=Z,1μm,21.0s						
MDP	Montagnes des	149.80	284	PKPbc	PKPbc	14 55 23.7	-0.7
	comp=Z,26nm,1.1s,baz=191,slow=1.0,SNR=10.0						
GO04	Tololo Observa	149.99	200		PKPbc	14 55 24.3	-0.3
DWPF	Disney Wildern	150.09	359	IAMs_20	IAMs_20	16 06 48.2	
	comp=Z,1μm,22.0s						
ANWB	Willy Bob	152.08	315	IAMs_20	IAMs_20	15 59 11.3	
	comp=Z,1μm,22.0s						
061Z	Ochoppi	152.31	358	IAMs_20	IAMs_20	16 11 37.0	
	comp=Z,1μm,22.0s						
FDF	Fort de France	153.48	309	IAMs_20	IAMs_20	16 10 24.0	
	comp=Z,873nm,22.0s						
GO02	Mina Guanaco	154.00	206	IAMs_20	IAMs_20	15 59 23.7	
	comp=Z,1μm,21.0s						
CBYP	Canovanas	154.34	322		PKiKP	14 55 36.4	+1.8
GRTK	Grand Turk	154.34	336	IAMs_20	IAMs_20	16 06 27.0	
	comp=Z,1μm,22.0s						
PB14	IPOC Station P	154.82	206	IAMs_20	IAMs_20	15 55 26.5	
	comp=Z,1μm,21.0s						
SIV	San Ignacio	155.08	235	PKP	PKPdf	14 55 27.7	+0.4
	comp=Z,2.1nm,0.8s,baz=44,slow=2.9,SNR=7.2						
GRGR	Grenville	155.37	305	IAMs_20	IAMs_20	16 15 37.6	
	comp=Z,804nm,22.0s						
PB15	IPOC Station P	155.62	209	IAMs_20	IAMs_20	16 04 01.9	
	comp=Z,1μm,20.0s						
LVC	Limon Verde	155.84	211	IAMs_20	IAMs_20	16 04 25.9	
	comp=Z,812nm,20.0s						
PB10	IPOC Station P	155.86	207	IAMs_20	IAMs_20	15 57 39.0	
	comp=Z,1μm,21.0s						
TEIG	Tepich	157.12	15	IAMs_20	IAMs_20	16 16 36.8	
	comp=Z,1μm,20.0s						
CMIG	Matias Romero	157.22	33	PKP	PKPdf	14 55 29.7	-0.3
	comp=Z,3.0nm,0.8s,baz=90,slow=5.3,SNR=2.2						
CMIG				PKPab	PKPab	14 56 02.0	+1.1
	comp=Z,9.7nm,0.8s,baz=349,slow=0.7,SNR=5.1						
PB01	IPOC Station P	157.43	212	IAMs_20	IAMs_20	15 57 35.2	
	comp=Z,1μm,22.0s						
PTGA	Pitinga	157.89	273	PKP	PKPdf	14 55 31.4	+0.3
	comp=Z,1.9nm,0.6s,baz=73,slow=4.8,SNR=4.0						
PTGA				PKPab	PKPab	14 56 05.1	+1.0
	comp=Z,9.5nm,0.7s,baz=70,slow=6.4,SNR=9.5						
PATCX	Punta Patache	157.96	211	IAMs_20	IAMs_20	16 00 48.2	
	comp=Z,1μm,22.0s						
MTDJ	Mount Denham	159.45	348	IAMs_20	IAMs_20	16 16 28.4	
	comp=Z,1μm,21.0s						
PB12	IPOC Station P	159.86	214	IAMs_20	IAMs_20	16 01 17.9	
	comp=Z,1μm,21.0s						
LPAZ	La Paz	160.24	223	PKP	PKPdf	14 55 35.0	+0.5
	comp=Z,4.7nm,0.8s,baz=28,slow=3.6,SNR=15						
LPAZ	La Paz	160.24	223	PKIKP	PKPdf	14 55 35.0	+0.5
APG	El Apazote	161.19	26	PKP	PKPdf	14 55 35.7	+0.7
	comp=Z,4.5nm,0.7s,baz=340,slow=15,SNR=4.1						
APG				PKPab	PKPab	14 56 17.4	-0.9
	comp=Z,35nm,0.9s,baz=310,slow=9.3,SNR=14						
ROSC	El Rosal	169.74	311	PKP	PKPdf	14 55 42.8	+0.4
	comp=Z,8.8nm,0.4s,baz=15,slow=14,SNR=8.9						

ISK 01 14:41:34.3, 38°.03N×27°.03E, h4km, ML1.8/4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	Balcova	0.35	1	PG	Pg	14 41 41.9	+0.8
BLCB				SG	Sg	14 41 47.1	+1.3
GCAM	G?zelcaml?	0.37	154	PG	Pg	14 41 41.9	+0.5
GCAM				SG	Sg	14 41 47.4	+1.2
URLA	Izmir	0.48	314	PG	Pb	14 41 44.4	-0.9
URLA				SG	Sb	14 41 51.5	-1.1
AYDB	Zeytinkoy-Aydi	0.68	97	PG	Pg	14 41 47.9	+0.5
AYDB				SG	Sb	14 41 58.4	-0.3

ATH 01 14:41:59.8, 38°.22N×25°.12E, h30km±2km, ML1.7/1, Error ellipse: s-maj=2.8km s-min=1.5km az=351.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSRA	Psara	0.48	47	P	Pb	14 42 10.0	+0.1
KARY	Karystos	0.57	252	P	Pb	14 42 11.1	-0.3
KARY				S	Sn	14 42 20.5	+0.2
KARY				AML	AML	14 42 21.0	
	comp=E,149μm,0.3s						
KARY				AML	AML	14 42 22.4	
	comp=N,198μm,0.1s						
TNSA	Tinos	0.68	177	P	Pn	14 42 13.9	+0.5
CHOS	Chios island	0.76	77	P	Pn	14 42 14.8	+0.2
KYMI	Kymi, Euboea I	0.90	298	P	Pb	14 42 17.8	+0.9
DION	Dionisos Attik	0.94	262	P	Pb	14 42 17.4	-0.2
ATHU	Athens Univers	1.08	257	P	Pb	14 42 19.8	-0.2
VLY	Voula,Athens	1.11	251	P	Pb	14 42 21.2	+0.8
SERI	Serifos	1.17	206	P	Pb	14 42 21.8	+0.4
VIL2	Platees	1.46	270	P	Pb	14 42 26.0	-0.4

PRU 01 15:02:09.5±0.0, 49°.86N×18°.48E, h0km, Mining Induced Event Darkov, E=2.6e+05
IPEC 01 15:02:08.5±0.2, 49°.84N×18°.55E, h1km±3km, ML1.3/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.26	269	ePG	Pg	15 02 13.5	+0.1
OKC				eSG	Sg	15 02 17.3	+0.5
MORC	Moravsky Berou	0.65	265	ePG	Pg	15 02 21.1	+0.1
MORC				eSG	Sg	15 02 29.1	-0.4
MORC	Moravsky Berou	0.65	265	ePg	Pg	15 02 21.0	0.0
	baz=84						
MORC				eSg	Sg	15 02 29.0	-0.5
	6.2nm,0.2s,baz=84						
LANS	Liptovska Anna	0.92	139	ePG	Pb	15 02 26.8	-0.4
LANS				eSG	Sb	15 02 40.3	+0.4
LANS				eLG	Lg	15 02 46.1	
JAVC	Velka Javorina	1.14	211	ePG	Pb	15 02 31.3	+0.3
KRLC	Kraliky	1.16	282	ePG	Pg	15 02 29.3	-1.5
KRLC				eSG	Sg	15 02 44.5	-1.3
	comp=Z,11nm,0.3s						
VYHS	Vyhne	1.36	172	ePG	Pg	15 02 34.3	-0.3
VYHS				eSG	Sn	15 02 53.6	+0.2
VRAC	Vranov	1.38	248	ePG	Pg	15 02 34.2	-0.7
VRAC				eSG	Sg	15 02 51.8	-1.0
VRAC	Vranov	1.38	248	ePg	Pg	15 02 34.2	-0.7
	baz=66						
VRAC				eSg	Sg	15 02 51.7	-1.1
	6.6nm,0.3s,baz=66						
DPC	Dobruska-Polom	1.52	290	ePG	Pn	15 02 36.1	-0.8
DPC				eSG	Sg	15 02 56.2	-1.1
	comp=Z,5.3nm,0.3s						
KRUC	Moravsky	1.61	242	ePG	Pn	15 02 37.5	-0.5
KRUC				eSG	Sn	15 02 58.8	-0.6
KRUC	Moravsky	1.61	242	ePg	Pn	15 02 37.5	-0.5
	baz=60						
KRUC				eSg	Sn	15 02 58.8	-0.6
	2.2nm,0.2s,baz=60						
OSTC	Ostas	1.66	296	ePG	Pn	15 02 38.8	0.0
OSTC				eSG	Sb	15 03 01.2	-0.1
	comp=Z,4.0nm,0.6s						
UPC	Upice	1.76	293	ePG	Pn	15 02 39.5	-0.6
UPC				eSG	Sb	15 03 03.8	-0.4
CHVC	Chvalec	1.77	296	eSG	Sb	15 03 04.4	0.0
KHC	Kasperske Hory	3.32	259	ePG	Pg	15 03 10.5	-1.5
KHC				eSG	Sg	15 03 52.4	-2.6
	comp=Z,2.0nm,0.4s						

IDC 01 15:14:15.2±1.1, 15°.95N×145°.91E, h0km, mb3.3/5, mb1 3.6/5, mb1mx3.4/40, mbtmp3.3/5, Error ellipse: s-maj=52.7km s-min=22.8km az=102.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	37.44	198	P	P	15 21 30.5	0.0
	0.2nm,0.5s,baz=30,slow=9.4,SNR=8.0						
ASAR	Alice Springs	41.09	197	P	P	15 22 00.7	-0.3
	0.1nm,0.4s,baz=18,slow=13,SNR=7.4						
MKAR	Makanchi Array	60.52	315	P	P	15 24 27.3	0.0
	0.4nm,0.5s,baz=92,slow=8.7,SNR=9.5						
ILAR	Eielson Array	66.01	26	P	P	15 25 03.3	-0.1
	0.2nm,0.5s,baz=243,slow=5.0,SNR=4.6						
YKA	Yellowknife Ar	80.31	28	P	P	15 26 28.0	+0.1
	0.1nm,0.5s,baz=294,slow=4.6,SNR=2.5						

BJI 01 15:21:09.3±0.0, 6°.18N×130°.57E, h10km, mB5.2/51, mb5.0/76, Ms4.6/57, Ms7 4.4/54
IDC 01 15:21:13.1±0.3, 6°.53N×130°.21E, h0km, mb5.1/42, mb1 5.1/46, mb1mx5.1/51, mbtmp5.1/46, ML5.0/4, MS4.3/27, Ms1 4.3/27, ms1mx4.1/42, Error ellipse: s-maj=13.2km s-min=8.6km az=85.0
NEIC 01 15:21:13.7±1.6, 6°.51N±0°.06×130°.14E±0°.06, h7km±2km, mb5.3/205, Error ellipse: s-maj=8.7km s-min=7.9km az=147.0
MOS 01 15:21:14.2±0.9, 6°.54N×130°.15E, h18km, mb5.5/70, Error ellipse: s-maj=6.7km s-min=4.0km az=108.3
GCMT 01 15:21:16.7±0.2, 6°.65N±0°.01×130°.05E±0°.01, h18km, MW5.2/114, Moment Tensor Solution. s56,c73; s114,c182; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.69±.03; $M_{\theta\theta}$0.11±.02; $M_{\phi\phi}$-0.80±.02; $M_{r\theta}$0.02±.05; $M_{\theta\phi}$0.21±.01; $M_{\phi r}$-0.37±.04; Best double couple: $M_0$0.85300×10^{17} NP1:ϕ_s342.00000°, δ32.00000°, λ81.00000°. NP2:ϕ_s173.00000°, δ58.00000°, λ96.00000°. Principal axes: T 0.7770, Plg76.0000°, Azm100.0000°; N 0.1530, Plg5.0000°, Azm349.0000°; P -0.9300, Plg13.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
DJA 01 15:21:22.0±0.8, 6°N±3°×13°0E±°, h23km±7km, M5.3/52, mb5.5/52, mB5.8/42, MLv5.5/8, Mw(mB)5.3/42, Mwp5.2/6
ISC 01 15:21:13.9±0.5, 6°.53N±0°.03×130°.19E±0°.03, h7km±2km, h7km:pP-P, n780, σ1s50/861, mb5.3/215, MS4.2/40, 35C-29D, East of Philippine Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	3.93	276	eP	Pn	15 22 11.0	-3.7
BIPH	Bislig	4.14	294 ⇓	iP	Pn	15 22 12.4	-5.1
BIPH				iS	Sn	15 22 56.6	-10
I39PW	PALAU INFRASON	4.44	77	Pn	Pn	15 22 19.6	-2.1
	baz=212,slow=14,SNR=3.1						
I39PW				Sn	Sn	15 23 06.2	-7.6
	baz=264,slow=81						
DDMP	Don Marcelino,	4.47	265	eP	Pn	15 22 20.0	-2.2
DAV	Davao City (W)	4.61	277	Pn	Pn	15 22 22.4	-1.7
	359nm,0.3s,baz=98,slow=14,SNR=66						
DAV				Sn	Sn	15 23 16.3	-1.6
	380nm,0.3s,baz=112,slow=22,SNR=8.5						
DAV	Davao City (W)	4.61	277 ⇑	eP	Pn	15 22 19.9	-4.2
DAV	Davao City (W)	4.61	277		Pn	15 22 22.6	-1.5
DAV					Sn	15 23 13.8	-4.1
DMPH	Davao City--Mi	4.68	277 ⇑	iP	Pn	15 22 24.1	-1.0
DMPH				eS	Sn	15 23 16.1	-3.6
KCP	Kidapawan	5.09	276 ⇓	iP	Pn	15 22 28.9	-1.8
KCP				iS	Sn	15 23 25.1	-4.7
BUKP	Musuan	5.26	285	eP	Pn	15 22 30.5	-2.6
SKMP	Bagumbayan, Su	5.61	270	eP	Pn	15 22 36.0	-1.8
MSLP	Maasin	6.38	305	eP	Pn	15 22 46.5	-1.8
TNTI	Ternate	6.38	206	P	Pn	15 22 50.3	+1.9
	2.7nm2μm9μm788nm,0.8s						
TNTI	Ternate	6.38	206		Pn	15 22 49.6	+1.2
PAGZ	Pagadian	6.88	281	eP	Pn	15 22 53.4	-1.9
TBP	Tagbilaran	7.01	297	eP	Pn	15 22 54.4	-2.7
DCPH	Dipolog City	7.08	287 ⇑	eP	Pn	15 22 56.8	-1.2
OCLP	Ormoc	7.11	310	eP	Pn	15 22 57.4	-1.1
LLP	Lapu-Lapu	7.21	302 ⇓	eP	Pn	15 22 56.7	-3.2
LLP				eS	Sn	15 24 13.8	-8.4
MNI	Manado	7.35	227	P	Pn	15 23 02.8	+1.1
MNI				pmax	pmax		
	comp=Z,1μm,0.8s						
SIJI	Sorong	7.43	172	Pn	Pn	15 23 02.9	0.0
	comp=Z,5.4nm,0.3s,baz=354,slow=18,SNR=22						
SIJI				Sn	Sn	15 24 19.2	-8.2
	comp=Z,10nm,0.3s,baz=348,slow=18,SNR=4.7						
SIJI				LR	LR	15 25 48.4	
	comp=Z,3μm,18.3s,baz=330,slow=37						
SNPH	Sibulan	7.43	293 ⇓	eP	Pn	15 23 00.7	-2.2
LBMI	Labuha	7.61	201	P	Pn	15 23 08.4	+3.1
	comp=Z,2.5nmcomp=Z,4μmcomp=Z,478nm,0.8s						
CNOP	Candoni, Negro	8.16	294	eP	Pn	15 23 09.4	-3.5
GUIM	Jordan	8.55	299	eP	Pn	15 23 14.9	-3.3
KMSI	Cibinong	8.56	227	P	Pn	15 23 20.2	+1.8
	comp=Z,666nmcomp=Z,25μmcomp=Z,3μm,0.8s						
RCP	Roxas	8.89	305 ⇑	eP	Pn	15 23 19.3	-3.6
RKPI	Ransiki, Papua	8.92	153	P	Pn	15 23 42.5	+19
JAP	San Jose, Anti	9.16	298 ⇓	eP	Pn	15 23 25.4	-1.2
PVCP	Virac	9.20	320	eP	Pn	15 23 26.9	-0.2
SANI	Sanana	9.50	206	P	Pn	15 23 31.0	-0.2
	comp=Z,3μmcomp=Z,241nm,0.7s						
FAKI	Fak Fak	9.61	168	P	Pn	15 23 37.3	+4.5
	comp=Z,52nm,1.0s						
FAKI	Fak Fak	9.61	168		Pn	15 23 33.8	+1.0
MSAI	Masohi	9.89	187	P	Pn	15 23 40.4	+3.8
	comp=Z,764nmcomp=Z,98nm,0.7s						
CUYO	Cuyo Island	10.03	296	eP	Pn	15 23 35.3	-3.2
NLAI	Namlea	10.18	198	P	Pn	15 23 42.7	+2.1
	comp=Z,2μmcomp=Z,116nm,0.8s						
MRSI	Marisa	10.19	234	P	Pn	15 23 42.7	+1.9
	comp=Z,4μmcomp=Z,29μmcomp=Z,3μm,0.7s						
AAI	Ambon	10.34	191	P	Pn	15 23 45.9	+3.1
	comp=Z,1μmcomp=Z,95nm,0.7s						
AAI	Ambon	10.34	191	P	Pn	15 23 46.6	+3.8
AAI				pmax	pmax		
	comp=Z,92nm,0.7s						
LUWI	Luwuk	10.55	225	P	Pn	15 23 46.6	+0.9
	comp=Z,6μmcomp=Z,879nm,0.9s						
LUWI	Luwuk	10.55	225		Pn	15 23 44.9	-0.8
BOAC	Boac	10.72	311	eP	Pn	15 23 47.2	-0.8
APSI	Ampana	11.28	229	P	Pn	15 23 57.0	+1.3
	comp=Z,5μmcomp=Z,360nm,0.8s						
LQP	Lukban	11.36	312	eP	Pn	15 23 53.6	-3.4
ENPP	El Nido	11.61	294	eP	Pn	15 23 56.6	-3.5
MPSI	Mapaga	11.97	239	P	Pn	15 24 05.8	+0.7
	comp=Z,4μmcomp=Z,2μmcomp=Z,206nm,0.9s						
SMPI	Sarmi	12.00	135	P	Pn	15 24 10.0	+4.5
	comp=Z,1μmcomp=Z,77nm,1.3s						
LUBP	Lubang	12.12	307	eP	Pn	15 24 03.9	-3.3
BATP	Bataraza	12.48	281	eP	Pn	15 24 09.5	-2.7
SMPP	San Manuel, Pa	13.35	317	eP	Pn	15 24 25.3	+1.3
GENI	Genyem	13.47	132	P	P	15 24 32.3	-2.7
	comp=Z,3μmcomp=Z,127nm,1.6s						
SPMM	Sapulut	13.78	263	P	Pn	15 24 32.0	+2.1
JAY	Jayapura	13.82	130	Pn	Pn	15 24 33.5	+3.0
	comp=Z,0.4nm,0.3s,baz=295,slow=8.3,SNR=9.2						
JAY				LR	LR	15 28 33.0	
	comp=Z,2μm,20.6s,baz=322,slow=32						
JAY	Jayapura	13.82	130	P	Pn	15 24 33.1	+2.7
	comp=Z,552nmcomp=Z,38nm,0.8s						
KKM	Kota Kinabalu	13.90	269		Pn	15 24 30.0	-1.6
TTSI	Tana Toraja	14.06	228	P	Pn	15 24 33.7	0.0
	comp=Z,2μmcomp=Z,141nm,0.9s						
BBSI	Bau Bau	14.15	213	P	Pn	15 24 36.2	+1.2
	comp=Z,551nmcomp=Z,37nm,0.8s						
APYP	Conner	14.25	323	eP	P	15 24 41.7	-2.0
SAUI	Saumlaki	14.46	176	Pn	Pn	15 24 35.3	-3.8
SMKI	Samarinda	14.69	242	P	Pn	15 24 44.1	+1.7
	comp=Z,10μmcomp=Z,730nm,1.5s						
SPSI	Sidrap Palu	14.73	225	P	Pn	15 24 42.0	-0.8
	comp=Z,2μmcomp=Z,185nm,0.9s						
BNSI	Bone	14.81	223	P	Pn	15 24 42.5	-1.4
	comp=Z,6μmcomp=Z,567nm,1.0s						
BKB	Balikpapan	15.36	240	P	Pn	15 24 52.7	+1.4
	comp=Z,8μmcomp=Z,586nm,1.5s						
BKB	Balikpapan	15.36	240		Pn	15 24 51.2	-0.1
BKSI	Bulukumba	15.48	221	P	Pn	15 24 51.8	-1.1
	comp=Z,3μmcomp=Z,290nm,1.0s						
KAPI	Kappang	15.49	223	Pn	Pn	15 24 52.3	-0.8
	comp=Z,4.2nm,0.3s,baz=80,slow=8.8,SNR=15						
KAPI	Kappang	15.49	223		Pn	15 24 51.3	-1.7
GUMO	Guam	16.06	63	P	Pn	15 25 00.2	-0.2
GUMO				pmax	pmax		
	comp=Z,299nm,1.3s						
GUMO	Guam	16.06	63		Pn	15 25 00.2	-0.2
GUMO				IAmb	IAmb	15 25 18.1	
	comp=Z,299nm,1.3s						
MMRI	Maumere	17.02	208	P	P	15 25 13.4	-1.2
	comp=Z,4μmcomp=Z,269nm,1.3s						
MMRI	Maumere	17.02	208	P	Pn	15 25 11.5	-1.2
MMRI				IAmb	IAmb	15 25 21.9	
	comp=Z,322nm,1.2s						
SOEI	Soe	17.22	200	P	P	15 25 18.5	+1.6
	comp=Z,2μmcomp=Z,159nm,0.9s						
SOEI	Soe	17.22	200	P	Pn	15 25 14.6	-0.7
SOEI				IAmb	IAmb	15 25 51.9	
	comp=Z,173nm,0.9s						
EDFI	Ende, Flores	17.38	209	P	P	15 25 19.5	+0.9
	comp=Z,2μmcomp=Z,69nm,0.7s						
BATI	Baumata	17.85	201	P	P	15 25 23.6	-0.2
	comp=Z,8.2nm,0.3s,baz=45,slow=13,SNR=14						
BATI	Baumata	17.85	201	P	P	15 25 26.4	+2.7
	comp=Z,86nm,1.1s						
SBUM	Sibu	18.36	258	P	Pn	15 25 28.6	-0.7
SBUM	Sibu	18.36	258	P	P	15 25 30.0	+0.6
TWG	Pinlang	18.43	332	P	P	15 25 29.5	-0.5
YULB	Yu-li	18.82	334	P	P	15 25 32.8	-1.6
TPUB	Ta-pu	19.05	332	P	P	15 25 35.7	-1.1
YOJ	Yonaguni jima	19.11	340	P	P	15 25 35.6	-1.9
YOJ				pmax	pmax		
	comp=Z,330nm,1.3s						
YOJ	Yonaguni jima	19.11	340	P	P	15 25 35.6	-1.9
YOJ				IAmb	IAmb	15 25 43.3	
	comp=Z,330nm,1.3s						
KDU	Kakadu	19.23	173	P	P	15 25 38.5	-0.3
	baz=19,SNR=15						
MTN	Manton Dam	19.27	177	P	P	15 25 39.2	-0.1
	baz=19,SNR=67						
MTN	Manton Dam	19.27	177	P	P	15 25 38.4	-0.9
MTN				IAmb	IAmb	15 25 42.9	
	comp=Z,204nm,1.1s						
SSLB	Suanglung	19.32	334	P	P	15 25 38.9	-1.0
WBSI	Waikabubak, Su	19.33	214	P	Pn	15 25 44.6	+3.5
	comp=Z,2μmcomp=Z,134nm,0.9s						
NACB	Ninganchiao	19.39	336	P	P	15 25 39.0	-1.6
PLAI	Plampang	19.64	219	P	Pn	15 25 47.3	+2.5
	comp=Z,7μmcomp=Z,261nm,1.0s						
YHNB	Yeheng	19.92	336	P	P	15 25 45.8	-0.6
YHNB				IAmb	IAmb	15 25 53.3	
	comp=Z,350nm,1.4s						
TATO	Taipei	20.15	337	P	Pn	15 25 50.0	-0.6
TATO				IAmb	IAmb	15 26 07.7	
	comp=Z,138nm,0.9s						
JOW	Kunigami	20.27	355	P	Pn	15 25 52.6	+0.5
	comp=Z,6.9nm,0.9s,baz=168,slow=12,SNR=16						
JOW	Kunigami	20.27	355	P	P	15 25 49.9	-0.3
JOW				IAmb	IAmb	15 25 57.6	
	comp=Z,189nm,1.5s						
KSM	Kuching	20.45	257	P	P	15 25 52.4	+0.1
KSM				IAmb	IAmb	15 25 58.2	
	comp=Z,144nm,0.8s						
KSM					PcP	15 30 05.2	+0.4
SRBI	Singaraja	20.83	226	P	Pn	15 25 59.2	+0.4
	comp=Z,4μmcomp=Z,418nm,1.1s						
KMMI	Kalianget	21.07	230	P	P	15 26 02.0	+3.1
	comp=Z,5μmcomp=Z,403nm,1.2s						
KNMB	Chin-men Tao	21.12	329	P	P	15 25 58.9	-0.6
DNP	Denpasar	21.24	225	P	P	15 26 05.5	+4.7
	comp=Z,29μmcomp=Z,814nm,1.3s						
DNP	Denpasar	21.24	225	P	P	15 26 04.9	+4.1
DNP				pmax	pmax		
	comp=Z,806nm,1.4s						
QZH	Quanzhou	21.42	330	P	P	15 25 59.0	-3.6
QZH				S	S	15 29 55.8	-4.8
QZH				LR	LR		
	comp=N,710nm,18.2s						
QZH				LR	LR		
	comp=E,390nm,13.0s						
QZH				LR	LR		
	comp=Z,660nm,13.7s						
JAGI	Jajag, Banyuwa	21.86	227	P	P	15 26 09.9	+2.5
	comp=Z,8μmcomp=Z,922nm,0.9s						
JAGI	Jajag, Banyuwa	21.86	227	P	P	15 26 08.7	+1.3
DLV	T Lat	22.08	286	P	P	15 26 09.6	-0.4
KNRA	Kununurra	22.11	184	P	P	15 26 09.4	-0.6
	baz=22,SNR=23						
KNRA	Kununurra	22.11	184	P	P	15 26 08.5	-1.6
GRJI	Gresik	22.15	233	P	P	15 26 13.8	+3.3
	comp=Z,999nmcomp=Z,129nm,1.1s						
UWJI	Ujung Watu	23.11	237	P	P	15 26 23.9	+3.1
	comp=Z,912nmcomp=Z,118nm,1.0s						
PMG	Port Moresby	23.16	133c	iP	P	15 26 21.4	+0.1
PMG				pmax	pmax		
	comp=Z,268nm,1.3s						
PMG	Port Moresby	23.16	133	P	P	15 26 20.8	-0.4
PWJI	Pagerwojo	23.35	232	P	P	15 26 26.1	+3.0
	comp=Z,3μmcomp=Z,164nm,0.9s						
QIZ	Qiongzhong	23.37	304	P	P	15 26 21.2	-2.2
QIZ				S	S	15 30 34.1	-2.8
QIZ				pmax	pmax		
	comp=Z,15nm,1.3s						
QIZ				LR	LR		
	comp=Z,420nm,15.2s						
QIZ				LR	LR		
	comp=Z,430nm,16.2s						
QIZ				LR	LR		
	comp=Z,710nm,18.1s						
QIZ	Qiongzhong	23.37	304	P	P	15 26 21.3	-2.2
JCJ	Chichijima	23.42	28	P	P	15 26 23.8	0.0
	comp=Z,146nm,0.8s,baz=116,slow=2.7,SNR=8.0						
SMRI	Semarang	23.88	236	P	P	15 26 31.5	+3.1

comp=Z,104nm,1.2s
SMRI Semarang 23.88 236 P **P** **15 26 27.7 -0.7**
SMRI IAmb IAmb 15 26 48.2
comp=Z,168nm,1.1s
WOJI Wonogiri, Jawa 23.93 234 P **P** **15 26 31.5 +2.6**
comp=Z,163nm,1.4s
PCJI Pacitan 23.95 233 P **P** **15 26 33.0 +4.0**
comp=Z,8µmcomp=Z,671nm,1.6s
COEN Coen 24.09 148 P **P** **15 26 30.2 -0.1**
baz=24,SNR=80
COEN Coen 24.09 148 P **P** **15 26 29.9 -0.4**
COEN IAmb IAmb 15 26 32.1
comp=Z,80nm,0.9s
UGM Wanagama 24.30 234 P **P** **15 26 37.2 +4.8**
comp=Z,328nm,1.0s
UGM Wanagama 24.30 234 P **P** **15 26 32.1 -0.3**
KRVT Keravat (AS076 24.31 116 P **P** **15 26 32.4 0.0**
comp=Z,74nm,0.8s,baz=257,slow=18,SNR=13
YOGI Yogyakarta 24.43 235 P **P** **15 26 40.0 +6.5**
FITZ Fitzroy Crossi 24.88 190 P **P** **15 26 37.4 -0.1**
baz=25,SNR=35
FITZ Fitzroy Crossi 24.88 190 P **P** **15 26 37.7 +0.2**
comp=Z,48nm,1.0s,baz=24,slow=10,SNR=39
FITZ PcP **PcP** **15 30 14.3 +0.7**
comp=Z,8.2nm,0.8s,baz=11,slow=2.8,SNR=2.7
FITZ LR LR 15 37 37.8
comp=Z,235nm,18.7s,baz=12,slow=40
FITZ Fitzroy Crossi 24.88 190 P **P** **15 26 36.9 -0.6**
FITZ IAmb IAmb 15 26 39.8
comp=Z,70nm,1.1s
FITZ PcP **PcP** **15 30 13.8 +0.2**
SSE Sheshan 25.86 342 P **P** **15 26 46.7 +0.5**
SSE IAmb IAmb 15 26 51.1
comp=Z,84nm,1.4s
LEM Lembang 26.14 240 P **P** **15 26 51.3 +2.1**
comp=Z,232nm,0.9s,baz=70,slow=7.8,SNR=29
LEM LR LR 15 37 28.8
comp=Z,514nm,21.6s,baz=11,slow=37
TPRI Tanjung Pinang 26.20 259 P **P** **15 26 51.2 +1.6**
comp=Z,5µmcomp=Z,522nm,1.0s
CISI Cisompet, Garu 26.34 238 P **P** **15 26 52.7 +1.8**
comp=Z,2µmcomp=Z,257nm,1.0s
CISI Cisompet, Garu 26.34 238 P **P** **15 26 49.2 -1.7**
JNU Nakatsue 26.47 1 P **P** **15 26 51.8 -0.1**
comp=Z,38nm,0.9s,baz=171,slow=7.1,SNR=13
JNU LR LR 15 38 20.8
comp=Z,767nm,18.6s,baz=154,slow=39
JNU Nakatsue 26.47 1 P **P** **15 26 51.4 -0.4**
JNU IAmb IAmb 15 26 54.9
comp=Z,78nm,1.1s
WRAB Tennant Creek 26.61 171 *c i*P **P** **15 26 52.6 -0.6**
WRAB pmax pmax
comp=Z,81nm,1.3s
WRAB Tennant Creek 26.61 171 P **P** **15 26 51.4 -1.8**
WRAB IAmb IAmb 15 26 55.4
comp=Z,60nm,0.9s
WRA Warramunga Arr 26.62 171 P **P** **15 26 52.7 -0.6**
comp=Z,45nm,0.9s,baz=350,slow=9.6,SNR=98
WRA PcP **PcP** **15 30 18.1 +0.5**
comp=Z,5.6nm,0.8s,baz=328,slow=2.9,SNR=4.7
WRA PKiKP **PKiKP** **15 37 55.6 -0.8**
comp=Z,0.7nm,0.8s,baz=316,slow=1.2,SNR=4.8
WRA LR LR 15 38 14.6
comp=Z,680nm,20.2s,baz=0.0,slow=38
WRA Warramunga Arr 26.62 171 *i* P **P** **15 26 52.5 -0.8**
WRA pmax pmax
comp=Z,52nm,0.9s
MYKOM Kota Tinggi 26.68 261 P **P** **15 26 52.7 -1.3**
MYKOM IAmb IAmb 15 26 59.2
comp=Z,91nm,1.0s
MYKOM Kota Tinggi 26.68 261 P **P** **15 26 55.0 +1.1**
DBJI Dramaga 26.76 241 P **P** **15 26 57.0 +2.4**
comp=Z,11µmcomp=Z,59nm,1.3s
CNJI Cibinong 26.80 240 P **P** **15 26 57.7 +2.7**
comp=Z,2µmcomp=Z,198nm,1.0s
SKJI Sukabumi 27.14 241 P **P** **15 27 01.4 +3.3**
comp=Z,126nm,0.8s
NJ2 Nanjing 27.51 339 *e*P **P** **15 27 02.9 +1.7**
NJ2 pP **pwP** **15 27 05.9 -3.0**
NJ2 sP sP 15 27 11.8 +10
NJ2 S **S** **15 31 46.0 +3.5**
NJ2 sS sS 15 31 57.1 +14
NJ2 pmax pmax
comp=Z,22nm,0.7s
NJ2 pmax pmax
comp=Z,260nm,7.6s
NJ2 LR LR
comp=Z,480nm,13.0s
NJ2 LR LR
comp=Z,520nm,13.7s
NJ2 LR LR
comp=Z,810nm,19.6s
BLSI Bandar Lampung 27.56 245 P **P** **15 27 04.6 +2.7**
comp=Z,72nm,0.4s
JHJ Hachijo jima 2 27.92 17 LR LR 15 38 48.4
comp=Z,508nm,18.5s,baz=94,slow=38
PATS Pohnpei 27.93 88 P **P** **15 27 06.5 +1.4**
WHN Wuhan 28.14 330 ⇑P **P** **15 27 10.6 +3.8**
WHN pmax pmax
comp=Z,48nm,0.9s
MDSI Maura Dua 28.18 248 P **P** **15 27 08.2 +0.8**
comp=Z,27nm,0.9s
MTSU Mount Surprise 28.20 151 P **P** **15 27 08.3 +0.8**
baz=28,SNR=44
KASI Kota Agung 28.30 246 P **P** **15 27 10.2 +1.7**
comp=Z,79nm,0.9s
QIS Mount Isa 28.46 161 P **P** **15 27 09.8 0.0**
baz=29,SNR=77
LWLI Liwa 28.50 247 P **P** **15 27 11.5 +1.2**
comp=Z,3µmcomp=Z,163nm,0.9s
IPM Ipoh 29.10 267 P **P** **15 27 14.6 -1.0**
IPM IAmb IAmb 15 27 21.9
comp=Z,94nm,1.4s
IPM PcP **PcP** **15 30 24.0 +0.2**
IPM Ipoh 29.10 267 P **P** **15 27 17.0 +1.4**
MNAI Manna 29.26 249 P **P** **15 27 15.6 -1.4**
KSI Kapahiang 29.35 251 P **P** **15 27 19.2 +1.3**
INU Inuyama 29.36 11 P **P** **15 27 16.9 -0.7**
SLVN Son La 29.38 303 P **P** **15 27 18.2 +0.2**
KULM Kulim 29.41 269 P **P** **15 27 17.6 -0.7**
KULM IAmb IAmb 15 27 22.5
comp=Z,71nm,1.4s
KULM PcP **PcP** **15 30 25.2 +0.7**
KULM Kulim 29.41 269 P **P** **15 27 20.0 +1.7**
PSA00 Pilbara Seismi 29.71 200 P **P** **15 27 20.1 -0.8**
TJN Taejon 29.82 355 ‖ *e*P **P** **15 27 21.7 0.0**
GYA Guiyang 29.92 314 ⇑ *i*P **P** **15 27 27.0 +4.1**
GYA PP **PnPn** **15 28 21.4 +2.5**
GYA S **S** **15 32 18.2 -2.6**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,60nm,3.5s
GYA LR LR
comp=Z,320nm,13.5s
GYA LR LR
comp=Z,340nm,14.4s
GYA LR LR
comp=Z,450nm,17.1s
ASAR Alice Springs 30.23 173 P **P** **15 27 24.8 -0.7**
comp=Z,7.7nm,0.7s,baz=353,slow=7.7,SNR=155
ASAR PcP **PcP** **15 30 27.1 +0.6**
comp=Z,12nm,0.7s,baz=352,slow=2.4,SNR=17
ASAR PKiKP **PKiKP** **15 37 57.5 -1.2**
comp=Z,0.6nm,0.8s,baz=0.6,slow=0.6,SNR=8.5
ASAR LR LR 15 40 55.2
comp=Z,418nm,19.1s,baz=336,slow=39
ENH Enshi 30.60 323 P **P** **15 27 28.9 +0.1**
ENH IAmb IAmb 15 27 40.3
comp=Z,103nm,1.8s
MAJO Matsushiro 30.76 13 *ce*P **P** **15 27 28.5 -1.5**
MAJO pmax pmax
comp=Z,17nm,1.0s
MAJO Matsushiro 30.76 13 P **P** **15 27 28.2 -1.8**
MAJO PcP **PcP** **15 30 26.6 -1.0**
MAT Matsushiro 30.76 13 P **P** **15 27 28.3 -1.7**
MAT *e*S **S** **15 32 31.6 -2.0**
MJAR Matsushiro Arr 30.76 13 P **P** **15 27 28.6 -1.4**
comp=Z,7.4nm,0.6s,baz=185,slow=9.1,SNR=36
MJAR PcP **PcP** **15 30 28.3 +0.7**
comp=Z,6.0nm,0.9s,baz=186,slow=3.0,SNR=8.9
MJAR LR LR 15 39 13.6
comp=Z,470nm,18.7s,baz=190,slow=35
CTAO Charters Tower 30.81 149 P **P** **15 27 30.2 -0.4**
CTAO pmax pmax
comp=Z,36nm,1.0s
CTAO Charters Tower 30.81 149 P **P** **15 27 30.2 -0.4**
CTAO IAmb IAmb 15 27 40.7
comp=Z,36nm,0.9s
KSRS Korea Array 30.85 356 P **P** **15 27 30.8 0.0**
comp=Z,4.7nm,0.8s,baz=175,slow=11,SNR=22
KSRS PcP **PcP** **15 30 28.5 +0.7**
comp=Z,7.6nm,0.8s,baz=186,slow=2.7,SNR=21
KSRS LR LR 15 39 12.6
comp=Z,538nm,20.9s,baz=172,slow=35
PSI Prapat 31.37 265 P **P** **15 27 36.4 +0.5**
comp=Z,25nm,0.9s,baz=356,slow=0.4,SNR=24
PSI PcP **PcP** **15 30 30.1 +0.2**
comp=Z,4.3nm,0.4s,baz=181,slow=2.2,SNR=3.5
PSI LR LR 15 42 01.1
comp=Z,390nm,19.3s,baz=89,slow=40
RPSI Rantau Prapat 31.39 264 P **P** **15 27 35.0 -0.8**
RPSI IAmb IAmb 15 27 40.7
comp=Z,36nm,0.9s
RPSI Rantau Prapat 31.39 264 **PcP** **15 30 30.1 +0.4**
WRKA Warakurna 31.43 183 P **P** **15 27 35.4 -0.7**
baz=32,SNR=10.0
TIA Tai'an 31.88 340 P **P** **15 27 40.1 +0.2**
TIA pmax pmax
comp=Z,20nm,0.8s
KMI Kunming 32.12 308 P **P** **15 27 46.6 +4.2**
KMI S **S** **15 32 55.1 -0.4**
KMI SS **SnSn** **15 34 56.7 +11**
KMI pmax pmax
comp=Z,28nm,1.1s
KMI pmax pmax
comp=Z,210nm,4.4s
KMI LR LR
comp=Z,620nm,21.2s
KMI LR LR
comp=Z,570nm,18.7s
KMI LR LR
comp=Z,640nm,21.7s
KMI Kunming 32.12 308 P **P** **15 27 41.3 -1.1**
KMI pmax pmax
comp=Z,33nm,1.1s
KMI Kunming 32.12 308 P **P** **15 27 41.3 -1.1**
KMI IAmb IAmb 15 27 47.3
comp=Z,34nm,1.1s
CMAR Chiang Mai Arr 32.66 294 P **P** **15 27 48.0 +1.0**
comp=Z,4.5nm,0.7s,baz=129,slow=7.1,SNR=28
CMAR PcP **PcP** **15 30 34.5 +1.4**
comp=Z,7.0nm,0.9s,baz=114,slow=0.8,SNR=10
CMAR PKiKP **PKiKP** **15 38 00.3 -0.1**
comp=Z,1.0nm,0.8s,baz=225,slow=1.6,SNR=8.3
CMAR LR LR 15 41 13.4
comp=Z,246nm,19.1s,baz=100,slow=37
CHTO Chiang Mai 32.77 295 P **P** **15 27 47.1 -0.9**
CHTO 15 30 33.2
CHTO pmax pmax
comp=Z,14nm,0.9s
CHTO Chiang Mai 32.77 295 P **P** **15 27 47.1 -0.9**
CHTO **PcP** **15 30 33.2 -0.2**
GIRL Giralia 32.93 208 P **P** **15 27 49.5 +0.2**
GIRL PcP **PcP** **15 30 33.8 +0.1**
GSI Gunungsitoli 32.94 262 P **P** **15 27 48.4 -1.1**
LHMI Lhok Sumawe 33.09 270 P **P** **15 27 49.6 -1.2**
HNR Honiara 33.62 118 LR LR 15 39 31.1
comp=Z,269nm,21.3s,baz=299,slow=33
HNR Honiara 33.62 118 P **P** **15 27 53.8 -1.6**
HNR pmax pmax
comp=Z,62nm,1.0s
HNR Honiara 33.62 118 P **P** **15 27 53.8 -1.6**
HNR IAmb IAmb 15 28 01.4
comp=Z,62nm,1.0s
XAN Xi'an 33.71 327 P **P** **15 27 56.2 +0.2**
XAN sP pwP 15 28 03.2 -0.6
XAN S **S** **15 33 21.0 +1.2**
XAN pmax pmax
comp=Z,10.0nm,0.8s
XAN pmax pmax
comp=Z,300nm,7.3s
XAN LR LR
comp=Z,410nm,18.4s
XAN LR LR
comp=Z,390nm,18.4s
XAN LR LR
comp=Z,500nm,17.9s
XAN Xi'an 33.71 327 P **P** **15 27 55.4 -0.7**
XAN pmax pmax
comp=Z,40nm,0.8s
XAN Xi'an 33.71 327 P **P** **15 27 55.4 -0.7**
XAN IAmb IAmb 15 27 59.5
comp=Z,40nm,0.8s
CD2 Chengdu 34.67 318 P **P** **15 28 05.4 +1.0**
CD2 pmax pmax
comp=Z,140nm,0.8s
MEEK Meekatharra 34.83 198 P **P** **15 28 05.7 0.0**
baz=35,SNR=21
QLP Quilpie 35.62 158 P **P** **15 28 12.6 +0.1**
baz=36,SNR=29
BJT Baijiatuao 35.64 341 P **P** **15 28 12.0 -0.6**
BJT pmax pmax
comp=Z,42nm,1.3s
BJT Baijiatuao 35.64 341 P **P** **15 28 12.0 -0.6**
BJI Beijing 35.66 341 P **P** **15 28 13.2 +0.5**
BJI PcP **PcP** **15 30 42.1 +0.9**
BJI pmax pmax
comp=Z,17nm,0.9s
BJI LR LR
comp=Z,110nm,6.0s
BJI LR LR
comp=Z,310nm,13.6s
BJI LR LR
comp=Z,310nm,18.9s
MSHR Mys Shultsa 35.91 1 *d i*P **P** **15 28 16.2 +1.4**
VLA Vladivostok 36.47 2 *c i*P **P** **15 28 20.5 +0.9**
VLA pmax pmax
comp=Z,75nm,1.2s
KWAJ Kwajalein Atol 37.15 84 P **P** **15 28 26.2 +0.4**
KWAJ pmax pmax
comp=Z,229nm,1.0s
KWAJ Kwajalein Atol 37.15 84 P **P** **15 28 26.2 +0.4**
FORT Forrest 37.15 183 P **P** **15 28 25.4 -0.1**
baz=37,SNR=6.8
FORT Forrest 37.15 183 P **P** **15 28 24.2 -1.4**
FORT IAmb IAmb 15 28 27.5
comp=Z,46nm,0.7s
FORT PcP **PcP** **15 30 46.5 +0.7**
ERM Erimo 37.17 16 P **P** **15 28 27.8 +2.2**
ERM pmax pmax
comp=Z,39nm,1.1s
ERM Erimo 37.17 16 P **P** **15 28 27.8 +2.2**
CN2 Changchun 37.36 354 *e*P **P** **15 28 27.8 +0.7**
CN2 *es*P pwP 15 28 36.0 +1.1
CN2 pmax pmax
comp=Z,20nm,1.2s
RMQ Roma 37.44 152 P **P** **15 28 28.4 +0.4**
baz=38,SNR=6.6
USRK Ussuriysk Ar. 37.55 2 P **P** **15 28 29.6 +0.8**
comp=Z,20nm,0.7s,baz=182,slow=7.9,SNR=51
USRK LR LR 15 44 45.4
comp=Z,375nm,18.6s,baz=198,slow=38
EIDS Eidsvold 37.66 148 P **P** **15 28 30.1 +0.2**
baz=38,SNR=8.2
EIDS Eidsvold 37.66 148 P **P** **15 28 30.1 +0.2**
MORW Morawa 37.92 200 P **P** **15 28 32.4 +0.3**
baz=38,SNR=8.1
MORW Morawa 37.92 200 P **P** **15 28 32.2 +0.1**
MORW IAmb IAmb 15 28 33.6
comp=Z,48nm,1.0s
MORW **PcP** **15 30 48.3 0.0**
MDJ Mudanjiang 37.94 359 P **P** **15 28 32.9 +0.8**
MDJ sP sP 15 28 35.7 +3.0
MDJ S **S** **15 34 29.0 +4.8**
MDJ pmax pmax
comp=Z,35nm,0.9s
MDJ pmax pmax
comp=Z,320nm,4.2s
MDJ Mudanjiang 37.94 359 P **P** **15 28 32.8 +0.7**
MDJ IAmb IAmb 15 28 36.4
comp=Z,48nm,1.0s
HHC Hu-ho-hao-te 38.01 337 P **P** **15 28 34.4 +1.5**
HHC sP pwP 15 28 44.2 +3.5
HHC S **S** **15 34 28.3 +2.7**
HHC sS ScP 15 34 35.7 -1.1
HHC pmax pmax
comp=Z,12nm,0.9s
HHC pmax pmax
comp=Z,110nm,6.4s
HHC LR LR
comp=Z,250nm,18.9s
HHC LR LR
comp=Z,220nm,17.6s
HHC LR LR
comp=Z,250nm,18.0s
COCO West Island 38.02 241 P **P** **15 28 32.9 -0.2**
COCO pmax pmax
comp=Z,764nm,2.0s
COCO West Island 38.02 241 P **P** **15 28 32.9 -0.2**
LZH Lanzhou 38.05 324 *e*P **P** **15 28 34.5 +1.1**
LZH pP pwP 15 28 37.6 -3.5
LZH sP sP 15 28 39.6 +5.7
LZH PP **PnPn** **15 30 04.5 +2.8**
LZH PcP **PcP** **15 30 49.8 +1.0**
LZH pmax pmax
comp=Z,36nm,1.3s
LZH pmax pmax
comp=Z,200nm,5.2s
LZH LR LR
comp=Z,480nm,13.8s
LZH LR LR
comp=Z,640nm,13.2s
LZH LR LR
comp=Z,690nm,16.3s
BTO Baotou 38.43 335 *e*P **P** **15 28 37.1 +0.7**
KMBL Kambalda 38.51 191 P **P** **15 28 37.4 +0.3**
baz=39,SNR=5.4
TEY Ternei 38.76 7 ⇑ *i*P **P** **15 28 40.1 +1.1**
TEY pmax pmax
comp=Z,200nm,1.6s
TEY pmax pmax
comp=N,70nm,0.9s
TEY pmax pmax
comp=Z,90nm,1.0s
TEY pmax pmax
comp=E,10.0nm,0.7s
ASAJ Asahikawa 38.99 14 P **P** **15 28 42.1 +1.3**
comp=E,40nm,0.8s,baz=219,slow=9.6,SNR=52
ASAJ LR LR 15 44 47.4
comp=E,482nm,19.5s,baz=236,slow=36
BLDU Ballidu 39.13 199 P **P** **15 28 42.7 +0.5**
baz=39,SNR=36
BBOO Buckleboo 39.52 172 P **P** **15 28 45.3 -0.1**
baz=40,SNR=25
BBOO Buckleboo 39.52 172 P **P** **15 28 45.2 -0.2**
BBOO IAmb IAmb 15 28 46.4
comp=Z,99nm,0.9s
STKA Stephens Creek 39.71 165 P **P** **15 28 46.9 -0.2**
baz=40,SNR=12
STKA Stephens Creek 39.71 165 P **P** **15 28 47.0 -0.1**
comp=Z,18nm,0.8s,baz=334,slow=8.3,SNR=18
STKA PcP **PcP** **15 30 53.4 -0.4**
comp=Z,9.7nm,0.8s,baz=306,slow=5.7,SNR=3.5
STKA LR LR 15 46 01.6
comp=Z,336nm,20.9s,baz=351,slow=38
STKA Stephens Creek 39.71 165 P **P** **15 28 46.5 -0.6**
STKA **PcP** **15 30 52.9 -0.9**
KLBR Kellerberrin 39.73 197 P **P** **15 28 47.7 +0.5**
baz=40,SNR=10
MUN Mundaring 40.55 198 P **P** **15 28 54.7 +0.7**
baz=41,SNR=20
HTT Hallett 40.60 169 P **P** **15 28 54.8 +0.3**
baz=41,SNR=8.8
CMSA Cobar Meteorol 40.65 159 P **P** **15 28 55.0 +0.1**
baz=41,SNR=11
NWAO Narrogin (SRO) 41.13 197 P **P** **15 29 00.0 +1.2**
baz=41,SNR=13
NWAO Narrogin (SRO) 41.13 197 P **P** **15 28 59.3 +0.5**
NWAO pmax pmax
comp=Z,124nm,0.8s
NWAO Narrogin (SRO) 41.13 197 P **P** **15 28 59.2 +0.4**
NWAO PcP **PcP** **15 30 58.0 -0.4**
NWAO Narrogin (SRO) 41.13 197 P **P** **15 28 59.1 +0.4**
NWAO IAmb IAmb 15 29 00.7
comp=Z,124nm,0.8s
NWAO PcP **PcP** **15 30 58.5 +0.2**
SHL Shillong 41.17 302 *ex* x 15 29 00.7
SHL *eP* **P** **15 29 00.7 +1.1**
SHL IAmb IAmb 15 29 04.7
comp=Z,55nm,0.4s
SHL Shillong 41.17 302 P **P** **15 28 59.7 +0.1**
SHL pmax pmax
comp=Z,61nm,0.8s
SHL Shillong 41.17 302 P **P** **15 28 59.7 +0.1**
SHL IAmb IAmb 15 29 04.3
comp=Z,61nm,0.8s
YSS Yuzh-Sakhalins 41.70 13 ⇑ *i*P **P** **15 29 04.3 +1.0**
YSS pmax pmax
comp=Z,90nm,0.8s
YSS MLR MLR
comp=Z,300nm,16.0s
YSS Yuzh-Sakhalins 41.70 13 P **P** **15 29 02.8 -0.5**
YSS IAmb IAmb 15 29 05.1
comp=Z,76nm,0.8s
ARMA Armidale 42.10 152 P **P** **15 29 07.8 +0.9**
baz=42,SNR=14
ARMA Armidale 42.10 152 P **P** **15 29 06.6 -0.3**
ARMA IAmb IAmb 15 29 08.9
comp=Z,86nm,1.3s
KLR Kul'dur 42.57 2 *c i*P **P** **15 29 11.0 +0.6**
KLR pmax pmax
comp=Z,63nm,1.1s
GTA Gaotai 42.65 325 ⇑P **P** **15 29 12.5 +1.1**
GTA pP pwP 15 29 19.5 +0.3
GTA sP sP 15 29 22.3 +10
GTA PcP **PcP** **15 31 04.4 +0.9**
GTA PcS **PcS** **15 34 54.2 -1.4**
GTA S **S** **15 35 33.4 -1.7**
GTA pmax pmax
comp=Z,18nm,1.0s
GTA pmax pmax
comp=Z,180nm,4.2s
GTA LR LR
comp=Z,250nm,16.5s
GTA LR LR
comp=Z,280nm,15.2s
GTA LR LR
comp=Z,480nm,15.6s
RKGY Rocky Gully 42.78 196 P **P** **15 29 14.3 +2.0**
baz=43,SNR=17
TARA Tarawa 42.92 95 P **P** **15 29 15.3 +1.5**
TARA IAmb IAmb 15 29 20.1
comp=Z,57nm,0.9s
LSA Lhasa 43.35 307 P **P** **15 29 17.9 +0.2**
LSA pmax pmax
comp=Z,19nm,0.8s
LSA Lhasa 43.35 307 P **P** **15 29 17.9 +0.2**
HIA Hailar 43.50 350 P **P** **15 29 18.0 0.0**
HIA 15 31 04.1
HIA pmax pmax
comp=Z,12nm,1.3s
HIA Hailar 43.50 350 P **P** **15 29 18.0 0.0**
HIA **PcP** **15 31 04.1 -1.8**
YNG Young 44.11 158 P **P** **15 29 23.9 +0.9**
baz=44,SNR=13
GRNR Gornyy 44.40 6 ⇑ *i*P **P** **15 29 26.6 +1.4**
GRNR *eS* **S** **15 36 05.0 +4.9**
GRNR pmax pmax
comp=Z,30nm,0.9s
GRNR smax smax
comp=N,2.0nm,1.0s
ARPS Mount Arapiles 44.43 167 P **P** **15 29 26.6 +1.0**
baz=45,SNR=19
CAN Canberra 45.24 158 P **P** **15 29 32.4 +0.2**
CAN pmax pmax
comp=Z,46nm,1.2s
CAN Canberra 45.24 158 P **P** **15 29 32.4 +0.2**
CAN IAmb IAmb 15 29 34.5
comp=Z,46nm,1.2s
CAN PcP **PcP** **15 31 13.7 +1.5**
TAPN Taplejung 45.30 302 *eP* **P** **15 29 34.1 +1.0**
comp=Z,184nm,0.8s
CNB Canberra Magne 45.37 158 P **P** **15 29 34.0 +0.8**
baz=46,SNR=10
TYV Tymovskoe 45.40 11 *eP* **P** **15 29 34.2 +1.1**
TYV pmax pmax
comp=Z,26nm,0.8s
ODAN Odare 45.41 302 *eP* **P** **15 29 34.7 +0.8**
comp=Z,142nm,0.8s
DZM Mont Dzumac 45.49 130 P **P** **15 29 34.6 +0.2**
DZM IAmb IAmb 15 29 35.9
comp=Z,23nm,0.8s
ULN Ulaanbaatar 45.67 338 *deP* **P** **15 29 36.5 +1.0**
ULN pmax pmax
comp=Z,67nm,1.1s
ULN Ulaanbaatar 45.67 338 P **P** **15 29 35.6 +0.1**
ULN IAmb IAmb 15 29 40.3

ULN PcP **PcP** **15 31 13.3 -0.3**
BOK Bokaro 45.84 297 *e*P **P** **15 29 38.8 +1.7**
BOK *i* x x 15 29 48.6
SONM Songino Array 45.89 338 P **P** **15 29 38.3 +1.1**
comp=Z,31nm,0.9s,baz=149,slow=9.0,SNR=125
SONM PcP **PcP** **15 31 14.8 +0.5**
comp=Z,12nm,0.8s,baz=162,slow=4.1,SNR=7.5
SONM ScP **ScP** **15 35 08.0 -0.1**
comp=Z,0.9nm,0.9s,baz=158,slow=1.6,SNR=2.9
SONM LR LR 15 50 23.4
comp=Z,365nm,18.7s,baz=280,slow=38
RAMN Ramite 46.11 301 *e*P **P** **15 29 40.8 +1.4**
comp=Z,184nm,0.8s
TOO Toolangi 46.14 163 P **P** **15 29 40.6 +1.4**
baz=46,SNR=18
TOO Toolangi 46.14 163 P **P** **15 29 39.8 +0.6**
TOO pmax pmax
comp=E,81nm,1.4s
TOO Toolangi 46.14 163 P **P** **15 29 39.8 +0.6**
JIRN Jiri 46.67 302 *e*P **P** **15 29 44.9 +0.9**
comp=Z,195nm,0.8s
LHI Lord Howe Isla 46.82 146 P **P** **15 29 45.5 +0.9**
MILA Mila 46.85 159 P **P** **15 29 46.0 +1.2**
baz=47,SNR=5.4
GUN Gumba 47.02 302 *e*P **P** **15 29 47.4 +0.7**
comp=Z,228nm,1.0s
ZEA Zeya 47.13 358 *e*P **P** **15 29 46.1 -0.6**
ZEA pmax pmax
comp=Z,24nm,1.6s
PKI Pulchoki 47.31 302 *e*P **P** **15 29 49.2 +0.3**
comp=Z,75nm,1.1s
PKIN Phulchoki 47.32 302 *e*P **P** **15 29 49.3 +0.4**
comp=Z,54nm,0.9s
KKN Kakani 47.48 302 *e*P **P** **15 29 50.4 +0.2**
comp=Z,105nm,1.0s
DMN Daman 47.57 302 *e*P **P** **15 29 51.3 +0.4**
comp=Z,114nm,1.1s
GKN Gorkha 48.09 302 *e*P **P** **15 29 55.1 +0.3**
comp=Z,96nm,1.1s
KOLN Koldanda 48.90 301 *e*P **P** **15 30 01.8 +0.7**
comp=Z,166nm,0.8s
DANN Dangsing 48.93 302 *e*P **P** **15 30 02.0 +0.6**
comp=Z,223nm,0.9s
ZAK Zakamensk 49.16 337 *e*P **P** **15 30 03.2 +0.7**
ZAK pmax pmax
comp=Z,11nm,1.0s
PYUN Piuthan 49.51 302 *e*P **P** **15 30 06.7 +0.9**
comp=Z,297nm,1.1s
TLY Talaya 50.07 339 *e*P **P** **15 30 10.6 +1.2**
TLY pmax pmax
comp=Z,82nm,1.3s
TLY Talaya 50.07 339 P **P** **15 30 10.0 +0.6**
TLY IAmb IAmb 15 30 14.3
comp=Z,62nm,1.6s
IRK Irkutsk 50.31 340 *e*P **P** **15 30 10.8 -0.4**
IRK pmax pmax
comp=Z,80nm,2.0s
MOY Mondy 51.05 337 *e*P P 15 30 28.9 +12
MOY pmax pmax
comp=Z,154nm,2.3s
FUNA Funafuti 51.10 106 P **P** **15 30 17.4 -0.3**
FUNA PcP **PcP** **15 31 34.7 +1.2**
HYB Hyderabad 51.51 287 *i* P **P** **15 30 23.0 +2.1**
PETK Petropavlovsk- 51.58 21 P **P** **15 30 22.0 +1.3**
comp=Z,18nm,0.7s,baz=171,slow=3.1,SNR=37
TAU Tasmania Unive 51.61 164 P **P** **15 30 20.4 -0.7**
TAU pmax pmax
comp=Z,166nm,1.9s
TAU Tasmania Unive 51.61 164 P **P** **15 30 20.4 -0.7**
PET Petropavlovsk 51.85 21 *e*P **P** **15 30 26.3 +3.6**
PET pmax pmax
comp=Z,56nm,1.3s
PET Petropavlovsk 51.85 21 P **P** **15 30 24.4 +1.6**
PET IAmb IAmb 15 30 28.9
comp=Z,82nm,1.3s
WMQ Urumqi 52.54 322 *e*P **P** **15 30 29.7 +1.6**
WMQ pP sP 15 30 31.7 +3.0
WMQ sP pwP 15 30 39.7 +3.8
WMQ pmax pmax
comp=Z,36nm,1.3s
WMQ pmax pmax
comp=Z,130nm,3.7s
WMQ LR LR
comp=Z,670nm,29.1s
WMQ LR LR
comp=Z,1μm,28.8s
WMQ LR LR
comp=Z,250nm,24.7s
WMQ Urumqi 52.54 322 P **P** **15 30 29.4 +1.2**
WMQ pmax pmax
comp=Z,44nm,0.9s
WMQ Urumqi 52.54 322 P **P** **15 30 29.4 +1.2**
WMQ IAmb IAmb 15 30 32.9
comp=Z,44nm,0.9s
BOD Bodaibo 52.69 349 *e*P **P** **15 30 33.6 +4.7**
BOD pmax pmax
comp=Z,33nm,1.6s
MSVF Nonsavu 53.05 118 P **P** **15 30 33.4 +1.1**
MSVF pmax pmax
comp=Z,44nm,1.0s
MSVF Nonsavu 53.05 118 P **P** **15 30 33.4 +1.1**
MSVF IAmb IAmb 15 30 35.8
comp=Z,44nm,0.9s
BHPL Bhopal 53.32 294 *e*P **P** **15 30 34.7 +0.4**
BHPL IAmb IAmb 15 30 39.1
comp=Z,23nm,0.8s
MIDW Midway 54.01 60 P **P** **15 30 39.1 0.0**
DDI Dehra Dun 54.26 303 *e*P **P** **15 30 42.1 +1.1**
MA2 Magadan 55.20 13*c i*P **P** **15 30 48.1 +0.8**
MA2 pmax pmax
comp=Z,41nm,0.8s
MA2 Magadan 55.20 13 P **P** **15 30 47.6 +0.3**
MA2 IAmb IAmb 15 30 51.8
comp=Z,43nm,0.8s
YAK Yakutsk 55.39 360 *e*P **P** **15 30 48.5 0.0**
YAK pmax pmax
comp=Z,32nm,0.9s
YAK pmax pmax
comp=N,28nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK Yakutsk 55.39 360 P **P** **15 30 48.3 -0.2**
YAK PcP **PcP** **15 31 48.5 -0.3**
DGZ Jazzator, Alta 55.97 328*c i*P **P** **15 30 54.1 +0.9**
DGZ pmax pmax
comp=Z,37nm,1.4s
POO Poona 56.07 288 *e*P **P** **15 30 54.0 -0.2**
POO IAmb IAmb 15 30 58.6
comp=Z,11nm,0.5s
DHRM DHARAMSHALA 56.21 305 *e*P **P** **15 30 55.2 -0.1**
MK31 Makanchi Array 57.33 323 *e*P **P** **15 31 03.0 +0.2**
MKAR Makanchi Array 57.33 323 P **P** **15 31 03.5 +0.8**
comp=Z,31nm,0.6s,baz=116,slow=8.1,SNR=274
MAKZ Makanchi 57.53 323 P **P** **15 31 04.4 +0.3**
MAKZ pmax pmax
comp=Z,45nm,0.8s
MAKZ Makanchi 57.53 323 P **P** **15 31 04.4 +0.3**
MAKZ IAmb IAmb 15 31 08.2
comp=Z,45nm,0.8s
PRZ Przheval'sk 57.95 317 P **P** **15 31 08.8 +1.4**
PRZ pmax pmax
comp=Z,149nm,1.5s
PRZ Przheval'sk 57.95 317 P **P** **15 31 08.8 +1.4**
OUZ Omahuta 58.25 139 P **P** **15 31 10.5 +1.2**
OUZ IAmb IAmb 15 31 12.5
comp=Z,43nm,1.4s
SMY Shemya 58.33 30 P **P** **15 31 11.0 +1.4**
SMY pmax pmax
comp=Z,437nm,1.7s
SMY Shemya 58.33 30 P **P** **15 31 11.0 +1.4**
SEY Seymchan 58.58 12⇑ *e*P **P** **15 31 13.0 +1.9**
KSH Kashi 58.60 313 P **P** **15 31 14.1 +2.2**
KSH PcP **PcP** **15 32 06.0 +3.9**
KSH PP **PP** **15 33 25.8 +4.2**
KSH PcS **PcS** **15 36 02.5 -1.4**
KSH S **S** **15 39 16.7 0.0**
KSH SS **SS** **15 43 12.3 +2.9**
KSH pmax pmax
comp=Z,33nm,0.7s
KSH pmax pmax
comp=Z,460nm,4.9s
KSH LR LR
comp=Z,270nm,8.2s
KSH LR LR
comp=Z,290nm,5.6s
KSH LR LR
comp=Z,600nm,12.8s
KDJ Kajisay 58.65 316 P **P** **15 31 12.9 +0.6**
KDJ pmax pmax
comp=Z,30nm,1.0s
KDJ Kajisay 58.65 316 P **P** **15 31 12.9 +0.6**
KDJ IAmb IAmb 15 31 16.8
comp=Z,30nm,1.0s
KNTN Kanton 58.73 97 P **P** **15 31 14.6 +1.6**
NRN Naryn 59.23 315 P **P** **15 31 16.8 +0.3**
NRN pmax pmax
comp=Z,26nm,1.2s
NRN Naryn 59.23 315 P **P** **15 31 16.8 +0.3**
NRN IAmb IAmb 15 31 20.7
comp=Z,26nm,1.1s
ULHL Ulahol 59.35 316 P **P** **15 31 18.1 +0.9**
SNR=20
BOOM Boomskoye usch 59.64 316 P **P** **15 31 19.2 0.0**
BOOM pmax pmax
comp=Z,24nm,1.2s
BOOM Boomskoye usch 59.64 316 P **P** **15 31 19.2 0.0**
BOOM IAmb IAmb 15 31 23.5
comp=Z,24nm,1.2s
ZALV Zalesovo Beam 59.75 331 P **P** **15 31 19.4 -0.1**
comp=Z,20nm,0.8s,baz=110,slow=6.3,SNR=58
ZALV Zalesovo Beam 59.75 331 *i* P **P** **15 31 19.2 -0.2**
ZALV pmax pmax
comp=Z,20nm,0.8s
KZA Kyzart 59.98 315 P **P** **15 31 22.6 +0.9**
SNR=41
TKM2 Tokmak 2 60.03 316 P **P** **15 31 22.6 +0.8**
SNR=23
KBK Karagaybulak 60.39 316 P **P** **15 31 28.1 +3.9**
SNR=13
UCH Uchtor 60.54 315 P **P** **15 31 27.1 +1.4**
SNR=67
CHMS Chumysh 60.64 316 P **P** **15 31 26.1 +0.3**
SNR=14
FRU1 Bishkek 60.66 316 P **P** **15 31 26.6 +0.6**
FRU1 pmax pmax
comp=Z,20nm,0.5s
FRU1 Bishkek 60.66 316 P **P** **15 31 26.6 +0.6**
FRU1 IAmb IAmb 15 32 53.9
comp=Z,20nm,0.5s
AAK Ala-Archa 60.70 316 P **P** **15 31 27.1 +0.8**
comp=Z,4.6nm,0.8s,baz=97,slow=6.8,SNR=12
AAK PcP **PcP** **15 32 10.8 +0.3**
comp=Z,4.1nm,0.5s,baz=113,slow=3.8,SNR=7.5
AAK Ala-Archa 60.70 316⇓ *i*P **P** **15 31 27.4 +1.1**
AAK pmax pmax
comp=Z,30nm,1.7s
AAK Ala-Archa 60.70 316 P **P** **15 31 26.4 0.0**
USP Ospenovka 60.91 316 P **P** **15 31 28.3 +0.7**
SNR=16
HIZ Hauiti 61.03 141 P **P** **15 31 29.5 +1.1**
AFI Afiamalu 61.06 110 P **P** **15 31 29.1 -0.1**
AFI Afiamalu 61.06 110 P **P** **15 31 29.1 -0.1**
AFI IAmb IAmb 15 31 32.2
comp=Z,33nm,0.9s
QRZ Quartz Range 61.07 144 P **P** **15 31 28.9 +0.3**
QRZ IAmb IAmb 15 31 30.1
comp=Z,37nm,1.0s
AML Almayashu 61.09 315 P **P** **15 31 30.4 +1.1**
SNR=50
EKS2 Erkin-Say 61.20 315 P **P** **15 31 30.8 +1.0**
SNR=30
RAO Raoul Island 61.25 128 P **P** **15 31 31.0 +0.9**
RAO Raoul Island 61.25 128 P **P** **15 31 31.0 +0.9**
KURK Kurchatov 61.33 325*c i*P **P** **15 31 30.6 +0.4**
KURK pmax pmax
comp=Z,146nm,1.7s
KURK Kurchatov 61.33 325 P **P** **15 31 30.2 0.0**
KURBB Kurchatov Arra 61.34 325 P **P** **15 31 30.8 +0.5**
comp=Z,35nm,0.7s,baz=123,slow=5.7,SNR=345
KURBB Kurchatov Arra 61.34 325 P **P** **15 31 30.5 +0.2**
FOZ Fox Glacier 61.38 148 P **P** **15 31 31.5 +0.9**
DCZ Deep Cove 61.42 151 P **P** **15 31 31.4 +0.5**
DCZ IAmb IAmb 15 31 35.0
comp=Z,48nm,1.2s
PYZ Puysegur Point 61.71 152 P **P** **15 31 32.8 -0.1**
MLZ Mavora Lakes 61.81 151 P **P** **15 31 33.3 -0.3**
NNZ Nelson 61.81 144 P **P** **15 31 33.3 -0.3**
NNZ IAmb IAmb 15 32 29.6
comp=Z,32nm,1.1s
WKZ Wanaka 61.87 150 P **P** **15 31 35.9 +1.9**
THZ Tophouse 61.89 145 P **P** **15 31 33.6 -0.6**
THZ IAmb IAmb 15 31 34.6
comp=Z,24nm,0.7s
WHZ Wether Hill Ro 62.11 151 P **P** **15 31 36.1 +0.6**
RPZ Rata Peaks 62.16 148 P **P** **15 31 35.8 -0.1**
RPZ IAmb IAmb 15 31 40.5
comp=Z,20nm,0.9s
LBZ Lake Benmore 62.16 149 P **P** **15 31 35.4 -0.5**
LTZ Lake Taylor 62.20 146 P **P** **15 31 35.5 -0.7**
LTZ IAmb IAmb 15 31 37.5
comp=Z,49nm,1.5s
TUWZ Tuamarina 62.27 144 P **P** **15 31 35.8 -0.9**
URZ Urewera 62.32 140 P **P** **15 31 36.3 -0.8**
URZ IAmb IAmb 15 31 37.9
comp=Z,19nm,1.0s
BSWZ Blackbirch Sta 62.42 144 P **P** **15 31 36.3 -1.4**
OXZ Oxford 62.43 147 P **P** **15 31 37.3 -0.4**
BKZ Black Stump Fm 62.45 141 P **P** **15 31 38.1 0.0**
BKZ IAmb IAmb 15 31 39.2
comp=Z,27nm,0.8s
KIWB Kanaga Island 62.46 34 P **P** **15 31 39.3 +1.5**
CMWZ Cape Campbell 62.63 144 P **P** **15 31 38.8 -0.3**
SNZO South Karori 62.65 144 P **P** **15 31 38.9 -0.4**
GAR Garm 62.65 311 P **P** **15 31 39.6 0.0**
KHZ Kahutara 62.67 145 P **P** **15 31 38.9 -0.5**
KHZ IAmb IAmb 15 31 41.6
comp=Z,23nm,0.9s
MXZ Matakaoa Point 62.71 138 P **P** **15 31 40.1 +0.4**
MQZ McQueen's Vall 63.01 147 P **P** **15 31 41.6 0.0**
MQZ PcP **PcP** **15 32 19.8 +0.2**
PLWZ Palliser 63.13 143 P **P** **15 31 41.9 -0.6**
BFZ Birch Farm 63.19 142 P **P** **15 31 43.3 +0.4**
CHGR Chuyangaron 63.45 310 P **P** **15 31 44.2 -0.6**
KK31 Karatay Array 63.62 315 *i* P **P** **15 31 45.6 -0.2**
KKAR Karatay Array 63.62 315 P **P** **15 31 45.5 -0.3**
KKAR pmax pmax
comp=Z,45nm,1.1s
KKAR Karatay Array 63.62 315 P **P** **15 31 45.5 -0.3**
TAS Tashkent 64.00 313 P **P** **15 31 48.8 +0.5**
TAS pmax pmax
comp=Z,57nm,0.7s
TAS Tashkent 64.00 313 P **P** **15 31 48.8 +0.5**
OTUK Ortayu 64.06 321 P **P** **15 31 47.6 -1.0**
NIUE Niue 64.23 115 P **P** **15 31 49.0 -1.1**
ATKA Atka Island 64.25 34 P **P** **15 31 50.1 +0.4**
TIXI Tiksi 65.05 360⇓ *i*P **P** **15 31 54.6 0.0**
TIXI pmax pmax
comp=Z,51nm,1.7s
TIXI Tiksi 65.05 360 P **P** **15 31 53.7 -0.9**
TIXI IAmb IAmb 15 31 56.3
comp=Z,25nm,0.9s
MCQ Macquarie Isla 65.40 162 P **P** **15 31 57.7 +0.7**
MCQ pmax pmax
comp=Z,321nm,1.6s
MCQ Macquarie Isla 65.40 162 P **P** **15 31 57.7 +0.7**
BILL Bilibino 66.00 14*c i*P **P** **15 32 01.0 +0.2**
BILL *e* 15 32 32.7
BILL *e* 15 34 24.4
BILL pmax pmax
comp=Z,26nm,1.7s
BILL MLR MLR
comp=Z,303nm,19.0s
BILL Bilibino 66.00 14 P **P** **15 32 00.7 -0.1**
BVAR Borovoye Array 66.93 325 P **P** **15 32 07.4 +0.4**
comp=Z,21nm,0.7s,baz=111,slow=8.1,SNR=72
BRVK Borovoye 67.00 325*ce*P **P** **15 32 07.6 +0.1**
BRVK pmax pmax
comp=Z,20nm,0.6s
BRVK Borovoye 67.00 325 P **P** **15 32 07.0 -0.5**
NIKH Nikolski High 67.56 35 P **P** **15 32 10.8 -0.2**
NRIK Noril'sk 68.59 345 P **P** **15 32 17.4 +0.3**
comp=Z,14nm,0.7s,baz=120,slow=6.6,SNR=42
NRIK PcP **PcP** **15 32 41.9 -0.3**
comp=Z,17nm,0.9s,baz=192,slow=3.4,SNR=6.2
NRIK LR LR 16 04 55.4
comp=Z,540nm,18.6s,baz=122,slow=38
UNV Unalaska Valle 69.18 34 P **P** **15 32 21.3 +0.2**
AKUT Akutan 69.68 34 P **P** **15 32 23.5 -0.7**
GEYT Alibeck 71.88 308 P **P** **15 32 39.1 +1.0**
comp=Z,17nm,0.8s,baz=129,slow=4.0,SNR=24
GEYT LR LR 16 07 33.9
comp=Z,104nm,20.2s,baz=70,slow=39
UOSS Minazif 72.77 294 P **P** **15 32 42.5 -1.0**
SDPT Sand Point 72.96 34 P **P** **15 32 43.5 -0.6**
SVE Sverdlovsk 73.43 327⇓ *e*P **P** **15 32 47.2 +0.4**
SVE pmax pmax
comp=Z,56nm,1.0s
AKTO Aktyubinsk 73.66 321 P **P** **15 32 48.6 +0.3**
comp=Z,8.1nm,0.7s,baz=92,slow=6.8,SNR=17
AKTO LR LR 16 07 40.9
comp=Z,173nm,20.6s,baz=84,slow=38
CASY Casey 74.02 188 P **P** **15 32 49.6 -0.4**
CASY IAmb IAmb 15 33 16.6
comp=Z,54nm,1.1s
CHGN Chignik 74.31 33 P **P** **15 32 51.7 -0.3**
CHGN IAmb IAmb 15 32 54.0
comp=Z,32nm,1.0s
ARU Arti 74.46 327*c i*P **P** **15 32 52.4 -0.5**
ARU 15 33 07.6
ARU S **S** **15 42 28.9 +0.8**
ARU SS **SS** **15 47 08.1 -6.2**
ARU pmax pmax
comp=Z,37nm,0.8s
ARU Arti 74.46 327 P **P** **15 32 52.1 -0.8**
ARU IAmb IAmb 15 32 56.0
comp=Z,35nm,0.7s
SOCY Socotra 75.20 281 P **P** **15 32 56.5 -1.6**
SOCY IAmb IAmb 15 33 00.6
comp=Z,30nm,0.9s
RDOG Red Dog Mine 75.45 21 P **P** **15 32 59.1 +0.8**
RDOG IAmb IAmb 15 33 03.2
comp=Z,30nm,1.1s
OHAK Old Harbor 77.25 33 P **P** **15 33 09.2 +0.4**
OHAK IAmb IAmb 15 33 10.8
comp=Z,28nm,1.1s
KDAK Kodiak Island 77.70 32 P **P** **15 33 12.2 +0.9**
comp=Z,15nm,0.8s,baz=281,slow=2.1,SNR=14
KDAK Kodiak Island 77.70 32 P **P** **15 33 12.1 +0.8**
KDAK IAmb IAmb 15 33 13.3
comp=Z,35nm,1.2s
PPLA Purkeypile 78.58 27 P **P** **15 33 16.8 +0.5**
PPLA IAmb IAmb 15 33 22.5
comp=Z,67nm,1.9s
CNPM China Poot 78.61 31 P **P** **15 33 16.4 +0.1**
CNPM IAmb IAmb 15 33 17.6
comp=Z,23nm,0.9s
BRLK Bradley Lake 78.81 30 P **P** **15 33 16.9 -0.5**
BRLK IAmb IAmb 15 33 21.0
comp=Z,34nm,1.0s
KTH Kantishna Hill 79.24 27 P **P** **15 33 19.6 -0.2**
BPAW Bear Paw Mtn. 79.28 26 P **P** **15 33 19.7 -0.3**
BPAW IAmb IAmb 15 33 21.8
comp=Z,29nm,0.9s
MLY Manley 79.50 25 P **P** **15 33 21.3 +0.1**
MLY IAmb IAmb 15 33 23.1
comp=Z,24nm,0.8s
TRF Thorofare Moun 79.51 27 P **P** **15 33 21.2 -0.2**
TRF IAmb IAmb 15 33 23.4
comp=Z,26nm,0.9s
RC01 Rabbit Creek A 79.52 29 P **P** **15 33 21.0 -0.3**
PMR Palmer 79.85 29 P **P** **15 33 22.0 -1.0**
PMR pmax pmax
comp=Z,19nm,0.8s
PMR Palmer 79.85 29 P **P** **15 33 22.0 -1.0**
BWN Browne 79.95 26 P **P** **15 33 24.8 +1.3**
BWN IAmb IAmb 15 33 27.2
comp=Z,44nm,0.9s
GHO Glory Hole Cre 79.97 28 P **P** **15 33 23.0 -0.8**
COLD Coldfoot 79.99 23 P **P** **15 33 23.9 +0.2**
MCK McKinley 80.14 26 P **P** **15 33 24.3 -0.3**
MCK pmax pmax
comp=Z,43nm,0.8s
MCK McKinley 80.14 26 P **P** **15 33 24.3 -0.3**
MCK IAmb IAmb 15 33 25.8
comp=Z,43nm,0.8s
RND Reindeer 80.14 27 P **P** **15 33 24.0 -0.7**
RND pmax pmax
comp=Z,38nm,1.1s
RND Reindeer 80.14 27 P **P** **15 33 23.9 -0.7**
RND IAmb IAmb 15 33 27.6
comp=Z,38nm,1.1s
NEA Nenana 80.16 26 P **P** **15 33 24.3 -0.3**
NEA IAmb IAmb 15 33 27.1
comp=Z,26nm,0.8s
KNK Knik Glacier 80.16 29 P **P** **15 33 25.0 +0.2**
KNK IAmb IAmb 15 33 25.9
comp=Z,22nm,0.6s
SML Sawmill 80.25 28 P **P** **15 33 25.5 +0.2**
SML IAmb IAmb 15 33 28.9
comp=Z,27nm,0.9s
TOLK Toolik Lake Re 80.40 21 P **P** **15 33 27.4 +1.5**
baz=263
TOLK Toolik Lake Re 80.40 21 P **P** **15 33 26.5 +0.6**
TOLK IAmb IAmb 15 33 28.5
comp=Z,35nm,0.8s
MDM Murphy Dome 80.55 25 P **P** **15 33 27.2 +0.4**
WRH Wood River Hil 80.57 26 P **P** **15 33 26.9 +0.1**
TCOL CIGO, UAF Yank 80.70 25 P **P** **15 33 27.4 -0.1**
baz=266
COLA College 80.71 25*c i*P **P** **15 33 27.2 -0.4**
COLA pmax pmax
comp=Z,10.0nm,0.8s
COLA College 80.71 25 P **P** **15 33 27.4 -0.2**
CCB Clear Creek Bu 80.71 26 P **P** **15 33 27.3 -0.3**
SCM Sheep Creek Mo 80.73 28 P **P** **15 33 28.3 +0.4**
SCM pmax pmax
comp=Z,30nm,0.8s
SCM Sheep Creek Mo 80.73 28 P **P** **15 33 28.3 +0.4**
SCM IAmb IAmb 15 33 29.6
comp=Z,30nm,0.8s
GLI Glacier Island 80.78 29 P **P** **15 33 28.1 0.0**
GLI IAmb IAmb 15 33 29.5
comp=Z,20nm,0.7s
DHY Denali Highway 80.78 27 P **P** **15 33 28.6 +0.4**
POKR Poker Plat Res 80.90 25 P **P** **15 33 29.9 +1.3**
baz=266
HIN Hinchinbrook I 81.05 30 P **P** **15 33 29.9 +0.3**
HDA Harding Lake 81.06 26 P **P** **15 33 29.0 -0.6**
baz=266
HDA Harding Lake 81.06 26 P **P** **15 33 28.6 -0.9**
HDA IAmb IAmb 15 33 31.0
comp=Z,17nm,0.7s
FID Port Fidalgo 81.08 30 P **P** **15 33 29.6 -0.1**
ILAR Eielson Array 81.11 25 P **P** **15 33 29.5 -0.3**
comp=Z,4.9nm,0.6s,baz=244,slow=6.9,SNR=73
ILAR PKKPbc **PKKPbc** **15 52 06.4 -2.5**
comp=Z,1.0nm,0.9s,baz=90,slow=0.9,SNR=7.3
EYAK Cordova Ski Ar 81.43 30 P **P** **15 33 31.4 -0.1**
GROC Groznyy 81.49 313 *e*P **P** **15 33 32.0 -0.2**
GROC *e* 15 33 40.3
GROC *e* 15 36 39.8
GROC pmax pmax
comp=Z,37nm,1.2s
PRGR Permogore 81.71 331 *e*P **P** **15 33 32.3 -0.7**
PRGR pmax pmax
comp=Z,40nm,0.9s
FYU Fort Yukon 81.89 24 P **P** **15 33 35.1 +1.3**
FYU IAmb IAmb 15 33 36.7
comp=Z,42nm,1.0s
RIDG Independent Ri 81.95 27 P **P** **15 33 34.3 0.0**
RIDG IAmb IAmb 15 33 36.8
comp=Z,27nm,1.0s
HMT Hamilton 82.16 30 P **P** **15 33 34.7 -0.7**
DOT Dot Lake 82.30 27 P **P** **15 33 36.6 +0.4**
TBLG Delisi 82.31 311 P **P** **15 33 36.9 +0.3**
TBLG pmax pmax
comp=Z,17nm,0.7s
TBLG Delisi 82.31 311 P **P** **15 33 36.9 +0.3**
TBLG IAmb IAmb 15 33 37.9
comp=Z,17nm,0.7s
SCRK Sand Creek 82.34 26 P **P** **15 33 36.4 0.0**
GLB Gilahina Butte 82.39 29 P **P** **15 33 37.0 +0.3**
GLB IAmb IAmb 15 33 41.8
comp=Z,19nm,0.9s
MENT Mentasta 82.45 27 P **P** **15 33 37.3 +0.4**
GUDG Gudauri 82.47 312 P **P** **15 33 39.7 +2.0**
VRDI Verde Repeater 82.56 29 P **P** **15 33 38.0 +0.3**
PPT Papeete 82.71 109 LR LR 16 01 39.2
comp=Z,145nm,21.1s,baz=256,slow=29
CRQM Cirque 82.72 30 P **P** **15 33 38.8 +0.3**
CRQM IAmb IAmb 15 33 41.5
comp=Z,20nm,0.9s
MCARA McCarthy VSAT 82.77 29 P **P** **15 33 39.4 +0.8**

MCARA IAmb IAmb 15 33 43.4
comp=Z,17nm,0.9s
WAX Waxell Ridge 82.86 30 P P 15 33 39.6 +0.4
WAX IAmb IAmb 15 33 41.4
comp=Z,42nm,1.4s
TGL Tana Glacier 82.87 30 P P 15 33 39.9 +0.7
TGL IAmb IAmb 15 33 41.8
comp=Z,14nm,0.8s
ZEI Tsey 82.89 312 *e*P pmax P 15 33 39.1 -0.8
ZEI pmax
comp=Z,11nm,0.6s
NCK Nalchik 83.08 313⇓ *e*P pmax P 15 33 40.9 +0.3
NCK pmax
comp=Z,14nm,0.6s
BALM Baldy 83.10 29 P P 15 33 40.8 +0.4
AKH Akhalkalaki 83.25 311 ⇓P P 15 33 43.2 +1.4
AKH Akhalkalaki 83.25 311 P P 15 33 42.4 +0.6
AKH pmax pmax
comp=Z,16nm,0.7s
AKH Akhalkalaki 83.25 311 P P 15 33 42.4 +0.6
AKH IAmb IAmb 15 33 44.5
comp=Z,16nm,0.7s
BARN Barnard Glacie 83.44 29 P P 15 33 43.1 +0.8
BARN IAmb IAmb 15 33 45.4
comp=Z,12nm,0.6s
EGAK Eagle 83.56 26 P P 15 33 43.2 +0.6
KBZ Khabaz 83.58 313 P P 15 33 44.4 +1.3
comp=Z,4.1nm,0.9s,baz=129,slow=5.6,SNR=6.0
CTGM Chitina Glacie 83.60 29 P P 15 33 44.6 +1.5
CTGM IAmb IAmb 15 34 43.2
comp=Z,25nm,0.9s
KARS Kars 83.60 310 P P 15 33 46.3 +2.8
KIV Kislovodsk 83.72 313 *e*P P 15 33 44.5 +0.5
KIV pmax pmax
comp=Z,32nm,1.0s
NEY Neytrino 83.73 313⇓ *e*P P 15 33 46.1 +1.9
NEY pmax pmax
comp=Z,3.0nm,0.8s
DAWY Dawson 84.36 26 P P 15 33 47.8 +1.0
BCA Borcka 84.65 311 ⇓P P 15 33 49.0 +0.2
KLMR Klimovskoe 84.67 331 *e*P P 15 33 45.7 -2.6
KLMR pmax pmax
comp=Z,114nm,1.3s
KLMR Klimovskoe 84.67 331 *e*P P 15 33 45.7 -2.6
KLMR AMP 15 33 49.3
comp=Z,114nm,1.3s
TMCR Tamitsa 85.11 334 *e*P P 15 33 49.8 -0.6
TMCR pmax pmax
comp=Z,92nm,0.9s
EPYK Eagle Plains 85.31 24 P P 15 33 52.5 +1.0
baz=276
EPYK Eagle Plains 85.31 24 P P 15 33 51.9 +0.4
EPYK IAmb IAmb 15 33 56.1
comp=Z,34nm,1.4s
HYT Haines Junctio 85.48 29 P P 15 33 53.6 +1.1
HYT IAmb IAmb 15 33 55.1
comp=Z,23nm,0.7s
ABPO Ambohimpanom 85.49 250 P P 15 33 53.7 +0.2
ABPO pmax pmax
comp=Z,14nm,0.9s
ABPO Ambohimpanom 85.49 250 P P 15 33 53.7 +0.2
ABPO IAmb IAmb 15 33 57.5
comp=Z,14nm,0.9s
VORR Voronezh 85.54 321 *e*P P 15 33 52.0 -0.8
VORR pmax pmax
comp=Z,300nm,1.4s
VSR Storozhevoye 85.60 321 *ce*P P 15 33 52.8 -0.4
VSR pmax pmax
comp=Z,166nm,1.6s
VNDA Vanda 85.77 173 P P 15 33 53.4 0.0
comp=Z,2.0nm,0.6s,baz=324,slow=6.7,SNR=9.1
VNDA LR LR 16 12 09.6
comp=Z,313nm,18.7s,baz=278,slow=36
SOC Sochi 85.89 313 *e*P P 15 33 53.8 -1.0
SOC *e* 15 37 16.2
SOC *e*S S 15 44 18.4 -10
SOC *e*SSS SSS 15 53 32.3
SOC pmax pmax
comp=Z,21nm,0.7s
LVZ Lovozero 86.08 338 *de*P P 15 33 54.9 -0.4
LVZ pmax pmax
comp=Z,29nm,0.9s
LVZ Lovozero 86.08 338 P P 15 33 54.5 -0.8
LVZ IAmb IAmb 15 33 56.0
comp=Z,26nm,0.8s
MOS Moscow 86.10 326 *e*P P 15 33 54.0 -1.5
MOS pmax pmax
comp=Z,39nm,0.8s
ATD Arta Tunnel 86.12 281 P P 15 33 57.2 +0.6
ATD IAmb IAmb 15 34 01.4
comp=Z,30nm,1.1s
INK Inuvik 86.31 22 P P 15 33 56.3 0.0
comp=Z,6.1nm,0.7s,baz=291,slow=4.6,SNR=34
INK Inuvik 86.31 22 P P 15 33 55.9 -0.4
APA Apatity 86.60 338⇓ *i*P P 15 33 56.7 -1.1
APA pmax pmax
comp=Z,34nm,0.9s
SKAG Skagway 86.70 31 P P 15 33 59.5 +1.1
SKAG IAmb IAmb 15 34 01.3
comp=Z,22nm,0.8s
OBN Obninsk 86.77 325 *ce*P P 15 33 57.9 -0.9
OBN *e* 15 34 01.4
OBN *e* 15 37 24.1
OBN *e*SS SS 15 50 20.1 +2.1
OBN pmax pmax
comp=Z,57nm,1.7s
OBN MLR MLR
comp=Z,178nm,21.0s
WHY Whitehorse 86.78 29 P P 15 33 59.8 +0.9
WHY IAmb IAmb 15 34 01.7
comp=Z,21nm,0.8s
BESE Bessie Mountai 87.06 32 P P 15 33 59.5 -0.8
JIS Juneau Island 87.35 32 P P 15 34 02.4 +0.8
JIS IAmb IAmb 15 34 04.5
comp=Z,16nm,0.9s
MAW Mawson 87.57 201 P P 15 34 03.3 +1.0
baz=88,SNR=10.0
MAW Mawson 87.57 201 P P 15 34 02.9 +0.6
comp=Z,26nm,0.9s,baz=57,slow=6.1,SNR=19
MAW Mawson 87.57 201 P P 15 34 02.9 +0.6
A36M Sachs Harbour 88.30 18 P P 15 34 06.1 +0.3
baz=286
SPA0 Spitsbergen Ar 88.41 349 *e*P P 15 34 05.0 -1.3
SPITS Spitsbergen Ar 88.41 349 P P 15 34 05.8 -0.6
comp=Z,14nm,0.8s,baz=87,slow=7.6,SNR=14
KEV Kevo 88.45 340 P P 15 34 05.8 -0.8
KEV pmax pmax
comp=Z,25nm,0.8s
KEV Kevo 88.45 340 P P 15 34 05.8 -0.8
GAZ Gaziantep 88.47 307 P P 15 34 07.3 -0.3
GAZ IAmb IAmb 15 34 12.0
comp=Z,18nm,0.8s
KBS Kingsbay 88.86 350 *de*P P 15 34 08.2 -0.2
KBS pmax pmax
comp=Z,35nm,1.7s
KBS Kingsbay 88.86 350 *e*P P 15 34 08.0 -0.5
ARCES ARCESS Array B 89.02 340 P P 15 34 08.9 -0.4
comp=Z,67nm,0.8s,baz=87,slow=5.5,SNR=172
ARCES LR LR 16 20 49.1
comp=Z,109nm,18.2s,baz=108,slow=40
ARE0 ARCESS Array S 89.02 340 *e*P P 15 34 08.8 -0.6
HAMF Hammerfest 89.29 341 *e*P P 15 34 09.7 -0.8
C36M Paulatuk 89.43 20 P P 15 34 11.0 -0.2
baz=287
DLBC Dease Lake 89.58 31 P P 15 34 13.0 +0.7
comp=Z,1.1nm,0.5s,baz=302,slow=9.4,SNR=3.9
DLBC Dease Lake 89.58 31 P P 15 34 12.6 +0.3
KTK1 Kautokeino 89.94 340 *e*P P 15 34 12.9 -0.7
NOR Nord 90.61 355 *i*P P 15 34 16.0 -0.6
NOR pmax pmax
comp=Z,10.0nm,0.9s
NOR Nord 90.61 355 *i*P P 15 34 16.0 -0.6
comp=Z,10nm,0.9s
BRTR Keskin Array B 90.89 310 P P 15 34 17.8 -1.2
comp=Z,3.6nm,0.8s,baz=78,slow=5.2,SNR=9.8
BRTR Keskin Array B 90.89 310 *i*P P 15 34 19.1 +0.2
BRTR pmax pmax
comp=Z,4.0nm,0.8s
FINES FINESS Array B 90.99 332 P P 15 34 18.0 -0.7
comp=Z,15nm,0.8s,baz=74,slow=4.8,SNR=66
FINES LR LR 16 17 42.1
comp=Z,202nm,20.9s,baz=37,slow=37
TRO Tromso 91.17 341 *e*P P 15 34 18.5 -0.8
VSU Vasula 91.46 329⇓ *e*P P 15 34 20.6 -0.3
AKASG Malin Array Be 91.89 321 P P 15 34 22.4 -0.7
comp=Z,2.5nm,0.7s,baz=60,slow=4.4,SNR=18
AKASG PP PP 15 38 06.3 +4.3
comp=Z,0.3nm,0.3s,baz=65,slow=7.8,SNR=5.1
AKASG LR LR 16 18 52.1
comp=Z,68nm,21.3s,baz=85,slow=38
AKASG Malin Array Be 91.89 321 *i*P P 15 34 22.1 -1.0
AKASG pmax pmax
comp=Z,3.0nm,0.7s
KIEV Kiev 91.90 321 P P 15 34 22.0 -1.1
SORM Soroca 93.02 319⇓P P 15 34 28.2 -0.1
SORM Soroca 93.02 319⇓P P 15 34 28.2 -0.1
KMBO Kilima Mbogo 93.04 269 P P 15 34 30.7 +1.2
comp=Z,2.5nm,1.0s,baz=5.2,slow=9.9,SNR=3.8
KMBO LR LR 16 14 29.9
comp=Z,84nm,21.1s,baz=92,slow=34
KMBO Kilima Mbogo 93.04 269 P P 15 34 29.4 -0.1
KMBO pmax pmax
comp=Z,10.0nm,1.4s
KMBO Kilima Mbogo 93.04 269 P P 15 34 29.4 -0.1
STEI Steigen 93.08 340 *e*P P 15 34 27.2 -1.0
LOF Lofoten 93.57 340 *e*P P 15 34 29.4 -1.1
TOPG Topolog 93.74 316⇓P P 15 34 31.4 -0.4
MOR8 Moi Rana 94.14 338 *e*P P 15 34 31.0 -2.2
KMPD K-Podol'skiy 94.14 320 P P 15 34 32.0 -1.5
RES Resolute Bay 94.45 11 P P 15 34 34.6 +0.2
comp=Z,6.5nm,0.8s,baz=318,slow=6.0,SNR=20
RES Resolute Bay 94.45 11 P P 15 34 34.1 -0.3
TESR Tescani 94.53 318⇑P P 15 34 34.9 -0.5
VRI Vrincioaia 94.64 317⇓P P 15 34 35.7 -0.2
VRI Vrincioaia 94.64 317⇓P P 15 34 35.7 -0.2
DAG Danmarks Havn 94.93 353⇑*i*P P 15 34 35.7 -0.9
DAG pmax pmax
comp=Z,12nm,0.7s
DAG Danmarks Havn 94.93 353⇑*i*P P 15 34 35.7 -0.9
comp=Z,12nm,0.7s
BURAR Bucovina Array 95.19 319⇑P P 15 34 38.4 -0.1
BURAR Bucovina Array 95.19 319⇑P P 15 34 38.4 -0.1
MLR Muntele Rosu 95.26 317 P P 15 34 38.8 -0.1
comp=Z,1.9nm,0.6s,baz=90,slow=3.0,SNR=3.9
MLR Muntele Rosu 95.26 317⇓P P 15 34 38.4 -0.5
MLR Muntele Rosu 95.26 317 P P 15 34 38.3 -0.7
LVV L'vov 95.34 321 *e*P P 15 34 39.6 +0.6
YKA Yellowknife Ar 95.53 25 P P 15 34 39.4 -0.2
comp=Z,2.5nm,0.8s,baz=295,slow=4.2,SNR=24
YKA PP PP 15 38 23.5 -6.6
comp=Z,0.3nm,0.8s,baz=300,slow=7.1,SNR=3.8
YKA PKKPbc **PKKPdf** 15 51 28.6 -4.5
comp=Z,0.9nm,0.7s,baz=119,slow=2.7,SNR=8.1
VOIR 95.88 317⇓P P 15 34 40.9 -0.8
VOIR 95.88 317⇓P P 15 34 40.9 -0.8
SYO Syowa Base 96.26 201⇑*i*P P 15 34 42.0 -0.7
SYO Syowa Base 96.26 201⇓*e*PcP PcP 15 34 44.0 +1.2
D03D Eldon 96.35 41 P P 15 34 45.3 +1.6
baz=287
KOLS Kolonicke sedl 96.70 321 *e*P P 15 34 45.6 +0.4
KOLS Kolonicke sedl 96.70 321 *e*PDIFF P 15 34 45.6 +0.4
UZH Uzhgorod 96.78 321 *e*P P 15 34 44.6 -0.9
UZH *e* 15 34 56.0
DRGR 97.06 319⇑P P 15 34 46.5 -0.5
DRGR 97.06 319⇑P P 15 34 46.5 -0.5
HFS Hagfors 97.13 333 P P 15 34 45.9 -1.0
comp=Z,12nm,0.7s,baz=92,slow=4.5,SNR=55
K02D Willamette Mer 97.32 46 P Pdif 15 34 49.1 +0.8
baz=286
NB2 NORSAR Subarra 97.79 335 P P 15 34 48.1 -1.8
comp=Z,8.4nm,0.9s,baz=62,slow=4.4
NB2 NORSAR Subarra 97.79 335 P P 15 34 48.1 -1.8
baz=62,slow=4.4
NOA NORSAR Array B 97.79 335 P P 15 34 48.5 -1.4
comp=Z,3.4nm,0.7s,baz=64,slow=4.5,SNR=17
NOA LR LR 16 24 15.5
comp=Z,179nm,18.1s,baz=65,slow=39
NORES NORESS Array B 97.80 334 P P 15 34 49.0 -0.9
NORES pmax pmax
comp=Z,1.0nm,0.5s
HUMO Hull Mountain 97.84 45 P P 15 34 49.9 -0.7
HUMO IAmb IAmb 15 34 52.6
comp=Z,5.7nm,1.0s
NC204 NORSAR Array S 97.87 335 *e*P P 15 34 49.0 -1.3
I04A Tendick Farm, 97.89 44 P Pdif 15 34 51.4 +0.5
baz=287
SIRR Siria 97.91 318⇓P Pdif 15 34 50.7 -0.1
BZS Buzias 98.14 318⇑P P 15 34 50.7 -1.1
BZS Buzias 98.14 318⇑P P 15 34 50.7 -1.1
J05D Fort Rock, OR 98.86 44 P Pdif 15 34 56.6 +1.3
baz=288
PINE Pine Mountain 98.91 44 P P 15 34 55.6 0.0
PINE IAmb IAmb 15 34 57.6
comp=Z,11nm,0.9s
VYHS Vyhne 98.99 321 *e*P P 15 34 55.3 -0.3
VYHS Vyhne 98.99 321 *e*PDIFF P 15 34 55.3 -0.3
K05A Summer Lake 99.27 45 P Pdif 15 34 57.7 +0.6
K05A IAmb IAmb 15 34 59.2
comp=Z,11nm,1.1s
BRG Berggiesshubel 101.01 325 *e*PDIFF Pdif 15 35 04.0 -0.5
comp=Z,5.8nm,1.0s
BRG Berggiesshubel 101.01 325 *e*P Pdif 15 35 04.0 -0.5
BRG pmax pmax
comp=Z,1.0nm,1.0s
CLL Collm 101.36 325 *i* Pdif Pdif 15 35 06.8 +0.8
comp=Z,9.0nm,1.4s
CLL Collm 101.36 325 *i*P Pdif 15 35 06.8 +0.8
CLL pmax pmax
comp=Z,9.0nm,1.4s
GERES GERESS Array B 102.00 323 P Pdif 15 35 08.9 -0.1
comp=Z,1.2nm,0.9s,baz=64,slow=4.6,SNR=8.6
GERES GERESS Array B 102.00 323 P Pdif 15 35 09.0 -0.1
NVAR Mina Array Bea 102.48 48 P Pdif 15 35 12.8 +1.2
comp=Z,0.8nm,0.8s,baz=272,slow=3.9,SNR=5.0
NVAR PP PP 15 39 20.0 -4.2
comp=Z,0.4nm,0.7s,baz=277,slow=9.9,SNR=2.2
ELK Elko 103.91 45 P Pdif 15 35 18.3 +0.3
ELK Elko 103.91 45 Pdif 15 35 18.2 +0.3
ECSD EROS Data Cent 114.53 36 P PKPdf 15 39 55.4 +0.2
baz=307
G40A Rib Lake 117.03 31 PKiKP 15 40 00.2 +0.2
TXAR Lajitas Array 117.17 52 PKP PKiKP 15 40 01.6 +0.8
comp=Z,1.4nm,0.8s,baz=190,slow=0.8,SNR=9.8
SCHQ Schefferville 117.23 11 PKP PKiKP 15 40 00.6 +0.5
comp=Z,3.3nm,0.8s,baz=267,slow=1.8,SNR=4.6
SCHQ Schefferville 117.23 11 PKPdf 15 39 59.9 -0.2
ESDC Sonseca Array 117.54 321 PKP PKiKP 15 40 01.5 +0.3
comp=Z,15.5nm,0.7s,baz=10,slow=2.6,SNR=4.6
E43A Lone Tree Farm 117.81 28 PKPdf 15 40 00.8 -0.6
JFWS Jewell Farm 118.62 33 PKiKP PKPdf 15 40 02.7 -0.4
JFWS Jewell Farm 118.62 33 PKPdf 15 40 02.7 -0.4
L40A Anamosa 118.65 34 PKPdf 15 40 01.9 -1.2
D47A Chapleau 119.04 25 P PKiKP 15 40 04.1 +0.3
baz=322
E46A Sault Ste Mari 119.05 27 PKPdf 15 40 03.5 -0.3
G45A Suttons Bay 119.43 28 P PKiKP 15 40 05.3 +0.7
baz=318
E47A Iron Bridge 119.43 26 P PKiKP 15 40 04.8 +0.2
baz=321
D48A Paudash Townsh 119.49 25 P PKiKP 15 40 04.9 +0.2
baz=323
JCT Junction City 119.63 50 PKiKP PKPdf 15 40 05.2 -0.2
JCT Junction City 119.63 50 P PKiKP 15 40 06.4 +0.9
baz=299
JCT Junction City 119.63 50 PKPdf 15 40 05.2 -0.2
CHGQ Chibougamau 119.87 18 P PKiKP 15 40 05.4 0.0
baz=332
E48A Lockeyer 119.89 25 P PKiKP 15 40 05.9 +0.4
baz=322
S39A Bolivar 120.19 39 PKPdf 15 40 06.1 -0.1
D50A G1974 Best Tow 120.29 23 P PKPdf 15 40 05.9 -0.3
baz=325
R40A Maddies Statio 120.47 38 PKPdf 15 40 06.5 -0.2
F49A Sandfield 120.51 26 P PKiKP 15 40 06.8 +0.1
baz=322
E51A G1948 Merrick 120.94 23 P PKiKP 15 40 07.8 +0.2
baz=325
J47A Sunmer 121.17 29 PKiKP 15 40 08.4 +0.3
D53A Lac Vacive, Po 121.18 22 P PKPdf 15 40 07.8 0.0
baz=327
CCM Cathedral Cave 121.25 38 PKiKP PKPdf 15 40 08.3 0.0
CCM Cathedral Cave 121.25 38 P PKiKP 15 40 08.5 +0.1
baz=310
CCM Cathedral Cave 121.25 38 PKPdf 15 40 08.3 0.0
U40A Yellville 121.30 40 P PKiKP 15 40 08.5 0.0
baz=308
U40A Yellville 121.30 40 PKPdf 15 40 07.9 -0.6
W39A Magazine 121.39 42 P PKiKP 15 40 09.2 +0.5
baz=306
W39A Magazine 121.39 42 PKPdf 15 40 08.6 -0.1

D54A Lac Fusel, La 121.50 21 P **PKPdf 15 40 08.3 -0.3**
baz=328
K47A Vermontville 121.51 30 P **PKiKP 15 40 09.1 +0.4**
baz=318
F52A Sundridge 121.62 24 P **PKiKP 15 40 09.3 +0.4**
baz=325
E53A Dumoine, Ponti 121.78 22 P **PKiKP 15 40 09.3 +0.1**
baz=327
K48A Perry 121.84 29 P **PKiKP 15 40 09.7 +0.3**
baz=319
J49A Marlette 121.89 28 P **PKiKP 15 40 09.8 +0.3**
baz=320
MIAR Mount Ida 121.91 42 PKIKP **PKiKP 15 40 10.5 +0.7**
MIAR Mount Ida 121.91 42 P **PKiKP 15 40 10.9 +1.1**
baz=306
MIAR Mount Ida 121.91 42 PKiKP 15 40 10.5 +0.7
E54A Lac Daplat, Po 121.91 22 P **PKPdf 15 40 09.0 -0.3**
baz=328
ALGO Algonquin Park 121.99 23 P **PKiKP 15 40 09.6 -0.1**
baz=326
T42A Van Buren 121.99 39 PKPdf 15 40 09.2 -0.5
D55A Sainte-Anne-du 122.03 20 P **PKiKP 15 40 09.7 0.0**
baz=330
D56A ZEC Mazanza, M 122.25 20 P **PKiKP 15 40 10.3 +0.1**
baz=330
L48A N Adams 122.33 30 P **PKiKP 15 40 10.4 0.0**
baz=318
G54A Lake Saint Pet 122.44 23 P **PKiKP 15 40 10.6 +0.1**
baz=326
N47A Urbana 122.46 32 P **PKPdf 15 40 10.4 -0.1**
baz=316
LCAR Lake Charles 122.56 39 PKPdf 15 40 10.4 -0.4
E56A St. Veronique 122.59 20 P **PKiKP 15 40 10.9 +0.1**
baz=330
LATQ La Tuque 122.60 18 P **PKiKP 15 40 11.1 +0.3**
baz=333
D58A Chemin du LacG 122.83 19 P **PKiKP 15 40 11.4 +0.1**
baz=333
H53A Bobcaygeon 122.92 24 P **PKiKP 15 40 11.9 +0.4**
baz=325
E57A Chemin Saint G 123.01 20 P **PKiKP 15 40 11.9 +0.3**
baz=331
N49A Columbus Grove 123.21 31 P **PKiKP 15 40 12.3 +0.1**
baz=318
O49A Covington 123.68 31 P **PKPdf 15 40 12.9 0.0**
baz=318
Q49A Covington 123.68 31 PKPdf 15 40 12.7 -0.2
Q48A North Vernon 123.84 33 P **PKiKP 15 40 14.4 +0.9**
baz=316
N50A Nevada 123.85 30 P **PKiKP 15 40 13.8 +0.3**
baz=319
G57A Newington 123.85 21 P **PKiKP 15 40 13.8 +0.4**
baz=330
D62A Allapoint, All 123.96 16 P **PKiKP 15 40 13.6 +0.1**
baz=337
F60A Warwick 124.12 19 P **PKiKP 15 40 14.1 +0.3**
baz=333
E61A Lac Etchemin 124.15 17 P **PKiKP 15 40 14.5 +0.6**
baz=335
J55A Hilton 124.31 25 P **PKiKP 15 40 14.6 +0.3**
baz=326
N52A McGinn's Farm, 124.53 29 P **PKiKP 15 40 15.2 +0.4**
baz=321
WVT Waverly 124.57 37 PKIKP **PKiKP 15 40 14.9 -0.1**
WVT Waverly 124.57 37 P **PKiKP 15 40 15.2 +0.1**
baz=312
WVT Waverly 124.57 37 PKiKP 15 40 14.9 -0.1
I57A Carthage 124.60 22 P **PKiKP 15 40 15.1 +0.2**
baz=328
P51A Williamsport 124.86 31 PKPdf 15 40 15.3 0.0
L55A Hinsdale 124.93 26 P **PKiKP 15 40 15.8 +0.2**
baz=325
Q51A Peebles 125.05 32 PKPdf 15 40 15.3 -0.3
PLAL Pickwick Lake 125.18 38 PKPdf 15 40 14.9 -1.0
P52A Corning 125.21 30 P **PKiKP 15 40 16.2 0.0**
baz=320
TORD Torodi Ar. Bea 125.23 291 PKP **PKiKP 15 40 16.6 -0.3**
comp=Z,19nm,0.8s,baz=48,slow=2.1,SNR=93
TORD PKKPbc **PKKPab** 15 49 53.9 -0.7
comp=Z,0.8nm,0.8s,baz=241,slow=2.2,SNR=4.3
J58A Remsen 125.23 23 P **PKiKP 15 40 16.8 +0.7**
baz=329
J58A Remsen 125.23 23 PKPdf 15 40 15.2 -0.6
L56A Greenwood 125.35 25 P **PKiKP 15 40 16.7 +0.2**
baz=326
M55A Ridgway 125.37 26 P **PKiKP 15 40 16.8 +0.3**
baz=324
J59A Piesco 125.44 22 P **PKiKP 15 40 17.0 +0.4**
baz=330
J59A Piesco 125.44 22 PKiKP 15 40 16.6 0.0
CLTN Cedars of Leba 125.48 36 PKPdf 15 40 15.7 -0.7
U49A Red Boiling Sp 125.52 36 PKPdf 15 40 16.5 0.0
I60A Shoreham 125.55 21 P **PKiKP 15 40 17.6 +0.9**
baz=331
PKME Peaks-Kenny Pk 125.56 17 P **PKiKP 15 40 17.4 +0.7**
baz=336
Q52A Bidwell 125.65 31 P **PKiKP 15 40 17.1 0.0**
baz=319
T50A Nancy 125.69 34 PKPdf 15 40 16.8 0.0
P53A Whipple 125.70 30 P **PKiKP 15 40 17.4 +0.2**
baz=320
P53A Whipple 125.70 30 PKPdf 15 40 16.5 -0.2
L57A Andrews Acres 125.76 25 P **PKiKP 15 40 17.4 +0.2**
baz=326
S51A Beattyville 125.94 33 PKPdf 15 40 16.9 -0.4
BINY Binghamton 125.94 24 P **PKiKP 15 40 17.9 +0.3**
baz=327
P54A Burton 126.05 29 P **PKiKP 15 40 18.6 +0.7**
baz=321
M57A Sunshine Farm, 126.19 25 P **PKiKP 15 40 18.5 +0.4**
baz=326
Q54A Coxs Mills 126.36 30 P **PKiKP 15 40 18.7 +0.2**
baz=321
O56A Blue Knob Stat 126.42 27 P **PKiKP 15 40 18.7 +0.1**
baz=324
SSPA Standing Stone 126.43 26 P **PKiKP 15 40 18.7 +0.1**
baz=325
W50A Signal Mountai 126.70 36 PKiKP 15 40 19.3 -0.1
Q55A Buckhannon 126.72 29 P **PKiKP 15 40 19.4 +0.1**
baz=322
P56A Dayton Farm, R 126.91 28 P **PKiKP 15 40 19.8 +0.2**
baz=323
LRAL Lakeview Retre 127.13 40 P **PKiKP 15 40 20.4 +0.2**
baz=311
V52A Sevierville 127.24 35 PKPdf 15 40 20.0 +0.2
W52A Murphy 127.58 35 PKiKP 15 40 20.9 -0.2
Z50A Ashland 127.66 39 P **PKiKP 15 40 21.4 +0.2**
baz=312
Z50A Ashland 127.66 39 PKPdf 15 40 20.9 +0.1
Q58A Fox Den Farm, 127.90 28 P **PKiKP 15 40 21.8 +0.2**
baz=324
T59A Double "B" Far 129.54 29 PKPdf 15 40 22.0 -2.2
KIC Kosan Boka 133.24 285 *e*PKP1 **PKPdf 15 40 31.6 -0.2**
comp=Z,11nm,0.8s
DBIC Dimbokro 133.27 285 PKP **PKiKP 15 40 32.5 -0.6**
comp=Z,11nm,0.8s,baz=82,slow=3.0,SNR=12
DBIC Dimbokro 133.27 285 PKIKP **PKPdf 15 40 31.2 -0.6**
DBIC Dimbokro 133.27 285 PKPdf 15 40 31.2 -0.6
TIC Tomomdi 133.43 285 *e*PKP1 **PKPdf 15 40 31.9 -0.3**
LIC Lamto 133.55 285 *e*PKP1 **PKPdf 15 40 32.4 0.0**
comp=Z,54nm,1.0s
PLCA Paso Flores 141.22 155 PKP **PKPdf 15 40 44.4 -1.5**
comp=Z,8.8nm,1.0s,baz=234,slow=0.5,SNR=8.6
PLCA Paso Flores 141.22 155 PKIKP **PKPdf 15 40 46.0 +0.1**
PLCA Paso Flores 141.22 155 PKPdf 15 40 46.0 +0.1
GO05 Huala 145.09 147 PKPdf 15 40 52.5 -0.3
BCIP Isla Barro Col 146.26 63 *e*P **PKPab 15 40 57.1 0.0**
AZU Azuero 146.45 65 *e*P **PKPdf 15 40 56.3 +0.6**
SDDR Presa de Saban 146.97 39 PKPbc 15 40 58.6 +0.2
ROC1 El Roble 147.12 146 PKPdf 15 40 57.5 +0.9
ROC1 PKPbc **PKPab 15 41 00.1 -0.2**
PEL Peldehue 147.18 147 PKP2 **PKPab 15 40 59.0 -0.8**
PEL Peldehue 147.18 147 PKPdf 15 40 57.2 +0.8
PEL PKPbc **PKPab 15 40 59.4 -0.8**
DR12 Loma Pena Alta 148.29 37 PKPbc 15 41 01.8 -0.3
CAPC Capurgana 148.68 62 *e*P **PKiKP 15 41 04.3 -0.3**
GO04 Tololo Observa 149.30 143 PKPdf 15 41 00.4 +0.1
GO04 PKPbc **sPKPbc 15 41 04.9 -0.3**
SJCC San Jacinto, C 149.92 57 *e*P **PKiKP 15 41 06.8 -0.4**
SMRC Santa Marta, M 150.01 54 *e*P **PKPbc 15 41 06.8 +0.4**
DBBC Dabeiba 150.42 63 *e*P **PKPbc 15 41 05.0 -2.6**
OBIP Obispado Ponce 150.49 34 PKPdf **PKPdf 15 41 00.9 -1.2**
OBIP **PKPbc 15 41 07.4 0.0**
MALC Bahia Malaga 150.59 70 *e*P **PKiKP 15 41 09.4 +0.9**
ICMP Isla Caja de M 150.66 34 PKPdf **PKPdf 15 41 00.6 -1.8**
ICMP **PKPbc 15 41 07.3 -0.5**

SJG	San Juan	150.68	33	PKIKP	PKiKP	15 41 08.6	0.0
SJG	San Juan	150.68	33	PKPdf	PKPdf	15 41 00.7	-1.7
SJG					PKiKP	15 41 08.6	0.0
UREC	San Jos de Ur	150.68	61	eP	PKiKP	15 41 08.7	-0.1
PDPR	Patillas Dam,	150.83	33	PKPdf	PKPdf	15 41 01.6	-1.1
PDPR					pPKPbc	15 41 08.4	-0.3
MTP	Monte Pirata	151.01	32	PKPdf	PKPdf	15 40 59.7	-3.3
MTP					PKiKP	15 41 09.2	-0.1
CBOC	Ciudad Bolivar	151.10	65	eP	PKiKP	15 41 09.8	0.0
STVI	Saint Thomas	151.11	31	PKPdf	PKPdf	15 41 01.0	-2.0
STVI					PKPbc	15 41 08.8	-0.1
HELC	Santa Helena	151.39	64	eP	PKiKP	15 41 10.7	+0.1
ZARC	Zaragoza, Cauc	151.40	61	eP	PKPdf	15 41 04.5	+0.8
SMLC	San Martn de	151.42	58	eP	PKiKP	15 41 10.1	-0.2
GO03	Copiap	151.46	140	PKPdf	PKPdf	15 41 01.9	-1.6
GO03					PKiKP	15 41 10.6	+0.5
YOTC	Yotoco, Valle	151.53	69	eP	PKiKP	15 41 10.5	-0.2
POPC	Popayan, Colom	151.71	72	eP	PKiKP	15 41 11.2	0.0
CRUC	La Cruz	151.74	74	eP	PKiKP	15 41 12.1	+0.7
SOTA	Rioblanco	151.90	73	eP	PKPdf	15 41 08.1	+3.1
GUY2C	Guyana, Caldas	151.95	66	eP	PKiKP	15 41 12.7	+0.7
PCON	Cinco Dias	152.04	72	eP	PKiKP	15 41 12.9	+0.6
TOLC	Tolima	152.24	67	eP	PKiKP	15 41 13.2	+0.8
NORC	Norcasia	152.25	65	eP	PKPbc	15 41 11.8	0.0
ORTC	Ortega, Tolima	152.57	68	eP	PKiKP	15 41 12.9	+0.2
BETC	Betania	152.82	71	eP	PKiKP	15 41 14.5	+1.3
SPBC	San Pablo de B	152.93	64	eP	PKiKP	15 41 13.7	+0.2
GARC	Garzon, Huila	152.94	72	eP	PKiKP	15 41 14.6	+0.8
PRAC	Prado	152.98	69	eP	PKiKP	15 41 14.4	+0.8
PB14	IPOC Station P	153.29	135	PKPdf	PKPdf	15 41 04.7	-1.9
PB14				PKPbc	sPKPbc	15 41 14.9	+0.2
PB14					sPKPab	15 41 27.3	+0.9
PAMC	Pamplona, Colo	153.33	59	eP	PKiKP	15 41 15.7	+0.9
GO02	Mina Guanaco	153.51	137		PKPdf	15 41 06.7	-0.2
GO02					sPKPbc	15 41 15.7	+0.5
GO02					sPKPab	15 41 28.5	+1.1
CHIC	Chingaza	153.67	66	eP	PKPdf	15 41 09.7	+2.1
RUSC	La Rusia	153.70	63	eP	PKPbc	15 41 15.0	-0.4
RUSC	La Rusia	153.70	63		PKPdf	15 41 06.8	-0.9
RUSC				PKPbc	PKPbc	15 41 15.1	-0.4
MACC	Macarena, Meta	154.50	71	eP	PKiKP	15 41 17.8	+1.2
PB01	IPOC Station P	156.10	129	PKPdf	PKPdf	15 41 08.7	-1.6
PB01					sPKPab	15 41 38.4	+0.2
PB11	IPOC Station P	156.66	126	PKPdf	PKPdf	15 41 07.8	-3.3
PB11					sPKPab	15 41 41.3	+0.6
CPUP	Villa Florida	159.04	161	PKP	PKPdf	15 41 13.9	+0.2
	comp=Z,4.7nm,0.9s,baz=11,slow=1.9,SNR=8.1						
CPUP				PKPab	PKPab	15 41 49.6	-0.3
	comp=Z,7.7nm,0.9s,baz=197,slow=4.4,SNR=6.4						
CPUP	Villa Florida	159.04	161	PKIKP	PKPdf	15 41 13.5	-0.2
CPUP						15 41 50.1	
CPUP	Villa Florida	159.04	161		PKPdf	15 41 13.5	-0.2
CPUP					pPKPab	15 41 50.1	-0.3
LPAZ	La Paz	159.61	120	PKP	PKPdf	15 41 16.4	+1.1
	comp=Z,4.5nm,0.9s,baz=38,slow=1.9,SNR=12						
LPAZ				PKPab	sPKPab	15 41 55.3	+1.1
	comp=Z,12nm,0.8s,baz=236,slow=3.6,SNR=19						
LPAZ	La Paz	159.61	120		PKPdf	15 41 14.3	-1.1
LPAZ					sPKPab	15 41 54.2	0.0
SAML	Samuel	166.53	101	eP	PKPdf	15 41 20.6	-0.7
SAML	Samuel	166.53	101	PKP2	PKPab	15 42 23.3	-0.1
SAML						16 41 20.2	
SAML	Samuel	166.53	101		PKPdf	15 41 20.2	-1.1
SAML					PKPab	15 42 23.3	-0.1
BDFB	Brasilia	170.78	191	PKPab	PKPab	15 42 41.7	-0.1
	comp=Z,8.2nm,1.1s,baz=284,slow=2.6,SNR=4.2						
BDFB	Brasilia	170.78	191	PKIKP	PKPdf	15 41 23.1	-1.0
BDFB						15 42 40.6	
BDFB	Brasilia	170.78	191	PKPdf	PKPdf	15 41 23.1	-1.0
BDFB					PKPab	15 42 40.6	-1.1

*NNC **01** 15:54:48.8±0.9, 44.57°N×80.68°E, h0km, mb3.7, mpv3.7, Error ellipse: s-maj=7.0km s-min=4.5km az=101.0*
*SOME **01** 15:54:51.9, 44.57°N×80.48°E, h15km*
ISC 01 15:54:47.2±1.2**, 44.61°N**±0.03×**80.84°E**±0.04**, h6**km±10km**, n47,** σ1^s**49**/70**, 12C-7D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	0.80	250	eP	Pg	15 55 02.8	+0.4
	25nm,0.1s						
DJR				eS	Sg	15 55 11.3	-1.5
	508nm,0.1s						
DJR	Jarkent	0.80	250	P	Pg	15 55 02.9	+0.4
	16nm,0.1s						
DJR				S	Sg	15 55 12.4	-0.5
	501nm,0.3s						
KTMS	Ketmen	1.21	197	eP	Pn	15 55 11.7	+1.0
	31nm,0.0s						
KTMS				eS	Sg	15 55 26.0	-0.1
	219nm,0.1s						
KAPS	Kapalarasan	1.25	303	eP	Pn	15 55 11.5	+0.3
	82nm,0.1s						
KAPS				eS	Sb	15 55 26.2	-1.4
	56nm,0.1s						
KAPS	Kapalarasan	1.25	303	P	Pn	15 55 10.8	-0.4
	79nm,0.2s						
KAPS				S	Sb	15 55 25.8	-1.8
	97nm,0.2s						
PDGK	Podgornoye	1.60	218	P	Pb	15 55 17.3	0.0
	25nm,0.4s						
PDGK				S	Sn	15 55 37.0	-0.3
	38nm,0.2s						
PDGK	Podgornoye	1.60	218	⇑P	Pb	15 55 17.2	0.0
	29nm,0.3s						
PDGK				⇑S	Sn	15 55 36.7	-0.5
	65nm,0.4s						
SHLS	Shalkode	1.76	215	eP	Pn	15 55 18.6	+0.4
	114nm,0.1s						
SHLS				eS	Sn	15 55 38.3	-2.6
	101nm,0.1s						
SHLS	Shalkode	1.76	215	P	Pn	15 55 17.7	-0.6
	91nm,0.2s						
SHLS				S	Sn	15 55 37.6	-3.4
	192nm,0.3s						
TDK	Taldyqorghan	1.77	284	eP	Pb	15 55 20.8	+0.7
	129nm,0.1s						
TDK				eS	Sn	15 55 41.9	+0.6
	524nm,0.2s						
TDK	Taldyqorghan	1.77	284	P	Pg	15 55 22.1	+1.0
	290nm,0.4s						
TDK				S	Sg	15 55 45.3	+1.1
	395nm,0.4s						
MNBS	Baschi	1.82	254	eP	Pb	15 55 21.9	+0.9
	47nm,0.1s						
MNBS				eS	Sb	15 55 43.7	-0.4
	342nm,0.1s						
MNBS	Baschi	1.82	254	P	Pb	15 55 20.7	-0.3
	13nm,0.2s						
MNBS				S	Sn	15 55 42.7	0.0
	263nm,0.2s						
ARXS	Arharly	2.19	261	eP	Pb	15 55 28.6	+1.4
	42nm,0.1s						
ARXS				eS	Sb	15 55 55.3	+0.7
	415nm,0.3s						
ARXS	Arharly	2.19	261	Pg	Pb	15 55 27.7	+0.4
	51nm,0.2s						
ARXS				Lg	Lg	15 55 54.7	
	526nm,0.3s						
KURS	Kuram	2.22	241	eP	Pb	15 55 29.0	+1.2
	9.0nm,0.1s						
KURS				eS	Sb	15 55 55.9	+0.3
	64nm,0.2s						
KURS	Kuram	2.22	241	Pg	Pb	15 55 27.6	-0.1
	11nm,0.3s						
KURS				Lg	Lg	15 55 54.7	
	66nm,0.3s						
SATY	Saty	2.34	230	eP	Pg	15 55 31.6	-0.4
	23nm,0.1s						
SATY				eS	Sb	15 56 00.3	+1.3
	292nm,0.2s						
SATY	Saty	2.34	230	Pg	Pb	15 55 30.3	+0.5
	89nm,0.2s						
SATY				Lg	Lg	15 55 59.2	
	292nm,0.2s						
MAKZ	Makanchi	2.34	20	⇑Pg	Pg	15 55 32.8	+0.8
	5.2nm,0.4s						
MAKZ				⇓Lg	Lg	15 56 03.1	
	6.5nm,0.2s						
MK31	Makanchi Array	2.41	24	⇑Pg	Pg	15 55 33.3	-0.1
	2.7nm,0.2s,baz=204,slow=14,SNR=194						
MK31				⇑Lg	Lg	15 56 04.5	
	12nm,0.2s,baz=208,slow=25,SNR=24						
CHKK	Chushkaly	2.87	256	eP	Pb	15 55 40.0	+1.3
	11nm,0.1s						
CHKK				eS	Sb	15 56 14.8	+0.8
	344nm,0.2s						
CHKK	Chushkaly	2.87	256	Pg	Pb	15 55 38.2	-0.5
	7.1nm,0.2s						
CHKK				Lg	Lg	15 56 12.8	
	351nm,0.3s						
MDOK	Medeo	3.10	244	eP	Pb	15 55 43.8	+1.1
	4.8nm,0.1s						
MDOK				eS	Sb	15 56 21.4	+0.6
	42nm,0.4s						
MDOK	Medeo	3.10	244	⇓Pg	Pb	15 55 44.7	+2.0
	6.0nm,0.5s						
MDOK				⇓Lg	Lg	15 56 21.0	
	32nm,0.5s						
MDOK	Medeo	3.10	244	Pg	Pb	15 55 42.5	-0.2
	5.0nm,0.2s						
MDOK				Lg	Lg	15 56 20.1	
	45nm,0.6s						
KTBS	Karatobe	3.12	255	eP	Pb	15 55 44.7	+1.6
	3.1nm,0.1s						
KTBS				eS	Sb	15 56 22.6	+1.3
	186nm,0.4s						
KNDC	Almaty	3.12	245	⇑Pg	Pb	15 55 44.7	+1.6
	4.0nm,0.2s						
KNDC				⇑Lg	Lg	15 56 22.7	
	17nm,0.4s						
AAA	Alma-Ata	3.16	245	eP	Pb	15 55 45.1	+1.4
	14nm,0.1s						
AAA				eS	Sb	15 56 23.6	+1.1
	49nm,0.1s						
AAA	Alma-Ata	3.16	245	Pg	Pb	15 55 43.3	-0.4
	7.6nm,0.1s						
AAA				Lg	Lg	15 56 21.6	
	22nm,0.2s						
TNSS	Tian-Shan	3.22	242	eP	Pb	15 55 47.0	+2.0
	3.6nm,0.1s						
TNSS				eS	Sb	15 56 26.6	+2.0
	31nm,0.2s						
KUU	Kurty	3.31	259	eP	Pb	15 55 47.6	+1.3
	4.0nm,0.1s						
KUU				eS	Sb	15 56 27.6	+0.9
	91nm,0.3s						
KUU	Kurty	3.31	259	Pg	Pb	15 55 45.9	-0.4
	0.8nm,0.1s						
KUU				Lg	Lg	15 56 25.9	
	115nm,0.4s						
IZV	Izvestkoviy	3.44	244	eP	Pb	15 55 50.4	+1.9
	3.5nm,0.1s						
IZV				eS	Sb	15 56 32.3	+1.8
	23nm,0.2s						
MTBS	Maitube	3.51	247	eP	Pb	15 55 51.2	+1.4
	2.1nm,0.1s						
MTBS				eS	Sb	15 56 33.8	+1.1
	100nm,0.3s						
MTBS	Maitube	3.51	247	Pg	Pb	15 55 50.3	+0.5
	3.9nm,0.1s						
MTBS				Lg	Lg	15 56 33.5	
	102nm,0.4s						
KRBS	Karabastau	3.83	258	eP	Pb	15 55 56.5	+1.5
	1.0nm,0.1s						
KRBS				eS	Sb	15 56 42.9	+1.3
	11nm,0.2s						
KST	Kastek	3.86	248	eP	Pb	15 55 57.1	+1.5
	3.4nm,0.1s						
KST				eS	Sb	15 56 44.1	+1.5
	33nm,0.3s						
KST	Kastek	3.86	248	Pg	Pb	15 55 55.0	-0.6
	2.0nm,0.3s						
KST				Lg	Lg	15 56 41.6	
	32nm,0.6s						
ZSN	Zaisan	4.00	43	eP	Pg	15 56 04.0	+0.4
	2.2nm,0.1s						
ZSN				eS	Sg	15 56 55.9	+0.4
	21nm,0.3s						
TKM2	Tokmak 2	4.15	248	⇑Pg	Pb	15 56 03.9	+3.2
	3.8nm,0.5s						
TKM2				⇓Lg	Lg	15 56 52.4	
	12nm,0.4s						
AAK	Ala-Archa	5.01	249	⇑Pg	Pb	15 56 17.4	+2.1
	2.6nm,0.5s						
AAK				⇑Lg	Lg	15 57 19.1	
	15nm,0.7s						
MRKS	Merke	5.83	254	eP	Pb	15 56 34.1	+5.0
	1.1nm,0.1s						
MRKS				eS	Sg	15 57 47.5	-6.6
	12nm,0.4s						
KURBB	Kurchatov Arra	6.22	346	⇓Lg	Lg	15 58 02.1	
	8.1nm,0.5s						
KURK	Kurchatov	6.29	347	⇓Lg	Lg	15 58 05.6	
	12nm,0.6s						
OTUK	Ortayu	6.91	305	⇓Lg	Lg	15 58 22.8	
	3.4nm,0.4s						
KK31	Karatay Array	7.61	262	⇑Pg	Pb	15 57 05.4	+5.8
	0.3nm,0.3s,baz=75,slow=17,SNR=3.6						
KK31				⇑Lg	Lg	15 58 40.8	
	3.0nm,0.5s,baz=80,slow=27,SNR=12						

*IDC **01** 15:57:56.6±3.4, 36.05°N×70.31°E, h88km±28km, mb3.6/8, mb1 3.7/14, mb1mx3.4/55, mbtmp4.0/14, Error ellipse: s-maj=27.2km s-min=16.5km az=160.0*
*NNC **01** 15:58:01.6±3.5, 36.52°N×70.01°E, h106km±90km, mb3.9, mpv4.3, Error ellipse: s-maj=34.1km s-min=17.1km az=151.0*
ISC 01 15:57:57.4±0.8**, 36.06°N**±0.05×**70.51°E**±0.09**, h100**km**, n47,** σ1^s**88**/54**, mb3.5**/7**, 3C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.51	152	P	Pn	15 58 38.7	+2.0
CEP				S	Sn	15 59 09.0	+2.1
THW	Thamme Wali	3.41	162	P	Pn	15 58 49.7	+1.0
THW				S	Sn	15 59 28.0	-0.3
SARP	Sargodha	4.50	156	P	Pn	15 59 03.7	+0.4
THN	Thein Dam	5.62	128	eP	Pn	15 59 21.5	+3.0
THN				eP	Pn	15 59 21.5	+3.0
THN				ex	Sn	16 00 23.0	+1.2
THN				ex	Sn	16 00 23.0	+1.2
DHRM	DHARAMSHALA	6.12	127	eP	Pn	15 59 26.6	+1.1
DHRM				eS	Sn	16 00 32.7	-1.5
DHRM				IAML		16 00 35.4	
	comp=E,455nm,0.3s						
DHRM				IAML		16 00 35.4	
	comp=N,322nm,0.4s						
AML	Almayashu	6.55	21	P	Pn	15 59 33.1	+1.6
	SNR=57						
BHK	Bhakra	6.75	132	ex	Sn	16 00 48.8	-0.5
UCH	Uchtor	6.90	26	P	Pn	15 59 37.3	+1.0
	SNR=13						
KK31	Karatay Array	7.04	0	⇑P	Pn	15 59 37.8	+0.1
	comp=N,11nm,0.5s,baz=186,slow=13,SNR=45						
KK31				S	Sn	16 00 51.7	-4.5
	comp=N,6.4nm,0.3s,baz=176,slow=18,SNR=8.1						
KZA	Kyzart	7.05	30	P	Pn	15 59 39.6	+1.3
	SNR=7.6						
EKS2	Erkin-Say	7.06	20	P	Pn	15 59 40.2	+2.0
	SNR=16						
AAK	Ala-Archa	7.26	24	P	Pn	15 59 41.8	+1.0
	comp=N,4.9nm,0.3s,baz=208,slow=7.9,SNR=17						
AAK				S	Sn	16 01 02.4	+0.6
	comp=N,3.0nm,0.3s,baz=307,slow=22,SNR=16						
AAK	Ala-Archa	7.26	24	P	Pn	15 59 42.0	+1.1
	SNR=25						
AAK	Ala-Archa	7.26	24	⇓P	Pn	15 59 41.6	+0.7
	comp=N,14nm,0.5s						
AAK				S	Sn	16 01 01.3	-0.4
	comp=N,28nm,0.7s						
SMLA	Simla	7.41	130	eP	Pn	15 59 42.6	-0.3
SMLA				IAML		16 01 05.3	
	comp=Z,41nm,0.2s						
KBK	Karagaybulak	7.43	26	P	Pn	15 59 44.6	+1.3
	SNR=7.1						
CHMS	Chumysh	7.67	24	P	Pn	15 59 47.2	+0.9
	SNR=17						
USP	Ospenovka	7.83	22	P	Pn	15 59 49.9	+1.4
	SNR=8.4						
TKM2	Tokmak 2	7.90	28	P	Pn	15 59 50.7	+1.0
	SNR=18						
TKM2	Tokmak 2	7.90	28	⇑P	Pn	15 59 50.2	+0.6
	comp=Z,20nm,1.2s						
TKM2				S	Sn	16 01 15.4	-2.0
	comp=Z,9.0nm,0.8s						
GEYT	Alibeck	10.09	284	P	Pn	16 00 17.3	-2.0
	comp=Z,1.6nm,0.3s,baz=116,slow=12,SNR=17						
GEYT				S	Sn	16 02 04.8	-5.7
	comp=Z,1.4nm,0.3s,baz=184,slow=14,SNR=3.3						
GYA0B	ALIBECK ARRAY	10.09	284	P	Pn	16 00 16.8	-2.4
GYA0B				S	Sn	16 02 02.0	-8.5
PYUN	Piuthan	13.21	123	eP	Pn	16 00 58.0	-3.3
	comp=Z,34nm,0.3s						
DANN	Dangsing	13.59	121	eP	Pn	16 01 03.1	-3.1
	comp=Z,14nm,0.3s						
KOLN	Koldanda	13.84	123	eP	Pn	16 01 06.3	-3.1
	comp=Z,18nm,0.4s						
MKAR	Makanchi Array	13.88	36	P	Pn	16 01 11.0	+1.3
	comp=Z,1.8nm,0.3s,baz=220,slow=13,SNR=3.8						
BHPL	Bhopal	14.11	153	ex	Pn	16 01 11.3	-1.5
BHPL				eP	P	16 01 15.0	-2.2
BHPL				ex	Sn	16 03 34.4	-14
GKN	Gorkha	14.41	120	eP	Pn	16 01 13.6	-3.2
	comp=Z,16nm,0.2s						
GKN				eS	Sn	16 03 44.5	-11
DMN	Daman	14.98	120	eP	Pn	16 01 21.6	-2.5
	comp=Z,11nm,0.4s						
KKN	Kakani	14.99	119	eP	Pn	16 01 21.0	-3.2
	comp=Z,21nm,0.5s						
PKIN	Phulchoki	15.21	120	eP	Pn	16 01 23.7	-3.2
	comp=Z,23nm,0.5s						
PKI	Pulchoki	15.22	120	eP	Pn	16 01 24.2	-3.0
	comp=Z,9.7nm,0.3s						
AB31	Akbulak array	15.29	333	P	Pn	16 01 24.6	-2.9
	comp=Z,7.1nm,0.4s,baz=159,slow=13,SNR=95						
AB31				S	Sn	16 04 04.0	-12
	comp=Z,6.1nm,0.4s,baz=166,slow=21,SNR=9.0						
GUN	Gumba	15.35	118	eP	Pn	16 01 26.0	-2.9
	comp=Z,9.9nm,0.3s						
KURBB	Kurchatov Arra	15.67	19	P	Pn	16 01 32.1	-0.2
	comp=Z,0.1nm,0.3s,baz=209,slow=10,SNR=8.7						
BVAR	Borovoye Array	16.97	360	P	Pn	16 01 47.5	-0.8
	comp=Z,0.8nm,0.3s,baz=168,slow=8.4,SNR=13						
BVAR				S	Sn	16 04 57.4	+0.7
	comp=Z,0.1nm,0.3s,baz=171,slow=19,SNR=1.8						
AKTO	Aktyubinsk	16.98	332	P	Pn	16 01 48.1	-0.3
	comp=Z,0.3nm,0.3s,baz=136,slow=11,SNR=9.2						
AKTO	Aktyubinsk	16.98	332	P	Pn	16 01 47.9	-0.5
	comp=Z,5.5nm,0.9s						
AKTO				⇑S	Sn	16 04 43.9	-13
	comp=Z,3.3nm,0.7s						
TAPN	Taplejung	17.00	116	eP	Pn	16 01 47.4	-1.8
	comp=Z,8.6nm,0.3s						
ZALV	Zalesovo Beam	20.48	25	P	P	16 02 27.8	+0.8
	comp=Z,11nm,0.4s,baz=217,slow=10,SNR=52						
SONM	Songino Array	28.91	55	P	P	16 03 48.6	+1.7
	comp=Z,0.3nm,0.6s,baz=272,slow=11,SNR=2.4						
NRIK	Noril'sk	34.63	11	P	P	16 04 37.5	+0.9
	comp=Z,1.5nm,0.4s,baz=186,slow=3.4,SNR=5.6						
FINES	FINESS Array B	37.63	327	P	P	16 05 02.0	-0.2
	comp=Z,2.7nm,0.9s,baz=90,slow=11,SNR=3.6						
ARCES	ARCESS Array B	41.41	338	P	P	16 05 33.6	+0.2
	comp=Z,3.1nm,1.0s,baz=112,slow=9.3,SNR=11						
NOA	NORSAR Array B	44.50	323	P	P	16 05 57.9	-0.6
	comp=Z,0.4nm,0.5s,baz=98,slow=7.7,SNR=1.8						
TORD	Torodi Ar. Bea	65.31	269	P	P	16 08 28.1	-1.0
	comp=Z,0.5nm,1.0s,baz=65,slow=7.8,SNR=2.1						
WRA	Warramunga Arr	82.09	122	P	P	16 10 08.2	+1.2
	comp=Z,0.5nm,0.9s,baz=325,slow=5.0,SNR=1.7						

*SJA **01** 16:09:39.7±0.9, 28.31°S×67.53°W, h136km±5km, ML4.0, MW4.0*
*NEIC **01** 16:09:39.5±1.9, 28.31°S±0.07×67.43°W±0.10, h118km±6km, mb4.4/10, Error ellipse: s-maj=12.6km s-min=9.7km az=86.0*
*IDC **01** 16:09:40.5±0.8, 28.23°S×67.41°W, h121km±5km, mb3.9/7, mb1 3.8/10, mb1mx3.6/29, mbtmp4.1/10, Error ellipse: s-maj=21.5km s-min=13.3km az=79.0*
ISC 01 16:09:39.8±0.6**, 28.25°S**±0.05×**67.54°W**±0.06**, h122**km±5km**, n66,** σ1^s**42**/78**, mb4.3**/8**, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCA	Vinchina	0.76	230	i P	Pn	16 10 01.8	+1.7
VCA				eS	Sn	16 10 18.6	+3.3
VCA				IAML		16 10 20.4	
	comp=Z,5µm,0.8s						
CYA	Choya	1.54	98	eP	Pn	16 10 09.4	+1.5
CYA				eS	Sn	16 10 30.8	+1.5
CYA				IAML		16 10 31.6	
	comp=Z,568nm,0.6s						
ACDV	Cuesta del Vie	2.36	215	i P	Pn	16 10 19.4	+1.3
ACDV				eS	Sn	16 10 47.9	+0.5
ACDV				IAML		16 10 53.7	
	comp=Z,600nm,0.5s						
GO03	Copiap	2.47	285		Pn	16 10 20.5	+1.1
AROD	Rodeo	2.55	221	i P	Pn	16 10 22.5	+1.8
AROD				eS	Sn	16 10 53.0	+1.0
ACCO	Cerro Coronel	2.68	209	i P	Pn	16 10 23.5	+1.1
ACCO				eS	Sn	16 10 56.1	+1.0
ACCO				IAML		16 10 58.5	
	comp=Z,976nm,0.7s						
AMOG	MOGNA	2.81	197	i P	Pn	16 10 24.4	+0.7
AMOG				eS	Sn	16 10 58.1	+0.6
AMOG				IAML		16 10 59.8	
	comp=Z,689nm,0.6s						
GO04	Tololo Observa	3.43	235		Pn	16 10 32.3	+0.2
GO02	Mina Guanaco	3.58	329		Pn	16 10 35.6	+1.5
RTCV	Cerro Valdivia	3.71	193	i P	Pn	16 10 36.2	+0.7
RTCV				IAML		16 11 22.4	
	comp=Z,241nm,1.3s						
ACAN	Cantantal	4.03	176	i P	Pn	16 10 40.6	+0.9
ACAN				IAML		16 11 52.0	
	comp=Z,60nm,0.5s						
PB14	IPOC Station P	4.43	324		Pn	16 10 46.2	+0.8
ASAL	Salagasta	4.47	194	i P	Pn	16 10 46.2	+0.5
ASAL				IAML		16 12 00.4	
	comp=Z,144nm,0.7s						
AZAP	Zapla	4.58	30	i P	Pn	16 10 49.8	+2.4
AZAP				IAML		16 12 09.0	
	comp=Z,28nm,1.0s						
ARCO	CERRO ARCO	4.73	194	i P	Pn	16 10 49.8	+0.5
ARCO				IAML		16 11 47.5	
	comp=Z,152nm,0.6s						
AAGR	Agrelo	4.95	193	i P	Pn	16 10 52.8	+0.7
AAGR				IAML		16 12 10.4	
	comp=Z,155nm,1.0s						
PB15	IPOC Station P	5.31	340		Pn	16 10 58.3	+1.1
PB15	IPOC Station P	5.31	340	i P	Pn	16 10 58.6	+1.4
PB15				IAML		16 12 03.0	
	comp=Z,131nm,0.2s						
PB10	IPOC Station P	5.44	329	Pn	Pn	16 10 59.5	+0.8
PEL	Peldehue	5.58	208		Pn	16 11 00.2	-0.4
PEL	Peldehue	5.58	208	i P	Pn	16 11 00.6	0.0
ROC1	El Roble	5.58	212		Pn	16 10 58.6	-2.2
LVC	Limon Verde	5.75	347	P	Pn	16 11 04.2	+1.0
	comp=Z,83nm,0.3s,baz=38,slow=0.2,SNR=17						
LVC				S	Sn	16 12 08.4	+0.2
	comp=Z,85nm,0.3s,baz=112,slow=0.4,SNR=8.7						
PB06	IPOC Station P	5.82	341		Pn	16 11 04.5	+0.6
YJA	Yavi	6.32	17	i P	Pn	16 11 13.8	+2.8
PB04	IPOC Station P	6.34	338	Pn	Pn	16 11 12.6	+1.5
PB09	IPOC Station P	6.61	346	Pn	Pn	16 11 15.5	+0.8
PB07	IPOC Station P	6.83	341	Pn	Pn	16 11 16.8	-0.9
PB01	IPOC Station P	7.39	346		Pn	16 11 24.5	-0.6
GO05	Huala	7.71	208	Pn	Pn	16 11 25.3	-4.0
PATCX	Punta Patache	7.77	342	Pn	Pn	16 11 27.8	-2.4
PB08	IPOC Station P	8.20	349	Pn	Pn	16 11 35.9	-0.5
PB11	IPOC Station P	8.67	347	Pn	Pn	16 11 41.3	-1.2
GO01	Chusmiza	8.67	350	Pn	Pn	16 11 42.2	-0.6
PSGCX	Pisagua	8.93	344	Pn	Pn	16 11 43.5	-2.4
MNMC	Minye Minye	9.27	348	Pn	Pn	16 11 50.5	-0.2
CPUP	Villa Florida	9.28	80	P	Pn	16 11 48.8	-1.8
	comp=Z,0.5nm,0.3s,baz=249,slow=13,SNR=7.6						
CPUP	Villa Florida	9.28	80		Pn	16 11 48.6	-1.9
PB12	IPOC Station P	9.92	344	Pn	Pn	16 11 57.1	-2.3
PB16	IPOC Station P	10.03	349	Pn	Pn	16 12 00.2	-1.1
LPAZ	La Paz	11.91	357	P	Pn	16 12 27.2	+0.8
	comp=Z,0.2nm,0.3s,baz=158,slow=8.1,SNR=5.2						
LPAZ	La Paz	11.91	357		Pn	16 12 24.6	-1.9
LPAZ	La Paz	11.91	357	Pn	Pn	16 12 24.4	-2.1
PLCA	Paso Flores	12.70	190	Pn	Pn	16 12 32.0	-4.1
SIV	San Ignacio	13.59	27	P	Pn	16 12 47.0	-0.7
	comp=Z,0.2nm,0.3s,baz=203,slow=13,SNR=7.0						
SAML	Samuel	19.63	13	P	P	16 13 59.6	+0.7
SAML				IAmb	IAmb	16 14 00.5	
	comp=Z,22nm,1.3s						
BDFB	Brasilia	21.99	59	P	P	16 14 23.3	-1.0
	comp=Z,1.5nm,0.4s,baz=241,slow=12,SNR=5.4						
BDFB	Brasilia	21.99	59	P	P	16 14 21.4	-2.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PTGA	Pitinga	28.31	16	P	P	16 15 22.4	+0.4
	comp=Z,6.4nm,0.7s,baz=191,slow=12,SNR=10						
PTGA	Pitinga	28.31	16	P	P	16 15 22.8	+0.8
PTGA				IAmb	IAmb	16 15 25.7	
	comp=Z,8.8nm,1.1s						
RUSC	La Rusia	34.36	350	P	P	16 16 16.5	+0.8
HOPE	Hope Point	34.46	148	P	P	16 16 16.7	+1.1
061Z	Ochoppi	55.32	345	P	P	16 19 02.0	+1.2
SNAA	Sanae	55.53	160	P	P	16 19 02.4	+0.5
	comp=Z,0.5nm,0.5s,baz=279,slow=8.3,SNR=13						
SNAA	Sanae	55.53	160	P	P	16 19 02.2	+0.2
SNAA				IAmb	IAmb	16 19 17.0	
	comp=Z,4.9nm,1.4s						
QSPA	South Pole Qui	61.97	180	P	P	16 19 47.0	+0.3
QSPA				IAmb	IAmb	16 20 02.4	
	comp=Z,6.2nm,1.5s						
DBIC	Dimbokro	69.65	70	P	P	16 20 36.5	+0.1
	comp=Z,2.4nm,0.4s,baz=202,slow=4.2,SNR=13						
DBIC	Dimbokro	69.65	70	P	P	16 20 36.5	+0.1
TORD	Torodi Ar. Bea	78.56	68	P	P	16 21 28.7	+0.5
	comp=Z,11nm,0.8s,baz=258,slow=5.2,SNR=49						
TORD				pP	pP	16 21 58.3	-1.1
	comp=Z,0.5nm,0.8s,baz=250,slow=3.5,SNR=0.9						
BOSA	Boshof	79.25	117	P	P	16 21 32.6	+0.6
	comp=Z,1.2nm,0.5s,baz=261,slow=1.9,SNR=7.5						
BOSA	Boshof	79.25	117	P	P	16 21 32.8	+0.7
BOSA				IAmb	IAmb	16 21 46.2	
	comp=Z,10nm,1.5s						
PDAR	Pinedale Array	80.55	330	P	P	16 21 39.6	+0.9
	comp=Z,0.2nm,0.5s,baz=129,slow=5.3,SNR=3.0						
ASAR	Alice Springs	124.40	204	PKP	PKPdf	16 28 24.7	-0.4
	comp=Z,0.4nm,0.3s,baz=133,slow=1.8,SNR=22						
ASAR				pPKP	pPKPdf	16 28 58.1	-0.4
	comp=Z,0.5nm,0.7s,baz=120,slow=1.8,SNR=3.6						
WRA	Warramunga Arr	127.63	206	PKP	PKPdf	16 28 31.5	+0.2
	comp=Z,0.3nm,0.3s,baz=155,slow=2.0,SNR=18						
WRA				pPKP	pPKPdf	16 29 04.2	-0.5
	comp=Z,0.5nm,0.6s,baz=165,slow=1.5,SNR=2.9						
ZALV	Zalesovo Beam	147.32	31	PKPbc	PKPbc	16 29 09.6	+1.0
	comp=Z,3.2nm,0.4s,baz=293,slow=3.8,SNR=20						
ZALV				pPKPbc	pPKPbc	16 29 41.4	-0.5
	comp=Z,1.1nm,0.6s,baz=316,slow=4.1,SNR=2.9						
MKAR	Makanchi Array	150.01	44	PKPbc	PKiKP	16 29 16.6	-0.1
	comp=Z,2.7nm,0.7s,baz=306,slow=2.4,SNR=19						
MKAR				pPKPbc	pPKPbc	16 29 49.2	+0.1
	comp=Z,0.6nm,0.7s,baz=327,slow=2.4,SNR=2.5						

IDC 01 16:12:54.6±1.9**, 7°.53S×153°.96E, h0km, mb3.4**/3**, mb1 3.7**/4**, mb1mx3.4**/33**, mbtmp3.5**/4**, ML3.7**/1**, Error ellipse: s-maj=45.7km s-min=25.8km az=109.0, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.73	329	Pn	Pn	16 13 53.7	+0.2
	6.2nm,0.3s,baz=71,slow=5.3,SNR=18						
KRVT				Sn	Sn	16 14 38.4	+0.2
	4.2nm,0.3s,baz=115,slow=24,SNR=5.9						
WRA	Warramunga Arr	22.67	235	P	P	16 17 58.1	+0.3
	1.2nm,0.9s,baz=60,slow=9.2,SNR=7.0						
ASAR	Alice Springs	25.05	228	P	P	16 18 20.3	-0.5
	0.3nm,0.7s,baz=57,slow=10,SNR=8.2						
ILAR	Eielson Array	84.24	22	P	P	16 25 28.1	+0.3
	0.6nm,0.7s,baz=248,slow=4.8,SNR=6.6						

*NEIC **01** 16:21:08.9±2.5, 21°.10S±0°.05×68°.56W±0°.10, h125km±6km, Error ellipse: s-maj=13.5km s-min=6.7km az=97.0*
*IDC **01** 16:21:09.8±0.9, 21°.09S×68°.29W, h124km±10km, mb3.9/4, mb1 3.9/8, mb1mx3.5/35, mbtmp4.3/8, Error ellipse: s-maj=26.2km s-min=10.5km az=105.0*
*GUC **01** 16:21:09.7±0.7, 21°.09S×68°.59W, h132km±4km, ML4.1*
*VAO **01** 16:21:22.2±2.3, 20°.66S×68°.21W, h256km±22km, mb4.0*
ISC 01 16:21:09.3±0.6**, 21°.08S**±0°.03×**68°.74W**±0°.05**, h139**km±6km**, n72,** σ1§**21**/93**, mb4.1**/4**, 12C-7D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.70	273	⇑iP	Pn	16 21 30.7	-0.1
PB01				iS	Sn	16 21 46.8	-0.3
PB01				IAML		16 21 48.5	
	comp=N,5µm,0.2s						
PB01	IPOC Station P	0.70	273		Pn	16 21 30.1	-0.7
PB01				Sn	Sn	16 21 46.6	-0.4
PB09	IPOC Station P	0.85	213	⇑iP	Pn	16 21 32.4	+0.4
PB09				IAML		16 21 50.8	
	comp=N,3µm,0.3s						
PB09	IPOC Station P	0.85	213		Pn	16 21 32.1	+0.1
PB09				Sn	Sn	16 21 49.4	+0.1
PB08	IPOC Station P	1.01	337	⇑iP	Pn	16 21 33.9	+0.2
PB08				iS	Sn	16 21 52.1	+0.1
PB08				IAML		16 21 55.1	
	comp=E,2µm,0.4s						
PB08	IPOC Station P	1.01	337		Pn	16 21 33.0	-0.6
PB08				Sn	Sn	16 21 52.0	-0.1
PB02	IPOC Station P	1.11	257	⇓iP	Pn	16 21 34.9	+0.8
PB02				iS	Sn	16 21 53.9	+0.8
PB02				IAML		16 21 55.7	
	comp=E,9µm,0.2s						
PB07	IPOC Station P	1.25	239	⇓iP	Pn	16 21 36.2	+0.6
PB07				iS	Sn	16 21 56.5	+0.8
PB07				IAML		16 21 59.3	
	comp=E,3µm,0.6s						
PB07	IPOC Station P	1.25	239		Pn	16 21 35.6	-0.1
PATCX	Punta Patache	1.35	281	⇑iP	Pn	16 21 37.5	+1.0
PATCX				iS	Sn	16 21 58.4	+1.1
PATCX				IAML		16 22 01.8	
	comp=E,8µm,0.3s						
PATCX	Punta Patache	1.35	281		Pn	16 21 37.1	+0.6
PB03	IPOC Station P	1.35	224	⇓iP	Pn	16 21 37.1	+0.5
PB03				iS	Sn	16 21 57.8	+0.4
PB03				IAML		16 21 59.0	
	comp=N,3µm,0.3s						
TA01	Diego Aracena	1.45	291	⇑iP	Pn	16 21 38.0	+0.6
TA01				iS	Sn	16 21 59.6	+0.7
TA01				IAML		16 22 00.4	
	comp=E,4µm,0.2s						
GO01	Chusmiza	1.47	343	⇑iP	Pn	16 21 38.5	+0.2
GO01				iS	Sn	16 22 00.7	+0.4
GO01	Chusmiza	1.47	343		Pn	16 21 38.3	0.0
LVC	Limon Verde	1.53	186	P	Pn	16 21 39.2	+0.5
	comp=E,128nm,0.3s,baz=31,slow=0.4,SNR=1.6						
LVC				S	Sn	16 22 01.4	+0.1
	comp=E,120nm,0.3s,baz=288,slow=20,SNR=1.5						
TA02	Huaiquique	1.54	301	eP	Pn	16 21 38.8	+0.4
TA02				iS	Sn	16 22 01.2	+0.6
PB11	IPOC Station P	1.57	327	⇑iP	Pn	16 21 39.1	+0.1
PB11				iS	Sn	16 22 01.9	+0.2
PB11				IAML		16 22 03.6	
	comp=E,3µm,0.2s						
PB11	IPOC Station P	1.57	327		Pn	16 21 39.0	-0.1
PB06	IPOC Station P	1.79	206	⇑iP	Pn	16 21 42.0	+0.5
PB06				iS	Sn	16 22 06.5	+0.3
PB06				IAML		16 22 08.8	
	comp=E,2µm,0.1s						
PB06	IPOC Station P	1.79	206		Pn	16 21 41.8	+0.2
PB04	IPOC Station P	1.81	226	⇑iP	Pn	16 21 42.3	+0.5
PB04				iS	Sn	16 22 07.3	+0.7
PB04				IAML		16 22 13.7	
	comp=N,1µm,0.5s						
PB04	IPOC Station P	1.81	226		Pn	16 21 42.3	+0.5
PSGC	Pisagua	1.97	318	⇑iP	Pn	16 21 43.4	-0.2
PSGC				iS	Sn	16 22 09.5	-0.3
PSGC				IAML		16 22 12.5	
	comp=N,1µm,0.3s						
PSGCX	Pisagua	1.97	318		Pn	16 21 43.4	-0.2
MNMC	Minye Minye	2.10	337	⇓iP	Pn	16 21 45.8	+0.5
MNMC				iS	Sn	16 22 14.1	+1.2
MNMC	Minye Minye	2.10	337		Pn	16 21 45.9	+0.5
PB15	IPOC Station P	2.22	198	⇑iP	Pn	16 21 47.0	+0.3
PB15				iS	Sn	16 22 15.7	+0.2
PB15	IPOC Station P	2.22	198		Pn	16 21 47.1	+0.4
PB05	IPOC Station P	2.23	217	⇑iP	Pn	16 21 47.0	+0.3
PB16	IPOC Station P	2.83	345	⇓iP	Pn	16 21 55.5	+0.8
PB16				IAML		16 22 34.5	
	comp=E,194nm,0.4s						
PB16	IPOC Station P	2.83	345		Pn	16 21 55.4	+0.8
PB12	IPOC Station P	2.88	328	⇓iP	Pn	16 21 54.0	-0.8
PB12				iS	Sn	16 22 29.0	-0.8
PB12	IPOC Station P	2.88	328		Pn	16 21 54.1	-0.6
PB10	IPOC Station P	2.95	214	⇓iP	Pn	16 21 55.7	+0.1
PB10	IPOC Station P	2.95	214		Pn	16 21 55.5	0.0
PB14	IPOC Station P	3.85	203	eP	Pn	16 22 06.9	-0.7
PB14	IPOC Station P	3.85	203		Pn	16 22 06.9	-0.7
GO02	Mina Guanaco	4.14	191	eP	Pn	16 22 10.8	-0.5
GO02				iS	Sn	16 22 58.3	-1.2
GO02	Mina Guanaco	4.14	191		Pn	16 22 11.1	-0.3
LPAZ	La Paz	4.80	7	P	Pn	16 22 21.6	+1.0
	comp=E,5.6nm,0.3s,baz=172,slow=8.3,SNR=102						
LPAZ				S	Sn	16 23 16.4	+0.5
	comp=E,0.6nm,0.3s,baz=47,slow=18,SNR=1.3						
LPAZ	La Paz	4.80	7		Pn	16 22 21.4	+0.8
GO03	Copiap	6.63	192		Pn	16 22 42.2	-2.1
LCO	Las Campanas	8.09	192	Pn	Pn	16 23 02.7	-1.6
SIV	San Ignacio	8.86	56	P	Pn	16 23 09.7	-4.6
	comp=E,8.1nm,0.3s,baz=258,slow=9.9,SNR=144						
GO04	Tololo Observa	9.24	191		Pn	16 23 15.6	-4.0
NNA	Nana	11.92	318	Pn	Pn	16 23 52.1	-2.9
AQDB	Aquidauana	12.21	89	eP	Pn	16 24 02.6	+3.9
AQDB				eS	Sn	16 26 13.7	+0.2
SAML	Samuel	13.20	25	P	Pn	16 24 11.2	-0.3
SALV	Santo Antonio	13.40	70	eP	Pn	16 24 16.5	+2.4
GO05	Huala	14.16	191	P	Pn	16 24 23.4	-0.2
TRCB	Terra Rica	15.04	99	eP	Pn	16 24 36.6	+1.7
CLDB	Colider	16.04	53	eP	Pn	16 24 44.9	-2.3
IPMB	Ipameri, GO	19.59	84	eP	P	16 25 25.6	-1.1
PLCA	Paso Flores	19.65	184	P	P	16 25 29.8	+2.5
	comp=E,0.1nm,0.3s,baz=352,slow=10,SNR=4.5						
PLCA	Paso Flores	19.65	184	P	P	16 25 24.4	-2.9
BDFB	Brasilia	20.39	78	P	P	16 25 33.4	-2.1
	comp=E,1.1nm,0.3s,baz=258,slow=9.7,SNR=8.5						
BDFB	Brasilia	20.39	78	P	P	16 25 31.2	-4.3
BDFB				IAmb	IAmb	16 25 42.4	
	comp=Z,18nm,1.4s						
PTGA	Pitinga	21.96	24	P	P	16 25 50.5	-1.7
	comp=Z,2.9nm,0.2s,baz=178,slow=13,SNR=7.3						
PTGA	Pitinga	21.96	24	P	P	16 25 50.0	-2.2
PTGA				IAmb	IAmb	16 25 55.7	
	comp=Z,7.5nm,0.8s						
PTGA	Pitinga	21.96	24	eP	P	16 25 50.3	-1.8
JANB	Januaria	23.96	80	eP	P	16 26 09.6	-1.5
RUSC	La Rusia	27.14	350	P	P	16 26 41.0	+0.8
DBIC	Dimbokro	68.46	74	P	P	16 31 56.6	-0.2
	comp=Z,3.5nm,0.8s,baz=213,slow=8.3,SNR=4.0						
DBIC	Dimbokro	68.46	74	P	P	16 31 56.3	-0.5
TORD	Torodi Ar. Bea	77.06	70	P	P	16 32 47.5	-0.1
	comp=Z,1.7nm,0.5s,baz=254,slow=5.3,SNR=18						
YKA	Yellowknife Ar	90.85	341	P	P	16 33 58.9	+2.5
	comp=Z,0.8nm,0.6s,baz=132,slow=5.0,SNR=8.5						
ASAR	Alice Springs	130.36	208	PKP	PKiKP	16 40 06.2	+1.3
	comp=Z,0.3nm,0.6s,baz=138,slow=1.7,SNR=4.8						
WRA	Warramunga Arr	133.40	210	PKP	PKiKP	16 40 12.4	+1.3
	comp=Z,0.7nm,0.7s,baz=164,slow=1.9,SNR=8.1						
ZALV	Zalesovo Beam	141.51	25	PKP	PKiKP	16 40 26.6	+0.1
	comp=Z,0.5nm,0.6s,baz=288,slow=0.9,SNR=3.6						
KSH	Kashi	144.71	51	PKP	PKPab	16 40 30.1	+1.0
KSH				pPKP	pPKPdf	16 40 59.6	-9.0
MKAR	Makanchi Array	145.20	36	PKP	PKPab	16 40 32.3	+1.8
	comp=Z,0.9nm,0.6s,baz=358,slow=2.8,SNR=10.0						

*IDC **01** 16:34:26.3±2.6, 8°.46S×119°.32E, h170km±31km, mb3.4/2, mb1 3.2/6, mb1mx2.9/35, mbtmp3.7/6, Error ellipse: s-maj=48.8km s-min=23.5km az=71.0*
ISC 01 16:34:26.4±1.6**, 8°.5S**±0°.1×**119°.4E**±0°.2**, h170**km**, n6,** σ1§**73**/10**, Flores region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	3.47	6	P	Pn	16 35 19.9	-0.5
	1.4nm,0.3s,baz=177,slow=12,SNR=9.2						
KAPI				S	Sn	16 36 02.3	-0.3
	0.7nm,0.3s,baz=56,slow=17,SNR=1.3						
BATI	Baumata	4.56	112	P	Pn	16 35 35.3	+0.8
	1.2nm,0.3s,baz=274,slow=3.3,SNR=5.0						
FITZ	Fitzroy Crossi	11.33	148	P	Pn	16 37 04.8	+1.3
	0.1nm,0.3s,baz=323,slow=10,SNR=8.9						
FITZ				S	Sn	16 39 06.3	-2.9
	0.2nm,0.3s,baz=171,slow=17,SNR=7.3						
WRA	Warramunga Arr	18.42	130	P	P	16 38 28.9	-0.1
	0.2nm,0.3s,baz=304,slow=10,SNR=15						
WRA				S	S	16 41 52.1	+1.6
	0.1nm,0.3s,baz=297,slow=20,SNR=2.3						
ASAR	Alice Springs	20.53	139	P	P	16 38 52.2	+0.5
	0.8nm,0.3s,baz=315,slow=8.9,SNR=39						
ASAR				S	S	16 42 29.7	-2.4
	0.3nm,0.8s,baz=333,slow=24,SNR=1.6						
STKA	Stephens Creek	31.11	142	P	P	16 40 29.9	+0.9
	4.3nm,1.1s,baz=325,slow=12,SNR=2.7						

*IDC **01** 16:45:07.1±4.5, 6°.21S×155°.99E, h0km, mb3.4/3, mb1 3.8/4, mb1mx3.4/36, mbtmp3.5/4, ML3.9/1, Error ellipse: s-maj=81.8km s-min=38.3km az=68.0*
*NEIC **01** 16:45:14.3±1.6, 6°.7S±0°.1×155°.47E±0°.04, h35km±2km, mb4.3/4, Error ellipse: s-maj=24.2km s-min=3.9km az=13.0*
ISC 01 16:45:14.3±1.2**, 6°.8S**±0°.1×**155°.5E**±0°.1**, h35**km**, n10,** σ2§**46**/11**, mb3.9**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	4.21	307		Pn	16 46 15.0	-1.1
KRVT	Keravat (AS076	4.25	305	Pn	Pn	16 46 15.5	-1.1
	6.7nm,0.3s,baz=152,slow=3.3,SNR=43						
KRVT				Sn	Sn	16 47 07.2	+2.2
	14nm,0.3s,baz=195,slow=20,SNR=2.0						
PMG	Port Moresby	8.68	252	Pn	Pn	16 47 16.4	-1.0
WB0	Warramunga Arr	24.24	236	P	P	16 50 28.2	0.0
WB0				IAmb	IAmb	16 50 32.7	
	comp=Z,12nm,1.6s						
WB2	Warramunga Arr	24.36	235	P	P	16 50 27.8	-1.5
WB2				IAmb	IAmb	16 50 29.1	
	comp=Z,7.7nm,1.4s						
WRA	Warramunga Arr	24.37	235	P	P	16 50 32.4	+3.0
	comp=Z,0.5nm,0.7s,baz=58,slow=9.8,SNR=3.2						
ASAR	Alice Springs	26.71	229	P	P	16 50 55.6	+5.0
	comp=Z,0.4nm,0.8s,baz=65,slow=8.2,SNR=4.7						
NIUE	Niue	35.75	113	P	P	16 52 10.7	+0.5
MORW	Morawa	43.30	234	P	P	16 53 11.3	-1.8
MORW				IAmb	IAmb	16 53 18.9	
	comp=Z,34nm,1.4s						
CMAR	Chiang Mai Arr	61.15	295	P	P	16 55 25.2	-0.6
	comp=Z,0.6nm,0.7s,baz=110,slow=4.9,SNR=4.3						

*SJA **01** 16:45:16.1±0.5, 19°.81S×71°.46W, h10km±5km, ML4.9, MW4.7*
*NEIC **01** 16:45:22.6±1.5, 20°.01S±0°.04×71°.14W±0°.05, h6km±3km, mb5.2/242, Mwr4.8/39, ML4.9(GUC), Error ellipse: s-maj=6.5km s-min=5.3km az=112.0*
*NEIC **01** 16:45:22.3, 20°.02S×71°.11W, h11km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.01; $M_{\theta\theta}$0.19; $M_{\phi\phi}$-1.20; $M_{r\theta}$1.16; $M_{\theta\phi}$1.17; $M_{\phi r}$-0.79; Fault plane solution: $M_0$2.15000×10^{16} NP1:ϕ_s124.67000°, δ71.37000°, λ61.21000°. NP2:ϕ_s4.50000°, δ33.85000°, λ145.01000°. Principal axes: T 1.8353, Plg54.0000°, Azm359.0000°; N 0.5249, Plg27.0000°, Azm135.0000°; P -2.3603, Plg21.0000°, Azm236.0000°;*
*GUC **01** 16:45:23.8±0.8, 19°.95S×71°.28W, h27km±3km, ML4.8*
*IDC **01** 16:45:23.1±0.5, 19°.84S×70°.86W, h0km, mb4.6/17, mb1 4.7/21, mb1mx4.7/29, mbtmp4.6/21, ML4.2/4, MS4.0/9, Ms1 4.0/9, ms1mx3.7/23, Error ellipse: s-maj=18.2km s-min=12.9km az=58.0*
*GCMT **01** 16:45:27.6±0.4, 19°.95S±0°.03×71°.47W±0°.03, h28km, MW5.1/71, Moment Tensor Solution. s33,c40; s71,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.58±.30; $M_{\theta\theta}$-1.41±.17; $M_{\phi\phi}$-3.17±.19; $M_{r\theta}$-0.04±.26; $M_{\theta\phi}$1.72±.10; $M_{\phi r}$-2.31±.28; Best double couple: $M_0$4.95300×10^{16} NP1:ϕ_s318.00000°, δ34.00000°, λ70.00000°. NP2: ϕ_s162.00000°, δ58.00000°, λ103.00000°. Principal axes: T 5.2550, Plg73.0000°, Azm106.0000°; N -0.6040, Plg11.0000°, Azm335.0000°; P -4.6500, Plg12.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*VAO **01** 16:45:36.2±1.7, 19°.54S×70°.34W, h68km±12km, mb4.7*
ISC 01 16:45:22.9±0.6**, 19°.97S**±0°.03×**71°.10W**±0°.04**, h7**km±3km**, n726,** σ1§**11**/743**, mb5.2**/121**, 16C-4D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TA02	Huaiquique	0.96	108	⇑iP	Pn	16 45 42.6	-0.2
TA02				eS	Sn	16 45 56.9	+0.1
TA02				IAML		16 45 58.1	
	comp=N,59µm,0.6s						
PSGC	Pisagua	1.00	68	⇑iP	Pb	16 45 42.8	+0.3
PSGC				eS	Sn	16 45 57.5	-0.3
PSGC				IAML		16 46 01.9	
	comp=N,52µm,0.6s						
PSGCX	Pisagua	1.00	68		Pb	16 45 42.9	+0.4
PSGCX				Sg	Sb	16 45 55.7	-0.2
PSGCX	Pisagua	1.00	68	eS	Sn	16 45 58.1	+0.3
PSGCX				IAML		16 46 01.5	
	comp=Z,24µm,0.7s						
TA01	Diego Aracena	1.05	124	⇑iP	Pb	16 45 43.7	+0.3
TA01				eS	Sn	16 45 58.7	-0.2
TA01				IAML		16 46 05.9	
	comp=E,22µm,0.4s						
PATCX	Punta Patache	1.23	134	⇑iP	Pg	16 45 46.3	-0.1
PATCX				eS	Sn	16 46 04.3	+0.8
PATCX				IAML		16 46 11.1	
	comp=E,28µm,0.4s						
PATCX	Punta Patache	1.23	134		Pg	16 45 46.0	-0.5
PATCX				Sn	Sg	16 46 02.0	-0.3
PATCX	Punta Patache	1.23	134	eP	Pg	16 45 45.8	-0.6
PATCX				IAML		16 46 12.7	
	comp=Z,12µm,1.3s						
PB11	IPOC Station P	1.38	81	⇑iP	Pb	16 45 49.0	-0.1
PB11				eS	Sn	16 46 08.7	+1.3
PB11				IAML		16 46 13.3	
	comp=N,37µm,0.4s						
PB11	IPOC Station P	1.38	81		Pn	16 45 48.7	0.0
PB11				Sn	Sg	16 46 07.3	+0.1
PB11	IPOC Station P	1.38	81	eP	Pn	16 45 48.3	-0.4
PB11				IAML		16 46 23.2	
	comp=Z,21µm,0.8s						
PB12	IPOC Station P	1.54	29	⇑iP	Pn	16 45 50.7	-0.2
PB12				iS	Sn	16 46 10.7	-0.5
PB12				IAML		16 46 21.6	
	comp=N,8µm,0.5s						
PB12	IPOC Station P	1.54	29		Pn	16 45 50.7	-0.2
MNMC	Minye Minye	1.65	60	⇑iP	Pb	16 45 53.2	-0.6
MNMC				eS	Sg	16 46 16.9	+0.9
MNMC				IAML		16 46 29.3	
	comp=N,47µm,0.8s						
MNMC	Minye Minye	1.65	60		Pn	16 45 53.0	+0.4
AP01	Chacalluta	1.75	24	⇑iP	Pn	16 45 53.6	0.0
AP01				eS	Sn	16 46 16.1	-0.1
PB02	IPOC Station P	1.75	140	⇑iP	Pn	16 45 53.7	-0.2
PB02				IAML		16 46 27.3	
	comp=E,22µm,0.5s						
PB02	IPOC Station P	1.75	140	eP	Pn	16 45 53.6	-0.2
PB02				eS	Sg	16 46 21.6	+2.3
PB02				IAML		16 46 24.6	
	comp=Z,11µm,0.4s						
GO01	Chusmiza	1.82	81	⇑iP	Pn	16 45 55.8	+0.7
GO01				iS	Sg	16 46 22.3	+0.7
GO01	Chusmiza	1.82	81		Pn	16 45 55.8	+0.7
PB08	IPOC Station P	1.84	96	⇑iP	Pb	16 45 56.7	-0.4
PB08				eS	Sg	16 46 22.6	+0.5
PB08				IAML		16 46 28.3	
	comp=E,10µm,0.3s						
PB08	IPOC Station P	1.84	96		Pn	16 45 55.8	+0.5
PB08	IPOC Station P	1.84	96	eP	Pn	16 45 55.7	+0.4
PB08				eS	Sg	16 46 24.1	+2.0
PB08				IAML		16 46 34.1	
	comp=Z,8µm,1.1s						
PB01	IPOC Station P	1.85	125	⇑iP	Pn	16 45 55.8	+0.6
PB01				eS	Sb	16 46 21.4	+0.9
PB01				IAML		16 46 27.8	
	comp=N,9µm,0.3s						
PB01	IPOC Station P	1.85	125		Pn	16 45 55.5	+0.3
PB01	IPOC Station P	1.85	125	eP	Pn	16 45 55.4	+0.2
PB01				IAML		16 46 30.0	
	comp=Z,8µm,0.6s						
PB07	IPOC Station P	2.08	147	⇓iP	Pn	16 45 58.2	-0.3
PB07	IPOC Station P	2.08	147		Pn	16 45 58.0	-0.4
PB07	IPOC Station P	2.08	147	eP	Pn	16 45 58.1	-0.3
PB07				eS	Sg	16 46 29.5	-0.4
PB07				IAML		16 46 43.0	
	comp=Z,5µm,0.5s						
PB16	IPOC Station P	2.22	43	⇑iP	Pn	16 46 01.5	+0.8
PB16				iS	Sg	16 46 34.3	-0.1
PB16	IPOC Station P	2.22	43		Pn	16 46 01.4	+0.8
PB03	IPOC Station P	2.42	149	⇓iP	Pn	16 46 02.7	-0.3
PB03				IAML		16 46 54.1	
	comp=E,3µm,0.5s						
PB03	IPOC Station P	2.42	149	eP	Pn	16 46 02.9	-0.2
PB03				IAML		16 46 51.5	
	comp=Z,3µm,0.7s						
PB04	IPOC Station P	2.51	159	⇓iP	Pn	16 46 03.5	-0.9
PB04				IAML		16 47 00.2	
	comp=N,5µm,0.8s						
PB04	IPOC Station P	2.51	159		Pn	16 46 03.4	-0.9
PB04	IPOC Station P	2.51	159	iP	Pn	16 46 03.5	-0.9
PB04				IAML		16 46 58.4	
	comp=Z,5µm,1.5s						
PB09	IPOC Station P	2.51	137	⇑iP	Pn	16 46 05.6	+1.2
PB09				iS	Sn	16 46 36.1	+0.7
PB09	IPOC Station P	2.51	137		Pn	16 46 05.6	+1.2
PB09	IPOC Station P	2.51	137	eP	Pn	16 46 04.7	+0.3
PB09				IAML		16 47 01.5	
	comp=Z,5µm,1.6s						
PB05	IPOC Station P	2.99	164	iP	Pn	16 46 09.5	-1.3
PB05	IPOC Station P	2.99	164	iP	Pn	16 46 10.1	-0.7
PB05				IAML		16 47 22.4	
	comp=Z,1µm,0.8s						
PB06	IPOC Station P	3.07	153	⇓iP	Pn	16 46 11.4	-0.7
PB06	IPOC Station P	3.07	153		Pn	16 46 11.3	-0.7
PB06	IPOC Station P	3.07	153	iP	Pn	16 46 11.9	-0.1
PB06				IAML		16 47 19.3	
	comp=Z,3µm,1.2s						
LVC	Limon Verde	3.33	142	Pn	Pn	16 46 17.3	+1.6
	comp=Z,91nm,0.3s,baz=40,slow=0.2,SNR=136						
LVC				Sn	Sn	16 46 56.4	+0.7
	comp=Z,129nm,0.3s,baz=123,slow=23,SNR=11						
LVC				Lg	Lg	16 47 12.2	
	comp=Z,111nm,0.3s,baz=30,slow=23,SNR=8.4						
PB15	IPOC Station P	3.56	155		Pn	16 46 17.9	-0.9
PB15	IPOC Station P	3.56	155	iP	Pn	16 46 18.6	-0.2
PB15				IAML		16 47 25.1	
	comp=Z,4µm,1.1s						
PB10	IPOC Station P	3.56	172		Pn	16 46 17.0	-1.6
PB10	IPOC Station P	3.56	172	iP	Pn	16 46 17.1	-1.5
PB10				IAML		16 47 42.1	
	comp=Z,958nm,1.1s						
LPAZ	La Paz	4.63	38	Pn	Pn	16 46 37.6	+3.7
	comp=Z,0.9nm,0.3s,baz=208,slow=9.4,SNR=42						
LPAZ				LR	LR	16 48 08.5	
	comp=Z,1µm,21.1s,baz=210,slow=38						
LPAZ	La Paz	4.63	38		Pn	16 46 37.3	+3.4
PB14	IPOC Station P	4.67	172		Pn	16 46 31.9	-2.3
GO02	Mina Guanaco	5.35	165		Pn	16 46 43.0	-0.5
AZAP	Zapla	7.02	128	iP	Pn	16 47 07.6	+1.3
AZAP				IAML		16 49 23.8	
	comp=Z,46nm,2.4s						
GO03	Copiap	7.63	174		Pn	16 47 13.0	-1.6
NNA	Nana	9.67	324	Pn	Pn	16 47 44.7	+2.2
	comp=Z,1.0nm,0.3s,baz=194,slow=12,SNR=2.3						
NNA				Sn	Sn	16 49 28.5	-3.1
	comp=Z,3.2nm,0.3s,baz=276,slow=6.4,SNR=5.2						
NNA	Nana	9.67	324	Pn	Pn	16 47 41.3	-1.3
GO04	Tololo Observa	10.16	179		Pn	16 47 47.1	-2.3
SIV	San Ignacio	10.33	69	Pn	Pn	16 47 50.3	-1.4
	comp=Z,2.7nm,0.3s,baz=278,slow=8.3,SNR=26						
PTLB	Pontes e Lacer	12.26	70	eP	Pn	16 48 16.5	-1.5
SAML	Samuel	13.37	36		Pn	16 48 31.8	-1.4
SAML	Samuel	13.37	36	eP	Pn	16 48 31.9	-1.4
CPUP	Villa Florida	14.16	119	Pn	Pn	16 48 43.9	0.0
	comp=Z,0.2nm,0.3s,baz=311,slow=15,SNR=1.6						
CPUP				LR	LR	16 54 38.3	
	comp=Z,534nm,19.0s,baz=297,slow=40						
CPUP	Villa Florida	14.16	119		Pn	16 48 44.2	+0.2
AQDB	Aquidauana	14.47	95	eP	Pn	16 48 48.3	+0.1
GO05	Huala	15.00	183		Pn	16 48 54.8	-0.5
H03N1	Juan Fernandez	15.11	206	T	T	17 04 51.9	
	baz=33,slow=72,SNR=92						
H03N2	Juan Fernandez	15.12	206	T	T	17 04 51.4	
	baz=33,slow=72,SNR=119						
H03N3	Juan Fernandez	15.13	206	T	T	17 04 50.4	
	baz=33,slow=72,SNR=108						
SALV	Santo Antonio	15.21	77	eP	Pn	16 48 58.8	+0.5
CLDB	Colider	17.30	61	eP	Pn	16 49 23.1	-2.0

PTGB Pitanga 18.23 108 eP P 16 49 39.5 +2.6
PCMB Pacaembu 18.62 98 eP Pn 16 49 42.0 +0.6
ARAG Araguaiana, MT 18.85 80 eP P 16 49 41.5 -2.2
LPA La Plata 18.89 145 eP P 16 49 37.9 -6.1
LPA S Sn 16 52 51.7 -25
LPA PCP PcP 16 53 56.9 -14
LPA PKIKP **PKiKP** 17 02 04.1 +3.2
LPA SKIKS 17 09 01.7
MACA Manacapuru-AM 19.56 33 eP P 16 49 51.2 -0.3
FRTB Fartura 20.30 103 eP P 16 49 59.7 +0.2
PLCA Paso Flores 20.70 179 P Pn 16 50 05.9 -0.2
comp=Z,75nm,1.0s,baz=359,slow=12,SNR=74
PLCA Paso Flores 20.70 179 P Pn 16 50 06.1 0.0
PLCA IAmb IAmb 16 50 06.9
comp=Z,118nm,1.1s
IPMB Ipameri, GO 21.74 89 eP P 16 50 14.7 -0.4
PTGA Pitinga 22.01 31 P P 16 50 16.5 -1.5
comp=Z,27nm,0.5s,baz=217,slow=11,SNR=24
PTGA Pitinga 22.01 31 P P 16 50 15.6 -2.4
PTGA Pitinga 22.01 31 eP P 16 50 17.0 -1.0
RCLB Rio Claro- Sao 22.11 101 eP P 16 50 19.9 +0.8
CRUC La Cruz 22.16 344 eP P 16 50 24.3 +4.3
BDFB Brasilia 22.39 83 P P 16 50 20.9 -1.3
comp=Z,14nm,1.0s,baz=252,slow=10,SNR=6.4
BDFB LR LR 16 59 58.8
comp=Z,607nm,20.0s,baz=273,slow=40
BDFB Brasilia 22.39 83 P P 16 50 21.3 -1.0
SOTA Rioblanco 22.62 346 eP P 16 50 28.8 +3.7
PCON Cinco Dias 22.76 346 eP P 16 50 30.0 +3.4
BETC Betania 22.91 349 eP P 16 50 30.8 +3.1
POPC Popayan, Colom 23.03 346 eP P 16 50 30.5 +1.4
PRAC Prado 23.83 351 eP P 16 50 36.2 -0.6
GR1C Gorgona, Isla 23.86 342 eP P 16 50 42.5 +5.4
PARB Paraibuna 23.91 103 eP P 16 50 37.0 -0.6
HORQ Saladito 23.93 346 eP P 16 50 39.0 +0.9
VILC Villavicencio, 24.07 354 eP P 16 50 40.7 +1.4
ORTC Ortega, Tolima 24.08 350 eP P 16 50 40.7 +1.5
YOTC Yotoco, Valle 24.36 347 eP P 16 50 42.7 +0.8
BOAV Boa Vista 24.54 26 eP P 16 50 43.5 +0.1
CHIC Chingaza 24.59 354 eP P 16 50 43.2 -1.1
BSCB Bom Sucesso 24.68 97 eP P 16 50 44.9 +0.2
ROSC El Rosal 24.86 352 P P 16 50 49.6 +2.9
comp=Z,5.9nm,0.4s,baz=141,slow=12,SNR=2.3
ROSC El Rosal 24.86 352 P P 16 50 47.8 +1.1
ROSC IAmb IAmb 16 51 05.0
comp=Z,44nm,0.9s
GUY2C Guyana, Caldas 25.39 350 eP P 16 50 53.2 +1.6
MAN01 Angra dos Reis 25.41 101 eP P 16 50 51.4 0.0
RUSC La Rusia 25.78 355 eP P 16 50 55.6 +0.5
RUSC La Rusia 25.78 355 P P 16 50 55.3 +0.1
JANB Januaria 26.00 83 eP P 16 50 55.2 -1.6
CBOC Ciudad Bolivar 26.12 349 eP P 16 50 58.5 +0.5
TAMC Tame, Arauca 26.25 358 eP P 16 50 58.9 -0.1
HELC Santa Helena 26.36 350 eP P 16 51 02.6 +2.3
PTBC PUERTO BERRIO, 26.55 353 eP P 16 51 00.4 -1.3
PAMC Pamplona, Colo 27.19 357 eP P 16 51 08.6 +0.7
DBBC Dabeiba 27.29 349 eP P 16 51 09.9 +1.5
SJMB Sao Joao De Ma 28.24 93 eP P 16 51 16.8 -0.1
SDV Santo Domingo 28.68 1 P P 16 51 21.1 +0.2
comp=Z,4.3nm,0.3s,baz=239,slow=10,SNR=1.5
SDV Santo Domingo 28.68 1 P P 16 51 19.0 -1.9
SMLC San Martn de 28.74 354 eP P 16 51 19.3 -2.0
ROSB Rosrio 31.33 61 eP P 16 51 43.5 -0.7
NBMO Morrinhos-CE 34.53 65 eP P 16 52 10.4 -1.8
RCBR Riachuelo 36.97 72 eP P 16 52 32.7 -0.6
CRPR Cabo Rojo, PR 37.95 6 P P 16 52 39.7 -1.6
CRPR IAmb IAmb 16 52 41.4
comp=Z,57nm,1.0s
OBIP Obispado Ponce 38.04 7 P P 16 52 40.9 -1.2
OBIP IAmb IAmb 16 52 51.5
comp=Z,38nm,0.9s
PDPR Patillas Dam, 38.08 8 P P 16 52 40.2 -2.2
PDPR IAmb IAmb 16 52 51.1
comp=Z,61nm,1.2s
SJG San Juan 38.16 8 P P 16 52 40.7 -2.4
SJG IAmb IAmb 16 52 51.7
comp=Z,53nm,1.0s
MTP Monte Pirata 38.22 9 P P 16 52 41.8 -1.8
MTP IAmb IAmb 16 52 52.1
comp=Z,43nm,1.1s
ZAIG Zacatecas 52.42 323 P P 16 54 35.3 -1.3
158A Hollywood 53.13 350 P P 16 54 42.2 +0.9
baz=169
NHSC New Hope 53.49 351 P P 16 54 45.0 +1.1
baz=169
NHSC New Hope 53.49 351 P P 16 54 43.1 -0.9
Z58A St. Stephen 53.66 351 P P 16 54 46.3 +1.1
baz=170
Z57A Bowman 53.76 350 P P 16 54 46.8 +0.9
baz=169
152A Waverly Hall 53.94 346 P P 16 54 46.7 -0.6
152A IAmb IAmb 16 54 57.3
comp=Z,23nm,1.1s
Y60A Bolivia 54.10 353 P P 16 54 49.4 +1.0
baz=172
GOGA Godfrey 54.38 347 P P 16 54 51.5 +1.0
baz=166
Y55A Saluda 54.58 349 P P 16 54 52.6 +0.7
baz=168
X60A Albert Glenn T 54.64 353 P P 16 54 53.1 +0.8
baz=172
X59A McDuffie Farm, 54.71 352 P P 16 54 53.4 +0.6
baz=171
Z50A Ashland 54.79 345 P P 16 54 53.3 -0.2
baz=163
Z50A Ashland 54.79 345 P P 16 54 53.1 -0.4
Z50A IAmb IAmb 16 55 03.4
comp=Z,15nm,0.8s
X58A Rowland 54.79 352 P P 16 54 54.0 +0.6
baz=171
LRAL Lakeview Retre 54.85 344 P P 16 54 54.1 +0.2
baz=162
Y52A Lilburn 54.94 347 P P 16 54 55.4 +0.8
baz=165
X56A White Oak 54.98 350 P P 16 54 55.5 +0.6
baz=169
BIRD Birdtown, Kers 55.04 351 P P 16 54 55.6 +0.4
BIRD IAmb IAmb 16 55 06.4
comp=Z,51nm,1.1s
X55A Gracelyn & Ava 55.06 349 P P 16 54 56.0 +0.6
baz=166
W60A Pink Hill 55.08 353 P P 16 54 56.4 +0.9
baz=172
W61A Ground Anchor 55.13 354 P P 16 54 56.9 +1.0
baz=173
W58A Raeford 55.23 352 P P 16 54 57.3 +0.7
baz=171,SNR=6.7
833A Chaparral WMA, 55.26 329 P P 16 54 57.2 +0.3
baz=147
X54A Belton 55.27 349 P P 16 54 57.4 +0.4
baz=167
W59A Clinton 55.28 353 P P 16 54 57.8 +0.9
baz=172
W57A Gilead 55.47 351 P P 16 54 58.2 -0.1
baz=170
W57A Gilead 55.47 351 P P 16 54 57.6 -0.7
W57A IAmb IAmb 16 55 09.4
comp=Z,32nm,1.0s
W56A Indian Trail 55.54 351 P P 16 54 59.0 +0.2
baz=169
KMSC Kings Mountain 55.67 350 P P 16 55 00.3 +0.5
baz=168
KMSC Kings Mountain 55.67 350 P P 16 54 59.6 -0.2
KMSC IAmb IAmb 16 55 10.3
comp=Z,23nm,1.0s
V60A Jim Taylor Roa 55.74 354 P P 16 55 01.0 +0.8
baz=173
W54A Cherokee Point 55.76 349 P P 16 55 01.1 +0.7
baz=167
V59A Middlesex 55.84 353 P P 16 55 02.0 +1.0
baz=172,SNR=6.3
V58A Windy Hill, Pi 55.98 352 P P 16 55 02.7 +0.7
baz=171,SNR=5.7
V58A Windy Hill, Pi 55.98 352 P P 16 55 02.0 0.0
V58A IAmb IAmb 16 55 12.6
comp=Z,38nm,1.1s
V57A Coltrane Farms 56.16 352 P P 16 55 03.8 +0.5
baz=170
V56A Mocksville 56.19 351 P P 16 55 04.4 +0.9
baz=169
X48A Hartselle 56.21 344 P P 16 55 03.6 -0.1
X48A IAmb IAmb 16 55 14.2
comp=Z,38nm,1.4s
V55A Taylorsville 56.34 350 P P 16 55 05.2 +0.6
baz=169
V55A Taylorsville 56.34 350 P P 16 55 05.2 +0.6
V55A IAmb IAmb 16 55 15.4
comp=Z,26nm,0.9s
U59A Littleton 56.38 354 P P 16 55 05.7 +0.9
baz=172
U59A Littleton 56.38 354 P P 16 55 05.5 +0.7
V54A Nebo 56.39 349 P P 16 55 05.5 +0.5
baz=168
U60A Pendleton 56.43 354 P P 16 55 05.9 +0.7
baz=173
V53A Saluda 56.44 349 P P 16 55 05.4 0.0
U58A Oxford 56.50 353 P P 16 55 06.5 +0.8
baz=172
W50A Signal Mountai 56.50 346 P P 16 55 05.6 -0.2
W50A IAmb IAmb 16 55 16.4
comp=Z,33nm,1.2s
CPCT Cooper Cave 56.57 347 P P 16 55 06.7 +0.5
CPCT IAmb IAmb 16 55 16.9
comp=Z,32nm,1.3s
U57A Blanch 56.64 352 P P 16 55 07.5 +0.8
baz=171
SWET Sewanee 56.66 345 P P 16 55 05.2 -1.8
U56A King 56.70 351 P P 16 55 07.5 +0.3
baz=170
U56A King 56.70 351 P P 16 55 07.8 +0.6
U56A IAmb IAmb 16 55 18.8
comp=Z,45nm,1.0s
V52A Sevierville 56.76 348 P P 16 55 07.5 -0.1
OXF Oxford 56.91 342 P P 16 55 08.1 -0.6
baz=160
U55A TA2, Sparta 56.95 350 P P 16 55 09.2 +0.2
baz=169
T59A Double "B" Far 56.96 354 P P 16 55 09.8 +0.8
baz=173,SNR=8.3
T59A Double "B" Far 56.96 354 P P 16 55 09.0 0.0
PLAL Pickwick Lake 56.98 343 P P 16 55 07.8 -1.4
PLAL IAmb IAmb 16 55 18.5
comp=Z,26nm,1.1s
T58A Grand View Acr 57.04 353 P P 16 55 10.5 +1.0
baz=172,SNR=7.4
U54A Nelsons Funny 57.09 350 P P 16 55 10.4 +0.4
baz=168
U54A Nelsons Funny 57.09 350 P P 16 55 09.4 -0.7
U54A IAmb IAmb 16 55 20.9
comp=Z,38nm,0.9s
T57A Hurt 57.18 352 P P 16 55 11.4 +0.8
baz=171
T57A Hurt 57.18 352 P P 16 55 11.2 +0.7
T57A IAmb IAmb 16 55 21.4
comp=Z,42nm,1.1s
JCT Junction City 57.26 330 P P 16 55 11.6 +0.3
baz=148
T56A Rocky Mt 57.32 352 P P 16 55 12.5 +1.0
baz=170
WLAR White Oak Lake 57.34 338 P P 16 55 10.6 -1.2
V48A Smith Brothers 57.38 345 P P 16 55 10.3 -1.7
W45A Hickory Valley 57.45 342 P P 16 55 10.8 -1.7
W45A IAmb IAmb 16 55 22.4
comp=Z,46nm,0.9s
WHTX Lake Whitney, 57.51 333 P P 16 55 13.5 +0.6
baz=150
T55A Pulaski 57.51 351 P P 16 55 13.8 +0.8
baz=169,SNR=7.3
T54A Tazewell 57.58 350 P P 16 55 13.7 +0.3
baz=168
CLTN Cedars of Leba 57.59 345 P P 16 55 13.3 -0.2
CLTN IAmb IAmb 16 55 40.2
comp=Z,17nm,0.8s
S60A Water View 57.61 355 P P 16 55 14.4 +0.9
baz=174
S58A Poland Farm, P 57.65 353 P P 16 55 14.5 +0.7
baz=172
S58A Poland Farm, P 57.65 353 P P 16 55 13.8 0.0
T53A Wise 57.67 349 P P 16 55 14.3 +0.2
baz=167
S59A Mechanicsville 57.72 354 P P 16 55 14.9 +0.6
baz=173
U49A Red Boiling Sp 57.87 346 P P 16 55 14.7 -0.7
U49A IAmb IAmb 16 55 25.8
comp=Z,55nm,1.6s
S56A Natural Bridge 57.89 352 P P 16 55 16.7 +1.1
baz=171
S57A Dark Hollow, R 57.90 353 P P 16 55 16.6 +1.0
baz=171,SNR=6.6
S57A Dark Hollow, R 57.90 353 P P 16 55 15.2 -0.4
S57A IAmb IAmb 16 55 26.5
comp=Z,37nm,0.9s
R58B Mineral 57.98 354 P P 16 55 17.3 +1.2
baz=172,SNR=5.2
R58B Mineral 57.98 354 P P 16 55 16.6 +0.4
R58B IAmb IAmb 16 55 27.8
comp=Z,47nm,1.1s
WVT Waverly 58.00 344 P P 16 55 15.8 -0.5
baz=162
WVT Waverly 58.00 344 P P 16 55 15.0 -1.3
WVT IAmb IAmb 16 55 25.6
comp=Z,21nm,0.9s
UALR University of 58.07 339 P P 16 55 15.7 -1.2
UALR IAmb IAmb 16 55 27.8
comp=Z,30nm,1.1s
S55A Lewisburg 58.11 351 P P 16 55 18.0 +0.8
baz=170,SNR=5.4
R61A Willards 58.13 356 P P 16 55 19.3 +2.1
baz=175
R59A King George, V 58.14 354 P P 16 55 18.1 +0.9
baz=173
T50A Nancy 58.15 347 P P 16 55 16.9 -0.4
T50A IAmb IAmb 16 55 27.1
comp=Z,16nm,0.8s
TXAR Lajitas Array 58.22 326 P P 16 55 19.2 +1.1
comp=Z,4.7nm,1.0s,baz=150,slow=8.1,SNR=18
S54A Dingess, Beckl 58.26 350 P P 16 55 18.7 +0.5
baz=169
S53A Williamson 58.28 350 P P 16 55 19.1 +0.8
baz=168
MIAR Mount Ida 58.28 338 P P 16 55 18.8 +0.5
baz=155,SNR=8.8
MIAR Mount Ida 58.28 338 P P 16 55 18.4 +0.1
MIAR IAmb IAmb 16 55 29.7
comp=Z,44nm,1.2s
R58A Rapidan 58.32 354 P P 16 55 19.3 +0.7
baz=172
R57A Stanardsville 58.38 353 P P 16 55 19.9 +1.0
baz=172,SNR=5.4
W41B Gary Mavity, V 58.40 340 P P 16 55 19.6 +0.4
baz=157
WHAR Wooly Hollow 58.52 340 P P 16 55 20.1 +0.1
WHAR IAmb IAmb 16 55 30.9
comp=Z,15nm,0.9s
R55A Marlinton 58.56 352 P P 16 55 21.2 +0.9
baz=170
R54A Victor 58.59 351 P P 16 55 21.0 +0.5
baz=169
T47A Sharon Grove 58.63 345 P P 16 55 20.6 -0.2
LCAR Lake Charles 58.88 341 P P 16 55 22.0 -0.4
LCAR IAmb IAmb 16 55 32.3
comp=Z,13nm,1.0s
R53A Hurricane 58.88 350 P P 16 55 22.9 +0.4
baz=168
Q58A Fox Den Farm, 58.93 354 P P 16 55 23.9 +1.2
baz=173
W39A Magazine 58.94 338 P P 16 55 23.8 +0.9
baz=155,SNR=7.4
W39A Magazine 58.94 338 P P 16 55 23.9 +1.0
W39A IAmb IAmb 16 55 34.8
comp=Z,23nm,1.1s
X37A Clayton 58.97 337 P P 16 55 23.8 +0.7
X37A IAmb IAmb 16 55 35.0
comp=Z,33nm,1.1s
ABTX Abilene, Hawle 59.00 332 P P 16 55 24.2 +0.8
baz=148
ABTX Abilene, Hawle 59.00 332 P P 16 55 23.8 +0.4
FCAR Ozark Folk Cen 59.02 340 P P 16 55 22.7 -0.7
FCAR IAmb IAmb 16 56 59.9
comp=Z,16nm,0.9s
Q57A Strasburg 59.09 353 P P 16 55 25.5 +1.6
baz=172,SNR=8.1
Q56A Snyder Ridge, 59.19 353 P P 16 55 25.9 +1.3
baz=171,SNR=5.1
Q56A Snyder Ridge, 59.19 353 P P 16 55 25.1 +0.5
Q55A Buckhannon 59.26 352 P P 16 55 26.1 +1.0
baz=170
PBMO Poplar Bluff 59.32 342 P P 16 55 25.4 -0.2
PBMO IAmb IAmb 16 55 35.4
comp=Z,18nm,0.9s
Q53A Leroy 59.33 351 P P 16 55 25.9 +0.3
baz=169
Q54A Coxs Mills 59.35 351 P P 16 55 26.7 +1.0
baz=169
Q54A Coxs Mills 59.35 351 P P 16 55 26.1 +0.4
Q54A IAmb IAmb 16 55 35.8
comp=Z,21nm,0.8s
P58A Pank, Wackersv 59.43 354 P P 16 55 27.4 +1.2
baz=173
P59A Jarrettsville 59.48 355 P P 16 55 27.7 +1.2
baz=174
P57A Homestead Farm 59.50 354 P P 16 55 28.1 +1.4
baz=172
P57A Homestead Farm 59.50 354 P P 16 55 27.8 +1.1
P57A IAmb IAmb 16 55 38.3
comp=Z,39nm,1.1s
Q52A Bidwell 59.55 350 P P 16 55 27.3 +0.3
baz=168
P56A Dayton Farm, R 59.61 353 P P 16 55 28.8 +1.4
baz=172
P60A Greenville 59.62 356 P P 16 55 28.1 +0.5
baz=175
WCl Wyandotte Cave 59.63 346 P P 16 55 28.2 +0.6
baz=164
U40A Yellville 59.68 340 P P 16 55 28.2 +0.1
baz=156,SNR=6.2
U40A Yellville 59.68 340 P P 16 55 27.7 -0.4
U40A IAmb IAmb 16 55 38.8
comp=Z,20nm,0.9s
P55A Reedsville 59.73 352 P P 16 55 28.7 +0.4
baz=171
Q50A Georgetown 59.74 348 P P 16 55 28.8 +0.4
baz=166
T42A Van Buren 59.75 342 P P 16 55 27.9 -0.6
Q51A Peebles 59.80 349 P P 16 55 28.8 0.0
baz=167
Q51A Peebles 59.80 349 P P 16 55 28.7 -0.1
Q51A IAmb IAmb 16 55 39.1
comp=Z,14nm,0.8s
S44A Carbondale 59.85 343 P P 16 55 28.9 -0.3
SIUC Southern Illin 59.86 343 P P 16 55 28.8 -0.4
MVL Millersville 59.86 355 P P 16 55 29.9 +0.8
MVL IAmb IAmb 16 55 40.2
comp=Z,42nm,1.2s
MCWV Mont Chateau 59.88 352 P P 16 55 29.9 +0.5
baz=171
P54A Burton 59.91 352 P P 16 55 30.1 +0.5
baz=170
P53A Whipple 59.93 351 P P 16 55 30.0 +0.4
baz=169
O58A Lewisberry 60.03 355 P P 16 55 31.4 +1.0
baz=174
Q49A Aurora 60.07 348 P P 16 55 30.2 -0.4
baz=165
O60A Telford 60.11 356 P P 16 55 32.0 +1.2
baz=175
O59A Robesonia 60.16 356 P P 16 55 32.4 +1.2
baz=174
O57A Amberson 60.18 354 P P 16 55 32.6 +1.2
baz=173
P51A Williamsport 60.19 349 P P 16 55 31.3 -0.1
baz=167
TUL1 Leonard 60.30 337 P P 16 55 32.6 +0.4
baz=153
TUL1 Leonard 60.30 337 P P 16 55 33.3 +1.0
O56A Blue Knob Stat 60.33 353 P P 16 55 33.6 +1.1
baz=172,SNR=6.9
O56A Blue Knob Stat 60.33 353 P P 16 55 33.3 +0.8
O55A Ligonier 60.35 353 P P 16 55 33.6 +1.0
baz=171
N61A South Mountain 60.48 357 P P 16 55 34.3 +0.9
baz=177
SSPA Standing Stone 60.63 354 P P 16 55 35.3 +0.9
baz=173
SSPA Standing Stone 60.63 354 P P 16 55 34.3 -0.1
SSPA IAmb IAmb 16 55 45.5
comp=Z,38nm,1.1s
N57A Milroy 60.71 354 P P 16 55 35.8 +0.8
baz=173
PAL Palisades 60.72 358 P P 16 55 35.7 +0.7
baz=177
N58A Sunbury 60.72 355 P P 16 55 36.2 +1.1
baz=174
N58A Sunbury 60.72 355 P P 16 55 35.8 +0.7
N58A IAmb IAmb 16 55 46.8
comp=Z,41nm,1.2s
CCM Cathedral Cave 60.75 342 P P 16 55 35.8 +0.5
baz=158
CCM Cathedral Cave 60.75 342 P P 16 55 35.0 -0.3
CCM IAmb IAmb 16 55 45.8
comp=Z,14nm,0.9s
N55A Marion Center 60.88 353 P P 16 55 37.4 +1.2
baz=172,SNR=8.6
ACSO Alum Creek Sta 60.91 350 P P 16 55 36.9 +0.6
baz=167
ACSO Alum Creek Sta 60.91 350 P P 16 55 35.2 -1.2
N56A West Decatur 60.95 354 P P 16 55 37.4 +0.8
baz=172
MNTX Cornudas Mount 60.99 327 P P 16 55 37.3 +0.2
baz=143,SNR=18
MNTX Cornudas Mount 60.99 327 P P 16 55 37.2 0.0
MNTX IAmb IAmb 16 55 39.6
comp=Z,10nm,0.9s
M61A Granite Spring 61.02 358 P P 16 55 37.4 +0.4
baz=177
M63A Gales Ferry 61.07 359 P P 16 55 38.4 +1.0
baz=179
M60A Port Jervis 61.07 357 P P 16 55 37.8 +0.4
baz=176
O49A Covington 61.11 348 P P 16 55 38.2 +0.5
baz=166
M62A Hamden 61.12 358 P P 16 55 38.6 +0.8
baz=178
N53A Lisbon 61.14 352 P P 16 55 38.5 +0.5
baz=170
N54A Moraine State 61.18 352 P P 16 55 39.2 +1.0
baz=170
N54A Moraine State 61.18 352 P P 16 55 38.4 +0.2
M64A Tiverton 61.21 360 P P 16 55 39.9 +1.6
baz=180
M58A Price's Panora 61.23 355 P P 16 55 39.6 +1.0
baz=174
M57A Sunshine Farm, 61.25 355 P P 16 55 39.7 +1.1
baz=174
M57A Sunshine Farm, 61.25 355 P P 16 55 39.4 +0.7
R40A Maddies Statio 61.27 341 P P 16 55 38.4 -0.4
R40A IAmb IAmb 16 55 49.5
comp=Z,52nm,1.6s
M59A Waymart 61.33 356 P P 16 55 40.4 +1.1
baz=175,SNR=6.2
O48A Farmland 61.33 348 P P 16 55 38.9 -0.3
baz=165
T35A Sooner Cattle 61.46 337 P P 16 55 39.8 -0.4
N50A Nevada 61.46 350 P P 16 55 40.9 +0.8
baz=167
N51A Ashland 61.48 350 P P 16 55 40.2 0.0
baz=168
M56A Emporium 61.49 354 P P 16 55 41.2 +0.9
baz=172,SNR=6.0
M56A Emporium 61.49 354 P P 16 55 40.8 +0.4
L63A North Scituate 61.52 360 P P 16 55 41.3 +0.8
baz=180
M55A Ridgway 61.54 353 P P 16 55 41.4 +0.7
baz=172,SNR=6.1
M55A Ridgway 61.54 353 P P 16 55 41.2 +0.6
MSTX Muleshoe 61.55 330 P P 16 55 41.5 +0.5
baz=146
MSTX Muleshoe 61.55 330 P P 16 55 41.0 0.0
MSTX IAmb IAmb 16 56 25.4
comp=Z,15nm,0.9s
L64A Middleborough 61.59 0 P P 16 55 41.5 +0.6
baz=180
M54A Oil Creek Stat 61.68 353 P P 16 55 42.3 +0.7
baz=171
M54A Oil Creek Stat 61.68 353 P P 16 55 41.8 +0.2
M53A WI Miller and 61.74 352 P P 16 55 42.2 +0.3
baz=170
P43A Skaggs, Pawnee 61.75 344 P P 16 55 41.4 -0.7
N49A Columbus Grove 61.79 349 P P 16 55 42.1 -0.2
baz=166,SNR=6.2
N49A Columbus Grove 61.79 349 P P 16 55 41.8 -0.5
L58A Harry Jones Me 61.86 356 P P 16 55 44.0 +1.2
baz=175,SNR=5.9
SFIN Lafayette 61.86 346 P P 16 55 41.9 -0.9
baz=163
SFIN Lafayette 61.86 346 P P 16 55 41.6 -1.2
SFIN IAmb IAmb 16 55 51.7
comp=Z,22nm,0.8s
ALLY Alegheny Colle 61.88 352 P P 16 55 42.4 -0.5

L57A Andrews Acres 61.89 355 P P 16 55 44.3 +1.3
baz=174
N48A Decatur 61.89 348 P P 16 55 42.6 -0.3
baz=165
M52A Chesterland 61.93 351 P P 16 55 43.4 +0.2
baz=169
L59A Walton 61.96 357 P P 16 55 44.6 +1.1
baz=176,SNR=6.4
L59A Walton 61.96 357 P P 16 55 43.6 +0.1
BINY Binghamton 62.02 356 P P 16 55 44.9 +1.1
baz=175
BINY Binghamton 62.02 356 P P 16 55 43.6 -0.2
L56A Greenwood 62.08 355 P P 16 55 45.2 +0.9
baz=173
L56A Greenwood 62.08 355 P P 16 55 44.0 -0.3
L61B Northampton 62.12 359 P P 16 55 46.1 +1.6
baz=178
HRV Adam Dziewonsk 62.17 360 P P 16 55 45.8 +1.0
baz=180
VNA3 Neumayer Olymp 62.17 161 P P 16 55 46.5 +1.9
L53A Girard 62.19 352 P P 16 55 45.5 +0.5
baz=170
L55A Hinsdale 62.21 354 P P 16 55 46.2 +1.0
baz=172,SNR=5.7
ERPA Erie 62.32 353 P P 16 55 46.4 +0.6
baz=171
K62A Royalston 62.33 359 P P 16 55 46.9 +1.0
baz=179
K63A Dunstable 62.35 360 P P 16 55 47.1 +1.2
baz=180
P40A Paris 62.35 342 P P 16 55 45.7 -0.4
P40A IAmb IAmb 16 55 56.1
comp=Z,19nm,0.9s
L54A Sinclairville 62.36 353 P P 16 55 46.8 +0.7
baz=171,SNR=6.4
K61A Williamstown 62.36 358 P P 16 55 47.1 +1.0
baz=178
VNA1 Neumayer--Stat 62.40 160 P P 16 55 48.5 +2.4
TRY Troy 62.43 358 P P 16 55 47.2 +0.7
M48A Edgerton 62.44 348 P P 16 55 47.3 +0.6
baz=166
WVNY West Valley, N 62.45 354 P P 16 55 47.3 +0.6
K59A Cooperstown 62.53 357 P P 16 55 48.2 +1.0
baz=176,SNR=8.4
K58A Earlville 62.56 356 P P 16 55 48.4 +0.9
baz=175
K58A Earlville 62.56 356 P P 16 55 48.1 +0.6
K57A Scipio Center 62.59 356 P P 16 55 48.4 +0.7
baz=174
K56A Middlesex 62.62 355 P P 16 55 48.6 +0.7
baz=174
K54A Basiliko Farm, 62.66 354 P P 16 55 49.2 +1.0
baz=172
MMNY Mt. Morris Dam 62.70 354 P P 16 55 48.8 +0.4
K55A Perry 62.72 354 P P 16 55 49.2 +0.7
baz=173
VNA2 Neumayer--Watz 62.77 161 P P 16 55 50.4 +1.8
baz=285,slow=8.8
P38A Dawn 62.88 341 P P 16 55 49.2 -0.4
P38A IAmb IAmb 16 55 59.7
comp=Z,16nm,0.8s
J62A Henniker 62.89 359 P P 16 55 50.8 +1.2
baz=179
121A Cookes Peak, D 62.91 325 P P 16 55 50.4 +0.2
baz=141,SNR=5.8
121A Cookes Peak, D 62.91 325 P P 16 55 49.8 -0.4
121A IAmb IAmb 16 56 02.4
comp=Z,8.9nm,0.9s
J60A Lant Hill Farm 62.94 358 P P 16 55 51.1 +1.2
baz=178
J61A Chester 63.02 359 P P 16 55 51.4 +1.0
baz=178
ACCN Adirondack Com 63.09 358 P P 16 55 51.7 +0.8
N41A Harden Midland 63.10 343 P P 16 55 50.0 -1.1
N41A IAmb IAmb 16 56 01.1
comp=Z,29nm,0.9s
J58A Remsen 63.14 357 P P 16 55 52.0 +0.7
baz=176
J56A Wolcott 63.16 355 P P 16 55 51.9 +0.5
baz=174
J56A Wolcott 63.16 355 P P 16 55 51.6 +0.3
J59A Piesco 63.20 357 P P 16 55 52.6 +0.8
baz=176,SNR=6.5
J59A Piesco 63.20 357 P P 16 55 52.3 +0.6
J55A Hilton 63.23 355 P P 16 55 52.4 +0.6
baz=173
J55A Hilton 63.23 355 P P 16 55 51.8 0.0
J57A Williamstown 63.23 356 P P 16 55 52.5 +0.6
baz=175
J57A Williamstown 63.23 356 P P 16 55 51.8 0.0
J54A Appleton 63.31 354 P P 16 55 53.0 +0.6
baz=172
I58A Old Forge 63.45 357 P P 16 55 54.2 +0.8
baz=176
J52A Paris 63.49 352 P P 16 55 53.9 +0.3
baz=170
I59A Olmsteadville 63.51 358 P P 16 55 54.7 +1.0
baz=177,SNR=5.6
I62A Tamworth 63.53 360 P P 16 55 55.1 +1.3
baz=180
I60A Shoreham 63.53 358 P P 16 55 55.1 +1.3
baz=178
I61A Oroboro, Fairl 63.60 359 P P 16 55 54.9 +0.6
baz=179,SNR=5.8
K48A Perry 63.60 349 P P 16 55 55.1 +0.7
baz=166
NCB Newcomb 63.69 357 P P 16 55 55.9 +0.9
NCB IAmb IAmb 16 56 06.5
comp=Z,20nm,0.9s
I57A Carthage 63.73 356 P P 16 55 56.2 +1.0
baz=175
PECO Prince Edward 63.82 355 P P 16 55 55.5 -0.3
LBNH Lisbon 63.90 359 P P 16 55 58.0 +1.7
baz=179
LBNH Lisbon 63.90 359 P P 16 55 57.0 +0.6
ANMO Albuquerque 64.11 328 P P 16 55 59.4 +1.2
comp=Z,2.0nm,0.6s,baz=141,slow=7.4
ANMO Albuquerque 64.11 328 P P 16 55 58.9 +0.7
baz=143
ANMO Albuquerque 64.11 328 P P 16 55 58.5 +0.3
H58A Gabriels 64.14 358 P P 16 55 58.8 +0.9
baz=177
I55A Frankford 64.16 355 P P 16 55 57.8 -0.2
baz=173
H61A Lyndonville 64.20 359 P P 16 55 59.6 +1.4
baz=179
H62A Milan 64.23 360 P P 16 55 59.9 +1.4
baz=180
H60A Morristown 64.23 359 P P 16 55 59.9 +1.4
baz=178
H64A Troy 64.32 1 P P 16 56 00.1 +1.1
baz=182
H63A New Sharon 64.33 1 P P 16 56 00.4 +1.4
baz=181
CBKS Cedar Bluff 64.34 335 P P 16 56 00.2 +0.8
baz=150
H59A Cadyville 64.35 358 P P 16 56 00.3 +1.1
baz=177
LONY Lake Ozonia 64.36 357 P P 16 55 59.7 +0.4
LONY IAmb IAmb 16 56 10.2
comp=Z,23nm,0.9s
SNAA Sanae 64.39 161 P P 16 56 01.1 +1.8
SNAA Sanae 64.39 161 P P 16 55 59.5 +0.1
SNAA IAmb IAmb 16 56 02.1
comp=Z,11nm,0.9s
H65A Eastbrook 64.41 2 P P 16 56 00.7 +1.1
baz=183
H56A Elgin 64.42 356 P P 16 56 00.5 +0.8
baz=175
H55A Tweed 64.45 355 P P 16 56 00.5 +0.7
baz=174
DELO Deloro Mine 64.45 355 P P 16 56 00.0 +0.1
L40A Anamosa 64.47 344 P P 16 55 59.6 -0.5
L40A IAmb IAmb 16 56 46.7
comp=Z,30nm,0.9s
FRNY Flat Rock 64.53 358 P P 16 56 01.6 +1.2
H66A Whiting 64.54 3 P P 16 56 01.5 +1.0
baz=184
H53A Bobcaygeon 64.59 354 P P 16 56 01.2 +0.4
baz=172,SNR=6.1
G60A Masonville 64.77 359 P P 16 56 03.3 +1.3
baz=179
G63A Kingsbury 64.79 1 P P 16 56 03.5 +1.4
baz=182
SADO Sadowa 64.84 354 P P 16 56 02.6 +0.1
G57A Newington 64.86 357 P P 16 56 03.3 +0.8
baz=176,SNR=5.6
G58A Ormstown 64.86 358 P P 16 56 03.5 +1.0
baz=177
G62A West of Eustis 64.88 0 P P 16 56 04.3 +1.6
baz=181,SNR=8.6
G62A West of Eustis 64.88 0 P P 16 56 04.0 +1.3
SCIA State Center 64.88 342 P P 16 56 03.1 +0.3
baz=157
I48A Sherman Twp 64.88 350 P P 16 56 03.4 +0.7
baz=167
T25A Trinidad 64.91 331 P P 16 56 04.4 +1.0
baz=145
G65A Princeton 64.94 3 P P 16 56 04.3 +1.3
baz=184
G61A St-Isidore-de- 64.94 360 P P 16 56 04.8 +1.7
baz=180,SNR=5.2
PKME Peaks-Kenny Pk 64.94 1 P P 16 56 04.2 +1.1
baz=182
PKME Peaks-Kenny Pk 64.94 1 P P 16 56 03.6 +0.6
G64A Maxfield 64.95 2 P P 16 56 04.1 +1.0
baz=182
JFWS Jewell Farm 65.01 345 P P 16 56 04.2 +0.6
baz=160
JFWS Jewell Farm 65.01 345 P P 16 56 03.3 -0.4
JFWS IAmb IAmb 16 56 13.5
comp=Z,17nm,0.8s
G55A Calabogie 65.11 356 P P 16 56 04.8 +0.6
baz=174
G53A Haburton 65.14 354 P P 16 56 04.9 +0.5
baz=172,SNR=7.9
ORIO Orleans, Innes 65.23 357 P P 16 56 05.7 +0.7
baz=176
ORIO Orleans, Innes 65.23 357 P P 16 56 05.4 +0.4
ORIO IAmb IAmb 16 56 16.2
comp=Z,12nm,1.0s
214A Organ Pipe Nat 65.29 321 P P 16 56 06.8 +1.1
baz=137
214A Organ Pipe Nat 65.29 321 P P 16 56 06.5 +0.8
214A IAmb IAmb 16 56 17.1
comp=Z,19nm,1.4s
H48A Harrisville 65.32 350 P P 16 56 06.2 +0.6
baz=167
G54A Lake Saint Pet 65.37 355 P P 16 56 06.5 +0.6
baz=173
F63A Nahmakanta, Br 65.39 2 P P 16 56 06.8 +0.8
baz=182
F64A Sherman 65.57 2 P P 16 56 08.1 +0.9
baz=183
F64A Sherman 65.57 2 P P 16 56 08.0 +0.9
I42A Draeger Farm, 65.62 346 P P 16 56 07.2 -0.3
I42A IAmb IAmb 16 56 17.6
comp=Z,34nm,1.2s
F60A Warwick 65.63 359 P P 16 56 08.6 +1.0
baz=179
F61A St Evariste 65.63 0 P P 16 56 08.4 +0.9
baz=180
LMN Caledonia Moun 65.76 5 P P 16 56 08.9 +0.5
LMN IAmb IAmb 16 56 18.8
comp=Z,27nm,0.8s
G47A Hillman 65.86 350 P P 16 56 08.6 -0.4
baz=167
F52A Sundridge 65.88 354 P P 16 56 09.1 -0.1
baz=172
SDCO Great Sand Dun 65.91 331 P P 16 56 11.1 +1.2
baz=145,SNR=11
SDCO Great Sand Dun 65.91 331 P P 16 56 10.8 +0.9
ALGO Algonquin Park 65.92 355 P P 16 56 09.5 +0.1
baz=173
H43A Windswept, Lux 65.92 347 P P 16 56 09.0 -0.5
H43A IAmb IAmb 16 56 19.2
comp=Z,22nm,0.8s
W18A Petrified Fore 65.93 326 P P 16 56 10.9 +0.9
baz=140
TRQ Mont Tremblant 65.95 357 P P 16 56 09.7 0.0
BGNE Belgrade 66.02 338 P P 16 56 10.6 +0.3
baz=152
BGNE Belgrade 66.02 338 P P 16 56 09.1 -1.1
E60A Ste Agathe de 66.03 360 P P 16 56 10.8 +0.7
baz=180
E58A La Victoria 66.06 358 P P 16 56 10.9 +0.6
baz=178
F51A Arnstein 66.07 353 P P 16 56 10.4 0.0
baz=171
E61A Lac Etchemin 66.09 0 P P 16 56 11.6 +1.1
baz=181
E63A Oxbow 66.12 2 P P 16 56 12.1 +1.3
baz=183
E57A Chemin Saint G 66.13 358 P P 16 56 11.4 +0.6
baz=177
E64A Bridgewater 66.14 2 P P 16 56 12.1 +1.2
baz=183
E56A St. Veronique 66.30 357 P P 16 56 12.3 +0.5
baz=176,SNR=5.8
E52A Mattawa 66.30 354 P P 16 56 12.6 +0.8
baz=172
E53A Dumoine, Ponti 66.30 355 P P 16 56 12.3 +0.4
baz=173
E54A Lac Daplat, Po 66.32 355 P P 16 56 12.6 +0.6
baz=174
PQI Presque Isle 66.39 2 P P 16 56 11.6 -0.8
PQI IAmb IAmb 16 56 23.4
comp=Z,36nm,1.1s
S22A 4UR Ranch, Cre 66.53 330 P P 16 56 13.6 -0.3
baz=143
E51A G1948 Merrick 66.63 354 P P 16 56 14.5 +0.5
baz=171
F45A CNI Biological 66.64 349 P P 16 56 14.6 +0.6
baz=165
D57A Chemin Vers le 66.72 358 P P 16 56 15.3 +0.7
baz=177,SNR=9.1
D63A Stockholm 66.75 2 P P 16 56 15.8 +1.1
baz=183
D62A Allapoint, All 66.77 2 P P 16 56 15.9 +1.1
baz=182
D62A Allapoint, All 66.77 2 P P 16 56 15.4 +0.6
D58A Chemin du LacG 66.77 359 P P 16 56 15.8 +0.9
baz=178,SNR=8.1
D56A ZEC Mazanza, M 66.79 357 P P 16 56 15.6 +0.6
baz=176
D55A Sainte-Anne-du 66.79 357 P P 16 56 15.8 +0.8
baz=176
D61A St Aubert, Com 66.87 1 P P 16 56 16.8 +1.4
baz=181
I37A Lemond, Waseca 66.87 343 P P 16 56 15.2 -0.3
E48A Lockeyer 66.89 352 P P 16 56 16.4 +0.7
baz=169
MVCO Mesa Verde 66.91 328 P P 16 56 17.4 +1.1
baz=142
MVCO Mesa Verde 66.91 328 P P 16 56 16.7 +0.4
D54A Lac Fusel, La 67.00 356 P P 16 56 16.2 -0.1
baz=174,SNR=5.3
D53A Lac Vacive, Po 67.00 355 P P 16 56 16.7 +0.4
baz=173
D53A Lac Vacive, Po 67.00 355 P P 16 56 15.9 -0.4
D53A IAmb IAmb 16 56 26.8
comp=Z,14nm,0.8s
E47A Iron Bridge 67.03 351 P P 16 56 17.1 +0.6
baz=168
LATQ La Tuque 67.06 359 P P 16 56 17.6 +0.9
baz=178
BATG Bathurst New B 67.09 4 P P 16 56 17.5 +0.7
E46A Sault Ste Mari 67.10 350 P P 16 56 16.6 -0.3
E46A IAmb IAmb 16 56 26.5
comp=Z,23nm,1.1s
WUAZ Wupatki 67.10 325 P P 16 56 19.5 +2.1
baz=139,SNR=7.8
WUAZ Wupatki 67.10 325 P P 16 56 18.3 +0.8
WUAZ IAmb IAmb 16 56 30.0
comp=Z,17nm,1.1s
D51A Lot 18 Range I 67.17 354 P P 16 56 17.7 +0.3
baz=172
GLA Glamis 67.26 321 P P 16 56 17.1 -1.2
baz=135
D50A G1974 Best Tow 67.29 354 P P 16 56 18.5 +0.4
baz=171,SNR=5.4
D48A Paudash Townsh 67.53 352 P P 16 56 20.2 +0.6
baz=169
D49A Beulah Townshi 67.57 352 P P 16 56 20.1 +0.1
baz=170
ECSD EROS Data Cent 67.58 340 P P 16 56 20.3 +0.2
baz=154,SNR=13
ECSD EROS Data Cent 67.58 340 P P 16 56 20.0 -0.1
ECSD IAmb IAmb 16 56 31.2
comp=Z,29nm,1.2s
E43A Lone Tree Farm 67.58 348 P P 16 56 19.5 -0.5
E43A IAmb IAmb 16 56 29.7
comp=Z,11nm,0.8s
ISCO Idaho Springs 67.63 332 P P 16 56 22.4 +1.5
baz=145
ISCO Idaho Springs 67.63 332 P P 16 56 20.7 -0.2
ISCO IAmb IAmb 16 56 23.3
comp=Z,25nm,1.9s
SMCO Snowmass 67.74 331 P P 16 56 22.2 +0.5
IKP In-Ko-Pah, Jac 67.75 320 P P 16 56 23.7 +2.2
baz=134
SPMN Marine on St. 67.83 344 P P 16 56 21.1 -0.5
SPMN IAmb IAmb 16 56 31.4
comp=Z,13nm,0.8s
VLDQ Val d'Or 68.01 355 P P 16 56 23.1 +0.5
BC3 Big Chuckawall 68.06 321 P P 16 56 25.4 +1.9
baz=135
MONP2 Monument Peak 68.10 320 P P 16 56 25.9 +2.0
baz=134,SNR=5.1
BAR Barrett 68.11 320 P P 16 56 23.9 +0.2
BAR IAmb IAmb 16 56 28.2
comp=Z,18nm,1.1s
W13A Hualapai Mount 68.18 323 P P 16 56 24.7 +0.3
IRM Iron Mountain 68.23 322 P P 16 56 26.7 +2.2
baz=135
U15A North Rim 68.28 325 P P 16 56 26.0 +1.0
U15A IAmb IAmb 16 56 37.8
comp=Z,13nm,1.1s
D41A Chassel 68.56 347 P P 16 56 26.0 -0.1
D41A IAmb IAmb 16 56 36.4
comp=Z,24nm,0.9s
F36A Milaca 68.61 343 P P 16 56 26.2 -0.3
F36A IAmb IAmb 16 56 36.4
comp=Z,11nm,0.8s
XPFO Pion Flat 68.62 320 P P 16 56 26.8 -0.3
PFO Pinyon Flats O 68.62 320 P P 16 56 29.0 +2.0
baz=134
PFO Pinyon Flats O 68.62 320 P P 16 56 26.3 -0.7
N23A Red Feather La 68.67 332 P P 16 56 28.8 +1.5
baz=145
E38A The Farm, Brul 68.80 345 P P 16 56 26.9 -0.8
E38A IAmb IAmb 16 56 37.5
comp=Z,16nm,1.1s
GMRC Granite Mounta 68.97 322 P P 16 56 31.2 +2.0
baz=135,SNR=9.3
KNB Kanab 69.00 325 P P 16 56 30.1 +0.7
O20A White River Ci 69.09 330 P P 16 56 31.5 +1.6
baz=143
O20A White River Ci 69.09 330 P P 16 56 30.0 +0.1
O20A IAmb IAmb 16 56 42.8
comp=Z,21nm,1.4s
LCMT Little Creek M 69.22 325 P P 16 56 30.1 -0.6
SRU San Rafael Swe 69.39 328 P P 16 56 31.7 -0.1
HEC Hector,Ludlow 69.40 321 P P 16 56 33.9 +2.1
baz=135
MTPU Mount Pierson 69.43 326 P P 16 56 32.9 +0.7
Q16A Castle Valley 69.57 328 P P 16 56 32.5 -0.4
SZCU Shurtz Canyon 69.57 325 P P 16 56 32.8 -0.1
CHGQ Chibougamau 69.63 358 P P 16 56 33.3 +0.5
baz=177
MATQ Matagami 69.66 355 P P 16 56 32.9 -0.1
baz=174
CIS Catalina Islan 69.67 319 P P 16 56 34.9 +1.5
baz=133
CCUT Cedar City 69.68 325 P P 16 56 34.7 +1.1
MSU Marysvale 69.78 327 P P 16 56 35.6 +1.4
BFSC Mount Baldy Ra 69.78 320 P P 16 56 35.8 +1.6
baz=134
P17A Butcher Ranch, 69.78 328 P P 16 56 34.8 +0.7
TMUT Trail Mountain 69.88 328 P P 16 56 35.4 +0.5
SHPR Sheep Range 69.91 323 P P 16 56 36.5 +1.5
LIC Lamto 69.96 75 eP P 16 56 34.6 -1.0
comp=Z,8.9nm,0.7s
DRLN Deer Lake 69.97 9 P P 16 56 35.2 +0.3
GSC Goldstone, Bar 70.00 321 P P 16 56 37.7 +2.2
baz=134
GSC Goldstone, Bar 70.00 321 P P 16 56 35.5 0.0
EYMN Ely 70.04 346 P P 16 56 35.9 +0.6
baz=160
EYMN Ely 70.04 346 P P 16 56 35.0 -0.4
RDMU Red Mountain 70.06 330 P P 16 56 35.7 -0.2
SHOC Shoshone, Teco 70.11 322 P P 16 56 38.4 +2.3
baz=135
TIC Toumodi 70.14 75 eP P 16 56 35.5 -1.2
QSPA South Pole Qui 70.21 180 P P 16 56 36.4 0.0
QSPA IAmb IAmb 16 56 39.9
comp=Z,31nm,1.2s
KIC Kosan Boka 70.28 75 eP P 16 56 36.3 -1.2
comp=Z,17nm,0.8s
DBIC Dimbokro 70.30 75 P P 16 56 36.9 -0.7
comp=Z,7.6nm,0.7s,baz=217,slow=5.4,SNR=10
DBIC LR LR 17 25 55.4
comp=Z,134nm,19.2s,baz=222,slow=35
DBIC Dimbokro 70.30 75 P P 16 56 36.5 -1.1
DBIC IAmb IAmb 16 56 37.8
comp=Z,14nm,0.9s
K22A Casper 70.35 333 P P 16 56 38.7 +1.1
baz=145
EDW2 Edwards Air Fo 70.42 320 P P 16 56 39.7 +1.7
baz=133
RSSD Black Hills 70.55 335 P P 16 56 40.1 +1.2
baz=147
RSSD Black Hills 70.55 335 P P 16 56 39.5 +0.7
PSUT Pine Spring 70.67 326 P P 16 56 40.2 +0.6
NLU North Lily Min 70.81 328 P P 16 56 40.8 +0.3
TPNV Topopah Spring 70.84 323 P P 16 56 41.9 +1.3
TPNV IAmb IAmb 16 56 44.5
comp=Z,16nm,1.2s
FURC Furnace Creek, 70.85 322 P P 16 56 43.1 +2.6
baz=135
MPMC Manual Prospec 70.93 322 P P 16 56 43.2 +1.9
baz=134,SNR=6.8
B35A Bob, Littlefor 70.97 344 P P 16 56 40.6 -0.4
B35A IAmb IAmb 16 56 50.8
comp=Z,11nm,0.9s
JLU Jordanelle 70.99 329 P P 16 56 40.7 -0.9
ISA Isabella, Lake 71.24 321 P P 16 56 45.5 +2.4
baz=133,SNR=10
ISA Isabella, Lake 71.24 321 P P 16 56 44.9 +1.9
ISA IAmb IAmb 16 56 47.8
comp=Z,14nm,1.1s
DUG Dugway, Tooele 71.36 327 P P 16 56 45.9 +2.1
baz=139,SNR=7.9
DUG Dugway, Tooele 71.36 327 P P 16 56 44.3 +0.6
DUG IAmb IAmb 16 56 47.1
comp=Z,13nm,1.1s
E28A Huff 71.43 339 P P 16 56 43.4 -0.5
R11A Troy Canyon, C 71.47 324 P P 16 56 46.5 +2.0
baz=136,SNR=13
R11A Troy Canyon, C 71.47 324 P P 16 56 46.4 +2.0
AGMN Agassiz Nation 71.48 343 P P 16 56 44.1 0.0
baz=156,SNR=6.6
AGMN Agassiz Nation 71.48 343 P P 16 56 43.3 -0.8
AGMN IAmb IAmb 16 56 54.2
comp=Z,11nm,0.8s
GRAC Grapevine Rang 71.51 322 P P 16 56 47.2 +2.6
baz=134
PKM Mcpherson Peak 71.53 319 P P 16 56 47.1 +2.2
baz=132,SNR=7.8
CWC Cottonwood Cre 71.54 322 P P 16 56 47.1 +2.2
baz=134
VES Vestal, Richgr 71.72 321 P P 16 56 47.5 +1.7
baz=133
PDAR Pinedale Array 71.78 331 P P 16 56 47.5 +1.1
comp=Z,1.1nm,0.6s,baz=135,slow=8.1,SNR=11
BW06 Boulder Array 71.78 331 P P 16 56 48.2 +1.9
baz=142
BW06 Boulder Array 71.78 331 P P 16 56 46.1 -0.2
HWUT Hardware Ranch 71.82 329 P P 16 56 46.2 -0.3
SMMC Simmler 71.92 320 P P 16 56 49.7 +2.6
baz=132
BGU Big Grassy Mou 72.02 328 P P 16 56 47.6 -0.2
SPUT South Promonto 72.02 328 P P 16 56 47.9 +0.1
TBI Tubuai 72.05 251 eS S 17 06 14.6 +3.9
comp=Z,204nm,28.2s
TBI Tubuai 72.05 251 eLR LR 17 18 55.9
comp=Z,304nm,30.0s
MDND Maddock 72.19 340 P P 16 56 49.5 +1.1
baz=152
PAGB Antelope Grade 72.35 320 P P 16 56 49.7 0.0
PAGB IAmb IAmb 16 57 01.2
comp=Z,35nm,1.6s
AHID Auburn Hatcher 72.49 330 P P 16 56 50.4 -0.1
OMMB Old Mammoth Mi 72.88 322 P P 16 56 52.8 -0.3
OMMB IAmb IAmb 16 56 56.4
comp=Z,12nm,1.0s
MDPB Devils Postpil 72.94 322 P P 16 56 53.4 0.0
TPAW Teton Pass 72.98 331 P P 16 56 53.0 -0.5
PMPB Monarch Peak 73.01 320 P P 16 56 54.9 +1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PMPB				IAmb	IAmb	16 57 06.5	
	comp=Z,15nm,1.1s						
ELK	Elko	73.02	326	P	P	16 56 54.7	+1.0
NVAR	Mina Array Bea	73.04	323	P	P	16 56 56.1	+2.2
	comp=Z,3.7nm,0.8s,baz=144,slow=5.9,SNR=28						
FXWY	Fox Creek	73.13	331	P	P	16 56 54.5	+0.1
ULM	Lac du Bonnet	73.27	344	P	P	16 56 54.6	0.0
	comp=Z,5.1nm,0.7s,baz=153,slow=5.1,SNR=8.8						
ULM				LR	LR	17 31 48.9	
	comp=Z,105nm,18.4s,baz=128,slow=38						
ULM	Lac du Bonnet	73.27	344	P	P	16 56 54.3	-0.4
ULM				IAmb	IAmb	16 57 04.6	
	comp=Z,11nm,0.8s						
IMW	Indian Meadow	73.29	331	P	P	16 56 55.4	+0.1
RYN	Ryan	73.30	323	P	P	16 56 55.4	+0.1
FLWY	Flagg Ranch	73.33	331	P	P	16 56 56.0	+0.6
FLWY				IAmb	IAmb	16 56 58.8	
	comp=Z,24nm,1.3s						
KVN	Kaiserville	73.35	324	P	P	16 56 56.4	+0.7
RLMT	Red Lodge	73.52	333	P	P	16 56 58.1	+1.5
	baz=143,SNR=8.5						
RLMT	Red Lodge	73.52	333	P	P	16 56 57.2	+0.6
H17A	Grant Village	73.52	332	P	P	16 56 59.3	+2.6
	baz=142						
YPP	Pitchstone Pla	73.52	331	P	P	16 56 56.8	+0.1
LAO	LASA Array	73.54	336	P	P	16 56 57.9	+1.4
	baz=146,SNR=7.1						
LAO	LASA Array	73.54	336	P	P	16 56 56.6	+0.2
LAO				IAmb	IAmb	16 57 00.2	
	comp=Z,27nm,1.2s						
PPT2	Papeete2	73.66	257	*e*S	S	17 06 31.3	+1.9
	comp=Z,322nm,26.2s						
PPT2	Papeete2	73.66	257	*e*LR	LR	17 19 40.4	
	comp=Z,206nm,25.0s						
WAKR	Walker	73.74	322	P	P	16 56 58.6	+0.5
YNE	Yellowstone No	73.75	332	P	P	16 56 58.1	+0.1
YNR	Norris Junctio	73.81	332	P	P	16 56 57.1	-1.2
YMR	Madison River	73.90	332	P	P	16 56 57.7	-1.2
YHH	Holmes Hill	73.94	332	P	P	16 56 58.5	-0.8
YERR	Yerington	73.95	323	P	P	16 56 59.1	-0.1
CMB	Columbia Colle	73.97	321	P	P	16 56 58.6	-0.6
YHB	Horse Butte	74.07	331	P	P	16 56 58.6	-1.2
YHL	Hebgen Lake	74.14	332	P	P	16 56 59.6	-0.8
PNTR	Pine Nut	74.23	323	P	P	16 57 00.8	-0.2
DGMT	Dagmar	74.28	338	P	P	16 57 02.3	+1.6
	baz=148						
DGMT	Dagmar	74.28	338	P	P	16 56 59.3	-1.4
DGMT				IAmb	IAmb	16 57 12.5	
	comp=Z,29nm,0.8s						
PAHR	Pah Rah Range	74.53	323	P	P	16 57 01.7	-0.8
PAHR				IAmb	IAmb	16 57 06.2	
	comp=Z,17nm,0.9s						
SCHQ	Schefferville	74.59	3	P	P	16 57 02.9	+0.5
	comp=Z,2.0nm,0.5s,baz=176,slow=6.2,SNR=5.3						
SCHQ				LR	LR	17 31 42.9	
	comp=Z,91nm,18.8s,baz=326,slow=37						
SCHQ	Schefferville	74.59	3	P	P	16 57 02.1	-0.3
SCHQ				IAmb	IAmb	16 57 12.8	
	comp=Z,23nm,1.1s						
MCMT	McKenzie Canyo	74.88	331	P	P	16 57 03.4	-1.2
AFDM	Forest Hills D	74.92	322	P	P	16 57 04.2	-0.5
DLMT	Dillon	75.17	331	P	P	16 57 05.7	-0.4
BEKR	Beckworth	75.19	323	P	P	16 57 06.4	+0.1
MFID	Camas Ranch	75.26	328	P	P	16 57 04.8	-1.8
MFID				IAmb	IAmb	16 57 19.4	
	comp=Z,29nm,1.4s						
LRM	Limekiln Ridge	75.46	331	P	P	16 57 07.9	0.0
ORV	Oroville	75.63	322	P	P	16 57 08.6	-0.1
ORV				IAmb	IAmb	16 57 12.3	
	comp=Z,21nm,1.1s						
GDXM	Geysers	75.90	321	P	P	16 57 09.8	-0.5
EGMT	Eagleton	76.03	334	P	P	16 57 12.0	+1.1
	baz=143,SNR=9.9						
EGMT	Eagleton	76.03	334	P	P	16 57 10.8	-0.1
EGMT				IAmb	IAmb	16 57 22.4	
	comp=Z,16nm,0.9s						
O02D	Mt. Diablo Mer	76.79	322	P	P	16 57 16.7	+1.3
	baz=131						
MSO	Missoula	76.90	331	P	P	16 57 17.6	+1.7
	baz=139						
MSO	Missoula	76.90	331	P	P	16 57 14.3	-1.6
MSO				IAmb	IAmb	16 57 28.4	
	comp=Z,38nm,1.9s						
WDC	Whiskeytown Da	76.91	322	P	P	16 57 15.4	-0.5
KCPM	Cahto Peak	76.93	321	P	P	16 57 16.0	-0.3
KCPM				IAmb	IAmb	16 57 29.3	
	comp=Z,24nm,1.3s						
BMO	Blue Mountains	77.03	328	P	P	16 57 15.9	-0.8
N02D	Trinity Center	77.26	323	P	P	16 57 19.1	+1.0
	baz=131						
M04C	Macdoel	77.30	324	P	P	16 57 20.0	+1.7
	baz=132,SNR=10						
KMRM	Mail Ridge	77.35	321	P	P	16 57 17.0	-1.5
KMRM				IAmb	IAmb	16 57 23.4	
	comp=Z,23nm,1.2s						
K05A	Summer Lake	77.41	325	P	P	16 57 18.8	-0.2
K05A				IAmb	IAmb	16 57 23.9	
	comp=Z,24nm,1.2s						
I07A	Izee	77.61	327	P	P	16 57 19.0	-1.0
M02C	Callahan	77.62	323	P	P	16 57 21.4	+1.4
	baz=131						
JTMT	Jette	77.74	332	P	P	16 57 20.0	-0.6
YBH	Yreka Blue Hor	77.76	323	P	P	16 57 19.7	-1.2
KHMM	Horse Mountain	77.78	322	P	P	16 57 20.5	-0.6
L04D	Klamath Falls	77.85	324	P	P	16 57 22.9	+1.5
	baz=132						
J05D	Fort Rock, OR	77.98	325	P	P	16 57 23.9	+1.8
	baz=133,SNR=7.2						
VNDA	Vanda	77.98	190	P	P	16 57 24.2	+2.8
	comp=Z,2.5nm,1.0s,baz=139,slow=5.4,SNR=12						
PINE	Pine Mountain	78.16	326	P	P	16 57 23.1	0.0
G08A	Pilot Rock	78.17	328	P	P	16 57 22.0	-1.1
KRMB	Red Mountain	78.30	322	P	P	16 57 22.6	-1.3
J04D	Umpqua Nationa	78.42	325	P	P	16 57 26.3	+1.7
	baz=132						
WALA	Waterton Lakes	78.57	333	P	P	16 57 24.5	-0.7
WALA				IAmb	IAmb	16 57 37.1	
	comp=Z,21nm,1.0s						
SYO	Syowa Base	78.64	160⇑	*e*pP	P	16 57 24.2	-1.0
SYO	Syowa Base	78.64	160⇑	*e*PcP	PcP	16 57 34.5	+0.3
I05D	Terrebonne, OR	78.74	326	P	P	16 57 28.2	+2.1
	baz=133						
TORD	Torodi Ar. Bea	78.80	72	P	P	16 57 26.6	-0.5
	comp=Z,23nm,0.7s,baz=252,slow=5.0,SNR=113						
TORD				LR	LR	17 31 10.9	
	comp=Z,112nm,18.1s,baz=230,slow=35						
K02D	Willamette Mer	78.92	323	P	P	16 57 28.8	+1.6
	baz=131						
FFC	Flin Flon	78.95	342	P	P	16 57 26.6	-0.4
I04A	Tendick Farm,	78.95	325	P	P	16 57 28.7	+1.4
	baz=132						
HAWA	Hanford	79.23	328	P	P	16 57 27.8	-0.9
G05D	Wamic, OR	79.34	326	P	P	16 57 30.7	+1.3
	baz=133						
J01E	Myrtle Point	79.37	324	P	P	16 57 30.8	+1.2
	baz=130						
I03D	Drain, OR	79.40	324	P	P	16 57 31.5	+1.8
	baz=131						
NEW	Newport	79.41	331	P	P	16 57 31.6	+1.9
	baz=137						
H04A	Detroit Lake	79.42	326	P	P	16 57 29.8	-0.1
H04D	Lebanon	79.61	325	P	P	16 57 32.3	+1.5
	baz=132						
C09A	Chrisman Ranch	79.61	330	P	P	16 57 31.4	+0.6
C09A				IAmb	IAmb	16 57 34.6	
	comp=Z,23nm,1.4s						
F04A	Amboy	80.38	326	P	P	16 57 33.1	-1.9
F04A				IAmb	IAmb	16 57 38.2	
	comp=Z,36nm,1.4s						
LTY	Liberty	80.39	328	P	P	16 57 33.8	-1.3
LON	Longmire	80.62	327	P	P	16 57 34.6	-1.7
FCC	Fort Churchill	80.71	348	P	P	16 57 35.6	-0.8
E04D	Cinebar	80.87	327	P	P	16 57 39.5	+1.9
	baz=132						
D05A	Enumclaw	81.00	328	P	P	16 57 36.7	-1.6
D05A				IAmb	IAmb	16 57 40.9	
	comp=Z,17nm,0.8s						
D04E	Lakebay	81.39	327	P	P	16 57 41.8	+1.5
	baz=132						
B05A	Bryant	81.78	328	P	P	16 57 43.5	+1.2
	baz=132						
D03D	Eldon	81.79	327	P	P	16 57 44.4	+2.0
	baz=132						
A04D	Lummi Island	82.39	328	P	P	16 57 47.2	+1.7
	baz=132						
TSUM	Tsumeb	82.45	108	P	P	16 57 45.1	-1.7
PGC	Sidney	82.71	328	P	P	16 57 46.8	-0.4
PGC				IAmb	IAmb	16 57 50.1	
	comp=Z,16nm,1.1s						
LLLB	Lillooet	83.27	330	P	P	16 57 48.9	-1.3
LLLB				IAmb	IAmb	16 58 02.3	
	comp=Z,24nm,1.5s						
PAB	San Pablo	85.89	45	P	P	16 58 02.6	-1.1
BOSA	Boshof	85.98	119	P	P	16 58 05.0	+0.4
	comp=Z,1.8nm,0.8s,baz=158,slow=1.3,SNR=4.0						
BOSA	Boshof	85.98	119	P	P	16 58 03.6	-1.0
BOSA				IAmb	IAmb	16 59 11.5	
	comp=Z,52nm,1.9s						
TAM	Tamanrasset	85.99	64	P	P	16 58 04.9	+0.2
TAM				IAmb	IAmb	16 58 06.8	
	comp=Z,18nm,1.2s						
ESDC	Sonseca Array	86.21	45	P	P	16 58 05.7	+0.4
	comp=Z,2.7nm,1.0s,baz=245,slow=4.8,SNR=11						
ESDC				LR	LR	17 36 02.3	
	comp=Z,77nm,18.1s,baz=245,slow=35						
MAW	Mawson	86.37	164	P	P	16 58 07.4	+1.9
	comp=Z,5.6nm,1.1s,baz=214,slow=8.8,SNR=5.2						
MAW	Mawson	86.37	164	P	P	16 58 05.2	-0.4
YKA	Yellowknife Ar	89.08	341	P	P	16 58 19.1	+0.7
	comp=Z,6.8nm,0.8s,baz=137,slow=5.2,SNR=56						
YKA				LR	LR	17 40 16.1	
	comp=Z,65nm,21.8s,baz=0.0,slow=37						
DLBC	Dease Lake	91.92	333	P	P	16 58 32.2	+0.3
DLBC				IAmb	IAmb	16 59 10.7	
	comp=Z,12nm,1.2s						
CLL	Collm	101.75	40	*e*PP	PKiKP	17 03 25.0	-15
ILAR	Eielson Array	101.99	335	PP	PKiKP	17 03 29.5	-10
	comp=Z,0.3nm,0.9s,baz=108,slow=5.8,SNR=2.4						
TOLK	Toolik Lake Re	104.31	338	P	Pdif	16 59 28.1	+0.6
	baz=108						
KBZ	Khabaz	120.75	50	PKP	PKiKP	17 04 16.5	+0.6
	comp=Z,3.2nm,1.0s,baz=240,slow=2.1,SNR=3.9						
H11S2	WAKE ISLAND Hy	125.63	279	T	T	19 23 56.2	
	baz=103						
H11S1	WAKE ISLAND Hy	125.64	279	T	T	19 23 56.8	
	baz=103						
H11S3	WAKE ISLAND Hy	125.65	279	T	T	19 23 57.3	
	baz=103						
ARU	Arti	128.01	33		PKiKP	17 04 30.4	+0.5
ASAR	Alice Springs	130.24	211	PKP	PKiKP	17 04 35.6	0.0
	comp=Z,1.9nm,0.9s,baz=129,slow=2.1,SNR=13						
WRA	Warramunga Arr	133.15	214	PKP	PKiKP	17 04 41.5	0.0
	comp=Z,2.1nm,0.7s,baz=156,slow=1.8,SNR=25						
KURK	Kurchatov	141.12	31		PKPdf	17 04 55.3	+1.3
ZALV	Zalesovo Beam	141.40	23	PKP	PKPdf	17 04 54.4	0.0
	comp=Z,6.0nm,0.7s,baz=290,slow=2.9,SNR=23						
AAK	Ala-Archa	143.31	44		PKPdf	17 04 57.3	-1.2
KDJ	Kajisay	145.30	43		PKPdf	17 05 02.8	+0.8
MAKZ	Makanchi	145.37	33		PKPdf	17 05 02.3	+0.6
MKAR	Makanchi Array	145.54	33	PKPbc	PKPab	17 05 02.8	+0.5
	comp=Z,12nm,0.8s,baz=325,slow=2.9,SNR=72						
KSH	Kashi	145.68	48	PKPbc	PKPab	17 05 04.2	+1.0
KSH				PP	PP	17 08 24.7	+1.2
KSH				PKS	PKSdf	17 08 36.6	-1.5
FAKI	Fak Fak	147.70	228		PKPbc	17 05 08.7	-0.6
USRK	Ussuriysk Ar.	149.12	327	PKPbc	PKiKP	17 05 13.2	-0.2
	comp=Z,8.5nm,0.9s,baz=39,slow=3.0,SNR=12						
MJAR	Matsushiro Arr	149.52	309	PKPbc	PKiKP	17 05 14.6	+0.1
	comp=Z,7.5nm,0.8s,baz=126,slow=1.4,SNR=27						
MAJO	Matsushiro	149.52	309		PKiKP	17 05 14.2	-0.3
MAT	Matsushiro	149.52	309	PKP	PKiKP	17 05 14.3	-0.2
SIJI	Sorong	149.84	229	PKPbc	PKiKP	17 05 15.6	-0.2
	comp=Z,6.0nm,0.7s,baz=33,slow=6.3,SNR=8.3						
WMQ	Urumqi	150.35	32	*e*P	PKPdf	17 05 09.5	-0.6
WMQ				pmax	pmax		
	comp=Z,44nm,4.3s						
WMQ				LR	LR		
	comp=N,720nm,28.9s						
WMQ				LR	LR		
	comp=E,980nm,29.1s						
WMQ				LR	LR		
	comp=Z,73nm,28.9s						
HYB	Hyderabad	151.16	90	*i* PKP	PKPbc	17 05 18.0	+0.1
SONM	Songino Array	152.13	4	PKP	PKPdf	17 05 14.2	+1.5
	comp=Z,1.4nm,1.0s,baz=80,slow=0.3,SNR=7.3						
SONM				PKPbc	sPKPbc	17 05 20.6	+0.5
	comp=Z,5.2nm,0.8s,baz=329,slow=1.4,SNR=23						
SONM				PKPab	pPKPab	17 05 29.5	+0.1
	comp=Z,6.8nm,0.7s,baz=347,slow=3.1,SNR=8.2						
ULN	Ulaanbaatar	152.14	3	PKPdf	PKPdf	17 05 10.4	-2.4
ULN					PKPbc	17 05 18.9	-0.6
KSRS	Korea Array	155.96	320	PKP	PKPdf	17 05 19.8	+1.5
	comp=Z,2.3nm,1.1s,baz=90,slow=1.3,SNR=7.6						
KSRS				PKPab	sPKPab	17 05 47.5	+1.5
	comp=Z,1.9nm,0.9s,baz=39,slow=2.1,SNR=4.8						
HHC	Hu-ho-hao-te	159.07	354	*e*P	PKPdf	17 05 21.8	-0.4
GTA	Gaotai	159.11	20	*e*PKP	PKPdf	17 05 24.1	+1.8
GTA				sPKP		17 05 33.9	
LZH	Lanzhou	163.34	14	*e*PKP	PKPdf	17 05 26.5	-0.5
LZH				pPKP	sPKPdf	17 05 37.8	+10
LZH				sPKP		17 05 38.3	
LZH				PKP	sPKPab	17 06 18.4	+0.1
LZH				LR	LR		
	comp=N,98nm,18.0s						
LZH				LR	LR		
	comp=E,100nm,18.2s						
LZH				LR	LR		
	comp=Z,120nm,20.1s						
CMAR	Chiang Mai Arr	170.47	97	PKPab	PKPab	17 06 49.8	+0.3
	comp=Z,0.6nm,0.5s,baz=255,slow=5.7,SNR=4.9						

*DDA **01** 16:48:38.7, 38°.10N×27°.44E, h7km±3km, MW3.5*
*ISK **01** 16:48:38.7, 38°.12N×27°.47E, h12km, ML3.4/45*
*ATH **01** 16:48:38.9, 38°.09N×27°.50E, h22km±4km, ML3.2/7, Error ellipse: s-maj=6.0km s-min=1.9km az=258.0*
*THE **01** 16:48:41.7, 38°.05N×27°.34E, h0km±1km, ML3.1/8, Error ellipse: s-maj=2.5km s-min=1.2km az=88.0*
ISC 01 16:48:39.0±1.0**, 38°.10N**±0°.01×**27°.48E**±0°.01**, h11**km±8km**, n123, σ0s.79**/163**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AYDB	Zeytinkoy-Aydi	0.36	115	PG	Pb	16 48 46.9	-0.7
AYDB				SG	Sg	16 48 52.2	+1.2
GCAM	G?zelcaml?	0.44	206	PG	Pg	16 48 47.9	+0.1
GCAM				SG	Sg	16 48 54.1	+0.5
GCAM	G?zelcaml?	0.44	206	*i* P	Pg	16 48 47.9	+0.1
GCAM				*i* S	Sg	16 48 53.4	-0.2
GCAM				IAML		16 48 54.0	
	comp=E,2µm,0.4s						
BLCB	Balcova	0.45	310	PG	Pb	16 48 48.1	-0.9
BLCB				SG	Sg	16 48 53.8	+0.1
DGB	zmir	0.47	264	*i* P	Pb	16 48 48.6	-0.8
DGB				*i* S	Sg	16 48 53.6	-0.9
SMG	Samos	0.64	233	P	Pg	16 48 51.5	0.0
SMG				S	Sb	16 49 00.6	-0.6
	comp=E,5µm,0.4s						
SMG	Samos	0.64	233	P	Pb	16 48 51.8	-0.5
SMG				S	Sb	16 49 00.7	-0.6
SMG				AML	AML	16 49 04.7	
	comp=N,8721µm,0.4s						
SMG				AML	AML	16 49 05.0	
	comp=E,9497µm,0.4s						
GOMA	Golmarmara-Man	0.70	29	PG	Pg	16 48 52.2	-0.4
GOMA				SG	Sg	16 49 01.9	+0.2
URLA	Izmir	0.74	291	PG	Pb	16 48 53.8	-0.3
URLA	Izmir	0.74	291	*i* P	Pb	16 48 53.8	-0.3
URLA				*i* S	Sb	16 49 03.5	-0.7
AKHS	Akhisar	0.82	19	*i* P	Pb	16 48 55.2	-0.1
AKHS				*i* S	Sg	16 49 05.4	-0.2
AKHS				IAML		16 49 10.0	
	comp=E,1µm,0.5s						
AKS	Akhisar	0.82	19	PG	Pg	16 48 54.6	-0.3
KRBN	Karaburun	0.88	304	PG	Pg	16 48 55.7	-0.3
ZEDA	zmir-Bergama	0.92	340	*i* P	Pb	16 48 56.9	-0.1
ZEDA				*i* S	Sg	16 49 07.8	-1.0
ZEDA				IAML		16 49 12.0	
	comp=N,928nm,0.6s						
ZEDA				IAML		16 49 12.0	
	comp=E,1µm,0.3s						
MANT	Manisa	0.94	65	*i* P	Pn	16 48 57.9	-0.5
MANT				*i* S	Sg	16 49 08.0	-1.3
MANT				IAML		16 49 13.0	
	comp=N,840nm,0.4s						
KULA	Kula-Manisa	1.02	66	PG	Pn	16 48 59.1	-0.3
BDRM	Kayabasi	1.03	182	*i* P	Pg	16 48 58.8	-0.1
BDRM				*i* P	Pg	16 48 58.9	-0.1
BDRM				*i* S	Sn	16 49 13.1	-1.0
BDRM				*i* S	Sg	16 49 13.2	+0.8
BDRM				IAML		16 49 18.0	
	comp=N,404nm,0.3s						
BODT	Bodrum	1.04	187	PG	Pb	16 48 58.8	-0.4
DKL	Dikili	1.07	335	PG	Pn	16 48 59.6	-0.4
YER	Yerkesik	1.16	146	PN	Pg	16 49 01.9	+0.6
CHOS	Chios island	1.16	285	P	Pg	16 49 01.4	+0.1
CHOS				S	Sn	16 49 17.3	+0.1
	comp=N,718nm,0.4s						
CHOS	Chios island	1.16	285	P	Pg	16 49 01.5	+0.1
CHOS				AML	AML	16 49 22.9	
	comp=E,1644µm,0.5s						
CHOS				AML	AML	16 49 27.5	
	comp=N,894µm,0.3s						
CHOS	Chios island	1.16	285	PN	Pg	16 49 01.4	+0.1
DENT	Denizli	1.28	105	PN	Pg	16 49 03.3	-0.3
STEP	BALIKESIR_Sava	1.29	8	*i* P	Pg	16 49 04.1	+0.3
STEP				*i* S	Sg	16 49 21.1	+0.5
STEP				IAML		16 49 22.0	
	comp=N,2µm,0.5s						
STEP				IAML		16 49 24.0	
	comp=E,747nm,0.4s						
TAVA	DENIZLI_Tavas	1.30	119	*i* P	Pg	16 49 04.0	-0.1
TAVA				*i* S	Sg	16 49 21.1	+0.1
DATC	Datca-Mugla	1.35	174	PN	Pb	16 49 03.9	-0.4
DEMI	Demirci	1.35	45	*i* P	Pb	16 49 04.2	-0.3
DEMI				*i* S	Sb	16 49 21.3	-0.5
DEMI				IAML		16 49 25.0	
	comp=N,374nm,0.6s						
DEMI				IAML		16 49 26.0	
	comp=E,500nm,0.3s						
AYVA	Ayvalik	1.35	333	*i* P	Pg	16 49 05.0	-0.1
AYVA				*i* S	Sg	16 49 22.7	0.0
AYVA				IAML		16 49 25.0	
	comp=N,667nm,0.6s						
USAK	Uak-Merkez	1.36	63	*i* P	Pb	16 49 04.6	+0.1
USAK				*i* S	Sb	16 49 21.6	-0.3
DAT	Datca	1.37	177	PN	Pn	16 49 03.9	-0.4
DAT	Datca	1.37	177	*i* P	Pn	16 49 03.9	-0.4
DAT				*i* S	Sg	16 49 23.1	-0.1
KOSK	Kos Island	1.40	197	P	Pg	16 49 06.8	+0.8
KOSK				S	Sg	16 49 26.0	+1.8
	comp=N,548nm,0.5s						
KOSK	Kos Island	1.40	197	PN	Pb	16 49 04.7	-0.6
PRK	Paraskevi	1.48	321	P	Pg	16 49 08.6	+1.1
PRK				S	Sg	16 49 28.9	+2.1
	comp=N,1µm,0.5s						
PRK	Paraskevi	1.48	321	P	Pg	16 49 07.1	-0.4
PRK				AML	AML	16 49 30.0	
	comp=E,2944µm,0.5s						
PRK				AML	AML	16 49 32.9	
	comp=N,1969µm,0.5s						
NISR	Nisiros	1.51	191	P	Pb	16 49 07.1	0.0
TURN	Turunc	1.52	144	PN	Pn	16 49 05.5	-0.6
TURN	Turunc	1.52	144	*i* P	Pn	16 49 05.5	-0.6
TURN				*i* S	Sn	16 49 25.3	-0.6
TURN				IAML		16 49 32.0	
	comp=N,370nm,0.5s						
TURN				IAML		16 49 33.0	
	comp=E,348nm,0.5s						
SIMA	Simav-Kutahya	1.53	50	PN	Pn	16 49 06.6	+0.1
SMAA	Simav-Kutahya	1.54	49	PN	Pn	16 49 06.7	+0.1
PSRA	Psara	1.57	287	P	Pg	16 49 08.6	-0.5
BALB	Balikesir	1.57	11	PN	Pn	16 49 06.6	-0.3
DALY	Dalyan (Mula)	1.59	144	PN	Pb	16 49 08.1	-0.3
DALY	Dalyan (Mula)	1.59	144	*i* P	Pb	16 49 08.1	-0.3
KHAL	Karahalli	1.61	80	*i* P	Pb	16 49 08.3	-0.6
KHAL				*i* S	Sb	16 49 28.9	-0.3
KHL	Karahalli	1.63	81	PN	Pn	16 49 08.0	+0.2
BALY	Balya	1.64	4	*i* P	Pn	16 49 08.3	+0.3
BALY				*i* S	Sb	16 49 29.2	-0.9
BALY				IAML		16 49 32.0	
	comp=E,549nm,0.6s						
BALY				IAML		16 49 32.0	
	comp=N,489nm,0.5s						
SHAP	Saphane-Kutahy	1.65	55	PN	Pn	16 49 08.5	+0.4
SIGR	SIGRI	1.69	312	P	Pg	16 49 11.7	+0.3
SIGR				S	Sg	16 49 33.7	+0.4
	comp=N,252nm,0.6s						
SIGR	SIGRI	1.69	312	P	Pb	16 49 10.2	0.0
SIGR				AML	AML	16 49 33.7	
	comp=E,529µm,0.7s						
SIGR				AML	AML	16 49 37.3	
	comp=N,470µm,0.9s						
SIGR	SIGRI	1.69	312	PN	Pb	16 49 09.1	-1.0
DURS	Dursunbey	1.69	27	*i* P	Pn	16 49 08.6	-0.1
DURS				*i* S	Sn	16 49 30.4	0.0
DURS				IAML		16 49 38.0	
	comp=N,240nm,0.5s						
DURS				IAML		16 49 38.0	
	comp=E,433nm,0.5s						
DST	Dursunbey	1.75	30	PN	Pn	16 49 09.5	+0.1
GEDZ	Gediz	1.78	57	PN	Pn	16 49 10.4	+0.5
AMGA	Amorgos Island	1.79	225	P	Pb	16 49 11.9	+0.1
AMGA				S	Sb	16 49 35.0	+0.7
	comp=E,658nm,0.3s						
AMGA	Amorgos Island	1.79	225	P	Pb	16 49 11.8	-0.1
AMGA				AML	AML	16 49 42.4	
	comp=E,1327µm,0.4s						
AMGA				AML	AML	16 49 42.4	
	comp=N,1244µm,0.3s						
BAYC	CANAKKALE_Bayr	1.79	336	*i* P	Pn	16 49 10.5	+0.5
BAYC				IAML		16 49 38.0	
	comp=E,226nm,0.5s						
APE	Apeiranthos	1.86	237	P	Pb	16 49 12.7	-0.4
APE				S	Sb	16 49 36.6	+0.2
	comp=E,190nm,0.5s						
APE	Apeiranthos	1.86	237	P	Pn	16 49 10.6	-0.4
APE				AML	AML	16 49 44.7	
	comp=E,307µm,0.5s						
APE				AML	AML	16 49 46.5	
	comp=N,443µm,0.4s						
APE	Apeiranthos	1.86	237	PN	Pb	16 49 11.7	-1.4
GOLH	Golhisar	1.86	117	*i* P	Pb	16 49 12.8	-0.5
GOLH				IAML		16 49 48.0	
	comp=E,604nm,0.5s						
FETY	Fethiye	1.94	138	PN	Pn	16 49 12.5	+0.4
FETY	Fethiye	1.94	138	*i* P	Pb	16 49 14.1	-0.4
EZN	Ezine	1.94	333	PN	Pn	16 49 12.1	+0.1
ARG	Arkhangelos	1.95	164	P	Pb	16 49 13.2	-1.4
ARG				S	Sb	16 49 39.3	+0.4
	comp=E,310nm,0.8s						
ARG	Arkhangelos	1.95	164	P	Pn	16 49 12.7	+0.6
ARG				AML	AML	16 49 46.5	
	comp=E,738µm,0.6s						
ARG				AML	AML	16 49 50.8	
	comp=N,467µm,0.8s						
ARG	Arkhangelos	1.95	164	PN	Pb	16 49 13.3	-1.4
GONE	Gonen-Balikesi	1.95	5	PN	Pn	16 49 11.9	-0.2
BASM	Basmaki-Afyon	2.04	94	PN	Pn	16 49 13.9	+0.5
TVSB	Tavsanli	2.05	48	PN	Pn	16 49 13.9	+0.2
BOZC	Bozcaada	2.06	328	PN	Pn	16 49 13.9	+0.2
BOZC	Bozcaada	2.06	328	*i* P	Pb	16 49 14.8	-1.8
BOZC				*i* S	Sb	16 49 41.8	-0.4
BOZC				IAML		16 49 47.0	
	comp=N,137nm,0.8s						
BRDR	BURDUR-Merkez	2.08	100	*i* P	Pb	16 49 15.4	-1.6
KZIL	AFYON_Kizioren	2.10	85	*i* P	Pn	16 49 15.2	+0.8
KNL	Balıkesir	2.17	1	*i* P	Pb	16 49 17.5	-0.9
KNL				*i* S	Sb	16 49 46.1	+0.8
KNL				IAML		16 49 48.0	
	comp=N,222nm,0.6s						
KNL				IAML		16 49 49.0	
	comp=E,268nm,0.5s						
IOSP	Ios island	2.22	232	P	Pn	16 49 17.0	+1.1
ORLT	Orhaneli	2.23	29	PN	Pn	16 49 16.2	+0.1
EDC	Edincik	2.26	7	PN	Pn	16 49 16.5	0.0
KRBG	Karabiga-Canak	2.29	357	PN	Pn	16 49 16.9	0.0
THT2	Imerovigli	2.33	225	PN	Pn	16 49 17.7	+0.3
LPK	Lapseki	2.34	346	PN	Pn	16 49 17.7	+0.2
ELL	Elmali	2.36	124	PN	Pn	16 49 18.9	+1.0
ULDT	Uludag	2.41	32	*i* P	Pn	16 49 18.8	+0.1
ULDT				*i* S	Sn	16 49 48.6	+0.3
ISP	Isparta	2.42	96	PN	Pn	16 49 19.2	+0.5
GADA	Gvkgeada	2.42	330	PN	Pn	16 49 18.5	-0.1
GELI	Tayfur-Gelibol	2.42	342	PN	Pn	16 49 19.3	+0.7
SHUT	Suhut-Afyon	2.46	78	PN	Pn	16 49 19.7	+0.5
MRMT	Marmara Adasi	2.50	2	PN	Pn	16 49 19.9	+0.1
MDNY	Mudanya-Bursa	2.52	25	PN	Pn	16 49 20.3	+0.4
AKAS	Kas	2.52	137	*i* P	Pb	16 49 22.8	-1.6
KORT	Korkueli	2.53	115	PN	Pn	16 49 20.7	+0.4
KORT	Korkueli	2.53	115	*i* P	Pb	16 49 23.9	-0.8
LIA	Limnos Island	2.53	316	P	Pn	16 49 20.5	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IGD	**Bursa**	**2.54**	**31**	*i* P	**Pb**	**16 49 25.7**	**+1.0**
SERI	**Serifos**	**2.55**	**249**	P	**Pn**	**16 49 20.3**	**-0.1**
KARP	**Karpathos**	**2.56**	**186**	P	**Pb**	**16 49 22.7**	**-2.3**
KARP	**Karpathos**	**2.56**	**186**	P	**Pn**	**16 49 20.8**	**+0.2**
KARP	**Karpathos**	**2.56**	**186**	PN	**Pn**	**16 49 20.6**	**0.0**
RKY	**Sarkoy-Tekirda**	**2.59**	**355**	PN	**Pn**	**16 49 21.2**	**+0.1**
BAGO	**Egridir - ISPA**	**2.62**	**91**	*i* P	**Pn**	**16 49 22.5**	**+1.1**
ERIK	**Erikli-Kesan**	**2.67**	**344**	PN	**Pn**	**16 49 22.7**	**+0.6**
GEMT	**Gemlik**	**2.68**	**29**	PN	**Pn**	**16 49 22.8**	**+0.6**
ARMT	**Armutlu**	**2.69**	**23**	PN	**Pn**	**16 49 22.6**	**+0.3**
KESN	**Edirne-Kesan**	**2.79**	**347**	*i* P	**Pn**	**16 49 24.0**	**0.0**
BOLV	**Bolvadin**	**2.80**	**76**	*i* P	**Pn**	**16 49 25.0**	**+1.1**
SMTH	**Samothraki Isl**	**2.81**	**328**	P	**Pn**	**16 49 25.4**	**+1.4**
SMTH	**Samothraki Isl**	**2.81**	**328**	P	**Pn**	**16 49 25.0**	**+1.0**
ENEZ	**Enez**	**2.83**	**339**	PN	**Pn**	**16 49 24.5**	**+0.3**
ALN	**Alexandroupoli**	**3.01**	**339**	P	**Pn**	**16 49 27.4**	**+0.8**
ALN	**Alexandroupoli**	**3.01**	**339**	P	**Pn**	**16 49 27.0**	**+0.4**
BUY	**Buyukada**	**3.03**	**24**	*i* P	**Pb**	**16 49 34.7**	**+1.7**
BUY				*i* S	**Sb**	**16 50 12.2**	**+2.2**
GEYV	**SAKARYA_Geyve**	**3.23**	**42**	*i* P	**Pg**	**16 49 39.2**	**-1.8**
GEYV				*i* S	**Sg**	**16 50 20.9**	**-2.0**
THAS	**Thassos island**	**3.29**	**320**	P	**Pn**	**16 49 31.5**	**+0.9**
SKIA	**Skiathos**	**3.32**	**290**	P	**Pn**	**16 49 32.5**	**+1.5**
RDO	**Rodhopi**	**3.39**	**334**	P	**Pn**	**16 49 32.5**	**+0.6**
KEPZ	**Antalya-Kepez**	**3.49**	**109**	*i* P	**Pn**	**16 49 35.1**	**+1.7**
KAND	**Kocaeli-Kandir**	**3.65**	**34**	*i* P	**Pn**	**16 49 36.4**	**+0.9**
KDHN	**Kadinhani**	**3.67**	**82**	*i* P	**Pn**	**16 49 38.2**	**+2.3**
KIRK	**Kırklareli**	**3.69**	**356**	*i* P	**Pn**	**16 49 36.2**	**+0.2**
SAHE	**Sakarya_HENDEK**	**3.79**	**42**	*i* P	**Pg**	**16 49 50.1**	**-1.5**
SAHE				*i* S	**Sg**	**16 50 39.8**	**-1.0**
KIBS	**BOLU**	**4.11**	**54**	*i* P	**Pg**	**16 49 58.3**	**+0.5**
KIBS				*i* S	**Sg**	**16 50 53.0**	**+2.0**
BCAM	**Yenicaga**	**4.47**	**51**	*i* P	**Pg**	**16 50 05.3**	**+0.7**
BCAM				*i* S	**Sg**	**16 51 02.5**	**0.0**

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*IDC **01** 16:58:53.5±4.9, 16°.02S×167°.67E, h89km±52km, mb3.6/8, mb1 3.8/9, mb1mx3.5/40, mbtmp4.0/9, ML4.4/1, MS3.6/3, Ms1 3.7/3, ms1mx3.0/33, Error ellipse: s-maj=42.7km s-min=28.1km az=137.0*

ISC 01 16:58:48.9±1.1**, 15°.77S**±0°.09×**167°.6E**±0°.3**, h39**km**, n13, σ1s.19**/12**, mb4.0**/8**, MS3.8**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.37**	**190**	P	**Pn**	**17 00 21.7**	**+1.3**
	10nm,0.3s,baz=11,slow=16,SNR=87						
DZM				S	**Sn**	**17 01 31.2**	**-0.7**
	2.7nm,0.3s,baz=322,slow=22,SNR=4.1						
URZ	**Urewera**	**23.92**	**161**	LR	LR	17 10 38.8	
	comp=Z,86nm,21.8s,baz=89,slow=30						
WRA	**Warramunga Arr**	**31.91**	**258**	P	**P**	**17 05 09.9**	**-1.1**
	0.5nm,0.7s,baz=88,slow=8.7,SNR=7.4						
ASAR	**Alice Springs**	**32.63**	**251**	P	**P**	**17 05 16.7**	**-0.6**
	1.3nm,0.7s,baz=78,slow=9.0,SNR=20						
MJAR	**Matsushiro Arr**	**58.97**	**333**	P	**P**	**17 08 44.7**	**+0.1**
	0.8nm,0.5s,baz=180,slow=6.9,SNR=4.0						
ASAJ	**Asahikawa**	**63.82**	**340**	P	**P**	**17 09 18.7**	**+1.5**
	4.6nm,0.7s,baz=184,slow=6.0,SNR=6.6						
PETK	**Petropavlovsk-**	**69.12**	**354**	P	**P**	**17 09 51.8**	**+0.9**
	1.8nm,0.7s,baz=163,slow=10,SNR=1.6						
CMAR	**Chiang Mai Arr**	**75.67**	**294**	P	**P**	**17 10 31.7**	**+0.9**
	0.6nm,0.7s,baz=123,slow=4.5,SNR=4.6						
SONM	**Songino Array**	**83.52**	**324**	P	**P**	**17 11 13.0**	**+0.1**
	0.7nm,0.4s,baz=127,slow=3.6,SNR=5.0						
ILAR	**Eielson Array**	**87.40**	**18**	P	**P**	**17 11 30.4**	**-1.3**
	0.5nm,0.6s,baz=236,slow=5.4,SNR=5.6						
ILAR				LR	LR	17 47 03.6	
	comp=Z,43nm,19.1s,baz=100,slow=33						
NVAR	**Mina Array Bea**	**87.69**	**49**	LR	LR	17 43 28.0	
	comp=Z,34nm,19.2s,baz=304,slow=30						
ARCES	**ARCESS Array B**	**121.33**	**345**	PKP	**PKPdf**	**17 17 36.1**	**-1.2**
	1.5nm,0.8s,baz=79,slow=2.6,SNR=8.5						
GERES	**GERESS Array B**	**140.71**	**333**	PKP	**PKPdf**	**17 18 13.2**	**-1.4**
	0.5nm,0.8s,baz=26,slow=2.5,SNR=3.3						

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*IDC **01** 17:08:11.0±0.9, 40°.74S×44°.30E, h0km, mb3.9/7, mb1 3.9/7, mb1mx3.6/42, mbtmp3.9/7, MS3.6/6, Ms1 3.6/6, ms1mx3.2/36, Error ellipse: s-maj=34.6km s-min=21.7km az=45.0*

*NEIC **01** 17:08:13.7±1.0, 40°.8S±0°.2×44°.2E±0°.3, h15km±4km, mb4.4/3, Error ellipse: s-maj=31.9km s-min=20.8km az=71.0*

ISC 01 17:08:12.4±1.0**, 40°.8S**±0°.2×**44°.2E**±0°.2**, h10**km**, n19, σ0s.92**/10**, mb4.0**/6**, MS3.7**/5**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**19.71**	**302**	LR	LR	17 18 49.0	
	comp=Z,80nm,21.8s,baz=228,slow=32						
SUR	**Sutherland**	**20.55**	**287**	P	Pn	17 12 53.6	+0.1
	9.6nm,1.1s,baz=139,slow=11,SNR=4.3						
SUR	**Sutherland**	**20.55**	**287**	P	**P**	**17 12 51.9**	**+0.6**
SUR				IAmb	IAmb	17 13 11.4	
	comp=Z,24nm,1.4s						
LBTB	**Lobatse**	**22.10**	**310**	LR	LR	17 20 36.9	
	comp=Z,120nm,18.8s,baz=208,slow=34						
MATP	**Matopo**	**24.30**	**322**	P	**P**	**17 13 28.6**	**-1.6**
	comp=Z,2.2nm,0.5s,baz=156,slow=7.4,SNR=6.6						
MATP				LR	LR	17 21 36.7	
	comp=Z,140nm,19.8s,baz=214,slow=33						
LSZ	**Lusaka**	**28.98**	**327**	LR	LR	17 25 40.8	
	comp=Z,168nm,18.6s,baz=172,slow=36						
SNAA	**Sanae**	**38.68**	**202**	P	**P**	**17 15 36.3**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=34,slow=11,SNR=2.5						
SNAA	**Sanae**	**38.68**	**202**	P	**P**	**17 15 36.1**	**+0.2**
SNAA				IAmb	IAmb	17 15 44.0	
	comp=Z,8.1nm,1.4s						
QSPA	**South Pole Qui**	**49.45**	**180**	P	**P**	**17 17 01.7**	**-0.7**
	comp=Z,2.3nm,1.0s,baz=253,slow=10,SNR=9.0						
QSPA	**South Pole Qui**	**49.45**	**180**	P	**P**	**17 17 01.4**	**-1.0**
QSPA				IAmb	IAmb	17 17 24.0	
	comp=Z,6.4nm,1.4s						
H01W2	**Cape Leeuwin H**	**54.19**	**108**	T	T	18 16 06.0	
	baz=242,slow=75,SNR=5.9						
H01W3	**Cape Leeuwin H**	**54.20**	**108**	T	T	18 16 02.2	
	baz=242,slow=75,SNR=6.0						
H01W1	**Cape Leeuwin H**	**54.21**	**108**	T	T	18 16 02.6	
	baz=242,slow=75,SNR=6.7						
TORD	**Torodi Ar. Bea**	**66.53**	**314**	P	**P**	**17 19 03.0**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=148,slow=6.6,SNR=4.4						
ASAR	**Alice Springs**	**74.71**	**108**	P	**P**	**17 19 52.6**	**0.0**
	comp=Z,0.7nm,1.0s,baz=224,slow=5.2,SNR=4.7						
WRA	**Warramunga Arr**	**77.33**	**105**	P	**P**	**17 20 08.2**	**+0.7**
	comp=Z,1.8nm,1.2s,baz=226,slow=4.4,SNR=5.6						
AAK	**Ala-Archa**	**87.41**	**22**	LR	LR	17 56 39.9	
	comp=Z,30nm,20.7s,baz=216,slow=33						
ESDC	**Sonseca Array**	**91.31**	**325**	LR	LR	18 03 20.3	
	comp=Z,38nm,19.1s,baz=205,slow=36						
TXAR	**Lajitas Array**	**151.51**	**257**	PKPbc	**PKiKP**	**17 28 08.1**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=139,slow=5.6,SNR=6.1						

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*HLW **01** 17:33:38.7, 37°.10N×27°.45E, h5km±13km, Md4.3, Ml4.3*

*IDC **01** 17:33:39.9±0.9, 37°.14N×27°.31E, h0km, mb3.9/10, mb1 3.9/14, mb1mx3.7/48, mbtmp3.8/14, ML3.2/4, MS3.1/7, Ms1 3.1/7, ms1mx2.7/58, Error ellipse: s-maj=24.3km s-min=15.2km az=150.0*

*ISK **01** 17:33:40.6, 37°.03N×27°.47E, h13km, ML4.1/36*

*DDA **01** 17:33:40.8, 37°.03N×27°.46E, h11km, MW4.1*

*MOS **01** 17:33:40.9±0.9, 37°.09N×27°.53E, h12km, mb4.3/12, Error ellipse: s-maj=6.7km s-min=4.9km az=102.8*

*THE **01** 17:33:40.6, 37°.03N×27°.48E, h0km, ML3.7/8, Error ellipse: s-maj=0.8km s-min=0.4km az=64.0*

*NEIC **01** 17:33:41.5±2.4, 36°.99N±0°.05×27°.50E±0°.05, h13km±5km, Error ellipse: s-maj=7.2km s-min=5.5km az=156.0*

*ATH **01** 17:33:41.2, 37°.01N×27°.40E, h26km±1km, ML3.7/9, Error ellipse: s-maj=1.8km s-min=1.0km az=65.0*

*GII **01** 17:33:43.6±0.5, 37°.05N×27°.55E, h150km, Mm4.0/5*

ISC 01 17:33:41.3±0.7**, 37°.01N**±0°.02×**27°.48E**±0°.02**, h9**km±4km**, n327, σ1s.50**/361**, mb4.1**/22**, 30C-14D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.07**	**334**	⇓*i* P	**Pg**	**17 33 43.4**	**-0.1**
BDRM				*i* P	**Pg**	**17 33 43.4**	**-0.1**
BDRM				*i* S	**Sg**	**17 33 44.5**	**-0.4**
BDRM				*i* S		17 33 44.6	
BDRM				IAML		17 33 45.0	
	comp=N,107µm,0.4s						
BDRM				IAML		17 33 45.0	
	comp=E,107µm,0.5s						
BDRM				IAML		17 33 45.0	
	comp=E,75µm,0.4s						
BODT	**Bodrum**	**0.15**	**292**	PG	**Pb**	**17 33 44.7**	**+0.1**
BODT				SG	**Sg**	**17 33 47.1**	**+0.3**
YKAV	**Yalikavak-Bodr**	**0.20**	**306**	PG	**Pg**	**17 33 45.1**	**-0.4**
YKAV				SG	**Sg**	**17 33 48.4**	**+0.1**
DATC	**Datca-Mugla**	**0.29**	**150**	PG	**Pg**	**17 33 47.4**	**+0.4**
DATC				SG	**Sb**	**17 33 52.7**	**-0.8**
DAT	**Datca**	**0.29**	**164**	PG	**Pg**	**17 33 47.5**	**+0.3**
DAT	**Datca**	**0.29**	**164**	⇑*i* P	**Pg**	**17 33 47.5**	**+0.3**
DAT				*i* S	**Sb**	**17 33 52.6**	**-1.0**
KOSK	**Kos Island**	**0.48**	**238**	P	**Pg**	**17 33 50.6**	**0.0**
KOSK				S	**Sb**	**17 33 59.1**	**+0.1**
	comp=E,13µm,0.4s						
KOSK	**Kos Island**	**0.48**	**238**	PG	**Pg**	**17 33 50.6**	**0.0**
NISR	**Nisiros**	**0.48**	**216**	P	**Pg**	**17 33 50.8**	**0.0**
NISR				S	**Sb**	**17 33 58.6**	**-0.7**
NISR	**Nisiros**	**0.48**	**216**	P	**Pg**	**17 33 50.8**	**0.0**
NISR				S	**Sb**	**17 33 58.0**	**-1.3**
NISR				AML	AML	17 34 01.3	
	comp=E,20017µm,0.4s						
NISR				AML	AML	17 34 05.1	
	comp=N,9516µm,0.3s						
YER	**Yerkesik**	**0.65**	**78**	PG	**Pg**	**17 33 53.9**	**-0.1**
YER	**Yerkesik**	**0.65**	**78**	P	**Pg**	**17 33 54.0**	**-0.1**
GCAM	**G?zelcaml?**	**0.72**	**344**	PG	**Pg**	**17 33 54.4**	**-0.9**
GCAM	**G?zelcaml?**	**0.72**	**344**	⇑*i* P	**Pg**	**17 33 54.5**	**-0.7**
GCAM				*i* S	**Sn**	**17 34 06.1**	**-2.7**
GCAM				IAML		17 34 08.0	
	comp=N,11µm,0.4s						
GCAM				IAML		17 34 08.0	
	comp=E,18µm,0.5s						
AYDN	**Tasoluk**	**0.73**	**26**	⇑*i* P	**Pb**	**17 33 55.0**	**-1.2**
AYDN				*i* S	**Sb**	**17 34 04.6**	**-1.8**
SMG	**Samos**	**0.87**	**324**	P	**Pb**	**17 33 57.4**	**-1.2**
SMG				S	**Sn**	**17 34 10.2**	**-2.4**
	comp=E,16µm,0.3s						
SMG	**Samos**	**0.87**	**324**	P	**Pb**	**17 33 57.6**	**-1.0**
SMG				S	**Sb**	**17 34 09.4**	**-1.0**
SMG				AML	AML	17 34 12.4	
	comp=E,37950µm,0.4s						
SMG				AML	AML	17 34 14.8	
	comp=N,26032µm,0.3s						
TURN	**Turunc**	**0.91**	**98**	PG	Pg	17 33 53.8	-5.0
TURN				SG	**Sg**	**17 34 04.2**	**-6.4**
TURN	**Turunc**	**0.91**	**98**	⇑*i* P	Pg	17 33 53.5	-5.4
TURN				*i* S	**Sg**	**17 34 05.4**	**-5.3**
TURN				IAML		17 34 07.0	
	comp=N,7µm,0.5s						
TURN				IAML		17 34 08.0	
	comp=E,8µm,0.3s						
ARG	**Arkhangelos**	**0.94**	**146**	P	**Pg**	**17 33 59.5**	**0.0**
ARG				S	**Sn**	**17 34 14.3**	**-0.1**
	comp=E,5µm,0.6s						
ARG	**Arkhangelos**	**0.94**	**146**	P	**Pg**	**17 33 59.3**	**-0.2**
ARG				S	**Sn**	**17 34 14.2**	**-0.2**
ARG				AML	AML	17 34 20.0	
	comp=N,10852µm,1.0s						
ARG				AML	AML	17 34 20.8	
	comp=E,8245µm,0.8s						
ARG	**Arkhangelos**	**0.94**	**146**	PG	**Pg**	**17 33 59.2**	**-0.3**
ARG				SG	**Sn**	**17 34 13.7**	**-0.7**
ARG	**Arkhangelos**	**0.94**	**146**	P	**Pn**	**17 34 00.6**	**-0.2**
DALY	**Dalyan (Mula)**	**0.96**	**101**	PG	**Pb**	**17 33 59.8**	**-0.3**
DALY	**Dalyan (Mula)**	**0.96**	**101**	⇑*i* P	**Pg**	**17 33 59.5**	**-0.3**
DALY				*i* S	**Sn**	**17 34 14.0**	**-0.7**
DALY				IAML		17 34 19.0	
	comp=E,2µm,0.6s						
DALY				IAML		17 34 19.0	
	comp=N,4µm,0.7s						
AYDB	**Zeytinkoy-Aydi**	**0.99**	**19**	PG	**Pg**	**17 33 59.3**	**-1.2**
DGB	**zmir**	**1.15**	**336**	⇑*i* P	**Pb**	**17 34 02.0**	**-1.4**
DGB				*i* S	**Sn**	**17 34 17.7**	**-1.7**
DGB				IAML		17 34 22.0	
	comp=E,2µm,0.8s						
DGB				IAML		17 34 23.0	
	comp=N,2µm,0.7s						
TAVA	**DENIZLI_Tavas**	**1.23**	**68**	⇑*i* P	**Pb**	**17 34 04.2**	**-0.7**
TAVA				*i* S	**Sn**	**17 34 21.3**	**-0.4**
TAVA				IAML		17 34 27.0	
	comp=N,1µm,0.7s						
TAVA				IAML		17 34 32.0	
	comp=E,2µm,0.6s						
AMGA	**Amorgos Island**	**1.28**	**263**	P	**Pn**	**17 34 04.1**	**-1.4**
AMGA				S	**Sg**	**17 34 23.6**	**+0.9**
	comp=E,4µm,0.5s						
AMGA	**Amorgos Island**	**1.28**	**263**	P	**Pn**	**17 34 04.2**	**-1.4**
AMGA				AML	AML	17 34 26.7	
	comp=E,7953µm,0.5s						
AMGA				AML	AML	17 34 29.8	
	comp=N,7008µm,0.5s						
FETY	**Fethiye**	**1.34**	**106**	PN	**Pn**	**17 34 05.8**	**-0.4**
FETY	**Fethiye**	**1.34**	**106**	⇑*i* P	**Pb**	**17 34 06.0**	**-0.6**
FETY				*i* S	**Sg**	**17 34 25.5**	**+1.1**
FETY				IAML		17 34 30.0	
	comp=E,970nm,0.8s						
FETY				IAML		17 34 31.0	
	comp=N,766nm,0.4s						
BLCB	**Balcova**	**1.42**	**346**	PN	**Pn**	**17 34 06.1**	**-1.3**
DENT	**Denizli**	**1.44**	**58**	PN	**Pn**	**17 34 07.1**	**-0.6**
KARP	**Karpathos**	**1.48**	**190**	P	**Pn**	**17 34 07.2**	**-1.0**
KARP				S	**Sb**	**17 34 27.8**	**-0.1**
	comp=N,1µm,0.5s						
KARP	**Karpathos**	**1.48**	**190**	P	**Pn**	**17 34 07.3**	**-0.9**
KARP				AML	AML	17 34 34.3	
	comp=E,2113µm,0.5s						
KARP				AML	AML	17 34 35.8	
	comp=N,2163µm,0.4s						
KARP	**Karpathos**	**1.48**	**190**	PN	**Pn**	**17 34 07.3**	**-0.9**
KARP	**Karpathos**	**1.48**	**190**		**Pn**	**17 34 07.2**	**-0.9**
ANAF	**Anafi Island**	**1.52**	**245**	P	**Pb**	**17 34 08.6**	**-1.1**
ANAF				S	**Sg**	**17 34 29.3**	**-0.9**
	comp=N,5µm,0.5s						
ANAF	**Anafi Island**	**1.52**	**245**	P	**Pb**	**17 34 08.6**	**-1.1**
ANAF				AML	AML	17 34 37.9	
	comp=E,10456µm,0.6s						
ANAF				AML	AML	17 34 38.3	
	comp=N,8536µm,0.4s						
URLA	**Izmir**	**1.52**	**333**	PN	**Pb**	**17 34 08.1**	**-1.7**
URLA	**Izmir**	**1.52**	**333**	*i* P	**Pb**	**17 34 08.8**	**-1.0**
URLA				*i* S	**Sg**	**17 34 30.6**	**+0.3**
URLA				IAML		17 34 35.0	
	comp=N,1µm,0.5s						
URLA				IAML		17 34 37.0	
	comp=E,1µm,0.8s						
APE	**Apeiranthos**	**1.56**	**273**	P	**Pn**	**17 34 08.4**	**-0.9**
APE				S	**Sb**	**17 34 29.3**	**-1.0**
	comp=E,958nm,0.6s						
APE	**Apeiranthos**	**1.56**	**273**	P	**Pn**	**17 34 08.5**	**-0.9**
APE				AML	AML	17 34 37.6	
	comp=E,1974µm,0.5s						
APE				AML	AML	17 34 40.0	
	comp=N,1459µm,0.4s						
APE	**Apeiranthos**	**1.56**	**273**	⇑P	**Pn**	**17 34 08.5**	**-0.9**
APE				⇓S	**Sn**	**17 34 28.0**	**-1.8**
APE	**Apeiranthos**	**1.56**	**273**	PN	**Pn**	**17 34 08.3**	**-1.0**
APE	**Apeiranthos**	**1.56**	**273**	*d i* P	**Pn**	**17 34 08.4**	**-0.9**
GOLH	**Golhisar**	**1.68**	**81**	⇑*i* P	**Pg**	**17 34 12.7**	**-0.9**
GOLH				*i* S	**Sg**	**17 34 34.5**	**-0.9**
GOLH				IAML		17 34 49.0	
	comp=N,2µm,0.8s						
MANT	**Manisa**	**1.71**	**30**	*i* P	**Pn**	**17 34 11.0**	**-0.6**
MANT				*i* S	**Sg**	**17 34 38.1**	**+1.7**
MANT				IAML		17 34 41.0	
	comp=N,620nm,0.8s						
MANT				IAML		17 34 44.0	
	comp=E,689nm,0.6s						
MANT	**Manisa**	**1.71**	**30**		**Pn**	**17 34 10.6**	**-1.0**
GOMA	**Golmarmara-Man**	**1.73**	**11**	PN	**Pn**	**17 34 11.1**	**-0.6**
SANT	**Santorini**	**1.74**	**249**	⇑P	**Pb**	**17 34 13.0**	**-0.6**
SANT				⇑S	**Sb**	**17 34 35.0**	**-0.6**
SANT	**Santorini**	**1.74**	**249**	PN	**Pn**	**17 34 11.5**	**-0.3**
SANT	**Santorini**	**1.74**	**249**		**Pn**	**17 34 11.1**	**-0.8**
KRBN	**Karaburun**	**1.75**	**335**	PN	**Pb**	**17 34 11.7**	**-1.9**
THT2	**Imerovigli**	**1.75**	**252**	PN	**Pn**	**17 34 11.2**	**-0.7**
KULA	**Kula-Manisa**	**1.77**	**31**	PN	**Pn**	**17 34 11.7**	**-0.6**
IOSP	**Ios island**	**1.78**	**262**	P	**Pn**	**17 34 11.3**	**-1.0**
IOSP	**Ios island**	**1.78**	**262**	P	**Pn**	**17 34 11.2**	**-1.1**
IOSP				AML	AML	17 34 44.8	
	comp=E,2320µm,0.6s						
IOSP				AML	AML	17 34 47.0	
	comp=N,3638µm,0.5s						
CHOS	**Chios island**	**1.78**	**321**	P	**Pn**	**17 34 11.4**	**-1.0**
CHOS				S	**Sb**	**17 34 35.3**	**-1.5**
	comp=N,2µm,0.6s						
CHOS	**Chios island**	**1.78**	**321**	P	**Pn**	**17 34 11.7**	**-0.8**
CHOS				AML	AML	17 34 44.7	
	comp=E,2971µm,0.5s						
CHOS				AML	AML	17 34 45.3	
	comp=N,2936µm,0.7s						
CHOS	**Chios island**	**1.78**	**321**	PN	**Pn**	**17 34 11.9**	**-0.5**
AKAS	**Kas**	**1.88**	**114**	*i* P	**Pg**	**17 34 16.5**	**-0.8**
AKAS				*i* S	**Sg**	**17 34 43.4**	**+1.8**
AKHS	**Akhisar**	**1.89**	**8**	*i* P	**Pn**	**17 34 12.8**	**-1.1**
AKHS				IAML		17 34 52.0	
	comp=E,517nm,0.6s						
AKS	**Akhisar**	**1.89**	**8**	PN	**Pn**	**17 34 12.7**	**-1.1**
KSL	**Kastellorizon**	**1.90**	**116**	P	**Pb**	**17 34 15.7**	**-0.4**
TNSA	**Tinos**	**1.92**	**287**	P	**Pn**	**17 34 13.3**	**-1.0**
ELL	**Elmali**	**1.96**	**97**	PN	**Pn**	**17 34 15.0**	**+0.1**
ELL	**Elmali**	**1.96**	**97**	P	**Pn**	**17 34 13.5**	**-1.5**
ELL	**Elmali**	**1.96**	**97**		**Pn**	**17 34 13.4**	**-1.5**
ZEDA	**zmir-Bergama**	**1.98**	**351**	*i* P	**Pn**	**17 34 13.9**	**-1.2**
ZEDA				*i* S	**Sg**	**17 34 42.9**	**-2.2**
ZEDA				IAML		17 34 51.0	
	comp=N,2µm,1.0s						
ZEDA				IAML		17 34 54.0	
	comp=E,1µm,0.7s						
KHL	**Karahalli**	**2.09**	**50**	PN	**Pn**	**17 34 16.3**	**-0.3**
USAK	**Uak-Merkez**	**2.10**	**35**	*i* P	**Pn**	**17 34 16.3**	**-0.4**
USAK				IAML		17 35 00.0	
	comp=N,325nm,1.0s						
DEMR	**Demre-Antalya**	**2.10**	**111**	PN	**Pn**	**17 34 16.6**	**0.0**
KHAL	**Karahalli**	**2.10**	**49**	*i* P	**Pn**	**17 34 16.7**	**-0.1**
KHAL				*i* S	**Sg**	**17 34 52.7**	**+3.9**
KHAL				IAML		17 35 00.0	
	comp=E,277nm,0.7s						
KHAL				IAML		17 35 02.0	
	comp=N,313nm,0.6s						
DKL	**Dikili**	**2.11**	**348**	PN	**Pn**	**17 34 15.8**	**-1.0**
ZKR	**Zakros**	**2.15**	**209**	P	**Pn**	**17 34 18.1**	**+0.7**
ZKR	**Zakros**	**2.15**	**209**	P	**Pb**	**17 34 18.4**	**-2.0**
ZKR	**Zakros**	**2.15**	**209**	PN	**Pn**	**17 34 17.5**	**+0.1**
PSRA	**Psara**	**2.16**	**316**	P	**Pn**	**17 34 17.6**	**+0.1**
BRDR	**BURDUR-Merkez**	**2.17**	**71**	*i* P	**Pb**	**17 34 19.5**	**-1.4**
BRDR				IAML		17 34 58.0	
	comp=E,473nm,0.6s						
BRDR				IAML		17 35 06.0	
	comp=N,648nm,0.8s						
BASM	**Basmaki-Afyon**	**2.24**	**65**	PN	**Pn**	**17 34 18.4**	**-0.3**
DEMI	**Demirci**	**2.25**	**25**	*i* P	**Pn**	**17 34 18.3**	**-0.6**
DEMI				IAML		17 35 03.0	
	comp=E,568nm,1.0s						
DEMI				IAML		17 35 09.0	
	comp=N,350nm,1.0s						
KORT	**Korkueli**	**2.30**	**89**	PN	**Pn**	**17 34 19.4**	**-0.1**
KORT	**Korkueli**	**2.30**	**89**	*i* P	**Pb**	**17 34 23.7**	**+0.7**
KORT				IAML		17 35 09.0	
	comp=E,913nm,1.8s						
KORT				IAML		17 35 16.0	
	comp=N,634nm,0.9s						
NPS	**Neapolis**	**2.31**	**222**	P	**Pn**	**17 34 19.9**	**+0.4**
NPS	**Neapolis**	**2.31**	**222**	P	**Pn**	**17 34 19.9**	**+0.4**
NPS	**Neapolis**	**2.31**	**222**	P	**Pn**	**17 34 20.1**	**+0.6**
STEP	**BALIKESIR_Sava**	**2.37**	**4**	*i* P	**Pn**	**17 34 20.3**	**-0.2**
STEP				*i* S	**Sg**	**17 34 57.9**	**+0.3**
STEP				IAML		17 35 05.0	
	comp=E,977nm,0.7s						
STEP				IAML		17 35 06.0	
	comp=N,2µm,0.8s						
AYVA	**Ayvalik**	**2.38**	**345**	*i* P	**Pb**	**17 34 21.3**	**-3.1**
AYVA				IAML		17 35 03.0	
	comp=N,453nm,0.6s						
AYVA				IAML		17 35 04.0	
	comp=E,523nm,0.7s						
SIMA	**Simav-Kutahya**	**2.39**	**29**	PN	**Pn**	**17 34 20.3**	**-0.5**
AKUM	**Antalya-Kumluc**	**2.40**	**106**	*i* P	**Pb**	**17 34 23.5**	**-1.2**
AKUM				*i* S	**Sb**	**17 34 53.7**	**-0.8**
AKUM				IAML		17 35 11.0	
	comp=E,486nm,1.7s						
AKUM				IAML		17 35 13.0	
	comp=N,322nm,1.4s						
SERI	**Serifos**	**2.40**	**275**	P	**Pn**	**17 34 19.9**	**-0.9**
SERI	**Serifos**	**2.40**	**275**	P	**Pn**	**17 34 20.0**	**-0.9**
SMAA	**Simav-Kutahya**	**2.40**	**29**	PN	**Pn**	**17 34 20.8**	**-0.1**
PRK	**Paraskevi**	**2.43**	**337**	P	**Pn**	**17 34 21.1**	**-0.1**
PRK	**Paraskevi**	**2.43**	**337**	P	**Pn**	**17 34 21.8**	**+0.6**
PRK	**Paraskevi**	**2.43**	**337**	P	**Pb**	**17 34 22.3**	**-2.9**
SHAP	**Saphane-Kutahy**	**2.44**	**34**	PN	**Pn**	**17 34 21.1**	**-0.4**
KZIL	**AFYON_Kizioren**	**2.45**	**59**	*i* P	**Pb**	**17 34 23.5**	**-2.3**
KZIL				IAML		17 35 11.0	
	comp=E,485nm,1.2s						
KZIL				IAML		17 35 14.0	
	comp=N,446nm,1.1s						
LAST	**Lasithi**	**2.45**	**222**	P	**Pn**	**17 34 22.1**	**+0.5**
LAST	**Lasithi**	**2.45**	**222**	P	**Pn**	**17 34 22.5**	**+0.9**
KEMT	**Kemer-ANTALYA**	**2.50**	**98**	PN	**Pn**	**17 34 22.5**	**+0.3**
GEDZ	**Gediz**	**2.54**	**36**	PN	**Pn**	**17 34 22.5**	**-0.4**
SIGR	**SIGRI**	**2.55**	**330**	P	**Pn**	**17 34 22.1**	**-0.7**
SIGR	**SIGRI**	**2.55**	**330**	P	**Pn**	**17 34 22.4**	**-0.4**
SIGR	**SIGRI**	**2.55**	**330**	PN	**Pn**	**17 34 22.2**	**-0.6**
ISP	**Isparta**	**2.56**	**70**	PN	**Pn**	**17 34 23.1**	**0.0**
ISP	**Isparta**	**2.56**	**70**	P	**Pn**	**17 34 21.7**	**-1.4**
ISP	**Isparta**	**2.56**	**70**	Pn	**Pn**	**17 34 22.3**	**-0.8**
ISP	**Isparta**	**2.56**	**70**		**Pn**	**17 34 21.7**	**-1.4**
HRKL	**Herakleio**	**2.56**	**229**	PN	**Pn**	**17 34 22.9**	**-0.1**
KARY	**Karystos**	**2.63**	**294**	P	**Pn**	**17 34 23.6**	**-0.3**
KARY	**Karystos**	**2.63**	**294**	P	**Pn**	**17 34 23.7**	**-0.3**
BALB	**Balikesir**	**2.65**	**7**	PN	**Pn**	**17 34 23.4**	**-0.8**
DURS	**Dursunbey**	**2.71**	**16**	*i* P	**Pn**	**17 34 24.2**	**-0.9**
DURS				IAML		17 35 13.0	
	comp=E,427nm,0.6s						
DURS				IAML		17 35 14.0	
	comp=N,390nm,0.6s						
IDI	**Anoyia**	**2.71**	**231**	P	**Pn**	**17 34 24.9**	**-0.2**
IDI	**Anoyia**	**2.71**	**231**	Pn	**Pn**	**17 34 24.5**	**-0.6**
	comp=N,2.8nm,0.3s,baz=59,slow=15,SNR=16						
IDI				Sn	**Sn**	**17 34 55.7**	**-2.4**
	comp=N,6.0nm,0.3s,baz=314,slow=18,SNR=4.3						
IDI				LR	LR	17 35 37.0	
	comp=N,242nm,21.9s,baz=170,slow=44						
IDI	**Anoyia**	**2.71**	**231**	P	**Pn**	**17 34 24.9**	**-0.2**
IDI	**Anoyia**	**2.71**	**231**	⇑P	**Pn**	**17 34 25.4**	**+0.2**
IDI	**Anoyia**	**2.71**	**231**	PN	**Pn**	**17 34 25.0**	**-0.2**
IDI	**Anoyia**	**2.71**	**231**		**Pn**	**17 34 24.7**	**-0.4**
BALY	**Balya**	**2.73**	**2**	*i* P	**Pn**	**17 34 24.1**	**-1.3**
BAGO	**Egridir - ISPA**	**2.81**	**69**	*i* P	**Pn**	**17 34 27.5**	**+1.0**
BAYC	**CANAKKALE_Bayr**	**2.83**	**345**	*i* P	**Pn**	**17 34 26.0**	**-0.8**
BAYC				IAML		17 35 27.0	
	comp=E,208nm,1.1s						
AFYO	**Afyonkarahisar**	**2.85**	**51**	*i* P	**Pn**	**17 34 26.5**	**-0.6**
SHUT	**Suhut-Afyon**	**2.88**	**57**	PN	**Pn**	**17 34 27.6**	**0.0**
TVSB	**Tavsanli**	**2.90**	**32**	PN	**Pn**	**17 34 27.8**	**+0.1**
EZN	**Ezine**	**2.96**	**342**	PN	**Pn**	**17 34 27.7**	**-0.8**
GONE	**Gonen-Balikesi**	**3.04**	**3**	PN	**Pn**	**17 34 29.2**	**-0.4**
BOZC	**Bozcaada**	**3.04**	**339**	PN	**Pn**	**17 34 29.4**	**-0.3**
BOZC	**Bozcaada**	**3.04**	**339**	*i* P	**Pn**	**17 34 29.2**	**-0.4**
BOZC				IAML		17 35 24.0	
	comp=N,300nm,0.9s						
BOZC				IAML		17 35 26.0	
	comp=E,242nm,0.9s						
VLY	**Voula,Athens**	**3.05**	**287**	P	**Pn**	**17 34 29.7**	**-0.1**
VLY	**Voula,Athens**	**3.05**	**287**	P	**Pn**	**17 34 29.9**	**+0.1**
PTL	**Penteli**	**3.06**	**291**	P	**Pn**	**17 34 30.0**	**+0.1**
ATHU	**Athens Univers**	**3.09**	**289**	P	**Pn**	**17 34 30.4**	**0.0**
VAM	**Vamos**	**3.10**	**240**	P	**Pb**	**17 34 33.6**	**-3.0**
KYMI	**Kymi, Euboea I**	**3.13**	**302**	P	**Pn**	**17 34 30.8**	**-0.1**
KYMI	**Kymi, Euboea I**	**3.13**	**302**	P	**Pn**	**17 34 30.6**	**-0.3**
ATH	**Athens Observa**	**3.15**	**289**	P	**Pn**	**17 34 31.7**	**+0.6**
IMMV	**Iera Moni Meta**	**3.22**	**242**	PN	**Pn**	**17 34 30.9**	**-1.2**
ORLT	**Orhaneli**	**3.23**	**20**	PN	**Pn**	**17 34 32.3**	**0.0**
BOLV	**Bolvadin**	**3.23**	**57**	*i* P	**Pn**	**17 34 33.3**	**+0.8**
KNL	**Balıkesir**	**3.26**	**1**	*i* P	**Pn**	**17 34 32.6**	**-0.1**
KEPZ	**Antalya-Kepez**	**3.30**	**91**	*i* P	**Pb**	**17 34 36.6**	**-3.5**
KEPZ				IAML		17 35 21.0	
	comp=E,217nm,0.9s						
KEPZ				IAML		17 35 22.0	
	comp=N,261nm,0.7s						
RODP	**Rodopos**	**3.34**	**245**	PN	**Pn**	**17 34 33.3**	**-0.4**
EDC	**Edincik**	**3.35**	**5**	PN	**Pn**	**17 34 33.2**	**-0.7**
ULDT	**Uludag**	**3.39**	**22**	*i* P	**Pn**	**17 34 34.8**	**+0.2**
LIA	**Limnos Island**	**3.40**	**329**	P	**Pn**	**17 34 34.5**	**-0.1**
LIA	**Limnos Island**	**3.40**	**329**	P	**Pn**	**17 34 34.6**	**-0.1**
LPK	**Lapseki**	**3.41**	**351**	PN	**Pn**	**17 34 34.5**	**-0.2**
GADA	**Gvkgeada**	**3.41**	**339**	PN	**Pn**	**17 34 34.4**	**-0.3**
GELI	**Tayfur-Gelibol**	**3.48**	**347**	PN	**Pn**	**17 34 35.3**	**-0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DOGA	**KONYA_Doganhis**	**3.50**	**70**	*i* P	**Pn**	**17 34 38.3**	**+2.2**
VILL	**Villia**	**3.51**	**290**	P	**Pn**	**17 34 36.4**	**+0.3**
MRKA	**Markates**	**3.52**	**300**	P	**Pn**	**17 34 36.2**	**-0.1**
IGD	**Bursa**	**3.52**	**22**	*i* P	**Pn**	**17 34 35.2**	**-1.1**
VIL2	**Platees**	**3.56**	**291**	P	**Pn**	**17 34 36.5**	**-0.2**
VLI	**Veliai**	**3.66**	**267**	P	**Pn**	**17 34 38.1**	**0.0**
BORA	**Eskisehir**	**3.70**	**38**	*i* P	**Pn**	**17 34 39.3**	**+0.6**
SMTH	**Samothraki Isl**	**3.78**	**337**	P	**Pn**	**17 34 39.5**	**-0.3**
SKIA	**Skiathos**	**3.83**	**305**	P	**Pn**	**17 34 40.8**	**+0.2**
PROD	**Prodromos**	**3.84**	**290**	P	**Pn**	**17 34 41.2**	**+0.5**
PROD	**Prodromos**	**3.84**	**290**	P	**Pn**	**17 34 41.1**	**+0.4**
KESN	**Edirne-Kesan**	**3.87**	**351**	*i* P	**Pn**	**17 34 39.6**	**-1.7**
GAZI	**Gazipasa**	**3.96**	**100**	*i* P	**Pn**	**17 34 43.9**	**+1.5**
GAZI				IAML		17 35 30.0	
	comp=E,124nm,1.0s						
GAZI				IAML		17 35 33.0	
	comp=N,168nm,0.9s						
KMER	**Konya-Meram**	**3.97**	**77**	*i* P	**Pn**	**17 34 45.3**	**+2.8**
KDHN	**Kadinhani**	**3.97**	**66**	*i* P	**Pn**	**17 34 44.1**	**+1.5**
KONT	**Konya--Tatoy**	**3.99**	**75**	*i* P	**Pn**	**17 34 44.6**	**+1.8**
ALN	**Alexandroupoli**	**4.04**	**344**	P	**Pn**	**17 34 43.0**	**-0.4**
ALN	**Alexandroupoli**	**4.04**	**344**	P	**Pn**	**17 34 42.8**	**-0.6**
ALN	**Alexandroupoli**	**4.04**	**344**	Pn	**Pn**	**17 34 42.8**	**-0.6**
BUY	**Buyukada**	**4.05**	**18**	*i* P	**Pg**	**17 34 58.3**	**-0.5**
GEYV	**SAKARYA_Geyve**	**4.11**	**31**	*i* P	**Pg**	**17 34 57.7**	**-2.4**
PAIG	**Paliouri**	**4.17**	**316**	P	**Pn**	**17 34 45.4**	**+0.2**
ISK	**Istanbul-Kandi**	**4.24**	**16**	P	**Pn**	**17 34 45.8**	**-0.2**
OUR	**Ouranopolis**	**4.31**	**322**	P	**Pn**	**17 34 48.0**	**+1.0**
RDO	**Rodhopi**	**4.40**	**341**	P	**Pn**	**17 34 48.5**	**+0.2**
ITM	**Ithomi**	**4.44**	**274**	Pn	**Pn**	**17 34 50.5**	**+1.6**
BTAS	**Taskesti**	**4.50**	**37**	*i* P	**Pn**	**17 34 51.5**	**+1.8**
AGG	**Agios Georgios**	**4.54**	**298**	P	**Pn**	**17 34 51.0**	**+0.8**
AGG	**Agios Georgios**	**4.54**	**298**	P	**Pn**	**17 34 51.1**	**+0.8**
AGG	**Agios Georgios**	**4.54**	**298**	Pn	**Pn**	**17 34 51.1**	**+0.9**
KAND	**Kocaeli-Kandir**	**4.59**	**27**	*i* P	**Pn**	**17 34 49.9**	**-1.1**
KAVA	**Kavala**	**4.61**	**331**	P	**Pn**	**17 34 51.0**	**-0.1**
SAHE	**Sakarya_HENDEK**	**4.65**	**33**	*i* P	**Pn**	**17 34 53.0**	**+1.2**
ANX	**Ano Chora**	**4.68**	**291**	P	**Pn**	**17 34 53.6**	**+1.3**
LEF	**Lefka**	**4.77**	**112**	⇑P	**Pn**	**17 34 57.2**	**+3.8**
LEF	**Lefka**	**4.77**	**112**	*i* P	**Pn**	**17 34 52.7**	**-0.7**
KIRK	**Kırklareli**	**4.78**	**357**	*i* P	**Pn**	**17 34 52.3**	**-1.2**
KKUL	**Konya-Kulu**	**4.80**	**62**	*i* P	**Pn**	**17 34 55.3**	**+1.3**
KIBS	**BOLU**	**4.83**	**44**	*i* P	**Pn**	**17 34 55.9**	**+1.6**
GULN	**MERSIN_Gulnar**	**4.95**	**98**	*i* P	**Pn**	**17 34 58.5**	**+2.6**
LIT	**Litokhoron**	**4.99**	**310**	P	**Pn**	**17 34 56.0**	**-0.4**
LIT	**Litokhoron**	**4.99**	**310**	Pn	**Pn**	**17 34 56.0**	**-0.4**
YIGI	**Dzce**	**5.02**	**37**	*i* P	**Pg**	**17 35 17.5**	**+0.1**
ANTO	**Ankara**	**5.06**	**54**	P	**Pn**	**17 34 56.9**	**-0.5**
ANTO	**Ankara**	**5.06**	**54**		**Pn**	**17 34 56.9**	**-0.5**
SRS	**Serrai**	**5.10**	**325**	P	**Pn**	**17 34 58.4**	**+0.5**
SRS	**Serrai**	**5.10**	**325**	P	**Pn**	**17 34 58.9**	**+1.0**
SRS				pmax	pmax		
	comp=Z,15nm,1.5s						
RZN	**Rozhen**	**5.14**	**336**	*e*P	**Pn**	**17 34 59.0**	**+0.3**
CSS	**Mathiatis**	**5.16**	**112**	Pn	**Pn**	**17 34 57.7**	**-1.1**
CSS	**Mathiatis**	**5.16**	**112**		**Pn**	**17 34 58.3**	**-0.5**
NVR	**Nevrokopi**	**5.17**	**328**	P	**Pn**	**17 34 59.2**	**+0.3**
BCAM	**Yenicaga**	**5.22**	**42**	*i* P	**Pn**	**17 35 01.3**	**+1.6**
CMDR	**Camlidere-ANKA**	**5.23**	**47**	*i* P	**Pn**	**17 35 01.7**	**+1.8**
KERG	**Konya-Eregli**	**5.32**	**84**	*i* P	**Pn**	**17 35 03.8**	**+2.8**
KIZK	**Mersin**	**5.38**	**94**	*i* P	**Pn**	**17 35 05.1**	**+3.4**
MMB	**Musomiste**	**5.42**	**329**	*e*P	**Pn**	**17 35 02.3**	**-0.1**
KNT	**Kendrikon**	**5.47**	**321**	P	**Pn**	**17 35 06.0**	**+3.0**
KNT				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PLD	**Plovdiv**	**5.53**	**338**	P	**Pn**	**17 35 06.4**	**+2.6**
BRTR	**Keskin Array B**	**5.55**	**59**	Pn	**Pn**	**17 35 05.1**	**+0.9**
	comp=Z,1.4nm,0.3s,baz=242,slow=15,SNR=37						
BRTR				Sn	**Sn**	**17 36 07.3**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=122,slow=14,SNR=7.0						
BRTR	**Keskin Array B**	**5.55**	**59**	*i* P	**Pn**	**17 35 06.0**	**+1.8**
BRTR				pmax	pmax		
	comp=Z,14nm,0.8s						
VAY	**Valandovo**	**5.75**	**320**	*i* Pn	**Pn**	**17 35 09.6**	**+2.7**
VAY	**Valandovo**	**5.75**	**320**	*i* Pn	**Pn**	**17 35 09.6**	**+2.7**
ELDT	**Eldivan**	**5.80**	**51**	*i* P	**Pn**	**17 35 10.7**	**+2.9**
GULE	**Gulek**	**5.83**	**85**	*i* P	**Pn**	**17 35 11.7**	**+3.5**
DED	**Mersin**	**5.86**	**88**	*i* P	**Pn**	**17 35 12.1**	**+3.7**
DELI	**KIRIKKALE**	**5.87**	**57**	*i* P	**Pn**	**17 35 10.0**	**+1.4**
BTIN	**Bartın**	**5.92**	**37**	*i* P	**Pn**	**17 35 10.0**	**+0.8**
KKB	**Krupnik**	**5.93**	**326**	*e*P	**Pn**	**17 35 10.1**	**+0.8**
CDAG	**Cicekdag**	**6.01**	**62**	*i* P	**Pn**	**17 35 12.1**	**+1.5**
CDAG				*i* S	Sn	17 36 09.8	-10
ELND	**Elena**	**6.04**	**349**	⇑P	**Pn**	**17 35 11.3**	**+0.4**
ELND				⇓S	**Sn**	**17 36 19.1**	**-1.1**
FNA	**Florina**	**6.07**	**310**	P	**Pn**	**17 35 11.8**	**+0.4**
FNA	**Florina**	**6.07**	**310**		**Pn**	**17 35 11.8**	**+0.4**
NEF	**NEVSHA**	**6.25**	**359**	*e*P	**Pn**	**17 35 13.7**	**-0.1**
VTS	**Vitosha**	**6.49**	**331**	⇑P	**Pn**	**17 35 18.0**	**+0.9**
VTS				⇑S	**Sn**	**17 36 30.1**	**-1.3**
VTS	**Vitosha**	**6.49**	**331**	*e*P	**Pn**	**17 35 17.8**	**+0.7**
VTS	**Vitosha**	**6.49**	**331**	P	**Pn**	**17 35 18.0**	**+0.9**
VTS	**Vitosha**	**6.49**	**331**		**Pn**	**17 35 18.0**	**+0.9**
PLVB	**Pleven**	**6.74**	**342**	⇑P	**Pn**	**17 35 21.0**	**+0.6**
HWQ	**Hawqa**	**7.41**	**109**	*e*P	**Pn**	**17 35 29.8**	**0.0**
TIRR	**Tirgusor**	**7.48**	**5**	⇑P	**Pn**	**17 35 31.1**	**+0.6**
TIRR	**Tirgusor**	**7.48**	**5**	P	**Pn**	**17 35 31.1**	**+0.6**
OFRI	**`Ofer**	**7.56**	**123**	Pn	**Pn**	**17 35 30.9**	**-0.9**
MMA0B	**Mount Meron ar**	**7.62**	**119**	Pn	**Pn**	**17 35 32.0**	**-0.6**
MMA0B				Sn	**Sn**	**17 36 56.7**	**-2.5**
MMAI	**Mount Meron Ar**	**7.62**	**119**	Pn	**Pn**	**17 35 31.3**	**-1.3**
	comp=Z,7.8nm,0.3s,baz=312,slow=11,SNR=24						
MMAI				Sn	**Sn**	**17 36 52.9**	**-6.3**
	comp=Z,4.0nm,0.3s,baz=328,slow=14,SNR=2.0						
MMAI				LR	LR	17 39 00.0	
	comp=Z,84nm,19.9s,baz=235,slow=41						
SHBL	**Chebaa**	**7.69**	**116**	*e*P	**Pn**	**17 35 33.6**	**0.0**
GEM	**Giv'at Ha'Em**	**7.70**	**117**	Pn	**Pn**	**17 35 32.6**	**-1.1**
KSDI	**Kefar Szold**	**7.71**	**117**	Pn	**Pn**	**17 35 32.6**	**-1.1**
NATI	**Neve Ativ**	**7.72**	**116**	Pn	**Pn**	**17 35 33.1**	**-0.9**
SWA2		**7.93**	**193**	P	**Pn**	**17 35 36.1**	**-0.7**
	baz=193						
SWA2				AMP		17 37 00.0	
	baz=193						
SWA2				S	**Sn**	**17 37 01.6**	**-4.9**
	baz=193						
RSH		**7.95**	**138**	P	**Pn**	**17 35 36.7**	**-0.4**
	baz=137						
MMLI	**Mount Malkishu**	**7.97**	**123**	Pn	**Pn**	**17 35 36.3**	**-1.1**
MMLI				Sn	**Sn**	**17 37 06.0**	**-1.6**
HHAG	**Hagoal**	**8.02**	**150**	S	**Sn**	**17 37 04.3**	**-4.7**
	baz=150						
HMDT	**Nahal Hemdat**	**8.15**	**123**	Pn	**Pn**	**17 35 38.9**	**-0.9**
GLL	**Jalalah**	**8.21**	**153**	P	**Pn**	**17 35 40.4**	**-0.3**
	baz=153						
AMAZ	**Amatzia**	**8.22**	**129**	Pn	**Pn**	**17 35 39.4**	**-1.5**
KZIT	**Kziot**	**8.37**	**135**	Pn	**Pn**	**17 35 41.7**	**-1.1**
SUZ	**Suez**	**8.43**	**146**	P	**Pn**	**17 35 43.5**	**-0.2**
	baz=146						
YTIR	**Yattir**	**8.46**	**129**	Pn	**Pn**	**17 35 43.2**	**-1.0**
DSI	**Dead Sea**	**8.49**	**127**	Pn	**Pn**	**17 35 43.8**	**-0.7**
MLR	**Muntele Rosu**	**8.55**	**353**	Pn	**Pn**	**17 35 44.1**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=109,slow=15,SNR=1.2						
MLR	**Muntele Rosu**	**8.55**	**353**	⇓P	**Pn**	**17 35 47.2**	**+1.8**
MLR	**Muntele Rosu**	**8.55**	**353**		**Pn**	**17 35 43.9**	**-1.6**
TIP	**Timpagrande**	**8.73**	**288**	⇑P	**Pn**	**17 35 48.7**	**+0.9**
TIP	**Timpagrande**	**8.73**	**288**		**Pn**	**17 35 49.1**	**+1.3**
HERR	**Herculane**	**8.75**	**336**	⇓P	**Pn**	**17 35 47.7**	**-0.3**
ZAF	**Zafarana**	**8.79**	**150**	P	**Pn**	**17 35 47.8**	**-0.9**
	baz=149						
VRI	**Vrincioaia**	**8.87**	**357**	⇑P	**Pn**	**17 35 51.4**	**+1.6**
VRI	**Vrincioaia**	**8.87**	**357**	P	**Pn**	**17 35 51.3**	**+1.6**
MDVR	**Moldovita**	**8.91**	**332**	⇑P	**Pn**	**17 35 50.7**	**+0.5**
GZR	**Gura Zlata**	**9.10**	**339**	⇓P	**Pn**	**17 35 52.8**	**0.0**
PRNI	**Paran**	**9.13**	**134**	Pn	**Pn**	**17 35 51.8**	**-1.5**
ASF	**Jabal al Asfar**	**9.14**	**119**	Pn	**Pn**	**17 35 55.2**	**+1.7**
	comp=Z,0.5nm,0.3s,baz=263,slow=11,SNR=3.4						
ASF				Sn	**Sn**	**17 37 34.2**	**-2.3**
	comp=Z,0.3nm,0.3s,baz=277,slow=8.3,SNR=1.7						
OZUR		**9.17**	**353**	⇑P	**Pn**	**17 35 55.2**	**+1.4**
MBRI	**Mt Berech**	**9.50**	**137**	Pn	**Pn**	**17 35 57.0**	**-1.4**
MBRI				Sn	**Sn**	**17 37 42.9**	**-2.5**
EIL	**Elat**	**9.62**	**137**	Pn	**Pn**	**17 35 58.5**	**-1.5**
	comp=Z,1.0nm,0.3s,baz=289,slow=3.2,SNR=14						
EIL				Sn	**Sn**	**17 37 42.7**	**-5.5**
	comp=Z,1.2nm,0.3s,baz=222,slow=13,SNR=5.6						
EIL	**Elat**	**9.62**	**137**	Pn	**Pn**	**17 35 58.3**	**-1.7**
BZS	**Buzias**	**9.66**	**335**	⇑P	**Pn**	**17 36 01.2**	**+0.7**
BZS	**Buzias**	**9.66**	**335**	P	**Pn**	**17 36 02.3**	**+1.8**
BZS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HBST	**Basata**	**9.86**	**140**	P	**Pn**	**17 36 02.4**	**-0.9**
	baz=140						
HBST				S	**Sn**	**17 37 48.7**	**-5.4**
	baz=140						
HBST				AMP		17 38 00.0	
	baz=140						
DRGR		**10.40**	**342**	P	Pn	17 36 14.7	+4.0
DRGR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VYHS	**Vyhne**	**13.11**	**334**	*e*P	Pn	17 36 40.8	-6.9
VYHS	**Vyhne**	**13.11**	**334**	*e*PN	Pn	17 36 40.8	-6.9
OKC	**Ostrava-Krasne**	**14.49**	**335**	*e*P	P	17 37 19.9	+6.6
OKC	**Ostrava-Krasne**	**14.49**	**335**	*e*P	P	17 37 19.9	+6.6
VRAC	**Vranov**	**14.62**	**331**	LR	LR	17 42 45.6	
	comp=Z,60nm,18.6s,baz=186,slow=38						
KRLC	**Kraliky**	**15.17**	**333**	*e*P	**P**	**17 37 26.2**	**+5.3**
KRLC	**Kraliky**	**15.17**	**333**	*e*P	**P**	**17 37 26.2**	**+5.3**
GERES	**GERESS Array B**	**15.52**	**324**	Pn	**P**	**17 37 24.0**	**-0.9**
	baz=134,slow=9.6,SNR=3.4						
GERES				LR	LR	17 42 45.0	
	comp=Z,88nm,19.9s,baz=200,slow=36						
GERES	**GERESS Array B**	**15.52**	**324**	P	**P**	**17 37 24.0**	**-0.9**
GERES	**GERESS Array B**	**15.52**	**324**	P	**P**	**17 37 24.0**	**-0.9**
OSTC	**Ostas**	**15.77**	**333**	*e*P	P	17 37 35.3	+7.7
KHC	**Kasperske Hory**	**15.78**	**325**	*e*P	P	17 37 35.5	+7.8
KHC	**Kasperske Hory**	**15.78**	**325**	*e*P	P	17 37 35.5	+7.8
UPC	**Upice**	**15.81**	**332**	*e*P	P	17 37 36.8	+8.9
UPC	**Upice**	**15.81**	**332**	*e*P	P	17 37 36.8	+8.9
CHVC	**Chvalec**	**15.86**	**332**	*e*P	P	17 37 37.2	+8.7
PRU	**Pruhonice**	**15.98**	**328**	*e*P	**P**	**17 37 31.4**	**+1.5**
PRU	**Pruhonice**	**15.98**	**328**	*e*P	**P**	**17 37 31.4**	**+1.5**
DAVOX	**Davos/Dischmat**	**16.31**	**312**	LR	LR	17 43 50.4	
	comp=Z,124nm,21.0s,baz=110,slow=38						
VSR	**Storozhevoye**	**16.47**	**27**	⇓*e*P	**P**	**17 37 36.2**	**+1.0**
CLL	**Collm**	**17.62**	**329**	*e*P	**P**	**17 37 50.0**	**+2.0**
CLL	**Collm**	**17.62**	**329**	*e*P	**P**	**17 37 50.0**	**+2.0**
FINES	**FINESS Array B**	**24.48**	**358**	LR	LR	17 48 08.3	
	comp=Z,90nm,20.6s,baz=254,slow=36						
ESDC	**Sonseca Array**	**24.74**	**286**	P	**P**	**17 39 02.0**	**-1.2**
	comp=Z,1.8nm,0.9s,baz=78,slow=9.4,SNR=11						
HFS	**Hagfors**	**24.77**	**343**	P	**P**	**17 39 01.7**	**-1.5**
	comp=Z,2.9nm,0.9s,baz=135,slow=15,SNR=3.6						
KLMR	**Klimovskoe**	**25.06**	**14**	*e*P	**P**	**17 39 04.9**	**-0.8**
KLMR				pmax	pmax		
	comp=Z,12nm,0.8s						
KLMR	**Klimovskoe**	**25.06**	**14**	*e*P	**P**	**17 39 05.0**	**-0.8**
KLMR				AMP		17 39 06.5	
	comp=Z,12nm,0.8s						
AKTO	**Aktyubinsk**	**25.62**	**49**	P	**P**	**17 39 11.1**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=230,slow=12,SNR=5.4						
NOA	**NORSAR Array B**	**26.16**	**342**	LR	LR	17 51 56.2	
	comp=Z,27nm,19.7s,baz=255,slow=42						
PRGR	**Permogore**	**27.15**	**19**	*e*P	**P**	**17 39 23.5**	**-1.1**
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.4s						
TMCR	**Tamitsa**	**27.93**	**10**	*e*P	**P**	**17 39 35.8**	**+4.3**
ARU	**Arti**	**28.45**	**37**	*d i*P	**P**	**17 39 36.4**	**+0.1**
ARU				S	**S**	**17 44 25.8**	**+2.2**
ARU				SS	**SnSn**	**17 45 43.2**	**+1.6**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.5s						
TORD	**Torodi Ar. Bea**	**33.11**	**231**	P	**P**	**17 40 17.4**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=32,slow=8.6,SNR=19						
BRVK	**Borovoye**	**33.66**	**48**	⇓*e*P	**P**	**17 40 25.8**	**+3.5**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
AAK	**Ala-Archa**	**36.17**	**66**	⇓*e*P	**P**	**17 40 45.9**	**+1.6**
AAK				pmax	pmax		
	comp=Z,4.0nm,2.0s						
KSH	**Kashi**	**37.80**	**71**	P	**P**	**17 40 56.7**	**-1.4**
KSH				pP	sP	17 41 01.6	-0.4
KSH				sP	pP	17 41 03.9	+3.0
KSH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KURK	**Kurchatov**	**38.56**	**53**	⇑*i*P	**P**	**17 41 05.0**	**+0.8**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KURK	**Kurchatov**	**38.56**	**53**	P	**P**	**17 41 04.2**	**0.0**
KURK				IAmb	IAmb	17 41 05.8	
	comp=Z,5.3nm,1.1s						
MKAR	**Makanchi Array**	**41.20**	**58**	P	**P**	**17 41 26.9**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=290,slow=7.1,SNR=13						
MKAR	**Makanchi Array**	**41.20**	**58**	*ce*P	**P**	**17 41 26.8**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZALV	**Zalesovo Beam**	**42.37**	**48**	P	**P**	**17 41 35.8**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=264,slow=9.3,SNR=9.1						
ZALV	**Zalesovo Beam**	**42.37**	**48**	*i* P	**P**	**17 41 35.7**	**0.0**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DGZ	**Jazzator, Alta**	**44.27**	**54**	⇑*e*P	**P**	**17 41 52.4**	**+1.1**
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.3s						
NRIK	**Noril'sk**	**45.41**	**26**	P	**P**	**17 42 00.8**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=269,slow=3.9,SNR=5.0						
GTA	**Gaotai**	**55.45**	**64**	*e*P	**P**	**17 43 18.8**	**+2.4**
GTA				pP	sP	17 43 25.0	+4.5
GTA				sP	pP	17 43 27.8	+8.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONM	**Songino Array**	**56.87**	**52**	P	**P**	**17 43 26.8**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=277,slow=8.0,SNR=5.8						
ULN	**Ulaanbaatar**	**57.27**	**52**	⇑*e*P	**P**	**17 43 30.4**	**+1.0**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TIXI	**Tiksi**	**58.77**	**21**	⇓*e*P	**P**	**17 43 40.1**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,5.0nm,2.1s						
YAK	**Yakutsk**	**63.33**	**31**	⇑*e*P	**P**	**17 44 11.0**	**+0.6**
YAK				pmax	pmax		
	comp=Z,12nm,2.5s						
SEY	**Seymchan**	**71.13**	**23**	⇓*e*P	**P**	**17 45 01.0**	**+1.2**
KLR	**Kul'dur**	**71.14**	**42**	⇓*e*P	**P**	**17 45 00.9**	**+0.8**
KSRS	**Korea Array**	**75.67**	**54**	P	**P**	**17 45 27.4**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=316,slow=5.2,SNR=4.3						
YKA	**Yellowknife Ar**	**76.26**	**343**	P	**P**	**17 45 27.5**	**-2.4**
	comp=Z,0.5nm,0.9s,baz=56,slow=4.9,SNR=4.6						
YKA	**Yellowknife Ar**	**76.26**	**343**	⇑*e*P	**P**	**17 45 28.4**	**-1.5**
YKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						

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*IDC **01** 17:44:30.9±1.2, 2°.63S×135°.74E, h0km, mb3.7/6, mb1 4.0/8, mb1mx3.7/36, mbtmp3.9/8, ML4.2/2, Error ellipse: s-maj=38.7km s-min=22.0km az=77.0*

*DJA **01** 17:44:34.9±0.4, 3°S±4°×13°6E±°, h10km, M4.2/7, mB5.1/1, mb4.3/4, MLv4.1/7, Mw(mB)4.5/1*

ISC 01 17:44:36.0±0.7**, 2°.76S**±0°.07×**135°.65E**±0°.06**, h35km, n18, σ1s.91**/22**, mb3.6**/5**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**1.06**	**34**	P	**Pn**	**17 44 53.9**	**-0.5**
SRPI				S	**Sn**	**17 45 07.3**	**-0.7**
BAKI	**Biak**	**1.62**	**17**	P	**Pn**	**17 45 03.4**	**+1.3**
RKPI	**Ransiki, Papua**	**1.92**	**310**	P	**Pn**	**17 45 06.2**	**0.0**
RKPI				S	**Sn**	**17 45 29.7**	**+0.5**
SMPI	**Sarmi**	**3.16**	**76**	P	**Pn**	**17 45 25.3**	**+2.1**
FAKI	**Fak Fak**	**3.40**	**267**	P	**Pn**	**17 45 27.3**	**+0.8**
GENI	**Genyem**	**4.52**	**88**	P	**Pn**	**17 45 45.1**	**+3.1**
SIJI	**Sorong**	**4.76**	**293**	Pn	**Pn**	**17 45 46.1**	**+0.8**
	42nm,0.3s,baz=250,slow=2.5,SNR=588						
SIJI				Sn	**Sn**	**17 46 36.8**	**-2.6**
	17nm,0.3s,baz=102,slow=12,SNR=13						
AAI	**Ambon**	**7.50**	**263**	P	**Pn**	**17 46 27.1**	**+4.2**
LBMI	**Labuha**	**8.41**	**284**	P	**Pn**	**17 46 36.5**	**+1.1**
	15nm,0.7s						
NLAI	**Namlea**	**8.55**	**267**	P	**Pn**	**17 46 38.9**	**+1.6**
WRA	**Warramunga Arr**	**17.13**	**184**	P	**Pn**	**17 48 29.6**	**-3.1**
	0.5nm,0.3s,baz=3.3,slow=12,SNR=15						
WRA				S	Sn	17 51 30.3	-12
	0.2nm,0.3s,baz=5.7,slow=22,SNR=6.9						
FITZ	**Fitzroy Crossi**	**18.13**	**212**	P	**P**	**17 48 45.4**	**+0.2**
	0.2nm,0.3s,baz=3.7,slow=9.8,SNR=8.5						
ASAR	**Alice Springs**	**20.85**	**184**	P	**P**	**17 49 16.4**	**+1.4**
	8.4nm,0.7s,baz=10,slow=11,SNR=98						
ASAR				S	**S**	**17 53 03.2**	**-2.6**
	0.9nm,1.0s,baz=13,slow=21,SNR=3.0						
CMAR	**Chiang Mai Arr**	**41.83**	**302**	P	**P**	**17 52 21.5**	**-1.4**
	0.7nm,0.7s,baz=104,slow=7.3,SNR=4.7						
SONM	**Songino Array**	**56.51**	**337**	P	**P**	**17 54 15.1**	**+0.3**
	0.2nm,0.5s,baz=134,slow=8.3,SNR=2.4						
MKAR	**Makanchi Array**	**67.98**	**324**	P	**P**	**17 55 32.2**	**+0.5**
	0.4nm,0.5s,baz=115,slow=8.8,SNR=5.3						
VNDA	**Vanda**	**76.02**	**174**	P	**P**	**17 56 20.4**	**+1.3**
	0.4nm,0.6s,baz=346,slow=6.5,SNR=3.7						
ILAR	**Eielson Array**	**87.15**	**25**	P	**P**	**17 57 17.4**	**-0.7**
	0.6nm,0.7s,baz=258,slow=4.6,SNR=5.5						

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*IDC **01** 17:45:23.3±4.9, 37°.15N×72°.03E, h192km±36km, mb3.2/4, mb1 3.2/9, mb1mx2.9/48, mbtmp3.7/9, Error ellipse: s-maj=55.1km s-min=33.4km az=142.0*

*NNC **01** 17:45:29.6±10.0, 37°.68N×71°.77E, h229km±146km, mb2.5, mpv3.8, Error ellipse: s-maj=103.4km s-min=59.1km az=13.0*

ISC 01 17:45:22.1±2.8**, 37°.2N**±0°.2×**71°.9E**±0°.1**, h200km, n22, σ2s.36**/22**, mb3.2**/4**, 2C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.15**	**15**	P	**Pn**	**17 46 40.9**	**+2.1**
	SNR=225						
UCH	**Uchtor**	**5.45**	**21**	P	**Pn**	**17 46 44.7**	**+2.1**
	SNR=68						
KZA	**Kyzart**	**5.56**	**27**	P	**Pn**	**17 46 45.4**	**+1.4**
	SNR=8.2						
EKS2	**Erkin-Say**	**5.68**	**15**	P	**Pn**	**17 46 47.5**	**+2.3**
	SNR=32						
AAK	**Ala-Archa**	**5.82**	**20**	P	**Pn**	**17 46 49.5**	**+2.4**
	5.1nm,0.3s,baz=189,slow=5.1,SNR=130						
AAK				S	**Sn**	**17 47 53.3**	**-1.2**
	0.9nm,0.3s,baz=316,slow=20,SNR=11						
AAK	**Ala-Archa**	**5.82**	**20**	P	**Pn**	**17 46 49.5**	**+2.4**
	SNR=37						
AAK	**Ala-Archa**	**5.82**	**20**	⇓P	**Pn**	**17 46 48.9**	**+1.8**
	4.1nm,0.6s						
AAK				S	**Sn**	**17 47 53.2**	**-1.2**
	12nm,0.8s						
KBK	**Karagaybulak**	**5.97**	**23**	P	**Pn**	**17 46 51.6**	**+2.5**
	SNR=18						
KK31	**Karatay Array**	**6.01**	**351**	⇑P	**Pn**	**17 46 51.4**	**+1.9**
	2.3nm,0.3s,baz=158,slow=11,SNR=58						
KK31				⇓S	Sn	17 47 54.4	-4.2
	2.9nm,0.3s,baz=164,slow=22,SNR=11						
ULHL	**Ulahol**	**6.09**	**32**	P	**Pn**	**17 46 52.1**	**+1.4**
	SNR=15						
CHMS	**Chumysh**	**6.23**	**20**	P	**Pn**	**17 46 54.2**	**+1.9**
	SNR=12						
TKM2	**Tokmak 2**	**6.42**	**25**	P	**Pn**	**17 46 56.9**	**+2.0**
	SNR=37						
TKM2	**Tokmak 2**	**6.42**	**25**	⇓P	**Pn**	**17 46 55.9**	**+1.0**
	12nm,0.5s						
TKM2				⇑S	**Sn**	**17 48 11.5**	**+3.1**
	1.4nm,0.6s						
MKAR	**Makanchi Array**	**12.35**	**36**	P	**P**	**17 48 12.1**	**-3.4**
	0.1nm,0.3s,baz=217,slow=12,SNR=2.9						
KURBB	**Kurchatov Arra**	**14.27**	**17**	P	**P**	**17 48 35.8**	**-0.9**
	0.1nm,0.3s,baz=207,slow=10,SNR=6.4						
AB31	**Akbulak array**	**14.85**	**328**	⇓P	**P**	**17 48 44.4**	**+1.3**
	0.4nm,0.5s,baz=155,slow=11,SNR=9.9						
AB31				⇓S	**S**	**17 51 22.5**	**-4.6**
	0.4nm,0.6s						
BVAR	**Borovoye Array**	**15.88**	**357**	P	**Pn**	**17 48 57.2**	**+2.3**
	0.2nm,0.3s,baz=163,slow=10,SNR=5.7						
ZALV	**Zalesovo Beam**	**19.02**	**24**	P	**Pn**	**17 49 30.2**	**-1.6**
	0.6nm,0.3s,baz=208,slow=10,SNR=9.8						
FINES	**FINESS Array B**	**37.31**	**325**	P	P	17 52 17.6	+2.9
	4.7nm,1.1s,baz=99,slow=8.9,SNR=2.4						
ARCES	**ARCESS Array B**	**40.79**	**337**	P	P	17 52 46.4	+3.0
	0.3nm,0.3s,baz=119,slow=10,SNR=5.4						
TORD	**Torodi Ar. Bea**	**66.42**	**269**	P	P	17 55 52.3	+2.3
	0.2nm,0.4s,baz=51,slow=5.6,SNR=4.6						
YKA	**Yellowknife Ar**	**80.54**	**3**	P	P	17 57 13.6	+2.0
	0.2nm,0.5s,baz=356,slow=4.9,SNR=4.2						

WEL 01 17:47:51.1±0.7**, 35°S**±16°×**18°0W**±1°8**, h249km**±16km**, M3.9**/9**, MLv3.9**/9**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.33**	**204**	P	Pn	17 48 46.7	-0.4
MXZ				S	S	17 49 31.4	-0.1
WMGZ	**Waiomatatini S**	**3.53**	**201**	P	Pn	17 48 50.5	+1.1
WMGZ				S	S	17 49 36.9	+1.3
HAZ	**Te Kaha**	**3.69**	**209**	P	Pn	17 48 51.4	+0.2
HAZ				S	S	17 49 42.3	+3.4
PKGZ	**Pakihiroa**	**3.70**	**204**	P	Pn	17 48 50.2	-1.2
PKGZ				S	S	17 49 38.5	-0.7
PUZ	**Puketiti**	**3.81**	**201**	P	Pn	17 48 53.6	+1.0
PUZ				S	S	17 49 41.2	-0.3
RUGZ	**Raukumara Rang**	**3.92**	**208**	P	Pn	17 48 54.0	+0.1
RUGZ				S	S	17 49 44.3	+0.5
CNGZ	**Carnagh Statio**	**4.21**	**200**	P	Pn	17 48 56.7	-0.6
MWZ	**Matawai**	**4.29**	**207**	P	Pn	17 48 57.5	-0.8
MWZ				S	S	17 49 52.4	+0.6
URZ	**Urewera**	**4.40**	**211**	P	Pn	17 48 59.1	-0.4
URZ				S	S	17 49 53.7	-0.2
MUGZ	**Murupara**	**4.73**	**213**	P	Pn	17 49 03.6	+0.1
MUGZ				S	S	17 50 02.1	+0.9
RTZ	**Ruatahuna**	**4.75**	**210**	P	Pn	17 49 01.6	-2.3
RTZ				S	S	17 50 03.1	+1.2
BKZ	**Black Stump Fm**	**5.42**	**210**	P	Pn	17 49 12.2	+0.2
BKZ				S	S	17 50 16.5	-0.1
HIZ	**Hauiti**	**5.75**	**225**	P	Pn	17 49 18.1	+2.0
BHHZ	**Black Hill Sta**	**5.88**	**211**	P	Pn	17 49 17.2	-0.5
BHHZ				S	S	17 50 27.1	+0.2
TSZ	**Takapari Road**	**6.40**	**209**	P	Pn	17 49 23.4	-0.7
TSZ				S	S	17 50 35.2	-3.4

INET 01 17:49:55.3, 12°.42N×86°.52W, h4km, ML3.5, Nicaragua

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*IDC **01** 18:08:51.9±2.9, 21°.53N×101°.21E, h0km, mb4.0/8, mb1 4.0/9, mb1mx3.6/54, mbtmp3.9/9, ML3.9/1, MS4.8/1, Ms1 4.8/1, ms1mx2.9/47, Error ellipse: s-maj=72.1km s-min=16.0km az=112.0*

*BJI **01** 18:08:51.4±0.0, 21°.56N×101°.00E, h15km, mB4.2/3, mb4.2/9, ML4.2/6, Ms3.8/7, Ms7 3.6/8*

*NEIC **01** 18:08:55.1±1.8, 21°.37N±0°.07×101°.17E±0°.04, h25km±7km, mb4.1/4, Error ellipse: s-maj=11.4km s-min=2.1km az=151.0*

ISC 01 18:08:54.1±0.5**, 21°.52N**±0°.03×**101°.13E**±0°.05**, h10km, n37, σ2s.52**/56**, mb4.0**/11**, Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SLVN	**Son La**	**2.59**	**94**		**Pn**	**18 09 34.4**	**-1.7**
PHRA	**Phrae**	**3.12**	**196**	Pg	**Pb**	**18 09 51.2**	**+1.5**
PHRA				Pn	**Pn**	**18 09 42.9**	**-0.4**
LAMP	**Lampang**	**3.30**	**206**	Pg	**Pb**	**18 09 53.9**	**+1.2**
LAMP				Pn	**Pn**	**18 09 45.0**	**-0.8**
LAMP				Sg	**Sb**	**18 10 37.5**	**+4.6**
CMMT	**Chiang Mai**	**3.38**	**218**	Pg	**Pb**	**18 09 55.2**	**+1.0**
CMMT				Pn	**Pn**	**18 09 45.1**	**-1.9**
CHTO	**Chiang Mai**	**3.38**	**218**		**Pn**	**18 09 44.8**	**-2.2**
CM09	**Chiang Mai Arr**	**3.66**	**214**	Pg	**Pb**	**18 09 59.6**	**+0.7**
CM09				Pn	**Pn**	**18 09 49.6**	**-1.2**
CMAR	**Chiang Mai Arr**	**3.67**	**214**	Pn	**Pn**	**18 09 49.1**	**-1.9**
	2.6nm,0.3s,baz=24,slow=12,SNR=38						
CMAR				Pg	**Pb**	**18 10 00.3**	**+1.2**
	11nm,0.3s,baz=32,slow=18,SNR=22						
CMAR				Lg	Lg	18 10 51.5	
	11nm,0.3s,baz=38,slow=32,SNR=9.9						
CMAR				LR	LR	18 11 33.1	
	comp=Z,229nm,19.2s,baz=20,slow=43						
CM15	**Chiang Mai Arr**	**3.69**	**215**	P	**Pb**	**18 10 02.7**	**+3.3**
CM02	**Chiang Mai Arr**	**3.69**	**214**	Pg	**Pb**	**18 10 01.7**	**+2.3**
CM02				Pn	**Pn**	**18 09 52.0**	**+0.8**
CM01	**Chiang Mai Arr**	**3.70**	**214**	Pg	**Pb**	**18 10 02.1**	**+2.5**
CM01				Pn	**Pn**	**18 09 49.7**	**-1.6**
CM01				Sg	**Sb**	**18 10 48.9**	**+4.5**
CM04	**Chiang Mai Arr**	**3.70**	**214**	Pg	**Pb**	**18 10 01.3**	**+1.6**
CM04				Pn	**Pn**	**18 09 49.6**	**-1.8**
CM04				Sg	**Sb**	**18 10 48.3**	**+3.6**
CM05	**Chiang Mai Arr**	**3.72**	**214**	Pg	**Pb**	**18 10 02.1**	**+2.2**
CM05				Pn	**Pn**	**18 09 50.4**	**-1.2**
CM05				Sg	**Sb**	**18 10 50.3**	**+5.2**
UTTA	**Uttaradit**	**3.79**	**188**	Pg	**Pb**	**18 10 03.9**	**+2.8**
UTTA				Pn	**Pn**	**18 09 51.4**	**-1.2**
KMI	**Kunming**	**3.88**	**22**	Pg	**Pb**	**18 10 05.5**	**+2.7**
KMI				Sg	**Sg**	**18 11 03.1**	**+4.3**
KMI				smax	smax		
	comp=N,130nm,1.1s						
KMI				smax	smax		

comp=E,140nm,1.0s
KMI LR LR
comp=N,540nm,5.6s
KMI LR LR
comp=E,450nm,4.7s
KMI LR LR
comp=Z,410nm,4.4s
KMI Kunming 3.88 22 Pn **Pn 18 09 54.4 +0.3**
NONG Nongkai 3.92 151 Pg **Pg 18 10 07.7 -1.6**
NONG Pn **Pn 18 09 54.9 +0.5**
NONG Sg **Sg 18 11 00.2 +0.1**
PHIT Phitsanulok 4.36 189 Pg **Pb 18 10 13.2 +2.5**
PHIT Pn **Pn 18 10 00.1 -0.3**
PHIT Sg **Sg 18 11 13.0 -1.1**
MHMT Maesarieng 4.49 223 Pn **Pn 18 10 00.7 -1.5**
GYA Guiyang 7.05 45 *e*Pn Pn 18 10 33.3 -4.2
GYA Sn **Sn 18 11 56.2 -1.7**
GYA Sg **Sb 18 12 28.5 +7.4**
GYA smax smax
comp=N,100nm,0.9s
GYA smax smax
comp=E,80nm,0.9s
GYA LR LR
comp=N,290nm,6.2s
GYA LR LR
comp=E,410nm,5.5s
GYA LR LR
comp=Z,370nm,7.3s
QIZ Qiongzhong 8.54 105 Pn **Pn 18 10 56.7 -1.2**
XAN Xi'an 14.24 27 P **Pn 18 12 13.0 -2.9**
XAN S **Sn 18 14 47.1 -7.0**
XAN pmax pmax
comp=Z,5.0nm,1.0s
XAN LR LR
comp=N,170nm,10.3s
XAN LR LR
comp=E,190nm,8.4s
XAN LR LR
comp=Z,210nm,11.9s
GTA Gaotai 17.87 357 P **P 18 13 05.8 +2.2**
GTA pP pP 18 13 09.2 +2.5
GTA sP sP 18 13 12.8 +4.7
GTA pmax pmax
comp=Z,4.0nm,1.3s
GTA pmax pmax
comp=Z,53nm,4.4s
GTA LR LR
comp=N,160nm,12.1s
GTA LR LR
comp=Z,88nm,10.2s
HHC Hu-ho-hao-te 21.21 22 P **P 18 13 38.2 -1.8**
HHC pmax pmax
comp=Z,10.0nm,0.8s
HHC pmax pmax
comp=Z,46nm,4.7s
WMQ Urumqi 24.89 336 *e*P **P 18 14 13.6 -3.5**
SONM Songino Array 26.60 8 P **P 18 14 32.3 -0.3**
1.0nm,0.7s,baz=189,slow=8.2,SNR=7.4
MKAR Makanchi Array 29.49 333 P **P 18 14 57.2 -1.2**
2.3nm,0.6s,baz=142,slow=9.7,SNR=31
KURBB Kurchatov Arra 34.04 334 P **P 18 15 35.9 -2.3**
0.8nm,0.6s,baz=140,slow=9.7,SNR=16
KURK Kurchatov 34.07 334 P **P 18 15 39.6 +1.1**
ZALV Zalesovo Beam 34.68 343 P **P 18 15 44.2 +0.5**
1.1nm,0.7s,baz=139,slow=9.6,SNR=4.8
BVAR Borovoye Array 39.28 331 P **P 18 16 23.3 +0.3**
1.9nm,0.6s,baz=128,slow=9.2,SNR=18
BRVK Borovoye 39.35 331 P **P 18 16 23.9 +0.3**
BRVK IAmb IAmb 18 16 29.3
comp=Z,2.5nm,0.8s
GEYT Alibeck 40.40 304 P **P 18 16 32.9 +0.4**
comp=Z,2.2nm,0.8s,baz=163,slow=11,SNR=4.7
WRAB Tennant Creek 52.46 139 P P 18 18 02.6 -4.7
TIXI Tiksi 52.63 11 P **P 18 18 06.7 -1.2**
TIXI IAmb IAmb 18 18 09.4
comp=Z,3.3nm,0.9s
HFS Hagfors 70.34 328 P **P 18 20 07.7 -0.1**
comp=Z,1.3nm,0.6s,baz=88,slow=14,SNR=4.5
NOA NORSAR Array B 71.39 329 P **P 18 20 13.3 -0.9**
comp=Z,0.7nm,0.8s,baz=78,slow=6.2,SNR=3.4
YKA Yellowknife Ar 91.60 16 LR LR 19 07 25.3
comp=Z,404nm,18.0s,baz=0.0,slow=38

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*BJI **01** 18:09:02.8±0.0, 28°.76S×175°.90W, h10km, mB5.6/25, mb5.2/28, Ms5.0/16, Ms7 4.8/16*

*NEIC **01** 18:09:05.7±2.2, 28°.84S±0°.08×176°.5W±0°.1, h11km±3km, mb4.9/115, Error ellipse: s-maj=13.6km s-min=11.1km az=119.0*

*GCMT **01** 18:09:10.7±0.1, 28°.57S±0°.01×176°.22W±0°.01, h14km, MW5.2/140, Moment Tensor Solution. s91,c150; s140,c227; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.73±.02; $M_{\theta\theta}$-0.03±.01; $M_{\phi\phi}$-0.69±.01; $M_{r\theta}$0.14±.03; $M_{\theta\phi}$-0.13±.01; $M_{\phi r}$0.49±.03; Best double couple: $M_0$0.88700×10^{17} NP1:ϕ_s188.00000°, δ27.00000°, λ85.00000°. NP2:ϕ_s14.00000°, δ63.00000°, λ92.00000°. Principal axes: T 0.8910, Plg72.0000°, Azm290.0000°; N -0.0090, Plg2.0000°, Azm193.0000°; P -0.8830, Plg18.0000°, Azm102.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **01** 18:09:14.3±1.4, 28°.53S×176°.74W, h61km±12km, mb4.4/23, mb1 4.5/23, mb1mx4.4/36, mbtmp4.7/23, MS4.7/27, Ms1 4.7/27, ms1mx4.6/40 Error ellipse: s-maj=15.4km s-min=12.0km az=160.0*

ISC 01 18:09:09.7±0.3**, 28°.98S**±0°.04×**176°.41W**±0°.05**, h36**km**, n307,** σ**1s.89**/314**, mb4.9**/83**, MS4.7**/34**, 3C, Kermadec Islands region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
RAO Raoul Island 1.34 258 P **Pn 18 09 34.1 +2.2**
570nm,0.3s,baz=104,slow=22,SNR=12
RAO S **Sn 18 09 52.2 +3.6**
2μm,0.3s,baz=274,slow=23,SNR=6.7
RAO LR LR 18 10 01.4
comp=Z,13μm,19.6s,baz=96,slow=37
RAO Raoul Island 1.34 258 **Pn 18 09 29.9 -2.1**
GLKZ Green Lake 1.35 257 P **Pn 18 09 34.3 +2.3**
GLKZ S **Sn 18 09 56.1 +7.4**
MXZ Matakaoa Point 9.63 206 Pn **Pn 18 11 23.7 -2.1**
MXZ Matakaoa Point 9.63 206 P **Pn 18 11 25.1 -0.7**
MXZ S **Sn 18 13 13.4 +0.7**
WMGZ Waiomatatini S 9.82 205 P **Pn 18 11 28.0 -0.4**
WMGZ S **Sn 18 13 19.5 +2.2**
PKGZ Pakihiroa 10.01 206 P **Pn 18 11 29.6 -1.4**
PKGZ S **Sn 18 13 22.3 +0.3**
HAZ Te Kaha 10.01 207 P **Pn 18 11 29.7 -1.2**
HAZ S **Sn 18 13 23.8 +1.9**
PUZ Puketiti 10.10 205 P **Pn 18 11 31.0 -1.2**
PUZ S **Sn 18 13 23.5 -0.7**
RUGZ Raukumara Rang 10.23 207 P **Pn 18 11 33.4 -0.7**
RUGZ S **Sn 18 13 30.2 +2.6**
OUZ Omahuta 10.51 231 **Pn 18 11 35.9 -1.9**
TKGZ Te Karaka 10.58 205 S **Sn 18 13 37.6 +1.7**
MWZ Matawai 10.61 207 P **Pn 18 11 37.0 -2.2**
MWZ S **Sn 18 13 36.2 -0.6**
URZ Urewera 10.71 209 P **Pn 18 11 39.2 -1.4**
0.7nm,0.3s,baz=277,slow=3.2,SNR=15
URZ S **Sn 18 13 38.5 -0.8**
4.4nm,0.3s,baz=179,slow=21,SNR=12
URZ Urewera 10.71 209 **Pn 18 11 37.9 -2.6**
URZ Urewera 10.71 209 P **Pn 18 11 38.6 -2.0**
URZ S **Sn 18 13 37.1 -2.2**
RAGZ Rawiri 10.79 207 P **Pn 18 11 41.2 -0.5**
RAGZ S **Sn 18 13 41.1 -0.2**
MUGZ Murupara 11.04 209 P **Pn 18 11 45.7 +0.6**
MUGZ S **Sn 18 13 46.2 -1.1**
RTZ Ruatahuna 11.07 208 P **Pn 18 11 43.6 -2.0**
RTZ S **Sn 18 13 47.5 -0.6**
RAHZ Arahi 11.29 207 P **Pn 18 11 48.4 -0.1**
RAHZ S **Sn 18 13 53.5 +0.2**
MTHZ Maungataniwha 11.33 208 P **Pn 18 11 48.1 -0.9**
MTHZ S **Sn 18 13 53.0 -1.4**
NIUE Niue 11.49 32 P **Pn 18 11 51.2 -0.2**
baz=11,SNR=5.2
NIUE Niue 11.49 32 Pn Pn 18 11 42.8 -8.6
BKZ Black Stump Fm 11.74 208 Pn Pn 18 11 50.2 -4.4
BKZ Black Stump Fm 11.74 208 P **Pn 18 11 51.8 -2.9**
MCHZ McNeill Hill 11.89 207 P **Pn 18 11 56.4 -0.3**
HIZ Hauiti 11.96 215 Pn **Pn 18 12 00.3 +2.6**
HIZ Hauiti 11.96 215 P **Pn 18 12 01.5 +3.8**
KWHZ Kaweka Forest 11.99 208 P **Pn 18 11 55.5 -2.5**
KAHZ Kahuranaki 12.13 205 P **Pn 18 11 57.8 -2.2**
BHHZ Black Hill Sta 12.19 209 P **Pn 18 12 01.2 +0.4**
MSVF Nonsavu 12.29 334 **Pn 18 11 59.2 -3.1**
TSZ Takapari Road 12.71 208 P **Pn 18 12 06.5 -1.5**
DVHZ Dannevirke 12.84 206 P **Pn 18 12 11.0 +1.4**
BFZ Birch Farm 13.14 205 Pn Pn 18 12 09.1 -4.6
BFZ Birch Farm 13.14 205 P Pn 18 12 09.0 -4.7
MRZ Mangatainoka R 13.38 207 P **Pn 18 12 13.3 -3.7**
HOWZ Holdsworth Sta 13.60 207 P **Pn 18 12 17.2 -2.9**
TMWZ Te Maipa 13.64 205 P **Pn 18 12 20.2 -0.4**
OGWZ Otaki Gorge 13.68 208 P **Pn 18 12 18.8 -2.2**
MSWZ Moikau Station 14.15 206 Pn Pn 18 12 23.3 -4.3
MSWZ Moikau Station 14.15 206 P **Pn 18 12 27.3 -0.2**
DUWZ D'Urville Isla 14.20 211 P **Pn 18 12 26.0 -2.3**
PLWZ Palliser 14.28 206 Pn Pn 18 12 25.1 -4.2
SNZO South Karori 14.28 208 Pn Pn 18 12 24.3 -5.0
BHW Baring Head 14.29 207 Pn Pn 18 12 24.8 -4.7
TUWZ Tuamarina 14.70 210 Pn 18 12 30.7 -4.3
TUWZ Tuamarina 14.70 210 P **Pn 18 12 32.8 -2.2**
NNZ Nelson 14.78 212 Pn Pn 18 12 31.8 -4.3
NNZ Nelson 14.78 212 P **Pn 18 12 36.8 +0.7**
CMWZ Cape Campbell 14.85 208 Pn **Pn 18 12 35.4 -1.6**
QRZ Quartz Range 14.89 215 Pn **Pn 18 12 34.2 -3.3**
QRZ Quartz Range 14.89 215 P **Pn 18 12 39.1 +1.6**
BSWZ Blackbirch Sta 14.96 209 **Pn 18 12 36.7 -1.8**
THZ Tophouse 15.43 211 **Pn 18 12 42.7 -2.0**
THZ IAmb IAmb 18 12 57.0
comp=Z,29nm,0.5s
THZ Tophouse 15.43 211 P **Pn 18 12 42.8 -2.0**
AFI Afiamalu 15.60 17 P Pn 18 12 39.5 -7.5
AFI IAmb IAmb 18 12 48.3
comp=Z,104nm,1.3s
KHZ Kahutara 15.68 209 **Pn 18 12 41.5 -6.4**
KHZ IAmb IAmb 18 13 06.6
comp=Z,36nm,0.6s
KHZ Kahutara 15.68 209 P **Pn 18 12 45.3 -2.6**
DSZ Denniston Nort 15.94 214 P **Pn 18 12 51.3 +0.1**
GVZ Greta Valley S 16.35 209 P **Pn 18 12 56.2 -0.2**
LTZ Lake Taylor 16.53 211 **Pn 18 12 57.0 -1.8**
LTZ Lake Taylor 16.53 211 P **Pn 18 12 56.6 -2.1**
AMCZ Amberley 16.68 209 P **Pn 18 13 01.7 +1.1**
INZ Inchbonnie 16.86 212 P **Pn 18 13 00.9 -2.0**
DZM Mont Dzumac 16.92 290 *e*P **Pn 18 13 03.8 -0.1**
comp=Z,168nm,1.4s
DZM *e*LR LR 18 16 52.6
comp=Z,7μm,25.5s
DZM Mont Dzumac 16.92 290 P **P 18 13 07.6 +2.0**
comp=Z,2.5nm,0.3s,baz=206,slow=17,SNR=31
DZM LR LR 18 18 27.8
comp=Z,7μm,18.1s,baz=123,slow=34
RAR Rarotonga 16.93 67 LR LR 18 19 23.0
comp=Z,2μm,19.2s,baz=249,slow=36
RAR Rarotonga 16.93 67 Pn **Pn 18 12 58.2 -5.6**
RAR IAmb IAmb 18 13 04.2
comp=Z,149nm,1.2s
OKCZ Okains Bay 16.96 207 P **Pn 18 13 03.9 -0.2**
OXZ Oxford 17.06 210 P **Pn 18 13 02.0 -3.4**
OXZ IAmb IAmb 18 13 22.9
comp=Z,42nm,0.6s
OXZ Oxford 17.06 210 P **Pn 18 13 03.5 -1.9**
MQZ McQueen's Vall 17.11 208 **Pn 18 13 04.2 -1.8**
RPZ Rata Peaks 17.81 211 P **P 18 13 16.8 +1.7**
comp=Z,2.3nm,0.3s,baz=60,slow=2.3,SNR=10
RPZ LR LR 18 21 10.0
comp=Z,4μm,18.3s,baz=30,slow=40
RPZ Rata Peaks 17.81 211 P **Pn 18 13 12.5 -2.2**
FOZ Fox Glacier 18.25 214 Pn **P 18 13 16.6 -3.4**
ODZ Otahua Downs 19.04 209 P **P 18 13 26.6 -2.0**
WKZ Wanaka 19.60 212 P **P 18 13 32.2 -2.6**
MLZ Mavora Lakes 20.43 213 P **P 18 13 40.3 -3.5**
WHZ Wether Hill Ro 20.90 212 P **P 18 13 46.9 -2.0**
TBI Tubuai 24.80 83 *e*S **S 18 18 49.5 +0.8**
comp=Z,429nm,25.0s,baz=340
TBI *e*LQ LQ 18 19 24.4
comp=Z,2μm,27.2s
TBI *e*LR LR 18 20 28.9
comp=Z,3μm,30.0s
KNTN Kanton 26.44 11 P **P 18 14 40.6 -2.6**
PPT2 Papeete2 27.07 71 *e*S **S 18 19 27.0 +2.2**
comp=Z,2μm,24.5s
PPT2 *e*LQ LQ 18 20 14.1
comp=Z,2μm,23.0s
PPT2 *e*LR LR 18 21 24.9
comp=Z,3μm,29.0s,baz=239
PPT Papeete 27.08 71 LR LR 18 25 26.0
comp=Z,2μm,18.4s,baz=244,slow=36
ARMA Armidale 27.75 259 P **P 18 14 57.6 +2.3**
baz=28,SNR=10
ARMA Armidale 27.75 259 P **P 18 14 57.0 +1.8**
ARMA IAmb IAmb 18 14 59.7
comp=Z,16nm,0.9s
MGCD Mangrove Creek 28.07 253 P **P 18 15 00.9 +3.1**
baz=28,SNR=6.3
EIDS Eidsvold 29.09 269 P **P 18 15 06.3 -0.7**
HNR Honiara 29.49 307 P **P 18 15 08.1 -2.5**
comp=Z,32nm,0.9s,baz=200,slow=5.3,SNR=4.8
HNR LR LR 18 25 55.8
comp=Z,2μm,18.2s,baz=163,slow=34
HNR Honiara 29.49 307 P **P 18 15 06.2 -4.4**
CAN Canberra 29.86 249 P **P 18 15 15.0 +1.2**
CAN IAmb IAmb 18 15 18.4
comp=Z,37nm,1.3s
RMQ Roma 30.86 266 P **P 18 15 24.4 +1.6**
baz=31,SNR=12
MCQ Macquarie Isla 31.12 208 P **P 18 15 26.5 +1.8**
baz=31,SNR=4.4
CMSA Cobar Meteorol 32.73 256 P **P 18 15 40.1 +1.0**
baz=33,SNR=20
TOO Toolangi 32.80 245 P **P 18 15 39.4 -0.3**
TOO IAmb IAmb 18 16 05.3
comp=Z,31nm,1.5s
QLP Quilpie 34.79 264 P **P 18 15 57.9 +0.8**
baz=35,SNR=3.4
CTA Charters Tower 34.98 276 LR LR 18 29 26.0
comp=Z,4μm,18.2s,baz=109,slow=35
CTAO Charters Tower 34.98 276 P **P 18 15 57.5 -1.3**
CTAO IAmb IAmb 18 16 00.1
comp=Z,12nm,0.8s
STKA Stephens Creek 36.16 255 P **P 18 16 10.0 +1.2**
baz=36,SNR=16
STKA Stephens Creek 36.16 255 P **P 18 16 10.0 +1.2**
comp=Z,10nm,0.7s,baz=96,slow=9.1,SNR=18
STKA LR LR 18 30 18.0
comp=Z,2μm,18.0s,baz=90,slow=35
STKA Stephens Creek 36.16 255 IAmb IAmb 18 16 12.3
comp=Z,3.2nm,0.9s
MTSU Mount Surprise 37.42 278 P **P 18 16 19.7 +0.1**
baz=37,SNR=24
HTT Hallett 38.24 252 P **P 18 16 27.0 +0.5**
baz=38,SNR=7.1
RABL Rabaul 38.67 304 P **P 18 16 27.3 -2.9**
KRVT Keravat (AS076 38.70 303 P **P 18 16 28.5 -1.8**
comp=Z,50nm,0.5s,baz=223,slow=1.0,SNR=18
KRVT LR LR 18 31 04.6
comp=Z,837nm,19.4s,baz=120,slow=34
PMG Port Moresby 39.30 292 P **P 18 16 33.7 -1.7**
TAOE Nuku Hiva Isla 39.48 67 *e*LR LR 18 27 07.4
comp=Z,1μm,28.4s
COEN Coen 40.25 283 P **P 18 16 43.6 +0.2**
baz=40,SNR=8.6
COEN Coen 40.25 283 P **P 18 16 42.5 -0.9**
BBOO Buckleboo 40.70 252 P **P 18 16 47.4 +0.5**
baz=41,SNR=8.5
BBOO Buckleboo 40.70 252 P **P 18 16 46.0 -0.9**
BBOO IAmb IAmb 18 17 09.4
comp=Z,39nm,1.4s
AS31 Alice Springs 44.59 265 P **P 18 17 16.8 -1.8**
ASAR Alice Springs 44.59 265 P **P 18 17 17.7 -0.9**
comp=Z,9.2nm,0.8s,baz=97,slow=6.9,SNR=119
ASAR PcP **PP 18 19 02.5 -0.5**
comp=Z,2.5nm,0.7s,baz=116,slow=4.0,SNR=5.5
ASAR ScP **ScP 18 22 50.2 -0.5**
comp=Z,0.3nm,0.7s,baz=138,slow=32,SNR=1.8
ASAR LR LR 18 35 41.9
comp=Z,3μm,18.4s,baz=102,slow=36
WR0 Warramunga Arr 45.27 270 P **P 18 17 22.6 -1.5**
WR0 IAmb IAmb 18 17 27.0
comp=Z,12nm,0.9s
WB2 Warramunga Arr 45.44 270 P **P 18 17 22.6 -2.9**
WB2 IAmb IAmb 18 17 26.9
comp=Z,18nm,0.8s
WRAB Tennant Creek 45.45 270 P **P 18 17 23.7 -1.7**
WRAB IAmb IAmb 18 17 26.2
comp=Z,17nm,0.9s
WRA Warramunga Arr 45.45 270 P **P 18 17 24.6 -1.0**
comp=Z,17nm,0.8s,baz=110,slow=7.6,SNR=46
WRA PcP **PcP 18 19 04.8 +0.6**
comp=Z,9.7nm,1.1s,baz=111,slow=3.4,SNR=7.2
WRA S **S 18 24 00.1 -4.7**
comp=Z,0.5nm,0.7s,baz=107,slow=14,SNR=2.7
WB0 Warramunga Arr 45.47 270 P **P 18 17 23.7 -1.9**
WB0 IAmb IAmb 18 17 27.0
comp=Z,16nm,0.7s
JOHN Johnston Islan 45.92 9 P **P 18 17 28.9 -0.1**
FORT Forrest 47.76 253 P **P 18 17 43.0 -0.4**
baz=48,SNR=15
FORT Forrest 47.76 253 P **P 18 17 42.4 -1.1**
JAY Jayapura 48.51 295 LR LR 18 35 53.4
comp=Z,579nm,21.8s,baz=130,slow=33
GENI Genyem 48.90 294 P **P 18 17 53.4 +1.0**
comp=Z,36nm,0.9s
WRKA Warakurna 49.05 261 P **P 18 17 52.3 -1.3**
baz=49,SNR=22
VNDA Vanda 49.65 186 P P 18 18 03.9 +6.6
comp=Z,1.9nm,0.9s,baz=3.2,slow=8.7,SNR=6.5
VNDA LR LR 18 35 22.9
comp=Z,669nm,21.0s,baz=23,slow=31
KNRA Kununurra 52.00 272 P **P 18 18 13.9 -1.9**
KNRA IAmb IAmb 18 18 15.2
comp=Z,30nm,1.4s
FITZ Fitzroy Crossi 53.77 268 P **P 18 18 29.1 +0.3**
baz=54,SNR=5.2
FITZ Fitzroy Crossi 53.77 268 P **P 18 18 27.6 -1.2**
FITZ IAmb IAmb 18 18 30.8
comp=Z,17nm,1.1s
NWAO Narrogin (SRO) 56.20 248 LR LR 18 41 05.5
comp=Z,566nm,19.4s,baz=122,slow=34
MEEK Meekatharra 56.86 256 P **P 18 18 50.2 -0.9**
baz=57,SNR=4.5
SIJI Sorong 57.13 290 P **P 18 18 51.4 -1.7**
comp=Z,27nm,1.0s,baz=71,slow=5.7,SNR=21
SIJI LR LR 18 42 22.3
comp=Z,621nm,18.4s,baz=124,slow=35
RPN Rapa Nui 58.49 106 LR LR 18 40 34.9
comp=Z,715nm,18.2s,baz=251,slow=32
BATI Baumata 58.86 276 LR LR 18 44 55.6
comp=Z,4μm,18.4s,baz=133,slow=37
QSPA South Pole Qui 61.13 180 P **P 18 19 20.8 +0.6**
KAPI Kappang 64.74 279 P P 18 19 39.7 -5.1
comp=Z,13nm,1.0s,baz=103,slow=5.0,SNR=4.1
KAPI LR LR 18 49 19.1
comp=Z,617nm,18.2s,baz=296,slow=37
MAW Mawson 74.12 200 P **P 18 20 42.5 +0.6**
baz=74,SNR=6.8
MAW Mawson 74.12 200 P **P 18 20 46.2 +4.3**
comp=Z,19nm,1.2s,baz=119,slow=7.4,SNR=9.3
MAW LR LR 18 53 59.7
comp=Z,1μm,18.3s,baz=106,slow=36
MAW Mawson 74.12 200 P **P 18 20 43.6 +1.8**
LEM Lembang 74.46 271 P **P 18 20 44.6 -0.4**
comp=Z,11nm,0.4s,baz=175,slow=23,SNR=4.3
LEM LR LR 18 55 36.1
comp=Z,526nm,18.2s,baz=108,slow=38
SBUM Sibu 74.97 281 P **P 18 20 45.7 -2.1**
KSM Kuching 76.13 280 P **P 18 20 52.2 -2.2**
KSM IAmb IAmb 18 20 56.5
comp=Z,9.2nm,0.9s
JOW Kunigami 76.75 311 P **P 18 20 57.6 +0.1**
comp=Z,1.3nm,0.8s,baz=144,slow=9.6,SNR=4.3
JOW Kunigami 76.75 311 IAmb IAmb 18 20 57.9
comp=Z,32nm,1.5s
MJAR Matsushiro Arr 77.88 324 P **P 18 21 02.2 -1.5**
comp=Z,9.3nm,0.8s,baz=141,slow=6.1,SNR=34
MJAR LR LR 18 50 31.4
comp=Z,138nm,21.0s,baz=205,slow=32
MAJO Matsushiro 77.88 324 P **P 18 21 02.2 -1.5**
MAJO IAmb IAmb 18 21 04.2
comp=Z,13nm,0.9s
MAT Matsushiro 77.88 324 P **P 18 21 02.2 -1.5**
MAT S **S 18 30 55.4 +1.2**
MDSI Maura Dua 78.58 271 P **P 18 21 07.2 -0.9**
comp=Z,18nm,0.8s
SYO Syowa Base 78.80 192⇑ *e*pP **P 18 21 10.0 +1.6**
SYO Syowa Base 78.80 192⇑ *e*sP P 18 21 14.5 +6.1
SYO Syowa Base 78.80 192⇑ *e*PcP **PcP 18 21 18.6 +1.5**
JNU Nakatsue 79.43 317 P **P 18 21 11.4 -0.9**
comp=Z,19nm,1.0s,baz=94,slow=4.1,SNR=5.0
JNU Nakatsue 79.43 317 P **P 18 21 11.3 -1.1**
SNAA Sanae 79.53 178 P **P 18 21 12.8 +0.4**
VNA3 Neumayer Olymp 79.62 176 P **P 18 21 15.5 +2.6**
VNA2 Neumayer--Watz 80.08 176 P **P 18 21 18.4 +3.1**
baz=173,slow=4.1
VNA1 Neumayer--Stat 80.30 176 P **P 18 21 19.8 +3.3**
JKA Kamikawa-asahi 81.83 331 P **P 18 21 25.2 +0.4**
ASAJ Asahikawa 81.83 331 P **P 18 21 25.2 +0.4**
MYKOM Kota Tinggi 81.89 277 P **P 18 21 24.8 -1.1**
MYKOM IAmb IAmb 18 21 32.9
comp=Z,8.6nm,1.0s
PLCA Paso Flores 82.46 132 P **P 18 21 32.3 +3.7**
comp=Z,6.1nm,1.0s,baz=225,slow=4.4,SNR=16
PLCA LR LR 18 53 27.4
comp=Z,490nm,18.1s,baz=246,slow=32
PLCA Paso Flores 82.46 132 P **P 18 21 30.7 +2.1**
PLCA IAmb IAmb 18 21 46.2
comp=Z,12nm,1.1s
YSS Yuzh-Sakhalins 84.08 333 P **P 18 21 35.7 -0.7**
KSRS Korea Array 84.18 319 P **P 18 21 37.0 -0.2**
comp=Z,2.6nm,0.8s,baz=138,slow=5.5,SNR=11
KSRS LR LR 18 56 45.3
comp=Z,260nm,18.9s,baz=118,slow=34
ISA Isabella, Lake 84.32 44 P **P 18 21 38.2 +0.2**
ISA IAmb IAmb 18 22 05.2
comp=Z,11nm,1.4s
CMB Columbia Colle 84.78 41 P **P 18 21 40.3 0.0**
CMB IAmb IAmb 18 21 46.1
comp=Z,8.7nm,1.3s
PETK Petropavlovsk- 84.79 345 P **P 18 21 39.8 -0.1**
comp=Z,5.8nm,0.9s,baz=122,slow=8.5,SNR=13
AFDM Forest Hills D 85.08 40 P **P 18 21 40.5 -1.2**
MNSI Mandailing Nat 85.13 274 P **P 18 21 43.6 +1.0**
comp=Z,8.7nm,0.8s
ORV Oroville 85.20 39 P **P 18 21 41.8 -0.5**
OMMB Old Mammoth Mi 85.31 42 P **P 18 21 42.7 -0.6**
WDC Whiskeytown Da 85.34 38 P **P 18 21 42.9 -0.1**
WDC IAmb IAmb 18 21 58.4
comp=Z,18nm,1.4s
113A Mohawk Valley, 85.44 49 P **P 18 21 43.3 -0.3**
QIZ Qiongzhong 85.65 294 P **P 18 21 44.5 -0.5**
QIZ S **S 18 32 16.7 +1.7**
QIZ pmax pmax
comp=Z,190nm,9.4s
QIZ LR LR
comp=Z,150nm,15.7s
QIZ LR LR
comp=Z,170nm,15.2s
QIZ LR LR
comp=Z,160nm,17.2s
WAKR Walker 85.65 41 P **P 18 21 45.8 +1.0**
WAKR IAmb IAmb 18 22 01.1
comp=Z,17nm,1.5s
IPM Ipoh 85.66 278 P **P 18 21 44.5 -0.7**
IPM IAmb IAmb 18 21 49.0
comp=Z,7.0nm,0.8s
PNTR Pine Nut 85.95 41 P **P 18 21 46.1 -0.3**
PNTR IAmb IAmb 18 22 06.6
comp=Z,8.7nm,0.9s
YBH Yreka Blue Hor 86.06 37 P **P 18 21 48.6 +1.9**
comp=Z,2.8nm,0.9s,baz=300,slow=1.2,SNR=3.9
YBH Yreka Blue Hor 86.06 37 P **P 18 21 46.6 -0.1**
NVAR Mina Array Bea 86.26 42 P **P 18 21 48.6 +0.7**
comp=Z,2.5nm,0.7s,baz=222,slow=7.7,SNR=16
NVAR LR LR 18 56 49.1
comp=Z,1μm,18.1s,baz=212,slow=33
KULM Kulim 86.38 278 P **P 18 21 52.2 +3.4**
KULM IAmb IAmb 18 21 52.9
comp=Z,9.6nm,1.1s
NJ2 Nanjing 86.38 310 *e*P **P 18 21 49.4 +1.1**
NJ2 pmax pmax
comp=Z,18nm,0.6s
PEL Peldehue 86.39 126 P **P 18 21 48.4 -0.2**
PAHR Pah Rah Range 86.49 40 P **P 18 21 49.1 +0.2**
TPNV Topopah Spring 86.52 44 P **P 18 21 50.3 +1.2**
TPNV IAmb IAmb 18 21 58.5
comp=Z,9.2nm,1.1s
HUMO Hull Mountain 86.55 36 P **P 18 21 47.6 -1.3**
HUMO IAmb IAmb 18 22 04.1
comp=Z,11nm,1.2s
RPSI Rantau Prapat 86.62 275 P **P 18 21 47.8 -2.2**
RPSI IAmb IAmb 18 21 57.8

comp=Z,13nm,1.1s
USRK Ussuriysk Ar. 86.75 326 P **P** **18 21 49.6 -0.2**
comp=Z,5.5nm,0.8s,baz=117,slow=3.3,SNR=11
USRK LR LR 18 57 31.7
comp=Z,236nm,19.4s,baz=128,slow=34
KVN Kaiserville 86.79 42 P **P** **18 21 51.2 +0.8**
KVN IAmb IAmb 18 21 56.0
comp=Z,12nm,1.4s
GSI Gunungsitoli 87.13 273 P **P** **18 21 53.4 +0.9**
comp=Z,90nm,0.9s
GSI Gunungsitoli 87.13 273 P **P** **18 21 50.8 -1.6**
TUC Tucson 87.14 51 P **P** **18 21 54.0 +1.9**
TUC IAmb IAmb 18 22 18.8
comp=Z,15nm,1.5s
K05A Summer Lake 87.72 37 P **P** **18 21 54.5 -0.4**
LCMT Little Creek M 88.41 46 P **P** **18 21 56.3 -1.9**
PINE Pine Mountain 88.44 37 P **P** **18 21 57.5 -0.7**
PINE IAmb IAmb 18 22 17.5
comp=Z,7.3nm,1.1s
WHN Wuhan 88.61 306 P **P** **18 21 59.8 +0.7**
U15A North Rim 88.65 47 P **P** **18 22 00.6 +1.0**
U15A IAmb IAmb 18 22 23.7
comp=Z,7.5nm,0.9s
CCUT Cedar City 88.67 45 P **P** **18 21 57.0 -2.5**
KNB Kanab 88.68 46 P **P** **18 21 58.9 -0.7**
WUAZ Wupatki 88.69 48 P **P** **18 21 58.8 -0.8**
WUAZ IAmb IAmb 18 22 24.3
comp=Z,13nm,1.4s
WVOR Wild Horse Val 88.75 39 P **P** **18 21 59.8 +0.2**
WVOR IAmb IAmb 18 22 06.8
comp=Z,7.1nm,1.4s
PSUT Pine Spring 88.99 44 P **P** **18 21 59.7 -1.3**
E03A Lebam 89.06 33 P **P** **18 22 00.2 -0.5**
PKCU Pink Cliffs 89.27 46 P **P** **18 21 59.9 -2.6**
121A Cookes Peak, D 89.33 52 P **P** **18 22 01.7 -0.9**
121A IAmb IAmb 18 22 18.8
comp=Z,8.7nm,1.4s
I07A Izee 89.39 37 P **P** **18 22 02.9 +0.3**
I07A IAmb IAmb 18 22 20.9
comp=Z,7.8nm,1.4s
W18A Petrified Fore 89.52 49 P **P** **18 22 03.4 -0.1**
W18A IAmb IAmb 18 22 10.2
comp=Z,7.9nm,1.1s
ELK Elko 89.56 42 P **P** **18 22 04.0 +0.3**
comp=Z,0.6nm,0.5s,baz=247,slow=6.4,SNR=3.5
ELK Elko 89.56 42 IAmb IAmb 18 22 12.5
comp=Z,2.7nm,1.1s
G06A Carlson Farm, 89.59 36 P **P** **18 22 01.8 -1.6**
G06A IAmb IAmb 18 22 23.4
comp=Z,12nm,1.3s
MTPU Mount Pierson 89.71 45 P **P** **18 22 04.2 -0.3**
TIA Tai'an 90.03 312 P **P** **18 22 06.8 +1.2**
TIA pmax pmax
comp=Z,12nm,0.8s
TXAR Lajitas Array 90.46 57 P **P** **18 22 09.6 +1.7**
comp=Z,1.0nm,0.9s,baz=199,slow=6.2,SNR=6.5
TXAR LR LR 18 56 32.1
comp=Z,309nm,19.2s,baz=0.0,slow=31
G08A Pilot Rock 90.49 37 P **P** **18 22 08.3 +0.6**
G08A IAmb IAmb 18 22 25.6
comp=Z,9.7nm,1.2s
MNTX Cornudas Mount 90.53 54 P **P** **18 22 06.4 -1.7**
CNPM China Poot 90.60 13 P **P** **18 22 07.6 -0.1**
PGC Sidney 90.61 32 P **P** **18 22 06.5 -1.4**
BRLK Bradley Lake 90.89 13 P **P** **18 22 08.1 -1.0**
E07A Sunnyside 90.89 35 P **P** **18 22 08.2 -1.3**
MFID Camas Ranch 90.94 39 P **P** **18 22 07.8 -2.1**
MFID IAmb IAmb 18 22 24.9
comp=Z,7.6nm,1.3s
HAWA Hanford 90.94 35 P **P** **18 22 08.4 -1.2**
HAWA IAmb IAmb 18 22 16.2
comp=Z,7.5nm,1.0s
LTY Liberty 90.97 34 P **P** **18 22 09.3 -0.5**
LTY IAmb IAmb 18 22 11.7
comp=Z,5.1nm,1.0s
BMO Blue Mountains 91.08 38 P **P** **18 22 10.8 +0.4**
TMUT Trail Mountain 91.08 45 P **P** **18 22 12.0 +1.1**
P17A Butcher Ranch, 91.48 45 P **P** **18 22 12.7 +0.2**
SPUT South Promonto 91.56 43 P **P** **18 22 13.5 +0.7**
SLVN Son La 91.60 293 P **P** **18 22 14.2 +0.8**
ANMO Albuquerque 91.61 51 P **P** **18 22 15.3 +2.0**
comp=Z,1.8nm,0.6s,baz=262,slow=4.3,SNR=4.6
ANMO Albuquerque 91.61 51 P **P** **18 22 10.7 -2.6**
HVU Hansel Valley 91.66 42 P **P** **18 22 10.2 -3.1**
E09A Wood Farm, Sta 91.74 36 P **P** **18 22 10.2 -3.1**
E09A IAmb IAmb 18 22 37.9
comp=Z,9.6nm,1.2s
F10A Beach Ranch, E 91.86 37 P **P** **18 22 13.4 -0.6**
F10A IAmb IAmb 18 22 26.6
comp=Z,6.2nm,0.8s
ENH Enshi 91.95 304 P **P** **18 22 14.6 -0.2**
GYA Guiyang 92.05 299 *e*P **P** **18 22 16.4 +1.0**
GYA PP **PP** **18 25 57.1 +1.3**
GYA SKS **SKSac** **18 32 49.9 +3.9**
GYA S **S** **18 33 16.0 +0.7**
GYA SS **SS** **18 39 28.5 +3.0**
GYA pmax pmax
comp=Z,10.0nm,0.5s
GYA pmax pmax
comp=Z,90nm,3.9s
RC01 Rabbit Creek A 92.34 13 P **P** **18 22 15.7 0.0**
GLI Glacier Island 92.67 14 P **P** **18 22 16.2 -1.1**
KNK Knik Glacier 92.88 13 P **P** **18 22 17.6 -0.6**
BJI Beijing 92.89 315 P **P** 18 22 28.5 +10
BJI Beijing 92.89 315 SKS **SKSac** **18 32 54.1 +4.4**
BJI Beijing 92.89 315 SS SS 18 40 09.3 +33
BJI pmax pmax
comp=Z,7.0nm,0.9s
BJI LR LR
comp=N,120nm,11.8s
BJI LR LR
comp=E,68nm,8.6s
BJI LR LR
comp=Z,350nm,36.9s
GHO Glory Hole Cre 93.12 13 P **P** **18 22 18.7 -0.8**
SCM Sheep Creek Mo 93.49 13 P **P** **18 22 20.5 -0.7**
MSTX Muleshoe 93.61 53 P **P** **18 22 21.1 -1.3**
MSTX IAmb IAmb 18 22 25.2
comp=Z,4.4nm,0.8s
BALM Baldy 93.88 16 P **P** **18 22 22.0 -1.0**
BALM IAmb IAmb 18 22 25.5
comp=Z,4.2nm,0.9s
BARN Barnard Glacie 94.07 16 P **P** **18 22 23.6 -0.4**
BARN IAmb IAmb 18 22 26.5
comp=Z,4.4nm,0.9s
PDAR Pinedale Array 94.16 43 P **P** **18 22 25.8 +0.9**
comp=Z,0.6nm,0.8s,baz=197,slow=4.6,SNR=6.0
CMAR Chiang Mai Arr 94.25 289 P **P** **18 22 27.1 +1.5**
comp=Z,2.0nm,1.0s,baz=132,slow=3.3,SNR=8.2
CMAR LR LR 19 06 30.3
comp=Z,71nm,19.9s,baz=100,slow=37
XAN Xi'an 94.36 307 P **P** **18 22 25.6 -0.2**
XAN sP pP 18 22 32.0 -3.5
XAN SKS **SKSac** **18 32 59.8 +1.5**
XAN S **ScS** **18 33 41.6 +5.2**
XAN sS pS 18 33 50.2 +2.2
XAN pmax pmax
comp=Z,4.0nm,1.0s
XAN pmax pmax
comp=Z,130nm,4.1s
XAN LR LR
comp=Z,220nm,18.7s
XAN LR LR
comp=Z,230nm,18.7s
XAN LR LR
comp=Z,300nm,17.6s
KMI Kunming 94.42 296 P **P** **18 22 26.6 +0.1**
KMI pP PcP 18 22 28.9 +2.0
KMI sP pP 18 22 32.3 -3.9
KMI pmax pmax
comp=Z,5.0nm,0.6s
KMI pmax pmax
comp=Z,87nm,5.6s
KMI LR LR
comp=Z,130nm,16.2s
KMI LR LR
comp=Z,180nm,20.2s
KMI LR LR
comp=Z,210nm,19.8s
YHL Hebgen Lake 94.45 40 P **P** **18 22 27.5 +1.3**
YHH Holmes Hill 94.60 41 P **P** **18 22 28.3 +1.3**
RND Reindeer 94.63 12 P **P** **18 22 25.6 -0.8**
YNE Yellowstone No 95.22 41 P **P** **18 22 27.2 -2.4**
WRH Wood River Hil 95.75 12 P **P** **18 22 29.6 -1.7**
WRH IAmb IAmb 18 22 32.5
comp=Z,5.1nm,0.9s
DOT Dot Lake 95.79 14 P **P** **18 22 30.7 -0.9**
DOT IAmb IAmb 18 22 33.7
comp=Z,2.9nm,0.8s
CCB Clear Creek Bu 95.96 12 P **P** **18 22 30.3 -1.9**
CCB IAmb IAmb 18 22 54.1
comp=Z,5.5nm,1.2s
ILAR Eielson Array 96.24 12 P **P** **18 22 33.0 -0.5**
comp=Z,0.9nm,0.8s,baz=217,slow=5.4,SNR=7.2
ILAR LR LR 19 00 15.2
comp=Z,113nm,18.7s,baz=188,slow=32
HHC Hu-ho-hao-te 96.25 313 P **P** **18 22 33.8 -0.5**
HHC S **S** **18 33 50.3 -1.1**
HHC pmax pmax
comp=Z,9.0nm,0.9s
HHC pmax pmax
comp=Z,52nm,6.9s
HHC LR LR
comp=Z,170nm,19.0s
HHC LR LR
comp=Z,93nm,18.0s
HHC LR LR
comp=Z,100nm,16.0s
CD2 Chengdu 96.51 302 *e*P **P** **18 22 35.0 -0.7**
LPAZ La Paz 97.45 113 LR LR 18 58 52.4
comp=Z,76nm,20.9s,baz=297,slow=30
LZH Lanzhou 98.99 306 *e*P **Pdif** **18 22 45.0 -1.9**
LZH pP pP 18 22 48.3 -8.3
LZH sP sP 18 22 50.8 -10
LZH *e*PP **PP** **18 26 49.5 -0.1**
LZH pmax pmax
comp=Z,18nm,1.5s
LZH pmax pmax
comp=Z,72nm,9.7s
LZH LR LR
comp=Z,160nm,17.3s
LZH LR LR
comp=Z,170nm,17.1s
LZH LR LR
comp=Z,280nm,19.6s
YKA Yellowknife Ar 103.57 25 Pdiff **Pdif** **18 23 12.2 +5.8**
comp=Z,0.4nm,0.9s,baz=257,slow=5.0,SNR=3.9
YKA PP **PP** **18 27 21.5 -1.8**
comp=Z,0.5nm,0.9s,baz=230,slow=7.2,SNR=3.8
WMQ Urumqi 113.43 308 *e*PKP **PKiKP** **18 27 44.1 +0.3**
WMQ LR LR
comp=Z,470nm,28.9s
WMQ LR LR
comp=Z,970nm,29.2s
WMQ LR LR
comp=Z,260nm,21.7s
ZALV Zalesovo Beam 117.88 319 PKP **PKPdf** **18 27 50.4 -1.5**
comp=Z,0.7nm,0.6s,baz=117,slow=0.7,SNR=4.3
MKAR Makanchi Array 117.91 310 PKP **PKPdf** **18 27 51.6 -0.7**
comp=Z,1.2nm,0.8s,baz=58,slow=1.9,SNR=7.5
KSH Kashi 120.70 301 PKP **PKiKP** **18 28 00.0 +1.9**
KSH PP **PP** **18 29 31.7 +5.1**
KSH PKS **PKSdf** **18 31 35.3 +0.6**
KSH AMB AMB
comp=Z,180nm,4.6s
KSH LR LR
comp=Z,90nm,4.1s
KSH LR LR
comp=Z,30nm,5.5s
KSH LR LR
comp=Z,150nm,6.0s
KURK Kurchatov 121.06 314 **PKPdf** **18 27 55.8 -2.3**
FRB Frobisher Bay 123.45 30 PKP **PKPdf** **18 28 01.4 -0.9**
comp=Z,2.8nm,0.7s,baz=271,slow=3.9,SNR=5.6
KKAR Karatay Array 125.43 304 **PKPdf** **18 28 06.1 -0.7**
BVAR Borovoye Array 126.34 316 PKP **PKPdf** **18 28 07.5 -0.7**
comp=Z,1.8nm,0.7s,baz=25,slow=4.9,SNR=8.2
AKTO Aktyubinsk 134.14 314 PKP **PKiKP** **18 28 25.1 +0.6**
comp=Z,1.2nm,0.5s,baz=93,slow=2.8,SNR=8.0
ARCES ARCESS Array B 137.48 349 PKhKP PKPpre 18 28 24.8
comp=Z,1.4nm,0.8s,baz=34,slow=8.8,SNR=1.5
KLMR Klimovskoe 140.13 333 *e*PKPdf **PKiKP** **18 28 38.9 +2.6**
KLMR AMP 18 28 44.4
comp=Z,21nm,2.3s
FINES FINESS Array B 144.26 342 PKhKP PKPpre 18 28 38.6
comp=Z,1.9nm,0.6s,baz=85,slow=2.3,SNR=14
AKH Akhalkalaki 145.40 302 **PKPdf** **18 28 42.4 -1.6**
KBZ Khabaz 145.43 306 PKP **PKPdf** **18 28 43.5 -0.2**
comp=Z,4.9nm,0.9s,baz=92,slow=2.4,SNR=7.7
KIV Kislovodsk 145.53 306 **PKPdf** **18 28 43.1 -0.9**
NB2 NORSAR Subarra 147.53 353 PKP **PKPbc** **18 28 48.6 -0.8**
comp=Z,4.7nm,0.9s,baz=16,slow=3.2
NOA NORSAR Array B 147.53 353 PKPbc **PKPbc** **18 28 48.6 -0.8**
comp=Z,6.6nm,0.7s,baz=13,slow=4.4,SNR=16
AKASG Malin Array Be 150.96 325 PKPbc **PKPbc** **18 28 57.9 -0.4**
comp=Z,9.5nm,0.7s,baz=43,slow=2.9,SNR=35
ILGA Ilgaz 152.68 304 **PKPdf** **18 28 54.3 -1.5**
BRTR Keskin Array B 153.09 301 PKPbc **PKPbc** **18 29 03.0 -0.8**
comp=Z,1.4nm,0.7s,baz=72,slow=4.0,SNR=7.3
CSS Mathiatis 154.13 291 **PKiKP** **18 29 06.0 0.0**
KOLS Kolonicke sedl 155.46 329 *e*PKP **PKPab** **18 29 23.5 -1.4**
MLR Muntele Rosu 155.86 319 PKPab **PKPab** **18 29 28.1 +1.2**
comp=Z,2.2nm,0.8s,baz=19,slow=8.5,SNR=4.7
MLR Muntele Rosu 155.86 319 **PKPab** **18 29 23.2 -3.7**
CHVC Chvalec 156.45 340 *e*PKPAB **PKPab** **18 29 32.0 +3.0**
CLL Collm 156.60 345 *e*PKPdf **PKPdf** **18 29 06.0 +5.5**
CLL *e*PKPdiff **sPKPdf** **18 29 16.0 +1.9**
CLL *e* 18 29 23.0
CLL *e*PKPab **PKPab** **18 29 31.0 +1.4**
comp=Z,10.0nm,1.3s
CLL *e* 18 29 38.0
CLL *e*PP **PP** **18 33 09.0 +1.8**
CLL *e*PSKS 18 43 27.0
CLL *e*SKKSdf SKKSdf 18 44 36.0 -1.3
CLL *e*PPS PPS 18 46 18.0
CLL *e*SS **SS** **18 53 00.0 +4.5**
CLL *e* 18 55 12.0
CLL *e*SSS SSS 18 59 00.0
CLL *e* 19 00 24.0
CLL *e*PSSrev 19 01 54.0
CLL *e* 19 04 18.0
CLL LmV 20 03 00.0
comp=Z,200nm,18.7s
ELL Elmali 156.62 296 **PKPab** **18 29 31.0 +0.5**
KRLC Kraliky 156.67 338 *e*PKPAB **PKPab** **18 29 30.0 0.0**
VYHS Vyhne 157.25 333 *e*PKP **PKPab** **18 29 31.4 -1.1**
VRAC Vranov 157.39 337 PKPab **PKPab** **18 29 32.6 -0.5**
comp=Z,1.1nm,0.5s,baz=44,slow=8.7,SNR=4.4
VRAC Vranov 157.39 337 *e*PKP **PKPab** **18 29 33.4 +0.3**
JAVC Velka Javorina 157.39 335 *e*PKP **PKPab** **18 29 32.1 -1.1**
KRUC Moravsky 157.67 337 *e*PKP **PKPab** **18 29 34.1 -0.2**
KHC Kasperske Hory 158.47 342 *e*PKPAB **PKPab** **18 29 38.5 +0.7**
GERES GERESS Array B 158.69 341 PKPab **PKPab** **18 29 36.3 -2.6**
comp=Z,0.4nm,0.6s,baz=210,slow=1.1,SNR=3.5
CONA Conrad Observa 158.82 337 *i* PKPab **PKPab** **18 29 39.4 -0.1**
comp=Z,7.5nm,1.6s
VTS Vitosha 159.11 316 **PKPab** **18 29 38.8 -2.2**
SOKA Soboth 160.19 336 *i* PKPab **PKPab** **18 29 45.5 +0.1**
comp=Z,6.8nm,1.1s
MOTA Moosalm 160.75 344 *i* pPKPab **PKPab** **18 29 48.5 +0.5**
comp=Z,6.1nm,1.2s
SQTA Sankt Quirin 160.84 344 *i* sPKPab **PKPab** **18 29 51.5 +3.2**
comp=Z,4.6nm,1.1s
ABTA Abfaltersbach 160.93 341 *i* PKPab **PKPab** **18 29 48.2 -0.5**
comp=Z,6.3nm,1.5s
FETA Feichten 161.14 345 *i* pPKPab **PKPab** **18 29 52.5 +2.9**
comp=Z,3.9nm,1.2s
DAVOX Davos/Dischmat 161.56 346 PKPab **PKPab** **18 29 50.9 -0.6**
comp=Z,2.2nm,0.8s,baz=94,slow=2.9,SNR=3.3
FUORN Ofenpass-Fuorn 161.62 345 **PKPab** **18 29 51.5 -0.4**
TORD Torodi Ar. Bea 164.15 173 PKPab **PKPab** **18 30 06.0 +2.7**
comp=Z,2.1nm,0.9s,baz=180,slow=3.5,SNR=6.0
ESDC Sonseca Array 167.64 28 PKPab **PKPab** **18 30 18.2 -0.1**
comp=Z,1.5nm,0.9s,baz=318,slow=3.9,SNR=8.0

DJA 01 18:14:25.4±0.4,9°S±4°×12°5E±°,h10km,M3.7/6,mb4.2/3, MLv3.5/6,Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
SOEI	**Soe**	**1.10**	**244**	P	Pg	18	14	45.2	-1.3
SOEI				S	Sn	18	15	01.7	-0.5
BATI	**Baumata**	**1.83**	**240**	P	Pn	18	14	57.6	+0.6
SAUI	**Saumlaki**	**6.10**	**78**	P	Pn	18	15	55.2	-0.5
	1.6nm308nm,1.1s								

*NEIC **01** 18:20:18.2±1.8,0°.3N±0°.1×122°.33E±0°.09,h182km±6km, mb4.2/18,Error ellipse: s-maj=15.0km s-min=12.5km az=151.0*
*DJA **01** 18:20:19.2±0.3,0°.7N±4°×12°.2E±°,h163km±4km,M4.2/15, mB4.6/6,mb4.3/9,MLv4.3/15,Mw(mB)3.8/6*
*IDC **01** 18:20:20.0±1.6,0°.27N±122°.31E,h198km±15km,mb3.7/11, mb1 3.7/14,mb1mx3.4/43,mbtmp4.2/14,Error ellipse: s-maj=19.0km s-min=8.7km az=69.0*
ISC 01 18:20:19.5±0.5,0°.32N±0°.06×122°.27E±0°.06,h200km,n66, σ1§79/65,mb4.1/21,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
MRSI	**Marisa**	**0.37**	**296**	P	**Pn**	**18**	**20**	**41.8**	**-4.4**
MRSI				S	**Sn**	**18**	**20**	**59.3**	**-7.4**
APSI	**Ampana**	**1.37**	**207**	P	**Pn**	**18**	**20**	**49.5**	**-2.6**
LUWI	**Luwuk**	**1.44**	**160**	P	**Pn**	**18**	**20**	**49.5**	**-3.1**
LUWI	**Luwuk**	**1.44**	**160**		**Pn**	**18**	**20**	**49.6**	**-3.1**
KMSI	**Cibinong**	**1.73**	**81**	P	**Pn**	**18**	**20**	**53.9**	**-1.4**
MPSI	**Mapaga**	**2.37**	**271**	P	**Pn**	**18**	**21**	**00.3**	**-1.7**
TTSI	**Tana Toraja**	**4.14**	**216**	P	**Pn**	**18**	**21**	**22.5**	**-0.6**
SPSI	**Sidrap Palu**	**4.93**	**210**	P	**Pn**	**18**	**21**	**32.2**	**-0.9**
TNTI	**Ternate**	**5.12**	**85**	P	**Pn**	**18**	**21**	**33.9**	**-1.5**
	0.1nm20nm,0.6s								
TNTI	**Ternate**	**5.12**	**85**		**Pn**	**18**	**21**	**32.2**	**-3.2**
BNSI	**Bone**	**5.16**	**205**	P	**Pn**	**18**	**21**	**36.2**	**+0.2**
	0.4nm1µm100nm,0.6s								
LBMI	**Labuha**	**5.32**	**100**	P	**Pn**	**18**	**21**	**35.4**	**-2.6**
	0.8nm1µm24nm,0.5s								
KAPI	**Kappang**	**5.86**	**205**	P	**Pn**	**18**	**21**	**44.1**	**-0.9**
	7.9nm,0.3s,baz=24,slow=4.9,SNR=36								
KAPI	**Kappang**	**5.86**	**205**		**Pn**	**18**	**21**	**43.3**	**-1.7**
NLAI	**Namlea**	**5.98**	**126**	P	**Pn**	**18**	**21**	**46.1**	**-0.4**
	0.3nm700nm17nm,0.7s								
BKSI	**Bulukumba**	**6.00**	**201**	P	**Pn**	**18**	**21**	**47.0**	**+0.2**
	0.2nm515nm61nm,0.9s								
KKM	**Kota Kinabalu**	**8.30**	**313**		Pn	18	22	22.2	+5.3
SIJI	**Sorong**	**9.07**	**97**	P	**Pn**	**18**	**22**	**26.0**	**-0.8**
	0.4nm,0.3s,baz=213,slow=22,SNR=2.0								
JAGI	**Jajag, Banyuwa**	**11.90**	**223**	P	**P**	**18**	**23**	**08.8**	**+0.7**
MTN	**Manton Dam**	**15.75**	**146**	P	**Pn**	**18**	**23**	**51.1**	**+0.1**
MTN				IAmb	IAmb	18	24	33.7	
	comp=Z,13nm,1.2s								
KNRA	**Kununurra**	**17.14**	**158**	P	**Pn**	**18**	**24**	**06.9**	**-0.6**
KNRA				IAmb	IAmb	18	24	10.2	
	comp=Z,7.6nm,0.8s								
MYKOM	**Kota Tinggi**	**18.48**	**275**	P	**Pn**	**18**	**24**	**21.9**	**-1.4**
FITZ	**Fitzroy Crossi**	**18.60**	**170**	P	**Pn**	**18**	**24**	**21.7**	**-2.9**
	comp=Z,0.5nm,0.3s,baz=5.7,slow=6.6,SNR=16								
FITZ	**Fitzroy Crossi**	**18.60**	**170**	P	**Pn**	**18**	**24**	**22.0**	**-2.6**
MDSI	**Maura Dua**	**18.69**	**255**	P	**Pn**	**18**	**24**	**24.8**	**-1.0**
	comp=Z,15nm,1.0s								
WB0	**Warramunga Arr**	**23.23**	**150**	P	**P**	**18**	**25**	**09.0**	**0.0**
WB0				IAmb	IAmb	18	25	09.9	
	comp=Z,6.4nm,0.6s								
WRA	**Warramunga Arr**	**23.35**	**150**	P	**P**	**18**	**25**	**10.7**	**+0.5**
	comp=Z,3.1nm,0.6s,baz=328,slow=10,SNR=31								
WB2	**Warramunga Arr**	**23.36**	**150**	P	**P**	**18**	**25**	**09.9**	**-0.3**
WB2				IAmb	IAmb	18	25	11.5	
	comp=Z,4.9nm,0.7s								
SSLB	**Suanglung**	**23.37**	**357**	P	**P**	**18**	**25**	**11.6**	**+1.3**
WR0	**Warramunga Arr**	**23.46**	**150**	P	**P**	**18**	**25**	**11.4**	**+0.2**
WR0				IAmb	IAmb	18	25	12.8	
	comp=Z,10.0nm,1.0s								
AS31	**Alice Springs**	**26.38**	**155**	P	**P**	**18**	**25**	**37.8**	**+0.2**
ASAR	**Alice Springs**	**26.38**	**155**	P	**P**	**18**	**25**	**37.6**	**+0.1**
	comp=Z,2.0nm,0.5s,baz=343,slow=14,SNR=48								
ASAR				PcP	**PcP**	**18**	**28**	**58.8**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=348,slow=2.1,SNR=14								
ASAR				S	**S**	**18**	**29**	**55.6**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=333,slow=19,SNR=6.9								
ASAR				ScP	**ScP**	**18**	**32**	**20.2**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=344,slow=2.9,SNR=7.5								
CMAR	**Chiang Mai Arr**	**29.15**	**310**	P	P	18	26	05.2	+2.9
	comp=Z,0.7nm,0.7s,baz=133,slow=7.1,SNR=4.0								
KRVT	**Keravat (AS076**	**30.08**	**99**	P	**P**	**18**	**26**	**12.2**	**+1.7**
	comp=Z,15nm,0.5s,baz=92,slow=22,SNR=4.3								
RABL	**Rabaul**	**30.20**	**99**	P	**P**	**18**	**26**	**11.5**	**-0.1**
ENH	**Enshi**	**32.18**	**339**	P	P	18	26	30.7	+2.1
STKA	**Stephens Creek**	**36.88**	**152**	P	**P**	**18**	**27**	**09.7**	**+0.8**
	comp=Z,4.3nm,0.5s,baz=338,slow=9.1,SNR=14								
STKA	**Stephens Creek**	**36.88**	**152**	P	**P**	**18**	**27**	**08.9**	**0.0**
MJAR	**Matsushiro Arr**	**38.96**	**21**	P	**P**	**18**	**27**	**25.5**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=188,slow=9.5,SNR=5.8								
BJI	**Beijing**	**39.93**	**353**	S	S	18	33	31.2	+7.1
LSA	**Lhasa**	**41.62**	**317**	P	**P**	**18**	**27**	**48.3**	**-0.5**
LSA				IAmb	IAmb	18	27	52.7	
	comp=Z,4.5nm,0.6s								
TAPN	**Taplejung**	**42.69**	**312**	*e*P	**P**	**18**	**27**	**59.1**	**+1.8**
	comp=Z,7.7nm,0.4s								
RAMN	**Ramite**	**43.31**	**311**	*e*P	P	18	28	04.6	+2.4
	comp=Z,26nm,0.7s								
GTA	**Gaotai**	**43.99**	**335**	*e*P	P	18	28	09.8	+2.5
GTA				S	S	18	33	48.1	-36
GTA				pmax	pmax				
	comp=Z,7.0nm,0.9s								
GTA				pmax	pmax				
	comp=Z,38nm,4.8s								
GTA				LR	LR				
	comp=N,63nm,14.6s								
GTA				LR	LR				
	comp=E,93nm,14.0s								
GTA				LR	LR				
	comp=Z,91nm,15.5s								
JIRN	**Jiri**	**44.00**	**311**	*e*P	**P**	**18**	**28**	**09.9**	**+2.1**
	comp=Z,19nm,0.4s								
GUN	**Gumba**	**44.36**	**311**	*e*P	**P**	**18**	**28**	**12.7**	**+2.0**
	comp=Z,17nm,0.4s								
PKI	**Pulchoki**	**44.54**	**311**	*e*P	**P**	**18**	**28**	**13.5**	**+1.4**
	comp=Z,4.8nm,0.5s								
PKIN	**Phulchoki**	**44.55**	**311**	*e*P	**P**	**18**	**28**	**13.5**	**+1.4**
	comp=Z,5.8nm,0.4s								
DMN	**Daman**	**44.79**	**310**	*e*P	**P**	**18**	**28**	**15.5**	**+1.5**
	comp=Z,8.9nm,0.6s								
GKN	**Gorkha**	**45.35**	**311**	*e*P	**P**	**18**	**28**	**20.0**	**+1.8**
	comp=Z,10.0nm,0.3s								
KOLN	**Koldanda**	**46.02**	**310**	*e*P	**P**	**18**	**28**	**25.6**	**+2.0**
	comp=Z,18nm,0.5s								
DANN	**Dangsing**	**46.19**	**310**	*e*P	**P**	**18**	**28**	**26.6**	**+1.6**
	comp=Z,36nm,0.6s								
ASAJ	**Asahikawa**	**47.22**	**20**	P	**P**	**18**	**28**	**33.6**	**+1.3**
	comp=Z,1.7nm,0.7s,baz=231,slow=12,SNR=1.7								
JKA	**Kamikawa-asahi**	**47.22**	**20**	P	**P**	**18**	**28**	**33.6**	**+1.3**
ULN	**Ulaanbaatar**	**49.17**	**346**	P	**P**	**18**	**28**	**46.2**	**-1.2**
ULN				IAmb	IAmb	18	28	49.8	
	comp=Z,4.3nm,0.8s								
SONM	**Songino Array**	**49.30**	**346**	P	**P**	**18**	**28**	**50.1**	**+1.8**
	comp=Z,3.9nm,0.7s,baz=163,slow=8.9,SNR=22								
SONM				PcP	**PcP**	**18**	**30**	**08.3**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=165,slow=7.9,SNR=3.8								
KSH	**Kashi**	**57.46**	**318**	P	P	18	29	54.9	+7.1
KSH				pP	PcP	18	30	34.1	-5.1
KSH				sP	sP	18	30	51.6	-3.5
KSH				pmax	pmax				
	comp=Z,42nm,1.4s								
MKAR	**Makanchi Array**	**57.97**	**329**	P	**P**	**18**	**29**	**52.3**	**+1.2**
	comp=Z,1.2nm,0.3s,baz=128,slow=8.6,SNR=26								
MKAR				PcP	**PcP**	**18**	**30**	**40.9**	**0.0**
	comp=Z,1.9nm,0.7s,baz=130,slow=7.0,SNR=9.3								
KBL	**Kabul**	**60.18**	**310**	P	**P**	**18**	**30**	**07.0**	**+0.3**
PETK	**Petropavlovsk-**	**60.29**	**24**	P	**P**	**18**	**30**	**08.1**	**+1.2**
	comp=Z,1.8nm,0.7s,baz=214,slow=3.4,SNR=6.0								
ZALV	**Zalesovo Beam**	**61.73**	**336**	P	**P**	**18**	**30**	**16.4**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=142,slow=7.5,SNR=4.1								
YAK	**Yakutsk**	**61.81**	**4**	P	**P**	**18**	**30**	**17.4**	**+0.6**
KURK	**Kurchatov**	**62.34**	**330**	P	**P**	**18**	**30**	**21.0**	**+0.3**
KURK				IAmb	IAmb	18	30	23.2	
	comp=Z,2.1nm,0.5s								
BRVK	**Borovoye**	**67.91**	**329**	P	**P**	**18**	**30**	**57.5**	**+1.0**
BRVK				IAmb	IAmb	18	31	44.0	
	comp=Z,2.1nm,0.6s								
TIXI	**Tiksi**	**71.35**	**2**	P	**P**	**18**	**31**	**16.7**	**-0.3**
TIXI				IAmb	IAmb	18	31	17.7	
	comp=Z,3.0nm,0.5s								
TORD	**Torodi Ar. Bea**	**119.62**	**285**	PKP	**PKiKP**	**18**	**38**	**46.4**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=95,slow=0.2,SNR=2.8								

*NEIC **01** 19:07:30.6±1.2,36°.28N±0°.01×97°.24W±0°.03,h2km±7km, Error ellipse: s-maj=3.2km s-min=1.9km az=98.0*
*TUL **01** 19:07:30.5±1.1,36°.28N±0°.02×97°.25W±0°.03,h4km±1km, ML3.1,Error ellipse: s-maj=3.3km s-min=2.5km az=80.0*
*ANF **01** 19:07:32.5±0.6,36°.06N±97°.16W,h0km,ML3.7/7,Error ellipse: s-maj=6.8km s-min=4.2km az=173.0*
ISC 01 19:07:31.0±0.8,36°.26N±0°.03×97°.24W±0°.03,h10km,n37,

σ1^{s}02/41, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.61	190		Pg	19 07 42.9	0.0
OKCFA	Oklahoma City	0.86	192		Pg	19 07 47.1	-0.5
OKCSW	OKLAHOMA CITY	0.86	191		Pg	19 07 47.2	-0.5
T35A	Sooner Cattle	0.88	41		Pg	19 07 47.1	-0.8
FNO	Franklin	1.01	188		Pg	19 07 50.1	-0.3
W35A	Tecumseh	1.14	165		Pb	19 07 51.9	-1.0
TUL1	Leonard	1.22	106	P	Pn	19 07 53.4	-0.8
	baz=288						
TUL1				S	Sb	19 08 10.0	0.0
	baz=288						
TUL1	Leonard	1.22	106		Pn	19 07 53.4	-0.8
U32A	Winter Ranch,	1.43	275		Pn	19 07 56.7	-0.4
WMOK	Wichita Mounta	1.97	220	P	Pn	19 08 05.5	+1.0
	baz=38						
WMOK				S	Sb	19 08 32.3	+0.7
	baz=38						
WMOK	Wichita Mounta	1.97	220		Pn	19 08 05.6	+1.0
X37A	Clayton	2.26	137		Pn	19 08 09.1	+0.7
U38A	Gravette	2.31	85		Pn	19 08 09.4	+0.2
R32A	Long Quarter,	2.46	332		Pn	19 08 10.9	-0.4
HHAR	Hobbs	2.67	88		Pn	19 08 14.8	+0.7
KSU1	Kansas State U	2.88	10	P	Pb	19 08 24.2	+1.6
	baz=190						
KSU1				S	Sg	19 09 00.9	-2.8
	baz=190						
KSU1	Kansas State U	2.88	10		Pn	19 08 17.5	+0.5
W39A	Magazine	3.00	110		Pn	19 08 19.7	+1.0
CBKS	Cedar Bluff	3.23	323	S	Sb	19 09 09.7	+1.6
	baz=141						
MIAR	Mount Ida	3.44	119	P	Pn	19 08 26.0	+1.3
	baz=301						
MIAR	Mount Ida	3.44	119		Pn	19 08 25.9	+1.1
S39A	Bolivar	3.45	64		Pn	19 08 25.5	+0.7
S39A				Pg	Pb	19 08 33.6	+1.5
U40A	Yellville	3.54	87		Pn	19 08 27.4	+1.3
AMTX	Amarillo	3.87	251	Pb	Pb	19 08 38.5	-0.9
	baz=68						
AMTX	Amarillo	3.87	251		Pn	19 08 32.2	+1.5
X40A	Basin Creek Fa	4.01	115	Pn	Pn	19 08 34.3	+1.8
ABTX	Abilene, Hawle	4.13	209	Pg	Pb	19 08 43.2	-0.7
WHAR	Wooly Hollow	4.14	102		Pn	19 08 33.8	-0.4
FCAR	Ozark Folk Cen	4.16	94		Pn	19 08 34.3	-0.2
W41B	Gary Mavity, V	4.20	103	S	Sn	19 09 25.2	+0.9
	baz=287						
WHTX	Lake Whitney,	4.26	182	Pn	Pn	19 08 36.7	+0.7
R40A	Maddies Statio	4.45	61	Pn	Pn	19 08 39.0	+0.4
N35A	Tabor	4.76	15	Pn	Pn	19 08 41.9	-1.0
MSTX	Muleshoe	5.08	245		Pn	19 08 47.0	-0.3
CCM	Cathedral Cave	5.11	68		Pn	19 08 48.1	+0.4
N38A	Joes South For	5.51	34	Pn	Pn	19 08 53.9	+0.8
SDCO	Great Sand Dun	6.78	285		Pn	19 09 10.8	0.0

IDC 01 19:16:35.5±3.2**, 14°.42S**×**166°.85E, h0km, mb3.4**/3, **mb1 3.7**/4**, mb1mx3.4**/38**, mbtmp3.6**/4**, ML3.8**/1**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.7**/25**, Error ellipse: s-maj=70.6km s-min=39.3km az=91.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.62	183	Pn	Pn	19 18 28.3	+0.4
	1.5nm,0.3s,baz=342,slow=3.6,SNR=27						
DZM				Sn	Sn	19 19 43.1	-12
	baz=304,slow=22,SNR=1.8						
RPZ	Rata Peaks	29.41	174	LR	LR	19 34 33.5	
	comp=Z,94nm,18.0s,baz=142,slow=37						
WRA	Warramunga Arr	31.50	255	P	P	19 23 01.0	+1.6
	0.3nm,0.8s,baz=89,slow=9.2,SNR=2.2						
ASAR	Alice Springs	32.40	249	P	P	19 23 05.9	-1.4
	0.3nm,0.4s,baz=76,slow=9.5,SNR=5.4						
SONM	Songino Array	82.01	324	P	P	19 28 57.5	-0.1
	0.2nm,0.4s,baz=121,slow=6.7,SNR=3.8						

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*NEIC **01** 19:23:20.9±1.1, 9°.61S±0°.06×161°.54E±0°.10, h81km±10km, mb4.8/31, Error ellipse: s-maj=14.8km s-min=7.1km az=107.0*

*IDC **01** 19:23:23.9±2.1, 9°.95S×161°.37E, h88km±15km, mb3.9/15, mb1 4.1/17, mb1mx3.8/51, mbtmp4.3/17, MS3.4/6, Ms1 3.4/6, ms1mx3.0/32, Error ellipse: s-maj=21.7km s-min=13.5km az=87.0*

ISC 01 19:23:22.8±0.5**, 9°.88S**±0°.06×**161°.50E**±0°.08**, h85km, n72,** σ**1^{s}51**/72**, mb4.7**/38**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.59	286	P	Pn	19 23 47.9	-1.6
	542nm,0.3s,baz=148,slow=3.1,SNR=340						
HNR				S	Sn	19 24 08.9	-0.8
	2μm,0.3s,baz=20,slow=22,SNR=25						
HNR				LR	LR	19 24 36.9	
	comp=Z,462nm,20.5s,baz=110,slow=49						
KRVT	Keravat (AS076	10.91	300	P	Pn	19 25 57.7	+1.7
	7.1nm,0.3s,baz=256,slow=2.3,SNR=7.0						
KRVT				S	Sn	19 27 41.2	-15
	8.3nm,0.3s,baz=230,slow=23,SNR=2.6						
KRVT				LR	LR	19 29 19.1	
	comp=Z,78nm,20.6s,baz=87,slow=33						
DZM	Mont Dzumac	13.02	159	P	Pn	19 26 24.7	+0.2
	0.5nm,0.3s,baz=352,slow=12,SNR=12						
DZM				S	Sn	19 28 44.7	-2.9
	0.1nm,0.3s,baz=141,slow=18,SNR=2.0						
DZM				LR	LR	19 30 26.3	
	comp=Z,258nm,21.0s,baz=30,slow=32						
DZM	Mont Dzumac	13.02	159	Pn	Pn	19 26 24.4	-0.1
PATS	Pohnpei	16.91	349		Pn	19 27 10.8	-3.4
PATS				IAmb	IAmb	19 27 12.2	
	comp=Z,115nm,1.3s						
CTA	Charters Tower	17.86	234	P	Pn	19 27 27.8	+1.9
	comp=Z,0.7nm,0.3s,baz=59,slow=13,SNR=25						
CTAO	Charters Tower	17.86	234		Pn	19 27 27.9	+2.0
CTAO				IAmb	IAmb	19 27 30.8	
	comp=Z,33nm,0.8s						
EIDS	Eidsvold	18.30	211	P	Pn	19 27 30.9	-0.2
COEN	Coen	18.38	255	Pn	Pn	19 27 33.0	+1.0
ARMA	Armidale	22.41	203	P	P	19 28 17.1	+2.6
RAO	Raoul Island	27.25	138	P	P	19 28 57.0	-2.1
	comp=Z,423nm,0.3s,baz=91,slow=23,SNR=5.6						
WR0	Warramunga Arr	27.86	246	P	P	19 29 04.3	-0.4
WB0	Warramunga Arr	27.94	246	P	P	19 29 04.8	-0.5
WB2	Warramunga Arr	28.03	246	P	P	19 29 05.9	-0.3
WRA	Warramunga Arr	28.04	246	P	P	19 29 06.1	-0.2
	comp=Z,8.8nm,0.7s,baz=77,slow=9.0,SNR=73						
STKA	Stephens Creek	28.61	217	P	P	19 29 12.1	+0.9
	comp=Z,3.4nm,0.6s,baz=54,slow=13,SNR=7.6						
STKA				LR	LR	19 39 54.8	
	comp=Z,122nm,20.1s,baz=30,slow=35						
STKA	Stephens Creek	28.61	217	P	P	19 29 12.2	+0.9
AS31	Alice Springs	29.68	239	P	P	19 29 20.1	-0.7
ASAR	Alice Springs	29.68	239	P	P	19 29 19.9	-0.9
	comp=Z,9.2nm,1.0s,baz=63,slow=10,SNR=96						
ASAR				LR	LR	19 41 07.6	
	comp=Z,99nm,18.2s,baz=60,slow=36						
TOO	Toolangi	31.12	205	P	P	19 29 35.4	+2.1
TOO				IAmb	IAmb	19 29 37.9	
	comp=Z,26nm,1.4s						
KNRA	Kununurra	32.41	256	P	P	19 29 44.9	0.0
KNRA				IAmb	IAmb	19 30 12.5	
	comp=Z,8.5nm,0.7s						
BBOO	Buckleboo	32.72	222	P	P	19 29 47.9	+0.5
FITZ	Fitzroy Crossi	35.68	253	P	P	19 30 12.5	-0.7
	comp=Z,4.8nm,0.5s,baz=70,slow=8.9,SNR=42						
FITZ	Fitzroy Crossi	35.68	253	P	P	19 30 12.8	-0.5
FITZ				IAmb	IAmb	19 30 14.1	
	comp=Z,17nm,1.5s						
PSAD2	Pilbara Seismi	41.51	249	P	P	19 31 01.1	-1.0
PSAC2	Pilbara Seismi	41.56	249	P	P	19 31 02.0	-0.4
PSAC2				IAmb	IAmb	19 31 03.7	
	comp=Z,19nm,1.2s						
PSAB2	Pilbara Seismi	41.59	249	P	P	19 31 02.5	-0.2
PSAB2				IAmb	IAmb	19 31 16.1	
	comp=Z,29nm,1.4s						
PSAA3	Pilbara Seismi	41.60	249	P	P	19 31 02.3	-0.5
PSAA3				IAmb	IAmb	19 31 16.6	
	comp=Z,21nm,1.2s						
PSAB3	Pilbara Seismi	41.61	249	P	P	19 31 01.0	-1.8
PSAB3				IAmb	IAmb	19 31 06.8	
	comp=Z,26nm,1.4s						
PSAD1	Pilbara Seismi	41.61	249	P	P	19 31 02.3	-0.5
PSAD1				IAmb	IAmb	19 31 04.0	
	comp=Z,10.0nm,0.9s						
PSAA2	Pilbara Seismi	41.61	249	P	P	19 31 01.8	-1.0
PSAA2				IAmb	IAmb	19 31 03.3	
	comp=Z,12nm,0.8s						
PSA00	Pilbara Seismi	41.61	249	P	P	19 31 02.0	-0.9
PSA00				IAmb	IAmb	19 31 06.2	
	comp=Z,23nm,1.2s						
PSAA1	Pilbara Seismi	41.62	249	P	P	19 31 02.1	-0.8
PSAA1				IAmb	IAmb	19 31 02.7	
	comp=Z,10nm,1.0s						
PSAB1	Pilbara Seismi	41.63	249	P	P	19 31 02.6	-0.4
PSAB1				IAmb	IAmb	19 31 03.5	
	comp=Z,13nm,0.9s						
PSAC3	Pilbara Seismi	41.64	249	P	P	19 31 02.1	-0.9
PSAC3				IAmb	IAmb	19 31 27.1	
	comp=Z,24nm,1.4s						
PSAD3	Pilbara Seismi	41.68	249	P	P	19 31 03.3	-0.1
PSAD3				IAmb	IAmb	19 31 04.8	
	comp=Z,25nm,1.2s						
MORW	Morawa	46.57	239	P	P	19 31 42.5	+0.2
NWAO	Narrogin (SRO)	46.71	234	P	P	19 31 43.7	+0.3
NWAO	Narrogin (SRO)	46.71	234	P	P	19 31 43.7	+0.3
NWAO				IAmb	IAmb	19 31 47.6	
	comp=Z,20nm,1.1s						
JAGI	Jajag, Banyuwa	46.73	268	P	P	19 31 41.7	-2.1
UGM	Wanagama	50.36	268	P	P	19 32 11.0	-0.7
MJAR	Matsushiro Arr	51.11	336	P	P	19 32 15.8	-1.2
	comp=Z,0.6nm,0.5s,baz=45,slow=16,SNR=2.4						
ASAJ	Asahikawa	56.42	344	P	P	19 32 56.7	+1.2
	comp=Z,4.0nm,0.8s,baz=196,slow=14,SNR=4.2						
KSRS	Korea Array	56.63	328	LR	LR	19 55 16.1	
	comp=Z,30nm,19.7s,baz=116,slow=34						
NJ2	Nanjing	58.30	317	*e*P	P	19 33 07.0	-2.0
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
USRK	Ussuriysk Ar.	60.11	336	P	P	19 33 22.2	+1.0
	comp=Z,3.2nm,0.8s,baz=120,slow=6.8,SNR=4.7						
GYA	Guiyang	64.33	306	*e*P	P	19 33 43.5	-6.4
GYA				sP	PcP	19 34 28.9	+5.0
GYA				PP	PP	19 36 10.8	-1.7
GYA				S	S	19 42 25.2	+3.3
GYA				sS	sS	19 42 58.1	-0.5
GYA	Guiyang	64.33	306	SS	SS	19 46 30.0	-3.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,70nm,5.0s						
GYA				LR	LR		
	comp=N,70nm,6.3s						
GYA				LR	LR		
	comp=E,80nm,4.0s						
GYA				LR	LR		
	comp=Z,100nm,5.1s						
CASY	Casey	65.98	200	P	P	19 34 01.1	+1.4
KMI	Kunming	66.96	303	P	P	19 34 13.3	+6.2
KMI				pP	pP	19 34 26.0	-2.4
KMI				sP	PcP	19 34 35.3	+0.3
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
KMI				pmax	pmax		
	comp=Z,100nm,4.4s						
KMI				LR	LR		
	comp=E,80nm,5.7s						
KMI				LR	LR		
	comp=Z,73nm,4.6s						
VNDA	Vanda	67.62	180	P	P	19 34 10.8	+0.7
	comp=Z,1.0nm,0.6s,baz=343,slow=7.7,SNR=8.5						
VNDA	Vanda	67.62	180	P	P	19 34 10.6	+0.5
CMAR	Chiang Mai Arr	67.82	295	P	P	19 34 11.9	-0.5
	comp=Z,0.8nm,0.9s,baz=124,slow=5.6,SNR=4.3						
HHC	Hu-ho-hao-te	68.28	321	P	P	19 34 14.5	-0.4
HHC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,47nm,5.0s						
LZH	Lanzhou	70.91	314	*e*P	P	19 34 28.7	-2.6
LZH				pP	PcP	19 34 50.2	-1.1
LZH				sP	sP	19 34 59.5	-2.4
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,79nm,5.8s						
LZH				LR	LR		
	comp=N,210nm,15.0s						
LZH				LR	LR		
	comp=E,220nm,15.2s						
LZH				LR	LR		
	comp=Z,360nm,17.8s						
GTA	Gaotai	75.27	315	P	P	19 34 58.2	+1.3
GTA				pP	pP	19 35 21.8	+2.8
GTA				sP	sP	19 35 35.6	+7.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONM	Songino Array	75.30	325	P	P	19 34 58.3	+1.5
	comp=Z,1.6nm,0.7s,baz=141,slow=5.5,SNR=13						
QSPA	South Pole Qui	80.11	180	P	P	19 35 23.5	+0.2
	comp=Z,2.4nm,0.6s,baz=323,slow=1.0,SNR=21						
ILAR	Eielson Array	83.79	20	P	P	19 35 45.1	+2.8
	comp=Z,0.4nm,0.8s,baz=234,slow=2.8,SNR=4.9						
MAW	Mawson	84.21	202	P	P	19 35 44.8	+0.3
	comp=Z,2.0nm,0.7s,baz=327,slow=4.4,SNR=2.5						
WMQ	Urumqi	85.33	316	*e*P	P	19 35 49.6	-1.1
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,45nm,5.1s						
WMQ				LR	LR		
	comp=N,560nm,29.1s						
WMQ				LR	LR		
	comp=E,1μm,28.9s						
WMQ				LR	LR		
	comp=Z,110nm,28.9s						
NVAR	Mina Array Bea	88.50	51	P	P	19 36 08.1	+1.7
	comp=Z,0.4nm,0.7s,baz=225,slow=7.5,SNR=4.0						
MKAR	Makanchi Array	89.83	318	P	P	19 36 12.8	+0.6
	comp=Z,1.5nm,0.8s,baz=93,slow=6.1,SNR=11						
MKAR				LR	LR	20 15 10.8	
	comp=Z,29nm,21.8s,baz=302,slow=35						
KSH	Kashi	92.78	309	P	P	19 36 26.6	+0.4
KSH				sP	sP	19 36 55.2	-2.3
KSH				PP	PP	19 40 13.9	+4.4
KSH	Kashi	92.78	309	S	S	19 47 21.0	-3.7
KSH				pmax	pmax		
	comp=Z,13nm,1.1s						
KSH				pmax	pmax		
	comp=Z,120nm,4.5s						
KSH				LR	LR		
	comp=N,88nm,11.3s						
KSH				LR	LR		
	comp=E,94nm,10.3s						
KSH				LR	LR		
	comp=Z,180nm,14.4s						
ARCES	ARCESS Array B	114.13	344	PKP	PKPdf	19 41 51.5	-0.2
	comp=Z,2.9nm,1.0s,baz=90,slow=2.4,SNR=5.5						
AKASG	Malin Array Be	123.58	326	PKP	PKPdf	19 42 10.4	+0.1
	comp=Z,0.4nm,0.4s,baz=58,slow=2.4,SNR=4.3						
NOA	NORSAR Array B	124.43	343	PKP	PKPdf	19 42 11.9	+0.1
	comp=Z,0.5nm,0.9s,baz=333,slow=2.4,SNR=1.9						
VYHS	Vyhne	130.42	328	*e*PKP	PKPdf	19 42 21.7	-1.9
GERES	GERESS Array B	132.75	331	PKP	PKiKP	19 42 28.9	-0.3
	comp=Z,0.3nm,0.6s,baz=54,slow=2.3,SNR=3.1						
ESDC	Sonseca Array	147.62	339	PKPbc	PKPbc	19 42 58.0	+0.2
	comp=Z,0.4nm,0.4s,baz=248,slow=43,SNR=4.5						
TORD	Torodi Ar. Bea	159.94	281	PKP	PKPdf	19 43 11.2	-1.9
	comp=Z,1.0nm,1.1s,baz=11,slow=0.8,SNR=4.1						

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*GCG **01** 19:30:44.9±0.4, 14°.45N×93°.29W, h10km, MD4.1*

*MEX **01** 19:30:48.0±0.6, 14°.49N×93°.22W, h74km±23km, MD3.9*

ISC 01 19:30:47.9±2.1**, 14°.5N**±0°.1×**93°.2W**±0°.1**, h54km**±49km**, n8,** σ**0^{s}67**/15**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.02	68	*e*P	Pn	19 31 05.3	-0.7
THIG				*e*S	Sn	19 31 19.7	+0.3
PCIG		1.18	1	*e*P	Pn	19 31 08.0	-0.1
PCIG				*e*S	Sn	19 31 23.9	+0.8
STG3	Santiaguito 3,	1.63	83	*e*P	Pn	19 31 14.6	+0.2
CCIG	Comitan	2.05	31	*e*P	Pn	19 31 20.0	-0.2
CCIG				*i* S	Sn	19 31 44.0	-0.7
TGIG		2.25	3	*e*P	Pn	19 31 22.9	+0.2
TGIG				*e*S	Sn	19 31 49.8	+0.4
FUG	Fuego 3	2.33	92	*e*P	Pn	19 31 24.3	+0.4
FUG				*e*S	Sn	19 31 52.3	+0.8
IXG	Ixpaco	2.74	97	*e*P	Pn	19 31 29.8	+0.2
IXG				*e*S	Sn	19 32 00.5	-1.1
CMIG	Matias Romero	3.00	328	*i* P	Pn	19 31 32.4	-0.7
CMIG				*e*S	Sn	19 32 08.4	+0.6

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*NEIC **01** 19:33:59.6±2.5, 43°.75N±0°.02×105°.10W±0°.08, h0km±2km, ML3.4/63, Error ellipse: s-maj=9.6km s-min=3.3km az=77.0*

*IDC **01** 19:34:03.3±1.0, 45°.10N×107°.06W, h0km, mb4.1/1, mb1 3.5/5, mb1mx3.3/51, mbtmp3.2/5, ML3.1/4, MS3.5/2, Ms1 3.4/2, ms1mx2.6/51, Error ellipse: s-maj=31.2km s-min=7.9km az=129.0*

ISC 01 19:33:59.7±0.9**, 43°.73N**±0°.05×**105°.19W**±0°.05**, h0km, n59,** σ**1^{s}33**/54**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.92	65	Pn	Pn	19 34 20.3	+0.2
K22A	Casper	1.46	223	Pn	Pn	19 34 24.7	-2.7
K22A				IAML		19 34 49.5	
	comp=E,294nm,0.6s						
PHWY	Pilot Hill	2.44	185		Pn	19 34 40.9	-0.1
RWWY	Rawlins	2.53	217		Pn	19 34 43.1	+0.9
RWWY				IAML		19 35 22.1	
	comp=E,253nm,0.9s						
RWWY				IAML		19 35 24.1	
	comp=E,171nm,0.8s						
LAO	LASA Array	3.04	346		Pn	19 34 47.5	-1.7
LAO				IAML		19 35 47.0	
	comp=E,144nm,0.8s						
RLMT	Red Lodge	3.23	297	Pn	Pn	19 34 51.6	-0.3
PDAR	Pinedale Array	3.33	255	Pn	Pn	19 34 53.3	0.0
	comp=E,2.2nm,0.3s,baz=67,slow=17,SNR=3.0						
PDAR				Pg	Pb	19 34 58.8	-1.0
	comp=E,4.9nm,0.3s,baz=75,slow=19,SNR=13						
PDAR				Lg	Lg	19 35 37.1	
	comp=E,7.0nm,0.3s,baz=102,slow=20,SNR=3.8						
OGNE	Ogallala	3.64	139	Pn	Pn	19 34 55.4	-1.9
OGNE					Pg	19 35 08.2	-1.1
OGNE				IAML		19 36 04.6	
	comp=E,113nm,1.2s						
YNE	Yellowstone No	3.68	292		Pn	19 34 53.2	-4.9
YMP	Mirror Lake Pl	3.71	287		Pn	19 34 53.8	-4.7
H17A	Grant Village	3.94	282		Pn	19 35 00.7	-0.9
H17A				IAML		19 36 06.3	
	comp=N,36nm,0.9s						
H17A				IAML		19 36 07.8	
	comp=E,34nm,1.9s						
ISCO	Idaho Springs	3.94	185		Pn	19 34 54.7	-7.0
FLWY	Flagg Ranch	4.00	277		Pn	19 35 04.2	+1.9
FLWY				IAML		19 36 15.0	
	comp=E,67nm,2.5s						
FLWY				IAML		19 36 16.4	
	comp=E,80nm,1.6s						
SNOW	Snow King Moun	4.05	268		Pn	19 35 04.2	+1.0
SNOW				IAML		19 36 17.8	
	comp=E,42nm,1.3s						
SNOW				IAML		19 36 22.5	
	comp=E,75nm,1.8s						
YNR	Norris Junctio	4.07	286		Pn	19 35 02.8	-0.6
YPP	Pitchstone Pla	4.09	280		Pn	19 35 04.8	+1.1
REDW	Red Top Meadow	4.13	267		Pn	19 35 01.8	-2.5
REDW				IAML		19 36 24.8	
	comp=E,49nm,0.7s						
REDW				IAML		19 36 29.2	
	comp=E,72nm,1.1s						
IMW	Indian Meadow	4.17	274		Pn	19 35 06.3	+1.6
IMW				IAML		19 35 36.2	
	comp=E,40nm,0.5s						
IMW				IAML		19 36 22.6	
	comp=E,28nm,0.7s						
YHH	Holmes Hill	4.20	287		Pn	19 35 06.9	+1.6
FXWY	Fox Creek	4.24	271		Pn	19 35 08.0	+2.3
O20A	White River Ci	4.25	213	Pn	Pn	19 35 01.5	-4.4
O20A				IAML		19 36 25.2	
	comp=N,50nm,1.2s						
O20A				IAML		19 37 44.2	
	comp=E,47nm,3.0s						
YMR	Madison River	4.26	285	Pn	Pn	19 35 08.9	+3.0
E28A	Huff	4.26	47		Pn	19 35 05.5	-0.3
AHID	Auburn Hatcher	4.42	259		Pn	19 35 07.2	-1.0
AHID				IAML		19 36 27.1	
	comp=N,54nm,1.2s						
AHID				IAML		19 36 39.2	
	comp=E,36nm,1.3s						
YHB	Horse Butte	4.43	285		Pn	19 35 10.3	+2.0
YHL	Hebgen Lake	4.45	287		Pn	19 35 09.7	+1.1
RDMU	Red Mountain	4.54	227		Pn	19 35 11.6	+1.8
SMCO	Snowmass	4.74	197		Pb	19 35 23.6	-0.3
SMCO				IAML		19 36 30.1	
	comp=E,27nm,1.2s						
SMCO				IAML		19 37 54.3	
	comp=E,20nm,4.3s						
DGMT	Dagmar	4.79	8		Pn	19 35 11.6	-1.5
KSCO	Kaye Shedlock'	5.09	157		Pb	19 35 31.1	+1.4
HWUT	Hardware Ranch	5.16	248		Pn	19 35 17.9	-0.3
HWUT				IAML		19 36 54.9	
	comp=E,31nm,1.4s						
HWUT				IAML		19 37 01.6	
	comp=E,26nm,1.0s						
TCUT	Toone Canyon	5.29	243		Pn	19 35 22.2	+2.0
EGMT	Eagleton	5.35	325		Pn	19 35 21.7	+0.9
JLU	Jordanelle	5.61	238	Pn	Pn	19 35 24.7	+0.2
MCMT	McKenzie Canyo	5.61	284		Pn	19 35 25.5	+0.9
PV22	Blue Mesa, Par	5.86	209	Pn	Pn	19 35 27.0	-0.9
SPUT	South Promonto	5.89	248		Pn	19 35 29.4	+1.2
P17A	Butcher Ranch,	5.95	226		Pn	19 35 31.0	+1.8
PV23	Carpenter Ridg	6.01	210	Pn	Pn	19 35 30.6	+0.5
PV04	Paradox Valley	6.03	209		Pn	19 35 30.4	+0.2
PV12	Saucer Basin,	6.06	208	Pn	Pn	19 35 30.9	+0.1
PV11	David Mesa, Pa	6.10	208	Pn	Pn	19 35 31.0	-0.2
PV16	Nyswonger Mesa	6.10	209	Pn	Pn	19 35 31.7	+0.4
SRU	San Rafael Swe	6.11	223	Pn	Pn	19 35 31.9	+0.4
PV03	Paradox Valley	6.13	208	Pn	Pn	19 35 32.8	+1.1
PV17	East Wray Mesa	6.15	209	Pn	Pn	19 35 32.6	+0.7
PV18	Skein Mesa, Pa	6.16	208	Pn	Pn	19 35 32.1	0.0
PV13	Radium Mtn., P	6.21	207	Pn	Pn	19 35 32.4	-0.4
ECSD	EROS Data Cent	6.21	87	Pn	Pn	19 35 33.6	+1.0
TMUT	Trail Mountain	6.33	228	Pn	Pn	19 35 35.0	+0.5
NLU	North Lily Min	6.38	236	Pn	Pn	19 35 37.4	+2.3
Q16A	Castle Valley	6.59	225		Pn	19 35 37.5	-0.5
MSU	Marysvale	7.42	228	Pn	Pn	19 35 49.6	+0.3
MTPU	Mount Pierson	7.77	225	Pn	Pn	19 35 56.5	+2.2
ULM	Lac du Bonnet	9.11	41	Pn	Pn	19 36 13.0	+0.8
	comp=E,0.8nm,0.3s,baz=223,slow=13,SNR=5.0						
ULM				Lg	Lg	19 38 48.0	
	comp=E,0.5nm,0.3s,baz=299,slow=13,SNR=3.3						
ULM				LR	LR	19 40 22.7	
	comp=E,59nm,18.5s,baz=207,slow=42						
TXAR	Lajitas Array	14.42	175	Pn	P	19 37 52.2	+20
	comp=E,0.1nm,0.3s,baz=189,slow=30,SNR=1.8						
YKA	Yellowknife Ar	19.59	347	Pn	P	19 38 10.1	-19
	comp=E,0.0nm,0.3s,baz=152,slow=12,SNR=1.7						
ARCES	ARCESS Array B	61.41	18	P	P	19 44 16.3	-0.7
	comp=E,2.1nm,0.9s,baz=339,slow=7.2,SNR=3.9						
RAR	Rarotonga	81.71	230	LR	LR	20 13 30.2	
	comp=E,120nm,20.8s,baz=288,slow=29						

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*MOS **01** 19:34:17.8±0.6, 52°.51N×159°.89E, h34km, mb4.0/1, Error ellipse: s-maj=8.7km s-min=4.2km az=89.9*

*KRSC **01** 19:34:17.1±1.2, 52°.60N×159°.76E, h54km±14km, ML4.3*

*IDC **01** 19:34:23.4±1.6, 52°.82N×159°.25E, h84km±11km, mb3.3/14, mb1 3.6/15, mb1mx3.3/61, mbtmp3.7/15, Error ellipse: s-maj=24.1km s-min=15.8km az=150.0*

ISC 01 19:34:19.1±0.9**, 52°.62N**±0°.03×**159°.70E**±0°.04**, h45km**±8km**, n102,** σ**1^{s}42**/137**, mb3.5**/14**, 2D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.52	22	*e*P	Pn	19 34 30.3	0.0
SPN				*e*S	Sn	19 34 38.4	+0.1
SPN	Mys Shipunski	0.52	22	PN	Pn	19 34 30.3	0.0
SPN				S	Sn	19 34 38.4	+0.1
NLC	Nalytchevo	0.59	339	*e*P	Pn	19 34 31.4	+0.1
NLC				*e*S	Sn	19 34 40.4	+0.4
NLC	Nalytchevo	0.59	339	PN	Pn	19 34 31.4	+0.1
NLC				S	Sn	19 34 40.4	+0.4
DALK	Dalny	0.71	306	*e*P	Pn	19 34 32.6	-0.2
DALK				*e*S	Sn	19 34 42.0	-0.6
DALK	Dalny	0.71	306	PN	Pn	19 34 32.6	-0.2

DALK				S	Sn	19 34 42.0	-0.6
RUS	Russkaya	0.75	256	eP	Pn	19 34 33.3	0.0
RUS				eS	Sn	19 34 43.7	+0.1
RUS	Russkaya	0.75	256	PN	Pn	19 34 33.3	0.0
RUS				S	Sn	19 34 43.7	+0.1
PET	Petropavlovsk	0.75	303κ	iPN	Pn	19 34 33.4	0.0
PET				eS	Sn	19 34 43.0	-0.7
PET				pmax	pmax		
	comp=Z,1µm,0.4s						
PET				smax	smax		
	comp=N,3µm,0.6s						
PET				smax	smax		
	comp=E,2µm,0.3s						
UGLR	Uglovaya	0.79	318	eP	Pn	19 34 34.6	+0.5
UGLR				eS	Sn	19 34 45.5	+0.6
UGLR	Uglovaya	0.79	318	PN	Pn	19 34 34.6	+0.5
UGLR				S	Sn	19 34 45.5	+0.6
SMAR	Somma	0.84	320	eP	Pn	19 34 34.8	0.0
SMAR	Somma	0.84	320	PN	Pn	19 34 34.8	0.0
AVH	Avacha	0.87	318	iP	Pn	19 34 35.7	+0.6
AVH				iS	Sn	19 34 47.8	+1.1
AVH	Avacha	0.87	318	PN	Pn	19 34 35.7	+0.6
AVH				S	Sn	19 34 47.8	+1.1
KRER	Koryakskii	0.90	320	P	Pn	19 34 36.1	+0.5
KRER				S	Sn	19 34 48.0	+0.6
KRER	Koryakskii	0.90	320	PN	Pn	19 34 36.0	+0.5
KRER				S	Sn	19 34 48.1	+0.6
KOK	Koryaka	0.93	317	eP	Pn	19 34 36.4	+0.5
KOK	Koryaka	0.93	317	PN	Pn	19 34 36.4	+0.5
MTVR	Mutnovka	0.94	262	eP	Pn	19 34 36.3	+0.3
MTVR				eS	Sn	19 34 48.4	0.0
MTVR	Mutnovka	0.94	262	PN	Pn	19 34 36.3	+0.3
MTVR				S	Sn	19 34 48.4	0.0
KRX	Arik	0.98	320	eP	Pn	19 34 36.8	+0.2
KRX	Arik	0.98	320	PN	Pn	19 34 36.8	+0.2
KRMR	Karymshinskiy	0.98	283	eP	Pn	19 34 36.6	+0.2
KRMR				eS	Sn	19 34 49.1	0.0
KRMR	Karymshinskiy	0.98	283	PN	Pn	19 34 36.6	+0.2
KRMR				S	Sn	19 34 49.1	0.0
GRL	Gorelyy	0.99	267	eP	Pn	19 34 37.5	+0.7
GRL				eS	Sn	19 34 51.2	+1.5
GRL	Gorelyy	0.99	267	PN	Pn	19 34 37.5	+0.7
GRL				S	Sn	19 34 51.2	+1.5
ASAK	Asacha	1.12	259	P	Pn	19 34 39.3	+0.8
ASAK				S	Sn	19 34 54.1	+1.2
ASAK	Asacha	1.12	259	PN	Pn	19 34 39.3	+0.8
ASAK				S	Sn	19 34 54.2	+1.3
KDTR	Khodutka, Kamc	1.29	232	eP	Pn	19 34 41.0	+0.4
KDTR				eS	Sn	19 34 56.9	+0.3
KDTR	Khodutka, Kamc	1.29	232	PN	Pn	19 34 41.0	+0.4
KDTR				S	Sn	19 34 56.9	+0.3
PETK	Petropavlovsk-	1.31	293	P	Pn	19 34 41.5	+0.6
	comp=E,136nm,0.3s,baz=105,slow=20,SNR=3998						
PETK				S	Sn	19 34 57.6	+0.4
	comp=E,63nm,0.3s,baz=107,slow=20,SNR=4.0						
PETK				LR	LR	19 35 27.6	
	comp=E,162nm,20.1s,baz=56,slow=65						
KII	Karymskiy	1.43	354	eP	Pn	19 34 43.1	+0.5
KII				eS	Sn	19 35 01.0	+0.7
KII	Karymskiy	1.43	354	PN	Pn	19 34 43.1	+0.5
KII				S	Sn	19 35 01.0	+0.7
APC	Apacha	1.57	282	iP	Pn	19 34 45.9	+1.4
APC				S	Sn	19 35 05.6	+1.9
APC	Apacha	1.57	282	PN	Pn	19 34 45.9	+1.4
PAU	Pauzhetka	2.12	238	eP	Pn	19 34 53.9	+1.8
PAU				eS	Sn	19 35 19.1	+1.9
PAU	Pauzhetka	2.12	238	PN	Pn	19 34 53.9	+1.8
PAU				S	Sn	19 35 19.1	+1.9
KZV	Kizimen	2.52	8	eP	Pn	19 34 58.9	+1.2
KZV				S	Sn	19 35 28.5	+1.2
KZV	Kizimen	2.52	8	PN	Pn	19 34 58.9	+1.2
TUMD	Tumrok D	2.62	9	eP	Pn	19 35 00.1	+1.1
TUMD				eS	Sn	19 35 29.9	+0.4
TUMR	Tumrok	2.68	5	eP	Pn	19 35 01.7	+1.8
TUMR				eS	Sn	19 35 33.3	+2.2
TUMR	Tumrok	2.68	5	PN	Pn	19 35 00.1	+0.2
SKR	Severo-Kuril's	2.96	230	eP	Pn	19 35 05.0	+1.5
SKR				eS	Sn	19 35 38.7	+1.0
SKR	Severo-Kuril's	2.96	230	ePN	Pn	19 35 04.5	+1.0
SKR				eS	Sn	19 35 38.0	+0.3
SKR				smax	smax		
	comp=E,455nm,0.5s						
SKR				smax	smax		
	comp=N,542nm,0.4s						
ALID	Alaid	3.12	237	iP	Pn	19 35 06.9	+1.0
ALID	Alaid	3.12	237	PN	Pn	19 35 06.9	+1.0
KMNR	Kamenistaya	3.16	6	eP	Pn	19 35 08.6	+2.2
KMNR				S	Sn	19 35 46.3	+3.4
KMNR	Kamenistaya	3.16	6	PN	Pn	19 35 08.6	+2.2
KIRR	Kirishev	3.36	6	eP	Pn	19 35 10.7	+1.5
KIRR	Kirishev	3.36	6	PN	Pn	19 35 10.7	+1.5
ESO	Esso	3.37	350	eP	Pn	19 35 10.5	+1.4
ESO	Esso	3.37	350	PN	Pn	19 35 10.5	+1.4
KPT	Kopyto	3.37	5	eP	Pn	19 35 11.1	+1.9
KPT	Kopyto	3.37	5	PN	Pn	19 35 11.1	+1.9
BZGR	Bezymyannyi-Gr	3.38	10	eP	Pn	19 35 11.6	+2.2
BZGR	Bezymyannyi-Gr	3.38	10	PN	Pn	19 35 11.6	+2.2
BZWR	Bezymyannyi-We	3.38	8	eP	Pn	19 35 12.2	+2.7
BZWR	Bezymyannyi-We	3.38	8	PN	Pn	19 35 12.2	+2.7
KOZ	Kozyrevsk	3.45	2	eP	Pn	19 35 12.0	+1.7
KOZ	Kozyrevsk	3.45	2	PN	Pn	19 35 12.0	+1.7
ZLN	Zelenaya	3.47	10	eP	Pn	19 35 12.3	+1.7
ZLN				eS	Sn	19 35 51.4	+1.0
ZLN	Zelenaya	3.47	10	PN	Pn	19 35 12.3	+1.7
LGNR	Loginova	3.52	9	eP	Pn	19 35 14.5	+3.0
LGNR	Loginova	3.52	9	PN	Pn	19 35 14.5	+3.0
CIRR	Tsirk	3.56	10	eP	Pn	19 35 14.2	+2.3
CIRR	Tsirk	3.56	10	PN	Pn	19 35 14.2	+2.3
KRSR	Krestovskiy	3.64	8	eP	Pn	19 35 14.9	+1.9
KRSR	Krestovskiy	3.64	8	PN	Pn	19 35 14.9	+1.9
SRDR	Sredinnyy	3.71	0	eP	Pn	19 35 15.4	+1.5
SRDR	Sredinnyy	3.71	0	PN	Pn	19 35 15.4	+1.5
KLY	Klyuchi	3.74	8	eP	Pn	19 35 15.9	+1.6
KLY	Klyuchi	3.74	8	PN	Pn	19 35 15.9	+1.6
KBG	Krutoberegovo	4.04	25	eP	Pn	19 35 20.8	+2.4
KBG				eS	Sn	19 36 06.7	+2.3
KBG	Krutoberegovo	4.04	25	PN	Pn	19 35 20.8	+2.4
KBG				S	Sn	19 36 06.7	+2.3
BKI	Bering	4.52	53	eP	Pn	19 35 25.2	+0.2
BKI				eS	Sn	19 36 11.5	-4.7
BKI	Bering	4.52	53	PN	Pn	19 35 25.2	+0.2
ASAJ	Asahikawa	14.17	240	P	Pn	19 37 38.7	+1.8
	comp=N,0.4nm,0.3s,baz=46,slow=8.7,SNR=7.8						
MJAR	Matsushiro Arr	22.06	232	P	P	19 39 10.6	+0.6
	comp=N,1.1nm,0.5s,baz=9.3,slow=15,SNR=8.0						
ILAR	Eielson Array	29.32	45	P	P	19 40 17.4	+0.4
	comp=N,0.3nm,0.6s,baz=267,slow=4.9,SNR=2.2						
H11N2	WAKE ISLAND Hy	33.30	168	T	T	20 16 41.3	
	baz=352,slow=76,SNR=50						
H11N3	WAKE ISLAND Hy	33.31	168	T	T	20 16 43.5	
	baz=352,slow=76,SNR=52						
H11N1	WAKE ISLAND Hy	33.32	168	T	T	20 16 34.7	
	baz=352,slow=76,SNR=61						
INK	Inuvik	34.39	37	P	P	19 41 01.9	+0.6
	comp=N,0.4nm,0.3s,baz=275,slow=5.3,SNR=3.4						
H11S1	WAKE ISLAND Hy	34.48	168	T	T	20 18 01.9	
H11S3	WAKE ISLAND Hy	34.49	168	T	T	20 18 04.7	
	SNR=21						
H11S2	WAKE ISLAND Hy	34.50	168	T	T	20 18 01.9	
ZALV	Zalesovo Beam	42.83	303	P	P	19 42 08.7	-3.6
	comp=N,0.3nm,0.3s,baz=69,slow=7.9,SNR=2.0						
YKA	Yellowknife Ar	43.67	42	P	P	19 42 19.7	+0.8
	comp=N,0.1nm,0.3s,baz=202,slow=15,SNR=3.2						
MKAR	Makanchi Array	48.15	296	P	P	19 42 51.4	-3.0
	comp=N,0.6nm,0.5s,baz=57,slow=7.4,SNR=17						
CMAR	Chiang Mai Arr	57.85	258	P	P	19 44 04.9	-1.2
	comp=N,0.4nm,0.6s,baz=32,slow=7.1,SNR=3.0						
PDAR	Pinedale Array	57.96	60	P	P	19 44 08.5	+1.6
	comp=N,0.2nm,0.5s,baz=342,slow=5.7,SNR=2.8						
FINES	FINESS Array B	60.46	336	P	P	19 44 21.5	-2.1
	comp=N,1.3nm,0.6s,baz=28,slow=8.6,SNR=7.5						
NOA	NORSAR Array B	63.93	344	P	P	19 44 45.7	-1.2
	comp=N,0.2nm,0.4s,baz=19,slow=6.0,SNR=4.2						
AKASG	Malin Array Be	68.90	329	P	P	19 45 17.0	-1.7
	comp=N,0.4nm,0.4s,baz=30,slow=7.1,SNR=2.8						
TXAR	Lajitas Array	71.04	67	P	P	19 45 33.2	+0.8
	comp=N,0.4nm,0.8s,baz=294,slow=5.4,SNR=3.9						
KRLC	Kraliky	72.97	336	eP	P	19 45 42.5	-1.0
KRLC	Kraliky	72.97	336	eP	P	19 45 42.5	-1.0
KHC	Kasperske Hory	74.62	338	eP	P	19 45 52.7	-0.5
KHC	Kasperske Hory	74.62	338	eP	P	19 45 52.7	-0.5
GERES	GERESS Array B	74.86	337	P	P	19 45 53.8	-0.8
	comp=N,0.7nm,0.4s,baz=35,slow=6.2,SNR=9.3						
ASAR	Alice Springs	79.23	204	P	P	19 46 19.8	+0.6
	comp=N,0.2nm,0.6s,baz=18,slow=5.8,SNR=1.4						

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*TIR **01** 19:38:33.9, 41.°07N×19.°69E, h24km, Md2.8/4*
*SKO **01** 19:38:35.9, 41.°13N×19.°44E, h7km*
*BEO **01** 19:38:36.2±0.9, 41.°22N×19.°75E, h18km±3km, ML1.9/5*
ISC 01 19:38:36.3±1.6**, 41.°24N**±0.°07×**19.°59E**±0.°04**, h17**km±8km**,**
n20, σ**1.s29**/33**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.23	62	ePg	Pg	19 38 41.1	-0.6
TIR				eSg	Sb	19 38 45.1	-0.8
TIR	Tirane	0.23	62	iPG	Pg	19 38 41.5	-0.2
TIR				iSG	Sb	19 38 45.1	-0.8
PHP	Peshkopia	0.78	55	iPG	Pn	19 38 52.2	-0.4
PHP				iSG	Sn	19 39 07.3	+3.4
PUK	Puka	0.83	16	iPG	Pb	19 38 49.8	-2.6
PUK				iSG	Sb	19 39 02.5	-0.9
OHR	Ohrid	0.92	98	iPg	Pn	19 38 54.7	+0.2
OHR				iSg	Sn	19 39 09.1	+1.8
OHR				eLg	Lg	19 39 11.8	
	comp=N,46nm,0.9s						
OHR	Ohrid	0.92	98	iPg	Pn	19 38 54.7	+0.2
OHR				iSg	Sn	19 39 09.1	+1.8
OHR				eLg	Lg	19 39 11.8	
	comp=N,46nm,0.9s						
BCI	Bajram Curri	1.18	17	iPN	Pg	19 38 58.7	-0.4
BCI				iSN	Sg	19 39 17.2	+2.6
PDG	Podgorica	1.22	348	ePg	Pg	19 38 59.9	+0.1
PDG				eSg	Sg	19 39 16.9	+1.2
SKO	Skopje	1.56	62	eSg	Sn	19 39 22.4	-0.9
TREB	Trebinje	1.74	328	ePg	Pb	19 39 08.8	+0.9
TREB				eSg	Sg	19 39 32.6	+0.1
DBRK	Dubrovnik	1.79	323	ePn	Pn	19 39 06.4	-0.1
DBRK				Sn	Sb	19 39 30.4	-0.4
SJES	Sjenica	2.04	8	ePg	Pb	19 39 13.9	+0.9
SJES				eSg	Sg	19 39 42.0	0.0
STON	Ston	2.16	320	ePn	Pn	19 39 11.7	+0.2
STON				Sn	Sn	19 39 36.8	-1.0
SELS	Selova	2.28	29	ePg	Pb	19 39 18.2	+1.2
IVAS	Ivanjica	2.37	10	ePg	Pb	19 39 18.7	+0.1
BOSS	Bosilegrad	2.49	59	ePg	Pb	19 39 18.4	-2.3
MAKA	Makarska	2.80	318	Sn	Sn	19 39 53.4	-0.3
DIVS	Divibare	2.87	6	ePn	Pn	19 39 21.0	-0.4
KIJV	Kijevo	3.63	321	Sn	Sn	19 40 15.2	+1.1
MORI	Morici	3.89	314	ePn	Pn	19 39 34.8	-0.5
MORI				Sn	Sn	19 40 20.6	0.0

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*VAO **01** 19:44:33.7±0.7, 19.°78S×69.°20W, h112km±6km, mb4.3*
*NEIC **01** 19:44:34.0±1.5, 20.°00S±0.°04×69.°21W±0.°07, h102km±3km, mb4.5/4, Error ellipse: s-maj=9.7km s-min=5.3km az=84.0*
*GUC **01** 19:44:34.9±0.6, 19.°98S×69.°14W, h97km±2km, ML4.3*
*IDC **01** 19:44:35.7±1.1, 20.°04S×68.°80W, h116km±9km, mb3.9/4, mb1 3.9/8, mb1mx3.6/34, mbtmp4.3/8, MS2.6/3, Ms1 2.6/3, ms1mx2.5/26, Error ellipse: s-maj=27.8km s-min=8.8km az=100.0*
ISC 01 19:44:33.0±0.6**, 19.°98S**±0.°03×**69.°19W**±0.°05**, h103**km±5km**,**
n95, σ**1.s48**/115**, mb4.2**/3**, 10C-7D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.16	169	⇓eP	Pn	19 44 48.9	+0.9
PB08				eS	Sn	19 44 60.0	+0.9
PB08	IPOC Station P	0.16	169	Pn	Pn	19 44 48.4	+0.4
PB08				Sn	Sn	19 44 59.7	+0.6
GO01	Chusmiza	0.31	359	⇑iP	Pn	19 44 49.3	+0.7
GO01				eS	Sn	19 45 00.9	+0.7
GO01				IAML		19 45 01.9	
	comp=E,17µm,0.3s						
GO01				IAML		19 45 02.1	
	comp=N,17µm,0.3s						
GO01	Chusmiza	0.31	359	Pn	Pn	19 44 49.4	+0.8
PB11	IPOC Station P	0.49	296	⇑iP	Pn	19 44 50.1	+0.8
PB11				eS	Sn	19 45 02.2	+0.8
PB11				IAML		19 45 03.8	
	comp=N,7µm,0.5s						
PB11	IPOC Station P	0.49	296	Pn	Pn	19 44 50.1	+0.8
PB11				Sn	Sn	19 45 00.1	-1.3
MNMC	Minye Minye	0.93	335	⇓eP	Pn	19 44 54.9	+1.6
MNMC				eS	Sn	19 45 10.0	+1.5
MNMC				IAML		19 45 15.0	
	comp=N,25µm,0.5s						
MNMC	Minye Minye	0.93	335	Pn	Pn	19 44 54.9	+1.6
MNMC				Sn	Sn	19 45 09.5	+1.0
TA02	Huaiquique	0.93	252	⇑iP	Pn	19 44 54.2	+1.3
TA02				eS	Sn	19 45 09.1	+1.2
TA02				IAML		19 45 13.0	
	comp=E,21µm,0.2s						
PSGC	Pisagua	0.96	293	⇑iP	Pn	19 44 54.4	+1.0
PSGC				eS	Sn	19 45 09.5	+0.8
PSGC				IAML		19 45 13.0	
	comp=N,6µm,0.5s						
PSGCX	Pisagua	0.96	293	Pn	Pn	19 44 54.2	+0.8
PSGCX				Sn	Sn	19 45 09.4	+0.7
PB01	IPOC Station P	1.09	195	⇑iP	Pn	19 44 56.1	+1.4
PB01				eS	Sn	19 45 12.6	+1.4
PB01				IAML		19 45 14.2	
	comp=N,11µm,0.3s						
PB01	IPOC Station P	1.09	195	Pn	Pn	19 44 55.2	+0.5
PB01				Sn	Sn	19 45 12.5	+1.4
TA01	Diego Aracena	1.10	238	⇑iP	Pn	19 44 55.7	+1.0
TA01				eS	Sn	19 45 11.8	+0.7
PATCX	Punta Patache	1.23	227	⇑iP	Pn	19 44 57.4	+1.1
PATCX				eS	Sn	19 45 15.3	+1.4
PATCX				IAML		19 45 23.3	
	comp=N,7µm,0.5s						
PATCX	Punta Patache	1.23	227	Pn	Pn	19 44 56.8	+0.5
PB02	IPOC Station P	1.49	206	⇑iP	Pn	19 45 00.7	+1.4
PB02				IAML		19 45 26.8	
	comp=N,9µm,0.3s						
PB16	IPOC Station P	1.67	349	eP	Pn	19 45 04.2	+2.1
PB16				eS	Sn	19 45 26.6	+2.6
PB16	IPOC Station P	1.67	349	Pn	Pn	19 45 04.2	+2.1
PB12	IPOC Station P	1.74	321	⇓iP	Pn	19 45 03.4	+0.9
PB12				iS	Sn	19 45 26.3	+1.5
PB12				IAML		19 45 32.5	
	comp=E,2µm,0.4s						
PB12	IPOC Station P	1.74	321	Pn	Pn	19 45 03.0	+0.5
PB09	IPOC Station P	1.81	182	⇓iP	Pn	19 45 05.2	+1.8
PB09				iS	Sn	19 45 28.7	+2.2
PB09				IAML		19 45 31.6	
	comp=E,1µm,0.5s						
PB09	IPOC Station P	1.81	182	Pn	Pn	19 45 05.1	+1.8
PB07	IPOC Station P	1.85	201	⇑iP	Pn	19 45 05.4	+1.4
PB07				iS	Sn	19 45 28.7	+1.1
PB07				IAML		19 45 35.9	
	comp=E,4µm,0.2s						
PB07	IPOC Station P	1.85	201	Pn	Pn	19 45 05.5	+1.5
AP01	Chacalluta	1.94	326	⇑iP	Pn	19 45 06.3	+1.4
AP01				IAML		19 45 41.2	
	comp=N,8µm,0.3s						
PB03	IPOC Station P	2.12	194	⇓iP	Pn	19 45 08.5	+1.0
PB03				IAML		19 45 44.5	
	comp=E,1µm,0.3s						
PB04	IPOC Station P	2.51	201	⇓iP	Pn	19 45 14.0	+1.6
PB04				IAML		19 45 56.2	
	comp=E,2µm,0.3s						
PB04	IPOC Station P	2.51	201	Pn	Pn	19 45 14.2	+1.8
LVC	Limon Verde	2.63	174	P	Pn	19 45 16.2	+2.0
	comp=E,37nm,0.3s,baz=26,slow=9.2,SNR=90						
LVC				S	Sn	19 45 48.3	+2.5
	comp=E,42nm,0.3s,baz=125,slow=21,SNR=14						
LVC				LR	LR	19 46 22.1	
	comp=E,79nm,18.6s,baz=106,slow=42						
LVC	Limon Verde	2.63	174	eP	Pn	19 45 16.4	+2.2
LVC				iS	Sn	19 45 48.0	+2.2
LVC	Limon Verde	2.63	174	eP	Pn	19 45 16.9	+2.6
PB06	IPOC Station P	2.73	188	eP	Pn	19 45 16.3	+0.9
PB06	IPOC Station P	2.73	188		Pn	19 45 16.9	+1.4
PB15	IPOC Station P	3.22	185	⇓iP	Pn	19 45 23.8	+1.8
PB15	IPOC Station P	3.22	185		Pn	19 45 22.9	+0.9
PB10	IPOC Station P	3.74	200		Pn	19 45 28.3	-0.3
LPAZ	La Paz	3.81	15	P	Pn	19 45 33.5	+3.3
	comp=E,6.1nm,0.3s,baz=184,slow=5.5,SNR=187						
LPAZ				S	Sn	19 46 17.2	+2.8
	comp=E,0.9nm,0.3s,baz=248,slow=20,SNR=1.6						
LPAZ				LR	LR	19 47 36.5	
	comp=E,65nm,21.7s,baz=284,slow=48						
LPAZ	La Paz	3.81	15	Pn	Pn	19 45 33.4	+3.1
PB14	IPOC Station P	4.76	193		Pn	19 45 42.1	-0.6
GO02	Mina Guanaco	5.17	184	Pn	Pn	19 45 48.1	-0.2
GO03	Copiap	7.64	187	Pn	Pn	19 46 18.1	-3.4
SIV	San Ignacio	8.68	64	P	Pn	19 46 34.4	-1.4
	comp=E,12nm,0.3s,baz=264,slow=11,SNR=274						
SIV				LR	LR	19 49 34.6	
	comp=E,67nm,18.1s,baz=103,slow=36						
GO04	Tololo Observa	10.25	188	Pn	Pn	19 46 53.6	-3.6
PTLB	Pontes e Lacer	10.58	66	eP	Pn	19 46 59.7	-1.9
VILB	Vilhena	11.09	52	eP	Pn	19 47 08.0	-0.6
SAML	Samuel	12.41	29	Pn	Pn	19 47 25.5	-0.6
SAML	Samuel	12.41	29	eP	Pn	19 47 24.4	-1.7
CPUP	Villa Florida	12.60	122	P	Pn	19 47 27.0	-1.5
	comp=E,0.2nm,0.3s,baz=299,slow=15,SNR=4.6						
CPUP	Villa Florida	12.60	122	Pn	Pn	19 47 28.4	-0.1
AQDB	Aquidauana	12.67	95	eP	Pn	19 47 31.3	+1.9
SALV	Santo Antonio	13.46	75	eP	Pn	19 47 39.5	-0.4
ITQB	Itaqui	14.92	133	eP	P	19 48 01.9	+0.2
C2SB	Chapadao do Su	15.47	88	eP	P	19 48 06.9	-0.9
TRCB	Terra Rica	15.67	103	eP	P	19 48 09.1	-0.9
CLDB	Colider	15.76	57	eP	Pn	19 48 07.6	-1.6
PTGB	Pitanga	16.52	110	eP	P	19 48 21.9	+2.4
PCMB	Pacaembu	16.84	99	eP	P	19 48 24.2	+1.3
ARAG	Araguaiana, MT	17.08	78	eP	P	19 48 26.4	+0.9
ITAB	Concordia	17.21	118	eP	Pn	19 48 28.4	+1.4
CPSB	Cacapava Do Su	17.61	129	eP	Pn	19 48 33.0	+1.2
ITRB	Iturama	17.71	92	eP	Pn	19 48 32.9	-0.3
PLTB	Pedras Altas	18.26	133	eP	Pn	19 48 40.4	+0.8
FRTB	Fartura	18.54	104	eP	Pn	19 48 41.8	-1.3
MACA	Manacapuru-AM	18.66	27	eP	P	19 48 41.7	-1.4
CNLB	Canela	19.06	123	eP	Pn	19 48 48.3	-0.8
BB19B	Bebedouro	19.38	97	eP	P	19 48 50.5	-0.3
IPMB	Ipameri, GO	19.93	88	eP	P	19 48 56.5	-0.4
RCLB	Rio Claro- Sao	20.33	101	eP	P	19 48 59.9	-1.3
SPB	Sao Paulo	20.51	104	eP	Pn	19 49 04.3	-1.8
BDFB	Brasilia	20.61	81	P	P	19 49 02.7	-1.6
	comp=E,3.0nm,0.4s,baz=250,slow=6.7,SNR=5.1						
BDFB	Brasilia	20.61	81	P	P	19 49 04.0	-0.2
PLCA	Paso Flores	20.71	183	P	P	19 49 06.3	+1.2
	comp=E,4.1nm,0.7s,baz=4.9,slow=12,SNR=15						
PLCA	Paso Flores	20.71	183	IAmb	IAmb	19 49 10.2	
	comp=Z,62nm,1.9s						
PET01	Itanhaem-SP	20.74	106	eP	P	19 49 05.5	+0.1
VAO	Valinhos	20.89	102	eP	P	19 49 06.5	-0.6
PTGA	Pitinga	21.16	26	P	P	19 49 08.3	-1.7
	comp=Z,2.6nm,0.3s,baz=73,slow=23,SNR=11						
PTGA	Pitinga	21.16	26	P	P	19 49 08.4	-1.5
PTGA				IAmb	IAmb	19 49 45.9	
	comp=Z,11nm,1.4s						
PTGA	Pitinga	21.16	26	eP	P	19 49 08.3	-1.7
BSCB	Bom Sucesso	22.89	97	eP	P	19 49 28.1	0.0
MAN01	Angra dos Reis	23.64	101	eP	P	19 49 35.0	-0.2
BOAV	Boa Vista	23.81	22	eP	P	19 49 34.8	-1.8
JANB	Januaria	24.21	82	eP	P	19 49 39.8	-0.5
RUSC	La Rusia	26.00	351	P	P	19 49 58.8	+1.9
SJMB	Sao Joao De Ma	26.44	92	eP	P	19 49 59.8	-0.7
BSFB	Barra de Sao F	26.74	92	eP	P	19 50 02.7	-0.4
ROSB	Rosrio	29.78	58	eP	P	19 50 30.1	-0.1
DBIC	Dimbokro	68.56	74	P	P	19 55 24.3	-0.8
	comp=Z,3.2nm,0.5s,baz=220,slow=2.5,SNR=10.0						
DBIC	Dimbokro	68.56	74	IAmb	IAmb	19 57 53.5	
	comp=Z,18nm,1.4s						
TORD	Torodi Ar. Bea	77.10	71	P	P	19 56 14.8	-0.7
	comp=Z,1.5nm,0.4s,baz=253,slow=5.4,SNR=31						
TORD				pP	pP	19 56 42.5	-0.9
	comp=Z,1.6nm,0.7s,baz=248,slow=5.1,SNR=4.0						
ASAR	Alice Springs	131.12	209	PKP	PKiKP	20 03 34.2	-0.3
	comp=Z,0.3nm,0.8s,baz=134,slow=1.7,SNR=5.4						
WRA	Warramunga Arr	134.11	212	PKP	PKiKP	20 03 40.4	-0.2
	comp=Z,0.4nm,0.6s,baz=158,slow=1.7,SNR=5.1						
MKAR	Makanchi Array	144.55	34	PKP	PKiKP	20 03 58.8	-2.3
	comp=Z,0.5nm,0.9s,baz=295,slow=2.2,SNR=2.3						
SONM	Songino Array	151.99	6	PKPbc	PKiKP	20 04 17.7	+1.2
	comp=Z,0.2nm,0.4s,baz=315,slow=1.5,SNR=4.1						
LZH	Lanzhou	162.83	19	ePKP	PKPdf	20 04 23.7	+0.2
LZH				pPKP	pPKPdf	20 04 51.2	-2.0
LZH				sPKP		20 05 02.3	
LZH				PKP	PKPab	20 05 16.0	+3.2

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*NNC **01** 19:50:38.6±0.3, 43.°21N×78.°67E, h0km, mb3.6, mpv3.7, Error ellipse: s-maj=4.2km s-min=1.6km az=175.0*
*KRNET **01** 19:50:39.3±0.1, 43.°23N×78.°65E, h19km, mb3.5*
*SOME **01** 19:50:39.4, 43.°28N×78.°63E, h10km*
ISC 01 19:50:39.9±0.9**, 43.°22N**±0.°02×**78.°63E**±0.°02**, h19**km±2km**,**
n88, σ**1.s59**/152**, 32C-18D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.23	226	eP	Pb	19 50 44.0	-1.3
	1µm,0.2s						
SATY				eS	Sb	19 50 47.7	-1.2
	11µm,0.2s						
SATY	Saty	0.23	226	P	Pb	19 50 44.0	-1.3
	1µm,0.2s						
SATY				S	Sb	19 50 47.7	-1.2
	11µm,0.2s						
KURS	Kuram	0.43	308	eP	Pg	19 50 48.0	-0.9
	baz=6.0						
KURS				eS	Sg	19 50 54.1	-0.8
	baz=6.0						
KURS	Kuram	0.43	308	eP	Pg	19 50 48.0	-0.9
	7.7nm,0.1s						
KURS				eS	Sg	19 50 54.0	-0.8
	56nm,0.1s						
KURS	Kuram	0.43	308	P	Pg	19 50 48.0	-0.9
	7.7nm,0.1s						
KURS				S	Sg	19 50 54.0	-0.9
	40nm,0.2s						
SHLS	Shalkode	0.61	96	eP	Pn	19 50 56.4	+2.8
	baz=94						
SHLS				eS	Sn	19 51 08.5	+5.6
	baz=94						
SHLS	Shalkode	0.61	96	eP	Pn	19 50 56.4	+2.8
	10nm,0.1s						
SHLS				eS	Sn	19 51 08.6	+5.6
	171nm,0.3s						
SHLS	Shalkode	0.61	96	P	Pn	19 50 56.3	+2.7
	10nm,0.1s						
SHLS				S	Sn	19 51 08.3	+5.3
	171nm,0.3s						
PDGK	Podgornoye	0.64	80	P	Pb	19 50 50.8	-1.6
	35nm,0.1s						
PDGK				S	Sb	19 50 59.1	-1.7
	150nm,0.2s						
PDGK	Podgornoye	0.64	80	⇑P	Pb	19 50 50.7	-1.6
	51nm,0.5s						
PDGK				⇓S	Sb	19 50 58.7	-2.2
	58nm,0.5s						
PRZ	Przheval'sk	0.76	193	⇑iP	Pb	19 50 54.2	-0.4
	baz=93						
PRZ				⇑iS	Sg	19 51 04.6	-0.4
	baz=93						
ANVS	Anan'yevo	0.83	239	⇑iP	Pb	19 50 54.8	-1.0
	baz=39						
ANVS				⇑iS	Sb	19 51 06.8	+0.1
	baz=39						
MNBS	Baschi	0.87	349	eP	Pg	19 50 56.3	-0.7
	89nm,0.1s						
MNBS				eS	Sn	19 51 08.3	-1.2
	418nm,0.2s						
MNBS	Baschi	0.87	349	P	Pg	19 50 56.1	-0.9
	89nm,0.1s						
MNBS				S	Sg	19 51 08.0	-0.6
	418nm,0.2s						
KOTS	Kotyrbulak	1.11	271	eP	Pb	19 51 00.3	-0.3
	baz=70						
KOTS				eS	Sg	19 51 15.7	-0.5
	baz=70						
KOTS	Kotyrbulak	1.11	271	eP	Pb	19 51 00.3	-0.3
	249nm,0.2s						
KOTS				eS	Sg	19 51 15.7	-0.5
	356nm,0.3s						
KOTS	Kotyrbulak	1.11	271	P	Pb	19 51 00.3	-0.3
	249nm,0.2s						
KOTS				S	Sn	19 51 15.3	-0.2
	356nm,0.3s						
ARXS	Arharly	1.15	330	eP	Pb	19 51 00.8	-0.3
	31nm,0.1s						
ARXS				eS	Sg	19 51 16.3	-1.0
	73nm,0.1s						
ARXS	Arharly	1.15	330	P	Pb	19 51 00.5	-0.6
	31nm,0.1s						
ARXS				S	Sn	19 51 15.6	-0.6

	73nm,0.1s						
MDOK	Medeo	1.16	268	eP	Pn	19 51 00.8	-0.4
	baz=67						
MDOK				eS	Sb	19 51 16.0	-0.1
	baz=67						
MDOK	Medeo	1.16	268	eP	Pn	19 51 00.8	-0.4
	36nm,0.2s						
MDOK				eS	Sb	19 51 16.0	-0.1
	181nm,0.4s						
MDOK	Medeo	1.16	268	⇓P	Pn	19 51 00.4	-0.9
	6.0nm,0.2s						
MDOK				⇓S	Sb	19 51 15.9	-0.1
	30nm,0.2s						
MDOK	Medeo	1.16	268	Pg	Pn	19 51 00.8	-0.4
	36nm,0.2s						
MDOK				Lg	Lg	19 51 16.0	
	181nm,0.4s						
KNDC	Almaty	1.22	270	⇓P	Pb	19 51 02.0	-0.4
	24nm,0.5s						
KNDC				⇓S	Sg	19 51 18.6	-0.9
	88nm,0.3s						
TNSS	Tian-Shan	1.25	262	eP	Pn	19 51 02.4	-0.3
	baz=62						
TNSS				eS	Sn	19 51 19.2	0.0
	baz=62						
TNSS	Tian-Shan	1.25	262	eP	Pn	19 51 02.4	-0.3
	30nm,0.2s						
TNSS				eS	Sn	19 51 19.1	0.0
	99nm,0.3s						
TNSS	Tian-Shan	1.25	262	P	Pn	19 51 02.4	-0.3
	30nm,0.2s						
TNSS				S	Sn	19 51 19.1	0.0
	99nm,0.3s						
AAA	Alma-Ata	1.26	270	eP	Pg	19 51 03.3	-0.9
	baz=69						
AAA				eS	Sg	19 51 20.3	-0.4
	baz=69						
AAA	Alma-Ata	1.26	270	eP	Pg	19 51 03.3	-0.9
	81nm,0.1s						
AAA				eS	Sg	19 51 20.3	-0.4
	19nm,0.1s						
AAA	Alma-Ata	1.26	270	P	Pg	19 51 03.3	-0.9
	81nm,0.1s						
AAA				S	Sg	19 51 20.3	-0.4
	19nm,0.1s						
KTMS	Ketmen	1.27	79	eP	Pb	19 51 02.5	-0.9
	baz=79						
KTMS				eS	Sn	19 51 18.9	-0.5
	baz=79						
KTMS	Ketmen	1.27	79	eP	Pb	19 51 02.5	-0.9
	14nm,0.1s						
KTMS				eS	Sn	19 51 18.9	-0.5
	335nm,0.2s						
KTMS	Ketmen	1.27	79	P	Pb	19 51 02.5	-0.9
	14nm,0.1s						
KTMS				S	Sn	19 51 18.9	-0.5
	335nm,0.2s						
CHKK	Chushkaly	1.35	298	eP	Pb	19 51 04.6	0.0
	baz=98						
CHKK				eS	Sb	19 51 22.1	+0.6
	baz=98						
CHKK	Chushkaly	1.35	298	eP	Pb	19 51 04.6	0.0
	5.3nm,0.1s						
CHKK				eS	Sb	19 51 22.1	+0.6
	103nm,0.2s						
CHKK	Chushkaly	1.35	298	P	Pb	19 51 04.3	-0.3
	5.3nm,0.1s						
CHKK				S	Sb	19 51 22.1	+0.6
	103nm,0.2s						
DJR	Jarkent	1.39	37	eP	Pg	19 51 05.2	-1.6
	60nm,0.3s						
DJR				eS	Sg	19 51 23.6	-1.3
	323nm,0.5s						
DJR	Jarkent	1.39	37	P	Pb	19 51 05.1	-0.2
	60nm,0.3s						
DJR				S	Sg	19 51 23.4	-1.6
	323nm,0.5s						
IZV	Izvestkoviy	1.49	263	eP	Pb	19 51 07.2	+0.2
	baz=63						
IZV				eS	Sg	19 51 27.1	-1.0
	baz=63						
IZV	Izvestkoviy	1.49	263	eP	Pb	19 51 07.2	+0.2
	18nm,0.1s						
IZV				eS	Sg	19 51 27.1	-1.0
	150nm,0.2s						
KTBS	Karatobe	1.50	290	eP	Pb	19 51 07.2	+0.1
	30nm,0.2s						
KTBS				eS	Sg	19 51 27.1	-1.4
	288nm,0.4s						
KTBS	Karatobe	1.50	290	P	Pb	19 51 07.0	-0.1
	30nm,0.2s						
KTBS				S	Sb	19 51 26.8	+1.0
	288nm,0.4s						
KDJ	Kajisay	1.53	225	⇑iP	Pb	19 51 07.4	-0.3
	baz=25						
KDJ				⇑iS	Sb	19 51 27.4	+0.6
	baz=25						
MTBS	Maitube	1.61	267	eP	Pb	19 51 09.0	-0.1
	15nm,0.2s						
MTBS				eS	Sg	19 51 30.5	-1.5
	298nm,0.3s						
MTBS	Maitube	1.61	267	P	Pb	19 51 09.1	0.0
	15nm,0.2s						
MTBS				S	Sg	19 51 30.5	-1.5
	298nm,0.3s						
TDK	Taldyqorghan	1.79	355	eP	Pb	19 51 12.1	+0.1
	40nm,0.1s						
TDK				eS	Sg	19 51 35.8	-1.7
	349nm,0.2s						
TDK	Taldyqorghan	1.79	355	P	Pb	19 51 11.6	-0.4
TDK				S	Sg	19 51 35.0	-2.6
KUU	Kurty	1.80	293	eP	Pb	19 51 12.1	-0.1
	baz=92						
KUU				eS	Sb	19 51 35.6	+1.3
	baz=92						
KUU	Kurty	1.80	293	eP	Pb	19 51 12.1	-0.1
	6.7nm,0.2s						
KUU				eS	Sb	19 51 35.6	+1.3
	110nm,0.2s						
KUU	Kurty	1.80	293	P	Pb	19 51 12.1	-0.1
	6.7nm,0.2s						
KUU				S	Sb	19 51 35.3	+1.0
	136nm,0.4s						
KST	Kastek	1.96	266	eP	Pb	19 51 15.4	+0.4
	29nm,0.3s						
KST				eS	Sg	19 51 41.8	-1.4
	56nm,0.3s						
KST	Kastek	1.96	266	Pg	Pb	19 51 15.4	+0.4
	29nm,0.3s						
KST				Lg	Lg	19 51 41.2	
	56nm,0.3s						
ULHL	Ulahol	2.02	242	⇑iP	Pb	19 51 15.4	-0.6
	baz=42						
ULHL				⇑iS	Sb	19 51 41.3	+0.6
	baz=42						
ULHL	Ulahol	2.02	242	P	Pb	19 51 15.7	-0.3
	SNR=113						
BOOM	Boomskoye usch	2.11	251	⇓iP	Pb	19 51 16.6	-1.0
	baz=51						
BOOM				⇓iS	Sb	19 51 43.4	-0.1
	baz=51						
KAPS	Kapalarasan	2.13	14	eP	Pb	19 51 18.4	+0.5
	7.0nm,0.1s						
KAPS				eS	Sg	19 51 46.4	-2.0
	252nm,0.3s						
KAPS	Kapalarasan	2.13	14	Pg	Pb	19 51 18.4	+0.5
	7.0nm,0.1s						
KAPS				Lg	Lg	19 51 46.2	
	252nm,0.3s						
KRBS	Karabastau	2.21	283	eP	Pb	19 51 19.6	+0.5
	8.4nm,0.2s						
KRBS				eS	Sg	19 51 48.4	-2.5
	111nm,0.2s						
TKM2	Tokmak 2	2.25	263	⇑iP	Pb	19 51 18.2	-1.7
	baz=63						
TKM2				⇑iS	Sb	19 51 46.5	-0.9
	baz=63						
TKM2	Tokmak 2	2.25	263	P	Pb	19 51 19.9	0.0
	SNR=81						
TKM2	Tokmak 2	2.25	263	⇓Pn	Pb	19 51 19.7	-0.2
	6.6nm,0.3s						
TKM2				⇑Sn	Sg	19 51 50.3	-1.9
	28nm,0.5s						
NRN	Naryn	2.65	228	⇑iP	Pb	19 51 24.8	-2.1
	baz=29						
NRN				⇑iS	Sb	19 51 57.4	-1.7
	baz=29						
KZA	Kyzart	2.75	247	⇑iP	Pn	19 51 25.5	+2.3
	baz=46						
KZA				⇑iS	Sb	19 51 58.9	-3.1
	baz=46						
KZA	Kyzart	2.75	247	P	Pb	19 51 28.2	-0.3
	SNR=28						
KBK	Karagaybulak	2.77	259	⇓iP	Pn	19 51 25.5	+2.2
	baz=59						
KBK				⇓iS	Sn	19 51 58.9	+2.7
	baz=59						
KBK	Karagaybulak	2.77	259	P	Pb	19 51 28.7	-0.1
	SNR=63						
CHMS	Chumysh	2.85	267	⇑iP	Pn	19 51 26.6	+2.3
	baz=67						
CHMS				⇑iS	Sn	19 52 00.3	+2.2
	baz=67						
CHMS	Chumysh	2.85	267	P	Pb	19 51 30.3	+0.1
	SNR=8.2						
FRU1	Bishkek	2.96	263	⇑iP	Pn	19 51 28.0	+2.1
	baz=63						
FRU1				⇑iS	Sn	19 52 03.4	+2.4
	baz=63						
USP	Ospenovka	3.02	272	⇑iP	Pn	19 51 28.4	+1.7
	baz=72						
USP				⇑iS	Sn	19 52 04.8	+2.5
	baz=72						
USP	Ospenovka	3.02	272	P	Pb	19 51 33.0	0.0
	SNR=10						
AAK	Ala-Archa	3.10	261	⇑iP	Pn	19 51 29.7	+1.9
	baz=60						
AAK				⇑iS	Sn	19 52 07.1	+2.8
	baz=60						
AAK	Ala-Archa	3.10	261	P	Pb	19 51 33.1	-1.3
	SNR=15						
AAK	Ala-Archa	3.10	261	⇑Pg	Pb	19 51 33.9	-0.5
	3.1nm,0.3s						
AAK				⇑Lg	Lg	19 52 14.8	
	38nm,0.7s						
UCH	Uchtor	3.19	253	⇑iP	Pn	19 51 31.3	+1.9
	baz=53						
UCH				⇑iS	Sn	19 52 09.9	+2.7
	baz=53						
UCH	Uchtor	3.19	253	P	Pb	19 51 34.4	-1.9
	SNR=22						
EKS2	Erkin-Say	3.61	263	⇑iP	Pn	19 51 37.2	+2.4
	baz=63						
EKS2				⇑iS	Sn	19 52 19.0	+2.0
	baz=63						
EKS2	Erkin-Say	3.61	263	P	Pb	19 51 44.6	+1.5
	SNR=11						
AML	Almayashu	3.80	255	⇑iP	Pn	19 51 40.0	+2.3
	baz=55						
AML				⇑iS	Sn	19 52 23.9	+1.8
	baz=55						
AML	Almayashu	3.80	255	P	Pb	19 51 48.4	+1.8
	SNR=6.5						
MRKS	Merke	4.00	265	eP	Pb	19 51 51.5	+1.8
	3.3nm,0.2s						
MRKS				eS	Sg	19 52 43.4	-4.7
	11nm,0.2s						
MRKS	Merke	4.00	265	Pg	Pb	19 51 51.5	+1.8
	3.3nm,0.2s						
MRKS				Lg	Lg	19 52 43.4	
	11nm,0.2s						
MAKZ	Makanchi	4.30	32	⇓Pg	Pg	19 51 58.2	-4.0
	0.8nm,0.3s						
MAKZ				⇓Lg	Lg	19 52 51.2	
	2.1nm,0.4s						
MK31	Makanchi Array	4.41	35	⇓Pn	Pn	19 51 48.0	+2.2
	0.5nm,0.2s,baz=212,slow=14,SNR=39						
MK31				⇓Sn	Sn	19 52 39.0	+2.4
	0.8nm,0.3s,baz=211,slow=25,SNR=6.0						
MK31				⇓Lg	Lg	19 52 55.4	
	0.9nm,0.2s,baz=212,slow=29,SNR=9.5						
KK31	Karatay Array	5.94	272	Pg	Pb	19 52 27.8	+5.0
	0.4nm,0.4s,baz=100,slow=15,SNR=9.1						
KK31				Lg	Lg	19 53 49.3	
	2.2nm,0.5s,baz=74,slow=29,SNR=7.2						
OTUK	Ortayu	6.68	321	⇓Lg	Lg	19 54 06.9	
	2.6nm,0.5s						
KURBB	Kurchatov Arra	7.40	359	⇓Lg	Lg	19 54 29.2	
	12nm,1.0s						
KURK	Kurchatov	7.50	360	⇓Lg	Lg	19 54 33.7	
	12nm,0.8s						

IDC 01 20:11:10.3±2.5**, 3°.71N**×**125°.80E, h0**km**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.1**/37**, mbtmp3.2**/3**, Error ellipse: s-maj=242.6km s-min=28.2km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.96	161	P	P	20 16 36.9	+1.2
	0.2nm,0.4s,baz=342,slow=8.9,SNR=5.4						
ASAR	Alice Springs	28.33	164	P	P	20 17 04.8	-1.3
	0.3nm,0.9s,baz=341,slow=7.1,SNR=1.4						
MKAR	Makanchi Array	57.05	326	P	P	20 20 58.0	-0.2
	0.1nm,0.4s,baz=124,slow=6.7,SNR=4.6						

MEX ***01*** *20:11:42.6±0.4, 31°.46N×115°.39W, h20km±89km, MD3.6*
ECX ***01*** *20:11:42.3±0.4, 31°.24N×115°.92W, h5km±22km, MD2.8, ML3.0*
ISC 01 20:11:40.6±1.1**, 31°.21N**±0°.04×**115°.95W**±0°.03**, h19**km±3km**, n14, σ0s.94**/26**, 4C-4D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVX	San Vicente	0.28	294	⇑iP	Pg	20 11 47.1	+0.1
SVX				eS	Sg	20 11 51.1	-0.2
SPIG	San Pedro Mart	0.44	112	eP	Pg	20 11 49.7	-0.2
SPIG				eS	Sg	20 11 56.0	-0.2
SPIG	San Pedro Mart	0.44	112	eP	Pg	20 11 50.0	+0.1
SPIG				eS	Sg	20 11 56.0	-0.2
SPX	San Pedro Mart	0.45	113	⇑eP	Pg	20 11 50.1	+0.1
SPX				eS	Sg	20 11 56.1	-0.2
SPX				e		20 11 56.3	
SPX				IAML		20 11 56.3	
	comp=E,1μm,0.1s						
SPX	San Pedro Mart	0.45	113	eP	Pg	20 11 49.8	-0.2
SPX				eS	Sg	20 11 55.8	-0.5
SQX	San Quintin	0.64	175	⇓eP	Pg	20 11 53.5	+0.3
SQX				eS	Sg	20 12 02.6	+0.7
ESJX	Sierra Juarez	0.79	360	eP	Pb	20 11 54.4	-1.4
ESJX				eS	Sb	20 12 04.8	-1.5
ECBX	El Chinero	0.81	71	⇑eP	Pb	20 11 56.5	+0.4
ECBX				eS	Sb	20 12 06.5	-0.1
SFX	San Felipe	0.96	100	⇓eP	Pg	20 11 59.5	+0.3
SFX				eS	Sb	20 12 11.4	+0.6
CBX	Cerro Bola	1.26	331	eP	Pn	20 12 03.5	+0.2
CBX				IAML		20 12 27.9	
	comp=E,214nm,0.6s						
CBX				⇑e		20 12 27.9	
CBX	Cerro Bola	1.26	331	eP	Pn	20 12 03.5	+0.2
CBX				eS	Sb	20 12 19.8	+0.1
ERMX	Rumorosa	1.34	357	⇓e	Sb	20 12 25.1	+3.1
ERMX				IAML		20 12 25.1	
	comp=E,354nm,0.4s						
ERMX				IAML		20 12 25.4	
	comp=N,210nm,0.2s						
ERMX				⇓e		20 12 25.4	
MBIG	Mexicali	1.35	28	eP	Pg	20 12 08.0	+1.2
MBIG				eS	Sn	20 12 20.4	-1.4
TJIG	Tijuana	1.37	333	eP	Pn	20 12 05.0	+0.3
TJIG				eS	Sn	20 12 22.1	-0.2

JMA ***01*** *20:28:41.3±0.1, 24°.36N×121°.89E, h38km±3km, M2.1*
TAP ***01*** *20:28:41.4, 24°.41N×121°.92E, h24km, ML2.9, C*
ISC 01 20:28:40.5±0.9**, 24°.38N**±0°.02×**122°.00E**±0°.02**, h17**km±7km**, n89, σ0s.92**/160**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.20	35	P	Pg	20 28 47.8	+2.5
	baz=49						
EOS1				i S	Sg	20 28 53.1	+4.5
	baz=49						
ENA	Nanau	0.24	281	P	Pb	20 28 46.4	0.0
	baz=276						
ENA				S	Sb	20 28 50.0	-0.4
	baz=276						
TWC	Suao	0.27	328	P	Pb	20 28 46.9	+0.1
	baz=345						
TWC				S	Sb	20 28 50.6	-0.5
	baz=345						
NACB	Ninganchiao	0.42	241	i P	Pb	20 28 49.6	0.0
	baz=235						
NACB				S	Sb	20 28 56.1	+0.4
	baz=235						
ILA	Ilan	0.45	329	i P	Pb	20 28 50.4	+0.5
	baz=331						
ILA				i S	Sb	20 28 57.0	+0.7
	baz=331						
TWE	Neicheng	0.45	318	P	Pb	20 28 49.8	-0.2
	baz=325						
TWE				S	Sb	20 28 55.8	-0.8
	baz=325						
ENTT	Nioudou	0.47	303	P	Pb	20 28 50.0	-0.4
	baz=306						
ENTT				eS	Sg	20 28 55.9	-0.5
	baz=306						
TWD	Chiawan	0.48	231	P	Pb	20 28 50.6	+0.2
	baz=224						
TWD				S	Sb	20 28 58.3	+1.2
	baz=224						
NTC	Toucheng	0.49	342	P	Pb	20 28 51.2	+0.5
	baz=350						
NTC				eS	Sb	20 28 58.4	+0.7
	baz=350						
NDT	Datong Townshi	0.50	296	P	Pb	20 28 50.4	-0.4
	baz=298						
NDT				eS	Sg	20 28 56.8	-0.3
	baz=298						
SLBB	Yuanshan	0.50	318	P	Pb	20 28 50.7	-0.1
	baz=324						
SLBB				S	Sb	20 28 57.5	-0.4
	baz=324						
ETLH	Xiulin Townshi	0.51	250	i P	Pb	20 28 50.7	-0.2
	baz=247						
ETLH				S	Sb	20 28 58.8	+0.7
	baz=247						
HWA	Hwalien	0.54	222	eS	Sn	20 29 02.0	-0.1
	baz=212						
NNSH	Datong	0.56	275	P	Pb	20 28 51.7	-0.3
	baz=276						
NNSH				S	Sg	20 28 58.9	-0.4
	baz=276						
NNSB	Datong	0.57	275	P	Pb	20 28 51.6	-0.4
	baz=278						
NNSB				S	Sg	20 28 59.3	-0.1
	baz=278						
NNS	Nan Shan	0.57	276	P	Pb	20 28 51.8	-0.4
	baz=280						
NNS				eS	Sg	20 28 59.1	-0.6
	baz=280						
NWLT	Wulai	0.60	311	P	Pb	20 28 52.2	-0.4
	baz=315						
NWLT				S	Sg	20 28 59.6	-0.8
	baz=315						
TIPB	Shuangxi	0.61	345	P	Pb	20 28 52.8	0.0
	baz=357						
TIPB				S	Sb	20 29 01.1	0.0
	baz=357						
YHNB	Yeheng	0.64	297	P	Pb	20 28 52.7	-0.5
	baz=298						
YHNB				S	Sg	20 29 00.9	-0.6
	baz=298						
NSK	Sanguang	0.66	297	P	Pb	20 28 53.0	-0.5
	baz=298						
NSK				S	Sg	20 29 01.1	-1.0
	baz=298						
TWA	Mucha	0.71	328	eP	Pb	20 28 54.4	0.0
	baz=324						
TWA				S	Sb	20 29 03.5	-0.3
	baz=324						
WHF	Hehuan Shan	0.71	251	P	Pb	20 28 54.6	-0.1
	baz=253						
WHF				eS	Sb	20 29 04.3	0.0
	baz=253						
NWF	Wu-fen Shan	0.71	344	eP	Pn	20 28 55.3	-0.6
	baz=343						
NWF				eS	Sb	20 29 04.4	+0.3
	baz=343						
WFSB	Wu-fen Shan	0.71	344	P	Pn	20 28 55.6	-0.3
	baz=343						
WFSB				S	Sb	20 29 04.7	+0.6
	baz=343						
NHDH	Xindian Distri	0.72	323	eP	Pb	20 28 55.0	+0.4
	baz=321						
NHDH				eS	Sb	20 29 04.2	0.0
	baz=321						
TATO	Taipei	0.75	322	P	Pb	20 28 55.3	+0.2
	baz=319						
TATO				S	Sb	20 29 05.2	+0.1
	baz=319						
TWT	Tachien	0.76	260	eP	Pn	20 28 56.4	-0.3
	baz=257						
TWT				eS	Sb	20 29 06.2	+0.6
	baz=257						
TDCB	Techi	0.78	261	eP	Pb	20 28 55.6	-0.1
	baz=258						
TDCB				S	Sb	20 29 06.1	0.0
	baz=258						
TAP1	Taipei	0.79	326	P	Pn	20 28 56.6	-0.2
	baz=330						
TAP1				S	Sb	20 29 06.6	+0.6
	baz=330						
TAP	Taipei	0.79	326	eP	Pn	20 28 57.3	+0.3
	baz=330						
TAP				S	Sb	20 29 06.6	+0.3
	baz=330						
CHGB	Renai	0.82	247	P	Pb	20 28 56.5	+0.1
	baz=249						
CHGB				eS	Sb	20 29 08.2	+0.9
	baz=249						
WLTB	Daxi	0.83	305	P	Pn	20 28 57.1	-0.2
	baz=311						
WLTB				S	Sb	20 29 08.3	+1.0
	baz=311						
YM01	YM01	0.86	333	P	Pb	20 28 57.4	+0.4
	baz=337						
YM01				S	Sb	20 29 08.7	+0.6
	baz=337						
JYNG	Yonagunijimaku	0.86	85	P	Pn	20 28 59.0	+1.1
JYNG				S	Sn	20 29 11.4	+1.3
OWD	Renai	0.87	241	P	Pb	20 28 57.0	-0.2
	baz=236						
OWD				eS	Sb	20 29 08.7	+0.2
	baz=236						
YM10	YM10	0.87	333	P	Pb	20 28 57.4	+0.3
	baz=337						
YM10				S	Sb	20 29 09.0	+0.5
	baz=337						
YM05	YM05	0.87	333	P	Pn	20 28 57.8	-0.3
	baz=337						
YM05				eS	Sb	20 29 09.7	+1.0
	baz=337						
YM04	YM04	0.88	331	P	Pb	20 28 57.7	+0.4
	baz=335						
YM04				eS	Sb	20 29 09.2	+0.4
	baz=335						
EGFH	Guangfu	0.88	217	S	Sb	20 29 10.0	+1.1
	baz=225						
TWS1	Kuangyinshan	0.89	324	P	Pb	20 28 57.8	+0.3
	baz=338						
TWS1				eS	Sb	20 29 09.2	+0.1
	baz=338						
YM03	YM03	0.90	332	P	Pn	20 28 58.8	+0.4
	baz=336						
YM03				S	Sb	20 29 09.7	+0.3
	baz=336						
ANP	Anpu	0.91	331	P	Pb	20 28 58.0	0.0
	baz=336						
ANP				eS	Sb	20 29 10.8	+1.0
	baz=336						
YOJ	Yonaguni jima	0.92	85	eP	Pn	20 28 59.1	+0.4
	baz=79						
YOJ				S	Sn	20 29 13.1	+1.5
	baz=79						
NTST	Danshui	0.93	327	eP	Pb	20 28 57.5	-0.6
	baz=341						
NTST				S	Sb	20 29 11.2	+1.1
	baz=341						
LIOB	Emei	0.94	286	P	Pb	20 28 58.8	+0.5
	baz=287						
LIOB				eS	Sb	20 29 10.5	+0.1
	baz=287						
NCU	National Centr	0.94	308	eS	Sn	20 29 12.3	+0.2
	baz=297						
NCUH	Zhongli	0.94	308	eS	Sb	20 29 11.8	+1.1
	baz=311						
NSTT	Nanjuang	0.94	285	P	Pb	20 28 58.5	+0.1
	baz=285						
NSTT				S	Sb	20 29 11.5	+0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=285						
TWY	Chenhua	0.96	338	P	Pn	20 28 59.5	+0.3
	baz=342						
TWY				S	Sb	20 29 12.2	+1.1
	baz=342						
WHP	Taichung City	0.97	264	eP	Pn	20 28 59.6	+0.2
	baz=267						
WHP				S	Sb	20 29 12.6	+1.2
	baz=267						
VWDT	VWDT	1.00	232	eP	Pg	20 28 58.8	-1.2
	baz=227						
VWDT				S	Sb	20 29 13.3	+1.0
	baz=227						
SBCB	Hsinchu	1.01	294	S	Sn	20 29 14.3	+0.6
	baz=295						
HGSD	Ruisui	1.03	211	eP	Pn	20 29 00.8	+0.6
	baz=222						
HGSD				eS	Sn	20 29 17.7	+3.4
	baz=222						
DPDB	Guoxing	1.04	251	P	Pg	20 28 59.4	-1.3
	baz=248						
DPDB				eS	Sb	20 29 14.0	+0.5
	baz=248						
EHY	Hungye	1.07	216	P	Pg	20 28 59.9	-1.3
	baz=210						
EHY				S	Sb	20 29 15.0	+0.7
	baz=210						
TWQ1	Liyutan	1.12	268	P	Pn	20 29 02.1	+0.7
	baz=267						
TWQ1				S	Sn	20 29 17.4	+0.9
	baz=267						
SMLT	Sun Moon Lake	1.12	244	P	Pb	20 29 01.6	+0.1
	baz=233						
SMLT				S	Sn	20 29 17.8	+1.1
	baz=233						
SSLB	Suanglung	1.12	238	eP	Pn	20 29 02.0	+0.5
	baz=226						
SSLB				S	Sb	20 29 16.7	+0.8
	baz=226						
NSY	Sanyi	1.13	272	eS	Sb	20 29 17.0	+0.9
	baz=270						
YULB	Yu-li	1.18	213	eP	Pg	20 29 01.7	-1.5
	baz=209						
YULB				eS	Sg	20 29 17.5	-1.1
	baz=209						
TWF1	Yuli	1.21	212	eP	Pg	20 29 01.4	-2.4
	baz=222						
TWF1				eS	Sg	20 29 18.8	-0.9
	baz=222						
WHYT	Xinyi Township	1.25	237	eP	Pg	20 29 03.7	-1.0
	baz=224						
WJS	Zhushan	1.29	245	S	Sn	20 29 23.2	+2.6
	baz=227						
WNT	Mingjian	1.30	248	eP	Pb	20 29 04.8	+0.3
	baz=244						
WNT				S	Sn	20 29 23.4	+2.4
	baz=244						
ALS	Alishan	1.40	232	eP	Pg	20 29 07.2	-0.3
	baz=217						
CHN5	Tsauling	1.44	237	P	Pn	20 29 06.6	+0.7
	baz=234						
CHN5				eS	Sb	20 29 25.6	+0.6
	baz=234						
WGK	Gukeng	1.49	243	S	Sg	20 29 27.6	-0.9
	baz=239						
ELDTW	Lidau	1.49	217	eP	Pn	20 29 05.8	-0.8
	baz=213						
ELDTW				S	Sn	20 29 26.3	+0.6
	baz=213						
WDLH	Douliu	1.50	243	eP	Pg	20 29 08.7	-0.7
	baz=240						
WDLH				eS	Sb	20 29 28.0	+1.2
	baz=240						
IRIF	Iriomote-Funau	1.58	91	P	Pb	20 29 08.8	-0.4
IRIF				eS	Sg	20 29 29.9	-1.5
RLNB	Erlin	1.58	252	eS	Sg	20 29 30.5	-0.8
	baz=249						
CHN4	Tsaushan	1.65	232	P	Pg	20 29 11.4	-0.8
	baz=229						
CHN4				S	Sb	20 29 31.8	+0.9
	baz=229						
TPUB	Ta-pu	1.65	230	P	Pb	20 29 10.2	-0.3
	baz=226						
TPUB				S	Sb	20 29 32.1	+0.9
	baz=226						
WTP	Ta-pu	1.70	229	eP	Pb	20 29 11.1	-0.3
	baz=225						
WTP				S	Sb	20 29 34.0	+1.5
	baz=225						
TWGBT	Beinan	1.77	209	eS	Sn	20 29 32.8	+0.2
	baz=205						
TWK	Hsinying	1.78	232	P	Pn	20 29 11.4	+0.9
	baz=228						
TWK				S	Sb	20 29 35.8	+1.2
	baz=228						
WSF	Szhu	1.79	246	S	Sn	20 29 34.3	+1.4
	baz=243						
SNST	Tainan City	1.80	230	eS	Sb	20 29 36.7	+1.4
	baz=227						
CHN1	Nanshi	1.80	229	eP	Pb	20 29 12.8	-0.3
	baz=226						
CHN1				S	Sb	20 29 36.0	+0.6
	baz=226						
SGST	Jiashian	1.83	225	P	Pn	20 29 11.7	+0.4
	baz=209						
SGST				S	Sb	20 29 36.8	+0.5
	baz=209						
JKRS	Kuro-shima	1.84	94	S	Sb	20 29 36.4	0.0
SLGT	Liugui	1.86	222	P	Pb	20 29 13.8	-0.3
	baz=219						
SLGT				S	Sn	20 29 37.0	+2.2
	baz=219						
CHN8	Yiju	1.94	238	S	Sb	20 29 40.5	+1.2
	baz=221						
JIJ	Ishigaki jima	1.95	90	P	Pb	20 29 14.4	-1.2
JIJ				S	Sn	20 29 38.4	+1.4
ECL	Taimali	2.02	209	eP	Pn	20 29 13.6	-0.2
	baz=194						
ECL				eS	Sn	20 29 38.5	-0.2
	baz=194						
JISG	Ishigakijimahi	2.11	84	P	Pb	20 29 17.3	-1.1
JISG				S	Sb	20 29 43.2	-1.1
EAST	Anshuo	2.25	208	eP	Pn	20 29 17.0	-0.1
	baz=196						
EAST				eS	Sn	20 29 44.6	+0.1
	baz=196						
PTTC	Pingtan	2.31	299	eS	Sn	20 29 44.9	-0.9
	baz=300						
VWUC	VWUC	2.40	285	eP	Pn	20 29 19.8	+0.8
	baz=284						
VWUC				eS	Sn	20 29 47.2	-0.8
	baz=284						

IDC ***01*** *20:34:23.1±1.2, 6°.83S×154°.43E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.7/37, mbtmp3.8/9, ML3.8/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/44, Error ellipse: s-maj=36.0km s-min=23.0km az=99.0*
NEIC ***01*** *20:34:27.7±0.4, 6°.8S±0°.2×154°.4E±0°.2, h29km±7km, mb4.0/4, Error ellipse: s-maj=30.0km s-min=25.1km az=56.0*
ISC 01 20:34:28.8±1.1**, 6°.9S**±0°.1×**154°.4E**±0°.2**, h39km, n18, σ0s.60**/15**, mb3.8**/10**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.42	320	Pn	Pn	20 35 19.1	-0.7
KRVT	Keravat (AS076	3.42	317	Pn	Pn	20 35 19.4	-0.3
	9.1nm,0.3s,baz=207,slow=3.1,SNR=8.6						
KRVT				Sn	Sn	20 35 59.5	+0.4
	9.0nm,0.3s,baz=232,slow=20,SNR=4.2						
WB0	Warramunga Arr	23.25	235	P	P	20 39 25.5	-7.5
WB2	Warramunga Arr	23.37	234	P	P	20 39 26.2	-8.0
WB2				IAmb	IAmb	20 39 44.8	
	comp=Z,3.0nm,0.9s						
WRA	Warramunga Arr	23.38	234	P	P	20 39 34.4	+0.1
	comp=Z,2.0nm,0.9s,baz=54,slow=9.5,SNR=7.9						
ASAR	Alice Springs	25.80	227	P	P	20 39 56.5	0.0
	comp=Z,0.8nm,0.8s,baz=55,slow=9.8,SNR=4.1						
STKA	Stephens Creek	27.61	204	P	P	20 40 12.6	0.0
	comp=Z,3.2nm,0.9s,baz=320,slow=22,SNR=2.8						
FITZ	Fitzroy Crossi	30.13	246	LR	LR	20 54 18.4	
	comp=Z,59nm,18.3s,baz=136,slow=40						
KAPI	Kappang	34.46	271	LR	LR	20 56 21.8	
	comp=Z,28nm,19.9s,baz=287,slow=38						
SONM	Songino Array	68.87	328	P	P	20 45 30.0	+0.4
	comp=Z,0.2nm,0.4s,baz=126,slow=9.3,SNR=2.2						
MKAR	Makanchi Array	82.87	319	P	P	20 46 50.1	+0.6
	comp=Z,0.7nm,0.8s,baz=103,slow=5.7,SNR=5.6						
ZALV	Zalesovo Beam	83.70	326	P	P	20 46 52.8	-0.7
	comp=Z,0.6nm,0.7s,baz=112,slow=6.4,SNR=1.7						
KDJ	Kajisay	85.13	313	P	P	20 47 01.9	+0.6
KURK	Kurchatov	86.32	322	P	P	20 47 06.8	0.0
KURK	Kurchatov	86.32	322	IAmb	IAmb	20 47 08.8	
	comp=Z,1.1nm,0.8s						
KURBB	Kurchatov Arra	86.35	322	P	P	20 47 06.8	-0.1
	comp=Z,0.3nm,0.8s,baz=102,slow=4.8,SNR=2.4						
NVAR	Mina Array Bea	92.13	52	P	P	20 47 35.0	+0.2
	comp=Z,0.6nm,0.7s,baz=251,slow=5.5,SNR=4.8						
TORD	Torodi Ar. Bea	152.37	285	PKPbc	PKPbc	20 54 21.9	+0.1
	comp=Z,0.5nm,0.6s,baz=65,slow=2.3,SNR=3.6						
TORD				PKPab	sPKPbc	20 54 33.7	-1.5
	comp=Z,0.7nm,0.6s,baz=58,slow=2.3,SNR=5.0						

EAF ***01*** *20:36:49.9±1.6, 28°.58S×27°.33E, h10km, MD3.4*
NAM ***01*** *20:36:52.2±0.8, 28°.47S×27°.34E, h10km, MD3.5*
PRE ***01*** *20:36:54.6±1.2, 28°.00S×26°.88E, h2km, ML2.3*
ISC 01 20:36:52.2±1.6**, 28°.17S**±0°.07×**27°.07E**±0°.08**, h7km, n13, σ2s.24**/26**, South Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PRYS	Parys	1.27	12	eP	Pb	20 37 17.3	+0.8
PRYS				eS	Sg	20 37 32.0	-1.0
PRYS				AML	AML	20 37 38.1	
	comp=Z,128nm,0.6s						
BOSA	Boshof	1.66	254	i P	Pn	20 37 22.6	+0.7
BOSA				i S	Sn	20 37 43.0	-0.4
BOSA	Boshof	1.66	254	i P	Pn	20 37 22.6	+0.7
BOSA				i S	Sn	20 37 44.0	+0.5
BOSA	Boshof	1.66	254	i P	Pn	20 37 22.6	+0.7
BOSA				i S	Sn	20 37 43.0	-0.4
ERPM	east rand prop	2.10	30	eP	Pb	20 37 31.8	+1.2
ERPM				eS	Sb	20 37 58.7	+1.7
ERPM				AML	AML	20 38 13.3	
	comp=Z,26nm,0.5s						
KSR	Koster	2.32	356	eP	Pn	20 37 32.9	+2.0
KSR				eS	Sn	20 37 59.9	+0.1
KSR				AML	AML	20 38 04.5	
	comp=Z,34nm,0.6s						
LBTB	Lobatse	3.41	337	i P	Pn	20 37 48.7	+2.7
LBTB				i S	Sb	20 38 33.4	-1.4
LBTB	Lobatse	3.41	337	i P	Pn	20 37 48.7	+2.7
LBTB				i S	Sn	20 38 31.3	+4.6
LBTB	Lobatse	3.41	337	i P	Pn	20 37 48.7	+2.7
LBTB				i S	Sb	20 38 33.4	-1.4
UPI	Upington	5.14	267	eP	Pn	20 38 11.1	+1.5
UPI				eS	Sn	20 39 06.5	-2.7
UPI				AML	AML	20 39 29.6	
	comp=Z,3.4nm,0.4s						
MATP	Matopo	7.82	10	i P	Pn	20 38 46.6	0.0
MATP				i S	Sn	20 40 12.7	-2.8
MATP	Matopo	7.82	10	i P	Pn	20 38 46.4	-0.1
MATP				i S	Sn	20 40 09.9	-5.5
MATP	Matopo	7.82	10	i P	Pn	20 38 46.6	0.0
MATP				i S	Sn	20 40 12.7	-2.8

KRNET ***01*** *20:36:56.7±0.1, 40°.42N×71°.72E, h22km, mb2.4*
SOME ***01*** *20:36:56.4, 40°.43N×71°.82E, h10km*
NNC ***01*** *20:36:58.6±2.9, 40°.57N×71°.77E, h0km, mb2.8, mpv2.4, Error ellipse: s-maj=23.7km s-min=9.5km az=11.0*
ISC 01 20:36:56.4±1.1**, 40°.42N**±0°.05×**71°.73E**±0°.04**, h15km, n17, σ1s.40**/31**, 17C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BTK	Batken	0.79	243	⇓iP	Pb	20 37 11.8	0.0
	baz=43						
BTK				⇓iS	Sb	20 37 22.2	-0.2
	baz=43						
ARSB	Arslanbob	1.31	46	⇓iP	Pg	20 37 21.0	-0.6
	baz=46						
ARSB				⇓iS	Sg	20 37 38.0	-0.7
	baz=46						
ARK	Arkit	1.39	7	⇑iP	Pb	20 37 22.0	-0.1
	baz=8.0						
ARK				⇑iS	Sb	20 37 40.0	+0.3
	baz=8.0						
IUG	Iuzhnay	2.15	324	eP	Pg	20 37 36.4	-1.2
	3.0nm,0.2s						
IUG				eS	Sg	20 38 05.6	+0.2
	15nm,0.3s						
AML	Almayashu	2.26	40	⇑iP	Pn	20 37 35.0	+1.4
	baz=40						
AML				⇑iS	Sb	20 38 03.2	-1.8
	baz=40						
MRKS	Merke	2.58	25	eP	Pb	20 37 43.3	+0.9
	0.6nm,0.1s						
MRKS				eS	Sg	20 38 17.5	-1.7
	5.2nm,0.2s						
EKS2	Erkin-Say	2.71	34	⇑iP	Pn	20 37 41.1	+1.5
	baz=34						
EKS2				⇑iS	Sn	20 38 14.0	+1.8
	baz=34						
UCH	Uchtor	2.77	48	⇑iP	Pn	20 37 41.8	+1.2
	baz=48						
UCH				⇑iS	Sn	20 38 15.0	+1.1
	baz=48						
KK31	Karatay Array	2.83	342	Pg	Pb	20 37 47.5	+0.9
	0.5nm,0.3s,baz=163,slow=15,SNR=17						
KK31				⇑Lg	Lg	20 38 25.0	
	5.0nm,0.6s,baz=163,slow=26,SNR=13						
BRLS	Borolday	2.97	332	eP	Pb	20 37 47.8	-1.2
	0.9nm,0.1s						
BRLS				eS	Sb	20 38 25.6	+0.5
	0.4nm,0.1s						
AAK	Ala-Archa	3.03	42	⇑iP	Pn	20 37 45.4	+1.4
	baz=42						
AAK				⇑iS	Sn	20 38 21.7	+1.5
	baz=42						
AAK	Ala-Archa	3.03	42	Pg	Pg	20 37 52.2	-2.3
	1.0nm,0.6s						
AAK				Lg	Lg	20 38 31.1	
	2.0nm,0.3s						
KZA	Kyzart	3.13	57	⇑iP	Pn	20 37 46.4	+0.9
	baz=57						
KZA				⇑iS	Sn	20 38 23.3	+0.5
	baz=57						
KBK	Karagaybulak	3.29	46	⇑iP	Pn	20 37 49.0	+1.5
	baz=46						
KBK				⇑iS	Sn	20 38 27.7	+1.2
	baz=46						
TKM2	Tokmak 2	3.82	48	⇓iP	Pn	20 37 56.2	+1.3
	baz=48						
TKM2				⇓iS	Sn	20 38 39.8	+0.1
	baz=48						
TKM2	Tokmak 2	3.82	48	⇑Pg	Pb	20 38 05.9	+2.2
	0.8nm,0.6s						
TKM2				⇑Lg	Lg	20 38 54.4	
	1.9nm,0.7s						
KST	Kastek	4.11	49	eP	Pg	20 38 12.1	-3.0
	0.4nm,0.0s						
KST				eS	Sg	20 39 06.8	-1.6
	1.6nm,0.2s						

IDC ***01*** *21:06:28.5±1.1, 21°.94S×67°.02W, h171km±17km, mb3.8/1, mb1 3.3/4, mb1mx3.1/31, mbtmp3.7/4, Error ellipse: s-maj=28.7km s-min=17.7km az=126.0*
GUC ***01*** *21:06:30.3±0.7, 21°.87S×67°.48W, h210km±6km, ML4.1*
ISC 01 21:06:28.2±0.9**, 21°.82S**±0°.05×**67°.23W**±0°.08**, h188km**±11km**, n26, σ1s.81**/46**, 14C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	1.75	243	P	Pn	21 07 04.8	+1.2
	13nm,0.3s,baz=56,slow=8.7,SNR=115						
LVC				S	Sn	21 07 31.3	+0.2
	18nm,0.3s,baz=16,slow=11,SNR=41						
LVC	Limon Verde	1.75	243	⇓iP	Pn	21 07 04.8	+1.2
LVC				i S	Sn	21 07 31.4	+0.3
PB09	IPOC Station P	1.87	270	⇑iP	Pn	21 07 06.1	+1.4
PB09				eS	Sn	21 07 33.5	+0.6
PB01	IPOC Station P	2.24	290	⇑iP	Pn	21 07 09.4	+0.9
PB01				eS	Sn	21 07 39.4	-0.5
PB01				IAML		21 07 40.7	
	comp=N,646nm,0.3s						
PB06	IPOC Station P	2.34	247	⇑iP	Pn	21 07 10.3	+0.5
PB06				eS	Sn	21 07 41.3	-0.8
PB06				IAML		21 07 43.1	
	comp=E,322nm,0.2s						
PB08	IPOC Station P	2.45	313	⇑iP	Pn	21 07 13.4	+2.1
PB08				i S	Sn	21 07 46.0	+1.3
PB08				IAML		21 07 47.5	
	comp=N,322nm,0.3s						
PB07	IPOC Station P	2.47	272	⇑iP	Pn	21 07 12.0	+0.8
PB07				eS	Sn	21 07 43.0	-1.7
PB07				IAML		21 07 43.8	
	comp=E,370nm,0.3s						
PB15	IPOC Station P	2.49	236	⇓eP	Pn	21 07 12.5	+0.9
PB15				eS	Sn	21 07 45.0	-0.3
PB02	IPOC Station P	2.53	281	⇑iP	Pn	21 07 12.5	+0.6
PB02				i S	Sn	21 07 44.2	-1.6
PB02				IAML		21 07 45.0	
	comp=N,618nm,0.2s						
PB04	IPOC Station P	2.75	259	⇑iP	Pn	21 07 14.9	+0.3
PB04				i S	Sn	21 07 48.4	-2.3
PB04				IAML		21 07 52.1	
	comp=N,237nm,0.3s						
GO01	Chusmiza	2.82	319	⇑iP	Pn	21 07 17.5	+1.8
GO01				eS	Sn	21 07 53.8	+1.2
PATCX	Punta Patache	2.90	289	⇑iP	Pn	21 07 16.5	+0.4
PATCX				i S	Sn	21 07 51.6	-1.9
PATCX				IAML		21 07 54.2	
	comp=N,728nm,0.2s						
TA01	Diego Aracena	3.02	294	⇑iP	Pn	21 07 17.5	0.0
TA01				eS	Sn	21 07 53.6	-2.4
TA01				IAML		21 07 55.2	
	comp=E,400nm,0.2s						
PB11	IPOC Station P	3.06	312	⇑iP	Pn	21 07 18.8	+0.6
PB11				eS	Sn	21 07 56.5	-0.6
PB11				IAML		21 07 59.0	
	comp=N,431nm,0.2s						
TA02	Huaiquique	3.12	299	eP	Pn	21 07 18.9	+0.3
TA02				eS	Sn	21 07 55.9	-2.2
TA02				IAML		21 08 01.1	
	comp=N,528nm,0.1s						
MNMC	Minye Minye	3.47	320	⇑iP	Pn	21 07 24.7	+1.3
MNMC				eS	Sn	21 08 06.2	-0.2
PSGC	Pisagua	3.49	309	i S	Sn	21 08 04.1	-2.5
PB10	IPOC Station P	3.50	241	⇑iP	Pn	21 07 23.2	-0.2
PB10				i S	Sn	21 08 02.8	-3.8
PB14	IPOC Station P	4.04	226	eP	Pn	21 07 30.4	0.0
PB16	IPOC Station P	4.07	328	⇑iP	Pn	21 07 33.0	+1.9
PB16				i S	Sn	21 08 20.8	+0.5
LPAZ	La Paz	5.56	351	P	Pn	21 07 53.0	+2.7
	comp=N,0.8nm,0.3s,baz=184,slow=8.0,SNR=19						
LPAZ				S	Sn	21 08 55.8	+0.8
	comp=N,0.4nm,0.3s,baz=203,slow=24,SNR=5.2						
SIV	San Ignacio	8.22	46	P	Pn	21 08 23.8	-0.7
SIV				S	Sn	21 09 50.1	-6.7
	comp=N,1.2nm,0.3s,baz=140,slow=23,SNR=7.8						
CPUP	Villa Florida	10.10	118	P	Pn	21 08 46.1	-2.8
	comp=N,0.1nm,0.3s,baz=24,slow=4.6,SNR=2.9						
PLCA	Paso Flores	19.07	188	P	P	21 10 37.5	+1.1
	comp=N,0.1nm,0.3s,baz=356,slow=15,SNR=3.7						
TORD	Torodi Ar. Bea	76.00	70	P	P	21 17 56.3	+1.3
	comp=N,0.9nm,0.4s,baz=256,slow=5.7,SNR=14						
MKAR	Makanchi Array	144.95	37	PKP	PKPdf	21 25 44.2	+1.3
	comp=N,0.4nm,0.8s,baz=349,slow=1.5,SNR=3.1						

SOME ***01*** *21:07:36.5, 39°.90N×77°.23E, h5km*
KRNET ***01*** *21:07:39.1±0.1, 39°.87N×77°.12E, mb3.3*
NNC ***01*** *21:07:39.9±2.5, 40°.01N×77°.16E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=16.6km s-min=13.1km az=161.0*
ISC 01 21:07:44.1±1.7**, 40°.16N**±0°.08×**77°.12E**±0°.03**, h10km, n65, σ1s.70**/99**, 33C-8D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NRN	Naryn	1.53	327	⇑iP	Pn	21 08 11.6	-0.3
	baz=31						
NRN				⇑iS	Sg	21 08 35.7	+2.2
	baz=31						
KDJ	Kajisay	1.97	1	⇑iP	Pb	21 08 18.9	-1.3
	baz=1.0						
KDJ				⇑iS	Sg	21 08 47.4	-0.1
	baz=1.0						
ULHL	Ulahol	2.19	343	⇑iP	Pb	21 08 22.0	-2.0
	baz=45						
ULHL				⇑iS	Sg	21 08 53.1	-1.4
	baz=45						
ULHL	Ulahol	2.19	343	P	Pb	21 08 23.1	-0.9
	SNR=22						
KZA	Kyzart	2.38	324	⇑iP	Pn	21 08 23.9	+0.3
	baz=28						
KZA				⇑iS	Sb	21 08 56.8	-0.2
	baz=28						
KZA	Kyzart	2.38	324	P	Pb	21 08 27.5	+0.1
	SNR=47						
BOOM	Boomskoye usch	2.50	339	⇑iP	Pn	21 08 25.7	+0.8
	baz=42						
BOOM				⇑iS	Sb	21 08 59.5	-0.5
	baz=42						
PRZ	Przheval'sk	2.52	22	⇓iP	Pn	21 08 26.1	+0.9
	baz=20						
PRZ				⇓iS	Sb	21 09 00.6	0.0
	baz=20						
ANVS	Anan'yevo	2.66	9	⇑iP	Pn	21 08 28.5	+1.3
	baz=8.0						
ANVS				⇑iS	Sb	21 09 04.0	-0.6
	baz=8.0						
UCH	Uchtor	2.85	317	⇑iP	Pn	21 08 30.5	+0.4
	baz=21						
UCH				⇑iS	Sb	21 09 07.9	-2.7
	baz=21						
UCH	Uchtor	2.85	317	P	Pb	21 08 32.4	-3.0
	SNR=9.2						
TNSS	Tian-Shan	2.88	357	eP	Pb	21 08 35.2	-0.6
	7.7nm,0.4s						
TNSS				eS	Sg	21 09 17.4	+0.8
	20nm,0.7s						
TNSS	Tian-Shan	2.88	357	Pg	Pg	21 08 37.8	-1.5
	20nm,0.7s						
TNSS				Lg	Lg	21 09 18.2	
	22nm,0.8s						
IZV	Izvestkoviy	2.90	353	eP	Pb	21 08 37.3	+1.2
	4.0nm,0.3s						
IZV				eS	Sg	21 09 21.0	+3.6
	21nm,0.3s						
IZV	Izvestkoviy	2.90	353	Pg	Pg	21 08 38.7	-1.0
	11nm,0.5s						
IZV				Lg	Lg	21 09 19.5	
	35nm,0.8s						
KBK	Karagaybulak	2.98	327	⇑iP	Pn	21 08 32.5	+0.8
	baz=30						
KBK				⇑iS	Sb	21 09 11.1	-3.0
	baz=30						
KBK	Karagaybulak	2.98	327	P	Pb	21 08 37.9	+0.4
	SNR=9.1						
TKM2	Tokmak 2	2.99	338	⇑iP	Pn	21 08 33.3	+1.5
	baz=40						
TKM2				⇑iS	Sb	21 09 12.0	-2.2
	baz=40						
TKM2	Tokmak 2	2.99	338	P	Pn	21 08 33.9	+2.1
	SNR=9.7						
TKM2	Tokmak 2	2.99	338	⇑Pg	Pn	21 08 33.6	+1.8
	2.6nm,0.4s						
TKM2				⇓Lg	Lg	21 09 19.7	
	12nm,0.7s						
MDOK	Medeo	3.00	359	eP	Pb	21 08 36.9	-0.9
	7.9nm,0.6s						
MDOK				eS	Sg	21 09 20.3	-0.3
	52nm,0.6s						
MDOK	Medeo	3.00	359	Pg	Pb	21 08 36.3	-1.5
	9.1nm,0.5s						
MDOK				Lg	Lg	21 09 19.3	
	112nm,0.9s						
MDOK	Medeo	3.00	359	Pg	Pb	21 08 39.0	+1.2
	7.4nm,0.8s						
MDOK				Lg	Lg	21 09 19.9	
	74nm,0.9s						
KST	Kastek	3.01	344	eP	Pb	21 08 38.0	+0.1
	3.8nm,0.2s						
KST				eS	Sg	21 09 21.9	+1.0
	13nm,0.4s						
KST	Kastek	3.01	344	Pg	Pb	21 08 38.2	+0.3
	2.5nm,0.7s						
KST				Lg	Lg	21 09 18.4	
	12nm,0.6s						
MTBS	Maitube	3.02	350	eP	Pb	21 08 37.6	-0.4
	3.2nm,0.1s						
MTBS				eS	Sg	21 09 21.1	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	4.3nm,0.1s						
MTBS	**Maitube**	**3.02**	**350**	Pg	**Pg**	**21 08 39.5**	**-2.4**
	5.1nm,0.4s						
MTBS				Lg	Lg	21 09 20.6	
	12nm,0.5s						
SATY	**Saty**	**3.06**	**18**	*e*P	**Pb**	**21 08 38.5**	**-0.2**
	8.5nm,0.4s						
SATY				*e*S	**Sg**	**21 09 22.4**	**+0.2**
	22nm,0.5s						
SATY	**Saty**	**3.06**	**18**	Pg	**Pb**	**21 08 38.9**	**+0.3**
	10nm,1.1s						
SATY				Lg	Lg	21 09 19.7	
	28nm,0.7s						
KNDC	**Almaty**	**3.06**	**358**	⇑Pg	**Pb**	**21 08 36.3**	**-2.4**
	12nm,0.6s						
KNDC				⇓Lg	Lg	21 09 21.9	
	106nm,0.8s						
KOTS	**Kotyrbulak**	**3.07**	**360**	*e*P	**Pb**	**21 08 38.8**	**-0.2**
	9.5nm,0.4s						
KOTS				*e*S	**Sg**	**21 09 23.4**	**+0.5**
	145nm,0.6s						
KOTS	**Kotyrbulak**	**3.07**	**360**	Pg	**Pb**	**21 08 40.0**	**+1.0**
	22nm,0.4s						
KOTS				Lg	Lg	21 09 21.3	
	145nm,0.9s						
AAK	**Ala-Archa**	**3.17**	**322**	⇑*i*P	**Pn**	**21 08 34.7**	**+0.5**
	baz=25						
AAK				⇑*i*S	**Sn**	**21 09 15.4**	**+3.2**
	baz=25						
AAK	**Ala-Archa**	**3.17**	**322**	P	**Pb**	**21 08 40.4**	**-0.2**
	SNR=8.1						
AAK	**Ala-Archa**	**3.17**	**322**	⇑Pg	**Pb**	**21 08 38.7**	**-1.9**
	6.9nm,0.6s						
AAK				Lg	Lg	21 09 25.7	
	26nm,0.9s						
AML	**Almayashu**	**3.25**	**308**	⇓*i*P	**Pn**	**21 08 35.7**	**+0.1**
	baz=12						
AML				⇓*i*S	**Sn**	**21 09 16.5**	**+1.9**
	baz=12						
AML	**Almayashu**	**3.25**	**308**	P	**Pn**	**21 08 37.8**	**+2.2**
	SNR=21						
CHMS	**Chumysh**	**3.35**	**329**	⇑*i*P	**Pn**	**21 08 37.4**	**+0.8**
	baz=31						
CHMS				⇑*i*S	**Sn**	**21 09 20.0**	**+3.6**
	baz=31						
ARSB	**Arslanbob**	**3.35**	**292**	⇑*i*P	**Pn**	**21 08 35.7**	**-1.0**
	baz=96						
ARSB				⇑*i*S	**Sn**	**21 09 16.8**	**+0.1**
	baz=96						
KURS	**Kuram**	**3.42**	**13**	*e*P	**Pb**	**21 08 44.5**	**-0.3**
	7.5nm,0.4s						
KURS				*e*S	**Sg**	**21 09 32.9**	**-1.0**
	13nm,1.1s						
KURS	**Kuram**	**3.42**	**13**	Pg	**Pb**	**21 08 46.3**	**+1.5**
	7.7nm,0.5s						
KURS				Lg	Lg	21 09 32.2	
	14nm,0.9s						
SHLS	**Shalkode**	**3.47**	**30**	*e*P	**Pg**	**21 08 48.0**	**-2.7**
	3.5nm,0.2s						
SHLS				*e*S	**Sg**	**21 09 38.8**	**+3.2**
	35nm,0.6s						
EKS2	**Erkin-Say**	**3.55**	**316**	⇑*i*P	**Pn**	**21 08 40.0**	**+0.6**
	baz=19						
EKS2				⇑*i*S	**Sn**	**21 09 23.4**	**+2.0**
	baz=19						
EKS2	**Erkin-Say**	**3.55**	**316**	P	**Pn**	**21 08 42.3**	**+3.0**
	SNR=9.5						
KTBS	**Karatobe**	**3.57**	**355**	*e*P	**Pb**	**21 08 47.0**	**-0.3**
	3.9nm,0.5s						
KTBS				*e*S	**Sg**	**21 09 37.7**	**-1.0**
	31nm,0.9s						
KTBS	**Karatobe**	**3.57**	**355**	Pg	**Pb**	**21 08 48.3**	**+0.9**
	3.8nm,0.9s						
KTBS				Lg	Lg	21 09 35.5	
	8.6nm,0.9s						
PDGK	**Podgornoye**	**3.63**	**28**	Pg	**Pb**	**21 08 49.4**	**+0.9**
	0.8nm,0.5s						
PDGK				Lg	Lg	21 09 38.7	
	11nm,0.6s						
PDGK	**Podgornoye**	**3.63**	**28**	⇑Pg	**Pn**	**21 08 42.5**	**+1.9**
	6.6nm,0.7s						
PDGK				⇓Lg	Lg	21 09 37.9	
	22nm,0.7s						
USP	**Ospenovka**	**3.67**	**329**	⇑*i*P	**Pn**	**21 08 42.7**	**+1.7**
	baz=31						
USP				⇑*i*S	**Sn**	**21 09 28.4**	**+4.0**
	baz=31						
CHKK	**Chushkaly**	**3.70**	**358**	*e*P	**Pb**	**21 08 49.9**	**+0.4**
	3.3nm,0.2s						
CHKK				*e*S	**Sg**	**21 09 42.6**	**-0.2**
	14nm,0.5s						
CHKK	**Chushkaly**	**3.70**	**358**	Pg	**Pg**	**21 08 52.0**	**-2.9**
	4.9nm,0.6s						
CHKK				Lg	Lg	21 09 41.8	
	14nm,0.6s						
KUU	**Kurty**	**3.78**	**351**	*e*P	**Pb**	**21 08 50.7**	**-0.2**
	2.9nm,0.4s						
KUU				*e*S	**Sg**	**21 09 43.8**	**-1.7**
	15nm,1.0s						
KUU	**Kurty**	**3.78**	**351**	Pg	**Pb**	**21 08 52.9**	**+2.0**
	3.3nm,0.8s						
KUU				Lg	Lg	21 09 43.5	
	22nm,1.0s						
MRKS	**Merke**	**3.91**	**313**	*e*P	**Pb**	**21 08 53.9**	**+0.7**
	2.2nm,0.1s						
MRKS				*e*S	**Sg**	**21 09 49.1**	**-0.4**
	3.3nm,0.2s						
MRKS	**Merke**	**3.91**	**313**	Pg	**Pb**	**21 08 55.0**	**+1.9**
	2.9nm,0.4s						
MRKS				Lg	Lg	21 09 47.3	
	2.9nm,0.8s						
MNBS	**Baschi**	**4.03**	**13**	*e*P	**Pb**	**21 08 55.1**	**-0.2**
	2.0nm,0.2s						
MNBS				*e*S	**Sg**	**21 09 51.5**	**-2.1**
	13nm,0.3s						
MNBS	**Baschi**	**4.03**	**13**	Pg	**Pb**	**21 08 57.0**	**+1.7**
	3.2nm,0.4s						
MNBS				Lg	Lg	21 09 50.7	
	12nm,0.4s						
KTMS	**Ketmen**	**4.08**	**35**	*e*P	**Pb**	**21 08 54.8**	**-1.3**
	0.1nm,0.1s						
KTMS				*e*S	**Sg**	**21 09 50.6**	**-4.4**
	6.3nm,0.4s						
KTMS	**Ketmen**	**4.08**	**35**	Pg	**Pb**	**21 08 57.3**	**+1.3**
	0.1nm,0.1s						
KTMS				Lg	Lg	21 09 51.0	
	6.0nm,0.8s						
ARXS	**Arharly**	**4.09**	**7**	*e*P	**Pb**	**21 08 56.2**	**0.0**
	11nm,0.6s						
ARXS				*e*S	**Sg**	**21 09 53.5**	**-1.8**
	8.0nm,0.4s						
ARXS	**Arharly**	**4.09**	**7**	Pg	**Pb**	**21 08 56.6**	**+0.4**
	10nm,0.6s						
ARXS				Lg	Lg	21 09 49.6	
	7.9nm,0.8s						
DJR	**Jarkent**	**4.62**	**25**	Pg	**Pb**	**21 09 07.0**	**+1.7**
	1.9nm,0.3s						
DJR				Lg	Lg	21 10 07.5	
	5.1nm,0.4s						
TDK	**Taldyqorghan**	**4.93**	**11**	*e*P	**Pb**	**21 09 11.5**	**+1.0**
	6.8nm,0.2s						
TDK				*e*S	**Sg**	**21 10 19.2**	**-3.3**
	12nm,0.2s						
KAPS	**Kapalarasan**	**5.38**	**17**	*e*P	**Pb**	**21 09 21.4**	**+3.1**
	1.2nm,0.3s						
KAPS				*e*S	**Sg**	**21 10 36.3**	**-0.6**
	3.9nm,0.4s						
KK31	**Karatay Array**	**5.76**	**303**	⇑Pg	**Pb**	**21 09 27.0**	**+2.3**
	2.1nm,0.9s,baz=122,slow=15,SNR=6.0						
KK31				⇓Lg	Lg	21 10 47.9	
	3.3nm,0.9s,baz=126,slow=28,SNR=3.5						

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*IDC **01** 21:35:45.0±1.6, 12°.30N×85°.98W, h151^{km}±16^{km}, mb3.4/2, mb1 3.7/6, mb1mx3.2/39, mbtmp3.9/6, Error ellipse: s-maj=57.0km s-min=13.9km az=50.0*
*INET **01** 21:35:46.2, 12°.06N×86°.47W, h154^{km}, ML3.6*
*SNET **01** 21:35:47.4±0.8, 12°.03N×86°.66W, h156^{km}±15^{km}, ML4.2*
*UCR **01** 21:35:47.3±2.0, 11°.86N×86°.67W, h3^{km}±6^{km}, MD4.0, ML3.9*
ISC 01 21:35:45.1±0.8**, 12°.04N**±0°.07×**86°.38W**±0°.07**, h159**^{km}±8^{km}**, n43, σ1^{s}30**/61**, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATN	**Matagalpa**	**0.99**	**27**	*e*P	**Pn**	**21 36 12.2**	**+1.4**
ACON	**Acoyapa**	**1.19**	**93**	*e*P	**Pn**	**21 36 13.6**	**+1.2**
GBS3	**Finca Las Img**	**1.54**	**144**	*i* P	**Pn**	**21 36 16.3**	**+0.4**
GBS3				*i* S	**Sn**	**21 36 38.6**	**-1.0**
BUAI	**Buenos Aires**	**1.55**	**138**	*i* P	**Pn**	**21 36 16.9**	**+1.0**
GB1A	**Borinquen Arri**	**1.55**	**141**	*e*P	**Pn**	**21 36 16.9**	**+1.0**
GB1A				*e*S	**Sn**	**21 36 40.5**	**+0.8**
BUEV	**Buena Vista**	**1.56**	**142**	*e*P	**Pn**	**21 36 17.0**	**+0.9**
BUEV				*e*S	**Sn**	**21 36 41.3**	**+1.4**
LAPC	**Finca la Perla**	**1.57**	**143**	*i* P	**Pn**	**21 36 16.7**	**+0.6**
LAPC				*i* S	**Sn**	**21 36 39.1**	**-0.9**
NY14	**Universidad de**	**1.61**	**149**	*i* P	**Pn**	**21 36 17.8**	**+1.2**
LIM1	**Limonal**	**1.73**	**140**	*i* P	**Pn**	**21 36 19.0**	**+1.1**
COLC	**Colonia**	**1.79**	**140**	*i* P	**Pn**	**21 36 19.6**	**+1.1**
CUI	**Cuipilapa**	**1.82**	**139**	*i* P	**Pn**	**21 36 20.1**	**+1.3**
CNCH	**Conchagua**	**1.88**	**311**	*e*P	**Pn**	**21 36 19.8**	**+0.3**
CNCH				IAML		21 36 49.9	
	comp=Z,1µm,0.2s						
CNCH	**Conchagua**	**1.88**	**311**	*e*P	**Pn**	**21 36 19.8**	**+0.3**
CNCH				*e*S	**Sn**	**21 36 46.1**	**+0.1**
CNCH				IAML		21 36 49.9	
	comp=Z,1µm,0.2s						
PTEN	**Parque Tenorio**	**1.90**	**134**	*i* P	**Pn**	**21 36 20.9**	**+1.1**
ACAL	**Aguas Claras**	**1.92**	**136**	*i* P	**Pn**	**21 36 21.3**	**+1.3**
ACAL				*i* S	**Sn**	**21 36 48.4**	**+1.5**
LCND	**La Caada**	**1.94**	**311**	*e*P	**Pn**	**21 36 20.0**	**0.0**
LCND	**La Caada**	**1.94**	**311**	*e*P	**Pn**	**21 36 20.0**	**0.0**
GUAI	**GUAI**	**1.95**	**154**	*i* P	**Pn**	**21 36 21.6**	**+1.3**
PLVR	**Palo Verde**	**1.96**	**149**	*e*P	**Pn**	**21 36 22.2**	**+1.7**
JUCU	**Jucuar¡n**	**2.19**	**304**	*e*P	**Pn**	**21 36 23.1**	**+0.2**
JUCU				*e*S	**Sn**	**21 36 51.5**	**-0.8**
JUCU				IAML		21 36 55.4	
	comp=Z,1µm,0.3s						
JUCU	**Jucuar¡n**	**2.19**	**304**	*e*P	**Pn**	**21 36 23.1**	**+0.2**
JUCU				*e*S	**Sn**	**21 36 51.5**	**-0.8**
JUCU				IAML		21 36 55.4	
	comp=Z,1µm,0.3s						
TGUH	**Tegucigalpa,Un**	**2.19**	**337**	*e*P	**Pn**	**21 36 24.9**	**+1.8**
TGUH	**Tegucigalpa,Un**	**2.19**	**337**	*e*P	**Pn**	**21 36 24.9**	**+1.8**
TGUH				*e*S	**Sn**	**21 36 53.1**	**+0.7**
JTS	**Las Juntas de**	**2.23**	**141**	P	**Pn**	**21 36 24.4**	**+0.9**
	comp=Z,45nm,0.3s,baz=26,slow=14,SNR=82						
JTS				S	**Sn**	**21 36 52.8**	**-0.4**
	comp=Z,52nm,0.3s,baz=3.0,slow=23,SNR=15						
JTS	**Las Juntas de**	**2.23**	**141**	*e*P	**Pn**	**21 36 24.7**	**+1.2**
FAGO	**Alcalda de S**	**2.35**	**315**	*e*P	**Pn**	**21 36 25.5**	**+0.6**
FAGO				*e*S	**Sn**	**21 36 55.5**	**-0.3**
FAGO	**Alcalda de S**	**2.35**	**315**	*e*P	**Pn**	**21 36 25.5**	**+0.6**
FAGO				*e*S	**Sn**	**21 36 55.5**	**-0.3**
PACA	**Pacayal**	**2.37**	**307**	*e*P	**Pn**	**21 36 25.8**	**+0.6**
PACA				*e*S	**Sn**	**21 36 55.1**	**-1.1**
PACA	**Pacayal**	**2.37**	**307**	*e*P	**Pn**	**21 36 25.8**	**+0.6**
PACA				*e*S	**Sn**	**21 36 55.1**	**-1.1**
TECA	**Tecapa**	**2.52**	**305**	*e*P	**Pn**	**21 36 28.0**	**+0.9**
TECA				*e*S	**Sn**	**21 36 59.6**	**-0.1**
TECA	**Tecapa**	**2.52**	**305**	*e*P	**Pn**	**21 36 28.0**	**+0.9**
TECA				*e*S	**Sn**	**21 36 59.6**	**-0.1**
LFRS	**El Faro**	**3.05**	**301**	*e*P	**Pn**	**21 36 34.3**	**+0.7**
LFRS	**El Faro**	**3.05**	**301**	*e*P	**Pn**	**21 36 34.3**	**+0.7**
LFRS				*e*S	**Sn**	**21 37 09.8**	**-1.3**
CEVE	**Cerro Verde**	**3.62**	**300**	*e*P	**Pn**	**21 36 42.1**	**+1.1**
CEVE	**Cerro Verde**	**3.62**	**300**	*e*P	**Pn**	**21 36 42.1**	**+1.1**
IXG	**Ixpaco**	**4.49**	**299**	*e*P	**Pn**	**21 36 52.9**	**+0.7**
APG	**El Apazote**	**4.94**	**307**	P	**Pn**	**21 36 60.0**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=120,slow=12,SNR=6.1						
APG				S	**Sn**	**21 37 56.8**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=152,slow=22,SNR=1.8						
CMIG	**Matias Romero**	**9.64**	**302**	P	**Pn**	**21 38 01.1**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=162,slow=12,SNR=12						
SDV	**Santo Domingo**	**15.80**	**100**	P	**Pn**	**21 39 13.4**	**-5.9**
	comp=Z,1.0nm,0.3s,baz=294,slow=20,SNR=2.3						
TXAR	**Lajitas Array**	**23.56**	**320**	P	**P**	**21 40 43.4**	**+2.1**
	comp=Z,1.4nm,0.6s,baz=140,slow=10,SNR=18						
PLCA	**Paso Flores**	**54.51**	**165**	P	**P**	**21 44 58.0**	**+1.4**
	comp=Z,1.6nm,0.9s,baz=0.4,slow=6.7,SNR=3.2						
ASAR	**Alice Springs**	**140.08**	**248**	PKP	**PKPdf**	**21 54 55.2**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=113,slow=2.4,SNR=4.9						
WRA	**Warramunga Arr**	**140.15**	**253**	PKP	**PKiKP**	**21 54 57.4**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=91,slow=2.4,SNR=8.0						

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*IDC **01** 21:50:50.7±2.5, 12°.77S×166°.94E, h200^{km}±22^{km}, mb4.0/17, mb1 4.1/18, mb1mx3.8/50, mbtmp4.4/18, MS3.6/1, Ms1 3.6/1, ms1mx2.4/38, Error ellipse: s-maj=18.1km s-min=12.8km az=137.0*
*NEIC **01** 21:50:51.2±1.5, 12°.8S±0°.1×167°.0E±0°.1, h207^{km}±6^{km}, mb4.4/126, Error ellipse: s-maj=19.8km s-min=15.1km az=99.0*
ISC 01 21:50:50.5±0.4**, 12°.84S**±0°.06×**166°.99E**±0°.09**, h200**^{km}**, n151, σ0^{s}79**/142**, mb4.4**/80**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.19**	**183**	P	**Pn**	**21 53 01.4**	**+2.0**
	1.3nm,0.3s,baz=188,slow=17,SNR=16						
DZM				S	**Sn**	**21 54 41.9**	**-0.6**
	0.3nm,0.3s,baz=111,slow=22,SNR=1.0						
DZM	**Mont Dzumac**	**9.19**	**183**	Pn	**Pn**	**21 53 00.8**	**+1.3**
EIDS	**Eidsvold**	**19.50**	**228**	P	**Pn**	**21 55 04.2**	**-2.1**
CTA	**Charters Tower**	**21.14**	**247**	P	**P**	**21 55 20.2**	**+0.1**
	7.9nm,0.6s,baz=69,slow=13,SNR=10						
CTAO	**Charters Tower**	**21.14**	**247**	P	**P**	**21 55 21.3**	**+1.2**
CTAO				IAmb	IAmb	21 55 23.2	
	comp=Z,10nm,0.8s						
RAO	**Raoul Island**	**21.53**	**142**	LR	LR	22 01 19.5	
	comp=Z,139nm,19.2s,baz=112,slow=29						
ARMA	**Armidale**	**22.53**	**217**	P	**P**	**21 55 33.3**	**-0.5**
OUZ	**Omahuta**	**23.07**	**166**	P	**P**	**21 55 38.5**	**+0.1**
COEN	**Coen**	**23.19**	**265**	P	**P**	**21 55 40.1**	**+0.3**
COEN				IAmb	IAmb	21 55 42.1	
	comp=Z,5.1nm,0.7s						
MXZ	**Matakaoa Point**	**26.62**	**160**	P	**P**	**21 56 11.0**	**+0.5**
URZ	**Urewera**	**26.87**	**162**	P	**P**	**21 56 12.7**	**-0.1**
URZ				IAmb	IAmb	21 56 20.1	
	comp=Z,13nm,1.1s						
BKZ	**Black Stump Fm**	**27.54**	**164**	P	**P**	**21 56 19.2**	**+0.5**
BKZ				IAmb	IAmb	21 56 31.9	
	comp=Z,6.6nm,1.0s						
QRZ	**Quartz Range**	**28.30**	**171**	P	**P**	**21 56 26.1**	**+0.7**
QRZ				IAmb	IAmb	21 56 38.4	
	comp=Z,11nm,1.0s						
BFZ	**Birch Farm**	**28.90**	**165**	P	**P**	**21 56 29.9**	**-0.9**
TUWZ	**Tuamarina**	**29.12**	**169**	P	**P**	**21 56 33.1**	**+0.4**
THZ	**Tophouse**	**29.27**	**171**	P	**P**	**21 56 33.6**	**-0.5**
THZ				IAmb	IAmb	21 56 44.1	
	comp=Z,12nm,1.0s						
BHW	**Baring Head**	**29.28**	**168**	P	**P**	**21 56 33.4**	**-0.7**
MSWZ	**Moikau Station**	**29.37**	**167**	P	**P**	**21 56 34.3**	**-0.6**
PLWZ	**Palliser**	**29.52**	**167**	P	**P**	**21 56 36.9**	**+0.6**
KHZ	**Kahutara**	**30.01**	**170**	P	**P**	**21 56 40.9**	**+0.4**
KHZ				IAmb	IAmb	21 56 48.6	
	comp=Z,8.1nm,0.9s						
STKA	**Stephens Creek**	**30.04**	**227**	P	**P**	**21 56 41.5**	**+0.5**
	comp=Z,2.8nm,0.4s,baz=48,slow=10.0,SNR=9.1						
STKA	**Stephens Creek**	**30.04**	**227**	P	**P**	**21 56 41.0**	**0.0**
LTZ	**Lake Taylor**	**30.18**	**172**	P	**P**	**21 56 42.1**	**0.0**
LTZ				IAmb	IAmb	21 56 43.5	
	comp=Z,8.6nm,0.7s						
RPZ	**Rata Peaks**	**30.96**	**174**	P	**P**	**21 56 48.0**	**-0.9**
RPZ				IAmb	IAmb	21 57 06.2	
	comp=Z,15nm,1.1s						
MQZ	**McQueen's Vall**	**31.14**	**172**	P	**P**	**21 56 49.4**	**-1.0**
LBZ	**Lake Benmore**	**31.55**	**176**	P	**P**	**21 56 53.1**	**-1.0**
LBZ				IAmb	IAmb	21 57 05.3	
	comp=Z,15nm,1.1s						
WR0	**Warramunga Arr**	**31.88**	**253**	P	**P**	**21 56 56.5**	**-0.7**
WB0	**Warramunga Arr**	**31.99**	**253**	P	**P**	**21 56 57.7**	**-0.6**
WB0				IAmb	IAmb	21 56 58.6	
	comp=Z,12nm,0.8s						
WB2	**Warramunga Arr**	**32.05**	**253**	P	**P**	**21 56 57.6**	**-1.1**
WRA	**Warramunga Arr**	**32.06**	**253**	P	**P**	**21 56 58.4**	**-0.5**
	comp=Z,4.3nm,0.5s,baz=86,slow=9.1,SNR=39						
AS31	**Alice Springs**	**33.13**	**246**	P	**P**	**21 57 07.6**	**-0.5**
ASAR	**Alice Springs**	**33.13**	**246**	P	**P**	**21 57 07.7**	**-0.5**
	comp=Z,6.4nm,0.7s,baz=73,slow=9.7,SNR=79						
ASAR				PcP	**PcP**	**21 59 46.0**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=81,slow=1.5,SNR=4.1						
ASAR				ScP	**ScP**	**22 03 13.0**	**+1.1**
	comp=Z,1.8nm,0.9s,baz=83,slow=2.7,SNR=8.1						
BBOO	**Buckleboo**	**34.55**	**230**	P	**P**	**21 57 20.4**	**+0.2**
MTN	**Manton Dam**	**34.94**	**266**	P	**P**	**21 57 23.2**	**-0.6**
KNRA	**Kununurra**	**37.12**	**261**	P	**P**	**21 57 42.6**	**+0.3**
SIJI	**Sorong**	**37.34**	**286**	P	**P**	**21 57 43.3**	**-0.8**
	comp=Z,3.4nm,0.4s,baz=138,slow=7.9,SNR=4.4						
FORT	**Forrest**	**40.05**	**237**	P	**P**	**21 58 06.7**	**+0.2**
FITZ	**Fitzroy Crossi**	**40.13**	**257**	P	**P**	**21 58 08.0**	**+0.8**
	comp=Z,2.8nm,0.5s,baz=69,slow=7.2,SNR=8.8						
FITZ	**Fitzroy Crossi**	**40.13**	**257**	P	**P**	**21 58 07.8**	**+0.5**
PSA00	**Pilbara Seismi**	**45.72**	**252**	P	**P**	**21 58 51.7**	**-0.4**
NWAO	**Narrogin (SRO)**	**49.50**	**238**	P	**P**	**21 59 21.1**	**+0.1**
NWAO				IAmb	IAmb	21 59 21.5	
	comp=Z,25nm,1.1s						
NWAO	**Narrogin (SRO)**	**49.50**	**238**	P	**P**	**21 59 20.8**	**-0.2**
NWAO				IAmb	IAmb	21 59 38.6	
	comp=Z,10nm,1.1s						
MORW	**Morawa**	**49.86**	**243**	P	**P**	**21 59 23.9**	**+0.1**
NJ2	**Nanjing**	**64.14**	**315**	*e*P	**P**	**22 01 04.7**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
VNDA	**Vanda**	**64.73**	**181**	P	**P**	**22 01 07.6**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=352,slow=7.6,SNR=20						
VNDA	**Vanda**	**64.73**	**181**	P	**P**	**22 01 07.9**	**+0.9**
PETK	**Petropavlovsk-**	**66.17**	**354**	P	**P**	**22 01 17.2**	**+0.8**
	comp=Z,3.7nm,0.7s,baz=160,slow=6.1,SNR=5.2						
HHC	**Hu-ho-hao-te**	**73.98**	**319**	P	**P**	**22 02 05.1**	**+0.8**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,37nm,5.2s						
CHGN	**Chignik**	**74.68**	**19**	P	**P**	**22 02 07.5**	**-0.3**
CHGN				IAmb	IAmb	22 02 21.1	
	comp=Z,8.5nm,0.9s						
LZH	**Lanzhou**	**76.86**	**312**	⇑P	**P**	**22 02 22.1**	**+1.2**
LZH				pP	pwP	22 03 13.6	+2.1
LZH				sP	sP	22 03 36.5	+7.6
LZH				PP	**PP**	**22 05 19.3**	**+2.4**
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,74nm,4.2s						
OHAK	**Old Harbor**	**77.13**	**21**	P	**P**	**22 02 21.2**	**-0.4**
OHAK				IAmb	IAmb	22 02 22.6	
	comp=Z,9.8nm,0.7s						
QSPA	**South Pole Qui**	**77.17**	**180**	P	**P**	**22 02 22.3**	**+0.3**
KDAK	**Kodiak Island**	**77.81**	**21**	P	**P**	**22 02 25.1**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=267,slow=5.4,SNR=4.9						
KDAK	**Kodiak Island**	**77.81**	**21**	P	**P**	**22 02 25.7**	**+0.3**
KDAK				IAmb	IAmb	22 02 26.0	
	comp=Z,6.6nm,0.9s						
CNPM	**China Poot**	**79.59**	**20**	P	**P**	**22 02 35.8**	**+0.6**
RSO	**Redoubt South**	**79.81**	**19**	P	**P**	**22 02 36.6**	**+0.1**
BRLK	**Bradley Lake**	**79.89**	**20**	P	**P**	**22 02 37.0**	**+0.3**
ANM	**Nome**	**79.98**	**12**	P	**P**	**22 02 37.5**	**+0.4**
SEW	**Seward**	**80.62**	**20**	P	**P**	**22 02 40.4**	**-0.2**
SEW				IAmb	IAmb	22 02 41.4	
	comp=Z,5.4nm,0.6s						
BILL	**Bilibino**	**80.67**	**360**	P	**P**	**22 02 41.1**	**+0.4**
BILL				IAmb	IAmb	22 02 42.0	
	comp=Z,10nm,0.9s						
SONM	**Songino Array**	**80.82**	**324**	P	**P**	**22 02 41.9**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=128,slow=11,SNR=5.5						
RC01	**Rabbit Creek A**	**81.25**	**20**	P	**P**	**22 02 44.2**	**+0.3**
RC01				IAmb	IAmb	22 02 44.4	
	comp=Z,6.1nm,0.6s						
PPLA	**Purkeypile**	**81.85**	**18**	P	**P**	**22 02 46.6**	**-0.6**
HIN	**Hinchinbrook I**	**81.86**	**21**	P	**P**	**22 02 47.3**	**+0.2**
KNK	**Knik Glacier**	**81.91**	**20**	P	**P**	**22 02 47.7**	**+0.2**
KNK				IAmb	IAmb	22 02 48.1	
	comp=Z,7.3nm,0.6s						
GLI	**Glacier Island**	**81.99**	**21**	P	**P**	**22 02 48.0**	**+0.2**
GLI				IAmb	IAmb	22 02 48.6	
	comp=Z,9.9nm,0.8s						
GHO	**Glory Hole Cre**	**82.02**	**20**	P	**P**	**22 02 48.4**	**+0.4**
GHO				IAmb	IAmb	22 02 48.6	
	comp=Z,4.2nm,0.8s						
FID	**Port Fidalgo**	**82.12**	**21**	P	**P**	**22 02 48.6**	**+0.1**
FID				IAmb	IAmb	22 02 49.2	
	comp=Z,13nm,1.0s						
EYAK	**Cordova Ski Ar**	**82.23**	**21**	P	**P**	**22 02 49.3**	**+0.3**
EYAK				IAmb	IAmb	22 02 51.6	
	comp=Z,6.0nm,1.0s						
SML	**Sawmill**	**82.24**	**20**	P	**P**	**22 02 49.5**	**+0.3**
SML				IAmb	IAmb	22 02 49.7	
	comp=Z,5.4nm,0.6s						
RAGM	**Ragged Mountai**	**82.51**	**22**	P	**P**	**22 02 49.5**	**-1.1**
RAGM				IAmb	IAmb	22 02 51.9	
	comp=Z,8.2nm,1.2s						
SCM	**Sheep Creek Mo**	**82.59**	**20**	P	**P**	**22 02 51.4**	**+0.4**
HMT	**Hamilton**	**82.63**	**22**	P	**P**	**22 02 51.5**	**+0.3**
HMT				IAmb	IAmb	22 02 52.3	
	comp=Z,9.5nm,0.7s						
SUCK	**Suckling Hills**	**82.63**	**23**	P	**P**	**22 02 50.6**	**-0.5**
SUCK				IAmb	IAmb	22 03 09.8	
	comp=Z,9.8nm,1.0s						
KTH	**Kantishna Hill**	**82.73**	**18**	P	**P**	**22 02 51.1**	**-0.6**
KTH				IAmb	IAmb	22 02 51.9	
	comp=Z,4.2nm,0.8s						
TRF	**Thorofare Moun**	**82.84**	**18**	P	**P**	**22 02 51.9**	**-0.4**
TRF				IAmb	IAmb	22 02 54.0	
	comp=Z,7.4nm,1.0s						
KCPM	**Cahto Peak**	**82.88**	**47**	P	**P**	**22 02 52.5**	**-0.5**
KCPM				IAmb	IAmb	22 02 54.9	
	comp=Z,6.9nm,1.0s						
BPAW	**Bear Paw Mtn.**	**83.12**	**17**	P	**P**	**22 02 53.1**	**-0.5**
CRQM	**Cirque**	**83.32**	**22**	IAmb	IAmb	22 02 56.0	
	comp=Z,8.8nm,0.9s						
KRMB	**Red Mountain**	**83.38**	**45**	P	**P**	**22 02 56.4**	**+0.9**
TGL	**Tana Glacier**	**83.44**	**22**	IAmb	IAmb	22 02 56.4	
	comp=Z,5.9nm,0.8s						
MCK	**McKinley**	**83.45**	**18**	IAmb	IAmb	22 02 55.9	
	comp=Z,10nm,1.0s						
DHY	**Denali Highway**	**83.46**	**19**	IAmb	IAmb	22 02 58.0	
	comp=Z,5.1nm,0.8s						
DIB	**Dawson Inlet,**	**83.56**	**32**	P	**P**	**22 02 56.3**	**+0.3**
DIB				IAmb	IAmb	22 02 57.0	
	comp=Z,10nm,0.9s						
MOBC	**Moresby Island**	**83.79**	**32**	P	**P**	**22 02 58.0**	**+0.7**
BALM	**Baldy**	**83.80**	**22**	IAmb	IAmb	22 02 58.1	
	comp=Z,6.3nm,0.6s						
MLY	**Manley**	**83.89**	**17**	P	**P**	**22 02 57.6**	**0.0**
BARN	**Barnard Glacie**	**84.07**	**22**	P	**P**	**22 02 59.1**	**+0.4**
BARN				IAmb	IAmb	22 02 59.9	
	comp=Z,8.0nm,0.7s						
CTGM	**Chitina Glacie**	**84.13**	**23**	P	**P**	**22 02 59.5**	**+0.6**
CTGM				IAmb	IAmb	22 03 00.1	
	comp=Z,11nm,0.8s						
DHAK	**Deception Hill**	**84.20**	**25**	P	**P**	**22 02 59.2**	**0.0**
YBH	**Yreka Blue Hor**	**84.28**	**45**	P	**P**	**22 03 00.5**	**+0.3**
	comp=Z,3.1nm,0.8s,baz=181,slow=1.5,SNR=9.5						
YBH	**Yreka Blue Hor**	**84.28**	**45**	P	**P**	**22 03 00.2**	**+0.1**
HUMO	**Hull Mountain**	**84.45**	**44**	P	**P**	**22 03 01.0**	**+0.1**
HUMO				IAmb	IAmb	22 03 02.9	
	comp=Z,3.9nm,0.8s						
CCB	**Clear Creek Bu**	**84.46**	**18**	IAmb	IAmb	22 03 00.5	
	comp=Z,7.7nm,0.7s						
AFDM	**Forest Hills D**	**84.48**	**48**	P	**P**	**22 03 00.3**	**-0.7**
CMB	**Columbia Colle**	**84.58**	**49**	P	**P**	**22 03 00.7**	**-0.9**
RIDG	**Independent Ri**	**84.75**	**19**	IAmb	IAmb	22 03 03.0	
	comp=Z,9.7nm,1.0s						
IL31		**84.83**	**18**	P	**P**	**22 03 01.5**	**-0.6**
IL31				IAmb	IAmb	22 03 02.5	
	comp=Z,7.3nm,0.8s						
ILAR	**Eielson Array**	**84.83**	**18**	P	**P**	**22 03 01.6**	**-0.6**
	comp=Z,5.2nm,0.5s,baz=231,slow=5.3,SNR=72						
DOT	**Dot Lake**	**84.94**	**20**	P	**P**	**22 03 02.6**	**-0.2**
DOT				IAmb	IAmb	22 03 03.9	
	comp=Z,4.8nm,0.8s						
SCRK	**Sand Creek**	**85.19**	**20**	IAmb	IAmb	22 03 05.3	
	comp=Z,5.0nm,0.8s						
BBB	**Bella Bella**	**85.37**	**34**	P	**P**	**22 03 04.4**	**-0.7**
BBB				IAmb	IAmb	22 03 20.6	
	comp=Z,14nm,1.1s						
MDPB	**Devils Postpil**	**85.41**	**50**	P	**P**	**22 03 03.9**	**-2.1**
MDPB				IAmb	IAmb	22 03 07.0	
	comp=Z,3.7nm,0.8s						
WAKR	**Walker**	**85.44**	**49**	P	**P**	**22 03 06.1**	**0.0**
OMMB	**Old Mammoth Mi**	**85.46**	**50**	P	**P**	**22 03 04.7**	**-1.7**
K05A	**Summer Lake**	**85.91**	**45**	P	**P**	**22 03 08.9**	**+0.6**
K05A				IAmb	IAmb	22 03 09.2	
	comp=Z,5.7nm,0.6s						
PFO	**Pinyon Flats O**	**86.12**	**54**	P	**P**	**22 03 09.0**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=262,slow=4.4,SNR=4.1						
PFO	**Pinyon Flats O**	**86.12**	**54**	P	**P**	**22 03 08.9**	**-0.5**
XPFO	**Pion Flat**	**86.13**	**54**	P	**P**	**22 03 08.8**	**-0.7**
RYN	**Ryan**	**86.16**	**49**	IAmb	IAmb	22 03 10.6	
	comp=Z,3.5nm,0.8s						
NVAR	**Mina Array Bea**	**86.25**	**49**	P	**P**	**22 03 10.5**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=235,slow=8.4,SNR=12						
PINE	**Pine Mountain**	**86.27**	**44**	P	**P**	**22 03 10.8**	**+0.8**
PINE				IAmb	IAmb	22 03 11.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,4.5nm,0.8s						
EGAK	**Eagle**	**86.64**	**20**	IAmb	IAmb	22 03 14.1	
	comp=Z,5.1nm,0.6s						
TOLK	**Toolik Lake Re**	**86.91**	**15**	P	**P**	**22 03 13.2**	**+0.8**
TOLK				IAmb	IAmb	22 03 13.8	
	comp=Z,2.8nm,0.5s						
TPNV	**Topopah Spring**	**87.32**	**51**	P	**P**	**22 03 15.1**	**-0.2**
I07A	**Izee**	**87.34**	**44**	IAmb	IAmb	22 03 16.3	
	comp=Z,4.7nm,0.8s						
LTY	**Liberty**	**87.72**	**41**	P	**P**	**22 03 16.9**	**+0.1**
LTY				IAmb	IAmb	22 03 17.1	
	comp=Z,3.3nm,0.7s						
G08A	**Pilot Rock**	**88.12**	**43**	P	**P**	**22 03 18.5**	**-0.3**
G08A				IAmb	IAmb	22 03 19.9	
	comp=Z,4.9nm,1.1s						
F10A	**Beach Ranch, E**	**89.50**	**43**	P	**P**	**22 03 25.0**	**-0.2**
F10A				IAmb	IAmb	22 03 25.9	
	comp=Z,4.6nm,0.6s						
PSUT	**Pine Spring**	**89.61**	**50**	P	**P**	**22 03 25.4**	**-0.6**
MFID	**Camas Ranch**	**89.63**	**45**	P	**P**	**22 03 26.0**	**+0.2**
MFID				IAmb	IAmb	22 03 27.0	
	comp=Z,3.5nm,0.8s						
LCMT	**Little Creek M**	**89.64**	**52**	P	**P**	**22 03 25.4**	**-0.7**
CCUT	**Cedar City**	**89.70**	**51**	P	**P**	**22 03 25.7**	**-0.8**
U15A	**North Rim**	**90.21**	**53**	P	**P**	**22 03 28.8**	**-0.2**
U15A				IAmb	IAmb	22 03 30.6	
	comp=Z,3.2nm,0.7s						
NEW	**Newport**	**90.31**	**40**	P	**P**	**22 03 28.1**	**-0.8**
NEW				IAmb	IAmb	22 03 29.6	
	comp=Z,3.2nm,0.9s						
MSU	**Marysvale**	**90.86**	**51**	P	**P**	**22 03 30.4**	**-1.5**
WMQ	**Urumqi**	**91.22**	**315**	*e*P	**P**	**22 03 33.1**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,26nm,4.5s						
WMQ				LR	LR		
	comp=N,310nm,29.3s						
WMQ				LR	LR		
	comp=E,2μm,29.0s						
WMQ				LR	LR		
	comp=Z,130nm,29.3s						
REDW	**Red Top Meadow**	**93.10**	**46**	P	**P**	**22 03 41.7**	**-0.4**
REDW				IAmb	IAmb	22 03 43.5	
	comp=Z,2.5nm,0.9s						
PV09	**Paradox Valley**	**93.17**	**51**	P	**P**	**22 03 42.2**	**-0.5**
PV20	**West Nyswonger**	**93.26**	**52**	P	**P**	**22 03 42.7**	**-0.2**
PV18	**Skein Mesa, Pa**	**93.28**	**52**	P	**P**	**22 03 43.2**	**+0.2**
PV16	**Nyswonger Mesa**	**93.29**	**52**	P	**P**	**22 03 42.1**	**-0.9**
PV04	**Paradox Valley**	**93.32**	**52**	P	**P**	**22 03 42.5**	**-0.6**
PV11	**David Mesa, Pa**	**93.32**	**52**	P	**P**	**22 03 44.1**	**+0.9**
PV13	**Radium Mtn., P**	**93.33**	**52**	P	**P**	**22 03 44.0**	**+0.7**
PV03	**Paradox Valley**	**93.33**	**52**	P	**P**	**22 03 42.5**	**-0.8**
FLWY	**Flagg Ranch**	**93.39**	**46**	IAmb	IAmb	22 03 47.5	
	comp=Z,3.9nm,0.9s						
PV02	**Paradox Valley**	**93.41**	**52**	P	**P**	**22 03 44.2**	**+0.6**
PV07	**Paradox Valley**	**93.53**	**52**	P	**P**	**22 03 41.3**	**-2.9**
MKAR	**Makanchi Array**	**95.65**	**317**	P	**P**	**22 03 53.6**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=83,slow=6.4,SNR=16						
ZALV	**Zalesovo Beam**	**95.71**	**324**	P	**P**	**22 03 52.0**	**-1.5**
	comp=Z,0.9nm,0.6s,baz=103,slow=3.2,SNR=4.3						
YKA	**Yellowknife Ar**	**96.00**	**27**	P	**P**	**22 03 53.5**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=253,slow=4.4,SNR=10						
KSH	**Kashi**	**98.82**	**308**	P	Pdif	22 04 08.6	+0.6
KSH				pP	sP	22 05 17.0	-0.4
KSH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,150nm,5.9s						
ARCES	**ARCESS Array B**	**118.37**	**346**	PKP	**PKiKP**	**22 09 13.1**	**-0.5**
	comp=Z,1.8nm,0.5s,baz=77,slow=1.5,SNR=25						
FINES	**FINESS Array B**	**123.88**	**339**	PKP	**PKiKP**	**22 09 23.9**	**-0.8**
	comp=Z,4.6nm,1.0s,baz=359,slow=7.6,SNR=4.8						
NB2	**NORSAR Subarra**	**128.74**	**345**	PKPdf	**PKiKP**	**22 09 33.6**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=34,slow=1.9						
NOA	**NORSAR Array B**	**128.74**	**345**	PKP	**PKiKP**	**22 09 33.6**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=40,slow=2.3,SNR=4.0						
GERES	**GERESS Array B**	**137.84**	**334**	PKP	**PKiKP**	**22 09 52.7**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=18,slow=4.5,SNR=2.4						
KEST	**Kesra**	**149.57**	**322**	PKPbc	**PKiKP**	**22 10 15.3**	**-2.5**
	comp=Z,2.7nm,0.6s,baz=39,slow=21,SNR=2.6						
ESDC	**Sonseca Array**	**152.10**	**345**	PKPbc	**PKiKP**	**22 10 22.5**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=18,slow=2.0,SNR=6.7						
ESDC				PKPab	**PKPab**	**22 10 33.5**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=7.4,slow=3.6,SNR=6.4						
TORD	**Torodi Ar. Bea**	**165.66**	**273**	PKP	**PKPdf**	**22 10 31.2**	**-1.0**
	comp=Z,1.0nm,1.0s,baz=316,slow=4.0,SNR=3.7						

*NIED **01** 21:56:00, 44°.10N×148°.10E, h53km, Mw3.8 Best double couple: M₀5.35000×10¹⁴ NP1:φs40.00000°, δ81.00000°, λ83.00000°. NP2:φs259.00000°, δ12.00000°, λ128.00000°.*
*SKHL **01** 21:56:42.5±0.5, 44°.44N×148°.50E, h68km±5km, mb5.1/6*
*MOS **01** 21:56:42.2±1.1, 44°.45N×148°.38E, h63km, mb4.6/1, Error ellipse: s-maj=12.3km s-min=9.4km az=149.1*
*JMA **01** 21:56:43.3±0.3, 44°.09N×148°.08E, h0km, M4.5*
*IDC **01** 21:56:45.5±2.5, 44°.53N×148°.24E, h75km±22km, mb3.3/12, mb1 3.6/16, mb1mx3.4/63, mbtmp3.6/16, MS2.5/4, Ms1 2.6/4, ms1mx2.3/31, Error ellipse: s-maj=23.5km s-min=16.8km az=143.0*

ISC 01 21:56:43.5±1.2**, 44°.44N**±0°.06×**148°.37E**±0°.08**, h58**km±10km**, n68, σ1ˢ16**/82**, mb3.5**/12**, 4C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.88**	**336**	*i* P	**Pn**	**21 56 59.0**	**-0.8**
KUR				AMB	AMB	21 56 59.0	
	320nm,0.3s						
KUR				AMB	AMB	21 56 59.0	
	440nm,0.3s						
KUR				AMB	AMB	21 56 59.0	
	1μm,0.3s						
KUR				*e*S	**Sn**	**21 57 11.0**	**-0.8**
KUR				A	A	21 57 12.0	
	3μm,0.2s						
KUR				A	A	21 57 12.0	
	2μm,0.2s						
KUR	**Kuril'sk**	**0.88**	**336**	*d i*PN	**Pn**	**21 56 59.0**	**-0.8**
KUR				*e*S	**Sn**	**21 57 10.4**	**-1.4**
KUR				pmax	pmax		
	comp=N,322nm,0.3s						
KUR				pmax	pmax		
	comp=E,444nm,0.3s						
KUR				pmax	pmax		
	comp=Z,1μm,0.3s						
KUR				smax	smax		
	comp=N,3μm,0.2s						
KUR				smax	smax		
	comp=E,2μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.85**	**258**	*i* P	**Pn**	**21 57 12.6**	**-0.2**
YUK				AMB	AMB	21 57 14.4	
	comp=E,220nm,0.2s						
YUK				AMB	AMB	21 57 14.4	
	comp=E,350nm,0.2s						
YUK				*i* S	**Sn**	**21 57 35.6**	**+0.6**
YUK				A	A	21 57 37.7	
	comp=E,810nm,0.3s						
YUK				A	A	21 57 37.7	
	comp=E,2μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.85**	**258**	⇓*i*PN	**Pn**	**21 57 12.6**	**-0.2**
YUK				*i* S	**Sn**	**21 57 35.7**	**+0.7**
YUK				pmax	pmax		
	comp=E,444nm,0.2s						
YUK				pmax	pmax		
	comp=Z,700nm,0.2s						
YUK				pmax	pmax		
	comp=N,123nm,0.1s						
YUK				smax	smax		
	comp=N,814nm,0.1s						
YUK				smax	smax		
	comp=E,2μm,0.6s						
LAGR	**Lagunnoye**	**1.90**	**259**	*i* P	**Pn**	**21 57 13.5**	**+0.1**
LAGR				AMB	AMB	21 57 14.0	
	comp=E,120nm,0.2s						
LAGR				AMB	AMB	21 57 14.0	
	comp=E,100nm,0.2s						
LAGR				AMB	AMB	21 57 14.0	
	comp=E,400nm,0.2s						
LAGR				*i* S	**Sn**	**21 57 35.0**	**-1.2**
LAGR				A	A	21 57 42.0	
	comp=E,3μm,0.4s						
LAGR				A	A	21 57 42.0	
	comp=E,1μm,0.4s						
LAGR	**Lagunnoye**	**1.90**	**259**	⇑*i*PN	**Pn**	**21 57 13.3**	**-0.1**
LAGR				*i* S	**Sn**	**21 57 37.2**	**+1.0**
LAGR				pmax	pmax		
	comp=N,117nm,0.1s						
LAGR				pmax	pmax		
	comp=E,95nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,395nm,0.1s						
LAGR				smax	smax		
	comp=N,3μm,0.3s						
LAGR				smax	smax		
	comp=E,1μm,0.3s						
GRPR	**Tuman**	**1.92**	**258**	*i* P	**Pn**	**21 57 14.0**	**+0.2**
GRPR				AMB	AMB	21 57 16.0	
	comp=E,310nm,0.4s						
GRPR				AMB	AMB	21 57 16.0	
	comp=E,170nm,0.4s						
GRPR				AMB	AMB	21 57 16.0	
	comp=E,390nm,0.4s						
GRPR				*i* S	**Sn**	**21 57 35.2**	**-1.6**
GRPR				A	A	21 57 40.0	
	comp=E,890nm,0.4s						
GRPR				A	A	21 57 40.0	
	comp=E,1μm,0.4s						
GRPR	**Tuman**	**1.92**	**258**	*i* PN	**Pn**	**21 57 13.6**	**-0.2**
GRPR				*i* S	**Sn**	**21 57 37.2**	**+0.4**
GRPR				pmax	pmax		
	comp=E,167nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,494nm,0.3s						
GRPR				pmax	pmax		
	comp=N,311nm,0.2s						
GRPR				smax	smax		
	comp=E,1μm,0.4s						
GRPR				smax	smax		
	comp=N,894nm,0.1s						
GLVR	**Golovnino**	**2.17**	**252**	*i* P	**Pn**	**21 57 17.2**	**0.0**
GLVR				AMB	AMB	21 57 18.0	
	comp=N,40nm,0.3s						
GLVR				AMB	AMB	21 57 18.0	
	comp=N,260nm,0.3s						
GLVR				*i* S	**Sn**	**21 57 42.0**	**-0.9**
GLVR				A	A	21 57 50.0	
	comp=N,840nm,0.4s						
GLVR				A	A	21 57 50.0	
	comp=N,2μm,0.4s						
GLVR	**Golovnino**	**2.17**	**252**	⇓*i*PN	**Pn**	**21 57 17.2**	**0.0**
GLVR				*i* S	**Sn**	**21 57 44.9**	**+2.0**
GLVR				pmax	pmax		
	comp=N,38nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,263nm,0.1s						
GLVR				smax	smax		
	comp=E,2μm,0.2s						
GLVR				smax	smax		
	comp=N,842nm,0.1s						
NEM2	**Nemuro 2**	**2.18**	**242**	P	**Pn**	**21 57 16.5**	**-0.8**
NEM2				*e*S	**Sn**	**21 57 40.7**	**-2.5**
NMR	**Nemuro--Hokkai**	**2.19**	**242**	*i* P	**Pn**	**21 57 16.7**	**-0.7**
NMR				*e*S	**Sn**	**21 57 41.3**	**-2.0**
NMR	**Nemuro--Hokkai**	**2.19**	**242**	⇑*i*PN	**Pn**	**21 57 16.6**	**-0.8**
NMR				*e*S	**Sn**	**21 57 41.3**	**-2.0**
JRA	**Rausu**	**2.39**	**259**	P	**Pn**	**21 57 21.0**	**+0.8**
JNSB	**Nemuroshibetsu**	**2.51**	**256**	P	**Pn**	**21 57 22.7**	**+0.8**
JKHN	**Kushirohamanak**	**2.69**	**241**	P	**Pn**	**21 57 24.1**	**-0.2**
JKHN				*e*S	**Sn**	**21 57 54.1**	**-1.5**
JNK	**Nakash**	**2.77**	**253**	P	**Pn**	**21 57 25.9**	**+0.5**
JNK				*e*S	**Sn**	**21 57 57.1**	**-0.5**
JAK	**Akkeshi**	**3.03**	**243**	P	**Pn**	**21 57 28.7**	**-0.2**
JAR	**Ashorobuto**	**3.52**	**253**	P	**Pn**	**21 57 36.9**	**+1.3**
JAR				*e*S	**Sn**	**21 58 16.9**	**+1.0**
JCH	**Churui**	**4.07**	**245**	P	**Pn**	**21 57 43.4**	**+0.2**
JKK2	**Kamakawa 2**	**4.09**	**264**	P	**Pn**	**21 57 45.7**	**+2.3**
JKA	**Kamikawa-asahi**	**4.16**	**268**	*e*P	**Pn**	**21 57 46.0**	**+1.6**
ASAJ	**Asahikawa**	**4.16**	**268**	P	**Pn**	**21 57 46.0**	**+1.6**
	comp=N,4.3nm,0.3s,baz=57,slow=22,SNR=18						
ASAJ				S	Sn	21 58 44.8	+13
	comp=N,2.9nm,0.3s,baz=86,slow=16,SNR=2.2						
ASAJ				LR	LR	21 59 28.3	
	comp=N,84nm,21.0s,baz=320,slow=40						
JSE	**Soyaes**	**4.16**	**279**	P	**Pn**	**21 57 45.1**	**+0.7**
ERM	**Erimo**	**4.51**	**239**	*ce*PN	**Pn**	**21 57 51.9**	**+2.7**
YSS	**Yuzh-Sakhalins**	**4.67**	**305**	*e*P	**Pn**	**21 57 51.9**	**+0.5**
YSS				AMB	AMB	21 57 52.2	
	comp=N,20nm,0.7s						
YSS				*e*S	**Sn**	**21 58 43.4**	**-0.8**
YSS				A	A	21 58 49.7	
	comp=N,20nm,0.8s						
YSS	**Yuzh-Sakhalins**	**4.67**	**305**	*e*PN	**Pn**	**21 57 51.7**	**+0.3**
YSS				*e*S	**Sn**	**21 58 43.4**	**-0.8**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				smax	smax		
	comp=N,20nm,0.8s						
JKB	**Kayabe**	**5.94**	**247**	P	**Pn**	**21 58 09.4**	**+0.6**
JKB				*e*S	**Sn**	**21 59 13.9**	**-1.5**
JOT	**Ohata**	**6.18**	**243**	P	**Pn**	**21 58 12.3**	**+0.2**
JOT				*e*S	**Sn**	**21 59 18.3**	**-3.1**
JOSM	**Okushiri--Mats**	**6.91**	**253**	P	**Pn**	**21 58 23.3**	**+1.3**
PETK	**Petropavlovsk-**	**10.63**	**32**	P	**Pn**	**21 59 14.4**	**+1.5**
	comp=N,0.1nm,0.3s,baz=209,slow=12,SNR=2.3						
MJAR	**Matsushiro Arr**	**11.04**	**228**	P	**Pn**	**21 59 18.4**	**-0.2**
	comp=N,0.1nm,0.3s,baz=23,slow=14,SNR=4.7						
MJAR				LR	LR	22 03 04.8	
	comp=N,15nm,18.9s,baz=350,slow=34						
USRK	**Ussuriysk Ar.**	**11.74**	**275**	P	**Pn**	**21 59 29.2**	**+1.1**
	baz=145,slow=43,SNR=4.6						
KLR	**Kul'dur**	**12.35**	**299**	*e*P	**Pn**	**21 59 39.2**	**+2.9**
KLR	**Kul'dur**	**12.35**	**299**	⇑*e*PN	**Pn**	**21 59 39.2**	**+2.9**
KLR				pmax	pmax		
	comp=Z,9.0nm,3.8s						
EKMR	**Ekimchan**	**13.32**	**316**	*e*P	**Pn**	**21 59 47.4**	**-2.2**
KSRS	**Korea Array**	**16.93**	**253**	LR	LR	22 06 13.7	
	comp=Z,17nm,21.5s,baz=326,slow=34						
SONM	**Songino Array**	**29.03**	**292**	P	**P**	**22 02 37.8**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=66,slow=8.1,SNR=2.9						
H11N2	**WAKE ISLAND Hy**	**29.07**	**142**	T	T	22 33 24.0	
	baz=336						
H11N1	**WAKE ISLAND Hy**	**29.08**	**142**	T	T	22 33 28.6	
	baz=336						
H11N3	**WAKE ISLAND Hy**	**29.09**	**142**	T	T	22 33 26.3	
	baz=336						
H11S1	**WAKE ISLAND Hy**	**30.07**	**143**	T	T	22 34 45.6	
	baz=337,slow=75						
H11S3	**WAKE ISLAND Hy**	**30.07**	**143**	T	T	22 34 44.5	
	baz=337,slow=75						
H11S2	**WAKE ISLAND Hy**	**30.08**	**143**	T	T	22 34 46.0	
	baz=337,slow=75						
ILAR	**Eielson Array**	**40.41**	**37**	P	**P**	**22 04 16.0**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=252,slow=5.6,SNR=1.7						
ZALV	**Zalesovo Beam**	**41.29**	**307**	PcP	**PcP**	**22 06 20.6**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=41,slow=4.6,SNR=3.7						
MKAR	**Makanchi Array**	**45.05**	**297**	P	**P**	**22 04 52.4**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=85,slow=10,SNR=4.4						
MKAR				PcP	**PcP**	**22 06 33.5**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=68,slow=4.6,SNR=6.1						
TAPN	**Taplejung**	**50.87**	**272**	*e*P	**P**	**22 05 38.1**	**-0.7**
	comp=Z,6.2nm,0.8s						
GUN	**Gumba**	**51.85**	**274**	*e*P	**P**	**22 05 46.2**	**0.0**
	comp=Z,8.0nm,0.4s						
RAMN	**Ramite**	**51.90**	**272**	*e*P	**P**	**22 05 46.8**	**+0.3**
	comp=Z,15nm,0.3s						
KKN	**Kakani**	**52.35**	**274**	*e*P	**P**	**22 05 49.7**	**-0.1**
PKI	**Pulchoki**	**52.39**	**273**	*e*P	**P**	**22 05 49.9**	**-0.3**
	comp=Z,5.8nm,0.7s						
DMN	**Daman**	**52.58**	**274**	*e*P	**P**	**22 05 51.5**	**0.0**
GKN	**Gorkha**	**52.69**	**274**	*e*P	**P**	**22 05 52.2**	**0.0**
	comp=Z,3.8nm,0.2s						
DANN	**Dangsing**	**53.11**	**275**	*e*P	**P**	**22 05 55.6**	**+0.2**
	comp=Z,5.8nm,0.3s						
KOLN	**Koldanda**	**53.56**	**275**	*e*P	**P**	**22 05 58.9**	**+0.2**
	comp=Z,2.4nm,0.3s						
YKA	**Yellowknife Ar**	**54.74**	**34**	P	**P**	**22 06 06.8**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=300,slow=6.9,SNR=5.5						
FINES	**FINESS Array B**	**64.66**	**333**	P	**P**	**22 07 13.4**	**-1.2**
	comp=Z,2.8nm,1.1s,baz=46,slow=5.5,SNR=9.6						
WRA	**Warramunga Arr**	**65.34**	**195**	P	**P**	**22 07 20.1**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=23,slow=7.2,SNR=2.4						
NVAR	**Mina Array Bea**	**66.47**	**59**	P	**P**	**22 07 27.4**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=304,slow=7.1,SNR=2.9						
PDAR	**Pinedale Array**	**68.79**	**51**	P	**P**	**22 07 41.2**	**-0.3**
	comp=Z,0.1nm,0.4s,baz=109,slow=42,SNR=2.4						
ASAR	**Alice Springs**	**69.05**	**194**	P	**P**	**22 07 43.7**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=13,slow=6.1,SNR=2.6						
NOA	**NORSAR Array B**	**69.28**	**339**	P	**P**	**22 07 43.3**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=29,slow=6.5,SNR=1.6						
NOA				LR	LR	22 42 52.2	
	comp=Z,5.1nm,18.5s,baz=25,slow=40						
KHC	**Kasperske Hory**	**78.78**	**332**	*e*P	**P**	**22 08 39.5**	**-0.2**
KHC	**Kasperske Hory**	**78.78**	**332**	*e*P	**P**	**22 08 39.5**	**-0.2**
GERES	**GERESS Array B**	**78.98**	**331**	P	**P**	**22 08 39.5**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=52,slow=8.0,SNR=2.4						
TXAR	**Lajitas Array**	**81.54**	**57**	P	**P**	**22 08 55.4**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=299,slow=4.6,SNR=7.2						
TORD	**Torodi Ar. Bea**	**115.18**	**324**	PKP	**PKiKP**	**22 15 17.6**	**-0.9**
	comp=Z,0.5nm,1.0s,baz=5.6,slow=1.8,SNR=1.8						

*NEIC **01** 21:57:12.1±1.1, 17°.6S±0°.1×178°.61W±0°.09, h596km±6km, mb4.0/34, Error ellipse: s-maj=18.2km s-min=12.3km az=197.0*
*IDC **01** 21:57:12.2±9.2, 17°.60S×178°.56W, h594km±118km, mb3.3/10, mb1 3.5/10, mb1mx3.0/50, mbtmp4.2/10, Error ellipse: s-maj=65.0km s-min=34.7km az=167.0*

ISC 01 21:57:11.7±0.8**, 17°.5S**±0°.1×**178°.6W**±0°.1**, h600**km**, n51, σ0ˢ79**/44**, mb3.9**/27**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.25**	**265**	P	**P**	**21 58 31.7**	**-0.7**
AFI	**Afiamalu**	**7.42**	**62**	P	**P**	**21 59 06.5**	**+0.7**
NIUE	**Niue**	**8.35**	**102**	P	**P**	**21 59 14.9**	**+0.6**
DZM	**Mont Dzumac**	**14.84**	**250**	P	**P**	**22 00 18.5**	**0.0**
MLZ	**Mavora Lakes**	**29.96**	**199**	P	**P**	**22 02 33.5**	**+0.6**
ARMA	**Armidale**	**30.04**	**239**	P	**P**	**22 02 33.9**	**0.0**
ARMA				IAmb	IAmb	22 02 35.0	
	comp=Z,7.4nm,1.1s						
WHZ	**Wether Hill Ro**	**30.48**	**199**	P	**P**	**22 02 36.0**	**-1.4**
CTA	**Charters Tower**	**33.38**	**260**	P	**P**	**22 03 02.3**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=70,slow=12,SNR=2.0						
CTAO	**Charters Tower**	**33.38**	**260**	P	**P**	**22 03 02.8**	**+0.5**
CTAO				IAmb	IAmb	22 03 06.0	
	comp=Z,4.3nm,1.1s						
COEN	**Coen**	**36.97**	**270**	P	**P**	**22 03 32.7**	**+0.7**
STKA	**Stephens Creek**	**38.72**	**241**	P	**P**	**22 03 45.9**	**-0.1**
	comp=Z,3.9nm,0.7s,baz=110,slow=12,SNR=4.9						
STKA	**Stephens Creek**	**38.72**	**241**	P	**P**	**22 03 46.2**	**+0.3**
BBOO	**Buckleboo**	**43.50**	**241**	P	**P**	**22 04 23.6**	**0.0**
WR0	**Warramunga Arr**	**44.39**	**259**	P	**P**	**22 04 30.9**	**+0.3**
WB0	**Warramunga Arr**	**44.54**	**259**	P	**P**	**22 04 32.4**	**+0.6**
WB0				IAmb	IAmb	22 04 34.4	
	comp=Z,5.8nm,1.1s						
WB2	**Warramunga Arr**	**44.57**	**259**	P	**P**	**22 04 32.1**	**+0.1**
WB2				IAmb	IAmb	22 04 32.7	
	comp=Z,5.3nm,1.1s						
WRA	**Warramunga Arr**	**44.58**	**259**	P	**P**	**22 04 32.5**	**+0.4**
	comp=Z,2.1nm,0.5s,baz=93,slow=6.8,SNR=41						
ASAR	**Alice Springs**	**44.78**	**254**	P	**P**	**22 04 34.3**	**+0.6**
	comp=Z,20nm,0.5s,baz=88,slow=8.3,SNR=288						
FORT	**Forrest**	**50.07**	**244**	P	**P**	**22 05 12.3**	**-0.7**
KNRA	**Kununurra**	**50.40**	**264**	P	**P**	**22 05 15.6**	**+0.1**
SIJI	**Sorong**	**52.01**	**283**	P	**P**	**22 05 28.3**	**+1.1**
	comp=Z,8.9nm,0.6s,baz=106,slow=4.3,SNR=6.7						
FITZ	**Fitzroy Crossi**	**52.97**	**260**	P	**P**	**22 05 35.0**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=55,slow=5.8,SNR=6.2						
FITZ	**Fitzroy Crossi**	**52.97**	**260**	IAmb	IAmb	22 05 35.5	
	comp=Z,2.4nm,0.9s						
PSAD2	**Pilbara Seismi**	**57.77**	**255**	P	**P**	**22 06 06.7**	**-0.5**
PSAD2				IAmb	IAmb	22 06 15.5	
	comp=Z,7.9nm,1.0s						
PSAC2	**Pilbara Seismi**	**57.84**	**255**	P	**P**	**22 06 07.8**	**+0.2**
PSAC2				IAmb	IAmb	22 06 23.9	
	comp=Z,9.6nm,1.1s						
PSAB2	**Pilbara Seismi**	**57.87**	**255**	P	**P**	**22 06 08.6**	**+0.7**
PSAB2				IAmb	IAmb	22 06 12.2	
	comp=Z,8.9nm,1.1s						
PSAB3	**Pilbara Seismi**	**57.88**	**255**	P	**P**	**22 06 07.5**	**-0.4**
PSAB3				IAmb	IAmb	22 06 20.8	
	comp=Z,9.9nm,1.1s						
PSAA3	**Pilbara Seismi**	**57.88**	**255**	P	**P**	**22 06 07.8**	**-0.1**
PSAA3				IAmb	IAmb	22 06 10.8	
	comp=Z,13nm,1.1s						
PSA00	**Pilbara Seismi**	**57.89**	**255**	P	**P**	**22 06 08.4**	**+0.4**
PSA00				IAmb	IAmb	22 06 09.3	
	comp=Z,6.3nm,0.8s						
PSAA2	**Pilbara Seismi**	**57.89**	**255**	P	**P**	**22 06 08.2**	**+0.2**
PSAA1	**Pilbara Seismi**	**57.90**	**255**	P	**P**	**22 06 07.9**	**-0.1**
PSAA1				IAmb	IAmb	22 06 12.0	
	comp=Z,9.3nm,1.1s						
PSAC3	**Pilbara Seismi**	**57.90**	**255**	P	**P**	**22 06 07.6**	**-0.4**
PSAC3				IAmb	IAmb	22 06 14.0	
	comp=Z,7.2nm,1.1s						
PSAB1	**Pilbara Seismi**	**57.91**	**255**	P	**P**	**22 06 08.2**	**0.0**
PSAB1				IAmb	IAmb	22 06 23.2	
	comp=Z,7.9nm,1.1s						
PSAD1	**Pilbara Seismi**	**57.92**	**255**	P	**P**	**22 06 08.7**	**+0.5**
PSAD1				IAmb	IAmb	22 06 11.9	
	comp=Z,9.1nm,1.1s						
PSAC1	**Pilbara Seismi**	**57.92**	**255**	P	**P**	**22 06 08.1**	**-0.1**
PSAC1				IAmb	IAmb	22 06 15.9	
	comp=Z,6.7nm,0.9s						
PSAD3	**Pilbara Seismi**	**57.94**	**255**	P	**P**	**22 06 08.3**	**0.0**
NWAO	**Narrogin (SRO)**	**59.29**	**242**	P	**P**	**22 06 17.6**	**+0.4**
NWAO	**Narrogin (SRO)**	**59.29**	**242**	P	**P**	**22 06 17.8**	**+0.6**
NWAO				IAmb	IAmb	22 06 18.1	
	comp=Z,7.0nm,1.1s						
MORW	**Morawa**	**60.53**	**246**	P	**P**	**22 06 24.3**	**-1.2**
MORW				IAmb	IAmb	22 06 43.0	
	comp=Z,7.7nm,1.1s						
KAPI	**Kappang**	**61.53**	**274**	P	**P**	**22 06 31.8**	**-0.4**
KAPI				IAmb	IAmb	22 06 42.7	
	comp=Z,9.8nm,1.1s						
JAGI	**Jajag, Banyuwa**	**65.92**	**268**	P	**P**	**22 07 00.6**	**+0.5**
JAGI				IAmb	IAmb	22 07 17.6	
	comp=Z,12nm,1.1s						
UGM	**Wanagama**	**69.53**	**268**	P	**P**	**22 07 21.8**	**-0.2**
SDPT	**Sand Point**	**74.14**	**11**	P	**P**	**22 07 47.9**	**+0.2**
OHAK	**Old Harbor**	**77.35**	**14**	P	**P**	**22 08 05.7**	**+0.4**
BEKR	**Beckworth**	**78.66**	**42**		pwP	22 10 20.6	+0.3
NVAR	**Mina Array Bea**	**79.21**	**44**	P	P	22 08 17.3	+1.3
	comp=Z,0.5nm,0.6s,baz=234,slow=10,SNR=3.7						
SEW	**Seward**	**80.83**	**14**		pwP	22 10 35.4	+3.7
DLBC	**Dease Lake**	**85.49**	**23**	P	P	22 08 48.8	+1.8
	comp=Z,0.9nm,0.4s,baz=118,slow=2.4,SNR=3.0						
TXAR	**Lajitas Array**	**85.88**	**58**	P	P	22 08 51.5	+1.9
	comp=Z,0.5nm,0.7s,baz=208,slow=7.8,SNR=4.6						
PDAR	**Pinedale Array**	**87.13**	**43**	P	P	22 08 56.5	+1.1
	comp=Z,0.2nm,0.5s,baz=153,slow=5.0,SNR=2.7						
GERES	**GERESS Array B**	**147.16**	**345**	PKPbc	**PKPab**	**22 15 48.6**	**-3.6**
	comp=Z,0.3nm,0.6s,baz=7.6,slow=4.0,SNR=3.6						

*MEX **01** 21:58:41.5±0.5, 15°.05N×92°.65W, h99km±4km, MD3.7*
*GCG **01** 21:58:41.0±0.3, 15°.50N×92°.60W, h21km±3km, MD4.1*

ISC 01 21:58:43.7±1.6**, 15°.15N**±0°.08×**92°.70W**±0°.07**, h71**km±14km**, n10, σ1ˢ19**/17**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.48**	**119**	*e*P	**Pn**	**21 58 55.1**	**-1.4**
THIG				*e*S	**Sn**	**21 59 06.4**	**+0.6**
PCIG		**0.74**	**318**	*e*P	**Pn**	**21 58 59.0**	**-0.2**
PCIG				*e*S	**Sn**	**21 59 12.6**	**+1.9**
STG3	**Santiaguito 3,**	**1.18**	**111**	*e*P	**Pn**	**21 59 03.9**	**-0.8**
CCIG	**Comitan**	**1.25**	**26**	*e*P	**Pn**	**21 59 04.5**	**-1.2**
CCIG				*i* S	**Sn**	**21 59 23.0**	**+0.9**
ERG	**Entre ros, C**	**1.30**	**123**	*e*P	**Pn**	**21 59 05.9**	**-0.3**
ERG				*e*S	**Sn**	**21 59 22.1**	**-0.9**
TGIG		**1.67**	**346**	*e*P	**Pn**	**21 59 10.2**	**-0.9**
TGIG				*i* S	**Sn**	**21 59 32.3**	**+0.6**
FUG	**Fuego 3**	**1.93**	**111**	*e*P	**Pn**	**21 59 14.0**	**-0.7**
FUG				*e*S	**Sn**	**21 59 39.6**	**+1.5**
PCG	**Pacaya**	**2.16**	**110**	*e*S	**Sn**	**21 59 45.9**	**+2.1**
IXG	**Ixpaco**	**2.39**	**114**	*e*P	**Pn**	**21 59 20.7**	**-0.3**
CMIG	**Matias Romero**	**2.85**	**313**	*e*P	**Pn**	**21 59 26.2**	**-0.8**
CMIG				*e*S	**Sn**	**22 00 00.4**	**+0.1**

*PRE **01** 21:59:46.1±1.0, 26°.47S×27°.43E, h2km, ML2.0*
*EAF **01** 21:59:47.2±0.9, 26°.55S×27°.68E, h4km±12km, MD3.2*

ISC 01 21:59:45.2±0.9**, 26°.45S**±0°.04×**27°.58E**±0°.05**, h5**km**, n12, σ1ˢ77**/24**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.51**	**203**	*e*P	**Pg**	**21 59 54.4**	**-0.7**
PRYS				*e*S	**Sg**	**22 00 02.1**	**+0.3**
PRYS				AML	AML	22 00 05.3	
	comp=Z,62nm,0.2s						
ERPM	**east rand prop**	**0.60**	**80**	*e*P	**Pn**	**22 00 00.8**	**+0.3**
ERPM				*e*S	**Sn**	**22 00 11.1**	**+0.4**
ERPM				AML	AML	22 00 11.6	

	comp=Z,60nm,0.1s						
KSR	**Koster**	**0.86**	**314**	*e*P	**Pg**	**22 00 01.8**	**+0.2**
KSR				*e*S	**Sg**	**22 00 11.5**	**-1.3**
KSR				AML	AML	22 00 17.8	
	comp=Z,23nm,0.1s						
LBTB	**Lobatse**	**2.29**	**308**	*i* P	**Pb**	**22 00 27.4**	**+0.3**
LBTB				*i* S	**Sb**	**22 00 56.3**	**+0.5**
LBTB	**Lobatse**	**2.29**	**308**	*i* P	**Pb**	**22 00 27.4**	**+0.3**
LBTB				*i* S	**Sb**	**22 00 56.3**	**+0.5**
BOSA	**Boshof**	**2.98**	**223**	*i* P	**Pn**	**22 00 35.2**	**+1.9**
BOSA				*i* S	**Sn**	**22 01 09.4**	**-0.2**
BOSA	**Boshof**	**2.98**	**223**	*i* P	**Pn**	**22 00 35.2**	**+1.9**
BOSA				*i* S	**Sn**	**22 01 09.4**	**-0.2**
UPI	**Upington**	**5.94**	**250**	*e*P	**Pn**	**22 01 14.1**	**+0.2**
UPI				*e*S	**Sn**	**22 02 18.1**	**-4.3**
UPI				AML	AML	22 02 19.4	
	comp=Z,13nm,0.7s						
MATP	**Matopo**	**6.06**	**8**	*i* P	**Pn**	**22 01 17.1**	**+1.6**
MATP				*i* S	**Sn**	**22 02 24.6**	**-0.8**
MATP	**Matopo**	**6.06**	**8**	*i* P	**Pn**	**22 01 17.1**	**+1.6**
MATP				*i* S	**Sn**	**22 02 24.6**	**-0.8**
CHIPN	**CHIPINGE**	**7.74**	**38**	*i* P	**Pn**	**22 01 40.6**	**+1.9**
CHIPN				*i* S	**Sn**	**22 03 03.4**	**-3.4**
CHIPN	**CHIPINGE**	**7.74**	**38**	*i* P	**Pn**	**22 01 40.6**	**+1.9**
CHIPN				*i* S	**Sn**	**22 03 03.4**	**-3.4**

*SKHL **01** 22:00:35.0±0.7, 46.°82N×152.°65E, h121km±5km, mb4.9/3, msh5.0/2*
*MOS **01** 22:00:35.7±1.3, 46.°99N×152.°35E, h125km, mb4.0/11, Error ellipse: s-maj=8.3km s-min=6.1km az=80.9*
*IDC **01** 22:00:38.0±2.4, 47.°13N×152.°25E, h127km±21km, mb3.6/18, mb1 3.7/22, mb1mx3.5/60, mbtmp4.0/22, Error ellipse: s-maj=22.4km s-min=13.5km az=120.0*
*NEIC **01** 22:00:42±1.4, 47.°5N±0.°2×151.°9E±0.°2, h137km±9km, mb4.2/19, Error ellipse: s-maj=26.0km s-min=13.4km az=164.0*
ISC 01 22:00:35.7±0.7, **47.°08N**±0.°08×**152.°16E**±0.°08, **h100**km, **n172**, σ1.°60/176, **mb4.2**/47, **21C-14D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.51**	**240**	*i* P	**Pn**	**22 01 31.0**	**+2.9**
KUR				AMB	AMB	22 01 32.3	
	300nm,2.0s						
KUR				AMB	AMB	22 01 32.4	
	30nm,0.3s						
KUR				AMB	AMB	22 01 32.4	
	20nm,0.3s						
KUR				AMB	AMB	22 01 32.4	
	40nm,0.3s						
KUR				*i* S	**Sn**	**22 02 13.5**	**+4.8**
KUR				A	A	22 02 17.9	
	160nm,0.3s						
KUR				A	A	22 02 17.9	
	150nm,0.3s						
KUR	**Kuril'sk**	**3.51**	**240**⇓	*i*PN	**Pn**	**22 01 31.4**	**+3.3**
KUR				*i* S	**Sn**	**22 02 14.3**	**+5.6**
KUR				pmax	pmax		
	comp=N,35nm,0.3s						
KUR				pmax	pmax		
	comp=Z,48nm,0.3s						
KUR				pmax	pmax		
	comp=E,9.0nm,0.1s						
KUR				smax	smax		
	comp=N,63nm,0.3s						
KUR				smax	smax		
	comp=E,123nm,0.3s						
SKR	**Severo-Kuril's**	**4.45**	**34**	*e*P	**Pn**	**22 01 41.6**	**+0.7**
SKR				AMB	AMB	22 01 42.0	
	comp=E,20nm,0.4s						
SKR				AMB	AMB	22 01 43.6	
	comp=E,200nm,3.0s						
SKR				*e*S	**Sn**	**22 02 31.0**	**-0.5**
SKR				A	A	22 02 31.5	
	comp=E,300nm,2.0s						
SKR				A	A	22 02 31.5	
	comp=E,200nm,2.0s						
SKR				A	A	22 02 35.0	
	comp=E,60nm,0.3s						
SKR				A	A	22 02 35.0	
	comp=E,100nm,0.3s						
SKR	**Severo-Kuril's**	**4.45**	**34**	*e*PN	**Pn**	**22 01 41.7**	**+0.8**
SKR				*e*S	**Sn**	**22 02 29.4**	**-2.1**
SKR				pmax	pmax		
	comp=Z,16nm,0.4s						
SKR				smax	smax		
	comp=N,63nm,0.2s						
SKR				smax	smax		
	comp=E,98nm,0.2s						
PAU	**Pauzhetka**	**5.34**	**33**	*e*P	**Pn**	**22 01 53.9**	**+1.0**
PAU				AMB	AMB	22 01 54.5	
	comp=E,30nm,1.0s						
PAU				*e*S	**Sn**	**22 02 51.7**	**-1.4**
PAU				A	A	22 02 52.6	
	comp=E,300nm,0.4s						
PAU				A	A	22 02 52.6	
	comp=E,240nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**5.37**	**238**	*i* P	**Pn**	**22 01 55.4**	**+2.1**
YUK				AMB	AMB	22 01 55.9	
	comp=E,50nm,0.4s						
YUK				AMB	AMB	22 01 55.9	
	comp=E,80nm,0.4s						
YUK				AMB	AMB	22 01 55.9	
	comp=E,190nm,0.4s						
YUK				*i* S	**Sn**	**22 02 56.4**	**+2.6**
YUK				A	A	22 02 57.4	
	comp=E,400nm,2.0s						
YUK				A	A	22 02 57.4	
	comp=E,500nm,2.0s						
YUK				A	A	22 03 02.8	
	comp=E,120nm,0.4s						
YUK				A	A	22 03 02.8	
	comp=E,160nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**5.37**	**238**⇓	*i*PN	**Pn**	**22 01 55.4**	**+2.1**
YUK				*i* S	**Sn**	**22 02 55.3**	**+1.5**
YUK				pmax	pmax		
	comp=Z,185nm,0.1s						
YUK				pmax	pmax		
	comp=N,51nm,0.2s						
YUK				pmax	pmax		
	comp=E,83nm,0.2s						
YUK				smax	smax		
	comp=E,158nm,0.6s						
YUK				smax	smax		
	comp=N,117nm,0.3s						
GRPR	**Tuman**	**5.44**	**238**	*e*P	**Pn**	**22 01 56.0**	**+1.7**
GRPR				AMB	AMB	22 01 59.0	
	comp=N,80nm,0.3s						
GRPR				*e*S	**Sn**	**22 02 58.0**	**+2.4**
GRPR				A	A	22 03 04.0	
	comp=N,60nm,0.4s						
GRPR				A	A	22 03 04.0	
	comp=N,160nm,0.4s						
GRPR	**Tuman**	**5.44**	**238**	*e*PN	**Pn**	**22 01 56.0**	**+1.7**
GRPR				*e*S	**Sn**	**22 02 57.8**	**+2.2**
GRPR				pmax	pmax		
	comp=Z,81nm,0.3s						
GRPR				smax	smax		
	comp=E,160nm,0.1s						
GRPR				smax	smax		
	comp=N,58nm,0.2s						
GLVR	**Golovnino**	**5.74**	**237**	*e*P	**Pn**	**22 01 59.7**	**+1.3**
GLVR				AMB	AMB	22 02 01.0	
	comp=N,40nm,0.6s						
GLVR				AMB	AMB	22 02 01.0	
	comp=N,60nm,0.6s						
GLVR				AMB	AMB	22 02 01.0	
	comp=N,130nm,0.6s						
GLVR				*e*S	**Sn**	**22 03 03.5**	**+0.6**
GLVR				A	A	22 03 09.5	
	comp=N,100nm,0.5s						
GLVR				A	A	22 03 09.5	
	comp=N,210nm,0.5s						
GLVR	**Golovnino**	**5.74**	**237**	*e*PN	**Pn**	**22 01 59.7**	**+1.3**
GLVR				*e*S	**Sn**	**22 03 03.0**	**+0.1**
GLVR				pmax	pmax		
	comp=Z,132nm,0.6s						
GLVR				pmax	pmax		
	comp=N,41nm,0.4s						
GLVR				pmax	pmax		
	comp=E,56nm,0.2s						
GLVR				smax	smax		
	comp=N,100nm,0.2s						
GLVR				smax	smax		
	comp=E,269nm,0.4s						
JRA	**Rausu**	**5.86**	**240**	P	**Pn**	**22 02 02.0**	**+2.1**
NEM2	**Nemuro 2**	**5.86**	**233**	P	**Pn**	**22 01 59.4**	**-0.5**
NEM2				*e*S	**Sn**	**22 03 01.7**	**-4.0**
NMR	**Nemuro--Hokkai**	**5.86**	**233**	*i* P	**Pn**	**22 01 59.7**	**-0.3**
NMR	**Nemuro--Hokkai**	**5.86**	**233**⇓	*i*PN	**Pn**	**22 01 59.6**	**-0.4**
NMR				*e*S	**Sn**	**22 03 01.9**	**-3.9**
JNK	**Nakash**	**6.30**	**239**	P	**Pn**	**22 02 07.5**	**+1.5**
YSS	**Yuzh-Sakhalins**	**6.43**	**272**	*e*P	Pn	22 02 13.0	+5.3
YSS				AMB	AMB	22 02 14.2	
	comp=E,30nm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.43**	**272**	*e*PN	Pn	22 02 13.6	+5.9
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.43**	**272**		Pn	22 02 12.4	+4.7
JTKR	**Abashiri--Toko**	**6.58**	**245**	P	**Pn**	**22 02 12.1**	**+2.4**
JAK	**Akkeshi**	**6.68**	**235**	P	**Pn**	**22 02 10.8**	**-0.3**
JAK				*e*S	**Sn**	**22 03 21.5**	**-4.1**
JMP	**Maruseppu**	**6.90**	**247**	P	**Pn**	**22 02 17.3**	**+3.2**
PEA0B	**Petropavlovsk-**	**7.01**	**28**	PN	Pn	22 02 17.5	+2.0
PEA0B	**Petropavlovsk-**	**7.01**	**28**	Pn	Pn	22 02 17.5	+2.0
PETK	**Petropavlovsk-**	**7.01**	**28**	P	Pn	22 02 17.0	+1.5
	comp=Z,0.6nm,0.3s,baz=196,slow=15,SNR=9.3						
JAR	**Ashorobuto**	**7.03**	**241**	P	**Pn**	**22 02 17.7**	**+1.8**
JOB	**Onbets**	**7.23**	**238**	*e*S	**Sn**	**22 03 35.8**	**-3.2**
TYV	**Tymovskoe**	**7.31**	**305**	*e*P	Pn	22 02 25.0	+5.4
TYV				AMB	AMB	22 02 25.6	
	comp=Z,100nm,2.4s						
TYV				AMB	AMB	22 02 26.9	
	comp=Z,20nm,0.9s						
TYV				*e*S	Sn	22 03 49.5	+8.5
TYV				A	A	22 03 53.3	
	comp=Z,30nm,0.7s						
TYV	**Tymovskoe**	**7.31**	**305**	*e*PN	Pn	22 02 25.0	+5.4
TYV				*e*S	Sn	22 03 50.5	+10
TYV				pmax	pmax		
	comp=Z,100nm,2.4s						
TYV				pmax	pmax		
	comp=Z,16nm,0.9s						
TYV				smax	smax		
	comp=E,31nm,1.6s						
JKA	**Kamikawa-asahi**	**7.33**	**250**	*e*P	Pn	22 02 23.6	+3.7
ASAJ	**Asahikawa**	**7.33**	**250**	P	Pn	22 02 23.6	+3.6
	comp=E,1.0nm,0.3s,baz=86,slow=14,SNR=13						
ASAJ	**Asahikawa**	**7.33**	**250**	P	Pn	22 02 24.1	+4.1
JKK2	**Kamakawa 2**	**7.35**	**248**	P	**Pn**	**22 02 23.5**	**+3.3**
JCH	**Churui**	**7.68**	**238**	P	**Pn**	**22 02 24.5**	**-0.2**
ERM	**Erimo**	**8.18**	**235**⇑	*e*PN	**Pn**	**22 02 31.9**	**+0.4**
JKB	**Kayabe**	**9.49**	**241**	P	**Pn**	**22 02 48.1**	**-1.2**
JKB				*e*S	**Sn**	**22 04 26.9**	**-7.2**
JTM	**Tenmabayashi**	**10.17**	**236**	*e*S	Sn	22 04 40.9	-10
EKMR	**Ekimchan**	**13.70**	**303**	*e*P	**P**	**22 03 48.6**	**-2.1**
EKMR				AMB	AMB	22 03 55.0	
	comp=E,10.0nm,0.7s						
USA0B	**Ussuriysk Arra**	**14.40**	**266**	P	**P**	**22 03 57.0**	**-1.5**
USA0B	**Ussuriysk Arra**	**14.40**	**266**	Pn	**P**	**22 03 57.0**	**-1.5**
USRK	**Ussuriysk Ar.**	**14.40**	**266**	P	**P**	**22 03 56.6**	**-1.9**
	baz=73,slow=12,SNR=12						
MJAR	**Matsushiro Arr**	**14.78**	**230**	P	**P**	**22 04 02.5**	**-0.3**
	comp=E,0.1nm,0.3s,baz=19,slow=10,SNR=6.3						
MAT	**Matsushiro**	**14.78**	**230**	P	**P**	**22 04 04.7**	**+1.9**
SEY	**Seymchan**	**15.89**	**0**⇓	*e*P	**P**	**22 04 15.8**	**+0.9**
BMKR	**Bomnak**	**16.52**	**306**	*e*P	**P**	**22 04 21.9**	**-0.1**
BMKR				AMB	AMB	22 04 25.0	
	comp=E,10.0nm,0.6s						
YAK	**Yakutsk**	**19.69**	**328**⇓	*e*P	**Pn**	**22 04 58.3**	**-0.7**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KSRS	**Korea Array**	**20.28**	**250**	P	Pn	22 05 05.5	-0.5
	comp=Z,2.4nm,0.6s,baz=57,slow=11,SNR=11						
KSRS	**Korea Array**	**20.28**	**250**	*e*P	Pn	22 05 05.7	-0.3
KSRS	**Korea Array**	**20.28**	**250**	*e*P	Pn	22 05 05.7	-0.3
BILL	**Bilibino**	**22.23**	**14**⇓	*e*P	**P**	**22 05 25.5**	**+1.8**
BILL				*i* *PP	**sP**	**22 05 54.6**	**+0.3**
BILL				*i* S	**S**	**22 09 19.4**	**-2.1**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.6s						
TIXI	**Tiksi**	**26.97**	**344**⇓	*e*P	**P**	**22 06 06.9**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.7s						
HHC	**Hu-ho-hao-te**	**29.62**	**273**	P	**P**	**22 06 33.3**	**+1.9**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,40nm,5.6s						
ULN	**Ulaanbaatar**	**30.17**	**288**	*e*P	**P**	**22 06 37.6**	**+1.3**
ULN	**Ulaanbaatar**	**30.17**	**288**⇓	*e*P	**P**	**22 06 37.6**	**+1.3**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	**Songino Array**	**30.61**	**289**	P	**P**	**22 06 38.6**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=91,slow=12,SNR=1.8						
SEW	**Seward**	**35.78**	**47**	P	**P**	**22 07 26.4**	**+1.7**
SEW				IAmb	IAmb	22 07 29.4	
	comp=Z,2.6nm,0.5s						
TOLK	**Toolik Lake Re**	**35.81**	**32**	P	**P**	**22 07 25.9**	**+1.0**
LZH	**Lanzhou**	**37.23**	**271**	⇓P	**P**	**22 07 39.4**	**+1.9**
LZH				pP	sP	22 08 08.5	-1.9
LZH				sP	pwP	22 08 24.2	+21
LZH				PP	**PnPn**	**22 09 10.6**	**+4.8**
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				pmax	pmax		
	comp=Z,52nm,5.0s						
GTA	**Gaotai**	**38.27**	**278**	P	**P**	**22 07 47.4**	**+1.2**
GTA				pP	sP	22 08 18.2	-1.3
GTA				sP	pwP	22 08 32.4	+21
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,35nm,4.6s						
GTA				LR	LR		
	comp=N,93nm,10.2s						
GTA				LR	LR		
	comp=E,150nm,12.7s						
GTA				LR	LR		
	comp=Z,87nm,11.4s						
HYT	**Haines Junctio**	**41.49**	**44**	P	**P**	**22 08 11.8**	**-0.7**
INK	**Inuvik**	**41.72**	**33**	P	**P**	**22 08 14.0**	**-0.2**
INK	**Inuvik**	**41.72**	**33**	P	**P**	**22 08 14.0**	**-0.2**
ZALV	**Zalesovo Beam**	**41.89**	**305**	P	**P**	**22 08 14.6**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=69,slow=7.4,SNR=3.8						
WMQ	**Urumqi**	**44.20**	**290**	*e*P	**P**	**22 08 36.5**	**+1.9**
WMQ				pmax	pmax		
	comp=Z,50nm,3.9s						
WMQ				LR	LR		
	comp=N,320nm,29.2s						
WMQ				LR	LR		
	comp=E,630nm,28.8s						
WMQ				LR	LR		
	comp=Z,54nm,25.3s						
KEKH	**Kekaha**	**45.97**	**106**	P	P	22 08 53.7	+5.0
MKAR	**Makanchi Array**	**46.21**	**297**	P	**P**	**22 08 50.1**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=59,slow=6.2,SNR=17						
MKAR				PcP	**PcP**	**22 10 23.5**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=43,slow=2.8,SNR=2.5						
MAKZ	**Makanchi**	**46.39**	**297**	P	**P**	**22 08 49.7**	**-2.1**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MAKZ	**Makanchi**	**46.39**	**297**	P	**P**	**22 08 49.7**	**-2.1**
KURK	**Kurchatov**	**46.64**	**303***c*	*i*P	**P**	**22 08 52.6**	**-1.0**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURK	**Kurchatov**	**46.64**	**303**	P	**P**	**22 08 52.9**	**-0.7**
KURK				IAmb	IAmb	22 08 54.1	
	comp=Z,4.1nm,1.0s						
LSA	**Lhasa**	**49.60**	**272**	*e*P	**P**	**22 09 18.3**	**+1.0**
LSA	**Lhasa**	**49.60**	**272**	P	**P**	**22 09 18.3**	**+1.0**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LSA	**Lhasa**	**49.60**	**272**	P	**P**	**22 09 18.3**	**+1.0**
LSA				IAmb	IAmb	22 09 20.2	
	comp=Z,4.8nm,0.6s						
BRVK	**Borovoye**	**50.19**	**309**	*e*P	**P**	**22 09 20.3**	**-0.5**
BRVK	**Borovoye**	**50.19**	**309**⇓	*e*P	**P**	**22 09 20.3**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRVK	**Borovoye**	**50.19**	**309**	P	**P**	**22 09 20.5**	**-0.3**
BRVK				IAmb	IAmb	22 09 21.3	
	comp=Z,2.7nm,1.1s						
RES	**Resolute Bay**	**50.73**	**18**	P	**P**	**22 09 23.1**	**-1.4**
	comp=Z,2.2nm,0.8s,baz=339,slow=8.6,SNR=3.0						
YKA	**Yellowknife Ar**	**51.05**	**37**	P	**P**	**22 09 27.1**	**0.0**
	comp=Z,0.2nm,0.5s,baz=303,slow=7.1,SNR=2.2						
KDJ	**Kajisay**	**51.71**	**294**	P	**P**	**22 09 33.2**	**+0.6**
KDJ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KDJ	**Kajisay**	**51.71**	**294**	P	**P**	**22 09 33.2**	**+0.6**
CMAR	**Chiang Mai Arr**	**51.82**	**255**	P	**P**	**22 09 34.6**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=37,slow=6.8,SNR=5.0						
SPITS	**Spitsbergen Ar**	**52.17**	**350**	P	**P**	**22 09 33.4**	**-1.9**
	comp=Z,8.1nm,1.0s,baz=60,slow=8.8,SNR=5.9						
AAK	**Ala-Archa**	**53.10**	**296**	*e*P	**P**	**22 09 43.2**	**+0.3**
AAK	**Ala-Archa**	**53.10**	**296**⇓	*e*P	**P**	**22 09 43.2**	**+0.3**
AAK				pmax	pmax		
	comp=Z,5.0nm,2.2s						
TAPN	**Taplejung**	**53.43**	**272**	*e*P	**P**	**22 09 47.0**	**+1.4**
	comp=Z,4.3nm,0.3s						
KSH	**Kashi**	**53.92**	**292**	P	P	22 09 52.6	+3.7
KSH				pP	sP	22 10 25.7	+2.9
KSH				sP	PcP	22 10 40.6	-12
KSH				pmax	pmax		
	comp=Z,11nm,1.0s						
KSH				pmax	pmax		
	comp=Z,150nm,4.8s						
JIRN	**Jiri**	**54.27**	**274**	*e*P	**P**	**22 09 53.0**	**+1.2**
	comp=Z,13nm,0.4s						
GUN	**Gumba**	**54.32**	**274**	*e*P	**P**	**22 09 53.1**	**+0.9**
	comp=Z,5.7nm,0.5s						
ARU	**Arti**	**54.33**	**317**	*e*P	**P**	**22 09 50.4**	**-1.0**
ARU	**Arti**	**54.33**	**317***c*	*i*P	**P**	**22 09 50.4**	**-1.0**
ARU				*PP	**sP**	**22 10 20.2**	**-5.1**
ARU						22 10 52.3	
ARU						22 11 53.0	
ARU				S	**S**	**22 17 19.9**	**-1.4**
ARU				SS	**SS**	**22 21 05.0**	**+1.1**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.7s						
RAMN	**Ramite**	**54.44**	**273**	*e*P	**P**	**22 09 53.7**	**+0.8**
	comp=Z,6.5nm,0.3s						
PKI	**Pulchoki**	**54.86**	**274**	*e*P	**P**	**22 09 56.6**	**+0.6**
	comp=Z,5.2nm,0.5s						
PKIN	**Phulchoki**	**54.86**	**274**	*e*P	**P**	**22 09 57.1**	**+1.1**
	comp=Z,3.8nm,0.4s						
DMN	**Daman**	**55.04**	**274**	*e*P	**P**	**22 09 58.5**	**+1.2**
	comp=Z,16nm,0.8s						
GKN	**Gorkha**	**55.11**	**275**	*e*P	**P**	**22 09 58.8**	**+1.2**
	comp=Z,14nm,0.5s						
DANN	**Dangsing**	**55.49**	**276**	*e*P	**P**	**22 10 01.9**	**+1.4**
	comp=Z,25nm,0.6s						
KOLN	**Koldanda**	**55.96**	**276**	*e*P	**P**	**22 10 05.1**	**+1.3**
	comp=Z,3.7nm,0.3s						
ARCES	**ARCESS Array B**	**57.33**	**340**	P	**P**	**22 10 12.1**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=32,slow=7.1,SNR=5.2						
GAR	**Garm**	**57.78**	**294**	P	**P**	**22 10 16.9**	**+0.5**
CHGR	**Chuyangaron**	**58.71**	**295**	P	**P**	**22 10 21.5**	**-1.3**
GCMT	**Greycliff**	**63.03**	**51**	P	P	22 10 56.4	+4.4
YPP	**Pitchstone Pla**	**63.41**	**53**	P	**P**	**22 10 56.0**	**+1.3**
FINES	**FINESS Array B**	**63.46**	**334**	P	**P**	**22 10 53.5**	**-0.8**
	comp=Z,2.7nm,0.5s,baz=34,slow=8.1,SNR=26						
GEYT	**Alibeck**	**65.87**	**300**	P	**P**	**22 11 10.9**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=54,slow=7.5,SNR=5.4						
NB2	**NORSAR Subarra**	**67.70**	**341**	P	**P**	**22 11 21.6**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**67.70**	**341**	P	**P**	**22 11 21.6**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=30,slow=6.7,SNR=13						
NOA	**NORSAR Array B**	**67.70**	**341**	*e*P	**P**	**22 11 21.7**	**-0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NORES	**NORESS Array B**	**67.90**	**340**	P	**P**	**22 11 22.8**	**-0.1**
NORES				pmax	pmax		
	comp=Z,1.0nm,0.2s						
WRA	**Warramunga Arr**	**68.62**	**198**	P	**P**	**22 11 26.1**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=17,slow=6.4,SNR=2.1						
KBZ	**Khabaz**	**70.16**	**313**	P	**P**	**22 11 35.5**	**-1.6**
	comp=Z,1.1nm,0.5s,baz=56,slow=5.9,SNR=3.7						
KBZ	**Khabaz**	**70.16**	**313**	*e*P	**P**	**22 11 37.8**	**+0.6**
KBZ	**Khabaz**	**70.16**	**313**	*e*P	**P**	**22 11 37.8**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**70.91**	**326**	P	**P**	**22 11 40.9**	**-0.7**
	comp=Z,2.7nm,0.4s,baz=36,slow=6.2,SNR=28						
ASAR	**Alice Springs**	**72.32**	**198**	P	**P**	**22 11 50.1**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=11,slow=5.5,SNR=9.7						
KOLS	**Kolonicke sedl**	**74.94**	**328**	*e*P	**P**	**22 12 05.5**	**0.0**
KOLS	**Kolonicke sedl**	**74.94**	**328**	*e*P	**P**	**22 12 05.5**	**0.0**
BURAR	**Bucovina Array**	**74.95**	**326**	⇑P	**P**	**22 12 05.3**	**-0.4**
BURAR	**Bucovina Array**	**74.95**	**326**	⇑P	**P**	**22 12 05.3**	**-0.4**
BIZ	**Bicaz**	**75.17**	**325**	⇑P	**P**	**22 12 05.8**	**-1.0**
TESR	**Tescani**	**75.30**	**324**	⇑P	**P**	**22 12 07.3**	**-0.3**
TRPA	**Tarpa**	**75.52**	**328**	⇑P	**P**	**22 12 09.4**	**+0.6**
LANS	**Liptovska Anna**	**75.74**	**330**	*e*P	**P**	**22 12 09.9**	**-0.2**
LANS	**Liptovska Anna**	**75.74**	**330**	*e*P	**P**	**22 12 09.9**	**-0.2**
KRLC	**Kraliky**	**75.83**	**332**	*e*P	**P**	**22 12 10.6**	**0.0**
KRLC	**Kraliky**	**75.83**	**332**	*e*P	**P**	**22 12 10.6**	**0.0**
MORC	**Moravsky Berou**	**75.84**	**332**	*e*P	**P**	**22 12 10.8**	**+0.1**
MORC	**Moravsky Berou**	**75.84**	**332**	P	**P**	**22 12 09.5**	**-1.2**
MORC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MORC	**Moravsky Berou**	**75.84**	**332**	P	**P**	**22 12 09.5**	**-1.2**
MORC				IAmb	IAmb	22 12 11.9	
	comp=Z,2.3nm,0.8s						
EKA	**Eskdalemuir Ar**	**75.86**	**346**	P	**P**	**22 12 10.7**	**+0.1**
ESK	**Eskdalemuir**	**75.89**	**346**	P	**P**	**22 12 09.8**	**-0.9**
ESK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ESK	**Eskdalemuir**	**75.89**	**346**	P	**P**	**22 12 09.8**	**-0.9**
CLL	**Collm**	**75.89**	**335**	*i* P	**P**	**22 12 11.6**	**+0.8**
	comp=Z,6.0nm,0.7s						
CLL	**Collm**	**75.89**	**335**	P	**P**	**22 12 10.7**	**-0.1**
CLL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CLL	**Collm**	**75.89**	**335**	P	**P**	**22 12 10.7**	**-0.1**
CLL				IAmb	IAmb	22 12 12.3	
	comp=Z,5.0nm,0.6s						
OZUR		**75.98**	**325**	⇑P	**P**	**22 12 12.1**	**+0.5**
UOSS	**Minazif**	**76.01**	**291**	P	**P**	**22 12 12.2**	**+0.2**
UOSS				IAmb	IAmb	22 12 18.3	
	comp=Z,4.5nm,1.1s						
MLR	**Muntele Rosu**	**76.42**	**324**	⇑P	**P**	**22 12 14.1**	**0.0**
MLR	**Muntele Rosu**	**76.42**	**324**	⇑P	**P**	**22 12 14.1**	**0.0**
MLR	**Muntele Rosu**	**76.42**	**324**	P	**P**	**22 12 15.0**	**+0.9**
MLR				IAmb	IAmb	22 12 15.9	
	comp=Z,4.6nm,0.6s						
VYHS	**Vyhne**	**76.52**	**330**	*e*P	**P**	**22 12 15.0**	**+0.5**
VYHS	**Vyhne**	**76.52**	**330**	*e*P	**P**	**22 12 15.0**	**+0.5**
VRAC	**Vranov**	**76.56**	**332**	*e*P	**P**	**22 12 14.8**	**+0.1**
VRAC	**Vranov**	**76.56**	**332**	⇑P	**P**	**22 12 15.2**	**+0.5**
VRAC	**Vranov**	**76.56**	**332**	⇑P	**P**	**22 12 15.2**	**+0.5**
DRGR		**76.58**	**327**	⇑P	**P**	**22 12 14.6**	**-0.4**
DRGR		**76.58**	**327**	⇑P	**P**	**22 12 14.6**	**-0.4**
PRU	**Pruhonice**	**76.60**	**333**	*e*P	**P**	**22 12 15.4**	**+0.5**
PRU	**Pruhonice**	**76.60**	**333**	*e*P	**P**	**22 12 15.4**	**+0.5**
VOIR		**76.82**	**325**	⇓P	**P**	**22 12 17.2**	**+0.9**
VOIR		**76.82**	**325**	⇓P	**P**	**22 12 17.2**	**+0.9**
KRUC	**Moravsky**	**76.83**	**332**	*e*P	**P**	**22 12 16.2**	**0.0**
ARR	**Arges**	**77.04**	**325**	⇑P	**P**	**22 12 18.4**	**+0.9**
KHC	**Kasperske Hory**	**77.66**	**334**⇓	*e*P	**P**	**22 12 20.6**	**-0.3**
KHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KHC	**Kasperske Hory**	**77.66**	**334**	*e*P	**P**	**22 12 21.2**	**+0.3**
KHC	**Kasperske Hory**	**77.66**	**334**	P	**P**	**22 12 20.6**	**-0.3**
BRTR	**Keskin Array B**	**77.70**	**316**	P	**P**	**22 12 21.9**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=54,slow=5.3,SNR=7.4						
BRTR	**Keskin Array B**	**77.70**	**316**	*e*P	**P**	**22 12 22.5**	**+1.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GRA1	**Grafenberg Arr**	**77.85**	**335**	P	**P**	**22 12 21.4**	**-0.5**
GRA1				IAmb	IAmb	22 12 23.3	
	comp=Z,6.5nm,0.9s						
GRF	**Grafenberg Arr**	**77.85**	**335**	P	**P**	**22 12 21.4**	**-0.5**
GRF				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GERES	**GERESS Array B**	**77.87**	**333**	P	**P**	**22 12 21.9**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=37,slow=5.9,SNR=11						
BZS	**Buzias**	**77.98**	**327**	⇑P	**P**	**22 12 22.7**	**0.0**
BZS	**Buzias**	**77.98**	**327**	⇑P	**P**	**22 12 22.7**	**0.0**
CONA	**Conrad Observa**	**78.00**	**332**	*i* P	**P**	**22 12 23.9**	**+1.1**
	comp=Z,2.1nm,0.6s						
PLVB	**Pleven**	**78.69**	**324**	⇑P	**P**	**22 12 26.8**	**+0.2**
SOKA	**Soboth**	**79.37**	**332**	*i* P	**P**	**22 12 30.8**	**+0.4**
	comp=Z,2.5nm,0.8s						
KBA	**Koelnbreinsper**	**79.55**	**333**	*e*P	**P**	**22 12 32.4**	**+0.9**
	comp=Z,3.1nm,0.6s						
WATA	**Walderalm**	**79.86**	**334**	*i* P	**P**	**22 12 33.9**	**+0.8**
	comp=Z,3.1nm,0.5s						
VTS	**Vitosha**	**79.89**	**324**	⇑P	**P**	**22 12 34.5**	**+1.1**
VTS	**Vitosha**	**79.89**	**324**	⇑P	**P**	**22 12 34.5**	**+1.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WTTA	Wattenberg	79.91	334	*i* P	P	22 12 34.3	+0.9
	comp=Z,3.7nm,0.5s						
RETA	Reutte	79.97	335	*i* P	P	22 12 34.7	+1.1
	comp=Z,3.7nm,1.1s						
MOTA	Moosalm	80.00	334	*i* P	P	22 12 35.0	+1.2
	comp=Z,7.2nm,1.3s						

*IDC **01** 22:19:43.5±0.8, 28°.28N×99°.71E, h0km, mb3.8/13, mb1 3.9/14, mb1mx3.7/46, mbtmp3.8/14, ML4.0/1, MS2.8/3, Ms1 2.8/3, ms1mx2.5/54, Error ellipse: s-maj=29.6km s-min=15.3km az=68.0*

*BJI **01** 22:19:45.0±0.0, 28°.21N×99°.47E, h6km, mb3.8/3, ML3.3/11*

ISC 01 22:19:46.2±0.6**, 28°.40N**±0°.09×**99°.47E**±0°.07**, h10km, n31, σ1ṡ47**/30**, mb3.9**/12**, MS2.7**/3**, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	Kunming	4.38	137	Pg	Pn	22 20 56.7	+3.7
KMI				Sg	Sb	22 21 59.2	+2.8
KMI				smax	smax		
	comp=N,38nm,1.2s						
KMI				smax	smax		
	comp=E,37nm,0.9s						
GYA	Guiyang	6.68	105	*e*Pn	Pn	22 21 24.4	-0.2
GYA				Sn	Sn	22 22 38.1	-2.7
GYA				smax	smax		
	comp=N,10.0nm,0.9s						
GYA				smax	smax		
	comp=E,10.0nm,0.8s						
LSA	Lhasa	7.40	282	Pn	Pn	22 21 36.8	+2.1
CMAR	Chiang Mai Arr	9.90	183	Pn	Pn	22 22 07.8	-1.0
	0.4nm,0.3s,baz=0.8,slow=13,SNR=4.4						
CMAR				Lg	Lg	22 24 55.3	
	0.6nm,0.3s,baz=3.7,slow=29,SNR=1.8						
TAPN	Taplejung	10.46	267	*e*P	Pn	22 22 16.3	-0.3
	11nm,0.4s						
ODAN	Odare	10.82	265	*e*P	Pn	22 22 21.0	-0.5
	13nm,0.4s						
RAMN	Ramite	11.50	266	*e*P	Pn	22 22 30.3	-0.5
	29nm,0.6s						
JIRN	Jiri	11.76	270	*e*P	Pn	22 22 33.5	-0.9
	15nm,0.3s						
GUN	Gumba	12.00	271	*e*P	Pn	22 22 37.5	-0.3
	18nm,0.5s						
PKI	Pulchoki	12.46	270	*e*P	Pn	22 22 43.3	-0.6
	17nm,0.5s						
PKIN	Phulchoki	12.46	270	*e*P	Pn	22 22 43.7	-0.3
	14nm,0.4s						
KKN	Kakani	12.54	271	*e*P	Pn	22 22 44.3	-0.7
	15nm,0.5s						
DMN	Daman	12.72	270	*e*P	Pn	22 22 46.3	-1.1
	11nm,0.6s						
GKN	Gorkha	13.09	272	*e*P	Pn	22 22 52.3	-0.1
	5.1nm,0.2s						
DANN	Dangsing	13.83	274	*e*P	Pn	22 23 01.8	-0.9
	7.5nm,0.4s						
WMQ	Urumqi	18.07	332	*e*P	Pn	22 23 58.5	+1.1
SONM	Songino Array	20.14	14	P	P	22 24 20.5	-0.1
	0.3nm,0.5s,baz=186,slow=6.8,SNR=2.4						
SONM				LR	LR	22 33 34.8	
	comp=Z,27nm,18.9s,baz=239,slow=41						
MKAR	Makanchi Array	22.77	328	P	P	22 24 50.0	+1.3
	2.2nm,0.5s,baz=131,slow=9.6,SNR=21						
AAK	Ala-Archa	24.69	312	P	P	22 25 10.0	+2.4
	1.9nm,0.5s,baz=107,slow=6.8,SNR=16						
KSRS	Korea Array	25.46	62	LR	LR	22 36 06.4	
	comp=Z,23nm,18.1s,baz=290,slow=39						
KURBB	Kurchatov Arra	27.27	330	P	P	22 25 31.7	+1.0
	1.1nm,0.5s,baz=139,slow=10,SNR=5.7						
ZALV	Zalesovo Beam	27.70	341	P	P	22 25 35.7	+1.3
	1.4nm,0.6s,baz=152,slow=9.9,SNR=6.8						
MJAR	Matsushiro Arr	33.50	66	LR	LR	22 39 52.5	
	comp=Z,18nm,20.1s,baz=245,slow=36						
AKASG	Malin Array Be	56.33	314	P	P	22 29 25.9	-1.3
	0.2nm,0.3s,baz=72,slow=6.9,SNR=2.9						
FINES	FINESS Array B	57.59	327	P	P	22 29 35.8	-0.2
	1.8nm,0.6s,baz=72,slow=6.2,SNR=7.7						
WRA	Warramunga Arr	58.69	141	P	P	22 29 41.1	-3.1
	1.6nm,0.6s,baz=327,slow=7.8,SNR=8.3						
ASAR	Alice Springs	61.48	144	P	P	22 30 00.9	-2.4
	0.4nm,0.9s,baz=326,slow=6.6,SNR=2.4						
NOA	NORSAR Array B	64.76	327	P	P	22 30 24.3	-0.4
	1.2nm,0.9s,baz=78,slow=6.2,SNR=3.3						
KMBO	Kilima Mbogo	66.34	255	P	P	22 30 36.0	+0.1
	1.6nm,0.7s,baz=103,slow=5.1,SNR=4.6						
GERES	GERESS Array B	66.54	314	P	P	22 30 36.0	-0.5
	0.4nm,0.7s,baz=64,slow=3.1,SNR=3.8						
ILAR	Eielson Array	73.98	24	P	P	22 31 21.0	-0.6
	0.5nm,0.8s,baz=303,slow=5.0,SNR=4.8						

IDC 01 22:38:18.0±1.4**, 5°.81S**×**149°.57E, h0km, mb3.4**/3**, mb1 3.8**/4**, mb1mx3.4**/38**, mbtmp3.6**/4**, ML3.7**/1**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx2.7**/23**, Error ellipse: s-maj=78.4km s-min=21.9km az=142.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.87	59	Pn	Pn	22 39 05.7	+0.6
	11nm,0.3s,baz=156,slow=7.2,SNR=3.8						
KRVT				Sn	Sn	22 39 41.8	+1.5
	13nm,0.3s,baz=311,slow=20,SNR=4.3						
WRA	Warramunga Arr	20.41	225	P	P	22 42 57.1	+0.3
	0.8nm,0.4s,baz=52,slow=11,SNR=8.2						
ASAR	Alice Springs	23.29	219	P	P	22 43 27.8	+0.1
	0.4nm,0.5s,baz=54,slow=9.1,SNR=5.4						
FITZ	Fitzroy Crossi	26.36	240	P	P	22 43 55.9	-0.2
	0.8nm,0.4s,baz=59,slow=9.6,SNR=2.1						
RPZ	Rata Peaks	42.22	157	LR	LR	23 02 21.5	
	comp=Z,185nm,20.1s,baz=197,slow=34						
TORD	Torodi Ar. Bea	147.51	285	PKPbc	PKPbc	22 58 04.2	-1.0
	1.4nm,0.5s,baz=91,slow=2.6,SNR=24						

IDC 01 22:41:00.5±943.0**, 41°.59N**×**115°.38W, h0km, Error ellipse: s-maj=375.6km s-min=135.9km az=177.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I56US	NEWPORT INFRAS	6.79	350	*i*		23 20 00.0	
	baz=170,slow=316,SNR=3.1						
I10CA	LAC DU BONNET	15.95	51	*i*		00 14 30.0	
	baz=247,slow=326,SNR=1.4						
I53US	FAIRBANKS INFR	29.75	332	*i*		01 47 30.0	
	baz=130,slow=371,SNR=0.5						

*IDC **01** 22:43:51.1±2.0, 51°.63N×174°.55W, h0km, mb3.6/8, mb1 3.8/11, mb1mx3.6/61, mbtmp3.6/11, ML3.3/3, MS3.0/5, Ms1 3.0/5, ms1mx2.6/51, Error ellipse: s-maj=52.2km s-min=20.8km az=0.0*

*NEIC **01** 22:43:52.3±0.7, 51°.3N±0°.1×174°.1W±0°.1, h18km±16km, Error ellipse: s-maj=21.4km s-min=13.0km az=170.0*

*AEIC **01** 22:43:55.1±0.7, 51°.41N±0°.08×174°.3W±0°.1, h48km±9km, ML3.2, mb3.6/25(NEIC), Error ellipse: s-maj=13.8km s-min=9.4km az=141.0*

ISC 01 22:43:55.5±1.0**, 51°.4N**±0°.1×**174°.30W**±0°.07**, h38km, n51, σ1ṡ01**/49**, mb3.4**/8**, MS3.2**/4**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	0.78	5		Pn	22 44 10.7	+0.8
ATKA	Atka Island	0.78	5		Sn	22 44 21.3	+0.9
GSMY	Great Sitkin M	1.25	300		Pn	22 44 16.7	+0.3
GSTR	Great Sitkin T	1.28	302		Pn	22 44 17.4	+0.6
GSTD	Great Sitkin T	1.30	299		Pn	22 44 17.7	+0.5
GSTD					Sn	22 44 36.2	+2.8
ADK	Adak	1.55	288		Pn	22 44 20.7	+0.2
ADK	Adak	1.55	288		Pn	22 44 20.8	+0.3
KIMD	Kanaga Island	1.86	281		Pn	22 44 25.1	+0.3
TAFP	Tanaga Falls P	2.34	283		Pn	22 44 32.6	+1.2
TASE	Tanaga Southea	2.36	281		Pn	22 44 33.1	+1.4
OHAK	Old Harbor	13.54	56	Pn	Pn	22 47 03.3	-1.4
KDAK	Kodiak Island	14.06	55	Pn	Pn	22 47 12.6	+0.7
	0.2nm,0.3s,baz=242,slow=4.0,SNR=1.3						
PETK	Petropavlovsk-	17.18	287	Pn	Pn	22 47 49.8	-2.5
	0.1nm,0.3s,baz=88,slow=15,SNR=2.1						
PETK				LR	LR	22 53 15.9	
	comp=Z,33nm,21.9s,baz=61,slow=33						
KTH	Kantishna Hill	17.34	37	P	Pn	22 47 53.8	-0.6
KTH				IAmb	IAmb	22 48 05.6	
	comp=Z,5.8nm,1.0s						
TRF	Thorofare Moun	17.52	37		Pn	22 47 55.8	-0.8
SML	Sawmill	17.54	44		Pn	22 47 56.0	-0.7
BPAW	Bear Paw Mtn.	17.62	35	P	Pn	22 47 57.2	-0.6
BPAW				IAmb	IAmb	22 48 07.3	
	comp=Z,5.3nm,1.2s						
MID	Middleton Isla	17.66	52		Pn	22 47 58.0	-0.2
GLI	Glacier Island	17.73	47		Pn	22 47 59.0	-0.2
HIN	Hinchinbrook I	17.85	49		Pn	22 47 59.7	-1.0
FID	Port Fidalgo	17.98	48		Pn	22 48 00.9	-1.2
FID				IAmb	IAmb	22 48 09.0	
	comp=Z,6.5nm,1.1s						
SCM	Sheep Creek Mo	17.98	44	P	Pn	22 48 01.8	-0.5
RND	Reindeer	18.05	39	P	P	22 48 02.6	-0.6
RND				IAmb	IAmb	22 48 11.4	
	comp=Z,5.2nm,1.2s						
MCK	McKinley	18.19	38	P	P	22 48 04.1	-0.6
MCK				IAmb	IAmb	22 48 21.9	
	comp=Z,4.7nm,1.0s						
MLY	Manley	18.26	33	P	P	22 48 05.3	-0.2
MLY				IAmb	IAmb	22 48 11.4	
	comp=Z,4.6nm,1.0s						
DHY	Denali Highway	18.48	41		P	22 48 07.9	-0.2
DHY				IAmb	IAmb	22 48 22.9	
	comp=Z,5.3nm,1.2s						
RAGM	Ragged Mountai	18.72	50	P	P	22 48 10.1	-0.5
RAGM				IAmb	IAmb	22 48 19.1	
	comp=Z,4.0nm,0.8s						
WRH	Wood River Hil	18.89	36	P	P	22 48 11.8	-0.5
CCB	Clear Creek Bu	19.08	36	P	P	22 48 13.6	-0.9
HDA	Harding Lake	19.28	37	P	P	22 48 15.9	-0.7
ILAR	Eielson Array	19.49	36	P	P	22 48 19.1	+0.2
	comp=Z,0.3nm,0.3s,baz=237,slow=8.8,SNR=13						
VRDI	Verde Repeater	19.53	48	P	P	22 48 18.7	-0.9
RIDG	Independent Ri	19.80	40	P	P	22 48 21.8	-0.6
RIDG				IAmb	IAmb	22 48 38.6	
	comp=Z,2.4nm,0.6s						
COLD	Coldfoot	19.82	28	P	P	22 48 21.0	-1.5
DOT	Dot Lake	20.08	41	P	P	22 48 24.9	-0.5
DOT				IAmb	IAmb	22 48 37.9	
	comp=Z,3.3nm,1.0s						
SCRK	Sand Creek	20.25	40	P	P	22 48 26.9	-0.3
BARN	Barnard Glacie	20.32	49	P	P	22 48 27.1	-1.1
BARN				IAmb	IAmb	22 48 42.5	
	comp=Z,3.5nm,1.2s						
PRP	Porcupine Dome	20.36	35	P	P	22 48 27.6	-0.9
PRP				IAmb	IAmb	22 48 44.3	
	comp=Z,1.9nm,0.8s						
CTGM	Chitina Glacie	20.46	49	P	P	22 48 28.9	-0.8
CTGM				IAmb	IAmb	22 48 48.1	
	comp=Z,1.7nm,0.7s						
INK	Inuvik	25.82	34	P	P	22 49 22.9	+0.2
	comp=Z,0.9nm,0.8s,baz=207,slow=9.0,SNR=3.0						
NVAR	Mina Array Bea	40.74	86	P	P	22 51 35.3	+2.5
	comp=Z,0.4nm,0.8s,baz=290,slow=5.4,SNR=2.3						
KSRS	Korea Array	42.45	274	LR	LR	23 08 13.5	
	comp=Z,6.7nm,21.4s,baz=165,slow=35						
PDAR	Pinedale Array	43.59	75	P	P	22 51 57.5	+1.5
	comp=Z,0.3nm,0.8s,baz=302,slow=5.2,SNR=2.5						
PDAR				LR	LR	23 08 41.9	
	comp=Z,34nm,20.6s,baz=134,slow=34						
SONM	Songino Array	49.12	299	P	P	22 52 37.5	-1.6
	comp=Z,0.4nm,0.5s,baz=46,slow=8.5,SNR=3.6						
SPITS	Spitsbergen Ar	50.49	357	LR	LR	23 13 59.1	
	comp=Z,26nm,18.1s,baz=350,slow=36						
LPIG	La Paz	55.42	94	LR	LR	23 13 14.9	
	comp=Z,19nm,20.1s,baz=222,slow=32						
ARCES	ARCESS Array B	58.48	352	P	P	22 53 46.8	-0.2
	comp=Z,1.3nm,0.8s,baz=20,slow=8.1,SNR=1.8						
MKAR	Makanchi Array	62.17	311	P	P	22 54 12.4	-0.2
	comp=Z,0.2nm,0.3s,baz=49,slow=6.4,SNR=6.4						
NOA	NORSAR Array B	67.79	357	P	P	22 54 49.3	+0.4
	comp=Z,0.1nm,0.3s,baz=17,slow=6.5,SNR=1.2						
HFS	Hagfors	68.60	356	P	P	22 54 54.1	+0.2
	baz=0.0,slow=3.0						
GERES	GERESS Array B	79.87	355	P	P	22 55 59.9	0.0
	comp=Z,0.4nm,0.8s,baz=337,slow=8.7,SNR=4.6						

IDC 01 22:45:49.8±2.5**, 7°.08S**×**150°.45E, h0km, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.5**/42**, mbtmp3.8**/4**, ML3.5**/1**, Error ellipse: s-maj=113.9km s-min=27.1km az=127.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.17	30	Pn	Pn	22 46 40.6	-0.3
	5.5nm,0.3s,baz=258,slow=20,SNR=1.7						
KRVT				Sn	Sn	22 47 17.6	-1.8
	32nm,0.3s,baz=195,slow=20,SNR=9.8						
WRA	Warramunga Arr	20.19	229	P	P	22 50 26.4	+0.1
	2.8nm,0.4s,baz=55,slow=11,SNR=22						
ASAR	Alice Springs	22.90	222	P	P	22 50 55.0	-0.4
	0.8nm,0.5s,baz=54,slow=8.3,SNR=9.2						
FITZ	Fitzroy Crossi	26.53	243	P	P	22 51 28.9	-0.6
	0.8nm,0.3s,baz=67,slow=8.4,SNR=6.5						
TORD	Torodi Ar. Bea	148.67	284	PKPbc	PKPbc	23 05 40.6	+0.5
	0.1nm,0.5s,baz=55,slow=3.8,SNR=1.2						

IDC 01 22:45:52.5±999.0**, 39°.98N**×**115°.60W, h0km, Error ellipse: s-maj=444.7km s-min=159.7km az=0.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I56US	NEWPORT INFRAS	8.36	353	*i*		23 33 10.0	
	baz=173,slow=317,SNR=4.1						
I10CA	LAC DU BONNET	17.14	47	*i*		00 31 10.0	
	baz=241,slow=326,SNR=1.3						
I53US	FAIRBANKS INFR	31.12	334	*i*		02 00 00.0	
	baz=130,slow=368,SNR=0.3						

*IDC **01** 23:08:18.6±0.8, 15°.02S×173°.56W, h0km, mb4.1/9, mb1 4.4/9, mb1mx4.0/41, mbtmp4.1/9, MS3.8/15, Ms1 3.8/15, ms1mx3.4/50, Error ellipse: s-maj=45.1km s-min=19.3km az=137.0*

*NEIC **01** 23:08:19.6±2.0, 15°.0S±0°.1×173°.7W±0°.1, h10km±1km, mb4.4/11, Error ellipse: s-maj=23.2km s-min=13.8km az=37.0*

ISC 01 23:08:22.6±0.5**, 15°.1S**±0°.1×**173°.60W**±0°.09**, h30km, n62, σ1ṡ28**/47**, mb4.2**/15**, MS3.8**/18**, 5C-3D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.13	56		Pn	23 08 46.9	-9.3
NIUE	Niue	5.28	139	Pn	Pn	23 09 38.3	-1.1
FUNA	Funafuti	9.62	312	Pn	Pn	23 10 36.6	-2.6
KNTN	Kanton	12.40	9	Pn	Pn	23 11 08.2	-9.0
RAR	Rarotonga	14.46	117	Pn	Pn	23 11 43.4	-2.0
DZM	Mont Dzumac	20.13	247	*e*P	Pn	23 13 02.2	+5.8
	36nm,1.4s						
DZM				*e*LR	LR	23 17 52.4	
	comp=Z,292nm,27.1s						
DZM	Mont Dzumac	20.13	247		P	23 12 50.5	-4.0
PPT	Papeete	23.18	99	LR	LR	23 20 43.4	
	comp=Z,28nm,18.7s,baz=316,slow=32						
PPT2	Papeete2	23.18	99	*e*LQ	LQ	23 17 35.5	
	414nm,26.5s						
PPT2				*e*LR	LR	23 18 49.6	
	comp=Z,55nm,25.8s						
TBI	Tubuai	24.19	113	*e*LR	LR	23 19 25.8	
	comp=Z,102nm,26.0s						
URZ	Urewera	24.47	198	P	P	23 13 38.6	-0.4
	2.4nm,0.5s,baz=348,slow=20,SNR=1.6						
URZ				LR	LR	23 21 55.1	
	comp=Z,298nm,18.4s,baz=19,slow=33						
URZ	Urewera	24.47	198	IAmb	IAmb	23 13 45.1	
	comp=Z,11nm,1.1s						
STKA	Stephens Creek	44.01	240	P	P	23 16 30.1	+2.5
	comp=Z,2.9nm,1.0s,baz=50,slow=10,SNR=3.0						
STKA				LR	LR	23 32 08.6	
	comp=Z,67nm,18.6s,baz=191,slow=32						
WR0	Warramunga Arr	49.53	257	P	P	23 17 10.1	-0.9
WR0				IAmb	IAmb	23 17 23.9	
	comp=Z,3.8nm,0.9s						
WB0	Warramunga Arr	49.68	257	P	P	23 17 12.5	+0.3
WB0				IAmb	IAmb	23 17 14.8	
	comp=Z,3.0nm,0.8s						
WB2	Warramunga Arr	49.71	257	P	P	23 17 12.1	-0.3
WB2				IAmb	IAmb	23 17 15.8	
	comp=Z,2.5nm,0.7s						
WRA	Warramunga Arr	49.72	257	P	P	23 17 12.2	-0.3
	comp=Z,1.7nm,0.7s,baz=90,slow=7.4,SNR=14						
WRA				LR	LR	23 36 48.2	
	comp=Z,78nm,19.0s,baz=190,slow=34						
ASAR	Alice Springs	50.02	252	P	P	23 17 15.3	+0.6
	comp=Z,11nm,0.7s,baz=86,slow=8.1,SNR=102						
ASAR				LR	LR	23 36 24.2	
	comp=Z,65nm,21.1s,baz=108,slow=34						
PFO	Pinyon Flats O	72.87	47	LR	LR	23 43 02.0	
	comp=Z,124nm,20.7s,baz=220,slow=29						
YBH	Yreka Blue Hor	73.49	37	LR	LR	23 43 37.4	
	comp=Z,82nm,21.7s,baz=254,slow=29						
NVAR	Mina Array Bea	74.25	42	P	P	23 19 57.4	+0.2
	comp=Z,1.0nm,0.8s,baz=228,slow=10,SNR=7.6						
NVAR				LR	LR	23 45 09.0	
	comp=Z,72nm,19.2s,baz=198,slow=30						
ELK	Elko	77.50	41	LR	LR	23 46 25.6	
	comp=Z,54nm,19.8s,baz=254,slow=30						
BALM	Baldy	79.89	15	P	P	23 20 30.6	+2.3
BALM				IAmb	IAmb	23 20 31.1	
	comp=Z,3.1nm,1.1s						
TXAR	Lajitas Array	80.61	56	P	P	23 20 32.6	-0.3
	comp=Z,0.6nm,0.8s,baz=218,slow=5.7,SNR=2.5						
TXAR				LR	LR	23 50 34.6	
	comp=Z,58nm,19.5s,baz=0.0,slow=32						
ANMO	Albuquerque	80.77	50	LR	LR	23 49 09.2	
	comp=Z,77nm,20.6s,baz=268,slow=30						
WRH	Wood River Hil	81.71	11	P	P	23 20 37.6	-0.1
HDA	Harding Lake	81.87	11	P	P	23 20 40.7	+2.1
HDA				IAmb	IAmb	23 20 42.8	
	comp=Z,4.1nm,1.1s						
CCB	Clear Creek Bu	81.92	11	P	P	23 20 38.5	-0.4
CCB				IAmb	IAmb	23 20 49.0	
	comp=Z,5.1nm,1.2s						
ILAR	Eielson Array	82.21	11	P	P	23 20 39.9	-0.5
	comp=Z,0.4nm,0.5s,baz=218,slow=5.8,SNR=4.7						
PRP	Porcupine Dome	83.13	11	P	P	23 20 46.2	+0.8
MAW	Mawson	88.00	199	P	P	23 21 12.7	+3.1
	comp=Z,3.2nm,0.8s,baz=326,slow=2.9,SNR=4.1						
MAW				LR	LR	23 57 54.6	
	comp=Z,56nm,19.7s,baz=82,slow=34						
MAW	Mawson	88.00	199	IAmb	IAmb	23 21 13.9	
	comp=Z,1.1nm,0.9s						
PLCA	Paso Flores	89.84	132	LR	LR	23 55 26.3	
	comp=Z,37nm,18.7s,baz=192,slow=32						
YKA	Yellowknife Ar	89.92	23	P	P	23 21 18.3	-0.2
	comp=Z,0.4nm,0.7s,baz=228,slow=4.5,SNR=7.8						
ULM	Lac du Bonnet	93.83	39	LR	LR	23 58 18.9	
	comp=Z,70nm,19.4s,baz=280,slow=32						
TKL	Tuckaleechee C	98.51	55	LR	LR	23 59 20.9	
	comp=Z,26nm,18.4s,baz=259,slow=31						
VRAC	Vranov	144.90	348	⇑P	PKiKP	23 28 00.8	+0.3
VRI	Vrincioaia	144.91	335	⇓P	PKPdf	23 27 58.9	+2.0
DOPR	Dopca	145.36	336	⇑P	PKPdf	23 27 58.1	+0.4
MLR	Muntele Rosu	145.53	335	⇓P	PKiKP	23 28 00.5	-1.7
KHC	Kasperske Hory	145.57	352	*e*PKP	PKPab	23 27 59.9	+1.5
DRGR		145.61	340	⇑P	PKPab	23 27 59.7	+1.0
BRTR	Keskin Array B	145.82	321	PKPbc	PKPab	23 28 00.6	+0.8
	comp=Z,2.7nm,0.7s,baz=132,slow=1.8,SNR=16						
GERES	GERESS Array B	145.83	351	PKPbc	PKPab	23 27 60.0	+0.5
	comp=Z,1.4nm,0.8s,baz=7.6,slow=4.0,SNR=10						
VOIR		145.93	336	⇓P	PKiKP	23 28 01.9	-1.0
ARR	Arges	146.15	337	⇑P	PKPab	23 28 01.6	+0.8
CONA	Conrad Observa	146.36	348	*e*sPKPdf	PKiKP	23 28 03.0	-0.7
	comp=Z,4.5nm,1.3s						
MOA	Molln	146.72	350	*e*pPKPab	PKiKP	23 28 04.8	+0.4
	comp=Z,1.8nm,0.7s						
BZS	Buzias	147.00	340	⇑P	PKPab	23 28 03.5	-0.5
RETA	Reutte	147.52	354	*i* sPKPbc	PKiKP	23 28 06.8	+0.6
	comp=Z,5.6nm,0.9s						
WATA	Walderalm	147.59	353	*i* pPKPbc	PKPab	23 28 06.3	-0.1
	comp=Z,3.8nm,0.9s						
KBA	Koelnbreinsper	147.61	351	*e*pPKPbc	PKPab	23 28 06.5	0.0
	comp=Z,5.0nm,1.8s						
MOTA	Moosalm	147.63	354	*i* pPKPbc	PKiKP	23 28 06.6	+0.1
	comp=Z,8.3nm,1.1s						
WTTA	Wattenberg	147.65	353	*i* pPKPbc	PKPab	23 28 07.0	+0.4
	comp=Z,5.9nm,1.0s						
SOKA	Soboth	147.72	349	*i* pPKPbc	PKiKP	23 28 06.3	-0.2
	comp=Z,3.0nm,0.9s						
SQTA	Sankt Quirin	147.74	354	*i* pPKPbc	PKiKP	23 28 06.8	+0.2
	comp=Z,5.6nm,1.3s						
DAVA	Damuels	147.79	356	*i* PKiKP	PKiKP	23 28 06.5	-0.3
	comp=Z,7.7nm,1.2s						
OBKA	Obir	147.97	349	*i* sPKPbc	PKPab	23 28 08.4	+0.6
	comp=Z,2.0nm,0.7s						
FETA	Feichten	147.99	354	*i* sPKPbc	PKPab	23 28 08.3	+0.3
	comp=Z,5.4nm,1.0s						
MYKA	Terra Mystica	148.00	351	*i* PKiKP	PKiKP	23 28 06.7	-0.5
	comp=Z,3.5nm,0.8s						
ABTA	Abfaltersbach	148.05	352	*e*pPKPdf	PKPbc	23 28 05.2	-0.2
	comp=Z,7.2nm,1.1s						
TORD	Torodi Ar. Bea	175.03	113	PKP	PKPdf	23 28 31.2	+0.7
	comp=Z,0.7nm,1.0s,baz=337,slow=5.6,SNR=3.6						

UPP 01 23:17:38.8±0.2**, 67°.85N**×**20°.20E, h0km, ML2.1, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.11	27	P	Pg	23 17 41.2	+0.3
KUA				S	Sg	23 17 42.9	+0.5
KOVU	Salmi	0.37	358	P	Pg	23 17 46.0	+0.1
KOVU				S	Sg	23 17 50.7	-0.1
LANU	Lannavaara	0.70	73	P	Pg	23 17 52.1	-0.1
LANU				S	Sg	23 18 01.3	0.0
MASU	Masugnsbyn	0.79	119	P	Pg	23 17 53.7	-0.3
MASU				S	Sg	23 18 04.3	+0.1
KIF	Kilpisjarvi	1.18	11	*e*P	Pb	23 18 01.7	-0.3
PAJU	Pajala	1.40	125	P	Pn	23 18 04.2	-1.3
HEF	Hetta	1.41	65	*e*P	Pn	23 18 04.8	-0.9

HEL 01 23:18:11.1±0.2**, 67°.13N**×**20°.45E, h0km, ML1.7, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERTU	Ertsjaerv	0.90	129	PG	Pg	23 18 27.4	-0.9
	baz=308						
HEF	Hetta	1.77	42	MSG		23 19 04.0	
	comp=Z,4.4nm,0.2s						
HEF				SG	Sn	23 19 05.8	-0.4
HEF	Hetta	1.77	42	*e*P	Pn	23 18 41.9	-1.0
TOF	Tornio	1.87	123	PG	Pn	23 18 44.5	+0.2
TOF				MSG		23 19 07.1	
	comp=Z,6.9nm,0.2s						
TOF				SG	Sb	23 19 10.1	+0.1
KIF	Kilpisjarvi	1.89	4	PG	Pb	23 18 45.6	-0.8
KIF				MSG		23 19 08.4	
	comp=Z,4.4nm,0.2s						
KIF				SG	Sb	23 19 10.6	+0.2
KIF	Kilpisjarvi	1.89	4	*e*P	Pb	23 18 45.5	-0.8
RNF	Rovaniemi	2.26	101	PB	Pn	23 18 50.1	+0.4
RNF				SG	Sb	23 19 20.2	-1.0
SGF	Sodankyl	2.38	80	PB	Pn	23 18 52.2	+0.9
SGF				SB	Sn	23 19 22.6	+1.5
BURU	Burvik	2.59	171	PB	Pn	23 18 55.9	+1.8
	baz=354						
OUL	Oulu	3.02	130	PB	Pn	23 19 02.0	+1.8
	baz=317						
ARE0	ARCESS Array S	3.06	36	PN	Pn	23 18 59.1	-1.5
	baz=222						
UMAU	Umeaa	3.27	178	PB	Pn	23 19 05.1	+1.7
UMAU				SB	Sn	23 19 44.6	+1.7
KU6	Riekki	3.93	102	PN	Pn	23 19 12.7	+0.1
VAF	Ylistaro	4.21	166	PN	Pn	23 19 18.4	+1.9
	baz=352						

*IDC **01** 23:41:58.2±1.1, 51°.57N×174°.14W, h0km, mb3.7/13, mb1 3.9/16, mb1mx3.7/60, mbtmp3.7/16, ML3.4/3, MS3.3/9, Ms1 3.3/9, ms1mx3.0/51, Error ellipse: s-maj=28.8km s-min=18.1km az=164.0*

*AEIC **01** 23:42:03.2±2.7, 51°.42N±0°.05×174°.44W±0°.09, h12km±6km, ML3.3, mb3.8/48(NEIC), Error ellipse: s-maj=8.5km s-min=6.1km az=124.0*

*NEIC **01** 23:42:04.6±1.9, 51°.46N±0°.06×174°.32W±0°.06, h33km±8km, Error ellipse: s-maj=8.8km s-min=5.0km az=170.0*

ISC 01 23:42:03.8±0.8**, 51°.40N**±0°.09×**174°.31W**±0°.06**, h38km, n89, σ1ṡ37**/79**, mb3.8**/14**, MS3.3**/8**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	0.80	5		Pn	23 42 18.8	+0.1
ATKA	Atka Island	0.80	5		Sn	23 42 28.9	-0.5
ATKA	Atka Island	0.80	5		Sn	23 42 29.1	-0.3
GSMY	Great Sitkin M	1.26	301		Pn	23 42 24.4	-0.5
GSTR	Great Sitkin T	1.29	303		Pn	23 42 25.8	+0.4
GSTD	Great Sitkin T	1.32	301		Pn	23 42 25.4	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSTD					**Sn**	**23 42 43.9**	**+1.8**
ADK	**Adak**	**1.56**	**289**		**Pn**	**23 42 29.1**	**+0.2**
KIWB	**Kanaga Island**	**1.83**	**285**	Pn	**Pn**	**23 42 31.6**	**-1.0**
KIKV	**Kanaga Island**	**1.85**	**286**		**Pn**	**23 42 33.5**	**+0.6**
KIMD	**Kanaga Island**	**1.86**	**282**		**Pn**	**23 42 33.3**	**+0.2**
TAFP	**Tanaga Falls P**	**2.34**	**284**		**Pn**	**23 42 40.5**	**+0.8**
TASE	**Tanaga Southea**	**2.36**	**282**		**Pn**	**23 42 41.0**	**+0.9**
NIKH	**Nikolski High**	**3.71**	**63**	Pn	**Pn**	**23 42 59.1**	**+0.7**
UNV	**Unalaska Valle**	**5.35**	**60**	Pn	**Pn**	**23 43 22.2**	**+1.3**
AKUT	**Akutan**	**5.86**	**59**	Pn	**Pn**	**23 43 30.5**	**+2.5**
SPIA	**Saint Paul Isl**	**6.25**	**21**	Pn	**Pn**	**23 43 34.7**	**+1.3**
SMY	**Shemya**	**7.27**	**285**	Pn	**Pn**	**23 43 47.9**	**+0.5**
FALS	**False Pass**	**7.41**	**58**	Pn	**Pn**	**23 43 49.9**	**+0.7**
SDPT	**Sand Point**	**9.16**	**59**	Pn	**Pn**	**23 44 14.1**	**+0.9**
CNBA	**Chernabura Isl**	**9.49**	**63**	Pn	**Pn**	**23 44 19.8**	**+2.1**
CHGN	**Chignik**	**10.59**	**56**	Pn	**Pn**	**23 44 33.5**	**+0.8**
OHAK	**Old Harbor**	**13.55**	**56**	Pn	**Pn**	**23 45 11.0**	**-2.2**
ANM	**Nome**	**14.00**	**16**	Pn	**Pn**	**23 45 20.9**	**+1.6**
KDAK	**Kodiak Island**	**14.08**	**55**	Pn	**Pn**	**23 45 17.5**	**-3.0**
	0.3nm,0.3s,baz=189,slow=2.2,SNR=10						
KDAK	**Kodiak Island**	**14.08**	**55**		**Pn**	**23 45 22.9**	**+2.5**
RSO	**Redoubt South**	**15.04**	**45**		**Pn**	**23 45 36.1**	**+2.7**
CNPM	**China Poot**	**15.34**	**49**	Pn	**Pn**	**23 45 39.5**	**+2.3**
BRLK	**Bradley Lake**	**15.59**	**48**	Pn	**Pn**	**23 45 42.2**	**+1.6**
SEW	**Seward**	**16.39**	**48**	Pn	**Pn**	**23 45 50.8**	**+0.1**
SEW				IAmb	IAmb	23 46 07.0	
	comp=Z,6.9nm,0.7s						
PPLA	**Purkeypile**	**16.52**	**37**	Pn	**P**	**23 45 55.1**	**+0.4**
PPLA				IAmb	IAmb	23 46 10.8	
	comp=Z,7.0nm,1.0s						
RC01	**Rabbit Creek A**	**16.64**	**45**	Pn	**Pn**	**23 45 55.2**	**+1.3**
PETK	**Petropavlovsk-**	**17.18**	**287**	Pn	**P**	**23 46 01.3**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=74,slow=15,SNR=2.1						
PETK				LR	LR	23 52 40.3	
	comp=Z,69nm,20.1s,baz=60,slow=37						
GHO	**Glory Hole Cre**	**17.29**	**43**		**Pn**	**23 46 01.4**	**-0.7**
KNK	**Knik Glacier**	**17.34**	**45**		**Pn**	**23 46 01.8**	**-0.8**
KNK				IAmb	IAmb	23 46 18.9	
	comp=Z,5.0nm,0.6s						
KTH	**Kantishna Hill**	**17.36**	**37**		**Pn**	**23 46 03.9**	**+0.9**
KTH				IAmb	IAmb	23 46 12.9	
	comp=Z,7.0nm,0.8s						
TRF	**Thorofare Moun**	**17.55**	**37**	Pn	**Pn**	**23 46 06.9**	**+1.6**
TRF				IAmb	IAmb	23 46 23.1	
	comp=Z,7.4nm,1.1s						
SML	**Sawmill**	**17.56**	**44**	Pn	**Pn**	**23 46 04.1**	**-1.3**
SML				IAmb	IAmb	23 46 21.4	
	comp=Z,6.9nm,0.9s						
MID	**Middleton Isla**	**17.68**	**52**	Pn	**P**	**23 46 08.9**	**+1.5**
GLI	**Glacier Island**	**17.75**	**47**	Pn	**Pn**	**23 46 06.0**	**-1.7**
GLI				IAmb	IAmb	23 46 22.0	
	comp=Z,4.7nm,0.7s						
HIN	**Hinchinbrook I**	**17.88**	**49**	Pn	**Pn**	**23 46 08.1**	**-1.2**
FID	**Port Fidalgo**	**18.00**	**48**	Pn	**Pn**	**23 46 09.4**	**-1.3**
FID				IAmb	IAmb	23 46 26.5	
	comp=Z,4.4nm,0.5s						
MCK	**McKinley**	**18.21**	**38**	IAmb	IAmb	23 46 29.5	
	comp=Z,7.5nm,0.9s						
BWN	**Browne**	**18.24**	**36**	Pn	**P**	**23 46 14.6**	**+1.0**
EYAK	**Cordova Ski Ar**	**18.28**	**49**		**Pn**	**23 46 16.9**	**+2.8**
EYAK				IAmb	IAmb	23 46 23.3	
	comp=Z,6.4nm,1.1s						
MLY	**Manley**	**18.29**	**33**	P	**Pn**	**23 46 16.2**	**+1.9**
MLY				IAmb	IAmb	23 46 34.5	
	comp=Z,8.8nm,0.8s						
NEA	**Nenana**	**18.61**	**35**	P	**P**	**23 46 18.1**	**+0.6**
RAGM	**Ragged Mountai**	**18.74**	**50**	P	**P**	**23 46 20.1**	**+1.0**
RAGM				IAmb	IAmb	23 46 31.1	
	comp=Z,7.9nm,1.0s						
WRH	**Wood River Hil**	**18.91**	**36**	P	**Pn**	**23 46 23.4**	**+1.6**
WRH				IAmb	IAmb	23 46 40.3	
	comp=Z,4.6nm,0.9s						
HMT	**Hamilton**	**18.93**	**50**	P	**P**	**23 46 21.2**	**0.0**
HMT				IAmb	IAmb	23 46 40.0	
	comp=Z,7.5nm,0.8s						
SUCK	**Suckling Hills**	**19.10**	**51**	P	**P**	**23 46 24.6**	**+1.6**
MDM	**Murphy Dome**	**19.12**	**35**	P	**P**	**23 46 24.2**	**+1.0**
MDM				IAmb	IAmb	23 46 41.9	
	comp=Z,4.0nm,0.7s						
BILL	**Bilibino**	**19.18**	**338**	P	**P**	**23 46 24.8**	**+0.9**
IL31		**19.51**	**36**	IAmb	IAmb	23 46 42.8	
	comp=Z,3.0nm,0.6s						
ILAR	**Eielson Array**	**19.51**	**36**	P	**P**	**23 46 25.6**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=239,slow=9.5,SNR=25						
VRDI	**Verde Repeater**	**19.55**	**48**	P	**P**	**23 46 29.1**	**+1.0**
CRQM	**Cirque**	**19.57**	**49**	P	**P**	**23 46 29.3**	**+1.0**
CRQM				IAmb	IAmb	23 46 36.8	
	comp=Z,5.0nm,1.0s						
WAX	**Waxell Ridge**	**19.63**	**50**	P	**P**	**23 46 29.3**	**+0.4**
WAX				IAmb	IAmb	23 46 36.8	
	comp=Z,7.9nm,1.0s						
TGL	**Tana Glacier**	**19.72**	**49**	P	**P**	**23 46 30.8**	**+0.9**
RIDG	**Independent Ri**	**19.82**	**40**	IAmb	IAmb	23 46 42.4	
	comp=Z,5.6nm,1.0s						
BALM	**Baldy**	**20.02**	**49**	P	**P**	**23 46 33.6**	**+0.5**
DOT	**Dot Lake**	**20.11**	**41**	P	**P**	**23 46 33.8**	**-0.2**
DOT				IAmb	IAmb	23 46 46.7	
	comp=Z,3.2nm,0.7s						
BARN	**Barnard Glacie**	**20.34**	**49**	P	Pn	23 46 39.5	+0.6
PRP	**Porcupine Dome**	**20.39**	**35**	P	**P**	**23 46 39.2**	**+2.1**
PRP				IAmb	IAmb	23 46 54.3	
	comp=Z,7.6nm,1.2s						
CTGM	**Chitina Glacie**	**20.48**	**49**	P	**P**	**23 46 40.2**	**+2.0**
CTGM				IAmb	IAmb	23 46 58.5	
	comp=Z,3.6nm,0.7s						
FYU	**Fort Yukon**	**21.03**	**33**	P	**P**	**23 46 46.2**	**+2.3**
EGAK	**Eagle**	**21.71**	**39**	P	**P**	**23 46 51.1**	**-0.2**
DAWY	**Dawson**	**22.19**	**42**	P	**P**	**23 46 57.5**	**+1.1**
DAWY				IAmb	IAmb	23 47 15.3	
	comp=Z,5.1nm,1.1s						
HYT	**Haines Junctio**	**22.29**	**51**	P	**P**	**23 46 59.5**	**+1.9**
INK	**Inuvik**	**25.85**	**34**	P	**P**	**23 47 30.0**	**-1.2**
	comp=Z,1.4nm,0.7s,baz=274,slow=7.0,SNR=5.0						
INK	**Inuvik**	**25.85**	**34**	P	**P**	**23 47 31.7**	**+0.4**
INK				IAmb	IAmb	23 47 49.6	
	comp=Z,3.9nm,1.1s						
ASAJ	**Asahikawa**	**29.52**	**273**	LR	LR	23 59 19.6	
	comp=Z,53nm,19.4s,baz=65,slow=35						
YKA	**Yellowknife Ar**	**33.16**	**47**	LR	LR	00 03 43.6	
	comp=Z,111nm,20.4s,baz=0.0,slow=40						
YBH	**Yreka Blue Hor**	**36.08**	**85**	LR	LR	00 00 01.9	
	comp=Z,38nm,18.4s,baz=299,slow=30						
MJAR	**Matsushiro Arr**	**36.58**	**265**	LR	LR	00 02 48.3	
	comp=Z,36nm,21.0s,baz=90,slow=34						
NVAR	**Mina Array Bea**	**40.75**	**86**	P	**P**	**23 49 39.1**	**-2.0**
	comp=Z,0.1nm,0.4s,baz=308,slow=3.3,SNR=1.7						
NVAR				LR	LR	00 02 52.0	
	comp=Z,45nm,19.2s,baz=208,slow=31						
KSRS	**Korea Array**	**42.45**	**274**	LR	LR	00 10 05.8	
	comp=Z,15nm,18.1s,baz=58,slow=40						
PDAR	**Pinedale Array**	**43.60**	**75**	P	**P**	**23 50 03.6**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=322,slow=4.5,SNR=4.4						
NRIK	**Noril'sk**	**45.79**	**331**	LR	LR	00 11 24.4	
	comp=Z,37nm,19.2s,baz=46,slow=39						
SONM	**Songino Array**	**49.12**	**299**	P	**P**	**23 50 47.4**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=65,slow=9.0,SNR=5.1						
FRB	**Frobisher Bay**	**51.50**	**33**	P	**P**	**23 51 04.0**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=316,slow=6.7,SNR=7.8						
ZALV	**Zalesovo Beam**	**56.02**	**316**	LR	LR	00 17 25.1	
	comp=Z,36nm,18.1s,baz=46,slow=38						
ARCES	**ARCESS Array B**	**58.50**	**352**	P	**P**	**23 51 54.8**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=10,slow=7.6,SNR=7.9						
MKAR	**Makanchi Array**	**62.18**	**311**	P	**P**	**23 52 20.4**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=44,slow=5.0,SNR=6.3						
FINES	**FINESS Array B**	**66.33**	**349**	P	**P**	**23 52 46.6**	**-1.3**
	comp=Z,1.3nm,0.9s,baz=20,slow=6.1,SNR=4.2						
NOA	**NORSAR Array B**	**67.82**	**357**	P	**P**	**23 52 55.9**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=4.2,slow=6.7,SNR=2.5						
AKASG	**Malin Array Be**	**76.33**	**345**	P	**P**	**23 53 47.3**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=17,slow=5.7,SNR=2.1						
GERES	**GERESS Array B**	**79.90**	**355**	P	**P**	**23 54 08.1**	**-0.3**
	comp=Z,0.7nm,1.0s,baz=0.0,slow=2.0,SNR=5.0						
WRA	**Warramunga Arr**	**84.05**	**228**	P	**P**	**23 54 32.5**	**+2.2**
	comp=Z,0.9nm,0.8s,baz=34,slow=5.9,SNR=3.2						
ASAR	**Alice Springs**	**87.47**	**226**	P	**P**	**23 54 47.7**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=32,slow=5.5,SNR=3.8						

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*SJA **01** 23:43:59.1±0.4, 27°.23S×62°.99W, h660km±12km, ML4.4, MW4.4*
*VAO **01** 23:44:11.7±0.3, 27°.09S×63°.43W, h551km±4km, mb4.4*
*NEIC **01** 23:44:12.5±1.4, 27°.10S±0°.09×63°.4W±0°.1, h569km±6km, mb4.4/171, Error ellipse: s-maj=16.8km s-min=12.8km az=70.0*
*IDC **01** 23:44:12.7±0.5, 27°.06S×63°.42W, h571km±5km, mb3.7/20, mb1 3.8/27, mb1mx3.7/43, mbtmp4.7/27, Error ellipse: s-maj=11.8km s-min=8.2km az=72.0*
ISC 01 23:44:12.1±0.3**, 27°.09S**±0°.04×**63°.42W**±0°.05**, h561**km**, n250, σ0.97**/263**, mb4.4**/100**, 1D, Santiago del Estero Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CYA	**Choya**	**2.50**	**237**	*e*P	**P**	**23 45 25.7**	**+0.5**
CYA				IAML		23 46 37.4	
	comp=Z,33nm,0.7s						
CPUP	**Villa Florida**	**5.50**	**83**	P	**P**	**23 45 48.3**	**+1.5**
	comp=Z,21nm,0.3s,baz=249,slow=8.8,SNR=473						
CPUP				S	**S**	**23 47 05.9**	**+1.7**
	baz=45,slow=15,SNR=1.4						
MRA	**San Martin**	**5.67**	**200**	*e*P	**P**	**23 45 47.4**	**-0.9**
MRA				IAML		23 47 13.7	
	comp=Z,12nm,0.5s						
AMOG	**MOGNA**	**5.87**	**228**	*e*P	**P**	**23 45 50.6**	**+0.6**
AMOG				*e*S	**S**	**23 47 13.8**	**+3.6**
AMOG				IAML		23 47 17.2	
	comp=Z,93nm,0.5s						
GO02	**Mina Guanaco**	**5.87**	**288**	P	**P**	**23 45 52.3**	**+1.9**
GO03	**Copiap**	**6.08**	**264**	P	**P**	**23 45 53.1**	**+1.1**
ACAN	**Cantantal**	**6.12**	**211**	*e*P	**P**	**23 45 52.5**	**+0.2**
ACAN				IAML		23 47 24.4	
	comp=Z,59nm,1.0s						
RTCV	**Cerro Valdivia**	**6.52**	**222**	*e*P	**P**	**23 45 57.2**	**+1.3**
LVC	**Limon Verde**	**6.69**	**311**	P	**P**	**23 45 59.4**	**+1.4**
	comp=Z,36nm,0.3s,baz=132,slow=5.5,SNR=329						
LVC				S	**S**	**23 47 23.9**	**-0.7**
	comp=Z,34nm,0.3s,baz=101,slow=5.1,SNR=10						
LVC	**Limon Verde**	**6.69**	**311**	P	**P**	**23 45 59.0**	**+1.0**
PB15	**IPOC Station P**	**6.71**	**304**	P	**P**	**23 45 59.6**	**+1.5**
PB14	**IPOC Station P**	**6.75**	**290**	P	**P**	**23 45 58.7**	**+0.2**
RTLS	**Leoncito**	**6.95**	**226**	*e*P	**P**	**23 46 01.9**	**+1.7**
PB06	**IPOC Station P**	**7.09**	**307**	P	**P**	**23 46 02.9**	**+1.3**
GO04	**Tololo Observa**	**7.17**	**243**	P	**P**	**23 46 03.2**	**+0.8**
ASAL	**Salagasta**	**7.22**	**219**	*e*P	**P**	**23 46 03.6**	**+1.0**
PB10	**IPOC Station P**	**7.37**	**297**	P	**P**	**23 46 05.3**	**+1.3**
PB10					**S**	**23 47 40.2**	**+4.4**
ARCO	**CERRO ARCO**	**7.46**	**219**	*e*P	**P**	**23 46 05.8**	**+0.9**
PB09	**IPOC Station P**	**7.48**	**314**	P	**P**	**23 46 05.7**	**+0.4**
PB04	**IPOC Station P**	**7.74**	**306**	P	**P**	**23 46 08.6**	**+0.8**
AVIZ	**Vizcacheras**	**7.74**	**213**	*e*P	**P**	**23 46 08.7**	**+1.2**
PB07	**IPOC Station P**	**7.95**	**311**	P	**P**	**23 46 10.9**	**+1.0**
PB01	**IPOC Station P**	**8.18**	**316**	P	**P**	**23 46 12.7**	**+0.6**
PB08	**IPOC Station P**	**8.69**	**322**	P	**P**	**23 46 18.8**	**+1.3**
PEL	**Peldehue**	**8.71**	**224**	P	**P**	**23 46 17.4**	**+0.3**
ROC1	**El Roble**	**8.81**	**226**	P	**P**	**23 46 18.1**	**-0.2**
GO01	**Chusmiza**	**9.09**	**323**	P	**P**	**23 46 22.8**	**+1.1**
PLTB	**Pedras Altas**	**9.74**	**121**	*e*P	**P**	**23 46 27.3**	**-0.2**
PLTB				*e*S	**S**	**23 48 17.7**	**-1.0**
MNMC	**Minye Minye**	**9.75**	**323**	P	**P**	**23 46 28.9**	**+0.9**
ITAB	**Concordia**	**10.06**	**93**	*e*P	**P**	**23 46 31.1**	**+0.4**
ITAB				*e*S	**S**	**23 48 23.9**	**-0.7**
PB16	**IPOC Station P**	**10.36**	**326**	P	**P**	**23 46 36.0**	**+1.4**
PTGB	**Pitanga**	**10.49**	**80**	*e*P	**P**	**23 46 36.0**	**+0.7**
PTGB				*e*S	**S**	**23 48 33.1**	**0.0**
PB12	**IPOC Station P**	**10.57**	**322**	P	**P**	**23 46 36.6**	**+0.5**
GO05	**Huala**	**10.74**	**221**	P	**P**	**23 46 37.7**	**+0.1**
SIV	**San Ignacio**	**11.26**	**12**	P	**P**	**23 46 44.0**	**+0.8**
	comp=Z,3.5nm,0.3s,baz=207,slow=9.0,SNR=205						
LPAZ	**La Paz**	**11.60**	**337**	P	**P**	**23 46 47.9**	**+0.5**
	comp=Z,8.7nm,0.3s,baz=130,slow=5.2,SNR=230						
LPAZ				S	**S**	**23 48 52.9**	**-2.1**
	comp=Z,0.9nm,0.3s,baz=224,slow=18,SNR=4.2						
LPAZ	**La Paz**	**11.60**	**337**	P	**P**	**23 46 46.9**	**-0.5**
LPAZ	**La Paz**	**11.60**	**337**	*e*P	**P**	**23 46 47.7**	**+0.3**
LPAZ				*e*S	**S**	**23 48 53.5**	**-1.5**
PTLB	**Pontes e Lacer**	**12.25**	**20**	*e*P	**P**	**23 46 53.8**	**+0.5**
PTLB				*e*S	**S**	**23 49 06.1**	**+0.1**
PCMB	**Pacaembu**	**12.35**	**66**	*e*P	**P**	**23 46 54.8**	**+0.4**
PCMB				*e*S	**S**	**23 49 08.0**	**+0.1**
FRTB	**Fartura**	**13.09**	**76**	*e*P	**P**	**23 47 01.9**	**-0.1**
FRTB				*e*S	**S**	**23 49 22.5**	**+0.8**
SALV	**Santo Antonio**	**13.25**	**34**	*e*P	**P**	**23 47 03.6**	**0.0**
SALV				*e*S	**S**	**23 49 26.1**	**+1.3**
PLCA	**Paso Flores**	**14.83**	**202**	P	**P**	**23 47 18.2**	**-1.3**
	comp=Z,1.1nm,0.3s,baz=23,slow=10,SNR=40						
PLCA	**Paso Flores**	**14.83**	**202**	*e*P	**P**	**23 47 18.3**	**-1.2**
PLCA				*e*S	**S**	**23 49 53.4**	**-0.2**
VAO	**Valinhos**	**15.46**	**78**	*e*P	**P**	**23 47 25.9**	**-0.2**
VAO				*e*S	**S**	**23 50 05.5**	**+0.5**
ARAG	**Araguaiana, MT**	**15.64**	**46**	*e*P	**P**	**23 47 27.4**	**-0.4**
ARAG				*e*S	**S**	**23 50 08.9**	**+0.9**
PARB	**Paraibuna**	**16.53**	**81**	*e*P	**P**	**23 47 36.2**	**0.0**
IPMB	**Ipameri, GO**	**16.71**	**60**	*e*P	**P**	**23 47 37.9**	**0.0**
IPMB				*e*S	**S**	**23 50 27.4**	**+1.9**
CLDB	**Colider**	**17.66**	**25**	*e*P	**P**	**23 47 45.7**	**-0.7**
CLDB				*e*S	**S**	**23 50 41.9**	**+0.8**
BDFB	**Brasilia**	**18.30**	**55**	P	**P**	**23 47 52.8**	**+0.4**
	comp=Z,4.9nm,0.3s,baz=227,slow=8.0,SNR=55						
BDFB	**Brasilia**	**18.30**	**55**	P	**P**	**23 47 52.8**	**+0.4**
NNA	**Nana**	**19.61**	**317**	P	**P**	**23 48 04.1**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=218,slow=12,SNR=1.6						
NNA	**Nana**	**19.61**	**317**	P	**P**	**23 48 04.3**	**0.0**
JANB	**Januaria**	**21.44**	**60**	*e*P	**P**	**23 48 21.1**	**+0.3**
JANB				*e*S	**S**	**23 51 43.6**	**+2.0**
MACA	**Manacapuru-AM**	**23.94**	**7**	*e*P	**P**	**23 48 42.3**	**-0.7**
EFI	**East Falkland**	**24.89**	**172**	P	**P**	**23 48 50.0**	**-0.8**
PTGA	**Pitinga**	**26.42**	**8**	P	**P**	**23 49 04.4**	**-0.5**
	comp=Z,31nm,0.6s,baz=195,slow=12,SNR=65						
PTGA	**Pitinga**	**26.42**	**8**	P	**P**	**23 49 04.6**	**-0.3**
USHA	**Ushuaia**	**27.96**	**186**	P	**P**	**23 49 17.4**	**-0.4**
	comp=Z,5.9nm,0.6s,baz=89,slow=13,SNR=9.7						
BOAV	**Boa Vista**	**29.45**	**6**	*e*P	**P**	**23 49 31.2**	**-0.1**
BOAV				*e*S	**S**	**23 53 47.0**	**+0.2**
ROSC	**El Rosal**	**33.45**	**340**	P	**P**	**23 50 06.0**	**+0.1**
	comp=Z,11nm,0.4s,baz=176,slow=13,SNR=4.0						
ROSC	**El Rosal**	**33.45**	**340**	P	**P**	**23 50 05.8**	**-0.1**
MDP	**Montagnes des**	**33.66**	**20**	P	**P**	**23 50 06.7**	**-0.4**
	comp=Z,19nm,0.5s,baz=191,slow=11,SNR=21						
RUSC	**La Rusia**	**34.10**	**343**	P	**P**	**23 50 11.0**	**-0.4**
SDV	**Santo Domingo**	**36.44**	**348**	P	**P**	**23 50 28.6**	**-1.9**
	comp=Z,9.5nm,0.3s,baz=225,slow=1.4,SNR=3.8						
GRGR	**Grenville**	**39.02**	**3**	P	**P**	**23 50 50.7**	**-0.5**
BCIP	**Isla Barro Col**	**39.40**	**334**	P	**P**	**23 50 54.0**	**-0.3**
URIC	**Uribia, Colomb**	**39.45**	**347**	P	**P**	**23 50 51.0**	**-3.7**
ANWB	**Willy Bob**	**44.52**	**2**	P	**P**	**23 51 32.5**	**-1.9**
ICMP	**Isla Caja de M**	**44.81**	**356**	P	**P**	**23 51 35.0**	**-1.7**
PDPR	**Patillas Dam,**	**44.91**	**356**	P	**P**	**23 51 36.0**	**-1.4**
MLPR	**Magueyes Islan**	**44.93**	**355**	P	**P**	**23 51 36.7**	**-0.8**
MTP	**Monte Pirata**	**44.97**	**357**	P	**P**	**23 51 35.5**	**-2.4**
MTP				IAmb	IAmb	23 51 49.0	
	comp=Z,22nm,1.1s						
CRPR	**Cabo Rojo, PR**	**44.97**	**355**	P	**P**	**23 51 36.6**	**-1.2**
OBIP	**Obispado Ponce**	**44.97**	**356**	P	**P**	**23 51 36.9**	**-1.0**
HUMP	**Col San Antoni**	**45.02**	**357**	P	**P**	**23 51 38.3**	**0.0**
HUMP				IAmb	IAmb	23 51 48.8	
	comp=Z,15nm,1.1s						
CBYP	**Canovanas**	**45.15**	**357**	P	**P**	**23 51 38.2**	**-1.2**
CBYP				IAmb	IAmb	23 51 46.2	
	comp=Z,14nm,1.0s						
CUPR	**Culebra, Puert**	**45.16**	**358**	P	**P**	**23 51 37.7**	**-1.6**
STVI	**Saint Thomas**	**45.20**	**358**	P	**P**	**23 51 38.4**	**-1.2**
AGPR	**Aguadilla, PR**	**45.43**	**355**	P	**P**	**23 51 40.6**	**-0.8**
BANI	**BANI**	**45.71**	**351**	P	**P**	**23 51 41.8**	**-1.9**
DR12	**Loma Pena Alta**	**45.97**	**352**	P	**P**	**23 51 42.3**	**-3.3**
SDDR	**Presa de Saban**	**46.43**	**350**	P	**P**	**23 51 48.5**	**-0.5**
MTDJ	**Mount Denham**	**47.08**	**342**	P	**P**	**23 51 53.9**	**-0.1**
GTBY	**Guantanamo Bay**	**48.09**	**345**	P	**P**	**23 52 01.5**	**+0.1**
CCIG	**Comitan**	**51.34**	**324**	P	**P**	**23 52 25.0**	**-0.5**
TEIG	**Tepich**	**52.84**	**330**	P	**P**	**23 52 35.8**	**-0.2**
TEIG				IAmb	IAmb	23 52 36.2	
	comp=Z,16nm,0.8s						
SHEL	**Horse Pasture**	**54.38**	**91**	P	**P**	**23 52 46.7**	**-0.4**
061Z	**Ochoppi**	**55.28**	**341**	P	**P**	**23 52 53.1**	**+0.1**
SNAA	**Sanae**	**55.37**	**160**	P	**P**	**23 52 52.4**	**-0.7**
	comp=Z,2.0nm,1.0s,baz=290,slow=9.6,SNR=5.9						
SNAA				pP	**pP**	**23 54 40.8**	**+0.2**
	comp=Z,8.5nm,1.0s,baz=292,slow=9.6,SNR=14						
SNAA	**Sanae**	**55.37**	**160**	P	**P**	**23 52 52.5**	**-0.7**
SNAA					**pP**	**23 54 42.2**	**+1.5**
BBSR	**BB Station**	**59.14**	**359**	P	**P**	**23 53 19.5**	**+0.2**
553A	**Crawfordville**	**60.40**	**339**	P	**P**	**23 53 27.5**	**-0.2**
255A	**Hazlehurst**	**61.44**	**342**	P	**P**	**23 53 34.0**	**-0.4**
255A				IAmb	IAmb	23 53 43.8	
	comp=Z,21nm,1.2s						
GOGA	**Godfrey**	**63.11**	**341**	P	**P**	**23 53 44.1**	**-1.1**
BIRD	**Birdtown, Kers**	**63.48**	**344**	P	**P**	**23 53 48.0**	**+0.5**
BIRD				IAmb	IAmb	23 53 48.6	
	comp=Z,10nm,0.7s						
Y52A	**Lilburn**	**63.71**	**341**	P	**P**	**23 53 48.9**	**-0.2**
Z50A	**Ashland**	**63.71**	**339**	IAmb	IAmb	23 53 49.7	
	comp=Z,13nm,0.8s						
LRAL	**Lakeview Retre**	**63.86**	**338**	P	**P**	**23 53 49.3**	**-0.7**
W57A	**Gilead**	**63.86**	**345**	P	**P**	**23 53 50.3**	**+0.3**
W57A				IAmb	IAmb	23 53 51.3	
	comp=Z,10nm,0.6s						
U61A	**Possum Corner**	**64.27**	**348**	P	**P**	**23 53 52.0**	**-0.5**
Z47A	**Carrollton**	**64.37**	**337**	P	**P**	**23 53 52.9**	**-0.3**
Z47A				IAmb	IAmb	23 53 53.9	
	comp=Z,12nm,0.8s						
X51A	**Calhoun**	**64.59**	**340**	P	**P**	**23 53 54.1**	**-0.6**
X51A				IAmb	IAmb	23 53 55.1	
	comp=Z,9.8nm,0.7s						
V53A	**Saluda**	**65.05**	**343**	P	**P**	**23 53 57.4**	**-0.2**
V53A				IAmb	IAmb	23 53 58.7	
	comp=Z,16nm,1.1s						
X48A	**Hartselle**	**65.17**	**339**	IAmb	IAmb	23 53 58.7	
	comp=Z,7.1nm,0.7s						
TKL	**Tuckaleechee C**	**65.30**	**342**	P	**P**	**23 53 58.1**	**-1.0**
	comp=Z,5.2nm,0.8s,baz=165,slow=8.7,SNR=7.8						
TKL	**Tuckaleechee C**	**65.30**	**342**	P	**P**	**23 53 58.4**	**-0.7**
CPCT	**Cooper Cave**	**65.32**	**341**	P	**P**	**23 53 58.8**	**-0.4**
CPCT				IAmb	IAmb	23 53 59.8	
	comp=Z,6.3nm,0.6s						
W50A	**Signal Mountai**	**65.32**	**340**	IAmb	IAmb	23 53 59.9	
	comp=Z,9.6nm,0.8s						
V52A	**Sevierville**	**65.43**	**342**	P	**P**	**23 53 59.0**	**-0.8**
LIC	**Lamto**	**65.43**	**69**	*e*P	**P**	**23 53 59.3**	**-1.1**
	comp=Z,16nm,0.6s						
Y45A	**Yeager Farm, C**	**65.49**	**336**	P	**P**	**23 54 00.4**	**+0.1**
SWET	**Sewanee**	**65.52**	**340**	P	**P**	**23 54 00.5**	**-0.1**
SWET				IAmb	IAmb	23 54 00.7	
	comp=Z,8.0nm,0.5s						
V51A	**Loudon**	**65.60**	**341**	P	**P**	**23 54 00.1**	**-0.8**
V51A				IAmb	IAmb	23 54 01.4	
	comp=Z,9.2nm,0.9s						
U54A	**Nelsons Funny**	**65.60**	**344**	P	**P**	**23 54 01.2**	**+0.2**
TIC	**Toumodi**	**65.67**	**68**	*e*P	**P**	**23 54 01.6**	**-0.3**
KIC	**Kosan Boka**	**65.75**	**69**	*e*P	**P**	**23 54 01.3**	**-1.1**
	comp=Z,17nm,0.6s						
DBIC	**Dimbokro**	**65.82**	**68**	P	**P**	**23 54 02.4**	**-0.4**
	comp=Z,6.3nm,0.4s,baz=211,slow=5.0,SNR=23						
DBIC				pP	**pP**	**23 55 58.1**	**+2.4**
	comp=Z,3.6nm,0.9s,baz=198,slow=4.1,SNR=3.2						
DBIC	**Dimbokro**	**65.82**	**68**	P	**P**	**23 54 02.0**	**-0.7**
DBIC				IAmb	IAmb	23 54 02.8	
	comp=Z,8.9nm,0.6s						
BLA	**Blacksburg**	**65.93**	**345**	P	**P**	**23 54 03.7**	**+0.7**
BLA				IAmb	IAmb	23 54 21.1	
	comp=Z,21nm,1.3s						
PLAL	**Pickwick Lake**	**66.00**	**338**	IAmb	IAmb	23 54 03.4	
	comp=Z,7.4nm,0.6s						
R58B	**Mineral**	**66.12**	**348**	P	**P**	**23 54 04.5**	**+0.4**
V48A	**Smith Brothers**	**66.28**	**339**	IAmb	IAmb	23 54 05.6	
	comp=Z,11nm,0.7s						
CLTN	**Cedars of Leba**	**66.45**	**340**	IAmb	IAmb	23 54 06.7	
	comp=Z,10.0nm,0.7s						
WLAR	**White Oak Lake**	**66.69**	**333**	P	**P**	**23 54 08.5**	**+0.8**
WLAR				IAmb	IAmb	23 54 09.8	
	comp=Z,21nm,1.1s						
S54A	**Dingess, Beckl**	**66.70**	**345**	P	**P**	**23 54 07.6**	**-0.1**
S54A				IAmb	IAmb	23 54 09.2	
	comp=Z,14nm,0.8s						
T50A	**Nancy**	**66.88**	**341**	P	**P**	**23 54 08.4**	**-0.4**
R55A	**Marlinton**	**66.89**	**346**	P	**P**	**23 54 09.3**	**+0.4**
R55A				IAmb	IAmb	23 54 11.3	
	comp=Z,12nm,0.8s						
WVT	**Waverly**	**66.96**	**339**	P	**P**	**23 54 08.7**	**-0.7**
WVT				IAmb	IAmb	23 54 09.5	
	comp=Z,9.0nm,0.6s						
JCT	**Junction City**	**66.98**	**326**	P	**P**	**23 54 10.0**	**+0.3**
JCT				IAmb	IAmb	23 54 11.0	
	comp=Z,7.5nm,0.6s						
WHTX	**Lake Whitney,**	**67.11**	**329**	P	**P**	**23 54 10.1**	**-0.3**
WHTX				IAmb	IAmb	23 54 11.2	
	comp=Z,6.9nm,0.6s						
S51A	**Beattyville**	**67.12**	**343**	P	**P**	**23 54 10.0**	**-0.2**
S51A				IAmb	IAmb	23 54 10.7	
	comp=Z,14nm,1.1s						
T47A	**Sharon Grove**	**67.52**	**340**	IAmb	IAmb	23 54 12.8	
	comp=Z,8.9nm,0.8s						
GNAR	**Gosnell**	**67.55**	**337**	P	**P**	**23 54 12.4**	**-0.6**
P57A	**Homestead Farm**	**67.61**	**348**	P	**P**	**23 54 14.3**	**+1.1**
P57A				IAmb	IAmb	23 54 16.5	
	comp=Z,13nm,1.0s						
MIAR	**Mount Ida**	**67.63**	**333**	P	**P**	**23 54 14.2**	**+0.8**
WHAR	**Wooly Hollow**	**67.78**	**335**	P	**P**	**23 54 14.3**	**0.0**
MVL	**Millersville**	**67.82**	**349**	P	**P**	**23 54 15.1**	**+0.6**
MVL				IAmb	IAmb	23 54 16.1	
	comp=Z,8.4nm,0.8s						
TXAR	**Lajitas Array**	**68.07**	**323**	P	**P**	**23 54 16.6**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=156,slow=6.8,SNR=5.2						
TX31	**Lajitas Ar. Si**	**68.08**	**323**	P	**P**	**23 54 16.8**	**+0.3**
TX32	**Lajitas Array**	**68.08**	**323**	P	**P**	**23 54 16.9**	**+0.5**
PARMO	**Parma**	**68.09**	**337**	P	**P**	**23 54 16.5**	**+0.3**
PAGS	**Pennsylvania G**	**68.11**	**349**	P	**P**	**23 54 16.9**	**+0.7**
PAGS				IAmb	IAmb	23 54 18.0	
	comp=Z,14nm,0.8s						
FCAR	**Ozark Folk Cen**	**68.25**	**335**	P	**P**	**23 54 16.8**	**-0.4**
FCAR				IAmb	IAmb	23 54 23.1	
	comp=Z,14nm,0.8s						
W39A	**Magazine**	**68.28**	**334**	IAmb	IAmb	23 54 19.1	
	comp=Z,7.8nm,0.8s						
P53A	**Whipple**	**68.32**	**345**	P	**P**	**23 54 17.5**	**-0.1**
P53A				IAmb	IAmb	23 54 19.0	
	comp=Z,16nm,1.0s						
X37A	**Clayton**	**68.40**	**332**	P	**P**	**23 54 18.5**	**+0.3**
PBMO	**Poplar Bluff**	**68.43**	**337**	IAmb	IAmb	23 54 18.9	
	comp=Z,13nm,0.7s						
O56A	**Blue Knob Stat**	**68.48**	**348**	P	**P**	**23 54 19.0**	**+0.5**
WSPT	**Westport, CT**	**68.53**	**352**	P	**P**	**23 54 19.0**	**+0.2**
ODNJ	**Ogdensburg**	**68.62**	**351**	P	**P**	**23 54 19.7**	**+0.4**
N59A	**State Game Lan**	**68.63**	**350**	P	**P**	**23 54 19.8**	**+0.4**
N59A				IAmb	IAmb	23 54 31.9	
	comp=Z,28nm,1.4s						
SIUC	**Southern Illin**	**68.86**	**338**	P	**P**	**23 54 20.5**	**-0.4**
SIUC				IAmb	IAmb	23 54 20.9	
	comp=Z,7.9nm,0.6s						
T42A	**Van Buren**	**68.89**	**337**	P	**P**	**23 54 21.3**	**+0.3**
BRYW	**Bryant College**	**69.07**	**354**	P	**P**	**23 54 22.0**	**0.0**
KSCT	**Kent School, K**	**69.10**	**352**	P	**P**	**23 54 21.9**	**-0.2**
KSCT				IAmb	IAmb	23 54 34.1	
	comp=Z,14nm,1.1s						
KSPA	**Keystone Colle**	**69.25**	**350**	P	**P**	**23 54 23.4**	**+0.3**
KSPA				IAmb	IAmb	23 54 34.5	
	comp=Z,22nm,1.3s						
M57A	**Sunshine Farm,**	**69.26**	**349**	P	**P**	**23 54 24.1**	**+1.0**
M57A				IAmb	IAmb	23 54 30.9	
	comp=Z,21nm,1.4s						
N54A	**Moraine State**	**69.43**	**347**	P	**P**	**23 54 25.1**	**+0.9**
N54A				IAmb	IAmb	23 54 25.9	
	comp=Z,11nm,0.7s						
M56A	**Emporium**	**69.58**	**348**	P	**P**	**23 54 25.0**	**-0.1**
M56A				IAmb	IAmb	23 54 26.2	
	comp=Z,13nm,1.1s						
M55A	**Ridgway**	**69.68**	**348**	P	**P**	**23 54 26.3**	**+0.6**
M55A				IAmb	IAmb	23 54 27.2	
	comp=Z,11nm,0.8s						
L59A	**Walton**	**69.77**	**351**	P	**P**	**23 54 26.4**	**+0.2**
L59A				IAmb	IAmb	23 54 28.1	
	comp=Z,18nm,1.0s						
CCM	**Cathedral Cave**	**69.86**	**337**	P	**P**	**23 54 26.2**	**-0.6**
CCM				IAmb	IAmb	23 54 27.3	
	comp=Z,8.1nm,0.7s						
M54A	**Oil Creek Stat**	**69.89**	**347**	P	**P**	**23 54 27.3**	**+0.3**
M54A				IAmb	IAmb	23 54 28.8	
	comp=Z,9.6nm,0.8s						
BINY	**Binghamton**	**69.91**	**350**	P	**P**	**23 54 27.3**	**+0.2**
BINY				IAmb	IAmb	23 54 28.9	
	comp=Z,11nm,1.0s						
L56A	**Greenwood**	**70.11**	**349**	P	**P**	**23 54 28.6**	**+0.3**
L56A				IAmb	IAmb	23 54 29.9	
	comp=Z,12nm,0.7s						
S39A	**Bolivar**	**70.29**	**335**	IAmb	IAmb	23 54 30.4	
	comp=Z,9.8nm,0.8s						
N49A	**Columbus Grove**	**70.36**	**343**	IAmb	IAmb	23 54 29.9	
	comp=Z,10nm,0.6s						
K58A	**Earlville**	**70.41**	**350**	P	**P**	**23 54 30.2**	**+0.2**
K58A				IAmb	IAmb	23 54 31.7	
	comp=Z,6.8nm,0.6s						
WVNY	**West Valley, N**	**70.56**	**348**	P	**P**	**23 54 31.4**	**+0.5**
WVNY				IAmb	IAmb	23 54 32.5	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,9.3nm,0.8s						
MMNY	Mt. Morris Dam	70.75	349	P	P	23 54 32.4	+0.4
MMNY				IAmb	IAmb	23 54 33.3	
	comp=Z,12nm,0.7s						
MNTX	Cornudas Mount	70.84	323	P	P	23 54 32.4	-0.4
J59A	Piesco	70.94	351	P	P	23 54 33.8	+0.7
J59A				IAmb	IAmb	23 54 34.7	
	comp=Z,8.2nm,0.7s						
I63A	Otisfield	71.10	355	P	P	23 54 35.4	+1.4
J56A	Wolcott	71.10	350	P	P	23 54 33.6	-0.4
J56A				IAmb	IAmb	23 54 37.2	
	comp=Z,7.1nm,0.8s						
MSTX	Muleshoe	71.28	326	P	P	23 54 35.4	0.0
MSTX				IAmb	IAmb	23 54 36.8	
	comp=Z,9.1nm,0.8s						
NCB	Newcomb	71.40	352	P	P	23 54 35.0	-0.8
NCB				IAmb	IAmb	23 54 52.8	
	comp=Z,15nm,1.4s						
LBNH	Lisbon	71.41	354	P	P	23 54 36.0	+0.2
LBNH				IAmb	IAmb	23 54 37.5	
	comp=Z,17nm,1.1s						
HDIL	Hopedale	71.47	339	P	P	23 54 34.8	-1.4
SUR	Sutherland	71.50	117	P	P	23 54 37.4	+0.3
SUR				IAmb	IAmb	23 54 44.5	
	comp=Z,17nm,1.4s						
EMMW	East Machias	71.55	357	P	P	23 54 36.4	-0.2
H62A	Milan	71.67	354	P	P	23 54 38.0	+0.7
H62A				IAmb	IAmb	23 54 48.6	
	comp=Z,12nm,1.1s						
G65A	Princeton	72.04	357	P	P	23 54 40.5	+1.1
N41A	Harden Midland	72.11	338	P	P	23 54 39.4	-0.6
N41A				IAmb	IAmb	23 54 40.1	
	comp=Z,10nm,1.1s						
VNDA	Vanda	72.20	189	P	P	23 54 41.0	+1.0
	comp=Z,3.0nm,0.9s,baz=138,slow=4.5,SNR=11						
VNDA	Vanda	72.20	189	P	P	23 54 41.7	+1.7
PKME	Peaks-Kenny Pk	72.20	356	P	P	23 54 40.7	+0.4
F63A	Nahmakanta, Br	72.63	356	P	P	23 54 42.6	-0.2
F63A				IAmb	IAmb	23 54 57.8	
	comp=Z,29nm,1.5s						
J47A	Sunmer	72.70	344	P	P	23 54 42.2	-1.1
J47A				IAmb	IAmb	23 54 57.4	
	comp=Z,15nm,1.1s						
F64A	Sherman	72.74	356	P	P	23 54 43.0	-0.5
F64A				IAmb	IAmb	23 54 45.6	
	comp=Z,18nm,0.9s						
PLVO	Plevna	72.86	350	P	P	23 54 44.3	+0.2
PLVO				IAmb	IAmb	23 54 55.5	
	comp=Z,14nm,1.4s						
SADO	Sadowa	72.94	348	P	P	23 54 44.5	-0.2
	comp=Z,2.9nm,0.4s,baz=174,slow=4.7,SNR=4.5						
R32A	Long Quarter,	73.07	332	P	P	23 54 45.2	-0.4
R32A				IAmb	IAmb	23 54 47.1	
	comp=Z,10nm,0.8s						
K43A	Burlington	73.15	341	P	P	23 54 45.3	-0.5
E63A	Oxbow	73.30	356	P	P	23 54 46.6	0.0
E63A				IAmb	IAmb	23 54 46.7	
	comp=Z,22nm,1.4s						
L40A	Anamosa	73.45	339	IAmb	IAmb	23 54 48.2	
	comp=Z,14nm,0.8s						
Y22D	IRIS PASSCAL I	73.49	323		pP	23 56 43.0	-2.4
PQI	Presque Isle	73.53	357	P	P	23 54 48.9	+0.9
PQI				IAmb	IAmb	23 54 51.3	
	comp=Z,20nm,1.2s						
TSUM	Tsumeb	73.75	104	P	P	23 54 49.5	-0.6
CBKS	Cedar Bluff	73.83	331	P	P	23 54 49.9	0.0
ANMO	Albuquerque	73.92	324	P	P	23 54 50.8	+0.1
	comp=Z,1.3nm,0.6s,baz=117,slow=9.6,SNR=4.9						
ANMO	Albuquerque	73.92	324	P	P	23 54 50.3	-0.4
D62A	Allapoint, All	74.00	356	P	P	23 54 50.3	-0.3
D62A				IAmb	IAmb	23 55 05.2	
	comp=Z,12nm,1.1s						
BATG	Bathurst New B	74.06	358	P	P	23 54 51.2	+0.2
BATG				IAmb	IAmb	23 55 06.6	
	comp=Z,15nm,1.4s						
I42A	Draeger Farm,	74.40	341	IAmb	IAmb	23 54 53.8	
	comp=Z,8.1nm,0.7s						
H43A	Windswept, Lux	74.61	342	P	P	23 54 52.8	-1.3
H43A				IAmb	IAmb	23 54 54.8	
	comp=Z,11nm,0.8s						
TORD	Torodi Ar. Bea	74.75	66	P	P	23 54 55.2	-0.3
	comp=Z,11nm,0.5s,baz=278,slow=6.1,SNR=147						
TORD				pP	pP	23 56 54.6	+2.1
	comp=Z,1.6nm,0.6s,baz=247,slow=6.2,SNR=7.0						
E46A	Sault Ste Mari	75.52	345	P	P	23 54 58.5	-0.6
E46A				IAmb	IAmb	23 55 00.5	
	comp=Z,15nm,1.3s						
SDCO	Great Sand Dun	75.62	327	P	P	23 55 00.6	+0.3
E43A	Lone Tree Farm	76.18	343	P	P	23 55 03.4	+0.6
E43A				IAmb	IAmb	23 55 04.0	
	comp=Z,11nm,0.6s						
DRLN	Deer Lake	76.18	4	P	P	23 55 03.4	+0.7
DRLN				IAmb	IAmb	23 55 04.3	
	comp=Z,15nm,0.8s						
BOSA	Boshof	76.47	115	P	P	23 55 04.6	-0.5
	comp=Z,3.3nm,0.5s,baz=250,slow=3.9,SNR=18						
BOSA	Boshof	76.47	115	P	P	23 55 04.9	-0.2
BOSA				IAmb	IAmb	23 55 05.8	
	comp=Z,17nm,1.5s						
ECSD	EROS Data Cent	76.78	336	P	P	23 55 06.2	+0.1
ISCO	Idaho Springs	77.29	328	P	P	23 55 08.9	-0.5
MAW	Mawson	77.52	162	P	P	23 55 09.5	-0.4
	comp=Z,2.7nm,0.6s,baz=149,slow=3.7,SNR=4.0						
MAW	Mawson	77.52	162	P	P	23 55 09.7	-0.2
PV15	Paradox Valley	77.56	325	P	P	23 55 11.2	+0.4
F36A	Milaca	77.59	339	P	P	23 55 10.5	+0.1
LBTB	Lobatse	78.21	112	P	P	23 55 14.2	-0.4
EYMN	Ely	78.84	341	P	P	23 55 16.7	-0.5
SRU	San Rafael Swe	79.19	325	P	P	23 55 19.0	-0.5
MTPU	Mount Pierson	79.28	323	P	P	23 55 20.0	-0.2
RDMU	Red Mountain	79.80	326	P	P	23 55 22.9	+0.2
B35A	Bob, Littlefor	79.87	340	IAmb	IAmb	23 55 23.6	
	comp=Z,11nm,0.6s						
AGMN	Agassiz Nation	80.49	339	P	P	23 55 26.1	+0.4
AGMN				IAmb	IAmb	23 55 26.9	
	comp=Z,7.6nm,0.7s						
PDAR	Pinedale Array	81.46	328	P	P	23 55 31.6	+0.4
	comp=Z,1.3nm,0.6s,baz=126,slow=9.3,SNR=12						
HWUT	Hardware Ranch	81.58	326	P	P	23 55 31.5	-0.3
SCHQ	Schefferville	81.64	358	P	P	23 55 31.8	+0.2
	comp=Z,2.8nm,0.7s,baz=168,slow=4.8,SNR=4.2						
SPUT	South Promonto	81.81	325	P	P	23 55 32.4	-0.6
ULM	Lac du Bonnet	82.20	340	P	P	23 55 34.3	-0.2
	comp=Z,3.4nm,0.8s,baz=110,slow=4.6,SNR=5.3						
IMW	Indian Meadow	82.98	328	P	P	23 55 38.8	-0.1
TAM	Tamanrasset	83.04	60	P	P	23 55 39.0	-0.6
ESDC	Sonseca Array	86.47	42	P	P	23 55 55.2	-0.5
	comp=Z,1.1nm,0.8s,baz=237,slow=4.9,SNR=7.8						
YKA	Yellowknife Ar	98.15	339	P	P	23 56 48.7	+0.1
	comp=Z,0.4nm,0.6s,baz=127,slow=4.8,SNR=7.4						
MURB	Monte Urbino	98.69	46		pP	23 58 52.6	-2.5
ASAR	Alice Springs	126.84	200	PKP	PKPdf	00 02 12.1	-1.0
	comp=Z,1.4nm,0.6s,baz=161,slow=2.4,SNR=10						
WRA	Warramunga Arr	130.18	202	PKP	PKPdf	00 02 18.8	-0.7
	comp=Z,0.6nm,0.4s,baz=168,slow=1.5,SNR=4.2						
WRA				SKPbc	SKPbc	00 04 48.2	-2.4
	comp=Z,2.8nm,0.6s,baz=159,slow=3.9,SNR=12						
FITZ	Fitzroy Crossi	134.23	192	PKP	PKPdf	00 02 26.1	-1.0
	comp=Z,1.1nm,0.6s,baz=225,slow=2.9,SNR=1.9						
FITZ				SKPbc	SKPbc	00 05 02.7	-1.8
	comp=Z,4.3nm,0.8s,baz=207,slow=3.0,SNR=8.4						
AAK	Ala-Archa	142.56	54		PKPdf	00 02 39.9	-1.8
KURK	Kurchatov	142.80	40		PKPdf	00 02 39.9	-1.7
KSH	Kashi	144.16	59	PKP	PKPdf	00 02 43.9	-0.7
KSH				pPKP	pPKPdf	00 04 49.7	-6.0
KSH				PP	PP	00 06 10.8	+3.9
KSH				PKS	PKSdf	00 06 19.9	-0.3
KSH	Kashi	144.16	59	SS	SS	00 24 09.2	+1.1
KSH				AMB	AMB		
	comp=Z,160nm,4.2s						
KSH				LR	LR		
	comp=N,37nm,9.9s						
KSH				LR	LR		
	comp=E,79nm,11.7s						
KSH				LR	LR		
	comp=Z,58nm,10.5s						
ZALV	Zalesovo Beam	144.43	32	PKP	PKPab	00 02 44.9	-0.1
	comp=Z,3.4nm,0.3s,baz=146,slow=10,SNR=5.0						
ZALV				SKPbc	SKPbc	00 05 30.2	-0.6
	comp=Z,0.8nm,0.5s,baz=297,slow=2.5,SNR=3.9						
LEM	Lembang	145.19	164	PKPbc	PKPab	00 02 49.1	-0.1
	comp=Z,27nm,0.6s,baz=286,slow=9.0,SNR=4.7						
MAKZ	Makanchi	146.44	45		PKPbc	00 02 50.8	+0.3
MK31	Makanchi Array	146.64	45		PKPbc	00 02 51.4	+0.3
MKAR	Makanchi Array	146.64	45	PKPbc	PKPdf	00 02 49.2	+0.7
	comp=Z,4.6nm,0.6s,baz=307,slow=1.8,SNR=51						
MKAR				pPKPbc	pPKPbc	00 05 01.1	+1.2
	comp=Z,2.2nm,0.6s,baz=289,slow=4.1,SNR=12						
SIJI	Sorong	148.81	209	PKPbc	PKPbc	00 02 57.0	-0.7
	comp=Z,4.7nm,0.5s,baz=156,slow=19,SNR=1.6						
LZH	Lanzhou	165.93	47	⇓PKP	PKPdf	00 03 12.4	-1.0
LZH				PKP	PKPab	00 04 18.3	+0.9
LZH				pPKP	pPKPdf	00 05 27.2	+1.7
LZH				sPKP		00 06 35.6	

*IDC **02** 00:02:20.7±1.2, 37°.95N×27°.03E, h0km, mb3.5/4, mb1 3.5/9, mb1mx3.3/44, mbtmp3.4/9, ML3.3/5, MS2.3/3, Ms1 2.3/3, ms1mx2.1/43, Error ellipse: s-maj=23.9km s-min=17.9km az=133.0*
*ISK **02** 00:02:21.6, 38°.02N×27°.03E, h20km, ML3.7/35*
*DDA **02** 00:02:22.2, 38°.02N×27°.04E, h8km±2km, MW3.7*
*THE **02** 00:02:22.3, 38°.03N×27°.02E, h8km±1km, ML3.6/12, Error ellipse: s-maj=1.4km s-min=0.6km az=250.0*
*ATH **02** 00:02:22.1, 38°.08N×26°.96E, h22km±1km, ML3.5/20, Error ellipse: s-maj=2.1km s-min=1.1km az=254.0*
ISC 02 00:02:22.4±0.8**, 38°.02N**±0°.01×**27°.05E**±0°.02**, h16**km±5km**, n207, σ1^{s}16**/249**, mb3.5**/4**, 21C-3D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	zmir	0.14	284	i P	Pg	00 02 25.9	-0.3
DGB				IAML		00 02 28.0	
	comp=N,21μm,0.3s						
DGB				IAML		00 02 28.0	
	comp=E,22μm,0.2s						
DGB				i S	Sg	00 02 28.1	-0.6
GCAM	G?zelcaml?	0.35	155	PG	Pg	00 02 29.7	+0.1
GCAM				SG	Sg	00 02 34.8	+0.3
GCAM	G?zelcaml?	0.35	155	i P	Pg	00 02 29.8	+0.1
GCAM				i S	Sg	00 02 34.6	+0.1
GCAM				IAML		00 02 35.0	
	comp=N,6μm,0.2s						
GCAM				IAML		00 02 36.0	
	comp=E,3μm,0.1s						
SMG	Samos	0.35	209	P	Pg	00 02 29.6	-0.1
SMG				S	Sb	00 02 34.9	-0.8
	comp=E,25μm,0.3s						
SMG	Samos	0.35	209	P	Pg	00 02 29.6	-0.1
SMG				S	Sb	00 02 35.5	-0.2
SMG				AML	AML	00 02 35.8	
	comp=N,55469μm,0.3s						
SMG				AML	AML	00 02 35.9	
	comp=E,43897μm,0.3s						
BLCB	Balcova	0.36	359	PG	Pg	00 02 29.9	0.0
BLCB				SG	Sg	00 02 34.7	-0.4
URLA	Izmir	0.49	314	PG	Pg	00 02 32.1	-0.2
URLA				SG	Sb	00 02 39.2	-0.6
URLA	Izmir	0.49	314	i P	Pg	00 02 32.1	-0.2
URLA				i S	Sb	00 02 39.0	-0.8
URLA				IAML		00 02 40.0	
	comp=E,4μm,0.3s						
URLA				IAML		00 02 40.0	
	comp=N,2μm,0.4s						
AYDB	Zeytinkoy-Aydi	0.67	96	PG	Pg	00 02 35.7	+0.1
CHOS	Chios island	0.87	295	P	Pg	00 02 38.5	-0.8
CHOS				S	Sb	00 02 50.3	-0.2
	comp=N,11μm,0.4s						
CHOS	Chios island	0.87	295	P	Pg	00 02 38.2	-1.0
CHOS				S	Sg	00 02 49.5	-1.2
CHOS				AML	AML	00 02 52.9	
	comp=E,29315μm,0.4s						
CHOS				AML	AML	00 02 53.3	
	comp=N,13907μm,0.4s						
CHOS	Chios island	0.87	295	PG	Pb	00 02 38.8	-0.3
YKAV	Yalikavak-Bodr	0.91	168	PG	Pg	00 02 39.5	-0.6
ZEDA	zmir-Bergama	0.95	1	i P	Pg	00 02 40.4	-0.3
ZEDA				i S	Sg	00 02 53.0	-0.2
ZEDA				IAML		00 02 55.0	
	comp=E,850nm,0.2s						
ZEDA				IAML		00 02 56.0	
	comp=N,1μm,0.4s						
GOMA	Golmarmara-Man	0.97	45	PG	Pg	00 02 40.7	-0.5
BODT	Bodrum	0.98	168	PG	Pg	00 02 40.6	-0.8
BDRM	Kayabasi	1.00	162	i P	Pg	00 02 41.3	-0.5
BDRM				i P	Pg	00 02 41.3	-0.5
BDRM				i S	Sg	00 02 54.8	-0.2
BDRM				IAML		00 02 58.0	
	comp=N,1μm,0.7s						
BDRM				IAML		00 02 58.0	
	comp=E,475nm,0.4s						
BDRM				IAML		00 02 58.0	
	comp=E,701nm,0.4s						
AKHS	Akhisar	1.05	35	i P	Pg	00 02 41.8	-0.9
AKHS				IAML		00 02 59.0	
	comp=E,552nm,0.3s						
AKS	Akhisar	1.05	35	PG	Pg	00 02 41.7	-1.0
DKL	Dikili	1.06	354	PG	Pg	00 02 41.9	-1.0
KOSK	Kos Island	1.27	183	P	Pn	00 02 44.9	-0.6
KOSK				S	Sg	00 03 02.7	-0.6
	comp=E,3μm,0.5s						
KOSK	Kos Island	1.27	183	PN	Pn	00 02 44.8	-0.7
MANT	Manisa	1.28	68	i P	Pg	00 02 47.0	-0.1
MANT				i S	Sb	00 03 01.2	-1.4
MANT				IAML		00 03 06.0	
	comp=E,412nm,0.3s						
AYVA	Ayvalik	1.32	348	i P	Pb	00 02 47.0	+0.2
AYVA				i S	Sg	00 03 05.0	0.0
AYVA				IAML		00 03 08.0	
	comp=N,1μm,0.5s						
AYVA				IAML		00 03 08.0	
	comp=E,900nm,0.8s						
YER	Yerkesik	1.32	132	PN	Pn	00 02 46.1	-0.2
DATC	Datca-Mugla	1.35	159	PN	Pn	00 02 45.9	-0.7
DAT	Datca	1.35	162	PN	Pn	00 02 46.0	-0.8
DAT	Datca	1.35	162	i P	Pn	00 02 46.2	-0.6
DAT				i S	Sb	00 03 04.4	-0.3
KULA	Kula-Manisa	1.36	68	PN	Pn	00 02 46.4	-0.5
PRK	Paraskevi	1.37	334	P	Pn	00 02 46.6	-0.3
PRK				S	Sb	00 03 05.3	+0.4
	comp=E,6μm,0.7s						
PRK	Paraskevi	1.37	334	P	Pn	00 02 47.0	+0.1
PRK				AML	AML	00 03 10.9	
	comp=E,12813μm,0.9s						
PRK				AML	AML	00 03 12.9	
	comp=N,11312μm,0.5s						
NISR	Nisiros	1.41	177	P	Pn	00 02 47.0	-0.4
NISR	Nisiros	1.41	177	P	Pg	00 02 49.0	-0.4
STEP	BALIKESIR_Sava	1.45	21	i P	Pn	00 02 47.4	-0.7
STEP				i S	Sg	00 03 08.9	-0.4
STEP				IAML		00 03 10.0	
	comp=E,673nm,0.8s						
STEP				IAML		00 03 11.0	
	comp=N,594nm,0.6s						
AMGA	Amorgos Island	1.50	218	P	Pn	00 02 47.2	-1.5
AMGA				S	Sn	00 03 07.8	-0.2
	comp=N,3μm,0.6s						
AMGA	Amorgos Island	1.50	218	P	Pb	00 02 50.2	+0.3
AMGA				AML	AML	00 03 13.6	
	comp=N,5821μm,0.6s						
AMGA				AML	AML	00 03 13.8	
	comp=E,6763μm,0.6s						
SIGR	SIGRI	1.51	322	P	Pn	00 02 47.3	-1.6
SIGR				S	Sn	00 03 07.6	-0.7
	comp=E,2μm,0.6s						
SIGR	SIGRI	1.51	322	P	Pn	00 02 48.7	-0.2
SIGR				AML	AML	00 03 13.1	
	comp=E,3034μm,0.5s						
SIGR				AML	AML	00 03 16.0	
	comp=N,3671μm,0.7s						
SIGR	SIGRI	1.51	322	PN	Pn	00 02 48.4	-0.5
APE	Apeiranthos	1.54	232	P	Pn	00 02 48.0	-1.2
APE				S	Sn	00 03 09.2	+0.3
	comp=N,1μm,0.3s						
APE	Apeiranthos	1.54	232	P	Pn	00 02 49.9	+0.7
APE				AML	AML	00 03 15.4	
	comp=E,1488μm,0.4s						
APE				AML	AML	00 03 15.6	
	comp=N,2620μm,0.3s						
APE	Apeiranthos	1.54	232	PN	Pn	00 02 48.0	-1.2
TAVA	DENIZLI_Tavas	1.58	110	i P	Pn	00 02 49.9	+0.1
DEMI	Demirci	1.66	51	i P	Pb	00 02 53.3	+0.7
DEMI				IAML		00 03 16.0	
	comp=E,426nm,0.6s						
DEMI				IAML		00 03 19.0	
	comp=N,279nm,0.4s						
TURN	Turunc	1.68	132	PN	Pn	00 02 48.9	-2.3
TURN	Turunc	1.68	132	i P	Pn	00 02 49.0	-2.3
TURN				IAML		00 03 17.0	
	comp=N,338nm,0.7s						
TURN				IAML		00 03 18.0	
	comp=E,283nm,0.6s						
USAK	Uak-Merkez	1.69	65	i P	Pn	00 02 52.1	+0.6
USAK				IAML		00 03 19.0	
	comp=E,195nm,1.1s						
BALB	Balikesir	1.74	22	PN	Pn	00 02 51.5	-0.5
DALY	Dalyan (Mula)	1.75	133	PN	Pn	00 02 51.7	-0.4
DALY	Dalyan (Mula)	1.75	133	i P	Pn	00 02 52.1	-0.1
DALY				IAML		00 03 30.0	
	comp=N,258nm,0.8s						
BAYC	CANAKKALE_Bayr	1.76	347	i P	Pn	00 02 51.8	-0.5
BAYC				IAML		00 03 21.0	
	comp=N,234nm,0.3s						
BAYC				IAML		00 03 21.0	
	comp=E,564nm,0.5s						
BALY	Balya	1.77	14	i P	Pn	00 02 51.9	-0.7
BALY				i S	Sb	00 03 18.2	+1.5
BALY				IAML		00 03 20.0	
	comp=N,309nm,0.3s						
BALY				IAML		00 03 22.0	
	comp=E,415nm,0.5s						
SIMA	Simav-Kutahya	1.85	54	PN	Pn	00 02 53.3	-0.3
EZN	Ezine	1.89	343	PN	Pn	00 02 53.6	-0.5
IOSP	Ios island	1.91	228	P	Pn	00 02 54.7	+0.4
IOSP				S	Sn	00 03 19.1	+1.1
	comp=E,2μm,0.4s						
IOSP	Ios island	1.91	228	P	Pn	00 02 54.8	+0.4
IOSP				AML	AML	00 03 27.4	
	comp=E,4475μm,0.4s						
IOSP				AML	AML	00 03 28.2	
	comp=N,3717μm,0.3s						
DURS	Dursunbey	1.93	35	i P	Pn	00 02 54.1	-0.7
DURS				IAML		00 03 26.0	
	comp=E,235nm,0.6s						
DURS				IAML		00 03 28.0	
	comp=N,261nm,0.5s						
ANAF	Anafi Island	1.95	212	P	Pb	00 02 56.8	-0.7
ANAF				AML	AML	00 03 33.4	
	comp=E,8520μm,0.5s						
ANAF				AML	AML	00 03 33.6	
	comp=N,8564μm,0.3s						
KHAL	Karahalli	1.96	79	i P	Pn	00 02 55.8	+0.7
KHAL				i S	Sb	00 03 23.2	+1.3
BOZC	Bozcaada	1.98	337	PN	Pn	00 02 54.9	-0.4
BOZC	Bozcaada	1.98	337	i P	Pn	00 02 53.6	-1.7
BOZC				i P	Pb	00 02 57.9	-0.2
BOZC				i S	Sg	00 03 24.6	-1.5
BOZC				IAML		00 03 27.0	
	comp=N,602nm,0.5s						
BOZC				IAML		00 03 27.0	
	comp=N,424nm,0.4s						
BOZC				IAML		00 03 27.0	
	comp=E,865nm,0.4s						
BOZC				IAML		00 03 29.0	
	comp=E,666nm,0.5s						
ARG	Arkhangelos	2.00	154	P	Pn	00 02 54.7	-0.8
ARG				S	Sn	00 03 21.1	+0.9
	comp=E,550nm,0.7s						
ARG	Arkhangelos	2.00	154	P	Pb	00 02 58.9	+0.6
ARG				AML	AML	00 03 31.7	
	comp=E,932μm,0.6s						
ARG				AML	AML	00 03 33.9	
	comp=N,1311μm,0.9s						
ARG	Arkhangelos	2.00	154	PN	Pn	00 02 54.8	-0.8
CMBO	Columbo, Santo	2.03	221	P	Pn	00 02 56.4	+0.5
CMBO				S	Sg	00 03 29.5	+1.9
CMBO	Columbo, Santo	2.03	221	P	Pn	00 02 56.9	+1.0
CMBO				AML	AML	00 03 33.1	
	comp=N,8666μm,0.5s						
CMBO				AML	AML	00 03 36.6	
	comp=E,5046μm,0.6s						
THT2	Imerovigli	2.05	220	PN	Pn	00 02 55.7	-0.5
SAP2K	Karterados	2.05	219	P	Pn	00 02 57.2	+0.9
KARY	Karystos	2.06	271	P	Pn	00 02 55.9	-0.6
KARY				S	Sn	00 03 21.3	-0.6
	comp=E,252nm,0.5s						
KARY	Karystos	2.06	271	P	Pn	00 02 56.4	0.0
SANT	Santorini	2.08	218	P	Pb	00 02 58.5	-1.3
SANT				AML	AML	00 03 35.4	
	comp=N,930μm,0.4s						
SANT				AML	AML	00 03 36.9	
	comp=E,3174μm,0.5s						
SANT	Santorini	2.08	218	⇑P	Pg	00 03 01.4	-0.9
SANT				⇑S	Sg	00 03 30.1	+0.8
SANT	Santorini	2.08	218	PN	Pn	00 02 56.2	-0.5
GONE	Gonen-Balikesi	2.08	14	PN	Pn	00 02 56.6	-0.1
SAP3	Santorini-Thir	2.09	221	P	Pn	00 02 57.7	+0.9
GEDZ	Gediz	2.12	60	PN	Pn	00 02 57.2	0.0
SAP1	Santorini-Akro	2.12	219	P	Pn	00 02 58.5	+1.2
FETY	Fethiye	2.13	130	PN	Pn	00 02 57.5	+0.1
FETY	Fethiye	2.13	130	i P	Pn	00 02 58.4	+1.0
FETY				i S	Sg	00 03 32.8	+1.9
GOLH	Golhisar	2.14	111	i P	Pn	00 02 58.7	+1.0
SERI	Serifos	2.21	248	P	Pn	00 03 00.3	+1.8
SERI				AML	AML	00 03 33.7	
	comp=E,466μm,0.4s						
SERI				AML	AML	00 03 35.4	
	comp=N,511μm,0.5s						
LPK	Lapseki	2.36	355	PN	Pn	00 03 00.6	+0.1
TVSB	Tavsanli	2.37	52	PN	Pn	00 03 00.7	0.0
BASM	Basmaki-Afyon	2.37	91	PN	Pn	00 03 00.9	+0.1
LIA	Limnos Island	2.37	323	P	Pn	00 03 00.6	-0.1
LIA				S	Sn	00 03 30.7	+1.2
	comp=N,365nm,0.8s						
LIA	Limnos Island	2.37	323	P	Pn	00 03 00.9	+0.2
LIA				AML	AML	00 03 46.0	
	comp=N,766μm,0.7s						
LIA				AML	AML	00 03 46.3	
	comp=E,677μm,0.9s						
BRDR	BURDUR-Merkez	2.41	97	i P	Pn	00 03 01.4	+0.1
EDC	Edincik	2.41	15	PN	Pn	00 03 01.1	-0.1
GELI	Tayfur-Gelibol	2.42	350	PN	Pn	00 03 01.1	-0.2
KZIL	AFYON_Kizioren	2.45	83	i P	Pn	00 03 02.8	+1.0
MHLA	Plaka, Milos I	2.45	240	P	Pn	00 03 02.4	+0.6
KARP	Karpathos	2.47	178	P	Pb	00 03 05.1	-1.4
KARP	Karpathos	2.47	178	PN	Pn	00 03 01.8	-0.3
PTL	Penteli	2.52	272	P	Pn	00 03 02.6	-0.1
PTL				AML	AML	00 03 54.5	
	comp=N,355μm,0.9s						
PTL				AML	AML	00 03 55.0	
	comp=E,378μm,0.6s						
VLY	Voula,Athens	2.58	267	P	Pn	00 03 03.0	-0.5
VLY	Voula,Athens	2.58	267	P	Pn	00 03 03.1	-0.5
ATHU	Athens Univers	2.58	270	P	Pn	00 03 04.5	+1.0
ELL	Elmali	2.61	118	PN	Pn	00 03 04.1	+0.1
MRMT	Marmara Adasi	2.62	9	PN	Pn	00 03 03.9	-0.2
AFYO	Afyonkarahisar	2.67	72	i P	Pg	00 03 13.7	+0.2
AFYO				i S	Sg	00 03 47.1	-0.9
AFYO				IAML		00 03 54.0	
	comp=E,287nm,1.1s						
RKY	Sarkoy-Tekirda	2.67	2	PN	Pn	00 03 04.7	-0.1
SART	Tekirdag	2.67	2	i P	Pn	00 03 04.3	-0.5
SART				IAML		00 03 49.0	
	comp=E,131nm,0.5s						
ULDT	Uludag	2.67	37	i P	Pg	00 03 12.4	-1.3
ULDT				i S	Sg	00 03 46.3	-2.0
ULDT				IAML		00 03 52.0	
	comp=E,196nm,0.6s						
ULDT				IAML		00 03 52.0	
	comp=N,144nm,0.5s						
AKAS	Kas	2.71	130	i P	Pn	00 03 07.1	+1.6
AKAS				i S	Sg	00 03 48.0	-1.6
SMTH	Samothraki Isl	2.72	335	P	Pn	00 03 05.3	-0.2
SMTH	Samothraki Isl	2.72	335	P	Pn	00 03 05.3	-0.2
SMTH				AML	AML	00 03 53.9	
	comp=N,309μm,0.5s						
SMTH				AML	AML	00 03 54.5	
	comp=E,228μm,0.5s						
KSL	Kastellorizon	2.75	132	P	Pb	00 03 09.4	-1.9
IGD	Bursa	2.80	36	i P	Pn	00 03 09.2	+2.7
IGD				i S	Sb	00 03 48.1	+2.1
MRKA	Markates	2.81	285	P	Pn	00 03 07.2	+0.5
MRKA				AML	AML	00 04 05.0	
	comp=N,204μm,0.7s						
MRKA				AML	AML	00 04 05.5	
	comp=E,186μm,0.7s						
KORT	Korkueli	2.81	110	i P	Pn	00 03 08.9	+2.0
KESN	Edirne-Kesan	2.82	354	i P	Pn	00 03 06.8	-0.4
KESN				i S	Sg	00 03 51.3	-1.7
KESN				IAML		00 03 52.0	
	comp=E,194nm,0.4s						
KESN				IAML		00 03 53.0	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=N,251nm,0.5s						
ZKR	**Zakros**	**2.98**	**193**	AML	AML	00 04 04.7	
	comp=N,337μm,0.7s						
ZKR				AML	AML	00 04 08.0	
	comp=E,749μm,0.8s						
ALN	**Alexandroupoli**	**2.98**	**345**	P	**Pn**	**00 03 08.9**	**-0.1**
ALN				S	**Sn**	**00 03 44.2**	**-0.2**
	comp=E,135nm,0.5s						
ALN	**Alexandroupoli**	**2.98**	**345**	P	**Pn**	**00 03 08.8**	**-0.2**
ALN				AML	AML	00 04 04.9	
	comp=N,373μm,0.7s						
ALN				AML	AML	00 04 05.3	
	comp=E,312μm,0.6s						
NPS	**Neapolis**	**2.98**	**203**	P	**Pn**	**00 03 11.8**	**+2.7**
NPS				AML	AML	00 04 04.2	
	comp=N,910μm,0.8s						
NPS				AML	AML	00 04 04.5	
	comp=E,781μm,0.8s						
VIL2	**Platees**	**2.99**	**275**	P	**Pn**	**00 03 09.0**	**-0.2**
AUKIR	**Kırka- Seyitga**	**3.00**	**64**	*i* P	**Pb**	**00 03 15.0**	**-0.6**
SKIA	**Skiathos**	**3.03**	**293**	P	**Pn**	**00 03 10.1**	**+0.3**
SKIA				AML	AML	00 04 07.1	
	comp=N,331μm,0.8s						
SKIA				AML	AML	00 04 07.3	
	comp=E,267μm,0.6s						
DID	**Didima**	**3.06**	**262**	P	**Pn**	**00 03 11.7**	**+1.4**
AKUM	**Antalya-Kumluc**	**3.13**	**122**	*i* P	**Pn**	**00 03 13.1**	**+2.0**
BOLV	**Bolvadin**	**3.14**	**76**	*i* P	**Pb**	**00 03 19.6**	**+1.6**
THAS	**Thassos island**	**3.15**	**326**	P	**Pn**	**00 03 11.6**	**+0.1**
IDI	**Anoyia**	**3.23**	**213**	Pn	**Pn**	**00 03 12.0**	**-0.6**
	comp=E,1.4nm,0.3s,baz=10,slow=15,SNR=6.2						
IDI				Sn	**Sn**	**00 03 49.0**	**-1.8**
	comp=E,5.4nm,0.3s,baz=302,slow=14,SNR=2.8						
IDI				Lg	Lg	00 04 05.8	
	comp=E,5.5nm,0.3s,baz=44,slow=12,SNR=3.3						
IDI				LR	LR	00 04 20.1	
	comp=E,27nm,18.4s,baz=332,slow=38						
IDI	**Anoyia**	**3.23**	**213**	⇑P	**Pb**	**00 03 18.6**	**-0.9**
IDI				⇑S	**Sg**	**00 04 03.3**	**-3.0**
LKR	**Lokris**	**3.25**	**282**	P	**Pn**	**00 03 12.3**	**-0.4**
BUY	**Buyukada**	**3.25**	**29**	*i* P	**Pb**	**00 03 18.7**	**-1.0**
NEO	**Neokhori**	**3.26**	**294**	P	**Pn**	**00 03 12.3**	**-0.7**
OUR	**Ouranopolis**	**3.32**	**315**	P	**Pn**	**00 03 14.1**	**+0.4**
RDO	**Rodhopi**	**3.33**	**340**	P	**Pn**	**00 03 14.2**	**+0.3**
RDO	**Rodhopi**	**3.33**	**340**	P	**Pn**	**00 03 14.1**	**+0.2**
GEYV	**SAKARYA_Geyve**	**3.52**	**45**	*i* P	**Pg**	**00 03 27.8**	**-2.1**
VLI	**Veliai**	**3.52**	**250**	P	**Pn**	**00 03 18.4**	**+1.8**
KAVA	**Kavala**	**3.56**	**327**	P	**Pn**	**00 03 17.1**	**0.0**
DOGA	**KONYA_Doganhis**	**3.65**	**87**	*i* P	**Pn**	**00 03 19.8**	**+1.4**
KIRK	**Kırklareli**	**3.76**	**1**	*i* P	**Pn**	**00 03 18.0**	**-1.7**
AUSIV	**SIVRIHISAR**	**3.79**	**67**	*i* P	**Pg**	**00 03 33.9**	**-1.1**
KEPZ	**Antalya-Kepez**	**3.79**	**106**	*i* P	**Pn**	**00 03 21.6**	**+1.3**
AGG	**Agios Georgios**	**3.83**	**287**	P	**Pn**	**00 03 21.8**	**+1.0**
KDZ	**Kurdzhali**	**3.84**	**341**	*i* P	**Pn**	**00 03 21.0**	**+0.1**
KLV	**Kalavryta, Ach**	**3.87**	**272**	P	**Pn**	**00 03 21.9**	**+0.6**
KALE	**Kalithea**	**3.89**	**277**	P	**Pn**	**00 03 22.3**	**+0.7**
KAND	**Kocaeli-Kandir**	**3.92**	**37**	*i* P	**Pn**	**00 03 19.2**	**-2.7**
MAKR	**Makrakomi, Fth**	**3.98**	**286**	P	**Pn**	**00 03 23.2**	**+0.3**
BTAS	**Taskesti**	**3.98**	**49**	*i* P	**Pb**	**00 03 30.7**	**-1.6**
BTAS				*i* S	**Sg**	**00 04 28.4**	**-1.9**
LAKA	**Lakka**	**4.00**	**275**	P	**Pn**	**00 03 24.3**	**+1.1**
KDHN	**Kadinhani**	**4.02**	**81**	*i* P	**Pn**	**00 03 24.9**	**+1.4**
ANX	**Ano Chora**	**4.08**	**280**	P	**Pn**	**00 03 25.3**	**+1.1**
RZN	**Rozhen**	**4.08**	**335**	*i* P	**Pn**	**00 03 24.7**	**+0.3**
SAHE	**Sakarya_HENDEK**	**4.08**	**45**	*i* P	**Pg**	**00 03 38.2**	**-2.5**
NVR	**Nevrokopi**	**4.14**	**325**	P	**Pn**	**00 03 25.4**	**+0.5**
ITM	**Ithomi**	**4.15**	**260**	P	**Pn**	**00 03 26.2**	**+1.0**
DIM	**Dimitrovgrad**	**4.19**	**344**	*i* P	**Pn**	**00 03 25.8**	**+0.1**
KONT	**Konya--Tatoy**	**4.20**	**89**	*i* P	**Pn**	**00 03 27.1**	**+1.2**
EVR	**Evrytania**	**4.21**	**284**	P	**Pn**	**00 03 27.3**	**+1.3**
DRO	**Drossia**	**4.22**	**271**	P	**Pn**	**00 03 27.7**	**+1.6**
PYL	**PYLOS**	**4.37**	**257**	P	**Pn**	**00 03 29.4**	**+1.3**
MMB	**Musomiste**	**4.39**	**325**	*i* P	**Pn**	**00 03 28.0**	**-0.4**
KIBS	**BOLU**	**4.43**	**56**	*i* P	**Pg**	**00 03 44.0**	**-3.3**
KIBS				*i* S	**Sb**	**00 04 39.3**	**+6.1**
JMB	**Yambol**	**4.46**	**356**	*i* P	**Pn**	**00 03 29.2**	**-0.1**
PLD	**Plovdiv**	**4.46**	**337**	*i* P	**Pn**	**00 03 30.1**	**+0.7**
KNT	**Kendrikon**	**4.49**	**316**	P	**Pn**	**00 03 31.0**	**+1.2**
YIGI	**Dzce**	**4.50**	**48**	*i* P	**Pg**	**00 03 46.1**	**-2.4**
KKUL	**Konya-Kulu**	**4.74**	**74**	*i* P	**Pg**	**00 03 52.5**	**-0.7**
VAY	**Valandovo**	**4.78**	**315**	*i* Pn	**Pg**	**00 03 53.4**	**-0.4**
VAY	**Valandovo**	**4.78**	**315**	*i* Pn	**Pg**	**00 03 53.4**	**-0.4**
BCAM	**Yenicaga**	**4.78**	**53**	*i* P	**Pg**	**00 03 53.0**	**-1.0**
CMDR	**Camlidere-ANKA**	**4.88**	**58**	*i* P	**Pg**	**00 03 54.5**	**-1.4**
ELND	**Elena**	**4.99**	**350**	⇑P	**Pn**	**00 03 36.7**	**0.0**
PRD	**Provadia**	**5.18**	**3**	*i* P	**Pn**	**00 03 39.5**	**+0.2**
NEF	**NEVSHA**	**5.24**	**2**	*i* P	**Pn**	**00 03 40.2**	**+0.1**
SZH	**Strazhica**	**5.31**	**351**	*i* P	**Pn**	**00 03 40.8**	**-0.3**
BRTR	**Keskin Array B**	**5.42**	**70**	Pn	**Pn**	**00 03 44.1**	**+1.5**
	comp=E,0.2nm,0.3s,baz=246,slow=14,SNR=7.6						
BRTR				Pg	**Pg**	**00 04 02.5**	**-3.6**
	comp=E,0.4nm,0.3s,baz=247,slow=16,SNR=14						
BRTR				Sn	**Sn**	**00 04 42.0**	**-2.8**
	baz=68,slow=28,SNR=1.5						
BRTR				Lg	Lg	00 05 18.7	
	baz=270,slow=15,SNR=1.0						
VTS	**Vitosha**	**5.44**	**329**	⇑P	**Pn**	**00 03 43.8**	**+0.8**
VTS	**Vitosha**	**5.44**	**329**	*i* P	**Pn**	**00 03 44.1**	**+1.1**
RAZG	**Razgrad**	**5.56**	**356**	⇓P	**Pn**	**00 03 44.8**	**+0.4**
PLVB	**Pleven**	**5.67**	**342**	⇑P	**Pn**	**00 03 46.3**	**+0.3**
ICOR	**Ion Corvin**	**6.12**	**5**	P	**Pn**	**00 03 53.2**	**+1.0**
COPA	**Copaceanca**	**6.26**	**348**	P	**Pn**	**00 03 54.7**	**+0.6**
TIRR	**Tirgusor**	**6.51**	**9**	⇑P	**Pn**	**00 03 58.5**	**+0.9**
TLBR	**Topalu**	**6.56**	**6**	P	**Pn**	**00 03 59.4**	**+1.2**
SULR		**6.68**	**355**	P	**Pn**	**00 04 00.9**	**+1.0**
PGOR	**Pogoanele**	**6.88**	**360**	⇑P	**Pn**	**00 04 04.4**	**+1.8**
MLR	**Muntele Rosu**	**7.51**	**354**	Pn	**Pn**	**00 04 12.6**	**+1.2**
	comp=E,0.5nm,0.3s,baz=172,slow=7.1,SNR=6.5						
MLR				Lg	Lg	00 06 24.1	
	comp=E,0.2nm,0.3s,baz=14,slow=6.2,SNR=4.0						
MLR	**Muntele Rosu**	**7.51**	**354**	⇓P	**Pn**	**00 04 12.4**	**+1.0**
BISRR	**Bisoca**	**7.53**	**358**	⇑P	**Pn**	**00 04 12.7**	**+1.1**
ARR	**Arges**	**7.56**	**347**	⇑P	**Pn**	**00 04 12.2**	**+0.2**
VOIR		**7.56**	**349**	⇑P	**Pn**	**00 04 12.7**	**+0.6**
PLOR	**Plostina**	**7.83**	**358**	⇑P	**Pn**	**00 04 16.5**	**+0.7**
VRI	**Vrincioaia**	**7.84**	**358**	⇑P	**Pn**	**00 04 16.9**	**+1.0**
MDVR	**Moldovita**	**7.86**	**331**	⇑P	**Pn**	**00 04 16.9**	**+0.8**
VARL	**Varlezi**	**7.90**	**4**	⇑P	**Pn**	**00 04 17.7**	**+1.2**
GZR	**Gura Zlata**	**8.03**	**338**	⇑P	**Pn**	**00 04 18.6**	**+0.1**
DOPR	**Dopca**	**8.04**	**352**	⇓P	**Pn**	**00 04 19.4**	**+0.9**
MMAI	**Mount Meron Ar**	**8.44**	**124**	Pn	**Pn**	**00 04 22.9**	**-1.3**
	comp=E,0.9nm,0.3s,baz=315,slow=12,SNR=8.6						
MMAI				Sn	**Sn**	**00 05 55.8**	**-3.4**
	comp=E,0.4nm,0.3s,baz=289,slow=33,SNR=2.1						
TESR	**Tescani**	**8.49**	**358**	⇑P	**Pn**	**00 04 25.6**	**+0.9**
BZS	**Buzias**	**8.61**	**334**	⇑P	**Pn**	**00 04 26.5**	**+0.2**
BIZ	**Bicaz**	**8.94**	**356**	⇑P	**Pn**	**00 04 31.8**	**+0.9**
BURAR	**Bucovina Array**	**9.68**	**353**	⇑P	**Pn**	**00 04 42.6**	**+1.4**
ASF	**Jabal al Asfar**	**9.95**	**123**	Pn	**Pn**	**00 04 42.8**	**-2.1**
	comp=E,0.1nm,0.3s,baz=297,slow=11,SNR=1.4						
KBZ	**Khabaz**	**13.27**	**60**	LR	LR	00 11 48.5	
	comp=E,25nm,21.9s,baz=144,slow=43						
VRAC	**Vranov**	**13.57**	**330**	LR	LR	00 11 00.7	
	comp=E,12nm,18.7s,baz=154,slow=38						
GERES	**GERESS Array B**	**14.51**	**322**	Pn	**P**	**00 05 53.8**	**+0.1**
	comp=E,0.1nm,0.3s,baz=138,slow=11,SNR=2.2						
KHC	**Kasperske Hory**	**14.76**	**323**	*e*P	P	00 06 02.0	+5.5
AKTO	**Aktyubinsk**	**25.23**	**51**	P	**P**	**00 07 48.5**	**+1.0**
	comp=E,0.6nm,0.6s,baz=248,slow=10,SNR=4.4						
TORD	**Torodi Ar. Bea**	**33.50**	**229**	P	**P**	**00 09 01.7**	**+0.5**
	comp=E,0.9nm,0.6s,baz=37,slow=8.8,SNR=6.6						
MKAR	**Makanchi Array**	**40.97**	**59**	P	**P**	**00 10 07.2**	**+2.8**
	comp=E,0.2nm,0.6s,baz=298,slow=7.8,SNR=2.4						
ZALV	**Zalesovo Beam**	**41.95**	**48**	P	**P**	**00 10 13.6**	**+1.4**
	comp=E,0.3nm,0.3s,baz=284,slow=8.2,SNR=2.2						

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*IDC **02** 00:21:18.6±0.5, 1°.42N×126°.18E, h0km, mb4.3/24, mb1 4.4/27, mb1mx4.3/42, mbtmp4.3/27, ML4.0/3, MS3.6/14, Ms1 3.6/14, ms1mx3.4/39, Error ellipse: s-maj=19.6km s-min=10.6km az=75.0*

*DJA **02** 00:21:22.7±0.2, 1°N±3°×12°6E±°, h10km, M4.6/26, mB5.1/8, mb4.7/26, MLv4.8/14, Mw(mB)4.4/8, Mwp4.8/1*

*NEIC **02** 00:21:23.0±2.2, 1°.46N±0°.07×126°.46E±0°.06, h24km±5km, mb4.7/62, Error ellipse: s-maj=11.5km s-min=7.8km az=209.0*

*GCMT **02** 00:21:26.0±0.4, 1°.58N±0°.02×126°.42E±0°.03, h26km±1km, MW4.8/67, Moment Tensor Solution. s15,c18; s67,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.60±.19; $M_{\theta\theta}$0.68±.10; $M_{\phi\phi}$-1.29±.13; $M_{r\theta}$-1.41±.30; $M_{\theta\phi}$-1.49±.09; $M_{\phi r}$0.23±.25; Best double couple: $M_0$2.33300×10^{16}*

NP1:ϕ_s350.00000°, δ56.00000°, λ20.00000°. NP2: ϕ_s248.00000°, δ74.00000°, λ144.00000°. Principal axes: T 2.4810, Plg36.0000°, Azm204.0000°; N -0.2970, Plg51.0000°, Azm47.0000°; P -2.1850, Plg11.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 02 00:21:25.5±0.3**, 1°.44N**±0°.04×**126°.41E**±0°.05**, h47km, n150, σ1s.52**/147**, mb4.6**/59**, MS3.6**/17**, 1C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.16**	**125**	P	**Pn**	**00 21 43.9**	**-1.5**
TNTI				S	**Sn**	**00 21 59.5**	**-0.6**
TNTI	**Ternate**	**1.16**	**125**		**Pn**	**00 21 44.0**	**-1.4**
LBMI	**Labuha**	**2.33**	**152**	P	**Pn**	**00 22 00.8**	**-0.6**
LBMI				S	**Sn**	**00 22 29.5**	**+0.7**
KMSI	**Cibinong**	**2.57**	**251**	P	**Pn**	**00 22 05.0**	**+0.3**
LUWI	**Luwuk**	**4.39**	**236**	P	**Pn**	**00 22 31.3**	**+1.6**
LUWI	**Luwuk**	**4.39**	**236**		**Pn**	**00 22 31.5**	**+1.8**
MRSI	**Marisa**	**4.57**	**258**	P	**Pn**	**00 22 32.2**	**+0.1**
DDMP	**Don Marcelino,**	**4.69**	**351**	*e*P	**Pn**	**00 22 33.1**	**-0.7**
DDMP				*e*S	**Sn**	**00 23 29.3**	**+2.3**
NLAI	**Namlea**	**4.69**	**172**	P	**Pn**	**00 22 33.5**	**-0.3**
SIJI	**Sorong**	**5.37**	**115**	Pn	**Pn**	**00 22 43.1**	**-0.1**
	2.6nm,0.3s,baz=295,slow=9.2,SNR=11						
SKMP	**Bagumbayan, Su**	**5.38**	**340**	*e*P	**Pn**	**00 22 42.2**	**-1.1**
SKMP				*e*S	**Sn**	**00 23 41.0**	**-3.0**
KCP	**Kidapawan**	**5.69**	**347**	⇓*e*P	**Pn**	**00 22 48.0**	**+0.4**
KCP				*e*S	**Sn**	**00 23 46.8**	**-4.9**
BUKP	**Musuan**	**6.54**	**348**	*e*P	**Pn**	**00 23 02.0**	**+2.8**
BUKP				*e*S	**Sn**	**00 24 17.9**	**+5.3**
MPSI	**Mapaga**	**6.60**	**261**	P	**Pn**	**00 23 01.1**	**+1.1**
	0.4nm866nm64nm,1.0s						
FAKI	**Fak Fak**	**7.27**	**127**	P	**Pn**	**00 23 09.9**	**+0.7**
	0.3nm722nm90nm,0.8s						
FAKI	**Fak Fak**	**7.27**	**127**		**Pn**	**00 23 08.9**	**-0.3**
BBSI	**Bau Bau**	**7.87**	**209**	P	**Pn**	**00 23 19.9**	**+2.4**
	0.1nm29nm,0.8s						
TTSI	**Tana Toraja**	**7.95**	**236**	P	**Pn**	**00 23 20.4**	**+1.9**
	0.3nm2μm58nm,0.6s						
SPSI	**Sidrap Palu**	**8.53**	**231**	P	**Pn**	**00 23 28.9**	**+2.4**
	705nm68nm,0.7s						
BNSI	**Bone**	**8.56**	**227**	P	**Pn**	**00 23 27.0**	**+0.1**
	1μm66nm,0.9s						
BKSI	**Bulukumba**	**9.19**	**223**	P	**Pn**	**00 23 33.7**	**-1.9**
	40nm,1.1s						
KAPI	**Kappang**	**9.23**	**226**	Pn	**Pn**	**00 23 34.6**	**-1.6**
	2.8nm,0.3s,baz=185,slow=2.2,SNR=5.5						
KAPI	**Kappang**	**9.23**	**226**		**Pn**	**00 23 35.9**	**-0.3**
BKB	**Balikpapan**	**9.88**	**254**	Pn	**Pn**	**00 23 44.3**	**-0.7**
KKM	**Kota Kinabalu**	**11.15**	**295**		**Pn**	**00 24 02.1**	**-0.5**
EDFI	**Ende, Flores**	**11.16**	**205**	P	**Pn**	**00 24 03.3**	**+0.7**
	13nm,1.1s						
SOEI	**Soe**	**11.32**	**191**	P	Pn	00 24 13.0	+8.2
SOEI	**Soe**	**11.32**	**191**	Pn	**Pn**	**00 24 05.0**	**+0.2**
BATI	**Baumata**	**11.88**	**193**	Pn	Pn	00 24 18.4	+6.0
	4.2nm,0.3s,baz=242,slow=12,SNR=4.2						
BATI	**Baumata**	**11.88**	**193**	P	Pn	00 24 21.2	+8.8
PLAI	**Plampang**	**13.34**	**220**	P	**P**	**00 24 43.7**	**+3.0**
SBUM	**Sibu**	**14.22**	**274**		**Pn**	**00 24 44.4**	**+0.2**
JAY	**Jayapura**	**14.82**	**105**	Pn	**Pn**	**00 24 53.3**	**+1.0**
	0.4nm,0.3s,baz=325,slow=12,SNR=1.7						
JAY				LR	LR	00 30 03.9	
	comp=Z,449nm,20.5s,baz=324,slow=35						
JAY	**Jayapura**	**14.82**	**105**	P	P	00 25 03.4	+6.1
MTN	**Manton Dam**	**14.94**	**162**	Pn	**Pn**	**00 24 53.1**	**-0.7**
DNP	**Denpasar**	**15.02**	**228**	P	P	00 25 06.9	+7.5
JAGI	**Jajag, Banyuwa**	**15.69**	**231**	P	**P**	**00 25 06.6**	**-0.3**
	42nm,0.9s						
JAGI	**Jajag, Banyuwa**	**15.69**	**231**	P	**Pn**	**00 25 02.4**	**-1.2**
JAGI				IAmb	IAmb	00 25 12.5	
	comp=Z,43nm,0.9s						
KSM	**Kuching**	**16.10**	**270**		**Pn**	**00 25 07.6**	**-1.2**
KNRA	**Kununurra**	**17.16**	**172**	P	**Pn**	**00 25 22.0**	**0.0**
PWJI	**Pagerwojo**	**17.33**	**237**	P	**P**	**00 25 25.6**	**+0.5**
	comp=Z,32nm,1.0s						
SMRI	**Semarang**	**18.03**	**242**		**P**	**00 25 32.0**	**-0.8**
SMRI				IAmb	IAmb	00 25 44.6	
	comp=Z,27nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.43**	**182**	P	**P**	**00 25 47.1**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=26,slow=11,SNR=12						
FITZ	**Fitzroy Crossi**	**19.43**	**182**	P	**P**	**00 25 47.7**	**-0.4**
CISI	**Cisompet, Garu**	**20.59**	**244**	P	Pn	00 26 02.5	-0.9
DLV	**T Lat**	**20.61**	**301**	P	**P**	**00 26 01.9**	**+0.7**
DLV				IAmb	IAmb	00 26 08.9	
	comp=Z,37nm,1.1s						
TWG	**Pinlang**	**21.88**	**347**	P	**P**	**00 26 14.3**	**-0.2**
GUMO	**Guam**	**21.90**	**56**	P	**P**	**00 26 13.9**	**-0.9**
GUMO				IAmb	IAmb	00 26 24.3	
	comp=Z,52nm,1.0s						
PMBI	**Palembang**	**22.06**	**259**	P	P	00 26 26.9	+10
TPUB	**Ta-pu**	**22.45**	**346**	P	**P**	**00 26 19.6**	**-1.1**
TPUB				IAmb	IAmb	00 26 27.4	
	comp=Z,27nm,0.8s						
WB0	**Warramunga Arr**	**22.48**	**160**	P	**P**	**00 26 20.5**	**-0.6**
MYKOM	**Kota Tinggi**	**22.55**	**271**	P	**P**	**00 26 22.9**	**+1.0**
MYKOM				IAmb	IAmb	00 26 25.9	
	comp=Z,30nm,0.9s						
COEN	**Coen**	**22.58**	**133**	P	**P**	**00 26 21.7**	**-0.5**
WRAB	**Tennant Creek**	**22.62**	**160**	P	**P**	**00 26 22.9**	**+0.4**
WRA	**Warramunga Arr**	**22.62**	**160**	P	**P**	**00 26 21.3**	**-1.3**
	comp=Z,51nm,0.7s,baz=330,slow=12,SNR=68						
WRA				S	**S**	**00 30 28.3**	**+0.9**
	comp=Z,3.2nm,0.9s,baz=346,slow=17,SNR=7.0						
WB2	**Warramunga Arr**	**22.63**	**160**	P	**P**	**00 26 22.2**	**-0.4**
WR0	**Warramunga Arr**	**22.71**	**160**	P	**P**	**00 26 22.5**	**-1.0**
WR0				IAmb	IAmb	00 26 29.1	
	comp=Z,37nm,1.0s						
SSLB	**Suanglung**	**22.84**	**347**	P	**P**	**00 26 23.8**	**-1.1**
SSLB				IAmb	IAmb	00 26 34.0	
	comp=Z,13nm,0.7s						
PMG	**Port Moresby**	**23.31**	**118**	P	**P**	**00 26 28.3**	**-1.3**
MBWA	**Marble Bar**	**23.39**	**196**	P	**P**	**00 26 31.3**	**+1.1**
MBWA				IAmb	IAmb	00 26 39.8	
	comp=Z,27nm,0.7s						
PSA00	**Pilbara Seismi**	**23.75**	**195**	P	**P**	**00 26 34.0**	**+0.4**
PSA00				IAmb	IAmb	00 26 37.3	
	comp=Z,18nm,0.8s						
QIZ	**Qiongzhong**	**23.86**	**318**	P	**P**	**00 26 36.6**	**+1.9**
QIZ				S	**S**	**00 30 53.2**	**+5.5**
QIZ				LR	LR		
	comp=N,160nm,20.1s						
QIZ				LR	LR		
	comp=E,160nm,19.1s						
QIZ				LR	LR		
	comp=Z,270nm,22.1s						
JOW	**Kunigami**	**25.32**	**4**	P	**P**	**00 26 48.3**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=198,slow=13,SNR=3.2						
JOW	**Kunigami**	**25.32**	**4**	P	**P**	**00 26 49.0**	**+1.0**
JOW				IAmb	IAmb	00 26 53.0	
	comp=Z,14nm,0.7s						
IPM	**Ipoh**	**25.53**	**277**	P	**P**	**00 26 49.6**	**-0.4**
AS31	**Alice Springs**	**25.99**	**164**	P	**P**	**00 26 55.5**	**+1.4**
AS31				IAmb	IAmb	00 27 03.8	
	comp=Z,7.1nm,0.6s						
KULM	**Kulim**	**25.99**	**279**	P	**P**	**00 26 52.0**	**-2.2**
ASAR	**Alice Springs**	**25.99**	**164**	P	**P**	**00 26 54.6**	**+0.5**
	comp=Z,14nm,0.9s,baz=335,slow=8.0,SNR=41						
ASAR				S	**S**	**00 31 22.2**	**+0.5**
	comp=Z,1.4nm,0.9s,baz=344,slow=20,SNR=3.3						
MNSI	**Mandailing Nat**	**26.83**	**269**	P	**P**	**00 27 07.7**	**+5.9**
RPSI	**Rantau Prapat**	**27.50**	**273**	P	**P**	**00 27 09.3**	**+1.5**
PSI	**Prapat**	**27.50**	**273**	P	**P**	**00 27 05.7**	**-2.2**
	comp=Z,5.7nm,0.7s,baz=358,slow=3.2,SNR=11						
PSI				LR	LR	00 39 24.2	
	comp=Z,147nm,18.5s,baz=93,slow=40						
GSI	**Gunungsitoli**	**28.83**	**270**	P	**P**	**00 27 21.1**	**+1.5**
	comp=Z,119nm,1.0s						
GSI	**Gunungsitoli**	**28.83**	**270**	P	**P**	**00 27 20.4**	**+0.8**
CTA	**Charters Tower**	**28.92**	**139**	P	**P**	**00 27 20.9**	**+0.5**
	comp=Z,4.3nm,0.8s,baz=310,slow=12,SNR=3.2						
CTAO	**Charters Tower**	**28.92**	**139**	P	**P**	**00 27 21.1**	**+0.7**
CTAO				IAmb	IAmb	00 27 27.5	
	comp=Z,13nm,1.1s						
JCJ	**Chichijima**	**29.67**	**29**	LR	LR	00 37 51.3	
	comp=Z,70nm,20.4s,baz=288,slow=33						
WHN	**Wuhan**	**31.13**	**340**	P	P	00 27 48.5	+8.7
NJ2	**Nanjing**	**31.28**	**348**	*e*P	**P**	**00 27 43.1**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
GYA	**Guiyang**	**31.30**	**324**	*e*P	**P**	**00 27 40.3**	**-1.2**
GYA				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,10.0nm,0.5s						
JNU	**Nakatsue**	**31.80**	**7**	P	**P**	**00 27 44.1**	**-1.6**
	comp=Z,6.6nm,0.9s,baz=184,slow=14,SNR=2.3						
JNU				LR	LR	00 42 57.1	
	comp=Z,45nm,18.9s,baz=190,slow=41						
CMAR	**Chiang Mai Arr**	**31.81**	**304**	P	**P**	**00 27 44.6**	**-1.4**
	comp=Z,1.0nm,0.3s,baz=133,slow=6.6,SNR=4.1						
CMAR				LR	LR	00 40 33.6	
	comp=Z,72nm,21.5s,baz=110,slow=36						
CHTO	**Chiang Mai**	**31.99**	**304**	P	**P**	**00 27 48.2**	**+0.7**
ENH	**Enshi**	**32.87**	**332**	P	**P**	**00 27 55.1**	**0.0**
NWAO	**Narrogin (SRO)**	**35.26**	**193**	P	**P**	**00 28 13.7**	**-2.1**
	comp=Z,5.8nm,0.6s,baz=31,slow=7.4,SNR=2.2						
EIDS	**Eidsvold**	**35.78**	**140**	P	**P**	**00 28 20.4**	**0.0**
EIDS				IAmb	IAmb	00 28 23.0	
	comp=Z,12nm,1.1s						
KSRS	**Korea Array**	**35.87**	**2**	P	**P**	**00 28 21.3**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=183,slow=9.7,SNR=6.6						
STKA	**Stephens Creek**	**36.12**	**158**	P	**P**	**00 28 23.1**	**-0.2**
	comp=Z,7.6nm,0.7s,baz=335,slow=11,SNR=9.3						
STKA	**Stephens Creek**	**36.12**	**158**	P	**P**	**00 28 23.4**	**+0.2**
CD2	**Chengdu**	**36.33**	**326**	*e*P	**P**	**00 28 26.0**	**+1.0**
XAN	**Xi'an**	**36.33**	**335**	P	**P**	**00 28 24.4**	**-0.6**
XAN				S	**S**	**00 34 03.9**	**+1.0**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,89nm,3.5s						
XAN				LR	LR		
	comp=N,100nm,16.3s						
XAN				LR	LR		
	comp=E,89nm,14.4s						
XAN				LR	LR		
	comp=Z,98nm,16.5s						
XAN	**Xi'an**	**36.33**	**335**	P	**P**	**00 28 23.8**	**-1.2**
XAN				IAmb	IAmb	00 28 27.7	
	comp=Z,16nm,1.1s						
MJAR	**Matsushiro Arr**	**36.60**	**16**	P	**P**	**00 28 26.3**	**-1.0**
	comp=Z,1.3nm,0.5s,baz=182,slow=9.3,SNR=7.3						
MJAR				LR	LR	00 42 39.0	
	comp=Z,89nm,21.5s,baz=200,slow=35						
MJB9	**Matsu-Tunnel**	**36.60**	**16**	P	**P**	**00 28 27.5**	**+0.2**
MJB9				IAmb	IAmb	00 28 37.9	
	comp=Z,8.5nm,1.0s						
LZH	**Lanzhou**	**40.33**	**331**	*e*P	**P**	**00 28 58.2**	**-0.5**
LZH				pP	pP	00 29 04.0	-6.9
LZH				sP	pwP	00 29 08.4	-2.5
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
SHL	**Shillong**	**41.01**	**309**	P	**P**	**00 29 05.4**	**+0.9**
SHL				IAmb	IAmb	00 29 07.5	
	comp=Z,10nm,1.0s						
HHC	**Hu-ho-hao-te**	**41.47**	**343**	P	**P**	**00 29 10.1**	**+2.1**
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,48nm,5.5s						
USRK	**Ussuriysk Ar.**	**42.87**	**6**	P	**P**	**00 29 19.4**	**+0.3**
	comp=Z,3.0nm,0.7s,baz=183,slow=8.2,SNR=6.1						
ASAJ	**Asahikawa**	**44.87**	**17**	P	**P**	**00 29 35.5**	**+0.3**
	comp=Z,2.7nm,0.3s,baz=213,slow=11,SNR=5.4						
ASAJ				LR	LR	00 48 02.7	
	comp=Z,80nm,21.6s,baz=102,slow=36						
GTA	**Gaotai**	**44.91**	**331**	*e*P	**P**	**00 29 34.1**	**-1.7**
GTA				pP	pP	00 29 44.7	-3.5
GTA				sP	pwP	00 29 48.2	0.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,60nm,5.0s						
GTA				LR	LR		
	comp=N,160nm,14.9s						
GTA				LR	LR		
	comp=E,560nm,16.2s						
GTA				LR	LR		
	comp=Z,380nm,18.4s						
DZM	**Mont Dzumac**	**45.52**	**123**	P	**P**	**00 29 39.9**	**-0.9**
DZM				IAmb	IAmb	00 29 41.7	
	comp=Z,6.7nm,1.0s						
RAMN	**Ramite**	**45.84**	**307**	*e*P	**P**	**00 29 45.6**	**+2.1**
	comp=Z,7.6nm,0.6s						
JIRN	**Jiri**	**46.48**	**308**	*e*P	**P**	**00 29 49.1**	**+0.3**
	comp=Z,12nm,0.5s						
GUN	**Gumba**	**46.84**	**308**	*e*P	**P**	**00 29 51.8**	**+0.3**
	comp=Z,18nm,0.7s						
HIA	**Hailar**	**47.99**	**354**	P	**P**	**00 30 00.2**	**+0.5**
HIA				IAmb	IAmb	00 30 02.8	
	comp=Z,9.8nm,0.9s						
KOLN	**Koldanda**	**48.59**	**307**	*e*P	**P**	**00 30 04.7**	**-0.3**
	comp=Z,12nm,0.5s						
DANN	**Dangsing**	**48.71**	**307**	*e*P	**P**	**00 30 04.8**	**-1.2**
	comp=Z,23nm,0.6s						
PYUN	**Piuthan**	**49.22**	**307**	*e*P	**P**	**00 30 08.8**	**-1.0**
SONM	**Songino Array**	**49.37**	**342**	P	**P**	**00 30 10.9**	**+0.5**
	comp=Z,4.4nm,1.1s,baz=159,slow=8.5,SNR=12						
SONM				LR	LR	00 52 08.7	
	comp=Z,84nm,19.9s,baz=120,slow=38						
FUNA	**Funafuti**	**53.53**	**102**	P	**P**	**00 30 42.0**	**0.0**
WMQ	**Urumqi**	**54.42**	**326**	*e*P	**P**	**00 30 50.1**	**+2.0**
WMQ				pP	pP	00 30 53.9	-6.8
WMQ				pmax	pmax		
	comp=Z,24nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,46nm,4.9s						
WMQ				LR	LR		
	comp=N,450nm,29.1s						
WMQ				LR	LR		
	comp=E,390nm,29.2s						
WMQ				LR	LR		
	comp=Z,93nm,28.1s						
PETK	**Petropavlovsk-**	**57.66**	**22**	P	**P**	**00 31 11.5**	**+0.5**
	comp=Z,3.9nm,0.9s,baz=176,slow=7.5,SNR=6.3						
PRZ	**Przheval'sk**	**59.24**	**320**	P	**P**	**00 31 22.2**	**-0.2**
MK31	**Makanchi Array**	**59.26**	**326**	P	**P**	**00 31 21.3**	**-1.0**
MK31				IAmb	IAmb	00 31 28.5	
	comp=Z,5.1nm,1.0s						
MKAR	**Makanchi Array**	**59.26**	**326**	P	**P**	**00 31 20.8**	**-1.5**
	comp=Z,2.9nm,0.6s,baz=121,slow=7.5,SNR=29						
MKAR				LR	LR	00 57 34.8	
	comp=Z,120nm,22.0s,baz=112,slow=37						
MAKZ	**Makanchi**	**59.44**	**326**	P	**P**	**00 31 23.1**	**-0.5**
MAKZ				IAmb	IAmb	00 31 31.1	
	comp=Z,6.6nm,0.8s						
KSH	**Kashi**	**59.45**	**316**	P	**P**	**00 31 27.2**	**+3.3**
KSH				pP	pP	00 31 33.1	-3.6
KSH				sP	pwP	00 31 36.2	-0.5
KSH				pmax	pmax		
	comp=Z,41nm,1.5s						
KSH				pmax	pmax		
	comp=Z,140nm,5.4s						
KDJ	**Kajisay**	**59.85**	**319**	P	**P**	**00 31 25.6**	**-1.0**
KDJ				IAmb	IAmb	00 31 31.3	
	comp=Z,5.3nm,0.9s						
OXZ	**Oxford**	**60.45**	**143**	P	**P**	**00 31 30.4**	**0.0**
YAK	**Yakutsk**	**60.50**	**2**	P	**P**	**00 31 29.7**	**-0.7**
BOOM	**Boomskoye usch**	**60.83**	**319**	P	**P**	**00 31 32.8**	**-0.6**
MA2	**Magadan**	**60.99**	**14**	P	**P**	**00 31 36.5**	**+2.7**
ZAA0	**Zalesovo Array**	**62.48**	**334**	IAmb	IAmb	00 31 50.0	
	comp=Z,4.8nm,1.1s						
ZALV	**Zalesovo Beam**	**62.48**	**334**	P	**P**	**00 31 42.6**	**-1.3**
	comp=Z,1.3nm,0.4s,baz=135,slow=6.1,SNR=8.6						
KBL	**Kabul**	**62.67**	**309**	P	**P**	**00 31 45.9**	**0.0**
KBL				IAmb	IAmb	00 31 52.3	
	comp=Z,5.9nm,0.9s						
KURK	**Kurchatov**	**63.50**	**328**	P	**P**	**00 31 49.9**	**-0.9**
CHGR	**Chuyangaron**	**63.97**	**313**	P	**P**	**00 31 54.6**	**+0.4**
CHGR				IAmb	IAmb	00 32 00.3	
	comp=Z,9.8nm,1.0s						
BRVK	**Borovoye**	**69.14**	**328**	P	**P**	**00 32 26.1**	**-0.8**
BRVK				IAmb	IAmb	00 32 37.1	
	comp=Z,9.5nm,1.1s						
TIXI	**Tiksi**	**70.13**	**1**	P	**P**	**00 32 32.3**	**-0.3**
TIXI				IAmb	IAmb	00 32 50.2	
	comp=Z,3.2nm,0.6s						
GEYT	**Alibeck**	**72.08**	**309**	P	**P**	**00 32 43.9**	**-1.3**
	comp=Z,1.4nm,0.7s,baz=101,slow=7.5,SNR=2.7						
NRIK	**Noril'sk**	**72.57**	**347**	P	**P**	**00 32 46.9**	**-0.4**
	comp=Z,5.5nm,0.6s,baz=124,slow=6.0,SNR=20						
NRIK				LR	LR	01 07 42.9	
	comp=Z,37nm,21.5s,baz=66,slow=38						
ARU	**Arti**	**76.70**	**328**	P	**P**	**00 33 10.6**	**-0.9**
ARU				IAmb	IAmb	00 33 17.6	
	comp=Z,7.3nm,0.9s						
RAYN	**Ar Rayn**	**81.09**	**293**	P	**P**	**00 33 35.9**	**-0.5**
RAYN				IAmb	IAmb	00 33 45.9	
	comp=Z,5.4nm,1.1s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VNDA	Vanda	81.21	173	P	P	00 33 35.9	0.0
	comp=Z,2.6nm,0.8s,baz=309,slow=6.1,SNR=16						
VNDA				LR	LR	01 10 16.4	
	comp=Z,28nm,18.3s,baz=341,slow=36						
VNDA	Vanda	81.21	173	P	P	00 33 36.1	+0.3
TTA	Tatalina	83.08	27	P	P	00 33 47.8	+1.7
AKH	Akhalkalaki	83.73	311	P	P	00 33 53.1	+3.1
KBZ	Khabaz	84.32	314	P	P	00 33 50.7	-2.0
	comp=Z,1.0nm,0.6s,baz=225,slow=5.8,SNR=3.9						
KNK	Knik Glacier	86.41	29	P	P	00 34 03.7	+0.9
KNK				IAmb	IAmb	00 34 18.6	
	comp=Z,5.4nm,0.9s						
TOLK	Toolik Lake Re	86.48	21	P	P	00 34 03.5	+0.5
KLMR	Klimovskoe	87.23	331	eP	P	00 34 03.9	-2.8
KLMR				AMP		00 34 15.6	
	comp=Z,18nm,1.5s						
ILAR	Eielson Array	87.30	25	P	P	00 34 06.4	-0.7
	comp=Z,0.2nm,0.6s,baz=257,slow=6.0,SNR=2.2						
SYO	Syowa Base	90.18	201⇑	epP	pP	00 34 28.0	-5.8
BRTR	Keskin Array B	91.23	310	P	P	00 34 25.2	-1.1
	comp=Z,1.2nm,0.7s,baz=182,slow=3.9,SNR=5.7						
ARCES	ARCESS Array B	92.48	340	P	P	00 34 30.8	-0.3
	comp=Z,2.9nm,0.8s,baz=95,slow=6.1,SNR=6.0						
ARCES				LR	LR	01 21 31.8	
	comp=Z,27nm,18.0s,baz=104,slow=39						
AKASG	Malin Array Be	93.46	321	LR	LR	01 21 05.6	
	comp=Z,22nm,19.9s,baz=30,slow=38						
FINES	FINESS Array B	93.69	332	P	P	00 34 35.3	-1.6
	comp=Z,1.6nm,0.8s,baz=80,slow=3.4,SNR=1.7						
FINES				LR	LR	01 20 48.2	
	comp=Z,35nm,19.6s,baz=72,slow=38						
BUR08	Bucovina Ar. S	96.49	318	IAmb	IAmb	00 35 01.1	
	comp=Z,3.2nm,1.0s						
TORD	Torodi Ar. Bea	123.30	287	PKP	PKPdf	00 40 18.3	-0.1
	comp=Z,0.9nm,0.9s,baz=115,slow=2.1,SNR=7.3						
S39A	Bolivar	126.50	39		PKiKP	00 40 26.4	+2.0
GO02	Mina Guanaco	151.81	148		PKiKP	00 41 17.8	+1.1

TRN 02 00:24:29.0, 18°.11N×61°.59W, h16km, MD3.7, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	Willy Bob	0.48	204	eP	Pn	00 24 41.3	0.0
ANWB				eS	Sn	00 24 48.6	-0.7
SKI	Saint Kitts	1.34	235	eP	Pg	00 24 55.4	+0.4
SKI				eS	Sg	00 25 14.4	+2.0
SKOC	St. Kitts, UWI	1.36	234	eP	Pb	00 24 53.9	-0.2
SKOC				eS	Sg	00 25 14.9	+1.9
NVDO	Nevis, Disaste	1.39	225	eP	Pg	00 24 55.7	-0.2
NVDO				eS	Sg	00 25 15.1	+1.1
ABD	La Joyeuse, An	1.63	177	eP	Pb	00 24 58.4	-0.4
CBE	Ff, Capester	2.03	181	eP	Pb	00 25 05.0	-0.6
MAGL	Barre de l'ile	2.17	172	eP	Pb	00 25 06.7	-1.2
TDBA	Terre de Bas,	2.25	181	eP	Pn	00 25 06.4	+0.7
MDPV	Dominica, Penn	2.47	176	eP	Pn	00 25 09.9	+1.1
MDPV				eS	Sb	00 25 41.3	-2.1
DWS	Wesley	2.54	174	eP	Pn	00 25 11.7	+2.1
DWS				eS	Sn	00 25 42.3	+2.0
PCM	Pelee Case Pet	3.29	174	eP	Pn	00 25 22.5	+2.4
BAMF	Morne Balai	3.30	173	eP	Pn	00 25 22.0	+1.8
FDF	Fort de France	3.38	173	eP	Pn	00 25 24.2	+2.9
FDF				eS	Sn	00 26 04.0	+2.9
ZAM	Aeronautique	3.56	171	eP	Pn	00 25 24.7	+1.0
LPMF	Morne Lapointe	3.56	170	eP	Pn	00 25 23.5	-0.3
MPOM	Morne Pois Mar	3.71	169	eP	Pn	00 25 24.6	-1.2
SLBI	Saint Lucia, B	4.10	172	eP	Pn	00 25 33.3	+2.1
SLBI	Saint Lucia, B	4.10	172	eS	Sn	00 26 21.4	+2.5
SLAC	Saint Lucia, A	4.24	171	eP	Pn	00 25 35.2	+2.2
SLAC	Saint Lucia, A	4.24	171	eS	Sn	00 26 23.9	+1.6
SJG	San Juan	4.34	271	eP	Pn	00 25 36.8	+2.4
SJG	San Juan	4.34	271	eS	Sn	00 26 26.4	+1.6
SVB	Belmont	4.82	176	eP	Pn	00 25 44.5	+3.5
SVB	Belmont	4.82	176	eS	Sn	00 26 37.4	+0.7
SVCV	St. Vincent, C	4.83	175	eP	Pn	00 25 43.9	+2.8
AOPR	Arecibo Observ	4.92	274	eP	Pn	00 25 45.1	+2.7
AOPR	Arecibo Observ	4.92	274	eS	Sn	00 26 40.1	+1.0
SDDR	Presa de Saban	9.24	277	eP	Pn	00 26 44.9	+3.0
SDDR	Presa de Saban	9.24	277	eS	Sn	00 28 22.6	-3.0

WEL 02 00:51:02.7±0.8, 33°S±7°×17°9E±2°3, h33km, M4.0/11, mB4.5/3, ML4.3/11, MLv4.0/11, Mw(mB)3.7/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.55	190	P	Pn	00 52 09.6	+0.4
MXZ				S	Sn	00 53 02.7	+1.7
WMGZ	Waiomatatini S	4.79	188	P	Pn	00 52 13.3	+0.8
WMGZ				S	Sn	00 53 08.6	+1.7
HAZ	Te Kaha	4.83	194	P	Pn	00 52 14.8	+1.7
HAZ				S	Sn	00 53 11.2	+3.3
PKGZ	Pakihiroa	4.91	191	P	Pn	00 52 13.9	-0.3
PKGZ				S	Sn	00 53 10.0	+0.1
RUGZ	Raukumara Rang	5.05	195	P	Pn	00 52 17.3	+1.0
RUGZ				S	Sn	00 53 13.3	-0.3
PUZ	Puketiti	5.06	189	P	Pn	00 52 16.7	+0.5
PUZ				S	Sn	00 53 13.6	+0.1
MWZ	Matawai	5.44	195	P	Pn	00 52 20.2	-1.3
MWZ				S	Sn	00 53 22.0	-1.0
CNGZ	Carnagh Statio	5.47	189	P	Pn	00 52 22.6	+0.7
URZ	Urewera	5.47	198	P	Pn	00 52 22.0	+0.1
URZ				S	Sn	00 53 25.9	+2.2
TKGZ	Te Karaka	5.48	192	P	Pn	00 52 19.5	-2.6
RAGZ	Rawiri	5.62	195	P	Pn	00 52 24.1	0.0
RIGZ	Rimuhau	5.76	192	P	Pn	00 52 25.9	0.0
RIGZ				S	Sn	00 53 29.5	-1.3
SNGZ	Shannon Statio	5.91	195	P	Pn	00 52 27.1	-0.9

*NIED **02** 01:04:00, 38°.30N×141°.90E, h44km, Mw3.6 Best double couple: $M_0$3.32000×10[14] NP1:ϕ_s24.00000°, δ70.00000°, λ89.00000°. NP2:ϕ_s205.00000°, δ20.00000°, λ92.00000°.*
*IDC **02** 01:04:18.8±2.5, 38°.23N×142°.13E, h47km±18km, mb3.7/7, mb1 3.8/11, mb1mx3.5/48, mbtmp3.9/11, ML3.2/4, MS2.3/3, Ms1 2.3/3, ms1mx2.1/38, Error ellipse: s-maj=31.0km s-min=13.1km az=114.0*
*JMA **02** 01:04:20.4±0.1, 38°.30N×141°.85E, h47km±1km, M3.8*
JMA Felt I J1.
ISC 02 01:04:19.0±1.8, 38°.27N±0°.05×142°.0E±0°.1, h41km±13km, n27, σ1§31/40, mb3.9/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.42	276	P	Pn	01 04 29.2	+0.5
JIKH				S	Sn	01 04 35.3	-0.2
JIO	Ouri	0.54	291	P	Pn	01 04 30.5	+0.3
JIO				S	Sn	01 04 37.6	-0.6
JKMT	Kesennumamotoy	0.68	323	P	Pn	01 04 32.6	+0.5
JKMT				S	Sn	01 04 41.1	-0.5
OFUJ	Ofunato	0.85	343	P	Pn	01 04 35.1	+0.6
OFUJ				S	Sn	01 04 45.6	-0.2
JMK	Ichinoseki	0.91	319	P	Pn	01 04 35.8	+0.5
JMK				S	Sn	01 04 46.4	-0.9
JMM	Marumori	1.03	247	P	Pn	01 04 36.7	-0.2
JMM				S	Sn	01 04 49.6	-0.5
JOU	Okura	1.05	276	P	Pn	01 04 37.4	+0.2
JOU				S	Sn	01 04 50.0	-0.7
JFK	Kawauchi	1.26	225	P	Pn	01 04 40.5	+0.4
JFK				S	Sn	01 04 55.6	-0.3
JOM	Ohasama	1.32	336	P	Pn	01 04 41.8	+0.8
JYK	Kaneyama	1.44	297	P	Pn	01 04 42.8	+0.3
JFT	Otama	1.51	241	P	Pn	01 04 44.2	+0.7
JFT				S	Sn	01 05 01.7	-0.2
JYS	Shirataka	1.52	269	P	Pn	01 04 44.0	+0.4
JYS				eS	Sn	01 05 01.6	-0.6
JRG	Rokugo	1.55	317	P	Pn	01 04 45.0	+1.0
MJAR	Matsushiro Arr	3.47	241	P	Pn	01 05 11.4	+0.9
	0.4nm,0.3s,baz=58,slow=10,SNR=12						
MJAR				S	Sn	01 05 51.8	+1.5
	0.3nm,0.3s,baz=12,slow=18,SNR=4.0						
MJAR				LR	LR	01 06 54.7	
	comp=Z,46nm,19.8s,baz=100,slow=44						
MAT	Matsushiro	3.47	241	P	Pn	01 05 12.4	+1.9
MAT				S	Sn	01 05 55.8	+5.5
JHJ	Hachijo jima 2	5.44	200	P	Pn	01 05 38.7	+1.1
	6.1nm,0.3s,baz=335,slow=16,SNR=1.2						
JHJ				S	Sn	01 06 35.8	-3.1
	7.0nm,0.3s,baz=46,slow=11,SNR=1.7						
ASAJ	Asahikawa	5.86	4	P	Pn	01 05 43.8	+0.5
	1.5nm,0.3s,baz=204,slow=25,SNR=2.7						
ASAJ				S	Sn	01 06 49.4	+0.3
	0.4nm,0.3s,baz=146,slow=34,SNR=1.6						
ASAJ				LR	LR	01 08 30.8	
	comp=Z,16nm,21.6s,baz=129,slow=43						
USRK	Ussuriysk Ar.	9.58	311	P	Pn	01 06 35.7	+1.4
	baz=128,slow=14,SNR=3.2						
KSRS	Korea Array	11.15	270	LR	LR	01 10 55.3	
	comp=Z,23nm,19.4s,baz=158,slow=35						
ZALV	Zalesovo Beam	41.44	311	P	P	01 12 01.4	+0.2
	0.8nm,0.3s,baz=80,slow=8.3,SNR=3.6						
MKAR	Makanchi Array	43.87	301	P	P	01 12 21.3	+0.1
	0.7nm,0.6s,baz=85,slow=9.8,SNR=7.6						
WRA	Warramunga Arr	58.34	188	P	P	01 14 08.1	-1.9
	1.1nm,0.9s,baz=6.5,slow=7.2,SNR=3.0						
ARCES	ARCESS Array B	63.01	339	P	P	01 14 41.6	+0.5
	3.6nm,1.1s,baz=55,slow=7.8,SNR=5.9						
FINES	FINESS Array B	67.94	332	P	P	01 15 13.2	+0.2
	1.4nm,0.8s,baz=28,slow=6.6,SNR=3.7						
NB2	NORSAR Subarra	73.23	337	P	P	01 15 45.8	+0.4
	comp=Z,0.8nm,0.8s,baz=38,slow=5.9						
NOA	NORSAR Array B	73.23	337	P	P	01 15 44.2	-1.2
	comp=Z,1.4nm,0.9s,baz=40,slow=5.7,SNR=3.8						
AKASG	Malin Array Be	73.60	322	P	P	01 15 47.4	-0.3
	comp=Z,0.3nm,0.3s,baz=44,slow=6.2,SNR=4.1						

*BGR **02** 01:07:21.5±0.0, 22°.83S×176°.43W, h33km*
*BJI **02** 01:08:03.5±0.0, 21°.30S×177°.90W, h353km, mB4.8/18, mb4.8/31*
*NEIC **02** 01:08:09.8±2.1, 21°.26S±0°.09×178°.0W±0°.1, h409km±4km, mb4.6/139, Error ellipse: s-maj=14.6km s-min=12.9km az=93.0*
*IDC **02** 01:08:12.3±1.3, 21°.30S×178°.01W, h430km±12km, mb4.2/28, mb1 4.3/29, mb1mx4.2/36, mbtmp5.0/29, Error ellipse: s-maj=11.3km s-min=9.6km az=125.0*
ISC 02 01:08:08.9±0.5, 21°.34S±0°.05×177°.87W±0°.05, h403km±5km, n443, σ1§19/467, mb4.7/113, 63C-6D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.26	312	Pn	P	01 09 35.1	+1.4
NIUE	Niue	7.79	75	Pn	P	01 10 00.3	-1.7
NIUE				S	S	01 11 31.3	-2.5
RAO	Raoul Island	7.88	180	S	S	01 11 29.0	-6.5
	86nm,0.3s,baz=86,slow=24,SNR=2.0						
GLKZ	Green Lake	7.89	180	P	P	01 10 00.7	-2.4
GLKZ				S	S	01 11 21.6	-14
AFI	Afiamalu	9.39	39		P	01 10 15.5	-4.4
FUNA	Funafuti	13.05	347	P	P	01 10 57.1	-3.1
DZM	Mont Dzumac	14.60	264	eP	P	01 11 19.3	+2.1
	227nm,0.9s						
DZM				eLR	LR	01 13 31.7	
DZM	Mont Dzumac	14.60	264	P	P	01 11 19.5	+2.4
	14nm,0.3s,baz=110,slow=9.0,SNR=136						
DZM				S	S	01 13 53.8	+0.9
	0.3nm,0.3s,baz=205,slow=18,SNR=2.1						
DZM	Mont Dzumac	14.60	264	P	P	01 11 18.0	+0.8
OUZ	Omahuta	15.73	207	P	P	01 11 28.4	-0.7
OUZ				IAmb	IAmb	01 11 34.3	
	comp=Z,19nm,1.0s						
OUZ	Omahuta	15.73	207	P	P	01 11 28.1	-1.0
WCZ	Waipu Caves	16.06	203	P	P	01 11 34.2	+1.6
KUZ	Kuaotunu	16.34	199	P	P	01 11 37.2	+1.7
MXZ	Matakaoa Point	16.51	191	P	P	01 11 37.9	+0.5
MWZ	Matawai	17.40	192	P	P	01 11 48.3	+1.5
MWZ				S	S	01 14 53.7	+6.4
URZ	Urewera	17.41	193	P	P	01 11 44.0	-2.9
	comp=Z,25nm,0.3s,baz=275,slow=3.6,SNR=56						
URZ				S	S	01 14 38.6	-8.8
	comp=Z,1.5nm,0.3s,baz=20,slow=7.5,SNR=2.6						
URZ	Urewera	17.41	193	P	P	01 11 45.5	-1.5
URZ					S	01 14 47.8	+0.3
URZ	Urewera	17.41	193	P	P	01 11 48.9	+1.9
URZ				S	S	01 14 50.3	+2.8
CNGZ	Carnagh Statio	17.42	190	P	P	01 11 48.5	+1.4
TKGZ	Te Karaka	17.44	191	P	P	01 11 47.5	+0.3
TKGZ				S	S	01 14 53.7	+5.7
RAGZ	Rawiri	17.58	192	P	P	01 11 47.8	-1.0
RAGZ				S	S	01 14 55.3	+4.4
RIGZ	Rimuhau	17.71	191	P	P	01 11 50.4	+0.2
SNGZ	Shannon Statio	17.87	192	P	P	01 11 49.4	-2.4
KNZ	Kokohu	18.04	191	P	P	01 11 51.6	-1.9
MTHZ	Maungataniwha	18.04	193	P	P	01 11 53.9	+0.2
WHHZ	Waihua	18.18	192	P	P	01 11 54.1	-0.9
HIZ	Hauiti	18.23	199	P	P	01 11 55.7	0.0
ARHZ	Aropaoanui	18.40	193	P	P	01 11 56.8	-0.7
BKZ	Black Stump Fm	18.42	194	P	P	01 11 56.8	-0.9
BKZ					S	01 15 07.0	+0.8
BFZ	Birch Farm	19.92	193	P	P	01 12 11.2	-1.1
MSWZ	Moikau Station	20.85	195	P	P	01 12 20.1	-0.6
MSWZ					S	01 15 49.7	+3.6
SNZO	South Karori	20.88	196	P	P	01 12 20.2	-0.8
BHW	Baring Head	20.93	195	P	P	01 12 21.4	-0.1
PLWZ	Palliser	20.99	195	P	P	01 12 21.2	-0.9
QRZ	Quartz Range	21.07	201	P	P	01 12 23.4	+0.6
NNZ	Nelson	21.16	199	P	P	01 12 23.6	0.0
NNZ				IAmb	IAmb	01 12 28.7	
	comp=Z,30nm,1.0s						
TUWZ	Tuamarina	21.20	197	P	P	01 12 24.6	+0.8
CMWZ	Cape Campbell	21.42	196	P	P	01 12 26.1	+0.2
BSWZ	Blackbirch Sta	21.48	197	P	P	01 12 26.6	+0.1
THZ	Tophouse	21.80	199	P	P	01 12 29.4	-0.1
THZ				IAmb	IAmb	01 12 36.8	
	comp=Z,22nm,0.5s						
KHZ	Kahutara	22.22	197	P	P	01 12 32.6	-0.6
KHZ				IAmb	IAmb	01 12 39.7	
	comp=Z,30nm,1.0s						
OXZ	Oxford	23.49	199	P	P	01 12 44.6	-0.1
RPZ	Rata Peaks	24.14	200	P	P	01 12 51.6	+1.0
	comp=Z,18nm,0.5s,baz=43,slow=3.6,SNR=12						
RPZ				S	S	01 16 36.2	-2.3
	comp=Z,4.8nm,0.8s,baz=70,slow=22,SNR=1.1						
RPZ	Rata Peaks	24.14	200	P	P	01 12 51.2	+0.6
FOZ	Fox Glacier	24.40	202	P	P	01 12 52.6	-0.2
FOZ				IAmb	IAmb	01 13 07.4	
	comp=Z,36nm,1.0s						
HNR	Honiara	24.41	296	P	P	01 12 50.5	-2.8
	comp=Z,30nm,0.3s,baz=213,slow=11,SNR=1.1						
HNR	Honiara	24.41	296	IAmb	IAmb	01 12 57.5	
	comp=Z,93nm,0.7s						
LBZ	Lake Benmore	25.03	201	P	P	01 13 00.2	+1.8
LBZ				IAmb	IAmb	01 13 02.6	
	comp=Z,14nm,0.9s						
TBI	Tubuai	26.33	100	eLR	LR	01 19 04.5	
	comp=Z,133nm,27.2s						
PPT2	Papeete2	26.92	87	eLR	LR	01 19 15.8	
	comp=Z,148nm,26.2s						
WHZ	Wether Hill Ro	27.11	202	P	P	01 13 17.6	+0.8
EIDS	Eidsvold	28.75	256	P	P	01 13 31.1	-0.6
EIDS				IAmb	IAmb	01 13 33.0	
	comp=Z,18nm,0.6s						
ARMA	Armidale	28.82	245	P	P	01 13 33.0	+0.7
ARMA				IAmb	IAmb	01 13 35.7	
	comp=Z,23nm,0.7s						
CAN	Canberra	32.15	237	P	P	01 14 01.7	+0.5
CAN				IAmb	IAmb	01 14 03.4	
	comp=Z,39nm,0.8s						
CTA	Charters Tower	33.54	266	P	P	01 14 13.7	+0.5
	comp=Z,24nm,0.5s,baz=96,slow=10,SNR=10						
CTA				PcP	PcP	01 16 43.4	+0.3
	comp=Z,2.8nm,0.5s,baz=88,slow=5.2,SNR=3.0						
CTAO	Charters Tower	33.54	266	P	P	01 14 12.6	-0.6
CTAO				IAmb	IAmb	01 14 14.0	
	comp=Z,31nm,0.6s						
TOO	Toolangi	35.51	235	P	P	01 14 30.1	+0.4
PMG	Port Moresby	35.66	284	P	P	01 14 30.1	-1.1
STKA	Stephens Creek	37.54	245	P	P	01 14 47.3	+0.6
	comp=Z,24nm,0.6s,baz=97,slow=10,SNR=59						
STKA				PcP	PcP	01 16 55.2	+0.4
	comp=Z,1.7nm,0.4s,baz=52,slow=18,SNR=2.1						
STKA	Stephens Creek	37.54	245	P	P	01 14 46.5	-0.2
COEN	Coen	37.77	275	P	P	01 14 48.1	-0.6
COEN				IAmb	IAmb	01 14 50.2	
	comp=Z,34nm,0.7s						
TAOE	Nuku Hiva Isla	38.36	77	eLR	LR	01 24 32.0	
	comp=Z,2µm,30.2s						
BBOO	Buckleboo	42.29	244	P	P	01 15 24.5	-0.6
JAY	Jayapura	44.43	289	P	P	01 15 42.3	0.0
	comp=Z,95nm,0.7s,baz=144,slow=3.5,SNR=40						
AS31	Alice Springs	44.45	258	P	P	01 15 41.7	-0.7
ASAR	Alice Springs	44.45	258	P	P	01 15 42.0	-0.3
	comp=Z,20nm,0.7s,baz=91,slow=8.3,SNR=166						
ASAR				PcP	PcP	01 17 17.9	0.0
	comp=Z,4.1nm,0.6s,baz=100,slow=4.0,SNR=6.9						
ASAR				ScP	ScP	01 20 29.7	-1.2
	comp=Z,1.0nm,0.8s,baz=100,slow=4.8,SNR=3.5						
ASAR				S	S	01 21 43.3	-3.5
	comp=Z,0.9nm,0.8s,baz=95,slow=17,SNR=4.4						
WRAB	Tennant Creek	44.60	263	P	P	01 15 42.2	-1.4
WRAB				IAmb	IAmb	01 15 43.3	
	comp=Z,21nm,0.7s						
WRA	Warramunga Arr	44.61	263	P	P	01 15 42.7	-0.9
	comp=Z,19nm,0.6s,baz=93,slow=7.8,SNR=158						
WRA				PcP	PcP	01 17 17.1	-1.4
	comp=Z,2.2nm,0.8s,baz=98,slow=6.5,SNR=1.8						
WRA				S	S	01 21 45.2	-3.8
	comp=Z,0.8nm,0.7s,baz=149,slow=28,SNR=5.6						
SMPI	Sarmi	46.43	289	P	P	01 15 58.5	+0.8
	comp=Z,19nm,1.1s						
FORT	Forrest	49.08	247	P	P	01 16 17.3	-0.3
MTN	Manton Dam	49.30	271	P	P	01 16 18.4	-1.0
MTN				IAmb	IAmb	01 16 19.3	
	comp=Z,34nm,0.6s						
KNRA	Kununurra	50.73	267	P	P	01 16 29.7	-0.3
FAKI	Fak Fak	51.81	284	P	P	01 16 33.0	-4.9
FITZ	Fitzroy Crossi	53.04	263	P	P	01 16 46.3	-0.6
FITZ				IAmb	IAmb	01 16 48.1	
	comp=Z,23nm,0.8s						
SIJI	Sorong	53.58	285	P	P	01 16 50.7	0.0
	comp=Z,121nm,0.7s,baz=84,slow=6.6,SNR=49						
MSAI	Masohi	54.66	281	P	P	01 17 04.0	+5.6
NLAI	Namlea	56.38	281	P	P	01 17 10.9	+0.4
	comp=Z,1µmcomp=Z,42nm,0.6s						
SOEI	Soe	56.65	272	P	P	01 17 12.5	-0.1
	comp=Z,2µmcomp=Z,129nm,1.1s						
SOEI	Soe	56.65	272	P	P	01 17 12.6	+0.1
BATI	Baumata	57.07	272	P	P	01 17 16.7	+1.3
	comp=Z,47nm,0.5s,baz=151,slow=1.6,SNR=9.1						
BATI	Baumata	57.07	272	P	P	01 17 16.2	+0.9
	comp=Z,38nm,0.7s						
LBMI	Labuha	57.07	284	P	P	01 17 13.9	-1.4
	comp=Z,1µmcomp=Z,37nm,0.6s						
VNDA	Vanda	57.09	185	P	P	01 17 16.9	+2.5
	comp=Z,3.4nm,0.9s,baz=357,slow=7.8,SNR=17						
VNDA				ScP	ScP	01 21 23.6	-0.5
	comp=Z,1.4nm,0.9s,baz=332,slow=4.7,SNR=5.1						
VNDA	Vanda	57.09	185	P	P	01 17 16.4	+1.9
TNTI	Ternate	57.79	285	P	P	01 17 18.6	-1.7
TNTI				IAmb	IAmb	01 17 34.9	
	comp=Z,27nm,1.0s						
MBWA	Marble Bar	57.80	258	P	P	01 17 20.1	-0.1
NWAO	Narrogin (SRO)	58.11	244	P	P	01 17 21.7	-0.5
NWAO				IAmb	IAmb	01 17 23.1	
	comp=Z,28nm,0.9s						
MMRI	Maumere	58.91	273	P	P	01 17 26.7	-1.2
MMRI	Maumere	58.91	273	P	P	01 17 26.8	-1.2
EDFI	Ende, Flores	59.38	272	P	P	01 17 31.1	-0.2
	comp=Z,321nmcomp=Z,29nm,1.1s						
MORW	Morawa	59.63	248	IAmb	IAmb	01 17 33.3	
	comp=Z,39nm,0.8s						
LUWI	Luwuk	61.21	281	P	P	01 17 44.6	+1.3
	comp=Z,65nm,1.3s						
LUWI	Luwuk	61.21	281	P	P	01 17 42.9	-0.4
WBSI	Waikabubak, Su	61.23	271	P	P	01 17 42.6	-1.0
	comp=Z,48nm,0.9s						
BKSI	Bulukumba	62.03	275	P	P	01 17 50.2	+1.5
	comp=Z,24nm,0.7s						
BNSI	Bone	62.38	276	P	P	01 17 52.0	+1.0
	comp=Z,41nm,1.1s						
KAPI	Kappang	62.48	276	P	P	01 17 51.6	-0.1
	comp=Z,6.4nm,0.6s,baz=219,slow=3.6,SNR=3.9						
KAPI	Kappang	62.48	276	P	P	01 17 51.4	-0.3
KAPI				IAmb	IAmb	01 17 52.6	
	comp=Z,12nm,0.9s						
SPSI	Sidrap Palu	62.85	277	P	P	01 17 53.7	-0.4
	comp=Z,21nm,0.8s						
PLAI	Plampang	63.01	271	P	P	01 17 55.4	+0.3
	comp=Z,90nm,1.5s						
MPSI	Mapaga	64.39	281	P	P	01 18 04.1	0.0
	comp=Z,43nm,0.9s						
SRBI	Singaraja	65.64	271	P	P	01 18 12.2	+0.2
	comp=Z,87nm,1.0s						
JAGI	Jajag, Banyuwa	66.50	270	P	P	01 18 16.5	-0.9
	comp=Z,81nm,0.9s						
JAGI	Jajag, Banyuwa	66.50	270	P	P	01 18 16.2	-1.2
JHJ	Hachijo jima 2	67.57	322	P	P	01 18 23.3	-0.3
	comp=Z,47nm,0.4s,baz=69,slow=21,SNR=7.8						
QSPA	South Pole Qui	68.73	180	P	P	01 18 32.4	+1.9
QSPA				IAmb	IAmb	01 18 38.0	
	comp=Z,15nm,0.8s						
PWJI	Pagerwojo	68.84	269	P	P	01 18 31.8	-0.1
	comp=Z,106nm,0.7s						
PCJI	Pacitan	69.37	269	P	P	01 18 35.4	+0.3
	comp=Z,392nm,0.6s						
WOJI	Wonogiri, Jawa	69.72	269	P	P	01 18 37.5	+0.3
UGM	Wanagama	70.07	269	P	P	01 18 39.6	+0.2
	comp=Z,191nm,1.0s						
UGM	Wanagama	70.07	269	P	P	01 18 38.1	-1.3
JOW	Kunigami	70.80	310	P	P	01 18 43.6	+0.2
	comp=Z,1.4nm,0.9s,baz=161,slow=14,SNR=4.2						
JOW	Kunigami	70.80	310	IAmb	IAmb	01 18 46.2	
	comp=Z,11nm,1.0s						
MJAR	Matsushiro Arr	70.95	324	P	P	01 18 44.2	+0.1
	comp=Z,3.7nm,0.5s,baz=137,slow=6.2,SNR=11						
MAT	Matsushiro	70.96	324	P	P	01 18 43.9	-0.2
SBUM	Sibu	72.27	280	P	P	01 18 52.7	+0.4
SBUM				IAmb	IAmb	01 18 54.2	
	comp=Z,6.9nm,0.9s						
SBUM	Sibu	72.27	280	P	P	01 18 53.0	+0.7
CISI	Cisompet, Garu	72.72	269	P	P	01 18 56.1	+1.1
	comp=Z,2µmcomp=Z,69nm,0.7s						
JNU	Nakatsue	72.97	317	P	P	01 18 56.5	+0.6
	comp=Z,23nm,1.0s,baz=145,slow=2.8,SNR=6.1						
JNU	Nakatsue	72.97	317	P	P	01 18 55.5	-0.5
LEM	Lembang	73.15	269	P	P	01 18 58.4	+0.8
	comp=Z,89nm,0.7s,baz=88,slow=4.3,SNR=6.5						
CNJI	Cibinong	73.44	269	P	P	01 18 58.8	-0.3
	comp=Z,4µmcomp=Z,103nm,1.0s						
KSM	Kuching	73.65	278	P	P	01 19 00.3	0.0
KSM	Kuching	73.65	278	P	P	01 19 01.0	+0.7
DBJI	Dramaga	74.05	269	P	P	01 19 04.4	+1.7
JKA	Kamikawa-asahi	74.52	332	P	P	01 19 06.5	+1.9
ASAJ	Asahikawa	74.52	332	P	P	01 19 06.5	+1.9
	comp=Z,20nm,0.5s,baz=227,slow=9.2,SNR=6.8						
SSLB	Suanglung	74.54	304	IAmb	IAmb	01 19 05.9	
	comp=Z,14nm,0.7s						
YSS	Yuzh-Sakhalins	76.69	333	P	P	01 19 17.2	+0.5
YSS					P	01 19 18.2	+1.5
PEA0B	Petropavlovsk-	77.11	345	P	P	01 19 19.3	+0.4
PETK	Petropavlovsk-	77.11	345	P	P	01 19 19.2	+0.4
	comp=Z,18nm,0.7s,baz=146,slow=8.4,SNR=29						
KSRS	Korea Array	77.59	319	P	P	01 19 22.3	+0.5
	comp=Z,3.0nm,0.7s,baz=139,slow=7.0,SNR=7.5						
SAO	San Andreas Ge	78.55	43	P	P	01 19 28.7	+1.6
KSI	Kapahiang	78.94	270	P	P	01 19 29.3	-0.5
	comp=Z,107nm,0.7s						
KMRM	Mail Ridge	79.32	39	IAmb	IAmb	01 19 34.2	
	comp=Z,13nm,0.9s						
DLV	T Lat	79.48	287	P	P	01 19 33.2	+0.4
USA0B	Ussuriysk Arra	79.72	326	IAmb	IAmb	01 19 35.6	
	comp=Z,25nm,1.1s						
USRK	Ussuriysk Ar.	79.72	326	P	P	01 19 34.8	+1.6
	comp=Z,7.7nm,0.8s,baz=131,slow=3.5,SNR=21						
MYKOM	Kota Tinggi	79.75	276	P	P	01 19 34.0	0.0
CMB	Columbia Colle	79.99	43	P	P	01 19 36.1	+1.2
ORV	Oroville	80.23	41	P	P	01 19 37.6	+1.7
NJ2	Nanjing	80.51	310	eP	P	01 19 39.4	+1.8
NJ2				pmax	pmax		
	comp=Z,25nm,0.7s						
MAW	Mawson	80.82	200	P	P	01 19 39.5	+0.9
	comp=Z,3.7nm,0.5s,baz=159,slow=5.2,SNR=20						
MAW	Mawson	80.82	200	P	P	01 19 40.0	+1.4
YBH	Yreka Blue Hor	80.86	38	P	P	01 19 40.7	+1.3
WAKR	Walker	80.87	43	P	P	01 19 40.9	+1.2
PNTR	Pine Nut	81.12	42	P	P	01 19 42.8	+1.8
PNTR				IAmb	IAmb	01 19 43.5	
	comp=Z,7.6nm,1.0s						
MDJ	Mudanjiang	81.27	325	P	P	01 19 42.4	+1.1
MDJ				IAmb	IAmb	01 19 43.7	
	comp=Z,18nm,1.0s						
HUMO	Hull Mountain	81.28	38	P	P	01 19 43.2	+1.7
YERR	Yerington	81.28	42	P	P	01 19 42.8	+1.1
NVAR	Mina Array Bea	81.55	43	P	P	01 19 44.8	+1.6
	comp=Z,2.1nm,0.7s,baz=222,slow=8.8,SNR=16						
KDAK	Kodiak Island	81.60	13	P	P	01 19 44.2	+1.5
	comp=Z,2.8nm,0.7s,baz=233,slow=5.1,SNR=4.1						

KDAK Kodiak Island 81.60 13 IAmb IAmb 01 19 45.5
comp=Z,4.5nm,0.8s
NV11 Mina Array Sit 81.64 43 P P 01 19 44.6 +1.0
KVN Kaiserville 82.04 43 P P 01 19 47.2 +1.6
MOD Modoc Plateau 82.38 39 P P 01 19 48.9 +1.6
K05A Summer Lake 82.54 39 P P 01 19 49.1 +0.9
K05A IAmb IAmb 01 19 50.9
comp=Z,9.4nm,1.0s
H04A Detroit Lake 83.03 36 P P 01 19 51.8 +1.5
CN2 Changchun 83.03 322 *e*P P 01 19 51.3 +0.9
CN2 pmax pmax
comp=Z,20nm,1.3s
WHN Wuhan 83.04 306 P P 01 19 52.2 +1.5
PINE Pine Mountain 83.17 38 P P 01 19 53.1 +1.8
PINE IAmb IAmb 01 19 54.1
comp=Z,9.0nm,0.9s
MNSI Mandailing Nat 83.35 273 P P 01 19 51.8 -0.9
comp=Z,3μmcomp=Z,47nm,0.8s
IPM Ipoh 83.36 277 P P 01 19 54.0 +1.2
BRLK Bradley Lake 83.77 13 P P 01 19 53.9 +0.2
BRLK IAmb IAmb 01 19 55.5
comp=Z,10nm,0.8s
KULM Kulim 84.01 278 P P 01 19 57.0 +1.0
I07A Izee 84.17 38 P P 01 19 57.5 +1.2
U15A North Rim 84.43 48 P P 01 19 59.8 +1.9
U15A IAmb IAmb 01 20 00.7
comp=Z,6.0nm,0.8s
MA2 Magadan 84.62 345 P P 01 19 58.5 +0.5
MA2 IAmb IAmb 01 19 58.8
comp=Z,14nm,0.8s
RPSI Rantau Prapat 84.65 275 P P 01 19 59.2 +0.1
RPSI Rantau Prapat 84.65 275 IAmb IAmb 01 19 59.9
comp=Z,30nm,0.9s
PSI Prapat 84.69 275 P P 01 19 59.2 -0.3
comp=Z,28nm,0.9s,baz=180,slow=5.1
G08A Pilot Rock 85.20 37 P P 01 20 02.9 +1.6
G08A pwP 01 21 37.9 +2.0
RC01 Rabbit Creek A 85.22 13 IAmb IAmb 01 20 02.2
comp=Z,5.9nm,0.9s
GSI Gunungsitoli 85.40 273 P P 01 20 04.2 +1.3
comp=Z,460nm,0.8s
GLI Glacier Island 85.62 15 IAmb IAmb 01 20 04.4
comp=Z,11nm,0.7s
KNK Knik Glacier 85.79 14 IAmb IAmb 01 20 05.4
comp=Z,6.5nm,0.8s
PMR Palmer 85.80 13 IAmb IAmb 01 20 04.9
comp=Z,4.2nm,0.7s
SYO Syowa Base 85.94 193⇓*e*PcP PcP 01 20 06.0 -0.4
SYO Syowa Base 85.94 193⇑*e*pP pP 01 21 36.4 +0.8
KCSI Kotacane, Aceh 86.02 275 P P 01 20 06.0 +0.1
comp=Z,21nm,0.7s
WAX Waxell Ridge 86.31 17 IAmb IAmb 01 20 08.4
comp=Z,7.5nm,0.9s
CRQM Cirque 86.50 16 IAmb IAmb 01 20 09.4
comp=Z,6.6nm,1.0s
TGL Tana Glacier 86.58 16 IAmb IAmb 01 20 09.3
comp=Z,7.9nm,1.1s
F10A Beach Ranch, E 86.59 38 IAmb IAmb 01 20 09.6
comp=Z,9.8nm,0.9s
ENH Enshi 86.61 304 P P 01 20 09.0 +0.6
BALM Baldy 86.94 16 IAmb IAmb 01 20 11.4
comp=Z,5.3nm,1.1s
MNTX Cornudas Mount 87.13 54 P P 01 20 12.5 +1.7
MNTX pwP 01 21 48.8 +3.1
BARN Barnard Glacie 87.14 17 IAmb IAmb 01 20 12.8
comp=Z,6.8nm,0.8s
CTGM Chitina Glacie 87.15 17 IAmb IAmb 01 20 12.7
comp=Z,4.3nm,0.7s
GYA Guiyang 87.17 300 *e*P P 01 20 12.2 +1.0
GYA pmax pmax
comp=Z,10.0nm,0.8s
SNAA Sanae 87.17 178 P P 01 20 10.4 +0.1
KTH Kantishna Hill 87.21 12 IAmb IAmb 01 20 11.2
comp=Z,6.3nm,0.9s
VNA3 Neumayer Olymp 87.30 176 P P 01 20 11.6 +0.7
SLVN Son La 87.33 294 IAmb IAmb 01 20 16.0
comp=Z,6.0nm,1.0s
TX31 Lajitas Ar. Si 87.40 57 IAmb IAmb 01 20 15.0
comp=Z,12nm,1.1s
TXAR Lajitas Array 87.40 57 P P 01 20 13.9 +1.7
comp=Z,1.2nm,0.7s,baz=202,slow=5.4,SNR=5.2
LHMI Lhok Sumawe 87.41 277 P P 01 20 13.3 +0.8
VNA2 Neumayer--Watz 87.75 177 P P 01 20 14.0 +1.0
baz=191,slow=3.0
MCK McKinley 87.76 12 IAmb IAmb 01 20 15.4
comp=Z,11nm,0.8s
VNA1 Neumayer--Stat 87.97 177 P P 01 20 15.2 +1.2
MENT Mentasta 88.21 15 IAmb IAmb 01 20 17.5
comp=Z,5.8nm,1.1s
MLY Manley 88.59 11 IAmb IAmb 01 20 17.7
comp=Z,7.2nm,0.6s
WRH Wood River Hil 88.59 12 IAmb IAmb 01 20 18.2
comp=Z,10nm,0.7s
PLCA Paso Flores 88.61 133 P P 01 20 18.5 +0.7
comp=Z,0.6nm,0.9s,baz=247,slow=2.0,SNR=3.0
RIDG Independent Ri 88.64 14 IAmb IAmb 01 20 19.1
comp=Z,8.5nm,1.2s
XAN Xi'an 88.74 307 P P 01 20 19.1 +0.8
XAN pmax pmax
comp=Z,16nm,1.2s
XAN pmax pmax
comp=Z,41nm,4.6s
XAN Xi'an 88.74 307 P P 01 20 18.4 +0.1
XAN PcP 01 20 19.8 +0.4
XAN IAmb IAmb 01 20 20.4
comp=Z,19nm,1.1s
DOT Dot Lake 88.74 14 IAmb IAmb 01 20 19.2
comp=Z,5.3nm,1.0s
HDA Harding Lake 88.77 13 IAmb IAmb 01 20 19.4
comp=Z,10.0nm,0.7s
COLA College 89.00 12 P P 01 20 19.4 +0.8
COLA PcP 01 20 19.8 +0.1
IL31 89.10 13 IAmb IAmb 01 20 20.1
comp=Z,4.7nm,0.7s
ILAR Eielson Array 89.10 13 P P 01 20 18.5 -0.7
comp=Z,3.3nm,0.5s,baz=214,slow=5.5,SNR=36
FLWY Flagg Ranch 89.43 42 IAmb IAmb 01 20 24.0
comp=Z,4.4nm,0.8s
PDAR Pinedale Array 89.48 43 P P 01 20 22.6 +0.8
comp=Z,1.8nm,0.8s,baz=207,slow=2.5,SNR=15
KMI Kunming 89.84 297 P P 01 20 25.7 +1.9
KMI pmax pmax
comp=Z,14nm,1.3s
BILL Bilibino 89.88 354 P P 01 20 23.0 +0.3
BILL IAmb IAmb 01 20 25.7
comp=Z,5.8nm,0.8s
HHC Hu-ho-hao-te 90.02 314 P P 01 20 25.4 +1.2
HHC pmax pmax
comp=Z,14nm,1.0s
HHC pmax pmax
comp=Z,53nm,5.3s
DAWY Dawson 90.23 16 IAmb IAmb 01 20 26.9
comp=Z,5.7nm,0.7s
EGAK Eagle 90.38 15 IAmb IAmb 01 20 27.3
comp=Z,9.1nm,0.8s
CMAR Chiang Mai Arr 90.51 290 P P 01 20 28.7 +1.9
comp=Z,5.8nm,0.4s,baz=123,slow=3.2,SNR=42
CHTO Chiang Mai 90.64 290 P P 01 20 27.6 +0.2
EPYK Eagle Plains 92.75 15 IAmb IAmb 01 20 38.1
comp=Z,3.4nm,0.7s
YAK Yakutsk 92.93 338 P P 01 20 37.0 +0.1
YKA Yellowknife Ar 97.22 25 P P 01 20 56.3 0.0
comp=Z,0.2nm,0.6s,baz=233,slow=4.8,SNR=2.7
ZALV Zalesovo Beam 111.22 321 PKiKP PKiKP 01 25 53.5 -1.7
comp=Z,2.6nm,0.6s,baz=128,slow=0.5,SNR=11
MKAR Makanchi Array 111.86 313 PKiKP PKiKP 01 25 55.5 -1.2
comp=Z,0.9nm,0.4s,baz=133,slow=1.0,SNR=21
KURK Kurchatov 114.69 317 PKPdf 01 26 00.9 -1.0
KURBB Kurchatov Arra 114.74 317 PKP PKPdf 01 26 00.7 -1.3
comp=Z,1.4nm,0.4s,baz=100,slow=1.7,SNR=14
KURBB SKP SKPdf 01 28 55.9 -2.5
comp=Z,0.7nm,0.8s,baz=99,slow=1.9,SNR=5.3
BOOM Boomskoye usch 115.83 308 PKiKP 01 26 04.8 +0.1
AAK Ala-Archa 116.91 308 PKP PKPdf 01 26 05.8 -0.9
comp=Z,0.8nm,0.5s,baz=72,slow=3.2,SNR=3.8
BRVK Borovoye 119.86 320 PKPdf 01 26 11.2 -0.7
KK31 Karatay Array 119.86 308 PKPdf 01 26 11.2 -1.0
KBL Kabul 120.40 298 PKPdf 01 26 13.4 -0.4
SPA0 Spitsbergen Ar 122.70 357 *e*PKPdf PKPdf 01 26 16.1 -0.6
DAG Danmarks Havn 123.56 6 *i* P PKPdf 01 26 16.8 -1.5
comp=Z,2.1nm,0.5s
BOSA Boshof 125.56 205 PKP PKPdf 01 26 23.6 -0.2
comp=Z,3.2nm,1.0s,baz=145,slow=4.7,SNR=3.9
ARU Arti 125.96 325 PKPdf 01 26 22.9 -0.6
HAMF Hammerfest 129.06 351 *e*PKPdf PKPdf 01 26 28.1 -0.8
GEYT Alibeck 129.33 302 PKP PKPdf 01 26 30.4 -0.1

comp=Z,3.3nm,0.7s,baz=186,slow=1.5,SNR=10
ARCES ARCESS Array B 129.76 350 PKP PKPdf 01 26 29.9 -0.5
comp=Z,5.1nm,0.4s,baz=37,slow=1.2,SNR=65
ARE0 ARCESS Array S 129.76 350 *e*PKPdf PKPdf 01 26 30.0 -0.3
UOSS Minazif 130.41 285 PKiKP 01 26 33.4 -0.4
KTK1 Kautokeino 130.60 350 *e*PKPdf PKPdf 01 26 31.0 -1.0
TRO Tromso 130.64 352 *e*PKPdf PKPdf 01 26 31.3 -0.7
TRO *e*PP sPKPdf 01 28 49.7 -0.3
STEI Steigen 132.69 353 *e*PKPdf PKPdf 01 26 34.7 -1.1
NSS Namsos 136.33 354 *e*PKPdf PKPdf 01 26 40.7 -2.0
FINES FINESS Array B 136.61 344 PKhKP PKPpre 01 26 32.8
comp=Z,0.9nm,0.5s,baz=40,slow=3.6,SNR=6.7
FINES PKP PKPdf 01 26 43.5 +0.1
comp=Z,4.0nm,0.6s,baz=124,slow=2.8,SNR=12
FINES SKP SKPbc 01 29 37.3 +0.1
comp=Z,0.8nm,0.5s,baz=45,slow=3.2,SNR=4.3
DOMB Dombas 139.04 355 *e*PKPdf PKPpre 01 26 43.2
AKN Aaknes 139.05 357 *e*PKPdf PKPdf 01 26 45.4 -2.5
FOO Floro 139.72 358 *e*PKPdf PKPpre 01 26 44.4
NB2 NORSAR Subarra 139.82 353 PKP PKPpre 01 26 41.4
comp=Z,0.8nm,0.5s,baz=17,slow=2.6
NOA NORSAR Array B 139.82 353 PKhKP PKPpre 01 26 40.8
comp=Z,0.6nm,0.5s,baz=18,slow=4.1,SNR=9.6
NOA PKP PKiKP 01 26 51.3 -0.6
comp=Z,0.8nm,0.5s,baz=14,slow=3.8,SNR=6.8
RAYN Ar Rayn 139.96 282 PKPdf 01 26 47.9 -2.8
NC602 NORSAR Array S 140.08 353 *e*PKPdf PKPpre 01 26 43.2
SKAR Skarslia 140.45 355 *e*PKPdf PKPpre 01 26 43.5
BER Bergen 140.92 357 *e*PKPdf PKPpre 01 26 46.0
KONO Kongsberg 141.36 354 *e*PKPdf PKPpre 01 26 45.4
BLS5 Blasjo 141.83 356 *e*PKPdf PKPpre 01 26 48.5
AKASG Malin Array Be 143.80 331 PKP PKPab 01 26 54.1 -1.0
comp=Z,6.7nm,0.5s,baz=44,slow=4.3,SNR=142
GOET G??ttrup 143.97 353 *i* P PKPbc 01 26 56.1 +0.6
comp=Z,84nm,0.9s
MUD Monsted U'grnd 144.54 353 *i* P PKPbc 01 26 57.1 -0.3
comp=Z,42nm,0.8s
MBAR Mbarara 144.55 236 PKPdf 01 26 59.9 +0.6
BSD Bornholm Skovb 144.93 347 *i* P PKPdf 01 26 58.0 -0.5
comp=Z,58nm,0.9s
LLD Lille Linde 145.22 350 *i* P PKPbc 01 26 59.7 +0.1
SORM Soroca 145.98 328 ⇑P PKPbc 01 27 01.9 -0.2
GKP Gorka Klasztor 146.08 344 *e*PKP PKPbc 01 27 02.0 -0.1
BEL Belsk 146.28 339 *e*PKP PKPab 01 27 04.5 0.0
MILM Milestii Mici 146.55 326 ⇑P PKPbc 01 27 03.4 -0.3
ILGA Ilgaz 146.86 314 PKPbc PKPbc 01 27 04.7 -0.3
BSEG Bad Segeberg 146.86 351 *e*PKPbc PKPbc 01 27 04.6 +0.3
baz=15,slow=2.3
LEOM Leova 147.14 326 ⇑P PKPbc 01 27 05.6 +0.2
VASR Vaslui 147.26 327 ⇑P PKPbc 01 27 06.1 +0.5
KWP Kalwaria Pacla 147.39 335 *e*PKP PKPbc 01 27 05.9 0.0
KWP Kalwaria Pacla 147.39 335 PKPbc 01 27 05.8 -0.2
BR131 Keskin Array S 147.49 311 PKPbc PKPbc 01 27 05.6 -1.1
BRTR Keskin Array B 147.49 311 PKPbc PKPbc 01 27 06.2 -0.5
comp=Z,9.1nm,0.6s,baz=140,slow=4.2,SNR=34
BIR Birlad 147.60 326 ⇑P PKPbc 01 27 07.3 +0.8
RUE Ruedersdorf 147.63 347 *e*PKPbc PKPbc 01 27 06.6 +0.2
baz=15,slow=2.3
TLCR 147.66 324 ⇑P PKPbc 01 27 06.9 +0.2
VARL Varlezi 147.72 325 ⇑P PKPbc 01 27 07.5 +0.6
BURAR Bucovina Array 147.85 330 ⇑P PKPbc 01 27 07.9 +0.6
GHRR 147.85 326 ⇑P PKiKP 01 27 08.4 -0.3
JURR Jurilovca 147.88 323 ⇑P PKPbc 01 27 07.6 +0.3
BIZ Bicaz 147.91 328 ⇑P PKiKP 01 27 08.3 -0.6
BHL Bhannes 147.91 300 *e*P PKPbc 01 27 07.5 -0.4
TESR Tescani 147.93 327 ⇑P PKPbc 01 27 07.5 +0.1
QRWL Qaraoun 147.98 299 *e*P PKPbc 01 27 08.1 0.0
OJC Ojcow 147.98 338 *e*PKP PKPbc 01 27 07.3 -0.1
OJC Ojcow 147.98 338 PKPbc 01 27 07.5 +0.1
ANTO Ankara 148.01 312 ⇑P PKPbc 01 27 08.4 +0.4
ANTO Ankara 148.01 312 PKPbc 01 27 08.1 +0.1
DQRL Deir Qamar 148.03 300 *e*P PKPbc 01 27 08.2 0.0
CFR Carcaliu 148.03 324 ⇑P PKPbc 01 27 07.8 +0.2
TOPG Topolog 148.09 323 ⇑P PKPbc 01 27 08.3 +0.4
KOLS Kolonicke sedl 148.12 335 *e*PKP PKPbc 01 27 08.5 +0.7
KOLS *e* 01 27 12.5
NRDL Niedersach Rie 148.29 351 *e*PKPbc PKPbc 01 27 08.3 +0.3
baz=15,slow=2.3
TIRR Tirgusor 148.33 323 ⇑P PKPbc 01 27 08.7 +0.3
VRI Vrincioaia 148.33 326 ⇑P PKPbc 01 27 08.5 0.0
PLOR Plostina 148.38 326 ⇑P PKPbc 01 27 08.5 -0.2
HARR Harsova 148.46 324 ⇑P PKPbc 01 27 09.3 +0.5
NIE Niedzica 148.48 337 *e*PKP PKiKP 01 27 09.5 -0.5
TLBR Topalu 148.48 323 ⇑P PKPbc 01 27 09.3 +0.4
MFTR Murfatlar 148.50 322 ⇓P PKPbc 01 27 09.5 +0.6
KSP Ksiaz 148.52 343 *e*PKP PKPbc 01 27 09.1 +0.3
GRER 148.53 325 ⇑P PKiKP 01 27 11.1 +0.9
BISRR Bisoca 148.55 326 ⇑P PKiKP 01 27 09.8 -0.5
ASSE Asse, Remlinge 148.56 350 *e*PKPbc PKPbc 01 27 09.0 +0.3
baz=15,slow=2.3
MANR Mangalia 148.62 322 ⇑P PKiKP 01 27 09.9 -0.5
TSMN Mangalia Port- 148.63 322 ⇑P PKiKP 01 27 10.2 -0.3
TRPA Tarpa 148.64 333 ⇑P PKPbc 01 27 09.4 +0.3
OZUR 148.65 328 ⇑P PKPbc 01 27 09.9 +0.6
IBBN Ibbenburen 148.78 353 *e*PKPbc PKPbc 01 27 09.6 +0.2
baz=15,slow=2.3
IBBN *e*PKPab PKPab 01 27 15.5 +0.9
baz=14,slow=4.2
OSTC Ostas 148.80 343⇑*e*PKP PKPbc 01 27 09.9 +0.4
CHVC Chvalec 148.82 343⇑*e*PKP PKPbc 01 27 08.5 -1.1
PGOR Pogoanele 148.83 325 ⇓P PKiKP 01 27 10.7 -0.1
OKC Ostrava-Krasne 148.86 340⇑*e*PKP PKPbc 01 27 09.4 -0.2
CLZ Clausthal 148.88 350 *e*PKPbc PKPbc 01 27 10.1 +0.4
baz=15,slow=2.3
CLL Collm 148.90 347 *e*PKPdf PKPdf 01 27 07.0 +1.8
CLL *i* PKPbc PKiKP 01 27 10.7 -0.1
comp=Z,20nm,0.8s
CLL *i* PKiKP PKPbc 01 27 12.2 +2.5
comp=Z,28nm,0.7s
CLL *i* PKPab PKPab 01 27 16.5 +1.4
comp=Z,25nm,0.9s
CLL *e* 01 28 36.0
CLL Collm 148.90 347 PKiKP 01 27 10.4 -0.3
UPC Upice 148.90 343⇑*e*PKP PKPbc 01 27 10.0 +0.3
UPC *e*PKPAB PKPab 01 27 16.7 +1.5
PSN Preselentsi 148.94 322 *e*P PKPbc 01 27 10.2 +0.2
DOPR Dopca 148.94 328 ⇑P PKiKP 01 27 10.9 -0.2
DPC Dobruska-Polom 148.96 342⇑*e*PKP PKPbc 01 27 10.3 +0.4
MLR Muntele Rosu 148.99 327 ⇑P PKPbc 01 27 10.1 -0.2
MLR Muntele Rosu 148.99 327 PKPbc PKPbc 01 27 09.9 -0.4
LANS Liptovska Anna 149.00 338 *e*PKP PKiKP 01 27 11.2 +0.1
LANS *e* 01 27 17.6
KRLC Kraliky 149.07 342⇑*e*PKP PKPbc 01 27 10.4 +0.2
KRLC *e*PKPAB PKPab 01 27 15.6 -0.3
MORC Moravsky Berou 149.10 340 *e*PKP PKPbc 01 27 10.3 0.0
MORC Moravsky Berou 149.10 340 ⇑P PKiKP 01 27 10.9 -0.4
KECS Kecovo 149.18 336 *e*PKP PKPab 01 27 17.7 +1.3
FBE Freiberg 149.19 346 *e*PKPbc PKiKP 01 27 11.1 -0.3
baz=15,slow=2.3
FBE *e*PKPab PKPab 01 27 17.5 +1.2
baz=14,slow=4.2
SECR 149.23 326 ⇑P PKPbc 01 27 11.1 +0.3
GTTG Gottingen 149.24 350 *e*PKPbc PKPbc 01 27 10.9 +0.4
baz=15,slow=2.3
GTTG *e*PKPab PKPab 01 27 17.5 +1.0
baz=14,slow=4.2
NEUB Neuenburg 149.25 348 *e*PKPbc PKPbc 01 27 10.7 +0.2
baz=15,slow=2.3
CJR Cluj-Napoca 149.26 330 ⇑P PKiKP 01 27 11.3 -0.4
PVCC Panska Ves 149.26 344⇑*e*PKP PKiKP 01 27 11.1 -0.5
PVCC *e*PKPAB PKPab 01 27 17.9 +1.2
PLAR PLOIESTI 149.34 326 ⇓P PKPbc 01 27 10.5 -0.4
SULR 149.37 325 ⇑P PKPbc 01 27 11.1 0.0
VOIR 149.48 327 ⇑P PKPbc 01 27 11.5 0.0
DRGR 149.60 331 ⇑P PKPbc 01 27 11.8 +0.1
BUG Bochum--Univer 149.69 354 *e*PKPbc PKPbc 01 27 11.6 +0.1
baz=15,slow=2.3
NEF NEVSHA 149.72 322 *e*P PKPbc 01 27 12.1 +0.1
PRA Prague 149.72 344⇑*e*PKP PKPbc 01 27 12.0 +0.3
ARR Arges 149.74 328 ⇑P PKiKP 01 27 13.3 +0.5
PRU Pruhonice 149.77 344⇑*e*PKP PKPbc 01 27 12.0 +0.2
PRU *e*PKPAB PKPab 01 27 20.0 +1.2
GOPC GO Pecny, Ondr 149.77 344⇑*e*PKP PKPbc 01 27 12.2 +0.3
VYHS Vyhne 149.78 338 *e*PKP PKPbc 01 27 12.1 +0.2
VYHS *e* 01 27 20.1
VRAC Vranov 149.81 341 *e*PKP PKPbc 01 27 12.0 0.0
VRAC Vranov 149.81 341 ⇑P PKiKP 01 27 12.6 -0.2
PLN Plauen 149.86 347 *e*PKPbc PKPbc 01 27 12.3 +0.2
baz=15,slow=2.3
PLN *e*PKPab PKPab 01 27 19.9 +0.8
baz=14,slow=4.2
TANN Tannenbergstha 149.86 347 *e*PKPbc PKPbc 01 27 12.4 +0.3
baz=15,slow=2.3

JAVC Velka Javorina 149.86 339 *e*PKP PKiKP 01 27 13.3 +0.4
PSZ Piszkesteto 149.87 336 ⇑P PKPab 01 27 18.8 -0.6
PSZ Piszkesteto 149.87 336 PKPbc 01 27 12.3 0.0
UBBA Unterbreizbach 149.93 350 *e*PKPbc PKPbc 01 27 12.1 +0.1
baz=15,slow=2.3
GUNZ Gunzen 149.94 347 *e*PKPbc PKiKP 01 27 12.8 -0.2
baz=15,slow=2.3
GUNZ *e*PKPab PKPab 01 27 20.5 +1.0
baz=14,slow=4.2
WERN Wernitzgruen 150.00 347 *e*PKPbc PKiKP 01 27 12.9 -0.3
baz=15,slow=2.3
WERN *e*PKPab PKPab 01 27 20.9 +1.1
baz=14,slow=4.2
NKC Novy Kostel 150.03 347⇑*e*PKP PKPbc 01 27 12.8 +0.3
NKC *e*PKPAB PKPab 01 27 20.4 +0.5
KRUC Moravsky 150.09 341 *e*PKP PKPbc 01 27 12.6 0.0
TREC Trest 150.14 342⇑*e*PKP PKPbc 01 27 12.7 -0.1
HUMR Humele 150.15 326 ⇑P PKPbc 01 27 12.7 -0.2
PBCC Pribram 150.19 344⇑*e*PKP PKPbc 01 27 13.0 +0.1
PBCC *e*PKPAB PKPab 01 27 21.7 +1.2
DEV Deva 150.20 330 ⇓P PKPbc 01 27 13.0 0.0
SMOL Smolenice 150.24 339 *e*PKP PKiKP 01 27 13.9 +0.2
SMOL *e* 01 27 22.6
COPA Copaceanca 150.29 325 ⇑P PKPbc 01 27 13.0 -0.2
MODS Modra-Piesok 150.41 339 *e*PKP PKPbc 01 27 13.3 -0.2
MODS *e* 01 27 22.2
SIRR Siria 150.47 332 ⇑P PKiKP 01 27 14.1 -0.1
SZH Strazhica 150.47 323 *e*P PKPbc 01 27 13.4 -0.3
ROTZ Rotzenmuhle 150.53 347 *e*PKPbc PKPbc 01 27 13.8 +0.2
baz=15,slow=2.3
SRO Srobarova 150.54 338 *e*PKP PKPab 01 27 23.0 +1.0
SRO2 Moca 150.56 337 *e*PKP PKPbc 01 27 12.9 -0.8
GZR Gura Zlata 150.62 330 ⇑P PKPbc 01 27 14.0 -0.1
MEM Membach 150.63 355 PKPbc PKPbc 01 27 13.8 0.0
MEM PKPab PKPab 01 27 22.0 -0.3
BSTI Sart Tilman 150.69 356 PKPbc PKPbc 01 27 13.8 -0.2
ELND Elena 150.72 323 ⇑P PKiKP 01 27 14.6 -0.2
TNS Taunus Mts 150.75 352 *e*PKPbc PKPbc 01 27 14.4 +0.2
baz=15,slow=2.3
TNS *e*PKPab PKPab 01 27 23.7 +0.8
baz=14,slow=4.2
GRF Grafenberg Arr 150.80 348 *e*PKPbc PKiKP 01 27 14.5 -0.2
baz=15,slow=2.3
GRF *e*PKPab PKPab 01 27 24.3 +1.3
baz=14,slow=4.2
KHC Kasperske Hory 150.80 345 *e*PKPDF PKPdf 01 27 09.0 +0.7
KHC ⇑*e*PKP PKiKP 01 27 14.6 -0.2
KHC *e*PKPAB PKPab 01 27 24.0 +0.8
KHC Kasperske Hory 150.80 345 PKPdf 01 27 08.3 0.0
KHC PKPbc PKiKP 01 27 15.0 +0.2
KHC PKPab PKPab 01 27 24.5 +1.3
SNF Seneffe 150.84 357 PKPbc PKPbc 01 27 14.3 0.0
SNF PKPab PKPab 01 27 23.1 0.0
BCLA Clavier 150.87 356 PKPab PKPab 01 27 23.7 +0.4
BGES Gesves 150.92 356 PKPbc PKPbc 01 27 14.0 -0.5
BGES PKiKP PKiKP 01 27 14.8 -0.2
BGES PKPab PKPab 01 27 22.9 -0.7
SRE Strehaia 150.95 328 ⇑P PKiKP 01 27 15.4 +0.2
WET Wettzell 150.96 345 *e*PKPbc PKPbc 01 27 14.7 0.0
baz=15,slow=2.3
WET *e*PKPab PKPab 01 27 25.0 +1.2
baz=14,slow=4.2
BZS Buzias 150.99 331 ⇑P PKPbc 01 27 15.0 +0.1
BMRD Maredsous 151.02 357 PKPbc PKPbc 01 27 14.6 -0.1
BMRD PKPab PKPab 01 27 23.5 -0.4
GEC2 GERESS Array S 151.04 344 *e*PKPbc PKPbc 01 27 15.0 0.0
baz=15,slow=2.3
GERES GERESS Array B 151.04 344 PKPbc PKPbc 01 27 15.0 0.0
comp=Z,7.9nm,0.7s,baz=24,slow=1.6,SNR=7.0
GERES PKPab PKPab 01 27 24.7 +0.5
comp=Z,4.5nm,0.8s,baz=22,slow=4.3,SNR=9.0
PLVB Pleven 151.11 325 ⇓P PKPbc 01 27 15.3 +0.1
HERR Herculane 151.17 329 ⇑P PKPbc 01 27 15.3 0.0
DOU Dourbes 151.23 357 PKPbc PKiKP 01 27 15.5 -0.1
CONA Conrad Observa 151.26 341 *e*PKiKP PKPbc 01 27 15.6 +0.1
comp=Z,5.4nm,0.5s,SNR=15
PUNG Punghina 151.36 328 ⇑P PKPbc 01 27 15.5 -0.3
DIM Dimitrovgrad 151.48 322 *e*P PKPbc 01 27 16.0 -0.1
WLF Walferdange 151.55 355 PKPbc PKiKP 01 27 16.8 +0.5
WLF PKPab PKPab 01 27 26.3 +0.1
WLF Walferdange 151.55 355 *e*PKPbc PKiKP 01 27 16.6 +0.3
baz=15,slow=2.3
WLF *e*PKPab PKPab 01 27 27.4 +1.2
baz=14,slow=4.2
WLF Walferdange 151.55 355 PKiKP 01 27 16.8 +0.5
MDVR Moldovita 151.58 330 ⇑P PKPbc 01 27 15.7 -0.5
KDZ Kurdzhali 151.80 321 *e*P PKPbc 01 27 16.3 -0.5
MOA Molln 151.80 343 *e*PKPbc PKPbc 01 27 16.2 -0.4
comp=Z,2.7nm,0.5s
ARSA Arzberg 151.97 340 *i* PKPbc PKPbc 01 27 16.5 -0.6
comp=Z,3.4nm,1.0s
STU Stuttgart 152.05 350 *e*PKPbc PKiKP 01 27 17.3 0.0
baz=15,slow=2.3
STU *e*PKPab PKPab 01 27 29.2 +0.8
baz=14,slow=4.2
FUR Furstenfeldbru 152.24 347 *e*PKPbc PKPbc 01 27 17.6 0.0
baz=15,slow=2.3
FUR *e*PKPab PKPab 01 27 30.3 +1.1
baz=14,slow=4.2
RJOB Jochberg 152.29 344 *e*PKPbc PKPbc 01 27 17.4 -0.4
baz=15,slow=2.3
RJOB *e*PKPab PKPab 01 27 31.0 +1.5
baz=14,slow=4.2
VTS Vitosha 152.38 325 ⇑P PKiKP 01 27 18.4 -0.1
VTS Vitosha 152.38 325 *e*P PKPbc 01 27 17.9 -0.4
VTS Vitosha 152.38 325 PKPbc 01 27 18.1 -0.2
BFO Black Forest 152.61 351 *e*PKPbc PKPbc 01 27 18.2 -0.2
baz=15,slow=2.3
BFO *e*PKPab PKPab 01 27 31.4 +0.6
baz=14,slow=4.2
BFO Black Forest 152.61 351 PKPbc 01 27 18.5 0.0
BFO PKPab 01 27 31.3 +0.5
SOKA Soboth 152.63 340 *e*PKPbc PKPbc 01 27 17.7 -0.9
comp=Z,1.6nm,0.5s
SOKA *i* PKPab PKPab 01 27 31.8 +0.8
comp=Z,8.8nm,1.4s
PERS Pernice 152.64 340 *i* PKPbc PKPbc 01 27 17.8 -0.8
GROS Grobnik 152.67 340 *i* PKPbc PKPbc 01 27 17.8 -0.9
KBA Koelnbreinsper 152.76 343 *e*PKPbc PKPbc 01 27 17.8 -1.2
comp=Z,3.2nm,0.5s,SNR=5.6
KBA *e*PKPab PKPab 01 27 33.0 +1.3
comp=Z,7.8nm,0.7s
MMB Musomiste 152.81 323 *e*P PKPbc 01 27 18.2 -0.9
OBKA Obir 152.93 341 *e*PKiKP PKiKP 01 27 20.3 +0.9
comp=Z,4.5nm,0.8s
OBKA *e*PKPab PKPab 01 27 32.8 +0.6
comp=Z,3.2nm,0.7s
UBR Ueberruh 152.94 348 *e*PKPbc PKPbc 01 27 19.0 -0.2
baz=15,slow=2.3
DOBS Dobrina 152.96 339 *i* PKPbc PKPbc 01 27 18.6 -0.6
WATA Walderalm 152.96 346 *e*PKPbc PKPbc 01 27 18.7 -0.6
comp=Z,3.0nm,0.4s
MOSL Moslavina 152.98 337 *i* P PKPbc 01 27 18.9 -0.4
RETA Reutte 152.99 347 *e*PKPbc PKPbc 01 27 19.1 -0.3
comp=Z,3.5nm,0.6s
RETA *e*PKPab PKPab 01 27 32.8 +0.4
comp=Z,6.4nm,0.7s
WTTA Wattenberg 153.01 346 *e*PKiKP PKPbc 01 27 19.3 -0.3
comp=Z,5.6nm,0.4s,SNR=5.2
WTTA *e*PKPab PKPab 01 27 32.9 +0.2
comp=Z,8.7nm,0.7s
MOTA Moosalm 153.06 346 *e*PKiKP PKPbc 01 27 19.3 -0.3
comp=Z,6.1nm,0.8s
MOTA *e*PKPab PKPab 01 27 33.4 +0.6
comp=Z,5.0nm,0.6s
MYKA Terra Mystica 153.09 342 *i* PKPbc PKPbc 01 27 18.3 -1.2
comp=Z,5.3nm,0.6s
MYKA *e*PKPab PKPab 01 27 32.5 -0.4
comp=Z,6.3nm,0.7s
SQTA Sankt Quirin 153.15 346 *i* PKPbc PKPbc 01 27 19.3 -0.4
comp=Z,3.9nm,0.6s
SQTA *e*PKPab PKPab 01 27 33.7 +0.5
comp=Z,6.6nm,0.9s
VNDS Vrh nad Dolski 153.25 340 *i* PKPbc PKPbc 01 27 19.4 -0.5
ABTA Abfaltersbach 153.28 344 *e*PKPbc PKPbc 01 27 19.1 -0.9
comp=Z,8.6nm,0.6s,SNR=6.4
ABTA *e*PKPab PKPab 01 27 34.0 +0.2
comp=Z,8.4nm,0.7s
LJU Ljubljana 153.35 341 *i* PKPbc PKPbc 01 27 19.7 -0.4
DAVA Damuels 153.36 348 *e*PKPbc PKPbc 01 27 19.7 -0.6
comp=Z,3.0nm,0.6s
DAVA *e*PKPab PKPab 01 27 35.0 +0.9
comp=Z,4.4nm,0.7s
FETA Feichten 153.44 347 *e*PKiKP PKPbc 01 27 20.2 -0.3
comp=Z,1.8nm,0.5s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FETA				ePKPab	PKPab	01 27 34.7	+0.2
	comp=Z,7.9nm,1.1s						
STAL	STALIGIAL	153.68	343		PKPbc	01 27 20.1	-0.7
STAL				PKPab	PKPab	01 27 35.1	-0.3
FUORN	Ofenpass-Fuorn	153.92	347		PKiKP	01 27 21.6	0.0
FUORN				PKPab	PKPab	01 27 37.8	+1.1
UDBI	Udbina	154.27	337	i P	PKPbc	01 27 21.5	-0.7
KIJV	Kijevo	154.48	336	i P	PKiKP	01 27 22.2	-0.4
NVLJ	Novalja	154.55	338	i P	PKiKP	01 27 21.6	-1.0
FNA	Florina	154.66	324		PKPdf	01 27 14.6	+0.4
FNA				PKPbc	PKiKP	01 27 22.2	-0.9
MORI	Morici	154.86	336	i P	PKiKP	01 27 22.6	-0.7
ZIRJ	Zirje	155.06	336	i P	PKPdf	01 27 24.3	+10
INTR	Introdacqua	157.13	337	PKPdf	PKPdf	01 27 18.0	+0.6
INTR					PKPab	01 27 50.0	-0.4
ESDC	Sonseca Array	160.99	15	PKP	PKPdf	01 27 21.9	-0.1
	comp=Z,0.3nm,0.6s,baz=33,slow=2.1,SNR=4.6						
ESDC				PKPab	PKPab	01 28 06.9	-0.3
	comp=Z,1.4nm,1.0s,baz=347,slow=4.0,SNR=5.6						
DBIC	Dimbokro	163.93	154	PKP	PKPdf	01 27 24.7	-0.8
	comp=Z,5.0nm,0.9s,baz=202,slow=2.3,SNR=3.6						
KEST	Kesra	164.33	338	PKPab	PKPab	01 28 22.0	-0.1
	comp=Z,2.4nm,0.6s,baz=329,slow=3.0,SNR=6.2						
TOA0	Torodi Ar. Sit	171.84	177		PKPdf	01 27 30.1	-0.8
TORD	Torodi Ar. Bea	171.84	177	PKP	PKPdf	01 27 30.1	-0.7
	comp=Z,2.0nm,0.8s,baz=21,slow=0.3,SNR=12						
TORD				PKPab	PKPab	01 28 55.6	+0.1
	comp=Z,1.0nm,0.7s,baz=175,slow=3.8,SNR=7.9						

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*IDC **02** 01:19:32.1±1.1, 13°.65N×120°.81E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.6/45, mbtmp3.8/7, MS2.5/1, Ms1 2.7/1, ms1mx2.2/34, Error ellipse: s-maj=60.1km s-min=18.0km az=63.0*
*MAN **02** 01:19:43.1, 13°.47N×120°.48E, h28km, mb4.4, ML3.2, MS3.0*
ISC 02 01:19:41.8±0.8, **13°.56N**±0°.04×**120°.43E**±0°.06, **h74**km±7km, **n18**, σ**0s.98**/26, **mb3.9**/7, **1C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.25	315	eP	Pn	01 19 52.6	-0.6
LUBP				eS	Sn	01 20 01.0	-0.5
LQP	Lukban	1.21	63	⇑eP	Pn	01 20 03.4	0.0
LQP				eS	Sn	01 20 20.8	+1.3
SJMP	San Jose	1.28	148	eP	Pn	01 20 04.6	+0.5
SJMP				eS	Sn	01 20 21.2	+0.4
BOAC	Boac	1.38	94	eP	Pn	01 20 05.3	0.0
BOAC				eS	Sn	01 20 23.1	+0.1
BUSP	Coron	1.56	188	eP	Pn	01 20 07.7	0.0
BUSP				eS	Sn	01 20 27.0	-0.3
OTRP	Odiongan	1.95	127	eP	Pn	01 20 13.4	+0.5
OTRP				eS	Sn	01 20 36.8	+0.1
PCPH	Palayan	2.10	18	⇓eP	Pn	01 20 14.2	-0.6
PCPH				eS	Sn	01 20 38.4	-1.6
SMPP	San Manuel, Pa	2.59	5	eP	Pn	01 20 20.8	-0.8
CUYO	Cuyo Island	2.75	168	eP	Pn	01 20 23.3	-0.4
BOLP	Bolinao	2.85	350	eP	Pn	01 20 27.6	+2.4
APYP	Conner	4.35	10	eP	Pn	01 21 15.8	+30
CMAR	Chiang Mai Arr	21.22	286	P	P	01 24 23.6	+1.8
	1.3nm,0.3s,baz=93,slow=9.1,SNR=4.7						
CMAR				LR	LR	01 32 40.3	
	comp=Z,11nm,19.0s,baz=145,slow=37						
WRA	Warramunga Arr	35.99	157	P	P	01 26 34.1	-1.7
	0.6nm,0.5s,baz=333,slow=10.0,SNR=7.8						
WRA				pP	pP	01 26 53.9	+0.4
	0.6nm,0.5s,baz=336,slow=9.4,SNR=3.6						
SONM	Songino Array	36.12	344	P	P	01 26 36.8	-0.1
	1.6nm,0.6s,baz=166,slow=9.9,SNR=8.3						
ASAR	Alice Springs	39.27	160	P	P	01 27 02.7	-0.8
	0.5nm,0.6s,baz=338,slow=7.1,SNR=8.1						
ASAR				pP	pP	01 27 21.9	+0.4
	0.9nm,0.5s,baz=338,slow=6.7,SNR=6.2						
MKAR	Makanchi Array	45.99	324	P	P	01 27 58.3	+0.5
	0.2nm,0.3s,baz=139,slow=8.2,SNR=2.5						
ZALV	Zalesovo Beam	49.06	333	P	P	01 28 20.7	-0.7
	1.2nm,0.3s,baz=115,slow=7.4,SNR=4.8						
KURBB	Kurchatov Arra	50.16	326	P	P	01 28 29.9	+0.1
	1.4nm,0.4s,baz=130,slow=7.7,SNR=14						

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*IDC **02** 01:52:44.6±0.5, 1°.48N×126°.39E, h0km, mb4.2/19, mb1 4.3/22, mb1mx4.2/37, mbtmp4.2/22, ML4.1/3, MS3.1/6, Ms1 3.2/6, ms1mx2.8/32, Error ellipse: s-maj=26.2km s-min=10.4km az=77.0*
*DJA **02** 01:52:51.1±1.2, 2°N±4°×12°6E±°, h30km±10km, M4.7/15, mB5.2/6, mb4.8/15, MLv4.7/15, MLv4.6/4, Mw(mB)4.6/6*
*NEIC **02** 01:52:52.4±2.4, 1°.46N±0°.09×126°.51E±0°.06, h60km±7km, mb4.4/22, Error ellipse: s-maj=13.5km s-min=7.7km az=195.0*
ISC 02 01:52:51.7±0.4, **1°.50N**±0°.05×**126°.53E**±0°.06, **h47**km, **n80**, σ**1s.71**/80, **mb4.4**/28, **MS3.1**/6, **1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.10	131	P	Pn	01 53 10.4	-0.4
TNTI	Ternate	1.10	131		Pn	01 53 10.4	-0.4
LBMI	Labuha	2.33	155	P	Pn	01 53 28.5	+0.9
KMSI	Cibinong	2.71	250	P	Pn	01 53 32.0	-0.8
SANI	Sanana	3.57	189	P	Pn	01 53 43.5	-1.1
LUWI	Luwuk	4.53	236	P	Pn	01 54 00.5	+2.7
LUWI	Luwuk	4.53	236		Pn	01 53 59.4	+1.6
DDMP	Don Marcelino,	4.65	350	eP	Pn	01 53 58.3	-1.1
DDMP				eS	Sn	01 54 56.9	+4.8
MRSI	Marisa	4.70	258	P	Pn	01 54 00.0	-0.2
NLAI	Namlea	4.74	173	P	Pn	01 54 01.8	+1.1
SIJI	Sorong	5.29	116	Pn	Pn	01 54 06.4	-1.8
	2.3nm,0.3s,baz=238,slow=22,SNR=2.8						
SKMP	Bagumbayan, Su	5.37	338	eP	Pn	01 54 08.0	-1.2
SKMP				eS	Sn	01 55 07.5	-2.3
KCP	Kidapawan	5.66	345	⇑eP	Pn	01 54 14.7	+1.4
KCP				eS	Sn	01 54 50.4	-27
MPSI	Mapaga	6.73	260	P	Pn	01 54 27.2	-0.8
	0.2nm0.2nm826nm39nm,0.9s						
FAKI	Fak Fak	7.21	128	P	Pn	01 54 36.9	+2.4
	0.2nm0.2nm51nm,0.9s						
FAKI	Fak Fak	7.21	128		Pn	01 54 35.9	+1.3
BBSI	Bau Bau	7.99	210	P	Pn	01 54 44.9	-0.4
	12nm,0.8s						
TTSI	Tana Toraja	8.09	236	P	Pn	01 54 46.4	-0.2
	0.2nm1µm60nm,0.6s						
SPSI	Sidrap Palu	8.67	231	P	Pn	01 54 55.6	+1.0
	0.2nm763nm46nm,0.4s						
BNSI	Bone	8.70	228	P	Pn	01 54 57.0	+2.1
	0.1nm31nm,0.5s						
BKSI	Bulukumba	9.32	223	P	Pn	01 55 04.5	+0.9
	1µm36nm,0.8s						
KAPI	Kappang	9.37	226	Pn	Pn	01 55 00.5	-3.6
	4.1nm,0.3s,baz=178,slow=13,SNR=6.1						
KAPI	Kappang	9.37	226		Pn	01 55 03.4	-0.8
SOEI	Soe	11.41	191	P	Pn	01 55 40.2	+8.0
SOEI	Soe	11.41	191	Pn	Pn	01 55 27.9	-4.3
PLAI	Plampang	13.47	220	P	P	01 56 10.7	+2.3
SBUM	Sibu	14.34	274	Pn	Pn	01 56 10.8	-1.2
MTN	Manton Dam	14.96	162		Pn	01 56 18.2	-2.1
KSM	Kuching	16.22	270		P	01 56 39.3	+0.4
KNRA	Kununurra	17.21	173	Pn	Pn	01 56 47.0	-1.9
FITZ	Fitzroy Crossi	19.50	183	P	P	01 57 13.4	-1.6
	0.6nm,0.3s,baz=17,slow=7.4,SNR=17						
FITZ	Fitzroy Crossi	19.50	183	P	P	01 57 13.7	-1.3
DLV	T Lat	20.69	301	P	P	01 57 28.4	+0.2
DLV				IAmb	IAmb	01 57 35.2	
	comp=Z,20nm,0.8s						
PMBI	Palembang	22.19	259	P	P	01 57 51.0	+6.8
WB0	Warramunga Arr	22.50	160	P	P	01 57 46.4	-1.1
COEN	Coen	22.54	133	P	P	01 57 48.6	+0.7
COEN				IAmb	IAmb	01 58 00.8	
	comp=Z,20nm,1.6s						
WRAB	Tennant Creek	22.64	161	P	P	01 57 49.0	0.0
WRA	Warramunga Arr	22.64	161	P	P	01 57 47.9	-1.1
	comp=Z,21nm,0.7s,baz=337,slow=11,SNR=69						
WRA				PcP	PcP	02 01 40.1	-0.5
	comp=Z,0.3nm,0.4s,baz=317,slow=2.2,SNR=2.2						
WRA				S	S	02 01 54.8	+0.9
	comp=Z,1.8nm,0.9s,baz=339,slow=17,SNR=5.6						
WB2	Warramunga Arr	22.65	161	P	P	01 57 48.1	-0.9
WR0	Warramunga Arr	22.73	160	P	P	01 57 49.5	-0.4
WR0				IAmb	IAmb	01 58 01.2	
	comp=Z,18nm,1.0s						
AS31	Alice Springs	26.02	164	P	P	01 58 21.1	+0.5
AS31				IAmb	IAmb	01 58 25.9	
	comp=Z,5.1nm,0.4s						
ASAR	Alice Springs	26.02	164	P	P	01 58 20.4	-0.2
	comp=Z,4.1nm,0.6s,baz=344,slow=7.4,SNR=50						
ASAR				PcP	PcP	02 01 48.4	+0.4
	comp=Z,0.6nm,0.3s,baz=357,slow=2.1,SNR=4.6						
ASAR				S	S	02 02 52.0	+3.6
	comp=Z,0.6nm,0.9s,baz=351,slow=22,SNR=2.1						
CTA	Charters Tower	28.89	139	P	P	01 58 46.7	+0.4
	comp=Z,1.3nm,0.3s,baz=0.0,slow=10,SNR=1.7						
WHN	Wuhan	31.11	339	P	P	01 59 10.9	+5.1
NJ2	Nanjing	31.24	347	eP	P	01 59 08.0	+1.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JNU	Nakatsue	31.72	7	LR	LR	02 10 38.7	
	comp=Z,24nm,21.5s,baz=170,slow=34						
CMAR	Chiang Mai Arr	31.88	304	LR	LR	02 14 07.0	
	comp=Z,15nm,18.8s,baz=105,slow=40						
KSRS	Korea Array	35.80	2	P	P	01 59 46.5	0.0
	comp=Z,0.4nm,0.3s,baz=181,slow=10.0,SNR=2.3						
STKA	Stephens Creek	36.14	158	P	P	01 59 48.4	-1.2
	comp=Z,5.0nm,0.8s,baz=338,slow=7.8,SNR=9.0						
STKA	Stephens Creek	36.14	158	IAmb	IAmb	02 01 08.5	
	comp=Z,6.6nm,1.6s						
MJAR	Matsushiro Arr	36.50	16	P	P	01 59 51.2	-1.4
	comp=Z,0.7nm,0.3s,baz=168,slow=8.4,SNR=2.1						
MJAR				LR	LR	02 14 06.0	
	comp=Z,24nm,21.1s,baz=195,slow=35						
MAT	Matsushiro	36.50	16	P	P	01 59 51.3	-1.3
HHC	Hu-ho-hao-te	41.45	343	P	P	02 00 36.4	+2.4
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,38nm,5.1s						
USRK	Ussuriysk Ar.	42.79	6	P	P	02 00 46.2	+1.5
	comp=Z,1.6nm,0.6s,baz=200,slow=7.1,SNR=6.4						
SONM	Songino Array	49.34	342	P	P	02 01 36.8	+0.3
	comp=Z,1.5nm,0.8s,baz=160,slow=9.0,SNR=5.5						
WMQ	Urumqi	54.44	326	eP	P	02 02 15.2	+0.8
PETK	Petropavlovsk-	57.56	22	P	P	02 02 36.7	+0.3
	comp=Z,1.3nm,0.5s,baz=180,slow=5.0,SNR=8.4						
MK31	Makanchi Array	59.27	326	P	P	02 02 47.2	-1.4
MK31				IAmb	IAmb	02 02 54.8	
	comp=Z,2.9nm,0.8s						
MKAR	Makanchi Array	59.27	326	P	P	02 02 47.5	-1.1
	comp=Z,1.6nm,0.4s,baz=119,slow=7.7,SNR=25						
MAKZ	Makanchi	59.46	326	P	P	02 02 48.2	-1.6
KSH	Kashi	59.49	316	P	P	02 02 52.6	+2.3
KSH				pP	pP	02 03 05.3	+2.2
KSH				sP	sP	02 03 11.8	+3.4
KSH				pmax	pmax		
	comp=Z,14nm,0.5s						
KSH				pmax	pmax		
	comp=Z,130nm,5.0s						
KDJ	Kajisay	59.88	319	P	P	02 02 52.4	-0.7
ZALV	Zalesovo Beam	62.48	334	P	P	02 03 07.9	-2.3
	comp=Z,0.6nm,0.4s,baz=122,slow=8.1,SNR=2.6						
KURK	Kurchatov	63.51	328	P	P	02 03 16.2	-0.9
BRVK	Borovoye	69.15	328	P	P	02 03 52.8	-0.3
BRVK				IAmb	IAmb	02 04 03.5	
	comp=Z,9.3nm,1.4s						
NRIK	Noril'sk	72.53	346	P	P	02 04 13.2	-0.2
	comp=Z,4.5nm,0.7s,baz=132,slow=6.1,SNR=11						
NRIK				LR	LR	02 37 50.2	
	comp=Z,32nm,18.9s,baz=210,slow=37						
ARU	Arti	76.71	328	P	P	02 04 36.4	-1.4
RAYN	Ar Rayn	81.18	293	P	P	02 05 02.4	-0.7
RAYN				IAmb	IAmb	02 05 06.4	
	comp=Z,4.2nm,1.0s						
VNDA	Vanda	81.25	173	P	P	02 05 02.5	+0.2
	comp=Z,1.4nm,0.6s,baz=318,slow=7.7,SNR=16						
VNDA	Vanda	81.25	173	P	P	02 05 02.7	+0.4
MAW	Mawson	81.61	200	P	P	02 05 04.4	+0.1
	comp=Z,1.2nm,0.6s,baz=50,slow=7.9,SNR=2.2						
AKH	Akhalkalaki	83.78	311	P	P	02 05 17.7	+1.2
KBZ	Khabaz	84.36	314	P	P	02 05 18.7	-0.4
	comp=Z,3.2nm,0.8s,baz=120,slow=5.9,SNR=5.6						
ILAR	Eielson Array	87.19	25	P	P	02 05 31.9	-0.8
	comp=Z,0.2nm,0.4s,baz=257,slow=3.7,SNR=5.5						
KMBO	Kilima Mbogo	89.31	269	LR	LR	02 43 09.5	
	comp=Z,18nm,20.7s,baz=104,slow=34						
MESA	MESA	89.47	30	P	P	02 05 43.3	-0.5
BRTR	Keskin Array B	91.28	310	P	P	02 05 51.5	-1.2
	comp=Z,0.4nm,0.4s,baz=143,slow=41,SNR=2.0						
ARCES	ARCESS Array B	92.46	340	P	P	02 05 55.2	-2.1
	comp=Z,1.6nm,0.8s,baz=75,slow=6.4,SNR=4.0						
FINES	FINESS Array B	93.69	332	P	P	02 06 01.7	-1.3
	comp=Z,3.9nm,1.1s,baz=52,slow=5.4,SNR=4.1						
FINES				LR	LR	02 51 55.3	
	comp=Z,12nm,20.1s,baz=346,slow=38						
TORD	Torodi Ar. Bea	123.39	287	PKP	PKiKP	02 11 44.8	-0.2
	comp=Z,0.7nm,0.7s,baz=109,slow=2.4,SNR=11						

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*NNC **02** 02:11:02.0±2.2, 38°.38N×73°.81E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=18.3km s-min=11.1km az=156.0*
*IDC **02** 02:11:05.6±2.7, 38°.34N×74°.34E, h138km±20km, mb3.5/10, mb1 3.6/15, mb1mx3.4/50, mbtmp4.0/15, Error ellipse: s-maj=26.3km s-min=16.4km az=137.0*
*NEIC **02** 02:11:06.2±1.7, 38°.37N±0°.08×74°.31E±0°.08, h143km±9km, mb4.1/3, Error ellipse: s-maj=14.6km s-min=3.4km az=143.0*
*BJI **02** 02:11:06.2±0.0, 38°.38N×74°.47E, h142km, mB4.3/2, mb4.5/4*
ISC 02 02:11:05.1±0.5, **38°.24N**±0°.05×**74°.16E**±0°.05, **h152**km, **n79**, σ**2s.39**/87, **mb3.9**/10, **12C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	1.90	47	P	Pn	02 11 32.6	-6.7
KSH				S	Sn	02 11 51.6	-14
KSH				smax	smax		
	comp=N,5µm,0.3s						
KSH				smax	smax		
	comp=E,4µm,0.2s						
GAR	Garm	3.11	285		Pn	02 11 54.9	+1.0
NRN	Naryn	3.49	23		Pn	02 11 56.9	-2.1
AML	Almayashu	3.91	355	P	Pn	02 12 04.2	-0.3
	SNR=348						
KZA	Kyzart	3.92	12	P	Pn	02 12 03.7	-1.0
	SNR=76						
CHGR	Chuyangaron	3.95	278		Pn	02 12 05.6	+0.8
UCH	Uchtor	3.99	4	P	Pn	02 12 05.3	-0.4
	SNR=88						
ULHL	Ulahol	4.31	21	P	Pn	02 12 08.6	-1.0
	SNR=34						
AAK	Ala-Archa	4.40	3	P	Pn	02 12 10.5	-0.3
	7.9nm,0.3s,baz=173,slow=8.4,SNR=103						
AAK				S	Sn	02 12 58.4	-3.5
	3.6nm,0.3s,baz=163,slow=15,SNR=3.8						
AAK	Ala-Archa	4.40	3	P	Pn	02 12 10.7	0.0
	SNR=46						
AAK	Ala-Archa	4.40	3	⇑P	Pn	02 12 10.4	-0.3
	28nm,0.7s						
AAK				⇓S	Sn	02 13 01.2	-0.7
	47nm,0.8s						
AAK	Ala-Archa	4.40	3		Pn	02 12 10.3	-0.4
EKS2	Erkin-Say	4.43	356	P	Pn	02 12 11.2	+0.1
	SNR=21						
KBK	Karagaybulak	4.45	7	P	Pn	02 12 11.4	-0.1
	SNR=39						
BOOM	Boomskoye usch	4.46	17		Pn	02 12 10.7	-0.8
KDJ	Kajisay	4.52	30		Pn	02 12 10.8	-1.5
FRU1	Bishkek	4.58	4		Pn	02 12 13.0	0.0
CEP	Cherat	4.77	203	P	Pn	02 12 17.6	+2.0
CHMS	Chumysh	4.78	5	P	Pn	02 12 15.5	0.0
	SNR=65						
TKM2	Tokmak 2	4.80	13	P	Pn	02 12 15.5	-0.6
	SNR=74						
TKM2	Tokmak 2	4.80	13	⇓P	Pn	02 12 15.3	-0.8
	60nm,0.4s						
TKM2				⇑S	Sn	02 13 10.7	-0.8
	68nm,0.8s						
USP	Ospenovka	5.03	3	P	Pn	02 12 18.5	-0.4
	SNR=17						
PRZ	Przheval'sk	5.33	36	Pn	Pn	02 12 21.7	-1.3
MDOK	Medeo	5.39	23	⇑P	Pn	02 12 22.2	-1.5
	8.7nm,0.6s						
MDOK				⇓S	Sn	02 13 26.7	+1.6
	48nm,1.4s						
KBL	Kabul	5.54	230		Pn	02 12 29.0	+3.2
KK31	Karatay Array	5.60	331	⇑P	Pn	02 12 25.2	-1.2
	7.7nm,0.2s,baz=138,slow=8.9,SNR=355						
KK31				⇑S	Sn	02 13 26.3	-3.6
	43nm,0.6s,baz=157,slow=20,SNR=14						
KK31	Karatay Array	5.60	331		Pn	02 12 26.7	+0.3
KKAR	Karatay Array	5.60	331		Pn	02 12 26.7	+0.3
THW	Thamme Wali	5.78	201	P	Pn	02 12 29.9	+1.0
THN	Thein Dam	5.93	167	ex	Pn	02 12 32.6	+1.8
THN				ex	Sn	02 13 37.0	-0.9
DHRM	DHARAMSHALA	6.22	163	ex	Pn	02 12 34.2	-0.8
DHRM				ex	x	02 13 38.7	
SARP	Sargodha	6.42	191	P	Pn	02 12 37.7	+0.3
PDGK	Podgornoye	6.50	37	⇓P	Pn	02 12 37.6	-0.9
	6.5nm,0.6s						
PDGK				⇑S	Sn	02 13 57.9	+6.3
	41nm,1.0s						
SMLA	Simla	7.51	160	ex	Pn	02 12 50.4	-1.5
SMLA				ex	x	02 14 07.2	
MAKZ	Makanchi	10.32	31	Pn	Pn	02 13 27.4	-1.8
HRA	Herat	10.36	252		Pn	02 13 32.1	+2.2
MK31	Makanchi Array	10.44	32		Pn	02 13 29.3	-1.4
MKAR	Makanchi Array	10.44	32	P	Pn	02 13 29.5	-1.2
	0.2nm,0.3s,baz=210,slow=14,SNR=34						
WMQ	Urumqi	11.64	57	eP	Pn	02 13 44.6	-1.9
PYUN	Piuthan	12.52	141	eP	Pn	02 13 54.4	-3.8
	74nm,0.4s						
GEYT	Alibeck	12.65	274	P	Pn	02 13 59.0	-0.7
	3.6nm,0.3s,baz=100,slow=9.4,SNR=40						
GEYT				S	Sn	02 16 07.7	-12
	0.1nm,0.3s,baz=91,slow=28,SNR=1.9						
GYA0B	ALIBECK ARRAY	12.65	274	⇑P	Pn	02 13 58.9	-0.7
GYA0B				⇑S	Sn	02 16 18.6	-1.0
GYA0B	ALIBECK ARRAY	12.65	274		Pn	02 13 58.8	-0.9
DANN	Dangsing	12.71	138	eP	Pn	02 13 56.6	-4.1
	43nm,0.4s						
KURBB	Kurchatov Arra	12.77	13	P	Pn	02 13 57.9	-3.1
	0.1nm,0.3s,baz=203,slow=11,SNR=15						
KURK	Kurchatov	12.87	13		Pn	02 13 59.2	-3.1
KOLN	Koldanda	13.09	140	eP	Pn	02 14 02.0	-3.6
	30nm,0.4s						
GKN	Gorkha	13.45	136	eP	Pn	02 14 06.7	-3.4
	21nm,0.2s						
KKN	Kakani	13.97	135	eP	Pn	02 14 12.7	-4.1
	21nm,0.5s						
DMN	Daman	14.02	136	eP	Pn	02 14 13.5	-3.9
	11nm,0.4s						
PKIN	Phulchoki	14.20	135	eP	Pn	02 14 15.6	-4.1
	15nm,0.4s						
PKI	Pulchoki	14.21	135	eP	Pn	02 14 16.0	-3.9
	17nm,0.6s						
GUN	Gumba	14.22	133	eP	Pn	02 14 16.5	-3.5
	9.5nm,0.3s						
JIRN	Jiri	14.59	133	eP	Pn	02 14 20.9	-3.7
	38nm,0.4s						
BVAR	Borovoye Array	15.02	351	P	Pn	02 14 28.0	-1.5
	3.3nm,0.3s,baz=159,slow=9.4,SNR=43						
AB31	Akbulak array	15.04	322	⇑P	P	02 14 30.8	-0.6
	4.6nm,0.3s,baz=133,slow=12,SNR=51						
AB31				⇑S	Sn	02 17 15.4	-1.2
	2.4nm,0.6s,baz=131,slow=25,SNR=8.2						
BRVK	Borovoye	15.06	351		Pn	02 14 29.1	-0.8
RAMN	Ramite	15.36	133	eP	Pn	02 14 30.7	-3.4
	19nm,0.4s						
TAPN	Taplejung	15.72	130	eP	Pn	02 14 34.6	-4.0
	6.4nm,0.4s						
ODAN	Odare	15.89	132	eP	Pn	02 14 36.5	-4.1
	18nm,0.5s						
AKTO	Aktyubinsk	16.75	322	P	Pn	02 14 52.5	+1.8
	0.4nm,0.3s,baz=127,slow=15,SNR=12						
AKTO				S	S	02 17 46.7	-10
	0.1nm,0.3s,baz=38,slow=20,SNR=2.1						
AKTO	Aktyubinsk	16.75	322	⇑P	Pn	02 14 52.4	+1.8
	3.1nm,0.7s						
AKTO				⇑S	S	02 17 56.2	-0.3
	2.2nm,0.6s						
ZAA0	Zalesovo Array	17.33	22	P	P	02 14 55.9	-0.7
ZAA0				IAmb	IAmb	02 14 57.3	
	comp=Z,8.5nm,0.9s						
ZALV	Zalesovo Beam	17.33	22	P	P	02 14 56.7	+0.1
	comp=Z,2.7nm,0.3s,baz=214,slow=12,SNR=21						
WSAR	Wadi Sarin	20.00	226	P	Pn	02 15 30.3	+1.1
	comp=Z,2.2nm,0.5s,baz=86,slow=4.8,SNR=6.9						
GTA	Gaotai	20.00	79	P	Pn	02 15 29.8	+0.5
GTA				pP	pP	02 15 54.4	+1.3
GTA				sP	sP	02 16 13.2	+0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARU	Arti	20.96	335	P	P	02 15 37.8	+2.0
ARU				IAmb	IAmb	02 15 42.6	
	comp=Z,7.9nm,1.2s						
SONM	Songino Array	25.28	57	P	P	02 16 18.0	+0.7
	comp=Z,1.4nm,0.4s,baz=263,slow=12,SNR=3.4						
HHC	Hu-ho-hao-te	28.82	73	P	P	02 16 48.6	-0.4
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,42nm,5.2s						
NRIK	Noril'sk	31.99	9	P	P	02 17 17.9	+1.5
	comp=Z,0.8nm,0.2s,baz=168,slow=6.8,SNR=4.0						
WHN	Wuhan	33.83	91	P	P	02 17 47.4	+15
FINES	FINESS Array B	37.51	324	P	P	02 18 06.2	+2.5
	comp=Z,0.7nm,0.4s,baz=109,slow=9.7,SNR=11						
ARCES	ARCESS Array B	40.54	336	P	P	02 18 31.4	+2.5
	comp=Z,1.8nm,0.5s,baz=109,slow=8.3,SNR=28						
NOA	NORSAR Array B	44.54	322	P	P	02 19 03.6	+2.2
	comp=Z,0.3nm,0.5s,baz=91,slow=8.5,SNR=3.7						
TORD	Torodi Ar. Bea	68.26	270	P	P	02 21 51.6	+1.9
	comp=Z,1.1nm,0.4s,baz=47,slow=5.6,SNR=33						
INK	Inuvik	71.76	10	P	P	02 22 11.7	+1.5
	comp=Z,0.8nm,0.5s,baz=335,slow=5.6,SNR=9.6						
INK	Inuvik	71.76	10	IAmb	IAmb	02 23 14.3	
	comp=Z,12nm,1.9s						
ILAR	Eielson Array	72.40	17	P	P	02 22 14.7	+0.5
	comp=Z,0.6nm,0.8s,baz=308,slow=4.3,SNR=5.7						
YKA	Yellowknife Ar	79.36	4	P	P	02 22 55.0	+1.5
	comp=Z,0.6nm,0.4s,baz=347,slow=5.4,SNR=9.4						

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*IDC **02** 02:16:15.1±1.4, 38°.09N×20°.85E, h0km, mb3.7/3, mb1 3.5/5, mb1mx3.3/41, mbtmp3.4/5, ML3.3/1, Error ellipse: s-maj=33.5km s-min=25.4km az=138.0*
*ATH **02** 02:16:17.0, 37°.82N×21°.09E, h8km±1km, ML3.2/13, Error ellipse: s-maj=1.7km s-min=0.7km az=8.0*
*THE **02** 02:16:17.4, 37°.82N×21°.07E, h15km±1km, ML3.3/25, Error ellipse: s-maj=1.1km s-min=0.5km az=252.0*
*PDG **02** 02:16:18.9±0.2, 38°.08N×20°.91E, h10km±2km, ML3.4/12, Error ellipse: s-maj=3.3km s-min=0.8km az=90.0*
ISC 02 02:16:17.5±0.7, **37°.90N**±0°.02×**21°.08E**±0°.02, **h17**km±4km, **n134**, σ**1s.21**/187, **mb3.8**/3, **9C-5D, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VTN	Vitineika	0.09	80	P	Pg	02 16 20.5	-0.4
VTN				S	Sg	02 16 23.6	+0.4
VTN	Vitineika	0.09	80	P	Pg	02 16 20.6	-0.4
VTN				S	Sg	02 16 22.9	-0.3
ZAK2	Zakynthos	0.18	231	P	Pg	02 16 21.9	-0.2
ZAK2				S	Sg	02 16 24.3	-0.8
KFL	Anninata	0.31	312	P	Pg	02 16 24.4	+0.2
KFL				S	Sb	02 16 29.7	+0.3
	5µm,0.3s						
KFL	Anninata	0.31	312	P	Pg	02 16 24.5	+0.4
KFL				AML	AML	02 16 36.3	
	comp=N,9643µm,0.3s						
KFL				AML	AML	02 16 37.2	
	comp=E,10669µm,0.3s						
KRI1	kERI	0.32	221	P	Pg	02 16 23.6	-0.7
KRI1				S	Sg	02 16 27.4	-1.4
	comp=E,21µm,0.3s						
RLS	Riolos of Patr	0.34	63	P	Pg	02 16 24.3	-0.5
RLS				S	Sb	02 16 31.0	+0.7
	comp=E,6µm,0.4s						
RLS	Riolos of Patr	0.34	63	P	Pg	02 16 24.3	-0.5
RLS				S	Sb	02 16 30.1	-0.2
RLS				AML	AML	02 16 33.2	
	comp=N,13480µm,0.4s						
RLS				AML	AML	02 16 33.6	
	comp=E,10964µm,0.5s						
VLS	Valsamata	0.47	306	P	Pg	02 16 26.8	-0.3
VLS				S	Sb	02 16 36.0	+1.9
VLS	Valsamata	0.47	306	P	Pg	02 16 27.0	-0.1
VLS				S	Sb	02 16 35.4	+1.3
VLS				AML	AML	02 16 41.7	
	comp=E,2610µm,0.2s						
VLS				AML	AML	02 16 43.2	
	comp=N,3974µm,0.5s						
DRO	Drossia	0.50	84	P	Pg	02 16 26.4	-1.2
DRO				S	Sg	02 16 35.7	+1.3
	comp=N,10µm,0.4s						
DRO	Drossia	0.50	84	P	Pg	02 16 26.6	-1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DRO				S	**Sg**	**02 16 33.4**	**-1.0**
DRO				AML	AML	02 16 37.9	
	comp=N,20491µm,0.5s						
DRO				AML	AML	02 16 38.4	
	comp=E,21453µm,0.3s						
KEF2	**Argostoli. Kep**	**0.54**	**300**	P	**Pg**	**02 16 28.2**	**-0.1**
ARG2	**Argostoli**	**0.54**	**301**	P	**Pg**	**02 16 28.4**	**+0.1**
ARG2				S	**Sb**	**02 16 38.2**	**+2.2**
	comp=E,8µm,0.4s						
ARGA	**Argostoli. Kep**	**0.55**	**300**	P	**Pg**	**02 16 28.7**	**+0.3**
ARGA				S	**Sb**	**02 16 37.3**	**+1.1**
LXRA	**Lixouri, Kepha**	**0.59**	**301**	P	**Pg**	**02 16 29.6**	**+0.5**
LXRA				S	**Sb**	**02 16 39.2**	**+1.8**
KEF1	**Kardakata, Kep**	**0.61**	**308**	P	**Pg**	**02 16 29.5**	**-0.1**
CHV1	**Chavriata, Kef**	**0.62**	**297**	P	**Pg**	**02 16 29.8**	**+0.1**
CHV1				S	**Sb**	**02 16 39.6**	**+1.4**
	comp=E,10µm,0.5s						
AMT	**Artemida-Makis**	**0.62**	**126**	P	Pg	02 16 28.1	-1.7
AMT	**Artemida-Makis**	**0.62**	**126**	P	Pg	02 16 28.2	-1.6
AMT				S	**Sg**	**02 16 36.3**	**-1.8**
AMT				AML	AML	02 16 38.5	
	comp=N,13571µm,0.6s						
AMT				AML	AML	02 16 39.1	
	comp=E,9904µm,0.6s						
KEF4	**Livadi, Kephal**	**0.63**	**305**	P	**Pg**	**02 16 29.9**	**0.0**
KEF4				S	**Sb**	**02 16 40.0**	**+1.5**
AST1	**Astakos**	**0.64**	**1**	P	**Pn**	**02 16 30.7**	**-1.1**
AST1				S	**Sb**	**02 16 42.3**	**+3.5**
	comp=E,4µm,0.2s						
VSK1	**VASILIKIADES**	**0.65**	**321**	P	**Pb**	**02 16 30.5**	**+0.1**
AGT1	**Agia Thekli**	**0.65**	**303**	P	**Pg**	**02 16 30.2**	**-0.1**
AGT1				S	**Sb**	**02 16 41.0**	**+1.9**
	comp=E,5µm,0.6s						
KEF3	**Kipouria, Keph**	**0.65**	**298**	P	**Pg**	**02 16 30.3**	**0.0**
UPR	**University Cam**	**0.68**	**55**	P	**Pn**	**02 16 32.6**	**+0.3**
UPR				S	**Sn**	**02 16 42.5**	**+0.1**
UPR	**University Cam**	**0.68**	**55**	P	**Pn**	**02 16 32.0**	**-0.3**
FSK	**Fiskardo**	**0.69**	**324**	P	**Pb**	**02 16 30.8**	**-0.3**
FSK				S	**Sn**	**02 16 43.7**	**+0.9**
	comp=E,2µm,0.7s						
FSK	**Fiskardo**	**0.69**	**324**	P	**Pb**	**02 16 30.8**	**-0.3**
FSK				AML	AML	02 16 52.9	
	comp=E,3426µm,0.7s						
FSK				AML	AML	02 16 55.7	
	comp=N,2733µm,0.6s						
LAKA	**Lakka**	**0.79**	**64**	P	**Pg**	**02 16 31.9**	**-1.0**
LAKA				S	**Sn**	**02 16 46.5**	**+1.3**
	comp=N,2µm,0.9s						
LAKA	**Lakka**	**0.79**	**64**	P	**Pg**	**02 16 32.1**	**-0.8**
LAKA				AML	AML	02 16 47.8	
	comp=N,3052µm,0.6s						
LAKA				AML	AML	02 16 47.8	
	comp=E,3286µm,1.0s						
MGNA	**Meganis**	**0.79**	**343**	P	**Pn**	**02 16 32.9**	**-0.9**
EVGI	**Lefkada island**	**0.79**	**335**	P	**Pb**	**02 16 32.9**	**+0.1**
EVGI				S	**Sn**	**02 16 46.0**	**+0.7**
EVGI	**Lefkada island**	**0.79**	**335**	P	**Pb**	**02 16 32.9**	**+0.1**
EFP	**Efpalio**	**0.84**	**51**	P	**Pb**	**02 16 33.3**	**-0.3**
EFP				S	**Sn**	**02 16 48.2**	**+1.8**
	comp=E,2µm,0.5s						
EFP	**Efpalio**	**0.84**	**51**	P	**Pb**	**02 16 33.7**	**+0.1**
EFP				S	**Sn**	**02 16 47.1**	**+0.7**
EFP				AML	AML	02 16 50.1	
	comp=N,5022µm,0.6s						
EFP				AML	AML	02 16 50.3	
	comp=E,2560µm,0.4s						
KLV	**Kalavryta, Ach**	**0.86**	**80**	P	**Pg**	**02 16 33.5**	**-0.8**
KLV				S	**Sb**	**02 16 46.6**	**+1.4**
	comp=E,1µm,0.5s						
KLV	**Kalavryta, Ach**	**0.86**	**80**	P	**Pg**	**02 16 32.7**	**-1.6**
KLV				S	**Sg**	**02 16 45.5**	**-0.1**
KLV				AML	AML	02 16 52.3	
	comp=N,2157µm,0.5s						
KLV				AML	AML	02 16 53.7	
	comp=E,1771µm,0.6s						
ALIK	**Aliki, Aigiali**	**0.89**	**66**	P	**Pg**	**02 16 34.6**	**-0.2**
ALIK				S	**Sn**	**02 16 48.6**	**+0.9**
TRIZ	**Trizonia**	**0.91**	**59**	P	**Pg**	**02 16 34.4**	**-0.8**
TRIZ	**Trizonia**	**0.91**	**59**	P	**Pg**	**02 16 34.5**	**-0.7**
SERG	**Sergoula**	**0.93**	**56**	P	**Pb**	**02 16 34.9**	**-0.2**
SERG				S	**Sn**	**02 16 50.1**	**+1.5**
	comp=E,2µm,0.4s						
SERG	**Sergoula**	**0.93**	**56**	P	**Pb**	**02 16 35.0**	**-0.1**
SERG				S	**Sn**	**02 16 48.5**	**-0.1**
SERG				AML	AML	02 16 52.3	
	comp=N,2764µm,0.2s						
SERG				AML	AML	02 16 52.8	
	comp=E,4368µm,0.6s						
LKD2	**Lefkada island**	**0.95**	**340**	P	**Pn**	**02 16 35.6**	**-0.4**
LKD2				S	**Sn**	**02 16 50.7**	**+1.5**
	comp=E,2µm,0.5s						
LKD2	**Lefkada island**	**0.95**	**340**	P	**Pn**	**02 16 35.7**	**-0.3**
ANX	**Ano Chora**	**0.96**	**44**	P	**Pn**	**02 16 35.8**	**-0.5**
ANX				S	**Sn**	**02 16 50.7**	**+1.2**
	comp=E,2µm,0.6s						
ANX	**Ano Chora**	**0.96**	**44**	P	**Pn**	**02 16 35.8**	**-0.5**
ANX				AML	AML	02 16 55.1	
	comp=N,4361µm,0.5s						
ANX				AML	AML	02 16 55.4	
	comp=E,4204µm,0.5s						
KALE	**Kalithea**	**0.97**	**59**	P	**Pg**	**02 16 35.5**	**-0.8**
KALE				S	**Sn**	**02 16 51.5**	**+1.7**
	comp=E,2µm,0.6s						
KALE	**Kalithea**	**0.97**	**59**	P	**Pg**	**02 16 35.6**	**-0.7**
ITM	**Ithomi**	**0.99**	**137**	P	Pb	02 16 34.0	-2.1
ITM				S	**Sb**	**02 16 49.0**	**+0.2**
	comp=E,1µm,0.7s						
ITM	**Ithomi**	**0.99**	**137**	P	Pb	02 16 34.4	-1.7
TRIP	**Tripoli**	**1.02**	**111**	P	**Pb**	**02 16 35.5**	**-1.1**
TRIP				S	**Sb**	**02 16 51.5**	**+1.7**
	comp=E,1µm,0.6s						
TRIP	**Tripoli**	**1.02**	**111**	P	**Pb**	**02 16 35.6**	**-1.1**
TRIP				S	**Sb**	**02 16 48.5**	**-1.3**
TRIP				AML	AML	02 16 53.7	
	comp=E,2303µm,0.6s						
TRIP				AML	AML	02 16 59.9	
	comp=N,2580µm,0.7s						
PYL	**PYLOS**	**1.13**	**152**	P	Pn	02 16 36.1	-2.5
PYL				S	**Sb**	**02 16 53.0**	**-0.1**
	comp=N,642nm,0.5s						
PYL	**PYLOS**	**1.13**	**152**	P	Pn	02 16 36.4	-2.2
PYL				AML	AML	02 16 59.0	
	comp=E,1840µm,0.4s						
PYL				AML	AML	02 16 59.3	
	comp=N,1191µm,0.4s						
VLX	**Vlachokerasia**	**1.16**	**117**	P	**Pn**	**02 16 38.2**	**-0.8**
VLX				S	**Sb**	**02 16 53.9**	**0.0**
	comp=N,1µm,0.5s						
VLX	**Vlachokerasia**	**1.16**	**117**	P	**Pn**	**02 16 38.3**	**-0.8**
EVR	**Evrytania**	**1.17**	**29**	P	**Pn**	**02 16 39.5**	**+0.4**
EVR				S	**Sn**	**02 16 57.3**	**+2.6**
	comp=N,608nm,0.5s						
EVR	**Evrytania**	**1.17**	**29**	P	**Pn**	**02 16 39.7**	**+0.6**
MAKR	**Makrakomi, Fth**	**1.38**	**36**	P	**Pg**	**02 16 43.9**	**-0.3**
MAKR				S	**Sg**	**02 17 02.2**	**-0.1**
	comp=N,978nm,0.6s						
MAKR	**Makrakomi, Fth**	**1.38**	**36**	P	**Pg**	**02 16 44.0**	**-0.3**
PROD	**Prodromos**	**1.48**	**75**	P	**Pb**	**02 16 45.7**	**+1.1**
AGG	**Agios Georgios**	**1.49**	**41**	P	**Pb**	**02 16 44.1**	**-0.6**
AGG				S	**Sg**	**02 17 05.4**	**-0.2**
	comp=N,468nm,0.7s						
AGG	**Agios Georgios**	**1.49**	**41**	P	**Pg**	**02 16 45.3**	**-0.9**
LOUT	**Loutraki**	**1.50**	**86**	P	**Pn**	**02 16 44.1**	**+0.5**
LOUT	**Loutraki**	**1.50**	**86**	P	**Pb**	**02 16 46.2**	**+1.3**
DYR	**Agios Nikonas**	**1.51**	**138**	P	**Pn**	**02 16 44.4**	**+0.6**
DYR	**Agios Nikonas**	**1.51**	**138**	P	**Pn**	**02 16 44.4**	**+0.6**
LKR	**Lokris**	**1.69**	**63**	P	**Pn**	**02 16 47.2**	**+1.0**
LKR	**Lokris**	**1.69**	**63**	P	**Pb**	**02 16 48.7**	**+0.7**
KRND	**KRANIDI**	**1.72**	**107**	P	**Pn**	**02 16 47.5**	**+0.8**
KRND	**KRANIDI**	**1.72**	**107**	P	**Pn**	**02 16 49.0**	**+2.3**
IGT	**Igoumenitsa**	**1.73**	**341**	P	**Pg**	**02 16 48.6**	**-2.2**
IGT				S	**Sg**	**02 17 10.7**	**-2.6**
	comp=N,218nm,0.6s						
IGT	**Igoumenitsa**	**1.73**	**341**	P	**Pg**	**02 16 49.6**	**-1.2**
DID	**Didima**	**1.76**	**102**	P	**Pn**	**02 16 48.2**	**+1.0**
DID				S	**Sn**	**02 17 08.6**	**-0.6**
	comp=N,530nm,0.8s						
DID	**Didima**	**1.76**	**102**	P	**Pn**	**02 16 49.4**	**+2.3**
VIL2	**Platees**	**1.76**	**79**	P	**Pb**	**02 16 50.7**	**+1.4**
JAN	**Janina**	**1.76**	**354**	P	**Pb**	**02 16 48.5**	**-0.9**
JAN	**Janina**	**1.76**	**354**	P	**Pg**	**02 16 51.4**	**0.0**
VILL	**Villia**	**1.78**	**81**	P	**Pn**	**02 16 49.0**	**+1.4**
THL	**Klokotos Trika**	**1.81**	**23**	P	**Pb**	**02 16 48.8**	**-1.5**
THL	**Klokotos Trika**	**1.81**	**23**	P	**Pg**	**02 16 52.1**	**-0.3**
VLI	**Veliai**	**1.90**	**128**	P	**Pn**	**02 16 48.7**	**-0.3**
VLI	**Veliai**	**1.90**	**128**	P	**Pn**	**02 16 50.7**	**+1.7**
KPRO	**Kipourio**	**2.06**	**6**	P	**Pb**	**02 16 53.0**	**-1.5**
KPRO	**Kipourio**	**2.06**	**6**	P	**Pg**	**02 16 55.8**	**-1.3**
KEK	**Kerkira**	**2.07**	**331**	P	**Pb**	**02 16 53.0**	**-1.6**
KEK	**Kerkira**	**2.07**	**331**	P	**Pb**	**02 16 54.4**	**-0.2**
MRKA	**Markates**	**2.13**	**67**	P	**Pb**	**02 16 55.7**	**0.0**
VLY	**Voula,Athens**	**2.15**	**90**	P	**Pn**	**02 16 55.0**	**+2.5**
NEO	**Neokhori**	**2.19**	**49**	P	**Pn**	**02 16 54.6**	**+1.5**
NEO	**Neokhori**	**2.19**	**49**	P	**Pb**	**02 16 56.8**	**+0.1**
PTL	**Penteli**	**2.21**	**85**	S	**Sn**	**02 17 21.6**	**+1.3**
PTL	**Penteli**	**2.21**	**85**	P	**Pn**	**02 16 56.4**	**+3.0**
SKIA	**Skiathos**	**2.26**	**55**	P	**Pb**	**02 16 57.8**	**0.0**
NEST	**Nestorio**	**2.51**	**359**	P	**Pg**	**02 17 02.5**	**-3.2**
KARY	**Karystos**	**2.66**	**86**	P	**Pn**	**02 17 03.2**	**+3.6**
PAIG	**Paliouri**	**2.87**	**44**	P	**Pb**	**02 17 05.3**	**-2.8**
OHR	**Ohrid**	**3.21**	**356**	*i* Pn	**Pg**	**02 17 17.0**	**-2.1**
OHR	**Ohrid**	**3.21**	**356**	*i* Pn	**Pg**	**02 17 17.0**	**-2.1**
VAY	**Valandovo**	**3.60**	**18**	*i* Pn	**Pb**	**02 17 19.5**	**-1.2**
VAY	**Valandovo**	**3.60**	**18**	*i* Pn	**Pb**	**02 17 19.5**	**-1.2**
TIP	**Timpagrande**	**3.62**	**292**	P	**Pn**	**02 17 13.7**	**+0.9**
TIP				S	**Sn**	**02 17 57.2**	**+2.0**
SKO	**Skopje**	**4.08**	**4**	*i* Pn	**Pg**	**02 17 35.5**	**-0.1**
SKO	**Skopje**	**4.08**	**4**	*i* Pn	**Pg**	**02 17 35.5**	**-0.1**
ULC	**Ulcinj**	**4.29**	**341**	⇑*i*Pn	**Pn**	**02 17 23.0**	**+0.9**
ULC				*i* Sn	**Sn**	**02 18 11.3**	**-0.5**
DRME	**Dracevica, Mon**	**4.52**	**342**	⇓*i*Pn	**Pn**	**02 17 26.1**	**+1.0**
DRME				*i* Sn	**Sn**	**02 18 16.8**	**-0.5**
BUM	**Brajici-Budva**	**4.70**	**340**	⇑*i*Pn	**Pn**	**02 17 28.6**	**+0.9**
BUM				*i* Sn	**Sn**	**02 18 21.1**	**-0.8**
TTG	**Podgorica**	**4.73**	**343**	⇑*i*Pn	**Pn**	**02 17 29.0**	**+0.9**
TTG				*i* Sn	**Sn**	**02 18 22.1**	**-0.4**
PVY	**Plav**	**4.77**	**350**	⇑*i*Pn	**Pn**	**02 17 29.5**	**+0.9**
PVY				*i* Sn	**Sn**	**02 18 23.6**	**+0.1**
CEME	**Cevo**	**4.93**	**341**	⇑*i*Pn	**Pn**	**02 17 31.5**	**+0.7**
CEME				*i* Sn	**Sn**	**02 18 26.6**	**-0.8**
HCY	**Herceg Novi**	**4.95**	**337**	⇓*i*Pn	**Pn**	**02 17 31.8**	**+0.7**
HCY				*i* Sn	**Sn**	**02 18 26.9**	**-1.1**
IVA	**Berane**	**5.05**	**350**	⇓*i*Pn	**Pn**	**02 17 33.8**	**+1.3**
IVA				*i* Sn	**Sn**	**02 18 30.0**	**-0.4**
KOME	**Kolasin**	**5.09**	**347**	⇑*i*Pn	**Pn**	**02 17 33.8**	**+0.8**
KOME				*i* Sn	**Sn**	**02 18 30.8**	**-0.5**
NKME	**Niksic**	**5.12**	**342**	⇑*i*Pn	**Pn**	**02 17 34.3**	**+0.8**
NKME				*i* Sn	**Sn**	**02 18 31.5**	**-0.7**
NKY	**Niksic**	**5.16**	**343**	⇑*i*Pn	**Pn**	**02 17 34.9**	**+0.9**
NKY				*i* Sn	**Sn**	**02 18 32.1**	**-1.1**
DBRK	**Dubrovnik**	**5.26**	**336**	*e*Pn	**Pn**	**02 17 37.8**	**+2.4**
DBRK				Sn	**Sn**	**02 18 35.5**	**-0.1**
BRY	**Bratogost**	**5.36**	**340**	⇓*i*Pn	**Pn**	**02 17 37.1**	**+0.3**
BRY				*i* Sn	**Sn**	**02 18 37.0**	**-1.1**
UPM	**Unac-Piva**	**5.55**	**343**	⇑*i*Pn	**Pn**	**02 17 40.5**	**+1.1**
UPM				*i* Sn	**Sn**	**02 18 41.5**	**-1.4**
PLE	**Pljevlja**	**5.57**	**347**	⇓*i*Pn	**Pn**	**02 17 40.8**	**+1.1**
PLE				*i* Sn	**Sn**	**02 18 42.8**	**-0.6**
STON	**Ston**	**5.59**	**334**	*e*Pn	**Pn**	**02 17 42.2**	**+2.3**
STON				Sn	**Sn**	**02 18 44.2**	**+0.6**
MAKA	**Makarska**	**6.20**	**331**	*e*Pn	**Pn**	**02 17 50.2**	**+2.0**
MAKA				Sn	**Sn**	**02 18 58.1**	**-0.6**
KIJV	**Kijevo**	**7.05**	**331**	*e*Pn	**Pn**	**02 18 00.7**	**+0.8**
KIJV				Sn	**Sn**	**02 19 19.5**	**0.0**
ZIRJ	**Zirje**	**7.07**	**326**	*e*Pn	**Pn**	**02 17 59.9**	**-0.2**
MORI	**Morici**	**7.21**	**327**	*e*Pn	**Pn**	**02 18 03.4**	**+1.3**
UDBI	**Udbina**	**7.74**	**331**	*i* Pn	**Pn**	**02 18 10.4**	**+1.1**
SOKA	**Soboth**	**9.84**	**335**	*e*Pn	**Pn**	**02 18 41.2**	**+2.9**
	comp=N,0.2nm,0.2s						
OBKA	**Obir**	**9.87**	**333**	*e*Pn	Pn	02 18 43.6	+5.0
	comp=N,1.5nm,0.5s						
WATA	**Walderalm**	**11.73**	**326**	*e*Pn	Pn	02 19 09.4	+5.2
	comp=N,0.5nm,0.2s						
GERES	**GERESS Array B**	**12.18**	**336**	Pn	**Pn**	**02 19 07.6**	**-2.5**
	comp=N,0.1nm,0.3s,baz=156,slow=15,SNR=1.7						
ESDC	**Sonseca Array**	**19.59**	**283**	P	**P**	**02 20 42.8**	**-1.9**
	baz=80,slow=12,SNR=1.4						
TORD	**Torodi Ar. Bea**	**30.10**	**220**	P	**P**	**02 22 26.5**	**+0.3**
	comp=N,1.2nm,0.7s,baz=33,slow=8.8,SNR=6.7						
MKAR	**Makanchi Array**	**45.07**	**58**	P	**P**	**02 24 33.0**	**+0.6**
	comp=N,0.2nm,0.4s,baz=267,slow=8.4,SNR=2.7						
ZALV	**Zalesovo Beam**	**45.55**	**48**	P	**P**	**02 24 36.3**	**+0.3**
	comp=N,0.8nm,0.3s,baz=278,slow=8.4,SNR=3.2						

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*MDD **02** 02:24:32.2±0.2, 29.°16N×14.°46W, h30km, mbLg3.0/12, Error ellipse: s-maj=3.2km s-min=0.9km az=172.0, PRXIMO TT-model: canary*

*INMG **02** 02:24:33.7±1.0, 29.°16N×14.°42W, h5km, ML2.7, Error ellipse: s-maj=2.6km s-min=2.3km az=108.0*

ISC 02 02:24:23.0±0.9**, 29.°45N**±0.°04**×14.°60W**±0.°04**, h10km, n18,** σ**1.38**/32**, 3C-2D, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFAM	**Famara**	**0.99**	**109**	⇓P	**Pn**	**02 24 45.6**	**+2.6**
	26nm,0.2s,SNR=18						
EFAM				S	**Sb**	**02 24 55.0**	**-0.3**
	38nm,0.2s,SNR=7.9						
CFUE	**Fuerteventura**	**0.99**	**144**	⇓P	**Pn**	**02 24 43.7**	**+0.6**
	410nm,0.2s,SNR=18						
CFUE				S	**Sg**	**02 24 51.8**	**-3.3**
	1µm,0.1s,SNR=7.9						
GGC	**Guia Canaria**	**1.61**	**215**	⇑P	**Pg**	**02 24 54.9**	**+1.0**
	38nm,0.1s,SNR=18						
GGC				S	**Sn**	**02 25 10.8**	**-1.6**
	52nm,0.2s,SNR=7.9						
EOSO	**Osorio**	**1.61**	**212**	P	**Pg**	**02 24 54.9**	**+0.9**
	31nm,0.1s,SNR=56						
EOSO				S	**Sn**	**02 25 11.0**	**-1.5**
	21nm,0.2s,SNR=6.0						
EBAJ	**Bajamar**	**1.78**	**240**	P	**Pg**	**02 24 58.7**	**+1.6**
	0.7nm,0.1s,SNR=8.2						
EBAJ				S	**Sb**	**02 25 18.4**	**+0.3**
	8.7nm,0.1s,SNR=9.1						
CGUI	**Guimar, Teneri**	**1.97**	**236**	⇑P	**Pg**	**02 25 01.2**	**+0.4**
	19nm,0.1s,SNR=18						
CGUI				S	**Sn**	**02 25 21.9**	**+0.6**
	70nm,0.2s,SNR=7.9						
MACI	**Morro de la Ar**	**2.06**	**235**	⇑P	**Pg**	**02 25 02.3**	**-0.3**
	2.2nm,0.2s,SNR=18						
MACI				S	**Sn**	**02 25 24.7**	**+1.0**
	26nm,0.3s,SNR=7.9						
CRAJ	**Montana Rajada**	**2.11**	**236**	P	**Pg**	**02 25 03.7**	**+0.1**
	5.6nm,0.1s,SNR=4.0						
CRAJ				S	**Sn**	**02 25 26.2**	**+1.0**
	76nm,0.2s,SNR=12						
CCAN	**Las Canadas**	**2.14**	**236**	P	**Pg**	**02 25 03.1**	**-1.1**
	0.5nm,0.1s,SNR=7.9						
CCAN				S	**Sn**	**02 25 27.1**	**+1.2**
	2.7nm,0.2s,SNR=7.9						
EGOM	**La Gomera**	**2.63**	**241**	P	**Pb**	**02 25 09.9**	**-0.3**
	2.9nm,0.1s,SNR=6.8						
EGOM				S	**Sn**	**02 25 36.9**	**-0.5**
	75nm,0.1s,SNR=14						
EHIG	**Higuera**	**2.95**	**253**	S	**Sn**	**02 25 47.5**	**+2.0**
	27nm,0.2s,SNR=7.9						
TBT	**Taburiente**	**3.00**	**256**	P	**Pb**	**02 25 16.8**	**+0.2**
	1.8nm,0.1s,SNR=7.9						
TBT				S	**Sn**	**02 25 46.6**	**-0.1**
	4.5nm,0.2s,SNR=7.9						
CTIG	**El Hierro**	**3.36**	**241**	S	**Sn**	**02 25 55.3**	**-0.2**
	8.0nm,0.1s,SNR=7.9						
CHIE	**El Hierro**	**3.42**	**241**	S	**Sn**	**02 25 55.9**	**-1.1**
	0.5nm,0.1s,SNR=7.9						
CCUM	**Cumbre, El Hie**	**3.46**	**241**	S	**Sn**	**02 25 57.7**	**-0.4**
	20nm,0.2s,SNR=7.9						
PMAR	**Madeira**	**3.82**	**329**	*e*Pn	**Pb**	**02 25 32.1**	**+1.5**
PMAR				*e*Sn	**Sb**	**02 26 15.2**	**-1.8**
PMAR				A	A	02 26 19.2	
	19nm,0.2s						
PMPS	**Porto Santo**	**3.89**	**338**	*e*Pn	**Pb**	**02 25 31.7**	**0.0**
PMPS				*e*Sn	**Sb**	**02 26 16.3**	**-2.5**
PMPS				A	A	02 26 18.8	
	6.7nm,0.4s						
PMPST	**Porto Santo, M**	**3.91**	**338**	*e*Pn	**Pb**	**02 25 32.5**	**+0.5**
PMPST				*e*Sn	**Sb**	**02 26 17.1**	**-2.3**
PMPST				A	A	02 26 21.9	
	22nm,0.7s						

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*INET **02** 02:48:41.0, 12.°24N×86.°37W, h5km, ML3.6*

SNET 02 02:48:40.8±1.1**, 11.°87N×86.°30W, h35km**±999km**, ML2.9, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCND	**La Caada**	**2.11**	**313**	*e*S	Sn	02 49 39.4	+0.6
JUCU	**Jucuar¡n**	**2.35**	**306**	*e*P	Pn	02 49 17.6	+0.6
JUCU				*e*S	Sn	02 49 45.3	+0.6
TGUH	**Tegucigalpa,Un**	**2.37**	**336**	*e*P	Pn	02 49 17.0	-0.3
FAGO	**Alcalda de S**	**2.53**	**316**	*e*S	Sn	02 49 50.5	+1.4
COEB	**Comit de Eme**	**2.71**	**307**	*e*P	Pn	02 49 23.2	+1.2
COEB				IAML		02 50 02.2	
	comp=Z,42nm,0.3s						
LFRS	**El Faro**	**3.21**	**303**	*e*P	Pn	02 49 28.9	0.0
LFRS				*e*S	Sn	02 50 07.6	+1.6

WEL 02 02:55:17.3, 38°S±2°**×17°8E**±°**, h42km**±3km**, M2.6**/16**, ML2.9**/16**, MLv2.6**/16**, Error ellipse: s-maj=0.0km s-min=0.0km az=91.7, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUGZ	**Raukumara Rang**	**0.16**	**288**	P	Pn	02 55 24.8	+0.1
PKGZ	**Pakihiroa**	**0.21**	**53**	P	Pn	02 55 24.9	-0.1
HAZ	**Te Kaha**	**0.27**	**345**	P	Pn	02 55 25.7	+0.3
PUZ	**Puketiti**	**0.31**	**100**	P	Pn	02 55 25.8	-0.1
MWZ	**Matawai**	**0.42**	**220**	P	Pn	02 55 27.3	+0.2
TKGZ	**Te Karaka**	**0.42**	**182**	P	Pn	02 55 27.4	+0.3
WMGZ	**Waiomatatini S**	**0.47**	**66**	P	Pn	02 55 28.1	+0.3
CNGZ	**Carnagh Statio**	**0.54**	**150**	P	Pn	02 55 29.3	+0.6
MXZ	**Matakaoa Point**	**0.57**	**38**	P	Pn	02 55 29.7	+0.6
RAGZ	**Rawiri**	**0.60**	**216**	P	Pn	02 55 29.9	+0.4
URZ	**Urewera**	**0.64**	**248**	P	Pn	02 55 30.5	+0.5
RIGZ	**Rimuhau**	**0.69**	**187**	P	Pn	02 55 31.1	+0.3
WHRZ	**Whale Island**	**0.72**	**282**	P	Pn	02 55 31.6	+0.5
SNGZ	**Shannon Statio**	**0.87**	**208**	P	Pn	02 55 33.5	+0.3
MARZ	**Manawahe**	**0.94**	**271**	P	Pn	02 55 34.0	-0.1
MUGZ	**Murupara**	**0.98**	**242**	P	Pn	02 55 34.9	+0.2
KNZ	**Kokohu**	**1.02**	**189**	P	Pn	02 55 34.3	-0.8
OPRZ	**Ohinepanea**	**1.05**	**279**	P	Pn	02 55 35.0	-0.6
TARZ	**Mount Tarawera**	**1.10**	**258**	P	Pn	02 55 36.8	+0.4
MTHZ	**Maungataniwha**	**1.16**	**224**	P	Pn	02 55 38.2	+1.1
BKZ	**Black Stump Fm**	**1.57**	**223**	P	Pn	02 55 43.6	+0.7
KUZ	**Kuaotunu**	**2.13**	**306**	P	Pn	02 55 49.6	-0.8
TUVZ	**Tukino**	**2.14**	**233**	P	Pn	02 55 50.7	0.0
BFZ	**Birch Farm**	**2.94**	**205**	P	Pn	02 55 59.5	-2.1

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*IDC **02** 02:56:14.2±6.7, 32.°00S×179.°55W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.5/35, mbtmp3.5/2, Error ellipse: s-maj=285.4km s-min=60.6km az=159.0*

*WEL **02** 02:56:46.5±0.8, 34°S±11°×18°0W±1°9, h332km±13km, M3.9/9, mB4.1/3, MLv4.0/9, Mw(mB)3.2/3*

ISC 02 02:56:48.6±2.1**, 33.°8S**±0.°1**×179.°8W**±0.°3**, h350km, n14,** σ**1.34**/21**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**4.32**	**200**	P	**Pn**	**02 58 00.3**	**-0.4**
WMGZ				S	**S**	**02 58 59.8**	**+0.8**
HAZ	**Te Kaha**	**4.46**	**206**	P	**Pn**	**02 58 01.2**	**-1.0**
HAZ				S	**S**	**02 59 02.0**	**+0.2**
PKGZ	**Pakihiroa**	**4.48**	**202**	P	**Pn**	**02 58 00.9**	**-1.7**
PKGZ				S	**S**	**02 59 01.4**	**-0.9**
RUGZ	**Raukumara Rang**	**4.69**	**206**	P	**Pn**	**02 58 03.2**	**-1.6**
RUGZ				S	**S**	**02 59 05.9**	**-0.5**
KUZ	**Kuaotunu**	**4.75**	**230**	P	**Pn**	**02 58 03.6**	**-1.8**
MUGZ	**Murupara**	**5.48**	**210**	P	**Pn**	**02 58 11.5**	**-1.9**
BKZ	**Black Stump Fm**	**6.18**	**208**	P	**Pn**	**02 58 21.5**	**+0.1**
BKZ				S	**S**	**02 59 37.7**	**+0.9**
KWHZ	**Kaweka Forest**	**6.43**	**207**	P	**Pn**	**02 58 25.4**	**+1.1**
KWHZ				S	**S**	**02 59 43.7**	**+1.7**
KRHZ	**Kereru**	**6.64**	**207**	P	**Pn**	**02 58 24.6**	**-2.1**
KRHZ				S	**S**	**02 59 46.2**	**-0.3**
PNHZ	**Pukenui**	**6.94**	**207**	P	**Pn**	**02 58 28.1**	**-2.1**
BFZ	**Birch Farm**	**7.61**	**204**	P	**Pn**	**02 58 38.9**	**+1.0**
ASAR	**Alice Springs**	**41.57**	**272**	P	**P**	**03 04 04.9**	**+1.4**
	0.5nm,0.8s,baz=108,slow=7.9,SNR=4.4						
WRA	**Warramunga Arr**	**42.87**	**277**	P	**P**	**03 04 14.6**	**+0.7**
	0.4nm,0.4s,baz=116,slow=8.2,SNR=5.1						
FINES	**FINESS Array B**	**147.71**	**337**	PKPbc	**PKPab**	**03 15 54.7**	**-0.2**
	1.7nm,0.9s,baz=46,slow=4.0,SNR=5.4						

KRSC 02 02:57:26.8±1.9**, 49.°39N×156.°48E, h37km**±24km**, ML3.6, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.31**	**350**	*e*P	Pn	02 57 49.5	+1.0
SKR				*e*S	Sn	02 58 05.9	+1.2
ALID	**Alaid**	**1.59**	**338**	*e*P	Pn	02 57 52.0	-0.5
PAU	**Pauzhetka**	**2.09**	**6**	*e*S	Sn	02 58 27.3	+3.5
KDTR	**Khodutka, Kamc**	**2.62**	**22**	*e*P	Pn	02 58 10.4	+3.9
KDTR				*e*S	Sn	02 58 41.7	+4.7
MIPR	**Malaya Ipel'ka**	**2.89**	**3**	*e*P	Pn	02 58 12.0	+1.8
ASAK	**Asacha**	**3.13**	**16**	*e*P	Pn	02 58 18.0	+4.5
ASAK				*e*S	Sn	02 58 55.0	+5.4
RUS	**Russkaya**	**3.31**	**22**	*e*P	Pn	02 58 19.4	+3.6
RUS				*e*S	Sn	02 58 57.3	+3.5
GRL	**Gorelyy**	**3.32**	**17**	*e*P	Pn	02 58 20.8	+4.6
GRL				*e*S	Sn	02 59 00.0	+5.6
KRMR	**Karymshinskiy**	**3.59**	**16**	*e*P	Pn	02 58 23.8	+4.0
UGLR	**Uglovaya**	**4.09**	**20**	*e*P	Pn	02 58 31.3	+4.5
AVH	**Avacha**	**4.13**	**19**	*e*P	Pn	02 58 32.6	+5.4
KOK	**Koryaka**	**4.13**	**18**	*e*P	Pn	02 58 32.6	+5.3
KOK				*e*S	Sn	02 59 20.7	+6.3
SMAR	**Somma**	**4.14**	**20**	*e*P	Pn	02 58 32.7	+5.2
KRER	**Koryakskii**	**4.17**	**19**	*e*P	Pn	02 58 33.0	+5.1
KRER				*e*S	Sn	02 59 21.3	+5.9
SDLR	**Sedlovina**	**4.17**	**20**	*e*P	Pn	02 58 31.9	+4.0
SDLR				*e*S	Sn	02 59 19.7	+4.3
KRX	**Arik**	**4.20**	**18**	*e*P	Pn	02 58 33.4	+5.1
SPN	**Mys Shipunski**	**4.33**	**30**	*e*P	Pn	02 58 33.9	+4.0
SPN				*e*S	Sn	02 59 22.6	+3.6
KZV	**Kizimen**	**6.19**	**21**	*e*P	Pn	02 59 02.0	+6.4

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*NEIC **02** 03:06:04.4±1.5, 52.°57N±0.°07×171.°78W±0.°06, h121km±4km, mb4.8/234, Error ellipse: s-maj=10.5km s-min=5.5km az=174.0*

*IDC **02** 03:06:06.1±1.5, 52.°75N×171.°92W, h131km±12km, mb4.1/29, mb1 4.2/31, mb1mx4.1/42, mbtmp4.5/31, MS2.8/7, Ms1 2.8/7, ms1mx2.5/38, Error ellipse: s-maj=14.5km s-min=8.6km az=165.0*

*AEIC **02** 03:06:06±4.3, 52.°36N±0.°08×171.°71W±0.°08, h97km±4km, Error ellipse: s-maj=12.6km s-min=5.2km az=155.0*

ISC 02 03:06:04.6±0.7**, 52.°58N**±0.°07**×171.°82W**±0.°04**, h123km**±5km**, n647,** σ**0.82**/568**, mb4.8**/123**, 19C-1D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**1.51**	**256**		**Pn**	**03 06 31.4**	**-0.8**
ATKA	**Atka Island**	**1.51**	**256**		**Sn**	**03 06 51.7**	**-1.5**
NIKH	**Nikolski High**	**1.84**	**77**		**Pn**	**03 06 35.2**	**-1.0**
NIKH	**Nikolski High**	**1.84**	**77**		**Sn**	**03 06 58.3**	**-2.1**
OKSP	**Okmok Steeple**	**2.24**	**71**		**Pn**	**03 06 40.8**	**-0.3**
OKSP					**Sn**	**03 07 08.8**	**-0.4**
OKFG	**Magazine Ridge**	**2.50**	**69**		**Pn**	**03 06 44.3**	**-0.2**
OKFG					**Sn**	**03 07 16.0**	**+0.9**
GSTR	**Great Sitkin T**	**2.65**	**261**		**Pn**	**03 06 46.1**	**-0.2**
GSMY	**Great Sitkin M**	**2.66**	**260**		**Pn**	**03 06 46.2**	**-0.3**
GSTD	**Great Sitkin T**	**2.71**	**260**		**Pn**	**03 06 46.8**	**-0.4**
GSTD					**Sn**	**03 07 19.1**	**-0.8**
GSSP	**Great Sitkin S**	**2.72**	**261**		**Pn**	**03 06 47.0**	**-0.2**
ETKA	**Kagalaska Isla**	**2.91**	**257**		**Pn**	**03 06 49.8**	**0.0**
ADAG	**Mount Adagdak**	**3.00**	**260**		**Pn**	**03 06 51.7**	**+0.8**
ADK	**Adak**	**3.07**	**259**		**Pn**	**03 06 52.0**	**+0.2**
MREP	**Makushin Rep't**	**3.29**	**66**		**Pn**	**03 06 54.7**	**0.0**
MSW	**Makushin Switc**	**3.31**	**64**		**Pn**	**03 06 54.7**	**-0.3**
MNAT	**Makushin Natee**	**3.35**	**65**		**Pn**	**03 06 55.3**	**-0.2**
MNAT					**Sn**	**03 07 35.0**	**+0.2**
KIKV	**Kanaga Island**	**3.37**	**260**		**Pn**	**03 06 56.1**	**+0.4**
KICM	**Kanaga Island**	**3.37**	**261**		**Pn**	**03 06 56.6**	**+0.8**
KIMD	**Kanaga Island**	**3.44**	**258**		**Pn**	**03 06 56.8**	**+0.2**
UNV	**Unalaska Valle**	**3.44**	**66**		**Pn**	**03 06 56.5**	**-0.1**
AKRB	**Akutan Reef Bi**	**3.78**	**64**		**Pn**	**03 07 01.5**	**+0.4**
AKMO	**Akutan Morgan**	**3.79**	**64**		**Pn**	**03 07 02.1**	**+0.7**
ZRO	**Akutan Zero**	**3.81**	**64**		**Pn**	**03 07 02.2**	**+0.6**
AKBBA	**Akutan Broad B**	**3.84**	**64**		**Pn**	**03 07 02.4**	**+0.4**
TAFP	**Tanaga Falls P**	**3.85**	**262**		**Pn**	**03 07 02.5**	**+0.4**
HSB	**Akutan Spr's B**	**3.88**	**63**		**Pn**	**03 07 02.8**	**+0.2**
TASE	**Tanaga Southea**	**3.90**	**261**		**Pn**	**03 07 03.2**	**+0.4**
AKUT	**Akutan**	**3.94**	**64**		**Pn**	**03 07 03.6**	**+0.4**

AKSA **Akutan Strait** 3.98 65 Pn 03 07 04.1 +0.3
AKSA **Akutan Strait** 3.98 65 Pn 03 07 04.3 +0.5
GALAA **Gareloi Lava P** 4.36 262 Pn 03 07 09.3 +0.4
WECS **Westdahl Cape** 4.63 62 Pn 03 07 12.9 +0.4
WESP **Westdahl Peak** 4.64 63 Pn 03 07 12.9 +0.1
SPIA **Saint Paul Isl** 4.69 11 Pn 03 07 15.2 +1.9
SSBA **Shishaldin** 5.07 61 Pn 03 07 18.3 -0.2
FALS **False Pass** 5.48 62 Pn 03 07 24.0 +0.1
DT1 **Dutton Round H** 6.18 62 Pn 03 07 32.9 -0.5
DOL_ **Dolgoi Island** 6.42 62 Pn 03 07 36.1 -0.5
SDPT **Sand Point** 7.24 63 Pn 03 07 46.2 -1.4
CNBA **Chernabura Isl** 7.60 68 Pn 03 07 50.2 -2.2
VNWF **Veniaminof 8** 8.00 59 Pn 03 07 57.3 -0.6
VNFG **Fog Glacier, M** 8.05 58 Pn 03 07 58.6 0.0
VNSS **Veniaminof 8** 8.08 58 Pn 03 07 58.6 -0.5
VNNF **Veniaminof 3** 8.18 58 Pn 03 08 00.6 +0.3
CHGN **Chignik** 8.65 59 Pn 03 08 04.8 -1.8
KAHC **Katmai Hardscr** 11.26 51 Pn 03 08 41.6 -0.1
OHAK **Old Harbor** 11.62 59 Pn 03 08 41.8 -4.6
KDAK **Kodiak Island** 12.14 57 P Pn 03 08 48.7 -4.6
6.6nm,0.3s,baz=256,slow=6.4,SNR=93
KDAK LR LR 03 14 01.6
comp=Z,47nm,20.2s,baz=279,slow=39
KDAK **Kodiak Island** 12.14 57 Pn 03 08 49.0 -4.3
RSO **Redoubt South** 13.11 46 Pn 03 09 06.3 +0.2
CNPM **China Poot** 13.40 51 Pn 03 09 08.5 -1.1
BRLK **Bradley Lake** 13.65 50 Pn 03 09 11.5 -1.4
SEW **Seward** 14.45 50 Pn 03 09 19.9 -3.0
PPLA **Purkeypile** 14.64 37 Pn 03 09 26.2 +0.6
PMR **Palmer** 15.20 45 IAmb IAmb 03 09 35.1
comp=Z,16nm,0.3s
GHO **Glory Hole Cre** 15.37 44 IAmb IAmb 03 09 35.8
comp=Z,52nm,0.6s
KNK **Knik Glacier** 15.41 46 IAmb IAmb 03 09 36.7
comp=Z,22nm,0.4s
KTH **Kantishna Hill** 15.49 37 IAmb IAmb 03 09 39.9
comp=Z,68nm,1.0s
SML **Sawmill** 15.63 45 IAmb IAmb 03 09 38.8
comp=Z,31nm,0.5s
BPAW **Bear Paw Mtn.** 15.80 35 IAmb IAmb 03 09 43.8
comp=Z,73nm,1.0s
GLI **Glacier Island** 15.82 49 IAmb IAmb 03 09 39.8
comp=Z,29nm,0.6s
HIN **Hinchinbrook I** 15.94 51 IAmb IAmb 03 09 43.0
comp=Z,35nm,0.5s
RND **Reindeer** 16.19 39 IAmb IAmb 03 09 56.5
comp=Z,36nm,0.7s
MCK **McKinley** 16.33 38 IAmb IAmb 03 09 49.2
comp=Z,55nm,1.4s
BWN **Browne** 16.38 36 IAmb IAmb 03 09 57.7
comp=Z,50nm,0.6s
MLY **Manley** 16.46 33 P P 03 09 49.4 +0.9
DHY **Denali Highway** 16.61 41 IAmb IAmb 03 10 02.3
comp=Z,34nm,0.6s
RAGM **Ragged Mountai** 16.80 52 IAmb IAmb 03 09 57.5
comp=Z,30nm,0.7s
HMT **Hamilton** 16.98 52 IAmb IAmb 03 09 58.3
comp=Z,32nm,0.7s
WRH **Wood River Hil** 17.05 37 P P 03 09 53.5 -1.4
SUCK **Suckling Hills** 17.15 53 IAmb IAmb 03 09 58.9
comp=Z,40nm,0.5s
MDM **Murphy Dome** 17.27 35 IAmb IAmb 03 10 06.7
comp=Z,20nm,0.4s
TCOL **CIGO, UAF Yank** 17.35 36 P P 03 09 57.3 -0.9
baz=236,SNR=5.7
COLA **College** 17.35 36 P P 03 09 58.3 +0.1
HDA **Harding Lake** 17.43 38 P P 03 09 58.0 -1.2
baz=239,SNR=86
HDA **Harding Lake** 17.43 38 IAmb IAmb 03 10 07.2
comp=Z,58nm,0.6s
POKR **Poker Plat Res** 17.64 35 P P 03 10 00.1 -1.3
baz=236,SNR=20
ILAR **Eielson Array** 17.64 37 P P 03 09 59.7 -1.7
comp=Z,14nm,0.3s,baz=234,slow=9.6,SNR=308
ILAR PcP PcP 03 14 33.9 +0.4
comp=Z,0.1nm,0.3s,baz=289,slow=2.8,SNR=2.2
ILAR ScP ScP 03 17 55.9 -1.0
comp=Z,0.1nm,0.3s,baz=264,slow=2.8,SNR=6.4
WAX **Waxell Ridge** 17.69 52 IAmb IAmb 03 10 06.3
comp=Z,54nm,0.7s
MENT **Mentasta** 18.06 44 P P 03 10 05.7 -0.4
MENT IAmb IAmb 03 10 20.7
comp=Z,25nm,0.6s
DOT **Dot Lake** 18.20 42 IAmb IAmb 03 10 14.8
comp=Z,52nm,0.9s
PETK **Petropavlovsk-** 18.36 284 P P 03 10 10.2 +0.9
comp=Z,1.0nm,0.3s,baz=87,slow=15,SNR=42
PETK ScP ScP 03 17 57.9 -0.8
comp=Z,0.1nm,0.3s,baz=72,slow=0.9,SNR=5.0
SCRK **Sand Creek** 18.37 41 IAmb IAmb 03 10 15.7
comp=Z,48nm,0.8s
BARN **Barnard Glacie** 18.41 51 IAmb IAmb 03 10 18.3
comp=Z,39nm,1.0s
PRP **Porcupine Dome** 18.53 36 IAmb IAmb 03 10 12.7
comp=Z,26nm,0.6s
CTGM **Chitina Glacie** 18.54 51 IAmb IAmb 03 10 14.8
comp=Z,33nm,0.6s
BILL **Bilibino** 18.73 334 Pn 03 10 14.9 -0.3
BILL IAmb IAmb 03 10 16.3
comp=Z,28nm,0.6s
TOLK **Toolik Lake Re** 19.25 25 P P 03 10 19.7 +0.7
baz=225,SNR=92
TOLK **Toolik Lake Re** 19.25 25 IAmb IAmb 03 10 22.4
comp=Z,62nm,0.8s
DAWY **Dawson** 20.28 43 IAmb IAmb 03 10 34.6
comp=Z,26nm,0.7s
HYT **Haines Junctio** 20.35 53 IAmb IAmb 03 10 33.6
comp=Z,34nm,0.6s
SKAG **Skagway** 21.30 57 IAmb IAmb 03 10 44.3
comp=Z,40nm,0.8s
SIT **Sitka** 21.32 63 IAmb IAmb 03 10 44.5
comp=Z,54nm,1.3s
BESE **Bessie Mountai** 21.52 59 P P 03 10 43.5 -0.1
BESE IAmb IAmb 03 10 58.5
comp=Z,26nm,0.7s
JIS **Juneau Island** 21.77 60 IAmb IAmb 03 10 49.8
comp=Z,35nm,0.6s
EPYK **Eagle Plains** 22.14 38 P P 03 10 48.4 -1.4
baz=249,SNR=80
EPYK **Eagle Plains** 22.14 38 P P 03 10 48.9 -0.9
WRAK **Wrangell Islan** 23.01 65 IAmb IAmb 03 11 02.4
comp=Z,21nm,0.6s
INK **Inuvik** 24.00 34 P P 03 11 07.5 +0.2
comp=Z,76nm,0.3s,baz=226,slow=7.6,SNR=1523
INK PcP PcP 03 14 45.9 +0.4
comp=Z,2.0nm,0.5s,baz=5.3,slow=1.1,SNR=4.0
INK ScP ScP 03 18 11.7 -0.6
comp=Z,0.7nm,0.5s,baz=288,slow=4.7,SNR=6.4
INK **Inuvik** 24.00 34 P P 03 11 07.3 -0.1
DLBC **Dease Lake** 24.06 59 P P 03 11 10.5 +2.4
comp=Z,32nm,0.6s,baz=264,slow=6.8,SNR=91
DLBC **Dease Lake** 24.06 59 IAmb IAmb 03 11 11.5
comp=Z,60nm,1.1s
C36M **Paulatuk** 27.59 35 P P 03 11 39.6 0.0
baz=257,SNR=56
C36M **Paulatuk** 27.59 35 P P 03 11 39.7 +0.1
C36M IAmb IAmb 03 11 40.6
comp=Z,34nm,0.9s
A36M **Sachs Harbour** 27.94 29 P P 03 11 43.3 +0.6
baz=251,SNR=61
LLLB **Lillooet** 30.59 73 P P 03 12 07.5 +1.0
YKA **Yellowknife Ar** 31.23 49 P P 03 12 12.0 +0.1
comp=Z,3.0nm,0.5s,baz=280,slow=7.3,SNR=44
YKA PcP PcP 03 15 03.0 -0.1
comp=Z,0.6nm,0.7s,baz=267,slow=2.5,SNR=3.4
YKA ScP ScP 03 18 33.9 -0.6
comp=Z,0.8nm,0.7s,baz=282,slow=3.4,SNR=7.3
YKA LR LR 03 24 04.1
comp=Z,32nm,21.0s,baz=0.0,slow=35
B05A **Bryant** 31.46 78 P P 03 12 16.2 +2.2
baz=297,SNR=8.2
TIXI **Tiksi** 31.78 329 P P 03 12 16.4 -0.2
TIXI PcP 03 15 04.4 -0.1
E04D **Cinebar** 31.98 81 P P 03 12 21.2 +2.5
baz=299
D05A **Enumclaw** 32.02 79 IAmb IAmb 03 12 29.9
comp=Z,13nm,0.8s
LTY **Liberty** 32.78 78 IAmb IAmb 03 12 34.8
comp=Z,8.7nm,0.5s
H04D **Lebanon** 32.91 84 P P 03 12 27.6 +0.8
baz=302
I04A **Tendick Farm,** 33.50 85 P P 03 12 33.6 +1.6
baz=303,SNR=5.2
I05D **Terrebonne, OR** 33.86 83 P P 03 12 37.4 +2.3
baz=303
HAWA **Hanford** 33.88 79 P P 03 12 36.7 +1.4

J04D **Umpqua Nationa** 33.99 86 P P 03 12 37.9 +1.5
baz=304,SNR=9.2
NEW **Newport** 34.40 75 P P 03 12 41.2 +1.4
baz=298,SNR=20
L04D **Klamath Falls** 34.44 87 P P 03 12 42.0 +1.7
baz=305
J05D **Fort Rock, OR** 34.49 85 P P 03 12 43.3 +2.6
baz=304,SNR=9.0
N02D **Trinity Center** 34.92 89 P P 03 12 46.8 +2.5
baz=307
M04C **Macdoel** 34.98 88 P P 03 12 45.5 +0.7
baz=306
I07A **Izee** 35.11 83 IAmb IAmb 03 12 56.5
comp=Z,6.3nm,0.6s
O02D **Mt. Diablo Mer** 35.35 91 P P 03 12 50.1 +2.1
baz=308
O03E **Paynes Creek** 35.88 90 P P 03 12 54.0 +1.5
baz=307
HOPS **Hopland Field** 35.90 92 IAmb IAmb 03 12 57.0
comp=Z,21nm,1.5s
WALA **Waterton Lakes** 35.91 72 IAmb IAmb 03 12 59.4
comp=Z,5.8nm,0.5s
J08A **Circle Bar Ran** 36.13 83 IAmb IAmb 03 13 05.4
comp=Z,5.7nm,0.5s
JTMT **Jette** 36.32 74 IAmb IAmb 03 13 03.8
comp=Z,12nm,0.5s
WVOR **Wild Horse Val** 36.55 84 IAmb IAmb 03 13 09.2
comp=Z,6.8nm,0.5s
H11N2 **WAKE ISLAND Hy** 36.73 215 T T 03 51 30.4
baz=21,slow=76,SNR=20
H11N3 **WAKE ISLAND Hy** 36.74 215 T T 03 51 27.8
baz=21,slow=76,SNR=25
H11N1 **WAKE ISLAND Hy** 36.75 215 T T 03 51 27.8
baz=21,slow=76,SNR=23
RES **Resolute Bay** 36.82 26 P P 03 12 59.7 -0.3
comp=Z,4.3nm,0.3s,baz=276,slow=9.2,SNR=62
RES PcP PcP 03 15 18.8 -0.2
comp=Z,4.0nm,0.7s,baz=182,slow=0.3,SNR=5.5
RES **Resolute Bay** 36.82 26 P P 03 12 59.8 -0.3
MSO **Missoula** 36.99 75 P P 03 13 02.6 +0.7
baz=301
MSO **Missoula** 36.99 75 IAmb IAmb 03 13 08.9
comp=Z,5.9nm,0.6s
PAHR **Pah Rah Range** 37.71 89 IAmb IAmb 03 13 20.3
comp=Z,7.2nm,0.6s
H11S1 **WAKE ISLAND Hy** 37.93 214 T T 03 52 42.1
baz=19
H11S2 **WAKE ISLAND Hy** 37.95 214 T T 03 52 42.5
baz=19,slow=75
H11S3 **WAKE ISLAND Hy** 37.95 214 T T 03 52 42.7
baz=19,slow=75
PNTR **Pine Nut** 37.96 89 P P 03 13 11.1 +0.8
MJAR **Matsushiro Arr** 38.21 265 P P 03 13 12.9 +0.7
comp=Z,1.9nm,0.3s,baz=44,slow=8.1,SNR=10.0
MAJO **Matsushiro** 38.21 265 P P 03 13 12.8 +0.6
MAJO IAmb IAmb 03 13 14.1
comp=Z,8.5nm,0.7s
MAT **Matsushiro** 38.21 265 P P 03 13 12.4 +0.2
MJB9 **Matsu-Tunnel** 38.21 266 P P 03 13 12.6 +0.4
YERR **Yerington** 38.24 89 IAmb IAmb 03 13 25.2
comp=Z,5.8nm,0.5s
WAKR **Walker** 38.42 90 P P 03 13 15.3 +1.2
WAKR IAmb IAmb 03 13 27.2
comp=Z,7.4nm,0.5s
EGMT **Eagleton** 38.82 71 P P 03 13 17.9 +0.7
baz=301,SNR=9.2
EGMT **Eagleton** 38.82 71 IAmb IAmb 03 13 19.9
comp=Z,9.4nm,0.7s
NVAR **Mina Array Bea** 39.16 89 P P 03 13 22.1 +1.8
comp=Z,0.4nm,0.4s,baz=298,slow=8.4,SNR=8.1
NVAR ScP ScP 03 19 04.3 +0.4
comp=Z,0.5nm,0.7s,baz=306,slow=4.0,SNR=5.1
ELK **Elko** 39.60 84 P P 03 13 25.4 +1.4
FFC **Flin Flon** 39.88 58 P P 03 13 25.4 -0.4
FFC IAmb IAmb 03 13 26.7
comp=Z,9.7nm,0.6s
TIN **Tinemaha, Big** 40.08 91 P P 03 13 29.7 +1.9
baz=311
H17A **Grant Village** 40.29 76 P P 03 13 31.9 +2.3
baz=304,SNR=5.5
VES **Vestal, Richgr** 40.35 93 P P 03 13 31.1 +1.2
baz=312
FLWY **Flagg Ranch** 40.39 77 IAmb IAmb 03 13 39.1
comp=Z,9.2nm,0.6s
PKM **Mcpherson Peak** 40.55 95 P P 03 13 33.5 +1.8
baz=312
CWC **Cottonwood Cre** 40.57 92 P P 03 13 33.7 +1.7
baz=311
RLMT **Red Lodge** 40.65 75 P P 03 13 34.0 +1.5
baz=304,SNR=7.1
ISA **Isabella, Lake** 40.84 93 P P 03 13 35.6 +1.5
baz=312
R11A **Troy Canyon, C** 40.87 87 P P 03 13 35.7 +1.3
baz=309
MPMC **Mammal Prospec** 41.18 91 P P 03 13 38.7 +1.7
baz=311
FURC **Furnace Creek,** 41.30 90 P P 03 13 39.6 +1.9
baz=311
TPNV **Topopah Spring** 41.36 89 P P 03 13 40.2 +1.8
baz=311
DUG **Dugway, Tooele** 41.41 83 P P 03 13 39.8 +1.1
baz=308
DUG **Dugway, Tooele** 41.41 83 P P 03 13 39.9 +1.1
CN2 **Changchun** 41.51 284 eP P 03 13 37.8 -1.5
CN2 pmax pmax
comp=Z,10.0nm,0.4s
LAO **LASA Array** 41.56 71 P P 03 13 41.2 +1.4
baz=303,SNR=5.1
LAO **LASA Array** 41.56 71 IAmb IAmb 03 13 46.2
comp=Z,20nm,1.1s
DGMT **Dagmar** 41.76 68 P P 03 13 41.9 +0.6
baz=302,SNR=5.1
DGMT **Dagmar** 41.76 68 IAmb IAmb 03 13 42.5
comp=Z,12nm,0.7s
BW06 **Boulder Array** 41.83 78 P P 03 13 43.1 +0.9
baz=306,SNR=7.2
PDAR **Pinedale Array** 41.83 78 P P 03 13 43.4 +1.1
comp=Z,3.2nm,0.6s,baz=308,slow=4.8,SNR=23
FCC **Fort Churchill** 41.95 50 IAmb IAmb 03 13 43.9
comp=Z,24nm,0.9s
NLU **North Lily Min** 42.00 83 P P 03 13 44.4 +0.7
SHOC **Shoshone, Teco** 42.03 91 P P 03 13 43.8 +0.2
baz=312,SNR=5.5
GSC **Goldstone, Bar** 42.10 92 P P 03 13 45.2 +0.8
baz=312,SNR=7.4
GSC **Goldstone, Bar** 42.10 92 IAmb IAmb 03 13 56.9
comp=Z,7.3nm,0.4s
BFSC **Mount Baldy Ra** 42.29 94 P P 03 13 47.0 +1.0
baz=313
TULEG **Thule** 42.43 20 IAmb IAmb 03 13 47.4
comp=Z,18nm,0.6s
JCJ **Chichijima** 42.54 252 P P 03 13 48.2 +0.4
comp=Z,21nm,0.5s,baz=302,slow=14,SNR=1.6
TUQ **Turquoise Moun** 42.55 91 P P 03 13 49.8 +1.7
baz=312
HEC **Hector,Ludlow** 42.70 92 P P 03 13 50.8 +1.6
baz=312
GMRC **Granite Mounta** 43.15 91 P P 03 13 53.8 +1.0
baz=312
PFO **Pinyon Flats O** 43.45 93 P P 03 13 56.5 +1.3
baz=313
BELC **Belle Mtn. Jos** 43.47 93 P P 03 13 56.0 +0.5
baz=313
KSRS **Korea Array** 43.89 275 P P 03 13 59.1 +0.6
comp=Z,1.4nm,0.5s,baz=50,slow=7.9,SNR=6.6
KSRS ScP ScP 03 19 21.8 -0.6
comp=Z,1.2nm,0.7s,baz=44,slow=3.7,SNR=2.8
O20A **White River Ci** 44.20 80 P P 03 14 01.7 +0.3
baz=309,SNR=5.8
O20A **White River Ci** 44.20 80 IAmb IAmb 03 14 09.6
comp=Z,16nm,0.8s
RSSD **Black Hills** 44.29 73 P P 03 14 01.5 -0.5
baz=306
RSSD **Black Hills** 44.29 73 P P 03 14 02.6 +0.6
RSSD IAmb IAmb 03 14 08.8
comp=Z,8.5nm,0.5s
IKP **In-Ko-Pah, Jac** 44.32 94 P P 03 14 03.8 +1.6
baz=314
MDND **Maddock** 44.67 66 P P 03 14 05.2 +0.4
baz=304,SNR=5.3
E28A **Huff** 44.79 68 IAmb IAmb 03 14 10.9
comp=Z,19nm,0.9s
GLA **Glamis** 44.83 93 P P 03 14 07.6 +1.4
baz=314
JNU **Nakatsue** 44.97 268 P P 03 14 08.2 +0.9
comp=Z,2.7nm,0.3s,baz=279,slow=0.3,SNR=6.6
PV11 **David Mesa, Pa** 44.98 82 IAmb IAmb 03 14 16.4
comp=Z,7.5nm,0.5s

N23A **Red Feather La** 45.11 78 P P 03 14 09.3 +0.7
baz=308
WUAZ **Wupatki** 45.27 87 P P 03 14 11.3 +1.5
baz=312
ULM **Lac du Bonnet** 45.36 61 P P 03 14 10.2 +0.1
comp=Z,13nm,0.5s,baz=309,slow=7.9,SNR=27
ULM **Lac du Bonnet** 45.36 61 IAmb IAmb 03 14 10.7
comp=Z,15nm,0.6s
NOR **Nord** 45.39 5⇑*i*P P 03 14 09.7 -0.2
comp=Z,4.4nm,0.8s
NRIK **Noril'sk** 45.51 331 P P 03 14 10.5 -0.5
comp=Z,2.0nm,0.7s,baz=85,slow=6.4,SNR=5.3
KULLO **Kullorsuaq** 45.94 20⇑*i*P P 03 14 14.3 0.0
comp=Z,12nm,0.7s
ISCO **Idaho Springs** 45.99 79 P P 03 14 16.2 +0.6
baz=309
AGMN **Agassiz Nation** 46.48 63 P P 03 14 18.7 -0.2
baz=306,SNR=14
AGMN **Agassiz Nation** 46.48 63 IAmb IAmb 03 14 19.7
comp=Z,14nm,0.8s
W18A **Petrified Fore** 46.53 86 P P 03 14 20.6 +0.9
baz=312
214A **Organ Pipe Nat** 46.81 92 P P 03 14 22.9 +1.1
baz=314
SUSD **Miller** 47.03 69 P P 03 14 23.6 +0.4
baz=307
SDCO **Great Sand Dun** 47.37 81 P P 03 14 24.8 -1.5
baz=311,SNR=5.3
B35A **Bob, Littlefor** 47.60 62 IAmb IAmb 03 14 28.2
comp=Z,20nm,0.7s
TUC **Tucson** 47.80 90 P P 03 14 30.4 +0.9
baz=314
T25A **Trinidad** 48.42 80 P P 03 14 35.5 +1.1
baz=311
KBS **Kingsbay** 48.73 359 eP P 03 14 36.6 +0.8
ECSD **EROS Data Cent** 48.80 69 P P 03 14 36.0 -0.9
baz=309
ECSD **EROS Data Cent** 48.80 69 IAmb IAmb 03 14 40.4
comp=Z,7.1nm,0.5s
TLY **Talaya** 48.99 305 P P 03 14 38.7 +0.4
EYMN **Ely** 49.05 61 P P 03 14 38.3 -0.4
baz=307,SNR=17
F36A **Milaca** 49.21 65 IAmb IAmb 03 14 43.7
comp=Z,7.6nm,0.5s
BJI **Beijing** 49.28 286 P P 03 14 39.5 -1.0
BJI pmax pmax
comp=Z,5.0nm,1.2s
BGNE **Belgrade** 49.38 72 P P 03 14 42.8 +1.5
baz=310
SPA0 **Spitsbergen Ar** 49.40 358 P P 03 14 41.1 +0.1
SPA0 **Spitsbergen Ar** 49.40 358 eP P 03 14 40.7 -0.4
SPITS **Spitsbergen Ar** 49.40 358 P P 03 14 40.9 -0.1
comp=Z,5.5nm,0.4s,baz=49,slow=6.9,SNR=55
SPITS PcP PcP 03 16 01.0 -0.4
comp=Z,9.0nm,1.0s,baz=76,slow=3.5,SNR=9.4
SPITS LR LR 03 34 46.0
comp=Z,14nm,20.4s,baz=345,slow=35
121A **Cookes Peak, D** 49.48 87 P P 03 14 42.6 +0.2
baz=314
DAG **Danmarks Havn** 49.79 8⇑*i*P P 03 14 43.2 -0.7
comp=Z,12nm,0.7s
SONM **Songino Array** 49.90 299 P P 03 14 45.8 +0.5
comp=Z,1.1nm,0.8s,baz=35,slow=24,SNR=5.5
SONM PcP PcP 03 16 03.9 +0.1
comp=Z,2.9nm,0.7s,baz=68,slow=3.0,SNR=8.3
SONM ScP ScP 03 19 47.2 -0.5
comp=Z,1.9nm,0.6s,baz=33,slow=3.0,SNR=7.8
SPMN **Marine on St.** 50.01 65 P P 03 14 45.1 -0.8
baz=309,SNR=7.7
CBKS **Cedar Bluff** 50.12 76 P P 03 14 46.3 -0.6
baz=311,SNR=7.9
HOPEN **Hopen** 50.73 355 eP P 03 14 50.5 -0.5
SUMG **Summit** 51.01 16 IAmb IAmb 03 14 54.6
comp=Z,34nm,1.3s
SUMG **Summit** 51.01 16⇑*i*P P 03 14 53.8 +0.2
comp=Z,40nm,0.5s
D41A **Chassel** 51.16 61 IAmb IAmb 03 14 55.9
comp=Z,19nm,1.1s
G40A **Rib Lake** 51.41 63 IAmb IAmb 03 14 57.2
comp=Z,10nm,1.1s
MNTX **Cornudas Mount** 51.52 86 P P 03 14 58.9 +1.4
baz=315
MNTX **Cornudas Mount** 51.52 86 P P 03 14 59.0 +1.4
MSTX **Muleshoe** 51.54 82 P P 03 14 59.0 +1.2
baz=314
AMTX **Amarillo** 51.57 81 P P 03 14 58.2 +0.2
baz=313
I40A **Norwalk** 52.06 65 IAmb IAmb 03 15 04.7
comp=Z,22nm,1.1s
E44A **Grand Marais A** 52.84 60 P P 03 15 07.2 +0.2
baz=310
JFWS **Jewell Farm** 52.90 66 P P 03 15 06.9 -0.7
baz=311
JFWS **Jewell Farm** 52.90 66 IAmb IAmb 03 15 10.5
comp=Z,12nm,0.7s
L40A **Anamosa** 52.91 67 IAmb IAmb 03 15 10.7
comp=Z,6.1nm,0.6s
I42A **Draeger Farm,** 53.00 64 IAmb IAmb 03 15 09.5
comp=Z,8.0nm,0.5s
NJ2 **Nanjing** 53.03 276 eP P 03 15 09.0 +0.3
NJ2 pmax pmax
comp=Z,11nm,0.5s
WMOK **Wichita Mounta** 53.41 79 P P 03 15 11.2 -0.3
baz=314,SNR=6.7
D46A **Sault St. Mari** 53.65 58 P P 03 15 12.0 -1.0
baz=311,SNR=5.6
F45A **CMU Biological** 53.66 60 P P 03 15 12.8 -0.2
baz=311
G45A **Suttons Bay** 54.01 61 P P 03 15 15.4 -0.2
baz=311
D47A **Chapleau** 54.02 58 P P 03 15 15.4 -0.3
baz=311,SNR=17
TXAR **Lajitas Array** 54.24 87 P P 03 15 18.6 +0.9
comp=Z,1.5nm,0.3s,baz=304,slow=6.2,SNR=16
G46A **Petoskey** 54.25 60 P P 03 15 17.1 -0.2
baz=312,SNR=14
E47A **Iron Bridge** 54.33 58 P P 03 15 17.6 -0.2
baz=312,SNR=6.7
ABTX **Abilene, Hawle** 54.36 81 P P 03 15 19.0 +0.6
baz=315,SNR=6.1
TUL1 **Leonard** 54.39 76 P P 03 15 18.6 0.0
baz=314
D48A **Paudash Townsh** 54.61 57 P P 03 15 19.6 -0.3
baz=312,SNR=16
L44A **Lake County Fo** 54.68 65 P P 03 15 19.9 -0.6
baz=312
GLMI **Grayling** 54.70 61 P P 03 15 20.4 -0.2
baz=312
D49A **Beulah Townshi** 54.77 56 P P 03 15 20.9 -0.2
baz=312,SNR=11
I46A **Reed City** 54.85 62 P P 03 15 21.2 -0.5
baz=312
U38A **Gravette** 54.86 74 IAmb IAmb 03 15 26.2
comp=Z,7.2nm,0.5s
G47A **Hillman** 54.87 60 P P 03 15 21.3 -0.6
baz=312
E48A **Lockeyer** 54.88 58 P P 03 15 21.7 -0.2
baz=312,SNR=5.9
MATQ **Matagami** 54.95 52 P P 03 15 21.5 -0.9
baz=312,SNR=6.1
HDIL **Hopedale** 55.00 67 P P 03 15 22.6 -0.2
baz=313
H47A **Mio** 55.07 61 P P 03 15 22.9 -0.4
baz=312,SNR=5.8
F48A **Evansville** 55.09 58 P P 03 15 23.4 0.0
baz=312,SNR=5.3
HHAR **Hobbs** 55.23 74 IAmb IAmb 03 15 28.9
comp=Z,6.8nm,0.5s
SCO **Scoresbysund** 55.33 12 P P 03 15 24.3 -0.4
SCO **Scoresbysund** 55.33 12⇑*i*P P 03 15 24.5 -0.2
comp=Z,16nm,0.4s
F49A **Sandfield** 55.43 58 P P 03 15 25.8 -0.1
baz=312,SNR=7.6
H48A **Harrisville** 55.47 60 P P 03 15 26.0 -0.1
baz=312
CCM **Cathedral Cave** 55.58 71 P P 03 15 26.5 -0.5
baz=313
CCM **Cathedral Cave** 55.58 71 P P 03 15 28.2 +1.2
D50A **G1974 Best Tow** 55.61 56 P P 03 15 26.6 -0.5
baz=313,SNR=13
J47A **Sunmer** 55.66 62 P P 03 15 27.3 -0.2
baz=313
L46A **Eue Claire** 55.68 64 P P 03 15 26.9 -0.8
baz=313
JCT **Junction City** 55.77 83 P P 03 15 29.0 +0.5
baz=316,SNR=5.6
U40A **Yellville** 55.81 73 P P 03 15 27.8 -1.0
baz=314,SNR=9.9

U40A **Yellville** 55.81 73 lAmb lAmb 03 15 32.8
comp=Z,7.0nm,0.6s
D51A **Lot 18 Range I** 55.90 56 P **P** **03 15 28.7 -0.5**
baz=313,SNR=6.2
K47A **Vermontville** 55.94 63 P **P** **03 15 29.2 -0.4**
baz=313
W39A **Magazine** 56.07 75 P **P** **03 15 30.6 +0.1**
baz=314
VLDQ **Val d'Or** 56.16 54 lAmb lAmb 03 15 29.6
comp=Z,12nm,0.8s
J48A **Bridge Port** 56.17 61 P **P** **03 15 30.9 -0.3**
baz=313
E51A **G1948 Merrick** 56.21 56 P **P** **03 15 31.1 -0.4**
baz=313,SNR=11
ZALV **Zalesovo Beam** 56.24 316 PcP **PcP** **03 16 27.4 -0.2**
comp=Z,4.2nm,0.6s,baz=36,slow=3.7,SNR=14
ZALV LR LR 03 42 05.4
comp=Z,8.1nm,18.6s,baz=98,slow=38
SCHQ **Schefferville** 56.29 42 P **P** **03 15 31.8 -0.1**
comp=Z,12nm,0.5s,baz=322,slow=7.5,SNR=24
SCHQ **Schefferville** 56.29 42 P **P** **03 15 31.4 -0.5**
K48A **Perry** 56.33 62 P **P** **03 15 32.0 -0.3**
baz=313
SFIN **Lafayette** 56.35 66 P **P** **03 15 32.5 0.0**
baz=313,SNR=7.6
T42A **Van Buren** 56.37 72 lAmb lAmb 03 15 35.7
comp=Z,3.9nm,0.5s
CHGQ **Chibougamau** 56.40 50 P **P** **03 15 31.5 -1.2**
baz=314,SNR=9.2
F51A **Arnstein** 56.41 57 P **P** **03 15 32.2 -0.6**
baz=313,SNR=7.6
J49A **Marlette** 56.48 61 P **P** **03 15 33.5 +0.1**
baz=313
HAMF **Hammerfest** 56.57 354 *e*P **P** **03 15 32.7 -0.9**
MIAR **Mount Ida** 56.64 75 P **P** **03 15 34.8 +0.2**
baz=315
K49A **Clarkson** 56.70 62 P **P** **03 15 34.9 0.0**
baz=313,SNR=5.4
D53A **Lac Vacive, Po** 56.74 55 P **P** **03 15 34.8 -0.3**
baz=314,SNR=6.6
D53A **Lac Vacive, Po** 56.74 55 lAmb lAmb 03 15 35.8
comp=Z,14nm,0.8s
L48A **N Adams** 56.75 63 P **P** **03 15 34.9 -0.4**
baz=313
N47A **Urbana** 56.78 65 P **P** **03 15 34.9 -0.7**
baz=314
F52A **Sundridge** 56.80 57 P **P** **03 15 35.7 +0.1**
baz=313,SNR=19
E52A **Mattawa** 56.81 56 P **P** **03 15 35.2 -0.5**
baz=314,SNR=8.1
WHN **Wuhan** 56.82 278 P P 03 15 47.8 +12
M48A **Edgerton** 56.91 64 P **P** **03 15 35.9 -0.5**
baz=314
PBMO **Poplar Bluff** 56.93 71 lAmb lAmb 03 15 40.2
comp=Z,7.0nm,0.7s
SIUC **Southern Illin** 56.98 70 P **P** **03 15 39.4 +2.5**
SIUC lAmb lAmb 03 15 40.9
comp=Z,10nm,0.7s
X40A **Basin Creek Fa** 57.12 75 P **P** **03 15 37.9 0.0**
baz=315
N48A **Decatur** 57.16 64 P **P** **03 15 37.2 -1.0**
baz=314
D54A **Lac Fusel, La** 57.21 54 P **P** **03 15 37.7 -0.7**
baz=314
E53A **Dumoine, Ponti** 57.24 55 P **P** **03 15 38.4 -0.3**
baz=314
I51A **Listowel** 57.29 59 P **P** **03 15 39.2 +0.1**
baz=314,SNR=5.2
H52A **Wyevale** 57.31 58 P **P** **03 15 39.1 0.0**
baz=314,SNR=7.8
M49A **Liberty Center** 57.32 63 P **P** **03 15 37.3 -2.0**
baz=314
ALGO **Algonquin Park** 57.34 56 P **P** **03 15 38.9 -0.5**
baz=314,SNR=6.9
E54A **Lac Daplat, Po** 57.44 55 P **P** **03 15 38.7 -1.3**
baz=314
O48A **Farmland** 57.51 65 P **P** **03 15 39.4 -1.3**
baz=314,SNR=6.8
ARCES **ARCESS Array B** 57.53 353 P **P** **03 15 39.5 -0.8**
comp=Z,4.6nm,0.6s,baz=18,slow=8.5,SNR=50
ARCES PcP **PcP** **03 16 31.8 -0.6**
comp=Z,2.1nm,0.6s,baz=12,slow=6.2,SNR=4.2
ARCES LR LR 03 43 36.1
comp=Z,5.4nm,18.3s,baz=349,slow=39
ARE0 **ARCESS Array S** 57.53 353 *e*P **P** **03 15 39.5 -0.9**
N49A **Columbus Grove** 57.59 64 P **P** **03 15 40.0 -1.1**
baz=314
XAN **Xi'an** 57.60 285 P **P** **03 15 41.1 -0.3**
XAN pmax pmax
comp=Z,6.0nm,0.8s
XAN pmax pmax
comp=Z,77nm,4.6s
XAN **Xi'an** 57.60 285 P **P** **03 15 40.5 -1.0**
XAN lAmb lAmb 03 15 41.9
comp=Z,4.7nm,0.7s
G53A **Haliburton** 57.62 57 P **P** **03 15 41.7 +0.3**
baz=314,SNR=20
G54A **Lake Saint Pet** 57.70 56 P **P** **03 15 41.3 -0.7**
baz=314,SNR=6.9
TRO **Tromso** 57.84 356 *e*P **P** **03 15 42.1 -0.3**
D55A **Sainte-Anne-du** 57.88 53 P **P** **03 15 42.7 -0.5**
baz=314,SNR=14
P48A **Milroy** 57.91 66 P **P** **03 15 42.7 -0.8**
baz=314,SNR=7.9
J52A **Paris** 57.97 60 P **P** **03 15 44.0 +0.2**
baz=314
E55A **Montcerf-Lytto** 57.99 54 P **P** **03 15 43.1 -0.8**
baz=314
H53A **Bobcaygeon** 58.03 57 P **P** **03 15 44.1 -0.1**
baz=314,SNR=8.1
I53A **Kortright Cn E** 58.03 58 P **P** **03 15 44.2 0.0**
baz=314
D56A **ZEC Mazanza, M** 58.21 53 P **P** **03 15 44.7 -0.8**
baz=315,SNR=7.6
KTK1 **Kautokeino** 58.21 354 *e*P **P** **03 15 44.9 -0.3**
N50A **Nevada** 58.25 63 P **P** **03 15 45.5 -0.4**
baz=314
P49A **Miami Univ. Ec** 58.25 65 P **P** **03 15 44.7 -1.1**
baz=314,SNR=5.3
F55A **Otter Lake** 58.28 55 P **P** **03 15 45.1 -0.8**
baz=315
WCI **Wyandotte Cave** 58.28 67 P **P** **03 15 45.6 -0.5**
baz=315
E56A **St. Veronique** 58.43 54 P **P** **03 15 46.3 -0.7**
baz=315,SNR=5.6
O50A **Cable** 58.43 64 P **P** **03 15 46.1 -1.0**
baz=314
PLVO **Plevna** 58.47 56 lAmb lAmb 03 15 49.0
comp=Z,10nm,0.6s
G55A **Calabogie** 58.50 56 P **P** **03 15 47.0 -0.4**
baz=315,SNR=6.4
Q49A **Aurora** 58.52 66 P **P** **03 15 47.6 -0.2**
baz=315
DELO **Deloro Mine** 58.56 57 lAmb lAmb 03 15 49.0
comp=Z,15nm,0.9s
N51A **Ashland** 58.57 63 P **P** **03 15 47.7 -0.4**
baz=315
D57A **Chemin Vers le** 58.66 53 P **P** **03 15 47.8 -0.7**
baz=315
T47A **Sharon Grove** 58.69 69 lAmb lAmb 03 15 53.4
comp=Z,15nm,1.1s
P50A **Jamestown** 58.71 65 P **P** **03 15 48.4 -0.6**
baz=315,SNR=7.6
ACSO **Alum Creek Sta** 58.72 64 P **P** **03 15 48.5 -0.6**
baz=315
I55A **Frankford** 58.74 57 P **P** **03 15 49.4 +0.3**
baz=315,SNR=7.3
H55A **Tweed** 58.76 56 P **P** **03 15 49.5 +0.3**
baz=315,SNR=6.4
WVT **Waverly** 58.88 70 P **P** **03 15 50.5 +0.2**
J54A **Appleton** 58.91 58 P **P** **03 15 50.6 +0.3**
baz=315,SNR=5.7
E57A **Chemin Saint G** 58.96 53 P **P** **03 15 49.7 -0.9**
baz=315,SNR=6.6
ORIO **Orleans, Innes** 58.97 55 P **P** **03 15 49.6 -1.1**
baz=315
L53A **Girard** 58.98 60 P **P** **03 15 50.9 0.0**
baz=315
O51A **Pataskala** 58.99 63 P **P** **03 15 50.3 -0.6**
baz=315
ERPA **Erie** 59.01 60 P **P** **03 15 50.7 -0.3**
baz=315
N52A **McGinn's Farm,** 59.02 62 P **P** **03 15 50.6 -0.5**
baz=315
D58A **Chemin du LacG** 59.09 52 P **P** **03 15 50.6 -0.9**
baz=316,SNR=5.4
OXF **Oxford** 59.11 73 P **P** **03 15 52.0 +0.1**
baz=315

M53A **WI Miller and** 59.12 61 P **P** **03 15 51.5 -0.3**
baz=315
Q50A **Georgetown** 59.15 65 P **P** **03 15 52.0 -0.1**
baz=315
H56A **Elgin** 59.20 56 P **P** **03 15 52.2 -0.1**
baz=315,SNR=8.2
L54A **Sinclairville** 59.28 60 P **P** **03 15 53.1 +0.1**
baz=315,SNR=6.5
J55A **Hilton** 59.34 58 P **P** **03 15 53.5 +0.2**
baz=315
K54A **Basiliko Farm,** 59.35 59 P **P** **03 15 52.8 -0.6**
baz=315
Q51A **Peebles** 59.37 65 P **P** **03 15 52.9 -0.7**
baz=315
E58A **La Victoria** 59.41 53 P **P** **03 15 52.6 -1.1**
baz=316
O52A **Adamsville** 59.43 63 P **P** **03 15 53.3 -0.6**
baz=315,SNR=5.5
G57A **Newington** 59.47 55 P **P** **03 15 53.4 -0.7**
baz=316,SNR=5.6
N53A **Lisbon** 59.48 62 P **P** **03 15 54.0 -0.3**
baz=315
LOF **Lofoten** 59.54 358 *e*P **P** **03 15 53.4 -0.8**
PLAL **Pickwick Lake** 59.55 71 lAmb lAmb 03 15 58.8
comp=Z,5.9nm,0.7s
K55A **Perry** 59.59 58 P **P** **03 15 54.4 -0.6**
baz=315
P52A **Corning** 59.61 64 P **P** **03 15 54.8 -0.3**
baz=315
M54A **Oil Creek Stat** 59.61 60 P **P** **03 15 54.8 -0.4**
baz=315
D59A **Saint-Raymond** 59.65 51 P **P** **03 15 54.3 -1.0**
baz=316
MMNY **Mt. Morris Dam** 59.67 58 lAmb lAmb 03 15 56.6
comp=Z,16nm,1.0s
O53A **New Philadelph** 59.67 62 P **P** **03 15 55.3 -0.4**
baz=315
STEI **Steigen** 59.69 357 *e*P **P** **03 15 54.7 -0.5**
L55A **Hinsdale** 59.78 59 P **P** **03 15 56.5 +0.1**
baz=315
J56A **Wolcott** 59.83 57 P **P** **03 15 56.6 0.0**
baz=316
N54A **Moraine State** 59.83 61 P **P** **03 15 56.3 -0.4**
baz=315
G58A **Ormstown** 59.90 54 P **P** **03 15 56.4 -0.7**
baz=316
I57A **Carthage** 59.96 56 P **P** **03 15 57.2 -0.4**
baz=316
K56A **Middlesex** 59.99 58 P **P** **03 15 58.1 +0.3**
baz=316,SNR=8.2
Q52A **Bidwell** 60.01 64 P **P** **03 15 57.6 -0.3**
baz=315
LONY **Lake Ozonia** 60.02 55 P **P** **03 15 57.3 -0.7**
baz=316
F59A **Saint Guilaume** 60.02 53 P **P** **03 15 57.0 -0.9**
baz=316
P53A **Whipple** 60.12 63 P **P** **03 15 58.3 -0.3**
baz=316
M55A **Ridgway** 60.12 60 P **P** **03 15 58.7 0.0**
baz=316,SNR=5.0
D60A **Saint Jean D'O** 60.15 51 P **P** **03 15 58.0 -0.8**
baz=316
J57A **Williamstown** 60.17 57 P **P** **03 15 59.1 +0.2**
baz=316,SNR=5.4
O54A **Avella** 60.17 62 P **P** **03 15 58.5 -0.5**
baz=316
L56A **Greenwood** 60.27 59 P **P** **03 16 00.2 +0.5**
baz=316,SNR=6.2
D61A **St Aubert, Com** 60.29 50 P **P** **03 15 59.2 -0.5**
baz=317,SNR=7.1
E60A **Ste Agathe de** 60.29 52 P **P** **03 15 58.7 -1.0**
baz=316
F60A **Warwick** 60.34 52 P **P** **03 15 59.4 -0.7**
baz=316
H58A **Gabriels** 60.37 55 P **P** **03 15 59.7 -0.7**
baz=316
K57A **Scipio Center** 60.39 58 P **P** **03 16 00.6 +0.1**
baz=316
M56A **Emporium** 60.41 60 P **P** **03 16 00.6 -0.1**
baz=316
H59A **Cadyville** 60.44 54 P **P** **03 16 00.2 -0.7**
baz=316
N55A **Marion Center** 60.49 61 P **P** **03 16 01.1 -0.1**
baz=316
Q53A **Leroy** 60.49 64 P **P** **03 16 00.9 -0.3**
baz=316
I58A **Old Forge** 60.49 56 P **P** **03 16 00.6 -0.6**
baz=316
P54A **Burton** 60.53 63 P **P** **03 16 01.4 -0.1**
baz=316,SNR=6.2
J58A **Remsen** 60.57 56 P **P** **03 16 01.9 +0.2**
baz=316,SNR=5.1
R53A **Hurricane** 60.63 64 P **P** **03 16 02.5 +0.3**
baz=316
E61A **Lac Etchemin** 60.70 51 P **P** **03 16 02.2 -0.4**
baz=317
O55A **Ligonier** 60.73 61 P **P** **03 16 02.7 -0.2**
baz=316
L57A **Andrews Acres** 60.74 58 P **P** **03 16 03.3 +0.4**
baz=316,SNR=7.0
N56A **West Decatur** 60.76 60 P **P** **03 16 02.9 -0.1**
baz=316
Q54A **Coxs Mills** 60.78 63 P **P** **03 16 03.3 +0.1**
baz=316
Q54A **Coxs Mills** 60.78 63 lAmb lAmb 03 16 04.1
comp=Z,11nm,0.8s
G60A **Masonville** 60.78 53 P **P** **03 16 02.2 -0.9**
baz=317
F61A **St Evariste** 60.80 52 P **P** **03 16 02.7 -0.5**
baz=317
K58A **Earlville** 60.81 57 P **P** **03 16 03.4 +0.1**
baz=316
Z47A **Carrollton** 60.83 73 lAmb lAmb 03 16 08.0
comp=Z,13nm,0.7s
MCWV **Mont Chateau** 60.83 62 P **P** **03 16 03.3 -0.2**
baz=316
J59A **Piesco** 60.89 56 P **P** **03 16 03.6 -0.3**
baz=316
J59A **Piesco** 60.89 56 lAmb lAmb 03 16 04.6
comp=Z,16nm,1.0s
D62A **Allapoint, All** 60.91 50 P **P** **03 16 03.6 -0.3**
baz=317
D62A **Allapoint, All** 60.91 50 P **P** **03 16 04.0 +0.1**
P55A **Reedsville** 60.95 62 P **P** **03 16 04.3 -0.1**
baz=316
I59A **Olmsteadville** 60.97 55 P **P** **03 16 04.1 -0.3**
baz=316
W50A **Signal Mountai** 60.98 69 lAmb lAmb 03 16 09.4
comp=Z,11nm,0.8s
H60A **Morristown** 60.99 54 P **P** **03 16 04.1 -0.5**
baz=317
BINY **Binghamton** 61.04 58 P **P** **03 16 05.4 +0.4**
baz=316
G61A **St-Isidore-de-** 61.04 53 P **P** **03 16 04.6 -0.2**
baz=317
M57A **Sunshine Farm,** 61.07 59 P **P** **03 16 05.1 0.0**
baz=316
O56A **Blue Knob Stat** 61.08 61 P **P** **03 16 04.9 -0.3**
baz=316
SSPA **Standing Stone** 61.17 60 P **P** **03 16 05.8 -0.1**
baz=316
SSPA **Standing Stone** 61.17 60 P **P** **03 16 06.2 +0.3**
Q55A **Buckhannon** 61.18 63 P **P** **03 16 05.8 -0.2**
baz=316
KURK **Kurchatov** 61.20 317 P **P** **03 16 05.3 -0.6**
K59A **Cooperstown** 61.21 57 P **P** **03 16 06.1 0.0**
baz=316
I60A **Shoreham** 61.22 55 P **P** **03 16 05.5 -0.6**
baz=317
L58A **Harry Jones Me** 61.23 58 P **P** **03 16 06.5 +0.3**
baz=316,SNR=5.7
R54A **Victor** 61.27 64 P **P** **03 16 06.6 +0.1**
baz=316
N57A **Milroy** 61.27 60 P **P** **03 16 06.2 -0.3**
baz=316
T53A **Wise** 61.27 66 P **P** **03 16 07.6 +1.0**
baz=316
FPAL **Fort Paine** 61.28 70 lAmb lAmb 03 16 11.6
comp=Z,12nm,0.8s
S54A **Dingess, Beckl** 61.36 64 P **P** **03 16 07.3 +0.1**
baz=316
ACCN **Adirondack Com** 61.37 55 P **P** **03 16 06.8 -0.3**
D63A **Stockholm** 61.38 49 P **P** **03 16 06.9 -0.2**
baz=318
H61A **Lyndonville** 61.39 53 P **P** **03 16 06.9 -0.3**
baz=317
M58A **Price's Panora** 61.39 59 P **P** **03 16 07.4 +0.1**
baz=316

MOR8 **Moi Rana** 61.48 357 *e*P **P** **03 16 05.8 -1.7**
P56A **Dayton Farm, R** 61.48 62 P **P** **03 16 08.0 +0.1**
baz=316
L59A **Walton** 61.53 57 P **P** **03 16 08.8 +0.5**
baz=317,SNR=12
LRAL **Lakeview Retre** 61.57 72 P **P** **03 16 09.0 +0.4**
baz=316
G62A **West of Eustis** 61.57 52 P **P** **03 16 08.2 -0.2**
baz=317,SNR=5.8
J60A **Lant Hill Farm** 61.59 55 P **P** **03 16 08.7 +0.1**
baz=317,SNR=8.8
LBNH **Lisbon** 61.61 54 P **P** **03 16 08.5 -0.2**
baz=317
O57A **Amberson** 61.61 60 P **P** **03 16 08.7 -0.1**
baz=316
E63A **Oxbow** 61.68 50 P **P** **03 16 08.3 -0.8**
baz=318,SNR=5.8
I61A **Oroboro, Fairl** 61.69 54 P **P** **03 16 09.4 +0.2**
baz=317
H62A **Milan** 61.74 53 P **P** **03 16 09.3 -0.3**
baz=317,SNR=6.7
T54A **Tazewell** 61.75 65 P **P** **03 16 10.1 +0.2**
baz=316,SNR=7.3
M59A **Waymart** 61.80 58 P **P** **03 16 10.2 +0.1**
baz=317
K60A **Five Rivers En** 61.81 56 P **P** **03 16 10.2 +0.1**
baz=317
S55A **Lewisburg** 61.83 64 P **P** **03 16 10.3 0.0**
baz=316
F63A **Nahmakanta, Br** 61.90 51 P **P** **03 16 10.2 -0.4**
baz=318
P57A **Homestead Farm** 61.94 61 P **P** **03 16 10.2 -0.8**
baz=317
J61A **Chester** 61.95 55 P **P** **03 16 10.7 -0.3**
baz=317
E64A **Bridgewater** 61.96 50 P **P** **03 16 10.4 -0.6**
baz=318,SNR=6.2
U54A **Nelsons Funny** 62.00 66 P **P** **03 16 11.8 +0.2**
baz=316
Z50A **Ashland** 62.03 71 P **P** **03 16 11.8 +0.1**
baz=317
Z50A **Ashland** 62.03 71 lAmb lAmb 03 16 15.5
comp=Z,19nm,1.2s
Q57A **Strasburg** 62.05 62 P **P** **03 16 10.9 -0.8**
baz=317
O58A **Lewisberry** 62.05 60 P **P** **03 16 11.7 -0.1**
baz=317
N59A **State Game Lan** 62.08 59 P **P** **03 16 12.3 +0.3**
baz=317
G63A **Kingsbury** 62.09 52 P **P** **03 16 11.4 -0.5**
baz=318
L60A **Shokan** 62.10 57 P **P** **03 16 12.1 +0.1**
baz=317
PKME **Peaks-Kenny Pk** 62.13 51 P **P** **03 16 12.0 -0.1**
baz=318
F64A **Sherman** 62.13 50 P **P** **03 16 11.5 -0.7**
baz=318
T55A **Pulaski** 62.14 65 P **P** **03 16 12.5 0.0**
baz=317
I62A **Tamworth** 62.17 54 P **P** **03 16 12.3 -0.1**
baz=318
WMQ **Urumqi** 62.21 306 *e*P **P** **03 16 15.4 +2.6**
WMQ pmax pmax
comp=Z,19nm,0.9s
WMQ pmax pmax
comp=Z,82nm,6.7s
WMQ LR LR
comp=N,610nm,29.0s
WMQ LR LR
comp=E,37nm,28.9s
WMQ LR LR
comp=Z,140nm,28.9s
H63A **New Sharon** 62.22 52 P **P** **03 16 12.2 -0.5**
baz=318
BLA **Blacksburg** 62.28 64 P **P** **03 16 13.6 +0.2**
baz=317
BLA **Blacksburg** 62.28 64 lAmb lAmb 03 16 17.5
comp=Z,15nm,0.9s
L61A **Hillsdale 1, H** 62.29 56 P **P** **03 16 13.5 +0.2**
baz=317
O59A **Robesonia** 62.30 59 P **P** **03 16 13.5 0.0**
baz=317
P58A **Pank, Wackersv** 62.31 61 P **P** **03 16 13.6 +0.1**
baz=317
M60A **Port Jervis** 62.38 57 P **P** **03 16 14.2 +0.4**
baz=317,SNR=8.6
G64A **Maxfield** 62.39 51 P **P** **03 16 13.4 -0.4**
baz=318
I63A **Otisfield** 62.41 53 P **P** **03 16 13.8 -0.2**
baz=318
J62A **Henniker** 62.41 54 P **P** **03 16 14.0 -0.1**
baz=318
S56A **Natural Bridge** 62.41 63 P **P** **03 16 14.3 +0.1**
baz=317,SNR=7.1
U55A **TA2, Sparta** 62.44 65 P **P** **03 16 14.6 +0.1**
baz=317,SNR=5.1
N60A **Cedar Hill Far** 62.46 58 P **P** **03 16 14.9 +0.5**
baz=317
V54A **Nebo** 62.47 66 P **P** **03 16 14.9 +0.3**
baz=317
Q58A **Fox Den Farm,** 62.51 61 P **P** **03 16 14.9 +0.1**
baz=317
R57A **Stanardsville** 62.52 62 P **P** **03 16 15.1 +0.2**
baz=317
L61B **Northampton** 62.54 55 P **P** **03 16 14.8 -0.1**
baz=317
MKAR **Makanchi Array** 62.56 312 P **P** **03 16 14.3 -0.7**
comp=Z,0.6nm,0.4s,baz=49,slow=6.6,SNR=9.1
MKAR PcP **PcP** **03 16 52.6 -0.4**
comp=Z,1.0nm,0.5s,baz=34,slow=3.7,SNR=3.8
K62A **Royalston** 62.61 55 P **P** **03 16 15.4 0.0**
baz=318
BRVK **Borovoye** 62.66 323 P **P** **03 16 14.9 -0.6**
Y52A **Lilburn** 62.66 69 P **P** **03 16 15.6 -0.3**
baz=317
P59A **Jarrettsville** 62.69 60 P **P** **03 16 16.1 +0.2**
baz=317
O60A **Telford** 62.71 59 P **P** **03 16 16.4 +0.3**
baz=317
J63A **Strafford** 62.73 54 P **P** **03 16 16.5 +0.3**
baz=318
R58A **Rapidan** 62.80 62 P **P** **03 16 16.8 0.0**
baz=317
V55A **Taylorsville** 62.82 66 P **P** **03 16 17.2 +0.3**
baz=317
M61A **Granite Spring** 62.83 57 P **P** **03 16 16.8 -0.1**
baz=317
W54A **Cherokee Point** 62.83 67 P **P** **03 16 17.2 +0.1**
baz=317
CD2 **Chengdu** 62.88 286 *e*P **P** **03 16 16.0 -1.4**
K63A **Dunstable** 62.94 55 P **P** **03 16 17.8 +0.2**
baz=318
N61A **South Mountain** 62.97 58 P **P** **03 16 18.2 +0.4**
baz=317
PAL **Palisades** 62.98 57 P **P** **03 16 17.9 +0.1**
baz=318
G65A **Princeton** 62.99 50 P **P** **03 16 17.7 -0.2**
baz=319
H65A **Eastbrook** 63.05 51 P **P** **03 16 17.6 -0.7**
baz=318
HRV **Adam Dziewonsk** 63.06 55 P **P** **03 16 18.1 -0.3**
baz=318
T57A **Hurt** 63.07 64 P **P** **03 16 18.7 +0.2**
baz=317
X54A **Belton** 63.12 68 P **P** **03 16 18.9 +0.1**
baz=317
M62A **Hamden** 63.18 56 P **P** **03 16 18.9 -0.2**
baz=318
NSS **Namsos** 63.18 358 *e*P **P** **03 16 17.9 -1.0**
V56A **Mocksville** 63.25 66 P **P** **03 16 20.2 +0.5**
baz=317
N62A **Caumsett State** 63.26 57 P **P** **03 16 19.6 -0.1**
baz=318
KMSC **Kings Mountain** 63.27 67 P **P** **03 16 20.4 +0.5**
baz=317
S58A **Poland Farm, P** 63.28 63 P **P** **03 16 20.0 +0.2**
baz=317
O61A **Allentown** 63.32 58 P **P** **03 16 20.2 +0.1**
baz=318
U57A **Blanch** 63.44 64 P **P** **03 16 20.9 0.0**
baz=317
T58A **Grand View Acr** 63.50 63 P **P** **03 16 21.3 0.0**
baz=317
S59A **Mechanicsville** 63.58 62 P **P** **03 16 22.1 +0.3**
baz=317
X55A **Gracelyn & Ava** 63.59 67 P **P** **03 16 22.2 +0.2**
baz=317
V57A **Coltrane Farms** 63.59 65 P **P** **03 16 22.9 +0.9**

baz=317
M63A Gales Ferry 63.63 56 P P 03 16 22.3 +0.1
baz=318
W56A Indian Trail 63.70 66 P P 03 16 22.6 -0.1
baz=317
ARU Arti 63.73 331 P P 03 16 21.9 -0.7
ARU IAmb IAmb 03 16 22.7
comp=Z,5.7nm,0.6s
Y55A Saluda 63.86 68 P P 03 16 24.2 +0.4
baz=317
X56A White Oak 63.91 67 P P 03 16 24.5 +0.4
baz=317
W57A Gilead 64.01 66 P P 03 16 25.0 +0.3
baz=318
T59A Double "B" Far 64.02 63 P P 03 16 25.1 +0.4
baz=318
T59A Double "B" Far 64.02 63 IAmb IAmb 03 16 26.2
comp=Z,21nm,1.1s
V58A Windy Hill, Pi 64.03 65 P P 03 16 25.3 +0.5
baz=318
DRLN Deer Lake 64.28 42 IAmb IAmb 03 16 27.1
comp=Z,16nm,0.8s
U59A Littleton 64.34 63 P P 03 16 27.5 +0.7
baz=318
GYA Guiyang 64.42 281 ⇓ *i*P P 03 16 28.2 +0.5
GYA pP PcP 03 16 54.0 -7.0
GYA PP **PP 03 18 53.1 +2.6**
GYA S **S 03 24 54.5 -2.0**
GYA sS pS 03 25 40.4 +11
GYA Guiyang 64.42 281 SS SS 03 29 12.4 +4.1
GYA pmax pmax
comp=Z,10.0nm,0.7s
GYA pmax pmax
comp=Z,40nm,3.5s
V59A Middlesex 64.53 64 P P 03 16 28.6 +0.5
baz=318
U60A Pendleton 64.60 63 P P 03 16 29.1 +0.6
baz=318
X58A Rowland 64.81 66 P P 03 16 30.0 +0.1
baz=318
V60A Jim Taylor Roa 65.06 63 P P 03 16 32.1 +0.6
baz=318
Y58A Scranton 65.11 66 P P 03 16 32.5 +0.7
baz=318
FINES FINESS Array B 65.43 351 P P 03 16 32.4 -1.1
comp=Z,2.5nm,0.5s,baz=13,slow=8.0,SNR=28
FINES PcP **PcP 03 17 03.2 -1.2**
comp=Z,1.5nm,0.6s,baz=48,slow=2.8,SNR=3.5
FINES LR LR 03 48 32.8
comp=Z,6.8nm,18.3s,baz=3.0,slow=39
AKN Aaknes 65.58 1 *e*P P 03 16 33.8 -0.6
DOMB Dombas 65.72 360 *e*P P 03 16 34.1 -1.2
NB2 NORSAR Subarra 66.70 358 P P 03 16 41.0 -0.7
comp=Z,1.7nm,0.5s,baz=2.1,slow=6.5
NB2 NORSAR Subarra 66.70 358 P P 03 16 41.0 -0.7
baz=2.1,slow=6.5
NOA NORSAR Array B 66.70 358 P P 03 16 41.3 -0.4
comp=Z,2.0nm,0.5s,baz=2.0,slow=6.3,SNR=17
NOA LR LR 03 44 46.2
comp=Z,4.1nm,20.6s,baz=100,slow=35
SKAR Skarslia 67.08 360 *e*P P 03 16 43.5 -0.6
KONO Kongsberg 68.11 359 *e*P P 03 16 50.1 -0.4
AAK Ala-Archa 69.28 314 P P 03 16 58.4 +0.1
HOMB Homborsund 69.50 360 *e*P P 03 16 58.2 -0.9
NRN Naryn 69.57 312 P P 03 17 00.7 +0.4
SLVN Son La 69.92 279 P P 03 17 02.9 +0.5
KKAR Karatay Array 70.62 317 P P 03 17 05.8 -0.4
PMG Port Moresby 71.00 223 P P 03 17 09.2 +0.5
LSA Lhasa 71.00 294 P P 03 17 09.8 +0.5
LSA IAmb IAmb 03 17 11.3
comp=Z,13nm,0.8s
KSH Kashi 71.11 311 P P 03 17 12.9 +3.4
KSH sP sP 03 17 54.3 +2.0
KSH PP **PP 03 19 52.0 +3.9**
KSH S **S 03 26 17.1 +1.1**
KSH SKS **SKSac 03 26 57.9 -2.7**
KSH Kashi 71.11 311 SS SS 03 30 55.7 +4.9
KSH pmax pmax
comp=Z,19nm,0.6s
KSH pmax pmax
comp=Z,61nm,4.5s
KSH LR LR
comp=N,99nm,4.5s
KSH LR LR
comp=E,64nm,7.0s
KSH LR LR
comp=Z,130nm,5.8s
BSD Bornholm Skovb 72.52 356 *i* P P 03 17 16.3 -1.1
comp=Z,2.1nm,0.3s
SHL Shillong 73.76 291 IAmb IAmb 03 17 25.3
comp=Z,8.7nm,0.7s
GAR Garm 74.08 314 IAmb IAmb 03 17 27.8
comp=Z,14nm,0.7s
TAPN Taplejung 74.73 295 *e*P P 03 17 31.3 +0.1
CHTO Chiang Mai 74.83 281 P P 03 17 31.4 0.0
CHGR Chuyangaron 74.86 315 IAmb IAmb 03 17 32.5
comp=Z,24nm,0.8s
CMAR Chiang Mai Arr 75.11 281 P P 03 17 33.6 +0.6
comp=Z,6.9nm,0.7s,baz=27,slow=7.0,SNR=19
GUN Gumba 75.29 297 *e*P P 03 17 34.6 +0.1
comp=Z,48nm,0.4s
JIRN Jiri 75.32 296 *e*P P 03 17 34.9 +0.3
comp=Z,73nm,0.4s
AKASG Malin Array Be 75.56 346 P P 03 17 33.5 -1.6
comp=Z,1.2nm,0.4s,baz=16,slow=5.9,SNR=8.5
AKBB Malin Array Si 75.56 346 P P 03 17 33.5 -1.7
RAMN Ramite 75.65 295 *e*P P 03 17 36.2 -0.2
comp=Z,23nm,0.5s
PKI Pulchoki 75.82 297 *e*P P 03 17 37.1 -0.3
comp=Z,11nm,0.5s
PKIN Phulchoki 75.82 297 *e*P P 03 17 36.8 -0.6
comp=Z,9.8nm,0.5s
GKN Gorkha 75.90 298 *e*P P 03 17 37.5 -0.2
comp=Z,37nm,0.6s
DMN Daman 75.95 297 *e*P P 03 17 38.1 0.0
comp=Z,12nm,0.5s
DANN Dangsing 76.09 298 *e*P P 03 17 39.0 +0.1
comp=Z,66nm,0.6s
LUWI Luwuk 76.14 249 P P 03 17 38.7 -0.2
CLL Collm 76.40 357 *i* P P 03 17 40.5 +0.6
KOLN Koldanda 76.64 298 *e*P P 03 17 41.2 -0.7
comp=Z,13nm,0.6s
PYUN Puthan 76.70 299 *e*P P 03 17 42.1 -0.2
comp=Z,37nm,0.7s
CHVC Chvalec 76.99 355 *e*P P 03 17 43.0 -0.3
OSTC Ostas 77.01 355 *e*P P 03 17 42.9 -0.5
UPC Upice 77.07 355 *e*P P 03 17 43.7 0.0
BSTI Sart Tilman 77.18 2 P P 03 17 44.4 +0.1
DPC Dobruska-Polom 77.21 355 *e*P P 03 17 44.6 +0.1
BMRD Maredsous 77.45 2 P P 03 17 45.4 -0.4
BMRD PcP **PcP 03 17 56.8 +1.0**
KRLC Kraliky 77.46 354 *e*P P 03 17 45.7 -0.2
PRU Pruhonice 77.66 356 *e*P P 03 17 46.8 -0.2
GOPC GO Pecny, Ondr 77.72 356 *e*P P 03 17 47.3 -0.1
SORM Soroca 78.19 346 ⇑P P 03 17 48.7 -1.3
VRAC Vranov 78.23 354 ⇑P P 03 17 50.3 +0.1
TREC Trest 78.31 355 *e*P P 03 17 50.4 -0.2
KBL Kabul 78.35 313 P P 03 17 50.0 -1.3
KBL IAmb IAmb 03 17 51.0
comp=Z,7.1nm,0.6s
KHC Kasperske Hory 78.56 356 *e*P P 03 17 52.0 0.0
GERES GERESS Array B 78.84 356 P P 03 17 53.3 -0.3
comp=Z,1.5nm,0.6s,baz=15,slow=5.4,SNR=19
VYHS Vyhne 78.89 353 *e*P P 03 17 53.5 -0.3
TRPA Tarpa 78.92 350 ⇑P P 03 17 53.4 -0.5
BURAR Bucovina Array 79.12 348 ⇑P P 03 17 54.5 -0.8
KBZ Khabaz 79.51 335 P P 03 17 57.4 +0.2
comp=Z,2.1nm,0.7s,baz=88,slow=4.8,SNR=6.1
CONA Conrad Observa 79.65 355 *e*P P 03 17 58.4 +0.3
comp=Z,2.1nm,0.5s
BIZ Bicaz 79.67 348 ⇑P P 03 17 58.3 +0.2
GEYT Alibeck 79.96 322 P P 03 17 59.5 -0.3
comp=Z,1.5nm,0.6s,baz=336,slow=6.8,SNR=3.7
DRGR 80.22 350 ⇑P P 03 18 00.3 -0.8
RETA Reutte 80.28 358 *e*P P 03 18 01.5 +0.1
comp=Z,1.7nm,0.6s
ARSA Arzberg 80.34 355 *e*P P 03 18 01.8 +0.1
comp=Z,2.7nm,0.8s
WTTA Wattenberg 80.49 358 *e*P P 03 18 02.9 +0.3
comp=Z,2.4nm,0.6s
SQTA Sankt Quirin 80.54 358 *e*P P 03 18 02.9 +0.1
comp=Z,2.5nm,0.7s
KBA Koelnbreinsper 80.62 356 *e*P P 03 18 03.9 +0.5
comp=Z,6.7nm,0.5s
VRI Vrincioaia 80.64 347 ⇑P P 03 18 02.8 -0.5
FETA Feichten 80.75 358 *e*P P 03 18 04.2 +0.2
comp=Z,3.2nm,0.7s
TBLG Delisi 80.88 333 IAmb IAmb 03 18 05.3
comp=Z,14nm,0.6s
SOKA Soboth 80.94 355 *e*P P 03 18 05.0 0.0
comp=Z,1.2nm,0.5s
TLCR 81.00 345 ⇑P P 03 18 04.1 -1.0
CTAO Charters Tower 81.02 219 P P 03 18 06.0 +0.6
CFR Carcaliu 81.12 346 ⇑P P 03 18 05.2 -0.6
MLR Muntele Rosu 81.12 347 ⇑P pP 03 18 44.5 +8.0
OBKA Obir 81.13 356 *e*P P 03 18 06.4 +0.4
comp=Z,2.1nm,0.5s
FUORN Ofenpass-Fuorn 81.16 359 P P 03 18 06.0 -0.3
TUE Stuetta 81.32 359 P P 03 18 07.2 +0.1
GZR Gura Zlata 81.60 350 ⇑P P 03 18 07.7 -0.7
HARR Harsova 81.62 346 ⇑P P 03 18 08.5 0.0
TIRR Tirgusor 81.78 346 ⇑P P 03 18 09.2 -0.1
TIRR Tirgusor 81.78 346 IAmb IAmb 03 18 09.7
comp=Z,10nm,0.7s
PLVB Pleven 83.36 348 ⇑P P 03 18 17.3 -0.2
BRTR Keskin Array B 85.44 341 P P 03 18 28.8 +0.5
comp=Z,1.7nm,0.7s,baz=82,slow=1.0,SNR=12
WRA Warramunga Arr 85.98 230 P P 03 18 30.4 -0.4
comp=Z,1.4nm,0.5s,baz=32,slow=5.6,SNR=11
ESDC Sonseca Array 87.51 9 P P 03 18 37.5 -0.7
comp=Z,1.3nm,0.8s,baz=339,slow=3.3,SNR=7.9
AS31 Alice Springs 89.40 228 P P 03 18 47.4 +0.3
ASAR Alice Springs 89.40 228 P P 03 18 47.5 +0.4
comp=Z,5.2nm,0.7s,baz=30,slow=4.8,SNR=44
STKA Stephens Creek 93.42 218 P P 03 19 06.0 +0.5
comp=Z,0.7nm,0.3s,baz=119,slow=7.2,SNR=3.6
LPAZ La Paz 111.07 89 Pdiff Pdif 03 20 26.6 +0.9
comp=Z,0.4nm,0.3s,baz=207,slow=16,SNR=12
TORD Torodi Ar. Bea 114.30 7 PKP PKiKP 03 24 28.9 -0.8
comp=Z,0.5nm,0.4s,baz=349,slow=3.1,SNR=11
H03N2 Juan Fernandez 117.40 110 T T 05 33 09.0
baz=318,slow=77,SNR=5.9
H03N1 Juan Fernandez 117.42 110 T T 05 33 05.7
baz=318,slow=77,SNR=11
H03N3 Juan Fernandez 117.42 110 T T 05 33 06.2
baz=318,slow=77,SNR=6.7
DBIC Dimbokro 119.94 15 PKP PKPdf 03 24 38.6 -2.0
comp=Z,3.7nm,1.0s,baz=242,slow=3.6,SNR=2.1
TSUM Tsumeb 145.88 344 PKPbc 03 25 29.2 -0.3
LBTB Lobatse 149.47 328 PKPbc 03 25 39.4 +0.3
MAW Mawson 150.11 219 PKPbc PKPbc 03 25 39.4 +0.3
comp=Z,3.5nm,0.7s,baz=294,slow=6.0,SNR=5.9
BOSA Boshof 152.91 325 PKPbc PKiKP 03 25 47.2 +0.1
comp=Z,2.9nm,0.4s,baz=15,slow=1.9,SNR=26

ROM 02 03:11:11.9±0.1, 42.504N±0.005×13.210E±0.007, h10km, ML1.5/13, Error ellipse: s-maj=0.6km s-min=0.4km az=62.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.15**	**78**	P	Pg	03 11 15.9	+0.5
CAMP				S	Sg	03 11 18.5	+0.7
CAMP				AML	AML		
	comp=N,314μm,0.4s						
CAMP				AML	AML		
	comp=E,198μm,0.3s						
SMA1	**SAN MARTINO**	**0.16**	**36**	P	Pg	03 11 16.1	+0.6
SMA1				S	Sg	03 11 18.9	+1.0
SMA1				AML	AML		
	comp=E,844μm,2.5s						
SMA1				AML	AML		
	comp=N,468μm,0.3s						
LNSS	**Leonessa**	**0.16**	**308**	P	Pg	03 11 16.1	+0.6
LNSS				S	Sg	03 11 18.8	+0.8
LNSS				AML	AML		
	comp=E,452μm,1.6s						
LNSS				AML	AML		
	comp=N,482μm,0.1s						
LNSS				AML	AML		
	comp=E,453μm,1.6s						
AQU	**L'Aquila**	**0.21**	**136**	P	Pb	03 11 17.1	-0.6
AQU				S	Sg	03 11 20.4	+1.2
AQU				AML	AML		
	comp=N,85μm,3.1s						
AQU				AML	AML		
	comp=E,109μm,0.2s						
AQU				AML	AML		
	comp=N,85μm,3.1s						
FIAM	**Fiamignano**	**0.25**	**196**	P	Pg	03 11 17.5	+0.6
FIAM				S	Sg	03 11 21.5	+1.2
FIAM				AML	AML		
	comp=N,69μm,3.0s						
FIAM				AML	AML		
	comp=E,120μm,1.4s						
FIAM				AML	AML		
	comp=N,69μm,3.0s						
TERO	**Teramo**	**0.32**	**68**	P	Pg	03 11 18.3	+0.1
TERO				S	Sg	03 11 22.9	+0.5
TERO				AML	AML		
	comp=E,78μm,1.5s						
TERO				AML	AML		
	comp=N,57μm,0.5s						
TERO				AML	AML		
	comp=E,77μm,1.5s						
NRCA	**Norcia**	**0.34**	**348**	P	Pg	03 11 18.8	+0.2
NRCA				S	Sg	03 11 23.9	+0.8
NRCA				AML	AML		
	comp=E,412μm,0.1s						
NRCA				AML	AML		
	comp=N,249μm,0.1s						
FAGN	**Fagnano**	**0.37**	**131**	P	Pb	03 11 20.1	-0.4
FAGN				S	Sb	03 11 26.3	0.0
FAGN				AML	AML		
	comp=N,129μm,0.4s						
FAGN				AML	AML		
	comp=N,128μm,0.4s						
FAGN				AML	AML		
	comp=E,208μm,1.7s						
FDMO	**Fiordimonte**	**0.54**	**350**	P	Pg	03 11 22.3	-0.1
FDMO				S	Sb	03 11 30.8	-0.5
FDMO				AML	AML		
	comp=E,44μm,2.9s						
FDMO				AML	AML		
	comp=N,33μm,3.2s						
FDMO				AML	AML		
	comp=E,44μm,2.9s						
FDMO				AML	AML		
	comp=N,33μm,3.2s						
OFFI	**Offida**	**0.56**	**39**	P	Pb	03 11 23.4	-0.3
OFFI				S	Sb	03 11 31.6	-0.1
OFFI				AML	AML		
	comp=N,73μm,2.6s						
OFFI				AML	AML		
	comp=E,78μm,1.3s						
OFFI				AML	AML		
	comp=N,72μm,2.6s						
MOMA	**Monte Martano**	**0.56**	**303**	P	Pg	03 11 23.1	+0.3
MOMA				S	Sb	03 11 31.6	-0.3
MOMA				AML	AML		
	comp=E,88μm,0.2s						
MOMA				AML	AML		
	comp=N,69μm,0.2s						
MOMA				AML	AML		
	comp=N,69μm,0.2s						
CSP1	**Cessapalombo**	**0.59**	**360**	P	Pg	03 11 23.2	-0.1
CSP1				S	Sb	03 11 32.1	-0.6
ASSB	**Assisi San Ben**	**0.67**	**323**	P	Pg	03 11 25.1	+0.2
ASSB				S	Sb	03 11 34.6	-0.6
CING	**Cingoli**	**0.87**	**359**	AML	AML		
	comp=E,19μm,1.4s						
CING				AML	AML		
	comp=N,17μm,1.1s						
ARVD	**Arcevia**	**1.01**	**349**	AML	AML		
	comp=N,10μm,3.6s						
ARVD				AML	AML		
	comp=E,10μm,2.9s						
ARVD				AML	AML		
	comp=E,11μm,1.6s						
ARVD				AML	AML		
	comp=N,10μm,3.6s						

*VIE **02** 03:12:19.8±0.2, 46.79N×12.73E, h8km±4km, mb1.3/7, ml1.9/18, Error ellipse: s-maj=2.2km s-min=1.0km az=11.0*
6 km SSW of Lienz
ROM 02 03:12:19.8±0.2, 46.77N±0.01×12.74E±0.01, h10km±1km, ML1.5/5, 2C-2D, Error ellipse: s-maj=1.4km s-min=0.5km az=201.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABTA	**Abfaltersbach**	**0.16**	**261**	*i* Pg	Pg	03 12 23.6	+0.2
	4.7nm,0.0s,SNR=133						
ABTA				*i* Sg	Sg	03 12 26.2	+0.3
	58nm,0.1s						
FVI	**Forni Avoltri**	**0.18**	**171**	P	Pg	03 12 24.3	+0.7
FVI				S	Sg	03 12 27.2	+0.9
FVI				AML	AML		
	comp=E,328μm,0.1s						
FVI				AML	AML		
	comp=N,263μm,2.2s						
CSMI	**Casera Mimoias**	**0.27**	**193**	⇓ *e*Pg	Pg	03 12 25.8	+0.5
CSMI				*e*Sg	Sg	03 12 30.0	+1.1
ZOU	**Zoufplan**	**0.27**	**143**	⇑ *e*Pg	Pg	03 12 25.9	+0.6
ZOU				*e*Sg	Sg	03 12 30.1	+1.1
CLUD	**Cludinico**	**0.33**	**163**	⇑ *e*Pg	Pg	03 12 26.9	+0.6
PLRO	**Paularo**	**0.36**	**128**	⇓ *e*Pg	Pg	03 12 27.4	+0.5
PLRO				*e*Sg	Sg	03 12 32.8	+1.1
RISI	**Rein**	**0.49**	**292**	P	Pg	03 12 29.3	0.0
RISI				S	Sg	03 12 36.1	+0.3
RISI				AML	AML		
	comp=E,120μm,0.2s						
RISI				AML	AML		
	comp=N,134μm,0.7s						
KBA	**Koelnbreinsper**	**0.52**	**53**	*i* Pg	Pg	03 12 30.4	+0.6
	comp=N,7.3nm,0.1s,SNR=39						
KBA				*i* Sg	Sg	03 12 37.0	+0.2
	comp=N,4.9nm,0.1s						
PTCC	**Patocco-Chiusa**	**0.56**	**131**	P	Pg	03 12 31.0	+0.3
PTCC				S	Sg	03 12 38.7	+0.6
PTCC				AML	AML		
	comp=E,20μm,2.9s						
PTCC				AML	AML		
	comp=N,19μm,2.5s						
ACOM	**Acomizza, Ital**	**0.58**	**112**	*e*Pg	Pg	03 12 31.5	+0.4
ACOM	**Acomizza, Ital**	**0.58**	**112**	P	Pb	03 12 31.6	-0.5
ACOM				S	Sg	03 12 39.4	+0.8
ACOM				AML	AML		
	comp=N,73μm,0.2s						
ACOM				AML	AML		
	comp=E,56μm,2.3s						
MYKA	**Terra Mystica**	**0.64**	**102**	*e*Pg	Pb	03 12 32.7	-0.3
	comp=E,0.1nm,0.0s						
MYKA				*e*Sg	Sb	03 12 42.3	+0.3
	comp=E,1.8nm,0.1s,SNR=5.0						
BRES	**Bressanone**	**0.70**	**264**	P	Pg	03 12 32.8	-0.5
WTTA	**Wattenberg**	**0.90**	**304**	*e*Pg	Pg	03 12 37.0	-0.1
	comp=E,3.0nm,0.2s,SNR=9.8						
WTTA				*i* Sg	Sg	03 12 48.5	-0.4
	comp=E,3.3nm,0.2s						
WTTA	**Wattenberg**	**0.90**	**304**	P	Pg	03 12 37.0	-0.2
WTTA				S	Sg	03 12 48.7	-0.3
ROSI	**Rosskopf**	**0.93**	**280**	P	Pg	03 12 37.1	-0.5
ROSI				S	Sb	03 12 50.3	-0.2
WATA	**Walderalm**	**0.98**	**306**	*i* Pg	Pg	03 12 38.5	-0.1
	comp=E,1.2nm,0.2s						
WATA				*i* Sg	Sg	03 12 51.4	+0.1
	comp=E,5.5nm,0.2s						
KOSI	**Kohlern**	**0.99**	**252**	S	Pg	03 12 40.0	+1.2
KOSI	**Kohlern**	**0.99**	**252**	P	Pg	03 12 38.5	-0.3
KOSI				S	Sg	03 12 51.8	+0.2
APPI	**Appiano**	**1.08**	**255**	S	Pg	03 12 41.0	+0.4
APPI	**Appiano**	**1.08**	**255**	P	Pg	03 12 40.1	-0.4
APPI				S	Sg	03 12 54.4	-0.3
APPI				AML	AML		
	comp=E,18μm,1.6s						
APPI				AML	AML		
	comp=N,23μm,1.3s						
SQTA	**Sankt Quirin**	**1.14**	**294**	*i* Pg	Pb	03 12 41.2	-0.5
	comp=N,0.5nm,0.1s						
SQTA				Sg	Sg	03 12 56.1	-0.4
	comp=N,0.9nm,0.1s						
MOTA	**Moosalm**	**1.26**	**298**	Pg	Pg	03 12 44.5	+0.6
	comp=N,0.1nm,0.1s						
MOTA				*e*Sg	Sb	03 12 60.0	0.0
	comp=N,2.9nm,0.3s						
OBKA	**Obir**	**1.27**	**101**	*e*Pg	Pg	03 12 44.5	+0.3
	comp=N,0.6nm,0.1s						
OBKA				*e*Sg	Sn	03 13 02.5	+1.6
	comp=N,1.6nm,0.2s						
FETA	**Feichten**	**1.40**	**281**	*e*Pg	Pb	03 12 46.0	-0.2
	comp=N,0.2nm,0.1s						
FETA				*e*Sg	Sg	03 13 04.5	-0.3
	comp=N,0.2nm,0.1s						
MOA	**Molln**	**1.50**	**43**	Pg	Pg	03 12 48.8	+0.3
	comp=N,0.7nm,0.2s						
MOA				*e*Sg	Sg	03 13 10.2	+2.2
	comp=N,2.4nm,0.2s,SNR=4.9						
RETA	**Reutte**	**1.53**	**299**	*e*Pg	Pg	03 12 49.1	0.0
	comp=N,0.3nm,0.1s						
RETA				*e*Sg	Sg	03 13 11.4	+2.4
	comp=N,0.9nm,0.2s						
SOKA	**Soboth**	**1.58**	**93**	*e*Pn	Pb	03 12 49.0	-0.1
	comp=N,0.5nm,0.2s						
SOKA				*e*Sg	Sg	03 13 11.5	+0.9
	comp=N,0.8nm,0.3s						

*IDC **02** 03:23:25.6±2.4, 6.84S×130.48E, h112km±26km, mb3.7/2,*
mb1 3.9/6, mb1mx3.5/36, mbtmp4.2/6, Error ellipse:
s-maj=43.6km s-min=21.9km az=106.0
*NEIC **02** 03:23:26.0±2.4, 6.82S±0.10×130.4E±0.1, h122km±13km,*
mb4.0/2, Error ellipse: s-maj=16.9km s-min=12.1km
az=130.0
*DJA **02** 03:23:27.7±0.4, 7.S±4×13.0E±, h112km±20km, M4.1/6,*
mB4.9/3, mb4.1/6, MLv4.1/3, Mw(mB)4.2/3
ISC 02 03:23:26.4±0.8, 6.56S±0.07×130.1E±0.1, h100km, n18,
σ1s95/20, mb4.1/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**4.21**	**31**	P	**Pn**	**03 24 31.0**	**+2.4**
FAKI				S	**Sn**	**03 25 17.0**	**+0.2**
FAKI	**Fak Fak**	**4.21**	**31**	Pn	**Pn**	**03 24 30.2**	**+1.6**
SIJI	**Sorong**	**5.78**	**12**	P	**Pn**	**03 24 52.0**	**+2.1**
	2.1nm,0.3s,baz=195,slow=20,SNR=17						
SIJI				S	**Sn**	**03 25 51.1**	**-3.7**
	2.5nm,0.3s,baz=269,slow=23,SNR=3.2						
MTN	**Manton Dam**	**6.33**	**171**		**Pn**	**03 24 58.6**	**+1.4**
BATI	**Baumata**	**7.31**	**240**	P	**Pn**	**03 25 12.4**	**+1.8**
	12nm,0.3s,baz=50,slow=16,SNR=5.1						
BATI				S	**Sn**	**03 26 32.6**	**+0.6**
	5.6nm,0.3s,baz=177,slow=7.6,SNR=1.9						
KNRA	**Kununurra**	**9.15**	**188**		**Pn**	**03 25 34.0**	**-1.6**
FITZ	**Fitzroy Crossi**	**12.26**	**200**	P	**Pn**	**03 26 15.0**	**-2.6**
	1.2nm,0.3s,baz=36,slow=11,SNR=46						
FITZ				S	Sn	03 28 19.3	-13
	0.7nm,0.3s,baz=155,slow=19,SNR=2.0						
FITZ	**Fitzroy Crossi**	**12.26**	**200**		**Pn**	**03 26 16.1**	**-1.5**
WB0	**Warramunga Arr**	**13.78**	**163**	P	**Pn**	**03 26 35.9**	**-1.7**
WRAB	**Tennant Creek**	**13.92**	**163**		**Pn**	**03 26 36.7**	**-2.8**
WRA	**Warramunga Arr**	**13.93**	**163**	P	Pn	03 26 33.6	-6.0
	1.5nm,0.3s,baz=349,slow=13,SNR=12						
WB2	**Warramunga Arr**	**13.93**	**163**	P	**Pn**	**03 26 38.6**	**-1.0**
WR0	**Warramunga Arr**	**14.00**	**162**	P	**Pn**	**03 26 38.0**	**-2.5**
ASAR	**Alice Springs**	**17.40**	**168**	P	**Pn**	**03 27 23.6**	**+0.5**
	1.5nm,0.3s,baz=338,slow=9.0,SNR=52						
ASAR				S	Sn	03 30 25.0	-12
	0.1nm,0.3s,baz=353,slow=28,SNR=3.0						
ENH	**Enshi**	**41.61**	**333**	P	**P**	**03 31 03.5**	**-1.3**
MJAR	**Matsushiro Arr**	**43.55**	**10**	P	**P**	**03 31 19.9**	**-0.5**
	1.0nm,0.6s,baz=175,slow=8.7,SNR=4.9						
MK31	**Makanchi Array**	**67.91**	**327**	P	**P**	**03 34 14.4**	**+0.1**
MK31				IAmb	IAmb	03 34 15.6	
	comp=Z,1.6nm,0.7s						
MKAR	**Makanchi Array**	**67.91**	**327**	P	**P**	**03 34 15.1**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=119,slow=8.2,SNR=23						

*NEIC **02** 03:23:43.1±1.9, 6.8S±0.1×155.42E±0.08, h37km±4km,*
mb4.5/31, Error ellipse: s-maj=16.1km s-min=11.8km
az=185.0
*IDC **02** 03:23:48.4±3.3, 6.81S×155.29E, h84km±28km, mb4.0/18,*
mb1 4.1/21, mb1mx4.0/42, mbtmp4.3/21, MS3.3/6,
Ms1 3.4/6, ms1mx2.9/22, Error ellipse: s-maj=19.6km
s-min=13.8km az=98.0
ISC 02 03:23:44.8±0.4, 6.91S±0.07×155.38E±0.07, h50km, n68,
σ1s65/64, mb4.4/30, Bougainville-Solomon Islands
region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**4.22**	**308**	P	**Pn**	**03 24 47.9**	**+1.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	5.9nm,0.3s,baz=240,slow=4.2,SNR=2.0						
KRVT				S	**Sn**	**03 25 41.0**	**+6.2**
	17nm,0.3s,baz=12,slow=16,SNR=1.6						
KRVT				LR	LR	03 26 40.6	
	comp=Z,317nm,21.5s,baz=119,slow=42						
HNR	**Honiara**	**5.17**	**119**	P	**Pn**	**03 25 01.5**	**+1.8**
	9.4nm,0.3s,baz=190,slow=12,SNR=1.3						
HNR				S	**Sn**	**03 26 04.9**	**+6.8**
	13nm,0.3s,baz=298,slow=18,SNR=1.5						
HNR				LR	LR	03 27 09.9	
	comp=Z,301nm,19.9s,baz=288,slow=38						
HNR	**Honiara**	**5.17**	**119**	Pn	**Pn**	**03 24 58.8**	**-0.9**
HNR					**Sn**	**03 25 58.3**	**+0.2**
PMG	**Port Moresby**	**8.51**	**252**		**Pn**	**03 25 44.7**	**-0.8**
CTA	**Charters Tower**	**15.82**	**213**	P	**P**	**03 27 27.4**	**0.0**
	0.3nm,0.3s,baz=34,slow=15,SNR=3.7						
DZM	**Mont Dzumac**	**18.48**	**146**	P	**Pn**	**03 27 59.5**	**+2.1**
	0.8nm,0.3s,baz=302,slow=9.9,SNR=13						
DZM				LR	LR	03 34 46.2	
	comp=Z,85nm,18.8s,baz=54,slow=35						
DZM	**Mont Dzumac**	**18.48**	**146**	P	**P**	**03 27 55.4**	**-1.5**
WR0	**Warramunga Arr**	**24.03**	**235**	P	**P**	**03 28 57.0**	**+1.6**
WR0				IAmb	IAmb	03 29 11.0	
	comp=Z,8.4nm,0.7s						
WB0	**Warramunga Arr**	**24.05**	**236**	P	**P**	**03 28 57.0**	**+1.3**
WB0				IAmb	IAmb	03 29 09.3	
	comp=Z,10.0nm,0.8s						
WRAB	**Tennant Creek**	**24.17**	**236**	P	**P**	**03 28 58.0**	**+1.3**
WB2	**Warramunga Arr**	**24.18**	**236**	P	**P**	**03 28 58.6**	**+1.8**
WB2				IAmb	IAmb	03 29 22.6	
	comp=Z,8.7nm,0.8s						
WRA	**Warramunga Arr**	**24.18**	**236**	P	**P**	**03 28 57.8**	**+1.0**
	comp=Z,4.3nm,0.5s,baz=58,slow=9.6,SNR=7.8						
WRA				PcP	**PcP**	**03 32 36.5**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=40,slow=2.1,SNR=2.0						
SIJI	**Sorong**	**24.79**	**283**	P	**P**	**03 29 00.9**	**-1.5**
	comp=Z,13nm,0.6s,baz=41,slow=10,SNR=7.7						
ASAR	**Alice Springs**	**26.52**	**229**	P	**P**	**03 29 18.2**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=62,slow=8.8,SNR=6.5						
ASAR				PcP	**PcP**	**03 32 39.9**	**-2.0**
	comp=Z,0.8nm,0.7s,baz=79,slow=2.9,SNR=3.1						
H11S3	**WAKE ISLAND Hy**	**27.59**	**24**	T	T	03 57 47.5	
	baz=203,slow=75,SNR=60						
H11S2	**WAKE ISLAND Hy**	**27.60**	**24**	T	T	03 57 45.8	
	baz=203,slow=75,SNR=72						
H11S1	**WAKE ISLAND Hy**	**27.61**	**24**	T	T	03 57 51.6	
	baz=203,slow=75,SNR=52						
STKA	**Stephens Creek**	**27.98**	**206**	P	**P**	**03 29 31.1**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=327,slow=11,SNR=3.8						
STKA				LR	LR	03 40 35.4	
	comp=Z,116nm,19.1s,baz=23,slow=36						
H11N1	**WAKE ISLAND Hy**	**28.77**	**23**	T	T	03 59 08.1	
	baz=308,slow=74,SNR=7.4						
H11N3	**WAKE ISLAND Hy**	**28.79**	**23**	T	T	03 59 09.9	
	baz=205,slow=74,SNR=6.3						
FITZ	**Fitzroy Crossi**	**31.04**	**246**	P	**P**	**03 29 57.9**	**-0.3**
	comp=Z,5.2nm,0.7s,baz=134,slow=5.4,SNR=1.7						
FITZ				PcP	**PcP**	**03 32 50.9**	**-2.4**
	comp=Z,2.3nm,0.7s,baz=100,slow=6.1,SNR=2.8						
FITZ	**Fitzroy Crossi**	**31.04**	**246**	P	**P**	**03 29 59.3**	**+1.1**
FITZ				IAmb	IAmb	03 30 08.0	
	comp=Z,4.3nm,0.6s						
DLV	**T Lat**	**50.26**	**292**	P	**P**	**03 32 36.0**	**-0.8**
JKA	**Kamikawa-asahi**	**52.08**	**348**	P	**P**	**03 32 49.5**	**-0.3**
ASAJ	**Asahikawa**	**52.08**	**348**	P	**P**	**03 32 49.5**	**-0.3**
	comp=Z,2.2nm,0.6s,baz=344,slow=31,SNR=3.9						
NJ2	**Nanjing**	**52.09**	**320**	*e*P	**P**	**03 32 51.3**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PPT	**Papeete**	**54.65**	**107**	LR	LR	03 52 58.1	
	comp=Z,14nm,20.4s,baz=116,slow=32						
BKNI	**Bangkinang**	**54.69**	**275**	P	**P**	**03 33 11.3**	**+1.8**
PETK	**Petropavlovsk-**	**59.81**	**2**	P	**P**	**03 33 45.0**	**+0.2**
	comp=Z,10nm,0.7s,baz=177,slow=7.8,SNR=20						
CMAR	**Chiang Mai Arr**	**61.09**	**295**	P	**P**	**03 33 54.5**	**+0.2**
	comp=Z,3.5nm,0.4s,baz=120,slow=4.9,SNR=19						
HHC	**Hu-ho-hao-te**	**62.25**	**324**	P	**P**	**03 34 03.4**	**+1.6**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,76nm,5.5s						
MA2	**Magadan**	**66.37**	**357**	P	**P**	**03 34 27.6**	**-0.7**
SONM	**Songino Array**	**69.47**	**327**	P	**P**	**03 34 46.9**	**-1.2**
	comp=Z,1.8nm,0.9s,baz=138,slow=6.9,SNR=6.8						
SHL	**Shillong**	**69.58**	**300**	P	**P**	**03 34 49.1**	**-0.3**
VNDA	**Vanda**	**70.66**	**179**	P	**P**	**03 34 54.5**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=68,slow=7.6,SNR=1.9						
CNPM	**China Poot**	**78.52**	**25**	P	**P**	**03 35 40.5**	**-0.1**
WMQ	**Urumqi**	**79.02**	**317**	*e*P	**P**	**03 35 45.0**	**+1.2**
RC01	**Rabbit Creek A**	**80.03**	**24**	P	**P**	**03 35 48.1**	**-0.6**
RC01				IAmb	IAmb	03 35 49.6	
	comp=Z,12nm,1.4s						
RDOG	**Red Dog Mine**	**80.33**	**15**	P	**P**	**03 35 49.9**	**-0.4**
PMR	**Palmer**	**80.55**	**24**	P	**P**	**03 35 51.0**	**-0.6**
GHO	**Glory Hole Cre**	**80.74**	**23**	P	**P**	**03 35 51.8**	**-0.8**
SML	**Sawmill**	**80.99**	**24**	P	**P**	**03 35 53.8**	**-0.2**
SCM	**Sheep Creek Mo**	**81.40**	**24**	P	**P**	**03 35 56.0**	**-0.3**
RND	**Reindeer**	**81.68**	**22**	IAmb	IAmb	03 35 57.3	
	comp=Z,3.4nm,0.9s						
MCK	**McKinley**	**81.83**	**22**	IAmb	IAmb	03 35 57.9	
	comp=Z,7.0nm,0.9s						
QSPA	**South Pole Qui**	**83.07**	**180**	P	**P**	**03 36 06.2**	**+1.2**
QSPA				IAmb	IAmb	03 36 06.7	
	comp=Z,4.6nm,0.8s						
IL31		**83.15**	**21**	P	**P**	**03 36 03.9**	**-1.2**
IL31				IAmb	IAmb	03 36 32.0	
	comp=Z,9.0nm,1.6s						
ILAR	**Eielson Array**	**83.15**	**21**	P	**P**	**03 36 03.5**	**-1.8**
	comp=Z,1.7nm,0.9s,baz=258,slow=4.9,SNR=15						
ILAR				LR	LR	04 07 19.8	
	comp=Z,35nm,21.4s,baz=264,slow=31						
CTGM	**Chitina Glacie**	**83.48**	**26**	P	**P**	**03 36 07.3**	**+0.1**
MK31	**Makanchi Array**	**83.59**	**319**	P	**P**	**03 36 07.1**	**-0.8**
MKAR	**Makanchi Array**	**83.59**	**319**	P	**P**	**03 36 06.5**	**-1.4**
	comp=Z,1.4nm,0.9s,baz=110,slow=5.6,SNR=7.2						
DOT	**Dot Lake**	**83.63**	**23**	IAmb	IAmb	03 36 08.1	
	comp=Z,3.1nm,0.8s						
ZALV	**Zalesovo Beam**	**84.32**	**326**	P	**P**	**03 36 08.6**	**-2.8**
	comp=Z,1.1nm,0.5s,baz=125,slow=4.9,SNR=4.3						
MAW	**Mawson**	**84.63**	**203**	P	**P**	**03 36 13.1**	**+0.4**
	comp=Z,2.2nm,0.7s,baz=101,slow=8.9,SNR=6.1						
MAW	**Mawson**	**84.63**	**203**	IAmb	IAmb	03 37 15.3	
	comp=Z,8.6nm,2.0s						
KSH	**Kashi**	**86.25**	**310**	P	**P**	**03 36 23.4**	**+1.8**
KSH				pP	sP	03 36 39.1	-2.6
KSH				sP	pP	03 36 46.6	+10
KSH				pmax	pmax		
	comp=Z,100nm,2.4s						
KSH				pmax	pmax		
	comp=Z,140nm,5.6s						
INK	**Inuvik**	**89.50**	**21**	P	**P**	**03 36 35.2**	**-1.0**
	comp=Z,1.7nm,0.5s,baz=261,slow=4.8,SNR=17						
INK	**Inuvik**	**89.50**	**21**	IAmb	IAmb	03 36 36.4	
	comp=Z,5.1nm,1.3s						
NVAR	**Mina Array Bea**	**91.36**	**52**	P	**P**	**03 36 46.3**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=264,slow=5.3,SNR=2.8						
YKA	**Yellowknife Ar**	**96.08**	**28**	P	**P**	**03 37 06.0**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=261,slow=4.3,SNR=10.0						
PDAR	**Pinedale Array**	**98.35**	**48**	P	**P**	**03 37 16.6**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=333,slow=1.0,SNR=2.2						
PLCA	**Paso Flores**	**116.56**	**142**	PKP	**PKiKP**	**03 42 23.9**	**0.0**
	comp=Z,2.0nm,1.1s,baz=239,slow=5.3,SNR=3.7						
AKASG	**Malin Array Be**	**117.69**	**325**	PKP	**PKPdf**	**03 42 24.3**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=64,slow=2.2,SNR=1.9						
NOA	**NORSAR Array B**	**119.74**	**341**	PKP	**PKPdf**	**03 42 27.9**	**-1.4**
	comp=Z,0.6nm,0.8s,baz=79,slow=4.3,SNR=1.9						
GERES	**GERESS Array B**	**127.17**	**329**	PKP	**PKPdf**	**03 42 43.7**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=252,slow=0.6,SNR=9.0						
TAM	**Tamanrasset**	**146.97**	**302**		**PKPbc**	**03 43 22.9**	**-0.1**
BDFB	**Brasilia**	**147.77**	**134**	PKPbc	**PKPbc**	**03 43 24.8**	**-0.5**
	comp=Z,3.1nm,0.6s,baz=129,slow=3.7,SNR=6.2						
TORD	**Torodi Ar. Bea**	**153.37**	**286**	PKPbc	**PKPbc**	**03 43 37.5**	**-1.2**
	comp=Z,1.3nm,0.6s,baz=42,slow=2.4,SNR=9.5						
TORD				PKPab	**PKPab**	**03 43 49.2**	**-1.7**
	comp=Z,1.9nm,0.6s,baz=76,slow=3.6,SNR=10						

DJA 02 03:59:24.4±1.0**,3°N**±4°×**9°6E**±°**,h14**km±4km**,M4.0**/6**,**
mB4.5/1**,mb4.5**/2**,MLv3.8**/6**,Mw(mB)3.6**/1**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**0.38**	**120**	P	Pb	03 59 33.2	+0.3
SNSI				S	Sb	03 59 39.5	+0.9
TPTI		**1.35**	**61**	P	Pn	03 59 48.0	-0.8
TPTI				S	Sn	04 00 05.6	-0.9
MLSI	**Meulaboh, Aceh**	**1.70**	**14**	P	Pn	03 59 53.5	-0.2
MLSI				S	Sn	04 00 16.0	+0.7
KCSI	**Kotacane, Aceh**	**1.99**	**63**	P	Pn	03 59 58.4	+0.7
GSI	**Gunungsitoli**	**2.03**	**129**	P	Pn	03 59 56.8	-1.5
LHMI	**Lhok Sumawe**	**2.78**	**20**	P	Pn	04 00 08.0	-0.5

*INET **02** 04:21:56.2, 12°.40N×86°.52W, h5km, ML3.9*
SNET 02 04:21:57.8±1.3**,12°.39N**×**86°.46W,h15**km±169km**,ML3.4, Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.60**	**304**	*e*P	Pn	04 22 25.0	-0.7
CNCH				IAML		04 22 54.1	
	comp=Z,420nm,0.4s						
LCND	**La Caada**	**1.66**	**303**	*e*P	Pn	04 22 25.7	-0.8
LCND				*e*S	Sn	04 22 47.8	+0.2
LCND				*e*S	Sb	04 22 47.9	-1.1
LCND				IAML		04 22 55.0	
	comp=Z,437nm,0.3s						
TGUH	**Tegucigalpa,Un**	**1.83**	**335**	*e*P	Pn	04 22 28.4	-0.5
JUCU	**Jucuar¡n**	**1.94**	**296**	*e*P	Pn	04 22 29.5	-0.8
JUCU				*e*S	Sn	04 22 55.3	+0.8
BLLM	**Bellamira**	**2.02**	**301**	*e*P	Pn	04 22 31.8	+0.4
FAGO	**Alcalda de S**	**2.06**	**309**	*e*P	Pn	04 22 31.2	-0.8
FAGO				*e*S	Sn	04 22 58.0	+0.6
PACA	**Pacayal**	**2.11**	**301**	*e*P	Pn	04 22 33.3	+0.6
PACA				*e*S	Sb	04 23 00.6	-1.2
TECA	**Tecapa**	**2.27**	**299**	*e*P	Pn	04 22 35.6	+0.7
COEG	**Centro de Oper**	**2.65**	**298**	*e*P	Pn	04 22 40.6	+0.5
COEG				*e*S	Sn	04 23 13.7	+1.6
COEG				IAML		04 23 24.6	
	comp=Z,116nm,0.3s						
LFRS	**El Faro**	**2.81**	**296**	*e*P	Pn	04 22 42.1	-0.3
LFRS				*e*S	Sn	04 23 16.6	+0.5
CEVE	**Cerro Verde**	**3.39**	**295**	*e*S	Sn	04 23 32.3	+1.6

*MAN **02** 04:31:31.0, 10°.00N×124°.31E, h14km, mb4.9, ML3.8, MS3.8*
*IDC **02** 04:31:43.9±9.7, 9°.60N×123°.93E, h120km±93km, mb3.5/5, mb1 3.7/5, mb1mx3.3/36, mbtmp3.8/5, MS3.0/4, Ms1 3.0/4, ms1mx2.6/26, Error ellipse: s-maj=40.5km s-min=21.9km az=68.0*
ISC 02 04:31:31.1±0.6**,9°.94N**±0°.03×**124°.27E**±0°.03**,h10**km**,n23, σ1§41**/33**,mb3.8**/5**,MS2.8**/4**,3C-2D,Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.47**	**238**	*e*P	**Pn**	**04 31 42.8**	**-1.0**
TBP				*i* S	**Sb**	**04 31 50.5**	**+2.1**
LLP	**Lapu-Lapu**	**0.48**	**322**	⇓*i*P	**Pg**	**04 31 39.8**	**-0.6**
LLP				*i* S	**Sg**	**04 31 46.8**	**+0.1**
MSLP	**Maasin**	**0.62**	**72**	*e*P	**Pg**	**04 31 42.7**	**-0.3**
MSLP				*e*S	**Sb**	**04 31 52.9**	**+0.2**
OCLP	**Ormoc**	**1.15**	**17**	*e*P	**Pb**	**04 31 50.7**	**-2.5**
OCLP				*e*S	**Sn**	**04 32 11.2**	**+2.0**
SNPH	**Sibulan**	**1.18**	**240**	⇑*i*P	**Pb**	**04 31 52.8**	**-0.8**
SNPH				*i* S	**Sn**	**04 32 09.5**	**-0.2**
CNOP	**Candoni, Negro**	**1.61**	**266**	*e*P	**Pn**	**04 31 59.1**	**-0.4**
CNOP				*e*S	**Sb**	**04 32 21.0**	**-0.2**
DCPH	**Dipolog City**	**1.62**	**214**	⇓*i*P	**Sn**	**04 32 20.3**	**-0.4**
BUTP	**Butuan**	**1.65**	**126**	*e*P	**Pn**	**04 31 59.3**	**-0.8**
BUTP				*e*S	**Sn**	**04 32 21.6**	**+0.2**
GUIM	**Jordan**	**1.78**	**293**	*e*P	**Pn**	**04 32 01.9**	**0.0**
GUIM				*e*S	**Sb**	**04 32 25.9**	**-0.4**
BUKP	**Musuan**	**2.19**	**159**	*e*P	**Pn**	**04 32 07.7**	**0.0**
BUKP				*e*S	**Sb**	**04 32 37.5**	**-0.8**
RCP	**Roxas**	**2.19**	**317**	⇑*e*P	**Pn**	**04 32 07.4**	**-0.3**
RCP				*i* S	**Sn**	**04 32 35.8**	**+0.9**
PAGZ	**Pagadian**	**2.25**	**203**	*e*P	**Pn**	**04 32 08.5**	**0.0**
JAP	**San Jose, Anti**	**2.42**	**290**	⇑*e*P	**Pb**	**04 32 12.6**	**-2.0**
JAP				*e*S	**Sn**	**04 32 39.3**	**-1.0**
CNP	**Catarman**	**2.58**	**9**	*e*P	**Pn**	**04 32 11.8**	**-1.1**
CNP				*e*S	**Sb**	**04 32 49.1**	**-0.3**
CUYO	**Cuyo Island**	**3.32**	**286**	*e*P	**Pn**	**04 32 23.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**25.94**	**292**	P	**P**	**04 37 04.6**	**+0.8**
	0.9nm,0.3s,baz=94,slow=7.3,SNR=4.0						
CMAR				LR	LR	04 46 19.2	
	comp=Z,24nm,19.1s,baz=270,slow=34						
KSRS	**Korea Array**	**27.59**	**6**	P	**P**	**04 37 22.8**	**+4.3**
	1.4nm,0.8s,baz=178,slow=8.2,SNR=2.9						
KSRS				LR	LR	04 48 23.9	
	comp=Z,17nm,18.1s,baz=214,slow=36						
WRA	**Warramunga Arr**	**31.31**	**162**	LR	LR	04 52 38.2	
	comp=Z,26nm,19.5s,baz=200,slow=40						
ASAR	**Alice Springs**	**34.71**	**164**	P	**P**	**04 38 20.2**	**-1.1**
	0.5nm,0.6s,baz=341,slow=6.6,SNR=9.5						
MKAR	**Makanchi Array**	**51.11**	**324**	P	**P**	**04 40 33.9**	**-0.1**
	2.3nm,0.9s,baz=127,slow=9.3,SNR=4.7						
ILAR	**Eielson Array**	**80.59**	**26**	P	**P**	**04 43 46.3**	**+2.7**
	1.3nm,1.3s,baz=278,slow=6.1,SNR=2.2						
NOA	**NORSAR Array B**	**92.17**	**333**	LR	LR	05 29 10.6	
	comp=Z,9.9nm,19.2s,baz=345,slow=37						
TORD	**Torodi Ar. Bea**	**118.55**	**291**	PKP	**PKPdf**	**04 50 17.7**	**-2.5**
	0.5nm,0.7s,baz=56,slow=2.9,SNR=3.6						

*JMA **02** 04:34:22.7±0.2, 23°.08N×120°.52E, h1km±2km, M3.8*
*TAP **02** 04:34:23.6, 23°.06N×120°.59E, h9km, ML3.8, B*
*ASIES **02** 04:34:24.8, 23°.07N×120°.61E, h16km, MW3.3*
ISC 02 04:34:24.5±0.8**,23°.08N**±0°.01×**120°.59E**±0°.01**,h13**km±4km**, n114,**σ**1§08**/207**,10C-10D,Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SGST	**Jiashian**	**0.01**	**309**	⇑*i*P	**Pg**	**04 34 25.1**	**-1.8**
	baz=16						
SGST				*i* S	**Sg**	**04 34 26.9**	**-1.6**
	baz=16						
SLGT	**Liugui**	**0.10**	**148**	⇓*i*P	**Pg**	**04 34 26.9**	**-0.6**
	baz=141						
SLGT				*i* S	**Sg**	**04 34 29.3**	**-0.3**
	baz=141						
CHN1	**Nanshi**	**0.12**	**332**	⇓*i*P	**Pg**	**04 34 27.6**	**-0.3**
	baz=337						
CHN1				*i* S	**Sg**	**04 34 30.6**	**+0.3**
	baz=337						
SNST	**Tainan City**	**0.17**	**329**	⇓*i*P	**Pg**	**04 34 28.4**	**-0.1**
	baz=334						
SNST				*i* S	**Sg**	**04 34 32.3**	**+1.0**
	baz=334						
WTP	**Ta-pu**	**0.17**	**7**	⇑*i*P	**Pg**	**04 34 28.6**	**0.0**
	baz=11						
WTP				*i* S	**Sg**	**04 34 32.8**	**+1.4**
	baz=11						
STYT	**Tauyuan**	**0.18**	**60**	⇓*i*P	**Pg**	**04 34 28.7**	**0.0**
	baz=61						
STYT				*i* S	**Sg**	**04 34 32.3**	**+0.8**
	baz=61						
CHN3	**Shinhua**	**0.21**	**270**	⇓*i*P	**Pg**	**04 34 29.5**	**+0.4**
	baz=273						
CHN3				*i* S	**Sg**	**04 34 34.6**	**+2.3**
	baz=273						
TPUB	**Ta-pu**	**0.23**	**9**	⇑P	**Pg**	**04 34 29.5**	**+0.1**
	baz=17						
TPUB				S	**Sg**	**04 34 34.1**	**+1.3**
	baz=17						
CHN4	**Tsaushan**	**0.27**	**0**	⇑*i*P	**Pb**	**04 34 30.6**	**-0.8**
	baz=2.0						
CHN4				*i* S	**Sb**	**04 34 36.0**	**+0.1**
	baz=2.0						
TWM1	**Shoushan**	**0.30**	**212**	⇑*i*P	**Pb**	**04 34 31.2**	**-0.5**
	baz=200						
SSD	**Sandimen**	**0.33**	**173**	⇓*i*P	**Pb**	**04 34 31.2**	**-1.1**
	baz=162						
SSD				*i* S	**Sb**	**04 34 36.4**	**-1.1**
	baz=162						
TAI1	**Yung-k'ang**	**0.34**	**264**	*i* P	**Pb**	**04 34 32.6**	**+0.3**
	baz=273						
TAI1				*i* S	**Sb**	**04 34 39.5**	**+1.9**
	baz=273						
SGLT	**Jiouru**	**0.36**	**195**	*i* P	**Pb**	**04 34 32.8**	**0.0**
	baz=180						
SGLT				*e*S	**Sb**	**04 34 39.3**	**+0.9**
	baz=180						
SCLT	**Jiali**	**0.38**	**285**	P	**Pb**	**04 34 32.8**	**-0.3**
	baz=302						
SCLT				S	**Sb**	**04 34 40.5**	**+1.6**
	baz=302						
SNJT	**Kaohsiung City**	**0.40**	**216**	*e*P	**Pn**	**04 34 34.3**	**-1.6**
	baz=201						
SNJT				*e*S	**Sb**	**04 34 40.4**	**+0.9**
	baz=201						
ELDTW	**Lidau**	**0.41**	**74**	⇓*i*P	**Pb**	**04 34 32.9**	**-0.7**
	baz=74						
ELDTW				*i* S	**Sb**	**04 34 39.8**	**-0.1**
	baz=74						
CHN8	**Yiju**	**0.44**	**308**	*i* P	**Pb**	**04 34 33.6**	**-0.6**
	baz=327						
CHN8				S	**Sb**	**04 34 41.8**	**+1.1**
	baz=327						
CHY	**Chiayi**	**0.45**	**340**	P	**Pb**	**04 34 33.9**	**-0.4**
	baz=344						
CHY				S	**Sb**	**04 34 42.0**	**+1.1**
	baz=344						
MASBT	**Mashibuluo**	**0.46**	**175**	⇓P	**Pb**	**04 34 33.4**	**-1.2**
	baz=166						
MASBT				S	**Sb**	**04 34 40.0**	**-1.4**
	baz=166						
ALS	**Alishan**	**0.47**	**24**	P	**Pb**	**04 34 34.3**	**-0.7**
	baz=27						
ALS				S	**Sb**	**04 34 42.2**	**+0.2**
	baz=27						
WLGB	**Puzi**	**0.48**	**326**	P	**Pb**	**04 34 35.1**	**+0.3**
	baz=330						
WLGB				S	**Sb**	**04 34 42.8**	**+1.0**
	baz=330						
TWG	**Pinlang**	**0.51**	**120**	*i* P	**Pb**	**04 34 35.0**	**-0.4**
	baz=117						
TWG				S	**Sb**	**04 34 42.2**	**-0.5**
	baz=117						
TWGBT	**Beinan**	**0.52**	**120**	⇓P	**Pb**	**04 34 34.8**	**-0.7**
	baz=117						
TWGBT				*e*S	**Sb**	**04 34 42.9**	**0.0**
	baz=117						
CHN5	**Tsauling**	**0.53**	**9**	*i* P	**Pb**	**04 34 34.9**	**-0.8**
	baz=11						
CHN5				*i* S	**Sb**	**04 34 44.5**	**+1.3**
	baz=11						
KAU	**Kaohsiung**	**0.57**	**207**	*e*P	**Pn**	**04 34 37.8**	**-0.5**
	baz=221						
KAU				S	**Sn**	**04 34 47.4**	**-0.1**
	baz=221						
ECL	**Taimali**	**0.58**	**145**	*i* P	**Pb**	**04 34 35.8**	**-0.8**
	baz=137						
ECL				*i* S	**Sb**	**04 34 44.8**	**+0.1**
	baz=137						
SSPT	**Xinbi**	**0.59**	**182**	*i* P	**Pb**	**04 34 36.8**	**+0.1**
	baz=165						
SSPT				S	**Sn**	**04 34 46.1**	**-2.0**
	baz=165						
TTN	**Taitung**	**0.60**	**122**	*i* P	**Pn**	**04 34 37.5**	**-1.3**
	baz=120						
TTN				S	**Sn**	**04 34 47.2**	**-1.2**
	baz=120						
WGK	**Gukeng**	**0.61**	**357**	*i* P	**Pb**	**04 34 36.9**	**-0.1**
WGK				*i* S	**Sn**	**04 34 47.7**	**-0.8**
WDLH	**Douliu**	**0.61**	**355**	*i* P	**Pb**	**04 34 37.2**	**+0.1**
	baz=357						
WDLH				*i* S	**Sn**	**04 34 48.0**	**-0.7**
	baz=357						
WSF	**Szhu**	**0.65**	**329**	P	**Pb**	**04 34 37.4**	**-0.4**
	baz=332						
WSF				*i* S	**Sb**	**04 34 48.0**	**+1.1**
	baz=332						
FULB	**Fuli**	**0.66**	**79**	⇑*i*P	**Pb**	**04 34 38.1**	**+0.2**
	baz=79						
FULB				S	**Sb**	**04 34 48.2**	**+1.2**
	baz=79						
WHYT	**Xinyi Township**	**0.66**	**21**	P	**Pb**	**04 34 37.9**	**-0.1**
	baz=23						
WHYT				S	**Sb**	**04 34 48.2**	**+1.1**
	baz=23						
SCZT	**Fangliau**	**0.70**	**178**	*i* P	**Pb**	**04 34 38.1**	**-0.5**
	baz=164						
SCZT				S	**Sb**	**04 34 47.9**	**-0.2**
	baz=164						
TWF1	**Yuli**	**0.70**	**67**	*i* P	**Pb**	**04 34 38.6**	**-0.1**
	baz=68						
TWF1				S	**Sb**	**04 34 48.6**	**+0.3**
	baz=68						
CHKT	**Chengkung**	**0.71**	**88**	P	**Pn**	**04 34 39.4**	**-0.9**
	baz=78						
CHKT				S	**Sn**	**04 34 51.4**	**+0.3**
	baz=78						
YULB	**Yu-li**	**0.72**	**64**	P	**Pb**	**04 34 38.4**	**-0.5**
	baz=63						
EAST	**Anshuo**	**0.73**	**161**	*i* P	**Pb**	**04 34 38.5**	**-0.6**
	baz=150						
EAST				S	**Sn**	**04 34 50.1**	**-1.5**
	baz=150						
WLCH	**Liuqiu**	**0.75**	**195**	P	**Pn**	**04 34 41.3**	**+0.6**
	baz=193						
WLCH				S	**Sn**	**04 34 54.7**	**+2.7**
	baz=193						
WJS	**Zhushan**	**0.75**	**10**	*i* P	**Pb**	**04 34 39.5**	**0.0**
	baz=11						
WJS				S	**Sn**	**04 34 51.0**	**-1.2**
	baz=11						
TWP	**Hsiaoliuchiu**	**0.76**	**196**	*i* P	**Pn**	**04 34 41.7**	**+0.8**
	baz=194						
TWP				*i* S	**Sn**	**04 34 55.3**	**+3.1**
	baz=194						
TAW	**Tawu**	**0.77**	**158**	*i* P	**Pb**	**04 34 39.1**	**-0.6**
	baz=156						
TAW				S	**Sb**	**04 34 50.8**	**+0.7**
	baz=156						
SSLB	**Suanglung**	**0.78**	**25**	⇑P	**Pb**	**04 34 39.5**	**-0.5**
	baz=27						
SSLB				S	**Sb**	**04 34 51.4**	**+0.8**
	baz=27						
EHY	**Hungye**	**0.80**	**57**	P	**Pn**	**04 34 40.5**	**-1.0**
	baz=66						
EHY				S	**Sb**	**04 34 51.9**	**+0.9**
	baz=66						
WMLT	**Mailiao**	**0.80**	**335**	S	**Sn**	**04 34 52.4**	**-0.8**
	baz=351						
WNT	**Mingjian**	**0.80**	**6**	⇑*i*P	**Pb**	**04 34 40.5**	**+0.1**
	baz=9.0						
WNT				*i* S	**Sn**	**04 34 52.8**	**-0.6**
	baz=9.0						
RLNB	**Erlin**	**0.84**	**345**	P	**Pb**	**04 34 40.7**	**-0.3**
	baz=348						
RLNB				S	**Sn**	**04 34 53.0**	**-1.2**
	baz=348						
VWDT	**VWDT**	**0.84**	**37**	⇑P	**Pb**	**04 34 40.7**	**-0.4**
	baz=38						
VWDT				S	**Sn**	**04 34 53.4**	**-0.9**
	baz=38						
SMLT	**Sun Moon Lake**	**0.85**	**19**	*i* P	**Pb**	**04 34 41.2**	**-0.1**
	baz=21						
SMLT				*i* S	**Sn**	**04 34 54.8**	**+0.1**
	baz=21						
HGSD	**Ruisui**	**0.87**	**61**	P	**Pn**	**04 34 41.9**	**-0.5**
	baz=62						
HGSD				S	**Sb**	**04 34 53.8**	**+0.7**
	baz=62						
WDGT	**Dungji**	**0.88**	**282**	*i* P	**Pb**	**04 34 40.8**	**-0.8**
	baz=282						
WDGT				*i* S	**Sb**	**04 34 53.6**	**+0.4**
	baz=282						
TWH	**Lutao**	**0.90**	**114**	⇓P	**Pn**	**04 34 42.0**	**-0.8**
	baz=104						
TWH				S	**Sn**	**04 34 56.0**	**+0.4**
	baz=104						
EGFH	**Guangfu**	**0.97**	**52**	P	**Pn**	**04 34 43.8**	**0.0**
	baz=61						
EGFH				S	**Sn**	**04 34 57.6**	**+0.2**
	baz=61						
WCHH	**Zhanghua**	**1.00**	**358**	P	**Pn**	**04 34 43.8**	**-0.5**
	baz=1.0						
WCHH				S	**Sn**	**04 34 59.2**	**+1.0**
	baz=1.0						
DPDB	**Guoxing**	**1.00**	**18**	P	**Pn**	**04 34 44.4**	**0.0**
	baz=20						
DPDB				*e*S	**Sn**	**04 34 59.0**	**+0.6**
	baz=20						
OWD	**Renai**	**1.03**	**31**	P	**Pb**	**04 34 43.7**	**-0.5**
	baz=33						
OWD				*e*S	**Sn**	**04 34 59.0**	**-0.1**
	baz=33						
PHUB	**P'eng-hu**	**1.03**	**295**	P	**Pg**	**04 34 42.8**	**-1.7**
	baz=298						
PHUB				S	**Sg**	**04 34 56.4**	**-1.6**
	baz=298						
ESL	**Shilin**	**1.07**	**46**	*i* P	**Pn**	**04 34 45.4**	**+0.2**
	baz=48						
ESL				S	**Sn**	**04 35 00.8**	**+0.9**
	baz=48						

TCU	**Taichung** baz=7.0	1.07	4	*e*P		**Pg**	04 34 44.0	-1.2
TCU				*e*S		**Sn**	04 35 01.2	+1.3
PNG	**Penghu** baz=300	1.07	297	P		**Pg**	04 34 43.6	-1.5
PNG				S		**Sg**	04 34 58.1	-1.1
HEN	**Hengchun** baz=158	1.07	173	P		**Pn**	04 34 45.3	0.0
HEN				*e*S		**Sn**	04 35 01.9	+1.8
VCHM	**Qimei** baz=277	1.08	277	P		**Pg**	04 34 43.5	-1.8
VCHM				S		**Sb**	04 34 58.9	-0.1
CHGB	**Renai** baz=30	1.12	29	⇑P		**Pb**	04 34 45.4	-0.4
CHGB				S		**Sn**	04 35 02.8	+1.3
TWK1	**Hengchun** baz=167	1.15	170	P		**Pn**	04 34 46.3	+0.1
TWK1				S		**Sn**	04 35 04.7	+2.9
TWKBT	**Hengchun** baz=167	1.15	170	P		**Pn**	04 34 46.0	-0.2
TWKBT				S		**Sn**	04 35 04.8	+2.9
TSEB	**Hengchuen, Pin** baz=159	1.21	166	P		**Pg**	04 34 48.5	+0.8
TSEB				S		**Sn**	04 35 06.4	+3.2
WHF	**Hehuan Shan** baz=32	1.23	30	P		**Pn**	04 34 47.8	-0.1
WHF				S		**Sn**	04 35 05.1	+0.5
WHP	**Taichung City** baz=27	1.24	15	P		**Pg**	04 34 47.7	-0.7
WHP				S		**Sn**	04 35 07.2	+2.9
WDJ	**Dajia District** baz=4.0	1.27	2	P		**Pg**	04 34 48.2	-0.7
WDJ				*e*S		**Sn**	04 35 06.4	+1.6
TDCB	**Techi** baz=26	1.28	24	P		**Pg**	04 34 48.5	-0.8
TDCB				S		**Sn**	04 35 06.7	+1.3
TWT	**Tachien** baz=26	1.29	24	*i* P		**Pg**	04 34 48.5	-0.8
TWT				*i* S		**Sn**	04 35 07.1	+1.4
HWA	**Hwalien** baz=47	1.29	46	P		**Pg**	04 34 49.5	+0.1
HWA				*e*S		**Sg**	04 35 07.1	+0.8
TWD	**Chiawan** baz=44	1.36	42	P		**Pg**	04 34 50.2	-0.4
TWD				S		**Sg**	04 35 08.4	0.0
LAY	**Lan-yu** baz=138	1.36	139	P		**Pg**	04 34 49.9	-0.8
LAY				*e*S		**Sg**	04 35 08.3	-0.1
PTSB	**Yuanli** baz=7.0	1.37	4	P		**Pg**	04 34 49.9	-1.0
PTSB				S		**Sg**	04 35 09.9	+1.2
ETLH	**Xiulin Townshi** baz=27	1.39	36	P		**Pb**	04 34 50.1	-0.3
ETLH				*e*S		**Sg**	04 35 11.3	+1.9
NACB	**Ninganchiao** baz=56	1.43	40	P		**Pb**	04 34 50.6	-0.4
NACB				*e*S		**Sg**	04 35 11.3	+0.7
NMLH	**Miaoli** baz=9.0	1.47	7	P		**Pb**	04 34 51.5	-0.2
NMLH				*e*S		**Sg**	04 35 11.4	-0.4
NNSB	**Datong** baz=30	1.53	28	P		**Pb**	04 34 52.4	-0.5
NNSB				*e*S		**Sg**	04 35 12.9	-0.9
NNSH	**Datong** baz=29	1.53	28	P		**Pb**	04 34 52.5	-0.3
NNSH				*e*S		**Sg**	04 35 12.9	-1.0
NNS	**Nan Shan** baz=29	1.54	28	*e*P		**Pg**	04 34 53.0	-1.1
NNS				*e*S		**Sg**	04 35 13.1	-1.0
LIOB	**Emei** baz=359	1.61	14	P		**Pb**	04 34 53.1	-1.1
LIOB				S		**Sg**	04 35 16.2	-0.2
ENA	**Nanau** baz=53	1.71	38	P		**Pb**	04 34 55.4	-0.5
ENA				*e*S		**Sg**	04 35 19.7	+0.2
NDT	**Datong Townshi** baz=30	1.74	29	*e*P		**Pb**	04 34 55.9	-0.4
NDT				*e*S		**Sg**	04 35 20.1	-0.4
NSK	**Sanguang** baz=7.0	1.74	24	P		**Pn**	04 34 54.7	+0.2
NSK				*e*S		**Sb**	04 35 18.8	+0.6
YHNB	**Yeheng** baz=8.0	1.74	24	P		**Pb**	04 34 55.2	-1.2
YHNB				*e*S		**Sg**	04 35 19.4	-1.2
ENTT	**Nioudou** baz=17	1.79	30	*e*P		**Pg**	04 34 57.6	-1.4
NWLT	**Wulai** baz=24	1.89	26	*e*P		**Pn**	04 34 57.3	+0.8
TWE	**Neicheng** baz=16	1.91	31	P		**Pg**	04 34 59.9	-1.3
TWC	**Suao** baz=48	1.91	37	P		**Pb**	04 34 59.6	+0.3
SLBB	**Yuanshan** baz=9.0	1.92	30	P		**Pb**	04 34 59.3	-0.2
EOS1	**EOS1** baz=40	2.03	44	*e*P		**Pb**	04 35 00.9	-0.4
NTC	**Toucheng** baz=17	2.10	32	*e*P		**Pb**	04 35 02.2	-0.3
NTC				*e*S		**Sg**	04 35 30.2	-2.0
VWUC	**VWUC** baz=337	2.17	332	*e*P		**Pn**	04 34 58.9	-1.5
VWUC				*e*S		**Sb**	04 35 28.9	-1.7
TIPB	**Shuangxi** baz=12	2.20	31	*e*P		**Pn**	04 35 01.7	+0.9
TIPB				*e*S		**Sb**	04 35 31.1	-0.2
YM04	**YM04** baz=20	2.24	22	*e*P		**Pn**	04 35 01.9	+0.5
YM01	**YM01** baz=21	2.25	23	*e*P		**Pn**	04 35 02.2	+0.7
YM10	**YM10** baz=21	2.25	23	*e*P		**Pn**	04 35 01.5	0.0
YM05	**YM05** baz=21	2.26	23	*e*P		**Pn**	04 35 02.0	+0.4
NWF	**Wu-fen Shan** baz=10.0	2.26	28	*e*P		**Pb**	04 35 05.4	+0.1
WFSB	**Wu-fen Shan** baz=10.0	2.26	28	*e*P		**Pb**	04 35 05.4	+0.2
ANP	**Anpu** baz=2.0	2.27	22	*e*P		**Pn**	04 35 02.5	+0.7
YM03	**YM03** baz=20	2.27	22	*e*P		**Pb**	04 35 04.5	-0.9
YM11	**YM11** baz=21	2.27	23	*e*P		**Pn**	04 35 02.7	+0.9
PTMZ	**Houxiangcun** baz=331	2.37	326	*e*P		**Pn**	04 35 02.8	-0.3
KNM	**Kinmen** baz=308	2.38	304	*e*P		**Pn**	04 35 04.1	+0.8
JYNG	**Yonagunijimaku**	2.55	57	P		**Pn**	04 35 07.3	+1.7
JYNG				S		**Sb**	04 35 40.2	-1.3
YOJ	**Yonaguni jima**	2.61	58	P		**Pn**	04 35 07.7	+1.3
YOJ				S		**Sb**	04 35 41.5	-1.7
HATJ	**Hateruma jima**	3.11	71	P		**Pn**	04 35 14.0	+0.8
HATJ				S		**Sn**	04 35 52.4	+2.2
IRIF	**Iriomote-Funau**	3.14	66	P		**Pn**	04 35 15.4	+1.7
IRIF				S		**Sn**	04 35 54.2	+3.2
JKRS	**Kuro-shima**	3.34	69	P		**Pn**	04 35 18.0	+1.6
JKRS				*e*S		**Sn**	04 35 58.5	+2.5
JIJ	**Ishigaki jima**	3.50	68	P		**Pn**	04 35 19.5	+0.9
JIJ				S		**Sn**	04 35 59.7	-0.2
JISG	**Ishigakijimahi**	3.72	65	P		**Pn**	04 35 19.9	-1.8
JISG				S		**Sn**	04 36 06.9	+1.5
XPSS	**Dashiqiu** baz=5.0	3.85	355	*e*P		**Pn**	04 35 23.6	+0.1

IDC ***02*** *04:35:32.8±1.0, 6˚.44N×126˚.11E, h0km, mb3.9/6, mb1 1.4/6, mb1mx3.6/36, mbtmp3.9/6, MS3.6/1, Ms1 3.6/1, ms1mx2.3/40, Error ellipse: s-maj=67.4km s-min=20.6km az=76.0*

MAN ***02*** *04:35:42.8, 6˚.18N×126˚.07E, h74km, mb4.8, ML3.7, MS3.7*

NEIC ***02*** *04:35:44.0±1.5, 6˚.33N±0˚.09×126˚.2E±0˚.2, h91km±9km, mb4.3/5, Error ellipse: s-maj=25.4km s-min=10.8km az=74.0*

ISC 02 04:35:43.8±0.8, 6˚27N±0˚06×126˚06E±0˚08, h88km±7km, n21, σ0s87/24, mb3.8/6, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.39**	**246**	*e*P	**Pn**	**04 35 56.9**	**-0.5**
DDMP				*e*S	**Sn**	**04 36 06.6**	**-1.0**
MATI	**Mati**	**0.70**	**16**	*e*P	**Pn**	**04 36 00.0**	**-0.1**
MATI				*e*S	**Sn**	**04 36 14.1**	**+1.8**
DAV	**Davao City (W)**	**0.93**	**329**	Pn	**Pn**	**04 36 02.9**	**+0.3**
DMPH	**Davao City--Mi**	**0.98**	**326**	⇑*i*P	**Pn**	**04 36 02.7**	**-0.4**
DMPH				*i* S	**Sn**	**04 36 17.8**	**+0.1**
KCP	**Kidapawan**	**1.22**	**307**	⇓*e*P	**Pn**	**04 36 06.0**	**0.0**
KCP				*i* S	**Sn**	**04 36 23.8**	**+1.1**
SKMP	**Bagumbayan, Su**	**1.53**	**280**	*e*P	**Pn**	**04 36 09.8**	**-0.1**
BUKP	**Musuan**	**1.89**	**328**	*e*P	**Pn**	**04 36 14.9**	**+0.4**
BUKP				*e*S	**Sn**	**04 36 38.5**	**+0.6**
TNTI	**Ternate**	**5.61**	**167**	Pn	**Pn**	**04 37 04.9**	**+0.2**
LUWI	**Luwuk**	**7.97**	**204**	Pn	**Pn**	**04 37 38.6**	**+1.7**
MTN	**Manton Dam**	**19.64**	**165**	P	**P**	**04 40 05.2**	**-0.5**
MTN	comp=Z,13nm,1.1s			IAmb	IAmb	04 40 14.8	
GUMO	**Guam**	**19.89**	**67**	P	**P**	**04 40 07.0**	**-1.3**
KNRA	**Kununurra**	**21.96**	**173**	P	**P**	**04 40 31.3**	**+0.7**
FITZ	**Fitzroy Crossi** comp=Z,2.2nm,0.5s,baz=358,slow=8.0,SNR=16	**24.21**	**181**	P	**P**	**04 40 53.2**	**+0.8**
FITZ	**Fitzroy Crossi** comp=Z,28nm,2.0s	**24.21**	**181**	IAmb	IAmb	04 41 07.5	
WRA	**Warramunga Arr** comp=Z,0.6nm,0.3s,baz=345,slow=11,SNR=9.7	**27.29**	**163**	P	**P**	**04 41 21.0**	**+0.7**
ASAR	**Alice Springs** comp=Z,2.0nm,0.6s,baz=343,slow=7.0,SNR=24	**30.72**	**166**	P	**P**	**04 41 51.4**	**+0.7**
BRDH	**Bariadhala** comp=Z,83nm,19.6s,baz=92,slow=38	**36.97**	**300**	LR	LR	04 59 09.0	
STKA	**Stephens Creek** comp=Z,2.6nm,0.8s,baz=359,slow=11,SNR=4.0	**40.72**	**160**	P	**P**	**04 43 15.4**	**-0.6**
MKAR	**Makanchi Array** comp=Z,0.2nm,0.4s,baz=117,slow=6.9,SNR=4.9	**55.11**	**325**	P	**P**	**04 45 06.0**	**-0.9**
ILAR	**Eielson Array** comp=Z,0.3nm,0.7s,baz=233,slow=4.9,SNR=5.5	**83.11**	**26**	P	**P**	**04 47 59.7**	**0.0**
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.8s,baz=86,slow=1.0,SNR=1.6	**121.48**	**289**	PKP	**PKiKP**	**04 54 28.7**	**+0.5**

MEX ***02*** *04:55:26.2±0.5, 14˚.56N×91˚.90W, h93km±4km, MD3.8*

GCG ***02*** *04:55:27.2±0.6, 14˚.60N×91˚.94W, h86km±5km, MD3.7*

ISC 02 04:55:27.4±1.9, 14˚.7N±0˚.1×91˚.99W±0˚.08, h85km±12km, n9, σ0s54/16, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.38**	**314**	*e*P	**Pn**	**04 55 40.5**	**-0.2**
THIG				*i* S	**Sn**	**04 55 50.8**	**+0.2**
STG3	**Santiaguito 3,**	**0.41**	**81**	*e*P	**Pn**	**04 55 41.1**	**-0.1**
ERG	**Entre ros, C**	**0.45**	**117**	*e*P	**Pn**	**04 55 41.3**	**0.0**
ERG				*e*S	**Sn**	**04 55 51.3**	**-0.3**
FUG	**Fuego 3**	**1.12**	**100**	*e*P	**Pn**	**04 55 48.3**	**-0.2**
FUG				*e*S	**Sn**	**04 56 04.8**	**+0.5**
IXG	**Ixpaco**	**1.57**	**107**	*e*P	**Pn**	**04 55 53.5**	**-0.5**
IXG				*e*S	**Sn**	**04 56 14.2**	**+0.1**
NBG	**Las Nubes**	**1.59**	**92**	*e*P	**Pn**	**04 55 54.4**	**+0.1**
PCIG		**1.59**	**312**	*e*P	**Pn**	**04 55 53.7**	**-0.4**
PCIG				*e*S	**Sn**	**04 56 14.6**	**+0.3**
CCIG	**Comitan**	**1.63**	**355**	*e*P	**Pn**	**04 55 54.0**	**-0.8**
CCIG				*i* S	**Sn**	**04 56 16.2**	**+0.6**
CMIG	**Matias Romero**	**3.70**	**311**	*e*P	**Pn**	**04 56 21.9**	**-0.4**
CMIG				*i* S	**Sn**	**04 57 05.9**	**+1.1**

TAP 02 05:08:58.7, 23˚.06N×120˚.59E, h7km, ML2.1, 4C-2D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGST	**Jiashian** baz=351	**0.02**	**335**	⇑*i*P	Pg	05 08 59.8	-0.3
SGST				*i* S	Sg	05 09 01.5	+0.5
SLGT	**Liugui** baz=144	**0.08**	**144**	*i* P	Pg	05 09 01.6	+0.8
SLGT				*i* S	Sg	05 09 03.9	+1.8
CHN1	**Nanshi** baz=334	**0.14**	**334**	⇓*i*P	Pg	05 09 02.2	+0.5
CHN1				*i* S	Sg	05 09 05.3	+1.7
SNST	**Tainan City** baz=330	**0.18**	**331**	*i* P	Pg	05 09 03.2	+0.8
SNST				*i* S	Sg	05 09 06.9	+2.0
STYT	**Tauyuan** baz=57	**0.18**	**56**	⇓*i*P	Pg	05 09 03.4	+1.0
STYT				*i* S	Sg	05 09 06.9	+2.0
WTP	**Ta-pu** baz=8.0	**0.19**	**6**	⇑*i*P	Pg	05 09 03.2	+0.7
WTP				*i* S	Sg	05 09 07.6	+2.5
CHN3	**Shinhua** baz=274	**0.21**	**274**	*i* P	Pg	05 09 04.4	+1.4
CHN3				*i* S	Sg	05 09 08.1	+2.3
TWK	**Hsinying** baz=336	**0.23**	**335**	*i* P	Pg	05 09 04.0	+0.7
TWK				S	Sg	05 09 08.5	+2.1
TPUB	**Ta-pu** baz=7.0	**0.24**	**8**	⇑P	Pg	05 09 04.2	+0.7
TPUB				S	Sg	05 09 08.9	+2.1
TWM1	**Shoushan** baz=212	**0.28**	**214**	*e*P	Pb	05 09 06.2	0.0
TWM1				*e*S	Sb	05 09 10.8	-0.3
CHN4	**Tsaushan** baz=359	**0.29**	**360**	⇑*i*P	Pg	05 09 05.2	+0.7
CHN4				S	Sb	05 09 11.0	-0.3
SSD	**Sandimen** baz=172	**0.31**	**174**	P	Pb	05 09 05.8	-0.9
TAI1	**Yung-k'ang** baz=266	**0.34**	**267**	*e*P	Pb	05 09 06.3	-0.8
TAI1				*e*S	Sb	05 09 11.8	-0.9
ELDTW	**Lidau** baz=72	**0.41**	**72**	*e*S	Sb	05 09 14.8	-0.1
MASBT	**Mashibuluo** baz=175	**0.45**	**175**	P	Pb	05 09 08.2	-0.8
MASBT				S	Sb	05 09 15.0	-0.8
CHN8	**Yiju** baz=309	**0.45**	**309**	*e*P	Pg	05 09 08.0	+0.5
CHN8				*e*S	Sb	05 09 15.8	-0.2
CHY	**Chiayi** baz=341	**0.46**	**340**	*e*P	Pb	05 09 09.3	+0.1
CHY				*e*S	Sb	05 09 16.5	+0.2
TWG	**Pinlang** baz=118	**0.50**	**118**	P	Pb	05 09 09.9	0.0
TWGBT	**Beinan** baz=118	**0.51**	**118**	P	Pb	05 09 09.7	-0.3
TWGBT				*e*S	Sb	05 09 18.6	+1.0
ECL	**Taimali** baz=143	**0.57**	**144**	P	Pb	05 09 11.2	+0.2
ECL				S	Sb	05 09 20.5	+1.2
FULB	**Fuli** baz=77	**0.66**	**78**	*e*P	Pb	05 09 12.9	+0.3
SCZT	**Fangliau** baz=177	**0.69**	**178**	*e*P	Pb	05 09 12.7	-0.3
SCZT				*e*S	Sb	05 09 23.9	+1.2
EAST	**Anshuo** baz=160	**0.71**	**161**	*e*P	Pb	05 09 13.3	-0.2
EAST				*e*S	Sb	05 09 24.7	+1.1

TAP 02 05:09:02.2, 23˚.79N×120˚.98E, h12km, ML2.3, 1C-2D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSLB	**Suanglung** baz=273	**0.02**	**274**	P	Pg	05 09 04.8	+0.4
SSLB				S	Sg	05 09 06.4	+0.5
SMLT	**Sun Moon Lake** baz=326	**0.12**	**324**	⇑*i*P	Pg	05 09 05.8	+0.4
SMLT				*i* S	Sg	05 09 08.4	+0.6
WHYT	**Xinyi Township** baz=231	**0.14**	**232**	*i* P	Pg	05 09 05.9	+0.2
WHYT				*i* S	Sg	05 09 09.2	+1.0
VWDT	**VWDT** baz=102	**0.15**	**102**	⇓P	Pb	05 09 07.1	+0.1
VWDT				S	Sg	05 09 10.7	+2.3
WJS	**Zhushan** baz=278	**0.23**	**279**	P	Pb	05 09 08.2	-0.1
WJS				S	Sg	05 09 12.4	+2.0
OWD	**Renai** baz=47	**0.25**	**47**	*e*P	Pb	05 09 08.3	-0.5
OWD				*i* S	Sg	05 09 11.9	+0.8
DPDB	**Guoxing** baz=349	**0.25**	**350**	P	Pg	05 09 07.8	+0.2
DPDB				*i* S	Sg	05 09 11.8	+0.8
WNT	**Mingjian** baz=289	**0.28**	**289**	P	Pb	05 09 09.1	-0.2
WNT				S	Sb	05 09 14.1	+0.2
YUS	**Yu-Shan** baz=184	**0.30**	**184**	⇓*i*P	Pg	05 09 09.1	+0.6
YUS				*i* S	Sb	05 09 14.2	-0.6
ALS	**Alishan** baz=24	**0.32**	**210**	P	Pg	05 09 09.1	+0.4
ALS	**Alishan** baz=208	**0.32**	**210**	P	Pg	05 09 09.1	+0.3
ALS				S	Sb	05 09 14.6	-0.6
CHGB	**Renai** baz=33	**0.33**	**34**	P	Pg	05 09 09.4	+0.5
CHGB				S	Sb	05 09 15.3	-0.2
CHN5	**Tsauling** baz=8.0	**0.33**	**236**	*e*P	Pb	05 09 09.9	-0.2
CHN5	**Tsauling** baz=235	**0.33**	**236**	*i* P	Pb	05 09 09.7	-0.4
CHN5				*i* S	Sb	05 09 15.6	+0.1
WDLH	**Douliu** baz=256	**0.41**	**257**	*e*P	Pb	05 09 11.8	+0.3
ESL	**Shilin** baz=86	**0.42**	**86**	*i* P	Pb	05 09 11.8	+0.2
ESL				*i* S	Sb	05 09 18.0	+0.1
EHY	**Hungye** baz=130	**0.42**	**131**	P	Pb	05 09 12.0	+0.3
EHY				S	Sb	05 09 18.2	+0.3
EGFH	**Guangfu** baz=105	**0.43**	**106**	P	Pg	05 09 11.0	+0.3
EGFH				*i* S	Sb	05 09 18.8	+0.6
WHF	**Hehuan Shan** baz=37	**0.45**	**36**	*i* P	Pb	05 09 12.0	-0.3
WHF				*i* S	Sb	05 09 18.4	-0.6
TCU	**Taichung** baz=323	**0.45**	**323**	S	Sb	05 09 19.4	+0.5
WCHH	**Zhanghua** baz=307	**0.48**	**307**	P	Pb	05 09 13.1	+0.5
WCHH				S	Sb	05 09 20.5	+0.8
WHP	**Taichung City** baz=356	**0.49**	**357**	*i* P	Pb	05 09 12.9	+0.1
WHP				*i* S	Sb	05 09 21.3	+1.2
YULB	**Yu-li** baz=143	**0.49**	**143**	P	Pb	05 09 12.5	-0.3
YULB				S	Sb	05 09 19.8	-0.2
TDCB	**Techi** baz=19	**0.49**	**20**	P	Pg	05 09 12.0	0.0
TDCB				*e*S	Sg	05 09 18.8	+0.2
HGSD	**Ruisui** baz=125	**0.50**	**125**	P	Pb	05 09 13.3	+0.3
HGSD				S	Sb	05 09 21.3	+0.9
TWF1	**Yuli** baz=145	**0.52**	**146**	*i* P	Pb	05 09 13.3	-0.1
TWF1				*i* S	Sb	05 09 21.6	+0.8
CHN4	**Tsaushan** baz=219	**0.56**	**219**	*e*P	Pg	05 09 13.5	+0.4
CHN4				S	Sb	05 09 21.8	-0.1
RLNB	**Erlin** baz=280	**0.57**	**281**	*e*S	Sb	05 09 22.0	-0.3
TWQ1	**Liyutan** baz=341	**0.59**	**342**	P	Pb	05 09 14.6	+0.1
TWQ1				*e*S	Sb	05 09 22.4	-0.4
ELDTW	**Lidau** baz=175	**0.59**	**176**	*e*S	Sb	05 09 23.6	+0.5
HWA	**Hwalien** baz=72	**0.61**	**72**	*e*P	Pb	05 09 15.0	+0.2
HWA				*e*S	Sb	05 09 24.7	+1.4
ETLH	**Xiulin Townshi** baz=47	**0.62**	**48**	P	Pb	05 09 15.0	-0.1
ETLH				S	Sb	05 09 24.5	+0.6
WTP	**Ta-pu** baz=211	**0.63**	**212**	*e*P	Pg	05 09 14.4	-0.1
WTP	**Ta-pu** baz=15	**0.63**	**212**	S	Pg	05 09 14.4	-0.2
TWD	**Chiawan** baz=62	**0.64**	**63**	*e*P	Pb	05 09 15.0	-0.3
TWD				S	Sb	05 09 25.2	+1.0
WDJ	**Dajia District** baz=331	**0.64**	**331**	*e*P	Pg	05 09 14.6	0.0
WDJ				*e*S	Sb	05 09 24.3	+0.1
NACB	**Ninganchiao** baz=55	**0.69**	**56**	P	Pb	05 09 16.0	-0.2
NACB				S	Sb	05 09 25.6	+0.1
NNSB	**Datong** baz=30	**0.74**	**30**	*e*P	Pg	05 09 16.3	-0.3
NNSB				*e*S	Sg	05 09 26.4	0.0
NNSH	**Datong** baz=30	**0.74**	**30**	*e*P	Pg	05 09 16.3	-0.3
NNSH				*e*S	Sg	05 09 26.2	-0.1
NNS	**Nan Shan** baz=29	**0.74**	**29**	*e*P	Pb	05 09 17.3	0.0
CHN8	**Yiju** baz=237	**0.83**	**238**	*e*P	Pg	05 09 17.7	-0.6
CHN8				*e*S	Sg	05 09 28.7	-0.4
LIOB	**Emei** baz=2.0	**0.86**	**2**	*e*P	Pb	05 09 19.6	+0.5
NDT	**Datong Townshi** baz=31	**0.95**	**31**	*e*P	Pg	05 09 20.3	-0.2
NDT				*e*S	Sn	05 09 34.4	-0.5
NSK	**Sanguang**	**0.95**	**21**	*e*P	Pb	05 09 20.9	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=21						
NSK				eS	Sn	05 09 34.7	-0.3
	baz=21						
YHNB	Yeheng	0.95	22	eP	Pg	05 09 20.3	-0.3
	baz=22						
YHNB				eS	Sb	05 09 34.0	+0.6
	baz=22						
TTN	Taitung	1.04	171	eP	Pb	05 09 21.6	-0.5
	baz=170						
TTN				eS	Sn	05 09 37.0	-0.1
	baz=170						
NWLT	Wulai	1.10	26	eP	Pg	05 09 23.4	0.0
	baz=25						
NWLT				eS	Sn	05 09 38.9	+0.3
	baz=25						

TAP 02 05:09:04.1, 23°.01N×120°.55E, h2km, ML2.2, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGST	Jiashian	0.08	21	i P	Pg	05 09 06.5	+0.7
	baz=25						
SGST				i S	Sg	05 09 08.4	+1.6
	baz=25						
SLGT	Liugui	0.09	97	S	Sg	05 09 08.2	+1.2
	baz=97						
CHN1	Nanshi	0.18	353	P	Pg	05 09 08.6	+1.0
	baz=353						
CHN1				S	Sg	05 09 11.9	+1.9
	baz=353						
CHN3	Shinhua	0.18	292	eS	Sg	05 09 12.4	+2.3
	baz=292						
TWM1	Shoushan	0.22	213	eP	Pg	05 09 09.4	+1.2
	baz=211						
TWM1				eS	Sg	05 09 13.2	+2.1
	baz=211						
SNST	Tainan City	0.22	347	eP	Pg	05 09 09.7	+1.4
	baz=346						
SNST				S	Sg	05 09 13.4	+2.2
	baz=346						
STYT	Tauyuan	0.25	50	eP	Pg	05 09 10.2	+1.4
	baz=51						
STYT				eS	Sg	05 09 14.9	+2.9
	baz=51						
WTP	Ta-pu	0.25	14	i P	Pg	05 09 10.2	+1.3
	baz=15						
TWK	Hsinying	0.27	347	i P	Pb	05 09 10.7	-0.9
	baz=349						
TWK				S	Sb	05 09 15.2	-1.5
	baz=349						
SSD	Sandimen	0.27	164	eP	Pb	05 09 10.8	-0.7
	baz=162						
SSD				eS	Sb	05 09 15.7	-0.9
	baz=162						
SSD	Sandimen	0.27	164	S	Pb	05 09 11.1	-0.5
	baz=172						
TAI1	Yung-k'ang	0.30	277	eP	Pb	05 09 11.2	-0.9
	baz=276						
TAI1				eS	Sb	05 09 16.0	-1.5
	baz=276						
TPUB	Ta-pu	0.30	14	P	Pb	05 09 11.3	-1.0
	baz=13						
TPUB				S	Sb	05 09 16.9	-0.8
	baz=13						
SNJT	Kaohsiung City	0.32	219	eP	Pb	05 09 11.8	-0.7
	baz=218						
CHN4	Tsaushan	0.35	6	eS	Sb	05 09 18.2	-0.7
	baz=6.0						
SCLT	Jiali	0.37	297	eS	Sb	05 09 18.8	-0.7
	baz=297						

IDC 02 05:28:25.7±123.0, 20°.49N×144°.45E, h0km, Error ellipse: s-maj=244.1km s-min=23.2km az=101.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	21.05	92	H	H	05 54 47.0	
	baz=279,slow=75,SNR=420						
H11S1	WAKE ISLAND Hy	21.06	92	H	H	05 54 47.7	
	baz=279,slow=75,SNR=407						
H11S2	WAKE ISLAND Hy	21.07	92	H	H	05 54 48.3	
	baz=279,slow=75,SNR=307						
H11N1	WAKE ISLAND Hy	21.09	88	H	H	05 54 49.6	
	baz=276,slow=74,SNR=165						
H11N2	WAKE ISLAND Hy	21.09	88	H	H	05 54 50.0	
	baz=276,slow=74,SNR=206						
H11N3	WAKE ISLAND Hy	21.10	88	H	H	05 54 51.0	
	baz=276,slow=74,SNR=132						
H03N3	Juan Fernandez	139.52	118	H	H	08 22 57.4	
	baz=123,slow=74,SNR=5.2						
H03N1	Juan Fernandez	139.53	118	H	H	08 22 57.1	
	baz=266,slow=74,SNR=5.6						

*IDC **02** 05:41:29.0±4.0, 6°.01S×103°.64E, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.6/41, mbtmp4.0/5, Error ellipse: s-maj=109.9km s-min=57.6km az=43.0*
*NEIC **02** 05:41:36.5±1.4, 6°.02S±0°.10×103°.8E±0°.1, h58km±8km, mb4.6/3, Error ellipse: s-maj=20.1km s-min=8.6km az=51.0*
ISC 02 05:41:35.2±0.8, 6°.0S±0°.1×103°.9E±0°.1, h42km, n17, σ1s.74/18, mb4.2/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	1.84	331		Pn	05 42 05.7	+1.4
CISI	Cisompet, Garu	4.24	112	Pn	Pn	05 42 39.5	+2.2
CISI					Sn	05 43 22.1	-3.5
XMIS	Christmas Isla	4.81	158	Pn	Pn	05 42 47.0	+1.7
UGM	Wanagama	6.89	107	Pn	Pn	05 43 16.4	+2.5
GSI	Gunungsitoli	9.57	319	Pn	Pn	05 43 50.8	+0.3
CM31	Chiang Mai Arr	24.76	349	P	P	05 46 52.7	-0.5
CM31				IAmb	IAmb	05 46 53.6	
	comp=Z,9.4nm,0.3s						
CMAR	Chiang Mai Arr	24.76	349	P	P	05 46 52.5	-0.6
	comp=Z,1.9nm,0.3s,baz=179,slow=9.1,SNR=6.6						
FAKI	Fak Fak	28.47	85	P	P	05 47 27.5	+0.9
FAKI				IAmb	IAmb	05 47 28.4	
	comp=Z,17nm,0.8s						
STKA	Stephens Creek	43.65	131	P	P	05 49 34.8	-1.2
STKA				IAmb	IAmb	05 49 39.4	
	comp=Z,1.5nm,1.1s						
SONM	Songino Array	53.63	2	P	P	05 50 53.4	+0.9
	comp=Z,1.0nm,0.6s,baz=193,slow=5.9,SNR=3.9						
MKAR	Makanchi Array	55.92	342	P	P	05 51 08.4	-0.6
	comp=Z,0.5nm,0.6s,baz=146,slow=7.8,SNR=7.2						
USRK	Ussuriysk Ar.	56.02	24	P	P	05 51 09.8	+0.1
	comp=Z,1.4nm,0.5s,baz=210,slow=5.2,SNR=5.1						
ZALV	Zalesovo Beam	61.81	347	P	P	05 51 49.0	-0.8
	comp=Z,0.8nm,0.4s,baz=186,slow=4.2,SNR=5.4						
GSC	Goldstone, Bar	132.59	46		PKPdf	06 00 42.8	-3.2
MEDO	Medina	142.91	3		PKPdf	06 01 06.0	+1.4
TXAR	Lajitas Array	145.15	45	PKPbc	PKPab	06 01 08.8	+0.1
	comp=Z,0.3nm,0.5s,baz=324,slow=1.7,SNR=8.0						
Z38A	Mt. Pleasant	147.69	30		PKPbc	06 01 16.2	+0.3

*GCG **02** 05:43:14.3±0.5, 12°.90N×91°.49W, h15km, MD4.0*
*IDC **02** 05:43:23.1±6.0, 13°.37N×91°.19W, h34km±45km, mb3.5/3, mb1 3.8/7, mb1mx3.5/40, mbtmp3.7/7, ML3.5/3, MS3.2/4, Ms1 3.2/4, ms1mx2.6/33, Error ellipse: s-maj=40.6km s-min=24.3km az=45.0*
*NEIC **02** 05:43:23.1±2.5, 13°.35N±0°.08×91°.31W±0°.06, h32km±5km, mb4.2/13, Error ellipse: s-maj=12.1km s-min=7.8km az=203.0*
ISC 02 05:43:22.5±1.0, 13°.4N±0°.1×91°.24W±0°.08, h28km, n34, σ1s.14/32, mb4.1/8, MS3.0/3, 1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	1.12	44	⇓eP	Pn	05 43 42.4	-0.1
FUG	Fuego 3	1.15	20	eP	Pn	05 43 42.9	0.0
STG3	Santiaguito 3,	1.38	346	eP	Pn	05 43 45.1	-1.0
NBG	Las Nubes	1.49	35	eP	Pb	05 43 49.1	-0.7
APG	El Apazote	1.80	25	Pn	Pn	05 43 53.0	+1.1
	38nm,0.3s,baz=165,slow=9.7,SNR=210						
APG				Lg	Lg	05 44 19.7	
	18nm,0.3s,baz=336,slow=10,SNR=11						
SNET	Serv Nac Est T	1.98	80		Pn	05 43 54.3	+0.1
CCIG	Comitan	3.03	343		Pn	05 44 09.8	+1.0
CSGN	Cosiguina Volc	3.60	96	Pn	Pn	05 44 17.5	+0.9
TGUH	Tegucigalpa,Un	3.91	79	Pn	Pn	05 44 21.6	+0.7
CMIG	Matias Romero	5.11	317	Pn	Pn	05 44 37.4	+0.1
	0.8nm,0.3s,baz=113,slow=12,SNR=8.2						
MATN	Matagalpa	5.19	94		Pn	05 44 37.7	-0.8
ACON	Acoyapa	6.08	103	Pn	Pn	05 44 49.9	-0.7
JTS	Las Juntas de	6.87	116	Pn	Pn	05 45 02.2	+0.7
	0.4nm,0.3s,baz=342,slow=22,SNR=2.1						
JTS				Sn	Sn	05 46 17.4	-1.4
	0.1nm,0.3s,baz=328,slow=15,SNR=1.2						
JTS	Las Juntas de	6.87	116		Pn	05 45 01.9	+0.4
TEIG	Tepich	7.39	22	Pn	Pn	05 45 09.8	+1.2
TEIG				LR	LR	05 48 25.4	
	comp=Z,178nm,19.9s,baz=168,slow=41						
TXAR	Lajitas Array	19.64	326	P	Pn	05 47 49.8	-0.9
	0.1nm,0.3s,baz=155,slow=12,SNR=8.1						
TX31	Lajitas Ar. Si	19.64	326	P	Pn	05 47 50.1	-0.6
TX32	Lajitas Array	19.64	326	P	Pn	05 47 50.2	-0.4
MNTX	Cornudas Mount	22.40	327	P	P	05 48 20.9	+1.9
TKL	Tuckaleechee C	23.20	16	LR	LR	05 58 15.8	
	comp=Z,58nm,19.9s,baz=203,slow=38						
V52A	Sevierville	23.42	16	P	P	05 48 30.3	+1.0
V52A				IAmb	IAmb	05 48 32.0	
	comp=Z,8.2nm,1.3s						
NNA	Nana	28.95	150	LR	LR	05 58 39.5	
	comp=Z,17nm,19.1s,baz=312,slow=32						
K31A	O'Neill	29.87	349	P	P	05 49 29.6	+1.9
ACCN	Adirondack Com	33.52	23	P	P	05 50 00.6	+0.9
REDW	Red Top Meadow	34.34	334	P	P	05 50 06.5	-0.6
REDW				IAmb	IAmb	05 50 17.2	
	comp=Z,6.7nm,1.4s						
NVAR	Mina Array Bea	34.63	321	P	P	05 50 11.3	+1.6
	comp=Z,1.2nm,0.8s,baz=131,slow=8.0,SNR=9.0						
J08A	Circle Bar Ran	37.98	327	P	P	05 50 39.3	+1.2
J08A				IAmb	IAmb	05 50 39.4	
	comp=Z,1.7nm,0.6s						
YKA	Yellowknife Ar	51.81	346	P	P	05 52 25.6	-2.1
	comp=Z,0.5nm,0.7s,baz=144,slow=7.8,SNR=5.4						
DLBC	Dease Lake	53.53	336	P	P	05 52 41.2	+0.5
DLBC				IAmb	IAmb	05 52 58.3	
	comp=Z,4.6nm,1.4s						
SFJD	Kangerlussuaq	59.90	17	LR	LR	06 19 59.4	
	comp=Z,34nm,18.8s,baz=218,slow=37						
INK	Inuvik	61.26	343	P	P	05 53 33.1	-1.7
	comp=Z,1.2nm,0.9s,baz=140,slow=4.1,SNR=4.0						
INK	Inuvik	61.26	343	P	P	05 53 32.7	-2.1
INK				IAmb	IAmb	05 53 33.8	
	comp=Z,2.0nm,1.1s						
TRF	Thorofare Moun	64.53	335	P	P	05 53 56.5	-0.4
MLY	Manley	65.32	336	P	P	05 54 01.0	-0.9
MLY				IAmb	IAmb	05 54 13.0	
	comp=Z,2.6nm,1.1s						

*ANF **02** 05:46:03.0±1.3, 36°.05N×97°.54W, h0km, ML3.5/6, Error ellipse: s-maj=19.5km s-min=4.0km az=157.0*
*TUL **02** 05:46:03.2±1.3, 36°.08N±0°.04×97°.55W±0°.06, h5km±7km, ML3.2, Error ellipse: s-maj=6.8km s-min=4.9km az=67.0*
*NEIC **02** 05:46:03.6±1.8, 36°.04N±0°.04×97°.57W±0°.06, h4km±7km, Error ellipse: s-maj=6.9km s-min=5.1km az=61.0*
ISC 02 05:46:03.3±0.9, 36°.09N±0°.03×97°.55W±0°.04, h10km, n50, σ1s.15/56, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.46	162	Pg	Pg	05 46 12.2	-0.1
ADOK				Sg	Sg	05 46 18.6	+0.2
OKCFA	Oklahoma City	0.68	173		Pg	05 46 16.1	-0.4
OKCSW	OKLAHOMA CITY	0.69	173		Pg	05 46 16.2	-0.5
OKCSW				Sg	Sg	05 46 25.7	-0.1
FNO	Franklin	0.84	172		Pg	05 46 19.1	-0.4
W35A	Tecumseh	1.08	150		Pg	05 46 22.9	-1.2
T35A	Sooner Cattle	1.17	45		Pb	05 46 25.6	-0.1
U32A	Winter Ranch,	1.21	284		Pn	05 46 25.7	-0.7
TUL1	Leonard	1.43	97	P	Pn	05 46 29.3	-0.2
	baz=277						
TUL1				S	Sb	05 46 49.1	+0.6
	baz=277						
TUL1	Leonard	1.43	97		Pn	05 46 29.2	-0.2
X34A	Smith Ranch, M	1.51	189		Pb	05 46 31.1	-0.3
WMOK	Wichita Mounta	1.69	217	P	Pn	05 46 33.2	+0.3
	baz=36						
WMOK				S	Sb	05 46 55.8	+0.1
	baz=36						
WMOK	Wichita Mounta	1.69	217		Pn	05 46 33.1	+0.3
X37A	Clayton	2.33	130		Pn	05 46 42.5	+0.8
U38A	Gravette	2.58	81		Pn	05 46 46.7	+1.5
Z35A	Perchaven, San	2.77	175	Pn	Pn	05 46 48.7	+1.0
HHAR	Hobbs	2.92	85		Pn	05 46 50.9	+1.0
KSU1	Kansas State U	3.10	14		Pn	05 46 54.0	+1.7
W39A	Magazine	3.19	105	P	Pn	05 46 54.7	+1.1
	baz=287						
W39A	Magazine	3.19	105		Pn	05 46 54.2	+0.7
CBKS	Cedar Bluff	3.23	328		Pn	05 46 56.0	+1.8
Z38A	Mt. Pleasant	3.53	143		Pn	05 46 57.6	-0.6
AMTX	Amarillo	3.58	252		Pn	05 46 58.9	-0.2
MIAR	Mount Ida	3.59	114	P	Pn	05 47 00.8	+1.7
	baz=296						
MIAR	Mount Ida	3.59	114		Pn	05 47 00.0	+0.9
S39A	Bolivar	3.74	64	Pn	Pn	05 47 02.4	+1.3
ABTX	Abilene, Hawle	3.87	207	Pn	Pn	05 47 03.2	+0.3
WHTX	Lake Whitney,	4.09	179	P	Pn	05 47 06.8	+0.9
	baz=359						
WHTX	Lake Whitney,	4.09	179	Pn	Pn	05 47 06.4	+0.4
X40A	Basin Creek Fa	4.17	111		Pn	05 47 07.9	+0.9
WHAR	Wooly Hollow	4.35	99	Pn	Pn	05 47 10.4	+0.8
WLAR	White Oak Lake	4.36	122	Pn	Pn	05 47 10.1	+0.5
FCAR	Ozark Folk Cen	4.40	91		Pn	05 47 10.9	+0.8
W41B	Gary Mavity, V	4.41	100	P	Pn	05 47 11.0	+0.7
	baz=283						
W41B				S	Sn	05 48 02.7	+0.9
	baz=283						
UALR	University of	4.45	106	Pn	Pn	05 47 11.3	+0.5
P38A	Dawn	4.75	41		Pn	05 47 17.0	+2.0
R40A	Maddies Statio	4.75	61	Pn	Pn	05 47 16.2	+1.2
MSTX	Muleshoe	4.78	245		Pn	05 47 14.9	-0.6
KSCO	Kaye Shedlock'	4.98	307	Pn	Pn	05 47 20.4	+2.1
N35A	Tabor	4.99	17	Pn	Pn	05 47 20.2	+1.9
LCAR	Lake Charles	5.18	88	Pn	Pn	05 47 21.2	+0.4
T42A	Van Buren	5.28	78	Pn	Pn	05 47 24.3	+2.1
BGNE	Belgrade	5.33	355	Pn	Pn	05 47 23.3	+0.3
N38A	Joes South For	5.79	34	Pn	Pn	05 47 28.3	-0.9
L34A	Svendsen Farm,	5.94	8	Pn	Pn	05 47 32.2	+0.9
OGNE	Ogallala	5.99	325	Pn	Pn	05 47 32.4	+0.4
SDCO	Great Sand Dun	6.58	287	Pn	Pn	05 47 41.9	+1.5
SDCO					Pb	05 48 04.1	+6.0
SCIA	State Center	6.71	29	Pn	Pn	05 47 45.3	+3.3
SCIA					Pg	05 48 08.9	-3.0
ISCO	Idaho Springs	7.37	303		Pn	05 47 51.0	-0.2
ECSD	EROS Data Cent	7.67	5	Pn	Pn	05 47 55.4	+0.4
MNTX	Cornudas Mount	7.85	238	Pn	Pn	05 47 57.1	-0.5

*TAP **02** 06:14:34.3, 24°.71N×122°.42E, h13km±1km, ML3.1, C*
*JMA **02** 06:14:35.2±0.1, 24°.65N×122°.39E, h11km±3km, M2.7*
ISC 02 06:14:34.7±1.0, 24°.69N±0°.03×122°.40E±0°.02, h13km±9km, n48, σ0s.45/87, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.28	242	⇓P	Pb	06 14 41.6	0.0
	baz=238						
EOS1				S	Sb	06 14 46.9	+0.5
	baz=238						
TWC	Suao	0.51	262	i P	Pg	06 14 44.5	-0.2
	baz=258						
TWC				i S	Sb	06 14 52.9	+0.1
	baz=258						
JYNG	Yonagunijimaku	0.55	115	P	Pg	06 14 45.8	+0.4
JYNG				S	Sg	06 14 52.7	0.0
NTC	Toucheng	0.55	288	eP	Pg	06 14 45.9	+0.4
	baz=285						
NTC				eS	Sb	06 14 53.6	-0.3
	baz=285						
TIPB	Shuangxi	0.60	299	i P	Pg	06 14 46.5	+0.1
	baz=295						
TIPB				S	Sb	06 14 55.4	0.0
	baz=295						
YOJ	Yonaguni jima	0.60	112	P	Pg	06 14 46.5	+0.2
	baz=114						
YOJ				S	Sg	06 14 54.3	0.0
	baz=114						
YOJ	Yonaguni jima	0.60	112	P	Pg	06 14 46.6	+0.2
YOJ				S	Sg	06 14 54.5	+0.2
ILA	Ilan	0.60	278	S	Sb	06 14 56.4	+0.9
	baz=275						
ENA	Nanau	0.65	247	P	Pg	06 14 47.5	0.0
	baz=245						
ENA				S	Sn	06 14 58.7	-1.3
	baz=245						
TWE	Neicheng	0.67	273	i P	Pg	06 14 47.5	-0.3
	baz=270						
TWE				i S	Sb	06 14 58.0	+0.5
	baz=270						
NWF	Wu-fen Shan	0.68	304	i P	Pb	06 14 48.5	-0.1
	baz=301						
NWF				S	Sb	06 14 58.4	+0.4
	baz=301						
WFSB	Wu-fen Shan	0.68	304	P	Pb	06 14 48.5	-0.1
	baz=301						
WFSB				S	Sb	06 14 58.0	+0.1
	baz=301						
SLBB	Yuanshan	0.70	276	P	Pg	06 14 48.6	+0.3
	baz=273						
SLBB				eS	Sb	06 14 59.7	+1.2
	baz=273						
ENTT	Nioudou	0.76	267	P	Pg	06 14 49.4	-0.1
	baz=264						
ENTT				i S	Sb	06 15 00.5	+0.3
	baz=264						
NDT	Datong Townshi	0.81	264	i P	Pb	06 14 50.9	+0.1
	baz=262						
NDT				i S	Sb	06 15 02.8	+1.1
	baz=262						
NWLT	Wulai	0.82	277	eP	Pg	06 14 50.6	-0.1
	baz=274						
NWLT				eS	Sb	06 15 02.3	+0.3
	baz=274						
NHDH	Xindian Distri	0.84	289	S	Sn	06 15 04.2	-0.4
	baz=287						
TATO	Taipei	0.88	289	eP	Pn	06 14 52.6	-0.2
	baz=287						
TATO				eS	Sb	06 15 03.8	+0.3
	baz=287						
YM01	YM01	0.88	301	P	Pb	06 14 52.5	+0.5
	baz=299						
YM01				S	Sb	06 15 04.1	+0.3
	baz=299						
YM11	YM11	0.89	303	eP	Pg	06 14 51.5	-0.4
	baz=300						
YM11				S	Sb	06 15 04.4	+0.4
	baz=300						
NACB	Ninganchiao	0.90	235	P	Pg	06 14 51.5	-0.5
	baz=234						
NACB				S	Sb	06 15 04.1	+0.1
	baz=234						
YM10	YM10	0.90	302	P	Pb	06 14 52.5	+0.3
	baz=299						
YM10				S	Sb	06 15 04.7	+0.6
	baz=299						
YM05	YM05	0.90	302	eP	Pb	06 14 52.4	+0.1
	baz=300						
YM05				eS	Sb	06 15 04.2	+0.1
	baz=300						
YM04	YM04	0.91	301	eP	Pb	06 14 53.0	+0.5
	baz=298						
YM04				eS	Sg	06 15 04.5	+0.2
	baz=298						
YHNB	Yeheng	0.93	269	P	Pg	06 14 52.8	+0.1
	baz=267						
YHNB				S	Sb	06 15 06.0	+0.8
	baz=267						
TWY	Chenhua	0.94	309	P	Pb	06 14 53.2	+0.3
	baz=307						
TWY				S	Sg	06 15 05.0	0.0
	baz=307						
NSK	Sanguang	0.95	270	P	Pg	06 14 53.0	-0.1
	baz=267						
NSK				S	Sg	06 15 05.7	+0.2
	baz=267						
TWD	Chiawan	0.95	231	eP	Pn	06 14 53.6	-0.2
	baz=229						
NNSB	Datong	0.96	255	P	Pg	06 14 52.7	-0.7
	baz=253						
NNSB				eS	Sb	06 15 06.5	+0.4
	baz=253						
NNSH	Datong	0.96	255	eP	Pg	06 14 52.8	-0.5
	baz=253						
NNSH				S	Sg	06 15 05.7	-0.2
	baz=253						
ETLH	Xiulin Townshi	0.96	241	P	Pg	06 14 53.0	-0.4
	baz=239						
ETLH				eS	Sn	06 15 08.1	+0.4
	baz=239						
NNS	Nan Shan	0.97	256	P	Pg	06 14 53.5	+0.1
	baz=253						
NNS				S	Sn	06 15 07.5	-0.4
	baz=253						
PCYT	Pengchaiyu	0.99	342	eP	Pb	06 14 52.7	-1.1
	baz=341						
WHF	Hehuan Shan	1.17	243	P	Pb	06 14 57.1	0.0
	baz=241						
WHF				S	Sn	06 15 14.0	+0.7
	baz=241						
TDCB	Techi	1.21	249	P	Pb	06 14 57.7	+0.1
	baz=248						
TDCB				eS	Sn	06 15 15.1	+1.2
	baz=248						
IRIF	Iriomote-Funau	1.26	106	P	Pb	06 14 58.5	+0.1
IRIF				S	Sn	06 15 15.0	+0.1
LIOB	Emei	1.26	269	P	Pg	06 14 59.5	+0.5
	baz=267						
LIOB				eS	Sb	06 15 14.6	0.0
	baz=267						
CHGB	Renai	1.28	241	P	Pg	06 14 59.5	+0.1
	baz=240						
OWD	Renai	1.33	237	eP	Pg	06 15 00.2	-0.2
	baz=236						
OWD				eS	Sg	06 15 18.0	+0.3
	baz=236						
WHP	Taichung City	1.39	253	eP	Pn	06 14 60.0	+0.1
	baz=252						
WHP				eS	Sg	06 15 19.2	-0.3
	baz=252						
HATJ	Hateruma jima	1.42	116	P	Pb	06 15 01.4	+0.2
HATJ				eS	Sb	06 15 19.6	+0.3
HGSD	Ruisui	1.49	217	eP	Pb	06 15 02.3	0.0
	baz=216						
JKRS	Kuro-shima	1.53	107	S	Sb	06 15 22.2	-0.1
SMLT	Sun Moon Lake	1.59	240	eP	Pn	06 15 01.9	-0.7
	baz=239						
YULB	Yu-li	1.64	218	eP	Pn	06 15 03.1	-0.2
	baz=218						
YULB				eS	Sn	06 15 24.2	0.0
	baz=218						
JISG	Ishigakijimahi	1.74	93	S	Sb	06 15 27.9	-0.4
YUS	Yu-Shan	1.78	228	eP	Pb	06 15 07.0	-0.6
	baz=227						
YUS				eS	Sn	06 15 28.8	+0.3
	baz=227						
CHN5	Tsauling	1.91	236	eP	Pb	06 15 08.6	-0.9
	baz=235						
CHN5				eS	Sn	06 15 31.4	+0.2
	baz=235						

*INET **02** 06:14:52.6, 11°.18N×86°.07W, h62km, ML3.0*
UCR 02 06:14:54.1±1.0, 11°.24N×86°.05W, h75km±7km, MD3.7, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBS3	Finca Las Img	0.74	127	i P	Pn	06 15 09.5	-0.4
GB1A	Borinquen Arri	0.77	123	eP	Pn	06 15 10.8	+0.6
GB1A				eS	Sn	06 15 22.9	+0.8
LAPC	Finca la Perla	0.77	127	i P	Pn	06 15 09.9	-0.2
LAPC				i S	Sn	06 15 22.3	+0.3
BUEV	Buena Vista	0.77	124	eP	Pn	06 15 10.3	0.0
BUEV				i S	Sn	06 15 23.0	+0.8
NY14	Universidad de	0.78	139	i P	Pn	06 15 10.8	+0.5
BUAI	Buenos Aires	0.79	117	i P	Pn	06 15 10.5	+0.1
LIM1	Limonal	0.95	124	i P	Pn	06 15 12.3	0.0
COLC	Colonia	1.01	124	i P	Pn	06 15 12.9	-0.1
CUI	Cuipilapa	1.04	123	eP	Pn	06 15 13.5	0.0
CUI				eS	Sn	06 15 29.4	+1.5
GUAI	GUAI	1.10	151	i P	Pn	06 15 14.3	+0.2
GUAI				i S	Sn	06 15 29.3	+0.3
PLVR	Palo Verde	1.12	142	eP	Pn	06 15 14.6	+0.1
PLVR				eS	Sn	06 15 31.4	+1.6
ACAL	Aguas Claras	1.17	121	i P	Pn	06 15 15.0	0.0
JTS	Las Juntas de	1.43	131	eP	Pn	06 15 18.1	-0.3
JTS				eS	Sn	06 15 36.8	+0.1
CEDE	Laguna Cedeo	1.52	119	eP	Pn	06 15 20.0	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CASO	Castillo	1.52	121	iP	Pn	06 15 19.8	+0.2
LCR2	La Lucha 2	2.50	126	eP	Pn	06 15 33.7	+0.8

*TAP **02** 06:15:11.2, 24°.76N×122°.40E, h10km, ML2.6, D*
*JMA **02** 06:15:12.3±0.1, 24°.65N×122°.40E, h15km, M1.7*
ISC 02 06:15:11.6±1.1**, 24°.70N**±0°.05×**122°.40E**±0°.03**, h11**km±10km**,**
n25, σ**0s.48**/45**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.29	238	P	Pb	06 15 18.5	-0.3
	baz=229						
EOS1				S	Sb	06 15 23.9	+0.3
	baz=229						
TWC	Suao	0.51	259	eP	Pg	06 15 21.4	-0.2
	baz=252						
TWC				eS	Sb	06 15 30.1	+0.2
	baz=252						
JYNG	Yonagunijimaku	0.56	116	P	Pg	06 15 22.7	+0.2
JYNG				S	Sg	06 15 30.1	+0.2
TIPB	Shuangxi	0.58	297	eP	Pg	06 15 22.3	-0.7
	baz=292						
TIPB				eS	Sb	06 15 32.4	+0.2
	baz=292						
ILA	Ilan	0.59	276	eP	Pg	06 15 23.4	+0.2
	baz=270						
ILA				eS	Sb	06 15 32.5	+0.1
	baz=270						
YOJ	Yonaguni jima	0.61	113	P	Pg	06 15 23.6	+0.1
YOJ				eS	Sg	06 15 31.4	-0.1
ENA	Nanau	0.66	245	eS	Sn	06 15 36.1	-1.1
	baz=240						
TWE	Neicheng	0.66	272	eP	Pg	06 15 24.3	-0.2
	baz=266						
TWE				eS	Sb	06 15 34.5	0.0
	baz=266						
NWF	Wu-fen Shan	0.67	303	eP	Pb	06 15 25.3	0.0
	baz=298						
NWF				eS	Sb	06 15 34.9	+0.3
	baz=298						
WFSB	Wu-fen Shan	0.67	303	eS	Sb	06 15 35.1	+0.6
	baz=298						
SLBB	Yuanshan	0.69	274	eS	Sb	06 15 36.1	+0.8
	baz=269						
ENTT	Nioudou	0.76	265	eP	Pg	06 15 26.6	+0.3
	baz=260						
ENTT				S	Sb	06 15 37.9	+0.7
	baz=260						
NDT	Datong Townshi	0.81	263	eP	Pg	06 15 27.2	0.0
	baz=258						
NDT				eS	Sn	06 15 39.9	-1.1
	baz=258						
NWLT	Wulai	0.81	275	eP	Pb	06 15 27.8	0.0
	baz=271						
NWLT				eS	Sb	06 15 39.2	+0.4
	baz=271						
YM01	YM01	0.87	301	eP	Pg	06 15 28.6	+0.2
	baz=297						
YM01				eS	Sb	06 15 40.8	+0.3
	baz=297						
NACB	Ninganchiao	0.90	234	eP	Pb	06 15 29.5	+0.3
	baz=231						
NACB				eS	Sn	06 15 42.9	-0.3
	baz=231						
YHNB	Yeheng	0.93	268	eP	Pg	06 15 29.6	+0.1
	baz=264						
YHNB				eS	Sb	06 15 42.5	+0.4
	baz=264						
NSK	Sanguang	0.94	269	eP	Pg	06 15 29.7	-0.1
	baz=264						
NSK				eS	Sb	06 15 43.5	+0.9
	baz=264						
NNSB	Datong	0.96	254	eP	Pg	06 15 29.8	-0.4
	baz=250						
NNSB				eS	Sn	06 15 44.7	-0.2
	baz=250						
NNSH	Datong	0.96	254	eP	Pg	06 15 30.2	0.0
	baz=250						
NNSH				eS	Sn	06 15 44.7	-0.2
	baz=250						
NNS	Nan Shan	0.97	255	eS	Sn	06 15 44.9	-0.1
	baz=250						
ETLH	Xiulin Townshi	0.97	240	eP	Pg	06 15 30.3	0.0
	baz=236						
ETLH				eS	Sn	06 15 44.6	-0.4
	baz=236						
WHF	Hehuan Shan	1.17	242	eP	Pb	06 15 33.0	-1.1
	baz=239						
WHF				eS	Sn	06 15 51.3	+0.8
	baz=239						
TDCB	Techi	1.21	249	eP	Pb	06 15 34.9	+0.2
	baz=245						
TDCB				eS	Sn	06 15 51.9	+0.8
	baz=245						
IRIF	Iriomote-Funau	1.27	106	S	Sb	06 15 51.7	-0.2

*IDC **02** 06:22:27.0±0.9, 32°.37S×178°.86W, h0km, mb4.2/5, mb1 4.4/6, mb1mx4.0/24, mbtmp4.2/6, ML4.0/1, MS3.1/3, Ms1 3.1/3, ms1mx2.8/30, Error ellipse: s-maj=28.1km s-min=25.9km az=39.0*
*WEL **02** 06:22:28.3±0.3, 33°S±3°×17°9W±°, h0km, M4.4/25, mB4.9/13, ML4.9/25, MLv4.7/25, Mw(mB)4.2/13*
*NEIC **02** 06:22:32.9±3.0, 32°.71S±0°.08×178°.8W±0°.1, h37km±7km, mb4.3/9, Error ellipse: s-maj=17.9km s-min=9.8km az=115.0*
ISC 02 06:22:31.8±0.7**, 32°.66S**±0°.06×**178°.51W**±0°.09**, h33**km**, n74,**
σ**1s.73**/78**, mb4.3**/10**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.42	9	P	Pn	06 23 21.3	-1.5
GLKZ				S	Sn	06 23 58.8	-3.4
RAO	Raoul Island	3.43	9	LR	LR	06 24 35.2	
	comp=Z,124nm,21.1s,baz=153,slow=40						
RAO	Raoul Island	3.43	9	Pn	Pn	06 23 25.0	+2.1
RIZ	Raoul Island	3.44	8	P	Pn	06 23 23.7	+0.7
MXZ	Matakaoa Point	5.55	207	Pn	Pn	06 23 53.4	+1.4
MXZ	Matakaoa Point	5.55	207	P	Pn	06 23 52.5	+0.5
MXZ				S	Sn	06 24 54.6	0.0
WMGZ	Waiomatatini S	5.73	205	P	Pn	06 23 54.5	0.0
WMGZ				S	Sn	06 24 59.4	+0.2
PKGZ	Pakihiroa	5.92	207	P	Pn	06 23 56.2	-1.0
PKGZ				S	Sn	06 25 01.1	-2.8
HAZ	Te Kaha	5.93	210	P	Pn	06 23 57.6	+0.5
HAZ				S	Sn	06 25 04.0	+0.1
PUZ	Puketiti	6.01	205	P	Pn	06 23 57.7	-0.8
PUZ				S	Sn	06 25 04.1	-2.1
GRZ	Great Barrier	6.14	233	P	Pn	06 24 02.5	+2.4
RUGZ	Raukumara Rang	6.15	209	P	Pn	06 23 59.5	-0.9
KUZ	Kuaotunu	6.26	228	P	Pn	06 24 06.7	+4.8
CNGZ	Carnagh Statio	6.40	204	P	Pn	06 24 05.0	+1.2
TKGZ	Te Karaka	6.49	206	P	Pn	06 24 05.4	+0.4
MWZ	Matawai	6.52	209	P	Pn	06 24 04.3	-1.2
MWZ				S	Sn	06 25 16.9	-1.9
OPRZ	Ohinepanea	6.57	217	P	Pn	06 24 08.3	+2.4
MARZ	Manawahe	6.62	215	P	Pn	06 24 09.0	+2.3
URZ	Urewera	6.64	211	Pn	Pn	06 24 05.7	-1.3
	2.9nm,0.3s,baz=269,slow=4.3,SNR=41						
URZ				Sn	Sn	06 25 20.4	-1.0
	3.3nm,0.3s,baz=268,slow=11,SNR=8.1						
URZ	Urewera	6.64	211		Pn	06 24 05.9	-1.0
URZ	Urewera	6.64	211	P	Pn	06 24 06.5	-0.4
URZ				S	Sn	06 25 17.8	-3.6
RAGZ	Rawiri	6.71	209	P	Pn	06 24 09.1	+1.1
RIGZ	Rimuhau	6.76	206	P	Pn	06 24 08.1	-0.5
WCZ	Waipu Caves	6.76	239	P	Pn	06 24 11.8	+3.1
PRGZ	Paritu Road	6.91	204	P	Pn	06 24 11.9	+1.2
MUGZ	Murupara	6.97	212	P	Pn	06 24 09.9	-1.6
SNGZ	Shannon Statio	6.98	208	P	Pn	06 24 11.2	-0.5
RTZ	Ruatahuna	6.99	210	P	Pn	06 24 10.8	-1.0
OUZ	Omahuta	7.04	247		Pn	06 24 14.7	+2.2
OUZ	Omahuta	7.04	247	P	Pn	06 24 14.9	+2.3
OUZ				S	Sn	06 25 28.3	-3.2
MTHZ	Maungataniwha	7.25	210	P	Pn	06 24 15.6	+0.2
NMHZ	Naumai	7.47	209	P	Pn	06 24 19.0	+0.6
ARHZ	Aropaoanui	7.53	208	P	Pn	06 24 19.7	+0.5
BKZ	Black Stump Fm	7.66	211		Pn	06 24 20.2	-0.8
BKZ	Black Stump Fm	7.66	211	P	Pn	06 24 19.6	-1.4
MCHZ	McNeill Hill	7.81	208	P	Pn	06 24 22.8	-0.3
KWHZ	Kaweka Forest	7.90	210	P	Pn	06 24 23.4	-1.0
HIZ	Hauiti	7.96	221	Pn	Pn	06 24 28.0	+2.9
HIZ	Hauiti	7.96	221	P	Pn	06 24 28.2	+3.1
KAHZ	Kahuranaki	8.04	206	P	Pn	06 24 23.6	-2.7
KRHZ	Kereru	8.11	209	P	Pn	06 24 26.1	-1.1
BHHZ	Black Hill Sta	8.11	211	P	Pn	06 24 26.3	-0.9
FWVZ	Far West T-bar	8.16	215	P	Pn	06 24 28.0	0.0
BFZ	Birch Farm	9.05	206	Pn	Pn	06 24 38.1	-2.0
MSWZ	Moikau Station	10.06	208	Pn	Pn	06 24 52.8	-1.2
TUWZ	Tuamarina	10.63	212	Pn	Pn	06 25 01.2	-0.5
OXZ	Oxford	12.99	212		Sn	06 27 46.1	-11
RPZ	Rata Peaks	13.74	214	Pn	Pn	06 25 43.5	-0.8
DZM	Mont Dzumac	17.01	305	LR	LR	06 31 20.8	
	comp=Z,192nm,20.4s,baz=134,slow=32						
PPT	Papeete	30.07	67	LR	LR	06 40 17.1	
	comp=Z,26nm,19.0s,baz=94,slow=35						
CTA	Charters Tower	33.81	283	P	P	06 29 11.1	+0.2
	1.7nm,0.4s,baz=110,slow=14,SNR=3.5						
CTAO	Charters Tower	33.81	283	P	P	06 29 11.1	+0.2
CTAO				IAmb	IAmb	06 29 12.7	
	comp=Z,3.8nm,1.0s						
AS31	Alice Springs	42.61	270	P	P	06 30 23.8	-1.3
ASAR	Alice Springs	42.61	270	P	P	06 30 23.1	-2.0
	comp=Z,2.0nm,0.7s,baz=108,slow=7.7,SNR=26						
WR0	Warramunga Arr	43.62	275	P	P	06 30 31.2	-2.1
WR0				IAmb	IAmb	06 30 40.8	
	comp=Z,3.8nm,1.2s						
WB2	Warramunga Arr	43.79	275	P	P	06 30 32.5	-2.1
WB2				IAmb	IAmb	06 30 36.0	
	comp=Z,3.6nm,0.6s						
WRAB	Tennant Creek	43.80	275	P	P	06 30 32.5	-2.2
WRAB				IAmb	IAmb	06 30 48.7	
	comp=Z,10nm,1.4s						
WRA	Warramunga Arr	43.80	275	P	P	06 30 32.5	-2.3
	comp=Z,1.8nm,0.4s,baz=114,slow=8.1,SNR=30						
WB0	Warramunga Arr	43.84	275	P	P	06 30 32.8	-2.2
WB0				IAmb	IAmb	06 30 33.5	
	comp=Z,6.1nm,0.8s						
FITZ	Fitzroy Crossi	51.96	272	P	P	06 31 37.8	-0.1
QSPA	South Pole Qui	57.46	180	P	P	06 32 20.2	+3.0
	comp=Z,4.4nm,0.7s,baz=20,slow=1.3,SNR=25						
QSPA	South Pole Qui	57.46	180	P	P	06 32 20.3	+3.0
PLCA	Paso Flores	81.29	133	P	P	06 34 47.5	+2.6
	comp=Z,1.4nm,0.9s,baz=262,slow=7.6,SNR=4.5						
PLCA	Paso Flores	81.29	133	P	P	06 34 46.6	+1.7
NVAR	Mina Array Bea	90.18	43	P	P	06 35 30.7	+1.8
	comp=Z,0.5nm,0.8s,baz=214,slow=8.3,SNR=3.8						
ARCES	ARCESS Array B	140.69	347	PKhKP	PKPpre	06 41 52.6	
	comp=Z,2.1nm,0.9s,baz=57,slow=3.3,SNR=1.8						
FIA1	FINESS Array S	147.09	338	PKPdf	PKPbc	06 42 08.7	-1.8
FINES	FINESS Array B	147.09	338	PKPbc	PKPbc	06 42 08.7	-1.8
	comp=Z,1.1nm,0.3s,baz=46,slow=4.8,SNR=13						
NC303	NORSAR Array S	150.70	350	PKPbc	PKPbc	06 42 18.9	-0.9
NB2	NORSAR Subarra	150.90	350	PKP	PKPbc	06 42 18.6	-1.7
	comp=Z,1.0nm,0.7s,baz=35,slow=2.6						
NOA	NORSAR Array B	150.90	350	PKPbc	PKPbc	06 42 19.2	-1.1
	comp=Z,0.4nm,0.5s,baz=14,slow=4.1,SNR=2.6						
HFS	Hagfors	151.35	347	PKPbc	PKPbc	06 42 19.7	-1.6
	comp=Z,1.7nm,0.8s,baz=346,slow=0.6,SNR=2.0						
TOA0	Torodi Ar. Sit	160.58	181	PKPab	PKPab	06 43 10.7	+0.6
TORD	Torodi Ar. Bea	160.58	181	PKPab	PKPab	06 43 10.6	+0.5
	comp=Z,1.5nm,0.6s,baz=178,slow=3.3,SNR=9.8						

*IDC **02** 06:52:26.4±1.4, 54°.35S×5°.81E, h0km, mb4.4/7, mb1 4.5/8, mb1mx4.1/35, mbtmp4.5/8, ML3.8/1, MS4.2/10, Ms1 4.1/10, ms1mx3.9/22, Error ellipse: s-maj=46.9km s-min=19.9km az=47.0*
*NEIC **02** 06:52:29.0±1.9, 54°.5S±0°.1×5°.7E±0°.2, h10km±1km, mb4.8/11, Error ellipse: s-maj=23.2km s-min=21.4km az=69.0*
*GCMT **02** 06:52:32.0±0.2, 54°.29S±0°.01×6°.43E±0°.02, h18km±1km, MW5.1/121, Moment Tensor Solution. s48,c61; s121,c175; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.76±.16; $M_{\theta\theta}$5.21±.17; $M_{\phi\phi}$-4.45±.15; $M_{r\theta}$1.07±.33; $M_{\theta\phi}$1.64±.12; $M_{\phi r}$1.37±.33; Best double couple: $M_0$5.39700×10^{16} NP1:ϕ_s125.00000°,δ71.00000°, λ-3.00000°. NP2:ϕ_s216.00000°,δ87.00000°, λ-161.00000°. Principal axes: T 5.7380, Plg11.0000°, Azm349.0000°; N -0.6800, Plg70.0000°, Azm225.0000°; P -5.0550, Plg16.0000°, Azm83.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 02 06:52:29.0±0.7**, 54°.5S**±0°.1×**5°.7E**±0°.1**, h10**km**, n34,**
σ**0s.99**/26**, mb4.7**/8**, MS4.2**/10**, 1C-1D, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	17.34	196	P	P	06 56 32.5	+0.3
VNA2	Neumayer--Watz	17.46	194	P	P	06 56 32.9	-0.6
	baz=16,slow=15						
SNAA	Sanae	17.62	189	P	P	06 56 35.3	0.0
SNAA	Sanae	17.62	189	P	P	06 56 34.8	-0.6
	0.3nm,0.3s,baz=12,slow=14,SNR=24						
SNAA	Sanae	17.62	189	P	Pn	06 56 34.6	+0.2
SNAA				IAmb	IAmb	06 56 46.2	
	comp=Z,99nm,1.2s						
VNA3	Neumayer Olymp	18.09	196	P	P	06 56 41.0	+0.6
SYO	Syowa Base	21.22	146	⇑iP	P	06 57 12.0	-2.5
SYO	Syowa Base	21.22	146	⇓eP	P	06 57 16.0	+1.5
MAW	Mawson	29.37	139	P	P	06 58 30.5	-1.1
	comp=Z,2.9nm,0.9s,baz=284,slow=20,SNR=4.3						
MAW				LR	LR	07 07 52.6	
	comp=Z,354nm,21.9s,baz=280,slow=32						
MAW	Mawson	29.37	139	P	P	06 58 30.6	-1.1
QSPA	South Pole Qui	35.73	180	P	P	06 59 27.8	+0.3
	comp=Z,10nm,0.9s,baz=229,slow=3.5,SNR=33						
QSPA	South Pole Qui	35.73	180	P	P	06 59 28.0	+0.5
QSPA				IAmb	IAmb	06 59 34.2	
	comp=Z,12nm,0.8s						
VNDA	Vanda	47.40	173	P	P	07 01 03.1	+0.4
	comp=Z,7.5nm,0.9s,baz=216,slow=7.5,SNR=12						
VNDA				LR	LR	07 22 21.1	
	comp=Z,322nm,18.1s,baz=195,slow=38						
VNDA	Vanda	47.40	173	P	P	07 01 03.3	+0.6
VNDA				IAmb	IAmb	07 01 13.6	
	comp=Z,13nm,1.0s						
ABPO	Ambohimpanom	47.46	58	P	P	07 01 04.1	0.0
H10S2	ASCENSION HYDR	48.25	333	T	T	07 52 47.8	
	baz=162,slow=74,SNR=5.1						
H10S3	ASCENSION HYDR	48.26	333	T	T	07 53 02.1	
	baz=58,slow=74,SNR=13						
PLCA	Paso Flores	50.70	253	LR	LR	07 23 11.6	
	comp=Z,46nm,18.1s,baz=147,slow=36						
PLCA	Paso Flores	50.70	253	P	P	07 01 28.1	-0.5
CPUP	Villa Florida	53.43	275	P	P	07 01 48.0	-1.0
	comp=Z,4.4nm,0.9s,baz=169,slow=5.2,SNR=7.5						
CPUP				LR	LR	07 23 47.8	
	comp=Z,110nm,18.5s,baz=143,slow=35						
CPUP	Villa Florida	53.43	275	P	P	07 01 49.9	+0.9
CPUP				IAmb	IAmb	07 01 50.8	
	comp=Z,5.9nm,1.0s						
BDFB	Brasilia	56.62	292	P	P	07 02 12.3	+0.1
	comp=Z,3.0nm,0.8s,baz=154,slow=7.9,SNR=4.6						
BDFB				LR	LR	07 23 26.2	
	comp=Z,178nm,21.1s,baz=135,slow=33						
BDFB	Brasilia	56.62	292	P	P	07 02 11.6	-0.7
BDFB				IAmb	IAmb	07 02 22.9	
	comp=Z,16nm,1.4s						
KMBO	Kilima Mbogo	59.16	38	LR	LR	07 26 57.5	
	comp=Z,434nm,18.1s,baz=110,slow=35						
DBIC	Dimbokro	61.59	348	LR	LR	07 25 01.1	
	comp=Z,236nm,19.7s,baz=109,slow=32						
DBIC	Dimbokro	61.59	348	P	P	07 02 46.2	-0.2
LVC	Limon Verde	63.03	268	LR	LR	07 28 49.0	
	comp=Z,131nm,21.9s,baz=138,slow=35						
TORD	Torodi Ar. Bea	67.47	356	LR	LR	07 28 55.5	
	comp=Z,197nm,20.1s,baz=165,slow=32						
LPAZ	La Paz	67.52	273	P	P	07 03 25.2	-0.9
	comp=Z,4.0nm,1.0s,baz=125,slow=6.6,SNR=12						
LPAZ	La Paz	67.52	273	P	P	07 03 24.9	-1.2
LPAZ				IAmb	IAmb	07 03 36.7	
	comp=Z,8.3nm,0.9s						
SAML	Samuel	70.54	282	P	P	07 03 45.7	+1.6
SAML				IAmb	IAmb	07 03 53.3	
	comp=Z,14nm,1.5s						
ROSC	El Rosal	88.13	281	LR	LR	07 43 00.8	
	comp=Z,272nm,19.9s,baz=197,slow=34						
ASAR	Alice Springs	90.37	134	P	P	07 05 30.9	+0.4
	comp=Z,0.8nm,0.7s,baz=190,slow=4.7,SNR=5.0						
YKA	Yellowknife Ar	148.88	309	PKPbc	PKPdf	07 12 12.9	+1.4
	comp=Z,1.2nm,0.9s,baz=106,slow=2.9,SNR=9.5						

*IDC **02** 06:54:47.8±1.2, 54°.24S×5°.96E, h0km, mb4.3/7, mb1 4.5/8, mb1mx4.1/35, mbtmp4.3/8, ML4.4/1, MS4.4/2, Ms1 4.3/2, ms1mx3.6/23, Error ellipse: s-maj=34.2km s-min=22.6km az=78.0*
*NEIC **02** 06:54:48.0±2.4, 54°.09S±0°.06×6°.2E±0°.2, h10km±1km, mb4.6/9, Error ellipse: s-maj=25.2km s-min=8.8km az=105.0*
ISC 02 06:54:47.9±0.7**, 54°.13S**±0°.09×**6°.3E**±0°.1**, h10**km**, n30,**
σ**1s.27**/23**, mb4.5**/8**, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	17.81	196	P	P	06 58 55.9	-0.3
VNA2	Neumayer--Watz	17.91	195	P	Pn	06 58 55.2	-1.5
	baz=17,slow=15						
SNAA	Sanae	18.05	189	P	Pn	06 58 57.9	-0.7
SNAA	Sanae	18.05	189	P	Pn	06 58 57.3	-1.3
	1.1nm,0.3s,baz=317,slow=12,SNR=9.0						
SNAA	Sanae	18.05	189	P	Pn	06 58 57.2	-1.3
SNAA				IAmb	IAmb	06 59 03.3	
	comp=Z,32nm,1.0s						
VNA3	Neumayer Olymp	18.55	196	P	Pn	06 59 04.8	+0.2
SUR	Sutherland	24.08	31	LR	LR	07 06 58.9	
	comp=Z,838nm,19.3s,baz=200,slow=30						
BOSA	Boshof	29.01	36	LR	LR	07 09 53.8	
	comp=Z,597nm,19.3s,baz=198,slow=31						
MAW	Mawson	29.43	139	P	P	07 00 50.9	-0.1
TSUM	Tsumeb	35.93	18	P	P	07 01 50.8	+2.3
	comp=Z,2.1nm,0.8s,baz=183,slow=12,SNR=3.8						
TSUM	Tsumeb	35.93	18	P	P	07 01 50.3	+1.8
QSPA	South Pole Qui	36.11	180	P	P	07 01 49.9	+0.2
	comp=Z,8.5nm,0.7s,baz=226,slow=3.4,SNR=12						
QSPA	South Pole Qui	36.11	180	P	P	07 01 50.1	+0.4
QSPA				IAmb	IAmb	07 01 51.7	
	comp=Z,10nm,0.8s						
MATP	Matopo	37.67	35	P	P	07 02 00.1	-3.2
	comp=Z,2.0nm,0.7s,baz=217,slow=5.9,SNR=4.3						
VNDA	Vanda	47.74	173	P	P	07 03 25.5	+1.2
	comp=Z,3.0nm,0.7s,baz=218,slow=8.7,SNR=4.7						
VNDA	Vanda	47.74	173	P	P	07 03 25.3	+1.1
VNDA				IAmb	IAmb	07 03 36.6	
	comp=Z,14nm,1.3s						
H10S2	ASCENSION HYDR	48.08	332	T	T	07 55 05.0	
	baz=162,slow=74,SNR=7.9						
H10S3	ASCENSION HYDR	48.09	332	T	T	07 55 05.7	
	baz=58,slow=74,SNR=16						
PLCA	Paso Flores	51.15	252	P	P	07 03 50.5	-0.4
	comp=Z,1.5nm,0.8s,baz=103,slow=7.9,SNR=4.6						
PLCA	Paso Flores	51.15	252	P	P	07 03 50.2	-0.6
PLCA				IAmb	IAmb	07 03 58.6	
	comp=Z,8.1nm,1.5s						
CPUP	Villa Florida	53.75	274	P	P	07 04 09.8	-0.3
	comp=Z,8.1nm,1.1s,baz=175,slow=5.9,SNR=4.3						
CPUP	Villa Florida	53.75	274	P	P	07 04 08.8	-1.4
BDFB	Brasilia	56.81	291	P	P	07 04 33.2	+0.8
	comp=Z,2.9nm,0.9s,baz=12,slow=3.1,SNR=2.5						
BDFB	Brasilia	56.81	291	P	P	07 04 32.7	+0.2
BDFB				IAmb	IAmb	07 04 44.1	
	comp=Z,5.5nm,0.9s						
LPAZ	La Paz	67.84	273	P	P	07 05 47.4	+0.4
	comp=Z,2.6nm,0.7s,baz=170,slow=4.3,SNR=5.9						
H01W2	Cape Leeuwin H	71.81	125	T	T	08 25 47.9	
	baz=217,slow=75,SNR=75						
H01W1	Cape Leeuwin H	71.82	125	T	T	08 25 54.8	
	baz=217,slow=75,SNR=16						
H01W3	Cape Leeuwin H	71.82	125	T	T	08 25 49.8	
	baz=217,slow=75,SNR=76						
LTZ	Lake Taylor	82.72	170	P	P	07 07 12.4	+0.9
YKA	Yellowknife Ar	148.91	310	PKPbc	PKiKP	07 14 36.0	+0.2
	comp=Z,1.3nm,0.7s,baz=116,slow=3.0,SNR=5.3						

*JMA **02** 06:56:52.7±0.1, 24°.11N×122°.20E, h40km±3km, M2.1*
*TAP **02** 06:56:52.9, 24°.23N×122°.19E, h20km, ML3.2, C*
ISC 02 06:56:52.8±1.0**, 24°.17N**±0°.02×**122°.20E**±0°.02**, h26**km±10km**,**
n61, σ**0s.63**/98**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.38	351	P	Pb	06 57 00.8	-0.2
	baz=350						
EOS1				eS	Sb	06 57 06.4	-0.2
	baz=350						
ENA	Nanau	0.49	301	iP	Pb	06 57 02.4	-0.4
	baz=296						
ENA				iS	Sb	06 57 09.9	+0.3
	baz=296						
TWC	Suao	0.54	324	iP	Pb	06 57 02.8	-0.8
	baz=321						
TWC				eS	Sb	06 57 09.7	-1.2
	baz=321						
NACB	Ninganchiao	0.55	270	eP	Pb	06 57 04.2	+0.4
	baz=264						
NACB				eS	Sn	06 57 13.1	-0.2
	baz=264						
TWD	Chiawan	0.56	260	eS	Sn	06 57 13.2	-0.3
	baz=254						
ETLH	Xiulin Townshi	0.65	273	iP	Pb	06 57 05.9	+0.3
	baz=268						
ETLH				eS	Sn	06 57 15.6	-0.4
	baz=268						
ILA	Ilan	0.72	325	P	Pb	06 57 06.5	-0.2
	baz=323						
ILA				eS	Sb	06 57 16.3	+0.2
	baz=323						
TWE	Neicheng	0.73	319	P	Pb	06 57 06.6	-0.2
	baz=316						
TWE				eS	Sb	06 57 16.3	-0.1
	baz=316						
JYNG	Yonagunijimaku	0.74	68	P	Pb	06 57 07.0	0.0
JYNG				S	Sb	06 57 16.7	0.0
ENTT	Nioudou	0.74	309	P	Pb	06 57 06.9	-0.1
	baz=306						
ENTT				eS	Sb	06 57 16.9	+0.1
	baz=306						
NDT	Datong Townshi	0.76	305	eP	Pb	06 57 07.6	+0.3
	baz=301						
NDT				eS	Sn	06 57 17.8	-0.6
	baz=301						
NTC	Toucheng	0.76	334	eP	Pn	06 57 07.0	-0.8
	baz=332						
SLBB	Yuanshan	0.77	319	eP	Pn	06 57 07.8	-0.3
	baz=316						
SLBB				eS	Sb	06 57 18.1	+0.5
	baz=316						
NNSB	Datong	0.78	289	eP	Pn	06 57 08.0	-0.3
	baz=285						
NNSB				eS	Sn	06 57 19.1	-0.2
	baz=285						
NNSH	Datong	0.78	289	eP	Pb	06 57 08.2	+0.4
	baz=285						
NNSH				eS	Sn	06 57 19.3	0.0
	baz=285						
ESL	Shilin	0.79	243	eP	Pb	06 57 07.8	+0.1
	baz=238						
ESL				eS	Sn	06 57 19.1	0.0
	baz=238						
NNS	Nan Shan	0.80	290	eP	Pb	06 57 08.3	+0.3
	baz=285						
NNS				eS	Sn	06 57 19.8	+0.2
	baz=285						
YOJ	Yonaguni jima	0.80	69	eP	Pn	06 57 08.1	-0.3
	baz=72						
YOJ				eS	Sn	06 57 20.2	+0.8
	baz=72						
YOJ	Yonaguni jima	0.80	69	P	Pb	06 57 08.2	+0.2
YOJ				S	Sb	06 57 18.2	-0.2
WHF	Hehuan Shan	0.85	268	eP	Pn	06 57 08.9	-0.5
	baz=264						
WHF				eS	Sn	06 57 21.6	+0.3
	baz=264						
TIPB	Shuangxi	0.86	337	eP	Pn	06 57 08.9	-0.4
	baz=336						
TIPB				eS	Sb	06 57 19.9	-0.4
	baz=336						
EGFH	Guangfu	0.86	235	eS	Sn	06 57 21.2	+0.1
	baz=231						
NWLT	Wulai	0.87	314	eP	Pb	06 57 09.6	+0.3
	baz=311						
YHNB	Yeheng	0.90	304	eP	Pb	06 57 09.8	+0.1
	baz=300						
YHNB				eS	Sb	06 57 21.9	+0.6
	baz=300						
NSK	Sanguang	0.91	303	eP	Pn	06 57 09.9	-0.2
	baz=300						
NSK				eS	Sb	06 57 22.3	+0.6
	baz=300						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHGB	Renai	0.94	263	eP	Pn	06 57 10.4	-0.1
	baz=259						
CHGB				eS	Sb	06 57 23.4	+0.7
	baz=259						
TDCB	Techi	0.95	275	eP	Pb	06 57 10.9	+0.2
	baz=271						
TDCB				eS	Sb	06 57 24.2	+1.3
	baz=271						
OWD	Renai	0.96	257	eP	Pb	06 57 12.0	+1.2
	baz=253						
HGSD	Ruisui	0.98	226	eP	Pb	06 57 11.3	+0.2
	baz=223						
TATO	Taipei	1.02	321	eP	Pb	06 57 12.2	+0.3
	baz=319						
TATO				eS	Sb	06 57 25.5	+0.6
	baz=319						
YM01	YM01	1.12	330	eP	Pn	06 57 13.1	+0.2
	baz=328						
YM01				eS	Sn	06 57 27.5	-0.1
	baz=328						
YULB	Yu-li	1.13	227	eP	Pn	06 57 12.3	-0.7
	baz=224						
YM10	YM10	1.14	330	eP	Pn	06 57 13.2	+0.2
	baz=328						
YM11	YM11	1.14	330	eP	Pb	06 57 14.4	+0.6
	baz=329						
YM05	YM05	1.14	330	eP	Pn	06 57 13.1	-0.1
	baz=328						
YM04	YM04	1.15	329	eP	Pn	06 57 13.2	0.0
	baz=327						
WHP	Taichung City	1.15	275	eP	Pb	06 57 14.4	+0.5
	baz=272						
TWF1	Yuli	1.16	225	eP	Pn	06 57 12.8	-0.6
	baz=222						
LIOB	Emei	1.17	294	eP	Pb	06 57 14.8	+0.4
	baz=291						
SSLB	Suanglung	1.20	252	eP	Pb	06 57 14.7	-0.2
	baz=248						
SMLT	Sun Moon Lake	1.22	257	eP	Pb	06 57 14.8	-0.5
	baz=253						
SMLT				eS	Sb	06 57 30.8	+0.2
	baz=253						
TWY	Chenhua	1.22	334	eP	Pb	06 57 15.8	+0.6
	baz=333						
TYC	Yuchr	1.25	258	eP	Pb	06 57 15.1	-0.6
	baz=255						
FULB	Fuli	1.28	221	eP	Pn	06 57 14.3	-0.6
	baz=218						
FULB				eS	Sn	06 57 30.9	-0.3
	baz=218						
YUS	Yu-Shan	1.33	239	eP	Pn	06 57 16.2	+0.1
	baz=236						
IRIF	Iriomote-Funau	1.41	83	P	Pn	06 57 16.6	-0.2
IRIF				S	Sn	06 57 34.9	+0.4
ALS	Alishan	1.44	243	eP	Pb	06 57 18.3	-0.7
	baz=240						
ALS				eS	Sb	06 57 36.6	-0.3
	baz=240						
STYT	Tauyuan	1.66	233	eP	Pn	06 57 21.3	+1.0
	baz=230						
STYT				eS	Sb	06 57 42.9	-0.3
	baz=230						
TPUB	Ta-pu	1.68	239	eP	Pb	06 57 22.1	-0.9
	baz=237						
TPUB				eS	Sb	06 57 44.0	+0.3
	baz=237						
CHN4	Tsaushan	1.68	241	eP	Pb	06 57 22.1	-0.9
	baz=239						
CHN4				eS	Sb	06 57 44.3	+0.5
	baz=239						
WTP	Ta-pu	1.72	238	eP	Pb	06 57 22.8	-0.9
	baz=235						
WTP				eS	Sb	06 57 44.5	-0.4
	baz=235						
JIJ	Ishigaki jima	1.79	84	P	Pn	06 57 22.2	+0.2
JIJ				S	Sn	06 57 43.6	-0.3
CHN1	Nanshi	1.82	238	eP	Pb	06 57 24.7	-0.7
	baz=235						
CHN1				eS	Sb	06 57 47.2	-0.5
	baz=235						
SGST	Jiashian	1.84	234	eS	Sb	06 57 47.4	-0.8
	baz=232						
JISG	Ishigakijimahi	1.97	78	S	Sn	06 57 48.1	-0.3
MASBT	Mashibuluo	2.12	223	eP	Pn	06 57 27.4	+0.9
	baz=221						
MASBT				eS	Sb	06 57 54.7	-1.6
	baz=221						
SCZT	Fangliau	2.31	219	eP	Pn	06 57 31.0	+1.9
	baz=217						
PHUB	P'eng-hu	2.49	255	eS	Sn	06 58 01.8	+0.5
	baz=253						
PNG	Penghu	2.49	256	eS	Sn	06 58 02.9	+1.7
	baz=254						
VWUC	VWUC	2.63	289	eP	Pn	06 57 32.7	-0.8
	baz=286						
VWUC				eS	Sn	06 58 03.1	-1.5
	baz=286						
VCHM	Qimei	2.71	250	eS	Sn	06 58 08.3	+1.6
	baz=248						

TRN 02 07:14:54.3, 13°.86N×60°.36W, h24km, MD3.6, Windward Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SLAC	Saint Lucia, A	0.52	274	eP	Pn	07 15 06.8	+0.5
SLAC				eS	Sn	07 15 15.5	+1.1
MCLT	Moule a Chique	0.58	255	eP	Pn	07 15 07.6	+0.4
MCLT				eS	Sn	07 15 17.1	+1.1
SLBI	Saint Lucia, B	0.62	285	eP	Pn	07 15 08.0	+0.4
SLBI				eS	Sn	07 15 17.2	+0.5
SLB	Belfond	0.66	267	eP	Pn	07 15 09.7	+1.5
SLB				eS	Sn	07 15 19.9	+2.0
MPOM	Morne Pois Mar	0.76	320	eP	Pn	07 15 09.8	+0.3
LPMF	Morne Lapointe	0.92	320	eP	Pn	07 15 12.4	+0.6
BIM	Bigot	0.95	313	eP	Pn	07 15 12.9	+0.7
ZAM	Aeronautique	0.96	318	eP	Pb	07 15 12.9	+0.6
SVCV	St. Vincent, C	0.96	233	eP	Pb	07 15 13.4	+1.0
SVCV				eS	Sn	07 15 26.6	+1.4
SSV	Crater Summit	0.97	237	eP	Pb	07 15 13.7	+1.2
SSV				eS	Sn	07 15 28.0	+2.4
SVV	Soufriere Volc	0.99	237	eP	Pb	07 15 14.2	+1.4
SVV				eS	Sn	07 15 28.5	+2.4
SVB	Belmont	1.05	236	eP	Pb	07 15 14.3	+0.5
SVB				eS	Sn	07 15 29.6	+2.2
BBGH	Gun Hill	1.05	132	eP	Pb	07 15 14.2	+0.2
FDF	Fort de France	1.16	319	eP	Pb	07 15 16.4	+0.6
FDF				eS	Sb	07 15 32.6	+2.2
GBMF	Grand Be	1.22	320	eP	Pb	07 15 17.2	+0.5
PML	Morne Lenard	1.22	319	eP	Pb	07 15 17.4	+0.7
BAMF	Morne Balai	1.22	321	eP	Pb	07 15 17.2	+0.4
SVN	Savane Anatole	1.25	321	eP	Pb	07 15 17.5	+0.2
PCM	Pelee Case Pet	1.26	319	eP	Pb	07 15 17.7	+0.3
GCMP	Grenada, Carri	1.72	217	eP	Pn	07 15 23.9	+1.1
GCMP				eS	Sb	07 15 45.3	-1.0
GRGR	Grenville	2.13	216	eP	Pb	07 15 31.0	-1.3
GRGR				eS	Sn	07 15 55.3	+1.1

*IDC **02** 07:19:52.5±0.5, 7°.09S×154°.01E, h0km, mb4.7/26, mb1 4.8/29, mb1mx4.7/45, mbtmp4.7/29, ML4.2/3, MS4.1/9, Ms1 4.1/9, ms1mx3.6/36, Error ellipse: s-maj=18.1km s-min=11.3km az=85.0*

*BJI **02** 07:19:53.1±0.0, 6°.86S×154°.44E, h16km, mB5.1/35, mb4.9/50, Ms4.8/13, Ms7 4.7/7*

*NEIC **02** 07:19:56.4±1.8, 7°.07S±0°.07×153°.99E±0°.09, h24km±4km, mb4.9/113, Error ellipse: s-maj=12.9km s-min=10.7km az=91.0*

*GCMT **02** 07:19:56.4±0.2, 7°.23S±0°.02×154°.03E±0°.02, h12km, MW5.0/103, Moment Tensor Solution. s56,c65; s103,c138; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.55±.15; $M_{\theta\theta}$1.42±.11; $M_{\phi\phi}$2.13±.10; $M_{r\theta}$-1.61±.35; $M_{\theta\phi}$-1.39±.07; $M_{\phi r}$0.54±.27; Best double couple: $M_0$3.76700×10^{16} NP1:ϕ_s333.00000°, δ35.00000°, λ-70.00000°. NP2:ϕ_s129.00000°, δ58.00000°, λ-103.00000°. Principal axes: T 3.5050, Plg12.0000°, Azm229.0000°; N 0.5240, Plg11.0000°, Azm136.0000°; P -4.0290, Plg74.0000°, Azm4.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **02** 07:20:01.3±1.0, 7°S±6°×15°4E±°, h47km±9km, M5.2/21, mb5.0/21, mB5.6/6, MLv5.4/1, Mw(mB)5.1/6*

ISC 02 07:19:58.1±0.3, 7°.14S±0°.05×154°.06E±0°.06, h35km, n204, σ1.32/211, mb4.8/89, MS4.2/10, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.47	324	Pn	Pn	07 20 48.8	-0.8
	17nm,0.3s,baz=14,slow=6.7,SNR=4.0						
KRVT				Sn	Sn	07 21 29.0	-0.5
	52nm,0.3s,baz=48,slow=23,SNR=6.7						
RABL	Rabaul	3.48	327		Pn	07 20 48.1	-1.7
HNR	Honiara	6.25	112	LR	LR	07 23 31.8	
	comp=Z,1μm,19.1s,baz=294,slow=35						
PMG	Port Moresby	7.19	251		Pn	07 21 39.6	-1.2
COEN	Coen	12.66	237		Pn	07 22 55.0	-0.8
PATS	Pohnpei	14.52	17	P	Pn	07 23 22.1	+1.0
CTA	Charters Tower	14.93	210	Pn	Pn	07 23 25.6	-1.2
	0.5nm,0.3s,baz=33,slow=15,SNR=5.5						
CTA				LR	LR	07 28 33.9	
	comp=Z,755nm,20.9s,baz=24,slow=35						
CTAO	Charters Tower	14.93	210		Pn	07 23 25.4	-1.4
EIDS	Eidsvold	18.35	189	P	Pn	07 24 11.4	+1.5
DZM	Mont Dzumac	19.05	142	P	Pn	07 24 19.0	+0.4
	1.3nm,0.3s,baz=349,slow=11,SNR=31						
DZM	Mont Dzumac	19.05	142	P	Pn	07 24 20.0	+1.4
DZM				IAmb	IAmb	07 24 21.0	
	comp=Z,48nm,0.9s						
WR0	Warramunga Arr	22.82	234	P	P	07 24 56.7	-1.5
WR0				IAmb	IAmb	07 25 06.8	
	comp=Z,26nm,0.8s						
WB0	Warramunga Arr	22.84	235	P	P	07 24 56.5	-2.0
WRAB	Tennant Creek	22.96	234	P	P	07 24 57.3	-2.4
WRAB				IAmb	IAmb	07 25 04.7	
	comp=Z,38nm,0.8s						
WB2	Warramunga Arr	22.97	234	P	P	07 24 58.0	-1.7
WB2				IAmb	IAmb	07 25 05.0	
	comp=Z,28nm,0.8s						
WRA	Warramunga Arr	22.98	234	P	P	07 24 58.1	-1.7
	comp=Z,13nm,0.7s,baz=57,slow=10,SNR=13						
WRA				LR	LR	07 33 16.7	
	comp=Z,716nm,22.0s,baz=55,slow=35						
ARMA	Armidale	23.27	185	P	P	07 25 04.5	+1.7
ARMA				IAmb	IAmb	07 25 07.8	
	comp=Z,54nm,1.4s						
MTN	Manton Dam	23.27	254	P	P	07 25 01.7	-1.1
SIJI	Sorong	23.57	284	LR	LR	07 35 28.8	
	comp=Z,374nm,21.6s,baz=101,slow=40						
AS31	Alice Springs	25.39	227	P	P	07 25 21.4	-1.0
ASAR	Alice Springs	25.39	227	P	P	07 25 21.1	-1.2
	comp=Z,9.6nm,0.7s,baz=58,slow=9.2,SNR=74						
ASAR				LR	LR	07 34 40.0	
	comp=Z,858nm,20.8s,baz=70,slow=35						
MSVF	Nonsavu	25.65	116	P	P	07 25 25.7	+0.9
MSVF				IAmb	IAmb	07 25 39.2	
	comp=Z,41nm,1.4s						
KNRA	Kununurra	26.18	249	P	P	07 25 28.9	-0.7
KNRA				IAmb	IAmb	07 25 32.8	
	comp=Z,35nm,1.0s						
STKA	Stephens Creek	27.22	204	P	P	07 25 38.5	-0.3
	comp=Z,9.4nm,0.5s,baz=30,slow=13,SNR=22						
STKA				LR	LR	07 36 22.1	
	comp=Z,573nm,18.8s,baz=22,slow=36						
STKA	Stephens Creek	27.22	204	P	P	07 25 38.0	-0.8
TNTI	Ternate	27.77	285	P	P	07 25 40.5	-3.4
TNTI				IAmb	IAmb	07 25 51.5	
	comp=Z,19nm,0.8s						
FITZ	Fitzroy Crossi	29.75	246	P	P	07 26 00.0	-1.5
	comp=Z,17nm,0.6s,baz=65,slow=8.1,SNR=57						
FITZ	Fitzroy Crossi	29.75	246	P	P	07 26 00.1	-1.3
FITZ				IAmb	IAmb	07 26 05.6	
	comp=Z,18nm,0.8s						
BATI	Baumata	30.20	262	LR	LR	07 39 42.8	
	comp=Z,405nm,21.3s,baz=123,slow=40						
BBOO	Buckleboo	30.53	211	P	P	07 26 09.6	+1.4
KMSI	Cibinong	30.97	283	P	P	07 26 09.7	-2.6
	comp=Z,114nm,0.5s						
EDFI	Ende, Flores	32.09	265	P	P	07 26 22.9	+0.5
	comp=Z,303nmcomp=Z,17nm,1.1s						
OUZ	Omahuta	33.22	150	P	P	07 26 33.3	+1.5
OUZ				IAmb	IAmb	07 26 36.8	
	comp=Z,16nm,1.3s						
MSLP	Maasin	33.77	300	eP	P	07 26 36.9	+0.1
FORT	Forrest	33.85	223	P	P	07 26 36.6	-0.8
KAPI	Kappang	34.18	272	LR	LR	07 43 49.3	
	comp=Z,108nm,18.1s,baz=118,slow=42						
KNTN	Kanton	34.36	84	P	P	07 26 41.9	0.0
URZ	Urewera	37.35	149	P	P	07 27 08.5	+1.2
	comp=Z,9.2nm,1.0s,baz=297,slow=3.7,SNR=5.7						
URZ	Urewera	37.35	149	P	P	07 27 08.2	+1.0
URZ				IAmb	IAmb	07 27 18.5	
	comp=Z,12nm,0.9s						
BKZ	Black Stump Fm	37.75	151	P	P	07 27 13.9	+3.1
BKZ				IAmb	IAmb	07 27 23.1	
	comp=Z,18nm,1.3s						
MSWZ	Moikau Station	38.99	154	P	P	07 27 20.7	-0.4
RPZ	Rata Peaks	39.36	160	P	P	07 27 25.9	+1.7
RPZ				IAmb	IAmb	07 27 29.2	
	comp=Z,35nm,1.2s						
PCJI	Pacitan	42.50	266	P	P	07 27 50.0	-0.4
	comp=Z,56nm,1.1s						
JNU	Nakatsue	45.70	333	P	P	07 28 15.5	-0.4
	comp=Z,23nm,0.9s,baz=142,slow=2.1,SNR=6.5						
JNU	Nakatsue	45.70	333	P	P	07 28 15.7	-0.2
CISI	Cisompet, Garu	45.85	266	P	P	07 28 16.2	-1.2
	comp=Z,74nm,1.0s						
CISI	Cisompet, Garu	45.85	266	P	P	07 28 17.8	+0.4
MJAR	Matsushiro Arr	45.93	342	P	P	07 28 15.5	-2.1
	comp=Z,2.3nm,0.7s,baz=169,slow=9.8,SNR=8.5						
MAT	Matsushiro	45.93	342	P	P	07 28 15.5	-2.0
MAT				eS	S	07 35 00.8	+0.9
CNJI	Cibinong	46.54	267	P	P	07 28 24.0	+1.2
	comp=Z,6μmcomp=Z,174nm,0.7s						
DLV	T Lat	49.13	292	P	P	07 28 43.0	0.0
MDSI	Maura Dua	49.68	270	P	P	07 28 47.7	+0.7
	comp=Z,979nmcomp=Z,9.8nm,0.8s						
TPRI	Tanjung Pinang	50.06	277	P	P	07 28 52.8	+2.9
KSRS	Korea Array	50.64	333	P	P	07 28 53.5	-0.3
	comp=Z,8.9nm,1.1s,baz=154,slow=8.0,SNR=11						
WHN	Wuhan	53.40	317	P	P	07 29 23.0	+8.4
IPM	Ipoh	54.17	281	P	P	07 29 19.2	-1.3
IPM				IAmb	IAmb	07 29 38.0	
	comp=Z,9.6nm,1.1s						
USA0B	Ussuriysk Arra	54.85	341	P	P	07 29 24.4	-0.4
USRK	Ussuriysk Ar.	54.85	341	P	P	07 29 24.8	-0.1
	comp=Z,24nm,1.0s,baz=158,slow=7.8,SNR=25						
MDJ	Mudanjiang	56.04	339	P	P	07 29 33.3	-0.1
MDJ				pP	pP	07 29 40.9	-1.5
MDJ				sP	sP	07 29 46.3	+0.3
MDJ				ScP	ScP	07 34 25.8	-2.3
MDJ				PcS	PcS	07 34 30.2	-1.4
MDJ				S	S	07 37 22.4	+2.9
MDJ				sS	sS	07 37 36.1	+2.3
MDJ				pmax	pmax		
	comp=Z,32nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,150nm,3.1s						
MDJ				LR	LR		
	comp=Z,78nm,5.4s						
MDJ				LR	LR		
	comp=Z,130nm,5.0s						
MDJ				LR	LR		
	comp=Z,280nm,4.7s						
MDJ	Mudanjiang	56.04	339	P	P	07 29 33.2	-0.2
GYA	Guiyang	56.81	308	eP	P	07 29 39.8	+0.4
GYA				PP	PP	07 31 52.8	+6.7
GYA				S	S	07 37 31.6	+1.0
GYA				SS	SS	07 41 20.4	+1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA				pmax	pmax		
	comp=Z,100nm,3.5s						
GYA				LR	LR		
	comp=Z,80nm,4.3s						
GYA				LR	LR		
	comp=Z,80nm,3.9s						
GYA				LR	LR		
	comp=Z,90nm,5.1s						
CN2	Changchun	56.93	336	eP	P	07 29 39.3	-0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN	Xi'an	59.17	317	P	P	07 29 53.0	-2.8
XAN				pP	pP	07 30 01.9	-2.8
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,69nm,4.3s						
KMI	Kunming	59.33	305	P	P	07 29 58.3	+1.0
KMI				pmax	pmax		
	comp=Z,9.0nm,1.6s						
KLR	Kul'dur	59.43	343	P	P	07 29 56.9	-0.3
	comp=Z,26nm,1.0s,baz=156,slow=4.9,SNR=39						
CM31	Chiang Mai Arr	60.01	296	P	P	07 30 02.0	+0.3
CMAR	Chiang Mai Arr	60.01	296	P	P	07 30 02.2	+0.4
	comp=Z,7.7nm,0.9s,baz=105,slow=4.2,SNR=21						
PEA0B	Petropavlovsk-	60.09	3	P	P	07 30 01.3	-0.4
PETK	Petropavlovsk-	60.09	3	P	P	07 30 01.1	-0.6
	comp=Z,12nm,1.0s,baz=173,slow=9.2,SNR=10						
CHTO	Chiang Mai	60.13	296	P	P	07 30 02.5	-0.2
CHTO				IAmb	IAmb	07 30 07.0	
	comp=Z,13nm,1.2s						
CD2	Chengdu	61.20	311	eP	P	07 30 10.0	+0.2
HHC	Hu-ho-hao-te	61.67	324	P	P	07 30 14.6	+1.9
HHC				pmax	pmax		
	comp=Z,64nm,6.8s						
HIA	Hailar	63.67	336	P	P	07 30 25.8	0.0
ADK	Adak	63.91	20	P	P	07 30 27.2	0.0
MA2	Magadan	66.55	358	P	P	07 30 43.3	-1.0
GTA	Gaotai	68.22	317	P	P	07 30 56.0	+0.6
GTA				pP	sP	07 31 09.0	+1.0
GTA				S	S	07 39 59.0	+5.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,90nm,5.2s						
GTA				LR	LR		
	comp=Z,73nm,19.6s						
GTA				LR	LR		
	comp=Z,380nm,19.9s						
SHL	Shillong	68.57	301	P	P	07 30 57.5	-0.5
ULN	Ulaanbaatar	68.63	328	P	P	07 30 58.5	+0.6
ULN				IAmb	IAmb	07 30 59.9	
	comp=Z,10nm,1.1s						
SONM	Songino Array	68.96	328	P	P	07 31 00.4	+0.5
	comp=Z,6.5nm,0.8s,baz=133,slow=6.7,SNR=9.3						
VNDA	Vanda	70.47	178	P	P	07 31 09.3	+0.8
	comp=Z,3.9nm,0.9s,baz=325,slow=6.0,SNR=16						
VNDA	Vanda	70.47	178	P	P	07 31 08.9	+0.3
VNDA				IAmb	IAmb	07 31 12.8	
	comp=Z,6.9nm,1.0s						
YAK	Yakutsk	71.50	348	P	P	07 31 14.4	-0.5
TLY	Talaya	72.72	330	P	P	07 31 23.2	+0.7
	comp=Z,2.3nm,0.6s,baz=129,slow=9.6,SNR=3.8						
TLY	Talaya	72.72	330	P	P	07 31 22.9	+0.4
TLY				IAmb	IAmb	07 31 24.1	
	comp=Z,16nm,1.5s						
BILL	Bilibino	75.50	5	P	P	07 31 37.9	-0.5
BILL				IAmb	IAmb	07 31 38.9	
	comp=Z,15nm,1.0s						
OHAK	Old Harbor	77.06	26	P	P	07 31 46.6	-0.8
OHAK				IAmb	IAmb	07 31 49.4	
	comp=Z,13nm,1.2s						
ANM	Nome	77.63	17	P	P	07 31 50.1	-0.4
ANM				IAmb	IAmb	07 31 52.1	
	comp=Z,16nm,1.2s						
WMQ	Urumqi	78.30	317	eP	P	07 31 55.1	+0.3
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,92nm,3.7s						
WMQ				LR	LR		
	comp=Z,130nm,27.3s						
WMQ				LR	LR		
	comp=Z,220nm,29.0s						
CNPM	China Poot	79.28	25	P	P	07 31 59.1	-0.6
BRLK	Bradley Lake	79.56	25	P	P	07 32 00.8	-0.4
SEW	Seward	80.35	25	P	P	07 32 05.0	-0.4
SEW				IAmb	IAmb	07 32 13.8	
	comp=Z,16nm,1.4s						
TIXI	Tiksi	80.37	352	P	P	07 32 03.4	-1.9
RC01	Rabbit Creek A	80.77	24	P	P	07 32 06.7	-1.1
PPLA	Purkeypile	80.85	22	P	P	07 32 07.4	-0.9
RDOG	Red Dog Mine	80.89	15	P	P	07 32 07.8	-0.5
RDOG				IAmb	IAmb	07 32 11.1	
	comp=Z,16nm,1.4s						
PMR	Palmer	81.29	24	P	P	07 32 09.4	-1.1
SML	Sawmill	81.73	24	P	P	07 32 12.4	-0.5
SML				IAmb	IAmb	07 32 14.0	
	comp=Z,20nm,1.3s						
GLI	Glacier Island	81.75	25	P	P	07 32 12.2	-0.7
GLI				IAmb	IAmb	07 32 13.9	
	comp=Z,8.2nm,0.7s						
HIN	Hinchinbrook I	81.76	26	P	P	07 32 13.2	+0.2
HIN				IAmb	IAmb	07 32 18.5	
	comp=Z,20nm,1.5s						
TRF	Thorofare Moun	81.88	22	P	P	07 32 12.4	-1.3
FID	Port Fidalgo	81.95	25	P	P	07 32 12.8	-1.2
BPAW	Bear Paw Mtn.	81.99	21	P	P	07 32 12.9	-1.3
SCM	Sheep Creek Mo	82.15	24	P	P	07 32 14.6	-0.5
EYAK	Cordova Ski Ar	82.16	26	P	P	07 32 15.1	0.0
RND	Reindeer	82.39	22	P	P	07 32 15.3	-1.1
MLY	Manley	82.61	21	P	P	07 32 16.7	-0.7
DHY	Denali Highway	82.78	23	P	P	07 32 18.6	+0.1
QSPA	South Pole Qui	82.84	180	P	P	07 32 19.3	+0.6
MK31	Makanchi Array	82.90	319	P	P	07 32 20.4	+1.1
MK31				IAmb	IAmb	07 32 23.8	
	comp=Z,6.5nm,0.8s						
MKAR	Makanchi Array	82.90	319	P	P	07 32 18.8	-0.5
	comp=Z,8.7nm,0.9s,baz=109,slow=4.5,SNR=44						
NEA	Nenana	82.95	21	P	P	07 32 17.7	-1.4
NEA				IAmb	IAmb	07 32 19.2	
	comp=Z,9.5nm,0.9s						
MAKZ	Makanchi	83.11	319	P	P	07 32 19.8	-0.6
CRQM	Cirque	83.39	26	P	P	07 32 22.4	+0.7
CRQM				IAmb	IAmb	07 32 31.8	
	comp=Z,20nm,1.4s						
CCB	Clear Creek Bu	83.45	22	P	P	07 32 20.0	-1.7
VRDI	Verde Repeater	83.47	26	P	P	07 32 21.6	-0.5
VRDI				IAmb	IAmb	07 32 23.5	
	comp=Z,12nm,1.3s						
COLA	College	83.55	21	P	P	07 32 20.9	-1.3
COLA				IAmb	IAmb	07 32 22.1	
	comp=Z,8.2nm,0.8s						
HDA	Harding Lake	83.64	22	P	P	07 32 21.5	-1.2
MCARA	McCarthy VSAT	83.72	26	P	P	07 32 23.2	0.0
MCARA				IAmb	IAmb	07 32 29.7	
	comp=Z,5.5nm,0.8s						
ZAA0	Zalesovo Array	83.78	326	P	P	07 32 22.8	-0.8
ZAA0				IAmb	IAmb	07 32 23.6	
	comp=Z,7.4nm,0.8s						
ZALV	Zalesovo Beam	83.78	326	P	P	07 32 22.9	-0.7
	comp=Z,4.9nm,0.6s,baz=116,slow=5.5,SNR=16						
IL31		83.85	22	P	P	07 32 22.5	-1.2
ILAR	Eielson Array	83.85	22	P	P	07 32 21.7	-2.1
	comp=Z,1.8nm,0.5s,baz=243,slow=5.0,SNR=49						
MAW	Mawson	83.91	203	P	P	07 32 24.8	+0.7
	comp=Z,4.1nm,0.8s,baz=110,slow=5.4,SNR=7.8						
MAW	Mawson	83.91	203	P	P	07 32 24.6	+0.5
COLD	Coldfoot	84.04	19	P	P	07 32 25.4	+0.7
RIDG	Independent Ri	84.10	23	P	P	07 32 23.9	-1.2
RIDG				IAmb	IAmb	07 32 26.7	
	comp=Z,8.1nm,1.1s						
MENT	Mentasta	84.16	24	P	P	07 32 24.7	-0.8
BARN	Barnard Glacie	84.17	26	P	P	07 32 25.3	-0.4
BARN				IAmb	IAmb	07 32 28.8	
	comp=Z,9.8nm,1.4s						
CTGM	Chitina Glacie	84.27	26	P	P	07 32 25.8	-0.4
CTGM				IAmb	IAmb	07 32 30.3	
	comp=Z,6.4nm,1.0s						
PRZ	Przheval'sk	84.33	314	P	P	07 32 28.3	+1.3
DOT	Dot Lake	84.36	23	P	P	07 32 25.5	-0.9
DOT				IAmb	IAmb	07 32 27.5	
	comp=Z,6.1nm,0.8s						
SCRK	Sand Creek	84.55	23	P	P	07 32 26.8	-0.7
SCRK				IAmb	IAmb	07 32 38.8	
	comp=Z,7.3nm,1.4s						
TOLK	Toolik Lake Re	85.04	18	P	P	07 32 28.9	-0.9
KDJ	Kajisay	85.12	313	P	P	07 32 30.7	-0.2
FYU	Fort Yukon	85.35	20	P	P	07 32 31.5	+0.2
FYU				IAmb	IAmb	07 32 34.6	
	comp=Z,12nm,1.4s						
KSH	Kashi	85.40	311	P	P	07 32 34.3	+2.0
KSH				pP	sP	07 32 44.4	-0.6
KSH				PP	PP	07 35 53.6	+2.7
KSH				SKS	SKSac	07 42 54.5	-0.6
KSH				S	SKKSac	07 43 01.7	-0.1
KSH				SS	SS	07 48 43.8	+6.9
KSH				pmax	pmax		
	comp=Z,29nm,1.2s						
KSH				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,210nm,3.9s						
KSH				LR	LR		
	comp=Z,100nm,11.7s						
KSH				LR	LR		
	comp=Z,170nm,8.5s						
KSH				LR	LR		
	comp=Z,380nm,5.4s						
NRN	Naryn	85.82	312	P	P	07 32 34.8	+0.2
ULHL	Ulahol	85.83	313	P	P	07 32 35.3	+0.8
	SNR=8.5						
HYT	Haines Junctio	85.92	27	P	P	07 32 35.0	+0.5
HYT				IAmb	IAmb	07 32 37.8	
	comp=Z,11nm,1.3s						
KURK	Kurchatov	86.37	322	P	P	07 32 35.7	-1.0
KURK				IAmb	IAmb	07 32 37.2	
	comp=Z,10nm,1.1s						
DAWY	Dawson	86.40	24	P	P	07 32 37.0	+0.4
DAWY				IAmb	IAmb	07 32 38.1	
	comp=Z,14nm,1.5s						
KURBB	Kurchatov Arra	86.40	322	P	P	07 32 35.6	-1.3
	comp=Z,2.4nm,0.7s,baz=104,slow=3.9,SNR=25						
TKM2	Tokmak 2	86.44	314	P	P	07 32 38.0	+0.4
	SNR=6.9						
KZA	Kyzart	86.51	313	P	P	07 32 39.4	+1.3
	SNR=17						
UCH	Uchtor	87.07	313	P	P	07 32 41.9	+1.0
	SNR=12						
AAK	Ala-Archa	87.17	313	P	P	07 32 40.7	-0.3
AAK				IAmb	IAmb	07 32 42.3	
	comp=Z,5.5nm,1.1s						
AML	Almayashu	87.65	313	P	P	07 32 44.0	+0.3
	SNR=18						
EPYK	Eagle Plains	88.34	22	P	P	07 32 45.6	-0.3
NRIK	Noril'sk	88.57	341	P	P	07 32 46.0	-0.8
	comp=Z,4.9nm,0.6s,baz=103,slow=4.4,SNR=14						
DLBC	Dease Lake	88.74	31	P	P	07 32 48.1	+0.1
DLBC				IAmb	IAmb	07 32 49.6	
	comp=Z,13nm,1.4s						
INK	Inuvik	90.18	21	P	P	07 32 53.5	-0.9
BEKR	Beckworth	91.14	50	P	P	07 33 00.2	+0.3
BEKR				IAmb	IAmb	07 33 01.1	
	comp=Z,7.1nm,1.3s						
VCNR	Virginia City	91.61	51	P	P	07 33 02.7	+0.7
BVAR	Borovoye Array	91.85	323	P	P	07 33 00.7	-1.8
	comp=Z,3.8nm,0.9s,baz=106,slow=4.9,SNR=18						
BRVK	Borovoye	91.92	323	P	P	07 33 01.4	-1.5
BRVK				IAmb	IAmb	07 33 03.0	
	comp=Z,4.7nm,1.0s						
PASC	Pasadena Art C	92.11	56	P	P	07 33 04.7	+0.5
RYN	Ryan	92.39	52	P	P	07 33 06.1	+0.5
RYN				IAmb	IAmb	07 33 07.3	
	comp=Z,6.1nm,1.0s						
NVAR	Mina Array Bea	92.54	52	P	P	07 33 07.0	+0.6
	comp=Z,5.2nm,1.0s,baz=253,slow=6.3,SNR=13						
NV11	Mina Array Sit	92.65	52	P	P	07 33 07.3	+0.5
NV11				IAmb	IAmb	07 33 08.6	
	comp=Z,7.6nm,1.1s						
KVN	Kaiserville	92.77	51	P	P	07 33 07.7	+0.3
KVN				IAmb	IAmb	07 33 09.0	
	comp=Z,4.8nm,1.0s						
GSC	Goldstone, Bar	93.37	55	P	P	07 33 10.6	+0.5
GSC				IAmb	IAmb	07 33 12.9	
	comp=Z,3.4nm,0.9s						
PFO	Pinyon Flats O	93.47	57	P	P	07 33 11.8	+1.2
XPFO	Pion Flat	93.47	57	P	P	07 33 11.4	+0.7
C36M	Paulatuk	93.76	21	P	P	07 33 10.0	-1.0
C36M				IAmb	IAmb	07 33 11.0	
	comp=Z,7.1nm,1.2s						
TPNV	Topopah Spring	93.99	53	P	P	07 33 13.9	+0.8
BMO	Blue Mountains	94.01	45	P	P	07 33 12.2	-0.6
R11A	Troy Canyon, C	94.65	52	P	P	07 33 16.9	+0.9
R11A				IAmb	IAmb	07 33 17.8	
	comp=Z,5.5nm,1.2s						
SHPR	Sheep Range	94.82	54	P	P	07 33 17.7	+0.9
SHPR				IAmb	IAmb	07 33 19.0	
	comp=Z,5.4nm,1.0s						
ELK	Elko	95.13	50	P	P	07 33 18.0	-0.3
W13A	Hualapai Mount	95.73	55	P	P	07 33 21.3	+0.2
W13A				IAmb	IAmb	07 33 23.7	
	comp=Z,4.3nm,1.1s						
YKA	Yellowknife Ar	96.90	28	P	P	07 33 25.1	-0.4
	comp=Z,0.6nm,0.6s,baz=262,slow=4.5,SNR=12						
U15A	North Rim	97.12	54	P	Pdif	07 33 28.5	+1.0
U15A				IAmb	IAmb	07 33 29.8	
	comp=Z,3.8nm,1.1s						
MTPU	Mount Pierson	97.30	53	P	Pdif	07 33 29.7	+1.2
ARU	Arti	98.94	326	P	P	07 33 33.0	-1.7
	comp=Z,0.4nm,0.2s,baz=31,slow=0.9,SNR=4.3						
ARU				LR	LR	08 19 47.3	
	comp=Z,119nm,18.9s,baz=129,slow=36						
ARU	Arti	98.94	326	P	P	07 33 32.7	-2.1
ARU				IAmb	IAmb	07 33 36.8	
	comp=Z,6.6nm,1.2s						
PDAR	Pinedale Array	99.48	48	P	Pdif	07 33 36.9	-0.9
	comp=Z,0.7nm,0.9s,baz=109,slow=3.6,SNR=4.3						
E46A	Sault Ste Mari	116.71	41	PKPdf	PKPdf	07 38 38.5	-0.3
LRAL	Lakeview Retre	118.06	56	PKPdf	PKPdf	07 38 41.1	-0.7
V52A	Sevierville	120.22	53	PKPdf	PKiKP	07 38 46.0	0.0
SADO	Sadowa	120.67	42	PKPdf	PKiKP	07 38 47.0	+0.3
ERPA	Erie	121.06	45	PKPdf	PKPdf	07 38 47.4	0.0
Q54A	Coxs Mills	121.48	48	PKPdf	PKiKP	07 38 48.5	+0.1
W57A	Gilead	123.24	52	PKPdf	PKiKP	07 38 51.9	0.0
M57A	Sunshine Farm,	123.34	45	PKPdf	PKiKP	07 38 52.1	+0.1
KHC	Kasperske Hory	126.58	329	*e*PKPDF	PKiKP	07 38 58.5	+0.2
GERES	GERESS Array B	126.69	328	PKP	PKiKP	07 38 58.4	-0.2
	comp=Z,0.7nm,0.4s,baz=129,slow=0.9,SNR=7.6						
LPAZ	La Paz	132.20	119	PKP	PKiKP	07 39 11.2	0.0
	comp=Z,3.3nm,1.0s,baz=250,slow=3.0,SNR=5.8						
LPAZ	La Paz	132.20	119		PKPdf	07 39 09.9	-0.2
SDV	Santo Domingo	135.73	85		PKPdf	07 39 16.2	-0.1
PMTG	Montargil	144.43	336	*e*PKP	PKPdf	07 39 31.4	+0.3
PBEJ	Beja	145.16	335	*e*PKP	PKPdf	07 39 32.9	+0.5
PTGA	Pitinga	145.16	102		PKPbc	07 39 32.1	-0.6
PNCL	Nicolau / Gran	145.37	335	*e*PKP	PKPdf	07 39 33.6	+0.9
MESJ	Messejana	145.47	335	*e*PKPdf	PKPbc	07 39 31.7	-1.2
MESJ	Messejana	145.47	335	*e*PKP	PKPab	07 39 34.1	+1.0
PCVE	Castro Verde	145.57	334	*e*PKP	PKPab	07 39 34.6	+1.1
PVAQ	Vaqueiros	145.62	334	*e*PKP	PKPab	07 39 34.4	+0.7
PTEO	Sao Teotonio	145.93	335	*e*PKP	PKPab	07 39 36.1	+1.2
TAM	Tamanrasset	145.97	301		PKPab	07 39 35.5	-0.2
MORF	Marmelete	146.10	335	*e*PKPdf	PKPdf	07 39 32.9	-1.3
BDFB	Brasilia	148.53	136	PKPbc	PKPdf	07 39 39.8	+1.0
	comp=Z,15nm,1.2s,baz=151,slow=9.8,SNR=6.0						
BDFB	Brasilia	148.53	136		PKPdf	07 39 37.1	-1.7
TOA0	Torodi Ar. Sit	152.17	285		PKPbc	07 39 50.3	-0.7
TORD	Torodi Ar. Bea	152.17	285	PKP	PKPdf	07 39 44.4	+0.1
	comp=Z,1.4nm,1.0s,baz=16,slow=1.9,SNR=18						
TORD				PKPbc	PKPbc	07 39 50.5	-0.5
	comp=Z,12nm,0.8s,baz=68,slow=2.2,SNR=36						

*JMA **02** 07:25:34.5±0.1, 24°.33N×122°.25E, h64km±2km, M1.8*
*TAP **02** 07:25:34.4, 24°.32N×122°.24E, h61km±1km, ML2.6, C*
ISC 02 07:25:34.9±1.4**, 24°.38N**±0°.05×**122°.26E**±0°.02**, h61**km±11km**,**
n34, σ0ˢ59/61**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.21	326	*e*P	Pn	07 25 44.7	+0.3
	baz=335						
EOS1				*e*S	Sn	07 25 52.5	+1.0
	baz=335						
TWC	Suao	0.44	302	*e*S	Sn	07 25 54.9	+0.3
	baz=309						
ENA	Nanau	0.47	276	*e*P	Pn	07 25 46.6	-0.1
	baz=282						
ENA				*e*S	Sn	07 25 55.4	+0.2
	baz=282						
JYNG	Yonagunijimaku	0.63	83	P	Pn	07 25 48.5	+0.1
JYNG				S	Sn	07 25 58.5	+0.2
NACB	Ninganchiao	0.64	251	*e*P	Pn	07 25 48.0	-0.4
	baz=255						
NACB				*e*S	Sn	07 25 58.0	-0.4
	baz=255						
ENTT	Nioudou	0.68	293	*e*P	Pn	07 25 49.1	+0.1
	baz=297						
YOJ	Yonaguni jima	0.69	83	*e*P	Pn	07 25 49.2	+0.1
	baz=78						
YOJ				*e*S	Sn	07 25 59.7	+0.1
	baz=78						
YOJ	Yonaguni jima	0.69	83	P	Pn	07 25 49.1	0.0
YOJ				S	Sn	07 25 59.5	-0.1
TIPB	Shuangxi	0.71	327	*e*P	Pn	07 25 48.3	-1.0
	baz=329						
TIPB				*e*S	Sn	07 25 58.4	-1.6
	baz=329						
NDT	Datong Townshi	0.71	288	*e*P	Pn	07 25 49.7	+0.3
	baz=292						
NDT				*e*S	Sn	07 26 00.5	+0.5
	baz=292						
ETLH	Xiulin Townshi	0.73	257	*e*P	Pn	07 25 49.4	-0.2
	baz=260						
ETLH				*e*S	Sn	07 26 00.0	-0.4
	baz=260						
NNSB	Datong	0.80	274	*e*P	Pn	07 25 50.3	-0.2
	baz=277						
NNSB				*e*S	Sn	07 26 01.6	-0.4
	baz=277						
NNS	Nan Shan	0.81	275	*e*P	Pn	07 25 50.4	-0.2
	baz=278						
NNS				*e*S	Sn	07 26 02.1	-0.1
	baz=278						
YHNB	Yeheng	0.85	290	*e*P	Pn	07 25 51.3	+0.1
	baz=293						
YHNB				*e*S	Sn	07 26 02.9	-0.3
	baz=293						
NSK	Sanguang	0.87	290	*e*P	Pn	07 25 51.6	+0.2
	baz=293						
NSK				*e*S	Sn	07 26 03.2	-0.3
	baz=293						
WHF	Hehuan Shan	0.93	256	*e*P	Pn	07 25 52.4	-0.1
	baz=258						
WHF				*e*S	Sn	07 26 05.2	-0.3
	baz=258						
ESL	Shilin	0.94	233	*e*P	Pn	07 25 51.7	-0.4
	baz=235						
ESL				*e*S	Sn	07 26 04.6	-0.4
	baz=235						
TDCB	Techi	1.01	263	*e*P	Pn	07 25 53.7	+0.5
	baz=265						
TDCB				*e*S	Sn	07 26 06.6	-0.2
	baz=265						
CHGB	Renai	1.04	252	*e*P	Pn	07 25 53.9	+0.3
	baz=254						
CHGB				*e*S	Sn	07 26 07.2	-0.4
	baz=254						
LIOB	Emei	1.16	284	*e*S	Sn	07 26 11.0	+0.9
	baz=286						
HGSD	Ruisui	1.17	221	*e*P	Pn	07 25 55.9	+0.7
	baz=222						
VWDT	VWDT	1.19	239	*e*P	Pn	07 25 56.0	+0.5
	baz=240						
VWDT				*e*S	Sn	07 26 11.1	+0.2
	baz=240						
WHP	Taichung City	1.20	265	*e*P	Pn	07 25 57.0	+1.3
	baz=267						
EHY	Hungye	1.22	225	*e*P	Pn	07 25 55.3	-0.5
	baz=225						
EHY				*e*S	Sn	07 26 10.4	-1.1
	baz=225						
YULB	Yu-li	1.32	222	*e*P	Pn	07 25 56.6	-0.5
	baz=222						
YULB				*e*S	Sn	07 26 12.7	-1.1
	baz=222						
SSLB	Suanglung	1.33	244	*e*P	Pn	07 25 58.6	+1.3
	baz=245						
SSLB				*e*S	Sn	07 26 14.1	0.0
	baz=245						
IRIF	Iriomote-Funau	1.35	92	P	Pn	07 25 57.4	-0.1
IRIF				S	Sn	07 26 14.4	-0.1
TWF1	Yuli	1.35	221	*e*P	Pn	07 25 56.8	-0.8
	baz=221						
TWF1				*e*S	Sn	07 26 13.9	-0.6
	baz=221						
HATJ	Hateruma jima	1.45	102	P	Pn	07 25 59.4	+0.5
HATJ				*e*S	Sn	07 26 17.5	+0.5
YUS	Yu-Shan	1.48	234	*e*P	Pn	07 26 00.4	+0.5
	baz=234						
JKRS	Kuro-shima	1.61	95	P	Pn	07 26 01.3	+0.3
JKRS				S	Sn	07 26 20.6	-0.2
JIJ	Ishigaki jima	1.72	90	P	Pn	07 26 02.6	0.0
JIJ				S	Sn	07 26 23.2	-0.3
CHN4	Tsaushan	1.83	236	*e*P	Pn	07 26 05.4	+1.3
	baz=237						
JISG	Ishigakijimahi	1.88	83	P	Pn	07 26 04.5	-0.3
JISG				S	Sn	07 26 27.0	-0.5

*IDC **02** 07:25:46.3±0.9, 13°.48N×125°.59E, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.8/50, mbtmp4.0/8, Error ellipse: s-maj=49.9km s-min=18.2km az=73.0*
*NEIC **02** 07:25:49.7±1.6, 13°.44N±0°.08×125°.45E±0°.08, h23km±5km, mb4.5/27, Error ellipse: s-maj=11.8km s-min=9.8km az=137.0*
*MAN **02** 07:25:49.8, 13°.62N×125°.34E, h41km, mb4.7, ML3.5, MS3.4*
ISC 02 07:25:49.9±0.5**, 13°.56N**±0°.04×**125°.33E**±0°.07**, h24**km**, n54,**
σ1ˢ52/59**, mb4.5**/23**, 1C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PVCP	Virac	1.15	272	*e*P	Pn	07 26 09.9	-0.6
PVCP				*e*S	Sn	07 26 24.9	-0.6
CNP	Catarman	1.23	212	*e*P	Pn	07 26 12.0	+0.3
CNP				*e*S	Sn	07 26 28.0	+0.4
GQP	Guinayangan	2.83	277	⇓*e*P	Pn	07 26 34.2	+0.6
GQP				*e*S	Sn	07 26 56.0	-11
RCP	Roxas	3.22	232	⇑*e*P	Pn	07 26 40.3	+1.3
OTRP	Odiongan	3.44	250	*e*P	Pn	07 26 43.5	+1.5
POLP	Polilio Island	3.49	290	*e*P	Pn	07 26 47.0	+4.3
POLP				*e*S	Sn	07 27 24.5	+1.2
LQP	Lukban	3.73	279	*e*P	Pn	07 26 46.3	+0.2
LQP				*e*S	Sb	07 27 50.6	+11
TBP	Tagbilaran	4.11	201	*e*P	Pn	07 26 54.5	+3.3
PALP	Palanan	4.47	321	*e*P	Pn	07 26 55.7	-0.5
PALP				*e*S	Sn	07 27 44.1	-3.4
PCPH	Palayan	4.56	296	⇓*e*P	Pn	07 26 56.0	-1.4
CAUP	Cauayan	4.77	315	*e*P	Pn	07 27 01.0	+0.6
SMPP	San Manuel, Pa	5.18	300	*e*P	Pn	07 27 06.4	+0.3
APYP	Conner	5.81	318	*e*P	Pn	07 27 15.2	+0.5
APYP				*e*S	Sn	07 28 17.4	-3.2
BOLP	Bolinao	5.94	299	*e*P	Pn	07 27 16.2	-0.2
DAV	Davao City (W)	6.46	178	Pn	Pn	07 27 21.3	-2.2
JOW	Kunigami	13.49	11	Pn	Pn	07 29 00.9	+1.0
HKPS	Hong Kong Po S	13.72	311	Pn	Pn	07 29 04.6	+1.5
LUWI	Luwuk	14.73	190	Pn	Pn	07 29 14.8	-2.0
SBUM	Sibu	17.03	231	P	Pn	07 29 47.9	+1.2
KSRS	Korea Array	23.91	5	P	P	07 31 02.9	+1.0
	4.8nm,0.8s,baz=184,slow=10,SNR=10.0						
MYKOM	Kota Tinggi	24.26	243	P	P	07 31 06.2	+0.8
JAGI	Jajag, Banyuwa	24.54	208	P	P	07 31 08.2	+0.3
JAGI				IAmb	IAmb	07 31 10.4	
	comp=Z,30nm,0.7s						
XAN	Xi'an	25.25	327	P	P	07 31 15.4	+1.1
FITZ	Fitzroy Crossi	31.46	179	P	P	07 32 08.8	-0.9
FITZ				IAmb	IAmb	07 32 13.8	
	comp=Z,9.0nm,1.4s						
WB0	Warramunga Arr	34.30	165	P	P	07 32 32.6	-2.0
WB0				IAmb	IAmb	07 32 46.3	
	comp=Z,7.4nm,1.4s						
WRA	Warramunga Arr	34.45	165	P	P	07 32 33.8	-2.1
	comp=Z,1.1nm,1.1s,baz=345,slow=9.5,SNR=3.1						
WB2	Warramunga Arr	34.46	165	P	P	07 32 36.4	+0.4
WB2				IAmb	IAmb	07 32 40.2	
	comp=Z,7.4nm,1.3s						
SONM	Songino Array	37.63	339	P	P	07 33 04.4	+1.3
	comp=Z,4.1nm,0.9s,baz=152,slow=8.2,SNR=3.9						
ASAR	Alice Springs	37.94	167	P	P	07 33 05.2	-0.6
	comp=Z,1.4nm,0.5s,baz=351,slow=7.5,SNR=19						
MORW	Morawa	43.32	192	P	P	07 33 48.8	-1.3
MORW				IAmb	IAmb	07 34 03.9	
	comp=Z,18nm,1.2s						
FORT	Forrest	44.16	177	P	P	07 33 57.5	+0.7
NWAO	Narrogin (SRO)	46.87	189	P	P	07 34 17.2	-1.0
NWAO	Narrogin (SRO)	46.87	189	P	P	07 34 17.4	-0.9
NWAO				IAmb	IAmb	07 34 34.0	
	comp=Z,20nm,1.2s						
BBOO	Buckleboo	47.24	168	P	P	07 34 21.7	+0.5
YAK	Yakutsk	48.50	3	P	P	07 34 29.3	-1.2
MK31	Makanchi Array	48.88	322	P	P	07 34 35.7	+1.9
MKAR	Makanchi Array	48.88	322	P	P	07 34 35.5	+1.7
	comp=Z,0.7nm,0.5s,baz=106,slow=9.9,SNR=4.0						
KURK	Kurchatov	52.86	325	P	P	07 35 05.0	+1.3
KURK				IAmb	IAmb	07 35 06.1	
	comp=Z,6.7nm,0.8s						
KURBB	Kurchatov Arra	52.87	324	P	P	07 35 05.3	+1.6
	comp=Z,5.8nm,0.9s,baz=120,slow=8.0,SNR=20						
TIXI	Tiksi	58.10	1	P	P	07 35 39.2	-1.7
BVAR	Borovoye Array	58.46	325	P	P	07 35 45.4	+1.5
	comp=Z,1.3nm,0.6s,baz=142,slow=8.2,SNR=4.9						
KDAK	Kodiak Island	74.42	33	P	P	07 37 26.6	+0.8
KDAK				IAmb	IAmb	07 37 45.8	
	comp=Z,7.6nm,1.4s						
BPAW	Bear Paw Mtn.	75.14	27	P	P	07 37 30.6	+0.6
BPAW				IAmb	IAmb	07 37 31.9	
	comp=Z,4.7nm,0.9s						
MLY	Manley	75.25	26	P	P	07 37 32.3	+1.7
MLY				IAmb	IAmb	07 37 32.7	
	comp=Z,4.6nm,0.9s						
TOLK	Toolik Lake Re	75.68	22	P	P	07 37 34.7	+1.7
TOLK				IAmb	IAmb	07 37 35.3	
	comp=Z,3.1nm,0.8s						
NEA	Nenana	75.97	26	P	P	07 37 35.7	+1.1
NEA				IAmb	IAmb	07 37 36.0	
	comp=Z,5.1nm,1.0s						
SEW	Seward	75.98	31	P	P	07 37 34.8	0.0
ILAR	Eielson Array	76.90	26	P	P	07 37 39.7	-0.2
	comp=Z,0.4nm,0.8s,baz=250,slow=6.5,SNR=5.8						
GLI	Glacier Island	77.09	30	P	P	07 37 38.9	-2.2
GLI				IAmb	IAmb	07 37 47.2	
	comp=Z,6.5nm,1.1s						
HARP	HAARP	77.87	28	P	P	07 37 45.0	-0.5
HARP				IAmb	IAmb	07 37 50.0	
	comp=Z,6.6nm,0.7s						
RIDG	Independent Ri	77.87	27	P	P	07 37 46.2	+0.7
RIDG				IAmb	IAmb	07 37 47.2	
	comp=Z,8.2nm,1.4s						
VRDI	Verde Repeater	78.82	30	P	P	07 37 51.3	+0.4
VRDI				IAmb	IAmb	07 38 07.2	
	comp=Z,4.3nm,1.2s						
INK	Inuvik	81.58	22	P	P	07 38 05.8	+0.4
735A	Kenedy	120.70	44		PKPdf	07 44 38.3	-2.3

*NNC **02** 07:36:23.9±0.5, 50°.05N×78°.84E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=8.1km s-min=2.3km az=73.0, Suspected Mining explosion.*
*ASRS **02** 07:36:26.3±0.9, 50°N±4°×7°9E±°, h10km, MLh3.5/7, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
ISC 02 07:36:24.1±0.8**, 50°.00N**±0°.04×**78°.57E**±0°.05**, h0**km**, n22,**
σ1ˢ03/44**, 21C-11D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.59	357	⇑P	Pg	07 36 35.1	-0.3
KUR07				⇓S	Sg	07 36 43.8	+0.9
KUR06	Kurchatov Arra	0.61	357	⇑P	Pg	07 36 35.5	-0.2
KUR06				⇓S	Sb	07 36 45.1	-1.6
KUR14	Kurchatov Arra	0.62	1	⇓P	Pg	07 36 35.3	-0.6
KUR14				⇓S	Sg	07 36 43.9	-0.1
KUR15	Kurchatov Arra	0.62	359	⇑P	Pg	07 36 35.6	-0.4
KUR15				⇓S	Sg	07 36 44.7	+0.7
KURBB	Kurchatov Arra	0.63	358	⇑P	Pg	07 36 35.7	-0.4
	50nm,0.3s						
KURBB				⇑S	Sg	07 36 44.5	+0.3
	152nm,0.7s						
KUR16	Kurchatov Arra	0.63	356	⇑P	Pg	07 36 35.9	-0.3
KUR16				⇑S	Sg	07 36 44.9	+0.6
KUR17	Kurchatov Arra	0.64	354	⇑P	Pg	07 36 36.1	-0.2
KUR17				⇑S	Sg	07 36 45.3	+0.8
KUR05	Kurchatov Arra	0.65	358	⇑P	Pg	07 36 36.0	-0.4
KUR05				⇑S	Sg	07 36 45.6	+0.7
KUR04	Kurchatov Arra	0.67	358	⇓P	Pg	07 36 36.4	-0.5
KUR04				⇑S	Sg	07 36 45.9	+0.4
KURK	Kurchatov	0.72	2	⇑P	Pg	07 36 37.1	-0.8
	13nm,0.3s						
KURK				⇑S	Sg	07 36 46.5	-0.7
	50nm,0.6s						
MAKZ	Makanchi	3.92	143	P	Pn	07 37 26.2	+0.7
MAKZ				S	Sn	07 38 13.0	+0.9
MAKZ	Makanchi	3.92	143	⇑Pn	Pn	07 37 26.6	+1.1
	0.8nm,0.5s						
MAKZ				⇓Pg	Pb	07 37 33.0	-0.9
	3.7nm,0.7s						
MAKZ				⇑Lg	Lg	07 38 24.1	
	11nm,0.7s						
MK31	Makanchi Array	4.05	141	⇑Pn	Pn	07 37 28.0	+0.6
	0.2nm,0.2s,baz=322,slow=10,SNR=54						
MK31				⇑Pg	Pb	07 37 37.1	+0.8
	2.1nm,0.4s,baz=333,slow=13,SNR=22						
MK31				⇓Lg	Lg	07 38 31.0	
	8.0nm,0.5s,baz=332,slow=30,SNR=14						
MKAR	Makanchi Array	4.05	141	P	Pn	07 37 28.2	+0.9
MKAR				S	Sn	07 38 14.6	-0.8
UKR	Ust'-Kan	4.07	74	P	Pn	07 37 27.4	-0.3
UKR				S	Sn	07 38 14.0	-2.1
OTUK	Ortayu	4.45	249	⇓Pn	Pn	07 37 35.2	+2.3
	1.2nm,0.2s						
OTUK				⇓Pg	Pg	07 37 47.5	-1.9
	1.2nm,0.4s						
OTUK				⇓Lg	Lg	07 38 49.2	
	4.2nm,0.4s						
DGZ	Jazzator, Alta	5.74	90	P	Pn	07 37 51.3	+0.6
DGZ				S	Sn	07 38 57.5	+0.3
CHBI	Chibit, Altay	5.75	83	P	Pn	07 37 50.9	+0.1
CHBI				S	Sn	07 38 58.9	+1.5
AKAR	Aktash	5.83	83	P	Pn	07 37 52.1	+0.4
AKAR				S	Sn	07 38 59.8	+0.4
BRVK	Borovoye	6.01	304	⇑Pn	Pn	07 37 52.8	-1.4
	2.2nm,0.8s						
BRVK				⇑Sn	Sn	07 39 06.9	+3.2
	1.6nm,0.4s						
BRVK				⇑Lg	Lg	07 39 40.1	
	2.4nm,0.7s						
ULGR	Ulagan, Altay	6.05	80	P	Pn	07 37 54.4	-0.4
ULGR				S	Sn	07 39 04.2	-0.5
CUR	Chagan-Uzun	6.30	85	P	Pn	07 37 59.1	+0.8
CUR				S	Sn	07 39 11.2	+0.2

IDC 02 07:37:33.1±3.8**, 7°.20S**×**154°.17E, h0**km**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.5**/32**, mbtmp3.4**/3**, Error ellipse: s-maj=136.4km s-min=39.0km az=117.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.03	235	P	P	07 42 40.1	0.0
	0.3nm,0.4s,baz=58,slow=9.8,SNR=4.8						
ASAR	Alice Springs	25.43	228	P	P	07 43 02.5	-0.3
	1.0nm,0.7s,baz=62,slow=9.4,SNR=10						
MKAR	Makanchi Array	83.02	319	P	P	07 50 00.6	+0.1
	0.2nm,0.7s,baz=112,slow=7.0,SNR=2.7						
TORD	Torodi Ar. Bea	152.29	285	PKPbc	PKPbc	07 57 32.2	+0.1
	0.5nm,0.7s,baz=85,slow=2.4,SNR=3.5						

*IDC **02** 07:46:01.9±0.6, 18°.81S×175°.45W, h0km, mb4.6/25, mb1 4.8/26, mb1mx4.7/40, mbtmp4.6/26, ML3.9/1, MS5.1/27, Ms1 5.1/27, ms1mx4.9/41, Error ellipse: s-maj=21.1km s-min=12.7km az=147.0*
*BJI **02** 07:46:03.4±0.0, 19°.03S×175°.44W, h12km, mB5.4/27, mb5.1/35, Ms5.2/40, Ms7 5.0/40*
*NEIC **02** 07:46:04.3±1.9, 18°.60S±0°.08×175°.40W±0°.07, h13km±1km, mb5.3/236, Ms_20 5.2/653, Mwb5.6/24, Mwc5.6(GCMT), Error ellipse: s-maj=14.2km s-min=11.3km az=174.0*
*NEIC **02** 07:46:05.4, 18°.79S×175°.24W, h13km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.38; $M_{\theta\theta}$-2.52; $M_{\phi\phi}$2.90; $M_{r\theta}$0.21; $M_{\theta\phi}$-0.36; $M_{\phi r}$0.51; Fault plane solution: $M_0$2.81000×10^{17} NP1:ϕ_s311.01000°, δ79.42000°, λ178.67000°. NP2:ϕ_s41.25000°, δ88.70000°, λ10.58000°. Principal axes: T 2.9933, Plg8.0000°, Azm267.0000°; N -0.4240, Plg79.0000°, Azm48.0000°; P -2.5693, Plg7.0000°, Azm176.0000°;*
*GCMT **02** 07:46:07.3±0.1, 18°.69S±0°.01×175°.29W±0°.01, h14km, MW5.6/166, Moment Tensor Solution. s133, c236; s166, c339; Duration: 1ˢ5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.42±.03; $M_{\theta\theta}$-2.82±.03; $M_{\phi\phi}$3.24±.04; $M_{r\theta}$-0.36±.06; $M_{\theta\phi}$-0.35±.03; $M_{\phi r}$0.83±.07; Best double couple: $M_0$3.16400×10^{17} NP1:ϕ_s42.00000°, δ76.00000°, λ4.00000°. NP2:ϕ_s312.00000°, δ87.00000°, λ166.00000°. Principal axes: T 3.4470, Plg12.0000°, Azm266.0000°; N -0.5640, Plg75.0000°, Azm118.0000°; P -2.8800, Plg7.0000°, Azm358.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **02** 07:46:08, 18°.71S×175°.29W, h14km, Moment Tensor*

Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.35; $M_{\theta\theta}$-3.03; $M_{\phi\phi}$3.38; $M_{r\theta}$-0.31; $M_{\theta\phi}$-0.37; $M_{\phi r}$0.66; Fault plane solution: $M_0$3.32000×10^{17} NP1:ϕ_s312.00000°, δ87.00000°, λ169.00000°. NP2:ϕ_s42.00000°, δ79.00000°, λ3.00000°. Principal axes: T 3.5212, Plg10.0000°, Azm266.0000°; N -0.4445, Plg78.0000°, Azm117.0000°; P -3.0766, Plg6.0000°, Azm357.0000°;

*BGR **02** 07:46:09.2±0.0, 18.°95S×178.°45W, h33km*

*MOS **02** 07:46:11.1±2.4, 18.°48S×175.°71W, h56km, mb5.2/30, MS5.3/14, Error ellipse: s-maj=9.3km s-min=8.9km az=139.3*

ISC 02 07:46:04.9±0.4**, 18.°77S**±0.°05×**175.°29W**±0.°04**, h17km**±2km**, h18km:pP-P, n820, σ1.s53**/510**, mb5.3**/176**, MS5.2**/377**, 56C-19D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.08	94	P	Pn	07 47 19.4	-0.9
	baz=5.1,SNR=41						
NIUE	Niue	5.08	94		Pn	07 47 19.3	-0.9
AFI	Afiamalu	5.89	35		Pn	07 47 26.8	-4.7
MSVF	Nonsavu	6.42	278	c iP	Pn	07 47 40.4	+1.7
MSVF	Nonsavu	6.42	278		Pn	07 47 39.3	+0.6
RAO	Raoul Island	10.71	192	LR	LR	07 52 19.9	
	comp=Z,22μm,20.3s,baz=16,slow=36						
FUNA	Funafuti	11.51	332	Pn	Pn	07 48 49.9	+1.4
RAR	Rarotonga	14.78	102	Pn	Pn	07 49 32.4	-0.8
	5.4nm,0.3s,baz=276,slow=6.9,SNR=11						
RAR				LR	LR	07 53 50.4	
	comp=Z,8μm,21.8s,baz=286,slow=31						
RAR	Rarotonga	14.78	102	Pn	Pn	07 49 31.7	-1.6
KNTN	Kanton	16.28	13	P	Pn	07 49 49.9	-2.9
KNTN				IAmb	IAmb	07 49 57.9	
	comp=Z,244nm,1.2s						
DZM	Mont Dzumac	17.43	256	ePn	Pn	07 50 07.9	+0.4
	comp=Z,470nm,1.3s						
DZM				eLQ	LQ	07 53 30.3	
	comp=Z,23μm,26.2s						
DZM				eLR	LR	07 54 12.8	
	comp=Z,33μm,25.1s						
DZM	Mont Dzumac	17.43	256	P	Pn	07 50 07.9	+0.4
	comp=Z,0.3nm,0.3s,baz=87,slow=13,SNR=33						
DZM				LR	LR	07 55 39.5	
	comp=Z,20μm,19.8s,baz=87,slow=33						
DZM	Mont Dzumac	17.43	256	P	P	07 50 08.2	-0.4
OUZ	Omahuta	19.12	209	P	P	07 50 26.9	-0.1
URZ	Urewera	20.52	197	P	P	07 50 39.7	-2.5
	comp=Z,72nm,0.9s,baz=15,slow=5.6,SNR=15						
URZ				LR	LR	07 57 34.6	
	comp=Z,17μm,21.6s,baz=19,slow=34						
URZ	Urewera	20.52	197	P	P	07 50 40.8	-1.4
HIZ	Hauiti	21.46	202	P	P	07 50 51.7	-0.7
HIZ				IAmb	IAmb	07 50 58.7	
	comp=Z,278nm,1.4s						
HIZ				IAMs_20	IAMs_20	07 58 12.7	
	comp=Z,9μm,19.0s						
BKZ	Black Stump Fm	21.54	198	P	P	07 50 49.7	-3.5
BKZ				IAMs_20	IAMs_20	07 59 51.8	
	comp=Z,9μm,20.0s						
BFZ	Birch Farm	23.02	197	IAMs_20	IAMs_20	07 58 59.0	
	comp=Z,9μm,22.0s						
TARA	Tarawa	23.12	329	P	P	07 51 08.5	-1.7
TARA	Tarawa	23.12	329	IAMs_20	IAMs_20	07 57 35.1	
	comp=Z,9μm,20.0s						
SNZO	South Karori	24.04	199		P	07 51 18.3	-0.6
SNZO				IAmb	IAmb	07 51 24.9	
	comp=Z,66nm,0.9s						
BHW	Baring Head	24.08	198	P	P	07 51 20.3	+0.9
QRZ	Quartz Range	24.34	203	P	P	07 51 21.5	-0.3
QRZ				IAmb	IAmb	07 51 27.7	
	comp=Z,96nm,0.9s						
QRZ				IAMs_20	IAMs_20	08 01 52.8	
	comp=Z,8μm,21.0s						
TUWZ	Tuamarina	24.39	200	P	P	07 51 22.5	+0.3
PAE	Paea	24.44	92	eP	P	07 51 25.3	+2.4
	comp=Z,23nm,1.0s						
PAE	Paea	24.44	92	eT	T	08 16 40.2	
	comp=Z,14nm,0.3s						
PPT2	Papeete2	24.45	91	eP	P	07 51 25.8	+2.7
	comp=Z,136nm,1.1s						
PPT2				eS	S	07 55 40.8	-1.8
	comp=Z,2μm,31.5s						
PPT2				eLQ	LQ	07 56 25.9	
	comp=Z,8μm,25.2s						
PPT2				eLR	LR	07 57 20.1	
	comp=Z,25μm,27.5s,baz=258						
PPT2	Papeete2	24.45	91	eT	T	08 16 41.6	
	comp=Z,16nm,0.3s						
PPT	Papeete	24.45	91	LR	LR	07 58 26.2	
	comp=Z,6μm,20.5s,baz=261,slow=30						
PPTF	Pamatai, Papee	24.46	91	P	P	07 51 28.7	+5.5
TBI	Tubuai	24.51	105	eP	P	07 51 26.1	+2.6
	comp=Z,206nm,0.9s						
TBI				eS	S	07 55 42.3	-1.1
	comp=Z,2μm,31.2s						
TBI				eLQ	LQ	07 56 27.3	
	comp=Z,13μm,27.0s						
TBI				eLR	LR	07 57 25.0	
	comp=Z,12μm,29.2s,baz=276						
TIAR	Tiarei	24.67	91	eP	P	07 51 27.7	+2.6
	comp=Z,31nm,0.9s						
TIAR	Tiarei	24.67	91	eT	T	08 16 57.4	
	comp=Z,3.7nm,0.3s						
TVO	Taravao	24.74	92	eP	P	07 51 28.3	+2.6
	comp=Z,109nm,1.5s						
TVO	Taravao	24.74	92	eT	T	08 16 56.0	
	comp=Z,3.7nm,0.3s						
THZ	Tophouse	25.03	201	IAMs_20	IAMs_20	08 00 15.2	
	comp=Z,7μm,21.0s						
KHZ	Kahutara	25.41	200	P	P	07 51 30.5	-0.9
KHZ				IAmb	IAmb	07 52 11.5	
	comp=Z,190nm,1.9s						
KHZ				IAMs_20	IAMs_20	08 02 44.2	
	comp=Z,9μm,20.0s						
HNR	Honiara	25.72	288	LR	LR	08 00 03.2	
	comp=Z,4μm,19.1s,baz=122,slow=33						
HNR	Honiara	25.72	288	IAMs_20	IAMs_20	08 00 10.0	
	comp=Z,7μm,18.0s						
LTZ	Lake Taylor	26.15	201	P	P	07 51 37.9	-0.4
LTZ				IAmb	IAmb	07 51 48.3	
	comp=Z,142nm,1.5s						
LTZ				IAMs_20	IAMs_20	08 03 35.9	
	comp=Z,7μm,21.0s						
PMOR	Pomariorio Ree	26.47	86	eP	P	07 51 44.0	+2.7
	comp=Z,283nm,1.2s						
PMOR	Pomariorio Ree	26.47	86	eT	T	08 19 09.1	
	comp=Z,17nm,0.4s						
VAH	Vaihoa	26.67	87	eP	P	07 51 45.7	+2.6
	comp=Z,146nm,0.9s						
VAH	Vaihoa	26.67	87	eT	T	08 19 20.7	
	comp=Z,9.9nm,0.2s						
OXZ	Oxford	26.71	201	P	P	07 51 41.7	-1.5
OXZ				IAMs_20	IAMs_20	08 03 00.7	
	comp=Z,6μm,20.0s						
XMAS	Kiritimati	27.13	42	P	P	07 51 45.2	-2.0
XMAS				IAmb	IAmb	07 51 54.4	
	comp=Z,88nm,1.1s						
RPZ	Rata Peaks	27.39	202	P	P	07 51 47.0	-2.4
	comp=Z,23nm,1.0s,baz=346,slow=1.4,SNR=9.0						
RPZ	Rata Peaks	27.39	202	P	P	07 51 50.9	+1.5
RPZ				IAMs_20	IAMs_20	08 04 12.7	
	comp=Z,8μm,20.0s						
ODZ	Otahua Downs	28.70	201	IAMs_20	IAMs_20	08 04 11.3	
	comp=Z,6μm,19.0s						
WKZ	Wanaka	29.10	203	IAMs_20	IAMs_20	08 03 28.6	
	comp=Z,7μm,19.0s						
MLZ	Mavora Lakes	29.89	204	IAMs_20	IAMs_20	08 05 45.7	
	comp=Z,8μm,19.0s						
WHZ	Wether Hill Ro	30.40	203	IAMs_20	IAMs_20	08 04 19.1	
	comp=Z,5μm,21.0s						
PYZ	Puysegur Point	31.12	205	IAMs_20	IAMs_20	08 06 15.4	
	comp=Z,7μm,20.0s						
EIDS	Eidsvold	31.79	252	P	P	07 52 28.6	0.0
	baz=32,SNR=6.3						
EIDS	Eidsvold	31.79	252	P	P	07 52 27.7	-0.9
ARMA	Armidale	32.12	242	P	P	07 52 32.3	+0.7
	baz=32,SNR=7.4						
ARMA	Armidale	32.12	242	P	P	07 52 33.1	+1.5
ARMA				IAmb	IAmb	07 52 35.6	
	comp=Z,86nm,1.6s						
KWAJ	Kwajalein Atol	32.17	327	IAMs_20	IAMs_20	08 02 08.2	
	comp=Z,6μm,22.0s						
RMQ	Roma	33.98	250	P	P	07 52 48.5	+0.7
	baz=34,SNR=19						
KRVT	Keravat (AS076	35.01	290	P	P	07 52 54.1	-2.6
	comp=Z,67nm,0.8s,baz=37,slow=22,SNR=5.0						
KRVT				LR	LR	08 05 57.9	
	comp=Z,6μm,19.3s,baz=124,slow=34						
CNB	Canberra Magne	35.31	235	P	P	07 52 59.6	+0.3
	baz=36,SNR=5.1						
TAOE	Nuku Hiva Isla	35.45	79	eT	T	08 30 21.7	
	comp=Z,155nm,0.2s						
TAOE	Nuku Hiva Isla	35.45	79	IAMs_20	IAMs_20	08 03 56.6	
	comp=Z,4μm,20.0s						
CAN	Canberra	35.59	235	P	P	07 53 01.8	+0.1
CAN				pmax	pmax		
	comp=Z,88nm,1.6s						
CAN				MLR	MLR		
	comp=Z,4μm,19.0s						
CAN	Canberra	35.59	235	P	P	07 53 01.8	+0.1
CAN				IAmb	IAmb	07 53 25.8	
	comp=Z,88nm,1.6s						
CAN				IAMs_20	IAMs_20	08 06 17.6	
	comp=Z,4μm,19.0s						
CTA	Charters Tower	36.24	261	LR	LR	08 06 02.7	
	comp=Z,7μm,21.1s,baz=98,slow=33						
CTA	Charters Tower	36.24	261	P	P	07 53 06.1	-1.2
CTA				pmax	pmax		
	comp=Z,53nm,1.2s						
CTAO	Charters Tower	36.24	261	P	P	07 53 05.5	-1.8
CTAO				pmax	pmax		
	comp=Z,115nm,1.5s						
CTAO	Charters Tower	36.24	261	P	P	07 53 05.5	-1.8
CMSA	Cobar Meteorol	37.34	242	P	P	07 53 16.3	-0.2
	baz=37,SNR=26						
PMG	Port Moresby	37.52	279	c iP	P	07 53 17.0	-1.3
PMG	Port Moresby	37.52	279	P	P	07 53 17.1	-1.1
MTSU	Mount Surprise	38.27	264	P	P	07 53 22.7	-1.9
	baz=38,SNR=8.0						
TOO	Toolangi	38.97	233	P	P	07 53 30.0	-0.3
	baz=39,SNR=3.7						
TOO	Toolangi	38.97	233	P	P	07 53 30.2	-0.1
TOO				pmax	pmax		
	comp=Z,38nm,1.2s						
TOO	Toolangi	38.97	233	P	P	07 53 30.2	-0.1
TOO				IAMs_20	IAMs_20	08 07 20.2	
	comp=Z,4μm,19.0s						
COEN	Coen	40.08	270	P	P	07 53 38.1	-1.6
	baz=40,SNR=9.0						
COEN	Coen	40.08	270	P	P	07 53 38.2	-1.6
COEN				IAmb	IAmb	07 53 51.7	
	comp=Z,65nm,1.1s						
COEN				IAMs_20	IAMs_20	08 06 54.5	
	comp=Z,4μm,22.0s						
STKA	Stephens Creek	40.84	243	P	P	07 53 45.3	-0.6
	baz=41,SNR=7.2						
STKA	Stephens Creek	40.84	243	P	P	07 53 45.2	-0.6
	comp=Z,22nm,1.1s,baz=73,slow=6.0,SNR=8.2						
STKA				LR	LR	08 09 28.1	
	comp=Z,3μm,18.0s,baz=78,slow=35						
STKA	Stephens Creek	40.84	243	P	P	07 53 44.9	-1.0
STKA				pmax	pmax		
	comp=Z,12nm,1.1s						
STKA				MLR	MLR		
	comp=Z,900nm,18.0s						
STKA	Stephens Creek	40.84	243	P	P	07 53 44.9	-1.0
KIP	Kipapa	43.38	24	⇑eP	P	07 54 05.7	-0.8
KIP				pmax	pmax		
	comp=Z,48nm,1.2s						
JAY	Jayapura	45.99	285	P	P	07 54 26.3	-1.4
	comp=Z,5.2nm,0.6s,baz=108,slow=4.6,SNR=3.7						
JAY				LR	LR	08 12 34.3	
	comp=Z,2μm,20.6s,baz=78,slow=35						
JAY	Jayapura	45.99	285	P	P	07 54 27.4	-0.3
	comp=Z,546nmcomp=Z,34nm,1.4s						
WR0	Warramunga Arr	47.21	260	IAmb	IAmb	07 54 55.8	
	comp=Z,43nm,1.4s						
WB2	Warramunga Arr	47.38	260	P	P	07 54 36.1	-2.4
	baz=47						
WRAB	Tennant Creek	47.39	260	⇓eP	P	07 54 36.4	-2.1
WRAB				pmax	pmax		
	comp=Z,21nm,1.3s						
WRAB	Tennant Creek	47.39	260	P	P	07 54 37.2	-1.3
WRA	Warramunga Arr	47.40	260	P	P	07 54 35.8	-2.8
	comp=Z,10nm,1.1s,baz=96,slow=7.4,SNR=20						
WRA				LR	LR	08 12 51.4	
	comp=Z,5μm,21.6s,baz=90,slow=34						
AS31	Alice Springs	47.42	255	P	P	07 54 37.3	-1.5
ASAR	Alice Springs	47.42	255	P	P	07 54 37.0	-1.8
	comp=Z,13nm,0.7s,baz=88,slow=8.4,SNR=67						
ASAR				LR	LR	08 13 57.6	
	comp=Z,2μm,18.0s,baz=94,slow=36						
ASAR	Alice Springs	47.42	255	P	P	07 54 37.0	-1.8
KDU	Kakadu	50.51	269	P	P	07 55 00.2	-2.2
	baz=50,SNR=3.2						
MTN	Manton Dam	51.74	268	IAMs_20	IAMs_20	08 14 31.6	
	comp=Z,2μm,20.0s						
FORT	Forrest	52.33	245	IAMs_20	IAMs_20	08 18 05.7	
	comp=Z,3μm,20.0s						
WRKA	Warakurna	52.41	253	P	P	07 55 15.5	-1.2
	baz=52,SNR=27						
KNRA	Kununurra	53.35	264	P	P	07 55 21.8	-1.9
	baz=53,SNR=5.5						
KNRA	Kununurra	53.35	264	P	P	07 55 21.1	-2.6
KNRA				IAmb	IAmb	07 55 31.8	
	comp=Z,33nm,1.0s						
FAKI	Fak Fak	53.65	280	P	P	07 55 24.1	-1.9
	comp=Z,46nm,1.3s						
FAKI	Fak Fak	53.65	280	IAMs_20	IAMs_20	08 17 01.6	
	comp=Z,3μm,21.0s						
SIJI	Sorong	55.32	282	P	P	07 55 37.2	-0.9
	comp=Z,59nm,1.1s,baz=60,slow=8.1,SNR=13						
SIJI				LR	LR	08 19 11.2	
	comp=Z,2μm,18.2s,baz=106,slow=36						
FITZ	Fitzroy Crossi	55.81	261	P	P	07 55 40.6	-0.9
	baz=56,SNR=9.7						
FITZ	Fitzroy Crossi	55.81	261	P	P	07 55 40.5	-1.1
	comp=Z,16nm,1.2s,baz=91,slow=11,SNR=13						
FITZ	Fitzroy Crossi	55.81	261	P	P	07 55 40.2	-1.3
SOEI	Soe	59.03	270	P	P	07 56 04.4	-0.1
	comp=Z,3μmcomp=Z,274nm,1.1s						
SOEI	Soe	59.03	270	P	P	07 56 03.6	-0.9
SOEI				IAMs_20	IAMs_20	08 20 47.9	
	comp=Z,3μm,20.0s						
BATI	Baumata	59.48	269	P	P	07 56 07.6	+0.1
	comp=Z,15nm,0.4s,baz=114,slow=22,SNR=4.0						
BATI				LR	LR	08 23 16.2	
	comp=Z,3μm,18.2s,baz=138,slow=38						
SANI	Sanana	59.81	279	P	P	07 56 10.2	+0.5
	comp=Z,885nmcomp=Z,59nm,1.3s						
VNDA	Vanda	59.86	186	P	P	07 56 11.6	+2.6
	comp=Z,4.9nm,1.2s,baz=9.3,slow=6.3,SNR=5.8						
VNDA				LR	LR	08 16 53.9	
	comp=Z,715nm,21.4s,baz=28,slow=31						
VNDA	Vanda	59.86	186	P	P	07 56 10.2	+1.1
VNDA				pmax	pmax		
	comp=Z,30nm,1.7s						
VNDA	Vanda	59.86	186	P	P	07 56 10.2	+1.1
PSA00	Pilbara Seismi	60.56	255	P	P	07 56 12.7	-2.1
KLBR	Kellerberrin	61.10	244	P	P	07 56 18.2	-0.2
	baz=61,SNR=5.0						
MMRI	Maumere	61.27	270	P	P	07 56 17.6	-2.2
JCJ	Chichijima	61.48	317	LR	LR	08 18 11.8	
	comp=Z,452nm,20.9s,baz=124,slow=31						
EDFI	Ende, Flores	61.76	270	P	P	07 56 21.3	-1.8
	comp=Z,519nmcomp=Z,40nm,1.3s						
MORW	Morawa	62.85	246	P	P	07 56 28.4	-1.7
DAV	Davao City (W)	63.68	288	LR	LR	08 23 45.4	
	comp=Z,653nm,18.7s,baz=144,slow=36						
WBSI	Waikabubak, Su	63.69	268	P	P	07 56 38.7	+2.8
	comp=Z,90nm,1.2s						
BNSI	Bone	64.56	274	P	P	07 56 39.9	-1.7
	comp=Z,56nm,1.2s						
SPSI	Sidrap Palu	65.02	274	P	P	07 56 48.1	+3.5
	comp=Z,18nm,1.2s						
PLAI	Plampang	65.44	269	P	P	07 56 46.3	-1.1
	comp=Z,2μmcomp=Z,105nm,1.3s						
MPSI	Mapaga	66.34	279	P	P	07 56 51.0	-2.1
	comp=Z,666nmcomp=Z,22nm,1.3s						
CASY	Casey	66.61	205	IAMs_20	IAMs_20	08 21 23.4	
	comp=Z,2μm,22.0s						
JAGI	Jajag, Banyuwa	68.98	268	P	P	07 57 07.5	-2.3
JAGI				IAMs_20	IAMs_20	08 26 21.5	
	comp=Z,1μm,20.0s						
MJAR	Matsushiro Arr	70.39	322	P	P	07 57 16.6	-1.4
	comp=Z,3.3nm,0.9s,baz=174,slow=6.4,SNR=5.9						
MJAR				LR	LR	08 26 36.1	
	comp=Z,186nm,18.7s,baz=100,slow=35						
MAJO	Matsushiro	70.39	322	⇑iP	P	07 57 17.3	-0.8
MAJO				pmax	pmax		
	comp=Z,13nm,1.6s						
MAT	Matsushiro	70.39	322	P	P	07 57 16.7	-1.4
MAT				S	S	08 06 28.8	-1.3
QSPA	South Pole Qui	71.29	180	P	P	07 57 25.0	+1.8
QSPA	South Pole Qui	71.29	180	IAMs_20	IAMs_20	08 25 38.7	
	comp=Z,2μm,18.0s						
PWJI	Pagerwojo	71.33	268	P	P	07 57 24.4	+0.2
	comp=Z,54nm,1.3s						
PCJI	Pacitan	71.87	267	P	P	07 57 26.6	-0.9
	comp=Z,96nm,1.3s						
KUR	Kuril'sk	71.98	334	P	P	07 57 30.3	+2.9
KUR				S	SKiKP	08 07 06.2	+2.0
KUR				pmax	pmax		
	comp=Z,499nm,5.5s						
KUR				smax	smax		
	comp=Z,622nm,18.0s						
UGM	Wanagama	72.58	267	P	P	07 57 30.7	-1.1
	comp=Z,49nm,1.2s						
FALS	False Pass	74.03	7	IAMs_20	IAMs_20	08 25 49.3	
	comp=Z,1μm,18.0s						
SNCC	San Nicolas Is	74.21	46	P	P	07 57 41.0	+0.1
	baz=235						
SBUM	Sibu	74.27	278	P	P	07 57 48.0	+6.3
NACB	Ninganchiao	74.87	302	IAMs_20	IAMs_20	08 25 56.6	
	comp=Z,1μm,21.0s						
PET	Petropavlovsk	74.98	344	IAMs_20	IAMs_20	08 24 12.2	
	comp=Z,2μm,21.0s						
SAO	San Andreas Ge	75.03	42	IAmb	IAmb	07 57 53.2	
	comp=Z,82nm,1.9s						
SAO				IAMs_20	IAMs_20	08 30 40.5	
	comp=Z,1μm,18.0s						
SMMC	Simmler	75.10	44	P	P	07 57 47.3	+1.2
	baz=234						
PMPB	Monarch Peak	75.11	43	P	P	07 57 47.8	+1.6
PMPB				IAmb	IAmb	07 58 25.5	
	comp=Z,51nm,1.4s						
PMPB				IAMs_20	IAMs_20	08 27 42.7	
	comp=Z,1μm,19.0s						
PAGB	Antelope Grade	75.18	44	IAmb	IAmb	07 57 55.4	
	comp=Z,69nm,1.6s						
PAGB				IAMs_20	IAMs_20	08 27 28.6	
	comp=Z,976nm,18.0s						
SSLB	Suanglung	75.20	302	IAMs_20	IAMs_20	08 26 02.4	
	comp=Z,1μm,22.0s						
CISI	Cisompet, Garu	75.24	267	IAMs_20	IAMs_20	08 28 38.6	
	comp=Z,1μm,21.0s						
PEA0B	Petropavlovsk-	75.30	344	⇓iP	P	07 57 46.5	-0.3
PEA0B	Petropavlovsk-	75.30	344	IAMs_20	IAMs_20	08 23 47.9	
	comp=Z,1μm,22.0s						
PETK	Petropavlovsk-	75.30	344	P	P	07 57 45.6	-1.2
	comp=Z,3.1nm,0.9s,baz=174,slow=7.3,SNR=4.1						
PETK				LR	LR	08 24 22.1	
	comp=Z,1μm,22.0s,baz=153,slow=30						
HOPS	Hopland Field	75.41	40	IAMs_20	IAMs_20	08 25 47.2	
	comp=Z,2μm,18.0s						
GDXM	Geysers	75.46	40	IAMs_20	IAMs_20	08 25 13.6	
	comp=Z,2μm,20.0s						
OSI	Osito Audit: C	75.54	45	IAMs_20	IAMs_20	08 21 31.6	
	comp=Z,1μm,21.0s						
YSS	Yuzh-Sakhalins	75.55	332	eP	P	07 57 48.5	+0.2
YSS				e		07 58 08.8	
YSS				e		08 02 18.5	
YSS				eS	S	08 07 26.0	-2.1
YSS				e		08 08 02.9	
YSS				pmax	pmax		
	comp=Z,20nm,1.4s						
YSS				MLR	MLR		
	comp=E,300nm,14.0s						
YSS	Yuzh-Sakhalins	75.55	332	IAMs_20	IAMs_20	08 24 17.6	
	comp=Z,2μm,22.0s						
109C	Camp Elliot, M	75.67	48	P	P	07 57 50.1	+0.7
	baz=236						
KSM	Kuching	75.73	277	P	P	07 57 49.0	-1.2
KSM				IAmb	IAmb	07 57 58.8	
	comp=Z,50nm,1.1s						
KSM	Kuching	75.73	277	P	P	07 57 55.0	+4.8
BAR	Barrett	75.86	48	IAMs_20	IAMs_20	08 24 24.3	
	comp=Z,1μm,18.0s						
MURC	Murrieta	76.01	47	P	P	07 57 51.8	+0.5
	baz=236						
VES	Vestal, Richgr	76.01	44	P	P	07 57 52.1	+0.9
	baz=234						
BFSC	Mount Baldy Ra	76.05	46	P	P	07 57 52.5	+0.8
	baz=236						
CHGN	Chignik	76.12	10	IAMs_20	IAMs_20	08 25 11.9	
	comp=Z,1μm,18.0s						
MONP2	Monument Peak	76.16	48	P	P	07 57 53.2	+0.8
	baz=237						
EDW2	Edwards Air Fo	76.18	45	P	P	07 57 52.4	0.0
	baz=235,SNR=14						
IKP	In-Ko-Pah, Jac	76.24	48	P	P	07 57 52.5	-0.2
	baz=237						
ISA	Isabella, Lake	76.31	45	P	P	07 57 53.6	+0.5
	baz=235,SNR=13						
O02D	Mt. Diablo Mer	76.33	39	P	P	07 57 54.4	+1.3
	baz=231,SNR=10						
PFO	Pinyon Flats O	76.53	47	P	P	07 57 54.9	+0.5
	comp=Z,1.7nm,0.8s,baz=222,slow=5.6,SNR=5.4						
PFO	Pinyon Flats O	76.53	47	⇓eP	P	07 57 54.9	+0.5
PFO				pmax	pmax		
	comp=Z,10.0nm,1.8s						
PFO	Pinyon Flats O	76.53	47	P	P	07 57 55.4	+1.0
	baz=237						
PFO	Pinyon Flats O	76.53	47	P	P	07 57 54.7	+0.3
PFO				IAMs_20	IAMs_20	08 23 52.9	
	comp=Z,1μm,20.0s						
XPFO	Pion Flat	76.53	47	P	P	07 57 55.0	+0.6
XPFO				IAMs_20	IAMs_20	08 23 52.9	
	comp=Z,1μm,20.0s						
KRMB	Red Mountain	76.54	37	IAmb	IAmb	07 58 02.1	
	comp=Z,43nm,1.4s						
KRMB				IAMs_20	IAMs_20	08 25 43.9	
	comp=Z,1μm,20.0s						
SWSC	Sam W. Stewart	76.62	48	P	P	07 57 55.8	+1.0
	baz=237						
AFDM	Forest Hills D	76.66	41	P	P	07 57 55.1	+0.2
WDC	Whiskeytown Da	76.73	39	P	P	07 57 56.0	+0.8
WDC				pmax	pmax		
	comp=Z,29nm,1.4s						
WDC	Whiskeytown Da	76.73	39	P	P	07 57 56.0	+0.8
WDC				IAmb	IAmb	07 58 02.7	
	comp=Z,29nm,1.4s						
LRMC	Laurel Mtn Rad	76.73	45	P	P	07 57 55.8	+0.3
	baz=235,SNR=13						
N02D	Trinity Center	76.88	38	P	P	07 57 57.2	+1.0
	baz=231						
O03E	Paynes Creek	76.99	39	P	P	07 57 57.0	+0.2
	baz=232,SNR=16						
CWC	Cottonwood Cre	77.02	44	P	P	07 57 57.7	+0.5
	baz=235						
BELC	Belle Mtn. Jos	77.06	47	P	P	07 57 58.1	+0.6
	baz=237						
M02C	Callahan	77.06	38	P	P	07 57 58.3	+1.1
	baz=230						
MDPB	Devils Postpil	77.06	43	IAMs_20	IAMs_20	08 29 38.3	
	comp=Z,926nm,18.0s						
OMMB	Old Mammoth Mi	77.10	43	IAMs_20	IAMs_20	08 29 30.4	
	comp=Z,1μm,18.0s						
MPMC	Manual Prospec	77.19	45	P	P	07 57 59.1	+0.9
	baz=235,SNR=19						
GSC	Goldstone, Bar	77.22	46	P	P	07 57 59.0	+0.8
	baz=236,SNR=13						
GSC	Goldstone, Bar	77.22	46	IAmb	IAmb	07 58 05.8	
	comp=Z,41nm,1.5s						
BC3	Big Chuckawall	77.25	48	P	P	07 57 59.3	+0.9
	baz=237						
TIN	Tinemaha, Big	77.28	43	P	P	07 57 59.2	+0.7
	baz=235						
HEC	Hector,Ludlow	77.28	46	P	P	07 57 58.9	+0.3
	baz=236,SNR=5.8						
KSRS	Korea Array	77.33	317	P	P	07 57 58.6	0.0
	comp=Z,2.4nm,0.8s,baz=134,slow=7.2,SNR=6.7						
YBH	Yreka Blue Hor	77.36	38	P	P	07 57 59.9	+1.0
	comp=Z,4.4nm,0.9s,baz=196,slow=2.7,SNR=11						
YBH	Yreka Blue Hor	77.36	38	P	P	07 57 59.4	+0.5
YBH				pmax	pmax		
	comp=Z,19nm,1.2s						
YBH	Yreka Blue Hor	77.36	38	P	P	07 57 59.4	+0.5
GLA	Glamis	77.37	48	P	P	07 58 00.2	+1.1
	baz=238						
K02D	Willamette Mer	77.44	36	P	P	07 58 00.7	+1.4
	baz=230						
BEKR	Beckworth	77.60	40	IAmb	IAmb	07 58 07.6	
	comp=Z,32nm,1.4s						
PNTR	Pine Nut	77.60	41	IAmb	IAmb	07 59 45.5	
	comp=Z,19nm,0.9s						
QZH	Quanzhou	77.64	302	eP	P	07 58 04.4	+3.7
QZH				S	S	08 07 52.6	+0.6
QZH				LR	LR		

comp=Z,450nm,19.9s
QZH LR LR
comp=Z,310nm,19.4s
QZH LR LR
comp=Z,540nm,19.9s
GMRC Granite Mounta 77.72 47 P **P** **07 58 01.8 +0.7**
baz=237
IRM Iron Mountain 77.74 47 P **P** **07 58 02.3 +1.2**
baz=237,SNR=16
YERR Yerington 77.76 41 IAmb IAmb 07 59 12.4
comp=Z,16nm,0.7s
HUMO Hull Mountain 77.78 37 IAmb IAmb 07 58 08.8
comp=Z,33nm,1.6s
GRAC Grapevine Rang 77.81 44 P **P** **07 58 02.6 +1.2**
baz=235
FURC Furnace Creek, 77.84 45 P **P** **07 58 01.6 +0.1**
baz=236,SNR=5.5
M04C Macdoel 77.90 38 P **P** **07 58 03.0 +1.0**
baz=231
TUQ Turquoise Moun 77.90 46 P **P** **07 58 02.9 +0.8**
baz=237,SNR=6.1
L04D Klamath Falls 77.90 37 P **P** **07 58 02.9 +0.9**
baz=231
SHOC Shoshone, Teco 77.92 45 P **P** **07 58 02.8 +0.7**
baz=236
Y12C Blythe 77.95 48 P **P** **07 58 02.9 +0.7**
baz=238
113A Mohawk Valley, 77.97 49 P **P** **07 58 02.5 +0.1**
113A IAMs_20 IAMs_20 08 24 41.3
comp=Z,999nm,20.0s
RYN Ryan 78.00 42 IAmb IAmb 07 58 10.1
comp=Z,40nm,1.5s
NVAR Mina Array Bea 78.03 42 P **P** **07 58 03.7 +0.9**
comp=Z,2.9nm,0.8s,baz=226,slow=9.1,SNR=19
NVAR LR LR 08 29 51.6
comp=Z,688nm,18.1s,baz=220,slow=34
PAHR Pah Rah Range 78.10 41 IAmb IAmb 07 58 10.5
comp=Z,32nm,1.5s
NV11 Mina Array Sit 78.12 42 IAmb IAmb 07 58 23.9
comp=Z,25nm,1.2s
NV11 IAMs_20 IAMs_20 08 29 22.4
comp=Z,877nm,18.0s
214A Organ Pipe Nat 78.25 50 P **P** **07 58 04.9 +0.9**
baz=239
I03D Drain, OR 78.26 36 P **P** **07 58 04.8 +1.1**
baz=230
PDMCI Parker Dam,Lak 78.52 48 P **P** **07 58 06.5 +1.1**
baz=238
TPNV Topopah Spring 78.52 45 P **P** **07 58 06.6 +1.0**
baz=236
TPNV Topopah Spring 78.52 45 IAMs_20 IAMs_20 08 26 11.4
comp=Z,880nm,19.0s
TYV Tymovskoe 78.56 334 *e*P **P** **07 58 08.8 +3.7**
TYV pmax pmax
comp=Z,26nm,1.5s
KDAK Kodiak Island 78.57 12 P **P** **07 58 03.9 -1.2**
KDAK pmax pmax
comp=Z,50nm,1.6s
KDAK Kodiak Island 78.57 12 P **P** **07 58 03.9 -1.2**
KDAK IAmb IAmb 07 58 11.6
comp=Z,50nm,1.6s
KDAK Kodiak Island 78.57 12 IAMs_20 IAMs_20 08 26 01.8
comp=Z,1µm,20.0s
J04D Umpqua Nationa 78.66 37 P **P** **07 58 07.1 +0.9**
baz=231
I04A Tendick Farm, 78.84 36 P **P** **07 58 07.6 +0.6**
baz=230
COR Corvallis 78.86 35 IAMs_20 IAMs_20 08 26 20.2
comp=Z,1µm,19.0s
MOD Modoc Plateau 78.87 39 IAMs_20 IAMs_20 08 27 06.8
comp=Z,953nm,19.0s
SHPR Sheep Range 79.00 45 IAMs_20 IAMs_20 08 26 17.4
comp=Z,945nm,18.0s
USA0B Ussuriysk Arra 79.02 324⇑ *e*P **P** **07 58 08.6 +0.8**
USA0B Ussuriysk Arra 79.02 324 IAMs_20 IAMs_20 08 27 50.9
comp=Z,1µm,21.0s
USRK Ussuriysk Ar. 79.02 324 P **P** **07 58 07.7 -0.2**
comp=Z,0.9nm,0.8s,baz=144,slow=40,SNR=1.9
USRK LR LR 08 27 31.9
comp=Z,972nm,20.4s,baz=95,slow=32
K05A Summer Lake 79.03 38 P **P** **07 58 09.1 +0.8**
W13A Hualapai Mount 79.12 47 IAMs_20 IAMs_20 08 25 44.5
comp=Z,991nm,21.0s
H04D Lebanon 79.13 35 P **P** **07 58 09.3 +0.8**
baz=230
J05D Fort Rock, OR 79.19 37 P **P** **07 58 09.7 +0.7**
baz=231
G03D McMinnville, O 79.29 35 P **P** **07 58 10.2 +0.9**
baz=230
PMBI Palembang 79.54 270 IAMs_20 IAMs_20 08 32 30.5
comp=Z,1µm,20.0s
MDSI Maura Dua 79.62 269 P **P** **07 58 11.8 -0.1**
comp=Z,9.0nm,1.5s
PINE Pine Mountain 79.67 37 IAmb IAmb 07 58 19.2
comp=Z,34nm,1.2s
R11A Troy Canyon, C 79.73 44 P **P** **07 58 12.6 +0.5**
baz=236
I05D Terrebonne, OR 79.78 36 P **P** **07 58 13.1 +0.9**
baz=231
TUC Tucson 79.91 51 P **P** **07 58 14.5 +1.4**
TUC pmax pmax
comp=Z,17nm,1.2s
TUC Tucson 79.91 51 P **P** **07 58 13.3 +0.1**
baz=240
TUC Tucson 79.91 51 P **P** **07 58 14.5 +1.4**
E03A Lebam 80.00 33 IAMs_20 IAMs_20 08 26 50.2
comp=Z,945nm,20.0s
WVOR Wild Horse Val 80.18 39 P **P** **07 58 15.7 +1.3**
WVOR pmax pmax
comp=Z,20nm,1.6s
G05D Wamic, OR 80.37 35 P **P** **07 58 15.7 +0.5**
baz=231
NLWA Neilton Lookou 80.40 33 IAMs_20 IAMs_20 08 27 02.7
comp=Z,1µm,20.0s
CNPM China Poot 80.46 12 IAMs_20 IAMs_20 08 27 02.6
comp=Z,1µm,20.0s
HOM Homer 80.50 12 IAMs_20 IAMs_20 08 25 38.6
comp=Z,1µm,22.0s
E04D Cinebar 80.53 34 P **P** **07 58 16.5 +0.5**
baz=230
MDJ Mudanjiang 80.62 324 P **P** **07 58 15.9 -0.6**
MDJ S **S** **08 08 26.7 +3.8**
MDJ SS **SS** **08 13 39.8 +3.5**
MDJ pmax pmax
comp=Z,10.0nm,1.6s
MDJ pmax pmax
comp=Z,160nm,3.1s
MDJ LR LR
comp=Z,660nm,22.8s
MDJ LR LR
comp=Z,700nm,18.5s
MDJ LR LR
comp=Z,1µm,20.1s
MDJ Mudanjiang 80.62 324 IAMs_20 IAMs_20 08 28 32.2
comp=Z,1µm,21.0s
DIB Dawson Inlet, 80.64 24 IAMs_20 IAMs_20 08 26 33.3
comp=Z,975nm,20.0s
F05D White Salmon 80.69 35 P **P** **07 58 17.9 +1.0**
baz=231
BRLK Bradley Lake 80.75 12 P **P** **07 58 15.9 -1.0**
BRLK IAmb IAmb 07 58 30.0
comp=Z,74nm,1.7s
BRLK IAMs_20 IAMs_20 08 27 10.9
comp=Z,1µm,20.0s
NJ2 Nanjing 80.79 308 *e*P **P** **07 58 19.1 +1.4**
NJ2 pmax pmax
comp=Z,20nm,0.9s
MOBC Moresby Island 80.80 25 IAMs_20 IAMs_20 08 25 58.5
comp=Z,1µm,21.0s
D03D Eldon 80.89 33 P **P** **07 58 19.4 +1.5**
baz=229
WUAZ Wupatki 81.09 48 P **P** **07 58 20.5 +1.0**
baz=240
WUAZ Wupatki 81.09 48 P **P** **07 58 20.6 +1.1**
GRNR Gornyy 81.19 331⇑ *i*P **P** **07 58 23.5 +4.0**
GRNR pmax pmax
comp=Z,10.0nm,1.4s
D05A Enumclaw 81.24 34 IAmb IAmb 07 58 30.6
comp=Z,48nm,1.3s
HPIG 81.35 58 IAMs_20 IAMs_20 08 33 49.1
comp=Z,874nm,19.0s
SEW Seward 81.35 13 IAmb IAmb 07 58 29.2
comp=Z,24nm,1.0s
SEW IAMs_20 IAMs_20 08 27 04.3
comp=Z,991nm,21.0s
PGC Sidney 81.44 32 IAmb IAmb 07 58 27.7
comp=Z,38nm,1.4s
F07A Phinny Hill Vi 81.54 36 IAMs_20 IAMs_20 08 27 57.0
comp=Z,1µm,20.0s
G08A Pilot Rock 81.71 36 IAmb IAmb 07 58 29.5
comp=Z,44nm,1.5s
A04D Lummi Island 81.86 32 P **P** **07 58 23.9 +0.9**
baz=230
B05A Bryant 81.88 33 P **P** **07 58 23.6 +0.5**
baz=230
MYKOM Kota Tinggi 81.93 275 IAMs_20 IAMs_20 08 34 20.5
comp=Z,908nm,20.0s
E07A Sunnyside 81.98 35 IAMs_20 IAMs_20 08 28 00.8
comp=Z,1µm,20.0s
HAWA Hanford 82.06 35 P **P** **07 58 24.4 +0.3**
HAWA IAmb IAmb 07 58 31.3
comp=Z,28nm,1.2s
HAWA IAMs_20 IAMs_20 08 27 52.8
comp=Z,1µm,20.0s
ZAIG Zacatecas 82.14 63 IAMs_20 IAMs_20 08 26 23.4
comp=Z,1µm,20.0s
RC01 Rabbit Creek A 82.19 12 IAmb IAmb 07 58 38.2
comp=Z,47nm,1.4s
RC01 IAMs_20 IAMs_20 08 37 34.2
comp=Z,832nm,18.0s
121A Cookes Peak, D 82.24 52 IAMs_20 IAMs_20 08 25 55.3
comp=Z,1µm,22.0s
HIN Hinchinbrook I 82.26 14 IAmb IAmb 07 58 30.8
comp=Z,31nm,1.3s
HIN IAMs_20 IAMs_20 08 26 44.4
comp=Z,2µm,22.0s
GAMB Gambell 82.33 2 IAMs_20 IAMs_20 08 27 03.6
comp=Z,1µm,22.0s
B06A Marblemount 82.35 33 IAMs_20 IAMs_20 08 28 26.3
comp=Z,906nm,19.0s
E08A Dider Farm, El 82.38 35 P **P** **07 58 25.8 0.0**
E08A IAmb IAmb 07 58 32.8
comp=Z,64nm,1.7s
E08A IAMs_20 IAMs_20 08 27 52.3
comp=Z,1µm,20.0s
KLR Kul'dur 82.38 328⇑ *e*P **P** **07 58 26.7 +0.9**
KLR pmax pmax
comp=Z,12nm,2.5s
QIZ Qiongzhong 82.51 293 P **P** **07 58 27.5 +0.4**
QIZ S **S** **08 08 42.4 -1.2**
QIZ SS **SS** **08 14 06.0 +0.5**
QIZ pmax pmax
comp=Z,150nm,6.6s
QIZ LR LR
comp=Z,440nm,31.4s
QIZ LR LR
comp=Z,340nm,19.6s
QIZ LR LR
comp=Z,450nm,25.5s
CN2 Changchun 82.53 321 *e*P P 07 58 32.5 +5.8
CN2 *e*S **S** **08 08 50.2 +7.4**
CN2 pmax pmax
comp=Z,30nm,1.4s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,200nm,21.0s
CN2 LR LR
comp=Z,300nm,21.0s
CN2 LR LR
comp=Z,400nm,21.0s
DUG Dugway, Tooele 82.54 43 P **P** **07 58 28.3 +1.3**
DUG pmax pmax
comp=Z,7.0nm,1.3s
DUG Dugway, Tooele 82.54 43 P **P** **07 58 27.8 +0.8**
baz=239
DUG Dugway, Tooele 82.54 43 IAMs_20 IAMs_20 08 32 08.5
comp=Z,856nm,18.0s
GLI Glacier Island 82.56 13 P **P** **07 58 25.1 -1.3**
GLI IAmb IAmb 07 58 32.1
comp=Z,46nm,1.3s
GLI IAMs_20 IAMs_20 08 28 29.3
comp=Z,1µm,20.0s
SNY Shenyang 82.57 319⇑ P P 07 58 32.0 +5.1
SNY S **S** **08 08 44.6 +1.4**
SNY SKS **SKSac** **08 08 48.9 +1.6**
SNY pmax pmax
comp=Z,25nm,1.7s
SNY LR LR
comp=Z,320nm,17.8s
SNY LR LR
comp=Z,340nm,15.8s
SNY LR LR
comp=Z,550nm,18.4s
EYAK Cordova Ski Ar 82.57 14 IAMs_20 IAMs_20 08 26 52.6
comp=Z,1µm,21.0s
FID Port Fidalgo 82.58 14 IAmb IAmb 07 58 40.8
comp=Z,69nm,1.8s
FID IAMs_20 IAMs_20 08 27 36.7
comp=Z,1µm,20.0s
SIT Sitka 82.59 21 IAMs_20 IAMs_20 08 26 32.6
comp=Z,2µm,22.0s
SUCK Suckling Hills 82.63 15 IAMs_20 IAMs_20 08 26 09.2
comp=Z,2µm,22.0s
KNK Knik Glacier 82.75 13 IAmb IAmb 07 58 46.9
comp=Z,30nm,1.4s
KNK IAMs_20 IAMs_20 08 26 53.2
comp=Z,1µm,21.0s
PMR Palmer 82.78 12 IAMs_20 IAMs_20 08 39 00.9
comp=Z,893nm,18.0s
D08A Wollman Farm, 82.80 35 IAmb IAmb 07 58 35.1
comp=Z,36nm,1.3s
D08A IAMs_20 IAMs_20 08 28 55.5
comp=Z,1µm,20.0s
MA2 Magadan 82.84 343⇓ *e*P **P** **07 58 28.9 +1.0**
MA2 pmax pmax
comp=Z,45nm,4.0s
MA2 Magadan 82.84 343 IAMs_20 IAMs_20 08 29 46.1
comp=Z,1µm,20.0s
EPT El Paso 82.85 53 IAMs_20 IAMs_20 08 26 25.6
comp=Z,930nm,22.0s
E09A Wood Farm, Sta 82.90 36 IAMs_20 IAMs_20 08 28 19.0
comp=Z,947nm,20.0s
F10A Beach Ranch, E 83.09 37 IAmb IAmb 07 58 36.2
comp=Z,36nm,1.3s
TMUT Trail Mountain 83.13 45 P **P** **07 58 31.2 +0.9**
SML Sawmill 83.13 13 IAMs_20 IAMs_20 08 40 31.3
comp=Z,958nm,18.0s
WRAK Wrangell Islan 83.14 22 IAMs_20 IAMs_20 08 32 35.2
comp=Z,942nm,18.0s
SCM Sheep Creek Mo 83.36 13 IAmb IAmb 07 58 57.2
comp=Z,37nm,1.2s
SCM IAMs_20 IAMs_20 08 27 23.5
comp=Z,1µm,22.0s
PPLA Purkeypile 83.41 10 IAMs_20 IAMs_20 08 29 21.5
comp=Z,1µm,20.0s
ANM Nome 83.42 4 IAMs_20 IAMs_20 08 31 37.6
comp=Z,1µm,20.0s
LLLB Lillooet 83.49 31 P **P** **07 58 30.8 -0.7**
LLLB IAmb IAmb 07 58 38.3
comp=Z,30nm,1.5s
LLLB IAMs_20 IAMs_20 08 28 00.3
comp=Z,1µm,21.0s
WHN Wuhan 83.52 305 P P 07 58 37.1 +5.0
WHN S **S** **08 08 59.0 +5.7**
WHN LR LR
comp=Z,340nm,9.0s
WHN LR LR
comp=Z,770nm,14.9s
WHN LR LR
comp=Z,1µm,21.2s
C09A Chrisman Ranch 83.60 35 IAMs_20 IAMs_20 08 29 48.6
comp=Z,885nm,19.0s
MNTX Comudas Mount 83.67 54 P **P** **07 58 34.1 +1.2**
baz=244
UNM Universidad Na 83.71 67 IAMs_20 IAMs_20 08 26 49.5
comp=Z,1µm,21.0s
VRDI Verde Repeater 83.71 15 IAmb IAmb 07 58 38.9
comp=Z,24nm,1.2s
VRDI IAMs_20 IAMs_20 08 29 29.8
comp=Z,899nm,20.0s
BALM Baldy 83.82 15 IAmb IAmb 07 58 46.4
comp=Z,19nm,1.1s
BALM IAMs_20 IAMs_20 08 27 52.8
comp=Z,1µm,20.0s
MVCO Mesa Verde 83.94 48 P **P** **07 58 32.2 -2.2**
baz=241
MCARA McCarthy VSAT 83.95 15 IAmb IAmb 07 58 56.9
comp=Z,25nm,1.4s
MCARA IAMs_20 IAMs_20 08 30 08.2
comp=Z,918nm,20.0s
TX31 Lajitas Ar. Si 83.97 56 P **P** **07 58 35.6 +1.0**
TX32 Lajitas Array 83.97 56 IAmb IAmb 07 58 46.2
comp=Z,51nm,1.7s
TXAR Lajitas Array 83.97 56 P **P** **07 58 36.0 +1.4**
comp=Z,3.4nm,0.9s,baz=212,slow=6.9,SNR=24
TXAR LR LR 08 27 57.8
comp=Z,511nm,21.6s,baz=0.0,slow=30
CTGM Chitina Glacie 84.02 16 IAmb IAmb 07 59 02.0
comp=Z,20nm,1.2s
MAW Mawson 84.04 199 P **P** **07 58 34.9 +0.9**
comp=Z,3.9nm,0.9s,baz=92,slow=6.2,SNR=4.1
MAW LR LR 08 34 23.0
comp=Z,1µm,18.4s,baz=110,slow=35
MAW Mawson 84.04 199 P **P** **07 58 35.0 +0.9**
MAW pmax pmax
comp=Z,5.0nm,0.4s
MAW Mawson 84.04 199 P **P** **07 58 35.0 +0.9**
MAW IAmb IAmb 08 01 35.3
comp=Z,5.4nm,0.3s
HWUT Hardware Ranch 84.09 43 IAMs_20 IAMs_20 08 34 58.3
comp=Z,810nm,18.0s
BKNI Bangkinang 84.11 272 IAMs_20 IAMs_20 08 35 32.4
comp=Z,1µm,21.0s
PV17 East Wray Mesa 84.14 46 IAmb IAmb 07 58 43.0
comp=Z,52nm,1.7s
PV14 Lion Creek, Pa 84.14 46 IAmb IAmb 07 58 45.5
comp=Z,16nm,1.0s
PV18 Skein Mesa, Pa 84.16 46 IAmb IAmb 07 58 43.1
comp=Z,42nm,1.6s
PV20 West Nyswonger 84.17 46 P **P** **07 58 36.5 +1.0**
PV20 IAmb IAmb 07 58 44.9
comp=Z,24nm,1.2s
PV13 Radium Mtn., P 84.18 47 IAmb IAmb 07 58 44.0
comp=Z,30nm,1.4s
PV16 Nyswonger Mesa 84.19 46 IAmb IAmb 07 59 12.0
comp=Z,60nm,2.0s
PV23 Carpenter Ridg 84.19 46 IAmb IAmb 07 58 45.8
comp=Z,21nm,1.0s
PV03 Paradox Valley 84.21 46 IAmb IAmb 07 58 43.3
comp=Z,50nm,1.7s
PV03 IAMs_20 IAMs_20 08 29 55.2
comp=Z,863nm,20.0s
PV11 David Mesa, Pa 84.21 46 IAmb IAmb 07 58 45.3
comp=Z,26nm,1.2s
KTH Kantishna Hill 84.23 11 P **P** **07 58 34.1 -1.0**
KTH IAmb IAmb 07 58 47.3
comp=Z,48nm,1.6s
KTH IAMs_20 IAMs_20 08 29 47.4
comp=Z,1µm,20.0s
PV04 Paradox Valley 84.23 46 IAmb IAmb 07 58 46.0
comp=Z,21nm,1.2s
PV04 IAMs_20 IAMs_20 08 30 02.0
comp=Z,1µm,20.0s
TRF Thorofare Moun 84.25 11 IAmb IAmb 07 58 42.9
comp=Z,23nm,1.1s
PV02 Paradox Valley 84.26 47 IAmb IAmb 07 58 43.5
comp=Z,51nm,1.8s
PV12 Saucer Basin, 84.27 46 IAmb IAmb 07 58 46.3
comp=Z,37nm,1.2s
PV12 IAMs_20 IAMs_20 08 28 17.9
comp=Z,1µm,20.0s
PV21 Cone Mtn., Par 84.27 46 IAMs_20 IAMs_20 08 29 10.8
comp=Z,943nm,21.0s
ANMO Albuquerque 84.34 50⇓ *i*P **P** **07 58 38.2 +1.8**
ANMO pmax pmax
comp=Z,27nm,2.5s
ANMO Albuquerque 84.34 50 P P **07 58 37.4 +0.9**
baz=243
ANMO Albuquerque 84.34 50 P **P** **07 58 36.7 +0.3**
ANMO IAmb IAmb 07 58 47.1
comp=Z,23nm,1.4s
PV01 Paradox Valley 84.34 47 IAmb IAmb 07 58 43.9
comp=Z,59nm,1.9s
HARP HAARP 84.34 14 IAMs_20 IAMs_20 08 30 36.4
comp=Z,1µm,21.0s
PV22 Blue Mesa, Par 84.39 46 P **P** **07 58 37.2 +0.6**
PV22 IAmb IAmb 07 58 44.3
comp=Z,40nm,1.7s
DHY Denali Highway 84.47 12 IAmb IAmb 07 58 42.4
comp=Z,36nm,1.6s
DHY IAMs_20 IAMs_20 08 41 03.7
comp=Z,868nm,18.0s
NEW Newport 84.49 35 IAMs_20 IAMs_20 08 30 24.2
comp=Z,961nm,20.0s
PV15 Paradox Valley 84.50 47 IAmb IAmb 07 58 56.3
comp=Z,18nm,1.2s
MCK McKinley 84.76 11 P **P** **07 58 36.4 -1.3**
MCK pmax pmax
comp=Z,33nm,1.1s
MCK McKinley 84.76 11 P **P** **07 58 36.4 -1.3**
MCK IAmb IAmb 07 58 46.9
comp=Z,33nm,1.1s
HYT Haines Junctio 84.95 18 IAmb IAmb 07 58 45.9
comp=Z,40nm,1.7s
AHID Auburn Hatcher 84.98 42 IAmb IAmb 07 58 46.8
comp=Z,41nm,1.6s
MENT Mentasta 85.14 14 IAMs_20 IAMs_20 08 30 41.4
comp=Z,1µm,20.0s
SEY Seymchan 85.31 346⇓ *i*P **P** **07 58 39.5 -0.9**
S22A 4UR Ranch, Cre 85.37 48 P **P** **07 58 42.7 +1.0**
baz=242
DLMT Dillon 85.43 39 P **P** **07 58 42.0 +0.3**
DLMT IAmb IAmb 07 58 49.0
comp=Z,44nm,1.5s
MSO Missoula 85.45 37 P **P** **07 58 42.3 +0.6**
baz=237
MSO Missoula 85.45 37 IAmb IAmb 07 58 48.1
comp=Z,34nm,1.6s
MSO IAMs_20 IAMs_20 08 30 16.6
comp=Z,1µm,20.0s
REDW Red Top Meadow 85.45 41 IAmb IAmb 07 58 53.3
comp=Z,41nm,1.5s
TPAW Teton Pass 85.45 41 IAmb IAmb 07 59 10.2
comp=Z,40nm,1.6s
FXWY Fox Creek 85.48 41 IAmb IAmb 07 58 49.5
comp=Z,34nm,1.7s
DLBC Dease Lake 85.48 22 IAMs_20 IAMs_20 08 35 27.2
comp=Z,1µm,20.0s
O20A White River Ci 85.53 45 P **P** **07 58 42.9 +0.5**
baz=241
O20A White River Ci 85.53 45 IAmb IAmb 07 58 49.7
comp=Z,65nm,2.0s
O20A IAMs_20 IAMs_20 08 29 48.1
comp=Z,889nm,20.0s
SNOW Snow King Moun 85.56 41 P **P** **07 58 42.9 +0.4**
WHY Whitehorse 85.59 19 IAmb IAmb 07 59 00.4
comp=Z,47nm,1.8s
RIDG Independent Ri 85.59 13 IAMs_20 IAMs_20 08 32 23.0
comp=Z,1µm,20.0s
MLY Manley 85.63 10 IAmb IAmb 07 58 47.4
comp=Z,21nm,1.2s
IMW Indian Meadow 85.67 41 P **P** **07 58 44.1 +1.1**
IMW IAmb IAmb 07 58 51.2
comp=Z,18nm,1.1s
DOT Dot Lake 85.68 13 IAmb IAmb 07 58 56.3
comp=Z,20nm,1.0s
DOT IAMs_20 IAMs_20 08 28 44.7
comp=Z,1µm,22.0s
HDA Harding Lake 85.75 12 P **P** **07 58 42.5 -0.1**
baz=207
HDA Harding Lake 85.75 12 IAmb IAmb 07 58 48.0
comp=Z,18nm,0.9s
HDA IAMs_20 IAMs_20 08 29 18.6
comp=Z,885nm,22.0s
BW06 Boulder Array 85.96 42 P **P** **07 58 43.2 -1.2**
baz=240
PDAR Pinedale Array 85.96 42 P **P** **07 58 44.6 +0.1**
comp=Z,2.2nm,0.8s,baz=187,slow=2.9,SNR=10
SCRK Sand Creek 85.98 13 IAMs_20 IAMs_20 08 29 27.7
comp=Z,1µm,21.0s
TCOL CIGO, UAF Yank 86.00 11 P **P** **07 58 43.9 +0.1**
baz=206
COLA College 86.00 11*c i*P **P** **07 58 42.9 -0.9**
COLA pmax pmax
comp=Z,20nm,1.1s
COLA College 86.00 11 P **P** **07 58 42.8 -1.0**
IL31 86.09 12 P **P** **07 58 43.3 -0.9**
IL31 IAmb IAmb 07 58 50.9
comp=Z,42nm,1.4s
ILAR Eielson Array 86.09 12 P **P** **07 58 43.3 -1.0**
comp=Z,10.0nm,1.2s,baz=217,slow=5.8,SNR=24
ILAR LR LR 08 30 02.5
comp=Z,816nm,21.8s,baz=218,slow=31
H17A Grant Village 86.15 41 P **P** **07 58 46.8 +1.4**
baz=239
POKR Poker Plat Res 86.30 11 P **P** **07 58 47.1 +1.8**
baz=206
SDCO Great Sand Dun 86.30 48 P **P** **07 58 46.9 +0.6**
baz=243
LKWY Lake 86.35 40 IAmb IAmb 07 59 07.3
comp=Z,23nm,1.4s
BJI Beijing 86.49 314 P **P** **07 58 46.6 -0.2**

BJI sP pwP 07 59 02.9 +8.1
BJI S **S** **08 09 28.0 +5.6**
BJI SS **SS** **08 15 04.4 +0.9**
BJI pmax pmax
comp=Z,12nm,1.9s
BJI LR LR
comp=Z,470nm,17.2s
BJI LR LR
comp=Z,160nm,14.7s
BJI LR LR
comp=Z,570nm,25.0s
MSTX Muleshoe 86.64 53 P **P** **07 58 48.5 +0.6**
baz=245
MSTX Muleshoe 86.64 53 IAMs_20 IAMs_20 08 28 47.8
comp=Z,1µm,22.0s
WALA Waterton Lakes 86.69 35 P **P** **07 58 48.0 +0.3**
WALA IAmb IAmb 07 58 54.6
comp=Z,38nm,1.4s
WALA IAMs_20 IAMs_20 08 31 34.5
comp=Z,930nm,20.0s
RPSI Rantau Prapat 86.87 274 IAMs_20 IAMs_20 08 39 06.5
comp=Z,1µm,20.0s
PSI Prapat 86.91 274 P **P** **07 58 48.2 -1.4**
comp=Z,5.0nm,0.7s,baz=179,slow=5.9,SNR=4.1
PSI Prapat 86.91 274 P **P** **07 58 48.5 -1.1**
PSI pmax pmax
comp=Z,9.0nm,1.2s
RWWY Rawlins 86.96 44 IAMs_20 IAMs_20 08 31 19.8
comp=Z,1µm,20.0s
833A Chaparral WMA, 86.98 59 P **P** **07 58 50.4 +0.8**
baz=247
PRP Porcupine Dome 87.02 12 IAmb IAmb 07 59 02.9
comp=Z,25nm,1.3s
PRP IAMs_20 IAMs_20 08 39 31.1
comp=Z,773nm,19.0s
RDOG Red Dog Mine 87.05 5 IAMs_20 IAMs_20 08 30 48.5
comp=Z,1µm,22.0s
Q24A Divide 87.10 47 P **P** **07 58 50.7 +0.5**
baz=243
DAWY Dawson 87.12 15 IAmb IAmb 07 58 56.1
comp=Z,33nm,1.3s
DAWY IAMs_20 IAMs_20 08 30 01.0
comp=Z,1µm,22.0s
ISCO Idaho Springs 87.16 46 P **P** **07 58 50.8 +0.3**
baz=243
EGAK Eagle 87.30 14 IAmb IAmb 07 59 04.5
comp=Z,17nm,1.0s
EGAK IAMs_20 IAMs_20 08 29 23.7
comp=Z,1µm,22.0s
RLMT Red Lodge 87.32 40 P **P** **07 58 52.0 +1.0**
baz=240
RLMT Red Lodge 87.32 40 IAmb IAmb 07 58 57.6
comp=Z,33nm,1.9s
ZEA Zeya 87.40 330 *e*P **P** **07 58 51.2 +0.3**
ZEA *e*S **S** **08 09 33.0 +2.4**
ZEA pmax pmax
comp=Z,55nm,1.4s
ZEA pmax pmax
comp=N,29nm,1.2s
JCT Junction City 87.50 57 P **P** **07 58 52.8 +0.7**
baz=247
JCT Junction City 87.50 57 IAmb IAmb 07 59 01.5
comp=Z,14nm,0.9s
BILL Bilibino 87.61 353⇑ *e*P **P** **07 58 51.2 -0.4**
BILL *e* 08 02 16.8
BILL *i* S SKSac 08 09 05.6 -13
BILL *i* SSS SSS 08 18 45.0
BILL pmax pmax
comp=Z,9.0nm,1.2s
BILL Bilibino 87.61 353 P **P** **07 58 51.2 -0.4**
COLD Coldfoot 87.74 10 IAMs_20 IAMs_20 08 32 08.0
comp=Z,975nm,21.0s
AMTX Amarillo 87.84 52 IAMs_20 IAMs_20 08 29 01.6
comp=Z,991nm,22.0s
K22A Casper 87.86 43 IAMs_20 IAMs_20 08 36 24.3
comp=Z,922nm,18.0s
FYU Fort Yukon 88.00 12 IAMs_20 IAMs_20 08 30 28.1
comp=Z,1µm,22.0s
GYA Guiyang 88.04 299⇑ *i*P **P** **07 58 53.1 -1.7**
GYA PP **PP** **08 02 26.9 +5.1**
GYA SKS **SKSac** **08 09 19.0 -4.0**
GYA S **SKKSac** **08 09 34.6 +1.4**
GYA pmax pmax
comp=Z,10.0nm,0.6s
GYA pmax pmax
comp=Z,60nm,3.5s
GYA LR LR
comp=Z,240nm,18.5s
GYA LR LR
comp=Z,270nm,20.2s
GYA LR LR
comp=Z,340nm,20.9s
ABTX Abilene, Hawle 88.47 55 P **P** **07 58 57.7 +1.1**
baz=247
ABTX Abilene, Hawle 88.47 55 IAMs_20 IAMs_20 08 30 50.7
comp=Z,1µm,20.0s
EGMT Eagleton 88.49 38 P **P** **07 58 57.3 +1.0**
baz=240
PLCA Paso Flores 88.58 133 LR LR 08 30 35.1
comp=Z,500nm,20.7s,baz=268,slow=30
HIA Hailar 88.80 324 IAMs_20 IAMs_20 08 33 26.9
comp=Z,1µm,21.0s
SYO Syowa Base 88.95 192⇓ *e*P **P** **07 58 57.0 -1.2**
SYO Syowa Base 88.95 192⇑ *e*pP pP 07 59 01.6 -1.7
TOLK Toolik Lake Re 89.14 9 P **P** **07 59 00.2 +1.3**
baz=204
TOLK Toolik Lake Re 89.14 9 IAMs_20 IAMs_20 08 35 06.8
comp=Z,757nm,20.0s
XAN Xi'an 89.15 306 P **P** **07 58 59.5 -0.2**
XAN pP pwP 07 59 09.5 +1.7
XAN sP sP 07 59 14.0 +7.3
XAN PP **PP** **08 02 31.3 +0.9**
XAN SKS **SKSac** **08 09 25.5 -3.6**
XAN S **S** **08 09 46.9 -1.3**
XAN pmax pmax
comp=Z,9.0nm,1.1s
XAN pmax pmax
comp=Z,130nm,3.8s
XAN LR LR
comp=Z,230nm,16.3s
XAN LR LR
comp=Z,220nm,17.1s
XAN LR LR
comp=Z,370nm,22.8s
XAN Xi'an 89.15 306 P **P** **07 58 59.5 -0.2**
XAN pmax pmax
comp=Z,63nm,1.5s
XAN MLR MLR
comp=Z,400nm,20.0s
XAN Xi'an 89.15 306 P **P** **07 58 59.5 -0.2**
SNAA Sanae 89.64 178 P **P** **07 59 01.3 -0.2**
SNAA Sanae 89.64 178⇑ *e*P **P** **07 59 02.2 +0.7**
SNAA Sanae 89.64 178 P **P** **07 59 02.1 +0.6**
SNAA IAmb IAmb 07 59 07.6
comp=Z,33nm,1.7s
SNAA IAMs_20 IAMs_20 08 32 55.5
comp=Z,1µm,22.0s
EPYK Eagle Plains 89.66 15 P **P** **07 59 01.8 +0.4**
baz=216
EPYK Eagle Plains 89.66 15 IAMs_20 IAMs_20 08 30 59.1
comp=Z,997nm,22.0s
WHTX Lake Whitney, 89.94 56 P **P** **07 59 04.1 +0.7**
baz=248
WHTX Lake Whitney, 89.94 56 IAmb IAmb 07 59 12.5
comp=Z,24nm,1.1s
WHTX IAMs_20 IAMs_20 08 31 56.5
comp=Z,762nm,20.0s
LAO LASA Array 89.94 40 P **P** **07 59 03.8 +0.6**
baz=242
WMOK Wichita Mounta 89.96 53 P **P** **07 59 03.4 -0.2**
baz=247
HHC Hu-ho-hao-te 90.00 313 P P 07 58 51.1 -13
HHC sP sP 07 59 09.8 -0.8
HHC Hu-ho-hao-te 90.00 313 S **SKSac** **08 09 39.5 +5.5**
HHC Hu-ho-hao-te 90.00 313 sS sS 08 10 04.3 -0.3
HHC pmax pmax
comp=Z,7.0nm,0.9s
HHC pmax pmax
comp=Z,39nm,4.9s
HHC LR LR
comp=N,170nm,21.6s
HHC LR LR
comp=E,310nm,17.3s
HHC LR LR
comp=Z,450nm,17.3s
OGNE Ogallala 90.12 47 IAMs_20 IAMs_20 08 37 35.6
comp=Z,703nm,18.0s

VNA2 Neumayer--Watz 90.14 176 P **P** **07 59 04.6 +0.8**
baz=198,slow=3.5
RSSD Black Hills 90.15 43 P **P** **07 59 05.0 +0.6**
baz=244
HKT Hockley 90.48 59⇓ *e*P **P** **07 59 06.1 +0.2**
HKT pmax pmax
comp=Z,21nm,1.9s
HKT Hockley 90.48 59 P **P** **07 59 06.5 +0.5**
HKT IAmb IAmb 07 59 27.2
comp=Z,33nm,1.7s
Z35A Perchaven, San 90.60 55 IAMs_20 IAMs_20 08 31 36.9
comp=Z,1µm,22.0s
X34A Smith Ranch, M 90.63 54 IAMs_20 IAMs_20 08 31 46.7
comp=Z,873nm,20.0s
SNET Serv Nac Est T 90.68 76 IAMs_20 IAMs_20 08 29 37.0
comp=Z,1µm,22.0s
CBKS Cedar Bluff 90.86 49 P **P** **07 59 08.2 +0.5**
baz=247
KMI Kunming 90.87 296 P **P** **07 59 09.5 +1.3**
KMI pP pwP 07 59 19.2 +3.0
KMI sP sP 07 59 24.4 +9.2
KMI SKS **SKSac** **08 09 38.5 -1.4**
KMI S **S** **08 10 01.7 -3.2**
KMI sS sS 08 10 16.1 +2.7
KMI SS **SS** **08 16 05.1 -3.1**
KMI pmax pmax
comp=Z,5.0nm,1.0s
KMI pmax pmax
comp=Z,36nm,3.1s
KMI LR LR
comp=Z,140nm,35.4s
KMI LR LR
comp=Z,520nm,21.6s
KMI LR LR
comp=Z,630nm,23.6s
BTO Baotou 90.97 313 *e*P P 07 59 15.5 +7.3
R32A Long Quarter, 91.44 50 P **P** **07 59 11.0 +0.6**
R32A IAmb IAmb 07 59 18.0
comp=Z,14nm,0.8s
R32A IAMs_20 IAMs_20 08 33 30.9
comp=Z,744nm,19.0s
INK Inuvik 91.96 14 P **P** **07 59 11.9 0.0**
comp=Z,3.5nm,0.9s,baz=197,slow=4.7,SNR=9.3
INK Inuvik 91.96 14 P **P** **07 59 11.5 -0.5**
INK pmax pmax
comp=Z,19nm,1.4s
INK Inuvik 91.96 14 P **P** **07 59 11.4 -0.5**
INK IAmb IAmb 07 59 18.1
comp=Z,19nm,1.4s
INK IAMs_20 IAMs_20 08 32 32.8
comp=Z,846nm,22.0s
CMAR Chiang Mai Arr 91.97 289 P **P** **07 59 13.0 -0.2**
comp=Z,0.7nm,0.4s,baz=110,slow=3.1,SNR=6.7
CMAR Chiang Mai Arr 91.97 289 *i* P **P** **07 59 13.8 +0.6**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
DGMT Dagmar 91.97 39 P **P** **07 59 13.5 +0.9**
baz=244
DGMT Dagmar 91.97 39 IAMs_20 IAMs_20 08 34 21.5
comp=Z,961nm,19.0s
CD2 Chengdu 92.03 302 P **P** **07 59 13.0 -0.3**
CD2 S **S** **08 10 14.0 -0.9**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 LR LR
comp=Z,740nm,26.5s
CD2 LR LR
comp=Z,590nm,20.6s
CD2 LR LR
comp=Z,560nm,24.5s
NATX Nacogdoches 92.07 57 IAMs_20 IAMs_20 08 34 59.0
comp=Z,799nm,20.0s
Z38A Mt. Pleasant 92.34 56 IAMs_20 IAMs_20 08 33 21.1
comp=Z,840nm,20.0s
T35A Sooner Cattle 92.49 52 IAmb IAmb 07 59 24.5
comp=Z,11nm,0.8s
T35A IAMs_20 IAMs_20 08 32 11.8
comp=Z,931nm,22.0s
X37A Clayton 92.52 54 IAMs_20 IAMs_20 08 33 03.2
comp=Z,1µm,21.0s
GO04 Tololo Observa 92.60 123 P **P** **07 59 13.2 -3.0**
TGUH Tegucigalpa,Un 92.60 76 IAMs_20 IAMs_20 08 30 34.9
comp=Z,909nm,22.0s
TUL1 Leonard 92.67 53 P **P** **07 59 16.5 +0.5**
baz=249
TUL1 Leonard 92.67 53 IAmb IAmb 07 59 24.7
comp=Z,17nm,0.9s
BGNE Belgrade 92.99 47 IAMs_20 IAMs_20 08 35 50.6
comp=Z,917nm,20.0s
KSU1 Kansas State U 93.22 50 IAMs_20 IAMs_20 08 34 26.0
comp=Z,736nm,20.0s
E28A Huff 93.32 42 IAMs_20 IAMs_20 08 40 17.5
comp=Z,642nm,18.0s
JTS Las Juntas de 93.57 80⇑ *e*P **P** **07 59 21.6 +0.9**
JTS pmax pmax
comp=Z,20nm,2.2s
SUSD Miller 93.60 44 IAMs_20 IAMs_20 08 34 59.6
comp=Z,976nm,21.0s
TEIG Tepich 93.64 70 IAMs_20 IAMs_20 08 32 57.0
comp=Z,1µm,20.0s
LZH Lanzhou 93.77 307 *e*P **P** **07 59 23.0 +1.7**
LZH pP pwP 07 59 32.0 +2.6
LZH sP sP 07 59 36.8 +8.5
LZH PP **PP** **08 03 13.1 +6.1**
LZH SKS **SKSac** **08 09 54.6 -1.0**
LZH pmax pmax
comp=Z,28nm,1.1s
LZH pmax pmax
comp=Z,210nm,4.8s
LZH LR LR
comp=Z,450nm,15.4s
LZH LR LR
comp=Z,370nm,16.3s
LZH LR LR
comp=Z,470nm,16.7s
ACON Acoyapa 93.88 79 IAMs_20 IAMs_20 08 31 32.2
comp=Z,914nm,20.0s
MIAR Mount Ida 93.89 55 P **P** **07 59 23.3 +1.6**
MIAR pmax pmax
comp=Z,16nm,2.0s
MIAR Mount Ida 93.89 55 P **P** **07 59 21.9 +0.2**
baz=250
MIAR Mount Ida 93.89 55 IAMs_20 IAMs_20 08 34 11.0
comp=Z,736nm,21.0s
YKA Yellowknife Ar 93.89 24 P **P** **07 59 20.9 -0.1**
comp=Z,1.7nm,0.9s,baz=230,slow=4.1,SNR=13
YKA LR LR 08 38 31.6
comp=Z,725nm,18.0s,baz=0.0,slow=34
U38A Gravette 93.92 53 IAmb IAmb 07 59 30.3
comp=Z,22nm,1.4s
W39A Magazine 93.95 54 P **P** **07 59 22.0 +0.1**
baz=250
W39A Magazine 93.95 54 IAMs_20 IAMs_20 08 34 05.6
comp=Z,1µm,20.0s
WLAR White Oak Lake 93.96 56 IAMs_20 IAMs_20 08 33 28.9
comp=Z,839nm,22.0s
NNA Nana 94.02 104⇑ *e*P **P** **07 59 20.3 -2.6**
NNA pmax pmax
comp=Z,23nm,1.1s
NNA Nana 94.02 104 IAMs_20 IAMs_20 08 31 55.1
comp=Z,969nm,21.0s
ESPN Las Esperanzas 94.77 79 IAMs_20 IAMs_20 08 32 06.6
comp=Z,1µm,20.0s
ECSD EROS Data Cent 94.90 46 P **P** **07 59 26.1 -0.1**
baz=249
ECSD EROS Data Cent 94.90 46 P **P** **07 59 24.6 -1.6**
ECSD IAmb IAmb 07 59 35.4
comp=Z,13nm,1.3s
U40A Yellville 95.05 53 P **P** **07 59 26.3 -0.7**
baz=251
U40A Yellville 95.05 53 IAmb IAmb 07 59 36.0
comp=Z,15nm,1.1s
C36M Paulatuk 95.08 16 P **P** **07 59 26.8 +0.5**
baz=228
CCAR Cane Creek 95.09 56 IAMs_20 IAMs_20 08 34 46.8
comp=Z,879nm,20.0s
W41B Gary Mavity, V 95.13 55 P **P** **07 59 26.6 -0.7**
baz=251
WHAR Wooly Hollow 95.13 55 IAMs_20 IAMs_20 08 34 51.0
comp=Z,1µm,21.0s
S39A Bolivar 95.14 52 IAmb IAmb 07 59 35.6
comp=Z,12nm,1.1s
S39A IAMs_20 IAMs_20 08 33 33.1
comp=Z,844nm,22.0s
FCAR Ozark Folk Cen 95.46 54 P **P** **07 59 29.0 +0.1**
FCAR IAmb IAmb 07 59 37.1
comp=Z,27nm,1.4s

FCAR IAMs_20 IAMs_20 08 35 01.5
comp=Z,1µm,20.0s
P38A Dawn 95.64 50 IAMs_20 IAMs_20 08 34 13.0
comp=Z,861nm,22.0s
ULN Ulaanbaatar 95.75 319⇑ *e*P **P** **07 59 30.0 -0.1**
ULN pmax pmax
comp=Z,2.0nm,1.2s
F33A 5 Mile Ranch, 95.87 44 IAMs_20 IAMs_20 08 41 22.2
comp=Z,813nm,18.0s
FFC Flin Flon 95.89 34 IAMs_20 IAMs_20 08 36 59.6
comp=Z,843nm,20.0s
LCAR Lake Charles 96.26 54 IAmb IAmb 07 59 34.4
comp=Z,13nm,1.4s
LCAR IAMs_20 IAMs_20 08 35 13.7
comp=Z,1µm,21.0s
A36M Sachs Harbour 96.58 14 P **P** **07 59 33.9 +0.8**
baz=227
SCIA State Center 96.62 48 IAMs_20 IAMs_20 08 37 17.8
comp=Z,764nm,19.0s
P40A Paris 96.69 51 IAMs_20 IAMs_20 08 35 39.9
comp=Z,886nm,22.0s
LPAR Lepanto 96.77 55 IAMs_20 IAMs_20 08 35 09.3
comp=Z,710nm,21.0s
CCM Cathedral Cave 96.82 52 IAMs_20 IAMs_20 08 35 06.4
comp=Z,908nm,22.0s
Y45A Yeager Farm, C 96.83 57 IAMs_20 IAMs_20 08 35 07.0
comp=Z,835nm,21.0s
PBMO Poplar Bluff 97.04 54 IAMs_20 IAMs_20 08 36 02.3
comp=Z,767nm,21.0s
GNAR Gosnell 97.10 55 IAMs_20 IAMs_20 08 35 50.1
comp=Z,771nm,20.0s
OXF Oxford 97.13 56 IAMs_20 IAMs_20 08 35 39.0
comp=Z,715nm,22.0s
K38A Parkersburg 97.17 48 IAMs_20 IAMs_20 08 38 50.4
comp=Z,659nm,20.0s
PEBM Pemiscott Bayo 97.27 54 IAMs_20 IAMs_20 08 36 16.4
comp=Z,830nm,21.0s
PSGCX Pisagua 97.30 113 IAMs_20 IAMs_20 08 33 43.5
comp=Z,763nm,21.0s
PVMO Portageville 97.48 54 IAMs_20 IAMs_20 08 36 12.1
comp=Z,942nm,21.0s
PB12 IPOC Station P 97.50 112 IAMs_20 IAMs_20 08 34 08.8
comp=Z,1µm,20.0s
PARMO Parma 97.52 54 IAMs_20 IAMs_20 08 36 13.1
comp=Z,972nm,21.0s
LNXT Lenox 97.55 55 IAMs_20 IAMs_20 08 36 13.9
comp=Z,748nm,20.0s
PENMO Penman 97.55 54 IAMs_20 IAMs_20 08 36 13.9
comp=Z,934nm,21.0s
HALT Halls 97.61 55 IAMs_20 IAMs_20 08 35 54.5
comp=Z,727nm,22.0s
ULM Lac du Bonnet 97.67 40 LR LR 08 38 34.1
comp=Z,1µm,19.5s,baz=253,slow=32
HENM Henderson Moun 97.75 54 IAMs_20 IAMs_20 08 36 31.2
comp=Z,908nm,21.0s
TIXI Tiksi 97.75 345⇑ *e*P **P** **07 59 35.7 -2.7**
TIXI pmax pmax
comp=Z,1.0nm,1.0s
GLAT Glass 97.76 54 IAMs_20 IAMs_20 08 36 10.4
comp=Z,930nm,22.0s
GTA Gaotai 97.87 309 *e*P Pdif 07 59 45.1 +5.1
GTA S **S** **08 11 04.4 -1.2**
GTA SS **SS** **08 17 43.6 -3.9**
GTA pmax pmax
comp=Z,4.0nm,0.8s
GTA pmax pmax
comp=Z,76nm,4.6s
GTA LR LR
comp=Z,220nm,19.2s
GTA LR LR
comp=Z,500nm,23.0s
GTA LR LR
comp=Z,530nm,23.7s
HICK Hickman 97.88 54 IAMs_20 IAMs_20 08 36 45.6
comp=Z,925nm,21.0s
N41A Harden Midland 97.93 50 IAMs_20 IAMs_20 08 38 09.5
comp=Z,701nm,20.0s
MNMC Minye Minye 97.94 113 IAMs_20 IAMs_20 08 35 39.4
comp=Z,870nm,19.0s
SPMN Marine on St. 97.97 45 P Pdif 07 59 40.6 +0.6
baz=252
SPMN Marine on St. 97.97 45 IAMs_20 IAMs_20 08 36 22.4
comp=Z,700nm,20.0s
L40A Anamosa 98.08 48 IAMs_20 IAMs_20 08 37 21.5
comp=Z,690nm,19.0s
S44A Carbondale 98.21 53 IAMs_20 IAMs_20 08 35 29.2
comp=Z,818nm,22.0s
PB16 IPOC Station P 98.32 113 IAMs_20 IAMs_20 08 35 04.6
comp=Z,1µm,20.0s
T45A Paducah 98.47 54 IAMs_20 IAMs_20 08 36 54.3
comp=Z,797nm,21.0s
P43A Skaggs, Pawnee 98.58 51 IAMs_20 IAMs_20 08 36 39.0
comp=Z,752nm,22.0s
WVT Waverly 98.84 55 IAMs_20 IAMs_20 08 36 10.2
comp=Z,850nm,22.0s
HDIL Hopedale 99.02 50 IAMs_20 IAMs_20 08 38 16.4
comp=Z,832nm,20.0s
JFWS Jewell Farm 99.02 48 IAMs_20 IAMs_20 08 37 09.2
comp=Z,868nm,22.0s
TLY Talaya 99.13 321 IAMs_20 IAMs_20 08 40 12.3
comp=Z,869nm,21.0s
Y49A Mount Mountai 99.32 57 IAMs_20 IAMs_20 08 38 35.9
comp=Z,712nm,21.0s
USIN University of 99.49 53 IAMs_20 IAMs_20 08 36 18.2
comp=Z,926nm,22.0s
O44A Mansfield 99.51 51 IAMs_20 IAMs_20 08 36 31.4
comp=Z,774nm,22.0s
V48A Smith Brothers 99.52 56 IAMs_20 IAMs_20 08 36 29.8
comp=Z,707nm,22.0s
T47A Sharon Grove 99.64 54 IAMs_20 IAMs_20 08 37 38.4
comp=Z,659nm,20.0s
EYMN Ely 99.67 43 IAMs_20 IAMs_20 08 45 13.5
comp=Z,606nm,18.0s
G40A Rib Lake 99.74 46 IAMs_20 IAMs_20 08 37 48.2
comp=Z,808nm,21.0s
CLTN Cedars of Leba 100.00 55 IAMs_20 IAMs_20 08 37 18.8
comp=Z,711nm,22.0s
FPAL Fort Paine 100.14 57 IAMs_20 IAMs_20 08 38 13.8
comp=Z,674nm,21.0s
M44A Midewin, Midew 100.16 50 IAMs_20 IAMs_20 08 38 21.6
comp=Z,800nm,20.0s
I42A Draeger Farm, 100.23 47 IAMs_20 IAMs_20 08 39 48.4
comp=Z,750nm,18.0s
P46A Rosedale 100.29 52 IAMs_20 IAMs_20 08 36 53.2
comp=Z,815nm,20.0s
SHL Shillong 100.34 294 IAMs_20 IAMs_20 08 54 01.8
comp=Z,868nm,20.0s
U49A Red Boiling Sp 100.54 55 IAMs_20 IAMs_20 08 37 36.1
comp=Z,760nm,21.0s
SFIN Lafayette 100.58 51 IAMs_20 IAMs_20 08 37 15.8
comp=Z,917nm,22.0s
WCI Wyandotte Cave 100.60 53 IAMs_20 IAMs_20 08 38 20.6
comp=Z,880nm,22.0s
BLO Bloomington 100.68 52 IAMs_20 IAMs_20 08 44 13.6
comp=Z,615nm,19.0s
Y52A Lilburn 101.20 58 IAMs_20 IAMs_20 08 38 21.9
comp=Z,909nm,22.0s
F42A Maple Grove Fa 101.27 45 IAMs_20 IAMs_20 08 38 54.7
comp=Z,686nm,20.0s
D41A Chassel 101.33 44 IAMs_20 IAMs_20 08 43 41.9
comp=Z,628nm,20.0s
T50A Nancy 101.40 55 IAMs_20 IAMs_20 08 38 01.9
comp=Z,631nm,20.0s
R49A Shelbyville 101.47 53 IAMs_20 IAMs_20 08 38 15.7
comp=Z,821nm,22.0s
GOGA Godfrey 101.56 59 IAMs_20 IAMs_20 08 39 33.4
comp=Z,689nm,22.0s
L46A Eue Claire 101.59 50 IAMs_20 IAMs_20 08 39 15.4
comp=Z,795nm,21.0s
N47A Urbana 101.74 51 IAMs_20 IAMs_20 08 39 31.5
comp=Z,708nm,21.0s
J45A Montague 101.88 48 IAMs_20 IAMs_20 08 40 08.0
comp=Z,702nm,21.0s
R50A Paris 102.11 54 IAMs_20 IAMs_20 08 38 46.6
comp=Z,799nm,22.0s
I45A Fountain 102.14 48 IAMs_20 IAMs_20 08 40 16.8
comp=Z,853nm,20.0s
E43A Lone Tree Farm 102.19 45 IAMs_20 IAMs_20 08 41 11.1
comp=Z,949nm,20.0s
S51A Beattyville 102.52 54 IAMs_20 IAMs_20 08 38 37.4
comp=Z,835nm,22.0s
060A Indiantown 102.54 66 IAMs_20 IAMs_20 08 39 42.2
comp=Z,1µm,21.0s
O49A Covington 102.57 52 IAMs_20 IAMs_20 08 38 04.6
comp=Z,698nm,22.0s
M48A Edgerton 102.60 50 IAMs_20 IAMs_20 08 41 59.3
comp=Z,780nm,20.0s
HODGE Hodges 102.74 58 IAMs_20 IAMs_20 08 41 54.7

comp=Z,628nm,20.0s
MTDJ Mount Denham 102.76 75 IAMs_20 IAMs_20 08 36 17.1
comp=Z,935nm,22.0s
G45A Suttons Bay 102.78 47 IAMs_20 IAMs_20 08 45 18.8
comp=Z,649nm,18.0s
N49A Columbus Grove 102.86 51 IAMs_20 IAMs_20 08 40 14.2
comp=Z,714nm,20.0s
J47A Sumner 102.94 49 IAMs_20 IAMs_20 08 40 12.1
comp=Z,743nm,19.0s
E44A Grand Marais A 102.97 45 IAMs_20 IAMs_20 08 41 44.7
comp=Z,798nm,19.0s
Q51A Peebles 103.04 53 IAMs_20 IAMs_20 08 38 42.1
comp=Z,730nm,22.0s
I47A Gladwin 103.34 48 IAMs_20 IAMs_20 08 41 12.7
comp=Z,900nm,21.0s
P51A Williamsport 103.36 53 IAMs_20 IAMs_20 08 39 27.5
comp=Z,656nm,22.0s
AAM Ann Arbor 103.56 50 IAMs_20 IAMs_20 08 46 05.6
comp=Z,587nm,20.0s
J48A Bridge Port 103.69 49 IAMs_20 IAMs_20 08 40 55.0
comp=Z,805nm,20.0s
KMSC Kings Mountain 103.70 57 IAMs_20 IAMs_20 08 42 25.9
comp=Z,604nm,20.0s
M50A Fremont 103.81 51 IAMs_20 IAMs_20 08 40 01.2
comp=Z,833nm,20.0s
R53A Hurricane 103.94 54 IAMs_20 IAMs_20 08 40 05.0
comp=Z,825nm,20.0s
V55A Taylorsville 103.96 57 IAMs_20 IAMs_20 08 38 58.7
comp=Z,686nm,22.0s
E46A Sault Ste Mari 104.00 46 IAMs_20 IAMs_20 08 42 18.0
comp=Z,791nm,20.0s
Y57A Sumter 104.20 59 IAMs_20 IAMs_20 08 41 19.3
comp=Z,783nm,20.0s
S54A Dingess, Beckl 104.31 55 IAMs_20 IAMs_20 08 39 55.0
comp=Z,1µm,22.0s
H48A Harrisville 104.32 47 IAMs_20 IAMs_20 08 41 53.5
comp=Z,942nm,21.0s
K50A Casco 104.41 49 IAMs_20 IAMs_20 08 39 26.0
comp=Z,686nm,21.0s
O52A Adamsville 104.42 52 IAMs_20 IAMs_20 08 39 46.6
comp=Z,758nm,22.0s
I49A Point Hope 104.51 48 IAMs_20 IAMs_20 08 40 26.7
comp=Z,922nm,20.0s
P53A Whipple 104.62 53 IAMs_20 IAMs_20 08 39 19.0
comp=Z,714nm,22.0s
W57A Gilead 104.77 58 IAMs_20 IAMs_20 08 43 26.4
comp=Z,693nm,19.0s
BLA Blacksburg 104.88 55 IAMs_20 IAMs_20 08 40 20.0
comp=Z,763nm,22.0s
Q54A Coxs Mills 104.94 54 IAMs_20 IAMs_20 08 40 15.4
comp=Z,736nm,19.0s
M52A Chesterland 105.07 51 IAMs_20 IAMs_20 08 42 10.8
comp=Z,782nm,21.0s
X58A Rowland 105.17 58 IAMs_20 IAMs_20 08 41 14.9
comp=Z,876nm,21.0s
N53A Lisbon 105.31 52 IAMs_20 IAMs_20 08 40 03.1
comp=Z,813nm,22.0s
R55A Marlinton 105.34 54 IAMs_20 IAMs_20 08 40 36.1
comp=Z,961nm,22.0s
Y59A Loris 105.42 59 IAMs_20 IAMs_20 08 43 39.5
comp=Z,575nm,19.0s
O54A Avella 105.53 52 IAMs_20 IAMs_20 08 40 19.9
comp=Z,865nm,21.0s
V58A Windy Hill, Pi 105.61 57 IAMs_20 IAMs_20 08 42 03.5
comp=Z,656nm,22.0s
T57A Hurt 105.75 56 IAMs_20 IAMs_20 08 41 41.0
comp=Z,777nm,22.0s
N54A Moraine State 105.97 52 IAMs_20 IAMs_20 08 40 22.4
comp=Z,886nm,22.0s
S57A Dark Hollow, R 106.13 55 IAMs_20 IAMs_20 08 41 34.2
comp=Z,746nm,22.0s
ERPA Erie 106.19 50 IAMs_20 IAMs_20 08 42 06.3
comp=Z,845nm,21.0s
Q56A Snyder Ridge, 106.20 54 IAMs_20 IAMs_20 08 40 42.9
comp=Z,855nm,22.0s
M54A Oil Creek Stat 106.31 51 IAMs_20 IAMs_20 08 39 33.6
comp=Z,691nm,22.0s
U59A Littleton 106.77 57 IAMs_20 IAMs_20 08 44 09.2
comp=Z,726nm,21.0s
S58A Poland Farm, P 106.81 55 IAMs_20 IAMs_20 08 42 01.1
comp=Z,624nm,21.0s
O56A Blue Knob Stat 106.91 53 IAMs_20 IAMs_20 08 42 33.4
comp=Z,673nm,21.0s
M55A Ridgway 106.97 51 IAMs_20 IAMs_20 08 41 40.0
comp=Z,609nm,20.0s
R58B Mineral 107.01 55 IAMs_20 IAMs_20 08 42 11.3
comp=Z,717nm,21.0s
T59A Double "B" Far 107.08 56 IAMs_20 IAMs_20 08 43 40.2
comp=Z,622nm,22.0s
V60A Jim Taylor Roa 107.08 57 IAMs_20 IAMs_20 08 42 01.4
comp=Z,636nm,22.0s
P57A Homestead Farm 107.18 53 IAMs_20 IAMs_20 08 41 00.8
comp=Z,816nm,22.0s
J54A Appleton 107.37 49 IAMs_20 IAMs_20 08 41 41.5
comp=Z,827nm,21.0s
M56A Emporium 107.41 51 IAMs_20 IAMs_20 08 41 41.4
comp=Z,779nm,22.0s
CBN Corbin Frederi 107.44 55 IAMs_20 IAMs_20 08 42 12.9
comp=Z,941nm,22.0s
SSPA Standing Stone 107.48 52 IAMs_20 IAMs_20 08 41 10.4
comp=Z,821nm,22.0s
MEDO Medina 107.49 50 IAMs_20 IAMs_20 08 41 31.5
comp=Z,713nm,21.0s
SAML Samuel 107.63 106 IAMs_20 IAMs_20 08 40 13.6
comp=Z,808nm,20.0s
T60A Surry 107.75 56 IAMs_20 IAMs_20 08 42 50.1
comp=Z,689nm,22.0s
J55A Hilton 107.97 50 IAMs_20 IAMs_20 08 41 22.2
comp=Z,659nm,22.0s
PAGS Pennsylvania G 108.29 53 IAMs_20 IAMs_20 08 41 21.0
comp=Z,989nm,22.0s
N58A Sunbury 108.39 52 IAMs_20 IAMs_20 08 42 23.7
comp=Z,719nm,20.0s
MVL Millersville 108.53 53 IAMs_20 IAMs_20 08 43 20.5
comp=Z,557nm,20.0s
D53A Lac Vacive, Po 108.60 46 IAMs_20 IAMs_20 08 43 36.7
comp=Z,744nm,20.0s
J56A Wolcott 108.66 50 IAMs_20 IAMs_20 08 42 05.5
comp=Z,750nm,21.0s
P60A Greenville 109.05 53 IAMs_20 IAMs_20 08 42 53.2
comp=Z,904nm,21.0s
N59A State Game Lan 109.11 52 IAMs_20 IAMs_20 08 49 58.8
comp=Z,710nm,19.0s
PSUB Penn St. - Bra 109.20 53 IAMs_20 IAMs_20 08 42 59.3
comp=Z,889nm,21.0s
K58A Earlville 109.47 50 IAMs_20 IAMs_20 08 45 13.9
comp=Z,813nm,20.0s
P61A Hammonton 109.67 54 IAMs_20 IAMs_20 08 43 32.7
comp=Z,866nm,21.0s
ODNJ Ogdensburg 110.01 52 IAMs_20 IAMs_20 08 44 06.5
comp=Z,808nm,22.0s
NCB Newcomb 110.64 49 IAMs_20 IAMs_20 08 44 25.1
comp=Z,785nm,19.0s
ZAA0 Zalesovo Array 110.75 321 IAMs_20 IAMs_20 08 47 30.4
comp=Z,844nm,21.0s
TULEG Thule 111.95 14 IAMs_20 IAMs_20 08 47 42.1
comp=Z,835nm,20.0s
MAKZ Makanchi 112.08 314 IAMs_20 IAMs_20 08 54 31.7
comp=Z,816nm,20.0s
KURK Kurchatov 114.45 318 ⇓*i* PKIKP **PKiKP 08 04 43.8 +0.1**
F64A Sherman 114.94 47 IAMs_20 IAMs_20 08 53 14.5
comp=Z,615nm,19.0s
SCHQ Schefferville 115.75 38 IAMs_20 IAMs_20 09 04 01.1
comp=Z,610nm,18.0s
KSH Kashi 115.99 305 PKP **PKPdf 08 04 45.7 -1.5**
AAK Ala-Archa 117.23 309 *i* PKIKP **PKPdf 08 04 48.8 -0.7**
AAK Ala-Archa 117.23 309 IAMs_20 IAMs_20 08 56 53.4
comp=Z,524nm,18.0s
NIL Nilore 117.75 299 IAMs_20 IAMs_20 09 04 57.1
comp=Z,560nm,19.0s
BDFB Brasilia 117.85 120 IAMs_20 IAMs_20 08 45 37.8
comp=Z,914nm,22.0s
BRVK Borovoye 119.44 321 ⇑*i* PKIKP **PKPdf 08 04 53.2 0.0**
KBS Kingsbay 119.71 358 IAMs_20 IAMs_20 08 58 49.4
comp=Z,514nm,19.0s
SUMG Summit 120.88 14 IAMs_20 IAMs_20 08 54 57.8
comp=Z,759nm,19.0s
TAS Tashkent 121.11 307 IAMs_20 IAMs_20 09 04 51.4
comp=Z,606nm,20.0s
ARU Arti 125.20 327 *i* PKIKP **PKPdf 08 05 04.2 0.0**
ARU 08 06 54.3
ARU 08 12 12.9
ARU MLR MLR
comp=Z,1µm,19.0s
ARU Arti 125.20 327 PKPdf 08 05 03.4 -0.8
SCO Scoresbysund 125.86 11 IAMs_20 IAMs_20 08 54 43.3
comp=Z,781nm,21.0s
HRA Herat 126.90 299 IAMs_20 IAMs_20 09 05 42.9
comp=Z,691nm,20.0s
TMCR Tamitsa 129.38 342 *e*PKIKP **PKPdf 08 05 09.1 -2.8**
GEYT Alibeck 129.98 304 PKP **PKPdf 08 05 14.1 +0.1**
comp=Z,1.6nm,0.9s,baz=357,slow=3.3,SNR=5.6
MOS Moscow 135.53 334 *e*PKIKP **PKiKP 08 05 29.8 +4.5**
MOS *e* 08 07 59.4
MOS MLR MLR
comp=Z,800nm,21.0s
OBN Obninsk 136.40 334 ⇑*i* PKIKP **PKiKP 08 05 31.5 +4.4**
OBN *e* 08 08 05.2
OBN *e*PPP PPP 08 11 08.8
OBN *e*SS SS 08 25 58.9 -7.7
OBN pmax pmax
comp=Z,33nm,1.7s
OBN MLR MLR
comp=Z,1µm,22.0s
AKT Akhty 137.02 311 *e*PKIKP **PKiKP 08 05 28.1 -0.9**
AKT pmax pmax
comp=Z,19nm,1.9s
VSR Storozhevoye 137.74 328 ⇓*i* PKIKP **PKPdf 08 05 28.0 0.0**
KONO Kongsberg 139.02 356 IAMs_20 IAMs_20 09 09 25.5
comp=Z,588nm,22.0s
KBZ Khabaz 139.48 316 ⇑*i* PKIKP **PKiKP 08 05 34.8 +1.0**
NEY Neytrino 139.80 316 ⇑*i* PKIKP **PKPdf 08 05 30.1 -2.2**
RAYN Ar Rayn 141.75 284 IAMs_20 IAMs_20 09 20 39.2
comp=Z,587nm,20.0s
AKBB Malin Array Si 142.66 334 ⇓*i* PKIKP **PKPdf 08 05 36.7 -0.3**
LVV L'vov 145.37 338 *e*PKIKP **PKiKP 08 05 44.6 -1.1**
DIKM Dikmen 145.42 318 ⇑P **PKiKP 08 05 44.2 -1.8**
KIS Kishinev 145.60 330 *e*PKP **PKiKP 08 05 45.0 -1.2**
KIS *e*L L 08 54 20.0
KIS LRM MLR 09 10 40.0
comp=Z,700nm,20.0s
KIS Kishinev 145.60 330 *e*PKIKP **PKiKP 08 05 45.0 -1.2**
KIS *e* 08 05 58.0
KIS MLR MLR
comp=Z,700nm,20.0s
NRDL Niedersach Rie 146.08 354 *e*PKPbc **PKPab 08 05 44.3 +0.1**
baz=18,slow=2.8
GAZ Gaziantep 146.18 310 PKPbc 08 05 44.2 -0.4
ASSE Asse, Remlinge 146.38 353 *e*PKPbc **PKPab 08 05 45.4 0.0**
baz=18,slow=2.8
OJC Ojcow 146.39 342 *e*PKP **PKiKP 08 05 47.2 -0.6**
IBBN Ibbenburen 146.45 357 *e*PKPbc **PKPab 08 05 45.7 0.0**
baz=18,slow=2.8
CLZ Clausthal 146.70 354 *e*PKPbc **PKPab 08 05 46.5 -0.2**
baz=18,slow=2.8
BURAR Bucovina Array 146.72 334 ⇑P **PKiKP 08 05 48.0 -0.7**
BURAR Bucovina Array 146.72 334 ⇑PKP2 **PKPab 08 05 47.2 +0.1**
KOLS Kolonicke sedl 146.74 339 *e*PKP2 **PKiKP 08 05 51.6 +3.0**
KOLS Kolonicke sedl 146.74 339 *e*PKP **PKiKP 08 05 51.6 +3.0**
BIZ Bicaz 146.87 333 ⇑P **PKPab 08 05 47.2 -0.3**
CLL Collm 146.88 350 *e*PKPbc **PKPdf 08 05 43.0 -1.2**
comp=Z,38nm,1.6s
CLL *i* PKiKP **PKiKP 08 05 49.9 +1.2**
CLL *i* 08 05 51.9
comp=Z,130nm,1.5s
CLL *e* 08 24 06.0
CLL *e*PSS PSS 08 28 54.0
CLL *e*SSS SSS 08 33 36.0
CLL Collm 146.88 350 *e*PKPbc **PKPab 08 05 47.6 +0.2**
baz=18,slow=2.8
CLL Collm 146.88 350 *i* PKP2 **PKiKP 08 05 52.0 +3.3**
CLL pmax pmax
comp=Z,130nm,1.5s
NIE Niedzica 146.95 341 *e*PKP **PKiKP 08 05 51.8 +2.8**
TESR Tescani 146.96 332 ⇓P **PKPbc 08 05 47.2 +0.7**
UZH Uzhgorod 146.99 338 *e*PKIKP **PKPdf 08 05 44.0 -0.5**
UZH *e* 08 05 47.6
UZH *e* 08 09 14.2
UZH *e* 08 12 45.0
OSTC Ostas 146.99 346 *e*PKP **PKPab 08 05 47.2 -0.7**
OSTC *ex* x 08 05 53.0
OSTC AMS AMS 09 15 10.0
comp=Z,1µm,18.8s
CHVC Chvalec 146.99 347 *e*PKP **PKPab 08 05 47.7 -0.2**
CHVC *ex* x 08 05 53.0
CHVC AMS AMS 09 09 00.0
comp=Z,800nm,19.5s
GTTG Gottingen 147.03 354 *e*PKPbc **PKPab 08 05 47.5 -0.5**
baz=18,slow=2.8
UPC Upice 147.08 347 AMS AMS 09 09 30.0
comp=Z,1µm,21.5s
BRG Berggiesshubel 147.14 349 *e*PKP **PKPdf 08 05 45.1 +0.4**
comp=Z,36nm,2.2s
BRG Berggiesshubel 147.14 349 *i* PKP **PKiKP 08 05 52.5 +3.2**
comp=Z,117nm,1.8s
BRG SS SS 08 29 09.0 +58
comp=N,514nm,24.0s
comp=E,193nm,23.5s
comp=Z,732nm,21.8s
BRG Berggiesshubel 147.14 349 *e*PKPbc **PKPdf 08 05 45.3 +0.6**
baz=18,slow=2.8
BRG Berggiesshubel 147.14 349 *e*PKIKP **PKPdf 08 05 45.1 +0.4**
BRG pmax pmax
comp=Z,4.0nm,2.2s
BRG MLR MLR
comp=E,514nm,23.5s
BRG MLR MLR
comp=Z,193nm,21.8s
DPC Dobruska-Polom 147.16 346 *e*PKP2 **PKPab 08 05 48.1 -0.5**
DPC MLR MLR
comp=Z,900nm,20.2s
DPC Dobruska-Polom 147.16 346 *e*PKP **PKPab 08 05 48.1 -0.5**
DPC *ep*PKP **pPKPab 08 05 53.7 -0.1**
DPC AMS AMS 09 10 20.0
comp=Z,900nm,20.2s
OKC Ostrava-Krasne 147.19 344 AMS AMS 09 08 10.0
comp=Z,900nm,22.3s
FBE Freiberg 147.19 350 *e*PKPbc **PKPdf 08 05 45.8 +1.0**
baz=18,slow=2.8
CFR Carcaliu 147.25 329 ⇑P **PKPab 08 05 48.3 -0.8**
CFR Carcaliu 147.25 329 ⇑PKP2 **PKPab 08 05 48.3 -0.8**
KRLC Kraliky 147.31 346 *e*PKP2 **PKPbc 08 05 48.2 +0.8**
KRLC MLR MLR
comp=Z,700nm,22.7s
KRLC Kraliky 147.31 346 *e*PKP **PKPbc 08 05 48.2 +0.8**
KRLC *ep*PKP **pPKPab 08 05 53.7 -0.7**
KRLC AMS AMS 09 13 50.0
comp=Z,700nm,22.7s
TRPA Tarpa 147.32 338 ⇑P **PKiKP 08 05 53.3 +3.5**
TOPG Topolog 147.34 328 ⇑P **PKPbc 08 05 48.3 +0.7**
PVCC Panska Ves 147.35 348 *e*PKP2 **PKPbc 08 05 47.8 +0.3**
PVCC MLR MLR
comp=Z,600nm,21.3s
PVCC Panska Ves 147.35 348 *e*PKP **PKPbc 08 05 47.8 +0.3**
PVCC AMS AMS 09 09 50.0
comp=Z,600nm,21.3s
MORC Moravsky Berou 147.40 345 *e*PKP **PKPbc 08 05 48.4 +0.7**
MORC Moravsky Berou 147.40 345 ⇑P **PKiKP 08 05 50.2 +0.3**
MORC Moravsky Berou 147.40 345 ⇑PKP2 **PKPab 08 05 48.9 -0.7**
VRI Vrincioaia 147.41 331 ⇑P **PKPbc 08 05 48.5 +0.7**
VRI Vrincioaia 147.41 331 ⇑PKP2 **PKPbc 08 05 48.5 +0.7**
PLOR Plostina 147.46 331 ⇑P **PKPbc 08 05 48.8 +0.8**
PLOR Plostina 147.46 331 ⇑PKP2 **PKPbc 08 05 48.8 +0.8**
BR131 Keskin Array S 147.48 316 ⇑PKP2 **PKPbc 08 05 47.6 -0.8**
BR131 Keskin Array S 147.48 316 PKPbc 08 05 47.5 -0.8
BRTR Keskin Array B 147.48 316 PKPbc **PKPbc 08 05 47.5 -0.8**
comp=Z,6.2nm,1.1s,baz=132,slow=1.8,SNR=17
TIRR Tirgusor 147.62 327 ⇑P **PKPbc 08 05 48.9 +0.5**
TIRR Tirgusor 147.62 327 ⇑PKP2 **PKPbc 08 05 48.9 +0.5**
OZUR 147.66 332 ⇓P **PKiKP 08 05 49.6 -1.0**
HARR Harsova 147.70 328 ⇑P **PKPbc 08 05 48.9 +0.3**
HARR Harsova 147.70 328 ⇑PKP2 **PKPbc 08 05 48.9 +0.3**
PRA Prague 147.82 348 AMS AMS 09 13 50.0
comp=Z,400nm,17.5s
PRU Pruhonice 147.88 348 *e*PKP2 **PKiKP 08 05 50.0 -0.8**
PRU MLR MLR
comp=Z,800nm,20.2s
PRU Pruhonice 147.88 348 *e*PKP **PKiKP 08 05 50.0 -0.8**
PRU *ep*PKP **pPKPab 08 05 55.2 -1.4**
PRU AMS AMS 09 08 00.0
comp=Z,800nm,20.2s
GOPC GO Pecny, Ondr 147.90 348 *e*PKP2 **PKPbc 08 05 49.2 +0.2**
GOPC MLR MLR
comp=Z,700nm,16.7s
GOPC GO Pecny, Ondr 147.90 348 *e*PKP **PKPbc 08 05 49.2 +0.2**
GOPC AMS AMS 09 10 30.0
comp=Z,700nm,16.7s
DOPR Dopca 147.94 332 ⇑P **PKPbc 08 05 49.6 +0.3**
ANTO Ankara 147.95 317 PKIKP **PKPdf 08 05 47.0 +0.5**
ANTO Ankara 147.95 317 PKPdf 08 05 47.0 +0.5
ANTO Ankara 147.95 317 IAMs_20 IAMs_20 09 22 49.3
comp=Z,444nm,18.0s
MBAR Mbarara 148.00 236 PKP2 **PKPbc 08 05 51.2 +0.6**
MBAR MLR MLR
comp=Z,800nm,18.0s
MBAR Mbarara 148.00 236 PKPbc 08 05 51.2 +0.6
NKC Novy Kostel 148.01 351 AMS AMS 09 13 00.0
comp=Z,700nm,14.4s
BEBN Eben Emael 148.04 359 PKPab **PKPab 08 05 51.8 -0.1**
MLR Muntele Rosu 148.06 331 ⇓P **PKiKP 08 05 51.0 -0.5**
MLR Muntele Rosu 148.06 331 ⇓PKP2 **PKiKP 08 05 51.0 -0.5**
VRAC Vranov 148.07 345 PKPbc **PKPbc 08 05 50.1 +0.6**
comp=Z,2.2nm,0.4s,baz=43,slow=3.1,SNR=13
VRAC Vranov 148.07 345 *e*PKP **PKPab 08 05 52.8 +0.6**
CJR Cluj-Napoca 148.10 335 ⇑P **PKiKP 08 05 50.8 -0.7**
CJR Cluj-Napoca 148.10 335 ⇑PKP2 **PKiKP 08 05 50.8 -0.7**
JAVC Velka Javorina 148.21 344 *e*PKP **PKiKP 08 05 51.9 +0.2**
VYHS Vyhne 148.22 342 *e*PKP2 **PKiKP 08 05 50.8 -0.8**
VYHS Vyhne 148.22 342 *e*PKP **PKiKP 08 05 50.8 -0.8**
VYHS *e* 08 05 55.4
MEM Membach 148.22 358 PKPab **PKPab 08 05 52.4 -0.3**
MEM pPKP **sPKPbc 08 05 55.6 -1.2**
MEM pPKPbc **sPKPab 08 05 59.1 -0.6**
MEM sPKiKP **sPKiKP 08 06 05.3 +6.7**
PSN Preselentsi 148.28 327 *e*P **PKiKP 08 05 51.5 -0.4**
TREC Trest 148.34 347 AMS AMS 09 12 30.0
comp=Z,1µm,14.4s
KRUC Moravsky 148.34 345 *e*PKP **PKPbc 08 05 50.6 +0.4**
DRGR 148.38 336 ⇑P **PKiKP 08 05 51.4 -0.7**
DRGR 148.38 336 ⇑PKP2 **PKiKP 08 05 51.4 -0.7**
PSZ Piszkesteto 148.41 340 ⇑P **PKiKP 08 05 51.5 -0.6**
PSZ Piszkesteto 148.41 340 ⇑PKIKP **PKPdf 08 05 48.0 +1.0**
BCLA Clavier 148.42 359 PKiKP **PKiKP 08 05 51.4 -0.5**
BGES Gesves 148.46 360 PKPab **PKiKP 08 05 52.8 +0.8**
BHOU Houvegnez 148.47 358 PKPbc **PKPbc 08 05 50.3 -0.2**
BHOU PKiKP **PKiKP 08 05 51.0 -1.1**
ROTZ Rotzenmuhle 148.50 351 *e*PKPbc **PKPbc 08 05 51.3 +0.8**
baz=18,slow=2.8
VOIR 148.50 332 ⇓P **PKPbc 08 05 51.4 +0.6**
VOIR 148.50 332 ⇓PKP2 **PKPbc 08 05 51.4 +0.6**
BMRD Maredsous 148.54 360 PKPab **PKPab 08 05 53.4 -0.6**
BMRD pPKP **sPKPbc 08 05 56.4 -1.2**
SMOL Smolenice 148.59 344 *e*PKP2 **PKPab 08 05 55.3 +1.0**
SMOL Smolenice 148.59 344 *e*PKP **PKPab 08 05 55.3 +1.0**
GRF Grafenberg Arr 148.71 352 *e*PKPbc **PKPbc 08 05 51.7 +0.5**
baz=18,slow=2.8
ARR Arges 148.74 332 ⇑P **PKPbc 08 05 52.1 +0.6**
DOU Dourbes 148.75 0 PKiKP **PKPbc 08 05 51.8 +0.6**
DOU PKPab **PKPab 08 05 54.4 -0.5**
MODS Modra-Piesok 148.76 344 *e*PKP2 **PKPab 08 05 56.5 +1.5**
MODS Modra-Piesok 148.76 344 *e*PKP **PKPab 08 05 56.5 +1.5**
KHC Kasperske Hory 148.88 349 *c* *i* PKP2 **PKPbc 08 05 51.6 0.0**
KHC pmax pmax
comp=Z,57nm,2.5s
KHC Kasperske Hory 148.88 349 *e*PKP **PKPbc 08 05 51.7 +0.1**
KHC *ep*PKP **sPKPbc 08 05 57.5 -1.2**
KHC *ex* x 08 06 13.5
KHC *ex* x 08 09 00.0
KHC AMS AMS 09 12 50.0
comp=Z,700nm,15.6s
KHC Kasperske Hory 148.88 349 IAMs_20 IAMs_20 09 13 13.4
comp=Z,364nm,20.0s
PRD Provadia 149.03 327 *e*P **PKPbc 08 05 52.5 +0.4**
GERES GERESS Array B 149.13 348 PKPbc **PKPbc 08 05 52.0 -0.3**
comp=Z,1.5nm,0.8s,baz=353,slow=3.1,SNR=13
WLF Walferdange 149.16 358 pPKP **PKPab 08 05 58.7 +2.1**
WLF sPKiKP **sPKPab 08 06 07.2 +3.7**
WLF Walferdange 149.16 358 *e*PKPbc **PKiKP 08 05 53.7 +0.2**
baz=18,slow=2.8
SIRR Siria 149.22 337 ⇑P **PKPbc 08 05 53.1 +0.6**
GZR Gura Zlata 149.50 334 ⇑P **PKPbc 08 05 53.0 -0.4**
GZR Gura Zlata 149.50 334 ⇑PKHKP **PKPbc 08 05 53.0 -0.4**
CONA Conrad Observa 149.53 345 *i* PKiKP **PKiKP 08 05 54.5 0.0**
comp=Z,60nm,1.6s,SNR=20
BZS Buzias 149.78 336 ⇓P **PKPbc 08 05 53.9 0.0**
BZS Buzias 149.78 336 ⇓PKP2 **PKPbc 08 05 53.9 0.0**
MOA Molln 149.97 347 *i* pPKPbc pPKPbc 08 05 57.4 -2.1
comp=Z,24nm,1.6s
HERR Herculane 150.07 334 ⇑P **PKPbc 08 05 54.8 +0.1**
FUR Furstenfeldbru 150.20 351 *e*PKPbc **PKiKP 08 05 55.4 -0.3**
baz=18,slow=2.8
ARSA Arzberg 150.25 345 *i* sPKPbc **PKPab 08 06 00.1 -1.1**
comp=Z,19nm,1.5s,SNR=5.9
BFO Black Forest 150.37 355 *e*PKPbc **PKiKP 08 05 56.0 -0.1**
baz=18,slow=2.8
BFO Black Forest 150.37 355 PKIKP **PKiKP 08 05 55.9 -0.1**
BFO Black Forest 150.37 355 PKiKP 08 05 55.9 -0.1
MDVR Moldovita 150.44 335 ⇑P **PKPbc 08 05 55.1 -0.5**
UBR Ueberruh 150.83 353 *e*PKPbc **PKiKP 08 05 57.0 -0.1**
baz=18,slow=2.8
KBA Koelnbreinsper 150.89 348 *i* PKiKP **PKPbc 08 05 56.8 0.0**
comp=Z,2.8nm,0.7s
KBA *i* sPKPbc **pPKPbc 08 06 01.9 -0.1**
comp=Z,13nm,1.1s
SOKA Soboth 150.90 345 *i* PKiKP **PKPbc 08 05 56.6 -0.1**
comp=Z,22nm,1.5s
SOKA *i* PKPab **sPKPbc 08 06 02.5 -1.2**
comp=Z,22nm,1.5s
SOKA *i* sPKPab **pPKPab 08 06 09.1 0.0**
comp=Z,34nm,1.3s
RETA Reutte 150.94 352 *i* PKPab **PKPab 08 06 02.4 -1.6**
comp=Z,20nm,1.4s
WATA Walderalm 150.96 350 *i* sPKPdf **PKPbc 08 05 56.3 -0.6**
comp=Z,9.1nm,1.1s
WATA *i* PKPab **PKPab 08 06 02.5 -1.7**
comp=Z,36nm,1.8s
WTTA Wattenberg 151.02 350 *i* PKiKP **PKPbc 08 05 56.6 -0.5**
comp=Z,14nm,1.1s
WTTA *i* PKPab **PKPab 08 06 02.9 -1.7**
comp=Z,33nm,1.4s
MOTA Moosalm 151.03 351 *i* PKiKP **PKPbc 08 05 56.6 -0.5**
comp=Z,11nm,1.1s
MOTA *i* sPKiKP **sPKPbc 08 06 03.1 -1.0**
comp=Z,33nm,1.7s
SQTA Sankt Quirin 151.13 351 *i* PKiKP **PKiKP 08 05 57.6 -0.2**
comp=Z,13nm,1.1s
OBKA Obir 151.17 346 *i* PKiKP **PKPbc 08 05 57.4 0.0**
comp=Z,2.0nm,0.6s
DAVA Damuels 151.25 353 *i* PKiKP **PKiKP 08 05 58.6 +0.5**
comp=Z,14nm,1.2s
DAVA *i* PKPab **PKPab 08 06 03.7 -1.7**
comp=Z,30nm,1.2s
MYKA Terra Mystica 151.26 347 *i* PKPbc **PKPbc 08 05 56.7 -0.8**
comp=Z,2.4nm,0.6s
MYKA *i* sPKPbc **pPKPbc 08 06 02.3 -0.4**
comp=Z,21nm,1.5s
ALN Alexandroupoli 151.36 325 IAMs_20 IAMs_20 09 11 06.8
comp=Z,571nm,22.0s
ABTA Abfaltersbach 151.37 349 *i* PKiKP **PKiKP 08 05 58.1 -0.2**
comp=Z,15nm,1.2s
ABTA *i* sPKPbc **pPKPbc 08 06 02.9 -0.1**
FETA Feichten 151.40 351 *ep*PKPdf **pPKPdf 08 05 55.6 -1.5**
comp=Z,13nm,1.5s
FETA *i* sPKiKP pPKPbc 08 06 03.5 +0.3
comp=Z,25nm,1.1s
VTS Vitosha 151.51 331 ⇑P **PKiKP 08 05 59.2 +0.4**
VTS Vitosha 151.51 331 ⇑PKIKP **PKPbc 08 05 57.7 -0.6**
VNDS Vrh nad Dolski 151.52 345 *i* PKPbc **PKPbc 08 05 57.5 -0.6**
VNDS *i* 08 06 02.8
LJU Ljubljana 151.62 346 *i* PKPbc **PKPbc 08 05 58.0 -0.3**
LJU *e* 08 06 03.3
STAL STALIGIAL 151.80 348 PKPbc 08 05 56.7 -2.0
FUORN Ofenpass-Fuorn 151.85 352 PKiKP 08 05 59.4 -0.2
BOJS Bojanci 151.94 344 *i* PKPbc **PKPbc 08 05 58.5 -0.6**
BOJS *e* 08 06 04.3
MMB Musomiste 152.06 329 *e*P **PKPbc 08 05 59.2 -0.3**
TUE Stuetta 152.11 353 PKPbc 08 05 56.6 -3.0
KKB Krupnik 152.17 330 *e*P **PKPbc 08 05 57.7 -2.0**
LIT Litokhoron 153.80 328 PKIKP **PKPdf 08 05 55.0 -0.4**
LIT 08 06 17.5
LIT Litokhoron 153.80 328 PKPdf **PKPdf 08 05 55.0 -0.4**
LIT **PKPab 08 06 17.5 +1.3**
FNA Florina 153.81 330 PKIKP **PKPdf 08 05 53.9 -1.6**
FNA 08 06 00.5
FNA Florina 153.81 330 PKPdf 08 05 53.9 -1.6
FNA PKPbc **pPKPdf 08 06 00.5 -0.3**
NRCA Norcia 154.98 345 IAMs_20 IAMs_20 09 31 50.0
comp=Z,583nm,22.0s
ESDC Sonseca Array 157.86 18 PKPab **PKPab 08 06 36.7 +3.1**
comp=Z,1.3nm,0.7s,baz=330,slow=6.0,SNR=9.4
SFS San Fernando 159.92 26 IAMs_20 IAMs_20 09 26 13.9
comp=Z,457nm,20.0s
TORD Torodi Ar. Bea 173.70 152 PKP **PKPdf 08 06 13.4 -0.9**
comp=Z,0.9nm,0.9s,baz=343,slow=1.5,SNR=5.2
TORD PKPab **PKPab 08 07 47.2 +3.5**
comp=Z,2.1nm,1.1s,baz=193,slow=6.1,SNR=3.6

*IDC **02** 07:53:16.3±1.2, 0°.93N×125°.92E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.7/39, mbtmp4.0/5, Error ellipse: s-maj=55.7km s-min=19.7km az=78.0*
*NEIC **02** 07:53:22.4±2.8, 1°.0N±0°.1×126°.14E±0°.07, h45km±10km, mb4.2/15, Error ellipse: s-maj=14.6km s-min=9.4km az=173.0*
*DJA **02** 07:53:22.4±0.6, 1°N±6°×12°6E±°, h54km±24km, M4.0/8, mb4.3/2, MLv3.9/8*
ISC 02 07:53:22.6±0.6, **0°.97N**±0°.07×**126°.14E**±0°.05, **h44**km, **n34**, σ**1s.48**/35, **mb4.1**/14, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.25**	**99**	P	**Pn**	**07 53 44.4**	**+0.9**
TNTI	**Ternate**	**1.25**	**99**		**Pn**	**07 53 44.1**	**+0.6**
LBMI	**Labuha**	**2.10**	**140**	P	**Pn**	**07 53 55.6**	**+0.3**
KMSI	**Cibinong**	**2.19**	**260**	P	**Pn**	**07 53 56.8**	**+0.3**
KMSI				S	**Sn**	**07 54 23.0**	**+0.6**
SANI	**Sanana**	**3.00**	**183**	P	**Pn**	**07 54 06.9**	**-0.8**
LUWI	**Luwuk**	**3.92**	**239**	P	**Pn**	**07 54 22.9**	**+2.7**
LUWI	**Luwuk**	**3.92**	**239**	Pn	**Pn**	**07 54 22.1**	**+1.9**
MRSI	**Marisa**	**4.22**	**263**	P	**Pn**	**07 54 21.5**	**-3.0**
APSI	**Ampana**	**4.86**	**247**	P	**Pn**	**07 54 36.6**	**+3.4**
SPSI	**Sidrap Palu**	**8.03**	**232**	P	**Pn**	**07 55 18.0**	**+1.2**
	20nm,0.7s						
BNSI	**Bone**	**8.05**	**228**	P	**Pn**	**07 55 17.7**	**+0.7**
SBUM	**Sibu**	**13.99**	**276**	Pn	**Pn**	**07 56 36.7**	**-1.6**
FITZ	**Fitzroy Crossi**	**18.96**	**181**		**Pn**	**07 57 41.2**	**+0.1**
CISI	**Cisompet, Garu**	**20.14**	**245**	P	**P**	**07 57 51.6**	**-1.6**
WB0	**Warramunga Arr**	**22.14**	**159**	P	**P**	**07 58 13.1**	**-1.6**
WB0				IAmb	IAmb	07 58 18.7	
	comp=Z,12nm,1.2s						
WRAB	**Tennant Creek**	**22.28**	**159**	P	**P**	**07 58 15.1**	**-1.1**
WRAB				IAmb	IAmb	07 58 26.6	
	comp=Z,6.9nm,1.0s						
WRA	**Warramunga Arr**	**22.29**	**159**	P	**P**	**07 58 14.6**	**-1.7**
	comp=Z,0.8nm,0.3s,baz=337,slow=11,SNR=34						
WB2	**Warramunga Arr**	**22.29**	**159**	P	**P**	**07 58 15.1**	**-1.3**
WB2				IAmb	IAmb	07 58 20.3	
	comp=Z,8.6nm,1.1s						
WR0	**Warramunga Arr**	**22.37**	**159**	P	**P**	**07 58 15.6**	**-1.6**
WR0				IAmb	IAmb	07 58 31.5	
	comp=Z,17nm,1.4s						
COEN	**Coen**	**22.47**	**132**	P	**P**	**07 58 18.7**	**+0.4**
PSAB2	**Pilbara Seismi**	**23.21**	**195**	P	**P**	**07 58 26.1**	**+0.2**
PSAB2				IAmb	IAmb	07 58 37.7	
	comp=Z,14nm,1.1s						
IPM	**Ipoh**	**25.32**	**278**	P	**P**	**07 58 48.0**	**+2.5**
AS31	**Alice Springs**	**25.63**	**163**	P	**P**	**07 58 48.1**	**-0.1**
ASAR	**Alice Springs**	**25.63**	**163**	P	**P**	**07 58 48.8**	**+0.6**
	comp=Z,1.3nm,0.3s,baz=344,slow=11,SNR=35						
KULM	**Kulim**	**25.80**	**280**	P	**P**	**07 58 48.4**	**-1.5**
KULM				IAmb	IAmb	07 58 51.3	
	comp=Z,14nm,1.1s						
KULM	**Kulim**	**25.80**	**280**	P	**P**	**07 58 51.0**	**+1.2**
MJAR	**Matsushiro Arr**	**37.12**	**16**	P	**P**	**08 00 28.9**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=183,slow=8.8,SNR=5.6						
PEA0B	**Petropavlovsk-**	**58.19**	**22**	P	**P**	**08 03 13.7**	**+1.7**
PETK	**Petropavlovsk-**	**58.19**	**22**	P	**P**	**08 03 13.5**	**+1.4**
	comp=Z,1.7nm,0.7s,baz=180,slow=4.4,SNR=4.9						
MK31	**Makanchi Array**	**59.49**	**326**	P	**P**	**08 03 20.1**	**-1.2**
MK31				IAmb	IAmb	08 03 23.0	
	comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**59.49**	**326**	P	**P**	**08 03 20.7**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=121,slow=8.4,SNR=12						
KURK	**Kurchatov**	**63.75**	**328**	P	**P**	**08 03 49.1**	**-0.7**
KK31	**Karatay Array**	**64.85**	**318**	P	**P**	**08 03 57.4**	**+0.1**
KK31				IAmb	IAmb	08 03 58.6	
	comp=Z,2.4nm,1.2s						
KKAR	**Karatay Array**	**64.85**	**318**	P	**P**	**08 03 58.1**	**+0.8**
KKAR				IAmb	IAmb	08 03 58.5	
	comp=Z,2.4nm,1.2s						

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*IDC **02** 08:01:21.9±1.1, 13°.69N×145°.16E, h0km, mb3.5/5, mb1 3.8/5, mb1mx3.4/52, mbtmp3.5/5, Error ellipse: s-maj=56.0km s-min=24.0km az=106.0*
*NEIC **02** 08:01:34.7±1.6, 13°.6N±0°.1×145°.2E±0°.2, h109km±5km, mb4.5/10, Error ellipse: s-maj=22.4km s-min=17.2km az=85.0*
ISC 02 08:01:34.7±0.7, **13°.6N**±0°.1×**145°.1E**±0°.1, **h109**km, **n18**, σ**1s.31**/19, **mb4.2**/11, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.26**	**269**		**Pn**	**08 01 50.9**	**+0.8**
GUMO				Sn	**Sn**	**08 02 02.1**	**+0.4**
PATS	**Pohnpei**	**14.60**	**116**	Pn	**Pn**	**08 04 56.3**	**+0.3**
WB0	**Warramunga Arr**	**34.80**	**198**	P	**P**	**08 08 14.9**	**-0.1**
WR0	**Warramunga Arr**	**34.93**	**198**	P	**P**	**08 08 15.9**	**-0.4**
WR0				IAmb	IAmb	08 08 17.2	
	comp=Z,12nm,1.5s						
WRAB	**Tennant Creek**	**34.97**	**198**	P	**P**	**08 08 16.4**	**-0.1**
WRAB				IAmb	IAmb	08 08 30.5	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**34.97**	**198**	P	**P**	**08 08 16.7**	**+0.1**
WB2				IAmb	IAmb	08 08 33.3	
	comp=Z,3.5nm,1.1s						
WRA	**Warramunga Arr**	**34.98**	**198**	P	**P**	**08 08 16.4**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=19,slow=9.3,SNR=7.6						
AS31	**Alice Springs**	**38.62**	**197**	P	**P**	**08 08 49.0**	**+1.4**
ASAR	**Alice Springs**	**38.62**	**197**	P	**P**	**08 08 47.9**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=22,slow=11,SNR=8.3						
PEA0B	**Petropavlovsk-**	**40.67**	**12**	P	**P**	**08 09 01.8**	**-2.3**
PEA0B				IAmb	IAmb	08 09 07.9	
	comp=Z,13nm,1.1s						
BBOO	**Buckleboo**	**46.95**	**190**	P	**P**	**08 09 54.5**	**-0.1**
CAN	**Canberra**	**48.78**	**176**	P	**P**	**08 10 06.1**	**-2.6**
CAN				IAmb	IAmb	08 10 16.2	
	comp=Z,15nm,1.3s						
BKZ	**Black Stump Fm**	**60.09**	**152**	P	**P**	**08 11 31.4**	**+0.8**
MKAR	**Makanchi Array**	**61.66**	**316**	P	**P**	**08 11 42.1**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=106,slow=6.3,SNR=2.8						
CNPM	**China Poot**	**65.10**	**30**	P	**P**	**08 12 03.5**	**-0.1**
CNPM				IAmb	IAmb	08 12 04.0	
	comp=Z,3.6nm,1.0s						
ILAR	**Eielson Array**	**68.45**	**25**	P	**P**	**08 12 23.1**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=250,slow=5.8,SNR=4.3						
NVAR	**Mina Array Bea**	**86.72**	**51**	P	**P**	**08 14 09.9**	**+2.8**
	comp=Z,0.4nm,0.7s,baz=253,slow=4.5,SNR=3.9						
LPAZ	**La Paz**	**147.77**	**99**		**PKPbc**	**08 21 08.7**	**+0.1**

IDC 02 08:29:31.3±128.0, **20°.49N**×**144°.48E**, **h0**km, **Error ellipse: s-maj=253.5km s-min=23.7km az=101.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**21.03**	**92**	H	H	08 55 50.8	
	baz=279,slow=75,SNR=539						
H11S1	**WAKE ISLAND Hy**	**21.04**	**92**	H	H	08 55 51.5	
	baz=279,slow=75,SNR=733						
H11S2	**WAKE ISLAND Hy**	**21.05**	**92**	H	H	08 55 52.1	
	baz=279,slow=75,SNR=595						
H11N1	**WAKE ISLAND Hy**	**21.06**	**88**	H	H	08 55 53.5	
	baz=276,slow=75,SNR=487						
H11N2	**WAKE ISLAND Hy**	**21.07**	**88**	H	H	08 55 53.9	
	baz=276,slow=75,SNR=383						
H11N3	**WAKE ISLAND Hy**	**21.08**	**88**	H	H	08 55 54.8	
	baz=276,slow=75,SNR=177						
H03N2	**Juan Fernandez**	**139.49**	**118**	H	H	11 23 59.0	
	baz=267,slow=74,SNR=21						
H03N3	**Juan Fernandez**	**139.50**	**118**	H	H	11 24 00.8	
	baz=267,slow=74,SNR=25						
H03N1	**Juan Fernandez**	**139.51**	**118**	H	H	11 24 01.1	
	baz=267,slow=74,SNR=34						

IDC 02 08:39:22.0±128.0, **20°.49N**×**144°.45E**, **h0**km, **Error ellipse: s-maj=252.5km s-min=23.0km az=101.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**21.05**	**92**	H	H	09 05 43.3	
	baz=279,slow=75,SNR=472						
H11S1	**WAKE ISLAND Hy**	**21.06**	**92**	H	H	09 05 43.9	
	baz=279,slow=75,SNR=715						
H11S2	**WAKE ISLAND Hy**	**21.07**	**92**	H	H	09 05 44.6	
	baz=279,slow=75,SNR=389						
H11N1	**WAKE ISLAND Hy**	**21.09**	**88**	H	H	09 05 46.0	
	baz=276,slow=75,SNR=851						
H11N2	**WAKE ISLAND Hy**	**21.09**	**88**	H	H	09 05 46.2	
	baz=276,slow=75,SNR=814						
H11N3	**WAKE ISLAND Hy**	**21.10**	**88**	H	H	09 05 47.2	
	baz=276,slow=75,SNR=332						
H03N2	**Juan Fernandez**	**139.51**	**118**	H	H	11 33 51.3	
	baz=267,slow=74,SNR=13						
H03N3	**Juan Fernandez**	**139.52**	**118**	H	H	11 33 53.3	
	baz=267,slow=74,SNR=14						
H03N1	**Juan Fernandez**	**139.53**	**118**	H	H	11 33 53.1	
	baz=267,slow=74,SNR=22						

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*BJI **02** 08:43:28.2±0.0, 4°.58S×127°.85E, h46km, mB5.8/77, mb5.4/85, Ms5.5/93, Ms7 5.3/87*
*IDC **02** 08:43:33.8±1.3, 3°.83S×127°.34E, h25km±8km, mb5.2/39, mb1 5.2/41, mb1mx5.2/43, mbtmp5.4/41, ML5.2/2, MS5.3/26, Ms1 5.3/26, ms1mx5.1/49, Error ellipse: s-maj=12.2km s-min=8.3km az=69.0*
*MOS **02** 08:43:34.4±1.0, 3°.73S×127°.35E, h39km, mb6.0/71, MS5.2/25, Error ellipse: s-maj=7.0km s-min=4.1km az=118.2*
*GCMT **02** 08:43:35.5±0.1, 3°.78S×127°.35E, h18km, MW5.8/160, Moment Tensor Solution. s151,c314; s160,c343; Duration: 1s.9 Moment tensor: Scale 10^17Nm; Mrr3.29±.05; Mθθ-4.64±.04; Mφφ1.35±.04; Mrθ-2.79±.12; Mθφ2.68±.03; Mφr-1.77±.12; Best double couple: Mo5.92200×10^17 NP1:φs144.00000°, δ45.00000°, λ146.00000°. NP2:φs259.00000°, δ67.00000°, λ50.00000°. Principal axes: T 5.7260, Plg51.0000°, Azm123.0000°; N 0.3920, Plg36.0000°, Azm277.0000°; P -6.1180, Plg13.0000°, Azm17.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KLM **02** 08:43:35.0, 3°.80S×127°.72E, h42km, mb5.7*
*NEIC **02** 08:43:36, 3°.78S×127°.37E, h18km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr3.31; Mθθ-4.78; Mφφ1.47; Mrθ-2.22; Mθφ2.74; Mφr-1.39; Fault plane solution: Mo5.69000×10^17 NP1:φs260.00000°, δ65.00000°, λ49.00000°. NP2:φs144.00000°, δ47.00000°, λ144.00000°. Principal axes: T 5.1670, Plg52.0000°, Azm121.0000°; N 0.9275, Plg37.0000°, Azm281.0000°; P -6.0945, Plg10.0000°, Azm18.0000°;*
*DJA **02** 08:43:36.5±0.1, 4°S±1°×12°8E±°, h46km±2km, M5.7/85, mB6.1/79, mb5.7/85, MLv5.8/25, Mw(mB)5.8/79, Mwp5.7/48*
*NEIC **02** 08:43:36.5±2.0, 3°.82S±0°.05×127°.40E±0°.04, h47km±4km, mb5.9/218, Ms_20 5.5/551, Mwc5.8/25, Mww5.7, Mwc5.8(GCMT), Error ellipse: s-maj=8.2km s-min=4.1km az=139.0*
*NEIC **02** 08:43:38, 3°.90S×127°.53E, h30km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr3.92; Mθθ-4.58; Mφφ0.66; Mrθ-1.19; Mθφ2.39; Mφr-1.43; Fault plane solution: Mo5.25000×10^17 NP1:φs266.00000°, δ55.00000°, λ55.00000°. NP2:φs137.00000°, δ48.00000°, λ129.00000°. Principal axes: T 4.8950, Plg62.0000°, Azm117.0000°; N 0.6497, Plg28.0000°, Azm288.0000°; P -5.5447, Plg4.0000°, Azm20.0000°;*
*NEIC **02** 08:43:39.9, 3°.92S×127°.40E, h26km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr3.99; Mθθ-4.83; Mφφ0.84; Mrθ-2.92; Mθφ2.49; Mφr-3.44; Fault plane solution: Mo6.72000×10^17 NP1:φs140.03000°, δ45.86000°, λ143.59000°. NP2:φs257.21000°, δ64.79000°, λ50.33000°. Principal axes: T 7.3842, Plg53.0000°, Azm119.0000°; N -1.3207, Plg35.0000°, Azm277.0000°; P -6.0635, Plg11.0000°, Azm15.0000°;*
ISC 02 08:43:36.6±0.3, **3°.86S**±0°.03×**127°.44E**±0°.03, **h49**km±2km, **h49**km**:pP-P**, **n1618**, σ**1s.52**/1484, **mb5.8**/241, **MS5.5**/331, **113C-33D**, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.70**	**331**	P	Pn	08 43 45.5	-4.9
AAI	**Ambon**	**0.78**	**77**	P	**Pn**	**08 43 48.7**	**-2.6**
AAI				S	**Sn**	**08 43 58.7**	**-3.3**
AAI	**Ambon**	**0.78**	**77**	P	**Pn**	**08 43 48.4**	**-2.9**
MSAI	**Masohi**	**1.57**	**71**	P	**Pn**	**08 44 00.6**	**-1.5**
SANI	**Sanana**	**2.31**	**321**	P	**Pn**	**08 44 10.2**	**-2.0**
SANI				S	**Sn**	**08 44 36.7**	**-2.7**
BNDI	**Bandanaira**	**2.55**	**105**	P	**Pn**	**08 44 13.8**	**-1.7**
LBMI	**Labuha**	**3.20**	**1**	P	**Pn**	**08 44 24.0**	**-0.5**
TNTI	**Ternate**	**4.60**	**359**	P	**Pn**	**08 44 42.1**	**-1.6**
TNTI	**Ternate**	**4.60**	**359**		**Pn**	**08 44 42.9**	**-0.8**
SIJI	**Sorong**	**4.84**	**52**	Pn	**Pn**	**08 44 46.0**	**-1.0**
	663nm,0.3s,baz=225,slow=13,SNR=439						
SIJI				Sn	**Sn**	**08 45 40.6**	**-1.3**
	613nm,0.3s,baz=60,slow=21,SNR=27						
SIJI				LR	LR	08 47 20.0	
	comp=Z,63μm,20.3s,baz=248,slow=46						
FAKI	**Fak Fak**	**4.89**	**79**	P	**Pn**	**08 44 47.0**	**-0.7**
FAKI				S	**Sn**	**08 45 41.1**	**-2.0**
FAKI	**Fak Fak**	**4.89**	**79**		**Pn**	**08 44 47.5**	**-0.2**
BBSI	**Bau Bau**	**5.11**	**251**	P	**Pn**	**08 44 51.5**	**+0.7**
	1.2nm3μm178nm,0.9s						
LUWI	**Luwuk**	**5.44**	**301**	P	**Pn**	**08 44 54.9**	**-0.3**
	19nm33μm49μm6μm,0.7s						
LUWI	**Luwuk**	**5.44**	**301**		**Pn**	**08 44 54.3**	**-0.8**
KMSI	**Cibinong**	**5.60**	**322**	P	**Pn**	**08 44 57.6**	**+0.2**
	21nm1μm51μm5μm,0.6s						
SAUI	**Saumlaki**	**5.62**	**137**	P	**Pn**	**08 44 59.2**	**+1.5**
	19nm50μm54μm5μm,0.6s						
SAUI	**Saumlaki**	**5.62**	**137**		**Pn**	**08 44 59.8**	**+2.2**
MNI	**Manado**	**5.87**	**334**	P	**Pn**	**08 45 01.0**	**-0.2**
MNI				pmax	pmax		
	comp=Z,3μm,0.6s						
APSI	**Ampana**	**6.48**	**297**	P	**Pn**	**08 45 09.6**	**+0.1**
	comp=Z,7.7nmcomp=Z,16μmcomp=Z,19μmcomp=Z,2μm,0.6s						
SOEI	**Soe**	**6.65**	**208**	P	**Pn**	**08 45 16.0**	**+4.0**
	comp=Z,5.2nmcomp=Z,99μmcomp=Z,26μmcomp=Z,1μm,0.9s						
SOEI	**Soe**	**6.65**	**208**		**Pn**	**08 45 15.2**	**+3.3**
MRSI	**Marisa**	**6.98**	**308**	P	**Pn**	**08 45 16.4**	**0.0**
	comp=Z,8.8nmcomp=Z,20μmcomp=Z,23μmcomp=Z,3μm,0.7s						
MMRI	**Maumere**	**7.02**	**227**	P	**Pn**	**08 45 19.5**	**+2.6**
	comp=Z,1.9nmcomp=Z,68μmcomp=Z,14μmcomp=Z,373nm,1.0s						
MMRI	**Maumere**	**7.02**	**227**		**Pn**	**08 45 18.6**	**+1.7**
RKPI	**Ransiki, Papua**	**7.12**	**71**	P	**Pn**	**08 45 17.3**	**-1.1**
	comp=Z,24nmcomp=Z,26μmcomp=Z,3μm,0.7s						
BNSI	**Bone**	**7.33**	**266**	P	**Pn**	**08 45 21.7**	**+0.5**
	comp=Z,1.4nmcomp=Z,26μmcomp=Z,7μmcomp=Z,466nm,0.7s						
BATI	**Baumata**	**7.33**	**210**	Pn	**Pn**	**08 45 24.1**	**+2.8**
	comp=Z,20nm,0.3s,baz=170,slow=0.2,SNR=27						
BATI				LR	LR	08 48 06.1	
	comp=Z,62μm,19.6s,baz=48,slow=37						
BATI	**Baumata**	**7.33**	**210**	P	**Pn**	**08 45 24.4**	**+3.1**
	comp=Z,1.3nmcomp=Z,30μmcomp=Z,6μmcomp=Z,298nm,1.4s						
BKSI	**Bulukumba**	**7.43**	**258**	P	**Pn**	**08 45 24.2**	**+1.6**
	comp=Z,2.6nmcomp=Z,16μmcomp=Z,11μmcomp=Z,713nm,0.6s						
EDFI	**Ende, Flores**	**7.50**	**229**	P	**Pn**	**08 45 25.0**	**+1.4**
	comp=Z,0.8nmcomp=Z,39μmcomp=Z,4μmcomp=Z,260nm,0.7s						
TTSI	**Tana Toraja**	**7.65**	**276**	P	**Pn**	**08 45 27.3**	**+1.8**
	comp=Z,1.0nmcomp=Z,17μmcomp=Z,5μmcomp=Z,268nm,0.7s						
SPSI	**Sidrap Palu**	**7.65**	**269**	P	**Pn**	**08 45 27.3**	**+1.7**
	comp=Z,1.3nmcomp=Z,16μmcomp=Z,7μmcomp=Z,290nm,0.7s						
KAPI	**Kappang**	**7.75**	**261**	Pn	**Pn**	**08 45 27.4**	**+0.5**
	comp=Z,128nm,0.3s,baz=105,slow=5.7,SNR=180						
KAPI	**Kappang**	**7.75**	**261**	P	**Pn**	**08 45 28.1**	**+1.2**
KAPI	**Kappang**	**7.75**	**261**	P	**Pn**	**08 45 28.0**	**+1.1**
KAPI	**Kappang**	**7.75**	**261**		**Pn**	**08 45 28.0**	**+1.1**
MPSI	**Mapaga**	**8.61**	**299**	P	**Pn**	**08 45 39.3**	**+0.6**
	comp=Z,20μmcomp=Z,6μmcomp=Z,428nm,0.8s						
SRPI	**Serui, Papua**	**9.01**	**78**	P	**Pn**	**08 45 42.4**	**-1.8**
	comp=Z,95nmcomp=Z,4.3nm,0.4s						
BAKI	**Biak**	**9.06**	**73**	P	**Pn**	**08 45 43.6**	**-1.3**
	comp=Z,15μmcomp=Z,1μm,0.6s						
BASI	**Baing, Sumba**	**9.29**	**227**	P	**Pn**	**08 45 50.4**	**+2.4**
	comp=Z,24μmcomp=Z,8μmcomp=Z,453nm,1.1s						
MTN	**Manton Dam**	**9.65**	**158**	P	**Pn**	**08 45 52.9**	**0.0**
	baz=9.7,SNR=54						
MTN	**Manton Dam**	**9.65**	**158**		**Pn**	**08 45 52.4**	**-0.5**
WBSI	**Waikabubak, Su**	**9.84**	**234**	P	**Pn**	**08 45 57.3**	**+1.7**
	comp=Z,25μmcomp=Z,6μmcomp=Z,361nm,0.8s						
DDMP	**Don Marcelino,**	**10.04**	**350**	*e*P	**Pn**	**08 45 56.1**	**-2.3**
KDU	**Kakadu**	**10.09**	**151**	P	**Pn**	**08 45 57.3**	**-1.6**
	baz=10,SNR=105						
SKMP	**Bagumbayan, Su**	**10.71**	**344**	*e*P	**Pn**	**08 46 05.8**	**-1.6**
PLAI	**Plampang**	**10.79**	**242**	P	**Pn**	**08 46 10.8**	**+2.1**
	comp=Z,19μmcomp=Z,4μmcomp=Z,268nm,1.2s						
MATI	**Mati**	**10.80**	**354**	*e*P	**Pn**	**08 46 07.4**	**-1.2**
BKB	**Balikpapan**	**10.84**	**283**	Pn	**Pn**	**08 46 12.5**	**+3.2**
DAV	**Davao City (W)**	**11.01**	**350**	Pn	**Pn**	**08 46 08.9**	**-2.7**
	baz=103,slow=4.4,SNR=9.3						
DAV	**Davao City (W)**	**11.01**	**350**⇑	*e*P	Pn	08 46 05.2	-6.5
DAV	**Davao City (W)**	**11.01**	**350**	Pn	**Pn**	**08 46 10.2**	**-1.5**
SMPI	**Sarmi**	**11.41**	**81**	P	**Pn**	**08 46 17.6**	**+0.5**
	comp=Z,10μmcomp=Z,20μmcomp=Z,290nm,1.6s						
KNRA	**Kununurra**	**11.82**	**174**	P	**Pn**	**08 46 21.1**	**-1.5**
	baz=12,SNR=246						
KNRA	**Kununurra**	**11.82**	**174**		**Pn**	**08 46 21.2**	**-1.5**
BUKP	**Musuan**	**11.90**	**349**	*e*P	**Pn**	**08 46 21.5**	**-2.3**
PAGZ	**Pagadian**	**12.31**	**341**	*e*P	**Pn**	**08 46 27.1**	**-2.2**
CGP	**Cagayan de Oro**	**12.53**	**347**⇓	*e*P	**Pn**	**08 46 34.4**	**+2.0**
GENI	**Genyem**	**12.77**	**85**	P	**Pn**	**08 46 34.7**	**-1.0**
	comp=Z,15μmcomp=Z,11μmcomp=Z,606nm,1.0s						
SRBI	**Singaraja**	**12.86**	**250**	P	**Pn**	**08 46 39.9**	**+3.0**
	comp=Z,17μmcomp=Z,7μmcomp=Z,300nm,1.8s						
BUTP	**Butuan**	**12.87**	**352**	*e*P	**Pn**	**08 46 34.9**	**-2.1**
DCPH	**Dipolog City**	**13.01**	**342**	*e*P	**P**	**08 46 47.2**	**-0.9**
JAY	**Jayapura**	**13.31**	**85**	Pn	**Pn**	**08 46 40.0**	**-3.1**
	comp=Z,3.8nm,0.3s,baz=274,slow=9.1,SNR=18						
JAY				Sn	**Sn**	**08 49 07.2**	**-2.6**
	comp=Z,0.7nm,0.3s,baz=68,slow=8.5,SNR=2.1						
JAY				LR	LR	08 53 30.9	
	comp=Z,19μm,19.6s,baz=290,slow=44						
JAY	**Jayapura**	**13.31**	**85**	P	**Pn**	**08 46 40.1**	**-3.1**
	comp=Z,2μmcomp=Z,101nm,1.1s						
JAY	**Jayapura**	**13.31**	**85**	P	**Pn**	**08 46 42.6**	**-0.6**
JAY				pmax	pmax		
	comp=Z,161nm,1.1s						
KMMI	**Kalianget**	**13.78**	**256**	P	**Pn**	**08 46 52.2**	**+2.8**
	comp=Z,6μmcomp=Z,434nm,1.8s						
TBP	**Tagbilaran**	**13.92**	**345**	*e*P	P	08 47 02.8	+4.6
JAGI	**Jajag, Banyuwa**	**13.98**	**250**	P	**Pn**	**08 46 54.1**	**+2.0**
	comp=Z,13μmcomp=Z,8μmcomp=Z,303nm,1.1s						
JAGI	**Jajag, Banyuwa**	**13.98**	**250**		**Pn**	**08 46 54.2**	**+2.0**
MSLP	**Maasin**	**14.13**	**350**	*e*P	**Pn**	**08 46 51.0**	**-3.2**
FITZ	**Fitzroy Crossi**	**14.26**	**187**	P	**Pn**	**08 46 53.5**	**-2.4**
	baz=14,SNR=56						
FITZ	**Fitzroy Crossi**	**14.26**	**187**	Pn	**Pn**	**08 46 54.3**	**-1.7**
	comp=Z,2.6nm,0.3s,baz=24,slow=13,SNR=55						
FITZ				LR	LR	08 53 11.2	
	comp=Z,18μm,19.4s,baz=9.0,slow=40						
CNOP	**Candoni, Negro**	**14.41**	**341**	*e*P	**Pn**	**08 46 55.5**	**-2.4**
KKM	**Kota Kinabalu**	**14.91**	**311**		**Pn**	**08 47 04.3**	**-0.3**
OCLP	**Ormoc**	**15.08**	**349**	*e*P	**Pn**	**08 47 04.9**	**-1.8**
GUIM	**Jordan**	**15.18**	**341**	*e*P	**Pn**	**08 47 05.1**	**-2.8**
GRJI	**Gresik**	**15.20**	**258**	P	**P**	**08 47 16.2**	**+3.8**
	comp=Z,4μmcomp=Z,425nm,1.1s						
BATP	**Bataraza**	**15.82**	**323**	*e*P	**Pn**	**08 47 10.6**	**-5.7**
CUYO	**Cuyo Island**	**15.95**	**336**	*e*P	**P**	**08 47 21.6**	**+0.9**
RCP	**Roxas**	**16.01**	**343**⇑	*e*P	**Pn**	**08 47 17.1**	**-1.6**
PWJI	**Pagerwojo**	**16.09**	**254**	P	**P**	**08 47 22.2**	**-0.1**
	comp=Z,20μmcomp=Z,10μmcomp=Z,322nm,1.5s						
SBUM	**Sibu**	**16.45**	**292**	P	**P**	**08 47 25.0**	**-1.3**
SBUM	**Sibu**	**16.45**	**292**	P	**P**	**08 47 26.0**	**-0.3**
CNP	**Catarman**	**16.49**	**350**	*e*P	**Pn**	**08 47 22.8**	**-2.0**
UWJI	**Ujung Watu**	**16.62**	**261**	P	**P**	**08 47 29.8**	**+1.6**
	comp=Z,3μmcomp=Z,234nm,1.5s						
PCJI	**Pacitan**	**16.73**	**254**	P	**P**	**08 47 28.8**	**-0.6**
	comp=Z,10μmcomp=Z,603nm,1.0s						
WOJI	**Wonogiri, Jawa**	**16.89**	**256**	P	**P**	**08 47 32.1**	**+0.8**
	comp=Z,12μmcomp=Z,13μmcomp=Z,480nm,1.4s						
ENPP	**El Nido**	**16.96**	**332**	*e*P	**Pn**	**08 47 28.9**	**-1.7**
OTRP	**Odiongan**	**16.99**	**342**	*e*P	**P**	**08 47 35.8**	**+3.5**
WB0	**Warramunga Arr**	**17.21**	**157**	P	**Pn**	**08 47 30.4**	**-3.3**
WB0				IAmb	IAmb	08 47 37.6	
	comp=Z,751nm,1.2s						
SMRI	**Semarang**	**17.21**	**259**	P	**P**	**08 47 37.8**	**+3.0**
	comp=Z,29μmcomp=Z,27μmcomp=Z,910nm,1.2s						
SMRI	**Semarang**	**17.21**	**259**	P	**P**	**08 47 35.7**	**+0.9**
UGM	**Wanagama**	**17.30**	**256**	P	**P**	**08 47 37.6**	**+1.8**
	comp=Z,22μmcomp=Z,17μmcomp=Z,724nm,1.6s						
UGM	**Wanagama**	**17.30**	**256**	P	**P**	**08 47 36.9**	**+1.2**
UGM				IAmb	IAmb	08 48 08.6	
	comp=Z,2μm,1.6s						
BUSP	**Coron**	**17.32**	**336**	*e*P	**P**	**08 47 38.5**	**+2.6**
WRAB	**Tennant Creek**	**17.34**	**158***c*	*i*P	**Pn**	**08 47 32.8**	**-2.6**
WRAB	**Tennant Creek**	**17.34**	**158**	P	**Pn**	**08 47 31.8**	**-3.6**
WRA	**Warramunga Arr**	**17.35**	**158**	P	**Pn**	**08 47 32.0**	**-3.4**
	comp=Z,9.9nm,0.3s,baz=343,slow=12,SNR=229						
WRA				S	**Sn**	**08 50 40.8**	**-6.9**
	baz=218,slow=18,SNR=2.9						
WRA				LR	LR	08 54 48.8	
	comp=Z,17μm,18.0s,baz=335,slow=39						
WRA				PKiKP	**PKiKP**	**09 00 07.2**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=308,slow=1.3,SNR=4.9						
WRA				P3KPbc		09 22 33.3	
	comp=Z,0.0nm,0.3s,baz=152,slow=4.1,SNR=7.5						
WB2	**Warramunga Arr**	**17.35**	**158**	P	**Pn**	**08 47 32.1**	**-3.4**
SJMP	**San Jose**	**17.39**	**339**	*e*P	**Pn**	**08 47 34.6**	**-1.3**
WR0	**Warramunga Arr**	**17.44**	**157**	P	**Pn**	**08 47 33.3**	**-3.3**
WR0				IAmb	IAmb	08 47 41.5	
	comp=Z,2μm,1.9s						
YOGI	**Yogyakarta**	**17.50**	**256**	P	**P**	**08 47 39.8**	**+1.8**
	comp=Z,12μmcomp=Z,9μmcomp=Z,502nm,1.8s						
PVCP	**Virac**	**17.64**	**349**	*e*P	**Pn**	**08 47 35.6**	**-3.4**
KSM	**Kuching**	**17.92**	**287**	P	**P**	**08 47 43.4**	**+0.8**
KSM	**Kuching**	**17.92**	**287**	P	**P**	**08 47 45.0**	**+2.4**
BOAC	**Boac**	**18.08**	**342**	*e*P	**P**	**08 47 45.9**	**+1.6**
PGP	**Puerto Galera**	**18.41**	**340**⇓	*e*P	**P**	**08 47 47.3**	**-0.7**
COEN	**Coen**	**18.49**	**124**	P	**P**	**08 47 47.3**	**-1.6**
	baz=18,SNR=216						
COEN	**Coen**	**18.49**	**124**	P	**P**	**08 47 47.8**	**-1.1**
COEN				IAmb	IAmb	08 48 03.3	
	comp=Z,1μm,1.4s						
MBWA	**Marble Bar**	**18.76**	**203**	P	**Pn**	**08 47 52.9**	**+0.3**
MBWA				S	**S**	**08 51 25.2**	**+2.4**
MBWA	**Marble Bar**	**18.76**	**203**	P	**Pn**	**08 47 52.7**	**0.0**
LQP	**Lukban**	**18.79**	**342**	*e*P	**Pn**	**08 47 52.5**	**-0.7**
LUBP	**Lubang**	**18.88**	**338**	*e*P	**Pn**	**08 47 55.7**	**+1.6**
PSA00	**Pilbara Seismi**	**19.09**	**202**	P	**Pn**	**08 47 56.5**	**-0.2**
POLP	**Polilio Island**	**19.25**	**344**	*e*P	**Pn**	**08 47 58.5**	**0.0**
CISI	**Cisompet, Garu**	**19.86**	**258**	P	**P**	**08 48 03.2**	**-0.8**
	comp=Z,10μmcomp=Z,17μmcomp=Z,1μm,0.7s						
LEM	**Lembang**	**19.95**	**261**	P	**Pn**	**08 48 06.1**	**-0.9**
	comp=Z,28nm,0.3s,baz=60,slow=8.3,SNR=35						
LEM				LR	LR	08 56 51.6	
	comp=Z,16μm,19.9s,baz=80,slow=40						
LEM	**Lembang**	**19.95**	**261**	P	**Pn**	**08 48 06.3**	**-0.8**
	comp=Z,9μmcomp=Z,7μmcomp=Z,356nm,1.0s						
LEM	**Lembang**	**19.95**	**261**	P	**Pn**	**08 48 06.3**	**-0.8**
LEM				pmax	pmax		
	comp=Z,566nm,1.0s						
BALP	**Baler**	**20.32**	**344**	*e*P	**P**	**08 48 08.9**	**+0.1**
PMG	**Port Moresby**	**20.34**	**107**	P	**P**	**08 48 08.6**	**-0.5**
PMG				pmax	pmax		
	comp=Z,519nm,1.1s						
PMG				MLR	MLR		
	comp=Z,4μm,21.0s						
PMG	**Port Moresby**	**20.34**	**107**	P	**P**	**08 48 08.6**	**-0.5**
PMG				IAmb	IAmb	08 48 15.1	
	comp=Z,519nm,1.1s						
QIS	**Mount Isa**	**20.39**	**145**	P	Pn	08 48 10.8	-1.3
	baz=20,SNR=311						
CNJI	**Cibinong**	**20.50**	**259**	P	**P**	**08 48 09.7**	**-1.1**
	comp=Z,9μmcomp=Z,24μmcomp=Z,2μm,1.0s						
AS31	**Alice Springs**	**20.66**	**163**	P	Pn	08 48 14.1	-1.1
ASAR	**Alice Springs**	**20.66**	**163**	P	Pn	08 48 14.2	-1.1
	comp=Z,1μm,0.9s,baz=342,slow=9.9,SNR=1853						
ASAR				PcP	**PcP**	**08 52 22.1**	**+0.6**
	comp=Z,18nm,0.5s,baz=359,slow=2.0,SNR=10						
ASAR				ScP	**ScP**	**08 55 54.7**	**+0.4**
	comp=Z,3.5nm,0.7s,baz=344,slow=1.5,SNR=4.4						
ASAR				LR	LR	08 56 36.7	
	comp=Z,8μm,18.6s,baz=336,slow=38						
ASAR				PKiKP	**PKiKP**	**09 00 08.7**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=253,slow=1.3,SNR=4.2						
ASAR				P3KPbc		09 22 20.4	
	comp=Z,0.5nm,0.5s,baz=166,slow=4.2,SNR=9.7						
DBJI	**Dramaga**	**20.77**	**262**	P	Pn	08 48 15.8	-0.9
	comp=Z,289nm,0.8s						
SMPP	**San Manuel, Pa**	**20.97**	**342**	*e*P	**P**	**08 48 11.9**	**-4.0**
SKJI	**Sukabumi**	**21.02**	**261**	P	**P**	**08 48 16.7**	**+0.2**
	comp=Z,8μmcomp=Z,10μmcomp=Z,602nm,1.2s						
WRKA	**Warakurna**	**21.07**	**178**	P	**P**	**08 48 18.8**	**+1.9**
	baz=21,SNR=311						
BOLP	**Bolinao**	**21.44**	**340**	*e*P	**P**	**08 48 20.5**	**-0.4**
MTSU	**Mount Surprise**	**21.78**	**132**	P	**P**	**08 48 25.1**	**+0.6**
	baz=22,SNR=161						
APYP	**Conner**	**22.43**	**344**	*e*P	**P**	**08 48 30.5**	**-1.0**
XMIS	**Christmas Isla**	**22.58**	**252**	P	**P**	**08 48 30.6**	**-2.7**
XMIS				IAmb	IAmb	08 48 42.8	
	comp=Z,481nm,1.1s						
GIRL	**Giralia**	**22.63**	**213**	P	**P**	**08 48 34.8**	**+1.2**
	baz=23,SNR=29						
GIRL	**Giralia**	**22.63**	**213**	P	**P**	**08 48 33.9**	**+0.3**

GIRL IAmb IAmb 08 48 37.2
comp=Z,749nm,1.1s
PMBI Palembang 22.64 272 P **P** **08 48 35.3 +1.4**
MEEK Meekatharra 24.18 200 P **P** **08 48 48.8 +0.2**
baz=24,SNR=87
MYKOM **Kota Tinggi 24.23 283** IAmb IAmb 08 48 53.3
comp=Z,1μm,2.0s
MYKOM **Kota Tinggi 24.23 283** P **P** **08 48 50.0 +0.8**
MNAI Manna 24.42 268 P **P** **08 48 52.1 +1.1**
comp=Z,7μmcomp=Z,397nm,1.0s
MNAI Manna 24.42 268 P **P** **08 48 51.0 0.0**
MNAI IAmb IAmb 08 48 55.1
comp=Z,280nm,0.9s
CTA Charters Tower 24.43 133 P **P** **08 48 52.3 +1.4**
comp=Z,205nm,1.1s,baz=309,slow=12,SNR=98
CTA LR LR 08 59 01.0
comp=Z,9μm,21.5s,baz=318,slow=38
CTAO Charters Tower 24.43 133 P **P** **08 48 52.3 +1.4**
CTAO pmax pmax
comp=Z,2μm,1.8s
CTAO MLR MLR
comp=Z,11μm,22.0s
CTAO Charters Tower 24.43 133 P **P** **08 48 52.3 +1.4**
DLV T Lat 24.52 310 P **P** **08 48 52.3 +0.3**
DLV IAmb IAmb 08 49 04.3
comp=Z,539nm,1.3s
KRVT Keravat (AS076 24.53 92 P **P** **08 48 51.5 -0.5**
comp=Z,741nm,1.0s,baz=104,slow=3.1,SNR=54
KRVT LR LR 08 59 53.0
comp=Z,6μm,18.1s,baz=273,slow=40
BBP Basco 24.74 348 *e*P **P** **08 48 49.5 -4.2**
MASI Maura Aman, Be 25.16 271 P **P** **08 48 58.4 +0.7**
comp=Z,13μmcomp=Z,428nm,1.7s
SDSI Sungai Dareh 26.14 276 P **P** **08 49 07.7 +1.1**
comp=Z,6μmcomp=Z,182nm,1.5s
BKNI Bangkinang 26.70 278 P **P** **08 49 12.1 +0.4**
comp=Z,5μmcomp=Z,5μmcomp=Z,433nm,1.3s
BKNI Bangkinang 26.70 278 IAmb IAmb 08 49 24.7
comp=Z,506nm,1.1s
FORT Forrest 26.79 179 P **P** **08 49 13.1 +1.0**
baz=27,SNR=119
FORT Forrest 26.79 179 P **P** **08 49 12.9 +0.7**
FORT IAMs_20 IAMs_20 09 00 29.9
comp=Z,15μm,18.0s
MORW Morawa 27.31 202 P **P** **08 49 17.6 +0.7**
baz=28,SNR=35
MORW Morawa 27.31 202 P **P** **08 49 16.4 -0.5**
IPM Ipoh 27.66 287 P **P** **08 49 20.8 +0.6**
IPM Ipoh 27.66 287 P **P** **08 49 21.0 +0.8**
QLP Quilpie 27.73 146 P **P** **08 49 21.9 +1.1**
baz=28,SNR=7.9
TPUB Ta-pu 27.80 346 P **P** **08 49 21.9 +0.6**
KMBL Kambalda 27.86 190 P **P** **08 49 22.6 +0.8**
baz=28,SNR=55
SSLB Suanglung 28.20 347 P **P** **08 49 25.0 +0.1**
KULM Kulim 28.26 289 P **P** **08 49 25.8 +0.3**
KULM Kulim 28.26 289 P **P** **08 49 26.0 +0.4**
SISI Saibi 28.43 274 P **P** **08 49 25.8 -1.3**
comp=Z,1μmcomp=Z,84nm,1.3s
YOJ Yonaguni jima 28.48 352 IAmb IAmb 08 49 37.2
comp=Z,268nm,1.0s
BLDU Baliidu 28.48 200 P **P** **08 49 27.5 +0.2**
baz=29,SNR=52
QIZ Qiongzhong 28.59 323 P **P** **08 49 28.6 +0.2**
QIZ pP **pwP** **08 49 41.7 -2.0**
QIZ S **S** **08 54 13.4 -0.1**
QIZ sS **sS** **08 54 36.3 +3.1**
QIZ pmax pmax
comp=Z,31nm,1.8s
QIZ pmax pmax
comp=Z,860nm,7.6s
QIZ LR LR
comp=Z,6μm,18.1s
QIZ LR LR
comp=Z,5μm,17.7s
QIZ LR LR
comp=Z,3μm,13.7s
YHNB Yeheng 28.96 349 P **P** **08 49 31.9 +0.2**
YHNB IAmb IAmb 08 49 49.2
comp=Z,467nm,1.4s
KLBR Kellerberrin 29.05 197 P **P** **08 49 33.6 +1.2**
baz=29,SNR=35
RPSI Rantau Prapat 29.23 282 IAmb IAmb 08 49 36.7
comp=Z,451nm,1.7s
TATO Taipei 29.24 349 P **P** **08 49 35.6 +1.5**
PSI Prapat 29.25 283 P **P** **08 49 34.1 -0.4**
comp=Z,53nm,0.6s,baz=178,slow=2.0,SNR=62
PSI LR LR 09 02 14.7
comp=Z,5μm,20.1s,baz=91,slow=38
KNMB Chin-men Tao 29.50 343 P **P** **08 49 37.2 +0.8**
KNMB IAmb IAmb 08 49 47.4
comp=Z,471nm,1.6s
QZH Quanzhou 29.89 344⇓ *i*P **P** **08 49 40.8 +0.9**
QZH S **S** **08 54 29.6 -4.2**
QZH pmax pmax
comp=Z,120nm,1.2s
QZH pmax pmax
comp=Z,2μm,8.7s
QZH LR LR
comp=Z,1μm,11.4s
QZH LR LR
comp=Z,2μm,12.8s
QZH LR LR
comp=Z,4μm,28.9s
MUN Mundaring 29.90 199 P **P** **08 49 40.6 +0.7**
baz=30,SNR=16
BBOO Buckleboo 29.91 165 P **P** **08 49 40.9 +0.9**
baz=30,SNR=10
BBOO Buckleboo 29.91 165 IAmb IAmb 08 49 52.1
comp=Z,364nm,1.4s
GZH Guangzhou 30.11 333 P P 08 49 47.1 +5.3
GZH PP **PP** **08 50 47.7 -2.8**
GZH S **S** **08 54 45.3 +8.0**
GZH LR LR
comp=Z,5μm,13.9s
GZH LR LR
comp=Z,5μm,22.6s
GSI Gunungsitoli 30.28 279 P **P** **08 49 43.5 0.0**
comp=Z,23μmcomp=Z,2μm,1.2s
GSI Gunungsitoli 30.28 279 P **P** **08 49 42.5 -1.0**
RMQ Roma 30.38 140 P **P** **08 49 44.7 +0.5**
baz=30,SNR=28
NWAO Narrogin (SRO) 30.45 197 P **P** **08 49 45.4 +0.7**
baz=31,SNR=47
NWAO Narrogin (SRO) 30.45 197 P **P** **08 49 45.5 +0.7**
comp=Z,107nm,0.8s,baz=29,slow=6.0,SNR=60
NWAO LR LR 09 02 57.9
comp=Z,6μm,18.3s,baz=60,slow=38
NWAO Narrogin (SRO) 30.45 197 P **P** **08 49 45.5 +0.7**
NWAO Narrogin (SRO) 30.45 197 P **P** **08 49 45.2 +0.4**
JOW Kunigami 30.52 1 P **P** **08 49 46.0 +0.5**
comp=Z,11nm,0.6s,baz=178,slow=15,SNR=44
JOW Kunigami 30.52 1 P **P** **08 49 45.1 -0.3**
JOW IAmb IAmb 08 49 48.6
comp=Z,530nm,1.7s
KCSI Kotacane, Aceh 30.54 284 P **P** **08 49 45.2 -0.6**
comp=Z,2μmcomp=Z,61nm,0.8s
STKA Stephens Creek 30.89 156 P **P** **08 49 49.3 +0.6**
baz=31,SNR=70
STKA Stephens Creek 30.89 156 P **P** **08 49 49.2 +0.6**
comp=Z,29nm,0.5s,baz=331,slow=9.3,SNR=56
STKA LR LR 09 03 16.0
comp=Z,10μm,18.8s,baz=328,slow=38
STKA Stephens Creek 30.89 156 P **P** **08 49 49.0 +0.3**
TPTI 31.05 283 P **P** **08 49 49.9 -0.4**
comp=Z,570nmcomp=Z,24nm,1.0s
EIDS Eidsvold 31.20 136 P **P** **08 49 51.4 -0.1**
baz=31,SNR=10
EIDS Eidsvold 31.20 136 P **P** **08 49 51.1 -0.4**
EIDS IAMs_20 IAMs_20 09 03 07.6
comp=Z,10μm,20.0s
HTT Hallett 31.32 161 P **P** **08 49 53.8 +1.3**
baz=32,SNR=22
LHMI Lhok Sumawe 31.77 286 P **P** **08 49 57.1 +0.5**
comp=Z,6μmcomp=Z,6μmcomp=Z,222nm,1.3s
LHMI Lhok Sumawe 31.77 286 IAmb IAmb 08 50 07.2
comp=Z,290nm,1.1s
MLSI Meulaboh, Aceh 32.04 284 P **P** **08 49 59.2 +0.2**
comp=Z,14μmcomp=Z,370nm,1.2s
RKGY Rocky Gully 32.10 196 P **P** **08 50 01.4 +2.1**
baz=32,SNR=19
CMSA Cobar Meteorol 32.45 150 P **P** **08 50 03.6 +1.2**
baz=33,SNR=84
PATS Pohnpei 32.60 71 P **P** **08 50 02.9 -1.1**
baz=33,SNR=4.3
PATS Pohnpei 32.60 71 P **P** **08 50 05.0 +1.1**

PATS IAmb IAmb 08 50 06.0
comp=Z,276nm,1.4s
HNR Honiara 32.75 101 P **P** **08 50 04.9 -0.3**
comp=Z,109nm,0.9s,baz=108,slow=5.8,SNR=3.9
HNR LR LR 09 05 13.2
comp=Z,3μm,18.7s,baz=268,slow=40
HNR Honiara 32.75 101 IAmb IAmb 08 50 38.1
comp=Z,324nm,1.3s
JCJ Chichijima 33.91 24 P **P** **08 50 15.7 +0.5**
comp=Z,177nm,0.8s,baz=167,slow=5.6,SNR=7.6
JCJ LR LR 09 01 56.5
comp=Z,2μm,20.6s,baz=233,slow=32
ARMA Armidale 34.93 142 P **P** **08 50 25.2 +1.1**
baz=35,SNR=12
ARMA Armidale 34.93 142 IAmb IAmb 08 50 38.5
comp=Z,394nm,1.9s
ARMA IAMs_20 IAMs_20 09 05 39.6
comp=Z,8μm,18.0s
SSE Sheshan 35.27 351 P **P** **08 50 27.3 +0.5**
SSE S **S** **08 55 56.3 -1.0**
SSE pmax pmax
comp=Z,13nm,0.6s
SSE LR LR
comp=Z,990nm,21.8s
SSE LR LR
comp=Z,990nm,19.2s
ARPS Mount Arapiles 35.33 160 P **P** **08 50 29.1 +1.8**
baz=36,SNR=14
CM31 Chiang Mai Arr 35.77 309 P **P** **08 50 32.4 +1.0**
CM31 P **P** **08 50 32.5 +1.1**
SNR=33
CM31 Chiang Mai Arr 35.77 309 P **P** **08 50 32.0 +0.6**
CM31 IAmb IAmb 08 50 42.7
comp=Z,195nm,1.5s
CMAR Chiang Mai Arr 35.77 309 P **P** **08 50 31.7 +0.3**
comp=Z,9.2nm,0.5s,baz=139,slow=6.7,SNR=28
CMAR PcP **PcP** **08 52 59.0 +0.4**
comp=Z,12nm,1.0s,baz=145,slow=2.3,SNR=7.9
CMAR ScP **ScP** **08 56 44.2 +3.4**
comp=Z,3.4nm,0.6s,baz=155,slow=3.2,SNR=7.8
CMAR LR LR 09 05 54.2
comp=Z,2μm,21.9s,baz=128,slow=38
CMAR Chiang Mai Arr 35.77 309 *i* P **P** **08 50 32.2 +0.8**
CMAR pmax pmax
comp=Z,10.0nm,0.5s
CHTO Chiang Mai 35.98 310 P **P** **08 50 33.9 +0.8**
CHTO P **P** **08 50 33.9 +0.8**
CHTO Chiang Mai 35.98 310 P **P** **08 50 33.7 +0.5**
CHTO pmax pmax
comp=Z,84nm,1.0s
CHTO MLR MLR
comp=Z,4μm,21.0s
CHTO Chiang Mai 35.98 310 P **P** **08 50 33.6 +0.5**
YNG Young 36.02 150 P **P** **08 50 34.9 +1.7**
baz=36,SNR=44
GYA Guiyang 36.23 327⇑ *i*P **P** **08 50 36.1 +0.8**
GYA PP **PP** **08 52 05.3 +6.8**
GYA PcP **PcP** **08 53 00.8 +0.9**
GYA S **S** **08 56 12.3 -0.2**
GYA SS **SS** **08 58 47.9 -4.3**
GYA pmax pmax
comp=Z,20nm,1.2s
GYA pmax pmax
comp=Z,1μm,7.4s
GYA LR LR
comp=Z,2μm,18.0s
GYA LR LR
comp=Z,1μm,13.9s
GYA LR LR
comp=Z,2μm,15.2s
WHN Wuhan 36.42 341 P **P** **08 50 38.0 +1.3**
WHN pP **pP** **08 50 47.5 -1.0**
WHN PP **PP** **08 52 06.1 +5.7**
WHN S **S** **08 56 18.4 +3.4**
WHN pmax pmax
comp=Z,2μm,3.6s
WHN LR LR
comp=Z,3μm,9.6s
WHN LR LR
comp=Z,4μm,9.6s
WHN LR LR
comp=Z,6μm,16.9s
MGCD Mangrove Creek 36.63 146 P **P** **08 50 39.0 +0.5**
baz=37,SNR=11
NJ2 Nanjing 36.63 348 *e*P **P** **08 50 39.5 +1.0**
NJ2 PP **PnPn** **08 52 07.6 +4.7**
NJ2 S **S** **08 56 20.8 +2.6**
NJ2 pmax pmax
comp=Z,63nm,0.8s
NJ2 pmax pmax
comp=Z,2μm,7.1s
NJ2 LR LR
comp=Z,2μm,17.1s
NJ2 LR LR
comp=Z,1μm,22.7s
NJ2 LR LR
comp=Z,3μm,19.9s
JNU Nakatsue 36.92 5 P **P** **08 50 41.4 +0.4**
comp=Z,59nm,1.0s,baz=255,slow=3.5,SNR=20
JNU ScP **ScP** **08 56 47.3 +2.4**
comp=Z,14nm,1.0s,baz=196,slow=5.9,SNR=3.9
JNU LR LR 09 04 48.0
comp=Z,7μm,21.3s,baz=173,slow=34
JNU Nakatsue 36.92 5 P **P** **08 50 40.9 -0.1**
JNU IAmb IAmb 08 50 51.5
comp=Z,278nm,1.4s
CAN Canberra 37.13 150 P **P** **08 50 44.7 +1.9**
CNB Canberra Magne 37.30 150 P **P** **08 50 45.3 +1.0**
baz=37,SNR=10
TOO Toolangi 37.41 156 P **P** **08 50 46.2 +1.1**
baz=38,SNR=8.3
TOO Toolangi 37.41 156 IAmb IAmb 08 50 49.1
comp=Z,284nm,1.6s
TOO IAMs_20 IAMs_20 09 06 57.6
comp=Z,7μm,21.0s
KMI Kunming 37.48 322 P **P** **08 50 47.6 +1.5**
KMI pP pP 08 50 57.3 -0.9
KMI PP **PnPn** **08 52 16.3 +2.7**
KMI S **S** **08 56 35.2 +3.3**
KMI pmax pmax
comp=Z,47nm,2.0s
KMI pmax pmax
comp=Z,630nm,4.4s
KMI LR LR
comp=Z,3μm,19.3s
KMI LR LR
comp=Z,4μm,17.4s
KMI LR LR
comp=Z,2μm,19.3s
KMI Kunming 37.48 322 IAmb IAmb 08 50 58.8
comp=Z,295nm,1.4s
PBA Port Blair 37.79 294⇑ *i*P P 08 50 47.4 -1.2
ENH Enshi 38.03 334 IAmb IAmb 08 51 00.9
comp=Z,183nm,1.0s
DGPR DIGLIPUR 38.21 297 *e*P **P** **08 50 50.4 -1.8**
DGPR IAmb IAmb 08 51 06.3
comp=Z,93nm,0.2s
MILA Mila 38.59 152 P **P** **08 50 56.0 +0.9**
baz=39,SNR=9.4
INU Inuyama 40.02 12 P **P** **08 51 06.9 0.0**
INU IAmb IAmb 08 51 17.3
comp=Z,190nm,1.1s
TJN Taejon 40.03 360⇓ *e*P **P** **08 51 07.2 +0.3**
TIA Tai'an 41.01 347 P **P** **08 51 16.1 +1.0**
TIA pmax pmax
comp=Z,19nm,1.1s
TIA pmax pmax
comp=Z,680nm,4.9s
TIA LR LR
comp=Z,2μm,16.7s
TIA LR LR
comp=Z,1μm,20.6s
TIA LR LR
comp=Z,3μm,18.6s
KSRS Korea Array 41.10 1 P **P** **08 51 16.2 +0.4**
comp=Z,42nm,0.8s,baz=178,slow=9.4,SNR=68
KSRS PcP **PcP** **08 53 13.9 -0.8**
comp=Z,5.1nm,0.5s,baz=186,slow=2.9,SNR=6.6
KSRS ScP **ScP** **08 57 03.5 +2.8**
comp=Z,4.1nm,0.7s,baz=186,slow=4.0,SNR=8.7
KSRS LR LR 09 07 08.5
comp=Z,3μm,21.7s,baz=190,slow=34
INCN Inchon 41.14 359 P **P** **08 51 16.6 +0.4**
INCN pmax pmax
comp=Z,225nm,1.2s
INCN Inchon 41.14 359 P **P** **08 51 16.6 +0.4**

INCN IAmb IAmb 08 51 26.5
comp=Z,225nm,1.2s
KS19 Wonju Array Si 41.15 1 P **P** **08 51 16.6 +0.3**
CD2 Chengdu 41.30 328 P **P** **08 51 17.9 +0.2**
CD2 pP sP 08 51 32.2 -3.5
CD2 PP **PP** **08 52 54.9 +1.0**
CD2 S **S** **08 57 29.6 +0.9**
CD2 sS sS 08 57 51.2 +2.3
CD2 SS **SS** **09 00 35.6 +1.7**
CD2 pmax pmax
comp=Z,50nm,0.7s
CD2 LR LR
comp=Z,3μm,12.9s
CD2 LR LR
comp=Z,4μm,16.3s
CD2 LR LR
comp=Z,4μm,13.3s
MAJO Matsushiro 41.43 13*d* *i*P **P** **08 51 17.4 -1.2**
MAJO pmax pmax
comp=Z,51nm,1.0s
MAJO MLR MLR
comp=Z,4μm,18.0s
MAJO Matsushiro 41.43 13 P **P** **08 51 17.8 -0.7**
MAT Matsushiro 41.43 13 P **P** **08 51 17.1 -1.5**
MAT S **S** **08 57 29.0 -1.4**
MJAR Matsushiro Arr 41.43 13 P **P** **08 51 17.5 -1.1**
comp=Z,28nm,0.7s,baz=186,slow=9.0,SNR=70
MJAR ScP **ScP** **08 57 04.5 +2.4**
comp=Z,6.7nm,0.9s,baz=196,slow=4.4,SNR=8.4
XAN Xi'an 41.55 337 P **P** **08 51 19.1 -0.5**
XAN pP sP 08 51 33.8 -3.0
XAN sP pwP 08 51 40.1 +3.8
XAN PP **PnPn** **08 53 03.4 +1.9**
XAN S **S** **08 57 30.9 -1.3**
XAN sS sS 08 57 56.1 +3.7
XAN ScS **ScS** **09 01 13.4 -5.8**
XAN pmax pmax
comp=Z,32nm,1.2s
XAN pmax pmax
comp=Z,880nm,4.9s
XAN LR LR
comp=Z,3μm,18.2s
XAN LR LR
comp=Z,2μm,18.2s
XAN LR LR
comp=Z,4μm,17.4s
XAN Xi'an 41.55 337 IAmb IAmb 08 51 29.8
comp=Z,714nm,1.8s
DZM Mont Dzumac 41.91 119 *e*P **P** **08 51 23.7 +0.8**
comp=Z,241nm,1.5s
DZM *e*S **S** **08 57 37.7 -0.4**
comp=Z,2μm,24.4s
DZM *e*LQ LQ 09 01 12.4
comp=Z,5μm,27.8s
DZM *e*LR LR 09 03 13.1
comp=Z,7μm,24.6s
DZM Mont Dzumac 41.91 119 P **P** **08 51 23.5 +0.6**
comp=Z,40nm,1.0s,baz=306,slow=6.5,SNR=23
DZM Mont Dzumac 41.91 119 IAmb IAmb 08 51 35.1
comp=Z,355nm,1.8s
MOO Moorlands 42.27 158 P **P** **08 51 26.6 +1.2**
baz=42,SNR=5.9
TAU Tasmania Unive 42.72 158 P **P** **08 51 31.3 +2.3**
TAU pmax pmax
comp=Z,140nm,1.4s
TAU MLR MLR
comp=Z,7μm,18.0s
TAU Tasmania Unive 42.72 158 P **P** **08 51 31.3 +2.3**
TAU Tasmania Unive 42.72 158 IAMs_20 IAMs_20 09 10 38.0
comp=Z,7μm,18.0s
DL2 Dalian 42.89 353 P **P** **08 51 31.7 +1.3**
DL2 S **S** **08 57 52.6 +0.9**
DL2 pmax pmax
comp=Z,45nm,1.1s
DL2 pmax pmax
comp=Z,640nm,6.7s
DL2 LR LR
comp=Z,2μm,16.1s
DL2 LR LR
comp=Z,2μm,12.6s
DL2 LR LR
comp=Z,3μm,17.8s
BRDH Bariadhala 43.79 309 P **P** **08 51 38.4 +0.5**
comp=Z,96nm,0.4s,baz=83,slow=13,SNR=8.6
BELO BELONIA 44.25 309 *e*P **P** **08 51 42.2 +0.6**
AGT Agartala 44.75 310 *e*P **P** **08 51 45.8 +0.2**
BJT Baijiatuau 44.87 348 IAmb IAmb 08 51 56.5
comp=Z,354nm,1.5s
BJI Beijing 44.89 348 P **P** **08 51 45.8 -0.6**
BJI sP **sP** **08 52 08.6 +4.8**
BJI PcP **PcP** **08 53 28.3 +0.9**
BJI S **S** **08 58 20.6 -0.3**
BJI pmax pmax
comp=Z,41nm,1.5s
BJI pmax pmax
comp=Z,600nm,4.7s
BJI LR LR
comp=Z,2μm,16.7s
BJI LR LR
comp=Z,1μm,15.7s
BJI LR LR
comp=Z,2μm,22.7s
ZIRO ZIRO 44.98 316 *e*P **P** **08 51 48.4 +0.8**
ZIRO IAmb IAmb 08 51 57.5
comp=Z,234nm,1.1s
TEZP TEZPUR 45.16 314⇑ *i*P **P** **08 51 48.9 +0.1**
SHL Shillong 45.21 312⇑ *i*P **P** **08 51 49.0 -0.5**
SHL Shillong 45.21 312 P **P** **08 51 49.7 +0.2**
SNR=79
SHL S **S** **08 58 27.0 +0.7**
SHL Shillong 45.21 312 P **P** **08 51 48.7 -0.8**
SHL pmax pmax
comp=Z,165nm,0.9s
SHL Shillong 45.21 312 P **P** **08 51 48.7 -0.8**
SHL IAmb IAmb 08 52 00.9
comp=Z,165nm,0.9s
LZH Lanzhou 45.46 333 *e*P **P** **08 51 51.9 +0.7**
LZH pP pP 08 52 02.0 -2.1
LZH sP pwP 08 52 07.4 +3.3
LZH PcP **PcP** **08 53 30.6 +0.9**
LZH PP **PP** **08 53 38.5 +0.1**
LZH S **S** **08 58 27.9 -1.7**
LZH pmax pmax
comp=Z,76nm,1.1s
LZH pmax pmax
comp=Z,1μm,5.4s
LZH LR LR
comp=Z,3μm,15.2s
LZH LR LR
comp=Z,1μm,16.4s
LZH LR LR
comp=Z,3μm,16.8s
SNY Shenyang 45.60 356⇑ *i*P **P** **08 51 53.2 +1.2**
SNY sP **sP** **08 52 10.2 +0.8**
SNY PP **PP** **08 53 41.7 +2.1**
SNY S **S** **08 58 39.4 +8.3**
SNY pmax pmax
comp=Z,33nm,1.4s
SNY pmax pmax
comp=Z,700nm,5.2s
SNY LR LR
comp=Z,3μm,19.5s
SNY LR LR
comp=Z,2μm,19.7s
SNY LR LR
comp=Z,4μm,22.3s
TARA Tarawa 45.75 84 P **P** **08 51 55.0 +1.3**
TARA IAmb IAmb 08 51 56.4
comp=Z,241nm,1.3s
NFK Norfolk Island 45.84 128 P **P** **08 51 54.5 +0.3**
baz=46,SNR=3.7
MSHR Mys Shultsa 46.34 4*d* *i*P **P** **08 51 58.7 +0.8**
HHC Hu-ho-hao-te 46.80 343 P **P** **08 52 01.7 0.0**
HHC pP pwP 08 52 18.8 +0.5
HHC S **S** **08 58 47.2 -1.4**
HHC sS sS 08 59 15.2 +6.1
HHC pmax pmax
comp=Z,13nm,0.7s
HHC pmax pmax
comp=Z,430nm,6.3s
HHC LR LR
comp=Z,660nm,12.3s
HHC LR LR
comp=Z,640nm,13.6s
HHC LR LR
comp=Z,1μm,16.9s

DHUB **DHUBRI** 46.87 311⇑ *i*P **P** **08 52 01.2 -1.0**
VLA **Vladivostok** 46.93 4*c i*P **P** **08 52 04.4 +1.9**
VLA pmax pmax
comp=Z,99nm,1.1s
BTO **Baotou** 47.04 342 *e*P **P** **08 52 04.9 +1.4**
BWNR **Bhubaneshwar** 47.39 302⇑ *i*P **P** **08 52 06.5 +0.1**
BWNR *i* x x 08 54 00.1
CN2 **Changchun** 47.48 358 *e*P **P** **08 52 05.3 -1.4**
CN2 *e*S **S** **08 58 58.2 +0.3**
CN2 SS **SS** **09 02 20.3 -6.1**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,700nm,8.3s
CN2 LR LR
comp=Z,2µm,22.0s
CN2 LR LR
comp=Z,2µm,22.0s
CN2 LR LR
comp=Z,3µm,20.0s
ERM **Érimo** 47.84 16⇑ *e*P **P** **08 52 10.2 +0.6**
ERM pmax pmax
comp=Z,16nm,1.0s
ERM MLR MLR
comp=Z,3µm,19.0s
USA0B **Ussuriysk Arra** 48.01 4*c i*P **P** **08 52 10.7 -0.2**
USRK **Ussuriysk Ar.** 48.01 4 P **P** **08 52 11.2 +0.3**
comp=Z,40nm,0.7s,baz=184,slow=7.0,SNR=107
USRK ScP **ScP** **08 57 31.4 +2.4**
comp=Z,15nm,1.1s,baz=197,slow=2.0,SNR=11
LSA **Lhasa** 48.18 316 P **P** **08 52 14.0 +1.0**
LSA **Lhasa** 48.18 316 P **P** **08 52 14.0 +1.0**
LSA **Lhasa** 48.18 316 P **P** **08 52 14.2 +1.2**
LSA P **P** **08 52 14.2 +1.2**
MDJ **Mudanjiang** 48.30 2 P **P** **08 52 13.2 +0.2**
MDJ pP pP 08 52 21.9 -3.3
MDJ sP sP 08 52 27.3 -3.1
MDJ PcS **PcS** **08 57 35.1 0.0**
MDJ S **S** **08 59 10.9 +1.4**
MDJ pmax pmax
comp=Z,48nm,1.4s
MDJ LR LR
comp=Z,3µm,20.1s
MDJ LR LR
comp=Z,1µm,15.5s
MDJ LR LR
comp=Z,4µm,19.9s
GTK **Tadong** 48.62 312⇑ *i*P **P** **08 52 16.1 0.0**
BOK **Bokaro** 48.92 306⇑ *i*P **P** **08 52 18.5 +0.2**
BOK IAmb IAmb 08 52 21.5
comp=Z,59nm,1.1s
ODAN **Odare** 49.28 311 *e*P **P** **08 52 21.5 +0.2**
comp=Z,196nm,0.6s
TAPN **Taplejung** 49.31 311 *e*P **P** **08 52 21.7 +0.2**
comp=Z,255nm,0.8s
TEY **Ternei** 49.36 9⇓ *e*P **P** **08 52 21.9 +0.7**
TEY *e* 08 52 38.8
TEY pmax pmax
comp=Z,30nm,0.7s
TEY pmax pmax
comp=E,200nm,8.1s
TEY pmax pmax
comp=Z,200nm,13.8s
MDRS **Chennai** 49.78 291⇑ *i*P **P** **08 52 24.7 -0.2**
MDRS IAmb IAmb 08 52 29.9
comp=Z,53nm,0.9s
PVM **Polavaram** 49.84 296 *e*P **P** **08 52 25.1 -0.2**
PVM IAmb IAmb 08 52 26.4
comp=Z,78nm,1.5s
PVM IVMs_BB IVMs_BB 09 11 13.7
comp=Z,400nm,22.1s
RAMN **Ramite** 49.93 310 *e*P **P** **08 52 26.8 +0.6**
comp=Z,370nm,0.5s
GTA **Gaotai** 50.01 332 ⇑P **P** **08 52 26.7 +0.2**
GTA pP pP 08 52 36.7 -2.9
GTA sP pwP 08 52 41.5 +1.9
GTA PcP **PcP** **08 53 47.3 +1.4**
GTA PP **PP** **08 54 19.9 -2.0**
GTA S **S** **08 59 33.9 -0.2**
GTA SS **SS** **09 03 12.1 +4.3**
GTA pmax pmax
comp=Z,31nm,1.7s
GTA pmax pmax
comp=Z,720nm,7.1s
GTA LR LR
comp=Z,2µm,14.4s
GTA LR LR
comp=Z,2µm,13.7s
GTA LR LR
comp=Z,2µm,16.8s
SKHT **Srikalahasti** 50.48 291 *e*P **P** **08 52 29.8 -0.4**
SKHT IAmb IAmb 08 52 31.9
comp=Z,139nm,1.6s
MYLAV **Mylavaram** 50.56 295 *e*P **P** **08 52 30.3 -0.5**
MYLAV IAmb IAmb 08 52 31.1
comp=Z,86nm,1.5s
MYLAV IVMs_BB IVMs_BB 09 10 46.1
comp=Z,419nm,25.6s
JIRN **Jiri** 50.61 311 *e*P **P** **08 52 31.6 +0.1**
comp=Z,242nm,0.7s
ADKI **Addanki** 50.87 294 *e*P **P** **08 52 32.9 -0.2**
ADKI IAmb IAmb 08 52 35.5
comp=Z,32nm,0.7s
ADKI IVMs_BB IVMs_BB 09 10 39.4
comp=Z,389nm,22.0s
GUN **Gumba** 50.98 311 *e*P **P** **08 52 34.3 +0.1**
comp=Z,719nm,1.2s
PKI **Pulchoki** 51.16 310 *e*P **P** **08 52 35.2 -0.3**
comp=Z,91nm,0.7s
PKIN **Phulchoki** 51.17 310 *e*P **P** **08 52 35.2 -0.4**
comp=Z,96nm,0.6s
KKN **Kakani** 51.37 310 *e*P **P** **08 52 36.8 -0.2**
comp=Z,82nm,0.6s
DMN **Daman** 51.41 310 *e*P **P** **08 52 37.4 +0.1**
comp=Z,175nm,0.8s
MSVF **Nonsavu** 51.42 110*de*P **P** **08 52 38.3 +1.0**
MSVF pmax pmax
comp=Z,136nm,1.1s
MSVF MLR MLR
comp=Z,1µm,17.0s
MSVF **Nonsavu** 51.42 110 P **P** **08 52 38.8 +1.4**
FUNA **Funafuti** 51.63 98 P **P** **08 52 39.8 +0.9**
NJS **Nagarjunasagar** 51.70 294 *e*P **P** **08 52 38.4 -1.0**
NJS IAmb IAmb 08 52 49.7
comp=Z,27nm,0.7s
NJS IVMs_BB IVMs_BB 09 11 00.0
comp=Z,366nm,29.9s
TRD **Trivandrum** 51.81 284 *e*P **P** **08 52 38.2 -2.0**
TRD IAmb IAmb 08 52 42.9
comp=Z,110nm,0.2s
SRLM **Srisailam** 51.94 294 *e*P **P** **08 52 40.0 -1.1**
SRLM IAmb IAmb 08 52 41.3
comp=Z,68nm,1.4s
GKN **Gorkha** 51.97 310 *e*P **P** **08 52 41.3 -0.1**
comp=Z,161nm,0.5s
KUR **Kuril'sk** 52.16 18*d i*P **P** **08 52 43.8 +1.5**
KUR *i* 08 53 51.3
KUR 08 54 39.1
KUR *e*S **S** **09 00 04.1 +0.9**
KUR pmax pmax
comp=Z,226nm,1.3s
KUR pmax pmax
comp=Z,1µm,7.7s
YSS **Yuzh-Sakhalins** 52.37 13⇓ *e*P **P** **08 52 44.0 +0.2**
YSS *e**PP **sP** **08 52 59.2 -2.0**
YSS *e* 08 53 52.6
YSS *e* 08 54 49.2
YSS *e*S **S** **09 00 03.5 -2.5**
YSS *e* 09 02 30.0
YSS *e*SS **SS** **09 03 48.0 +3.4**
YSS *e*SSS SSS 09 05 32.0
YSS pmax pmax
comp=Z,30nm,1.3s
YSS pmax pmax
comp=Z,800nm,4.7s
YSS smax smax
comp=N,800nm,12.3s
YSS smax smax
comp=E,900nm,13.6s
YSS MLR MLR
comp=Z,1µm,15.0s
YSS **Yuzh-Sakhalins** 52.37 13 P **P** **08 52 44.1 +0.2**
RPR **Rampur** 52.48 297 *e*P **P** **08 52 44.3 -0.9**
RPR IAmb IAmb 08 52 47.3
comp=Z,31nm,0.9s

KOLN **Koldanda** 52.64 309 *e*P **P** **08 52 46.6 +0.1**
comp=Z,186nm,0.5s
HYB **Hyderabad** 52.66 295 *i* P **P** **08 52 45.5 -1.1**
comp=Z,110nm,1.0s
HYB *e*sP **sP** **08 53 05.0 -0.5**
HYB *e*S **S** **09 00 12.0 +0.9**
HYB **Hyderabad** 52.66 295⇑ *i*P **P** **08 52 45.4 -1.1**
HYB IAmb IAmb 08 52 46.7
comp=Z,51nm,0.7s
HYB ⇓ *e*Pg **PcP** **08 54 01.4 +5.3**
HYBB **Hyderabad (bro** 52.66 295 *e*P **P** **08 52 45.5 -1.0**
HYBB IAmb IAmb 08 52 46.7
comp=Z,29nm,0.8s
HYBB IVMs_BB IVMs_BB 09 13 37.6
comp=Z,382nm,22.4s
DANN **Dangsing** 52.81 310 *e*P **P** **08 52 47.7 -0.1**
comp=Z,471nm,0.6s
OUZ **Omahuta** 52.83 132 P **P** **08 52 49.3 +1.8**
OUZ IAmb IAmb 08 52 51.2
comp=Z,210nm,1.4s
KLR **Kul'dur** 53.00 4 P **P** **08 52 48.4 0.0**
comp=Z,42nm,1.2s,baz=197,slow=7.1,SNR=3.6
KLR ScP **ScP** **08 57 52.5 +2.3**
comp=Z,3.8nm,0.7s,baz=213,slow=2.0,SNR=4.9
KLR S **S** **09 00 12.5 -2.1**
comp=Z,3.9nm,1.1s,baz=357,slow=18,SNR=10
KLR **Kul'dur** 53.00 4*c i*P **P** **08 52 48.1 -0.3**
KLR pmax pmax
comp=Z,165nm,1.3s
URV **Uravakonda** 53.09 292 *e*P **P** **08 52 48.3 -1.4**
URV IAmb IAmb 08 52 59.5
comp=Z,36nm,0.8s
URV IVMs_BB IVMs_BB 09 16 56.4
comp=Z,623nm,21.2s
PYUN **Piuthan** 53.28 309 *e*P **P** **08 52 51.3 +0.2**
comp=Z,374nm,0.9s
HIA **Hailar** 53.33 354*d i*P **P** **08 52 51.6 +0.7**
HIA pmax pmax
comp=Z,73nm,1.6s
HIA MLR MLR
comp=Z,3µm,19.0s
SRSP **Sriramsagar** 53.35 297 *e*P **P** **08 52 50.4 -1.2**
SRSP IAmb IAmb 08 53 01.7
comp=Z,32nm,0.9s
SRSP IVMs_BB IVMs_BB 09 13 09.2
comp=Z,288nm,13.6s
NGP **Nagpur** 53.52 300⇑ *i*P **P** **08 52 51.4 -1.4**
ULN **Ulaanbaatar** 54.52 343 P **P** **08 52 59.9 +0.1**
ULN **Ulaanbaatar** 54.52 343*c i*P **P** **08 52 59.8 0.0**
ULN pmax pmax
comp=Z,252nm,1.4s
ULN MLR MLR
comp=Z,1µm,18.0s
ULN **Ulaanbaatar** 54.52 343 P **P** **08 52 59.9 +0.1**
ULN IAmb IAmb 08 53 10.8
comp=Z,278nm,1.4s
KLRI **Killari** 54.63 295 *e*P **P** **08 52 59.6 -1.4**
KLRI IAmb IAmb 08 53 02.1
comp=Z,27nm,0.7s
KLRI IVMs_BB IVMs_BB 09 12 51.2
comp=Z,440nm,32.0s
SONM **Songino Array** 54.69 343 P **P** **08 53 00.8 -0.2**
comp=Z,11nm,0.7s,baz=158,slow=8.8,SNR=23
SONM ScP **ScP** **08 58 00.4 +2.5**
comp=Z,6.8nm,0.8s,baz=157,slow=3.8,SNR=6.5
WHZ **Wether Hill Ro** 54.72 146 IAmb IAmb 08 53 02.8
comp=Z,136nm,1.4s
WHZ IAMs_20 IAMs_20 09 15 08.4
comp=Z,6µm,22.0s
GRNR **Gornyy** 54.96 7⇓ *i*P **P** **08 53 03.9 +1.2**
GRNR *e* 08 53 12.3
GRNR *e*S **S** **09 00 45.6 +4.6**
GRNR pmax pmax
comp=Z,40nm,1.3s
GRNR smax smax
comp=E,4.0nm,0.6s
LBZ **Lake Benmore** 55.12 144 IAmb IAmb 08 53 06.0
comp=Z,159nm,1.3s
HIZ **Hauiti** 55.17 135 IAmb IAmb 08 53 08.0
comp=Z,293nm,1.4s
RPZ **Rata Peaks** 55.26 143 IAMs_20 IAMs_20 09 17 27.0
comp=Z,4µm,19.0s
THZ **Tophouse** 55.40 140 P **P** **08 53 07.3 +1.1**
THZ IAmb IAmb 08 53 08.5
comp=Z,313nm,1.8s
THZ IAMs_20 IAMs_20 09 17 04.6
comp=Z,5µm,20.0s
LTZ **Lake Taylor** 55.52 141 IAmb IAmb 08 53 09.3
comp=Z,324nm,1.7s
LTZ IAMs_20 IAMs_20 09 16 43.7
comp=Z,5µm,19.0s
OXZ **Oxford** 55.66 142 IAmb IAmb 08 53 30.8
comp=Z,126nm,1.4s
OXZ IAMs_20 IAMs_20 09 16 45.4
comp=Z,4µm,19.0s
BHPL **Bhopal** 55.70 301⇑ *i*P **P** **08 53 07.5 -1.1**
BHPL IAmb IAmb 08 53 10.5
comp=Z,70nm,0.6s
TYV **Tymovskoe** 56.05 12 *e*P **P** **08 53 12.7 +2.2**
TYV pmax pmax
comp=Z,36nm,1.3s
KHZ **Kahutara** 56.14 140 IAmb IAmb 08 53 13.1
comp=Z,130nm,1.1s
MQZ **McQueen's Vall** 56.24 142 IAmb IAmb 08 53 14.5
comp=Z,238nm,1.6s
SNZO **South Karori** 56.36 138 P **P** **08 53 13.1 +0.2**
GOA **Goa** 56.43 291⇑ *i*P **P** **08 53 13.1 -0.8**
GOA IAmb IAmb 08 53 15.8
comp=Z,176nm,1.5s
MCQ **Macquarie Isla** 56.60 159 P **P** **08 53 15.3 +0.9**
baz=57,SNR=6.0
MCQ **Macquarie Isla** 56.60 159 IAmb IAmb 08 53 17.2
comp=Z,193nm,1.1s
BKZ **Black Stump Fm** 56.61 135 IAmb IAmb 08 53 16.7
comp=Z,154nm,1.2s
URZ **Urewera** 56.67 134 LR LR 09 20 40.2
comp=Z,3µm,18.1s,baz=313,slow=39
URZ **Urewera** 56.67 134 IAmb IAmb 08 53 16.8
comp=Z,222nm,1.2s
URZ IAMs_20 IAMs_20 09 17 01.2
comp=Z,4µm,20.0s
CIT **Chita** 56.91 350 *e*P **P** **08 53 16.2 -0.5**
CIT *e* 08 53 32.2
CIT *e* 08 54 11.8
CIT pmax pmax
comp=Z,226nm,1.6s
POO **Poona** 57.26 295⇑ *i*P **P** **08 53 18.1 -1.7**
ZEA **Zeya** 57.39 360 *e*P **P** **08 53 19.8 -0.1**
ZEA *e* 08 54 16.0
ZEA *e*S **S** **09 01 10.0 -3.1**
ZEA *e*PS **PnS** **09 01 31.0 +1.1**
ZEA pmax pmax
comp=N,860nm,1.2s
ZEA pmax pmax
comp=Z,170nm,1.4s
ZEA pmax pmax
comp=Z,1µm,11.0s
ZEA pmax pmax
comp=Z,700nm,9.0s
ZEA smax smax
comp=N,1µm,12.0s
RAO **Raoul Island** 57.52 122 LR LR 09 16 24.4
comp=N,3µm,21.8s,baz=299,slow=34
NKL **Nikolayevsk** 57.88 9 *e*P **P** **08 53 25.3 +1.9**
NKL *e* 08 54 23.1
NKL *e*S **S** **09 01 27.3 +7.7**
NKL pmax pmax
comp=Z,82nm,1.4s
NKL pmax pmax
comp=N,7.0nm,0.8s
NKL pmax pmax
comp=Z,242nm,2.7s
ZAK **Zakamensk** 57.89 342 *e*P **P** **08 53 22.8 -0.9**
ZAK pmax pmax
comp=Z,30nm,1.3s
ZAK pmax pmax
comp=Z,19nm,1.6s
DDI **Dehra Dun** 58.12 309⇑ *i*P **P** **08 53 24.6 -1.1**
DDI IAmb IAmb 08 53 41.3
comp=Z,98nm,0.9s
TLY **Talaya** 58.93 343 P **P** **08 53 31.0 +0.1**
comp=Z,4.8nm,0.5s,baz=314,slow=4.7,SNR=3.6
TLY ScP **ScP** **08 58 19.6 +3.3**
comp=Z,0.9nm,0.4s,baz=133,slow=8.1,SNR=3.5
TLY **Talaya** 58.93 343 P **P** **08 53 30.8 0.0**
TLY **Talaya** 58.93 343*c i*P **P** **08 53 30.8 0.0**

TLY *e*S **S** **09 01 31.4 -2.0**
TLY pmax pmax
comp=Z,125nm,1.4s
TLY **Talaya** 58.93 343 P **P** **08 53 30.6 -0.2**
TLY IAmb IAmb 08 53 42.1
comp=Z,94nm,1.5s
SMLA **Simla** 59.17 310⇑ *i*P **P** **08 53 32.5 -0.3**
IRK **Irkutsk** 59.25 344 *e*P **P** **08 53 33.1 +0.1**
IRK pmax pmax
comp=Z,187nm,2.0s
WMQ **Urumqi** 59.39 327 P **P** **08 53 35.0 +0.8**
WMQ pP pP 08 53 42.6 -4.6
WMQ PcP **PcP** **08 54 21.7 0.0**
WMQ S **S** **09 01 40.2 +0.5**
WMQ ScS **ScS** **09 03 19.6 -0.8**
WMQ SS **SS** **09 05 37.0 +1.5**
WMQ pmax pmax
comp=Z,40nm,1.9s
WMQ pmax pmax
comp=Z,410nm,3.7s
WMQ LR LR
comp=Z,2µm,18.3s
WMQ LR LR
comp=Z,910nm,14.9s
WMQ LR LR
comp=Z,1µm,29.2s
WMQ **Urumqi** 59.39 327 IAmb IAmb 08 53 45.3
comp=Z,195nm,1.2s
SKR **Severo-Kuril's** 59.65 21 *e*P P 08 53 40.9 +5.2
SKR *e*S **S** **09 01 42.5 -0.1**
SKR *e*SS **SS** **09 05 46.1 +7.0**
SKR pmax pmax
comp=Z,59nm,1.4s
SKR pmax pmax
comp=Z,600nm,12.9s
SKR pmax pmax
comp=Z,300nm,8.5s
MOY **Mondy** 59.73 341 *e*P **P** **08 53 36.5 0.0**
MOY pmax pmax
comp=Z,157nm,2.0s
DHRM **DHARAMSHALA** 60.33 311⇑ *i*P **P** **08 53 40.7 -0.5**
AFI **Afiamalu** 60.73 104 P **P** **08 53 44.8 +0.8**
AFI pmax pmax
comp=Z,143nm,1.2s
AFI **Afiamalu** 60.73 104 P **P** **08 53 44.8 +0.8**
AFI IAmb IAmb 08 53 46.6
comp=Z,143nm,1.2s
KNTN **Kanton** 60.74 91 P **P** **08 53 44.7 +0.8**
KNTN IAmb IAmb 08 53 46.7
comp=Z,165nm,1.3s
PEA0B **Petropavlovsk-** 62.21 20⇑ *e*P **P** **08 53 53.6 +0.5**
PEA0B **Petropavlovsk-** 62.21 20 IAmb IAmb 08 54 05.0
comp=Z,182nm,1.2s
PEA0B IAMs_20 IAMs_20 09 25 34.4
comp=Z,3µm,18.0s
PETK **Petropavlovsk-** 62.21 20 P **P** **08 53 53.5 +0.4**
comp=Z,21nm,0.8s,baz=184,slow=4.4,SNR=66
BOD **Bodaibo** 62.42 352⇓ *i*P **P** **08 53 54.2 -0.2**
BOD pmax pmax
comp=Z,301nm,1.4s
PET **Petropavlovsk** 62.47 21⇓ *i*P **P** **08 53 56.1 +1.3**
PET *i* S **S** **09 02 19.5 +1.1**
PET *e*SS **SS** **09 06 27.5 +4.3**
PET pmax pmax
comp=Z,172nm,1.2s
PET pmax pmax
comp=Z,1µm,13.1s
PET pmax pmax
comp=Z,1µm,13.6s
PET **Petropavlovsk** 62.47 21 P **P** **08 53 56.3 +1.5**
PET IAMs_20 IAMs_20 09 25 32.3
comp=Z,4µm,20.0s
NIL **Nilore** 63.25 311 P **P** **08 53 59.9 -0.6**
NIL S S 09 02 46.7 +18
NIL **Nilore** 63.25 311 P **P** **08 53 58.7 -1.8**
NIL pmax pmax
comp=Z,75nm,0.6s
NIL MLR MLR
comp=Z,2µm,22.0s
NIL **Nilore** 63.25 311 P **P** **08 53 58.7 -1.8**
NIL IAmb IAmb 08 54 02.6
comp=Z,75nm,0.6s
ZSN **Zaisan** 63.28 329⇑ *i*P **P** **08 53 59.5 -1.0**
comp=Z,90nm,2.7s
ZSN *e*PP **PP** **08 56 16.7 -3.5**
ZSN *e*S **S** **09 02 28.5 -0.4**
ZSN **Zaisan** 63.28 329*c i*P **P** **08 53 59.4 -1.0**
ZSN *e* 08 56 16.6
ZSN *e*S **S** **09 02 28.5 -0.4**
ZSN pmax pmax
comp=Z,90nm,2.7s
CASY **Casey** 63.43 188 IAMs_20 IAMs_20 09 19 09.5
comp=Z,3µm,19.0s
DGZ **Jazzator, Alta** 63.55 332*c i*P **P** **08 54 01.9 -0.4**
DGZ pmax pmax
comp=Z,23nm,1.1s
DGZ MLR MLR
comp=Z,2µm,19.0s
SHLS **Shalkode** 63.69 323⇑ *i*P **P** **08 54 01.6 -1.7**
comp=Z,143nm,1.9s
SHLS *e*S **S** **09 02 32.8 -1.6**
SHLS **Shalkode** 63.69 323*c i*P **P** **08 54 01.6 -1.7**
SHLS *e*S **S** **09 02 32.7 -1.6**
SHLS pmax pmax
comp=Z,143nm,1.9s
PDGK **Podgornoye** 63.77 323 P **P** **08 54 02.6 -1.3**
PRZ **Przheval'sk** 63.97 322 IAmb IAmb 08 54 16.6
comp=Z,117nm,1.2s
KSH **Kashi** 63.99 318 P **P** **08 54 05.6 +0.2**
KSH PcP **PcP** **08 54 39.1 -1.4**
KSH PP **PP** **08 56 30.6 +3.9**
KSH S **S** **09 02 32.8 -5.5**
KSH ScS **SKSac** **09 03 54.4 -1.0**
KSH pmax pmax
comp=Z,350nm,1.9s
KSH pmax pmax
comp=Z,2µm,5.1s
KSH LR LR
comp=Z,1µm,10.5s
KSH LR LR
comp=Z,2µm,16.8s
KSH LR LR
comp=Z,3µm,13.1s
MK31 **Makanchi Array** 64.22 327 *i* P **P** **08 54 05.5 -1.1**
MK31 **Makanchi Array** 64.22 327 P **P** **08 54 05.9 -0.7**
MKAR **Makanchi Array** 64.22 327 P **P** **08 54 06.1 -0.5**
comp=Z,30nm,0.6s,baz=115,slow=7.4,SNR=142
MKAR PKPPKP P'P'df 09 22 47.3 -9.1
comp=Z,1.3nm,1.0s,baz=323,slow=3.0,SNR=4.4
SATY **Saty** 64.28 322⇑ *i*P **P** **08 54 07.1 -0.2**
comp=Z,100nm,2.1s
SATY *e*PP **PP** **08 56 25.9 -3.2**
SATY *e*S **S** **09 02 42.7 +0.9**
comp=Z,201nm,6.1s
SATY **Saty** 64.28 322*c i*P **P** **08 54 07.0 -0.2**
SATY *e* 08 56 25.9
SATY *e*S **S** **09 02 42.6 +0.9**
SATY pmax pmax
comp=Z,100nm,2.1s
SATY smax smax
comp=E,201nm,6.1s
MAKZ **Makanchi** 64.40 327 P **P** **08 54 07.0 -0.8**
MAKZ pmax pmax
comp=Z,195nm,1.5s
MAKZ **Makanchi** 64.40 327 P **P** **08 54 07.0 -0.8**
MAKZ IAmb IAmb 08 54 17.6
comp=Z,195nm,1.4s
TNSS **Tian-Shan** 65.17 321⇑ *i*P **P** **08 54 13.5 +0.1**
TNSS **Tian-Shan** 65.17 321⇑ *i*P **P** **08 54 13.4 +0.1**
MDOK **Medeo** 65.17 322 *i* P **P** **08 54 12.9 -0.2**
MDOK *i* S **S** **09 02 54.2 +1.5**
MDOK **Medeo** 65.17 322 *i* P **P** **08 54 12.9 -0.2**
MDOK *i* S **S** **09 02 54.2 +1.5**
ULHL **Ulahol** 65.20 320 P **P** **08 54 13.8 +0.5**
SNR=9.9
AAA **Alma-Ata** 65.28 322 *e*P **P** **08 54 11.7 -1.9**
AAA *e*S **S** **09 02 50.8 -3.1**
AAA **Alma-Ata** 65.28 322 *e*P **P** **08 54 13.4 -0.2**
TDK **Taldyqorghan** 65.35 324 *e*P **P** **08 54 13.5 -0.5**
comp=Z,281nm,1.7s
TDK *e*S **S** **09 02 54.4 -0.3**
TDK **Taldyqorghan** 65.35 324 *e*P **P** **08 54 13.5 -0.5**
TDK *e*S **S** **09 02 54.3 -0.3**
TDK pmax pmax
comp=Z,281nm,1.7s

YAK	Yakutsk	65.73	1	c iP	P	08 54 16.1	+0.1
YAK				e*PP	pP	08 54 27.7	-1.2
YAK				e		08 54 46.1	
YAK				e		08 56 40.5	
YAK				ePPP	PPP	08 58 11.0	
YAK				eS	S	09 02 54.7	-3.7
YAK				e		09 04 05.5	
YAK				eSS	SS	09 07 09.8	-3.9
YAK				pmax	pmax		
	comp=Z,64nm,1.3s						
YAK				pmax	pmax		
	comp=N,44nm,1.1s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,147nm,2.8s						
YAK				pmax	pmax		
	comp=N,104nm,2.3s						
YAK				pmax	pmax		
	comp=E,88nm,2.7s						
YAK				smax	smax		
	comp=N,668nm,3.3s						
YAK				smax	smax		
	comp=E,164nm,3.0s						
YAK	Yakutsk	65.73	1	P	P	08 54 16.4	+0.4
YAK				IAMs_20	IAMs_20	09 26 08.0	
	comp=Z,4µm,20.0s						
KZA	Kyzart	65.75	320	P	P	08 54 17.5	+0.4
	SNR=40						
MA2	Magadan	65.87	13	c iP	P	08 54 17.7	+0.7
MA2				pmax	pmax		
	comp=Z,125nm,1.7s						
MA2				MLR	MLR		
	comp=Z,2µm,16.0s						
MA2	Magadan	65.87	13	P	P	08 54 18.1	+1.1
MA2				IAmb	IAmb	08 54 28.4	
	comp=Z,191nm,1.4s						
TKM2	Tokmak 2	65.95	321	P	P	08 54 18.1	-0.1
	SNR=30						
TKM2	Tokmak 2	65.95	321	P	P	08 54 16.6	-1.6
KUU	Kurty	66.00	322	⇑iP	P	08 54 17.8	-0.5
	comp=Z,292nm,1.7s						
KUU				eS	S	09 03 01.7	-0.9
KUU	Kurty	66.00	322	c iP	P	08 54 17.7	-0.5
KUU				eS	S	09 03 01.6	-0.9
KUU				pmax	pmax		
	comp=Z,292nm,1.7s						
KBK	Karagaybulak	66.23	320	P	P	08 54 20.6	+0.7
	SNR=18						
UCH	Uchtor	66.30	320	P	P	08 54 20.9	+0.2
	SNR=43						
AAK	Ala-Archa	66.51	320	P	P	08 54 21.8	+0.1
	comp=Z,8.2nm,0.7s,baz=112,slow=5.4,SNR=46						
AAK				PKPPKP	P'P'df	09 22 45.5	-7.8
	comp=Z,0.6nm,0.3s,baz=192,slow=0.8,SNR=4.3						
AAK				LR	LR	09 25 32.4	
	comp=Z,1µm,21.9s,baz=93,slow=38						
AAK	Ala-Archa	66.51	320	P	P	08 54 21.8	+0.1
	SNR=22						
AAK	Ala-Archa	66.51	320	iP	P	08 54 21.7	0.0
	SNR=25						
AAK	Ala-Archa	66.51	320	iP	P	08 54 21.7	0.0
	SNR=25						
AAK	Ala-Archa	66.51	320	P	P	08 54 21.7	0.0
AAK	Ala-Archa	66.51	320	iP	P	08 54 21.5	-0.2
AAK				pmax	pmax		
	comp=Z,86nm,1.5s						
AAK				MLR	MLR		
	comp=Z,1µm,19.0s						
AAK	Ala-Archa	66.51	320	P	P	08 54 21.6	0.0
AML	Almayashu	66.78	319	P	P	08 54 23.8	+0.1
	SNR=54						
KBL	Kabul	66.80	310	P	P	08 54 23.1	-0.7
KBL				P	P	08 54 23.1	-0.7
KBL				S	S	09 03 13.2	+0.2
KBL	Kabul	66.80	310	P	P	08 54 23.2	-0.6
KBL				pmax	pmax		
	comp=Z,163nm,1.6s						
KBL				MLR	MLR		
	comp=Z,1µm,19.0s						
KBL	Kabul	66.80	310	P	P	08 54 23.2	-0.6
KBL				IAmb	IAmb	08 54 25.9	
	comp=Z,163nm,1.6s						
USP	Ospenovka	66.82	321	P	P	08 54 23.3	-0.2
	SNR=42						
SGDS	Sogindy	66.83	321	⇑iP	P	08 54 22.9	-0.7
	comp=Z,78nm,1.9s						
SGDS				eS	S	09 03 12.7	-0.1
EKS2	Erkin-Say	66.98	320	P	P	08 54 25.0	+0.4
	SNR=26						
ZAA0	Zalesovo Array	67.66	334	IAmb	IAmb	08 54 38.2	
	comp=Z,111nm,1.1s						
ZALV	Zalesovo Beam	67.66	334	P	P	08 54 27.1	-1.4
	comp=Z,19nm,0.7s,baz=138,slow=5.1,SNR=54						
ZALV				PKPPKP	P'P'df	09 22 50.6	+0.4
	comp=Z,0.8nm,0.3s,baz=176,slow=7.1,SNR=8.8						
BTLS	Baital	67.99	322	⇑iP	P	08 54 29.9	-0.9
	comp=Z,46nm,1.8s						
BTLS				iS	S	09 03 23.8	-2.7
	comp=Z,81nm,5.6s						
BTLS	Baital	67.99	322	c iP	P	08 54 29.9	-0.9
BTLS				iS	S	09 03 23.8	-2.7
BTLS				pmax	pmax		
	comp=Z,46nm,1.8s						
BTLS				smax	smax		
	comp=E,81nm,5.6s						
KURBB	Kurchatov Arra	68.52	329	P	P	08 54 33.2	-0.8
	comp=E,27nm,0.6s,baz=131,slow=5.7,SNR=116						
KURBB	Kurchatov Arra	68.52	329	P	P	08 54 32.7	-1.3
KURK	Kurchatov	68.53	329	P	P	08 54 33.4	-0.6
KURK	Kurchatov	68.53	329	P	P	08 54 33.5	-0.5
KURK				pmax	pmax		
	comp=Z,386nm,1.7s						
KURK	Kurchatov	68.53	329	P	P	08 54 33.5	-0.5
KURK				IAmb	IAmb	08 54 43.6	
	comp=Z,386nm,1.6s						
DZA	Taraz	68.68	319	eP	P	08 54 34.0	-1.3
DZA	Taraz	68.68	319	eP	P	08 54 33.9	-1.3
SMY	Shemya	68.69	28	IAMs_20	IAMs_20	09 28 54.3	
	comp=Z,3µm,19.0s						
JBG	Jabagly	68.98	318	c iP	P	08 54 37.7	+0.4
JBG				pmax	pmax		
	comp=Z,96nm,1.7s						
IUG	Iuzhnay	69.20	318	⇑iP	P	08 54 38.2	-0.4
IUG				eS	S	09 03 39.2	-2.0
IUG	Iuzhnay	69.20	318	c iP	P	08 54 38.1	-0.5
IUG				eS	S	09 03 39.2	-2.0
SEY	Seymchan	69.24	12	⇑eP	P	08 54 39.1	+0.9
SEY				i *PP	pP	08 54 49.6	-1.5
KK31	Karatay Array	69.31	319	iP	P	08 54 37.9	-1.2
BRLS	Borolday	69.72	319	eS	S	09 03 45.9	-1.2
OTUK	Ortayu	70.62	324	P	P	08 54 46.2	-0.8
WBK	Wadi Bani Khal	71.77	295	P	P	08 54 54.0	-0.5
	SNR=7.5						
WBK				S	S	09 04 11.5	-0.2
WSAR	Wadi Sarin	72.21	296	P	P	08 54 56.2	-0.9
	comp=Z,16nm,0.6s,baz=143,slow=4.6,SNR=26						
WSAR	Wadi Sarin	72.21	296	P	P	08 54 56.6	-0.5
	SNR=14						
MHTO	MHTO	72.35	293	P	P	08 54 56.6	-1.4
	SNR=13						
MHTO				S	S	09 04 16.2	-2.1
JMDO	Jabal Madar	72.50	295	P	P	08 54 57.9	-1.0
	SNR=12						
SMDO	Samad	72.69	295	P	P	08 54 59.1	-1.0
	SNR=13						
BIDO	Bidbid	72.72	296	P	P	08 54 59.6	-0.6
	SNR=30						
BIDO				S	S	09 04 22.3	-0.1
ADK	Adak	72.88	32	P	P	08 55 01.6	+1.2
ADK				pmax	pmax		
	comp=Z,222nm,1.6s						
ADK	Adak	72.88	32	P	P	08 55 01.6	+1.2
ADK				IAmb	IAmb	08 55 03.4	
	comp=Z,222nm,1.6s						
BSY	Bisya	73.40	295	P	P	08 55 03.2	-1.0
	SNR=8.6						
HOQ	Hoqain	73.46	296	P	P	08 55 03.7	-0.9
	SNR=26						
BVAR	Borovoye Array	74.06	328	P	P	08 55 06.6	-0.9
	comp=Z,7.1nm,0.5s,baz=126,slow=6.4,SNR=44						
ARQ	Araqi	74.12	295	P	P	08 55 07.5	-1.0
	SNR=14						
BRVK	Borovoye	74.14	328	c iP	P	08 55 06.9	-1.0
BRVK				pmax	pmax		
	comp=Z,144nm,1.6s						
BRVK				MLR	MLR		
	comp=Z,842nm,19.0s						
BRVK	Borovoye	74.14	328	P	P	08 55 06.9	-1.0
BRVK				IAmb	IAmb	08 55 17.4	
	comp=Z,216nm,1.6s						
SOHO	SOHO	74.27	296	P	P	08 55 08.2	-1.1
	SNR=22						
ATKA	Atka Island	74.37	33	IAmb	IAmb	08 55 11.9	
	comp=Z,287nm,1.5s						
SOCY	Socotra	74.70	284	P	P	08 55 10.1	-2.0
	SNR=10.0						
SOCY	Socotra	74.70	284	IAmb	IAmb	08 55 21.7	
	comp=Z,100nm,0.9s						
MDH	Madha	74.72	297	iP	P	08 55 09.6	-2.2
	SNR=10						
MDH	Madha	74.72	297	iP	P	08 55 09.6	-2.2
	SNR=10						
UOSS	Minazif	74.73	297	iP	P	08 55 10.4	-1.5
	SNR=15						
UOSS	Minazif	74.73	297	iP	P	08 55 10.4	-1.5
	SNR=15						
UOSS	Minazif	74.73	297	P	P	08 55 10.3	-1.6
UOSS				IAmb	IAmb	08 55 22.1	
	comp=Z,35nm,0.8s						
HATD	Hatta, Dubai	74.77	297	iP	P	08 55 11.4	-0.8
	SNR=27						
HATD	Hatta, Dubai	74.77	297	iP	P	08 55 11.4	-0.8
	SNR=27						
HATD	Hatta, Dubai	74.77	297	P	P	08 55 11.4	-0.8
	SNR=31						
ASHO	Ashiyiah	74.81	297	iP	P	08 55 11.4	-1.0
	SNR=27						
ASHO	Ashiyiah	74.81	297	iP	P	08 55 11.4	-1.0
	SNR=27						
ASHO	Ashiyiah	74.81	297	P	P	08 55 11.6	-0.8
	SNR=26						
BANOM	Banah	74.84	298	iP	P	08 55 11.7	-1.0
	SNR=9.2						
BANOM	Banah	74.84	298	iP	P	08 55 11.7	-1.0
	SNR=9.2						
BANOM	Banah	74.84	298	P	P	08 55 12.2	-0.4
	SNR=9.5						
MSFE	Esma-Masafi	74.85	297	iP	P	08 55 11.7	-1.0
	SNR=22						
MSFE	Esma-Masafi	74.85	297	iP	P	08 55 11.7	-1.0
	SNR=22						
ALNE	Al Ain	74.96	296	iP	P	08 55 12.2	-1.1
	SNR=28						
ALNE	Al Ain	74.96	296	iP	P	08 55 12.2	-1.1
	SNR=28						
SHME	Shamm	75.01	298	iP	P	08 55 13.0	-0.6
	SNR=8.7						
SHME	Shamm	75.01	298	iP	P	08 55 13.0	-0.6
	SNR=8.7						
NAZ	Nazwa, Dubai	75.22	297	iP	P	08 55 13.3	-1.4
	SNR=8.7						
NAZ	Nazwa, Dubai	75.22	297	iP	P	08 55 13.3	-1.4
	SNR=8.7						
NAZ	Nazwa, Dubai	75.22	297	P	P	08 55 13.7	-1.0
	SNR=11						
FAQ	Al Faqa, Dubai	75.23	297	iP	P	08 55 13.8	-1.1
	SNR=5.6						
FAQ	Al Faqa, Dubai	75.23	297	iP	P	08 55 13.8	-1.1
	SNR=5.6						
XMAS	Kiritimati	75.30	87	P	P	08 55 17.0	+1.6
XMAS				IAmb	IAmb	08 55 18.5	
	comp=Z,251nm,1.3s						
TIXI	Tiksi	75.37	0	P	P	08 55 13.9	-0.7
	comp=Z,24nm,0.5s,baz=177,slow=4.3,SNR=68						
TIXI				S	S	09 04 47.7	-2.7
	comp=Z,0.4nm,0.3s,baz=31,slow=21,SNR=5.9						
TIXI	Tiksi	75.37	0	c iP	P	08 55 13.5	-1.1
TIXI				pmax	pmax		
	comp=Z,165nm,1.5s						
TIXI				MLR	MLR		
	comp=Z,3µm,21.0s						
TIXI	Tiksi	75.37	0	P	P	08 55 13.7	-0.9
TIXI				IAmb	IAmb	08 55 25.3	
	comp=Z,210nm,1.5s						
TIXI				IAMs_20	IAMs_20	09 29 20.5	
	comp=Z,3µm,20.0s						
AJN	Ajban	75.74	296	iP	P	08 55 16.3	-1.4
	SNR=8.8						
AJN	Ajban	75.74	296	iP	P	08 55 16.3	-1.4
	SNR=8.8						
AJN	Ajban	75.74	296	P	P	08 55 16.6	-1.1
	SNR=8.2						
VNDA	Vanda	75.86	173	P	P	08 55 16.9	-0.4
	comp=Z,11nm,0.9s,baz=321,slow=6.0,SNR=46						
VNDA				PP	PP	08 58 12.5	+4.6
	comp=Z,4.4nm,0.9s,baz=318,slow=11,SNR=3.7						
VNDA				LR	LR	09 26 10.9	
	comp=Z,4µm,21.9s,baz=337,slow=34						
VNDA	Vanda	75.86	173	P	P	08 55 17.0	-0.4
VNDA	Vanda	75.86	173	P	P	08 55 16.8	-0.7
ABTO	Aybut	76.08	289	P	P	08 55 18.5	-1.4
	SNR=11						
GEYT	Alibeck	76.25	310	P	P	08 55 20.2	-0.2
	comp=Z,16nm,0.8s,baz=128,slow=2.4,SNR=41						
BILL	Bilibino	76.68	14	c iP	P	08 55 21.8	-0.3
BILL				e		08 55 35.3	
BILL				e		08 58 21.0	
BILL				iS	SKSac	09 05 35.2	+5.5
BILL				iSS	SS	09 10 08.7	+7.3
BILL				pmax	pmax		
	comp=Z,45nm,1.5s						
BILL				MLR	MLR		
	comp=Z,3µm,20.0s						
BILL	Bilibino	76.68	14	P	P	08 55 21.8	-0.3
MAW	Mawson	76.94	201	P	P	08 55 23.7	0.0
	baz=77,SNR=12						
MAW	Mawson	76.94	201	P	P	08 55 23.2	-0.4
	comp=Z,17nm,0.9s,baz=65,slow=6.3,SNR=22						
MAW				LR	LR	09 28 25.5	
	comp=Z,1µm,18.2s,baz=54,slow=35						
MAW	Mawson	76.94	201	P	P	08 55 23.2	-0.4
KIP	Kipapa	77.09	67	⇑iP	P	08 55 27.0	+1.6
KIP				pmax	pmax		
	comp=Z,198nm,1.5s						
KIP				MLR	MLR		
	comp=Z,1µm,18.0s						
NRIK	Noril'sk	77.92	347	P	P	08 55 29.4	+0.3
	comp=Z,25nm,0.8s,baz=135,slow=5.6,SNR=94						
NRIK				S	S	09 05 18.8	+0.4
	comp=Z,0.6nm,0.3s,baz=315,slow=19,SNR=7.8						
NRIK	Noril'sk	77.92	347	iP	P	08 55 29.2	+0.1
NRIK				pmax	pmax		
	comp=Z,320nm,1.6s						
AB31	Akbulak array	78.48	322	P	P	08 55 31.4	-1.2
KHLU	Kahalu`u	78.78	69	P	P	08 55 35.9	+1.0
KHLU				IAmb	IAmb	08 55 37.4	
	comp=Z,366nm,1.4s						
HPAH	Hawaii Prepara	79.02	69	IAmb	IAmb	08 55 38.6	
	comp=Z,295nm,1.4s						
HMH	Humu'ula Sheep	79.16	69	P	P	08 55 38.6	+1.3
MLH	Mauna Loa	79.24	69	P	P	08 55 39.4	+1.8
UNV	Unalaska Valle	79.28	33	IAmb	IAmb	08 55 47.8	
	comp=Z,104nm,1.1s						
UNV				IAMs_20	IAMs_20	09 24 06.4	
	comp=Z,3µm,22.0s						
ABPO	Ambohimpanom	79.50	251	P	P	08 55 37.6	-1.5
ABPO				pmax	pmax		
	comp=Z,43nm,1.6s						
ABPO	Ambohimpanom	79.50	251	P	P	08 55 37.5	-1.5
SVE	Sverdlovsk	80.78	329	d eP	P	08 55 44.1	-0.8
SVE				eS	S	09 05 45.2	-3.9
SVE				pmax	pmax		
	comp=Z,197nm,1.5s						
GAMB	Gambell	81.03	23	IAmb	IAmb	08 55 50.0	
	comp=Z,127nm,1.3s						
FALS	False Pass	81.32	33	IAMs_20	IAMs_20	09 25 45.5	
	comp=Z,3µm,21.0s						
ARU	Arti	81.71	328	d iP	P	08 55 48.2	-1.6
ARU				*PP	pP	08 56 00.1	-2.8
ARU						08 58 52.9	
ARU				S	S	09 05 58.1	-0.7
ARU				SSS	SSS	09 14 39.7	
ARU				pmax	pmax		
	comp=Z,173nm,1.5s						
ARU	Arti	81.71	328	P	P	08 55 48.7	-1.2
ARU				IAmb	IAmb	08 55 52.9	
	comp=Z,275nm,1.6s						
TBI	Tubuai	82.16	113	eS	S	09 06 02.4	-2.3
	comp=Z,2µm,24.0s						
PPT2	Papeete2	82.17	107	eS	S	09 06 02.6	-2.6
	comp=Z,2µm,23.5s						
PPT2	Papeete2	82.17	107	eLR	LR	09 21 44.5	
	comp=Z,2µm,36.2s						
TIAR	Tiarei	82.39	107	eP	P	08 55 55.4	+1.1
	comp=Z,43nm,1.3s						
TVO	Taravao	82.47	107	eP	P	08 55 55.9	+1.2
	comp=Z,59nm,1.3s						
SDPT	Sand Point	83.08	33	IAmb	IAmb	08 55 58.9	
	comp=Z,165nm,0.8s						
CNBA	Chernabura Isl	83.42	34	IAmb	IAmb	08 56 02.8	
	comp=Z,68nm,0.8s						
MEH	Mehetia	83.60	107	eP	P	08 56 01.0	+0.5
	comp=Z,78nm,1.3s						
ANM	Nome	83.87	24	IAmb	IAmb	08 56 12.8	
	comp=Z,192nm,1.6s						
PMOR	Pomariorio Ree	83.87	105	eP	P	08 56 02.8	+0.9
	comp=Z,202nm,1.2s						
RAYN	Ar Rayn	84.15	294	P	P	08 56 02.4	-0.9
RAYN				pmax	pmax		
	comp=Z,62nm,0.7s						
RAYN				MLR	MLR		
	comp=Z,1µm,20.0s						
RAYN	Ar Rayn	84.15	294	P	P	08 56 02.4	-0.9
RAYN				IAmb	IAmb	08 56 14.3	
	comp=Z,62nm,0.7s						
DAMY	Dhamar	84.25	285	P	P	08 56 05.2	+1.0
	SNR=19						
DAMY	Dhamar	84.25	285	IAmb	IAmb	08 56 20.5	
	comp=Z,212nm,1.5s						
CHGN	Chignik	84.47	33	IAmb	IAmb	08 56 06.7	
	comp=Z,339nm,1.8s						
CHGN				IAMs_20	IAMs_20	09 27 21.6	
	comp=Z,3µm,22.0s						
AKT	Akhty	84.84	312	eP	P	08 56 06.3	-0.2
AKT				e		08 59 22.8	
AKT				pmax	pmax		
	comp=Z,70nm,1.1s						
MAK	Makhachkala	85.26	314	eP	P	08 56 08.2	-0.1
MAK				e		08 59 24.5	
MAK				ePPP	PPP	09 01 16.6	
MAK				e		09 06 29.8	
MAK				eS	S	09 06 30.8	-4.4
MAK				eSS	SS	09 12 09.9	-0.5
MAK				pmax	pmax		
	comp=Z,407nm,1.4s						
ATD	Arta Tunnel	85.47	282	P	P	08 56 10.9	+0.8
	SNR=12						
SYO	Syowa Base	85.65	201	⇓iX	P	08 56 07.2	-2.6
SYO	Syowa Base	85.65	201	⇓iPcP	PcP	08 56 14.4	+1.8
LGD	Lagodekhi	86.00	312	P	P	08 56 12.9	+0.8
QSPA	South Pole Qui	86.10	180	P	P	08 56 11.4	-0.9
GROC	Groznyy	86.53	314	eP	P	08 56 14.8	+0.1
GROC				e		08 59 35.5	
GROC				pmax	pmax		
	comp=Z,274nm,1.5s						
KIRV	Kirov	87.05	329	⇑eP	P	08 56 16.2	-0.6
TBLG	Delisi	87.10	312	P	P	08 56 18.1	+0.6
KZRT	Kazreti	87.31	312	P	P	08 56 18.9	+0.3
GUDG	Gudauri	87.39	313	P	P	08 56 19.6	+0.4
OHAK	Old Harbor	87.43	32	IAMs_20	IAMs_20	09 30 31.8	
	comp=Z,3µm,21.0s						
ZEI	Tsey	87.85	313	eP	P	08 56 19.0	-2.4
ZEI				pmax	pmax		
	comp=Z,92nm,0.7s						
BGD	Bogdanovka	87.89	311	P	P	08 56 21.2	-0.4
KDAK	Kodiak Island	87.90	32	P	P	08 56 21.2	+0.3
KDAK				pmax	pmax		
	comp=Z,434nm,1.7s						
KDAK	Kodiak Island	87.90	32	P	P	08 56 21.2	+0.3
AKH	Akhalkalaki	87.99	312	⇑P	P	08 56 23.2	+1.2
AKH	Akhalkalaki	87.99	312	P	P	08 56 22.9	+0.9
ONI	Oni	88.16	313	P	P	08 56 23.2	+0.6
NCK	Nalchik	88.16	314	⇑eP	P	08 56 22.5	-0.1
NCK				pmax	pmax		
	comp=Z,82nm,1.2s						
KARS	Kars	88.21	311	P	P	08 56 24.3	+1.3
RSO	Redoubt South	88.31	29	P	P	08 56 22.9	-0.2
KBZ	Khabaz	88.69	314	P	P	08 56 24.3	-0.6
	comp=Z,30nm,0.7s,baz=96,slow=1.7,SNR=47						
KBZ	Khabaz	88.69	314	c iP	P	08 56 24.4	-0.6
KBZ				i *PP	pP	08 56 38.4	+0.1
KBZ				pmax	pmax		
	comp=Z,91nm,1.5s						
HOM	Homer	88.72	30	IAmb	IAmb	08 56 28.5	
	comp=Z,80nm,0.8s						
HOM				IAMs_20	IAMs_20	09 30 47.7	
	comp=Z,2µm,20.0s						
GOF	Gofitskoye	88.74	315	⇑iP	P	08 56 24.7	-0.5
GOF				eS	SKSac	09 06 45.1	-5.7
GOF				pmax	pmax		
	comp=Z,195nm,1.4s						
NEY	Neytrino	88.77	313	c iP	P	08 56 25.7	+0.1
NEY				pmax	pmax		
	comp=Z,21nm,0.8s						
NEY				MLR	MLR		
	comp=Z,148nm,15.0s						
SHA1	Shidzhatmaz	88.87	314	c iP	P	08 56 25.5	-0.7
KIV	Kislovodsk	88.87	314	⇑P	P	08 56 26.0	0.0
KIV	Kislovodsk	88.87	314	iP	P	08 56 25.7	-0.3
	SNR=15						
KIV	Kislovodsk	88.87	314	iP	P	08 56 25.7	-0.3
	SNR=15						
KIV	Kislovodsk	88.87	314	eP	P	08 56 25.4	-0.6
KIV				pmax	pmax		
	comp=Z,84nm,1.1s						
KIV	Kislovodsk	88.87	314	P	P	08 56 25.4	-0.6
KIV				IAmb	IAmb	08 56 39.9	
	comp=Z,76nm,1.3s						
CNPM	China Poot	88.90	30	IAMs_20	IAMs_20	09 32 41.7	
	comp=Z,2µm,21.0s						
PPLA	Purkeypile	89.03	27	IAmb	IAmb	08 56 38.4	
	comp=Z,140nm,1.8s						
BRLK	Bradley Lake	89.11	30	IAmb	IAmb	08 56 29.0	
	comp=Z,166nm,1.7s						
KIBK	Kibwezi	89.24	268	P	P	08 56 27.7	-0.7
	SNR=6.2						
BATM	Batumi	89.35	312	⇑P	P	08 56 29.5	+1.3
BATM	Batumi	89.35	312	⇑P	P	08 56 29.5	+1.3
BCA	Borcka	89.39	311	⇑P	P	08 56 28.5	+0.1
PRGR	Permogore	89.47	332	eP	P	08 56 24.5	-3.7
PRGR				pmax	pmax		
	comp=Z,50nm,1.1s						
KTH	Kantishna Hill	89.70	26	IAmb	IAmb	08 56 31.2	
	comp=Z,125nm,1.8s						
KTH				IAMs_20	IAMs_20	09 44 07.5	
	comp=Z,2µm,18.0s						
BPAW	Bear Paw Mtn.	89.76	26	IAmb	IAmb	08 56 43.5	
	comp=Z,117nm,1.9s						
BPAW				IAMs_20	IAMs_20	09 44 12.0	
	comp=Z,2µm,18.0s						
RC01	Rabbit Creek A	89.88	29	IAmb	IAmb	08 56 41.2	
	comp=Z,39nm,0.8s						
RC01				IAMs_20	IAMs_20	09 30 59.4	
	comp=Z,2µm,21.0s						
SEW	Seward	89.88	30	IAmb	IAmb	08 56 45.8	
	comp=Z,52nm,1.3s						
SEW				IAMs_20	IAMs_20	09 32 31.5	
	comp=Z,3µm,21.0s						
TRF	Thorofare Moun	89.97	26	IAmb	IAmb	08 56 40.5	
	comp=Z,96nm,1.6s						
MLY	Manley	90.02	25	IAMs_20	IAMs_20	09 34 30.7	
	comp=Z,2µm,21.0s						
KMBO	Kilima Mbogo	90.11	269	P	P	08 56 31.3	-1.4
	comp=Z,1.2nm,0.3s,baz=122,slow=1.9,SNR=8.2						
KMBO				LR	LR	09 32 35.7	
	comp=Z,2µm,21.4s,baz=95,slow=33						
KMBO	Kilima Mbogo	90.11	269	P	P	08 56 31.7	-0.9
KMBO	Kilima Mbogo	90.11	269	P	P	08 56 31.7	-0.9
KMBO	Kilima Mbogo	90.11	269	iP	P	08 56 34.4	+1.8
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KMBO	Kilima Mbogo	90.11	269	P	P	08 56 31.5	-1.2
KMBO				IAmb	IAmb	08 56 35.0	
	comp=Z,73nm,1.9s						
KMBO	Kilima Mbogo	90.11	269	IAMs_20	IAMs_20	09 32 21.6	
	comp=Z,2µm,21.0s						
PMR	Palmer	90.24	28	IAmb	IAmb	08 56 33.7	
	comp=Z,114nm,1.5s						
VRH	Novokhopyorsk	90.29	321	eP	P	08 56 30.8	-1.5
VRH				pmax	pmax		
	comp=Z,80nm,0.8s						
GHO	Glory Hole Cre	90.36	28	IAMs_20	IAMs_20	09 31 53.0	
	comp=Z,2µm,21.0s						
BWN	Browne	90.43	26	IAmb	IAmb	08 56 45.3	
	comp=Z,48nm,0.9s						
BWN				IAMs_20	IAMs_20	09 30 43.8	
	comp=Z,2µm,21.0s						
KNK	Knik Glacier	90.53	29	IAmb	IAmb	08 56 36.3	

KNK IAMs_20 IAMs_20 09 31 31.7
comp=Z,77nm,0.8s
comp=Z,2µm,21.0s
RND Reindeer 90.60 27 IAmb IAmb 08 56 35.7
comp=Z,35nm,0.6s
RND IAMs_20 IAMs_20 09 44 58.3
comp=Z,2µm,18.0s
SML Sawmill 90.64 28 IAmb IAmb 08 56 36.6
comp=Z,76nm,0.8s
SOC Sochi 90.98 313 *e*P **P 08 56 33.1 -2.6**
SOC *e* 09 00 06.9
SOC *e*S **SKSac 09 06 59.2 -4.6**
SOC *e*SS **SS 09 13 30.5 -3.3**
SOC pmax pmax
comp=Z,24nm,0.6s
TOLK Toolik Lake Re 91.01 21 P **P 08 56 35.9 +0.6**
baz=262
SCM Sheep Creek Mo 91.12 28 IAMs_20 IAMs_20 09 31 16.1
comp=Z,2µm,22.0s
GLI Glacier Island 91.13 29 IAmb IAmb 08 56 39.0
comp=Z,50nm,0.7s
GLI IAMs_20 IAMs_20 09 33 36.5
comp=Z,2µm,21.0s
CCB Clear Creek Bu 91.21 25 IAmb IAmb 08 56 36.7
comp=Z,86nm,1.5s
TCOL CIGO, UAF Yank 91.21 25 P **P 08 56 35.3 -1.0**
baz=264,SNR=9.5
COLA College 91.21 25 *de*P **P 08 56 35.8 -0.5**
COLA pmax pmax
comp=Z,18nm,0.8s
COLA MLR MLR
comp=Z,858nm,16.0s
COLA College 91.21 25 P **P 08 56 34.6 -1.6**
DHY Denali Highway 91.23 27 IAmb IAmb 08 56 39.9
comp=Z,120nm,1.6s
POKR Poker Plat Res 91.42 25 P **P 08 56 37.8 +0.5**
baz=264
HDA Harding Lake 91.55 26 P **P 08 56 36.5 -1.4**
baz=264,SNR=21
HDA Harding Lake 91.55 26 IAmb IAmb 08 56 48.8
comp=Z,28nm,0.9s
MALT Malatya 91.59 308 P **P 08 56 39.1 +0.3**
ILAR Eielson Array 91.61 25 P **P 08 56 36.4 -1.8**
comp=Z,9.7nm,0.6s,baz=250,slow=5.0,SNR=84
ILAR PP **PP 09 00 17.5 +0.5**
comp=Z,7.1nm,1.2s,baz=268,slow=7.1,SNR=6.4
ILAR PKKP **PKKPdf 09 13 55.5 -1.9**
comp=Z,1.7nm,0.7s,baz=74,slow=1.4,SNR=19
ILAR LR LR 09 35 10.7
comp=Z,501nm,20.1s,baz=265,slow=34
EYAK Cordova Ski Ar 91.76 30 IAmb IAmb 08 56 52.3
comp=Z,137nm,1.8s
EYAK IAMs_20 IAMs_20 09 35 04.2
comp=Z,2µm,20.0s
TAOE Nuku Hiva Isla 91.80 99 *e*S **S 09 07 32.9 -5.4**
comp=Z,4µm,27.8s
TAOE Nuku Hiva Isla 91.80 99 *e*LR LR 09 26 13.8
comp=Z,2µm,32.7s
VORD Divnogorie 91.80 321 *e*P **P 08 56 37.9 -1.4**
VORD pmax pmax
comp=Z,70nm,1.0s
VSR Storozhevoye 91.89 321 *d i*P **P 08 56 38.6 -1.2**
VSR pmax pmax
comp=Z,175nm,1.6s
VSR MLR MLR
comp=Z,1µm,23.0s
VORR Voronezh 91.90 321 *e*P **P 08 56 38.0 -1.8**
VORR pmax pmax
comp=Z,300nm,1.6s
LPSR Galich'ya Gora 92.13 322 *e*P **P 08 56 39.3 -1.5**
LPSR pmax pmax
comp=Z,80nm,1.7s
RAGM Ragged Mountai 92.28 30 IAMs_20 IAMs_20 09 35 48.9
comp=Z,2µm,18.0s
KLMR Klimovskoe 92.32 331 ⇑ *i*P **P 08 56 39.3 -2.2**
KLMR *e* 09 00 22.6
KLMR pmax pmax
comp=Z,133nm,1.7s
KLMR Klimovskoe 92.32 331 ⇑ *i*P **P 08 56 39.4 -2.1**
KLMR *e*P **P 08 56 39.4 -2.1**
KLMR *e*P **P 08 56 39.4 -2.1**
KLMR AMP 08 56 41.9
comp=Z,133nm,1.7s
KLMR *e*PP **PP 09 00 22.7 +0.1**
RIDG Independent Ri 92.42 26 IAMs_20 IAMs_20 09 45 31.4
comp=Z,1µm,18.0s
FYU Fort Yukon 92.45 24 IAmb IAmb 08 56 55.9
comp=Z,120nm,1.4s
HMT Hamilton 92.48 30 IAMs_20 IAMs_20 09 36 25.3
comp=Z,2µm,20.0s
ANN Anapa 92.69 315 *i* P **P 08 56 42.0 -1.6**
ANN *e**PP **pP 08 56 56.2 -0.7**
ANN *e* 09 07 13.2
ANN pmax pmax
comp=Z,55nm,0.4s
ANN pmax pmax
comp=Z,110nm,0.6s
SUCK Suckling Hills 92.71 30 IAMs_20 IAMs_20 09 33 08.3
comp=Z,2µm,21.0s
DOT Dot Lake 92.76 27 IAmb IAmb 08 56 46.0
comp=Z,117nm,1.7s
DOT IAMs_20 IAMs_20 09 36 39.3
comp=Z,2µm,19.0s
SCRK Sand Creek 92.81 26 IAmb IAmb 08 56 45.5
comp=Z,60nm,1.5s
MENT Mentasta 92.88 27 IAmb IAmb 08 56 47.0
comp=Z,79nm,1.6s
VRDI Verde Repeater 92.92 29 IAmb IAmb 08 56 46.9
comp=Z,151nm,1.8s
VRDI IAMs_20 IAMs_20 09 35 11.9
comp=Z,2µm,20.0s
MOS Moscow 93.05 326 *e*P **P 08 56 41.7 -3.3**
MOS *e* 08 56 51.5
MOS *e* 09 00 25.1
MOS *e* 09 07 13.6
MOS *e*PS **PS 09 08 58.4 -7.7**
MOS pmax pmax
comp=Z,61nm,1.2s
CRQM Cirque 93.06 29 IAmb IAmb 08 56 47.9
comp=Z,102nm,1.2s
CRQM IAMs_20 IAMs_20 09 36 17.1
comp=Z,2µm,20.0s
MCARA McCarthy VSAT 93.14 29 IAmb IAmb 08 57 01.7
comp=Z,40nm,0.9s
MCARA IAMs_20 IAMs_20 09 33 23.6
comp=Z,2µm,22.0s
TMCR Tamitsa 93.18 334 *e*P **P 08 56 43.6 -1.8**
TMCR pmax pmax
comp=Z,43nm,0.8s
TGL Tana Glacier 93.21 29 IAMs_20 IAMs_20 09 36 00.5
comp=Z,2µm,20.0s
BALM Baldy 93.45 29 IAMs_20 IAMs_20 09 34 05.9
comp=Z,2µm,21.0s
KVT Kavak 93.56 311 P **P 08 56 48.3 +0.5**
MESA MESA 93.62 30 IAMs_20 IAMs_20 09 33 08.6
comp=Z,2µm,22.0s
OBN Obninsk 93.63 325 *c i*P **P 08 56 46.2 -1.5**
OBN *e* 09 00 37.0
OBN *i* S **S 09 07 47.0 -5.7**
OBN *i* SS **SS 09 14 19.6 +8.4**
OBN pmax pmax
comp=Z,96nm,1.6s
CTGM Chitina Glacie 93.94 29 IAMs_20 IAMs_20 09 34 29.9
comp=Z,2µm,22.0s
EIL Elat 94.05 299 LR LR 09 45 46.4
comp=Z,696nm,18.0s,baz=124,slow=40
EGAK Eagle 94.06 25 IAmb IAmb 08 56 51.9
comp=Z,129nm,1.7s
DIKM Dikmen 94.17 311 ⇑P **P 08 56 53.4 +2.9**
LVZ Lovozero 94.60 338 ⇓ *e*P **P 08 56 51.3 -0.6**
LVZ pmax pmax
comp=Z,28nm,1.0s
LVZ Lovozero 94.60 338 P **P 08 56 50.0 -2.0**
YKU2 Yakutat 94.77 31 IAMs_20 IAMs_20 09 32 45.9
comp=Z,2µm,22.0s
DAWY Dawson 94.84 26 IAMs_20 IAMs_20 09 45 53.3
comp=Z,2µm,20.0s
SIM Simferopol' 95.05 315 *d i*P **P 08 56 53.7 -0.8**
SIM *e* 09 00 49.0
SIM *e*S **S 09 08 11.0 +5.4**
SIM pmax pmax
comp=Z,47nm,1.0s
APA Apatity 95.08 337 ⇓ *i*P **P 08 56 52.2 -1.9**
APA *i* 09 07 24.0
APA *i* S **S 09 08 00.0 -4.9**
APA *i* PS **PS 09 09 26.0 -2.1**

APA pmax pmax
comp=Z,6.0nm,1.1s
BR131 Keskin Array S 95.37 309 P **P 08 56 54.8 -1.5**
SNR=12
BR131 Keskin Array S 95.37 309 *c i*P **P 08 56 54.5 -1.7**
BR131 Keskin Array S 95.37 309 P **P 08 56 54.7 -1.5**
BRTR Keskin Array B 95.37 309 P **P 08 56 54.5 -1.7**
comp=Z,5.2nm,0.6s,baz=114,slow=4.8,SNR=19
BRTR PP **PP 09 00 49.5 +2.3**
comp=Z,2.0nm,0.8s,baz=119,slow=8.8,SNR=4.3
BRTR PKKPbc **PKKPbc 09 13 48.8 -1.2**
comp=Z,1.0nm,0.7s,baz=211,slow=4.3,SNR=5.0
BRTR Keskin Array B 95.37 309 *ce*P **P 08 56 54.7 -1.5**
BRTR pmax pmax
comp=Z,6.0nm,0.6s
EPYK Eagle Plains 95.86 24 P **P 08 56 57.4 -0.4**
baz=274
HOPEN Hopen 96.62 347 *e*P **P 08 57 00.9 -0.1**
INK Inuvik 96.91 22 P **P 08 57 01.8 -0.6**
comp=Z,13nm,0.7s,baz=287,slow=4.1,SNR=60
INK Inuvik 96.91 22 IAmb IAmb 08 57 04.3
comp=Z,105nm,1.6s
SKAG Skagway 96.99 31 IAmb IAmb 08 57 06.0
comp=Z,88nm,1.6s
SKAG IAMs_20 IAMs_20 09 34 42.5
comp=Z,2µm,22.0s
WHY Whitehorse 97.11 29 IAmb IAmb 08 57 06.7
comp=Z,69nm,1.4s
WHY IAMs_20 IAMs_20 09 35 54.8
comp=Z,2µm,22.0s
KEV Kevo 97.21 340 P Pdif 08 57 04.5 +0.7
KEV Kevo 97.21 340 IAMs_20 IAMs_20 09 47 14.4
comp=Z,2µm,22.0s
BESE Bessie Mountai 97.30 32 IAMs_20 IAMs_20 09 34 32.8
comp=Z,2µm,22.0s
ARCES ARCESS Array B 97.77 340 P **P 08 57 04.5 -1.7**
comp=Z,21nm,0.6s,baz=80,slow=4.1,SNR=76
ARCES PKiKP **PKiKP 09 01 40.2 +0.3**
comp=Z,1.4nm,0.5s,baz=122,slow=2.1,SNR=9.7
ARCES PKKPbc **PKKPbc 09 13 42.0 -2.3**
comp=Z,1.7nm,0.8s,baz=262,slow=2.5,SNR=7.9
ARE0 ARCESS Array S 97.77 340 *e*P **P 08 57 06.1 -0.2**
SPA0 Spitsbergen Ar 98.01 349 *e*P **P 08 57 06.9 -0.3**
SPITS Spitsbergen Ar 98.01 349 P **P 08 57 06.2 -1.1**
comp=Z,26nm,0.7s,baz=91,slow=9.2,SNR=32
SNAA Sanae 98.09 194 P Pdif 08 57 08.3 +0.5
SNAA Sanae 98.09 194 PKKPbc PKKPbc 09 13 40.7 -2.8
comp=Z,4.4nm,1.2s,baz=240,slow=7.1,SNR=9.9
SNAA Sanae 98.09 194 ⇓ *e*P Pdif 08 57 07.9 +0.1
SNAA Sanae 98.09 194 P **P 08 57 06.6 -1.2**
SNAA IAMs_20 IAMs_20 09 39 57.3
comp=Z,2µm,19.0s
HAMF Hammerfest 98.17 341 *e*P **P 08 57 07.1 -0.9**
AKASG Malin Array Be 98.18 321 P **P 08 57 06.6 -1.9**
comp=Z,4.1nm,0.5s,baz=73,slow=4.3,SNR=32
AKASG Malin Array Be 98.18 321 *ce*P **P 08 57 07.4 -1.1**
AKASG pmax pmax
comp=Z,5.0nm,0.5s
AKBB Malin Array Si 98.18 321 *ce*P **P 08 57 06.8 -1.7**
KBS Kingsbay 98.55 350 IAMs_20 IAMs_20 09 41 45.4
comp=Z,2µm,21.0s
KBS Kingsbay 98.55 350 *e*Pdif Pdif 08 57 10.1 +0.6
HSPB Hornsund (broa 98.59 348 *e*Pdif **P 08 57 09.2 -0.6**
KTK1 Kautokeino 98.66 339 *e*Pdif **P 08 57 09.6 -0.6**
MICGM Minsk 98.68 324 *e*P **P 08 57 10.0 -0.6**
MICGM *e*PP **PP 09 01 18.0 +6.0**
MICGM *e*PPP PPP 09 03 24.0
MICGM *e*SKS **SKSac 09 07 46.0 +1.4**
MICGM *e*S **S 09 08 32.0 -4.2**
MICGM *e*SS **SS 09 15 16.0 -6.6**
MICGM *e*SSS SSS 09 19 10.0
MNK Minsk 98.68 324 *e*P **P 08 57 10.0 -0.6**
MNK *e* 09 01 18.0
MNK *e* 09 03 24.0
MNK *e* 09 07 46.0
MNK *e*S **S 09 08 32.0 -4.2**
MNK *e* 09 15 16.0
MNK *e* 09 19 10.0
KIS Kishinev 98.69 317 *e*PKP **P 08 57 10.0 -0.9**
KIS Kishinev 98.69 317 *e*P **P 08 57 10.0 -0.9**
KIS *e* 08 57 19.0
MILM Milestii Mici 98.70 317 ⇑P **P 08 57 08.3 -2.6**
JURR Jurilovca 98.78 315 ⇓P **P 08 57 10.8 -0.5**
FINES FINESS Array B 98.80 332 P **P 08 57 09.8 -1.2**
comp=Z,2.7nm,0.6s,baz=142,slow=6.8,SNR=9.9
FINES PKiKP **PKiKP 09 01 42.7 +0.8**
comp=Z,1.5nm,0.6s,baz=48,slow=2.1,SNR=1.8
TLCR 98.80 315 ⇑P **P 08 57 11.1 -0.3**
TLCR 98.80 315 ⇑P **P 08 57 11.1 -0.3**
BOSA Boshof 98.82 240 P **P 08 57 11.3 -0.7**
comp=Z,2.0nm,0.6s,baz=108,slow=5.6,SNR=5.5
BOSA LR LR 09 37 42.9
comp=Z,641nm,19.2s,baz=132,slow=33
BOSA Boshof 98.82 240 IAmb IAmb 09 00 42.1
comp=Z,51nm,1.9s
A36M Sachs Harbour 98.97 17 P **P 08 57 11.2 -0.4**
baz=285
MANR Mangalia 99.05 314 ⇑P **Pdif 08 57 08.6 -3.9**
TOPG Topolog 99.13 315 ⇑P **Pdif 08 57 11.4 -1.5**
TIRR Tirgusor 99.13 314 ⇑P **Pdif 08 57 12.0 -0.9**
TIRR Tirgusor 99.13 314 ⇑P **Pdif 08 57 12.0 -0.9**
TIRR Tirgusor 99.13 314 IAmb IAmb 08 57 23.3
comp=Z,56nm,1.0s
NACGM Naroch 99.27 325 *e*P **Pdif 08 57 12.0 -1.3**
NACGM *e*PP PKiKP 09 02 05.0 +22
NACGM *e*PPP PPP 09 03 28.0
NACGM *e*SKS SKSac 09 07 59.0 +11
NACGM *e*SKKS **SKKSac 09 08 14.0 -5.3**
NACGM *e*SKKKS 09 08 47.0
CFR Carcaliu 99.28 315 ⇑P **Pdif 08 57 12.4 -1.1**
CFR Carcaliu 99.28 315 ⇑P **Pdif 08 57 12.4 -1.1**
MANT Manisa 99.34 308 IAmb IAmb 08 57 14.6
comp=Z,80nm,1.3s
PSN Preselentsi 99.35 313 *e*P **Pdif 08 57 12.2 -1.7**
VASR Vasiui 99.42 316 ⇑P **Pdif 08 57 14.4 +0.2**
HARR Harsova 99.46 315 ⇓P **Pdif 08 57 13.6 -0.7**
HARR Harsova 99.46 315 ⇓P **Pdif 08 57 13.6 -0.7**
ICOR Ion Corvin 99.59 314 ⇑P **Pdif 08 57 14.8 -0.1**
VNA2 Neumayer--Watz 99.68 194 P **Pdif 08 57 14.2 -0.6**
baz=123,slow=3.9
PRD Provadia 99.95 313 *e*P **Pdif 08 57 15.3 -1.3**
TRO Tromso 99.99 340 *e*Pdif **Pdif 08 57 16.3 +0.2**
C36M Paulatuk 100.06 20 P **Pdif 08 57 16.5 0.0**
baz=286
TESR Tescani 100.21 316 ⇑P **Pdif 08 57 17.4 -0.3**
VRI Vrincioaia 100.22 316 ⇑P **Pdif 08 57 17.6 -0.1**
VRI Vrincioaia 100.22 316 ⇑P **Pdif 08 57 17.6 -0.1**
BISRR Bisoca 100.26 315 ⇓P **Pdif 08 57 19.1 +1.1**
PLOR Plostina 100.27 316 ⇑P **Pdif 08 57 17.6 -0.4**
PLOR Plostina 100.27 316 ⇑P **Pdif 08 57 17.6 -0.4**
BIZ Bicaz 100.55 317 ⇑P **Pdif 08 57 18.8 -0.4**
NOR Nord 100.66 355 *i* P **Pdif 08 57 19.2 +0.2**
NOR Nord 100.66 355 *i* P **Pdif 08 57 19.2 +0.2**
MLR Muntele Rosu 100.80 315 ⇑P **Pdif 08 57 20.2 -0.3**
MLR Muntele Rosu 100.80 315 ⇑P **Pdif 08 57 20.2 -0.3**
SZH Strazhica 101.01 313 *e*P **Pdif 08 57 20.0 -1.3**
BURAR Bucovina Array 101.08 318 ⇓P **Pdif 08 57 21.7 +0.1**
BURAR Bucovina Array 101.08 318 ⇓P **Pdif 08 57 21.7 +0.1**
ELND Elena 101.08 313 ⇑P **Pdif 08 57 20.8 -0.8**
DOPR Dopca 101.14 316 ⇑P **Pdif 08 57 22.6 +0.7**
VOIR 101.43 315 ⇑P **Pdif 08 57 23.2 0.0**
VOIR 101.43 315 ⇑P **Pdif 08 57 23.2 0.0**
LVV L'vov 101.58 320 *e*P **Pdif 08 57 23.1 -0.6**
LVV *e* 09 01 38.1
LVV *e*PPP PPP 09 03 50.4
LVV *e* 09 08 01.4
LVV *e*S **Sdif 09 08 53.6 -7.2**
LVV *e*PS **PS 09 10 29.3 -10**
LVV *e*SS **SS 09 15 58.7 -4.6**
LVV *e*SSS SSS 09 19 50.0
ARCR ARCALIA 101.72 317 ⇑P **Pdif 08 57 27.2 +2.8**
ARR Arges 101.73 315 ⇑P **Pdif 08 57 24.2 -0.3**
STEI Steigen 101.79 339 *e*Pdif **Pdif 08 57 23.6 -0.5**
PLVB Pleven 101.95 313 ⇑P **Pdif 08 57 24.5 -1.0**
CJR Cluj-Napoca 102.28 317 ⇑P **Pdif 08 57 27.8 +0.8**
CJR Cluj-Napoca 102.28 317 ⇑P **Pdif 08 57 27.8 +0.8**
KWP Kalwaria Pacla 102.46 320 *e*P **Pdif 08 57 28.1 +0.4**
TRPA Tarpa 102.80 318 ⇑P **Pdif 08 57 29.6 +0.5**
DRGR 102.88 317 ⇓P **Pdif 08 57 29.7 +0.1**
DRGR 102.88 317 ⇓P **Pdif 08 57 29.7 +0.1**
UZH Uzhgorod 102.88 319 ⇑ *e*P **Pdif 08 57 29.6 +0.1**
UZH *e* 09 01 49.1
UZH *e* 09 03 54.5

UZH *e* 09 08 05.3
UZH *e*S **Sdif 09 09 08.0 -3.7**
UZH *e* 09 10 49.4
UZH *e* 09 16 29.5
GZR Gura Zlata 103.02 316 ⇑P **Pdif 08 57 30.0 -0.3**
GZR Gura Zlata 103.02 316 ⇑P **Pdif 08 57 30.0 -0.3**
VTS Vitosha 103.05 313 ⇑P **Pdif 08 57 30.5 -0.1**
VTS Vitosha 103.05 313 *e*P **Pdif 08 57 29.3 -1.3**
VTS Vitosha 103.05 313 ⇑P **Pdif 08 57 30.5 -0.1**
KONS Konsvik 103.06 338 *e*Pdif **Pdif 08 57 30.3 +0.4**
SIRR Siria 103.67 317 ⇑P **Pdif 08 57 33.7 +0.5**
BZS Buzias 103.80 316 ⇑P **Pdif 08 57 33.6 0.0**
BZS Buzias 103.80 316 ⇑P **Pdif 08 57 33.6 0.0**
MDVR Moldovita 103.86 315 ⇑P **Pdif 08 57 33.3 -0.7**
NIE Niedzica 104.04 320 *e*P **Pdif 08 57 33.0 -1.7**
OJC Ojcow 104.21 321 *e*P **Pdif 08 57 35.5 +0.1**
PSZ Piszkesteto 104.58 318 P **Pdif 08 57 36.5 -0.7**
PSZ Piszkesteto 104.58 318 **Pdif 08 57 36.5 -0.7**
DAG Danmarks Havn 104.82 352 *i* P **Pdif 08 57 37.3 -0.2**
DAG Danmarks Havn 104.82 352 *i* P **Pdif 08 57 37.3 -0.2**
HFS Hagfors 105.01 332 Pdiff **Pdif 08 57 36.6 -2.1**
comp=Z,2.8nm,0.5s,baz=106,slow=4.8,SNR=24
RES Resolute Bay 105.10 11 Pdiff **Pdif 08 57 38.8 0.0**
comp=Z,3.3nm,0.7s,baz=300,slow=5.3,SNR=21
RES PKiKP **PKiKP 09 01 54.6 +1.6**
comp=Z,5.4nm,1.1s,baz=220,slow=3.6,SNR=5.9
MORC Moravsky Berou 105.72 321 *e*PDIFF **Pdif 08 57 42.2 0.0**
NB2 NORSAR Subarra 105.84 333 P **Pdif 08 57 40.9 -1.5**
comp=Z,21nm,1.7s,baz=72,slow=4.4
NB2 NORSAR Subarra 105.84 333 P **Pdif 08 57 40.9 -1.5**
baz=72,slow=4.4
NOA NORSAR Array B 105.84 333 Pdiff **Pdif 08 57 40.5 -2.0**
comp=Z,1.1nm,0.7s,baz=68,slow=4.5,SNR=6.8
JAVC Velka Javorina 105.84 320 *e*PDIFF **Pdif 08 57 43.8 +1.0**
D03D Eldon 105.94 42 P **PKiKP 09 01 54.4 -0.9**
baz=282
LLLB Illoget 106.02 38 IAMs_20 IAMs_20 09 36 17.3
comp=Z,2µm,22.0s
YKA Yellowknife Ar 106.04 25 Pdiff **Pdif 08 57 43.0 -0.2**
comp=Z,2.0nm,0.7s,baz=294,slow=4.0,SNR=17
YKA PKiKP **PKiKP 09 01 54.6 -0.5**
comp=Z,1.8nm,0.6s,baz=287,slow=1.4,SNR=24
YKA PKKPbc **PKKPbc 09 13 16.0 -3.9**
comp=Z,1.4nm,0.6s,baz=118,slow=3.6,SNR=17
I02D Swisshome 106.08 45 P **PKiKP 09 01 55.1 -0.5**
baz=280
KRLC Kraliky 106.13 321 *e*PP **PKiKP 09 02 02.2 +6.5**
J01E Myrtle Point 106.19 46 P **PKiKP 09 01 54.7 -1.2**
baz=280
D04E Lakebay 106.22 42 P **PKiKP 09 01 55.0 -0.8**
baz=282
KSP Ksiaz 106.25 322 *e*P **Pdif 08 57 45.0 +0.5**
G03D McMinnville, O 106.28 44 P **PKiKP 09 01 55.7 -0.3**
baz=281
COR Corvallis 106.38 45 IAMs_20 IAMs_20 09 48 59.3
comp=Z,1µm,18.0s
B05A Bryant 106.43 41 P **PKiKP 09 01 56.3 +0.1**
baz=283,SNR=8.9
VRAC Vranov 106.43 320 *e*PDIFF **Pdif 08 57 46.0 +0.7**
K02D Willamette Mer 106.46 47 P **PKiKP 09 01 56.6 +0.1**
baz=280
E04D Cinebar 106.49 43 P **PKiKP 09 01 56.6 +0.2**
baz=282
I03D Drain, OR 106.51 46 P **PKiKP 09 01 56.7 +0.2**
baz=281
JCC Jacoby Creek, 106.51 49 IAMs_20 IAMs_20 09 37 03.4
comp=Z,1µm,20.0s
KRUC Moravsky 106.62 320 *e*PDIFF **Pdif 08 57 46.6 +0.5**
KHMM Horse Mountain 106.73 49 IAMs_20 IAMs_20 09 37 55.0
comp=Z,2µm,20.0s
D05A Enumclaw 106.74 42 IAMs_20 IAMs_20 09 39 42.6
comp=Z,1µm,20.0s
B06A Marblemount 106.77 40 IAMs_20 IAMs_20 09 38 39.2
comp=Z,2µm,21.0s
H04D Lebanon 106.78 45 P **PKiKP 09 01 57.2 +0.2**
baz=282
KCPM Cahto Peak 107.03 50 IAMs_20 IAMs_20 09 39 21.3
comp=Z,1µm,20.0s
KONO Kongsberg 107.11 332 IAMs_20 IAMs_20 09 49 49.6
comp=Z,1µm,20.0s
I04A Tendick Farm, 107.16 45 P **PKiKP 09 01 58.5 +0.7**
baz=282
M02C Callahan 107.29 48 P **PKiKP 09 01 58.4 +0.3**
baz=280
YBH Yreka Blue Hor 107.33 48 IAMs_20 IAMs_20 09 39 27.4
comp=Z,2µm,20.0s
N02D Trinity Center 107.47 48 P **PKiKP 09 01 59.0 +0.5**
baz=280
J04D Umpqua Nationa 107.48 46 P **PKiKP 09 01 59.0 +0.4**
baz=282
HOPS Hopland Field 107.54 50 IAMs_20 IAMs_20 09 41 20.7
comp=Z,1µm,20.0s
L04D Klamath Falls 107.54 47 P **PKiKP 09 01 58.9 +0.2**
baz=281
O02D Mt. Diablo Mer 107.55 49 P **PKiKP 09 01 59.2 +0.6**
baz=280
LTY Liberty 107.60 42 IAMs_20 IAMs_20 09 43 51.4
comp=Z,1µm,21.0s
G05D Wamic, OR 107.62 44 P **PKiKP 09 01 59.2 +0.7**
baz=283
WDC Whiskeytown Da 107.67 49 IAMs_20 IAMs_20 09 37 52.0
comp=Z,2µm,21.0s
BRG Berggiesshubel 107.68 322 *e*PDIFF **Pdif 08 57 51.7 +0.9**
comp=Z,23nm,1.9s
BRG Berggiesshubel 107.68 322 *i* PKP **PKiKP 09 01 59.7 +1.2**
comp=Z,21nm,1.9s
BRG SKS **SKSac 09 08 32.0 +5.2**
BRG SDIFF **Sdif 09 09 52.0 +0.3**
BRG SS **SS 09 17 28.0 +1.4**
comp=N,2µm,16.6s
comp=E,2µm,14.8s
comp=Z,3µm,15.5s
BRG Berggiesshubel 107.68 322 *e*P **Pdif 08 57 51.7 +0.9**
BRG pmax pmax
comp=Z,1.0nm,1.9s
GDXM Geysers 107.78 51 IAMs_20 IAMs_20 09 51 31.8
comp=Z,2µm,18.0s
I05D Terrebonne, OR 107.80 45 P **PKiKP 09 01 59.6 +0.6**
baz=282
M04C Macdoel 107.96 47 P **PKiKP 09 01 59.9 +0.4**
baz=281
J05D Fort Rock, OR 108.10 46 P **PKiKP 09 01 59.6 -0.1**
baz=282,SNR=6.6
CLL Collm 108.12 323 *e*Pdif **Pdif 08 57 54.0 +1.3**
CLL *e* 09 01 50.0
CLL *e*PKiKP **PKiKP 09 02 03.0 +3.7**
CLL *e*PP **PP 09 02 22.0 -0.5**
CLL *e*PPP 09 02 38.0
B08A Colville Reser 108.20 40 IAMs_20 IAMs_20 09 39 22.9
comp=Z,2µm,22.0s
BOJS Bojanci 108.21 317 *e*PP **PP 09 02 28.8 +5.4**
O03E Paynes Creek 108.27 49 P **PKiKP 09 01 59.8 -0.2**
baz=281
GERES GERESS Array B 108.39 320 Pdiff **Pdif 08 57 54.5 +0.4**
comp=Z,0.3nm,0.5s,baz=44,slow=12,SNR=5.6
GERES PKiKP **PKiKP 09 02 00.1 +0.1**
comp=Z,0.9nm,0.4s,baz=22,slow=1.4,SNR=4.4
GERES PKKPbc **PKKPbc 09 13 11.6 -0.7**
comp=Z,0.5nm,0.7s,baz=265,slow=6.2,SNR=3.7
KHC Kasperske Hory 108.39 321 *e*PKP **PKiKP 09 01 59.7 -0.2**
KHC *ex* x 09 03 27.0
HAWA Hanford 108.57 42 IAMs_20 IAMs_20 09 40 41.0
comp=Z,1µm,20.0s
ORV Oroville 108.64 50 IAMs_20 IAMs_20 09 40 12.8
comp=Z,1µm,22.0s
D08A Wollman Farm, 108.80 41 IAMs_20 IAMs_20 09 44 39.2
comp=Z,1µm,21.0s
C09A Chrisman Ranch 109.03 41 IAMs_20 IAMs_20 09 43 26.0
comp=Z,1µm,20.0s
SKDS Skadanscina 109.04 317 *e*PP **PP 09 02 28.3 -1.2**
MOD Modoc Plateau 109.06 47 IAMs_20 IAMs_20 09 40 35.7
comp=Z,1µm,20.0s
I07A Izee 109.15 45 IAMs_20 IAMs_20 09 45 22.6
comp=Z,1µm,20.0s
SAO San Andreas Ge 109.18 52 IAMs_20 IAMs_20 09 40 05.4
comp=Z,1µm,20.0s
BEKR Beckworth 109.44 49 IAMs_20 IAMs_20 09 42 20.0
comp=Z,2µm,20.0s
E09A Wood Farm, Sta 109.46 42 IAMs_20 IAMs_20 09 45 09.6
comp=Z,1µm,19.0s
NEW Newport 109.64 40 P **PKiKP 09 02 02.5 +0.2**
baz=287
NEW Newport 109.64 40 IAMs_20 IAMs_20 09 40 28.1
comp=Z,2µm,21.0s
CMB Columbia Colle 109.78 51 IAMs_20 IAMs_20 09 51 28.1
comp=Z,1µm,18.0s

VCNR	Virginia City	110.09	50	IAMs_20	IAMs_20	09 41 10.3	
	comp=Z,1µm,22.0s						
WVOR	Wild Horse Val	110.15	46	IAMs_20	IAMs_20	09 42 50.4	
	comp=Z,1µm,20.0s						
WTTA	Wattenberg	110.16	319	*i* PKiKP	PKiKP	09 02 04.1	+0.6
	comp=Z,19nm,1.1s						
WATA	Walderalm	110.18	319	*i* PKiKP	PKiKP	09 02 03.7	+0.3
	comp=Z,24nm,1.2s						
PAHR	Pah Rah Range	110.21	49	IAMs_20	IAMs_20	09 41 14.3	
	comp=Z,1µm,21.0s						
WAKR	Walker	110.42	50	IAMs_20	IAMs_20	09 58 40.0	
	comp=Z,1µm,18.0s						
YERR	Yerington	110.47	50	IAMs_20	IAMs_20	09 50 20.3	
	comp=Z,1µm,18.0s						
MOTA	Moosalm	110.49	319	*i* PKiKP	PKiKP	09 02 04.3	+0.3
	comp=Z,11nm,1.3s						
SMMC	Simmler	110.59	54	P	PKiKP	09 02 04.7	+0.3
	baz=280						
RETA	Reutte	110.67	320	*e*PKiKP	PKiKP	09 02 04.9	+0.6
	comp=Z,8.4nm,1.3s						
PKM	Mcpherson Peak	110.81	54	P	PKiKP	09 02 06.1	+1.0
	baz=280,SNR=5.1						
SUMG	Summit	110.81	355	IAMs_20	IAMs_20	09 56 47.2	
	comp=Z,1µm,21.0s						
MDPB	Devils Postpil	110.87	51	IAMs_20	IAMs_20	09 41 32.1	
	comp=Z,2µm,20.0s						
SCZ2	Santa Cruz Isl	111.11	55	P	PKiKP	09 02 05.8	+0.4
	baz=280						
VES	Vestal, Richgr	111.22	53	P	PKiKP	09 02 05.8	+0.2
	baz=281						
DAVA	Damuels	111.30	320	*i* PKiKP	PKiKP	09 02 06.3	+0.7
	comp=Z,13nm,1.1s						
NVAR	Mina Array Bea	111.31	50	Pdiff	Pdif	08 58 08.0	+0.5
	comp=Z,0.5nm,0.5s,baz=252,slow=6.3,SNR=7.5						
NVAR				PKiKP	PKiKP	09 02 06.8	+0.8
	comp=Z,1.6nm,0.6s,baz=242,slow=2.6,SNR=15						
NVAR				PP	PP	09 02 44.1	-2.2
	comp=Z,4.0nm,1.0s,baz=272,slow=4.9,SNR=9.5						
WALA	Waterton Lakes	111.41	38	IAMs_20	IAMs_20	09 40 44.4	
	comp=Z,2µm,22.0s						
NV11	Mina Array Sit	111.42	50	IAMs_20	IAMs_20	09 59 39.4	
	comp=Z,1µm,18.0s						
ARVC	Arvin	111.56	54	P	PKiKP	09 02 06.7	+0.4
	baz=281						
TIN	Tinemaha, Big	111.65	52	P	PKiKP	09 02 07.0	+0.4
	baz=282						
ISA	Isabella, Lake	111.74	53	P	PKiKP	09 02 07.2	+0.6
	baz=281						
CWC	Cottonwood Cre	111.90	52	P	PKiKP	09 02 07.8	+0.7
	baz=282						
MSO	Missoula	112.13	41	P	PKiKP	09 02 07.1	0.0
	baz=289						
CIS	Catalina Islan	112.21	56	P	PKiKP	09 02 08.2	+0.6
	baz=281						
FMP	Fort Macarthur	112.26	55	P	PKiKP	09 02 07.7	+0.1
	baz=281						
EDW2	Edwards Air Fo	112.28	54	P	PKiKP	09 02 08.8	+1.1
	baz=281,SNR=9.6						
GRAC	Grapevine Rang	112.34	52	P	PKiKP	09 02 08.5	+0.7
	baz=283						
LRMC	Laurel Mtn Rad	112.41	53	P	PKiKP	09 02 09.3	+1.3
	baz=282,SNR=5.5						
MPMC	Manual Prospec	112.44	53	P	PKiKP	09 02 09.3	+1.1
	baz=282,SNR=9.6						
BFSC	Mount Baldy Ra	112.68	55	P	PKiKP	09 02 09.1	+0.6
	baz=281						
FURC	Furnace Creek,	112.85	52	P	PKiKP	09 02 09.8	+1.2
	baz=283,SNR=7.6						
GSC	Goldstone, Bar	113.15	53	P	PKiKP	09 02 10.6	+1.2
	baz=282,SNR=9.1						
MURC	Murrieta	113.18	55	P	PKiKP	09 02 10.3	+0.9
	baz=281						
TPNV	Topopah Spring	113.22	51	P	PKiKP	09 02 10.2	+0.6
	baz=283						
TPNV	Topopah Spring	113.22	51	IAMs_20	IAMs_20	09 43 19.4	
	comp=Z,2µm,21.0s						
BBRC	Big Bear Solar	113.27	54	P	PKiKP	09 02 10.3	+0.4
	baz=282						
109C	Camp Elliot, M	113.39	56	P	PKiKP	09 02 10.8	+1.1
	baz=281						
R11A	Troy Canyon, C	113.40	50	P	PKiKP	09 02 10.8	+0.9
	baz=284						
SHOC	Shoshone, Teco	113.44	53	P	PKiKP	09 02 10.9	+1.1
	baz=283,SNR=8.2						
HEC	Hector,Ludlow	113.62	54	P	PKiKP	09 02 11.1	+0.7
	baz=282,SNR=5.9						
PFO	Pinyon Flats O	113.78	55⇑	*i*PKIKP	PKiKP	09 02 11.6	+0.9
PFO	Pinyon Flats O	113.78	55	P	PKiKP	09 02 11.7	+0.9
	baz=282,SNR=12						
TUQ	Turquoise Moun	113.82	53	P	PKiKP	09 02 11.9	+1.1
	baz=283						
MONP2	Monument Peak	113.95	56	P	PKiKP	09 02 12.3	+1.1
	baz=282,SNR=8.8						
BELC	Belle Mtn. Jos	114.07	54	P	PKiKP	09 02 12.4	+1.1
	baz=282,SNR=17						
GMRC	Granite Mounta	114.18	54	P	PKiKP	09 02 12.6	+1.1
	baz=283,SNR=14						
SHPR	Sheep Range	114.18	52	IAMs_20	IAMs_20	09 43 17.8	
	comp=Z,2µm,21.0s						
IKP	In-Ko-Pah, Jac	114.26	56	P	PKiKP	09 02 12.3	+0.7
	baz=282,SNR=7.2						
EGMT	Eagleton	114.36	38	P	PKiKP	09 02 11.7	+0.4
	baz=293,SNR=24						
EGMT	Eagleton	114.36	38	IAMs_20	IAMs_20	09 41 41.8	
	comp=Z,1µm,22.0s						
SWSC	Sam W. Stewart	114.45	56	P	PKiKP	09 02 13.0	+1.2
	baz=282,SNR=5.9						
BC3	Big Chuckawall	114.59	55	P	PKiKP	09 02 13.5	+1.2
	baz=282,SNR=11						
IRM	Iron Mountain	114.73	54	P	PKiKP	09 02 13.9	+1.5
	baz=283,SNR=8.6						
ILULI	Ilulissat	114.74	359	IAMs_20	IAMs_20	10 01 06.0	
	comp=Z,1µm,18.0s						
KEST	Kesra	114.90	308	PP	PP	09 03 09.7	-2.2
	comp=Z,9.5nm,1.0s,baz=357,slow=3.1,SNR=5.8						
DUG	Dugway, Tooele	114.97	47	P	PKPdf	09 02 13.6	+0.8
	baz=287						
DUG	Dugway, Tooele	114.97	47	IAMs_20	IAMs_20	09 44 32.2	
	comp=Z,1µm,20.0s						
H17A	Grant Village	115.18	42	P	PKPdf	09 02 15.0	+1.7
	baz=291,SNR=8.1						
H17A	Grant Village	115.18	42	IAMs_20	IAMs_20	09 45 04.0	
	comp=Z,2µm,20.0s						
EKA	Eskdalemuir Ar	115.20	331	PKP	PKPdf	09 02 12.9	+0.3
	comp=Z,2.4nm,0.5s,baz=26,slow=2.7,SNR=12						
FLWY	Flagg Ranch	115.21	43	IAMs_20	IAMs_20	09 44 53.8	
	comp=Z,1µm,21.0s						
GLA	Glamis	115.23	55	P	PKPdf	09 02 14.5	+1.1
	baz=283						
GLA	Glamis	115.23	55	IAMs_20	IAMs_20	09 48 32.0	
	comp=Z,1µm,20.0s						
Y12C	Blythe	115.32	54	P	PKPdf	09 02 14.4	+0.9
	baz=283						
REDW	Red Top Meadow	115.36	43		PKPdf	09 02 14.1	+0.5
PDMCI	Parker Dam,Lak	115.51	54	P	PKPdf	09 02 14.5	+0.7
	baz=284						
W13A	Hualapai Mount	115.52	53	IAMs_20	IAMs_20	09 52 28.4	
	comp=Z,1µm,18.0s						
FFC	Flin Flon	115.53	29	PKIKP	PKiKP	09 02 13.0	-0.3
FFC	Flin Flon	115.53	29		PKiKP	09 02 13.0	-0.3
RLMT	Red Lodge	115.78	41	P	PKPdf	09 02 15.3	+1.0
	baz=292						
RLMT	Red Lodge	115.78	41	IAMs_20	IAMs_20	09 42 33.8	
	comp=Z,1µm,22.0s						
PKCU	Pink Cliffs	116.14	50		PKiKP	09 02 16.3	+0.9
113A	Mohawk Valley,	116.16	55	IAMs_20	IAMs_20	09 47 27.7	
	comp=Z,1µm,19.0s						
U15A	North Rim	116.43	51	IAMs_20	IAMs_20	09 45 20.3	
	comp=Z,1µm,20.0s						
BW06	Boulder Array	116.45	44	P	PKiKP	09 02 15.8	+0.1
	baz=291,SNR=13						
PDAR	Pinedale Array	116.45	44	PKP	PKPdf	09 02 15.8	0.0
	comp=Z,8.5nm,1.0s,baz=243,slow=1.0,SNR=34						
PDAR				PKKPbc	PKKPbc	09 12 44.1	-1.2
	comp=Z,0.5nm,0.6s,baz=101,slow=4.7,SNR=4.0						
Q16A	Castle Valley	116.57	48		PKiKP	09 02 17.3	+1.3
SFJD	Kangerlussuaq	116.96	359	IAMs_20	IAMs_20	10 00 22.7	
	comp=Z,1µm,21.0s						
LAO	LASA Array	117.10	39	P	PKiKP	09 02 17.6	+1.0
	baz=296,SNR=36						
LAO	LASA Array	117.10	39	IAMs_20	IAMs_20	09 43 06.6	
	comp=Z,1µm,22.0s						
214A	Organ Pipe Nat	117.14	56	P	PKiKP	09 02 18.0	+0.9
	baz=283,SNR=6.7						
RDMU	Red Mountain	117.20	46		PKiKP	09 02 17.4	+0.1
WUAZ	Wupatki	117.40	52	P	PKiKP	09 02 18.5	+0.8
	baz=286,SNR=22						
WUAZ	Wupatki	117.40	52	IAMs_20	IAMs_20	09 59 31.9	
	comp=Z,997nm,18.0s						
ANGG	Ammassalik, Gr	117.45	353	IAMs_20	IAMs_20	10 00 01.8	
	comp=Z,1µm,22.0s						
DGMT	Dagmar	117.52	36	P	PKiKP	09 02 17.5	+0.1
	baz=298,SNR=8.3						
O20A	White River Ci	118.31	46	P	PKiKP	09 02 20.1	+0.7
	baz=291,SNR=36						
PV05	Paradox Valley	118.38	48	IAMs_20	IAMs_20	09 56 32.3	
	comp=Z,1µm,18.0s						
PV17	East Wray Mesa	118.41	48		PKiKP	09 02 20.2	+0.6
PV22	Blue Mesa, Par	118.46	48	IAMs_20	IAMs_20	09 45 34.4	
	comp=Z,1µm,22.0s						
PV18	Skein Mesa, Pa	118.46	48	IAMs_20	IAMs_20	09 46 15.6	
	comp=Z,1µm,19.0s						
RWWY	Rawlins	118.47	44	IAMs_20	IAMs_20	09 51 08.2	
	comp=Z,1µm,19.0s						
PV03	Paradox Valley	118.50	48	IAMs_20	IAMs_20	09 56 21.7	
	comp=Z,1µm,20.0s						
PV13	Radium Mtn., P	118.56	48		PKiKP	09 02 20.4	+0.4
K22A	Casper	118.57	43	P	PKPdf	09 02 19.5	-0.2
	baz=293,SNR=12						
K22A	Casper	118.57	43	IAMs_20	IAMs_20	09 47 12.7	
	comp=Z,1µm,21.0s						
SRIG	Santa Rosalia	118.60	61	IAMs_20	IAMs_20	10 01 28.9	
	comp=Z,1µm,19.0s						
TUC	Tucson	118.72	55	PKIKP	PKiKP	09 02 20.8	+0.6
TUC	Tucson	118.72	55	P	PKiKP	09 02 21.1	+0.9
	baz=285						
TUC	Tucson	118.72	55		PKiKP	09 02 20.8	+0.6
TUC	Tucson	118.72	55	IAMs_20	IAMs_20	09 59 33.3	
	comp=Z,1µm,19.0s						
PV15	Paradox Valley	118.75	48	IAMs_20	IAMs_20	09 56 44.2	
	comp=Z,1000nm,19.0s						
W18A	Petrified Fore	118.80	52	P	PKiKP	09 02 21.4	+0.9
	baz=287,SNR=14						
W18A	Petrified Fore	118.80	52	IAMs_20	IAMs_20	09 53 19.9	
	comp=Z,1µm,20.0s						
MVCO	Mesa Verde	119.11	49	P	PKiKP	09 02 22.0	+0.9
	baz=289,SNR=29						
FRB	Frobisher Bay	119.11	8	PKP	PKPdf	09 02 19.2	-0.6
	comp=Z,7.4nm,0.9s,baz=68,slow=0.9,SNR=29						
HSIG		119.36	59	IAMs_20	IAMs_20	09 46 07.9	
	comp=Z,1µm,20.0s						
SMCO	Snowmass	119.56	47	IAMs_20	IAMs_20	09 50 57.6	
	comp=Z,1µm,20.0s						
RSSD	Black Hills	119.60	40	PKIKP	PKPdf	09 02 21.1	-0.6
RSSD	Black Hills	119.60	40	P	PKPdf	09 02 20.9	-0.8
	baz=296						
RSSD	Black Hills	119.60	40		PKPdf	09 02 21.1	-0.6
RSSD	Black Hills	119.60	40	IAMs_20	IAMs_20	09 46 53.7	
	comp=Z,1µm,22.0s						
N23A	Red Feather La	119.65	44	P	PKiKP	09 02 22.4	+0.3
	baz=293,SNR=10.0						
S22A	4UR Ranch, Cre	120.18	48	P	PKiKP	09 02 24.1	+0.9
	baz=291,SNR=31						
ISCO	Idaho Springs	120.31	45	P	PKiKP	09 02 23.7	+0.2
	baz=293,SNR=14						
ISCO	Idaho Springs	120.31	45	IAMs_20	IAMs_20	09 48 04.2	
	comp=Z,1µm,21.0s						
MDND	Maddock	120.49	35	P	PKPdf	09 02 23.0	0.0
	baz=302						
MDND	Maddock	120.49	35	IAMs_20	IAMs_20	09 58 52.6	
	comp=Z,1µm,21.0s						
E28A	Huff	120.52	37	IAMs_20	IAMs_20	09 49 58.4	
	comp=Z,1µm,20.0s						
Q24A	Divide	120.96	46	P	PKiKP	09 02 24.9	+0.2
	baz=293						
121A	Cookes Peak, D	121.10	54	P	PKiKP	09 02 26.0	+1.0
	baz=287,SNR=11						
ULM	Lac du Bonnet	121.15	31	PKP	PKPdf	09 02 23.5	-0.7
	comp=Z,8.2nm,0.5s,baz=320,slow=2.8,SNR=21						
ULM	Lac du Bonnet	121.15	31*c*	*i*PKIKP	PKPdf	09 02 23.2	-1.0
ULM	Lac du Bonnet	121.15	31		PKPdf	09 02 23.4	-0.7
ULM				IAMs_20	IAMs_20	09 58 04.6	
	comp=Z,1µm,22.0s						
SDCO	Great Sand Dun	121.16	48	P	PKiKP	09 02 26.0	+0.9
	baz=292,SNR=37						
Y22D	IRIS PASSCAL I	121.32	52	P	PKiKP	09 02 26.3	+1.0
	baz=288						
ANMO	Albuquerque	121.41	51*c*	*i*PKIKP	PKiKP	09 02 26.4	+0.8
ANMO				pmax	pmax		
	comp=Z,41nm,1.3s						
ANMO	Albuquerque	121.41	51	P	PKiKP	09 02 26.4	+0.8
	baz=289						
ANMO	Albuquerque	121.41	51		PKPdf	09 02 25.4	0.0
T25A	Trinidad	122.19	48	P	PKiKP	09 02 27.7	+0.6
	baz=292,SNR=29						
AGMN	Agassiz Nation	122.32	33	P	PKPdf	09 02 25.6	-0.9
	baz=306						
AGMN	Agassiz Nation	122.32	33	IAMs_20	IAMs_20	10 00 07.7	
	comp=Z,1µm,20.0s						
OGNE	Ogallala	122.33	43	P	PKPdf	09 02 26.6	-0.3
	baz=296						
EPT	El Paso	122.36	55	IAMs_20	IAMs_20	09 49 12.6	
	comp=Z,1µm,21.0s						
SUSD	Miller	122.65	38	P	PKPdf	09 02 27.0	-0.4
	baz=301						
SUSD	Miller	122.65	38	IAMs_20	IAMs_20	09 50 14.2	
	comp=Z,1µm,20.0s						
KSCO	Kaye Shedlock'	122.75	45	P	PKiKP	09 02 28.0	0.0
	baz=295,SNR=7.8						
KSCO	Kaye Shedlock'	122.75	45	IAMs_20	IAMs_20	09 50 40.6	
	comp=Z,1µm,20.0s						
MNTX	Cornudas Mount	123.29	54	P	PKiKP	09 02 29.5	+0.4
	baz=288,SNR=70						
MNTX	Cornudas Mount	123.29	54	IAMs_20	IAMs_20	09 49 43.4	
	comp=Z,1µm,21.0s						
B35A	Bob, Littlefor	123.42	32	IAMs_20	IAMs_20	09 50 52.6	
	comp=Z,1µm,20.0s						
ESDC	Sonseca Array	123.49	316	PKP	PKiKP	09 02 29.3	-0.1
	comp=Z,22nm,1.4s,baz=33,slow=2.0,SNR=24						
ESDC				PKKPbc	PKKPbc	09 12 19.3	+0.3
	comp=Z,1.6nm,1.1s,baz=249,slow=5.0,SNR=4.7						
F33A	5 Mile Ranch,	123.49	35	IAMs_20	IAMs_20	09 54 24.0	
	comp=Z,1µm,21.0s						
K31A	O'Neill	123.70	40		PKPdf	09 02 28.9	-0.5
K31A				IAMs_20	IAMs_20	09 53 09.2	
	comp=Z,1µm,20.0s						
PAB	San Pablo	123.81	316	PKIKP	PKPdf	09 02 29.4	-0.4
PAB				MLR	MLR		
	comp=Z,500nm,20.0s						
PAB	San Pablo	123.81	316		PKPdf	09 02 29.4	-0.4
TAF	Taforalt	124.34	310	P	PKiKP	09 02 32.0	+0.8
	SNR=9.7						
ECSD	EROS Data Cent	124.46	38	P	PKPdf	09 02 30.7	-0.1
	baz=303						
ECSD	EROS Data Cent	124.46	38	IAMs_20	IAMs_20	09 52 15.0	
	comp=Z,1µm,21.0s						
MSTX	Muleshoe	124.60	51	P	PKPdf	09 02 31.5	0.0
	baz=292,SNR=42						
BGNE	Belgrade	124.70	41	P	PKPdf	09 02 30.9	-0.5
	baz=300,SNR=10						
BGNE	Belgrade	124.70	41	IAMs_20	IAMs_20	09 49 44.7	
	comp=Z,1µm,21.0s						
EYMN	Ely	124.84	31	P	PKPdf	09 02 31.3	-0.1
	baz=310						
EYMN	Ely	124.84	31	IAMs_20	IAMs_20	09 51 38.1	
	comp=Z,1µm,20.0s						
CBKS	Cedar Bluff	124.86	44	P	PKPdf	09 02 31.9	+0.1
	baz=297						
F36A	Milaca	125.05	34	IAMs_20	IAMs_20	10 02 21.1	
	comp=Z,955nm,20.0s						
AMTX	Amarillo	125.09	49	P	PKPdf	09 02 32.5	+0.1
	baz=293						
AMTX	Amarillo	125.09	49	IAMs_20	IAMs_20	09 58 58.8	
	comp=Z,1µm,20.0s						
HORN	Hornachuelos	125.20	315	P	PKiKP	09 02 33.0	+0.3
	SNR=9.3						
PVRL	Vila Real	125.25	319	*e*PKPdf	PKiKP	09 02 34.1	+1.3
PALE	Palemas	125.34	311	P	PKiKP	09 02 33.0	-0.1
	SNR=8.1						
TX32	Lajitas Array	125.42	57		PKiKP	09 02 33.5	-0.1
TXAR	Lajitas Array	125.42	57	PKP	PKPdf	09 02 33.3	+0.1
	comp=Z,8.5nm,0.9s,baz=252,slow=1.9,SNR=3.6						
L34A	Svendsen Farm,	125.55	39	IAMs_20	IAMs_20	09 59 18.1	
	comp=Z,1µm,20.0s						
MTE	Manteigas	125.58	318	*e*PKPdf	PKiKP	09 02 37.1	+3.6
PVIS	Viseu	125.65	319	*e*PKPdf	PKiKP	09 02 34.9	+1.3
TOA0	Torodi Ar. Sit	125.65	283		PKPdf	09 02 32.7	-1.1
TORD	Torodi Ar. Bea	125.65	283	PKP	PKPdf	09 02 32.8	-1.0
	comp=Z,17nm,0.9s,baz=74,slow=2.1,SNR=63						
TORD				PKKPbc	PKKPbc	09 12 11.1	+1.4
	comp=Z,5.8nm,1.2s,baz=273,slow=2.9,SNR=10						
R32A	Long Quarter,	125.75	44	IAMs_20	IAMs_20	10 08 50.1	
	comp=Z,904nm,18.0s						
PCBR	Castelo Branco	125.81	318	*e*PKPdf	PKiKP	09 02 34.6	+0.7
SPMN	Marine on St.	125.84	34	P	PKPdf	09 02 32.9	-0.5
	baz=308						
SPMN	Marine on St.	125.84	34	IAMs_20	IAMs_20	09 59 42.0	
	comp=Z,1µm,21.0s						
PMRV	Marv??o	125.95	317	*e*PKPdf	PKiKP	09 02 34.4	+0.2
I37A	Lemond, Waseca	126.22	36	IAMs_20	IAMs_20	09 50 47.3	
	comp=Z,2µm,22.0s						
N35A	Tabor	126.61	40	IAMs_20	IAMs_20	09 51 55.1	
	comp=Z,1µm,21.0s						
KSU1	Kansas State U	126.87	43	P	PKPdf	09 02 35.7	+0.1
	baz=300,SNR=9.1						
RSA	Sarsar	126.88	312	P	PKiKP	09 02 37.1	+0.9
	SNR=5.8						
D41A	Chassel	126.91	30	IAMs_20	IAMs_20	10 02 50.9	
	comp=Z,1µm,20.0s						
PBEJ	Beja	126.95	316	*e*PKPdf	PKiKP	09 02 37.5	+1.3
PVAQ	Vaqueiros	127.14	315	*e*PKPdf	PKPdf	09 02 36.2	+0.1
G40A	Rib Lake	127.25	33	IAMs_20	IAMs_20	09 54 25.1	
	comp=Z,1µm,21.0s						
PCVE	Castro Verde	127.26	316	*e*PKPdf	PKiKP	09 02 37.9	+1.1
MESJ	Messejana	127.28	316	*e*PKPdf	PKPdf	09 02 35.8	-0.6
MESJ				AMS	AMS	10 21 23.0	
	comp=Z,864nm,18.1s						
MESJ	Messejana	127.28	316	*e*PKIKP	PKPdf	09 02 35.7	-0.6
MESJ	Messejana	127.28	316	*e*PKPdf	PKiKP	09 02 37.5	+0.6
WMOK	Wichita Mounta	127.33	48	PKIKP	PKPdf	09 02 35.7	-0.9
WMOK	Wichita Mounta	127.33	48	P	PKPdf	09 02 36.5	-0.1
	baz=295,SNR=31						
WMOK	Wichita Mounta	127.33	48		PKPdf	09 02 35.7	-0.9
WMOK	Wichita Mounta	127.33	48	IAMs_20	IAMs_20	09 52 59.5	
	comp=Z,1µm,20.0s						
PBDV	Barranco-do-Ve	127.37	315	*e*PKPdf	PKiKP	09 02 38.8	+1.7
PNCL	Nicolau / Gran	127.37	316	*e*PKPdf	PKiKP	09 02 38.0	+1.0
K38A	Parkersburg	127.40	37	IAMs_20	IAMs_20	09 49 31.5	
	comp=Z,1µm,22.0s						
ABTX	Abilene, Hawle	127.53	51	P	PKiKP	09 02 37.4	-0.1
	baz=293,SNR=11						
SCIA	State Center	127.56	38	P	PKPdf	09 02 36.6	-0.2
	baz=305,SNR=6.9						
SCIA	State Center	127.56	38	IAMs_20	IAMs_20	09 51 03.9	
	comp=Z,1µm,21.0s						
MORF	Marmelete	127.84	316	*e*PKPdf	PKPdf	09 02 36.7	-0.9
MORF				AMS	AMS	10 21 15.4	
	comp=Z,1µm,24.9s						
MORF	Marmelete	127.84	316	*e*PKIKP	PKPdf	09 02 36.6	-0.9
SCHQ	Schefferville	127.88	10	PKP	PKPdf	09 02 37.1	+0.1
	comp=Z,8.5nm,0.6s,baz=7.0,slow=2.9,SNR=12						
I40A	Norwalk	127.89	34	IAMs_20	IAMs_20	09 49 42.3	
	comp=Z,1µm,22.0s						
T35A	Sooner Cattle	128.00	45	IAMs_20	IAMs_20	09 53 27.7	
	comp=Z,1µm,20.0s						
F42A	Maple Grove Fa	128.02	31	IAMs_20	IAMs_20	09 53 56.2	
	comp=Z,1µm,21.0s						
ZHG	ZHG	128.10	310	P	PKiKP	09 02 40.0	+1.2
	SNR=7.0						
ZAIG	Zacatecas	128.14	64	IAMs_20	IAMs_20	09 48 34.1	
	comp=Z,1µm,21.0s						
E43A	Lone Tree Farm	128.17	30	IAMs_20	IAMs_20	10 03 38.1	
	comp=Z,1µm,20.0s						
N38A	Joes South For	128.17	39	IAMs_20	IAMs_20	10 04 09.4	
	comp=Z,1µm,20.0s						
JCT	Junction City	128.21	54	PKIKP	PKPdf	09 02 38.5	+0.1
JCT	Junction City	128.21	54	P	PKPdf	09 02 38.5	+0.1
	baz=291						
JCT	Junction City	128.21	54		PKPdf	09 02 38.5	+0.1
JCT				IAMs_20	IAMs_20	09 52 04.5	
	comp=Z,1µm,20.0s						
TZRR	Tazzarine	128.29	307	P	PKiKP	09 02 40.0	+0.7
	SNR=11						
E44A	Grand Marais A	128.52	29	P	PKPdf	09 02 38.6	+0.2
	baz=316						
E44A	Grand Marais A	128.52	29	IAMs_20	IAMs_20	10 00 06.3	
	comp=Z,1µm,20.0s						
P38A	Dawn	128.63	40	IAMs_20	IAMs_20	10 03 59.7	
	comp=Z,907nm,19.0s						
L40A	Anamosa	128.67	37	IAMs_20	IAMs_20	09 52 01.1	
	comp=Z,1µm,22.0s						
JFWS	Jewell Farm	128.71	35	P	PKPdf	09 02 38.1	-0.8
	baz=309,SNR=18						
I42A	Draeger Farm,	128.84	33	IAMs_20	IAMs_20	10 04 29.3	
	comp=Z,1µm,19.0s						
TUL1	Leonard	128.99	46	P	PKPdf	09 02 39.7	0.0
	baz=299,SNR=15						
TUL1	Leonard	128.99	46	IAMs_20	IAMs_20	09 57 52.0	
	comp=Z,1µm,21.0s						
D46A	Sault St. Mari	129.22	28	P	PKPdf	09 02 39.6	-0.2
	baz=318,SNR=12						
833A	Chaparral WMA,	129.30	56	P	PKiKP	09 02 41.3	+0.1
	baz=290,SNR=20						
F45A	CMU Biological	129.39	30	P	PKPdf	09 02 40.2	+0.1
	baz=316,SNR=6.7						
E46A	Sault Ste Mari	129.48	28	IAMs_20	IAMs_20	10 02 26.5	
	comp=Z,1µm,20.0s						
WHTX	Lake Whitney,	129.48	51	P	PKiKP	09 02 41.5	0.0
	baz=294,SNR=16						
WHTX	Lake Whitney,	129.48	51	IAMs_20	IAMs_20	09 53 05.8	
	comp=Z,1µm,20.0s						
D47A	Chapleau	129.52	27	P	PKPdf	09 02 40.6	+0.2
	baz=319,SNR=20						
MATQ	Matagami	129.57	21	P	PKPdf	09 02 39.6	-0.7
	baz=327,SNR=12						
L42A	Oliver, Polo	129.62	36	IAMs_20	IAMs_20	09 55 10.2	
	comp=Z,1µm,20.0s						
P40A	Paris	129.64	40	IAMs_20	IAMs_20	09 53 59.2	
	comp=Z,974nm,20.0s						
N41A	Harden Midland	129.70	38	IAMs_20	IAMs_20	09 55 59.6	
	comp=Z,1µm,19.0s						
G45A	Suttons Bay	129.78	30	P	PKPdf	09 02 40.5	-0.4
	baz=315,SNR=8.2						
G45A	Suttons Bay	129.78	30		PKPdf	09 02 40.6	-0.2
G45A				IAMs_20	IAMs_20	09 59 23.6	
	comp=Z,988nm,20.0s						
S39A	Bolivar	129.81	42	IAMs_20	IAMs_20	10 03 48.2	
	comp=Z,1µm,19.0s						
435B	Jarrell	129.87	52	P	PKPdf	09 02 41.7	+0.3
	baz=293						
H45A	Beulah	129.87	31	P	PKPdf	09 02 40.9	-0.1
	baz=314						
E47A	Iron Bridge	129.89	27	P	PKPdf	09 02 41.2	+0.1
	baz=318,SNR=22						
X37A	Clayton	129.92	47	IAMs_20	IAMs_20	10 03 16.7	
	comp=Z,1µm,20.0s						
K43A	Burlington	129.94	34	IAMs_20	IAMs_20	09 54 15.3	
	comp=Z,1µm,22.0s						
G46A	Petoskey	129.97	29	P	PKPdf	09 02 41.0	-0.2
	baz=316,SNR=7.9						
D48A	Paudash Townsh	130.00	26	P	PKPdf	09 02 41.1	-0.1
	baz=321,SNR=20						
D49A	Beulah Townshi	130.12	25	P	PKPdf	09 02 41.4	-0.1
	baz=321,SNR=10						
I45A	Fountain	130.18	32	P	PKPdf	09 02 41.3	-0.4
	baz=314						
R40A	Maddies Statio	130.19	41	IAMs_20	IAMs_20	09 53 47.0	
	comp=Z,1µm,21.0s						
H46A	Fife Lake	130.36	30	P	PKPdf	09 02 41.9	-0.1
	baz=315						
E48A	Lockeyer	130.38	27	P	PKPdf	09 02 42.0	0.0
	baz=320,SNR=20						
GLMI	Grayling	130.45	30	P	PKPdf	09 02 42.1	-0.1
	baz=316						
GLMI	Grayling	130.45	30	IAMs_20	IAMs_20	10 04 57.3	
	comp=Z,1µm,19.0s						
J45A	Montague	130.51	32	P	PKPdf	09 02 41.8	-0.5
	baz=313						
J45A	Montague	130.51	32	IAMs_20	IAMs_20	09 55 55.3	
	comp=Z,1µm,20.0s						
L44A	Lake County Fo	130.51	34	P	PKPdf	09 02 41.9	-0.4
	baz=311						
L44A	Lake County Fo	130.51	34	IAMs_20	IAMs_20	10 05 21.7	
	comp=Z,1µm,20.0s						
CHGQ	Chibougamau	130.53	18	P	PKPdf	09 02 41.6	-0.5
	baz=331,SNR=15						
G47A	Hillman	130.57	29	P	PKPdf	09 02 42.7	+0.3
	baz=317,SNR=14						
I46A	Reed City	130.65	31	P	PKPdf	09 02 41.8	-0.8
	baz=315						
F48A	Evansville	130.66	27	P	PKPdf	09 02 42.3	-0.2
	baz=319,SNR=9.0						
HDIL	Hopedale	130.74	37	P	PKPdf	09 02 42.4	-0.5
	baz=308						
W39A	Magazine	130.77	45	P	PKPdf	09 02 43.0	0.0
	baz=300,SNR=13						
W39A	Magazine	130.77	45	IAMs_20	IAMs_20	10 12 06.0	
	comp=Z,1µm,19.0s						
H47A	Mio	130.81	30	P	PKPdf	09 02 42.7	-0.2
	baz=316,SNR=6.3						
U40A	Yellville	130.83	44	P	PKPdf	09 02 42.5	-0.7
	baz=302,SNR=18						
D50A	G1974 Best Tow	130.84	24	P	PKPdf	09 02 42.2	-0.6

baz=323,SNR=19
F49A **Sandfield** 130.98 27 P PKPdf 09 02 43.2 +0.1
baz=320,SNR=8.7
CCM **Cathedral Cave** 130.99 41 PKIKP PKPdf 09 02 43.3 -0.1
CCM MLR MLR
comp=Z,1µm,21.0s
CCM **Cathedral Cave** 130.99 41 P PKPdf 09 02 42.9 -0.5
baz=304
CCM **Cathedral Cave** 130.99 41 PKPdf 09 02 43.3 -0.1
CCM **Cathedral Cave** 130.99 41 IAMs_20 IAMs_20 09 57 10.1
comp=Z,992nm,21.0s
VLDQ **Val d'Or** 131.01 22 IAMs_20 IAMs_20 09 59 45.6
comp=Z,984nm,20.0s
I47A **Gladwin** 131.08 30 P PKPdf 09 02 43.0 -0.4
baz=316
D51A **Lot 18 Range I** 131.09 24 P PKPdf 09 02 42.5 -0.8
baz=324,SNR=7.1
P43A **Skaggs, Pawnee** 131.16 38 IAMs_20 IAMs_20 10 07 13.2
comp=Z,1µm,18.0s
H48A **Harrisville** 131.17 29 P PKPdf 09 02 43.6 +0.1
baz=318
MIAR **Mount Ida** 131.24 46 P PKPdf 09 02 44.4 +0.4
baz=300,SNR=22
MIAR **Mount Ida** 131.24 46 IAMs_20 IAMs_20 09 56 36.5
comp=Z,1µm,21.0s
K46A **Dorr** 131.35 33 P PKPdf 09 02 43.7 -0.2
baz=313
I48A **Sherman Twp** 131.36 30 P PKPdf 09 02 43.6 -0.3
baz=317
J47A **Sunmer** 131.47 31 P PKPdf 09 02 44.0 -0.1
baz=315,SNR=8.9
J47A **Sunmer** 131.47 31 IAMs_20 IAMs_20 09 56 37.6
comp=Z,1µm,20.0s
E51A **G1948 Merrick** 131.49 25 P PKPdf 09 02 43.5 -0.6
baz=323,SNR=9.1
L46A **Eue Claire** 131.52 34 P PKPdf 09 02 43.8 -0.5
baz=312
L46A **Eue Claire** 131.52 34 IAMs_20 IAMs_20 10 05 40.3
comp=Z,999nm,21.0s
HKT **Hockley** 131.59 53 PKIKP PKiKP 09 02 45.8 +0.1
HKT **Hockley** 131.59 53 PKiKP 09 02 45.8 +0.1
HKT **Hockley** 131.59 53 IAMs_20 IAMs_20 09 55 01.5
comp=Z,1µm,20.0s
NATX **Nacogdoches** 131.73 50 P PKPdf 09 02 44.7 -0.3
baz=296
D53A **Lac Vacive, Po** 131.77 23 P PKPdf 09 02 44.2 -0.4
baz=326
D53A **Lac Vacive, Po** 131.77 23 IAMs_20 IAMs_20 10 00 58.5
comp=Z,1µm,22.0s
K47A **Vermontville** 131.78 32 P PKPdf 09 02 44.2 -0.6
baz=314,SNR=10.0
WHAR **Wooly Hollow** 131.78 45 IAMs_20 IAMs_20 10 05 12.5
comp=Z,858nm,20.0s
F51A **Arnstein** 131.79 25 P PKPdf 09 02 44.5 -0.2
baz=322,SNR=9.1
X40A **Basin Creek Fa** 131.80 46 P PKPdf 09 02 45.0 0.0
baz=300,SNR=6.7
X40A **Basin Creek Fa** 131.80 46 IAMs_20 IAMs_20 10 01 29.3
comp=Z,1µm,19.0s
W41B **Gary Mavity, V** 131.86 45 P PKPdf 09 02 44.8 -0.4
baz=301
Q44A **Meyer Farm, Va** 131.91 39 IAMs_20 IAMs_20 09 55 02.3
comp=Z,1µm,20.0s
J48A **Bridge Port** 131.96 31 P PKPdf 09 02 44.8 -0.2
baz=316,SNR=5.5
I49A **Point Hope** 131.97 29 P PKPdf 09 02 44.7 -0.3
baz=318
I49A **Point Hope** 131.97 29 IAMs_20 IAMs_20 10 06 03.6
comp=Z,1µm,19.0s
UALR **University of** 132.00 45 IAMs_20 IAMs_20 10 03 15.6
comp=Z,1µm,19.0s
E52A **Mattawa** 132.03 24 P PKPdf 09 02 44.8 -0.3
baz=324,SNR=8.1
D54A **Lac Fusel, La** 132.10 22 P PKPdf 09 02 44.8 -0.4
baz=327,SNR=5.7
K48A **Perry** 132.14 31 P PKPdf 09 02 45.1 -0.4
baz=315,SNR=6.0
SFIN **Lafayette** 132.15 36 P PKPdf 09 02 45.0 -0.5
baz=310
SFIN **Lafayette** 132.15 36 IAMs_20 IAMs_20 09 56 58.5
comp=Z,1µm,22.0s
F52A **Sundridge** 132.15 25 P PKPdf 09 02 45.3 -0.1
baz=323,SNR=7.9
J49A **Marlette** 132.24 30 P PKPdf 09 02 45.2 -0.3
baz=317
PBMO **Poplar Bluff** 132.24 42 IAMs_20 IAMs_20 10 07 26.5
comp=Z,1µm,19.0s
KIC **Kosan Boka** 132.32 275 *e*PKIKP PKiKP 09 02 47.4 -0.3
comp=Z,25nm,0.6s
M47A **Cromwell** 132.34 34 P PKPdf 09 02 45.8 -0.1
baz=313
E53A **Dumoine, Ponti** 132.36 23 P PKPdf 09 02 45.4 -0.3
baz=325
DBIC **Dimbokro** 132.43 275 PKP PKPdf 09 02 45.9 -0.8
comp=Z,8.7nm,0.5s,baz=69,slow=2.0,SNR=16
DBIC SKPbc SKPab 09 06 11.6 +0.5
comp=Z,9.0nm,0.8s,baz=96,slow=3.5,SNR=5.6
DBIC **Dimbokro** 132.43 275 PKIKP PKPdf 09 02 47.3 +0.5
DBIC **Dimbokro** 132.43 275 PKPdf 09 02 47.3 +0.5
Z41A **Richland Creek** 132.43 47 P PKPdf 09 02 45.5 -0.7
baz=299
K49A **Clarkson** 132.50 31 P PKPdf 09 02 45.4 -0.7
baz=316
E54A **Lac Daplat, Po** 132.50 23 P PKPdf 09 02 45.5 -0.5
baz=326
ALGO **Algonquin Park** 132.55 24 P PKPdf 09 02 45.8 -0.3
baz=324,SNR=6.9
L48A **N Adams** 132.58 32 P PKPdf 09 02 46.2 -0.1
baz=314,SNR=20
OLIL **Olney** 132.58 38 IAMs_20 IAMs_20 09 55 45.0
comp=Z,1µm,21.0s
TIC **Toumodi** 132.59 275 *e*PKIKP PKPdf 09 02 47.6 +0.5
LIC **Lamto** 132.60 275 *e*PKIKP PKiKP 09 02 48.0 -0.2
comp=Z,46nm,0.6s
N47A **Urbana** 132.62 34 P PKPdf 09 02 46.1 -0.3
baz=312,SNR=6.1
D55A **Sainte-Anne-du** 132.65 21 P PKPdf 09 02 45.9 -0.4
baz=328
PLCA **Paso Flores** 132.67 161 PKP PKPdf 09 02 47.3 +0.7
comp=Z,15nm,0.8s,baz=220,slow=1.3,SNR=44
PLCA SKPbc SKPab 09 06 11.9 +0.5
comp=Z,7.0nm,0.9s,baz=183,slow=2.2,SNR=6.1
PLCA **Paso Flores** 132.67 161 PKPdf 09 02 46.5 -0.2
PLCA **Paso Flores** 132.67 161 *eP* PKPdf 09 02 47.3 +0.7
PLCA **Paso Flores** 132.67 161 *eP* PKiKP 09 02 48.8 +1.1
AAM **Ann Arbor** 132.74 31 P PKPdf 09 02 46.3 -0.3
baz=316
AAM **Ann Arbor** 132.74 31 IAMs_20 IAMs_20 09 56 27.2
comp=Z,1µm,21.0s
M48A **Edgerton** 132.75 33 P PKPdf 09 02 46.4 -0.2
baz=314
PARMO **Parma** 132.75 41 IAMs_20 IAMs_20 10 04 49.0
comp=Z,1µm,21.0s
H52A **Wyevale** 132.81 27 P PKPdf 09 02 46.6 0.0
baz=322
CCAR **Cane Creek** 132.84 46 IAMs_20 IAMs_20 10 05 24.1
comp=Z,1µm,21.0s
D56A **ZEC Mazanza, M** 132.88 21 P PKPdf 09 02 46.6 -0.1
baz=329
E55A **Montcerf-Lytto** 132.92 22 P PKPdf 09 02 46.2 -0.5
baz=327
K50A **Casco** 132.93 30 P PKPdf 09 02 46.2 -0.7
baz=317
PVMO **Portageville** 132.93 42 IAMs_20 IAMs_20 09 59 00.7
comp=Z,1µm,21.0s
I51A **Listowel** 132.94 28 P PKPdf 09 02 46.7 -0.3
baz=320
PENMO **Penman** 132.96 42 IAMs_20 IAMs_20 10 04 54.4
comp=Z,978nm,19.0s
GNAR **Gosnell** 132.97 42 IAMs_20 IAMs_20 09 56 30.9
comp=Z,991nm,20.0s
G53A **Haliburton** 132.98 25 P PKPdf 09 02 47.2 +0.2
baz=323,SNR=6.2
G54A **Lake Saint Pet** 132.98 25 P PKPdf 09 02 46.5 -0.5
baz=324
PEBM **Pemiscott Bayo** 132.99 42 IAMs_20 IAMs_20 09 56 32.4
comp=Z,1µm,20.0s
N48A **Decatur** 133.01 34 P PKPdf 09 02 46.6 -0.5
baz=313
SADO **Sadowa** 133.04 26 IAMs_20 IAMs_20 10 03 41.5
comp=Z,1µm,22.0s
I52A **Shelburne** 133.13 27 P PKPdf 09 02 47.1 -0.2
baz=321
M49A **Liberty Center** 133.16 32 P PKPdf 09 02 47.0 -0.4
baz=315
X43A **Marvell** 133.16 45 P PKPdf 09 02 47.4 -0.2
baz=302
HICK **Hickman** 133.17 41 IAMs_20 IAMs_20 10 06 40.0
comp=Z,1µm,20.0s
D57A **Chemin Vers le** 133.21 20 P PKPdf 09 02 47.1 -0.2
baz=330
E56A **St. Veronique** 133.22 21 P PKPdf 09 02 47.1 -0.2
baz=329
T45A **Paducah** 133.27 40 IAMs_20 IAMs_20 09 59 06.6
comp=Z,1µm,20.0s
GLAT **Glass** 133.29 42 IAMs_20 IAMs_20 09 59 40.1
comp=Z,1µm,20.0s
441A **DeRidder** 133.31 50 IAMs_20 IAMs_20 10 03 38.0
comp=Z,1µm,21.0s
F55A **Otter Lake** 133.32 23 P PKPdf 09 02 46.8 -0.8
baz=327
USIN **University of** 133.32 39 IAMs_20 IAMs_20 09 57 51.7
comp=Z,1µm,21.0s
O48A **Farmland** 133.34 35 P PKPdf 09 02 47.4 -0.3
baz=312
L50A **Kingsville** 133.36 31 P PKPdf 09 02 47.2 -0.5
baz=316
N49A **Columbus Grove** 133.43 33 P PKPdf 09 02 47.6 -0.3
baz=314,SNR=7.6
N49A **Columbus Grove** 133.43 33 IAMs_20 IAMs_20 09 59 53.7
comp=Z,1µm,20.0s
H53A **Bobcaygeon** 133.44 26 P PKPdf 09 02 47.1 -0.7
baz=323
HALT **Halls** 133.46 42 IAMs_20 IAMs_20 09 58 24.7
comp=Z,957nm,20.0s
D58A **Chemin du LacG** 133.48 19 P PKPdf 09 02 47.6 -0.2
baz=332
K51A **Iona Station** 133.52 29 P PKPdf 09 02 47.9 -0.2
baz=318
I53A **Kortright Cn E** 133.58 27 P PKPdf 09 02 47.8 -0.3
baz=321
J52A **Paris** 133.62 28 P PKPdf 09 02 48.0 -0.2
baz=320
E57A **Chemin Saint G** 133.65 21 P PKPdf 09 02 47.8 -0.4
baz=330
G55A **Calabogie** 133.66 24 P PKPdf 09 02 48.0 -0.2
baz=326
PLVO **Plevna** 133.69 24 IAMs_20 IAMs_20 09 57 49.5
comp=Z,1µm,21.0s
M50A **Fremont** 133.70 32 P PKPdf 09 02 48.0 -0.4
baz=316
M50A **Fremont** 133.70 32 IAMs_20 IAMs_20 10 14 31.7
comp=Z,897nm,19.0s
P48A **Milroy** 133.72 36 P PKPdf 09 02 48.2 -0.4
baz=312
O49A **Covington** 133.85 34 P PKPdf 09 02 48.5 -0.2
baz=313,SNR=8.6
Q48A **North Vernon** 133.89 36 P PKPdf 09 02 48.9 +0.1
baz=311,SNR=8.1
D59A **Saint-Raymond** 133.89 18 P PKPdf 09 02 48.5 -0.1
baz=333
DELO **Deloro Mine** 133.89 25 IAMs_20 IAMs_20 10 06 16.9
comp=Z,1µm,21.0s
F57A **Harrington** 133.96 21 P PKPdf 09 02 48.2 -0.6
baz=329
ORIO **Orleans, Innes** 133.97 22 P PKPdf 09 02 48.6 -0.1
baz=327
E58A **La Victoria** 133.98 20 P PKPdf 09 02 48.4 -0.3
baz=331
W45A **Hickory Valley** 133.99 43 IAMs_20 IAMs_20 09 56 25.4
comp=Z,919nm,22.0s
WCI **Wyandotte Cave** 134.00 37 PKHKP PKPpre 09 02 39.4
WCI 09 02 49.6
WCI **Wyandotte Cave** 134.00 37 P PKPdf 09 02 48.6 -0.5
baz=310
WCI **Wyandotte Cave** 134.00 37 PKPpre 09 02 39.4
WCI PKPdf PKPdf 09 02 49.6 +0.6
H55A **Tweed** 134.05 24 P PKPdf 09 02 48.5 -0.5
baz=325
P49A **Miami Univ. Ec** 134.08 35 P PKPdf 09 02 48.4 -0.8
baz=312
N50A **Nevada** 134.09 33 P PKPdf 09 02 49.1 -0.1
baz=315
I55A **Frankford** 134.11 25 P PKPdf 09 02 48.9 -0.1
baz=324
E59A **St. Maurice** 134.14 19 P PKPdf 09 02 48.8 -0.2
baz=332
OXF **Oxford** 134.19 44 P PKPdf 09 02 49.0 -0.5
baz=304
M51A **Elyria** 134.20 31 P PKPdf 09 02 48.8 -0.6
baz=317
D61A **St Aubert, Com** 134.21 17 P PKPdf 09 02 49.0 -0.2
baz=335
F58A **St-Lin Laurent** 134.23 21 P PKPdf 09 02 49.1 -0.1
baz=330
D60A **Saint Jean D'O** 134.25 18 P PKPdf 09 02 49.2 -0.1
baz=334
O50A **Cable** 134.28 34 P PKPdf 09 02 49.4 -0.2
baz=314
T47A **Sharon Grove** 134.28 39 IAMs_20 IAMs_20 09 54 51.9
comp=Z,1µm,21.0s
WVT **Waverly** 134.33 41 PKHKP PKPpre 09 02 41.4
WVT 09 02 49.8
WVT **Waverly** 134.33 41 P PKPdf 09 02 49.3 -0.4
baz=307
WVT **Waverly** 134.33 41 PKPpre 09 02 41.4
WVT PKPdf PKPdf 09 02 49.8 +0.1
Q49A **Aurora** 134.33 36 P PKPdf 09 02 49.5 -0.2
baz=312
H56A **Elgin** 134.39 24 P PKPdf 09 02 49.6 0.0
baz=326
N51A **Ashland** 134.40 32 P PKPdf 09 02 49.7 0.0
baz=316,SNR=5.8
N51A **Ashland** 134.40 32 IAMs_20 IAMs_20 10 09 52.2
comp=Z,980nm,20.0s
J54A **Appleton** 134.44 27 P PKPdf 09 02 49.7 0.0
baz=322
J54A **Appleton** 134.44 27 IAMs_20 IAMs_20 10 01 23.8
comp=Z,1µm,21.0s
Y45A **Yeager Farm, C** 134.45 45 IAMs_20 IAMs_20 10 05 36.3
comp=Z,1µm,19.0s
G57A **Newington** 134.46 22 P PKPdf 09 02 49.6 -0.1
baz=328
M52A **Chesterland** 134.47 30 P PKPdf 09 02 49.2 -0.7
baz=318
P50A **Jamestown** 134.55 34 P PKPdf 09 02 49.7 -0.4
baz=314,SNR=5.2
ACSO **Alum Creek Sta** 134.56 33 P PKPdf 09 02 49.6 -0.5
baz=315
ACSO **Alum Creek Sta** 134.56 33 IAMs_20 IAMs_20 09 58 44.7
comp=Z,893nm,21.0s
DRLN **Deer Lake** 134.57 5 IAMs_20 IAMs_20 10 06 39.4
comp=Z,1µm,21.0s
E60A **Ste Agathe de** 134.58 18 P PKPdf 09 02 49.7 -0.2
baz=333
F59A **Saint Guilaume** 134.60 20 P PKPdf 09 02 49.7 -0.2
baz=331
MEDO **Medina** 134.61 27 IAMs_20 IAMs_20 10 01 39.2
comp=Z,1µm,21.0s
VBMS **Vicksburg** 134.61 47 P PKPdf 09 02 50.6 +0.2
baz=301
PECO **Prince Edward** 134.63 25 IAMs_20 IAMs_20 10 00 21.4
comp=Z,997nm,22.0s
R49A **Shelbyville** 134.64 37 IAMs_20 IAMs_20 09 58 05.1
comp=Z,1µm,20.0s
D62A **Allapoint, All** 134.64 16 P PKPdf 09 02 49.9 -0.1
baz=337
L53A **Girard** 134.71 29 P PKPdf 09 02 50.1 -0.2
baz=319
ERPA **Erie** 134.71 29 P PKPdf 09 02 50.2 -0.1
baz=320
F60A **Warwick** 134.78 19 P PKPdf 09 02 50.1 -0.1
baz=332
J55A **Hilton** 134.82 26 P PKPdf 09 02 50.4 -0.1
baz=323
E61A **Lac Etchemin** 134.82 17 P PKPdf 09 02 50.6 +0.2
baz=334
O51A **Pataskala** 134.83 33 P PKPdf 09 02 50.4 -0.2
baz=315
PLAL **Pickwick Lake** 134.83 42 IAMs_20 IAMs_20 10 07 43.2
comp=Z,978nm,20.0s
N52A **McGinn's Farm,** 134.84 31 P PKPdf 09 02 50.7 +0.1
baz=317
M53A **WI Miller and** 134.89 30 P PKiKP 09 02 51.5 -0.6
baz=319
D63A **Stockholm** 134.93 15 P PKPdf 09 02 51.1 +0.6
baz=338
K54A **Basiliko Farm,** 134.94 27 P PKPdf 09 02 50.6 -0.1
baz=322
L54A **Sinclairville** 134.94 28 P PKPdf 09 02 50.6 -0.1
baz=321
Q50A **Georgetown** 134.97 35 P PKPdf 09 02 50.6 -0.3
baz=313
LONY **Lake Ozonia** 135.02 22 P PKPdf 09 02 50.9 +0.1
baz=328
P51A **Williamsport** 135.05 34 P PKPdf 09 02 50.5 -0.5
baz=314
P51A **Williamsport** 135.05 34 IAMs_20 IAMs_20 10 09 27.6
comp=Z,1µm,21.0s
F61A **St Evariste** 135.08 18 P PKPdf 09 02 51.3 +0.4
baz=334
K55A **Perry** 135.13 27 P PKPdf 09 02 50.6 -0.5
baz=323
I57A **Carthage** 135.17 24 P PKPdf 09 02 50.9 -0.2
baz=326
Q51A **Peebles** 135.20 34 P PKPdf 09 02 50.9 -0.4
baz=314
Q51A **Peebles** 135.20 34 IAMs_20 IAMs_20 09 59 12.8
comp=Z,1µm,21.0s
V48A **Smith Brothers** 135.21 41 IAMs_20 IAMs_20 10 11 15.0
comp=Z,1µm,20.0s
J56A **Wolcott** 135.22 25 P PKPdf 09 02 51.0 -0.2
baz=324
O52A **Adamsville** 135.26 32 P PKPdf 09 02 51.2 -0.2
baz=316
O52A **Adamsville** 135.26 32 IAMs_20 IAMs_20 10 15 30.1
comp=Z,901nm,19.0s
N53A **Lisbon** 135.28 31 P PKPdf 09 02 51.4 0.0
baz=318
N53A **Lisbon** 135.28 31 IAMs_20 IAMs_20 10 01 20.3
comp=Z,1µm,22.0s
PQI **Presque Isle** 135.29 15 PKPdf 09 02 51.5 +0.3
H59A **Cadyville** 135.33 21 P PKPdf 09 02 51.5 +0.1
baz=329
M54A **Oil Creek Stat** 135.34 29 P PKPdf 09 02 51.2 -0.3
baz=320,SNR=5.4
M54A **Oil Creek Stat** 135.34 29 IAMs_20 IAMs_20 09 57 43.6
comp=Z,1µm,22.0s
H58A **Gabriels** 135.34 22 P PKPdf 09 02 51.5 +0.1
baz=329
L55A **Hinsdale** 135.39 28 P PKPdf 09 02 51.4 -0.2
baz=322
E63A **Oxbow** 135.41 16 P PKPdf 09 02 51.3 -0.1
baz=337
G60A **Masonville** 135.41 20 P PKPdf 09 02 51.8 +0.3
baz=331
P52A **Corning** 135.45 33 P PKPdf 09 02 51.3 -0.4
baz=316
146A **Union** 135.45 46 IAMs_20 IAMs_20 10 02 54.0
comp=Z,1µm,20.0s
J57A **Williamstown** 135.47 24 P PKPdf 09 02 51.5 -0.2
baz=326
J57A **Williamstown** 135.47 24 IAMs_20 IAMs_20 10 00 26.6
comp=Z,1µm,21.0s
K56A **Middlesex** 135.49 26 P PKPdf 09 02 51.3 -0.5
baz=324
O53A **New Philadelph** 135.49 32 P PKPdf 09 02 51.6 -0.2
baz=317
G61A **St-Isidore-de-** 135.52 19 P PKPdf 09 02 51.4 -0.3
baz=333
E64A **Bridgewater** 135.57 15 P PKPdf 09 02 51.4 -0.4
baz=338
N54A **Moraine State** 135.59 30 P PKPdf 09 02 51.8 -0.2
baz=319,SNR=5.5
I58A **Old Forge** 135.65 23 P PKPdf 09 02 52.1 +0.1
baz=327
H60A **Morristown** 135.76 21 P PKPdf 09 02 52.3 +0.1
baz=331
M55A **Ridgway** 135.80 28 P PKPdf 09 02 52.0 -0.4
baz=321,SNR=6.7
J58A **Remsen** 135.80 24 P PKPdf 09 02 52.5 +0.2
baz=327
J58A **Remsen** 135.80 24 IAMs_20 IAMs_20 09 59 25.4
comp=Z,1µm,21.0s
346A **Big Creek Wild** 135.81 47 IAMs_20 IAMs_20 09 58 22.7
comp=Z,1µm,20.0s
K57A **Scipio Center** 135.81 25 P PKPdf 09 02 52.2 -0.1
baz=325,SNR=8.0
L56A **Greenwood** 135.83 27 P PKPdf 09 02 52.2 -0.2
baz=323
L56A **Greenwood** 135.83 27 IAMs_20 IAMs_20 10 05 00.4
comp=Z,1µm,22.0s
X48A **Hartselle** 135.83 42 IAMs_20 IAMs_20 10 08 20.6
comp=Z,949nm,21.0s
Z47A **Carrollton** 135.84 44 IAMs_20 IAMs_20 09 59 20.2
comp=Z,1µm,21.0s
Q52A **Bidwell** 135.85 34 P PKPdf 09 02 52.3 -0.2
baz=315
F63A **Nahmakanta, Br** 135.89 17 P PKPdf 09 02 52.1 -0.3
baz=336
G62A **West of Eustis** 135.90 18 P PKPdf 09 02 52.4 0.0
baz=334
F64A **Sherman** 135.95 16 P PKPdf 09 02 52.5 +0.1
baz=337
P53A **Whipple** 135.95 32 P PKPdf 09 02 52.7 0.0
baz=316,SNR=10
P53A **Whipple** 135.95 32 IAMs_20 IAMs_20 10 16 00.4
comp=Z,985nm,19.0s
O54A **Avella** 135.98 31 P PKPdf 09 02 52.9 +0.1
baz=318
I59A **Olmsteadville** 135.99 22 P PKPdf 09 02 53.0 +0.3
baz=329
S51A **Beattyville** 136.00 36 IAMs_20 IAMs_20 09 55 24.2
comp=Z,1µm,21.0s
J59A **Piesco** 136.03 23 P PKPdf 09 02 53.1 +0.4
baz=328
H61A **Lyndonville** 136.05 20 P PKPdf 09 02 53.3 +0.6
baz=332
M56A **Emporium** 136.06 28 P PKPdf 09 02 53.4 +0.5
baz=322
SWET **Sewanee** 136.11 41 IAMs_20 IAMs_20 10 05 36.7
comp=Z,959nm,21.0s
K58A **Earlville** 136.15 25 P PKPdf 09 02 52.9 -0.1
baz=326,SNR=6.1
K58A **Earlville** 136.15 25 PKPdf 09 02 51.9 -1.1
I60A **Shoreham** 136.16 22 P PKPdf 09 02 53.2 +0.3
baz=330
N55A **Marion Center** 136.22 29 P PKPdf 09 02 53.3 +0.1
baz=320
PKME **Peaks-Kenny Pk** 136.23 17 P PKPdf 09 02 53.2 +0.2
baz=336
L57A **Andrews Acres** 136.26 26 P PKPdf 09 02 52.9 -0.3
baz=324
G63A **Kingsbury** 136.27 17 P PKPdf 09 02 53.0 -0.1
baz=335
H62A **Milan** 136.27 19 P PKPdf 09 02 53.7 +0.6
baz=333
LBNH **Lisbon** 136.31 20 P PKPdf 09 02 53.0 -0.2
baz=332
Q53A **Leroy** 136.33 33 P PKPdf 09 02 53.3 -0.1
baz=316
P54A **Burton** 136.35 32 P PKPdf 09 02 53.5 0.0
baz=316,SNR=5.0
G64A **Maxfield** 136.40 17 P PKPdf 09 02 53.5 +0.2
baz=336
N56A **West Decatur** 136.45 29 P PKPdf 09 02 53.5 -0.1
baz=321
K59A **Cooperstown** 136.47 24 P PKPdf 09 02 53.7 +0.1
baz=327
R53A **Hurricane** 136.47 34 P PKPdf 09 02 53.7 0.0
baz=315
BINY **Binghamton** 136.47 25 P PKPdf 09 02 53.5 -0.1
baz=325
I61A **Oroboro, Fairl** 136.48 21 P PKPdf 09 02 53.3 -0.2
baz=331
O55A **Ligonier** 136.50 30 P PKPdf 09 02 53.9 +0.2
baz=320
W50A **Signal Mountai** 136.52 40 IAMs_20 IAMs_20 10 07 05.5
comp=Z,970nm,20.0s
H63A **New Sharon** 136.55 18 P PKPdf 09 02 54.0 +0.4
baz=334
Y49A **Blount Mountai** 136.60 42 IAMs_20 IAMs_20 09 58 43.1
comp=Z,1µm,20.0s
Q54A **Coxs Mills** 136.62 33 P PKPdf 09 02 53.9 0.0
baz=317
Q54A **Coxs Mills** 136.62 33 IAMs_20 IAMs_20 10 02 04.9
comp=Z,1µm,21.0s
J60A **Lant Hill Farm** 136.63 22 P PKPdf 09 02 53.8 0.0
baz=329
MCWV **Mont Chateau** 136.64 31 P PKPdf 09 02 54.0 0.0
baz=318
L58A **Harry Jones Me** 136.66 25 P PKPdf 09 02 54.1 +0.1
baz=325
M57A **Sunshine Farm,** 136.66 27 P PKPdf 09 02 54.1 +0.2
baz=323
M57A **Sunshine Farm,** 136.66 27 IAMs_20 IAMs_20 10 08 29.5
comp=Z,1µm,21.0s
LRAL **Lakeview Retre** 136.68 44 P PKPdf 09 02 54.2 0.0
baz=305,SNR=8.0
LRAL **Lakeview Retre** 136.68 44 IAMs_20 IAMs_20 09 57 45.3
comp=Z,1µm,22.0s
FPAL **Fort Paine** 136.73 41 IAMs_20 IAMs_20 10 01 32.2
comp=Z,1µm,21.0s
P55A **Reedsville** 136.76 31 P PKPdf 09 02 54.2 0.0

baz=318,SNR=6.1
G65A Princeton 136.77 15 P PKPdf 09 02 54.0 0.0
baz=338
H64A Troy 136.82 17 P PKPdf 09 02 54.2 +0.1
baz=335
O56A Blue Knob Stat 136.82 29 P PKPdf 09 02 54.4 +0.1
baz=320
O56A Blue Knob Stat 136.82 29 IAMs_20 IAMs_20 10 00 06.9
comp=Z,1µm,21.0s
S53A Williamson 136.82 35 P PKPdf 09 02 54.6 +0.2
baz=314
I62A Tamworth 136.83 20 P PKPdf 09 02 54.3 +0.1
baz=332
SSPA Standing Stone 136.86 28 P PKPdf 09 02 54.5 +0.1
baz=322
SSPA Standing Stone 136.86 28 IAMs_20 IAMs_20 09 59 05.9
comp=Z,1µm,21.0s
J61A Chester 136.86 21 P PKPdf 09 02 54.6 +0.3
baz=330
CPCT Cooper Cave 136.87 39 IAMs_20 IAMs_20 09 59 40.5
comp=Z,1µm,21.0s
L59A Walton 136.88 25 P PKPdf 09 02 54.5 +0.1
baz=326
I63A Otisfield 136.93 19 P PKPdf 09 02 54.7 +0.3
baz=333
N57A Milroy 136.93 28 P PKPdf 09 02 54.6 +0.1
baz=322
M58A Price's Panora 136.94 27 P PKPdf 09 02 54.6 +0.1
baz=324
TRY Troy 136.97 23 IAMs_20 IAMs_20 10 08 24.2
comp=Z,1µm,20.0s
K60A Five Rivers En 136.98 23 P PKPdf 09 02 54.7 +0.2
baz=328
Q55A Buckhannon 137.01 32 P PKPdf 09 02 54.8 0.0
baz=318,SNR=8.6
H65A Eastbrook 137.05 16 P PKPdf 09 02 54.5 0.0
baz=337
T53A Wise 137.07 36 P PKPdf 09 02 55.1 +0.2
baz=313,SNR=6.5
R54A Victor 137.11 33 P PKPdf 09 02 54.7 -0.2
baz=316,SNR=6.6
K61A Williamstown 137.18 23 P PKPdf 09 02 54.9 0.0
baz=329
S54A Dingess, Beckl 137.20 34 P PKPdf 09 02 55.0 -0.1
baz=315
S54A Dingess, Beckl 137.20 34 IAMs_20 IAMs_20 10 03 10.7
comp=Z,999nm,20.0s
X51A Calhoun 137.20 40 IAMs_20 IAMs_20 09 57 12.7
comp=Z,1µm,22.0s
H66A Whiting 137.22 15 P PKPdf 09 02 54.9 0.0
baz=338
J62A Henniker 137.24 21 P PKPdf 09 02 54.4 -0.5
baz=331
N58A Sunbury 137.25 27 P PKPdf 09 02 55.0 -0.1
baz=323,SNR=7.0
N58A Sunbury 137.25 27 IAMs_20 IAMs_20 10 09 13.9
comp=Z,1µm,19.0s
M59A Waymart 137.25 25 P PKPdf 09 02 54.9 -0.1
baz=325
P56A Dayton Farm, R 137.27 30 P PKPdf 09 02 54.9 -0.2
baz=320
Z50A Ashland 137.29 43 P PKPdf 09 02 55.2 -0.1
baz=306,SNR=10.0
O57A Amberson 137.31 29 P PKPdf 09 02 55.2 0.0
baz=322
I64A Boothbay 137.34 18 P PKPdf 09 02 54.6 -0.4
baz=334
L60A Shokan 137.38 24 P PKPdf 09 02 55.3 0.0
baz=327
Q56A Snyder Ridge, 137.44 31 P PKPdf 09 02 55.2 -0.3
baz=319
J63A Strafford 137.44 20 P PKPdf 09 02 55.3 0.0
baz=332
L61A Hillsdale 1, H 137.47 23 P PKPdf 09 02 55.6 +0.2
baz=328
R55A Marlinton 137.51 33 P PKPdf 09 02 55.7 0.0
baz=317
R55A Marlinton 137.51 33 IAMs_20 IAMs_20 10 00 01.6
comp=Z,919nm,22.0s
T54A Tazewell 137.57 35 P PKPdf 09 02 55.7 -0.2
baz=314
K62A Royalston 137.57 22 P PKPdf 09 02 55.9 +0.3
baz=330
L61B Northampton 137.59 22 P PKPdf 09 02 55.9 +0.3
baz=330
N59A State Game Lan 137.61 26 P PKPdf 09 02 55.4 -0.4
baz=324
S55A Lewisburg 137.67 33 P PKPdf 09 02 55.3 -0.7
baz=316
P57A Homestead Farm 137.69 30 P PKPdf 09 02 55.8 -0.1
baz=321
P57A Homestead Farm 137.69 30 IAMs_20 IAMs_20 10 02 45.1
comp=Z,1µm,21.0s
O58A Lewisberry 137.72 28 P PKPdf 09 02 55.9 0.0
baz=322,SNR=6.5
PAGS Pennsylvania G 137.73 28 IAMs_20 IAMs_20 10 03 17.8
comp=Z,1µm,21.0s
Z51A Franklin 137.75 42 IAMs_20 IAMs_20 10 05 16.5
comp=Z,1µm,22.0s
M60A Port Jervis 137.77 25 P PKPdf 09 02 56.0 0.0
baz=326
U54A Nelsons Funny 137.80 36 P PKPdf 09 02 55.9 -0.4
baz=314
K63A Dunstable 137.81 21 P PKPdf 09 02 56.2 +0.2
baz=331
Q57A Strasburg 137.84 30 P PKPdf 09 02 56.3 +0.1
baz=320
KSCT Kent School, K 137.90 23 PKPdf 09 02 56.2 0.0
O59A Robesonia 137.91 27 P PKPdf 09 02 56.2 -0.1
baz=324
N60A Cedar Hill Far 137.94 26 P PKPdf 09 02 56.4 +0.1
baz=325
HRV Adam Dziewonsk 137.96 21 P PKPdf 09 02 56.4 +0.2
baz=331
L62A Suffield 137.96 22 P PKPdf 09 02 56.3 +0.1
baz=329
T55A Pulaski 137.98 34 P PKPdf 09 02 56.2 -0.4
baz=315
P58A Pank, Wackersv 138.04 29 P PKPdf 09 02 56.3 -0.2
baz=322
BLA Blacksburg 138.12 34 P PKPdf 09 02 56.9 +0.1
baz=316
BLA Blacksburg 138.12 34 IAMs_20 IAMs_20 10 08 55.9
comp=Z,1µm,20.0s
M61A Granite Spring 138.13 24 P PKPdf 09 02 56.8 +0.1
baz=327
Y52A Lilburn 138.16 41 P PKPdf 09 02 57.3 +0.3
baz=309,SNR=9.1
V54A Nebo 138.23 37 P PKPdf 09 02 57.2 +0.1
baz=313
S56A Natural Bridge 138.25 33 P PKPdf 09 02 56.9 -0.1
baz=317
O60A Telford 138.26 26 P PKPdf 09 02 56.8 -0.1
baz=325
U55A TA2, Sparta 138.26 35 P PKPdf 09 02 57.2 0.0
baz=315,SNR=7.5
Q58A Fox Den Farm, 138.28 30 P PKPdf 09 02 57.0 0.0
baz=321,SNR=6.5
PAL Palisades 138.33 24 P PKPdf 09 02 57.4 +0.4
baz=327
R57A Stanardsville 138.34 31 P PKPdf 09 02 57.4 +0.3
baz=319
P59A Jarrettsville 138.36 28 P PKPdf 09 02 57.3 +0.2
baz=323
M62A Hamden 138.37 23 P PKPdf 09 02 56.8 -0.3
baz=329
N61A South Mountain 138.38 25 P PKPdf 09 02 57.4 +0.2
baz=326
T56A Rocky Mt 138.46 34 P PKPdf 09 02 57.2 -0.2
baz=316
L63A North Scituate 138.50 22 P PKPdf 09 02 57.5 +0.3
baz=331
S57A Dark Hollow, R 138.51 32 P PKPdf 09 02 57.0 -0.5
baz=318
W54A Cherokee Point 138.55 38 P PKPdf 09 02 57.6 0.0
baz=312
P60A Greenville 138.56 27 P PKPdf 09 02 57.4 -0.1
baz=324
P60A Greenville 138.56 27 IAMs_20 IAMs_20 10 00 43.8
comp=Z,1µm,21.0s
N62A Caumsett State 138.58 24 P PKPdf 09 02 57.1 -0.3
baz=328
R58A Rapidan 138.60 31 P PKPdf 09 02 57.8 +0.2
baz=320
V55A Taylorsville 138.62 36 P PKPdf 09 02 57.6 -0.1
baz=314
L64A Middleborough 138.71 21 P PKPdf 09 02 57.7 0.0
baz=332
M63A Gales Ferry 138.73 22 P PKPdf 09 02 58.1 +0.4
baz=330
U56A King 138.75 35 P PKPdf 09 02 58.0 0.0
baz=315
X54A Belton 138.79 39 P PKPdf 09 02 58.3 +0.2
baz=311
O61A Allentown 138.82 26 P PKPdf 09 02 57.8 -0.1
baz=326
GOGA Godfrey 138.83 41 P PKPdf 09 02 58.4 +0.2
baz=309
Q59A Harwood 138.84 29 P PKPdf 09 02 58.4 +0.4
baz=322
T57A Hurt 138.91 33 P PKPdf 09 02 58.1 -0.1
baz=317
T57A Hurt 138.91 33 IAMs_20 IAMs_20 10 04 17.9
comp=Z,1µm,21.0s
M64A Tiverton 138.92 21 P PKPdf 09 02 58.5 +0.5
baz=331
R58B Mineral 138.92 31 P PKPdf 09 02 58.4 +0.2
baz=320
KMSC Kings Mountain 139.03 37 P PKPdf 09 02 58.4 -0.1
baz=313
P61A Hammonton 139.06 26 IAMs_20 IAMs_20 10 01 00.7
comp=Z,1µm,20.0s
V56A Mocksville 139.06 36 P PKPdf 09 02 58.4 -0.1
baz=315
HODGE Hodges 139.07 39 IAMs_20 IAMs_20 10 01 27.9
comp=Z,1µm,22.0s
S58A Poland Farm, P 139.10 31 P PKPdf 09 02 58.8 +0.3
baz=319
M65A Busby, Falmout 139.11 21 P PKPdf 09 02 58.5 +0.1
baz=332
Q60A Greensboro 139.12 28 P PKPdf 09 02 58.8 +0.3
baz=323
Q60A Greensboro 139.12 28 PKPdf 09 02 59.1 +0.6
R59A King George, V 139.13 30 P PKPdf 09 02 58.7 +0.2
baz=321
U57A Blanch 139.28 34 P PKPdf 09 02 58.9 0.0
baz=317
X55A Gracelyn & Ava 139.30 38 P PKPdf 09 02 59.4 +0.4
baz=312
R60A Leonardtown, M 139.34 29 P PKPdf 09 02 59.5 +0.5
baz=322
T58A Grand View Acr 139.34 33 P PKPdf 09 02 59.1 +0.1
baz=318
S59A Mechanicsville 139.38 31 P PKPdf 09 02 59.1 +0.1
baz=320
V57A Coltrane Farms 139.42 35 P PKPdf 09 02 59.3 +0.1
baz=316,SNR=8.0
W56A Indian Trail 139.48 36 P PKPdf 09 02 59.3 0.0
baz=314
M66A Nantucket 139.56 21 P PKPdf 09 02 59.5 +0.2
baz=332
154A Montrose 139.56 41 IAMs_20 IAMs_20 10 00 02.2
comp=Z,1µm,22.0s
X56A White Oak 139.65 37 P PKPdf 09 03 00.2 +0.6
baz=313
U58A Oxford 139.74 33 P PKPdf 09 02 59.9 +0.1
baz=318
S60A Water View 139.74 30 P PKPdf 09 03 00.1 +0.4
baz=321
W57A Gilead 139.82 36 P PKPdf 09 02 59.8 -0.1
baz=315
T59A Double "B" Far 139.84 32 P PKPdf 09 02 59.8 -0.1
baz=319
V58A Windy Hill, Pi 139.87 34 P PKPdf 09 03 00.1 +0.1
baz=316
R61A Willards 139.89 28 P PKPdf 09 02 60.0 0.0
baz=323
TIGA Tifton 139.95 43 P PKPdf 09 03 00.6 +0.4
baz=307
TIGA Tifton 139.95 43 IAMs_20 IAMs_20 10 08 25.5
comp=Z,1µm,20.0s
Y56A Pelion 139.96 38 P PKPdf 09 03 00.3 +0.1
baz=312
553A Crawfordville 140.09 45 IAMs_20 IAMs_20 10 00 10.0
comp=Z,1µm,22.0s
T60A Surry 140.14 31 P PKPdf 09 03 01.0 +0.6
baz=321
T60A Surry 140.14 31 IAMs_20 IAMs_20 10 08 47.9
comp=Z,1µm,20.0s
U59A Littleton 140.18 33 P PKPdf 09 03 00.8 +0.2
baz=319
Z56A Williston 140.22 39 P PKPdf 09 03 01.3 +0.6
baz=312
X57A Johnson Farm, 140.24 37 P PKPdf 09 03 01.2 +0.5
baz=314
W58A Raeford 140.35 35 P PKPdf 09 03 01.7 +0.8
baz=316
Y57A Sumter 140.37 37 P PKPdf 09 03 01.6 +0.6
baz=313
V59A Middlesex 140.37 34 P PKPdf 09 03 01.5 +0.6
baz=318
U60A Pendleton 140.43 32 P PKPdf 09 03 01.8 +0.8
baz=320
X58A Rowland 140.62 36 P PKPdf 09 03 02.0 +0.7
baz=315
X58A Rowland 140.62 36 IAMs_20 IAMs_20 10 10 04.4
comp=Z,1µm,21.0s
Z57A Bowman 140.66 39 P PKPdf 09 03 02.0 +0.5
baz=312
W59A Clinton 140.70 34 P PKPdf 09 03 02.4 +0.9
baz=317
Y58A Scranton 140.88 37 P PKPdf 09 03 02.5 +0.6
baz=314
157A Early Branch 140.88 40 P PKPdf 09 03 02.5 +0.6
baz=311
V60A Jim Taylor Roa 140.91 33 P PKPdf 09 03 02.6 +0.8
baz=319
V60A Jim Taylor Roa 140.91 33 IAMs_20 IAMs_20 10 09 08.5
comp=Z,1µm,22.0s
U61A Possum Corner 140.91 31 P PKPdf 09 03 02.4 +0.6
baz=320
CNNC Cliffs of the 140.95 34 P PKPdf 09 03 02.5 +0.5
baz=318
X59A McDuffie Farm, 141.03 35 P PKPdf 09 03 02.4 +0.3
baz=316
APG El Apazote 141.08 71 PKP PKPdf 09 03 02.6 -0.4
comp=Z,31nm,1.1s,baz=313,slow=4.9,SNR=15
APG SKPbc SKiKP 09 06 38.7 +0.7
comp=Z,7.2nm,1.0s,baz=338,slow=13,SNR=3.9
NHSC New Hope 141.11 38 P PKPdf 09 03 02.9 +0.6
baz=313
Z58A St. Stephen 141.18 38 P PKPdf 09 03 02.8 +0.4
baz=313
W60A Pink Hill 141.19 34 P PKPdf 09 03 03.0 +0.6
baz=318
V61A Roper 141.25 32 P PKPdf 09 03 02.9 +0.4
baz=320
Y59A Loris 141.29 36 P PKPdf 09 03 03.1 +0.5
baz=315
158A Hollywood 141.35 39 P PKPdf 09 03 03.3 +0.6
baz=312
X60A Albert Glenn T 141.39 35 P PKPdf 09 03 03.3 +0.5
baz=317
W61A Ground Anchor 141.49 33 P PKPdf 09 03 03.8 +0.9
baz=318
Z59A Georgetown, SC 141.57 37 P PKPdf 09 03 03.7 +0.6
baz=314
Y60A Bolivia 141.66 35 P PKPdf 09 03 03.8 +0.5
baz=316
656A Willston 141.91 45 IAMs_20 IAMs_20 10 10 41.0
comp=Z,1µm,20.0s
OGAUY Aigu 141.96 177 eP PKiKP 09 03 05.8 -0.9
DWPF Disney Wildern 143.43 46 PKPbc 09 03 04.5 +0.7
DWPF Disney Wildern 143.43 46 IAMs_20 IAMs_20 10 07 35.4
comp=Z,1µm,20.0s
PLTB Pedras Altas 144.56 178 eP PKPbc 09 03 07.3 +0.2
PLTB Pedras Altas 144.56 178 eP PKPbc 09 03 07.3 +0.1
CPSB Cacapava Do Su 145.92 179 eP PKPab 09 03 12.1 +0.1
ITQB Itaqui 146.44 174 eP PKPab 09 03 14.1 +0.1
PB14 IPOC Station P 146.79 149 IAMs_20 IAMs_20 09 58 33.3
comp=Z,912nm,22.0s
CNLB Canela 146.98 183 eP PKPdf 09 03 13.6 +0.8
CNLB Canela 146.98 183 eP PKPab 09 03 16.6 +0.4
JTS Las Juntas de 147.25 77 PKP PKPdf 09 03 14.1 +0.5
comp=Z,47nm,0.8s,baz=313,slow=3.2,SNR=39
JTS PKPbc PKPbc 09 03 16.8 +0.9
comp=Z,47nm,0.8s,baz=42,slow=1.8,SNR=26
JTS Las Juntas de 147.25 77 PKIKP PKPdf 09 03 13.2 -0.3
JTS Las Juntas de 147.25 77 PKPdf 09 03 13.2 -0.3
HDC Heredia 148.11 77 IAMs_20 IAMs_20 10 02 39.7
comp=Z,710nm,20.0s
ITAB Concordia 149.09 181 eP PKPdf 09 03 17.8 +1.6
ITAB Concordia 149.09 181 eP PKPbc 09 03 18.6 -1.7
LVC Limon Verde 149.22 149 PKP PKPdf 09 03 18.1 +1.0
comp=Z,75nm,1.0s,baz=169,slow=2.1,SNR=11
LVC PKPbc PKiKP 09 03 22.2 -0.3
comp=Z,59nm,0.9s,baz=226,slow=2.3,SNR=27
LVC Limon Verde 149.22 149 eP PKPdf 09 03 18.8 +1.8
LVC Limon Verde 149.22 149 eP PKPdf 09 03 19.1 +2.0
PB07 IPOC Station P 149.44 147 PKPdf 09 03 17.6 +0.5
BBSR BB Station 149.44 20 PKPdf 09 03 16.5 0.0
CPUP Villa Florida 149.64 172 PKP PKPdf 09 03 17.2 0.0
comp=Z,88nm,1.3s,baz=68,slow=0.6,SNR=20
CPUP PKPbc PKPbc 09 03 21.8 +0.1
comp=Z,54nm,0.8s,baz=196,slow=1.8,SNR=49
CPUP Villa Florida 149.64 172 PKPdf 09 03 17.1 0.0
CPUP PKPbc PKPbc 09 03 22.3 +0.6
CPUP Villa Florida 149.64 172 eP PKPdf 09 03 17.3 +0.2
CPUP Villa Florida 149.64 172 eP PKPbc 09 03 19.6 -2.1
PRVC Isla de Provid 150.03 70 eP PKiKP 09 03 24.7 +0.9
TIJ01 Guaruva-PR 150.79 187 eP PKPdf 09 03 20.1 +1.0
TIJ01 Guaruva-PR 150.79 187 eP PKPdf 09 03 21.0 +1.9
PB11 IPOC Station P 151.13 145 IAMs_20 IAMs_20 10 01 56.8
comp=Z,918nm,19.0s
NNA Nana 151.18 123 PKP PKPdf 09 03 20.7 +0.9
comp=Z,57nm,1.2s,baz=101,slow=1.0,SNR=7.6
NNA PKPbc PKiKP 09 03 26.2 -0.1
comp=Z,133nm,1.0s,baz=267,slow=3.4,SNR=20
NNA Nana 151.18 123 PKPdf 09 03 20.5 +0.6
NNA PKPbc PKiKP 09 03 26.7 +0.4
NNA IAMs_20 IAMs_20 10 01 54.4
comp=Z,1µm,22.0s
PET01 Itanhaem-SP 151.55 190 eP PKPbc 09 03 23.7 -2.7
ESAR Angra dos Reis 152.13 196 eP PKPdf 09 03 22.7 +1.7
PARB Paraibuna 152.13 194 eP PKPdf 09 03 22.3 +1.2
PARB Paraibuna 152.13 194 eP PKPdf 09 03 22.7 +1.6
MAN01 Angra dos Reis 152.14 197 eP PKPdf 09 03 22.3 +1.2
MAN01 Angra dos Reis 152.14 197 eP PKPdf 09 03 24.4 +3.2
SPB Sao Paulo 152.26 190 eP PKPdf 09 03 22.9 +1.7
SPB Sao Paulo 152.26 190 eP PKPdf 09 03 22.5 +1.3
BCIP Isla Barro Col 152.40 78 eP PKPbc 09 03 27.8 -0.8
BCIP Isla Barro Col 152.40 78 IAMs_20 IAMs_20 10 01 03.5
comp=Z,837nm,19.0s
VAO Valinhos 152.75 191 eP PKPdf 09 03 23.3 +1.3
VAO Valinhos 152.75 191 eP PKPdf 09 03 24.7 +2.6
FRTB Fartura 152.81 186 eP PKPdf 09 03 23.2 +1.1
FRTB Fartura 152.81 186 eP PKPdf 09 03 24.1 +2.1
RCLB Rio Claro- Sao 153.43 190 eP PKPdf 09 03 24.6 +1.6
RCLB Rio Claro- Sao 153.43 190 eP PKPdf 09 03 25.6 +2.6
TRCB Terra Rica 153.51 180 eP PKPdf 09 03 23.9 +0.8
TRCB Terra Rica 153.51 180 eP PKPdf 09 03 26.1 +3.0
BSCB Bom Sucesso 154.15 197 eP PKPdf 09 03 23.9 -0.2
BSCB Bom Sucesso 154.15 197 eP PKPdf 09 03 26.9 +2.7
PCMB Pacaembu 154.66 183 eP PKPdf 09 03 25.5 +0.7
PCMB Pacaembu 154.66 183 eP PKPdf 09 03 27.6 +2.8
BSFB Barra de Sao F 154.67 207 eP PKPdf 09 03 24.8 0.0
BSFB Barra de Sao F 154.67 207 eP PKPdf 09 03 27.7 +2.9
LPAZ La Paz 154.75 143 PKP PKPdf 09 03 26.5 +0.8
comp=Z,17nm,1.1s,baz=340,slow=0.7,SNR=39
LPAZ PKPbc PKiKP 09 03 34.8 +0.5
comp=Z,20nm,0.8s,baz=32,slow=2.0,SNR=46
LPAZ La Paz 154.75 143 eP PKPdf 09 03 26.6 +0.8
LPAZ La Paz 154.75 143 eP PKPdf 09 03 27.0 +1.3
BB19B Bebedouro 154.92 189 eP PKPdf 09 03 24.8 -0.3
BB19B Bebedouro 154.92 189 eP PKPdf 09 03 27.7 +2.5
SJMB Sao Joao De Ma 154.94 206 eP PKPdf 09 03 24.4 -0.8
SJMB Sao Joao De Ma 154.94 206 eP PKPdf 09 03 26.3 +1.2
AQDB Aquidauana 155.62 173 eP PKPdf 09 03 26.1 0.0
AQDB Aquidauana 155.62 173 eP PKPdf 09 03 27.3 +1.2
SOTA Rioblanco 155.93 93 eP PKPdf 09 03 27.8 +0.5
PCON Cinco Dias 156.15 93 eP PKPdf 09 03 27.9 +0.2
DBBC Dabeiba 156.25 81 eP PKPdf 09 03 28.6 +1.4
YOTC Yotoco, Valle 156.27 89 eP PKPdf 09 03 27.1 -0.2
SDDR Presa de Saban 156.32 49 IAMs_20 IAMs_20 10 18 48.4
comp=Z,804nm,20.0s
ITRB Iturama 156.49 185 eP PKPdf 09 03 30.2 +2.9
CBOC Ciudad Bolivar 156.55 84 eP PKPdf 09 03 27.4 -0.3
SJCC San Jacinto, C 156.77 74 eP PKPdf 09 03 27.8 0.0
SJCC eP PKPdf 09 03 29.1 +1.3
UREC San Jos de Ur 156.83 79 eP PKPdf 09 03 27.4 -0.4
HELC Santa Helena 157.01 83 eP PKPdf 09 03 27.6 -0.9
BETC Betania 157.13 92 eP PKPdf 09 03 29.4 +1.1
ANIL Santa Ana 157.21 88 eP PKPdf 09 03 29.4 +0.7
GUY2C Guyana, Caldas 157.23 86 eP PKPdf 09 03 28.8 -0.2
RREF El Recreo 157.26 87 eP PKPdf 09 03 30.3 +1.1
ORTC Ortega, Tolima 157.37 89 eP PKPdf 09 03 28.7 +0.1
C2SB Chapadao do Su 157.51 179 eP PKPdf 09 03 30.8 +2.3
ARGC Ariguani, Magd 157.67 73 eP PKPdf 09 03 27.9 -0.9
IPMB Ipameri, GO 157.88 191 eP PKPdf 09 03 27.6 -1.5
IPMB Ipameri, GO 157.88 191 eP PKPdf 09 03 31.9 +2.8
PTBC PUERTO BERRIO 158.04 82 eP PKPdf 09 03 27.5 -1.9
SMLC San Martn de 158.07 76 eP PKPdf 09 03 29.7 +0.4
ROSC El Rosal 158.28 87 PKP PKPdf 09 03 30.7 +0.6
comp=Z,25nm,0.8s,baz=250,slow=1.6,SNR=21
ROSC El Rosal 158.28 87 eP PKPdf 09 03 31.1 +1.0
ROSC El Rosal 158.28 87 PKPdf 09 03 30.2 0.0
SPBC San Pablo de B 158.49 84 eP PKPdf 09 03 30.4 +0.4
SIV San Ignacio 158.56 157 PKP PKPdf 09 03 30.0 +0.1
comp=Z,5.2nm,0.7s,baz=274,slow=1.1,SNR=29
CHIC Chingaza 158.88 87 eP PKPdf 09 03 29.6 -1.3
OCAC Ocana 158.91 77 eP PKPdf 09 03 30.7 +0.1
RUSC La Rusia 159.46 84 eP PKPdf 09 03 31.0 -0.6
JANB Januaria 159.50 203 eP PKPdf 09 03 29.6 -1.5
PAMC Pamplona, Colo 159.67 79 eP PKPdf 09 03 32.3 +0.4
PTLB Pontes e Lacer 159.74 161 eP PKPdf 09 03 31.4 +0.1
PTLB Pontes e Lacer 159.74 161 eP PKPdf 09 03 34.0 +2.8
BDFB Brasilia 160.11 193 PKP PKPdf 09 03 31.3 -0.5
comp=Z,34nm,1.3s,baz=0.4,slow=4.5,SNR=12
BDFB Brasilia 160.11 193 PKIKP PKPdf 09 03 32.0 +0.2
BDFB Brasilia 160.11 193 PKPdf 09 03 32.0 +0.2
SALV Santo Antonio 160.12 171 eP PKPdf 09 03 31.6 -0.1
ARAG Araguaiana, MT 160.55 182 eP PKPdf 09 03 31.8 -0.4
ARAG Araguaiana, MT 160.55 182 eP PKPdf 09 03 35.8 +3.7
SJG San Juan 160.57 42 PKP PKPdf 09 03 31.5 -0.5
comp=Z,5.4nm,0.3s,baz=323,slow=3.6,SNR=7.9
SJG San Juan 160.57 42 PKPdf 09 03 31.1 -1.0
RCBR Riachuelo 160.78 240 eP PKPdf 09 03 35.6 +3.0
SDV Santo Domingo 161.37 74 eP PKPdf 09 03 32.3 -1.0
SDV Santo Domingo 161.37 74 PKPdf 09 03 32.8 -0.5
SDV Santo Domingo 161.37 74 eP PKPdf 09 03 33.0 -0.3
SDV Santo Domingo 161.37 74 eP PKPdf 09 03 34.5 +1.1
VILB Vilhena 161.66 156 eP PKPdf 09 03 33.8 +0.4
SAML Samuel 163.45 140 PKIKP PKPdf 09 03 35.3 +0.1
SAML 09 04 24.9
SAML Samuel 163.45 140 PKPdf 09 03 35.3 +0.1
SAML PKPab PKPab 09 04 24.9 -1.4
CLDB Colider 165.02 168 eP PKPdf 09 03 35.5 -1.1
ROSB Rosrio 169.22 232 eP PKPdf 09 03 37.5 -2.2
MACA Manacapuru-AM 169.30 131 eP PKPdf 09 03 38.9 -0.9
PTGA Pitinga 171.31 121 PKPdf 09 03 39.7 -1.2
PTGA PKPab 09 05 01.7 +0.6
PTGA Pitinga 171.31 121 eP PKPdf 09 03 40.4 -0.5
PTGA Pitinga 171.31 121 eP PKPdf 09 03 45.0 +4.1

IDC 02 08:57:33.8±1.9, 0.33S×125.35E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/36, mbtmp3.4/3, Error ellipse: s-maj=180.0km s-min=26.8km az=64.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.39	156	P	P		09 02 22.2	-1.0
	0.5nm,0.3s,baz=334,slow=11,SNR=8.3							
ASAR	Alice Springs	24.64	161	P	P		09 02 57.0	+0.8
	0.3nm,0.4s,baz=342,slow=9.1,SNR=6.2							
MKAR	Makanchi Array	60.14	327	P	P		09 07 43.1	-0.1
	0.4nm,0.4s,baz=119,slow=8.6,SNR=5.1							

*NIED **02** 09:15:00.38'.00N×143'.90E, h5km, Mw5.5 Best double couple: M0 1.70000×10^17 NP1:φ=245.00000°, δ53.00000°, λ-90.00000°. NP2:φ=65.00000°, δ37.00000°, λ-90.00000°.*
*IDC **02** 09:15:18.4±0.3, 37'.85N×144'.30E, h0km, mb5.5/45, mb1 5.6/52, mb1mx5.6/59, mbtmp5.5/52, ML4.4/8, MS4.9/44, Ms1 4.9/44, ms1mx4.8/56, Error ellipse: s-maj=10.1km s-min=7.7km az=102.0*
*MOS **02** 09:15:18.1±1.0, 37'.95N×144'.25E, h10km, mb6.1/198, MS5.4/64, Error ellipse: s-maj=4.9km s-min=3.3km az=106.4*
*BJI **02** 09:15:19.0±0.0, 37'.90N×144'.30E, h10km, mB5.8/70, mb5.6/84, Ms5.6/98, Ms7 5.4/90*
*NEIC **02** 09:15:20.7±1.4, 37'.85N±0'.05×144'.23E±0'.09, h16km±2km, mb6.0/710, Ms_20 5.3/148, Mwc5.6/39, Mww5.6, Mwc5.7(GCMT), Error ellipse: s-maj=10.5km s-min=7.5km*

az=108.0

NEIC ***02*** *09:15:21.2, 38˚.02N×145˚.19E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=3.52; Mθθ=2.49; Mφφ=1.03; Mrθ=0.25; Mθφ=1.01; Mφr=-0.96; Fault plane solution: M0=3.38000×10^17 NP1:φ1=50.05000°, δ=48.30000°, λ=-107.21000°. NP2:φ2=255.01000°, δ=44.50000°, λ=-71.63000°. Principal axes: T 3.0153, Plg2.0000°, Azm152.0000°; N 0.7282, Plg13.0000°, Azm62.0000°; P -3.7435, Plg77.0000°, Azm251.0000°;*

GCMT ***02*** *09:15:21.9±0.1, 37˚.91N±0˚.01×144˚.22E±0˚.01, h12km, MW5.6/170, Moment Tensor Solution. s111,c191; s170,c367; Duration: 1s5 Moment tensor: Scale 10^17 Nm; Mrr=3.13±.03; Mθθ=2.63±.03; Mφφ=0.49±.03; Mrθ=0.02±.10; Mθφ=0.93±.02; Mφr=0.81±.11; Best double couple: M0=3.15300×10^17 NP1:φ1=81.00000°, δ=43.00000°, λ=-72.00000°. NP2:φ2=237.00000°, δ=49.00000°, λ=-106.00000°. Principal axes: T 2.9970, Plg3.0000°, Azm339.0000°; N 0.3110, Plg12.0000°, Azm248.0000°; P -3.3090, Plg77.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***02*** *09:15:22, 37˚.95N×144˚.38E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=3.39; Mθθ=2.89; Mφφ=0.50; Mrθ=0.25; Mθφ=1.26; Mφr=-0.67; Fault plane solution: M0=3.49000×10^17 NP1:φ1=55.00000°, δ=46.00000°, λ=-106.00000°. NP2:φ2=258.00000°, δ=46.00000°, λ=-74.00000°. Principal axes: T 3.4310, Plg0.0000°, Azm157.0000°; N 0.1072, Plg12.0000°, Azm67.0000°; P -3.5382, Plg78.0000°, Azm248.0000°;*

NEIC ***02*** *09:15:22, 37˚.75N×144˚.35E, h16km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=3.17; Mθθ=2.13; Mφφ=1.04; Mrθ=0.58; Mθφ=0.57; Mφr=1.95; Fault plane solution: M0=3.51000×10^17 NP1:φ1=222.00000°, δ=62.00000°, λ=-106.00000°. NP2:φ2=74.00000°, δ=32.00000°, λ=-62.00000°. Principal axes: T 2.7402, Plg15.0000°, Azm324.0000°; N 1.2134, Plg14.0000°, Azm230.0000°; P -3.9536, Plg69.0000°, Azm99.0000°;*

JMA ***02*** *09:15:22.0±0.2, 37˚.94N×144˚.13E, h48km, M5.6*

JMA Felt II J1.

BGR ***02*** *09:15:29.4±0.0, 38˚.88N×145˚.05E, h39km, mb5.9, mB_BB6.3, Ms5.3*

ISC 02 09:15:20.2±0.4, 37˚.92N±0˚.03×144˚.30E±0˚.03, h12km±2km, h12km:pP-P, n2290, σ1≥21/2422, mb6.0/669, MS5.3/185, 68C-195D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		
JIKH	**Ishinomakikobu**	**2.27**	**281**	⇓P	**Pn**	**09 15 56.2**	**-1.3**
JIKH				*e*S	**Sn**	**09 16 21.1**	**-4.3**
OFUJ	**Ofunato**	**2.37**	**300**	⇑P	**Pn**	**09 15 57.8**	**-1.1**
OFUJ				S	**Sn**	**09 16 24.5**	**-3.3**
JIO	**Ouri**	**2.39**	**284**	⇓P	**Pn**	**09 15 57.9**	**-1.2**
JIO				S	**Sn**	**09 16 24.1**	**-4.2**
JKMT	**Kesennumamotoy**	**2.40**	**293**	⇓P	**Pn**	**09 15 58.1**	**-1.1**
JKMT				*e*S	**Sn**	**09 16 25.0**	**-3.4**
MIYJ	**Miyakonagasawa**	**2.55**	**311**	⇑P	**Pn**	**09 16 00.1**	**-1.3**
JMK	**Ichinoseki**	**2.63**	**294**	P	**Pn**	**09 16 01.6**	**-0.8**
JMK				*e*S	**Sn**	**09 16 30.8**	**-3.5**
JMST	**Minamisoumatoc**	**2.71**	**267**	⇓P	**Pn**	**09 16 01.9**	**-1.6**
JOFO	**Osakifurukawao**	**2.76**	**285**	P	**Pn**	**09 16 03.9**	**-0.2**
JTH	**Tanohata**	**2.77**	**317**	⇑P	**Pn**	**09 16 03.2**	**-1.2**
JOM	**Ohasama**	**2.82**	**304**	⇑P	**Pn**	**09 16 04.4**	**-0.7**
JOM				S	**Sn**	**09 16 36.4**	**-2.6**
JOU	**Okura**	**2.90**	**280**	P	**Pn**	**09 16 05.8**	**-0.4**
ONAJ	**Iwakimizuishiy**	**2.91**	**255**	⇓P	**Pn**	**09 16 04.4**	**-1.9**
JFFD	**Fukushimafurud**	**3.09**	**256**	⇓P	**Pn**	**09 16 07.1**	**-1.7**
JFT	**Otama**	**3.17**	**264**	⇓P	**Pn**	**09 16 09.2**	**-0.7**
JFT				*e*S	**Sn**	**09 16 44.9**	**-2.7**
JYK	**Kaneyama**	**3.25**	**289**	⇓P	**Pn**	**09 16 10.7**	**-0.3**
JYK				S	**Sn**	**09 16 47.5**	**-2.2**
JANG	**Nango**	**3.27**	**319**	⇑P	**Pn**	**09 16 09.9**	**-1.4**
JANG				*e*S	**Sn**	**09 16 46.3**	**-3.8**
JYA	**Atsumi**	**3.67**	**282**	⇓P	**Pn**	**09 16 16.6**	**-0.2**
ERM	**Erimo**	**4.18**	**348**	*c* *i*P	**Pn**	**09 16 22.1**	**-1.7**
ERM				pmax	pmax		
	comp=Z,958nm,1.0s						
ERM	**Erimo**	**4.18**	**348**		**Pn**	**09 16 22.5**	**-1.3**
ERM				Sn	**Sn**	**09 17 10.6**	**-2.0**
BSO1	**Boso 1**	**4.22**	**220**	P	**Pn**	**09 16 21.9**	**-1.9**
JOT	**Ohata**	**4.27**	**325**	P	**Pn**	**09 16 24.8**	**-0.2**
JOT				*e*S	**Sn**	**09 17 09.9**	**-4.9**
JKB	**Kayabe**	**4.69**	**329**	P	**Pn**	**09 16 30.7**	**-0.1**
JKB				*e*S	**Sn**	**09 17 20.3**	**-4.8**
JRY	**Ryogami san**	**4.72**	**248**	⇓P	**Pn**	**09 16 29.9**	**-1.4**
JRY				S	**Sn**	**09 17 21.1**	**-4.9**
JCH	**Churui**	**4.75**	**352**	⇑P	**Pn**	**09 16 30.8**	**-0.7**
JCH				*e*S	**Sn**	**09 17 20.8**	**-5.6**
JOD2	**Odawara 2**	**4.96**	**239**	P	**Pn**	**09 16 32.8**	**-1.7**
JOD2				*e*S	**Sn**	**09 17 26.7**	**-5.1**
MJAR	**Matsushiro Arr**	**5.05**	**256**	Pn	**Pn**	**09 16 35.4**	**-0.3**
	comp=Z,18nm,0.3s,baz=77,slow=14,SNR=812						
MJAR				LR	LR	09 19 01.0	
	comp=Z,23µm,18.4s,baz=70,slow=44						
MJAR				P3KP		09 55 17.9	
	comp=Z,0.0nm,0.3s,baz=347,slow=1.0,SNR=6.0						
MAJO	**Matsushiro**	**5.06**	**256**	*d* *i*P	**Pn**	**09 16 36.1**	**+0.3**
MAJO	**Matsushiro**	**5.06**	**256**		**Pn**	**09 16 36.2**	**+0.4**
MAT	**Matsushiro**	**5.06**	**256**	P	**Pn**	**09 16 35.9**	**+0.1**
MAT				S	**Sn**	**09 17 32.1**	**-2.0**
MJB9	**Matsu-Tunnel**	**5.06**	**256**		**Pn**	**09 16 36.2**	**+0.4**
JBT2	**Biratori 2**	**5.08**	**344**	⇑P	**Pn**	**09 16 35.5**	**-0.5**
JKHN	**Kushirohamanak**	**5.20**	**7**	⇑P	**Pn**	**09 16 35.6**	**-2.1**
JAR	**Ashorobuto**	**5.39**	**356**	⇑P	**Pn**	**09 16 38.1**	**-2.2**
NEM2	**Nemuro 2**	**5.55**	**11**	⇑P	**Pn**	**09 16 39.9**	**-2.6**
NEM2				*e*S	**Sn**	**09 17 38.8**	**-7.4**
NMR	**Nemuro--Hokkai**	**5.55**	**11**	⇑ *i*P	**Pn**	**09 16 40.0**	**-2.5**
NMR				*i* S	**Sn**	**09 17 39.1**	**-7.1**
JOSM	**Okushiri--Mats**	**5.57**	**320**	P	**Pn**	**09 16 42.8**	**0.0**
JHJ2	**Mitsune**	**6.03**	**219**	P	**Pn**	**09 16 47.3**	**-1.9**
JHJ2				*e*S	**Sn**	**09 17 52.2**	**-5.9**
JHJ2	**Mitsune**	**6.03**	**219**		**Pn**	**09 16 46.1**	**-3.1**
JHJ2				Sn	**Sn**	**09 17 52.9**	**-5.3**
JHJ	**Hachijo jima 2**	**6.04**	**219**	Pn	**Pn**	**09 16 46.0**	**-3.4**
	comp=Z,125nm,0.3s,baz=93,slow=22,SNR=93						
JHJ				Sn	**Sn**	**09 17 50.4**	**-8.0**
	comp=Z,731nm,0.3s,baz=70,slow=22,SNR=8.0						
JHJ				LR	LR	09 19 34.3	
	comp=Z,5µm,21.3s,baz=55,slow=43						
JTKR	**Abashiri--Toko**	**6.05**	**357**	⇑P	**Pn**	**09 16 48.5**	**-0.9**
JTKR				*e*S	**Sn**	**09 17 52.2**	**-6.4**
JHR	**Hokuryu**	**6.14**	**342**	P	**Pn**	**09 16 51.0**	**+0.4**
JHR				*e*S	**Sn**	**09 17 57.6**	**-3.1**
GRPR	**Tuman**	**6.17**	**10**	⇓ *i*P	**Pn**	**09 16 48.6**	**-2.4**
GRPR				*i* S	**Sn**	**09 17 53.8**	**-7.6**
GRPR				pmax	pmax		
	comp=Z,5µm,0.3s						
GRPR				pmax	pmax		
	comp=N,2µm,0.4s						
GRPR				pmax	pmax		
	comp=E,3µm,0.2s						
GRPR				smax	smax		
	comp=N,17µm,0.4s						
GRPR				smax	smax		
	comp=E,20µm,0.7s						
YUK	**Yuzh-Kuril'sk**	**6.22**	**10**	⇑ *i*P	**Pn**	**09 16 49.2**	**-2.5**
YUK				*i* S	**Sn**	**09 17 55.3**	**-7.4**
YUK				pmax	pmax		
	comp=Z,8µm,1.3s						
YUK				pmax	pmax		
	comp=N,1µm,0.2s						
YUK				pmax	pmax		
	comp=Z,4µm,0.2s						
YUK				pmax	pmax		
	comp=E,596nm,0.3s						
YUK				smax	smax		
	comp=N,7µm,0.5s						
YUK				smax	smax		
	comp=E,27µm,0.6s						
LAGR	**Lagunnoye**	**6.23**	**10**	⇓ *i*P	**Pn**	**09 16 49.2**	**-2.7**
LAGR				*i* S	**Sn**	**09 17 55.7**	**-7.3**
LAGR				pmax	pmax		
	comp=Z,5µm,0.6s						
LAGR				pmax	pmax		
	comp=E,5µm,0.5s						
LAGR				pmax	pmax		
	comp=N,2µm,0.4s						
LAGR				smax	smax		
	comp=N,28µm,0.6s						
LAGR				smax	smax		
	comp=E,27µm,0.6s						
JKA	**Kamikawa-asahi**	**6.32**	**349**		**Pn**	**09 16 52.4**	**-0.8**
JKA					**Sn**	**09 18 01.5**	**-3.7**
ASAJ	**Asahikawa**	**6.32**	**349**	Pn	**Pn**	**09 16 52.4**	**-0.8**
	comp=E,76nm,0.3s,baz=188,slow=10,SNR=186						
ASAJ				Sn	**Sn**	**09 18 01.5**	**-3.8**
	comp=E,38nm,0.3s,baz=59,slow=19,SNR=8.5						
INU	**Inuyama**	**6.40**	**249**		**Pn**	**09 16 54.3**	**+0.1**
KUR	**Kuril'sk**	**7.78**	**19**	⇓ *i*P	**Pn**	**09 17 11.4**	**-1.7**
KUR				*i* S	**Sn**	**09 18 33.9**	**-7.2**
KUR				pmax	pmax		
	comp=Z,2µm,0.6s						
KUR				pmax	pmax		
	comp=N,609nm,0.4s						
KUR				pmax	pmax		
	comp=E,1µm,0.4s						
KUR				pmax	pmax		
	comp=Z,4µm,1.1s						
KUR				smax	smax		
	comp=E,2µm,1.8s						
KUR				smax	smax		
	comp=N,8µm,1.1s						
YSS	**Yuzh-Sakhalins**	**9.10**	**353**	⇓ *e*P	**Pn**	**09 17 29.8**	**-1.4**
YSS				*e*S	**Sn**	**09 19 08.7**	**-4.8**
YSS				pmax	pmax		
	comp=Z,4µm,6.4s						
YSS				pmax	pmax		
	comp=Z,300nm,0.9s						
YSS				MLR	MLR		
	comp=N,9µm,14.0s						
YSS				MLR	MLR		
	comp=E,9µm,13.0s						
YSS	**Yuzh-Sakhalins**	**9.10**	**353**		**Pn**	**09 17 30.3**	**-0.9**
TEY	**Ternei**	**9.16**	**323**	⇑ *e*P	**Pn**	**09 17 30.8**	**-1.2**
TEY				*e*S	**Sn**	**09 19 12.0**	**-3.0**
TEY				pmax	pmax		
	comp=E,2µm,1.6s						
TEY				pmax	pmax		
	comp=N,2µm,1.3s						
TEY				pmax	pmax		
	comp=Z,2µm,2.2s						
TEY				pmax	pmax		
	comp=Z,120nm,1.9s						
TEY				pmax	pmax		
	comp=E,170nm,1.9s						
TEY				pmax	pmax		
	comp=N,130nm,1.1s						
TEY				smax	smax		
	comp=N,190nm,1.1s						
TEY				smax	smax		
	comp=E,190nm,1.4s						
TEY				MLR	MLR		
	comp=E,12µm,17.0s						
TEY				MLR	MLR		
	comp=N,18µm,18.0s						
TEY				MLR	MLR		
	comp=Z,21µm,15.0s						
VLA	**Vladivostok**	**10.78**	**303**	*c* *i*P	**Pn**	**09 17 56.0**	**+1.7**
JCJ	**Chichijima**	**10.94**	**190**	Pn	Pn	09 17 50.6	-5.9
	comp=Z,69nm,0.3s,baz=67,slow=7.5,SNR=54						
JCJ				LR	LR	09 24 05.1	
	comp=Z,2µm,18.4s,baz=0.0,slow=48						
MSHR	**Mys Shultsa**	**11.07**	**299**	*de*P	**Pn**	**09 17 59.2**	**+1.0**
USA0B	**Ussuriysk Arra**	**11.21**	**308**	*ce*P	**Pn**	**09 18 01.5**	**+1.3**
USA0B	**Ussuriysk Arra**	**11.21**	**308**		**Pn**	**09 18 00.9**	**+0.7**
USRK	**Ussuriysk Ar.**	**11.21**	**308**	Pn	**Pn**	**09 18 01.6**	**+1.4**
	baz=124,slow=12,SNR=80						
USRK				LR	LR	09 21 52.3	
	comp=Z,9µm,21.4s,baz=117,slow=35						
UGL	**Uglegorsk**	**11.27**	**352**	*e*P	**Pn**	**09 18 00.2**	**-0.7**
UGL				pmax	pmax		
	comp=Z,2µm,2.9s						
UGL				pmax	pmax		
	comp=N,2µm,3.0s						
UGL				pmax	pmax		
	comp=Z,474nm,0.8s						
JNU	**Nakatsue**	**11.94**	**250**	Pn	**Pn**	**09 18 09.0**	**-1.2**
	comp=Z,2.2nm,0.3s,baz=57,slow=8.2,SNR=50						
JNU				LR	LR	09 23 09.4	
	comp=Z,5µm,19.5s,baz=78,slow=40						
MDJ	**Mudanjiang**	**12.92**	**306**	P	**Pn**	**09 18 24.3**	**+0.7**
MDJ				pP	P	09 18 31.7	-2.6
MDJ				sP		09 18 35.0	
MDJ				S	**Sn**	**09 20 48.9**	**+1.7**
MDJ				sS		09 20 58.5	
MDJ				SS	**SnSn**	**09 21 04.8**	**+5.5**
MDJ				PcS	**PcS**	**09 27 31.8**	**0.0**
MDJ				pmax	pmax		
	comp=Z,8µm,2.7s						
MDJ				pmax	pmax		
	comp=Z,5µm,5.3s						
MDJ				LR	LR		
	comp=Z,14µm,16.8s						
MDJ				LR	LR		
	comp=Z,9µm,18.9s						
MDJ				LR	LR		
	comp=Z,25µm,16.4s						
MDJ	**Mudanjiang**	**12.92**	**306**		**Pn**	**09 18 24.5**	**+0.9**
KSRS	**Korea Array**	**12.99**	**273**	Pn	**Pn**	**09 18 25.7**	**+1.2**
	comp=Z,1.9nm,0.3s,baz=88,slow=12,SNR=91						
KSRS				LR	LR	09 22 45.7	
	comp=Z,3µm,21.6s,baz=70,slow=34						
KSRS				PcP	**PcP**	**09 23 58.2**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=100,slow=1.4,SNR=9.4						
TYV	**Tymovskoe**	**12.99**	**355**	*e*P	**Pn**	**09 18 23.5**	**-1.0**
TYV				*e*S	**Sn**	**09 20 47.3**	**-1.6**
TYV				pmax	pmax		
	comp=Z,1µm,2.9s						
TYV				pmax	pmax		
	comp=Z,52nm,1.1s						
TYV				smax	smax		
	comp=E,20nm,1.0s						
KS19	**Wonju Array Si**	**13.03**	**273**		**Pn**	**09 18 24.9**	**-0.1**
TJN	**Taejon**	**13.60**	**269**	⇓ *e*P	**Pn**	**09 18 32.9**	**0.0**
INCN	**Inchon**	**14.00**	**274**	P	**Pn**	**09 18 37.2**	**-1.2**
INCN	**Inchon**	**14.00**	**274**		**Pn**	**09 18 37.2**	**-1.2**
GRNR	**Gornyy**	**14.02**	**339**	⇑ *i*P	**Pn**	**09 18 37.2**	**-1.3**
GRNR				*e*S	**Sn**	**09 21 11.9**	**-2.0**
GRNR				pmax	pmax		
	comp=Z,110nm,0.7s						
GRNR				smax	smax		
	comp=N,10.0nm,0.5s						
KLR	**Kul'dur**	**14.49**	**325**	Pn	**Pn**	**09 18 42.6**	**-2.3**
	comp=N,1.4nm,0.3s,baz=138,slow=13,SNR=61						
KLR				PcP	**PcP**	**09 24 00.5**	**+1.1**
	comp=N,0.3nm,0.3s,baz=27,slow=3.6,SNR=5.9						
KLR				LR	LR	09 24 12.5	
	comp=N,4µm,19.9s,baz=140,slow=37						
KLR	**Kul'dur**	**14.49**	**325**	*c* *i*P	**Pn**	**09 18 43.0**	**-1.9**
SKR	**Severo-Kuril's**	**15.28**	**30**	*e*P	**Pn**	**09 18 53.2**	**-2.4**
SKR				pmax	pmax		
	comp=Z,700nm,4.6s						
SKR				pmax	pmax		
	comp=Z,333nm,0.8s						
SKR				pmax	pmax		
	comp=Z,1µm,2.5s						
SKR				MLR	MLR		
	comp=Z,5µm,14.0s						
SKR				MLR	MLR		
	comp=Z,5µm,14.0s						
CN2	**Changchun**	**15.42**	**298**	*e*P	**Pn**	**09 18 55.5**	**-1.9**
CN2				*e*S	**Sn**	**09 21 44.3**	**-3.7**
CN2				pmax	pmax		
	comp=Z,2µm,6.0s						
CN2				LR	LR		
	comp=Z,6µm,15.0s						
CN2				LR	LR		
	comp=Z,10µm,15.0s						
CN2				LR	LR		
	comp=Z,9µm,15.0s						
OKH	**Okha**	**15.66**	**357**	*de*P	Pn	09 18 52.6	-7.9
OKH				pmax	pmax		
	comp=Z,1µm,10.9s						
OKH				MLR	MLR		
	comp=E,11µm,14.0s						
OKH				MLR	MLR		
	comp=N,10µm,15.0s						
SNY	**Shenyang**	**16.38**	**290**	⇑P	**Pn**	**09 19 08.5**	**-1.3**
SNY				S	**Sn**	**09 22 07.3**	**-4.0**
SNY				pmax	pmax		
	comp=N,68nm,1.6s						
SNY				pmax	pmax		
	comp=N,1µm,3.9s						
SNY				LR	LR		
	comp=N,5µm,11.7s						
SNY				LR	LR		
	comp=N,10µm,14.9s						
SNY				LR	LR		
	comp=N,18µm,15.7s						
JOW	**Kunigami**	**17.45**	**235**	P	**P**	**09 19 24.5**	**-0.1**
	comp=N,0.5nm,0.3s,baz=88,slow=15,SNR=34						
JOW	**Kunigami**	**17.45**	**235**	P	**Pn**	**09 19 23.7**	**+0.2**
DL2	**Dalian**	**17.80**	**280**	P	**Pn**	**09 19 26.7**	**-0.9**
DL2				S	**Sn**	**09 22 46.7**	**+0.9**
DL2				pmax	pmax		
	comp=N,350nm,1.2s						
DL2				pmax	pmax		
	comp=N,2µm,4.0s						
DL2				LR	LR		
	comp=N,8µm,17.8s						
DL2				LR	LR		
	comp=N,8µm,15.6s						
PEA0B	**Petropavlovsk-**	**17.81**	**27**	*ce*P	**P**	**09 19 28.1**	**-0.3**
PEA0B	**Petropavlovsk-**	**17.81**	**27**	P	**Pn**	**09 19 27.8**	**+0.1**
PETK	**Petropavlovsk-**	**17.81**	**27**	P	**Pn**	**09 19 27.7**	**0.0**
	comp=N,1.5nm,0.3s,baz=194,slow=9.7,SNR=61						
PETK				LR	LR	09 28 05.9	
	comp=N,3µm,18.4s,baz=213,slow=43						
PET	**Petropavlovsk**	**18.09**	**29**	*e*P	**Pn**	**09 19 27.1**	**-4.1**
PET				*e*S	Sn	09 22 41.2	-12
PET				pmax	pmax		
	comp=Z,3µm,8.4s						
PET				pmax	pmax		
	comp=Z,169nm,1.1s						
PET	**Petropavlovsk**	**18.09**	**29**	P	**Pn**	**09 19 30.6**	**-0.5**
ZEA	**Zeya**	**19.70**	**329**	*e*P	**P**	**09 19 48.2**	**-1.0**
ZEA				*e*S	**S**	**09 23 25.0**	**-6.0**
ZEA				pmax	pmax		
	comp=N,1µm,1.8s						
ZEA				pmax	pmax		
	comp=E,640nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,2µm,1.8s						
ZEA				pmax	pmax		
	comp=Z,6µm,8.0s						
ZEA				pmax	pmax		
	comp=E,3µm,6.0s						
ZEA				pmax	pmax		
	comp=N,4µm,5.0s						
ZEA				pmax	pmax		
	comp=N,4µm,6.0s						
ZEA				pmax	pmax		
	comp=E,6µm,6.0s						
ZEA				MLR	MLR		
	comp=N,10µm,15.0s						
ZEA				MLR	MLR		
	comp=Z,11µm,15.0s						
ZEA				MLR	MLR		
	comp=E,4µm,12.0s						
SSE	**Sheshan**	**20.20**	**257**	P	**P**	**09 19 54.2**	**-0.6**
SSE				S	**S**	**09 23 40.8**	**-0.5**
SSE				pmax	pmax		
	comp=E,30nm,0.7s						
SSE				pmax	pmax		
	comp=E,1µm,5.3s						
SSE				LR	LR		
	comp=E,5µm,15.7s						
HIA	**Hailar**	**21.00**	**311**	*c* *i*P	**P**	**09 20 02.0**	**-1.3**
HIA				pmax	pmax		
	comp=Z,199nm,1.0s						
HIA				MLR	MLR		
	comp=Z,13µm,16.0s						
HIA	**Hailar**	**21.00**	**311**	P	**P**	**09 20 02.8**	**-0.5**
HIA	**Hailar**	**21.00**	**311**	IAMs_20	IAMs_20	09 29 15.1	
	comp=Z,11µm,18.0s						
NJ2	**Nanjing**	**21.62**	**262**	*e*P	**P**	**09 20 08.7**	**-1.5**
NJ2				pP	**pP**	**09 20 12.0**	**+0.1**
NJ2				S	**S**	**09 24 07.1**	**-2.3**
NJ2				sS	Sn	09 24 17.5	-0.7
NJ2				pmax	pmax		
	comp=Z,64nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,2µm,8.5s						
NJ2				LR	LR		
	comp=Z,5µm,11.4s						
NJ2				LR	LR		
	comp=Z,10µm,13.7s						
NJ2				LR	LR		
	comp=Z,9µm,17.1s						
TIA	**Tai'an**	**21.73**	**274**	P	**P**	**09 20 10.4**	**-0.9**
TIA				S	**S**	**09 24 06.2**	**-5.3**
TIA				pmax	pmax		
	comp=Z,56nm,1.2s						
TIA				LR	LR		
	comp=Z,7µm,13.4s						
TIA				LR	LR		
	comp=Z,3µm,13.2s						
TIA				LR	LR		
	comp=Z,3µm,11.8s						
BJI	**Beijing**	**21.94**	**284**	P	**P**	**09 20 10.5**	**-2.9**
BJI				S	**S**	**09 24 11.5**	**-3.9**
BJI				pmax	pmax		
	comp=Z,60nm,1.1s						
BJI				pmax	pmax		
	comp=Z,2µm,3.5s						
BJI				LR	LR		
	comp=Z,10µm,14.2s						
BJI				LR	LR		
	comp=Z,3µm,16.6s						
BJI				LR	LR		
	comp=Z,3µm,15.2s						
BJT	**Baijiatuao**	**21.94**	**284**	P	**P**	**09 20 12.4**	**-1.1**
BJT				pmax	pmax		
	comp=Z,260nm,1.2s						
BJT				MLR	MLR		
	comp=Z,4µm,18.0s						
BJT	**Baijiatuao**	**21.94**	**284**	P	**P**	**09 20 12.4**	**-1.1**
MA2	**Magadan**	**22.07**	**9**	LR	LR	09 28 21.8	
	comp=Z,2µm,21.7s,baz=195,slow=35						
MA2	**Magadan**	**22.07**	**9**	*ce*P	**P**	**09 20 15.5**	**+0.8**
MA2				pmax	pmax		
	comp=Z,349nm,1.4s						
MA2	**Magadan**	**22.07**	**9**	P	**P**	**09 20 15.5**	**+0.8**
YOJ	**Yonaguni jima**	**22.55**	**240**	P	**P**	**09 20 19.2**	**-1.0**
YOJ				pmax	pmax		
	comp=Z,220nm,0.9s						
YOJ				MLR	MLR		
	comp=Z,3µm,18.0s						
YOJ	**Yonaguni jima**	**22.55**	**240**	P	**P**	**09 20 19.2**	**-1.0**
TATO	**Taipei**	**23.28**	**243**	P	**P**	**09 20 27.4**	**-0.3**
YHNB	**Yeheng**	**23.55**	**242**	P	**P**	**09 20 30.1**	**-0.4**
NACB	**Ninganchiao**	**23.72**	**241**	P	**P**	**09 20 30.8**	**-1.3**
GUMO	**Guam**	**24.24**	**179**	P	**P**	**09 20 36.0**	**-0.9**
GUMO				pmax	pmax		
	comp=Z,514nm,1.4s						
GUMO	**Guam**	**24.24**	**179**	P	**P**	**09 20 36.0**	**-0.9**
GUMO				IAmb	IAmb	09 20 47.5	
	comp=Z,514nm,1.4s						
SSLB	**Suanglung**	**24.41**	**241**	P	**P**	**09 20 37.2**	**-1.4**
YULB	**Yu-li**	**24.43**	**240**	P	**P**	**09 20 36.5**	**-2.3**
TPUB	**Ta-pu**	**24.95**	**241**	P	**P**	**09 20 42.1**	**-1.4**
TPUB				IAmb	IAmb	09 20 47.1	
	comp=Z,285nm,1.1s						
TWG	**Pinlang**	**24.97**	**240**	P	**P**	**09 20 42.5**	**-1.1**
TIY	**Taiyuan**	**25.12**	**279**	*e*P	**P**	**09 20 46.4**	**+1.5**
TIY				S	**S**	**09 25 09.8**	**+0.4**
TIY				SS	**SnSn**	**09 26 04.3**	**+5.4**
TIY				pmax	pmax		
	comp=Z,720nm,1.1s						
TIY				LR	LR		
	comp=Z,3µm,13.3s						
TIY				LR	LR		
	comp=Z,6µm,12.7s						
TIY				LR	LR		
	comp=Z,7µm,13.1s						
QZH	**Quanzhou**	**25.37**	**247**	⇓ *i*P	**P**	**09 20 46.7**	**-0.5**
QZH				pP	**pwP**	**09 20 57.0**	**-0.6**
QZH				S	**S**	**09 25 14.9**	**+1.4**
QZH				pmax	pmax		
	comp=Z,100nm,1.1s						
QZH				pmax	pmax		
	comp=Z,1µm,5.6s						
QZH				LR	LR		
	comp=Z,2µm,11.8s						
QZH				LR	LR		
	comp=Z,3µm,14.2s						
QZH				LR	LR		
	comp=Z,4µm,16.1s						
HHC	**Hu-ho-hao-te**	**25.39**	**287**	P	**P**	**09 20 47.5**	**0.0**
HHC				pP	pwP	09 20 58.2	+0.4
HHC				sP	sP	09 21 02.8	+13

HHC eS S 09 25 07.4 -6.4
HHC sS sS 09 25 21.4 +4.6
HHC pmax pmax
comp=Z,150nm,1.2s
HHC pmax pmax
comp=Z,1μm,5.4s
HHC LR LR
comp=Z,2μm,12.2s
HHC LR LR
comp=Z,5μm,14.5s
HHC LR LR
comp=Z,7μm,12.6s
SMY Shemya 25.42 45 P P 09 20 48.9 +1.5
SMY pmax pmax
comp=Z,1μm,1.5s
SMY Shemya 25.42 45 P P 09 20 48.9 +1.5
SEY Seymchan 25.52 9 P P 09 20 49.9 +1.7
comp=Z,219nm,0.8s,baz=191,slow=7.2,SNR=663
SEY Seymchan 25.52 9 *d* iP P 09 20 49.8 +1.5
CIT Chita 25.69 313 *e*P P 09 20 50.7 +0.7
CIT *e* 09 21 35.5
CIT eS S 09 25 24.5 +6.3
CIT pmax pmax
comp=Z,2μm,2.0s
WHN Wuhan 25.76 262 ⇑ iP P 09 20 51.2 +0.5
WHN sP pwP 09 21 01.4 +0.4
WHN PcP PcP 09 24 20.8 +0.4
WHN S S 09 25 23.0 +3.5
WHN pmax pmax
comp=Z,200nm,1.1s
WHN pmax pmax
comp=Z,3μm,3.5s
WHN LR LR
comp=Z,6μm,15.1s
WHN LR LR
comp=Z,14μm,13.8s
WHN LR LR
comp=Z,19μm,15.2s
YAK Yakutsk 25.78 344 P P 09 20 50.3 -0.3
comp=Z,116nm,0.7s,baz=349,slow=1.6,SNR=52
YAK LR LR 09 31 23.0
comp=Z,4μm,20.9s,baz=160,slow=37
YAK Yakutsk 25.78 344 *d* iP P 09 20 50.5 -0.1
YAK *e**PP pwP 09 20 59.2 -1.5
YAK *e* 09 21 25.6
YAK *e*PPP PPP 09 21 48.0
YAK *e* 09 24 17.9
YAK eS S 09 25 18.3 -0.9
YAK eSSS SSS 09 26 34.3
YAK pmax pmax
comp=Z,187nm,0.8s
YAK pmax pmax
comp=N,53nm,0.9s
YAK pmax pmax
comp=E,27nm,0.9s
YAK pmax pmax
comp=Z,503nm,1.5s
YAK pmax pmax
comp=N,379nm,1.6s
YAK pmax pmax
comp=E,488nm,1.6s
YAK smax smax
comp=N,5μm,3.7s
YAK smax smax
comp=E,1μm,3.5s
YAK MLR MLR
comp=Z,2μm,18.0s
YAK MLR MLR
comp=N,3μm,18.0s
YAK MLR MLR
comp=E,1μm,17.0s
YAK Yakutsk 25.78 344 P P 09 20 50.4 -0.1
YAK IAmb IAmb 09 21 04.1
comp=Z,290nm,0.8s
KNMB Chin-men Tao 25.81 246 P P 09 20 50.7 -0.5
BTO Baotou 26.58 287 *e*P P 09 21 00.1 +1.9
H11N2 WAKE ISLAND Hy 26.72 126 T T 09 48 04.3
baz=322,slow=74,SNR=132
H11N1 WAKE ISLAND Hy 26.73 126 T T 09 48 05.6
baz=322,slow=74,SNR=85
H11N3 WAKE ISLAND Hy 26.74 126 T T 09 48 09.4
baz=322
WAKE Wake Island 26.90 127 P P 09 20 58.6 -2.4
WAKE IAmb IAmb 09 21 04.8
comp=Z,390nm,1.3s
H11S1 WAKE ISLAND Hy 27.51 128 T T 09 48 55.7
baz=317,slow=74
H11S3 WAKE ISLAND Hy 27.51 129 T T 09 49 13.1
baz=317,slow=74
H11S2 WAKE ISLAND Hy 27.52 128 T T 09 49 00.2
baz=317,SNR=18
BOD Bodaibo 28.07 325 ⇑ iP P 09 21 11.1 -0.1
BOD pmax pmax
comp=Z,252nm,2.1s
XAN Xi'an 28.79 273 P P 09 21 17.8 -0.1
XAN pP pwP 09 21 29.4 +1.1
XAN S S 09 26 05.2 -2.2
XAN SS SnSn 09 27 39.0 +10
XAN pmax pmax
comp=Z,53nm,1.4s
XAN pmax pmax
comp=Z,2μm,6.8s
XAN LR LR
comp=Z,4μm,12.5s
XAN LR LR
comp=Z,4μm,13.6s
XAN LR LR
comp=Z,5μm,13.8s
XAN Xi'an 28.79 273 P P 09 21 16.9 -1.0
XAN pmax pmax
comp=Z,200nm,1.2s
XAN Xi'an 28.79 273 P P 09 21 16.9 -1.0
ULN Ulaanbaatar 28.80 302 *d* iP P 09 21 19.0 +1.0
ULN pmax pmax
comp=Z,116nm,1.7s
ULN MLR MLR
comp=Z,5μm,16.0s
ULN Ulaanbaatar 28.80 302 P P 09 21 19.0 +1.0
ULN Ulaanbaatar 28.80 302 IAmIs_20 IAmIs_20 09 33 15.5
comp=Z,5μm,18.0s
SONM Songino Array 29.23 302 P P 09 21 22.7 +0.8
comp=Z,19nm,0.7s,baz=110,slow=6.5,SNR=46
SONM LR LR 09 33 31.6
comp=Z,4μm,18.4s,baz=106,slow=37
ENH Enshi 29.70 266 P P 09 21 25.8 -0.2
ENH IAmb IAmb 09 21 42.0
comp=Z,228nm,0.9s
PCPH Palayan 30.26 229 ⇑ *e*P P 09 21 35.7 +4.6
ADK Adak 30.55 50 P P 09 21 33.9 +0.6
ADK pmax pmax
comp=Z,206nm,1.0s
ADK Adak 30.55 50 P P 09 21 33.9 +0.6
ADK IAmb IAmb 09 21 35.0
comp=Z,206nm,1.0s
GSTR Great Sitkin T 30.98 50 P P 09 21 36.9 -0.2
IRK Irkutsk 31.24 310 *e*P P 09 21 39.7 +0.2
IRK pmax pmax
comp=Z,172nm,2.2s
TLY Talaya 31.52 309 P P 09 21 42.7 +0.7
comp=Z,8.6nm,0.7s,baz=92,slow=4.3,SNR=8.1
TLY PcP PcP 09 24 34.8 +0.3
comp=Z,19nm,0.9s,baz=327,slow=4.1,SNR=3.9
TLY Talaya 31.52 309 *d* iP P 09 21 42.3 +0.4
TLY pmax pmax
comp=Z,21nm,1.0s
TLY MLR MLR
comp=Z,10μm,17.0s
TLY Talaya 31.52 309 P P 09 21 42.3 +0.4
TLY PcP 09 24 34.5 0.0
ZAK Zakamensk 31.56 307 *e*P P 09 21 42.5 +0.1
ZAK *e* 09 26 59.3
ZAK pmax pmax
comp=Z,82nm,1.3s
ATKA Atka Island 32.12 50 P P 09 21 47.3 +0.2
ATKA IAmb IAmb 09 21 48.5
comp=Z,204nm,0.9s
LZH Lanzhou 32.19 279 ⇓ P P 09 21 48.9 +0.8
LZH sP pwP 09 22 00.2 +1.7
LZH PcP PcP 09 24 37.9 +1.2
LZH S S 09 27 04.0 +3.1
LZH sS sS 09 27 14.3 +10
LZH pmax pmax
comp=Z,220nm,1.2s
LZH pmax pmax
comp=Z,1μm,5.4s
LZH LR LR
comp=Z,5μm,11.9s
LZH LR LR
comp=Z,7μm,12.5s
LZH LR LR
comp=Z,7μm,14.2s
BILL Bilibino 32.55 15 *d* iP P 09 21 50.8 +0.1
BILL *e* 09 22 58.0
BILL pmax pmax
comp=Z,219nm,1.3s
BILL MLR MLR
comp=Z,3μm,20.0s
BILL Bilibino 32.55 15 P P 09 21 50.8 +0.1
BILL IAmb IAmb 09 21 52.4
comp=Z,180nm,1.1s
BILL PcP PcP 09 24 36.6 -0.3
BILL IAmIs_20 IAmIs_20 09 33 38.6
comp=Z,4μm,22.0s
MOY Mondy 33.15 309 *e*P P 09 21 56.7 +0.4
MOY pmax pmax
comp=Z,149nm,2.2s
GYA Guiyang 33.63 261 ⇓ iP P 09 22 00.1 -0.7
GYA PP PnPn 09 23 13.6 +1.2
GYA S S 09 27 20.7 -2.7
GYA pmax pmax
comp=Z,80nm,1.1s
GYA pmax pmax
comp=Z,630nm,7.0s
GYA LR LR
comp=Z,4μm,15.6s
GYA LR LR
comp=Z,3μm,16.8s
GYA LR LR
comp=Z,4μm,17.8s
CD2 Chengdu 33.97 270 P P 09 22 03.7 +0.1
CD2 S S 09 27 27.5 -0.9
CD2 pmax pmax
comp=Z,80nm,0.9s
CD2 LR LR
comp=Z,10μm,15.2s
CD2 LR LR
comp=Z,7μm,16.2s
CD2 LR LR
comp=Z,7μm,14.2s
GTA Gaotai 34.51 287 ⇓ P P 09 22 09.4 +1.1
GTA pP pwP 09 22 17.2 -1.5
GTA sP sP 09 22 20.4 +9.4
GTA PcP PcP 09 24 44.5 +1.3
GTA S S 09 27 37.1 +0.4
GTA PcS PcS 09 28 30.3 +0.6
GTA pmax pmax
comp=Z,150nm,1.3s
GTA pmax pmax
comp=Z,1μm,5.6s
GTA LR LR
comp=Z,9μm,17.5s
GTA LR LR
comp=Z,8μm,16.1s
GTA LR LR
comp=Z,9μm,15.8s
TIXI Tiksi 34.72 351 P P 09 22 09.2 -0.3
comp=Z,47nm,0.8s,baz=144,slow=7.6,SNR=90
TIXI PcP PcP 09 24 42.9 0.0
comp=Z,26nm,1.0s,baz=160,slow=5.2,SNR=4.3
TIXI Tiksi 34.72 351 *d* iP P 09 22 09.1 -0.4
TIXI pmax pmax
comp=Z,64nm,0.8s
TIXI Tiksi 34.72 351 P P 09 22 09.3 -0.3
TIXI PcP PcP 09 24 43.1 +0.2
DAV Davao City (W) 35.09 214 LR LR 09 35 08.0
comp=Z,1μm,19.6s,baz=39,slow=34
QIZ Qiongzhong 35.39 248 P P 09 22 16.8 +0.9
QIZ S S 09 27 54.0 +3.6
QIZ pmax pmax
comp=Z,31nm,1.5s
QIZ pmax pmax
comp=Z,670nm,3.2s
QIZ LR LR
comp=Z,3μm,17.2s
QIZ LR LR
comp=Z,2μm,18.1s
QIZ LR LR
comp=Z,4μm,13.5s
QIZ Qiongzhong 35.39 248 IAmIs_20 IAmIs_20 09 37 47.4
comp=Z,3μm,18.0s
NIKH Nikolski High 35.46 50 P P 09 22 15.8 -0.4
NIKH IAmb IAmb 09 22 17.2
comp=Z,227nm,0.9s
GAMB Gambell 36.77 31 P P 09 22 27.7 +0.5
KMI Kunming 37.36 262 P P 09 22 32.9 -0.1
KMI pP pwP 09 22 40.1 -3.3
KMI sP sP 09 22 43.3 +7.6
KMI PcP PcP 09 24 52.5 +0.5
KMI S S 09 28 21.3 +0.4
KMI SS SnSn 09 30 51.3 -5.9
KMI pmax pmax
comp=Z,120nm,1.3s
KMI pmax pmax
comp=Z,630nm,4.0s
KMI LR LR
comp=Z,2μm,18.0s
KMI LR LR
comp=Z,5μm,15.5s
KMI LR LR
comp=Z,4μm,15.5s
KMI Kunming 37.36 262 P P 09 22 32.2 -0.8
KMI pmax pmax
comp=Z,138nm,1.1s
KMI MLR MLR
comp=Z,4μm,18.0s
KMI Kunming 37.36 262 P P 09 22 32.1 -0.8
KMI Kunming 37.36 262 IAmIs_20 IAmIs_20 09 38 52.5
comp=Z,4μm,18.0s
SLVN Son La 38.48 256 S 09 28 39.3 +1.7
SLVN IAmIs_20 IAmIs_20 09 39 58.0
comp=Z,3μm,18.0s
ANM Nome 39.64 31 P P 09 22 52.3 +0.9
ANM pmax pmax
comp=Z,146nm,1.3s
ANM Nome 39.64 31 P P 09 22 52.2 +0.9
BAKI Biak 39.65 193 P P 09 22 53.0 +1.1
SMPI Sarmi 40.05 189 P P 09 22 56.4 +1.2
comp=Z,2μmcomp=Z,190nm,1.3s
TNTI Ternate 40.12 207 P P 09 22 56.2 +0.3
comp=Z,1μmcomp=Z,96nm,1.2s
TNTI Ternate 40.12 207 P P 09 22 54.1 -1.7
JAY Jayapura 40.37 186 P P 09 22 58.1 +0.1
comp=Z,79nm,1.0s,baz=338,slow=4.0,SNR=17
JAY LR LR 09 38 46.6
comp=Z,421nm,18.6s,baz=12,slow=35
JAY Jayapura 40.37 186 P P 09 22 57.8 -0.2
comp=Z,777nmcomp=Z,66nm,1.4s
SIJI Sorong 40.43 200 P P 09 22 58.4 0.0
comp=Z,53nm,1.0s,baz=10,slow=12,SNR=14
SIJI LR LR 09 37 20.0
comp=Z,788nm,21.9s,baz=20,slow=33
GENI Genyem 40.49 186 P P 09 22 59.7 +0.8
comp=Z,11μmcomp=Z,258nm,1.1s
SDPT Sand Point 40.53 46 P P 09 22 57.4 -1.5
KKM Kota Kinabalu 40.72 226 P P 09 23 00.4 -0.5
CNBA Chernabura Isl 41.03 47 P P 09 23 02.5 -0.5
CNBA IAmb IAmb 09 23 03.9
comp=Z,201nm,1.0s
DLV T Lat 41.11 241 P P 09 23 00.2 -4.1
LBMI Labuha 41.38 206 P P 09 23 07.9 +1.6
comp=Z,3μmcomp=Z,177nm,1.9s
KMSI Cibinong 41.61 212 P P 09 23 18.3 +10
comp=Z,18μmcomp=Z,285nm,0.4s
SPMM Sapulut 41.68 224 P P 09 23 10.0 +1.2
RDOG Red Dog Mine 41.68 27 P P 09 23 08.1 -0.1
CHGN Chignik 41.72 45 P P 09 23 07.8 -0.8
DGZ Jazzator, Alta 41.75 305 *d* iP P 09 23 10.3 +1.1
DGZ pmax pmax
comp=Z,253nm,1.1s
DGZ MLR MLR
comp=Z,10μm,16.0s
GTOI Gorontalo 41.96 213 P P 09 23 11.6 +0.6
comp=Z,0.0nm,0.6s
FAKI Fak Fak 42.14 198 P P 09 23 13.0 +0.5
comp=Z,63nm,1.3s
FAKI Fak Fak 42.14 198 P P 09 23 10.8 -1.7
DIBR DIBRUGARH 42.42 271 *e*P P 09 23 16.1 +1.3
WMQ Urumqi 42.50 297 *e*P P 09 23 16.7 +1.4
WMQ pP pwP 09 23 22.2 -3.6
WMQ S S 09 29 41.7 +4.6
WMQ ScS ScS 09 33 15.2 -1.6
WMQ pmax pmax
comp=Z,46nm,1.3s
WMQ pmax pmax
comp=Z,2μm,4.5s
WMQ LR LR
comp=Z,2μm,13.3s
WMQ LR LR
comp=Z,980nm,18.3s
WMQ LR LR
comp=Z,1μm,23.3s
WMQ Urumqi 42.50 297 P P 09 23 13.9 -1.4
WMQ pmax pmax
comp=Z,75nm,0.8s
WMQ Urumqi 42.50 297 P P 09 23 13.9 -1.4
RABL Rabaul 42.53 168 P P 09 23 15.5 -0.2
MRSI Marisa 42.57 214 P P 09 23 17.6 +1.6
comp=Z,3μmcomp=Z,177nm,1.3s
KRVT Keravat (AS076 42.62 169 P P 09 23 15.9 -0.4
comp=Z,118nm,0.9s,baz=160,slow=10,SNR=11
KRVT LR LR 09 37 48.0
comp=Z,575nm,21.8s,baz=349,slow=32
ZAA0 Zalesovo Array 43.03 312 P P 09 23 19.5 +0.1
ZAA0 PcP PcP 09 25 09.4 +0.1
ZALV Zalesovo Beam 43.03 312 P P 09 23 19.5 +0.1
comp=Z,75nm,0.9s,baz=87,slow=6.2,SNR=84
ZALV PcP PcP 09 25 09.4 0.0
comp=Z,52nm,0.5s,baz=97,slow=3.3,SNR=13
ZALV LR LR 09 41 52.5
comp=Z,2μm,18.7s,baz=100,slow=37
SANI Sanana 43.23 207 P P 09 23 20.6 -0.7
comp=Z,2μmcomp=Z,120nm,0.9s
ZIRO ZIRO 43.24 271 *e*P P 09 23 22.1 +0.5
ZIRO IAmb IAmb 09 23 28.7
comp=Z,52nm,0.8s
TTA Tatalina 43.38 35 P P 09 23 22.6 +0.4
TTA pmax pmax
comp=Z,92nm,1.2s
TTA Tatalina 43.38 35 P P 09 23 22.6 +0.4
NRIK Noril'sk 43.44 334 P P 09 23 22.8 +0.3
comp=Z,87nm,1.1s,baz=107,slow=9.1,SNR=99
NRIK PcP PcP 09 25 11.6 +1.2
comp=Z,51nm,1.0s,baz=74,slow=5.0,SNR=4.2
NRIK LR LR 09 42 25.4
comp=Z,3μm,19.4s,baz=108,slow=37
NRIK Noril'sk 43.44 334 *i* P P 09 23 22.6 +0.1
NRIK pmax pmax
comp=Z,155nm,1.3s
MSAI Masohi 43.47 203 P P 09 23 24.8 +1.6
comp=Z,35nm,0.9s
LUWI Luwuk 43.57 212 P P 09 23 25.4 +1.3
comp=Z,91nm,1.1s
LUWI Luwuk 43.57 212 P P 09 23 21.0 -3.1
MPSI Mapaga 43.63 217 P P 09 23 25.4 +0.8
comp=Z,1μmcomp=Z,49nm,1.3s
CHTO Chiang Mai 43.73 257 P P 09 23 26.0 +0.5
CHTO pmax pmax
comp=Z,198nm,1.4s
CHTO MLR MLR
comp=Z,2μm,18.0s
CHTO Chiang Mai 43.73 257 P P 09 23 25.9 +0.5
CHTO Chiang Mai 43.73 257 IAmIs_20 IAmIs_20 09 44 18.2
comp=Z,2μm,18.0s
ZSN Zaisan 43.75 302 ⇓ *i* P P 09 23 26.5 +1.1
comp=Z,182nm,1.1s
ZSN eS S 09 29 52.8 -2.6
ZSN Zaisan 43.75 302 *d* iP P 09 23 26.4 +1.1
ZSN eS S 09 29 52.7 -2.6
ZSN pmax pmax
comp=Z,182nm,1.1s
KOHI KOHIMA 43.88 269 *ex* P P 09 23 27.3 +0.6
APSI Ampana 43.94 214 P P 09 23 26.6 -0.4
comp=Z,1μmcomp=Z,119nm,1.2s
CM31 Chiang Mai Arr 43.94 257 P P 09 23 28.1 +0.9
SNR=19
CM31 Chiang Mai Arr 43.94 257 P P 09 23 27.6 +0.5
CMAR Chiang Mai Arr 43.94 257 P P 09 23 27.9 +0.7
comp=Z,20nm,1.0s,baz=43,slow=7.4,SNR=66
CMAR PcP PcP 09 25 13.5 +0.5
comp=Z,7.1nm,0.7s,baz=29,slow=3.1,SNR=6.0
CMAR LR LR 09 43 46.0
comp=Z,2μm,18.2s,baz=59,slow=39
NLAI Namlea 43.95 205 P P 09 23 31.3 +4.2
comp=Z,4μmcomp=Z,59nm,1.2s
AAI Ambon 44.01 203 P P 09 23 29.2 +1.6
comp=Z,151nm,0.6s
BNDI Bandanaira 44.30 201 P P 09 23 28.1 -1.8
comp=Z,6μmcomp=Z,373nm,1.0s
LSA Lhasa 44.41 276 P P 09 23 32.3 +1.0
LSA Lhasa 44.41 276 P P 09 23 30.4 -1.0
LSA pmax pmax
comp=Z,73nm,1.3s
LSA MLR MLR
comp=Z,2μm,20.0s
LSA Lhasa 44.41 276 P P 09 23 30.4 -1.0
OHAK Old Harbor 44.54 43 P P 09 23 31.7 +0.3
OHAK IAmb IAmb 09 23 32.8
comp=Z,194nm,0.9s
RSO Redoubt South 44.78 39 P P 09 23 34.6 +1.0
TARA Tarawa 44.89 137 P P 09 23 34.7 0.0
KDAK Kodiak Island 44.90 43 P P 09 23 34.6 +0.3
comp=Z,543nm,0.8s,baz=281,slow=3.8,SNR=404
KDAK Kodiak Island 44.90 43 P P 09 23 34.7 +0.4
KDAK pmax pmax
comp=Z,668nm,0.9s
KDAK Kodiak Island 44.90 43 P P 09 23 34.7 +0.4
PPLA Purkeypile 45.12 35 P P 09 23 38.1 +1.9
PPLA IAmb IAmb 09 23 39.7
comp=Z,329nm,1.1s
HOM Homer 45.34 40 P P 09 23 37.9 +0.2
HOM PcP PcP 09 25 17.6 +0.5
CNPM China Poot 45.55 40 P P 09 23 39.3 -0.2
CNPM IAmb IAmb 09 23 41.2
comp=Z,158nm,1.0s
JOHN Johnston Islan 45.58 105 P P 09 23 41.5 +1.3
MK31 Makanchi Array 45.60 302 *i* P P 09 23 40.6 +0.5
MK31 Makanchi Array 45.60 302 P P 09 23 40.5 +0.4
MK31 IAmb IAmb 09 23 41.9
comp=Z,142nm,1.0s
MKAR Makanchi Array 45.60 302 P P 09 23 40.6 +0.5
comp=Z,110nm,0.9s,baz=84,slow=9.0,SNR=262
MKAR PcP PcP 09 25 18.1 -0.3
comp=Z,32nm,0.9s,baz=70,slow=4.0,SNR=4.1
MKAR LR LR 09 42 36.3
MKAR comp=Z,3μm,21.3s,baz=82,slow=36 PKPPKP P'P'df 09 55 02.2 -16
comp=Z,0.8nm,0.9s,baz=211,slow=0.7,SNR=4.3
MKAR P4KPbc 10 01 28.3
comp=Z,0.4nm,0.8s,baz=54,slow=9.1,SNR=3.8
SMKI Samarinda 45.63 220 P P 09 23 41.3 +0.8
SHL Shillong 45.71 270 *e*P P 09 23 41.7 +0.3
SHL Shillong 45.71 270 P P 09 23 41.5 +0.1
SNR=10.0
SHL Shillong 45.71 270 P P 09 23 39.6 -1.8
SHL 09 25 18.6
SHL pmax pmax
comp=Z,66nm,1.2s
SHL MLR MLR
comp=Z,2μm,18.0s
SHL Shillong 45.71 270 P P 09 23 39.6 -1.8
SHL PcP PcP 09 25 18.6 -0.7
SHL IAmIs_20 IAmIs_20 09 45 09.3
comp=Z,2μm,18.0s
BPAW Bear Paw Mtn. 45.72 34 P P 09 23 42.0 +1.3
BPAW PcP PcP 09 25 19.8 +1.4
BRLK Bradley Lake 45.72 40 P P 09 23 40.5 -0.3
BRLK IAmb IAmb 09 23 43.5
comp=Z,135nm,1.0s
BRLK PcP PcP 09 25 18.8 +0.3
KTH Kantishna Hill 45.72 34 P P 09 23 42.3 +1.4
MAKZ Makanchi 45.81 302 P P 09 23 41.5 -0.2
MAKZ Makanchi 45.81 302 P P 09 23 42.3 +0.6
MAKZ IAmb IAmb 09 23 43.6
comp=Z,184nm,1.1s
MAKZ IAmIs_20 IAmIs_20 09 42 32.6
comp=Z,3μm,22.0s
MLY Manley 45.88 32 P P 09 23 43.6 +1.6
MLY IAmb IAmb 09 23 45.1
comp=Z,222nm,1.0s
SBUM Sibu 45.94 228 P P 09 23 42.9 -0.1
SBUM Sibu 45.94 228 P P 09 23 44.0 +1.0
TRF Thorofare Moun 46.00 35 P P 09 23 41.4 -1.9
TRF IAmb IAmb 09 23 46.8
comp=Z,99nm,0.8s
RC01 Rabbit Creek A 46.26 38 P P 09 23 44.6 -0.5
COLD Coldfoot 46.26 29 P P 09 23 46.2 +1.2
BWN Browne 46.39 34 P P 09 23 48.2 +2.2

SEW Seward 46.43 39 P P 09 23 46.2 -0.1
SEW IAmb IAmb 09 23 49.3
comp=Z,251nm,1.0s
BKB Balikpapan 46.48 219 P P 09 23 47.3 0.0
comp=Z,160nm,0.6s
PMR Palmer 46.54 37 P P 09 23 47.2 0.0
PMR pmax pmax
comp=Z,261nm,1.0s
PMR Palmer 46.54 37 P P 09 23 47.2 0.0
NEA Nenana 46.57 33 P P 09 23 48.5 +1.1
MCK McKinley 46.61 34 P P 09 23 48.5 +0.7
MCK pmax pmax
comp=Z,214nm,1.0s
MCK McKinley 46.61 34 P P 09 23 48.5 +0.7
MCK IAmb IAmb 09 23 50.0
comp=Z,214nm,1.0s
TOLK Toolik Lake Re 46.63 27 P P 09 23 49.4 +1.4
baz=264,SNR=172
TOLK Toolik Lake Re 46.63 27 P P 09 23 49.3 +1.4
TOLK IAmb IAmb 09 23 50.7
comp=Z,145nm,0.9s
TOLK PcP **PcP 09 25 23.0 +1.4**
GHO Glory Hole Cre 46.63 37 P P 09 23 48.7 +0.7
RND Reindeer 46.65 35 P P 09 23 48.4 +0.3
RND pmax pmax
comp=Z,354nm,1.0s
RND Reindeer 46.65 35 P P 09 23 48.4 +0.3
KNK Knik Glacier 46.87 37 P P 09 23 50.3 +0.5
KNK IAmb IAmb 09 23 52.0
comp=Z,190nm,1.0s
SML Sawmill 46.91 37 P P 09 23 50.8 +0.6
MDM Murphy Dome 46.94 33 P P 09 23 51.3 +0.9
WRH Wood River Hil 46.99 33 P P 09 23 51.1 +0.4
WRH IAmb IAmb 09 23 53.3
comp=Z,113nm,0.8s
WRH PcP **PcP 09 25 23.1 +0.2**
TCOL CIGO, UAF Yank 47.09 33 P P 09 23 52.9 +1.4
baz=269,SNR=70
COLA College 47.10 33 *d* iP **P 09 23 52.3 +0.7**
COLA pmax pmax
comp=Z,119nm,0.9s
COLA MLR MLR
comp=Z,803nm,16.0s
COLA College 47.10 33 P P 09 23 52.2 +0.7
COLA IAmb IAmb 09 23 55.3
comp=Z,154nm,0.9s
CCB Clear Creek Bu 47.12 33 P P 09 23 51.6 -0.1
PMG Port Moresby 47.15 176 *c* iP **P 09 23 52.0 -0.4**
PMG pmax pmax
comp=Z,443nm,1.4s
PMG Port Moresby 47.15 176 P P 09 23 51.4 -1.0
PMG IAmb IAmb 09 23 57.4
comp=Z,132nm,1.1s
KURK Kurchatov 47.20 308 *d* iP **P 09 23 52.6 +0.1**
KURK pmax pmax
comp=Z,359nm,1.3s
KURK MLR MLR
comp=Z,5μm,16.0s
KURK Kurchatov 47.20 308 P P 09 23 52.5 -0.1
KURK Kurchatov 47.20 308 IAMs_20 IAMs_20 09 45 28.1
comp=Z,4μm,18.0s
KURBB Kurchatov Arra 47.27 308 P P 09 23 52.5 -0.6
POKR Poker Plat Res 47.28 32 P P 09 23 54.7 +1.7
baz=270,SNR=221
POKR S **S 09 30 46.8 +1.0**
baz=270
DHY Denali Highway 47.32 35 P P 09 23 54.1 +0.6
DHY IAmb IAmb 09 23 55.6
comp=Z,124nm,1.0s
BRDH Bariadhala 47.34 267 P P 09 23 55.3 +1.3
comp=Z,134nm,0.8s,baz=79,slow=9.2,SNR=7.4
SCM Sheep Creek Mo 47.39 37 P P 09 23 55.0 +1.0
SCM pmax pmax
comp=Z,443nm,0.9s
SCM Sheep Creek Mo 47.39 37 P P 09 23 55.0 +1.0
GTK Tadong 47.48 274 *eP* **P 09 23 55.2 0.0**
GTK *i* x x 09 25 25.9
HDA Harding Lake 47.49 33 P P 09 23 55.0 +0.3
baz=271,SNR=293
HDA Harding Lake 47.49 33 P P 09 23 54.8 +0.2
SPSI Sidrap Palu 47.49 214 P P 09 23 55.7 +0.6
comp=Z,42nm,1.4s
IL31 47.51 33 P P 09 23 54.9 +0.2
ILAR Eielson Array 47.51 33 P P 09 23 55.1 +0.3
comp=Z,184nm,0.8s,baz=263,slow=6.0,SNR=1068
ILAR LR LR 09 45 12.4
comp=Z,510nm,20.2s,baz=262,slow=38
ILAR PKPPKP P'P'df 09 54 52.7 -25
comp=Z,0.6nm,0.9s,baz=165,slow=1.9,SNR=4.6
GLI Glacier Island 47.55 38 P P 09 23 55.8 +0.7
GLI IAmb IAmb 09 23 57.1
comp=Z,170nm,0.9s
BBSI Bau Bau 47.69 210 P P 09 24 09.7 +13
BNSI Bone 47.73 214 P P 09 23 59.0 +2.0
comp=Z,2μmcomp=Z,66nm,1.2s
KSM Kuching 47.85 229 P P 09 23 58.9 +0.9
KSM Kuching 47.85 229 P P 09 23 59.0 +1.1
FID Port Fidalgo 47.86 38 P P 09 23 57.9 +0.3
HIN Hinchinbrook I 47.88 39 P P 09 23 58.6 +0.9
MID Middleton Isla 48.05 40 P P 09 24 00.0 +1.0
MID pmax pmax
comp=Z,163nm,0.9s
MID Middleton Isla 48.05 40 P P 09 23 60.0 +1.0
MID IAmb IAmb 09 24 01.3
comp=Z,163nm,0.9s
PRP Porcupine Dome 48.08 32 P P 09 24 00.4 +1.1
PRP IAmb IAmb 09 24 02.4
comp=Z,142nm,0.8s
TAPN Taplejung 48.17 275 *eP* **P 09 24 01.5 +0.8**
comp=Z,330nm,1.2s
FYU Fort Yukon 48.19 30 P P 09 24 01.2 +1.3
EYAK Cordova Ski Ar 48.24 38 P P 09 24 01.9 +1.5
PDGK Podgornoye 48.39 298 P P 09 24 00.4 -1.7
KAPI Kappang 48.43 214 P P 09 24 02.6 +0.1
comp=Z,21nm,0.7s,baz=7.4,slow=20,SNR=11
KAPI LR LR 09 44 47.7
comp=Z,380nm,20.4s,baz=114,slow=37
KAPI Kappang 48.43 214 P P 09 24 02.5 +0.1
KAPI IAmb IAmb 09 24 07.4
comp=Z,158nm,1.4s
KAPI PcP **PcP 09 25 29.3 +0.6**
RIDG Independent Ri 48.43 34 P P 09 24 02.3 +0.3
RIDG IAmb IAmb 09 24 03.7
comp=Z,143nm,1.0s
SHLS Shalkode 48.46 298 ⇓ *i* P **P 09 24 00.7 -2.0**
comp=Z,135nm,1.2s
SHLS *e*S **S 09 30 59.2 -4.2**
SHLS *e*LR LR 09 46 19.6
comp=Z,1μm,14.2s
SHLS Shalkode 48.46 298 *d* iP **P 09 24 00.6 -2.0**
SHLS *e*S **S 09 30 59.1 -4.2**
SHLS pmax pmax
comp=Z,135nm,1.2s
SHLS MLR MLR
comp=Z,1μm,14.0s
BKSI Bulukumba 48.55 213 P P 09 24 03.5 +0.2
comp=Z,30nm,1.2s
ODAN Odare 48.65 274 *eP* **P 09 24 04.8 +0.4**
comp=Z,488nm,1.3s
TDK Taldyqorghan 48.67 300 *i* P **P 09 24 04.5 +0.4**
comp=Z,410nm,1.2s
TDK *e*S **S 09 31 05.4 -0.6**
TDK *e*LR LR 09 45 13.6
comp=Z,3μm,14.7s
TDK Taldyqorghan 48.67 300 *i* P **P 09 24 04.4 +0.4**
TDK *e*S **S 09 31 05.3 -0.6**
TDK pmax pmax
comp=Z,410nm,1.2s
TDK MLR MLR
comp=Z,3μm,15.0s
RAGM Ragged Mountai 48.78 39 P P 09 24 06.0 +1.2
DOT Dot Lake 48.79 34 P P 09 24 05.1 +0.4
DOT IAmb IAmb 09 24 06.5
comp=Z,144nm,0.9s
SCRK Sand Creek 48.80 34 P P 09 24 05.4 +0.5
HMT Hamilton 48.99 39 P P 09 24 07.5 +1.1
MENT Mentasta 48.99 35 P P 09 24 07.7 +1.4
GLB Gilahina Butte 49.09 37 P P 09 24 08.8 +1.7
JIRN Jiri 49.22 276 *eP* **P 09 24 09.6 +0.7**
comp=Z,766nm,1.4s
RAMN Ramite 49.23 275 *eP* **P 09 24 09.2 +0.4**
comp=Z,507nm,1.2s
SATY Saty 49.23 298 ⇓ *i* P **P 09 24 09.1 +0.6**
comp=Z,119nm,1.5s
SATY *e*S **S 09 31 14.2 0.0**
SATY *e*LR LR 09 46 59.8
SATY Saty 49.23 298 *d* iP **P 09 24 09.1 +0.6**
SATY *e*S **S 09 31 14.1 0.0**
SATY pmax pmax
comp=Z,119nm,1.5s
SUCK Suckling Hills 49.27 39 P P 09 24 10.5 +2.1
VRDI Verde Repeater 49.29 37 P P 09 24 10.2 +1.4
HNR Honiara 49.32 159 LR LR 09 44 47.4
comp=Z,787nm,19.6s,baz=322,slow=36
GUN Gumba 49.35 276 *eP* **P 09 24 10.4 +0.5**
comp=Z,507nm,1.1s
PRZ Przheval'sk 49.41 297 P P 09 24 11.1 +1.1
PRZ pmax pmax
comp=Z,321nm,1.1s
PRZ MLR MLR
comp=Z,3μm,20.0s
PRZ Przheval'sk 49.41 297 P P 09 24 11.1 +1.1
PRZ IAMs_20 IAMs_20 09 45 21.9
comp=Z,3μm,20.0s
MCARA McCarthy VSAT 49.47 37 P P 09 24 11.5 +1.6
CRQM Cirque 49.49 38 P P 09 24 12.0 +1.7
TGL Tana Glacier 49.64 38 P P 09 24 12.8 +1.4
WAX Waxell Ridge 49.67 38 P P 09 24 13.2 +1.7
BALM Baldy 49.84 38 P P 09 24 14.2 +1.3
BALM pmax pmax
comp=Z,291nm,0.9s
BALM Baldy 49.84 38 P P 09 24 14.2 +1.3
PKI Pulchoki 49.88 276 *eP* **P 09 24 13.9 0.0**
KKN Kakani 49.88 277 *eP* **P 09 24 14.2 +0.5**
comp=Z,516nm,1.3s
PKIN Phulchoki 49.88 276 *eP* **P 09 24 13.8 -0.1**
EGAK Eagle 49.96 33 P **P 09 24 14.1 +0.5**
DMN Daman 50.10 276 *eP* **P 09 24 15.7 +0.2**
comp=Z,432nm,1.6s
MDOK Medeo 50.14 298 *i* P **P 09 24 16.3 +0.7**
MDOK *e*S S 09 31 38.0 +11
MDOK *e*LR LR 09 45 55.0
comp=Z,1μm,14.8s
MDOK Medeo 50.14 298 *i* P **P 09 24 16.2 +0.7**
MDOK *e*S S 09 31 37.9 +11
MDOK MLR MLR
comp=Z,1μm,15.0s
MESA MESA 50.16 39 P P 09 24 16.2 +0.8
MESA IAmb IAmb 09 24 18.2
comp=Z,238nm,0.9s
BARN Barnard Glacie 50.17 38 P P 09 24 16.7 +1.2
BARN IAmb IAmb 09 24 18.3
comp=Z,261nm,1.0s
AAA Alma-Ata 50.22 299 *eP* **P 09 24 15.5 -0.5**
AAA *e*LR LR 09 47 21.6
comp=Z,1μm,14.1s
AAA Alma-Ata 50.22 299 *eP* **P 09 24 15.5 -0.5**
AAA MLR MLR
comp=Z,1μm,14.0s
TNSS Tian-Shan 50.25 298 ⇓ *i* P **P 09 24 17.6 +0.9**
TNSS Tian-Shan 50.25 298 ⇓ *i* P **P 09 24 17.5 +0.9**
GKN Gorkha 50.28 277 *eP* **P 09 24 17.2 +0.4**
comp=Z,1μm,1.4s
CTGM Chitina Glacie 50.34 38 P P 09 24 17.8 +1.1
KDJ Kajisay 50.38 297 P P 09 24 18.2 +0.8
KDJ pmax pmax
comp=Z,136nm,1.1s
KDJ MLR MLR
comp=Z,3μm,21.0s
KDJ Kajisay 50.38 297 P P 09 24 18.2 +0.8
KDJ IAmb IAmb 09 24 19.6
comp=Z,136nm,1.1s
KDJ IAMs_20 IAMs_20 09 45 52.6
comp=Z,3μm,21.0s
KUU Kurty 50.41 300 ⇓ *i* P **P 09 24 17.3 0.0**
comp=Z,347nm,1.3s
KUU *e*S **S 09 31 27.2 -3.2**
KUU *e*LR LR 09 47 00.3
comp=Z,2μm,13.9s
KUU Kurty 50.41 300 *d* iP **P 09 24 17.3 0.0**
KUU *e*S **S 09 31 27.1 -3.2**
KUU pmax pmax
comp=Z,347nm,1.3s
KUU MLR MLR
comp=Z,2μm,14.0s
MTBS Maitube 50.58 299 ⇓ *i* P **P 09 24 19.5 +0.7**
MTBS Maitube 50.58 299 ⇓ *i* P **P 09 24 19.4 +0.7**
MMRI Maumere 50.70 209 P P 09 24 24.7 +5.0
comp=Z,16μmcomp=Z,241nm,1.5s
MMRI Maumere 50.70 209 P P 09 24 19.6 -0.1
DAWY Dawson 50.80 33 P P 09 24 21.3 +1.3
DANN Dangsing 50.81 278 *eP* **P 09 24 21.8 +0.9**
comp=Z,990nm,1.3s
SOEI Soe 51.00 206 P P 09 24 21.7 -0.4
comp=Z,3μmcomp=Z,177nm,1.0s
SOEI Soe 51.00 206 P P 09 24 21.5 -0.6
SOEI IAmb IAmb 09 24 39.4
comp=Z,246nm,1.2s
ULHL Ulahol 51.00 298 P P 09 24 22.9 +0.8
SNR=43
EDFI Ende, Flores 51.01 209 P P 09 24 21.5 -0.7
comp=Z,2μmcomp=Z,104nm,1.5s
KOLN Koldanda 51.20 277 *eP* **P 09 24 24.2 +0.4**
comp=Z,394nm,1.5s
TKM2 Tokmak 2 51.23 299 P P 09 24 25.1 +1.3
SNR=301
TKM2 Tokmak 2 51.23 299 P P 09 24 24.2 +0.4
KULM Kulim 51.26 242 P P 09 24 24.9 +1.0
KULM IAmb IAmb 09 24 26.3
comp=Z,240nm,1.4s
KULM Kulim 51.26 242 P P 09 24 25.0 +1.0
BOK Bokaro 51.32 272 *eP* **P 09 24 24.8 +0.4**
BOK IAmb IAmb 09 24 26.7
comp=Z,23nm,0.8s
BOK *i* x x 09 25 39.5
NRN Naryn 51.44 297 P P 09 24 25.8 +0.2
NRN pmax pmax
comp=Z,79nm,1.2s
NRN MLR MLR
comp=Z,4μm,18.0s
NRN Naryn 51.44 297 P P 09 24 25.8 +0.2
NRN IAMs_20 IAMs_20 09 49 31.1
comp=Z,4μm,18.0s
PYUN Piuthan 51.53 278 *eP* **P 09 24 26.9 +0.7**
comp=Z,1μm,1.3s
IPM Ipoh 51.57 241 P P 09 24 26.4 0.0
IPM IAmb IAmb 09 24 27.9
comp=Z,167nm,1.1s
IPM Ipoh 51.57 241 P P 09 24 27.0 +0.6
EPYK Eagle Plains 51.61 30 P P 09 24 27.9 +1.8
baz=278,SNR=435
EPYK Eagle Plains 51.61 30 P P 09 24 27.9 +1.8
BTLS Baital 51.61 302 ⇓ *i* P **P 09 24 26.2 -0.2**
comp=Z,102nm,1.8s
BTLS *e*S **S 09 31 44.9 -2.0**
BTLS *e*LR LR 09 48 37.5
BTLS Baital 51.61 302 *d* iP **P 09 24 26.1 -0.2**
BTLS *e*S **S 09 31 44.8 -2.1**
BTLS pmax pmax
comp=Z,102nm,1.8s
COEN Coen 51.61 181 P P 09 24 26.2 -0.3
COEN IAmb IAmb 09 24 38.6
comp=Z,115nm,0.8s
BATI Baumata 51.62 206 P P 09 24 26.0 -0.6
comp=Z,55nm,0.7s,baz=263,slow=1.4,SNR=11
BATI LR LR 09 46 05.1
comp=Z,262nm,20.2s,baz=33,slow=36
BATI Baumata 51.62 206 P P 09 24 26.6 -0.1
comp=Z,1μmcomp=Z,75nm,1.1s
MYKOM Kota Tinggi 51.65 236 P P 09 24 27.8 +0.9
MYKOM Kota Tinggi 51.65 236 P P 09 24 28.0 +1.1
BVAR Borovoye Array 51.68 312 P4KPbc 10 01 55.2
comp=Z,2.6nm,1.1s,baz=101,slow=7.7,SNR=7.3
DGPR DIGLIPUR 51.72 256 ⇓ *i* P **P 09 24 28.6 +1.1**
SGDS Sogindy 51.72 300 ⇓ *i* P **P 09 24 27.6 +0.3**
comp=Z,178nm,1.5s
SGDS *e*S **S 09 31 47.9 -0.8**
SGDS *e*LR LR 09 47 49.2
comp=Z,2μm,15.0s
BRVK Borovoye 51.73 312 *d* iP **P 09 24 27.3 +0.1**
BRVK pmax pmax
comp=Z,200nm,1.1s
BRVK MLR MLR
comp=Z,4μm,16.0s
BRVK Borovoye 51.73 312 P P 09 24 27.2 +0.1
BRVK IAmb IAmb 09 24 29.1
comp=Z,163nm,1.0s
KZA Kyzart 51.75 298 P P 09 24 29.7 +1.7
SNR=76
KBK Karagaybulak 51.77 298 P P 09 24 28.7 +1.0
SNR=130
OTUK Ortayu 51.77 306 P P 09 24 27.1 -0.4
CHMS Chumysh 51.79 299 P P 09 24 28.5 +0.7
SNR=22
OPA Opana 51.83 91 P P 09 24 28.5 +0.3
OPA pmax pmax
comp=Z,250nm,1.1s
OPA Opana 51.83 91 P P 09 24 28.5 +0.3
OPA IAmb IAmb 09 24 31.3
comp=Z,250nm,1.1s
TPRI Tanjung Pinang 51.87 234 P P 09 24 32.2 +3.7
USP Ospenovka 51.87 299 P P 09 24 29.1 +0.7
SNR=73
FRU1 Bishkek 51.94 299 P P 09 24 29.6 +0.7
FRU1 pmax pmax
comp=Z,245nm,1.1s
FRU1 Bishkek 51.94 299 P P 09 24 29.6 +0.7
FRU1 IAmb IAmb 09 24 31.2
comp=Z,245nm,1.1s
KIP Kipapa 51.96 91 ⇓ *e*P **P 09 24 29.2 0.0**
KIP pmax pmax
comp=Z,149nm,1.1s
MTN Manton Dam 51.98 196 P P 09 24 28.7 -0.6
AAK Ala-Archa 52.09 299 P P 09 24 30.8 +0.7
comp=Z,51nm,0.9s,baz=85,slow=5.6,SNR=58
AAK PcP **PcP 09 25 42.6 +0.5**
comp=Z,22nm,1.0s,baz=59,slow=4.1,SNR=3.8
AAK Ala-Archa 52.09 299 P P 09 24 30.9 +0.7
SNR=49
AAK Ala-Archa 52.09 299 *i* P **P 09 24 30.9 +0.7**
SNR=56
AAK Ala-Archa 52.09 299 *d* iP **P 09 24 30.2 +0.1**
AAK pmax pmax
comp=Z,158nm,1.3s
AAK MLR MLR
comp=Z,2μm,18.0s
AAK Ala-Archa 52.09 299 P P 09 24 30.8 +0.7
AAK Ala-Archa 52.09 299 IAMs_20 IAMs_20 09 46 05.7
comp=Z,2μm,19.0s
KSH Kashi 52.14 294 P P 09 24 35.1 +4.6
KSH pP pwP 09 24 37.9 -2.7
KSH PcP **PcP 09 25 46.6 +4.3**
KSH PP **PP 09 26 35.3 +6.7**
KSH S **S 09 31 59.6 +5.0**
KSH SS **SS 09 35 35.7 +4.1**
KSH pmax pmax
comp=Z,480nm,1.2s
KSH pmax pmax
comp=Z,2μm,4.5s
KSH LR LR
comp=Z,5μm,16.7s
KSH LR LR
comp=Z,4μm,15.1s
KSH LR LR
comp=Z,3μm,14.9s
UCH Uchtor 52.22 298 P P 09 24 32.6 +1.1
SNR=32
DHAK Deception Hill 52.22 40 P P 09 24 32.9 +2.2
DHAK IAmb IAmb 09 24 33.9
comp=Z,260nm,1.2s
INK Inuvik 52.54 28 P P 09 24 34.1 +1.3
comp=Z,155nm,1.1s,baz=281,slow=7.6,SNR=361
INK PcP **PcP 09 25 43.6 +0.6**
comp=Z,44nm,1.0s,baz=257,slow=5.8,SNR=4.4
INK Inuvik 52.54 28 P P 09 24 34.0 +1.1
INK pmax pmax
comp=Z,178nm,1.1s
INK Inuvik 52.54 28 P P 09 24 34.0 +1.1
INK IAmb IAmb 09 24 35.4
comp=Z,178nm,1.1s
EKS2 Erkin-Say 52.58 299 P P 09 24 34.5 +0.7
SNR=52
PLAI Plampang 52.70 214 P P 09 24 33.3 -1.3
comp=Z,2μmcomp=Z,110nm,1.5s
WBSI Waikabubak, Su 52.74 211 P P 09 24 36.1 +1.1
comp=Z,1μmcomp=Z,90nm,1.2s
BASI Baing, Sumba 52.78 210 P P 09 24 34.8 -0.5
comp=Z,2μmcomp=Z,127nm,0.9s
PBA Port Blair 52.81 254 P P 09 24 34.1 -1.5
PBA IAmb IAmb 09 24 43.8
comp=Z,213nm,1.2s
AML Almayashu 52.82 298 P P 09 24 37.1 +1.3
SNR=201
KMMI Kalianget 52.92 219 P P 09 24 37.1 +0.8
comp=Z,111nm,1.3s
BWNR Bhubaneshwar 53.21 268 *eP* **P 09 24 38.7 +0.2**
BWNR IAmb IAmb 09 24 42.6
comp=Z,106nm,1.5s
SRBI Singaraja 53.22 217 P P 09 24 39.2 +0.8
comp=Z,6μmcomp=Z,471nm,1.6s
PPBI Pangkal Pinang 53.24 230 P P 09 24 39.9 +1.2
KHLH Kahului Airpor 53.49 91 P P 09 24 40.1 -0.5
KHLH IAmb IAmb 09 24 44.1
comp=Z,273nm,1.2s
WHY Whitehorse 53.50 37 P P 09 24 40.8 +0.6
WHY IAmb IAmb 09 24 43.5
comp=Z,183nm,0.9s
GRJI Gresik 53.56 221 P P 09 24 42.0 +1.0
comp=Z,2μmcomp=Z,129nm,1.2s
SKAG Skagway 53.58 39 P P 09 24 41.3 +0.7
SKAG IAmb IAmb 09 24 47.4
comp=Z,163nm,1.0s
LHMI Lhok Sumawe 53.92 245 P P 09 24 44.8 +1.1
comp=Z,3μmcomp=Z,171nm,1.0s
LHMI Lhok Sumawe 53.92 245 P P 09 24 40.8 -2.9
LHMI IAmb IAmb 09 24 54.6
comp=Z,280nm,1.3s
UWJI Ujung Watu 53.95 223 P P 09 24 45.0 +1.1
comp=Z,2μmcomp=Z,144nm,1.4s
BESE Bessie Mountai 54.04 40 P P 09 24 45.0 +0.9
BESE IAmb IAmb 09 24 47.4
comp=Z,269nm,1.3s
JAGI Jajag, Banyuwa 54.06 218 P P 09 24 42.4 -2.3
DZA Taraz 54.18 300 *eP* **P 09 24 44.5 -1.0**
DZA Taraz 54.18 300 *eP* **P 09 24 44.4 -1.0**
SIT Sitka 54.21 42 P P 09 24 47.2 +1.9
SIT pmax pmax
comp=Z,79nm,1.0s
SIT MLR MLR
comp=Z,1μm,19.0s
SIT Sitka 54.21 42 P P 09 24 47.2 +1.9
PSI Prapat 54.23 241 P P 09 24 46.3 +0.2
comp=Z,43nm,0.9s,baz=360,slow=4.4,SNR=33
PSI PcP **PcP 09 25 51.0 +0.5**
comp=Z,24nm,0.9s,baz=178,slow=1.7,SNR=4.5
PSI Prapat 54.23 241 P P 09 24 45.8 -0.3
PSI pmax pmax
comp=Z,96nm,1.1s
RPSI Rantau Prapat 54.30 241 P P 09 24 46.3 -0.2
RPSI PcP **PcP 09 25 51.0 +0.4**
RPSI Rantau Prapat 54.30 241 P P 09 24 45.8 -0.7
RPSI IAmb IAmb 09 24 49.7
comp=Z,96nm,1.1s
DDI Dehra Dun 54.35 283 *eP* **P 09 24 47.2 +0.4**
JIS Juneau Island 54.36 40 P P 09 24 46.8 +0.4
JIS IAmb IAmb 09 24 49.8
comp=Z,190nm,1.0s
KCSI Kotacane, Aceh 54.52 243 P P 09 24 47.3 -0.8
comp=Z,1μmcomp=Z,44nm,1.6s
A36M Sachs Harbour 54.57 22 P P 09 24 49.2 +1.5
baz=284,SNR=166
BKNI Bangkinang 54.59 237 P P 09 24 49.7 +1.1
comp=Z,18μmcomp=Z,467nm,1.2s
BKNI Bangkinang 54.59 237 P P 09 24 48.7 +0.1
KHLU Kahalu`u 54.62 92 P P 09 24 49.7 +0.7
KHLU IAmb IAmb 09 24 51.5
comp=Z,141nm,1.1s
KK31 Karatay Array 54.66 300 *i* P **P 09 24 48.1 -0.8**
KK31 Karatay Array 54.66 300 P P 09 24 49.0 +0.1
KK31 IAmb IAmb 09 24 51.4
comp=Z,212nm,1.4s
KKAR Karatay Array 54.66 300 P P 09 24 49.0 +0.1
KKAR pmax pmax
comp=Z,212nm,1.4s
KKAR Karatay Array 54.66 300 P P 09 24 49.0 +0.1
KKAR IAmb IAmb 09 24 51.4
comp=Z,212nm,1.4s
SMLA Simla 54.67 284 *eP* **P 09 24 49.2 +0.2**
SMLA IAmb IAmb 09 24 52.3
comp=Z,173nm,1.0s
SMRI Semarang 54.75 223 P P 09 24 49.8 +0.1
comp=Z,228nm,1.1s
SMRI Semarang 54.75 223 P P 09 24 48.7 -0.9
SMRI IAmb IAmb 09 25 04.2
comp=Z,288nm,1.2s
POHA Pohakuloa 54.81 91 P P 09 24 50.9 +0.4

POHA IAmb IAmb 09 24 53.2
comp=Z,190nm,0.9s
DHRM DHARAMSHALA 54.83 286 ⇓*i*P **P** **09 24 50.4 -0.1**
PWJI Pagerwojo 54.85 221 P **P** **09 24 49.3 -1.1**
comp=Z,3μmcomp=Z,216nm,1.1s
JBG Jabagly 54.89 300*d i*P **P** **09 24 51.5 +0.8**
JBG *e*S **S** **09 32 33.4 +1.4**
MLOA Mauna Loa Obse 54.90 92 P **P** **09 24 52.9 +1.6**
MLOA IAmb IAmb 09 24 54.2
comp=Z,233nm,1.0s
MWH Moku'aweowe 54.91 92 P **P** **09 24 50.9 -0.6**
HMH Humu'ula Sheep 54.94 92 P **P** **09 24 52.4 +0.9**
HMH IAmb IAmb 09 24 55.7
comp=Z,190nm,1.2s
MLSI Meulaboh, Aceh 54.97 245 P **P** **09 24 51.4 0.0**
comp=Z,9μmcomp=Z,167nm,0.7s
KHU Kahuku 55.02 92 P **P** **09 24 52.6 +0.6**
KHU pmax pmax
comp=Z,453nm,1.1s
KHU Kahuku 55.02 92 P **P** **09 24 52.6 +0.6**
MLH Mauna Loa 55.07 92 P **P** **09 24 53.7 +1.3**
MLH IAmb IAmb 09 24 55.2
comp=Z,177nm,0.9s
AIN Ainahou 55.08 92 P **P** **09 24 52.4 0.0**
WOJI Wonogiri, Jawa 55.15 222 P **P** **09 24 53.3 +0.7**
comp=Z,73nm,1.4s
BRLS Boroldaу 55.15 301 *e*S **S** **09 32 37.7 +2.6**
MNSI Mandailing Nat 55.23 239 P **P** **09 24 53.0 -0.2**
comp=Z,46nm,0.6s
KNRA Kununurra 55.28 198 P **P** **09 24 53.1 -0.3**
SDSI Sungai Dareh 55.28 236 P **P** **09 24 54.3 +0.7**
comp=Z,3μmcomp=Z,239nm,1.3s
PCJI Pacitan 55.32 221 P **P** **09 24 54.2 +0.4**
comp=Z,86nm,1.1s
IUG Iuzhnay 55.35 300 ⇓*i*P **P** **09 24 54.4 +0.4**
IUG *e*S **S** **09 32 37.5 -0.6**
IUG Iuzhnay 55.35 300*d i*P **P** **09 24 54.3 +0.4**
IUG *e*S **S** **09 32 37.4 -0.6**
UGM Wanagama 55.42 222 P **P** **09 24 54.1 -0.5**
comp=Z,7μmcomp=Z,427nm,1.4s
UGM Wanagama 55.42 222 P **P** **09 24 53.9 -0.7**
YOGI Yogyakarta 55.47 222 P **P** **09 24 54.6 -0.3**
comp=Z,4μmcomp=Z,368nm,1.4s
C36M Paulatuk 55.65 25 P **P** **09 24 56.5 +1.0**
baz=287,SNR=184
C36M Paulatuk 55.65 25 P **P** **09 24 56.5 +1.0**
C36M IAmb IAmb 09 24 57.8
comp=Z,245nm,1.1s
NDI New Delhi 55.75 282 *e*P **P** **09 24 56.0 -0.9**
CRAG Craig 55.85 43 P **P** **09 24 57.9 +0.7**
CRAG IAmb IAmb 09 25 00.5
comp=Z,128nm,1.0s
WRAK Wrangell Islan 55.97 42 P **P** **09 24 58.1 +0.1**
WRAK IAmb IAmb 09 25 01.3
comp=Z,129nm,1.0s
WRAK Wrangell Islan 55.97 42 IAMs_20 IAMs_20 09 45 43.6
comp=Z,1μm,20.0s
SVE Sverdlovsk 56.00 319*c i*P **P** **09 24 59.4 +1.1**
SVE *e* 09 27 03.1
SVE *e*S **S** **09 32 47.9 +1.9**
SVE pmax pmax
comp=Z,419nm,1.1s
SVE pmax pmax
comp=Z,530nm,9.3s
SVE MLR MLR
comp=E,7μm,16.0s
SVE MLR MLR
comp=Z,11μm,16.0s
SVE MLR MLR
comp=N,3μm,16.0s
LEM Lembang 56.12 226 P **P** **09 24 59.3 -0.4**
comp=N,150nm,0.7s,baz=44,slow=5.6,SNR=22
LEM LR LR 09 48 28.2
comp=N,491nm,22.0s,baz=0.5,slow=36
LEM Lembang 56.12 226 P **P** **09 24 59.7 0.0**
comp=N,2μmcomp=N,173nm,1.3s
KRJI Kerinci 56.13 235 P **P** **09 25 00.5 +0.7**
comp=N,542nm,1.4s
TAS Tashkent 56.17 299 P **P** **09 25 00.7 +0.9**
TAS pmax pmax
comp=Z,138nm,0.8s
TAS Tashkent 56.17 299 IAMs_20 IAMs_20 09 47 56.8
comp=Z,2μm,21.0s
GSI Gunungsitoli 56.23 241 P **P** **09 25 01.1 +0.6**
comp=Z,35μmcomp=Z,1μm,1.4s
GSI Gunungsitoli 56.23 241 P **P** **09 24 58.1 -2.4**
MDSI Maura Dua 56.27 231 P **P** **09 25 00.6 0.0**
comp=Z,3μmcomp=Z,220nm,1.4s
SNSI Sinabang, Aceh 56.32 243 P **P** **09 25 02.6 +1.5**
comp=Z,274nm,1.4s
DBJI Dramaga 56.39 227 P **P** **09 25 01.4 -0.1**
comp=Z,85nm,2.2s
MASI Maura Aman, Be 56.43 233 P **P** **09 25 02.3 +0.4**
comp=Z,23μmcomp=Z,286nm,0.6s
DLBC Dease Lake 56.50 39 P **P** **09 25 04.3 +2.4**
comp=Z,74nm,0.8s,baz=290,slow=7.4,SNR=142
DLBC Dease Lake 56.50 39 P **P** **09 25 04.2 +2.3**
DLBC IAmb IAmb 09 25 05.6
comp=Z,147nm,1.1s
NIL Nilore 56.51 289 P **P** **09 25 02.0 -0.3**
NIL pmax pmax
comp=Z,688nm,1.5s
NIL MLR MLR
comp=Z,1μm,19.0s
NIL Nilore 56.51 289 P **P** **09 25 02.0 -0.3**
KSI Kapahiang 56.60 233 P **P** **09 25 02.6 -0.5**
comp=Z,115nm,1.1s
CISI Cisompet, Garu 56.60 225 P **P** **09 25 01.3 -1.8**
comp=Z,128nm,1.2s
CISI Cisompet, Garu 56.60 225 P **P** **09 25 00.6 -2.5**
PBSI Pulau Batu 56.73 239 P **P** **09 25 04.8 +0.8**
comp=Z,186nm,1.4s
LWLI Liwa 56.76 230 P **P** **09 25 03.6 -0.7**
comp=Z,98nm,1.2s
CNJI Cibinong 56.79 226 P **P** **09 25 01.6 -2.7**
comp=Z,3μmcomp=Z,115nm,1.2s
MNAI Manna 56.92 232 P **P** **09 25 05.9 +0.6**
comp=Z,158nm,1.4s
MNAI Manna 56.92 232 P **P** **09 25 04.0 -1.4**
DIB Dawson Inlet, 56.97 45 P **P** **09 25 05.8 +0.6**
DIB IAmb IAmb 09 25 07.6
comp=Z,122nm,1.0s
H02S1 DAWSON INLET T 56.97 45 P **P** **09 25 06.7 +1.5**
SNR=10
SISI Saibi 57.12 238 P **P** **09 25 07.1 +0.4**
comp=Z,43nm,0.9s
ARU Arti 57.22 319 LR LR 09 51 37.3
comp=Z,3μm,19.1s,baz=74,slow=38
ARU Arti 57.22 319*d i*P **P** **09 25 07.4 +0.5**
ARU 09 26 00.1
ARU 09 27 16.4
ARU PPP PPP 09 28 28.5
ARU S **S** **09 33 02.3 +0.2**
ARU 09 34 54.2
ARU SS **SS** **09 36 52.1 +1.5**
ARU pmax pmax
comp=Z,516nm,1.3s
ARU MLR MLR
comp=Z,11μm,16.0s
ARU Arti 57.22 319 P **P** **09 25 07.1 +0.2**
MOBC Moresby Island 57.28 45 P **P** **09 25 08.0 +0.5**
KNTN Kanton 57.38 125 P **P** **09 25 08.2 -0.4**
KNTN IAmb IAmb 09 25 12.8
comp=Z,163nm,1.1s
PPSI Pulau Pagai 57.58 236 P **P** **09 25 10.8 +0.8**
comp=Z,331nm,1.1s
CTA Charters Tower 57.73 178 P **P** **09 25 10.2 -0.7**
comp=Z,11nm,1.1s,baz=346,slow=7.4,SNR=6.4
CTA LR LR 09 46 30.4
comp=Z,609nm,21.9s,baz=8.5,slow=32
CTAO Charters Tower 57.73 178 P **P** **09 25 09.8 -1.0**
CTAO pmax pmax
comp=Z,41nm,1.4s
CTAO Charters Tower 57.73 178 P **P** **09 25 09.8 -1.0**
NGP Nagpur 58.09 273 *e*P **P** **09 25 13.3 -0.3**
NGP IAmb IAmb 09 25 16.1
comp=Z,270nm,1.6s
WB0 Warramunga Arr 58.13 191 P **P** **09 25 12.4 -1.2**
PVM Polavaram 58.18 268 *e*P **P** **09 25 14.7 +0.5**
PVM IAmb IAmb 09 25 16.0
comp=Z,83nm,1.4s
WB5 Warramunga Arr 58.24 191 IAMs_20 IAMs_20 09 49 18.2
comp=Z,2μm,22.0s
BHPL Bhopal 58.28 276 *e*P **P** **09 25 14.4 -0.5**
BHPL IAmb IAmb 09 25 18.4
comp=Z,60nm,1.2s

WR0 Warramunga Arr 58.30 191 P **P** **09 25 13.3 -1.5**
WR9 Warramunga Arr 58.30 191 IAMs_20 IAMs_20 09 49 20.7
comp=Z,1μm,19.0s
WRAB Tennant Creek 58.30 191*d i*P **P** **09 25 13.2 -1.7**
WRAB pmax pmax
comp=Z,317nm,0.9s
WRAB Tennant Creek 58.30 191 P **P** **09 25 13.4 -1.5**
WB2 Warramunga Arr 58.31 191 P **P** **09 25 13.7 -1.2**
WRA Warramunga Arr 58.31 191 P **P** **09 25 14.0 -0.9**
comp=Z,264nm,0.9s,baz=9.0,slow=7.0,SNR=186
WRA LR LR 09 49 31.5
comp=Z,739nm,22.0s,baz=10.0,slow=35
WRA PKPPKP **P'P'df** **09 54 51.4 +4.5**
comp=Z,2.0nm,1.1s,baz=161,slow=2.2,SNR=3.5
WRA Warramunga Arr 58.31 191 P **P** **09 25 14.0 -0.9**
FITZ Fitzroy Crossi 58.42 201 P **P** **09 25 15.4 -0.3**
FITZ IAmb IAmb 09 25 19.3
comp=Z,243nm,1.1s
AB31 Akbulak array 59.12 311 P **P** **09 25 20.4 +0.1**
ABKAR Akbulak array 59.12 311 P **P** **09 25 20.4 0.0**
ABKAR IAmb IAmb 09 25 21.9
comp=Z,131nm,0.9s
RPR Rampur 59.13 271 *e*P **P** **09 25 21.0 +0.1**
RPR IAmb IAmb 09 25 22.2
comp=Z,81nm,1.4s
KBL Kabul 59.24 292 P **P** **09 25 21.3 -0.4**
KBL pmax pmax
comp=Z,114nm,1.0s
KBL MLR MLR
comp=Z,2μm,18.0s
KBL Kabul 59.24 292 P **P** **09 25 21.3 -0.4**
KBL IAmb IAmb 09 25 22.7
comp=Z,114nm,1.0s
KBL IAMs_20 IAMs_20 09 53 32.9
comp=Z,2μm,18.0s
MYLAV Mylavaram 59.24 268 *e*P **P** **09 25 22.3 +0.7**
MYLAV IAmb IAmb 09 25 23.7
comp=Z,97nm,1.3s
HOPEN Hopen 59.73 346 *e*P **P** **09 25 25.2 +1.1**
AKTO Aktyubinsk 59.79 312 LR LR 09 52 18.0
comp=Z,2μm,18.0s,baz=66,slow=37
AKTO PKP2bc 09 55 01.6
comp=Z,1.5nm,0.8s,baz=152,slow=2.8,SNR=7.0
AKTO Aktyubinsk 59.79 312 P **P** **09 25 24.7 -0.2**
BBB Bella Bella 59.82 45 P **P** **09 25 25.1 +0.1**
BBB IAmb IAmb 09 25 27.4
comp=Z,154nm,1.2s
SRSP Sriramsagar 59.85 271 *e*P **P** **09 25 25.7 -0.1**
SRSP IAmb IAmb 09 25 26.9
comp=Z,175nm,1.2s
SPA0 Spitsbergen Ar 60.09 349 P **P** **09 25 27.0 +0.4**
SPA0 IAmb IAmb 09 25 28.5
comp=Z,114nm,1.2s
SPA0 Spitsbergen Ar 60.09 349 *e*P **P** **09 25 27.1 +0.4**
SPITS Spitsbergen Ar 60.09 349 P **P** **09 25 26.9 +0.2**
KBS Kingsbay 60.17 351*d i*P **P** **09 25 27.7 +0.6**
KBS pmax pmax
comp=Z,163nm,1.0s
KBS MLR MLR
comp=Z,1μm,21.0s
KBS Kingsbay 60.17 351 P **P** **09 25 28.2 +1.1**
KBS IAmb IAmb 09 25 29.4
comp=Z,184nm,1.0s
KBS Kingsbay 60.17 351 *e*P **P** **09 25 28.2 +1.1**
XMIS Christmas Isla 60.21 225 P **P** **09 25 26.9 -1.3**
XMIS IAmb IAmb 09 25 29.4
comp=Z,117nm,1.3s
ADKI Addanki 60.28 267 *e*P **P** **09 25 29.4 +0.6**
ADKI IAmb IAmb 09 25 30.8
comp=Z,51nm,1.4s
NOR Nord 60.30 357 ⇓*i*P **P** **09 25 28.4 +0.4**
NOR pmax pmax
comp=Z,110nm,1.0s
NOR Nord 60.30 357 ⇓*i*P **P** **09 25 28.4 +0.4**
comp=Z,105nm,1.0s
NJS Nagarjunasagar 60.41 268 *e*P **P** **09 25 29.3 -0.4**
NJS IAmb IAmb 09 25 30.9
comp=Z,40nm,1.3s
HYB Hyderabad 60.52 270 *i* P **P** **09 25 30.0 -0.4**
comp=Z,300nm,1.4s
HYB *e*sP **pwP** **09 25 40.0 -0.6**
HYB *e*PcP **PcP** **09 26 14.0 -1.0**
HYB *e*S **S** **09 33 46.0 0.0**
HYBB Hyderabad (bro 60.52 270 *e*P **P** **09 25 30.3 -0.1**
HYBB IAmb IAmb 09 25 31.5
comp=Z,60nm,1.1s
SRLM Srisailam 60.99 268 *e*P **P** **09 25 33.3 -0.3**
SRLM IAmb IAmb 09 25 34.6
comp=Z,35nm,1.2s
HSPB Hornsund (broa 61.05 348 *e*P **P** **09 25 34.4 +1.2**
RES Resolute Bay 61.16 15 P **P** **09 25 34.3 +0.4**
RES pmax pmax
comp=Z,253nm,1.3s
RES Resolute Bay 61.16 15 P **P** **09 25 34.3 +0.4**
PRGR Permogore 61.27 327 ⇓*i*P **P** **09 25 35.3 +0.5**
PRGR pmax pmax
comp=Z,223nm,1.0s
MDRS Chennai 61.66 265 *e*P **P** **09 25 38.7 +0.5**
MDRS IAmb IAmb 09 25 41.1
comp=Z,51nm,0.8s
SKHT Srikalahasti 61.70 266 *e*P **P** **09 25 39.1 +0.7**
SKHT IAmb IAmb 09 25 40.3
comp=Z,85nm,1.4s
KLRI Killari 61.70 271 *e*P **P** **09 25 38.1 -0.4**
KLRI IAmb IAmb 09 25 39.1
comp=Z,135nm,1.2s
YKA Yellowknife Ar 61.88 31 P **P** **09 25 39.4 +0.4**
comp=Z,54nm,0.8s,baz=301,slow=6.2,SNR=407
YKA PKPPKP P'P'df 09 54 39.5 -16
comp=Z,0.5nm,0.9s,baz=150,slow=2.2,SNR=4.1
YKA PKP2bc 09 54 49.8
comp=Z,2.3nm,1.0s,baz=124,slow=2.6,SNR=9.0
AS31 Alice Springs 62.03 191 P **P** **09 25 39.4 -1.1**
ASAR Alice Springs 62.03 191 P **P** **09 25 39.5 -1.0**
comp=Z,58nm,0.9s,baz=9.9,slow=5.7,SNR=199
ASAR LR LR 09 51 35.7
comp=Z,814nm,21.8s,baz=356,slow=35
ASAR PKPPKP **P'P'df** **09 54 39.0 -2.2**
comp=Z,1.2nm,0.9s,baz=172,slow=3.5,SNR=5.2
ASAR PKP2bc 09 54 49.1
comp=Z,3.1nm,1.1s,baz=168,slow=2.3,SNR=7.7
LVZ Lovozero 62.24 336*de*P **P** **09 25 40.8 -0.5**
LVZ pmax pmax
comp=Z,147nm,1.3s
LVZ MLR MLR
comp=Z,3μm,24.0s
APA Apatity 62.82 336 ⇓*i*P **P** **09 25 44.5 -0.6**
APA *i* 09 28 05.0
APA *i*S **S** **09 34 10.0 -3.7**
URV Uravakonda 62.94 268 *e*P **P** **09 25 46.6 -0.1**
URV IAmb IAmb 09 25 47.8
comp=Z,246nm,1.9s
TMCR Tamitsa 63.06 332 *e*P **P** **09 25 45.7 -1.1**
TMCR pmax pmax
comp=Z,270nm,1.0s
DZM Mont Dzumac 63.20 157 *e*P **P** **09 25 49.3 +1.0**
comp=Z,167nm,1.2s
DZM *e*S **S** **09 34 18.9 -0.7**
comp=Z,5μm,29.1s
DZM Mont Dzumac 63.20 157 *e*LR LR 09 44 38.5
comp=Z,2μm,22.4s
DZM Mont Dzumac 63.20 157 P **P** **09 25 49.3 +1.0**
comp=Z,43nm,0.9s,baz=58,slow=9.7,SNR=17
DZM LR LR 09 49 32.2
comp=Z,1μm,21.9s,baz=1.5,slow=32
DZM Mont Dzumac 63.20 157 P **P** **09 25 48.5 +0.3**
DZM IAmb IAmb 09 25 52.9
comp=Z,82nm,1.1s
EIDS Eidsvold 63.27 173 P **P** **09 25 48.3 -0.3**
PSAD1 Pilbara Seismi 63.38 206 P **P** **09 25 48.8 -0.6**
PSAD1 IAmb IAmb 09 25 52.3
comp=Z,196nm,1.1s
PSAD1 IAMs_20 IAMs_20 09 43 31.6
comp=Z,1μm,19.0s
KEV Kevo 63.42 340 P **P** **09 25 49.6 +0.5**
KEV pmax pmax
comp=Z,136nm,1.0s
KEV Kevo 63.42 340 P **P** **09 25 49.6 +0.5**
KEV IAmb IAmb 09 25 50.8
comp=Z,136nm,1.0s
PSAC2 Pilbara Seismi 63.46 205 P **P** **09 25 49.5 -0.5**
PSAC2 IAmb IAmb 09 25 52.7
comp=Z,171nm,1.1s
PSA00 Pilbara Seismi 63.49 206 P **P** **09 25 48.7 -1.4**
PSA00 IAmb IAmb 09 26 01.4
comp=Z,105nm,0.9s
PSAB1 Pilbara Seismi 63.49 206 P **P** **09 25 49.7 -0.5**
PSAB1 IAmb IAmb 09 25 52.9
comp=Z,121nm,1.1s
PSAA1 Pilbara Seismi 63.50 206 IAMs_20 IAMs_20 09 44 35.5
comp=Z,2μm,22.0s
HAMF Hammerfest 63.73 341 *e*P **P** **09 25 51.2 0.0**
MSVF Nonsavu 63.80 144‖ *e*P **P** **09 25 54.2 +1.9**
MSVF pmax pmax
comp=Z,65nm,1.1s
MSVF MLR MLR
comp=Z,724nm,15.0s
TULEG Thule 63.91 8 P **P** **09 25 52.0 -0.3**
ARCES ARCESS Array B 63.97 340 P **P** **09 25 53.1 +0.4**
comp=Z,45nm,0.8s,baz=56,slow=8.9,SNR=79
ARE0 ARCESS Array S 63.97 340 P **P** **09 25 53.2 +0.4**
ARE0 ARCESS Array S 63.97 340 *e*P **P** **09 25 53.1 +0.4**
LLLB Lillooet 64.01 45 P **P** **09 25 54.6 +1.2**
LLLB IAmb IAmb 09 25 55.9
comp=Z,143nm,1.1s
XMAS Kiritimati 64.05 109 P **P** **09 25 54.9 +0.9**
XMAS IAmb IAmb 09 25 58.7
comp=Z,253nm,1.4s
KLMR Klimovskoe 64.22 328*d i*P **P** **09 25 54.6 +0.1**
KLMR *e* 09 28 12.9
KLMR pmax pmax
comp=Z,315nm,1.5s
KLMR MLR MLR
comp=Z,3μm,15.0s
KLMR Klimovskoe 64.22 328 ⇓*i*P **P** **09 25 54.6 +0.1**
KLMR ⇑*i*P **P** **09 25 54.6 +0.1**
KLMR ⇑*i*P **P** **09 25 54.6 +0.1**
KLMR AMP 09 25 56.2
comp=Z,315nm,1.5s
KLMR *e*PP **PP** **09 28 13.0 -2.3**
KLMR LQ LQ 09 51 42.5
KLMR LQ LQ 09 51 42.5
KLMR LR LR 09 52 20.4
KLMR AMP 09 56 34.0
comp=Z,3μm,15.3s
HRA Herat 64.25 295 P **P** **09 25 55.8 +0.3**
HRA IAmb IAmb 09 25 57.6
comp=Z,169nm,1.2s
HRA IAMs_20 IAMs_20 09 55 28.7
comp=Z,2μm,21.0s
NLWA Neilton Lookou 64.41 49 P **P** **09 25 58.1 +2.0**
A04D Lummi Island 64.45 47 P **P** **09 25 57.9 +1.7**
baz=299,SNR=15
D03D Eldon 64.81 48 P **P** **09 26 00.9 +2.3**
baz=299,SNR=108
KTK1 Kautokeino 64.92 340 *e*P **P** **09 25 59.2 +0.2**
E03A Lebam 65.01 50 P **P** **09 26 01.6 +1.7**
SGF Sodankyl 65.01 338 P **P** **09 26 00.8 +1.2**
B05A Bryant 65.03 47 P **P** **09 26 01.6 +1.6**
baz=300,SNR=79
DAG Danmarks Havn 65.08 356 ⇓*i*P **P** **09 26 00.0 +0.1**
DAG pmax pmax
comp=Z,150nm,0.9s
DAG Danmarks Havn 65.08 356 ⇓*i*P **P** **09 26 00.0 +0.1**
comp=Z,146nm,0.9s
D04E Lakebay 65.17 49 P **P** **09 26 03.4 +2.4**
baz=300,SNR=12
B06A Marblemount 65.26 47 P **P** **09 26 02.7 +1.2**
B06A IAmb IAmb 09 26 04.0
comp=Z,155nm,1.1s
F03A Seaside 65.31 50 P **P** **09 26 02.1 +0.1**
GOA Goa 65.34 271 ⇓*i*P **P** **09 26 02.2 -0.3**
GEYT Alibeck 65.41 300 P **P** **09 26 03.1 +0.4**
comp=Z,102nm,1.0s,baz=38,slow=2.6,SNR=152
GEYT LR LR 09 57 18.7
comp=Z,1μm,19.8s,baz=70,slow=38
GYA0B ALIBECK ARRAY 65.41 300 P **P** **09 26 03.0 +0.2**
GYA0B IAmb IAmb 09 26 07.6
comp=Z,170nm,1.1s
GYA0B IAMs_20 IAMs_20 09 57 17.0
comp=Z,2μm,19.0s
F04D Rainier, OR 65.57 50 P **P** **09 26 05.5 +2.0**
baz=300,SNR=5.5
E04D Cinebar 65.60 49 P **P** **09 26 05.9 +2.2**
baz=300,SNR=68
TRO Tromso 65.61 342 *e*P **P** **09 26 03.7 +0.3**
D05A Enumclaw 65.63 48 P **P** **09 26 06.0 +2.1**
G03D McMinnville, O 65.85 51 P **P** **09 26 07.3 +1.9**
baz=300,SNR=21
C06D Leavenworth 65.90 47 P **P** **09 26 07.2 +1.5**
baz=300,SNR=6.8
LON Longmire 65.95 49 P **P** **09 26 05.9 -0.2**
LON pmax pmax
comp=Z,80nm,1.1s
LON Longmire 65.95 49 P **P** **09 26 05.9 -0.2**
LON IAmb IAmb 09 26 08.8
comp=Z,80nm,1.1s
I02D Swisshome 66.04 52 P **P** **09 26 08.7 +2.1**
baz=300,SNR=9.8
COR Corvallis 66.14 51 P **P** **09 26 07.5 +0.2**
COR pmax pmax
comp=Z,328nm,1.1s
COR Corvallis 66.14 51 P **P** **09 26 07.5 +0.2**
LTY Liberty 66.37 48 P **P** **09 26 09.9 +1.1**
LTY IAmb IAmb 09 26 10.7
comp=Z,107nm,1.0s
J01E Myrtle Point 66.47 53 P **P** **09 26 11.4 +2.0**
baz=300,SNR=19
H04D Lebanon 66.52 51 P **P** **09 26 11.7 +2.0**
baz=301,SNR=25
GIRL Giralia 66.54 210 P **P** **09 26 10.0 0.0**
I03D Drain, OR 66.56 52 P **P** **09 26 12.2 +2.3**
baz=301,SNR=42
B08A Colville Reser 66.58 46 P **P** **09 26 10.2 +0.1**
F05D White Salmon 66.60 49 P **P** **09 26 11.9 +1.7**
baz=301,SNR=21
OUL Oulu 66.73 336 P **P** **09 26 11.8 +1.1**
H04A Detroit Lake 66.78 51 P **P** **09 26 12.9 +1.5**
COCO West Island 66.78 232 P **P** **09 26 11.2 -0.4**
COCO pmax pmax
comp=Z,409nm,1.2s
COCO West Island 66.78 232 P **P** **09 26 11.2 -0.4**
KULLO Kullorsuaq 66.87 6 ⇓*i*P **P** **09 26 11.4 0.0**
KULLO pmax pmax
comp=Z,230nm,1.0s
KULLO Kullorsuaq 66.87 6 ⇓*i*P **P** **09 26 11.4 0.0**
comp=Z,226nm,1.0s
K02D Willamette Mer 66.87 53 P **P** **09 26 13.9 +1.8**
baz=301,SNR=51
G05D Wamic, OR 67.02 50 P **P** **09 26 14.7 +1.8**
baz=301,SNR=52
I04A Tendick Farm, 67.09 52 P **P** **09 26 15.0 +1.6**
baz=301,SNR=33
KRMB Red Mountain 67.32 54 P **P** **09 26 15.9 +0.9**
KRMB IAmb IAmb 09 26 18.4
comp=Z,165nm,1.4s
HUMO Hull Mountain 67.36 53 P **P** **09 26 15.8 +0.7**
G06A Carlson Farm, 67.43 50 P **P** **09 26 16.4 +0.9**
G06A IAmb IAmb 09 26 18.6
comp=Z,186nm,1.1s
I05D Terrebonne, OR 67.47 51 P **P** **09 26 17.5 +1.6**
baz=302,SNR=70
C09A Chrisman Ranch 67.47 46 P **P** **09 26 16.1 +0.3**
HAWA Hanford 67.48 48 P **P** **09 26 17.3 +1.5**
HAWA IAmb IAmb 09 26 18.7
comp=Z,133nm,1.1s
D08A Wollman Farm, 67.49 47 P **P** **09 26 16.4 +0.5**
D08A IAmb IAmb 09 26 18.3
comp=Z,116nm,0.9s
F07A Phinny Hill Vi 67.51 49 P **P** **09 26 17.8 +1.8**
J04D Umpqua Nationa 67.57 52 P **P** **09 26 18.5 +1.8**
baz=301,SNR=76
JCC Jacoby Creek, 67.60 55 P **P** **09 26 17.9 +1.3**
E08A Dider Farm, El 67.71 48 P **P** **09 26 18.5 +1.3**
E08A IAmb IAmb 09 26 19.8
comp=Z,97nm,0.9s
KHMM Horse Mountain 67.77 55 P **P** **09 26 18.6 +0.7**
STEI Steigen 67.77 342 *e*P **P** **09 26 17.3 0.0**
NEW Newport 67.88 45 P **P** **09 26 19.4 +1.0**
NEW pmax pmax
comp=Z,185nm,1.1s
NEW Newport 67.88 45 P **P** **09 26 19.4 +1.0**
baz=302,SNR=118
NEW Newport 67.88 45 P **P** **09 26 19.4 +1.0**
NEW IAmb IAmb 09 26 20.8
comp=Z,185nm,1.1s
MOS Moscow 67.89 324 *e*P **P** **09 26 15.9 -2.3**
MOS *e* 09 26 43.2
MOS *e*PPP PPP 09 30 26.2
MOS *e*S **S** **09 35 14.9 -1.4**

MOS *e* 09 35 54.8
MOS pmax pmax
comp=Z,800nm,1.8s
MOS pmax pmax
comp=Z,378nm,1.4s
MOS pmax pmax
comp=N,173nm,1.2s
MOS pmax pmax
comp=E,120nm,1.2s
MOS MLR MLR
comp=N,4µm,16.0s
MOS MLR MLR
comp=E,4µm,16.0s
MOS MLR MLR
comp=Z,6µm,16.0s
YBH Yreka Blue Hor 67.97 54 P **P** **09 26 20.3 +1.2**
YBH pmax pmax
comp=Z,152nm,1.2s
YBH Yreka Blue Hor 67.97 54 P **P** **09 26 20.3 +1.2**
YBH IAmb IAmb 09 26 22.5
comp=Z,152nm,1.1s
L04D Klamath Falls 67.98 53 P **P** **09 26 20.9 +1.7**
baz=302,SNR=127
PINE Pine Mountain 68.00 51 P **P** **09 26 21.3 +1.9**
LOF Lofoten 68.04 342 *eP* **P** **09 26 17.7 -1.2**
M02C Callahan 68.06 54 P **P** **09 26 21.8 +2.2**
baz=302,SNR=66
J05D Fort Rock, OR 68.09 52 P **P** **09 26 21.9 +2.0**
baz=302,SNR=182
K04D Chiloquin, OR 68.11 53 P **P** **09 26 21.6 +1.6**
baz=302
KMRM Mail Ridge 68.12 56 P **P** **09 26 20.7 +0.7**
KMRM IAmb IAmb 09 26 23.0
comp=Z,98nm,1.1s
SUF Sumiainen 68.21 334 P **P** **09 26 21.1 +1.0**
E09A Wood Farm, Sta 68.23 47 P **P** **09 26 21.7 +1.1**
ARMA Armidale 68.33 173 P **P** **09 26 21.8 +0.6**
N02D Trinity Center 68.38 54 P **P** **09 26 23.7 +2.0**
baz=302,SNR=96
G08A Pilot Rock 68.41 49 P **P** **09 26 23.1 +1.3**
VRH Novokhopyorsk 68.45 319 *eP* **P** **09 26 21.5 -0.3**
VRH *eS* **S** **09 35 20.9 -2.1**
VRH pmax pmax
comp=Z,120nm,0.8s
VRH smax smax
comp=E,420nm,3.9s
VRH MLR MLR
comp=Z,7µm,16.0s
KCPM Cahto Peak 68.48 56 P **P** **09 26 24.3 +1.9**
M04C Macdoel 68.50 53 P **P** **09 26 24.2 +1.8**
baz=302,SNR=118
PUL Pulkovo 68.58 330 *c iP* **P** **09 26 23.2 +0.8**
PUL pmax pmax
comp=Z,108nm,0.5s
K05A Summer Lake 68.60 52 P **P** **09 26 25.2 +2.1**
WDC Whiskeytown Da 68.69 55 P **P** **09 26 23.7 +0.2**
WDC Whiskeytown Da 68.69 55 P **P** **09 26 23.7 +0.2**
WDC IAmb IAmb 09 26 26.5
comp=Z,136nm,1.1s
I07A Izee 68.73 50 P **P** **09 26 25.1 +1.2**
I07A IAmb IAmb 09 26 26.7
comp=Z,105nm,1.1s
O02D Mt. Diablo Mer 68.74 55 P **P** **09 26 25.9 +2.0**
baz=302,SNR=89
OBN Obninsk 68.75 324 ⇑P **P** **09 26 24.3 +0.8**
OBN Obninsk 68.75 324 *d iP* **P** **09 26 23.7 +0.2**
OBN *e* 09 26 43.9
OBN *e* 09 28 58.4
OBN *eS* **S** **09 35 28.5 +2.1**
OBN pmax pmax
comp=Z,424nm,1.7s
OBN MLR MLR
comp=Z,5µm,15.0s
OBN Obninsk 68.75 324 P **P** **09 26 23.8 +0.2**
F10A Beach Ranch, E 69.06 48 P **P** **09 26 26.9 +1.0**
LPSR Galich'ya Gora 69.08 321 *eP* **P** **09 26 25.6 -0.1**
LPSR *eS* **S** **09 35 28.5 -2.0**
LPSR pmax pmax
comp=Z,180nm,1.0s
LPSR smax smax
comp=E,280nm,2.6s
LPSR MLR MLR
comp=Z,2µm,15.0s
FIA1 FINESS Array S 69.08 333 P **P** **09 26 26.0 +0.5**
FINES FINESS Array B 69.09 333 P **P** **09 26 25.8 +0.2**
comp=Z,86nm,0.8s,baz=46,slow=8.2,SNR=176
FINES LR LR 10 00 21.4
comp=Z,4µm,18.3s,baz=58,slow=39
VAF Ylistaro 69.16 335 P **P** **09 26 27.3 +1.3**
HOPS Hopland Field 69.19 56 P **P** **09 26 27.9 +1.3**
HOPS IAmb IAmb 09 26 29.5
comp=Z,187nm,1.3s
WALA Waterton Lakes 69.22 44 P **P** **09 26 27.2 +0.3**
WALA IAmb IAmb 09 26 29.3
comp=Z,193nm,1.1s
MOR8 Moi Rana 69.31 341 *eP* **P** **09 26 25.6 -1.3**
O03E Paynes Creek 69.32 55 P **P** **09 26 28.6 +1.1**
baz=303,SNR=136
KONS Konsvik 69.40 341 *eP* **P** **09 26 28.2 +0.7**
MOD Modoc Plateau 69.41 53 P **P** **09 26 29.6 +1.4**
MOD IAmb IAmb 09 26 30.9
comp=Z,135nm,1.1s
GDXM Geysers 69.47 56 IAMs_20 IAMs_20 09 57 25.5
comp=Z,2µm,18.0s
VORR Voronezh 69.48 320 *eP* **P** **09 26 26.0 -2.2**
VORR pmax pmax
comp=Z,350nm,1.4s
STKA Stephens Creek 69.48 182 P **P** **09 26 27.4 -0.8**
comp=Z,27nm,0.8s,baz=355,slow=8.6,SNR=20
STKA LR LR 09 55 26.9
comp=Z,592nm,21.9s,baz=2.2,slow=35
STKA Stephens Creek 69.48 182 P **P** **09 26 27.8 -0.4**
BMO Blue Mountains 69.63 49 P **P** **09 26 30.9 +1.5**
BMO pmax pmax
comp=Z,139nm,1.2s
BMO Blue Mountains 69.63 49 P **P** **09 26 30.9 +1.5**
BMO IAmb IAmb 09 26 32.1
comp=Z,139nm,1.1s
JMIC Jan Mayen 69.66 351 *eP* **P** **09 26 30.3 +1.4**
MAK Makhachkala 69.71 309 *eP* P 09 26 24.3 -5.4
MAK *e* 09 29 00.4
MAK *eS* S 09 35 27.2 -11
MAK pmax pmax
comp=Z,370nm,1.5s
MAK MLR MLR
comp=Z,3µm,14.0s
J08A Circle Bar Ran 69.75 50 P **P** **09 26 31.8 +1.6**
VSR Storozhevoye 69.76 320 *eP* **P** **09 26 29.7 -0.2**
VSR *eS* **S** **09 35 35.2 -3.4**
VSR pmax pmax
comp=Z,260nm,1.9s
VSR smax smax
comp=E,150nm,2.6s
VSR MLR MLR
comp=Z,8µm,16.0s
MCCM Marconi Confer 69.77 57 P **P** **09 26 31.4 +1.2**
MCCM IAmb IAmb 09 26 32.6
comp=Z,150nm,0.9s
SUMG Summit 69.78 1 ⇓*iP* **P** **09 26 31.3 +1.1**
SUMG pmax pmax
comp=Z,500nm,0.9s
SUMG Summit 69.78 1 P **P** **09 26 31.4 +1.1**
SUMG Summit 69.78 1 ⇓*iP* **P** **09 26 31.3 +1.1**
comp=Z,498nm,0.9s
VORD Divnogorie 69.84 319 *eP* **P** **09 26 30.2 -0.2**
VORD pmax pmax
comp=Z,80nm,0.9s
ORV Oroville 69.91 55 P **P** **09 26 31.8 +0.7**
ORV pmax pmax
comp=Z,166nm,1.2s
ORV Oroville 69.91 55 P **P** **09 26 31.8 +0.7**
ORV IAmb IAmb 09 26 33.3
comp=Z,166nm,1.2s
FORT Forrest 70.01 195 P **P** **09 26 31.0 -0.5**
WVOR Wild Horse Val 70.16 51 P **P** **09 26 34.0 +1.3**
WVOR pmax pmax
comp=Z,248nm,1.3s
WVOR Wild Horse Val 70.16 51 P **P** **09 26 34.0 +1.3**
WVOR IAmb IAmb 09 26 35.6
comp=Z,248nm,1.3s
AKT Akhty 70.38 308 *eP* **P** **09 26 34.3 +0.2**
AKT *e* 09 26 56.1
AKT pmax pmax
comp=Z,143nm,0.9s
MSO Missoula 70.47 46 P **P** **09 26 35.3 +0.8**
baz=305,SNR=72
MSO Missoula 70.47 46 P **P** **09 26 35.4 +0.8**
MSO IAmb IAmb 09 26 36.8
comp=Z,187nm,1.4s
BEKR Beckworth 70.48 54 P **P** **09 26 35.9 +1.1**
BEKR IAmb IAmb 09 26 37.3
comp=Z,174nm,1.0s
AFDM Forest Hills D 70.59 55 P **P** **09 26 36.2 +0.9**
AFDM IAmb IAmb 09 26 37.9
comp=Z,144nm,1.4s
GROC Groznyy 70.62 310 *eP* **P** **09 26 34.0 -1.3**
GROC *e* 09 26 55.0
GROC *eS* **S** **09 35 49.2 +0.3**
GROC pmax pmax
comp=Z,116nm,1.3s
BBOO Buckleboo 70.79 187 P **P** **09 26 35.7 -0.5**
VSU Vasula 70.84 330 *eP* **P** **09 26 36.6 +0.2**
VSU Vasula 70.84 330 *d iP* **P** **09 26 36.3 -0.1**
VSU pmax pmax
comp=Z,429nm,1.0s
VSU MLR MLR
comp=Z,5µm,18.0s
SEKA Sheki 70.86 308 P **P** **09 26 37.1 +0.1**
RUBR Rubicon Trail 71.06 55 P **P** **09 26 39.6 +1.2**
RUBR IAmb IAmb 09 26 41.1
comp=Z,125nm,0.9s
LGD Lagodekhi 71.11 309 P **P** **09 26 38.6 +0.2**
PAHR Pah Rah Range 71.19 54 P **P** **09 26 40.4 +1.3**
PAHR IAmb IAmb 09 26 41.8
comp=Z,170nm,1.1s
GOF Gofitskoye 71.20 313 ⇓*iP* **P** **09 26 39.5 +0.7**
GOF *eS* **S** **09 35 56.9 +1.3**
GOF pmax pmax
comp=Z,317nm,1.0s
LKRN Lenkeran, Azer 71.24 305 P **P** **09 26 39.3 +0.1**
NSS Namsos 71.25 340 *eP* **P** **09 26 38.6 -0.1**
VCNR Virginia City 71.25 55 P **P** **09 26 40.8 +1.3**
VCNR IAmb IAmb 09 26 41.8
comp=Z,90nm,1.0s
MFID Camas Ranch 71.32 49 P **P** **09 26 40.9 +1.2**
MFID IAmb IAmb 09 26 42.5
comp=Z,178nm,1.1s
PNTR Pine Nut 71.40 55 P **P** **09 26 42.0 +1.6**
PNTR IAmb IAmb 09 26 42.8
comp=Z,126nm,1.0s
SCO Scoresbysund 71.45 355 P **P** **09 26 40.2 +0.3**
SCO pmax pmax
comp=Z,188nm,1.3s
SCO MLR MLR
comp=Z,800nm,20.0s
SCO Scoresbysund 71.45 355 P **P** **09 26 40.2 +0.3**
SCO IAmb IAmb 09 26 42.1
comp=Z,188nm,1.3s
SCO Scoresbysund 71.45 355 ⇓*iP* **P** **09 26 40.7 +0.8**
comp=Z,177nm,1.3s
CMB Columbia Colle 71.48 56 P **P** **09 26 42.1 +1.4**
CMB pmax pmax
comp=Z,228nm,1.2s
CMB Columbia Colle 71.48 56 P **P** **09 26 42.1 +1.4**
CMB IAmb IAmb 09 26 43.4
comp=Z,228nm,1.2s
SAO San Andreas Ge 71.48 58 P **P** **09 26 41.3 +0.6**
SAO pmax pmax
comp=Z,131nm,1.4s
SAO San Andreas Ge 71.48 58 P **P** **09 26 41.3 +0.6**
SAO IAmb IAmb 09 26 43.3
comp=Z,132nm,1.4s
SAO IAMs_20 IAMs_20 09 56 43.3
comp=Z,1µm,18.0s
YERR Yerington 71.69 55 P **P** **09 26 40.5 -1.7**
YERR IAmb IAmb 09 26 45.0
comp=Z,220nm,1.1s
MORW Morawa 71.70 206 P **P** **09 26 41.1 -0.8**
MORW IAmb IAmb 09 26 44.0
comp=Z,126nm,1.2s
FFC Flin Flon 71.70 34 P **P** **09 26 42.4 +0.7**
FFC pmax pmax
comp=Z,228nm,1.0s
FFC Flin Flon 71.70 34 P **P** **09 26 42.4 +0.7**
GANJ Ganja 71.73 307 P **P** **09 26 42.5 +0.3**
NCK Nalchik 71.77 311 ⇓*eP* **P** **09 26 42.9 +0.5**
NCK pmax pmax
comp=Z,94nm,1.2s
GUDG Gudauri 71.83 310 P **P** **09 26 43.7 +0.7**
WAKR Walker 71.83 55 P **P** **09 26 44.5 +1.5**
WAKR IAmb IAmb 09 26 45.4
comp=Z,104nm,1.1s
ZEI Tsey 72.00 310 *eP* **P** **09 26 40.7 -3.3**
ZEI pmax pmax
comp=Z,55nm,0.9s
KIV Kislovodsk 72.05 312 ⇓P **P** **09 26 45.3 +1.2**
KIV Kislovodsk 72.05 312 *i* P **P** **09 26 44.9 +0.8**
SNR=45
KIV Kislovodsk 72.05 312 *eP* **P** **09 26 45.0 +0.9**
KIV pmax pmax
comp=Z,748nm,1.0s
KIV Kislovodsk 72.05 312 P **P** **09 26 44.6 +0.6**
KBZ Khabaz 72.05 312 P **P** **09 26 45.0 +1.0**
comp=Z,96nm,0.9s,baz=62,slow=4.7,SNR=165
KBZ LR LR 10 03 57.7
comp=Z,1µm,18.1s,baz=55,slow=40
KBZ Khabaz 72.05 312 *d iP* **P** **09 26 44.8 +0.8**
KBZ pmax pmax
comp=Z,193nm,1.0s
EGMT Eagleton 72.08 43 P **P** **09 26 44.9 +0.7**
baz=307,SNR=59
EGMT Eagleton 72.08 43 P **P** **09 26 44.7 +0.5**
EGMT IAmb IAmb 09 26 47.3
comp=Z,156nm,1.4s
DLMT Dillon 72.08 46 P **P** **09 26 44.6 +0.2**
DLMT IAmb IAmb 09 26 46.9
comp=Z,171nm,1.2s
TBLG Delisi 72.09 309 P **P** **09 26 44.6 +0.3**
TBLG pmax pmax
comp=Z,135nm,1.1s
TBLG Delisi 72.09 309 P **P** **09 26 44.6 +0.3**
TBLG IAmb IAmb 09 26 46.0
comp=Z,134nm,1.1s
FCC Fort Churchill 72.16 28 P **P** **09 26 44.0 -0.4**
FCC pmax pmax
comp=Z,354nm,1.3s
FCC Fort Churchill 72.16 28 P **P** **09 26 44.0 -0.4**
PMPB Monarch Peak 72.22 58 P **P** **09 26 43.7 -1.5**
PMPB IAmb IAmb 09 26 48.1
comp=Z,118nm,1.2s
RYN Ryan 72.36 55 P **P** **09 26 47.0 +0.9**
RYN IAmb IAmb 09 26 48.9
comp=Z,124nm,1.0s
ONI Oni 72.38 310 P **P** **09 26 47.4 +1.3**
KVN Kaiserville 72.39 54 P **P** **09 26 47.8 +1.4**
KVN pmax pmax
comp=Z,257nm,1.1s
KVN Kaiserville 72.39 54 P **P** **09 26 47.8 +1.4**
NEY Neytrino 72.43 311 *d iP* **P** **09 26 47.7 +1.2**
NEY pmax pmax
comp=Z,11nm,1.0s
MDPB Devils Postpil 72.56 56 P **P** **09 26 48.8 +1.3**
ILULI Ilulissat 72.57 6 P **P** **09 26 46.9 +0.3**
ILULI pmax pmax
comp=Z,151nm,1.0s
ILULI Ilulissat 72.57 6 P **P** **09 26 46.9 +0.3**
ILULI IAmb IAmb 09 26 48.4
comp=Z,151nm,1.0s
ILULI Ilulissat 72.57 6 ⇓*iP* **P** **09 26 47.1 +0.5**
comp=Z,153nm,1.0s
NVAR Mina Array Bea 72.61 55 P **P** **09 26 49.1 +1.4**
comp=Z,85nm,0.8s,baz=284,slow=6.4,SNR=537
NVAR PKPPKP P'P'df 09 54 17.9 -19
comp=Z,0.3nm,0.6s,baz=106,slow=8.4,SNR=2.8
OMMB Old Mammoth Mi 72.62 56 P **P** **09 26 49.1 +1.2**
OMMB IAmb IAmb 09 26 50.8
comp=Z,128nm,1.3s
NV11 Mina Array Sit 72.70 55 P **P** **09 26 49.5 +1.3**
NV11 IAmb IAmb 09 26 51.0
comp=Z,179nm,1.3s
MLAC Mammoth, Mammo 72.72 56 P **P** **09 26 50.2 +1.8**
baz=305,SNR=100
TBLU Trondheim 72.72 340 *eP* **P** **09 26 47.5 -0.2**
WSAR Wadi Sarin 72.84 286 P **P** **09 26 49.5 +0.5**
SNR=11
PAGB Antelope Grade 72.86 58 P **P** **09 26 50.6 +1.6**
IZAR Zarasai 72.88 329 *eP* **P** **09 26 49.4 +0.7**
WBK Wadi Bani Khal 72.94 286 P **P** **09 26 50.5 +0.8**
SNR=22
WBK P **pP** **09 26 51.2 -0.5**
SNR=9.4
WBK S **SKiKP** **09 36 23.8 +1.2**
CAN Canberra 73.00 176 P **P** **09 26 49.2 -0.3**
CAN pmax pmax
comp=Z,65nm,1.2s
CAN Canberra 73.00 176 P **P** **09 26 49.2 -0.3**
MICGM Minsk 73.03 327 ⇓*eP* **P** **09 26 50.0 +0.4**
MICGM ⇓*eP* **P** **09 26 50.0 +0.4**
MICGM PM 09 26 51.0
comp=Z,0.9nm,1.5s
MICGM *e*PcP **PcP** **09 27 08.0 +1.6**
MICGM *e*PP **PP** **09 29 34.0 +2.4**
MICGM *e*PPP PPP 09 31 24.0
MICGM *e*S **S** **09 36 16.0 -0.3**
MICGM *e*SS **SS** **09 41 00.0 +4.0**
MICGM *e*SSS SSS 09 44 00.0
MICGM *e*LQ LQ 09 57 16.0
MICGM *e*LR LR 10 00 00.0
MICGM LRM MLR 10 02 04.0
comp=Z,11nm,16.0s
MNK Minsk 73.03 327 ⇓*eP* **P** **09 26 50.0 +0.4**
MNK *e* 09 26 50.0
MNK *e* 09 27 08.0
MNK *e* 09 29 34.0
MNK *e* 09 31 24.0
MNK *eS* **S** **09 36 16.0 -0.3**
MNK *e* 09 41 00.0
MNK pmax pmax
comp=Z,890nm,1.5s
MNK MLR MLR
comp=Z,11µm,16.0s
AKH Akhalkalaki 73.04 309 ⇑P **P** **09 26 51.7 +1.6**
AKH Akhalkalaki 73.04 309 IAMs_20 IAMs_20 10 04 09.7
comp=Z,1µm,18.0s
ISAL Salakas 73.05 328 *eP* **P** **09 26 50.3 +0.6**
BGD Bogdanovka 73.06 309 P **P** **09 26 50.6 +0.3**
BIDO Bidbid 73.07 287 P **P** **09 26 50.8 +0.5**
SNR=23
BIDO S **SKiKP** **09 36 25.6 +2.9**
BANOM Banah 73.09 290 *i* P **P** **09 26 50.5 0.0**
SNR=50
BANOM Banah 73.09 290 P **P** **09 26 51.1 +0.6**
SNR=31
NAX Nakhchivan 73.09 307 P **P** **09 26 50.6 +0.2**
VOG Valley Oaks Go 73.10 57 P **P** **09 26 51.2 +0.9**
baz=305
SLIT Slitere, Latvi 73.12 332 *eP* **P** **09 26 50.1 0.0**
SHME Shamm 73.14 290 *i* P **P** **09 26 50.8 0.0**
SNR=36
IIGN Ignalina 73.16 328 *eP* **P** **09 26 51.1 +0.7**
YHL Hebgen Lake 73.19 46 P **P** **09 26 51.6 +0.4**
ELK Elko 73.21 51 P **P** **09 26 52.1 +0.8**
ELK pmax pmax
comp=Z,85nm,1.3s
ELK Elko 73.21 51 P **P** **09 26 52.1 +0.8**
NACGM Naroch 73.23 328 *eP* **P** **09 26 50.0 -0.8**
NACGM PM 09 26 51.0
comp=Z,0.5nm,1.0s
NACGM *e*LQ LQ 09 53 36.0
NACGM *e*LR LR 10 01 08.0
NACGM LRM MLR 10 02 56.0
YHB Horse Butte 73.24 46 P **P** **09 26 52.3 +0.9**
SMMC Simmler 73.27 58 P **P** **09 26 53.0 +1.6**
baz=305,SNR=28
SMDO Samad 73.39 286 P **P** **09 26 52.7 +0.3**
SNR=22
YHH Holmes Hill 73.42 46 P **P** **09 26 52.8 +0.3**
YMR Madison River 73.42 46 P **P** **09 26 53.2 +0.8**
MDH Madha 73.44 289 *i* P **P** **09 26 51.9 -0.7**
SNR=14
MDH Madha 73.44 289 P **P** **09 26 51.9 -0.7**
SNR=22
TIN Tinemaha, Big 73.44 56 P **P** **09 26 54.1 +1.5**
baz=305,SNR=18
MSFE Esma-Masafi 73.51 289 *i* P **P** **09 26 53.2 +0.2**
SNR=50
YNM Yellowstone No 73.54 46 P **P** **09 26 54.0 +0.9**
YNR Norris Junctio 73.56 46 P **P** **09 26 54.0 +0.8**
VES Vestal, Richgr 73.57 57 P **P** **09 26 53.7 +0.6**
baz=305,SNR=98
PKM Mcpherson Peak 73.63 58 P **P** **09 26 55.4 +1.7**
baz=305,SNR=55
HOQ Hoqain 73.65 287 P **P** **09 26 54.1 +0.3**
SNR=49
HOQ S **S** **09 36 27.4 +3.1**
YUF Upper Falls 73.66 46 P **P** **09 26 53.9 +0.1**
UOSS Minazif 73.71 289 *i* P **P** **09 26 53.6 -0.5**
SNR=71
UOSS Minazif 73.71 289 P **P** **09 26 53.9 -0.2**
UOSS Minazif 73.71 289 P **P** **09 26 53.9 -0.2**
UOSS IAmb IAmb 09 26 55.5
comp=Z,262nm,1.3s
JMDO Jabal Madar 73.73 286 P **P** **09 26 55.0 +0.6**
SNR=9.3
JMDO P **P** **09 26 55.0 +0.6**
SNR=24
YPP Pitchstone Pla 73.76 46 pP 09 26 56.4 -0.2
YNE Yellowstone No 73.76 45 P **P** **09 26 54.8 +0.4**
UMQ Umm Al-Quwin 73.79 290 *i* P **P** **09 26 55.5 +1.0**
SNR=8.4
UMQ Umm Al-Quwin 73.79 290 P **P** **09 26 55.6 +1.1**
SNR=7.6
LKWY Lake 73.81 46 P **P** **09 26 55.9 +1.1**
LKWY pmax pmax
comp=Z,92nm,1.2s
LKWY Lake 73.81 46 P **P** **09 26 55.9 +1.1**
H17A Grant Village 73.81 46 P **P** **09 26 57.7 +2.9**
baz=307,SNR=92
H17A Grant Village 73.81 46 P **P** **09 26 56.9 +2.1**
H17A IAmb IAmb 09 26 59.1
comp=Z,176nm,1.1s
HATD Hatta, Dubai 73.83 289 *i* P **P** **09 26 54.9 0.0**
SNR=93
HATD Hatta, Dubai 73.83 289 P **P** **09 26 55.1 +0.2**
SNR=71
YMP Mirror Lake Pl 73.84 46 P **P** **09 26 56.5 +1.5**
CWC Cottonwood Cre 73.89 56 P **P** **09 26 56.4 +1.1**
baz=305
IMW Indian Meadow 73.91 47 P **P** **09 26 57.3 +1.9**
IMW IAmb IAmb 09 26 58.1
comp=Z,114nm,1.1s
SOHO SOHO 73.92 288 P **P** **09 26 55.1 -0.3**
SNR=45
FLWY Flagg Ranch 73.93 46 P **P** **09 26 57.5 +2.1**
FLWY IAmb IAmb 09 26 59.2
comp=Z,316nm,1.4s
SBC Santa Barbara 73.95 59 P **P** **09 26 57.3 +1.9**
baz=305,SNR=9.8
ASHO Ashiyiah 73.97 289 *i* P **P** **09 26 56.0 +0.3**
SNR=90
ASHO Ashiyiah 73.97 289 P **P** **09 26 56.2 +0.5**
SNR=84
PABE Paberze 73.98 329 *eP* **P** **09 26 55.6 +0.4**
SOC Sochi 74.00 313 *eP* **P** **09 26 54.9 -0.6**
SOC *eS* **SKiKP** **09 36 25.0 +1.4**
SOC *eSS* **SS** **09 41 13.5 +2.2**
SOC pmax pmax
comp=Z,102nm,1.0s
MOL Molde 74.00 341 *eP* **P** **09 26 55.6 +0.4**
FXWY Fox Creek 74.01 47 P **P** **09 26 57.5 +1.6**
BATM Batumi 74.02 310 ⇑P **P** **09 26 56.9 +1.1**
BATM Batumi 74.02 310 P **P** **09 26 56.8 +1.1**
DOMB Dombas 74.03 340 *eP* **P** **09 26 55.8 +0.4**
NC405 NORSAR Array S 74.03 338 P **P** **09 26 55.5 0.0**
NC405 IAmb IAmb 09 26 56.6
comp=Z,249nm,1.1s
GRAC Grapevine Rang 74.04 55 P **P** **09 26 57.5 +1.5**
baz=306,SNR=148
NC303 NORSAR Array S 74.04 338 P **P** **09 26 55.8 +0.3**
NC303 IAmb IAmb 09 26 56.6
comp=Z,232nm,1.1s
ISA Isabella, Lake 74.08 57 P **P** **09 26 56.1 -0.2**
ISA pmax pmax
comp=Z,71nm,1.1s
ISA Isabella, Lake 74.08 57 P **P** **09 26 56.6 +0.4**
baz=305,SNR=46
ISA Isabella, Lake 74.08 57 P **P** **09 26 56.1 -0.2**
NAZ Nazwa, Dubai 74.09 289 *i* P **P** **09 26 56.0 -0.3**
SNR=25
NAZ Nazwa, Dubai 74.09 289 P **P** **09 26 56.5 +0.2**
SNR=31
HVU Hansel Valley 74.10 49 P **P** **09 26 58.1 +1.7**
HVU pmax pmax
comp=Z,209nm,1.4s
HVU Hansel Valley 74.10 49 P **P** **09 26 58.1 +1.7**

Sta	Name	Dist	Az	Phase	Phase	Time	Res
RLMT	Red Lodge	74.11	45	P	P	09 26 57.7	+1.3
	baz=308,SNR=60						
RLMT	Red Lodge	74.11	45	P	P	09 26 57.6	+1.2
TPAW	Teton Pass	74.14	47	P	P	09 26 58.1	+1.4
TPAW				IAmb	IAmb	09 27 00.9	
	comp=Z,294nm,1.4s						
ARVC	Arvin	74.15	58	P	P	09 26 57.6	+1.0
	baz=305,SNR=38						
BCA	Borcka	74.16	310	⇑P	P	09 26 57.8	+1.2
NC204	NORSAR Array S	74.18	339	P	P	09 26 56.6	+0.3
NB201	NORSAR Array S	74.21	338	P	P	09 26 55.8	-0.7
BSY	Bisya	74.21	287	P	P	09 26 57.7	+0.6
	SNR=30						
NB2	NORSAR Subarra	74.24	338	P	P	09 26 56.6	-0.1
	comp=Z,160nm,1.0s,baz=38,slow=6.2						
NB2	NORSAR Subarra	74.24	338	P	P	09 26 56.6	-0.1
	baz=38,slow=6.2						
NOA	NORSAR Array B	74.24	338	P	P	09 26 56.8	+0.2
	comp=Z,66nm,0.8s,baz=38,slow=5.9,SNR=195						
NOA				LR	LR	10 03 19.8	
	comp=Z,2μm,21.7s,baz=30,slow=39						
SCZ2	Santa Cruz Isl	74.26	59	P	P	09 26 58.6	+1.3
	baz=305,SNR=7.4						
SNOW	Snow King Moun	74.28	47	P	P	09 26 58.0	+0.5
REDW	Red Top Meadow	74.28	47	P	P	09 26 57.0	-0.5
REDW				IAmb	IAmb	09 27 00.6	
	comp=Z,255nm,1.5s						
FAQ	Al Faqa, Dubai	74.28	289	*i* P	P	09 26 57.3	-0.1
	SNR=8.0						
FAQ	Al Faqa, Dubai	74.28	289	P	P	09 26 57.4	-0.1
	SNR=8.2						
NBO00	NORSAR Array S	74.37	338	P	P	09 26 57.5	0.0
NBO00				IAmb	IAmb	09 26 58.5	
	comp=Z,254nm,1.1s						
ARQ	Araqi	74.38	288	P	P	09 26 59.0	+0.8
	SNR=49						
NC602	NORSAR Array S	74.39	338	P	P	09 26 56.6	-0.9
NC602				IAmb	IAmb	09 26 58.2	
	comp=Z,154nm,1.2s						
NORES	NORESS Array B	74.39	338	P	P	09 26 57.8	+0.3
NORES				pmax	pmax		
	comp=Z,45nm,1.0s						
R11A	Troy Canyon, C	74.40	53	P	P	09 26 59.5	+1.3
	baz=306,SNR=216						
R11A	Troy Canyon, C	74.40	53	P	P	09 26 58.9	+0.7
R11A				IAmb	IAmb	09 27 00.9	
	comp=Z,204nm,1.2s						
PBUR	Paburge	74.41	331	*e*P	P	09 26 58.1	+0.4
BGU	Big Grassy Mou	74.46	50	P	P	09 26 59.0	+0.5
AKN	Aaknes	74.47	341	*e*P	P	09 26 58.5	+0.5
NAO01	NORSAR Array S	74.49	338	P	P	09 26 58.3	+0.2
NAO01				IAmb	IAmb	09 26 59.0	
	comp=Z,194nm,1.1s						
NAO01	NORSAR Array S	74.49	338	*e*P	P	09 26 58.0	-0.1
AHID	Auburn Hatcher	74.50	48	P	P	09 26 59.1	+0.4
MPMC	Manual Prospec	74.50	56	P	P	09 26 60.0	+1.1
	baz=306,SNR=186						
OSI	Osito Audit: C	74.52	58	P	P	09 27 00.2	+1.4
	baz=306,SNR=10						
OSI	Osito Audit: C	74.52	58	P	P	09 26 58.5	-0.3
OSI				IAmb	IAmb	09 27 01.5	
	comp=Z,135nm,0.9s						
ANN	Anapa	74.55	315 *d*	*i*P	P	09 26 58.8	+0.1
ANN				*e*S	S	09 36 32.6	-1.1
ANN				pmax	pmax		
	comp=Z,225nm,1.7s						
ALNE	Al Ain	74.55	289	*i* P	P	09 26 58.9	-0.2
	SNR=46						
SPUT	South Promonto	74.58	50	P	P	09 26 57.9	-1.2
MHTO	MHTO	74.63	285	P	P	09 26 59.7	+0.1
	SNR=46						
FURC	Furnace Creek,	74.68	56	P	P	09 27 01.0	+1.4
	baz=306,SNR=188						
DGMT	Dagmar	74.70	40	P	P	09 27 00.0	+0.4
	baz=310,SNR=38						
DGMT	Dagmar	74.70	40	P	P	09 27 00.0	+0.4
DGMT				IAmb	IAmb	09 27 01.4	
	comp=Z,189nm,1.2s						
LRMC	Laurel Mtn Rad	74.71	57	P	P	09 27 01.0	+0.9
	baz=306,SNR=70						
SNCC	San Nicolas Is	74.77	60	P	P	09 27 01.5	+1.3
	baz=306,SNR=9.1						
SNCC	San Nicolas Is	74.77	60	P	P	09 27 00.7	+0.5
LAO	LASA Array	74.79	42	P	P	09 27 01.3	+1.1
	baz=310,SNR=55						
LAO	LASA Array	74.79	42	P	P	09 27 01.1	+0.9
LAO				IAmb	IAmb	09 27 02.8	
	comp=Z,279nm,1.4s						
SFJD	Kangerlussuaq	74.79	6	⇓*i*P	P	09 27 00.1	+0.5
SFJD				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SFJD	Kangerlussuaq	74.79	6	P	P	09 27 00.1	+0.5
SFJD				IAmb	IAmb	09 27 01.4	
	comp=Z,128nm,1.0s						
SFJD	Kangerlussuaq	74.79	6	⇓*i*P	P	09 27 00.1	+0.5
	comp=Z,8.7nm,0.9s						
TPNV	Topopah Spring	74.79	55	P	P	09 27 01.7	+1.2
TPNV				pmax	pmax		
	comp=Z,198nm,1.1s						
TPNV	Topopah Spring	74.79	55	P	P	09 27 01.8	+1.2
	baz=306						
TPNV	Topopah Spring	74.79	55	P	P	09 27 01.7	+1.2
TPNV				IAmb	IAmb	09 27 03.1	
	comp=Z,198nm,1.1s						
AJN	Ajban	74.84	289	*i* P	P	09 27 00.6	-0.1
	SNR=11						
AJN	Ajban	74.84	289	P	P	09 27 00.4	-0.3
	SNR=23						
EDW2	Edwards Air Fo	74.86	58	P	P	09 27 02.1	+1.3
	baz=306,SNR=80						
NWAO	Narrogin (SRO)	74.86	203	P	P	09 26 59.7	-0.7
NWAO				pmax	pmax		
	comp=Z,127nm,1.2s						
NWAO	Narrogin (SRO)	74.86	203	P	P	09 27 00.1	-0.3
NWAO	Narrogin (SRO)	74.86	203	P	P	09 26 59.7	-0.7
NWAO				IAmb	IAmb	09 27 03.3	
	comp=Z,127nm,1.1s						
HWUT	Hardware Ranch	74.93	49	P	P	09 27 02.4	+1.2
AKASG	Malin Array Be	74.98	323	P	P	09 27 01.1	+0.1
	comp=Z,63nm,0.8s,baz=43,slow=6.2,SNR=304						
AKASG				LR	LR	10 01 19.6	
	comp=Z,749nm,19.5s,baz=15,slow=37						
AKBB	Malin Array Si	74.98	323 *d*	*i*P	P	09 27 01.1	0.0
AKBB	Malin Array Si	74.98	323	P	P	09 27 01.2	+0.1
AKBB				IAmb	IAmb	09 27 02.5	
	comp=Z,142nm,1.0s						
AKBB				IAMs_20	IAMs_20	10 00 58.8	
	comp=Z,1μm,18.0s						
DECC	Green Verdugo	74.99	58	P	P	09 27 02.4	+0.9
	baz=306,SNR=12						
DUG	Dugway, Tooele	75.03	51	P	P	09 27 03.1	+1.3
DUG				pmax	pmax		
	comp=Z,263nm,1.4s						
DUG	Dugway, Tooele	75.03	51	P	P	09 27 03.2	+1.5
	baz=307,SNR=150						
DUG	Dugway, Tooele	75.03	51	P	P	09 27 03.1	+1.3
DUG				IAmb	IAmb	09 27 04.8	
	comp=Z,263nm,1.4s						
TOO	Toolangi	75.13	179	P	P	09 27 01.7	-0.2
TOO				pmax	pmax		
	comp=Z,24nm,0.9s						
TOO	Toolangi	75.13	179	P	P	09 27 01.7	-0.2
PASC	Pasadena Art C	75.14	58	P	P	09 27 03.3	+0.9
TCUT	Toone Canyon	75.32	49	P	P	09 27 04.9	+1.4
FMP	Fort Macarthur	75.33	59	P	P	09 27 04.6	+1.1
	baz=306,SNR=9.3						
SUW	Suwalki	75.36	329	*i* P	P	09 27 03.1	0.0
SUW				LMZ	LR	10 01 26.6	
	comp=Z,1.8nm,21.0s						
SUW	Suwalki	75.36	329	P	P	09 27 02.4	-0.8
SUW				pmax	pmax		
	comp=Z,223nm,1.1s						
SUW				MLR	MLR		
	comp=Z,2μm,20.0s						
SUW	Suwalki	75.36	329	P	P	09 27 02.4	-0.8
SUW				IAmb	IAmb	09 27 04.7	
	comp=Z,223nm,1.1s						
SUW				IAMs_20	IAMs_20	10 01 33.8	
	comp=Z,2μm,20.0s						
SKAR	Skarslia	75.36	339	*e*P	P	09 27 03.9	+0.7
CTU	Camp Tracy	75.37	50	P	P	09 27 05.1	+1.3
PSUT	Pine Spring	75.38	52	P	P	09 27 05.0	+1.1
BW06	Boulder Array	75.39	47	P	P	09 27 04.7	+0.7
	baz=308,SNR=47						
BW06	Boulder Array	75.39	47	P	P	09 27 04.3	+0.3
PDAR	Pinedale Array	75.39	47	P	P	09 27 04.5	+0.5

Sta	Name	Dist	Az	Phase	Phase	Time	Res
	comp=Z,24nm,0.8s,baz=274,slow=2.6,SNR=223						
SHOC	Shoshone, Teco	75.39	56	P	P	09 27 04.9	+1.1
	baz=306						
GSC	Goldstone, Bar	75.40	57	P	P	09 27 04.4	+0.5
GSC				pmax	pmax		
	comp=Z,107nm,1.1s						
GSC	Goldstone, Bar	75.40	57	P	P	09 27 05.1	+1.1
	baz=306,SNR=86						
GSC	Goldstone, Bar	75.40	57	P	P	09 27 04.4	+0.5
GSC				IAmb	IAmb	09 27 06.3	
	comp=Z,107nm,1.1s						
CIS	Catalina Islan	75.44	59	P	P	09 27 04.9	+0.9
	baz=306,SNR=20						
BFSC	Mount Baldy Ra	75.45	58	P	P	09 27 05.1	+0.7
	baz=306,SNR=58						
FOO	Floro	75.46	341	*e*P	P	09 27 04.2	+0.6
RRX	Edison Barstow	75.52	57	P	P	09 27 05.9	+1.4
	baz=306,SNR=5.8						
HYA	Hoyanger	75.53	340	*e*P	P	09 27 04.6	+0.5
SCI2	San Clemente I	75.59	59	P	P	09 27 06.0	+1.1
	baz=306,SNR=7.2						
JLU	Jordanelle	75.61	50	P	P	09 27 06.2	+1.0
NLU	North Lily Min	75.62	50	P	P	09 27 05.6	+0.3
SHPR	Sheep Range	75.76	55	P	P	09 27 07.5	+1.4
SHPR				IAmb	IAmb	09 27 09.0	
	comp=Z,169nm,1.2s						
KONO	Kongsberg	75.84	338 *d*	*i*P	P	09 27 06.0	+0.2
KONO				pmax	pmax		
	comp=Z,60nm,0.9s						
KONO				MLR	MLR		
	comp=Z,2μm,20.0s						
KONO	Kongsberg	75.84	338	P	P	09 27 06.3	+0.5
KONO	Kongsberg	75.84	338	*e*P	P	09 27 06.2	+0.3
MPU	Maple Canyon	75.86	50	P	P	09 27 07.8	+1.1
TUQ	Turquoise Moun	75.90	56	P	P	09 27 08.0	+1.2
	baz=307,SNR=130						
BBRC	Big Bear Solar	75.94	58	P	P	09 27 08.0	+0.8
	baz=306,SNR=43						
HEC	Hector,Ludlow	75.99	57	P	P	09 27 08.4	+1.1
	baz=307,SNR=74						
SUE	Sulen	76.00	341	*e*P	P	09 27 07.0	+0.4
KLNR	Kaliningrad	76.12	330 *d*	*i*P	P	09 27 07.7	+0.2
KLNR				pmax	pmax		
	comp=Z,157nm,1.0s						
KLNR				MLR	MLR		
	comp=Z,3μm,18.0s						
MURC	Murrieta	76.14	58	P	P	09 27 09.0	+0.9
	baz=306,SNR=34						
CCUT	Cedar City	76.28	53	P	P	09 27 10.6	+1.5
SIM	Simferopol'	76.28	317 *c*	*e*P	P	09 27 08.9	+0.2
SIM				*e*		09 30 07.0	
SIM				*e*S	S	09 36 55.0	+2.0
SIM				*e*PS	PnS	09 37 51.0	+21
SIM				pmax	pmax		
	comp=Z,92nm,0.9s						
ASK	Askoy	76.37	341	*e*P	P	09 27 10.0	+1.1
BER	Bergen	76.42	340	*e*P	P	09 27 09.9	+0.8
SZCU	Shurtz Canyon	76.43	53	P	P	09 27 11.2	+1.2
MSU	Marysvale	76.44	52	P	P	09 27 11.5	+1.5
MSU	Marysvale	76.44	52	P	P	09 27 11.5	+1.5
GMRC	Granite Mounta	76.46	56	P	P	09 27 11.2	+1.1
	baz=307,SNR=64						
ODD1	Odda	76.47	340	*e*P	P	09 27 10.7	+1.2
TMUT	Trail Mountain	76.56	51	P	P	09 27 10.2	-0.5
109C	Camp Elliot, M	76.62	59	P	P	09 27 11.9	+1.1
	baz=307,SNR=26						
109C	Camp Elliot, M	76.62	59	P	P	09 27 10.7	-0.1
109C				IAmb	IAmb	09 27 13.2	
	comp=Z,207nm,1.3s						
PFO	Pinyon Flats O	76.63	58 *d*	*e*P	P	09 27 11.2	+0.2
PFO				pmax	pmax		
	comp=Z,131nm,1.3s						
PFO				MLR	MLR		
	comp=Z,1μm,17.0s						
PFO	Pinyon Flats O	76.63	58	P	P	09 27 11.8	+0.8
	baz=307,SNR=72						
PFO	Pinyon Flats O	76.63	58	P	P	09 27 11.0	0.0
PFO				IAmb	IAmb	09 27 13.3	
	comp=Z,203nm,1.4s						
XPFO	Pion Flat	76.63	58	P	P	09 27 11.0	0.0
XPFO				IAmb	IAmb	09 27 13.3	
	comp=Z,222nm,1.5s						
LCMT	Little Creek M	76.68	53	P	P	09 27 12.6	+1.3
BELC	Belle Mtn. Jos	76.70	57	P	P	09 27 12.0	+0.5
	baz=307,SNR=45						
MTPU	Mount Pierson	76.72	52	P	P	09 27 13.6	+1.8
P17A	Butcher Ranch,	76.73	50	P	P	09 27 12.9	+1.3
RDMU	Red Mountain	76.75	49	P	P	09 27 13.0	+1.3
ANGG	Ammassalik, Gr	76.78	1	P	P	09 27 11.5	+0.4
ANGG				IAmb	IAmb	09 27 12.3	
	comp=Z,133nm,1.0s						
Q16A	Castle Valley	76.81	51	P	P	09 27 13.4	+1.4
BLS5	Blasjo	76.93	339	*e*P	P	09 27 13.0	+0.9
KNB	Kanab	76.95	53	P	P	09 27 14.5	+1.7
KNB				pmax	pmax		
	comp=Z,362nm,1.3s						
KNB	Kanab	76.95	53	P	P	09 27 14.5	+1.7
PKCU	Pink Cliffs	77.01	53	P	P	09 27 13.9	+0.5
BAR	Barrett	77.04	59	P	P	09 27 13.3	+0.1
BORG	Borgarnes	77.05	354	P	P	09 27 14.2	+1.6
BORG				pmax	pmax		
	comp=Z,204nm,0.9s						
BORG	Borgarnes	77.05	354	P	P	09 27 14.2	+1.6
MONP2	Monument Peak	77.08	58	P	P	09 27 14.6	+0.9
	baz=307,SNR=39						
SRU	San Rafael Swe	77.09	50	P	P	09 27 14.4	+0.8
SRU				pmax	pmax		
	comp=Z,120nm,1.1s						
SRU	San Rafael Swe	77.09	50	P	P	09 27 14.4	+0.8
SORM	Soroca	77.14	322	⇑P	P	09 27 13.9	+0.4
SORM	Soroca	77.14	322	P	P	09 27 13.8	+0.4
NEE2	Needles Airpor	77.16	56	P	P	09 27 14.6	+0.8
	baz=307						
IRM	Iron Mountain	77.18	57	P	P	09 27 15.1	+1.1
	baz=307,SNR=82						
K22A	Casper	77.20	46	P	P	09 27 14.7	+0.6
	baz=310,SNR=70						
K22A	Casper	77.20	46	P	P	09 27 14.8	+0.6
K22A				IAmb	IAmb	09 27 16.2	
	comp=Z,149nm,1.1s						
BC3	Big Chuckawall	77.27	57	P	P	09 27 15.4	+0.8
	baz=307,SNR=60						
HOMB	Homborsund	77.30	338	*e*P	P	09 27 14.5	+0.4
HORU	Horodok	77.32	324	P	P	09 27 14.4	0.0
MDND	Maddock	77.41	38	P	P	09 27 15.6	+0.6
	baz=313,SNR=9.8						
MDND	Maddock	77.41	38	P	P	09 27 14.3	-0.7
RWWY	Rawlins	77.43	47	P	P	09 27 15.4	-0.2
RWWY				IAmb	IAmb	09 27 17.6	
	comp=Z,129nm,1.1s						
W13A	Hualapai Mount	77.43	55	P	P	09 27 15.8	+0.2
KMY	Karmoy	77.44	340	*e*P	P	09 27 15.8	+0.9
IKP	In-Ko-Pah, Jac	77.44	58	P	P	09 27 16.6	+1.0
	baz=307,SNR=56						
SWSC	Sam W. Stewart	77.47	58	P	P	09 27 16.3	+0.7
	baz=307,SNR=26						
ULM	Lac du Bonnet	77.48	35	P	P	09 27 15.2	-0.1
	comp=Z,66nm,0.9s,baz=312,slow=6.6,SNR=110						
ULM	Lac du Bonnet	77.48	35 *d*	*i*P	P	09 27 15.1	-0.2
ULM	Lac du Bonnet	77.48	35	P	P	09 27 15.3	-0.1
ULM				IAmb	IAmb	09 27 16.6	
	comp=Z,111nm,1.0s						
SNART	Snartemo	77.62	338	*e*P	P	09 27 16.6	+0.7
RSSD	Black Hills	77.62	43	P	P	09 27 16.2	-0.3
RSSD				pmax	pmax		
	comp=Z,83nm,1.1s						
RSSD	Black Hills	77.62	43	P	P	09 27 16.8	+0.2
	baz=311						
RSSD	Black Hills	77.62	43	P	P	09 27 16.2	-0.3
U15A	North Rim	77.65	53	P	P	09 27 18.1	+1.2
U15A				IAmb	IAmb	09 27 19.9	
	comp=Z,173nm,1.2s						
OUZ	Omahuta	77.68	156	P	P	09 27 17.2	+0.9
KVT	Kavak	77.68	313	P	P	09 27 18.1	+1.4
KIS	Kishinev	77.69	321	*i* P	P	09 27 17.0	+0.5
	comp=Z,360nm,1.5s						
KIS	Kishinev	77.69	321	*i* PcP	PcP	09 27 29.0	+2.4
KIS	Kishinev	77.69	321	*e*PP	PP	09 30 12.0	+0.8
KIS	Kishinev	77.69	321	LRM	MLR	10 05 02.0	
	comp=Z,4μm,16.0s						
KIS	Kishinev	77.69	321 κ	*i*P	P	09 27 17.0	+0.5
KIS				*i*		09 27 29.0	
KIS				*e*		09 30 12.0	
KIS				*i* S	S	09 37 10.0	+1.8
KIS				*i* PS	PnS	09 37 40.0	-7.8

Sta	Name	Dist	Az	Phase	Phase	Time	Res
KIS				pmax	pmax		
	comp=Z,360nm,1.5s						
KIS				smax	smax		
	comp=N,700nm,12.0s						
KIS				MLR	MLR		
	comp=Z,4μm,16.0s						
KIS				MLR	MLR		
	comp=N,2μm,15.0s						
KIS	Kishinev	77.69	321	*i* PS		09 37 40.0	
KIS	Kishinev	77.69	321	*e*SSS	SSS	09 46 00.0	
BSD	Bornholm Skovb	77.73	333	⇓*i*P	P	09 27 16.7	+0.1
BSD				pmax	pmax		
	comp=Z,160nm,1.1s						
BSD	Bornholm Skovb	77.73	333	⇓*i*P	P	09 27 16.7	+0.1
	comp=Z,164nm,1.1s						
E28A	Huff	77.73	40	P	P	09 27 16.4	-0.5
E28A				IAmb	IAmb	09 27 19.6	
	comp=Z,216nm,1.4s						
MILM	Milestii Mici	77.75	321	⇑P	P	09 27 17.2	+0.4
PDMCI	Parker Dam,Lak	77.75	56	P	P	09 27 18.2	+1.1
	baz=308,SNR=36						
O20A	White River Ci	77.81	48	P	P	09 27 18.5	+0.8
	baz=310,SNR=54						
O20A	White River Ci	77.81	48	P	P	09 27 18.1	+0.4
O20A				IAmb	IAmb	09 27 19.8	
	comp=Z,168nm,1.4s						
Y12C	Blythe	77.83	57	P	P	09 27 18.8	+1.2
	baz=308,SNR=38						
Y12C	Blythe	77.83	57	P	P	09 27 18.7	+1.1
Y12C				IAmb	IAmb	09 27 20.2	
	comp=Z,149nm,1.2s						
BEL	Belsk	77.94	328	*i* P	P	09 27 18.9	+1.1
BEL				LMZ	LR	10 03 02.3	
	comp=Z,1.9nm,22.8s						
BEL	Belsk	77.94	328	P	P	09 27 20.4	+2.6
LVV	L'vov	78.00	325 *c*	*i*P	P	09 27 18.6	+0.4
LVV				*e*		09 30 13.6	
LVV				*e*PPP	PPP	09 32 04.2	
LVV				*e*S	S	09 37 11.3	-0.1
LVV				*e*		09 37 32.9	
LVV				*e*PS	PnS	09 37 56.9	+5.3
LVV				MLR	MLR		
	comp=N,2μm,16.0s						
LVV				MLR	MLR		
	comp=E,3μm,16.0s						
LVV				MLR	MLR		
	comp=Z,4μm,16.0s						
MALT	Malatya	78.02	309	P	P	09 27 20.3	+1.6
GLA	Glamis	78.06	57	P	P	09 27 20.1	+1.2
GLA				pmax	pmax		
	comp=Z,154nm,1.2s						
GLA	Glamis	78.06	57	P	P	09 27 20.2	+1.2
	baz=308,SNR=24						
GLA	Glamis	78.06	57	P	P	09 27 20.1	+1.2
GLA				IAmb	IAmb	09 27 21.5	
	comp=Z,154nm,1.1s						
GOET	G??ttrup	78.10	337	⇓*i*P	P	09 27 19.7	+1.1
	comp=Z,536nm,0.9s						
GKP	Gorka Klasztor	78.29	331	*i* P	P	09 27 20.1	+0.4
GKP				LMZ	LR	10 05 40.8	
	comp=Z,3.4nm,17.6s						
PV09	Paradox Valley	78.32	50	P	P	09 27 20.6	0.0
LEOM	Leova	78.33	321	⇑P	P	09 27 21.3	+1.1
LEOM	Leova	78.33	321	P	P	09 27 21.2	+1.1
PV21	Cone Mtn., Par	78.37	50	P	P	09 27 21.9	+1.0
PV21				IAmb	IAmb	09 27 26.4	
	comp=Z,128nm,1.1s						
PV21				IAMs_20	IAMs_20	10 07 58.7	
	comp=Z,1μm,20.0s						
PV23	Carpenter Ridg	78.42	50	P	P	09 27 22.3	+1.1
VASR	Vaslui	78.45	321	⇑P	P	09 27 22.1	+1.4
PV10	Paradox Valley	78.45	50	P	P	09 27 22.6	+1.3
PV14	Lion Creek, Pa	78.46	50	P	P	09 27 22.4	+1.1
PV22	Blue Mesa, Par	78.50	50	P	P	09 27 22.6	+1.1
PV22				IAmb	IAmb	09 27 24.1	
	comp=Z,294nm,1.5s						
PV20	West Nyswonger	78.52	50	P	P	09 27 22.2	+0.7
PV04	Paradox Valley	78.52	50	P	P	09 27 22.6	+1.0
PV04				IAmb	IAmb	09 27 25.1	
	comp=Z,252nm,1.3s						
PV19	Morning Glory	78.53	50	P	P	09 27 22.8	+1.2
PV19				IAmb	IAmb	09 27 23.6	
	comp=Z,204nm,1.1s						
MORS	Morshin	78.55	325	P	P	09 27 22.1	+0.8
PV17	East Wray Mesa	78.56	50	P	P	09 27 22.6	+0.8
PV16	Nyswonger Mesa	78.57	50	P	P	09 27 22.5	+0.6
PV16				IAmb	IAmb	09 27 25.4	
	comp=Z,231nm,1.3s						
KSV	Kosov	78.59	324	P	P	09 27 20.7	-0.8
MUD	Monsted U'grnd	78.59	336	*i* P	P	09 27 22.0	+0.7
MUD				pmax	pmax		
	comp=Z,120nm,1.2s						
MUD	Monsted U'grnd	78.59	336	*i* P	P	09 27 22.0	+0.7
	comp=Z,118nm,1.2s						
PV11	David Mesa, Pa	78.60	50	P	P	09 27 23.2	+1.2
PV05	Paradox Valley	78.60	50	P	P	09 27 23.3	+1.2
PV18	Skein Mesa, Pa	78.61	50	P	P	09 27 22.4	+0.2
PV18				IAmb	IAmb	09 27 25.6	
	comp=Z,330nm,1.4s						
PV12	Saucer Basin,	78.63	50	P	P	09 27 23.0	+0.8
PV03	Paradox Valley	78.64	50	P	P	09 27 23.3	+1.0
PV03				IAmb	IAmb	09 27 25.8	
	comp=Z,266nm,1.3s						
PV07	Paradox Valley	78.65	50	P	P	09 27 23.0	+0.6
PV07				IAmb	IAmb	09 27 24.9	
	comp=Z,194nm,1.5s						
N23A	Red Feather La	78.67	47	P	P	09 27 23.8	+1.3
	baz=311,SNR=92						
PHWY	Pilot Hill	78.68	46	P	P	09 27 23.2	+0.6
PV13	Radium Mtn., P	78.72	50	P	P	09 27 23.9	+1.1
KWP	Kalwaria Pacla	78.72	326	*i* P	P	09 27 23.4	+1.2
KWP				LMZ	LR	10 05 46.0	
	comp=Z,6.8nm,16.1s						
KWP	Kalwaria Pacla	78.72	326	P	P	09 27 23.2	+0.9
KWP	Kalwaria Pacla	78.72	326	P	P	09 27 23.1	+0.9
PV02	Paradox Valley	78.74	50	P	P	09 27 23.3	+0.5
PV02				IAmb	IAmb	09 27 25.6	
	comp=Z,258nm,1.3s						
RGN	Rugen	78.74	333	*e*P	P	09 27 22.9	+0.7
RGN	Rugen	78.74	333	*e*P	P	09 27 23.3	+1.1
	comp=Z,475nm,1.6s,baz=35,slow=5.2						
RGN				*e*pP	pwP	09 27 34.5	+2.0
	baz=34,slow=5.2						
WUAZ	Wupatki	78.79	54	P	P	09 27 24.5	+1.4
	baz=309,SNR=91						
WUAZ	Wupatki	78.79	54	P	P	09 27 23.6	+0.5
WUAZ				IAmb	IAmb	09 27 25.9	
	comp=Z,160nm,1.1s						
PV15	Paradox Valley	78.81	50	P	P	09 27 24.0	+0.7
RAR	Rarotonga	78.85	128	LR	LR	09 55 04.5	
	comp=Z,518nm,20.0s,baz=305,slow=30						
AGMN	Agassiz Nation	78.88	36	P	P	09 27 22.9	-0.2
	baz=316,SNR=82						
AGMN	Agassiz Nation	78.88	36	P	P	09 27 22.8	-0.4
AGMN				IAmb	IAmb	09 27 24.2	
	comp=Z,117nm,1.1s						
PV01	Paradox Valley	78.89	50	P	P	09 27 24.3	+0.6
PV01				IAmb	IAmb	09 27 25.6	
	comp=Z,124nm,1.2s						
TLCR		78.93	319	⇑P	P	09 27 24.3	+0.8
TLCR		78.93	319	P	P	09 27 24.2	+0.8
113A	Mohawk Valley,	78.94	57	P	P	09 27 24.5	+0.8
113A				IAmb	IAmb	09 27 26.0	
	comp=Z,154nm,1.4s						
BUR08	Bucovina Ar. S	79.00	323	P	P	09 27 24.7	+0.8
BURAR	Bucovina Array	79.02	323	⇓P	P	09 27 25.0	+0.9
BURAR	Bucovina Array	79.02	323	P	P	09 27 24.9	+0.9
BIZ	Bicaz	79.07	322	⇓P	P	09 27 25.2	+1.0
SMCO	Snowmass	79.18	49	P	P	09 27 26.1	+0.7
JURR	Jurilovca	79.19	319	⇑P	P	09 27 25.8	+1.0
SCHL	Schela	79.22	320	⇓P	P	09 27 26.5	+1.6
CFR	Carcaliu	79.28	320	⇓P	P	09 27 25.6	+0.3
CFR	Carcaliu	79.28	320	P	P	09 27 25.6	+0.3
PETR	Petresti	79.36	321	⇑P	P	09 27 27.6	+1.8
TOPG	Topolog	79.37	319	⇓P	P	09 27 26.7	+0.8
ODBI	Odobesti	79.42	321	⇓P	P	09 27 28.2	+2.1
KOLS	Kolonicke sedl	79.43	325	*e*P	P	09 27 26.9	+0.8
KOLS				pmax	pmax		
	comp=Z,59nm,1.2s						
KOLS	Kolonicke sedl	79.43	325	*e*P	P	09 27 26.9	+0.8
GAZ	Gaziantep	79.48	309	IAMs_20	IAMs_20	10 03 35.3	
	comp=Z,975nm,19.0s						
VRI	Vrincioaia	79.52	321	⇓P	P	09 27 27.8	+1.1
VRI	Vrincioaia	79.52	321	P	P	09 27 27.7	+1.1

MVCO **Mesa Verde** 79.52 51 P P 09 27 28.2 +1.1
baz=310,SNR=84
MVCO **Mesa Verde** 79.52 51 P P 09 27 28.0 +0.9
OJC **Ojcow** 79.56 327 *i* P P 09 27 27.6 +0.8
OJC LMZ LR 10 06 36.9
comp=Z,3.2nm,18.4s
OJC **Ojcow** 79.56 327 P P 09 27 27.3 +0.5
OJC pmax pmax
comp=Z,203nm,1.1s
OJC **Ojcow** 79.56 327 P P 09 27 27.3 +0.5
OJC IAmb IAmb 09 27 29.0
comp=Z,203nm,1.1s
PLOR **Plostina** 79.56 321 ⇓P P 09 27 27.8 +0.8
PLOR **Plostina** 79.56 321 P P 09 27 27.7 +0.8
ISCO **Idaho Springs** 79.57 47 P P 09 27 28.7 +1.2
ISCO pmax pmax
comp=Z,54nm,1.2s
ISCO **Idaho Springs** 79.57 47 P P 09 27 28.6 +1.2
baz=311,SNR=46
ISCO **Idaho Springs** 79.57 47 P P 09 27 28.6 +1.2
WHFO **Wadi Hawf** 79.62 285 P P 09 27 26.7 -1.0
SNR=9.0
TIRR **Tirgusor** 79.64 319 P P 09 27 27.8 +0.5
TIRR pmax pmax
comp=Z,405nm,1.5s
TIRR MLR MLR
comp=Z,6μm,18.0s
TIRR **Tirgusor** 79.64 319 P P 09 27 27.8 +0.5
UZH **Uzhgorod** 79.64 325 *e*P P 09 27 27.7 +0.5
UZH *e* 09 27 35.6
UZH *e* 09 30 29.0
UZH *e* 09 32 24.6
UZH *e*S S 09 37 28.5 -0.5
UZH MLR MLR
comp=N,550nm,15.5s
UZH MLR MLR
comp=E,1μm,15.5s
UZH MLR MLR
comp=Z,380nm,15.5s
GRER 79.73 320 ⇑P P 09 27 29.1 +1.3
BISRR **Bisoca** 79.75 321 ⇓P P 09 27 29.8 +1.8
EFOR **EFORIE** 79.79 319 ⇑P P 09 27 29.5 +1.4
ARCR **ARCALIA** 79.81 323 ⇓P P 09 27 29.8 +1.6
OZUR 79.82 322 ⇑P P 09 27 29.8 +1.5
B35A **Bob. Littlefor** 79.82 35 P P 09 27 28.1 -0.2
SKMB **Sankelmark Bun** 79.94 335 *e*P P 09 27 30.0 +1.3
comp=Z,406nm,1.3s,baz=35,slow=5.2
NIE **Niedzica** 79.94 327 *i* P P 09 27 30.2 +1.2
NIE LMZ LR 10 06 36.0
comp=Z,2.9nm,17.0s
NIE **Niedzica** 79.94 327 P P 09 27 30.0 +1.0
BR131 **Keskin Array S** 79.96 313 P P 09 27 30.2 +0.8
SNR=32
BR131 **Keskin Array S** 79.96 313 *d i* P P 09 27 29.5 +0.1
BR131 **Keskin Array S** 79.96 313 P P 09 27 29.9 +0.6
BRTR **Keskin Array B** 79.96 313 P P 09 27 29.9 +0.5
comp=Z,29nm,1.1s,baz=92,slow=3.7,SNR=86
BRTR PP PP 09 30 30.9 +0.4
comp=Z,5.8nm,1.0s,baz=58,slow=4.7,SNR=3.9
BRTR PKKPbc PKKPbc 09 46 13.8 +0.6
comp=Z,0.9nm,0.8s,baz=46,slow=7.1,SNR=4.9
BRTR LR LR 10 09 21.4
comp=Z,675nm,18.3s,baz=52,slow=40
BRTR **Keskin Array B** 79.96 313 *i* P P 09 27 29.8 +0.5
BRTR pmax pmax
comp=Z,30nm,1.1s
MANR **Mangalia** 79.99 319 ⇑P P 09 27 30.4 +1.2
214A **Organ Pipe Nat** 80.07 57 P P 09 27 30.9 +1.0
baz=309,SNR=32
214A **Organ Pipe Nat** 80.07 57 P P 09 27 31.1 +1.1
W18A **Petrified Fore** 80.08 53 P P 09 27 31.4 +1.2
baz=310,SNR=28
W18A **Petrified Fore** 80.08 53 P P 09 27 30.7 +0.6
SUSD **Miller** 80.09 40 P P 09 27 29.8 0.0
baz=314,SNR=5.7
SUSD **Miller** 80.09 40 P P 09 27 30.2 +0.4
SUSD IAmb IAmb 09 27 31.2
comp=Z,256nm,1.0s
DOPR **Dopca** 80.11 322 ⇓P P 09 27 31.6 +1.7
MLR **Muntele Rosu** 80.17 321 ⇑P P 09 27 31.4 +1.0
MLR **Muntele Rosu** 80.17 321 P P 09 27 30.3 -0.1
MLR pmax pmax
comp=Z,205nm,1.4s
MLR MLR MLR
comp=Z,4μm,18.0s
MLR **Muntele Rosu** 80.17 321 P P 09 27 30.3 -0.1
MLR IAmb IAmb 09 27 33.4
comp=Z,205nm,1.4s
ICOR **Ion Corvin** 80.19 319 ⇓P P 09 27 32.2 +1.9
S22A **4UR Ranch, Cre** 80.19 50 P P 09 27 32.4 +1.5
baz=311,SNR=83
RUE **Ruedersdorf** 80.22 332 *e*P P 09 27 30.6 +0.3
RUE **Ruedersdorf** 80.22 332 *e*P P 09 27 31.1 +0.8
comp=Z,140nm,1.1s,baz=35,slow=5.2
RUE *e*pP pwP 09 27 42.4 +1.8
baz=34,slow=5.2
BSEG **Bad Segeberg** 80.28 334 *e*P P 09 27 31.5 +0.9
comp=Z,128nm,1.0s,baz=35,slow=5.2
BSEG *e*pP pwP 09 27 42.8 +1.9
baz=34,slow=5.2
BSEG **Bad Segeberg** 80.28 334 P P 09 27 32.2 +1.6
ABTO **Aybut** 80.32 284 P P 09 27 30.9 -0.6
SNR=8.6
X18A **Snowflake** 80.32 54 P P 09 27 32.3 +0.9
ANTO **Ankara** 80.35 313 ⇑P P 09 27 32.8 +1.4
ANTO **Ankara** 80.35 313 P P 09 27 32.4 +1.0
ANTO pmax pmax
comp=Z,132nm,1.2s
ANTO **Ankara** 80.35 313 P P 09 27 32.4 +1.0
ANTO IAmb IAmb 09 27 33.7
comp=Z,132nm,1.1s
MLA1 **Latheron** 80.39 343 ⇓*e*P P 09 27 31.8 +0.7
Q24A **Divide** 80.39 48 P P 09 27 32.7 +0.8
baz=311,SNR=16
SECR 80.43 321 ⇑P P 09 27 33.0 +1.3
CJR **Cluj-Napoca** 80.43 323 ⇑P P 09 27 33.4 +1.8
F33A **5 Mile Ranch,** 80.44 38 P P 09 27 32.0 +0.4
F33A IAmb IAmb 09 27 33.2
comp=Z,241nm,1.2s
LEHL **Lehliu** 80.45 320 ⇑P P 09 27 33.1 +1.4
LANS **Liptovska Anna** 80.50 327 *e*P P 09 27 33.6 +1.6
LANS pmax pmax
comp=Z,63nm,1.2s
LANS **Liptovska Anna** 80.50 327 *e*P P 09 27 33.6 +1.6
KSP **Ksiaz** 80.53 330 *i* P P 09 27 32.8 +0.8
KSP LMZ LR 10 06 41.1
comp=Z,2.8nm,18.3s
KSP **Ksiaz** 80.53 330 P P 09 27 32.9 +0.9
OKC **Ostrava-Krasne** 80.55 328 *e*P P 09 27 33.2 +1.1
OKC *e* 09 27 33.2
OKC MLR MLR
comp=Z,2μm,17.2s
OKC **Ostrava-Krasne** 80.55 328 *e*P P 09 27 33.2 +1.1
OKC AMS AMS 10 06 40.0
comp=Z,2μm,17.2s
KECS **Kecovo** 80.56 326 *e*P P 09 27 33.5 +1.3
KECS pmax pmax
comp=Z,28nm,1.2s
KECS **Kecovo** 80.56 326 *e*P P 09 27 33.5 +1.3
SULR 80.59 320 ⇓P P 09 27 33.7 +1.3
VOIR 80.65 321 ⇓P P 09 27 33.9 +1.0
VOIR 80.65 321 P P 09 27 33.9 +1.0
IVI **Ivigtut** 80.70 6 P P 09 27 32.8 +0.2
IVI IAmb IAmb 09 27 34.3
comp=Z,137nm,1.1s
OSTC **Ostas** 80.79 329 *e*P P 09 27 34.6 +1.2
OSTC AMS AMS 10 08 50.0
comp=Z,3μm,15.2s
MTUR **Matau** 80.79 321 ⇑P P 09 27 34.5 +0.8
MTUR **Matau** 80.79 321 P P 09 27 34.5 +0.8
DRGR 80.80 324 ⇓P P 09 27 34.1 +0.5
CHVC **Chvalec** 80.83 330 *e*P P 09 27 34.7 +1.0
CHVC AMS AMS 10 08 50.0
comp=Z,3μm,15.2s
MORC **Moravsky Berou** 80.84 328 ⇓*i*P P 09 27 34.5 +0.6
MORC **Moravsky Berou** 80.84 328 ⇑P P 09 27 35.1 +1.3
MORC **Moravsky Berou** 80.84 328 P P 09 27 34.4 +0.6
MORC pmax pmax
comp=Z,127nm,1.1s
MORC MLR MLR
comp=Z,2μm,18.0s
MORC **Moravsky Berou** 80.84 328 P P 09 27 34.4 +0.6
MORC IAmb IAmb 09 27 36.1
comp=Z,127nm,1.1s

OGNE **Ogallala** 80.85 45 P P 09 27 34.5 +0.5
baz=313,SNR=16
OGNE **Ogallala** 80.85 45 P P 09 27 34.5 +0.5
HLG **Helgoland** 80.89 336 *e*P P 09 27 34.7 +0.9
comp=Z,248nm,1.1s,baz=35,slow=5.2
DPC **Dobruska-Polom** 80.90 329 *e*P P 09 27 35.0 +0.9
DPC MLR MLR
comp=Z,2μm,15.9s
DPC **Dobruska-Polom** 80.90 329 *e*P P 09 27 35.0 +0.9
DPC AMS AMS 10 06 50.0
comp=Z,2μm,15.9s
ARR **Arges** 80.91 322 ⇑P P 09 27 35.7 +1.4
UPC **Upice** 80.91 330 *e*P P 09 27 34.8 +0.7
UPC MLR MLR
comp=Z,3μm,15.6s
UPC **Upice** 80.91 330 *e*P P 09 27 34.8 +0.7
UPC *ex* x 09 27 46.4
UPC AMS AMS 10 09 00.0
comp=Z,3μm,15.6s
KRLC **Kraliky** 80.93 329 *e*P P 09 27 35.2 +0.9
KRLC MLR MLR
comp=Z,3μm,15.3s
KRLC **Kraliky** 80.93 329 *e*P P 09 27 35.2 +0.9
KRLC *ex* x 09 27 44.7
KRLC AMS AMS 10 07 30.0
comp=Z,3μm,15.3s
NRS **Narsarsuaq** 80.95 5 *i* P P 09 27 33.7 -0.3
NRS pmax pmax
comp=Z,65nm,1.1s
NRS **Narsarsuaq** 80.95 5 *i* P P 09 27 33.7 -0.3
comp=Z,65nm,1.1s
SDCO **Great Sand Dun** 80.99 49 P P 09 27 36.3 +1.2
baz=311,SNR=73
SDCO **Great Sand Dun** 80.99 49 P P 09 27 36.1 +0.9
MCD **Coleburn Disti** 81.02 343 ⇓*e*P P 09 27 35.2 +0.7
HIZ **Hauiti** 81.09 156 P P 09 27 35.7 +0.8
HIZ IAmb IAmb 09 27 39.2
comp=Z,110nm,1.1s
EYMN **Ely** 81.13 34 P P 09 27 35.1 -0.2
baz=319,SNR=74
EYMN **Ely** 81.13 34 P P 09 27 34.8 -0.6
EYMN IAmb IAmb 09 27 36.6
comp=Z,145nm,1.1s
TUC **Tucson** 81.19 56 P P 09 27 36.8 +0.8
TUC pmax pmax
comp=Z,63nm,1.3s
TUC **Tucson** 81.19 56 P P 09 27 36.9 +0.8
baz=310
TUC **Tucson** 81.19 56 P P 09 27 36.8 +0.8
PSZ **Piszkesteto** 81.25 326 ⇓P P 09 27 37.4 +1.4
PSZ **Piszkesteto** 81.25 326 P P 09 27 36.4 +0.4
PSZ pmax pmax
comp=Z,201nm,1.2s
PSZ MLR MLR
comp=Z,6μm,18.0s
PSZ **Piszkesteto** 81.25 326 P P 09 27 36.4 +0.4
PSZ IAmb IAmb 09 27 38.5
comp=Z,201nm,1.2s
RAZG **Razgrad** 81.25 319 ⇑P P 09 27 37.4 +1.4
VYHS **Vyhne** 81.28 327 *e*P P 09 27 37.0 +0.9
VYHS pmax pmax
comp=Z,110nm,1.2s
VYHS **Vyhne** 81.28 327 *e*P P 09 27 37.0 +0.9
DEV **Deva** 81.37 323 ⇑P P 09 27 37.3 +0.7
DEV **Deva** 81.37 323 P P 09 27 37.3 +0.7
BRG **Berggiesshubel** 81.43 331 ⇓*i*P P 09 27 37.3 +0.5
comp=Z,88nm,1.2s
BRG **Berggiesshubel** 81.43 331 *e*S S 09 37 48.3 +0.6
comp=Z,4.4nm,1.2s
BRG **Berggiesshubel** 81.43 331 *e*P P 09 27 37.3 +0.5
comp=Z,88nm,1.2s,baz=35,slow=5.2
BRG **Berggiesshubel** 81.43 331 ⇓*i*P P 09 27 37.3 +0.5
BRG *e*S S 09 37 48.3 +0.6
BRG smax smax
comp=N,88nm,1.2s
CLL **Collm** 81.44 332 ⇓*i*P P 09 27 38.0 +1.1
comp=Z,141nm,1.0s
CLL *i* Pmax 09 27 38.4
CLL *i* 09 27 49.0
comp=Z,61nm,1.0s
CLL *i* 09 27 57.8
comp=Z,50nm,1.0s
CLL *e*SKSac SKSac 09 37 55.0 -1.1
CLL LmH 10 01 00.0
comp=N,1μm,18.0s
CLL LmH 10 01 00.0
comp=E,2μm,21.1s
CLL **Collm** 81.44 332 *e*P P 09 27 38.2 +1.3
comp=E,141nm,1.0s,baz=35,slow=5.2
CLL *e*pP pwP 09 27 49.6 +2.3
baz=34,slow=5.2
CLL **Collm** 81.44 332 P P 09 27 37.4 +0.5
CLL pmax pmax
comp=Z,132nm,1.0s
CLL MLR MLR
comp=Z,2μm,19.0s
CLL **Collm** 81.44 332 P P 09 27 37.4 +0.5
CLL IAmb IAmb 09 27 39.4
comp=Z,132nm,1.0s
CLL IAMs_20 IAMs_20 10 07 42.7
comp=Z,2μm,19.0s
PVCC **Panska Ves** 81.46 330 *e*P P 09 27 37.8 +0.8
PVCC MLR MLR
comp=Z,3μm,15.6s
PVCC **Panska Ves** 81.46 330 *e*P P 09 27 37.8 +0.8
PVCC *ex* x 09 27 49.0
PVCC AMS AMS 10 09 30.0
comp=Z,3μm,15.6s
K31A **O'Neill** 81.46 42 P P 09 27 37.5 +0.2
JAVC **Velka Javorina** 81.50 328 ⇓*i*P P 09 27 38.9 +1.6
COPA **Copaceanca** 81.50 320 ⇑P P 09 27 38.2 +0.9
NRDL **Niedersach Rie** 81.54 334 *e*P P 09 27 37.9 +0.7
comp=Z,71nm,1.2s,baz=35,slow=5.2
NRDL *e*pP pwP 09 27 49.0 +1.5
baz=34,slow=5.2
KAC **Achnashellach** 81.56 344 ⇓*e*P P 09 27 38.2 +0.8
VRAC **Vranov** 81.60 328 ⇓*i*P P 09 27 38.6 +0.8
VRAC **Vranov** 81.60 328 ⇓P P 09 27 38.6 +0.8
URZ **Urewera** 81.61 154 P P 09 27 35.9 -1.8
comp=Z,16nm,0.9s,baz=351,slow=2.5,SNR=5.9
URZ LR LR 10 01 45.3
comp=Z,432nm,18.6s,baz=360,slow=34
URZ **Urewera** 81.61 154 P P 09 27 36.0 -1.6
FBE **Freiberg** 81.62 331 *e*P P 09 27 38.7 +0.9
comp=Z,151nm,1.1s,baz=35,slow=5.2
FBE *e*pP pwP 09 27 50.0 +1.9
baz=34,slow=5.2
ASSE **Asse, Remlinge** 81.64 333 *e*P P 09 27 38.4 +0.6
comp=Z,90nm,1.3s,baz=35,slow=5.2
ASSE *e*pP pwP 09 27 49.8 +1.6
baz=34,slow=5.2
SIRR **Siria** 81.67 324 ⇓P P 09 27 39.3 +1.0
F36A **Milaca** 81.75 37 P P 09 27 37.9 -0.7
KPL **Plockton** 81.78 344 ⇓*e*P P 09 27 39.5 +1.0
KPL IAmb IAmb 09 27 40.6
comp=Z,268nm,1.0s
ECSD **EROS Data Cent** 81.78 40 P P 09 27 38.8 0.0
baz=316,SNR=108
ECSD **EROS Data Cent** 81.78 40 P P 09 27 38.7 -0.2
ECSD IAmb IAmb 09 27 40.2
comp=Z,101nm,0.9s
GZR **Gura Zlata** 81.79 323 ⇓P P 09 27 39.2 +0.3
KSCO **Kaye Shedlock'** 81.82 46 P P 09 27 39.7 +0.4
baz=313,SNR=27
KSCO **Kaye Shedlock'** 81.82 46 P P 09 27 39.7 +0.4
KSCO IAmb IAmb 09 27 41.2
comp=Z,170nm,1.2s
GOPC **GO Pecny, Ondr** 81.86 330 *e*P P 09 27 39.9 +0.7
GOPC MLR MLR
comp=Z,3μm,15.4s
GOPC **GO Pecny, Ondr** 81.86 330 *e*P P 09 27 39.9 +0.7
GOPC AMS AMS 10 08 10.0
comp=Z,3μm,15.4s
SMOL **Smolenice** 81.86 327 *e*P P 09 27 40.5 +1.3
SMOL pmax pmax
comp=Z,68nm,1.2s
SMOL **Smolenice** 81.86 327 *e*P P 09 27 40.5 +1.3
KRUC **Moravsky** 81.87 328 ⇓*i*P P 09 27 40.0 +0.8
KRUC **Moravsky** 81.87 328 P P 09 27 40.1 +0.8
PRA **Prague** 81.88 330 *e*P P 09 27 40.0 +0.8
PRA MLR MLR
comp=Z,2μm,15.2s
PRA **Prague** 81.88 330 *e*P P 09 27 40.0 +0.8
PRA AMS AMS 10 09 40.0
comp=Z,2μm,15.2s

PRU **Pruhonice** 81.90 330 *e*P P 09 27 40.0 +0.7
PRU MLR MLR
comp=Z,3μm,14.5s
PRU **Pruhonice** 81.90 330 *e*P P 09 27 40.0 +0.7
PRU *ex* x 09 27 51.2
PRU AMS AMS 10 09 30.0
comp=Z,3μm,14.5s
EDU **Dundee** 81.90 342 ⇓*e*P P 09 27 39.7 +0.5
BUD **Budapest** 81.96 326 P P 09 27 41.0 +1.3
BUD pmax pmax
comp=Z,86nm,1.6s
CLZ **Clausthal** 81.98 333 *e*P P 09 27 40.6 +0.9
comp=Z,173nm,1.3s,baz=35,slow=5.2
CLZ *e*pP pwP 09 27 51.9 +1.8
baz=34,slow=5.2
NEUB **Neuenburg** 81.98 332 *e*P P 09 27 40.3 +0.6
comp=Z,186nm,1.1s,baz=35,slow=5.2
NEUB *e*pP pwP 09 27 51.8 +1.7
baz=34,slow=5.2
VLAD **Vladila** 82.00 321 ⇑P P 09 27 40.0 +0.1
ELND **Elena** 82.02 319 ⇑P P 09 27 40.6 +0.5
MODS **Modra-Piesok** 82.04 327 *e*P P 09 27 40.5 +0.4
MODS pmax pmax
comp=Z,162nm,1.3s
MODS **Modra-Piesok** 82.04 327 *e*P P 09 27 40.5 +0.4
T25A **Trinidad** 82.04 49 P P 09 27 41.5 +0.9
baz=312,SNR=96
TREC **Trest** 82.06 329 *e*P P 09 27 41.1 +0.8
TREC MLR MLR
comp=Z,3μm,16.2s
TREC **Trest** 82.06 329 *e*P P 09 27 41.1 +0.8
TREC AMS AMS 10 08 20.0
comp=Z,3μm,16.2s
E38A **The Farm, Brul** 82.11 35 P P 09 27 40.3 -0.2
E38A IAmb IAmb 09 27 41.4
comp=Z,114nm,0.9s
SRE **Strehaia** 82.11 322 ⇑P P 09 27 42.1 +1.5
SRE **Strehaia** 82.11 322 P P 09 27 42.0 +1.5
BZS **Buzias** 82.17 323 ⇓P P 09 27 41.1 +0.3
BKZ **Bakony Stump Fm** 82.22 155 P P 09 27 39.8 -1.2
ANMO **Albuquerque** 82.25 52 *d i* P P 09 27 42.5 +0.8
ANMO pmax pmax
comp=Z,71nm,1.2s
ANMO MLR MLR
comp=Z,873nm,17.0s
ANMO **Albuquerque** 82.25 52 P P 09 27 42.9 +1.2
baz=311
ANMO **Albuquerque** 82.25 52 P P 09 27 42.4 +0.8
ANMO IAmb IAmb 09 27 44.4
comp=Z,120nm,1.2s
ZST **Bratislava** 82.25 327 *e*P P 09 27 41.6 +0.4
ZST pmax pmax
comp=Z,2μm,3.6s
ZST **Bratislava** 82.25 327 *e*P P 09 27 41.5 +0.4
INVG **Invergeldie, C** 82.25 343 ⇓*e*P P 09 27 41.0 0.0
INVG IAmb IAmb 09 27 42.1
comp=Z,105nm,1.1s
HERR **Herculane** 82.34 322 ⇓P P 09 27 41.8 0.0
PLVB **Pleven** 82.34 320 ⇓P P 09 27 42.4 +0.7
PBCC **Pribram** 82.36 330 *e*P P 09 27 42.4 +0.7
PBCC *ex* x 09 27 53.6
GTTG **Gottingen** 82.37 333 *e*P P 09 27 42.3 +0.6
comp=Z,110nm,1.1s,baz=35,slow=5.2
GTTG *e*pP pwP 09 27 53.8 +1.7
baz=34,slow=5.2
TANN **Tannenbergstha** 82.37 331 *e*P P 09 27 42.3 +0.4
comp=Z,126nm,1.3s,baz=35,slow=5.2
TANN *e*pP pwP 09 27 53.7 +1.5
baz=34,slow=5.2
ESY **Stoneypath** 82.37 342 ⇓*e*P P 09 27 42.4 +0.7
PLN **Plauen** 82.43 331 *e*P P 09 27 42.7 +0.6
comp=Z,65nm,1.2s,baz=35,slow=5.2
PLN *e*pP pwP 09 27 54.0 +1.6
baz=34,slow=5.2
RAYN **Ar Rayn** 82.43 294 P P 09 27 42.4 -0.2
RAYN pmax pmax
comp=Z,103nm,1.2s
RAYN **Ar Rayn** 82.43 294 P P 09 27 42.4 -0.2
RAYN IAmb IAmb 09 27 44.2
comp=Z,103nm,1.1s
LENM **Lemitar** 82.44 52 P P 09 27 44.1 +1.5
PMOR **Pomariorio Ree** 82.45 116 *e*P P 09 27 43.2 +0.6
comp=Z,363nm,1.3s
PMOR **Pomariorio Ree** 82.45 116 *e*T T 10 58 27.1
comp=Z,6.7nm,0.2s
GUNZ **Gunzen** 82.46 331 *e*P P 09 27 43.0 +0.7
comp=Z,78nm,1.1s,baz=35,slow=5.2
GUNZ *e*pP pwP 09 27 54.5 +1.8
baz=34,slow=5.2
IBBN **Ibbenburen** 82.50 335 *e*P P 09 27 43.1 +0.7
comp=Z,126nm,1.1s,baz=35,slow=5.2
IBBN *e*pP pwP 09 27 54.3 +1.6
baz=34,slow=5.2
MOX **Moxa** 82.50 332 *e*P P 09 27 43.0 +0.5
comp=Z,84nm,1.2s,baz=35,slow=5.2
MOX *e*pP pwP 09 27 54.4 +1.5
baz=34,slow=5.2
MOX *e*L L 10 09 40.5
comp=Z,1μm,18.1s
MOX **Moxa** 82.50 332 P P 09 27 43.7 +1.2
MOX pmax pmax
comp=Z,74nm,1.3s
WERN **Wernitzgruen** 82.50 331 *e*P P 09 27 43.3 +0.8
comp=Z,87nm,1.1s,baz=35,slow=5.2
WERN *e*pP pwP 09 27 54.7 +1.8
baz=34,slow=5.2
QRZ **Quartz Range** 82.52 159 P P 09 27 42.2 -0.2
NKC **Novy Kostel** 82.52 331 *e*P P 09 27 43.3 +0.7
NKC MLR MLR
comp=Z,3μm,16.5s
NKC **Novy Kostel** 82.52 331 *e*P P 09 27 43.3 +0.7
NKC AMS AMS 10 08 30.0
comp=Z,3μm,16.5s
PUNG **Punghina** 82.53 322 ⇑P P 09 27 43.7 +1.0
Y22D **IRIS PASSCAL I** 82.53 52 P P 09 27 44.6 +1.5
baz=311,SNR=7.4
Y22D **IRIS PASSCAL I** 82.53 52 P P 09 27 43.8 +0.6
Y22D IAmb IAmb 09 27 48.2
comp=Z,93nm,1.1s
EAB **Aberfoyle** 82.54 343 ⇓*e*P P 09 27 43.4 +0.8
SPMN **Marine on St.** 82.56 37 P P 09 27 42.9 0.0
baz=318,SNR=28
SPMN **Marine on St.** 82.56 37 P P 09 27 42.7 -0.2
SPMN IAmb IAmb 09 27 44.3
comp=Z,160nm,1.4s
BHL **Bhannes** 82.56 307 *e*P P 09 27 43.7 +0.4
EBL **Broad Law** 82.61 342 ⇓*e*P P 09 27 43.7 +0.8
BGNE **Belgrade** 82.64 42 P P 09 27 43.3 -0.1
baz=315,SNR=31
BGNE **Belgrade** 82.64 42 P P 09 27 43.3 -0.1
RCY **Rachaya** 82.71 307 *e*P P 09 27 44.8 +0.7
LAWE **Loch Awe, Argy** 82.72 344 ⇓*e*P P 09 27 44.3 +0.9
LAWE IAmb IAmb 09 27 45.4
comp=Z,300nm,1.2s
MDVR **Moldovita** 82.75 323 ⇓P P 09 27 44.0 +0.1
SHBL **Chebaa** 82.87 307 *e*P P 09 27 45.5 +0.6
SOCY **Socotra** 82.87 280 P P 09 27 43.2 -1.8
SNR=16
SOCY **Socotra** 82.87 280 P P 09 27 43.3 -1.8
SOP **Sopron** 82.88 327 P P 09 27 45.6 +1.1
SOP pmax pmax
comp=Z,192nm,1.3s
PGBU **Glenifferbraes** 82.92 343 ⇓*e*P P 09 27 45.4 +0.9
PGBU IAmb IAmb 09 27 46.7
comp=Z,490nm,1.2s
UBBA **Unterbreizbach** 82.95 333 *e*P P 09 27 45.0 +0.4
comp=Z,94nm,1.7s,baz=35,slow=5.2
UBBA *e*pP pwP 09 27 56.5 +1.5
baz=34,slow=5.2
KHC **Kasperske Hory** 82.96 330 *d i* P P 09 27 45.4 +0.5
KHC pmax pmax
comp=Z,158nm,1.1s
KHC MLR MLR
comp=Z,6μm,17.0s
KHC **Kasperske Hory** 82.96 330 *e*P P 09 27 45.5 +0.5
KHC *ex* x 09 27 56.7
KHC *ex* x 09 28 05.6
KHC AMS AMS 10 08 30.0
comp=Z,3μm,16.3s
KHC **Kasperske Hory** 82.96 330 P P 09 27 45.1 +0.2
KHC IAMs_20 IAMs_20 10 08 24.9
comp=Z,1μm,18.0s
CONA **Conrad Observa** 82.98 328 *i* PcP P 09 27 46.3 +1.2
comp=Z,96nm,1.0s,SNR=79
121A **Cookes Peak, D** 82.99 54 P P 09 27 46.9 +1.3

baz=311,SNR=58
121A Cookes Peak, D 82.99 54 P **P** **09 27 46.8 +1.3**
121A IAmb IAmb 09 27 48.3
comp=Z,104nm,1.0s
ROTZ Rotzenmuhle 82.99 331 *eP* **P** **09 27 46.0 +0.9**
comp=Z,124nm,1.3s,baz=35,slow=5.2
ROTZ *ep*P **pwP** **09 27 57.3 +2.0**
baz=34,slow=5.2
PPT Papeete 83.00 118 LR LR 10 05 20.4
comp=Z,324nm,18.4s,baz=305,slow=36
PPT2 Papeete2 83.02 119 *e*S **S** **09 38 03.4 -1.5**
comp=Z,1µm,29.0s
PPT2 Papeete2 83.02 119 *e*LQ LQ 09 49 38.6
comp=Z,2µm,32.0s
PPT2 *e*LR LR 09 52 44.9
comp=Z,2µm,24.8s,baz=318
EKA Eskdalemuir Ar 83.03 342 P **P** **09 27 45.5 +0.4**
ISP Isparta 83.04 313 P **P** **09 27 45.4 -0.3**
ISP pmax pmax
comp=Z,111nm,1.2s
ESK Eskdalemuir 83.06 342 P **P** **09 27 45.9 +0.6**
ESK pmax pmax
comp=Z,85nm,1.1s
ESK Eskdalemuir 83.06 342 P **P** **09 27 45.9 +0.6**
ESK IAmb IAmb 09 27 46.8
comp=Z,85nm,1.1s
D41A Chassel 83.09 33 P **P** **09 27 45.5 -0.2**
D41A IAmb IAmb 09 27 48.0
comp=Z,103nm,1.0s
MORH Mrgy, Hungar 83.09 325‖ *i*P **P** **09 27 45.3 -0.3**
GEC2 GERESS Array S 83.14 330 *eP* **P** **09 27 46.4 +0.4**
comp=Z,61nm,1.1s,baz=35,slow=5.2
GEC2 **GERESS Array S 83.14 330** P **P** **09 27 45.7 -0.3**
GEC2 IAMs_20 IAMs_20 10 07 12.6
comp=Z,2µm,22.0s
GERES GERESS Array B 83.14 330 P **P** **09 27 46.2 +0.2**
comp=Z,15nm,0.8s,baz=35,slow=4.9,SNR=99
GERES PP **09 30 57.8 +1.5**
comp=Z,2.2nm,0.9s,baz=52,slow=8.6,SNR=3.8
GERES PKKPbc **PKKPbc** **09 46 06.5 +0.2**
comp=Z,0.3nm,0.3s,baz=215,slow=4.2,SNR=6.0
GERES LR LR 10 07 44.3
comp=Z,2µm,19.6s,baz=40,slow=38
TIAR Tiarei 83.16 118 *eP* **P** **09 27 46.7 +0.4**
comp=Z,25nm,1.1s
HSIG 83.16 59 P **P** **09 27 45.9 -0.4**
HSIG IAmb IAmb 09 27 48.5
comp=Z,83nm,1.1s
I37A Lemond, Waseca 83.17 38 P **P** **09 27 46.5 +0.4**
L34A Svendsen Farm, 83.17 41 P **P** **09 27 46.1 -0.1**
PLD Plovdiv 83.22 319 P **P** **09 27 47.2 +0.9**
PLD pmax pmax
comp=Z,332nm,1.7s
WET Wettzell 83.23 330 *eP* **P** **09 27 47.2 +0.9**
comp=Z,111nm,1.3s,baz=35,slow=5.2
WET *ep*P **pwP** **09 27 58.6 +1.9**
baz=34,slow=5.2
WET Wettzell 83.23 330 P **P** **09 27 47.0 +0.7**
CSS Mathiatis 83.30 309 P **P** **09 27 48.4 +1.4**
CSS Mathiatis 83.30 309 P **P** **09 27 47.5 +0.5**
CSS IAmb IAmb 09 27 48.9
comp=Z,189nm,1.2s
SRIG Santa Rosalia 83.36 61 P **P** **09 27 47.8 +0.5**
SRIG IAmb IAmb 09 27 49.6
comp=Z,242nm,1.5s
FRGS Fruska Gora 83.36 324‖ *i*P **P** **09 27 47.3 +0.2**
TVO Taravao 83.37 118 *eP* **P** **09 27 48.0 +0.6**
comp=Z,48nm,1.2s
ALN Alexandroupoli 83.38 318 P **P** **09 27 48.2 +1.0**
ALN Alexandroupoli 83.38 318 P **P** **09 27 47.7 +0.5**
ALN pmax pmax
comp=Z,115nm,1.2s
ALN Alexandroupoli 83.38 318 P **P** **09 27 47.6 +0.5**
ALN IAmb IAmb 09 27 49.2
comp=Z,115nm,1.2s
ALN IAMs_20 IAMs_20 10 10 53.1
comp=Z,824nm,18.0s
BUG Bochum--Univer 83.39 335 *eP* **P** **09 27 47.2 +0.2**
comp=Z,84nm,1.1s,baz=35,slow=5.2
BUG Bochum--Univer 83.39 335 P **P** **09 27 48.5 +1.5**
BUG pmax pmax
comp=Z,73nm,1.2s
GRA1 Grafenberg Arr 83.42 331 P **P** **09 27 47.9 +0.6**
GRA1 IAmb IAmb 09 27 49.6
comp=Z,139nm,1.0s
GRA1 IAMs_20 IAMs_20 10 09 54.0
comp=Z,1µm,19.0s
GRF Grafenberg Arr 83.42 331 *eP* **P** **09 27 48.3 +1.1**
comp=Z,181nm,1.2s,baz=35,slow=5.2
GRF *ep*P **pwP** **09 27 59.8 +2.1**
baz=34,slow=5.2
GRF *e*L L 09 56 52.5
comp=Z,1µm,22.0s
GRF Grafenberg Arr 83.42 331 P **P** **09 27 47.9 +0.6**
GRF pmax pmax
comp=Z,139nm,1.0s
LEF Lefka 83.47 310‖ P **P** **09 27 48.9 +1.1**
RDO Rodhopi 83.47 318 P **P** **09 27 49.0 +1.4**
N33A J Bar K, Exete 83.49 42 P **P** **09 27 47.6 -0.1**
N33A IAmb IAmb 09 27 48.4
comp=Z,168nm,1.2s
NEWG New Galloway 83.49 342‖ *eP* **P** **09 27 48.2 +0.7**
NEWG IAmb IAmb 09 27 49.3
comp=Z,204nm,1.2s
THZ Tophouse 83.49 159 P **P** **09 27 46.7 -0.8**
BFZ Birch Farm 83.51 156 P **P** **09 27 47.0 -0.5**
VTS Vitosha 83.59 320 P **P** **09 27 49.1 +0.6**
VTS Vitosha 83.59 320 P **P** **09 27 49.5 +1.0**
VTS pmax pmax
comp=Z,204nm,1.2s
VTS MLR MLR
comp=Z,1µm,18.0s
VTS Vitosha 83.59 320 P **P** **09 27 49.5 +1.0**
VTS IAMs_20 IAMs_20 10 08 54.7
comp=Z,1µm,18.0s
CBKS Cedar Bluff 83.59 45 P **P** **09 27 48.6 +0.2**
CBKS pmax pmax
comp=Z,120nm,1.1s
CBKS Cedar Bluff 83.59 45 P **P** **09 27 48.0 -0.4**
baz=314,SNR=11
CBKS Cedar Bluff 83.59 45 P **P** **09 27 48.5 +0.2**
CBKS IAmb IAmb 09 27 49.4
comp=Z,120nm,1.1s
GMK Mull of Kintyr 83.60 343‖ *eP* **P** **09 27 48.7 +0.6**
ARSA Arzberg 83.65 328 *i* PcP **P** **09 27 49.4 +0.8**
comp=Z,37nm,0.8s,SNR=20
KESW Keswick, Cumbr 83.69 342‖ *eP* **P** **09 27 49.2 +0.6**
KESW IAmb IAmb 09 27 50.8
comp=Z,531nm,1.2s
MANT Manisa 83.70 315 P **P** **09 27 48.8 -0.4**
MOA Molln 83.70 329 *i* PcP **P** **09 27 49.5 +0.7**
comp=Z,80nm,1.2s,SNR=22
BEHE Becsehely 83.72 327‖ *i*P **P** **09 27 49.2 +0.3**
G40A Rib Lake 83.74 35 P **P** **09 27 48.9 -0.1**
G40A IAmb IAmb 09 27 50.2
comp=Z,82nm,1.0s
SCHQ Schefferville 83.83 18 P **P** **09 27 49.6 +0.3**
comp=Z,56nm,0.9s,baz=352,slow=5.6,SNR=24
SCHQ Schefferville 83.83 18 P **P** **09 27 49.6 +0.3**
SCHQ IAmb IAmb 09 27 50.8
comp=Z,116nm,1.1s
GAL1 Galloway 83.83 343‖ *eP* **P** **09 27 49.6 +0.4**
GAL1 IAmb IAmb 09 27 51.0
comp=Z,279nm,1.0s
HPK Haverah Park 83.88 341‖ *eP* **P** **09 27 50.3 +0.8**
HPK IAmb IAmb 09 27 51.8
comp=Z,320nm,1.2s
TEKS Tekeris 83.95 324‖ *i*P **P** **09 27 50.6 +0.5**
CLGH Cloghs, Cushen 83.96 343‖ *eP* **P** **09 27 50.7 +0.8**
CLGH IAmb IAmb 09 27 51.8
comp=Z,307nm,1.1s
SMTH Samothraki Isl 83.96 318 P **P** **09 27 48.5 -1.7**
TNS Taunus Mts 84.00 333 *eP* **P** **09 27 50.9 +0.6**
comp=Z,81nm,1.2s,baz=35,slow=5.2
TNS Taunus Mts 84.00 333 P **P** **09 27 51.0 +0.7**
DIVS Divibare 84.08 323‖ *i*P **P** **09 27 51.0 +0.2**
KAVA Kavala 84.12 319 P **P** **09 27 50.5 -0.5**
ELL Elmali 84.13 313 P **P** **09 27 51.6 +0.3**
ELL pmax pmax
comp=Z,882nm,1.2s
ELL Elmali 84.13 313 P **P** **09 27 51.6 +0.3**
TAOE Nuku Hiva Isla 84.18 106 *e*LR LR 09 53 57.7
comp=Z,2µm,34.1s
NVR Nevrokopi 84.20 319 P **P** **09 27 51.9 +0.5**
AHRW Bad Neuenahr-A 84.22 334 *eP* **P** **09 27 51.8 +0.5**
comp=Z,117nm,1.2s,baz=35,slow=5.2
AHRW *ep*P **pwP** **09 28 03.3 +1.7**
baz=34,slow=5.2
MEH Mehetia 84.26 118 *eP* **P** **09 27 52.4 +0.5**
comp=Z,59nm,1.1s
THAS Thassos island 84.29 318 P **P** **09 27 51.5 -0.3**
E43A Lone Tree Farm 84.31 33 P **P** **09 27 51.8 -0.1**
E43A IAmb IAmb 09 27 53.0
comp=Z,67nm,0.9s
SOKA Soboth 84.31 328 *i* PcP **P** **09 27 52.5 +0.5**
comp=Z,96nm,0.8s,SNR=73
N35A Tabor 84.35 41 P **P** **09 27 52.1 0.0**
TOD Tromm 84.39 333 P **P** **09 27 52.9 +0.7**
RJOB Jochberg 84.39 329 *eP* **P** **09 27 53.3 +0.9**
comp=Z,145nm,1.1s,baz=35,slow=5.2
RJOB *ep*P **pwP** **09 28 04.7 +2.0**
baz=34,slow=5.2
LBWR Ladybower, Pea 84.41 340‖ *eP* **P** **09 27 53.2 +0.9**
LBWR IAmb IAmb 09 27 54.3
comp=Z,719nm,1.2s
PRK Paraskevi 84.43 316 P **P** **09 27 53.6 +1.0**
R32A Long Quarter, 84.44 45 P **P** **09 27 52.6 -0.2**
WIM Isle of Man 84.48 342‖ *eP* **P** **09 27 52.9 +0.3**
K38A Parkersburg 84.50 38 P **P** **09 27 52.9 0.0**
K38A IAmb IAmb 09 27 53.6
comp=Z,77nm,1.1s
SRS Serrai 84.51 319 P **P** **09 27 52.3 -0.7**
SRS Serrai 84.51 319 P **P** **09 27 53.3 +0.3**
SRS pmax pmax
comp=Z,145nm,1.4s
MEM Membach 84.52 335 P **P** **09 27 53.4 +0.6**
BBLS Lazići 84.53 323‖ *i*P **P** **09 27 53.8 +0.7**
LIA Limnos Island 84.56 318 P **P** **09 27 52.3 -0.9**
E44A Grand Marais A 84.57 32 P **P** **09 27 53.4 +0.3**
baz=322,SNR=8.7
E44A Grand Marais A 84.57 32 P **P** **09 27 53.4 +0.3**
ZAG Zagreb 84.57 327‖ *i*P **P** **09 27 53.1 -0.1**
HAPS Han Pijesak,Bl 84.58 324 *eP* **P** **09 27 56.0 +2.6**
GOLS Golise 84.58 327 *i* P **P** **09 27 53.5 +0.2**
I40A Norwalk 84.59 36 P **P** **09 27 53.2 -0.1**
I40A IAmb IAmb 09 27 54.0
comp=Z,64nm,0.9s
FUR Furstenfeldbru 84.64 331 *eP* **P** **09 27 54.5 +0.9**
comp=Z,204nm,1.0s,baz=35,slow=5.2
FUR *ep*P **pwP** **09 28 05.7 +1.8**
baz=34,slow=5.2
FUR Furstenfeldbru 84.64 331 P **P** **09 27 54.5 +0.9**
OBKA Obir 84.65 328 *i* P **P** **09 27 53.8 +0.1**
comp=Z,30nm,0.9s,SNR=14
SIGR SIGRI 84.69 317 P **P** **09 27 54.1 +0.2**
KBA Koelnbreinsper 84.70 329 *i* PcP **P** **09 27 54.1 +0.1**
comp=Z,68nm,1.0s,SNR=31
KBA Koelnbreinsper 84.70 329 P **P** **09 27 55.0 +1.0**
OXZ Oxford 84.70 160 P **P** **09 27 53.0 -0.5**
OXZ IAmb IAmb 09 27 56.8
comp=Z,80nm,1.1s
OXZ IAMs_20 IAMs_20 09 56 53.3
comp=Z,2µm,20.0s
GMM Mts of Mourne 84.70 343‖ *eP* **P** **09 27 53.9 +0.2**
KSL Kastellorizon 84.74 312 P **P** **09 27 54.0 -0.2**
RPZ Rata Peaks 84.80 161 LR LR 10 02 21.2
comp=Z,735nm,19.3s,baz=348,slow=33
CRES Cresnjev 84.80 327‖ *i*P **P** **09 27 54.1 -0.3**
STNC Stoke 84.82 340‖ *eP* **P** **09 27 55.1 +0.8**
STNC IAmb IAmb 09 27 56.5
comp=Z,387nm,1.4s
SCIA State Center 84.82 39 P **P** **09 27 55.0 +0.4**
baz=318,SNR=27
SCIA State Center 84.82 39 P **P** **09 27 55.1 +0.5**
KNT Kendrikon 84.83 320 P **P** **09 27 54.9 +0.3**
OUR Ouranopolis 84.87 319 P **P** **09 27 55.0 +0.2**
BLY Banja Luka 84.88 325‖ *i*P **P** **09 27 54.7 -0.1**
BLY Banja Luka 84.88 325 P **P** **09 27 54.9 +0.2**
BLY IAmb IAmb 09 27 56.4
comp=Z,90nm,1.4s
VAY Valandovo 84.88 320 *i* P **P** **09 27 55.5 +0.7**
VAY Valandovo 84.88 320 *i* P **P** **09 27 55.5 +0.7**
VAY Valandovo 84.88 320 P **P** **09 27 55.6 +0.7**
VAY pmax pmax
comp=Z,282nm,1.1s
KTD Kalmit 84.89 333 P **P** **09 27 55.5 +0.7**
CWF Charnwood Fore 84.89 340‖ *eP* **P** **09 27 55.1 +0.5**
CWF IAmb IAmb 09 27 56.4
comp=Z,323nm,1.3s
MYKA Terra Mystica 84.93 328 *i* P **P** **09 27 54.8 -0.3**
comp=Z,110nm,1.7s,SNR=20
STU Stuttgart 84.94 332 *eP* **P** **09 27 55.7 +0.7**
comp=Z,210nm,1.2s,baz=35,slow=5.2
STU *ep*P **pwP** **09 28 07.1 +1.7**
baz=34,slow=5.2
STU Stuttgart 84.94 332 P **P** **09 27 55.4 +0.4**
STU pmax pmax
comp=Z,170nm,1.1s
STU MLR MLR
comp=Z,2µm,18.0s
STU Stuttgart 84.94 332 P **P** **09 27 55.4 +0.4**
PLE Pljevlja 84.94 323‖ *i*P **P** **09 27 56.1 +0.8**
SKO Skopje 84.97 321 *i* P **P** **09 27 56.5 +1.2**
SKO Skopje 84.97 321 *i* P **P** **09 27 56.5 +1.2**
SKO Skopje 84.97 321 P **P** **09 27 57.3 +2.0**
SKO pmax pmax
comp=Z,243nm,1.5s
LJU Ljubljana 85.03 327 *i* P **P** **09 27 55.2 -0.3**
LJU Ljubljana 85.03 327‖ *i*P **P** **09 27 55.0 -0.5**
IVA Beram 85.05 322‖ *i*P **P** **09 27 56.3 +0.5**
MNTX Cornudas Mount 85.07 53 P **P** **09 27 56.5 +0.5**
baz=312,SNR=81
MNTX Cornudas Mount 85.07 53 P **P** **09 27 56.5 +0.5**
WME Myndd Eilian 85.08 342‖ *eP* **P** **09 27 55.5 -0.1**
KSU1 Kansas State U 85.11 43 P **P** **09 27 55.7 -0.4**
baz=316,SNR=36
KSU1 Kansas State U 85.11 43 P **P** **09 27 55.7 -0.4**
KSU1 IAmb IAmb 09 27 56.9
comp=Z,123nm,0.9s
PLG Polygyros 85.13 319 P **P** **09 27 55.7 -0.4**
D46A Sault St. Mari 85.13 31 P **P** **09 27 55.5 -0.5**
baz=324,SNR=30
HORT Hortiatis 85.14 319 P **P** **09 27 55.8 -0.5**
MSTX Muleshoe 85.16 50 P **P** **09 27 56.7 +0.2**
baz=313,SNR=29
MSTX Muleshoe 85.16 50 P **P** **09 27 56.5 -0.1**
MSTX IAmb IAmb 09 27 58.2
comp=Z,95nm,1.3s
MATQ Matagami 85.16 26 P **P** **09 27 55.7 -0.4**
baz=328,SNR=54
CHOS Chios Island 85.17 316 P **P** **09 27 56.1 -0.3**
MGRS Mrkonjic Grad 85.18 325‖ *i*P **P** **09 27 57.5 +1.2**
THE Thessaloniki 85.19 319 P **P** **09 27 55.9 -0.5**
THE Thessaloniki 85.19 319 P **P** **09 27 57.6 +1.2**
AMTX Amarillo 85.19 49 P **P** **09 27 57.6 +0.9**
baz=314
AMTX Amarillo 85.19 49 P **P** **09 27 57.4 +0.8**
WLF1 Llynfaes 85.20 342‖ *eP* **P** **09 27 55.5 -0.7**
WLF1 IAmb IAmb 09 27 58.0
comp=Z,608nm,1.3s
WATA Walderalm 85.20 330 *i* PcP **P** **09 27 56.8 +0.2**
comp=Z,86nm,1.2s,SNR=22
LBZ Lake Benmore 85.21 162 P **P** **09 27 56.3 +0.2**
SMG Samos 85.21 315 P **P** **09 27 56.4 -0.2**
PVY Plav 85.23 322‖ *i*P **P** **09 27 57.0 +0.3**
GRG Griva 85.24 320 P **P** **09 27 56.4 -0.3**
GRG Griva 85.24 320 P **P** **09 27 57.5 +0.8**
WTTA Wattenberg 85.24 330 *i* PcP **P** **09 27 57.1 +0.4**
comp=Z,54nm,1.0s,SNR=22
KOME Kolasin 85.25 323‖ *i*P **P** **09 27 56.8 0.0**
FOEL Foel Wylfa 85.26 341‖ *eP* **P** **09 27 57.3 +0.8**
FOEL IAmb IAmb 09 27 58.6
comp=Z,496nm,1.1s
UPM Unac-Piva 85.27 323‖ *i*P **P** **09 27 56.5 -0.5**
UPM Unac-Piva 85.27 323‖ *i*P **P** **09 27 56.5 -0.5**
LANF Langenberg 85.27 333 P **P** **09 27 57.4 +0.7**
WLF Walferdange 85.28 334 *eP* **P** **09 27 57.5 +0.8**
comp=Z,212nm,1.4s,baz=35,slow=5.2
WLF *ep*P **pwP** **09 28 08.9 +1.9**
baz=34,slow=5.2
WLF Walferdange 85.28 334 P **P** **09 27 57.3 +0.6**
WLF pmax pmax
comp=Z,219nm,1.5s
WLF MLR MLR
comp=Z,2µm,20.0s
WLF Walferdange 85.28 334 P **P** **09 27 57.3 +0.6**
WLF IAmb IAmb 09 27 59.1
comp=Z,219nm,1.5s
YLL Llanberis 85.28 342 *eP* **P** **09 27 56.7 +0.1**
YRC Rhoscolyn 85.28 342 *eP* **P** **09 27 56.8 +0.3**
ABTA Abfaltersbach 85.30 329 *i* P **P** **09 27 56.6 -0.4**
comp=Z,59nm,1.1s,SNR=12
CEY Cerknica 85.31 327‖ *i*P **P** **09 27 56.5 -0.5**
PAIG Paliouri 85.33 318 P **P** **09 27 56.9 -0.2**
PAIG Paliouri 85.33 318 P **P** **09 27 58.0 +0.9**
D47A Chapleau 85.38 30 P **P** **09 27 56.8 -0.4**
baz=324,SNR=57
MOTA Moosalm 85.38 330 *i* PcP **P** **09 27 57.8 +0.3**
comp=Z,134nm,1.1s,SNR=38
I42A Draeger Farm, 85.39 36 P **P** **09 27 57.4 0.0**
I42A IAmb IAmb 09 27 58.7
comp=Z,89nm,1.0s
RETA Reutte 85.40 330 *i* PcP **P** **09 27 58.0 +0.6**
comp=Z,176nm,1.1s,SNR=48
LLW Llanuwychllyn 85.41 341‖ *eP* **P** **09 27 57.7 +0.4**
LLW IAmb IAmb 09 27 59.3
comp=Z,162nm,1.2s
DOU Dourbes 85.43 335 P **P** **09 27 59.0 +1.6**
SQTA Sankt Quirin 85.44 330 *i* PcP **P** **09 27 58.1 +0.4**
comp=Z,64nm,0.9s,SNR=24
E46A Sault Ste Mari 85.44 31 P **P** **09 27 57.1 -0.5**
H43A Windswept, Lux 85.46 35 P **P** **09 27 57.6 -0.1**
H43A IAmb IAmb 09 27 59.2
comp=Z,140nm,1.0s
F45A CMU Biological 85.48 32 P **P** **09 27 57.7 0.0**
baz=323,SNR=8.6
UBR Ueberruh 85.49 331 *eP* **P** **09 27 58.0 +0.2**
comp=Z,77nm,1.3s,baz=35,slow=5.2
UBR *ep*P **pwP** **09 28 09.6 +1.4**
baz=34,slow=5.2
HLM1 Long Mynd 85.51 341‖ *eP* **P** **09 27 57.7 -0.1**
HLM1 IAmb IAmb 09 27 59.6
comp=Z,231nm,1.4s
JFWS Jewell Farm 85.51 37 P **P** **09 27 57.5 -0.5**
JFWS pmax pmax
comp=Z,64nm,1.0s
JFWS Jewell Farm 85.51 37 P **P** **09 27 57.5 -0.5**
baz=320,SNR=18
JFWS Jewell Farm 85.51 37 P **P** **09 27 57.5 -0.5**
JFWS IAmb IAmb 09 27 58.9
comp=Z,64nm,0.9s
NKY Niksic 85.53 323‖ *i*P **P** **09 27 57.8 -0.4**
ARG Arkhangelos 85.53 313 P **P** **09 28 00.2 +2.0**
NKME Niksic 85.58 323‖ *i*P **P** **09 27 57.8 -0.6**
BAIF Baives 85.59 336 *eP* **P** **09 27 57.7 -0.5**
BAIF pmax pmax
comp=Z,140nm,1.7s
STAL STALIGIAL 85.61 329 P **P** **09 27 57.3 -1.2**
RIY Rijeka 85.62 327‖ *i*P **P** **09 27 57.7 -0.7**
TRI Trieste 85.62 328 P **P** **09 27 57.3 -1.1**
TRI pmax pmax
comp=Z,70nm,1.0s
TRI MLR MLR
comp=Z,2µm,18.0s
TRI Trieste 85.62 328 P **P** **09 27 57.3 -1.1**
TRI IAmb IAmb 09 27 58.9
comp=Z,70nm,1.0s
BFO Black Forest 85.62 332 *eP* **P** **09 27 58.9 +0.5**
comp=Z,258nm,1.2s,baz=35,slow=5.2
BFO *ep*P **pwP** **09 28 10.3 +1.5**
baz=34,slow=5.2
BFO Black Forest 85.62 332 P **P** **09 27 58.7 +0.2**
BFO pmax pmax
comp=Z,210nm,1.1s
BFO MLR MLR
comp=Z,2µm,19.0s
BFO Black Forest 85.62 332 P **P** **09 27 58.7 +0.2**
SKY Skiros Island 85.63 317 P **P** **09 27 58.7 +0.1**
SKDS Skadanscina 85.64 327 *eP* **P** **09 27 57.8 -0.8**
N38A Joes South For 85.64 40 P **P** **09 27 58.9 +0.2**
BRY Bratogost 85.67 323‖ *i*P **P** **09 27 58.2 -0.8**
BRY Bratogost 85.67 323‖ *i*P **P** **09 27 58.2 -0.8**
PHP Peshkopia 85.68 321 P **P** **09 27 58.6 -0.3**
L40A Anamosa 85.69 38 P **P** **09 27 58.8 -0.1**
L40A IAmb IAmb 09 28 00.0
comp=Z,158nm,1.1s
PDG Podgorica 85.69 323‖ *i*P **P** **09 27 58.8 0.0**
PDG Podgorica 85.69 323 P **P** **09 27 58.8 0.0**
TTG Podgorica 85.69 323‖ *i*P **P** **09 27 59.1 +0.3**
DSB Dublin 85.71 343 P **P** **09 27 58.8 0.0**
DSB IAmb IAmb 09 28 00.9
comp=Z,100nm,1.1s
U32A Winter Ranch, 85.72 46 P **P** **09 27 59.4 +0.3**
U32A IAmb IAmb 09 28 01.1
comp=Z,136nm,1.1s
CEME Cevo 85.76 323‖ *i*P **P** **09 27 59.0 -0.3**
D48A Paudash Townsh 85.79 30 P **P** **09 27 58.6 -0.7**
baz=325,SNR=22
E47A Iron Bridge 85.79 31 P **P** **09 27 58.9 -0.4**
baz=324,SNR=38
FETA Feichten 85.79 330 *i* PcP **P** **09 27 59.9 +0.4**
comp=Z,92nm,1.0s,SNR=42
EIL Elat 85.80 305 P **P** **09 27 59.8 +0.1**
comp=Z,47nm,1.2s,baz=49,slow=2.0,SNR=29
EIL PP **PP** **09 31 20.9 +2.4**
comp=Z,10.0nm,1.1s,baz=318,slow=1.8,SNR=3.9
LIT Litokhoron 85.82 319 P **P** **09 27 59.2 -0.3**
LIT Litokhoron 85.82 319 P **P** **09 27 59.3 -0.3**
LIT pmax pmax
comp=Z,167nm,1.0s
LIT MLR MLR
comp=Z,2µm,18.0s
LIT Litokhoron 85.82 319 P **P** **09 27 59.3 -0.3**
D49A Beulah Townshi 85.89 29 P **P** **09 27 59.0 -0.7**
baz=326,SNR=16
FNA Florina 85.89 320 P **P** **09 27 59.4 -0.5**
FNA Florina 85.89 320 P **P** **09 27 59.6 -0.4**
FNA pmax pmax
comp=Z,116nm,1.1s
FNA Florina 85.89 320 P **P** **09 27 59.6 -0.4**
FNA IAmb IAmb 09 28 01.1
comp=Z,116nm,1.1s
DAVA Damuels 85.91 331 *i* PcP **P** **09 28 00.4 +0.4**
comp=Z,177nm,1.0s,SNR=50
DRME Dracevica, Mon 85.91 322‖ *i*P **P** **09 28 00.1 +0.1**
DRME Dracevica, Mon 85.91 322‖ *i*P **P** **09 28 00.2 +0.2**
OHR Ohrid 85.93 321 *i* P **P** **09 28 00.1 0.0**
OHR Ohrid 85.93 321 *i* P **P** **09 28 00.1 0.0**
G45A Suttons Bay 85.94 33 P **P** **09 28 00.1 +0.1**
baz=323,SNR=15
G45A Suttons Bay 85.94 33 P **P** **09 28 00.3 +0.2**
G45A IAmb IAmb 09 28 01.6
comp=Z,162nm,1.1s
ODZ Otahua Downs 85.94 162 P **P** **09 28 00.3 +0.6**
BUM Brajici-Budva 85.96 323‖ *i*P **P** **09 28 00.1 -0.2**
STRD Stroud 85.99 340‖ *eP* **P** **09 28 00.8 +0.7**
STRD IAmb IAmb 09 28 01.9
comp=Z,712nm,1.3s
SKIA Skiathos 86.00 318 P **P** **09 27 59.5 -1.0**
MCH1 Michaelchurch 86.01 340‖ *eP* **P** **09 28 00.4 +0.1**
MCH1 IAmb IAmb 09 28 02.0
comp=Z,298nm,1.3s
NEO Neokhori 86.02 318 P **P** **09 27 59.7 -0.9**
SLE Schleitheim 86.04 332 P **P** **09 28 01.4 +0.9**
KZN Kozani 86.04 320 P **P** **09 28 00.3 -0.4**
HCY Herceg Novi 86.04 323‖ *i*P **P** **09 27 59.8 -0.8**
HCY Herceg Novi 86.04 323‖ *i*P **P** **09 27 59.9 -0.7**
KYMI Kymi, Euboea I 86.05 317 P **P** **09 28 00.4 -0.3**
ULC Ulcinj 86.05 322‖ *i*P **P** **09 28 00.3 -0.4**
G46A Petoskey 86.05 32 P **P** **09 28 00.7 +0.1**
baz=323,SNR=13
STON Ston 86.09 324‖ *i*P **P** **09 27 59.8 -1.0**
HMNX Herstmonceux 86.09 338‖ *eP* **P** **09 28 01.8 +1.1**
HMNX IAmb IAmb 09 28 02.9
comp=Z,597nm,1.1s
H45A Beulah 86.10 33 P **P** **09 28 01.2 +0.3**
baz=322,SNR=9.9
CHGQ Chibougamau 86.12 24 P **P** **09 28 00.3 -0.5**
baz=330,SNR=63
SWN1 Swindon 86.13 340‖ *eP* **P** **09 28 01.6 +0.7**
ECH Echery 86.15 333 P **P** **09 28 01.1 +0.1**
ECH pmax pmax
comp=Z,102nm,1.0s
ECH Echery 86.15 333 P **P** **09 28 01.1 +0.1**
ECH IAmb IAmb 09 28 02.6
comp=Z,102nm,1.0s
ECH IAMs_20 IAMs_20 10 13 07.1
comp=Z,1µm,18.0s
TIR Tirane 86.22 322 P **P** **09 28 01.8 +0.3**
TIR Tirane 86.22 322 P **P** **09 28 01.2 -0.3**
TIR pmax pmax
comp=Z,188nm,1.3s
TIR Tirane 86.22 322 P **P** **09 28 01.2 -0.3**
TIR IAmb IAmb 09 28 03.2
comp=Z,188nm,1.3s

E48A Lockeyer 86.22 30 P P 09 28 00.9 -0.5
baz=325,SNR=24
CTI Castel Tesino 86.22 329 P P 09 28 00.6 -0.9
CTI pmax pmax
comp=Z,48nm,1.0s
CTI MLR MLR
comp=Z,2µm,20.0s
CTI Castel Tesino 86.22 329 P P 09 28 00.6 -0.9
MRKA Markates 86.27 318 P P 09 28 01.2 -0.6
FUORN Ofenpass-Fuorn 86.31 330 P P 09 28 02.7 +0.5
FUORN IAMs_20 IAMs_20 10 11 22.3
comp=Z,2µm,22.0s
NEST Nestorio 86.33 320 P P 09 28 02.4 +0.2
P38A Dawn 86.36 41 P P 09 28 02.3 +0.1
P38A IAmb IAmb 09 28 03.1
comp=Z,102nm,1.0s
AMGA Amorgos Island 86.37 315 P P 09 28 01.1 -1.2
APE Apeiranthos 86.40 315 P P 09 28 00.9 -1.6
PENT Pentalofos 86.44 320 P P 09 28 02.1 -0.7
THL Klokotos Trika 86.47 319 P P 09 28 01.4 -1.3
I45A Fountain 86.48 34 P P 09 28 03.2 +0.4
baz=322,SNR=5.9
I45A Fountain 86.48 34 P P 09 28 03.0 +0.2
I45A IAmb IAmb 09 28 04.5
comp=Z,141nm,1.0s
L42A Oliver, Polo 86.49 37 P P 09 28 02.2 -0.6
L42A IAmb IAmb 09 28 03.7
comp=Z,105nm,1.0s
RSBS Rosebush, Pemb 86.51 341 eP P 09 28 02.1 -0.6
RSBS IAmb IAmb 09 28 04.5
comp=Z,122nm,1.1s
H46A Fife Lake 86.53 33 P P 09 28 03.3 +0.4
baz=323
D50A G1974 Best Tow 86.55 28 P P 09 28 02.2 -0.8
baz=327,SNR=16
GLMI Grayling 86.55 33 P P 09 28 03.6 +0.4
baz=323,SNR=12
GLMI Grayling 86.55 33 P P 09 28 03.5 +0.4
KARP Karpathos 86.56 313 P P 09 28 02.9 -0.5
KARP Karpathos 86.56 313 P P 09 28 03.2 -0.2
KARP IAmb IAmb 09 28 05.7
comp=Z,136nm,1.0s
F48A Evansville 86.57 31 P P 09 28 02.8 -0.3
baz=325,SNR=30
K43A Burlington 86.57 36 P P 09 28 02.7 -0.5
K43A IAmb IAmb 09 28 04.3
comp=Z,92nm,1.1s
G47A Hillman 86.59 32 P P 09 28 03.4 +0.2
baz=324,SNR=18
HINF Hinteralfeld 86.59 333 eP P 09 28 02.4 -0.9
HINF pmax pmax
comp=Z,52nm,1.2s
HAU Haudompre 86.61 333 eP P 09 28 03.5 +0.1
HAU pmax pmax
comp=Z,77nm,1.1s
VLDQ Val d'Or 86.63 27 P P 09 28 02.1 -1.2
VLDQ IAmb IAmb 09 28 03.6
comp=Z,151nm,1.1s
AGG Agios Georgios 86.70 319 P P 09 28 02.6 -1.4
AGG Agios Georgios 86.70 319 P P 09 28 03.1 -0.9
AGG pmax pmax
comp=Z,31nm,1.0s
AGG Agios Georgios 86.70 319 P P 09 28 03.1 -0.9
ATHU Athens Univers 86.70 317 P P 09 28 02.1 -1.9
AXAR Agios Charalam 86.72 318 P P 09 28 03.0 -1.0
T35A Sooner Cattle 86.74 44 P P 09 28 04.5 +0.3
T35A IAmb IAmb 09 28 05.2
comp=Z,94nm,1.1s
ANAF Anafi Island 86.77 315 P P 09 28 02.3 -2.0
VLY Voula,Athens 86.78 317 P P 09 28 02.5 -1.8
TUE Stuetta 86.78 331 P P 09 28 04.6 +0.1
TUE IAmb IAmb 09 28 08.1
comp=Z,72nm,1.0s
D51A Lot 18 Range I 86.79 28 P P 09 28 03.3 -0.9
baz=327,SNR=19
MAKR Makrakomi, Fth 86.81 319 P P 09 28 03.6 -0.9
VILL Villia 86.81 317 P P 09 28 02.9 -1.7
F49A Sandfield 86.86 30 P P 09 28 04.2 -0.3
baz=325,SNR=21
J45A Montague 86.89 34 P P 09 28 04.6 -0.1
baz=322
N41A Harden Midland 86.90 39 P P 09 28 05.0 +0.1
I46A Reed City 86.90 34 P P 09 28 05.2 +0.4
baz=323,SNR=11
H47A Mio 86.91 32 P P 09 28 05.1 +0.3
baz=324,SNR=19
SANT Santorini 86.94 315 IAMs_20 IAMs_20 10 12 01.4
comp=Z,1µm,18.0s
JAN Janina 86.99 320 P P 09 28 05.7 +0.3
WMOK Wichita Mounta 87.00 47 P P 09 28 05.6 +0.1
WMOK pmax pmax
comp=Z,98nm,1.2s
WMOK Wichita Mounta 87.00 47 P P 09 28 05.8 +0.3
baz=315,SNR=84
WMOK Wichita Mounta 87.00 47 P P 09 28 05.6 +0.1
WMOK IAmb IAmb 09 28 07.2
comp=Z,98nm,1.1s
SALO Salr 87.03 330 P P 09 28 05.4 0.0
SALO IAmb IAmb 09 28 06.4
comp=Z,93nm,1.1s
TBI Tubuai 87.03 123 eS S 09 38 42.6 -1.7
comp=Z,715nm,35.2s
TBI Tubuai 87.03 123 eLQ LQ 09 51 31.6
comp=Z,958nm,33.0s
TBI eLR LR 09 54 41.6
comp=Z,1µm,35.5s
TBI Tubuai 87.03 123 eT T 11 04 11.4
comp=Z,17nm,0.4s
EVR Evrytania 87.05 319 P P 09 28 05.0 -0.8
L44A Lake County Fo 87.18 36 P P 09 28 06.1 -0.2
baz=321,SNR=10.0
L44A Lake County Fo 87.18 36 P P 09 28 06.0 -0.2
L44A IAmb IAmb 09 28 07.4
comp=Z,137nm,1.0s
P40A Paris 87.19 40 P P 09 28 06.5 +0.2
H48A Harrisville 87.20 32 P P 09 28 06.6 +0.4
baz=324,SNR=7.8
H48A Harrisville 87.20 32 P P 09 28 06.3 +0.1
H48A IAmb IAmb 09 28 07.3
comp=Z,100nm,1.0s
E51A G1948 Merrick 87.21 29 P P 09 28 05.7 -0.6
baz=327,SNR=28
ANX Ano Chora 87.23 319 P P 09 28 05.4 -1.3
I47A Gladwin 87.25 33 P P 09 28 06.8 +0.4
baz=324,SNR=12
I47A Gladwin 87.25 33 P P 09 28 06.9 +0.4
OKCFA Oklahoma City 87.29 46 P P 09 28 07.1 +0.2
SERG Sergoula 87.30 318 P P 09 28 05.2 -1.7
OKCSW OKLAHOMA CITY 87.30 46 P P 09 28 07.0 +0.1
TRIZ Trizonia 87.32 318 P P 09 28 05.2 -1.7
IGT Igoumenitsa 87.35 320 P P 09 28 06.5 -0.6
IGT Igoumenitsa 87.35 320 P P 09 28 06.9 -0.2
IGT pmax pmax
comp=Z,100nm,1.4s
EFP Efpalio 87.37 318 P P 09 28 06.6 -0.5
ZKR Zakros 87.41 314 P P 09 28 07.2 -0.3
D53A Lac Vacive, Po 87.42 27 P P 09 28 06.7 -0.6
baz=328
D53A Lac Vacive, Po 87.42 27 P P 09 28 06.8 -0.4
D53A IAmb IAmb 09 28 08.2
comp=Z,89nm,1.1s
FNO Franklin 87.43 46 P P 09 28 08.2 +0.7
I48A Sherman Twp 87.45 32 P P 09 28 08.0 +0.5
baz=324,SNR=16
LAKA Lakka 87.47 318 P P 09 28 06.9 -0.8
KEK Kerkira 87.48 320 P P 09 28 07.4 -0.3
KLV Kalavryta, Ach 87.52 318 P P 09 28 06.7 -1.3
F51A Arnstein 87.56 29 P P 09 28 07.5 -0.4
baz=327,SNR=14
X34A Smith Ranch, M 87.65 47 P P 09 28 09.0 +0.4
NPS Neapolis 87.65 314 P P 09 28 07.6 -1.0
D54A Lac Fusel, La 87.73 27 P P 09 28 08.1 -0.7
baz=329,SNR=24
M44A Midewin, Midew 87.73 37 P P 09 28 08.3 -0.5
E52A Mattawa 87.73 28 P P 09 28 08.1 -0.7
baz=328,SNR=11
J47A Sunmer 87.74 34 P P 09 28 09.4 +0.5
baz=323,SNR=14
J47A Sunmer 87.74 34 P P 09 28 08.9 +0.1
LKD2 Lefkada island 87.74 319 P P 09 28 08.3 -0.7
TX31 Lajitas Ar. Si 87.75 54 P P 09 28 08.8 -0.5
TX31 IAmb IAmb 09 28 10.5
comp=Z,110nm,1.1s
TX32 Lajitas Array 87.75 54 P P 09 28 08.7 -0.6
K46A Dorr 87.75 34 P P 09 28 08.8 -0.1
baz=323,SNR=7.9
TXAR Lajitas Array 87.75 54 P P 09 28 09.6 +0.3
comp=Z,25nm,0.9s,baz=295,slow=3.4,SNR=203
TXAR PKKPbc PKKPbc 09 45 56.7 +1.6
comp=Z,0.3nm,0.5s,baz=158,slow=6.6,SNR=5.1
TXAR PKPPKP P'P'df 09 54 00.5 -8.3
comp=Z,0.6nm,0.8s,baz=130,slow=3.9,SNR=5.8
HDIL Hopedale 87.78 38 P P 09 28 09.3 +0.2
baz=321,SNR=38
HDIL Hopedale 87.78 38 P P 09 28 09.3 +0.2
LAST Lasithi 87.80 314 P P 09 28 09.0 -0.4
W35A Tecumseh 87.80 46 P P 09 28 09.1 -0.3
TUL1 Leonard 87.86 45 P P 09 28 09.8 +0.1
baz=317,SNR=20
TUL1 Leonard 87.86 45 P P 09 28 09.9 +0.3
TUL1 IAmb IAmb 09 28 11.2
comp=Z,105nm,1.1s
SGRT San Giovanni R 87.87 324 P P 09 28 09.1 -0.5
SGRT IAmb IAmb 09 28 09.9
comp=Z,65nm,1.0s
SGRT IAMs_20 IAMs_20 10 14 02.7
comp=Z,824nm,22.0s
EVGI Lefkada island 87.87 319 P P 09 28 09.1 -0.5
RLS Riolos of Patr 87.87 318 P P 09 28 08.6 -1.0
SCTE Santa Cesarea 87.87 322 P P 09 28 09.2 -0.4
SCTE IAmb IAmb 09 28 10.4
comp=Z,78nm,0.9s
SCTE IAMs_20 IAMs_20 10 10 46.0
comp=Z,1µm,20.0s
ZCCA Zocca 87.88 329 P P 09 28 10.3 +0.7
ZCCA IAmb IAmb 09 28 16.5
comp=Z,57nm,1.1s
F52A Sundridge 87.89 29 P P 09 28 09.4 -0.2
baz=327,SNR=27
ABTX Abilene, Hawle 87.98 49 P P 09 28 10.7 +0.4
baz=315,SNR=14
ABTX Abilene, Hawle 87.98 49 P P 09 28 10.4 +0.1
ABTX IAmb IAmb 09 28 12.0
comp=Z,61nm,1.1s
CLF Chambon-Foret 87.99 336 P P 09 28 10.7 +0.7
R40A Maddies Statio 88.00 41 P P 09 28 10.0 -0.2
R40A IAmb IAmb 09 28 11.4
comp=Z,145nm,1.3s
E53A Dumoine, Ponti 88.02 28 P P 09 28 09.6 -0.6
baz=328
I49A Point Hope 88.02 32 P P 09 28 10.6 +0.4
baz=325,SNR=9.1
I49A Point Hope 88.02 32 P P 09 28 10.8 +0.6
IDI Anoyia 88.04 315 ⇑P P 09 28 10.9 +0.3
IDI Anoyia 88.04 315 P P 09 28 09.9 -0.7
IDI IAmb IAmb 09 28 11.5
comp=Z,72nm,1.2s
FSK Fiskardo 88.04 319 P P 09 28 09.4 -1.0
L46A Eue Claire 88.05 35 P P 09 28 10.4 +0.1
baz=322,SNR=16
L46A Eue Claire 88.05 35 P P 09 28 10.5 +0.1
HPIG 88.06 57 P P 09 28 11.3 +0.4
MURB Monte Urbino 88.11 327 P P 09 28 11.6 +0.8
MURB IAmb IAmb 09 28 13.0
comp=Z,160nm,1.4s
K47A Vermontville 88.11 34 P P 09 28 10.7 +0.1
baz=323,SNR=7.1
LOR Lormes 88.12 334 eP P 09 28 10.2 -0.4
LOR pmax pmax
comp=Z,254nm,1.4s
J48A Bridge Port 88.14 33 P P 09 28 11.1 +0.4
baz=324,SNR=24
J48A Bridge Port 88.14 33 P P 09 28 11.1 +0.4
J48A IAMs_20 IAMs_20 09 59 19.1
comp=Z,1µm,20.0s
E54A Lac Daplat, Po 88.15 27 P P 09 28 10.1 -0.6
baz=328
NRCA Norcia 88.20 326 P P 09 28 11.0 -0.2
NRCA IAmb IAmb 09 28 12.2
comp=Z,86nm,1.2s
FLN La Foliniere 88.21 338 eP P 09 28 10.3 -0.7
FLN pmax pmax
comp=Z,194nm,1.5s
ALGO Algonquin Park 88.24 28 P P 09 28 10.7 -0.5
baz=328,SNR=23
VLS Valsamata 88.24 319 P P 09 28 10.7 -0.7
U38A Gravette 88.25 44 P P 09 28 11.2 -0.3
U38A IAmb IAmb 09 28 12.7
comp=Z,98nm,1.2s
D55A Sainte-Anne-du 88.25 26 P P 09 28 11.1 -0.2
baz=330,SNR=26
ITM Ithomi 88.28 318 P P 09 28 10.4 -1.2
ITM Ithomi 88.28 318 P P 09 28 10.4 -1.2
ITM IAmb IAmb 09 28 11.4
comp=Z,96nm,1.2s
ITM IAMs_20 IAMs_20 10 13 11.9
comp=Z,1µm,18.0s
J49A Marlette 88.36 33 P P 09 28 12.3 +0.5
baz=324,SNR=28
P43A Skaggs, Pawnee 88.37 39 P P 09 28 12.2 +0.2
K48A Perry 88.39 33 P P 09 28 12.3 +0.3
baz=324,SNR=16
IMMV Iera Moni Meta 88.42 315 P P 09 28 11.8 -0.5
OSSC Osservatorio P 88.44 328 P P 09 28 11.6 -0.6
OSSC IAMs_20 IAMs_20 10 13 35.9
comp=Z,1µm,20.0s
AQU L'Aquila 88.46 326 ⇓iP P 09 28 12.5 +0.1
AQU L'Aquila 88.46 326 P P 09 28 12.2 -0.2
AQU pmax pmax
comp=Z,53nm,0.9s
AQU L'Aquila 88.46 326 P P 09 28 12.2 -0.2
AQU IAmb IAmb 09 28 14.1
comp=Z,53nm,0.9s
D56A ZEC Mazanza, M 88.48 26 P P 09 28 12.4 +0.1
baz=330,SNR=69
O44A Mansfield 88.49 38 P P 09 28 12.4 -0.1
O44A IAmb IAmb 09 28 13.8
comp=Z,85nm,0.9s
INTR Introdacqua 88.51 325 P P 09 28 11.8 -0.9
INTR IAmb IAmb 09 28 14.0
comp=Z,59nm,1.0s
ACER Acerenza 88.54 323 P P 09 28 12.6 -0.1
ACER IAmb IAmb 09 28 14.2
comp=Z,87nm,0.9s
ACER IAMs_20 IAMs_20 10 12 53.5
comp=Z,1µm,20.0s
E55A Montcerf-Lytto 88.54 27 P P 09 28 12.1 -0.4
baz=329,SNR=6.7
LPL La Plagne 88.58 332 eP P 09 28 13.8 +0.7
LPL pmax pmax
comp=Z,42nm,0.9s
LPG La Plagne 88.59 332 eP P 09 28 13.1 -0.1
LPG pmax pmax
comp=Z,65nm,1.0s
PYL PYLOS 88.59 317 P P 09 28 11.3 -1.7
HHAR Hobbs 88.61 43 P P 09 28 12.9 -0.3
H52A Wyevale 88.64 30 P P 09 28 12.8 -0.3
baz=327,SNR=27
GRR Gorron 88.65 338 eP P 09 28 12.7 -0.4
GRR pmax pmax
comp=Z,115nm,1.1s
K49A Clarkson 88.69 33 P P 09 28 13.9 +0.4
baz=324,SNR=9.8
G54A Lake Saint Pet 88.70 28 P P 09 28 13.0 -0.4
baz=328,SNR=21
AVF Avril sur Loir 88.70 334 eP P 09 28 13.0 -0.4
AVF pmax pmax
comp=Z,209nm,1.4s
CCM Cathedral Cave 88.71 41 P P 09 28 13.6 0.0
CCM Cathedral Cave 88.71 41 P P 09 28 13.6 0.0
baz=319
CCM Cathedral Cave 88.71 41 P P 09 28 13.6 0.0
G53A Haliburton 88.73 29 P P 09 28 13.4 -0.1
baz=328,SNR=21
SLM Saint Louis 88.78 40 P P 09 28 14.0 +0.1
SLM pmax pmax
comp=Z,202nm,1.0s
SLM Saint Louis 88.78 40 P P 09 28 13.9 +0.1
DAMY Dhamar 88.79 287 P P 09 28 15.5 +0.8
SNR=27
DAMY Dhamar 88.79 287 P P 09 28 14.0 -0.6
DAMY IAmb IAmb 09 28 17.0
comp=Z,132nm,1.2s
D57A Chemin Vers le 88.80 25 P P 09 28 14.0 +0.2
baz=331,SNR=82
E56A St. Veronique 88.82 26 P P 09 28 13.8 -0.1
baz=330,SNR=36
SADO Sadowa 88.82 29 P P 09 28 13.7 -0.3
SADO IAmb IAmb 09 28 15.1
comp=Z,90nm,1.3s
M47A Cromwell 88.88 35 P P 09 28 14.4 +0.1
baz=323,SNR=15
I51A Listowel 88.88 31 P P 09 28 14.9 +0.6
baz=326,SNR=18
Z35A Perchaven, San 88.89 47 P P 09 28 14.4 -0.1
L48A N Adams 88.94 34 P P 09 28 14.9 +0.3
baz=324,SNR=35
F55A Otter Lake 88.96 27 P P 09 28 14.0 -0.7
baz=329,SNR=13
SFIN Lafayette 88.97 37 P P 09 28 15.0 +0.3
baz=322,SNR=21
SFIN Lafayette 88.97 37 P P 09 28 14.7 0.0
SFIN IAmb IAmb 09 28 16.2
comp=Z,114nm,0.9s
PAOL Paolisi 88.98 324 P P 09 28 14.5 -0.4
BNI Bardonecchia 89.00 331 P P 09 28 13.9 -1.1
BNI pmax pmax
comp=Z,20nm,1.0s
BNI MLR MLR
comp=Z,1µm,21.0s
BNI Bardonecchia 89.00 331 P P 09 28 13.9 -1.1
BNI IAMs_20 IAMs_20 10 08 54.5
comp=Z,1µm,21.0s
AAM Ann Arbor 89.00 33 P P 09 28 14.9 +0.1
AAM pmax pmax
comp=Z,83nm,1.0s
AAM Ann Arbor 89.00 33 P P 09 28 15.1 +0.3
baz=324,SNR=6.0
AAM Ann Arbor 89.00 33 P P 09 28 14.9 +0.1
AAM IAmb IAmb 09 28 16.5
comp=Z,82nm,1.0s
K50A Casco 89.06 33 P P 09 28 15.2 +0.2
baz=325,SNR=6.2
K50A Casco 89.06 33 P P 09 28 15.3 +0.2
K50A IAmb IAmb 09 28 16.7
comp=Z,132nm,1.1s
K50A IAMs_20 IAMs_20 09 57 17.5
comp=Z,2µm,21.0s
X37A Clayton 89.06 45 P P 09 28 15.5 +0.2
D58A Chemin du LacG 89.06 24 P P 09 28 14.9 -0.2
baz=332,SNR=23
U40A Yellville 89.14 43 P P 09 28 15.4 -0.2
baz=318,SNR=94
U40A Yellville 89.14 43 P P 09 28 15.4 -0.2
M48A Edgerton 89.19 35 P P 09 28 15.9 +0.2
baz=323
M48A Edgerton 89.19 35 P P 09 28 15.8 +0.1
M48A IAmb IAmb 09 28 17.2
comp=Z,118nm,1.1s
Q44A Meyer Farm, Va 89.19 39 P P 09 28 15.9 +0.1
H53A Bobcaygeon 89.20 29 P P 09 28 15.7 0.0
baz=328,SNR=29
N47A Urbana 89.23 36 P P 09 28 15.8 -0.1
baz=323,SNR=31
N47A Urbana 89.23 36 P P 09 28 15.9 -0.1
E57A Chemin Saint G 89.24 25 P P 09 28 16.1 +0.1
baz=331,SNR=32
TRQ Mont Tremblant 89.26 26 P P 09 28 16.0 -0.1
G55A Calabogie 89.33 28 P P 09 28 16.0 -0.4
baz=329,SNR=36
PLVO Plevna 89.38 28 P P 09 28 16.5 -0.1
PLVO IAmb IAmb 09 28 17.7
comp=Z,88nm,0.9s
JCT Junction City 89.39 51 P P 09 28 16.5 -0.5
JCT pmax pmax
comp=Z,34nm,0.9s
JCT Junction City 89.39 51 P P 09 28 16.7 -0.2
baz=315,SNR=17
JCT Junction City 89.39 51 P P 09 28 16.5 -0.5
TIP Timpagrande 89.40 322 P P 09 28 16.6 -0.3
TIP Timpagrande 89.40 322 P P 09 28 16.9 0.0
I53A Kortright Cn E 89.44 30 P P 09 28 17.3 +0.4
baz=327,SNR=9.1
D59A Saint-Raymond 89.48 24 P P 09 28 17.1 +0.1
baz=332,SNR=7.6
W39A Magazine 89.50 44 P P 09 28 17.3 0.0
baz=318,SNR=23
W39A Magazine 89.50 44 P P 09 28 17.1 -0.2
W39A IAmb IAmb 09 28 18.7
comp=Z,88nm,1.4s
P46A Rosedale 89.51 37 P P 09 28 17.7 +0.4
P46A IAmb IAmb 09 28 18.9
comp=Z,111nm,0.8s
M49A Liberty Center 89.53 34 P P 09 28 17.1 -0.3
baz=324,SNR=13
TCF Toulx Ste Croi 89.53 335 eP P 09 28 17.2 -0.1
TCF pmax pmax
comp=Z,140nm,1.5s
N48A Decatur 89.55 35 P P 09 28 17.6 +0.1
baz=323,SNR=22
E58A La Victoria 89.56 25 P P 09 28 17.5 +0.1
baz=331,SNR=22
T42A Van Buren 89.57 41 P P 09 28 17.5 -0.1
T42A IAmb IAmb 09 28 18.9
comp=Z,76nm,1.2s
J52A Paris 89.57 31 P P 09 28 18.0 +0.5
baz=326,SNR=18
F57A Harrington 89.57 26 P P 09 28 16.8 -0.6
baz=330
K51A Iona Station 89.57 32 P P 09 28 18.2 +0.7
baz=326,SNR=13
L50A Kingsville 89.58 33 P P 09 28 17.6 +0.1
baz=325
SSB Saint Sauveur 89.59 333 P P 09 28 17.6 0.0
SSB pmax pmax
comp=Z,31nm,1.2s
SSB MLR MLR
comp=Z,1µm,20.0s
SSB Saint Sauveur 89.59 333 P P 09 28 17.6 0.0
SSB Saint Sauveur 89.59 333 IAMs_20 IAMs_20 10 11 22.2
comp=Z,1µm,20.0s
ORIO Orleans, Innes 89.59 27 P P 09 28 17.0 -0.6
baz=330,SNR=32
ORIO Orleans, Innes 89.59 27 P P 09 28 17.3 -0.3
DELO Deloro Mine 89.62 29 P P 09 28 17.9 +0.2
DELO IAmb IAmb 09 28 19.0
comp=Z,116nm,1.0s
E59A St. Maurice 89.72 24 P P 09 28 18.2 +0.1
baz=332
H06E1 SOCORRO T-PHAS 89.72 66 P P 09 28 20.1 +1.4
SNR=4.9
H06S1 SOCORRO T 89.73 66 P P 09 28 20.1 +1.4
WHTX Lake Whitney, 89.73 48 P P 09 28 18.9 +0.4
baz=316,SNR=37
WHTX Lake Whitney, 89.73 48 P P 09 28 18.5 0.0
WHTX IAmb IAmb 09 28 20.2
comp=Z,133nm,0.9s
H55A Tweed 89.75 28 P P 09 28 18.3 0.0
baz=328,SNR=28
OLIL Olney 89.77 38 P P 09 28 18.9 +0.4
D61A St Aubert, Com 89.82 23 P P 09 28 18.6 +0.1
baz=334
F58A St-Lin Laurent 89.83 26 P P 09 28 18.4 -0.2
baz=331
D60A Saint Jean D'O 89.85 23 P P 09 28 18.5 -0.1
baz=333,SNR=17
I55A Frankford 89.85 29 P P 09 28 18.8 0.0
baz=328,SNR=24
K52A Tillsonburg 89.85 31 P P 09 28 19.5 +0.6
baz=326,SNR=15
N49A Columbus Grove 89.88 35 P P 09 28 19.1 +0.1
baz=324,SNR=24
N49A Columbus Grove 89.88 35 P P 09 28 19.2 +0.2
N49A IAmb IAmb 09 28 20.5
comp=Z,105nm,0.9s
FCAR Ozark Folk Cen 89.88 43 P P 09 28 18.6 -0.6
FCAR IAmb IAmb 09 28 20.1
comp=Z,108nm,1.1s
VIVF Saint-Julien-I 89.91 333 eP P 09 28 18.9 -0.2
VIVF pmax pmax
comp=Z,36nm,0.9s
O48A Farmland 89.97 36 P P 09 28 19.4 0.0
baz=323,SNR=36
M50A Fremont 89.99 34 P P 09 28 19.3 -0.2
baz=325
S44A Carbondale 90.00 40 P P 09 28 19.9 +0.3
S44A IAmb IAmb 09 28 21.2
comp=Z,170nm,1.2s
SIUC Southern Illin 90.00 40 P P 09 28 19.6 0.0
H56A Elgin 90.06 28 P P 09 28 19.5 -0.2
baz=329,SNR=15
G57A Newington 90.08 27 P P 09 28 19.6 -0.3
baz=330,SNR=25
MIAR Mount Ida 90.09 44 P P 09 28 20.4 +0.3
MIAR pmax pmax
comp=Z,140nm,1.0s
MIAR Mount Ida 90.09 44 P P 09 28 20.6 +0.4

baz=318,SNR=96
MIAR Mount Ida 90.09 44 P P 09 28 20.4 +0.3
MIAR IAmb IAmb 09 28 21.8
comp=Z,140nm,1.0s
PBMO Poplar Bluff 90.10 41 P P 09 28 20.3 +0.2
E60A Ste Agathe de 90.17 24 P P 09 28 20.3 +0.1
baz=333,SNR=13
F59A Saint Guilaume 90.19 25 P P 09 28 20.4 +0.1
baz=332,SNR=15
BLO Bloomington 90.19 37 P P 09 28 20.5 0.0
BLO pmax pmax
comp=Z,95nm,1.3s
BLO Bloomington 90.19 37 P P 09 28 20.5 0.0
BLO IAmb IAmb 09 28 22.1
comp=Z,94nm,1.2s
WHAR Wooly Hollow 90.24 43 P P 09 28 20.7 -0.1
Z38A Mt. Pleasant 90.25 46 P P 09 28 21.0 +0.1
LCAR Lake Charles 90.26 42 P P 09 28 20.6 -0.3
D62A Allapoint, All 90.27 22 P P 09 28 20.8 +0.1
baz=334,SNR=19
D62A Allapoint, All 90.27 22 P P 09 28 21.1 +0.4
D62A IAmb IAmb 09 28 22.2
comp=Z,88nm,1.0s
J54A Appleton 90.28 30 P P 09 28 20.9 +0.1
baz=328,SNR=9.3
J54A Appleton 90.28 30 P P 09 28 20.4 -0.4
J54A IAmb IAmb 09 28 22.4
comp=Z,106nm,1.0s
PECO Prince Edward 90.35 28 P P 09 28 21.1 0.0
PECO IAmb IAmb 09 28 22.3
comp=Z,98nm,1.0s
PECO IAMs_20 IAMs_20 09 56 05.4
comp=Z,1µm,22.0s
W41B Gary Mavity, V 90.35 43 P P 09 28 21.1 -0.2
baz=319,SNR=26
F60A Warwick 90.36 24 P P 09 28 21.0 -0.1
baz=332,SNR=6.9
G58A Ormstown 90.37 26 P P 09 28 20.9 -0.2
baz=331,SNR=20
O49A Covington 90.40 35 P P 09 28 21.6 +0.1
baz=324,SNR=15
O49A Covington 90.40 35 P P 09 28 21.7 +0.2
O49A IAmb IAmb 09 28 22.8
comp=Z,66nm,0.9s
E61A Lac Etchemin 90.41 23 P P 09 28 21.7 +0.3
baz=333,SNR=9.6
M51A Elyria 90.43 33 P P 09 28 21.2 -0.3
baz=325
MEDO Medina 90.44 30 P P 09 28 21.7 +0.2
MEDO IAmb IAmb 09 28 23.1
comp=Z,135nm,1.2s
N50A Nevada 90.46 34 P P 09 28 22.1 +0.3
baz=324,SNR=10
P48A Milroy 90.48 36 P P 09 28 21.7 -0.1
baz=323,SNR=10
P48A Milroy 90.48 36 P P 09 28 21.8 -0.1
435B Jarrell 90.52 49 P P 09 28 22.2 +0.1
baz=316,SNR=5.9
CEL Celeste 90.54 322 P P 09 28 21.5 -0.7
CEL IAMs_20 IAMs_20 10 14 45.5
comp=Z,1µm,20.0s
PARMO Parma 90.54 41 P P 09 28 22.7 +0.6
X40A Basin Creek Fa 90.55 44 P P 09 28 22.2 -0.1
baz=318,SNR=26
X40A Basin Creek Fa 90.55 44 P P 09 28 22.5 +0.3
X40A IAmb IAmb 09 28 23.9
comp=Z,69nm,1.1s
USIN University of 90.58 39 P P 09 28 22.5 +0.2
USIN IAmb IAmb 09 28 24.0
comp=Z,93nm,1.4s
D63A Stockholm 90.59 22 P P 09 28 22.2 0.0
baz=335,SNR=16
UALR University of 90.60 43 P P 09 28 22.7 +0.2
J55A Hilton 90.61 29 P P 09 28 22.2 -0.1
baz=328,SNR=9.8
J55A Hilton 90.61 29 P P 09 28 22.8 +0.5
J55A IAmb IAmb 09 28 23.6
comp=Z,106nm,1.0s
M52A Chesterland 90.61 32 P P 09 28 22.7 +0.3
baz=326
M52A Chesterland 90.61 32 P P 09 28 23.3 +0.9
M52A IAmb IAmb 09 28 24.2
comp=Z,128nm,1.2s
RJF Les Rejaudoux 90.63 335 *e*P P **09 28 22.4 0.0**
RJF pmax pmax
comp=Z,126nm,1.4s
HENM Henderson Moun 90.64 40 P P 09 28 22.7 +0.1
HENM IAmb IAmb 09 28 24.0
comp=Z,93nm,0.9s
HENM IAMs_20 IAMs_20 10 06 21.7
comp=Z,1µm,20.0s
LONY Lake Ozonia 90.64 27 P P 09 28 22.0 -0.6
baz=330
F61A St Evariste 90.66 24 P P 09 28 23.4 +0.8
baz=333,SNR=26
N51A Ashland 90.68 33 P P 09 28 22.6 -0.2
baz=325,SNR=7.5
N51A Ashland 90.68 33 P P 09 28 22.8 0.0
N51A IAmb IAmb 09 28 24.1
comp=Z,108nm,1.3s
237A Washetta, Mont 90.69 47 P P 09 28 23.1 +0.1
237A IAmb IAmb 09 28 24.7
comp=Z,94nm,1.4s
ERPA Erie 90.70 31 P P 09 28 23.3 +0.5
baz=327,SNR=5.4
ERPA Erie 90.70 31 P P 09 28 23.1 +0.3
ERPA IAmb IAmb 09 28 24.6
comp=Z,165nm,1.4s
L53A Girard 90.73 32 P P 09 28 23.4 +0.5
baz=326,SNR=8.1
P49A Miami Univ. Ec 90.75 36 P P 09 28 23.0 -0.1
baz=324,SNR=17
O50A Cable 90.76 35 P P 09 28 23.4 +0.2
baz=324,SNR=34
Q48A North Vernon 90.76 37 P P 09 28 23.0 -0.1
baz=323,SNR=8.6
CAF Calviac 90.77 334 *e*P P **09 28 23.4 +0.3**
CAF pmax pmax
comp=Z,101nm,1.2s
FRNY Flat Rock 90.80 26 P P 09 28 23.2 0.0
K54A Basilika Farm, 90.82 30 P P 09 28 23.6 +0.2
baz=328,SNR=15
I57A Carthage 90.84 28 P P 09 28 23.4 -0.1
baz=330,SNR=14
L54A Sinclairville 90.88 31 P P 09 28 24.0 +0.4
baz=327,SNR=9.7
HICK Hickman 90.90 40 P P 09 28 24.2 +0.3
PEBM Pemiscott Bayo 90.91 41 P P 09 28 24.3 +0.5
PEBM IAmb IAmb 09 28 27.2
comp=Z,93nm,1.0s
HBAR Harrisburg 90.92 42 P P 09 28 24.4 +0.4
H59A Cadyville 90.94 26 P P 09 28 23.7 -0.2
baz=331,SNR=18
GNAR Gosnell 90.94 41 P P 09 28 24.2 +0.2
BATG Bathurst New B 90.94 20 P P 09 28 24.1 +0.3
BATG IAmb IAmb 09 28 25.6
comp=Z,110nm,1.0s
BATG IAMs_20 IAMs_20 10 09 20.7
comp=Z,1µm,21.0s
PQI Presque Isle 90.94 22 P P 09 28 23.9 +0.1
PQI IAmb IAmb 09 28 25.1
comp=Z,82nm,0.9s
H58A Gabriels 90.96 26 P P 09 28 23.9 -0.1
baz=331,SNR=42
K55A Perry 90.96 30 P P 09 28 24.2 +0.1
baz=328,SNR=16
J56A Wolcott 90.96 29 P P 09 28 23.8 -0.2
baz=329,SNR=9.9
J56A Wolcott 90.96 29 P P 09 28 24.1 +0.2
J56A IAmb IAmb 09 28 25.2
comp=Z,100nm,1.1s
J56A IAMs_20 IAMs_20 09 59 14.7
comp=Z,1µm,20.0s
ACSO Alum Creek Sta 90.97 34 P P 09 28 24.3 +0.1
baz=325,SNR=14
ACSO Alum Creek Sta 90.97 34 P P 09 28 24.2 +0.1
ACSO IAmb IAmb 09 28 25.5
comp=Z,71nm,0.9s
M53A WI Miller and 90.98 32 P P 09 28 24.3 +0.2
baz=326,SNR=6.7
WLAR White Oak Lake 90.99 45 P P 09 28 24.2 0.0
G60A Masonville 91.00 25 P P 09 28 24.3 +0.1
baz=332,SNR=6.1
MMNY Mt. Morris Dam 91.02 30 P P 09 28 24.3 0.0
MMNY IAmb IAmb 09 28 25.7
comp=Z,111nm,1.1s
ALLY Alegheny Colle 91.03 32 P P 09 28 24.3 0.0
ALLY IAmb IAmb 09 28 26.0
comp=Z,81nm,1.1s
WCI Wyandotte Cave 91.05 37 P P 09 28 24.1 -0.4
WCI pmax pmax
comp=Z,92nm,1.1s
WCI Wyandotte Cave 91.05 37 P P 09 28 24.7 +0.2
baz=322
WCI Wyandotte Cave 91.05 37 P P 09 28 24.1 -0.4
WCI IAmb IAmb 09 28 26.0
comp=Z,92nm,1.1s
E63A Oxbow 91.05 22 P P 09 28 24.3 0.0
baz=335,SNR=17
E63A Oxbow 91.05 22 P P 09 28 24.4 0.0
E63A IAmb IAmb 09 28 25.6
comp=Z,110nm,1.1s
E63A IAMs_20 IAMs_20 10 04 06.5
comp=Z,1µm,20.0s
N52A McGinn's Farm, 91.07 33 P P 09 28 24.2 -0.3
baz=325
LPAR Lepanto 91.07 42 P P 09 28 24.8 +0.2
DRLN Deer Lake 91.08 14 P P 09 28 24.5 +0.1
GLAT Glass 91.08 41 P P 09 28 24.9 +0.2
Q49A Aurora 91.09 36 P P 09 28 24.9 +0.2
baz=323,SNR=13
G61A St-Isidore-de- 91.10 24 P P 09 28 25.2 +0.6
baz=332,SNR=27
P50A Jamestown 91.11 35 P P 09 28 24.9 +0.1
baz=324,SNR=20
833A Chaparral WMA, 91.15 52 P P 09 28 25.6 +0.5
baz=315,SNR=11
J57A Williamstown 91.17 28 P P 09 28 24.9 0.0
baz=329,SNR=18
J57A Williamstown 91.17 28 P P 09 28 25.0 0.0
J57A IAMs_20 IAMs_20 10 00 27.2
comp=Z,1µm,21.0s
O51A Pataskala 91.21 34 P P 09 28 25.1 -0.1
baz=325,SNR=11
E64A Bridgewater 91.23 22 P P 09 28 25.3 +0.1
baz=335,SNR=20
L55A Hinsdale 91.28 30 P P 09 28 25.8 +0.2
baz=328,SNR=8.6
K56A Middlesex 91.28 29 P P 09 28 25.6 0.0
baz=328,SNR=12
I58A Old Forge 91.31 27 P P 09 28 25.5 -0.1
baz=330,SNR=7.3
NCB Newcomb 91.33 27 P P 09 28 25.6 -0.1
NCB IAmb IAmb 09 28 27.2
comp=Z,72nm,1.1s
M54A Oil Creek Stat 91.34 31 P P 09 28 26.0 +0.2
baz=327,SNR=6.8
M54A Oil Creek Stat 91.34 31 P P 09 28 25.5 -0.4
H60A Morristown 91.35 25 P P 09 28 25.8 0.0
baz=332,SNR=11
N53A Lisbon 91.44 33 P P 09 28 26.3 0.0
baz=326
N53A Lisbon 91.44 33 P P 09 28 26.1 -0.2
J58A Remsen 91.48 28 P P 09 28 26.6 +0.2
baz=330,SNR=20
J58A Remsen 91.48 28 P P 09 28 26.2 -0.2
J58A IAmb IAmb 09 28 27.8
comp=Z,103nm,1.1s
Z41A Richland Creek 91.48 45 P P 09 28 27.0 +0.4
baz=318,SNR=8.8
G62A West of Eustis 91.48 24 P P 09 28 26.8 +0.4
baz=333,SNR=20
G62A West of Eustis 91.48 24 P P 09 28 26.3 -0.1
F63A Nahmakanta, Br 91.49 23 P P 09 28 27.0 +0.6
baz=334,SNR=8.0
F63A Nahmakanta, Br 91.49 23 P P 09 28 26.4 0.0
F63A IAmb IAmb 09 28 28.1
comp=Z,58nm,1.1s
R49A Shelbyville 91.53 37 P P 09 28 26.6 -0.1
VT1 Waterbury 91.53 26 P P 09 28 27.1 +0.4
VT1 IAmb IAmb 09 28 28.4
comp=Z,105nm,1.0s
NATX Nacogdoches 91.53 47 P P 09 28 27.1 +0.3
baz=318,SNR=6.8
NATX Nacogdoches 91.53 47 P P 09 28 26.9 0.0
NATX IAmb IAmb 09 28 29.8
comp=Z,67nm,1.0s
P51A Williamsport 91.55 35 P P 09 28 26.5 -0.3
baz=324,SNR=7.8
P51A Williamsport 91.55 35 P P 09 28 26.3 -0.4
P51A IAmb IAmb 09 28 27.8
comp=Z,61nm,1.0s
CCAR Cane Creek 91.56 44 P P 09 28 27.2 +0.3
K57A Scipio Center 91.56 29 P P 09 28 26.8 0.0
baz=329,SNR=8.7
O52A Adamsville 91.57 34 P P 09 28 26.9 -0.1
baz=325,SNR=7.7
O52A Adamsville 91.57 34 P P 09 28 26.7 -0.2
O52A IAmb IAmb 09 28 28.3
comp=Z,94nm,1.4s
F64A Sherman 91.58 22 P P 09 28 27.0 +0.2
baz=335,SNR=8.9
F64A Sherman 91.58 22 P P 09 28 26.9 +0.2
F64A IAmb IAmb 09 28 28.3
comp=Z,60nm,0.9s
F64A IAMs_20 IAMs_20 10 04 22.4
comp=Z,1µm,21.0s
X43A Marvell 91.58 43 P P 09 28 27.4 +0.4
baz=320,SNR=7.3
I59A Olmsteadville 91.61 27 P P 09 28 27.1 +0.1
baz=331,SNR=16
T47A Sharon Grove 91.62 39 P P 09 28 27.4 +0.2
T47A IAmb IAmb 09 28 28.8
comp=Z,77nm,0.9s
H61A Lyndonville 91.63 25 P P 09 28 27.9 +0.8
baz=332,SNR=20
Q50A Georgetown 91.64 36 P P 09 28 27.4 +0.2
baz=324,SNR=8.1
L56A Greenwood 91.66 30 P P 09 28 27.5 +0.1
baz=328,SNR=11
L56A Greenwood 91.66 30 P P 09 28 27.5 +0.1
L56A IAmb IAmb 09 28 28.9
comp=Z,108nm,1.3s
N54A Moraine State 91.67 32 P P 09 28 27.5 +0.2
baz=327,SNR=7.3
N54A Moraine State 91.67 32 P P 09 28 27.3 0.0
N54A IAmb IAmb 09 28 28.2
comp=Z,47nm,1.1s
J59A Piesco 91.67 27 P P 09 28 27.3 0.0
baz=330,SNR=19
J59A Piesco 91.67 27 P P 09 28 27.1 -0.2
J59A IAmb IAmb 09 28 28.7
comp=Z,121nm,1.1s
O53A New Philadelph 91.73 33 P P 09 28 27.7 +0.1
baz=326,SNR=8.3
M55A Ridgway 91.75 31 P P 09 28 28.1 +0.4
baz=327,SNR=11
M55A Ridgway 91.75 31 P P 09 28 28.0 +0.3
735A Kenedy 91.76 51 P P 09 28 27.6 -0.4
735A IAmb IAmb 09 28 30.4
comp=Z,80nm,1.1s
I60A Shoreham 91.77 26 P P 09 28 27.9 +0.1
baz=331,SNR=14
Q51A Peebles 91.79 35 P P 09 28 28.0 +0.1
baz=324,SNR=20
Q51A Peebles 91.79 35 P P 09 28 28.2 +0.3
Q51A IAmb IAmb 09 28 29.4
comp=Z,82nm,0.9s
PKME Peaks-Kenny Pk 91.83 23 P P 09 28 28.5 +0.6
baz=334,SNR=12
PKME Peaks-Kenny Pk 91.83 23 P P 09 28 28.1 +0.2
P52A Corning 91.84 34 P P 09 28 27.9 -0.2
baz=325,SNR=8.8
H62A Milan 91.85 25 P P 09 28 28.9 +0.7
baz=333,SNR=27
H62A Milan 91.85 25 P P 09 28 28.9 +0.7
ATD Arta Tunnel 91.86 286 P P 09 28 29.6 +0.9
SNR=27
ATD Arta Tunnel 91.86 286 P P 09 28 28.5 -0.2
K58A Earlville 91.86 28 P P 09 28 28.4 +0.2
baz=330,SNR=15
K58A Earlville 91.86 28 P P 09 28 28.4 +0.2
G63A Kingsbury 91.86 23 P P 09 28 28.8 +0.6
baz=334,SNR=13
LBNH Lisbon 91.89 25 P P 09 28 28.9 +0.6
LBNH pmax pmax
comp=Z,43nm,1.1s
LBNH Lisbon 91.89 25 P P 09 28 29.0 +0.7
baz=332,SNR=5.9
LBNH Lisbon 91.89 25 P P 09 28 28.9 +0.6
WVT Waverly 91.93 40 P P 09 28 28.7 +0.1
WVT pmax pmax
comp=Z,37nm,0.9s
WVT Waverly 91.93 40 P P 09 28 28.9 +0.2
baz=322
WVT Waverly 91.93 40 P P 09 28 28.7 +0.1
R50A Paris 91.94 36 P P 09 28 28.8 +0.2
R50A IAmb IAmb 09 28 30.1
comp=Z,71nm,1.1s
M56A Emporium 91.97 31 P P 09 28 28.9 +0.2
baz=328,SNR=8.5
M56A Emporium 91.97 31 P P 09 28 28.4 -0.3
W45A Hickory Valley 91.99 41 P P 09 28 29.2 +0.3
G64A Maxfield 92.01 23 P P 09 28 29.5 +0.7
baz=334
ACCN Adirondack Com 92.04 27 P P 09 28 29.5 +0.5
L57A Andrews Acres 92.06 29 P P 09 28 29.1 0.0
baz=329,SNR=8.4
I61A Oroboro, Fairl 92.07 25 P P 09 28 29.5 +0.4
baz=332
H63A New Sharon 92.14 24 P P 09 28 29.8 +0.4
baz=334
K59A Cooperstown 92.14 28 P P 09 28 29.8 +0.3
baz=330
O54A Avella 92.15 33 P P 09 28 29.8 +0.2
baz=326,SNR=8.1
O54A Avella 92.15 33 P P 09 28 30.0 +0.4
O54A IAmb IAmb 09 28 30.5
comp=Z,52nm,1.1s
HKT Hockley 92.17 49 P P 09 28 30.2 +0.5
HKT pmax pmax
comp=Z,51nm,1.5s
HKT Hockley 92.17 49 P P 09 28 30.2 +0.5
BINY Binghamton 92.22 29 P P 09 28 29.9 +0.1
baz=329
BINY Binghamton 92.22 29 P P 09 28 29.5 -0.3
N55A Marion Center 92.23 31 P P 09 28 29.9 -0.1
baz=327,SNR=5.6
HNH Hanover 92.24 26 P P 09 28 29.6 -0.3
HNH IAmb IAmb 09 28 31.9
comp=Z,72nm,1.1s
J60A Lant Hill Farm 92.25 27 P P 09 28 30.2 +0.2
baz=331
P53A Whipple 92.29 34 P P 09 28 30.3 +0.1
baz=326,SNR=5.0
P53A Whipple 92.29 34 P P 09 28 30.3 +0.1
Q52A Bidwell 92.33 35 P P 09 28 30.1 -0.3
baz=325,SNR=6.3
WVL Waterville 92.34 24 P P 09 28 30.5 +0.2
WVL IAmb IAmb 09 28 32.2
comp=Z,114nm,1.3s
CLTB Caltabellotta 92.37 323 IAMs_20 IAMs_20 10 15 49.9
comp=Z,1µm,21.0s
OXF Oxford 92.37 42 P P 09 28 30.7 0.0
OXF pmax pmax
comp=Z,189nm,1.0s
OXF Oxford 92.37 42 P P 09 28 30.6 -0.1
baz=320,SNR=24
OXF Oxford 92.37 42 P P 09 28 30.7 0.0
N56A West Decatur 92.40 31 P P 09 28 31.0 +0.3
baz=328
L58A Harry Jones Me 92.40 29 P P 09 28 31.0 +0.3
baz=329
G65A Princeton 92.41 22 P P 09 28 31.0 +0.3
baz=335
G65A Princeton 92.41 22 P P 09 28 30.3 -0.4
G65A IAmb IAmb 09 28 32.5
comp=Z,98nm,1.1s
G65A IAMs_20 IAMs_20 10 04 57.3
comp=Z,1µm,20.0s
H64A Troy 92.41 23 P P 09 28 31.0 +0.3
baz=334
I62A Tamworth 92.42 25 P P 09 28 31.2 +0.5
baz=333
I62A Tamworth 92.42 25 P P 09 28 30.9 +0.1
I62A IAmb IAmb 09 28 33.3
comp=Z,103nm,1.5s
J61A Chester 92.47 26 P P 09 28 31.4 +0.5
baz=332
I63A Otisfield 92.51 24 P P 09 28 31.7 +0.6
baz=333
I63A Otisfield 92.51 24 P P 09 28 31.4 +0.3
M57A Sunshine Farm, 92.51 30 P P 09 28 31.6 +0.4
baz=328
M57A Sunshine Farm, 92.51 30 P P 09 28 32.0 +0.8
M57A IAmb IAmb 09 28 32.3
comp=Z,62nm,1.1s
VSL Villasalto 92.55 327 IAMs_20 IAMs_20 10 11 57.6
comp=Z,1µm,21.0s
L59A Walton 92.58 28 P P 09 28 31.7 +0.1
baz=330
L59A Walton 92.58 28 P P 09 28 31.7 +0.1
L59A IAmb IAmb 09 28 34.1
comp=Z,62nm,1.1s
O55A Ligonier 92.58 32 P P 09 28 31.6 0.0
baz=327
P54A Burton 92.59 33 P P 09 28 32.0 +0.4
baz=326
TRY Troy 92.61 27 P P 09 28 32.2 +0.5
TRY IAmb IAmb 09 28 35.5
comp=Z,72nm,1.4s
K60A Five Rivers En 92.63 27 P P 09 28 32.0 +0.3
baz=331
U49A Red Boiling Sp 92.65 38 P P 09 28 32.0 0.0
U49A IAmb IAmb 09 28 33.3
comp=Z,65nm,1.0s
H65A Eastbrook 92.66 23 P P 09 28 31.8 0.0
baz=335
GGN Saint George 92.70 22 P P 09 28 32.6 +0.7
GGN IAmb IAmb 09 28 33.5
comp=Z,80nm,1.1s
PLAL Pickwick Lake 92.70 41 P P 09 28 31.7 -0.5
T50A Nancy 92.70 37 P P 09 28 32.3 +0.1
T50A IAmb IAmb 09 28 33.5
comp=Z,45nm,0.9s
CLTN Cedars of Leba 92.72 39 P P 09 28 32.5 +0.3
CLTN IAmb IAmb 09 28 33.7
comp=Z,44nm,0.9s
Q53A Leroy 92.74 34 P P 09 28 32.5 +0.2
baz=326
M58A Price's Panora 92.74 29 P P 09 28 32.4 +0.1
baz=329
V48A Smith Brothers 92.75 39 P P 09 28 32.4 0.0
V48A IAmb IAmb 09 28 33.5
comp=Z,39nm,0.9s
Y45A Yeager Farm, C 92.80 42 P P 09 28 33.4 +0.8
S51A Beattyville 92.80 36 P P 09 28 32.2 -0.4
S51A IAmb IAmb 09 28 33.6
comp=Z,38nm,0.9s
SSPA Standing Stone 92.80 31 P P 09 28 32.7 +0.1
baz=328
SSPA Standing Stone 92.80 31 P P 09 28 33.0 +0.4
K61A Williamstown 92.81 27 P P 09 28 33.0 +0.5
baz=331
MCWV Mont Chateau 92.81 33 P P 09 28 33.0 +0.4
baz=327
MCWV Mont Chateau 92.81 33 P P 09 28 33.0 +0.4
J62A Henniker 92.83 26 P P 09 28 33.1 +0.5
baz=332
O56A Blue Knob Stat 92.84 31 P P 09 28 32.9 0.0
baz=328
O56A Blue Knob Stat 92.84 31 P P 09 28 32.3 -0.5
N57A Milroy 92.84 30 P P 09 28 32.8 +0.1
baz=328
KSPA Keystone Colle 92.85 29 P P 09 28 32.7 0.0
H66A Whiting 92.86 22 P P 09 28 33.1 +0.4
baz=336
EMMW East Machias 92.89 22 P P 09 28 33.3 +0.5
EMMW IAmb IAmb 09 28 33.9
comp=Z,90nm,1.1s
I64A Boothbay 92.93 24 P P 09 28 33.3 +0.3
baz=334
ZAIG Zacatecas 92.94 58 P P 09 28 34.2 +0.3
ZAIG IAmb IAmb 09 28 36.3
comp=Z,48nm,1.0s
P55A Reedsville 92.94 33 P P 09 28 33.5 +0.2
baz=327
Q54A Coxs Mills 92.94 34 P P 09 28 33.4 +0.2
baz=326
Q54A Coxs Mills 92.94 34 P P 09 28 33.6 +0.3
Q54A IAmb IAmb 09 28 34.2
comp=Z,52nm,1.1s
R53A Hurricane 92.99 35 P P 09 28 33.4 -0.1
baz=325
R53A Hurricane 92.99 35 P P 09 28 33.5 0.0
M59A Waymart 92.99 29 P P 09 28 33.6 +0.1
baz=330
J63A Strafford 93.03 25 P P 09 28 34.3 +0.7

	baz=333						
L60A	Shokan	93.06	28	P	P	09 28 34.0	+0.3
	baz=331						
N58A	Sunbury	93.10	30	P	P	09 28 34.0	+0.1
	baz=329						
N58A	Sunbury	93.10	30	P	P	09 28 33.7	-0.2
L61A	Hillsdale 1, H	93.12	27	P	P	09 28 34.1	+0.1
	baz=331						
342A	Flagon Creek P	93.16	46	P	P	09 28 34.9	+0.6
342A				IAmb	IAmb	09 28 36.6	
	comp=Z,52nm,1.2s						
K62A	Royalston	93.18	26	P	P	09 28 34.9	+0.6
	baz=332						
L61B	Northampton	93.21	26	P	P	09 28 34.7	+0.3
	baz=332						
Q55A	Buckhannon	93.26	33	P	P	09 28 34.9	+0.2
	baz=326						
O57A	Amberson	93.27	31	P	P	09 28 34.7	-0.1
	baz=328						
P56A	Dayton Farm, R	93.37	32	P	P	09 28 35.4	+0.2
	baz=327						
K63A	Dunstable	93.40	26	P	P	09 28 35.4	+0.2
	baz=332						
N59A	State Game Lan	93.40	29	P	P	09 28 35.5	+0.1
	baz=329						
N59A	State Game Lan	93.40	29	P	P	09 28 35.2	-0.2
S53A	Williamson	93.44	35	P	P	09 28 35.5	-0.1
	baz=325						
M60A	Port Jervis	93.48	28	P	P	09 28 35.5	-0.2
	baz=330						
VBMS	Vicksburg	93.53	44	P	P	09 28 36.2	+0.2
	baz=320,SNR=6.3						
R54A	Victor	93.54	34	P	P	09 28 35.9	-0.2
	baz=326						
HRV	Adam Dziewonsk	93.55	26	P	P	09 28 35.7	-0.2
	baz=332						
KSCT	Kent School, K	93.56	27	P	P	09 28 35.9	-0.1
KSCT				IAmb	IAmb	09 28 36.7	
	comp=Z,59nm,1.3s						
L62A	Suffield	93.58	27	P	P	09 28 36.0	-0.1
	baz=332						
SWET	Sewanee	93.61	39	P	P	09 28 35.7	-0.7
SWET				IAmb	IAmb	09 28 37.1	
	comp=Z,68nm,1.0s						
Q56A	Snyder Ridge,	93.61	32	P	P	09 28 36.1	-0.2
	baz=327						
Q56A	Snyder Ridge,	93.61	32	P	P	09 28 36.1	-0.2
PAGS	Pennsylvania G	93.62	30	P	P	09 28 35.9	-0.4
O58A	Lewisberry	93.63	30	P	P	09 28 35.9	-0.5
	baz=329						
X48A	Hartselle	93.64	40	P	P	09 28 35.7	-0.9
N60A	Cedar Hill Far	93.70	29	P	P	09 28 36.4	-0.3
	baz=330						
S54A	Dingess, Beckl	93.71	35	P	P	09 28 36.6	-0.2
	baz=326						
S54A	Dingess, Beckl	93.71	35	P	P	09 28 36.2	-0.6
S54A				IAmb	IAmb	09 28 37.5	
	comp=Z,52nm,1.2s						
P57A	Homestead Farm	93.73	31	P	P	09 28 36.4	-0.4
	baz=328						
WES	Weston	93.74	26	P	P	09 28 36.2	-0.6
WES				pmax	pmax		
	comp=Z,45nm,1.3s						
WES	Weston	93.74	26	P	P	09 28 36.2	-0.6
O59A	Robesonia	93.76	30	P	P	09 28 36.1	-0.9
	baz=329						
M61A	Granite Spring	93.82	28	P	P	09 28 37.1	-0.1
	baz=331						
T53A	Wise	93.82	36	P	P	09 28 37.4	-0.1
	baz=325						
R55A	Marlinton	93.84	34	P	P	09 28 37.5	+0.1
	baz=326						
R55A	Marlinton	93.84	34	P	P	09 28 37.5	+0.1
R55A				IAmb	IAmb	09 28 38.8	
	comp=Z,45nm,0.9s						
V51A	Loudon	93.91	38	P	P	09 28 37.9	+0.2
V51A				IAmb	IAmb	09 28 38.9	
	comp=Z,50nm,1.1s						
W50A	Signal Mountai	93.92	39	P	P	09 28 37.6	-0.3
Q57A	Strasburg	93.94	32	P	P	09 28 37.6	-0.2
	baz=328						
344A	Westbrook Farm	93.99	45	P	P	09 28 38.8	+0.7
344A				IAmb	IAmb	09 28 40.3	
	comp=Z,45nm,0.9s						
146A	Union	94.00	43	P	P	09 28 37.9	-0.3
146A				IAmb	IAmb	09 28 40.2	
	comp=Z,103nm,1.0s						
P58A	Pank, Wackersv	94.01	31	P	P	09 28 37.9	-0.3
	baz=328						
M62A	Hamden	94.02	27	P	P	09 28 37.7	-0.4
	baz=332						
PAL	Palisades	94.03	28	P	P	09 28 37.9	-0.3
	baz=331						
O60A	Telford	94.06	29	P	P	09 28 38.1	-0.3
	baz=330						
Z47A	Carrollton	94.09	42	P	P	09 28 38.5	-0.1
Z47A				IAmb	IAmb	09 28 39.7	
	comp=Z,49nm,0.9s						
S55A	Lewisburg	94.09	34	P	P	09 28 38.3	-0.3
	baz=326						
L63A	North Scituate	94.10	26	P	P	09 28 38.7	+0.2
	baz=332						
N61A	South Mountain	94.11	28	P	P	09 28 38.8	+0.3
	baz=330						
CPCT	Cooper Cave	94.11	38	P	P	09 28 38.6	-0.1
T54A	Tazewell	94.20	35	P	P	09 28 39.1	0.0
	baz=325						
V52A	Sevierville	94.25	37	P	P	09 28 39.3	0.0
V52A				IAmb	IAmb	09 28 40.6	
	comp=Z,49nm,1.1s						
N62A	Caumsett State	94.26	28	P	P	09 28 39.2	0.0
	baz=331						
P59A	Jarrettsville	94.26	30	P	P	09 28 39.0	-0.3
	baz=329						
FPAL	Fort Paine	94.30	39	P	P	09 28 39.3	-0.3
L64A	Middleborough	94.30	26	P	P	09 28 39.7	+0.3
	baz=333						
TKL	Tuckaleechee C	94.31	37	P	P	09 28 39.5	-0.1
TKL				pmax	pmax		
	comp=Z,35nm,0.9s						
TKL	Tuckaleechee C	94.31	37	P	P	09 28 39.5	-0.1
Q58A	Fox Den Farm,	94.32	32	P	P	09 28 39.3	-0.3
	baz=328						
M63A	Gales Ferry	94.36	27	P	P	09 28 39.4	-0.2
	baz=332						
PSUB	Penn St. - Bra	94.38	30	IAMs_20	IAMs_20	10 01 36.0	
	comp=Z,1µm,22.0s						
P60A	Greenville	94.40	30	P	P	09 28 39.7	-0.3
	baz=330						
Y49A	Blount Mountai	94.44	40	P	P	09 28 39.7	-0.5
T55A	Pulaski	94.51	35	P	P	09 28 40.6	0.0
	baz=326						
R57A	Stanardsville	94.51	32	P	P	09 28 40.7	+0.2
	baz=328						
M64A	Tiverton	94.52	26	P	P	09 28 39.6	-0.8
	baz=333						
U54A	Nelsons Funny	94.53	36	P	P	09 28 40.5	-0.2
	baz=325						
U54A	Nelsons Funny	94.53	36	P	P	09 28 40.8	+0.1
O61A	Allentown	94.58	29	P	P	09 28 40.5	-0.2
	baz=330						
S56A	Natural Bridge	94.58	33	P	P	09 28 40.5	-0.3
	baz=327						
BLA	Blacksburg	94.59	34	P	P	09 28 40.8	-0.1
BLA				pmax	pmax		
	comp=Z,47nm,1.1s						
BLA	Blacksburg	94.59	34	P	P	09 28 40.7	-0.3
	baz=326						
BLA	Blacksburg	94.59	34	P	P	09 28 40.8	-0.1
BLA				IAmb	IAmb	09 28 42.1	
	comp=Z,47nm,1.1s						
X51A	Calhoun	94.66	39	P	P	09 28 41.3	+0.1
W52A	Murphy	94.69	38	P	P	09 28 41.7	+0.3
R58A	Rapidan	94.73	32	P	P	09 28 41.1	-0.3
	baz=328						
346A	Big Creek Wild	94.74	44	P	P	09 28 42.5	+0.9
346A				IAmb	IAmb	09 28 43.3	
	comp=Z,58nm,1.1s						
V53A	Saluda	94.76	37	P	P	09 28 42.1	+0.3
LRAL	Lakeview Retre	94.78	41	P	P	09 28 41.3	-0.5
	baz=322						
LRAL	Lakeview Retre	94.78	41	P	P	09 28 41.2	-0.6
LRAL				IAMs_20	IAMs_20	09 57 56.0	
	comp=Z,1µm,21.0s						
S57A	Dark Hollow, R	94.78	33	P	P	09 28 41.5	-0.2
	baz=327						
S57A	Dark Hollow, R	94.78	33	P	P	09 28 42.1	+0.4

Q59A	Harwood	94.81	31	P	P	09 28 41.6	-0.2
	baz=329						
U55A	TA2, Sparta	94.90	35	P	P	09 28 41.9	-0.5
	baz=326						
T56A	Rocky Mt	94.92	34	P	P	09 28 42.2	-0.2
	baz=326						
R58B	Mineral	95.07	32	P	P	09 28 42.4	-0.6
	baz=328						
CBN	Corbin Frederi	95.07	32	P	P	09 28 42.8	-0.3
	baz=328						
V54A	Nebo	95.08	36	P	P	09 28 42.8	-0.3
	baz=325						
Z50A	Ashland	95.16	40	P	P	09 28 43.1	-0.5
	baz=322						
Z50A	Ashland	95.16	40	P	P	09 28 43.2	-0.3
Z50A				IAmb	IAmb	09 28 44.4	
	comp=Z,49nm,0.9s						
BG3	Lake Jocassee	95.25	37	P	P	09 28 44.0	+0.1
T57A	Hurt	95.29	34	P	P	09 28 43.7	-0.4
	baz=327						
T57A	Hurt	95.29	34	P	P	09 28 43.8	-0.3
S58A	Poland Farm, P	95.29	33	P	P	09 28 43.8	-0.2
	baz=328						
U56A	King	95.33	35	P	P	09 28 43.8	-0.4
	baz=326						
R60A	Leonardtown, M	95.35	31	P	P	09 28 44.0	-0.3
	baz=329						
V55A	Taylorsville	95.36	36	P	P	09 28 44.1	-0.3
	baz=326						
V55A	Taylorsville	95.36	36	P	P	09 28 44.4	0.0
S59A	Mechanicsville	95.48	32	P	P	09 28 44.8	-0.1
	baz=328						
W54A	Cherokee Point	95.53	37	P	P	09 28 45.0	-0.2
	baz=325						
Y52A	Lilburn	95.61	39	P	P	09 28 45.6	0.0
	baz=324						
Y52A	Lilburn	95.61	39	P	P	09 28 45.9	+0.3
T58A	Grand View Acr	95.64	33	P	P	09 28 45.4	-0.2
	baz=327						
KEST	Kesra	95.67	325	P	P	09 28 45.8	-0.2
	comp=Z,14nm,0.9s,baz=313,slow=1.7,SNR=10						
KEST				LR	LR	10 15 42.8	
	comp=Z,814nm,19.6s,baz=352,slow=38						
KEST	Kesra	95.67	325	P	P	09 28 45.4	-0.6
V56A	Mocksville	95.72	35	P	P	09 28 45.7	-0.3
	baz=326						
U57A	Blanch	95.72	34	P	P	09 28 45.7	-0.3
	baz=327						
S60A	Water View	95.80	32	P	P	09 28 46.3	0.0
	baz=329						
X54A	Belton	95.88	37	P	P	09 28 46.9	+0.1
	baz=325						
KMSC	Kings Mountain	95.88	36	P	P	09 28 46.5	-0.3
	baz=326						
KMSC	Kings Mountain	95.88	36	P	P	09 28 46.8	0.0
PAULI	Pauline	95.92	37	P	P	09 28 47.0	+0.1
V57A	Coltrane Farms	95.98	35	P	P	09 28 46.8	-0.4
	baz=327						
250A	Grady	95.99	41	P	P	09 28 47.1	-0.2
250A				IAmb	IAmb	09 28 48.6	
	comp=Z,74nm,1.1s						
250A				IAMs_20	IAMs_20	10 03 53.6	
	comp=Z,1µm,20.0s						
T59A	Double "B" Far	96.04	33	P	P	09 28 47.3	-0.2
	baz=328						
T59A	Double "B" Far	96.04	33	P	P	09 28 47.4	0.0
U58A	Oxford	96.10	33	P	P	09 28 47.6	-0.2
	baz=327						
HODGE	Hodges	96.19	37	P	P	09 28 48.1	-0.1
W56A	Indian Trail	96.24	36	P	P	09 28 48.0	-0.4
	baz=326						
152A	Waverly Hall	96.24	40	P	P	09 28 48.3	-0.2
T60A	Surry	96.25	32	P	P	09 28 48.0	-0.4
	baz=329						
GOGA	Godfrey	96.27	39	P	P	09 28 49.0	+0.4
GOGA				pmax	pmax		
	comp=Z,45nm,1.5s						
GOGA	Godfrey	96.27	39	P	P	09 28 48.2	-0.4
	baz=324						
GOGA	Godfrey	96.27	39	P	P	09 28 49.0	+0.4
GOGA	Godfrey	96.27	39	IAMs_20	IAMs_20	10 00 21.8	
	comp=Z,1µm,21.0s						
X55A	Gracelyn & Ava	96.29	37	P	P	09 28 48.2	-0.5
	baz=325						
V58A	Windy Hill, Pi	96.35	34	P	P	09 28 48.2	-0.7
	baz=327						
PBRG	Braganca	96.37	339	eP	P	09 28 49.1	+0.1
	comp=Z,28nm,1.3s						
U59A	Littleton	96.46	33	P	P	09 28 49.1	-0.3
	baz=328						
U59A	Littleton	96.46	33	P	P	09 28 49.5	+0.1
W57A	Gilead	96.49	35	P	P	09 28 48.9	-0.6
	baz=326						
W57A	Gilead	96.49	35	P	P	09 28 49.5	-0.1
W57A				IAmb	IAmb	09 28 50.4	
	comp=Z,34nm,1.0s						
X56A	White Oak	96.56	36	P	P	09 28 49.3	-0.5
	baz=326						
Y55A	Saluda	96.62	37	P	P	09 28 50.3	+0.1
	baz=325						
U60A	Pendleton	96.63	33	P	P	09 28 49.8	-0.4
	baz=328						
PGAV	Gavieira, Arco	96.65	340	eP	P	09 28 50.7	+0.4
	comp=Z,34nm,1.6s						
PGAV	Gavieira, Arco	96.65	340	eLR	LR	10 02 16.1	
	comp=Z,735nm,16.0s						
V59A	Middlesex	96.76	34	P	P	09 28 50.2	-0.6
	baz=328						
W58A	Raeford	96.95	35	P	P	09 28 51.1	-0.5
	baz=327						
X57A	Johnson Farm,	97.02	36	P	P	09 28 51.7	-0.2
	baz=326						
MVO	Moncorvo	97.04	339	eP	P	09 28 51.7	-0.3
	comp=Z,33nm,1.2s						
MVO	Moncorvo	97.04	339	eLR	LR	10 02 35.2	
	comp=Z,1µm,22.0s						
U61A	Possum Corner	97.05	32	P	P	09 28 51.6	-0.5
	baz=329						
154A	Montrose	97.09	39	P	Pdif	09 28 52.5	+0.1
154A				IAmb	IAmb	09 28 53.7	
	comp=Z,70nm,1.1s						
PVRL	Vila Real	97.14	339	eP	Pdif	09 28 52.8	+0.3
	comp=Z,35nm,1.8s						
V60A	Jim Taylor Roa	97.19	33	P	P	09 28 52.2	-0.5
	baz=328						
X58A	Rowland	97.29	35	P	P	09 28 52.8	-0.3
	baz=327						
ESDC	Sonseca Array	97.47	336	P	P	09 28 53.9	-0.1
	comp=Z,3.8nm,0.9s,baz=8.8,slow=3.6,SNR=16						
ESDC				LR	LR	10 18 20.9	
	comp=Z,1µm,20.0s,baz=10.0,slow=39						
Z57A	Bowman	97.70	37	P	P	09 28 54.7	-0.3
	baz=326						
TIGA	Tifton	97.79	40	P	P	09 28 55.4	-0.1
	baz=324						
TIGA	Tifton	97.79	40	IAMs_20	IAMs_20	10 08 26.3	
	comp=Z,1µm,20.0s						
MTE	Manteigas	97.90	339	eP	Pdif	09 28 56.0	0.0
	comp=Z,42nm,1.2s						
MTE	Manteigas	97.90	339	eLR	LR	10 02 58.5	
	comp=Z,1µm,20.0s						
MTE	Manteigas	97.90	339	IAMs_20	IAMs_20	10 19 46.5	
	comp=Z,1µm,19.0s						
157A	Early Branch	98.06	37	P	P	09 28 56.6	0.0
	baz=326						
COI	Coimbra	98.32	339	IAMs_20	IAMs_20	10 19 39.7	
	comp=Z,1µm,18.0s						
CART	Cartagena	98.33	333	IAMs_20	IAMs_20	10 14 53.0	
	comp=Z,864nm,19.0s						
PMRV	Marv??o	98.75	338	eLR	LR	10 03 10.5	
	comp=Z,868nm,20.0s						
PVAQ	Vaqueiros	100.72	338	eLR	LR	10 03 39.9	
	comp=Z,1µm,20.0s						
KMBO	Kilima Mbogo	104.11	280	Pdiff	Pdif	09 29 24.1	-0.1
	comp=Z,1.0nm,0.3s,baz=76,slow=1.0,SNR=3.6						
MBAR	Mbarara	108.82	284	IAMs_20	IAMs_20	10 23 48.4	
	comp=Z,549nm,19.0s						
CSGN	Cosiguina Volc	109.85	55	IAMs_20	IAMs_20	10 04 10.8	
	comp=Z,514nm,20.0s						
MATN	Matagalpa	110.93	53	IAMs_20	IAMs_20	10 20 40.1	
	comp=Z,721nm,21.0s						
VNDA	Vanda	115.68	176	PKP	PKPdf	09 34 00.1	-0.9
	comp=Z,3.1nm,1.0s,baz=316,slow=4.3,SNR=12						
VNDA				PKKPbc	PKKPab	09 44 35.6	-0.2
	comp=Z,1.3nm,1.0s,baz=118,slow=2.2,SNR=3.2						
VNDA	Vanda	115.68	176		PKPdf	09 34 00.7	-0.2
TOA0	Torodi Ar. Sit	118.28	318		PKPdf	09 34 06.9	-1.0

TORD	Torodi Ar. Bea	118.28	318	PKP	PKPdf	09 34 06.8	-1.1
	comp=Z,9.7nm,1.0s,baz=13,slow=2.0,SNR=30						
TORD				PP	PP	09 35 20.9	-1.8
	comp=Z,6.9nm,1.0s,baz=28,slow=7.0,SNR=6.8						
TORD				PKKPbc	PKKPbc	09 44 26.0	+1.2
	comp=Z,3.4nm,1.0s,baz=220,slow=3.0,SNR=8.3						
LSZ	Lusaka	119.75	273	PKIKP	PKPdf	09 34 10.2	-0.6
LSZ	Lusaka	119.75	273		PKPdf	09 34 10.2	-0.6
LSZ	Lusaka	119.75	273	IAMs_20	IAMs_20	10 33 49.6	
	comp=Z,605nm,18.0s						
MAW	Mawson	121.34	206	PKP	PKPdf	09 34 11.6	-0.4
	comp=Z,14nm,0.9s,baz=159,slow=0.8,SNR=17						
MAW				PKKPbc	PKKPbc	09 44 13.8	-0.5
	comp=Z,3.4nm,0.8s,baz=295,slow=3.8,SNR=4.9						
MAW	Mawson	121.34	206		PKPdf	09 34 12.0	-0.1
SDV	Santo Domingo	123.14	43		PKPdf	09 34 17.0	-0.5
SDV	Santo Domingo	123.14	43	eP	PKPdf	09 34 17.0	-0.5
SDV	Santo Domingo	123.14	43	eP	PKiKP	09 34 17.9	+0.2
RUSC	La Rusia	124.24	47		PKPdf	09 34 19.3	-0.7
ROSC	El Rosal	124.36	49	PKP	PKiKP	09 34 20.5	+0.1
	comp=Z,24nm,1.0s,baz=329,slow=3.7,SNR=14						
ROSC	El Rosal	124.36	49		PKPdf	09 34 19.8	-0.3
LBTB	Lobatse	127.01	265	PKIKP	PKPdf	09 34 24.5	0.0
LBTB	Lobatse	127.01	265		PKPdf	09 34 24.4	0.0
DBIC	Dimbokro	127.15	320	PKP	PKPdf	09 34 24.2	-0.7
	comp=Z,24nm,0.9s,baz=32,slow=1.9,SNR=22						
DBIC				PP	PP	09 36 20.4	-2.3
	comp=Z,17nm,1.1s,baz=22,slow=9.9,SNR=5.1						
TIC	Toumodi	127.25	320	ePKIKP	PKPdf	09 34 23.7	-1.5
KIC	Kosan Boka	127.36	320	ePKIKP	PKPdf	09 34 23.6	-1.7
	comp=Z,119nm,1.2s						
LIC	Lamto	127.62	320	ePKIKP	PKPdf	09 34 24.2	-1.6
	comp=Z,122nm,1.1s						
QSPA	South Pole Qui	127.66	180		PKPdf	09 34 23.4	-0.9
BOSA	Boshof	128.99	261	PKP	PKPdf	09 34 27.8	-0.4
	comp=Z,7.9nm,0.8s,baz=114,slow=1.4,SNR=11						
BOSA	Boshof	128.99	261	PKIKP	PKPdf	09 34 27.1	-1.0
BOSA	Boshof	128.99	261		PKPdf	09 34 27.1	-1.0
SYO	Syowa Base	130.03	207	⇑eX	PKPdf	09 34 26.0	-2.6
SYO	Syowa Base	130.03	207	⇑ipPKPdf	pPKPdf	09 34 35.2	+4.4
TSUM	Tsumeb	130.31	277		PKPdf	09 34 30.9	0.0
PTGA	Pitinga	136.77	37		PKPdf	09 34 43.4	+0.3
PTGA	Pitinga	136.77	37	eP	PKPdf	09 34 42.7	-0.4
NVL	N'lazarevskaya	138.97	202	ePKIKP	PKPdf	09 34 46.4	+1.1
NVL				pmax	pmax		
	comp=Z,25nm,1.0s						
SNAA	Sanae	142.25	196	PKPdf	PKPdf	09 34 45.9	-5.5
VNA2	Neumayer--Watz	143.79	195	PKPdf	PKPab	09 34 51.0	0.0
VNA3	Neumayer Olymp	144.00	194	PKPdf	PKPab	09 34 51.1	-0.7
VNA1	Neumayer--Stat	144.19	195	PKPdf	PKPab	09 34 52.3	-0.1
PB12	IPOC Station P	144.22	67		PKPbc	09 34 55.0	+0.4
LPAZ	La Paz	144.25	62	PKP	PKPab	09 34 55.2	+0.2
	comp=Z,34nm,0.8s,baz=344,slow=4.7,SNR=116						
LPAZ	La Paz	144.25	62	PKIKP	PKPab	09 34 54.9	-0.2
LPAZ	La Paz	144.25	62		PKPab	09 34 54.9	-0.2
LPAZ	La Paz	144.25	62	eP	PKPbc	09 34 55.5	+0.1
LPAZ	La Paz	144.25	62	eP	PKPbc	09 34 55.6	+0.2
ROSB	Rosrio	144.30	15	eP	PKPbc	09 34 55.2	+0.3
H10N2	ASCENSION HYDR	144.42	322	PKP	PKPdf	09 34 56.6	+0.2
	baz=68,slow=4.1,SNR=8.4						
H10N1	ASCENSION HYDR	144.43	322	PKP	PKPdf	09 34 56.7	+0.1
	baz=68,slow=4.1,SNR=10						
H10N3	ASCENSION HYDR	144.44	322	PKP	PKPdf	09 34 56.6	+0.1
	baz=68,slow=4.1,SNR=7.9						
ASCN	Ascension	144.45	322		PKPbc	09 34 55.3	-0.1
PB16	IPOC Station P	144.64	66		PKPbc	09 34 57.0	+0.4
H03N2	Juan Fernandez	144.83	96	PKP	PKPdf	09 34 56.6	0.0
	baz=163,slow=15,SNR=6.0						
H03N3	Juan Fernandez	144.84	96	PKP	PKPdf	09 34 57.0	+0.3
	baz=163,slow=15,SNR=9.4						
H03N1	Juan Fernandez	144.85	96	PKP	PKPdf	09 34 57.1	+0.5
	baz=163,slow=15,SNR=4.8						
H03S2	Juan Fernandez	144.97	97	PKPbc	PKPdf	09 34 58.4	+1.5
H03S3	Juan Fernandez	144.98	97	PKPbc	PKPdf	09 34 58.4	+1.5
H03S1	Juan Fernandez	144.99	97	PKPbc	PKPdf	09 34 58.4	+1.5
PSGCX	Pisagua	144.99	68		PKPab	09 34 56.3	-0.7
MNMC	Minye Minye	145.08	67		PKPdf	09 34 58.3	+0.1
NBMO	Morrinhos-CE	145.33	8	eP	PKPdf	09 34 58.4	0.0
PB11	IPOC Station P	145.44	68		PKPab	09 34 59.0	+0.2
GO01	Chusmiza	145.72	67		PKPab	09 35 00.5	+0.3
PATCX	Punta Patache	145.72	70		PKPab	09 34 59.5	-0.2
SHEL	Horse Pasture	145.73	301	PKP2	PKPbc	09 34 59.5	0.0
SHEL	Horse Pasture	145.73	301		PKPbc	09 34 59.5	0.0
PB08	IPOC Station P	146.04	68	PKPbc	PKPbc	09 35 00.6	-0.2
PB01	IPOC Station P	146.35	70		PKPdf	09 35 00.2	+0.2
PB07	IPOC Station P	146.46	71		PKPdf	09 35 00.8	+0.5
VILB	Vilhena	146.91	48	eP	PKPdf	09 35 01.9	+0.8
PB10	IPOC Station P	146.98	74	PKPbc	PKPdf	09 35 01.7	+0.7
PB09	IPOC Station P	146.98	70	PKPbc	PKPbc	09 35 02.5	-0.7
CLDB	Colider	147.59	39	eP	PKPdf	09 35 01.9	-0.3
PB15	IPOC Station P	147.63	73		PKPdf	09 35 01.1	-1.2
PB15				PKPbc	pPKPdf	09 35 03.4	-1.0
PB15				PKPab	sPKPdf	09 35 06.0	+0.8
PB14	IPOC Station P	147.70	76	PKPbc	PKPdf	09 35 03.8	+1.3
PB14				PKPab	PKiKP	09 35 06.5	-0.8
LVC	Limon Verde	147.71	71	PKP2	PKPdf	09 35 04.0	+1.3
LVC	Limon Verde	147.71	71	PKPbc	PKPdf	09 35 04.0	+1.3
LVC	Limon Verde	147.71	71	eP	PKPdf	09 35 02.5	-0.1
LVC	Limon Verde	147.71	71	eP	PKPdf	09 35 02.9	+0.2
NBPA	Parau_RN	147.95	3	eP	PKPdf	09 35 03.5	+0.7
GO02	Mina Guanaco	148.61	76		PKPdf	09 35 04.2	+0.2
PTLB	Pontes e Lacer	149.51	49	eP	PKPdf	09 35 06.2	+1.0
GO04	Tololo Observa	150.04	86		PKPdf	09 35 06.0	-0.1
GO04				PKPbc	PKPbc	09 35 11.3	+0.3
GO05	Huala	150.83	95		PKiKP	09 35 13.1	0.0
ROC1	El Roble	150.92	91		PKPdf	09 35 06.7	-0.7
ROC1				PKPbc	PKPbc	09 35 13.3	+0.3
GO09	Cerro Castillo	151.02	129		PKiKP	09 35 13.1	+0.2
PEL	Peldehue	151.24	91	PKIKP	PKiKP	09 35 14.0	-0.1
PEL	Peldehue	151.24	91		PKPdf	09 35 06.9	-0.7
PEL				PKPbc	PKiKP	09 35 14.0	-0.1
GO10	Punta Arenas	151.28	134	PKPdf	PKPdf	09 35 07.7	+0.7
GO10					PKPbc	09 35 13.2	+0.2
SALV	Santo Antonio	151.85	44	eP	PKPdf	09 35 09.2	+0.3
PLCA	Paso Flores	153.00	107	PKP	PKPdf	09 35 09.9	-0.1
	comp=Z,4.7nm,1.0s,baz=344,slow=4.0,SNR=5.8						
PLCA				PKPbc	PKiKP	09 35 18.1	+0.6
	comp=Z,17nm,0.8s,baz=262,slow=4.4,SNR=20						
PLCA				PKPab	PKPab	09 35 28.5	-0.2
	comp=Z,33nm,0.9s,baz=263,slow=3.1,SNR=23						
PLCA	Paso Flores	153.00	107		PKPdf	09 35 10.4	+0.4
PLCA				PKPbc	PKPbc	09 35 16.7	-0.6
PLCA				PKPab	PKPab	09 35 28.8	0.0
PLCA	Paso Flores	153.00	107	eP	PKPdf	09 35 09.9	-0.1
PLCA	Paso Flores	153.00	107	eP	PKPdf	09 35 09.5	-0.5
ARAG	Araguaiana, MT	153.69	37	eP	PKPdf	09 35 11.8	+0.2
BDFB	Brasilia	155.28	29	PKP	PKPdf	09 35 14.1	+0.1
	comp=Z,1.8nm,0.4s,baz=336,slow=3.5,SNR=6.4						
BDFB				PKPbc	pPKPbc	09 35 23.4	-1.6
	comp=Z,7.3nm,0.8s,baz=349,slow=6.1,SNR=7.4						
BDFB				PP	PP	09 39 12.6	-1.7
	comp=Z,18nm,1.0s,baz=191,slow=5.2,SNR=7.0						
BDFB	Brasilia	155.28	29		PKPdf	09 35 13.8	-0.2
BDFB					pPKPbc	09 35 23.0	-2.0
BDFB					PKPab	09 35 39.2	+0.3
AQDB	Aquidauana	155.45	51	eP	PKPdf	09 35 14.5	+0.6
JANB	Januaria	155.99	21	eP	PKPdf	09 35 14.6	-0.3
IPMB	Ipameri, GO	157.31	32	eP	PKPdf	09 35 17.1	+0.6
CPUP	Villa Florida	158.39	64	PKP	PKPdf	09 35 17.2	-0.3
	comp=Z,9.9nm,1.0s,baz=54,slow=2.7,SNR=10						
CPUP				PKPab	PKPab	09 35 52.0	0.0
	comp=Z,15nm,0.9s,baz=340,slow=4.2,SNR=12						
CPUP				PP	PP	09 39 28.2	-4.0
	comp=Z,7.6nm,1.2s,baz=279,slow=6.4,SNR=3.7						
CPUP	Villa Florida	158.39	64	PKIKP	PKPdf	09 35 16.9	-0.6
CPUP						09 35 52.1	
CPUP	Villa Florida	158.39	64	eP	PKPdf	09 35 17.7	+0.2
PCMB	Pacaembu	158.91	44	eP	PKPdf	09 35 18.6	+0.3
TRCB	Terra Rica	159.06	49	eP	PKPdf	09 35 18.9	+0.4
SJMB	Sao Joao De Ma	160.26	16	eP	PKPdf	09 35 19.8	-0.1
BSFB	Barra de Sao F	160.46	15	eP	PKPdf	09 35 20.7	+0.6
BSCB	Bom Sucesso	161.40	28	eP	PKPdf	09 35 21.4	+0.3

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*MDD **02** 09:31:57.5±2.7, 30.°97N×10.°68W, h0km, mb3.9/7, Error ellipse: s-maj=80.7km s-min=8.3km az=127.0*

*CNRM **02** 09:32:01.5±1.8, 30.°60N×9.°93W, h32km±10km, Error ellipse: s-maj=10.8km s-min=7.9km az=40.0*

ISC 02 09:31:52.2±1.0, **30.°67N**±0.°05×**10.°33W**±0.°04, **h10km, n18, σ3.s03**/28, **Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EAH	EAH	1.17	33	P	Pn	09 32 18.6	+3.9
EAH				S	Sn	09 32 33.7	+3.1
TTIG	Tnine Tigouga,	1.64	94	P	Pn	09 32 21.7	+0.5
TTIG				S	Sn	09 32 40.3	-2.0
OUK	Oukaimeden	2.19	75	P	Pb	09 32 32.0	-0.1
SRHM	Skhour des Reh	2.75	49	P	Pb	09 32 39.5	-2.0
OUZM	OUZ	3.08	85	P	Pn	09 32 42.7	+1.6
EFAM	Famara	3.17	242	P	Pn	09 32 44.3	+2.1
	0.8nm,0.2s,SNR=7.9						
EFAM				S	Sn	09 33 21.1	+1.0
	SNR=7.9						
CFUE	Fuerteventura	3.73	238	P	Pb	09 32 56.2	-2.0
	2.6nm,0.1s,SNR=7.9						
CFUE				S	Sn	09 33 36.5	+2.7
	SNR=7.9						
TZRR	Tazzarine	4.10	87	P	Pn	09 32 56.6	+1.5
TZRR				Lg	Lg	09 33 58.2	
ZGR	Zagora	4.11	96	P	Pn	09 32 57.8	+2.6
ZGR				Lg	Lg	09 33 57.8	
ZHG	ZHG	4.18	48	P	Pn	09 32 58.7	+2.6
CZD	Col de Zad	5.08	61	Lg	Lg	09 34 34.1	
MD31	MD31	5.23	64	P	Pn	09 33 13.6	+3.0
MD31				S	Sn	09 34 10.2	-0.7
MDT	Midelt	5.33	65	P	Pn	09 33 14.9	+3.0
MDT				S	Sn	09 34 13.6	+0.2
PFVI	Vila Bisbo	6.57	11	P	Pn	09 33 32.1	+3.2
	2.8nm,0.2s,SNR=7.9						
PFVI				S	Sn	09 34 39.5	-4.3
	SNR=7.9						
EGRO	El Granado	7.24	18	P	Pn	09 33 41.9	+3.7
	0.6nm,0.1s,SNR=7.9						
EGRO				S	Sn	09 34 57.3	-3.1
	SNR=7.9						
EMIN	Mina Concepcio	7.70	22	P	Pn	09 33 47.8	+3.4
	0.1nm,0.1s,SNR=7.9						
EMIN				S	Sn	09 35 06.6	-5.1
	SNR=7.9						
ECAB	El Cabril	8.43	27	P	Pn	09 33 57.3	+2.8
	0.2nm,0.1s,SNR=7.9						
ECAB				S	Sn	09 35 24.7	-4.9
	SNR=7.9						
EBAD	Badajoz	8.52	18	P	Pn	09 33 57.4	+1.8
	0.3nm,0.1s,SNR=7.9						
EBAD				S	Sn	09 35 27.4	-4.3
	SNR=7.9						

*IDC **02** 09:48:50.7±26.0,22°.47S×172°.68W,h0km,mb4.2/4, mb1 4.4/4,mb1mx3.7/37,mbtmp4.2/4,Error ellipse: s-maj=483.7km s-min=154.9km az=76.0*

*NEIC **02** 09:48:56.8±1.7,23°.80S±0°.09×173°.16W±0°.06,h10km±1km, mb4.4/9,Error ellipse: s-maj=16.0km s-min=8.4km az=166.0*

ISC 02 09:48:56.1±1.0**,23°.78S**±0°.10×**173°.2W**±0°.1**,h10km,n17, σ1s.54**/18**,mb4.4**/8**,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.57	33	Pn	Pn	09 50 18.0	-1.1
NIUE				Sn	Sn	09 51 23.5	+0.4
RAO	Raoul Island	6.91	217	Pn	Pn	09 50 36.8	-0.7
AFI	Afiamalu	9.90	8	Sn	Sn	09 53 11.9	+1.9
MSVF	Nonsavu	10.18	305	Pn	Pn	09 51 20.9	-1.6
CTA	Charters Tower	37.73	268	P	P	09 56 13.5	+1.2
	5.9nm,0.4s,baz=96,slow=11,SNR=20						
CTAO	Charters Tower	37.73	268	P	P	09 56 10.8	-1.5
CTAO				IAmb	IAmb	09 56 14.0	
	comp=Z,10nm,1.1s						
STKA	Stephens Creek	40.57	248	P	P	09 56 38.3	+2.3
	comp=Z,1.6nm,0.7s,baz=89,slow=14,SNR=4.3						
STKA	Stephens Creek	40.57	248	P	P	09 56 36.1	+0.1
COEN	Coen	42.30	275	P	P	09 56 48.6	-1.8
COEN				IAmb	IAmb	09 56 55.3	
	comp=Z,7.4nm,1.3s						
ASAR	Alice Springs	48.21	259	P	P	09 57 38.8	+1.5
	comp=Z,0.9nm,0.5s,baz=92,slow=6.6,SNR=14						
WR0	Warramunga Arr	48.46	264	P	P	09 57 39.9	+0.7
WB2	Warramunga Arr	48.63	264	P	P	09 57 41.6	+1.1
WB2				IAmb	IAmb	09 57 48.2	
	comp=Z,5.4nm,1.3s						
WRAB	Tennant Creek	48.64	264	P	P	09 57 41.5	+1.0
WRAB				IAmb	IAmb	09 57 48.5	
	comp=Z,4.3nm,1.1s						
WB0	Warramunga Arr	48.64	264	P	P	09 57 41.6	+1.0
WB0				IAmb	IAmb	09 57 42.2	
	comp=Z,4.1nm,0.8s						
WRA	Warramunga Arr	48.64	264	P	P	09 57 41.6	+1.0
	comp=Z,1.7nm,0.3s,baz=97,slow=8.4,SNR=39						
KNRA	Kununurra	54.94	267	P	P	09 58 30.6	+2.9
QSPA	South Pole Qui	66.31	180	P	P	09 59 44.6	0.0

IDC 02 09:50:41.0±4.0**,7°.15S**×**153°.89E,h0km,mb3.3**/3**, mb1 3.5**/3**,mb1mx3.3**/36**,mbtmp3.3**/3**,Error ellipse: s-maj=139.1km s-min=40.3km az=116.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.83	234	P	P	09 55 45.8	-0.1
	0.5nm,0.7s,baz=60,slow=10,SNR=2.1						
ASAR	Alice Springs	25.26	227	P	P	09 56 09.1	0.0
	0.8nm,0.8s,baz=59,slow=9.3,SNR=6.2						
MKAR	Makanchi Array	82.79	319	P	P	10 03 07.7	+0.5
	0.2nm,0.6s,baz=103,slow=6.2,SNR=2.2						
TORD	Torodi Ar. Bea	152.00	285	PKPbc	PKPbc	10 10 38.6	-0.6
	0.3nm,0.7s,baz=67,slow=4.8,SNR=2.3						

IDC 02 09:54:28.6±105.0**,20°.52N**×**144°.32E,h0km,Error ellipse: s-maj=208.6km s-min=19.8km az=101.0,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	21.18	92	H	H	10 20 59.2	
	baz=279,slow=75,SNR=428						
H11S1	WAKE ISLAND Hy	21.19	92	H	H	10 20 59.7	
	baz=279,slow=75,SNR=710						
H11S2	WAKE ISLAND Hy	21.20	92	H	H	10 21 00.3	
	baz=279,slow=75,SNR=487						
H11N1	WAKE ISLAND Hy	21.21	88	H	H	10 21 01.6	
	baz=276,slow=74,SNR=680						
H11N2	WAKE ISLAND Hy	21.21	88	H	H	10 21 01.9	
	baz=276,slow=74,SNR=561						
H11N3	WAKE ISLAND Hy	21.23	88	H	H	10 21 02.9	
	baz=276,slow=74,SNR=675						
H03N3	Juan Fernandez	139.64	118	H	H	12 49 08.9	
	baz=122,slow=74,SNR=11						
H03N1	Juan Fernandez	139.66	118	H	H	12 49 08.5	
	baz=267,slow=74,SNR=11						

*TAP **02** 10:29:41.8,24°.59N×122°.91E,h107km,ML4.3,B*

*IDC **02** 10:29:42.5±6.9,24°.73N×122°.94E,h108km±73km,mb3.3/4, mb1 3.3/5,mb1mx3.1/46,mbtmp3.6/5,ML2.6/1,Error ellipse: s-maj=52.2km s-min=20.5km az=67.0*

*JMA **02** 10:29:42.4±0.1,24°.54N×122°.83E,h104km±2km,M3.3*

ISC 02 10:29:42.4±0.8**,24°.57N**±0°.03×**122°.86E**±0°.02**,h104km**±5km**, n142,σ0s.90**/246**,mb3.5**/3**,17C-11D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.14	146	P	Pn	10 29 57.0	0.0
JYNG				S	Sn	10 30 07.7	-0.1
YOJ	Yonaguni jima	0.17	127	⇑iP	Pn	10 29 57.1	0.0
	baz=156						
YOJ				iS	Sn	10 30 07.9	-0.1
	baz=156						
YOJ	Yonaguni jima	0.17	127	P	Pn	10 29 57.1	0.0
YOJ				S	Sn	10 30 07.8	-0.2
EOS1	EOS1	0.67	269	iP	Pn	10 30 00.1	+0.2
	baz=260						
EOS1				S	Sn	10 30 13.2	+0.2
	baz=260						
IRIF	Iriomote-Funau	0.82	106	P	Pn	10 30 01.6	+0.2
IRIF				S	Sn	10 30 15.4	-0.2
TWC	Suao	0.92	273	iP	Pn	10 30 02.2	-0.2
	baz=271						
TWC				eS	Sn	10 30 16.2	-1.1
	baz=271						
NTC	Toucheng	0.98	287	iP	Pn	10 30 03.3	+0.3
	baz=278						
NTC				eS	Sn	10 30 18.0	-0.5
	baz=278						
HATJ	Hateruma jima	1.00	120	P	Pn	10 30 03.9	+0.7
HATJ				eS	Sn	10 30 19.0	+0.2
TIPB	Shuangxi	1.02	293	⇓iP	Pn	10 30 03.6	+0.2
	baz=286						
TIPB				eS	Sn	10 30 18.4	-0.9
	baz=286						
ENA	Nanau	1.03	263	iP	Pn	10 30 03.5	+0.1
	baz=256						
ENA				eS	Sn	10 30 19.4	+0.1
	baz=256						
ILA	Ilan	1.03	281	eP	Pn	10 30 03.8	+0.3
	baz=273						
ILA				eS	Sn	10 30 19.2	-0.2
	baz=273						
JKRS	Kuro-shima	1.10	107	P	Pn	10 30 04.9	+0.7
JKRS				S	Sn	10 30 21.0	+0.4
TWE	Neicheng	1.10	278	⇓iP	Pn	10 30 04.5	+0.3
	baz=272						
TWE				eS	Sn	10 30 20.1	-0.5
	baz=272						
NWF	Wu-fen Shan	1.10	297	⇓P	Pn	10 30 04.8	+0.4
	baz=287						
NWF				eS	Sn	10 30 21.2	+0.3
	baz=287						
WFSB	Wu-fen Shan	1.10	297	⇓eP	Pn	10 30 04.8	+0.5
	baz=287						
WFSB				eS	Sn	10 30 21.1	+0.3
	baz=287						
SLBB	Yuanshan	1.13	280	P	Pn	10 30 05.1	+0.5
	baz=274						
ENTT	Nioudou	1.18	274	iP	Pn	10 30 05.9	+0.7
	baz=268						
ENTT				iS	Sn	10 30 22.6	+0.2
	baz=268						
JIJ	Ishigaki jima	1.19	100	P	Pn	10 30 05.4	+0.2
JIJ				S	Sn	10 30 21.4	-1.0
NACB	Ninganchiao	1.22	252	⇑P	Pn	10 30 05.1	-0.5
	baz=245						
NACB				eS	Sn	10 30 21.8	-1.3
	baz=245						
NDT	Datong Townshi	1.23	272	⇑iP	Pn	10 30 06.4	+0.7
	baz=270						
NDT				eS	Sn	10 30 23.2	-0.1
	baz=270						
TWA	Mucha	1.23	290	⇓iP	Pn	10 30 06.0	+0.3
	baz=279						
TWA				eS	Sn	10 30 23.0	-0.4
	baz=279						
TWD	Chiawan	1.25	248	iP	Pn	10 30 05.5	-0.5
	baz=247						
TWD				eS	Sn	10 30 22.6	-1.2
	baz=247						
NWLT	Wulai	1.25	280	⇓iP	Pn	10 30 06.3	+0.3
	baz=284						
NWLT				eS	Sn	10 30 23.2	-0.7
	baz=284						
NHDH	Xindian Distri	1.28	288	P	Pn	10 30 06.7	+0.4
	baz=278						
NHDH				eS	Sn	10 30 23.6	-0.6
	baz=278						
PCYT	Pengchaiyu	1.28	326	eP	Pn	10 30 07.1	+0.8
	baz=318						
HWA	Hwalien	1.29	243	⇑iP	Pn	10 30 06.4	0.0
	baz=243						
HWA				eS	Sn	10 30 24.5	0.0
	baz=243						
TAP1	Taipei	1.30	291	eP	Pn	10 30 07.2	+0.6
	baz=280						
ETLH	Xiulin Townshi	1.31	254	⇑P	Pn	10 30 06.4	-0.3
	baz=250						
ETLH				eS	Sn	10 30 24.1	-1.0
	baz=250						
YM01	YM01	1.31	296	⇓iP	Pn	10 30 07.1	+0.4
	baz=287						
YM01				eS	Sn	10 30 25.4	+0.4
	baz=287						
YM08	YM08	1.31	298	eP	Pn	10 30 06.9	+0.2
	baz=290						
TATO	Taipei	1.31	288	P	Pn	10 30 06.9	+0.2
	baz=277						
TATO				eS	Sn	10 30 24.3	-0.7
	baz=277						
YM11	YM11	1.31	297	⇓P	Pn	10 30 07.1	+0.3
	baz=288						
YM11				eS	Sn	10 30 25.9	+0.7
	baz=288						
TAP	Taipei	1.32	291	eP	Pn	10 30 07.0	+0.2
	baz=279						
TAP				eS	Sn	10 30 25.0	-0.1
	baz=279						
YM05	YM05	1.32	297	iP	Pn	10 30 07.1	+0.2
	baz=288						
YM05				eS	Sn	10 30 25.3	0.0
	baz=288						
YM10	YM10	1.32	297	⇓P	Pn	10 30 07.2	+0.4
	baz=288						
JISG	Ishigakijimahi	1.32	89	P	Pn	10 30 07.1	+0.4
JISG				S	Sn	10 30 24.6	-0.6
YM04	YM04	1.34	296	⇓P	Pn	10 30 07.4	+0.4
	baz=285						
YM04				eS	Sn	10 30 25.4	-0.2
	baz=285						
TWY	Chenhua	1.35	302	⇓P	Pn	10 30 07.8	+0.7
	baz=292						
TWY				eS	Sn	10 30 26.7	+1.0
	baz=292						
YM03	YM03	1.35	297	P	Pn	10 30 07.6	+0.4
	baz=286						
YM03				eS	Sn	10 30 27.0	+1.1
	baz=286						
NNSB	Datong	1.35	264	eP	Pn	10 30 07.3	+0.1
	baz=258						
NNSH	Datong	1.35	264	P	Pn	10 30 07.3	0.0
	baz=258						
NNSH				eS	Sn	10 30 25.3	-0.8
	baz=258						
YHNB	Yeheng	1.36	275	P	Pn	10 30 07.8	+0.5
	baz=266						
YHNB				eS	Sn	10 30 25.9	-0.2
	baz=266						
NNS	Nan Shan	1.36	265	P	Pn	10 30 07.5	+0.1
	baz=257						
NNS				eS	Sn	10 30 25.7	-0.6
	baz=257						
ANP	Anpu	1.37	297	P	Pn	10 30 07.6	+0.2
	baz=285						
NSK	Sanguang	1.37	275	P	Pn	10 30 08.0	+0.6
	baz=266						
NSK				eS	Sn	10 30 26.6	+0.2
	baz=266						
NTST	Danshui	1.41	295	eP	Pn	10 30 08.5	+0.6
	baz=286						
NTST				eS	Sn	10 30 27.4	+0.3
	baz=286						
TWS1	Kuangyinshan	1.42	292	P	Pn	10 30 08.4	+0.5
	baz=283						
TWS1				eS	Sn	10 30 27.1	-0.1
	baz=283						
WLTB	Daxi	1.49	281	eP	Pn	10 30 09.2	+0.5
	baz=284						
WLTB				eS	Sn	10 30 29.6	+0.8
	baz=284						
ESL	Shilin	1.50	240	iP	Pn	10 30 08.4	-0.5
	baz=241						
WHF	Hehuan Shan	1.52	254	⇑iP	Pn	10 30 09.4	-0.1
	baz=259						
WHF				S	Sn	10 30 28.9	-1.2
	baz=259						
TWT	Tachien	1.57	259	P	Pn	10 30 10.8	+0.9
	baz=255						
TWT				S	Sn	10 30 30.9	+0.1
	baz=255						
NCU	National Centr	1.57	285	P	Pn	10 30 10.3	+0.5
	baz=275						
NCU				eS	Sn	10 30 31.4	+0.8
	baz=275						
NCUH	Zhongli	1.58	285	eP	Pn	10 30 10.4	+0.6
	baz=275						
NCUH				eS	Sn	10 30 31.1	+0.4
	baz=275						
TDCB	Techi	1.58	259	⇑P	Pn	10 30 10.7	+0.6
	baz=255						
TDCB				eS	Sn	10 30 31.1	0.0
	baz=255						
EGFH	Guangfu	1.59	236	P	Pn	10 30 10.0	0.0
	baz=234						
CHGB	Renai	1.62	252	⇑P	Pn	10 30 10.9	+0.3
	baz=246						
CHGB				eS	Sn	10 30 31.4	-0.6
	baz=246						
OWD	Renai	1.66	249	P	Pn	10 30 11.0	+0.1
	baz=244						
OWD				eS	Sn	10 30 31.2	-1.5
	baz=244						
JTJ	Tarama	1.68	87	P	Pn	10 30 11.7	+0.6
JTJ				S	Sn	10 30 32.7	-0.2
LIOB	Emei	1.68	273	iP	Pn	10 30 11.8	+0.6
	baz=271						
LIOB				eS	Sn	10 30 33.2	+0.1
	baz=271						
HGSD	Ruisui	1.69	231	⇑P	Pn	10 30 10.9	-0.4
	baz=229						
SBCB	Hsinchu	1.72	278	P	Pn	10 30 12.1	+0.4
	baz=276						
SBCB				S	Sn	10 30 34.3	+0.4
	baz=276						
HSN	Hsinchu	1.74	278	eP	Pn	10 30 12.3	+0.4
	baz=277						
HSN				S	Sn	10 30 33.7	-0.5
	baz=277						
EHY	Hungye	1.76	233	P	Pn	10 30 11.6	-0.6
	baz=242						
VWDT	VWDT	1.77	243	⇑iP	Pn	10 30 12.7	+0.4
	baz=238						
VWDT				eS	Sn	10 30 34.5	-0.4
	baz=238						
WHP	Taichung City	1.77	261	⇑iP	Pn	10 30 13.7	+1.4
	baz=258						
WHP				iS	Sn	10 30 35.7	+0.5
	baz=258						
DPDB	Guoxing	1.84	254	P	Pn	10 30 14.3	+1.0
	baz=251						
DPDB				eS	Sn	10 30 37.6	+0.8
	baz=251						
YULB	Yu-li	1.85	231	⇑P	Pn	10 30 12.9	-0.4
	baz=240						
TWF1	Yuli	1.87	230	⇑iP	Pn	10 30 13.4	-0.2
	baz=229						
NMLH	Miaoli	1.89	270	P	Pn	10 30 14.6	+0.9
	baz=262						
NMLH				eS	Sn	10 30 38.0	+0.4
	baz=262						
SSLB	Suanglung	1.91	246	⇑P	Pn	10 30 14.3	+0.3
	baz=246						
SSLB				eS	Sn	10 30 37.7	-0.5
	baz=246						
SMLT	Sun Moon Lake	1.92	250	P	Pn	10 30 14.8	+0.5
	baz=246						
SMLT				S	Sn	10 30 39.1	+0.7
	baz=246						
NSY	Sanyi	1.92	266	P	Pn	10 30 15.1	+0.9
	baz=265						
NSY				eS	Sn	10 30 39.0	+0.6
	baz=265						
TYC	Yuchr	1.94	251	P	Pn	10 30 15.5	+1.0
	baz=246						
TYC				eS	Sn	10 30 40.8	+1.8
	baz=246						
PTSB	Yuanli	1.97	267	eP	Pn	10 30 15.2	+0.5
	baz=266						
PTSB				eS	Sn	10 30 40.0	+0.6
	baz=266						
FULB	Fuli	1.98	227	⇑P	Pn	10 30 14.5	-0.5
	baz=224						
CHKT	Chengkung	2.00	223	P	Pn	10 30 14.4	-0.8
	baz=222						
CHKT				eS	Sn	10 30 38.1	-2.1
	baz=222						
WHYT	Xinyi Township	2.03	245	eP	Pn	10 30 16.7	+1.1
	baz=247						
WHYT				eS	Sn	10 30 41.6	+0.7
	baz=247						
TCU	Taichung	2.04	259	eP	Pn	10 30 16.7	+1.1
	baz=266						
TCU				eS	Sn	10 30 42.0	+1.0
	baz=266						
WDJ	Dajia District	2.04	264	eP	Pn	10 30 16.2	+0.6
	baz=263						
WDJ				S	Sn	10 30 41.4	+0.4
	baz=263						
YUS	Yu-Shan	2.05	239	P	Pn	10 30 16.7	+0.5
	baz=234						
YUS				eS	Sn	10 30 40.9	-1.2
	baz=234						
WJS	Zhushan	2.08	250	P	Pn	10 30 17.7	+1.4
	baz=249						
WJS				eS	Sn	10 30 43.3	+1.1
	baz=249						
WNT	Mingjian	2.10	251	P	Pn	10 30 18.0	+1.5
	baz=251						
WNT				eS	Sn	10 30 44.7	+2.2
	baz=251						
JIRB	Irabujima	2.12	82	P	Pn	10 30 17.3	+0.6
JIRB				eS	Sn	10 30 42.5	-0.4
ALS	Alishan	2.15	241	eP	Pn	10 30 18.6	+1.1
	baz=236						
ALS				eS	Sn	10 30 44.3	+0.1
	baz=236						
WCHH	Zhanghua	2.16	257	eP	Pn	10 30 17.9	+0.7
	baz=263						
WCHH				eS	Sn	10 30 44.0	+0.2
	baz=263						
ELDTW	Lidau	2.17	231	⇑iP	Pn	10 30 17.4	-0.2
	baz=228						
ELDTW				eS	Sn	10 30 43.1	-1.3
	baz=228						
JIKM	Ikemajima	2.20	80	P	Pn	10 30 18.7	+1.0
JIKM				S	Sn	10 30 44.7	0.0
CHN5	Tsauling	2.22	245	P	Pn	10 30 19.2	+1.2
	baz=239						
CHN5				eS	Sn	10 30 47.2	+1.8
	baz=239						
JMJ	Miyako jima 2	2.23	83	eP	Pn	10 30 19.3	+1.3
	baz=83						
JMJ				eS	Sn	10 30 45.4	+0.1
	baz=83						
TWH	Lutao	2.24	215	⇑iP	Pn	10 30 18.0	-0.3
	baz=214						
TWH				eS	Sn	10 30 44.1	-1.6
	baz=214						
JMJ2	Miyako jima3	2.25	85	P	Pn	10 30 19.4	+1.0
JMJ2				eS	Sn	10 30 45.4	-0.6
WDLH	Douliu	2.29	248	eP	Pn	10 30 20.6	+1.6
	baz=258						
WDLH				eS	Sn	10 30 48.5	+1.5
	baz=258						
JOGS	Gusukube	2.32	85	P	Pn	10 30 20.5	+1.2
JOGS				S	Sn	10 30 47.6	0.0
STYT	Tauyuan	2.38	234	P	Pn	10 30 21.3	+1.1
	baz=231						
STYT				eS	Sn	10 30 49.8	+0.7
	baz=231						
RLNB	Erlin	2.38	254	P	Pn	10 30 20.8	+0.7
	baz=253						
RLNB				S	Sn	10 30 49.3	+0.4
	baz=253						
TWGBT	Beinan	2.39	224	eP	Pn	10 30 19.7	-0.5
	baz=232						
TWGBT				eS	Sn	10 30 47.9	-1.3
	baz=232						
TWG	Pinlang	2.39	224	P	Pn	10 30 19.7	-0.6
	baz=232						
TWG				eS	Sn	10 30 48.0	-1.3
	baz=232						
TTN	Taitung	2.39	221	eP	Pn	10 30 20.8	+0.5
	baz=220						
TPUB	Ta-pu	2.40	239	P	Pn	10 30 21.7	+1.3
	baz=233						
TPUB				eS	Sn	10 30 51.2	+1.7
	baz=233						
CHN4	Tsaushan	2.40	240	eP	Pn	10 30 21.9	+1.5
	baz=234						
CHN4				eS	Sn	10 30 50.7	+1.2
	baz=234						
WTP	Ta-pu	2.44	238	eP	Pn	10 30 22.2	+1.2
	baz=247						
WTCT	Ta-ch'eng	2.46	254	eS	Sn	10 30 50.5	-0.3
	baz=253						
CHY	Chiayi	2.47	245	eP	Pn	10 30 22.6	+1.3
	baz=256						
CHY				eS	Sn	10 30 53.3	+2.2
	baz=256						
TWK	Hsinying	2.53	240	eP	Pn	10 30 23.1	+1.0

	baz=240						
TWK				eS	Sn	10 30 53.6	+1.0
	baz=240						
CHN1	Nanshi	2.54	238	eP	Pn	10 30 23.5	+1.3
	baz=247						
CHN1				eS	Sn	10 30 54.2	+1.4
	baz=247						
SNST	Tainan City	2.54	239	eP	Pn	10 30 23.9	+1.7
	baz=248						
SNST				eS	Sn	10 30 54.4	+1.5
	baz=248						
SGST	Jiashian	2.56	235	P	Pn	10 30 23.2	+0.8
	baz=236						
SGST				eS	Sn	10 30 53.9	+0.7
	baz=236						
SLGT	Liugui	2.56	233	P	Pn	10 30 24.2	+1.7
	baz=227						
WSF	Szhu	2.58	250	eS	Sn	10 30 54.3	+0.6
	baz=257						
ECL	Taimali	2.63	222	P	Pn	10 30 22.6	-0.8
	baz=228						
CHN8	Yiju	2.71	244	eS	Sn	10 30 58.1	+1.3
	baz=244						
SSD	Sandimen	2.73	229	eP	Pn	10 30 26.2	+1.4
	baz=230						
SSD				eS	Sn	10 30 58.3	+1.0
	baz=230						
LAY	Lan-yu	2.79	206	eP	Pn	10 30 24.6	-0.9
	baz=208						
MASBT	Mashibuluo	2.82	227	eP	Pn	10 30 26.9	+0.9
	baz=226						
MASBT				eS	Sn	10 31 01.0	+1.6
	baz=226						
EAST	Anshuo	2.85	221	P	Pn	10 30 26.3	-0.1
	baz=226						
EAST				eS	Sn	10 30 59.7	-0.5
	baz=226						
PTTC	Pingtan	2.95	289	eP	Pn	10 30 27.5	-0.1
	baz=286						
SSPT	Xinbi	2.95	226	eP	Pn	10 30 29.7	+2.0
	baz=238						
SCZT	Fangliau	3.00	224	eP	Pn	10 30 29.6	+1.3
	baz=221						
SCZT				eS	Sn	10 31 03.5	-0.2
	baz=221						
MATB	Ma-tsu	3.07	302	eP	Pn	10 30 28.9	-0.4
	baz=297						
MATB				eS	Sn	10 31 05.2	-0.2
	baz=297						
VWUC	VWUC	3.13	278	eP	Pn	10 30 29.7	-0.3
	baz=276						
VWUC				eS	Sn	10 31 04.0	-2.7
	baz=276						
PNG	Penghu	3.18	252	eP	Pn	10 30 30.7	0.0
	baz=252						
PHUB	P'eng-hu	3.19	251	eP	Pn	10 30 30.2	-0.6
	baz=251						
PHUB				eS	Sn	10 31 06.0	-2.0
	baz=251						
WDGT	Dungji	3.21	247	eP	Pn	10 30 31.2	+0.2
	baz=246						
WDGT				eS	Sn	10 31 07.8	-0.8
	baz=246						
TSEB	Hengchuen, Pin	3.21	215	eS	Sn	10 31 09.2	+0.6
	baz=223						
TWKBT	Hengchun	3.22	216	P	Pn	10 30 31.6	+0.4
	baz=218						
TWKBT				eS	Sn	10 31 09.2	+0.3
	baz=218						
TWK1	Hengchun	3.22	216	P	Pn	10 30 31.6	+0.3
	baz=218						
TWK1				eS	Sn	10 31 08.1	-0.9
	baz=218						
XPSS	Dashiqiu	3.37	315	eP	Pn	10 30 32.8	-0.3
	baz=311						
VCHM	Qimei	3.42	247	eP	Pn	10 30 34.0	+0.1
	baz=247						
VCHM				eS	Sn	10 31 12.9	-0.7
	baz=247						
LYJJ	Jianjiangzhen	3.43	306	eP	Pn	10 30 33.7	-0.2
	baz=293						
PTMZ	Houxiangcun	3.43	279	eP	Pn	10 30 33.9	-0.2
	baz=276						
PTMZ				eS	Sn	10 31 10.9	-3.1
	baz=276						
MHZQ	Yeshan	3.79	295	eP	Pn	10 30 39.1	+0.3
	baz=291						
KNM	Kinmen	4.04	269	eP	Pn	10 30 44.2	+2.0
	baz=268						
KNMB	Chin-men Tao	4.08	269	eP	Pn	10 30 42.4	-0.3
	baz=267						
KNMB				eS	Sn	10 31 26.6	-2.9
	baz=267						
AXDP	Jialang	4.46	275	eP	Pn	10 30 47.9	+0.1
	baz=266						
ZPLA	Ao Xicun	4.71	263	eP	Pn	10 30 51.1	-0.1
	baz=261						
JOW	Kunigami	5.38	64	i P	Pn	10 30 59.3	-1.1
	baz=64						
JOW	Kunigami	5.38	64	P	Pn	10 30 59.2	-1.1
	0.5nm,0.3s,baz=96,slow=18,SNR=32						
JOW				S	Sn	10 31 57.9	-3.1
	1.0nm,0.3s,baz=87,slow=18,SNR=7.7						
KSRS	Korea Array	13.56	17	P	Pn	10 32 52.0	+1.6
	1.7nm,0.3s,baz=199,slow=12,SNR=31						
USRK	Ussuriysk Ar.	20.96	19	P	P	10 34 15.3	-1.6
	3.5nm,0.7s,baz=191,slow=8.0,SNR=11						
MKAR	Makanchi Array	39.14	315	P	P	10 36 58.5	-1.3
	0.2nm,0.4s,baz=99,slow=9.4,SNR=4.5						
WRA	Warramunga Arr	45.63	165	P	P	10 37 53.0	+0.5
	1.3nm,0.7s,baz=346,slow=8.1,SNR=15						
ASAR	Alice Springs	49.13	167	P	P	10 38 20.5	+0.8
	0.2nm,0.3s,baz=350,slow=7.1,SNR=11						

IDC 02 10:54:43.6±2.9**, 5°.58S×152°.78E, h0km, mb3.0**/2**, mb1 3.3**/2**, mb1mx3.0**/40**, mbtmp3.0**/2**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.8**/11**, Error ellipse: s-maj=65.3km s-min=26.8km az=95.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.47	329	Pn	Pg	10 55 11.8	-0.1
	154nm,0.3s,baz=155,slow=0.7,SNR=127						
KRVT				Sn	Sg	10 55 26.3	-4.7
	79nm,0.3s,baz=184,slow=23,SNR=4.6						
WRA	Warramunga Arr	22.92	230	P	P	10 59 49.0	-0.5
	0.3nm,0.7s,baz=55,slow=10,SNR=4.7						
WRA				LR	LR	11 09 44.4	
	comp=Z,90nm,19.8s,baz=170,slow=39						
ASAR	Alice Springs	25.57	223	P	P	11 00 15.4	+0.8
	0.2nm,0.4s,baz=57,slow=9.1,SNR=6.2						
TORD	Torodi Ar. Bea	150.52	287	PKPbc	PKPbc	11 14 37.3	-1.2
	0.3nm,0.6s,baz=89,slow=1.8,SNR=2.3						

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*IDC **02** 10:57:45.9±1.4, 10°.35N×125°.60E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.5/57, mbtmp3.8/7, Error ellipse: s-maj=204.9km s-min=18.7km az=69.0*

*NEIC **02** 10:57:47.1±0.6, 10°.3N±0°.1×125°.6E±0°.1, h10km±1km, mb4.4/12, Error ellipse: s-maj=23.1km s-min=17.6km az=68.0*

*MAN **02** 10:58:05.3, 10°.12N×125°.57E, h131km, mb4.1, ML2.9, MS2.6*

ISC 02 10:58:03.2±0.8**, 10°.15N**±0°.06×**125°.7E**±0°.1**, h153**km±7km**, n28, σ1.36**/33**, mb4.1**/13**, 1C, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.42	208	eP	Pn	10 58 24.2	-0.3
SCPH				eS	Sn	10 58 40.2	-0.6
MSLP	Maasin	0.82	269	eP	Pn	10 58 27.1	+0.3
MSLP				eS	Sn	10 58 44.2	-0.6
BUTP	Butuan	1.18	183	eP	Pn	10 58 30.7	+0.9
BUTP				eS	Sn	10 58 52.2	+1.9
OCLP	Ormoc	1.39	310	eP	Pn	10 58 32.9	+1.1
LLP	Lapu-Lapu	1.70	276	eP	Pn	10 58 35.2	0.0
TBP	Tagbilaran	1.86	256	eP	Pn	10 58 40.2	+3.3
CGP	Cagayan de Oro	1.95	210⇑	eP	Pn	10 58 37.8	-0.2
CGP				eS	Sn	10 59 03.0	-1.7
BUKP	Musuan	2.34	195	eP	Pn	10 58 43.9	+1.2
CNP	Catarman	2.55	337	eP	Pn	10 58 47.3	+2.2
CNP				eS	Sn	10 59 17.5	0.0
FITZ	Fitzroy Crossi	28.07	180	P	P	11 03 39.7	-0.8
FITZ				IAmb	IAmb	11 03 40.0	
	comp=Z,8.2nm,1.5s						
PMG	Port Moresby	28.88	132	P	P	11 03 45.9	-1.9
PMG				IAmb	IAmb	11 03 56.7	
	comp=Z,5.7nm,1.1s						
WB0	Warramunga Arr	30.94	164	P	P	11 04 06.1	+0.2
WB0				IAmb	IAmb	11 04 11.1	
	comp=Z,6.3nm,1.3s						
WRAB	Tennant Creek	31.09	164	P	P	11 04 07.2	0.0
WRAB				IAmb	IAmb	11 04 16.7	
	comp=Z,8.8nm,1.5s						
WRA	Warramunga Arr	31.09	164	P	P	11 04 07.5	+0.2
	comp=Z,0.1nm,0.3s,baz=346,slow=9.0,SNR=7.3						
WB2	Warramunga Arr	31.10	164	P	P	11 04 07.4	+0.1
WB2				IAmb	IAmb	11 04 21.8	
	comp=Z,8.5nm,1.5s						
WR0	Warramunga Arr	31.16	164	P	P	11 04 07.9	0.0
WR0				IAmb	IAmb	11 04 14.2	
	comp=Z,7.2nm,1.4s						
AS31	Alice Springs	34.56	167	P	P	11 04 39.2	+1.8
ASAR	Alice Springs	34.56	167	P	P	11 04 37.9	+0.5
	comp=Z,0.3nm,0.3s,baz=345,slow=7.1,SNR=15						
SONM	Songino Array	40.93	340	P	P	11 05 27.9	-2.9
	comp=Z,2.6nm,0.5s,baz=128,slow=9.3,SNR=2.9						
BBOO	Buckleboo	43.85	167	P	P	11 05 55.2	+0.9
STKA	Stephens Creek	44.48	161	P	P	11 06 01.3	+2.0
	comp=Z,1.8nm,0.8s,baz=333,slow=8.5,SNR=5.2						
STKA	Stephens Creek	44.48	161	P	P	11 06 00.2	+0.9
MKAR	Makanchi Array	51.78	323	P	P	11 06 54.1	-1.2
	comp=Z,0.1nm,0.4s,baz=101,slow=7.5,SNR=2.1						
MSVF	Nonsavu	58.66	118	P	P	11 07 46.1	+1.1
DOT	Dot Lake	81.10	27	P	P	11 10 00.5	-0.7
HMT	Hamilton	81.29	30	P	P	11 10 02.9	+0.6
ARCES	ARCESS Array B	84.11	340	P	P	11 10 17.6	+1.0
	comp=Z,0.5nm,0.6s,baz=74,slow=6.7,SNR=1.1						
FINES	FINESS Array B	85.72	332	P	P	11 10 25.5	+0.7
	comp=Z,0.7nm,0.5s,baz=72,slow=6.2,SNR=4.6						

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*BJI **02** 11:12:07.0±0.0, 7°.89S×128°.16E, h200km, mB4.7/37, mb4.8/53*

*GCMT **02** 11:12:08.3±0.4, 7°.55S±0°.03×127°.88E±0°.03, h214km±5km, MW5.0/73, Moment Tensor Solution. s13,c13; s73,c91; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.35±.26; Mθθ-0.01±.28; Mφφ-2.35±.27; Mrθ3.17±.22; Mθφ2.47±.20; Mφr1.82±.20; Best double couple: M0 4.77300×10^16 NP1:φs1.00000°, δ56.00000°, λ143.00000°. NP2: φs113.00000°, δ60.00000°, λ40.00000°. Principal axes: T 5.6270, Plg48.0000°, Azm329.0000°; N -1.7160, Plg42.0000°, Azm144.0000°; P -3.9190, Plg2.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **02** 11:12:08.2±1.0, 7°.45S×127°.76E, h160km±8km, mb4.3/34, mb1 4.2/39, mb1mx4.2/46, mbtmp4.7/39, MS3.4/6, Ms1 3.4/6, ms1mx3.0/36 Error ellipse: s-maj=9.6km s-min=7.2km az=93.0*

*NEIC **02** 11:12:08.3±1.5, 7°.55S±0°.06×127°.81E±0°.05, h164km±4km, mb4.8/84, Error ellipse: s-maj=8.4km s-min=7.6km az=160.0*

*DJA **02** 11:12:09.0±0.2, 8°S±2°×12°8E±°, h167km±2km, M4.7/51, mb4.9/51, mB5.2/32, MLv5.1/17, Mw(mB)4.6/32, Mwp5.8/1*

*KLM **02** 11:12:18.0, 7°.63S×127°.69E, h255km, mb5.2*

ISC 02 11:12:08.3±0.6**, 7°.63S**±0°.03×**127°.83E**±0°.03**, h165**km±5km**, n311, σ1.65**/341**, mb4.7**/86**, 3C-1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.45	96	P	Pn	11 13 03.1	+1.1
SAUI				S	Sn	11 13 42.4	-1.3
SAUI	Saumlaki	3.45	96		Pn	11 13 02.7	+0.7
SAUI				Sn	Sn	11 13 44.2	+0.5
BNDI	Bandanaira	3.71	34	P	Pn	11 13 06.3	+1.0
AAI	Ambon	3.93	5	P	Pn	11 13 09.8	+1.7
SOEI	Soe	4.11	239	P	Pn	11 13 11.9	+1.4
SOEI				S	Sn	11 14 01.4	+2.4
SOEI	Soe	4.11	239		Pn	11 13 11.4	+0.9
SOEI				Sn	Sn	11 13 59.5	+0.5
MSAI	Masohi	4.39	14	P	Pn	11 13 15.7	+1.6
NLAI	Namlea	4.42	350	P	Pn	11 13 17.9	+3.4
BATI	Baumata	4.85	238	P	Pn	11 13 20.5	+0.5
	555nm,0.3s,baz=118,slow=2.2,SNR=529						
BATI				S	Sn	11 14 17.1	+0.9
	497nm,0.3s,baz=138,slow=5.4,SNR=9.8						
BATI	Baumata	4.85	238	P	Pn	11 13 21.5	+1.4
BATI				S	Sn	11 14 17.4	+1.2
MMRI	Maumere	5.63	259	P	Pn	11 13 30.9	+0.6
	4.1nm13μm1μm,0.9s						
MMRI	Maumere	5.63	259		Pn	11 13 31.3	+1.0
BBSI	Bau Bau	5.64	292	P	Pn	11 13 33.0	+2.5
	0.2nm613nm67nm,0.8s						
SANI	Sanana	5.84	342	P	Pn	11 13 34.8	+1.7
	0.6nm1μm164nm,0.9s						
MTN	Manton Dam	6.12	148	P	Pn	11 13 37.1	+0.4
	baz=6.2,SNR=531						
MTN				S	Sn	11 14 43.8	-2.3
	baz=6.2						
MTN	Manton Dam	6.12	148		Pn	11 13 36.9	+0.2
MTN				Sn	Sn	11 14 42.7	-3.4
EDFI	Ende, Flores	6.18	259	P	Pn	11 13 38.2	+0.5
	1.2nm4μm424nm,0.9s						
EDFI				S	Sn	11 14 49.7	+1.9
	1.2nm4μm424nm,0.9s						
FAKI	Fak Fak	6.42	43	P	Pn	11 13 39.9	-0.9
	1.2nm5μm272nm,0.9s						
FAKI	Fak Fak	6.42	43		Pn	11 13 39.1	-1.6
FAKI				Sn	Sn	11 14 49.2	-4.2
KDU	Kakadu	6.79	138	P	Pn	11 13 45.8	+0.1
	baz=6.9,SNR=1000						
KDU				S	Sn	11 14 56.1	-6.1
	baz=6.9						
LBMI	Labuha	6.95	357	P	Pn	11 13 50.4	+2.6
	0.6nm1μm71nm,0.9s						
SIJI	Sorong	7.54	27	P	Pn	11 13 54.3	-1.3
	69nm,0.3s,baz=202,slow=10,SNR=103						
SIJI				S	Sn	11 15 17.9	-2.2
	5.5nm,0.3s,baz=239,slow=23,SNR=1.8						
BASI	Baing, Sumba	7.62	250	P	Pn	11 13 56.2	-0.4
	3.9nm5μm289nm,0.6s						
BASI				S	Sn	11 15 16.0	-5.9
	3.9nm5μm289nm,0.6s						
BKSI	Bulukumba	8.00	286	P	Pn	11 14 04.0	+2.3
KNRA	Kununurra	8.05	174	P	Pn	11 14 02.0	-0.3
	baz=8.2,SNR=651						
KNRA				S	Sn	11 15 25.6	-6.8
	baz=8.2						
KNRA	Kununurra	8.05	174		Pn	11 14 02.0	-0.3
KNRA				Sn	Sn	11 15 26.7	-5.6
LUWI	Luwuk	8.26	322	P	Pn	11 14 08.9	+3.7
	2μm152nm,1.0s						
LUWI	Luwuk	8.26	322		Pn	11 14 05.4	+0.2
BNSI	Bone	8.33	292	P	Pn	11 14 08.7	+2.7
	708nm73nm,0.7s						
KAPI	Kappang	8.44	287	P	Pn	11 14 07.4	-0.2
	1.7nm,0.3s,baz=137,slow=10,SNR=9.5						
KAPI	Kappang	8.44	287		Pn	11 14 08.1	+0.5
WBSI	Waikabubak, Su	8.58	256	P	Pn	11 14 08.5	-1.0
	3μm327nm,0.9s						
RKPI	Ransiki, Papua	8.77	46	P	Pn	11 14 11.1	-0.8
	8μm544nm,1.0s						
SPSI	Sidrap Palu	8.81	294	P	Pn	11 14 14.3	+1.9
	811nm48nm,1.1s						
KMSI	Cibinong	9.01	335	P	Pn	11 14 20.0	+4.9
	3μm165nm,1.0s						
APSI	Ampana	9.09	317	P	Pn	11 14 19.2	+3.1
	1μm136nm,1.0s						
TTSI	Tana Toraja	9.19	299	P	Pn	11 14 22.4	+5.0
	706nm55nm,1.0s						
MRSI	Marisa	9.97	324	P	Pn	11 14 30.6	+2.8
	834nm48nm,0.7s						
PLAI	Plampang	10.02	262	P	Pn	11 14 27.0	-1.5
	2μm128nm,0.5s						
FITZ	Fitzroy Crossi	10.62	191	S	Sn	11 16 26.8	-7.3
	baz=11						
FITZ	Fitzroy Crossi	10.62	191	P	Pn	11 14 34.3	-2.0
	13nm,0.3s,baz=27,slow=11,SNR=159						
FITZ				S	Sn	11 16 27.9	-6.2
	41nm,0.3s,baz=90,slow=8.3,SNR=12						
FITZ				LR	LR	11 19 46.8	
	comp=Z,140nm,20.8s,baz=10.0,slow=42						
MPSI	Mapaga	11.19	315	P	Pn	11 14 45.6	+1.8
	1μm72nm,1.3s						
WAMI	Wamena	11.44	72	P	P	11 14 58.7	+4.6
SMPI	Sarmi	12.20	63	P	Pn	11 14 55.6	-1.2
	54nm,1.7s						
BKB	Balikpapan	12.60	300	P	P	11 15 12.3	+5.3
	3μm249nm,1.5s						
BKB	Balikpapan	12.60	300	P	P	11 15 06.6	-0.3
SMKI	Samarinda	12.77	303	P	P	11 15 13.6	+4.7
GENI	Genyem	13.26	68	P	Pn	11 15 11.3	+0.9
	4μm152nm,0.9s						
JAGI	Jajag, Banyuwa	13.57	266	P	Pn	11 15 15.9	+1.5
	54nm,0.6s						
JAGI	Jajag, Banyuwa	13.57	266		Pn	11 15 12.9	-1.5
WB0	Warramunga Arr	13.64	153		Pn	11 15 13.5	-1.7
WRAB	Tennant Creek	13.77	153		Pn	11 15 15.3	-1.5
WRA	Warramunga Arr	13.77	153	P	Pn	11 15 14.4	-2.4
	13nm,0.3s,baz=325,slow=14,SNR=619						
WRA				S	Sn	11 17 41.5	-8.3
	20nm,0.3s,baz=324,slow=24,SNR=15						
WB2	Warramunga Arr	13.78	153		Pn	11 15 15.2	-1.7
JAY	Jayapura	13.79	69	P	Pn	11 15 16.8	-0.3
	0.8nm,0.3s,baz=252,slow=11,SNR=3.4						
JAY	Jayapura	13.79	69	P	P	11 15 21.1	+0.9
	402nm32nm,1.3s						
DDMP	Don Marcelino,	13.81	351	eP	P	11 15 20.8	+0.4
DAV	Davao City (W)	14.77	351	LR	LR	11 21 10.9	
	comp=Z,156nm,20.7s,baz=42,slow=37						
KCP	Kidapawan	14.80	349⇓	eP	Pn	11 15 30.1	+0.4
BUKP	Musuan	15.65	350	eP	P	11 15 42.4	+1.5
PSA00	Pilbara Seismi	15.86	208	P	Pn	11 15 42.1	-0.6
PWJI	Pagerwojo	15.88	268	P	Pn	11 15 42.5	-0.6
	30nm,1.6s						
COEN	Coen	16.32	114	P	Pn	11 15 48.7	+0.3
	baz=16,SNR=25						
COEN	Coen	16.32	114	P	P	11 15 48.0	-0.2
COEN				IAmb	IAmb	11 16 06.8	
	comp=Z,31nm,0.8s						
PCJI	Pacitan	16.51	267	P	Pn	11 15 52.1	+1.5
	comp=Z,78nm,0.5s						
SPMM	Sapulut	16.70	317	P	Pn	11 15 57.0	+4.0
WOJI	Wonogiri, Jawa	16.76	268	P	P	11 15 53.4	+0.4
	comp=Z,18nm,0.7s						
AS31	Alice Springs	16.98	161	P	Pn	11 15 56.7	+0.5
AS31				IAmb	IAmb	11 16 14.4	
	comp=Z,19nm,0.5s						
ASAR	Alice Springs	16.98	161	P	Pn	11 15 57.1	+0.9
	comp=Z,3.7nm,0.3s,baz=336,slow=11,SNR=283						
ASAR				S	S	11 18 57.7	-6.4
	comp=Z,8.2nm,0.3s,baz=326,slow=18,SNR=13						
UGM	Wanagama	17.15	268	P	P	11 15 57.4	0.0
QIS	Mount Isa	17.18	140	P	Pn	11 16 00.0	+1.4
	baz=17,SNR=12						
WRKA	Warakurna	17.32	179	P	Pn	11 16 01.1	+0.8
	baz=18,SNR=111						
KKM	Kota Kinabalu	17.86	319	P	Pn	11 16 06.1	-0.7
MSLP	Maasin	17.89	350	eP	Pn	11 16 08.0	+0.9
CNOP	Candoni, Negro	18.10	343	eP	P	11 16 08.2	+0.5
SBUM	Sibu	18.52	302	P	Pn	11 16 14.4	-0.1
SBUM				IAmb	IAmb	11 16 16.2	
	comp=Z,56nm,0.8s						
SBUM	Sibu	18.52	302	P	Pn	11 16 16.0	+1.5
BATP	Bataraza	19.14	328	eP	Pn	11 16 20.4	-1.3
MTSU	Mount Surprise	19.14	125	P	Pn	11 16 21.3	-0.5
	baz=19,SNR=41						
PMG	Port Moresby	19.20	97	P	P	11 16 20.5	+0.8
KSM	Kuching	19.68	297	P	P	11 16 25.2	+0.3
KSM	Kuching	19.68	297	P	P	11 16 26.0	+1.1
CISI	Cisompet, Garu	19.84	269	P	P	11 16 24.0	-2.7
	comp=Z,5μmcomp=Z,101nm,0.7s						
CISI	Cisompet, Garu	19.84	269	P	P	11 16 23.6	-3.1
GIRL	Giralia	19.85	220	P	Pn	11 16 29.4	-0.7
	baz=20,SNR=20						
GIRL	Giralia	19.85	220	P	Pn	11 16 29.0	-1.1
LEM	Lembang	20.07	271	P	P	11 16 28.4	-0.9
	comp=Z,7.0nm,0.3s,baz=52,slow=12,SNR=4.5						
ENPP	El Nido	20.50	336	eP	P	11 16 34.9	+1.3
CNJI	Cibinong	20.53	270	P	P	11 16 32.9	-1.1
	comp=Z,1μmcomp=Z,197nm,0.8s						
MEEK	Meekatharra	20.84	204	P	P	11 16 38.6	+1.4
	baz=21,SNR=30						
SJMP	San Jose	21.05	341	eP	P	11 16 41.3	+1.8
PVCP	Virac	21.40	350	eP	P	11 16 42.9	-0.4
CTA	Charters Tower	21.72	127	P	P	11 16 47.6	+0.9
	comp=Z,6.8nm,0.9s,baz=297,slow=13,SNR=5.7						
CTA				LR	LR	11 26 16.8	
	comp=Z,250nm,18.6s,baz=269,slow=39						
CTAO	Charters Tower	21.72	127	P	P	11 16 46.9	+0.2
XMIS	Christmas Isla	22.08	261	P	P	11 16 49.0	-1.5
LQP	Lukban	22.48	344	eP	P	11 16 54.5	+0.1
LUBP	Lubang	22.52	340	eP	P	11 16 54.8	+0.3
MDSI	Maura Dua	23.73	276	P	P	11 17 03.9	-1.7
	comp=Z,17nm,1.4s						
MORW	Morawa	24.05	206	P	P	11 17 10.7	+2.3
	baz=24,SNR=15						
MORW	Morawa	24.05	206	P	P	11 17 08.7	+0.3
MORW				IAmb	IAmb	11 17 15.6	
	comp=Z,15nm,0.8s						
KMBL	Kambalda	24.26	192	P	P	11 17 12.1	+1.8
	baz=24,SNR=6.5						
KRVT	Keravat (AS076	24.28	84	LR	LR	11 26 42.6	
	comp=Z,88nm,20.6s,baz=322,slow=36						
SMPP	San Manuel, Pa	24.66	343	eP	P	11 17 13.7	-0.4
BLDU	Ballidu	25.13	203	P	P	11 17 20.6	+2.5
	baz=25,SNR=7.5						
MYKOM	Kota Tinggi	25.69	290	P	P	11 17 23.4	0.0
MYKOM	Kota Tinggi	25.69	290	P	P	11 17 24.0	+0.6
APYP	Conner	26.15	346	eP	P	11 17 25.3	-2.1
BBOO	Buckleboo	26.19	164	P	P	11 17 30.1	+2.4
	baz=26,SNR=12						
BBOO	Buckleboo	26.19	164	P	P	11 17 29.0	+1.2
NWAO	Narrogin (SRO)	27.02	200	P	P	11 17 36.6	+1.4
	comp=Z,2.6nm,0.3s,baz=183,slow=18,SNR=1.4						
NWAO	Narrogin (SRO)	27.02	200	P	P	11 17 36.0	+0.9
NWAO				IAmb	IAmb	11 17 54.6	
	comp=Z,18nm,1.1s						
STKA	Stephens Creek	27.32	154	P	P	11 17 40.1	+2.3
	baz=28,SNR=8.6						
STKA	Stephens Creek	27.32	154	P	P	11 17 39.5	+1.7
	comp=Z,1.3nm,0.4s,baz=190,slow=19,SNR=2.1						
STKA	Stephens Creek	27.32	154	P	P	11 17 39.3	+1.5
DLV	T Lat	27.35	315	P	P	11 17 38.0	-0.5
DLV				IAmb	IAmb	11 17 42.3	
	comp=Z,14nm,0.9s						
HTT	Hallett	27.65	160	P	P	11 17 44.5	+3.7
	baz=28,SNR=6.9						
BKNI	Bangkinang	27.86	285	P	P	11 17 43.0	+0.2
CMSA	Cobar Meteorol	29.04	147	P	P	11 17 55.8	+2.8
	baz=29,SNR=12						
IPM	Ipoh	29.33	293	P	P	11 17 55.5	-0.3
IPM	Ipoh	29.33	293	P	P	11 17 56.0	+0.2
KULM	Kulim	30.00	295	P	P	11 18 01.2	-0.6
KULM	Kulim	30.00	295	P	P	11 18 02.0	+0.2
RPSI	Rantau Prapat	30.61	289	P	P	11 18 06.6	-0.5
PSI	Prapat	30.65	289	P	P	11 18 06.3	-1.3
	comp=Z,149nm,0.9s,baz=179,slow=3.8,SNR=71						
GSI	Gunungsitoli	31.46	285	P	P	11 18 16.8	+2.2
	comp=Z,98nm,0.8s						
GSI	Gunungsitoli	31.46	285	P	P	11 18 13.8	-0.8
GSI				IAmb	IAmb	11 18 20.6	
	comp=Z,19nm,0.6s						
TPUB	Ta-pu	31.54	347	P	P	11 18 13.4	-1.7
TPUB				IAmb	IAmb	11 18 16.7	
	comp=Z,22nm,0.8s						
HNR	Honiara	31.80	96	LR	LR	11 31 26.2	
	comp=Z,64nm,19.4s,baz=338,slow=36						
QIZ	Qiongzhong	31.88	326	P	P	11 18 17.6	-0.6
QIZ				IAmb	IAmb	11 18 18.5	
	comp=Z,19nm,1.0s						
KCSI	Kotacane, Aceh	31.97	289	P	P	11 18 19.2	+0.1
	comp=Z,25nm,0.6s						
YOJ	Yonaguni jima	32.24	352	P	P	11 18 20.8	-0.5
TPTI		32.44	288	P	P	11 18 25.4	+2.2
	comp=Z,16nm,0.9s						
YHNB	Yeheng	32.72	349	P	P	11 18 24.3	-1.1
YHNB				IAmb	IAmb	11 18 25.2	
	comp=Z,18nm,0.9s						
LHMI	Lhok Sumawe	33.36	292	P	P	11 18 30.4	-0.7
MLSI	Meulaboh, Aceh	33.51	290	P	P	11 18 31.9	-0.6
	comp=Z,9μmcomp=Z,4μmcomp=Z,208nm,1.0s						
JOW	Kunigami	34.26	1	P	P	11 18 37.6	-1.1
	comp=Z,2.9nm,0.7s,baz=154,slow=11,SNR=9.9						
JOW	Kunigami	34.26	1	P	P	11 18 38.3	-0.4
JOW				IAmb	IAmb	11 18 40.7	
	comp=Z,21nm,0.8s						
SLVN	Son La	37.15	321	P	P	11 19 03.7	+0.1
SLVN				IAmb	IAmb	11 19 05.5	
	comp=Z,12nm,0.9s						
CM31	Chiang Mai Arr	38.53	313	P	P	11 19 14.6	-0.4

CM31 IAmb IAmb 11 19 19.6
comp=Z,15nm,0.6s
CMAR Chiang Mai Arr 38.53 313 P **P** **11 19 14.7 -0.4**
comp=Z,8.8nm,0.7s,baz=140,slow=6.7,SNR=39
CMAR PcP **PcP** **11 21 25.4 +0.9**
comp=Z,6.3nm,0.7s,baz=162,slow=2.7,SNR=16
CMAR ScP **ScP** **11 24 57.4 +0.1**
comp=Z,0.5nm,0.3s,baz=153,slow=3.7,SNR=4.6
CMAR LR LR 11 36 37.7
comp=Z,37nm,20.1s,baz=301,slow=38
CHTO Chiang Mai 38.76 313 P **P** **11 19 16.7 -0.3**
CHTO IAmb IAmb 11 19 21.5
comp=Z,11nm,0.7s
GYA Guiyang 39.63 329⇑ *iP* P **11 19 24.1 -0.1**
GYA pP pwP 11 20 05.5 +0.9
GYA PP **PnPn** **11 21 01.3 -2.3**
GYA PcP **PcP** **11 21 28.9 +0.9**
GYA S **S** **11 25 18.0 +2.8**
GYA SS **SS** **11 28 11.3 -6.3**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,100nm,5.1s
DZM Mont Dzumac 39.85 115 P **P** **11 19 27.5 +1.4**
comp=Z,5.3nm,0.9s,baz=332,slow=18,SNR=8.4
DZM Mont Dzumac 39.85 115 P **P** **11 19 27.8 +1.7**
WHN Wuhan 40.10 342 P **P** **11 19 28.6 +0.7**
WHN pmax pmax
comp=Z,84nm,0.9s
NJ2 Nanjing 40.38 348 *eP* **P** **11 19 30.1 0.0**
NJ2 pmax pmax
comp=Z,23nm,0.6s
JNU Nakatsue 40.63 4 P **P** **11 19 29.9 -2.4**
comp=Z,11nm,0.7s,baz=18,slow=0.9,SNR=9.8
JNU Nakatsue 40.63 4 P **P** **11 19 31.7 -0.5**
KMI Kunming 40.70 324 P **P** **11 19 34.5 +1.3**
KMI pmax pmax
comp=Z,35nm,0.7s
ENH Enshi 41.60 336 P **P** **11 19 39.7 -0.5**
ENH IAmb IAmb 11 19 40.5
comp=Z,13nm,0.7s
CD2 Chengdu 44.73 330 *eP* **P** **11 20 05.0 -0.3**
KSRS Korea Array 44.85 0 P **P** **11 20 05.8 -0.3**
comp=Z,8.9nm,0.6s,baz=179,slow=9.5,SNR=36
KSRS PcP **PcP** **11 21 44.0 -1.0**
comp=Z,2.5nm,0.8s,baz=181,slow=3.2,SNR=7.2
KSRS ScP **ScP** **11 25 21.7 -0.3**
comp=Z,1.2nm,1.0s,baz=187,slow=35,SNR=2.0
KS19 Wonju Array Si 44.90 0 P **P** **11 20 07.0 +0.5**
KS19 IAmb IAmb 11 20 08.4
comp=Z,18nm,0.7s
MAJO Matsushiro 45.01 12 P **P** **11 20 05.9 -1.5**
MAT Matsushiro 45.01 12 P **P** **11 20 05.6 -1.8**
MJAR Matsushiro Arr 45.01 12 P **P** **11 20 05.1 -2.2**
comp=Z,2.1nm,0.5s,baz=189,slow=9.4,SNR=8.8
MJAR PcP **PcP** **11 21 44.9 -0.7**
comp=Z,2.4nm,0.8s,baz=192,slow=4.5,SNR=5.4
MJAR ScP **ScP** **11 25 21.6 -1.1**
comp=Z,1.8nm,0.8s,baz=185,slow=6.0,SNR=5.5
XAN Xi'an 45.15 338 P **P** **11 20 07.4 -1.2**
XAN pmax pmax
comp=Z,23nm,0.7s
XAN pmax pmax
comp=Z,87nm,4.3s
XAN Xi'an 45.15 338 P **P** **11 20 07.8 -0.8**
XAN IAmb IAmb 11 20 08.2
comp=Z,18nm,0.6s
SHL Shillong 48.07 315 P **P** **11 20 31.0 -0.7**
SHL IAmb IAmb 11 20 34.7
comp=Z,15nm,0.6s
SHL PcP **PcP** **11 21 56.8 -0.2**
BJT Baijiatuau 48.62 348 P **P** **11 20 34.6 -0.7**
BJT IAmb IAmb 11 20 35.0
comp=Z,18nm,1.2s
BJI Beijing 48.64 348 P **P** **11 20 34.4 -1.1**
BJI pmax pmax
comp=Z,13nm,1.3s
BJI LR LR
comp=Z,68nm,5.0s
BJI LR LR
comp=Z,110nm,14.2s
LZH Lanzhou 48.99 334 *eP* **P** **11 20 38.7 +0.2**
LZH pmax pmax
comp=Z,51nm,1.1s
LZH pmax pmax
comp=Z,210nm,4.8s
HHC Hu-ho-hao-te 50.51 344 *eP* **P** **11 20 52.3 +2.5**
HHC pP sP 11 21 37.4 -6.0
HHC pmax pmax
comp=Z,10.0nm,0.8s
HHC pmax pmax
comp=Z,66nm,4.1s
HHC LR LR
comp=Z,160nm,20.4s
HHC LR LR
comp=Z,88nm,18.7s
HHC LR LR
comp=Z,82nm,11.2s
LSA Lhasa 51.20 318 P **P** **11 20 56.4 +0.8**
LSA Lhasa 51.20 318 P **P** **11 20 55.5 0.0**
LSA IAmb IAmb 11 20 57.6
comp=Z,19nm,0.6s
USA0B Ussuriysk Arra 51.72 4 P **P** **11 20 58.0 -0.6**
USRK Ussuriysk Ar. 51.72 4 P **P** **11 20 57.3 -1.3**
comp=Z,4.1nm,0.5s,baz=189,slow=7.6,SNR=18
MDJ Mudanjiang 52.03 2 P **P** **11 21 01.2 +0.3**
MDJ pmax pmax
comp=Z,13nm,1.9s
ODAN Odare 52.07 313 *eP* **P** **11 21 01.2 -0.6**
comp=Z,46nm,0.6s
RPZ Rata Peaks 52.08 141 P **P** **11 21 04.1 +2.8**
comp=Z,13nm,0.9s,baz=301,slow=16,SNR=2.6
RAMN Ramite 52.70 312 *eP* **P** **11 21 06.2 -0.3**
comp=Z,101nm,0.7s
TUWZ Tuamarina 52.86 137 P **P** **11 21 09.0 +1.9**
KHZ Kahutara 53.04 138 P **P** **11 21 10.7 +2.3**
KHZ IAmb IAmb 11 21 20.8
comp=Z,15nm,1.1s
ASAJ Asahikawa 53.21 13 P **P** **11 21 09.1 -0.5**
comp=Z,3.9nm,0.6s,baz=248,slow=12,SNR=8.4
JIRN Jiri 53.41 313 *eP* **P** **11 21 11.2 -0.6**
comp=Z,57nm,0.7s
GTA Gaotai 53.52 333 P **P** **11 21 12.2 +0.1**
GTA pP pwP 11 21 52.0 -2.4
GTA PcP **PcP** **11 22 17.7 +0.9**
GTA pmax pmax
comp=Z,29nm,0.7s
GTA pmax pmax
comp=Z,86nm,5.0s
GTA LR LR
comp=Z,130nm,18.9s
GTA LR LR
comp=Z,120nm,15.8s
GTA LR LR
comp=Z,160nm,15.1s
BKZ Black Stump Fm 53.70 134 P **P** **11 21 15.2 +1.7**
GUN Gumba 53.77 313 *eP* **P** **11 21 13.9 -0.5**
comp=Z,72nm,0.7s
PKI Pulchoki 53.93 312 *eP* **P** **11 21 14.6 -0.9**
comp=Z,25nm,0.4s
PKIN Phulchoki 53.94 312 *eP* **P** **11 21 14.6 -0.9**
comp=Z,25nm,0.4s
KKN Kakani 54.14 312 *eP* **P** **11 21 16.2 -0.8**
comp=Z,38nm,0.6s
DMN Daman 54.17 312 *eP* **P** **11 21 16.7 -0.5**
comp=Z,41nm,0.6s
HYB Hyderabad 54.68 298 *iP* **P** **11 21 20.0 -0.8**
comp=Z,60nm,1.0s
GKN Gorkha 54.73 312 *eP* **P** **11 21 20.7 -0.4**
comp=Z,70nm,0.3s
KOLN Koldanda 55.37 311 *eP* **P** **11 21 25.3 -0.5**
comp=Z,141nm,0.8s
DANN Dangsing 55.57 312 *eP* **P** **11 21 26.7 -0.6**
comp=Z,81nm,0.6s
PYUN Piuthan 56.01 311 *eP* **P** **11 21 29.9 -0.4**
comp=Z,109nm,0.6s
KLR Kul'dur 56.72 3 P **P** **11 21 34.5 -0.2**
comp=Z,0.6nm,0.3s,baz=194,slow=9.5,SNR=3.0
KLR PcP **PcP** **11 22 27.9 -0.8**
comp=Z,2.8nm,0.9s,baz=252,slow=3.3,SNR=5.5
ULN Ulaanbaatar 58.23 344 P **P** **11 21 45.8 +0.3**
ULN IAmb IAmb 11 21 46.7
comp=Z,14nm,0.9s
SONM Songino Array 58.39 343 P **P** **11 21 46.1 -0.4**
comp=Z,7.7nm,0.7s,baz=145,slow=3.6,SNR=7.6
CASY Casey 59.77 188 P **P** **11 21 57.8 +2.3**
CASY IAmb IAmb 11 22 03.6
comp=Z,9.5nm,0.8s
WMQ Urumqi 62.77 328 *eP* **P** **11 22 17.6 +1.4**
WMQ pmax pmax
comp=Z,18nm,1.1s
WMQ pmax pmax
comp=Z,24nm,3.7s
WMQ LR LR
comp=Z,980nm,29.2s
WMQ LR LR
comp=Z,1μm,29.2s
WMQ LR LR
comp=Z,170nm,29.1s
PEA0B Petropavlovsk- 65.61 19 P **P** **11 22 34.4 0.0**
PEA0B IAmb IAmb 11 22 47.3
comp=Z,26nm,1.4s
PETK Petropavlovsk- 65.61 19 P **P** **11 22 34.0 -0.4**
comp=Z,4.3nm,0.6s,baz=186,slow=4.7,SNR=30
PETK PKiKP **PKiKP** **11 29 08.8 +1.6**
comp=Z,0.5nm,0.4s,baz=235,slow=10.0,SNR=4.4
NIL Nilore 66.02 312 P **P** **11 22 37.0 -0.5**
KSH Kashi 67.05 319 P **P** **11 22 44.9 +0.9**
KSH PP **PP** **11 25 15.7 +1.6**
KSH S **S** **11 31 20.4 -4.4**
KSH SS **SS** **11 35 44.7 -2.4**
KSH pmax pmax
comp=Z,32nm,0.5s
KSH pmax pmax
comp=Z,98nm,4.4s
KSH LR LR
comp=Z,130nm,15.7s
KSH LR LR
comp=Z,170nm,8.4s
KSH LR LR
comp=Z,220nm,10.9s
MK31 Makanchi Array 67.59 328 P **P** **11 22 47.0 -0.2**
MKAR Makanchi Array 67.59 328 P **P** **11 22 46.3 -0.9**
comp=Z,8.2nm,0.5s,baz=127,slow=8.0,SNR=99
MAKZ Makanchi 67.77 328 P **P** **11 22 47.6 -0.7**
NRN Naryn 68.06 320 P **P** **11 22 50.1 -0.4**
KZA Kyzart 68.88 321 P **P** **11 22 55.3 -0.4**
SNR=8.3
TKM2 Tokmak 2 69.12 322 P **P** **11 22 57.4 +0.4**
SNR=7.1
UCH Uchtor 69.42 320 P **P** **11 22 59.8 +0.6**
SNR=8.4
MA2 Magadan 69.45 12 P **P** **11 22 57.4 -1.0**
comp=Z,4.7nm,0.9s,baz=187,slow=13,SNR=2.7
MA2 Magadan 69.45 12 P **P** **11 22 57.8 -0.6**
YAK Yakutsk 69.47 1 P **P** **11 22 57.8 -0.6**
comp=Z,6.7nm,0.3s,baz=88,slow=0.7,SNR=9.1
YAK Yakutsk 69.47 1 P **P** **11 22 58.1 -0.3**
KBL Kabul 69.54 311 P **P** **11 22 59.5 -0.2**
KBL IAmb IAmb 11 23 01.2
comp=Z,15nm,0.7s
AAK Ala-Archa 69.65 321 P **P** **11 22 59.8 -0.4**
comp=Z,5.6nm,0.6s,baz=100,slow=5.7,SNR=22
AAK Ala-Archa 69.65 321 P **P** **11 23 00.4 +0.2**
SNR=10
AAK Ala-Archa 69.65 321 *i* P **P** **11 23 00.4 +0.2**
SNR=13
AAK Ala-Archa 69.65 321 P **P** **11 23 00.2 0.0**
AML Almayashu 69.89 320 P **P** **11 23 02.5 +0.5**
SNR=15
ARSB Arslanbob 69.94 319 IAmb IAmb 11 23 03.8
comp=Z,30nm,1.4s
USP Ospenovka 69.98 321 P **P** **11 23 02.0 -0.1**
SNR=11
EKS2 Erkin-Say 70.11 321 P **P** **11 23 03.8 +0.9**
SNR=6.0
ZAA0 Zalesovo Array 71.21 335 P **P** **11 23 08.3 -0.9**
ZAA0 IAmb IAmb 11 23 09.0
comp=Z,15nm,0.7s
ZALV Zalesovo Beam 71.21 335 P **P** **11 23 07.8 -1.4**
comp=Z,19nm,0.7s,baz=126,slow=4.5,SNR=54
KURBB Kurchatov Arra 71.94 329 P **P** **11 23 12.8 -0.8**
comp=Z,22nm,0.8s,baz=134,slow=5.1,SNR=252
KURK Kurchatov 71.95 330 P **P** **11 23 13.3 -0.3**
VNDA Vanda 72.09 173 P **P** **11 23 15.3 +1.2**
comp=Z,2.5nm,0.5s,baz=318,slow=9.0,SNR=25
VNDA Vanda 72.09 173 P **P** **11 23 15.7 +1.6**
KK31 Karatay Array 72.41 320 P **P** **11 23 16.3 -0.3**
SEY Seymchan 72.83 11 P **P** **11 23 18.4 -0.3**
comp=Z,2.5nm,0.4s,baz=206,slow=4.0,SNR=23
SEY LR LR 11 54 17.8
comp=Z,969nm,21.6s,baz=329,slow=35
MAW Mawson 73.58 201 P **P** **11 23 25.6 +2.5**
baz=74,SNR=6.9
MAW Mawson 73.58 201 P **P** **11 23 23.8 +0.7**
comp=Z,4.3nm,0.6s,baz=74,slow=5.7,SNR=13
MAW Mawson 73.58 201 P **P** **11 23 25.1 +2.1**
HRA Herat 74.65 309 P **P** **11 23 30.1 -0.1**
HRA IAmb IAmb 11 23 31.5
comp=Z,17nm,0.9s
SOCY Socotra 76.00 285 P **P** **11 23 37.3 -0.7**
UOSS Minazif 76.80 298 *i* P **P** **11 23 41.6 -0.7**
SNR=6.3
UOSS Minazif 76.80 298 P **P** **11 23 41.5 -0.8**
UOSS IAmb IAmb 11 23 42.4
comp=Z,15nm,1.0s
MDH Madha 76.81 298 P **P** **11 23 40.9 -1.4**
HATD Hatta, Dubai 76.84 298 *i* P **P** **11 23 42.1 -0.4**
SNR=8.5
ASHO Ashiyiah 76.86 297 *i* P **P** **11 23 42.2 -0.5**
SNR=9.1
MSFE Esma-Masafi 76.95 298 *i* P **P** **11 23 43.3 +0.1**
SNR=9.3
BANOM Banah 76.97 299 *i* P **P** **11 23 43.1 -0.2**
SNR=8.1
ALNE Al Ain 76.98 297 *i* P **P** **11 23 42.9 -0.4**
SNR=6.0
SHME Shamm 77.14 299 P **P** **11 23 44.2 0.0**
BVAR Borovoye Array 77.46 329 P **P** **11 23 44.7 -0.6**
comp=Z,4.5nm,0.4s,baz=125,slow=7.4,SNR=32
BRVK Borovoye 77.53 329 P **P** **11 23 45.0 -0.7**
BRVK IAmb IAmb 11 23 46.5
comp=Z,33nm,1.4s
GEYT Alibeck 78.99 311 P **P** **11 23 53.5 -0.6**
comp=Z,7.4nm,0.8s,baz=153,slow=5.0,SNR=14
GYA0B ALIBECK ARRAY 78.99 311 P **P** **11 23 54.2 +0.1**
GYA0B IAmb IAmb 11 23 55.1
comp=Z,11nm,0.8s
TIXI Tiksi 79.12 0 P **P** **11 23 52.8 -1.2**
comp=Z,8.6nm,0.5s,baz=169,slow=4.6,SNR=16
TIXI Tiksi 79.12 0 P **P** **11 23 53.2 -0.8**
TIXI IAmb IAmb 11 23 54.3
comp=Z,11nm,0.5s
NRIK Noril'sk 81.66 347 P **P** **11 24 07.1 -0.6**
comp=Z,11nm,0.9s,baz=138,slow=5.4,SNR=13
SYO Syowa Base 82.30 201⇑ *eP* **P** **11 24 11.4 +0.3**
SYO Syowa Base 82.30 201⇑ *ePcP* **PcP** **11 24 17.0 +1.1**
QSPA South Pole Qui 82.35 180 P **P** **11 24 12.3 +0.7**
comp=Z,18nm,0.7s,baz=318,slow=1.3,SNR=124
QSPA South Pole Qui 82.35 180 P **P** **11 24 13.1 +1.5**
QSPA IAmb IAmb 11 24 13.9
comp=Z,18nm,0.7s
ARU Arti 85.11 329 P **P** **11 24 24.8 -0.7**
ARU IAmb IAmb 11 24 26.4
comp=Z,26nm,1.1s
RAYN Ar Rayn 86.04 294 P **P** **11 24 30.4 -0.6**
RAYN IAmb IAmb 11 24 31.5
comp=Z,17nm,0.7s
TBLG Delisi 89.90 312 P **P** **11 24 48.7 -0.2**
KMBO Kilima Mbogo 90.43 269 P **P** **11 24 52.2 0.0**
comp=Z,1.4nm,0.3s,baz=100,slow=22,SNR=1.7
AKH Akhalkalaki 90.77 312 P **P** **11 24 53.4 +0.3**
KDAK Kodiak Island 90.88 32 P **P** **11 24 52.5 -0.5**
comp=Z,2.2nm,0.7s,baz=115,slow=21,SNR=2.1
KDAK Kodiak Island 90.88 32 P **P** **11 24 53.3 +0.3**
KBZ Khabaz 91.57 314 P **P** **11 24 55.5 -1.0**
comp=Z,3.7nm,0.8s,baz=170,slow=1.0,SNR=13
MLY Manley 93.25 25 P **P** **11 25 03.6 -0.3**
KNK Knik Glacier 93.64 29 IAmb IAmb 11 25 06.7
comp=Z,4.7nm,0.8s
SML Sawmill 93.76 28 IAmb IAmb 11 25 07.0
comp=Z,6.4nm,0.7s
RND Reindeer 93.78 27 IAmb IAmb 11 25 05.6
comp=Z,7.3nm,0.9s
SCM Sheep Creek Mo 94.23 28 IAmb IAmb 11 25 08.7
comp=Z,9.2nm,1.0s
DHY Denali Highway 94.39 27 IAmb IAmb 11 25 09.3
comp=Z,5.1nm,1.1s
SNAA Sanae 94.55 194 P **P** **11 25 11.8 +2.0**
SNAA Sanae 94.55 194 P **P** **11 25 11.3 +1.5**
SNAA IAmb IAmb 11 25 12.7
comp=Z,4.3nm,0.8s
ILAR Eielson Array 94.83 25 P **P** **11 25 08.4 -2.6**
comp=Z,0.5nm,0.7s,baz=248,slow=5.3,SNR=7.3
ILAR PKKPbc **PKKPdf** **11 42 07.8 -1.3**
comp=Z,0.7nm,0.8s,baz=36,slow=2.3,SNR=8.3
VNA2 Neumayer--Watz 96.13 193 P **P** **11 25 16.9 0.0**
baz=119,slow=4.2
BOSA Boshof 97.29 240 P **P** **11 25 23.4 +0.2**
comp=Z,2.2nm,0.7s,baz=79,slow=4.9,SNR=4.7
BOSA Boshof 97.29 240 P Pdif 11 25 23.7 +0.3
BOSA IAmb IAmb 11 25 36.0
comp=Z,4.5nm,1.5s
BRTR Keskin Array B 98.04 309 P **P** **11 25 24.4 -2.0**
comp=Z,1.4nm,0.8s,baz=129,slow=4.9,SNR=5.1
INK Inuvik 100.24 22 P **Pdif** **11 25 34.0 -1.4**
comp=Z,0.8nm,1.0s,baz=318,slow=5.1,SNR=4.5
INK Inuvik 100.24 22 **Pdif** **11 25 34.8 -0.5**
AKASG Malin Array Be 101.31 320 P **Pdif** **11 25 39.2 -1.2**
comp=Z,1.2nm,0.7s,baz=74,slow=4.0,SNR=4.5
ARCES ARCESS Array B 101.41 339 P **Pdif** **11 25 38.8 -1.8**
comp=Z,3.4nm,0.8s,baz=83,slow=4.2,SNR=7.6
ARCES PKiKP **PKiKP** **11 30 03.9 +0.1**
comp=Z,0.9nm,0.6s,baz=108,slow=1.5,SNR=11
FINES FINESS Array B 102.28 331 PKiKP **PKiKP** **11 30 05.4 -0.1**
comp=Z,1.7nm,0.9s,baz=116,slow=4.4,SNR=3.4
RES Resolute Bay 108.70 11 PKiKP **PKiKP** **11 30 16.4 -0.6**
comp=Z,0.5nm,0.5s,baz=225,slow=6.4,SNR=5.0
YKA Yellowknife Ar 109.25 26 PKiKP **PKiKP** **11 30 18.1 -0.3**
comp=Z,0.6nm,0.6s,baz=296,slow=1.8,SNR=4.3
YKA PKKPbc **PKKPbc** **11 41 25.6 -1.9**
comp=Z,0.5nm,0.5s,baz=113,slow=3.6,SNR=9.0
GERES GERESS Array B 111.51 320 PKiKP **PKiKP** **11 30 23.1 -0.1**
comp=Z,0.7nm,0.5s,baz=52,slow=2.2,SNR=7.6
NVAR Mina Array Bea 113.37 51 PKiKP **PKiKP** **11 30 28.6 +1.3**
comp=Z,0.2nm,0.4s,baz=308,slow=3.6,SNR=3.5
ELK Elko 115.27 49 PKP **PKPdf** **11 30 31.7 +0.8**
comp=Z,0.5nm,0.3s,baz=12,slow=23,SNR=2.7
PFO Pinyon Flats O 115.56 56 PKP **PKiKP** **11 30 32.2 +0.7**
comp=Z,2.0nm,0.7s,baz=145,slow=1.3,SNR=4.3
PDAR Pinedale Array 118.86 45 PKP **PKiKP** **11 30 37.8 0.0**
comp=Z,0.8nm,0.7s,baz=28,slow=2.1,SNR=4.2
PDAR PKKPbc **PKKPab** **11 40 56.2 +0.4**
comp=Z,0.9nm,0.7s,baz=108,slow=8.3,SNR=8.3
ESDC Sonseca Array 126.42 314 PKP **PKPdf** **11 30 51.0 -1.1**
comp=Z,1.5nm,0.9s,baz=30,slow=4.6,SNR=6.8
MSTX Muleshoe 126.60 53 **PKPdf** **11 30 52.7 0.0**
TORD Torodi Ar. Sit 126.82 281 **PKPdf** **11 30 52.8 -0.6**
TORD Torodi Ar. Bea 126.82 281 PKP **PKPdf** **11 30 53.5 +0.1**
comp=Z,7.4nm,0.8s,baz=86,slow=2.0,SNR=29
TXAR Lajitas Array 127.09 59 PKP **PKiKP** **11 30 54.2 0.0**
comp=Z,1.6nm,0.9s,baz=229,slow=1.3,SNR=9.9
PLCA Paso Flores 128.98 162 PKP **PKiKP** **11 30 58.2 +0.5**
comp=Z,1.3nm,0.7s,baz=197,slow=1.6,SNR=4.3
PLCA Paso Flores 128.98 162 **PKiKP** **11 30 58.8 +1.0**
MDT Midelt 129.38 306 PKP **PKiKP** **11 30 59.0 +0.3**
comp=Z,2.4nm,0.7s,baz=266,slow=4.4,SNR=4.4
JCT Junction City 130.03 56 **PKiKP** **11 31 00.4 +0.4**
P38A Dawn 131.18 43 **PKiKP** **11 31 01.7 -0.3**
SCHQ Schefferville 131.48 11 PKP **PKiKP** **11 31 01.9 -0.3**
comp=Z,2.0nm,0.4s,baz=246,slow=16,SNR=4.3
SCHQ SKPbc **SKPbc** **11 34 11.1 -0.2**
comp=Z,9.6nm,1.0s,baz=13,slow=4.2,SNR=5.9
SCHQ Schefferville 131.48 11 **PKiKP** **11 31 02.0 -0.2**
U38A Gravette 132.07 47 **PKPdf** **11 31 02.9 0.0**
S39A Bolivar 132.25 45 **PKPdf** **11 31 03.4 +0.2**
DBIC Dimbokro 133.06 272 PKP **PKPdf** **11 31 05.7 +0.3**
comp=Z,4.0nm,0.6s,baz=90,slow=2.3,SNR=8.4
DBIC SKPbc **SKPbc** **11 34 16.7 -1.3**
comp=Z,7.2nm,1.1s,baz=283,slow=0.4,SNR=5.5
DBIC Dimbokro 133.06 272 **PKPdf** **11 31 05.8 +0.4**
U40A Yellville 133.21 46 **PKPdf** **11 31 05.0 -0.1**
T42A Van Buren 134.12 44 **PKPdf** **11 31 07.3 +0.6**
GO02 Mina Guanaco 143.25 153 **PKPdf** **11 31 23.1 -1.0**
TGUH Tegucigalpa,Un 144.97 76 **PKPdf** **11 31 27.4 +0.3**
PB06 IPOC Station P 145.37 151 **PKPab** **11 31 29.1 +1.0**
CPUP Villa Florida 145.87 172 PKPbc **PKPab** **11 31 30.7 +1.0**
comp=Z,12nm,0.8s,baz=170,slow=1.8,SNR=18
CPUP PP **PP** **11 34 53.8 +4.0**
comp=Z,2.4nm,0.8s,baz=149,slow=4.5,SNR=3.0
CPUP Villa Florida 145.87 172 **PKPab** **11 31 30.3 +0.6**
MATN Matagalpa 146.39 78 **PKPbc** **11 31 30.7 -0.3**
JTS Las Juntas de 147.52 83 **PKPbc** **11 31 35.0 +0.9**
PB08 IPOC Station P 147.74 149 **PKiKP** **11 31 36.9 0.0**
CBCY The Bluff, Cay 150.67 63 **PKiKP** **11 31 42.2 -0.2**
LPAZ La Paz 151.46 146 PKP **PKPdf** **11 31 39.2 +0.9**
comp=Z,6.5nm,0.7s,baz=208,slow=2.8,SNR=4.0
LPAZ PKPbc **PKiKP** **11 31 45.6 +0.6**
comp=Z,5.7nm,0.7s,baz=20,slow=3.6,SNR=21
LPAZ PKPab **PKPab** **11 31 54.9 +1.6**
comp=Z,15nm,0.6s,baz=146,slow=0.8,SNR=7.6
SDV Santo Domingo 161.68 85 **PKPdf** **11 31 50.8 -0.2**

PGC **02** *11:25:10.4±9.4, 49.37N×129.30W, h10km, ML3.2/44, MLSn3.3/44, Mw3.9/44, 200km southwest of Pt. Hardy, Bc Vancouver Island, Canada Region*
IDC **02** *11:25:11.6±1.2, 49.55N×129.01W, h0km, mb3.4/3, mb1 3.9/13, mb1mx3.7/61, mbtmp3.7/13, ML3.3/9, MS3.4/13, Ms1 3.4/13, ms1mx3.2/49, Error ellipse: s-maj=21.0km s-min=9.7km az=65.0*
NEIC **02** *11:25:16.0±1.3, 49.65N±0.04×128.60W±0.09, h10km±2km, mb4.2/88, Mwr3.9(OTT), Error ellipse: s-maj=9.7km s-min=6.4km az=272.0*
ISC 02 11:25:13.0±2.9, 49.56N±0.04×128.99W±0.06, h8km±20km, n442, σ1s26/410, mb4.3/10, MS3.6/6, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
BPBC	**Brooks Peninsu**	**0.99**	**53**	P		**Pb**	**11 25 32.0**	**-0.4**
BPBC	**Brooks Peninsu**	**0.99**	**53**			**Pb**	**11 25 32.0**	**-0.4**
HOLB	**Holberg**	**1.21**	**27**	Pn		**Pn**	**11 25 35.0**	**-1.2**
HOLB				Sn		**Sb**	**11 25 51.5**	**-0.5**
HOLB	**Holberg**	**1.21**	**27**			**Pn**	**11 25 35.0**	**-1.2**
HOLB				Sn		**Sb**	**11 25 51.5**	**-0.5**
EDB	**Eliza Dome**	**1.25**	**75**	Pn		**Pn**	**11 25 35.2**	**-1.5**
EDB	**Eliza Dome**	**1.25**	**75**	Pn		**Pn**	**11 25 35.2**	**-1.5**
PACB	**Port Alice, BC**	**1.30**	**47**	Pn		**Pn**	**11 25 36.1**	**-1.3**
PACB	**Port Alice, BC**	**1.30**	**47**	Pn		**Pn**	**11 25 36.1**	**-1.3**
MAYB	**Maynard**	**1.44**	**54**	Pn		**Pn**	**11 25 38.4**	**-1.1**
MAYB	**Maynard**	**1.44**	**54**	Pn		**Pn**	**11 25 38.4**	**-1.1**
PHC	**Port Hardy**	**1.52**	**41**	Pn		**Pn**	**11 25 39.7**	**-0.7**
PHC				Sn		**Sn**	**11 26 00.5**	**+0.1**
PHC	**Port Hardy**	**1.52**	**41**	Pn		**Pn**	**11 25 39.7**	**-0.7**
PHC				Sn		**Sn**	**11 26 00.5**	**+0.1**
NTKA	**Nootka**	**1.55**	**88**	Pn		**Pn**	**11 25 38.7**	**-2.1**
ETB	**Estevan Point**	**1.61**	**96**	Pn		Pn	11 25 39.3	-2.4
KEMF	**NEPTUNE Canada**	**1.62**	**183**	Pn		Pn	11 25 31.8	-10
NC89	**ODP889**	**1.67**	**122**	Pn		**Pn**	**11 25 40.9**	**-1.4**
NC89	**ODP889**	**1.67**	**122**	Pn		**Pn**	**11 25 40.9**	**-1.4**
TLCB	**Telegraph Cove**	**1.70**	**54**	Pn		**Pn**	**11 25 42.5**	**-0.5**
GDR	**Gold River**	**1.93**	**82**	Pn		**Pn**	**11 25 44.6**	**-1.5**
TOFB	**Tofino**	**2.06**	**100**	Pn		Pn	11 25 45.5	-2.3
SPLB	**Strathcona Par**	**2.19**	**80**	Pn		**Pn**	**11 25 49.0**	**-0.6**
BTB	**Buttle Lake**	**2.26**	**91**	Pn		**Pn**	**11 25 49.1**	**-1.7**
B012	**Ucluelet**	**2.35**	**104**	Pn		**Pn**	**11 25 50.1**	**-1.7**
OZB	**Mount Ozzard**	**2.37**	**103**	Pn		**Pn**	**11 25 50.5**	**-1.7**
CBB	**Campbell River**	**2.40**	**77**	Pn		**Pn**	**11 25 51.9**	**-0.6**
BFSB	**Bamfield**	**2.63**	**105**	Pn		**Pn**	**11 25 54.0**	**-1.7**
B928	**Bamfield**	**2.63**	**105**	Pn		Pn	11 25 53.3	-2.4
BBB	**Bella Bella**	**2.68**	**12**	Pn		**Pn**	**11 25 55.5**	**-0.9**
BBB	12nm,0.3s,baz=212,slow=13,SNR=72			LR		LR	11 26 24.4	
BBB	comp=Z,175nm,19.0s,baz=62,slow=27			Sn		**Sn**	**11 26 27.1**	**-1.9**
BBB	**Bella Bella**	**2.68**	**12**	Pn		**Pn**	**11 25 55.4**	**-1.1**
BBB				Sn		**Sn**	**11 26 27.2**	**-1.9**
BBB	**Bella Bella**	**2.68**	**12**			**Pn**	**11 25 55.8**	**-0.6**
BBB						**Sn**	**11 26 28.3**	**-0.8**
B927	**Port Alberni**	**2.75**	**96**	Pn		**Pn**	**11 25 55.6**	**-1.7**
MGB	**Mount Grey**	**2.87**	**100**	Pn		Pn	11 25 56.4	-2.7
GHNB	**Nanoose**	**3.11**	**93**	Pn		**Pn**	**11 26 01.4**	**-0.9**
OCP	**Olym-Cheeka Pk**	**3.14**	**112**	Pn		**Pn**	**11 26 00.9**	**-1.9**
BCBC	**Bella Coola**	**3.15**	**26**	Pn		**Pn**	**11 26 04.9**	**+2.2**
PFB	**Port Renfrew**	**3.15**	**107**	Pn		**Pn**	**11 26 00.8**	**-2.2**
YOUB	**Youbou, Lake C**	**3.17**	**100**	Pn		**Pn**	**11 26 01.1**	**-2.0**
B926	**Mesachie Lake**	**3.27**	**101**	Pn		**Pn**	**11 26 02.4**	**-2.2**
NLLB	**Nanaimo Lost L**	**3.29**	**94**	Pn		**Pn**	**11 26 03.9**	**-0.8**
SHB	**Sechelt**	**3.33**	**87**	Pn		**Pn**	**11 26 05.7**	**+0.3**
BNB	**Barry Inlet**	**3.48**	**331**	Pn		Pn	11 26 03.4	-4.1
BPCB	**Bare Point**	**3.52**	**98**	Pn		**Pn**	**11 26 07.3**	**-0.6**
LZB	**Mount Lazard**	**3.53**	**104**	Pn		**Pn**	**11 26 08.2**	**+0.1**
OBC	**Olympics--Boni**	**3.59**	**113**	Pn		**Pn**	**11 26 08.5**	**-0.5**

GOBB Galiano Island 3.64 98 Pn Pn 11 26 10.0 +0.4
BIB Bowen Island 3.71 90 Pn Pn 11 26 10.1 -0.5
B010 North Saanich 3.75 102 Pn Pn 11 26 10.8 -0.3
PGC Sidney 3.75 102 Pn Pn 11 26 10.1 -1.0
PGC Sidney 3.75 102 Pn 11 26 10.8 -0.3
B009 North Saanich 3.75 102 Pn Pn 11 26 10.9 -0.2
PA02 PA02 Ocean 3.75 102 Pn Pn 11 26 11.4 +0.3
B011 North Saanich 3.75 102 Pn Pn 11 26 10.9 -0.2
PA01 PA01 North 3.75 102 Pn Pn 11 26 11.3 +0.2
PA12 PA12 Sannich 3.75 102 Pn Pn 11 26 10.0 -1.1
PA04 PA04 Cage 3.75 102 Pn Pn 11 26 11.1 0.0
WPB Watts Point 3.76 86 Pn Pn 11 26 12.5 +1.3
STW Striped Peak 3.79 110 Pn Pn 11 26 10.5 -1.1
SNB Saturna Island 3.90 99 Pn Pn 11 26 12.3 -0.8
VGZ Gonzales 3.91 105 Pn Pn 11 26 09.5 -3.6
WSLR Whistler 3.97 80 Pn Pn 11 26 16.1 +1.9
NLWA Neilton Lookou 4.04 121 Pn 11 26 14.1 -1.0
NLWA Sn Sn 11 26 58.8 -3.8
MOBC Moresby Island 4.04 334 Pn Pn 11 26 16.0 +0.9
MOBC Moresby Island 4.04 334 Pn Pn 11 26 17.7 +2.6
BNAB Bonilla 4.07 346 Pn Pn 11 26 13.0 -2.5
BNAB Sn Sn 11 26 58.9 -4.3
MCW Mount Constitu 4.14 100 Pn Pn 11 26 16.7 +0.2
HNBB Haney 4.20 91 Pn Pn 11 26 17.8 +0.5
A04D Lummi Island 4.21 99 P Pn 11 26 16.6 -0.8
baz=281,SNR=15
A04D S Sn 11 27 06.5 -0.2
baz=281
DIB Dawson Inlet, 4.25 330 Pn Pn 11 26 13.1 -4.8
HDW Hoodsport 4.38 114 Pn Pn 11 26 19.2 -0.6
D03D Eldon 4.41 115 P Pn 11 26 19.7 -0.5
baz=296
D03D S Sn 11 27 09.7 -2.1
baz=296
VDB Vedder Mountai 4.54 94 Pn Pn 11 26 23.0 +1.1
UBRB Upper Baezaeko 4.54 41 Pn Pn 11 26 24.3 +2.2
GNW Green Mountain 4.56 114 Pn Pn 11 26 23.7 +1.5
CMW Cultus Mountai 4.67 102 Pn Pn 11 26 25.8 +2.0
LLLB Lillooet 4.70 74 Pn Pn 11 26 24.7 +0.6
LLLB Lillooet 4.70 74 Pn 11 26 24.6 +0.6
B05A Bryant 4.73 103 P Pn 11 26 24.0 -0.5
baz=286,SNR=20
B05A S Sn 11 27 19.3 -0.2
baz=286
D04E Lakebay 4.78 118 P Pn 11 26 25.7 +0.5
baz=299
D04E S Sn 11 27 22.8 +2.0
baz=299
RUBB Prince Rupert 4.83 351 Pn Pn 11 26 25.1 -0.9
RUBB Sn Sn 11 27 19.9 -2.1
HOPB Hope 4.94 89 Pn Pn 11 26 28.9 +1.5
B06A Marblemount 5.05 99 Pn 11 26 28.0 -0.9
D05A Enumclaw 5.24 114 Pn Pn 11 26 32.4 +0.9
E04D Cinebar 5.25 123 P Pn 11 26 32.1 +0.4
baz=304
E04D S Sn 11 27 31.4 -1.0
baz=304
GPW Glacier Peak 5.38 103 Pn Pn 11 26 34.1 +0.3
FMW Mount Fremont 5.55 116 Pn Pn 11 26 35.4 -0.7
LON Longmire 5.57 118 Pn Pn 11 26 36.4 +0.2
LON Longmire 5.57 118 Pn 11 26 36.0 -0.2
F04A Amboy 5.73 127 Pn 11 26 39.5 +1.2
G03D McMinnville, O 5.84 136 P Pn 11 26 39.7 0.0
baz=318
LTY Liberty 6.00 109 Pn Pn 11 26 43.6 +1.5
LTY Sn Sn 11 27 50.5 -0.5
LTY Liberty 6.00 109 Pn 11 26 42.2 +0.2
PNT Penticton 6.12 89 Pn Pn 11 26 44.0 +0.4
F05D White Salmon 6.27 123 P Pn 11 26 46.4 +0.7
baz=306
B08A Colville Reser 6.47 97 Pn Pn 11 26 49.5 +1.0
B08A Colville Reser 6.47 97 Pn 11 26 48.2 -0.3
H04D Lebanon 6.61 137 P Pn 11 26 49.5 -0.9
baz=320
BLBC Blue River 6.66 64 P Pn 11 26 51.5 +0.2
H04A Detroit Lake 6.73 134 Pn 11 26 53.1 +1.0
G05D Wamic, OR 6.77 127 P Pn 11 26 52.9 +0.3
baz=310
I03D Drain, OR 7.03 144 P Pn 11 26 57.3 +1.2
baz=326
SLEB Sale Mountain 7.13 73 P Pn 11 26 59.9 +2.2
MNB Mounoet Dainar 7.21 65 P Pn 11 27 00.5 +1.7
C09A Chrisman Ranch 7.31 100 P Pn 11 27 00.8 +0.7
C09A Chrisman Ranch 7.31 100 Pn 11 26 59.4 -0.6
I04A Tendick Farm, 7.33 139 P Pn 11 26 56.6 -3.7
baz=322
I05D Terrebonne, OR 7.39 132 P Pn 11 26 58.4 -2.8
baz=316
BMBC Bull Mountain 7.71 30 P Pn 11 27 08.1 +2.6
K02D Willamette Mer 7.80 150 P Pn 11 27 03.9 -2.9
baz=332
E09A Wood Farm, Sta 7.88 109 Pn 11 27 08.5 +0.7
J04D Umpqua Nationa 7.91 140 P Pn 11 27 05.0 -3.4
baz=324
NEW Newport 7.93 95 Pn Pn 11 27 09.0 +0.5
2.9nm,0.3s,baz=296,slow=12,SNR=31
NEW LR LR 11 30 18.7
comp=Z,475nm,20.8s,baz=276,slow=39
NEW Newport 7.93 95 P Pn 11 27 08.0 -0.5
baz=282,SNR=12
NEW Newport 7.93 95 11 27 09.1 +0.5
NBC4 NorthernBC 4 7.95 36 P Pn 11 27 11.9 +3.1
G08A Pilot Rock 8.03 118 Pn 11 27 11.0 +1.0
HUMO Hull Mountain 8.12 147 Pn 11 27 12.8 +1.7
J05D Fort Rock, OR 8.25 137 P Pn 11 27 11.8 -1.2
baz=320
I07A Izee 8.50 127 Pn 11 27 17.3 +0.8
L04D Klamath Falls 8.70 145 P Pn 11 27 16.4 -2.7
baz=328
NBC5 NorthernBC 5 8.81 23 P Pn 11 27 23.2 +2.6
DLBC Dease Lake 8.91 356 Pn Pn 11 27 22.3 +0.3
0.1nm,0.3s,baz=175,slow=15,SNR=2.3
DLBC Dease Lake 8.91 356 P Pn 11 27 22.8 +0.8
DLBC Dease Lake 8.91 356 Pn 11 27 24.2 +2.2
YBH Yreka Blue Hor 8.98 148 Pn Pn 11 27 24.4 +1.5
0.1nm,0.3s,baz=336,slow=14,SNR=9.8
YBH LR LR 11 30 37.6
comp=Z,124nm,18.6s,baz=330,slow=36
M02C Callahan 9.23 150 P Pn 11 27 27.2 +0.7
baz=333,SNR=9.6
M04C Macdoel 9.25 145 P Pn 11 27 22.3 -4.4
baz=328
KHMM Horse Mountain 9.44 155 Pn 11 27 31.2 +1.8
N02D Trinity Center 9.66 150 P Pn 11 27 28.6 -3.7
baz=333,SNR=14
WALA Waterton Lakes 9.87 87 P Pn 11 27 35.0 -0.1
JTMT Jette 9.90 95 P Pn 11 27 35.7 0.0
FBMT Ferry Basin 9.91 97 P Pn 11 27 35.5 -0.3
FNBB Fort Nelson 9.98 18 P Pn 11 27 37.0 +0.5
YBMT Yellow Bay 10.05 94 P Pn 11 27 38.4 +0.8
WDC Whiskeytown Da 10.07 151 Pn 11 27 40.1 +2.3
SWMT Swartz Lake 10.16 96 P Pn 11 27 39.4 +0.3
O02D Mt. Diablo Mer 10.36 153 P Pn 11 27 38.1 -3.8
baz=336
MSO Missoula 10.41 100 P Pn 11 27 42.7 0.0
baz=290
MSO Missoula 10.41 100 Pn 11 27 42.3 -0.3
EDM Edmonton 10.44 64 P Pn 11 27 43.1 +0.3
SLMT Seeley Lake 10.56 97 P Pn 11 27 45.2 +0.5
O03E Paynes Creek 10.57 149 P Pn 11 27 44.1 -0.7
baz=332
BPMT Black Pine Rid 10.88 101 P Pn 11 27 50.0 +0.9
OVMT Ovando 10.94 97 P Pn 11 27 51.0 +1.1
PAHR Pah Rah Range 11.99 142 Pn 11 28 05.7 +1.6
AFDM Forest Hills D 12.06 149 Pn 11 28 05.8 +0.8
RUBR Rubicon Trail 12.26 146 Pn 11 28 10.4 +2.5
PNTR Pine Nut 12.43 144 Pn 11 28 11.9 +1.6
YUK6 Outpost Mounta 12.58 339 P Pn 11 28 16.6 +4.4
YUK5 Granite Creek 12.63 340 P Pn 11 28 17.6 +4.8
TPMT Tepee Creek 12.74 106 P Pn 11 28 16.1 +1.5
EGMT Eagleton 12.78 90 P Pn 11 28 14.2 -0.7
baz=283
KVN Kaiserville 13.07 139 Pn 11 28 20.2 +1.2
ELK Elko 13.09 127 LR LR 11 33 45.4
comp=Z,80nm,18.9s,baz=333,slow=39
GRNC Granite Creek 13.33 332 P Pn 11 28 24.8 +2.3
CTGM Chitina Glacie 13.39 333 P Pn 11 28 22.8 -0.4
CTGM Chitina Glacie 13.39 333 Pn 11 28 26.3 +3.1
NVAR Mina Array Bea 13.51 141 Pn Pn 11 28 25.9 +0.8
0.0nm,0.3s,baz=317,slow=12,SNR=14
NVAR LR LR 11 33 25.9
comp=Z,161nm,18.0s,baz=326,slow=36
NV11 Mina Array Sit 13.57 141 Pn 11 28 27.0 +1.1

KIAG Kiagna River 13.66 331 P P 11 28 32.5 -3.5
BALM Baldy 13.75 332 P Pn 11 28 25.6 -2.5
PTPK Patty Peak 13.90 332 P Pn 11 28 27.2 -3.0
RLMT Red Lodge 14.08 101 P Pn 11 28 32.3 -0.6
baz=295,SNR=9.4
DUG Dugway, Tooele 14.78 123 P Pn 11 28 39.1 -3.2
baz=314
BW06 Boulder Array 15.06 109 P Pn 11 28 46.1 -0.1
baz=303,SNR=11
PDAR Pinedale Array 15.06 109 Pn Pn 11 28 48.0 +1.8
0.1nm,0.3s,baz=311,slow=11,SNR=52
GRAC Grapevine Rang 15.12 142 P Pn 11 28 47.1 +0.3
baz=329
YKA Yellowknife Ar 15.20 26 Pn Pn 11 28 44.5 -3.1
0.1nm,0.3s,baz=212,slow=12,SNR=14
PAGB Antelope Grade 15.23 152 P 11 28 52.1 -1.2
PAGB IAmb IAmb 11 28 54.3
comp=Z,6.9nm,0.9s
YKW3 Yellowknife Ar 15.25 26 P Pn 11 28 48.5 +0.2
CWC Cottonwood Cre 15.33 145 P Pn 11 28 45.9 -3.9
baz=331
LAO LASA Array 15.46 92 P Pn 11 28 50.7 -0.5
baz=288
LAO LASA Array 15.46 92 Pn 11 28 52.0 +0.7
LAO IAmb IAmb 11 29 08.4
comp=Z,15nm,1.1s
VES Vestal, Richgr 15.51 148 P Pn 11 28 49.4 -2.4
baz=334
DAWY Dawson 15.58 343 P P 11 28 57.7 +0.7
DAWY Dawson 15.58 343 IAmb IAmb 11 29 06.2
comp=Z,9.0nm,1.1s
TPNV Topopah Spring 15.63 139 P Pn 11 28 51.5 -2.1
baz=327
TPNV Topopah Spring 15.63 139 Pn 11 28 53.4 -0.2
TPNV IAmb IAmb 11 29 09.8
comp=Z,15nm,1.5s
SMMC Simmler 15.69 152 P Pn 11 28 51.0 -3.4
baz=337
FURC Furnace Creek, 15.78 141 P Pn 11 28 53.1 -2.3
baz=329
ISA Isabella, Lake 15.88 147 P Pn 11 28 55.1 -1.7
baz=333
ISA Isabella, Lake 15.88 147 Pn 11 28 58.7 +1.9
MPMC Manual Prospec 15.89 144 P Pn 11 28 54.0 -3.1
baz=331
SCM Sheep Creek Mo 15.98 327 IAmb IAmb 11 29 10.4
comp=Z,22nm,1.3s
KNK Knik Glacier 16.12 325 IAmb IAmb 11 29 12.0
comp=Z,27nm,0.9s
PKM Mcpherson Peak 16.14 152 P Pn 11 28 57.0 -3.2
baz=337
KDAK Kodiak Island 16.15 310 Pn Pn 11 29 00.2 +0.1
comp=Z,0.1nm,0.3s,baz=166,slow=23,SNR=2.3
KDAK Kodiak Island 16.15 310 P 11 29 04.4 +1.1
KDAK IAmb IAmb 11 29 11.3
comp=Z,18nm,1.1s
BRLK Bradley Lake 16.19 317 P 11 29 04.8 +1.0
BRLK IAmb IAmb 11 29 12.3
comp=Z,20nm,1.0s
CNPM China Poot 16.23 316 P 11 29 05.6 +1.4
CNPM IAmb IAmb 11 29 12.3
comp=Z,16nm,1.0s
ARVC Arvin 16.24 149 P Pn 11 28 59.4 -1.9
baz=335
DGMT Dagmar 16.29 84 P Pn 11 29 01.9 0.0
baz=283,SNR=5.2
DGMT Dagmar 16.29 84 IAmb IAmb 11 29 10.3
comp=Z,14nm,0.8s
DOT Dot Lake 16.30 336 P Pn 11 29 02.8 +0.7
DOT Dot Lake 16.30 336 P 11 29 04.3 -0.7
LRMC Laurel Mtn Rad 16.33 145 P Pn 11 29 01.0 -1.6
baz=332
RC01 Rabbit Creek A 16.42 322 P P 11 29 08.6 +2.3
PMR Palmer 16.48 325 P P 11 29 09.3 +2.4
SHOC Shoshone, Teco 16.51 141 P Pn 11 29 05.6 +0.8
baz=329,SNR=5.3
SCRK Sand Creek 16.55 336 P 11 29 08.1 +0.2
SCRK IAmb IAmb 11 29 16.6
comp=Z,16nm,1.0s
RIDG Independent Ri 16.59 335 IAmb IAmb 11 29 17.6
comp=Z,19nm,1.0s
GSC Goldstone, Bar 16.82 143 P Pn 11 29 08.7 -0.1
baz=331
K22A Casper 17.01 105 P Pn 11 29 10.7 -0.5
baz=301
K22A Casper 17.01 105 IAmb IAmb 11 29 16.0
comp=Z,15nm,1.0s
SCZ2 Santa Cruz Isl 17.02 153 P Pn 11 29 10.9 -0.4
baz=338
TUQ Tuouise Moun 17.05 141 P Pn 11 29 11.1 -0.7
baz=329
RWWY Rawlins 17.11 109 IAmb IAmb 11 29 16.2
comp=Z,24nm,1.0s
FFC Flin Flon 17.31 62 Pn 11 29 14.5 -0.2
EPYK Eagle Plains 17.32 350 P P 11 29 17.0 +0.8
baz=164
EPYK Eagle Plains 17.32 350 IAmb IAmb 11 29 24.6
comp=Z,21nm,1.5s
O20A White River Ci 17.42 115 P P 11 29 17.6 -0.2
baz=303,SNR=8.0
O20A White River Ci 17.42 115 IAmb IAmb 11 29 35.9
comp=Z,11nm,0.9s
RND Reindeer 17.57 330 IAmb IAmb 11 29 25.7
comp=Z,13nm,1.0s
BBRC Big Bear Solar 17.70 145 P P 11 29 20.6 -0.2
baz=333
HDA Harding Lake 17.70 334 P P 11 29 21.4 +0.9
baz=140
MCK McKinley 17.82 330 IAmb IAmb 11 29 34.0
comp=Z,26nm,1.5s
U15A North Rim 17.88 131 P P 11 29 24.4 +1.5
RSSD Black Hills 17.88 98 P Pn 11 29 22.4 +0.3
baz=296
RSSD Black Hills 17.88 98 P P 11 29 22.9 +0.1
IL31 17.96 335 P P 11 29 26.9 +3.7
ILAR Eielson Array 17.96 335 P P 11 29 24.5 +1.2
comp=Z,0.0nm,0.3s,baz=149,slow=11,SNR=11
TRF Thorofare Moun 18.08 328 IAmb IAmb 11 29 32.9
comp=Z,15nm,1.2s
WRH Wood River Hil 18.08 333 P P 11 29 27.8 +3.2
WRH IAmb IAmb 11 29 32.8
comp=Z,14nm,1.0s
PV10 Paradox Valley 18.14 121 P P 11 29 28.1 +2.3
PV10 IAmb IAmb 11 29 37.4
comp=Z,23nm,1.0s
DHRN Dharma Camp 18.18 12 P Pn 11 29 24.5 -0.8
PV17 East Wray Mesa 18.25 121 IAmb IAmb 11 29 30.9
comp=Z,20nm,0.9s
BELC Belle Mtn. Jos 18.28 143 P Pn 11 29 24.0 -3.0
baz=331
N23A Red Feather La 18.34 109 P P 11 29 28.5 +0.5
baz=305
KTH Kantishna Hill 18.36 328 IAmb IAmb 11 29 44.0
comp=Z,12nm,1.0s
POKR Poker Plat Res 18.37 335 P Pn 11 29 31.5 +3.7
baz=140
PHWY Pilot Hill 18.41 108 IAmb IAmb 11 29 31.5
comp=Z,15nm,0.7s
PV13 Radium Mtn., P 18.42 121 IAmb IAmb 11 29 32.8
comp=Z,22nm,1.0s
PFO Pinyon Flats O 18.45 145 LR LR 11 35 36.9
comp=Z,94nm,20.0s,baz=302,slow=34
IRM Iron Mountain 18.48 141 P Pn 11 29 30.0 +0.6
baz=330
BPAW Bear Paw Mtn. 18.74 329 IAmb IAmb 11 29 41.7
comp=Z,12nm,0.9s
BC3 Big Chuckawall 18.80 143 P P 11 29 32.6 -0.2
baz=331
INK Inuvik 18.94 355 P P 11 29 34.2 +0.3
comp=Z,0.1nm,0.3s,baz=152,slow=14,SNR=8.9
INK LR LR 11 36 50.2
comp=Z,115nm,19.6s,baz=190,slow=37
INK Inuvik 18.94 355 P Pn 11 29 35.2 +0.6
FYU Fort Yukon 18.98 340 IAmb IAmb 11 29 43.6
comp=Z,31nm,1.2s
WUAZ Wupatki 19.05 131 P Pn 11 29 39.4 +3.0
baz=322
E28A Huff 19.10 88 IAmb IAmb 11 29 40.0
comp=Z,31nm,0.8s
MONP2 Monument Peak 19.11 146 P P 11 29 32.5 -3.8
baz=334
ISCO Idaho Springs 19.21 112 P P 11 29 37.5 0.0
baz=308
ISCO Idaho Springs 19.21 112 P P 11 29 38.2 +0.7
MVCO Mesa Verde 19.27 122 P P 11 29 37.4 -0.8
baz=316
MLY Manley 19.28 332 P Pn 11 29 41.2 +2.3

MLY IAmb IAmb 11 29 47.2
comp=Z,20nm,1.1s
IKP In-Ko-Pah, Jac 19.44 146 P P 11 29 37.3 -2.5
baz=333
KUKN Kugluktuk,NWT 19.59 16 P P 11 29 41.6 +0.5
S22A 4UR Ranch, Cre 19.83 118 P P 11 29 45.0 +0.7
baz=313
TTA Tatalina 19.91 322 P Pn 11 29 48.7 +2.4
C36M Paulatuk 19.99 5 P Pn 11 29 47.9 +0.7
baz=190
C36M Paulatuk 19.99 5 P Pn 11 29 47.8 +0.6
C36M IAmb IAmb 11 29 54.3
comp=Z,8.3nm,1.0s
W18A Petrified Fore 20.19 128 P Pn 11 29 49.5 -0.4
baz=321
W18A Petrified Fore 20.19 128 P Pn 11 29 49.9 -0.1
W18A IAmb IAmb 11 29 57.3
comp=Z,9.1nm,1.1s
X18A Snowflake 20.54 130 P Pn 11 29 53.8 -0.4
X18A IAmb IAmb 11 30 05.3
comp=Z,6.7nm,1.0s
SDCO Great Sand Dun 20.60 116 P P 11 29 53.4 +0.7
baz=312
SDCO Great Sand Dun 20.60 116 P P 11 29 53.8 +1.1
COLD Coldfoot 20.71 337 P Pn 11 29 57.2 +1.6
COLD Coldfoot 20.71 337 P Pn 11 29 56.5 +0.8
COLD IAmb IAmb 11 30 05.0
comp=Z,16nm,1.3s
OGNE Ogallala 20.75 104 P P 11 29 54.4 +0.3
baz=303
OGNE Ogallala 20.75 104 P P 11 29 54.4 +0.3
ULM Lac du Bonnet 21.25 75 P P 11 29 59.6 +0.4
comp=Z,28nm,0.7s,baz=282,slow=10,SNR=37
ULM LR LR 11 38 49.2
comp=Z,175nm,22.0s,baz=266,slow=38
ULM Lac du Bonnet 21.25 75 P P 11 29 59.2 -0.1
ULM Lac du Bonnet 21.25 75 P P 11 29 59.5 +0.2
KSCO Kaye Shedlock' 21.51 109 P P 11 30 02.6 +0.3
baz=307
KSCO Kaye Shedlock' 21.51 109 P P 11 30 03.1 +0.8
TOLK Toolik Lake Re 21.64 340 P P 11 30 05.9 +2.5
baz=142
TOLK Toolik Lake Re 21.64 340 P P 11 30 06.0 +2.6
TOLK IAmb IAmb 11 30 12.0
comp=Z,15nm,1.1s
T25A Trinidad 21.65 116 P P 11 30 05.2 +1.2
baz=312
AGMN Agassiz Nation 21.71 81 P P 11 30 04.7 +0.5
baz=285,SNR=18
AGMN Agassiz Nation 21.71 81 P P 11 30 04.1 -0.2
TUC Tucson 21.95 135 P P 11 30 09.1 +2.1
baz=326
ANMO Albuquerque 22.05 123 P P 11 30 07.9 -0.3
comp=Z,0.5nm,0.3s,baz=310,slow=8.5,SNR=3.6
ANMO Albuquerque 22.05 123 P P 11 30 09.2 +0.9
baz=318
ANMO Albuquerque 22.05 123 P P 11 30 09.6 +1.4
FCC Fort Churchill 22.17 52 P P 11 30 10.1 +1.0
FCC Fort Churchill 22.17 52 P P 11 30 09.8 +0.7
A36M Sachs Harbour 22.57 3 P P 11 30 16.0 +2.8
baz=187,SNR=10
EPLO Experimental L 22.73 76 P P 11 30 15.4 +0.3
ECSD EROS Data Cent 22.86 92 P P 11 30 16.8 +0.2
baz=296,SNR=6.6
ECSD EROS Data Cent 22.86 92 P P 11 30 16.4 -0.2
ECSD IAmb IAmb 11 30 30.9
comp=Z,15nm,0.9s
B35A Bob, Littlefor 23.06 79 P P 11 30 18.2 -0.4
SOLO Sioux Lookout 23.68 75 P P 11 30 24.4 -0.4
F36A Milaca 24.01 85 P P 11 30 28.2 +0.3
F36A IAmb IAmb 11 30 39.5
comp=Z,11nm,0.9s
ATKO Atikokan Iron 24.29 77 P P 11 30 30.9 +0.3
PKLO Pickle Lake 24.45 71 P P 11 30 31.8 -0.2
EYMN Ely 24.61 79 P P 11 30 34.5 +1.0
baz=288,SNR=26
EYMN Ely 24.61 79 P P 11 30 34.1 +0.6
SPMN Marine on St. 24.72 86 P P 11 30 36.1 +1.6
baz=293
SPMN Marine on St. 24.72 86 P P 11 30 34.9 +0.4
SPMN IAmb IAmb 11 30 36.5
comp=Z,18nm,1.3s
AMTX Amarillo 24.80 116 P P 11 30 34.9 -0.6
baz=314
MSTX Muleshoe 24.83 119 P P 11 30 35.5 -0.2
baz=316
N35A Tabor 24.88 98 P P 11 30 36.4 +0.4
MNTX Cornudas Mount 25.12 126 P P 11 30 37.5 -0.7
baz=322
KSU1 Kansas State U 25.23 102 P P 11 30 39.9 +0.7
TBO Thunder Bay 25.73 77 P P 11 30 44.8 +1.1
N38A Joes South For 26.48 96 P P 11 30 51.2 +0.8
WMOK Wichita Mounta 26.63 112 P P 11 30 52.6 +0.7
baz=313
WMOK Wichita Mounta 26.63 112 P P 11 30 52.0 +0.1
WMOK IAmb IAmb 11 30 59.3
comp=Z,3.2nm,0.9s
I40A Norwalk 26.70 87 P P 11 30 52.1 -0.3
D41A Chassel 26.78 80 P P 11 30 52.8 -0.3
GTO Geraldton 26.96 73 P P 11 30 55.6 +1.0
L40A Anamosa 27.14 92 P P 11 30 56.5 +0.1
JFWS Jewell Farm 27.38 89 P P 11 30 59.1 +0.6
baz=297
W35A Tecumseh 27.51 109 P P 11 31 00.1 +0.3
I42A Draeger Farm, 27.80 86 P P 11 31 02.3 0.0
E44A Grand Marais A 28.63 79 P P 11 31 10.6 +1.0
baz=292
F45A CMU Biological 29.25 81 P P 11 31 15.4 +0.2
baz=293
LPIG La Paz 29.32 143 LR LR 11 43 40.4
comp=Z,55nm,19.3s,baz=348,slow=38
W39A Magazine 29.40 106 P P 11 31 16.5 -0.1
baz=310
G45A Suttons Bay 29.42 82 P P 11 31 17.1 +0.4
baz=294
E46A Sault Ste Mari 29.76 79 P P 11 31 19.9 +0.2
G46A Petoskey 29.82 81 P P 11 31 21.1 +0.9
baz=294
H46A Fife Lake 29.93 83 P P 11 31 20.9 -0.3
baz=295
FCAR Ozark Folk Cen 30.01 103 P P 11 31 21.8 -0.1
FCAR IAmb IAmb 11 31 23.0
comp=Z,4.3nm,0.7s
D47A Chapleau 30.26 77 P P 11 31 24.6 +0.5
baz=292
E47A Iron Bridge 30.38 78 P P 11 31 25.8 +0.6
baz=293
W41B Gary Mavity, V 30.38 104 P P 11 31 26.4 +1.1
baz=309
K46A Dorr 30.39 86 P P 11 31 25.2 -0.1
baz=298
I47A Gladwin 30.60 83 P P 11 31 28.1 +1.0
baz=296
I47A Gladwin 30.60 83 P P 11 31 28.0 +0.8
SFIN Lafayette 30.68 91 P P 11 31 28.8 +0.9
baz=301
K47A Vermontville 30.90 86 P P 11 31 29.9 +0.1
baz=298
D48A Paudash Townsh 31.04 76 P P 11 31 31.0 0.0
baz=292
F48A Evansville 31.05 79 P P 11 31 31.5 +0.4
baz=294
H48A Harrisville 31.07 81 P P 11 31 32.0 +0.7
baz=295
E48A Lockeyer 31.08 77 P P 11 31 29.7 -1.7
baz=293
N47A Urbana 31.33 89 P P 11 31 33.8 +0.1
baz=301
K48A Perry 31.41 85 P P 11 31 34.0 -0.3
baz=298
SUNO Sudbury Onapin 31.54 77 P P 11 31 36.3 +0.9
L48A N Adams 31.62 87 P P 11 31 36.4 +0.2
baz=299
I49A Point Hope 31.73 82 P P 11 31 37.7 +0.6
baz=296
N48A Decatur 31.78 89 P P 11 31 37.9 +0.3
baz=301
KILO Kirkland Lake 31.86 73 P P 11 31 39.3 +1.1
O48A Farmland 32.01 90 P P 11 31 39.8 +0.2
baz=301
M49A Liberty Center 32.15 87 P P 11 31 40.2 -0.7
baz=300
P48A Milroy 32.26 91 P P 11 31 41.0 -0.8
baz=302
D50A G1974 Best Tow 32.28 75 P P 11 31 42.3 +0.4
baz=293

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
Q48A	North Vernon	32.35	93	P	P	11 31 43.1	+0.5
	baz=303						
K50A	Casco	32.40	84	P	P	11 31 43.4	+0.5
	baz=298						
O49A	Covington	32.58	89	P	P	11 31 43.6	-1.0
	baz=302						
OXF	Oxford	32.60	102	P	P	11 31 44.1	-0.7
	baz=309						
D51A	Lot 18 Range I	32.60	75	P	P	11 31 44.5	-0.3
	baz=293						
MATQ	Matagami	32.71	70	P	P	11 31 46.1	+0.5
	baz=290						
F51A	Arnstein	32.73	77	P	P	11 31 46.6	+0.8
	baz=294						
E51A	G1948 Merrick	32.75	76	P	P	11 31 46.8	+0.7
	baz=294						
M50A	Fremont	32.79	87	P	P	11 31 46.9	+0.4
	baz=300						
Q49A	Aurora	32.85	92	P	P	11 31 47.6	+0.6
	baz=303						
I51A	Listowel	32.95	81	P	P	11 31 48.9	+1.1
	baz=297						
EEO	Eldee	32.97	76	P	P	11 31 48.2	+0.2
N50A	Nevada	33.05	88	P	P	11 31 49.2	+0.5
	baz=301						
O50A	Cable	33.06	89	P	P	11 31 48.8	0.0
	baz=302						
F52A	Sundridge	33.16	77	P	P	11 31 49.8	+0.2
	baz=295						
P50A	Jamestown	33.23	90	P	P	11 31 50.2	-0.1
	baz=302						
I52A	Shelburne	33.37	80	P	P	11 31 51.3	-0.2
	baz=297						
E52A	Mattawa	33.38	76	P	P	11 31 52.0	+0.5
	baz=294						
J52A	Paris	33.56	82	P	P	11 31 53.7	+0.5
	baz=298						
LG4Q	La Grande 4	33.62	62	P	P	11 31 53.4	-0.2
D53A	Lac Vacive, Po	33.66	74	P	P	11 31 54.3	+0.4
	baz=293						
D53A	Lac Vacive, Po	33.66	74	P	P	11 31 54.7	+0.7
SADO	Sadowa	33.72	79	P	P	11 31 54.0	-0.5
SADO	Sadowa	33.72	79	P	P	11 31 54.4	-0.1
M52A	Chesterland	33.82	85	P	P	11 31 56.1	+0.7
	baz=300						
G53A	Haliburton	33.90	78	P	P	11 31 56.5	+0.5
	baz=296						
ALGO	Algonquin Park	33.90	76	P	P	11 31 56.8	+0.7
	baz=295						
E53A	Dumoine, Ponti	33.97	75	P	P	11 31 57.4	+0.7
	baz=294						
G54A	Lake Saint Pet	34.12	77	P	P	11 31 58.5	+0.6
	baz=296						
H53A	Bobcaygeon	34.16	79	P	P	11 31 58.3	-0.1
	baz=296						
O52A	Adamsville	34.24	88	P	P	11 31 58.9	-0.2
	baz=302						
E54A	Lac Daplat, Po	34.24	75	P	P	11 31 59.0	-0.1
	baz=294						
M53A	WI Miller and	34.31	85	P	P	11 31 59.9	+0.2
	baz=300						
CHGQ	Chibougamau	34.64	68	P	P	11 32 03.0	+0.6
	baz=291						
P53A	Whipple	34.87	88	P	P	11 32 05.0	+0.5
	baz=302						
I55A	Frankford	34.90	79	P	P	11 32 05.4	+0.6
	baz=297						
M54A	Oil Creek Stat	34.93	84	P	P	11 32 05.4	+0.3
	baz=300						
N54A	Moraine State	35.00	85	P	P	11 32 06.0	+0.3
	baz=301						
G55A	Calabogie	35.05	77	P	P	11 32 04.4	-1.6
	baz=296						
H55A	Tweed	35.07	78	P	P	11 32 06.3	+0.2
	baz=297						
Q53A	Leroy	35.12	89	P	P	11 32 07.7	+1.0
	baz=303						
J55A	Hilton	35.26	80	P	P	11 32 08.1	+0.3
	baz=298						
K55A	Perry	35.36	81	P	P	11 32 06.0	-2.7
	baz=299						
P54A	Burton	35.40	88	P	P	11 32 09.5	+0.3
	baz=302						
Q54A	Coxs Mills	35.51	89	P	P	11 32 10.7	+0.7
	baz=303						
D56A	ZEC Mazanza, M	35.51	73	P	P	11 32 10.5	+0.5
	baz=294						
M55A	Ridgway	35.53	84	P	P	11 32 08.7	-1.5
	baz=300						
E56A	St. Veronique	35.55	74	P	P	11 32 09.9	-0.4
	baz=295						
Z50A	Ashland	35.63	101	P	P	11 32 11.6	+0.5
	baz=310						
GAC	Glen Almond	35.63	75	P	P	11 32 11.4	+0.4
H56A	Elgin	35.64	77	P	P	11 32 11.5	+0.5
	baz=297						
O55A	Ligonier	35.84	86	P	P	11 32 13.0	+0.1
	baz=302						
R54A	Victor	35.85	90	P	P	11 32 13.2	+0.2
	baz=304						
P55A	Reedsville	35.88	87	P	P	11 32 12.1	-1.1
	baz=303						
M56A	Emporium	35.90	83	P	P	11 32 13.3	-0.2
	baz=300						
L56A	Greenwood	35.98	82	P	P	11 32 15.0	+0.9
	baz=300						
Q55A	Buckhannon	35.99	88	P	P	11 32 14.7	+0.4
	baz=303						
D57A	Chemin Vers le	36.06	72	P	P	11 32 15.3	+0.5
	baz=295						
V53A	Saluda	36.13	95	P	P	11 32 15.4	0.0
E57A	Chemin Saint G	36.16	73	P	P	11 32 15.9	+0.3
	baz=295						
G57A	Newington	36.21	76	P	P	11 32 16.3	+0.4
	baz=297						
U54A	Nelsons Funny	36.27	93	P	P	11 32 17.3	+0.6
	baz=306						
O56A	Blue Knob Stat	36.29	85	P	P	11 32 16.5	-0.3
	baz=302						
J57A	Williamstown	36.36	79	P	P	11 32 17.4	+0.1
	baz=298						
R55A	Marlinton	36.36	89	P	P	11 32 18.1	+0.7
	baz=304						
L57A	Andrews Acres	36.50	82	P	P	11 32 19.1	+0.5
	baz=300						
P56A	Dayton Farm, R	36.52	87	P	P	11 32 18.9	+0.2
	baz=303						
Q56A	Snyder Ridge,	36.55	87	P	P	11 32 19.7	+0.8
	baz=303						
D58A	Chemin du LacG	36.65	72	P	P	11 32 18.9	-0.8
	baz=295						
M57A	Sunshine Farm,	36.66	83	P	P	11 32 19.7	-0.2
	baz=301						
I58A	Old Forge	36.88	78	P	P	11 32 22.0	+0.3
	baz=298						
K58A	Earlville	36.90	80	P	P	11 32 22.6	+0.7
	baz=299						
O57A	Amberson	36.92	85	P	P	11 32 22.5	+0.4
	baz=302						
BINY	Binghamton	36.96	81	P	P	11 32 22.6	+0.1
	baz=300						
Q57A	Strasburg	37.05	87	P	P	11 32 24.3	+1.0
	baz=303						
V55A	Taylorsville	37.06	93	P	P	11 32 24.1	+0.8
	baz=307						
P57A	Homestead Farm	37.07	86	P	P	11 32 23.7	+0.3
	baz=303						
X54A	Belton	37.10	96	P	P	11 32 24.4	+0.8
	baz=308						
L58A	Harry Jones Me	37.12	81	P	P	11 32 24.2	+0.3
	baz=300						
T56A	Rocky Mt	37.13	91	P	P	11 32 24.8	+0.9
	baz=305						
E59A	St. Maurice	37.15	73	P	P	11 32 24.4	+0.5
	baz=296						
J59A	Piesco	37.28	78	P	P	11 32 25.5	+0.3
	baz=299						
SCHQ	Schefferville	37.35	57	LR	LR	11 47 42.8	
	comp=Z,125nm,18.2s,baz=334,slow=36						
R57A	Stanardsville	37.39	88	P	P	11 32 26.7	+0.6
	baz=304						
K59A	Cooperstown	37.40	79	P	P	11 32 26.8	+0.7
	baz=300						
S57A	Dark Hollow, R	37.41	89	P	P	11 32 26.9	+0.6
	baz=305						
O58A	Lewisberry	37.43	84	P	P	11 32 26.8	+0.4
	baz=302						
Q58A	Fox Den Farm,	37.58	86	P	P	11 32 26.3	-1.3
	baz=303						
X55A	Gracelyn & Ava	37.62	95	P	P	11 32 28.6	+0.4
	baz=308						
M59A	Waymart	37.65	81	P	P	11 32 28.3	0.0
	baz=301						
F60A	Warwick	37.72	73	P	P	11 32 29.5	+0.7
	baz=297						
R58A	Rapidan	37.73	88	P	P	11 32 29.3	+0.4
	baz=304						
O59A	Robesonia	37.81	84	P	P	11 32 29.3	-0.3
	baz=302						
R58B	Mineral	38.00	88	P	P	11 32 31.1	-0.2
	baz=304						
J60A	Lant Hill Farm	38.08	78	P	P	11 32 32.8	+0.9
	baz=299						
V58A	Windy Hill, Pi	38.46	92	P	P	11 32 35.6	+0.5
	baz=307						
S59A	Mechanicsville	38.49	88	P	P	11 32 36.0	+0.6
	baz=305						
U59A	Littleton	38.99	90	P	P	11 32 39.6	+0.1
	baz=306						
D62A	Allapoint, All	39.02	70	P	P	11 32 40.2	+0.5
	baz=296						
Q61A	Milford	39.14	85	P	P	11 32 40.6	-0.2
	baz=304						
ROSC	El Rosal	63.97	115	LR	LR	12 07 35.2	
	comp=Z,47nm,18.5s,baz=38,slow=40						
NOA	NORSAR Array B	65.20	20	LR	LR	12 02 33.1	
	comp=Z,26nm,20.3s,baz=240,slow=34						
KURBB	Kurchatov Arra	77.45	342	P	P	11 37 07.2	-1.2
	comp=Z,0.2nm,0.7s,baz=20,slow=5.9,SNR=2.6						
MKAR	Makanchi Array	80.26	339	P	P	11 37 24.1	+0.1
	comp=Z,0.3nm,0.7s,baz=1.4,slow=4.9,SNR=4.1						
SIJI	Sorong	96.98	277	LR	LR	12 13 58.6	
	comp=Z,43nm,21.4s,baz=104,slow=30						

*IDC **02** 11:37:27.5±1.5, 37°.77N×144°.44E, h0km, mb3.5/3, mb1 3.8/6, mb1mx3.4/46, mbtmp3.7/6, ML3.4/3, Error ellipse: s-maj=35.3km s-min=23.2km az=124.0*
*JMA **02** 11:37:32.3±0.2, 37°.89N×144°.11E, h48km, M3.4*
ISC 02 11:37:32.0±1.1, 37°.90N±0°.06×144°.26E±0°.08, h35km±, n23, σ2s.30/39, mb3.4/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.24	281	P	Pn	11 38 06.4	-0.2
JIKH				eS	Sn	11 38 31.9	-1.2
OFUJ	Ofunato	2.35	301	P	Pn	11 38 08.1	0.0
OFUJ				eS	Sn	11 38 34.9	-0.8
JIO	Ouri	2.36	284	P	Pn	11 38 08.2	0.0
JIO				S	Sn	11 38 34.7	-1.3
JKMT	Kesennumamotoy	2.37	293	P	Pn	11 38 08.2	-0.2
JKMT				S	Sn	11 38 35.1	-1.2
JMK	Ichinoseki	2.61	295	P	Pn	11 38 12.0	+0.3
JMK				eS	Sn	11 38 41.5	-0.6
JOM	Ohasama	2.80	305	P	Pn	11 38 15.5	+1.1
JOM				eS	Sn	11 38 46.9	0.0
JFT	Otama	3.13	264	P	Pn	11 38 19.7	+0.8
JYK	Kaneyama	3.23	290	P	Pn	11 38 20.9	+0.7
JYK				S	Sn	11 38 57.8	+0.4
JANG	Nango	3.27	320	eS	Sn	11 38 56.7	-1.6
BSO1	Boso 1	4.19	220	P	Pn	11 38 32.3	-0.6
JRY	Ryogami san	4.69	248	P	Pn	11 38 40.3	0.0
JRY				S	Sn	11 39 31.5	-1.9
JKB	Kayabe	4.69	329	P	Pn	11 38 42.1	+1.8
JCH	Churui	4.76	352	P	Pn	11 38 40.4	-0.8
JCH				eS	Sn	11 39 32.3	-2.8
JOD2	Odawara 2	4.92	239	P	Pn	11 38 43.1	-0.4
JOD2				eS	Sn	11 39 36.6	-2.7
MJAR	Matsushiro Arr	5.02	256	Pn	Pn	11 38 45.9	+1.1
	0.4nm,0.3s,baz=82,slow=14,SNR=30						
MJAR				Sn	Sn	11 39 43.3	+1.7
	baz=150,slow=26,SNR=1.0						
MAT	Matsushiro	5.02	256	P	Pn	11 38 46.6	+1.8
MAT				eS	Sn	11 39 37.9	-3.7
NEM2	Nemuro 2	5.58	11	P	Pn	11 38 50.0	-2.4
NEM2				eS	Sn	11 39 49.0	-6.2
JHJ	Hachijo jima 2	6.01	219	Pn	Pn	11 38 56.7	-1.7
	3.9nm,0.3s,baz=60,slow=14,SNR=6.9						
JHJ				Sn	Sn	11 39 58.4	-7.5
	4.5nm,0.3s,baz=81,slow=23,SNR=2.7						
JTKR	Abashiri--Toko	6.07	358	P	Pn	11 38 58.3	-0.9
JTKR				eS	Sn	11 40 02.4	-5.0
ASAJ	Asahikawa	6.34	349	Pn	Pn	11 39 03.2	+0.4
	1.0nm,0.3s,baz=178,slow=12,SNR=8.4						
ASAJ				Sn	Sn	11 40 13.3	-0.7
	0.3nm,0.3s,baz=178,slow=31,SNR=1.5						
KURBB	Kurchatov Arra	47.26	308	P	P	11 46 04.2	+2.6
	0.1nm,0.4s,baz=83,slow=8.1,SNR=4.2						
ILAR	Eielson Array	47.55	33	P	P	11 46 04.3	+0.7
	0.5nm,0.8s,baz=258,slow=5.4,SNR=5.7						
WRA	Warramunga Arr	58.29	191	P	P	11 47 23.4	+0.1
	0.2nm,0.6s,baz=9.8,slow=7.1,SNR=2.6						

HEL 02 11:38:41.9±0.1, 63°.63N×22°.94E, h0km, ML1.2, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAF	Ylistaro	0.60	192	PG	Pg	11 38 52.7	-0.6
VAF				SG	Sb	11 39 03.2	-1.0
UMAU	Umeaa	1.04	285	PG	Pg	11 38 59.9	-1.9
	baz=105						
UMAU				SG	Sg	11 39 14.4	-0.7
OBF0	Syolatti, Pyha	1.04	33	PG	Pg	11 39 00.7	-1.2
OBF0				SN	Sn	11 39 19.6	+0.7
OUF	Merijarvi	1.08	46	PG	Pg	11 39 01.1	-1.5
OUF				MSG		11 39 15.1	
	comp=Z,1.0nm,0.2s						
OUF				SG	Sg	11 39 15.4	-1.2
BURU	Burvik	1.18	325	PG	Pg	11 39 03.8	-0.7
BURU				SG	Sg	11 39 17.5	-2.2
HUSU	Husum	1.69	262	PG	Pn	11 39 12.2	-0.4
HUSU				SN	Sg	11 39 36.2	0.0
KEF	Keuruu	1.71	148	PN	Pn	11 39 13.0	+0.1
KEF				MSG		11 39 33.0	
	comp=Z,1.7nm,0.2s						
KEF				SN	Sn	11 39 35.7	+0.2
SUF	Sumiainen	1.72	121	PG	Pn	11 39 12.9	-0.1
	baz=303						
SUF				MSG		11 39 33.2	
	comp=Z,2.3nm,0.2s						
SUF				SG	Sn	11 39 34.6	-1.1
OUL	Oulu	1.95	40	SG	Sb	11 39 43.0	0.0
KAF	Kangasniemi	2.17	133	PG	Pn	11 39 20.2	+1.0
	baz=314						
KAF				SG	Sb	11 39 48.6	-0.7
KALU	Kalix	2.25	4	PB	Pn	11 39 20.9	+0.6
KALU				SB	Sn	11 39 49.1	+0.4
HEMU	Hemsoen	2.42	249	PB	Pn	11 39 23.4	+0.8
	baz=63						
HEMU				SG	Sb	11 39 56.5	-0.1
TOF	Tornio	2.53	13	MSG		11 39 56.5	
	comp=Z,0.8nm,0.2s						
TOF				SB	Sn	11 39 56.8	+1.1
FIA0	FINESS Array S	2.63	145	PB	Pn	11 39 27.2	+1.7
	baz=331						
FIA0				SB	Sn	11 40 00.2	+2.1
ERTU	Ertsjaerv	2.96	354	SG	Sb	11 40 11.1	-0.9
JOF	Joensuu	3.85	97	SG	Sb	11 40 40.6	+2.9
LANU	Lannavaara	4.46	355	PG	Pb	11 40 03.1	+2.2

BER 02 11:39:09.8±0.9, 66°.41N×11°.88E, h0km±69km, ML1.1, Confirmed Earthquake, Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STOK	Stokkvaagen	0.47	99	eP	Pg	11 39 18.5	-0.2
STOK				eS	Sg	11 39 24.5	-0.2
KONS	Konsvik	0.51	79	eP	Pg	11 39 18.7	-0.8
KONS				eS	Sg	11 39 25.0	-1.1
KONS				IAML		11 39 25.9	
	comp=Z,11nm,0.4s						
MOR8	Moi Rana	1.06	102	eP	Pg	11 39 30.4	+0.2
MOR8				eS	Sn	11 39 46.5	-0.9
MOR8				IAML		11 39 51.7	
	comp=Z,5.7nm,0.2s						

*NIC **02** 11:41:18.4±0.0, 35°.17N×33°.86E, h53km±1km, Ml2.8/6*
*GII **02** 11:41:19.4±0.0, 35°.01N×33°.96E, h9km, MD1.9/3, Mm2.5/8*
*DDA **02** 11:41:19.6, 35°.41N×33°.56E, h29km±3km, ML2.4*
*ISK **02** 11:41:19.6, 35°.35N×33°.62E, h23km, ML3.2/20*
ISC 02 11:41:17.4±1.2, 35°.22N±0°.02×33°.83E±0°.03, h27km±13km, n54, σ1s.48/78, 4C, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MVOU	Mavrovouni	0.26	218	⇑P	Pn	11 41 27.4	+1.9
MVOU				S	Sn	11 41 34.3	+3.7
MVOU				AML	AML	11 41 35.3	
	4.7nm,0.5s						
MVOU				AML	AML	11 41 35.3	
	4.7nm,0.5s						
MVOU				AML	AML	11 41 35.5	
	5.2nm,0.3s						
MVOU				AML	AML	11 41 35.5	
	5.2nm,0.3s						
PARAL	Paralimni	0.29	143	P	Pn	11 41 27.9	+2.1
PARAL				S	Sn	11 41 34.2	+3.0
PARAL				AML	AML	11 41 36.1	
	1.6nm,0.7s						
PARAL				AML	AML	11 41 36.1	
	1.6nm,0.7s						
PARAL				AML	AML	11 41 36.6	
	1.6nm,0.2s						
PARAL				AML	AML	11 41 36.6	
	1.6nm,0.2s						
ATHAL	Athalassa	0.36	257	P	Pn	11 41 28.5	+1.5
ATHAL				AML	AML	11 41 36.3	
	4.2nm,0.4s						
ATHAL				AML	AML	11 41 36.3	
	4.2nm,0.4s						
ATHAL				S	Sn	11 41 36.7	+3.6
ATHAL				AML	AML	11 41 43.0	
	3.6nm,0.4s						
ATHAL				AML	AML	11 41 43.0	
	3.6nm,0.4s						
EREN	Erenkoy	0.41	42	PG	Pn	11 41 30.1	+2.5
EREN	Erenkoy	0.41	42	*i* P	Pn	11 41 29.9	+2.3
EREN				*i* S	Sn	11 41 38.8	+4.3
EREN				IAML		11 41 40.0	
	comp=E,209nm,0.3s						
CSS	Mathiatis	0.48	238	PG	Pn	11 41 29.4	+0.8
CSS				SG	Sn	11 41 37.1	+0.9
CSS	Mathiatis	0.48	238	Pg	Pn	11 41 29.2	+0.6
CSS	Mathiatis	0.48	238	⇑P	Pn	11 41 29.4	+0.8
CSS				S	Sn	11 41 37.9	+1.7
ASGA	Asgata	0.65	228	P	Pn	11 41 31.4	+0.6
ASGA				S	Sn	11 41 42.1	+1.9
ASGA				AML	AML	11 41 47.5	
	comp=E,1.0nm,0.6s						
ASGA				AML	AML	11 41 47.5	
	comp=E,1.0nm,0.6s						
ASGA				AML	AML	11 41 48.2	
	comp=E,1.0nm,0.6s						
ASGA				AML	AML	11 41 48.2	
	comp=E,1.0nm,0.6s						
AKDN	Akdeniz- Kıbrı	0.71	276	PG	Pn	11 41 31.2	-0.5
LEF	Lefka	0.78	263	PG	Pn	11 41 33.1	+0.5
LEF	Lefka	0.78	263	*i* P	Pn	11 41 33.2	+0.6
LEF				*i* S	Sb	11 41 43.2	+0.8
LEF				IAML		11 41 45.0	
	comp=N,126nm,0.6s						
SZAC	Souni	0.91	239	⇑P	Pn	11 41 34.9	+0.4
SZAC				S	Sb	11 41 48.0	+1.7
SZAC				AML	AML	11 41 52.6	
	comp=N,0.9nm,0.7s						
SZAC				AML	AML	11 41 52.6	
	comp=N,0.9nm,0.7s						
SZAC				AML	AML	11 41 53.4	
	comp=N,0.8nm,0.3s						
SZAC				AML	AML	11 41 53.4	
	comp=N,0.8nm,0.3s						
AKK2	Akkuyu-Mersin	0.94	346	PG	Pn	11 41 35.7	+0.8
TISA	Tisan-Mersin	0.95	353	PG	Pn	11 41 35.4	+0.5
TISA				SG	Sn	11 41 48.4	+0.8
AKK1	Akkuyu-Mersin	0.95	346	PG	Pn	11 41 35.9	+0.9
AKKU	Akkuyu-Mersin	0.96	346	PG	Pn	11 41 36.2	+1.0
YESI	Yesilovacik-Me	0.98	351	PG	Pn	11 41 36.2	+0.8
KARG	Kargicak-Mersi	0.98	354	PG	Pn	11 41 36.6	+1.1
GULN	MERSIN_Gulnar	0.99	346	*i* P	Pn	11 41 36.5	+0.9
GULN				*i* S	Sn	11 41 48.7	+0.1
GULN				IAML		11 41 50.0	
	comp=N,130nm,0.4s						
GULN				IAML		11 41 50.0	
	comp=E,104nm,0.3s						
IKL	Isikli	1.02	353	PG	Pn	11 41 37.1	+1.1
TEPK	Tepekoy-MERSIN	1.03	347	PG	Pn	11 41 36.9	+0.8
OREN	Orenkoy-Mersin	1.03	343	PG	Pn	11 41 36.7	+0.6
TEKE	Tekeli-Mersin	1.09	328	PG	Pb	11 41 37.3	-0.3
NATA	Nata	1.12	247	P	Pb	11 41 38.4	+0.2
NATA				S	Sn	11 41 53.0	+1.0
SILI	Silifke-Mersin	1.15	4	PG	Pb	11 41 39.0	+0.4
BERE	Bereket-Mersin	1.23	336	PG	Pb	11 41 39.9	-0.1
KEBE	Keben-Mersin	1.23	356	PN	Pb	11 41 40.4	+0.4
AKMS	Akamas	1.24	261	P	Pn	11 41 39.6	+0.6
AKMS				S	Sb	11 41 56.9	+1.1
AKMS				AML	AML	11 41 58.9	
	comp=E,0.6nm,0.5s						
AKMS				AML	AML	11 41 58.9	
	comp=E,0.6nm,0.5s						
AKMS				AML	AML	11 42 02.8	
	comp=E,0.7nm,0.5s						
AKMS				AML	AML	11 42 02.8	
	comp=E,0.7nm,0.5s						
TEVE	Tevekalti-Mers	1.25	346	PN	Pb	11 41 40.2	-0.2
KIZK	Mersin	1.28	11	PN	Pb	11 41 41.2	+0.3
KIZK	Mersin	1.28	11	*i* P	Pb	11 41 41.3	+0.3
KIZK				*i* S	Sb	11 41 57.1	+0.2
GAZI	Gazipasa	1.59	310	PN	Pb	11 41 43.9	-2.3
GAZI	Gazipasa	1.59	310	*i* P	Pn	11 41 43.3	-0.5
GAZI				*i* S	Sn	11 42 02.0	-1.6
GAZI				IAML		11 42 07.0	
	comp=N,56nm,0.3s						
KERG	Konya-Eregli	2.20	6	*i* P	Pb	11 41 54.2	-2.5
KERG				*i* S	Sb	11 42 20.6	-2.9
KERG				IAML		11 42 25.0	
	comp=N,35nm,0.3s						
KERG				IAML		11 42 27.0	
	comp=E,33nm,0.6s						
HNTI	Hanita	2.41	152	Pn	Pn	11 41 54.3	-0.8
HNTI				Sn	Sn	11 42 22.2	-1.5
KEPZ	Antalya-Kepez	2.46	314	*i* P	Pb	11 41 56.7	-4.3
KEPZ				IAML		11 42 24.0	
	comp=E,26nm,2.2s						
KEPZ				*i* S	Sn	11 42 25.1	0.0
OSC2	CSNet OBS 4	2.50	212	P	Pn	11 41 56.9	+0.6
NATI	Neve Ativ	2.51	141	Pn	Pn	11 41 56.8	+0.3
NATI				Sn	Sn	11 42 24.9	-1.3
GEM	Giv'at Ha'Em	2.52	142	Pn	Pn	11 41 56.5	-0.1
GEM				Sn	Sn	11 42 23.7	-2.7
KSDI	Kefar Szold	2.53	143	Pn	Pn	11 41 56.7	0.0
KSDI	Kefar Szold	2.53	143	⇑P	Pn	11 41 56.5	-0.2
OFRI	`Ofer	2.77	159	Pn	Pn	11 41 59.0	-1.0
OFRI				Sn	Sn	11 42 30.6	-2.0
MMLI	Mount Malkishu	3.08	154	Pn	Pn	11 42 04.9	+0.6
MMLI				Sn	Sn	11 42 39.5	-0.7
MMLI	Mount Malkishu	3.08	154	P	Pn	11 42 04.6	+0.3
MMLI				S	Sn	11 42 39.6	-0.7
HMDT	Nahal Hemdat	3.28	154	Pn	Pn	11 42 07.4	+0.3
AMAZ	Amatzia	3.79	166	P	Pn	11 42 14.1	0.0
DSI	Dead Sea	3.87	160	Pn	Pn	11 42 15.6	+0.5
DSI				Sn	Sn	11 42 58.8	-0.9
YTIR	Yattir	4.00	164	Pn	Pn	11 42 17.4	+0.4
GHAJ	Ghor Haditha	4.17	159	Pn	Pn	11 42 19.7	+0.4
KZIT	Kziot	4.33	174	Pn	Pn	11 42 21.7	+0.2
PRNI	Paran	4.96	168	Pn	Pn	11 42 30.4	+0.3
HRFI	Mount Harif	5.27	169	Pn	Pn	11 42 34.2	-0.2
EIL	Elat	5.62	170	Pn	Pn	11 42 40.2	+1.0

*MAN **02** 11:43:58.8, 15°.77N×118°.24E, h35km, mb5.4, ML4.3, MS4.5*
*IDC **02** 11:43:58.0±0.6, 15°.69N×118°.55E, h0km, mb4.1/20, mb1 4.3/21, mb1mx4.1/43, mbtmp4.1/21, MS3.5/10, Ms1 3.6/10, ms1mx3.2/47, Error ellipse: s-maj=19.2km s-min=12.1km az=84.0*
*KLM **02** 11:43:59.0, 15°.89N×118°.34E, h8km, mb4.8*
*NEIC **02** 11:44:01.7±1.2, 15°.70N±0°.06×118°.43E±0°.08, h28km±4km, mb4.5/51, Error ellipse: s-maj=11.6km s-min=9.0km az=102.0*
ISC 02 11:43:59.3±2.6, 15°.76N±0°.03×118°.44E±0°.04, h7km±17km,

n143,σ1.71/155,mb4.5/51,MS3.7/13,7C-1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**1.41**	**89**	eP	**Pn**	**11 44 24.1**	**-1.4**
SCZP				eS	**Sb**	**11 44 42.4**	**-1.8**
BOLP	**Bolinao**	**1.54**	**66**	eP	**Pn**	**11 44 26.7**	**-0.6**
BOLP				eS	**Sn**	**11 44 46.3**	**-1.2**
SMPP	**San Manuel, Pa**	**2.19**	**79**	eP	**Pn**	**11 44 35.9**	**-0.2**
SMPP				eS	**Sn**	**11 45 02.3**	**-1.2**
PCPH	**Palayan**	**2.56**	**94**	⇑eP	**Pn**	**11 44 41.1**	**-0.1**
LUBP	**Lubang**	**2.66**	**139**	eP	**Pn**	**11 44 41.3**	**-1.4**
LUBP				eS	**Sn**	**11 45 10.5**	**-4.7**
ABRA	**Dolores**	**2.87**	**49**	eP	**Pn**	**11 44 45.7**	**+0.1**
ABRA				eS	**Sn**	**11 45 19.8**	**-0.5**
SIPP	**Brgy, Tapao**	**2.89**	**42**	⇑eP	**Pn**	**11 44 44.6**	**-1.2**
SIPP				i S	**Sb**	**11 45 24.7**	**-2.1**
TGY	**Tagaytay City**	**2.92**	**124**	⇑eP	**Pn**	**11 44 47.5**	**+1.3**
TGY				eS	**Sn**	**11 45 23.6**	**+1.9**
BALP	**Baler**	**3.02**	**90**	eP	**Pn**	**11 44 48.3**	**+0.8**
BALP				eS	**Sn**	**11 45 25.8**	**+1.9**
PGP	**Puerto Galera**	**3.31**	**132**	⇑eP	**Pn**	**11 44 52.1**	**+0.5**
PGP				eS	**Sn**	**11 45 30.2**	**-0.9**
APYP	**Conner**	**3.40**	**52**	eP	**Pn**	**11 44 53.1**	**+0.3**
APYP				eS	**Sn**	**11 45 33.9**	**+0.5**
LQP	**Lukban**	**3.41**	**118**	⇑iP	**Pn**	**11 44 53.9**	**+0.8**
LQP				i S	**Sn**	**11 45 34.2**	**+0.2**
CAUP	**Cauayan**	**3.45**	**70**	eP	**Pn**	**11 44 55.4**	**+1.9**
CAUP				eS	**Sn**	**11 45 38.1**	**+3.5**
POLP	**Polilio Island**	**3.53**	**106**	eP	**Pn**	**11 44 55.9**	**+1.3**
POLP				eS	**Sn**	**11 45 38.7**	**+2.2**
BOAC	**Boac**	**4.01**	**124**	eP	**Pn**	**11 45 02.0**	**+0.8**
PALP	**Palanan**	**4.04**	**71**	eP	**Pn**	**11 45 04.8**	**+3.3**
BUSP	**Coron**	**4.11**	**155**	eP	**Pn**	**11 45 02.0**	**-0.5**
SJMP	**San Jose**	**4.18**	**141**	eP	**Pn**	**11 45 03.9**	**+0.4**
SJMP				eS	**Sn**	**11 45 49.1**	**-3.6**
GQP	**Guinayangan**	**4.29**	**115**	⇑iP	**Pn**	**11 45 06.1**	**+1.1**
ENPP	**El Nido**	**4.63**	**168**	eP	**Pn**	**11 45 08.0**	**-1.7**
OTRP	**Odiongan**	**4.84**	**134**	eP	**Pn**	**11 45 13.9**	**+1.3**
CUYO	**Cuyo Island**	**5.49**	**153**	eP	**Pn**	**11 45 20.0**	**-1.5**
BBP	**Basco**	**5.73**	**35**	eP	**Pn**	**11 45 24.8**	**-0.1**
PVCP	**Virac**	**5.93**	**111**	eP	**Pn**	**11 45 28.8**	**+1.2**
JAP	**San Jose, Anti**	**6.04**	**145**	⇓eP	Pn	11 45 19.9	-9.1
TWG	**Pinlang**	**7.45**	**19**		**Pn**	**11 45 49.1**	**+0.7**
TWG				Sn	**Sn**	**11 47 09.8**	**-3.4**
TPUB	**Ta-pu**	**7.78**	**15**		**Pn**	**11 45 52.7**	**-0.3**
TPUB				Sn	**Sn**	**11 47 16.3**	**-5.1**
YULB	**Yu-li**	**8.05**	**19**		**Pn**	**11 45 57.6**	**+0.8**
YULB				Sn	**Sn**	**11 47 24.3**	**-3.9**
SSLB	**Suanglung**	**8.33**	**16**		**Pn**	**11 46 00.9**	**+0.3**
QIZ	**Qiongzhong**	**8.83**	**293**	P	**Pn**	**11 46 05.0**	**-2.5**
QIZ				S	**Sn**	**11 47 45.6**	**-1.7**
QIZ				pmax	pmax		
	comp=Z,36nm,0.8s						
QIZ				LR	LR		
	comp=N,460nm,16.2s						
QIZ				LR	LR		
	comp=E,300nm,10.8s						
QIZ				LR	LR		
	comp=Z,250nm,13.7s						
QIZ	**Qiongzhong**	**8.83**	**293**		**Pn**	**11 46 05.4**	**-2.1**
NACB	**Ninganchiao**	**8.88**	**19**		**Pn**	**11 46 09.3**	**+1.2**
QZH	**Quanzhou**	**9.14**	**1**	eP	**Pn**	**11 46 10.9**	**-0.7**
QZH				eS	**Sn**	**11 47 55.7**	**+0.9**
QZH				LR	LR		
	comp=N,230nm,7.1s						
QZH				LR	LR		
	comp=E,410nm,10.0s						
QZH				LR	LR		
	comp=Z,290nm,10.4s						
YHNB	**Yeheng**	**9.28**	**17**		**Pn**	**11 46 15.0**	**+1.3**
TATO	**Taipei**	**9.60**	**17**	Pn	**Pn**	**11 46 19.7**	**+1.7**
YOJ	**Yonaguni jima**	**9.66**	**26**		**Pn**	**11 46 19.9**	**+1.1**
KKM	**Kota Kinabalu**	**9.90**	**193**		**Pn**	**11 46 21.3**	**-0.9**
DLV	**T Lat**	**10.39**	**250**		**Pn**	**11 46 28.7**	**-0.3**
DAV	**Davao City (W)**	**11.11**	**140**	LR	LR	11 51 29.9	
	comp=Z,263nm,19.8s,baz=326,slow=41						
SPMM	**Sapulut**	**11.15**	**190**	P	**Pn**	**11 46 41.0**	**+1.7**
JOW	**Kunigami**	**14.32**	**38**	Pn	**Pn**	**11 47 21.7**	**-0.9**
SBUM	**Sibu**	**14.58**	**205**		**Pn**	**11 47 26.9**	**+0.8**
SBUM	**Sibu**	**14.58**	**205**	P	**Pn**	**11 47 27.0**	**+0.8**
SLVN	**Son La**	**14.86**	**294**		**Pn**	**11 47 28.0**	**-2.0**
WHN	**Wuhan**	**15.19**	**346**	⇑P	**Pn**	**11 47 36.2**	**+1.9**
WHN				S	**Sn**	**11 50 22.6**	**-0.2**
WHN				pmax	pmax		
	comp=Z,40nm,0.5s						
WHN				LR	LR		
	comp=N,910nm,12.9s						
WHN				LR	LR		
	comp=E,2µm,13.4s						
WHN				LR	LR		
	comp=Z,510nm,10.1s						
MPSI	**Mapaga**	**15.39**	**175**	P	**Pn**	**11 47 39.3**	**+2.2**
	comp=Z,318nmcomp=Z,12nm,1.1s						
MRSI	**Marisa**	**15.57**	**167**	P	**P**	**11 47 46.1**	**+2.3**
	comp=Z,45nm,0.9s						
KMSI	**Cibinong**	**16.05**	**160**	P	**P**	**11 47 54.4**	**+5.3**
NJ2	**Nanjing**	**16.22**	**1**	eP	**Pn**	**11 47 49.2**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSM	**Kuching**	**16.31**	**210**	P	**P**	**11 47 51.4**	**-0.6**
KSM				IAmb	IAmb	11 48 04.2	
	comp=Z,22nm,1.0s						
KSM	**Kuching**	**16.31**	**210**	P	**P**	**11 47 52.0**	**0.0**
APSI	**Ampana**	**16.86**	**169**	P	**P**	**11 48 00.1**	**+2.0**
	comp=Z,415nmcomp=Z,51nm,1.0s						
LUWI	**Luwuk**	**17.23**	**165**	P	**P**	**11 48 05.3**	**+3.1**
	comp=Z,1µmcomp=Z,67nm,1.1s						
LUWI	**Luwuk**	**17.23**	**165**	P	**P**	**11 48 02.5**	**+0.3**
LUWI				IAmb	IAmb	11 48 08.0	
	comp=Z,77nm,1.1s						
KMI	**Kunming**	**17.40**	**305**	P	**P**	**11 48 05.1**	**+0.8**
KMI				pP	pwP	11 48 10.4	-0.5
KMI				sP	sP	11 48 13.4	+7.8
KMI				PP	**PnPn**	**11 48 20.2**	**+7.1**
KMI				S	**Sn**	**11 51 19.5**	**+2.4**
KMI				pmax	pmax		
	comp=Z,11nm,1.6s						
KMI				pmax	pmax		
	comp=Z,76nm,3.5s						
KMI				LR	LR		
	comp=N,340nm,15.6s						
KMI				LR	LR		
	comp=E,180nm,15.5s						
KMI				LR	LR		
	comp=Z,220nm,13.1s						
KMI	**Kunming**	**17.40**	**305**	Pn	**Pn**	**11 48 02.8**	**-0.2**
LBMI	**Labuha**	**18.59**	**150**	P	**Pn**	**11 48 19.9**	**+2.5**
	comp=Z,26nm,1.0s						
CM31	**Chiang Mai Arr**	**18.83**	**281**	P	**Pn**	**11 48 20.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**18.83**	**281**	P	**Pn**	**11 48 22.4**	**+2.0**
	baz=91,slow=10,SNR=47						
CHTO	**Chiang Mai**	**18.86**	**282**	P	**Pn**	**11 48 21.0**	**+0.2**
SPSI	**Sidrap Palu**	**19.64**	**176**	P	**Pn**	**11 48 30.3**	**+0.2**
MYKOM	**Kota Tinggi**	**19.99**	**227**	P	**P**	**11 48 32.3**	**-0.3**
MYKOM	**Kota Tinggi**	**19.99**	**227**	P	Pn	11 48 36.0	+1.7
CD2	**Chengdu**	**20.20**	**321**	eP	**P**	**11 48 35.0**	**+0.2**
KULM	**Kulim**	**20.33**	**241**	P	**P**	**11 48 33.7**	**-2.6**
JNU	**Nakatsue**	**20.63**	**31**	P	**P**	**11 48 40.0**	**+0.5**
	comp=Z,41nm,0.9s,baz=157,slow=5.6,SNR=18						
JNU				LR	LR	11 56 17.0	
	comp=Z,113nm,21.1s,baz=221,slow=36						
JNU	**Nakatsue**	**20.63**	**31**	P	**P**	**11 48 40.0**	**+0.5**
KAPI	**Kappang**	**20.68**	**176**	P	**P**	**11 48 40.4**	**+0.3**
	comp=Z,9.5nm,0.8s,baz=38,slow=12,SNR=3.9						
KAPI	**Kappang**	**20.68**	**176**	P	**P**	**11 48 39.6**	**-0.5**
KAPI				IAmb	IAmb	11 48 41.2	
	comp=Z,20nm,1.1s						
SIJI	**Sorong**	**20.82**	**141**	LR	LR	11 56 53.1	
	comp=Z,100nm,18.7s,baz=0.5,slow=37						
BKSI	**Bulukumba**	**21.01**	**175**	P	**P**	**11 48 45.6**	**+2.0**
	comp=Z,22nm,1.4s						
PSI	**Prapat**	**23.14**	**238**	P	**P**	**11 49 08.3**	**+1.8**
	comp=Z,1.9nm,0.3s,baz=360,slow=9.1,SNR=6.2						
KSRS	**Korea Array**	**23.18**	**19**	P	**P**	**11 49 06.7**	**+0.1**
	comp=Z,3.1nm,0.5s,baz=199,slow=11,SNR=14						
KSRS				LR	LR	11 58 16.2	
	comp=Z,98nm,19.8s,baz=334,slow=37						
RPSI	**Rantau Prapat**	**23.20**	**238**	P	**P**	**11 49 07.4**	**+0.4**
RPSI				IAmb	IAmb	11 49 17.2	
	comp=Z,11nm,1.2s						
BJT	**Baijiatuau**	**24.25**	**356**	P	**P**	**11 49 16.4**	**-0.6**
BJT				IAmb	IAmb	11 49 18.7	
	comp=Z,15nm,0.7s						
BJI	**Beijing**	**24.27**	**356**	P	**P**	**11 49 18.0**	**+0.9**
BJI				S	**S**	**11 53 41.9**	**+5.8**
BJI				pmax	pmax		
	comp=Z,22nm,0.7s						
BJI				LR	LR		
	comp=N,80nm,11.4s						
BJI				LR	LR		
	comp=E,170nm,14.2s						
BJI				LR	LR		
	comp=Z,400nm,30.3s						
EDFI	**Ende, Flores**	**24.56**	**172**	P	**P**	**11 49 19.8**	**-0.3**
	comp=Z,18nm,0.8s						
UGM	**Wanagama**	**24.79**	**199**	P	**P**	**11 49 21.2**	**-0.9**
LEM	**Lembang**	**24.87**	**206**	LR	LR	11 59 17.1	
	comp=Z,75nm,21.2s,baz=135,slow=37						
INU	**Inuyama**	**25.63**	**37**	P	**P**	**11 49 29.2**	**-0.3**
INU				IAmb	IAmb	11 49 35.7	
	comp=Z,13nm,1.2s						
HHC	**Hu-ho-hao-te**	**25.70**	**348**	eP	**P**	**11 49 32.5**	**+2.2**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,56nm,4.8s						
HHC				LR	LR		
	comp=N,96nm,12.0s						
HHC				LR	LR		
	comp=E,170nm,10.0s						
HHC				LR	LR		
	comp=Z,120nm,9.8s						
SOEI	**Soe**	**26.00**	**167**	P	**P**	**11 49 31.2**	**-2.0**
BATI	**Baumata**	**26.31**	**168**	P	**P**	**11 49 34.5**	**-1.4**
	comp=Z,15nm,0.4s,baz=208,slow=0.9,SNR=4.7						
SHL	**Shillong**	**26.65**	**296**	P	**P**	**11 49 39.0**	**-0.2**
SMPI	**Sarmi**	**26.69**	**130**	P	**P**	**11 49 40.7**	**+1.4**
	comp=Z,21nm,1.2s						
SAUI	**Saumlaki**	**26.81**	**151**	P	**P**	**11 49 43.6**	**+3.3**
	comp=Z,11µmcomp=Z,116nm,1.6s						
MJAR	**Matsushiro Arr**	**27.16**	**37**	P	**P**	**11 49 44.6**	**+1.2**
	comp=Z,0.2nm,0.4s,baz=267,slow=30,SNR=2.2						
LSA	**Lhasa**	**28.65**	**304**	P	**P**	**11 49 57.1**	**-0.2**
GTA	**Gaotai**	**28.65**	**329**	eP	**P**	**11 49 57.8**	**+1.0**
GTA				pP	pwP	11 50 07.7	+4.5
GTA				sP	sP	11 50 12.4	+14
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,73nm,5.1s						
GTA				LR	LR		
	comp=N,330nm,16.5s						
GTA				LR	LR		
	comp=E,420nm,15.1s						
GTA				LR	LR		
	comp=Z,350nm,12.7s						
KNRA	**Kununurra**	**32.86**	**161**	P	**P**	**11 50 32.9**	**-1.1**
KNRA				IAmb	IAmb	11 50 33.8	
	comp=Z,5.8nm,0.8s						
ULN	**Ulaanbaatar**	**33.37**	**346**	P	**P**	**11 50 38.2**	**-0.1**
FITZ	**Fitzroy Crossi**	**34.38**	**168**	P	**P**	**11 50 45.7**	**-1.5**
FITZ				IAmb	IAmb	11 51 01.7	
	comp=Z,11nm,1.3s						
KLR	**Kul'dur**	**35.10**	**15**	P	**P**	**11 50 52.9**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=217,slow=6.6,SNR=6.8						
PMG	**Port Moresby**	**37.87**	**129**	P	**P**	**11 51 15.9**	**-1.3**
WMQ	**Urumqi**	**38.26**	**323**	eP	**P**	**11 51 21.1**	**+0.8**
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,94nm,5.1s						
WMQ				LR	LR		
	comp=N,360nm,16.7s						
WMQ				LR	LR		
	comp=E,160nm,16.9s						
WMQ				LR	LR		
	comp=Z,100nm,21.5s						
COEN	**Coen**	**38.34**	**139**	P	**P**	**11 51 19.8**	**-1.3**
COEN				IAmb	IAmb	11 51 36.4	
	comp=Z,5.4nm,0.9s						
WB0	**Warramunga Arr**	**38.63**	**156**	IAmb	IAmb	11 51 27.5	
	comp=Z,7.8nm,0.9s						
WRAB	**Tennant Creek**	**38.76**	**156**	P	**P**	**11 51 23.1**	**-1.6**
WRAB				IAmb	IAmb	11 51 28.4	
	comp=Z,11nm,1.0s						
WRA	**Warramunga Arr**	**38.77**	**156**	P	**P**	**11 51 22.9**	**-1.8**
	comp=Z,4.2nm,0.8s,baz=335,slow=9.4,SNR=31						
WB2	**Warramunga Arr**	**38.77**	**156**	IAmb	IAmb	11 51 28.7	
	comp=Z,7.8nm,0.8s						
WR0	**Warramunga Arr**	**38.86**	**155**	IAmb	IAmb	11 51 28.8	
	comp=Z,13nm,1.2s						
AS31	**Alice Springs**	**42.00**	**159**	P	**P**	**11 51 50.3**	**-1.1**
ASAR	**Alice Springs**	**42.00**	**159**	P	**P**	**11 51 50.5**	**-0.9**
	comp=Z,6.6nm,0.7s,baz=336,slow=7.0,SNR=61						
MK31	**Makanchi Array**	**43.09**	**324**	P	**P**	**11 51 59.8**	**-0.3**
MKAR	**Makanchi Array**	**43.09**	**324**	P	**P**	**11 52 00.5**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=128,slow=9.8,SNR=12						
KSH	**Kashi**	**43.91**	**311**	P	**P**	**11 52 10.6**	**+3.7**
KSH				pP	pwP	11 52 16.5	+3.1
KSH				sP	sP	11 52 20.7	+12
KSH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,69nm,3.8s						
KDJ	**Kajisay**	**44.05**	**315**	P	**P**	**11 52 08.0**	**-0.1**
NIL	**Nilore**	**44.37**	**302**	P	**P**	**11 52 09.6**	**-1.0**
NIL				IAmb	IAmb	11 52 11.3	
	comp=Z,10nm,0.8s						
AAK	**Ala-Archa**	**46.08**	**315**	P	**P**	**11 52 24.0**	**-0.2**
ZAA0	**Zalesovo Array**	**46.24**	**333**	P	**P**	**11 52 25.4**	**+0.3**
ZAA0				IAmb	IAmb	11 52 27.9	
	comp=Z,2.8nm,0.3s						
ZALV	**Zalesovo Beam**	**46.24**	**333**	P	**P**	**11 52 25.4**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=64,slow=6.6,SNR=4.2						
ARSB	**Arslanbob**	**46.67**	**312**	P	**P**	**11 52 28.7**	**-0.2**
ARSB				IAmb	IAmb	11 52 30.6	
	comp=Z,4.0nm,0.6s						
YAK	**Yakutsk**	**46.90**	**7**	P	**P**	**11 52 29.2**	**-0.9**
KURK	**Kurchatov**	**47.27**	**326**	P	**P**	**11 52 33.2**	**0.0**
KURK				IAmb	IAmb	11 52 51.5	
	comp=Z,5.9nm,1.2s						
GAR	**Garm**	**47.94**	**309**	P	**P**	**11 52 37.8**	**-0.9**
GAR				IAmb	IAmb	11 52 51.8	
	comp=Z,12nm,1.3s						
PEA0B	**Petropavlovsk-**	**48.33**	**31**	P	**P**	**11 52 41.2**	**-0.2**
PETK	**Petropavlovsk-**	**48.33**	**31**	P	**P**	**11 52 41.5**	**+0.1**
	comp=Z,3.3nm,0.7s,baz=236,slow=7.9,SNR=11						
CHGR	**Chuyangaron**	**48.73**	**308**	P	**P**	**11 52 44.7**	**-0.1**
KK31	**Karatay Array**	**48.98**	**314**	P	**P**	**11 52 45.8**	**-0.8**
KK31				IAmb	IAmb	11 52 48.0	
	comp=Z,3.1nm,0.9s						
MA2	**Magadan**	**49.73**	**21**	P	**P**	**11 52 52.1**	**+0.1**
BBOO	**Buckleboo**	**51.15**	**161**	P	**P**	**11 53 01.6**	**-1.4**
STKA	**Stephens Creek**	**52.31**	**155**	P	**P**	**11 53 10.4**	**-1.4**
	comp=Z,3.5nm,0.7s,baz=320,slow=8.0,SNR=6.8						
STKA	**Stephens Creek**	**52.31**	**155**	P	**P**	**11 53 10.6**	**-1.2**
SEY	**Seymchan**	**52.74**	**19**	P	**P**	**11 53 15.2**	**+0.7**
	comp=Z,2.6nm,0.9s,baz=205,slow=9.0,SNR=3.5						
TIXI	**Tiksi**	**56.22**	**4**	P	**P**	**11 53 38.9**	**-0.8**
TIXI				IAmb	IAmb	11 53 44.1	
	comp=Z,7.7nm,1.4s						
NRIK	**Noril'sk**	**56.93**	**347**	P	**P**	**11 53 45.0**	**+0.1**
	comp=Z,4.6nm,0.8s,baz=145,slow=7.5,SNR=7.7						
NRIK				LR	LR	12 18 30.2	
	comp=Z,82nm,19.3s,baz=194,slow=36						
GEYT	**Alibeck**	**57.17**	**305**	P	**P**	**11 53 46.8**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=158,slow=43,SNR=2.1						
BILL	**Bilibino**	**60.45**	**19**	P	**P**	**11 54 08.8**	**-0.5**
BILL				IAmb	IAmb	11 54 25.6	
	comp=Z,3.1nm,1.0s						
SOCY	**Socotra**	**62.45**	**276**	P	**P**	**11 54 22.3**	**-1.6**
RAYN	**Ar Rayn**	**68.51**	**289**	P	**P**	**11 55 02.9**	**-0.1**
RAYN				IAmb	IAmb	11 55 04.1	
	comp=Z,4.2nm,0.8s						
KBZ	**Khabaz**	**68.89**	**311**	P	**P**	**11 55 05.2**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=172,slow=4.0,SNR=4.2						
TOLK	**Toolik Lake Re**	**76.18**	**22**	P	**P**	**11 55 48.2**	**+0.3**
TOLK				IAmb	IAmb	11 55 55.5	
	comp=Z,4.9nm,1.3s						
BPAW	**Bear Paw Mtn.**	**76.21**	**27**	P	**P**	**11 55 48.5**	**+0.3**
BPAW				IAmb	IAmb	11 55 59.5	
	comp=Z,6.2nm,1.1s						
ARCES	**ARCESS Array B**	**76.39**	**339**	P	**P**	**11 55 50.8**	**+1.8**
	comp=Z,1.0nm,0.8s,baz=339,slow=6.5,SNR=3.6						
BKZ	**Black Stump Fm**	**76.92**	**137**	P	**P**	**11 55 51.5**	**-1.1**
RND	**Reindeer**	**77.26**	**27**	P	**P**	**11 55 53.5**	**-0.7**
RND				IAmb	IAmb	11 55 59.1	
	comp=Z,3.4nm,0.9s						
FINES	**FINESS Array B**	**77.43**	**331**	P	**P**	**11 55 54.1**	**-1.0**
	comp=Z,1.1nm,0.8s,baz=80,slow=1.6,SNR=1.5						
FINES				LR	LR	12 31 13.7	
	comp=Z,26nm,18.3s,baz=155,slow=37						
AKASG	**Malin Array Be**	**77.49**	**319**	LR	LR	12 30 32.4	
	comp=Z,39nm,21.3s,baz=260,slow=36						
ILAR	**Eielson Array**	**77.86**	**26**	P	**P**	**11 55 56.3**	**-1.1**
	comp=Z,0.1nm,0.5s,baz=89,slow=19,SNR=2.9						
RIDG	**Independent Ri**	**78.95**	**27**	P	**P**	**11 56 03.0**	**-0.6**
RIDG				IAmb	IAmb	11 56 13.9	
	comp=Z,7.7nm,1.2s						
NOA	**NORSAR Array B**	**84.43**	**332**	LR	LR	12 34 35.9	
	comp=Z,38nm,19.3s,baz=60,slow=36						
GERES	**GERESS Array B**	**87.66**	**320**	LR	LR	12 37 46.5	
	comp=Z,36nm,18.7s,baz=78,slow=37						
YKA	**Yellowknife Ar**	**91.70**	**22**	P	**P**	**11 57 07.2**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=84,slow=20,SNR=2.5						

UCR 02 12:14:15.5±1.4,9.73N×84.78W,h13km±19km,MD3.6,1C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRA1	**San Ramn**	**0.46**	**40**	eP	Pg	12 14 24.5	-0.1
SRA1				eS	Sg	12 14 31.6	+0.8
JTS	**Las Juntas de**	**0.58**	**343**	eP	Pg	12 14 26.3	-0.6
JTS				eS	Sg	12 14 34.3	-0.3
CASO	**Castillo**	**0.70**	**4**	i P	Pg	12 14 28.6	-0.5
HDC	**Heredia**	**0.71**	**68**	eS	Sb	12 14 39.2	-0.3
FORC	**Fortuna**	**0.74**	**8**	i P	Pg	12 14 29.4	-0.4
FORC				i S	Sg	12 14 39.9	+0.3
CEDE	**Laguna Cedeo**	**0.75**	**6**	i P	Pg	12 14 29.6	-0.6
CEDE				eS	Sb	12 14 41.1	+0.3
LCR2	**La Lucha 2**	**0.77**	**89**	eP	Pg	12 14 29.3	-1.1
LCR2				eS	Sg	12 14 40.3	-0.2
GUAI	**GUAI**	**0.90**	**307**	⇑iP	Pg	12 14 31.7	-1.1
GUAI				i S	Sg	12 14 44.5	-0.1
ACAL	**Aguas Claras**	**0.93**	**344**	i P	Pg	12 14 32.6	-0.9
CUI	**Cuipilapa**	**0.99**	**338**	eP	Pb	12 14 33.3	-1.4
COLC	**Colonia**	**1.02**	**336**	i P	Pb	12 14 33.6	-1.4
HORNC	**Hornillas**	**1.05**	**338**	i P	Pb	12 14 34.0	-1.6
BUEV	**Buena Vista**	**1.23**	**330**	eP	Pn	12 14 37.3	-1.1
GB1A	**Borinquen Arri**	**1.24**	**331**	eP	Pn	12 14 37.4	-1.2
ACON	**Acoyapa**	**2.26**	**350**	eP	Pn	12 14 53.2	+0.6

*DDA **02** 12:19:32.1,37.01N×27.46E,h6km±1km,ML1.7*
ISK 02 12:19:31.4,37.01N×27.40E,h18km,ML1.9/6,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.07**	**30**	i P	Pg	12 19 34.0	-0.8
BDRM				IAML		12 19 35.0	
	comp=E,1µm,0.1s						
BDRM				IAML		12 19 35.0	
	comp=N,2µm,0.5s						
BDRM				i S	Sg	12 19 35.2	-1.9
BODT	**Bodrum**	**0.09**	**306**	PG	Pg	12 19 35.4	+0.4
BODT				SG	Sg	12 19 37.9	+0.4
YKAV	**Yalikavak-Bodr**	**0.15**	**320**	PG	Pg	12 19 35.8	+0.1
YKAV				SG	Sg	12 19 39.1	+0.5
DAT	**Datca**	**0.31**	**153**	PG	Pg	12 19 38.3	+0.1
DAT	**Datca**	**0.31**	**153**	i P	Pg	12 19 38.0	-0.2
DAT				i S	Sb	12 19 43.2	-0.1
YER	**Yerkesik**	**0.71**	**80**	PG	Pg	12 19 45.9	+0.4
AYDN	**Tasoluk**	**0.75**	**30**	i P	Pb	12 19 45.8	-0.2
AYDN				i S	Sb	12 19 55.0	-1.1
TURN	**Turunc**	**0.97**	**98**	PG	Pb	12 19 45.7	-4.0
TURN	**Turunc**	**0.97**	**98**	i P	Pb	12 19 45.0	-4.7
TURN				i S	Sb	12 19 55.1	-7.1
TURN				IAML		12 19 56.0	
	comp=N,25nm,0.3s						
TURN				IAML		12 19 57.0	
	comp=E,24nm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**1.01**	**22**	PG	Pg	12 19 51.1	0.0

*THE **02** 12:20:29.8,38.31N×22.51E,h6km,ML3.0/21,Error ellipse: s-maj=0.6km s-min=0.2km az=307.0*
*ATH **02** 12:20:29.2,38.30N×22.50E,h19km±1km,ML3.0/24,Error ellipse: s-maj=1.9km s-min=0.5km az=306.0*
ISC 02 12:20:29.6±0.8,38.31N±0.01×22.51E±0.01,h15km±6km, n77,σ0.47/127,4C-3D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLFA	**Delphi**	**0.17**	**357**	P	**Pg**	**12 20 33.6**	**-0.3**
DLFA				S	**Sg**	**12 20 36.7**	**0.0**
DLFA				AML	AML	12 20 37.1	
	comp=N,14812µm,0.2s						
DLFA				AML	AML	12 20 38.1	
	comp=E,18588µm,0.2s						
KALE	**Kalithea**	**0.30**	**287**	P	**Pg**	**12 20 35.8**	**-0.2**
KALE				S	**Sg**	**12 20 40.3**	**0.0**
	comp=E,7µm,0.2s						
KALE	**Kalithea**	**0.30**	**287**	P	**Pg**	**12 20 35.8**	**-0.2**
KALE				S	**Sg**	**12 20 40.7**	**+0.4**
KALE				AML	AML	12 20 41.0	
	comp=N,19162µm,0.2s						
KALE				AML	AML	12 20 41.1	
	comp=E,10413µm,0.2s						
PROD	**Prodromos**	**0.31**	**98**	P	**Pg**	**12 20 36.0**	**-0.1**
PROD				S	**Sg**	**12 20 40.5**	**0.0**
PROD	**Prodromos**	**0.31**	**98**	P	**Pg**	**12 20 35.9**	**-0.1**
PROD				S	**Sg**	**12 20 41.0**	**+0.4**
PROD				AML	AML	12 20 44.9	
	comp=E,11352µm,0.3s						
PROD				AML	AML	12 20 45.3	
	comp=N,11338µm,0.3s						
ALIK	**Aliki, Aigiali**	**0.32**	**262**	P	**Pg**	**12 20 36.4**	**+0.2**
TRIZ	**Trizonia**	**0.35**	**280**	P	**Pg**	**12 20 36.5**	**-0.3**
TRIZ	**Trizonia**	**0.35**	**280**	P	**Pg**	**12 20 36.4**	**-0.3**
TRIZ				S	**Sg**	**12 20 41.8**	**+0.2**
SERG	**Sergoula**	**0.37**	**287**	P	**Pg**	**12 20 36.8**	**-0.4**
SERG				S	**Sg**	**12 20 42.8**	**+0.5**
	comp=N,3µm,0.3s						
SERG	**Sergoula**	**0.37**	**287**	P	**Pg**	**12 20 36.8**	**-0.4**
SERG				S	**Sg**	**12 20 42.7**	**+0.3**
SERG				AML	AML	12 20 46.3	
	comp=E,7007µm,0.3s						
SERG				AML	AML	12 20 47.0	
	comp=N,5227µm,0.2s						
KLV	**Kalavryta, Ach**	**0.39**	**227**	P	**Pg**	**12 20 37.1**	**-0.3**
KLV	**Kalavryta, Ach**	**0.39**	**227**	P	**Pg**	**12 20 37.1**	**-0.3**
KLV				S	**Sg**	**12 20 42.5**	**-0.3**
KLV				AML	AML	12 20 42.9	
	comp=N,2238µm,0.3s						
KLV				AML	AML	12 20 45.6	
	comp=E,2090µm,0.2s						
LAKA	**Lakka**	**0.42**	**261**	P	**Pg**	**12 20 38.1**	**0.0**
LAKA				S	**Sg**	**12 20 44.0**	**+0.1**
LAKA	**Lakka**	**0.42**	**261**	P	**Pg**	**12 20 38.0**	**0.0**
LAKA				S	**Sg**	**12 20 44.1**	**+0.3**
LAKA				AML	AML	12 20 50.3	
	comp=N,955µm,0.4s						
LAKA				AML	AML	12 20 50.8	
	comp=E,951µm,0.3s						
LOUT	**Loutraki**	**0.48**	**131**	P	**Pg**	**12 20 39.1**	**-0.2**
LOUT				S	**Sg**	**12 20 46.1**	**+0.4**
	comp=E,3µm,0.3s						
LOUT	**Loutraki**	**0.48**	**131**	P	**Pg**	**12 20 39.0**	**-0.2**
LOUT				S	**Sg**	**12 20 46.0**	**+0.2**
LOUT				AML	AML	12 20 47.6	
	comp=E,902µm,0.3s						
LOUT				AML	AML	12 20 51.1	
	comp=N,1131µm,0.2s						
EFP	**Efpalio**	**0.49**	**285**	P	**Pg**	**12 20 38.9**	**-0.5**
EFP				S	**Sg**	**12 20 46.4**	**+0.5**
	comp=N,1µm,0.5s						
EFP	**Efpalio**	**0.49**	**285**	P	**Pg**	**12 20 38.8**	**-0.5**
EFP				S	**Sg**	**12 20 45.9**	**0.0**
EFP				AML	AML	12 20 47.3	
	comp=E,2503µm,0.2s						
EFP				AML	AML	12 20 47.7	
	comp=N,3224µm,0.4s						
LKR	**Lokris**	**0.52**	**48**	P	**Pg**	**12 20 39.2**	**-0.6**
LKR				S	**Sg**	**12 20 47.2**	**+0.4**
	comp=N,7µm,0.1s						
LKR	**Lokris**	**0.52**	**48**	P	**Pg**	**12 20 39.3**	**-0.6**
LKR				S	**Sb**	**12 20 47.3**	**-0.4**
LKR				AML	AML	12 20 48.5	
	comp=E,15058µm,0.2s						
LKR				AML	AML	12 20 49.8	

	comp=N,14544µm,0.2s					
ANX	**Ano Chora**	**0.54 302**	P	**Pg**	**12 20 39.9**	**-0.5**
ANX			S	**Sg**	**12 20 47.9**	**+0.2**
	comp=N,3µm,0.3s					
ANX	**Ano Chora**	**0.54 302**	P	**Pg**	**12 20 39.9**	**-0.5**
ANX			S	**Sg**	**12 20 48.2**	**+0.5**
ANX			AML	AML	12 20 50.8	
	comp=N,7164µm,0.3s					
ANX			AML	AML	12 20 51.4	
	comp=E,6098µm,0.3s					
VIL2	**Platees**	**0.60 99**	P	**Pb**	**12 20 41.8**	**-0.1**
VIL2			S	**Sb**	**12 20 51.6**	**+1.4**
VIL2			AML	AML	12 20 54.7	
	comp=N,7373µm,0.3s					
VIL2			AML	AML	12 20 56.6	
	comp=E,6579µm,0.3s					
VILL	**Villia**	**0.65 102**	P	**Pg**	**12 20 41.8**	**-0.5**
DRO	**Drossia**	**0.72 241**	P	**Pg**	**12 20 43.4**	**-0.3**
DRO			S	**Sb**	**12 20 54.1**	**+0.5**
	comp=E,2µm,0.3s					
DRO	**Drossia**	**0.72 241**	P	**Pg**	**12 20 43.4**	**-0.3**
DRO			S	**Sg**	**12 20 53.3**	**+0.1**
DRO			AML	AML	12 20 57.4	
	comp=E,3782µm,0.3s					
DRO			AML	AML	12 21 01.4	
	comp=N,2846µm,0.4s					
AGG	**Agios Georgios**	**0.73 349**	P	**Pg**	**12 20 43.4**	**-0.4**
AGG			S	**Sb**	**12 20 54.0**	**+0.1**
	comp=N,2µm,0.3s					
AGG	**Agios Georgios**	**0.73 349**	P	**Pg**	**12 20 43.4**	**-0.4**
AGG			S	**Sg**	**12 20 53.6**	**+0.1**
AGG			AML	AML	12 20 56.1	
	comp=N,2600µm,0.3s					
AGG			AML	AML	12 20 56.7	
	comp=E,4141µm,0.3s					
MAKR	**Makrakomi, Fth**	**0.77 337**	P	**Pg**	**12 20 44.1**	**-0.5**
MAKR			S	**Sb**	**12 20 55.2**	**+0.3**
	comp=E,2µm,0.5s					
MAKR	**Makrakomi, Fth**	**0.77 337**	P	**Pg**	**12 20 44.0**	**-0.5**
MAKR			S	**Sb**	**12 20 55.0**	**+0.1**
MAKR			AML	AML	12 21 00.4	
	comp=E,3312µm,0.5s					
MAKR			AML	AML	12 21 01.2	
	comp=N,4400µm,0.4s					
TRIP	**Tripoli**	**0.80 194**	P	**Pg**	**12 20 44.7**	**-0.4**
TRIP	**Tripoli**	**0.80 194**	P	**Pg**	**12 20 44.6**	**-0.6**
TRIP			S	**Sg**	**12 20 55.6**	**-0.1**
TRIP			AML	AML	12 20 59.2	
	comp=E,1595µm,0.3s					
TRIP			AML	AML	12 21 00.1	
	comp=N,1823µm,0.4s					
EVR	**Evrytania**	**0.82 318**	P	**Pg**	**12 20 45.3**	**-0.3**
EVR			S	**Sb**	**12 20 57.0**	**+0.4**
	comp=N,1µm,0.5s					
EVR	**Evrytania**	**0.82 318**	P	**Pg**	**12 20 45.3**	**-0.3**
EVR			S	**Sg**	**12 20 56.4**	**0.0**
EVR			AML	AML	12 21 01.0	
	comp=N,2284µm,0.4s					
EVR			AML	AML	12 21 02.7	
	comp=E,2041µm,0.5s					
RLS	**Riolos of Patr**	**0.86 254**	P	**Pb**	**12 20 46.0**	**-0.2**
RLS			S	**Sn**	**12 20 58.7**	**-0.7**
	comp=E,525nm,0.4s					
RLS	**Riolos of Patr**	**0.86 254**	P	**Pb**	**12 20 46.0**	**-0.2**
RLS			S	**Sb**	**12 20 57.8**	**+0.4**
RLS			AML	AML	12 21 03.6	
	comp=N,1379µm,0.5s					
RLS			AML	AML	12 21 04.7	
	comp=E,576µm,0.3s					
MRKA	**Markates**	**0.94 64**	P	**Pb**	**12 20 47.2**	**-0.4**
MRKA			S	**Sg**	**12 21 00.6**	**+0.6**
MRKA			AML	AML	12 21 05.0	
	comp=N,1580µm,0.3s					
MRKA			AML	AML	12 21 07.0	
	comp=E,1968µm,0.5s					
VLX	**Vlachokerasia**	**0.94 186**	P	**Pb**	**12 20 47.2**	**-0.4**
VLX			S	**Sn**	**12 21 01.4**	**-0.2**
	comp=E,2µm,0.5s					
VLX	**Vlachokerasia**	**0.94 186**	P	**Pb**	**12 20 47.0**	**-0.6**
VLX			S	**Sb**	**12 21 00.1**	**+0.1**
VLX			AML	AML	12 21 03.4	
	comp=N,3110µm,0.4s					
VLX			AML	AML	12 21 03.4	
	comp=E,3498µm,0.3s					
DID	**Didima**	**0.98 144**	P	**Pb**	**12 20 48.0**	**-0.4**
DID			S	**Sn**	**12 21 02.5**	**-0.1**
	comp=E,1µm,0.4s					
DID	**Didima**	**0.98 144**	P	**Pb**	**12 20 48.0**	**-0.4**
DID			S	**Sg**	**12 21 01.6**	**+0.1**
DID			AML	AML	12 21 04.3	
	comp=E,2664µm,0.5s					
DID			AML	AML	12 21 07.8	
	comp=N,1595µm,0.4s					
AMT	**Artemida-Makis**	**1.00 220**	P	**Pb**	**12 20 48.3**	**-0.3**
AMT			S	**Sn**	**12 21 03.1**	**+0.2**
	comp=N,1µm,0.3s					
AMT	**Artemida-Makis**	**1.00 220**	P	**Pb**	**12 20 48.4**	**-0.3**
AMT			S	**Sb**	**12 21 01.8**	**+0.2**
AMT			AML	AML	12 21 07.4	
	comp=E,1924µm,0.4s					
AMT			AML	AML	12 21 10.0	
	comp=N,2312µm,0.4s					
ATH	**Athens Observa**	**1.01 109**	P	**Pn**	**12 20 49.2**	**+0.1**
ATH			S	**Sg**	**12 21 02.5**	**+0.2**
ATH			AML	AML	12 21 04.1	
	comp=E,5179µm,0.3s					
ATH			AML	AML	12 21 07.3	
	comp=N,2471µm,0.5s					
KRND	**KRANIDI**	**1.05 151**	P	**Pb**	**12 20 49.3**	**-0.2**
KRND			S	**Sn**	**12 21 05.0**	**+0.8**
	comp=N,2µm,0.5s					
KRND	**KRANIDI**	**1.05 151**	P	**Pb**	**12 20 49.2**	**-0.2**
ATHU	**Athens Univers**	**1.06 108**	P	**Pn**	**12 20 49.9**	**-0.1**
ATHU	**Athens Univers**	**1.06 108**	P	**Pn**	**12 20 49.9**	**-0.1**
PTL	**Penteli**	**1.10 103**	P	**Pn**	**12 20 50.6**	**+0.1**
VLY	**Voula,Athens**	**1.11 114**	P	**Pb**	**12 20 50.6**	**+0.1**
VLY			S	**Sn**	**12 21 06.4**	**+0.8**
	comp=N,948nm,0.4s					
VLY	**Voula,Athens**	**1.11 114**	P	**Pb**	**12 20 50.6**	**+0.1**
SKIA	**Skiathos**	**1.14 41**	P	**Pb**	**12 20 50.9**	**-0.1**
SKIA			S	**Sg**	**12 21 07.8**	**+1.3**
	comp=N,550nm,0.4s					
SKIA	**Skiathos**	**1.14 41**	P	**Pb**	**12 20 51.0**	**-0.1**
DION	**Dionisos Attik**	**1.15 101**	P	**Pn**	**12 20 51.4**	**+0.3**
DION	**Dionisos Attik**	**1.15 101**	P	**Pn**	**12 20 51.3**	**+0.3**
NEO	**Neokhori**	**1.15 29**	P	**Pb**	**12 20 51.2**	**+0.1**
NEO			S	**Sg**	**12 21 08.0**	**+1.3**
	comp=N,885nm,0.2s					
NEO	**Neokhori**	**1.15 29**	P	**Pb**	**12 20 51.3**	**+0.1**
NEO			S	**Sn**	**12 21 06.4**	**-0.2**
NEO			AML	AML	12 21 11.6	
	comp=N,2080µm,0.3s					
NEO			AML	AML	12 21 11.8	
	comp=E,1442µm,0.2s					
ITM	**Ithomi**	**1.22 203**	P	**Pn**	**12 20 52.2**	**+0.1**
ITM			S	**Sg**	**12 21 10.1**	**+1.3**
	comp=E,295nm,0.5s					
ITM	**Ithomi**	**1.22 203**	P	**Pn**	**12 20 52.1**	**+0.1**
YDRA	**Hydra**	**1.22 141**	P	**Pg**	**12 20 52.9**	**-0.2**
KYMI	**Kymi, Euboea I**	**1.29 75**	P	**Pn**	**12 20 53.4**	**+0.3**
KYMI			S	**Sg**	**12 21 11.9**	**+0.6**
	comp=E,272nm,0.4s					
KYMI	**Kymi, Euboea I**	**1.29 75**	P	**Pn**	**12 20 53.3**	**+0.3**
THL	**Klokotos Trika**	**1.31 343**	P	**Pb**	**12 20 54.3**	**+0.3**
THL	**Klokotos Trika**	**1.31 343**	P	**Pb**	**12 20 54.1**	**+0.1**
THL			S	**Sg**	**12 21 11.8**	**-0.2**
THL			AML	AML	12 21 17.1	
	comp=N,350µm,0.4s					
THL			AML	AML	12 21 17.5	
	comp=E,683µm,0.5s					
KFL	**Anninata**	**1.37 262**	P	**Pg**	**12 20 56.5**	**+0.6**
PYL	**PYLOS**	**1.53 204**	P	**Pb**	**12 20 57.5**	**-0.2**
KARY	**Karystos**	**1.54 100**	P	**Pn**	**12 20 57.0**	**+0.4**
KARY			S	**Sg**	**12 21 18.5**	**-0.8**
	comp=E,285nm,0.4s					
KARY	**Karystos**	**1.54 100**	P	**Pb**	**12 20 57.3**	**-0.6**
DYR	**Agios Nikonas**	**1.55 185**	P	**Pb**	**12 20 57.8**	**-0.1**
VLI	**Veliai**	**1.62 168**	P	**Pn**	**12 20 57.7**	**+0.1**
VLI	**Veliai**	**1.62 168**	P	**Pn**	**12 20 57.8**	**+0.1**
SERI	**Serifos**	**1.94 125**	P	**Pn**	**12 21 02.1**	**+0.1**
APE	**Apeiranthos**	**2.70 116**	⇑P	**Pn**	**12 21 12.8**	**+0.3**
APE			⇑S	**Sn**	**12 21 43.0**	**-1.9**
IDI	**Anoyia**	**3.57 147**	⇓P	**Pn**	**12 21 24.9**	**+0.5**
VTS	**Vitosha**	**4.34 7**	⇑P	**Pn**	**12 21 35.7**	**+0.5**
VTS			⇓S	**Sn**	**12 22 24.1**	**-1.6**
VOIR		**7.37 14**	⇑P	**Pn**	**12 22 16.6**	**-0.1**
MLR	**Muntele Rosu**	**7.62 19**	⇓P	**Pn**	**12 22 19.6**	**-0.6**

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*DDA **02** 12:32:06.8, 36°.99N×27°.41E, h8^{km}, ML2.1*
*ISK **02** 12:32:06.5, 37°.00N×27°.41E, h14^{km}±1^{km}, ML2.5/9*
ISC 02 12:32:06.1±0.9**, 37°.00N**±0°.03×**27°.49E**±0°.03**, h10**^{km}±6^{km}**,**
n18, σ2^{s}**10**/31**, Turkey**

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.07 328**	*i* P	**Pg**	**12 32 09.2**	**+0.7**
BDRM			IAML		12 32 10.0	
	comp=E,1µm,0.2s					
BDRM			IAML		12 32 10.0	
	comp=N,4µm,0.3s					
BDRM			*i* S	**Sg**	**12 32 10.4**	**+0.2**
BODT	**Bodrum**	**0.16 292**	PG	**Pb**	**12 32 10.1**	**-1.1**
BODT			SG	**Sg**	**12 32 12.2**	**0.0**
YKAV	**Yalikavak-Bodr**	**0.21 306**	PG	**Pb**	**12 32 10.6**	**-1.5**
YKAV			SG	**Sg**	**12 32 13.6**	**0.0**
DATC	**Datca-Mugla**	**0.28 151**	PG	**Pn**	**12 32 13.5**	**-2.7**
DAT	**Datca**	**0.28 166**	PG	**Pb**	**12 32 13.3**	**0.0**
DAT			SG	**Sb**	**12 32 17.9**	**-0.2**
DAT	**Datca**	**0.28 166**	*i* P	**Pb**	**12 32 13.1**	**-0.2**
DAT			*i* S	**Sb**	**12 32 17.7**	**-0.4**
YER	**Yerkesik**	**0.65 78**	PG	**Pn**	**12 32 20.8**	**-0.6**
AYDN	**Tasoluk**	**0.73 25**	*i* P	**Pg**	**12 32 21.4**	**+1.2**
AYDN			*i* S	**Sg**	**12 32 31.2**	**+1.5**
GCAM	**G?zelcaml?**	**0.73 343**	PG	**Pb**	**12 32 20.9**	**0.0**
GCAM	**G?zelcaml?**	**0.73 343**	*i* P	**Pn**	**12 32 22.0**	**-0.4**
GCAM			*i* S	**Sb**	**12 32 31.3**	**+0.4**
GCAM			IAML		12 32 33.0	
	comp=E,53nm,0.2s					
GCAM			IAML		12 32 33.0	
	comp=N,111nm,0.2s					
TURN	**Turunc**	**0.90 98**	PG	**Pb**	**12 32 20.5**	**-3.3**
TURN			SG	**Sb**	**12 32 31.1**	**-4.6**
TURN	**Turunc**	**0.90 98**	*i* P	**Pb**	**12 32 20.3**	**-3.5**
TURN			*i* S	**Sb**	**12 32 30.7**	**-5.0**
TURN			IAML		12 32 32.0	
	comp=N,124nm,0.4s					
TURN			IAML		12 32 33.0	
	comp=E,124nm,0.3s					
DALY	**Dalyan (Mula)**	**0.95 101**	PG	**Pn**	**12 32 26.6**	**+1.2**
DALY	**Dalyan (Mula)**	**0.95 101**	*i* P	**Pn**	**12 32 26.4**	**+1.0**
DALY			*i* S	**Sn**	**12 32 40.8**	**+1.8**
DALY			IAML		12 32 43.0	
	comp=E,32nm,0.6s					
AYDB	**Zeytinkoy-Aydi**	**0.99 18**	PG	**Pg**	**12 32 26.5**	**+1.2**
DGB	**zmir**	**1.16 335**	*i* P	**Pg**	**12 32 28.9**	**+0.5**
DGB			*i* S	**Sb**	**12 32 42.6**	**-0.6**
DGB			IAML		12 32 46.0	
	comp=N,44nm,0.3s					
TAVA	**DENIZLI_Tavas**	**1.22 67**	*i* P	**Pg**	**12 32 32.7**	**+3.1**
TAVA			*i* S	**Sn**	**12 32 47.6**	**+1.6**
FETY	**Fethiye**	**1.33 106**	*i* P	**Pg**	**12 32 34.8**	**+3.2**
FETY			*i* S	**Sg**	**12 32 50.8**	**+1.9**

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*NIED **02** 12:33:00, 37°.90N×144°.10E, h5^{km}, Mw3.9 Best double couple: $M_0$7.62000×10^{14} NP1:ϕ_s139.00000°, δ80.00000°, λ-97.00000°. NP2:ϕ_s356.00000°, δ12.00000°, λ-54.00000°.*
*IDC **02** 12:33:47.2±0.7, 37°.73N×144°.43E, h0^{km}, mb3.8/11, mb1 4.0/18, mb1mx3.8/48, mbtmp3.9/18, ML3.9/5, MS3.0/3, Ms1 3.0/3, ms1mx2.5/42, Error ellipse: s-maj=22.6km s-min=13.9km az=125.0*
*NEIC **02** 12:33:49.3±1.7, 37°.84N±0°.07×144°.4E±0°.1, h10^{km}±1^{km}, mb4.4/20, Error ellipse: s-maj=15.0km s-min=10.5km az=119.0*
*JMA **02** 12:33:51.3±0.2, 37°.91N×144°.13E, h52^{km}, M3.8*
ISC 02 12:33:49.0±4.0**, 37°.92N**±0°.04×**144°.28E**±0°.06**, h12**^{km}±26^{km}**,**
n66, σ2^{s}**16**/85**, mb4.2**/19**, Off east coast of Honshu**

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.25 281**	P	**Pn**	**12 34 25.6**	**-0.5**
JIKH			S	**Sn**	**12 34 50.8**	**-2.9**
OFUJ	**Ofunato**	**2.35 300**	P	**Pn**	**12 34 27.1**	**-0.4**
OFUJ			S	**Sn**	**12 34 53.9**	**-2.3**
JIO	**Ouri**	**2.37 284**	P	**Pn**	**12 34 27.3**	**-0.4**
JIO			S	**Sn**	**12 34 54.0**	**-2.6**
JKMT	**Kesennumamotoy**	**2.38 293**	P	**Pn**	**12 34 27.4**	**-0.4**
JKMT			S	**Sn**	**12 34 54.2**	**-2.6**
JMK	**Ichinoseki**	**2.61 294**	P	**Pn**	**12 34 31.2**	**+0.2**
JOM	**Ohasama**	**2.80 305**	P	**Pn**	**12 34 34.6**	**+0.9**
JOM			*e*S	**Sn**	**12 35 06.1**	**-1.3**
JFT	**Otama**	**3.15 264**	S	**Sn**	**12 35 13.8**	**-2.2**
JYK	**Kaneyama**	**3.23 289**	P	**Pn**	**12 34 40.0**	**+0.4**
JYK			*e*S	**Sn**	**12 35 16.6**	**-1.4**
JANG	**Nango**	**3.26 320**	P	**Pn**	**12 34 39.8**	**-0.1**
JANG			*e*S	**Sn**	**12 35 15.7**	**-2.9**
ERM	**Erimo**	**4.18 348**		**Pn**	**12 34 52.7**	**+0.1**
ERM			Sn	**Sn**	**12 35 38.9**	**-2.4**
BSO1	**Boso 1**	**4.21 220**	P	**Pn**	**12 34 52.2**	**-0.3**
JOT	**Ohata**	**4.26 325**	P	**Pn**	**12 34 54.6**	**+0.9**
JOT			*e*S	**Sn**	**12 35 39.9**	**-3.5**
JKB	**Kayabe**	**4.68 329**	P	**Pn**	**12 35 00.7**	**+1.2**
JKB			*e*S	**Sn**	**12 35 49.9**	**-3.8**
JRY	**Ryogami san**	**4.70 248**	P	**Pn**	**12 34 59.4**	**-0.4**
JRY			S	**Sn**	**12 35 50.7**	**-3.6**
JCH	**Churui**	**4.74 352**	P	**Pn**	**12 34 59.4**	**-0.9**
JCH			*e*S	**Sn**	**12 35 50.2**	**-5.0**
JOD2	**Odawara 2**	**4.94 239**	P	**Pn**	**12 35 02.4**	**-0.7**
JOD2			*e*S	**Sn**	**12 35 55.4**	**-4.9**
MJAR	**Matsushiro Arr**	**5.03 256**	Pn	**Pn**	**12 35 05.4**	**+1.0**
	1.3nm,0.3s,baz=76,slow=12,SNR=142					
MJAR			Sn	**Sn**	**12 36 05.4**	**+2.9**
	baz=73,slow=18,SNR=1.6					
MJAR			LR	LR	12 37 47.0	
	comp=Z,49nm,18.2s,baz=90,slow=47					
MAJO	**Matsushiro**	**5.03 256**		**Pn**	**12 35 05.6**	**+1.3**
MAJO			Sn	**Sn**	**12 36 03.7**	**+1.2**
MAT	**Matsushiro**	**5.03 256**	P	**Pn**	**12 35 05.8**	**+1.4**
MAT			S	**Sn**	**12 36 02.5**	**0.0**
MJB9	**Matsu-Tunnel**	**5.03 256**		**Pn**	**12 35 05.9**	**+1.5**
MJB9			Sn	**Sn**	**12 36 03.3**	**+0.8**
NEM2	**Nemuro 2**	**5.55 11**	P	**Pn**	**12 35 09.0**	**-2.5**
NEM2			*e*S	Sn	12 36 07.8	-7.4
JHJ2	**Mitsune**	**6.02 218**	P	**Pn**	**12 35 16.3**	**-1.6**
JHJ2	**Mitsune**	**6.02 218**	Pn	**Pn**	**12 35 16.1**	**-1.7**
JHJ	**Hachijo jima 2**	**6.03 219**	Pn	**Pn**	**12 35 15.2**	**-2.8**
	19nm,0.3s,baz=141,slow=23,SNR=12					
JHJ			Sn	**Sn**	**12 36 18.8**	**-8.2**
	6.1nm,0.3s,baz=40,slow=18,SNR=1.5					
JTKR	**Abashiri--Toko**	**6.05 357**	P	**Pn**	**12 35 17.4**	**-0.9**
JTKR			*e*S	**Sn**	**12 36 21.5**	**-6.0**
JHR	**Hokuryu**	**6.13 342**	P	**Pn**	**12 35 20.7**	**+1.3**
JKA	**Kamikawa-asahi**	**6.32 349**		**Pn**	**12 35 22.6**	**+0.6**
ASAJ	**Asahikawa**	**6.32 349**	Pn	**Pn**	**12 35 22.6**	**+0.6**
	3.3nm,0.3s,baz=190,slow=8.3,SNR=28					
ASAJ			Sn	**Sn**	**12 36 31.5**	**-2.6**
	0.3nm,0.3s,baz=65,slow=19,SNR=1.5					
INU	**Inuyama**	**6.37 248**		**Pn**	**12 35 23.9**	**+1.1**
JCJ	**Chichijima**	**10.94 190**	Pn	**Pn**	**12 36 20.6**	**-4.7**
	2.4nm,0.3s,baz=314,slow=19,SNR=1.0					
USA0B	**Ussuriysk Arra**	**11.19 308**	Pn	**Pn**	**12 36 31.2**	**+2.4**
USRK	**Ussuriysk Ar.**	**11.19 308**	Pn	**Pn**	**12 36 32.3**	**+3.5**
	baz=108,slow=11,SNR=2.2					
KSRS	**Korea Array**	**12.96 273**	Pn	**Pn**	**12 36 55.3**	**+2.2**
	0.1nm,0.3s,baz=89,slow=14,SNR=4.1					
KSRS			LR	LR	12 41 17.4	
	comp=Z,24nm,19.9s,baz=64,slow=34					
PEA0B	**Petropavlovsk-**	**17.82 27**	Pn	**Pn**	**12 37 56.0**	**-0.7**
PETK	**Petropavlovsk-**	**17.82 27**	P	**Pn**	**12 37 56.1**	**-0.6**
	0.1nm,0.3s,baz=220,slow=13,SNR=5.3					
HIA	**Hailar**	**20.98 311**	P	**P**	**12 38 33.6**	**+1.5**
HIA			IAmb	IAmb	12 38 40.2	
	comp=Z,7.9nm,0.5s					
MA2	**Magadan**	**22.07 9**	P	**P**	**12 38 44.9**	**+1.3**
YULB	**Yu-li**	**24.41 240**	P	**P**	**12 39 08.1**	**+0.6**
YULB			IAmb	IAmb	12 39 16.2	
	comp=Z,17nm,1.2s					
SEY	**Seymchan**	**25.53 9**	P	**P**	**12 39 18.8**	**+1.6**
	comp=Z,2.1nm,0.7s,baz=188,slow=6.0,SNR=8.8					
KDAK	**Kodiak Island**	**44.91 43**	P	**P**	**12 42 03.7**	**+0.4**
	comp=Z,4.4nm,0.7s,baz=273,slow=3.7,SNR=7.0					
KDAK	**Kodiak Island**	**44.91 43**	P	**P**	**12 42 03.8**	**+0.4**
KDAK			IAmb	IAmb	12 42 04.9	
	comp=Z,6.1nm,0.8s					
PPLA	**Purkeypile**	**45.13 35**	P	**P**	**12 42 06.2**	**+1.0**
PPLA			IAmb	IAmb	12 42 08.4	
	comp=Z,7.3nm,1.4s					
MKAR	**Makanchi Array**	**45.58 302**	P	**P**	**12 42 11.0**	**+2.1**
	comp=Z,0.5nm,0.7s,baz=96,slow=7.3,SNR=2.2					
IL31		**47.52 33**	P	**P**	**12 42 24.7**	**+0.9**
ILAR	**Eielson Array**	**47.52 33**	P	**P**	**12 42 24.4**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=268,slow=6.0,SNR=15					
DOT	**Dot Lake**	**48.80 34**	P	**P**	**12 42 35.0**	**+1.3**
DOT			IAmb	IAmb	12 42 44.5	
	comp=Z,2.8nm,1.1s					
SCRK	**Sand Creek**	**48.81 34**	P	**P**	**12 42 34.2**	**+0.3**
MENT	**Mentasta**	**49.01 35**	P	**P**	**12 42 37.1**	**+1.8**
MENT			IAmb	IAmb	12 42 41.9	
	comp=Z,4.4nm,1.1s					
VRDI	**Verde Repeater**	**49.30 37**	P	**P**	**12 42 38.9**	**+1.1**
VRDI			IAmb	IAmb	12 42 40.2	
	comp=Z,2.6nm,0.9s					
CRQM	**Cirque**	**49.51 38**	P	**P**	**12 42 41.0**	**+1.7**
COEN	**Coen**	**51.61 181**	P	**P**	**12 42 54.5**	**-0.9**
COEN			IAmb	IAmb	12 43 12.8	
	comp=Z,5.8nm,1.2s					
EPYK	**Eagle Plains**	**51.62 30**	P	**P**	**12 42 56.6**	**+1.6**
EPYK			IAmb	IAmb	12 42 57.8	
	comp=Z,4.0nm,0.9s					
INK	**Inuvik**	**52.55 28**	P	**P**	**12 43 03.0**	**+1.1**
	comp=Z,1.0nm,0.5s,baz=306,slow=6.3,SNR=16					
INK	**Inuvik**	**52.55 28**	P	**P**	**12 43 03.2**	**+1.4**
WB0	**Warramunga Arr**	**58.13 191**	P	**P**	**12 43 42.2**	**-0.3**
WB2	**Warramunga Arr**	**58.30 191**	P	**P**	**12 43 44.2**	**+0.4**
WRA	**Warramunga Arr**	**58.31 191**	P	**P**	**12 43 43.2**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=9.5,slow=7.2,SNR=11					
FITZ	**Fitzroy Crossi**	**58.41 201**	P	**P**	**12 43 44.7**	**+0.2**
YKA	**Yellowknife Ar**	**61.89 31**	P	**P**	**12 44 08.0**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=300,slow=6.0,SNR=9.2					
ASAR	**Alice Springs**	**62.03 191**	P	**P**	**12 44 07.5**	**-1.7**
	comp=Z,0.3nm,0.7s,baz=14,slow=7.9,SNR=2.5					
DZM	**Mont Dzumac**	**63.21 157**	P	**P**	**12 44 17.7**	**+0.4**
PINE	**Pine Mountain**	**68.02 51**	P	**P**	**12 44 49.9**	**+1.5**
PINE			IAmb	IAmb	12 44 51.5	
	comp=Z,3.4nm,0.9s					
NVAR	**Mina Array Bea**	**72.63 55**	P	**P**	**12 45 17.8**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=291,slow=6.2,SNR=6.1					
PDAR	**Pinedale Array**	**75.41 47**	P	**P**	**12 45 33.7**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=270,slow=2.7,SNR=2.9					
PPT	**Papeete**	**83.02 118**	LR	LR	13 16 14.3	
	comp=Z,53nm,20.5s,baz=310,slow=31					
TXAR	**Lajitas Array**	**87.77 54**	P	**P**	**12 46 39.1**	**+0.8**
	comp=Z,0.1nm,0.4s,baz=327,slow=6.5,SNR=1.8					

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*SJA **02** 12:46:12.2±0.7, 21°.81S×68°.52W, h124^{km}±4^{km}, ML4.4, MW4.2*
*NEIC **02** 12:46:13.0±1.4, 21°.81S±0°.04×68°.42W±0°.07, h117^{km}±1^{km}, mb4.5/90, Mwr4.4/22, ML4.5(GUC), Error ellipse: s-maj=9.4km s-min=6.3km az=83.0*
*VAO **02** 12:46:12.7±0.6, 21°.66S×68°.36W, h112^{km}±6^{km}, mb4.8*
*IDC **02** 12:46:12.0±0.7, 21°.72S×68°.27W, h106^{km}±8^{km}, mb4.2/12, mb1 4.2/15, mb1mx4.0/30, mbtmp4.5/15, MS2.9/2, Ms1 2.9/2, ms1mx2.5/20, Error ellipse: s-maj=15.7km s-min=12.2km az=153.0*
*NEIC **02** 12:46:13, 21°.81S×68°.42W, h120^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-2.48; $M_{\theta\theta}$0.41; $M_{\phi\phi}$2.07; $M_{r\theta}$-0.57; $M_{\theta\phi}$-2.70; $M_{\phi r}$-2.28; Fault plane solution: $M_0$4.25000×10^{15} NP1:ϕ_s111.65000°, δ43.36000°, λ-143.98000°. NP2:ϕ_s353.79000°, δ66.19000°, λ-52.63000°. Principal axes: T 4.4168, Plg13.0000°, Azm58.0000°; N -0.3482, Plg34.0000°, Azm157.0000°; P -4.0686, Plg53.0000°, Azm309.0000°;*
*GUC **02** 12:46:13.5±0.7, 21°.84S×68°.55W, h135^{km}±5^{km}, ML4.5*
ISC 02 12:46:12.8±0.6**, 21°.78S**±0°.03×**68°.41W**±0°.05**, h117**^{km}±5^{km}**,**
n167, σ1^{s}**22**/172**, mb4.5**/45**, 13C-6D, Chile-Bolivia border region**

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.77 269**	⇑*i*P	**Pn**	**12 46 33.5**	**+0.9**
PB09			*i* S	**Sn**	**12 46 48.2**	**+0.7**
PB09			IAML		12 46 51.3	
	comp=E,6µm,0.4s					
PB09	**IPOC Station P**	**0.77 269**		**Pn**	**12 46 33.5**	**+0.9**
PB09	**IPOC Station P**	**0.77 269**	*i* P	**Pn**	**12 46 32.4**	**-0.2**
PB09			IAML		12 46 50.1	
	comp=Z,8µm,0.8s					
LVC	**Limon Verde**	**0.94 209**	P	**Pn**	**12 46 34.8**	**+0.4**
	comp=Z,845nm,0.3s,baz=26,slow=6.7,SNR=2292					
LVC			S	**Sn**	**12 46 50.6**	**-0.2**
	comp=Z,247nm,0.3s,baz=219,slow=18,SNR=11					
LVC			LR	LR	12 47 08.1	
	comp=Z,708nm,19.3s,baz=351,slow=52					
LVC	**Limon Verde**	**0.94 209**	*i* P	**Pn**	**12 46 34.5**	**+0.1**
LVC			*i* Sg	**Sn**	**12 46 51.0**	**+0.2**
LVC			IAML		12 46 53.5	
	comp=Z,1µm,0.4s					
LVC	**Limon Verde**	**0.94 209**	*e*P	**Pn**	**12 46 34.8**	**+0.4**
PB01	**IPOC Station P**	**1.24 306**	⇑*i*P	**Pn**	**12 46 37.8**	**+0.5**
PB01			*i* S	**Sn**	**12 46 56.5**	**+0.9**
PB01			IAML		12 46 57.4	
	comp=N,9µm,0.3s					
PB01	**IPOC Station P**	**1.24 306**		**Pn**	**12 46 37.7**	**+0.5**
PB01			Sn	**Sn**	**12 46 56.1**	**+0.4**
PB01	**IPOC Station P**	**1.24 306**	*i* P	**Pn**	**12 46 37.4**	**+0.2**
PB01			*i* Sg	**Sn**	**12 46 55.5**	**-0.1**
PB01			IAML		12 46 58.0	
	comp=Z,7µm,0.2s					
PB03	**IPOC Station P**	**1.27 258**	⇑*i*P	**Pn**	**12 46 37.7**	**+0.1**
PB03			*i* S	**Sn**	**12 46 56.0**	**-0.4**
PB03			IAML		12 46 57.2	
	comp=N,8µm,0.4s					
PB03	**IPOC Station P**	**1.27 258**	*i* P	**Pn**	**12 46 37.3**	**-0.3**
PB03			IAML		12 46 58.3	
	comp=Z,5µm,0.3s					
PB07	**IPOC Station P**	**1.37 272**	*i* P	**Pn**	**12 46 38.7**	**0.0**
PB07			*i* S	**Sn**	**12 46 58.3**	**-0.1**
PB07			IAML		12 46 59.4	
	comp=N,11µm,0.3s					
PB07	**IPOC Station P**	**1.37 272**		**Pn**	**12 46 38.7**	**0.0**
PB07			Sn	**Sn**	**12 46 58.0**	**-0.4**
PB07	**IPOC Station P**	**1.37 272**	*i* P	**Pn**	**12 46 38.2**	**-0.4**
PB07			IAML		12 47 00.5	
	comp=Z,7µm,0.3s					
PB06	**IPOC Station P**	**1.41 229**	⇑*i*P	**Pn**	**12 46 39.4**	**+0.2**
PB06			*i* S	**Sn**	**12 46 59.3**	**+0.1**
PB06			IAML		12 47 00.2	
	comp=N,7µm,0.4s					
PB06	**IPOC Station P**	**1.41 229**		**Pn**	**12 46 39.4**	**+0.2**
PB06			Sn	**Sn**	**12 46 59.1**	**-0.1**
PB06	**IPOC Station P**	**1.41 229**	*i* P	**Pn**	**12 46 38.8**	**-0.4**
PB06			*i* Sg	**Sn**	**12 46 58.8**	**-0.5**
PB06			IAML		12 47 00.8	
	comp=Z,7µm,1.1s					
PB02	**IPOC Station P**	**1.46 288**	⇑*i*P	**Pn**	**12 46 39.8**	**+0.2**
PB02			*i* S	**Sn**	**12 46 59.7**	**-0.3**
PB02			IAML		12 47 00.8	
	comp=N,16µm,0.2s					
PB02	**IPOC Station P**	**1.46 288**	*i* P	**Pn**	**12 46 39.1**	**-0.5**
PB02			IAML		12 47 02.1	
	comp=Z,12µm,0.2s					
PB04	**IPOC Station P**	**1.70 251**	⇑*i*P	**Pn**	**12 46 42.4**	**-0.2**
PB04			*i* S	**Sn**	**12 47 04.5**	**-0.8**
PB04			IAML		12 47 06.9	
	comp=E,3µm,0.5s					
PB04	**IPOC Station P**	**1.70 251**		**Pn**	**12 46 42.3**	**-0.2**
PB04	**IPOC Station P**	**1.70 251**	*i* P	**Pn**	**12 46 42.4**	**-0.2**
PB04			IAML		12 47 08.7	
	comp=Z,2µm,0.4s					
PB15	**IPOC Station P**	**1.72 214**	⇑*i*P	**Pn**	**12 46 43.2**	**+0.3**
PB15			*i* S	**Sn**	**12 47 06.2**	**+0.3**
PB15	**IPOC Station P**	**1.72 214**		**Pn**	**12 46 43.0**	**+0.1**
PB15			Sn	**Sn**	**12 47 06.1**	**+0.3**
PB15	**IPOC Station P**	**1.72 214**	*i* P	**Pn**	**12 46 42.1**	**-0.8**
PB15			IAML		12 47 11.2	
	comp=Z,7µm,0.2s					
PB08	**IPOC Station P**	**1.77 337**	⇓*i*P	**Pn**	**12 46 45.7**	**+2.0**
PB08			*i* S	**Sn**	**12 47 09.7**	**+2.5**
PB08			IAML		12 47 10.8	
	comp=E,2µm,0.2s					
PB08	**IPOC Station P**	**1.77 337**		**Pn**	**12 46 45.2**	**+1.5**
PATCX	**Punta Patache**	**1.88 300**	⇑*i*P	**Pn**	**12 46 45.0**	**+0.3**
PATCX			*i* S	**Sn**	**12 47 09.0**	**-0.1**
PATCX			IAML		12 47 09.8	

	comp=E,10µm,0.3s						
PATCX	**Punta Patache**	**1.88**	**300**		**Pn**	**12 46 45.0**	**+0.3**
PATCX	**Punta Patache**	**1.88**	**300**	*i* P	**Pn**	**12 46 44.4**	**-0.3**
PATCX				*i* Sg	**Sn**	**12 47 08.2**	**-0.8**
PATCX				IAML		12 47 10.6	
	comp=Z,3µm,0.5s						
PB05	**IPOC Station P**	**1.97**	**237**	⇑ *i*P	**Pn**	**12 46 45.4**	**-0.5**
PB05				*i* S	**Sn**	**12 47 09.1**	**-2.0**
PB05	**IPOC Station P**	**1.97**	**237**	*i* P	**Pn**	**12 46 45.4**	**-0.5**
PB05				IAML		12 47 16.8	
	comp=Z,1µm,0.8s						
TA01	**Diego Aracena**	**2.04**	**306**	⇑ *i*P	**Pn**	**12 46 46.5**	**-0.1**
TA01				*i* S	**Sn**	**12 47 11.8**	**-0.8**
TA01				IAML		12 47 13.6	
	comp=E,7µm,0.3s						
TA02	**Huaiquique**	**2.20**	**313**	*e*P	**Pn**	**12 46 48.5**	**-0.1**
TA02				*i* S	**Sn**	**12 47 15.3**	**-0.7**
GO01	**Chusmiza**	**2.23**	**341**	⇓ *i*P	**Pn**	**12 46 50.8**	**+1.4**
GO01	**Chusmiza**	**2.23**	**341**		**Pn**	**12 46 50.8**	**+1.4**
PB11	**IPOC Station P**	**2.32**	**330**	⇓ *i*P	**Pn**	**12 46 50.9**	**+0.6**
PB11				*i* S	**Sn**	**12 47 19.6**	**+0.5**
PB11				IAML		12 47 21.6	
	comp=N,5µm,0.4s						
PB11	**IPOC Station P**	**2.32**	**330**		**Pn**	**12 46 50.6**	**+0.3**
PB11	**IPOC Station P**	**2.32**	**330**	*i* P	**Pn**	**12 46 51.0**	**+0.6**
PB11				IAML		12 47 27.6	
	comp=Z,2µm,0.7s						
PB10	**IPOC Station P**	**2.62**	**229**	⇑ *i*P	**Pn**	**12 46 52.6**	**-1.5**
PB10				IAML		12 47 36.2	
	comp=N,779nm,0.3s						
PB10	**IPOC Station P**	**2.62**	**229**		**Pn**	**12 46 53.1**	**-1.0**
PB10	**IPOC Station P**	**2.62**	**229**	*i* P	**Pn**	**12 46 53.6**	**-0.4**
PB10				IAML		12 47 35.2	
	comp=Z,710nm,0.8s						
PSGC	**Pisagua**	**2.70**	**323**	⇑ *i*P	**Pn**	**12 46 54.4**	**-0.8**
PSGC				*i* S	**Sn**	**12 47 26.8**	**-1.0**
PSGC				IAML		12 47 27.9	
	comp=N,2µm,0.6s						
PSGCX	**Pisagua**	**2.70**	**323**		**Pn**	**12 46 54.4**	**-0.7**
YJA	**Yavi**	**2.72**	**99**	*i* P	**Pn**	**12 46 58.7**	**+3.0**
MNMC	**Minye Minye**	**2.86**	**337**	⇓ *i*P	**Pn**	**12 46 58.1**	**+0.7**
MNMC				*i* S	**Sn**	**12 47 33.2**	**+1.4**
MNMC				IAML		12 47 39.4	
	comp=N,3µm,0.2s						
MNMC	**Minye Minye**	**2.86**	**337**		**Pn**	**12 46 58.0**	**+0.5**
MNMCX	**Minye Minye**	**2.86**	**337**	*i* P	**Pn**	**12 46 58.4**	**+0.9**
MNMCX				IAML		12 47 36.1	
	comp=Z,1µm,0.3s						
PB14	**IPOC Station P**	**3.37**	**213**		**Pn**	**12 47 03.2**	**-1.0**
PB14	**IPOC Station P**	**3.37**	**213**	*i* P	**Pn**	**12 47 03.8**	**-0.4**
PB14				IAML		12 47 54.4	
	comp=Z,726nm,0.5s						
GO02	**Mina Guanaco**	**3.54**	**198**	⇑ *i*P	**Pn**	**12 47 05.5**	**-0.9**
GO02	**Mina Guanaco**	**3.54**	**198**		**Pn**	**12 47 05.4**	**-0.9**
PB16	**IPOC Station P**	**3.58**	**343**	⇓ *i*P	**Pn**	**12 47 08.3**	**+1.1**
PB16	**IPOC Station P**	**3.58**	**343**		**Pn**	**12 47 08.0**	**+0.8**
PB12	**IPOC Station P**	**3.63**	**330**	⇓ *i*P	**Pn**	**12 47 06.1**	**-1.3**
PB12				*i* S	**Sn**	**12 47 47.6**	**-2.0**
PB12	**IPOC Station P**	**3.63**	**330**		**Pn**	**12 47 06.1**	**-1.3**
AP01	**Chacalluta**	**3.85**	**332**	*e*P	**Pn**	**12 47 09.5**	**-0.8**
AP01				*i* S	**Sn**	**12 47 53.0**	**-1.8**
AZAP	**Zapla**	**3.93**	**129**	*i* P	**Pn**	**12 47 13.5**	**+2.0**
ASTB	**Santa Barbara**	**4.24**	**121**	*i* P	**Pn**	**12 47 16.9**	**+1.3**
LPAZ	**La Paz**	**5.47**	**3**	P	**Pn**	**12 47 35.8**	**+3.1**
	comp=Z,8.2nm,0.3s,baz=167,slow=5.8,SNR=96						
LPAZ				S	**Sn**	**12 48 38.0**	**+3.3**
	comp=Z,0.7nm,0.3s,baz=45,slow=20,SNR=1.2						
LPAZ	**La Paz**	**5.47**	**3**		**Pn**	**12 47 34.9**	**+2.3**
GO03	**Copiap**	**6.02**	**196**		**Pn**	**12 47 36.6**	**-2.9**
GO04	**Tololo Observa**	**8.63**	**194**		Pn	12 48 09.8	-5.1
SIV	**San Ignacio**	**9.02**	**52**	P	**Pn**	**12 48 18.0**	**-2.2**
	comp=Z,34nm,0.3s,baz=242,slow=10,SNR=340						
SIV				S	**Sn**	**12 49 55.2**	**-4.9**
	comp=Z,1.0nm,0.3s,baz=285,slow=20,SNR=2.8						
SIV				LR	LR	12 52 08.2	
	comp=Z,73nm,21.0s,baz=276,slow=40						
PTLB	**Pontes e Lacer**	**10.81**	**56**	*e*P	**Pn**	**12 48 42.6**	**-1.8**
PTLB				*e*S	**Sn**	**12 50 41.0**	**-2.5**
CPUP	**Villa Florida**	**11.09**	**116**	P	**Pn**	**12 48 46.8**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=299,slow=9.4,SNR=7.0						
CPUP				LR	LR	12 52 43.4	
	comp=Z,54nm,19.2s,baz=264,slow=36						
CPUP	**Villa Florida**	**11.09**	**116**	Pn	**Pn**	**12 48 46.1**	**-1.9**
ROC1	**El Roble**	**11.39**	**191**	Pn	**Pn**	**12 48 50.3**	**-1.8**
VILB	**Vilhena**	**11.77**	**43**	*e*P	**Pn**	**12 48 56.0**	**-1.1**
AQDB	**Aquidauana**	**11.94**	**86**	*e*P	**Pn**	**12 48 56.8**	**-2.4**
SALV	**Santo Antonio**	**13.38**	**66**	*e*P	**Pn**	**12 49 16.1**	**-2.0**
GO05	**Huala**	**13.54**	**192**	Pn	**Pn**	**12 49 17.8**	**-2.2**
SAML	**Samuel**	**13.72**	**22**		**Pn**	**12 49 21.6**	**-0.8**
SAML	**Samuel**	**13.72**	**22**	*e*P	**Pn**	**12 49 20.7**	**-1.8**
TRCB	**Terra Rica**	**14.64**	**97**	*e*P	**Pn**	**12 49 34.0**	**-0.3**
PTGB	**Pitanga**	**15.31**	**104**	*e*P	**P**	**12 49 45.0**	**+0.2**
PCMB	**Pacaembu**	**15.95**	**93**	*e*P	**Pn**	**12 49 50.3**	**-0.3**
CLDB	**Colider**	**16.24**	**50**	*e*P	**Pn**	**12 49 54.0**	**-0.3**
ARAG	**Araguaiana, MT**	**16.84**	**72**	*e*P	**Pn**	**12 50 01.7**	**+0.1**
FRTB	**Fartura**	**17.48**	**99**	*e*P	**Pn**	**12 50 09.1**	**-0.3**
PLCA	**Paso Flores**	**18.98**	**185**	P	**P**	**12 50 25.6**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=20,slow=12,SNR=7.2						
PLCA	**Paso Flores**	**18.98**	**185**	P	**P**	**12 50 23.0**	**-2.1**
IPMB	**Ipameri, GO**	**19.37**	**82**	*e*P	**P**	**12 50 29.2**	**-0.3**
SPB	**Sao Paulo**	**19.44**	**99**	*e*P	**P**	**12 50 30.2**	**+0.1**
VAO	**Valinhos**	**19.87**	**98**	*e*P	**P**	**12 50 34.5**	**-0.4**
BDFB	**Brasilia**	**20.25**	**76**	P	**P**	**12 50 38.1**	**-1.1**
	comp=Z,8.8nm,0.4s,baz=219,slow=8.9,SNR=10						
BDFB	**Brasilia**	**20.25**	**76**	P	**P**	**12 50 38.3**	**-0.9**
BDFB				IAmb	IAmb	12 50 40.7	
	comp=Z,27nm,1.3s						
PARB	**Paraibuna**	**21.10**	**99**	*e*P	**P**	**12 50 47.1**	**-1.1**
BSCB	**Bom Sucesso**	**22.02**	**92**	*e*P	**P**	**12 50 57.9**	**-0.1**
PTGA	**Pitinga**	**22.48**	**23**	P	**P**	**12 51 00.9**	**-1.7**
	comp=Z,16nm,0.3s,baz=205,slow=19,SNR=39						
PTGA				S	**S**	**12 54 56.5**	**-4.5**
	comp=Z,3.5nm,0.9s,baz=294,slow=20,SNR=2.2						
PTGA	**Pitinga**	**22.48**	**23**	P	**P**	**12 51 01.1**	**-1.5**
JANB	**Januaria**	**23.81**	**78**	*e*P	**P**	**12 51 13.5**	**-1.6**
SJMB	**Sao Joao De Ma**	**25.72**	**88**	*e*P	**P**	**12 51 31.5**	**-0.8**
RUSC	**La Rusia**	**27.88**	**350**	P	**P**	**12 51 53.0**	**+0.7**
RCBR	**Riachuelo**	**35.21**	**68**	P	**P**	**12 52 55.3**	**-0.8**
	comp=Z,15nm,0.8s,baz=237,slow=12,SNR=6.6						
TEIG	**Tepich**	**46.04**	**334**	P	**P**	**12 54 25.2**	**+0.4**
ZAIG	**Zacatecas**	**55.39**	**321**	P	**P**	**12 55 36.5**	**+1.2**
Z50A	**Ashland**	**57.22**	**343**	P	**P**	**12 55 47.4**	**-0.4**
Y49A	**Blount Mountai**	**57.93**	**342**	P	**P**	**12 55 51.9**	**-0.8**
Y49A				IAmb	IAmb	12 55 53.6	
	comp=Z,7.1nm,1.1s						
V55A	**Taylorsville**	**58.59**	**348**	P	**P**	**12 55 58.2**	**+0.9**
V53A	**Saluda**	**58.74**	**346**	P	**P**	**12 55 58.6**	**+0.2**
V52A	**Sevierville**	**59.09**	**346**	P	**P**	**12 56 00.9**	**+0.1**
VNA3	**Neumayer Olymp**	**59.66**	**161**	P	**P**	**12 56 05.2**	**+0.9**
VNA2	**Neumayer--Watz**	**60.23**	**161**	P	**P**	**12 56 09.1**	**+0.9**
	baz=291,slow=7.6						
WVT	**Waverly**	**60.46**	**342**	P	**P**	**12 56 09.6**	**-0.4**
TX32	**Lajitas Array**	**61.12**	**325**	P	**P**	**12 56 15.2**	**+0.3**
TXAR	**Lajitas Array**	**61.12**	**325**	P	**P**	**12 56 15.5**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=154,slow=9.1,SNR=10						
TX31	**Lajitas Ar. Si**	**61.12**	**325**	IAmb	IAmb	12 56 16.2	
	comp=Z,3.7nm,0.8s						
SNAA	**Sanae**	**61.86**	**161**	P	**P**	**12 56 20.0**	**+0.7**
SNAA	**Sanae**	**61.86**	**161**	P	**P**	**12 56 19.8**	**+0.5**
SNAA				IAmb	IAmb	12 56 21.4	
	comp=Z,12nm,1.5s						
T42A	**Van Buren**	**62.28**	**340**	IAmb	IAmb	12 56 29.9	
	comp=Z,4.2nm,0.7s						
MNTX	**Cornudas Mount**	**63.89**	**325**	P	**P**	**12 56 33.4**	**+0.2**
MNTX				IAmb	IAmb	12 56 34.3	
	comp=Z,6.3nm,1.4s						
ANMO	**Albuquerque**	**66.99**	**327**	P	**P**	**12 56 53.8**	**+0.5**
TUC	**Tucson**	**67.34**	**322**	P	**P**	**12 56 55.8**	**+0.4**
TUC				IAmb	IAmb	12 56 58.4	
	comp=Z,6.5nm,1.2s						
LIC	**Lamto**	**68.02**	**73**	*e*PKIKP	**P**	**12 57 01.9**	**+1.9**
	comp=Z,0.7nm,0.2s						
TIC	**Toumodi**	**68.22**	**73**	*e*PKIKP	**P**	**12 57 02.0**	**+0.8**
214A	**Organ Pipe Nat**	**68.27**	**320**	IAmb	IAmb	12 57 04.4	
	comp=Z,7.4nm,0.8s						
KIC	**Kosan Boka**	**68.34**	**73**	*e*PKIKP	**P**	**12 57 01.9**	**-0.1**
	comp=Z,12nm,0.8s						
DBIC	**Dimbokro**	**68.37**	**73**	P	**P**	**12 57 01.7**	**-0.4**
	comp=Z,4.3nm,0.6s,baz=216,slow=7.9,SNR=13						
DBIC	**Dimbokro**	**68.37**	**73**	P	**P**	**12 57 02.1**	**-0.1**
DBIC				IAmb	IAmb	12 57 04.8	
	comp=Z,5.2nm,0.8s						
QSPA	**South Pole Qui**	**68.41**	**180**	P	**P**	**12 57 03.0**	**+1.2**
SDCO	**Great Sand Dun**	**68.72**	**329**	IAmb	IAmb	12 57 06.3	
	comp=Z,3.6nm,0.8s						
MVCO	**Mesa Verde**	**69.78**	**327**	IAmb	IAmb	12 57 13.3	
	comp=Z,18nm,1.5s						
WUAZ	**Wupatki**	**70.03**	**324**	IAmb	IAmb	12 57 15.5	
	comp=Z,10.0nm,0.9s						
GLA	**Glamis**	**70.25**	**320**	IAmb	IAmb	12 57 16.5	
	comp=Z,5.0nm,0.8s						
Y12C	**Blythe**	**70.56**	**320**	IAmb	IAmb	12 57 18.4	
	comp=Z,7.6nm,0.8s						
W13A	**Hualapai Mount**	**71.14**	**322**	IAmb	IAmb	12 57 22.2	
	comp=Z,3.9nm,0.7s						
U15A	**North Rim**	**71.20**	**324**	IAmb	IAmb	12 57 22.9	
	comp=Z,6.9nm,0.9s						
XPFO	**Pion Flat**	**71.62**	**319**	P	**P**	**12 57 22.9**	**+1.1**
PFO	**Pinyon Flats O**	**71.62**	**319**	P	**P**	**12 57 22.8**	**+1.0**
SHPR	**Sheep Range**	**72.86**	**322**	IAmb	IAmb	12 57 32.4	
	comp=Z,4.2nm,0.8s						
TPNV	**Topopah Spring**	**73.80**	**322**	IAmb	IAmb	12 57 38.1	
	comp=Z,6.7nm,1.0s						
ISA	**Isabella, Lake**	**74.23**	**320**	P	**P**	**12 57 38.6**	**+1.5**
ISA				IAmb	IAmb	12 57 40.2	
	comp=Z,7.1nm,0.8s						
PDAR	**Pinedale Array**	**74.58**	**330**	P	**P**	**12 57 40.0**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=128,slow=8.6,SNR=11						
HWUT	**Hardware Ranch**	**74.67**	**328**	IAmb	IAmb	12 57 43.0	
	comp=Z,4.0nm,0.7s						
ULM	**Lac du Bonnet**	**75.72**	**342**	P	**P**	**12 57 44.8**	**-0.4**
	comp=Z,2.0nm,0.5s,baz=154,slow=8.6,SNR=6.7						
TPAW	**Teton Pass**	**75.79**	**329**	IAmb	IAmb	12 57 48.8	
	comp=Z,4.5nm,0.8s						
OMMB	**Old Mammoth Mi**	**75.85**	**321**	IAmb	IAmb	12 57 49.5	
	comp=Z,6.1nm,0.8s						
NVAR	**Mina Array Bea**	**76.00**	**322**	P	**P**	**12 57 48.6**	**+1.3**
	comp=Z,2.1nm,0.8s,baz=162,slow=6.5,SNR=18						
IMW	**Indian Meadow**	**76.10**	**330**	IAmb	IAmb	12 57 50.5	
	comp=Z,4.2nm,0.8s						
FLWY	**Flagg Ranch**	**76.13**	**330**	IAmb	IAmb	12 57 50.9	
	comp=Z,8.0nm,0.8s						
KVN	**Kaiserville**	**76.31**	**322**	IAmb	IAmb	12 57 51.6	
	comp=Z,6.5nm,0.9s						
YERR	**Yerington**	**76.91**	**322**	IAmb	IAmb	12 57 55.7	
	comp=Z,12nm,1.5s						
TOA0	**Torodi Ar. Sit**	**77.02**	**70**	P	**P**	**12 57 52.9**	**-0.4**
TORD	**Torodi Ar. Bea**	**77.02**	**70**	P	**P**	**12 57 53.1**	**-0.1**
	comp=Z,5.8nm,0.5s,baz=255,slow=5.4,SNR=48						
PNTR	**Pine Nut**	**77.19**	**322**	IAmb	IAmb	12 57 57.3	
	comp=Z,6.6nm,0.8s						
SUR	**Sutherland**	**78.04**	**120**	P	**P**	**12 58 00.1**	**+1.0**
ORV	**Oroville**	**78.60**	**321**	IAmb	IAmb	12 58 04.6	
	comp=Z,8.6nm,1.0s						
MOD	**Modoc Plateau**	**79.47**	**323**	IAmb	IAmb	12 58 09.1	
	comp=Z,9.0nm,1.1s						
TSUM	**Tsumeb**	**79.52**	**107**	P	**P**	**12 58 07.8**	**+0.6**
BMO	**Blue Mountains**	**79.90**	**327**	IAmb	IAmb	12 58 11.2	
	comp=Z,5.8nm,0.9s						
K05A	**Summer Lake**	**80.34**	**324**	IAmb	IAmb	12 58 14.3	
	comp=Z,7.9nm,0.8s						
I07A	**Izee**	**80.50**	**325**	IAmb	IAmb	12 58 14.9	
	comp=Z,9.1nm,1.4s						
PINE	**Pine Mountain**	**81.08**	**324**	IAmb	IAmb	12 58 18.1	
	comp=Z,6.4nm,0.8s						
BOSA	**Boshof**	**82.91**	**118**	P	**P**	**12 58 24.8**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=245,slow=5.9,SNR=7.3						
BOSA	**Boshof**	**82.91**	**118**	P	**P**	**12 58 24.6**	**-0.4**
BOSA				IAmb	IAmb	12 58 26.2	
	comp=Z,7.7nm,1.3s						
MAW	**Mawson**	**83.93**	**163**	P	**P**	**12 58 29.9**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=234,slow=7.6,SNR=5.0						
MAW	**Mawson**	**83.93**	**163**	P	**P**	**12 58 29.2**	**-0.1**
PAB	**San Pablo**	**85.39**	**44**	P	**P**	**12 58 38.5**	**+1.3**
PAB				IAmb	IAmb	12 58 53.3	
	comp=Z,12nm,1.4s						
YKA	**Yellowknife Ar**	**91.61**	**340**	P	**P**	**12 59 06.7**	**+0.7**
	comp=Z,3.9nm,0.8s,baz=134,slow=4.9,SNR=64						
ASAR	**Alice Springs**	**129.88**	**207**	PKP	**PKiKP**	**13 05 09.6**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=132,slow=1.8,SNR=15						
WRA	**Warramunga Arr**	**132.94**	**210**	PKP	**PKiKP**	**13 05 15.9**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=155,slow=1.8,SNR=25						
ZALV	**Zalesovo Beam**	**142.01**	**26**	PKP	**PKPdf**	**13 05 31.1**	**+0.5**
	comp=Z,1.8nm,0.5s,baz=281,slow=3.2,SNR=9.2						
KSH	**Kashi**	**144.91**	**52**	PKP	**PKPdf**	**13 05 36.9**	**+0.5**
KSH				pPKP	pPKPdf	13 06 06.3	-3.3
KSH				PP	**PP**	**13 08 59.5**	**+4.1**
MKAR	**Makanchi Array**	**145.59**	**37**	PKPbc	**PKPbc**	**13 05 37.8**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=316,slow=5.3,SNR=17						
USRK	**Ussuriysk Ar.**	**151.99**	**328**	PKPbc	**PKiKP**	**13 05 54.6**	**+0.2**
	comp=Z,2.6nm,0.7s,baz=14,slow=3.7,SNR=4.8						
MJAR	**Matsushiro Arr**	**152.61**	**308**	PKPbc	**PKiKP**	**13 05 56.1**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=99,slow=0.4,SNR=5.7						

*IDC **02** 13:02:59.5±1.3, 9°.27S×159°.00E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.7/24, mbtmp3.9/5, ML3.3/1, MS3.1/3, Ms1 3.1/3, ms1mx2.6/31, Error ellipse: s-maj=36.4km s-min=16.1km az=174.0*

*NEIC **02** 13:03:01.1±1.4, 9°.3S±0°.2×159°.0E±0°.1, h10km±2km, mb4.1/8, Error ellipse: s-maj=28.9km s-min=17.4km az=356.0*

ISC 02 13:03:03.1±1.1**, 9°.3S**±0°.2×**158°.96E**±0°.08**, h27**km**, n15, σ1s.33**/14**, mb3.9**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.98**	**97**	Pn	**Pn**	**13 03 20.2**	**-0.9**
	540nm,0.3s,baz=237,slow=6.5,SNR=68						
HNR				Sn	**Sn**	**13 03 34.0**	**-0.1**
	1µm,0.3s,baz=102,slow=20,SNR=11						
KRVT	**Keravat (AS076**	**8.49**	**305**	LR	LR	13 08 39.9	
	comp=Z,109nm,18.7s,baz=81,slow=40						
DZM	**Mont Dzumac**	**14.58**	**151**	Pn	**Pn**	**13 06 29.1**	**+1.2**
	0.1nm,0.3s,baz=287,slow=19,SNR=1.7						
DZM				LR	LR	13 10 42.8	
	comp=Z,58nm,19.4s,baz=20,slow=32						
COEN	**Coen**	**16.14**	**252**	P	**P**	**13 06 49.5**	**-1.8**
ARMA	**Armidale**	**22.09**	**197**	P	**P**	**13 07 54.1**	**-2.3**
WR0	**Warramunga Arr**	**25.85**	**243**	P	**P**	**13 08 33.9**	**+1.2**
WR0				IAmb	IAmb	13 08 41.4	
	comp=Z,3.6nm,0.8s						
WB0	**Warramunga Arr**	**25.92**	**244**	P	**P**	**13 08 33.5**	**+0.2**
WRAB	**Tennant Creek**	**26.01**	**243**	P	**P**	**13 08 35.3**	**+1.1**
WRAB				IAmb	IAmb	13 08 47.8	
	comp=Z,3.1nm,0.9s						
WB2	**Warramunga Arr**	**26.02**	**243**	P	**P**	**13 08 36.0**	**+1.8**
WB2				IAmb	IAmb	13 08 45.3	
	comp=Z,9.3nm,1.4s						
WRA	**Warramunga Arr**	**26.03**	**243**	P	**P**	**13 08 35.0**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=71,slow=9.7,SNR=10						
STKA	**Stephens Creek**	**27.64**	**213**	P	**P**	**13 08 49.6**	**+0.9**
	comp=Z,4.9nm,1.2s,baz=58,slow=9.5,SNR=1.7						
STKA	**Stephens Creek**	**27.64**	**213**	IAmb	IAmb	13 09 06.9	
	comp=Z,3.6nm,1.5s						
ASAR	**Alice Springs**	**27.88**	**236**	P	**P**	**13 08 51.5**	**+0.5**
	comp=Z,0.9nm,1.0s,baz=67,slow=9.6,SNR=4.8						
ASAR				LR	LR	13 18 24.0	
	comp=Z,41nm,18.6s,baz=72,slow=33						
FITZ	**Fitzroy Crossi**	**33.48**	**251**	P	**P**	**13 09 39.9**	**-0.6**
ILAR	**Eielson Array**	**84.12**	**20**	P	**P**	**13 15 31.9**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=248,slow=4.9,SNR=4.5						

*NEIC **02** 13:15:35.7±1.0, 59°.51N±0°.04×153°.1W±0°.1, h109km±5km, Error ellipse: s-maj=8.3km s-min=4.9km az=106.0*

AEIC 02 13:15:37.2±0.8**, 59°.52N**±0°.05×**153°.00W**±0°.07**, h104**km±3km**, ML2.5**/63**, Error ellipse: s-maj=8.2km s-min=3.3km az=147.0, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUL	**Augustine Lava**	**0.26**	**239**		Pn	13 15 50.9	-1.1
AUL					Sn	13 16 01.7	-1.3
HOM	**Homer**	**0.71**	**78**		Pn	13 15 54.3	-0.6
HOM					Sn	13 16 08.4	+0.2
CNPM	**China Poot**	**0.90**	**89**		Pn	13 15 56.0	-0.8
CNPM					Sn	13 16 10.7	-0.9
RSO	**Redoubt South**	**0.96**	**7**		Pn	13 15 56.2	-1.4
BRLK	**Bradley Lake**	**1.10**	**76**		Pn	13 15 58.0	-1.0
BRLK	**Bradley Lake**	**1.10**	**76**		Sn	13 16 14.5	-1.0
RDT	**Redoubt**	**1.10**	**16**		Pn	13 15 57.6	-1.5
BRSE	**Bradley Lake S**	**1.17**	**78**		Pn	13 15 58.6	-1.1
BRSE					Sn	13 16 15.7	-1.1
KAHG	**Katmai Hook Gl**	**1.30**	**219**		Pn	13 16 00.8	-0.4
KARR	**Katmai Rainbow**	**1.35**	**221**		Pn	13 16 01.3	-0.4
KAHC	**Katmai Hardscr**	**1.35**	**231**		Pn	13 16 01.1	-0.8
CAPN	**Captain Cook N**	**1.56**	**36**		Pn	13 16 05.0	+0.8
KCG	**Knife Ck. Glac**	**1.63**	**223**		Pn	13 16 04.7	-0.5
SLKM	**Skilak Lake**	**1.72**	**53**		Pn	13 16 05.8	-0.5
CKL	**Chakachamna La**	**1.72**	**11**		Pn	13 16 05.3	-1.1
KABU	**Katmai Buttres**	**1.72**	**224**		Pn	13 16 06.0	-0.4
KABU					Sn	13 16 27.6	-1.0
CKT	**Bend**	**1.74**	**13**		Pn	13 16 05.5	-1.1
KDAK	**Kodiak Island**	**1.75**	**173**		Pn	13 16 05.6	-1.1
KDAK					Sn	13 16 27.8	-1.3
SPWE	**Spurr West**	**1.78**	**7**		Pn	13 16 06.4	-0.7
KELA	**Mount Kelaz**	**1.78**	**234**		Pn	13 16 06.4	-0.7
SEW	**Seward**	**1.89**	**70**		Pn	13 16 07.8	-0.6
CAHL	**Cahill**	**1.89**	**220**		Pn	13 16 08.3	-0.2
STLK	**Strandline Lak**	**2.07**	**16**		Pn	13 16 09.9	-0.9
RC01	**Rabbit Creek A**	**2.27**	**44**		Pn	13 16 12.3	-1.0
OHAK	**Old Harbor**	**2.30**	**184**		Pn	13 16 12.2	-1.5
PWL	**Port Wells**	**2.69**	**58**		Pn	13 16 17.5	-1.4
PMR	**Palmer**	**2.83**	**41**		Pn	13 16 19.5	-1.1
PMR					Sn	13 16 50.7	-3.3
KNK	**Knik Glacier**	**2.95**	**48**		Pn	13 16 20.6	-1.7
GLI	**Glacier Island**	**3.25**	**63**		Pn	13 16 24.5	-1.7
SML	**Sawmill**	**3.25**	**43**		Pn	13 16 24.9	-1.4
HIN	**Hinchinbrook I**	**3.39**	**72**		Pn	13 16 27.5	-0.6
MID	**Middleton Isla**	**3.40**	**89**		Pn	13 16 27.7	-0.5
PPLA	**Purkeypile**	**3.42**	**6**		Pn	13 16 28.4	-0.2
FID	**Port Fidalgo**	**3.49**	**66**		Pn	13 16 27.2	-2.3
SCM	**Sheep Creek Mo**	**3.63**	**48**		Pn	13 16 30.2	-1.3
TT01	**Tatalina**	**3.70**	**338**		Pn	13 16 30.9	-1.3
EYAK	**Cordova Ski Ar**	**3.78**	**71**		Pn	13 16 32.7	-0.7
WAT2	**Susitna Watana**	**4.07**	**30**		Pn	13 16 36.0	-1.2
TRF	**Thorofare Moun**	**4.16**	**17**		Pn	13 16 37.7	-0.9
KTH	**Kantishna Hill**	**4.17**	**13**		Pn	13 16 37.6	-1.0
RAGM	**Ragged Mountai**	**4.28**	**75**		Pn	13 16 39.5	-0.5
GOAT	**Goat Mountain**	**4.29**	**72**		Pn	13 16 39.7	-0.5
RND	**Reindeer**	**4.38**	**25**		Pn	13 16 40.5	-1.0
HMT	**Hamilton**	**4.48**	**76**		Pn	13 16 41.8	-0.9
DHY	**Denali Highway**	**4.49**	**35**		Pn	13 16 41.8	-1.2
NICHA	**Nichawak Mount**	**4.61**	**77**		Pn	13 16 43.4	-1.1
MCK	**McKinley**	**4.66**	**23**		Pn	13 16 44.5	-0.7
BPAW	**Bear Paw Mtn.**	**4.70**	**11**		Pn	13 16 45.3	-0.4
BERG	**Berg Lake**	**4.76**	**75**		Pn	13 16 45.5	-1.1
KHIT	**Khitrov Hills**	**4.99**	**75**		Pn	13 16 49.0	-0.7
VRDI	**Verde Repeater**	**5.04**	**66**		Pn	13 16 49.5	-1.0
CRQM	**Cirque**	**5.09**	**72**		Pn	13 16 50.7	-0.5
WAX	**Waxell Ridge**	**5.18**	**75**		Pn	13 16 51.6	-0.7
TGL	**Tana Glacier**	**5.24**	**72**		Pn	13 16 51.8	-1.3
WRH	**Wood River Hil**	**5.49**	**23**		Pn	13 16 54.7	-1.6
KIAG	**Kiagna River**	**5.49**	**71**		Pn	13 16 55.2	-1.4
PTPK	**Patty Peak**	**5.50**	**68**		Pn	13 16 56.0	-0.6
BALM	**Baldy**	**5.52**	**69**		Pn	13 16 55.6	-1.4
MESA	**MESA**	**5.61**	**78**		Pn	13 16 58.0	-0.3
MLY	**Manley**	**5.64**	**10**		Pn	13 16 57.4	-1.0
CCB	**Clear Creek Bu**	**5.70**	**23**		Pn	13 16 57.5	-1.7
RIDG	**Independent Ri**	**5.75**	**39**		Pn	13 16 58.9	-1.1
GRNC	**Granite Creek**	**5.76**	**73**		Pn	13 16 59.0	-1.2
BARN	**Barnard Glacie**	**5.85**	**70**		Pn	13 17 00.5	-1.0
COLA	**College**	**5.89**	**22**		Pn	13 17 00.4	-1.4
IL31		**6.00**	**26**		Pn	13 17 01.7	-1.6
CHX	**Chaix Hills**	**6.03**	**80**		Pn	13 17 02.4	-1.4
SCRK	**Sand Creek**	**6.19**	**40**		Pn	13 17 04.1	-1.9
BC03		**6.47**	**52**		Pn	13 17 08.7	-0.9
IM03		**6.50**	**357**		Pn	13 17 09.4	-0.7
PNL	**Peninsula**	**6.91**	**83**		Pn	13 17 14.4	-1.3
PRP	**Porcupine Dome**	**6.94**	**27**		Pn	13 17 14.9	-1.3

*IDC **02** 13:19:48.3±1.9, 6°.58S×129°.34E, h164km±22km, mb3.4/2, mb1 3.4/7, mb1mx3.2/30, mbtmp3.9/7, Error ellipse: s-maj=26.4km s-min=17.8km az=111.0*

ISC 02 13:19:46.8±0.9**, 6°.72S**±0°.06×**129°.6E**±0°.1**, h165**km**, n7, σ3s.01**/12**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.06**	**17**	P	**Pn**	**13 21 15.1**	**+0.6**
	1.2nm,0.3s,baz=205,slow=21,SNR=20						
SIJI				S	**Sn**	**13 22 20.2**	**-3.1**
	2.9nm,0.3s,baz=75,slow=23,SNR=7.2						
BATI	**Baumata**	**6.77**	**239**	P	**Pn**	**13 21 25.1**	**+1.1**
	12nm,0.3s,baz=116,slow=2.5,SNR=18						
BATI				S	**Sn**	**13 22 39.2**	**-1.1**
	5.1nm,0.3s,baz=81,slow=19,SNR=5.7						
FITZ	**Fitzroy Crossi**	**11.94**	**198**	P	**Pn**	**13 22 33.6**	**+1.7**
	0.4nm,0.3s,baz=18,slow=8.8,SNR=26						
FITZ				S	**Sn**	**13 24 38.5**	**-5.7**
	0.7nm,0.3s,baz=69,slow=11,SNR=6.9						
WRA	**Warramunga Arr**	**13.95**	**161**	P	**Pn**	**13 22 59.7**	**+2.1**
	0.5nm,0.3s,baz=339,slow=13,SNR=41						
WRA				S	**Sn**	**13 25 29.3**	**-3.3**
	0.7nm,0.3s,baz=334,slow=22,SNR=6.7						
ASAR	**Alice Springs**	**17.36**	**167**	P	**Pn**	**13 23 43.6**	**+4.2**
	0.2nm,0.3s,baz=346,slow=11,SNR=20						
ASAR				S	**S**	**13 26 50.9**	**+0.2**
	0.1nm,0.3s,baz=320,slow=17,SNR=3.2						
MKAR	**Makanchi Array**	**67.74**	**327**	P	**P**	**13 30 27.2**	**+0.6**
	0.4nm,0.3s,baz=119,slow=7.8,SNR=7.1						
ZALV	**Zalesovo Beam**	**71.13**	**334**	P	**P**	**13 30 46.6**	**-0.6**
	0.6nm,0.5s,baz=149,slow=5.3,SNR=3.1						

*DJA **02** 13:33:01.3±0.2, 0°N±2°×12°6E±°, h10km, M4.2/19, mB4.9/1, mb4.5/10, MLv4.1/19, Mw(mB)4.2/1*

*NEIC **02** 13:33:03.5±2.1, 0°.33N±0°.08×126°.38E±0°.02, h46km±8km, mb4.5/24, Error ellipse: s-maj=11.9km s-min=2.7km az=168.0*

*IDC **02** 13:33:04.6±2.5, 0°.26N×126°.25E, h52km±25km, mb4.1/16, mb1 4.1/20, mb1mx3.9/44, mbtmp4.3/20, ML3.7/4, MS3.5/4, Ms1 3.6/4, ms1mx2.8/42, Error ellipse: s-maj=21.2km s-min=12.7km az=82.0*

ISC 02 13:33:03.9±0.4**, 0°.30N**±0°.05×**126°.40E**±0°.05**, h47**km**, n79, σ1s.49**/85**, mb4.5**/32**, 2C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.08**	**64**	P	**Pn**	**13 33 21.1**	**-1.5**
TNTI				S	**Sn**	**13 33 34.4**	**-2.1**
TNTI	**Ternate**	**1.08**	**64**		**Pn**	**13 33 21.3**	**-1.3**
LBMI	**Labuha**	**1.45**	**130**	P	**Pn**	**13 33 26.3**	**-1.3**
LBMI				S	**Sn**	**13 33 45.9**	**+0.5**
SANI	**Sanana**	**2.37**	**190**	P	**Pn**	**13 33 38.9**	**-1.4**
KMSI	**Cibinong**	**2.43**	**276**	P	**Pn**	**13 33 40.8**	**-0.3**
NLAI	**Namlea**	**3.58**	**169**	P	**Pn**	**13 33 58.0**	**+1.0**
LUWI	**Luwuk**	**3.86**	**250**	P	**Pn**	**13 34 04.0**	**+3.3**
LUWI	**Luwuk**	**3.86**	**250**		**Pn**	**13 34 01.6**	**+0.8**
MSAI	**Masohi**	**4.42**	**145**	P	**Pn**	**13 34 10.2**	**+1.8**
MRSI	**Marisa**	**4.46**	**272**	P	**Pn**	**13 34 08.8**	**-0.2**
APSI	**Ampana**	**4.90**	**256**	P	**Pn**	**13 34 14.7**	**-0.3**
SIJI	**Sorong**	**5.01**	**103**	P	**Pn**	**13 34 18.5**	**+2.0**
	0.9nm,0.3s,baz=281,slow=9.0,SNR=5.5						
SIJI				LR	LR	13 36 56.7	
	comp=Z,224nm,18.6s,baz=278,slow=45						
MPSI	**Mapaga**	**6.50**	**270**	P	**Pn**	**13 34 37.5**	**+0.5**
	0.1nm15nm,0.8s						
BBSI	**Bau Bau**	**6.90**	**214**	P	**Pn**	**13 34 43.7**	**+1.2**
	0.0nm8.6nm,1.0s						
TTSI	**Tana Toraja**	**7.37**	**243**	P	**Pn**	**13 34 49.2**	**+0.3**
	0.2nm56nm,0.6s						
BNSI	**Bone**	**7.83**	**233**	P	**Pn**	**13 34 55.8**	**+0.6**
	0.1nm37nm,0.7s						
SPSI	**Sidrap Palu**	**7.86**	**237**	P	**Pn**	**13 34 56.4**	**+0.7**
	0.2nm707nm73nm,0.7s						
BKSI	**Bulukumba**	**8.39**	**228**	P	**Pn**	**13 35 03.8**	**+0.8**
	29nm,0.7s						
KAPI	**Kappang**	**8.48**	**231**	P	**Pn**	**13 35 04.1**	**-0.1**
	3.2nm,0.3s,baz=76,slow=4.2,SNR=4.4						
KAPI	**Kappang**	**8.48**	**231**		**Pn**	**13 35 05.3**	**+1.1**
EDFI	**Ende, Flores**	**10.14**	**207**	P	**Pn**	**13 35 28.0**	**+1.0**
	7.5nm,0.9s						
BATI	**Baumata**	**10.78**	**195**	P	**Pn**	**13 35 36.3**	**+0.5**
	0.9nm,0.3s,baz=39,slow=17,SNR=2.0						
MTN	**Manton Dam**	**13.88**	**160**	Pn	**Pn**	**13 36 17.7**	**-0.3**
SBUM	**Sibu**	**14.33**	**279**	P	**P**	**13 36 27.4**	**-2.8**
KNRA	**Kununurra**	**16.05**	**172**		**Pn**	**13 36 45.2**	**-1.2**
KNRA				IAmb	IAmb	13 37 00.4	
	comp=Z,44nm,1.5s						
KSM	**Kuching**	**16.13**	**274**		**Pn**	**13 36 46.6**	**-0.9**
FITZ	**Fitzroy Crossi**	**18.30**	**182**	P	**P**	**13 37 13.2**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=22,slow=8.5,SNR=2.6						
FITZ	**Fitzroy Crossi**	**18.30**	**182**	P	**Pn**	**13 37 14.7**	**+0.3**
WB0	**Warramunga Arr**	**21.43**	**159**	P	**P**	**13 37 48.2**	**0.0**
WB0				IAmb	IAmb	13 37 54.3	
	comp=Z,15nm,0.8s						
WRAB	**Tennant Creek**	**21.57**	**159**	P	**P**	**13 37 49.7**	**+0.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRAB				IAmb	IAmb	13 37 55.3	
	comp=Z,12nm,0.7s						
WRA	Warramunga Arr	21.57	159	P	P	13 37 49.2	-0.4
	comp=Z,6.4nm,0.6s,baz=336,slow=11,SNR=30						
WB2	Warramunga Arr	21.57	159	P	P	13 37 49.8	+0.1
WB2				IAmb	IAmb	13 38 03.6	
	comp=Z,14nm,0.8s						
WR0	Warramunga Arr	21.66	159	P	P	13 37 49.6	-1.0
WR0					P	13 37 51.4	+0.8
COEN	Coen	21.84	131	P	P	13 37 53.1	+0.6
COEN					P	13 37 55.0	+2.5
COEN				IAmb	IAmb	13 38 01.8	
	comp=Z,36nm,1.5s						
TPUB	Ta-pu	23.54	347	P	P	13 38 07.5	-2.6
TPUB				IAmb	IAmb	13 38 21.1	
	comp=Z,30nm,1.2s						
AS31	Alice Springs	24.91	163	P	P	13 38 23.7	+1.0
ASAR	Alice Springs	24.91	163	P	P	13 38 23.7	+1.0
	comp=Z,9.4nm,0.7s,baz=353,slow=16,SNR=80						
GIRL	Giralia	25.70	207	P	P	13 38 28.6	-1.2
JOW	Kunigami	26.44	4	P	P	13 38 34.4	-2.0
JOW				IAmb	IAmb	13 38 39.6	
	comp=Z,11nm,0.6s						
FORT	Forrest	30.95	177	P	P	13 39 14.0	-2.5
NJ2	Nanjing	32.38	348	eP	P	13 39 29.3	+0.2
NJ2				pmax	pmax		
	comp=Z,13nm,0.7s						
CMAR	Chiang Mai Arr	32.44	305	P	P	13 39 28.7	-1.2
	comp=Z,0.3nm,0.3s,baz=128,slow=7.0,SNR=7.2						
CMAR				LR	LR	13 54 08.7	
	comp=Z,26nm,20.2s,baz=110,slow=39						
BBOO	Buckleboo	34.17	165	P	P	13 39 44.9	+0.2
STKA	Stephens Creek	35.09	157	P	P	13 39 53.0	+0.3
	comp=Z,2.9nm,0.7s,baz=325,slow=6.4,SNR=5.0						
STKA	Stephens Creek	35.09	157	P	P	13 39 53.2	+0.5
KSRS	Korea Array	37.00	2	P	P	13 40 10.5	+1.6
	comp=Z,2.2nm,0.6s,baz=177,slow=10.0,SNR=13						
MAT	Matsushiro	37.69	16	P	P	13 40 14.8	0.0
MJAR	Matsushiro Arr	37.69	16	P	P	13 40 14.7	-0.1
	comp=Z,1.2nm,0.5s,baz=180,slow=8.9,SNR=16						
BJI	Beijing	40.64	348	P	P	13 40 38.5	-0.8
BJI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TOO	Toolangi	41.61	157	P	P	13 40 45.3	-2.2
HHC	Hu-ho-hao-te	42.55	343	eP	P	13 40 57.1	+1.9
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,25nm,3.6s						
USRK	Ussuriysk Ar.	43.99	6	P	P	13 41 07.7	+1.1
	comp=Z,5.6nm,0.6s,baz=187,slow=6.3,SNR=19						
MDJ	Mudanjiang	44.22	3	P	P	13 41 09.6	+1.2
MDJ				pP	pP	13 41 19.2	-1.2
MDJ				ScP	ScP	13 46 45.8	+5.1
MDJ				PcS	PcS	13 46 50.4	+4.9
MDJ				S	S	13 47 39.7	+1.1
MDJ				sS	sS	13 47 55.0	-3.6
MDJ				SS	SS	13 50 56.0	-2.1
MDJ				ScS	ScS	13 51 04.9	+2.1
MDJ				pmax	pmax		
	comp=Z,10.0nm,2.0s						
MDJ				pmax	pmax		
	comp=Z,50nm,2.7s						
MDJ				LR	LR		
	comp=N,130nm,2.9s						
MDJ				LR	LR		
	comp=E,100nm,3.6s						
MDJ				LR	LR		
	comp=Z,51nm,3.0s						
DZM	Mont Dzumac	44.92	122	LR	LR	14 00 40.3	
	comp=Z,592nm,20.5s,baz=157,slow=37						
ASAJ	Asahikawa	45.95	16	P	P	13 41 23.1	+0.8
	comp=Z,2.4nm,0.7s,baz=186,slow=9.2,SNR=2.2						
JKA	Kamikawa-asahi	45.95	16	P	P	13 41 23.1	+0.8
SONM	Songino Array	50.44	343	P	P	13 41 57.0	+0.1
	comp=Z,4.1nm,0.7s,baz=165,slow=12,SNR=4.2						
WMQ	Urumqi	55.36	327	eP	P	13 42 33.6	+0.4
WMQ				PcP	PcP	13 43 31.4	-1.9
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,52nm,3.7s						
WMQ				LR	LR		
	comp=N,310nm,29.0s						
WMQ				LR	LR		
	comp=E,490nm,28.9s						
WMQ				LR	LR		
	comp=Z,93nm,29.1s						
PETK	Petropavlovsk-	58.72	22	P	P	13 42 58.5	+1.7
	comp=Z,6.5nm,0.5s,baz=182,slow=4.8,SNR=31						
MK31	Makanchi Array	60.19	327	P	P	13 43 04.8	-2.3
MK31				IAmb	IAmb	13 43 10.1	
	comp=Z,2.8nm,0.7s						
MKAR	Makanchi Array	60.19	327	P	P	13 43 06.8	-0.2
	comp=Z,3.3nm,0.6s,baz=123,slow=8.3,SNR=35						
MKAR				PcP	PcP	13 43 52.5	+0.2
	comp=Z,1.8nm,0.6s,baz=117,slow=4.5,SNR=5.9						
KSH	Kashi	60.26	317	P	P	13 43 10.5	+2.7
KSH				pP	pwP	13 43 22.7	-0.9
KSH				sP	sP	13 43 28.2	+2.9
KSH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,200nm,4.1s						
MAKZ	Makanchi	60.37	326	P	P	13 43 07.1	-1.2
MAKZ				IAmb	IAmb	13 43 11.3	
	comp=Z,4.2nm,0.7s						
YAK	Yakutsk	61.62	2	P	P	13 43 15.7	-0.7
ZALV	Zalesovo Beam	63.49	334	P	P	13 43 28.4	-0.6
	comp=Z,2.1nm,0.6s,baz=124,slow=5.5,SNR=10						
KURK	Kurchatov	64.45	329	P	P	13 43 33.5	-1.9
TIXI	Tiksi	71.25	1	P	P	13 44 17.8	0.0
TIXI				IAmb	IAmb	13 44 18.9	
	comp=Z,3.2nm,0.7s						
NRIK	Noril'sk	73.66	347	P	P	13 44 32.8	+0.6
	comp=Z,3.1nm,0.7s,baz=171,slow=1.4,SNR=4.3						
RAYN	Ar Rayn	81.53	294	P	P	13 45 17.3	+0.2
RAYN				IAmb	IAmb	13 45 18.2	
	comp=Z,12nm,1.4s						
KBZ	Khabaz	85.09	314	P	P	13 45 34.4	-0.5
	comp=Z,3.9nm,0.9s,baz=197,slow=4.2,SNR=6.8						
BRLK	Bradley Lake	86.07	30	P	P	13 45 40.7	+1.2
ILAR	Eielson Array	88.33	25	P	P	13 45 49.5	-0.8
	comp=Z,1.0nm,1.0s,baz=239,slow=5.2,SNR=5.1						
SYO	Syowa Base	89.12	201	⇑epP	pP	13 46 06.5	-0.5
SYO	Syowa Base	89.12	201	⇑esP	sP	13 46 14.8	+2.9
QSPA	South Pole Qui	90.23	180	P	P	13 45 59.5	+0.2
	comp=Z,1.2nm,0.7s,baz=196,slow=3.1,SNR=6.9						
QSPA	South Pole Qui	90.23	180	IAmb	IAmb	13 46 02.5	
	comp=Z,3.3nm,1.1s						
MLR	Muntele Rosu	97.12	316	LR	LR	14 35 29.9	
	comp=Z,17nm,18.1s,baz=121,slow=39						
TORD	Torodi Ar. Bea	123.60	286	PKP	PKiKP	13 51 57.5	-0.1
	comp=Z,1.1nm,0.7s,baz=54,slow=2.1,SNR=7.9						
TXAR	Lajitas Array	123.92	54	PKP	PKiKP	13 51 58.9	+0.9
	comp=Z,0.2nm,0.7s,baz=163,slow=0.9,SNR=2.9						

IDC 02 13:34:19.6±1.0, 16°.36N×145°.51E, h0km, mb3.6/6, mb1 3.9/6, mb1mx3.5/43, mbtmp3.6/6, Error ellipse: s-maj=58.8km s-min=20.5km az=109.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	37.71	197	P	P	13 41 36.4	-0.7
	0.9nm,0.6s,baz=20,slow=9.2,SNR=6.7						
FITZ	Fitzroy Crossi	39.44	211	P	P	13 41 52.5	+0.8
	0.6nm,0.3s,baz=23,slow=8.2,SNR=16						
ASAR	Alice Springs	41.37	196	P	P	13 42 07.2	-0.5
	0.6nm,0.8s,baz=19,slow=12,SNR=4.8						
MKAR	Makanchi Array	59.95	315	P	P	13 44 27.4	-0.4
	0.2nm,0.4s,baz=91,slow=5.8,SNR=0.8						
ILAR	Eielson Array	65.81	26	P	P	13 45 07.5	+1.1
	0.3nm,0.4s,baz=250,slow=5.5,SNR=6.9						
YKA	Yellowknife Ar	80.13	28	P	P	13 46 29.9	-1.4
	0.2nm,0.5s,baz=291,slow=5.2,SNR=3.4						

*NIED **02** 13:39:00, 35°.60N×141°.00E, h11km, Mw3.5 Best double couple: M₀2.18000×10¹⁴ NP1:φs10.00000°, δ55.00000°, λ-94.00000°. NP2:φs196.00000°, δ35.00000°, λ-84.00000°.*

JMA 02 13:39:42.2±0.1, 35°.60N×140°.90E, h18km±1km, M3.5, 4C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.11	342	⇓P	Pg	13 39 46.0	0.0
CHOJ				S	Sg	13 39 48.8	+0.3
JSMT	Sammumatsuo	0.37	277	⇑P	Pb	13 39 50.2	-0.1
JSMT				S	Sb	13 39 56.3	+0.6
JIHU	Itakohorinouch	0.47	320	⇑P	Pb	13 39 52.4	+0.4
JIHU				S	Sb	13 40 00.0	+1.3
JCN	Nagara	0.60	253	⇑P	Pb	13 39 54.6	+0.5
JCN				S	Sn	13 40 04.5	-0.5
KTR	Katsuura	0.66	227	P	Pb	13 39 54.8	-0.3
KTR				S	Sg	13 40 04.1	+0.2
BSO4	Boso 4	0.76	217	P	Pg	13 39 57.1	0.0
JYT	Yasato	0.85	318	⇑P	Pb	13 39 57.9	-0.5
JYT				S	Sb	13 40 09.0	-0.5
BSO3	Boso 3	0.86	202	⇓P	Pb	13 39 58.5	+0.1
BSO1	Boso 1	0.95	176	P	Pb	13 39 59.0	-0.7
JHO	Hitachi	1.04	345	P	Pb	13 40 00.9	-0.8
JHO				S	Sb	13 40 14.9	-0.2

*MAN **02** 13:52:29.0, 9°.38N×126°.15E, h13km, mb5.3, ML4.2, MS4.4*
*NEIC **02** 13:52:36.4±2.6, 9°.37N±0°.10×126°.1E±0°.2, h135km±10km, mb4.1/16, Error ellipse: s-maj=28.2km s-min=14.2km az=90.0*
*IDC **02** 13:52:38.6±3.0, 9°.31N×126°.07E, h151km±28km, mb3.4/8, mb1 3.6/9, mb1mx3.3/44, mbtmp3.8/9, MS2.9/3, Ms1 2.9/3, ms1mx2.4/29, Error ellipse: s-maj=64.3km s-min=15.5km az=73.0*
ISC 02 13:52:30.0±1.1, 9°.44N±0°.04×126°.23E±0°.07, h66km±11km, n45, σ1s.59/55, mb4.0/15, 3C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.76	233	eP	Pn	13 52 42.7	-2.7
BUTP				eS	Sn	13 52 54.7	-2.0
SCPH	Surigao	0.81	295	⇓iP	Pn	13 52 42.7	-3.2
SCPH				i S	Sn	13 52 57.0	-0.8
MSLP	Maasin	1.52	297	eP	Pn	13 52 54.8	-0.3
MSLP				eS	Sn	13 53 15.0	+0.9
CGP	Cagayan de Oro	1.81	237	⇑iP	Pn	13 52 57.6	-1.4
CGP				i S	Sn	13 53 19.5	-1.4
BUKP	Musuan	1.93	217	eP	Pn	13 53 01.1	+0.3
BUKP				eS	Sn	13 53 24.0	-0.1
OCLP	Ormoc	2.27	315	eP	Pn	13 53 05.7	+0.5
OCLP				eS	Sn	13 53 35.7	+3.6
TBP	Tagbilaran	2.35	276	eP	Pn	13 53 09.1	+2.7
TBP				i S	Sn	13 53 37.3	+3.1
LLP	Lapu-Lapu	2.40	292	eP	Pn	13 53 07.5	+0.4
LLP				eS	Sn	13 53 36.2	+0.8
DAV	Davao City (W)	2.44	195	P	Pn	13 53 17.3	+10
	62nm,0.3s,baz=314,slow=6.1,SNR=8.2						
DAV				S	Sn	13 53 42.5	+6.2
	44nm,0.3s,baz=312,slow=21,SNR=6.2						
DAV				LR	LR	13 54 25.2	
	comp=Z,258nm,18.5s,baz=83,slow=47						
MATI	Mati	2.47	179	eP	Pn	13 53 09.2	+1.1
MATI				eS	Sn	13 53 38.8	+1.6
KCP	Kidapawan	2.66	205	⇓eP	Pn	13 53 11.4	+0.7
KCP				i S	Sn	13 54 01.8	+20
SNPH	Sibulan	2.96	268	⇓eP	Pn	13 53 15.0	+0.4
SNPH				eS	Sn	13 53 53.1	+4.0
DCPH	Dipolog City	2.97	254	⇑eP	Pn	13 53 15.6	+0.8
DCPH				eS	Sn	13 53 49.8	+0.5
PAGZ	Pagadian	3.23	241	eP	Pn	13 53 18.9	+0.6
PAGZ				eS	Sn	13 53 57.3	+1.7
DDMP	Don Marcelino,	3.35	189	eP	Pn	13 53 20.1	+0.1
CNP	Catarman	3.42	333	eP	Pn	13 53 20.0	-0.9
CNP				eS	Sn	13 54 01.4	+1.0
CNOP	Candoni, Negro	3.57	277	eP	Pn	13 53 23.3	+0.4
CNOP				eS	Sn	13 54 03.9	0.0
GUIM	Jordan	3.78	289	eP	Pn	13 53 26.7	+0.8
RCP	Roxas	4.03	302	⇑eP	Pn	13 53 30.0	+0.8
PVCP	Virac	4.61	334	eP	Pn	13 53 39.5	+2.4
JAY	Jayapura	18.68	129	LR	LR	14 03 10.2	
	comp=Z,44nm,20.9s,baz=290,slow=34						
MTN	Manton Dam	22.66	168	P	P	13 57 26.6	+0.6
MTN				IAmb	IAmb	13 57 30.2	
	comp=Z,6.5nm,0.9s						
KNRA	Kununurra	25.08	174	P	P	13 57 49.0	+0.5
FITZ	Fitzroy Crossi	27.36	181	P	P	13 58 09.3	+0.1
	comp=Z,0.5nm,0.4s,baz=358,slow=7.5,SNR=5.8						
FITZ	Fitzroy Crossi	27.36	181	P	P	13 58 09.7	+0.5
FITZ				IAmb	IAmb	13 58 14.1	
	comp=Z,12nm,1.5s						
INU	Inuyama	27.61	19	P	P	13 58 13.3	+2.0
CM31	Chiang Mai Arr	27.93	292	P	P	13 58 13.0	-1.3
CM31				IAmb	IAmb	13 58 21.3	
	comp=Z,2.5nm,0.5s						
CMAR	Chiang Mai Arr	27.93	292	LR	LR	14 08 21.4	
	comp=Z,16nm,21.4s,baz=155,slow=34						
MAJO	Matsushiro	29.09	20	P	P	13 58 24.2	-0.3
MAJO				IAmb	IAmb	13 58 28.0	
	comp=Z,5.8nm,1.3s						
MJB9	Matsu-Tunnel	29.09	20	P	P	13 58 24.0	-0.4
MJB9				IAmb	IAmb	13 58 28.0	
	comp=Z,5.8nm,1.3s						
WB0	Warramunga Arr	30.11	165	P	P	13 58 32.5	-1.1
WB0				IAmb	IAmb	13 58 49.9	
	comp=Z,3.6nm,1.0s						
WRAB	Tennant Creek	30.26	165	P	P	13 58 34.1	-0.8
WRA	Warramunga Arr	30.26	165	P	P	13 58 33.5	-1.5
	comp=Z,0.4nm,0.6s,baz=334,slow=11,SNR=7.2						
WB2	Warramunga Arr	30.27	165	P	P	13 58 34.5	-0.5
WB2				IAmb	IAmb	13 58 50.7	
	comp=Z,5.3nm,1.2s						
WR0	Warramunga Arr	30.33	164	P	P	13 58 35.0	-0.6
WR0				IAmb	IAmb	13 58 49.7	
	comp=Z,6.2nm,1.4s						
AS31	Alice Springs	33.74	167	P	P	13 59 04.9	-0.6
ASAR	Alice Springs	33.74	167	P	P	13 59 05.0	-0.5
	comp=Z,0.4nm,0.3s,baz=347,slow=7.3,SNR=25						
FORT	Forrest	40.02	178	P	P	13 59 58.2	-0.4
BBOO	Buckleboo	43.04	168	P	P	14 00 23.7	+0.4
STKA	Stephens Creek	43.63	161	P	P	14 00 28.2	+0.1
	comp=Z,1.0nm,0.4s,baz=344,slow=8.1,SNR=6.0						
STKA	Stephens Creek	43.63	161	P	P	14 00 26.4	-1.7
MKAR	Makanchi Array	52.67	323	P	P	14 01 37.0	-0.6
	comp=Z,0.3nm,0.5s,baz=123,slow=7.4,SNR=6.8						
TIXI	Tiksi	62.18	1	P	P	14 02 44.0	-0.2
	comp=Z,0.5nm,0.3s,baz=179,slow=3.9,SNR=3.9						
ARCES	ARCESS Array B	84.96	340	P	P	14 04 57.1	-0.6
	comp=Z,0.7nm,0.5s,baz=80,slow=7.4,SNR=4.4						
YKA	Yellowknife Ar	94.53	24	P	P	14 05 43.0	-0.1
	comp=Z,0.3nm,0.7s,baz=306,slow=5.3,SNR=5.1						

IDC 02 14:02:09.8±2.9, 6°.84S×154°.43E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.3/37, mbtmp3.4/4, ML3.1/1, Error ellipse: s-maj=72.1km s-min=34.1km az=101.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.47	316	Pn	Pn	14 03 05.3	+0.1
	1.7nm,0.3s,baz=124,slow=3.6,SNR=1.3						
KRVT				Sn	Sn	14 03 41.7	-5.4
	5.9nm,0.3s,baz=65,slow=20,SNR=8.4						
WRA	Warramunga Arr	23.45	234	P	P	14 07 20.8	-0.3
	0.8nm,0.8s,baz=59,slow=9.8,SNR=5.4						
ASAR	Alice Springs	25.86	227	P	P	14 07 43.4	0.0
	0.6nm,0.8s,baz=60,slow=9.5,SNR=8.3						
MKAR	Makanchi Array	82.92	319	P	P	14 14 36.3	-0.4
	0.2nm,0.7s,baz=97,slow=6.6,SNR=3.0						
TORD	Torodi Ar. Bea	152.44	285	PKPbc	PKiKP	14 22 09.6	+0.2
	0.5nm,0.7s,baz=78,slow=3.5,SNR=3.0						

*IDC **02** 14:41:19.8±4.0, 19°.22N×145°.74E, h136km±37km, mb3.7/15, mb1 3.8/17, mb1mx3.5/52, mbtmp4.1/17, MS2.9/1, Ms1 2.9/1, ms1mx2.2/41, Error ellipse: s-maj=29.9km s-min=11.1km az=104.0*
*NEIC **02** 14:41:21.0±1.4, 19°.23N±0°.09×145°.71E±0°.08, h149km±9km, mb4.2/8, Error ellipse: s-maj=13.7km s-min=9.1km az=213.0*
ISC 02 14:41:21.2±0.6, 19°.23N±0°.07×145°.6E±0°.2, h150km, n28, σ0s.74/26, mb4.0/18, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.65	187	Pn	Pn	14 42 43.7	+0.4
JCJ	Chichijima	8.45	339	P	Pn	14 43 19.0	-1.5
	3.8nm,0.3s,baz=28,slow=23,SNR=7.0						
JCJ				S	Sn	14 44 39.6	-15
	5.4nm,0.3s,baz=279,slow=22,SNR=10.0						
MJAR	Matsushiro Arr	18.44	341	P	P	14 45 25.2	0.0
	baz=150,slow=9.9,SNR=1.5						
JAY	Jayapura	22.14	193	LR	LR	14 54 19.1	
	comp=Z,31nm,18.4s,baz=352,slow=35						
JKA	Kamikawa-asahi	24.94	355	P	P	14 46 31.8	+1.4
ASAJ	Asahikawa	24.95	355	P	P	14 46 31.8	+1.3
	2.0nm,0.6s,baz=157,slow=33,SNR=2.4						
PMG	Port Moresby	28.49	177	P	P	14 47 02.1	-0.4
PMG				IAmb	IAmb	14 47 13.6	
	comp=Z,5.0nm,1.0s						
KLR	Kul'dur	31.95	343	P	P	14 47 33.4	+0.8
	comp=Z,6.4nm,0.6s,baz=167,slow=6.7,SNR=24						
COEN	Coen	33.06	184	P	P	14 47 41.8	-0.9
PETK	Petropavlovsk-	35.09	13	P	P	14 48 00.3	+0.5
	comp=Z,2.3nm,1.1s,baz=190,slow=7.1,SNR=5.9						
KNRA	Kununurra	38.45	207	P	P	14 48 29.3	+0.7
WB0	Warramunga Arr	40.29	196	P	P	14 48 43.9	0.0
WB0				IAmb	IAmb	14 48 44.4	
	comp=Z,6.7nm,1.2s						
WR0	Warramunga Arr	40.43	196	P	P	14 48 44.7	-0.3
WRAB	Tennant Creek	40.46	196	P	P	14 48 44.5	-0.7
WB2	Warramunga Arr	40.47	196	P	P	14 48 45.3	+0.1
WB2				IAmb	IAmb	14 48 46.2	
	comp=Z,3.8nm,0.7s						
WRA	Warramunga Arr	40.47	196	P	P	14 48 45.3	0.0
	comp=Z,1.8nm,0.5s,baz=12,slow=8.6,SNR=34						
FITZ	Fitzroy Crossi	41.97	209	P	P	14 48 58.0	+0.4
	comp=Z,0.9nm,0.5s,baz=20,slow=6.7,SNR=29						
FITZ	Fitzroy Crossi	41.97	209	IAmb	IAmb	14 48 58.9	
	comp=Z,6.9nm,1.3s						
ASAR	Alice Springs	44.14	196	P	P	14 49 14.8	-0.1
	comp=Z,0.3nm,0.4s,baz=14,slow=7.4,SNR=21						
MKAR	Makanchi Array	58.05	314	P	P	14 50 59.4	+0.8
	comp=Z,0.2nm,0.5s,baz=111,slow=6.3,SNR=2.5						
KDAK	Kodiak Island	58.96	33	P	P	14 51 04.2	-0.3
	comp=Z,3.4nm,0.9s,baz=0.0,slow=1.0,SNR=2.2						
ILAR	Eielson Array	63.20	26	P	P	14 51 31.9	-1.2
	comp=Z,1.0nm,0.7s,baz=252,slow=5.5,SNR=8.9						
INK	Inuvik	68.92	23	P	P	14 52 09.3	-0.1
	comp=Z,0.8nm,0.5s,baz=263,slow=8.0,SNR=6.9						
YKA	Yellowknife Ar	77.56	28	P	P	14 53 00.1	-0.1
	comp=Z,2.3nm,0.7s,baz=288,slow=5.1,SNR=26						
ARCES	ARCESS Array B	81.97	342	P	P	14 53 24.2	+0.3
	comp=Z,2.8nm,1.0s,baz=71,slow=8.2,SNR=8.0						
NVAR	Mina Array Bea	82.87	52	P	P	14 53 30.0	+0.5
	comp=Z,2.0nm,0.7s,baz=267,slow=5.9,SNR=22						
FINES	FINESS Array B	86.38	335	P	P	14 53 45.5	-0.8
	comp=Z,2.2nm,0.9s,baz=46,slow=4.0,SNR=4.0						
PDAR	Pinedale Array	87.51	45	P	P	14 53 52.4	-0.1
	comp=Z,0.3nm,0.4s,baz=228,slow=4.7,SNR=3.4						

*NEIC **02** 15:34:17.0±1.5, 5°.9S±0°.1×149°.1E±0°.2, h86km±8km, mb4.5/11, Error ellipse: s-maj=22.0km s-min=14.8km az=104.0*
*IDC **02** 15:34:18.1±2.1, 5°.84S×149°.02E, h89km±20km, mb4.1/13, mb1 4.2/15, mb1mx3.9/35, mbtmp4.4/15, MS3.1/6, Ms1 3.1/6, ms1mx2.7/31, Error ellipse: s-maj=17.4km s-min=10.9km az=106.0*
ISC 02 15:34:19.4±0.5, 5°.88S±0°.07×148°.86E±0°.08, h100km, n39, σ1s.97/37, mb4.3/16, 1C, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.52	64	P	Pn	15 35 09.8	-2.4
	160nm,0.3s,baz=293,slow=1.0,SNR=196						
KRVT				S	Sn	15 35 56.2	+3.2
	30nm,0.3s,baz=212,slow=19,SNR=18						
PMG	Port Moresby	3.88	206		Pn	15 35 15.6	-1.4
JAY	Jayapura	8.79	292	LR	LR	15 39 16.6	
	comp=Z,84nm,21.9s,baz=54,slow=34						
COEN	Coen	9.78	214		Pn	15 36 35.3	-1.9
HNR	Honiara	11.54	108	LR	LR	15 41 03.0	
	comp=Z,56nm,18.1s,baz=216,slow=36						
CTA	Charters Tower	14.34	190	P	Pn	15 37 39.3	+1.4
	1.0nm,0.3s,baz=354,slow=12,SNR=7.3						
SIJI	Sorong	18.25	285	P	Pn	15 38 26.8	+0.5
	0.4nm,0.3s,baz=49,slow=19,SNR=1.4						
WB0	Warramunga Arr	19.71	224	P	P	15 38 41.4	+0.4
WB0				IAmb	IAmb	15 38 43.1	
	comp=Z,9.1nm,0.6s						
WR0	Warramunga Arr	19.73	224	P	P	15 38 41.8	+0.4
WR0				IAmb	IAmb	15 38 42.5	
	comp=Z,8.7nm,0.6s						
WRAB	Tennant Creek	19.85	224	P	P	15 38 42.9	+0.3
WRAB				IAmb	IAmb	15 38 43.4	
	comp=Z,19nm,0.6s						
WB2	Warramunga Arr	19.85	224	P	P	15 38 43.2	+0.5
WRA	Warramunga Arr	19.86	224	P	P	15 38 43.1	+0.3
	comp=Z,14nm,0.5s,baz=50,slow=11,SNR=118						
WRA				S	S	15 42 15.8	-5.3
	comp=Z,0.9nm,0.7s,baz=43,slow=23,SNR=3.6						
KNRA	Kununurra	21.99	242	P	P	15 39 05.4	-0.1
KNRA				IAmb	IAmb	15 39 08.0	
	comp=Z,14nm,0.8s						
AS31	Alice Springs	22.80	218	P	P	15 39 14.2	+0.2
ASAR	Alice Springs	22.80	218	P	P	15 39 13.8	-0.1
	comp=Z,8.7nm,0.7s,baz=52,slow=9.7,SNR=140						
ASAR				S	S	15 43 20.4	+4.7
	comp=Z,7.3nm,1.0s,baz=31,slow=22,SNR=21						
DZM	Mont Dzumac	23.41	135	P	P	15 39 17.9	-1.9
	comp=Z,17nm,0.9s,baz=318,slow=13,SNR=7.5						
DZM				LR	LR	15 47 02.0	
	comp=Z,119nm,19.1s,baz=322,slow=33						
DZM	Mont Dzumac	23.41	135	P	P	15 39 16.4	-3.4
DZM				IAmb	IAmb	15 39 20.2	
	comp=Z,19nm,0.9s						
BATI	Baumata	25.31	259	P	P	15 39 38.0	+1.0
	comp=Z,7.0nm,0.6s,baz=135,slow=4.3,SNR=1.3						
FITZ	Fitzroy Crossi	25.71	240	P	P	15 39 41.3	+0.7
	comp=Z,14nm,0.6s,baz=57,slow=8.7,SNR=37						
FITZ	Fitzroy Crossi	25.71	240	P	P	15 39 41.2	+0.7
FITZ				IAmb	IAmb	15 39 45.0	
	comp=Z,12nm,0.7s						
DAV	Davao City (W)	26.56	299	LR	LR	15 51 17.1	
	comp=Z,9.7nm,18.3s,baz=176,slow=38						
STKA	Stephens Creek	26.74	194	P	P	15 39 50.7	+1.0
	comp=Z,6.2nm,0.8s,baz=344,slow=9.9,SNR=12						
STKA	Stephens Creek	26.74	194	P	P	15 39 50.5	+0.8
KAPI	Kappang	28.99	270	LR	LR	15 53 55.2	
	comp=Z,24nm,18.1s,baz=9.5,slow=40						
URZ	Urewera	41.18	146	LR	LR	15 56 46.8	
	comp=Z,78nm,19.3s,baz=284,slow=33						
JNU	Nakatsue	42.38	337	P	P	15 42 04.2	+0.2
	comp=Z,4.9nm,0.7s,baz=142,slow=10.0,SNR=1.8						
JNU	Nakatsue	42.38	337	P	P	15 42 02.1	-1.9
RPZ	Rata Peaks	42.44	156	P	P	15 42 04.0	-0.3
	comp=Z,4.5nm,0.6s,baz=105,slow=22,SNR=1.3						
MJAR	Matsushiro Arr	43.37	347	P	P	15 42 11.8	-0.1
	comp=Z,2.9nm,0.9s,baz=167,slow=7.3,SNR=13						
PETK	Petropavlovsk-	59.24	6	P	P	15 44 10.8	+0.6
	comp=Z,1.9nm,0.5s,baz=168,slow=7.6,SNR=33						
VNDA	Vanda	71.92	177	P	P	15 45 31.7	+0.3
	comp=Z,2.3nm,0.9s,baz=338,slow=5.2,SNR=11						
MKAR	Makanchi Array	78.59	320	P	P	15 46 10.3	+0.1
	comp=Z,0.2nm,0.5s,baz=116,slow=6.6,SNR=2.3						
ZALV	Zalesovo Beam	79.91	327	P	P	15 46 15.7	-1.4
	comp=Z,0.8nm,0.5s,baz=102,slow=4.7,SNR=4.0						
KSH	Kashi	80.68	311	P	P	15 46 25.3	+3.5
KSH				pP	pP	15 46 46.1	-1.8
KSH				sP	sP	15 46 55.7	-3.1
KSH				pmax	pmax		
	comp=Z,19nm,1.2s						
KSH				pmax	pmax		
	comp=Z,180nm,5.9s						
QSPA	South Pole Qui	84.08	180	P	P	15 46 38.8	-0.2
QSPA				IAmb	IAmb	15 46 41.2	
	comp=Z,5.4nm,0.8s						
ILAR	Eielson Array	84.65	23	P	P	15 46 39.8	-1.9
	comp=Z,1.1nm,0.7s,baz=251,slow=5.3,SNR=12						
SYO	Syowa Base	91.33	200	⇑eX	P	15 47 17.4	+3.8
TORD	Torodi Ar. Bea	146.85	285	PKPbc	PKPbc	15 53 50.5	-0.6
	comp=Z,0.3nm,0.3s,baz=96,slow=3.0,SNR=8.3						
BDFB	Brasilia	152.86	142	PKPab	PKPab	15 54 16.4	-0.8
	comp=Z,1.1nm,0.3s,baz=180,slow=5.1,SNR=4.4						

IDC 02 15:41:52.7±30.0, 17°.64S×178°.83W, h675km±429km, mb2.9/7, mb1 3.2/7, mb1mx2.8/38, mbtmp3.9/7, Error ellipse: s-maj=132.9km s-min=57.5km az=36.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.41**	**241**	P	P	15 48 20.1	-0.2
	1.5nm,0.5s,baz=76,slow=11,SNR=7.2						
WRA	**Warramunga Arr**	**44.29**	**259**	P	P	15 49 06.4	0.0
	0.9nm,0.3s,baz=96,slow=7.5,SNR=28						
ASAR	**Alice Springs**	**44.48**	**254**	P	P	15 49 08.0	+0.2
	5.5nm,0.5s,baz=89,slow=8.3,SNR=128						
PETK	**Petropavlovsk-**	**73.32**	**345**	P	P	15 52 18.6	+0.4
	1.2nm,0.9s,baz=135,slow=9.3,SNR=2.0						
NVAR	**Mina Array Bea**	**79.51**	**44**	P	P	15 52 52.5	+0.1
	0.2nm,0.6s,baz=243,slow=8.0,SNR=1.9						
ILAR	**Eielson Array**	**85.72**	**13**	P	P	15 53 21.6	-0.8
	0.2nm,0.4s,baz=215,slow=6.2,SNR=2.1						
TXAR	**Lajitas Array**	**86.19**	**58**	P	P	15 53 26.0	+0.4
	0.4nm,0.7s,baz=204,slow=4.5,SNR=5.4						

*ISK **02** 15:41:56.8, 37.°07N×27.°49E, h4km, ML2.7/10*
*DDA **02** 15:41:57.0, 37.°07N×27.°47E, h8km±1km, ML2.5*
*ATH **02** 15:41:57.1, 37.°04N×27.°43E, h25km±1km, ML2.5/2, Error ellipse: s-maj=2.4km s-min=1.2km az=65.0*
*THE **02** 15:41:58.1, 37.°01N×27.°41E, h9km±2km, ML2.4/2, Error ellipse: s-maj=2.8km s-min=1.1km az=210.0*
ISC 02 15:41:56.5±0.8, **37.°05N**±0.°02×**27.°51E**±0.°02, **h13**km±5km, **n37**, σ**1.ˢ23**/61, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.05**	**284**	i P	**Pg**	**15 41 59.2**	**+0.3**
BDRM				i P	**Pg**	**15 41 59.2**	**+0.3**
BDRM				i S	**Sg**	**15 41 59.7**	**-0.9**
BDRM				i S	**Sg**	**15 41 59.7**	**-0.9**
BDRM				IAML		15 42 01.0	
	comp=E,4µm,0.2s						
BDRM				IAML		15 42 01.0	
	comp=E,3µm,0.2s						
BDRM				IAML		15 42 01.0	
	comp=N,8µm,0.3s						
BODT	**Bodrum**	**0.16**	**273**	PG	**Pg**	**15 42 00.6**	**+0.4**
BODT				SG	**Sg**	**15 42 03.1**	**+0.3**
YKAV	**Yalikavak-Bodr**	**0.19**	**292**	PG	**Pg**	**15 42 01.1**	**+0.3**
YKAV				SG	**Sg**	**15 42 04.1**	**+0.4**
DATC	**Datca-Mugla**	**0.32**	**157**	PG	**Pg**	**15 42 03.7**	**+0.7**
DAT	**Datca**	**0.33**	**170**	i P	**Pg**	**15 42 03.6**	**+0.4**
DAT				i S	**Sg**	**15 42 07.9**	**+0.2**
NISR	**Nisiros**	**0.53**	**215**	P	**Pg**	**15 42 06.2**	**-0.7**
NISR				S	**Sg**	**15 42 14.8**	**+0.8**
NISR	**Nisiros**	**0.53**	**215**	P	**Pg**	**15 42 07.4**	**+0.5**
NISR				S	**Sg**	**15 42 14.6**	**+0.6**
YER	**Yerkesik**	**0.63**	**82**	PG	**Pb**	**15 42 10.1**	**+0.7**
AYDN	**Tasoluk**	**0.68**	**26**	i P	**Pb**	**15 42 10.8**	**+0.6**
AYDN				i S	**Sg**	**15 42 19.1**	**+0.6**
AYDN				IAML		15 42 21.0	
	comp=N,332nm,0.3s						
AYDN				IAML		15 42 25.0	
	comp=E,270nm,0.2s						
GCAM	**G?zelcaml?**	**0.68**	**342**	PG	**Pg**	**15 42 09.9**	**+0.2**
GCAM	**G?zelcaml?**	**0.68**	**342**	i P	**Pg**	**15 42 10.1**	**+0.4**
GCAM				i S	**Sb**	**15 42 19.2**	**-0.4**
GCAM				IAML		15 42 24.0	
	comp=E,421nm,0.5s						
GCAM				IAML		15 42 24.0	
	comp=N,286nm,0.5s						
SMG	**Samos**	**0.84**	**321**	P	**Pb**	**15 42 13.3**	**+0.3**
SMG				S	**Sn**	**15 42 26.6**	**+0.2**
	comp=N,365nm,0.4s						
SMG	**Samos**	**0.84**	**321**	P	**Pb**	**15 42 13.2**	**+0.2**
SMG				S	**Sb**	**15 42 24.4**	**+0.1**
SMG				AML	AML	15 42 29.1	
	comp=N,751µm,0.3s						
SMG				AML	AML	15 42 30.1	
	comp=E,711µm,0.3s						
TURN	**Turunc**	**0.90**	**101**	PG	**Pg**	**15 42 09.7**	**-4.1**
TURN				SG	**Sg**	**15 42 20.4**	**-5.1**
AYDB	**Zeytinkoy-Aydi**	**0.94**	**19**	PG	**Pb**	**15 42 15.4**	**+0.6**
DALY	**Dalyan (Mula)**	**0.95**	**104**	PG	**Pn**	**15 42 16.8**	**+1.3**
DALY	**Dalyan (Mula)**	**0.95**	**104**	i P	**Pn**	**15 42 16.4**	**+0.8**
DALY				i S	**Sb**	**15 42 25.9**	**-1.4**
DALY				IAML		15 42 35.0	
	comp=N,94nm,0.8s						
DALY				IAML		15 42 53.0	
	comp=E,91nm,0.1s						
ARG	**Arkhangelos**	**0.97**	**149**	P	**Pn**	**15 42 16.1**	**+0.2**
ARG				S	**Sn**	**15 42 30.6**	**+1.1**
	comp=E,212nm,0.5s						
ARG	**Arkhangelos**	**0.97**	**149**	P	**Pn**	**15 42 16.2**	**+0.4**
ARG				S	**Sn**	**15 42 30.2**	**+0.7**
ARG				AML	AML	15 42 33.2	
	comp=N,456µm,0.4s						
ARG				AML	AML	15 42 36.1	
	comp=E,396µm,0.3s						
DGB	**zmir**	**1.11**	**334**	i P	**Pn**	**15 42 17.9**	**+0.1**
DGB				i S	**Sb**	**15 42 31.1**	**-1.0**
TAVA	**DENIZLI_Tavas**	**1.20**	**69**	i P	**Pg**	**15 42 21.8**	**+2.2**
TAVA				i S	**Sb**	**15 42 33.8**	**-0.8**
AMGA	**Amorgos Island**	**1.31**	**261**	P	**Pg**	**15 42 21.6**	**0.0**
FETY	**Fethiye**	**1.33**	**108**	PN	**Pg**	**15 42 23.1**	**+1.0**
FETY	**Fethiye**	**1.33**	**108**	i P	**Pg**	**15 42 24.4**	**+2.3**
FETY				i S	**Sn**	**15 42 39.4**	**+0.9**
BLCB	**Balcova**	**1.38**	**345**	PN	**Pg**	**15 42 23.8**	**+0.8**
URLA	**Izmir**	**1.49**	**331**	i P	**Pg**	**15 42 25.6**	**+0.5**
URLA				i S	**Sn**	**15 42 39.9**	**-2.6**
KARP	**Karpathos**	**1.53**	**191**	P	**Pn**	**15 42 23.6**	**+0.1**
KARP				S	**Sn**	**15 42 42.2**	**-1.1**
KARP	**Karpathos**	**1.53**	**191**	P	**Pn**	**15 42 23.8**	**+0.3**
ANAF	**Anafi Island**	**1.56**	**244**	P	**Pn**	**15 42 24.6**	**+0.7**
APE	**Apeiranthos**	**1.58**	**271**	P	**Pn**	**15 42 24.5**	**+0.2**
APE				S	**Sn**	**15 42 43.7**	**-0.9**
APE	**Apeiranthos**	**1.58**	**271**	P	**Pn**	**15 42 24.6**	**+0.4**
GOLH	**Golhisar**	**1.65**	**83**	i P	**Pg**	**15 42 30.1**	**+1.9**
GOLH				i S	**Sn**	**15 42 45.3**	**-1.2**
MANT	**Manisa**	**1.66**	**30**	i P	**Pg**	**15 42 28.7**	**+0.3**
MANT				i S	**Sn**	**15 42 46.9**	**0.0**
CHOS	**Chios island**	**1.76**	**320**	P	**Pb**	**15 42 28.3**	**-0.4**
CHOS	**Chios island**	**1.76**	**320**	PN	**Pb**	**15 42 28.9**	**+0.2**
IOSP	**Ios island**	**1.81**	**260**	P	**Pn**	**15 42 27.5**	**+0.2**
IOSP	**Ios island**	**1.81**	**260**	P	**Pn**	**15 42 27.9**	**+0.6**

*GCG **02** 16:28:38.6±1.0, 14.°79N×90.°48W, h226km±7km, MD3.8*
*NEIC **02** 16:28:43.4±1.7, 14.°40N±0.°07×90.°61W±0.°07, h189km±3km, mb4.4/15, Error ellipse: s-maj=12.2km s-min=7.3km az=214.0*
*IDC **02** 16:28:43.7±0.6, 14.°49N×90.°50W, h186km±2km, mb3.5/10, mb1 3.7/14, mb1mx3.5/34, mbtmp4.0/14, Error ellipse: s-maj=21.5km s-min=12.5km az=64.0*
*UCR **02** 16:28:44.5±1.2, 14.°38N×90.°56W, h175km±8km, ML3.4, mb4.4(NEIC)*
*SNET **02** 16:28:44.4±1.1, 14.°38N×90.°56W, h176km±8km, ML3.5*
*MEX **02** 16:28:46.8±0.5, 14.°36N×90.°82W, h185km±9km, MD3.9*
ISC 02 16:28:43.8±0.6, **14.°43N**±0.°06×**90.°58W**±0.°04, **h194**km±5km, **n73**, σ**1.ˢ77**/89, **mb4.0**/12, **2D**, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.04**	**213**	eP	**Pn**	**16 29 09.5**	**-0.1**
PCG				eS	**Sn**	**16 29 34.6**	**+5.2**
FUG	**Fuego 3**	**0.25**	**274**	eP	**Pn**	**16 29 09.2**	**-0.5**
FUG				eS	**Sn**	**16 29 33.7**	**+4.1**
NBG	**Las Nubes**	**0.28**	**55**	eP	**Pn**	**16 29 10.2**	**+0.4**
NBG				eS	**Sn**	**16 29 33.1**	**+3.1**
IXG	**Ixpaco**	**0.29**	**152**	eP	**Pn**	**16 29 08.3**	**-1.5**
IXG	**Ixpaco**	**0.29**	**152**	eP	**Pn**	**16 29 09.2**	**-0.6**
IXG	**Ixpaco**	**0.29**	**152**	eP	**Pn**	**16 29 08.3**	**-1.5**
APG	**El Apazote**	**0.58**	**11**	P	**Pn**	**16 29 10.4**	**-0.5**
	44nm,0.3s,baz=156,slow=12,SNR=334						
APG				S	**Sn**	**16 29 30.5**	**-1.4**
	57nm,0.3s,baz=294,slow=20,SNR=35						
ERG	**Entre ros, C**	**0.96**	**271**	eP	**Pn**	**16 29 12.4**	**-0.3**
ERG				eS	**Sn**	**16 29 38.8**	**+3.9**
STG3	**Santiaguito 3,**	**1.00**	**286**	eP	**Pn**	**16 29 12.8**	**-0.3**
STG3				eS	**Sn**	**16 29 38.5**	**+2.8**
RTAL	**Retalhuleu**	**1.08**	**275**	eS	**Sn**	**16 29 35.0**	**-1.4**
MRL	**Marmol**	**1.08**	**53**	eP	**Pn**	**16 29 13.7**	**-0.2**
MRL	**Marmol**	**1.08**	**53**	eP	**Pn**	**16 29 14.4**	**+0.6**
MRL				eS	**Sn**	**16 29 36.8**	**-0.2**
MRL	**Marmol**	**1.08**	**53**	eP	**Pn**	**16 29 13.7**	**-0.2**
CEVE	**Cerro Verde**	**1.10**	**123**	eP	**Pn**	**16 29 13.3**	**-0.7**
CEVE				eS	**Sn**	**16 29 36.8**	**-0.5**
CEVE				IAML		16 29 50.5	
	comp=Z,911nm,0.3s						
CEVE	**Cerro Verde**	**1.10**	**123**	eP	**Pn**	**16 29 13.3**	**-0.7**
CEVE				eS	**Sn**	**16 29 36.8**	**-0.5**
CEVE				IAML		16 29 50.5	
	comp=Z,911nm,0.3s						
MTO3	**Montecristo**	**1.18**	**91**⇓	i P	**Pn**	**16 29 13.8**	**-0.7**
MTO3				IAML		16 29 14.5	
	comp=Z,227nm,0.5s						
MTO3				eS	**Sn**	**16 29 36.4**	**-1.9**
MTO3	**Montecristo**	**1.18**	**91**⇓	i P	**Pn**	**16 29 13.8**	**-0.7**
MTO3				IAML		16 29 14.5	
	comp=Z,227nm,0.5s						
MTO3				eS	**Sn**	**16 29 36.4**	**-1.9**
ESQI	**Esquipulas**	**1.21**	**84**	eP	**Pn**	**16 29 14.1**	**-0.5**
ESQI				eS	**Sn**	**16 29 37.5**	**-0.9**
HUEH	**Huehuetenango**	**1.25**	**315**	eP	**Pn**	**16 29 15.1**	**0.0**
SNET	**Serv Nac Est T**	**1.50**	**119**		**Pn**	**16 29 15.9**	**-1.2**
LALI	**Alcalda de L**	**1.54**	**127**	eP	**Pn**	**16 29 16.6**	**-0.7**
LALI				eS	**Sn**	**16 29 40.7**	**-2.6**
LALI				IAML		16 29 49.7	
	comp=Z,246nm,0.3s						
LALI	**Alcalda de L**	**1.54**	**127**	eP	**Pn**	**16 29 16.6**	**-0.7**
LALI				eS	**Sn**	**16 29 40.7**	**-2.6**
LALI				IAML		16 29 49.7	
	comp=Z,246nm,0.3s						
LBRS	**Las Brisas**	**1.64**	**114**	eP	**Pn**	**16 29 17.9**	**-0.5**
LBRS	**Las Brisas**	**1.64**	**114**	eP	**Pn**	**16 29 17.9**	**-0.5**
LFRS	**El Faro**	**1.68**	**118**	eP	**Pn**	**16 29 18.1**	**-0.7**
LFRS	**El Faro**	**1.68**	**118**	eP	**Pn**	**16 29 18.1**	**-0.7**
THIG		**1.70**	**287**	eP	**Pn**	**16 29 17.7**	**-1.1**
THIG				i S	**Sn**	**16 29 41.9**	**-4.0**
CCIG	**Comitan**	**2.38**	**321**		**Pn**	**16 29 26.4**	**+0.3**
CCIG	**Comitan**	**2.38**	**321**	eP	**Pn**	**16 29 26.4**	**+0.3**
PCIG		**2.84**	**297**	eP	**Pn**	**16 29 30.4**	**-0.9**
PCIG				i S	**Sn**	**16 30 05.3**	**-3.1**
TGUH	**Tegucigalpa,Un**	**3.23**	**96**		**Pn**	**16 29 35.6**	**-0.4**
CSGN	**Cosiguina Volc**	**3.27**	**116**		**Pn**	**16 29 37.6**	**+1.1**
TGIG		**3.38**	**314**	eP	**Pn**	**16 29 37.7**	**-0.1**
TGIG				i S	**Sn**	**16 30 17.6**	**-2.5**
MATN	**Matagalpa**	**4.76**	**108**		**Pn**	**16 29 54.8**	**-0.4**
CMIG	**Matias Romero**	**4.92**	**303**	P	**Pn**	**16 29 56.3**	**-0.7**
	comp=Z,5.2nm,0.3s,baz=138,slow=8.4,SNR=67						
CMIG				S	**Sn**	**16 30 48.5**	**-6.1**
	comp=Z,14nm,0.3s,baz=122,slow=15,SNR=29						
CMIG	**Matias Romero**	**4.92**	**303**		**Pn**	**16 29 56.1**	**-0.9**
CMIG	**Matias Romero**	**4.92**	**303**	eP	**Pn**	**16 29 56.1**	**-0.9**
CMIG				i S	**Sn**	**16 30 51.6**	**-3.0**
HUIG	**Huatulco**	**5.50**	**285**	eP	**Pn**	**16 30 03.1**	**-1.4**
HUIG				i S	Sn	16 30 57.8	-10
ACON	**Acoyapa**	**5.81**	**114**		**Pn**	**16 30 08.8**	**+0.2**
TEIG	**Tepich**	**6.17**	**21**	P	**Pn**	**16 30 12.7**	**-0.5**
	comp=Z,2.9nm,0.3s,baz=20,slow=0.0,SNR=13						
JTS	**Las Juntas de**	**6.87**	**126**	P	**Pn**	**16 30 22.8**	**+0.5**
	comp=Z,21nm,0.3s,baz=12,slow=16,SNR=33						
JTS				S	**Sn**	**16 31 33.8**	**-6.7**
	comp=Z,2.7nm,0.3s,baz=344,slow=22,SNR=1.6						
TLIG	**Tlapa**	**8.29**	**293**		**Pn**	**16 30 39.5**	**-1.5**
MTDJ	**Mount Denham**	**13.08**	**71**	P	**P**	**16 31 47.4**	**+1.4**
WHTX	**Lake Whitney,**	**18.58**	**341**	P	**P**	**16 32 46.0**	**-0.3**
WHTX				IAmb	IAmb	16 32 48.7	
	comp=Z,9.5nm,0.6s						
SDDR	**Presa de Saban**	**19.02**	**74**	P	**P**	**16 32 50.5**	**-0.8**
SDDR				IAmb	IAmb	16 32 54.9	
	comp=Z,22nm,1.3s						
TXAR	**Lajitas Array**	**19.14**	**323**	P	**Pn**	**16 32 54.5**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=140,slow=10,SNR=6.6						
RUSC	**La Rusia**	**19.19**	**114**	P	**P**	**16 32 53.5**	**-0.1**
Z50A	**Ashland**	**19.21**	**12**	P	**Pn**	**16 32 55.8**	**-0.7**
Z50A				IAmb	IAmb	16 32 59.2	
	comp=Z,15nm,0.8s						
BG3	**Lake Jocassee**	**21.61**	**17**	P	**P**	**16 33 19.5**	**+0.9**
BG3				IAmb	IAmb	16 33 21.1	
	comp=Z,8.2nm,0.9s						
TKL	**Tuckaleechee C**	**22.01**	**15**	P	**P**	**16 33 23.0**	**+0.4**
	comp=Z,4.3nm,0.3s,baz=178,slow=11,SNR=6.9						
TKL	**Tuckaleechee C**	**22.01**	**15**	P	**P**	**16 33 22.6**	**0.0**
TKL				IAmb	IAmb	16 33 24.8	
	comp=Z,10nm,0.8s						
T47A	**Sharon Grove**	**22.68**	**7**	P	**P**	**16 33 29.1**	**+0.3**
WCI	**Wyandotte Cave**	**24.01**	**8**	P	**P**	**16 33 42.1**	**+1.3**
ANMO	**Albuquerque**	**24.94**	**328**	P	**P**	**16 33 49.6**	**0.0**
	comp=Z,1.5nm,0.5s,baz=305,slow=5.2,SNR=3.6						
ANMO	**Albuquerque**	**24.94**	**328**	IAmb	IAmb	16 33 50.3	
	comp=Z,1.8nm,0.6s						
E43A	**Lone Tree Farm**	**31.99**	**5**	P	**P**	**16 34 50.7**	**-1.0**
E43A				IAmb	IAmb	16 34 52.1	
	comp=Z,6.5nm,0.6s						
NVAR	**Mina Array Bea**	**34.22**	**319**	P	**P**	**16 35 13.9**	**+2.4**
	comp=Z,0.2nm,0.5s,baz=148,slow=7.5,SNR=5.3						
D53A	**Lac Vacive, Po**	**34.29**	**16**	P	**P**	**16 35 11.9**	**+0.3**
ULM	**Lac du Bonnet**	**35.98**	**354**	P	**P**	**16 35 25.4**	**-0.6**
	comp=Z,4.5nm,0.6s,baz=187,slow=9.6,SNR=7.8						
ULM	**Lac du Bonnet**	**35.98**	**354**	IAmb	IAmb	16 35 26.1	
	comp=Z,5.3nm,0.9s						
LPAZ	**La Paz**	**37.73**	**143**	P	**P**	**16 35 42.4**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=284,slow=6.9,SNR=5.2						
LPAZ	**La Paz**	**37.73**	**143**	IAmb	IAmb	16 35 43.1	
	comp=Z,1.2nm,0.7s						
SCHQ	**Schefferville**	**44.35**	**19**	P	**P**	**16 36 34.7**	**0.0**
	comp=Z,12nm,0.6s,baz=222,slow=7.1,SNR=14						
SCHQ	**Schefferville**	**44.35**	**19**	P	**P**	**16 36 34.2**	**-0.5**
SCHQ				IAmb	IAmb	16 36 35.4	
	comp=Z,11nm,0.7s						
YKA	**Yellowknife Ar**	**50.94**	**346**	P	**P**	**16 37 25.1**	**0.0**
	comp=Z,0.2nm,0.4s,baz=146,slow=8.5,SNR=5.3						
PLCA	**Paso Flores**	**57.94**	**162**	P	**P**	**16 38 16.9**	**+0.9**
	comp=Z,1.4nm,0.8s,baz=269,slow=9.7,SNR=2.9						
PLCA	**Paso Flores**	**57.94**	**162**	IAmb	IAmb	16 38 27.9	
	comp=Z,7.6nm,1.3s						
ILAR	**Eielson Array**	**62.99**	**336**	P	**P**	**16 38 49.6**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=123,slow=5.8,SNR=4.3						
ARCES	**ARCESS Array B**	**85.30**	**18**	P	**P**	**16 40 58.0**	**-0.6**
	comp=Z,2.2nm,1.0s,baz=305,slow=5.2,SNR=1.4						
WRA	**Warramunga Arr**	**136.83**	**256**	PKP	**PKPdf**	**16 47 45.0**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=88,slow=2.8,SNR=9.2						
ASAR	**Alice Springs**	**137.10**	**251**	PKhKP	PKPpre	16 47 35.8	
	comp=Z,0.3nm,0.9s,baz=109,slow=3.7,SNR=4.2						
ASAR				PKP	**PKPdf**	**16 47 45.2**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=95,slow=2.3,SNR=6.3						
FITZ	**Fitzroy Crossi**	**145.07**	**259**	PKPbc	**PKPbc**	**16 47 58.6**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=13,slow=3.7,SNR=12						
CMAR	**Chiang Mai Arr**	**146.00**	**344**	PKPbc	**PKPdf**	**16 48 01.1**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=336,slow=2.9,SNR=5.1						

MAN 02 16:32:36.2, 16.°49N×120.°98E, h0km, mb4.7, ML3.6, MS3.5, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**0.44**	**220**	eP	Pg	16 32 45.0	+0.3
SMPP				eS	Sg	16 32 51.8	+1.5
CAUP	**Cauayan**	**0.93**	**61**	eP	Pg	16 32 54.5	+0.5
CAUP				eS	Sn	16 33 10.0	-0.6
PCPH	**Palayan**	**0.93**	**173**⇓	eP	Pg	16 32 53.3	-0.7
PCPH				eS	Sb	16 33 07.5	-0.6
BALP	**Baler**	**0.94**	**142**	eP	Pg	16 32 53.3	-1.0
BALP				eS	Sg	16 33 06.0	-0.4
BOLP	**Bolinao**	**1.03**	**264**	eP	Pg	16 32 56.0	+0.1
BOLP				eS	Sn	16 33 12.4	-0.6
ABRA	**Dolores**	**1.18**	**348**	eP	Pg	16 32 57.6	-1.3
ABRA				eS	Sn	16 33 16.7	-0.1
SCZP	**Santa Cruz**	**1.25**	**235**	eP	Pg	16 33 00.1	0.0
APYP	**Conner**	**1.39**	**11**	eP	Pg	16 33 01.6	-1.3
APYP				eS	Sn	16 33 23.2	+1.2
PALP	**Palanan**	**1.50**	**67**	eP	Pn	16 33 04.2	-0.2
PALP				eS	Sn	16 33 29.5	+4.8
POLP	**Polilio Island**	**1.98**	**152**	eP	Pn	16 33 10.9	-0.1
POLP				eS	Sn	16 33 37.4	+0.8
LQP	**Lukban**	**2.42**	**167**	eP	Pn	16 33 18.5	+1.2
LQP				eS	Sb	16 33 52.3	+0.9
TBP	**Tagbilaran**	**7.32**	**157**	eP	Pn	16 34 25.0	+0.5
MSLP	**Maasin**	**7.36**	**149**	eP	Pn	16 34 24.6	-0.4

*INET **02** 16:37:25.7, 11.°85N×89.°15W, h27km, ML3.3*
*SNET **02** 16:37:28.6±1.3, 12.°15N×88.°99W, h11km±10km, ML3.6*
*UCR **02** 16:37:28.6±1.4, 12.°12N×88.°99W, h13km±7km, ML3.5*
*IDC **02** 16:37:30.0±2.8, 11.°96N×88.°99W, h45km±23km, mb3.0/2, mb1 3.6/6, mb1mx3.4/33, mbtmp3.5/6, ML3.4/4, Error ellipse: s-maj=49.8km s-min=17.9km az=45.0*
ISC 02 16:37:25.0±3.2, **12.°00N**±0.°07×**88.°92W**±0.°06, **h4**km±18km, **n42**, σ**1.ˢ25**/49, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JUCU	**Jucuar¡n**	**1.41**	**28**	eP	**Pn**	**16 37 51.8**	**+0.2**
JUCU	**Jucuar¡n**	**1.41**	**28**	eP	**Pn**	**16 37 51.8**	**+0.2**
COEB	**Comit de Eme**	**1.54**	**14**	IAML		16 38 14.6	
	comp=Z,972nm,0.3s						
COEB	**Comit de Eme**	**1.54**	**14**	IAML		16 38 14.6	
	comp=Z,972nm,0.3s						
TECA	**Tecapa**	**1.54**	**15**	eP	**Pn**	**16 37 54.1**	**+0.7**
TECA	**Tecapa**	**1.54**	**15**	eP	**Pn**	**16 37 54.1**	**+0.7**
PACA	**Pacayal**	**1.57**	**22**	eP	**Pn**	**16 37 54.6**	**+0.8**
PACA				eS	**Sg**	**16 38 15.7**	**0.0**
PACA	**Pacayal**	**1.57**	**22**	eP	**Pn**	**16 37 54.6**	**+0.8**
PACA				eS	**Sg**	**16 38 15.7**	**0.0**
BLLM	**Bellamira**	**1.58**	**25**	eP	**Pn**	**16 37 55.2**	**+1.2**
BLLM	**Bellamira**	**1.58**	**25**	eP	**Pn**	**16 37 55.2**	**+1.2**
COEG	**Centro de Oper**	**1.61**	**2**	eP	**Pn**	**16 37 53.6**	**-0.7**
COEG				IAML		16 38 25.7	
	comp=Z,749nm,0.2s						
COEG	**Centro de Oper**	**1.61**	**2**	eP	**Pn**	**16 37 53.6**	**-0.7**
COEG				IAML		16 38 25.7	
	comp=Z,749nm,0.2s						
LFRS	**El Faro**	**1.62**	**355**	eP	**Pn**	**16 37 55.0**	**+0.5**
LFRS	**El Faro**	**1.62**	**355**	eP	**Pn**	**16 37 55.0**	**+0.5**
LCND	**La Caada**	**1.65**	**38**	eP	**Pn**	**16 37 55.2**	**+0.5**
LCND	**La Caada**	**1.65**	**38**	eP	**Pn**	**16 37 55.2**	**+0.5**
CNCH	**Conchagua**	**1.66**	**40**	IAML		16 38 20.8	
	comp=Z,1µm,0.3s						
CNCH	**Conchagua**	**1.66**	**40**	IAML		16 38 20.8	
	comp=Z,1µm,0.3s						
SNET	**Serv Nac Est T**	**1.70**	**350**	eS	**Sb**	**16 38 17.0**	**-1.8**
SNET				IAML		16 38 20.6	
	comp=Z,1µm,0.4s						
SNET	**Serv Nac Est T**	**1.70**	**350**	eS	**Sb**	**16 38 17.0**	**-1.8**
SNET				IAML		16 38 20.6	
	comp=Z,1µm,0.4s						
BOQS	**Boqueron**	**1.76**	**349**	eP	**Pn**	**16 37 57.5**	**+1.0**
BOQS				eS	**Sb**	**16 38 19.0**	**-1.6**
BOQS	**Boqueron**	**1.76**	**349**	eP	**Pn**	**16 37 57.5**	**+1.0**
BOQS				eS	**Sb**	**16 38 19.0**	**-1.6**
FAGO	**Alcalda de S**	**1.86**	**25**	eP	**Pn**	**16 37 59.1**	**+1.3**
FAGO				eS	**Sn**	**16 38 22.3**	**+0.5**
FAGO	**Alcalda de S**	**1.86**	**25**	eP	**Pn**	**16 37 59.1**	**+1.3**
FAGO				eS	**Sn**	**16 38 22.3**	**+0.5**
CEVE	**Cerro Verde**	**1.94**	**339**	eP	**Pn**	**16 37 59.3**	**+0.3**
CEVE				eS	**Sb**	**16 38 23.5**	**-2.3**
CEVE	**Cerro Verde**	**1.94**	**339**	eP	**Pn**	**16 37 59.3**	**+0.3**
CEVE				eS	**Sb**	**16 38 23.5**	**-2.3**
SBLS	**San Blas**	**1.95**	**340**	eP	**Pn**	**16 38 00.2**	**+1.1**
SBLS	**San Blas**	**1.95**	**340**	eP	**Pn**	**16 38 00.2**	**+1.1**
SNJE	**San Jose**	**1.97**	**340**	eP	**Pn**	**16 38 00.5**	**+1.1**
SNJE	**San Jose**	**1.97**	**340**	eP	**Pn**	**16 38 00.5**	**+1.1**
RTR	**El Retiro**	**2.01**	**340**	eP	**Pn**	**16 38 00.6**	**+0.6**
RTR	**El Retiro**	**2.01**	**340**	eP	**Pn**	**16 38 00.6**	**+0.6**
ESQI	**Esquipulas**	**2.58**	**351**	eP	**Pn**	**16 38 08.9**	**+1.3**
ESQI				eS	**Sn**	**16 38 39.7**	**+0.1**
ESQI				IAML		16 38 44.2	
	comp=Z,126nm,0.4s						
APG	**El Apazote**	**3.34**	**334**	P	**Pn**	**16 38 19.4**	**+1.1**
	comp=Z,1.9nm,0.3s,baz=138,slow=12,SNR=6.1						
APG				S	**Sn**	**16 38 59.0**	**+0.4**
	comp=Z,2.2nm,0.3s,baz=108,slow=20,SNR=3.8						
JTS	**Las Juntas de**	**4.25**	**113**	P	**Pn**	**16 38 32.7**	**+2.0**
	comp=Z,2.8nm,0.3s,baz=173,slow=23,SNR=11						
JTS				S	**Sn**	**16 39 18.7**	**-2.0**
	comp=Z,5.0nm,0.3s,baz=5.8,slow=18,SNR=5.7						
CMIG	**Matias Romero**	**7.67**	**312**	P	**Pn**	**16 39 19.3**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=134,slow=9.5,SNR=7.9						
CMIG				S	**Sn**	**16 40 44.6**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=323,slow=19,SNR=1.0						
TEIG	**Tepich**	**8.21**	**4**	P	**Pn**	**16 39 27.9**	**+3.0**
	comp=Z,0.7nm,0.3s,baz=151,slow=0.0,SNR=1.2						
TXAR	**Lajitas Array**	**22.04**	**324**	P	**P**	**16 42 21.8**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=143,slow=11,SNR=6.9						
YKA	**Yellowknife Ar**	**53.68**	**346**	P	**P**	**16 46 46.5**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=144,slow=6.7,SNR=5.1						
WRA	**Warramunga Arr**	**137.76**	**254**	pPKP	pPKPdf	16 57 03.0	+12
	comp=Z,0.2nm,0.7s,baz=91,slow=2.3,SNR=1.3						
BATI	**Baumata**	**147.98**	**270**	PKPbc	**PKPdf**	**16 57 10.3**	**+0.5**
	comp=Z,9.7nm,0.6s,baz=198,slow=9.6,SNR=2.8						
CMAR	**Chiang Mai Arr**	**148.76**	**345**	PKPbc	**PKPdf**	**16 57 13.1**	**+2.1**
	comp=Z,0.5nm,0.6s,baz=358,slow=3.9,SNR=5.5						

MAN 02 16:37:45.8, 9.°43N×126.°07E, h2km, mb3.8, ML2.5, MS2.1, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**2.25**	**293**	eP	Pn	16 38 24.3	+0.2
LLP				eS	Sn	16 38 39.7	-13
PAGZ	**Pagadian**	**3.08**	**240**	eP	Pn	16 38 36.2	+0.7
CNOP	**Candoni, Negro**	**3.41**	**277**	eP	Pn	16 38 41.3	+1.3

*PRE **02** 17:01:09.8±0.8, 26.°45S×27.°45E, h2km, ML2.3*
*NAM **02** 17:01:12.0±11.0, 26.°33S×27.°66E, h10km, MD3.1*
ISC 02 17:01:07.7±1.0, **26.°37S**±0.°04×**27.°52E**±0.°06, **h5**km, **n11**, σ**2.ˢ20**/20, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.57**	**195**	eP	**Pg**	**17 01 18.6**	**-0.2**
PRYS				eS	**Sg**	**17 01 25.8**	**-0.5**
PRYS				AML	AML	17 01 27.6	
	comp=Z,168nm,0.1s						
ERPM	**east rand prop**	**0.65**	**88**	eP	**Pn**	**17 01 24.4**	**+0.7**
ERPM				AML	AML	17 01 34.3	
	comp=Z,126nm,0.5s						
SLR	**Silverton**	**0.93**	**47**	eP	**Pn**	**17 01 29.9**	**+2.4**
SLR				eS	**Sn**	**17 01 43.5**	**+2.2**
SLR				AML	AML	17 01 50.1	
	comp=Z,85nm,0.2s						
LBTB	**Lobatse**	**2.20**	**307**	i P	Pn	17 01 37.1	-7.9
LBTB				i S	**Sb**	**17 02 18.5**	**+2.8**
BOSA	**Boshof**	**3.01**	**221**	i P	**Pn**	**17 01 57.9**	**+1.7**
BOSA				i S	**Sb**	**17 02 36.9**	**-2.1**
BOSA	**Boshof**	**3.01**	**221**	eP	**Pn**	**17 01 57.7**	**+1.5**
BOSA				eS	**Sn**	**17 02 32.8**	**+0.1**
BOSA				AML	AML	17 02 47.3	
	comp=Z,22nm,0.3s						
BOSA	**Boshof**	**3.01**	**221**	i P	**Pn**	**17 01 57.6**	**+1.5**
BOSA				i S	**Sb**	**17 02 39.7**	**+0.7**
BOSA	**Boshof**	**3.01**	**221**	i P	**Pn**	**17 01 57.9**	**+1.7**
BOSA				i S	**Sb**	**17 02 36.9**	**-2.1**
MATP	**Matopo**	**5.98**	**9**	i P	**Pn**	**17 02 37.6**	**+0.6**
MATP				i S	**Sn**	**17 03 41.5**	**-4.5**
MATP	**Matopo**	**5.98**	**9**	i P	**Pn**	**17 02 37.9**	**+0.9**
MATP				i S	**Sn**	**17 03 44.9**	**-1.2**
MATP	**Matopo**	**5.98**	**9**	i P	**Pn**	**17 02 37.6**	**+0.6**
MATP				i S	**Sn**	**17 03 41.5**	**-4.5**

*NIED **02** 17:04:00, 37.°90N×144.°20E, h8km, Mw4.0 Best double couple: M0 1.03000×10^15 NP1:φs161.00000°, δ70.00000°, λ-99.00000°. NP2:φs6.00000°, δ22.00000°, λ-67.00000°.*
*IDC **02** 17:04:48.2±0.7, 37.°69N×144.°39E, h0km, mb3.8/13, mb1 4.0/19, mb1mx3.9/49, mbtmp3.9/19, ML2.9/4, MS2.8/6, Ms1 2.8/6, ms1mx2.5/44, Error ellipse: s-maj=20.6km s-min=13.6km az=122.0*
*JMA **02** 17:04:51.8±0.2, 37.°91N×144.°16E, h48km, M4.2*
*NEIC **02** 17:04:53.4±2.2, 37.°82N±0.°06×144.°3E±0.°1, h33km±5km, mb4.5/33, Error ellipse: s-maj=14.6km s-min=8.6km az=108.0*
ISC 02 17:04:53.5±0.6, **37.°93N**±0.°05×**144.°20E**±0.°06, **h35**km, **n88**, σ**1.ˢ91**/100, **mb4.3**/29, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.19**	**281**	P	**Pn**	**17 05 26.4**	**-0.9**
JIKH				S	**Sn**	**17 05 51.9**	**-1.3**
OFUJ	**Ofunato**	**2.29**	**301**	P	**Pn**	**17 05 28.1**	**-0.7**
OFUJ				S	**Sn**	**17 05 55.0**	**-0.8**
JIO	**Ouri**	**2.31**	**284**	P	**Pn**	**17 05 28.2**	**-0.7**
JIO				S	**Sn**	**17 05 55.0**	**-1.1**
JKMT	**Kesennumamotoy**	**2.32**	**293**	P	**Pn**	**17 05 28.2**	**-0.9**
JKMT				S	**Sn**	**17 05 55.2**	**-1.1**
JMK	**Ichinoseki**	**2.55**	**294**	P	**Pn**	**17 05 32.1**	**-0.2**
JMK				S	**Sn**	**17 06 01.9**	**-0.2**
JOM	**Ohasama**	**2.75**	**305**	P	**Pn**	**17 05 34.7**	**-0.3**
JOM				eS	**Sn**	**17 06 07.0**	**0.0**
JFT	**Otama**	**3.09**	**264**	P	**Pn**	**17 05 39.6**	**-0.2**

JFT				eS	Sn	17 06 15.1	-0.4
JYK	Kaneyama	3.17	289	P	Pn	17 05 41.1	+0.2
JYK				S	Sn	17 06 18.0	+0.5
JANG	Nango	3.21	320	P	Pn	17 05 40.8	-0.6
JANG				S	Sn	17 06 17.0	-1.4
ERM	Erimo	4.16	349		Pn	17 05 53.6	-0.7
BSO1	Boso 1	4.18	219	P	Pn	17 05 52.2	-2.0
BSO1				eS	Sn	17 06 40.4	-1.1
JOT	Ohata	4.22	326	P	Pn	17 05 55.9	+0.7
JOT				eS	Sn	17 06 40.7	-2.5
JKB	Kayabe	4.64	329	P	Pn	17 06 01.2	+0.2
JKB				eS	Sn	17 06 50.8	-2.8
JRY	Ryogami san	4.65	247	P	Pn	17 06 00.2	-1.0
JRY				S	Sn	17 06 51.2	-2.8
JCH	Churui	4.72	352	P	Pn	17 06 00.5	-1.6
JCH				eS	Sn	17 06 50.6	-5.0
JOD2	Odawara 2	4.90	239	P	Pn	17 06 03.2	-1.4
JOD2				eS	Sn	17 06 55.7	-4.4
MJAR	Matsushiro Arr	4.98	256	Pn	Pn	17 06 06.2	+0.5
	1.7nm,0.3s,baz=78,slow=15,SNR=118						
MJAR				Sn	Sn	17 07 05.3	+3.3
	0.2nm,0.3s,baz=87,slow=31,SNR=2.0						
MAJO	Matsushiro	4.98	256		Pn	17 06 06.2	+0.4
MAT	Matsushiro	4.98	256	P	Pn	17 06 06.5	+0.8
MAT				S	Sn	17 07 01.4	-0.7
MJB9	Matsu-Tunnel	4.98	256		Pn	17 06 06.9	+1.2
JOSM	Okushiri--Mats	5.51	320	P	Pn	17 06 13.8	+0.9
NEM2	Nemuro 2	5.55	12	P	Pn	17 06 09.8	-3.7
NEM2				eS	Sn	17 07 09.1	-7.0
JHJ2	Mitsune	5.99	218	P	Pn	17 06 17.0	-2.6
JHJ2				eS	Sn	17 07 21.9	-5.1
JHJ2	Mitsune	5.99	218	Pn	Pn	17 06 16.6	-3.0
JHJ	Hachijo jima 2	6.00	218	Pn	Pn	17 06 16.4	-3.3
	19nm,0.3s,baz=336,slow=18,SNR=22						
JHJ				Sn	Sn	17 07 21.4	-5.9
	19nm,0.3s,baz=99,slow=23,SNR=6.1						
JTKR	Abashiri--Toko	6.04	358	P	Pn	17 06 18.5	-1.7
JTKR				eS	Sn	17 07 22.6	-5.4
JHR	Hokuryu	6.10	343	P	Pn	17 06 22.2	+1.1
JKA	Kamikawa-asahi	6.30	349		Pn	17 06 23.5	-0.2
JKA					Sn	17 07 33.7	-0.7
ASAJ	Asahikawa	6.30	349	Pn	Pn	17 06 23.5	-0.2
	5.8nm,0.3s,baz=186,slow=9.8,SNR=52						
ASAJ				Sn	Sn	17 07 33.7	-0.7
	1.5nm,0.3s,baz=355,slow=30,SNR=2.1						
ASAJ				LR	LR	17 09 10.9	
	comp=Z,34nm,20.4s,baz=156,slow=40						
INU	Inuyama	6.32	248		Pn	17 06 24.4	+0.3
YSS	Yuzh-Sakhalins	9.08	354	Pn	Pn	17 07 00.3	-1.6
JCJ	Chichijima	10.94	190	Pn	Pn	17 07 21.1	-6.3
	4.3nm,0.3s,baz=295,slow=23,SNR=6.4						
USRK	Ussuriysk Ar.	11.14	308	Pn	Pn	17 07 33.5	+3.4
	baz=102,slow=17,SNR=1.8						
JNU	Nakatsue	11.86	250	Pn	Pn	17 07 40.0	-0.1
MDJ	Mudanjiang	12.85	306	Pn	Pn	17 07 55.3	+1.8
KSRS	Korea Array	12.90	273	Pn	P	17 07 56.8	-7.7
	0.2nm,0.3s,baz=84,slow=14,SNR=4.6						
KSRS				LR	LR	17 12 17.1	
	comp=Z,46nm,19.8s,baz=86,slow=34						
KLR	Kul'dur	14.43	325	LR	LR	17 15 03.0	
	comp=Z,20nm,18.4s,baz=142,slow=42						
PEA0B	Petropavlovsk-	17.84	27		P	17 08 59.1	0.0
PETK	Petropavlovsk-	17.84	27	P	P	17 08 59.7	+0.6
	0.1nm,0.3s,baz=220,slow=6.7,SNR=7.3						
PETK				LR	LR	17 15 59.7	
	comp=Z,19nm,20.9s,baz=241,slow=37						
MA2	Magadan	22.07	9	P	P	17 09 47.6	+2.5
	2.3nm,0.6s,baz=188,slow=14,SNR=2.3						
MA2	Magadan	22.07	9	P	P	17 09 47.4	+2.4
SEY	Seymchan	25.53	9	P	P	17 10 20.2	+1.8
	2.7nm,0.7s,baz=203,slow=8.1,SNR=16						
TLY	Talaya	31.45	309	LR	LR	17 25 25.0	
	comp=Z,34nm,18.2s,baz=124,slow=39						
SIJI	Sorong	40.41	200	LR	LR	17 30 32.5	
	comp=Z,30nm,18.3s,baz=170,slow=38						
ZALV	Zalesovo Beam	42.96	312	PcP	PcP	17 14 39.8	+1.0
	0.6nm,0.4s,baz=98,slow=4.4,SNR=3.6						
KDAK	Kodiak Island	44.95	43	P	P	17 13 04.9	+0.2
	5.5nm,0.6s,baz=300,slow=5.5,SNR=6.8						
KDAK	Kodiak Island	44.95	43	P	P	17 13 04.8	+0.1
PPLA	Purkeypile	45.16	35	P	P	17 13 07.5	+1.0
PPLA				IAmb	IAmb	17 13 19.9	
	comp=Z,13nm,1.6s						
MK31	Makanchi Array	45.52	302	P	P	17 13 11.1	+1.6
MKAR	Makanchi Array	45.52	302	P	P	17 13 11.2	+1.6
	comp=Z,0.6nm,0.7s,baz=87,slow=8.6,SNR=7.9						
MAKZ	Makanchi	45.73	302	P	P	17 13 12.8	+1.7
MLY	Manley	45.91	32	P	P	17 13 14.1	+1.7
TRF	Thorofare Moun	46.04	35	P	P	17 13 13.8	+0.3
TRF				IAmb	IAmb	17 13 48.2	
	comp=Z,5.6nm,1.5s						
RND	Reindeer	46.69	35	P	P	17 13 19.4	+0.9
RND				IAmb	IAmb	17 13 51.5	
	comp=Z,9.3nm,1.4s						
KURK	Kurchatov	47.13	308	P	P	17 13 22.9	+1.0
DHY	Denali Highway	47.36	35	P	P	17 13 24.5	+0.7
DHY				IAmb	IAmb	17 13 59.7	
	comp=Z,5.5nm,1.6s						
SCM	Sheep Creek Mo	47.43	37	P	P	17 13 24.6	+0.4
HDA	Harding Lake	47.52	33	P	P	17 13 25.2	+0.3
HDA				IAmb	IAmb	17 13 26.3	
	comp=Z,7.8nm,1.3s						
IL31		47.55	33	P	P	17 13 25.9	+0.9
IL31				IAmb	IAmb	17 13 26.1	
	comp=Z,2.9nm,0.8s						
ILAR	Eielson Array	47.55	33	P	P	17 13 25.4	+0.4
	comp=Z,2.4nm,0.8s,baz=264,slow=6.4,SNR=26						
DOT	Dot Lake	48.82	34	P	P	17 13 35.9	+1.0
SCRK	Sand Creek	48.84	34	P	P	17 13 35.3	+0.1
SCRK				IAmb	IAmb	17 13 36.5	
	comp=Z,2.2nm,0.8s						
VRDI	Verde Repeater	49.33	37	P	P	17 13 40.1	+1.1
VRDI				IAmb	IAmb	17 13 50.8	
	comp=Z,4.9nm,1.1s						
MCARA	McCarthy VSAT	49.51	37	P	P	17 13 41.6	+1.4
CRQM	Cirque	49.53	38	P	P	17 13 42.1	+1.5
TGL	Tana Glacier	49.69	38	P	P	17 13 43.6	+1.9
BALM	Baldy	49.88	38	P	P	17 13 44.2	+1.0
BALM				IAmb	IAmb	17 13 45.0	
	comp=Z,4.2nm,0.9s						
CTGM	Chitina Glacie	50.38	38	P	P	17 13 46.5	-0.5
EPYK	Eagle Plains	51.64	30	P	P	17 13 57.2	+0.9
EPYK				IAmb	IAmb	17 13 58.6	
	comp=Z,7.8nm,1.1s						
HYT	Haines Junctio	52.25	37	P	P	17 14 02.1	+1.2
HYT				IAmb	IAmb	17 14 04.6	
	comp=Z,6.2nm,0.9s						
DHAK	Deception Hill	52.26	40	P	P	17 14 02.5	+1.5
INK	Inuvik	52.57	28	P	P	17 14 02.8	-0.2
WHY	Whitehorse	53.54	37	P	P	17 14 12.6	+2.1
WHY				IAmb	IAmb	17 14 18.4	
	comp=Z,5.0nm,1.2s						
KNRA	Kununurra	55.26	198	P	P	17 14 25.4	+2.2
WB0	Warramunga Arr	58.13	191	P	P	17 14 42.7	-0.8
WR0	Warramunga Arr	58.29	191	P	P	17 14 43.7	-1.0
WR0				IAmb	IAmb	17 15 12.8	
	comp=Z,5.6nm,1.3s						
WB2	Warramunga Arr	58.31	191	P	P	17 14 44.0	-0.8
WB2				IAmb	IAmb	17 14 46.2	
	comp=Z,4.8nm,0.9s						
WRA	Warramunga Arr	58.31	191	P	P	17 14 44.0	-0.9
	comp=Z,3.2nm,0.9s,baz=11,slow=7.1,SNR=13						
RES	Resolute Bay	61.17	15	P	P	17 15 03.0	-0.9
RES				IAmb	IAmb	17 15 08.8	
	comp=Z,3.1nm,1.3s						
YKA	Yellowknife Ar	61.91	31	P	P	17 15 09.9	+0.8
	comp=Z,0.7nm,0.7s,baz=300,slow=6.1,SNR=13						
ASAR	Alice Springs	62.03	191	P	P	17 15 08.7	-1.6
	comp=Z,0.2nm,0.5s,baz=7.4,slow=7.6,SNR=9.4						
PINE	Pine Mountain	68.06	51	P	P	17 15 51.2	+1.5
PINE				IAmb	IAmb	17 15 52.4	
	comp=Z,5.1nm,0.9s						
FINES	FINESS Array B	69.04	333	P	P	17 15 57.1	+1.9
	comp=Z,0.9nm,0.9s,baz=58,slow=10,SNR=1.2						
NVAR	Mina Array Bea	72.67	55	P	P	17 16 18.5	+0.5
	comp=Z,0.9nm,0.7s,baz=288,slow=6.2,SNR=9.0						
NOA	NORSAR Array B	74.19	338	P	P	17 16 27.5	+1.2
	comp=Z,0.3nm,0.6s,baz=28,slow=6.3,SNR=2.1						
AKASG	Malin Array Be	74.92	323	P	P	17 16 31.7	+1.1
	comp=Z,0.3nm,0.4s,baz=46,slow=5.8,SNR=1.5						
RAR	Rarotonga	78.92	128	LR	LR	17 43 55.3	
	comp=Z,94nm,21.0s,baz=209,slow=30						
TXAR	Lajitas Array	87.81	54	P	P	17 17 41.4	+2.0
	comp=Z,0.1nm,0.4s,baz=323,slow=5.8,SNR=2.4						

NIED **02** *17:14:00,37.°90N×144.°10E,h5km,Mw4.1 Best double couple: M0 1.82000×10^15 NP1:φs142.00000°,δ82.00000°,λ-98.00000°. NP2:φs9.00000°,δ11.00000°,λ-44.00000°.*
IDC **02** *17:14:04.2±0.7,37.°79N×144.°40E,h0km,mb4.0/15, mb1 4.2/23,mb1mx4.0/51,mbtmp4.1/23,ML3.7/7,MS2.9/5, Ms1 2.9/5,ms1mx2.6/48,Error ellipse: s-maj=19.3km s-min=12.9km az=126.0*
MOS **02** *17:14:04.2±1.4,37.°99N×144.°33E,h12km,mb4.1/9,Error ellipse: s-maj=9.6km s-min=5.2km az=88.1*
NEIC **02** *17:14:07.5±1.7,37.°85N±0.°07×144.°3E±0.°1,h20km±5km, mb4.6/48,Error ellipse: s-maj=15.2km s-min=8.3km az=113.0*
JMA **02** *17:14:07.7±0.2,37.°91N×144.°15E,h61km,M4.1*
ISC 02 17:14:09.8±0.5**,37.°97N**±0.°05**×144.°32E**±0.°05**,h35km,n140,** σ**2.s59**/161**,mb4.5**/54**,MS3.4**/3**,11C-5D,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.27	279	P	Pn	17 14 42.2	-2.6
JIKH				S	Sn	17 15 07.3	-4.2
OFUJ	Ofunato	2.35	299	P	Pn	17 14 43.6	-2.3
OFUJ				S	Sn	17 15 10.3	-3.2
JKMT	Kesennumamotoy	2.38	291	S	Sn	17 15 11.0	-3.3
JIO	Ouri	2.39	283	P	Pn	17 14 44.0	-2.3
JIO				S	Sn	17 15 10.5	-3.8
JMK	Ichinoseki	2.62	293	P	Pn	17 14 47.2	-2.3
JOM	Ohasama	2.80	303	eS	Sn	17 15 22.6	-2.0
JFT	Otama	3.19	263	P	Pn	17 14 55.1	-2.3
JFT				S	Sn	17 15 30.7	-3.4
JANG	Nango	3.24	319	S	Sn	17 15 33.8	-1.6
JYK	Kaneyama	3.25	288	S	Sn	17 15 32.8	-2.8
ERM	Erimo	4.14	348⇓	eP	Pn	17 15 09.0	-1.4
ERM	Erimo	4.14	348		Pn	17 15 09.3	-1.1
ERM				Sn	Sn	17 15 53.2	-4.3
JAG	Ashikaga	4.18	250	P	Pn	17 15 08.2	-2.8
JAG				S	Sn	17 15 52.4	-6.1
JOT	Ohata	4.24	325	S	Sn	17 15 56.8	-3.2
BSO1	Boso 1	4.27	220	P	Pn	17 15 07.9	-3.8
JKB	Kayabe	4.66	328	P	Pn	17 15 16.8	-0.7
JKB				S	Sn	17 16 05.9	-4.4
JCH	Churui	4.70	351	P	Pn	17 15 15.8	-2.3
JCH				S	Sn	17 16 07.5	-3.8
JRY	Ryogami san	4.75	247	P	Pn	17 15 13.2	-5.7
JRY				S	Sn	17 16 04.8	-8.0
JOD2	Odawara 2	5.00	239	P	Pn	17 15 18.6	-3.7
JOD2				S	Sn	17 16 11.3	-7.5
MJAR	Matsushiro Arr	5.08	256	Pn	Pn	17 15 21.8	-1.5
	2.4nm,0.3s,baz=71,slow=10,SNR=294						
MJAR				Sn	Sn	17 16 19.5	-1.3
	baz=74,slow=21,SNR=1.3						
MJAR				LR	LR	17 17 39.5	
	comp=Z,168nm,18.9s,baz=80,slow=42						
MAJO	Matsushiro	5.08	256c	iP	Pn	17 15 22.1	-1.3
MAJO	Matsushiro	5.08	256		Pn	17 15 22.4	-1.0
MAT	Matsushiro	5.08	256	P	Pn	17 15 22.1	-1.3
MAT				S	Sn	17 16 19.0	-1.8
MJB9	Matsu-Tunnel	5.08	256		Pn	17 15 22.4	-1.0
NEM2	Nemuro 2	5.50	11	P	Pn	17 15 24.9	-4.2
NMR	Nemuro--Hokkai	5.50	11	eP	Pn	17 15 25.3	-3.8
NMR				eS	Sn	17 16 24.3	-6.8
JHJ2	Mitsune	6.08	218	P	Pn	17 15 32.2	-4.9
JHJ2				S	Sn	17 16 38.4	-7.0
JHJ2	Mitsune	6.08	218	Pn	Pn	17 15 31.9	-5.2
JHJ	Hachijo jima 2	6.09	219	Pn	Pn	17 15 32.8	-4.4
	28nm,0.3s,baz=319,slow=16,SNR=30						
JHJ				Sn	Sn	17 16 36.3	-9.4
	18nm,0.3s,baz=61,slow=22,SNR=2.2						
GRPR	Tuman	6.12	10⇑	iP	Pn	17 15 33.7	-3.9
GRPR				eS	Sn	17 16 39.5	-6.8
YUK	Yuzh-Kuril'sk	6.17	10	eP	Pn	17 15 34.5	-3.8
YUK				eS	Sn	17 16 41.5	-6.1
YUK				pmax	pmax		
	comp=Z,167nm,0.3s						
YUK				smax	smax		
	comp=E,102nm,0.3s						
YUK				smax	smax		
	comp=N,296nm,0.4s						
LAGR	Lagunnoye	6.18	10	eP	Pn	17 15 34.9	-3.5
LAGR				eS	Sn	17 16 40.8	-7.0
LAGR				pmax	pmax		
	comp=Z,256nm,0.3s						
LAGR				smax	smax		
	comp=N,660nm,0.5s						
LAGR				smax	smax		
	comp=E,370nm,0.3s						
JKA	Kamikawa-asahi	6.28	349		Pn	17 15 38.9	-0.9
JKA					Sn	17 16 48.6	-1.6
ASAJ	Asahikawa	6.28	349	Pn	Pn	17 15 38.9	-0.9
	comp=E,9.2nm,0.3s,baz=188,slow=11,SNR=96						
ASAJ				Sn	Sn	17 16 48.6	-1.6
	comp=E,1.0nm,0.3s,baz=11,slow=31,SNR=1.5						
INU	Inuyama	6.42	248		Pn	17 15 40.1	-1.8
KUR	Kuril'sk	7.73	19c	iP	Pn	17 15 56.7	-3.0
KUR				iS	Sn	17 17 18.2	-7.7
KUR				pmax	pmax		
	comp=Z,55nm,0.4s						
KUR				pmax	pmax		
	comp=E,35nm,0.3s						
KUR				pmax	pmax		
	comp=N,27nm,0.2s						
KUR				smax	smax		
	comp=E,66nm,0.3s						
KUR				smax	smax		
	comp=N,62nm,0.4s						
YSS	Yuzh-Sakhalins	9.05	353⇓	eP	Pn	17 16 16.0	-1.8
YSS				pmax	pmax		
	comp=Z,10.0nm,0.3s						
YSS	Yuzh-Sakhalins	9.05	353	Pn	Pn	17 16 15.7	-2.1
USA0B	Ussuriysk Arra	11.19	308	P	Pn	17 16 47.3	+0.2
USA0B	Ussuriysk Arra	11.19	308	Pn	Pn	17 16 47.3	+0.2
USRK	Ussuriysk Ar.	11.19	308	Pn	Pn	17 16 48.9	+1.9
	baz=109,slow=14,SNR=3.6						
JNU	Nakatsue	11.96	250	Pn	Pn	17 16 55.7	-2.1
	comp=Z,0.2nm,0.3s,baz=40,slow=9.5,SNR=2.4						
JNU	Nakatsue	11.96	250	Pn	Pn	17 16 56.2	-1.6
MDJ	Mudanjiang	12.90	306	P	Pn	17 17 10.0	-0.5
MDJ				pP	P	17 17 15.4	-5.3
MDJ				sP		17 17 22.8	
MDJ				S	Sn	17 19 30.8	-1.9
MDJ				sS		17 19 42.7	
MDJ				ScP	ScP	17 26 16.6	+2.8
MDJ				PcS	PcS	17 26 20.2	+2.5
MDJ				pmax	pmax		
	comp=Z,11nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,80nm,4.4s						
MDJ				LR	LR		
	comp=N,150nm,3.6s						
MDJ				LR	LR		
	comp=E,99nm,2.9s						
MDJ				LR	LR		
	comp=Z,82nm,3.4s						
KSRS	Korea Array	12.99	273	Pn	Pn	17 17 12.4	+0.7
	comp=Z,0.2nm,0.3s,baz=84,slow=14,SNR=8.1						
KSRS				LR	LR	17 21 33.7	
	comp=Z,45nm,21.5s,baz=55,slow=34						
KLR	Kul'dur	14.45	325	Pn	Pn	17 17 33.7	+2.1
	comp=Z,0.1nm,0.3s,baz=94,slow=15,SNR=2.0						
KLR				LR	LR	17 24 18.6	
	comp=Z,23nm,18.0s,baz=203,slow=42						
KLR	Kul'dur	14.45	325⇑	eP	Pn	17 17 29.4	-2.2
PEA0B	Petropavlovsk-	17.76	27	P	P	17 18 15.1	+0.5
PEA0B				pmax	pmax		
	comp=Z,16nm,1.3s						
PEA0B	Petropavlovsk-	17.76	27		P	17 18 15.1	+0.5
PETK	Petropavlovsk-	17.76	27	P	Pn	17 18 13.1	-1.0
	comp=Z,0.1nm,0.3s,baz=206,slow=9.9,SNR=7.3						
PETK				LR	LR	17 27 09.1	
	comp=Z,34nm,18.1s,baz=243,slow=44						
ZEA	Zeya	19.66	329	eP	P	17 18 35.6	+0.2
NJ2	Nanjing	21.64	262	eP	P	17 18 56.0	-1.0
NJ2				pmax	pmax		
	comp=Z,19nm,0.5s						
MA2	Magadan	22.02	9	P	P	17 19 02.2	+1.4
	comp=Z,6.2nm,0.9s,baz=176,slow=16,SNR=4.2						
MA2	Magadan	22.02	9⇓	eP	P	17 19 02.1	+1.4
MA2				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MA2	Magadan	22.02	9	P	P	17 19 01.4	+0.6
TPUB	Ta-pu	24.99	241	P	P	17 19 29.4	-0.9
TPUB				IAmb	IAmb	17 19 44.4	
	comp=Z,18nm,1.0s						
HHC	Hu-ho-hao-te	25.39	287	eP	P	17 19 32.6	-1.2
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,35nm,3.7s						
HHC				LR	LR		
	comp=N,68nm,8.4s						
HHC				LR	LR		
	comp=E,68nm,6.7s						
HHC				LR	LR		
	comp=Z,73nm,8.8s						
SEY	Seymchan	25.47	9	P	P	17 19 35.6	+1.4
	comp=Z,3.6nm,0.7s,baz=184,slow=6.8,SNR=18						
SEY	Seymchan	25.47	9⇑	eP	P	17 19 35.8	+1.6
YAK	Yakutsk	25.73	344	P	P	17 19 37.2	+0.6
	comp=Z,1.5nm,0.4s,baz=148,slow=2.8,SNR=4.4						
YAK	Yakutsk	25.73	344⇑	eP	P	17 19 36.4	-0.2
YAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YAK	Yakutsk	25.73	344	P	P	17 19 35.3	-1.2
YAK				IAmb	IAmb	17 19 55.7	
	comp=Z,6.1nm,0.5s						
WHN	Wuhan	25.77	262	P	P	17 19 40.5	+3.2
XAN	Xi'an	28.79	273	P	P	17 20 05.4	+1.0
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,36nm,4.9s						
LZH	Lanzhou	32.19	279	eP	P	17 20 33.9	-0.6
LZH				pP	sP	17 20 48.1	+2.1
LZH				sP	pwP	17 20 56.0	+4.8
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
BILL	Bilibino	32.50	15⇑	eP	P	17 20 37.0	+0.3
BILL				e		17 21 41.9	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.7s						
BILL				MLR	MLR		
	comp=Z,41nm,19.0s						
CD2	Chengdu	33.98	270	eP	P	17 20 48.0	-2.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TIXI	Tiksi	34.67	351⇑	eP	P	17 20 55.2	-0.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,2.5s						
DGZ	Jazzator, Alta	41.73	305⇑	eP	P	17 21 55.1	-0.3
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WMQ	Urumqi	42.48	296	eP	P	17 22 02.0	+0.5
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,59nm,3.7s						
WMQ				LR	LR		
	comp=N,340nm,29.0s						
WMQ				LR	LR		
	comp=E,960nm,29.1s						
WMQ				LR	LR		
	comp=Z,81nm,29.2s						
ZALV	Zalesovo Beam	43.00	312	PcP	PcP	17 23 55.5	+0.3
	comp=Z,0.5nm,0.4s,baz=104,slow=4.6,SNR=2.1						
CMAR	Chiang Mai Arr	43.96	257	P	P	17 22 14.4	+0.8
	comp=Z,0.4nm,0.4s,baz=35,slow=7.1,SNR=2.7						
KDAK	Kodiak Island	44.85	43	P	P	17 22 19.9	-0.3
	comp=Z,8.4nm,0.7s,baz=275,slow=6.1,SNR=9.8						
KDAK	Kodiak Island	44.85	43	P	P	17 22 20.2	0.0
KDAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KDAK	Kodiak Island	44.85	43	P	P	17 22 20.2	0.0
KDAK				IAmb	IAmb	17 22 20.8	
	comp=Z,9.0nm,0.8s						
PPLA	Purkeypile	45.08	35	P	P	17 22 24.1	+2.0
PPLA				IAmb	IAmb	17 22 24.4	
	comp=Z,14nm,1.4s						
MK31	Makanchi Array	45.58	302	P	P	17 22 24.9	-1.3
MK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK31	Makanchi Array	45.58	302	P	P	17 22 24.9	-1.3
MKAR	Makanchi Array	45.58	302	P	P	17 22 27.3	+1.0
	comp=Z,0.7nm,0.7s,baz=86,slow=9.0,SNR=5.8						
KTH	Kantishna Hill	45.68	34	P	P	17 22 28.3	+1.5
KTH				IAmb	IAmb	17 22 30.2	
	comp=Z,8.9nm,1.4s						
MLY	Manley	45.83	32	P	P	17 22 29.3	+1.4
GHO	Glory Hole Cre	46.59	37	P	P	17 22 34.2	+0.2
GHO				IAmb	IAmb	17 22 37.3	
	comp=Z,10nm,1.3s						
RND	Reindeer	46.60	35	P	P	17 22 34.6	+0.5
RND				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RND	Reindeer	46.60	35	P	P	17 22 34.6	+0.5
RND				IAmb	IAmb	17 22 35.3	
	comp=Z,4.3nm,0.9s						
MDM	Murphy Dome	46.89	33	P	P	17 22 37.1	+0.8
MDM				IAmb	IAmb	17 22 39.0	
	comp=Z,7.8nm,1.0s						
KURK	Kurchatov	47.18	308⇑	eP	P	17 22 37.8	-0.8
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURK	Kurchatov	47.18	308	P	P	17 22 36.7	-2.0
KURK				IAmb	IAmb	17 22 49.4	
	comp=Z,2.5nm,0.6s						
SCM	Sheep Creek Mo	47.34	37	P	P	17 22 40.4	+0.5
SCM				pmax	pmax		
	comp=Z,25nm,1.6s						
SCM	Sheep Creek Mo	47.34	37	P	P	17 22 40.4	+0.5
HDA	Harding Lake	47.44	33	P	P	17 22 40.6	+0.1
HDA				IAmb	IAmb	17 22 42.0	
	comp=Z,7.1nm,1.3s						
IL31		47.46	33	P	P	17 22 40.8	+0.1
IL31				IAmb	IAmb	17 22 41.9	
	comp=Z,4.5nm,0.8s						
ILAR	Eielson Array	47.46	33	P	P	17 22 41.1	+0.4
	comp=Z,3.1nm,0.8s,baz=264,slow=6.4,SNR=32						
RAGM	Ragged Mountai	48.74	39	P	P	17 22 51.6	+1.0
SCRK	Sand Creek	48.75	34	P	P	17 22 51.0	+0.2
MENT	Mentasta	48.95	35	P	P	17 22 54.0	+1.8
VRDI	Verde Repeater	49.24	37	P	P	17 22 54.8	+0.1
VRDI				IAmb	IAmb	17 22 56.4	
	comp=Z,3.3nm,0.7s						
MCARA	McCarthy VSAT	49.43	37	P	P	17 22 56.8	+0.9
CRQM	Cirque	49.45	38	P	P	17 22 57.5	+1.2
TGL	Tana Glacier	49.60	38	P	P	17 22 57.9	+0.6
WAX	Waxell Ridge	49.63	38	P	P	17 22 57.0	-0.4
BALM	Baldy	49.80	38	P	P	17 22 59.6	+0.7
BALM				IAmb	IAmb	17 23 11.2	
	comp=Z,16nm,1.7s						
BARN	Barnard Glacie	50.12	38	P	P	17 23 02.0	+0.6
BARN				IAmb	IAmb	17 23 03.6	
	comp=Z,5.1nm,1.1s						
CTGM	Chitina Glacie	50.30	38	P	P	17 23 03.6	+1.0
CTGM				IAmb	IAmb	17 23 04.7	
	comp=Z,5.7nm,1.2s						
BRVK	Borovoye	51.70	312⇑	eP	P	17 23 13.7	+0.5
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MTN	Manton Dam	52.03	196	P	P	17 23 14.7	-1.2
KSH	Kashi	52.13	294	P	P	17 23 21.2	+4.5
KSH				PP	PP	17 25 21.7	+6.8
KSH				S	S	17 30 46.2	+7.6
HYT	Haines Junctio	52.16	37	P	P	17 23 18.6	+2.0
HYT				IAmb	IAmb	17 23 19.8	
	comp=Z,8.8nm,0.8s						
INK	Inuvik	52.49	28	P	P	17 23 19.3	+0.6
	comp=Z,2.0nm,0.5s,baz=317,slow=6.6,SNR=6.2						
INK	Inuvik	52.49	28	P	P	17 23 19.3	+0.6
WHY	Whitehorse	53.46	37	P	P	17 23 27.1	+0.9
WHY				IAmb	IAmb	17 23 29.1	
	comp=Z,13nm,1.6s						
KNRA	Kununurra	55.33	198	P	P	17 23 39.2	-0.8
WB0	Warramunga Arr	58.18	191	P	P	17 23 58.5	-1.7
WR0	Warramunga Arr	58.35	191	P	P	17 23 59.5	-1.9
WR0				IAmb	IAmb	17 24 01.7	
	comp=Z,12nm,1.3s						
WRAB	Tennant Creek	58.35	191⇓	eP	P	17 23 59.8	-1.6
WRAB				pmax	pmax		
	comp=Z,18nm,1.7s						
WRAB	Tennant Creek	58.35	191	P	P	17 23 59.3	-2.1
WB2	Warramunga Arr	58.36	191	P	P	17 23 59.7	-1.8
WB2				IAmb	IAmb	17 24 10.5	
	comp=Z,5.9nm,0.8s						
WRA	Warramunga Arr	58.36	191	P	P	17 23 59.7	-1.8
	comp=Z,5.0nm,0.9s,baz=12,slow=7.2,SNR=16						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FITZ	Fitzroy Crossi	58.47	201	P	P	17 24 01.4	-0.8
FITZ				IAmb	IAmb	17 24 18.8	
	comp=Z,9.6nm,1.2s						
RES	Resolute Bay	61.11	15	P	P	17 24 20.0	+0.3
RES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RES	Resolute Bay	61.11	15	P	P	17 24 20.0	+0.3
YKA	Yellowknife Ar	61.83	31	P	P	17 24 25.4	+0.6
	comp=Z,1.0nm,0.7s,baz=300,slow=6.2,SNR=14						
ASAR	Alice Springs	62.09	191	P	P	17 24 25.4	-1.5
	comp=Z,0.5nm,0.8s,baz=5.9,slow=6.9,SNR=8.0						
PINE	Pine Mountain	67.97	51	P	P	17 25 05.0	-0.4
PINE				IAmb	IAmb	17 25 08.1	
	comp=Z,5.1nm,0.8s						
K05A	Summer Lake	68.56	52	P	P	17 25 10.1	+1.0
SUMG	Summit	69.73	1	P	P	17 25 16.5	+0.5
SUMG				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SUMG	Summit	69.73	1	P	P	17 25 16.5	+0.5
SUMG				IAmb	IAmb	17 25 17.9	
	comp=Z,6.4nm,1.2s						
FFC	Flin Flon	71.66	34	P	P	17 25 27.9	+0.3
FFC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FFC	Flin Flon	71.66	34	P	P	17 25 27.9	+0.3
KIV	Kislovodsk	72.02	312	eP	P	17 25 28.4	-1.7
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KVN	Kaiserville	72.35	54	P	P	17 25 33.0	+0.8
KVN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KVN	Kaiserville	72.35	54	P	P	17 25 33.0	+0.8
NVAR	Mina Array Bea	72.57	55	P	P	17 25 35.0	+1.4
	comp=Z,1.2nm,0.7s,baz=286,slow=6.1,SNR=12						
NB2	NORSAR Subarra	74.19	338	P	P	17 25 42.6	+0.1
	comp=Z,0.4nm,0.5s,baz=36,slow=6.2						
NOA	NORSAR Array B	74.19	338	P	P	17 25 43.0	+0.4
	comp=Z,0.2nm,0.4s,baz=44,slow=4.6,SNR=4.5						
NOA	NORSAR Array B	74.19	338	P	P	17 25 43.0	+0.4
R11A	Troy Canyon, C	74.36	53	P	P	17 25 44.7	+0.6
AKASG	Malin Array Be	74.95	323	P	P	17 25 47.3	+0.2
	comp=Z,0.1nm,0.3s,baz=259,slow=41,SNR=1.7						
PDAR	Pinedale Array	75.35	47	P	P	17 25 50.4	+0.6
	comp=Z,0.4nm,0.6s,baz=306,slow=1.6,SNR=5.7						
KONO	Kongsberg	75.79	338	⇓eP	P	17 25 50.5	-1.2
KONO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PV03	Paradox Valley	78.61	50	P	P	17 26 09.6	+1.4
PV03				IAmb	IAmb	17 26 20.2	
	comp=Z,11nm,1.6s						
SCHQ	Schefferville	83.78	18	LR	LR	18 05 57.4	
	comp=Z,17nm,21.3s,baz=360,slow=37						

*KRNET **02** 17:14:19.3±0.1, 41°.08N×72°.39E, h16km, mb2.5*
*NNC **02** 17:14:21.6±2.0, 41°.14N×72°.39E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=17.3km s-min=6.5km az=174.0*
*SOME **02** 17:14:21.6, 41°.12N×72°.38E, h10km*
ISC 02 17:14:20.2±1.3**, 41°.11N**±0°.05×**72°.43E**±0°.02**, h10**km±13km**, n26, σ1s24**/43**, 14C-10D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.47	62	⇓iP	Pg	17 14 29.4	0.0
	baz=61						
ARSB				⇓iS	Sg	17 14 37.3	+1.6
	baz=61						
ARK	Arkit	0.77	333	⇑iP	Pb	17 14 34.0	-1.9
	baz=36						
ARK				⇑iS	Sb	17 14 45.2	-1.3
	baz=36						
AML	Almayashu	1.40	42	⇑iP	Pn	17 14 46.4	+0.2
	baz=43						
AML				⇑iS	Sg	17 15 06.2	+1.0
	baz=43						
BTK	Batken	1.61	230	⇑iP	Pn	17 14 48.8	0.0
	baz=30						
BTK				⇑iS	Sb	17 15 11.0	+0.5
	baz=30						
MRKS	Merke	1.74	20	eP	Pg	17 14 54.0	+0.4
	4.4nm,0.3s						
MRKS				eS	Sg	17 15 16.7	+0.5
	14nm,0.3s						
MRKS	Merke	1.74	20	P	Pg	17 14 54.3	+0.7
	3.0nm,0.2s						
MRKS				S	Sg	17 15 16.9	+0.6
	14nm,0.3s						
EKS2	Erkin-Say	1.85	33	⇓iP	Pb	17 14 53.9	-0.3
	baz=33						
EKS2				⇓iS	Sg	17 15 19.8	0.0
	baz=33						
UCH	Uchtor	1.92	54	⇓iP	Pb	17 14 55.9	+0.3
	baz=54						
UCH				⇓iS	Sg	17 15 22.5	+0.4
	baz=54						
IUG	Iuzhnay	2.08	301	eP	Pg	17 15 00.3	+0.4
	1.1nm,0.2s						
IUG				eS	Sg	17 15 26.7	-0.2
	12nm,0.3s						
IUG	Iuzhnay	2.08	301	Pg	Pg	17 15 00.3	+0.4
	0.9nm,0.2s						
IUG				Lg	Lg	17 15 26.9	
	10nm,0.3s						
AAK	Ala-Archa	2.17	45	⇑eP	Pb	17 14 58.8	-0.9
	baz=45						
AAK				⇑iS	Sb	17 15 28.3	+1.5
	baz=45						
AAK	Ala-Archa	2.17	45	⇑Pg	Pb	17 15 00.9	+1.1
	3.3nm,0.5s						
AAK				⇑Lg	Lg	17 15 30.3	
	2.7nm,0.4s						
KZA	Kyzart	2.33	64	⇑iP	Pb	17 15 01.6	-0.9
	baz=64						
KZA				⇑iS	Sb	17 15 32.5	+1.0
	baz=64						
KK31	Karatay Array	2.45	325	⇓Pg	Pb	17 15 04.3	-0.1
	0.4nm,0.3s,baz=150,slow=17,SNR=6.8						
KK31				⇑Lg	Lg	17 15 36.3	
	1.8nm,0.5s,baz=140,slow=26,SNR=6.6						
BRLS	Borolday	2.72	316	eP	Pb	17 15 09.1	+0.1
	0.6nm,0.2s						
BRLS				eS	Sb	17 15 42.3	-0.2
	1.8nm,0.4s						
BRLS	Borolday	2.72	316	Pg	Pb	17 15 09.1	+0.1
	0.6nm,0.3s						
BRLS				Lg	Lg	17 15 41.9	
	1.8nm,0.4s						
SGDS	Sogindy	2.86	34	Pg	Pb	17 15 13.8	+2.5
	1.9nm,0.3s						
SGDS				Lg	Lg	17 15 50.5	
	2.2nm,0.4s						
TKM2	Tokmak 2	2.98	51	⇓Pg	Pb	17 15 14.1	+0.6
	0.9nm,0.5s						
TKM2				⇑Lg	Lg	17 15 54.5	
	2.7nm,0.8s						
ULHL	Ulahol	3.08	67	⇓iP	Pn	17 15 11.8	+2.7
	baz=67						
ULHL				⇓iS	Sb	17 15 50.3	-2.5
	baz=67						
KST	Kastek	3.27	53	eP	Pg	17 15 21.8	-1.0
	1.4nm,0.3s						
KST				eS	Sg	17 16 03.9	-1.2
	3.5nm,0.5s						
KST	Kastek	3.27	53	Pg	Pg	17 15 21.8	-1.0
	1.4nm,0.3s						
KST				Lg	Lg	17 16 03.9	
	3.5nm,0.5s						
KRBS	Karabastau	3.53	42	eP	Pg	17 15 26.4	-1.5
	0.5nm,0.3s						
KRBS				eS	Sg	17 16 11.8	-1.9
	1.2nm,0.8s						
KRBS	Karabastau	3.53	42	Pg	Pg	17 15 26.4	-1.5
	0.5nm,0.3s						
KRBS				Lg	Lg	17 16 11.8	
	1.2nm,0.8s						
TNSS	Tian-Shan	3.88	59	eP	Pg	17 15 33.4	-1.1
	1.1nm,0.3s						
TNSS				eS	Sg	17 16 24.1	-0.7
	1.9nm,0.6s						
KTBS	Karatobe	4.09	49	eP	Pg	17 15 36.8	-1.6
	0.5nm,0.4s						
KTBS				eS	Sg	17 16 29.4	-2.0
	2.7nm,0.7s						
KTBS	Karatobe	4.09	49	Pg	Pg	17 15 36.8	-1.6
	0.5nm,0.4s						
KTBS				Lg	Lg	17 16 29.4	
	2.7nm,0.7s						

JMA 02 17:18:49.4, 24°.43N×123°.95E, h0km, M1.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIJ	Ishigaki jima	0.19	111	P	Pg	17 18 53.4	+0.4
JIJ				S	Sg	17 18 56.2	+0.8
JKRS	Kuro-shima	0.20	164	P	Pg	17 18 53.8	+0.6
JKRS				S	Sg	17 18 57.1	+1.3
IRIF	Iriomote-Funau	0.22	245	P	Pg	17 18 54.2	+0.5
IRIF				S	Sg	17 18 57.7	+1.2
JISG	Ishigakijimahi	0.36	64	P	Pg	17 18 57.1	+0.7
JISG				eS	Sg	17 19 02.6	+1.5
HATJ	Hateruma jima	0.40	200	P	Pg	17 18 57.5	+0.5
HATJ				eS	Sg	17 19 03.7	+1.6
JTJ	Tarama	0.72	73	P	Pg	17 19 03.7	+0.6
JTJ				S	Sb	17 19 14.6	-0.6
YOJ	Yonaguni jima	0.86	272	P	Pg	17 19 06.3	+0.5
YOJ				eS	Sg	17 19 17.6	+0.7
YOJ	Yonaguni jima	0.86	272	P	Pg	17 19 06.2	+0.4
YOJ	Yonaguni jima	0.86	272	pmax	pmax		
	comp=Z,60nm,1.0s						
YOJ	Yonaguni jima	0.86	272	P	Pg	17 19 06.2	+0.4

*NIED **02** 17:36:00, 37°.90N×144°.20E, h5km, Mw3.9 Best double couple: M₀8.78000×10^14 NP1:φs149.00000°, δ81.00000°, λ-100.00000°. NP2:φs18.00000°, δ13.00000°, λ-41.00000°.*
*IDC **02** 17:36:10.5±0.9, 37°.73N×144°.41E, h0km, mb3.6/6, mb1 3.9/9, mb1mx3.6/56, mbtmp3.7/9, ML3.4/3, MS2.7/4, Ms1 2.8/4, ms1mx2.4/51, Error ellipse: s-maj=29.0km s-min=17.8km az=124.0*
*JMA **02** 17:36:13.5±0.2, 37°.92N×144°.17E, h47km, M3.5*
*NEIC **02** 17:36:13.8±2.7, 37°.84N±0°.04×144°.4E±0°.1, h28km±5km, mb4.6/14, Error ellipse: s-maj=15.6km s-min=2.8km az=108.0*
ISC 02 17:36:15.3±0.6**, 37°.95N**±0°.05×**144°.23E**±0°.06**, h35**km**, n49, σ2s04**/66**, mb4.3**/12**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.21	280	P	Pn	17 36 48.3	-1.2
JIKH				eS	Sn	17 37 13.8	-1.8
OFUJ	Ofunato	2.31	300	P	Pn	17 36 49.8	-1.0
OFUJ				eS	Sn	17 37 17.0	-1.0
JIO	Ouri	2.33	283	P	Pn	17 36 50.0	-1.1
JIO				S	Sn	17 37 17.1	-1.4
JKMT	Kesennumamotoy	2.33	293	P	Pn	17 36 50.1	-1.1
JKMT				S	Sn	17 37 17.5	-1.1
JMK	Ichinoseki	2.57	294	P	Pn	17 36 53.9	-0.5
JMK				eS	Sn	17 37 23.8	-0.6
JOM	Ohasama	2.76	304	P	Pn	17 36 56.6	-0.4
JOM				S	Sn	17 37 29.3	+0.2
JFT	Otama	3.12	263	P	Pn	17 37 01.7	-0.3
JYK	Kaneyama	3.19	289	P	Pn	17 37 02.8	-0.2
JYK				S	Sn	17 37 39.9	+0.1
JANG	Nango	3.21	320	P	Pn	17 37 02.9	-0.4
JANG				eS	Sn	17 37 38.8	-1.6
ERM	Erimo	4.15	349	Pn	Pn	17 37 15.2	-0.9
JOT	Ohata	4.22	325	P	Pn	17 37 19.5	+2.4
JOT				eS	Sn	17 38 04.4	-0.7
JKB	Kayabe	4.64	329	P	Pn	17 37 23.6	+0.7
JKB				eS	Sn	17 38 13.0	-2.5
JRY	Ryogami san	4.68	247	P	Pn	17 37 22.0	-1.5
JRY				S	Sn	17 38 12.9	-3.7
JCH	Churui	4.71	352	P	Pn	17 37 22.4	-1.4
JCH				eS	Sn	17 38 13.8	-3.4
JOD2	Odawara 2	4.93	239	P	Pn	17 37 25.5	-1.4
JOD2				eS	Sn	17 38 18.4	-4.3
MJAR	Matsushiro Arr	5.01	256	Pn	Pn	17 37 28.0	+0.1
	0.4nm,0.3s,baz=79,slow=13,SNR=78						
MJAR				Sn	Sn	17 38 28.7	+4.1
	baz=77,slow=30,SNR=2.1						
MJAR				LR	LR	17 39 34.7	
	comp=Z,74nm,21.5s,baz=90,slow=40						
MAJO	Matsushiro	5.01	256		Pn	17 37 28.1	+0.2
MAT	Matsushiro	5.01	256	P	Pn	17 37 28.0	0.0
MAT				S	Sn	17 38 23.5	-1.1
MJB9	Matsu-Tunnel	5.01	256		Pn	17 37 28.1	+0.1
NEM2	Nemuro 2	5.53	12	P	Pn	17 37 31.8	-3.3
NEM2				eS	Sn	17 38 31.0	-6.5
JHJ2	Mitsune	6.02	218	Pn	Pn	17 37 39.2	-2.7
JTKR	Abashiri--Toko	6.02	358	P	Pn	17 37 40.2	-1.7
JTKR				S	Sn	17 38 45.3	-4.2
JHJ	Hachijo jima 2	6.03	218	Pn	Pn	17 37 38.7	-3.3
	2.3nm,0.3s,baz=224,slow=19,SNR=1.3						
JHJ				Sn	Sn	17 38 45.2	-4.6
	5.0nm,0.3s,baz=238,slow=20,SNR=1.4						
JKA	Kamikawa-asahi	6.29	349		Pn	17 37 45.7	+0.2
JKA					Sn	17 38 57.1	+1.1
ASAJ	Asahikawa	6.29	349	Pn	Pn	17 37 45.7	+0.2
	1.3nm,0.3s,baz=193,slow=9.6,SNR=9.6						
ASAJ				Sn	Sn	17 38 57.1	+1.1
	0.2nm,0.3s,baz=56,slow=22,SNR=3.8						
INU	Inuyama	6.35	248	Pn	Pn	17 37 46.5	+0.1
KSRS	Korea Array	12.93	273	LR	LR	17 43 51.9	
	comp=Z,19nm,21.6s,baz=83,slow=35						
PETK	Petropavlovsk-	17.81	27	LR	LR	17 49 16.5	
	comp=Z,14nm,18.0s,baz=234,slow=44						
CHGN	Chignik	41.74	45	P	P	17 44 00.9	+0.1
CHGN				IAmb	IAmb	17 44 09.0	
	comp=Z,18nm,1.2s						
CMAR	Chiang Mai Arr	43.89	257	LR	LR	18 04 20.1	
	comp=Z,27nm,19.3s,baz=180,slow=38						
MK31	Makanchi Array	45.54	302	P	P	17 44 33.6	+2.2
MKAR	Makanchi Array	45.54	302	P	P	17 44 34.7	+3.2
	comp=Z,0.3nm,0.8s,baz=94,slow=6.1,SNR=2.9						
JOHN	Johnston Islan	45.64	105	P	P	17 44 31.2	-1.3
ILAR	Eielson Array	47.52	33	P	P	17 44 47.8	+1.1
	comp=Z,1.0nm,0.8s,baz=247,slow=6.2,SNR=12						
RIDG	Independent Ri	48.44	34	P	P	17 44 52.5	-1.4
DOT	Dot Lake	48.80	34	P	P	17 44 57.5	+0.9
INK	Inuvik	52.55	28	P	P	17 45 25.3	+0.6
WB0	Warramunga Arr	58.15	191	P	P	17 46 04.5	-1.1
WB0				IAmb	IAmb	17 46 12.4	
	comp=Z,6.1nm,1.1s						
WR0	Warramunga Arr	58.31	191	P	P	17 46 05.5	-1.2
WR0				IAmb	IAmb	17 46 22.7	
	comp=Z,8.7nm,1.6s						
WB2	Warramunga Arr	58.33	191	P	P	17 46 05.0	-1.8
WB2				IAmb	IAmb	17 46 32.8	
	comp=Z,14nm,1.5s						
WRA	Warramunga Arr	58.33	191	P	P	17 46 05.8	-1.0
	comp=Z,1.7nm,0.7s,baz=12,slow=7.4,SNR=10.0						
XMIS	Christmas Isla	60.19	225	P	P	17 46 18.9	-0.9
RES	Resolute Bay	61.15	15	P	P	17 46 25.7	+0.1
RES				IAmb	IAmb	17 46 37.0	
	comp=Z,4.2nm,1.3s						
YKA	Yellowknife Ar	61.88	31	P	P	17 46 31.8	+1.1
	comp=Z,0.4nm,0.7s,baz=302,slow=6.4,SNR=5.6						
ASAR	Alice Springs	62.05	191	P	P	17 46 31.4	-0.9
	comp=Z,0.8nm,1.1s,baz=3.6,slow=8.2,SNR=4.4						
NVAR	Mina Array Bea	72.64	55	P	P	17 47 40.9	+1.3
	comp=Z,0.6nm,0.8s,baz=281,slow=6.7,SNR=4.4						
PAGB	Antelope Grade	72.89	58	P	P	17 47 39.1	-1.8
PAGB				IAmb	IAmb	17 47 43.2	
	comp=Z,7.2nm,1.3s						
NWAO	Narrogin (SRO)	74.86	203	P	P	17 47 54.6	+2.5
NWAO	Narrogin (SRO)	74.86	203	P	P	17 47 55.1	+3.0
NWAO				IAmb	IAmb	17 48 23.0	
	comp=Z,28nm,1.4s						

IDC 02 17:45:01.0±1.8**, 7°.53S**×**120°.40E, h0**km**, mb3.4**/2**, mb1 3.7**/5**, mb1mx3.4**/43**, mbtmp3.5**/5**, ML3.3**/3**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.4**/28**, Error ellipse: s-maj=110.1km s-min=19.0km az=63.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	2.58	345	Pn	Pn	17 45 42.2	-1.7
	2.8nm,0.3s,baz=170,slow=11,SNR=23						
KAPI				Sn	Sn	17 46 15.4	-0.7
	5.1nm,0.3s,baz=30,slow=22,SNR=5.7						
FITZ	Fitzroy Crossi	11.68	155	Pn	Pn	17 47 47.4	-1.6
	0.1nm,0.3s,baz=297,slow=9.0,SNR=1.6						
FITZ				Sn	Sn	17 49 55.0	-5.2
	0.1nm,0.3s,baz=300,slow=4.7,SNR=2.2						
WRA	Warramunga Arr	18.30	134	P	P	17 49 17.6	+0.9
	0.3nm,0.3s,baz=305,slow=13,SNR=20						
ASAR	Alice Springs	20.62	143	P	P	17 49 41.5	-0.7
	0.9nm,0.6s,baz=312,slow=9.6,SNR=18						
URZ	Urewera	59.42	130	LR	LR	18 22 20.3	
	comp=Z,78nm,19.7s,baz=1.0,slow=38						
MKAR	Makanchi Array	63.80	332	P	P	17 55 36.1	+1.0
	0.3nm,0.5s,baz=134,slow=7.7,SNR=5.2						

*IDC **02** 18:05:57.3±1.7, 1°.20N×124°.66E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.4/47, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=144.7km s-min=23.9km az=65.0*
*NEIC **02** 18:06:24.1±1.1, 0°.5N±0°.1×123°.69E±0°.09, h247km±8km, mb4.2/10, Error ellipse: s-maj=17.9km s-min=12.5km az=172.0*
*DJA **02** 18:07:12.0±0.5, 0°S±6°×12°3E±°, h73km±18km, M3.4/8, MLv3.4/8*
ISC 02 18:06:25.1±0.8**, 0°.29N**±0°.09×**123°.37E**±0°.10**, h264**km**, n26, σ1s51**/23**, mb3.8**/8**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	0.67	65	P	S	18 07 30.1	+2.3
MRSI	Marisa	1.44	278	P	S	18 07 34.2	-1.2
LUWI	Luwuk	1.45	204	P	S	18 07 33.3	-2.2
LUWI	Luwuk	1.45	204		Pn	18 07 04.2	-0.2
LUWI					S	18 07 33.1	-2.4
APSI	Ampana	2.09	235	P	S	18 07 45.7	+0.9
MPSI	Mapaga	3.47	271	P	S	18 08 12.6	+2.4
SANI	Sanana	3.50	132	P	S	18 07 58.5	-12
TNTI	Ternate	4.02	83	P	S	18 08 10.4	-11
TNTI	Ternate	4.02	83	Pn	Pn	18 07 24.2	-5.6
LBMI	Labuha	4.23	103	P	S	18 08 14.7	-11
MTN	Manton Dam	15.14	150		Pn	18 09 47.0	+0.3
MTN				IAmb	IAmb	18 09 47.8	
	comp=Z,21nm,1.2s						
KNRA	Kununurra	16.73	162		Pn	18 10 05.0	-0.3
KNRA				IAmb	IAmb	18 10 27.0	
	comp=Z,17nm,1.3s						
FITZ	Fitzroy Crossi	18.40	173	P	P	18 10 21.6	+0.3
	comp=Z,0.1nm,0.3s,baz=350,slow=11,SNR=1.4						
FITZ	Fitzroy Crossi	18.40	173	P	P	18 10 21.4	+0.1
WB0	Warramunga Arr	22.67	152	P	P	18 11 04.2	0.0
WB0				IAmb	IAmb	18 11 06.6	
	comp=Z,8.2nm,1.3s						
WRA	Warramunga Arr	22.80	152	P	P	18 11 05.8	+0.4
	comp=Z,0.8nm,0.3s,baz=346,slow=15,SNR=33						
WB2	Warramunga Arr	22.80	152	P	P	18 11 05.5	+0.1
WB2				IAmb	IAmb	18 11 30.0	
	comp=Z,4.3nm,1.1s						
WR0	Warramunga Arr	22.90	152	P	P	18 11 06.8	+0.5
WR0				IAmb	IAmb	18 11 41.7	
	comp=Z,14nm,1.5s						
TPUB	Ta-pu	23.03	354	P	P	18 11 05.7	-1.8
YULB	Yu-li	23.06	355	P	P	18 11 04.0	-3.8
COEN	Coen	24.18	127	P	P	18 11 18.5	+0.4
COEN				IAmb	IAmb	18 11 38.5	
	comp=Z,7.3nm,1.4s						
AS31	Alice Springs	25.91	157	P	P	18 11 34.5	+0.9
ASAR	Alice Springs	25.91	157	P	P	18 11 34.5	+0.9
	comp=Z,0.2nm,0.3s,baz=339,slow=15,SNR=9.5						
STKA	Stephens Creek	36.34	153	P	P	18 13 04.9	+0.6
	comp=Z,1.1nm,0.5s,baz=321,slow=14,SNR=3.7						
STKA	Stephens Creek	36.34	153	P	P	18 13 04.8	+0.6
MKAR	Makanchi Array	58.57	328	P	P	18 15 55.4	+1.0
	comp=Z,0.2nm,0.5s,baz=113,slow=8.9,SNR=5.3						

*BJI **02** 18:10:29.0±0.0, 16°.84S×173°.01W, h20km, mB5.2/10, mb4.9/17, Ms5.4/2, Ms7 5.2/1*
*NEIC **02** 18:10:33.6±2.1, 16°.29S±0°.09×172°.8W±0°.1, h10km±1km, mb5.0/90, Error ellipse: s-maj=18.3km s-min=14.0km az=69.0*
*IDC **02** 18:10:33.0±0.6, 16°.20S×172°.96W, h0km, mb4.3/22, mb1 4.4/22, mb1mx4.3/43, mbtmp4.3/22, MS3.5/12, Ms1 3.6/12, ms1mx3.3/36, Error ellipse: s-maj=21.8km s-min=13.5km az=135.0*
ISC 02 18:10:36.7±0.4**, 16°.07S**±0°.07×**173°.01W**±0°.09**, h26**km**, n252, σ1s49**/230**, mb4.8**/69**, MS3.6**/14**, 20C-6D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.45	29		Pn	18 11 09.5	-5.6
NIUE	Niue	4.19	136	P	Pn	18 11 32.1	-7.0
	baz=3.9,SNR=59						
NIUE	Niue	4.19	136		Pn	18 11 31.9	-7.2
MSVF	Nonsavu	8.72	258		Pn	18 12 49.0	+7.6
KNTN	Kanton	13.27	6	Pn	Pn	18 13 41.7	-1.9
RAR	Rarotonga	13.54	114	Pn	Pn	18 13 38.4	-8.8
	2.1nm,0.3s,baz=21,slow=8.6,SNR=2.2						
RAR				LR	LR	18 17 46.4	
	comp=Z,157nm,20.8s,baz=288,slow=32						
DZM	Mont Dzumac	20.31	250	eP	Pn	18 15 14.6	+1.5
	60nm,1.1s						
DZM				eLQ	LQ	18 19 16.2	
	512nm,25.0s						
DZM				eLR	LR	18 20 08.8	
	comp=Z,641nm,24.1s						
DZM	Mont Dzumac	20.31	250	P	P	18 15 11.1	+0.1
	5.7nm,0.8s,baz=87,slow=22,SNR=6.9						
DZM				LR	LR	18 21 44.4	
	comp=Z,436nm,21.3s,baz=66,slow=33						
DZM	Mont Dzumac	20.31	250	P	P	18 15 10.7	-0.3
PAE	Paea	22.47	97	eT	T	18 38 22.7	
	2.4nm,0.3s						
PPT	Papeete	22.48	97	LR	LR	18 22 09.2	
	comp=Z,124nm,19.4s,baz=262,slow=31						
PPT2	Papeete2	22.48	97	eLQ	LQ	18 19 47.7	
	714nm,28.0s						
PPT2				eLR	LR	18 20 46.0	
	comp=Z,281nm,24.5s						
OUZ	Omahuta	22.53	210	P	P	18 15 33.0	-1.7
KUZ	Kuaotunu	22.90	204	P	P	18 15 39.5	+0.9
WMGZ	Waiomatatini S	22.96	198	P	P	18 15 41.3	+2.2
HAZ	Te Kaha	23.09	199	P	P	18 15 41.2	+0.7
HAZ				S	S	18 19 52.3	+2.3
WIAZ	Waiheke Island	23.18	205	P	P	18 15 42.1	+0.7
PUZ	Puketiti	23.24	198	P	P	18 15 42.6	+0.6
TBI	Tubuai	23.30	112	eLQ	LQ	18 20 12.0	
	501nm,28.0s						
TBI				eLR	LR	18 21 13.3	
	comp=Z,319nm,26.0s						
TBI	Tubuai	23.30	112	eT	T	18 39 30.0	
	9.7nm,0.4s						
RUGZ	Raukumara Rang	23.31	199	P	P	18 15 44.3	+1.4
MKAZ	Moumakai	23.43	204	P	P	18 15 44.6	+0.7
WTAZ	Waiatarua	23.52	206	P	P	18 15 45.4	+0.6
AWAZ	Awhitu Peninsu	23.61	205	P	P	18 15 46.1	+0.4
TKGZ	Te Karaka	23.70	198	P	P	18 15 48.3	+1.9
MWZ	Matawai	23.70	199	P	P	18 15 47.6	+1.1
URZ	Urewera	23.76	200	P	P	18 15 44.8	-2.3
	10nm,0.3s,baz=340,slow=4.4,SNR=20						
URZ	Urewera	23.76	200	P	P	18 15 40.9	-6.2
URZ	Urewera	23.76	200	P	P	18 15 44.8	-2.3
URZ				S	S	18 20 00.4	-0.6
KMRZ	Kaimai	23.79	202	P	P	18 15 49.7	+2.3
TLZ	Tolley Road	24.36	202	P	P	18 15 54.1	+1.4
HIZ	Hauiti	24.78	203	P	P	18 15 55.5	-0.9
HIZ				IAmb	IAmb	18 16 16.6	
	comp=Z,56nm,1.1s						
BKZ	Black Stump Fm	24.79	200	P	P	18 15 54.9	-1.7
BKZ				IAmb	IAmb	18 16 01.4	
	comp=Z,39nm,1.6s						
BKZ	Black Stump Fm	24.79	200	P	P	18 15 57.0	+0.5
BFZ	Birch Farm	26.24	199	P	P	18 16 08.5	-1.2
BFZ				IAmb	IAmb	18 16 34.8	
	comp=Z,77nm,1.8s						
HNR	Honiara	27.17	281	LR	LR	18 25 43.6	
	comp=Z,387nm,19.4s,baz=100,slow=33						
HNR	Honiara	27.17	281	P	P	18 16 13.2	-5.1
HNR				IAmb	IAmb	18 16 39.5	
	comp=Z,24nm,0.6s						
MSWZ	Moikau Station	27.22	200	P	P	18 16 16.3	-2.2
SNZO	South Karori	27.31	200	P	P	18 16 14.3	-4.9
BHW	Baring Head	27.34	200	P	P	18 16 17.7	-1.8
PLWZ	Palliser	27.36	199	P	P	18 16 19.1	-0.7
TUWZ	Tuamarina	27.68	201	P	P	18 16 20.0	-2.6
QRZ	Quartz Range	27.68	204	P	P	18 16 19.9	-2.7
QRZ				IAmb	IAmb	18 16 35.8	
	comp=Z,34nm,0.8s						
QRZ	Quartz Range	27.68	204	P	P	18 16 22.2	-0.4
NNZ	Nelson	27.69	202	P	P	18 16 20.0	-2.7
NNZ				IAmb	IAmb	18 17 09.2	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,47nm,1.3s						
THZ	Tophouse	28.34	203	P	P	18 16 25.1	-3.5
KHZ	Kahutara	28.69	201	P	P	18 16 30.7	-0.9
KHZ				IAmb	IAmb	18 16 43.6	
	comp=Z,27nm,1.2s						
DSZ	Denniston Nort	28.75	204	P	P	18 16 30.3	-1.9
LTZ	Lake Taylor	29.46	202	P	P	18 16 35.1	-3.4
LTZ				IAmb	IAmb	18 16 52.9	
	comp=Z,18nm,0.8s						
OXZ	Oxford	30.02	202	P	P	18 16 40.0	-3.4
OXZ				IAmb	IAmb	18 16 50.8	
	comp=Z,21nm,0.6s						
MQZ	McQueen's Vall	30.13	201	P	P	18 16 46.5	+2.1
RPZ	Rata Peaks	30.71	203	P	P	18 16 49.3	-0.3
	comp=Z,2.9nm,0.5s,baz=18,slow=19,SNR=1.6						
RPZ	Rata Peaks	30.71	203	P	P	18 16 47.4	-2.1
RPZ				IAmb	IAmb	18 17 13.9	
	comp=Z,39nm,1.3s						
KWAJ	Kwajalein Atol	31.28	321	P	P	18 16 57.8	+3.0
JCZ	Jackson Bay	31.91	205	P	P	18 17 01.5	+1.4
TAOE	Nuku Hiva Isla	32.84	81	eLR	LR	18 25 25.2	
	comp=Z,175nm,24.8s						
TAOE	Nuku Hiva Isla	32.84	81	eT	T	18 51 11.4	
	comp=Z,27nm,0.2s						
EIDS	Eidsvold	34.75	249	P	P	18 17 24.5	-0.6
	baz=35,SNR=3.3						
EIDS	Eidsvold	34.75	249	P	P	18 17 24.1	-1.0
EIDS				IAmb	IAmb	18 18 38.6	
	comp=Z,49nm,1.6s						
ARMA	Armidale	35.33	240	P	P	18 17 30.0	-0.2
	baz=36,SNR=10						
ARMA	Armidale	35.33	240	P	P	18 17 30.3	+0.1
ARMA				IAmb	IAmb	18 17 36.7	
	comp=Z,24nm,1.3s						
KRVT	Keravat (AS076	36.27	285	LR	LR	18 31 06.3	
	comp=Z,96nm,19.6s,baz=100,slow=34						
CNB	Canberra Magne	38.65	233	P	P	18 18 00.3	+2.0
	baz=39						
CTA	Charters Tower	38.87	258	P	P	18 18 00.1	-0.2
	comp=Z,2.1nm,0.5s,baz=73,slow=9.3,SNR=5.5						
CTAO	Charters Tower	38.87	258	P	P	18 17 60.0	-0.2
CTAO				IAmb	IAmb	18 19 23.7	
	comp=Z,43nm,1.5s						
CAN	Canberra	38.93	233	P	P	18 18 01.0	+0.4
CAN				IAmb	IAmb	18 18 30.0	
	comp=Z,67nm,1.9s						
PMG	Port Moresby	39.36	275	P	P	18 18 05.3	+0.9
H11S2	WAKE ISLAND Hy	39.73	329	T	T	19 00 17.3	
	baz=152						
H11S3	WAKE ISLAND Hy	39.74	329	T	T	19 00 25.8	
	baz=152						
H11S1	WAKE ISLAND Hy	39.74	329	T	T	19 00 14.4	
	baz=152						
CMSA	Cobar Meteorol	40.55	240	P	P	18 18 13.7	-0.4
	baz=41,SNR=30						
H11N3	WAKE ISLAND Hy	40.67	330	T	T	19 01 28.5	
	baz=152						
H11N1	WAKE ISLAND Hy	40.68	330	T	T	19 01 25.9	
	baz=152						
H11N2	WAKE ISLAND Hy	40.69	330	T	T	19 01 27.2	
	baz=152						
MTSU	Mount Surprise	40.78	261	P	P	18 18 17.6	+1.4
	baz=41,SNR=8.4						
QLP	Quilpie	41.02	248	P	P	18 18 17.6	-0.5
	baz=42						
COEN	Coen	42.32	267	P	P	18 18 30.0	+1.2
	baz=43,SNR=17						
COEN	Coen	42.32	267	P	P	18 18 29.6	+0.8
TOO	Toolangi	42.34	231	P	P	18 18 29.1	+0.3
	baz=43,SNR=11						
TOO	Toolangi	42.34	231	P	P	18 18 28.4	-0.4
TOO				IAmb	IAmb	18 19 29.1	
	comp=Z,75nm,1.8s						
TAU	Tasmania Unive	43.09	223	P	P	18 18 34.2	-0.5
STKA	Stephens Creek	44.04	241	P	P	18 18 42.7	+0.2
	baz=44,SNR=24						
STKA	Stephens Creek	44.04	241	P	P	18 18 42.8	+0.2
	comp=Z,6.7nm,0.6s,baz=85,slow=9.5,SNR=29						
STKA				LR	LR	18 36 31.0	
	comp=Z,79nm,18.5s,baz=27,slow=35						
STKA	Stephens Creek	44.04	241	P	P	18 18 42.4	-0.1
HTT	Hallett	46.53	239	P	P	18 19 03.5	+1.2
	baz=47,SNR=4.3						
BBOO	Buckleboo	48.81	240	P	P	18 19 19.7	-0.3
	baz=49,SNR=7.7						
BBOO	Buckleboo	48.81	240	P	P	18 19 19.5	-0.5
BBOO				PcP	PcP	18 20 47.1	+2.5
WR0	Warramunga Arr	49.88	257	P	P	18 19 27.7	-0.6
WR0				IAmb	IAmb	18 19 44.2	
	comp=Z,23nm,1.9s						
WB0	Warramunga Arr	50.03	257	P	P	18 19 29.0	-0.5
WB0				PcP	PcP	18 20 51.9	+2.6
WB7	Warramunga Arr	50.04	257	P	P	18 19 29.0	-0.5
	baz=50						
WB2	Warramunga Arr	50.05	257	P	P	18 19 29.0	-0.7
WRAB	Tennant Creek	50.06	257	P	P	18 19 28.2	-1.5
WRAB				IAmb	IAmb	18 19 46.2	
	comp=Z,42nm,1.9s						
WRA	Warramunga Arr	50.06	257	P	P	18 19 28.8	-0.9
	comp=Z,1.9nm,0.4s,baz=92,slow=6.5,SNR=60						
AS19	Alice Springs	50.22	252	P	P	18 19 30.4	-0.5
	baz=51						
AS31	Alice Springs	50.27	252	P	P	18 19 30.7	-0.6
ASAR	Alice Springs	50.27	252	P	P	18 19 30.7	-0.6
	comp=Z,12nm,0.5s,baz=88,slow=8.3,SNR=360						
KDU	Kakadu	52.80	266	P	P	18 19 50.5	+0.2
	baz=53,SNR=12						
MTN	Manton Dam	54.06	266	P	P	18 19 59.7	+0.2
	baz=55,SNR=8.4						
MTN	Manton Dam	54.06	266	P	P	18 19 59.7	+0.2
MTN				IAmb	IAmb	18 20 15.8	
	comp=Z,30nm,1.4s						
SAUI	Saumlaki	54.93	271	P	P	18 20 06.1	+0.2
WRKA	Warakurna	55.33	250	P	P	18 20 08.6	-0.1
	baz=56,SNR=39						
FAKI	Fak Fak	55.38	278	P	P	18 20 09.7	+0.6
FORT	Forrest	55.46	244	P	P	18 20 08.5	-1.0
FORT				PcP	PcP	18 21 10.2	+0.7
KNRA	Kununurra	55.84	262	P	P	18 20 12.4	0.0
	baz=56,SNR=5.0						
KNRA	Kununurra	55.84	262	P	P	18 20 12.2	-0.2
SIJI	Sorong	56.94	280	P	P	18 20 21.4	+1.1
	comp=Z,8.4nm,0.6s,baz=136,slow=8.8,SNR=15						
FITZ	Fitzroy Crossi	58.45	258	P	P	18 20 30.7	-0.1
	baz=59,SNR=5.7						
FITZ	Fitzroy Crossi	58.45	258	P	P	18 20 31.2	+0.4
	comp=Z,1.4nm,0.5s,baz=158,slow=3.1,SNR=9.8						
FITZ	Fitzroy Crossi	58.45	258	P	P	18 20 31.2	+0.4
FITZ				IAmb	IAmb	18 20 49.2	
	comp=Z,33nm,1.9s						
SOEI	Soe	61.28	268	P	P	18 20 51.9	+1.4
SOEI				IAmb	IAmb	18 21 19.1	
	comp=Z,18nm,0.9s						
VNDA	Vanda	62.76	186	P	P	18 20 59.5	+0.3
	comp=Z,1.3nm,0.7s,baz=350,slow=8.3,SNR=5.9						
VNDA	Vanda	62.76	186	P	P	18 20 58.7	-0.6
VNDA				IAmb	IAmb	18 21 12.2	
	comp=Z,6.3nm,1.1s						
PSA00	Pilbara Seismi	63.38	254	P	P	18 21 04.3	0.0
MEEK	Meekatharra	63.92	248	P	P	18 21 07.6	-0.2
	baz=64,SNR=7.6						
KLBR	Kellerberrin	64.27	242	P	P	18 21 10.2	+0.2
	baz=65,SNR=10						
NWAO	Narrogin (SRO)	64.63	241	P	P	18 21 10.4	-2.0
NWAO	Narrogin (SRO)	64.63	241	P	P	18 21 10.3	-2.1
NWAO				IAmb	IAmb	18 23 25.2	
	comp=Z,119nm,1.8s						
BLDU	Ballidu	65.23	243	P	P	18 21 16.5	+0.2
	baz=66,SNR=9.6						
MUN	Mundaring	65.55	242	P	P	18 21 19.2	+0.7
	baz=66,SNR=6.4						
MORW	Morawa	65.95	245	P	P	18 21 20.7	-0.3
GIRL	Giralia	68.38	252	P	P	18 21 38.1	+1.6
MJAR	Matsushiro Arr	69.69	320	P	P	18 21 45.9	+1.5
	comp=Z,0.3nm,0.4s,baz=179,slow=6.3,SNR=4.2						
MJAR				LR	LR	18 46 18.0	
	comp=Z,18nm,21.4s,baz=100,slow=31						
H06S1	SOCORRO T	70.17	63	T	T	19 38 09.3	
	SNR=10.0						
H06N1	SOCORRO T-PHAS	70.20	63	T	T	19 38 07.8	
H06E1	SOCORRO T-PHAS	70.21	63	T	T	19 37 58.0	
	SNR=35						
JKA	Kamikawa-asahi	72.30	328	P	P	18 22 02.4	+2.4
ASAJ	Asahikawa	72.30	328	P	P	18 22 02.4	+2.4
	comp=Z,2.9nm,0.8s,baz=103,slow=19,SNR=1.7						
PEA0B	Petropavlovsk-	73.38	342	P	P	18 22 07.9	+1.8
PETK	Petropavlovsk-	73.38	342	P	P	18 22 07.2	+1.1
	comp=Z,2.2nm,0.8s,baz=147,slow=8.8,SNR=6.4						
WAKR	Walker	73.89	41	P	P	18 22 08.9	-0.9
WAKR				IAmb	IAmb	18 23 04.2	
	comp=Z,22nm,2.0s						
YBH	Yreka Blue Hor	73.90	37	P	P	18 22 10.4	+0.8
QSPA	South Pole Qui	73.98	180	P	P	18 22 10.0	+0.1
QSPA				IAmb	IAmb	18 22 16.5	
	comp=Z,19nm,1.2s						
NVAR	Mina Array Bea	74.57	42	P	P	18 22 14.4	+0.7
	comp=Z,1.1nm,0.6s,baz=230,slow=9.1,SNR=8.3						
NV11	Mina Array Sit	74.66	42	P	P	18 22 13.5	-0.7
UGM	Wanagama	74.91	266	P	P	18 22 16.5	+0.5
KVN	Kaiserville	75.06	41	P	P	18 22 17.0	+0.5
K05A	Summer Lake	75.57	37	P	P	18 22 18.6	-0.9
K05A				IAmb	IAmb	18 22 33.3	
	comp=Z,18nm,1.4s						
SSLB	Suanglung	75.68	300	P	P	18 22 20.6	+0.3
TPUB	Ta-pu	75.75	300	P	P	18 22 20.0	-0.6
PINE	Pine Mountain	76.21	36	P	P	18 22 24.0	+1.0
R11A	Troy Canyon, C	76.28	43	P	P	18 22 23.6	0.0
WVOR	Wild Horse Val	76.72	38	P	P	18 22 25.2	-0.7
KSRS	Korea Array	76.90	316	LR	LR	18 50 48.1	
	comp=Z,14nm,21.6s,baz=136,slow=31						
I07A	Izee	77.20	36	P	P	18 22 27.8	-0.7
LEM	Lembang	77.97	266	P	P	18 22 34.8	+1.2
	comp=Z,16nm,0.6s,baz=285,slow=3.4,SNR=5.2						
USRK	Ussuriysk Ar.	78.14	323	LR	LR	18 53 30.0	
	comp=Z,29nm,18.8s,baz=106,slow=33						
MTPU	Mount Pierson	78.39	45	P	P	18 22 36.0	+0.4
KNK	Knik Glacier	79.66	12	P	P	18 22 42.2	+0.6
KNK				IAmb	IAmb	18 25 18.6	
	comp=Z,7.2nm,0.7s						
TGL	Tana Glacier	80.30	15	P	P	18 22 45.1	0.0
TGL				IAmb	IAmb	18 22 56.6	
	comp=Z,8.1nm,0.9s						
TX31	Lajitas Ar. Si	80.67	56	P	P	18 22 45.8	-2.1
TX31				IAmb	IAmb	18 23 38.4	
	comp=Z,22nm,1.4s						
TXAR	Lajitas Array	80.67	56	P	P	18 22 48.3	+0.4
	comp=Z,0.1nm,0.5s,baz=224,slow=7.6,SNR=2.6						
NJ2	Nanjing	80.87	307	eP	P	18 22 46.4	-2.3
NJ2				pmax	pmax		
	comp=Z,14nm,0.8s						
KTH	Kantishna Hill	81.20	10	P	P	18 22 49.9	+0.1
TRF	Thorofare Moun	81.21	10	P	P	18 22 49.9	-0.2
TRF				IAmb	IAmb	18 23 10.1	
	comp=Z,13nm,1.2s						
DHY	Denali Highway	81.39	11	P	P	18 22 51.0	0.0
RND	Reindeer	81.42	11	P	P	18 22 51.8	+0.7
RND				IAmb	IAmb	18 23 04.2	
	comp=Z,10nm,1.0s						
BPAW	Bear Paw Mtn.	81.70	10	P	P	18 22 52.9	+0.4
MCK	McKinley	81.70	11	P	P	18 22 53.8	+1.3
MCK				IAmb	IAmb	18 23 04.0	
	comp=Z,14nm,0.9s						
RIDG	Independent Ri	82.49	12	P	P	18 22 58.2	+1.5
RIDG				IAmb	IAmb	18 23 09.5	
	comp=Z,10nm,1.2s						
PDAR	Pinedale Array	82.51	42	P	P	18 22 57.9	+0.4
	comp=Z,0.7nm,0.6s,baz=208,slow=4.0,SNR=7.8						
WRH	Wood River Hil	82.53	11	P	P	18 22 56.9	+0.2
YHL	Hebgen Lake	82.55	39	P	P	18 22 57.9	+0.2
DOT	Dot Lake	82.57	13	P	P	18 22 58.0	+1.0
DOT				IAmb	IAmb	18 23 08.4	
	comp=Z,7.0nm,0.9s						
MLY	Manley	82.61	9	P	P	18 22 57.4	+0.1
MLY				IAmb	IAmb	18 23 08.4	
	comp=Z,7.0nm,0.8s						
HDA	Harding Lake	82.68	11	P	P	18 22 57.9	+0.3
HDA				IAmb	IAmb	18 23 09.1	
	comp=Z,12nm,0.9s						
YHH	Holmes Hill	82.72	39	P	P	18 22 58.0	-0.6
CCB	Clear Creek Bu	82.74	11	P	P	18 22 58.0	+0.2
CCB				IAmb	IAmb	18 23 09.3	
	comp=Z,12nm,0.8s						
SCRK	Sand Creek	82.87	12	P	P	18 22 58.0	-0.7
SCRK				IAmb	IAmb	18 23 10.6	
	comp=Z,5.7nm,0.9s						
COLA	College	82.94	11	P	P	18 22 58.9	+0.1
IL31		83.02	11	P	P	18 22 57.7	-1.6
IL31				IAmb	IAmb	18 23 11.6	
	comp=Z,4.3nm,0.7s						
ILAR	Eielson Array	83.02	11	P	P	18 22 59.5	+0.1
	comp=Z,0.9nm,0.8s,baz=223,slow=7.2,SNR=7.6						
ILAR				LR	LR	18 56 24.0	
	comp=Z,12nm,18.2s,baz=220,slow=33						
PRP	Porcupine Dome	83.95	11	P	P	18 23 03.6	-0.7
PRP				IAmb	IAmb	18 23 15.9	
	comp=Z,14nm,0.9s						
DAWY	Dawson	83.97	14	P	P	18 23 04.2	-0.1
DAWY				IAmb	IAmb	18 23 16.1	
	comp=Z,8.9nm,0.9s						
EGAK	Eagle	84.18	13	P	P	18 23 06.9	+1.6
EGAK				IAmb	IAmb	18 23 16.5	
	comp=Z,5.3nm,1.0s						
COLD	Coldfoot	84.74	9	P	P	18 23 07.8	-0.3
TOLK	Toolik Lake Re	86.14	8	P	P	18 23 15.2	+0.1
TOLK				IAmb	IAmb	18 23 26.9	
	comp=Z,6.5nm,1.2s						
EPYK	Eagle Plains	86.52	14	P	P	18 23 18.0	+1.0
EPYK				IAmb	IAmb	18 23 29.0	
	comp=Z,11nm,1.1s						
MAW	Mawson	87.29	199	P	P	18 23 21.2	+0.4
	comp=Z,2.8nm,1.0s,baz=280,slow=7.2,SNR=3.7						
MAW	Mawson	87.29	199	P	P	18 23 21.4	+0.6
PLCA	Paso Flores	88.79	132	LR	LR	18 55 02.3	
	comp=Z,46nm,21.1s,baz=248,slow=30						
INK	Inuvik	88.82	14	P	P	18 23 29.2	+1.3
	comp=Z,0.9nm,0.7s,baz=209,slow=5.7,SNR=2.9						
INK	Inuvik	88.82	14	P	P	18 23 29.4	+1.5
PSI	Prapat	88.91	273	P	P	18 23 30.6	+0.8
	comp=Z,3.6nm,0.8s,baz=179,slow=3.4,SNR=4.5						
XAN	Xi'an	89.33	306	P	P	18 23 28.9	-2.3
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,38nm,3.8s						
HHC	Hu-ho-hao-te	89.75	313	eP	P	18 23 29.3	-3.8
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
HHC				pmax	pmax		
	comp=Z,42nm,3.7s						
GSI	Gunungsitoli	89.80	271	P	P	18 23 34.3	+0.5
GSI				IAmb	IAmb	18 23 38.4	
	comp=Z,13nm,0.9s						
YKA	Yellowknife Ar	90.55	23	P	P	18 23 36.4	+0.3
	comp=Z,0.4nm,0.7s,baz=233,slow=5.0,SNR=8.7						
KMI	Kunming	91.65	296	P	P	18 23 38.2	-4.2
KMI				pmax	pmax		
	comp=Z,5.0nm,1.8s						
SYO	Syowa Base	92.02	191	⇑eP	P	18 23 39.1	-3.9
SYO	Syowa Base	92.02	191	⇓ePcP	P	18 23 41.9	-1.1
CD2	Chengdu	92.48	301	eP	P	18 23 42.0	-3.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CMAR	Chiang Mai Arr	93.18	288	P	P	18 23 52.4	+3.0
	comp=Z,1.4nm,0.7s,baz=90,slow=2.6,SNR=12						
CMAR				LR	LR	19 01 29.2	
	comp=Z,14nm,21.9s,baz=90,slow=33						
CHTO	Chiang Mai	93.28	289	P	P	18 23 50.4	+0.6
CHTO				IAmb	IAmb	18 23 53.1	
	comp=Z,2.5nm,0.7s						
LZH	Lanzhou	93.92	306	eP	P	18 23 47.9	-4.7
LZH				pP	PcP	18 23 52.6	-0.5
LZH				sP	pP	18 23 55.9	-4.4
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
GTA	Gaotai	97.89	309	eP	P	18 24 07.4	-3.1
GTA				pP	pP	18 24 15.4	-2.8
GTA				sP	sP	18 24 20.0	-1.0
GTA				pmax	pmax		
	comp=Z,1.0nm,1.3s						
ARCES	ARCESS Array B	125.32	352	PKP	PKiKP	18 29 35.4	+0.4
	comp=Z,2.4nm,0.9s,baz=329,slow=0.7,SNR=5.2						
FINES	FINESS Array B	132.67	348	PKP	PKPdf	18 29 49.1	+0.3
	comp=Z,1.0nm,0.8s,baz=72,slow=4.5,SNR=1.5						
CLL	Collm	144.51	354	i PKPdf	PKPdf	18 30 12.5	+1.8
DIKM	Dikmen	144.76	322	⇓P	PKPdf	18 30 13.3	+1.8
DPC	Dobruska-Polom	144.98	350	ePKP	PKiKP	18 30 14.5	-1.0
DPC				ex	x	18 30 21.8	
BUR08	Bucovina Ar. S	145.10	338		PKPdf	18 30 12.5	+0.4
OKC	Ostrava-Krasne	145.12	347	ePKP	PKiKP	18 30 14.1	-1.6
OKC				ex	x	18 30 21.9	
BURAR	Bucovina Array	145.12	338	⇑P	PKPdf	18 30 13.2	+1.1
MORC	Moravsky Berou	145.30	348	ePKIKP	PKPbc	18 30 09.8	-2.2
MORC	Moravsky Berou	145.30	348	⇑P	PKPdf	18 30 13.3	+1.1
BIZ	Bicaz	145.37	337	⇑P	PKPab	18 30 13.9	+1.5
TESR	Tescani	145.51	336	⇑P	PKPab	18 30 13.6	+0.6
TRPA	Tarpa	145.56	341	⇑P	PKPab	18 30 14.1	+1.0
PRU	Pruhonice	145.62	351	ePKP	PKPab	18 30 14.2	+1.0
PRU				ex	x	18 30 23.7	
TLCR		145.65	332	⇓P	PKPab	18 30 14.9	+1.4
VRAC	Vranov	145.93	349	ePKIKP	PKPdf	18 30 11.7	-1.6
VRAC	Vranov	145.93	349	⇑P	PKiKP	18 30 16.3	-1.1
CFR	Carcaliu	145.96	333	⇑P	PKPab	18 30 15.5	+0.9
VRI	Vrincioaia	146.00	335	⇑P	PKPab	18 30 14.9	+0.1
ILGA	Ilgaz	146.04	323		PKPbc	18 30 15.0	+0.1
TOPG	Topolog	146.09	332	⇑P	PKPab	18 30 16.3	+1.1
JAVC	Velka Javorina	146.15	347	ePKIKP	PKPbc	18 30 14.7	0.0
KRUC	Moravsky	146.21	349	ePKIKP	PKPdf	18 30 12.8	-0.9
TIRR	Tirgusor	146.40	332	⇓P	PKiKP	18 30 23.4	+4.9
HARR	Harsova	146.43	333	⇑P	PKPab	18 30 17.4	+0.9
DOPR	Dopca	146.45	337	⇑P	PKiKP	18 30 17.8	-0.8
KHC	Kasperske Hory	146.59	352	ePKP	PKPab	18 30 17.4	+0.4
KHC				ex	x	18 30 25.6	
KHC	Kasperske Hory	146.59	352		PKPdf	18 30 14.8	+0.4
MLR	Muntele Rosu	146.63	335	⇓P	PKPab	18 30 18.3	+0.9
MLR	Muntele Rosu	146.63	335		PKPbc	18 30 16.6	+0.3
DRGR		146.69	340	⇑P	PKPab	18 30 17.5	0.0
GERES	GERESS Array B	146.85	352	PKPbc	PKPab	18 30 17.9	-0.2
	comp=Z,0.7nm,0.7s,baz=45,slow=4.0,SNR=7.1						
BR131	Keskin Array S	146.91	321		PKPbc	18 30 18.2	+0.9
BRTR	Keskin Array B	146.91	321	PKPbc	PKPab	18 30 18.9	+0.2
	comp=Z,3.5nm,0.7s,baz=160,slow=2.4,SNR=18						
VOIR		147.02	336	⇑P	PKPab	18 30 19.3	+0.4
ARR	Arges	147.24	337	⇑P	PKiKP	18 30 20.4	0.0
ANTO	Ankara	147.33	322	⇑P	PKiKP	18 30 22.5	+1.8
CONA	Conrad Observa	147.40	349	ePKPdf	PKPdf	18 30 15.0	-0.9
	comp=Z,5.3nm,1.2s						
SIRR	Siria	147.49	341	⇑P	PKPab	18 30 20.2	-0.4
MOA	Molln	147.74	351	ePKPdf	PKPdf	18 30 13.7	-2.7
	comp=Z,9.1nm,2.2s						
BZS	Buzias	148.09	340	⇑P	PKiKP	18 30 21.4	-0.5
WATA	Walderalm	148.59	354	epPKPdf	PKPdf	18 30 19.6	+1.7
	comp=Z,2.7nm,0.6s						
MOTA	Moosalm	148.62	355	epPKPdf	PKPbc	18 30 20.4	-1.3
	comp=Z,7.6nm,0.9s						
WTTA	Wattenberg	148.65	354	PKPbc	PKPbc	18 30 20.9	-1.0
	comp=Z,6.7nm,1.2s						
SQTA	Sankt Quirin	148.74	354	ePKPbc	PKPbc	18 30 20.8	-1.2
	comp=Z,5.3nm,1.1s						
SOKA	Soboth	148.75	349	pPKPdf	PKPdf	18 30 19.5	+1.3
	comp=Z,4.3nm,0.9s						
DAVA	Damuels	148.78	356	PKiKP	PKiKP	18 30 23.2	-0.4
	comp=Z,3.5nm,0.7s						
MDVR	Moldovita	148.79	340	⇓P	PKPbc	18 30 22.9	+0.8
PLVB	Pleven	148.90	335	⇑P	PKiKP	18 30 23.7	0.0
FETA	Feichten	148.98	355	ePKPbc	PKPbc	18 30 21.4	-1.3
	comp=Z,4.9nm,1.1s						
MYKA	Terra Mystica	149.03	351	sPKPdf	PKPbc	18 30 22.5	-0.1
	comp=Z,3.0nm,1.0s						
ABTA	Abfaltersbach	149.06	353	PKiKP	PKPbc	18 30 23.4	+0.6
	comp=Z,9.3nm,1.0s						
FUORN	Ofenpass-Fuorn	149.41	356		PKPbc	18 30 23.9	0.0
VTS	Vitosha	150.10	336	⇑P	PKiKP	18 30 26.9	+0.5
VTS	Vitosha	150.10	336		PKPbc	18 30 25.7	+0.1
MURB	Monte Urbino	152.48	351		PKPab	18 30 40.8	-0.3
TORD	Torodi Ar. Bea	174.11	119	PKP	PKPdf	18 30 43.5	-1.5
	comp=Z,0.2nm,0.5s,baz=212,slow=0.1,SNR=2.5						
TORD				PKPab	PKPab	18 32 17.0	+0.5
	comp=Z,0.8nm,1.1s,baz=264,slow=5.0,SNR=2.3						

*IDC **02** 18:12:51.2±1.6, 52.°89N×1.°74E, h0km, mb3.5/2, mb1 3.7/10, mb1mx3.4/49, mbtmp3.6/10, ML3.4/7, Error ellipse: s-maj=26.3km s-min=15.3km az=41.0*
*BGR **02** 18:12:52.5±0.7, 53.°13N×1.°85E, h10km, ML3.7/9, Error ellipse: s-maj=16.7km s-min=12.2km az=177.0*
*LDG **02** 18:12:52.9±0.1, 53.°11N×1.°97E, h10km, Md3.7/2, Ml3.7/38, Error ellipse: s-maj=2.1km s-min=1.6km az=39.0*
*BGS **02** 18:12:57.1±1.4, 53.°19N×1.°83E, h10km, ML3.4*
*NAO **02** 18:12:57.1±9.2, 53.°55N×2.°18E, h16km±122km, ML2.1*
*PRU **02** 18:12:57.6±0.0, 53.°07N×2.°49E, h10km*
ISC 02 18:12:49.6±0.5**, 53.°05N**±0.°03×**2.°19E**±0.°02**, h10km, n222,** σ2.s61/303**, mb3.9**/3**, North Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WACR	West Acre	1.00	251	eP	Pn	18 13 11.2	+1.6
WACR				eS	Sg	18 13 23.5	+1.8
WACR				IAML		18 13 25.6	
	comp=E,441nm,0.2s						
WACR				IAML		18 13 26.5	
	comp=N,662nm,0.5s						
WACR				IAML		18 13 27.2	
	comp=Z,396nm,0.4s						
WACR	West Acre	1.00	251	eP	Pn	18 13 11.2	+1.6
WACR				eS	Sg	18 13 23.5	+1.8
WACR				IAML		18 13 25.6	
	comp=E,441nm,0.2s						
WACR				IAML		18 13 26.5	
	comp=N,662nm,0.5s						
WACR				IAML		18 13 27.2	
	comp=Z,396nm,0.4s						
WACR	West Acre	1.00	251	eP	Pn	18 13 11.2	+1.6
WACR				eS	Sg	18 13 23.5	+1.8
WACR				IAML		18 13 25.6	
	comp=E,441nm,0.2s						
WACR				IAML		18 13 26.5	
	comp=N,662nm,0.5s						
WACR				IAML		18 13 27.2	
	comp=Z,396nm,0.4s						
LMK	Market Rasen	1.56	286	eP	Pg	18 13 21.2	+1.7
LMK				IAML		18 13 44.9	
	comp=N,2μm,0.3s						
LMK				IAML		18 13 47.4	
	comp=E,2μm,0.3s						
LMK	Market Rasen	1.56	286	eP	Pg	18 13 21.2	+1.7
LMK				IAML		18 13 44.9	
	comp=N,2μm,0.3s						
LMK				IAML		18 13 47.4	
	comp=E,2μm,0.3s						
LMK	Market Rasen	1.56	286	eP	Pg	18 13 21.2	+1.7
LMK				IAML		18 13 44.9	
	comp=N,2μm,0.3s						
LMK				IAML		18 13 47.4	
	comp=E,2μm,0.3s						
BZEV	Zevekote	1.97	167	Pn	Pn	18 13 24.4	+1.5
ELSH	Elham, Standar	2.02	199	eP	Pg	18 13 29.0	+0.8
ELSH				eS	Sg	18 13 55.8	+1.5
ELSH				IAML		18 13 59.4	
	comp=N,402nm,0.4s						
ELSH				IAML		18 14 03.8	
	comp=E,379nm,0.5s						
ELSH	Elham, Standar	2.02	199	eP	Pg	18 13 29.0	+0.8
ELSH				eS	Sg	18 13 55.8	+1.5
ELSH				IAML		18 13 59.4	
	comp=N,402nm,0.4s						
ELSH				IAML		18 14 03.8	
	comp=E,379nm,0.5s						
ELSH	Elham, Standar	2.02	199	eP	Pg	18 13 29.0	+0.8
ELSH				eS	Sg	18 13 55.8	+1.5
ELSH				IAML		18 13 59.4	
	comp=N,402nm,0.4s						
ELSH				IAML		18 14 03.8	
	comp=E,379nm,0.5s						
CWF	Charnwood Fore	2.14	263	eP	Pb	18 13 29.1	+0.8
CWF				IAML		18 13 58.6	
	comp=E,116nm,0.2s						
CWF				IAML		18 13 59.4	
	comp=N,184nm,0.2s						
CWF	Charnwood Fore	2.14	263	eP	Pb	18 13 29.1	+0.8
CWF				IAML		18 13 58.6	
	comp=E,116nm,0.2s						
CWF				IAML		18 13 59.4	
	comp=N,184nm,0.2s						
CWF	Charnwood Fore	2.14	263	eP	Pb	18 13 29.1	+0.8
CWF				IAML		18 13 58.6	
	comp=E,116nm,0.2s						
CWF				IAML		18 13 59.4	
	comp=N,184nm,0.2s						
LBWR	Ladybower, Pea	2.38	280	eP	Pn	18 13 31.3	+2.7
LBWR				IAML		18 14 11.9	
	comp=N,526nm,0.3s						
LBWR				IAML		18 14 21.2	
	comp=E,324nm,0.4s						
LBWR	Ladybower, Pea	2.38	280	eP	Pn	18 13 31.3	+2.7

LBWR IAML 18 14 11.9
comp=N,526nm,0.3s
LBWR IAML 18 14 21.2
comp=E,324nm,0.4s
LBWR Ladybower, Pea 2.38 280 *eP* **Pn 18 13 31.3 +2.7**
LBWR IAML 18 14 11.9
comp=N,526nm,0.3s
LBWR IAML 18 14 21.2
comp=E,324nm,0.4s
HPK Haverah Park 2.45 293 *eP* **Pb 18 13 32.7 -0.9**
HPK IAML 18 14 14.9
comp=N,326nm,0.4s
HPK IAML 18 14 16.8
comp=E,511nm,0.3s
HPK Haverah Park 2.45 293 *eP* **Pb 18 13 32.7 -0.9**
HPK IAML 18 14 14.9
comp=N,326nm,0.4s
HPK IAML 18 14 16.8
comp=E,511nm,0.3s
HPK Haverah Park 2.45 293 *eP* **Pb 18 13 32.7 -0.9**
HPK IAML 18 14 14.9
comp=N,326nm,0.4s
HPK IAML 18 14 16.8
comp=E,511nm,0.3s
WOL Wolverton 2.73 232 *eP* **Pb 18 13 38.5 +0.2**
WOL IAML 18 14 24.5
comp=E,240nm,0.3s
WOL IAML 18 14 27.6
comp=N,203nm,0.3s
WOL Wolverton 2.73 232 *eP* **Pb 18 13 38.5 +0.2**
WOL IAML 18 14 24.5
comp=E,240nm,0.3s
WOL IAML 18 14 27.6
comp=N,203nm,0.3s
WOL Wolverton 2.73 232 *eP* **Pb 18 13 38.5 +0.2**
WOL IAML 18 14 24.5
comp=E,240nm,0.3s
WOL IAML 18 14 27.6
comp=N,203nm,0.3s
SNF Seneffe 2.86 152 Pn **Pn 18 13 37.6 +2.4**
SWN1 Swindon 2.89 239 *eP* **Pb 18 13 40.9 -0.4**
SWN1 IAML 18 14 31.1
comp=N,262nm,0.4s
SWN1 IAML 18 14 34.0
comp=E,233nm,0.5s
SWN1 Swindon 2.89 239 *eP* **Pb 18 13 40.9 -0.4**
SWN1 IAML 18 14 31.1
comp=N,262nm,0.4s
SWN1 IAML 18 14 34.0
comp=E,233nm,0.5s
SWN1 Swindon 2.89 239 *eP* **Pb 18 13 40.9 -0.4**
SWN1 IAML 18 14 31.1
comp=N,262nm,0.4s
SWN1 IAML 18 14 34.0
comp=E,233nm,0.5s
STRD Stroud 2.96 246 *eP* **Pb 18 13 41.3 -0.9**
STRD IAML 18 14 32.0
comp=E,498nm,0.7s
STRD IAML 18 14 35.2
comp=N,692nm,0.9s
STRD Stroud 2.96 246 *eP* **Pb 18 13 41.3 -0.9**
STRD IAML 18 14 32.0
comp=E,498nm,0.7s
STRD IAML 18 14 35.2
comp=N,692nm,0.9s
STRD Stroud 2.96 246 *eP* **Pb 18 13 41.3 -0.9**
STRD IAML 18 14 32.0
comp=E,498nm,0.7s
STRD IAML 18 14 35.2
comp=N,692nm,0.9s
EDMD Edmundbyers 3.03 308 *eP* **Pn 18 13 40.0 +2.4**
EDMD Edmundbyers 3.03 308 *eP* **Pn 18 13 40.0 +2.4**
EDMD Edmundbyers 3.03 308 *eP* **Pn 18 13 40.1 +2.6**
EDMD *eS* **Sn 18 14 15.1 +1.2**
HLM1 Long Mynd 3.12 262 *eP* **Pn 18 13 42.2 +3.4**
HLM1 IAML 18 14 36.0
comp=E,201nm,0.3s
HLM1 IAML 18 14 42.0
comp=N,125nm,0.6s
HLM1 Long Mynd 3.12 262 *eP* **Pn 18 13 42.2 +3.4**
HLM1 IAML 18 14 36.0
comp=E,201nm,0.3s
HLM1 IAML 18 14 42.0
comp=N,125nm,0.6s
HLM1 Long Mynd 3.12 262 *eP* **Pn 18 13 42.2 +3.4**
HLM1 IAML 18 14 36.0
comp=E,201nm,0.3s
HLM1 IAML 18 14 42.0
comp=N,125nm,0.6s
BEBN Eben Emael 3.13 135 Pn **Pn 18 13 41.6 +2.8**
BGES Gesves 3.23 145 Pn **Pn 18 13 42.6 +2.4**
BAIF Baives 3.25 156 *ePn* **Pn 18 13 43.2 +2.6**
BAIF Baives 3.25 156 *ePg* **Pg 18 13 54.3 +2.5**
BAIF *eSg* **Sg 18 14 36.6 +2.6**
comp=N,77nm,0.6s
FOEL Foel Wylfa 3.26 269 *eP* **Pn 18 13 44.3 +3.6**
FOEL IAML 18 14 45.9
comp=E,193nm,0.6s
FOEL IAML 18 14 47.6
comp=N,166nm,0.5s
FOEL Foel Wylfa 3.26 269 *eP* **Pn 18 13 44.3 +3.6**
FOEL IAML 18 14 45.9
comp=E,193nm,0.6s
FOEL IAML 18 14 47.6
comp=N,166nm,0.5s
FOEL Foel Wylfa 3.26 269 *eP* **Pn 18 13 44.3 +3.6**
FOEL IAML 18 14 45.9
comp=E,193nm,0.6s
FOEL IAML 18 14 47.6
comp=N,166nm,0.5s
BCLA Clavier 3.27 142 Pn **Pn 18 13 43.9 +3.0**
MCH1 Michaelchurch 3.34 254 *eP* **Pn 18 13 45.4 +3.6**
MCH1 IAML 18 14 38.6
comp=N,198nm,0.7s
MCH1 IAML 18 14 39.5
comp=E,102nm,0.3s
MCH1 Michaelchurch 3.34 254 *eP* **Pn 18 13 45.4 +3.6**
MCH1 IAML 18 14 38.6
comp=N,198nm,0.7s
MCH1 IAML 18 14 39.5
comp=E,102nm,0.3s
MCH1 Michaelchurch 3.34 254 *eP* **Pn 18 13 45.4 +3.6**
MCH1 IAML 18 14 38.6
comp=N,198nm,0.7s
MCH1 IAML 18 14 39.5
comp=E,102nm,0.3s
GIVF Givet 3.38 150 *ePn* **Pn 18 13 45.0 +2.6**
GIVF Givet 3.38 150 *ePg* **Pg 18 13 56.8 +2.5**
GIVF *eSn* **Sn 18 14 24.5 +2.0**
GIVF *eSg* **Sg 18 14 41.5 +3.4**
comp=E,86nm,0.5s
MEM Membach 3.41 134 Pn **Pn 18 13 45.9 +3.2**
BUG Bochum--Univer 3.52 115 *ePn* **Pb 18 13 48.0 -3.8**
BUG *eSn* **Sn 18 14 27.5 +1.7**
LLW Llanuwychllyn 3.54 269 *eP* **Pn 18 13 47.8 +3.2**
LLW Llanuwychllyn 3.54 269 *eP* **Pn 18 13 47.8 +3.2**
LLW Llanuwychllyn 3.54 269 *eP* **Pn 18 13 47.8 +3.2**
BHOU Houvegnez 3.60 137 Pn **Pn 18 13 48.5 +3.1**
EKA Eskdalemuir Ar 3.88 308 Pn **Pn 18 13 52.2 +3.0**
EKA Sn **Sn 18 14 34.5 -0.3**
EKA Eskdalemuir Ar 3.88 308 Pn **Pn 18 13 52.0 +2.8**
EKA baz=124,slow=14,SNR=166 Sn **Sn 18 14 35.4 +0.6**
baz=123,slow=26,SNR=10
EKA Lg Lg 18 14 51.8
baz=124,slow=28,SNR=3.7
EKA Eskdalemuir Ar 3.88 308 Pn **Pn 18 13 52.2 +3.0**
EKA Sn **Sn 18 14 34.5 -0.3**
ESK Eskdalemuir 3.90 308 *eP* **Pn 18 13 52.2 +2.8**
ESK IAML 18 15 04.9
comp=E,24nm,0.4s
ESK IAML 18 15 14.5
comp=N,28nm,0.4s
ESK Eskdalemuir 3.90 308 *eP* **Pn 18 13 52.2 +2.8**
ESK IAML 18 15 04.9
comp=E,24nm,0.4s
ESK IAML 18 15 14.5
comp=N,28nm,0.4s
ESK Eskdalemuir 3.90 308 *eP* **Pn 18 13 52.2 +2.8**
ESK IAML 18 15 04.9
comp=E,24nm,0.4s
ESK IAML 18 15 14.5
comp=N,28nm,0.4s
WME Myndd Eilian 3.92 278 *eP* **Pn 18 13 52.0 +2.4**
WME Myndd Eilian 3.92 278 *eP* **Pn 18 13 52.0 +2.4**
WME Myndd Eilian 3.92 278 *eP* **Pn 18 13 52.0 +2.4**
AHRW Bad Neuenahr-A 3.94 128 *ePn* **Pn 18 13 53.5 +3.5**
WLF1 Llynfaes 3.97 276 *eP* **Pn 18 13 52.9 +2.5**
WLF1 IAML 18 14 39.5
comp=N,91nm,0.5s
WLF1 IAML 18 14 40.2
comp=E,55nm,0.4s
WLF1 Llynfaes 3.97 276 *eP* **Pn 18 13 52.9 +2.5**
WLF1 IAML 18 14 39.5
comp=N,91nm,0.5s
WLF1 IAML 18 14 40.2
comp=E,55nm,0.4s
WLF1 Llynfaes 3.97 276 *eP* **Pn 18 13 52.9 +2.5**
WLF1 IAML 18 14 39.5
comp=N,91nm,0.5s
WLF1 IAML 18 14 40.2
comp=E,55nm,0.4s
ESY Stoneypath 4.01 318 *eP* **Pn 18 13 53.4 +2.4**
ESY Stoneypath 4.01 318 *eP* **Pn 18 13 53.4 +2.4**
ESY Stoneypath 4.01 318 *eP* **Pn 18 13 53.4 +2.4**
WPS Cemaes, Angles 4.03 278 *eP* **Pn 18 13 53.2 +2.0**
WPS IAML 18 14 41.0
comp=E,20nm,0.4s
WPS IAML 18 15 08.7
comp=N,40nm,0.5s
WPS Cemaes, Angles 4.03 278 *eP* **Pn 18 13 53.2 +2.0**
WPS IAML 18 14 41.0
comp=E,20nm,0.4s
WPS IAML 18 15 08.7
comp=N,40nm,0.5s
WPS Cemaes, Angles 4.03 278 *eP* **Pn 18 13 53.2 +2.0**
WPS IAML 18 14 41.0
comp=E,20nm,0.4s
WPS IAML 18 15 08.7
comp=N,40nm,0.5s
EBL Broad Law 4.09 314 *eP* **Pn 18 13 54.5 +2.4**
EBL Broad Law 4.09 314 *eP* **Pn 18 13 54.5 +2.4**
EBL Broad Law 4.09 314 *eP* **Pn 18 13 54.5 +2.4**
IOMK Kirk Michael 4.20 289 *eP* **Pn 18 13 55.7 +2.2**
IOMK IAML 18 15 15.8
comp=N,46nm,0.6s
IOMK IAML 18 15 26.4
comp=E,34nm,0.5s
IOMK Kirk Michael 4.20 289 *eP* **Pn 18 13 55.7 +2.2**
IOMK IAML 18 15 15.8
comp=N,46nm,0.6s
IOMK IAML 18 15 26.4
comp=E,34nm,0.5s
IOMK Kirk Michael 4.20 289 *eP* **Pn 18 13 55.7 +2.2**
IOMK IAML 18 15 15.8
comp=N,46nm,0.6s
IOMK IAML 18 15 26.4
comp=E,34nm,0.5s
WIM Isle of Man 4.23 288 *eP* **Pn 18 13 56.5 +2.5**
WIM Isle of Man 4.23 288 *eP* **Pn 18 13 56.5 +2.5**
WIM Isle of Man 4.23 288 *eP* **Pn 18 13 56.5 +2.5**
EDI Edinburgh 4.25 315 *eP* **Pn 18 13 57.5 +3.2**
EDI *eS* **Sn 18 14 44.8 +0.9**
NEWG New Galloway 4.31 301 *eP* **Pn 18 13 57.4 +2.4**
NEWG New Galloway 4.31 301 *eP* **Pn 18 13 57.4 +2.4**
NEWG New Galloway 4.31 301 *eP* **Pn 18 13 57.4 +2.4**
RSBS Rosebush, Pemb 4.38 258 *eP* **Pn 18 13 58.5 +2.5**
RSBS IAML 18 15 09.2
comp=E,36nm,0.3s
RSBS IAML 18 15 12.8
comp=N,30nm,0.4s
RSBS Rosebush, Pemb 4.38 258 *eP* **Pn 18 13 58.5 +2.5**
RSBS IAML 18 15 09.2
comp=E,36nm,0.3s
RSBS IAML 18 15 12.8
comp=N,30nm,0.4s
RSBS Rosebush, Pemb 4.38 258 *eP* **Pn 18 13 58.5 +2.5**
RSBS IAML 18 15 09.2
comp=E,36nm,0.3s
RSBS IAML 18 15 12.8
comp=N,30nm,0.4s
GAL1 Galloway 4.46 297 *eP* **Pn 18 13 59.6 +2.5**
GAL1 Galloway 4.46 297 *eP* **Pn 18 13 59.6 +2.5**
GAL1 Galloway 4.46 297 *eP* **Pn 18 13 59.6 +2.5**
FLN La Foliniere 4.62 203 *ePn* **Pn 18 14 01.5 +2.2**
baz=22
FLN La Foliniere 4.62 203 *ePg* **Pg 18 14 18.9 +1.0**
baz=22
FLN *eSn* **Sn 18 14 51.5 -1.4**
FLN *eSg* **Sg 18 15 18.4 +0.7**
comp=N,31nm,0.3s
LDF La Druitiere 4.70 199 *ePn* **Pn 18 14 02.6 +2.1**
LDF La Druitiere 4.70 199 *ePg* **Pg 18 14 19.9 +0.4**
LDF *eSn* **Sn 18 14 53.5 -1.5**
LDF *eSg* **Sg 18 15 19.7 -0.6**
comp=N,58nm,0.6s
DRUM Mains of Drumt 4.71 327 *eP* **Pn 18 14 02.5 +1.9**
DRUM Mains of Drumt 4.71 327 *eP* **Pn 18 14 02.5 +1.9**
DRUM Mains of Drumt 4.71 327 *eP* **Pn 18 14 02.5 +1.9**
DRUM *eS* **Sn 18 14 54.2 -1.0**
PGBU Glenifferbraes 4.77 308 *eP* **Pn 18 14 04.5 +3.1**
PGBU Glenifferbraes 4.77 308 *eP* **Pn 18 14 04.5 +3.1**
PGBU Glenifferbraes 4.77 308 *eP* **Pn 18 14 04.5 +3.1**
TNS Taunus Mts 4.82 124 *ePn* **Pn 18 14 05.9 +3.7**
NRDL Niedersach Rie 4.84 93 *ePn* **Pn 18 14 06.2 +3.9**
MEZF Maizieres J'vi 4.91 157 *ePn* **Pn 18 14 06.0 +2.7**
baz=335
MEZF Maizieres J'vi 4.91 157 *ePg* **Pg 18 14 24.4 +0.9**
baz=335
MEZF *eSg* **Sg 18 15 27.8 +0.8**
comp=N,52nm,0.7s
EAB Aberfoyle 4.92 312 *eP* **Pn 18 14 06.1 +2.6**
EAB Aberfoyle 4.92 312 *eP* **Pn 18 14 06.1 +2.6**
EAB Aberfoyle 4.92 312 *eP* **Pn 18 14 06.1 +2.6**
BSEG Bad Segeberg 4.94 76 *ePn* **Pn 18 14 06.3 +2.6**
INVG Invergeldie, C 4.95 316 *eP* **Pn 18 14 05.9 +2.1**
INVG Invergeldie, C 4.95 316 *eP* **Pn 18 14 05.9 +2.1**
INVG Invergeldie, C 4.95 316 *eP* **Pn 18 14 05.9 +2.1**
GTTG Gottingen 5.01 104 *ePn* **Pn 18 14 08.8 +4.1**
GTTG *eSn* **Sn 18 15 05.1 +2.5**
PAGF Fort de Pagny 5.03 152 *ePn* **Pn 18 14 09.3 +3.3**
PAGF Fort de Pagny 5.03 152 *ePg* **Pg 18 14 27.3 +1.4**
PAGF *eSn* **Sn 18 15 04.4 +1.2**
PAGF *eSg* **Sg 18 15 31.3 +0.3**
comp=N,59nm,0.8s,baz=333
GRR Gorron 5.05 204 *ePn* **Pn 18 14 06.7 +1.4**
GRR Gorron 5.05 204 *ePg* **Pg 18 14 26.9 +0.6**
GRR *eSn* **Sn 18 15 01.9 -1.9**
comp=N,32nm,0.5s
CLZ Clausthal 5.15 100 *ePn* **Pn 18 14 10.6 +3.8**
CLZ *eSn* **Sn 18 15 05.3 -0.9**
SFTF Sexfontaines 5.18 158 *ePn* **Pn 18 14 10.4 +3.3**
baz=336
SFTF Sexfontaines 5.18 158 *ePg* **Pg 18 14 30.7 +1.9**
baz=334
SFTF *eSg* **Sg 18 15 36.9 +1.1**
comp=N,23nm,0.4s
ASSE Asse, Remlinge 5.26 97 *eSn* **Sn 18 15 11.7 +3.1**
LAWE Loch Awe, Argy 5.45 309 *eP* **Pn 18 14 13.0 +2.3**
LAWE Loch Awe, Argy 5.45 309 *eP* **Pn 18 14 13.0 +2.3**
LAWE Loch Awe, Argy 5.45 309 *eP* **Pn 18 14 13.0 +2.3**
CDF Champ du Feu 5.66 143 *ePn* **Pn 18 14 16.5 +2.8**
CDF Champ du Feu 5.66 143 *ePg* **Pg 18 14 38.9 +1.0**
CDF *eSn* **Sn 18 15 19.0 +0.2**
CDF *eSg* **Sg 18 15 51.5 +0.4**
comp=N,11nm,0.5s
SGMF Saint Gilles 5.67 214 *ePn* **Pn 18 14 15.7 +1.9**
SGMF *eSn* **Sn 18 15 16.3 -2.7**
SGMF *eSg* **Sg 18 15 50.1 -1.4**
comp=N,84nm,1.0s
HAU Haudompre 5.71 151 *ePn* **Pn 18 14 18.3 +4.0**
HAU Haudompre 5.71 151 *ePg* **Pg 18 14 40.0 +1.2**
HAU *eSn* **Sn 18 15 19.7 -0.2**
HAU *eSg* **Sg 18 15 53.2 +0.5**
comp=N,34nm,0.6s
HYF Humbligny 5.80 177 *ePn* **Pn 18 14 18.0 +2.4**
HYF *eSn* **Sn 18 15 21.6 -0.5**
HYF *eSg* **Sg 18 15 56.5 +0.9**
ROSF Rostrenen 5.86 218 *ePn* **Pn 18 14 18.9 +2.5**
ROSF *eSn* **Sn 18 15 19.6 -4.0**
ROSF *eSg* **Sg 18 15 56.1 -1.4**
comp=N,74nm,0.9s
LOR Lormes 5.89 169 *ePn* **Pn 18 14 18.2 +1.4**
baz=349
LOR Lormes 5.89 169 *ePn* **Pn 18 14 18.3 +1.4**
LOR Lormes 5.89 169 *ePg* **Pg 18 14 44.0 +1.7**
baz=348
LOR *eSn* **Sn 18 15 22.4 -2.0**
baz=345
LOR *eSg* **Sg 18 16 00.9 +2.4**
comp=N,24nm,0.6s,baz=349
SNART Snartemo 6.01 26 *eP* **Pn 18 14 19.3 +0.9**
SNART *eS* **Sn 18 15 23.9 -3.2**
SNART IAML 18 15 31.9
comp=Z,5.1nm,0.5s
HINF Hinteralfeld 6.03 149 *ePn* **Pn 18 14 22.0 +3.2**
HINF Hinteralfeld 6.03 149 *ePg* **Pg 18 14 45.9 +0.9**
HINF *eSn* **Sn 18 15 28.0 +0.1**
HINF *eSg* **Sg 18 16 02.4 -0.6**
comp=Z,11nm,0.4s
SSF Saint Saulge 6.06 171 *ePn* **Pn 18 14 21.0 +1.9**
SSF Saint Saulge 6.06 171 *ePg* **Pg 18 14 45.5 0.0**
SSF *eSn* **Sn 18 15 27.6 -0.9**
SSF *eSg* **Sg 18 16 03.1 -0.8**
comp=Z,20nm,0.5s
BFO Black Forest 6.13 138 *ePn* **Pn 18 14 23.1 +2.9**
QUIF Quistinic 6.17 216 *ePn* **Pn 18 14 22.2 +1.5**
QUIF Quistinic 6.17 216 *ePg* **Pg 18 14 47.1 -0.6**
QUIF *eSn* **Sn 18 15 28.0 -3.2**
QUIF *eSg* **Sg 18 16 06.1 -1.5**
comp=Z,48nm,0.8s
KPL Plockton 6.21 317 *eP* **Pn 18 14 23.6 +2.5**
KPL Plockton 6.21 317 *eP* **Pn 18 14 23.6 +2.5**
KPL Plockton 6.21 317 *eP* **Pn 18 14 23.7 +2.6**
AVF Avril sur Loir 6.32 173 *ePn* **Pn 18 14 25.2 +2.6**
AVF *eSn* **Sn 18 15 33.5 -1.3**
AVF *eSg* **Sg 18 16 11.8 -0.3**
comp=Z,13nm,0.6s
MOX Moxa 6.32 109 *ePn* **Pn 18 14 24.9 +2.1**
MOX *eSn* **Sn 18 15 35.7 +0.7**
HOMB Homborsund 6.33 32 Pn **Pn 18 14 24.4 +1.6**
HOMB Sn **Sn 18 15 33.5 -1.6**
HOMB Homborsund 6.33 32 *eP* **Pn 18 14 25.0 +2.2**
HOMB *eS* **Sn 18 15 32.3 -2.8**
HOMB IAML 18 15 36.7
comp=Z,6.2nm,0.5s
KMY Karmoy 6.41 14 *eP* **Pn 18 14 24.1 +0.3**
KMY *eS* **Sn 18 15 32.8 -4.1**
KMY IAML 18 15 38.2
comp=Z,15nm,0.9s
BIGH Upper Bighouse 6.44 330 *eP* **Pn 18 14 26.0 +1.7**
BIGH *eS* **Sn 18 15 35.0 -2.9**
SMF Signal de Mont 6.50 170 *ePn* **Pn 18 14 26.6 +1.3**
SMF *eSn* **Sn 18 15 38.3 -1.2**
SMF *eSg* **Sg 18 16 17.4 -0.8**
comp=Z,38nm,0.8s
BGF Bois d'Agland 6.52 176 *ePn* **Pn 18 14 27.3 +1.9**
BGF *eSn* **Sn 18 15 38.0 -1.8**
BGF *eSg* **Sg 18 16 17.3 -1.3**
comp=Z,53nm,0.5s
MFF Saint Martin d 6.63 194 *ePn* **Pn 18 14 28.0 +1.0**
MFF Saint Martin d 6.63 194 *ePg* **Pg 18 14 55.8 -0.7**
MFF *eSn* **Sn 18 15 39.6 -3.0**
MFF *eSg* **Sg 18 16 20.6 -1.7**
comp=Z,24nm,0.7s
PLN Plauen 6.70 109 *ePn* **Pn 18 14 31.9 +3.9**
TCF Toulx Ste Croi 6.77 180 *ePn* **Pn 18 14 30.7 +1.7**
TCF Toulx Ste Croi 6.77 180 *ePg* **Pg 18 14 59.7 +0.5**
TCF *eSn* **Sn 18 15 44.6 -1.5**
TCF *eSg* **Sg 18 16 25.2 -1.6**
comp=Z,15nm,0.6s
BLS5 Blasjo 6.81 19 *eP* **Pn 18 14 31.0 +1.5**
BLS5 *eS* **Sn 18 15 42.8 -4.2**
BLS5 IAML 18 16 00.9
comp=Z,4.6nm,0.6s
GUNZ Gunzen 6.86 109 *ePn* **Pn 18 14 34.4 +4.3**
GUNZ *eSn* **Sn 18 15 48.8 +0.6**
WERN Wernitzgruen 6.92 110 *ePn* Pn 18 14 36.0 +5.0
CABF La Chapelle 6.92 157 *ePn* **Pn 18 14 32.8 +1.7**
CABF La Chapelle 6.92 157 *ePg* **Pg 18 15 02.7 +0.6**
CABF *eSn* **Sn 18 15 48.9 -1.0**
CABF *eSg* **Sg 18 16 30.9 -0.8**
comp=Z,60nm,1.2s
ODD1 Odda 7.30 18 *eP* **Pn 18 14 38.0 +1.9**
ODD1 *eS* **Sn 18 15 53.6 -5.4**
ODD1 IAML 18 16 02.3
comp=Z,6.9nm,0.4s
LRW Lerwick 7.34 347 *eP* **Pn 18 14 37.1 +0.5**
UBR Ueberruh 7.39 134 *ePn* **Pn 18 14 42.0 +4.6**
BER Bergen 7.55 12 *eP* **Pn 18 14 39.9 +0.3**
BER *eS* **Sn 18 15 59.1 -5.9**
BER IAML 18 16 03.1
comp=Z,7.0nm,0.6s
BRG Berggiesshubel 7.58 102 PN Pn 18 14 44.9 +4.8
BRG *e* 18 16 18.0
BRG *e* 18 17 20.8
DAVA Damuels 7.59 136 *ePn* **Pn 18 14 44.7 +4.4**
comp=Z,3.5nm,0.4s
ASK Askoy 7.63 11 *eP* **Pn 18 14 40.8 +0.2**
ASK *eS* **Sn 18 16 00.1 -6.8**
ASK IAML 18 16 13.5
comp=Z,18nm,1.1s
RJF Les Rejaudoux 7.77 183 *ePn* **Pn 18 14 45.0 +2.4**
RJF *eSn* **Sn 18 16 05.8 -4.8**
RJF *eSg* **Sg 18 16 56.3 -2.4**
comp=Z,29nm,0.8s
STRU Stroemstad 7.82 36 *eP* **Pn 18 14 44.6 +1.4**
DAVOX Davos/Dischmat 8.00 139 Pn **Pn 18 14 50.2 +4.2**
comp=Z,0.8nm,0.3s,baz=195,slow=6.9,SNR=8.3
DAVOX Sn **Sn 18 16 16.0 -0.6**
comp=Z,0.3nm,0.3s,baz=0.0,slow=20,SNR=2.2
MOTA Moosalm 8.08 131 *ePn* **Pn 18 14 51.3 +4.3**
comp=Z,1.5nm,0.4s
LPL La Plagne 8.11 157 *ePn* **Pn 18 14 50.0 +2.6**
LPG La Plagne 8.13 157 *ePn* **Pn 18 14 50.5 +2.7**
LPG *eSn* **Sn 18 16 18.5 -1.3**
comp=Z,6.8nm,0.7s
CAF Calviac 8.14 181 *ePn* **Pn 18 14 48.1 +0.4**
CAF *eSn* **Sn 18 16 15.4 -4.3**
CAF *eSg* **Sg 18 17 09.4 -1.1**
comp=Z,15nm,0.6s
SUE Sulen 8.15 9 *eP* **Pn 18 14 47.5 -0.1**
SUE *eS* **Sn 18 16 12.7 -7.0**
SUE IAML 18 16 30.2
comp=Z,5.0nm,0.6s
FETA Feichten 8.16 134 *ePn* **Pn 18 14 52.8 +4.6**
comp=Z,1.8nm,0.6s
KHC Kasperske Hory 8.18 114 *ePN* Pn 18 14 53.8 +5.6
KHC *eSN* **Sn 18 16 19.8 -0.8**
LFF La Frestale 8.18 187 *ePn* **Pn 18 14 49.1 +0.9**
LFF *eSn* **Sn 18 16 16.9 -3.7**
LFF *eSg* **Sg 18 17 09.3 -2.5**
comp=Z,36nm,0.7s
SQTA Sankt Quirin 8.22 132 *ePn* **Pn 18 14 52.3 +3.3**
comp=Z,2.0nm,0.5s
PRU Pruhonice 8.29 107 *ePN* **Pn 18 14 53.9 +4.1**
WATA Walderalm 8.31 130 *ePn* Pn 18 14 55.1 +5.0
comp=Z,1.2nm,0.3s
SKAR Skarslia 8.34 21 *eP* **Pn 18 14 51.5 +1.0**
SKAR *eS* **Sn 18 16 17.1 -7.6**
SKAR IAML 18 16 30.4
comp=Z,2.3nm,0.6s
VIVF Saint-Julien-l 8.37 168 *ePn* **Pn 18 14 53.5 +2.7**
VIVF *eSn* **Sn 18 16 22.6 -2.7**
comp=Z,5.4nm,0.4s
WTTA Wattenberg 8.39 130 *i* Pn Pn 18 14 57.1 +5.9
comp=Z,0.8nm,0.2s
GEC2 GERESS Array S 8.40 115 *ePn* Pn 18 14 57.1 +5.8
GERES GERESS Array B 8.40 115 Pn Pn 18 14 56.9 +5.5
comp=Z,0.9nm,0.3s,baz=300,slow=14,SNR=22
GERES Sn **Sn 18 16 29.4 +3.1**
comp=Z,0.3nm,0.3s,baz=307,slow=26,SNR=2.2
HYA Hoyanger 8.42 13 *eP* **Pn 18 14 52.0 +0.6**
HYA IAML 18 16 17.4
comp=Z,7.0nm,0.9s
ORIF Oris-en-Rattie 8.50 162 *ePn* **Pn 18 14 54.5 +1.8**
ORIF *eSn* **Sn 18 16 26.3 -2.3**
comp=Z,3.4nm,0.4s
FOO Floro 8.71 9 *eP* **Pn 18 14 54.9 -0.4**
FOO *eS* **Sn 18 16 25.1 -8.3**
FOO IAML 18 16 39.1
comp=Z,6.0nm,0.8s
LASF Ste Croix 9.05 172 *ePn* **Pn 18 15 02.7 +2.5**
LASF *eSn* **Sn 18 16 39.2 -3.0**
comp=Z,2.3nm,0.3s
ABTA Abfaltersbach 9.17 129 *ePn* Pn 18 15 10.1 +8.2
comp=Z,1.7nm,0.5s
NRA0 NORESS Array S 9.24 30 Pn **Pn 18 15 03.2 +0.6**
baz=227,slow=12
NRA0 Sn **Sn 18 16 42.1 -4.4**
baz=221,slow=18
NRA0 NORESS Array S 9.24 30 Pn **Pn 18 15 03.2 +0.6**
baz=227,slow=12

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NRA0				Sn	Sn	18 16 42.1	-4.4
	baz=221,slow=18						
MOA	Molln	9.30	119	*i* Pn	Pn	18 15 10.1	+6.5
	comp=Z,1.3nm,0.3s						
KBA	Koelnbreinsper	9.34	125	*i* Pn	Pn	18 15 10.3	+6.1
	comp=Z,3.9nm,0.4s						
NB2	NORSAR Subarra	9.39	28	Pn	Pn	18 15 05.9	+1.1
	baz=216,slow=16						
NB2	NORSAR Subarra	9.39	28	Pn	Pn	18 15 05.9	+1.1
	baz=216,slow=16						
NOA	NORSAR Array B	9.39	28	Pn	Pn	18 15 06.1	+1.4
	comp=Z,0.0nm,0.3s,baz=262,slow=16,SNR=3.8						
NOA				Sn	Sn	18 16 42.1	-8.2
	comp=Z,0.0nm,0.3s,baz=235,slow=17,SNR=2.1						
AKN	Aaknes	9.50	14	*e*P	Pn	18 15 06.6	+0.2
HFS	Hagfors	9.51	37	Pn	Pn	18 15 08.0	+1.7
	comp=Z,0.3nm,0.3s,baz=224,slow=12,SNR=10						
HFS				Sn	Sn	18 16 46.4	-6.7
	comp=Z,0.2nm,0.3s,baz=220,slow=20,SNR=1.8						
MTLF	Montolieu	9.72	180	*e*Pn	Pn	18 15 10.0	+0.7
FRF	La Foret Royal	9.95	161	*e*Pn	Pn	18 15 15.2	+2.7
FRF				*e*Sn	Sn	18 17 01.2	-3.0
	comp=Z,1.8nm,0.4s						
EPF	Esparros	10.11	188	*e*Pn	Pn	18 15 15.2	+0.5
EPF				*e*Sn	Sn	18 17 04.3	-3.7
	comp=Z,4.6nm,0.4s						
CONA	Conrad Observa	10.11	115	*e*Pn	Pn	18 15 22.9	+8.2
	comp=Z,0.6nm,0.4s						
LMR	La Mourre	10.14	162	*e*Pn	Pn	18 15 17.6	+2.5
SJPF	Ste Jean	10.20	194	*e*Pn	Pn	18 15 16.8	+0.8
SJPF				*e*Sn	Sn	18 17 03.5	-6.9
	comp=Z,6.0nm,0.6s						
ETSF	Etsaut	10.33	191	*e*Pn	Pn	18 15 17.3	-0.4
ETSF				*e*Sn	Sn	18 17 08.4	-5.1
	comp=Z,2.3nm,0.3s						
ESDC	Sonseca Array	14.03	200	Pn	Pn	18 16 08.0	-0.4
	comp=Z,0.2nm,0.3s,baz=20,slow=13,SNR=9.9						
FIA0	FINESS Array S	15.34	47	P	Pn	18 16 27.6	+1.8
	baz=249,slow=12						
FIA0	FINESS Array S	15.34	47	P	Pn	18 16 27.6	+1.8
	baz=249,slow=12						
FINES	FINESS Array B	15.34	47	Pn	Pn	18 16 26.3	+0.5
	comp=Z,0.3nm,0.3s,baz=252,slow=9.8,SNR=12						
FINES				Sn	Sn	18 19 07.6	-7.9
	comp=Z,0.1nm,0.3s,baz=247,slow=21,SNR=1.6						
AKASG	Malin Array Be	16.82	87	Pn	Pn	18 16 43.6	-1.3
	comp=Z,0.4nm,0.3s,baz=290,slow=13,SNR=2.7						
ARA0	ARCESS Array S	19.73	24	P	Pn	18 17 21.2	+0.7
	baz=219,slow=12						
ARA0	ARCESS Array S	19.73	24	P	Pn	18 17 21.2	+0.7
	baz=219,slow=12						
ARCES	ARCESS Array B	19.73	24	Pn	Pn	18 17 20.4	-0.1
	comp=Z,0.2nm,0.3s,baz=221,slow=11,SNR=8.0						
IDI	Anoyia	23.93	129	P	P	18 18 04.9	+1.3
	comp=Z,2.7nm,0.7s,baz=340,slow=15,SNR=1.6						
ZALV	Zalesovo Beam	46.46	54	P	P	18 21 21.4	+5.2
	comp=Z,0.4nm,0.3s,baz=294,slow=9.0,SNR=2.1						
MKAR	Makanchi Array	49.42	63	P	P	18 21 43.1	+3.9
	comp=Z,0.4nm,0.6s,baz=289,slow=6.2,SNR=5.0						

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*IDC **02** 18:32:24.1±1.6, 2°.11N×96°.04E, h0km, mb3.5/6, mb1 3.5/8, mb1mx3.4/44, mbtmp3.4/8, ML3.3/2, Error ellipse: s-maj=36.5km s-min=19.5km az=41.0*

*DJA **02** 18:32:26.3±0.9, 2°N±4°×9°6E±°, h11km±4km, M4.0/7, mb4.2/2, MLv3.9/7*

ISC 02 18:32:27.7±1.2**, 2°.10N**±0°.06×**96°.14E**±0°.10**, h27km, n21, σ1.51**/20**, mb3.5**/6**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.36	31	P	Pb	18 32 33.4	-2.5
GSI	Gunungsitoli	1.64	119	P	Pn	18 32 55.5	+0.7
GSI				S	Sn	18 33 14.3	-0.7
KCSI	Kotacane, Aceh	2.16	49	P	Pn	18 33 01.5	-0.5
KCSI				S	Sn	18 33 28.9	+1.0
MLSI	Meulaboh, Aceh	2.17	7	P	Pn	18 33 00.4	-1.7
MLSI				S	Sn	18 33 29.2	+1.0
PSI	Prapat	2.87	76	Pn	Pn	18 33 11.5	-0.3
	3.1nm,0.3s,baz=168,slow=0.7,SNR=5.4						
PSI				Pg	Pb	18 33 18.4	+0.1
	2.1nm,0.3s,baz=352,slow=0.6,SNR=24						
PBSI	Pulau Batu	3.02	135	P	Pn	18 33 14.7	+0.8
LHMI	Lhok Sumawe	3.21	15	P	Pn	18 33 16.1	-0.4
MNSI	Mandailing Nat	3.67	111	P	Pb	18 33 27.9	-4.1
CMAR	Chiang Mai Arr	16.49	9	Pn	Pn	18 36 17.9	+0.5
	0.1nm,0.3s,baz=198,slow=11,SNR=4.3						
CMAR				Sn	Sn	18 39 22.0	+2.3
	0.1nm,0.3s,baz=292,slow=24,SNR=2.3						
H08S2	Diego Garcia H	25.50	247	T	T	19 04 35.2	
	baz=68,slow=75,SNR=26						
H08S3	Diego Garcia H	25.50	247	T	T	19 04 35.3	
	baz=68,slow=75,SNR=27						
H08S1	Diego Carcia H	25.51	247	T	T	19 04 36.5	
	baz=68,slow=75,SNR=27						
H01W3	Cape Leeuwin H	40.48	157	T	T	19 23 09.5	
	baz=333,slow=76,SNR=3.6						
H01W2	Cape Leeuwin H	40.49	157	T	T	19 23 11.5	
	baz=333,slow=76,SNR=4.2						
H01W1	Cape Leeuwin H	40.49	157	T	T	19 23 21.1	
	baz=333,slow=76,SNR=4.1						
WRA	Warramunga Arr	43.41	122	P	P	18 40 29.9	+1.5
	0.4nm,0.8s,baz=300,slow=8.9,SNR=2.6						
ASAR	Alice Springs	44.78	127	P	P	18 40 40.4	+0.9
	0.2nm,0.8s,baz=305,slow=7.4,SNR=1.3						
MKAR	Makanchi Array	46.13	347	P	P	18 40 49.9	+0.2
	0.7nm,0.6s,baz=158,slow=8.2,SNR=11						
KURBB	Kurchatov Arra	50.60	346	P	P	18 41 24.5	+0.4
	0.2nm,0.5s,baz=166,slow=6.4,SNR=4.7						
ZALV	Zalesovo Beam	52.52	352	P	P	18 41 38.4	-0.1
	1.2nm,0.3s,baz=177,slow=6.7,SNR=2.0						
BVAR	Borovoye Array	55.06	341	P	P	18 41 57.2	+0.1
	0.4nm,0.6s,baz=119,slow=9.3,SNR=4.6						

KRSC 02 18:33:51.9±1.7**, 50°.84N**×**161°.68E, h49km**±45km**, ML3.7, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	2.46	295	*e*P	Pn	18 34 32.2	+2.7
KDTR				*e*S	Sn	18 35 01.7	+3.4
SPN	Mys Shipunski	2.48	336	*e*P	Pn	18 34 31.4	+1.6
SPN				*e*S	Sn	18 34 59.7	+0.9
RUS	Russkaya	2.54	310	*e*P	Pn	18 34 33.2	+2.7
RUS				*e*S	Sn	18 35 03.5	+3.3
MTVR	Mutnovka	2.73	308	*e*P	Pn	18 34 36.5	+3.2
MTVR				*e*S	Sn	18 35 08.9	+3.8
NLC	Nalytchevo	2.75	329	*e*S	Sn	18 35 08.5	+3.3
ASAK	Asacha	2.82	305	*e*P	Pn	18 34 37.8	+3.3
ASAK				*e*S	Sn	18 35 11.0	+3.8
GRL	Gorelyy	2.83	309	*e*P	Pn	18 34 38.7	+4.1
DALK	Dalny	2.85	322	*e*P	Pn	18 34 38.1	+3.4
DALK				*e*S	Sn	18 35 11.4	+3.7
PET	Petropavlovsk	2.88	321	*e*P	Pn	18 34 38.6	+3.4
PET				*e*S	Sn	18 35 12.0	+3.4
UGLR	Uglovaya	2.96	324	*e*P	Pn	18 34 39.8	+3.4
KRMR	Karymshinskiy	2.97	314	*e*P	Pn	18 34 40.3	+3.9
KRMR				*e*S	Sn	18 35 15.4	+4.6
SDLR	Sedlovina	2.99	326	*e*P	Pn	18 34 40.4	+3.5
SDLR				S	Sn	18 35 15.3	+3.8
SMAR	Somma	3.01	325	*e*P	Pn	18 34 41.2	+4.0
AVH	Avacha	3.03	324	*e*P	Pn	18 34 41.4	+4.0
AVH				*e*S	Sn	18 35 18.7	+6.2
KRER	Koryakskii	3.06	325	*e*P	Pn	18 34 42.2	+4.3
KOK	Koryaka	3.09	324	*e*P	Pn	18 34 42.4	+4.2
KRX	Arik	3.14	325	*e*P	Pn	18 34 42.1	+3.2
KRX				*e*S	Sn	18 35 18.7	+3.5
MIPR	Malaya Ipel'ka	3.39	297	P	Pn	18 34 46.2	+3.9
APC	Apacha	3.50	308	P	Pn	18 34 48.0	+4.4
SKR	Severo-Kuril's	3.54	270	*e*P	Pn	18 34 47.3	+3.1
ALID	Alaid	3.89	273	P	Pn	18 34 52.9	+3.8
KZV	Kizimen	4.36	349	P	Pn	18 34 58.7	+3.0
KZV				S	Sn	18 35 48.2	+3.0
TUMR	Tumrok	4.55	349	P	Pn	18 35 02.6	+4.4
KMNR	Kamenistaya	5.00	351	*e*P	Pn	18 35 08.8	+4.4
KMNR				*e*S	Sn	18 36 06.2	+5.3
ZLN	Zelenaya	5.21	355	*e*P	Pn	18 35 10.5	+3.2
LGNR	Loginova	5.29	354	P	Pn	18 35 11.5	+3.0
SRDR	Sredinnyy	5.61	349	P	Pn	18 35 16.5	+3.8

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*IDC **02** 18:40:44.4±1.6, 47°.82N×155°.06E, h0km, mb3.3/2, mb1 3.6/4, mb1mx3.2/50, mbtmp3.5/4, ML3.0/2, Error ellipse: s-maj=64.2km s-min=24.4km az=121.0*

*KRSC **02** 18:40:45.9±3.0, 48°.03N×155°.49E, h22km±33km, ML3.8*

ISC 02 18:40:48.1±1.1**, 47°.9N**±0°.1×**155°.1E**±0°.2**, h27km, n25, σ1.75**/32**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.83	13	*e*P	Pn	18 41 30.7	-0.8
SKR				*e*S	Sn	18 42 02.4	-2.3
ALID	Alaid	2.95	6	*e*P	Pn	18 41 32.1	-1.3
PAU	Pauzhetka	3.71	17	*e*P	Pn	18 41 44.4	+0.8
PAU				*e*S	Sn	18 42 26.1	-0.3
KDTR	Khodutka, Kamc	4.33	25	*e*P	Pn	18 41 51.8	-0.4
KDTR				*e*S	Sn	18 42 39.2	-2.5
MIPR	Malaya Ipel'ka	4.48	13	*e*P	Pn	18 41 55.0	+0.8
ASAK	Asacha	4.81	21	*e*P	Pn	18 41 59.7	+0.9
ASAK				*e*S	Sn	18 42 53.5	0.0
MTVR	Mutnovka	4.97	22	*e*P	Pn	18 42 01.8	+0.8
MTVR				*e*S	Sn	18 42 57.0	-0.6
GRL	Gorelyy	5.00	21	*e*P	Pn	18 42 02.5	+1.0
GRL				*e*S	Sn	18 42 59.1	+0.6
RUS	Russkaya	5.01	25	*e*P	Pn	18 42 01.2	-0.3
RUS				*e*S	Sn	18 42 56.0	-2.4
KRMR	Karymshinskiy	5.27	21	*e*P	Pn	18 42 06.7	+1.6
KRMR				*e*S	Sn	18 43 04.9	0.0
PETK	Petropavlovsk-	5.44	17	Pn	Pn	18 42 08.8	+1.4
	0.4nm,0.3s,baz=174,slow=12,SNR=50						
PETK				Sn	Sn	18 43 15.3	+6.2
	baz=90,slow=18,SNR=1.5						
DALK	Dalny	5.61	23	*e*P	Pn	18 42 10.1	+0.4
DALK				*e*S	Sn	18 43 12.1	-1.1
UGLR	Uglovaya	5.79	23	*e*P	Pn	18 42 13.0	+0.7
AVH	Avacha	5.82	22	*e*P	Pn	18 42 15.4	+2.7
SMAR	Somma	5.83	22	*e*P	Pn	18 42 14.2	+1.2
SDLR	Sedlovina	5.87	23	*e*P	Pn	18 42 13.4	0.0
KRX	Arik	5.88	21	*e*P	Pn	18 42 07.1	-6.5
SPN	Mys Shipunski	6.05	29	*e*P	Pn	18 42 15.8	+0.1
SPN				*e*S	Sn	18 43 21.8	-2.2
ASAJ	Asahikawa	9.49	251	Pn	Pn	18 43 01.4	-1.5
	0.4nm,0.3s,baz=92,slow=15,SNR=5.3						
MJAR	Matsushiro Arr	16.86	234	Pn	P	18 44 45.6	+1.5
	0.0nm,0.3s,baz=41,slow=13,SNR=1.4						
H11S1	WAKE ISLAND Hy	30.84	158	T	T	19 20 15.0	
	baz=345,slow=76,SNR=9.1						
H11S3	WAKE ISLAND Hy	30.85	158	T	T	19 19 58.7	
	baz=345,slow=76,SNR=29						
H11S2	WAKE ISLAND Hy	30.86	158	T	T	19 20 06.5	
	baz=345,slow=76,SNR=22						
YKA	Yellowknife Ar	49.17	38	P	P	18 49 33.7	+0.5
	0.2nm,0.6s,baz=297,slow=6.7,SNR=3.1						
ASAR	Alice Springs	73.77	200	P	P	18 52 19.9	+0.1
	0.4nm,0.8s,baz=9.4,slow=5.5,SNR=4.9						

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*NEIC **02** 19:05:14.7±2.8, 43°.78N±0°.05×105°.37W±0°.06, h0km±1km, ML3.5/67, Error ellipse: s-maj=8.5km s-min=7.1km az=133.0*

*IDC **02** 19:05:15.3±2.0, 43°.92N×105°.61W, h0km, mb3.9/2, mb1 3.7/8, mb1mx3.4/61, mbtmp3.5/8, ML2.9/4, Error ellipse: s-maj=60.3km s-min=9.7km az=144.0*

ISC 02 19:05:13.6±0.7**, 43°.74N**±0°.06×**105°.48W**±0°.05**, h0km, n89, σ2.25**/89**, Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	1.11	69	Pg	Pg	19 05 34.0	-1.0
K22A	Casper	1.33	215		Pb	19 05 40.7	+1.2
K22A				IAML		19 06 06.6	
	comp=N,465nm,0.6s						
RWWY	Rawlins	2.41	212		Pb	19 05 58.0	-0.1
RWWY				IAML		19 06 33.7	
	comp=N,238nm,1.1s						
RWWY				IAML		19 06 35.5	
	comp=N,205nm,0.7s						
PHWY	Pilot Hill	2.44	180		Pn	19 05 57.1	+2.1
LAO	LASA Array	3.00	350		Pn	19 06 03.7	+1.2
LAO				IAML		19 06 49.6	
	comp=N,280nm,0.8s						
RLMT	Red Lodge	3.04	298		Pn	19 06 05.8	+2.6
RLMT				IAML		19 07 04.1	
	comp=N,81nm,0.8s						
RLMT				IAML		19 07 04.6	
	comp=N,95nm,1.4s						
PDAR	Pinedale Array	3.13	253	Pn	Pn	19 06 08.3	+3.9
	comp=N,4.4nm,0.3s,baz=70,slow=17,SNR=21						
PDAR				Sn	Sb	19 06 47.9	-1.2
	comp=N,2.5nm,0.3s,baz=83,slow=32,SNR=1.5						
BW06	Boulder Array	3.13	253		Pn	19 06 08.5	+4.1
BW06				IAML		19 06 56.2	
	comp=N,64nm,0.4s						
YNE	Yellowstone No	3.48	293		Pn	19 06 11.6	+2.3
YMP	Mirror Lake Pl	3.50	288		Pn	19 06 12.2	+2.6
LKWY	Lake	3.63	285		Pn	19 06 13.1	+1.7
LKWY				IAML		19 06 41.8	
	comp=N,64nm,0.6s						
H17A	Grant Village	3.73	282		Pn	19 06 16.5	+3.9
H17A				IAML		19 07 22.3	
	comp=E,42nm,1.9s						
FLWY	Flagg Ranch	3.79	277		Pn	19 06 15.9	+2.5
FLWY				IAML		19 07 32.1	
	comp=E,90nm,1.5s						
OGNE	Ogallala	3.79	136		Pn	19 06 14.9	+1.6
SNOW	Snow King Moun	3.84	268		Pn	19 06 17.1	+2.9
SNOW				IAML		19 07 36.7	
	comp=E,72nm,1.9s						
SNOW				IAML		19 07 41.3	
	comp=E,73nm,1.0s						
YNR	Norris Junctio	3.86	286		Pn	19 06 17.2	+2.8
YPP	Pitchstone Pla	3.88	280		Pn	19 06 17.5	+2.8
REDW	Red Top Meadow	3.92	266		Pn	19 06 19.9	+4.6
REDW				IAML		19 07 37.0	
	comp=E,74nm,1.6s						
REDW				IAML		19 07 54.5	
	comp=E,82nm,1.6s						
ISCO	Idaho Springs	3.94	181		Pn	19 06 18.8	+3.2
IMW	Indian Meadow	3.95	274		Pn	19 06 19.9	+4.1
IMW				IAML		19 06 45.5	
	comp=E,51nm,0.6s						
TPAW	Teton Pass	3.98	268		Pn	19 06 20.2	+4.1
TPAW				IAML		19 07 42.5	
	comp=E,34nm,1.2s						
TPAW				IAML		19 07 49.7	
	comp=E,53nm,1.1s						
YHH	Holmes Hill	4.00	287		Pn	19 06 21.2	+4.8
FXWY	Fox Creek	4.02	270		Pn	19 06 21.3	+4.6
O20A	White River Ci	4.15	211		Pn	19 06 20.2	+1.8
O20A				IAML		19 07 32.6	
	comp=E,61nm,0.9s						
O20A				IAML		19 07 45.9	
	comp=N,81nm,1.4s						
AHID	Auburn Hatcher	4.22	259		Pn	19 06 20.4	+1.0
AHID				IAML		19 07 37.6	
	comp=N,78nm,1.8s						
AHID				IAML		19 07 45.0	
	comp=E,44nm,1.2s						
YHB	Horse Butte	4.23	286	Pn	Pn	19 06 20.5	+1.0
YHL	Hebgen Lake	4.24	287		Pn	19 06 22.0	+2.2
RDMU	Red Mountain	4.39	225		Pn	19 06 24.5	+2.8
SMCO	Snowmass	4.69	194		Pn	19 06 29.9	+3.9
SMCO				IAML		19 07 54.3	
	comp=E,38nm,1.2s						
SMCO				IAML		19 07 57.1	
	comp=E,22nm,1.6s						
SUSD	Miller	4.75	79	Pn	Pn	19 06 28.8	+2.3
DGMT	Dagmar	4.82	10		Pn	19 06 29.7	+2.3
HWUT	Hardware Ranch	4.96	247		Pn	19 06 32.9	+3.3
HWUT				IAML		19 08 04.9	
	comp=E,35nm,1.4s						
HWUT				IAML		19 08 07.7	
	comp=E,46nm,0.9s						
K31A	O'Neill	5.04	100	Pn	Pn	19 06 33.0	+2.4
TCUT	Toone Canyon	5.11	241	Pn	Pn	19 06 33.3	+1.7
KSCO	Kaye Shedlock'	5.19	155		Pn	19 06 33.6	+0.9
LRM	Limekiln Ridge	5.38	295		Pn	19 06 36.3	+1.0
MCMT	McKenzie Canyo	5.40	284		Pn	19 06 37.7	+2.1
SPUT	South Promonto	5.69	247		Pn	19 06 41.4	+1.9
PV22	Blue Mesa, Par	5.77	207		Pn	19 06 41.6	+1.0
P17A	Butcher Ranch,	5.80	225		Pn	19 06 44.4	+3.3
PV21	Cone Mtn., Par	5.80	208		Pn	19 06 41.0	-0.3
PV07	Paradox Valley	5.81	205		Pn	19 06 41.1	-0.2
MDND	Maddock	5.81	43		Pn	19 06 39.2	-1.9
PV15	Paradox Valley	5.85	204		Pn	19 06 41.6	-0.2
BGNE	Belgrade	5.89	111		Pn	19 06 42.5	+0.3
PV09	Paradox Valley	5.92	209		Pn	19 06 43.1	+0.3
PV23	Carpenter Ridg	5.92	208		Pn	19 06 44.5	+1.7
PV04	Paradox Valley	5.93	207		Pn	19 06 42.6	-0.3
PV12	Saucer Basin,	5.97	206		Pn	19 06 42.7	-0.8
SRU	San Rafael Swe	5.98	221		Pn	19 06 43.6	+0.1
SDCO	Great Sand Dun	5.99	180		Pn	19 06 42.7	-1.0
PV14	Lion Creek, Pa	5.99	208		Pn	19 06 42.8	-0.9
PV20	West Nyswonger	6.00	207		Pn	19 06 43.4	-0.5
PV11	David Mesa, Pa	6.01	206		Pn	19 06 43.8	-0.1
PV16	Nyswonger Mesa	6.01	207		Pn	19 06 44.6	+0.6
PV19	Morning Glory	6.04	207		Pn	19 06 46.1	+1.8
PV03	Paradox Valley	6.04	206		Pn	19 06 45.1	+0.7
PV02	Paradox Valley	6.05	205		Pn	19 06 45.9	+1.3
PV17	East Wray Mesa	6.05	207		Pn	19 06 47.5	+2.9
PV01	Paradox Valley	6.07	204		Pn	19 06 47.5	+2.7
PV18	Skein Mesa, Pa	6.07	206		Pn	19 06 46.6	+1.8
PV13	Radium Mtn., P	6.12	205		Pn	19 06 47.5	+2.0
TMUT	Trail Mountain	6.18	226		Pn	19 06 47.6	+1.2
PV05	Paradox Valley	6.28	207		Pn	19 06 48.7	+1.0
ECSD	EROS Data Cent	6.43	87		Pn	19 06 50.2	+0.7
Q16A	Castle Valley	6.44	224		Pn	19 06 52.0	+2.0
DUG	Dugway, Tooele	6.51	240		Pn	19 06 52.8	+2.0
CBKS	Cedar Bluff	6.55	137		Pn	19 06 52.7	+1.4
MSO	Missoula	6.72	300	Pn	Pn	19 06 54.6	+1.0
MSU	Marysvale	7.26	226		Pn	19 07 03.2	+2.0
R32A	Long Quarter,	7.37	134	Pn	Pn	19 07 04.0	+1.5
MTPU	Mount Pierson	7.62	224		Pn	19 07 08.4	+2.1
ELK	Elko	7.83	251	Pn	Pn	19 07 14.2	+5.2
	comp=E,0.3nm,0.3s,baz=63,slow=6.8,SNR=3.8						
ELK	Elko	7.83	251		Pn	19 07 09.5	+0.5
WALA	Waterton Lakes	7.89	315		Pn	19 07 10.6	+0.9
AGMN	Agassiz Nation	8.10	52	Pn	Pn	19 07 12.8	+0.4
KSU1	Kansas State U	8.12	122		Pn	19 07 15.4	+2.7
PSUT	Pine Spring	8.18	233		Pn	19 07 16.1	+2.3
CCUT	Cedar City	8.60	227		Pn	19 07 19.9	+0.3
ULM	Lac du Bonnet	9.24	42	Pn	Pn	19 07 26.6	-1.5
	comp=E,0.9nm,0.3s,baz=240,slow=11,SNR=5.3						
ULM				Pg		19 07 59.7	
	comp=E,0.6nm,0.3s,baz=228,slow=14,SNR=8.3						
ULM				Lg	Lg	19 09 58.4	
	comp=E,0.3nm,0.3s,baz=320,slow=21,SNR=3.4						
ULM	Lac du Bonnet	9.24	42		Pn	19 07 26.4	-1.7
WUAZ	Wupatki	9.38	211		Pn	19 07 29.9	-0.3
B35A	Bob, Littlefor	9.39	56		Pn	19 07 28.8	-1.3
NVAR	Mina Array Bea	11.03	246	Pn	Pn	19 07 57.7	+4.9
	comp=E,0.1nm,0.3s,baz=52,slow=12,SNR=4.5						
NVAR				Lg	Lg	19 10 58.6	
	comp=E,0.1nm,0.3s,baz=49,slow=18,SNR=1.7						
FFC	Flin Flon	11.23	10		Pn	19 07 53.9	-1.4
YBH	Yreka Blue Hor	12.83	267	Pn	Pn	19 08 21.6	+4.4
	baz=180,slow=20,SNR=1.8						
YBH				Sn	Sn	19 10 35.8	-4.9
	comp=E,0.1nm,0.3s,baz=139,slow=20,SNR=1.7						
YKA	Yellowknife Ar	19.53	347	P	P	19 09 42.8	+0.4
	comp=E,0.1nm,0.3s,baz=156,slow=12,SNR=5.8						
ZALV	Zalesovo Beam	82.29	354	P	P	19 17 37.0	+0.3
	comp=E,0.7nm,0.6s,baz=22,slow=1.6,SNR=3.8						
MKAR	Makanchi Array	89.59	355	P	P	19 18 13.6	+0.6
	comp=E,0.4nm,0.7s,baz=2.8,slow=3.6,SNR=6.0						

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*GCG **02** 19:08:21.6±0.3, 17°.57N×94°.32W, h216km±38km, MD5.1*

*NEIC **02** 19:08:23.0±2.0, 17°.56N±0°.07×94°.47W±0°.07, h148km±4km, mb5.1/413, Md5.0/16(MEX), Error ellipse: s-maj=11.8km s-min=7.7km az=217.0*

*IDC **02** 19:08:23.6±0.4, 17°.53N×94°.34W, h146km±3km, mb4.3/32, mb1 4.5/36, mb1mx4.4/47, mbtmp4.8/36, MS3.4/14, Ms1 3.4/14, ms1mx3.2/38, Error ellipse: s-maj=13.2km s-min=7.0km az=61.0*

*GCMT **02** 19:08:24.0±0.3, 17°.61N±0°.01×94°.51W±0°.02, h148km±1km, MW5.1/129, Moment Tensor Solution. s62,c77; s129,c190; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.72±.10; $M_{\theta\theta}$-1.06±.14; $M_{\phi\phi}$3.78±.14; $M_{r\theta}$2.37±.08; $M_{\theta\phi}$-3.43±.13; $M_{\phi r}$0.26±.09; Best double couple: $M_0$5.34500×10^{16} NP1:ϕ_s189.00000°, δ55.00000°, λ-31.00000°. NP2:ϕ_s298.00000°, δ65.00000°, λ-141.00000°. Principal axes: T 5.6530, Plg6.0000°, Azm61.0000°; N -0.6170, Plg45.0000°, Azm325.0000°; P -5.0360, Plg45.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MEX **02** 19:08:26.1±0.9, 17°.34N×94°.72W, h130km, MD5.0*

*BGR **02** 19:08:27.8±0.0, 17°.47N×93°.72W, h150km, mb5.1*

*UCR **02** 19:08:45.9±1.6, 16°.67N×92°.79W, h148km, ML4.3, mb5.1(NEIC)*

*SNET **02** 19:08:59.1±1.4, 16°.36N×91°.68W, h1km±8km, ML4.6*

ISC 02 19:08:22.7±0.3**, 17°.51N**±0°.04×**94°.57W**±0°.03**, h149km**±2km**, h149km:pP-P, n1066, σ1.26**/1142**, mb5.0**/240**, 3C-4D, Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.51	216	P	Pn	19 08 43.9	-0.1
	2μm,0.3s,baz=165,slow=1.9						
CMIG				S	Sn	19 08 58.5	-1.6
	3μm,0.3s,baz=221,slow=19,SNR=27						
CMIG	Matias Romero	0.51	216		Pn	19 08 43.7	-0.3
CMIG					Sn	19 08 56.0	-4.1
CMIG	Matias Romero	0.51	216	*i* P	Pn	19 08 43.7	-0.3
CMIG				*e*S	Sn	19 08 56.0	-4.1
TUIG	Tuzandepetl	0.54	15		Pn	19 08 45.1	+1.0
TUIG					Sn	19 09 00.8	+0.4
TUIG	Tuzandepetl	0.54	15	*i* P	Pn	19 08 45.1	+1.0
TUIG				*i* S	Sn	19 09 00.8	+0.4
TGIG		1.56	118		Pn	19 08 53.7	+0.8
TGIG					Sn	19 09 15.7	-0.3
TGIG		1.56	118	*e*P	Pn	19 08 53.7	+0.8
TGIG				*e*S	Sn	19 09 15.7	-0.3
VHO	Vista Hermosa	2.12	259	*e*P	Pn	19 08 58.8	-0.5
VHO				*e*S	Sn	19 09 23.4	-4.0
HUIG	Huatulco	2.27	221		Pn	19 08 57.9	-3.1
HUIG					Sn	19 09 25.0	-5.5
HUIG	Huatulco	2.27	221	*i* P	Pn	19 08 57.9	-3.1
HUIG				*e*S	Sn	19 09 25.0	-5.5
TOIG	Toxpalan	2.45	284	*e*P	Pn	19 09 03.4	+0.1
TOIG				*i* S	Sn	19 09 32.4	-2.1
CCIG	Comitan	2.63	117		Pn	19 09 06.2	+0.7
HLIG	Huajuapan de L	3.10	276	*i* P	Pn	19 09 11.3	-0.2
HLIG				*i* S	Sn	19 09 46.5	-2.8
HUEH	Huehuetenango	3.66	126	*e*P	Pn	19 09 18.9	+0.2
TLIG	Tlapa	3.82	271		Pn	19 09 19.9	-0.7
STG3	Santiaguito 3,	4.00	134	*e*P	Pn	19 09 24.6	+1.5
RTAL	Retalhuleu	4.05	137	*e*S	Sn	19 09 56.7	-14
ERG	Entre ros, C	4.20	136	*e*P	Pn	19 09 28.4	+2.9
PETF	Flores	4.53	97	*e*P	Pn	19 09 30.8	+0.9
APG	El Apazote	4.66	122	P	Pn	19 09 31.2	-0.7
	21nm,0.3s,baz=327,slow=15,SNR=97						
APG				S	Sn	19 10 17.7	-7.9
	373nm,0.3s,baz=3.2,slow=18,SNR=8.7						
UNM	Universidad Na	4.74	293		Pn	19 09 34.5	+1.6
NBG	Las Nubes	4.99	125	*e*S	Sn	19 10 36.1	+2.5
IXG	Ixpaco	5.17	129	*e*P	Pn	19 09 39.4	+0.8
MRL	Marmol	5.27	117	*e*P	Pn	19 09 39.2	-0.7
MRL	Marmol	5.27	117	*e*P	Pn	19 09 40.4	+0.4
MRL	Marmol	5.27	117	*e*P	Pn	19 09 39.2	-0.7
ESQI	Esquipulas	5.82	120	*e*P	Pn	19 09 45.7	-1.3
MTO3	Montecristo	5.88	121	*e*P	Pn	19 09 47.0	-1.1
MTO3	Montecristo	5.88	121	*e*P	Pn	19 09 47.0	-1.1
SBLS	San Blas	6.00	127	*e*P	Pn	19 09 51.7	+2.1
SBLS	San Blas	6.00	127	*e*P	Pn	19 09 51.7	+2.1
SBLS				*e*S	Sn	19 10 31.4	-26
CEVE	Cerro Verde	6.00	127	*e*P	Pn	19 09 51.5	+1.8
CEVE				IAML		19 10 37.0	
	comp=Z,877nm,0.6s						
CEVE	Cerro Verde	6.00	127	*e*P	Pn	19 09 51.5	+1.8
CEVE				IAML		19 10 37.0	
	comp=Z,877nm,0.6s						
SNET	Serv Nac Est T	6.39	126	Pn	Pn	19 09 55.6	+0.9
TEIG	Tepich	6.54	65	P	Pn	19 09 56.6	0.0
	baz=302,slow=0.0						
TEIG				LR	LR	19 12 30.3	
	comp=Z,459nm,21.3s,baz=254,slow=39						
TEIG	Tepich	6.54	65		Pn	19 09 56.0	-0.6
LFRS	El Faro	6.56	125	*e*P	Pn	19 09 58.3	+1.2
LFRS	El Faro	6.56	125	*e*P	Pn	19 09 58.3	+1.2
MOIG	Morelia	6.64	290		Pn	19 09 59.9	+1.7
COEG	Centro de Oper	6.71	124	*e*P	Pn	19 09 59.4	+0.5
COEG	Centro de Oper	6.71	124	*e*P	Pn	19 09 59.4	+0.5
COEB	Comit de Eme	7.05	124	*e*P	Pn	19 10 04.9	+1.3
COEB	Comit de Eme	7.05	124	*e*P	Pn	19 10 04.9	+1.3

CNCH Conchagua 7.74 122 IAML 19 10 54.4
comp=Z,609nm,0.5s
CNCH Conchagua 7.74 122 IAML 19 10 54.4
comp=Z,609nm,0.5s
TGUH Tegucigalpa,Un 7.81 115 **Pn** **19 10 13.9 +0.1**
CSGN Cosiguina Volc 8.12 123 **Pn** **19 10 20.5 +2.6**
ZAIG Zacatecas 9.16 306 **Pn** **19 10 33.1 +1.3**
MATN Matagalpa 9.50 117 **Pn** **19 10 36.9 +0.6**
KVTX Kingsville 10.45 343 Pn **Pn** **19 10 46.5 -2.2**
ACON Acoyapa 10.62 126 *eP* **Pn** **19 10 52.7 +1.7**
ACON Acoyapa 10.62 120 **Pn** **19 10 51.1 0.0**
GBS3 Finca Las Img 11.08 126 *eP* **Pn** **19 10 57.9 +0.9**
GB1A Borinquen Arri 11.10 126 *eP* **Pn** **19 10 58.4 +1.0**
NY14 Universidad de 11.10 127 *eP* **Pn** **19 10 59.1 +1.8**
BUEV Buena Vista 11.11 126 *eP* **Pn** **19 10 59.7 +2.2**
ESPN Las Esperanzas 11.24 117 **Pn** **19 10 59.6 +0.4**
COLC Colonia 11.34 126 *eP* **Pn** **19 11 02.2 +1.7**
GUAI GUAI 11.36 128 *eP* **Pn** **19 11 01.6 +0.9**
CUI Cuipilapa 11.38 126 *eP* **Pn** **19 11 01.9 +0.8**
PLVR Palo Verde 11.43 127 *eP* **Pn** **19 11 03.0 +1.2**
833A Chaparral WMA, 11.65 338 P **Pn** **19 11 05.9 +1.5**
baz=156,SNR=26
735A Kenedy 11.68 346 Pn **Pn** **19 11 07.7 +2.9**
JTS Las Juntas de 11.77 126 P **Pn** **19 11 06.6 +0.5**
comp=Z,17nm,0.3s,baz=349,slow=7.2,SNR=30
JTS S **Sn** **19 13 12.2 -4.1**
comp=Z,3.2nm,0.3s,baz=37,slow=20,SNR=1.8
JTS Las Juntas de 11.77 126 *eP* **Pn** **19 11 06.5 +0.4**
JTS Las Juntas de 11.77 126 **Pn** **19 11 06.1 0.0**
CEDE Laguna Cedeo 11.84 125 *eP* **Pn** **19 11 09.2 +2.1**
HKT Hockley 12.44 355 **Pn** **19 11 14.8 +0.2**
HDC Heredia 12.60 125 **Pn** **19 11 16.7 -0.2**
FSCY Frank Sound, G 12.83 80 **Pn** **19 11 19.6 -0.2**
545A Edgard 13.02 16 Pn **Pn** **19 11 22.4 +0.2**
441A DeRidder 13.24 5 P **Pn** **19 11 25.2 +0.2**
435B Jarrell 13.50 349 P **Pn** **19 11 29.8 +1.5**
baz=167,SNR=17
JCT Junction City 13.77 341 P **Pn** **19 11 32.8 +1.0**
baz=158,SNR=16
JCT Junction City 13.77 341 **Pn** **19 11 32.8 +1.0**
HPIG 13.91 314 **Pn** **19 11 35.0 +1.2**
342A Flagon Creek P 13.96 8 **Pn** **19 11 33.3 -0.8**
NATX Nacogdoches 14.19 360 P **Pn** **19 11 37.4 +0.4**
baz=179,SNR=6.5
NATX Nacogdoches 14.19 360 **Pn** **19 11 36.9 -0.1**
CBCY The Bluff, Cay 14.21 79 P **Pn** **19 11 37.8 +0.5**
344A Westbrook Farm 14.31 13 P **Pn** **19 11 38.9 +0.3**
TXAR Lajitas Array 14.42 326 P **P** **19 11 42.6 -0.1**
comp=Z,0.7nm,0.3s,baz=149,slow=14,SNR=98
TX31 Lajitas Ar. Si 14.43 326 P **P** **19 11 42.3 -0.5**
TX32 Lajitas Array 14.43 326 P **P** **19 11 42.1 -0.7**
237A Washetta, Mont 14.47 356 P **Pn** **19 11 39.6 -1.0**
346A Big Creek Wild 14.57 18 P **Pn** **19 11 42.2 +0.4**
WHTX Lake Whitney, 14.66 350 P **P** **19 11 44.1 -1.0**
baz=169,SNR=28
WHTX S **Sn** **19 14 20.4 -5.1**
baz=169
WHTX Lake Whitney, 14.66 350 P **Pn** **19 11 43.4 +0.6**
VBMS Vicksburg 15.10 13 P **Pn** **19 11 48.8 +0.4**
baz=195,SNR=6.2
VBMS Vicksburg 15.10 13 P **Pn** **19 11 47.6 -0.8**
061Z Ochoppi 15.17 54 P **Pn** **19 11 49.1 -0.2**
BRAL Brewton 15.22 25 P **Pn** **19 11 49.9 0.0**
baz=208
BRAL Brewton 15.22 25 P **P** **19 11 51.4 0.0**
143A Socs Landing, 15.40 10 P **Pn** **19 11 51.5 -0.5**
143A IAmb IAmb 19 11 59.5
comp=Z,109nm,0.8s
553A Crawfordville 15.65 34 P **Pn** **19 11 55.3 +0.1**
Z38A Mt. Pleasant 15.69 359 P **Pn** **19 11 56.1 +0.4**
ABTX Abilene, Hawle 15.73 344 P **P** **19 11 57.7 +0.6**
baz=162,SNR=24
ABTX Abilene, Hawle 15.73 344 P **Pn** **19 11 55.9 -0.4**
Z41A Richland Creek 15.76 5 P **P** **19 11 57.1 -0.3**
baz=186,SNR=6.9
146A Union 15.86 17 P **Pn** **19 11 55.8 -2.1**
Z35A Perchaven, San 15.94 352 P **Pn** **19 11 56.2 -2.5**
Z35A IAmb IAmb 19 12 33.3
comp=Z,162nm,1.0s
DWPF Disney Wildern 16.05 47 P **P** **19 12 00.6 0.0**
baz=231
DWPF Disney Wildern 16.05 47 P **Pn** **19 11 59.5 -0.5**
LPIG La Paz 16.11 297 P **P** **19 12 07.8 +6.5**
baz=50,slow=12,SNR=3.7
LPIG LR LR 19 17 59.0
comp=Z,104nm,21.5s,baz=240,slow=35
656A Willston 16.15 41 P **Pn** **19 12 01.0 -0.3**
WLAR White Oak Lake 16.16 4 P **Pn** **19 12 00.8 -0.7**
WLAR IAmb IAmb 19 12 23.9
comp=Z,117nm,0.8s
060A Indiantown 16.20 52 P **Pn** **19 12 01.4 -0.5**
MTDJ Mount Denham 16.23 85 P **Pn** **19 12 01.7 -0.8**
MTDJ IAmb IAmb 19 12 21.2
comp=Z,103nm,0.9s
250A Grady 16.25 26 P **Pn** **19 12 02.2 -0.3**
352A Blakely 16.43 30 P **P** **19 12 05.2 +0.4**
352A IAmb IAmb 19 12 09.3
comp=Z,113nm,0.8s
CCAR Cane Creek 16.53 8 P **Pn** **19 12 06.6 +0.6**
BCIP Isla Barro Col 16.55 118 **Pn** **19 12 06.7 +0.4**
BCIP IAmb IAmb 19 12 12.8
comp=Z,149nm,1.9s
Z47A Carrollton 16.68 19 P **Pn** **19 12 07.8 0.0**
LRAL Lakeview Retre 16.90 22 P **Pn** **19 12 10.8 +0.5**
baz=205,SNR=53
LRAL Lakeview Retre 16.90 22 P **P** **19 12 10.1 +0.1**
LRAL IAmb IAmb 19 12 18.8
comp=Z,95nm,0.6s
LRAL **S** **19 15 12.8 -5.5**
Y45A Yeager Farm, C 16.90 15 P **P** **19 12 09.7 -0.3**
CLNB Carlsbad 16.93 332 P **Pn** **19 12 11.8 +0.9**
X40A Basin Creek Fa 16.98 5 P **Pn** **19 12 12.1 +0.7**
baz=185,SNR=14
X40A Basin Creek Fa 16.98 5 P **Pn** **19 12 11.6 +0.2**
X40A IAmb IAmb 19 12 13.7
comp=Z,218nm,1.8s
MIAR Mount Ida 16.99 3 P **Pn** **19 12 12.1 +0.6**
baz=183,SNR=33
MIAR Mount Ida 16.99 3 P **P** **19 12 10.6 -0.3**
X37A Clayton 17.03 358 P **P** **19 12 11.2 -0.1**
TIGA Tifton 17.07 34 P **Pn** **19 12 12.4 -0.1**
baz=218
TIGA Tifton 17.07 34 P **P** **19 12 11.0 -0.9**
TIGA IAmb IAmb 19 12 27.8
comp=Z,98nm,0.7s
GDL2 Guadalupe Moun 17.10 331 **Pn** **19 12 15.6 +2.6**
MNTX Cornudas Mount 17.20 327 P **Pn** **19 12 15.0 +1.0**
baz=142
MNTX Cornudas Mount 17.20 327 P **Pn** **19 12 14.2 +0.2**
X43A Marvell 17.26 10 P **Pn** **19 12 14.7 +0.1**
baz=192
X34A Smith Ranch, M 17.27 351 P **Pn** **19 12 15.8 +0.9**
UALR University of 17.31 6 **Pn** **19 12 15.7 +0.3**
456A Hilliard 17.42 39 P **P** **19 12 13.6 -2.1**
Z50A Ashland 17.50 25 P **Pn** **19 12 17.5 -0.1**
baz=208,SNR=21
Z50A Ashland 17.50 25 P **Pn** **19 12 17.2 -0.4**
152A Waverly Hall 17.52 29 P **P** **19 12 16.1 -0.7**
152A IAmb IAmb 19 12 28.5
comp=Z,139nm,1.4s
OXF Oxford 17.55 14 P **Pn** **19 12 18.1 -0.1**
baz=196,SNR=10
OXF Oxford 17.55 14 P **P** **19 12 17.5 +0.4**
OXF IAmb IAmb 19 12 29.3
comp=Z,129nm,0.8s
WMOK Wichita Mounta 17.57 348 P **Pn** **19 12 18.4 -0.1**
baz=166,SNR=11
WMOK Wichita Mounta 17.57 348 P **P** **19 12 17.2 -0.1**
CPRX Cap Rock 17.58 333 P **Pn** **19 12 18.3 -0.4**
W39A Magazine 17.63 2 P **Pn** **19 12 19.6 +0.5**
baz=182,SNR=12
W39A Magazine 17.63 2 P **Pn** **19 12 18.9 -0.3**
W39A IAmb IAmb 19 12 21.9
comp=Z,78nm,0.7s
W35A Tecumseh 17.69 354 P **P** **19 12 19.2 +0.5**
W41B Gary Mavity, V 17.72 6 P **P** **19 12 19.0 +0.1**
baz=187,SNR=28
WHAR Wooly Hollow 17.83 6 P **P** **19 12 18.8 -1.3**
WHAR IAmb IAmb 19 12 23.4
comp=Z,124nm,1.0s
Y49A Blount Mountai 17.85 23 P **P** **19 12 19.7 -0.7**
Y49A IAmb IAmb 19 12 44.8
comp=Z,52nm,0.8s
FNO Franklin 17.86 352 P **P** **19 12 20.5 0.0**

MSTX Muleshoe 17.97 337 P **Pn** **19 12 22.9 -0.4**
baz=154,SNR=12
MSTX Muleshoe 17.97 337 P **P** **19 12 22.5 +0.7**
MSTX IAmb IAmb 19 12 27.3
comp=Z,251nm,1.7s
OKCSW OKLAHOMA CITY 18.01 352 P **Pn** **19 12 23.8 +0.1**
OKCFA Oklahoma City 18.02 352 P **P** **19 12 22.4 +0.1**
255A Hazlehurst 18.05 35 P **P** **19 12 21.5 -1.1**
X48A Hartselle 18.17 20 P **P** **19 12 22.6 -1.2**
X48A IAmb IAmb 19 12 37.5
comp=Z,75nm,1.0s
W45A Hickory Valley 18.22 14 P **P** **19 12 24.2 -0.3**
W45A IAmb IAmb 19 12 48.3
comp=Z,141nm,0.8s
154A Montrose 18.25 32 P **P** **19 12 24.4 -0.4**
154A IAmb IAmb 19 12 30.6
comp=Z,158nm,0.9s
HBAR Harrisburg 18.31 10 P **P** **19 12 25.6 +0.2**
PLAL Pickwick Lake 18.34 17 P **P** **19 12 25.6 -0.2**
PLAL IAmb IAmb 19 12 35.5
comp=Z,65nm,0.8s
TUL1 Leonard 18.36 357 P **P** **19 12 26.6 +0.6**
baz=176,SNR=24
TUL1 Leonard 18.36 357 P **P** **19 12 26.7 +0.7**
LPAR Lepanto 18.42 11 P **P** **19 12 27.0 +0.5**
AMTX Amarillo 18.43 341 P **Pn** **19 12 28.7 -0.1**
baz=158
AMTX Amarillo 18.43 341 P **Pn** **19 12 28.1 -0.7**
GTBY Guantanamo Bay 18.59 80 P **P** **19 12 28.3 -0.2**
HHAR Hobbs 18.71 2 P **P** **19 12 29.8 +0.1**
HHAR IAmb IAmb 19 12 34.5
comp=Z,103nm,0.7s
GOGA Godfrey 18.72 30 P **P** **19 12 29.9 0.0**
baz=215,SNR=16
GOGA Godfrey 18.72 30 P **P** **19 12 29.6 -0.3**
GOGA IAmb IAmb 19 12 43.8
comp=Z,68nm,0.8s
LCAR Lake Charles 18.73 9 P **P** **19 12 30.1 +0.1**
LCAR IAmb IAmb 19 12 32.0
comp=Z,119nm,1.0s
FPAL Fort Paine 18.76 24 P **P** **19 12 30.5 +0.2**
FPAL IAmb IAmb 19 12 35.6
comp=Z,40nm,0.6s
Y52A Lilburn 18.82 28 P **P** **19 12 31.6 +0.7**
baz=212,SNR=30
Y52A Lilburn 18.82 28 P **P** **19 12 31.4 +0.4**
GNAR Gosnell 18.82 12 P **P** **19 12 30.3 -0.6**
GNAR IAmb IAmb 19 12 47.4
comp=Z,146nm,0.9s
U40A Yellville 18.84 4 P **Pn** **19 12 32.3 -1.1**
baz=185,SNR=76
U40A Yellville 18.84 4 P **Pn** **19 12 32.2 -1.1**
U38A Gravette 18.86 0 P **P** **19 12 31.5 +0.1**
U38A IAmb IAmb 19 12 33.0
comp=Z,50nm,0.8s
HSIG 18.89 310 **Pn** **19 12 35.1 +1.0**
PEBM Pemiscott Bayo 19.00 12 P **P** **19 12 32.8 -0.1**
X51A Calhoun 19.08 25 P **P** **19 12 33.1 -0.6**
X51A IAmb IAmb 19 12 35.1
comp=Z,213nm,1.4s
121A Cookes Peak, D 19.14 324 P **Pn** **19 12 36.7 -0.4**
baz=138,SNR=8.7
121A Cookes Peak, D 19.14 324 P **Pn** **19 12 37.3 +0.2**
U32A Winter Ranch, 19.20 349 P **P** **19 12 35.6 +0.4**
SWET Sewanee 19.24 22 P **P** **19 12 35.0 -0.6**
SWET IAmb IAmb 19 12 36.6
comp=Z,84nm,0.7s
GLAT Glass 19.27 13 P **P** **19 12 35.5 -0.2**
T35A Sooner Cattle 19.41 355 P **P** **19 12 37.4 +0.1**
V48A Smith Brothers 19.42 19 P **P** **19 12 37.0 -0.5**
V48A IAmb IAmb 19 12 38.5
comp=Z,131nm,1.4s
157A Early Branch 19.44 36 P **P** **19 12 38.1 +0.4**
baz=222
W50A Signal Mountai 19.45 23 P **P** **19 12 37.4 -0.5**
W50A IAmb IAmb 19 12 39.0
comp=Z,97nm,0.8s
WVT Waverly 19.49 17 P **P** **19 12 38.2 0.0**
baz=199
WVT Waverly 19.49 17 P **P** **19 12 37.3 -0.8**
PBMO Poplar Bluff 19.54 10 P **P** **19 12 38.8 +0.1**
PBMO IAmb IAmb 19 12 40.5
comp=Z,147nm,1.0s
PARMO Parma 19.55 12 P **P** **19 12 38.8 -0.1**
HENM Henderson Moun 19.66 12 P **P** **19 12 40.3 +0.3**
T42A Van Buren 19.69 8 P **P** **19 12 39.1 -1.2**
T42A IAmb IAmb 19 12 42.0
comp=Z,48nm,0.9s
Z56A Williston 19.72 35 P **P** **19 12 40.6 -0.1**
baz=220
CLTN Cedars of Leba 19.90 20 P **P** **19 12 41.2 -1.5**
CLTN IAmb IAmb 19 12 43.5
comp=Z,55nm,0.8s
W52A Murphy 19.92 26 P **P** **19 12 41.7 -1.2**
W52A IAmb IAmb 19 12 44.5
comp=Z,113nm,0.9s
Y55A Saluda 19.94 32 P **P** **19 12 42.7 -0.3**
baz=218,SNR=9.5
158A Hollywood 19.95 38 P **P** **19 12 43.2 0.0**
baz=224
HODGE Hodges 19.97 31 P **P** **19 12 42.9 -0.5**
HODGE IAmb IAmb 19 13 01.7
comp=Z,46nm,0.9s
CPCT Cooper Cave 19.98 25 P **P** **19 12 42.7 -0.9**
CPCT IAmb IAmb 19 13 00.8
comp=Z,44nm,0.8s
Z57A Bowman 20.07 36 P **P** **19 12 44.0 -0.4**
baz=222,SNR=5.9
T45A Paducah 20.13 14 P **P** **19 12 44.8 -0.3**
X54A Belton 20.17 30 P **P** **19 12 45.3 -0.2**
baz=216,SNR=12
NHSC New Hope 20.22 37 P **P** **19 12 46.3 +0.2**
baz=223
NHSC New Hope 20.22 37 P Pn 19 12 48.5 -1.2
BG3 Lake Jocassee 20.27 29 P **P** **19 12 46.9 +0.3**
BG3 IAmb IAmb 19 13 04.6
comp=Z,94nm,0.8s
SJCC San Jacinto, C 20.29 109 *eP* **P** **19 12 47.9 +0.8**
ANMO Albuquerque 20.35 331 P Pn 19 12 50.1 -1.3
comp=Z,13nm,0.8s,baz=146,slow=13,SNR=31
ANMO Albuquerque 20.35 331 P **P** **19 12 49.4 +1.7**
baz=145
ANMO Albuquerque 20.35 331 P **P** **19 12 48.9 +1.2**
V51A Loudon 20.36 24 P **P** **19 12 47.2 -0.3**
V51A IAmb IAmb 19 13 05.6
comp=Z,61nm,0.7s
TKL Tuckaleechee C 20.46 26 P **P** **19 12 48.8 +0.1**
comp=Z,46nm,0.7s,baz=193,slow=13,SNR=34
TKL Tuckaleechee C 20.46 26 P **P** **19 12 48.2 -0.5**
TKL IAmb IAmb 19 13 07.0
comp=Z,65nm,0.8s
U49A Red Boiling Sp 20.46 21 P **P** **19 12 47.5 -1.2**
X55A Gracelyn & Ava 20.47 32 P **P** **19 12 48.8 0.0**
baz=217,SNR=13
T47A Sharon Grove 20.49 17 P **P** **19 12 47.6 -1.4**
Z58A St. Stephen 20.60 37 P **P** **19 12 50.6 +0.5**
baz=223
S44A Carbondale 20.64 12 P **P** **19 12 50.1 -0.5**
S44A IAmb IAmb 19 12 53.5
comp=Z,76nm,0.6s
PAULI Pauline 20.66 31 P **P** **19 12 50.3 -0.5**
PAULI IAmb IAmb 19 12 53.5
comp=Z,69nm,1.1s
SIUC Southern Illin 20.67 12 P **P** **19 12 50.0 -0.8**
CCM Cathedral Cave 20.68 7 P **P** **19 12 51.1 +0.2**
baz=189
CCM Cathedral Cave 20.68 7 P **P** **19 12 50.4 -0.5**
W54A Cherokee Point 20.69 30 P **P** **19 12 51.7 +0.5**
baz=215,SNR=32
V52A Sevierville 20.70 26 P **P** **19 12 49.6 -1.5**
V52A IAmb IAmb 19 13 15.2
comp=Z,68nm,0.9s
DBBC Dabeiba 20.73 118 *eP* Pn 19 12 55.6 -0.3
Y57A Sumter 20.77 35 P **P** **19 12 51.5 -0.5**
baz=221
TUC Tucson 20.78 318 P Pn 19 12 55.1 -1.3
baz=131
TUC Tucson 20.78 318 P Pn 19 12 55.1 -1.3
X56A White Oak 20.80 33 P **P** **19 12 52.5 +0.2**
baz=219,SNR=8.2
R40A Maddies Statio 20.80 5 P **P** **19 12 51.8 -0.5**
R40A IAmb IAmb 19 12 56.2
comp=Z,118nm,1.1s
Z59A Georgetown, SC 20.84 38 P **P** **19 12 53.0 +0.3**
baz=225

V53A Saluda 20.89 28 P **P** **19 12 52.6 -0.7**
V53A IAmb IAmb 19 13 12.7
comp=Z,54nm,0.9s
Y58A Scranton 21.10 36 P **P** **19 12 56.0 +0.5**
baz=223
R32A Long Quarter, 21.15 351 P **P** **19 12 56.0 0.0**
R32A IAmb IAmb 19 12 59.5
comp=Z,93nm,0.7s
KMSC Kings Mountain 21.15 31 P **P** **19 12 56.3 +0.2**
baz=217,SNR=21
USIN University of 21.26 15 P **P** **19 12 56.4 -0.8**
USIN IAmb IAmb 19 12 58.8
comp=Z,90nm,0.9s
X57A Johnson Farm, 21.27 35 P **P** **19 12 57.9 +0.5**
baz=221
V54A Nebo 21.37 29 P **P** **19 12 58.6 +0.1**
baz=215,SNR=9.3
SLM Saint Louis 21.39 9 P **P** **19 12 58.5 -0.1**
T25A Trinidad 21.39 338 P **P** **19 13 01.3 +2.4**
baz=153,SNR=15
W56A Indian Trail 21.53 33 P **P** **19 12 59.8 -0.3**
baz=219,SNR=11
KSU1 Kansas State U 21.59 356 P **P** **19 13 00.2 -0.5**
baz=174,SNR=8.4
KSU1 Kansas State U 21.59 356 P **P** **19 12 59.9 -0.8**
KSU1 IAmb IAmb 19 13 03.8
comp=Z,63nm,0.8s
Y59A Loris 21.61 38 P **P** **19 13 01.2 +0.2**
baz=224
CBKS Cedar Bluff 21.70 349 P **P** **19 13 02.3 +0.3**
baz=166,SNR=18
CBKS Cedar Bluff 21.70 349 P **P** **19 13 02.2 +0.3**
X58A Rowland 21.76 36 P **P** **19 13 02.2 -0.3**
baz=222
X58A Rowland 21.76 36 P **P** **19 13 02.1 -0.3**
X58A IAmb IAmb 19 13 22.6
comp=Z,67nm,0.8s
V55A Taylorsville 21.78 30 P **P** **19 13 02.3 -0.4**
baz=216,SNR=24
V55A Taylorsville 21.78 30 P **P** **19 13 02.3 -0.4**
V55A IAmb IAmb 19 13 04.1
comp=Z,82nm,0.6s
X18A Snowflake 21.83 324 P **P** **19 13 03.2 -0.2**
W57A Gilead 21.85 34 P **P** **19 13 02.8 -0.6**
baz=220,SNR=11
W57A Gilead 21.85 34 P **P** **19 13 02.6 -0.8**
W57A IAmb IAmb 19 13 04.1
comp=Z,74nm,0.9s
Q44A Meyer Farm, Va 21.86 12 P **P** **19 13 03.0 -0.5**
WCI Wyandotte Cave 21.88 18 P **P** **19 13 03.1 -0.6**
baz=201
WCI Wyandotte Cave 21.88 18 P **P** **19 13 02.9 -0.9**
OLIL Olney 21.89 14 P **P** **19 13 02.9 -0.9**
OLIL IAmb IAmb 19 13 04.6
comp=Z,119nm,0.8s
214A Organ Pipe Nat 21.90 314 P **P** **19 13 04.8 +0.7**
baz=127,SNR=9.7
214A Organ Pipe Nat 21.90 314 P **P** **19 13 04.5 +0.4**
U54A Nelsons Funny 22.04 28 P **P** **19 13 05.2 -0.3**
baz=214,SNR=22
U54A Nelsons Funny 22.04 28 P **P** **19 13 04.9 -0.5**
U54A pP **pP** **19 13 27.0 -5.1**
P40A Paris 22.05 5 P **P** **19 13 04.3 -1.1**
P40A pP **pP** **19 13 26.7 -5.3**
P38A Dawn 22.06 2 P **P** **19 13 04.6 -0.9**
P38A IAmb IAmb 19 13 05.8
comp=Z,77nm,0.7s
V56A Mocksville 22.10 32 P **P** **19 13 05.2 -0.8**
baz=218,SNR=10
T53A Wise 22.11 26 P **P** **19 13 05.3 -0.9**
baz=212,SNR=6.6
SDDR Presa de Saban 22.16 83 P **P** **19 13 05.0 -1.8**
SDDR IAmb IAmb 19 13 45.4
comp=Z,86nm,1.4s
W58A Raeford 22.16 35 P **P** **19 13 05.8 -0.8**
baz=222,SNR=7.0
X59A McDuffie Farm, 22.19 37 P **P** **19 13 05.9 -0.9**
baz=224
S51A Beattyville 22.25 24 P **P** **19 13 06.4 -1.1**
S51A pP **pP** **19 13 29.2 -5.2**
S51A IAmb IAmb 19 13 32.2
comp=Z,84nm,0.9s
R49A Shelbyville 22.28 20 P **P** **19 13 06.5 -1.3**
R49A **pP** **19 13 29.8 -4.8**
SDCO Great Sand Dun 22.33 337 P **P** **19 13 10.5 +1.9**
baz=151,SNR=19
SDCO Great Sand Dun 22.33 337 P **P** **19 13 10.3 +1.7**
SDCO IAmb IAmb 19 13 45.5
comp=Z,128nm,2.0s
U55A TA2, Sparta 22.38 30 P **P** **19 13 08.2 -0.6**
baz=216,SNR=41
GUY2C Guyana, Caldas 22.40 121 *eP* **P** **19 13 10.3 +0.6**
P43A Skaggs, Pawnee 22.49 10 P **P** **19 13 09.2 -0.5**
P43A pP **pP** **19 13 33.0 -3.8**
V57A Coltrane Farms 22.52 33 P **P** **19 13 09.5 -0.7**
baz=219,SNR=18
KSCO Kaye Shedlock' 22.55 343 P **P** **19 13 11.4 +0.9**
baz=159,SNR=7.5
KSCO Kaye Shedlock' 22.55 343 P **P** **19 13 11.7 +1.2**
KSCO IAmb IAmb 19 13 14.0
comp=Z,115nm,1.1s
X60A Albert Glenn T 22.55 38 P **P** **19 13 10.2 -0.2**
baz=225
R50A Paris 22.56 21 P **P** **19 13 09.4 -1.0**
R50A **pP** **19 13 33.4 -4.2**
R50A IAmb IAmb 19 13 37.6
comp=Z,79nm,1.1s
U56A King 22.58 31 P **P** **19 13 10.3 -0.3**
baz=217,SNR=22
U56A King 22.58 31 P **P** **19 13 09.7 -1.0**
U56A **pP** **19 13 33.6 -4.4**
T54A Tazewell 22.60 28 P **P** **19 13 10.2 -0.6**
baz=214,SNR=15
Q48A North Vernon 22.69 18 P **P** **19 13 11.0 -0.7**
baz=202,SNR=24
BLO Bloomington 22.70 16 P **P** **19 13 10.9 -0.8**
V58A Windy Hill, Pi 22.80 34 P **P** **19 13 12.0 -0.8**
baz=221,SNR=14
V58A Windy Hill, Pi 22.80 34 P **P** **19 13 11.9 -0.8**
V58A IAmb IAmb 19 13 13.5
comp=Z,74nm,0.9s
V58A pP **pP** **19 13 35.5 -4.9**
S22A 4UR Ranch, Cre 22.86 334 P **P** **19 13 15.3 +1.7**
baz=148,SNR=7.8
S53A Williamson 22.88 26 P **P** **19 13 12.7 -0.8**
baz=212
P46A Rosedale 22.94 15 P **P** **19 13 13.4 -0.5**
T55A Pulaski 23.00 29 P **P** **19 13 14.4 -0.3**
baz=215,SNR=18
Q49A Aurora 23.02 20 P **P** **19 13 14.3 -0.4**
baz=204,SNR=24
113A Mohawk Valley, 23.03 315 P **P** **19 13 16.9 +2.1**
W60A Pink Hill 23.04 37 P **P** **19 13 14.8 -0.1**
baz=225
MVCO Mesa Verde 23.15 331 P **P** **19 13 18.4 +2.2**
baz=144,SNR=8.7
MVCO Mesa Verde 23.15 331 P **P** **19 13 18.0 +1.8**
MVCO IAmb IAmb 19 13 53.2
comp=Z,86nm,1.4s
U57A Blanch 23.17 33 P **P** **19 13 15.6 -0.5**
baz=219,SNR=14
O44A Mansfield 23.18 12 P **P** **19 13 16.0 -0.1**
N38A Joes South For 23.23 3 P **P** **19 13 16.7 0.0**
BLA Blacksburg 23.25 30 P **P** **19 13 16.3 -0.6**
baz=216,SNR=13
BLA Blacksburg 23.25 30 P **P** **19 13 15.5 -1.4**
BLA IAmb IAmb 19 13 18.3
comp=Z,77nm,0.9s
BLA pP **pP** **19 13 42.9 -2.4**
V59A Middlesex 23.25 35 P **P** **19 13 15.7 -1.1**
baz=223,SNR=6.5
ORTC Ortega, Tolima 23.26 123 *eP* **P** **19 13 19.9 +2.7**
N33A J Bar K, Exete 23.28 354 P **P** **19 13 17.6 +0.4**
T56A Rocky Mt 23.29 31 P **P** **19 13 16.6 -0.6**
baz=217,SNR=27
N35A Tabor 23.29 358 P **P** **19 13 16.9 -0.3**
S54A Dingess, Beckl 23.33 27 P **P** **19 13 16.6 -1.0**
baz=213,SNR=5.9
S54A Dingess, Beckl 23.33 27 P **P** **19 13 16.0 -1.6**
S54A IAmb IAmb 19 13 18.6
comp=Z,52nm,1.1s
N41A Harden Midland 23.34 7 P **P** **19 13 17.5 -0.2**
N41A **pP** **19 13 46.4 +0.5**
WUAZ Wupatki 23.34 323 P **P** **19 13 19.6 +1.6**
baz=136,SNR=12
WUAZ Wupatki 23.34 323 P **P** **19 13 19.1 +1.2**

WUAZ pP **pP** 19 13 48.0 +1.6
HDIL Hopedale 23.42 10 P **P** 19 13 17.9 -0.4
baz=192,SNR=8.9
HDIL Hopedale 23.42 10 P **P** 19 13 16.9 -1.4
HDIL IAmb IAmb 19 13 19.4
comp=Z,83nm,0.8s
R53A Hurricane 23.50 26 P **P** 19 13 18.5 -0.7
baz=211,SNR=12
R53A Hurricane 23.50 26 P **P** 19 13 17.5 -1.7
R53A IAmb IAmb 19 13 20.4
comp=Z,52nm,0.7s
U58A Oxford 23.55 34 P **P** 19 13 18.6 -1.1
baz=221
P49A Miami Univ. Ec 23.56 19 P **P** 19 13 18.7 -1.0
baz=204,SNR=25
Q51A Peebles 23.57 22 P **P** 19 13 19.1 -0.6
baz=207,SNR=8.7
Q51A Peebles 23.57 22 P **P** 19 13 18.4 -1.3
Q51A **pP** 19 13 46.8 -1.7
PAMC Pamplona, Colo 23.60 113 *e*P **P** 19 13 21.2 +0.4
T57A Hurt 23.65 32 P **P** 19 13 19.9 -0.6
baz=219,SNR=14
T57A Hurt 23.65 32 P **P** 19 13 18.2 -2.3
S55A Lewisburg 23.67 29 P **P** 19 13 20.0 -0.7
baz=215,SNR=8.9
SFIN Lafayette 23.69 14 P **P** 19 13 20.1 -0.7
baz=198,SNR=11
SFIN Lafayette 23.69 14 P **P** 19 13 19.1 -1.7
SFIN IAmb IAmb 19 13 22.1
comp=Z,81nm,0.8s
R54A Victor 23.78 27 P **P** 19 13 20.9 -0.8
baz=214,SNR=11
GLA Glamis 23.92 314 P **P** 19 13 25.7 +2.7
GLA IAmb IAmb 19 14 17.4
comp=Z,109nm,1.8s
Q52A Bidwell 23.92 24 P **P** 19 13 22.5 -0.4
baz=210,SNR=16
P50A Jamestown 23.93 21 P **P** 19 13 22.1 -0.9
baz=206,SNR=22
U59A Littleton 23.93 35 P **P** 19 13 21.2 -1.9
PV01 Paradox Valley 23.94 332 P **P** 19 13 25.1 +1.8
PV01 IAmb IAmb 19 14 01.7
comp=Z,62nm,1.4s
RUSC La Rusia 23.96 116 *e*P **P** 19 13 22.9 -1.2
T58A Grand View Acr 23.98 33 P **P** 19 13 22.4 -1.1
baz=220,SNR=7.6
BGNE Belgrade 24.02 353 P **P** 19 13 24.2 +0.4
baz=171,SNR=7.1
BGNE Belgrade 24.02 353 P **P** 19 13 23.9 +0.1
S56A Natural Bridge 24.03 30 P **P** 19 13 23.1 -0.8
baz=217,SNR=11
PV15 Paradox Valley 24.07 332 P **P** 19 13 25.5 +0.9
PV15 IAmb IAmb 19 14 22.7
comp=Z,32nm,0.9s
PV13 Radium Mtn., P 24.07 332 P **P** 19 13 25.4 +0.8
PV13 IAmb IAmb 19 13 31.8
comp=Z,29nm,0.7s
PV02 Paradox Valley 24.07 332 P **P** 19 13 27.0 +2.4
PV02 **pP** 19 13 52.5 -1.8
PV02 IAmb IAmb 19 14 02.8
comp=Z,122nm,1.6s
P51A Williamsport 24.07 22 P **P** 19 13 23.5 -0.8
baz=208,SNR=15
P51A Williamsport 24.07 22 P **P** 19 13 23.2 -1.0
P51A **pP** 19 13 51.9 -2.0
O48A Farmland 24.09 18 P **P** 19 13 23.3 -1.1
baz=202,SNR=42
Q53A Leroy 24.13 26 P **P** 19 13 24.2 -0.5
baz=212,SNR=8.9
PV05 Paradox Valley 24.13 331 P **P** 19 13 26.6 +1.5
PV05 IAmb IAmb 19 13 31.2
comp=Z,35nm,0.7s
PV05 pP **pP** 19 13 52.9 -2.1
PV03 Paradox Valley 24.16 332 P **P** 19 13 27.3 +1.9
PV03 IAmb IAmb 19 14 03.5
comp=Z,115nm,1.5s
PV18 Skein Mesa, Pa 24.18 332 P **P** 19 13 27.1 +1.5
PV18 pP **pP** 19 13 57.2 +1.8
PV18 IAmb IAmb 19 14 03.7
comp=Z,168nm,1.7s
PV12 Saucer Basin, 24.19 332 P **P** 19 13 27.4 +1.8
PV12 IAmb IAmb 19 14 04.0
comp=Z,124nm,1.4s
ISCO Idaho Springs 24.19 339 P **P** 19 13 27.8 +2.0
baz=153,SNR=17
ISCO Idaho Springs 24.19 339 P **P** 19 13 26.8 +1.0
PV11 David Mesa, Pa 24.21 332 P **P** 19 13 27.3 +1.6
PV11 pP **pP** 19 13 54.9 -0.8
PV07 Paradox Valley 24.22 332 P **P** 19 13 27.6 +1.7
PV07 IAmb IAmb 19 14 09.4
comp=Z,73nm,1.4s
OGNE Ogallala 24.23 346 P **P** 19 13 27.5 +1.7
baz=162,SNR=8.0
OGNE Ogallala 24.23 346 P **P** 19 13 27.2 +1.5
PV17 East Wray Mesa 24.23 332 P **P** 19 13 28.0 +2.0
PV17 IAmb IAmb 19 14 04.1
comp=Z,184nm,1.7s
PV16 Nyswonger Mesa 24.24 332 P **P** 19 13 27.6 +1.5
PV16 IAmb IAmb 19 14 04.2
comp=Z,158nm,1.6s
R55A Marlinton 24.26 29 P **P** 19 13 25.5 -0.6
baz=215,SNR=18
R55A Marlinton 24.26 29 P **P** 19 13 24.9 -1.2
R55A IAmb IAmb 19 13 28.3
comp=Z,65nm,0.8s
R55A pP **pP** 19 13 53.5 -2.5
PV19 Morning Glory 24.27 332 P **P** 19 13 26.8 +0.5
PV19 pP **pP** 19 13 55.2 -1.2
PV19 IAmb IAmb 19 14 04.3
comp=Z,168nm,1.8s
O49A Covington 24.27 19 P **P** 19 13 25.4 -0.7
baz=204,SNR=24
O49A Covington 24.27 19 P **P** 19 13 25.1 -1.0
PV20 West Nyswonger 24.28 332 P **P** 19 13 27.6 +1.2
PV20 IAmb IAmb 19 14 04.5
comp=Z,77nm,1.4s
PV04 Paradox Valley 24.30 332 P **P** 19 13 28.7 +2.1
PV04 IAmb IAmb 19 14 04.9
comp=Z,118nm,1.2s
PV14 Lion Creek, Pa 24.34 332 P **P** 19 13 28.2 +1.2
PV10 Paradox Valley 24.34 332 P **P** 19 13 27.6 +0.5
PV10 IAmb IAmb 19 14 04.4
comp=Z,62nm,1.2s
SCIA State Center 24.35 2 P **P** 19 13 26.8 +0.1
baz=183,SNR=18
SCIA State Center 24.35 2 P **P** 19 13 26.9 +0.2
PV22 Blue Mesa, Par 24.36 332 P **P** 19 13 29.4 +2.2
U60A Pendleton 24.37 36 P **P** 19 13 26.1 -0.9
baz=224,SNR=6.2
PV23 Carpenter Ridg 24.39 332 P **P** 19 13 28.9 +1.3
PV23 IAmb IAmb 19 13 32.6
comp=Z,48nm,0.8s
S57A Dark Hollow, R 24.39 31 P **P** 19 13 26.4 -0.8
baz=218,SNR=6.6
S57A Dark Hollow, R 24.39 31 P **P** 19 13 26.3 -0.8
S57A IAmb IAmb 19 14 00.3
comp=Z,37nm,0.8s
L34A Svendsen Farm, 24.43 357 P **P** 19 13 27.5 0.0
M44A Midewin, Midew 24.45 12 P **P** 19 13 26.8 -0.9
M44A IAmb IAmb 19 13 29.3
comp=Z,109nm,0.9s
M44A **pP** 19 13 56.0 -2.0
PV21 Cone Mtn., Par 24.47 332 P **P** 19 13 29.1 +0.9
O50A Cable 24.47 21 P **P** 19 13 26.9 -1.0
baz=206,SNR=14
PV09 Paradox Valley 24.49 332 P **P** 19 13 28.8 +0.3
U15A North Rim 24.52 324 P **P** 19 13 29.3 +0.6
N47A Urbana 24.52 16 P **P** 19 13 27.1 -1.2
baz=200,SNR=18
N47A Urbana 24.52 16 P **P** 19 13 26.5 -1.8
T59A Double "B" Far 24.52 34 P **P** 19 13 27.4 -0.9
baz=222
T59A Double "B" Far 24.52 34 P **P** 19 13 27.0 -1.3
T59A IAmb IAmb 19 14 23.4
comp=Z,71nm,1.4s
Q54A Coxs Mills 24.52 26 P **P** 19 13 27.8 -0.6
baz=213,SNR=7.9
Q54A Coxs Mills 24.52 26 P **P** 19 13 26.7 -1.6
Q54A **pP** 19 13 55.0 -3.8
Q54A IAmb IAmb 19 14 05.3
comp=Z,36nm,0.8s
P52A Corning 24.55 24 P **P** 19 13 27.8 -0.8
baz=209,SNR=8.0
W13A Hualapai Mount 24.56 319 P **P** 19 13 31.4 +2.4
W13A **pP** 19 14 01.9 +2.4

L40A Anamosa 24.64 6 P **P** 19 13 28.7 -0.7
N48A Decatur 24.68 18 P **P** 19 13 28.8 -1.0
baz=202,SNR=26
BC3 Big Chuckawall 24.69 315 P **P** 19 13 33.1 +3.0
baz=125
P53A Whipple 24.72 25 P **P** 19 13 29.7 -0.4
baz=211,SNR=6.9
P53A Whipple 24.72 25 P **P** 19 13 28.6 -1.5
P53A **pP** 19 13 58.8 -2.0
P53A IAmb IAmb 19 14 04.5
comp=Z,89nm,1.0s
S58A Poland Farm, P 24.73 33 P **P** 19 13 29.3 -1.0
baz=220
ACSO Alum Creek Sta 24.77 22 P **P** 19 13 29.8 -0.8
baz=207
ACSO Alum Creek Sta 24.77 22 P **P** 19 13 29.1 -1.4
ACSO **pP** 19 14 02.4 +1.1
ACSO IAmb IAmb 19 14 06.2
comp=Z,89nm,0.9s
L42A Oliver, Polo 24.77 9 P **P** 19 13 29.6 -1.0
SDV Santo Domingo 24.80 107 P **P** 19 13 30.4 -1.0
comp=Z,23nm,0.8s,baz=298,slow=4.1,SNR=16
SDV Santo Domingo 24.80 107 P **P** 19 13 29.7 -1.7
SDV IAmb IAmb 19 14 27.1
comp=Z,34nm,0.8s
SDV Santo Domingo 24.80 107 *e*P **P** 19 13 29.3 -2.1
O51A Pataskala 24.82 22 P **P** 19 13 30.1 -1.0
baz=208
Q55A Buckhannon 24.86 28 P **P** 19 13 30.7 -0.8
baz=214
MONP2 Monument Peak 24.94 312 P **P** 19 13 35.0 +2.5
baz=122
M47A Cromwell 24.98 16 P **P** 19 13 31.8 -0.8
baz=200
N49A Columbus Grove 24.99 19 P **P** 19 13 31.6 -1.0
baz=204,SNR=5.9
N49A Columbus Grove 24.99 19 P **P** 19 13 31.3 -1.3
N49A IAmb IAmb 19 14 08.0
comp=Z,42nm,0.8s
R57A Stanardsville 25.02 31 P **P** 19 13 32.0 -0.9
baz=218,SNR=6.8
O52A Adamsville 25.08 23 P **P** 19 13 32.9 -0.6
baz=210,SNR=9.7
O52A Adamsville 25.08 23 P **P** 19 13 32.5 -0.9
O52A **pP** 19 14 04.5 +0.1
O52A IAmb IAmb 19 14 08.4
comp=Z,137nm,1.2s
R58B Mineral 25.09 32 P **P** 19 13 32.8 -0.7
baz=220
R58B Mineral 25.09 32 P **P** 19 13 32.1 -1.4
K38A Parkersburg 25.11 3 P **P** 19 13 33.2 -0.4
P54A Burton 25.19 26 P **P** 19 13 34.0 -0.5
baz=213,SNR=6.3
N50A Nevada 25.19 21 P **P** 19 13 33.6 -0.8
baz=206
KNB Kanab 25.23 324 P **P** 19 13 36.3 +1.3
KNB **pP** 19 14 06.6 +0.4
L44A Lake County Fo 25.24 12 P **P** 19 13 34.5 -0.3
baz=195
L44A Lake County Fo 25.24 12 P **P** 19 13 34.3 -0.5
PKCU Pink Cliffs 25.26 325 P **P** 19 13 34.1 -1.3
R58A Rapidan 25.28 32 P **P** 19 13 34.5 -0.8
baz=219,SNR=7.2
N23A Red Feather La 25.29 340 P **P** 19 13 38.1 +2.5
baz=154
K31A O'Neill 25.29 353 P **P** 19 13 36.0 +0.7
Q56A Snyder Ridge, 25.30 29 P **P** 19 13 35.4 -0.1
baz=216,SNR=5.1
Q56A Snyder Ridge, 25.30 29 P **P** 19 13 34.7 -0.7
Q56A IAmb IAmb 19 14 14.1
comp=Z,100nm,1.4s
M48A Edgerton 25.35 17 P **P** 19 13 35.3 -0.5
baz=202
M48A Edgerton 25.35 17 P **P** 19 13 33.9 -1.9
M48A IAmb IAmb 19 14 11.3
comp=Z,73nm,0.9s
XPFO Pion Flat 25.35 313 P **P** 19 13 35.6 -0.5
PFO Pinyon Flats O 25.36 313 P **P** 19 13 37.0 +0.8
comp=Z,0.6nm,0.3s,baz=202,slow=11,SNR=2.2
PFO pP **pP** 19 14 08.9 +1.7
comp=Z,5.1nm,0.8s,baz=114,slow=9.1,SNR=5.0
PFO LR LR 19 25 29.7
comp=Z,131nm,20.5s,baz=156,slow=40
PFO Pinyon Flats O 25.36 313 P **P** 19 13 35.0 -1.2
O53A New Philadelph 25.44 24 P **P** 19 13 35.9 -0.7
baz=211,SNR=8.0
MCWV Mont Chateau 25.51 27 P **P** 19 13 37.2 -0.1
baz=214
M49A Liberty Center 25.56 19 P **P** 19 13 36.6 -1.1
baz=204,SNR=22
N51A Ashland 25.59 22 P **P** 19 13 36.9 -1.1
baz=208
N51A Ashland 25.59 22 P **P** 19 13 35.5 -2.5
JFWS Jewell Farm 25.59 7 P **P** 19 13 37.9 -0.1
baz=189,SNR=40
JFWS Jewell Farm 25.59 7 P **P** 19 13 36.8 -1.2
SRU San Rafael Swe 25.62 330 P **P** 19 13 35.7 -2.9
MTPU Mount Pierson 25.63 326 P **P** 19 13 41.0 +2.1
Q57A Strasburg 25.66 30 P **P** 19 13 38.4 -0.3
baz=218
R59A King George, V 25.66 33 P **P** 19 13 38.3 -0.3
baz=221
K43A Burlington 25.67 11 P **P** 19 13 37.5 -1.3
O54A Avella 25.72 26 P **P** 19 13 38.6 -0.6
baz=212
O54A Avella 25.72 26 P **P** 19 13 38.4 -0.8
O54A IAmb IAmb 19 14 27.6
comp=Z,55nm,0.8s
N52A McGinn's Farm, 25.74 23 P **P** 19 13 39.1 -0.3
baz=209
Q16A Castle Valley 25.78 329 P **P** 19 13 40.7 +0.6
Q16A **pP** 19 14 12.8 +1.6
M50A Fremont 25.79 20 P **P** 19 13 39.3 -0.6
baz=206
SZCU Shurtz Canyon 25.79 325 P **P** 19 13 40.0 -0.1
SZCU **pP** 19 14 10.7 -0.6
L48A N Adams 25.86 18 P **P** 19 13 39.1 -1.4
baz=202,SNR=7.1
CCUT Cedar City 25.91 324 P **P** 19 13 40.9 -0.4
CCUT **pP** 19 14 12.4 0.0
Q58A Fox Den Farm, 25.94 31 P **P** 19 13 40.4 -0.8
baz=219
MSU Marysvale 25.98 327 P **P** 19 13 41.3 -0.6
P17A Butcher Ranch, 26.01 331 P **P** 19 13 42.3 +0.2
P17A **pP** 19 14 11.8 -1.5
M51A Elyria 26.02 22 P **P** 19 13 41.0 -0.9
baz=208
N53A Lisbon 26.06 24 P **P** 19 13 41.6 -0.7
baz=211,SNR=11
N53A Lisbon 26.06 24 P **P** 19 13 40.8 -1.5
N53A **pP** 19 14 13.8 +0.5
K46A Dorr 26.19 15 P **P** 19 13 42.0 -1.4
baz=199
O55A Ligonier 26.20 27 P **P** 19 13 42.7 -0.8
baz=214
ECSD EROS Data Cent 26.20 357 P **P** 19 13 43.5 0.0
baz=175,SNR=28
ECSD EROS Data Cent 26.20 357 P **P** 19 13 42.7 -0.8
ECSD IAmb IAmb 19 13 45.5
comp=Z,60nm,0.7s
P57A Homestead Farm 26.20 30 P **P** 19 13 43.1 -0.4
baz=218,SNR=5.0
P57A Homestead Farm 26.20 30 P **P** 19 13 42.8 -0.7
P57A **pP** 19 14 12.3 -2.3
P57A IAmb IAmb 19 14 20.3
comp=Z,30nm,1.1s
SHPR Sheep Range 26.26 320 P **P** 19 13 45.4 +1.1
SHPR **pP** 19 14 15.6 +0.2
K47A Vermontville 26.37 16 P **P** 19 13 43.6 -1.4
baz=201,SNR=15
AAM Ann Arbor 26.41 18 P **P** 19 13 44.9 -0.5
baz=204
RWWY Rawlins 26.43 338 P **P** 19 13 47.1 +1.2
RWWY IAmb IAmb 19 14 44.6
comp=Z,43nm,1.1s
L50A Kingsville 26.44 20 P **P** 19 13 44.7 -0.9
baz=206
I37A Lemoni, Waseca 26.44 2 P **P** 19 13 45.1 -0.6
M52A Chesterland 26.50 23 P **P** 19 13 45.2 -1.0
baz=209
I40A Norwalk 26.51 6 P **P** 19 13 45.5 -0.8
I40A IAmb IAmb 19 14 22.5
comp=Z,89nm,1.1s
N54A Moraine State 26.53 25 P **P** 19 13 46.0 -0.5
baz=212
N54A Moraine State 26.53 25 P **P** 19 13 45.5 -1.1

N54A **pP** 19 14 16.7 -0.9
N54A IAmb IAmb 19 14 27.8
comp=Z,40nm,0.8s
P58A Pank, Wackersv 26.55 31 P **P** 19 13 46.3 -0.4
baz=219
O56A Blue Knob Stat 26.57 28 P **P** 19 13 46.3 -0.7
baz=216
O56A Blue Knob Stat 26.57 28 P **P** 19 13 45.5 -1.4
O56A **pP** 19 14 16.6 -1.4
O56A IAmb IAmb 19 14 31.5
comp=Z,49nm,1.1s
M53A WI Miller and 26.67 24 P **P** 19 13 46.8 -0.9
baz=210,SNR=5.6
SDMD Soldier's Deli 26.72 32 P **P** 19 13 46.5 -1.7
I42A Draeger Farm, 26.73 9 P **P** 19 13 47.5 -0.7
I42A IAmb IAmb 19 14 23.7
comp=Z,90nm,1.4s
PSUT Pine Spring 26.89 325 P **P** 19 13 50.5 +0.5
PSUT **pP** 19 14 20.9 -0.4
O57A Amberson 26.95 29 P **P** 19 13 49.4 -0.9
baz=218
K22A Casper 27.05 340 P **P** 19 13 52.5 +1.1
baz=154
K22A Casper 27.05 340 P **P** 19 13 51.7 +0.3
K22A **pP** 19 14 23.7 +1.2
K22A IAmb IAmb 19 14 33.3
comp=Z,48nm,1.2s
P59A Jarrettsville 27.07 32 P **P** 19 13 50.8 -0.6
baz=220
SUSD Miller 27.11 353 P **P** 19 13 51.6 0.0
baz=171,SNR=5.3
SUSD Miller 27.11 353 P **P** 19 13 50.5 -1.2
M54A Oil Creek Stat 27.12 25 P **P** 19 13 51.4 -0.5
baz=212
M54A Oil Creek Stat 27.12 25 P **P** 19 13 51.1 -0.7
SSPA Standing Stone 27.17 29 P **P** 19 13 51.4 -0.9
baz=217
SSPA Standing Stone 27.17 29 P **P** 19 13 51.0 -1.2
SSPA IAmb IAmb 19 14 46.7
comp=Z,73nm,1.6s
TPNV Topopah Spring 27.21 320 P **P** 19 13 54.5 +1.6
TPNV **pP** 19 14 27.4 +3.3
N56A West Decatur 27.22 28 P **P** 19 13 51.9 -0.8
baz=216
O58A Lewisberry 27.23 31 P **P** 19 13 51.9 -0.9
baz=219
L53A Girard 27.27 24 P **P** 19 13 52.2 -0.9
baz=211
J48A Bridge Port 27.29 17 P **P** 19 13 53.1 -0.1
baz=203
I45A Fountain 27.37 13 P **P** 19 13 53.4 -0.5
baz=197
MVL Millersville 27.41 31 P **P** 19 13 53.6 -0.7
MVL IAmb IAmb 19 13 54.7
comp=Z,26nm,0.9s
MVL **pP** 19 14 28.9 +3.3
N57A Milroy 27.42 29 P **P** 19 13 54.0 -0.4
baz=217
I46A Reed City 27.45 14 P **P** 19 13 53.6 -1.1
baz=199
M55A Ridgway 27.46 26 P **P** 19 13 53.9 -1.0
baz=214
M55A Ridgway 27.46 26 P **P** 19 13 53.6 -1.2
M55A IAmb IAmb 19 14 40.0
comp=Z,36nm,0.8s
H43A Windswept, Lux 27.48 11 P **P** 19 13 53.8 -1.1
H43A IAmb IAmb 19 13 56.1
comp=Z,44nm,0.7s
K51A Iona Station 27.48 21 P **P** 19 13 53.3 -1.7
baz=208
ERPA Erie 27.51 24 P **P** 19 13 54.3 -1.0
baz=211
J49A Marlette 27.53 18 P **P** 19 13 53.7 -1.7
baz=204
P60A Greenville 27.63 33 P **P** 19 13 54.8 -1.5
baz=222
SPMN Marine on St. 27.67 3 P **P** 19 13 56.4 -0.2
baz=183,SNR=42
SPMN Marine on St. 27.67 3 P **P** 19 13 55.9 -0.7
M56A Emporium 27.73 27 P **P** 19 13 56.2 -1.0
baz=215
M56A Emporium 27.73 27 P **P** 19 13 55.8 -1.4
M56A pP **pP** 19 14 26.2 -2.2
M56A IAmb IAmb 19 14 45.3
comp=Z,26nm,0.8s
O59A Robesonia 27.73 31 P **P** 19 13 56.1 -1.1
baz=220
R11A Troy Canyon, C 27.73 323 P **P** 19 13 57.6 +0.1
I47A Gladwin 27.76 16 P **P** 19 13 56.7 -0.7
baz=201
K52A Tillsonburg 27.82 22 P **P** 19 13 57.3 -0.6
baz=209
L54A Sinclairville 27.88 25 P **P** 19 13 58.1 -0.4
baz=212
ISA Isabella, Lake 27.88 315 P **P** 19 13 59.0 +0.3
N58A Sunbury 27.88 30 P **P** 19 13 57.7 -0.8
baz=218
G40A Rib Lake 27.92 7 P **P** 19 13 57.5 -1.4
G40A IAmb IAmb 19 13 59.6
comp=Z,30nm,1.2s
M57A Sunshine Farm, 28.08 29 P **P** 19 13 59.6 -0.7
baz=217
HWUT Hardware Ranch 28.10 332 P **P** 19 14 00.7 +0.1
O60A Telford 28.13 32 P **P** 19 14 00.1 -0.6
baz=221
I48A Sherman Twp 28.13 17 P **P** 19 14 00.3 -0.4
baz=202
L55A Hinsdale 28.19 26 P **P** 19 14 00.6 -0.8
baz=214
BW06 Boulder Array 28.23 336 P **P** 19 14 02.1 +0.2
PDAR Pinedale Array 28.23 336 P **P** 19 14 03.1 +1.3
comp=Z,1.1nm,0.5s,baz=142,slow=9.8,SNR=6.1
SPUT South Promonto 28.26 331 P **P** 19 14 01.2 -1.0
F36A Milaca 28.29 2 P **P** 19 14 00.8 -1.2
F33A 5 Mile Ranch, 28.29 357 P **P** 19 14 01.4 -0.6
F33A IAmb IAmb 19 14 02.5
comp=Z,30nm,0.8s
J52A Paris 28.30 22 P **P** 19 14 01.2 -1.1
baz=209
WVNY West Valley, N 28.31 25 P **P** 19 14 01.5 -0.8
WVNY IAmb IAmb 19 14 53.0
comp=Z,49nm,0.9s
LUPA Lehigh Univers 28.35 32 P **P** 19 14 01.6 -1.1
H47A Mio 28.38 16 P **P** 19 14 01.7 -1.2
baz=201,SNR=6.2
N59A State Game Lan 28.40 31 P **P** 19 14 02.2 -0.9
baz=220,SNR=7.2
N59A State Game Lan 28.40 31 P **P** 19 14 01.7 -1.4
N59A IAmb IAmb 19 14 03.5
comp=Z,24nm,1.0s
M58A Price's Panora 28.42 29 P **P** 19 14 02.3 -1.0
baz=218,SNR=5.9
K54A Basiliko Farm, 28.44 25 P **P** 19 14 02.4 -1.1
baz=213
G45A Suttons Bay 28.45 13 P **P** 19 14 02.7 -0.9
baz=198
L56A Greenwood 28.53 27 P **P** 19 14 03.3 -1.0
baz=216
L56A Greenwood 28.53 27 P **P** 19 14 03.3 -1.0
L56A IAmb IAmb 19 14 54.8
comp=Z,41nm,1.0s
I51A Listowel 28.61 21 P **P** 19 14 03.3 -1.6
baz=208,SNR=8.4
F42A Maple Grove Fa 28.68 9 P **P** 19 14 04.6 -1.0
N60A Cedar Hill Far 28.69 32 P **P** 19 14 05.0 -0.8
baz=221
H48A Harrisville 28.71 17 P **P** 19 14 05.2 -0.7
baz=203
L57A Andrews Acres 28.73 28 P **P** 19 14 05.4 -0.7
baz=217
K55A Perry 28.80 26 P **P** 19 14 05.8 -0.8
baz=214
BRNJ Basking Ridge 28.83 33 P **P** 19 14 05.4 -1.5
BRNJ IAmb IAmb 19 15 09.4
comp=Z,36nm,0.9s
AHID Auburn Hatcher 28.84 334 P **P** 19 14 07.6 +0.3
AHID IAmb IAmb 19 15 06.0
comp=Z,37nm,1.5s
MMNY Mt. Morris Dam 28.87 26 P **P** 19 14 06.0 -1.3
MMNY IAmb IAmb 19 15 12.3
comp=Z,26nm,0.9s
G47A Hillman 29.00 16 P **P** 19 14 07.5 -0.9
baz=201
M59A Waymart 29.04 30 P **P** 19 14 07.9 -0.9
baz=220
K56A Middlesex 29.09 27 P **P** 19 14 08.1 -1.2

baz=215
F45A CMU Biological 29.09 13 P P 19 14 08.0 -1.2
baz=198,SNR=6.8
E38A The Farm, Brul 29.12 4 P P 19 14 08.6 -0.9
ELK Elko 29.22 327 P P 19 14 13.8 +3.1
comp=Z,1.2nm,0.7s,baz=126,slow=5.2,SNR=8.6
ELK Elko 29.22 327 P P 19 14 12.6 +1.8
L58A Harry Jones Me 29.23 29 P P 19 14 09.6 -0.8
baz=219
ATAH Atahualpa 29.24 146 P P 19 14 14.7 +3.4
comp=Z,40nm,0.8s,baz=332,slow=6.3,SNR=20
REDW Red Top Meadow 29.24 335 P P 19 14 12.3 +1.4
REDW IAmb IAmb 19 15 04.7
comp=Z,28nm,1.1s
M60A Port Jervis 29.27 32 P P 19 14 10.0 -0.9
baz=222
SNOW Snow King Moun 29.28 335 P P 19 14 11.3 +0.1
SNOW IAmb IAmb 19 14 51.2
comp=Z,27nm,0.8s
BINY Binghamton 29.28 29 P P 19 14 10.1 -0.9
baz=218
BINY Binghamton 29.28 29 P P 19 14 09.8 -1.2
BINY IAmb IAmb 19 15 06.2
comp=Z,82nm,1.6s
NV11 Mina Array Sit 29.32 320 P P 19 14 11.9 +0.4
NV11 pP 19 14 42.9 -0.1
OMMB Old Mammoth Mi 29.35 318 P P 19 14 12.9 +0.9
TPAW Teton Pass 29.38 335 P P 19 14 13.3 +1.1
PAL Palisades 29.40 33 P P 19 14 10.8 -1.2
baz=223
NVAR Mina Array Bea 29.41 320 P P 19 14 16.0 +3.6
comp=Z,4.9nm,0.8s,baz=134,slow=8.9,SNR=23
NVAR pP pP 19 14 47.4 +3.5
comp=Z,8.3nm,0.7s,baz=130,slow=9.0,SNR=9.0
NVAR ScP ScP 19 20 44.5 +1.7
comp=Z,1.0nm,0.9s,baz=136,slow=4.6,SNR=3.8
NVAR LR LR 19 28 44.4
comp=Z,25nm,20.9s,baz=150,slow=42
MDPB Devils Postpil 29.41 318 P P 19 14 12.8 +0.3
E28A Huff 29.43 351 P P 19 14 12.4 +0.2
E43A Lone Tree Farm 29.46 11 P P 19 14 11.5 -1.0
K57A Scipio Center 29.46 28 P P 19 14 11.4 -1.2
baz=217
FXWY Fox Creek 29.54 335 P P 19 14 14.4 +0.9
D32A Dogwood Acres, 29.61 357 P P 19 14 13.2 -0.6
RYN Ryan 29.67 320 P P 19 14 15.0 +0.4
KVN Kaiserville 29.68 321 P P 19 14 15.1 +0.4
M61A Granite Spring 29.70 33 P P 19 14 13.5 -1.1
baz=223
IMW Indian Meadow 29.72 336 P P 19 14 14.9 -0.3
L59A Walton 29.72 30 P P 19 14 14.3 -0.6
baz=220,SNR=6.3
L59A Walton 29.72 30 P P 19 14 13.7 -1.2
L59A IAmb IAmb 19 14 15.1
comp=Z,35nm,1.1s
H52A Wyevale 29.73 21 P P 19 14 13.7 -1.1
baz=209
J56A Wolcott 29.75 27 P P 19 14 14.2 -0.9
baz=216
J56A Wolcott 29.75 27 P P 19 14 14.0 -1.1
J56A IAmb IAmb 19 15 12.8
comp=Z,45nm,0.8s
FLWY Flagg Ranch 29.78 336 P P 19 14 15.3 -0.3
K58A Earlville 29.88 29 P P 19 14 15.3 -1.0
baz=218,SNR=6.1
K58A Earlville 29.88 29 P P 19 14 14.6 -1.7
K58A IAmb IAmb 19 14 16.4
comp=Z,37nm,1.2s
D41A Chassel 29.89 8 P P 19 14 14.9 -1.2
D41A pP pP 19 14 46.4 -1.2
E44A Grand Marais A 29.90 12 P P 19 14 16.1 -0.3
baz=196,SNR=5.3
E44A Grand Marais A 29.90 12 P P 19 14 16.1 -0.3
E44A IAmb IAmb 19 15 17.9
comp=Z,54nm,0.9s
F48A Evansville 29.94 17 P P 19 14 15.6 -1.1
baz=203
L60A Shokan 29.97 31 P P 19 14 15.9 -1.1
baz=221
H17A Grant Village 30.00 337 P P 19 14 19.6 +2.1
E46A Sault Ste Mari 30.01 14 P P 19 14 16.2 -1.1
F49A Sandfield 30.05 18 P P 19 14 16.8 -0.8
baz=204
SADO Sadowa 30.11 22 P P 19 14 16.8 -1.4
comp=Z,14nm,0.5s,baz=237,slow=7.9,SNR=14
SADO LR LR 19 28 33.8
comp=Z,73nm,18.4s,baz=288,slow=40
SADO Sadowa 30.11 22 P P 19 14 16.5 -1.7
SADO IAmb IAmb 19 14 17.9
comp=Z,23nm,0.9s
H53A Bobcaygeon 30.14 23 P P 19 14 17.4 -1.1
baz=211,SNR=19
KSCT Kent School, K 30.14 32 P P 19 14 17.4 -1.2
KSCT IAmb IAmb 19 14 18.6
comp=Z,35nm,1.0s
WAKR Walker 30.16 319 P P 19 14 19.8 +0.8
RLMT Red Lodge 30.16 339 P P 19 14 20.1 +1.2
baz=151,SNR=8.3
RLMT Red Lodge 30.16 339 P P 19 14 19.0 0.0
I55A Frankford 30.19 25 P P 19 14 17.9 -1.0
baz=213,SNR=6.7
PECO Prince Edward 30.23 26 P P 19 14 17.8 -1.5
J57A Williamstown 30.24 27 P P 19 14 18.2 -1.1
baz=217,SNR=6.6
J57A Williamstown 30.24 27 P P 19 14 17.9 -1.4
J57A IAmb IAmb 19 15 20.5
comp=Z,27nm,0.9s
M62A Hamden 30.25 33 P P 19 14 17.9 -1.6
baz=224
K59A Cooperstown 30.26 30 P P 19 14 18.9 -0.7
baz=220
YNE Yellowstone No 30.32 338 P P 19 14 20.1 -0.2
E47A Iron Bridge 30.34 16 P P 19 14 19.6 -0.6
baz=202
YHH Holmes Hill 30.44 337 P P 19 14 21.1 -0.4
L61A Hillsdale 1, H 30.45 32 P P 19 14 20.0 -1.3
baz=222
EYMN Ely 30.46 4 P P 19 14 20.8 -0.5
baz=186,SNR=27
EYMN Ely 30.46 4 P P 19 14 20.1 -1.2
EYMN IAmb IAmb 19 14 21.6
comp=Z,32nm,0.6s
DELO Deloro Mine 30.47 24 P P 19 14 19.9 -1.5
DELO IAmb IAmb 19 14 21.2
comp=Z,41nm,1.2s
CMB Columbia Colle 30.49 317 P P 19 14 23.4 +1.7
J58A Remsen 30.51 28 P P 19 14 20.6 -1.2
baz=218
J58A Remsen 30.51 28 P P 19 14 20.5 -1.2
MDND Maddock 30.54 353 P P 19 14 22.7 +0.7
baz=170,SNR=6.3
MDND Maddock 30.54 353 P P 19 14 21.6 -0.3
D46A Sault St. Mari 30.57 14 P P 19 14 21.5 -0.7
baz=200,SNR=8.2
G53A Haliburton 30.60 22 P P 19 14 21.4 -1.1
baz=211
K60A Five Rivers En 30.60 31 P P 19 14 21.8 -0.8
baz=221
PNTR Pine Nut 30.61 320 P P 19 14 22.4 -0.6
YHL Hebgen Lake 30.62 336 P P 19 14 22.1 -0.9
LAO LASA Array 30.66 344 P P 19 14 23.4 +0.3
baz=158
E48A Lockeyer 30.67 17 P P 19 14 22.2 -0.9
baz=204
H55A Tweed 30.67 25 P P 19 14 22.0 -1.1
baz=214,SNR=6.1
M63A Gales Ferry 30.67 34 P P 19 14 22.4 -0.8
baz=226
AGMN Agassiz Nation 30.73 358 P P 19 14 23.8 +0.2
baz=177,SNR=79
AGMN Agassiz Nation 30.73 358 P P 19 14 23.3 -0.3
B35A Bob, Littlefor 30.78 1 P P 19 14 23.2 -0.9
B35A IAmb IAmb 19 14 24.8
comp=Z,49nm,0.9s
I57A Carthage 30.80 27 P P 19 14 22.9 -1.4
baz=217
F51A Arnstein 30.85 20 P P 19 14 23.1 -1.6
baz=208,SNR=6.3
I58A Old Forge 30.91 28 P P 19 14 24.5 -0.9
baz=218,SNR=11
F52A Sundridge 30.93 21 P P 19 14 23.9 -1.5
baz=209,SNR=8.7
K61A Williamstown 30.95 31 P P 19 14 25.0 -0.6
baz=222,SNR=11
D47A Chapleau 30.95 15 P P 19 14 24.6 -1.0
baz=201,SNR=5.8

J59A Piesco 30.95 29 P P 19 14 24.6 -1.1
baz=219
J59A Piesco 30.95 29 P P 19 14 24.1 -1.6
J59A IAmb IAmb 19 14 29.7
comp=Z,42nm,1.5s
G54A Lake Saint Pet 31.03 23 P P 19 14 25.2 -1.2
baz=212,SNR=6.3
H56A Elgin 31.08 26 P P 19 14 26.3 -0.4
baz=215
L61B Northampton 31.08 32 P P 19 14 25.7 -1.1
baz=223
MCMT McKenzie Canyo 31.26 335 P P 19 14 29.7 +1.0
J60A Lant Hill Farm 31.30 30 P P 19 14 27.7 -1.0
baz=221
D48A Paudash Townsh 31.40 17 P P 19 14 28.4 -1.1
baz=204,SNR=10
G55A Calabogie 31.43 25 P P 19 14 28.7 -1.2
baz=214
K62A Royalston 31.46 32 P P 19 14 30.0 -0.2
baz=224
NCB Newcomb 31.47 29 P P 19 14 28.9 -1.4
NCB IAmb IAmb 19 14 30.2
comp=Z,34nm,1.3s
MFID Camas Ranch 31.48 330 P P 19 14 30.0 -0.5
I59A Olmsteadville 31.50 29 P P 19 14 29.4 -1.1
baz=220
ALGO Algonquin Park 31.52 22 P P 19 14 29.3 -1.2
baz=211,SNR=6.2
E51A G1948 Merrick 31.52 20 P P 19 14 29.4 -1.2
baz=208,SNR=12
E52A Mattawa 31.59 21 P P 19 14 29.4 -1.7
baz=210
DLMT Dillon 31.59 335 P P 19 14 31.0 -0.5
D49A Beulah Townshi 31.62 17 P P 19 14 30.2 -1.2
baz=204,SNR=5.4
L64A Middleborough 31.69 35 P P 19 14 31.2 -1.0
baz=227
J61A Chester 31.80 31 P P 19 14 32.6 -0.5
baz=222
I60A Shoreham 31.81 30 P P 19 14 32.2 -1.0
baz=221,SNR=5.7
LONY Lake Ozonia 31.82 28 P P 19 14 32.4 -0.9
baz=218,SNR=7.7
LONY Lake Ozonia 31.82 28 P P 19 14 32.2 -1.0
LONY IAmb IAmb 19 14 33.3
comp=Z,23nm,0.8s
H58A Gabriels 31.84 28 P P 19 14 32.3 -1.1
baz=213,SNR=5.6
DGMT Dagmar 31.87 348 P P 19 14 35.0 +1.3
baz=162
DGMT Dagmar 31.87 348 P P 19 14 33.9 +0.3
DGMT IAmb IAmb 19 14 36.1
comp=Z,33nm,0.8s
LRM Limekiln Ridge 31.92 336 P P 19 14 36.4 +2.0
D50A G1974 Best Tow 31.97 19 P P 19 14 33.1 -1.4
baz=207
E53A Dumoine, Ponti 32.02 22 P P 19 14 33.8 -1.1
baz=211
G57A Newington 32.02 27 P P 19 14 33.9 -1.1
baz=217
D51A Lot 18 Range I 32.05 20 P P 19 14 33.8 -1.4
baz=208,SNR=7.7
F55A Otter Lake 32.06 24 P P 19 14 34.4 -0.9
baz=214
ORIO Orleans, Innes 32.08 26 P P 19 14 34.7 -0.8
WVOR Wild Horse Val 32.22 326 P P 19 14 38.0 +1.1
H59A Cadyville 32.24 28 P P 19 14 35.7 -1.2
baz=219
E54A Lac Daplat, Po 32.24 23 P P 19 14 35.9 -1.0
baz=212,SNR=8.5
I61A Oroboro, Fairl 32.40 31 P P 19 14 37.5 -0.8
baz=222
FRNY Flat Rock 32.43 28 P P 19 14 37.5 -1.1
FRNY IAmb IAmb 19 15 49.6
comp=Z,58nm,1.6s
G58A Ormstown 32.47 28 P P 19 14 38.2 -0.7
baz=218
D53A Lac Vacive, Po 32.61 22 P P 19 14 38.8 -1.3
D53A IAmb IAmb 19 14 40.4
comp=Z,53nm,1.4s
H60A Morristown 32.63 30 P P 19 14 39.6 -0.8
baz=221
ULM Lac du Bonnet 32.68 358 P P 19 14 40.1 -0.5
comp=Z,62nm,0.8s,baz=175,slow=9.8,SNR=69
ULM LR LR 19 32 05.6
comp=Z,34nm,18.8s,baz=124,slow=44
ULM Lac du Bonnet 32.68 358 P P 19 14 39.6 -1.0
E55A Moerf-Lytto 32.69 24 P P 19 14 39.8 -1.0
baz=214
F57A Harrington 32.72 26 P P 19 14 40.4 -0.7
baz=217
LBNH Lisbon 32.76 31 P P 19 14 40.8 -0.7
baz=223
LBNH Lisbon 32.76 31 P P 19 14 40.8 -0.7
J08A Circle Bar Ran 32.77 327 P P 19 14 44.0 +2.3
J08A pP pP 19 15 17.2 +3.8
J08A IAmb IAmb 19 15 20.5
comp=Z,45nm,1.0s
I62A Tamworth 32.79 32 P P 19 14 41.3 -0.4
baz=224
EGMT Eagleton 32.88 341 P P 19 14 43.7 +1.2
baz=152
EGMT Eagleton 32.88 341 P P 19 14 43.7 +1.2
H61A Lyndonville 32.98 30 P P 19 14 42.6 -0.8
baz=222
D54A Lac Fusel, La 33.04 23 P P 19 14 42.8 -1.1
baz=212,SNR=9.1
TRQ Mont Tremblant 33.10 26 P P 19 14 43.3 -1.2
E56A St. Veronique 33.16 25 P P 19 14 44.0 -0.9
baz=216,SNR=9.7
G60A Masonville 33.21 29 P P 19 14 44.4 -0.9
baz=221
BMO Blue Mountains 33.26 330 P P 19 14 46.9 +0.9
I63A Otisfield 33.30 32 P P 19 14 45.3 -0.9
baz=225
MSO Missoula 33.33 336 P P 19 14 47.8 +1.2
baz=145,SNR=6.0
MSO Missoula 33.33 336 P P 19 14 47.8 +1.2
D55A Sainte-Anne-du 33.38 24 P P 19 14 45.8 -1.0
baz=214,SNR=16
H62A Milan 33.38 31 P P 19 14 45.9 -1.0
baz=223
E57A Chemin Saint G 33.42 26 P P 19 14 46.2 -1.0
baz=217,SNR=6.6
F59A Saint Guilaume 33.57 28 P P 19 14 47.9 -0.5
baz=220
VLDQ Val d'Or 33.58 21 P P 19 14 47.1 -1.4
D56A ZEC Mazanza, M 33.69 25 P P 19 14 48.3 -1.2
baz=216,SNR=9.7
G61A St-Isidore-de- 33.72 30 P P 19 14 49.4 -0.5
baz=222
E58A La Victoria 33.76 27 P P 19 14 49.3 -0.8
baz=218,SNR=8.5
I07A Izee 33.81 327 P P 19 14 51.1 +0.4
H63A New Sharon 34.01 32 P P 19 14 51.7 -0.6
baz=225
D57A Chemin Vers le 34.01 26 P P 19 14 51.5 -0.8
baz=217,SNR=9.6
F60A Warwick 34.04 29 P P 19 14 51.7 -0.8
baz=221
F10A Beach Ranch, E 34.06 331 P P 19 14 54.2 +1.3
F10A IAmb IAmb 19 15 31.0
comp=Z,22nm,0.8s
YBH Yreka Blue Hor 34.10 321 pP pP 19 15 26.9 +1.8
comp=Z,1.6nm,0.7s,baz=102,slow=8.1,SNR=2.5
NNA Nana 34.14 148 P P 19 14 55.0 +1.2
NNA IAmb IAmb 19 14 57.8
comp=Z,56nm,1.3s
G62A West of Eustis 34.16 31 P P 19 14 53.0 -0.5
baz=224,SNR=9.7
G62A West of Eustis 34.16 31 P P 19 14 52.9 -0.7
G62A IAmb IAmb 19 14 54.1
comp=Z,40nm,0.9s
JTMT Jette 34.22 336 P P 19 14 55.5 +1.3
H64A Troy 34.41 33 P P 19 14 55.2 -0.5
baz=226
F61A St Evariste 34.49 30 P P 19 14 56.0 -0.5
baz=222
D58A Chemin du LacG 34.50 26 P P 19 14 55.8 -0.6
baz=218,SNR=11
G63A Kingsbury 34.54 32 P P 19 14 56.3 -0.5
baz=225
E60A Ste Agathe de 34.57 29 P P 19 14 56.3 -0.8
baz=221,SNR=5.0
PKME Peaks-Kenny Pk 34.81 32 P P 19 14 58.0 -1.1
baz=225
D59A Saint-Raymond 34.88 28 P P 19 14 59.3 -0.5

baz=220
MATQ Matagami 34.95 19 P P 19 14 59.2 -1.1
baz=209,SNR=28
H65A Eastbrook 34.95 34 P P 19 14 59.8 -0.5
baz=227
E61A Lac Etchemin 35.06 29 P P 19 15 01.2 -0.1
baz=222
G64A Maxfield 35.07 32 P P 19 15 00.3 -1.1
baz=226
WALA Waterton Lakes 35.17 338 P P 19 15 04.2 +1.8
F63A Nahmakanta, Br 35.21 32 P P 19 15 01.7 -0.9
baz=225
D60A Saint Jean D'O 35.22 28 P P 19 15 01.8 -0.8
baz=221
H04A Detroit Lake 35.64 325 P P 19 15 07.4 +1.1
G65A Princeton 35.65 33 P P 19 15 05.4 -0.9
baz=228,SNR=6.4
G65A Princeton 35.65 33 P P 19 15 05.0 -1.4
G65A IAmb IAmb 19 15 06.4
comp=Z,43nm,0.9s
D61A St Aubert, Com 35.77 29 P P 19 15 06.8 -0.6
baz=222,SNR=5.5
NEW Newport 35.78 334 P P 19 15 09.6 +2.1
comp=Z,4.9nm,0.7s,baz=85,slow=5.9,SNR=4.5
NEW Newport 35.78 334 P P 19 15 08.9 +1.4
baz=141
C09A Chrisman Ranch 35.92 332 P P 19 15 09.2 +0.6
E63A Oxbow 36.05 31 P P 19 15 09.0 -0.8
baz=225
E63A Oxbow 36.05 31 P P 19 15 08.9 -0.8
E63A IAmb IAmb 19 15 09.9
comp=Z,26nm,0.8s
CHGQ Chibougamau 36.18 22 P P 19 15 09.6 -1.2
baz=214,SNR=5.6
D62A Allapoint, All 36.21 30 P P 19 15 10.5 -0.6
baz=224,SNR=9.1
D62A Allapoint, All 36.21 30 P P 19 15 09.8 -1.3
D62A IAmb IAmb 19 15 11.7
comp=Z,66nm,1.2s
E64A Bridgewater 36.34 32 P P 19 15 11.6 -0.6
baz=226
LTY Liberty 36.62 330 P P 19 15 15.8 +1.1
D63A Stockholm 36.64 31 P P 19 15 14.0 -0.7
baz=225,SNR=6.7
BOAV Boa Vista 36.64 110 eP P 19 15 13.2 -2.0
LON Longmire 36.83 328 P P 19 15 17.0 +0.6
FFC Flin Flon 37.58 353 P P 19 15 22.9 +0.3
FFC IAmb IAmb 19 15 25.2
comp=Z,28nm,0.7s
BATG Bathurst New B 37.82 32 P P 19 15 23.5 -1.2
BATG IAmb IAmb 19 15 24.7
comp=Z,21nm,0.8s
PTGA Pitinga 38.59 114 eP P 19 15 30.7 -0.8
LLLB Lillooet 39.59 333 P P 19 15 40.3 +0.9
SAML Samuel 40.65 128 P P 19 15 47.0 -1.6
SAML Samuel 40.65 128 eP P 19 15 47.5 -1.1
LPAZ La Paz 42.50 141 P P 19 16 05.0 +0.7
comp=Z,30nm,0.9s,baz=330,slow=6.1,SNR=65
LPAZ S S 19 22 16.1 +0.2
comp=Z,0.8nm,0.6s,baz=133,slow=5.4,SNR=4.0
LPAZ LR LR 19 32 31.2
comp=Z,40nm,18.7s,baz=326,slow=34
LPAZ La Paz 42.50 141 P P 19 16 04.6 +0.3
LPAZ IAmb IAmb 19 16 05.9
comp=Z,27nm,0.8s
LPAZ La Paz 42.50 141 eP P 19 16 04.7 +0.4
SCHQ Schefferville 42.90 23 P P 19 16 05.1 -1.2
comp=Z,12nm,0.7s,baz=221,slow=5.5,SNR=12
SCHQ LR LR 19 36 59.6
comp=Z,151nm,18.5s,baz=16,slow=40
SCHQ Schefferville 42.90 23 P P 19 16 05.0 -1.4
PB12 IPOC Station P 43.09 145 P P 19 16 09.0 +0.6
PB12 IAmb IAmb 19 16 10.6
comp=Z,35nm,0.9s
PB16 IPOC Station P 43.31 144 P P 19 16 11.6 +0.8
PB16 IAmb IAmb 19 16 13.8
comp=Z,39nm,0.9s
MNMC Minye Minye 43.91 145 P P 19 16 16.3 +1.2
PSGCX Pisagua 44.00 146 P P 19 16 16.4 +0.7
PB11 IPOC Station P 44.39 145 P P 19 16 19.6 +0.8
PB11 IAmb IAmb 19 16 21.2
comp=Z,83nm,1.0s
GO01 Chusmiza 44.56 145 P P 19 16 21.7 +1.1
GO01 IAmb IAmb 19 16 23.6
comp=Z,51nm,0.9s
PB08 IPOC Station P 44.97 145 P P 19 16 24.8 +1.1
PB08 IAmb IAmb 19 16 26.5
comp=Z,31nm,1.0s
PATCX Punta Patache 44.99 147 P P 19 16 24.2 +0.7
PATCX IAmb IAmb 19 16 26.0
comp=Z,80nm,1.5s
VILB Vilhena 45.47 129 eP P 19 16 27.0 -0.3
PB01 IPOC Station P 45.52 146 P P 19 16 28.4 +0.6
PB07 IPOC Station P 45.88 147 P P 19 16 30.6 0.0
PB07 IAmb IAmb 19 16 33.0
comp=Z,33nm,0.7s
PB09 IPOC Station P 46.27 147 P P 19 16 34.4 +0.7
PB09 IAmb IAmb 19 16 36.0
comp=Z,34nm,0.9s
PB06 IPOC Station P 46.85 148 P P 19 16 38.6 +0.5
PB06 IAmb IAmb 19 16 40.6
comp=Z,35nm,0.9s
YKA Yellowknife Ar 47.07 347 P P 19 16 39.7 +0.5
comp=Z,13nm,0.7s,baz=152,slow=7.8,SNR=102
YKA pP pP 19 17 14.9 +2.1
comp=Z,6.0nm,0.7s,baz=152,slow=7.9,SNR=4.5
YKA PP PP 19 18 32.2 +1.0
comp=Z,10.0nm,1.0s,baz=147,slow=9.9,SNR=7.9
YKA LR LR 19 39 57.4
comp=Z,29nm,18.8s,baz=0.0,slow=40
LVC Limon Verde 47.11 147 P P 19 16 41.4 +1.0
comp=Z,14nm,0.7s,baz=322,slow=5.3,SNR=14
LVC Limon Verde 47.11 147 P P 19 16 41.6 +1.1
LVC Limon Verde 47.11 147 eP P 19 16 41.0 +0.6
PDRB Porto dos Gac 47.27 125 eP P 19 16 40.1 -1.3
PTLB Pontes e Lacer 47.88 131 eP P 19 16 45.5 -0.5
PB14 IPOC Station P 48.05 150 P P 19 16 47.6 +0.1
PB14 IAmb IAmb 19 16 49.9
comp=Z,32nm,1.1s
DLBC Dease Lake 48.46 336 P P 19 16 53.5 +3.4
comp=Z,17nm,0.8s,baz=141,slow=6.1,SNR=26
DLBC pP pP 19 17 24.4 +0.4
comp=Z,5.0nm,0.8s,baz=162,slow=7.8,SNR=2.4
DLBC Dease Lake 48.46 336 IAmb IAmb 19 16 54.2
comp=Z,21nm,0.8s
GO02 Mina Guanaco 48.90 149 P P 19 16 54.4 +0.3
FRB Frobisher Bay 49.52 15 P P 19 16 57.4 -0.5
comp=Z,15nm,0.6s,baz=222,slow=9.1,SNR=51
FRB PP PP 19 18 53.2 -0.2
comp=Z,6.7nm,0.9s,baz=243,slow=7.6,SNR=3.4
SALV Santo Antonio 50.70 129 eP P 19 17 06.9 -0.5
GO04 Tololo Observa 52.65 154 P P 19 17 22.1 +0.1
GO04 IAmb IAmb 19 17 24.4
comp=Z,42nm,1.1s
HYT Haines Junctio 52.92 335 P P 19 17 23.9 +0.5
SMTB Santa Maria do 53.30 116 eP P 19 17 26.4 -0.4
ARAG Araguaiana, MT 53.53 126 eP P 19 17 28.0 -0.4
AQDB Aquidauana 53.66 133 eP P 19 17 28.8 -0.4
ROSB Rosrio 53.70 107 eP P 19 17 28.7 -1.1
C2SB Chapadao do Su 54.61 129 eP P 19 17 36.8 +0.6
ROC1 El Roble 55.02 156 P P 19 17 39.8 +0.6
BALM Baldy 55.02 334 P P 19 17 38.9 +0.3
TGL Tana Glacier 55.08 333 P P 19 17 39.8 +0.7
PEL Peldehue 55.30 156 P P 19 17 41.1 +0.2
PEL IAmb IAmb 19 17 43.2
comp=Z,50nm,1.1s
MCARA McCarthy VSAT 55.48 334 P P 19 17 43.4 +1.6
MCARA IAmb IAmb 19 18 39.5
comp=Z,14nm,0.8s
DAWY Dawson 55.52 338 P P 19 17 42.7 +0.6
EPYK Eagle Plains 56.03 341 P P 19 17 46.6 +0.9
baz=129,SNR=6.1
EPYK Eagle Plains 56.03 341 P P 19 17 46.1 +0.5
INK Inuvik 56.40 344 P P 19 17 49.2 +1.1
comp=Z,15nm,0.8s,baz=119,slow=7.6,SNR=64
INK pP pP 19 18 24.4 +1.4
comp=Z,4.9nm,0.7s,baz=137,slow=9.5,SNR=4.0
INK Inuvik 56.40 344 P P 19 17 48.4 +0.3
INK IAmb IAmb 19 17 50.2
comp=Z,18nm,0.8s
GO05 Huala 56.48 158 P P 19 17 49.0 -0.3
GO05 IAmb IAmb 19 17 50.8
comp=Z,29nm,1.0s
BDFB Brasilia 56.49 123 P P 19 17 49.8 +0.1
comp=Z,4.5nm,0.5s,baz=285,slow=8.6,SNR=8.9

BDFB Brasilia 56.49 123 P P 19 17 49.5 -0.3
BDFB IAmb IAmb 19 17 51.4
comp=Z,14nm,1.0s
HIN Hinchinbrook I 56.52 332 P P 19 17 51.4 +2.1
HIN IAmb IAmb 19 18 28.7
comp=Z,27nm,1.0s
EGAK Eagle 56.55 338 P P 19 17 50.1 +0.7
CPUP Villa Florida 56.64 139 P P 19 17 49.5 -1.0
comp=Z,12nm,1.0s,baz=336,slow=8.1,SNR=14
CPUP LR LR 19 41 13.3
comp=Z,44nm,19.8s,baz=267,slow=35
CPUP Villa Florida 56.64 139 P P 19 17 49.0 -1.5
CPUP IAmb IAmb 19 17 50.9
comp=Z,20nm,1.2s
CPUP Villa Florida 56.64 139 *e*P P 19 17 50.1 -0.4
FID Port Fidalgo 56.66 332 P P 19 17 51.9 +1.7
FID IAmb IAmb 19 18 29.2
comp=Z,18nm,1.1s
NBPS Pedro II - PI 56.75 108 *e*P P 19 17 51.7 0.0
SFJD Kangerlussuaq 56.98 19 P P 19 17 51.6 -0.7
SFJD IAmb IAmb 19 17 52.5
comp=Z,20nm,0.6s
ITRB Iturama 57.03 128 *e*P P 19 17 53.8 +0.4
DOT Dot Lake 57.03 336 P P 19 17 53.5 +0.7
SCRK Sand Creek 57.17 337 P P 19 17 53.8 -0.1
RES Resolute Bay 57.19 360 P P 19 17 53.2 -0.5
RES IAmb IAmb 19 17 54.8
comp=Z,15nm,0.8s
TRCB Terra Rica 57.32 133 *e*P P 19 17 55.0 -0.5
A36M Sachs Harbour 57.35 349 P P 19 17 56.0 +1.2
baz=145
RIDG Independent Ri 57.38 336 P P 19 17 57.1 +1.8
SCM Sheep Creek Mo 57.51 333 P P 19 17 57.1 +0.9
SCM IAmb IAmb 19 18 34.6
comp=Z,18nm,1.2s
PCMB Pacaembu 57.54 131 *e*P P 19 17 57.0 0.0
IPMB Ipameri, GO 57.65 125 *e*P P 19 17 57.8 -0.1
SML Sawmill 57.93 333 P P 19 18 00.1 +0.9
SML IAmb IAmb 19 19 07.6
comp=Z,38nm,1.6s
GHO Glory Hole Cre 58.17 333 P P 19 18 01.7 +0.9
RC01 Rabbit Creek A 58.25 332 P P 19 18 01.3 -0.1
BRLK Bradley Lake 58.28 330 P P 19 18 01.9 +0.3
BRLK IAmb IAmb 19 18 44.0
comp=Z,22nm,1.3s
KDAK Kodiak Island 58.45 328 LR LR 19 43 59.4
comp=Z,32nm,18.3s,baz=114,slow=36
HDA Harding Lake 58.51 336 P P 19 18 04.6 +1.5
baz=118
HDA Harding Lake 58.51 336 P P 19 18 04.1 +1.0
HDA pP pP 19 18 37.2 -0.9
PRP Porcupine Dome 58.52 338 P P 19 18 04.1 +0.8
PRP pP pP 19 18 37.6 -0.7
PRP IAmb IAmb 19 18 43.9
comp=Z,12nm,0.8s
IL31 58.66 337 P P 19 18 04.5 +0.5
IL31 pP pP 19 18 39.2 +0.2
ILAR Eielson Array 58.66 337 P P 19 18 05.2 +1.1
comp=Z,2.4nm,0.5s,baz=146,slow=5.1,SNR=54
ILAR pP pP 19 18 39.5 +0.4
comp=Z,4.1nm,0.8s,baz=107,slow=8.4,SNR=8.4
ILAR PcP PcP 19 18 53.7 +1.2
comp=Z,3.1nm,0.8s,baz=127,slow=4.5,SNR=6.8
RND Reindeer 58.82 335 P P 19 18 06.5 +1.2
RND IAmb IAmb 19 18 46.1
comp=Z,16nm,0.8s
CCB Clear Creek Bu 58.95 336 P P 19 18 06.4 +0.3
PTGB Pitanga 58.97 134 *e*P P 19 18 06.6 -0.3
MCK McKinley 58.99 335 P P 19 18 07.3 +0.8
MCK pP 19 18 42.4 +0.9
MCK IAmb IAmb 19 19 01.9
comp=Z,39nm,1.6s
POKR Poker Plat Res 59.03 337 P P 19 18 07.9 +1.2
baz=117
COLA College 59.07 336 P P 19 18 07.8 +0.9
COLA IAmb IAmb 19 18 46.8
comp=Z,11nm,0.7s
TCOL CIGO, UAF Yank 59.08 336 P P 19 18 07.7 +0.7
baz=117
JANB Januaria 59.19 120 *e*P P 19 18 09.3 +0.8
BB19B Bebedouro 59.21 129 *e*P P 19 18 09.1 +0.5
BWN Browne 59.39 335 P P 19 18 09.3 +0.1
RSO Redoubt South 59.41 331 P P 19 18 10.7 +1.2
NEA Nenana 59.41 336 P P 19 18 09.8 +0.5
NEA IAmb IAmb 19 18 53.2
comp=Z,41nm,1.0s
TRF Thorofare Moun 59.43 334 P P 19 18 10.4 +0.8
TRF IAmb IAmb 19 18 50.0
comp=Z,31nm,0.8s
ITQB Itaqui 59.49 142 *e*P P 19 18 10.8 +0.5
NBCL Cascavel-CE 59.57 106 *e*P P 19 18 10.6 -0.5
KTH Kantishna Hill 59.73 334 P P 19 18 12.2 +0.6
KTH IAmb IAmb 19 18 52.5
comp=Z,14nm,0.8s
FRTB Fartura 59.84 131 *e*P P 19 18 12.7 -0.2
BPAW Bear Paw Mtn. 59.97 335 P P 19 18 13.2 0.0
BPAW IAmb IAmb 19 18 54.6
comp=Z,15nm,0.8s
PPLA Purkeypile 60.01 333 P P 19 18 14.1 +0.5
MLY Manley 60.25 336 P P 19 18 16.0 +0.9
MLY IAmb IAmb 19 18 55.3
comp=Z,19nm,0.8s
NBMA Muriti-CE 60.40 109 *e*P P 19 18 16.7 -0.2
KULLO Kullorsuaq 60.59 11 *i* P P 19 18 17.2 +0.1
comp=Z,13nm,0.9s
ITAB Concordia 60.60 136 *e*P P 19 18 17.8 -0.1
NBPN Ponto Novo - B 60.65 114 *e*P P 19 18 17.8 -0.7
ANGG Ammassalik, Gr 60.78 23 P P 19 18 16.9 -1.6
COLD Coldfoot 60.98 338 P P 19 18 21.1 +1.1
TOLK Toolik Lake Re 61.40 340 P P 19 18 24.0 +1.2
baz=117,SNR=6.9
TOLK Toolik Lake Re 61.40 340 P P 19 18 23.7 +0.9
VAO Valinhos 61.53 129 *e*P P 19 18 24.8 +0.4
SPB Sao Paulo 61.54 130 P P 19 18 24.1 -0.2
SPB IAmb IAmb 19 18 25.6
comp=Z,30nm,1.0s
SPB Sao Paulo 61.54 130 *e*P P 19 18 24.4 +0.1
TTA Tatalina 61.67 333 P P 19 18 25.1 +0.4
CPSB Cacapava Do Su 61.94 140 *e*P P 19 18 26.1 -0.7
BSCB Bom Sucesso 62.02 126 *e*P P 19 18 28.2 +0.5
PET01 Itanhaem-SP 62.08 131 *e*P P 19 18 28.6 +0.7
PLCA Paso Flores 62.09 160 P P 19 18 28.9 +1.1
comp=Z,27nm,1.0s,baz=334,slow=7.9,SNR=36
PLCA pP pP 19 19 03.0 -0.5
comp=Z,4.1nm,0.7s,baz=340,slow=9.3,SNR=2.2
PLCA Paso Flores 62.09 160 P P 19 18 28.5 +0.7
PLCA IAmb IAmb 19 18 30.0
comp=Z,42nm,1.1s
PLCA Paso Flores 62.09 160 *e*P P 19 18 28.8 +1.1
RCBR Riachuelo 62.38 106 *e*P P 19 18 30.1 -0.1
PARB Paraibuna 62.72 129 *e*P P 19 18 32.6 +0.3
PLTB Pedras Altas 62.80 141 *e*P P 19 18 32.5 -0.1
CNLB Canela 62.82 137 *e*P P 19 18 32.9 +0.1
ESAR Angra dos Reis 63.42 128 *e*P P 19 18 38.2 +1.3
SUMG Summit 63.55 16 P P 19 18 37.1 -0.3
SUMG IAmb IAmb 19 18 40.6
comp=Z,9.9nm,0.7s
SUMG Summit 63.55 16 *i* P P 19 18 37.4 0.0
comp=Z,25nm,0.8s
SJMB Sao Joao De Ma 63.63 122 *e*P P 19 18 38.9 +0.6
MAN01 Angra dos Reis 63.70 127 *e*P P 19 18 39.7 +1.0
VAS01 Vassouras-RJ 63.77 126 *e*P P 19 18 39.9 +0.8
BSFB Barra de Sao F 63.97 122 *e*P P 19 18 41.3 +0.8
OGAUY Aigu 64.00 144 *e*P P 19 18 41.5 +1.1
ANM Nome 66.10 334 P P 19 18 55.0 +1.4
DAG Danmarks Havn 69.85 14⇑ *i*P P 19 19 16.2 -0.6
comp=Z,16nm,0.6s
NOR Nord 71.02 9 *i* P P 19 19 23.9 +0.1
comp=Z,6.2nm,0.6s
RAR Rarotonga 74.58 241 LR LR 19 43 16.4
comp=Z,31nm,19.9s,baz=320,slow=28
KPL Plockton 74.87 34 *e*P P 19 19 46.3 -0.5
KPL IAmb IAmb 19 19 47.4
comp=Z,54nm,0.8s
CLGH Cloghs, Cushen 74.96 37 *e*P P 19 19 46.6 -0.8
CLGH IAmb IAmb 19 19 48.4
comp=Z,27nm,0.7s
KAC Achnashellach 75.03 34 *e*P P 19 19 47.5 -0.3
LAWE Loch Awe, Argy 75.17 35 *e*P P 19 19 47.7 -0.9
LAWE IAmb IAmb 19 19 49.2
comp=Z,25nm,0.8s
GMM Mts of Mourne 75.19 37 *e*P P 19 19 48.4 -0.3
USHA Ushuaia 75.42 165 P P 19 19 51.5 +1.7
comp=Z,12nm,0.9s,baz=292,slow=5.7,SNR=2.8

MDO Dochfour 75.54 34 *e*P P 19 19 50.3 -0.4
BIGH Upper Bighouse 75.60 33 *e*P P 19 19 51.3 +0.4
PGBU Glenifferbraes 75.76 36 *e*P P 19 19 51.8 -0.1
PGBU IAmb IAmb 19 19 52.6
comp=Z,46nm,1.0s
EAB Aberfoyle 75.77 35 *e*P P 19 19 51.8 -0.2
GAL1 Galloway 75.80 37 *e*P P 19 19 52.0 -0.2
GAL1 IAmb IAmb 19 19 52.1
comp=Z,70nm,1.4s
PGAV Gavieira, Arco 75.81 50 *e*P P 19 19 52.7 0.0
comp=Z,42nm,1.2s
INVG Invergeldie, C 75.89 35 *e*P P 19 19 52.4 -0.3
INVG IAmb IAmb 19 19 53.2
comp=Z,30nm,0.8s
MLA1 Latheron 75.92 33 *e*P P 19 19 52.7 -0.1
WIM Isle of Man 75.95 37 *e*P P 19 19 53.3 +0.2
IOMK Kirk Michael 75.99 37 *e*P P 19 19 53.2 -0.1
IOMK IAmb IAmb 19 19 53.7
comp=Z,52nm,0.7s
PCAS Casmilo, Conde 76.00 52 *e*P P 19 19 54.4 +0.7
comp=Z,55nm,1.0s
NEWG New Galloway 76.02 36 *e*P P 19 19 53.6 +0.1
NEWG IAmb IAmb 19 19 54.2
comp=Z,38nm,1.1s
COI Coimbra 76.04 52 *e*P P 19 19 55.8 +1.9
MCD Coleburn Disti 76.11 34 *e*P P 19 19 53.9 0.0
RSBS Rosebush, Pemb 76.31 40 *e*P P 19 19 54.5 -0.7
RSBS IAmb IAmb 19 19 55.6
comp=Z,32nm,1.0s
PTEO Sao Teotonio 76.32 55 *e*P P 19 19 56.4 +0.9
PVIS Viseu 76.33 51 *e*P P 19 19 55.9 +0.3
comp=Z,42nm,1.0s
PNCL Nicolau / Gran 76.36 54 *e*P P 19 19 56.3 +0.6
comp=Z,33nm,1.2s
PMTG Montargil 76.40 53 *e*P P 19 19 57.8 +1.8
comp=Z,36nm,0.9s
EDU Dundee 76.43 35 *e*P P 19 19 55.7 0.0
MORF Marmelete 76.43 55 *e*P P 19 19 55.6 -0.6
MORF Marmelete 76.43 55 *e*P P 19 19 57.4 +1.2
comp=Z,52nm,1.6s
EDI Edinburgh 76.46 35 *e*P P 19 19 55.8 -0.1
EDI IAmb IAmb 19 19 56.6
comp=Z,46nm,0.7s
ESK Eskdalemuir 76.56 36 *e*P P 19 19 56.1 -0.4
ESK IAmb IAmb 19 19 57.0
comp=Z,38nm,0.8s
ESK Eskdalemuir 76.56 36 P P 19 19 55.6 -0.9
ESK IAmb IAmb 19 19 57.3
comp=Z,38nm,0.8s
EBL Broad Law 76.56 36 *e*P P 19 19 57.0 +0.5
DRUM Mains of Drumt 76.64 34 *e*P P 19 19 56.9 0.0
DRUM IAmb IAmb 19 19 57.6
comp=Z,72nm,0.6s
MESJ Messejana 76.66 54 *e*P P 19 19 56.9 -0.5
MESJ AMb AMB 19 19 58.9
comp=Z,22nm,0.9s
MESJ Messejana 76.66 54 *e*P P 19 19 58.0 +0.6
comp=Z,22nm,1.0s
ESY Stoneypath 76.77 35 *e*P P 19 19 57.8 +0.1
PCBR Castelo Branco 76.81 52 *e*P P 19 19 59.0 +0.8
comp=Z,42nm,1.2s
PCVE Castro Verde 76.84 54 *e*P P 19 19 59.1 +0.7
comp=Z,29nm,1.3s
MVO Moncorvo 76.88 51 *e*P P 19 19 59.1 +0.4
comp=Z,44nm,1.2s
PBEJ Beja 76.89 54 *e*P P 19 19 59.4 +0.7
comp=Z,34nm,1.1s
PBRG Braganca 76.96 50 *e*P P 19 19 59.3 +0.2
comp=Z,38nm,1.3s
PMRV Marv??o 76.96 53 *e*P P 19 19 59.4 +0.3
comp=Z,47nm,1.1s
PBDV Barranco-do-Ve 77.00 55 *e*P P 19 20 00.4 +1.0
comp=Z,56nm,1.7s
PVAQ Vaqueiros 77.14 55 *e*P P 19 20 01.2 +1.1
comp=Z,49nm,1.7s
PVAQ Vaqueiros 77.14 55 P P 19 20 00.7 +0.6
PVAQ IAmb IAmb 19 20 01.8
comp=Z,30nm,1.0s
BILL Bilibino 77.30 338 P P 19 20 00.1 -0.3
HLM1 Long Mynd 77.32 39 *e*P P 19 20 00.4 -0.4
HLM1 IAmb IAmb 19 20 01.5
comp=Z,26nm,0.9s
MCH1 Michaelchurch 77.36 39 *e*P P 19 20 00.6 -0.4
MCH1 IAmb IAmb 19 20 01.5
comp=Z,12nm,0.8s
EDMD Edmundbyers 77.36 36 *e*P P 19 20 01.3 +0.3
EDMD IAmb IAmb 19 20 02.0
comp=Z,58nm,0.9s
HPK Haverah Park 77.75 37 *e*P P 19 20 03.3 +0.2
HPK IAmb IAmb 19 20 04.2
comp=Z,34nm,0.9s
LBWR Ladybower, Pea 77.81 38 *e*P P 19 20 03.9 +0.3
LBWR IAmb IAmb 19 20 05.3
comp=Z,61nm,0.9s
HORN Hornachuelos 78.94 54 P P 19 20 10.7 +0.6
SNR=14
PAB San Pablo 79.23 52 P P 19 20 11.5 -0.3
PAB IAmb IAmb 19 20 13.4
comp=Z,34nm,0.9s
FOO Floro 79.25 29 *e*P P 19 20 11.2 0.0
SUE Sulen 79.28 29 *e*P P 19 20 11.8 +0.5
ESDC Sonseca Array 79.49 52 P P 19 20 13.7 +0.6
comp=Z,19nm,0.9s,baz=292,slow=5.8,SNR=84
AKN Aaknes 79.96 28 *e*P P 19 20 15.9 +0.8
KMY Karmoy 80.05 31 *e*P P 19 20 15.5 -0.1
ODD1 Oddi 80.51 30 *e*P P 19 20 18.8 +0.7
BLS5 Blasjo 80.58 31 *e*P P 19 20 19.5 +1.0
PALE Palemas 80.61 56 P P 19 20 20.0 +0.9
SNR=19
MDT Midelt 80.69 59 P P 19 20 21.0 +1.3
SNR=6.6
AKLM AKL 80.85 57 P P 19 20 22.0 +1.4
SNR=14
DOMB Dombas 80.92 28 *e*P P 19 20 21.4 +1.1
SESP Santiago Espad 80.95 53 P P 19 20 21.8 +0.7
SNR=5.1
SKAR Skarslia 81.05 29 *e*P P 19 20 22.1 +1.1
SNART Snartemo 81.30 31 *e*P P 19 20 22.8 +0.5
MOR8 Moi Rana 81.55 23 *e*P P 19 20 23.8 +0.4
CLF Chambon-Foret 81.64 42 P P 19 20 23.8 -0.5
CLF IAmb IAmb 19 20 25.8
comp=Z,32nm,0.9s
NC204 NORSAR Array S 81.96 28 P P 19 20 25.5 -0.2
KONO Kongsberg 82.01 30 P P 19 20 26.6 +0.6
KONO IAmb IAmb 19 20 29.4
comp=Z,34nm,1.4s
KONO Kongsberg 82.01 30 *e*P P 19 20 27.2 +1.2
NBO00 NORSAR Array S 82.05 28 P P 19 20 26.3 +0.1
NBO00 IAmb IAmb 19 20 28.5
comp=Z,49nm,0.9s
SNF Seneffe 82.16 40 P P 19 20 26.1 -0.8
SNF pP pP 19 21 05.1 +1.1
NAO01 NORSAR Array S 82.17 28 P P 19 20 26.1 -0.7
NAO01 IAmb IAmb 19 20 29.1
comp=Z,39nm,0.9s
NC303 NORSAR Array S 82.25 28 P P 19 20 26.8 -0.4
NB2 NORSAR Subarra 82.25 28 P P 19 20 28.1 +0.8
comp=Z,18nm,0.8s,baz=294,slow=5.3
NB2 NORSAR Subarra 82.25 28 P P 19 20 28.1 +0.8
baz=294,slow=5.3
NOA NORSAR Array B 82.25 28 P P 19 20 28.8 +1.6
comp=Z,14nm,0.8s,baz=293,slow=5.3,SNR=66
NOA pP pP 19 21 05.2 +0.9
comp=Z,7.5nm,0.9s,baz=291,slow=5.1,SNR=7.9
NB201 NORSAR Array S 82.28 28 P P 19 20 26.9 -0.5
NB201 IAmb IAmb 19 20 29.3
comp=Z,38nm,0.8s
NB201 pP pP 19 21 02.0 -2.4
OSL Oslo 82.44 29 *e*P P 19 20 29.4 +1.3
NC405 NORSAR Array S 82.44 28 P P 19 20 27.7 -0.6
NC405 IAmb IAmb 19 20 30.5
comp=Z,33nm,0.9s
DOU Dourbes 82.48 40 P P 19 20 29.1 +0.5
DOU pP pP 19 21 07.6 +1.9
NC602 NORSAR Array S 82.51 28 P P 19 20 29.1 +0.5
NC602 IAmb IAmb 19 20 31.0
comp=Z,28nm,0.8s
NC602 NORSAR Array S 82.51 28 *e*P P 19 20 29.8 +1.2
BMRD Maredsous 82.52 40 P P 19 20 28.9 +0.1
BMRD pP pP 19 21 08.0 +2.1
BGES Gesves 82.69 40 P P 19 20 30.3 +0.6
BGES pP pP 19 21 08.7 +1.8
BGES sP sP 19 21 22.5 -0.1
TDRA Tendrara 82.72 58 P P 19 20 32.0 +1.6
SNR=11

MEM Membach 83.17 39 P P 19 20 32.7 +0.5
MEM sP sP 19 21 25.4 +0.3
KTK1 Kautokeino 83.19 19 *e*P P 19 20 32.9 +1.0
WLF Walferdange 83.57 40 P P 19 20 35.1 +0.9
WLF pP pP 19 21 12.7 +1.2
WLF sP sP 19 21 27.0 -0.2
WLF Walferdange 83.57 40 *e*P P 19 20 35.7 +1.4
comp=Z,16nm,0.8s,baz=292,slow=4.9
ARCES ARCESS Array B 83.58 18 P P 19 20 34.6 +0.7
comp=Z,9.2nm,0.7s,baz=296,slow=5.2,SNR=33
AREO ARCESS Array S 83.58 18 *e*P P 19 20 34.8 +0.9
IBBN Ibbenburen 83.63 37 *e*P P 19 20 35.9 +1.4
comp=Z,29nm,1.5s,baz=292,slow=4.9
AHRW Bad Neuenahr-A 83.84 39 *e*P P 19 20 37.1 +1.5
comp=Z,9.5nm,0.7s,baz=292,slow=4.9
BSEG Bad Segeberg 84.48 35 *e*P P 19 20 40.3 +1.6
comp=Z,30nm,1.1s,baz=292,slow=4.9
ECH Echery 84.69 41 P P 19 20 39.2 -0.8
TNS Taunus Mts 84.77 39 *e*P P 19 20 41.8 +1.4
comp=Z,30nm,1.0s,baz=292,slow=4.9
NRDL Niedersach Rie 84.91 36 *e*P P 19 20 42.5 +1.7
comp=Z,15nm,0.9s,baz=292,slow=4.9
GTTG Gottingen 85.18 37 *e*P P 19 20 43.9 +1.6
comp=Z,21nm,0.9s,baz=292,slow=4.9
CLZ Clausthal 85.30 37 *e*P P 19 20 44.6 +1.7
comp=Z,31nm,1.4s,baz=292,slow=4.9
ASSE Asse, Remlinge 85.36 37 *e*P P 19 20 44.8 +1.7
comp=Z,31nm,1.2s,baz=292,slow=4.9
BFO Black Forest 85.38 41 *e*P P 19 20 44.1 +0.7
comp=Z,18nm,1.4s,baz=292,slow=4.9
BFO Black Forest 85.38 41 P P 19 20 42.9 -0.5
STU Stuttgart 85.75 40 *e*P P 19 20 46.4 +1.2
comp=Z,15nm,0.7s,baz=292,slow=4.9
TIXI Tiksi 86.32 347 P P 19 20 47.3 -0.2
NEUB Neuenburg 86.36 37 *e*P P 19 20 49.6 +1.5
comp=Z,17nm,1.2s,baz=292,slow=4.9
PEA0B Petropavlovsk- 86.37 325 P P 19 20 48.5 +0.4
PEA0B IAmb IAmb 19 21 43.5
comp=Z,77nm,1.6s
PETK Petropavlovsk- 86.37 325 P P 19 20 50.6 +2.5
comp=Z,1.7nm,1.0s,baz=70,slow=18,SNR=4.0
PETK pP pP 19 21 27.6 +2.0
comp=Z,8.9nm,0.9s,baz=87,slow=8.4,SNR=15
MOX Moxa 86.49 38 *e*P P 19 20 50.2 +1.4
comp=Z,12nm,1.3s,baz=292,slow=4.9
GRF Grafenberg Arr 86.63 39 *e*P P 19 20 51.3 +1.8
comp=Z,21nm,1.4s,baz=292,slow=4.9
GRF *e*pP pP 19 21 29.1 +2.1
GRF *e*sP sP 19 21 44.6 +2.0
TUE Stuetta 86.70 42 P P 19 20 49.7 -0.5
UBR Ueberruh 86.73 41 *e*P P 19 20 51.3 +1.2
comp=Z,15nm,1.1s,baz=292,slow=4.9
DAVA Damuels 86.74 41 *e*PcP PcP 19 20 51.5 -0.9
comp=Z,14nm,0.9s,SNR=4.2
MA2 Magadan 86.86 332 P P 19 20 52.1 +1.7
PLN Plauen 86.87 38 *e*P P 19 20 52.1 +1.5
comp=Z,18nm,1.5s,baz=292,slow=4.9
GUNZ Gunzen 87.02 38 *e*P P 19 20 53.0 +1.6
comp=Z,8.6nm,1.0s,baz=292,slow=4.9
CLL Collm 87.02 37 *e*P P 19 20 54.0 +2.7
comp=Z,12nm,1.5s
TANN Tannenbergstha 87.08 38 *e*P P 19 20 53.3 +1.5
comp=Z,24nm,1.3s,baz=292,slow=4.9
WERN Wernitzgruen 87.08 38 *e*P P 19 20 53.5 +1.8
comp=Z,14nm,1.1s,baz=292,slow=4.9
NKC Novy Kostel 87.14 38 *e*P P 19 20 53.1 +1.1
ROTZ Rotzenmuhle 87.19 38 *e*P P 19 20 53.6 +1.4
comp=Z,15nm,1.7s,baz=292,slow=4.9
RETA Reutte 87.21 41 *e*PcP PcP 19 20 53.5 -0.9
comp=Z,16nm,1.1s,SNR=8.3
FUORN Ofenpass-Fuorn 87.23 42 P P 19 20 52.3 -0.5
FUORN IAmb IAmb 19 20 56.8
comp=Z,14nm,0.9s
FETA Feichten 87.37 41 *i* PcP PcP 19 20 54.5 -0.7
comp=Z,11nm,1.3s
MOTA Moosalm 87.48 41 *e*PcP PcP 19 20 55.3 -0.4
comp=Z,12nm,1.1s,SNR=6.2
SQTA Sankt Quirin 87.60 41 *e*PcP P 19 20 55.0 +0.6
comp=Z,12nm,1.4s
TIC Toumodi 87.60 84 *e*PKP2 P 19 20 54.8 0.0
LIC Lanto 87.72 84 *e*PKP2 P 19 20 55.3 -0.1
comp=Z,3.2nm,0.3s
BRG Berggiesshubel 87.74 37 *e*P P 19 20 55.5 +0.8
comp=Z,22nm,1.8s
BRG Berggiesshubel 87.74 37 *e*P P 19 20 55.8 +1.0
comp=Z,22nm,1.8s,baz=292,slow=4.9
DBIC Dimbokro 87.75 84 P P 19 20 56.0 +0.4
comp=Z,4.6nm,0.6s,baz=272,slow=5.4,SNR=8.9
DBIC Dimbokro 87.75 84 P P 19 20 55.2 -0.3
DBIC IAmb IAmb 19 20 56.7
comp=Z,17nm,1.2s
WATA Walderalm 87.78 41 *e*PcP PcP 19 20 56.5 -0.4
comp=Z,9.1nm,1.1s
WET Wettzell 87.84 39 *e*P P 19 20 56.7 +1.3
comp=Z,3.8nm,0.9s,baz=292,slow=4.9
WTTA Wattenberg 87.85 41 *e*PcP P 19 20 56.4 +0.8
comp=Z,9.3nm,1.5s
KIC Kosan Boka 87.95 84 *e*PKP2 P 19 20 56.3 -0.2
comp=Z,29nm,0.9s
KHC Kasperske Hory 88.27 39 *e*P P 19 20 58.4 +1.0
KHC *e*SKS SKSac 19 31 13.0 +0.6
CTI Castel Tesino 88.34 42 P P 19 20 58.1 +0.2
FINES FINESS Array B 88.37 24 P P 19 20 57.7 +0.2
comp=Z,2.2nm,0.7s,baz=359,slow=3.2,SNR=7.3
RJOB Jochberg 88.37 40 *e*P P 19 20 59.0 +1.1
comp=Z,2.2nm,0.8s,baz=292,slow=4.9
GEC2 GERESS Array S 88.46 39 *e*P P 19 20 59.3 +0.9
comp=Z,3.4nm,1.0s,baz=292,slow=4.9
GERES GERESS Array B 88.46 39 P P 19 20 59.0 +0.6
comp=Z,1.2nm,0.8s,baz=337,slow=3.0,SNR=12
GERES pP pP 19 21 37.0 +1.0
comp=Z,0.7nm,0.8s,baz=302,slow=2.5,SNR=2.5
GERES LR LR 20 00 53.3
comp=Z,30nm,18.8s,baz=288,slow=36
OSTC Ostas 89.18 37 *e*P P 19 21 02.7 +1.1
MOA Molln 89.22 40 PcP PcP 19 21 02.7 -0.5
comp=Z,4.1nm,1.1s
DPC Dobruska-Polom 89.33 37 *e*P P 19 21 03.3 +0.9
KRLC Kraliky 89.72 37 *e*P P 19 21 04.9 +0.7
OBKA Obir 89.98 41 *e*PcP P 19 21 06.1 +0.6
comp=Z,7.3nm,0.8s
CONA Conrad Observa 90.16 39 *e*PcP P 19 21 06.2 -0.1
comp=Z,4.9nm,1.0s
SOKA Soboth 90.20 40 *e*PcP P 19 21 06.5 0.0
comp=Z,11nm,1.3s
ARSA Arzberg 90.25 40 *e*P P 19 21 05.4 -1.3
comp=Z,3.4nm,0.8s
MORC Moravsky Berou 90.30 37 ⇑P P 19 21 07.7 +0.9
MORC Moravsky Berou 90.30 37 P P 19 21 06.4 -0.4
KEST Kesra 90.73 52 P P 19 21 09.6 +0.4
comp=Z,6.7nm,0.7s,baz=224,slow=4.7,SNR=10
KEST Kesra 90.73 52 P P 19 21 07.5 -1.7
KEST IAmb IAmb 19 21 21.0
comp=Z,29nm,1.5s
MODS Modra-Piesok 90.80 38 *e*P P 19 21 09.6 +0.4
VYHS Vyhne 91.65 38 *e*P P 19 21 13.9 +0.8
TORD Torodi Ar. Bea 91.94 76 P P 19 21 14.8 -0.3
comp=Z,2.5nm,0.9s,baz=294,slow=5.0,SNR=10
TAM Tamanrasset 92.24 65 P P 19 21 14.9 -1.6
NRIK Noril'sk 93.38 359 LR LR 20 07 21.2
comp=Z,17nm,20.4s,baz=36,slow=38
KOLS Kolonicke sedl 93.40 36 *e*P P 19 21 22.2 +1.0
KLMR Klimovskoe 93.69 21 *e*P P 19 21 20.1 -2.1
KLMR AMP 19 21 22.8
comp=Z,8.0nm,1.3s
TRPA Tarpa 93.97 37 ⇓P P 19 21 24.3 +0.5
MATE Matera 93.98 45 ⇓P P 19 21 24.2 +0.2
BZS Buzias 94.73 39 ⇓P P 19 21 27.8 +0.4
AKASG Malin Array Be 96.13 32 P P 19 21 33.0 -0.5
comp=Z,0.1nm,0.3s,baz=322,slow=5.9,SNR=5.1
BIZ Bicaz 96.65 36 ⇓P P 19 21 37.8 +1.8
FNA Florina 97.03 43 P P 19 21 36.1 -1.8
FNA IAmb IAmb 19 21 39.6
comp=Z,5.1nm,0.9s
MLR Muntele Rosu 97.37 38 P P 19 21 36.3 -3.2
MLR IAmb IAmb 19 21 40.9
comp=Z,9.3nm,1.3s
KURBB Kurchatov Arra 111.90 5 PKKPbc PKKPbc 19 37 32.0 -2.5
comp=Z,0.9nm,0.9s,baz=199,slow=3.4,SNR=8.6
MKAR Makanchi Array 115.94 2 PKP PKPdf 19 26 50.2 +2.2
comp=Z,0.2nm,0.6s,baz=40,slow=2.5,SNR=2.0
BJI Beijing 115.98 334 PKP PKPdf 19 26 44.2 -4.0
HHC Hu-ho-hao-te 117.07 338 *e*PKP PKPdf 19 26 49.0 -1.5
HHC LR LR
comp=Z,130nm,18.2s
HHC LR LR

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,51nm,16.7s						
WMQ	Urumqi	118.94	358	ePKP	PKiKP	19 26 54.5	+0.5
WMQ				AMB	AMB		
	comp=Z,59nm,4.3s						
WMQ				LR	LR		
	comp=Z,530nm,29.0s						
WMQ				LR	LR		
	comp=Z,620nm,28.9s						
WMQ				LR	LR		
	comp=Z,94nm,29.2s						
GEYT	Alibeck	119.17	25	PKP	PKiKP	19 26 56.6	+2.0
	comp=Z,0.3nm,0.3s,baz=27,slow=9.7,SNR=1.9						
NJ2	Nanjing	121.23	327	ePKP	PKPdf	19 26 57.7	-0.9
SYO	Syowa Base	121.23	162⇑	epPdiff	pPdif	19 24 02.2	-0.5
GTA	Gaotai	121.81	347	ePKP	PKiKP	19 27 00.2	+0.4
BOSA	Boshof	124.03	113	PKP	PKiKP	19 27 04.6	+0.2
	comp=Z,5.5nm,0.9s,baz=338,slow=3.2,SNR=8.4						
BOSA	Boshof	124.03	113		PKPdf	19 27 04.2	0.0
STKA	Stephens Creek	127.53	243	PKP	PKiKP	19 27 11.1	-0.1
	comp=Z,3.0nm,0.7s,baz=27,slow=3.2,SNR=5.1						
MAW	Mawson	127.87	169	PKP	PKiKP	19 27 10.5	-0.1
	comp=Z,4.8nm,0.8s,baz=152,slow=1.8,SNR=8.8						
CD2	Chengdu	128.74	340	PKP	PKPdf	19 27 12.0	-1.1
GYA	Guiyang	131.67	334	ePKP	PKPdf	19 27 14.0	-4.8
WB0	Warramunga Arr	133.68	259		PKPdf	19 27 22.4	-0.1
WRA	Warramunga Arr	133.75	259	PKP	PKPdf	19 27 23.2	+0.5
	comp=Z,1.2nm,0.5s,baz=83,slow=2.4,SNR=22						
WRA				pPKP	pPKPdf	19 28 01.6	-0.5
	comp=Z,1.4nm,0.8s,baz=74,slow=1.6,SNR=3.5						
ASAR	Alice Springs	134.38	254	PKhKP	PKPpre	19 27 17.1	
	comp=Z,0.4nm,0.6s,baz=112,slow=3.8,SNR=5.1						
ASAR				PKP	PKPdf	19 27 23.9	+0.1
	comp=Z,1.4nm,0.8s,baz=82,slow=2.1,SNR=13						
ASAR				pPKP	pPKPdf	19 28 03.8	+0.5
	comp=Z,0.7nm,0.7s,baz=111,slow=1.4,SNR=3.2						
CMAR	Chiang Mai Arr	141.87	339	PKhKP	PKPpre	19 27 32.5	
	comp=Z,0.2nm,0.5s,baz=7.4,slow=2.1,SNR=2.5						
HYB	Hyderabad	144.64	11	i PKP	PKPab	19 27 41.5	0.0
HYB				epPKP	pPKPdf	19 28 19.0	-3.1
KSM	Kuching	149.07	305		PKPdf	19 27 49.0	-1.1

*IDC **02** 19:10:51.4±1.0, 17°.84S×174°.50W, h0^{km}, mb4.3/9, mb1 4.5/9, mb1mx4.0/51, mbtmp4.3/9, Error ellipse: s-maj=35.7km s-min=19.8km az=129.0*
*NEIC **02** 19:11:03.6±1.4, 18°.02S±0°.08×174°.51W±0°.09, h103^{km}±6^{km}, mb4.7/35, Error ellipse: s-maj=11.9km s-min=10.9km az=75.0*
ISC 02 19:11:06.1±0.5**, 18°.05S**±0°.09×**174°.38W**±0°.09**, h132**^{km}**, n54,** σ**1^{s}05**/52**, mb4.7**/27**, 1D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	Niue	4.34	104		Pn	19 12 09.3	-1.2
AFI	Afiamalu	4.82	32		Pn	19 12 14.6	-2.4
MSVF	Nonsavu	7.21	271		Pn	19 12 56.0	+6.9
DZM	Mont Dzumac	18.45	254		Pn	19 15 14.6	+1.1
OUZ	Omahuta	20.16	210		P	19 15 31.0	+0.9
URZ	Urewera	21.46	199	P	P	19 15 43.9	0.0
	7.8nm,0.4s,baz=341,slow=2.7,SNR=18						
URZ	Urewera	21.46	199	IAmb	IAmb	19 15 47.2	
	comp=Z,16nm,1.0s						
HIZ	Hauiti	22.45	203	P	P	19 15 54.5	+0.4
HIZ				IAmb	IAmb	19 16 16.1	
	comp=Z,58nm,1.3s						
BKZ	Black Stump Fm	22.48	199		P	19 15 52.9	-1.7
QRZ	Quartz Range	25.34	204	P	P	19 16 20.8	+0.2
QRZ				IAmb	IAmb	19 16 39.0	
	comp=Z,58nm,1.5s						
TUWZ	Tuamarina	25.36	201	P	P	19 16 20.5	-0.3
NNZ	Nelson	25.36	202	P	P	19 16 20.5	-0.4
NNZ				IAmb	IAmb	19 16 41.5	
	comp=Z,40nm,1.4s						
THZ	Tophouse	26.01	202	P	P	19 16 26.8	0.0
THZ				IAmb	IAmb	19 16 33.0	
	comp=Z,11nm,0.8s						
KHZ	Kahutara	26.37	200	P	P	19 16 29.4	-0.5
KHZ				IAmb	IAmb	19 16 54.3	
	comp=Z,35nm,1.4s						
LTZ	Lake Taylor	27.13	202	P	P	19 16 35.4	-1.5
LTZ				IAmb	IAmb	19 16 42.4	
	comp=Z,16nm,0.8s						
MQZ	McQueen's Vall	27.82	200	P	P	19 16 45.4	+2.6
MQZ				IAmb	IAmb	19 16 57.4	
	comp=Z,42nm,1.3s						
RPZ	Rata Peaks	28.38	203	P	P	19 16 48.9	+1.0
	comp=Z,9.3nm,0.9s,baz=355,slow=12,SNR=2.5						
RPZ	Rata Peaks	28.38	203	P	P	19 16 49.8	+2.0
RPZ				IAmb	IAmb	19 16 53.5	
	comp=Z,31nm,1.3s						
FOZ	Fox Glacier	28.70	204	P	P	19 16 50.7	+0.1
ARMA	Armidale	33.22	242	P	P	19 17 29.8	-0.9
ARMA				IAmb	IAmb	19 17 51.3	
	comp=Z,40nm,1.6s						
CTAO	Charters Tower	37.20	260	P	P	19 18 04.5	-0.4
CTAO				IAmb	IAmb	19 18 21.6	
	comp=Z,33nm,1.6s						
COEN	Coen	40.94	269	P	P	19 18 34.5	-1.5
STKA	Stephens Creek	41.94	242	P	P	19 18 44.4	+0.5
	comp=Z,0.8nm,0.4s,baz=89,slow=12,SNR=4.1						
STKA	Stephens Creek	41.94	242	P	P	19 18 44.3	+0.3
MIDW	Midway	46.09	356	P	P	19 19 18.3	+1.4
BBOO	Buckleboo	46.70	242	P	P	19 19 21.2	-0.6
WR0	Warramunga Arr	48.18	259	P	P	19 19 33.2	-0.3
WR0				IAmb	IAmb	19 19 38.1	
	comp=Z,11nm,1.6s						
WB0	Warramunga Arr	48.34	259	P	P	19 19 34.3	-0.4
WB2	Warramunga Arr	48.36	259	P	P	19 19 34.1	-0.8
WB2				IAmb	IAmb	19 19 42.1	
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	48.37	259	P	P	19 19 34.0	-1.0
	comp=Z,1.1nm,0.3s,baz=96,slow=7.1,SNR=43						
AS31	Alice Springs	48.44	254	P	P	19 19 34.9	-0.6
AS31				IAmb	IAmb	19 19 36.1	
	comp=Z,6.4nm,0.7s						
ASAR	Alice Springs	48.44	254	P	P	19 19 35.1	-0.3
	comp=Z,22nm,0.7s,baz=89,slow=8.2,SNR=210						
MTN	Manton Dam	52.62	267	P	P	19 20 06.5	-0.5
MTN				IAmb	IAmb	19 20 08.2	
	comp=Z,8.6nm,0.8s						
KNRA	Kununurra	54.28	263	P	P	19 20 18.6	-0.4
SIJI	Sorong	56.01	281	P	P	19 20 31.6	+0.2
	comp=Z,4.3nm,0.6s,baz=125,slow=5.9,SNR=6.1						
FITZ	Fitzroy Crossi	56.78	260	P	P	19 20 36.4	-0.5
FITZ				IAmb	IAmb	19 20 41.3	
	comp=Z,12nm,1.4s						
SOEI	Soe	59.90	269	P	P	19 20 58.0	-0.8
MORW	Morawa	63.93	246	P	P	19 21 24.9	-0.5
MORW				IAmb	IAmb	19 21 33.3	
	comp=Z,29nm,1.5s						
ADK	Adak	69.67	358	P	P	19 22 00.7	-0.4
JAGI	Jajag, Banyuwa	69.87	267	P	P	19 22 02.7	-0.5
MJAR	Matsushiro Arr	70.37	321	P	P	19 22 07.0	+1.2
	comp=Z,0.2nm,0.3s,baz=134,slow=7.0,SNR=2.4						
QSPA	South Pole Qui	72.00	180	P	P	19 22 17.1	+1.8
CNBA	Chernabura Isl	73.67	9	P	P	19 22 24.9	0.0
CNBA				IAmb	IAmb	19 22 47.2	
	comp=Z,15nm,0.9s						
MCCM	Marconi Confer	73.89	40	P	P	19 22 26.5	-0.1
NVAR	Mina Array Bea	76.92	42	P	P	19 22 46.0	+1.7
	comp=Z,0.5nm,0.3s,baz=220,slow=8.3,SNR=5.5						
KDAK	Kodiak Island	77.70	12	P	P	19 22 49.5	+1.7
KDAK				IAmb	IAmb	19 22 53.0	
	comp=Z,15nm,1.2s						
CCB	Clear Creek Bu	84.93	11	P	P	19 23 26.4	+0.6
CCB				IAmb	IAmb	19 23 27.4	
	comp=Z,4.2nm,0.6s						
ILAR	Eielson Array	85.22	11	P	P	19 23 28.2	+1.0
	comp=Z,1.0nm,0.5s,baz=228,slow=6.2,SNR=20						
SYO	Syowa Base	89.83	192⇓	eP	P	19 23 47.2	-2.2
ARCES	ARCESS Array B	127.09	351	PKP	PKiKP	19 29 55.0	+0.5
	comp=Z,2.7nm,0.9s,baz=354,slow=2.4,SNR=5.3						
FINES	FINESS Array B	134.30	346	PKP	PKiKP	19 30 09.7	+0.5
	comp=Z,2.4nm,1.0s,baz=65,slow=3.7,SNR=1.8						
CLL	Collm	146.31	352	i PKPbc	PKiKP	19 30 33.4	-0.7
	comp=Z,7.0nm,1.1s						
CLL	Collm	146.31	352		PKPab	19 30 32.2	+0.1
GERES	GERESS Array B	148.59	350	PKPbc	PKiKP	19 30 39.2	+0.1
	comp=Z,0.6nm,0.5s,baz=46,slow=3.9,SNR=7.2						

*NEIC **02** 19:19:41.4±1.9, 45°.12N±0°.05×106°.96W±0°.05, h0^{km}±2^{km}, ML3.6/73, Error ellipse: s-maj=8.9km s-min=6.1km az=189.0*
*IDC **02** 19:19:41.9±0.9, 44°.99N×106°.91W, h0^{km}, mb3.4/1, mb1 3.6/6, mb1mx3.4/53, mbtmp3.3/6, ML2.7/4, Error ellipse: s-maj=27.3km s-min=7.7km az=132.0*
ISC 02 19:19:40.7±0.9**, 45°.15N**±0°.06×**106°.90W**±0°.07**, h0**^{km}**, n84,** σ**1^{s}00**/81**, Montana**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAO	LASA Array	1.61	17		Pn	19 20 11.7	+1.3
LAO				IAML		19 20 56.6	
	790nm,0.8s						
LAO				IAML		19 21 03.9	
	655nm,1.0s						
RLMT	Red Lodge	1.68	270		Pn	19 20 11.6	+0.1
RLMT				IAML		19 20 43.8	
	602nm,1.0s						
RLMT				IAML		19 20 47.1	
	611nm,1.0s						
GCMT	Greycliff	2.05	289	Pn	Pn	19 20 16.9	+0.3
YNE	Yellowstone No	2.21	267		Pn	19 20 19.0	+0.2
RSSD	Black Hills	2.29	116		Pb	19 20 22.0	-0.9
RSSD				IAML		19 20 54.8	
	416nm,0.5s						
RSSD				IAML		19 20 55.2	
	338nm,0.5s						
YMP	Mirror Lake Pl	2.35	261		Pn	19 20 21.3	+0.4
K22A	Casper	2.52	174		Pn	19 20 23.7	+0.8
K22A				IAML		19 21 02.9	
	comp=E,348nm,1.0s						
K22A				IAML		19 21 06.9	
	comp=N,307nm,0.9s						
LKWY	Lake	2.56	258		Pn	19 20 23.2	-0.5
LKWY				IAML		19 21 13.0	
	comp=N,266nm,0.8s						
YUF	Upper Falls	2.61	262		Pn	19 20 23.0	-1.2
YNR	Norris Junctio	2.72	262		Pn	19 20 25.0	-0.8
H17A	Grant Village	2.73	255		Pn	19 20 27.8	+1.9
YNM	Yellowstone No	2.74	262		Pn	19 20 27.8	+1.7
YHH	Holmes Hill	2.83	264		Pn	19 20 27.3	-0.1
FLWY	Flagg Ranch	2.92	250		Pn	19 20 28.0	-0.5
FLWY				IAML		19 21 32.2	
	comp=N,282nm,1.0s						
YPP	Pitchstone Pla	2.92	254		Pn	19 20 28.9	+0.2
YMR	Madison River	2.93	262		Pn	19 20 29.5	+0.8
YHL	Hebgen Lake	3.06	266		Pn	19 20 31.5	+1.0
PDAR	Pinedale Array	3.06	220	Pn	Pn	19 20 33.0	+2.5
	comp=N,7.5nm,0.3s,baz=51,slow=17,SNR=80						
PDAR				Lg	Lg	19 21 12.3	
	comp=N,17nm,0.3s,baz=52,slow=32,SNR=17						
BW06	Boulder Array	3.06	220		Pn	19 20 30.9	+0.4
YHB	Horse Butte	3.08	264		Pn	19 20 31.2	+0.5
IMW	Indian Meadow	3.15	248		Pn	19 20 32.3	+0.4
IMW				IAML		19 21 23.1	
	comp=N,166nm,0.7s						
QLMT	Earthquake Lak	3.23	266		Pn	19 20 32.8	-0.1
SNOW	Snow King Moun	3.25	240		Pn	19 20 33.8	+0.8
SNOW				IAML		19 21 33.0	
	comp=N,151nm,0.9s						
FXWY	Fox Creek	3.33	244		Pn	19 20 33.8	-0.4
TPAW	Teton Pass	3.35	242		Pn	19 20 35.5	+1.0
TPAW				IAML		19 21 52.9	
	comp=N,138nm,1.0s						
REDW	Red Top Meadow	3.36	239		Pn	19 20 34.9	+0.3
REDW				IAML		19 21 36.2	
	comp=N,135nm,1.0s						
RWWY	Rawlins	3.47	184		Pn	19 20 36.6	+0.4
RWWY				IAML		19 21 41.1	
	comp=N,143nm,0.9s						
EGMT	Eagleton	3.48	327		Pn	19 20 37.8	+1.6
DGMT	Dagmar	3.80	28		Pn	19 20 41.4	+0.9
AHID	Auburn Hatcher	3.86	233		Pn	19 20 42.1	+0.6
AHID				IAML		19 21 46.5	
	comp=N,124nm,1.1s						
AHID				IAML		19 22 04.5	
	comp=E,90nm,0.9s						
LRM	Limekiln Ridge	3.96	282		Pn	19 20 43.5	+0.5
PHWY	Pilot Hill	3.99	164	Pn	Pn	19 20 44.2	+0.9
DLMT	Dillon	4.03	275		Pn	19 20 44.4	+0.7
DLMT				IAML		19 21 50.3	
	comp=E,84nm,1.1s						
DLMT				IAML		19 22 03.8	
	comp=E,105nm,1.1s						
MCMT	McKenzie Canyo	4.24	268		Pn	19 20 48.1	+1.5
E28A	Huff	4.56	70	Pn	Pn	19 20 51.6	+0.7
HWUT	Hardware Ranch	4.91	225		Pn	19 20 56.8	+0.9
HWUT				IAML		19 22 33.2	
	comp=E,54nm,1.0s						
RDMU	Red Mountain	4.98	204		Pn	19 20 56.8	-0.1
O20A	White River Ci	5.11	192		Pn	19 20 59.4	+0.8
MSO	Missoula	5.19	291		Pn	19 20 59.1	-0.5
MSO				IAML		19 22 46.0	
	comp=E,53nm,1.0s						
ISCO	Idaho Springs	5.43	170		Pn	19 21 03.2	0.0
SPUT	South Promonto	5.59	229		Pn	19 21 05.8	+0.6
SUSD	Miller	5.69	94		Pn	19 21 07.4	+0.9
CTU	Camp Tracy	5.71	220		Pn	19 21 06.3	-0.5
JTMT	Jette	5.73	300		Pn	19 21 06.6	-0.4
SMCO	Snowmass	5.97	181		Pn	19 21 09.3	-1.3
BGU	Big Grassy Mou	6.17	229		Pn	19 21 11.8	-1.3
WALA	Waterton Lakes	6.18	312		Pn	19 21 11.9	-1.4
NLU	North Lily Min	6.45	218		Pn	19 21 14.8	-2.2
DUG	Dugway, Tooele	6.60	223		Pn	19 21 18.3	-0.8
SRU	San Rafael Swe	6.61	205		Pn	19 21 18.6	-0.7
MFID	Camas Ranch	6.64	258		Pn	19 21 18.4	-1.3
TMUT	Trail Mountain	6.67	210		Pn	19 21 19.6	-0.6
PV22	Blue Mesa, Par	6.76	193		Pn	19 21 20.6	-0.7
PV21	Cone Mtn., Par	6.77	194		Pn	19 21 20.6	-0.9
PV07	Paradox Valley	6.83	192		Pn	19 21 22.4	+0.1
PV09	Paradox Valley	6.86	195		Pn	19 21 22.0	-0.7
PV23	Carpenter Ridg	6.88	194		Pn	19 21 22.4	-0.6
PV15	Paradox Valley	6.91	190		Pn	19 21 21.7	-1.7
PV04	Paradox Valley	6.92	193		Pn	19 21 22.9	-0.5
PV14	Lion Creek, Pa	6.96	194		Pn	19 21 23.7	-0.3
PV12	Saucer Basin,	6.98	192		Pn	19 21 24.4	+0.1
PV20	West Nyswonger	6.98	194		Pn	19 21 24.6	+0.3
Q16A	Castle Valley	7.00	209		Pn	19 21 23.9	-0.6
PV16	Nyswonger Mesa	7.00	193		Pn	19 21 24.7	+0.1
PV11	David Mesa, Pa	7.01	193		Pn	19 21 24.2	-0.5
PV17	East Wray Mesa	7.04	193		Pn	19 21 23.9	-1.2
PV03	Paradox Valley	7.04	193		Pn	19 21 24.3	-0.9
PV18	Skein Mesa, Pa	7.06	193		Pn	19 21 24.5	-0.9
PV02	Paradox Valley	7.08	192		Pn	19 21 25.8	+0.2
PV01	Paradox Valley	7.12	191		Pn	19 21 26.6	+0.2
PV13	Radium Mtn., P	7.13	192		Pn	19 21 26.8	+0.3
PV05	Paradox Valley	7.26	194		Pn	19 21 27.3	-0.9
F10A	Beach Ranch, E	7.30	280		Pn	19 21 28.9	+0.3
ELK	Elko	7.54	237	Pn	Pn	19 21 34.9	+2.9
	comp=E,0.1nm,0.3s,baz=45,slow=20,SNR=2.1						
ELK				Lg	Lg	19 23 30.7	
	comp=E,0.0nm,0.3s,baz=187,slow=13,SNR=1.3						
NEW	Newport	7.69	298	Lg	Lg	19 23 41.2	
	comp=E,1.2nm,0.3s,baz=24,slow=17,SNR=3.8						
I56US	NEWPORT INFRAS	7.69	298	i		20 07 40.0	
	baz=114,slow=313,SNR=1.2						
MVCO	Mesa Verde	8.03	189		Pn	19 21 38.3	-0.5
G08A	Pilot Rock	8.52	275	Pn	Pn	19 21 44.9	-0.5
ULM	Lac du Bonnet	9.01	52	Pn	Pn	19 21 52.4	+0.5
	comp=E,1.4nm,0.3s,baz=238,slow=12,SNR=15						
ULM				Lg	Lg	19 24 23.7	
	comp=E,0.6nm,0.3s,baz=143,slow=9.5,SNR=3.4						
ULM	Lac du Bonnet	9.01	52		Pn	19 21 51.9	0.0
NVAR	Mina Array Bea	10.84	236	Pn	Pn	19 22 19.6	+2.3
	comp=E,0.1nm,0.3s,baz=41,slow=21,SNR=2.4						
TXAR	Lajitas Array	15.99	170	Lg	Lg	19 28 03.6	
	comp=E,0.1nm,0.3s,baz=349,slow=34,SNR=1.6						
YKA	Yellowknife Ar	17.94	348	Pn	Pn	19 23 49.2	-2.0
	comp=E,0.0nm,0.3s,baz=161,slow=12,SNR=3.9						
YKA				Lg	Lg	19 29 01.9	
	comp=E,0.1nm,0.3s,baz=158,slow=23,SNR=1.4						
ILAR	Eielson Array	29.45	326	P	P	19 25 47.1	+1.4
	comp=E,0.5nm,0.9s,baz=117,slow=6.8,SNR=4.3						

*NIED **02** 19:26:00, 37°.20N×141°.20E, h29^{km}, Mw3.3 Best double couple: M$_0$9.82000×10^{13} NP1:φ$_s$109.00000°, δ81.00000°, λ-74.00000°. NP2:φ$_s$228.00000°, δ19.00000°, λ-150.00000°.*
*IDC **02** 19:26:50.0±3.3, 37°.08N×141°.45E, h0^{km}, mb3.2/2, mb1 3.5/4, mb1mx3.1/55, mbtmp3.4/4, ML2.9/2, Error ellipse: s-maj=51.2km s-min=34.4km az=19.0*
*JMA **02** 19:26:53.5±0.1, 37°.17N×141°.21E, h36^{km}±1^{km}, M3.6*
JMA Felt I J1.
ISC 02 19:26:51.5±1.6**, 37°.16N**±0°.04×**141°.35E**±0°.06**, h15**^{km}±10^{km}**, n15,** σ**0^{s}91**/28**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.43	299	P	Pb	19 27 01.6	+0.8
JFK				eS	Sb	19 27 07.0	-0.1
ONAJ	Iwakimizuishiy	0.44	263	P	Pb	19 27 01.7	+0.7
ONAJ				i S	Sb	19 27 07.4	-0.1
JFFD	Fukushimafurud	0.63	264	P	Pb	19 27 04.3	+0.1
JFFD				S	Sg	19 27 11.7	-0.6
JMST	Minamisoumatoc	0.67	327	P	Pb	19 27 05.2	+0.3
JMST				S	Sg	19 27 13.6	+0.1
JHO	Hitachi	0.83	229	P	Pb	19 27 07.0	-0.6
JHO				S	Sb	19 27 16.7	-1.9
JMM	Marumori	0.83	328	P	Pg	19 27 07.7	+0.1
JMM				S	Sb	19 27 18.1	-0.5
JFT	Otama	0.88	294	P	Pg	19 27 08.7	+0.1
JFT				eS	Sb	19 27 19.3	-0.8
JIO	Ouri	1.29	0	P	Pn	19 27 15.0	+0.1
JIO				S	Sb	19 27 30.2	-1.6
JOU	Okura	1.32	336	P	Pn	19 27 15.6	+0.2
JOU				eS	Sn	19 27 32.1	-0.6
JFY	Yanaizu	1.33	281	P	Pn	19 27 15.4	-0.2
JFY				eS	Sn	19 27 31.8	-1.2
MJAR	Matsushiro Arr	2.59	257	Pn	Pn	19 27 33.5	+0.6
	0.3nm,0.3s,baz=78,slow=17,SNR=26						
MJAR				Sn	Sb	19 28 07.7	-1.6
	1.2nm,0.3s,baz=92,slow=40,SNR=5.7						
MAT	Matsushiro	2.59	257	P	Pn	19 27 33.6	+0.7
MAT				S	Sn	19 28 05.7	+1.6
JHJ	Hachijo jima 2	4.23	198	Pn	Pn	19 27 56.3	+0.9
	15nm,0.3s,baz=332,slow=21,SNR=15						
JHJ				Sn	Sn	19 28 44.0	-0.4
	6.1nm,0.3s,baz=65,slow=22,SNR=1.2						
WRA	Warramunga Arr	57.18	188	P	P	19 36 37.3	-0.5
	0.1nm,0.4s,baz=5.7,slow=7.3,SNR=4.7						
ASAR	Alice Springs	60.91	188	P	P	19 37 04.9	+1.3
	0.2nm,0.8s,baz=8.9,slow=6.6,SNR=1.2						

MAN 02 19:35:30.6, 17°.42N×120°.20E, h28^{km}, mb4.3, ML3.1, MS2.8, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABRA	Dolores	0.54	65	eP	Pn	19 35 42.7	+0.2
ABRA				eS	Sn	19 35 52.3	+1.6
BOLP	Bolinao	1.07	195	eP	Pn	19 35 49.5	-0.2
BOLP				eS	Sb	19 36 04.5	+0.5
APYP	Conner	1.09	66	eP	Pn	19 35 49.8	-0.3
APYP				eS	Sn	19 36 04.2	0.0
SMPP	San Manuel, Pa	1.34	160	eP	Pn	19 35 52.3	-1.3
SMPP				eS	Sn	19 36 08.6	-2.0
CAUP	Cauayan	1.62	107	eP	Pb	19 35 58.9	-1.0
SCZP	Santa Cruz	1.66	190	eP	Pn	19 35 57.9	+0.1
SCZP				eS	Sn	19 36 19.4	+1.2
SGCP	Mt. Cagua	1.94	65	eP	Pn	19 36 02.3	+0.5
SGCP				eS	Sn	19 36 26.1	+0.9
BALP	Baler	2.13	141	eP	Pn	19 36 05.1	+0.7
BALP				eS	Sn	19 36 30.5	+0.7
PALP	Palanan	2.16	99	eP	Pn	19 36 05.4	+0.7
POLP	Polilio Island	3.15	148	eP	Sn	19 36 55.6	+0.4
SJMP	San Jose	5.01	170	eP	Pn	19 36 44.1	+0.1

*ANF **02** 19:44:19.4±1.0, 35°.67N×97°.41W, h1^{km}±9^{km}, ML3.7/6, Error ellipse: s-maj=23.5km s-min=4.8km az=167.0*
*TUL **02** 19:44:20.5±1.2, 35°.59N±0°.05×97°.40W±0°.05, h6^{km}±6^{km}, ML3.4, Mwr3.2/7(SLM), Error ellipse: s-maj=6.5km s-min=5.3km az=162.0, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M$_{rr}$-0.52; M$_{θθ}$4.76; M$_{φφ}$-4.24; M$_{rθ}$-1.00; M$_{θφ}$7.27; M$_{φr}$1.83;*
*NEIC **02** 19:44:21.2±1.6, 35°.57N±0°.04×97°.37W±0°.04, h9^{km}±7^{km} Error ellipse: s-maj=6.7km s-min=2.4km az=138.0*
ISC 02 19:44:20.3±0.8**, 35°.60N**±0°.03×**97°.40W**±0°.04**, h8**^{km}±5^{km}**, n65,** σ**1^{s}06**/76**, Oklahoma**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OK009	Oakdale Elemen	0.03	230		Pg	19 44 21.7	-0.2
OK009				Sg	Sg	19 44 22.6	-0.4
ADOK	Arcadia Dam	0.06	21		Pg	19 44 22.4	+0.2
ADOK				Sg	Sg	19 44 23.9	+0.4
OK001	Jones High Sch	0.10	115	Pg	Pg	19 44 23.0	+0.3
OK001				Sg	Sg	19 44 24.9	+0.6
OKCFA	Oklahoma City	0.19	194		Pg	19 44 24.4	+0.2
OKCFA				Sg	Sg	19 44 27.5	+0.6
OKCSW	OKLAHOMA CITY	0.20	190		Pg	19 44 24.7	+0.3
OKCSW				Sg	Sg	19 44 27.8	+0.7
FNO	Franklin	0.34	181		Pg	19 44 27.6	+0.5
FNO				Sg	Sg	19 44 32.7	+1.1
W35A	Tecumseh	0.62	136		Pg	19 44 32.2	0.0
W35A				Sg	Sg	19 44 40.8	+0.5
X34A	Smith Ranch, M	1.06	200	Pg	Pg	19 44 40.7	0.0
X34A				Sg	Sb	19 44 55.7	+0.8
TUL1	Leonard	1.34	76	P	Pn	19 44 44.5	-0.8
	baz=257						
TUL1				S	Sb	19 45 03.2	+0.3
	baz=257						
TUL1	Leonard	1.34	76		Pn	19 44 44.3	-1.0
WMOK	Wichita Mounta	1.43	233	P	Pn	19 44 46.0	-0.5
	baz=53						
WMOK	Wichita Mounta	1.43	233		Pn	19 44 45.8	-0.7
T35A	Sooner Cattle	1.49	28		Pn	19 44 47.6	+0.1
U32A	Winter Ranch,	1.52	301		Pn	19 44 48.1	+0.3
X37A	Clayton	1.94	121		Pn	19 44 54.4	+0.9
Z35A	Perchaven, San	2.27	177		Pn	19 44 58.2	+0.2
U38A	Gravette	2.58	70		Pn	19 45 03.6	+1.2
HHAR	Hobbs	2.88	75	Pn	Pn	19 45 04.9	-1.6
W39A	Magazine	2.98	97	P	Pn	19 45 08.5	+0.7
	baz=279						
W39A				S	Sn	19 45 45.0	+1.3
	baz=279						
W39A	Magazine	2.98	97		Pn	19 45 08.4	+0.5
R32A	Long Quarter,	3.01	340	Pn	Pn	19 45 08.9	+0.6
Z38A	Mt. Pleasant	3.07	139	Pn	Pn	19 45 07.8	-1.3
MIAR	Mount Ida	3.30	107	P	Pn	19 45 13.9	+1.5
	baz=290						
MIAR				S	Sn	19 45 53.4	+1.6
	baz=290						
MIAR	Mount Ida	3.30	107		Pn	19 45 13.8	+1.5
ABTX	Abilene, Hawle	3.51	213		Pn	19 45 18.6	+3.5
KSU1	Kansas State U	3.55	10		Pn	19 45 16.6	+0.9
AMTX	Amarillo	3.58	260		Pn	19 45 14.0	-2.2
WHTX	Lake Whitney,	3.60	181		Pn	19 45 14.0	-2.4
CBKS	Cedar Bluff	3.71	330		Pn	19 45 16.7	-1.3
U40A	Yellville	3.76	77	P	Pn	19 45 18.6	0.0
	baz=260						
U40A	Yellville	3.76	77		Pn	19 45 18.6	0.0
X40A	Basin Creek Fa	3.90	105		Pn	19 45 20.5	0.0
WLAR	White Oak Lake	4.01	117	Pn	Pn	19 45 21.3	-0.8
WHAR	Wooly Hollow	4.18	93		Pn	19 45 24.9	+0.6
W41B	Gary Mavity, V	4.23	94	S	Sn	19 46 15.7	+1.2
	baz=277						
FCAR	Ozark Folk Cen	4.30	85		Pn	19 45 26.6	+0.6
MSTX	Muleshoe	4.71	251		Pn	19 45 31.3	-0.5
R40A	Maddies Statio	4.91	55	Pn	Pn	19 45 34.2	-0.2
P38A	Dawn	5.05	36	Pn	Pn	19 45 37.8	+1.4
LCAR	Lake Charles	5.09	83	Pn	Pn	19 45 35.0	-1.9
T42A	Van Buren	5.29	72	Pn	Pn	19 45 39.4	-0.2
KSCO	Kaye Shedlock'	5.38	311	Pn	Pn	19 45 40.8	-0.2
JCT	Junction City	5.49	202	Pn	Pn	19 45 41.0	-1.5
CCM	Cathedral Cave	5.51	62		Pn	19 45 41.5	-1.1
PBMO	Poplar Bluff	5.75	76	Pn	Pn	19 45 44.3	-1.7
P40A	Paris	5.78	46		Pn	19 45 46.0	-0.4
BGNE	Belgrade	5.83	354		Pn	19 45 47.2	+0.1
CPRX	Cap Rock	5.94	246		Pn	19 45 48.5	-0.2
GNAR	Gosnell	6.01	84	Pn	Pn	19 45 49.1	-0.3
N38A	Joes South For	6.13	31		Pn	19 45 51.0	-0.2
PARMO	Parma	6.28	78	Pn	Pn	19 45 52.6	-0.6
L34A	Svendsen Farm,	6.41	7	Pn	Pn	19 45 54.3	-0.7
OGNE	Ogallala	6.46	327		Pn	19 45 55.9	0.0
OXF	Oxford	6.64	97	S	Sn	19 47 11.5	-2.5
	baz=282						
SDCO	Great Sand Dun	6.86	291		Pn	19 46 02.8	+1.4
K31A	O'Neill	7.09	352	Pn	Pn	19 46 04.7	+0.3
ANMO	Albuquerque	7.44	268		Pn	19 46 09.9	+0.6
MNTX	Cornudas Mount	7.71	242		Pn	19 46 13.3	+0.4
BNM	Barren Site	7.72	262	Pn	Pn	19 46 13.5	+0.2
ISCO	Idaho Springs	7.75	305		Pn	19 46 13.2	-0.5
WVT	Waverly	7.78	83	Pn	Pn	19 46 12.6	-1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
L40A	Anamosa	8.05	35	Pn	Pn	19 46 17.4	-0.1
ECSD	EROS Data Cent	8.14	4	Pn	Pn	19 46 17.9	-1.0
TX31	Lajitas Ar. Si	8.19	222	Pn	Pn	19 46 18.4	-1.2
TX32	Lajitas Array	8.19	222	Pn	Pn	19 46 17.9	-1.7

IDC ***02*** *19:58:59.8±1.4, 37.°45N×20.°86E, h0km, mb3.5/6, mb1 3.5/9, mb1mx3.3/54, mbtmp3.4/9, ML3.5/3, MS3.3/1, Ms1 3.3/1, ms1mx2.1/40, Error ellipse: s-maj=27.9km s-min=21.7km az=74.0*

ATH ***02*** *19:59:01.6, 37.°31N×20.°77E, h24km±1km, ML3.3/23, Error ellipse: s-maj=1.8km s-min=0.8km az=41.0*

PDG ***02*** *19:59:03.5±0.8, 37.°62N×20.°75E, h10km±1km, ML3.5/13, Error ellipse: s-maj=1.6km s-min=1.1km az=90.0*

THE ***02*** *19:59:03.2, 37.°37N×20.°83E, h10km, ML3.3/9, Error ellipse: s-maj=0.8km s-min=0.4km az=52.0*

ISC 02 19:59:02.7±1.1**, 37.°40N**±0.°03×**20.°80E**±0.°02**, h18**km±4km**, n194,** σ1.°93/253**, mb3.4**/6**, 7C-17D, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRI1	kERI	0.26	4	P	Pg	19 59 09.4	+0.7
KRI1				S	Sg	19 59 13.6	+0.8
ZAK2	Zakynthos	0.40	12	P	Pb	19 59 11.5	+0.2
ZAK2				S	Sb	19 59 17.5	+0.5
VTN	Vitineika	0.60	31	P	Pb	19 59 15.2	+0.5
VTN				S	Sb	19 59 23.5	+0.7
VTN	Vitineika	0.60	31	P	Pb	19 59 15.2	+0.5
VTN				S	Sn	19 59 25.7	0.0
KFL	Anninata	0.71	359	P	Pb	19 59 16.6	+0.1
KFL				S	Sb	19 59 27.7	+1.8
KFL	Anninata	0.71	359	P	Pb	19 59 16.6	+0.1
KFL				S	Sn	19 59 28.3	0.0
KFL				AML	AML	19 59 30.1	
	comp=N,15763μm,0.2s						
KFL				AML	AML	19 59 30.6	
	comp=E,27771μm,0.3s						
AMT	Artemida-Makis	0.74	79	P	Pb	19 59 16.8	-0.3
AMT	Artemida-Makis	0.74	79	P	Pb	19 59 16.8	-0.3
AMT				S	Sb	19 59 28.0	+1.2
AMT				AML	AML	19 59 33.4	
	comp=E,8596μm,0.4s						
AMT				AML	AML	19 59 38.4	
	comp=N,9795μm,0.4s						
VLS	Valsamata	0.79	348	P	Pb	19 59 18.5	+0.5
VLS				S	Sn	19 59 31.4	+1.0
VLS	Valsamata	0.79	348	P	Pb	19 59 18.4	+0.4
VLS				S	Sn	19 59 31.6	+1.2
VLS				AML	AML	19 59 31.9	
	comp=N,32970μm,0.3s						
VLS				AML	AML	19 59 32.0	
	comp=E,30858μm,0.3s						
VLS	Valsamata	0.79	348	P	Pb	19 59 18.4	+0.4
VLS				S	Sn	19 59 31.5	+1.0
VLS				AML	AML		
	comp=E,5465μm,1.7s						
VLS				AML	AML		
	comp=E,5460μm,1.7s						
VLS				AML	AML		
	comp=N,5720μm,1.7s						
KEF2	Argostoli. Kep	0.80	342	P	Pb	19 59 18.6	+0.5
KEF2				S	Sn	19 59 32.0	+1.4
ARGA	Argostoli. Kep	0.82	342	P	Pb	19 59 18.7	+0.3
ARGA				S	Sn	19 59 32.4	+1.5
RLS	Riolos of Patr	0.85	39	P	Pb	19 59 18.9	0.0
RLS				S	Sb	19 59 31.3	+1.4
	comp=N,2μm,0.2s						
RLS	Riolos of Patr	0.85	39	P	Pb	19 59 18.8	0.0
RLS				S	Sn	19 59 32.4	+0.8
RLS				AML	AML	19 59 33.8	
	comp=E,3167μm,0.2s						
RLS				AML	AML	19 59 35.6	
	comp=N,2918μm,0.3s						
LXRA	Lixouri, Kepha	0.85	341	P	Pn	19 59 20.2	+0.4
CHV1	Chavriata, Kef	0.85	337	P	Pn	19 59 19.8	+0.1
CHV1				S	Sn	19 59 32.9	+1.2
KEF3	Kipouria, Keph	0.88	336	P	Pn	19 59 20.1	-0.1
KEF3				S	Sn	19 59 34.5	+2.1
KEF4	Livadi, Kephal	0.91	341	P	Pn	19 59 20.5	0.0
PYL	PYLOS	0.91	123	P	Pg	19 59 19.3	-1.1
PYL				S	Sb	19 59 32.5	+0.8
	comp=N,4μm,0.4s						
PYL	PYLOS	0.91	123	P	Pg	19 59 19.1	-1.4
PYL				S	Sb	19 59 31.7	0.0
PYL				AML	AML	19 59 33.5	
	comp=N,6576μm,0.4s						
PYL				AML	AML	19 59 34.0	
	comp=E,7987μm,0.3s						
DRO	Drossia	0.91	52	P	Pb	19 59 19.9	-0.1
DRO				S	Sn	19 59 33.9	+0.6
	comp=E,4μm,0.5s						
DRO	Drossia	0.91	52	P	Pb	19 59 20.0	0.0
DRO				S	Sn	19 59 34.0	+0.7
DRO				AML	AML	19 59 34.4	
	comp=E,10115μm,0.3s						
DRO				AML	AML	19 59 36.1	
	comp=N,7030μm,0.3s						
ITM	Ithomi	0.93	103	P	Pb	19 59 19.7	-0.6
ITM				S	Sb	19 59 33.3	+1.0
	comp=N,2μm,0.5s						
ITM	Ithomi	0.93	103	P	Pb	19 59 19.7	-0.6
ITM				S	Sb	19 59 32.8	+0.6
ITM				AML	AML	19 59 36.1	
	comp=N,4173μm,0.4s						
ITM				AML	AML	19 59 36.4	
	comp=E,3676μm,0.6s						
FSK	Fiskardo	1.07	350	P	Pn	19 59 23.2	+0.3
FSK				S	Sn	19 59 39.9	+2.6
	comp=E,3μm,0.2s						
FSK	Fiskardo	1.07	350	P	Pn	19 59 23.1	+0.2
FSK				S	Sn	19 59 40.7	+3.4
FSK				AML	AML	19 59 42.3	
	comp=E,8965μm,0.2s						
FSK				AML	AML	19 59 42.5	
	comp=N,3662μm,0.2s						
TRIP	Tripoli	1.18	83	P	Pn	19 59 24.6	+0.2
TRIP	Tripoli	1.18	83	P	Pn	19 59 25.1	+0.7
TRIP				S	Sn	19 59 42.1	+2.1
TRIP				AML	AML	19 59 48.5	
	comp=E,1328μm,0.6s						
TRIP				AML	AML	19 59 50.7	
	comp=N,1289μm,0.8s						
UPR	University Cam	1.18	41	P	Pn	19 59 25.7	+1.4
UPR				S	Sn	19 59 44.0	+4.1
EVGI	Lefkada island	1.23	355	P	Pn	19 59 25.5	+0.6
EVGI				S	Sn	19 59 43.7	+2.7
EVGI	Lefkada island	1.23	355	P	Pn	19 59 25.5	+0.6
EVGI				S	Sn	19 59 44.8	+3.8
KLV	Kalavryta, Ach	1.25	59	P	Pb	19 59 25.5	-0.3
KLV				S	Sn	19 59 43.2	+1.4
	comp=N,415nm,0.5s						
KLV	Kalavryta, Ach	1.25	59	P	Pb	19 59 25.5	-0.3
KLV				S	Sn	19 59 45.2	+3.4
KLV				AML	AML	19 59 48.9	
	comp=N,731μm,0.2s						
KLV				AML	AML	19 59 53.2	
	comp=E,938μm,0.5s						
KLV	Kalavryta, Ach	1.25	59	P	Pb	19 59 25.4	-0.5
KLV				S	Sn	19 59 44.3	+2.5
KLV				AML	AML		
	comp=E,576μm,0.5s						
KLV				AML	AML		
	comp=N,518μm,1.2s						
LAKA	Lakka	1.26	48	P	Pn	19 59 26.0	+0.6
LAKA				S	Sn	19 59 43.8	+1.9
	comp=N,610nm,0.6s						
LAKA	Lakka	1.26	48	P	Pn	19 59 26.1	+0.6
LAKA				S	Sn	19 59 45.3	+3.5
LAKA				AML	AML	19 59 49.4	
	comp=N,1627μm,0.5s						
LAKA				AML	AML	19 59 56.4	
	comp=E,1066μm,0.6s						
VLX	Vlachokerasia	1.26	91	P	Pb	19 59 25.7	-0.3
VLX	Vlachokerasia	1.26	91	P	Pn	19 59 25.8	+0.3
VLX				S	Sn	19 59 44.2	+2.1
VLX				AML	AML	19 59 54.6	
	comp=N,1801μm,0.5s						
VLX				AML	AML	19 59 55.5	
	comp=E,2123μm,0.4s						
EFP	Efpalio	1.35	40	P	Pb	19 59 27.3	-0.1
EFP				S	Sn	19 59 46.4	+2.3
	comp=E,845nm,0.3s						
EFP	Efpalio	1.35	40	P	Pb	19 59 27.4	-0.1
EFP				AML	AML	19 59 52.7	
	comp=E,1577μm,0.3s						
EFP				AML	AML	19 59 56.0	
	comp=N,1684μm,0.4s						
DYR	Agios Nikonas	1.39	117	P	Pn	19 59 27.5	+0.4
DYR	Agios Nikonas	1.39	117	P	Pn	19 59 27.4	+0.2
DYR				S	Sn	19 59 46.6	+1.6
DYR				AML	AML	19 59 51.3	
	comp=E,486μm,0.3s						
DYR				AML	AML	19 59 51.3	
	comp=N,531μm,0.4s						
LKD2	Lefkada island	1.39	356	P	Pb	19 59 28.5	+0.3
LKD2				S	Sn	19 59 47.9	+2.7
	comp=N,1μm,0.6s						
LKD2	Lefkada island	1.39	356	P	Pb	19 59 28.7	+0.4
LKD2				S	Sn	19 59 49.6	+4.4
LKD2				AML	AML	19 59 55.5	
	comp=N,1837μm,0.3s						
LKD2				AML	AML	20 00 01.2	
	comp=E,2673μm,0.5s						
TRIZ	Trizonia	1.40	46	P	Pb	19 59 28.2	0.0
TRIZ	Trizonia	1.40	46	P	Pb	19 59 28.2	0.0
SERG	Sergoula	1.42	44	P	Pb	19 59 28.8	+0.1
SERG				S	Sn	19 59 50.2	+4.3
SERG				AML	AML	19 59 57.8	
	comp=N,2217μm,0.4s						
SERG				AML	AML	20 00 01.3	
	comp=E,1408μm,0.3s						
KALE	Kalithea	1.45	47	P	Pg	19 59 29.6	-1.2
KALE				S	Sn	19 59 50.7	+4.0
KALE				AML	AML	19 59 56.4	
	comp=N,1982μm,0.6s						
KALE				AML	AML	19 59 59.8	
	comp=E,1153μm,0.5s						
EVR	Evrytania	1.71	27	P	Pg	19 59 34.3	-1.4
EVR				AML	AML	20 00 02.2	
	comp=E,1806μm,0.5s						
EVR				AML	AML	20 00 05.0	
	comp=N,989μm,0.5s						
LOUT	Loutraki	1.82	71	P	Pn	19 59 33.9	+0.7
VLI	Veliai	1.84	111	P	Pb	19 59 35.5	-0.4
VLI				AML	AML	20 00 15.0	
	comp=N,506μm,0.4s						
VLI				AML	AML	20 00 18.8	
	comp=E,423μm,1.3s						
PROD	Prodromos	1.87	62	P	Pb	19 59 35.8	-0.7
PROD				AML	AML	20 00 09.1	
	comp=N,688μm,0.3s						
PROD				AML	AML	20 00 12.3	
	comp=E,647μm,0.6s						
MAKR	Makrakomi, Fth	1.92	33	P	Pg	19 59 38.0	-1.7
MAKR				AML	AML	20 00 12.2	
	comp=E,1418μm,0.3s						
MAKR				AML	AML	20 00 15.2	
	comp=N,1007μm,0.8s						
DID	Didima	1.94	86	P	Pn	19 59 36.1	+1.3
AGG	Agios Georgios	2.02	36	P	Pb	19 59 39.1	+0.1
VIL2	Platees	2.12	67	P	Pn	19 59 38.6	+1.3
VIL2				AML	AML	20 00 21.7	
	comp=E,404μm,0.5s						
VIL2				AML	AML	20 00 23.6	
	comp=N,423μm,0.9s						
LKR	Lokris	2.14	54	P	Pb	19 59 39.5	-1.5
IGT	Igoumenitsa	2.16	350	P	Pb	19 59 40.0	-1.3
JAN	Janina	2.25	1	P	Pb	19 59 41.2	-1.7
THL	Klokotos Trika	2.36	23	P	Pb	19 59 43.2	-1.6
THL	Klokotos Trika	2.36	23	P	Pb	19 59 43.2	-1.6
THL				AML	AML		
	comp=N,28μm,1.3s						
THL				AML	AML		
	comp=E,36μm,1.0s						
VLY	Voula,Athens	2.42	78	P	Pn	19 59 42.1	+0.7
VLY				AML	AML	20 00 16.4	
	comp=E,258μm,0.6s						
VLY				AML	AML	20 00 32.3	
	comp=N,270μm,0.7s						
KEK	Kerkira	2.44	342	P	Pn	19 59 42.5	+0.9
PTL	Penteli	2.52	74	P	Pn	19 59 44.2	+1.5
MRKA	Markates	2.56	59	P	Pn	19 59 45.0	+1.7
KYMI	Kymi, Euboea I	2.89	64	P	Pn	19 59 48.6	+0.8
SERI	Serifos	2.95	94	P	Pn	19 59 48.9	+0.2
KARY	Karystos	2.96	77	P	Pn	19 59 51.1	+2.3
KZN	Kozani	3.00	14	P	Pn	19 59 52.1	+2.7
IMMV	Iera Moni Meta	3.22	126	P	Pn	19 59 53.1	+0.8
SCTE	Santa Cesarea	3.23	326	P	Pn	19 59 52.8	+0.3
SCTE				S	Sn	20 00 31.3	+0.8
SCTE				AML	AML		
	comp=N,136μm,0.6s						
SCTE				AML	AML		
	comp=E,155μm,3.2s						
VAM	Vamos	3.39	125	P	Pn	19 59 55.4	+0.7
LADO	San Nicola del	3.54	303	P	Pn	19 59 57.7	+0.9
LADO				S	Sn	20 00 38.1	-0.1
LADO				AML	AML		
	comp=E,57μm,1.7s						
LADO				AML	AML		
	comp=N,37μm,0.3s						
PLAC	Placanica	3.60	288	P	Pn	19 59 58.3	+0.7
PLAC				AML	AML		
	comp=N,39μm,0.5s						
PLAC				AML	AML		
	comp=E,51μm,0.3s						
SERS	Sersale	3.62	298	P	Pn	19 59 58.1	+0.1
SERS				AML	AML		
	comp=N,32μm,0.8s						
SERS				AML	AML		
	comp=E,35μm,0.8s						
TIP	Timpagrande	3.64	300	⇓P	Pn	20 00 00.7	+2.4
TIP	Timpagrande	3.64	300	P	Pn	19 59 59.4	+1.2
TIP				AML	AML		
	comp=E,25μm,1.6s						
TIP				AML	AML		
	comp=N,22μm,1.2s						
PIPA	Pietrapaola	3.75	305	P	Pn	20 00 00.5	+0.7
PIPA				AML	AML		
	comp=E,144μm,0.7s						
PIPA				AML	AML		
	comp=N,108μm,3.3s						
APE	Apeiranthos	3.79	94	⇓P	Pn	20 00 00.1	-0.2
CELI	Celico	3.92	302	P	Pn	20 00 05.1	+3.0
CELI				AML	AML		
	comp=N,62μm,2.9s						
CELI				AML	AML		
	comp=E,60μm,2.9s						
CELI	Celico	3.92	302	P	Pn	20 00 05.1	+3.0
IDI	Anoyia	3.92	121	Pn	Pn	20 00 02.3	+0.3
	comp=E,0.9nm,0.3s,baz=302,slow=6.6,SNR=16						
IDI				Sn	Sn	20 00 42.2	-5.4
	comp=E,1.2nm,0.3s,baz=90,slow=20,SNR=2.0						
IDI	Anoyia	3.92	121	⇓P	Pn	20 00 02.3	+0.3
MTTG	Motta San Giov	4.09	280	P	Pn	20 00 06.8	+2.5
MTTG	Motta San Giov	4.09	280	P	Pn	20 00 06.8	+2.5
SALB	San Lorenzo Be	4.27	307	P	Pn	20 00 09.5	+2.5
SALB	San Lorenzo Be	4.27	307	P	Pn	20 00 09.5	+2.5
SALB				AML	AML		
	comp=N,86μm,1.7s						
SALB				AML	AML		
	comp=E,128μm,0.8s						
MPNC	Port Mandanici	4.38	281	P	Pn	20 00 10.4	+2.1
MPNC				AML	AML		
	comp=N,123μm,0.6s						
MPNC				AML	AML		
	comp=E,107μm,1.1s						
MPNC	Port Mandanici	4.38	281	P	Pn	20 00 10.4	+2.1
MCSR	Castroreale	4.45	280	P	Pn	20 00 11.9	+2.6
MCSR	Castroreale	4.45	280	P	Pn	20 00 11.9	+2.6
MCSR				AML	AML		
	comp=E,231μm,3.4s						
MCSR				AML	AML		
	comp=N,294μm,0.3s						
NOCI	Noci	4.46	321	P	Pn	20 00 10.5	+1.1
NOCI				S	Sn	20 00 59.8	-1.0
NOCI				AML	AML		
	comp=N,109μm,1.5s						
NOCI				AML	AML		
	comp=E,88μm,1.3s						
CRAC	Craco	4.51	312	P	Pn	20 00 13.7	+3.6
CRAC				AML	AML		
	comp=E,142μm,2.8s						
CRAC				AML	AML		
	comp=N,136μm,1.6s						
CRAC	Craco	4.51	312	P	Pn	20 00 13.7	+3.6
NOV	Novara	4.53	280	P	Pn	20 00 12.9	+2.4
NOV				AML	AML		
	comp=N,124μm,3.0s						
NOV				AML	AML		
	comp=E,122μm,1.4s						
NOV	Novara	4.53	280	P	Pn	20 00 12.9	+2.4
MATE	Matera	4.55	317	⇓P	Pn	20 00 11.7	+1.1
MATE	Matera	4.55	317	P	Pn	20 00 10.9	+0.4
MATE				AML	AML		
	comp=N,50μm,0.2s						
MATE				AML	AML		
	comp=E,49μm,1.4s						
SSY	Sortino	4.57	269	P	Pn	20 00 11.1	+0.1
SSY				AML	AML		
	comp=E,110μm,3.6s						
SSY				AML	AML		
	comp=N,286μm,3.3s						
SSY	Sortino	4.57	269	P	Pn	20 00 11.1	+0.1
HCRL	Carlentini	4.59	270	P	Pn	20 00 10.5	-0.8
HPAC	Pachino	4.60	263	P	Pn	20 00 13.2	+1.9
HPAC	Pachino	4.60	263	P	Pn	20 00 13.2	+1.9
HPAC				AML	AML		
	comp=E,221μm,2.9s						
HPAC				AML	AML		
	comp=N,224μm,0.6s						
SCHR	S. Chirico Rap	4.63	309	P	Pn	20 00 15.0	+3.2
SCHR	S. Chirico Rap	4.63	309	P	Pn	20 00 15.0	+3.2
MIGL	Miglionico	4.66	315	P	Pn	20 00 14.8	+2.6
MIGL	Miglionico	4.66	315	P	Pn	20 00 14.8	+2.6
MIGL				AML	AML		
	comp=E,215μm,0.7s						
MIGL				AML	AML		
	comp=N,230μm,3.3s						
PUK	Puka	4.69	352	P	Pn	20 00 14.5	+1.8
PUK				AML	AML		
	comp=E,42μm,0.7s						
PUK				AML	AML		
	comp=N,33μm,3.1s						
PUK	Puka	4.69	352	P	Pn	20 00 14.5	+1.8
VPL	Vulcano Piano	4.70	284	P	Pn	20 00 15.7	+3.0
ULC	Ulcinj	4.71	346	⇑ *i* Pn	Pn	20 00 12.8	-0.1
ULC				*i* Sn	Sn	20 01 05.4	-1.7
HLNI	Lentini	4.72	271	P	Pn	20 00 12.0	-1.0
MUCR	Ucria	4.74	280	P	Pn	20 00 16.9	+3.5
MUCR				AML	AML		
	comp=E,55μm,3.3s						
MUCR				AML	AML		
	comp=N,82μm,0.5s						
MUCR	Ucria	4.74	280	P	Pn	20 00 16.9	+3.5
SIRI	Monte Sirino -	4.75	307	P	Pn	20 00 17.5	+4.1
SIRI				AML	AML		
	comp=E,64μm,0.8s						
SIRI				AML	AML		
	comp=N,56μm,0.3s						
SIRI	Monte Sirino -	4.75	307	P	Pn	20 00 17.5	+4.1
MMB	Musomiste	4.76	28	*i* P	Pn	20 00 14.8	+1.2
AMUR	Altamura	4.78	318	P	Pn	20 00 15.9	+2.1
AMUR	Altamura	4.78	318	P	Pn	20 00 15.9	+2.1
AMUR				AML	AML		
	comp=E,62μm,2.9s						
AMUR				AML	AML		
	comp=N,92μm,0.4s						
HMDC	Modica	4.82	267	P	Pn	20 00 15.5	+1.1
HMDC	Modica	4.82	267	P	Pn	20 00 15.5	+1.1
HMDC				AML	AML		
	comp=N,189μm,2.8s						
HMDC				AML	AML		
	comp=E,148μm,1.2s						
MTSN	Montesano sull	4.87	308	P	Pn	20 00 18.2	+3.1
MTSN	Montesano sull	4.87	308	P	Pn	20 00 18.2	+3.1
MTSN				AML	AML		
	comp=N,54μm,0.4s						
MTSN				AML	AML		
	comp=E,45μm,1.5s						
MCEL	Monticello	4.87	308	P	Pn	20 00 18.9	+3.7
MCEL	Monticello	4.87	308	P	Pn	20 00 18.9	+3.7
MCEL				AML	AML		
	comp=E,58μm,0.3s						
MCEL				AML	AML		
	comp=N,62μm,1.7s						
DRME	Dracevica, Mon	4.94	346	⇑ *i* Pn	Pn	20 00 16.2	+0.2
DRME				*i* Sn	Sn	20 01 11.2	-1.4
GALF	Gagliano Caste	4.96	275	P	Pn	20 00 19.1	+2.8
GALF	Gagliano Caste	4.96	275	P	Pn	20 00 19.1	+2.8
GALF				AML	AML		
	comp=E,62μm,2.7s						
GALF				AML	AML		
	comp=N,51μm,2.7s						
MSFR	San Fratello	4.96	279	P	Pn	20 00 21.0	+4.6
MSFR	San Fratello	4.96	279	P	Pn	20 00 21.0	+4.6
MSFR				AML	AML		
	comp=N,36μm,3.4s						
MSFR				AML	AML		
	comp=E,36μm,1.4s						
BULG	Bulgheria - Ca	5.01	304	P	Pn	20 00 20.9	+3.9
BULG	Bulgheria - Ca	5.01	304	P	Pn	20 00 20.9	+3.9
BULG				AML	AML		
	comp=E,50μm,0.6s						
BULG				AML	AML		
	comp=N,90μm,1.6s						
SLCN	Sala Consilina	5.01	308	P	Pn	20 00 20.5	+3.4
SLCN				AML	AML		
	comp=E,510μm,0.6s						
SLCN				AML	AML		
	comp=N,423μm,1.6s						
SLCN				AML	AML		
	comp=E,149μm,0.3s						
SLCN				AML	AML		
	comp=N,87μm,0.9s						
SLCN	Sala Consilina	5.01	308	P	Pn	20 00 20.5	+3.4
HBSP	Bosco Santo Pi	5.04	269	P	Pn	20 00 19.0	+1.7
VAE	Valguarnera	5.08	273	Pn	Pn	20 00 22.4	+4.4
	comp=N,0.9nm,0.3s,baz=318,slow=14,SNR=1.8						
VAE				Sn	Sn	20 01 20.7	+4.5
	comp=N,1.1nm,0.3s,baz=338,slow=19,SNR=1.9						
BUM	Brajici-Budva	5.11	344	⇑ *i* Pn	Pn	20 00 18.4	0.0
BUM				*i* Sn	Sn	20 01 14.9	-2.0
MRVN	Minervino Murg	5.11	317	P	Pn	20 00 20.7	+2.3
MRVN	Minervino Murg	5.11	317	P	Pn	20 00 20.7	+2.3
MRVN				AML	AML		
	comp=E,49μm,0.5s						
MRVN				AML	AML		
	comp=N,59μm,0.3s						
PALZ	Palazzo San Ge	5.16	315	P	Pn	20 00 20.3	+1.2
PALZ	Palazzo San Ge	5.16	315	P	Pn	20 00 20.3	+1.2
PDG	Podgorica	5.16	347	⇓P	Pn	20 00 19.9	+0.9
TTG	Podgorica	5.16	347	⇓ *i* Pn	Pn	20 00 19.3	+0.3
TTG				*i* Sn	Sn	20 01 16.5	-1.6
CMPR	Campora	5.18	306	P	Pn	20 00 22.6	+3.2
CMPR	Campora	5.18	306	P	Pn	20 00 22.6	+3.2
CMPR				AML	AML		
	comp=N,22μm,1.5s						
CMPR				AML	AML		
	comp=E,30μm,3.5s						
IACL	Alicudi	5.21	285	P	Pn	20 00 23.6	+3.8
IACL				AML	AML		
	comp=E,73μm,3.5s						
IACL				AML	AML		
	comp=N,136μm,0.1s						
IACL	Alicudi	5.21	285	P	Pn	20 00 23.6	+3.8
PVY	Plav	5.23	353	⇓ *i* Pn	Pn	20 00 20.3	+0.2
PVY				*i* Sn	Sn	20 01 18.5	-1.4
RZN	Rozhen	5.25	34	*i* P	Pn	20 00 22.0	+1.6
MRLC	Muro Lucano	5.32	311	P	Pn	20 00 24.8	+3.6
CEME	Cevo	5.34	345	⇓ *i* Pn	Pn	20 00 21.7	+0.2
CEME				*i* Sn	Sn	20 01 20.6	-2.0
HCY	Herceg Novi	5.34	341	⇓ *i* Pn	Pn	20 00 21.3	-0.2
HCY				*i* Sn	Sn	20 01 21.0	-1.6
CLTA	Licata	5.46	270	P	Pn	20 00 25.5	+2.4
IVA	Berane	5.51	353	⇓ *i* Pn	Pn	20 00 24.2	+0.3
IVA				*i* Sn	Sn	20 01 25.0	-1.8
KOME	Kolasin	5.53	350	⇓ *i* Pn	Pn	20 00 24.4	+0.2
KOME				*i* Sn	Sn	20 01 25.1	-2.3
VTS	Vitosha	5.54	19	⇓P	Pn	20 00 25.8	+1.4
VTS	Vitosha	5.54	19	*i* P	Pn	20 00 25.8	+1.4
NKME	Niksic	5.54	346	⇓ *i* Pn	Pn	20 00 24.5	+0.2
NKME				*i* Sn	Sn	20 01 25.7	-1.9
NKY	Niksic	5.58	346	⇓ *i* Pn	Pn	20 00 25.1	+0.2
NKY				*i* Sn	Sn	20 01 26.2	-2.4
DBRK	Dubrovnik	5.64	340	*e* Pn	Pn	20 00 25.3	-0.3
DBRK				Sn	Sn	20 01 27.4	-2.5
MSAG	Monte S. Angel	5.73	320	P	Pn	20 00 28.9	+2.0
MSAG	Monte S. Angel	5.73	320	P	Pn	20 00 28.9	+2.0
BRY	Bratogost	5.76	343	⇓ *i* Pn	Pn	20 00 27.2	-0.2
BRY				*i* Sn	Sn	20 01 31.2	-1.9
STON	Ston	5.96	338	P	Pn	20 00 29.3	-0.7
STON	Ston	5.96	338	P	Pn	20 00 29.3	-0.7

STON	**Ston**	**5.96**	**338**	*e*Pn		**Pn**	**20 00 29.2**	**-0.7**
STON				Sn		**Sn**	**20 01 34.6**	**-3.1**
UPM	**Unac-Piva**	**5.97**	**347**⇑	*i*Pn		**Pn**	**20 00 30.3**	**-0.1**
UPM				*i* Sn		**Sn**	**20 01 35.8**	**-2.6**
PLE	**Pljevlja**	**6.02**	**350**⇑	*i*Pn		**Pn**	**20 00 31.3**	**+0.3**
PLE				*i* Sn		**Sn**	**20 01 36.6**	**-2.8**
MELA	**Melanico ??? S**	**6.14**	**316**	P		**Pn**	**20 00 34.1**	**+1.7**
MAKA	**Makarska**	**6.55**	**335**	*e*Pn		**Pn**	**20 00 38.4**	**+0.3**
ELND	**Elena**	**6.75**	**34**	⇑P		**Pn**	**20 00 41.1**	**+0.2**
ZIRJ	**Zirje**	**7.38**	**329**	*e*Pn		**Pn**	**20 00 49.5**	**+0.1**
KIJV	**Kijevo**	**7.39**	**335**	*e*Pn		**Pn**	**20 00 49.8**	**+0.1**
KIJV				Sn		**Sn**	**20 02 10.6**	**-2.4**
MORI	**Morici**	**7.53**	**331**	*i* Pn		**Pn**	**20 00 52.0**	**+0.5**
UDBI	**Udbina**	**8.07**	**333**	*e*Pn		**Pn**	**20 00 60.0**	**+0.9**
CSP1	**Cessapalombo**	**8.12**	**317**	P		**Pn**	**20 01 03.6**	**+3.8**
VOIR		**8.64**	**20**	⇓P		**Pn**	**20 01 07.1**	**+0.2**
MLR	**Muntele Rosu**	**8.96**	**24**	Pn		Pn	20 01 16.2	+4.9
	comp=N,0.2nm,0.3s,baz=209,slow=10,SNR=2.0							
MLR	**Muntele Rosu**	**8.96**	**24**	⇓P		**Pn**	**20 01 12.4**	**+1.1**
VRI	**Vrincioaia**	**9.55**	**26**	⇑P		**Pn**	**20 01 19.7**	**+0.4**
SOKA	**Soboth**	**10.21**	**337**	*i* Pn		**Pn**	**20 01 28.5**	**+0.1**
	comp=N,0.4nm,0.2s							
OBKA	**Obir**	**10.22**	**335**	*i* Pn		**Pn**	**20 01 30.0**	**+1.6**
	comp=N,0.4nm,0.1s							
MOA	**Molln**	**11.49**	**337**	*e*Pn		**Pn**	**20 01 47.0**	**+1.2**
	comp=N,2.3nm,0.5s							
GERES	**GERESS Array B**	**12.55**	**338**	Pn		**Pn**	**20 02 00.5**	**+0.1**
	comp=N,0.2nm,0.3s,baz=152,slow=14,SNR=4.4							
EIL	**Elat**	**14.09**	**119**	Pn		Pn	20 02 16.9	-4.5
	comp=N,0.0nm,0.3s,baz=346,slow=19,SNR=1.8							
EIL				Sn		Sn	20 04 42.5	-15
	comp=N,0.2nm,0.3s,baz=350,slow=19,SNR=2.3							
AKASG	**Malin Array Be**	**14.60**	**22**	Pn		**Pn**	**20 02 27.7**	**-0.5**
	comp=N,0.4nm,0.3s,baz=212,slow=11,SNR=1.6							
HFS	**Hagfors**	**25.20**	**351**	P		**P**	**20 04 07.2**	**-1.1**
	comp=N,2.5nm,0.8s,baz=148,slow=8.7,SNR=11							
EKA	**Eskdalemuir Ar**	**24.19**	**326**	P		**P**	**20 04 18.4**	**+0.6**
	comp=N,1.0nm,0.5s,baz=121,slow=8.2,SNR=10							
FINES	**FINESS Array B**	**24.30**	**6**	P		**P**	**20 04 17.6**	**-1.1**
	comp=N,1.1nm,0.8s,baz=180,slow=9.6,SNR=6.0							
NOA	**NORSAR Array B**	**24.42**	**349**	P		**P**	**20 04 19.5**	**-0.5**
	comp=N,0.3nm,0.5s,baz=154,slow=11,SNR=2.2							
TORD	**Torodi Ar. Bea**	**29.57**	**220**	P		**P**	**20 05 06.9**	**+0.3**
	comp=N,0.3nm,0.6s,baz=32,slow=9.4,SNR=3.2							
MKAR	**Makanchi Array**	**45.53**	**58**	P		**P**	**20 07 19.6**	**-1.5**
	comp=N,0.2nm,0.4s,baz=282,slow=4.7,SNR=5.0							
NRIK	**Noril'sk**	**47.39**	**26**	LR		LR	20 31 17.4	
	comp=N,31nm,18.8s,baz=50,slow=41							

MAN 02 20:01:07.2,16.70N×120.81E,h32km,mb4.4,ML3.3, MS3.1,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPP	**San Manuel, Pa**	**0.56**	**192**	*e*P	Pn	20 01 20.0	+1.0
ABRA	**Dolores**	**0.94**	**355**	*e*P	Pn	20 01 24.2	0.0
ABRA				*e*S	Sn	20 01 36.8	+0.1
BALP	**Baler**	**1.21**	**142**	*e*P	Pn	20 01 27.4	-0.5
BALP				*e*S	Sn	20 01 43.4	+0.2
APYP	**Conner**	**1.23**	**20**	*e*P	Pn	20 01 28.2	+0.1
APYP				*e*S	Sn	20 01 44.3	+0.7

SSNC ***02*** *20:02:45.9±2.0, 19.99N×73.34W, h44km±39km, MD3.5, ML3.3, MW3.6*
OSPL ***02*** *20:02:46.9±0.8, 19.90N×73.59W, h124km±19km, ML2.6*
ISC 02 20:02:43.9±1.5,20.1N±0.1×73.36W±0.07,h25km±17km,n8, σ0§95/14,Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASC	**Masc**	**0.82**	**275**	*e*Pg	**Pn**	**20 03 00.5**	**+0.6**
MASC				*e*Sg	**Sb**	**20 03 10.8**	**+0.5**
MASC				IAML		20 03 11.7	
	comp=N,499nm,0.2s						
MASC				IAML		20 03 12.1	
	comp=E,502nm,0.1s						
MOAC	**Moa**	**1.60**	**291**	*e*P	**Pb**	**20 03 12.2**	**-0.6**
MOAC				*e*S	**Sn**	**20 03 31.5**	**+1.0**
MOAC				IAML		20 03 34.2	
	comp=N,103nm,0.2s						
MOAC				IAML		20 03 34.2	
	comp=E,79nm,0.2s						
GTBY	**Guantanamo Bay**	**1.66**	**264**	*i* P	**Pn**	**20 03 12.2**	**+0.8**
GTBY				*e*S	**Sn**	**20 03 32.0**	**+0.1**
GTBY				IAML		20 03 35.7	
	comp=Z,61nm,0.1s						
LGNH	**Logne**	**1.73**	**156**	*i* P	**Pb**	**20 03 15.4**	**+0.3**
LGNH				*e*S	**Sb**	**20 03 36.1**	**-0.3**
LGNH				IAML		20 03 40.3	
	comp=Z,20nm,0.2s						
RCC	**Rio Carpintero**	**2.20**	**268**	*e*P	**Pn**	**20 03 19.5**	**+0.6**
RCC				*e*S	**Sn**	**20 03 43.8**	**-1.6**
RCC				IAML		20 03 48.0	
	comp=N,64nm,0.2s						
RCC				IAML		20 03 48.1	
	comp=E,47nm,0.2s						
SDDR	**Presa de Saban**	**2.25**	**119**	*i* P	**Pb**	**20 03 23.9**	**0.0**
SDDR				*e*S	**Sb**	**20 03 50.4**	**-0.8**
SDDR				IAML		20 04 03.1	
	comp=Z,75nm,0.5s						
LMGC	**Las Mercedes**	**3.43**	**270**	*e*P	**Pn**	**20 03 36.4**	**+0.6**
LMGC				*e*S	**Sn**	**20 04 14.1**	**-1.6**
LMGC				IAML		20 04 15.4	
	comp=N,24nm,0.1s						
LMGC				IAML		20 04 16.1	
	comp=E,22nm,0.1s						
CCCC	**Cccc**	**4.27**	**286**	*e*P	Pn	20 03 42.7	-4.7
CCCC				*e*S	Sn	20 04 25.8	-11
CCCC				IAML		20 04 28.5	
	comp=E,8.5nm,0.2s						
CCCC				IAML		20 04 29.0	
	comp=N,7.1nm,0.2s						

NAM ***02*** *20:21:54.7±39.0, 25.39S×28.76E, h80km±999km, MD3.8*
PRE ***02*** *20:22:05.6±1.2, 26.48S×27.61E, h2km, ML2.1*
ISC 02 20:22:05.3±0.8,26.42S±0.05×27.61E±0.04,h10km,n22, σ1§53/38,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WDLM	**Western Deep L**	**0.17**	**267**	*e*P	**Pg**	**20 22 09.2**	**+0.1**
WDLM				*e*S	**Sg**	**20 22 11.0**	**-0.8**
WDLM				AML	AML	20 22 11.5	
	comp=Z,1μm,0.2s						
ERPM	**east rand prop**	**0.57**	**83**	*e*P	**Pg**	**20 22 17.4**	**+1.0**
ERPM				*e*S	**Sg**	**20 22 24.9**	**+1.0**
ERPM				AML	AML	20 22 26.5	
	comp=Z,49nm,0.2s						
SLR	**Silverton**	**0.91**	**42**	*e*P	**Pg**	**20 22 24.1**	**+1.3**
SLR				*e*S	**Sn**	**20 22 38.1**	**+0.6**
SLR				AML	AML	20 22 42.2	
	comp=Z,35nm,0.4s						
LBTB	**Lobatse**	**2.29**	**307**	*i* P	**Pn**	**20 22 43.0**	**-0.3**
LBTB				*i* S	**Sn**	**20 23 13.5**	**+1.8**
BOSA	**Boshof**	**3.03**	**223**	*i* P	**Pn**	**20 22 54.7**	**+1.3**
BOSA				*i* S	**Sb**	**20 23 37.0**	**+0.5**
BOSA	**Boshof**	**3.03**	**223**	*i* P	**Pn**	**20 22 54.7**	**+1.3**
BOSA				*i* S	**Sn**	**20 23 28.2**	**-1.6**
BOSA	**Boshof**	**3.03**	**223**	*e*P	**Pn**	**20 22 54.4**	**+1.0**
BOSA				*e*S	**Sn**	**20 23 30.9**	**+1.0**
BOSA				AML	AML	20 23 44.8	
	comp=Z,11nm,0.5s						
BOSA	**Boshof**	**3.03**	**223**	*i* P	**Pb**	**20 22 59.4**	**0.0**
BOSA				*i* S	**Sb**	**20 23 37.0**	**+0.5**
BOSA	**Boshof**	**3.03**	**223**	*i* P	**Pn**	**20 22 53.4**	**-0.1**
BOSA				*i* S	**Sn**	**20 23 36.5**	**0.0**
BOSA	**Boshof**	**3.03**	**223**	*i* P	**Pn**	**20 22 54.4**	**+1.0**
BOSA				*i*		20 22 54.7	
	baz=42,slow=18						
BOSA				*i* S	**Sb**	**20 23 36.5**	**0.0**
BOSA	**Boshof**	**3.03**	**223**	*i* P	**Pn**	**20 22 54.7**	**+1.3**
BOSA				*i* S	**Sn**	**20 23 28.2**	**-1.6**
BOSA	**Boshof**	**3.03**	**223**	*i* P	**Pn**	**20 22 54.7**	**+1.3**
BOSA				*i* S	**Sb**	**20 23 37.0**	**+0.5**
MATP	**Matopo**	**6.02**	**8**	*i* P	**Pn**	**20 23 33.5**	**-1.0**
MATP				*i* S	Sn	20 24 34.2	-9.5
MATP	**Matopo**	**6.02**	**8**	*i* P	**Pn**	**20 23 33.8**	**-0.8**
MATP				*i* S	Sn	20 24 34.1	-10
MATP	**Matopo**	**6.02**	**8**	*i* P	**Pn**	**20 23 33.5**	**-1.0**
MATP				*i* S	Sn	20 24 34.2	-9.5
MATP	**Matopo**	**6.02**	**8**	*i* P	**Pn**	**20 23 31.5**	**-3.1**
MATP				*i* P	**Pn**	**20 23 33.1**	**-1.5**
MATP				*i* P	**Pn**	**20 23 33.5**	**-1.0**
MATP	**Matopo**	**6.02**	**8**	*i* P	**Pn**	**20 23 33.8**	**-0.8**
MATP				*i* S	Sn	20 24 34.1	-10
MATP	**Matopo**	**6.02**	**8**	*i* P	**Pn**	**20 23 33.5**	**-1.0**
MATP				*i* S	Sn	20 24 34.2	-9.5
CHIPN	**CHIPINGE**	**7.70**	**38**	*i* P	**Pn**	**20 24 00.5**	**+2.9**
CHIPN				*i* S	**Sn**	**20 25 22.1**	**-2.9**
CHIPN	**CHIPINGE**	**7.70**	**38**	*i* P	**Pn**	**20 23 58.3**	**+0.7**
CHIPN				*i* S	**Sn**	**20 25 22.4**	**-2.5**
CHIPN	**CHIPINGE**	**7.70**	**38**	*i* P	**Pn**	**20 24 00.5**	**+2.9**
CHIPN				*i* S	**Sn**	**20 25 22.1**	**-2.9**

IDC ***02*** *20:28:48.7±1.0, 0.27N×126.07E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.5/39, mbtmp3.8/6, Error ellipse: s-maj=62.6km s-min=20.0km az=70.0*
NEIC ***02*** *20:28:49.5±1.3, 0.2N±0.1×126.12E±0.06, h10km±2km, mb4.0/7, Error ellipse: s-maj=23.4km s-min=4.8km az=157.0*
ISC 02 20:28:53.3±0.8, 0.1N±0.1×126.17E±0.09,h44km,n15, σ1§44/15,mb3.9/11,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.36**	**62**	Pn	**Pn**	**20 29 14.2**	**-1.5**
LUWI	**Luwuk**	**3.59**	**251**	Pn	**Pn**	**20 29 44.8**	**-1.7**
WB0	**Warramunga Arr**	**21.35**	**158**	P	**P**	**20 33 37.6**	**+0.7**
WB0				IAmb	IAmb	20 33 54.0	
	comp=Z,5.0nm,1.0s						
WRA	**Warramunga Arr**	**21.49**	**159**	P	**P**	**20 33 40.2**	**+1.8**
	comp=Z,1.6nm,0.8s,baz=336,slow=11,SNR=6.1						
WB2	**Warramunga Arr**	**21.49**	**159**	P	**P**	**20 33 38.1**	**-0.3**
WB2				IAmb	IAmb	20 33 50.0	
	comp=Z,5.2nm,1.1s						
WR0	**Warramunga Arr**	**21.58**	**158**	P	**P**	**20 33 38.9**	**-0.5**
WR0				IAmb	IAmb	20 34 07.9	
	comp=Z,8.7nm,1.4s						
PMG	**Port Moresby**	**22.94**	**115**	P	**P**	**20 33 52.8**	**-1.1**
AS31	**Alice Springs**	**24.81**	**163**	P	**P**	**20 34 12.5**	**+1.0**
ASAR	**Alice Springs**	**24.81**	**163**	P	**P**	**20 34 14.8**	**+3.3**
	comp=Z,1.1nm,0.7s,baz=347,slow=13,SNR=8.9						
SONM	**Songino Array**	**50.54**	**343**	P	**P**	**20 37 48.0**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=147,slow=2.9,SNR=2.4						
PETK	**Petropavlovsk-**	**58.96**	**22**	P	**P**	**20 38 48.9**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=180,slow=5.2,SNR=4.4						
MKAR	**Makanchi Array**	**60.21**	**327**	P	**P**	**20 38 57.5**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=122,slow=7.5,SNR=8.2						
MAKZ	**Makanchi**	**60.39**	**327**	P	**P**	**20 38 57.1**	**-1.1**
MAKZ				IAmb	IAmb	20 39 22.8	
	comp=Z,2.4nm,1.2s						
KURBB	**Kurchatov Arra**	**64.48**	**329**	P	**P**	**20 39 25.8**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=129,slow=5.7,SNR=14						
KURK	**Kurchatov**	**64.49**	**329**	P	**P**	**20 39 25.8**	**+0.4**
KURK				IAmb	IAmb	20 39 28.1	
	comp=Z,1.9nm,0.8s						

JMA ***02*** *20:47:32.3,23.82N×121.74E, h50km±1km, M3.2*
TAP ***02*** *20:47:32.9,23.84N×121.79E, h51km, ML3.5, C*
ISC 02 20:47:33.8±1.5,23.81N±0.02×121.82E±0.02,h36km±1km, n120,σ0§91/233,2C-8D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.25**	**310**	*i* P	**Pn**	**20 47 41.7**	**-0.4**
HWA				*i* S	**Sn**	**20 47 48.3**	**-1.2**
	baz=310						
TWD	**Chiawan**	**0.34**	**323**	*i* P	**Pn**	**20 47 41.9**	**-0.2**
TWD				*i* S	**Sn**	**20 47 48.2**	**-0.5**
	baz=325						
ESL	**Shilin**	**0.35**	**270**⇓	*i*P	**Pn**	**20 47 42.2**	**-0.1**
ESL				S	**Sn**	**20 47 48.5**	**-0.4**
	baz=265						
EGFH	**Guangfu**	**0.39**	**248**	*i* P	**Pn**	**20 47 42.7**	**+0.1**
EGFH				*i* S	**Sn**	**20 47 50.1**	**+0.8**
	baz=243						
NACB	**Ninganchiao**	**0.41**	**330**	⇑P	**Pn**	**20 47 42.6**	**-0.4**
NACB				S	**Sn**	**20 47 49.6**	**-0.2**
	baz=332						
HGSD	**Ruisui**	**0.48**	**229**	P	**Pn**	**20 47 44.1**	**0.0**
HGSD				S	**Sn**	**20 47 52.6**	**+1.2**
	baz=220						
ETLH	**Xiulin Townshi**	**0.50**	**322**	P	**Pn**	**20 47 43.8**	**-0.7**
ETLH				S	**Sn**	**20 47 51.4**	**-0.5**
	baz=314						
EHY	**Hungye**	**0.55**	**236**	*i* P	**Pn**	**20 47 44.3**	**-0.9**
EHY				*i* S	**Sn**	**20 47 52.3**	**-0.7**
	baz=241						
WHF	**Hehuan Shan**	**0.60**	**303**⇓	*i*P	**Pn**	**20 47 45.2**	**-1.2**
WHF				*i* S	**Sn**	**20 47 54.1**	**-1.0**
	baz=303						
OWD	**Renai**	**0.60**	**284**	*i* P	**Pn**	**20 47 45.5**	**-0.7**
OWD				*i* S	**Sn**	**20 47 53.8**	**-0.9**
	baz=281						
ENA	**Nanau**	**0.62**	**353**	*i* P	**Pn**	**20 47 45.2**	**-1.0**
ENA				*i* S	**Sn**	**20 47 54.4**	**-0.4**
	baz=351						
VWDT	**VWDT**	**0.62**	**265**	⇓P	**Pn**	**20 47 45.8**	**-0.5**
VWDT				S	**Sn**	**20 47 54.6**	**-0.4**
	baz=257						
YULB	**Yu-li**	**0.64**	**229**	⇓P	**Pn**	**20 47 45.5**	**-0.9**
YULB				S	**Sn**	**20 47 54.4**	**-0.8**
	baz=233						
CHGB	**Renai**	**0.64**	**293**	⇓P	**Pn**	**20 47 45.9**	**-0.7**
CHGB				S	**Sn**	**20 47 55.3**	**-0.3**
	baz=291						
TWF1	**Yuli**	**0.66**	**226**	*i* P	**Pn**	**20 47 46.0**	**-0.7**
TWF1				*i* S	**Sn**	**20 47 55.3**	**-0.6**
	baz=231						
NNSB	**Datong**	**0.73**	**327**	P	**Pn**	**20 47 46.9**	**-0.8**
NNSB				S	**Sn**	**20 47 56.8**	**-0.9**
	baz=323						
NNSH	**Datong**	**0.73**	**327**	*i* P	**Pn**	**20 47 46.9**	**-0.8**
NNSH				*i* S	**Sn**	**20 47 56.7**	**-1.0**
	baz=323						
TWT	**Tachien**	**0.73**	**307**	*i* P	**Pn**	**20 47 47.2**	**-0.6**
TWT				*i* S	**Sn**	**20 47 57.0**	**-0.8**
	baz=310						
NNS	**Nan Shan**	**0.74**	**327**	*i* P	**Pn**	**20 47 47.0**	**-0.9**
NNS				*i* S	**Sn**	**20 47 57.0**	**-1.1**
	baz=328						
TDCB	**Techi**	**0.75**	**306**	⇓P	**Pn**	**20 47 47.4**	**-0.5**
TDCB				S	**Sn**	**20 47 57.0**	**-1.1**
	baz=310						
FULB	**Fuli**	**0.78**	**218**	P	**Pn**	**20 47 47.9**	**-0.3**
FULB				S	**Sn**	**20 47 59.5**	**+0.7**
	baz=226						
EOS1	**EOS1**	**0.79**	**21**	P	**Pn**	**20 47 48.8**	**+0.4**
EOS1				S	**Sn**	**20 48 00.1**	**+1.3**
	baz=34						
SSLB	**Suanglung**	**0.79**	**268**	P	**Pn**	**20 47 47.9**	**-0.6**
SSLB				S	**Sn**	**20 47 59.4**	**+0.2**
	baz=266						
TWC	**Suao**	**0.79**	**2**	*i* P	**Pn**	**20 47 48.2**	**-0.3**
TWC				*i* S	**Sn**	**20 47 59.0**	**-0.1**
	baz=12						
CHKT	**Chengkung**	**0.82**	**210**	*i* P	**Pn**	**20 47 48.1**	**-0.8**
CHKT				*i* S	**Sn**	**20 47 58.8**	**-1.0**
	baz=199						
NDT	**Datong Townshi**	**0.83**	**341**	P	**Pn**	**20 47 48.5**	**-0.5**
NDT				S	**Sn**	**20 47 59.5**	**-0.7**
	baz=342						
SMLT	**Sun Moon Lake**	**0.84**	**275**⇓	*i*P	**Pn**	**20 47 48.8**	**-0.5**
SMLT				*i* S	**Sn**	**20 48 00.1**	**-0.5**
	baz=275						
DPDB	**Guoxing**	**0.84**	**285**	*i* P	**Pn**	**20 47 48.6**	**-0.6**
DPDB				S	**Sn**	**20 48 00.3**	**-0.2**
	baz=282						
ENTT	**Nioudou**	**0.85**	**344**	*i* P	**Pn**	**20 47 48.8**	**-0.6**
ENTT				S	**Sn**	**20 47 59.6**	**-1.1**
	baz=346						
TYC	**Yuchr**	**0.89**	**276**	*i* P	**Pn**	**20 47 49.1**	**-0.6**
TYC				*i* S	**Sn**	**20 48 01.1**	**-0.2**
	baz=278						
WHYT	**Xinyi Township**	**0.89**	**263**	P	**Pn**	**20 47 49.8**	**0.0**
WHYT				S	**Sn**	**20 48 01.8**	**+0.2**
	baz=258						
TWE	**Neicheng**	**0.92**	**351**	*i* P	**Pn**	**20 47 49.8**	**-0.3**
TWE				*i* S	**Sn**	**20 48 01.6**	**-0.5**
	baz=344						
WHP	**Taichung City**	**0.92**	**300**	P	**Pn**	**20 47 50.1**	**-0.2**
WHP				*e*S	**Sn**	**20 48 01.8**	**-0.6**
	baz=303						
YHNB	**Yeheng**	**0.94**	**335**	P	**Pn**	**20 47 50.1**	**-0.5**
YHNB				S	**Sn**	**20 48 01.5**	**-1.5**
	baz=335						
ILA	**Ilan**	**0.95**	**356**	S	**Sn**	**20 48 03.4**	**+0.5**
	baz=358						
SLBB	**Yuanshan**	**0.95**	**350**	*i* P	**Pn**	**20 47 50.4**	**-0.3**
SLBB				*i* S	**Sn**	**20 48 03.4**	**+0.4**
	baz=342						
NSK	**Sanguang**	**0.96**	**334**	*i* P	**Pn**	**20 47 50.2**	**-0.5**
NSK				*i* S	**Sn**	**20 48 01.9**	**-1.3**
	baz=335						
ELDTW	**Lidau**	**0.96**	**230**⇓	*i*P	**Pn**	**20 47 50.0**	**-0.9**
ELDTW				*i* S	**Sn**	**20 48 02.8**	**-0.5**
	baz=223						
ALS	**Alishan**	**0.98**	**252**	P	**Pn**	**20 47 51.2**	**0.0**
ALS				S	**Sn**	**20 48 04.7**	**+0.7**
	baz=249						
WJS	**Zhushan**	**1.00**	**271**	P	**Pn**	**20 47 51.5**	**+0.3**
WJS				S	**Sn**	**20 48 06.5**	**+2.4**
	baz=269						
NWLT	**Wulai**	**1.00**	**343**	*e*P	**Pn**	**20 47 50.6**	**-0.8**
NWLT				*e*S	**Sn**	**20 48 02.9**	**-1.3**
	baz=344						
NTC	**Toucheng**	**1.04**	**1**	*e*P	**Pn**	**20 47 51.7**	**-0.1**
NTC				*e*S	**Sn**	**20 48 06.0**	**+1.0**
	baz=13						
WNT	**Mingjian**	**1.04**	**274**	*i* P	**Pn**	**20 47 52.5**	**+0.7**
WNT				*e*S	**Sn**	**20 48 06.3**	**+1.2**
	baz=272						
CHN5	**Tsauling**	**1.07**	**259**	*i* P	**Pn**	**20 47 52.4**	**+0.1**
CHN5				*e*S	**Sn**	**20 48 06.3**	**+0.4**
	baz=256						
TWQ1	**Liyutan**	**1.09**	**299**	*i* P	**Pn**	**20 47 52.5**	**-0.1**
TWQ1				*i* S	**Sn**	**20 48 06.5**	**0.0**
	baz=299						
TCU	**Taichung**	**1.10**	**288**	P	**Pn**	**20 47 53.2**	**+0.6**
TCU				S	**Sn**	**20 48 08.0**	**+1.5**
	baz=287						
LIOB	**Emei**	**1.11**	**319**	*i* P	**Pn**	**20 47 53.3**	**+0.6**
LIOB				S	**Sn**	**20 48 07.6**	**+0.8**
	baz=306						
NSY	**Sanyi**	**1.14**	**302**	*i* P	**Pn**	**20 47 53.6**	**+0.5**
NSY				*i* S	**Sn**	**20 48 08.0**	**+0.4**
	baz=302						
TWH	**Lutao**	**1.14**	**196**	*i* P	**Pn**	**20 47 52.4**	**-0.9**
TWH				*i* S	**Sn**	**20 48 06.8**	**-0.8**
	baz=186						
TIPB	**Shuangxi**	**1.15**	**0**	P	**Pn**	**20 47 53.5**	**+0.1**
TIPB				S	**Sn**	**20 48 07.8**	**-0.2**
	baz=353						
WLTB	**Daxi**	**1.16**	**334**	*e*P	**Pn**	**20 47 54.3**	**+0.9**
WLTB				*e*S	**Sn**	**20 48 08.1**	**+0.1**
	baz=340						
WGK	**Gukeng**	**1.16**	**264**	*i* P	**Pn**	**20 47 53.6**	**+0.2**
WGK				*e*S	**Sn**	**20 48 09.1**	**+1.1**
	baz=262						
STYT	**Tauyuan**	**1.17**	**237**⇑	*i*P	**Pn**	**20 47 54.0**	**+0.3**
STYT				*i* S	**Sn**	**20 48 09.3**	**+0.9**
	baz=228						
NHDH	**Xindian Distri**	**1.18**	**347**	*e*P	**Pn**	**20 47 53.6**	**0.0**
NHDH				S	**Sn**	**20 48 08.0**	**-0.5**
	baz=348						
WDLH	**Douliu**	**1.18**	**264**	P	**Pn**	**20 47 54.0**	**+0.3**
WDLH				S	**Sn**	**20 48 10.2**	**+1.7**
	baz=262						
TWA	**Mucha**	**1.18**	**350**	P	**Pn**	**20 47 54.1**	**+0.3**
TWA				S	**Sn**	**20 48 08.6**	**0.0**
	baz=341						
NMLH	**Miaoli**	**1.18**	**308**	P	**Pn**	**20 47 53.8**	**0.0**
NMLH				S	**Sn**	**20 48 09.3**	**+0.6**
	baz=307						
WCHH	**Zhanghua**	**1.18**	**283**	P	**Pn**	**20 47 54.2**	**+0.4**
WCHH				S	**Sn**	**20 48 10.4**	**+1.8**
	baz=293						
PTSB	**Yuanli**	**1.20**	**302**	*e*P	**Pn**	**20 47 54.8**	**+0.8**
PTSB				*e*S	**Sn**	**20 48 09.3**	**+0.3**
	baz=301						
TWGBT	**Beinan**	**1.20**	**215**	P	**Pn**	**20 47 52.7**	**-1.4**
TWGBT				S	**Sn**	**20 48 07.5**	**-1.6**
	baz=212						
WDJ	**Dajia District**	**1.20**	**297**	P	**Pn**	**20 47 54.1**	**+0.1**
WDJ				S	**Sn**	**20 48 09.9**	**+0.8**
	baz=296						
TWG	**Pinlang**	**1.20**	**215**	*i* P	**Pn**	**20 47 52.4**	**-1.7**
TWG				*i* S	**Sn**	**20 48 07.5**	**-1.6**
	baz=212						
TPUB	**Ta-pu**	**1.20**	**245**	P	**Pn**	**20 47 54.9**	**+0.8**
TPUB				S	**Sn**	**20 48 10.7**	**+1.5**
	baz=243						
JYNG	**Yonagunijimaku**	**1.21**	**58**	P	**Pn**	**20 47 54.4**	**+0.3**
JYNG				S	**Sn**	**20 48 09.7**	**+0.4**
CHN4	**Tsaushan**	**1.21**	**248**	P	**Pn**	**20 47 55.1**	**+0.9**
CHN4				S	**Sn**	**20 48 11.2**	**+1.8**
	baz=245						
TTN	**Taitung**	**1.22**	**210**	*e*P	**Pn**	**20 47 54.5**	**+0.2**
TTN				*e*S	**Sn**	**20 48 10.6**	**+1.0**
	baz=217						
WTP	**Ta-pu**	**1.24**	**243**	P	**Pn**	**20 47 55.0**	**+0.4**
WTP				S	**Sn**	**20 48 11.9**	**+1.7**
	baz=240						
TAP1	**Taipei**	**1.25**	**348**	*e*S	**Sn**	**20 48 10.4**	**+0.1**
	baz=348						
HSN	**Hsinchu**	**1.25**	**322**	*e*P	**Pn**	**20 47 54.3**	**-0.4**
	baz=337						

NWF	Wu-fen Shan	1.25	358	P	Pn	20 47 55.3	+0.4
	baz=348						
NWF				S	Sn	20 48 11.1	+0.5
	baz=348						
WFSB	Wu-fen Shan	1.25	358	P	Pn	20 47 55.3	+0.5
	baz=349						
WFSB				S	Sn	20 48 11.1	+0.7
	baz=349						
TAP	Taipei	1.25	347	eP	Pn	20 47 53.8	-0.9
	baz=347						
CHN2	Minshiung	1.26	257	P	Pn	20 47 55.6	+0.7
	baz=255						
CHN2				S	Sn	20 48 13.0	+2.4
	baz=255						
YOJ	Yonaguni jima	1.27	59	P	Pn	20 47 55.2	+0.3
YOJ				eS	Sn	20 48 10.8	+0.1
NCU	National Centr	1.29	334	eP	Pn	20 47 54.8	-0.5
	baz=334						
NCU				S	Sn	20 48 12.0	+0.8
	baz=334						
CHY	Chiayi	1.32	256	P	Pn	20 47 55.8	+0.2
	baz=254						
CHY				eS	Sn	20 48 13.0	+1.1
	baz=254						
TWS1	Kuangyinshan	1.33	344	eP	Pn	20 47 55.4	-0.4
	baz=345						
TWS1				eS	Sn	20 48 12.2	-0.2
	baz=345						
RLNB	Erlin	1.34	274	P	Pn	20 47 56.0	+0.1
	baz=282						
RLNB				S	Sn	20 48 13.8	+1.4
	baz=282						
CHN1	Nanshi	1.34	242	i P	Pn	20 47 56.4	+0.5
	baz=240						
CHN1				S	Sn	20 48 13.7	+1.1
	baz=240						
SGST	Jiashian	1.35	238	i P	Pn	20 47 56.0	-0.1
	baz=235						
SGST				i S	Sn	20 48 13.7	+1.0
	baz=235						
YM01	YM01	1.35	350	P	Pn	20 47 55.8	-0.3
	baz=340						
YM01				S	Sn	20 48 12.2	-0.6
	baz=340						
SNST	Tainan City	1.35	244	P	Pn	20 47 57.2	+1.2
	baz=242						
SNST				S	Sn	20 48 14.8	+2.1
	baz=242						
SLGT	Liugui	1.35	233	i P	Pn	20 47 57.2	+1.1
	baz=221						
SLGT				S	Sn	20 48 15.4	+2.6
	baz=221						
YM10	YM10	1.36	350	eP	Pn	20 47 55.4	-0.8
	baz=340						
YM10				S	Sn	20 48 12.5	-0.5
	baz=340						
YM04	YM04	1.36	349	eP	Pn	20 47 56.4	+0.2
	baz=350						
YM04				eS	Sn	20 48 12.7	-0.4
	baz=350						
YM05	YM05	1.36	350	eP	Pn	20 47 56.1	-0.3
	baz=340						
YM05				eS	Sn	20 48 11.4	-1.9
	baz=340						
YM11	YM11	1.36	351	eP	Pn	20 47 55.8	-0.6
	baz=340						
YM11				eS	Sn	20 48 13.3	+0.1
	baz=340						
YM03	YM03	1.38	349	eP	Pn	20 47 55.8	-0.9
	baz=350						
YM03				eS	Sn	20 48 13.2	-0.5
	baz=350						
NTST	Danshui	1.39	346	eP	Pn	20 47 56.1	-0.5
	baz=346						
NTST				eS	Sn	20 48 13.0	-0.7
	baz=346						
WTCT	Ta-ch'eng	1.41	272	P	Pn	20 47 57.2	+0.4
	baz=270						
WTCT				S	Sn	20 48 15.8	+1.6
	baz=270						
WLGB	Puzi	1.43	257	eP	Pn	20 47 57.6	+0.4
	baz=243						
WLGB				eS	Sn	20 48 16.4	+1.7
	baz=243						
ECL	Taimali	1.45	213	P	Pn	20 47 55.6	-1.8
	baz=210						
ECL				S	Sn	20 48 13.5	-1.7
	baz=210						
WMLT	Mailiao	1.46	270	eS	Sn	20 48 17.1	+1.6
	baz=268						
TWY	Chenhua	1.47	352	eP	Pn	20 47 57.7	0.0
	baz=342						
TWY				eS	Sn	20 48 15.6	-0.1
	baz=342						
WSF	Szhu	1.47	264	eP	Pn	20 47 58.4	+0.6
	baz=251						
WSF				S	Sn	20 48 17.1	+1.3
	baz=251						
SSD	Sandimen	1.52	226	P	Pn	20 47 59.0	+0.6
	baz=223						
SSD				S	Sn	20 48 18.4	+1.4
	baz=223						
CHN3	Shinhua	1.52	241	P	Pn	20 47 59.8	+1.4
	baz=239						
CHN3				S	Sn	20 48 20.6	+3.6
	baz=239						
CHN8	Yiju	1.55	253	P	Pn	20 47 58.5	-0.2
	baz=250						
CHN8				S	Sn	20 48 18.5	+1.0
	baz=250						
MASBT	Mashibuluo	1.62	223	P	Pn	20 47 59.8	0.0
	baz=220						
MASBT				eS	Sn	20 48 19.8	+0.5
	baz=220						
TAW	Tawu	1.68	211	eP	Pn	20 47 59.2	-1.4
	baz=200						
TAW				eS	Sn	20 48 19.3	-1.5
	baz=200						
EAST	Anshuo	1.68	212	P	Pn	20 47 59.4	-1.3
	baz=202						
EAST				eS	Sn	20 48 19.7	-1.3
	baz=202						
SSPT	Xinbi	1.75	221	eP	Pn	20 48 03.2	+1.6
	baz=218						
SSPT				eS	Sn	20 48 23.6	+0.9
	baz=218						
LAY	Lan-yu	1.78	188	P	Pn	20 48 00.7	-1.4
	baz=181						
LAY				S	Sn	20 48 22.1	-1.4
	baz=181						
SCZT	Fangliau	1.81	218	eP	Pn	20 48 02.6	+0.2
	baz=214						
SCZT				eS	Sn	20 48 25.0	+0.9
	baz=214						
IRIF	Iriomote-Funau	1.82	73	P	Pn	20 48 03.0	+0.4
IRIF				eS	Sn	20 48 25.3	+0.9
HATJ	Hateruma jima	1.83	82	P	Pn	20 48 03.3	+0.6
HATJ				eS	Sn	20 48 25.5	+0.8
JKRS	Kuro-shima	2.05	78	P	Pn	20 48 06.5	+0.8
JKRS				S	Sn	20 48 31.4	+1.4
WDGT	Dungji	2.06	255	eP	Pn	20 48 05.0	-0.7
	baz=252						
WDGT				eS	Sn	20 48 28.8	-1.4
	baz=252						
PHUB	P'eng-hu	2.08	262	eP	Pn	20 48 05.7	-0.4
	baz=273						
PHUB				eS	Sn	20 48 29.4	-1.4
	baz=273						
TWKBT	Hengchun	2.08	207	eP	Pn	20 48 06.3	+0.2
	baz=195						
TWKBT				eS	Sn	20 48 30.7	-0.1
	baz=195						
TWK1	Hengchun	2.08	207	eS	Sn	20 48 31.5	+0.7
	baz=195						
PNG	Penghu	2.09	264	P	Pn	20 48 05.5	-0.7
	baz=262						
PNG				S	Sn	20 48 30.2	-0.7
	baz=262						
JIJ	Ishigaki jima	2.19	75	P	Pn	20 48 07.8	+0.1
JIJ				S	Sn	20 48 33.5	-0.1
VCHM	Qimei	2.27	255	eP	Pn	20 48 08.1	-0.7
	baz=253						
VCHM				eS	Sn	20 48 34.5	-1.1
	baz=253						
JISG	Ishigakijimahi	2.40	71	P	Pn	20 48 10.5	-0.1
JISG				S	Sn	20 48 37.8	-0.9
JTJ	Tarama	2.76	72	P	Pn	20 48 15.7	+0.2
JTJ				S	Sn	20 48 48.0	+0.5
JIRB	Irabujima	3.22	71	P	Pn	20 48 21.7	-0.1
JIRB				eS	Sn	20 48 58.6	-0.4
JIKM	Ikemajima	3.32	70	P	Pn	20 48 23.6	+0.5
JIKM				eS	Sn	20 49 01.4	+0.1
JMJ2	Miyako jima3	3.33	73	P	Pn	20 48 23.8	+0.4
JMJ2				eS	Sn	20 49 02.5	+0.8
JOGS	Gusukube	3.41	73	P	Pn	20 48 25.4	+1.0

*IDC **02** 21:12:00.3±5.2, 9°.14S×124°.34E, h72^{km}±63^{km}, mb3.2/1, mb1 3.5/3, mb1mx3.1/30, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=67.5km s-min=33.2km az=29.0*

ISC 02 21:11:56.8±1.1**, 8°.89S**±0°.10×**124°.4E**±0°.2**, h35**^{km}**, n10,** σ**0^s.90**/11**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	1.50	209	P	Pn	21 12 22.7	+1.4
	29nm,0.3s,baz=82,slow=1.5,SNR=24						
BATI				S	Sn	21 12 38.4	-1.4
	120nm,0.3s,baz=309,slow=24,SNR=14						
WRA	Warramunga Arr	14.59	140	P	Pn	21 15 20.6	-0.3
	0.3nm,0.3s,baz=320,slow=13,SNR=12						
WRA				S	Sn	21 17 48.4	-13
	0.6nm,0.3s,baz=310,slow=20,SNR=6.6						
ASAR	Alice Springs	17.27	149	P	Pn	21 15 55.2	-0.2
	0.2nm,0.3s,baz=321,slow=11,SNR=12						
ASAR				S	Sn	21 18 56.1	-11
	0.4nm,0.3s,baz=322,slow=21,SNR=10						
ODAN	Odare	50.52	316	eP	P	21 20 51.8	-0.4
	1.2nm,0.3s						
TAPN	Taplejung	50.62	317	eP	P	21 20 52.8	-0.1
RAMN	Ramite	51.13	315	eP	P	21 20 56.5	-0.2
	6.3nm,0.5s						
PKI	Pulchoki	52.34	315	eP	P	21 21 05.1	-0.8
	2.7nm,0.3s						
PKIN	Phulchoki	52.35	315	eP	P	21 21 05.1	-0.8
	3.5nm,0.4s						
DANN	Dangsing	53.97	315	eP	P	21 21 16.9	-0.9
	6.0nm,0.5s						
MKAR	Makanchi Array	66.92	330	P	P	21 22 46.1	+0.5
	0.3nm,0.5s,baz=126,slow=8.1,SNR=6.4						

*MAN **02** 21:22:45.7, 5°.83N×126°.08E, h156^{km}, mb4.6, ML3.5, MS3.4*

*IDC **02** 21:23:06.9±9.1, 2°.50N×127°.82E, h0^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.4/45, mbtmp3.8/4, MS2.8/1, Ms1 2.8/1, ms1mx2.1/40, Error ellipse: s-maj=145.6km s-min=100.4km az=145.0*

ISC 02 21:22:48.2±1.3**, 5°.81N**±0°.09×**125°.99E**±0°.10**, h138**^{km}±10^{km}**, n13,** σ**0^s.97**/16**, mb3.8**/4**, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.40	317	eP	Pn	21 23 07.9	+0.1
DDMP				eS	Sn	21 23 22.4	-0.1
GSPH	General Santos	1.07	285	eP	Pn	21 23 11.9	-0.7
GSPH				i S	Sn	21 23 30.2	-1.0
MATI	Mati	1.16	13	eP	Pn	21 23 12.8	-0.6
MATI				eS	Sn	21 23 33.0	+0.4
DMPH	Davao City--Mi	1.35	339⇑	iP	Pn	21 23 14.9	-0.4
KCP	Kidapawan	1.49	323⇑	eP	Pn	21 23 17.0	+0.2
KCP				i S	Sn	21 23 40.9	+2.1
SKMP	Bagumbayan, Su	1.60	296	eP	Pn	21 23 17.4	-0.6
SKMP				eS	Sn	21 23 40.4	-0.3
BUKP	Musuan	2.25	336	eP	Pn	21 23 25.9	+0.2
BUKP				eS	Sn	21 23 55.1	+0.4
BUTP	Butuan	3.16	353	eP	Pn	21 23 35.5	-1.7
FITZ	Fitzroy Crossi	23.76	181	P	P	21 27 49.0	+0.9
	0.9nm,0.4s,baz=358,slow=9.8,SNR=6.1						
WRA	Warramunga Arr	26.88	162	P	P	21 28 16.4	+0.1
	0.8nm,0.3s,baz=341,slow=11,SNR=14						
ASAR	Alice Springs	30.30	166	P	P	21 28 47.8	+1.1
	1.0nm,0.5s,baz=344,slow=7.1,SNR=25						
USRK	Ussuriysk Ar.	38.60	7	LR	LR	21 47 00.1	
	comp=Z,13nm,20.6s,baz=342,slow=34						
STKA	Stephens Creek	40.32	159	P	P	21 30 13.5	+1.3
	2.7nm,0.5s,baz=352,slow=8.9,SNR=7.6						

*JMA **02** 21:24:05.5±0.4, 44°.12N×140°.27E, h238^{km}±4^{km}, M2.8*

*IDC **02** 21:24:05.5±1.2, 44°.26N×140°.27E, h239^{km}±20^{km}, mb3.2/1, mb1 2.9/3, mb1mx2.6/58, mbtmp3.4/3, Error ellipse: s-maj=37.8km s-min=25.2km az=152.0*

ISC 02 21:24:04.9±1.2**, 44°.06N**±0°.08×**140°.30E**±0°.08**, h245**^{km}±12^{km}**, n18,** σ**1^s.34**/24**, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK	Shakotan	0.71	170	P	Pn	21 24 38.2	+0.1
ASAJ	Asahikawa	1.66	87	P	Pn	21 24 44.2	+0.2
	2.5nm,0.3s,baz=258,slow=8.5,SNR=16						
ASAJ				S	S	21 25 14.7	0.0
	0.4nm,0.3s,baz=221,slow=28,SNR=1.5						
JWK2	Keihoku	1.70	42	P	Pn	21 24 44.7	+0.4
JKK2	Kamakawa 2	1.78	95	P	Pn	21 24 45.5	+0.5
JKK2				eS	S	21 25 16.3	-0.3
JSE	Soyaes	1.87	60	P	Pn	21 24 45.6	-0.1
JFR	Furan	1.89	117	P	Pn	21 24 46.8	+0.8
JOSM	Okushiri--Mats	2.06	197	P	Pn	21 24 48.3	+0.7
JKB	Kayabe	2.23	166	P	Pn	21 24 49.6	+0.4
JNBK	Urakawa-nobuka	2.52	134	P	Pn	21 24 53.5	+1.4
JNBK				eS	S	21 25 30.4	+1.2
JOMM	Oshimamatsumae	2.54	185	P	Pn	21 24 53.1	+0.9
JTKR	Abashiri--Toko	2.60	91	P	Pn	21 24 53.5	+0.7
JTKR				eS	S	21 25 31.1	+0.5
JAR	Ashorobuto	2.63	106	P	Pn	21 24 53.9	+0.8
JCH	Churui	2.66	122	P	Pn	21 24 53.1	-0.4
JCH				eS	S	21 25 29.1	-2.6
JAK	Akkeshi	3.37	107	eS	S	21 25 43.9	-1.7
JANG	Nango	3.79	166	P	Pn	21 25 05.6	-0.5
JANG				eS	S	21 25 52.1	-2.4
USRK	Ussuriysk Ar.	5.98	274	P	Pn	21 25 32.5	-0.1
	baz=80,slow=13,SNR=8.1						
MJAR	Matsushiro Arr	7.67	193	P	Pn	21 25 57.7	+3.6
	0.0nm,0.3s,baz=18,slow=13,SNR=2.4						
FINES	FINESS Array B	62.25	330	P	P	21 34 00.3	0.0
	0.4nm,0.4s,baz=44,slow=8.5,SNR=4.3						

*IDC **02** 21:29:44.6±1.6, 7°.21S×155°.08E, h0^{km}, mb3.7/6, mb1 4.0/7, mb1mx3.7/40, mbtmp3.7/7, ML3.8/1, MS3.0/5, Ms1 3.0/5, ms1mx2.6/36, Error ellipse: s-maj=47.9km s-min=26.9km az=126.0*

ISC 02 21:29:51.2±1.3**, 7°.1S**±0°.2×**154°.9E**±0°.2**, h41**^{km}**, n11,** σ**0^s.75**/8**, mb3.6**/6**, MS3.0**/3**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	4.01	314	Pn	Pn	21 30 49.5	-0.6
	5.8nm,0.3s,baz=227,slow=16,SNR=3.8						
KRVT				LR	LR	21 32 33.4	
	comp=Z,142nm,19.2s,baz=88,slow=40						
DZM	Mont Dzumac	18.57	144	LR	LR	21 40 24.6	
	comp=Z,88nm,19.1s,baz=268,slow=35						
WRA	Warramunga Arr	23.68	235	P	P	21 34 58.7	-0.6
	3.1nm,1.0s,baz=61,slow=9.8,SNR=8.1						
ASAR	Alice Springs	26.03	229	P	P	21 35 20.6	-0.2
	0.6nm,0.7s,baz=62,slow=8.5,SNR=8.5						
STKA	Stephens Creek	27.59	205	LR	LR	21 45 04.7	
	comp=Z,51nm,18.2s,baz=23,slow=33						
PETK	Petropavlovsk-	60.04	2	LR	LR	22 01 26.2	
	comp=Z,11nm,21.9s,baz=61,slow=32						
CMAR	Chiang Mai Arr	60.77	296	P	P	21 40 00.8	+1.4
	0.3nm,0.6s,baz=113,slow=6.4,SNR=1.8						
CMAR				LR	LR	22 06 21.8	
	comp=Z,3.4nm,19.4s,baz=180,slow=36						
MKAR	Makanchi Array	83.44	319	P	P	21 42 14.7	+0.1
	0.2nm,0.7s,baz=92,slow=7.2,SNR=2.2						
ILAR	Eielson Array	83.52	22	P	P	21 42 14.4	-0.1
	0.3nm,0.7s,baz=238,slow=3.1,SNR=2.9						
YKA	Yellowknife Ar	96.48	28	P	P	21 43 15.7	-0.2
	0.8nm,1.1s,baz=260,slow=5.4,SNR=3.6						
TORD	Torodi Ar. Bea	152.98	285	PKPbc	PKPbc	21 49 44.9	-0.3
	0.4nm,0.8s,baz=48,slow=3.4,SNR=2.1						

IDC 02 21:40:11.3±96.0**, 20°.68N**×**143°.68E, h0**^{km}**, Error ellipse: s-maj=192.1km s-min=9.9km az=103.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	21.78	92	H	H	22 07 25.8	
	baz=280						
H11S1	WAKE ISLAND Hy	21.79	92	H	H	22 07 26.5	
	baz=280						
H11S2	WAKE ISLAND Hy	21.80	92	H	H	22 07 27.0	
	baz=280						
H11N1	WAKE ISLAND Hy	21.80	88	H	H	22 07 28.2	
	baz=276						
H11N2	WAKE ISLAND Hy	21.81	88	H	H	22 07 28.5	
	baz=276						
H11N3	WAKE ISLAND Hy	21.82	88	H	H	22 07 29.6	
	baz=276						
H03N2	Juan Fernandez	140.24	118	H	H	00 35 33.2	
	baz=267,slow=74,SNR=33						
H03N3	Juan Fernandez	140.25	118	H	H	00 35 35.2	
	baz=267,slow=74,SNR=42						
H03N1	Juan Fernandez	140.26	118	H	H	00 35 35.9	
	baz=267,slow=74,SNR=48						

*IDC **02** 21:57:28.2±1.4, 7°.43S×155°.80E, h0^{km}, mb3.8/9, mb1 4.1/10, mb1mx3.8/42, mbtmp3.9/10, ML4.6/1, MS2.8/4, Ms1 2.8/4, ms1mx2.5/29, Error ellipse: s-maj=45.0km s-min=23.0km az=127.0*

ISC 02 21:57:33.6±1.2**, 7°.5S**±0°.2×**155°.8E**±0°.2**, h35**^{km}**, n14,** σ**0^s.99**/11**, mb3.8**/9**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.58	116	LR	LR	22 00 46.1	
	comp=Z,114nm,19.2s,baz=297,slow=43						
KRVT	Keravat (AS076	4.86	310	Pn	Pn	21 58 44.8	+0.5
	24nm,0.3s,baz=230,slow=11,SNR=2.5						
KRVT				LR	LR	22 00 46.8	
	comp=Z,139nm,18.9s,baz=70,slow=41						
WRA	Warramunga Arr	24.19	237	P	P	22 02 47.4	+0.3
	2.0nm,0.9s,baz=61,slow=9.5,SNR=8.2						
ASAR	Alice Springs	26.45	230	P	P	22 03 08.0	+0.5
	0.5nm,0.6s,baz=60,slow=9.5,SNR=9.2						
JHJ	Hachijo jima 2	43.12	340	LR	LR	22 21 14.6	
	comp=Z,16nm,21.8s,baz=98,slow=33						
KSRS	Korea Array	51.70	332	LR	LR	22 24 59.9	
	comp=Z,7.4nm,21.0s,baz=205,slow=32						
PETK	Petropavlovsk-	60.35	1	P	P	22 07 39.8	+0.8
	1.4nm,0.7s,baz=178,slow=8.8,SNR=6.2						
CMAR	Chiang Mai Arr	61.67	296	P	P	22 07 48.3	-0.3
	1.6nm,0.6s,baz=122,slow=4.8,SNR=3.6						
SONM	Songino Array	70.13	327	P	P	22 08 42.3	-0.4
	0.4nm,0.4s,baz=137,slow=5.3,SNR=3.6						
ILAR	Eielson Array	83.52	21	P	P	22 09 56.4	-1.3
	0.3nm,0.4s,baz=252,slow=3.8,SNR=6.7						
MKAR	Makanchi Array	84.25	319	P	P	22 10 01.2	-0.6
	0.2nm,0.5s,baz=116,slow=6.6,SNR=2.7						
KURBB	Kurchatov Arra	87.69	322	P	P	22 10 17.2	-1.4
	0.1nm,0.4s,baz=72,slow=5.9,SNR=0.9						
YKA	Yellowknife Ar	96.39	28	P	P	22 11 00.2	+1.6
	0.5nm,0.8s,baz=270,slow=4.4,SNR=6.1						
TORD	Torodi Ar. Bea	153.88	285	PKPbc	PKiKP	22 17 30.5	+0.1
	0.4nm,0.9s,baz=94,slow=1.9,SNR=1.8						

*IDC **02** 22:09:25.0±1.2, 34°.00N×79°.87E, h0^{km}, mb3.6/7, mb1 3.7/10, mb1mx3.4/57, mbtmp3.6/10, ML2.9/3, MS2.3/1, Ms1 2.5/1, ms1mx2.0/43, Error ellipse: s-maj=43.1km s-min=19.9km az=58.0*

ISC 02 22:09:31.8±0.8**, 34°.4N**±0°.1×**80°.3E**±0°.2**, h35**^{km}**, n21,** σ**1^s.95**/20**, mb3.6**/6**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYUN	Piuthan	6.65	159	eP	Pn	22 11 10.4	+3.1
	8.0nm,0.3s						
DANN	Dangsing	6.69	153	eP	Pn	22 11 07.9	+0.1
	10.0nm,0.4s						
KOLN	Koldanda	7.16	156	eP	Pn	22 11 17.6	+3.4
GKN	Gorkha	7.35	148	eP	Pn	22 11 18.9	+2.1
	6.0nm,0.3s						
GUN	Gumba	8.02	142	eP	Pn	22 11 27.5	+1.3
PKIN	Phulchoki	8.06	146	eP	Pn	22 11 28.6	+1.9
	4.6nm,0.5s						
PKI	Pulchoki	8.07	145	eP	Pn	22 11 28.5	+1.6
	4.4nm,0.6s						
JIRN	Jiri	8.38	141	eP	Pn	22 11 32.9	+1.7
	22nm,0.5s						
AAK	Ala-Archa	9.43	333	Pn	Pn	22 11 48.1	+2.9
	0.1nm,0.3s,baz=190,slow=17,SNR=2.2						
TAPN	Taplejung	9.46	136	eP	Pn	22 11 46.9	+1.0
ODAN	Odare	9.66	139	eP	Pn	22 11 49.0	+0.4
	4.6nm,0.5s						
MKAR	Makanchi Array	12.52	6	Pn	Pn	22 12 29.1	+1.7
	0.1nm,0.3s,baz=181,slow=13,SNR=5.6						
KURBB	Kurchatov Arra	16.31	356	Pn	Pn	22 13 18.6	+0.6
	0.0nm,0.3s,baz=184,slow=11,SNR=13						
BVAR	Borovoye Array	19.95	342	P	P	22 14 00.9	+0.2
	0.7nm,0.5s,baz=157,slow=12,SNR=8.2						
CMAR	Chiang Mai Arr	22.97	129	P	P	22 14 33.2	-0.1
	0.7nm,0.6s,baz=310,slow=11,SNR=5.4						
CMAR				LR	LR	22 23 40.9	
	comp=Z,8.0nm,19.2s,baz=210,slow=37						
FINES	FINESS Array B	43.52	326	P	P	22 17 31.2	-0.3
	1.4nm,0.8s,baz=145,slow=11,SNR=3.6						
ARCES	ARCESS Array B	46.08	336	P	P	22 17 51.9	0.0
	1.5nm,0.6s,baz=82,slow=8.7,SNR=5.1						
ASAJ	Asahikawa	48.21	59	LR	LR	22 39 32.9	
	comp=Z,378nm,20.3s,baz=127,slow=37						
TORD	Torodi Ar. Bea	73.34	275	P	P	22 20 57.1	-3.3
	0.4nm,0.7s,baz=44,slow=6.5,SNR=3.0						
WRA	Warramunga Arr	74.56	128	P	P	22 21 05.1	-2.1
	0.6nm,0.8s,baz=331,slow=4.8,SNR=2.7						
YKA	Yellowknife Ar	82.75	7	P	P	22 21 51.6	-0.1
	0.3nm,0.7s,baz=344,slow=4.7,SNR=5.4						

*IDC **02** 22:43:51.1±1.2, 3°.51S×149°.60E, h0^{km}, mb3.8/5, mb1 4.1/6, mb1mx3.7/38, mbtmp3.8/6, ML3.1/1, MS3.1/5, Ms1 3.2/5, ms1mx2.7/36, Error ellipse: s-maj=35.5km s-min=25.4km az=140.0*

ISC 02 22:43:53.7±1.0**, 3°.5S**±0°.2×**149°.6E**±0°.1**, h20**^{km}**, n12,** σ**1^s.24**/7**, mb3.7**/5**, MS3.1**/4**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.53	108	Pn	Pn	22 44 33.8	+0.1
	3.5nm,0.3s,baz=7.8,slow=23,SNR=4.7						
HNR	Honiara	11.83	120	LR	LR	22 50 41.4	
	comp=Z,71nm,18.2s,baz=304,slow=35						
WRA	Warramunga Arr	22.11	221	P	P	22 48 46.5	-1.5
	2.2nm,0.8s,baz=46,slow=10,SNR=9.2						
DZM	Mont Dzumac	24.64	140	LR	LR	22 57 44.3	
	comp=Z,116nm,18.6s,baz=228,slow=34						
ASAR	Alice Springs	25.14	216	P	P	22 49 17.6	0.0
	1.4nm,0.7s,baz=48,slow=8.2,SNR=12						
FITZ	Fitzroy Crossi	27.59	237	P	P	22 49 41.6	+1.7
	5.6nm,0.7s,baz=44,slow=7.9,SNR=6.3						
MKAR	Makanchi Array	77.28	319	P	P	22 55 46.4	-0.3
	0.2nm,0.7s,baz=102,slow=6.1,SNR=2.7						
ZALV	Zalesovo Beam	78.33	327	LR	LR	23 30 46.9	
	comp=Z,9.4nm,19.1s,baz=70,slow=36						
ILAR	Eielson Array	82.19	23	LR	LR	23 33 40.2	
	comp=Z,8.9nm,18.2s,baz=0.5,slow=36						
NRIK	Noril'sk	83.73	342	LR	LR	23 32 27.7	
	comp=Z,9.5nm,21.7s,baz=50,slow=35						
YKA	Yellowknife Ar	95.77	28	P	P	22 57 18.4	+0.2
	0.3nm,0.8s,baz=276,slow=4.5,SNR=3.6						
TORD	Torodi Ar. Bea	146.89	289	PKPbc	PKiKP	23 03 37.6	-0.8
	0.5nm,0.8s,baz=79,slow=4.3,SNR=3.5						

*ISK **02** 23:06:10.9, 35°.57N×33°.37E, h21^{km}, ML2.6/15*

*DDA **02** 23:06:11.4, 35°.57N×33°.30E, h7^{km}±5^{km}, ML1.9*

*NIC **02** 23:06:12.8±0.0, 35°.43N×33°.41E, h48^{km}±2^{km}, Ml1.9/2*

ISC 02 23:06:11.6±1.0**, 35°.59N**±0°.02×**33°.33E**±0°.03**, h25**^{km}±12^{km}**, n29,** σ**1^s.03**/46**, 2C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATHAL	Athalassa	0.45	173	P	Pb	23 06 21.6	+0.6
ATHAL				S	Sn	23 06 28.9	-0.7
TEKE	Tekeli-Mersin	0.58	343	PG	Pb	23 06 23.5	+0.3
TEKE				SG	Sn	23 06 32.5	-0.4
LEF	Lefka	0.59	218	PG	Pn	23 06 24.3	0.0
LEF	Lefka	0.59	218	i P	Pb	23 06 23.7	+0.5
LEF				i S	Sb	23 06 31.6	+0.5
AKKU	Akkuyu-Mersin	0.60	18	PG	Pb	23 06 23.2	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AKKU				SG	Sn	23 06 32.9	-0.5
MVOU	Mavrovouni	0.62	156	⇓P	Pb	23 06 23.5	-0.4
MVOU				AML	AML	23 06 30.7	
	0.3nm,0.3s						
MVOU				AML	AML	23 06 30.7	
	0.3nm,0.3s						
MVOU				AML	AML	23 06 31.0	
	0.4nm,0.2s						
MVOU				AML	AML	23 06 31.0	
	0.4nm,0.2s						
MVOU				S	Sb	23 06 31.5	-0.6
GULN	MERSIN_Gulnar	0.62	16	*i* P	Pb	23 06 23.6	-0.3
GULN				*i* S	Sb	23 06 30.3	-1.9
GULN				IAML		23 06 35.0	
	comp=E,48nm,0.6s						
CSS	Mathiatis	0.62	180	PG	Pb	23 06 24.0	+0.1
CSS				SG	Sb	23 06 32.0	-0.2
CSS	Mathiatis	0.62	180	⇑P	Pb	23 06 23.9	0.0
CSS				S	Sb	23 06 32.3	0.0
TISA	Tisan-Mersin	0.64	26	PG	Pb	23 06 24.3	+0.1
TISA				SG	Sb	23 06 33.5	+0.7
YESI	Yesilovacik-Me	0.66	23	PG	Pb	23 06 24.5	0.0
KARG	Kargicak-Mersi	0.69	27	PG	Pb	23 06 24.9	-0.1
EREN	Erenkoy	0.69	94	*i* P	Pn	23 06 27.9	+2.2
EREN				*i* S	Sn	23 06 36.0	+0.5
EREN				IAML		23 06 53.0	
	comp=E,84nm,0.8s						
EREN				IAML		23 06 56.0	
	comp=N,69nm,1.0s						
IKL	Isikli	0.71	24	PG	Pb	23 06 24.7	-0.7
IKL				SG	Sn	23 06 36.2	0.0
ALFC	Alefka	0.73	234	⇑P	Pb	23 06 26.1	+0.3
ALFC				AML	AML	23 06 39.7	
	comp=N,0.2nm,0.4s						
ALFC				AML	AML	23 06 42.7	
	comp=N,0.2nm,0.3s						
BERE	Bereket-Mersin	0.76	354	PG	Pb	23 06 26.5	+0.2
ASGA	Asgata	0.80	185	P	Pb	23 06 26.8	-0.1
ASGA				S	Sb	23 06 36.2	-1.1
TEVE	Tevekalti-Mers	0.85	6	PG	Pb	23 06 27.7	-0.1
SZAC	Souni	0.91	204	P	Pn	23 06 28.2	-0.5
KEBE	Keben-Mersin	0.91	20	PG	Pn	23 06 28.9	0.0
SILI	Silifke-Mersin	0.92	32	PG	Pb	23 06 29.4	+0.6
AKMS	Akamas	0.99	235	P	Pn	23 06 30.3	+0.4
AKMS				S	Sn	23 06 43.7	+0.7
GAZI	Gazipasa	1.04	309	PN	Pb	23 06 31.2	+0.2
GAZI	Gazipasa	1.04	309	*i* P	Pb	23 06 32.5	+1.5
GAZI				*i* S	Sn	23 06 41.0	-3.4
ERMK	Ermenek	1.10	342	*i* P	Pb	23 06 35.0	+2.8
ERMK				*i* S	Sn	23 06 45.9	-0.3
KIZK	Mersin	1.11	36	PN	Pn	23 06 31.2	-0.3
KIZK	Mersin	1.11	36	*i* P	Pn	23 06 31.8	+0.3
KIZK				*i* S	Sn	23 06 43.9	-2.1
KIZK				IAML		23 06 55.0	
	comp=N,20nm,0.5s						
MERS	Mersin	1.60	37	PN	Pn	23 06 38.5	+0.2
KERG	Konya-Eregli	1.94	19	*i* P	Pb	23 06 46.2	0.0
KERG				*i* S	Sn	23 07 08.4	+1.9
KERG				IAML		23 07 22.0	
	comp=N,12nm,0.6s						

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*IDC **02** 23:14:32.6±6.7, 17°.53S×178°.48W, h554^{km}±74^{km}, mb4.0/6, mb1 4.1/7, mb1mx3.3/38, mbtmp4.8/7, Error ellipse: s-maj=46.8km s-min=37.1km az=167.0*

*NEIC **02** 23:14:32.6±1.8, 17°.8S±0°.1×178°.4W±0°.1, h570^{km}±5^{km}, mb4.4/32, Error ellipse: s-maj=21.3km s-min=15.5km az=138.0*

ISC 02 23:14:31.0±0.6**, 17°.7S**±0°.1×**178°.4W**±0°.1**, h547**^{km}**, n48, σ0^{s}.93**/45**, mb4.4**/23**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.41	269	P	P	23 15 55.0	+6.4
AFI	Afiamalu	7.39	60	P	P	23 16 23.9	+1.0
DZM	Mont Dzumac	14.92	251	P	P	23 17 41.6	+1.7
	0.3nm,0.3s,baz=72,slow=20,SNR=1.9						
DZM	Mont Dzumac	14.92	251	P	P	23 17 41.2	+1.3
OUZ	Omahuta	18.84	201	P	P	23 18 18.4	+1.8
HIZ	Hauiti	21.55	195	P	P	23 18 42.2	+1.1
QRZ	Quartz Range	24.33	197	P	P	23 19 06.1	+0.3
QRZ				IAmb	IAmb	23 19 18.6	
	comp=Z,14nm,1.0s						
THZ	Tophouse	25.11	196	P	P	23 19 11.9	-0.9
THZ				IAmb	IAmb	23 19 13.5	
	comp=Z,8.0nm,1.1s						
KHZ	Kahutara	25.57	194	P	P	23 19 16.3	-0.5
KHZ				IAmb	IAmb	23 19 20.7	
	comp=Z,6.9nm,1.1s						
WKZ	Wanaka	29.03	199		pP	23 21 15.3	-0.8
EIDS	Eidsvold	29.37	250	P	P	23 19 50.1	-0.2
EIDS				IAmb	IAmb	23 20 03.7	
	comp=Z,4.5nm,0.8s						
ARMA	Armidale	30.07	240	P	P	23 19 57.0	+0.6
ARMA				IAmb	IAmb	23 19 59.0	
	comp=Z,8.1nm,0.8s						
PYZ	Puysegur Point	30.97	200		pwP	23 21 39.1	+1.5
CTAO	Charters Tower	33.51	260	P	P	23 20 26.3	+0.5
CTAO				IAmb	IAmb	23 20 27.3	
	comp=Z,7.3nm,0.8s						
CAN	Canberra	33.85	232	P	P	23 20 29.1	+0.6
CAN				IAmb	IAmb	23 20 34.5	
	comp=Z,9.0nm,1.1s						
COEN	Coen	37.14	270	P	P	23 20 57.5	+1.6
TOO	Toolangi	37.32	231	P	P	23 20 57.1	0.0
TOO				IAmb	IAmb	23 20 59.3	
	comp=Z,12nm,0.8s						
STKA	Stephens Creek	38.75	241	P	P	23 21 09.7	+0.8
	comp=Z,5.5nm,0.4s,baz=86,slow=8.6,SNR=18						
STKA	Stephens Creek	38.75	241	P	P	23 21 09.5	+0.6
JAY	Jayapura	42.88	286	P	P	23 21 41.5	-0.4
	comp=Z,15nm,0.8s,baz=126,slow=15,SNR=3.5						
BBOO	Buckleboo	43.53	241	P	P	23 21 46.6	-0.1
WR0	Warramunga Arr	44.51	259	P	P	23 21 54.5	0.0
WB0	Warramunga Arr	44.67	260	P	P	23 21 55.1	-0.6
WB0				IAmb	IAmb	23 21 59.1	
	comp=Z,5.9nm,0.7s						
WB2	Warramunga Arr	44.69	259	P	P	23 21 55.3	-0.5
WB2				IAmb	IAmb	23 21 56.8	
	comp=Z,10nm,0.6s						
WRA	Warramunga Arr	44.70	259	P	P	23 21 56.0	+0.1
	comp=Z,6.9nm,0.5s,baz=92,slow=7.4,SNR=102						
AS31	Alice Springs	44.88	254	P	P	23 21 57.9	+0.6
ASAR	Alice Springs	44.88	254	P	P	23 21 58.0	+0.7
	comp=Z,47nm,0.5s,baz=88,slow=8.4,SNR=817						
FORT	Forrest	50.12	244	P	P	23 22 35.4	-1.1
KNRA	Kununurra	50.54	264	P	P	23 22 38.2	-1.5
KNRA				IAmb	IAmb	23 22 40.7	
	comp=Z,14nm,0.8s						
SIJI	Sorong	52.22	283	P	P	23 22 51.7	-0.2
	comp=Z,19nm,0.7s,baz=70,slow=6.9,SNR=8.6						
FITZ	Fitzroy Crossi	53.09	260	P	P	23 22 57.6	-0.4
SOEI	Soe	56.10	270	P	P	23 23 19.1	-0.2
SOEI				IAmb	IAmb	23 23 22.0	
	comp=Z,13nm,0.7s						
PSA00	Pilbara Seismi	57.99	255	P	P	23 23 31.1	-0.9
NWAO	Narrogin (SRO)	59.33	242	P	P	23 23 40.1	-0.8
NWAO				IAmb	IAmb	23 23 47.9	
	comp=Z,24nm,1.1s						
NWAO	Narrogin (SRO)	59.33	242	P	P	23 23 40.0	-0.9
NWAO				IAmb	IAmb	23 23 48.5	
	comp=Z,10nm,1.1s						
GIRL	Giralia	62.98	253	P	P	23 24 05.1	+0.2
MAJO	Matsushiro	67.77	323	P	P	23 24 34.8	+0.1
MAJO				IAmb	IAmb	23 24 40.1	
	comp=Z,10nm,0.5s						
MJB9	Matsu-Tunnel	67.78	323	P	P	23 24 35.5	+0.9
MJB9				IAmb	IAmb	23 24 40.1	
	comp=Z,10nm,0.5s						
UGM	Wanagama	69.69	268	P	P	23 24 45.3	-1.4
QSPA	South Pole Qui	72.34	180	P	P	23 25 00.7	-0.7
YERR	Yerington	78.95	43	P	P	23 25 39.4	+0.8
YERR				IAmb	IAmb	23 25 39.8	
	comp=Z,8.0nm,0.8s						
NEA	Nenana	85.06	12	P	P	23 26 08.4	-0.4
TXAR	Lajitas Array	85.86	58	P	P	23 26 14.2	+0.7
	comp=Z,0.3nm,0.7s,baz=224,slow=7.0,SNR=4.4						
PRP	Porcupine Dome	86.63	13	P	P	23 26 13.7	-2.7
CMAR	Chiang Mai Arr	88.85	290	P	P	23 26 28.4	+0.7
	comp=Z,0.7nm,0.3s,baz=96,slow=3.6,SNR=4.4						
BRTR	Keskin Array B	144.67	315	PKP	PKPdf	23 33 06.0	-0.1
	comp=Z,1.2nm,0.9s,baz=216,slow=4.0,SNR=4.3						
CLL	Collm	145.28	347	*e*PKPbc	PKPab	23 33 08.0	-0.8
GERES	GERESS Array B	147.43	345	PKPbc	PKPbc	23 33 13.2	-0.6
	comp=Z,0.4nm,0.5s,baz=8.1,slow=2.8,SNR=5.7						

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*TIR **02** 23:18:21.9, 40°.88N×21°.35E, h6^{km}, Md2.5/4*

*ATH **02** 23:18:21.9, 40°.86N×21°.45E, h16^{km}±1^{km}, ML2.1/14, Error ellipse: s-maj=3.3km s-min=1.2km az=145.0*

*SKO **02** 23:18:21.0, 40°.77N×21°.42E, h20^{km}*

*THE **02** 23:18:22.2, 40°.86N×21°.41E, h9^{km}, ML2.3/5, Error ellipse: s-maj=1.0km s-min=0.6km az=246.0*

ISC 02 23:18:22.0±0.8**, 40°.85N**±0°.02×**21°.43E**±0°.02**, h11**^{km}±5^{km}**, n51, σ0^{s}.74**/67**, 2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	Florina	0.08	212	P	Pg	23 18 24.9	+0.3
FNA				S	Sg	23 18 26.4	0.0
	6μm,0.2s						
FNA	Florina	0.08	212	*i* PG	Pg	23 18 24.7	+0.2
FNA				*i* SG	Sg	23 18 26.5	+0.1
FNA	Florina	0.08	212	P	Pg	23 18 24.8	+0.2
FNA				S	Sg	23 18 26.8	+0.3
FNA				AML	AML	23 18 27.0	
	comp=E,14445μm,0.1s						
FNA				AML	AML	23 18 27.5	
	comp=N,17714μm,0.1s						
NEST	Nestorio	0.52	214	P	Pg	23 18 32.2	0.0
NEST				S	Sb	23 18 39.9	-0.9
	comp=N,880nm,0.2s						
NEST	Nestorio	0.52	214	P	Pg	23 18 32.1	-0.1
NEST				S	Sb	23 18 40.8	0.0
NEST				AML	AML	23 18 41.6	
	comp=E,1975μm,0.2s						
NEST				AML	AML	23 18 42.5	
	comp=N,1634μm,0.2s						
OHR	Ohrid	0.55	299	⇓*i*Pg	Pg	23 18 32.6	-0.1
OHR				*i* Sg	Sb	23 18 41.0	-0.4
OHR				*e*Lg	Lg	23 18 41.1	
	comp=N,170nm,0.5s						
OHR				*e*Lg	Lg	23 18 41.4	
	comp=E,128nm,0.4s						
OHR	Ohrid	0.55	299	⇓*i*Pg	Pg	23 18 32.6	-0.1
OHR				*i* Sg	Sb	23 18 41.0	-0.4
OHR				*e*Lg	Lg	23 18 41.1	
	comp=N,170nm,0.5s						
OHR				*e*Lg	Lg	23 18 41.4	
	comp=E,128nm,0.4s						
KZN	Kozani	0.60	154	P	Pg	23 18 33.7	0.0
KZN				S	Sb	23 18 42.9	-0.1
	comp=E,395nm,0.2s						
KZN	Kozani	0.60	154	P	Pg	23 18 33.8	0.0
KZN				S	Sb	23 18 43.1	+0.1
KZN				AML	AML	23 18 45.1	
	comp=N,799μm,0.2s						
KZN				AML	AML	23 18 45.1	
	comp=E,751μm,0.3s						
PENT	Pentalofos	0.69	199	P	Pg	23 18 35.2	-0.2
PENT	Pentalofos	0.69	199	P	Pg	23 18 35.3	-0.1
PENT				AML	AML	23 18 48.6	
	comp=E,414μm,0.4s						
PENT				AML	AML	23 18 51.4	
	comp=N,469μm,0.3s						
KTI	Kastanea	0.69	131	P	Pb	23 18 36.0	-0.1
GRG	Griva	0.74	81	P	Pb	23 18 36.5	-0.4
GRG				S	Sb	23 18 47.6	+0.5
	comp=N,210nm,0.6s						
GRG	Griva	0.74	81	P	Pb	23 18 36.5	-0.4
GRG				AML	AML	23 18 53.9	
	comp=E,381μm,0.4s						
GRG				AML	AML	23 18 54.2	
	comp=N,451μm,0.8s						
KPRO	Kipourio	0.90	183	P	Pg	23 18 39.0	-0.3
KPRO	Kipourio	0.90	183	P	Pg	23 18 39.0	-0.3
KPRO				AML	AML	23 18 55.4	
	comp=E,334μm,0.5s						
KPRO				AML	AML	23 19 05.6	
	comp=N,86μm,19.2s						
MEV	Metsovon	1.07	188	P	Pb	23 18 42.2	-0.5
MEV	Metsovon	1.07	188	P	Pb	23 18 41.9	-0.7
LIT	Litokhoron	1.10	132	P	Pn	23 18 43.4	+0.1
LIT	Litokhoron	1.10	132	P	Pn	23 18 43.9	+0.6
LIT				AML	AML	23 19 02.2	
	comp=E,146μm,0.3s						
LIT				AML	AML	23 19 02.3	
	comp=N,121μm,0.2s						
PHP	Peshkopia	1.12	319	P	Pb	23 18 42.4	-1.0
PHP				S	Sn	23 18 58.8	-0.2
PHP	Peshkopia	1.12	319	*i* PG	Pb	23 18 42.3	-1.1
PHP				*i* SG	Sg	23 18 58.2	+0.1
SKO	Skopje	1.12	0	*e*Pg	Pg	23 18 44.6	+1.0
SKO	Skopje	1.12	0	*e*Pg	Pg	23 18 44.6	+1.0
KNT	Kendrikon	1.15	74	P	Pg	23 18 44.0	-0.2
KNT	Kendrikon	1.15	74	P	Pg	23 18 44.1	-0.2
KNT				AML	AML	23 19 04.4	
	comp=N,183μm,0.5s						
KNT				AML	AML	23 19 04.6	
	comp=E,75μm,0.4s						
THE	Thessaloniki	1.19	100	P	Pg	23 18 45.1	+0.3
JAN	Janina	1.27	201	P	Pg	23 18 47.1	+0.7
JAN				AML	AML	23 19 11.9	
	comp=E,128μm,0.4s						
JAN				AML	AML	23 19 12.2	
	comp=N,120μm,0.3s						
HORT	Hortiatis	1.29	101	P	Pg	23 18 46.4	-0.4
HORT				AML	AML	23 19 07.4	
	comp=N,75μm,0.4s						
HORT				AML	AML	23 19 07.5	
	comp=E,50μm,0.5s						
THL	Klokotos Trika	1.36	161	P	Pb	23 18 46.7	-0.7
THL				S	Sg	23 19 06.5	+0.8
	comp=E,48nm,0.6s						
THL	Klokotos Trika	1.36	161	P	Pb	23 18 46.7	-0.7
THL				AML	AML	23 19 12.4	
	comp=N,90μm,0.6s						
THL				AML	AML	23 19 13.0	
	comp=E,88μm,0.7s						
SRN	Sarande	1.46	229	*i* PN	Pg	23 18 50.2	+0.2
SRN				*i* SN	Sg	23 19 10.8	+1.8
IGT	Igoumenitsa	1.56	213	*i* PN	Pg	23 18 51.9	-0.1
IGT				*i* SN	Sg	23 19 14.2	+2.0
IGT	Igoumenitsa	1.56	213	P	Pg	23 18 51.9	-0.1
IGT				AML	AML	23 19 21.4	
	comp=N,75μm,0.8s						
IGT				AML	AML	23 19 25.9	
	comp=E,71μm,0.5s						
PLG	Polygyros	1.61	107	P	Pb	23 18 51.1	-0.5
PLG				AML	AML	23 19 17.1	
	comp=N,50μm,0.6s						
PLG				AML	AML	23 19 17.8	
	comp=E,42μm,0.4s						
SRS	Serrai	1.66	80	P	Pn	23 18 51.2	+0.2
SRS	Serrai	1.66	80	P	Pn	23 18 51.2	+0.2
PUK	Puka	1.66	316	*i* PN	Pb	23 18 52.0	-0.7
PUK				*i* SN	Sg	23 19 16.3	+0.9
KEK	Kerkira	1.69	228	P	Pg	23 18 54.3	0.0
KEK				AML	AML	23 19 27.5	
	comp=N,48μm,0.7s						
KEK				AML	AML	23 19 27.9	
	comp=E,55μm,0.5s						
NVR	Nevrokopi	1.90	74	P	Pb	23 18 55.2	-1.5
PAIG	Paliouri	1.95	117	P	Pn	23 18 55.4	+0.5
AGG	Agios Georgios	1.95	159	P	Pb	23 18 56.3	-1.2
EVR	Evrytania	1.95	171	P	Pb	23 18 56.7	-0.9
OUR	Ouranopolis	2.01	104	P	Pb	23 18 56.8	-1.7
NEO	Neokhori	2.06	138	P	Pn	23 18 56.9	+0.3
LKD2	Lefkada island	2.14	196	P	Pb	23 19 00.1	-0.7
EVGI	Lefkada island	2.30	195	P	Pb	23 19 02.6	-0.9
EFP	Efpalio	2.45	171	P	Pn	23 19 02.5	+0.6
FSK	Fiskardo	2.48	196	P	Pb	23 19 04.3	-2.2
SERG	Sergoula	2.48	169	P	Pn	23 19 03.7	+1.4
THAS	Thassos island	2.51	94	P	Pn	23 19 02.8	+0.2

VIE 02 23:20:20.2±0.2**, 47°.33N**×**10°.71E, h8**^{km}**, ml0.2**/4**, Error ellipse: s-maj=2.0km s-min=1.2km az=93.0 9 km NNW of Imst, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RETA	Reutte	0.16	13	*e*Pg	Pg	23 20 23.7	0.0
	0.3nm,0.1s						
RETA				*i* Sg	Sg	23 20 26.4	+0.4
	0.6nm,0.1s						
MOTA	Moosalm	0.27	86	*e*Pg	Pg	23 20 25.4	-0.1
	0.3nm,0.1s						
MOTA				*e*Sg	Sg	23 20 29.7	+0.5
	0.7nm,0.1s						
FETA	Feichten	0.31	178	*e*Pg	Pg	23 20 26.5	+0.2
	0.1nm,0.1s						
FETA				*e*Sg	Sg	23 20 31.0	+0.6
	0.2nm,0.1s						
SQTA	Sankt Quirin	0.36	107	*e*Pg	Pg	23 20 27.1	-0.1
	0.2nm,0.1s						
SQTA				*e*Sg	Sg	23 20 32.7	+0.8
	0.6nm,0.1s						

JMA 02 23:24:10.4, 35°.64N×136°.61E, h9^{km}±1^{km}**, M2.6, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYTA	Yamagatataniai	0.11	114	P	Pg	23 24 13.1	+0.1
JYTA				S	Sg	23 24 14.9	0.0
JICN	Ichinomiyachia	0.39	151	P	Pg	23 24 18.3	+0.3
JICN				S	Sg	23 24 23.4	+0.3
JKG	Kaga	0.67	341	P	Pg	23 24 23.5	+0.1
JKG				S	Sg	23 24 32.5	+0.2
TSUJ	Tsu 2	0.94	190	P	Pg	23 24 28.2	-0.3
TSUJ				S	Sg	23 24 40.4	-0.3
JWT	Wachi	1.05	250	P	Pg	23 24 30.0	-0.6
JWT				S	Sg	23 24 43.0	-1.2
MAT	Matsushiro	1.58	55	P	Pn	23 24 38.9	+0.3
MAT				S	Sb	23 25 00.2	+0.4

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*NNC **02** 23:39:29.4±9.4, 38°.54N×73°.87E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=73.7km s-min=53.7km az=154.0*

ISC 02 23:39:30.1±4.6**, 38°.3N**±0°.3×**74°.1E**±0°.1**, h124**^{km}**, n9, σ1^{s}.06**/12**, 4C-2D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	3.81	355	P	Pn	23 40 28.1	+0.6
	SNR=38						
KZA	Kyzart	3.84	13	P	Pn	23 40 27.7	-0.2
	SNR=11						
UCH	Uchtor	3.90	4	P	Pn	23 40 29.2	+0.5
	SNR=12						
ULHL	Ulahol	4.23	22	P	Pn	23 40 32.7	-0.2
	SNR=5.8						
AAK	Ala-Archa	4.31	4	⇑Pn	Pn	23 40 34.0	+0.1
	1.8nm,0.9s						
AAK				⇑Sn	Sn	23 41 25.5	+2.0
	5.7nm,1.3s						
CHMS	Chumysh	4.69	6	P	Pn	23 40 39.5	+0.6
	SNR=14						
TKM2	Tokmak 2	4.72	13	P	Pn	23 40 39.4	-0.1
	SNR=14						
TKM2	Tokmak 2	4.72	13	⇓Pn	Pn	23 40 39.2	-0.2
	3.2nm,0.3s						
TKM2				⇓Sn	Sn	23 41 32.2	-1.1
	4.8nm,0.6s						
KK31	Karatay Array	5.50	331	⇑Pn	Pn	23 40 50.3	+0.6
	0.7nm,0.2s,baz=148,slow=15,SNR=28						
KK31				⇑Sn	Sn	23 41 50.1	-1.9
	3.3nm,0.5s,baz=157,slow=22,SNR=11						

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*IDC **03** 00:05:00.9±3.5, 36°.28N×71°.52E, h84^{km}±28^{km}, mb3.4/11, mb1 3.6/17, mb1mx3.4/52, mbtmp3.9/17, MS2.6/2, Ms1 2.6/2, ms1mx2.1/42, Error ellipse: s-maj=28.9km s-min=19.3km az=160.0*

*NEIC **03** 00:05:05.7±1.7, 36°.69N±0°.04×71°.41E±0°.10, h110^{km}±6^{km}, mb4.0/7, Error ellipse: s-maj=11.6km s-min=6.3km az=101.0*

*NNC **03** 00:05:06.1±2.4, 36°.77N×71°.29E, h112^{km}±29^{km}, mb3.6, mpv4.2, Error ellipse: s-maj=22.6km s-min=15.6km az=151.0*

ISC 03 00:05:04.1±0.5**, 36°.51N**±0°.05×**71°.56E**±0°.06**, h114**^{km}**, n81, σ1^{s}.96**/87**, mb3.7**/13**, 8C-8D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	Garm	2.67	339		Pn	00 05 45.0	-0.9
KBL	Kabul	2.84	227		Pn	00 05 50.3	+2.0
CHGR	Chuyangaron	2.87	319		Pn	00 05 47.0	-1.5
CHCP	Chirah Chowk	3.17	153	P	Pn	00 05 56.2	+3.7
NIL	Nilore	3.18	154		Pn	00 05 56.5	+3.9
THW	Thamme Wali	3.71	178	P	Pn	00 06 01.8	+2.1
ARSB	Arslanbob	4.93	13		Pn	00 06 16.3	+0.2
THN	Thein Dam	5.33	139	*e*P	Pn	00 06 24.5	+3.2
THN				*e*S	Sn	00 07 22.5	+1.0
DHRM	DHARAMSHALA	5.78	136	*e*P	Pn	00 06 29.5	+1.8
DHRM				*e*S	Sn	00 07 30.2	-2.7
DHRM				IAML		00 07 36.6	
	comp=N,446nm,0.4s						
DHRM				IAML		00 07 37.2	
	comp=E,451nm,0.2s						
AML	Almayashu	5.85	16	P	Pn	00 06 29.5	+0.8
	SNR=93						
UCH	Uchtor	6.15	21	P	Pn	00 06 33.7	+0.9
	SNR=26						
KZA	Kyzart	6.25	26	P	Pn	00 06 35.9	+1.8
	SNR=10						
EKS2	Erkin-Say	6.37	15	P	Pn	00 06 36.1	+0.6
	SNR=32						
BHK	Bhakra	6.49	140	*e*S	Sn	00 07 48.9	-0.9
AAK	Ala-Archa	6.52	19	P	Pn	00 06 38.9	+1.3
	comp=E,8.6nm,0.3s,baz=190,slow=7.9,SNR=52						
AAK				S	Sn	00 07 47.8	-2.8
	comp=E,1.9nm,0.3s,baz=139,slow=20,SNR=6.5						
AAK	Ala-Archa	6.52	19	P	Pn	00 06 38.8	+1.2
	SNR=20						
AAK	Ala-Archa	6.52	19	⇓P	Pn	00 06 38.4	+0.9
	comp=E,11nm,0.4s						
AAK				⇓S	Sn	00 07 48.2	-2.4
	comp=E,22nm,0.8s						
AAK	Ala-Archa	6.52	19		Pn	00 06 38.1	+0.6
KK31	Karatay Array	6.63	353	P	Pn	00 06 38.1	-0.8
	comp=E,11nm,0.3s,baz=182,slow=24,SNR=245						
KK31				⇑S	Sn	00 07 49.8	-3.2
	comp=E,40nm,0.8s,baz=181,slow=23,SNR=11						
KK31	Karatay Array	6.63	353		Pn	00 06 38.5	-0.4
KKAR	Karatay Array	6.63	353		Pn	00 06 38.5	-0.4
ULHL	Ulahol	6.78	31	P	Pn	00 06 43.3	+2.3
	SNR=13						
CHMS	Chumysh	6.93	20	P	Pn	00 06 43.7	+0.8
	SNR=20						
KDJ	Kajisay	7.10	36		Pn	00 06 45.9	+0.5
USP	Ospenovka	7.11	18	P	Pn	00 06 45.5	0.0
	SNR=14						
TKM2	Tokmak 2	7.11	25	P	Pn	00 06 46.9	+1.3
	SNR=20						
TKM2	Tokmak 2	7.11	25	⇓P	Pn	00 06 46.7	+1.1
	comp=E,13nm,0.6s						
TKM2				⇑S	Sn	00 08 02.4	-2.6
	comp=E,3.3nm,0.5s						
SMLA	Simla	7.12	137	*e*P	Pn	00 06 47.7	+2.2
SMLA				*e*S	Sn	00 08 00.9	-3.9
SMLA				IAML		00 08 04.8	
	comp=E,128nm,0.6s						
SMLA				IAML		00 08 06.3	
	comp=N,163nm,0.3s						
MDOK	Medeo	7.87	31	⇑P	Pn	00 06 57.8	+2.0
	comp=N,6.5nm,0.9s						
PDGK	Podgornoye	9.13	39	⇑P	Pn	00 07 12.9	0.0
	comp=N,8.7nm,1.2s						
GEYT	Alibeck	10.81	282	P	Pn	00 07 31.8	-3.8
	comp=N,4.1nm,0.3s,baz=107,slow=10,SNR=73						
GEYT				S	Sn	00 09 24.1	-11
	comp=N,3.7nm,0.3s,baz=128,slow=29,SNR=12						
GYA0B	ALIBECK ARRAY	10.81	282	⇑P	Pn	00 07 32.0	-3.6
GYA0B				⇓S	Sn	00 09 25.4	-9.2
GYA0B	ALIBECK ARRAY	10.81	282		Pn	00 07 32.4	-3.2
OTUK	Ortayu	11.74	3	⇓P	Pn	00 07 45.2	-2.6
	comp=N,2.4nm,0.7s						
PYUN	Piuthan	12.79	128	*e*P	Pn	00 08 00.9	-1.1
	comp=N,52nm,0.3s						
MAKZ	Makanchi	12.89	34		Pn	00 08 02.7	-0.2
MK31	Makanchi Array	13.02	35	⇑P	Pn	00 08 04.7	+0.1
	comp=N,1.6nm,0.7s,baz=218,slow=11,SNR=9.8						
MK31	Makanchi Array	13.02	35		Pn	00 08 05.7	+1.1
MKAR	Makanchi Array	13.02	35	P	Pn	00 08 05.0	+0.4
	comp=N,0.1nm,0.3s,baz=219,slow=12,SNR=9.8						
DANN	Dangsing	13.12	125	*e*P	Pn	00 08 04.6	-1.8
	comp=N,26nm,0.3s						
KOLN	Koldanda	13.41	127	*e*P	Pn	00 08 08.9	-1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=N,16nm,0.3s						
GKN	Gorkha	13.94	124	eP	Pn	00 08 15.4	-1.4
	comp=N,20nm,0.2s						
BHPL	Bhopal	14.17	157	ex	P	00 08 26.5	+2.9
BHPL				eS	Sn	00 10 47.6	-8.3
KKN	Kakani	14.51	123	eP	Pn	00 08 22.2	-1.9
	comp=N,9.9nm,0.3s						
PKIN	Phulchoki	14.72	123	eP	Pn	00 08 25.5	-1.4
	comp=N,14nm,0.4s						
PKI	Pulchoki	14.73	123	eP	Pn	00 08 25.5	-1.6
	comp=N,8.9nm,0.3s						
GUN	Gumba	14.84	121	eP	Pn	00 08 26.6	-1.8
	comp=N,9.1nm,0.3s						
KURBB	Kurchatov Arra	14.97	17	P	P	00 08 32.5	+0.3
	comp=N,0.1nm,0.3s,baz=206,slow=10,SNR=16						
KURBB	Kurchatov Arra	14.97	17	⇓P	P	00 08 32.2	0.0
	comp=N,3.5nm,0.7s						
KURK	Kurchatov	15.08	17	P	P	00 08 32.7	-0.7
JIRN	Jiri	15.21	121	eP	Pn	00 08 31.6	-1.5
	comp=N,37nm,0.4s						
AB31	Akbulak array	15.29	330	P	Pn	00 08 30.8	-2.9
	comp=N,2.0nm,0.3s,baz=139,slow=12,SNR=76						
AB31				S	Sn	00 11 08.2	-14
	comp=N,4.7nm,0.8s,baz=146,slow=24,SNR=18						
RAMN	Ramite	15.94	122	eP	Pn	00 08 40.6	-1.5
	comp=N,13nm,0.4s						
TAPN	Taplejung	16.46	119	eP	Pn	00 08 47.4	-1.2
	comp=N,11nm,0.3s						
BVAR	Borovoye Array	16.53	358	P	Pn	00 08 47.2	-1.8
	comp=N,0.5nm,0.3s,baz=165,slow=12,SNR=18						
ODAN	Odare	16.54	121	eP	Pn	00 08 49.1	-0.4
	comp=N,10.0nm,0.5s						
BRVK	Borovoye	16.57	357	⇓P	P	00 08 50.6	+0.7
	comp=N,4.3nm,0.9s						
BRVK	Borovoye	16.57	357	P	P	00 08 49.8	-0.1
BRVK				IAmb	IAmb	00 08 51.6	
	comp=Z,3.5nm,0.8s						
AKTO	Aktyubinsk	17.00	329	P	Pn	00 08 53.8	-0.9
	comp=Z,1.0nm,0.3s,baz=136,slow=13,SNR=14						
AKTO				S	Sn	00 11 51.6	-12
	comp=Z,0.1nm,0.3s,baz=139,slow=19,SNR=3.6						
AKTO	Aktyubinsk	17.00	329	⇓P	Pn	00 08 53.2	-1.4
	comp=Z,6.8nm,0.9s						
AKTO				⇑S	Sn	00 11 50.2	-13
	comp=Z,9.3nm,1.1s						
ZAA0	Zalesovo Array	19.72	24	⇑P	P	00 09 24.9	+0.5
	comp=Z,0.8nm,0.5s						
ZAA0	Zalesovo Array	19.72	24	IAmb	IAmb	00 09 26.4	
	comp=Z,8.2nm,0.6s						
ZALV	Zalesovo Beam	19.72	24	P	P	00 09 25.3	+0.9
	comp=Z,2.7nm,0.3s,baz=210,slow=10,SNR=42						
TBLG	Delisi	21.41	292	P	P	00 09 43.6	+1.0
TBLG				IAmb	IAmb	00 09 46.3	
	comp=Z,6.3nm,0.5s						
ARU	Arti	21.77	340	P	P	00 09 46.8	+0.5
	comp=Z,0.8nm,0.3s,baz=114,slow=4.4,SNR=6.2						
ARU				LR	LR	00 19 58.1	
	comp=Z,12nm,18.1s,baz=188,slow=41						
ARU	Arti	21.77	340	P	P	00 09 47.0	+0.7
ARU				IAmb	IAmb	00 09 50.3	
	comp=Z,4.3nm,0.7s						
KBZ	Khabaz	22.99	297	P	P	00 09 59.8	+1.0
	comp=Z,1.1nm,0.7s,baz=148,slow=9.4,SNR=4.8						
TLY	Talaya	27.31	46	LR	LR	00 22 08.3	
	comp=Z,16nm,20.1s,baz=157,slow=37						
ELL	Elmali	33.23	283	P	P	00 11 31.0	+0.7
AKASG	Malin Array Be	33.29	309	P	P	00 11 32.1	+1.6
	comp=Z,0.5nm,0.4s,baz=80,slow=7.6,SNR=6.3						
AKBB	Malin Array Si	33.29	309	P	P	00 11 31.4	+0.9
AKBB				IAmb	IAmb	00 11 33.4	
	comp=Z,2.6nm,1.1s						
NRIK	Noril'sk	34.03	10	P	P	00 11 38.4	+1.6
	comp=Z,0.9nm,0.5s,baz=161,slow=3.6,SNR=3.9						
BUR08	Bucovina Ar. S	35.67	303	P	P	00 11 53.2	+2.0
FINES	FINESS Array B	37.72	326	P	P	00 12 09.6	+1.3
	comp=Z,1.3nm,0.7s,baz=124,slow=9.6,SNR=8.2						
ARCES	ARCESS Array B	41.30	337	P	P	00 12 39.2	+1.3
	comp=Z,0.8nm,0.6s,baz=104,slow=8.9,SNR=9.1						
NB2	NORSAR Subarra	44.64	323	P	P	00 13 05.9	+1.0
	comp=Z,0.9nm,0.5s,baz=93,slow=7.9						
NOA	NORSAR Array B	44.64	323	P	P	00 13 06.2	+1.3
	comp=Z,0.8nm,0.4s,baz=96,slow=7.7,SNR=8.5						
ESDC	Sonseca Array	57.85	298	P	P	00 14 45.2	+1.4
	comp=Z,0.3nm,0.6s,baz=57,slow=7.4,SNR=2.1						
TORD	Torodi Ar. Bea	66.17	269	P	P	00 15 39.2	-0.5
	comp=Z,0.5nm,0.4s,baz=50,slow=6.2,SNR=18						
YKA	Yellowknife Ar	81.21	3	P	P	00 17 07.5	+0.7
	comp=Z,0.1nm,0.4s,baz=350,slow=5.3,SNR=4.0						
ASAR	Alice Springs	83.89	125	P	P	00 17 21.3	0.0
	comp=Z,0.5nm,0.8s,baz=314,slow=4.4,SNR=3.0						

*IDC **03** 00:07:53.5±2.2, 6°.98S×154°.68E, h0^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.6/38, mbtmp3.8/5, ML3.5/1, MS2.5/1, Ms1 2.5/1, ms1mx2.1/27, Error ellipse: s-maj=50.2km s-min=30.2km az=96.0*

ISC 03 00:07:59.3±2.0**, 7°.0S**±0°.2×**154°.7E**±0°.3**, h39**^{km}**, n7,** σ**0**^{s}**81**/8**, mb3.7**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.75	316	Pn	Pn	00 08 54.4	-0.3
	3.9nm,0.3s,baz=69,slow=8.6,SNR=1.7						
KRVT				Sn	Sn	00 09 38.0	+0.4
	9.0nm,0.3s,baz=60,slow=20,SNR=2.2						
HNR	Honiara	5.77	115	LR	LR	00 11 29.0	
	comp=Z,37nm,18.3s,baz=342,slow=38						
WRA	Warramunga Arr	23.53	235	P	P	00 13 04.9	-1.3
	2.2nm,0.7s,baz=57,slow=9.8,SNR=7.9						
ASAR	Alice Springs	25.91	228	P	P	00 13 29.1	+1.1
	0.6nm,0.6s,baz=55,slow=10,SNR=5.7						
FITZ	Fitzroy Crossi	30.33	246	P	P	00 14 07.2	-0.3
	2.1nm,0.8s,baz=90,slow=8.1,SNR=2.0						
MKAR	Makanchi Array	83.19	319	P	P	00 20 21.7	+0.1
	0.4nm,0.8s,baz=91,slow=6.1,SNR=3.7						
TORD	Torodi Ar. Bea	152.70	285	PKPbc	PKiKP	00 27 53.1	0.0
	0.7nm,0.7s,baz=99,slow=1.8,SNR=7.6						
TORD				PKPab	PKPab	00 28 03.5	-0.3
	1.0nm,0.8s,baz=85,slow=2.8,SNR=4.8						

*IDC **03** 00:20:14.7±0.8, 16°.65N×93°.91W, h136^{km}±7^{km}, mb3.4/7, mb1 3.7/11, mb1mx3.4/41, mbtmp3.9/11, MS2.4/1, Ms1 2.4/1, ms1mx2.0/27, Error ellipse: s-maj=29.9km s-min=12.0km az=37.0*

*NEIC **03** 00:20:15.8±2.2, 16°.68N±0°.06×94°.02W±0°.05, h148^{km}±6^{km}, Error ellipse: s-maj=9.5km s-min=5.9km az=209.0*

*MEX **03** 00:20:17.6±0.6, 16°.83N×94°.04W, h145^{km}±5^{km}, MD4.8*

ISC 03 00:20:15.5±0.7**, 16°.69N**±0°.06×**93°.98W**±0°.04**, h148**^{km}±6^{km}**, n41,** σ**1**^{s}**57**/53**, mb3.8**/7**, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		0.83	84		Pn	00 20 39.6	+0.8
TGIG					Sn	00 20 56.1	-0.5
TGIG		0.83	84	i P	Pn	00 20 39.6	+0.8
TGIG				eS	Sn	00 20 56.1	-0.5
CMIG	Matias Romero	0.95	295	P	Pn	00 20 39.6	-0.2
	baz=102,slow=7.5						
CMIG				S	Sn	00 20 56.6	-1.7
	616nm,0.3s,baz=66,slow=6.4,SNR=15						
CMIG				LR	LR	00 21 12.4	
	comp=Z,172nm,18.0s,baz=156,slow=56						
CMIG	Matias Romero	0.95	295		Pn	00 20 39.7	0.0
CMIG					Sn	00 20 56.4	-1.9
CMIG	Matias Romero	0.95	295	i P	Pn	00 20 39.7	0.0
CMIG				eS	Sn	00 20 56.4	-1.9
PCIG		1.22	143		Pn	00 20 44.1	+1.9
PCIG		1.22	143	eP	Pn	00 20 44.1	+1.9
PCIG				i S	Sn	00 21 04.2	+1.7
TUIG	Tuzandepetl	1.40	343		Pn	00 20 43.3	-0.6
TUIG	Tuzandepetl	1.40	343	eP	Pn	00 20 43.3	-0.6
TUIG				i S	Sn	00 21 02.7	-3.1
CCIG	Comitan	1.81	103	Pn	Pn	00 20 50.0	+1.4
CCIG				Sn	Sn	00 21 15.9	+1.9
HUIG	Huatulco	2.24	246		Pn	00 20 52.2	-1.2
HUIG	Huatulco	2.24	246	eP	Pn	00 20 52.2	-1.2
HUIG				i S	Sn	00 21 22.2	-0.3
VHO	Vista Hermosa	2.66	279	eP	Pn	00 21 00.0	+1.2
VHO				i S	Sn	00 21 29.8	-2.3
PEIG	Puerto Escondi	3.12	258	eP	Pn	00 21 03.4	-1.0
PEIG				i S	Sn	00 21 41.4	-0.7
YOIG	Yosondua	3.42	273	eP	Pn	00 21 08.1	-0.3
YOIG				eS	Sn	00 21 47.6	-1.8
APG	El Apazote	3.78	116	P	Pn	00 21 12.1	-1.0
	7.7nm,0.3s,baz=280,slow=17,SNR=40						
APG				S	Sn	00 21 50.3	-7.3
	14nm,0.3s,baz=322,slow=17,SNR=11						
APG				LR	LR	00 22 14.9	
	comp=Z,48nm,19.4s,baz=232,slow=32						
TLIG	Tlapa	4.47	282		Pn	00 21 23.0	+1.0
TEIG	Tepich	6.46	56	P	Pn	00 21 46.9	-1.4
	8.7nm,0.3s,baz=298,slow=0.0,SNR=13						
TGUH	Tegucigalpa,Un	6.98	111		Pn	00 21 55.8	+0.3
MOIG	Morelia	7.47	295		Pn	00 22 01.9	-0.1
MATN	Matagalpa	8.64	115	Pn	Pn	00 22 17.5	-0.1
JTS	Las Juntas de	10.84	125	P	Pn	00 22 46.6	-0.2
	1.8nm,0.3s,baz=17,slow=18,SNR=3.9						
237A	Washetta, Mont	15.34	354		P	00 23 45.9	+0.3
TXAR	Lajitas Array	15.41	326	P	P	00 23 47.2	+0.7
	0.0nm,0.3s,baz=151,slow=12,SNR=7.9						
TX31	Lajitas Ar. Si	15.41	326		Pn	00 23 46.0	+0.8
TX31				IAmb	IAmb	00 24 32.4	
	comp=Z,18nm,1.4s						
TX32	Lajitas Array	15.41	326	P	Pn	00 23 46.1	+0.9
TX32				IAmb	IAmb	00 24 32.4	
	comp=Z,6.1nm,1.4s						
WHTX	Lake Whitney,	15.56	349		Pn	00 23 47.2	+0.3
WHTX				IAmb	IAmb	00 23 56.8	
	comp=Z,12nm,0.8s						
WHAR	Wooly Hollow	18.59	4	P	P	00 24 21.9	+0.6
WHAR				IAmb	IAmb	00 25 16.3	
	comp=Z,31nm,1.9s						
PARMO	Parma	20.25	10	P	P	00 24 39.7	+0.5
ANMO	Albuquerque	21.34	331	P	P	00 24 51.7	+0.6
	comp=Z,0.6nm,0.4s,baz=188,slow=7.1,SNR=2.7						
ANMO	Albuquerque	21.34	331	P	P	00 24 51.0	-0.1
DR12	Loma Pena Alta	23.52	81	P	P	00 25 12.5	+0.1
X16A	Lo Mia Camp, P	23.60	322	P	P	00 25 12.4	-0.7
SDV	Santo Domingo	24.03	106	P	P	00 25 16.2	-1.0
	comp=Z,3.1nm,0.5s,baz=329,slow=5.6,SNR=4.5						
NVAR	Mina Array Bea	30.39	320	P	P	00 26 15.9	+2.0
	comp=Z,1.4nm,0.7s,baz=131,slow=9.1,SNR=12						
LPAZ	La Paz	41.52	141	P	P	00 27 47.8	-1.3
	comp=Z,0.9nm,0.7s,baz=308,slow=9.4,SNR=5.2						
LPAZ	La Paz	41.52	141	IAmb	IAmb	00 28 31.5	
	comp=Z,9.6nm,1.9s						
YKA	Yellowknife Ar	47.99	347	P	P	00 28 39.0	0.0
	comp=Z,0.6nm,0.7s,baz=152,slow=7.8,SNR=13						
ILAR	Eielson Array	59.63	337	P	P	00 30 04.3	+0.7
	comp=Z,0.3nm,0.6s,baz=150,slow=4.5,SNR=4.4						
ARCES	ARCESS Array B	84.19	18	P	P	00 32 30.2	+0.3
	comp=Z,3.1nm,1.0s,baz=296,slow=4.7,SNR=6.3						
WRA	Warramunga Arr	134.13	258	PKP	PKiKP	00 39 17.7	+0.1
	comp=Z,1.0nm,0.9s,baz=81,slow=2.6,SNR=3.7						

*IDC **03** 00:29:51.1±1.6, 4°.82S×153°.59E, h0^{km}, mb3.7/5, mb1 3.8/5, mb1mx3.5/37, mbtmp3.7/5, MS2.6/1, Ms1 2.6/1, ms1mx2.2/31, Error ellipse: s-maj=32.4km s-min=29.2km az=104.0*

ISC 03 00:29:58.8±1.7**, 4°.8S**±0°.2×**153°.5E**±0°.2**, h56**^{km}**, n8,** σ**0**^{s}**82**/8**, mb3.5**/5**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.53	290	Pn	Pn	00 30 23.2	-0.6
	117nm,0.3s,baz=171,slow=1.2,SNR=28						
KRVT				Sn	Sn	00 30 43.4	+0.7
	141nm,0.3s,baz=114,slow=20,SNR=9.7						
HNR	Honiara	7.88	126	LR	LR	00 34 06.8	
	comp=Z,39nm,20.0s,baz=260,slow=33						
WRA	Warramunga Arr	23.92	229	P	P	00 35 08.8	+1.1
	0.7nm,0.5s,baz=49,slow=9.7,SNR=8.1						
ASAR	Alice Springs	26.58	223	P	P	00 35 32.4	+0.5
	0.3nm,0.7s,baz=53,slow=9.0,SNR=1.6						
FITZ	Fitzroy Crossi	30.23	242	P	P	00 36 03.7	-0.7
	2.7nm,0.8s,baz=45,slow=7.1,SNR=8.2						
MKAR	Makanchi Array	80.79	319	P	P	00 42 07.3	+0.8
	0.4nm,0.4s,baz=95,slow=7.3,SNR=7.0						
ZALV	Zalesovo Beam	81.56	326	P	P	00 42 10.2	-0.1
	0.2nm,0.4s,baz=112,slow=5.3,SNR=2.0						
TORD	Torodi Ar. Bea	150.95	288	PKPbc	PKiKP	00 49 46.9	-0.1
	0.8nm,0.6s,baz=99,slow=2.3,SNR=11						

*NEIC **03** 00:34:18.4±2.4, 17°.16N±0°.03×101°.45W±0°.02, h6^{km}±8^{km}, Error ellipse: s-maj=5.1km s-min=2.8km az=191.0*

*MEX **03** 00:34:22.5±0.5, 17°.35N×101°.37W, h4^{km}±3^{km}, MD4.0*

ISC 03 00:34:19.8±1.6**, 17°.28N**±0°.05×**101°.38W**±0°.04**, h14**^{km}±10^{km}**, n29,** σ**1**^{s}**07**/46**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.34	345		Pb	00 34 27.7	+0.1
ZIIG					Sg	00 34 31.9	+0.3
ZIIG	Zihuatanejo	0.34	345	i P	Pb	00 34 27.7	+0.1
ZIIG				i S	Sg	00 34 31.9	+0.3
UON	La Union	0.81	329	eP	Pb	00 34 35.6	0.0
UON				eS	Sb	00 34 46.2	-0.1
CAIG	El Cayaco	1.08	102		Pn	00 34 40.5	-0.1
CAIG					Sb	00 34 54.5	+0.1
CAIG	El Cayaco	1.08	102	eP	Pn	00 34 40.5	-0.1
CAIG				eS	Sb	00 34 54.5	+0.1
ARIG	Puente Sto Nin	1.40	44		Pn	00 34 44.8	-0.1
ARIG	Puente Sto Nin	1.40	44	i P	Pn	00 34 44.8	-0.1
ARIG				i S	Sn	00 35 00.6	-2.5
MEIG	Mezcala	1.79	69		Pn	00 34 51.2	+0.8
MEIG	Mezcala	1.79	69	eP	Pn	00 34 51.2	+0.8
MEIG				i S	Sn	00 35 12.7	-0.4
PLIG	Platanillo	2.10	58		Pn	00 34 55.8	+1.1
PLIG	Platanillo	2.10	58	i P	Pn	00 34 55.0	+0.3
PLIG				i S	Sn	00 35 20.5	-0.1
MMIG	Aquila	2.13	298		Pn	00 34 54.7	-0.3
MMIG	Aquila	2.13	298	eP	Pn	00 34 54.7	-0.3
MMIG				i S	Sn	00 35 21.1	-0.1
CRIG	Cruz Grande	2.21	104	eP	Pn	00 34 57.2	+1.1
CRIG				eS	Sn	00 35 23.9	+0.6
MOIG	Morelia	2.39	4		Pn	00 35 00.5	+1.7
MOIG	Morelia	2.39	4		Sb	00 35 31.9	-0.4
MOIG	Morelia	2.39	4	i P	Pn	00 34 59.0	+0.2
MOIG				eS	Sn	00 35 27.2	-0.9
TLIG	Tlapa	2.70	84		Pb	00 35 05.8	-2.1
TLIG	Tlapa	2.70	84	eP	Pn	00 35 04.2	+1.3
TLIG				i S	Sn	00 35 36.2	+0.8
YAIG	Yautepec	2.70	54		Pn	00 35 04.7	+1.7
YAIG	Yautepec	2.70	54	i P	Pn	00 35 02.5	-0.5
YAIG				i S	Sn	00 35 35.8	+0.3
UNM	Universidad Na	2.92	45	Pn	Pn	00 35 08.8	+2.8
FTIG	Fresnillo de T	3.16	78	eP	Pn	00 35 10.3	+1.1
FTIG				i S	Sn	00 35 46.4	-0.3
PNIG	Pinotepa	3.23	105		Pb	00 35 15.2	-1.8
PNIG	Pinotepa	3.23	105	i P	Pn	00 35 12.3	+2.1
PNIG				i S	Sn	00 35 49.2	+0.7
TXIG	Tlaxiaco	3.45	90	eP	Pn	00 35 15.3	+1.9
TXIG				i S	Sn	00 35 54.9	+0.7
YOIG	Yosondua	3.69	96	eP	Pn	00 35 17.2	+0.6
YOIG				i S	Sn	00 36 00.8	+0.8
ZAIG	Zacatecas	5.58	349	Pn	Pn	00 35 43.1	+0.5
TX31	Lajitas Ar. Si	12.18	350	Pn	Pn	00 37 13.1	0.0

*CNRM **03** 01:00:11.8±0.6, 33°.50N×4°.98W, h2^{km}±3^{km}, Error ellipse: s-maj=3.7km s-min=2.4km az=95.0*

*INMG **03** 01:00:11.7±1.1, 33°.53N×4°.87W, h19^{km}±12^{km}, ML2.3, Error ellipse: s-maj=5.8km s-min=4.3km az=165.0*

*IGIL **03** 01:00:11.1, 33°.56N×4°.86W, h7^{km}, ML2.2*

*SFS **03** 01:00:12.0, 33°.70N×4°.98W, ML3.5, SEFROU (MARRUECOS)*

*MDD **03** 01:00:14.8±2.1, 33°.83N×5°.08W, h0^{km}, mb3.5/11, Error ellipse: s-maj=20.0km s-min=12.8km az=166.0, PRXIMO*

ISC 03 01:00:11.1±1.0**, 33°.53N**±0°.02×**4°.94W**±0°.02**, h18**^{km}±5^{km}**, n61,** σ**1**^{s}**98**/114**, 1C, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IFR	Ifrane	0.16	264	⇑iP	Pg	01 00 15.1	-0.5
IFR				eS	Sg	01 00 17.3	-1.4
CZD	Col de Zad	0.51	190	P	Pb	01 00 22.0	+0.3
CZD				S	Sb	01 00 28.4	-0.4
SICH	Sidi Chahed	0.65	331	P	Pb	01 00 24.9	+1.0
SICH				S	Sb	01 00 34.9	+2.2
MD31	MD31	0.68	167	P	Pb	01 00 24.2	-0.2
MD31				S	Sb	01 00 32.8	-0.8
MDT	Midelt	0.77	159	P	Pb	01 00 25.9	-0.1
MDT				S	Sb	01 00 35.5	-0.6
AKLM	AKL	1.32	42	P	Pg	01 00 37.7	+1.0
AKLM				S	Sg	01 00 55.5	+1.6
ZHG	ZHG	1.43	267	P	Pg	01 00 39.4	+0.8
ZHG				S	Sg	01 00 59.6	+2.4
RSA	Sarsar	1.53	332	P	Pg	01 00 40.3	-0.3
RSA				S	Sg	01 01 01.3	+0.7
CHEFC	Chefchaouen	1.60	348	P	Pg	01 00 42.1	+0.1
CHEFC				S	Sg	01 01 05.8	+2.9
PVLZ	Peæn de	1.72	18	P	Pb	01 00 42.7	+0.6
PVLZ				S	Sg	01 01 07.3	+0.8
PVLZ	Peæn de	1.72	18	eP	Pb	01 00 42.7	+0.6
PVLZ				eS	Sg	01 01 07.3	+0.8
GOLM	Goulmima	1.82	180	P	Pg	01 00 46.3	+0.1
GOLM				S	Sg	01 01 10.3	+0.4
PALE	Palemas	1.87	26	P	Pb	01 00 45.4	+0.6
PALE				S	Sg	01 01 11.5	+0.1
AVE	Averroes	2.08	264	P	Pb	01 00 48.6	+0.3
AVE				S	Sb	01 01 14.5	+0.5
AVE	Averroes	2.08	264	eP	Pn	01 00 46.0	+0.8
AVE				eS	Sb	01 01 15.9	+2.0
SMIR	Smir Dam	2.17	350	P	Pb	01 00 49.2	-0.7
SMIR				S	Sb	01 01 18.3	+1.8
ARF	Arif	2.18	164	P	Pb	01 00 49.5	-0.5
ARF				S	Sg	01 01 18.9	-2.4
GOG	Mont Gurugu	2.33	43	P	Pb	01 00 52.8	+0.2
GOG				S	Sb	01 01 21.0	0.0
TDRA	Tendrara	2.48	101	P	Pn	01 00 52.8	+2.0
TDRA				S	Sb	01 01 24.5	-1.1
SRHM	Skhour des Reh	2.70	248	P	Pb	01 00 58.4	-0.5
SRHM				S	Sg	01 01 34.6	-3.4
TZRR	Tazzarine	2.79	191	P	Pb	01 00 58.7	-1.8
TZRR				S	Sb	01 01 33.2	-1.3
EMIJ	Mijas	3.03	3	P	Pn	01 00 57.7	-0.4
	0.1nm,0.1s,SNR=9.1						
EMIJ				S	Sn	01 01 31.2	-2.7
	1.4nm,0.2s,SNR=7.9						
OUZM	OUZ	3.04	211	P	Pb	01 01 04.1	-0.7
OUZM				S	Sb	01 01 42.6	+1.1
OUK	Oukaimeden	3.39	228	P	Pn	01 01 06.7	+3.3
OUK				S	Sn	01 01 47.1	+3.6
ZGR	Zagora	3.45	190	P	Pn	01 01 05.8	+1.8
ZGR				S	Sn	01 01 46.8	+2.2
ELGU	Los Guajares,	3.50	18	P	Pn	01 01 04.6	0.0
	0.2nm,0.1s,SNR=7.9						
ELGU				S	Sn	01 01 42.7	-2.8
	2.7nm,0.2s,SNR=7.9						
EGOR	Sierra Gorda,	3.63	11	S	Sn	01 01 50.3	+1.2
	SNR=7.9						
EBER	Berja	3.75	26	P	Pn	01 01 06.2	-2.0
	0.1nm,0.2s,SNR=4.0						
EBER				S	Sn	01 01 51.6	-0.5
	1.9nm,0.3s,SNR=7.9						
TTIG	Tnine Tigouga,	4.21	226	P	Pn	01 01 17.4	+2.9
TTIG				S	Sn	01 02 02.5	-0.7
EMIN	Mina Concepcio	4.46	342	P	Pn	01 01 18.1	+0.3
	0.6nm,0.1s,SNR=7.9						
EMIN				S	Sn	01 02 05.3	-3.8
	0.6nm,0.1s,SNR=7.9						
PVAQ	Vaqueiros	4.48	330	P	Pn	01 01 17.5	-0.6
PVAQ				S	Sn	01 02 06.4	-3.3
	3.9nm,0.6s						
PVAQ	Vaqueiros	4.48	330	ePn	Pn	01 01 17.5	-0.6
PVAQ				eSn	Sn	01 02 06.4	-3.3
PVAQ				A	A	01 02 10.0	
	3.9nm,0.6s						
EGRO	El Granado	4.50	333	P	Pn	01 01 18.3	-0.1
	3.2nm,0.1s,SNR=12						
EGRO				S	Sn	01 02 05.9	-4.3
	2.1nm,0.2s,SNR=7.9						
EQES	Quesada	4.52	19	P	Pn	01 01 20.9	+2.1
	0.3nm,0.2s,SNR=4.0						
EQES				S	Sn	01 02 12.5	+1.6
	1.9nm,0.4s,SNR=7.9						
ECAB	El Cabril	4.55	355	P	Pn	01 01 19.8	+0.8
	0.1nm,0.1s,SNR=5.9						
ECAB				S	Sn	01 02 07.3	-4.2
	1.2nm,0.2s,SNR=7.5						
EADA	Adamuz	4.63	4	S	Sn	01 02 10.7	-2.9
	1.2nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	4.80	320	P	Pn	01 01 22.2	-0.2
	2.0nm,0.1s,SNR=7.1						
PFVI				S	Sn	01 02 13.7	-3.8
	1.9nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	4.80	320	ePn	Pn	01 01 22.3	-0.2
PFVI				eSn	Sn	01 02 16.4	-1.1
PFVI				A	A	01 02 22.6	
	5.9nm,0.6s						
PCVE	Castro Verde	4.81	329	P	Pn	01 01 23.1	+0.5
PCVE				S	Sn	01 02 16.1	-1.7
	2.1nm,0.6s						
PCVE	Castro Verde	4.81	329	ePn	Pn	01 01 23.1	+0.5
PCVE				eSn	Sn	01 02 16.1	-1.7
PCVE				A	A	01 02 21.9	
	2.1nm,0.6s						
MORF	Marmelete	4.83	322	P	Pn	01 01 23.5	+0.5
MORF	Marmelete	4.83	322	ePn	Pn	01 01 23.5	+0.5
SESP	Santiago Espad	4.97	22	S	Sn	01 02 24.7	+2.6
	1.1nm,0.3s,SNR=7.9						
PTEO	Sao Teotonio	5.05	323	P	Pn	01 01 26.7	+0.7
PTEO				S	Sn	01 02 22.5	-1.4
	2.0nm,0.4s						
PTEO	Sao Teotonio	5.05	323	ePn	Pn	01 01 26.7	+0.7
PTEO				eSn	Sn	01 02 22.5	-1.4
PTEO				A	A	01 02 28.7	
	4.1nm,0.4s						
MESJ	Messejana	5.06	329	eP	Pn	01 01 25.5	-0.5
MESJ				eS	Sn	01 02 19.8	-4.2
MESJ				AML	AML	01 02 24.7	
	comp=N,3.3nm,0.3s						
MESJ	Messejana	5.06	329	P	Pn	01 01 27.1	+1.1
MESJ				S	Sn	01 02 22.1	-1.9
	comp=N,3.2nm,0.8s						
MESJ	Messejana	5.06	329	ePn	Pn	01 01 27.1	+1.1
MESJ				eSn	Sn	01 02 22.1	-1.9
MESJ				A	A	01 02 22.1	
	comp=N,3.2nm,0.8s						
PNCL	Nicolau / Gran	5.42	328	P	Pn	01 01 31.5	+0.5
PNCL				S	Sn	01 02 31.3	-1.6
	comp=N,1.2nm,0.3s						
PNCL	Nicolau / Gran	5.42	328	ePn	Pn	01 01 31.5	+0.5
PNCL				eSn	Sn	01 02 31.3	-1.6
PNCL				A	A	01 02 34.7	
	comp=N,1.2nm,0.3s						
EBAD	Badajoz	5.47	343	P	Pn	01 01 32.0	+0.3
	comp=N,1.3nm,0.1s,SNR=15						
EBAD				S	Sn	01 02 30.4	-3.9
	comp=N,1.7nm,0.2s,SNR=7.9						
PESTR	Estremoz	5.74	339	ePn	Pn	01 01 35.7	+0.3
PESTR				eSn	Sn	01 02 38.4	-2.4
PAB	San Pablo	6.02	4	P	Pn	01 01 40.1	+0.8
	comp=N,0.2nm,0.2s,SNR=7.9						
PAB				S	Sn	01 02 42.7	-5.1
	comp=N,0.5nm,0.2s,SNR=7.9						
PMTG	Montargil	6.13	335	P	Pn	01 01 42.8	+2.1
PMTG				S	Sn	01 02 48.4	-1.9
	comp=N,1.6nm,0.2s						
PMTG	Montargil	6.13	335	ePn	Pn	01 01 42.8	+2.1
PMTG				eSn	Sn	01 02 48.4	-1.9
PMTG				A	A	01 03 05.9	
	comp=N,1.6nm,0.2s						
PMRV	Marv??o	6.21	342	P	Pn	01 01 42.3	+0.5
PMRV				S	Sn	01 02 49.4	-2.9
PMRV	Marv??o	6.21	342	ePn	Pn	01 01 42.3	+0.5
PMRV				eSn	Sn	01 02 49.4	-2.9
EPLA	Plasencia	6.58	352	P	Pn	01 01 47.3	+0.3
	comp=N,0.5nm,0.1s,SNR=5.6						
EPLA				S	Sn	01 02 53.8	-7.8
	comp=N,0.9nm,0.2s,SNR=7.9						
PCBR	Castelo Branco	6.62	343	P	Pn	01 01 47.7	+0.3
PCBR	Castelo Branco	6.62	343	ePn	Pn	01 01 47.7	+0.3
PSBE	So Bento	6.73	334	ePn	Pn	01 01 49.7	+0.7

*NIED **03** 01:02:00, 36°.30N×137°.60E, h5^{km}, Mw4.3 Best double couple: $M_0$3.39000×10^{15} NP1:ϕ_s95.00000°, δ74.00000°, λ155.00000°. NP2:ϕ_s193.00000°, δ66.00000°, λ18.00000°.*

*JMA **03** 01:02:47.4, 36°.27N×137°.60E, h4^{km}, M3.8 Broadband fault plane solution: P waves. NP1:ϕ_s194.00000°, δ80.00000°, λ9.00000°. NP2:ϕ_s102.00000°, δ82.00000°, λ170.00000°. Principal axes: T Plg13.0000°, Azm58.0000°; N Plg77.0000°, Azm242.0000°; P Plg1.0000°, Azm148.0000°;*

JMA Felt III J1.

*IDC **03** 01:02:47.7±1.6, 36.35N×137.58E, h0km, mb3.5/5, mb1 3.6/7, mb1mx3.4/51, mbtmp3.5/7, ML2.8/2, MS3.5/27, Ms1 3.5/27, ms1mx3.4/38 Error ellipse: s-maj=32.8km s-min=9.9km az=174.0*

ISC 03 01:02:47.9±1.2**, 36.28N**±0.04×**137.59E**±0.03**, h2**km±9km**, n36, σ0.79**/21**, mb3.4**/5**, MS3.6**/21**, 3C-1D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JGN	Niukaw	0.23	255	⇑P	Pg	01 02 52.1	-0.2
JGN				S	Sg	01 02 55.5	+0.2
JTT	Ttatey	0.38	328	⇓P	Pg	01 02 55.7	+0.5
JTT				S	Sg	01 03 01.1	+0.9
JNG	Nsakai	0.43	73	⇑P	Pg	01 02 55.9	-0.3
JNG				S	Sg	01 03 01.6	-0.2
MAT	Matsushiro	0.56	62	P	Pg	01 02 58.3	-0.5
MAT				S	Sg	01 03 05.7	-0.3
MAT	Matsushiro	0.56	62	P	Pg	01 02 58.2	-0.5
MAT				S	Sg	01 03 05.7	-0.3
MJAR	Matsushiro Arr	0.56	63	Pg	Pg	01 02 58.8	0.0
	59nm,0.3s,baz=244,slow=18,SNR=1968						
MJAR				Lg	Lg	01 03 06.0	
	115nm,0.3s,baz=248,slow=34,SNR=55						
MJAR				LR	LR	01 03 22.2	
	comp=Z,1μm,20.2s,baz=250,slow=61						
JYTA	Yamagatataniai	0.97	225	⇑P	Pg	01 03 06.0	-0.6
JYTA				S	Sg	01 03 18.6	-0.6
JHJ	Hachijo jima 2	3.64	150	Pn	Pn	01 03 46.3	+1.0
	2.7nm,0.3s,baz=44,slow=20,SNR=2.1						
JHJ				Sn	Sb	01 04 39.5	+2.0
	3.7nm,0.3s,baz=29,slow=22,SNR=1.4						
JHJ				LR	LR	01 05 17.8	
	comp=Z,1μm,18.9s,baz=96,slow=40						
KSRS	Korea Array	7.83	281	LR	LR	01 07 31.9	
	comp=Z,286nm,20.3s,baz=102,slow=36						
ASAJ	Asahikawa	8.71	25	LR	LR	01 08 27.0	
	comp=Z,186nm,19.4s,baz=158,slow=39						
USRK	Ussuriysk Ar.	8.99	333	LR	LR	01 08 12.4	
	comp=Z,153nm,18.8s,baz=125,slow=36						
JCJ	Chichijima	9.96	156	LR	LR	01 08 46.9	
	comp=Z,158nm,20.3s,baz=345,slow=36						
KLR	Kul'dur	13.62	344	Pn	Pn	01 06 01.5	-0.6
	0.0nm,0.3s,baz=237,slow=16,SNR=1.7						
KLR				LR	LR	01 11 08.8	
	comp=Z,183nm,19.5s,baz=159,slow=37						
PETK	Petropavlovsk-	21.95	34	P	P	01 07 43.3	+0.6
	1.2nm,0.9s,baz=223,slow=12,SNR=1.7						
PETK				LR	LR	01 16 00.1	
	comp=Z,90nm,20.3s,baz=239,slow=36						
MA2	Magadan	24.83	16	LR	LR	01 19 24.1	
	comp=Z,58nm,18.1s,baz=190,slow=40						
SONM	Songino Array	25.70	306	P	P	01 08 18.1	-1.5
	0.7nm,0.8s,baz=105,slow=11,SNR=1.3						
SONM				LR	LR	01 18 56.0	
	comp=Z,231nm,18.6s,baz=86,slow=38						
TLY	Talaya	28.55	313	LR	LR	01 20 56.3	
	comp=Z,76nm,18.4s,baz=102,slow=38						
CMAR	Chiang Mai Arr	38.33	253	LR	LR	01 26 08.3	
	comp=Z,43nm,19.0s,baz=46,slow=36						
ZALV	Zalesovo Beam	40.16	313	LR	LR	01 27 27.6	
	comp=Z,37nm,18.9s,baz=51,slow=37						
MKAR	Makanchi Array	41.91	302	LR	LR	01 28 39.0	
	comp=Z,95nm,18.1s,baz=78,slow=37						
NRIK	Noril'sk	42.69	336	LR	LR	01 29 32.3	
	comp=Z,124nm,18.2s,baz=117,slow=38						
ILAR	Eielson Array	51.77	32	P	P	01 11 56.7	+0.1
	0.2nm,0.6s,baz=290,slow=5.1,SNR=2.3						
ARU	Arti	54.88	318	LR	LR	01 37 02.9	
	comp=Z,25nm,18.1s,baz=91,slow=38						
AKTO	Aktyubinsk	56.87	311	LR	LR	01 38 27.6	
	comp=Z,57nm,18.7s,baz=78,slow=38						
KIRV	Kirov	58.98	322	LR	LR	01 39 54.5	
	comp=Z,48nm,19.6s,baz=36,slow=38						
GEYT	Alibeck	61.48	298	LR	LR	01 41 55.6	
	comp=Z,38nm,18.5s,baz=55,slow=38						
ARCES	ARCESS Array B	63.59	339	LR	LR	01 44 44.9	
	comp=Z,51nm,18.2s,baz=301,slow=40						
YKA	Yellowknife Ar	65.98	29	P	P	01 13 35.2	-0.2
	0.4nm,0.8s,baz=302,slow=6.0,SNR=6.4						
OBN	Obninsk	66.83	322	LR	LR	01 45 21.0	
	comp=Z,17nm,18.8s,baz=184,slow=38						
FINES	FINESS Array B	68.02	331	P	P	01 13 47.9	-0.4
	1.1nm,0.7s,baz=357,slow=3.8,SNR=4.3						
FINES				LR	LR	01 45 30.8	
	comp=Z,29nm,20.3s,baz=36,slow=38						
WSAR	Wadi Sarin	68.07	283	LR	LR	01 46 07.7	
	comp=Z,30nm,18.2s,baz=118,slow=38						
KBZ	Khabaz	69.03	309	LR	LR	01 47 23.2	
	comp=Z,37nm,19.3s,baz=66,slow=39						
AKASG	Malin Array Be	72.97	321	LR	LR	01 47 50.3	
	comp=Z,43nm,20.5s,baz=45,slow=37						
HFS	Hagfors	73.47	334	LR	LR	01 48 02.5	
	comp=Z,30nm,20.9s,baz=42,slow=37						
NOA	NORSAR Array B	73.65	336	LR	LR	01 50 14.0	
	comp=Z,32nm,19.3s,baz=45,slow=39						
ESDC	Sonseca Array	96.53	331	LR	LR	02 04 53.9	
	comp=Z,20nm,19.4s,baz=260,slow=39						

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*IDC **03** 01:33:37.5±2.0, 39.44N×38.97E, h0km, mb1 3.1/5, mb1mx2.9/47, mbtmp3.0/5, ML3.0/5, Error ellipse: s-maj=32.7km s-min=13.4km az=153.0*

*DDA **03** 01:33:40.4, 39.71N×38.85E, h7km±3km, MW3.6*

*ISK **03** 01:33:40.3, 39.72N×38.86E, h5km, ML3.6/21*

ISC 03 01:33:39.8±1.1**, 39.70N**±0.02×**38.85E**±0.01**, h2**km±9km**, n67, σ1.24**/100**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
REFA	Refahiye_ERZN	0.31	192	i P	Pg	01 33 45.5	-0.4
REFA				i S	Sg	01 33 47.5	-2.4
REFA				IAML		01 33 50.0	
	comp=E,6μm,0.3s						
REFA				IAML		01 33 51.0	
	comp=N,6μm,0.3s						
KEMA	Kemaliye	0.52	212	i P	Pg	01 33 50.7	+1.0
KEMA				i S	Sg	01 33 56.2	-0.2
KEMA				IAML		01 33 59.0	
	comp=N,3μm,0.3s						
KEMA				IAML		01 33 59.0	
	comp=E,3μm,0.3s						
KELT	Kelkit	0.54	35	i P	Pg	01 33 51.2	+0.9
KELT				i S	Sg	01 33 56.0	-1.3
KELT				IAML		01 33 59.0	
	comp=N,2μm,0.4s						
KELT				IAML		01 34 00.0	
	comp=E,1μm,0.3s						
EUZM	Uzumlu	0.66	89	i P	Pg	01 33 53.3	+0.9
EUZM				i S	Sg	01 34 01.9	+1.0
EUZM				IAML		01 34 14.0	
	comp=E,494nm,0.8s						
ERZN	Erzincan	0.68	100	PG	Pg	01 33 53.7	+0.7
SUSE	Susehri	0.71	316	i P	Pg	01 33 54.6	+1.1
SUSE				i S	Sg	01 34 01.9	-0.8
SUSE				IAML		01 34 05.0	
	comp=N,2μm,0.2s						
SUSE				IAML		01 34 06.0	
	comp=E,1μm,0.2s						
ARPR	Arapgir-MALATY	0.73	213	PG	Pg	01 33 54.8	+1.0
ARPR				SG	Sb	01 34 06.1	+0.2
TNCL	Tunceli-Merkez	0.80	137	i P	Pg	01 33 56.0	+0.8
TNCL				i S	Sg	01 34 03.9	-1.5
TNCL				IAML		01 34 08.0	
	comp=N,2μm,0.6s						
TNCL				IAML		01 34 08.0	
	comp=E,1μm,0.3s						
CUZAR	Zara_SIVAS	0.85	283	i P	Pg	01 33 56.7	+0.5
CUZAR				i S	Sg	01 34 05.6	-1.6
CUZAR				IAML		01 34 12.0	
	comp=N,574nm,0.3s						
CUZAR				IAML		01 34 19.0	
	comp=E,555nm,0.6s						
PTK	Pertek	0.91	152	PG	Pb	01 33 58.8	+0.2
PTK				SG	Sb	01 34 11.2	-0.1
HEKM	Malatya_Hekimh	1.07	220	i P	Pb	01 34 01.6	+0.3
HEKM				i S	Sg	01 34 13.4	-1.0
HEKM				IAML		01 34 23.0	
	comp=E,898nm,0.4s						
HEKM				IAML		01 34 24.0	
	comp=N,1μm,0.4s						
CUKAN	kangal_SIVAS	1.14	251	i P	Pg	01 34 02.1	+0.5
CUKAN				i S	Sg	01 34 16.5	+0.1
CUKAN				IAML		01 34 22.0	
	comp=N,305nm,0.7s						
CUKAN				IAML		01 34 24.0	
	comp=E,352nm,0.6s						
BAYT	Aydıntepe-Bayb	1.21	55	PN	Pg	01 34 03.4	+0.4
ELZG	Elazig	1.21	175	i P	Pg	01 34 02.9	-0.1
ELZG				i S	Sg	01 34 17.1	-1.6
ELZG				IAML		01 34 21.0	
	comp=N,2μm,0.4s						
ELZG				IAML		01 34 21.0	
	comp=E,2μm,0.4s						
ESPY	Espiye-Giresun	1.22	356	PN	Pg	01 34 03.2	+0.1
ESPY				SN	Sn	01 34 20.1	-0.9
BAYB	BAYBURT	1.22	62	i P	Pg	01 34 03.1	-0.1
BAYB				i S	Sg	01 34 16.1	-2.8
BAYB				IAML		01 34 22.0	
	comp=N,1μm,0.5s						
BAYB				IAML		01 34 22.0	
	comp=E,1μm,0.4s						
KOPT	Kop Dagi	1.31	76	i P	Pg	01 34 05.7	+0.8
KOPT				i S	Sn	01 34 23.5	-0.1
KOPT				IAML		01 34 30.0	
	comp=E,790nm,0.6s						
KOPT				IAML		01 34 30.0	
	comp=N,597nm,0.6s						
SCER	sogukcermik	1.33	277	i P	Pb	01 34 05.8	+0.1
SCER				i S	Sb	01 34 19.1	-4.3
SCER				IAML		01 34 29.0	
	comp=E,501nm,0.9s						
SCER				IAML		01 34 30.0	
	comp=N,570nm,0.4s						
YEDI	Yedisu-Bingol	1.34	101	PN	Pg	01 34 06.1	+0.6
RSDY	Resadiye-TOKAT	1.36	301	PN	Pb	01 34 06.3	+0.2
RSDY				SN	Sn	01 34 25.4	+0.8
SVRC	Sivrice-ELAZID	1.37	165	PN	Pn	01 34 06.2	0.0
SVRC				SN	Sn	01 34 25.8	+0.7
MALT	Malatya	1.43	193	PN	Pn	01 34 06.9	0.0
MALT				SN	Sg	01 34 27.8	+2.1
SVSK	Karacayir	1.44	279	PN	Pb	01 34 07.8	+0.4
SVSK				SN	Sg	01 34 27.8	+1.6
KTUT	Trabzon	1.46	28	PN	Pb	01 34 07.7	-0.1
ORDU	Ordu-Boztepe	1.49	330	i P	Pb	01 34 08.5	+0.1
ORDU				i S	Sn	01 34 25.1	-2.7
ORDU				IAML		01 34 31.0	
	comp=N,243nm,0.7s						
ORDU				IAML		01 34 35.0	
	comp=E,354nm,0.9s						
DARE	Darende-Malaty	1.55	224	PN	Pb	01 34 09.8	+0.4
CUGUR	Gurin_SVAS	1.57	232	i P	Pg	01 34 10.7	+0.8
CUGUR				i S	Sn	01 34 27.8	-2.1
CUGUR				IAML		01 34 37.0	
	comp=E,970nm,0.5s						
CUGUR				IAML		01 34 39.0	
	comp=N,649nm,0.5s						
AKCD	Akcadag	1.58	207	i P	Pb	01 34 09.8	-0.1
AKCD				IAML		01 34 36.0	
	comp=E,715nm,0.7s						
AKCD				IAML		01 34 38.0	
	comp=N,780nm,0.5s						
BNGB	Bingl	1.59	116	PN	Pb	01 34 10.0	0.0
ECAT	Cat-ERZURUM	1.64	93	i P	Pb	01 34 10.6	-0.4
ECAT				IAML		01 34 40.0	
	comp=N,107nm,0.5s						
ECAT				IAML		01 34 43.0	
	comp=E,110nm,0.5s						
EMRE	Erzurum,Aziziy	1.67	78	i P	Pg	01 34 12.9	+1.0
EMRE				IAML		01 34 46.0	
	comp=N,459nm,0.7s						
EMRE				IAML		01 34 49.0	
	comp=E,419nm,0.6s						
CUALT	Altinyayla-SIV	1.68	256	i P	Pb	01 34 11.6	0.0
CUALT				i S	Sn	01 34 31.5	-1.1
CUALT				IAML		01 34 44.0	
	comp=N,225nm,0.6s						
CUALT				IAML		01 34 45.0	
	comp=E,215nm,0.8s						
KRIK	Erzurum-spir	1.72	68	i P	Pg	01 34 13.1	+0.4
KARO	Karliova-Bingo	1.75	102	PN	Pb	01 34 12.5	-0.3
HANI	Diyarbakir_Han	1.77	136	i P	Pb	01 34 12.9	-0.1
HANI				IAML		01 34 43.0	
	comp=N,152nm,0.9s						
HANI				IAML		01 34 45.0	
	comp=E,111nm,0.9s						
TOKT	Tokat	1.87	290	PN	Pb	01 34 14.4	-0.5
ERBA	Erbaa	1.88	302	i P	Pb	01 34 14.6	-0.4
ELBS	KAHRAMANMARAS	1.92	225	i P	Pb	01 34 15.6	-0.1
ELBS				IAML		01 34 45.0	
	comp=N,612nm,0.6s						
ELBS				IAML		01 34 49.0	
	comp=E,457nm,0.6s						
TOKA	Tokat	1.92	290	i P	Pb	01 34 15.1	-0.6
AKDA	Akdag	1.98	78	i P	Pg	01 34 17.6	-0.1
CHOM	Cayeli-Rize	2.02	46	PN	Pb	01 34 16.3	-1.0
DYBB	Diyarbakir	2.02	150	PN	Pb	01 34 16.3	-1.0
CUSAR	Sarkisla-SIVAS	2.03	263	i P	Pb	01 34 17.3	-0.3
CUSAR				IAML		01 34 53.0	
	comp=N,89nm,0.5s						
CUSAR				IAML		01 34 57.0	
	comp=E,115nm,0.6s						
DIYA	Diyarbakir	2.04	150	i P	Pb	01 34 17.1	-0.6
DIYA				i S	Sn	01 34 40.4	-0.9
DIYA				IAML		01 34 57.0	
	comp=E,93nm,0.6s						
DIYA				IAML		01 35 01.0	
	comp=N,74nm,1.0s						
VRTB	Varto-Mus	2.09	104	PN	Pn	01 34 17.0	+0.9
VRTB	Varto-Mus	2.09	104	i P	Pb	01 34 19.2	+0.6
VRTB				i S	Sb	01 34 44.2	-0.9
VRTB				IAML		01 35 04.0	
	comp=E,210nm,0.8s						
VRTB				IAML		01 35 10.0	
	comp=N,217nm,1.0s						
URFA	Urfa	2.26	181	PN	Pn	01 34 19.3	+0.9
MUSM	Mu-Merkez	2.29	114	i P	Pb	01 34 22.8	+0.8
MUSM				i S	Sn	01 34 47.8	+0.1
SARI	SarD1z-Kayseri	2.29	236	PN	Pn	01 34 20.3	+1.4
KOPR	Koprukoy-ERZUR	2.33	82	PN	Pn	01 34 20.6	+1.2
HOMI	Horasan	2.38	81	i P	Pb	01 34 23.9	+0.3
HOMI				i S	Sb	01 34 53.8	+0.4
HOMI				IAML		01 35 06.0	
	comp=E,174nm,1.0s						
HOMI				IAML		01 35 21.0	
	comp=N,110nm,0.8s						
SVAN	Silvan-Diyarba	2.40	129	PN	Pn	01 34 21.1	+0.8
SVAN	Silvan-Diyarba	2.40	129	i P	Pb	01 34 25.0	+1.2
SVAN				i S	Sn	01 34 49.2	-1.1
SVAN				IAML		01 35 00.0	
	comp=N,50nm,0.6s						
SVAN				IAML		01 35 08.0	
	comp=E,50nm,0.9s						
BNN	Bunyan	2.48	251	PN	Pn	01 34 23.3	+1.8
DDEM	Demirkent	2.52	61	i P	Pg	01 34 27.6	-0.5
DDEM				i S	Sn	01 34 54.7	+1.4
DDEM				IAML		01 35 04.0	
	comp=N,481nm,0.4s						
DDEM				IAML		01 35 11.0	
	comp=E,198nm,0.9s						
DBAD	Bademkaya	2.54	58	i P	Pb	01 34 24.7	-1.5
DBAD				i S	Sn	01 34 52.7	-1.2
DBAD				IAML		01 35 06.0	
	comp=E,178nm,0.6s						
DBAD				IAML		01 35 07.0	
	comp=N,212nm,0.7s						
GUNE	Kayseri	2.63	253	i P	Pb	01 34 25.9	-1.8
GUNE				i S	Sg	01 35 05.2	+0.9
GUNE				IAML		01 35 20.0	
	comp=N,137nm,1.0s						
GUNE				IAML		01 35 23.0	
	comp=E,227nm,1.3s						
DBOC	Borcka	2.70	52	i P	Pb	01 34 28.5	-0.5
DBOC				IAML		01 35 10.0	
	comp=E,82nm,0.6s						
DAGI	Agillar	2.71	59	i P	Pg	01 34 30.9	-1.0
DAGI				i S	Sn	01 34 59.1	+0.9
DAGI				IAML		01 35 10.0	
	comp=N,97nm,0.9s						
DAGI				IAML		01 35 11.0	
	comp=E,136nm,0.7s						
BCA	Borcka	2.74	50	PN	Pn	01 34 26.2	+1.3
BATM	Batumi	2.88	48	PN	Pn	01 34 28.2	+1.4
AVNS	Nevsehir-Avano	3.23	255	i P	Pn	01 34 33.1	+1.3
AVNS				i S	Sb	01 35 19.5	+1.5
AVNS				IAML		01 35 39.0	
	comp=N,65nm,0.7s						
AVNS				IAML		01 35 46.0	
	comp=E,81nm,0.8s						
BRTR	Keskin Array B	4.02	272	Pn	Pn	01 34 43.4	+0.8
	comp=E,1.2nm,0.3s,baz=96,slow=14,SNR=43						
BRTR				Lg	Lg	01 35 49.0	
	baz=101,slow=22,SNR=1.5						
KBZ	Khabaz	5.03	36	Pn	Pn	01 34 59.0	+2.6
	comp=E,0.1nm,0.3s,baz=214,slow=3.6,SNR=2.4						
KVAR	Kislovodsk Arr	5.13	33	Pn	Pn	01 35 00.2	+2.4
	baz=259,slow=18,SNR=2.7						
MMAI	Mount Meron Ar	7.23	204	Pn	Pn	01 35 22.4	-4.3
	comp=E,0.1nm,0.3s,baz=46,slow=15,SNR=2.0						
AKASG	Malin Array Be	12.91	332	Pn	Pn	01 36 44.9	+0.6
	comp=E,0.5nm,0.3s,baz=138,slow=11,SNR=4.2						

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*IDC **03** 01:39:44.1±1.1, 1.39N×122.66E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.6/33, mbtmp3.8/6, ML4.0/1, MS2.8/1, Ms1 2.8/1, ms1mx2.2/36, Error ellipse: s-maj=129.2km s-min=19.5km az=67.0*

*DJA **03** 01:39:50.5±0.3, 1°N±2°×12°2E±°, h10km, M4.2/17, mB4.7/5, mb4.3/9, MLv4.3/17, Mw(mB)4.0/5*

ISC 03 01:39:51.5±0.9**, 1.09N**±0.07×**121.77E**±0.05**, h44**km**, n20, σ2.87**/25**, mb3.9**/5**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MRSI	Marisa	0.63	164	P	Pn	01 40 03.1	-1.1
MRSI				S	Sn	01 40 12.0	-1.2
APSI	Ampana	1.99	183	P	Pn	01 40 24.2	+1.5
APSI				S	Sn	01 40 51.6	+5.2
MPSI	Mapaga	2.01	248	P	Pn	01 40 24.8	+1.8
MPSI				S	Sn	01 40 52.1	+5.1
KMSI	Cibinong	2.27	103	P	Pn	01 40 28.9	+2.3
KMSI				S	Sn	01 40 59.3	+5.9
LUWI	Luwuk	2.34	155	P	Pn	01 40 29.6	+2.1
LUWI				S	Sn	01 40 58.6	+3.5
TTSI	Tana Toraja	4.54	205	P	Pn	01 40 59.9	+2.1
SANI	Sanana	5.25	126	P	Pn	01 41 09.7	+2.2
	0.2nm22nm,0.6s						
SPSI	Sidrap Palu	5.40	202	P	Pn	01 41 11.2	+1.6
	0.1nm30nm,0.6s						
BNSI	Bone	5.70	197	P	Pn	01 41 16.0	+2.3
	0.1nm46nm,0.8s						
LBMI	Labuha	5.99	107	P	Pn	01 41 19.5	+1.9
	0.3nm2μm39nm,0.4s						
KAPI	Kappang	6.39	198	LR	LR	01 44 26.4	
	comp=Z,76nm,19.4s,baz=12,slow=40						
BKSI	Bulukumba	6.58	194	P	Pn	01 41 26.9	+1.2
	0.1nm592nm14nm,0.5s						
BBSI	Bau Bau	6.58	173	P	Pn	01 41 27.8	+2.0
	0.0nm444nm5.6nm,0.6s						
NLAI	Namlea	6.85	129	P	Pn	01 41 31.7	+2.2
	0.3nm2μm33nm,0.4s						
FITZ	Fitzroy Crossi	19.44	169	P	P	01 44 13.1	-1.4
	0.3nm,0.3s,baz=17,slow=9.7,SNR=6.1						
WRA	Warramunga Arr	24.27	150	P	P	01 45 01.6	-3.1
	2.9nm,0.8s,baz=336,slow=8.6,SNR=9.6						
ASAR	Alice Springs	27.29	155	P	P	01 45 30.5	-1.7
	0.8nm,0.5s,baz=333,slow=9.9,SNR=18						
ASAR				PcP	PcP	01 48 49.6	-1.5
	0.6nm,0.3s,baz=345,slow=2.0,SNR=7.3						
STKA	Stephens Creek	37.79	152	P	P	01 47 00.1	-3.5
	1.6nm,0.7s,baz=342,slow=6.4,SNR=1.6						
SONM	Songino Array	48.44	346	P	P	01 48 28.3	-1.4
	1.0nm,0.7s,baz=170,slow=8.8,SNR=3.6						
MKAR	Makanchi Array	57.05	329	P	P	01 49 33.7	+0.6
	0.3nm,0.5s,baz=128,slow=9.0,SNR=4.4						

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*NIED **03** 01:45:00, 36.30N×137.60E, h5km, Mw3.9 Best double couple: M₀8.25000×10^14 NP1:φs85.00000°, δ72.00000°, λ154.00000°. NP2:φs183.00000°, δ65.00000°, λ20.00000°.*

JMA 03 01:45:38.7, 36.27N×137.60E, h3km±1km**, M3.5, 2C-1D Broadband fault plane solution: P waves. NP1:** φs84.00000°**,** δ68.00000°**,** λ159.00000°. **NP2:** φs183.00000°**,** δ70.00000°**,** λ23.00000°. **Principal axes:** T Plg30.0000°**,** Azm44.0000°**;** N Plg60.0000°**,** Azm221.0000°**;** P Plg1.0000°**,** Azm313.0000°**; Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JGN	Niukaw	0.23	259	⇑P	Pg	01 45 43.5	+0.3
JGN				S	Sg	01 45 47.0	+0.7
JTT	Ttatey	0.40	327	⇓P	Pg	01 45 46.9	+0.5
JTT				S	Sg	01 45 52.6	+1.1
JNG	Nsakai	0.43	71	⇑P	Pg	01 45 47.2	+0.3
JNG				S	Sg	01 45 53.0	+0.5
MAT	Matsushiro	0.56	61	P	Pg	01 45 49.4	-0.1
MAT				S	Sg	01 45 56.9	+0.2
MAT	Matsushiro	0.56	61	P	Pg	01 45 49.4	-0.1
MAT				S	Sg	01 45 57.0	+0.3
JYTA	Yamagatataniai	0.97	226	P	Pg	01 45 57.4	0.0
JYTA				S	Sg	01 46 10.0	0.0

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*THE **03** 01:55:56.9, 42.41N×23.39E, h3km±1km, ML2.7/6 Error ellipse: s-maj=2.1km s-min=0.6km az=54.0*

*BEO **03** 01:55:59.1±0.7, 42.51N×23.35E, h9km±2km, ML2.7/11*

ISC 03 01:55:57.0±1.1**, 42.43N**±0.02×**23.38E**±0.03**, h6**km±9km**, n52, σ0.87**/72**, 19C-16D, Bulgaria**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VTS	Vitosha	0.22	331	ePg	Pg	01 56 01.7	+0.3
VTS				eSg	Sg	01 56 04.5	+0.1
VTS	Vitosha	0.22	331	P	Pg	01 56 00.8	-0.6
VTS				S	Sg	01 56 04.4	+0.1
VTS	Vitosha	0.22	331	⇑P	Pg	01 56 01.8	+0.5
VTS				⇑S	Sg	01 56 04.8	+0.5
BOSS	Bosilegrad	0.67	276	ePg	Pg	01 56 10.8	+1.0
BOSS				eSg	Sb	01 56 21.1	+0.5
ZAPS	Zavoj	1.01	327	ePg	Pg	01 56 16.0	-0.4
ZAPS				eSg	Sg	01 56 28.6	-0.9
NVR	Nevrokopi	1.13	161	P	Pb	01 56 17.8	-1.2
NVR				S	Sb	01 56 34.1	+0.2
	350nm,0.3s						
BARS	Barje	1.22	289	ePg	Pb	01 56 20.5	+0.1
BARS	Barje	1.22	289	ePn	Pn	01 56 32.1	+12
BARS				eSg	Sb	01 56 37.2	+0.8
BARS				eSn	Sn	01 56 56.0	+19
BLKB	Belogradchik	1.30	337	⇑S	Sn	01 56 40.1	+0.6
KNT	Kendrikon	1.31	196	P	Pn	01 56 21.4	-0.4
KNT				S	Sb	01 56 40.0	+0.9
	365nm,0.3s						
SRS	Serrai	1.32	173	P	Pn	01 56 21.1	-0.8
SRS				S	Sb	01 56 39.9	+0.7
	442nm,0.3s						
PLVB	Pleven	1.32	43	⇑P	Pn	01 56 20.9	-1.1
BAIL	Bailesti	1.59	359	⇑P	Pn	01 56 24.9	-0.8
BAIL				⇑S	Sg	01 56 47.3	-0.9
ZAGS	Zajecar	1.62	329	ePn	Pn	01 56 25.6	-0.4
ZAGS				eSn	Sn	01 56 46.4	-0.8
GRG	Griva	1.64	207	P	Pn	01 56 26.0	-0.3
GRG				S	Sn	01 56 47.8	+0.1
	122nm,0.6s						
KAVA	Kavala	1.66	149	P	Pn	01 56 26.1	-0.5
KAVA				S	Sn	01 56 47.7	-0.5
	172nm,0.4s						
VLAD	Vladila	1.74	25	⇑P	Pn	01 56 28.7	+1.0
VLAD				⇑S	Sg	01 56 52.4	-0.5
HORT	Hortiatis	1.84	187	P	Pn	01 56 29.1	0.0
HORT				S	Sn	01 56 52.9	+0.2
	58nm,0.3s						
SELS	Selova	1.84	296	ePg	Pb	01 56 31.3	+0.2
SELS				eSg	Sg	01 56 56.2	0.0
PUNG	Punghina	1.88	350	⇑S	Sb	01 56 54.2	-1.2
ZIMR		1.91	49	⇑P	Pn	01 56 31.3	+1.3
ZIMR				⇑S	Sb	01 56 55.9	-0.3
ELND	Elena	1.91	74	⇓P	Pn	01 56 28.8	-1.2
PLG	Polygyros	2.05	179	P	Pn	01 56 31.5	-0.5
RDO	Rodhopi	2.06	128	P	Pn	01 56 32.6	+0.6
OUR	Ouranopolis	2.14	168	P	Pn	01 56 32.5	-0.6
COPA	Copaceanca	2.17	38	⇓S	Sn	01 57 01.5	+0.6
SRE	Strehaia	2.24	357	⇑P	Pn	01 56 34.1	-0.5
KUBS	Kucevo	2.34	329	ePn	Pn	01 56 38.1	+2.1
HUMR	Humele	2.40	28	⇓P	Pn	01 56 35.9	-0.9
GRUS	Gruza	2.44	308	ePn	Pn	01 56 37.7	+0.4
GRUS				eSn	Sn	01 57 07.6	+0.2
HERR	Herculane	2.55	344	⇓P	Pn	01 56 37.7	-1.1
RAZG	Razgrad	2.56	63	⇓P	Pn	01 56 39.7	+0.7
RAZG				⇑S	Sn	01 57 13.5	+3.0
SGRR	Singureni	2.61	46	⇑P	Pn	01 56 38.9	-0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJES	Sjenica	2.64	290	ePn	Pn	01 56 41.4	+1.2
SJES				eSn	Sn	01 57 11.9	-0.7
MDVR	Moldovita	2.65	333	⇓P	Pn	01 56 40.0	-0.2
TRUS	Trudelj	2.82	311	ePn	Pn	01 56 42.7	+0.2
DIVS	Divibare	2.99	305	ePn	Pn	01 56 44.8	-0.1
DIVS				eSn	Sn	01 57 18.8	-2.2
GZR	Gura Zlata	3.00	352	⇓P	Pn	01 56 45.1	0.0
SULR		3.07	42	⇓P	Pn	01 56 46.3	+0.3
ARR	Arges	3.08	17	⇓P	Pn	01 56 45.2	-0.9
VOIR		3.24	21	⇑P	Pn	01 56 48.6	+0.2
BZS	Buzias	3.43	339	⇑P	Pn	01 56 50.3	-0.7
DEV	Deva	3.47	355	⇓P	Pn	01 56 51.7	+0.2
MLR	Muntele Rosu	3.58	30	⇓P	Pn	01 56 53.7	+0.6
ICOR	Ion Corvin	3.65	61	⇓P	Pn	01 56 55.5	+1.6
DOPR	Dopca	3.82	22	⇑P	Pn	01 56 55.9	-0.5
BISRR	Bisoca	3.94	36	⇑P	Pn	01 56 59.3	+1.3
SIRR	Siria	4.03	343	⇑P	Pn	01 56 58.8	-0.5
PLOR	Plostina	4.16	33	⇓P	Pn	01 57 01.9	+1.0
TIRR	Tirgusor	4.19	59	⇓P	Pn	01 57 01.9	+0.6
VRI	Vrincioaia	4.20	34	⇓P	Pn	01 57 02.3	+0.8
CFR	Carcaliu	4.41	50	⇓P	Pn	01 57 04.2	-0.1

IDC 03 01:56:22.8±1.8, 30°.11N×43°.04W, h0km, mb3.3/4, mb1 3.6/4, mb1mx3.4/36, mbtmp3.3/4, MS3.1/7, Ms1 3.0/7, ms1mx2.7/22, Error ellipse: s-maj=102.7km s-min=30.7km az=20.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	24.19	246	LR	LR	02 08 46.8	
	comp=Z,20nm,20.4s,baz=98,slow=31						
SCHQ	Schefferville	30.03	332	LR	LR	02 14 31.1	
	comp=Z,30nm,18.0s,baz=328,slow=36						
PTGA	Pitinga	34.65	211	LR	LR	02 14 12.4	
	comp=Z,12nm,18.5s,baz=39,slow=31						
DBIC	Dimbokro	42.76	115	LR	LR	02 19 44.0	
	comp=Z,46nm,18.6s,baz=315,slow=33						
ULM	Lac du Bonnet	44.05	313	LR	LR	02 23 30.8	
	comp=Z,22nm,18.4s,baz=128,slow=37						
TORD	Torodi Ar. Bea	44.56	102	P	P	02 04 36.7	-0.1
	0.4nm,0.8s,baz=299,slow=8.2,SNR=2.7						
TORD				LR	LR	02 21 14.9	
	comp=Z,36nm,21.2s,baz=260,slow=34						
H10N2	ASCENSION HYDR	46.63	139	T	T	02 53 44.5	
	baz=324,slow=75,SNR=48						
H10N3	ASCENSION HYDR	46.64	139	T	T	02 53 39.7	
	baz=324,slow=75,SNR=53						
H10N1	ASCENSION HYDR	46.65	139	T	T	02 53 42.0	
	baz=324,slow=75,SNR=40						
H10S3	ASCENSION HYDR	47.46	140	T	T	02 54 38.5	
	baz=324,slow=74,SNR=24						
H10S2	ASCENSION HYDR	47.47	140	T	T	02 54 39.7	
	baz=256,slow=74,SNR=15						
TXAR	Lajitas Array	52.10	285	P	P	02 05 34.2	-0.8
	0.4nm,0.8s,baz=79,slow=5.8,SNR=5.8						
TXAR				LR	LR	02 27 05.9	
	comp=Z,16nm,18.2s,baz=0.0,slow=35						
PDAR	Pinedale Array	53.71	303	P	P	02 05 48.3	+1.4
	0.1nm,0.3s,baz=82,slow=7.9,SNR=2.2						
YKA	Yellowknife Ar	55.30	328	P	P	02 05 57.1	-0.7
	0.1nm,0.6s,baz=86,slow=8.1,SNR=2.2						

*SKHL **03** 02:07:15.8±0.7, 44°.49N×148°.38E, h57km±1km, mb4.4/3*
*JMA **03** 02:07:15.5±0.4, 44°.10N×148°.18E, h0km, M3.8*
ISC 03 02:07:11.8±3.2, 44°.39N±0°.08×148°.8E±0°.2, h42km, n20, σ2.10/31, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.06	324	i P	Pn	02 07 30.7	+0.5
KUR				AMB	AMB	02 07 31.0	
	300nm,0.3s						
KUR				i S	Sn	02 07 41.2	-2.5
KUR				A	A	02 07 46.6	
	2μm,0.3s						
KUR				A	A	02 07 46.6	
	1μm,0.3s						
YUK	Yuzh-Kuril'sk	2.11	261	eP	Pn	02 07 44.6	0.0
YUK				AMB	AMB	02 07 47.0	
	150nm,0.3s						
YUK				eS	Sn	02 08 06.3	-3.2
YUK				A	A	02 08 13.2	
	750nm,0.3s						
YUK				A	A	02 08 13.2	
	270nm,0.3s						
LAGR	Lagunnoye	2.16	262	eS	Sn	02 08 09.3	-1.5
GRPR	Tuman	2.18	261	eP	Pn	02 07 46.0	+0.4
GRPR				AMB	AMB	02 07 48.0	
	100nm,0.3s						
GRPR				eS	Sn	02 08 10.2	-1.1
GRPR				A	A	02 08 12.0	
	450nm,0.3s						
GRPR				A	A	02 08 12.0	
	130nm,0.3s						
NEM2	Nemuro 2	2.40	246	P	Pn	02 07 49.5	+0.9
NEM2				eS	Sn	02 08 14.7	-2.1
NMR	Nemuro--Hokkai	2.41	246	eP	Pn	02 07 49.8	+1.1
NMR				eS	Sn	02 08 15.3	-1.7
GLVR	Golovnino	2.42	256	eP	Pn	02 07 49.5	+0.7
GLVR				eS	Sn	02 08 18.0	+0.8
GLVR				A	A	02 08 22.0	
	950nm,0.4s						
GLVR				A	A	02 08 22.0	
	600nm,0.4s						
JRA	Rausu	2.65	262	P	Pn	02 07 54.2	+2.2
JRA				eS	Sn	02 08 23.6	+0.7
JNSB	Nemuroshibetsu	2.77	259	P	Pn	02 07 55.9	+2.2
JKHN	Kushirohamanak	2.91	245	P	Pn	02 07 57.1	+1.5
JNK	Nakash	3.02	256	P	Pn	02 07 58.8	+1.7
JNK				eS	Sn	02 08 31.0	-1.0
JAK	Akkeshi	3.25	246	P	Pn	02 08 01.7	+1.4
JAK				eS	Sn	02 08 35.7	-2.0
JTKR	Abashiri--Toko	3.51	265	P	Pn	02 08 07.1	+3.3
JAR	Ashorobuto	3.77	255	P	Pn	02 08 10.1	+2.7
JAR				eS	Sn	02 08 50.3	-0.1
JCH	Churui	4.30	248	P	Pn	02 08 17.4	+2.7
JKK2	Kamakawa 2	4.35	265	P	Pn	02 08 19.6	+4.2
JNBK	Urakawa-nobuka	4.86	246	P	Pn	02 08 24.7	+2.4
JKB	Kayabe	6.17	249	P	Pn	02 08 42.7	+2.3
JKB				eS	Sn	02 09 47.3	-2.4
JOT	Ohata	6.41	245	P	Pn	02 08 45.3	+1.7
JANG	Nango	6.69	236	P	Pn	02 08 48.3	+0.8
JANG				eS	Sn	02 09 57.5	-5.0

JMA 03 02:20:40.4, 36°.27N×137°.60E, h4km±1km, M2.9, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JGN	Niukaw	0.23	259	P	Pg	02 20 45.0	0.0
JGN				S	Sg	02 20 48.6	+0.5
JTT	Ttatey	0.40	327	P	Pg	02 20 48.8	+0.7
JNG	Nsakai	0.43	71	P	Pg	02 20 49.0	+0.4
MAT	Matsushiro	0.56	61	P	Pg	02 20 51.4	+0.2
MAT	Matsushiro	0.56	61	P	Pg	02 20 51.4	+0.2
JYTA	Yamagatataniai	0.97	226	P	Pg	02 20 59.0	-0.1

*NIED **03** 02:20:00, 36°.30N×137°.60E, h5km, Mw4.3 Best double couple: $M_0$2.97000×10^15 NP1:ϕ_s186.00000°, δ78.00000°, λ44.00000°. NP2:ϕ_s84.00000°, δ47.00000°, λ163.00000°.*
JMA 03 02:20:48.3, 36°.26N×137°.60E, h3km±1km, M3.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JGN	Niukaw	0.23	261	P	Pg	02 20 53.1	+0.3
JGN				S	Sg	02 20 56.4	+0.5
JTT	Ttatey	0.41	328	P	Pg	02 20 56.6	+0.5
JTT				eS	Sg	02 21 02.6	+1.2
JNG	Nsakai	0.43	70	P	Pg	02 20 56.8	+0.2
JNG				S	Sg	02 21 02.8	+0.6
MAT	Matsushiro	0.56	60	P	Pg	02 20 59.2	0.0
MAT				S	Sg	02 21 06.7	+0.2
MAT	Matsushiro	0.56	60	S	Pg	02 20 59.2	0.0
JYTA	Yamagatataniai	0.97	227	S	Sg	02 21 19.3	-0.1

IDC 03 02:50:36.9±9.8, 15°.65S×173°.76W, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.6/31, mbtmp3.6/3, Error ellipse: s-maj=441.9km s-min=39.3km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	49.45	257	P	P	02 59 29.4	+0.1
	0.3nm,0.6s,baz=94,slow=7.8,SNR=2.1						
ASAR	Alice Springs	49.71	252	P	P	02 59 31.0	-0.2
	1.1nm,0.7s,baz=88,slow=8.0,SNR=11						
ILAR	Eielson Array	82.75	11	P	P	03 03 02.3	0.0
	0.2nm,0.8s,baz=216,slow=6.9,SNR=1.9						
BRTR	Keskin Array B	146.13	320	PKPbc	PKPdf	03 10 18.5	-0.1
	0.2nm,0.5s,baz=58,slow=5.4,SNR=2.1						

*ATH **03** 03:00:15.9, 38°.21N×20°.39E, h14km±1km, ML2.6/12, Error ellipse: s-maj=2.6km s-min=1.2km az=240.0*
*THE **03** 03:00:16.6, 38°.23N×20°.40E, h12km, ML2.6/8, Error ellipse: s-maj=1.1km s-min=0.5km az=252.0*
ISC 03 03:00:15.7±0.8, 38°.22N±0°.03×20°.36E±0°.04, h15km±4km, n45, σ0.75/73, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF3	Kipouria, Keph	0.02	212	P	Pg	03 00 18.6	+0.2
KEF3				S	Sg	03 00 20.0	-0.2
AGT1	Agia Thekli	0.03	30	P	Pg	03 00 18.5	0.0
CHV1	Chavriata, Kef	0.04	160	P	Pg	03 00 18.6	+0.1
CHV1				S	Sg	03 00 20.2	-0.1
KEF4	Livadi, Kephal	0.06	53	P	Pg	03 00 18.7	0.0
KEF4				S	Sg	03 00 20.3	-0.3
LXRA	Lixouri, Kepha	0.06	111	P	Pg	03 00 18.7	0.0
LXRA				S	Sg	03 00 20.3	-0.3
ARGA	Argostoli. Kep	0.10	117	P	Pg	03 00 19.0	-0.1
ARGA				S	Sg	03 00 20.6	-0.6
ARG2	Argostoli	0.11	114	P	Pg	03 00 19.0	-0.1
ARG2				S	Sg	03 00 20.9	-0.4
KEF2	Argostoli. Kep	0.11	120	P	Pg	03 00 19.1	-0.1
KEF2				S	Sg	03 00 20.9	-0.6
VLS	Valsamata	0.18	104	P	Pg	03 00 20.0	-0.2
VLS				S	Sg	03 00 22.7	-0.4
	5μm,0.1s						
VLS	Valsamata	0.18	104	P	Pg	03 00 20.0	-0.2
VLS				AML	AML	03 00 22.8	
	comp=N,10484μm,0.1s						
VLS				AML	AML	03 00 23.1	
	comp=E,14974μm,0.2s						
VSK1	VASILIKIADES	0.24	40	P	Pg	03 00 21.4	+0.3
FSK	Fiskardo	0.28	33	P	Pg	03 00 22.0	+0.3
FSK	Fiskardo	0.28	33	P	Pg	03 00 22.1	+0.3
FSK				S	Sg	03 00 26.0	+0.1
FSK				AML	AML	03 00 26.9	
	comp=N,3436μm,0.2s						
FSK				AML	AML	03 00 28.0	
	comp=E,6137μm,0.2s						
KFL	Anninata	0.35	109	P	Pg	03 00 22.9	0.0
KFL				S	Sb	03 00 28.4	-0.7
KFL	Anninata	0.35	109	P	Pg	03 00 23.0	0.0
KFL				S	Sg	03 00 28.2	+0.2
KFL				AML	AML	03 00 29.4	
	comp=E,13910μm,0.3s						
KFL				AML	AML	03 00 31.1	
	comp=N,8659μm,0.5s						
EVGI	Lefkada island	0.46	30	P	Pg	03 00 25.1	+0.2
EVGI				S	Sb	03 00 32.5	+0.3
EVGI	Lefkada island	0.46	30	P	Pg	03 00 25.2	+0.2
EVGI				S	Sb	03 00 32.1	-0.1
MGNA	Meganis	0.55	38	P	Pg	03 00 26.7	+0.1
MGNA				AML	AML	03 00 35.3	
	comp=N,1294μm,0.2s						
MGNA				AML	AML	03 00 35.5	
	comp=E,1876μm,0.2s						
ZAK2	Zakynthos	0.61	136	P	Pg	03 00 27.7	+0.1
ZAK2				S	Sb	03 00 37.2	+0.9
LKD2	Lefkada island	0.61	22	P	Pg	03 00 27.9	+0.1
LKD2	Lefkada island	0.61	22	P	Pg	03 00 27.9	+0.1
LKD2				AML	AML	03 00 44.7	
	comp=N,468μm,0.4s						
LKD2				AML	AML	03 00 47.6	
	comp=E,589μm,0.3s						
KRI1	kERI	0.67	147	P	Pg	03 00 28.6	-0.1
KRI1				S	Sb	03 00 39.0	+1.0
RLS	Riolos of Patr	0.89	100	P	Pg	03 00 32.7	-0.2
RLS				S	Sb	03 00 45.3	+0.9
	comp=E,365nm,0.6s						
RLS	Riolos of Patr	0.89	100	P	Pg	03 00 32.3	-0.6
RLS				S	Sb	03 00 44.6	+0.2
RLS				AML	AML	03 00 49.2	
	comp=E,814μm,0.3s						
RLS				AML	AML	03 00 52.9	
	comp=N,702μm,0.4s						
DRO	Drossia	1.10	104	P	Pb	03 00 36.1	-0.3
DRO				S	Sn	03 00 52.1	+0.6
	comp=N,868nm,0.4s						
DRO	Drossia	1.10	104	P	Pb	03 00 36.1	-0.3
DRO				S	Sn	03 00 51.7	+0.3
DRO				AML	AML	03 01 00.8	
	comp=N,1621μm,0.5s						
DRO				AML	AML	03 01 01.3	
	comp=E,1986μm,0.6s						
EFP	Efpalio	1.23	80	P	Pn	03 00 38.4	0.0
EFP				AML	AML	03 01 02.5	
	comp=N,510μm,0.7s						
EFP				AML	AML	03 01 02.8	
	comp=E,486μm,0.5s						
AMT	Artemida-Makis	1.27	123	P	Pn	03 00 39.3	+0.4
AMT				S	Sg	03 00 56.9	+0.2
	comp=E,405nm,0.8s						
LAKA	Lakka	1.27	89	P	Pn	03 00 38.7	-0.3
LAKA				S	Sb	03 00 55.7	+0.1
	comp=E,178nm,0.8s						
IGT	Igoumenitsa	1.31	359	P	Pb	03 00 41.1	+1.1
IGT				AML	AML	03 01 06.0	
	comp=E,219μm,0.7s						
IGT				AML	AML	03 01 13.0	
	comp=N,167μm,0.7s						
SERG	Sergoula	1.34	81	P	Pn	03 00 40.4	+0.4
SERG				AML	AML	03 01 06.5	
	comp=N,546μm,0.4s						
SERG				AML	AML	03 01 09.5	
	comp=E,400μm,0.5s						
TRIZ	Trizonia	1.35	83	P	Pn	03 00 40.2	+0.2
TRIZ				S	Sg	03 00 58.9	-0.5
	comp=E,260nm,0.6s						
ALIK	Aliki, Aigiali	1.38	88	P	Pn	03 00 41.0	+0.6
KALE	Kalithea	1.41	83	P	Pn	03 00 41.0	+0.2
KALE				S	Sn	03 00 59.1	-0.1
	comp=E,205nm,0.5s						
KALE	Kalithea	1.41	83	P	Pn	03 00 41.1	+0.2
KALE				AML	AML	03 01 10.1	
	comp=N,442μm,0.7s						
KALE				AML	AML	03 01 11.8	
	comp=E,401μm,0.6s						
KLV	Kalavryta, Ach	1.42	97	P	Pn	03 00 41.6	+0.5
KLV				S	Sn	03 00 59.4	-0.1
	comp=E,112nm,0.5s						
KLV	Kalavryta, Ach	1.42	97	P	Pb	03 00 41.9	-0.1
KLV				AML	AML	03 01 11.1	
	comp=E,222μm,0.6s						
KLV				AML	AML	03 01 12.0	
	comp=N,236μm,0.5s						
DBRK	Dubrovnik	4.75	340	ePn	Pn	03 01 27.1	+0.3
DBRK				Sn	Sn	03 02 20.4	-1.3
STON	Ston	5.07	337	ePn	Pn	03 01 31.1	0.0
STON				Sn	Sn	03 02 26.9	-2.4
MAKA	Makarska	5.66	334	ePn	Pn	03 01 40.0	+0.8
MAKA				Sn	Sn	03 02 41.6	-2.3
ZIRJ	Zirje	6.50	328	ePn	Pn	03 01 50.7	0.0
ZIRJ				Sn	Sn	03 03 01.8	-2.7
KIJV	Kijevo	6.50	334	i Pn	Pn	03 01 52.4	+1.5
MORI	Morici	6.64	330	ePn	Pn	03 01 54.1	+1.3
UDBI	Udbina	7.18	333	i Pn	Pn	03 02 02.2	+2.0
NVLJ	Novalja	7.56	329	ePn	Pn	03 02 06.5	+1.2

*IDC **03** 03:07:47.1±2.1, 8°.47S×112°.50E, h0km, mb3.8/5, mb1 3.8/6, mb1mx3.5/55, mbtmp3.7/6, ML3.2/1, MS2.7/1, Ms1 2.9/1, ms1mx2.2/37, Error ellipse: s-maj=133.6km s-min=19.3km az=51.0*
*DJA **03** 03:07:52.7±0.4, 9°S±4°×11°2E±°, h10km, M4.3/17, mB4.9/1, mb4.6/3, MLv4.2/17, Mw(mB)4.2/1*
*NEIC **03** 03:07:55.8±1.1, 8°.9S±0°.2×112°.09E±0°.10, h83km±11km, mb4.3/4, Error ellipse: s-maj=36.4km s-min=6.8km az=199.0*
ISC 03 03:07:53.1±0.9, 9°.1S±0°.1×112°.04E±0°.06, h52km, n34, σ2.08/29, mb4.2/7, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCJI	Pacitan	1.25	317	P	Pn	03 08 15.4	+1.2
WOJI	Wonogiri, Jawa	1.68	319	P	Pn	03 08 22.0	+1.9
UGM	Wanagama	1.92	308	P	Pn	03 08 25.6	+2.2
UGM	Wanagama	1.92	308		Pn	03 08 25.2	+1.9
YOGI	Yogyakarta	2.15	307	P	Pn	03 08 29.0	+2.4
JAGI	Jajag, Banyuwa	2.19	73	P	Pn	03 08 28.8	+1.8
JAGI	Jajag, Banyuwa	2.19	73		Pn	03 08 28.7	+1.7
GRJI	Gresik	2.23	11	P	Pn	03 08 29.8	+2.2
SMRI	Semarang	2.59	322	P	Pn	03 08 34.8	+2.2
SMRI	Semarang	2.59	322		Pn	03 08 34.9	+2.3
KMMI	Kalianget	2.80	43	P	Pn	03 08 37.3	+1.8
UWJI	Ujung Watu	2.89	338	P	Pn	03 08 39.3	+2.6
DNP	Denpasar	3.16	82	P	Pn	03 08 42.5	+2.1
SRBI	Singaraja	3.30	72	P	Pn	03 08 44.3	+2.0
CISI	Cisompet, Garu	4.46	290	P	Pn	03 09 00.0	+1.8
CISI	Cisompet, Garu	4.46	290	Pn	Pn	03 08 59.8	+1.5
LEM	Lembang	4.93	297	P	Pn	03 09 06.6	+1.7
CNJI	Cibinong	5.18	290	P	Pn	03 09 10.9	+2.8
	0.3nm1μm51nm,0.7s						
PLAI	Plampang	5.67	88	P	Pn	03 09 16.7	+1.8
	0.2nm35nm,1.0s						
SKJI	Sukabumi	5.82	291	P	Pn	03 09 19.6	+2.7
FITZ	Fitzroy Crossi	15.94	125	Pn	Pn	03 11 32.2	-1.8
	0.1nm,0.3s,baz=309,slow=14,SNR=1.0						
FITZ				Sn	Sn	03 14 16.8	-13
	0.1nm,0.3s,baz=30,slow=20,SNR=1.3						
WRA	Warramunga Arr	24.09	119	P	P	03 13 05.1	+1.1
	0.4nm,0.6s,baz=296,slow=12,SNR=2.5						
ASAR	Alice Springs	25.43	127	P	P	03 13 17.4	+1.3
	0.3nm,0.4s,baz=303,slow=9.2,SNR=9.2						
CMAR	Chiang Mai Arr	30.29	335	LR	LR	03 26 52.8	
	comp=Z,13nm,19.0s,baz=40,slow=38						
STKA	Stephens Creek	35.56	134	P	P	03 14 46.5	+1.0
	1.5nm,0.4s,baz=318,slow=9.6,SNR=4.3						
STKA	Stephens Creek	35.56	134	IAmb	IAmb	03 15 39.5	
	comp=Z,9.0nm,1.9s						
H08S2	Diego Garcia H	39.14	269	T	T	03 57 18.5	
	baz=94,slow=75,SNR=4.8						
H08S3	Diego Garcia H	39.15	269	T	T	03 57 15.1	
	baz=94,slow=75,SNR=5.3						
H08S1	Diego Carcia H	39.16	269	T	T	03 57 18.5	
	baz=94,slow=75,SNR=7.2						
GAR	Garm	61.60	324	P	P	03 18 03.4	-2.1
MK31	Makanchi Array	61.66	337	P	P	03 18 03.9	-1.7
MK31				IAmb	IAmb	03 18 18.3	
	comp=Z,5.3nm,1.8s						
MKAR	Makanchi Array	61.66	337	P	P	03 18 04.5	-1.1
	comp=Z,0.5nm,0.4s,baz=150,slow=7.3,SNR=14						
ZAA0	Zalesovo Array	66.91	343	P	P	03 18 37.6	-2.2
ZAA0				IAmb	IAmb	03 18 38.9	
	comp=Z,1.8nm,0.7s						
ZALV	Zalesovo Beam	66.91	343	P	P	03 18 37.4	-2.4
	comp=Z,1.6nm,0.7s,baz=149,slow=5.2,SNR=6.0						

*IDC **03** 03:12:42.7±0.8, 51°.58N×15°.91E, h0km, mb1 3.2/8, mb1mx3.1/55, mbtmp3.1/8, ML2.6/8, Error ellipse: s-maj=14.2km s-min=8.4km az=107.0*
*VIE **03** 03:12:44.8±0.7, 51°.37N×15°.99E, h0km, mb2.4/6, ml2.7/6, Error ellipse: s-maj=6.2km s-min=4.2km az=73.0 77 km WNW of Wroclaw Suspected Mining induced.*
*UPP **03** 03:12:49.1±2.9, 51°.93N×15°.45E, h5km, ML1.8, Suspected explosion*
ISC 03 03:12:40.7±0.7, 51°.62N±0°.03×16°.13E±0°.03, h0km, n43, σ1.51/79, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHVC	Chvalec	1.03	183	ePG	Pg	03 13 01.0	+0.6
CHVC				eSG	Sg	03 13 13.2	-0.6
	comp=Z,37nm,0.5s						
OSTC	Ostas	1.06	177	ePG	Pg	03 13 01.6	+0.6
OSTC				eSG	Sg	03 13 14.0	-0.8
	comp=Z,24nm,0.4s						
UPC	Upice	1.11	184	ePG	Pg	03 13 02.2	+0.2
UPC				eSG	Sg	03 13 15.6	-0.8
	comp=Z,33nm,0.2s						
DPC	Dobruska-Polom	1.27	175	ePG	Pg	03 13 04.9	-0.2
DPC				eSG	Sg	03 13 19.9	-1.7
	comp=Z,19nm,0.2s						
PVCC	Panska Ves	1.47	223	ePG	Pg	03 13 09.0	+0.2
PVCC				eSG	Sn	03 13 28.5	+0.2
	comp=Z,57nm,0.2s						
BRG	Berggiesshubel	1.56	242	PN	Pn	03 13 10.0	+0.3
BRG				PG	Pg	03 13 11.8	+1.2
BRG				SG	Sn	03 13 31.8	+1.1
	30nm,0.4s						
KRLC	Kraliky	1.60	165	ePG	Pn	03 13 10.4	+0.2
KRLC				eSG	Sn	03 13 30.5	-1.1
	comp=Z,26nm,0.3s						
GOPC	GO Pecny, Ondr	1.91	207	ePN	Pn	03 13 14.7	+0.2
GOPC				ePG	Pb	03 13 16.1	-0.2
GOPC				eSG	Sb	03 13 40.1	-0.6
	comp=Z,20nm,0.7s						
PRU	Pruhonice	1.92	212	ePN	Pn	03 13 14.7	+0.1
PRU				ePG	Pb	03 13 16.5	0.0
PRU				eSG	Sb	03 13 40.6	-0.4
	comp=Z,21nm,0.6s						
CLL	Collm	1.98	262	i Pn	Pb	03 13 17.3	-0.3
	comp=Z,4.0nm,0.4s						
CLL				i Pg	Pg	03 13 20.5	+1.9
CLL				eSg	Sg	03 13 47.0	+2.7
	comp=Z,17nm,0.6s						
MORC	Moravsky Berou	2.05	154	ePN	Pn	03 13 16.8	+0.4
MORC				eSG	Sn	03 13 43.8	+1.1
OKC	Ostrava-Krasne	2.19	144	ePG	Pb	03 13 22.1	+0.9
VRAC	Vranov	2.33	173	Pn	Pn	03 13 20.5	+0.3
	comp=Z,0.7nm,0.3s,baz=350,slow=18,SNR=11						
VRAC				Sn	Sb	03 13 52.4	-0.4
	comp=Z,1.7nm,0.3s,baz=72,slow=20,SNR=9.2						
VRAC	Vranov	2.33	173	ePN	Pn	03 13 20.9	+0.6
VRAC				eSG	Sb	03 13 51.6	-1.3
TREC	Trest	2.36	190	ePN	Pn	03 13 22.3	+1.6
PBCC	Pribram	2.37	216	eSG	Sb	03 13 54.3	+0.5
KRUC	Moravsky	2.56	176	ePN	Pn	03 13 24.4	+0.9
KRUC				ePG	Pb	03 13 28.2	+0.7
KRUC				eSG	Sb	03 14 00.0	+0.4
NKC	Novy Kostel	2.71	241	ePN	Pn	03 13 26.9	+1.4
NKC				ePG	Pg	03 13 33.1	+0.5
NKC				eSG	Sg	03 14 09.2	+1.4
	comp=Z,22nm,0.3s						
JAVC	Velka Javorina	2.93	160	ePN	Pn	03 13 30.3	+1.7
JAVC				eSG	Sb	03 14 12.0	+1.8
KHC	Kasperske Hory	2.98	214	ePN	Pn	03 13 29.5	+0.3
KHC				ePG	Pb	03 13 35.6	+1.0
KHC				eSN	Sn	03 14 04.7	-0.9
KHC				eSG	Sg	03 14 15.3	-1.0
	comp=Z,11nm,0.6s						
GERES	GERESS Array B	3.19	210	Pn	Pn	03 13 33.0	+1.0
	comp=Z,0.8nm,0.3s,baz=31,slow=12,SNR=22						
GERES				Pg	Pb	03 13 38.8	+0.7
	comp=Z,1.7nm,0.3s,baz=29,slow=16,SNR=22						
GERES				Lg	Lg	03 14 20.1	
	comp=Z,1.7nm,0.3s,baz=31,slow=27,SNR=8.7						
SMOL	Smolenice	3.22	164	ePG	Pg	03 13 42.6	+0.3
SMOL				eSG	Sg	03 14 25.4	+1.4
LANS	Liptovska Anna	3.27	138	ePN	Pn	03 13 34.6	+1.5
MODS	Modra-Piesok	3.33	167	ePG	Pg	03 13 45.0	+0.5
MODS				eSG	Sg	03 14 27.9	+0.3
BSD	Bornholm Skovb	3.58	349	i P	Pn	03 13 39.6	+2.3
BSD				eS	Sn	03 14 21.1	+0.8
VYHS	Vyhne	3.58	150	ePN	Pn	03 13 37.9	+0.5
VYHS				eSG	Sg	03 14 38.6	+3.0
CONA	Conrad Observa	3.70	183	ePn	Pn	03 13 39.6	+0.5
	comp=Z,0.5nm,0.1s						
CONA				Sg	Sg	03 14 36.6	-2.8
	comp=Z,7.6nm,0.4s						
MOA	Molln	3.96	199	ePn	Pn	03 13 43.6	+1.0
	comp=Z,2.6nm,0.3s,SNR=7.3						
MOA				eSg	Sg	03 14 46.9	-1.0
	comp=Z,5.6nm,0.4s						
LUNU	Lund	4.33	339	P	Pn	03 13 49.1	+1.5
BLEU	Blekinge	4.70	358	P	Pn	03 13 55.1	+2.3
BLEU				S	Sn	03 14 46.9	-1.0
BJUU	Bjuv	4.83	339	P	Pn	03 13 55.9	+1.4
KBA	Koelnbreinsper	4.89	203	ePn	Pn	03 13 56.8	+1.2
	comp=Z,2.1nm,0.4s,SNR=5.7						
KBA				Sg	Sg	03 15 14.3	-3.5
	comp=Z,2.7nm,0.5s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VXJU	**Vaexsjoe**	**5.36**	**353**	P	**Pn**	**03 14 04.3**	**+2.5**
VXJU				S	**Sn**	**03 15 00.4**	**-3.7**
BYXU	**Byxelkrok**	**5.71**	**5**	P	**Pn**	**03 14 09.3**	**+2.7**
ASPU	**Aespoe**	**5.82**	**2**	P	**Pn**	**03 14 11.2**	**+3.2**
EKSU	**Eksjoe**	**5.99**	**356**	P	**Pn**	**03 14 13.0**	**+2.6**
EKSU				S	**Sn**	**03 15 16.7**	**-2.9**
VSTU	**Vaestervik**	**6.06**	**2**	P	**Pn**	**03 14 14.6**	**+3.2**
DAVOX	**Davos/Dischmat**	**6.34**	**223**	Pn	**Pn**	**03 14 16.4**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=9.3,slow=19,SNR=2.0						
AKASG	**Malin Array Be**	**8.28**	**91**	Pn	**Pn**	**03 14 43.1**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=279,slow=12,SNR=2.6						
HFS	**Hagfors**	**8.64**	**352**	Pn	**Pn**	**03 14 45.3**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=171,slow=12,SNR=1.7						
FINES	**FINESS Array B**	**11.26**	**25**	Pn	**Pn**	**03 15 23.0**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=209,slow=15,SNR=3.4						
EKA	**Eskdalemuir Ar**	**12.07**	**295**	Pn	**Pn**	**03 15 32.2**	**-1.6**
	baz=104,slow=14,SNR=1.5						
ARCES	**ARCESS Array B**	**18.51**	**10**	Pn	**P**	**03 16 55.7**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=203,slow=10,SNR=1.4						

*IDC **03** 03:13:26.9±1.6, 6.°77S×154.°62E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.6/43, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=43.2km s-min=25.4km az=110.0*

ISC 03 03:13:33.0±1.4**, 6.°8S**±0.°1×**154.°5E**±0.°2**, h39**km**, n7,** σ**0.s92**/9**, mb3.8**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.52**	**314**	Pn	**Pn**	**03 14 24.4**	**-0.8**
	4.2nm,0.3s,baz=225,slow=2.9,SNR=1.6						
KRVT				Sn	**Sn**	**03 15 06.1**	**+0.5**
	9.7nm,0.3s,baz=86,slow=13,SNR=2.0						
WRA	**Warramunga Arr**	**23.57**	**234**	P	**P**	**03 18 40.2**	**0.0**
	0.6nm,0.5s,baz=57,slow=9.5,SNR=6.1						
ASAR	**Alice Springs**	**25.98**	**228**	P	**P**	**03 19 02.5**	**+0.2**
	0.3nm,0.6s,baz=58,slow=9.6,SNR=2.5						
FITZ	**Fitzroy Crossi**	**30.33**	**246**	P	**P**	**03 19 42.0**	**+0.8**
	1.6nm,0.8s,baz=66,slow=10,SNR=1.5						
PETK	**Petropavlovsk-**	**59.73**	**2**	P	**P**	**03 23 34.6**	**+1.0**
	1.0nm,0.7s,baz=180,slow=7.2,SNR=4.2						
MKAR	**Makanchi Array**	**82.96**	**319**	P	**P**	**03 25 53.8**	**-0.2**
	0.7nm,0.7s,baz=95,slow=5.3,SNR=7.2						
TORD	**Torodi Ar. Bea**	**152.54**	**285**	PKPbc	**PKPbc**	**03 33 24.8**	**-1.5**
	1.7nm,0.7s,baz=79,slow=2.1,SNR=11						
TORD				PKPab	**pPKPbc**	**03 33 36.3**	**-0.3**
	0.6nm,0.7s,baz=72,slow=3.2,SNR=3.4						

*IDC **03** 03:18:11.4±4.6, 7.°31S×126.°05E, h450km±63km, mb3.0/2, mb1 2.9/5, mb1mx2.6/42, mbtmp3.7/5, Error ellipse: s-maj=114.3km s-min=22.4km az=52.0*

ISC 03 03:18:11.2±1.4**, 7.°3S**±0.°1×**126.°2E**±0.°2**, h450**km**, n6,** σ**1.s51**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.81**	**221**	P	**P**	**03 19 25.7**	**+0.8**
	54nm,0.3s,baz=119,slow=0.5,SNR=26						
BATI				S	**S**	**03 20 22.9**	**-1.7**
	9.4nm,0.3s,baz=323,slow=20,SNR=8.4						
FITZ	**Fitzroy Crossi**	**10.75**	**183**	P	**P**	**03 20 38.4**	**+1.8**
	0.1nm,0.3s,baz=355,slow=9.2,SNR=7.9						
WRA	**Warramunga Arr**	**14.86**	**149**	P	**P**	**03 21 19.8**	**-1.2**
	0.3nm,0.3s,baz=330,slow=10.0,SNR=2.8						
ASAR	**Alice Springs**	**17.89**	**156**	P	**P**	**03 21 53.1**	**+0.2**
	0.5nm,0.3s,baz=336,slow=8.1,SNR=27						
MKAR	**Makanchi Array**	**66.45**	**329**	P	**P**	**03 28 15.0**	**+0.3**
	0.4nm,0.7s,baz=140,slow=7.8,SNR=3.9						
ZALV	**Zalesovo Beam**	**70.22**	**335**	P	**P**	**03 28 36.8**	**-0.8**
	0.8nm,0.4s,baz=120,slow=8.5,SNR=2.9						

*IDC **03** 03:46:48.5±0.8, 23.°92S×175.°78W, h0km, mb4.4/16, mb1 4.6/17, mb1mx4.3/36, mbtmp4.4/17, ML3.9/1, MS3.7/15, Ms1 3.7/15, ms1mx3.5/33, Error ellipse: s-maj=28.0km s-min=17.2km az=140.0*

*NEIC **03** 03:46:49.8±1.6, 24.°0S±0.°1×175.°8W±0.°1, h10km±1km, mb4.8/39, Error ellipse: s-maj=21.4km s-min=18.9km az=125.0*

ISC 03 03:46:53.6±0.6**, 24.°10S**±0.°09×**175.°8W**±0.°1**, h35**km**, n75,** σ**1.s08**/60**, mb4.7**/25**, MS3.7**/13**, 1D, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.59**	**316**		**Pn**	**03 48 58.5**	**+3.0**
AFI	**Afiamalu**	**10.81**	**21**		Pn	03 49 18.3	-7.7
RAR	**Rarotonga**	**15.03**	**82**	Pn	Pn	03 50 14.2	-9.1
	7.4nm,0.3s,baz=236,slow=12,SNR=8.9						
RAR				LR	LR	03 55 06.9	
	comp=Z,351nm,19.8s,baz=259,slow=33						
RAR	**Rarotonga**	**15.03**	**82**		Pn	03 50 14.2	-9.2
URZ	**Urewera**	**15.37**	**202**	Pn	**Pn**	**03 50 29.0**	**+1.2**
	0.5nm,0.3s,baz=349,slow=5.2,SNR=2.3						
DZM	**Mont Dzumac**	**16.51**	**273**	*e*Pn	**P**	**03 50 45.4**	**+0.5**
	55nm,1.2s						
DZM				*e*LR	LR	03 54 39.3	
	comp=Z,398nm,23.5s						
DZM	**Mont Dzumac**	**16.51**	**273**	LR	LR	03 55 56.8	
	comp=Z,217nm,21.1s,baz=52,slow=33						
DZM	**Mont Dzumac**	**16.51**	**273**	Pn	**Pn**	**03 50 39.8**	**-2.9**
BFZ	**Birch Farm**	**17.84**	**200**	Pn	**Pn**	**03 50 58.8**	**-0.2**
BFZ				IAmb	IAmb	03 51 16.7	
	comp=Z,51nm,1.2s						
RPZ	**Rata Peaks**	**22.37**	**206**	P	**P**	**03 51 48.0**	**-0.6**
	comp=Z,2.5nm,0.5s,baz=6.3,slow=9.2,SNR=2.4						
RPZ	**Rata Peaks**	**22.37**	**206**	IAmb	IAmb	03 52 25.4	
	comp=Z,86nm,2.0s						
PPT	**Papeete**	**25.29**	**80**	LR	LR	04 00 30.1	
	comp=Z,230nm,19.2s,baz=292,slow=32						
CTA	**Charters Tower**	**35.36**	**269**	P	**P**	**03 53 45.4**	**-0.6**
	comp=Z,7.8nm,0.4s,baz=94,slow=11,SNR=18						
CTAO	**Charters Tower**	**35.36**	**269**	P	**P**	**03 53 45.4**	**-0.6**
PMG	**Port Moresby**	**38.26**	**286**	P	**P**	**03 54 10.5**	**-0.2**
STKA	**Stephens Creek**	**38.26**	**249**	P	**P**	**03 54 10.7**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=92,slow=14,SNR=2.9						
STKA				LR	LR	04 08 58.8	
	comp=Z,293nm,18.1s,baz=44,slow=35						
ASAR	**Alice Springs**	**45.83**	**260**	P	**P**	**03 55 13.1**	**+0.5**
	comp=Z,6.8nm,1.0s,baz=95,slow=8.1,SNR=17						
ASAR				LR	LR	04 14 22.7	
	comp=Z,276nm,18.3s,baz=96,slow=36						
WB2	**Warramunga Arr**	**46.26**	**265**	P	**P**	**03 55 15.0**	**-0.8**
WRAB	**Tennant Creek**	**46.26**	**265**	P	**P**	**03 55 15.1**	**-0.7**
WB0	**Warramunga Arr**	**46.26**	**265**	P	**P**	**03 55 15.3**	**-0.5**
WB0				IAmb	IAmb	03 55 15.9	
	comp=Z,9.1nm,0.8s						
WRA	**Warramunga Arr**	**46.27**	**265**	P	**P**	**03 55 14.8**	**-1.1**
	comp=Z,6.9nm,0.7s,baz=98,slow=8.3,SNR=12						
WRA				LR	LR	04 14 32.1	
	comp=Z,220nm,18.7s,baz=85,slow=36						
FITZ	**Fitzroy Crossi**	**54.68**	**264**	P	**P**	**03 56 19.6**	**0.0**
	comp=Z,8.7nm,1.0s,baz=124,slow=5.0,SNR=5.1						
FITZ	**Fitzroy Crossi**	**54.68**	**264**	P	**P**	**03 56 20.8**	**+1.2**
FITZ				IAmb	IAmb	03 56 21.5	
	comp=Z,14nm,1.1s						
SIJI	**Sorong**	**56.21**	**286**	P	**P**	**03 56 29.6**	**-0.9**
	comp=Z,17nm,0.8s,baz=68,slow=6.8,SNR=8.8						
SOEI	**Soe**	**58.74**	**273**	P	**P**	**03 56 48.6**	**+0.1**
JCJ	**Chichijima**	**65.11**	**319**	LR	LR	04 22 10.8	
	comp=Z,70nm,20.3s,baz=54,slow=33						
MJAR	**Matsushiro Arr**	**74.33**	**323**	P	**P**	**03 58 26.1**	**-1.4**
	comp=Z,1.3nm,0.7s,baz=163,slow=5.7,SNR=4.5						
MJAR				LR	LR	04 29 36.4	
	comp=Z,34nm,19.2s,baz=160,slow=35						
JNU	**Nakatsue**	**76.31**	**316**	LR	LR	04 28 41.5	
	comp=Z,36nm,18.5s,baz=178,slow=33						
MAW	**Mawson**	**78.89**	**199**	P	**P**	**03 58 55.4**	**+2.6**
	comp=Z,2.1nm,0.5s,baz=144,slow=5.1,SNR=6.8						
MAW	**Mawson**	**78.89**	**199**	P	**P**	**03 58 53.6**	**+0.8**
PEA0B	**Petropavlovsk-**	**80.28**	**344**	P	**P**	**03 59 00.3**	**-0.2**
PETK	**Petropavlovsk-**	**80.28**	**344**	P	**P**	**03 59 00.5**	**+0.1**
	comp=Z,6.7nm,0.8s,baz=140,slow=7.8,SNR=16						
PETK				LR	LR	04 31 18.1	
	comp=Z,31nm,18.6s,baz=236,slow=33						
KSRS	**Korea Array**	**80.95**	**318**	LR	LR	04 31 07.4	
	comp=Z,50nm,19.4s,baz=156,slow=33						
NVAR	**Mina Array Bea**	**82.25**	**42**	P	**P**	**03 59 10.8**	**-0.8**
	comp=Z,1.3nm,0.9s,baz=226,slow=8.2,SNR=7.4						
USRK	**Ussuriysk Ar.**	**83.10**	**325**	P	**P**	**03 59 15.7**	**+0.2**
	comp=Z,8.4nm,0.9s,baz=119,slow=4.6,SNR=8.1						
TUC	**Tucson**	**83.60**	**51**	P	**P**	**03 59 17.7**	**-0.9**
TUC				IAmb	IAmb	03 59 33.6	
	comp=Z,4.2nm,1.1s						
SYO	**Syowa Base**	**83.67**	**192**	⇓*e*P	**P**	**03 59 16.0**	**-2.2**
X16A	**Lo Mia Camp, P**	**84.32**	**48**	IAmb	IAmb	03 59 37.9	
	comp=Z,5.6nm,1.1s						
SNAA	**Sanae**	**84.36**	**178**	P	**P**	**03 59 23.0**	**+1.2**
SNAA	**Sanae**	**84.36**	**178**	P	**P**	**03 59 23.1**	**+1.2**
VNA3	**Neumayer Olymp**	**84.42**	**176**	P	**P**	**03 59 23.0**	**+1.0**
U15A	**North Rim**	**84.88**	**46**	IAmb	IAmb	03 59 40.8	
	comp=Z,7.1nm,1.1s						
VNA1	**Neumayer--Stat**	**85.09**	**176**	P	**P**	**03 59 27.0**	**+1.6**
PLCA	**Paso Flores**	**85.30**	**133**	LR	LR	04 34 33.8	
	comp=Z,28nm,18.6s,baz=178,slow=34						
X18A	**Snowflake**	**85.40**	**49**	P	**P**	**03 59 26.9**	**-0.8**
MSU	**Marysvale**	**86.14**	**45**	P	**P**	**03 59 31.8**	**+0.4**
RPSI	**Rantau Prapat**	**86.82**	**274**	P	**P**	**03 59 34.9**	**-0.1**
MNTX	**Cornudas Mount**	**87.17**	**53**	IAmb	IAmb	03 59 51.5	
	comp=Z,6.3nm,1.2s						
TX31	**Lajitas Ar. Si**	**87.27**	**56**	P	**P**	**03 59 38.4**	**+1.4**
TXAR	**Lajitas Array**	**87.27**	**56**	P	**P**	**03 59 36.8**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=217,slow=7.9,SNR=4.0						
GSI	**Gunungsitoli**	**87.49**	**273**	P	**P**	**03 59 39.2**	**+0.9**
MA2	**Magadan**	**87.80**	**344**	LR	LR	04 34 19.3	
	comp=Z,10nm,19.5s,baz=104,slow=32						
GHO	**Glory Hole Cre**	**88.25**	**12**	IAmb	IAmb	03 59 46.6	
	comp=Z,8.5nm,1.2s						
MCARA	**McCarthy VSAT**	**89.19**	**15**	P	**P**	**03 59 45.0**	**-0.1**
TRF	**Thorofare Moun**	**89.54**	**11**	P	**P**	**03 59 46.3**	**-0.6**
RND	**Reindeer**	**89.76**	**12**	P	**P**	**03 59 47.6**	**-0.3**
RND				IAmb	IAmb	04 00 01.9	
	comp=Z,6.7nm,1.0s						
ENH	**Enshi**	**89.77**	**303**	P	**P**	**03 59 49.2**	**+0.5**
PDAR	**Pinedale Array**	**90.18**	**42**	P	**P**	**03 59 50.1**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=270,slow=3.0,SNR=3.6						
MENT	**Mentasta**	**90.39**	**14**	P	**P**	**03 59 50.8**	**+0.1**
MENT				IAmb	IAmb	03 59 57.5	
	comp=Z,8.6nm,1.1s						
DOT	**Dot Lake**	**90.94**	**14**	IAmb	IAmb	03 59 54.1	
	comp=Z,4.0nm,1.0s						
CCB	**Clear Creek Bu**	**91.09**	**12**	P	**P**	**03 59 52.8**	**-1.1**
COLA	**College**	**91.28**	**12**	P	**P**	**03 59 54.5**	**-0.3**
ILAR	**Eielson Array**	**91.37**	**12**	P	**P**	**03 59 54.2**	**-1.0**
	comp=Z,0.9nm,0.9s,baz=223,slow=6.3,SNR=7.3						
XAN	**Xi'an**	**91.95**	**307**	P	**P**	**03 59 57.4**	**-1.3**
CMAR	**Chiang Mai Arr**	**93.26**	**289**	P	**P**	**04 00 06.8**	**+1.7**
	comp=Z,4.7nm,0.6s,baz=130,slow=3.8,SNR=14						
CMAR				LR	LR	04 42 43.9	
	comp=Z,12nm,18.5s,baz=130,slow=36						
CHTO	**Chiang Mai**	**93.40**	**289**	P	**P**	**04 00 05.9**	**+0.2**
LPAZ	**La Paz**	**98.77**	**112**	LR	LR	04 37 21.9	
	comp=Z,42nm,18.7s,baz=190,slow=31						
MKAR	**Makanchi Array**	**115.16**	**312**	PKiKP	**PKiKP**	**04 05 31.2**	**+0.1**
	comp=Z,0.1nm,0.5s,baz=70,slow=1.7,SNR=1.5						
FINES	**FINESS Array B**	**139.80**	**344**	PKP	**PKPdf**	**04 06 15.2**	**-2.1**
	comp=Z,2.0nm,0.9s,baz=357,slow=3.8,SNR=3.4						
AKASG	**Malin Array Be**	**147.16**	**330**	PKPbc	**PKPbc**	**04 06 32.1**	**-0.6**
	comp=Z,3.7nm,0.6s,baz=42,slow=4.8,SNR=12						
AKBB	**Malin Array Si**	**147.16**	**330**		**PKPbc**	**04 06 32.5**	**-0.2**
BRTR	**Keskin Array B**	**150.76**	**309**	PKPbc	**PKPbc**	**04 06 42.5**	**0.0**
	comp=Z,1.1nm,0.8s,baz=156,slow=3.4,SNR=6.0						
CLL	**Collm**	**152.01**	**348**	*e*PKPbc	**PKiKP**	**04 06 46.0**	**+0.9**
CLL				*i* sPKPbc	**pPKPdf**	**04 06 50.0**	**+1.2**
CLL				*e*PKPab	**PKPab**	**04 06 54.0**	**-0.2**
CLL				*i*		04 06 59.2	
	comp=Z,6.0nm,1.0s						
BRG	**Berggiesshubel**	**152.24**	**347**	*e*PKP	**PKiKP**	**04 06 45.8**	**+0.1**
	comp=Z,4.2nm,1.1s						
VYHS	**Vyhne**	**153.06**	**338**	*e*PP	**PKPab**	**04 06 59.3**	**+0.6**

*IDC **03** 03:48:43.3±0.8, 1.°07S×127.°13E, h0km, mb4.2/10, mb1 4.3/12, mb1mx4.0/42, mbtmp4.2/12, ML3.9/2, MS3.0/3, Ms1 3.1/3, ms1mx2.6/34, Error ellipse: s-maj=29.6km s-min=15.0km az=72.0*

*DJA **03** 03:48:45.9±0.2, 1°S±2°×12°7E±°, h10km, M4.7/19, mB5.3/6, mb5.0/16, MLv4.5/19, Mw(mB)4.7/6*

*NEIC **03** 03:48:48.6±1.9, 1.°02S±0.°07×127.°26E±0.°03, h36km±8km, mb4.5/29, Error ellipse: s-maj=9.8km s-min=5.0km az=179.0*

ISC 03 03:48:48.6±0.4**, 1.°05S**±0.°04×**127.°28E**±0.°05**, h31**km**, n96,** σ**1.s42**/98**, mb4.6**/27**, 1C-1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANI	**Sanana**	**1.63**	**232**	P	**Pn**	**03 49 13.6**	**-1.6**
SANI				S	**Sn**	**03 49 34.9**	**-0.2**
TNTI	**Ternate**	**1.81**	**3**	P	**Pn**	**03 49 17.9**	**+0.3**
TNTI				S	**Sb**	**03 49 42.1**	**-1.2**
TNTI	**Ternate**	**1.81**	**3**		**Pn**	**03 49 16.7**	**-0.9**
NLAI	**Namlea**	**2.19**	**185**	P	**Pn**	**03 49 21.9**	**-0.9**
NLAI				S	**Sn**	**03 49 49.6**	**+0.7**
AAI	**Ambon**	**2.78**	**161**	P	**Pn**	**03 49 30.4**	**-0.6**
MSAI	**Masohi**	**2.82**	**144**	P	**Pn**	**03 49 30.9**	**-0.7**
KMSI	**Cibinong**	**3.67**	**296**	P	**Pn**	**03 49 42.8**	**-0.4**
SIJI	**Sorong**	**3.99**	**88**	Pn	**Pn**	**03 49 49.4**	**+1.6**
	22nm,0.3s,baz=262,slow=7.4,SNR=37						
SIJI				Sn	**Sn**	**03 50 35.3**	**+1.8**
	baz=221,slow=19,SNR=1.0						
BNDI	**Bandanaira**	**4.34**	**143**	P	**Pn**	**03 49 51.7**	**-0.7**
LUWI	**Luwuk**	**4.50**	**270**	P	**Pn**	**03 49 53.2**	**-1.5**
LUWI	**Luwuk**	**4.50**	**270**		**Pn**	**03 49 54.7**	**0.0**
FAKI	**Fak Fak**	**5.31**	**111**	P	**Pn**	**03 50 04.9**	**-0.9**
	0.4nm1µm82nm,0.6s						
FAKI	**Fak Fak**	**5.31**	**111**		**Pn**	**03 50 04.6**	**-1.2**
MRSI	**Marisa**	**5.54**	**286**	P	**Pn**	**03 50 07.5**	**-1.6**
	0.5nm1µm91nm,0.6s						
APSI	**Ampana**	**5.63**	**271**	P	**Pn**	**03 50 10.1**	**-0.1**
	1.3nm4µm259nm,0.4s						
BBSI	**Bau Bau**	**6.45**	**227**	P	**Pn**	**03 50 19.6**	**-1.8**
	0.0nm13nm,0.8s						
MPSI	**Mapaga**	**7.50**	**281**	P	**Pn**	**03 50 38.1**	**+2.1**
TTSI	**Tana Toraja**	**7.71**	**255**	P	**Pn**	**03 50 37.4**	**-1.4**
	0.2nm31nm,0.5s						
BNSI	**Bone**	**7.90**	**245**	P	**Pn**	**03 50 39.8**	**-1.6**
	0.1nm19nm,0.6s						
SPSI	**Sidrap Palu**	**8.04**	**249**	P	**Pn**	**03 50 41.7**	**-1.6**
	0.7nm2µm180nm,0.6s						
BKSI	**Bulukumba**	**8.31**	**239**	P	**Pn**	**03 50 44.9**	**-2.1**
	1µm47nm,0.6s						
KAPI	**Kappang**	**8.48**	**242**	Pn	**Pn**	**03 50 50.1**	**+0.7**
	7.5nm,0.3s,baz=59,slow=6.2,SNR=12						
KAPI				LR	LR	03 53 38.9	
	comp=Z,88nm,21.3s,baz=112,slow=35						
KAPI	**Kappang**	**8.48**	**242**		**Pn**	**03 50 50.6**	**+1.2**
EDFI	**Ende, Flores**	**9.46**	**216**	P	**Pn**	**03 51 05.7**	**+2.8**
BATI	**Baumata**	**9.78**	**201**	LR	LR	03 54 57.9	
	comp=Z,213nm,20.2s,baz=36,slow=39						
MTN	**Manton Dam**	**12.33**	**162**	Pn	**Pn**	**03 51 43.4**	**+1.2**
KKM	**Kota Kinabalu**	**13.10**	**303**		**Pn**	**03 51 52.3**	**-0.4**
FITZ	**Fitzroy Crossi**	**17.02**	**185**	Pn	**Pn**	**03 52 44.0**	**-0.4**
	0.2nm,0.3s,baz=8.8,slow=6.1,SNR=5.6						
WB0	**Warramunga Arr**	**19.87**	**160**	P	**P**	**03 53 16.5**	**-0.9**
WB0				IAmb	IAmb	03 53 20.2	
	comp=Z,51nm,1.8s						
WRA	**Warramunga Arr**	**20.01**	**160**	P	**P**	**03 53 16.8**	**-2.2**
	comp=Z,8.5nm,0.7s,baz=341,slow=12,SNR=30						
WB2	**Warramunga Arr**	**20.02**	**160**	P	**P**	**03 53 17.8**	**-1.2**
WR0	**Warramunga Arr**	**20.10**	**160**	P	**P**	**03 53 19.3**	**-0.6**
WR0				IAmb	IAmb	03 53 22.5	
	comp=Z,27nm,1.4s						
COEN	**Coen**	**20.30**	**130**	P	**P**	**03 53 21.5**	**-0.6**
COEN				IAmb	IAmb	03 53 23.7	
	comp=Z,34nm,0.8s						
PMG	**Port Moresby**	**21.46**	**113**	P	**P**	**03 53 33.0**	**-1.6**
PMG				IAmb	IAmb	03 54 11.3	
	comp=Z,25nm,0.9s						
AS31	**Alice Springs**	**23.39**	**165**	P	**P**	**03 53 53.9**	**-1.1**
ASAR	**Alice Springs**	**23.39**	**165**	P	**P**	**03 53 53.5**	**-1.4**
	comp=Z,5.8nm,0.5s,baz=345,slow=11,SNR=40						
ASAR				PcP	**PcP**	**03 57 39.7**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=338,slow=4.0,SNR=1.9						
MYKOM	**Kota Tinggi**	**23.59**	**277**	P	**P**	**03 53 55.9**	**-1.0**
KSI	**Kapahiang**	**24.80**	**264**	P	**P**	**03 54 13.8**	**+5.6**
TPUB	**Ta-pu**	**25.05**	**345**	P	**P**	**03 54 09.0**	**-1.3**
IPM	**Ipoh**	**26.80**	**282**	P	**P**	**03 54 25.4**	**-0.8**
PDSI	**Padang**	**26.81**	**270**	P	**P**	**03 54 27.2**	**+0.8**
	comp=Z,15nm,0.9s						
KULM	**Kulim**	**27.33**	**284**	P	**P**	**03 54 29.3**	**-1.7**
MNSI	**Mandailing Nat**	**27.76**	**274**	P	**P**	**03 54 39.7**	**+4.9**
RPSI	**Rantau Prapat**	**28.59**	**278**	P	**P**	**03 54 42.2**	**-0.1**
RPSI				IAmb	IAmb	03 54 43.8	
	comp=Z,10nm,0.6s						
GSI	**Gunungsitoli**	**29.79**	**274**	P	**P**	**03 54 53.5**	**+0.5**
	comp=Z,164nm,0.7s						
GSI	**Gunungsitoli**	**29.79**	**274**	P	**P**	**03 54 52.5**	**-0.5**
KCSI	**Kotacane, Aceh**	**29.84**	**279**	P	**P**	**03 54 53.8**	**+0.4**
	comp=Z,14nm,0.7s						
MLSI	**Meulaboh, Aceh**	**31.30**	**280**	P	**P**	**03 55 08.2**	**+1.9**
	comp=Z,61nm,0.9s						
STKA	**Stephens Creek**	**33.52**	**158**	P	**P**	**03 55 26.2**	**+0.7**
	comp=Z,4.3nm,0.7s,baz=316,slow=9.2,SNR=6.5						
STKA	**Stephens Creek**	**33.52**	**158**	IAmb	IAmb	03 55 44.5	
	comp=Z,9.2nm,1.7s						
WHN	**Wuhan**	**33.74**	**340**	⇓P	**P**	**03 55 30.5**	**+3.1**
NJ2	**Nanjing**	**33.87**	**347**	*e*P	**P**	**03 55 30.1**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
CMAR	**Chiang Mai Arr**	**33.94**	**306**	LR	LR	04 10 31.2	
	comp=Z,15nm,21.1s,baz=145,slow=39						
MJAR	**Matsushiro Arr**	**38.75**	**14**	P	**P**	**03 56 08.9**	**-1.3**
	comp=Z,0.7nm,0.5s,baz=177,slow=8.9,SNR=1.9						
XAN	**Xi'an**	**38.93**	**335**	P	**P**	**03 56 12.2**	**+0.4**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN				pmax	pmax		
	comp=Z,45nm,4.6s						
XAN	**Xi'an**	**38.93**	**335**	P	**P**	**03 56 12.4**	**+0.6**
BJI	**Beijing**	**42.13**	**347**	P	**P**	**03 56 38.2**	**+0.1**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LZH	**Lanzhou**	**42.91**	**332**	*e*P	**P**	**03 56 46.4**	**+1.7**
LZH				pP	sP	03 56 56.7	+0.1
LZH				sP	pwP	03 57 02.5	+6.2
LZH				pmax	pmax		
	comp=Z,24nm,0.9s						
SHL	**Shillong**	**43.25**	**310**	P	**P**	**03 56 47.0**	**-0.6**
HHC	**Hu-ho-hao-te**	**44.08**	**343**	P	**P**	**03 56 56.4**	**+2.4**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,56nm,4.6s						
USRK	**Ussuriysk Ar.**	**45.24**	**5**	P	**P**	**03 57 03.0**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=200,slow=6.7,SNR=4.9						
LSA	**Lhasa**	**46.08**	**315**	P	**P**	**03 57 11.9**	**+1.4**
TAPN	**Taplejung**	**47.37**	**310**	*e*P	**P**	**03 57 20.4**	**-0.1**
	comp=Z,16nm,0.5s						
ODAN	**Odare**	**47.37**	**309**	*e*P	**P**	**03 57 20.7**	**+0.3**
	comp=Z,22nm,0.8s						
GTA	**Gaotai**	**47.48**	**331**	P	**P**	**03 57 21.5**	**+0.6**
GTA				pP	pP	03 57 28.9	-0.6
GTA				sP	pwP	03 57 32.5	-0.1
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
RAMN	**Ramite**	**48.03**	**309**	*e*P	**P**	**03 57 26.1**	**+0.5**
	comp=Z,53nm,0.7s						
JIRN	**Jiri**	**48.70**	**309**	*e*P	**P**	**03 57 31.0**	**+0.2**
	comp=Z,22nm,0.4s						
GUN	**Gumba**	**49.06**	**309**	*e*P	**P**	**03 57 33.7**	**+0.1**
	comp=Z,42nm,0.5s						
PKI	**Pulchoki**	**49.26**	**309**	*e*P	**P**	**03 57 35.3**	**+0.2**
	comp=Z,7.8nm,0.4s						
PKIN	**Phulchoki**	**49.27**	**309**	*e*P	**P**	**03 57 35.5**	**+0.4**
	comp=Z,10nm,0.4s						
DMN	**Daman**	**49.52**	**308**	*e*P	**P**	**03 57 37.2**	**+0.2**
	comp=Z,17nm,0.6s						
GKN	**Gorkha**	**50.07**	**309**	*e*P	**P**	**03 57 41.9**	**+0.9**
KOLN	**Koldanda**	**50.77**	**308**	*e*P	**P**	**03 57 47.1**	**+0.7**
	comp=Z,50nm,0.6s						
DANN	**Dangsing**	**50.91**	**309**	*e*P	**P**	**03 57 48.0**	**+0.4**
	comp=Z,75nm,0.6s						
HYB	**Hyderabad**	**51.37**	**293**	*i* P	**P**	**03 57 51.5**	**+0.7**
PYUN	**Piuthan**	**51.40**	**308**	*e*P	**P**	**03 57 52.1**	**+0.9**
	comp=Z,61nm,0.7s						
ULN	**Ulaanbaatar**	**51.80**	**343**	P	**P**	**03 57 53.0**	**-0.8**
ULN				IAmb	IAmb	03 57 59.7	
	comp=Z,4.7nm,0.7s						
SONM	**Songino Array**	**51.98**	**342**	P	**P**	**03 57 54.1**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=168,slow=8.8,SNR=4.5						
WMQ	**Urumqi**	**56.96**	**327**	*e*P	**P**	**03 58 32.5**	**+1.3**
PETK	**Petropavlovsk-**	**59.65**	**21**	P	**P**	**03 58 50.2**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=186,slow=5.7,SNR=4.1						
MK31	**Makanchi Array**	**61.79**	**327**	P	**P**	**03 59 03.5**	**-1.0**
MKAR	**Makanchi Array**	**61.79**	**327**	P	**P**	**03 59 04.1**	**-0.4**
	comp=Z,6.1nm,0.4s,baz=117,slow=8.0,SNR=111						
KSH	**Kashi**	**61.83**	**317**	P	**P**	**03 59 08.2**	**+3.1**
KSH				pP	sP	03 59 20.7	+3.4
KSH				sP	pwP	03 59 24.8	+8.1
KSH				pmax	pmax		
	comp=Z,47nm,1.7s						
KSH				pmax	pmax		
	comp=Z,120nm,5.0s						
MAKZ	**Makanchi**	**61.97**	**326**	P	**P**	**03 59 04.9**	**-0.8**
KDJ	**Kajisay**	**62.29**	**320**	P	**P**	**03 59 08.3**	**+0.1**
BOOM	**Boomskoye usch**	**63.27**	**320**	P	**P**	**03 59 13.0**	**-1.7**
BOOM				IAmb	IAmb	03 59 19.6	
	comp=Z,4.0nm,1.1s						
AAK	**Ala-Archa**	**64.28**	**319**	P	**P**	**03 59 19.5**	**-1.8**
ARSB	**Arslanbob**	**64.69**	**317**	P	**P**	**03 59 23.6**	**-0.3**
ARSB				IAmb	IAmb	03 59 28.3	
	comp=Z,5.6nm,0.8s						
ZALV	**Zalesovo Beam**	**65.08**	**334**	P	**P**	**03 59 24.2**	**-1.9**
	comp=Z,0.9nm,0.4s,baz=108,slow=4.8,SNR=5.0						
GAR	**Garm**	**65.58**	**314**	P	**P**	**03 59 28.3**	**-1.5**
KURK	**Kurchatov**	**66.05**	**329**	P	**P**	**03 59 31.7**	**-0.7**
CHGR	**Chuyangaron**	**66.28**	**313**	P	**P**	**03 59 34.2**	**-0.1**
KK31	**Karatay Array**	**67.11**	**318**	P	**P**	**03 59 39.0**	**-0.4**
KK31				IAmb	IAmb	03 59 44.1	
	comp=Z,3.0nm,0.8s						
KKAR	**Karatay Array**	**67.11**	**318**	P	**P**	**03 59 38.7**	**-0.7**
KKAR				IAmb	IAmb	03 59 44.1	
	comp=Z,3.0nm,0.8s						
NRIK	**Noril'sk**	**75.17**	**346**	P	**P**	**04 00 27.6**	**0.0**
	comp=Z,1.0nm,0.4s,baz=121,slow=10,SNR=4.3						
SYO	**Syowa Base**	**88.20**	**201**	⇑*e*PcP	**PcP**	**04 01 37.1**	**-0.9**

IDC 03 03:55:13.5±2.0**, 6.°97S**×**154.°88E, h0**km**, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.5**/23**, mbtmp3.6**/4**, ML3.8**/1**, Error ellipse: s-maj=49.5km s-min=32.6km az=92.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.88**	**313**	Pn	Pn	03 56 15.2	+0.7
	6.3nm,0.3s,baz=90,slow=4.0,SNR=1.8						
KRVT				Sn	Sn	03 57 00.3	-0.5
	13nm,0.3s,baz=193,slow=13,SNR=1.7						
WRA	**Warramunga Arr**	**23.74**	**235**	P	P	04 00 26.9	-0.7
	1.6nm,0.8s,baz=61,slow=9.5,SNR=7.3						
ASAR	**Alice Springs**	**26.11**	**228**	P	P	04 00 49.8	+0.5
	0.4nm,0.7s,baz=58,slow=9.3,SNR=2.7						
MKAR	**Makanchi Array**	**83.31**	**319**	P	P	04 07 42.7	+0.3
	0.2nm,0.5s,baz=122,slow=5.4,SNR=3.2						
TORD	**Torodi Ar. Bea**	**152.91**	**285**	PKPbc	PKPbc	04 15 13.8	-0.1
	0.9nm,0.6s,baz=98,slow=2.4,SNR=13						
TORD				PKPab	PKPab	04 15 24.3	-0.6
	0.8nm,0.8s,baz=89,slow=2.9,SNR=4.2						

*BJI **03** 04:14:43.3±0.0, 18.°06S×178.°47W, h560km, mB5.0/11, mb4.6/14*

*NEIC **03** 04:14:44.3±1.0, 17.°67S±0.°10×178.°8W±0.°1, h531km±6km, mb4.5/167, Error ellipse: s-maj=17.0km s-min=12.5km az=126.0*

*IDC **03** 04:14:46.2±0.6, 17.°72S×178.°94W, h551km±7km, mb3.9/24, mb1 4.0/25, mb1mx3.9/38, mbtmp4.8/25, Error ellipse: s-maj=12.1km s-min=7.8km az=137.0*

ISC 03 04:14:45.0±0.3**, 17.°70S**±0.°06×**178.°83W**±0.°06**, h539**km**, n286,** σ**0.s86**/240**, mb4.5**/100**, 10C-10D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.97**	**269**	P	**P**	**04 16 01.9**	**+2.9**
AFI	**Afiamalu**	**7.77**	**62**	P	**P**	**04 16 37.9**	**-2.3**
NIUE	**Niue**	**8.57**	**101**	P	**P**	**04 16 49.2**	**+1.1**
	baz=8.5,SNR=15						
NIUE	**Niue**	**8.57**	**101**	P	**P**	**04 16 47.1**	**-1.0**
FUNA	**Funafuti**	**9.31**	**348**	P	**P**	**04 16 55.2**	**-0.6**
DZM	**Mont Dzumac**	**14.51**	**250**	P	**P**	**04 17 48.5**	**-1.2**
	3.1nm,0.3s,baz=292,slow=19,SNR=35						
DZM	**Mont Dzumac**	**14.51**	**250**	P	**P**	**04 17 49.0**	**-0.7**
KNTN	**Kanton**	**16.39**	**26**	P	**P**	**04 18 07.5**	**-1.2**
NFK	**Norfolk Island**	**16.57**	**225**	P	**P**	**04 18 12.5**	**+2.3**
	baz=17						
TARA	**Tarawa**	**20.60**	**336**	P	**P**	**04 18 46.2**	**-1.0**
URZ	**Urewera**	**20.79**	**189**	P	**P**	**04 18 47.2**	**-1.4**
	8.2nm,0.3s,baz=260,slow=2.8,SNR=31						
URZ				S	**S**	**04 22 01.6**	**-4.2**
	13nm,0.7s,baz=200,slow=15,SNR=7.7						
URZ	**Urewera**	**20.79**	**189**	P	**P**	**04 18 47.5**	**-1.1**
KHZ	**Kahutara**	**25.48**	**193**	P	**P**	**04 19 29.0**	**-1.4**

LTZ Lake Taylor 26.12 195 P P 04 19 35.0 -1.0
OXZ Oxford 26.69 195 P P 04 19 39.7 -1.3
RPZ Rata Peaks 27.31 196 P P 04 19 45.6 -0.8
6.2nm,0.4s,baz=18,slow=3.4,SNR=6.3
FOZ Fox Glacier 27.49 198 P P 04 19 47.6 -0.3
WKZ Wanaka 28.90 198 P P 04 19 59.7 -0.7
EIDS Eidsvold 28.96 249 P P 04 20 01.1 0.0
baz=29,SNR=20
EIDS Eidsvold 28.96 249 P P 04 20 01.0 -0.2
MLZ Mavora Lakes 29.66 199 P P 04 20 07.3 +0.3
ARMA Armidale 29.70 239 P P 04 20 08.6 +1.0
baz=30,SNR=60
ARMA Armidale 29.70 239 P P 04 20 08.0 +0.4
MGCD Mangrove Creek 31.08 234 P P 04 20 20.5 +1.1
baz=31,SNR=40
RMQ Roma 31.21 248 P P 04 20 21.3 +0.8
baz=31,SNR=15
CTA Charters Tower 33.08 260 P P 04 20 36.0 -0.5
32nm,0.9s,baz=92,slow=11,SNR=22
CTAO Charters Tower 33.08 260 P P 04 20 36.2 -0.4
CNB Canberra Magne 33.23 232 P P 04 20 38.6 +0.9
baz=33,SNR=65
CAN Canberra 33.51 232 P P 04 20 40.1 0.0
YNG Young 33.59 234 P P 04 20 41.6 +1.0
baz=34,SNR=7.5
PMG Port Moresby 34.02 280 P P 04 20 44.7 +0.2
CMSA Cobar Meteorol 34.90 240 P P 04 20 52.1 +0.5
baz=35,SNR=16
MTSU Mount Surprise 35.03 263 P P 04 20 52.8 -0.2
baz=35,SNR=14
QLP Quilpie 35.23 249 P P 04 20 54.4 -0.1
baz=35,SNR=6.3
COEN Coen 36.70 270 P P 04 21 07.1 +0.3
baz=37,SNR=4.3
TOO Toolangi 36.99 230 P P 04 21 09.6 +0.7
baz=37,SNR=24
TOO Toolangi 36.99 230 P P 04 21 09.2 +0.3
MOO Moorlands 37.97 222 P P 04 21 17.8 +1.0
baz=38,SNR=5.3
STKA Stephens Creek 38.38 241 P P 04 21 21.0 +0.7
baz=38,SNR=69
STKA Stephens Creek 38.38 241 P P 04 21 20.6 +0.4
59nm,0.7s,baz=83,slow=10.0,SNR=109
STKA Stephens Creek 38.38 241 P P 04 21 20.2 -0.1
STKA IAmb IAmb 04 21 22.1
comp=Z,22nm,1.0s
QIS Mount Isa 39.30 259 P P 04 21 27.6 -0.3
baz=39,SNR=5.5
ARPS Mount Arapiles 39.45 233 P P 04 21 29.1 +0.3
baz=40,SNR=7.4
HTT Hallett 40.90 239 P P 04 21 41.0 +0.4
baz=41,SNR=41
JAY Jayapura 42.46 286 P P 04 21 53.7 +0.6
comp=Z,12nm,0.4s,baz=141,slow=7.0,SNR=9.7
GENI Genyem 42.92 286 P P 04 21 58.0 +1.3
comp=Z,2µmcomp=Z,82nm,1.0s
BBOO Buckleboo 43.15 241 P P 04 21 58.2 -0.1
baz=43,SNR=28
BBOO Buckleboo 43.15 241 P P 04 21 58.0 -0.3
HMH Humu'ula Sheep 43.59 33 P P 04 22 01.8 -0.3
HPAH Hawaii Prepara 43.84 32 P P 04 22 01.7 -2.0
WB2 Warramunga Arr 44.26 259 P P 04 22 05.8 -1.3
WRAB Tennant Creek 44.26 259 P P 04 22 05.9 -1.2
WRA Warramunga Arr 44.27 259 P P 04 22 06.0 -1.1
comp=Z,8.1nm,0.3s,baz=91,slow=7.9,SNR=275
WRA S S 04 27 59.5 -2.6
comp=Z,0.5nm,0.7s,baz=94,slow=13,SNR=2.0
AS31 Alice Springs 44.46 254 P P 04 22 08.2 -0.4
ASAR Alice Springs 44.46 254 P P 04 22 08.2 -0.3
comp=Z,96nm,0.5s,baz=90,slow=8.1,SNR=1219
ASAR ScP ScP 04 26 42.1 +0.7
comp=Z,0.9nm,0.4s,baz=97,slow=4.3,SNR=4.4
ASAR S S 04 28 00.9 -3.8
comp=Z,4.2nm,1.0s,baz=82,slow=16,SNR=12
KDU Kakadu 47.16 269 P P 04 22 28.6 -0.5
baz=47,SNR=52
MTN Manton Dam 48.40 268 P P 04 22 37.9 -0.6
baz=48,SNR=9.7
WRKA Warakurna 49.52 252 P P 04 22 46.6 -0.1
baz=50,SNR=139
FORT Forrest 49.73 244 P P 04 22 47.6 -0.5
baz=50,SNR=14
KNRA Kununurra 50.11 264 P P 04 22 50.3 -0.7
baz=50,SNR=16
SIJI Sorong 51.79 283 P P 04 23 03.4 0.0
comp=Z,27nm,0.4s,baz=67,slow=6.6,SNR=23
FITZ Fitzroy Crossi 52.66 260 P P 04 23 09.5 0.0
baz=53,SNR=68
FITZ Fitzroy Crossi 52.66 260 P P 04 23 09.5 0.0
KMBL Kambalda 55.04 244 P P 04 23 25.3 -0.8
baz=55,SNR=7.8
SOEI Soe 55.66 270 P P 04 23 31.6 +0.7
comp=Z,1µmcomp=Z,115nm,1.0s
SOEI Soe 55.66 270 P P 04 23 31.2 +0.4
TNTI Ternate 56.02 283 P P 04 23 33.1 -0.1
TNTI IAmb IAmb 04 23 34.3
comp=Z,32nm,1.0s
MBWA Marble Bar 57.73 256 P P 04 23 44.1 -0.7
MEEK Meekatharra 58.13 249 P P 04 23 46.6 -0.9
baz=58,SNR=19
EDFI Ende, Flores 58.38 271 P P 04 23 47.3 -2.1
comp=Z,14nm,1.0s
KLBR Kellerberrin 58.56 243 P P 04 23 49.6 -0.7
baz=59,SNR=16
NWAO Narrogin (SRO) 58.95 242 P P 04 23 52.8 -0.1
BLDU Ballidu 59.51 245 P P 04 23 56.0 -0.7
baz=60,SNR=9.1
LUWI Luwuk 59.67 279 P P 04 23 57.8 -0.1
MUN Mundaring 59.86 243 P P 04 23 59.1 +0.1
baz=60,SNR=3.7
MORW Morawa 60.19 246 P P 04 24 00.6 -0.6
baz=60,SNR=4.8
VNDA Vanda 60.62 185 P P 04 24 04.7 +1.5
comp=Z,2.7nm,0.7s,baz=356,slow=7.9,SNR=11
VNDA Vanda 60.62 185 P P 04 24 04.2 +1.0
APSI Ampana 60.77 279 P P 04 24 06.4 +1.1
comp=Z,591nmcomp=Z,43nm,1.1s
BNSI Bone 61.12 275 P P 04 24 07.7 +0.2
comp=Z,25nm,1.1s
SPSI Sidrap Palu 61.57 275 P P 04 24 09.5 -1.0
comp=Z,4µmcomp=Z,16nm,1.2s
GIRL Giralia 62.57 253 P P 04 24 17.3 +0.4
baz=63,SNR=6.1
TBP Tagbilaran 62.80 291 eP P 04 24 26.2 +7.8
MPSI Mapaga 62.84 280 P P 04 24 18.7 0.0
comp=Z,17nm,0.9s
CASY Casey 66.16 205 P P 04 24 39.0 +0.3
MJAR Matsushiro Arr 67.50 324 P P 04 24 47.2 -0.3
comp=Z,5.3nm,0.5s,baz=137,slow=5.6,SNR=23
MAJO Matsushiro 67.50 324 P P 04 24 47.1 -0.5
MAJO IAmb IAmb 04 24 47.7
comp=Z,11nm,1.1s
MAT Matsushiro 67.50 324 P P 04 24 47.1 -0.4
PCJI Pacitan 68.55 268 P P 04 24 54.3 -0.1
comp=Z,75nm,1.0s
ASAJ Asahikawa 70.90 332 P P 04 25 08.9 +1.2
comp=Z,5.6nm,0.4s,baz=237,slow=6.4,SNR=5.2
KSM Kuching 72.25 277 IAmb IAmb 04 25 18.0
comp=Z,22nm,0.9s
KSM Kuching 72.25 277 P P 04 25 18.0 +1.7
QSPA South Pole Qui 72.36 180 P P 04 25 16.9 +0.8
PETK Petropavlovsk- 73.37 345 P P 04 25 21.6 -0.2
comp=Z,16nm,0.9s,baz=135,slow=8.8,SNR=52
USRK Ussuriysk Ar. 76.21 326 P P 04 25 38.1 +0.2
comp=Z,2.5nm,0.8s,baz=190,slow=8.8,SNR=5.4
KMRM Mail Ridge 77.11 40 IAmb IAmb 04 25 45.5
comp=Z,19nm,1.0s
NJ2 Nanjing 77.49 310 eP P 04 25 46.6 +1.4
NJ2 pmax pmax
comp=Z,14nm,0.5s
OHAK Old Harbor 77.62 14 IAmb IAmb 04 25 46.2
comp=Z,23nm,0.9s
KDAK Kodiak Island 78.30 14 P P 04 25 48.7 -0.2
comp=Z,12nm,0.9s,baz=202,slow=3.5,SNR=22
KDAK Kodiak Island 78.30 14 P P 04 25 49.2 +0.2
KDAK IAmb IAmb 04 25 50.8
comp=Z,28nm,1.1s
MYKOM Kota Tinggi 78.47 276 P P 04 25 52.0 +1.1
MDPB Devils Postpil 78.61 44 IAmb IAmb 04 25 53.3
comp=Z,10nm,0.9s
YBH Yreka Blue Hor 78.62 39 P P 04 25 51.9 +0.7
comp=Z,5.1nm,0.9s,baz=302,slow=1.9,SNR=11
YBH pP pwP 04 27 49.4 +1.0
comp=Z,1.5nm,0.7s,baz=293,slow=8.9,SNR=3.8
PNTR Pine Nut 79.06 43 IAmb IAmb 04 25 55.7
comp=Z,15nm,0.8s

NVAR Mina Array Bea 79.55 44 P P 04 25 57.1 +0.7
comp=Z,4.0nm,0.8s,baz=224,slow=8.9,SNR=30
NVAR pP pwP 04 27 53.2 -0.7
comp=Z,0.1nm,0.5s,baz=322,slow=28,SNR=1.7
CN2 Changchun 79.61 323 eP P 04 25 57.6 +1.3
CN2 pmax pmax
comp=Z,20nm,1.0s
NV11 Mina Array Sit 79.65 44 P P 04 25 57.5 +0.6
KLR Kul'dur 79.72 330 P P 04 25 57.5 +0.7
comp=Z,2.7nm,1.0s,baz=173,slow=2.3,SNR=4.7
CNPM China Poot 80.17 14 P P 04 25 59.0 0.0
CNPM IAmb IAmb 04 25 59.7
comp=Z,12nm,0.9s
MOD Modoc Plateau 80.19 40 P P 04 25 59.0 -0.6
MOD IAmb IAmb 04 26 01.3
comp=Z,15nm,1.3s
K05A Summer Lake 80.29 39 IAmb IAmb 04 26 02.2
comp=Z,17nm,1.1s
BRLK Bradley Lake 80.47 14 IAmb IAmb 04 26 01.0
comp=Z,16nm,0.9s
SHPR Sheep Range 80.70 47 P P 04 26 02.8 +0.4
PINE Pine Mountain 80.88 38 IAmb IAmb 04 26 05.3
comp=Z,17nm,1.1s
MA2 Magadan 80.89 345 P P 04 26 01.4 -1.2
MA2 IAmb IAmb 04 26 02.7
comp=Z,9.4nm,0.9s
SEW Seward 81.11 14 IAmb IAmb 04 26 03.9
comp=Z,13nm,1.0s
TUC Tucson 81.89 52 P P 04 26 09.1 +0.6
I07A Izee 81.90 39 IAmb IAmb 04 26 10.2
comp=Z,8.4nm,0.9s
RC01 Rabbit Creek A 81.91 14 IAmb IAmb 04 26 08.3
comp=Z,18nm,1.1s
IPM Ipoh 81.99 277 P P 04 26 08.7 -0.6
IPM IAmb IAmb 04 26 10.7
comp=Z,20nm,1.1s
IPM Ipoh 81.99 277 P P 04 26 10.0 +0.7
J08A Circle Bar Ran 82.12 40 IAmb IAmb 04 26 11.2
comp=Z,11nm,1.0s
X16A Lo Mia Camp, P 82.36 50 IAmb IAmb 04 26 13.4
comp=Z,8.8nm,0.9s
PMR Palmer 82.50 14 IAmb IAmb 04 26 10.6
comp=Z,11nm,1.1s
KULM Kulim 82.60 278 P P 04 26 12.7 +0.3
KULM IAmb IAmb 04 26 14.0
comp=Z,14nm,1.4s
KULM Kulim 82.60 278 P P 04 26 14.0 +1.6
ANM Nome 82.66 6 IAmb IAmb 04 26 13.0
comp=Z,25nm,1.6s
U15A North Rim 82.68 48 IAmb IAmb 04 26 15.1
comp=Z,12nm,0.9s
G08A Pilot Rock 82.89 38 IAmb IAmb 04 26 14.9
comp=Z,13nm,1.2s
WUAZ Wupatki 82.92 49 IAmb IAmb 04 26 16.0
comp=Z,9.9nm,1.1s
WAX Waxell Ridge 83.11 17 IAmb IAmb 04 26 15.0
comp=Z,18nm,0.8s
HAWA Hanford 83.18 37 IAmb IAmb 04 26 16.2
comp=Z,12nm,1.1s
CRQM Cirque 83.28 17 IAmb IAmb 04 26 15.8
comp=Z,21nm,1.0s
RPSI Rantau Prapat 83.43 275 P P 04 26 15.9 -0.6
RPSI Rantau Prapat 83.43 275 P P 04 26 15.9 -0.6
RPSI IAmb IAmb 04 26 17.1
comp=Z,13nm,1.0s
PSI Prapat 83.46 275 P P 04 26 15.9 -0.9
comp=Z,4.3nm,0.4s,baz=172,slow=2.7,SNR=4.4
VRDI Verde Repeater 83.59 16 IAmb IAmb 04 26 17.2
comp=Z,14nm,1.0s
BMO Blue Mountains 83.64 39 IAmb IAmb 04 26 18.4
comp=Z,25nm,1.9s
GLB Gilahina Butte 83.68 16 IAmb IAmb 04 26 17.3
comp=Z,11nm,0.7s
BALM Baldy 83.74 17 IAmb IAmb 04 26 17.8
comp=Z,11nm,0.7s
MFID Camas Ranch 83.78 41 IAmb IAmb 04 26 19.5
comp=Z,11nm,1.1s
KTH Kantishna Hill 83.86 12 IAmb IAmb 04 26 17.1
comp=Z,13nm,0.9s
MAW Mawson 83.92 200 P P 04 26 18.0 +0.1
comp=Z,5.0nm,0.7s,baz=114,slow=8.6,SNR=8.6
MAW Mawson 83.92 200 P P 04 26 18.2 +0.3
BARN Barnard Glacie 83.95 17 IAmb IAmb 04 26 19.2
comp=Z,18nm,1.0s
CTGM Chitina Glacie 83.96 17 IAmb IAmb 04 26 19.1
comp=Z,14nm,0.8s
DHY Denali Highway 84.19 14 IAmb IAmb 04 26 19.1
comp=Z,10nm,1.1s
F10A Beach Ranch, E 84.28 38 IAmb IAmb 04 26 21.3
comp=Z,10nm,0.9s
GSI Gunungsitoli 84.29 273 P P 04 26 21.1 +0.2
GSI IAmb IAmb 04 26 22.7
comp=Z,12nm,0.6s
MCK McKinley 84.43 13 IAmb IAmb 04 26 20.6
comp=Z,13nm,0.8s
RIDG Independent Ri 85.35 14 IAmb IAmb 04 26 25.4
comp=Z,13nm,1.0s
HDA Harding Lake 85.45 13 IAmb IAmb 04 26 25.5
comp=Z,5.8nm,0.8s
DOT Dot Lake 85.47 15 IAmb IAmb 04 26 25.9
comp=Z,11nm,1.0s
CCB Clear Creek Bu 85.47 13 IAmb IAmb 04 26 26.0
comp=Z,16nm,1.2s
COLA College 85.66 13 P P 04 26 25.2 -1.0
WHY Whitehorse 85.70 20 IAmb IAmb 04 26 28.1
comp=Z,12nm,1.2s
ILAR Eielson Array 85.77 13 P P 04 26 25.8 -1.0
comp=Z,3.1nm,0.7s,baz=224,slow=5.2,SNR=58
DLBC Dease Lake 85.80 23 IAmb IAmb 04 26 28.9
comp=Z,24nm,1.5s
XAN Xi'an 85.81 308 P P 04 26 28.8 +1.0
XAN pmax pmax
comp=Z,6.0nm,1.0s
XAN pmax pmax
comp=Z,28nm,3.5s
BILL Bilibino 86.18 354 P P 04 26 28.9 +0.2
BILL IAmb IAmb 04 26 29.6
comp=Z,13nm,1.0s
TX32 Lajitas Array 86.22 58 IAmb IAmb 04 26 32.8
comp=Z,8.6nm,1.1s
TXAR Lajitas Array 86.23 58 P P 04 26 31.2 +1.3
comp=Z,3.3nm,0.8s,baz=222,slow=5.9,SNR=45
TXAR pP pwP 04 28 31.1 +1.2
comp=Z,0.7nm,0.9s,baz=208,slow=7.1,SNR=5.6
ANMO Albuquerque 86.28 52 P P 04 26 31.1 +0.9
HHC Hu-ho-hao-te 86.84 315 P P 04 26 32.8 +0.2
HHC pmax pmax
comp=Z,14nm,0.9s
HHC pmax pmax
comp=Z,44nm,7.3s
TPAW Teton Pass 86.90 42 P P 04 26 34.3 +1.3
TPAW IAmb IAmb 04 26 35.0
comp=Z,7.0nm,1.1s
REDW Red Top Meadow 86.91 43 IAmb IAmb 04 26 34.9
comp=Z,9.5nm,1.1s
DAWY Dawson 87.00 16 IAmb IAmb 04 26 33.7
comp=Z,21nm,1.2s
SNOW Snow King Moun 87.02 43 IAmb IAmb 04 26 35.5
comp=Z,11nm,1.1s
IMW Indian Meadow 87.10 42 IAmb IAmb 04 26 35.9
comp=Z,7.4nm,0.9s
EGAK Eagle 87.12 15 IAmb IAmb 04 26 33.3
comp=Z,7.6nm,1.1s
O20A White River Ci 87.20 46 IAmb IAmb 04 26 38.4
comp=Z,16nm,1.8s
FLWY Flagg Ranch 87.34 42 IAmb IAmb 04 26 37.2
comp=Z,10.0nm,1.1s
BW06 Boulder Array 87.48 44 IAmb IAmb 04 26 36.8
comp=Z,12nm,1.4s
PDAR Pinedale Array 87.48 44 P P 04 26 35.7 0.0
PDAR pP pwP 04 28 35.7 -0.2
comp=Z,1.0nm,0.9s,baz=242,slow=3.2,SNR=4.4
H17A Grant Village 87.56 42 IAmb IAmb 04 26 39.0
comp=Z,4.5nm,0.9s
LKWY Lake 87.75 42 IAmb IAmb 04 26 40.1
comp=Z,8.1nm,1.1s
CMAR Chiang Mai Arr 88.43 290 P P 04 26 41.8 +1.4
comp=Z,0.8nm,0.3s,baz=107,slow=3.3,SNR=6.3
TOLK Toolik Lake Re 88.65 10 IAmb IAmb 04 26 41.1
comp=Z,19nm,1.8s
RLMT Red Lodge 88.73 42 IAmb IAmb 04 26 43.5
comp=Z,4.8nm,1.1s
SYO Syowa Base 89.27 193 eP P 04 26 41.2 -2.1
EPYK Eagle Plains 89.51 16 IAmb IAmb 04 26 44.9
comp=Z,10nm,1.1s
ABTX Abilene, Hawle 90.64 56 IAmb IAmb 04 26 51.8

comp=Z,8.1nm,0.9s
SNAA Sanae 90.82 179 P P 04 26 49.8 -0.7
SNAA Sanae 90.82 179 P P 04 26 49.6 -0.9
VNA3 Neumayer Olymp 90.97 177 P P 04 26 51.1 -0.1
VNA1 Neumayer--Stat 91.64 177 P P 04 26 54.3 +0.1
INK Inuvik 91.79 15 P P 04 26 53.9 -0.8
comp=Z,3.7nm,0.9s,baz=210,slow=4.7,SNR=20
INK Inuvik 91.79 15 IAmb IAmb 04 26 55.0
comp=Z,7.3nm,1.0s
YKA Yellowknife Ar 94.31 25 P P 04 27 05.7 -0.7
comp=Z,2.6nm,0.9s,baz=238,slow=4.2,SNR=24
YKA pP pwP 04 29 09.2 +1.6
comp=Z,0.3nm,0.8s,baz=235,slow=4.5,SNR=3.1
KSH Kashi 112.63 306 PKP PKiKP 04 32 18.4 -2.2
KSH sPKP 04 35 17.0
ARCES ARCESS Array B 126.04 350 PKP PKPdf 04 32 45.2 -0.2
comp=Z,1.9nm,1.0s,baz=48,slow=1.8,SNR=6.3
FINES FINESS Array B 132.88 344 SKPbc SKPbc 04 35 35.7 -0.1
comp=Z,2.7nm,0.9s,baz=36,slow=3.5,SNR=7.6
BSEG Bad Segeberg 143.14 351 ePKPbc PKPab 04 33 15.2 +0.1
baz=15,slow=2.8
ILGA Ilgaz 143.65 317 PKPdf 04 33 19.1 0.0
BUR08 Bucovina Ar. S 144.22 332 PKPbc 04 33 19.1 -0.3
BURAR Bucovina Array 144.24 332 ⇑P PKPdf 04 33 20.3 +0.6
OJC Ojcow 144.27 339 ePKP PKPab 04 33 19.7 0.0
OJC Ojcow 144.27 339 PKPbc 04 33 19.1 -0.2
BIZ Bicaz 144.33 330 ⇑P PKPab 04 33 20.3 +0.3
BR131 Keskin Array S 144.35 315 PKPdf 04 33 20.3 +0.1
BRTR Keskin Array B 144.35 315 PKP PKPbc 04 33 20.1 +0.1
comp=Z,0.6nm,0.4s,baz=88,slow=2.2,SNR=8.6
TESR Tescani 144.37 329 ⇑P PKPdf 04 33 20.0 +0.1
KOLS Kolonicke sedl 144.45 336 ePKP PKPab 04 33 20.4 0.0
CFR Carcaliu 144.54 326 ⇓P PKPab 04 33 21.1 +0.3
NRDL Niedersach Rie 144.57 351 ePKPbc PKPdf 04 33 20.0 0.0
baz=15,slow=2.8
TOPG Topolog 144.61 326 ⇓P PKPab 04 33 21.2 +0.1
NIE Niedzica 144.78 338 ePKP PKPbc 04 33 21.1 +0.2
VRI Vrincioaia 144.79 328 ⇑P PKPab 04 33 21.9 +0.1
KSP Ksiaz 144.79 343 ePKP PKPab 04 33 21.3 -0.3
ASSE Asse, Remlinge 144.83 350 ePKPbc PKPbc 04 33 20.8 -0.1
baz=15,slow=2.8
PLOR Plostina 144.84 329 ⇑P PKPbc 04 33 21.2 0.0
TIRR Tirgusor 144.86 325 PKPab 04 33 22.2 +0.1
HARR Harsova 144.97 326 ⇑P PKPab 04 33 22.4 -0.1
TRPA Tarpa 144.99 335 ⇓P PKPbc 04 33 21.9 +0.3
OSTC Ostas 145.07 343 ePKP PKPab 04 33 22.5 -0.2
IBBN Ibbenburen 145.08 353 ePKPbc PKPbc 04 33 21.7 +0.1
baz=15,slow=2.8
CHVC Chvalec 145.09 343 ePKP PKPbc 04 33 22.0 +0.2
CLZ Clausthal 145.16 350 ePKPbc PKPbc 04 33 22.1 0.0
baz=15,slow=2.8
CLL Collm 145.17 347 i PKPbc PKPab 04 33 22.8 -0.2
comp=Z,53nm,1.7s
CLL i PKiKP PKiKP 04 33 27.7 +2.5
CLL Collm 145.17 347 ePKPbc PKPab 04 33 22.9 -0.1
baz=15,slow=2.8
DPC Dobruska-Polom 145.23 343 ePKP PKPbc 04 33 22.6 +0.3
LANS Liptovska Anna 145.30 339 ePKP PKPab 04 33 24.0 +0.3
KRLC Kraliky 145.34 342 ePKP PKPbc 04 33 22.5 -0.1
BRG Berggiesshubel 145.36 346 ePKP PKPbc 04 33 22.5 -0.1
comp=Z,9.4nm,1.0s
BRG e 04 36 11.4
comp=Z,8.3nm,1.3s
BRG Berggiesshubel 145.36 346 ePKPbc PKPbc 04 33 22.7 +0.1
baz=15,slow=2.8
DOPR Dopca 145.37 330 ⇑P PKPab 04 33 23.7 -0.4
MORC Moravsky Berou 145.38 341 ePKP PKPbc 04 33 22.4 -0.4
MORC Moravsky Berou 145.38 341 ⇓P PKPbc 04 33 22.3 -0.4
MLR Muntele Rosu 145.44 329 ⇑P PKPab 04 33 23.4 +0.2
MLR Muntele Rosu 145.44 329 PKPbc 04 33 23.4 +0.2
FBE Freiberg 145.45 346 ePKPbc PKPbc 04 33 23.3 +0.5
baz=15,slow=2.8
MBAR Mbarara 145.68 241 PKPbc 04 33 24.9 0.0
DRGR 145.97 333 ⇓P PKPbc 04 33 24.9 +0.3
PRU Pruhonice 146.03 344 ePKP PKPbc 04 33 24.9 +0.4
GOPC GO Pecny, Ondr 146.04 344 ePKP PKPbc 04 33 24.5 -0.1
VYHS Vyhne 146.08 339 ePKP PKPbc 04 33 25.5 +0.8
VYHS e 04 33 27.4
VRAC Vranov 146.09 342 ePKP PKPbc 04 33 24.7 0.0
VRAC Vranov 146.09 342 ⇓P PKPbc 04 33 24.9 +0.2
PLN Plauen 146.12 347 ePKPbc PKPbc 04 33 24.9 +0.1
baz=15,slow=2.8
TANN Tannenbergstha 146.13 347 ePKPbc PKPbc 04 33 24.9 +0.1
baz=15,slow=2.8
JAVC Velka Javorina 146.15 340 ePKP PKPbc 04 33 25.7 +0.7
ARR Arges 146.17 330 ⇑P PKPbc 04 33 25.9 +0.8
GUNZ Gunzen 146.20 347 ePKPbc PKPbc 04 33 25.2 +0.1
baz=15,slow=2.8
GUNZ ePKPab PKiKP 04 33 27.5 +0.1
baz=15,slow=4.0
WERN Wernitzgruen 146.26 347 ePKPab PKiKP 04 33 27.7 +0.1
baz=15,slow=4.0
NKC Novy Kostel 146.30 347 ePKP PKiKP 04 33 27.9 +0.3
KRUC Moravsky 146.36 342 ePKP PKPbc 04 33 25.1 -0.4
PBCC Pribram 146.45 345 ePKP PKPab 04 33 28.3 +0.1
MODS Modra-Piesok 146.70 340 ePKP PKPbc 04 33 27.0 +0.5
ROTZ Rotzenmuhle 146.79 347 ePKPbc PKPbc 04 33 26.9 +0.2
baz=15,slow=2.8
ROTZ ePKPab PKPab 04 33 29.7 +0.2
baz=15,slow=4.0
SIRR Siria 146.83 334 ⇓P PKPbc 04 33 27.2 +0.4
ZST Bratislava 146.91 340 ePKP PKPdf 04 33 24.4 +0.3
GZR Gura Zlata 147.02 332 ⇓P PKPbc 04 33 27.2 -0.2
TNS Taunus Mts 147.03 351 ePKPbc PKPbc 04 33 27.4 0.0
baz=15,slow=2.8
TNS ePKPab PKPab 04 33 30.4 -0.2
baz=15,slow=4.0
KHC Kasperske Hory 147.07 345 ePKP PKPbc 04 33 27.6 +0.2
KHC ex x 04 33 31.0
KHC Kasperske Hory 147.07 345 PKPbc 04 33 27.6 +0.2
WET Wettzell 147.23 346 ePKPbc PKPbc 04 33 27.8 0.0
baz=15,slow=2.8
WET ePKPab PKPab 04 33 31.7 +0.4
baz=15,slow=4.0
ELND Elena 147.25 325 ⇑P PKPab 04 33 32.3 +0.6
GEC2 GERESS Array S 147.30 345 ePKPbc PKPbc 04 33 28.1 0.0
baz=15,slow=2.8
GEC2 GERESS Array S 147.30 345 PKPbc 04 33 28.1 0.0
GERES GERESS Array B 147.30 345 PKPbc PKPbc 04 33 27.9 -0.3
comp=Z,1.7nm,0.5s,baz=21,slow=3.3,SNR=16
BZS Buzias 147.36 333 ⇓P PKPbc 04 33 28.4 +0.1
CONA Conrad Observa 147.54 341 ePKiKP PKPbc 04 33 29.1 +0.4
comp=Z,7.6nm,1.0s,SNR=6.3
DOU Dourbes 147.56 356 PKiKP PKPbc 04 33 28.5 -0.1
WLF Walferdange 147.86 354 PKiKP PKiKP 04 33 30.3 -0.5
WLF Walferdange 147.86 354 ePKPbc PKPbc 04 33 30.0 +0.6
baz=15,slow=2.8
WLF ePKPab PKPab 04 33 34.1 +0.3
baz=15,slow=4.0
STU Stuttgart 148.32 350 ePKPbc PKPbc 04 33 30.8 +0.2
baz=15,slow=2.8
FUR Furstenfeldbru 148.51 347 ePKPbc PKPbc 04 33 30.8 -0.4
baz=15,slow=2.8
FUR ePKPab PKPab 04 33 36.9 +0.3
baz=15,slow=4.0
RJOB Jochberg 148.56 345 ePKPab PKPab 04 33 37.5 +0.6
baz=15,slow=4.0
BFO Black Forest 148.89 351 ePKPbc PKPbc 04 33 31.8 -0.2
baz=15,slow=2.8
BFO ePKPab PKPab 04 33 37.7 -0.5
baz=15,slow=4.0
BFO Black Forest 148.89 351 PKPbc 04 33 32.3 +0.2
SOKA Soboth 148.91 341 ePKPbc PKPbc 04 33 31.1 -1.1
comp=Z,4.8nm,1.1s,SNR=5.0
KBA Koelnbreinsper 149.03 344 ePKPbc PKPbc 04 33 32.2 -0.4
comp=Z,2.6nm,0.5s
UBR Ueberruh 149.21 348 ePKPbc PKPbc 04 33 32.5 -0.4
baz=15,slow=2.8
WATA Walderalm 149.22 346 ePKiKP PKiKP 04 33 33.5 -0.4
comp=Z,2.3nm,0.5s
RETA Reutte 149.26 347 i PKPbc PKPbc 04 33 32.9 -0.1
comp=Z,2.2nm,0.5s
WTTA Wattenberg 149.28 346 ePKiKP PKPbc 04 33 33.1 -0.1
comp=Z,5.2nm,0.5s,SNR=7.9
MOTA Moosalm 149.32 347 ePKPbc PKPbc 04 33 32.9 -0.4
comp=Z,1.8nm,0.4s,SNR=5.2
MYKA Terra Mystica 149.36 343 ePKPbc PKPbc 04 33 32.4 -0.9
comp=Z,1.6nm,0.4s
SQTA Sankt Quirin 149.42 346 ePKPbc PKPbc 04 33 33.2 -0.3
comp=Z,3.4nm,0.7s
ABTA Abfaltersbach 149.55 345 ePKPbc PKPbc 04 33 32.7 -1.1
comp=Z,9.4nm,1.1s,SNR=5.4
DAVA Damuels 149.63 348 ePKiKP PKiKP 04 33 34.7 -0.1
comp=Z,5.0nm,0.9s
FETA Feichten 149.71 347 ePKPbc PKPbc 04 33 32.9 -1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,3.5nm,0.7s,SNR=4.2						
FUORN	**Ofenpass-Fuorn**	**150.19**	**347**		**PKiKP**	**04 33 36.0**	**-0.1**
FNA	**Florina**	**151.15**	**327**		**PKPbc**	**04 33 36.9**	**-0.7**
ESDC	**Sonseca Array**	**157.65**	**10**	PKPab	**PKPab**	**04 34 15.0**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=343,slow=4.8,SNR=5.9						
TORD	**Torodi Ar. Bea**	**175.45**	**187**	PKPab	**PKPab**	**04 35 34.9**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=165,slow=4.5,SNR=4.4						

*IDC **03** 04:20:20.5±1.2, 29°.78N×138°.65E, h431km±14km, mb3.0/10, mb1 3.1/14, mb1mx2.9/48, mbtmp3.8/14, Error ellipse: s-maj=24.5km s-min=13.4km az=85.0*
*JMA **03** 04:20:22.5±0.1, 30°.02N×139°.55E, h427km, M3.3*
ISC 03 04:20:19.9±0.7**, 29°.85N**±0°.07×**139°.0E**±0°.1**, h421**km**, n24,** σ**2s.08**/30**, mb3.3**/10**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**3.33**	**12**	P	**P**	**04 21 30.6**	**+3.5**
	12nm,0.3s,baz=66,slow=22,SNR=8.6						
CBIJ	**Chichi jima**	**3.93**	**133**	P	**P**	**04 21 34.2**	**+1.6**
CBIJ				*e*S	**S**	**04 22 30.8**	**-1.0**
JCJ	**Chichijima**	**3.93**	**133**	P	**P**	**04 21 35.0**	**+2.4**
	3.4nm,0.3s,baz=347,slow=22,SNR=10						
JCJ				S	**S**	**04 22 30.8**	**-1.0**
	18nm,0.3s,baz=285,slow=22,SNR=16						
JIE	**Ise**	**4.92**	**337**	P	**P**	**04 21 46.6**	**+4.8**
BSO1	**Boso 1**	**5.08**	**19**	P	**P**	**04 21 44.5**	**+1.7**
BSO1				*e*S	**S**	**04 22 49.4**	**-1.3**
BSO3	**Boso 3**	**5.10**	**14**	*e*S	**S**	**04 22 50.2**	**-1.5**
JNY	**Yasuok**	**5.57**	**351**	P	**P**	**04 21 52.6**	**+4.1**
JHU	**Hanno**	**5.99**	**2**	P	**P**	**04 21 54.1**	**+1.3**
JHU				*e*S	**S**	**04 23 07.1**	**-1.9**
JRY	**Ryogami san**	**6.15**	**359**	P	**P**	**04 21 56.9**	**+2.4**
MJAR	**Matsushiro Arr**	**6.70**	**355**	P	**P**	**04 22 01.0**	**+0.1**
	0.0nm,0.3s,baz=175,slow=11,SNR=2.9						
JHO	**Hitachi**	**6.87**	**11**	P	**P**	**04 22 04.5**	**+1.8**
JHO				S	**S**	**04 23 24.4**	**-2.0**
JFK	**Kawauchi**	**7.66**	**11**	*e*S	**S**	**04 23 39.8**	**-2.5**
JMK	**Ichinoseki**	**9.26**	**11**	P	**P**	**04 22 30.9**	**+2.1**
JMK				*e*S	**S**	**04 24 13.6**	**-1.6**
USRK	**Ussuriysk Ar.**	**15.36**	**341**	P	**P**	**04 23 35.8**	**+0.4**
	baz=147,slow=10,SNR=11						
ZALV	**Zalesovo Beam**	**45.56**	**318**	P	**P**	**04 27 57.4**	**-2.5**
	0.5nm,0.3s,baz=66,slow=11,SNR=2.2						
MKAR	**Makanchi Array**	**46.56**	**308**	P	**P**	**04 28 06.1**	**-1.7**
	0.2nm,0.3s,baz=89,slow=10.0,SNR=4.8						
WRA	**Warramunga Arr**	**49.71**	**186**	P	**P**	**04 28 30.9**	**-0.9**
	0.5nm,0.3s,baz=14,slow=7.0,SNR=8.5						
ASAR	**Alice Springs**	**53.44**	**186**	P	**P**	**04 28 57.6**	**-1.3**
	0.7nm,0.5s,baz=0.1,slow=5.8,SNR=4.8						
KDAK	**Kodiak Island**	**53.90**	**38**	P	**P**	**04 29 03.2**	**+1.5**
	3.9nm,0.9s,baz=266,slow=2.3,SNR=3.1						
INK	**Inuvik**	**61.71**	**25**	P	**P**	**04 29 56.1**	**+1.0**
	0.3nm,0.4s,baz=295,slow=5.2,SNR=3.7						
ARCES	**ARCESS Array B**	**70.01**	**340**	P	**P**	**04 30 47.1**	**-0.1**
	2.8nm,0.9s,baz=68,slow=11,SNR=2.0						
YKA	**Yellowknife Ar**	**71.05**	**28**	P	**P**	**04 30 54.1**	**+0.6**
	0.2nm,0.4s,baz=81,slow=21,SNR=6.6						
FINES	**FINESS Array B**	**74.23**	**333**	P	**P**	**04 31 11.3**	**-0.7**
	1.0nm,0.7s,baz=48,slow=2.8,SNR=5.6						
BRTR	**Keskin Array B**	**82.07**	**311**	P	**P**	**04 31 54.4**	**-0.8**
	0.4nm,0.7s,baz=72,slow=4.0,SNR=3.6						

*NEIC **03** 04:26:22.8±1.0, 14°.86N±0°.04×92°.95W±0°.06, h72km±10km, Error ellipse: s-maj=8.4km s-min=5.2km az=61.0*
*MEX **03** 04:26:23.8±0.5, 14°.79N×92°.96W, h66km±11km, MD4.0*
*GCG **03** 04:26:26.0±0.4, 15°.18N×92°.71W, h50km±999km, MD3.9*
ISC 03 04:26:24.3±1.6**, 14°.91N**±0°.07×**92°.97W**±0°.06**, h55**km±18km**, n15,** σ**0s.82**/24**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.68**	**90**		**Pn**	**04 26 37.5**	**-0.5**
THIG					**Sn**	**04 26 48.3**	**+0.3**
THIG		**0.68**	**90**	*e*P	**Pn**	**04 26 37.5**	**-0.5**
THIG				*i* S	**Sn**	**04 26 47.6**	**-0.3**
PCIG		**0.83**	**343**		**Pn**	**04 26 40.0**	**0.0**
PCIG					**Sn**	**04 26 52.3**	**+0.9**
PCIG		**0.83**	**343**	*i* P	**Pn**	**04 26 40.0**	**0.0**
PCIG				*e*S	**Sn**	**04 26 52.3**	**+0.9**
STG3	**Santiaguito 3,**	**1.36**	**98**	*e*P	**Pn**	**04 26 47.0**	**-0.3**
CCIG	**Comitan**	**1.59**	**30**		**Pn**	**04 26 50.5**	**+0.2**
CCIG					**Sn**	**04 27 10.5**	**+0.8**
CCIG	**Comitan**	**1.59**	**30**	*e*P	**Pn**	**04 26 50.5**	**+0.2**
CCIG				*e*S	**Sn**	**04 27 10.5**	**+0.8**
TGIG		**1.87**	**355**		**Pn**	**04 26 52.6**	**-1.4**
TGIG		**1.87**	**355**	*e*P	**Pn**	**04 26 52.8**	**-1.2**
TGIG				*i* S	**Sn**	**04 27 16.7**	**+0.2**
FUG	**Fuego 3**	**2.11**	**102**	*e*P	**Pn**	**04 26 58.5**	**+1.2**
FUG				*e*S	**Sn**	**04 27 21.8**	**-0.7**
IXG	**Ixpaco**	**2.55**	**106**	*e*P	**Pn**	**04 27 03.9**	**+0.4**
CMIG	**Matias Romero**	**2.85**	**320**		**Pn**	**04 27 07.1**	**-0.2**
CMIG	**Matias Romero**	**2.85**	**320**	*e*P	**Pn**	**04 27 07.1**	**-0.2**
CMIG				*i* S	**Sn**	**04 27 40.8**	**+0.4**
PEIG	**Puerto Escondi**	**4.17**	**286**	*e*P	**Pn**	**04 27 24.4**	**-1.1**
TEIG	**Tepich**	**6.93**	**40**		**Pn**	**04 28 01.6**	**-1.7**

*IDC **03** 04:46:37.3±0.8, 36°.29N×28°.94E, h0km, mb4.0/8, mb1 4.0/18, mb1mx3.7/56, mbtmp3.9/18, ML3.8/10, MS2.7/7, Ms1 2.7/7, ms1mx2.5/51, Error ellipse: s-maj=16.3km s-min=12.6km az=155.0*
*NEIC **03** 04:46:40.4±2.1, 36°.22N±0°.04×28°.97E±0°.06, h10km±2km, mb4.1/2, ML4.1(ISK), ML4.2(THE), Error ellipse: s-maj=8.8km s-min=5.8km az=118.0*
*ATH **03** 04:46:41.9, 36°.37N×28°.89E, h41km±1km, ML3.8/11, Error ellipse: s-maj=3.2km s-min=1.1km az=179.0*
*NIC **03** 04:46:41.7±0.0, 36°.35N×28°.99E, h69km±2km, Ml4.1/5*
*HLW **03** 04:46:42.8, 36°.12N×28°.96E, h21km±17km, Md3.9*
*DDA **03** 04:46:42.7, 36°.33N×28°.86E, h32km±1km, MW4.1*
*ISK **03** 04:46:42.6, 36°.32N×28°.87E, h26km, ML4.1/22*
*PDG **03** 04:46:42.6±0.7, 36°.28N×28°.91E, h36km±2km, ML4.3/12, Error ellipse: s-maj=0.9km s-min=0.8km az=90.0*
*THE **03** 04:46:43.4, 36°.35N×28°.88E, h16km±1km, ML3.7/14, Error ellipse: s-maj=1.3km s-min=0.4km az=170.0*
*GII **03** 04:46:46.7±0.3, 35°.90N×29°.14E, h40km, MD3.6/8, Mm3.6/18*
ISC 03 04:46:42.0±0.8**, 36°.24N**±0°.03×**28°.92E**±0°.03**, h35**km±3km**, n262,** σ**2s.09**/343**, mb4.1**/8**, 28C-27D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.42**	**19**	PG	**Pn**	**04 46 51.2**	**-0.3**
FETY				SG	**Sn**	**04 46 57.6**	**-0.5**
FETY	**Fethiye**	**0.42**	**19**	⇓*i*P	**Pn**	**04 46 51.1**	**-0.3**
FETY				*i* S	**Sn**	**04 46 57.7**	**-0.5**
FETY				IAML		04 46 59.0	
	comp=Z,8μm,0.5s						
KSL	**Kastellorizon**	**0.55**	**99**	P	**Pn**	**04 46 55.0**	**+1.7**
KSL				S	**Sn**	**04 47 04.4**	**+3.2**
	comp=Z,12μm,0.4s						
KSL	**Kastellorizon**	**0.55**	**99**	P	**Pn**	**04 46 55.0**	**+1.7**
KSL				S	**Sn**	**04 47 03.8**	**+2.7**
KSL				AML	AML	04 47 06.3	
	comp=E,30678μm,0.5s						
KSL				AML	AML	04 47 07.5	
	comp=N,16354μm,0.4s						
KSL	**Kastellorizon**	**0.55**	**99**	P	**Pn**	**04 46 55.0**	**+1.7**
KSL				S	**Sn**	**04 47 05.2**	**+4.0**
KSL				AML	AML	04 47 06.3	
	comp=N,30nm,0.3s						
KSL				AML	AML	04 47 06.3	
	comp=N,30nm,0.3s						
KSL				AML	AML	04 47 07.5	
	comp=N,17nm,0.4s						
KSL				AML	AML	04 47 07.5	
	comp=N,17nm,0.4s						
AKAS	**Kas**	**0.56**	**90**	PG	**Pn**	**04 46 55.1**	**+1.5**
AKAS				SG	**Sn**	**04 47 04.4**	**+2.7**
AKAS	**Kas**	**0.56**	**90**	⇑*i*P	**Pn**	**04 46 55.1**	**+1.5**
AKAS				*i* S	**Sn**	**04 47 04.9**	**+3.3**
AKAS				IAML		04 47 07.0	
	comp=Z,3μm,0.7s						
DALY	**Dalyan (Mula)**	**0.62**	**340**	PG	**Pn**	**04 46 53.7**	**-0.6**
DALY				SG	**Sn**	**04 47 01.9**	**-1.0**
DALY	**Dalyan (Mula)**	**0.62**	**340**	⇓*i*P	**Pn**	**04 46 53.7**	**-0.6**
DALY				*i* S	**Sn**	**04 47 01.7**	**-1.2**
DALY				IAML		04 47 04.0	
	comp=Z,7μm,0.6s						
ARG	**Arkhangelos**	**0.64**	**268**	P	**Pn**	**04 46 55.5**	**+1.0**
ARG				S	**Sn**	**04 47 05.3**	**+1.8**
	comp=Z,8μm,0.4s						
ARG	**Arkhangelos**	**0.64**	**268**	P	**Pn**	**04 46 55.5**	**+1.0**
ARG				S	**Sn**	**04 47 05.0**	**+1.5**
ARG				AML	AML	04 47 11.6	
	comp=N,14734μm,0.4s						
ARG				AML	AML	04 47 11.9	
	comp=E,18764μm,0.3s						
ARG	**Arkhangelos**	**0.64**	**268**	PG	**Pn**	**04 46 55.6**	**+1.0**
ARG	**Arkhangelos**	**0.64**	**268**	⇑P	**Pn**	**04 46 55.6**	**+1.1**
ARG				S	**Sn**	**04 47 08.3**	**+4.9**
TURN	**Turunc**	**0.68**	**338**	PG	**Pn**	**04 46 56.7**	**+1.6**
TURN				SG	**Sn**	**04 47 06.7**	**+2.2**
TURN	**Turunc**	**0.68**	**338**	⇑*i*P	**Pn**	**04 46 56.4**	**+1.3**
TURN				*i* S	**Sn**	**04 47 06.9**	**+2.3**
TURN				IAML		04 47 08.0	
	comp=Z,5μm,0.3s						
DEMR	**Demre-Antalya**	**0.80**	**90**	PG	**Pn**	**04 46 59.1**	**+2.4**
ELL	**Elmali**	**0.95**	**57**	PG	**Pn**	**04 47 00.5**	**+1.6**
ELL	**Elmali**	**0.95**	**57**	Pn	**Pn**	**04 47 00.6**	**+1.6**
YER	**Yerkesik**	**1.03**	**331**	PG	**Pn**	**04 47 00.9**	**+0.9**
YER				SG	**Sn**	**04 47 13.2**	**0.0**
GOLH	**Golhisar**	**1.12**	**27**	⇓*i*P	**Pn**	**04 47 02.9**	**+1.6**
GOLH				*i* S	**Sn**	**04 47 18.2**	**+2.6**
GOLH				IAML		04 47 24.0	
	comp=Z,4μm,0.6s						
DATC	**Datca-Mugla**	**1.14**	**298**	PG	**Pn**	**04 47 02.7**	**+1.3**
DATC				SG	**Sn**	**04 47 17.3**	**+1.6**
AKUM	**Antalya-Kumluc**	**1.16**	**85**	⇑*i*P	**Pn**	**04 47 03.4**	**+1.8**
AKUM				*i* S	**Sn**	**04 47 21.1**	**+4.9**
AKUM				IAML		04 47 39.0	
	comp=Z,837nm,0.6s						
DAT	**Datca**	**1.19**	**295**	PN	**Pn**	**04 47 03.2**	**+1.0**
DAT				SN	**Sn**	**04 47 17.8**	**+0.7**
DAT	**Datca**	**1.19**	**295**	⇑*i*P	**Pn**	**04 47 03.1**	**+1.0**
DAT				*i* S	**Sn**	**04 47 18.6**	**+1.5**
DAT				IAML		04 47 23.0	
	comp=Z,655nm,0.4s						
TAVA	**DENIZLI_Tavas**	**1.23**	**360**	⇓*i*P	**Pn**	**04 47 03.6**	**+0.9**
TAVA				*i* S	**Sn**	**04 47 19.0**	**+0.9**
TAVA				IAML		04 47 20.0	
	comp=Z,2μm,0.6s						
KEMT	**Kemer-ANTALYA**	**1.37**	**74**	PN	**Pn**	**04 47 06.8**	**+2.2**
KORT	**Korkueli**	**1.38**	**56**	PN	**Pn**	**04 47 07.0**	**+2.1**
KORT	**Korkueli**	**1.38**	**56**	⇑*i*P	**Pn**	**04 47 08.5**	**+3.6**
KORT				*i* S	Sn	04 47 31.5	+9.4
KORT				IAML		04 47 32.0	
	comp=Z,875nm,0.6s						
BDRM	**Kayabasi**	**1.44**	**305**	⇑*i*P	**Pn**	**04 47 06.4**	**+0.8**
BDRM				*i* S	**Sn**	**04 47 24.7**	**+1.3**
BDRM				IAML		04 47 32.0	
	comp=Z,1μm,0.4s						
NISR	**Nisiros**	**1.49**	**285**	P	**Pn**	**04 47 07.0**	**+0.8**
NISR				S	**Sn**	**04 47 26.1**	**+1.7**
	comp=Z,2μm,0.4s						
NISR	**Nisiros**	**1.49**	**285**	P	**Pn**	**04 47 06.8**	**+0.6**
DENT	**Denizli**	**1.52**	**4**	PN	**Pn**	**04 47 07.1**	**+0.4**
BODT	**Bodrum**	**1.53**	**303**	PN	**Pn**	**04 47 07.6**	**+0.8**
BODT				SN	**Sn**	**04 47 25.9**	**+0.4**
KARP	**Karpathos**	**1.58**	**245**	P	**Pn**	**04 47 09.8**	**+2.3**
KARP				S	**Sn**	**04 47 29.3**	**+2.5**
	comp=Z,2μm,0.2s						
KARP	**Karpathos**	**1.58**	**245**	P	**Pn**	**04 47 10.0**	**+2.4**
KARP				AML	AML	04 47 31.8	
	comp=N,4476μm,0.3s						
KARP				AML	AML	04 47 39.5	
	comp=E,5182μm,0.4s						
KARP	**Karpathos**	**1.58**	**245**	PN	**Pn**	**04 47 09.9**	**+2.4**
KARP	**Karpathos**	**1.58**	**245**		**Pn**	**04 47 09.7**	**+2.1**
KARP	**Karpathos**	**1.58**	**245**	⇑P	**Pn**	**04 47 10.0**	**+2.4**
KARP				AML	AML	04 47 30.3	
	comp=E,5.0nm,0.4s						
KARP				AML	AML	04 47 30.3	
	comp=E,5.0nm,0.4s						
KARP				S	**Sn**	**04 47 30.6**	**+3.8**
KARP				AML	AML	04 47 31.4	
	comp=E,4.5nm,0.3s						
KARP				AML	AML	04 47 31.4	
	comp=E,4.5nm,0.3s						
YKAV	**Yalikavak-Bodr**	**1.58**	**304**	PN	**Pn**	**04 47 08.2**	**+0.7**
KOSK	**Kos Island**	**1.64**	**289**	P	**Pn**	**04 47 08.4**	**+0.1**
KOSK				S	**Sn**	**04 47 30.0**	**+1.8**
	comp=E,1μm,0.5s						
KOSK	**Kos Island**	**1.64**	**289**	PN	**Pn**	**04 47 09.6**	**+1.3**
AYDN	**Tasoluk**	**1.65**	**330**	⇓*i*P	**Pn**	**04 47 09.0**	**+0.6**
AYDN				*i* S	**Sn**	**04 47 30.0**	**+1.6**
AYDN				IAML		04 47 35.0	
	comp=Z,2μm,0.5s						
BRDR	**BURDUR-Merkez**	**1.72**	**32**	*e*P	**Pn**	**04 47 11.0**	**+1.5**
BRDR				*i* S	**Sn**	**04 47 34.9**	**+4.6**
BRDR				IAML		04 47 46.0	
	comp=Z,650nm,0.7s						
AYDB	**Zeytinkoy-Aydi**	**1.89**	**335**	PN	**Pn**	**04 47 12.7**	**+0.8**
BASM	**Basmaki-Afyon**	**1.91**	**28**	PN	**Pn**	**04 47 13.4**	**+1.3**
GCAM	**G?zelcaml?**	**1.99**	**318**	PN	**Pn**	**04 47 14.2**	**+1.2**
GCAM				SN	**Sn**	**04 47 37.4**	**+0.7**
GCAM	**G?zelcaml?**	**1.99**	**318**	⇓*i*P	**Pn**	**04 47 13.8**	**+0.8**
GCAM				*i* S	**Sn**	**04 47 37.1**	**+0.5**
GCAM				IAML		04 47 38.0	
	comp=Z,2μm,0.3s						
ISP	**Isparta**	**2.04**	**39**	PN	**Pn**	**04 47 16.2**	**+2.3**
ISP	**Isparta**	**2.04**	**39**		**Pn**	**04 47 15.5**	**+1.7**
KHL	**Karahalli**	**2.14**	**13**	PN	**Pn**	**04 47 16.5**	**+1.3**
KHAL	**Karahalli**	**2.18**	**12**	*i* P	**Pn**	**04 47 16.1**	**+0.3**
KHAL				*i* S	**Sn**	**04 47 44.7**	**+3.1**
KHAL				IAML		04 48 01.0	
	comp=Z,205nm,0.4s						
SMG	**Samos**	**2.22**	**312**	P	**Pn**	**04 47 16.9**	**+0.6**
SMG				S	**Sn**	**04 47 42.2**	**-0.3**
	comp=Z,3μm,0.3s						
SMG	**Samos**	**2.22**	**312**	P	**Pn**	**04 47 16.9**	**+0.6**
SMG				AML	AML	04 47 44.2	
	comp=N,7579μm,0.3s						
SMG				AML	AML	04 47 45.0	
	comp=E,5096μm,0.2s						
KZIL	**AFYON_Kizioren**	**2.24**	**26**	*i* P	**Pn**	**04 47 17.4**	**+0.7**
KZIL				*i* S	**Sn**	**04 47 47.2**	**+4.0**
KZIL				IAML		04 47 58.0	
	comp=Z,305nm,0.8s						
KEPZ	**Antalya-Kepez**	**2.26**	**72**	*i* P	**Pn**	**04 47 19.6**	**+2.7**
KEPZ				*i* S	**Sn**	**04 47 48.7**	**+5.1**
KEPZ				IAML		04 47 54.0	
	comp=Z,145nm,0.5s						
MANT	**Manisa**	**2.27**	**353**	*i* P	**Pn**	**04 47 16.9**	**-0.2**
MANT				*i* S	**Sn**	**04 47 44.9**	**+0.9**
MANT				IAML		04 47 53.0	
	comp=Z,226nm,0.5s						
MANT	**Manisa**	**2.27**	**353**		**Pn**	**04 47 17.1**	**0.0**
KULA	**Kula-Manisa**	**2.28**	**355**	PN	**Pn**	**04 47 18.3**	**+1.1**
BAGO	**Egridir - ISPA**	**2.30**	**40**	*i* P	**Pn**	**04 47 19.0**	**+1.5**
BAGO				*i* S	**Sn**	**04 47 52.1**	**+7.4**
DGB	**zmir**	**2.43**	**319**	*i* P	**Pn**	**04 47 19.7**	**+0.5**
ZKR	**Zakros**	**2.47**	**244**	P	**Pn**	**04 47 22.6**	**+2.9**
ZKR				S	**Sn**	**04 47 52.3**	**+3.8**
	comp=Z,1μm,0.4s						
ZKR	**Zakros**	**2.47**	**244**	P	**Pn**	**04 47 22.6**	**+2.9**
ZKR				AML	AML	04 47 55.3	
	comp=E,2724μm,0.3s						
ZKR				AML	AML	04 47 56.3	
	comp=N,1284μm,0.4s						
ZKR	**Zakros**	**2.47**	**244**	⇑P	**Pn**	**04 47 22.6**	**+2.9**
ZKR				S	**Sn**	**04 47 53.1**	**+4.6**
ZKR				AML	AML	04 47 54.9	
	comp=N,2.7nm,0.3s						
ZKR				AML	AML	04 47 54.9	
	comp=N,2.7nm,0.3s						
ZKR				AML	AML	04 47 55.7	
	comp=N,1.3nm,0.4s						
ZKR				AML	AML	04 47 55.7	
	comp=N,1.3nm,0.4s						
USAK	**Uak-Merkez**	**2.48**	**2**	*i* P	**Pn**	**04 47 20.1**	**+0.2**
USAK				*i* S	**Sn**	**04 47 50.3**	**+1.4**
USAK				IAML		04 47 55.0	
	comp=Z,191nm,0.5s						
AMGA	**Amorgos Island**	**2.50**	**285**	P	**Pn**	**04 47 20.7**	**+0.5**
AMGA	**Amorgos Island**	**2.50**	**285**	P	**Pn**	**04 47 20.8**	**+0.6**
AMGA				AML	AML	04 48 13.3	
	comp=N,880μm,0.5s						
AMGA				AML	AML	04 48 21.4	
	comp=E,1071μm,0.7s						
STIA	**Sitia Lasithi**	**2.52**	**247**	P	**Pn**	**04 47 23.0**	**+2.6**
STIA				S	**Sn**	**04 47 52.1**	**+2.3**
ANAF	**Anafi Island**	**2.54**	**274**	P	**Pn**	**04 47 21.8**	**+1.1**
ANAF				S	**Sn**	**04 47 52.0**	**+1.6**
ANAF	**Anafi Island**	**2.54**	**274**	P	**Pn**	**04 47 21.9**	**+1.1**
SHUT	**Suhut-Afyon**	**2.65**	**29**	PN	**Pn**	**04 47 24.5**	**+2.2**
GAZI	**Gazipasa**	**2.75**	**89**	*i* P	**Pn**	**04 47 24.4**	**+0.9**
GAZI				IAML		04 47 57.0	
	comp=Z,222nm,0.4s						
AKHS	**Akhisar**	**2.78**	**342**	*i* P	**Pn**	**04 47 23.6**	**-0.3**
THR8	**Santorini-Mono**	**2.78**	**275**	P	**Pn**	**04 47 25.2**	**+1.3**
SANT	**Santorini**	**2.79**	**274**	P	**Pn**	**04 47 25.3**	**+1.1**
SANT	**Santorini**	**2.79**	**274**	⇓P	**Pn**	**04 47 25.3**	**+1.1**
SANT	**Santorini**	**2.79**	**274**		**Pn**	**04 47 25.4**	**+1.1**
DEMI	**Demirci**	**2.81**	**357**	*i* P	**Pn**	**04 47 24.4**	**0.0**
DEMI				IAML		04 48 26.0	
	comp=Z,109nm,0.6s						
URLA	**Izmir**	**2.81**	**320**	*i* P	**Pn**	**04 47 25.2**	**+0.7**
URLA				IAML		04 48 16.0	
	comp=Z,174nm,0.6s						
THR3	**Thira Island,**	**2.84**	**275**	P	**Pn**	**04 47 26.0**	**+1.2**
APE	**Apeiranthos**	**2.85**	**288**	P	**Pn**	**04 47 25.6**	**+0.7**
APE	**Apeiranthos**	**2.85**	**288**	P	**Pn**	**04 47 25.5**	**+0.6**
APE				AML	AML	04 48 03.8	
	comp=E,439μm,0.5s						
APE				AML	AML	04 48 22.8	
	comp=N,358μm,0.4s						
APE	**Apeiranthos**	**2.85**	**288**	⇓P	**Pn**	**04 47 25.7**	**+0.7**
APE				⇓S	**Sn**	**04 48 03.0**	**+5.0**
APE	**Apeiranthos**	**2.85**	**288**	⇑P	**Pn**	**04 47 25.5**	**+0.7**
NPS	**Neapolis**	**2.86**	**251**	P	**Pn**	**04 47 26.7**	**+1.7**
NPS				S	**Sn**	**04 48 00.4**	**+2.2**
	comp=N,1μm,0.3s						
NPS	**Neapolis**	**2.86**	**251**	P	**Pn**	**04 47 26.9**	**+1.8**
NPS				AML	AML	04 48 03.9	
	comp=N,2151μm,0.4s						
NPS				AML	AML	04 48 08.5	
	comp=E,2441μm,0.3s						
FRMA	**Ierapetra Chan**	**2.87**	**246**	P	**Pn**	**04 47 26.6**	**+1.5**
FRMA				S	**Sn**	**04 48 00.2**	**+1.9**
	comp=E,300nm,0.6s						
DOGA	**KONYA_Doganhis**	**2.88**	**49**	*i* P	**Pn**	**04 47 27.9**	**+2.4**
DOGA				IAML		04 48 09.0	
	comp=Z,175nm,0.7s						
IOSP	**Ios island**	**2.96**	**281**	P	**Pn**	**04 47 27.7**	**+1.2**
IOSP				S	**Sn**	**04 48 02.8**	**+2.0**
	comp=Z,288nm,0.6s						
IOSP	**Ios island**	**2.96**	**281**	P	**Pn**	**04 47 27.6**	**+1.1**
LAST	**Lasithi**	**3.00**	**250**	P	**Pn**	**04 47 28.3**	**+1.3**
LAST	**Lasithi**	**3.00**	**250**	P	**Pn**	**04 47 29.1**	**+2.1**
LAST				AML	AML	04 48 13.9	
	comp=N,909μm,0.7s						
LAST				AML	AML	04 48 28.0	
	comp=E,578μm,0.4s						
AKMS	**Akamas**	**3.04**	**113**	P	**Pn**	**04 47 28.3**	**+0.7**
AKMS				AML	AML	04 48 03.3	
	comp=E,7.9nm,0.5s						
AKMS				AML	AML	04 48 04.9	
	comp=E,5.7nm,0.5s						
ZEDA	**zmir-Bergama**	**3.09**	**332**	*i* P	**Pn**	**04 47 30.7**	**+2.5**
ZEDA				IAML		04 48 21.0	
	comp=Z,172nm,0.6s						
CHOS	**Chios island**	**3.13**	**314**	P	**Pn**	**04 47 29.6**	**+0.7**
CHOS	**Chios island**	**3.13**	**314**	P	**Pn**	**04 47 29.6**	**+0.7**
CHOS				AML	AML	04 48 06.5	
	comp=N,2312μm,0.4s						
CHOS				AML	AML	04 48 06.7	
	comp=E,3644μm,0.3s						
KMER	**Konya-Meram**	**3.16**	**60**	*i* P	**Pn**	**04 47 32.6**	**+3.3**
KMER				IAML		04 48 15.0	
	comp=Z,86nm,0.8s						
ALFC	**Alefka**	**3.19**	**109**	P	**Pn**	**04 47 29.9**	**+0.3**
ALFC				S	**Sn**	**04 48 07.7**	**+1.3**
ALFC				AML	AML	04 48 14.4	
	comp=Z,2.9nm,0.2s						
ALFC				AML	AML	04 48 14.4	
	comp=Z,2.9nm,0.2s						
KONT	**Konya--Tatoy**	**3.24**	**57**	*i* P	**Pn**	**04 47 32.9**	**+2.5**
KONT				IAML		04 48 40.0	
	comp=Z,71nm,0.9s						
ERMK	**Ermenek**	**3.25**	**82**	*i* P	**Pn**	**04 47 33.5**	**+2.9**
ERMK				IAML		04 48 19.0	
	comp=Z,235nm,0.8s						
STEP	**BALIKESIR_Sava**	**3.27**	**344**	*i* P	**Pn**	**04 47 31.7**	**+0.9**
STEP				IAML		04 48 32.0	
	comp=Z,317nm,0.7s						
NATA	**Nata**	**3.32**	**115**	P	**Pn**	**04 47 32.4**	**+1.0**
NATA				S	**Sn**	**04 48 11.1**	**+1.6**
OSC1	**CSNet OBS 1**	**3.35**	**144**	P	**Pn**	**04 47 32.9**	**+1.1**
DURS	**Dursunbey**	**3.38**	**354**	*i* P	**Pn**	**04 47 32.3**	**+0.1**
DURS				IAML		04 48 34.0	
	comp=Z,72nm,0.8s						
IDI	**Anoyia**	**3.41**	**255**	P	**Pn**	**04 47 34.0**	**+1.3**
IDI				S	**Sn**	**04 48 14.6**	**+2.7**
	comp=Z,382nm,0.3s						
IDI	**Anoyia**	**3.41**	**255**	Pn	**Pn**	**04 47 34.1**	**+1.5**
	comp=Z,54nm,0.3s,baz=65,slow=7.0,SNR=157						
IDI				Sn	**Sn**	**04 48 12.0**	**+0.1**
	comp=Z,36nm,0.3s,baz=106,slow=19,SNR=5.8						
IDI	**Anoyia**	**3.41**	**255**	P	**Pn**	**04 47 34.2**	**+1.5**
IDI	**Anoyia**	**3.41**	**255**	⇑P	**Pn**	**04 47 33.7**	**+1.1**
IDI	**Anoyia**	**3.41**	**255**		**Pn**	**04 47 33.7**	**+1.1**
KDHN	**Kadinhani**	**3.42**	**47**	*i* P	**Pn**	**04 47 34.4**	**+1.5**
LEF	**Lefka**	**3.42**	**108**	⇑P	**Pn**	**04 47 32.8**	**0.0**
LEF				⇓S	**Sn**	**04 48 11.8**	**-0.3**
LEF	**Lefka**	**3.42**	**108**	*i* P	**Pn**	**04 47 32.8**	**0.0**
LEF				IAML		04 48 17.0	
	comp=Z,224nm,0.6s						
SZAC	**Souni**	**3.56**	**113**	⇑P	**Pn**	**04 47 35.7**	**+1.0**
SZAC				S	**Sn**	**04 48 16.4**	**+0.9**
SIVA	**Sivas**	**3.56**	**251**	P	**Pn**	**04 47 37.7**	**+3.1**
BALY	**Balya**	**3.65**	**344**	*i* P	**Pn**	**04 47 36.4**	**+0.5**
BALY				IAML		04 48 28.0	
	comp=Z,81nm,0.7s						
PRK	**Paraskevi**	**3.66**	**326**	P	**Pn**	**04 47 37.0**	**+0.9**
PRK				S	**Sn**	**04 48 19.5**	**+1.5**
	comp=Z,698nm,0.7s						
PRK	**Paraskevi**	**3.66**	**326**	P	**Pn**	**04 47 37.1**	**+1.1**
SERI	**Serifos**	**3.68**	**286**	P	**Pn**	**04 47 37.2**	**+0.9**
SERI				S	**Sn**	**04 48 18.6**	**+0.1**
	comp=Z,65nm,0.5s						
GULN	**MERSIN_Gulnar**	**3.74**	**89**	*i* P	**Pn**	**04 47 38.8**	**+1.7**
GULN				IAML		04 48 30.0	
	comp=Z,84nm,0.3s						
CSS	**Mathiatis**	**3.82**	**108**	P	**Pn**	**04 47 39.8**	**+1.6**
CSS				AML	AML	04 48 29.1	
	comp=N,467μm,0.5s						
CSS				AML	AML	04 48 31.1	
	comp=E,463μm,0.4s						
CSS	**Mathiatis**	**3.82**	**108**	Pn	**Pn**	**04 47 39.5**	**+1.3**
CSS	**Mathiatis**	**3.82**	**108**		**Pn**	**04 47 38.8**	**+0.6**
CSS	**Mathiatis**	**3.82**	**108**	⇑P	**Pn**	**04 47 38.6**	**+0.4**
ASGA	**Asgata**	**3.82**	**111**	P	**Pn**	**04 47 39.2**	**+1.0**
ASGA				S	**Sn**	**04 48 22.7**	**+0.8**
SIGR	**SIGRI**	**3.83**	**322**	P	**Pn**	**04 47 39.6**	**+1.2**
SIGR				S	**Sn**	**04 48 21.5**	**-0.7**
	comp=E,240nm,0.5s						
VAM	**Vamos**	**3.92**	**259**	P	**Pn**	**04 47 41.5**	**+1.9**
BAYC	**CANAKKALE_Bayr**	**3.97**	**333**	*i* P	**Pn**	**04 47 43.9**	**+3.6**
BAYC				IAML		04 48 32.0	
	comp=Z,65nm,0.8s						
MVOU	**Mavrovouni**	**4.03**	**106**	⇑P	**Pn**	**04 47 41.1**	**-0.1**
OSC2	**CSNet OBS 4**	**4.19**	**138**	P	**Pn**	**04 47 44.8**	**+1.5**
BOZC	**Bozcaada**	**4.25**	**329**	*i* P	**Pn**	**04 47 44.9**	**+0.8**
BOZC				IAML		04 48 37.0	
	comp=Z,44nm,0.9s						
KERG	**Konya-Eregli**	**4.34**	**73**	*i* P	**Pn**	**04 47 46.7**	**+1.1**
KERG				IAML		04 49 00.0	
	comp=Z,60nm,0.5s						
AKSY	**AKSARAY - Alti**	**4.55**	**57**	*i* P	**Pn**	**04 47 50.1**	**+1.8**
BR231	**Keskin MP Arra**	**4.71**	**39**	Pn	**Pn**	**04 47 53.1**	**+2.5**
ANTO	**Ankara**	**4.75**	**39**	⇑P	**Pn**	**04 47 53.8**	**+2.7**
ANTO	**Ankara**	**4.75**	**39**		**Pn**	**04 47 52.6**	**+1.6**
MATC	**Matruh**	**5.08**	**197**	P	**Pn**	**04 47 56.8**	**+1.3**
	baz=198						
BRTR	**Keskin Array B**	**5.10**	**46**	Pn	**Pn**	**04 47 56.6**	**+0.6**
	comp=Z,1.7nm,0.3s,baz=22,slow=12,SNR=43						
BRTR				Sn	**Sn**	**04 48 53.9**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=212,slow=25,SNR=6.6						
BR131	**Keskin Array S**	**5.10**	**46**		**Pn**	**04 47 57.3**	**+1.3**
ALN	**Alexandroupoli**	**5.17**	**335**		**Pn**	**04 47 58.8**	**+2.0**
SLUM	**Salum**	**5.65**	**214**	P	**Pn**	**04 48 05.3**	**+2.0**
	baz=216						
SLUM				S	**Sn**	**04 49 02.6**	**-4.3**
	baz=216						
ITM	**Ithomi**	**5.69**	**282**		**Pn**	**04 48 07.3**	**+3.2**

HBRG Burj al `Arab 5.70 172 P Pn 04 48 05.4 +1.3
baz=172
AGG Agios Georgios 5.92 300 Pn 04 48 10.2 +3.1
HNTI Hanita 6.04 120 Pn **Pn 04 48 09.3 +0.5**
HNTI Sn **Sn 04 49 14.1 -2.6**
KDZ Kurdzhali 6.05 334 eP **Pn 04 48 11.0 +2.0**
HWQ Hawqa 6.08 107 eP **Pn 04 48 10.0 +0.7**
ILGA Ilgaz 6.10 37 Pn **Pn 04 48 12.8 +3.0**
OFRI `Ofer 6.18 124 Pn **Pn 04 48 11.4 +0.7**
MMA0B Mount Meron ar 6.24 119 Pn **Pn 04 48 12.2 +0.6**
MMA0B Sn **Sn 04 49 20.0 -1.7**
MMAI Mount Meron Ar 6.24 119 Pn **Pn 04 48 11.9 +0.3**
comp=Z,19nm,0.3s,baz=315,slow=12,SNR=94
MMAI Sn **Sn 04 49 16.9 -4.8**
comp=Z,63nm,0.3s,baz=314,slow=24,SNR=18
BLGI Bet Lehem HaGe 6.25 122 Sn **Sn 04 49 19.1 -2.7**
RCY Rachaya 6.31 114 eP **Pn 04 48 12.5 -0.1**
SHBL Chebaa 6.31 115 eP **Pn 04 48 12.9 +0.2**
GEM Giv'at Ha'Em 6.32 117 Pn **Pn 04 48 13.4 +0.7**
GEM Sn **Sn 04 49 21.0 -2.6**
KSDI Kefar Szold 6.33 117 Pn **Pn 04 48 13.3 +0.6**
KSDI Sn **Sn 04 49 21.8 -2.0**
NATI Neve Ativ 6.35 116 Pn **Pn 04 48 13.9 +0.9**
RZN Rozhen 6.35 330 eP **Pn 04 48 17.3 +4.1**
LIT Litokhoron 6.36 309 Pn 04 48 15.7 +2.5
SLTI Sal'it 6.45 126 Pn **Pn 04 48 15.2 +0.8**
MMLI Mount Malkishu 6.58 123 Pn **Pn 04 48 17.0 +0.8**
HMYD Mayadein 6.62 166 P **Pn 04 48 17.7 +1.0**
baz=165
SHMJ Saham 6.65 120 Pn **Pn 04 48 18.0 +0.8**
MMB Musomiste 6.70 324 eP **Pn 04 48 20.3 +2.4**
HNAT Natroun 6.74 167 P **Pn 04 48 19.7 +1.3**
baz=167
HNAT S **Sn 04 49 30.1 -3.8**
baz=167
KOT Kottamia 6.75 158 P **Pn 04 48 19.5 +0.9**
baz=157
HMDT Nahal Hemdat 6.76 124 Pn **Pn 04 48 19.7 +1.0**
HMDT Sn **Sn 04 49 31.8 -2.7**
AMAZ Amatzia 6.85 132 Pn **Pn 04 48 20.5 +0.6**
AMAZ Sn **Sn 04 49 33.7 -2.9**
BZK Bozkurt 6.95 33 ⇑P **Pn 04 48 22.7 +1.5**
HSAF As Saff 6.96 161 P **Pn 04 48 22.1 +0.6**
baz=160
KZIT Kziot 7.01 138 Pn **Pn 04 48 22.6 +0.5**
KZIT Sn **Sn 04 49 36.7 -3.9**
GLL Jalalah 7.04 160 P **Pn 04 48 23.5 +0.9**
baz=159
ELND Elena 7.08 342 ⇓P **Pn 04 48 26.2 +3.1**
YTIR Yattir 7.09 132 Pn **Pn 04 48 24.1 +0.8**
YTIR Sn **Sn 04 49 39.7 -2.9**
DSI Dead Sea 7.11 129 Pn **Pn 04 48 24.2 +0.7**
DSI Sn **Sn 04 49 40.2 -2.8**
DAMI2 DAM2 7.42 131 Pn **Pn 04 48 28.5 +0.8**
FNA Florina 7.45 310 Pn 04 48 29.9 +1.7
SWA2 7.56 204 P **Pn 04 48 30.7 +1.1**
baz=205
ZNM Zenema 7.61 153 P **Pn 04 48 31.9 +1.5**
baz=152
ZFRI Zfri 7.71 135 Pn **Pn 04 48 31.6 -0.1**
ZFRI Sn **Sn 04 49 53.9 -4.0**
VTS Vitosha 7.74 327 ⇓P **Pn 04 48 35.2 +3.0**
VTS Vitosha 7.74 327 Pn **Pn 04 48 34.0 +1.8**
ASF Jabal al Asfar 7.75 119 Pn **Pn 04 48 32.8 +0.4**
comp=Z,0.8nm,0.3s,baz=219,slow=4.6,SNR=11
PRNI Paran 7.77 137 Pn **Pn 04 48 32.5 -0.1**
KRMI Paran Flat 7.80 140 Pn **Pn 04 48 32.9 -0.2**
NBNS Bani Suef 7.85 165 P **Pn 04 48 34.0 +0.3**
baz=164
HRFI Mount Harif 8.03 139 Pn **Pn 04 48 36.5 +0.3**
HRFI Sn **Sn 04 50 01.7 -4.1**
MBRI Mt Berech 8.16 140 Pn **Pn 04 48 37.8 -0.2**
TIRR Tirgusor 8.22 357 ⇓P **Pn 04 48 41.7 +3.1**
TIRR Tirgusor 8.22 357 eP **Pn 04 48 41.4 +2.8**
TIRR Tirgusor 8.22 357 Pn 04 48 39.9 +1.2
EIL Elat 8.28 141 Pn **Pn 04 48 39.6 +0.1**
comp=Z,3.1nm,0.3s,baz=337,slow=5.7,SNR=34
EIL Sn **Sn 04 50 08.0 -3.9**
comp=Z,8.6nm,0.3s,baz=40,slow=13,SNR=11
EIL LR LR 04 52 43.6
comp=Z,24nm,18.8s,baz=46,slow=44
EIL Elat 8.28 141 Pn **Pn 04 48 39.5 0.0**
EIL Sn **Sn 04 50 07.6 -4.2**
AQBJ Aqaba 8.29 140 Pn **Pn 04 48 40.0 +0.4**
HRDS Abu Rudays 8.37 153 P **Pn 04 48 41.6 +0.9**
baz=152
HBST Basata 8.54 143 P **Pn 04 48 43.7 +0.6**
baz=143
HBST S **Sn 04 50 12.5 -5.8**
baz=143
GRB Gharib 8.59 157 P **Pn 04 48 44.1 +0.2**
baz=156
TOPG Topolog 8.64 357 ⇑P **Pn 04 48 46.4 +2.0**
TAMRE El Minia 8.70 168 P **Pn 04 48 46.1 +0.9**
baz=168
HDHB Dhahab 8.90 146 P **Pn 04 48 48.9 +0.8**
baz=145
CFR Carcaliu 8.95 356 ⇓P **Pn 04 48 51.5 +2.8**
HFRF Wahat Farafira 9.08 183 P **Pn 04 48 50.6 +0.2**
baz=184
SCTE Santa Cesarea 9.08 298 Pn 04 48 53.1 +2.7
ASUT 9.10 165 P **Pn 04 48 51.6 +0.8**
baz=165
TR1 Tor 1 9.25 151 P **Pn 04 48 53.4 +0.6**
baz=151
PVY Plav 9.39 315⇓iPn **Pn 04 48 57.3 +2.4**
PVY i Sn **Sn 04 50 37.5 -1.8**
ULC Ulcinj 9.44 310⇓iPn **Pn 04 48 58.0 +2.6**
ULC i Sn **Sn 04 50 38.4 -1.9**
MLR Muntele Rosu 9.51 347 Pn **Pn 04 48 56.9 +0.4**
comp=Z,0.3nm,0.3s,baz=213,slow=4.0,SNR=5.6
MLR Muntele Rosu 9.51 347 ⇑P **Pn 04 48 59.5 +3.0**
MLR Muntele Rosu 9.51 347 Pn 04 48 57.3 +0.8
DRME Dracevica, Mon 9.61 311⇑iPn **Pn 04 49 00.1 +2.5**
DRME i Sn **Sn 04 50 42.1 -2.2**
IVA Berane 9.61 316⇓iPn **Pn 04 49 00.3 +2.5**
IVA i Sn **Sn 04 50 42.4 -2.1**
PDG Podgorica 9.70 313 ⇓P **Pn 04 49 01.6 +2.6**
TTG Podgorica 9.70 313⇓iPn **Pn 04 49 01.4 +2.4**
TTG i Sn **Sn 04 50 44.6 -2.1**
VRI Vrincioaia 9.76 351 ⇓P **Pn 04 49 02.0 +2.3**
KOME Kolasin 9.81 315⇑iPn **Pn 04 49 03.1 +2.6**
KOME i Sn **Sn 04 50 46.8 -2.6**
HHRG Al Ghardaqah 9.82 155 P **Pn 04 49 03.1 +2.4**
baz=155
BUM Brajici-Budva 9.85 311⇓iPn **Pn 04 49 03.3 +2.3**
BUM i Sn **Sn 04 50 48.0 -2.3**
CEME Cevo 9.97 312⇑iPn **Pn 04 49 05.5 +2.7**
CEME i Sn **Sn 04 50 51.2 -2.2**
TIP Timpagrande 10.07 291 ⇑P **Pn 04 49 04.9 +0.8**
TIP Timpagrande 10.07 291 Pn 04 49 05.3 +1.2
NKME Niksic 10.08 313⇓iPn **Pn 04 49 07.1 +2.8**
NKME i Sn **Sn 04 50 53.9 -2.2**
TAR1 Taranto 10.08 299⇓iPn **Pn 04 49 06.4 +2.2**
NKY Niksic 10.09 314⇓iPn **Pn 04 49 06.5 +2.1**
NKY i Sn **Sn 04 50 53.9 -2.4**
HCY Herceg Novi 10.17 311⇓iPn **Pn 04 49 07.9 +2.5**
HCY i Sn **Sn 04 50 55.8 -2.4**
UPM Unac-Piva 10.38 315⇓iPn **Pn 04 49 10.9 +2.5**
UPM i Sn **Sn 04 51 00.7 -2.8**
BRY Bratogost 10.41 313⇑iPn **Pn 04 49 11.4 +2.6**
BRY i Sn **Sn 04 51 01.7 -2.5**
DBRK Dubrovnik 10.51 311 ePn **Pn 04 49 14.5 +4.4**
DBRK Sn **Sn 04 51 07.3 +0.8**
MATE Matera 10.54 298 ⇑P **Pn 04 49 12.7 +2.2**
CEL Celeste 10.58 285 Pn **Pn 04 49 13.1 +2.1**
BAI Bari 10.59 301⇑iPn **Pn 04 49 14.2 +3.1**
SG1 Sgolgore (BA) 10.63 299⇑iPn **Pn 04 49 13.9 +2.2**
STON Ston 10.90 311 ePn **Pn 04 49 18.7 +3.4**
BIZ Bicaz 10.90 350 ⇑P **Pn 04 49 17.4 +2.1**
ACER Acerenza 11.13 298 Pn 04 49 20.6 +2.0
MAKA Makarska 11.54 311 i Pn **Pn 04 49 28.6 +4.5**
VAE Valguarnera 11.69 280 Pn **Pn 04 49 27.6 +1.4**
comp=Z,1.3nm,0.3s,baz=140,slow=2.1,SNR=3.6
BURAR Bucovina Array 11.70 348 ⇓P **Pn 04 49 30.3 +3.9**
KIJV Kijevo 12.31 313 i Pn Pn 04 49 39.6 +4.9
ZIRJ Zirje 12.58 310 ePn **Pn 04 49 41.0 +2.7**
MORI Morici 12.66 311 ePn **Pn 04 49 43.3 +4.0**
UDBI Udbina 12.99 314 ePn **P 04 49 49.5 -4.5**
KBZ Khabaz 13.06 51 Pn **Pn 04 49 48.7 +3.8**
comp=Z,0.1nm,0.3s,baz=9.8,slow=8.8,SNR=1.8
DUGI Dugi Otok 13.12 310 ePn **Pn 04 49 49.6 +3.9**

NVLJ Novalja 13.54 312 ePn **Pn 04 49 55.2 +3.8**
AKASG Malin Array Be 14.46 1 Pn **Pn 04 50 02.2 -1.7**
comp=Z,0.5nm,0.3s,baz=184,slow=12,SNR=4.2
KEST Kesra 15.85 274 Pn **P 04 50 24.7 -1.2**
comp=Z,0.3nm,0.3s,baz=72,slow=0.9,SNR=9.7
VRAC Vranov 15.86 329 LR LR 04 57 43.8
comp=Z,13nm,18.3s,baz=102,slow=42
GEC2 GERESS Array S 16.82 323 P 04 50 39.1 +2.5
GEC2 IAmb IAmb 04 50 59.7
comp=Z,5.3nm,1.1s
GERES GERESS Array B 16.82 323 Pn **P 04 50 36.5 -0.1**
comp=Z,0.1nm,0.3s,baz=150,slow=11,SNR=2.6
GERES LR LR 04 57 46.2
comp=Z,26nm,18.1s,baz=95,slow=40
KHC Kasperske Hory 17.08 324 eP **P 04 50 40.5 +1.2**
KHC ex x 04 51 12.0
DAVOX Davos/Dischmat 17.68 312 LR LR 04 57 36.8
comp=Z,30nm,18.6s,baz=106,slow=37
GEYT Alibeck 23.32 77 P **P 04 51 45.2 -1.6**
comp=Z,1.8nm,0.4s,baz=277,slow=9.6,SNR=6.5
AKTO Aktyubinsk 25.28 47 P **P 04 52 04.3 -0.5**
comp=Z,1.6nm,0.6s,baz=253,slow=9.0,SNR=4.6
AKTO LR LR 05 04 26.5
comp=Z,24nm,19.4s,baz=80,slow=42
FINES FINESS Array B 25.29 357 P **P 04 52 04.6 -0.2**
comp=Z,4.1nm,0.7s,baz=157,slow=12,SNR=12
KLMR Klimovskoe 25.55 12 e P 04 52 21.2 +14
KLMR AMP 04 52 33.2
comp=Z,20nm,1.9s
HFS Hagfors 25.85 342 LR LR 05 03 58.9
comp=Z,30nm,19.9s,baz=129,slow=40
ESDC Sonseca Array 26.07 288 P **P 04 52 11.3 -0.8**
comp=Z,0.6nm,0.4s,baz=83,slow=9.4,SNR=11
NOA NORSAR Array B 27.25 341 LR LR 05 03 45.9
comp=Z,16nm,18.1s,baz=355,slow=38
ARCES ARCESS Array B 33.41 358 P **P 04 53 16.4 -0.4**
comp=Z,3.9nm,1.1s,baz=14,slow=11,SNR=1.8
TORD Torodi Ar. Bea 33.56 234 P **P 04 53 19.4 +0.7**
comp=Z,1.9nm,0.5s,baz=34,slow=8.7,SNR=35
MKAR Makanchi Array 40.62 58 P **P 04 54 18.3 0.0**
comp=Z,1.8nm,0.5s,baz=277,slow=7.2,SNR=35
DBIC Dimbokro 42.65 235 P **P 04 54 35.6 +0.4**
comp=Z,1.2nm,0.5s,baz=44,slow=8.7,SNR=8.4
DBIC Dimbokro 42.65 235 IAmb IAmb 04 55 06.3
comp=Z,20nm,1.5s

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*IDC **03** 04:51:27.4±0.4, 11.°45S×162.°55E, h0^{km}, mb4.8/32, mb1 4.8/35, mb1mx4.8/42, mbtmp4.8/35, ML4.7/3, MS4.0/29, Ms1 4.0/29, ms1mx3.9/36, Error ellipse: s-maj=13.3km s-min=11.4km az=87.0*

*BJI **03** 04:51:30.4±0.0, 11.°19S×162.°70E, h27^{km}, mB5.1/32, mb5.0/49, Ms4.7/13, Ms7 4.3/13*

*NEIC **03** 04:51:31.0±1.3, 11.°50S±0.°07×162.°49E±0.°08, h22^{km}±3^{km}, mb4.9/97, Error ellipse: s-maj=12.5km s-min=9.7km az=55.0*

*GCMT **03** 04:51:32.0±0.2, 11.°52S±0.°01×162.°61E±0.°02, h16^{km}, MW5.0/95, Moment Tensor Solution. s52,c64; s95,c128; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.62±.17; $M_{\theta\theta}$3.25±.12; $M_{\phi\phi}$0.36±.11; $M_{r\theta}$-1.29±.31; $M_{\theta\phi}$1.00±.09; $M_{\phi r}$-2.49±.43; Best double couple: $M_0$4.51100×10^{16} NP1:ϕ_s270.00000°,δ33.00000°,λ-54.00000°. NP2: ϕ_s49.00000°,δ64.00000°,λ-111.00000°. Principal axes: T 4.1380, Plg16.0000°, Azm155.0000°; N 0.7450, Plg19.0000°, Azm59.0000°; P -4.8840, Plg65.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 04:51:33.0±0.3**, 11.°58S**±0.°05×**162.°56E**±0.°06**, h39**^{km}**, n251, σ1§22**/229**, mb4.9**/77**, MS4.0**/32**, 9C-12D,**
Bougainville-Solomon Islands region

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

HNR Honiara 3.34 310 Pn **Pn 04 52 21.4 -1.3**
272nm,0.3s,baz=177,slow=1.6,SNR=29
HNR Sn **Sn 04 52 59.5 -1.6**
602nm,0.3s,baz=47,slow=22,SNR=12
HNR LR LR 04 53 54.3
comp=Z,4μm,20.5s,baz=134,slow=45
HNR Honiara 3.34 310 Pn 04 52 21.9 -0.7
DZM Mont Dzumac 11.07 161 ePn **Pn 04 54 08.0 -0.9**
106nm,1.2s
DZM eSn **Sn 04 56 05.0 -6.6**
2.5nm,0.2s
DZM eLR LR 04 56 45.2
comp=Z,3μm,24.6s
DZM Mont Dzumac 11.07 161 Pn **Pn 04 54 08.3 -0.6**
1.8nm,0.3s,baz=31,slow=8.9,SNR=202
DZM Sn **Sn 04 56 05.2 -6.3**
baz=327,slow=21,SNR=1.1
DZM LR LR 04 57 48.8
comp=Z,2μm,20.4s,baz=30,slow=34
DZM Mont Dzumac 11.07 161 Pn 04 54 09.7 +0.7
KRVT Keravat (AS076 12.68 304 LR LR 04 59 42.5
comp=Z,1μm,21.6s,baz=119,slow=39
PMG Port Moresby 15.29 277 P 04 55 08.5 -2.0
PMG IAmb IAmb 04 55 14.0
comp=Z,111nm,1.1s
MSVF Nonsavu 16.18 114 P **P 04 55 20.5 0.0**
TARA Tarawa 16.47 39 Pn **Pn 04 55 20.0 -1.3**
TARA IAmb IAmb 04 55 45.5
comp=Z,177nm,1.2s
EIDS Eidsvold 17.49 217 Pn **Pn 04 55 32.9 -1.0**
CTA Charters Tower 17.80 240 P **P 04 55 39.3 +1.0**
comp=Z,1.7nm,0.3s,baz=66,slow=14,SNR=33
CTAO Charters Tower 17.80 240 Pn **Pn 04 55 36.1 -1.9**
CTAO IAmb IAmb 04 55 43.5
comp=Z,105nm,1.0s
COEN Coen 19.05 261 P **Pn 04 55 54.7 +1.6**
ARMA Armidale 21.31 207 P **P 04 56 17.2 +0.6**
JAY Jayapura 23.46 291 P **P 04 56 36.6 -2.6**
comp=Z,46nm,1.1s,baz=120,slow=4.9,SNR=7.5
JAY Jayapura 23.46 291 P **P 04 56 39.7 +0.5**
comp=Z,348nmcomp=Z,30nm,1.3s
GENI Genyem 23.92 290 P **P 04 56 43.1 -0.5**
comp=Z,90nm,0.9s
RAO Raoul Island 25.31 137 LR LR 05 05 56.9
comp=Z,398nm,18.3s,baz=254,slow=34
OUZ Omahuta 25.58 159 P **P 04 57 01.4 +3.0**
OUZ IAmb IAmb 04 57 06.6
comp=Z,33nm,1.1s
STKA Stephens Creek 27.95 220 P **P 04 57 20.5 +0.7**
comp=Z,7.8nm,0.7s,baz=42,slow=7.7,SNR=8.7
STKA LR LR 05 07 32.7
comp=Z,361nm,19.5s,baz=33,slow=34
STKA Stephens Creek 27.95 220 P **P 04 57 21.2 +1.4**
WR0 Warramunga Arr 28.18 249 P **P 04 57 22.1 0.0**
WB0 Warramunga Arr 28.28 250 P **P 04 57 22.4 -0.5**
WB0 IAmb IAmb 04 57 23.7
comp=Z,22nm,0.9s
WRAB Tennant Creek 28.35 249 P **P 04 57 23.3 -0.3**
WRAB IAmb IAmb 04 57 24.5
comp=Z,59nm,1.6s
WB2 Warramunga Arr 28.35 249 P **P 04 57 23.3 -0.3**
WB2 IAmb IAmb 04 57 24.5
comp=Z,40nm,1.3s
WRA Warramunga Arr 28.36 249 P **P 04 57 23.4 -0.3**
comp=Z,12nm,0.9s,baz=78,slow=9.0,SNR=19
WRA PcP **PcP 05 00 36.5 +0.7**
comp=Z,1.4nm,0.3s,baz=75,slow=2.8,SNR=7.3
WRA LR LR 05 07 40.9
comp=Z,295nm,21.7s,baz=70,slow=34
URZ Urewera 29.58 156 P **P 04 57 36.0 +1.8**
comp=Z,4.0nm,0.8s,baz=20,slow=12,SNR=3.3
URZ LR LR 05 07 59.2
comp=Z,271nm,18.6s,baz=334,slow=33
URZ Urewera 29.58 156 IAmb IAmb 04 57 55.2
comp=Z,20nm,1.1s
ASAR Alice Springs 29.77 242 P **P 04 57 35.5 -0.6**
comp=Z,16nm,0.8s,baz=72,slow=9.8,SNR=129
ASAR PcP **PcP 05 00 40.0 +0.6**
comp=Z,4.5nm,1.1s,baz=60,slow=2.4,SNR=7.0
ASAR LR LR 05 09 27.2
comp=Z,298nm,18.4s,baz=70,slow=36
BKZ Black Stump Fm 30.14 158 P **P 04 57 41.0 +1.7**
BKZ IAmb IAmb 04 57 53.5
comp=Z,17nm,0.8s
H11S2 WAKE ISLAND Hy 30.16 8 T T 05 28 30.4
baz=188,slow=76,SNR=662
H11S3 WAKE ISLAND Hy 30.16 8 T T 05 28 30.5
baz=188,slow=76,SNR=376
H11S1 WAKE ISLAND Hy 30.18 8 T T 05 28 31.7
baz=188,slow=76,SNR=405

H11N1 WAKE ISLAND Hy 31.39 8 T T 05 30 01.9
SNR=52
H11N3 WAKE ISLAND Hy 31.40 8 T T 05 30 06.6
baz=186,slow=74,SNR=62
H11N2 WAKE ISLAND Hy 31.41 8 T T 05 30 06.6
baz=88,slow=74,SNR=76
SIJI Sorong 32.83 287 P **P 04 58 03.5 +0.3**
comp=Z,6.1nm,0.4s,baz=72,slow=9.6,SNR=3.7
SIJI LR LR 05 13 11.0
comp=Z,221nm,19.8s,baz=195,slow=40
RPZ Rata Peaks 32.85 169 P **P 04 58 03.9 +0.9**
comp=Z,8.1nm,0.8s,baz=236,slow=1.4,SNR=5.7
RPZ LR LR 05 09 43.5
comp=Z,314nm,19.4s,baz=18,slow=33
NLAI Namlea 36.09 280 P **P 04 58 31.7 +0.3**
comp=Z,1μmcomp=Z,72nm,1.4s
FITZ Fitzroy Crossi 36.22 255 P **P 04 58 32.0 -0.4**
comp=Z,12nm,0.8s,baz=106,slow=6.1,SNR=17
FITZ LR LR 05 13 26.9
comp=Z,520nm,18.2s,baz=72,slow=36
FITZ Fitzroy Crossi 36.22 255 P **P 04 58 31.8 -0.6**
FITZ IAmb IAmb 04 58 32.8
comp=Z,16nm,0.9s
LBMI Labuha 36.46 285 P P 04 58 39.1 +4.6
TNTI Ternate 37.05 287 P **P 04 58 40.1 +0.5**
FORT Forrest 37.19 234 P **P 04 58 41.4 +0.8**
SANI Sanana 37.48 282 P **P 04 58 43.5 +0.3**
comp=Z,5μmcomp=Z,99nm,0.9s
SOEI Soe 37.65 269 P **P 04 58 47.4 +2.6**
BATI Baumata 38.20 268 P **P 04 58 49.4 +0.1**
comp=Z,65nm,0.7s,baz=182,slow=2.9,SNR=11
BATI LR LR 05 14 55.7
comp=Z,334nm,19.1s,baz=114,slow=37
BATI Baumata 38.20 268 P **P 04 58 50.4 +1.1**
comp=Z,56nm,1.0s
MMRI Maumere 39.78 270 P **P 04 59 02.5 0.0**
comp=Z,81nm,1.1s
MMRI Maumere 39.78 270 P **P 04 59 01.4 -1.2**
EDFI Ende, Flores 40.30 270 P **P 04 59 06.3 -0.7**
comp=Z,11nm,1.2s
LUWI Luwuk 40.84 282 P **P 04 59 11.5 +0.2**
comp=Z,101nm,1.4s
APSI Ampana 41.96 282 P **P 04 59 20.5 0.0**
comp=Z,572nmcomp=Z,52nm,1.4s
BNSI Bone 42.59 276 P **P 04 59 25.7 0.0**
KAPI Kappang 42.81 275 P **P 04 59 27.5 0.0**
comp=Z,25nm,0.9s,baz=55,slow=5.4,SNR=13
KAPI Kappang 42.81 275 P **P 04 59 27.8 +0.3**
NWAO Narrogin (SRO) 46.58 235 P **P 04 59 57.5 +0.2**
comp=Z,14nm,0.9s,baz=30,slow=8.7,SNR=3.2
NWAO Narrogin (SRO) 46.58 235 IAmb IAmb 05 00 00.4
comp=Z,17nm,1.1s
PPT Papeete 46.61 103 LR LR 05 15 06.8
comp=Z,108nm,20.0s,baz=290,slow=30
PPT2 Papeete2 46.61 103 eLQ LQ 05 11 20.0
comp=Z,453nm,24.8s
PPT2 eLR LR 05 13 19.2
comp=Z,244nm,24.8s
MORW Morawa 46.63 241 P **P 04 59 57.9 +0.2**
KKM Kota Kinabalu 49.31 288 P **P 05 00 18.3 -0.5**
SBUM Sibu 51.94 282 P **P 05 00 38.2 -0.4**
SBUM Sibu 51.94 282 P **P 05 00 39.0 +0.5**
INU Inuyama 52.56 334 P **P 05 00 42.7 0.0**
MJAR Matsushiro Arr 53.08 335 P **P 05 00 45.2 -1.3**
comp=Z,3.5nm,0.9s,baz=167,slow=6.3,SNR=7.2
MJAR PcP **PcP 05 01 54.9 +0.3**
comp=Z,4.5nm,0.9s,baz=162,slow=4.9,SNR=6.2
MJAR LR LR 05 23 09.2
comp=Z,41nm,20.0s,baz=190,slow=36
MAT Matsushiro 53.08 335 P **P 05 00 47.4 +0.9**
MAT S **S 05 08 11.2 -2.9**
KSM Kuching 53.51 281 P **P 05 00 50.0 -0.1**
KSM IAmb IAmb 05 00 50.7
comp=Z,20nm,0.9s
KSM Kuching 53.51 281 P **P 05 00 50.0 -0.1**
JNU Nakatsue 53.75 327 P **P 05 00 51.1 -0.5**
comp=Z,15nm,0.9s,baz=115,slow=7.8,SNR=4.7
JNU LR LR 05 21 16.7
comp=Z,113nm,20.4s,baz=98,slow=33
CISI Cisompet, Garu 54.06 269 P **P 05 00 53.0 -1.3**
LEM Lembang 54.37 270 P **P 05 00 56.8 +0.2**
comp=Z,24nm,0.4s,baz=112,slow=8.1,SNR=9.8
LEM LR LR 05 27 06.8
comp=Z,127nm,18.2s,baz=181,slow=39
ASAJ Asahikawa 58.33 343 P **P 05 01 23.8 -0.2**
comp=Z,27nm,0.8s,baz=210,slow=11,SNR=12
KSRS Korea Array 58.61 328 P **P 05 01 25.8 -0.3**
comp=Z,6.7nm,1.0s,baz=148,slow=7.8,SNR=12
KSRS LR LR 05 24 31.2
comp=Z,100nm,19.3s,baz=118,slow=34
MYKOM Kota Tinggi 59.83 279 P **P 05 01 34.7 -0.4**
NJ2 Nanjing 60.25 317 eP **P 05 01 38.3 +0.8**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
USRK Ussuriysk Ar. 62.08 336 P **P 05 01 49.4 -0.3**
comp=Z,25nm,1.0s,baz=154,slow=6.8,SNR=21
USRK LR LR 05 24 37.2
comp=Z,47nm,21.6s,baz=148,slow=32
BKNI Bangkinang 62.21 277 P **P 05 01 52.1 +0.8**
KULM Kulim 63.82 282 P **P 05 02 01.8 0.0**
PETK Petropavlovsk- 64.56 357 P **P 05 02 05.7 -0.3**
comp=Z,6.4nm,0.9s,baz=142,slow=7.5,SNR=12
CN2 Changchun 64.64 331 eP **P 05 02 07.7 +1.0**
CN2 pmax pmax
comp=Z,20nm,1.0s
CASY Casey 64.76 201 P **P 05 02 08.1 +1.0**
RPSI Rantau Prapat 64.82 279 P **P 05 02 08.2 -0.3**
PSI Prapat 64.85 279 P **P 05 02 07.8 -1.0**
comp=Z,5.4nm,0.7s,baz=178,slow=3.3,SNR=14
GSI Gunungsitoli 65.81 277 P **P 05 02 14.4 -0.5**
VNDA Vanda 65.93 180 P **P 05 02 16.5 +1.9**
comp=Z,5.2nm,0.8s,baz=348,slow=7.2,SNR=16
VNDA LR LR 05 25 41.4
comp=Z,128nm,21.9s,baz=2.0,slow=31
VNDA Vanda 65.93 180 P **P 05 02 16.5 +1.9**
GYA Guiyang 66.16 306 eP **P 05 02 21.0 +4.0**
GYA pmax pmax
comp=Z,10.0nm,0.6s
KLR Kul'dur 66.35 339 P **P 05 02 17.6 0.0**
comp=Z,5.3nm,0.9s,baz=173,slow=2.0,SNR=7.0
XAN Xi'an 68.20 314 P **P 05 02 28.8 -0.9**
XAN pP pP 05 02 40.3 +1.0
XAN pmax pmax
comp=Z,14nm,0.9s
XAN pmax pmax
comp=Z,41nm,4.9s
XAN LR LR
comp=Z,130nm,15.5s
XAN LR LR
comp=Z,96nm,18.4s
XAN LR LR
comp=Z,160nm,18.7s
XAN Xi'an 68.20 314 IAmb IAmb 05 02 29.8
comp=Z,15nm,1.0s
KMI Kunming 68.75 303 P **P 05 02 33.2 -0.4**
KMI sP pwP 05 02 50.2 -0.6
KMI pmax pmax
comp=Z,15nm,1.2s
KMI LR LR
comp=Z,130nm,20.3s
KMI LR LR
comp=Z,120nm,13.5s
KMI LR LR
comp=Z,160nm,29.3s
CM31 Chiang Mai Arr 69.47 295 P **P 05 02 37.6 -0.3**
CM31 IAmb IAmb 05 02 42.4
comp=Z,9.3nm,1.1s
CMAR Chiang Mai Arr 69.47 295 P **P 05 02 38.3 +0.4**
comp=Z,1.9nm,0.5s,baz=114,slow=4.3,SNR=16
CMAR LR LR 05 32 00.0
comp=Z,33nm,21.1s,baz=100,slow=35
CHTO Chiang Mai 69.60 295 P **P 05 02 38.7 0.0**
CHTO IAmb IAmb 05 02 39.5
comp=Z,11nm,1.2s
HHC Hu-ho-hao-te 70.25 321 P **P 05 02 43.7 +1.3**
HHC pmax pmax
comp=Z,6.0nm,0.8s
HHC pmax pmax
comp=Z,93nm,6.5s
CD2 Chengdu 70.47 309 eP **P 05 02 44.0 +0.2**
ULN Ulaanbaatar 76.92 325 P **P 05 03 22.3 +0.8**
GTA Gaotai 77.20 315 ⇓P **P 05 03 23.4 +0.2**
GTA pP PcP 05 03 34.7 +0.9
GTA sP pwP 05 03 39.6 -1.0
GTA pmax pmax
comp=Z,18nm,1.2s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GTA				pmax	pmax		
	comp=Z,55nm,4.4s						
GTA				LR	LR		
	comp=Z,97nm,18.4s						
GTA				LR	LR		
	comp=Z,110nm,20.6s						
GTA				LR	LR		
	comp=Z,59nm,20.9s						
SONM	**Songino Array**	**77.28**	**325**	P	**P**	**05 03 24.1**	**+0.7**
	comp=Z,12nm,0.8s,baz=143,slow=6.0,SNR=33						
SONM				LR	LR	05 38 49.2	
	comp=Z,67nm,18.9s,baz=78,slow=37						
YAK	**Yakutsk**	**77.76**	**345**	P	**P**	**05 03 25.6**	**0.0**
KDAK	**Kodiak Island**	**78.25**	**23**	P	**P**	**05 03 28.7**	**+0.2**
KDAK				IAmb	IAmb	05 03 29.3	
	comp=Z,14nm,1.1s						
QSPA	**South Pole Qui**	**78.42**	**180**	P	**P**	**05 03 31.4**	**+1.8**
BILL	**Bilibino**	**79.46**	**1**	P	**P**	**05 03 35.3**	**+0.4**
CNPM	**China Poot**	**79.98**	**22**	IAmb	IAmb	05 03 49.4	
	comp=Z,12nm,1.1s						
TLY	**Talaya**	**80.86**	**327**	P	**P**	**05 03 42.6**	**-0.2**
TLY				IAmb	IAmb	05 03 43.8	
	comp=Z,20nm,1.1s						
MAW	**Mawson**	**83.05**	**202**	P	**P**	**05 03 55.4**	**+1.3**
	comp=Z,10nm,1.0s,baz=102,slow=5.9,SNR=11						
MAW				LR	LR	05 37 55.0	
	comp=Z,42nm,18.1s,baz=72,slow=34						
MAW	**Mawson**	**83.05**	**202**	P	**P**	**05 03 55.5**	**+1.5**
RDOG	**Red Dog Mine**	**83.19**	**12**	P	**P**	**05 03 55.1**	**+0.5**
RDOG				IAmb	IAmb	05 03 56.9	
	comp=Z,6.4nm,0.6s						
RND	**Reindeer**	**83.48**	**20**	IAmb	IAmb	05 04 06.5	
	comp=Z,25nm,1.8s						
MCK	**McKinley**	**83.67**	**20**	IAmb	IAmb	05 04 12.2	
	comp=Z,11nm,1.2s						
BALM	**Baldy**	**84.34**	**24**	IAmb	IAmb	05 04 23.2	
	comp=Z,7.2nm,1.1s						
BARN	**Barnard Glacie**	**84.62**	**24**	IAmb	IAmb	05 04 11.3	
	comp=Z,12nm,1.2s						
CTGM	**Chitina Glacie**	**84.70**	**24**	IAmb	IAmb	05 04 04.2	
	comp=Z,12nm,1.0s						
HDA	**Harding Lake**	**84.78**	**20**	IAmb	IAmb	05 04 03.8	
	comp=Z,8.2nm,0.7s						
COLA	**College**	**84.79**	**19**	P	**P**	**05 04 02.6**	**-0.2**
IL31		**85.03**	**19**	P	**P**	**05 04 03.5**	**-0.5**
IL31				IAmb	IAmb	05 04 11.3	
	comp=Z,8.9nm,1.4s						
ILAR	**Eielson Array**	**85.03**	**19**	P	**P**	**05 04 03.0**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=236,slow=7.6,SNR=9.0						
ILAR				PKKP	**PKKPbc**	**05 22 11.2**	**-3.3**
	comp=Z,0.4nm,0.6s,baz=344,slow=1.1,SNR=4.8						
ILAR				LR	LR	05 35 05.5	
	comp=Z,51nm,21.2s,baz=267,slow=31						
DOT	**Dot Lake**	**85.28**	**21**	IAmb	IAmb	05 04 13.0	
	comp=Z,7.5nm,1.1s						
YBH	**Yreka Blue Hor**	**86.51**	**46**	P	**P**	**05 04 13.1**	**+1.0**
HUMO	**Hull Mountain**	**86.62**	**45**	IAmb	IAmb	05 05 51.9	
	comp=Z,4.5nm,0.6s						
TOLK	**Toolik Lake Re**	**86.84**	**16**	P	**P**	**05 04 13.8**	**+0.8**
TOLK				IAmb	IAmb	05 04 39.9	
	comp=Z,16nm,1.6s						
AFDM	**Forest Hills D**	**86.91**	**49**	P	**P**	**05 04 15.4**	**+1.3**
WMQ	**Urumqi**	**87.27**	**316**	*e*P	**P**	**05 04 16.7**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,47nm,5.7s						
WMQ				LR	LR		
	comp=Z,110nm,26.3s						
WMQ				LR	LR		
	comp=Z,140nm,24.9s						
WMQ				LR	LR		
	comp=Z,75nm,24.9s						
MOD	**Modoc Plateau**	**88.28**	**47**	P	**P**	**05 04 21.3**	**+0.6**
NVAR	**Mina Array Bea**	**88.77**	**50**	P	**P**	**05 04 23.3**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=235,slow=7.9,SNR=14						
NVAR				LR	LR	05 39 07.1	
	comp=Z,75nm,18.7s,baz=240,slow=32						
KVN	**Kaiserville**	**89.09**	**50**	IAmb	IAmb	05 04 47.8	
	comp=Z,11nm,1.7s						
EPYK	**Eagle Plains**	**89.39**	**21**	IAmb	IAmb	05 04 27.3	
	comp=Z,7.8nm,0.9s						
I07A	**Izee**	**89.47**	**45**	IAmb	IAmb	05 04 49.6	
	comp=Z,9.4nm,1.5s						
J08A	**Circle Bar Ran**	**89.98**	**46**	IAmb	IAmb	05 04 51.2	
	comp=Z,17nm,1.4s						
SYO	**Syowa Base**	**90.34**	**198**	⇑*e*X	**P**	**05 04 26.0**	**-3.7**
SYO	**Syowa Base**	**90.34**	**198**	⇑*e*X	**P**	**05 04 34.4**	**+4.7**
BMO	**Blue Mountains**	**91.19**	**45**	IAmb	IAmb	05 04 56.4	
	comp=Z,9.7nm,1.4s						
ELK	**Elko**	**91.65**	**49**	IAmb	IAmb	05 04 48.7	
	comp=Z,5.8nm,1.1s						
MK31	**Makanchi Array**	**91.78**	**317**	P	**P**	**05 04 36.6**	**-0.2**
MKAR	**Makanchi Array**	**91.78**	**317**	P	**P**	**05 04 36.5**	**-0.3**
	comp=Z,8.1nm,0.6s,baz=98,slow=6.2,SNR=88						
MKAR				LR	LR	05 47 34.8	
	comp=Z,28nm,19.5s,baz=68,slow=37						
MAKZ	**Makanchi**	**91.99**	**317**	P	**P**	**05 04 37.4**	**-0.4**
ZAA0	**Zalesovo Array**	**92.17**	**325**	P	**P**	**05 04 37.1**	**-1.3**
ZAA0					**P**	**05 04 37.4**	**-0.9**
ZALV	**Zalesovo Beam**	**92.17**	**325**	P	**P**	**05 04 37.4**	**-0.9**
	comp=Z,1.6nm,0.6s,baz=116,slow=5.1,SNR=8.9						
ZALV				LR	LR	05 44 55.2	
	comp=Z,93nm,20.8s,baz=92,slow=35						
PRZ	**Przheval'sk**	**93.46**	**313**	P	**P**	**05 04 45.1**	**+0.3**
KDJ	**Kajisay**	**94.28**	**312**	P	**P**	**05 04 48.4**	**-0.2**
KSH	**Kashi**	**94.66**	**309**	P	**P**	**05 04 52.2**	**+1.8**
KSH				pP	pP	05 04 58.4	-2.2
KSH				sP	sP	05 05 03.1	-0.8
KSH				pmax	pmax		
	comp=Z,20nm,0.5s						
KSH				pmax	pmax		
	comp=Z,180nm,4.8s						
C36M	**Paulatuk**	**94.99**	**20**	IAmb	IAmb	05 04 55.0	
	comp=Z,6.4nm,1.4s						
KURK	**Kurchatov**	**95.06**	**321**	P	**P**	**05 04 50.9**	**-0.8**
KURBB	**Kurchatov Arra**	**95.09**	**321**	P	**P**	**05 04 50.6**	**-1.2**
	comp=Z,2.1nm,0.8s,baz=104,slow=3.3,SNR=22						
NRIK	**Noril'sk**	**95.54**	**340**	P	**P**	**05 04 52.2**	**-1.3**
	comp=Z,2.4nm,0.5s,baz=124,slow=6.2,SNR=6.6						
NRIK				LR	LR	05 46 19.5	
	comp=Z,106nm,21.8s,baz=60,slow=34						
PDAR	**Pinedale Array**	**96.22**	**48**	P	**P**	**05 04 56.7**	**-0.9**
	comp=Z,0.1nm,0.6s,baz=252,slow=4.6,SNR=1.6						
SNAA	**Sanae**	**96.36**	**185**	P	**P**	**05 04 57.5**	**0.0**
YKA	**Yellowknife Ar**	**96.89**	**28**	P	**P**	**05 04 58.5**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=251,slow=4.5,SNR=14						
YKA				LR	LR	05 45 23.8	
	comp=Z,39nm,18.5s,baz=0.0,slow=33						
VNA3	**Neumayer Olymp**	**97.20**	**183**	P	Pdif	05 05 01.6	+0.4
TXAR	**Lajitas Array**	**98.84**	**62**	PKKPbc	PKKPbc	05 21 37.6	+0.2
	comp=Z,0.2nm,0.6s,baz=120,slow=5.0,SNR=3.7						
TXAR				LR	LR	05 44 17.8	
	comp=Z,60nm,18.8s,baz=0.0,slow=32						
ARCES	**ARCESS Array B**	**116.04**	**345**	PKP	**PKiKP**	**05 10 09.9**	**-1.3**
	comp=Z,2.9nm,0.9s,baz=80,slow=1.4,SNR=5.5						
KBZ	**Khabaz**	**119.27**	**314**	PKP	**PKiKP**	**05 10 19.1**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=110,slow=5.2,SNR=3.6						
FINES	**FINESS Array B**	**121.09**	**337**	PKP	**PKPdf**	**05 10 19.8**	**-1.3**
	comp=Z,3.5nm,0.8s,baz=107,slow=2.6,SNR=8.9						
ORTC	**Ortega, Tolima**	**122.31**	**93**	*e*P	**PKPdf**	**05 10 23.3**	**-1.7**
RREF	**El Recreo**	**122.39**	**92**	*e*P	**PKiKP**	**05 10 27.3**	**+1.3**
GUY2C	**Guyana, Caldas**	**122.44**	**91**	*e*P	**PKiKP**	**05 10 26.5**	**+0.6**
BOSA	**Boshof**	**122.56**	**225**	PKP	**PKiKP**	**05 10 25.6**	**+0.2**
	comp=Z,2.3nm,0.7s,baz=141,slow=2.8,SNR=6.7						
LPAZ	**La Paz**	**122.73**	**118**	PKP	**PKiKP**	**05 10 27.1**	**+0.5**
	comp=Z,3.2nm,0.9s,baz=80,slow=0.4,SNR=9.3						
LPAZ	**La Paz**	**122.73**	**118**		**PKiKP**	**05 10 27.7**	**+1.1**
NORC	**Norcasia**	**122.98**	**91**	*e*P	**PKPdf**	**05 10 26.2**	**-0.1**
ROSC	**El Rosal**	**123.39**	**92**	PKP	**PKiKP**	**05 10 27.8**	**+0.1**
	comp=Z,3.1nm,0.3s,baz=79,slow=17,SNR=4.5						
SPBC	**San Pablo de B**	**123.78**	**91**	*e*P	**PKPdf**	**05 10 27.2**	**-0.6**
SMLC	**San Martn de**	**124.27**	**87**	*e*P	**PKiKP**	**05 10 33.5**	**+4.6**
RUSC	**La Rusia**	**124.79**	**91**	*e*P	**PKPdf**	**05 10 29.7**	**-0.6**
OCAC	**Ocana**	**124.93**	**88**	*e*P	**PKiKP**	**05 10 30.6**	**+0.2**
AKASG	**Malin Array Be**	**125.56**	**325**	PKP	**PKiKP**	**05 10 30.2**	**-0.2**
	comp=Z,8.5nm,0.8s,baz=59,slow=2.4,SNR=22						
AKBB	**Malin Array Si**	**125.56**	**325**		**PKiKP**	**05 10 30.5**	**+0.1**
CPUP	**Villa Florida**	**125.93**	**135**	PKP	**PKiKP**	**05 10 32.4**	**+0.4**
	comp=Z,3.5nm,0.8s,baz=333,slow=2.0,SNR=7.8						
NB2	**NORSAR Subarra**	**126.35**	**343**	PKPdf	**PKPdf**	**05 10 31.2**	**-0.1**
	comp=Z,6.6nm,1.1s,baz=31,slow=1.9						
NB2	**NORSAR Subarra**	**126.35**	**343**	PKPdf	**PKPdf**	**05 10 31.2**	**-0.1**
	baz=31,slow=1.9						
NOA	**NORSAR Array B**	**126.35**	**343**	PKP	**PKPdf**	**05 10 31.1**	**-0.3**
	comp=Z,3.2nm,0.9s,baz=34,slow=2.0,SNR=10						
ILGA	**Ilgaz**	**126.53**	**313**		**PKiKP**	**05 10 33.3**	**+0.3**
BRTR	**Keskin Array B**	**126.99**	**311**	PKP	**PKiKP**	**05 10 33.8**	**-0.1**
	comp=Z,1.4nm,1.0s,baz=142,slow=4.2,SNR=9.4						
SORM	**Soroca**	**127.28**	**323**	⇓P	**PKiKP**	**05 10 34.0**	**+0.1**
LSZ	**Lusaka**	**127.52**	**240**		**PKiKP**	**05 10 36.5**	**+0.9**
SDV	**Santo Domingo**	**127.65**	**88**	*e*P	**PKPdf**	**05 10 35.1**	**-0.3**
SDV	**Santo Domingo**	**127.65**	**88**		**PKiKP**	**05 10 35.6**	**-0.3**
TOPG	**Topolog**	**128.74**	**319**	⇓P	**PKiKP**	**05 10 37.7**	**+0.8**
CFR	**Carcaliu**	**128.76**	**320**	⇓P	**PKiKP**	**05 10 37.7**	**+0.7**
TIRR	**Tirgusor**	**128.90**	**319**	⇓P	**PKiKP**	**05 10 38.3**	**+1.0**
HARR	**Harsova**	**129.11**	**319**	⇓P	**PKiKP**	**05 10 39.4**	**+1.7**
BIZ	**Bicaz**	**129.19**	**322**	⇑P	**PKiKP**	**05 10 37.6**	**-0.2**
BURAR	**Bucovina Array**	**129.38**	**324**	⇑P	**PKiKP**	**05 10 39.9**	**+1.6**
MLR	**Muntele Rosu**	**129.99**	**321**	⇓P	**PKiKP**	**05 10 40.3**	**+0.6**
SAML	**Samuel**	**130.16**	**112**		**PKiKP**	**05 10 41.3**	**+0.6**
KOLS	**Kolonicke sedl**	**130.32**	**326**	*e*PKP	**PKiKP**	**05 10 40.6**	**+0.6**
TRPA	**Tarpa**	**130.62**	**325**	⇓P	**PKiKP**	**05 10 41.3**	**+0.7**
ARR	**Arges**	**130.86**	**321**	⇓P	**PKiKP**	**05 10 42.4**	**+1.1**
ELND	**Elena**	**131.22**	**318**	⇓P	**PKiKP**	**05 10 42.5**	**+0.4**
DRGR		**131.26**	**324**	⇑P	**PKiKP**	**05 10 41.7**	**-0.4**
SIRR	**Siria**	**132.16**	**324**	⇓P	**PKiKP**	**05 10 44.1**	**+0.2**
PSZ	**Piszkesteto**	**132.20**	**327**	⇓P	**PKiKP**	**05 10 45.7**	**+1.8**
MORC	**Moravsky Berou**	**132.25**	**330**	*e*PKP	**PKiKP**	**05 10 43.9**	**-0.1**
MORC	**Moravsky Berou**	**132.25**	**330**	⇑P	**PKiKP**	**05 10 44.2**	**+0.2**
VYHS	**Vyhne**	**132.41**	**328**	*e*PKP	**PKiKP**	**05 10 44.6**	**+0.3**
KRLC	**Kraliky**	**132.42**	**331**	*e*PKPDF	**PKiKP**	**05 10 44.4**	**+0.1**
DPC	**Dobruska-Polom**	**132.46**	**331**	*e*PKPDF	**PKiKP**	**05 10 45.3**	**+0.9**
BZS	**Buzias**	**132.54**	**323**	⇑P	**PKiKP**	**05 10 44.6**	**0.0**
JAVC	**Velka Javorina**	**132.78**	**329**	*e*PKP	**PKiKP**	**05 10 45.9**	**+0.8**
MDVR	**Moldovita**	**132.93**	**322**	⇑P	**PKiKP**	**05 10 44.9**	**-0.6**
VRAC	**Vranov**	**133.02**	**330**	*e*PKP	**PKiKP**	**05 10 45.0**	**-0.5**
VTS	**Vitosha**	**133.09**	**319**	⇑P	**PKiKP**	**05 10 46.4**	**+0.3**
VTS	**Vitosha**	**133.09**	**319**		**PKiKP**	**05 10 46.1**	**+0.1**
PVCC	**Panska Ves**	**133.15**	**332**	*e*PKPDF	**PKiKP**	**05 10 45.6**	**-0.1**
BRG	**Berggiesshubel**	**133.18**	**333**	*e*PKP	**PKiKP**	**05 10 45.2**	**-0.5**
	comp=Z,5.1nm,0.9s						
CLL	**Collm**	**133.28**	**334**	*i* PKPdf	**PKiKP**	**05 10 46.6**	**+0.7**
	comp=Z,7.0nm,1.1s						
CLL				L	L	06 04 00.0	
	comp=Z,100nm,21.9s						
KRUC	**Moravsky**	**133.28**	**330**	*e*PKP	**PKPdf**	**05 10 44.6**	**-0.2**
MODS	**Modra-Piesok**	**133.29**	**329**	*e*PKP	**PKiKP**	**05 10 46.1**	**0.0**
GOPC	**GO Pecny, Ondr**	**133.48**	**332**	*e*PKPDF	**PKiKP**	**05 10 47.1**	**+0.7**
PRU	**Pruhonice**	**133.54**	**332**	*e*PKPDF	**PKiKP**	**05 10 46.2**	**-0.3**
CONA	**Conrad Observa**	**134.30**	**329**	PKiKP	**PKiKP**	**05 10 47.8**	**-0.4**
	comp=Z,6.7nm,1.2s						
KHC	**Kasperske Hory**	**134.59**	**332**	*e*PKPDF	**PKiKP**	**05 10 48.2**	**-0.5**
KHC	**Kasperske Hory**	**134.59**	**332**		**PKiKP**	**05 10 48.4**	**-0.3**
GERES	**GERESS Array B**	**134.73**	**331**	PKP	**PKiKP**	**05 10 48.5**	**-0.6**
	comp=Z,2.5nm,0.7s,baz=8.5,slow=2.7,SNR=14						
ARSA	**Arzberg**	**134.92**	**328**	*e*PKiKP	**PKiKP**	**05 10 48.6**	**-0.8**
	comp=Z,2.6nm,0.9s						
FNA	**Florina**	**135.20**	**318**		**PKPdf**	**05 10 49.0**	**+0.2**
SOKA	**Soboth**	**135.55**	**328**	*e*PKPdf	**PKPdf**	**05 10 49.2**	**-0.1**
	comp=Z,6.9nm,1.1s						
PTGA	**Pitinga**	**136.02**	**103**		**PKiKP**	**05 10 52.4**	**-0.2**
KBA	**Koelnbreinsper**	**136.13**	**330**	*e*PKPdf	**PKPdf**	**05 10 50.1**	**-0.3**
	comp=Z,12nm,1.4s						
MYKA	**Terra Mystica**	**136.29**	**329**	*e*PKPdf	**PKPdf**	**05 10 50.6**	**0.0**
	comp=Z,5.3nm,1.0s						
ABTA	**Abfaltersbach**	**136.77**	**330**	*e*PKPdf	**PKPdf**	**05 10 51.5**	**-0.1**
	comp=Z,13nm,1.2s						
WATA	**Walderalm**	**136.81**	**331**	*e*PKiKP	**PKiKP**	**05 10 52.3**	**-1.1**
	comp=Z,12nm,1.2s						
WTTA	**Wattenberg**	**136.83**	**331**	*e*PKiKP	**PKPdf**	**05 10 52.3**	**+0.6**
	comp=Z,14nm,1.2s						
STAL	**STALIGIAL**	**137.01**	**329**		**PKiKP**	**05 10 52.9**	**-0.9**
MOTA	**Moosalm**	**137.02**	**332**	*e*PKPdf	**PKPdf**	**05 10 52.4**	**+0.3**
	comp=Z,12nm,1.0s						
SQTA	**Sankt Quirin**	**137.06**	**331**	*e*PKiKP	**PKPdf**	**05 10 52.6**	**+0.5**
	comp=Z,7.8nm,0.9s						
FETA	**Feichten**	**137.43**	**331**	*e*PKiKP	**PKiKP**	**05 10 53.8**	**-0.9**
	comp=Z,8.7nm,1.0s						
DAVA	**Damuels**	**137.63**	**332**	*e*PKiKP	**PKiKP**	**05 10 54.0**	**-1.1**
	comp=Z,4.1nm,0.7s						
FUORN	**Ofenpass-Fuorn**	**137.94**	**331**		**PKPdf**	**05 10 54.2**	**+0.3**
BDFB	**Brasilia**	**139.41**	**131**	PKP	**PKPdf**	**05 10 57.9**	**+0.6**
	comp=Z,2.5nm,0.7s,baz=157,slow=4.1,SNR=4.1						
KEST	**Kesra**	**145.86**	**319**	PKPbc	**PKPab**	**05 11 09.5**	**+0.3**
	comp=Z,40nm,1.0s,baz=274,slow=2.1,SNR=20						
ESDC	**Sonseca Array**	**149.57**	**339**	PKP	**PKPdf**	**05 11 14.5**	**+0.4**
	comp=Z,5.5nm,1.0s,baz=35,slow=3.6,SNR=4.9						
ESDC				PKPbc	**PKiKP**	**05 11 19.0**	**-0.8**
	comp=Z,4.2nm,0.8s,baz=6.9,slow=2.0,SNR=20						
PVIS	**Viseu**	**149.78**	**345**	*e*PKP	**PKiKP**	**05 11 20.5**	**+0.4**
PAB	**San Pablo**	**149.82**	**340**		**PKiKP**	**05 11 19.9**	**-0.4**
PCBR	**Castelo Branco**	**150.50**	**344**	*e*PKP	**PKiKP**	**05 11 21.8**	**+0.2**
PMRV	**Marv??o**	**150.87**	**344**	*e*PKP	**PKiKP**	**05 11 22.8**	**+0.4**
PSBE	**So Bento**	**151.14**	**346**	*e*PKP	**PKiKP**	**05 11 23.4**	**+0.5**
PMTG	**Montargil**	**151.42**	**345**	*e*PKP	**PKiKP**	**05 11 25.6**	**+2.1**
PBEJ	**Beja**	**152.31**	**344**	*e*PKP	**PKiKP**	**05 11 26.2**	**+0.8**
PNCL	**Nicolau / Gran**	**152.40**	**345**	*e*PKP	**PKiKP**	**05 11 26.3**	**+0.8**
MESJ	**Messejana**	**152.58**	**344**	*e*PKP	**PKiKP**	**05 11 26.6**	**+0.7**
PCVE	**Castro Verde**	**152.72**	**344**	*e*PKP	**PKiKP**	**05 11 27.2**	**+1.0**
PVAQ	**Vaqueiros**	**152.84**	**343**	*e*PKP	**PKiKP**	**05 11 26.8**	**+0.3**
PBDV	**Barranco-do-Ve**	**153.06**	**343**	*e*PKP	**PKiKP**	**05 11 27.6**	**+0.6**
MORF	**Marmelete**	**153.19**	**344**	*e*PKP	**PKiKP**	**05 11 28.7**	**+1.4**
PFVI	**Vila Bisbo**	**153.40**	**344**	*e*PKP	**PKiKP**	**05 11 29.1**	**+1.5**
MDT	**Midelt**	**155.80**	**333**	PKPab	**PKPab**	**05 11 50.1**	**+0.1**
	comp=Z,5.8nm,1.0s,baz=45,slow=8.2,SNR=4.2						
TOA0	**Torodi Ar. Sit**	**161.24**	**277**		**PKPdf**	**05 11 31.0**	**+0.7**
TORD	**Torodi Ar. Bea**	**161.24**	**277**	PKP	**PKPdf**	**05 11 30.4**	**+0.1**
	comp=Z,4.9nm,1.0s,baz=17,slow=2.9,SNR=16						
DBIC	**Dimbokro**	**166.65**	**250**	PKP	**PKPdf**	**05 11 35.6**	**+0.2**
	comp=Z,10.0nm,1.2s,baz=59,slow=3.7,SNR=4.6						

WEL 03 05:18:09.1, 38°S±9°×**17°5E**±3°2, **h169**km±26km, **M2.4**/13, **ML2.6**/13, **MLv2.4**/13, **Error ellipse: s-maj=0.0km s-min=0.0km az=80.5, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RITZ	**Rihia Road**	**0.95**	**162**	P	Sn	05 19 00.1	+4.4
MRHZ	**Matea Rd**	**1.06**	**136**	P	Pn	05 18 35.3	-0.9
MUGZ	**Murupara**	**1.09**	**112**	P	Pn	05 18 37.0	+0.5
RTZ	**Ruatahuna**	**1.30**	**115**	P	Pn	05 18 38.3	0.0
URZ	**Urewera**	**1.30**	**99**	P	Pn	05 18 38.4	+0.2
MTHZ	**Maungataniwha**	**1.32**	**126**	P	Pn	05 18 38.5	-0.1
BKZ	**Black Stump Fm**	**1.35**	**144**	P	Pn	05 18 38.6	-0.2
NMHZ	**Naumai**	**1.46**	**135**	P	Pn	05 18 40.3	+0.4
RAHZ	**Arahi**	**1.52**	**124**	P	Pn	05 18 40.5	+0.2
KWHZ	**Kaweka Forest**	**1.54**	**152**	P	Pn	05 18 53.5	+13
SNGZ	**Shannon Statio**	**1.62**	**116**	P	Pn	05 18 41.3	-0.1
MWZ	**Matawai**	**1.64**	**100**	P	Pn	05 18 41.6	0.0
ARHZ	**Aropaoanui**	**1.68**	**135**	P	Pn	05 18 56.9	+15
RUGZ	**Raukumara Rang**	**1.74**	**87**	P	Pn	05 18 42.5	-0.2
HAZ	**Te Kaha**	**1.85**	**81**	P	Pn	05 18 43.9	+0.1
RIGZ	**Rimuhau**	**1.90**	**110**	P	Pn	05 18 44.2	-0.2
TSZ	**Takapari Road**	**2.02**	**169**	P	Pn	05 18 45.4	-0.2
WMGZ	**Waiomatatini S**	**2.34**	**85**	P	Pn	05 18 49.5	+0.3
MRZ	**Mangatainoka R**	**2.58**	**178**	P	Pn	05 18 51.3	-0.8
OGWZ	**Otaki Gorge**	**2.75**	**185**	P	Pn	05 18 53.8	-0.4
KIW	**Kapiti Island**	**2.82**	**189**	P	Pn	05 18 54.5	-0.5
TMWZ	**Te Maipa**	**3.05**	**174**	P	Pn	05 18 56.2	-1.6
CAW	**Cannon Point**	**3.05**	**186**	P	Pn	05 18 57.0	-0.8
MTW	**Mount Morrison**	**3.08**	**180**	P	Pn	05 18 56.6	-1.6
TRWZ	**Traveller**	**3.33**	**177**	P	Pn	05 18 59.5	-1.8
MSWZ	**Moikau Station**	**3.34**	**183**	P	Pn	05 18 59.8	-1.7
PLWZ	**Palliser**	**3.50**	**183**	P	Pn	05 19 01.5	-1.9

*IDC **03** 05:26:04.3±1.7, 10°63S×162°01E, h0km, mb4.0/7, mb1 4.2/8, mb1mx3.9/38, mbtmp4.0/8, ML4.1/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/37, Error ellipse: s-maj=49.5km s-min=24.7km az=139.0*

*NEIC **03** 05:26:13.2±3.0, 10°3S±0°1×161°9E±0°1, h62km±4km, mb4.5/14, Error ellipse: s-maj=19.0km s-min=14.2km az=191.0*

ISC 03 05:26:13.2±0.8, **10°3S**±0°1×**161°83E**±0°08, **h54**km, **n25**, σ**1s35**/27, **mb4.2**/14, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.03**	**294**	Pn	**Pn**	**05 26 45.8**	**+0.8**
	45nm,0.3s,baz=172,slow=5.9,SNR=9.9						
HNR				Sn	**Sn**	**05 27 08.1**	**-1.2**
	218nm,0.3s,baz=350,slow=23,SNR=13						
HNR				LR	LR	05 27 27.2	
	comp=Z,188nm,21.6s,baz=124,slow=35						
HNR	**Honiara**	**2.03**	**294**		**Pn**	**05 26 45.5**	**+0.4**
HNR				Sn	**Sn**	**05 27 07.8**	**-1.4**
PMG	**Port Moresby**	**14.48**	**272**	P	**P**	**05 29 41.8**	**+1.2**
PATS	**Pohnpei**	**17.35**	**348**	P	**P**	**05 30 12.9**	**+0.5**
CTAO	**Charters Tower**	**17.91**	**235**	P	**Pn**	**05 30 20.6**	**+1.9**
COEN	**Coen**	**18.60**	**257**	P	**Pn**	**05 30 28.5**	**+1.4**
WR0	**Warramunga Arr**	**28.01**	**247**	P	**P**	**05 31 58.0**	**-1.3**
WB0	**Warramunga Arr**	**28.09**	**247**	P	**P**	**05 31 59.0**	**-1.1**
WB0				IAmb	IAmb	05 31 59.5	
	comp=Z,8.5nm,0.7s						
WRAB	**Tennant Creek**	**28.18**	**247**	P	**P**	**05 31 59.5**	**-1.3**
WRAB				IAmb	IAmb	05 32 07.2	
	comp=Z,7.3nm,1.2s						
WB2	**Warramunga Arr**	**28.18**	**247**	P	**P**	**05 31 59.5**	**-1.4**
WB2				IAmb	IAmb	05 32 00.7	
	comp=Z,3.6nm,0.7s						
WRA	**Warramunga Arr**	**28.19**	**247**	P	**P**	**05 31 59.5**	**-1.5**
	comp=Z,4.3nm,0.7s,baz=74,slow=9.0,SNR=9.8						
ASAR	**Alice Springs**	**29.77**	**240**	P	**P**	**05 32 13.1**	**-2.0**
	comp=Z,0.8nm,0.6s,baz=62,slow=10.0,SNR=7.9						
FAKI	**Fak Fak**	**30.25**	**282**	P	**P**	**05 32 20.4**	**+1.0**
FAKI				IAmb	IAmb	05 32 28.5	
	comp=Z,10.0nm,0.9s						
KNRA	**Kununurra**	**32.64**	**257**	P	**P**	**05 32 39.4**	**-0.9**
FITZ	**Fitzroy Crossi**	**35.88**	**253**	P	**P**	**05 33 06.6**	**-1.8**
	comp=Z,5.7nm,0.7s,baz=71,slow=9.1,SNR=20						
FITZ	**Fitzroy Crossi**	**35.88**	**253**	P	**P**	**05 33 06.7**	**-1.8**
FITZ				IAmb	IAmb	05 33 18.1	
	comp=Z,15nm,1.4s						
PSA00	**Pilbara Seismi**	**41.78**	**249**	P	**P**	**05 33 56.2**	**-1.5**
PSA00				IAmb	IAmb	05 34 09.4	
	comp=Z,17nm,1.2s						
PUH	**Pauahi**	**51.56**	**55**	P	**P**	**05 35 12.4**	**-2.0**
PEA0B	**Petropavlovsk-**	**63.22**	**357**	P	**P**	**05 36 36.7**	**+1.0**
PEA0B				IAmb	IAmb	05 36 52.5	
	comp=Z,11nm,1.3s						
SONM	**Songino Array**	**75.80**	**325**	P	**P**	**05 37 53.5**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=130,slow=2.3,SNR=3.6						
QSPA	**South Pole Qui**	**79.73**	**180**	P	**P**	**05 38 16.3**	**+1.1**
QSPA				IAmb	IAmb	05 38 17.0	
	comp=Z,2.9nm,1.1s						
ILAR	**Eielson Array**	**84.04**	**20**	P	**P**	**05 38 38.5**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=243,slow=5.2,SNR=5.2						
MKAR	**Makanchi Array**	**90.33**	**317**	P	**P**	**05 39 07.9**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=78,slow=4.9,SNR=3.5						
YKA	**Yellowknife Ar**	**96.06**	**28**	P	**P**	**05 39 35.2**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=254,slow=4.4,SNR=2.6						
GEC2	**GERESS Array S**	**133.24**	**331**	PKPdf	**PKPdf**	**05 45 22.2**	**-1.0**

*IDC **03** 05:31:35.6±1.2, 6°68S×154°44E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.7/50, mbtmp3.8/9, ML3.8/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/38, Error ellipse: s-maj=32.9km s-min=21.8km az=112.0*

*NEIC **03** 05:31:39.9±2.1, 7°26S±0°10×154°87E±0°06, h35km±2km, mb4.2/9, Error ellipse: s-maj=19.4km s-min=4.9km az=149.0*

ISC 03 05:31:40.2±0.9, **7°2S**±0°1×**154°8E**±0°1, **h41**km, **n22**, σ**1s70**/20, **mb3.8**/11, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.96**	**318**	Pn	**Pn**	**05 32 39.3**	**+0.8**
KRVT	**Keravat (AS076**	**3.97**	**316**	Pn	Pn	05 32 30.7	-7.9
	8.9nm,0.3s,baz=190,slow=4.5,SNR=6.0						
KRVT				Sn	Sn	05 33 09.7	-14
	14nm,0.3s,baz=142,slow=17,SNR=2.6						
PMG	**Port Moresby**	**7.89**	**253**		**Pn**	**05 33 31.6**	**-0.9**
JAY	**Jayapura**	**14.80**	**288**	LR	LR	05 40 55.5	
	comp=Z,46nm,18.1s,baz=315,slow=39						
CTAO	**Charters Tower**	**15.29**	**212**	Pn	**Pn**	**05 35 12.7**	**-0.7**
CTAO				IAmb	IAmb	05 35 20.1	
	comp=Z,22nm,1.4s						
WR0	**Warramunga Arr**	**23.42**	**235**	P	**P**	**05 36 47.8**	**+2.0**
WR0				IAmb	IAmb	05 36 48.5	
	comp=Z,4.5nm,0.8s						
WB0	**Warramunga Arr**	**23.44**	**236**	P	**P**	**05 36 46.4**	**+0.4**
WB0				IAmb	IAmb	05 36 47.1	
	comp=Z,9.0nm,1.4s						
WRAB	**Tennant Creek**	**23.56**	**235**	P	**P**	**05 36 47.1**	**-0.1**
WRAB				IAmb	IAmb	05 36 59.6	
	comp=Z,9.6nm,1.4s						
WB2	**Warramunga Arr**	**23.56**	**235**	P	**P**	**05 36 46.5**	**-0.7**
WRA	**Warramunga Arr**	**23.57**	**235**	P	**P**	**05 36 47.7**	**+0.4**
	comp=Z,3.0nm,0.9s,baz=57,slow=10.0,SNR=5.4						
LHI	**Lord Howe Isla**	**24.55**	**171**	P	**P**	**05 36 53.8**	**-2.3**
ASAR	**Alice Springs**	**25.93**	**228**	P	**P**	**05 37 10.6**	**+1.8**
	comp=Z,0.7nm,0.6s,baz=55,slow=9.3,SNR=6.9						
STKA	**Stephens Creek**	**27.50**	**205**	P	**P**	**05 37 26.6**	**+3.7**
	comp=Z,1.9nm,0.6s,baz=339,slow=4.3,SNR=1.3						
STKA	**Stephens Creek**	**27.50**	**205**	P	**P**	**05 37 24.4**	**+1.5**
FITZ	**Fitzroy Crossi**	**30.42**	**246**	P	**P**	**05 37 47.9**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=86,slow=7.8,SNR=6.2						
FITZ	**Fitzroy Crossi**	**30.42**	**246**	P	**P**	**05 37 48.7**	**-0.2**
FITZ				IAmb	IAmb	05 38 02.5	
	comp=Z,13nm,1.4s						
KSM	**Kuching**	**45.23**	**279**	P	**P**	**05 39 55.3**	**+1.4**
SONM	**Songino Array**	**69.38**	**327**	P	**P**	**05 42 40.7**	**-3.2**
	comp=Z,0.6nm,0.6s,baz=106,slow=5.2,SNR=1.7						
MKAR	**Makanchi Array**	**83.42**	**319**	P	**P**	**05 44 02.3**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=83,slow=6.4,SNR=3.2						
ILAR	**Eielson Array**	**83.60**	**22**	P	**P**	**05 44 04.2**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=233,slow=4.4,SNR=1.7						
NVAR	**Mina Array Bea**	**91.97**	**52**	P	**P**	**05 44 45.9**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=270,slow=3.6,SNR=2.8						
TORD	**Torodi Ar. Bea**	**152.90**	**285**	PKPbc	**PKiKP**	**05 51 35.8**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=53,slow=1.7,SNR=2.8						

*IDC **03** 05:37:17.3±2.7, 29°84S×179°88E, h90km±38km, mb3.4/2, mb1 3.8/4, mb1mx3.4/47, mbtmp3.9/4, MS2.9/1, Ms1 2.9/1, ms1mx2.5/16, Error ellipse: s-maj=62.1km s-min=28.1km az=143.0*

*WEL **03** 05:37:44.7±0.4, 32°S±6°×18°0W±1°6, h278km±8km, M3.9/24, mB4.5/15, MLv4.7/24, Mw(mB)3.6/15*

ISC 03 05:37:40.2±0.9, **31°80S**±0°08×**179°3E**±0°1, **h300**km, **n57**, σ**2s23**/70, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.50**	**44**	P	**Pn**	**05 38 41.4**	**+0.3**
GLKZ				S	**S**	**05 39 27.0**	**-2.8**
MXZ	**Matakaoa Point**	**5.80**	**188**	P	**Pn**	**05 39 10.9**	**+3.8**
MXZ				S	**S**	**05 40 15.0**	**-2.1**
WMGZ	**Waiomatatini S**	**6.05**	**186**	P	**Pn**	**05 39 11.2**	**+1.2**
WMGZ				S	**S**	**05 40 22.0**	**-0.3**
HAZ	**Te Kaha**	**6.07**	**191**	P	**Pn**	**05 39 13.5**	**+3.3**
HAZ				S	**S**	**05 40 22.6**	**-0.2**
PKGZ	**Pakihiroa**	**6.16**	**189**	P	**Pn**	**05 39 15.5**	**+4.2**
RUGZ	**Raukumara Rang**	**6.29**	**192**	P	**Pn**	**05 39 14.8**	**+1.8**
PUZ	**Puketiti**	**6.31**	**187**	P	**Pn**	**05 39 15.0**	**+1.8**
PUZ				S	**S**	**05 40 26.7**	**-1.5**
URZ	**Urewera**	**6.69**	**195**	P	**Pn**	**05 39 20.4**	**+2.7**
	2.1nm,0.3s,baz=267,slow=5.2,SNR=46						
URZ				S	**S**	**05 40 35.9**	**-0.5**
	3.3nm,0.3s,baz=77,slow=20,SNR=16						
URZ				LR	LR	05 41 44.4	
	comp=Z,76nm,19.0s,baz=246,slow=31						
CNGZ	**Carnagh Statio**	**6.73**	**187**	P	**Pn**	**05 39 20.5**	**+2.4**
TKGZ	**Te Karaka**	**6.73**	**190**	P	**Pn**	**05 39 20.7**	**+2.5**
TKGZ				S	**S**	**05 40 35.6**	**-1.6**
RIGZ	**Rimuhau**	**7.00**	**190**	P	**Pn**	**05 39 24.5**	**+2.9**
RIGZ				S	**S**	**05 40 43.1**	**-0.3**
SNGZ	**Shannon Statio**	**7.14**	**192**	P	**Pn**	**05 39 26.6**	**+3.3**
SNGZ				S	**S**	**05 40 47.0**	**+0.4**
TLZ	**Tolley Road**	**7.20**	**204**	P	Pn	05 39 29.9	+6.0
RAHZ	**Arahi**	**7.32**	**194**	P	**Pn**	**05 39 27.9**	**+2.5**
RAHZ				S	**S**	**05 40 49.0**	**-1.6**
KNZ	**Kokohu**	**7.33**	**190**	P	**Pn**	**05 39 26.4**	**+1.1**
MHGZ	**Mahia Peninsul**	**7.42**	**188**	P	**Pn**	**05 39 29.1**	**+2.6**
WHHZ	**Waihua**	**7.45**	**192**	P	**Pn**	**05 39 29.4**	**+2.5**
NMHZ	**Naumai**	**7.55**	**195**	P	**Pn**	**05 39 31.5**	**+3.2**
NMHZ				S	**S**	**05 40 54.9**	**-0.9**
HIZ	**Hauiti**	**7.61**	**207**	P	Pn	05 39 36.7	+7.8
ARHZ	**Aropaoanui**	**7.68**	**193**	P	**Pn**	**05 39 32.4**	**+2.7**
ARHZ				S	**S**	**05 40 54.8**	**-3.6**
BKZ	**Black Stump Fm**	**7.69**	**196**	P	**Pn**	**05 39 32.0**	**+2.1**
WTVZ	**West Tongariro**	**7.89**	**201**	P	**Pn**	**05 39 35.9**	**+3.5**
MCHZ	**McNeill Hill**	**7.91**	**195**	P	**Pn**	**05 39 34.1**	**+1.5**
NGZ	**Ngauruhoe**	**7.95**	**201**	P	**Pn**	**05 39 36.9**	**+3.8**
KWHZ	**Kaweka Forest**	**7.96**	**196**	P	**Pn**	**05 39 35.6**	**+2.4**
FWVZ	**Far West T-bar**	**8.03**	**201**	P	**Pn**	**05 39 37.3**	**+3.0**
WHVZ	**Whangaehu Hut**	**8.05**	**201**	P	**Pn**	**05 39 37.9**	**+3.4**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
BHHZ	**Black Hill Sta**	**8.11**	**198**	P	**Pn**	**05 39 35.4**	**+0.4**
MOVZ	**Moawhango**	**8.11**	**200**	P	**Pn**	**05 39 37.1**	**+1.9**
MOVZ				S	**S**	**05 41 05.9**	**-2.4**
KRHZ	**Kereru**	**8.18**	**196**	P	**Pn**	**05 39 37.2**	**+1.3**
KRHZ				S	**S**	**05 41 05.8**	**-3.8**
KAHZ	**Kahuranaki**	**8.21**	**193**	P	**Pn**	**05 39 37.0**	**+0.7**
KAHZ				S	**S**	**05 41 03.2**	**-7.3**
PXZ	**Pawanui**	**8.44**	**193**	P	**Pn**	**05 39 40.6**	**+1.6**
PNHZ	**Pukenui**	**8.47**	**196**	P	**Pn**	**05 39 40.5**	**+1.0**
PKE	**Pukeiti**	**8.54**	**209**	P	**P**	**05 39 47.4**	**+1.8**
PRHZ	**Porangahau**	**8.72**	**193**	P	**Pn**	**05 39 43.9**	**+1.5**
DVHZ	**Dannevirke**	**8.85**	**196**	P	**Pn**	**05 39 44.9**	**+0.8**
BFZ	**Birch Farm**	**9.20**	**195**	P	**Pn**	**05 39 49.6**	**+1.3**
MRZ	**Mangatainoka R**	**9.33**	**198**	P	**Pn**	**05 39 50.0**	**0.0**
TIWZ	**Tintock**	**9.37**	**196**	P	**Pn**	**05 39 51.5**	**+1.0**
HOWZ	**Holdsworth Sta**	**9.57**	**197**	P	**Pn**	**05 39 52.4**	**-0.5**
OGWZ	**Otaki Gorge**	**9.59**	**199**	P	**Pn**	**05 39 52.9**	**-0.2**
TMWZ	**Te Maipa**	**9.68**	**195**	P	**Pn**	**05 39 54.5**	**+0.2**
KIW	**Kapiti Island**	**9.70**	**200**	P	**Pn**	**05 39 54.4**	**-0.1**
MTW	**Mount Morrison**	**9.82**	**197**	P	**Pn**	**05 39 56.1**	**+0.1**
CAW	**Cannon Point**	**9.89**	**199**	P	**Pn**	**05 39 56.7**	**-0.1**
DUWZ	**D'Urville Isla**	**9.97**	**204**	P	**Pn**	**05 39 58.2**	**+0.4**
MSWZ	**Moikau Station**	**10.13**	**197**	P	**Pn**	**05 39 59.8**	**0.0**
TCW	**Tory Channel**	**10.22**	**202**	P	**Pn**	**05 39 57.9**	**-2.9**
PLWZ	**Palliser**	**10.27**	**197**	P	**Pn**	**05 40 01.6**	**+0.1**
QRZ	**Quartz Range**	**10.52**	**209**	P	**Pn**	**05 40 05.3**	**+0.8**
TUWZ	**Tuamarina**	**10.52**	**202**	P	**Pn**	**05 40 04.8**	**+0.2**
NNZ	**Nelson**	**10.53**	**205**	P	**Pn**	**05 40 04.4**	**-0.2**
THZ	**Tophouse**	**11.18**	**205**	P	**Pn**	**05 40 12.0**	**-0.6**
ASAR	**Alice Springs**	**40.73**	**270**	P	**P**	**05 44 53.2**	**+0.6**
	0.3nm,0.4s,baz=100,slow=7.8,SNR=5.5						
WRA	**Warramunga Arr**	**41.85**	**275**	P	**P**	**05 45 02.2**	**+0.5**
	0.6nm,0.3s,baz=112,slow=8.0,SNR=13						
FINES	**FINESS Array B**	**145.59**	**337**	PKP	**PKPdf**	**05 56 38.9**	**-3.1**
	1.1nm,0.6s,baz=57,slow=7.0,SNR=8.3						
BRTR	**Keskin Array B**	**151.15**	**296**	PKPbc	**PKiKP**	**05 56 59.5**	**+1.0**
	0.8nm,0.8s,baz=2.7,slow=3.0,SNR=4.6						

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*NIED **03** 05:42:00, 36°.30N×137°.60E, h5km, Mw4.1 Best double couple: M₀1.69000×10^15 NP1:φs190.00000°, δ75.00000°, λ39.00000°. NP2:φs88.00000°, δ53.00000°, λ160.00000°.*
*IDC **03** 05:42:21.3±1.2, 36°.26N×137°.59E, h0km, mb3.6/9, mb1 3.8/10, mb1mx3.6/61, mbtmp3.6/10, ML3.2/1, MS3.3/18, Ms1 3.3/18, ms1mx3.1/48, Error ellipse: s-maj=30.7km s-min=8.6km az=163.0*
*JMA **03** 05:42:21.6, 36°.25N×137°.60E, h3km, M3.5 Broadband fault plane solution: P waves. NP1:φs87.00000°, δ54.00000°, λ167.00000°. NP2:φs185.00000°, δ80.00000°, λ37.00000°. Principal axes: T Plg33.0000°, Azm53.0000°; N Plg52.0000°, Azm198.0000°; P Plg17.0000°, Azm311.0000°;*
JMA Felt II J1.
ISC 03 05:42:21.9±0.7**, 36°.23N**±0°.05×**137°.62E**±0°.03**, h10km, n31, σ1s.25**/23**, mb3.8**/9**, MS3.4**/11**, 2C-2D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
JGN	**Niukaw**	**0.24**	**269**	⇑P	**Pg**	**05 42 26.3**	**-0.6**
JGN				S	**Sg**	**05 42 29.7**	**-0.6**
JNG	**Nsakai**	**0.43**	**65**	⇑P	**Pg**	**05 42 30.2**	**-0.2**
JNG				eS	**Sg**	**05 42 36.2**	**+0.1**
JTT	**Ttatey**	**0.44**	**329**	⇓P	**Pg**	**05 42 30.1**	**-0.5**
JNT	**Takato**	**0.55**	**130**	⇓P	**Pg**	**05 42 32.7**	**+0.1**
MAT	**Matsushiro**	**0.57**	**56**	P	**Pg**	**05 42 32.6**	**-0.4**
MAT				S	**Sg**	**05 42 40.2**	**-0.3**
MAT	**Matsushiro**	**0.57**	**56**	P	**Pg**	**05 42 32.6**	**-0.4**
MAT				eS	**Sg**	**05 42 40.4**	**-0.1**
MJAR	**Matsushiro Arr**	**0.57**	**57**	Pg	**Pg**	**05 42 33.0**	**0.0**
	26nm,0.3s,baz=243,slow=19,SNR=1464						
MJAR				Lg	Lg	05 42 40.7	
	43nm,0.3s,baz=28,slow=18,SNR=20						
MJAR				LR	LR	05 42 50.0	
	comp=Z,304nm,21.2s,baz=260,slow=49						
JHJ	**Hachijo jima 2**	**3.58**	**149**	Pn	**Pb**	**05 43 22.9**	**-2.4**
	6.5nm,0.3s,baz=218,slow=18,SNR=2.0						
JHJ				LR	LR	05 44 51.2	
	comp=Z,927nm,18.6s,baz=102,slow=41						
JNU	**Nakatsue**	**6.36**	**243**	LR	LR	05 46 34.5	
	comp=Z,291nm,18.4s,baz=95,slow=40						
KSRS	**Korea Array**	**7.87**	**282**	Pn	**Pn**	**05 44 18.4**	**+2.0**
	0.3nm,0.3s,baz=99,slow=15,SNR=3.3						
KSRS				LR	LR	05 47 07.9	
	comp=Z,203nm,20.9s,baz=100,slow=36						
ASAJ	**Asahikawa**	**8.75**	**24**	LR	LR	05 48 00.6	
	comp=Z,88nm,19.0s,baz=170,slow=39						
USRK	**Ussuriysk Ar.**	**9.05**	**333**	LR	LR	05 48 00.5	
	comp=Z,125nm,20.9s,baz=153,slow=38						
JCJ	**Chichijima**	**9.90**	**156**	LR	LR	05 48 20.8	
	comp=Z,114nm,20.0s,baz=80,slow=36						
KLR	**Kul'dur**	**13.69**	**344**	Pn	**P**	**05 45 41.0**	**-3.7**
	0.1nm,0.3s,baz=150,slow=9.6,SNR=6.5						
KLR				LR	LR	05 50 45.2	
	comp=Z,126nm,18.7s,baz=158,slow=37						
PETK	**Petropavlovsk-**	**21.99**	**34**	LR	LR	05 55 22.4	
	comp=Z,58nm,21.3s,baz=237,slow=36						
SONM	**Songino Array**	**25.75**	**307**	P	**P**	**05 47 53.9**	**+1.2**
	0.5nm,0.3s,baz=101,slow=7.5,SNR=2.1						
SONM				LR	LR	05 58 32.6	
	comp=Z,148nm,20.2s,baz=52,slow=38						
TLY	**Talaya**	**28.61**	**313**	LR	LR	06 00 01.5	
	comp=Z,46nm,19.9s,baz=114,slow=37						
CMAR	**Chiang Mai Arr**	**38.34**	**253**	LR	LR	06 06 39.2	
	comp=Z,40nm,21.1s,baz=35,slow=38						
ZALV	**Zalesovo Beam**	**40.22**	**313**	P	**P**	**05 49 59.4**	**+1.0**
	0.4nm,0.5s,baz=87,slow=6.2,SNR=1.5						
ZALV				LR	LR	06 05 53.0	
	comp=Z,27nm,20.2s,baz=45,slow=35						
MKAR	**Makanchi Array**	**41.96**	**302**	P	**P**	**05 50 13.0**	**+0.1**
	0.4nm,0.8s,baz=83,slow=10.0,SNR=4.2						
MKAR				LR	LR	06 08 14.9	
	comp=Z,53nm,18.8s,baz=64,slow=37						
NRIK	**Noril'sk**	**42.75**	**336**	LR	LR	06 09 10.5	
	comp=Z,74nm,19.9s,baz=90,slow=38						
AAK	**Ala-Archa**	**48.18**	**298**	LR	LR	06 11 09.4	
	comp=Z,41nm,19.5s,baz=84,slow=36						
ILAR	**Eielson Array**	**51.80**	**32**	P	**P**	**05 51 29.8**	**+0.3**
	0.5nm,1.0s,baz=270,slow=6.3,SNR=2.8						
WRA	**Warramunga Arr**	**55.95**	**184**	P	**P**	**05 52 01.5**	**+1.1**
	1.0nm,1.1s,baz=359,slow=7.3,SNR=3.1						
INK	**Inuvik**	**56.48**	**26**	P	**P**	**05 52 04.6**	**+1.0**
	1.2nm,0.9s,baz=271,slow=5.9,SNR=5.1						
AKTO	**Aktyubinsk**	**56.93**	**311**	LR	LR	06 18 03.7	
	comp=Z,40nm,19.7s,baz=58,slow=38						
KIRV	**Kirov**	**59.03**	**322**	LR	LR	06 18 47.0	
	comp=Z,36nm,19.9s,baz=302,slow=37						
RES	**Resolute Bay**	**64.12**	**14**	P	**P**	**05 52 56.6**	**+0.8**
	0.7nm,0.7s,baz=315,slow=9.4,SNR=3.6						
YKA	**Yellowknife Ar**	**66.01**	**29**	P	**P**	**05 53 08.5**	**+0.3**
	0.7nm,0.9s,baz=300,slow=6.2,SNR=8.4						
FINES	**FINESS Array B**	**68.08**	**331**	P	**P**	**05 53 21.4**	**+0.1**
	1.3nm,0.9s,baz=41,slow=11,SNR=4.3						
NVAR	**Mina Array Bea**	**77.89**	**51**	LR	LR	06 25 41.7	
	comp=Z,21nm,21.9s,baz=346,slow=33						

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*SNET **03** 06:03:57.0±0.8, 12°.50N×87°.82W, h34km±4km, ML3.6*
*UCR **03** 06:03:57.1±1.0, 12°.50N×87°.81W, h34km±4km, ML3.6*
*INET **03** 06:03:57.2, 12°.49N×87°.68W, h52km, ML3.6*
ISC 03 06:03:56.2±4.5**, 12°.5N**±0°.2×**87°.79W**±0°.07**, h30**km±17km**, n28, σ0s.31**/50**, 2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
CNCH	**Conchagua**	**0.81**	**357**	eP	**Pn**	**06 04 11.7**	**-0.1**
CNCH	**Conchagua**	**0.81**	**357**	eP	**Pn**	**06 04 11.7**	**-0.1**
LCND	**La Caada**	**0.85**	**353**	⇓eP	**Pn**	**06 04 12.0**	**-0.2**
LCND				i Sg	**Sb**	**06 04 24.1**	**+0.5**
LCND				IAML		06 04 27.3	
	comp=Z,2μm,0.3s						
LCND	**La Caada**	**0.85**	**353**	⇓eP	**Pn**	**06 04 12.0**	**-0.2**
LCND				i Sg	**Sb**	**06 04 24.1**	**+0.5**
LCND				IAML		06 04 27.3	
	comp=Z,2μm,0.3s						
JUCU	**Jucuar¡n**	**0.91**	**330**	eP	**Pn**	**06 04 12.6**	**-0.4**
JUCU				eS	**Sb**	**06 04 25.1**	**-0.2**
JUCU				IAML		06 04 29.6	
	comp=Z,2μm,0.3s						
JUCU	**Jucuar¡n**	**0.91**	**330**	eP	**Pn**	**06 04 12.6**	**-0.4**
JUCU				eS	**Sb**	**06 04 25.1**	**-0.2**
JUCU				IAML		06 04 29.6	
	comp=Z,2μm,0.3s						
BLLM	**Bellamira**	**1.07**	**336**	eP	**Pn**	**06 04 15.3**	**+0.1**
BLLM				eS	**Sb**	**06 04 29.7**	**-0.3**
BLLM	**Bellamira**	**1.07**	**336**	eP	**Pn**	**06 04 15.3**	**+0.1**
BLLM				eS	**Sb**	**06 04 29.7**	**-0.3**
LCY	**Lacayo**	**1.08**	**333**	eP	**Pn**	**06 04 15.5**	**+0.1**
LCY	**Lacayo**	**1.08**	**333**	eP	**Pn**	**06 04 15.5**	**+0.1**
PACA	**Pacayal**	**1.13**	**332**	eP	**Pn**	**06 04 16.1**	**0.0**
PACA				eS	**Sb**	**06 04 31.6**	**-0.1**
PACA	**Pacayal**	**1.13**	**332**	eP	**Pn**	**06 04 16.1**	**0.0**
PACA				eS	**Sb**	**06 04 31.6**	**-0.1**
ALJI	**Alcalda de J**	**1.15**	**318**	eP	**Pn**	**06 04 16.2**	**0.0**
ALJI				eS	**Sn**	**06 04 30.4**	**-0.6**
ALJI				IAML		06 04 33.9	
	comp=Z,1μm,0.1s						
ALJI	**Alcalda de J**	**1.15**	**318**	eP	**Pn**	**06 04 16.2**	**0.0**
ALJI				eS	**Sn**	**06 04 30.4**	**-0.6**
ALJI				IAML		06 04 33.9	
	comp=Z,1μm,0.1s						
TECA	**Tecapa**	**1.24**	**326**	eP	**Pn**	**06 04 17.5**	**-0.2**
TECA				eS	**Sn**	**06 04 33.9**	**+0.3**
TECA	**Tecapa**	**1.24**	**326**	eP	**Pn**	**06 04 17.5**	**-0.2**
TECA				eS	**Sn**	**06 04 33.9**	**+0.3**
COEB	**Comit de Eme**	**1.26**	**325**	eP	**Pn**	**06 04 17.7**	**-0.2**
COEB				eS	**Sn**	**06 04 33.8**	**-0.1**
COEB	**Comit de Eme**	**1.26**	**325**	eP	**Pn**	**06 04 17.7**	**-0.2**
COEB				eS	**Sn**	**06 04 33.8**	**-0.1**
FAGO	**Alcalda de S**	**1.27**	**346**	eP	**Pn**	**06 04 17.6**	**-0.3**
FAGO				eS	**Sn**	**06 04 34.1**	**+0.3**
FAGO	**Alcalda de S**	**1.27**	**346**	eP	**Pn**	**06 04 17.6**	**-0.3**
FAGO				eS	**Sn**	**06 04 34.1**	**+0.3**
COEG	**Centro de Oper**	**1.57**	**317**	eP	**Pn**	**06 04 21.9**	**-0.3**
COEG				eS	**Sn**	**06 04 41.5**	**+0.1**
COEG				IAML		06 04 45.3	
	comp=Z,970nm,0.2s						
COEG	**Centro de Oper**	**1.57**	**317**	eP	**Pn**	**06 04 21.9**	**-0.3**
COEG				eS	**Sn**	**06 04 41.5**	**+0.1**
COEG				IAML		06 04 45.3	
	comp=Z,970nm,0.2s						
TGUH	**Tegucigalpa,Un**	**1.66**	**17**	eP	**Pn**	**06 04 23.3**	**-0.2**
TGUH				eS	**Sn**	**06 04 43.9**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.66**	**17**	eP	**Pn**	**06 04 23.3**	**-0.2**
TGUH				eS	**Sn**	**06 04 43.9**	**0.0**
LFRS	**El Faro**	**1.70**	**313**	eP	**Pn**	**06 04 23.9**	**0.0**
LFRS				eS	**Sn**	**06 04 45.0**	**+0.3**
LFRS	**El Faro**	**1.70**	**313**	eP	**Pn**	**06 04 23.9**	**0.0**
LFRS				eS	**Sn**	**06 04 45.0**	**+0.3**
LBRS	**Las Brisas**	**1.76**	**316**	eP	**Pn**	**06 04 25.6**	**+0.8**
LBRS	**Las Brisas**	**1.76**	**316**	eP	**Pn**	**06 04 25.6**	**+0.8**

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*NIED **03** 06:07:00, 36°.30N×137°.60E, h5km, Mw4.1 Best double couple: M₀1.77000×10^15 NP1:φs190.00000°, δ79.00000°, λ40.00000°. NP2:φs91.00000°, δ51.00000°, λ166.00000°.*
*JMA **03** 06:07:09.6, 36°.26N×137°.60E, h3km±1km, M3.6 Broadband fault plane solution: P waves. NP1: φs96.00000°, δ61.00000°, λ169.00000°. NP2: φs192.00000°, δ80.00000°, λ30.00000°. Principal axes: T Plg28.0000°, Azm58.0000°; N Plg59.0000°, Azm209.0000°; P Plg13.0000°, Azm321.0000°;*
JMA Felt II J1.
*IDC **03** 06:07:09.3±1.2, 36°.33N×137°.56E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.6/51, mbtmp3.7/8, ML3.2/1, MS3.3/12, Ms1 3.3/12, ms1mx3.0/50 Error ellipse: s-maj=31.5km s-min=8.5km az=169.0*
*NEIC **03** 06:07:10.3±2.6, 36°.23N±0°.07×137°.62E±0°.08, h10km±1km, mb4.2/6, Error ellipse: s-maj=15.9km s-min=3.3km az=136.0*
ISC 03 06:07:10.1±1.1**, 36°.25N**±0°.04×**137°.61E**±0°.03**, h4**km±8km**, n39, σ1s.00**/37**, mb4.0**/11**, MS3.2**/8**, 3C, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
JGN	**Niukaw**	**0.24**	**264**	⇑P	**Pg**	**06 07 14.4**	**-0.4**
JGN				S	**Sg**	**06 07 17.7**	**-0.2**
JTT	**Ttatey**	**0.42**	**328**	P	**Pg**	**06 07 18.1**	**-0.1**
JTT				S	**Sg**	**06 07 24.2**	**+0.5**
JNG	**Nsakai**	**0.43**	**68**	⇑P	**Pg**	**06 07 18.3**	**-0.1**
JNG				S	**Sg**	**06 07 24.0**	**0.0**
MAJO	**Matsushiro**	**0.56**	**59**		**Pg**	**06 07 20.6**	**-0.4**
MAJO				Sg	**Sg**	**06 07 27.9**	**-0.4**
MAT	**Matsushiro**	**0.56**	**59**	P	**Pg**	**06 07 20.6**	**-0.4**
MAT				S	**Sg**	**06 07 28.1**	**-0.2**
MAT	**Matsushiro**	**0.56**	**59**	P	**Pg**	**06 07 20.6**	**-0.4**
MAT				eS	**Sg**	**06 07 28.1**	**-0.2**
MJB9	**Matsu-Tunnel**	**0.56**	**58**		**Pg**	**06 07 20.7**	**-0.3**
MJB9				Sg	**Sg**	**06 07 27.8**	**-0.5**
MJAR	**Matsushiro Arr**	**0.57**	**59**	Pg	**Pg**	**06 07 21.1**	**0.0**
	73nm,0.3s,baz=244,slow=19,SNR=320						
MJAR				Lg	Lg	06 07 28.5	
	103nm,0.3s,baz=244,slow=35,SNR=14						
MJAR				LR	LR	06 07 37.9	
	comp=Z,358nm,20.6s,baz=250,slow=48						
JYTA	**Yamagatataniai**	**0.96**	**228**	⇑P	**Pg**	**06 07 28.1**	**-0.5**
JYTA				S	**Sg**	**06 07 40.8**	**-0.3**
INU	**Inuyama**	**1.02**	**208**		**Pg**	**06 07 29.1**	**-0.5**
JHJ	**Hachijo jima 2**	**3.60**	**150**	Pn	**Pb**	**06 08 13.3**	**-1.0**
	17nm,0.3s,baz=252,slow=11,SNR=6.5						
JHJ2	**Mitsune**	**3.62**	**149**		**Pb**	**06 08 15.2**	**+0.5**
JNU	**Nakatsue**	**6.36**	**243**	LR	LR	06 11 22.6	
	comp=Z,303nm,18.8s,baz=94,slow=40						
JNU	**Nakatsue**	**6.36**	**243**	Pn	**Pn**	**06 08 48.0**	**+3.3**
ERM	**Erimo**	**7.19**	**35**		**Pn**	**06 08 56.9**	**+0.9**
KSRS	**Korea Array**	**7.86**	**282**	Pn	**Pn**	**06 09 06.0**	**+0.8**
	0.4nm,0.3s,baz=103,slow=17,SNR=4.5						
USRK	**Ussuriysk Ar.**	**9.03**	**333**	LR	LR	06 12 50.3	
	comp=Z,113nm,18.8s,baz=131,slow=38						
JCJ	**Chichijima**	**9.92**	**156**	LR	LR	06 13 08.1	
	comp=Z,105nm,21.6s,baz=359,slow=36						
MDJ	**Mudanjiang**	**10.35**	**326**	Pn	**Pn**	**06 09 39.0**	**-0.3**
KLR	**Kul'dur**	**13.66**	**344**	LR	LR	06 15 11.6	
	comp=Z,104nm,20.6s,baz=157,slow=36						
PETK	**Petropavlovsk-**	**21.97**	**34**	LR	LR	06 20 20.7	
	comp=Z,53nm,19.0s,baz=241,slow=36						
SONM	**Songino Array**	**25.73**	**306**	LR	LR	06 23 20.8	
	comp=Z,136nm,19.8s,baz=132,slow=38						
TLY	**Talaya**	**28.59**	**313**	LR	LR	06 25 11.2	
	comp=Z,56nm,18.3s,baz=104,slow=38						
CMAR	**Chiang Mai Arr**	**38.34**	**253**	LR	LR	06 30 30.3	
	comp=Z,41nm,18.3s,baz=55,slow=37						
ZALV	**Zalesovo Beam**	**40.20**	**313**	P	**P**	**06 14 45.8**	**-1.6**
	0.4nm,0.3s,baz=101,slow=7.5,SNR=1.9						
ZALV				LR	LR	06 32 05.5	
	comp=Z,29nm,18.3s,baz=51,slow=37						
MKAR	**Makanchi Array**	**41.95**	**302**	LR	LR	06 33 05.0	
	comp=Z,30nm,20.5s,baz=54,slow=37						
NRIK	**Noril'sk**	**42.73**	**336**	LR	LR	06 31 47.4	
	comp=Z,43nm,20.2s,baz=132,slow=35						
KURK	**Kurchatov**	**44.01**	**308**	P	**P**	**06 15 16.3**	**-2.2**
KURK				IAmb	IAmb	06 15 18.8	
	comp=Z,2.4nm,0.9s						
KURBB	**Kurchatov Arra**	**44.08**	**308**	P	**P**	**06 15 17.6**	**-1.4**
	comp=Z,1.5nm,0.9s,baz=84,slow=8.6,SNR=12						
AAK	**Ala-Archa**	**48.16**	**298**	P	**P**	**06 15 50.1**	**-1.5**
AAK				IAmb	IAmb	06 15 51.5	
	comp=Z,2.7nm,1.4s						
GHO	**Glory Hole Cre**	**51.15**	**36**	P	**P**	**06 16 14.4**	**+0.5**
GHO				IAmb	IAmb	06 16 22.6	
	comp=Z,3.1nm,0.9s						
DHY	**Denali Highway**	**51.73**	**34**	P	**P**	**06 16 19.2**	**+0.8**
EPYK	**Eagle Plains**	**55.71**	**29**	P	**P**	**06 16 48.6**	**+1.2**
EPYK				IAmb	IAmb	06 16 49.3	
	comp=Z,3.5nm,0.8s						
WRA	**Warramunga Arr**	**55.97**	**184**	P	**P**	**06 16 49.4**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=359,slow=7.5,SNR=2.5						
WR0	**Warramunga Arr**	**55.98**	**183**	P	**P**	**06 16 50.5**	**+0.9**
AKTO	**Aktyubinsk**	**56.91**	**311**	P	**P**	**06 16 55.2**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=83,slow=12,SNR=3.6						
AKTO				LR	LR	06 43 10.2	
	comp=Z,31nm,18.6s,baz=78,slow=38						
YKA	**Yellowknife Ar**	**66.00**	**29**	P	**P**	**06 17 56.8**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=301,slow=6.0,SNR=11						
FINES	**FINESS Array B**	**68.05**	**331**	P	**P**	**06 18 09.7**	**-0.7**
	comp=Z,1.5nm,0.7s,baz=67,slow=6.4,SNR=4.6						
NVAR	**Mina Array Bea**	**77.89**	**51**	P	**P**	**06 19 10.0**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=297,slow=7.7,SNR=4.4						

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*NIED **03** 06:10:00, 36°.30N×137°.60E, h5km, Mw3.9 Best double couple: M₀7.98000×10^14 NP1:φs190.00000°, δ80.00000°, λ33.00000°. NP2:φs93.00000°, δ57.00000°, λ168.00000°.*
*IDC **03** 06:10:06.7±1.5, 36°.25N×137°.55E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.2/50, mbtmp3.3/3, Error ellipse: s-maj=12.0km s-min=8.9km az=48.0*
*JMA **03** 06:10:07.5, 36°.25N×137°.60E, h4km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φs107.00000°, δ52.00000°, λ-175.00000°. NP2: φs14.00000°, δ86.00000°, λ-38.00000°. Principal axes: T Plg23.0000°, Azm67.0000°; N Plg51.0000°, Azm189.0000°; P Plg29.0000°, Azm323.0000°;*
JMA Felt II J1.
ISC 03 06:10:07.4±1.2**, 36°.21N**±0°.07×**137°.61E**±0°.03**, h7**km±9km**, n10, σ0s.36**/16**, mb3.5**/3**, 3C-1D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
JGN	**Niukaw**	**0.24**	**273**	⇑P	**Pg**	**06 10 12.2**	**+0.1**
JGN				S	**Sg**	**06 10 15.5**	**+0.2**
JNG	**Nsakai**	**0.44**	**64**	⇑P	**Pg**	**06 10 16.2**	**+0.1**
JNG				eS	**Sg**	**06 10 22.2**	**+0.3**
JTT	**Ttatey**	**0.45**	**331**	⇓P	**Pg**	**06 10 16.1**	**-0.1**
JTT				S	**Sg**	**06 10 22.3**	**+0.2**
MAT	**Matsushiro**	**0.59**	**55**	P	**Pg**	**06 10 18.6**	**-0.1**
MAT				S	**Sg**	**06 10 26.1**	**-0.3**
MAT	**Matsushiro**	**0.59**	**55**	P	**Pg**	**06 10 18.6**	**-0.1**
MAT				S	**Sg**	**06 10 26.1**	**-0.3**
MJAR	**Matsushiro Arr**	**0.59**	**56**	Pg	**Pg**	**06 10 19.0**	**+0.2**
	35nm,0.3s,baz=245,slow=19,SNR=58						
MJAR				Lg	Lg	06 10 27.1	
	48nm,0.3s,baz=244,slow=40,SNR=32						
JYTA	**Yamagatataniai**	**0.94**	**229**	⇑P	**Pb**	**06 10 25.8**	**-0.1**
JYTA				eS	**Sb**	**06 10 38.4**	**-0.2**
KURBB	**Kurchatov Arra**	**44.10**	**308**	P	**P**	**06 18 15.3**	**-0.8**
	0.6nm,0.8s,baz=87,slow=8.9,SNR=5.2						
ILAR	**Eielson Array**	**51.82**	**32**	P	**P**	**06 19 16.1**	**+0.5**
	0.2nm,0.5s,baz=267,slow=6.1,SNR=2.0						
YKA	**Yellowknife Ar**	**66.03**	**29**	P	**P**	**06 20 54.8**	**+0.5**
	0.2nm,0.6s,baz=303,slow=5.8,SNR=5.3						

IDC 03 06:14:56.9±4.7**, 30°.72S×138°.02E, h0km, mb1 3.0**/3**, mb1mx3.0**/35**, mbtmp2.8**/3**, ML2.5**/3**, Error ellipse: s-maj=86.6km s-min=17.1km az=39.0, South Australia**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
STKA	**Stephens Creek**	**3.27**	**112**	Pn	Pn	06 15 50.3	+0.9
	0.2nm,0.3s,baz=297,slow=9.0,SNR=1.6						
STKA				Sn	Sn	06 16 29.0	-0.1
	2.3nm,0.3s,baz=328,slow=11,SNR=6.7						
STKA				Lg	Lg	06 16 40.0	
	3.7nm,0.3s,baz=206,slow=22,SNR=4.6						
ASAR	**Alice Springs**	**7.92**	**331**	Pn	Pn	06 16 53.6	0.0
	0.1nm,0.3s,baz=151,slow=12,SNR=5.6						
ASAR				Sn	Sn	06 18 23.6	-0.4
	0.2nm,0.3s,baz=157,slow=22,SNR=6.4						
WRA	**Warramunga Arr**	**11.24**	**342**	Pn	Pn	06 17 39.8	+0.9
	0.1nm,0.3s,baz=151,slow=12,SNR=3.1						
WRA				Sn	Sn	06 19 44.7	-0.6
	0.1nm,0.3s,baz=164,slow=24,SNR=1.5						

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*NIED **03** 06:26:00, 36°.20N×137°.60E, h5km, Mw4.6 Best double couple: M₀7.95000×10^15 NP1:φs195.00000°, δ72.00000°, λ39.00000°. NP2:φs91.00000°, δ53.00000°, λ158.00000°.*
*JMA **03** 06:26:57.9, 36°.25N×137°.60E, h3km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs94.00000°, δ58.00000°, λ169.00000°. NP2: φs189.00000°, δ81.00000°, λ32.00000°. Principal axes: T Plg29.0000°, Azm56.0000°; N Plg57.0000°, Azm204.0000°; P Plg15.0000°, Azm318.0000°;*
JMA Felt III J1.
*IDC **03** 06:26:58.2±0.7, 36°.30N×137°.59E, h0km, mb3.8/12, mb1 4.0/15, mb1mx3.8/52, mbtmp3.8/15, ML3.3/3, MS3.7/32, Ms1 3.7/32, ms1mx3.7/44 Error ellipse: s-maj=18.5km s-min=7.7km az=159.0*
*NEIC **03** 06:26:59.8±2.5, 36°.29N±0°.05×137°.67E±0°.06, h6km±4km, mb4.4/25, Error ellipse: s-maj=9.0km s-min=5.3km az=141.0*
ISC 03 06:27:00.1±0.5**, 36°.23N**±0°.04×**137°.62E**±0°.03**, h10km, n89, σ1s.71**/69**, mb4.3**/26**, MS3.9**/31**, 3C-1D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
JGN	**Niukaw**	**0.25**	**269**	⇑P	**Pg**	**06 27 02.6**	**-2.6**
JGN				S	**Sg**	**06 27 06.0**	**-2.6**
JNG	**Nsakai**	**0.42**	**65**	⇑P	**Pg**	**06 27 06.7**	**-1.8**
JNG				eS	**Sg**	**06 27 12.8**	**-1.3**
JTT	**Ttatey**	**0.44**	**328**	⇓P	**Pg**	**06 27 06.5**	**-2.3**
JTT				S	**Sg**	**06 27 12.9**	**-1.7**
MJB9	**Matsu-Tunnel**	**0.56**	**56**		**Pg**	**06 27 09.1**	**-2.0**
MAJO	**Matsushiro**	**0.57**	**56**		**Pg**	**06 27 09.0**	**-2.1**
MAT	**Matsushiro**	**0.57**	**56**	P	**Pg**	**06 27 09.0**	**-2.1**
MAT				S	**Sg**	**06 27 17.0**	**-1.5**
MAT	**Matsushiro**	**0.57**	**56**	P	**Pg**	**06 27 09.0**	**-2.1**
MAT				S	**Sg**	**06 27 17.1**	**-1.5**
MJAR	**Matsushiro Arr**	**0.57**	**56**	Pg	**Pg**	**06 27 09.3**	**-1.8**
	75nm,0.3s,baz=245,slow=17,SNR=795						
MJAR				Lg	Lg	06 27 17.5	
	167nm,0.3s,baz=246,slow=38,SNR=22						
MJAR				LR	LR	06 27 34.1	
	comp=Z,3μm,21.5s,baz=255,slow=62						
JYTA	**Yamagatataniai**	**0.96**	**229**	⇑P	**Pg**	**06 27 16.6**	**-2.0**
JYTA				S	**Sg**	**06 27 28.8**	**-2.2**
INU	**Inuyama**	**1.01**	**209**		**Pg**	**06 27 17.2**	**-2.3**
JHJ	**Hachijo jima 2**	**3.58**	**150**	Pn	**Pn**	**06 27 57.5**	**+1.8**
	5.9nm,0.3s,baz=43,slow=13,SNR=1.7						
JHJ				Sn	**Sb**	**06 28 43.6**	**-3.3**
	6.0nm,0.3s,baz=269,slow=18,SNR=1.5						
JHJ				LR	LR	06 29 27.7	
	comp=Z,3μm,18.4s,baz=310,slow=41						
JHJ2	**Mitsune**	**3.60**	**149**	Pn	**Pn**	**06 27 57.7**	**+1.8**
JNU	**Nakatsue**	**6.36**	**243**	Pn	**Pn**	**06 28 35.4**	**+1.4**
	0.6nm,0.3s,baz=19,slow=15,SNR=5.1						
JNU				Lg	Lg	06 30 19.7	
	0.4nm,0.3s,baz=168,slow=22,SNR=3.4						
JNU				LR	LR	06 31 10.7	
	comp=Z,1μm,18.4s,baz=79,slow=40						
JNU	**Nakatsue**	**6.36**	**243**		Pn	06 28 37.9	+3.9
ERM	**Erimo**	**7.20**	**35**		**Pn**	**06 28 46.3**	**+0.9**
KSRS	**Korea Array**	**7.87**	**282**	Pn	**Pn**	**06 28 55.2**	**+0.6**
	0.5nm,0.3s,baz=98,slow=14,SNR=3.0						
KSRS				LR	LR	06 31 43.7	
	comp=Z,618nm,21.3s,baz=100,slow=36						
ASAJ	**Asahikawa**	**8.75**	**24**	Pn	**Pn**	**06 29 08.3**	**+1.7**
	0.4nm,0.3s,baz=246,slow=13,SNR=4.4						
ASAJ				LR	LR	06 32 37.9	
	comp=Z,396nm,19.0s,baz=148,slow=39						
JKA	**Kamikawa-asahi**	**8.75**	**24**		**Pn**	**06 29 08.3**	**+1.7**
USRK	**Ussuriysk Ar.**	**9.05**	**333**	Pn	**Pn**	**06 29 11.9**	**+1.2**
	baz=149,slow=14,SNR=6.0						
USRK				LR	LR	06 32 38.0	
	comp=Z,114nm,19.8s,baz=137,slow=38						
JCJ	**Chichijima**	**9.90**	**156**	LR	LR	06 32 56.9	
	comp=Z,365nm,20.4s,baz=313,slow=36						
YSS	**Yuzh-Sakhalins**	**11.38**	**18**		**Pn**	**06 29 46.0**	**+3.4**
KLR	**Kul'dur**	**13.68**	**344**	Pn	P	06 30 17.7	-5.2
	0.1nm,0.3s,baz=140,slow=13,SNR=11						
KLR				LR	LR	06 35 00.2	
	comp=Z,391nm,21.0s,baz=159,slow=35						
TIA	**Tai'an**	**16.55**	**276**	P	**P**	**06 30 58.5**	**+3.7**
TIA				pmax	pmax		
	comp=Z,13nm,1.2s						
HHC	**Hu-ho-hao-te**	**20.87**	**291**	P	Pn	06 31 45.1	+0.3
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,68nm,5.4s						
HHC				LR	LR		
	comp=N,350nm,12.8s						
HHC				LR	LR		
	comp=E,260nm,11.9s						
HHC				LR	LR		
	comp=Z,180nm,11.9s						
PETK	**Petropavlovsk-**	**21.98**	**34**	LR	LR	06 40 11.0	
	comp=Z,184nm,20.2s,baz=235,slow=36						
MA2	**Magadan**	**24.87**	**16**	LR	LR	06 42 50.2	
	comp=Z,112nm,18.1s,baz=193,slow=38						
MA2	**Magadan**	**24.87**	**16**	P	**P**	**06 32 21.7**	**-1.0**
MA2				IAmb	IAmb	06 32 22.6	
	comp=Z,11nm,1.1s						
ULN	**Ulaanbaatar**	**25.34**	**307**	P	**P**	**06 32 26.6**	**-0.6**
SONM	**Songino Array**	**25.75**	**306**	P	**P**	**06 32 30.6**	**-0.4**
	comp=Z,2.6nm,1.0s,baz=104,slow=11,SNR=7.2						
SONM				LR	LR	06 43 08.5	
	comp=Z,432nm,19.3s,baz=90,slow=38						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YAK	**Yakutsk**	**26.30**	**352**	P	**P**	**06 32 35.0**	**-0.5**
TLY	**Talaya**	**28.61**	**313**	LR	LR	06 44 15.6	
	comp=Z,157nm,19.5s,baz=108,slow=36						
QIZ	**Qiongzhong**	**29.84**	**242**	P	**P**	**06 33 10.1**	**+2.5**
QIZ				S	**S**	**06 38 09.1**	**+4.6**
QIZ				pmax	pmax		
	comp=Z,16nm,1.8s						
QIZ				LR	LR		
	comp=N,300nm,15.2s						
QIZ				LR	LR		
	comp=E,320nm,14.7s						
QIZ				LR	LR		
	comp=Z,140nm,13.7s						
DAV	**Davao City (W)**	**31.05**	**204**	LR	LR	06 46 05.0	
	comp=Z,71nm,19.3s,baz=266,slow=37						
KMI	**Kunming**	**31.82**	**259**	P	P	06 33 30.4	+5.1
KMI				pP	sP	06 33 32.3	+2.0
KMI				pmax	pmax		
	comp=Z,11nm,0.7s						
KMI				pmax	pmax		
	comp=Z,59nm,4.5s						
KMI				LR	LR		
	comp=N,580nm,17.1s						
KMI				LR	LR		
	comp=E,320nm,17.1s						
KMI				LR	LR		
	comp=Z,430nm,13.7s						
CMAR	**Chiang Mai Arr**	**38.34**	**253**	LR	LR	06 50 18.7	
	comp=Z,94nm,18.4s,baz=57,slow=36						
WMQ	**Urumqi**	**38.49**	**297**	*e*P	**P**	**06 34 25.1**	**+2.7**
ZALV	**Zalesovo Beam**	**40.22**	**313**	LR	LR	06 51 53.6	
	comp=Z,82nm,19.9s,baz=75,slow=37						
MKAR	**Makanchi Array**	**41.97**	**302**	LR	LR	06 52 51.1	
	comp=Z,164nm,19.1s,baz=94,slow=37						
NRIK	**Noril'sk**	**42.75**	**336**	LR	LR	06 53 02.3	
	comp=Z,184nm,20.5s,baz=117,slow=37						
ANM	**Nome**	**43.87**	**32**	P	**P**	**06 35 07.4**	**+1.1**
ANM				IAmb	IAmb	06 35 08.3	
	comp=Z,12nm,1.5s						
KURK	**Kurchatov**	**44.03**	**308**	P	**P**	**06 35 05.1**	**-2.6**
PSI	**Prapat**	**48.79**	**236**	LR	LR	06 58 52.4	
	comp=Z,91nm,18.2s,baz=88,slow=39						
OHAK	**Old Harbor**	**49.40**	**42**	P	**P**	**06 35 51.1**	**+1.4**
KDAK	**Kodiak Island**	**49.72**	**41**	P	**P**	**06 35 52.3**	**+0.2**
KDAK				IAmb	IAmb	06 35 52.4	
	comp=Z,6.0nm,1.0s						
MLY	**Manley**	**50.14**	**32**	P	**P**	**06 35 56.5**	**+1.2**
CNPM	**China Poot**	**50.25**	**39**	P	**P**	**06 35 56.3**	**+0.2**
CNPM				IAmb	IAmb	06 35 59.2	
	comp=Z,5.2nm,0.9s						
BRLK	**Bradley Lake**	**50.40**	**39**	P	**P**	**06 35 57.8**	**+0.5**
BRLK				IAmb	IAmb	06 35 59.8	
	comp=Z,6.7nm,1.1s						
KK31	**Karatay Array**	**50.88**	**300**	P	**P**	**06 35 59.9**	**-1.3**
KKAR	**Karatay Array**	**50.88**	**300**	P	**P**	**06 36 00.2**	**-1.0**
PMR	**Palmer**	**51.08**	**36**	P	**P**	**06 36 01.6**	**-0.7**
PMR				IAmb	IAmb	06 36 02.6	
	comp=Z,5.2nm,1.0s						
SEW	**Seward**	**51.08**	**38**	P	**P**	**06 36 01.6**	**-0.7**
SEW				IAmb	IAmb	06 36 05.4	
	comp=Z,6.2nm,1.0s						
GHO	**Glory Hole Cre**	**51.16**	**36**	P	**P**	**06 36 03.2**	**+0.1**
SML	**Sawmill**	**51.44**	**36**	P	**P**	**06 36 05.4**	**+0.3**
SML				IAmb	IAmb	06 36 07.2	
	comp=Z,7.0nm,1.0s						
ILAR	**Eielson Array**	**51.80**	**32**	P	**P**	**06 36 06.6**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=282,slow=6.5,SNR=9.3						
ILAR				LR	LR	07 00 13.1	
	comp=Z,38nm,18.3s,baz=313,slow=38						
EYAK	**Cordova Ski Ar**	**52.84**	**37**	P	**P**	**06 36 15.8**	**+0.3**
EYAK				IAmb	IAmb	06 36 16.8	
	comp=Z,4.9nm,1.1s						
FITZ	**Fitzroy Crossi**	**55.21**	**194**	P	**P**	**06 36 34.8**	**+1.6**
EPYK	**Eagle Plains**	**55.72**	**29**	P	**P**	**06 36 37.4**	**+0.9**
WRA	**Warramunga Arr**	**55.95**	**184**	P	**P**	**06 36 38.1**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=357,slow=7.6,SNR=6.7						
INK	**Inuvik**	**56.48**	**26**	P	**P**	**06 36 40.8**	**-0.9**
	comp=Z,1.5nm,0.9s,baz=285,slow=9.1,SNR=6.7						
INK	**Inuvik**	**56.48**	**26**	P	**P**	**06 36 42.1**	**+0.4**
HYT	**Haines Junctio**	**56.74**	**36**	P	**P**	**06 36 45.6**	**+1.6**
HYT				IAmb	IAmb	06 36 48.1	
	comp=Z,3.9nm,0.9s						
ASAR	**Alice Springs**	**59.67**	**184**	P	**P**	**06 37 04.6**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=16,slow=8.1,SNR=6.2						
GEYT	**Alibeck**	**61.53**	**298**	LR	LR	07 05 59.2	
	comp=Z,91nm,18.6s,baz=75,slow=38						
KLMR	**Klimovskoe**	**62.79**	**327**	*e*P	P	06 37 13.9	-11
KLMR				AMP		06 37 17.1	
	comp=Z,18nm,2.0s						
ARCES	**ARCESS Array B**	**63.66**	**339**	LR	LR	07 07 53.3	
	comp=Z,114nm,21.6s,baz=70,slow=39						
RES	**Resolute Bay**	**64.12**	**14**	P	**P**	**06 37 33.1**	**-0.8**
YKA	**Yellowknife Ar**	**66.01**	**29**	P	**P**	**06 37 46.1**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=299,slow=6.3,SNR=16						
YKA				LR	LR	07 08 36.4	
	comp=Z,30nm,19.4s,baz=0.0,slow=38						
FINES	**FINESS Array B**	**68.08**	**331**	P	**P**	**06 37 58.9**	**-0.7**
	comp=Z,2.4nm,0.8s,baz=25,slow=5.0,SNR=6.9						
FINES				LR	LR	07 09 42.2	
	comp=Z,56nm,20.6s,baz=4.0,slow=38						
KBZ	**Khabaz**	**69.08**	**309**	LR	LR	07 12 06.8	
	comp=Z,85nm,18.5s,baz=73,slow=39						
AKASG	**Malin Array Be**	**73.03**	**321**	LR	LR	07 13 27.5	
	comp=Z,79nm,18.4s,baz=50,slow=38						
NB2	**NORSAR Subarra**	**73.71**	**336**	P	**P**	**06 38 32.8**	**-1.1**
	comp=Z,3.6nm,1.0s,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**73.71**	**336**	P	**P**	**06 38 33.0**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=41,slow=6.0,SNR=4.4						
NOA				LR	LR	07 14 15.8	
	comp=Z,54nm,19.6s,baz=45,slow=38						
LRM	**Limekiln Ridge**	**76.82**	**42**	P	**P**	**06 38 52.5**	**+0.1**
BRTR	**Keskin Array B**	**77.06**	**310**	P	**P**	**06 38 52.5**	**-1.2**
	comp=Z,0.8nm,0.8s,baz=68,slow=8.1,SNR=5.5						
BRTR				LR	LR	07 17 25.6	
	comp=Z,31nm,18.2s,baz=5.5,slow=39						
KVN	**Kaiserville**	**77.65**	**51**	P	**P**	**06 38 57.0**	**0.0**
KVN				IAmb	IAmb	06 38 58.4	
	comp=Z,2.8nm,1.0s						
NVAR	**Mina Array Bea**	**77.89**	**51**	P	**P**	**06 38 58.2**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=296,slow=6.3,SNR=7.1						
H17A	**Grant Village**	**78.76**	**43**	P	**P**	**06 39 05.5**	**+2.4**
H17A				IAmb	IAmb	06 39 06.2	
	comp=Z,3.5nm,1.1s						
PDAR	**Pinedale Array**	**80.38**	**44**	P	**P**	**06 39 11.2**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=305,slow=5.2,SNR=3.8						
GERES	**GERESS Array B**	**81.74**	**326**	LR	LR	07 18 25.9	
	comp=Z,54nm,18.7s,baz=94,slow=38						
ULM	**Lac du Bonnet**	**81.81**	**31**	LR	LR	07 18 44.5	
	comp=Z,48nm,18.2s,baz=329,slow=38						
SCHQ	**Schefferville**	**86.90**	**14**	LR	LR	07 20 51.1	
	comp=Z,23nm,21.7s,baz=350,slow=37						
PPT	**Papeete**	**87.05**	**114**	LR	LR	07 09 14.8	
	comp=Z,48nm,21.1s,baz=329,slow=29						
PPT2	**Papeete2**	**87.06**	**114**	*e*LR	LR	07 07 28.3	
	comp=Z,81nm,24.8s						
TAOE	**Nuku Hiva Isla**	**88.97**	**102**	*e*LR	LR	07 08 14.6	
	comp=Z,80nm,24.5s						
TBI	**Tubuai**	**90.78**	**119**	*e*LR	LR	07 08 44.0	
	comp=Z,62nm,25.0s						
TXAR	**Lajitas Array**	**93.00**	**50**	P	**P**	**06 40 14.1**	**0.0**
	comp=Z,0.3nm,0.8s,baz=271,slow=2.0,SNR=4.9						
ESDC	**Sonseca Array**	**96.59**	**331**	LR	LR	07 29 05.1	
	comp=Z,45nm,18.7s,baz=30,slow=39						
KMBO	**Kilima Mbogo**	**99.03**	**275**	LR	LR	07 28 12.8	
	comp=Z,14nm,18.7s,baz=274,slow=37						
SIV	**San Ignacio**	**153.86**	**44**	PKPbc	**PKiKP**	**06 46 59.0**	**-1.2**
	comp=Z,1.0nm,0.9s,baz=299,slow=4.0,SNR=3.8						

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*IDC **03** 06:32:46.2±2.2, 27°.00N×140°.30E, h450km±14km, mb3.0/4, mb1 3.1/5, mb1mx2.7/45, mbtmp3.7/5, Error ellipse: s-maj=71.6km s-min=40.9km az=13.0*

ISC 03 06:32:46.4±2.1**, 27°.0N**±0°.3×**140°.2E**±0°.3**, h450**km**, n6, σ0s.99**/7**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.78**	**86**	P	**P**	**06 33 47.0**	**+1.2**
	5.7nm,0.3s,baz=348,slow=20,SNR=7.9						
JCJ				S	**S**	**06 34 32.6**	**-1.2**
	17nm,0.3s,baz=272,slow=22,SNR=12						
MJAR	**Matsushiro Arr**	**9.69**	**350**	P	**P**	**06 35 00.5**	**+0.5**
	0.1nm,0.3s,baz=171,slow=11,SNR=2.0						
KURBB	**Kurchatov Arra**	**51.86**	**315**	P	**P**	**06 41 10.9**	**-0.5**
	0.2nm,0.2s,baz=97,slow=6.8,SNR=4.8						
ARCES	**ARCESS Array B**	**73.07**	**340**	P	**P**	**06 43 29.4**	**+0.2**
	1.6nm,0.7s,baz=72,slow=7.8,SNR=4.2						
YKA	**Yellowknife Ar**	**73.08**	**28**	P	**P**	**06 43 28.6**	**-0.7**
	0.2nm,0.5s,baz=296,slow=5.4,SNR=4.3						
FINES	**FINESS Array B**	**77.27**	**333**	P	**P**	**06 43 52.7**	**-0.1**
	0.8nm,0.4s,baz=66,slow=4.3,SNR=12						

IDC 03 06:39:34.1±3.1**, 16°.70S**×**175°.51E, h0**km**, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.6**/37**, mbtmp3.6**/4**, MS3.4**/4**, Ms1 3.4**/4**, ms1mx3.0**/27**, Error ellipse: s-maj=179.9km s-min=29.4km az=150.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.08**	**237**	*e*LR	LR	06 44 02.4	
PPT2	**Papeete2**	**33.35**	**97**	*e*LR	LR	06 55 10.1	
	comp=Z,190nm,26.0s						
PPT	**Papeete**	**33.35**	**97**	LR	LR	06 56 39.1	
	comp=Z,28nm,21.9s,baz=304,slow=31						
TBI	**Tubuai**	**33.51**	**107**	*e*LR	LR	06 54 57.0	
	comp=Z,69nm,32.5s						
STKA	**Stephens Creek**	**34.23**	**238**	LR	LR	06 58 35.3	
	comp=Z,80nm,19.9s,baz=27,slow=33						
WRA	**Warramunga Arr**	**39.15**	**259**	P	P	06 47 03.6	-0.3
	0.6nm,0.8s,baz=93,slow=9.3,SNR=0.7						
ASAR	**Alice Springs**	**39.55**	**253**	P	P	06 47 07.2	-0.1
	0.8nm,0.9s,baz=77,slow=9.8,SNR=5.6						
ASAR				LR	LR	07 02 28.8	
	comp=Z,98nm,20.4s,baz=63,slow=35						
SIJI	**Sorong**	**46.31**	**285**	LR	LR	07 07 00.5	
	comp=Z,46nm,18.4s,baz=237,slow=36						
NVAR	**Mina Array Bea**	**82.70**	**46**	P	P	06 51 59.8	-0.4
	0.3nm,0.7s,baz=233,slow=7.5,SNR=3.6						
ILAR	**Eielson Array**	**86.14**	**15**	P	P	06 52 16.8	+0.1
	0.6nm,0.9s,baz=234,slow=5.7,SNR=7.0						
GERES	**GERESS Array B**	**144.67**	**339**	PKP	PKPdf	06 59 12.9	-0.1
	1.1nm,0.8s,baz=352,slow=2.7,SNR=4.1						

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*NIED **03** 07:20:00, 36°.20N×137°.60E, h5km, Mw4.4 Best double couple: M0 3.89000×10^15 NP1:φs184.00000°, δ77.00000°, λ41.00000°. NP2:φs84.00000°, δ50.00000°, λ163.00000°.*
*JMA **03** 07:20:21.8, 36°.26N×137°.60E, h4km, M3.8 Broadband fault plane solution: P waves. NP1:φs59.00000°, δ49.00000°, λ133.00000°. NP2:φs184.00000°, δ56.00000°, λ52.00000°. Principal axes: T Plg59.0000°, Azm37.0000°; N Plg31.0000°, Azm208.0000°; P Plg4.0000°, Azm300.0000°;*
JMA Felt III J1.
*IDC **03** 07:20:22.1±0.8, 36°.34N×137°.58E, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.5/50, mbtmp3.7/9, ML3.4/2, MS3.5/25, Ms1 3.5/25, ms1mx3.3/49 Error ellipse: s-maj=20.0km s-min=8.4km az=164.0*
*NEIC **03** 07:20:23.4±2.9, 36°.26N±0°.04×137°.59E±0°.03, h10km±1km, mb4.5/6, Error ellipse: s-maj=6.5km s-min=3.0km az=335.0*

ISC 03 07:20:22.4±1.2**, 36°.24N**±0°.04×**137°.60E**±0°.03**, h1**km±9km**, n52, σ1s.20**/39**, mb3.7**/9**, MS3.6**/19**, 4D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.23**	**267**	⇓P	**Pg**	**07 20 26.5**	**-0.3**
JGN				S	**Sg**	**07 20 29.8**	**0.0**
JTT	**Ttatey**	**0.43**	**330**	⇓P	**Pg**	**07 20 30.2**	**-0.4**
JTT				S	**Sg**	**07 20 35.9**	**-0.3**
JNG	**Nsakai**	**0.44**	**67**	⇓P	**Pg**	**07 20 30.5**	**-0.3**
JNG				S	**Sg**	**07 20 36.4**	**-0.2**
MAJO	**Matsushiro**	**0.58**	**58**		**Pg**	**07 20 32.9**	**-0.6**
MAJO				Sg	**Sg**	**07 20 40.1**	**-0.9**
MAT	**Matsushiro**	**0.58**	**58**	P	**Pg**	**07 20 32.9**	**-0.6**
MAT				S	**Sg**	**07 20 40.4**	**-0.6**
MAT	**Matsushiro**	**0.58**	**58**	P	**Pg**	**07 20 32.9**	**-0.6**
MAT				S	**Sg**	**07 20 40.4**	**-0.6**
MJB9	**Matsu-Tunnel**	**0.58**	**57**		**Pg**	**07 20 33.0**	**-0.5**
MJB9				Sg	**Sg**	**07 20 40.2**	**-0.9**
MJAR	**Matsushiro Arr**	**0.58**	**58**	Pg	**Pg**	**07 20 33.3**	**-0.3**
	83nm,0.3s,baz=244,slow=19,SNR=4387						
MJAR				Lg	Lg	07 20 40.8	
	173nm,0.3s,baz=237,slow=22,SNR=58						
JYTA	**Yamagatataniai**	**0.95**	**228**	⇓P	**Pg**	**07 20 40.2**	**-0.4**
JYTA				S	**Sg**	**07 20 52.7**	**-0.2**
INU	**Inuyama**	**1.00**	**208**		**Pg**	**07 20 40.8**	**-0.8**
JHJ	**Hachijo jima 2**	**3.59**	**149**	Pn	**Pn**	**07 21 22.6**	**+3.4**
	8.9nm,0.3s,baz=256,slow=22,SNR=1.9						
JHJ				LR	LR	07 22 51.8	
	comp=Z,1μm,18.4s,baz=52,slow=40						
JHJ2	**Mitsune**	**3.61**	**149**	Pn	**Pn**	**07 21 21.2**	**+1.7**
JNU	**Nakatsue**	**6.35**	**243**	Lg	Lg	07 23 41.1	
	0.2nm,0.3s,baz=356,slow=16,SNR=2.8						
JNU				LR	LR	07 24 34.5	
	comp=Z,419nm,18.5s,baz=151,slow=40						
JNU	**Nakatsue**	**6.35**	**243**	Pn	**Pn**	**07 21 57.0**	**-0.2**
ERM	**Erimo**	**7.21**	**35**	Pn	**Pn**	**07 22 12.0**	**+3.1**
KSRS	**Korea Array**	**7.85**	**282**	Pn	**Pn**	**07 22 19.1**	**+1.3**
	0.6nm,0.3s,baz=92,slow=14,SNR=4.8						
KSRS				LR	LR	07 25 07.9	
	comp=Z,334nm,21.4s,baz=100,slow=36						
KS19	**Wonju Array Si**	**7.90**	**282**		**Pn**	**07 22 19.4**	**+0.9**
ASAJ	**Asahikawa**	**8.75**	**24**	LR	LR	07 26 10.9	
	comp=Z,192nm,18.3s,baz=116,slow=40						
USA0B	**Ussuriysk Arra**	**9.04**	**333**	Pn	**Pn**	**07 22 34.3**	**+0.4**
JCJ	**Chichijima**	**9.91**	**156**	LR	LR	07 26 21.4	
	comp=Z,162nm,19.8s,baz=103,slow=36						
KLR	**Kul'dur**	**13.67**	**344**	Pn	**Pn**	**07 23 40.6**	**+3.2**
	0.1nm,0.3s,baz=152,slow=13,SNR=3.9						
KLR				LR	LR	07 28 24.2	
	comp=Z,179nm,20.8s,baz=158,slow=36						
NACB	**Ninganchiao**	**18.30**	**233**		**Pn**	**07 24 36.2**	**-1.4**
NACB				IAmb	IAmb	07 24 53.6	
	comp=Z,54nm,1.4s						
PETK	**Petropavlovsk-**	**21.99**	**34**	LR	LR	07 33 35.1	
	comp=Z,82nm,19.7s,baz=226,slow=36						
MA2	**Magadan**	**24.87**	**16**	LR	LR	07 36 22.2	
	comp=Z,40nm,18.6s,baz=197,slow=39						
SONM	**Songino Array**	**25.74**	**307**	P	**P**	**07 25 54.4**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=111,slow=8.4,SNR=4.1						
TLY	**Talaya**	**28.59**	**313**	LR	LR	07 38 02.2	
	comp=Z,71nm,18.9s,baz=108,slow=37						
CMAR	**Chiang Mai Arr**	**38.33**	**253**	LR	LR	07 44 26.7	
	comp=Z,50nm,18.0s,baz=56,slow=38						
ZALV	**Zalesovo Beam**	**40.20**	**313**	LR	LR	07 45 17.0	
	comp=Z,37nm,20.8s,baz=99,slow=37						
MKAR	**Makanchi Array**	**41.95**	**302**	P	**P**	**07 28 13.3**	**-1.4**
	comp=Z,0.1nm,0.4s,baz=121,slow=19,SNR=2.2						
MKAR				LR	LR	07 46 15.4	
	comp=Z,87nm,19.8s,baz=86,slow=37						
NRIK	**Noril'sk**	**42.74**	**336**	LR	LR	07 47 18.2	
	comp=Z,91nm,18.4s,baz=103,slow=38						
KDAK	**Kodiak Island**	**49.73**	**41**	P	**P**	**07 29 15.9**	**0.0**
	comp=Z,1.8nm,0.7s,baz=260,slow=8.9,SNR=5.6						
KDAK	**Kodiak Island**	**49.73**	**41**	P	**P**	**07 29 16.1**	**+0.2**
KDAK				IAmb	IAmb	07 29 29.4	
	comp=Z,10nm,1.4s						
RND	**Reindeer**	**51.05**	**34**	P	**P**	**07 29 25.8**	**-0.2**
GHO	**Glory Hole Cre**	**51.17**	**36**	P	**P**	**07 29 26.5**	**-0.4**
GHO				IAmb	IAmb	07 29 30.6	
	comp=Z,2.7nm,0.9s						
ILAR	**Eielson Array**	**51.80**	**32**	LR	LR	07 53 25.6	
	comp=Z,26nm,18.3s,baz=314,slow=38						
EPYK	**Eagle Plains**	**55.73**	**29**	P	**P**	**07 30 00.8**	**+0.6**
EPYK				IAmb	IAmb	07 30 08.3	
	comp=Z,6.2nm,1.2s						
WRA	**Warramunga Arr**	**55.96**	**184**	P	**P**	**07 30 02.1**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=0.4,slow=7.6,SNR=7.1						
CTAO	**Charters Tower**	**56.61**	**170**	P	**P**	**07 30 06.7**	**-0.3**
ASAR	**Alice Springs**	**59.68**	**184**	P	**P**	**07 30 28.9**	**+0.4**
	comp=Z,0.5nm,0.9s,baz=11,slow=14,SNR=5.8						
GEYT	**Alibeck**	**61.51**	**298**	LR	LR	07 59 22.8	
	comp=Z,39nm,19.4s,baz=225,slow=38						
ARCES	**ARCESS Array B**	**63.64**	**339**	LR	LR	08 02 21.2	
	comp=Z,48nm,18.7s,baz=127,slow=40						
RES	**Resolute Bay**	**64.12**	**14**	LR	LR	08 01 05.9	
	comp=Z,20nm,19.3s,baz=184,slow=38						
YKA	**Yellowknife Ar**	**66.01**	**29**	P	**P**	**07 31 09.4**	**-0.9**
	comp=Z,0.2nm,0.7s,baz=303,slow=6.2,SNR=5.0						
FINES	**FINESS Array B**	**68.06**	**331**	P	**P**	**07 31 21.7**	**-1.6**
	comp=Z,1.2nm,0.7s,baz=354,slow=7.7,SNR=5.6						
KBZ	**Khabaz**	**69.06**	**309**	LR	LR	08 05 30.9	
	comp=Z,43nm,18.0s,baz=62,slow=39						
AKASG	**Malin Array Be**	**73.02**	**321**	LR	LR	08 06 51.2	
	comp=Z,43nm,18.2s,baz=65,slow=38						
NOA	**NORSAR Array B**	**73.70**	**336**	LR	LR	08 07 39.6	
	comp=Z,29nm,18.9s,baz=0.0,slow=39						
BRTR	**Keskin Array B**	**77.04**	**310**	LR	LR	08 09 24.6	
	comp=Z,18nm,19.8s,baz=356,slow=38						
GERES	**GERESS Array B**	**81.72**	**326**	LR	LR	08 10 32.9	
	comp=Z,31nm,18.3s,baz=92,slow=37						
ULM	**Lac du Bonnet**	**81.82**	**31**	LR	LR	08 11 38.7	
	comp=Z,16nm,18.4s,baz=50,slow=38						
PPT	**Papeete**	**87.07**	**114**	LR	LR	08 02 51.0	
	comp=Z,34nm,21.3s,baz=322,slow=29						
ESDC	**Sonseca Array**	**96.58**	**331**	LR	LR	08 22 38.2	
	comp=Z,22nm,18.2s,baz=45,slow=39						

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*TRN **03** 07:29:33.1, 13°.88N×60°.40W, h20km, MD3.8*
*IDC **03** 07:29:59.0±4.0, 13°.78N×64°.14W, h0km, mb3.4/3, mb1 3.7/5, mb1mx3.4/38, mbtmp3.4/5, ML3.1/2, MS3.1/3, Ms1 3.1/3, ms1mx2.5/21, Error ellipse: s-maj=142.2km s-min=30.8km az=82.0*

ISC 03 07:29:33.2±0.8**, 13°.88N**±0°.02×**60°.39W**±0°.03**, h10**km**, n45, σ0s.66**/60**, mb3.4**/3**, MS3.3**/3**, 1C, Windward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SLAC	**Saint Lucia, A**	**0.49**	**272**	⇑*i*P	**Pn**	**07 29 45.7**	**-0.5**
SLAC				*e*S	**Sb**	**07 29 53.0**	**+1.9**
MCLT	**Moule a Chique**	**0.56**	**252**	*e*P	**Pn**	**07 29 46.7**	**-0.6**
MCLT				*e*S	**Sn**	**07 29 56.0**	**-0.6**
SLBI	**Saint Lucia, B**	**0.58**	**284**	*e*P	**Pn**	**07 29 46.9**	**-0.6**
SLBI				*e*S	**Sn**	**07 29 56.3**	**-0.7**
SLB	**Belfond**	**0.63**	**265**	*e*P	**Pn**	**07 29 48.0**	**-0.2**
SLB				*e*S	**Sn**	**07 29 58.1**	**-0.3**
MPOM	**Morne Pois Mar**	**0.72**	**321**	*e*P	**Pn**	**07 29 48.6**	**-0.8**
LPMF	**Morne Lapointe**	**0.88**	**321**	*e*P	**Pn**	**07 29 51.2**	**-0.5**
BIM	**Bigot**	**0.91**	**314**	*e*P	**Pn**	**07 29 51.8**	**-0.3**
BIM				*e*S	**Sb**	**07 30 04.1**	**+0.8**
TRMF	**Trois Ilets**	**0.91**	**316**	*e*P	**Pn**	**07 29 51.7**	**-0.3**
ZAM	**Aeronautique**	**0.92**	**318**	*e*P	**Pn**	**07 29 51.8**	**-0.3**
SVCV	**St. Vincent, C**	**0.95**	**230**	*e*P	**Pb**	**07 29 51.9**	**+0.2**
SVCV				*e*S	**Sn**	**07 30 05.6**	**-0.6**
SSV	**Crater Summit**	**0.95**	**235**	*e*P	**Pb**	**07 29 52.0**	**+0.1**
SVV	**Soufriere Volc**	**0.98**	**235**	*e*P	**Pb**	**07 29 52.4**	**+0.2**
SVV				*e*S	**Sn**	**07 30 06.4**	**-0.5**
ILAM	**Ilet Lapin Mar**	**1.00**	**332**	*e*P	**Pn**	**07 29 53.1**	**-0.1**
ILAM				*e*S	**Sn**	**07 30 08.2**	**+0.8**
SVB	**Belmont**	**1.03**	**234**	*e*P	**Pn**	**07 29 53.5**	**-0.2**
SVB				*e*S	**Sn**	**07 30 08.0**	**-0.3**
BBGH	**Gun Hill**	**1.10**	**132**	*e*P	**Pg**	**07 29 54.3**	**0.0**
BBGH				*e*S	**Sn**	**07 30 09.5**	**-0.3**
FDF	**Fort de France**	**1.12**	**319**	*e*P	**Pn**	**07 29 54.9**	**0.0**
FDF				*e*S	**Sg**	**07 30 08.7**	**-0.5**
PML	**Morne Lenard**	**1.18**	**319**	*e*P	**Pg**	**07 29 56.0**	**+0.2**
GBMF	**Grand Be**	**1.18**	**321**	*e*P	**Pg**	**07 29 55.8**	**0.0**
BAMF	**Morne Balai**	**1.18**	**322**	*e*P	**Pg**	**07 29 55.9**	**0.0**
CXM	**Morne La Croix**	**1.19**	**321**	*e*P	**Pg**	**07 29 56.2**	**+0.1**
BBSP	**Saint Philip**	**1.20**	**130**	*e*P	**Pb**	**07 29 54.9**	**-1.0**
BBSP				*e*S	**Sn**	**07 30 12.7**	**+0.5**
SVN	**Savane Anatole**	**1.21**	**322**	*e*P	**Pb**	**07 29 56.3**	**+0.1**
PCM	**Pelee Case Pet**	**1.22**	**320**	*e*P	**Pg**	**07 29 56.5**	**-0.1**
GCMP	**Grenada, Carri**	**1.71**	**216**	*e*P	**Pn**	**07 30 02.9**	**-0.2**
GCMP				*e*S	**Sn**	**07 30 25.3**	**+0.2**
DWS	**Wesley**	**1.90**	**332**	*e*P	**Pn**	**07 30 05.5**	**0.0**
DWS				*e*S	**Sn**	**07 30 29.6**	**0.0**
GRSS	**Sisters**	**1.97**	**217**	*e*S	**Sn**	**07 30 31.5**	**0.0**
MDPV	**Dominica, Penn**	**2.00**	**330**	*e*P	**Pn**	**07 30 06.9**	**-0.2**
GRHS	**Sauteurs**	**2.05**	**217**	*e*P	**Pn**	**07 30 08.4**	**+0.6**
GRHS				*e*S	**Sb**	**07 30 36.2**	**+0.2**
GRGR	**Grenville**	**2.13**	**215**	*e*P	**Pn**	**07 30 09.5**	**+0.6**
GRGR				*e*S	**Sn**	**07 30 34.5**	**-0.9**
MAGL	**Barre de l'ile**	**2.23**	**337**	*e*P	**Pn**	**07 30 10.8**	**+0.7**
MAGL				*e*S	**Sn**	**07 30 37.9**	**+0.2**
GRFF	**Grenada Fort F**	**2.25**	**216**	*e*P	**Pn**	**07 30 10.9**	**+0.4**
GRFF				*e*S	**Sn**	**07 30 37.5**	**-0.7**
TDBA	**Terre de Bas,**	**2.29**	**329**	*e*P	**Pn**	**07 30 11.0**	**-0.1**
CBE	**Ff, Capester**	**2.47**	**332**	*e*P	**Pn**	**07 30 14.2**	**+0.7**
TOSP	**Speyside**	**2.57**	**183**	*e*P	**Pn**	**07 30 15.7**	**+0.8**
ABD	**La Joyeuse, An**	**2.78**	**338**	*e*P	**Pn**	**07 30 18.1**	**+0.3**
ABD				*e*S	**Sn**	**07 30 51.0**	**-0.5**
TRN	**Trinidad (W)**	**3.36**	**197**	*e*P	**Pn**	**07 30 26.5**	**+0.7**
TRN				*e*S	**Sn**	**07 31 04.9**	**-0.9**
GUIV	**Guiria**	**3.68**	**209**	*e*P	**Pn**	**07 30 30.7**	**+0.6**
GUIV				*e*S	**Sn**	**07 31 11.5**	**-2.2**
PCRV	**Puerto La Cruz**	**5.55**	**229**	Pn	**Pn**	**07 30 56.9**	**+1.0**
	0.8nm,0.3s,baz=71,slow=2.2,SNR=7.2						
SJG	**San Juan**	**6.95**	**308**	Pn	**Pn**	**07 31 13.7**	**-1.4**
	1.3nm,0.3s,baz=126,slow=20,SNR=1.6						
LPAZ	**La Paz**	**30.94**	**195**	LR	LR	07 49 01.7	
	comp=Z,19nm,21.9s,baz=300,slow=38						
PDAR	**Pinedale Array**	**51.03**	**314**	P	P	07 38 43.2	+7.4
	0.3nm,0.6s,baz=110,slow=7.8,SNR=4.3						
PFO	**Pinyon Flats O**	**54.28**	**301**	LR	LR	08 00 17.1	
	comp=Z,25nm,19.8s,baz=266,slow=36						
NVAR	**Mina Array Bea**	**56.44**	**307**	P	P	07 39 22.5	+6.9
	0.1nm,0.3s,baz=102,slow=7.5,SNR=3.7						
NEW	**Newport**	**57.77**	**319**	LR	LR	08 02 52.9	
	comp=Z,24nm,20.2s,baz=342,slow=36						
YKA	**Yellowknife Ar**	**61.65**	**335**	P	P	07 40 08.6	+18
	0.4nm,0.6s,baz=107,slow=7.7,SNR=5.4						

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*PRE **03** 07:57:18.8±0.7, 24°.45S×28°.09E, h5km, ML2.1*
*EAF **03** 07:57:46.2±1.1, 26°.31S×28°.59E, h10km, MD3.4*

ISC 03 07:57:23.5±1.2**, 26°.01S**±0°.06×**29°.44E**±0°.06**, h10**km**, n12, σ2s.16**/21**, South Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SLR	**Silverton**	**1.08**	**284**	*e*P	**Pg**	**07 57 44.1**	**-0.3**
SLR				*e*S	**Sn**	**07 58 01.7**	**+1.7**
SLR				AML	AML	07 58 08.9	
	comp=Z,33nm,0.4s						
PRYS	**Parys**	**2.08**	**243**	*e*P	**Pb**	**07 58 01.2**	**-0.3**
PRYS				*e*S	**Sg**	**07 58 32.8**	**+2.4**
PRYS				AML	AML	07 58 35.9	
	comp=Z,12nm,0.4s						
MOPA	**Mopani**	**3.05**	**36**	*e*P	**Pn**	**07 58 10.1**	**-1.8**
MOPA				*e*S	**Sn**	**07 58 46.6**	**-1.8**
MOPA				AML	AML	07 59 00.5	
	comp=Z,12nm,0.7s						
LBTB	**Lobatse**	**3.61**	**285**	*i* P	**Pg**	**07 58 32.4**	**-0.4**
LBTB				*i* S	**Sb**	**07 59 08.5**	**-3.0**
LBTB	**Lobatse**	**3.61**	**285**	*i* P	**Pb**	**07 58 27.6**	**0.0**
LBTB				*i* S	**Sg**	**07 59 19.8**	**+0.1**
LBTB	**Lobatse**	**3.61**	**285**	*i* P	**Pg**	**07 58 32.4**	**-0.4**
LBTB				*i* S	**Sb**	**07 59 08.5**	**-3.0**
BOSA	**Boshof**	**4.54**	**234**	*i* P	**Pb**	**07 58 44.3**	**+0.9**
BOSA				*i* S	**Sn**	**07 59 25.8**	**+0.4**
BOSA	**Boshof**	**4.54**	**234**	*i* P	**Pb**	**07 58 39.3**	**-4.1**
BOSA				*i* S	**Sb**	**07 59 41.7**	**+3.4**
BOSA	**Boshof**	**4.54**	**234**	*i* P	**Pb**	**07 58 44.3**	**+0.9**
BOSA				*i* S	**Sn**	**07 59 25.8**	**+0.4**
MATP	**Matopo**	**5.62**	**351**	*i* P	**Pg**	**07 59 12.7**	**+1.5**
MATP	**Matopo**	**5.62**	**351**	*i* P	Pn	07 58 34.5	-13
MATP				*i* S	**Sb**	**08 00 13.3**	**+3.8**
MATP	**Matopo**	**5.62**	**351**	*i* P	**Pg**	**07 59 12.7**	**+1.5**

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*JMA **03** 08:01:15.4, 36°.25N×137°.60E, h3km, M3.2 Broadband fault plane solution: P waves. NP1:φs91.00000°, δ65.00000°, λ170.00000°. NP2:φs185.00000°, δ81.00000°, λ25.00000°. Principal axes: T Plg24.0000°, Azm51.0000°; N Plg63.0000°, Azm203.0000°; P Plg11.0000°, Azm316.0000°;*
JMA Felt II J1.
*IDC **03** 08:01:16.9±1.5, 36°.28N×137°.69E, h0km, mb3.5/2, mb1 3.5/5, mb1mx3.3/43, mbtmp3.4/5, ML2.7/3, MS2.8/6, Ms1 2.8/6, ms1mx2.6/46 Error ellipse: s-maj=16.5km s-min=9.6km az=167.0*

ISC 03 08:01:16.3±0.8**, 36°.23N**±0°.04×**137°.70E**±0°.05**, h10**km**, n18, σ2s.00**/20**, MS2.6**/3**, 2C-3D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.31**	**269**	⇓P	**Pg**	**08 01 20.2**	**-2.3**
JGN				S	**Sg**	**08 01 23.6**	**-3.1**
JNG	**Nsakai**	**0.37**	**61**	⇑P	**Pb**	**08 01 24.1**	**-1.0**
JNG				S	**Sb**	**08 01 29.8**	**-1.2**
JTT	**Ttatey**	**0.48**	**322**	⇓P	**Pg**	**08 01 24.0**	**-1.7**
JTT				S	**Sg**	**08 01 30.1**	**-1.9**
JNT	**Takato**	**0.50**	**134**	⇓P	**Pb**	**08 01 26.5**	**-0.8**
JNT				S	**Sb**	**08 01 34.1**	**-0.6**
MAT	**Matsushiro**	**0.52**	**52**	P	**Pb**	**08 01 26.5**	**-1.1**
MAT				S	**Sb**	**08 01 34.1**	**-1.0**
MAT	**Matsushiro**	**0.52**	**52**	P	**Pb**	**08 01 26.5**	**-1.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MAT				S	Sb	08 01 34.1	-1.0
MJAR	**Matsushiro Arr**	**0.52**	**53**	Pg	**Pb**	**08 01 26.9**	**-0.7**
	23nm,0.3s,baz=242,slow=18,SNR=1732						
MJAR				Lg	Lg	08 01 34.3	
	47nm,0.3s,baz=230,slow=22,SNR=19						
MJAR				LR	LR	08 01 42.6	
	comp=Z,133nm,18.3s,baz=255,slow=50						
JYTA	**Yamagatataniai**	**1.00**	**231**	⇑P	**Pg**	**08 01 33.9**	**-1.7**
JYTA				S	**Sg**	**08 01 46.4**	**-2.3**
JNU	**Nakatsue**	**6.41**	**243**	Pn	**Pn**	**08 02 54.0**	**+3.1**
	0.3nm,0.3s,baz=36,slow=19,SNR=1.7						
KSRS	**Korea Array**	**7.93**	**282**	Pn	**Pn**	**08 03 15.0**	**+3.4**
	0.3nm,0.3s,baz=99,slow=14,SNR=2.9						
KSRS				LR	LR	08 06 09.9	
	comp=Z,70nm,18.1s,baz=128,slow=37						
USRK	**Ussuriysk Ar.**	**9.08**	**333**	Pn	**Pn**	**08 03 29.6**	**+2.2**
	baz=152,slow=16,SNR=1.7						
JCJ	**Chichijima**	**9.87**	**156**	LR	LR	08 07 14.5	
	comp=Z,42nm,20.0s,baz=330,slow=36						
KLR	**Kul'dur**	**13.70**	**343**	LR	LR	08 09 18.1	
	comp=Z,52nm,19.3s,baz=154,slow=35						
PETK	**Petropavlovsk-**	**21.95**	**33**	LR	LR	08 16 39.3	
	comp=Z,15nm,18.3s,baz=239,slow=42						
SONM	**Songino Array**	**25.80**	**306**	P	**P**	**08 06 49.6**	**+2.0**
	0.7nm,0.5s,baz=108,slow=9.3,SNR=2.3						
TLY	**Talaya**	**28.65**	**313**	LR	LR	08 18 32.0	
	comp=Z,17nm,19.4s,baz=112,slow=36						
ZALV	**Zalesovo Beam**	**40.27**	**313**	LR	LR	08 24 48.2	
	comp=Z,16nm,19.3s,baz=48,slow=35						
YKA	**Yellowknife Ar**	**65.98**	**29**	P	**P**	**08 12 03.2**	**+0.7**
	0.1nm,0.7s,baz=305,slow=5.8,SNR=5.4						

*MOS **03** 08:01:27.9±1.2, 44.73N×41.68E, h13km, mb4.1/1, Error ellipse: s-maj=12.2km s-min=6.3km az=110.3*
MOS Felt (II-III) at Stavropol'.
*NORS **03** 08:01:27.8±0.0, 44.69N×41.59E, h5km, MPVA3.9, Felt I=II-III MSK at Stavropol*
ISC 03 08:01:27.2±0.7**, 44.88N**±0.04×**41.84E**±0.03**, h10**km**, n30, σ1.94**/47**, 1C-2D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GOF	**Gofitskoye**	**0.88**	**78**	⇑*e*PG	**Pg**	**08 01 40.3**	**-3.8**
GOF				*e*S	**Sg**	**08 01 51.0**	**-4.5**
GOF				pmax	pmax		
	comp=Z,117nm,0.1s						
GOF				smax	smax		
	comp=N,401nm,0.1s						
GOF				smax	smax		
	comp=E,695nm,0.2s						
KIV	**Kislovodsk**	**1.11**	**146**	*i* PG	**Pg**	**08 01 47.4**	**-1.1**
KIV				pmax	pmax		
	comp=Z,85nm,0.7s						
ERBR	**Yeremizino-Bor**	**1.27**	**312**	*i* PG	**Pb**	**08 01 50.9**	**-0.3**
ERBR				*i* S	**Sn**	**08 02 09.0**	**+1.0**
SHA1	**Shidzhatmaz**	**1.29**	**152**	*e*Pg	**Pn**	**08 01 50.6**	**-0.8**
SHA1				*e*Sg	**Sn**	**08 02 08.1**	**-0.7**
SHA1	**Shidzhatmaz**	**1.29**	**152**	*e*PG	**Pn**	**08 01 50.6**	**-0.8**
ARXR	**Arkhyz**	**1.38**	**197**	*i* PG	**Pg**	**08 01 53.2**	**-0.5**
KBZ	**Khabaz**	**1.38**	**146**	*d i*PG	**Pn**	**08 01 51.7**	**-0.8**
KBTC	**Kuba-Taba**	**1.55**	**133**	*e*Pg	**Pn**	**08 01 55.0**	**+0.1**
KBTC				*e*Sg	**Sg**	**08 02 16.1**	**-1.0**
KBTC	**Kuba-Taba**	**1.55**	**133**	*e*PG	**Pn**	**08 01 55.0**	**+0.1**
KBTC				*e*S	**Sg**	**08 02 16.1**	**-1.0**
RPOR	**Krasnaya Polya**	**1.63**	**224**	*i* PN	**Pg**	**08 01 56.9**	**-1.6**
NEY	**Neytrino**	**1.75**	**158**	*e*Pg	**Pb**	**08 01 58.4**	**-1.2**
NEY				*e*Sg	**Sg**	**08 02 21.3**	**-2.2**
NEY	**Neytrino**	**1.75**	**158**	*e*PN	**Pb**	**08 01 58.3**	**-1.2**
NEY				pmax	pmax		
	comp=Z,61nm,0.1s						
NCK	**Nalchik**	**1.88**	**137**	*i* PN	**Pb**	**08 02 00.9**	**-0.7**
LZRR	**Lazarevskoye**	**2.00**	**243**	*i* PN	**Pg**	**08 02 03.5**	**-2.0**
LZRR				*e*S	**Sg**	**08 02 29.9**	**-1.5**
SOC	**Sochi**	**2.00**	**230**	*e*PN	**Pg**	**08 02 03.5**	**-2.0**
SOC				pmax	pmax		
	comp=Z,13nm,0.7s						
PRTR	**Priterechnaya**	**2.09**	**122**	*e*Pg	**Pb**	**08 02 05.2**	**+0.1**
PRTR				*e*Sg	**Sg**	**08 02 32.7**	**-1.6**
PRTR	**Priterechnaya**	**2.09**	**122**	*e*PN	**Pb**	**08 02 05.2**	**+0.1**
PRTR				*e*S	**Sg**	**08 02 32.7**	**-1.6**
LSNR	**Lesken**	**2.15**	**137**	*e*Pg	**Pb**	**08 02 06.3**	**+0.1**
LSNR				*e*Sg	**Sg**	**08 02 34.1**	**-2.1**
LSNR	**Lesken**	**2.15**	**137**	*e*PN	**Pb**	**08 02 06.3**	**+0.1**
LSNR				*e*S	**Sg**	**08 02 34.2**	**-2.1**
STDR	**Stavd-Durt**	**2.20**	**133**	*e*Pg	**Pb**	**08 02 06.6**	**-0.5**
STDR				*e*Sg	**Sb**	**08 02 35.1**	**+0.6**
STDR	**Stavd-Durt**	**2.20**	**133**	*e*PN	**Pb**	**08 02 06.6**	**-0.5**
STDR				*e*S	**Sb**	**08 02 35.1**	**+0.6**
DIGR	**Digorskoe uzhe**	**2.35**	**147**	*e*Pn	**Pb**	**08 02 09.1**	**-0.6**
DIGR				*e*Sn	**Sb**	**08 02 39.3**	**+0.4**
DIGR	**Digorskoe uzhe**	**2.35**	**147**	*e*PN	**Pb**	**08 02 09.3**	**-0.4**
DIGR				pmax	pmax		
	comp=Z,6.0nm,0.2s						
KORR	**Kora**	**2.41**	**137**	*e*Pn	**Pb**	**08 02 09.5**	**-1.2**
KORR				*e*Sn	**Sb**	**08 02 40.9**	**+0.4**
KORR	**Kora**	**2.41**	**137**	*e*PN	**Pb**	**08 02 09.5**	**-1.2**
KORR				*e*S	**Sb**	**08 02 40.9**	**+0.4**
ANN	**Anapa**	**3.13**	**270**	PN	**Pb**	**08 02 22.4**	**-0.5**
ANN				*e*S	**Sg**	**08 03 03.7**	**-4.1**
ANN				pmax	pmax		
	comp=Z,13nm,0.6s						
GROC	**Groznyy**	**3.31**	**119**	*e*PN	**Pn**	**08 02 18.3**	**-0.8**
GROC				pmax	pmax		
	comp=Z,12nm,0.1s						
OBN	**Obninsk**	**10.79**	**344**	⇓*e*P	**Pn**	**08 04 01.3**	**-0.2**
OBN				pmax	pmax		
	comp=Z,27nm,1.3s						
KURK	**Kurchatov**	**25.20**	**63**	*i* P	**P**	**08 06 59.6**	**+6.9**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.6s						
KSH	**Kashi**	**25.73**	**90**	P	**P**	**08 07 02.2**	**+4.4**
KSH				pP	sP	08 07 07.9	+5.6
KSH				sP	pP	08 07 09.4	+8.5
KSH				pmax	pmax		
	comp=Z,19nm,0.5s						
KSH				pmax	pmax		
	comp=Z,310nm,4.2s						

*INET **03** 08:04:32.6, 8.74N×84.27W, h15km, ML3.4*
UCR 03 08:04:39.5±1.4**, 9.38N×84.86W, h15**km±7km**, MD3.9, 1D, Costa Rica**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SRA1	**San Ramn**	**0.80**	**28**	*e*P	Pg	08 04 53.6	-1.5
JTS	**Las Juntas de**	**0.91**	**355**	*e*P	Pb	08 04 55.7	-1.4
LCR2	**La Lucha 2**	**0.92**	**67**	*e*P	Pb	08 04 55.8	-1.6
LCR2				*e*S	Sg	08 05 09.8	+0.1
HDC	**Heredia**	**0.97**	**50**	*e*P	Pb	08 04 56.8	-1.3
HDC				*e*S	Sn	08 05 11.6	-0.7
SJS	**Escuela Geolog**	**0.97**	**55**	*e*P	Pb	08 04 57.6	-0.6
EDDO	**Dominical**	**0.99**	**97**	*e*P	Pb	08 04 54.6	-3.8
CASO	**Castillo**	**1.06**	**7**	*i* P	Pb	08 04 58.4	-1.3
CASO				*i* S	Sg	08 05 13.7	-0.2
PLVR	**Palo Verde**	**1.08**	**334**	*e*P	Pb	08 04 59.1	-0.9
GUAI	**GUAI**	**1.09**	**324**	*i* P	Pb	08 04 58.7	-1.5
FORC	**Fortuna**	**1.10**	**10**	⇓*i*P	Pb	08 04 59.1	-1.1
CEDE	**Laguna Cedeo**	**1.11**	**8**	*e*P	Pb	08 04 59.6	-1.0
ACAL	**Aguas Claras**	**1.26**	**352**	*i* P	Pn	08 05 02.0	-0.7
EDLM	**Las Mercedes**	**1.26**	**94**	*e*P	Pn	08 05 01.9	-0.8
CVTR	**Volcan Turrial**	**1.26**	**59**	*e*P	Pn	08 05 02.5	-0.6
CUI	**Cuipilapa**	**1.31**	**347**	*i* P	Pn	08 05 02.5	-0.9
COLC	**Colonia**	**1.32**	**345**	*i* P	Pn	08 05 02.6	-0.9
PTEN	**Parque Tenorio**	**1.34**	**355**	*i* P	Pn	08 05 03.1	-0.6
HORNC	**Hornillas**	**1.36**	**347**	*i* P	Pn	08 05 03.4	-0.8
LIM1	**Limonal**	**1.37**	**344**	*i* P	Pn	08 05 03.5	-0.7
NY14	**Universidad de**	**1.43**	**333**	*i* P	Pn	08 05 04.7	-0.2
EDPN	**Palmar Norte**	**1.45**	**106**	*e*P	Pn	08 05 04.5	-0.7
BUEV	**Buena Vista**	**1.51**	**339**	*e*P	Pn	08 05 05.3	-0.9
GBS3	**Finca Las Img**	**1.51**	**337**	*i* P	Pn	08 05 04.7	-1.4
GB1A	**Borinquen Arri**	**1.53**	**340**	*e*P	Pn	08 05 06.6	+0.2
BUAI	**Buenos Aires**	**1.56**	**343**	*i* P	Pn	08 05 06.5	-0.3
EDBA	**Buenos Aires**	**1.58**	**98**	*e*P	Pn	08 05 06.0	-1.1

*IDC **03** 08:16:01.7±2.5, 38.26N×70.59E, h0km, mb3.6/2, mb1 3.6/7, mb1mx3.3/55, mbtmp3.5/7, ML3.1/5, MS2.5/4, Ms1 2.5/4, ms1mx2.2/54, Error ellipse: s-maj=31.5km s-min=18.4km az=163.0*
*NNC **03** 08:16:09.3±5.0, 38.85N×70.30E, h10km±21km, mb3.7, mpv3.2, Error ellipse: s-maj=33.6km s-min=16.9km az=8.0*
ISC 03 08:16:07.2±2.1**, 38.5N**±0.2×**70.14E**±0.09**, h27**km**, n25, σ2.04**/24**, 6C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.54**	**36**	P	**Pn**	**08 17 14.4**	**-0.1**
	SNR=32						
KK31	**Karatay Array**	**4.62**	**3**	⇑Pn	**Pn**	**08 17 15.3**	**+0.1**
	2.1nm,0.6s,baz=180,slow=15,SNR=7.2						
KK31				⇑Pg	**Pb**	**08 17 27.8**	**+0.3**
	2.5nm,0.7s,baz=183,slow=16,SNR=8.6						
KK31				Lg	Lg	08 18 24.3	
	18nm,0.7s,baz=174,slow=31,SNR=9.9						
EKS2	**Erkin-Say**	**5.00**	**32**	P	**Pn**	**08 17 23.8**	**+3.2**
	SNR=6.3						
UCH	**Uchtor**	**5.01**	**40**	P	**Pn**	**08 17 19.0**	**-2.0**
	SNR=12						
KZA	**Kyzart**	**5.30**	**46**	P	**Pn**	**08 17 24.1**	**-0.9**
	SNR=5.8						
AAK	**Ala-Archa**	**5.31**	**37**	Pn	**Pn**	**08 17 25.1**	**+0.3**
	1.4nm,0.3s,baz=191,slow=7.6,SNR=18						
AAK				Sn	**Sn**	**08 18 27.9**	**+2.8**
	0.5nm,0.3s,baz=163,slow=23,SNR=1.5						
AAK				Lg	Lg	08 18 47.7	
	0.8nm,0.3s,baz=319,slow=18,SNR=1.8						
AAK	**Ala-Archa**	**5.31**	**37**	P	**Pn**	**08 17 26.1**	**+1.3**
	SNR=9.9						
AAK	**Ala-Archa**	**5.31**	**37**	⇓Pn	**Pn**	**08 17 24.9**	**+0.1**
AAK				⇓Pg	**Pb**	**08 17 39.3**	**+0.1**
AAK				⇑Lg	Lg	08 18 44.7	
	17nm,0.8s						
KBK	**Karagaybulak**	**5.54**	**40**	P	**Pn**	**08 17 30.5**	**+2.4**
	SNR=6.2						
USP	**Ospenovka**	**5.80**	**33**	P	**Pn**	**08 17 32.1**	**+0.6**
	SNR=11						
ULHL	**Ulahol**	**5.98**	**49**	P	Sn	08 18 31.8	-10
	SNR=6.5						
TKM2	**Tokmak 2**	**6.07**	**41**	P	**Pn**	**08 17 36.8**	**+1.5**
	SNR=12						
TKM2	**Tokmak 2**	**6.07**	**41**	⇑Pn	**Pn**	**08 17 34.2**	**-1.0**
	4.6nm,0.6s						
TKM2				⇓Lg	Lg	08 19 10.7	
	7.9nm,0.8s						
GEYT	**Alibeck**	**9.48**	**270**	LR	LR	08 23 39.3	
	comp=Z,11nm,18.9s,baz=130,slow=46						
MK31	**Makanchi Array**	**12.19**	**43**	⇑P	**Pn**	**08 18 56.9**	**-2.1**
	0.8nm,0.6s,baz=228,slow=13,SNR=9.7						
MKAR	**Makanchi Array**	**12.19**	**43**	Pn	**Pn**	**08 18 56.1**	**-2.9**
	0.1nm,0.3s,baz=234,slow=13,SNR=12						
AB31	**Akbulak array**	**13.02**	**329**	⇑P	**Pn**	**08 19 09.1**	**-1.1**
	1.3nm,0.4s,baz=152,slow=11,SNR=57						
KURBB	**Kurchatov Arra**	**13.51**	**23**	Pn	**Pn**	**08 19 13.0**	**-3.9**
	0.0nm,0.3s,baz=218,slow=12,SNR=3.0						
BVAR	**Borovoye Array**	**14.54**	**1**	Pn	**Pn**	**08 19 29.5**	**-1.5**
	0.2nm,0.3s,baz=186,slow=8.5,SNR=2.7						
AKTO	**Aktyubinsk**	**14.73**	**328**	Pn	**Pn**	**08 19 33.4**	**-0.1**
	0.1nm,0.3s,baz=131,slow=14,SNR=2.0						
AKTO				Sn	**Sn**	**08 22 12.3**	**-3.4**
	0.1nm,0.3s,baz=89,slow=21,SNR=1.3						
WSAR	**Wadi Sarin**	**18.10**	**216**	LR	LR	08 27 59.7	
	comp=Z,24nm,19.6s,baz=238,slow=40						
KIRV	**Kirov**	**24.16**	**333**	LR	LR	08 33 05.6	
	comp=Z,12nm,20.0s,baz=334,slow=42						
TLY	**Talaya**	**26.82**	**50**	LR	LR	08 32 10.1	
	comp=Z,14nm,19.7s,baz=42,slow=36						
FINES	**FINESS Array B**	**35.46**	**325**	P	**P**	**08 23 03.8**	**+2.9**
	1.9nm,0.9s,baz=108,slow=12,SNR=2.4						
YKA	**Yellowknife Ar**	**79.29**	**2**	P	**P**	**08 28 08.7**	**-1.0**
	0.1nm,0.4s,baz=356,slow=5.0,SNR=3.9						

*BUT **03** 08:34:07±1.8, 44.59N±0.04×114.33W±0.05, h8km±5km, ML3.9, Mwr3.7/52(NEIC), Error ellipse: s-maj=6.3km s-min=4.8km az=171.0*
*ANF **03** 08:34:07.5±0.3, 44.62N×114.30W, h0km, ML4.1/10, Error ellipse: s-maj=5.7km s-min=2.7km az=2.0*
*IDC **03** 08:34:07.1±0.7, 44.53N×114.61W, h0km, mb3.2/1, mb1 3.8/9, mb1mx3.5/55, mbtmp3.5/9, ML2.9/6, MS2.8/4, Ms1 2.8/4, ms1mx2.5/20, Error ellipse: s-maj=9.5km s-min=6.4km az=86.0*
*NEIC **03** 08:34:08.1±1.4, 44.63N±0.04×114.31W±0.02, h5km±2km, Error ellipse: s-maj=7.3km s-min=3.2km az=187.0*
*NEIC **03** 08:34:08.2, 44.62N×114.27W, h15km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.61; $M_{\theta\theta}$1.44; $M_{\phi\phi}$-0.83; $M_{r\theta}$-0.93; $M_{\theta\phi}$-3.32; $M_{\phi r}$-0.89; Fault plane solution: $M_0$3.77000×10^{14} NP1:ϕ_s82.74000°, δ76.88000°, λ-161.61000°. NP2:ϕ_s348.43000°, δ72.10000°, λ-13.80000°. Principal axes: T 3.8210, Plg3.0000°, Azm215.0000°; N -0.1019, Plg68.0000°, Azm117.0000°; P -3.7191, Plg22.0000°, Azm306.0000°;*
ISC 03 08:34:07.9±0.6**, 44.62N**±0.03×**114.31W**±0.03**, h5**km**, n87, σ2.01**/97**, Western Idaho**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MCMT	**McKenzie Canyo**	**1.06**	**78**		**Pg**	**08 34 27.7**	**-0.6**
DLMT	**Dillon**	**1.42**	**58**		**Pn**	**08 34 34.3**	**-0.3**
MFID	**Camas Ranch**	**1.63**	**223**		**Pn**	**08 34 36.6**	**-0.8**
LRM	**Limekiln Ridge**	**1.78**	**47**		**Pn**	**08 34 39.0**	**-0.6**
QLMT	**Earthquake Lak**	**2.06**	**83**		**Pn**	**08 34 43.0**	**-0.4**
BMO	**Blue Mountains**	**2.15**	**277**		**Pn**	**08 34 43.9**	**-0.7**
MSO	**Missoula**	**2.22**	**7**	P	**Pn**	**08 34 45.2**	**-0.4**
	baz=187,SNR=113						
MSO				S	**Sn**	**08 35 13.8**	**+0.4**
	baz=187						
MSO	**Missoula**	**2.22**	**7**		**Pn**	**08 34 45.1**	**-0.4**
YHB	**Horse Butte**	**2.23**	**86**		**Pn**	**08 34 45.5**	**-0.1**
YHL	**Hebgen Lake**	**2.24**	**83**		**Pn**	**08 34 46.0**	**0.0**
F10A	**Beach Ranch, E**	**2.46**	**304**		**Pn**	**08 34 49.4**	**+0.5**
YHH	**Holmes Hill**	**2.47**	**85**		**Pn**	**08 34 49.2**	**+0.1**
IMW	**Indian Meadow**	**2.53**	**105**		**Pn**	**08 34 50.5**	**+0.6**
YPP	**Pitchstone Pla**	**2.54**	**97**		**Pn**	**08 34 50.7**	**+0.7**
FXWY	**Fox Creek**	**2.56**	**111**		**Pn**	**08 34 50.8**	**+0.5**
YNR	**Norris Junctio**	**2.59**	**87**		**Pn**	**08 34 52.3**	**+1.5**
FLWY	**Flagg Ranch**	**2.65**	**101**		**Pn**	**08 34 52.3**	**+0.8**
TPAW	**Teton Pass**	**2.67**	**114**		**Pn**	**08 34 52.6**	**+0.7**
H17A	**Grant Village**	**2.68**	**94**	P	**Pn**	**08 34 53.3**	**+1.3**
	baz=276,SNR=74						
H17A				Sb	**Sg**	**08 35 31.8**	**-2.2**
	baz=276						
H17A	**Grant Village**	**2.68**	**94**		**Pn**	**08 34 53.5**	**+1.5**
LKWY	**Lake**	**2.79**	**90**		**Pn**	**08 34 55.0**	**+1.4**
REDW	**Red Top Meadow**	**2.79**	**116**		**Pn**	**08 34 54.2**	**+0.7**
AHID	**Auburn Hatcher**	**2.98**	**127**		**Pn**	**08 34 58.2**	**+2.2**
JTMT	**Jette**	**3.12**	**0**		**Pn**	**08 34 58.3**	**+0.3**
J08A	**Circle Bar Ran**	**3.26**	**249**		**Pn**	**08 34 59.7**	**-0.1**
E09A	**Wood Farm, Sta**	**3.29**	**306**		**Pn**	**08 35 00.8**	**+0.6**
G08A	**Pilot Rock**	**3.37**	**283**		**Pn**	**08 35 00.7**	**-0.6**
GCMT	**Greycliff**	**3.48**	**69**		**Pn**	**08 35 03.4**	**+0.5**
SPUT	**South Promonto**	**3.58**	**157**		**Pn**	**08 35 05.7**	**+1.4**
RLMT	**Red Lodge**	**3.62**	**80**	P	**Pn**	**08 35 06.2**	**+1.3**
	baz=263,SNR=30						
RLMT				Sb	**Sb**	**08 35 59.8**	**+3.0**
	baz=263						
RLMT	**Red Lodge**	**3.62**	**80**		**Pn**	**08 35 06.5**	**+1.7**
HWUT	**Hardware Ranch**	**3.62**	**145**		**Pn**	**08 35 07.5**	**+2.6**
I07A	**Izee**	**3.77**	**264**		**Pn**	**08 35 06.8**	**0.0**
BGU	**Big Grassy Mou**	**3.81**	**165**		**Pn**	**08 35 07.6**	**+0.1**
E08A	**Dider Farm, El**	**3.82**	**301**		**Pn**	**08 35 07.8**	**+0.3**
WVOR	**Wild Horse Val**	**3.83**	**237**		**Pn**	**08 35 07.7**	**+0.1**
BW06	**Boulder Array**	**3.91**	**117**	Pb	**Pb**	**08 35 15.1**	**-2.4**
	baz=300,SNR=20						
BW06				Sb	**Sb**	**08 36 07.6**	**+2.3**
	baz=300						
PDAR	**Pinedale Array**	**3.91**	**117**	Pn	**Pb**	**08 35 13.6**	**-4.0**
	2.0nm,0.3s,baz=290,slow=10,SNR=45						
PDAR				Lg	Lg	08 36 17.5	
	1.9nm,0.3s,baz=325,slow=26,SNR=2.5						
ELK	**Elko**	**3.94**	**190**	Pn	**Pn**	**08 35 09.7**	**+0.5**
	1.8nm,0.3s,baz=6.8,slow=13,SNR=41						
ELK				Pg	**Pb**	**08 35 13.7**	**-4.2**
	14nm,0.3s,baz=355,slow=14,SNR=60						
ELK				Lg	Lg	08 36 04.8	
	14nm,0.3s,baz=129,slow=12,SNR=3.5						
ELK	**Elko**	**3.94**	**190**		**Pn**	**08 35 09.6**	**+0.4**
D08A	**Wollman Farm,**	**4.04**	**309**		**Pn**	**08 35 10.6**	**+0.2**
HAWA	**Hanford**	**4.08**	**298**		**Pn**	**08 35 11.0**	**+0.1**
TCUT	**Toone Canyon**	**4.10**	**148**		**Pn**	**08 35 12.3**	**+0.8**
NEW	**Newport**	**4.13**	**333**	Pn	**Pn**	**08 35 11.7**	**0.0**
	9.2nm,0.3s,baz=150,slow=13,SNR=94						
NEW				Pg	**Pb**	**08 35 23.5**	**+2.4**
	10.0nm,0.3s,baz=173,slow=13,SNR=22						
NEW				Lg	Lg	08 36 17.5	
	15nm,0.3s,baz=74,slow=21,SNR=3.3						
NEW	**Newport**	**4.13**	**333**	P	**Pn**	**08 35 11.4**	**-0.2**
	baz=151,SNR=29						
NEW				Sb	**Sg**	**08 36 15.8**	**-4.7**
	baz=151						
F07A	**Phinny Hill Vi**	**4.17**	**290**		**Pn**	**08 35 11.8**	**-0.3**
C09A	**Chrisman Ranch**	**4.20**	**321**		**Pn**	**08 35 13.0**	**+0.3**
E07A	**Sunnyside**	**4.35**	**298**		**Pn**	**08 35 14.9**	**+0.2**
WALA	**Waterton Lakes**	**4.45**	**3**		**Pn**	**08 35 16.1**	**0.0**
G06A	**Carlson Farm,**	**4.53**	**280**		**Pn**	**08 35 17.4**	**+0.2**
DUG	**Dugway, Tooele**	**4.56**	**165**	P	**Pn**	**08 35 17.9**	**+0.2**
	baz=346,SNR=15						
DUG				Sb	**Sb**	**08 36 25.5**	**+1.7**
	baz=346						
DUG	**Dugway, Tooele**	**4.56**	**165**		**Pn**	**08 35 17.8**	**+0.1**
EGMT	**Eagleton**	**4.64**	**41**	P	**Pn**	**08 35 18.4**	**-0.3**
	baz=224,SNR=19						
EGMT				S	**Sn**	**08 36 12.9**	**-0.2**
	baz=224						
EGMT	**Eagleton**	**4.64**	**41**		**Pn**	**08 35 18.5**	**-0.3**
PINE	**Pine Mountain**	**4.84**	**262**		**Pn**	**08 35 22.2**	**+0.6**
NLU	**North Lily Min**	**4.95**	**160**		**Pn**	**08 35 24.1**	**+1.0**
MPU	**Maple Canyon**	**5.01**	**156**		**Pn**	**08 35 25.1**	**+1.1**
G05D	**Wamic, OR**	**5.01**	**280**	P	**Pn**	**08 35 23.9**	**+0.1**
	baz=95						
I05D	**Terrebonne, OR**	**5.04**	**269**	P	**Pn**	**08 35 24.2**	**0.0**
	baz=85						
I05D				Sb	**Sg**	**08 36 44.4**	**-5.3**
	baz=85						
B08A	**Colville Reser**	**5.10**	**319**		**Pn**	**08 35 24.3**	**-0.7**
K05A	**Summer Lake**	**5.14**	**251**		**Pn**	**08 35 25.5**	**-0.2**
MOD	**Modoc Plateau**	**5.15**	**240**		**Pn**	**08 35 25.7**	**-0.1**
LTY	**Liberty**	**5.16**	**303**		**Pn**	**08 35 25.5**	**-0.3**
J05D	**Fort Rock, OR**	**5.17**	**257**	P	**Pn**	**08 35 27.0**	**+0.8**
	baz=73						
J05D				Sb	**Sg**	**08 36 48.5**	**-5.6**
	baz=73						
LON	**Longmire**	**5.67**	**295**		**Pn**	**08 35 33.0**	**+0.1**
K04D	**Chiloquin, OR**	**5.76**	**252**	Sg	**Sg**	**08 37 16.2**	**+3.3**
	baz=67						
D05A	**Enumclaw**	**5.94**	**298**		**Pn**	**08 35 36.5**	**-0.1**
K22A	**Casper**	**5.98**	**107**	Sb	**Sb**	**08 37 08.6**	**+3.8**
	baz=292						
H04D	**Lebanon**	**6.02**	**272**	Sb	**Sb**	**08 37 11.0**	**+5.3**
	baz=86						
LAO	**LASA Array**	**6.03**	**67**	Sb	**Sb**	**08 37 12.1**	**+6.0**
	baz=253						
KVN	**Kaiserville**	**6.24**	**208**		**Pn**	**08 35 41.9**	**+1.0**
R11A	**Troy Canyon, C**	**6.34**	**189**	Sb	**Sb**	**08 37 21.6**	**+6.5**
	baz=8.2						
HUMO	**Hull Mountain**	**6.59**	**255**		**Pn**	**08 35 45.5**	**0.0**
YBH	**Yreka Blue Hor**	**6.79**	**248**	Pn	**Pn**	**08 35 47.9**	**-0.3**
	0.2nm,0.3s,baz=36,slow=12,SNR=6.3						
YBH	**Yreka Blue Hor**	**6.79**	**248**	Pn	**Pn**	**08 35 48.7**	**+0.5**
NVAR	**Mina Array Bea**	**6.87**	**207**	Pn	**Pn**	**08 35 50.0**	**+0.4**
	0.2nm,0.3s,baz=19,slow=13,SNR=12						
NVAR				Pg	**Pb**	**08 36 04.4**	**-3.6**
	1.4nm,0.3s,baz=25,slow=13,SNR=16						
NVAR				Lg	Lg	08 37 40.3	
	0.7nm,0.3s,baz=47,slow=21,SNR=1.5						
NVAR				LR	LR	08 39 02.4	
	comp=Z,44nm,20.1s,baz=25,slow=44						
PV09	**Paradox Valley**	**7.24**	**146**		**Pn**	**08 35 56.5**	**+1.8**
RSSD	**Black Hills**	**7.38**	**90**	Pn	**Pn**	**08 36 00.0**	**+3.5**
AFDM	**Forest Hills D**	**7.54**	**224**	Pn	**Pn**	**08 36 01.5**	**+3.0**
DGMT	**Dagmar**	**7.96**	**58**		**Pn**	**08 36 04.5**	**+0.2**
ANMO	**Albuquerque**	**11.39**	**145**	LR	LR	08 40 52.7	
	comp=Z,47nm,18.8s,baz=21,slow=36						
ULM	**Lac du Bonnet**	**13.68**	**59**	Pn	**Pn**	**08 37 20.1**	**-2.2**
	0.1nm,0.3s,baz=291,slow=8.6,SNR=1.7						
ULM				Pg	P	08 38 16.6	+45
	0.4nm,0.3s,baz=242,slow=14,SNR=3.7						
ULM				Lg	Lg	08 41 13.7	
	0.2nm,0.3s,baz=158,slow=18,SNR=4.3						
ULM	**Lac du Bonnet**	**13.68**	**59**		**Pn**	**08 37 19.7**	**-2.7**
TXAR	**Lajitas Array**	**17.44**	**147**	Pn	**P**	**08 38 14.7**	**+1.3**
	0.0nm,0.3s,baz=345,slow=9.6,SNR=9.6						
TXAR				LR	LR	08 45 32.7	
	comp=Z,29nm,20.1s,baz=0.0,slow=39						
YKA	**Yellowknife Ar**	**17.91**	**360**	Pn	**Pn**	**08 38 15.1**	**-2.4**
	0.2nm,0.3s,baz=178,slow=12,SNR=17						
YKA				Lg	Lg	08 43 26.8	
	0.0nm,0.3s,baz=171,slow=28,SNR=4.8						
LPIG	**La Paz**	**20.73**	**170**	LR	LR	08 46 52.4	
	comp=Z,32nm,18.8s,baz=0.0,slow=37						
ILAR	**Eielson Array**	**27.08**	**330**	P	**P**	**08 39 51.7**	**+0.6**
	0.2nm,0.6s,baz=108,slow=8.5,SNR=2.8						

*IDC **03** 08:35:41.0±1.0, 6.47S×151.84E, h0km, mb4.1/7, mb1 4.3/8, mb1mx3.9/42, mbtmp4.1/8, ML3.9/1, MS3.3/1, Ms1 3.3/1, ms1mx2.4/41, Error ellipse: s-maj=48.4km s-min=17.1km az=119.0*
*NEIC **03** 08:35:44.5±1.5, 6.39S±0.05×151.76E±0.09, h19km±3km, mb4.3/22, Error ellipse: s-maj=13.2km s-min=6.8km az=99.0*
ISC 03 08:35:46.9±0.6**, 6.39S**±0.08×**151.8E**±0.1**, h37**km**, n36, σ0.94**/38**, mb4.2**/18**, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.08**	**6**	Pn	**Pn**	**08 36 18.9**	**-0.4**
	33nm,0.3s,baz=133,slow=1.7,SNR=14						
KRVT				Sn	**Sn**	**08 36 43.9**	**0.0**
	286nm,0.3s,baz=355,slow=23,SNR=17						
RABL	**Rabaul**	**2.21**	**10**		**Pn**	**08 36 20.3**	**-0.8**
RABL				Sn	**Sn**	**08 36 47.7**	**+0.4**
PMG	**Port Moresby**	**5.48**	**237**		**Pn**	**08 37 07.1**	**+1.1**
PMG				Sn	**Sn**	**08 38 07.4**	**-0.4**
DZM	**Mont Dzumac**	**21.06**	**139**	LR	LR	08 47 23.9	
	comp=Z,87nm,19.6s,baz=354,slow=34						
MTN	**Manton Dam**	**21.34**	**251**	P	**P**	**08 40 30.0**	**-1.0**
MTN				IAmb	IAmb	08 40 39.8	
	comp=Z,15nm,1.1s						
WB0	**Warramunga Arr**	**21.51**	**230**	P	**P**	**08 40 31.9**	**-0.9**
WR0	**Warramunga Arr**	**21.51**	**230**	P	**P**	**08 40 32.3**	**-0.5**
WR0				IAmb	IAmb	08 40 37.6	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**21.64**	**230**	P	**P**	**08 40 33.0**	**-1.2**
WB2	**Warramunga Arr**	**21.64**	**230**	P	**P**	**08 40 33.2**	**-1.1**
WB2				IAmb	IAmb	08 40 39.7	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**21.65**	**230**	P	**P**	**08 40 33.1**	**-1.2**
	comp=Z,4.0nm,0.9s,baz=55,slow=9.9,SNR=12						
AS31	**Alice Springs**	**24.31**	**223**	P	**P**	**08 41 00.6**	**-0.5**
ASAR	**Alice Springs**	**24.31**	**223**	P	**P**	**08 41 00.7**	**-0.5**
	comp=Z,7.5nm,0.8s,baz=53,slow=9.3,SNR=54						
KNRA	**Kununurra**	**24.39**	**246**	P	**P**	**08 41 00.4**	**-1.5**
KNRA				IAmb	IAmb	08 41 19.2	
	comp=Z,8.8nm,0.8s						
STKA	**Stephens Creek**	**27.09**	**199**	P	**P**	**08 41 25.8**	**-0.4**
	comp=Z,3.0nm,0.8s,baz=20,slow=11,SNR=4.3						
STKA	**Stephens Creek**	**27.09**	**199**	P	**P**	**08 41 25.8**	**-0.4**
FITZ	**Fitzroy Crossi**	**28.03**	**243**	P	**P**	**08 41 34.1**	**-0.7**
	comp=Z,3.1nm,0.6s,baz=52,slow=8.6,SNR=14						
FITZ	**Fitzroy Crossi**	**28.03**	**243**	P	**P**	**08 41 34.1**	**-0.7**
FITZ				IAmb	IAmb	08 41 38.7	
	comp=Z,17nm,1.5s						
FORT	**Forrest**	**32.93**	**220**	P	**P**	**08 42 17.0**	**-1.0**
HIZ	**Hauiti**	**38.19**	**150**	P	**P**	**08 43 02.4**	**-0.7**
PETK	**Petropavlovsk-**	**59.48**	**4**	P	**P**	**08 45 46.5**	**+0.5**
	comp=Z,0.8nm,0.9s,baz=180,slow=7.9,SNR=1.9						
OHAK	**Old Harbor**	**77.41**	**27**	P	**P**	**08 47 40.3**	**+2.3**
CNPM	**China Poot**	**79.57**	**26**	P	**P**	**08 47 51.8**	**+1.9**
BRLK	**Bradley Lake**	**79.85**	**26**	P	**P**	**08 47 52.4**	**+1.0**
BRLK				IAmb	IAmb	08 48 03.2	
	comp=Z,4.8nm,1.1s						
TRF	**Thorofare Moun**	**82.04**	**23**	P	**P**	**08 48 04.2**	**+1.0**
TRF				IAmb	IAmb	08 48 20.1	
	comp=Z,5.3nm,1.4s						
RND	**Reindeer**	**82.57**	**23**	P	**P**	**08 48 06.6**	**+0.8**
RND				IAmb	IAmb	08 48 20.4	
	comp=Z,4.7nm,1.1s						
MLY	**Manley**	**82.72**	**21**	P	**P**	**08 48 07.8**	**+1.2**
MLY				IAmb	IAmb	08 48 11.9	
	comp=Z,1.8nm,0.8s						
QSPA	**South Pole Qui**	**83.58**	**180**	P	**P**	**08 48 12.1**	**+1.0**
CCB	**Clear Creek Bu**	**83.59**	**22**	P	**P**	**08 48 11.5**	**+0.5**
CCB				IAmb	IAmb	08 48 16.9	
	comp=Z,1.3nm,0.7s						
MAW	**Mawson**	**83.73**	**203**	P	**P**	**08 48 12.1**	**+0.4**
BOOM	**Boomskoye usch**	**83.96**	**314**	P	**P**	**08 48 14.3**	**+0.7**
BOOM				IAmb	IAmb	08 48 24.1	
	comp=Z,2.1nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IL31		**84.00**	**22**	P	**P**	**08 48 13.3**	**+0.3**
IL31				IAmb	IAmb	08 48 26.0	
	comp=Z,1.6nm,0.7s						
ILAR	**Eielson Array**	**84.00**	**22**	P	**P**	**08 48 12.9**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=247,slow=5.2,SNR=18						
INK	**Inuvik**	**90.29**	**21**	P	**P**	**08 48 44.0**	**+0.6**
	comp=Z,1.0nm,1.1s,baz=259,slow=2.8,SNR=4.3						
INK	**Inuvik**	**90.29**	**21**	P	**P**	**08 48 44.1**	**+0.6**
TORD	**Torodi Ar. Bea**	**149.80**	**285**	PKPbc	**PKPbc**	**08 55 33.4**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=83,slow=2.9,SNR=9.5						
BDFB	**Brasilia**	**150.61**	**138**	PKPbc	**PKPbc**	**08 55 35.3**	**-0.8**
	comp=Z,2.4nm,0.6s,baz=181,slow=0.8,SNR=5.6						

*IDC **03** 08:39:27.6±1.2, 7°.02S×154°.99E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.6/43, mbtmp3.7/7, ML3.8/1, Error ellipse: s-maj=37.2km s-min=24.8km az=112.0*

*NEIC **03** 08:39:32.4±2.7, 7°.1S±0°.1×155°.1E±0°.1, h35km±2km, mb4.1/4, Error ellipse: s-maj=24.5km s-min=6.6km az=46.0*

ISC 03 08:39:34.1±0.9**, 7°.12S**±0°.09×**154°.9E**±0°.1**, h41km, n14, σ1s.36**/16**, mb3.8**/8**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.98**	**317**	Pn	**Pn**	**08 40 32.8**	**+0.1**
KRVT	**Keravat (AS076**	**3.99**	**314**	Pn	**Pn**	**08 40 30.2**	**-2.6**
	6.9nm,0.3s,baz=216,slow=20,SNR=1.5						
KRVT				Sn	**Sn**	**08 41 19.8**	**+1.4**
	4.9nm,0.3s,baz=158,slow=23,SNR=2.3						
PATS	**Pohnpei**	**14.28**	**14**	P	**Pn**	**08 42 55.4**	**+1.6**
ARMA	**Armidale**	**23.38**	**187**	P	**P**	**08 44 40.9**	**+1.5**
ARMA				IAmb	IAmb	08 44 43.1	
	comp=Z,11nm,1.2s						
WB0	**Warramunga Arr**	**23.52**	**236**	P	**P**	**08 44 41.5**	**+0.7**
WB0				IAmb	IAmb	08 44 59.5	
	comp=Z,6.9nm,1.4s						
WB2	**Warramunga Arr**	**23.64**	**235**	P	**P**	**08 44 42.2**	**+0.2**
WRA	**Warramunga Arr**	**23.66**	**235**	P	**P**	**08 44 41.2**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=62,slow=9.6,SNR=0.5						
WRA				PcP	**PcP**	**08 48 26.6**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=66,slow=2.6,SNR=1.2						
ASAR	**Alice Springs**	**26.01**	**228**	P	**P**	**08 45 02.9**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=64,slow=9.0,SNR=3.4						
STKA	**Stephens Creek**	**27.57**	**205**	P	**P**	**08 45 19.1**	**+1.7**
	comp=Z,2.5nm,1.0s,baz=21,slow=15,SNR=2.4						
NWAO	**Narrogin (SRO)**	**43.33**	**228**	P	**P**	**08 47 31.9**	**-0.5**
MKAR	**Makanchi Array**	**83.43**	**319**	P	**P**	**08 51 58.4**	**+1.0**
	comp=Z,0.1nm,0.4s,baz=95,slow=8.5,SNR=2.0						
ILAR	**Eielson Array**	**83.53**	**22**	P	**P**	**08 51 55.6**	**-1.9**
	comp=Z,0.3nm,0.8s,baz=237,slow=5.6,SNR=5.6						
YKA	**Yellowknife Ar**	**96.50**	**28**	P	**P**	**08 52 58.3**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=262,slow=4.0,SNR=3.2						
TORD	**Torodi Ar. Bea**	**152.95**	**285**	PKPbc	**PKPbc**	**08 59 27.4**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=86,slow=2.2,SNR=2.8						

*IDC **03** 08:47:36.8±1.4, 36°.37N×27°.56E, h106km±18km, mb3.3/2, mb1 3.3/5, mb1mx3.0/56, mbtmp3.7/5, Error ellipse: s-maj=31.9km s-min=11.5km az=167.0*

*DDA **03** 08:47:37.9, 36°.73N×27°.58E, h108km±1km, ML2.8*

*ISK **03** 08:47:37.0, 36°.67N×27°.47E, h110km±1km, ML2.9/17*

*ATH **03** 08:47:37.3, 36°.60N×27°.40E, h110km±7km, ML3.1/6, Error ellipse: s-maj=8.4km s-min=2.3km az=102.0*

*NIC **03** 08:47:39.2±0.0, 36°.60N×27°.38E, h93km±1km, Ml3.5/2*

*THE **03** 08:47:39.0, 36°.63N×27°.42E, h127km±7km, ML3.2/7, Error ellipse: s-maj=7.5km s-min=1.3km az=108.0*

ISC 03 08:47:37.2±0.9**, 36°.64N**±0°.03×**27°.47E**±0°.03**, h108km**±5km**, n66, σ1s.55**/100**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.12**	**45**	PG	**Pn**	**08 47 53.2**	**+0.8**
DAT				SG	**Sn**	**08 48 04.2**	**+0.5**
DAT	**Datca**	**0.12**	**45**	*i* P	**Pn**	**08 47 53.1**	**+0.7**
DAT				*i* S	**Sn**	**08 48 04.7**	**+1.0**
DAT				IAML		08 48 05.0	
	comp=E,241nm,0.5s						
DAT				IAML		08 48 05.0	
	comp=N,276nm,0.3s						
DATC	**Datca-Mugla**	**0.19**	**53**	PG	**Pn**	**08 47 53.0**	**+0.6**
DATC				SG	**Sn**	**08 48 04.4**	**+0.7**
KOSK	**Kos Island**	**0.41**	**286**	PG	**Pn**	**08 47 53.1**	**-0.2**
BDRM	**Kayabasi**	**0.42**	**357**	*i* P	**Pn**	**08 47 54.2**	**+0.8**
BDRM				*i* S	**Sn**	**08 48 06.7**	**+1.1**
BDRM				IAML		08 48 07.0	
	comp=N,324nm,0.4s						
BODT	**Bodrum**	**0.44**	**343**	PG	**Pn**	**08 47 54.3**	**+0.8**
BODT				SG	**Sn**	**08 48 06.1**	**+0.4**
YKAV	**Yalikavak-Bodr**	**0.51**	**342**	PG	**Pn**	**08 47 54.0**	**+0.1**
YKAV				SG	**Sn**	**08 48 06.6**	**+0.2**
ARG	**Arkhangelos**	**0.68**	**129**	P	**Pn**	**08 47 56.3**	**+1.0**
ARG				S	**Sn**	**08 48 09.6**	**+0.9**
	comp=N,1µm,0.5s						
ARG	**Arkhangelos**	**0.68**	**129**	P	**Pn**	**08 47 56.0**	**+0.9**
ARG				S	**Sn**	**08 48 09.4**	**+0.7**
ARG				AML	AML	08 48 10.4	
	comp=N,1802µm,0.4s						
ARG				AML	AML	08 48 10.5	
	comp=E,2880µm,0.5s						
ARG	**Arkhangelos**	**0.68**	**129**	PG	**Pn**	**08 47 56.2**	**+1.0**
ARG	**Arkhangelos**	**0.68**	**129**	P	**Pn**	**08 47 56.1**	**+0.9**
ARG				S	**Sn**	**08 48 09.7**	**+1.0**
YER	**Yerkesik**	**0.82**	**53**	PG	**Pn**	**08 47 57.3**	**+0.8**
TURN	**Turunc**	**0.94**	**75**	PG	**Pn**	**08 47 55.5**	**-2.1**
TURN				SG	**Sn**	**08 48 08.0**	**-5.0**
TURN	**Turunc**	**0.94**	**75**	*i* P	**Pn**	**08 47 55.5**	**-2.1**
TURN				*i* S	**Sn**	**08 48 08.5**	**-4.5**
TURN				IAML		08 48 09.0	
	comp=N,422nm,0.2s						
TURN				IAML		08 48 09.0	
	comp=E,708nm,0.3s						
DALY	**Dalyan (Mula)**	**0.97**	**79**	PG	**Pn**	**08 47 58.9**	**+1.0**
DALY	**Dalyan (Mula)**	**0.97**	**79**	*i* P	**Pn**	**08 47 59.1**	**+1.3**
DALY				*i* S	**Sn**	**08 48 14.9**	**+1.4**
DALY				IAML		08 48 15.0	
	comp=E,275nm,0.3s						
DALY				IAML		08 48 15.0	
	comp=N,580nm,0.6s						
KARP	**Karpathos**	**1.12**	**193**	P	**Pn**	**08 48 00.2**	**+0.6**
KARP				S	**Sn**	**08 48 16.6**	**+0.1**
	comp=N,1µm,0.4s						
KARP	**Karpathos**	**1.12**	**193**	P	**Pn**	**08 48 00.2**	**+0.6**
KARP				S	**Sn**	**08 48 16.1**	**-0.4**
KARP				AML	AML	08 48 18.1	
	comp=E,2343µm,0.4s						
KARP				AML	AML	08 48 18.8	
	comp=N,2727µm,0.3s						
KARP	**Karpathos**	**1.12**	**193**	PN	**Pn**	**08 48 00.3**	**+0.6**
KARP	**Karpathos**	**1.12**	**193**	P	**Pn**	**08 48 00.1**	**+0.6**
KARP				S	**Sn**	**08 48 16.4**	**-0.1**
KARP				AML	AML	08 48 17.1	
	comp=N,2.7nm,0.4s						
KARP				AML	AML	08 48 17.1	
	comp=N,2.7nm,0.4s						
KARP				AML	AML	08 48 18.4	
	comp=N,2.7nm,0.3s						
KARP				AML	AML	08 48 18.4	
	comp=N,2.7nm,0.3s						
SMG	**Samos**	**1.18**	**335**	P	**Pn**	**08 48 00.6**	**+0.4**
SMG	**Samos**	**1.18**	**335**	P	**Pn**	**08 48 01.0**	**+0.8**
AMGA	**Amorgos Island**	**1.28**	**279**	P	**Pn**	**08 48 02.2**	**+0.9**
AMGA	**Amorgos Island**	**1.28**	**279**	P	**Pn**	**08 48 02.1**	**+0.7**
FETY	**Fethiye**	**1.30**	**90**	PN	**Pn**	**08 48 02.1**	**+0.6**
FETY	**Fethiye**	**1.30**	**90**	*i* P	**Pn**	**08 48 01.9**	**+0.4**
FETY				*i* S	**Sn**	**08 48 20.0**	**+0.1**
FETY				IAML		08 48 21.0	
	comp=E,115nm,0.4s						
AYDB	**Zeytinkoy-Aydi**	**1.34**	**14**	PN	**Pn**	**08 48 02.3**	**+0.1**
AYDB				SN	**Sn**	**08 48 20.8**	**-0.3**
ANAF	**Anafi Island**	**1.40**	**259**	P	**Pn**	**08 48 03.7**	**+1.0**
ANAF	**Anafi Island**	**1.40**	**259**	P	**Pn**	**08 48 03.5**	**+0.8**
TAVA	**DENIZLI_Tavas**	**1.42**	**54**	*i* P	**Pn**	**08 48 03.3**	**+0.3**
TAVA				*i* S	**Sn**	**08 48 22.2**	**-0.4**
TAVA				IAML		08 48 23.0	
	comp=E,103nm,0.3s						
TAVA				IAML		08 48 23.0	
	comp=N,100nm,0.3s						
APE	**Apeiranthos**	**1.61**	**286**	P	**Pn**	**08 48 05.9**	**+0.6**
APE	**Apeiranthos**	**1.61**	**286**	PN	**Pn**	**08 48 05.8**	**+0.5**
APE	**Apeiranthos**	**1.61**	**286**	P	**Pn**	**08 48 06.3**	**+1.0**
SANT	**Santorini**	**1.64**	**261**	PN	**Pn**	**08 48 06.3**	**+0.6**
THT2	**Imerovigli**	**1.66**	**263**	PN	**Pn**	**08 48 06.9**	**+1.0**
AKAS	**Kas**	**1.77**	**103**	PN	**Pn**	**08 48 07.9**	**+0.6**
ZKR	**Zakros**	**1.83**	**214**	P	**Pn**	**08 48 08.8**	**+0.8**
ZKR				S	**Sn**	**08 48 32.5**	**+1.0**
	comp=N,128nm,0.3s						
ZKR	**Zakros**	**1.83**	**214**	P	**Pn**	**08 48 08.9**	**+0.8**
ZKR				S	**Sn**	**08 48 31.6**	**+0.1**
ZKR				AML	AML	08 48 34.9	
	comp=E,371µm,0.4s						
ZKR				AML	AML	08 48 36.0	
	comp=N,133µm,0.3s						
ZKR	**Zakros**	**1.83**	**214**	PN	**Pn**	**08 48 09.1**	**+1.1**
ZKR	**Zakros**	**1.83**	**214**	P	**Pn**	**08 48 08.9**	**+0.8**
ZKR				S	**Sn**	**08 48 32.1**	**+0.6**
ZKR				AML	AML	08 48 34.5	
	comp=N,0.4nm,0.4s						
ZKR				AML	AML	08 48 34.5	
	comp=N,0.4nm,0.4s						
ELL	**Elmali**	**1.96**	**86**	PN	**Pn**	**08 48 10.3**	**+0.6**
MANT	**Manisa**	**2.04**	**25**	*i* P	**Pn**	**08 48 11.0**	**+0.2**
MANT				*i* S	**Sn**	**08 48 35.6**	**-0.8**
NPS	**Neapolis**	**2.04**	**228**	P	**Pn**	**08 48 10.8**	**+0.1**
NPS				S	**Sn**	**08 48 35.2**	**-1.0**
	comp=N,248nm,0.2s						
NPS	**Neapolis**	**2.04**	**228**	P	**Pn**	**08 48 10.6**	**0.0**
NPS				AML	AML	08 48 37.4	
	comp=E,695µm,0.3s						
NPS				AML	AML	08 48 41.3	
	comp=N,329µm,0.5s						
KULA	**Kula-Manisa**	**2.09**	**26**	PN	**Pn**	**08 48 11.3**	**-0.1**
LAST	**Lasithi**	**2.19**	**228**	P	**Pn**	**08 48 12.9**	**+0.3**
LAST				S	**Sn**	**08 48 38.5**	**-1.2**
	comp=N,175nm,0.4s						
LAST	**Lasithi**	**2.19**	**228**	P	**Pn**	**08 48 12.6**	**-0.1**
LAST				AML	AML	08 48 39.5	
	comp=E,349µm,0.3s						
LAST				AML	AML	08 48 40.1	
	comp=N,354µm,0.4s						
BRDR	**BURDUR-Merkez**	**2.32**	**62**	*i* P	**Pn**	**08 48 15.2**	**+0.9**
BRDR				*i* S	**Sn**	**08 48 43.5**	**+0.8**
BRDR				IAML		08 48 44.0	
	comp=N,59nm,0.4s						
BRDR				IAML		08 48 46.0	
	comp=E,40nm,0.4s						
AKUM	**Antalya-Kumluc**	**2.34**	**97**	*i* P	**Pn**	**08 48 15.3**	**+0.9**
AKUM				*i* S	**Sn**	**08 48 43.9**	**+1.0**
AKUM				IAML		08 48 45.0	
	comp=N,50nm,0.6s						
KORT	**Korkueli**	**2.34**	**80**	PN	**Pn**	**08 48 15.3**	**+0.7**
KORT	**Korkueli**	**2.34**	**80**	*i* P	**Pn**	**08 48 16.7**	**+2.2**
KORT				*i* S	**Sn**	**08 48 46.7**	**+3.5**
KORT				IAML		08 48 47.0	
	comp=E,112nm,0.8s						
KORT				IAML		08 48 51.0	
	comp=N,72nm,0.5s						
KHAL	**Karahalli**	**2.36**	**42**	*i* P	**Pn**	**08 48 15.8**	**+1.0**
KHAL				*i* S	**Sn**	**08 48 42.8**	**-0.9**
KHAL				IAML		08 48 44.0	
	comp=N,40nm,0.4s						
KHAL				IAML		08 48 44.0	
	comp=E,40nm,0.5s						
USAK	**Uak-Merkez**	**2.41**	**30**	*i* P	**Pn**	**08 48 15.9**	**+0.5**
IDI	**Anoyia**	**2.49**	**238**	P	**Pn**	**08 48 16.3**	**-0.2**
IDI				S	**Sn**	**08 48 45.1**	**-1.6**
	comp=E,138nm,0.4s						
IDI	**Anoyia**	**2.49**	**238**	P	**Pn**	**08 48 16.5**	**0.0**
	comp=E,6.5nm,0.3s,baz=54,slow=13,SNR=30						
IDI				S	**Sn**	**08 48 44.8**	**-1.9**
	comp=E,21nm,0.3s,baz=144,slow=23,SNR=23						
IDI	**Anoyia**	**2.49**	**238**	P	**Pn**	**08 48 16.4**	**-0.1**
IDI				S	**Sn**	**08 48 45.0**	**-1.7**
IDI				AML	AML	08 48 46.8	
	comp=N,262µm,0.3s						
IDI				AML	AML	08 48 49.5	
	comp=E,289µm,0.5s						
IDI	**Anoyia**	**2.49**	**238**	PN	**Pn**	**08 48 16.7**	**+0.2**
VAM	**Vamos**	**2.92**	**246**	P	**Pn**	**08 48 23.3**	**+1.2**
VAM				S	**Sn**	**08 48 55.1**	**-1.7**
	comp=E,155nm,0.3s						
IMMV	**Iera Moni Meta**	**3.06**	**248**	P	**Pn**	**08 48 24.5**	**+0.5**
OSC2	**CSNet OBS 4**	**5.31**	**131**	P	**Pn**	**08 48 58.0**	**+3.8**
BRTR	**Keskin Array B**	**5.75**	**56**	P	**Pn**	**08 49 01.9**	**+1.6**
	comp=E,0.8nm,0.3s,baz=227,slow=13,SNR=33						
BRTR				S	**Sn**	**08 50 04.2**	**-0.8**
	comp=E,0.1nm,0.3s,baz=249,slow=28,SNR=2.1						
MMAI	**Mount Meron Ar**	**7.46**	**117**	P	**Pn**	**08 49 21.1**	**-2.3**
	comp=E,4.0nm,0.3s,baz=299,slow=12,SNR=16						
MMAI				S	**Sn**	**08 50 41.4**	**-5.1**
	comp=E,2.3nm,0.3s,baz=308,slow=25,SNR=6.1						
EIL	**Elat**	**9.36**	**136**	S	**Sn**	**08 51 25.0**	**-7.6**
	comp=E,0.4nm,0.3s,baz=24,slow=16,SNR=3.9						
KBZ	**Khabaz**	**13.74**	**54**	P	**P**	**08 50 53.4**	**+1.1**
	comp=E,0.2nm,0.3s,baz=247,slow=7.7,SNR=11						
TORD	**Torodi Ar. Bea**	**32.88**	**231**	P	**P**	**08 54 00.3**	**-0.7**
	comp=E,1.0nm,0.5s,baz=34,slow=8.9,SNR=8.1						
MKAR	**Makanchi Array**	**41.40**	**58**	P	**P**	**08 55 12.2**	**-0.5**
	comp=E,0.3nm,0.6s,baz=273,slow=9.5,SNR=3.9						

IDC 03 08:50:20.4±105.0**, 20°.52N×144°.38E, h0km, Error ellipse: s-maj=206.5km s-min=21.4km az=100.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**21.12**	**92**	H	H	09 16 46.0	
	baz=279,slow=75,SNR=174						
H11S1	**WAKE ISLAND Hy**	**21.13**	**92**	H	H	09 16 46.8	
	baz=279,slow=75,SNR=216						
H11S2	**WAKE ISLAND Hy**	**21.14**	**92**	H	H	09 16 47.4	
	baz=279,slow=75,SNR=150						
H11N1	**WAKE ISLAND Hy**	**21.15**	**88**	H	H	09 16 48.8	
	baz=276,slow=74,SNR=155						
H11N2	**WAKE ISLAND Hy**	**21.15**	**88**	H	H	09 16 49.1	
	baz=276,slow=74,SNR=135						
H11N3	**WAKE ISLAND Hy**	**21.17**	**88**	H	H	09 16 50.1	
	baz=276,slow=74,SNR=86						
H03N2	**Juan Fernandez**	**139.59**	**118**	H	H	11 44 57.2	
	baz=267						
H03N3	**Juan Fernandez**	**139.59**	**118**	H	H	11 44 58.0	
	baz=267,slow=74,SNR=33						
H03N1	**Juan Fernandez**	**139.60**	**118**	H	H	11 44 57.5	
	baz=267,slow=74,SNR=47						

*MOS **03** 08:57:11.7±0.9, 67°.69N×162°.38W, h10km, mb5.5/128, MS5.1/60, Error ellipse: s-maj=10.5km s-min=3.5km az=95.1*

*BJI **03** 08:57:11.4±0.0, 67°.88N×162°.08W, h13km, mB5.6/72, mb5.1/66, Ms5.9/80, Ms7 5.7/75*

*AEIC **03** 08:57:12±2.7, 67°.63N±0°.03×162°.2W±0°.1, h1km±3km, ML5.6/60, mb5.5/581(NEIC), Ms_20 5.3/599(NEIC), Mwb5.5/92(NEIC), Mwc5.7(GCMT), Mww5.7(NEIC), Error ellipse: s-maj=6.1km s-min=3.7km az=104.0*

*NEIC **03** 08:57:12, 67°.63N×162°.21W, h5km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-2.13; $M_{\theta\theta}$1.81; $M_{\phi\phi}$0.31; $M_{r\theta}$0.73; $M_{\theta\phi}$-1.47; $M_{\phi r}$0.27; Fault plane solution: $M_0$2.60000×10^{17} NP1:ϕ_s140.13000°, δ42.48000°, λ-61.73000°. NP2:ϕ_s284.03000°, δ53.50000°, λ-113.45000°. Principal axes: T 2.7674, Plg6.0000°, Azm30.0000°; N -0.3831, Plg19.0000°, Azm298.0000°; P -2.3844, Plg70.0000°, Azm137.0000°;*

*IDC **03** 08:57:12.9±0.3, 67°.86N×162°.34W, h0km, mb5.0/50, mb1 5.0/53, mb1mx5.0/66, mbtmp5.0/53, ML4.7/3, MS5.1/40, Ms1 5.1/40, ms1mx5.0/51 Error ellipse: s-maj=10.0km s-min=7.9km az=0.0*

*NEIC **03** 08:57:13.4±1.7, 67°.71N±0°.05×162°.3W±0°.1, h7km±1km, Error ellipse: s-maj=8.4km s-min=6.2km az=208.0*

*GCMT **03** 08:57:17.0±0.1, 67°.84N×162°.18W, h12km, MW5.7/161, Moment Tensor Solution. s150,c287; s161,c351; Duration: 1s.7 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.73±.03; $M_{\theta\theta}$3.04±.03; $M_{\phi\phi}$0.68±.03; $M_{r\theta}$-0.19±.10; $M_{\theta\phi}$-2.09±.03; $M_{\phi r}$0.91±.09; Best double couple: $M_0$4.11300×10^{17} NP1:ϕ_s289.00000°, δ42.00000°, λ-107.00000°. NP2:ϕ_s131.00000°, δ51.00000°, λ-75.00000°. Principal axes: T 4.3090, Plg4.0000°, Azm211.0000°; N -0.4000, Plg11.0000°, Azm302.0000°; P -3.9170, Plg78.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **03** 08:57:17, 67°.84N×162°.15W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-3.78; $M_{\theta\theta}$3.06; $M_{\phi\phi}$0.72; $M_{r\theta}$-0.76; $M_{\theta\phi}$-2.26; $M_{\phi r}$1.35; Fault plane solution: $M_0$4.43000×10^{17} NP1:ϕ_s133.00000°, δ55.00000°, λ-76.00000°. NP2:ϕ_s289.00000°, δ37.00000°, λ-110.00000°. Principal axes: T 4.6532, Plg9.0000°, Azm213.0000°; N -0.4975, Plg12.0000°, Azm305.0000°; P -4.1557, Plg75.0000°, Azm85.0000°;*

*NEIC **03** 08:57:19, 67°.84N×162°.32W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-3.84; $M_{\theta\theta}$3.08; $M_{\phi\phi}$0.76; $M_{r\theta}$-0.25; $M_{\theta\phi}$-2.21; $M_{\phi r}$1.05; Fault plane solution: $M_0$4.29000×10^{17} NP1:ϕ_s133.00000°, δ51.00000°, λ-74.00000°. NP2:ϕ_s289.00000°, δ41.00000°, λ-108.00000°. Principal axes: T 4.4803, Plg5.0000°, Azm212.0000°; N -0.4078, Plg12.0000°, Azm303.0000°; P -4.0725, Plg77.0000°, Azm99.0000°;*

*BGR **03** 08:57:25.3±0.0, 69°.01N×161°.42W, h10km, mb5.4, Ms4.8*

ISC 03 08:57:14.0±0.5**, 67°.73N**±0°.03×**162°.22W**±0°.03**, h10km**±2km**, h10km:pP-P, n1765, σ1s.50**/1521**, mb5.5**/512**, MS5.3**/413**, 68C-23D, Northern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.42**	**322**		**Pg**	**08 57 21.5**	**-0.8**
RDOG				Sg	**Sg**	**08 57 27.4**	**-0.4**
ANM	**Nome**	**3.42**	**203**	P	**Pn**	**08 58 04.8**	**-2.6**
ANM	**Nome**	**3.42**	**203**		**Pn**	**08 58 04.8**	**-2.6**
IM01	**Indian Mountai**	**3.77**	**113**		**Pn**	**08 58 11.8**	**-0.4**
IM01					**Sn**	**08 58 58.9**	**+2.3**
PS05	**TAPS Pump Stn5**	**4.58**	**96**		**Pn**	**08 58 22.6**	**-0.7**
COLD	**Coldfoot**	**4.65**	**91**		**Pn**	**08 58 25.4**	**+1.2**
COLD	**Coldfoot**	**4.65**	**91**		**Sn**	**08 59 20.3**	**+2.1**
TOLK	**Toolik Lake Re**	**4.81**	**73**	P	**Pn**	**08 58 27.5**	**+1.0**
	baz=264,SNR=1000						
TOLK				S	**Sn**	**08 59 22.5**	**+0.4**
	baz=264						
TOLK	**Toolik Lake Re**	**4.81**	**73**		**Pn**	**08 58 26.9**	**+0.5**
PS06	**TAPS Pump Stn6**	**5.28**	**105**		**Pn**	**08 58 32.6**	**-0.3**
MLY	**Manley**	**5.35**	**115**		**Pn**	**08 58 32.9**	**-1.0**
TTA	**Tatalina**	**5.47**	**149**	P	**Pn**	**08 58 34.8**	**-0.8**
TTA	**Tatalina**	**5.47**	**149**		**Pn**	**08 58 34.8**	**-0.8**
TT01	**Tatalina**	**5.49**	**149**		**Pn**	**08 58 35.0**	**-0.7**
PS01	**TAPS Pump Stn**	**5.51**	**56**		**Pn**	**08 58 36.3**	**+0.3**
GAMB	**Gambell**	**5.56**	**229**		**Pn**	**08 58 36.6**	**-0.1**
CHUM	**Lake Minchumin**	**5.61**	**129**		**Pn**	**08 58 37.1**	**-0.2**
BPAW	**Bear Paw Mtn.**	**5.86**	**123**		**Pn**	**08 58 40.3**	**-0.5**
PS07	**TAPS Pump Stn7**	**6.07**	**107**		**Pn**	**08 58 43.6**	**-0.1**
NEA	**Nenana**	**6.19**	**114**		**Pn**	**08 58 45.3**	**-0.1**
KTH	**Kantishna Hill**	**6.27**	**127**		**Pn**	**08 58 46.0**	**-0.5**
MDM	**Murphy Dome**	**6.27**	**110**		**Pn**	**08 58 46.1**	**-0.4**
BWN	**Browne**	**6.31**	**118**		**Pn**	**08 58 47.6**	**+0.6**
PPLA	**Purkeypile**	**6.41**	**134**		**Pn**	**08 58 48.3**	**-0.2**
I53US	**FAIRBANKS INFR**	**6.45**	**110**	Pn	**Pn**	**08 58 50.0**	**+1.1**
	baz=294,slow=12,SNR=1.6						
I53US				*i*		09 36 35.0	
	baz=305,slow=330,SNR=7.1						
TCOL	**CIGO, UAF Yank**	**6.45**	**110**	P	**Pn**	**08 58 49.6**	**+0.7**
	baz=302,SNR=1000						
TCOL	**CIGO, UAF Yank**	**6.45**	**110**		**Pn**	**08 58 49.5**	**+0.7**
COLA	**College**	**6.46**	**110**	*i* P	**Pn**	**08 58 49.3**	**+0.4**
COLA	**College**	**6.46**	**110**		**Pn**	**08 58 48.8**	**-0.2**
POKR	**Poker Plat Res**	**6.48**	**107**	P	**Pn**	**08 58 50.0**	**+0.7**
	baz=300,SNR=715						
POKR	**Poker Plat Res**	**6.48**	**107**		**Pn**	**08 58 49.1**	**-0.3**
TRF	**Thorofare Moun**	**6.54**	**125**		**Pn**	**08 58 50.9**	**+0.6**
CCB	**Clear Creek Bu**	**6.60**	**111**		**Pn**	**08 58 51.2**	**+0.3**
WRH	**Wood River Hil**	**6.60**	**113**		**Pn**	**08 58 50.8**	**-0.2**
FYU	**Fort Yukon**	**6.71**	**92**		**Pn**	**08 58 53.0**	**+0.5**
BM03	**Burnt Mountain**	**6.74**	**84**		**Pn**	**08 58 53.1**	**+0.1**
MCK	**McKinley**	**6.78**	**120**	P	**Pn**	**08 58 53.0**	**-0.4**
MCK	**McKinley**	**6.78**	**120**		**Pn**	**08 58 53.0**	**-0.4**
IL31		**6.86**	**108**		**Pn**	**08 58 54.2**	**-0.2**
ILAR	**Eielson Array**	**6.86**	**108**	Pn	**Pn**	**08 58 54.0**	**-0.5**
	195nm,0.3s,baz=304,slow=14,SNR=1977						
ILAR				Sn	**Sn**	**09 00 13.0**	**+0.5**
	42nm,0.3s,baz=290,slow=22,SNR=6.3						
ILAR				Lg	Lg	09 00 53.2	
	baz=308,slow=30,SNR=4.4						
ILAR				LR	LR	09 01 26.5	
	comp=Z,4µm,20.7s,baz=320,slow=36						
PRP	**Porcupine Dome**	**7.00**	**101**		**Pn**	**08 58 56.5**	**0.0**
PS08	**TAPS Pump Stn8**	**7.01**	**110**		**Pn**	**08 58 56.6**	**+0.1**
RND	**Reindeer**	**7.03**	**122**	P	**Pn**	**08 58 56.8**	**-0.1**
RND	**Reindeer**	**7.03**	**122**		**Pn**	**08 58 56.8**	**-0.1**
HDA	**Harding Lake**	**7.04**	**111**	P	**Pn**	**08 58 57.0**	**0.0**
	baz=304,SNR=971						
HDA	**Harding Lake**	**7.04**	**111**		**Pn**	**08 58 56.7**	**-0.3**
WAT2	**Susitna Watana**	**7.43**	**124**		**Pn**	**08 59 02.7**	**+0.3**
STLK	**Strandline Lak**	**7.67**	**140**		**Pn**	**08 59 05.9**	**+0.2**
SPWE	**Spurr West**	**7.69**	**143**		**Pn**	**08 59 06.4**	**+0.4**
DHY	**Denali Highway**	**7.74**	**120**		**Pn**	**08 59 07.0**	**+0.2**
PS10	**TAPS Pump St10**	**8.05**	**115**		**Pn**	**08 59 11.1**	**+0.2**
RIDG	**Independent Ri**	**8.18**	**111**		**Pn**	**08 59 12.5**	**-0.2**
GHO	**Glory Hole Cre**	**8.23**	**130**		**Pn**	**08 59 14.0**	**+0.6**
PMR	**Palmer**	**8.31**	**131**	P	**Pn**	**08 59 15.0**	**+0.6**
PMR	**Palmer**	**8.31**	**131**		**Pn**	**08 59 14.9**	**+0.6**
SCRK	**Sand Creek**	**8.35**	**108**		**Pn**	**08 59 15.2**	**+0.1**
RSO	**Redoubt South**	**8.37**	**146**		**Pn**	**08 59 15.4**	**-0.1**
SML	**Sawmill**	**8.38**	**129**		**Pn**	**08 59 15.5**	**+0.1**
DOT	**Dot Lake**	**8.52**	**110**		**Pn**	**08 59 17.1**	**-0.1**
SCM	**Sheep Creek Mo**	**8.66**	**126**	P	**Pn**	**08 59 19.4**	**+0.1**
SCM	**Sheep Creek Mo**	**8.66**	**126**		**Pn**	**08 59 19.4**	**+0.1**
EGAK	**Eagle**	**8.98**	**99**		**Pn**	**08 59 23.3**	**-0.2**
MENT	**Mentasta**	**9.08**	**113**		**Pn**	**08 59 25.4**	**+0.4**
CNPM	**China Poot**	**9.55**	**144**		**Pn**	**08 59 31.8**	**+0.4**
KAHC	**Katmai Hardscr**	**9.67**	**157**		**Pn**	**08 59 32.4**	**-0.7**
BC03		**9.69**	**109**		**Pn**	**08 59 33.1**	**-0.1**
KELA	**Mount Kelaz**	**9.76**	**160**		**Pn**	**08 59 33.9**	**-0.5**
DAWY	**Dawson**	**10.00**	**101**		**Pn**	**08 59 36.4**	**-1.2**
EPYK	**Eagle Plains**	**10.02**	**86**	P	**Pn**	**08 59 38.0**	**+0.1**
	baz=289,SNR=1000						
GLB	**Gilahina Butte**	**10.08**	**120**		**Pn**	**08 59 39.9**	**+1.2**
MCARA	**McCarthy VSAT**	**10.38**	**119**		**Pn**	**08 59 44.7**	**+1.9**
INK	**Inuvik**	**10.72**	**74**	Pn	**Pn**	**08 59 45.6**	**-1.7**
	17nm,0.3s,baz=295,slow=11,SNR=332						
INK				Sn	**Sn**	**09 01 40.0**	**-7.2**
	15nm,0.3s,baz=284,slow=17,SNR=7.6						
INK				LR	LR	09 04 36.9	
	comp=Z,11µm,20.5s,baz=258,slow=41						
INK	**Inuvik**	**10.72**	**74**	P	**Pn**	**08 59 45.9**	**-1.5**
INK	**Inuvik**	**10.72**	**74**		**Pn**	**08 59 45.9**	**-1.5**
KDAK	**Kodiak Island**	**10.89**	**152**	Pn	**Pn**	**08 59 50.9**	**+1.2**
	3.8nm,0.3s,baz=7.6,slow=8.5,SNR=69						
KDAK				Lg	Lg	09 02 58.5	
	baz=314,slow=21,SNR=1.3						
KDAK				LR	LR	09 03 43.0	
	comp=Z,16µm,20.3s,baz=358,slow=35						
KDAK	**Kodiak Island**	**10.89**	**152**	P	**Pn**	**08 59 50.5**	**+0.7**
KDAK	**Kodiak Island**	**10.89**	**152**		**Pn**	**08 59 50.5**	**+0.7**
SPIA	**Saint Paul Isl**	**11.21**	**203**		**Pn**	**08 59 52.4**	**-1.6**
CTGM	**Chitina Glacie**	**11.25**	**117**		**Pn**	**08 59 56.3**	**+1.5**
OHAK	**Old Harbor**	**11.30**	**154**		**Pn**	**08 59 56.2**	**+0.9**
CHGN	**Chignik**	**11.60**	**169**		**Pn**	**09 00 00.4**	**+1.0**
MESA	**MESA**	**11.63**	**121**		**Pn**	**09 00 02.4**	**+2.3**
BILL	**Bilibino**	**11.81**	**286**	*d i* P	**Pn**	**08 59 59.5**	**-2.8**
BILL				*e* S	**Sn**	**09 02 09.7**	**-4.1**
BILL				pmax	pmax		
	comp=Z,245nm,1.3s						
BILL				MLR	MLR		
	comp=Z,17µm,15.0s						
BILL	**Bilibino**	**11.81**	**286**		**Pn**	**08 59 59.4**	**-2.8**
SDPT	**Sand Point**	**12.45**	**175**		**Pn**	**09 00 11.6**	**+0.6**
FALS	**False Pass**	**12.93**	**183**		**Pn**	**09 00 19.4**	**+1.9**
CNBA	**Chernabura Isl**	**13.01**	**173**		**Pn**	**09 00 18.4**	**-0.2**
A36M	**Sachs Harbour**	**13.26**	**55**	P	**Pn**	**09 00 19.1**	**-2.8**
	baz=269,SNR=1000						
WHY	**Whitehorse**	**13.74**	**108**		**Pn**	**09 00 29.5**	**+0.8**
C36M	**Paulatuk**	**13.90**	**66**	P	**Pn**	**09 00 27.4**	**-3.3**
	baz=281,SNR=712						
SIT	**Sitka**	**16.25**	**118**	P	**Pn**	**09 01 02.3**	**+0.3**
SIT				pmax	pmax		
	comp=Z,157nm,1.0s						
ATKA	**Atka Island**	**16.63**	**207**	P	**Pn**	**09 01 07.4**	**+0.5**
DLBC	**Dease Lake**	**17.07**	**107**	Pn	**P**	**09 01 14.1**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=311,slow=12,SNR=34						
DLBC				Lg	Lg	09 06 07.1	
	comp=Z,0.3nm,0.3s,baz=87,slow=21,SNR=5.5						
DLBC				LR	LR	09 08 19.2	
	comp=Z,8µm,20.4s,baz=329,slow=39						
ADK	**Adak**	**17.39**	**211**	P	**P**	**09 01 19.3**	**+1.6**
ADK				pmax	pmax		
	comp=Z,263nm,1.4s						

ADK Adak 17.39 211 P **P** **09 01 19.3 +1.6**
SMY Shemya 18.88 229 P **Pn** **09 01 34.9 +0.2**
SMY pmax pmax
comp=Z,126nm,1.1s
SMY Shemya 18.88 229 P **Pn** **09 01 34.9 +0.2**
SEY Seymchan 19.17 277 Pn **P** **09 01 37.2 0.0**
comp=Z,0.6nm,0.3s,baz=72,slow=8.0,SNR=21
SEY Lg Lg 09 07 17.4
baz=174,slow=22,SNR=1.8
YKA Yellowknife Ar 20.26 82 P **P** **09 01 49.0 -0.2**
comp=Z,115nm,0.7s,baz=304,slow=9.7,SNR=320
YKA S **S** **09 05 29.6 -6.5**
comp=Z,18nm,0.9s,baz=309,slow=22,SNR=3.0
YKA Yellowknife Ar 20.26 82 P **P** **09 01 49.0 -0.2**
DIB Dawson Inlet, 20.34 121 **P** **09 01 50.7 +0.6**
MOBC Moresby Island 20.56 120 P Pn 09 01 53.9 -0.9
RES Resolute Bay 21.52 42 P **P** **09 02 01.3 -1.3**
comp=Z,11nm,0.7s,baz=257,slow=12,SNR=29
RES S **S** **09 05 58.2 -2.5**
comp=Z,41nm,0.8s,baz=347,slow=23,SNR=4.8
RES LR LR 09 11 46.3
comp=Z,5µm,22.0s,baz=279,slow=41
RES Resolute Bay 21.52 42 P **P** **09 02 01.5 -1.1**
RES pmax pmax
comp=Z,247nm,1.4s
RES Resolute Bay 21.52 42 P **P** **09 02 01.4 -1.1**
RES IAmb IAmb 09 02 34.8
comp=Z,247nm,1.4s
MA2 Magadan 21.86 271 P **P** **09 02 05.0 -1.5**
comp=Z,31nm,0.8s,baz=47,slow=12,SNR=9.2
MA2 LR LR 09 10 56.6
comp=Z,8µm,18.3s,baz=55,slow=38
MA2 Magadan 21.86 271 *ce*P **P** **09 02 04.9 -1.5**
MA2 pmax pmax
comp=Z,54nm,1.3s
MA2 Magadan 21.86 271 P **P** **09 02 05.3 -1.2**
MA2 IAmb IAmb 09 02 23.6
comp=Z,398nm,1.7s
MA2 Magadan 21.86 271 IAMs_20 IAMs_20 09 10 35.0
comp=Z,9µm,19.0s
BBB Bella Bella 22.66 116 P **P** **09 02 15.7 +0.7**
comp=Z,80nm,0.9s,baz=316,slow=10,SNR=16
BBB LR LR 09 11 53.6
comp=Z,5µm,18.4s,baz=325,slow=39
BBB Bella Bella 22.66 116 IAmb IAmb 09 02 20.9
comp=Z,127nm,1.1s
PET Petropavlovsk 23.74 251 *e*P **P** **09 02 25.0 -0.9**
PET *e*S **S** **09 06 33.9 -6.9**
PET pmax pmax
comp=Z,81nm,1.3s
PET pmax pmax
comp=Z,2µm,5.8s
PET pmax pmax
comp=Z,1µm,7.0s
PET MLR MLR
comp=Z,4µm,19.0s
PET Petropavlovsk 23.74 251 P **P** **09 02 24.4 -1.5**
PET IAmb IAmb 09 02 40.7
comp=Z,126nm,1.2s
PEA0B Petropavlovsk- 24.02 253 *ce*P **P** **09 02 26.9 -1.7**
PEA0B Petropavlovsk- 24.02 253 P **P** **09 02 27.4 -1.3**
PEA0B IAmb IAmb 09 02 36.5
comp=Z,231nm,1.2s
PETK Petropavlovsk- 24.02 253 P **P** **09 02 27.3 -1.4**
comp=Z,62nm,1.1s,baz=63,slow=10,SNR=36
PETK ScP **ScP** **09 09 48.3 +0.4**
comp=Z,6.1nm,1.2s,baz=327,slow=2.4,SNR=4.9
PETK LR LR 09 12 22.0
comp=Z,5µm,18.4s,baz=35,slow=38
LLLB Lilooet 26.14 111 IAmb IAmb 09 02 57.7
comp=Z,84nm,1.2s
SKR Severo-Kuril's 26.56 251 *e*P **P** **09 02 50.0 -1.7**
SKR *e*PPP PPP 09 03 43.1
SKR *e*S **S** **09 07 25.5 -0.2**
SKR *e*SS SnSn 09 08 51.0 +24
SKR pmax pmax
comp=Z,70nm,0.9s
SKR pmax pmax
comp=Z,600nm,8.1s
SKR pmax pmax
comp=Z,400nm,14.4s
SKR MLR MLR
comp=Z,2µm,18.0s
TULEG Thule 26.69 31 IAmb IAmb 09 03 09.6
comp=Z,140nm,1.0s
PGC Sidney 27.24 115 IAmb IAmb 09 03 06.2
comp=Z,78nm,0.9s
PGC IAMs_20 IAMs_20 09 13 56.1
comp=Z,7µm,20.0s
A04D Lummi Island 27.44 114 P **P** **09 02 57.5 -2.1**
baz=328
B05A Bryant 28.04 114 P **P** **09 03 04.3 -0.7**
baz=328,SNR=26
YAK Yakutsk 28.08 292 P **P** **09 03 06.2 +1.0**
comp=Z,11nm,0.4s,baz=109,slow=2.1,SNR=5.6
YAK Yakutsk 28.08 292 *e*P **P** **09 03 06.0 +0.8**
YAK *e**PP **sP** **09 03 14.4 +4.9**
YAK *e* 09 03 57.5
YAK *e*PPP PPP 09 04 10.2
YAK *e* 09 06 21.0
YAK *e*S **S** **09 07 47.0 -2.5**
YAK *e*SS **SS** **09 09 34.5 -13**
YAK *e* 09 13 49.5
YAK pmax pmax
comp=Z,23nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.0s
YAK pmax pmax
comp=E,14nm,1.4s
YAK pmax pmax
comp=Z,24nm,0.7s
YAK pmax pmax
comp=N,38nm,1.1s
YAK pmax pmax
comp=E,68nm,1.1s
YAK smax smax
comp=N,26nm,1.4s
YAK smax smax
comp=E,109nm,2.2s
YAK MLR MLR
comp=Z,3µm,12.0s
YAK MLR MLR
comp=E,2µm,11.0s
YAK MLR MLR
comp=N,966nm,14.0s
YAK Yakutsk 28.08 292 P **P** **09 03 05.6 +0.4**
YAK IAmb IAmb 09 03 53.0
comp=Z,54nm,0.8s
NLWA Neilton Lookou 28.18 117 P **P** **09 03 06.8 +0.5**
D03D Eldon 28.32 116 P **P** **09 03 06.4 -1.2**
baz=329,SNR=9.1
D04E Lakebay 28.74 116 P **P** **09 03 10.1 -1.1**
baz=330
C06D Leavenworth 28.75 113 P **P** **09 03 09.5 -1.9**
baz=328
B08A Colville Reser 28.94 110 P **P** **09 03 13.2 +0.1**
B08A IAmb IAmb 09 03 20.5
comp=Z,160nm,1.8s
D05A Enumclaw 29.00 115 P **P** **09 03 14.4 +0.8**
D05A IAmb IAmb 09 03 18.5
comp=Z,88nm,0.9s
E04D Cinebar 29.35 116 P **P** **09 03 16.0 -0.7**
baz=330,SNR=11
LTY Liberty 29.40 113 IAMs_20 IAMs_20 09 15 53.4
comp=Z,6µm,20.0s
LON Longmire 29.44 115 IAmb IAmb 09 03 25.3
comp=Z,85nm,1.4s
F04D Rainier, OR 29.61 117 P **P** **09 03 19.1 +0.1**
baz=331
NOR Nord 29.75 10 *i* P **P** **09 03 19.3 -0.6**
NOR pmax pmax
comp=Z,62nm,1.2s
NOR Nord 29.75 10 *i* P **P** **09 03 19.3 -0.6**
comp=Z,62nm,1.2s
NOR *i* 09 04 06.3
C09A Chrisman Ranch 29.79 110 IAMs_20 IAMs_20 09 16 23.7
comp=Z,6µm,18.0s
NEW Newport 29.82 108 P **P** **09 03 21.6 +0.8**
comp=Z,12nm,1.0s,baz=323,slow=5.5,SNR=14
NEW PcP **PcP** **09 06 26.7 +2.9**
comp=Z,12nm,1.0s,baz=331,slow=2.9,SNR=3.1
NEW LR LR 09 17 46.8
comp=Z,1µm,20.2s,baz=322,slow=41
NEW Newport 29.82 108 P **P** **09 03 21.9 +1.1**
NEW pmax pmax
comp=Z,70nm,1.8s
NEW MLR MLR
comp=Z,6µm,18.0s
NEW Newport 29.82 108 P **P** **09 03 20.8 0.0**
baz=327,SNR=12
NEW Newport 29.82 108 P **P** **09 03 21.9 +1.1**
NEW Newport 29.82 108 IAMs_20 IAMs_20 09 16 33.4
comp=Z,6µm,18.0s
F04A Amboy 29.94 116 IAmb IAmb 09 03 34.8
comp=Z,52nm,0.9s
KULLO Kullorsuaq 30.19 31 *i* P **P** **09 03 24.1 +0.3**
KULLO pmax pmax
comp=Z,90nm,0.9s
KULLO Kullorsuaq 30.19 31 *i* P **P** **09 03 24.1 +0.3**
comp=Z,90nm,0.9s
D08A Wollman Farm, 30.19 111 IAmb IAmb 09 03 27.8
comp=Z,47nm,0.9s
G03D McMinnville, O 30.29 118 P **P** **09 03 25.1 +0.1**
baz=332
E07A Sunnyside 30.29 113 IAmb IAmb 09 03 28.8
comp=Z,50nm,0.8s
F05D White Salmon 30.31 115 P **P** **09 03 24.6 -0.6**
baz=330
WALA Waterton Lakes 30.33 103 IAmb IAmb 09 03 33.4
comp=Z,105nm,1.1s
FCC Fort Churchill 30.34 73 P **P** **09 03 25.1 -0.2**
FCC pmax pmax
comp=Z,72nm,1.1s
FCC Fort Churchill 30.34 73 P **P** **09 03 25.1 -0.2**
FCC IAmb IAmb 09 03 39.1
comp=Z,72nm,1.1s
FFC Flin Flon 30.37 85 P **P** **09 03 25.9 +0.3**
FFC pmax pmax
comp=Z,239nm,2.0s
FFC MLR MLR
comp=Z,4µm,20.0s
FFC Flin Flon 30.37 85 P **P** **09 03 25.9 +0.3**
NKL Nikolayevsk 30.38 270 *e*P **P** **09 03 25.3 -0.4**
NKL *e* 09 04 35.9
NKL pmax pmax
comp=Z,22nm,1.3s
NKL pmax pmax
comp=N,6.0nm,0.8s
NKL pmax pmax
comp=E,2.0nm,0.8s
NKL pmax pmax
comp=Z,91nm,2.1s
HAWA Hanford 30.55 113 IAMs_20 IAMs_20 09 16 43.6
comp=Z,5µm,19.0s
E08A Dider Farm, El 30.63 112 IAmb IAmb 09 03 31.6
comp=Z,46nm,0.8s
G05D Wamic, OR 30.92 116 P **P** **09 03 30.7 +0.1**
baz=331,SNR=8.5
E09A Wood Farm, Sta 30.93 111 P **P** **09 03 30.9 +0.2**
E09A IAMs_20 IAMs_20 09 17 06.9
comp=Z,5µm,20.0s
H04D Lebanon 31.07 118 P **P** **09 03 30.6 -1.3**
baz=332
I02D Swisshome 31.07 120 P **P** **09 03 30.9 -1.0**
baz=333
H04A Detroit Lake 31.12 117 IAmb IAmb 09 03 39.6
comp=Z,71nm,1.5s
G06A Carlson Farm, 31.16 115 IAmb IAmb 09 03 41.1
comp=Z,98nm,1.5s
JTMT Jette 31.29 105 IAmb IAmb 09 03 38.0
comp=Z,74nm,0.9s
TYV Tymovskoe 31.43 266 *e*P **P** **09 03 35.0 0.0**
TYV *e*S **S** **09 08 45.0 +2.8**
TYV pmax pmax
comp=Z,300nm,4.5s
TYV pmax pmax
comp=Z,29nm,1.1s
TYV smax smax
comp=N,12nm,1.2s
I03D Drain, OR 31.60 120 P **P** **09 03 35.4 -1.1**
baz=333
G08A Pilot Rock 31.70 113 P **P** **09 03 37.1 -0.4**
I05D Terrebonne, OR 31.71 117 P **P** **09 03 37.7 +0.1**
baz=332,SNR=27
F10A Beach Ranch, E 31.72 110 IAMs_20 IAMs_20 09 17 40.9
comp=Z,5µm,19.0s
I04A Tendick Farm, 31.83 118 P **P** **09 03 38.0 -0.6**
baz=332,SNR=11
J01E Myrtle Point 31.89 121 P **P** **09 03 38.4 -0.7**
baz=333,SNR=6.8
MSO Missoula 32.19 106 P **P** **09 03 40.8 -1.0**
baz=328,SNR=25
MSO Missoula 32.19 106 IAmb IAmb 09 03 49.2
comp=Z,44nm,1.1s
MSO IAMs_20 IAMs_20 09 17 30.2
comp=Z,7µm,20.0s
PINE Pine Mountain 32.33 117 IAmb IAmb 09 03 48.0
comp=Z,62nm,1.0s
K02D Willamette Mer 32.39 121 P **P** **09 03 43.9 +0.3**
baz=334,SNR=18
J04D Umpqua Nationa 32.42 119 P **P** **09 03 44.1 +0.1**
baz=333
I07A Izee 32.56 115 IAmb IAmb 09 03 53.5
comp=Z,48nm,1.1s
BMO Blue Mountains 32.66 111 IAMs_20 IAMs_20 09 18 03.7
comp=Z,6µm,18.0s
J05D Fort Rock, OR 32.67 117 P **P** **09 03 46.9 +0.7**
baz=332,SNR=49
HUMO Hull Mountain 32.70 120 P **P** **09 03 47.0 +0.8**
EGMT Eagleton 32.74 100 P **P** **09 03 46.9 +0.3**
baz=326,SNR=27
EGMT Eagleton 32.74 100 IAMs_20 IAMs_20 09 18 40.1
comp=Z,5µm,18.0s
K04D Chiloquin, OR 33.09 119 P **P** **09 03 50.4 +0.6**
baz=333,SNR=6.7
L04D Klamath Falls 33.27 120 P **P** **09 03 51.3 -0.1**
baz=333,SNR=21
K05A Summer Lake 33.29 118 IAmb IAmb 09 04 00.6
comp=Z,77nm,1.2s
KBS Kingsbay 33.52 2 *ce*P **P** **09 03 54.2 +1.2**
KBS pmax pmax
comp=Z,163nm,2.5s
KBS Kingsbay 33.52 2 P **P** **09 03 52.7 -0.3**
KBS Kingsbay 33.52 2 *e*P **P** **09 03 54.1 +1.1**
YBH Yreka Blue Hor 33.57 121 IAmb IAmb 09 04 02.1
comp=Z,93nm,1.7s
M04C Macdoel 33.81 119 P **P** **09 03 57.1 +1.1**
baz=334,SNR=17
M02C Callahan 33.83 121 P **P** **09 03 57.9 +1.7**
baz=334,SNR=25
GRNR Gornyy 33.88 271 ⇑ *i*P **P** **09 03 56.1 -0.3**
GRNR *e* 09 05 23.8
GRNR *e*S **S** **09 09 23.0 +2.6**
GRNR pmax pmax
comp=Z,20nm,0.9s
GRNR smax smax
comp=N,2.0nm,0.9s
GRNR MLR MLR
comp=Z,6µm,13.0s
DLMT Dillon 33.93 106 IAMs_20 IAMs_20 09 18 37.3
comp=Z,5µm,20.0s
DAG Danmarks Havn 34.01 14 *i* P **P** **09 03 56.9 -0.3**
DAG pmax pmax
comp=Z,52nm,0.9s
DAG Danmarks Havn 34.01 14 *i* P **P** **09 03 56.9 -0.3**
comp=Z,52nm,0.9s
KHMM Horse Mountain 34.01 122 IAmb IAmb 09 04 06.2
comp=Z,91nm,1.7s
KUR Kuril'sk 34.14 254 *e*P **P** **09 03 58.0 -0.7**
KUR *e*PPP PPP 09 05 28.1
KUR S **S** **09 09 28.3 +3.8**
KUR *e* 09 14 21.5
MOD Modoc Plateau 34.22 118 IAmb IAmb 09 04 07.5
comp=Z,66nm,1.4s
N02D Trinity Center 34.25 121 P **P** **09 04 01.6 +1.7**
baz=334,SNR=19
SPA0 Spitsbergen Ar 34.31 1 *e*P **P** **09 03 59.1 -0.8**
SPITS Spitsbergen Ar 34.31 1 P **P** **09 03 59.1 -0.8**
SPITS pmax pmax
comp=Z,4.0nm,0.6s
WVOR Wild Horse Val 34.31 115 P **P** **09 04 01.5 +1.1**
WVOR pmax pmax
comp=Z,142nm,1.6s
WVOR MLR MLR
comp=Z,4µm,19.0s
WVOR Wild Horse Val 34.31 115 P **P** **09 04 01.5 +1.1**
WVOR IAmb IAmb 09 04 08.3
comp=Z,142nm,1.6s
WVOR IAMs_20 IAMs_20 09 19 23.3
comp=Z,4µm,19.0s
MFID Camas Ranch 34.44 111 IAmb IAmb 09 04 10.9
comp=Z,68nm,1.5s
MFID IAMs_20 IAMs_20 09 19 18.7
comp=Z,4µm,18.0s
DGMT Dagmar 34.47 94 P **P** **09 04 01.8 +0.2**
baz=325,SNR=38
YSS Yuzh-Sakhalins 34.59 261 *e*P **P** **09 04 04.8 +2.2**
YSS *e* 09 04 14.0
YSS *e* 09 05 21.2
YSS *e*S **S** **09 09 32.0 +0.6**
YSS pmax pmax
comp=Z,20nm,0.9s
YSS pmax pmax
comp=Z,900nm,4.7s
YSS MLR MLR
comp=Z,3µm,13.0s
YSS MLR MLR
comp=N,3µm,15.0s
YSS MLR MLR
comp=E,2µm,15.0s
YSS Yuzh-Sakhalins 34.59 261 IAMs_20 IAMs_20 09 18 35.3
comp=Z,5µm,18.0s
KMRM Mail Ridge 34.61 123 IAmb IAmb 09 04 10.5
comp=Z,46nm,0.9s
GCMT Greycliff 34.64 102 P **P** **09 04 03.6 +0.3**
WDC Whiskeytown Da 34.66 121 IAmb IAmb 09 04 11.2
comp=Z,59nm,1.2s
O02D Mt. Diablo Mer 34.95 122 P **P** **09 04 06.7 +0.8**
baz=335,SNR=8.4
ZEA Zeya 35.00 282 *e*P **P** **09 04 04.2 -1.9**
ZEA *e*S **S** **09 09 38.0 +0.4**
ZEA *e*SS **SS** **09 12 12.0 +3.0**
ZEA pmax pmax
comp=Z,600nm,4.0s
ZEA pmax pmax
comp=E,300nm,5.0s
ZEA pmax pmax
comp=E,24nm,1.0s
ZEA pmax pmax
comp=Z,64nm,1.4s
ZEA smax smax
comp=N,400nm,7.0s
ZEA MLR MLR
comp=N,4µm,12.0s
ZEA MLR MLR
comp=E,5µm,12.0s
ZEA MLR MLR
comp=Z,7µm,12.0s
YMR Madison River 35.12 105 P **P** **09 04 08.3 +0.9**
KCPM Cahto Peak 35.13 123 IAmb IAmb 09 04 24.3
comp=Z,78nm,1.3s
SUMG Summit 35.15 26 *i* P **P** **09 04 08.5 +0.9**
SUMG pmax pmax
comp=Z,220nm,0.8s
SUMG Summit 35.15 26 P **P** **09 04 07.1 -0.6**
SUMG Summit 35.15 26 *i* P **P** **09 04 08.5 +0.9**
comp=Z,222nm,0.8s
O03E Paynes Creek 35.16 121 P **P** **09 04 08.0 +0.3**
baz=334,SNR=32
NRIK Noril'sk 35.16 325 P **P** **09 04 07.4 +0.1**
comp=Z,39nm,0.8s,baz=48,slow=8.9,SNR=44
NRIK LR LR 09 22 00.6
comp=Z,5µm,18.8s,baz=43,slow=42
LAO LASA Array 35.18 98 P **P** **09 04 08.2 +0.4**
baz=327,SNR=22
LAO LASA Array 35.18 98 IAMs_20 IAMs_20 09 18 19.7
comp=Z,4µm,18.0s
FRB Frobisher Bay 35.20 50 P **P** **09 04 07.4 -0.2**
FRB pmax pmax
comp=Z,84nm,1.1s
RLMT Red Lodge 35.36 102 P **P** **09 04 10.3 +0.7**
baz=328,SNR=46
RLMT Red Lodge 35.36 102 P **P** **09 04 09.2 -0.4**
RLMT IAMs_20 IAMs_20 09 20 32.3
comp=Z,5µm,21.0s
LKWY Lake 35.42 104 IAmb IAmb 09 04 30.1
comp=Z,107nm,1.2s
HSPB Hornsund (broa 35.49 1 *e*S **S** **09 09 37.8 -6.8**
HSPB LMZ LR 09 14 26.2
comp=Z,4.7nm,35.5s
HSPB Hornsund (broa 35.49 1 *e*P **P** **09 04 09.4 -0.6**
H17A Grant Village 35.50 105 P **P** **09 04 12.5 +1.7**
baz=329,SNR=35
H17A Grant Village 35.50 105 IAmb IAmb 09 04 23.1
comp=Z,83nm,1.2s
FLWY Flagg Ranch 35.72 105 IAmb IAmb 09 04 21.2
comp=Z,100nm,1.1s
FLWY IAMs_20 IAMs_20 09 19 29.7
comp=Z,5µm,18.0s
IMW Indian Meadow 35.79 105 P **P** **09 04 14.0 +0.7**
IMW IAmb IAmb 09 04 21.7
comp=Z,55nm,0.9s
YUK Yuzh-Kuril'sk 35.91 255 *e*P P 09 04 08.6 -5.3
YUK *e* 09 05 36.0
YUK *e*PPP PPP 09 05 50.7
YUK *e*S **S** **09 09 50.1 -1.6**
YUK *e*SS **SnSn** **09 12 18.2 +3.5**
YUK *e*SSS SSS 09 12 36.4
YUK pmax pmax
comp=Z,184nm,1.3s
YUK pmax pmax
comp=Z,177nm,1.4s
YUK pmax pmax
comp=E,169nm,1.2s
YUK pmax pmax
comp=N,142nm,1.0s
YUK MLR MLR
comp=Z,2µm,12.0s
YUK MLR MLR
comp=E,496nm,13.0s
YUK MLR MLR
comp=N,3µm,14.0s
TPAW Teton Pass 36.14 106 P **P** **09 04 17.1 +0.8**
TPAW IAMs_20 IAMs_20 09 18 35.8
comp=Z,4µm,19.0s
ULM Lac du Bonnet 36.19 85 P **P** **09 04 17.8 +1.5**
comp=Z,7.8nm,0.6s,baz=326,slow=9.4,SNR=16
ULM PcP **PcP** **09 06 43.4 +1.9**
comp=Z,20nm,0.8s,baz=339,slow=18,SNR=4.0
ULM LR LR 09 20 40.2
comp=Z,3µm,18.9s,baz=330,slow=39
ULM Lac du Bonnet 36.19 85 *i* P **P** **09 04 17.4 +1.0**
ULM Lac du Bonnet 36.19 85 IAmb IAmb 09 05 35.6
comp=Z,88nm,1.5s
ULM IAMs_20 IAMs_20 09 20 28.9
comp=Z,5µm,18.0s
SNOW Snow King Moun 36.23 106 IAmb IAmb 09 04 27.6
comp=Z,63nm,0.9s
SNOW IAMs_20 IAMs_20 09 18 39.3
comp=Z,4µm,18.0s
REDW Red Top Meadow 36.28 106 IAmb IAmb 09 04 27.9
comp=Z,70nm,1.1s
REDW IAMs_20 IAMs_20 09 18 41.7
comp=Z,4µm,18.0s
BOD Bodaibo 36.58 297 *e*P **P** **09 04 17.5 -2.0**
BOD pmax pmax
comp=Z,109nm,1.6s
AFDM Forest Hills D 36.65 121 P **P** **09 04 20.9 +0.5**
AHID Auburn Hatcher 36.71 106 IAMs_20 IAMs_20 09 20 14.9
comp=Z,8µm,21.0s
MDND Maddock 36.73 90 P **P** **09 04 21.7 +0.7**
baz=325,SNR=15
MDND Maddock 36.73 90 P **P** **09 04 21.7 +0.7**
MDND IAMs_20 IAMs_20 09 19 15.1
comp=Z,5µm,21.0s
VCNR Virginia City 36.77 119 IAmb IAmb 09 04 29.9
comp=Z,54nm,0.9s
KLR Kul'dur 36.90 274 *ce*P **P** **09 04 20.4 -2.0**
PNTR Pine Nut 36.98 119 IAmb IAmb 09 04 32.6
comp=Z,64nm,0.8s
PNTR IAMs_20 IAMs_20 09 19 14.6
comp=Z,3µm,18.0s
ASAJ Asahikawa 37.05 259 LR LR 09 19 40.1
comp=Z,1µm,18.6s,baz=48,slow=36
BW06 Boulder Array 37.27 105 P **P** **09 04 26.3 +0.4**
baz=330,SNR=50
BW06 Boulder Array 37.27 105 IAmb IAmb 09 04 30.2
comp=Z,72nm,1.1s
BW06 IAMs_20 IAMs_20 09 19 49.9
comp=Z,4µm,19.0s
PDAR Pinedale Array 37.27 105 P **P** **09 04 26.6 +0.7**
comp=Z,32nm,0.7s,baz=337,slow=7.3,SNR=127
PDAR PcP **PcP** **09 06 47.6 +2.5**
comp=Z,6.0nm,0.7s,baz=120,slow=0.5,SNR=4.3
SFJD Kangerlussuaq 37.35 37 *i* P **P** **09 04 25.2 -0.8**
SFJD Kangerlussuaq 37.35 37 P **P** **09 04 25.9 -0.1**
SFJD Kangerlussuaq 37.35 37 *i* P **P** **09 04 25.2 -0.8**
E28A Huff 37.38 93 IAMs_20 IAMs_20 09 21 15.0
comp=Z,6µm,21.0s
WAKR Walker 37.56 119 IAmb IAmb 09 04 33.0

comp=Z,72nm,0.9s
CMB Columbia Colle 37.67 120 P **P** **09 04 29.5 +0.4**
CMB pmax pmax
comp=Z,15nm,0.9s
CMB MLR MLR
comp=Z,2µm,19.0s
CMB Columbia Colle 37.67 120 P **P** **09 04 29.5 +0.4**
RYN Ryan 37.75 118 IAMs_20 IAMs_20 09 21 43.2
comp=Z,3µm,18.0s
AGMN Agassiz Nation 37.79 87 P **P** **09 04 30.2 +0.3**
baz=325,SNR=20
NVAR Mina Array Bea 38.01 118 P **P** **09 04 33.2 +1.0**
comp=Z,47nm,0.8s,baz=322,slow=7.0,SNR=99
NVAR LR LR 09 22 13.1
comp=Z,2µm,18.4s,baz=353,slow=39
NV11 Mina Array Sit 38.05 118 IAmb IAmb 09 04 42.8
comp=Z,93nm,1.0s
RSSD Black Hills 38.17 98 P **P** **09 04 33.2 -0.3**
RSSD pmax pmax
comp=Z,36nm,1.2s
RSSD MLR MLR
comp=Z,4µm,19.0s
RSSD Black Hills 38.17 98 P **P** **09 04 33.6 +0.1**
baz=328
RSSD Black Hills 38.17 98 P **P** **09 04 33.2 -0.3**
RSSD Black Hills 38.17 98 IAMs_20 IAMs_20 09 22 56.9
comp=Z,4µm,19.0s
D32A Dogwood Acres, 38.31 89 IAmb IAmb 09 04 40.7
comp=Z,241nm,1.6s
D32A IAMs_20 IAMs_20 09 21 52.8
comp=Z,4µm,20.0s
DUG Dugway, Tooele 38.34 110 P **P** **09 04 35.2 +0.3**
DUG pmax pmax
comp=Z,29nm,0.9s
DUG MLR MLR
comp=Z,2µm,20.0s
DUG Dugway, Tooele 38.34 110 P **P** **09 04 35.0 +0.2**
baz=332,SNR=38
DUG Dugway, Tooele 38.34 110 P **P** **09 04 35.1 +0.3**
MDPB Devils Postpil 38.47 119 IAmb IAmb 09 04 46.6
comp=Z,98nm,1.1s
K22A Casper 38.50 102 P **P** **09 04 35.0 -1.2**
baz=330,SNR=21
OMMB Old Mammoth Mi 38.51 119 IAmb IAmb 09 04 41.6
comp=Z,95nm,1.1s
B35A Bob, Littlefor 38.55 85 IAMs_20 IAMs_20 09 21 50.3
comp=Z,5µm,19.0s
MLAC Mammoth, Mammo 38.55 119 P **P** **09 04 35.8 -0.9**
baz=335,SNR=28
ERM Erimo 38.65 257 *ce*P **P** **09 04 35.9 -1.3**
ERM pmax pmax
comp=Z,64nm,1.3s
ERM Erimo 38.65 257 P **P** **09 04 36.4 -0.8**
ERM IAmb IAmb 09 04 52.2
comp=Z,107nm,1.4s
ERM Erimo 38.65 257 IAMs_20 IAMs_20 09 21 23.6
comp=Z,5µm,19.0s
R11A Troy Canyon, C 39.01 115 P **P** **09 04 40.7 +0.2**
baz=334,SNR=115
RWWY Rawlins 39.08 103 P **P** **09 04 40.8 -0.4**
RWWY IAMs_20 IAMs_20 09 21 43.7
comp=Z,3µm,18.0s
TIN Tinemaha, Big 39.27 119 P **P** **09 04 41.1 -1.5**
baz=335,SNR=6.2
SCO Scoresbysund 39.45 20 *i*P **P** **09 04 43.9 +0.3**
SCO pmax pmax
comp=Z,35nm,0.8s
SCO Scoresbysund 39.45 20 IAmb IAmb 09 04 50.7
comp=Z,36nm,0.8s
SCO Scoresbysund 39.45 20 *i*P **P** **09 04 43.9 +0.3**
comp=Z,35nm,0.8s
VOG Valley Oaks Go 39.56 120 P **P** **09 04 44.0 -0.9**
baz=336
GRAC Grapevine Rang 39.62 118 P **P** **09 04 45.2 -0.2**
baz=335,SNR=7.9
F33A 5 Mile Ranch, 39.67 89 P **P** **09 04 45.7 0.0**
F33A IAmb IAmb 09 04 49.3
comp=Z,196nm,1.4s
F33A IAMs_20 IAMs_20 09 22 29.7
comp=Z,5µm,21.0s
EYMN Ely 39.74 83 P **P** **09 04 45.3 -1.0**
baz=326,SNR=40
EYMN Ely 39.74 83 IAmb IAmb 09 05 00.5
comp=Z,103nm,0.9s
EYMN Ely 39.74 83 IAMs_20 IAMs_20 09 22 36.7
comp=Z,5µm,18.0s
PAGB Antelope Grade 39.81 122 IAmb IAmb 09 04 51.8
comp=Z,106nm,1.0s
SUSD Miller 39.83 93 P **P** **09 04 46.5 -0.6**
baz=328
SUSD Miller 39.83 93 IAmb IAmb 09 05 00.8
comp=Z,84nm,1.0s
SUSD IAMs_20 IAMs_20 09 22 33.9
comp=Z,7µm,22.0s
CWC Cottonwood Cre 39.88 119 P **P** **09 04 47.1 -0.7**
baz=336
TPNV Topopah Spring 40.04 116 P **P** **09 04 49.1 0.0**
TPNV pmax pmax
comp=Z,66nm,0.9s
TPNV MLR MLR
comp=Z,2µm,18.0s
TPNV Topopah Spring 40.04 116 P **P** **09 04 49.4 +0.3**
baz=335
TPNV Topopah Spring 40.04 116 P **P** **09 04 49.1 0.0**
O20A White River Ci 40.05 106 P **P** **09 04 48.5 -0.7**
baz=331,SNR=11
O20A White River Ci 40.05 106 IAMs_20 IAMs_20 09 22 22.4
comp=Z,7µm,20.0s
VES Vestal, Richgr 40.09 120 P **P** **09 04 49.7 +0.4**
baz=336,SNR=18
N23A Red Feather La 40.24 103 P **P** **09 04 50.6 -0.3**
baz=331,SNR=37
FURC Furnace Creek, 40.27 117 P **P** **09 04 51.3 +0.6**
baz=335,SNR=32
SMMC Simmler 40.28 122 P **P** **09 04 49.9 -1.1**
baz=337,SNR=21
MPMC Manual Prospec 40.43 118 P **P** **09 04 53.3 +1.0**
baz=336,SNR=36
ISA Isabella, Lake 40.46 120 P **P** **09 04 53.2 +0.7**
ISA pmax pmax
comp=Z,70nm,1.1s
ISA MLR MLR
comp=Z,2µm,18.0s
ISA Isabella, Lake 40.46 120 P **P** **09 04 52.4 -0.1**
baz=336,SNR=39
ISA Isabella, Lake 40.46 120 P **P** **09 04 53.2 +0.7**
F36A Milaca 40.70 87 IAmb IAmb 09 04 57.9
comp=Z,120nm,1.6s
PKM Mcpherson Peak 40.73 122 P **P** **09 04 54.7 -0.2**
baz=337,SNR=25
SHPR Sheep Range 40.81 116 IAMs_20 IAMs_20 09 23 19.3
comp=Z,3µm,20.0s
E38A The Farm, Brul 40.83 84 IAMs_20 IAMs_20 09 23 20.6
comp=Z,5µm,18.0s
ARVC Arvin 40.83 121 P **P** **09 04 54.7 -0.7**
baz=336
LRMC Laurel Mtn Rad 40.89 119 P **P** **09 04 56.7 +0.6**
baz=336,SNR=12
SHOC Shoshone, Teco 40.98 117 P **P** **09 04 57.8 +1.1**
baz=335,SNR=31
USA0B Ussuriysk Arra 41.00 269 P **P** **09 04 56.2 -0.5**
USA0B pmax pmax
comp=Z,116nm,1.5s
USA0B MLR MLR
comp=Z,5µm,19.0s
USA0B Ussuriysk Arra 41.00 269 P **P** **09 04 56.2 -0.5**
USA0B IAmb IAmb 09 05 11.4
comp=Z,116nm,1.5s
USA0B IAMs_20 IAMs_20 09 21 57.1
comp=Z,5µm,19.0s
USRK Ussuriysk Ar. 41.00 269 P **P** **09 04 55.1 -1.6**
comp=Z,10nm,0.8s,baz=37,slow=7.3,SNR=15
USRK LR LR 09 22 16.9
comp=Z,5µm,18.2s,baz=22,slow=37
PV21 Cone Mtn., Par 41.17 107 IAmb IAmb 09 05 02.4
comp=Z,137nm,1.4s
PV21 IAMs_20 IAMs_20 09 22 46.9
comp=Z,5µm,18.0s
SBC Santa Barbara 41.17 122 P **P** **09 04 59.4 +1.2**
baz=337
PV23 Carpenter Ridg 41.25 108 IAmb IAmb 09 05 07.0
comp=Z,124nm,1.3s
PV22 Blue Mesa, Par 41.26 107 IAmb IAmb 09 05 02.9
comp=Z,110nm,0.8s
PV22 IAMs_20 IAMs_20 09 22 50.3
comp=Z,7µm,20.0s
PV10 Paradox Valley 41.31 108 IAMs_20 IAMs_20 09 21 50.7
comp=Z,5µm,20.0s

ISCO Idaho Springs 41.32 103 P **P** **09 04 59.8 0.0**
baz=331,SNR=56
ISCO Idaho Springs 41.32 103 IAMs_20 IAMs_20 09 21 04.9
comp=Z,3µm,18.0s
PV14 Lion Creek, Pa 41.32 108 IAmb IAmb 09 05 07.6
comp=Z,171nm,1.5s
PV14 IAMs_20 IAMs_20 09 21 47.9
comp=Z,5µm,18.0s
ECSD EROS Data Cent 41.32 91 P **P** **09 04 58.4 -1.1**
baz=328,SNR=67
ECSD EROS Data Cent 41.32 91 P **P** **09 04 58.7 -0.7**
ECSD EROS Data Cent 41.32 91 IAMs_20 IAMs_20 09 22 05.5
comp=Z,6µm,19.0s
EDW2 Edwards Air Fo 41.33 120 P **P** **09 05 00.2 +0.6**
baz=336,SNR=17
OSI Osito Audit: C 41.33 121 P **P** **09 04 59.7 0.0**
baz=337
OSI Osito Audit: C 41.33 121 P **P** **09 05 00.6 +1.0**
GSC Goldstone, Bar 41.34 118 P **P** **09 05 00.6 +0.8**
baz=336,SNR=71
GSC Goldstone, Bar 41.34 118 IAmb IAmb 09 05 04.3
comp=Z,90nm,1.1s
PV04 Paradox Valley 41.34 107 IAmb IAmb 09 05 03.8
comp=Z,82nm,0.9s
PV04 IAMs_20 IAMs_20 09 21 47.6
comp=Z,5µm,20.0s
CIT Chita 41.36 292 *e*P **P** **09 05 03.4 +3.7**
PV20 West Nyswonger 41.37 108 IAmb IAmb 09 05 07.8
comp=Z,80nm,1.1s
PV20 IAMs_20 IAMs_20 09 21 49.1
comp=Z,4µm,19.0s
HIA Hailar 41.39 284 IAMs_20 IAMs_20 09 23 42.7
comp=Z,6µm,19.0s
PV19 Morning Glory 41.39 108 IAmb IAmb 09 05 08.2
comp=Z,171nm,1.6s
PV19 IAMs_20 IAMs_20 09 21 49.7
comp=Z,4µm,18.0s
PV07 Paradox Valley 41.40 107 P **P** **09 05 00.5 +0.1**
PV07 IAmb IAmb 09 05 03.9
comp=Z,74nm,0.8s
PV16 Nyswonger Mesa 41.41 108 IAMs_20 IAMs_20 09 20 41.3
comp=Z,3µm,20.0s
PV17 East Wray Mesa 41.42 108 P **P** **09 05 00.8 +0.2**
PV17 IAmb IAmb 09 05 18.4
comp=Z,60nm,0.9s
PV17 IAMs_20 IAMs_20 09 21 50.7
comp=Z,4µm,19.0s
PV11 David Mesa, Pa 41.44 107 IAmb IAmb 09 05 18.6
comp=Z,72nm,0.9s
PV11 IAMs_20 IAMs_20 09 21 52.0
comp=Z,3µm,18.0s
PV12 Saucer Basin, 41.45 107 IAmb IAmb 09 05 04.6
comp=Z,81nm,0.9s
PV12 IAMs_20 IAMs_20 09 21 53.3
comp=Z,5µm,20.0s
K31A O'Neill 41.46 94 IAmb IAmb 09 05 10.0
comp=Z,153nm,1.4s
PV18 Skein Mesa, Pa 41.47 108 IAmb IAmb 09 05 08.1
comp=Z,237nm,1.8s
PV18 IAMs_20 IAMs_20 09 21 52.9
comp=Z,3µm,20.0s
PV03 Paradox Valley 41.49 107 IAMs_20 IAMs_20 09 22 56.3
comp=Z,4µm,18.0s
SPMN Marine on St. 41.51 87 P **P** **09 05 01.0 0.0**
baz=327,SNR=21
SPMN Marine on St. 41.51 87 P **P** **09 05 00.9 -0.1**
SPMN IAmb IAmb 09 05 10.4
comp=Z,65nm,0.9s
SPMN IAMs_20 IAMs_20 09 24 21.6
comp=Z,3µm,18.0s
TUQ Turquoise Moun 41.52 117 P **P** **09 05 01.4 +0.2**
baz=335,SNR=14
PV15 Paradox Valley 41.54 107 IAmb IAmb 09 05 05.2
comp=Z,94nm,0.8s
PV15 IAMs_20 IAMs_20 09 22 59.8
comp=Z,6µm,19.0s
PV05 Paradox Valley 41.55 108 IAmb IAmb 09 05 09.5
comp=Z,220nm,1.6s
PV05 IAMs_20 IAMs_20 09 21 54.7
comp=Z,3µm,19.0s
MDJ Mudanjiang 41.56 272 P **P** **09 05 01.1 -0.2**
MDJ S **S** **09 11 17.2 +0.3**
MDJ pmax pmax
comp=Z,38nm,1.2s
MDJ pmax pmax
comp=Z,2µm,3.6s
MDJ LR LR
comp=Z,7µm,14.2s
MDJ LR LR
comp=Z,7µm,14.8s
MDJ LR LR
comp=Z,6µm,16.4s
MDJ Mudanjiang 41.56 272 IAMs_20 IAMs_20 09 21 31.0
comp=Z,6µm,19.0s
PV02 Paradox Valley 41.57 107 IAMs_20 IAMs_20 09 23 00.5
comp=Z,5µm,19.0s
D41A Chassel 41.58 81 IAmb IAmb 09 05 15.7
comp=Z,123nm,1.1s
PV13 Radium Mtn., P 41.58 108 IAMs_20 IAMs_20 09 21 56.8
comp=Z,3µm,20.0s
SCZ2 Santa Cruz Isl 41.61 122 P **P** **09 05 01.8 -0.1**
baz=337
OGNE Ogallala 41.66 99 P **P** **09 05 01.0 -1.4**
baz=330
OGNE Ogallala 41.66 99 IAmb IAmb 09 05 09.1
comp=Z,107nm,1.4s
OGNE IAMs_20 IAMs_20 09 25 27.1
comp=Z,3µm,20.0s
RRX Edison Barstow 41.67 119 P **P** **09 05 01.9 -0.5**
baz=336
DECC Green Verdugo 41.79 121 P **P** **09 05 02.3 -1.1**
baz=337,SNR=9.5
U15A North Rim 41.88 112 IAMs_20 IAMs_20 09 24 11.6
comp=Z,3µm,18.0s
PASC Pasadena Art C 41.92 120 P **P** **09 05 05.8 +1.4**
HEC Hector,Ludlow 41.93 118 P **P** **09 05 04.7 +0.1**
baz=336,SNR=23
BFSC Mount Baldy Ra 42.03 120 P **P** **09 05 06.2 +0.7**
baz=336,SNR=52
COWI Conover 42.17 83 IAMs_20 IAMs_20 09 24 02.1
comp=Z,4µm,21.0s
GMRC Granite Mounta 42.20 117 P **P** **09 05 07.6 +0.7**
baz=336,SNR=51
BBRC Big Bear Solar 42.25 119 P **P** **09 05 07.2 -0.2**
baz=336,SNR=20
FMP Fort Macarthur 42.30 121 P **P** **09 05 06.8 -0.7**
baz=337
I37A Lemond, Waseca 42.31 88 IAmb IAmb 09 05 17.7
comp=Z,115nm,0.9s
I37A IAMs_20 IAMs_20 09 24 58.7
comp=Z,3µm,18.0s
SNCC San Nicolas Is 42.33 122 P **P** **09 05 06.6 -1.2**
baz=337
G40A Rib Lake 42.47 84 IAmb IAmb 09 05 16.6
comp=Z,118nm,1.7s
W13A Hualapai Mount 42.52 115 IAMs_20 IAMs_20 09 23 46.5
comp=Z,3µm,19.0s
MVCO Mesa Verde 42.54 108 P **P** **09 05 10.0 +0.3**
baz=333,SNR=19
MVCO Mesa Verde 42.54 108 IAMs_20 IAMs_20 09 22 38.2
comp=Z,3µm,18.0s
CIS Catalina Islan 42.55 121 P **P** **09 05 09.4 -0.1**
baz=337,SNR=8.0
NEE2 Needles Airpor 42.57 116 P **P** **09 05 08.9 -0.8**
baz=335
KEV Kevo 42.64 355 P **P** **09 05 08.9 -0.9**
KEV pmax pmax
comp=Z,34nm,0.8s
KEV MLR MLR
comp=Z,2µm,20.0s
KEV Kevo 42.64 355 P **P** **09 05 08.9 -0.9**
S22A 4UR Ranch, Cre 42.67 106 P **P** **09 05 11.0 +0.1**
baz=332,SNR=78
BGNE Belgrade 42.73 94 P **P** **09 05 10.7 -0.2**
baz=330,SNR=6.4
BGNE Belgrade 42.73 94 IAmb IAmb 09 05 13.9
comp=Z,65nm,0.8s
E43A Lone Tree Farm 42.74 81 IAmb IAmb 09 05 19.7
comp=Z,49nm,0.8s
MURC Murrieta 42.77 120 P **P** **09 05 12.0 +0.6**
baz=337,SNR=10.0
BELC Belle Mtn. Jos 42.80 118 P **P** **09 05 11.9 +0.2**
baz=336,SNR=20
IVI Ivigtut 42.80 41 IAmb IAmb 09 05 18.4
comp=Z,123nm,0.9s
SCHQ Schefferville 42.83 58 P **P** **09 05 12.1 +0.4**
comp=Z,54nm,1.0s,baz=334,slow=9.1,SNR=27
SCHQ LR LR 09 24 09.5

comp=Z,5µm,21.7s,baz=328,slow=38
SCHQ Schefferville 42.83 58 IAmb IAmb 09 05 18.6
comp=Z,75nm,0.9s
SCI2 San Clemente I 42.89 121 P **P** **09 05 12.9 +0.6**
baz=337,SNR=23
ARCES ARCESS Array B 42.90 356 P **P** **09 05 11.6 -0.4**
comp=Z,9.5nm,0.9s,baz=15,slow=9.1,SNR=13
ARCES PcP **PcP** **09 07 01.6 -0.8**
comp=Z,19nm,0.8s,baz=340,slow=3.1,SNR=11
ARCES LR LR 09 23 24.9
comp=Z,2µm,18.4s,baz=352,slow=37
ARE0 ARCESS Array S 42.90 356 *e*P **P** **09 05 11.7 -0.3**
TRO Tromso 42.90 359 *e*P **P** **09 05 11.8 -0.2**
L34A Svendsen Farm, 42.92 92 IAMs_20 IAMs_20 09 21 31.8
comp=Z,5µm,21.0s
E44A Grand Marais A 42.94 79 P **P** **09 05 12.0 -0.6**
baz=327,SNR=18
E44A Grand Marais A 42.94 79 P **P** **09 05 12.9 +0.3**
E44A IAmb IAmb 09 05 16.1
comp=Z,144nm,1.2s
IRM Iron Mountain 42.95 117 P **P** **09 05 12.9 +0.1**
baz=336,SNR=44
PFO Pinyon Flats O 43.00 119 P **P** **09 05 13.5 +0.1**
PFO pmax pmax
comp=Z,44nm,1.1s
PFO MLR MLR
comp=Z,2µm,18.0s
PFO Pinyon Flats O 43.00 119 P **P** **09 05 13.3 0.0**
baz=336,SNR=40
PFO Pinyon Flats O 43.00 119 P **P** **09 05 13.5 +0.1**
XPFO Pion Flat 43.00 119 P **P** **09 05 13.6 +0.2**
WUAZ Wupatki 43.02 112 P **P** **09 05 13.5 -0.1**
baz=334,SNR=65
WUAZ Wupatki 43.02 112 IAmb IAmb 09 05 18.0
comp=Z,91nm,0.9s
KSCO Kaye Shedlock' 43.12 101 P **P** **09 05 13.7 -0.6**
baz=331,SNR=8.0
KSCO Kaye Shedlock' 43.12 101 IAmb IAmb 09 05 22.2
comp=Z,120nm,1.3s
KSCO IAMs_20 IAMs_20 09 25 27.8
comp=Z,4µm,20.0s
PDMCI Parker Dam,Lak 43.16 116 P **P** **09 05 14.1 -0.3**
baz=336,SNR=11
SDCO Great Sand Dun 43.16 104 P **P** **09 05 15.2 +0.3**
baz=332,SNR=55
BC3 Big Chuckawall 43.30 118 P **P** **09 05 16.2 +0.4**
baz=336,SNR=28
MATQ Matagami 43.36 70 P **P** **09 05 14.7 -1.2**
baz=326,SNR=11
D46A Sault St. Mari 43.42 78 P **P** **09 05 16.3 -0.1**
baz=327,SNR=13
109C Camp Elliot, M 43.45 120 P **P** **09 05 17.6 +0.8**
baz=337,SNR=12
I40A Norwalk 43.47 86 IAmb IAmb 09 05 26.3
comp=Z,44nm,0.6s
I40A IAMs_20 IAMs_20 09 23 49.5
comp=Z,4µm,20.0s
KTK1 Kautokeino 43.48 357 *e*P **P** **09 05 17.3 +0.6**
NRS Narsarsuaq 43.52 39 P **P** **09 05 15.8 -1.2**
NRS pmax pmax
comp=Z,61nm,0.9s
NRS Narsarsuaq 43.52 39 IAMs_20 IAMs_20 09 25 05.3
comp=Z,4µm,20.0s
Y12C Blythe 43.53 117 P **P** **09 05 18.3 +0.9**
baz=336,SNR=23
N33A J Bar K, Exete 43.57 94 P **P** **09 05 16.7 -1.0**
N33A IAmb IAmb 09 05 20.4
comp=Z,69nm,0.7s
D47A Chapleau 43.63 77 P **P** **09 05 18.0 -0.1**
baz=327,SNR=59
MONP2 Monument Peak 43.67 119 P **P** **09 05 19.5 +0.7**
baz=337,SNR=120
K38A Parkersburg 43.72 89 IAMs_20 IAMs_20 09 24 24.8
comp=Z,4µm,19.0s
E46A Sault Ste Mari 43.76 78 IAMs_20 IAMs_20 09 24 42.3
comp=Z,4µm,21.0s
CN2 Changchun 43.83 275 *e*P **P** **09 05 21.2 +1.4**
CN2 *es*P sP 09 05 28.2 +4.0
CN2 *e*S **S** **09 11 50.2 0.0**
CN2 pmax pmax
comp=Z,20nm,0.6s
CN2 pmax pmax
comp=Z,620nm,4.0s
CN2 LR LR
comp=Z,7µm,16.0s
CN2 LR LR
comp=Z,7µm,16.0s
CN2 LR LR
comp=Z,3µm,16.0s
SWSC Sam W. Stewart 43.83 118 P **P** **09 05 20.7 +0.8**
baz=336,SNR=25
F45A CMU Biological 43.88 80 P **P** **09 05 19.9 -0.3**
baz=328,SNR=13
W18A Petrified Fore 43.97 111 P **P** **09 05 21.6 +0.4**
baz=334,SNR=23
W18A Petrified Fore 43.97 111 IAmb IAmb 09 05 25.7
comp=Z,84nm,1.1s
IKP In-Ko-Pah, Jac 44.00 119 P **P** **09 05 21.8 +0.5**
baz=337,SNR=36
D48A Paudash Townsh 44.01 76 P **P** **09 05 19.4 -1.7**
baz=327,SNR=25
GLA Glamis 44.06 117 P **P** **09 05 22.7 +0.8**
baz=336,SNR=8.5
GLA Glamis 44.06 117 IAMs_20 IAMs_20 09 26 03.2
comp=Z,3µm,18.0s
H43A Windswept, Lux 44.06 83 IAmb IAmb 09 05 35.6
comp=Z,67nm,1.1s
H43A IAMs_20 IAMs_20 09 25 11.2
comp=Z,4µm,19.0s
E47A Iron Bridge 44.07 77 P **P** **09 05 21.1 -0.6**
baz=327,SNR=15
T25A Trinidad 44.10 104 P **P** **09 05 22.3 -0.1**
baz=332,SNR=24
I42A Draeger Farm, 44.12 84 IAMs_20 IAMs_20 09 24 17.7
comp=Z,5µm,18.0s
LVZ Lovozero 44.14 351 *ce*P **P** **09 05 21.3 -0.7**
LVZ pmax pmax
comp=Z,52nm,1.3s
N35A Tabor 44.16 92 IAMs_20 IAMs_20 09 22 11.4
comp=Z,5µm,22.0s
SCIA State Center 44.18 89 P **P** **09 05 22.6 0.0**
baz=329,SNR=7.6
SCIA State Center 44.18 89 IAMs_20 IAMs_20 09 25 11.1
comp=Z,3µm,20.0s
G45A Suttons Bay 44.37 80 P **P** **09 05 23.6 -0.5**
baz=328,SNR=22
G45A Suttons Bay 44.37 80 IAmb IAmb 09 05 32.7
comp=Z,66nm,0.8s
CBKS Cedar Bluff 44.38 98 P **P** **09 05 24.0 -0.3**
baz=331,SNR=8.8
CBKS Cedar Bluff 44.38 98 IAmb IAmb 09 05 30.7
comp=Z,125nm,1.4s
IRK Irkutsk 44.38 299 *e*P **P** **09 05 23.4 -0.7**
IRK pmax pmax
comp=Z,73nm,2.5s
LOF Lofoten 44.38 2 *e*P **P** **09 05 24.8 +0.9**
CHGQ Chibougamau 44.39 67 P **P** **09 05 23.4 -0.8**
baz=327,SNR=8.4
X18A Snowflake 44.42 111 IAmb IAmb 09 05 29.4
comp=Z,70nm,1.1s
X18A IAMs_20 IAMs_20 09 24 02.8
comp=Z,3µm,19.0s
G46A Petoskey 44.44 80 P **P** **09 05 23.8 -0.9**
baz=328,SNR=16
JFWS Jewell Farm 44.45 86 P **P** **09 05 24.1 -0.7**
baz=329,SNR=16
JFWS Jewell Farm 44.45 86 IAmb IAmb 09 05 33.3
comp=Z,47nm,0.9s
JFWS Jewell Farm 44.45 86 IAMs_20 IAMs_20 09 22 41.3
comp=Z,3µm,20.0s
E48A Lockeyer 44.46 76 P **P** **09 05 24.3 -0.5**
baz=328,SNR=23
APA Apatity 44.54 352 *i*P **P** **09 05 24.2 -0.9**
APA pmax pmax
comp=Z,21nm,0.7s
APA MLR MLR
comp=Z,4µm,16.0s
H45A Beulah 44.58 81 P **P** **09 05 24.9 -0.9**
baz=328
STEI Steigen 44.60 1 *e*P **P** **09 05 25.4 -0.2**
113A Mohawk Valley, 44.68 116 IAmb IAmb 09 05 34.1
comp=Z,164nm,1.9s
113A IAMs_20 IAMs_20 09 25 15.6
comp=Z,3µm,19.0s
D50A G1974 Best Tow 44.74 74 P **P** **09 05 26.7 -0.3**
baz=328,SNR=29
VLDQ Val d'Or 44.81 71 IAMs_20 IAMs_20 09 26 37.6
comp=Z,4µm,20.0s

F48A	**Evansville**	**44.84**	**77**	P	**P**	**09 05 27.4**	**-0.4**
	baz=328,SNR=13						
G47A	**Hillman**	**44.94**	**79**	P	**P**	**09 05 27.7**	**-0.9**
	baz=328						
GLMI	**Grayling**	**44.95**	**80**	P	**P**	**09 05 28.9**	**+0.1**
	baz=328,SNR=12						
GLMI	**Grayling**	**44.95**	**80**	P	**P**	**09 05 28.2**	**-0.6**
SGF	**Sodankyl**	**44.97**	**355**	P	**P**	**09 05 29.7**	**+1.1**
SGF				pmax	pmax		
	comp=Z,179nm,1.3s						
D51A	**Lot 18 Range I**	**44.97**	**74**	P	**P**	**09 05 28.5**	**-0.4**
	baz=328						
I45A	**Fountain**	**45.01**	**82**	P	**P**	**09 05 28.8**	**-0.4**
	baz=328						
I45A	**Fountain**	**45.01**	**82**	IAMs_20	IAMs_20	09 25 50.3	
	comp=Z,4µm,18.0s						
TLY	**Talaya**	**45.06**	**299**	*c i*P	**P**	**09 05 30.9**	**+1.3**
TLY				*e*S	**S**	**09 12 10.0**	**+1.9**
TLY				*e*SSS	SSS	09 16 20.0	
TLY				pmax	pmax		
	comp=Z,47nm,1.1s						
TLY				MLR	MLR		
	comp=Z,7µm,17.0s						
TLY	**Talaya**	**45.06**	**299**	IAMs_20	IAMs_20	09 25 47.5	
	comp=Z,3µm,19.0s						
R32A	**Long Quarter,**	**45.11**	**97**	IAmb	IAmb	09 05 32.9	
	comp=Z,60nm,0.9s						
R32A				IAMs_20	IAMs_20	09 25 33.5	
	comp=Z,5µm,19.0s						
F49A	**Sandfield**	**45.11**	**77**	P	**P**	**09 05 28.9**	**-1.1**
	baz=328,SNR=7.4						
N38A	**Joes South For**	**45.13**	**90**	IAMs_20	IAMs_20	09 25 11.3	
	comp=Z,5µm,18.0s						
MJB9	**Matsu-Tunnel**	**45.29**	**258**	P	**P**	**09 05 30.6**	**-0.9**
MJB9				IAmb	IAmb	09 05 42.8	
	comp=Z,40nm,0.9s						
MJB9				IAMs_20	IAMs_20	09 24 56.3	
	comp=Z,3µm,20.0s						
MAJO	**Matsushiro**	**45.29**	**258**	P	**P**	**09 05 30.1**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,38nm,0.9s						
MAJO				MLR	MLR		
	comp=Z,3µm,20.0s						
MAJO	**Matsushiro**	**45.29**	**258**	P	**P**	**09 05 30.1**	**-1.4**
MAJO				IAmb	IAmb	09 05 42.8	
	comp=Z,38nm,0.8s						
MAJO	**Matsushiro**	**45.29**	**258**	IAMs_20	IAMs_20	09 24 55.3	
	comp=Z,3µm,20.0s						
MJAR	**Matsushiro Arr**	**45.29**	**258**	P	**P**	**09 05 30.9**	**-0.6**
	comp=Z,18nm,0.9s,baz=20,slow=8.4,SNR=27						
MJAR				LR	LR	09 25 07.3	
	comp=Z,3µm,19.9s,baz=35,slow=37						
H47A	**Mio**	**45.29**	**79**	P	**P**	**09 05 30.9**	**-0.5**
	baz=328,SNR=7.2						
ANMO	**Albuquerque**	**45.30**	**107**	*ce*P	**P**	**09 05 32.1**	**+0.2**
ANMO				pmax	pmax		
	comp=Z,53nm,1.0s						
ANMO	**Albuquerque**	**45.30**	**107**	P	**P**	**09 05 31.4**	**-0.5**
	baz=334						
ANMO	**Albuquerque**	**45.30**	**107**	P	**P**	**09 05 33.0**	**+1.1**
ANMO				IAmb	IAmb	09 05 40.2	
	comp=Z,87nm,1.2s						
ANMO	**Albuquerque**	**45.30**	**107**	IAMs_20	IAMs_20	09 26 00.3	
	comp=Z,4µm,18.0s						
KSU1	**Kansas State U**	**45.32**	**95**	P	**P**	**09 05 31.1**	**-0.6**
	baz=331,SNR=16						
K43A	**Burlington**	**45.35**	**84**	IAMs_20	IAMs_20	09 25 58.3	
	comp=Z,4µm,18.0s						
I46A	**Reed City**	**45.39**	**81**	P	**P**	**09 05 32.0**	**-0.3**
	baz=328						
E51A	**G1948 Merrick**	**45.40**	**74**	P	**P**	**09 05 32.0**	**-0.3**
	baz=328,SNR=14						
L42A	**Oliver, Polo**	**45.45**	**86**	IAmb	IAmb	09 05 35.4	
	comp=Z,72nm,1.1s						
L42A				IAMs_20	IAMs_20	09 24 59.8	
	comp=Z,4µm,19.0s						
J45A	**Montague**	**45.47**	**82**	P	**P**	**09 05 32.0**	**-0.8**
	baz=329						
J45A	**Montague**	**45.47**	**82**	IAMs_20	IAMs_20	09 25 45.3	
	comp=Z,4µm,18.0s						
H48A	**Harrisville**	**45.54**	**79**	P	**P**	**09 05 31.1**	**-2.3**
	baz=328,SNR=10						
H48A	**Harrisville**	**45.54**	**79**	IAmb	IAmb	09 05 36.1	
	comp=Z,64nm,1.0s						
H48A				IAMs_20	IAMs_20	09 27 51.3	
	comp=Z,3µm,19.0s						
D53A	**Lac Vacive, Po**	**45.59**	**72**	P	**P**	**09 05 33.2**	**-0.6**
	baz=328						
D53A	**Lac Vacive, Po**	**45.59**	**72**	IAmb	IAmb	09 05 45.4	
	comp=Z,78nm,1.4s						
D53A				IAMs_20	IAMs_20	09 22 29.9	
	comp=Z,4µm,19.0s						
I47A	**Gladwin**	**45.67**	**80**	P	**P**	**09 05 34.4**	**-0.1**
	baz=329,SNR=16						
214A	**Organ Pipe Nat**	**45.75**	**116**	P	**P**	**09 05 35.1**	**-0.2**
	baz=336,SNR=34						
214A	**Organ Pipe Nat**	**45.75**	**116**	IAmb	IAmb	09 05 45.2	
	comp=Z,50nm,0.9s						
214A				IAMs_20	IAMs_20	09 24 33.9	
	comp=Z,2µm,18.0s						
F51A	**Arnstein**	**45.76**	**75**	P	**P**	**09 05 34.6**	**-0.5**
	baz=328,SNR=8.7						
LENM	**Lemitar**	**45.81**	**108**	P	**P**	**09 05 38.1**	**+2.1**
I48A	**Sherman Twp**	**45.83**	**79**	P	**P**	**09 05 34.0**	**-1.8**
	baz=329,SNR=18						
D54A	**Lac Fusel, La**	**45.91**	**71**	P	**P**	**09 05 36.2**	**-0.1**
	baz=328,SNR=19						
Y22D	**IRIS PASSCAL I**	**45.91**	**108**	P	**P**	**09 05 36.1**	**-0.6**
	baz=334						
E52A	**Mattawa**	**45.92**	**74**	P	**P**	**09 05 36.0**	**-0.4**
	baz=328,SNR=37						
MOY	**Mondy**	**45.95**	**301**	*e*P	**P**	**09 05 37.0**	**+0.2**
MOY				pmax	pmax		
	comp=Z,104nm,3.2s						
L44A	**Lake County Fo**	**45.97**	**84**	P	**P**	**09 05 36.9**	**+0.1**
	baz=329,SNR=6.6						
L44A	**Lake County Fo**	**45.97**	**84**	IAMs_20	IAMs_20	09 26 17.5	
	comp=Z,3µm,19.0s						
P38A	**Dawn**	**46.03**	**91**	IAMs_20	IAMs_20	09 23 32.1	
	comp=Z,4µm,19.0s						
F52A	**Sundridge**	**46.09**	**75**	P	**P**	**09 05 37.4**	**-0.4**
	baz=328,SNR=17						
N41A	**Harden Midland**	**46.11**	**88**	IAMs_20	IAMs_20	09 25 49.3	
	comp=Z,4µm,18.0s						
TUC	**Tucson**	**46.13**	**113**	P	**P**	**09 05 38.9**	**+0.6**
TUC				pmax	pmax		
	comp=Z,57nm,1.4s						
TUC				MLR	MLR		
	comp=Z,2µm,18.0s						
TUC	**Tucson**	**46.13**	**113**	P	**P**	**09 05 37.7**	**-0.6**
	baz=336						
TUC	**Tucson**	**46.13**	**113**	P	**P**	**09 05 38.9**	**+0.6**
TUC				IAmb	IAmb	09 05 46.8	
	comp=Z,57nm,1.4s						
STOK	**Stokkvaagen**	**46.18**	**3**	*e*P	**P**	**09 05 38.9**	**+0.8**
E53A	**Dumoine, Ponti**	**46.20**	**73**	P	**P**	**09 05 37.8**	**-0.8**
	baz=328,SNR=17						
J47A	**Sunmer**	**46.23**	**81**	P	**P**	**09 05 38.4**	**-0.4**
	baz=329						
J47A	**Sunmer**	**46.23**	**81**	IAmb	IAmb	09 05 53.6	
	comp=Z,36nm,0.9s						
ZAK	**Zakamensk**	**46.29**	**298**	*e*P	**P**	**09 05 39.1**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,23nm,1.2s						
E54A	**Lac Daplat, Po**	**46.33**	**72**	P	**P**	**09 05 39.2**	**-0.4**
	baz=328,SNR=27						
K46A	**Dorr**	**46.34**	**82**	P	**P**	**09 05 39.2**	**-0.5**
	baz=329,SNR=12						
MOR8	**Moi Rana**	**46.36**	**2**	*e*P	**P**	**09 05 39.5**	**-0.1**
I49A	**Point Hope**	**46.37**	**79**	P	**P**	**09 05 39.8**	**-0.2**
	baz=329,SNR=5.3						
I49A	**Point Hope**	**46.37**	**79**	IAmb	IAmb	09 05 42.9	
	comp=Z,66nm,1.1s						
ALGO	**Algonquin Park**	**46.42**	**73**	P	**P**	**09 05 39.7**	**-0.6**
	baz=328,SNR=17						
D55A	**Sainte-Anne-du**	**46.45**	**70**	P	**P**	**09 05 40.3**	**-0.2**
	baz=328,SNR=16						
J48A	**Bridge Port**	**46.56**	**80**	P	**P**	**09 05 39.6**	**-1.8**
	baz=329						
J48A	**Bridge Port**	**46.56**	**80**	IAmb	IAmb	09 07 18.8	
	comp=Z,31nm,0.9s						
M44A	**Midewin, Midew**	**46.60**	**85**	IAMs_20	IAMs_20	09 25 32.2	
	comp=Z,3µm,20.0s						
K47A	**Vermontville**	**46.65**	**82**	P	**P**	**09 05 41.9**	**-0.3**
	baz=329,SNR=7.7						
D56A	**ZEC Mazanza, M**	**46.68**	**70**	P	**P**	**09 05 41.6**	**-0.8**
	baz=328,SNR=14						

P40A	**Paris**	**46.68**	**90**	IAMs_20	IAMs_20	09 24 15.3	
	comp=Z,3µm,20.0s						
E55A	**Montcerf-Lytto**	**46.72**	**71**	P	**P**	**09 05 42.3**	**-0.4**
	baz=328						
L46A	**Eue Claire**	**46.72**	**83**	P	**P**	**09 05 42.9**	**+0.2**
	baz=329,SNR=5.8						
L46A	**Eue Claire**	**46.72**	**83**	IAMs_20	IAMs_20	09 24 30.5	
	comp=Z,3µm,22.0s						
J49A	**Marlette**	**46.75**	**79**	P	**P**	**09 05 41.7**	**-1.2**
	baz=329						
U32A	**Winter Ranch,**	**46.80**	**99**	IAMs_20	IAMs_20	09 27 10.1	
	comp=Z,5µm,18.0s						
HDIL	**Hopedale**	**46.84**	**87**	P	**P**	**09 05 43.0**	**-0.6**
	baz=330,SNR=24						
HDIL	**Hopedale**	**46.84**	**87**	P	**P**	**09 05 42.8**	**-0.9**
HDIL				IAMs_20	IAMs_20	09 27 47.6	
	comp=Z,4µm,18.0s						
K48A	**Perry**	**46.86**	**81**	P	**P**	**09 05 43.7**	**-0.1**
	baz=329						
H52A	**Wyevale**	**46.87**	**76**	P	**P**	**09 05 42.7**	**-1.1**
	baz=329,SNR=9.4						
G54A	**Lake Saint Pet**	**46.88**	**74**	P	**P**	**09 05 43.2**	**-0.8**
	baz=329,SNR=14						
G53A	**Haliburton**	**46.92**	**74**	P	**P**	**09 05 43.5**	**-0.7**
	baz=329,SNR=31						
121A	**Cookes Peak, D**	**46.99**	**110**	P	**P**	**09 05 46.0**	**+0.8**
	baz=335,SNR=30						
121A	**Cookes Peak, D**	**46.99**	**110**	IAMs_20	IAMs_20	09 26 19.0	
	comp=Z,3µm,18.0s						
E56A	**St. Veronique**	**47.01**	**70**	P	**P**	**09 05 45.1**	**+0.1**
	baz=329,SNR=6.0						
D57A	**Chemin Vers le**	**47.02**	**69**	P	**P**	**09 05 44.2**	**-0.8**
	baz=329						
SADO	**Sadowa**	**47.03**	**75**	IAmb	IAmb	09 05 50.6	
	comp=Z,45nm,1.4s						
AMTX	**Amarillo**	**47.12**	**102**	P	**P**	**09 05 45.9**	**-0.1**
	baz=333						
AMTX	**Amarillo**	**47.12**	**102**	IAmb	IAmb	09 05 53.9	
	comp=Z,38nm,0.9s						
AMTX				IAMs_20	IAMs_20	09 28 07.5	
	comp=Z,4µm,18.0s						
K49A	**Clarkson**	**47.13**	**80**	P	**P**	**09 05 46.0**	**0.0**
	baz=329,SNR=9.1						
ULN	**Ulaanbaatar**	**47.14**	**293**	*ce*P	**P**	**09 05 44.0**	**-2.1**
ULN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
F55A	**Otter Lake**	**47.14**	**72**	P	**P**	**09 05 45.8**	**-0.2**
	baz=329,SNR=9.6						
I51A	**Listowel**	**47.16**	**77**	P	**P**	**09 05 46.1**	**-0.1**
	baz=329,SNR=13						
I52A	**Shelburne**	**47.25**	**76**	P	**P**	**09 05 46.6**	**-0.3**
	baz=329,SNR=7.5						
D58A	**Chemin du LacG**	**47.31**	**68**	P	**P**	**09 05 46.7**	**-0.6**
	baz=329,SNR=15						
OUL	**Oulu**	**47.35**	**355**	P	**P**	**09 05 48.1**	**+0.8**
SONM	**Songino Array**	**47.40**	**294**	P	**P**	**09 05 48.9**	**+0.8**
	comp=Z,9.6nm,1.0s,baz=30,slow=7.1,SNR=21						
SONM				LR	LR	09 25 59.4	
	comp=Z,3µm,18.3s,baz=38,slow=36						
H53A	**Bobcaygeon**	**47.41**	**75**	P	**P**	**09 05 47.6**	**-0.5**
	baz=329,SNR=10						
E57A	**Chemin Saint G**	**47.44**	**70**	P	**P**	**09 05 47.8**	**-0.5**
	baz=329,SNR=11						
K50A	**Casco**	**47.45**	**79**	P	**P**	**09 05 48.1**	**-0.3**
	baz=329						
K50A	**Casco**	**47.45**	**79**	IAmb	IAmb	09 05 51.1	
	comp=Z,28nm,0.8s						
AAM	**Ann Arbor**	**47.47**	**81**	P	**P**	**09 05 48.2**	**-0.4**
	baz=330,SNR=5.8						
AAM	**Ann Arbor**	**47.47**	**81**	IAMs_20	IAMs_20	09 23 23.4	
	comp=Z,4µm,20.0s						
L48A	**N Adams**	**47.48**	**82**	P	**P**	**09 05 48.7**	**0.0**
	baz=330,SNR=20						
O44A	**Mansfield**	**47.50**	**86**	IAMs_20	IAMs_20	09 28 20.2	
	comp=Z,3µm,18.0s						
G55A	**Calabogie**	**47.51**	**73**	P	**P**	**09 05 48.1**	**-0.7**
	baz=329,SNR=14						
MSTX	**Muleshoe**	**47.53**	**104**	P	**P**	**09 05 49.0**	**-0.2**
	baz=334,SNR=43						
MSTX	**Muleshoe**	**47.53**	**104**	P	**P**	**09 05 48.8**	**-0.5**
MSTX				IAMs_20	IAMs_20	09 27 28.3	
	comp=Z,3µm,18.0s						
M47A	**Cromwell**	**47.54**	**83**	P	**P**	**09 05 48.1**	**-1.0**
	baz=330						
P43A	**Skaggs, Pawnee**	**47.55**	**88**	IAMs_20	IAMs_20	09 27 14.3	
	comp=Z,4µm,19.0s						
PLVO	**Plevna**	**47.56**	**73**	IAmb	IAmb	09 05 56.4	
	comp=Z,30nm,0.8s						
TMCR	**Tamitsa**	**47.60**	**348**	*e*P	**P**	**09 05 49.1**	**-0.2**
TMCR				*e*S	**S**	**09 12 47.0**	**+3.0**
TMCR				pmax	pmax		
	comp=Z,53nm,1.1s						
I53A	**Kortright Cn E**	**47.68**	**76**	P	**P**	**09 05 50.5**	**+0.3**
	baz=329						
D59A	**Saint-Raymond**	**47.75**	**68**	P	**P**	**09 05 49.9**	**-0.8**
	baz=329						
JHJ	**Hachijo jima 2**	**47.76**	**254**	LR	LR	09 26 30.3	
	comp=Z,483nm,19.9s,baz=344,slow=37						
M48A	**Edgerton**	**47.77**	**82**	P	**P**	**09 05 49.9**	**-1.0**
	baz=330						
M48A	**Edgerton**	**47.77**	**82**	IAMs_20	IAMs_20	09 27 13.4	
	comp=Z,4µm,18.0s						
ORIO	**Orleans, Innes**	**47.77**	**72**	P	**P**	**09 05 49.9**	**-1.0**
	baz=329						
E58A	**La Victoria**	**47.79**	**69**	P	**P**	**09 05 50.5**	**-0.4**
	baz=329,SNR=8.3						
S39A	**Bolivar**	**47.80**	**92**	IAMs_20	IAMs_20	09 28 21.8	
	comp=Z,3µm,18.0s						
DELO	**Deloro Mine**	**47.81**	**74**	IAmb	IAmb	09 05 58.3	
	comp=Z,31nm,0.7s						
SFIN	**Lafayette**	**47.83**	**85**	P	**P**	**09 05 50.7**	**-0.6**
	baz=330,SNR=19						
J52A	**Paris**	**47.85**	**77**	P	**P**	**09 05 50.5**	**-1.0**
	baz=329,SNR=5.2						
K51A	**Iona Station**	**47.91**	**79**	P	**P**	**09 05 50.6**	**-1.4**
	baz=330						
N47A	**Urbana**	**47.93**	**83**	P	**P**	**09 05 51.6**	**-0.6**
	baz=330,SNR=29						
H55A	**Tweed**	**47.94**	**74**	P	**P**	**09 05 51.4**	**-0.7**
	baz=329,SNR=15						
NSS	**Namsos**	**47.97**	**3**	*e*P	**P**	**09 05 51.8**	**-0.3**
L50A	**Kingsville**	**48.01**	**80**	P	**P**	**09 05 51.9**	**-0.8**
	baz=330,SNR=5.4						
F58A	**St-Lin Laurent**	**48.03**	**70**	P	**P**	**09 05 51.2**	**-1.6**
	baz=329						
I55A	**Frankford**	**48.04**	**74**	P	**P**	**09 05 53.0**	**0.0**
	baz=329,SNR=7.6						
M49A	**Liberty Center**	**48.06**	**81**	P	**P**	**09 05 53.4**	**+0.2**
	baz=330,SNR=10						
SLM	**Saint Louis**	**48.15**	**89**	IAMs_20	IAMs_20	09 29 08.2	
	comp=Z,3µm,18.0s						
D60A	**Saint Jean D'O**	**48.15**	**67**	P	**P**	**09 05 53.2**	**-0.6**
	baz=329						
K52A	**Tillsonburg**	**48.16**	**78**	P	**P**	**09 05 53.3**	**-0.6**
	baz=330						
D61A	**St Aubert, Com**	**48.16**	**66**	P	**P**	**09 05 53.1**	**-0.8**
	baz=329						
N48A	**Decatur**	**48.20**	**83**	P	**P**	**09 05 53.9**	**-0.3**
	baz=330,SNR=16						
OKCFA	**Oklahoma City**	**48.23**	**98**	IAmb	IAmb	09 06 00.5	
	comp=Z,70nm,1.3s						
H56A	**Elgin**	**48.24**	**73**	P	**P**	**09 05 54.1**	**-0.4**
	baz=329,SNR=14						
G57A	**Newington**	**48.26**	**71**	P	**P**	**09 05 54.1**	**-0.5**
	baz=329,SNR=21						
CCM	**Cathedral Cave**	**48.27**	**90**	P	**P**	**09 05 53.4**	**-1.4**
CCM				pmax	pmax		
	comp=Z,67nm,0.9s						
CCM	**Cathedral Cave**	**48.27**	**90**	P	**P**	**09 05 53.8**	**-1.0**
	baz=331						
CCM	**Cathedral Cave**	**48.27**	**90**	P	**P**	**09 05 53.4**	**-1.4**
CCM	**Cathedral Cave**	**48.27**	**90**	IAMs_20	IAMs_20	09 25 13.4	
	comp=Z,3µm,20.0s						
WMOK	**Wichita Mounta**	**48.33**	**100**	P	**P**	**09 05 54.9**	**-0.5**
	baz=333,SNR=38						
WMOK	**Wichita Mounta**	**48.33**	**100**	IAmb	IAmb	09 05 58.3	
	comp=Z,34nm,1.0s						
WMOK	**Wichita Mounta**	**48.33**	**100**	IAMs_20	IAMs_20	09 29 01.8	
	comp=Z,3µm,18.0s						
KS19	**Wonju Array Si**	**48.35**	**268**	P	**P**	**09 05 55.8**	**+0.3**
KSRS	**Korea Array**	**48.37**	**268**	P	**P**	**09 05 56.0**	**+0.5**
	comp=Z,15nm,0.8s,baz=20,slow=7.7,SNR=26						
KSRS				LR	LR	09 26 15.9	
	comp=Z,2µm,18.1s,baz=36,slow=36						
Q44A	**Meyer Farm, Va**	**48.38**	**88**	IAMs_20	IAMs_20	09 28 03.3	
	comp=Z,4µm,20.0s						
F59A	**Saint Guilaume**	**48.41**	**69**	P	**P**	**09 05 54.1**	**-1.7**
	baz=329						

TUL1	**Leonard**	**48.42**	**96**	P	**P**	**09 05 54.9**	**-1.1**
	baz=332,SNR=33						
E60A	**Ste Agathe de**	**48.44**	**68**	P	**P**	**09 05 54.3**	**-1.7**
	baz=329,SNR=13						
P46A	**Rosedale**	**48.45**	**86**	P	**P**	**09 05 55.4**	**-0.8**
N49A	**Columbus Grove**	**48.46**	**82**	P	**P**	**09 05 55.9**	**-0.3**
	baz=330,SNR=13						
N49A	**Columbus Grove**	**48.46**	**82**	IAmb	IAmb	09 05 59.1	
	comp=Z,68nm,1.2s						
M50A	**Fremont**	**48.47**	**81**	P	**P**	**09 05 54.8**	**-1.5**
	baz=330,SNR=5.2						
M50A	**Fremont**	**48.47**	**81**	IAmb	IAmb	09 05 59.1	
	comp=Z,54nm,1.0s						
U38A	**Gravette**	**48.49**	**94**	IAmb	IAmb	09 06 02.3	
	comp=Z,33nm,1.1s						
U38A				IAMs_20	IAMs_20	09 26 27.1	
	comp=Z,4µm,19.0s						
J54A	**Appleton**	**48.50**	**76**	P	**P**	**09 05 56.2**	**-0.3**
	baz=330						
J54A	**Appleton**	**48.50**	**76**	IAmb	IAmb	09 05 59.1	
	comp=Z,54nm,1.0s						
J54A				IAMs_20	IAMs_20	09 27 40.9	
	comp=Z,3µm,18.0s						
PECO	**Prince Edward**	**48.54**	**74**	P	**P**	**09 05 58.3**	**+1.5**
G58A	**Ormstown**	**48.56**	**71**	P	**P**	**09 05 56.1**	**-0.8**
	baz=329						
F60A	**Warwick**	**48.60**	**68**	P	**P**	**09 05 56.9**	**-0.3**
	baz=329,SNR=15						
MNTX	**Cornudas Mount**	**48.61**	**108**	P	**P**	**09 05 57.6**	**+0.1**
	baz=335,SNR=81						
MNTX	**Cornudas Mount**	**48.61**	**108**	IAmb	IAmb	09 06 01.8	
	comp=Z,52nm,0.8s						
D62A	**Allapoint, All**	**48.66**	**65**	P	**P**	**09 05 56.5**	**-1.2**
	baz=330,SNR=8.9						
D62A	**Allapoint, All**	**48.66**	**65**	IAmb	IAmb	09 06 01.0	
	comp=Z,39nm,1.1s						
MEDO	**Medina**	**48.66**	**76**	P	**P**	**09 05 56.8**	**-0.9**
MEDO				IAmb	IAmb	09 06 00.3	
	comp=Z,55nm,1.0s						
MEDO				IAMs_20	IAMs_20	09 27 46.2	
	comp=Z,3µm,18.0s						
O48A	**Farmland**	**48.67**	**83**	P	**P**	**09 05 57.1**	**-0.8**
	baz=330,SNR=76						
E61A	**Lac Etchemin**	**48.72**	**67**	P	**P**	**09 05 57.2**	**-1.0**
	baz=330,SNR=8.6						
HHAR	**Hobbs**	**48.80**	**94**	IAMs_20	IAMs_20	09 26 44.3	
	comp=Z,5µm,19.0s						
X34A	**Smith Ranch, M**	**48.81**	**99**	IAmb	IAmb	09 06 05.3	
	comp=Z,91nm,1.7s						
J55A	**Hilton**	**48.81**	**75**	P	**P**	**09 05 57.6**	**-1.3**
	baz=330						
J55A	**Hilton**	**48.81**	**75**	IAmb	IAmb	09 07 26.4	
	comp=Z,40nm,1.1s						
J55A				IAMs_20	IAMs_20	09 27 44.1	
	comp=Z,4µm,18.0s						
LONY	**Lake Ozonia**	**48.82**	**71**	P	**P**	**09 05 57.3**	**-1.7**
	baz=330,SNR=33						
LONY	**Lake Ozonia**	**48.82**	**71**	IAmb	IAmb	09 06 05.3	
	comp=Z,51nm,0.8s						
LONY				IAMs_20	IAMs_20	09 24 17.5	
	comp=Z,4µm,21.0s						
INCN	**Inchon**	**48.84**	**269**	P	**P**	**09 06 00.9**	**+1.6**
INCN	**Inchon**	**48.84**	**269**	IAMs_20	IAMs_20	09 25 55.8	
	comp=Z,3µm,20.0s						
M51A	**Elyria**	**48.86**	**80**	P	**P**	**09 05 57.4**	**-1.9**
	baz=330,SNR=7.6						
ZAA0	**Zalesovo Array**	**48.87**	**314**	IAMs_20	IAMs_20	09 29 39.4	
	comp=Z,4µm,18.0s						
ZALV	**Zalesovo Beam**	**48.87**	**314**	P	**P**	**09 05 58.5**	**-0.8**
	comp=Z,37nm,0.8s,baz=22,slow=6.8,SNR=44						
ZALV				LR	LR	09 30 09.5	
	comp=Z,3µm,18.7s,baz=12,slow=41						
OLIL	**Olney**	**48.88**	**87**	P	**P**	**09 05 58.5**	**-1.0**
OLIL				IAMs_20	IAMs_20	09 25 14.5	
	comp=Z,2µm,19.0s						
F61A	**St Evariste**	**48.94**	**68**	P	**P**	**09 05 57.9**	**-2.0**
	baz=330,SNR=12						
N50A	**Nevada**	**48.98**	**81**	P	**P**	**09 05 59.7**	**-0.6**
	baz=330,SNR=8.3						
M52A	**Chesterland**	**48.99**	**79**	P	**P**	**09 05 59.1**	**-1.2**
	baz=330,SNR=7.9						
M52A	**Chesterland**	**48.99**	**79**	IAmb	IAmb	09 06 03.0	
	comp=Z,54nm,1.1s						
M52A				IAMs_20	IAMs_20	09 27 46.6	
	comp=Z,5µm,20.0s						
ERPA	**Erie**	**49.00**	**78**	P	**P**	**09 05 59.1**	**-1.2**
	baz=330						
ERPA	**Erie**	**49.00**	**78**	IAmb	IAmb	09 06 02.8	
	comp=Z,67nm,1.3s						
ERPA				IAMs_20	IAMs_20	09 24 04.0	
	comp=Z,3µm,18.0s						
I57A	**Carthage**	**49.02**	**73**	P	**P**	**09 05 59.3**	**-1.2**
	baz=330,SNR=15						
D63A	**Stockholm**	**49.03**	**65**	P	**P**	**09 05 58.0**	**-2.5**
	baz=330						
L53A	**Girard**	**49.04**	**78**	P	**P**	**09 05 59.5**	**-1.2**
	baz=330,SNR=6.7						
O49A	**Covington**	**49.04**	**83**	P	**P**	**09 05 59.8**	**-0.9**
	baz=330,SNR=6.7						
O49A	**Covington**	**49.04**	**83**	P	**P**	**09 05 59.7**	**-0.9**
K54A	**Basiliko Farm,**	**49.06**	**76**	P	**P**	**09 05 59.4**	**-1.4**
	baz=330,SNR=7.2						
BLO	**Bloomington**	**49.09**	**85**	IAmb	IAmb	09 06 03.4	
	comp=Z,34nm,0.8s						
H59A	**Cadyville**	**49.12**	**71**	P	**P**	**09 06 00.8**	**-0.6**
	baz=330,SNR=10						
H58A	**Gabriels**	**49.14**	**71**	P	**P**	**09 05 59.9**	**-1.6**
	baz=330,SNR=27						
N51A	**Ashland**	**49.15**	**80**	P	**P**	**09 06 01.2**	**-0.3**
	baz=330,SNR=10						
U40A	**Yellville**	**49.15**	**93**	P	**P**	**09 06 00.3**	**-1.3**
	baz=332,SNR=22						
U40A	**Yellville**	**49.15**	**93**	IAmb	IAmb	09 06 07.3	
	comp=Z,58nm,1.2s						
U40A				IAMs_20	IAMs_20	09 25 15.5	
	comp=Z,4µm,19.0s						
L54A	**Sinclairville**	**49.15**	**77**	P	**P**	**09 06 00.4**	**-1.1**
	baz=330,SNR=7.9						
J56A	**Wolcott**	**49.16**	**74**	P	**P**	**09 06 00.8**	**-0.7**
	baz=330,SNR=5.5						
K55A	**Perry**	**49.18**	**76**	P	**P**	**09 06 00.4**	**-1.4**
	baz=330,SNR=9.9						
G60A	**Masonville**	**49.22**	**69**	P	**P**	**09 06 01.5**	**-0.6**
	baz=330,SNR=13						
T42A	**Van Buren**	**49.23**	**91**	P	**P**	**09 06 00.9**	**-1.3**
T42A				IAmb	IAmb	09 06 04.4	
	comp=Z,25nm,0.7s						
T42A				IAMs_20	IAMs_20	09 30 21.7	
	comp=Z,2µm,19.0s						
MMNY	**Mt. Morris Dam**	**49.24**	**75**	IAmb	IAmb	09 06 04.3	
	comp=Z,48nm,1.1s						
WVNY	**West Valley, N**	**49.26**	**76**	IAmb	IAmb	09 06 04.7	
	comp=Z,51nm,1.2s						
M53A	**WI Miller and**	**49.33**	**79**	P	**P**	**09 06 02.3**	**-0.6**
	baz=330,SNR=13						
SIUC	**Southern Illin**	**49.34**	**89**	IAMs_20	IAMs_20	09 28 21.7	
	comp=Z,3µm,20.0s						
G61A	**St-Isidore-de-**	**49.35**	**69**	P	**P**	**09 06 03.0**	**0.0**
	baz=330						
O50A	**Cable**	**49.35**	**82**	P	**P**	**09 06 01.8**	**-1.3**
	baz=330,SNR=28						
ALLY	**Alegheny Colle**	**49.35**	**78**	P	**P**	**09 06 01.9**	**-1.2**
ALLY				IAMs_20	IAMs_20	09 29 52.2	
	comp=Z,3µm,18.0s						
J57A	**Williamstown**	**49.35**	**73**	P	**P**	**09 06 01.7**	**-1.4**
	baz=330,SNR=13						
J57A	**Williamstown**	**49.35**	**73**	IAmb	IAmb	09 06 05.4	
	comp=Z,38nm,0.9s						
PRGR	**Permogore**	**49.36**	**343**	*e*P	**P**	**09 06 01.7**	**-1.2**
PRGR				pmax	pmax		
	comp=Z,40nm,0.6s						
PQI	**Presque Isle**	**49.37**	**65**	IAmb	IAmb	09 06 06.0	
	comp=Z,79nm,1.5s						
E63A	**Oxbow**	**49.45**	**65**	P	**P**	**09 06 02.5**	**-1.3**
	baz=330,SNR=5.2						
E63A	**Oxbow**	**49.45**	**65**	IAmb	IAmb	09 06 06.3	
	comp=Z,77nm,1.6s						
P49A	**Miami Univ. Ec**	**49.47**	**83**	P	**P**	**09 06 03.2**	**-0.8**
	baz=331,SNR=18						
K56A	**Middlesex**	**49.48**	**75**	P	**P**	**09 06 02.9**	**-1.2**
	baz=330,SNR=9.5						
I58A	**Old Forge**	**49.49**	**72**	P	**P**	**09 06 03.0**	**-1.1**
	baz=330,SNR=8.2						
N52A	**McGinn's Farm,**	**49.50**	**80**	P	**P**	**09 06 02.4**	**-1.8**
	baz=330,SNR=8.3						
DL2	**Dalian**	**49.50**	**275**	P	**P**	**09 06 06.9**	**+2.7**
DL2				PP	**PP**	**09 07 59.6**	**+1.5**
DL2				S	**S**	**09 13 18.1**	**+6.7**

DL2 pmax pmax
comp=Z,32nm,0.9s
DL2 pmax pmax
comp=Z,820nm,5.9s
DL2 LR LR
comp=Z,6µm,15.0s
DL2 LR LR
comp=Z,12µm,15.9s
DL2 LR LR
comp=Z,4µm,13.5s
ACSO Alum Creek Sta 49.51 81 P P 09 06 03.5 -0.8
baz=330,SNR=21
ACSO Alum Creek Sta 49.51 81 IAmb IAmb 09 06 06.9
comp=Z,64nm,0.8s
NCB Newcomb 49.52 72 IAMs_20 IAMs_20 09 28 12.7
comp=Z,4µm,18.0s
BATG Bathurst New B 49.52 63 P P 09 06 04.8 +0.5
BATG IAmb IAmb 09 06 11.3
comp=Z,54nm,0.9s
BATG IAMs_20 IAMs_20 09 27 45.1
comp=Z,4µm,20.0s
L55A Hinsdale 49.52 76 P P 09 06 03.1 -1.3
baz=330,SNR=19
TJN Taejon 49.53 268 *ceP* P 09 06 03.4 -1.1
H60A Morristown 49.55 70 P P 09 06 02.9 -1.7
baz=330
Q48A North Vernon 49.61 85 P P 09 06 04.2 -0.9
baz=331,SNR=19
M54A Oil Creek Stat 49.65 78 P P 09 06 03.2 -2.2
baz=330,SNR=19
M54A Oil Creek Stat 49.65 78 IAmb IAmb 09 06 07.7
comp=Z,60nm,0.9s
M54A IAMs_20 IAMs_20 09 30 10.2
comp=Z,3µm,19.0s
E64A Bridgewater 49.66 65 P P 09 06 03.8 -1.6
baz=330
J58A Remsen 49.66 73 P P 09 06 04.2 -1.2
baz=330,SNR=8.5
PBMO Poplar Bluff 49.70 90 IAmb IAmb 09 06 12.0
comp=Z,74nm,0.9s
SUF Sumiainen 49.71 355 P P 09 06 06.9 +1.4
SUF pmax pmax
comp=Z,68nm,1.1s
O51A Pataskala 49.73 81 P P 09 06 05.0 -0.9
baz=330,SNR=31
VT1 Waterbury 49.73 70 IAMs_20 IAMs_20 09 30 14.8
comp=Z,4µm,21.0s
P50A Jamestown 49.75 83 P P 09 06 05.4 -0.7
baz=331,SNR=20
K57A Scipio Center 49.75 74 P P 09 06 05.3 -0.8
baz=330,SNR=8.0
X37A Clayton 49.75 96 P P 09 06 05.6 -0.6
X37A IAmb IAmb 09 06 45.4
comp=Z,38nm,0.8s
G62A West of Eustis 49.75 68 P P 09 06 04.5 -1.6
baz=330,SNR=8.8
G62A West of Eustis 49.75 68 IAmb IAmb 09 06 12.7
comp=Z,69nm,1.3s
MOL Molde 49.79 6 *eP* P 09 06 06.5 +0.4
I59A Olmsteadville 49.79 71 P P 09 06 05.7 -0.8
baz=330,SNR=26
W39A Magazine 49.82 94 P P 09 06 05.6 -1.1
baz=332,SNR=15
W39A Magazine 49.82 94 IAmb IAmb 09 06 12.3
comp=Z,150nm,1.9s
N53A Lisbon 49.82 79 P P 09 06 05.5 -1.2
baz=330,SNR=20
N53A Lisbon 49.82 79 IAmb IAmb 09 06 09.2
comp=Z,81nm,1.0s
F63A Nahmakanta, Br 49.84 66 P P 09 06 06.0 -0.7
baz=330,SNR=14
F63A Nahmakanta, Br 49.84 66 IAmb IAmb 09 06 12.9
comp=Z,56nm,1.0s
FCAR Ozark Folk Cen 49.84 92 IAmb IAmb 09 06 08.5
comp=Z,54nm,0.7s
FCAR IAMs_20 IAMs_20 09 25 36.8
comp=Z,4µm,20.0s
J59A Piesco 49.85 72 P P 09 06 06.5 -0.4
baz=330,SNR=9.0
H61A Lyndonville 49.85 69 P P 09 06 06.2 -0.7
baz=330,SNR=8.4
Q49A Aurora 49.86 84 P P 09 06 06.1 -0.9
baz=331,SNR=12
L56A Greenwood 49.88 76 P P 09 06 05.7 -1.5
baz=330,SNR=28
L56A Greenwood 49.88 76 IAmb IAmb 09 06 09.5
comp=Z,84nm,1.1s
L56A IAMs_20 IAMs_20 09 28 09.5
comp=Z,4µm,18.0s
ABTX Abilene, Hawle 49.89 102 P P 09 06 06.4 -0.9
baz=334,SNR=12
ABTX Abilene, Hawle 49.89 102 IAmb IAmb 09 06 09.8
comp=Z,65nm,1.4s
ABTX IAMs_20 IAMs_20 09 26 36.0
comp=Z,3µm,20.0s
F64A Sherman 49.96 66 P P 09 06 06.2 -1.4
baz=330,SNR=6.6
I60A Shoreham 49.96 71 P P 09 06 06.7 -1.0
baz=330
N54A Moraine State 50.00 78 P P 09 06 07.3 -0.8
baz=330,SNR=10
N54A Moraine State 50.00 78 IAmb IAmb 09 06 10.4
comp=Z,59nm,1.2s
WCI Wyandotte Cave 50.01 86 P P 09 06 07.6 -0.5
WCI pmax pmax
comp=Z,71nm,0.9s
WCI MLR MLR
comp=Z,4µm,21.0s
WCI Wyandotte Cave 50.01 86 P P 09 06 07.5 -0.6
baz=331
WCI Wyandotte Cave 50.01 86 P P 09 06 07.6 -0.5
WCI IAmb IAmb 09 06 10.4
comp=Z,71nm,0.8s
WCI Wyandotte Cave 50.01 86 IAMs_20 IAMs_20 09 27 38.4
comp=Z,4µm,21.0s
M55A Ridgway 50.02 77 P P 09 06 07.4 -0.8
baz=330,SNR=25
M55A Ridgway 50.02 77 IAmb IAmb 09 06 10.6
comp=Z,74nm,1.0s
K58A Earlville 50.04 74 P P 09 06 07.5 -0.9
baz=330,SNR=6.0
O52A Adamsville 50.05 81 P P 09 06 07.4 -0.9
baz=331,SNR=29
LCAR Lake Charles 50.05 91 IAmb IAmb 09 07 31.4
comp=Z,43nm,0.9s
PARMO Parma 50.06 90 P P 09 06 07.5 -1.1
H62A Milan 50.09 69 P P 09 06 07.5 -1.2
baz=330
H62A Milan 50.09 69 IAmb IAmb 09 06 15.5
comp=Z,138nm,1.9s
LBNH Lisbon 50.11 70 P P 09 06 09.2 +0.4
LBNH pmax pmax
comp=Z,39nm,0.8s
LBNH MLR MLR
comp=Z,4µm,19.0s
LBNH Lisbon 50.11 70 P P 09 06 08.7 -0.1
baz=330,SNR=8.5
LBNH Lisbon 50.11 70 P P 09 06 09.2 +0.4
LBNH IAmb IAmb 09 06 18.9
comp=Z,39nm,0.8s
LBNH IAMs_20 IAMs_20 09 30 23.5
comp=Z,5µm,19.0s
P51A Williamsport 50.14 82 P P 09 06 08.2 -0.9
baz=331,SNR=8.7
P51A Williamsport 50.14 82 IAmb IAmb 09 06 11.3
comp=Z,52nm,0.9s
P51A IAMs_20 IAMs_20 09 28 13.0
comp=Z,4µm,21.0s
PKME Peaks-Kenny Pk 50.15 67 P P 09 06 07.8 -1.3
baz=330,SNR=9.8
PKME Peaks-Kenny Pk 50.15 67 P P 09 06 08.9 -0.2
PKME IAmb IAmb 09 06 15.9
comp=Z,57nm,0.8s
AKN Aaknes 50.16 7 *eP* P 09 06 08.7 -0.3
Z35A Perchaven, San 50.16 99 IAmb IAmb 09 07 32.4
comp=Z,80nm,1.3s
Z35A IAMs_20 IAMs_20 09 30 09.1
comp=Z,3µm,19.0s
O53A New Philadelph 50.16 80 P P 09 06 08.1 -1.2
baz=331,SNR=20
G63A Kingsbury 50.16 67 P P 09 06 08.7 -0.5
baz=330,SNR=23
T45A Paducah 50.17 89 IAMs_20 IAMs_20 09 25 54.7
comp=Z,3µm,20.0s
M56A Emporium 50.22 76 P P 09 06 08.8 -0.9
baz=330,SNR=18
M56A Emporium 50.22 76 IAmb IAmb 09 06 12.5
comp=Z,73nm,1.1s
comp=Z,2µm,20.3s,baz=33,slow=36
N57A Milroy 51.09 76 P P 09 06 15.0 -1.2
baz=331,SNR=13
O56A Blue Knob Stat 51.14 78 P P 09 06 15.4 -1.3
baz=331,SNR=22
O56A Blue Knob Stat 51.14 78 IAmb IAmb 09 06 18.7
comp=Z,45nm,0.9s
O56A IAMs_20 IAMs_20 09 30 59.5
comp=Z,4µm,18.0s
M59A Waymart 51.19 74 P P 09 06 15.9 -1.1
baz=331,SNR=6.8
MCWV Mont Chateau 51.19 79 P P 09 06 16.1 -0.9
baz=331,SNR=9.9
MCWV Mont Chateau 51.19 79 IAMs_20 IAMs_20 09 28 56.0
comp=Z,4µm,18.0s
NC204 NORSAR Array S 51.20 4 IAmb IAmb 09 06 25.2
comp=Z,102nm,1.1s
I64A Boothbay 51.20 68 P P 09 06 14.9 -2.1
baz=331
L60A Shokan 51.24 73 P P 09 06 15.8 -1.5
baz=331,SNR=7.2
J63A Strafford 51.25 69 P P 09 06 16.7 -0.7
baz=331
H66A Whiting 51.26 65 P P 09 06 17.6 +0.2
baz=331
Q53A Leroy 51.26 81 P P 09 06 17.0 -0.6
baz=331,SNR=31
WVT Waverly 51.26 88 P P 09 06 16.8 -0.8
WVT pmax pmax
comp=Z,47nm,0.9s
WVT MLR MLR
comp=Z,4µm,19.0s
WVT Waverly 51.26 88 P P 09 06 16.8 -0.8
baz=332
WVT Waverly 51.26 88 P P 09 06 16.8 -0.8
WVT IAmb IAmb 09 06 20.5
comp=Z,47nm,0.8s
WVT Waverly 51.26 88 IAMs_20 IAMs_20 09 27 31.6
comp=Z,4µm,19.0s
NC303 NORSAR Array S 51.26 4 IAmb IAmb 09 06 25.8
comp=Z,89nm,1.4s
EMMW East Machias 51.27 66 IAmb IAmb 09 06 21.4
comp=Z,62nm,1.3s
WHTX Lake Whitney, 51.28 100 P P 09 06 17.1 -0.6
baz=334
WHTX Lake Whitney, 51.28 100 IAMs_20 IAMs_20 09 28 25.7
comp=Z,4µm,20.0s
L61A Hillsdale 1, H 51.30 72 P P 09 06 17.7 -0.2
baz=331,SNR=9.5
N58A Sunbury 51.32 76 P P 09 06 17.0 -1.0
baz=331,SNR=12
N58A Sunbury 51.32 76 IAmb IAmb 09 06 19.9
comp=Z,43nm,0.8s
P55A Reedsville 51.33 79 P P 09 06 17.5 -0.6
baz=331,SNR=21
K62A Royalston 51.37 71 P P 09 06 16.3 -2.0
baz=331,SNR=11
K62A Royalston 51.37 71 IAmb IAmb 09 06 24.9
comp=Z,54nm,1.1s
K62A IAMs_20 IAMs_20 09 31 04.8
comp=Z,3µm,20.0s
TXAR Lajitas Array 51.37 108 P P 09 06 18.9 +0.3
comp=Z,95nm,0.7s,baz=332,slow=5.8,SNR=351
TXAR LR LR 09 30 03.8
comp=Z,3µm,18.6s,baz=0.0,slow=38
TXAR PKPPKP **P'P'df** **09 36 54.6 -3.9**
comp=Z,0.4nm,0.9s,baz=142,slow=6.3,SNR=3.4
NC405 NORSAR Array S 51.38 4 P P 09 06 17.5 -0.7
NC405 IAmb IAmb 09 06 27.8
comp=Z,54nm,0.9s
L61B Northampton 51.39 71 P P 09 06 17.5 -1.0
baz=331
WLAR White Oak Lake 51.41 95 P P 09 06 18.6 -0.1
Q54A Coxs Mills 51.41 80 P P 09 06 17.1 -1.6
baz=331,SNR=14
Q54A Coxs Mills 51.41 80 IAmb IAmb 09 06 20.9
comp=Z,41nm,0.9s
NBO00 NORSAR Array S 51.44 4 IAmb IAmb 09 06 24.3
comp=Z,47nm,1.0s
NB2 NORSAR Subarra 51.45 4 P P 09 06 18.1 -0.6
comp=Z,35nm,1.1s,baz=356,slow=7.4
NB2 NORSAR Subarra 51.45 4 P P 09 06 18.1 -0.6
baz=356,slow=7.4
NOA NORSAR Array B 51.45 4 P P 09 06 18.0 -0.6
comp=Z,6.1nm,1.0s,baz=356,slow=7.3,SNR=16
NOA PcP **PcP** **09 07 32.2 -0.7**
comp=Z,4.2nm,0.9s,baz=360,slow=4.3,SNR=4.1
NOA LR LR 09 29 18.7
comp=Z,1µm,18.6s,baz=345,slow=38
X43A Marvell 51.52 92 P P 09 06 18.6 -0.9
baz=332
O57A Amberson 51.53 77 P P 09 06 18.3 -1.3
baz=331,SNR=24
S51A Beattyville 51.55 84 IAmb IAmb 09 06 28.2
comp=Z,79nm,0.9s
R53A Hurricane 51.56 82 P P 09 06 18.8 -1.0
baz=331,SNR=28
R53A Hurricane 51.56 82 IAMs_20 IAMs_20 09 28 35.7
comp=Z,3µm,22.0s
HHC Hu-ho-hao-te 51.58 285 P P 09 06 20.5 +0.4
HHC PP **PP** **09 08 18.5 +1.4**
HHC S S **09 13 37.1 -3.4**
HHC SS SS **09 17 08.0 -8.0**
HHC pmax pmax
comp=Z,11nm,0.7s
HHC pmax pmax
comp=Z,290nm,7.1s
HHC LR LR
comp=Z,3µm,14.5s
HHC LR LR
comp=Z,2µm,14.5s
HHC LR LR
comp=Z,4µm,15.3s
K63A Dunstable 51.60 70 P P 09 06 20.0 0.0
baz=331,SNR=12
N59A State Game Lan 51.60 75 P P 09 06 19.2 -0.9
baz=331,SNR=9.4
N59A State Game Lan 51.60 75 IAMs_20 IAMs_20 09 26 36.0
comp=Z,3µm,20.0s
T50A Nancy 51.62 85 P P 09 06 19.8 -0.5
QUA2 Belchertown 51.66 71 IAMs_20 IAMs_20 09 30 41.6
comp=Z,4µm,20.0s
M60A Port Jervis 51.67 74 P P 09 06 19.0 -1.6
baz=331,SNR=11
Q55A Buckhannon 51.68 80 P P 09 06 20.2 -0.5
baz=331,SNR=23
LRW Lerwick 51.69 12 *eP* P 09 06 20.0 -0.4
LRW IAMs_20 IAMs_20 09 30 06.2
comp=Z,2µm,17.4s
P56A Dayton Farm, R 51.70 78 P P 09 06 19.9 -1.0
baz=331,SNR=15
U49A Red Boiling Sp 51.71 86 IAmb IAmb 09 06 23.8
comp=Z,53nm,0.8s
U49A IAMs_20 IAMs_20 09 30 45.4
comp=Z,3µm,18.0s
SKAR Skarslia 51.71 6 *eP* P 09 06 20.1 -0.6
CCAR Cane Creek 51.72 93 IAMs_20 IAMs_20 09 26 35.5
comp=Z,3µm,22.0s
HRV Adam Dziewonsk 51.75 70 P P 09 06 21.5 +0.4
HRV pmax pmax
comp=Z,83nm,1.3s
HRV MLR MLR
comp=Z,4µm,20.0s
HRV Adam Dziewonsk 51.75 70 P P 09 06 19.5 -1.6
baz=331
HRV Adam Dziewonsk 51.75 70 P P 09 06 21.5 +0.4
HRV IAmb IAmb 09 06 27.9
comp=Z,83nm,1.3s
HRV Adam Dziewonsk 51.75 70 IAMs_20 IAMs_20 09 31 24.9
comp=Z,4µm,20.0s
JCT Junction City 51.76 103 P P 09 06 20.8 -0.6
baz=334,SNR=92
JCT Junction City 51.76 103 IAMs_20 IAMs_20 09 30 51.4
comp=Z,3µm,19.0s
NC602 NORSAR Array S 51.76 4 *eP* P 09 06 20.1 -0.9
L62A Suffield 51.77 72 P P 09 06 20.8 -0.5
baz=331
SVE Sverdlovsk 51.79 332 *ceP* P 09 06 21.3 +0.1
SVE *eS* S 09 13 42.8 +0.1
SVE pmax pmax
comp=Z,60nm,1.1s
SVE MLR MLR
comp=Z,2µm,20.0s
PAGS Pennsylvania G 51.86 76 IAmb IAmb 09 06 23.9
comp=Z,56nm,0.9s
KIRV Kirov 51.87 340 P P 09 06 22.0 +0.2
comp=Z,16nm,0.8s,baz=34,slow=4.0,SNR=8.2
CLTN Cedars of Leba 51.87 87 IAmb IAmb 09 06 25.2

ACCN Adirondack Com 50.22 71 P P 09 06 09.2 -0.5
L57A Andrews Acres 50.26 75 P P 09 06 09.9 -0.2
baz=330,SNR=12
I61A Oroboro, Fairl 50.27 70 P P 09 06 11.0 +0.9
baz=330,SNR=10
WHAR Wooly Hollow 50.30 93 IAmb IAmb 09 06 44.8
comp=Z,112nm,1.8s
WHAR IAMs_20 IAMs_20 09 25 51.1
comp=Z,3µm,22.0s
K59A Cooperstown 50.32 73 P P 09 06 10.3 -0.2
baz=330,SNR=13
G64A Maxfield 50.35 66 P P 09 06 09.5 -1.0
baz=330,SNR=6.3
P52A Corning 50.35 81 P P 09 06 09.8 -0.9
baz=331,SNR=12
DOMB Dombas 50.37 5 *eP* P 09 06 09.9 -0.7
R49A Shelbyville 50.38 85 IAmb IAmb 09 06 17.8
comp=Z,94nm,1.6s
BINY Binghamton 50.41 74 P P 09 06 09.8 -1.3
baz=330,SNR=14
BINY Binghamton 50.41 74 IAmb IAmb 09 06 14.0
comp=Z,47nm,1.0s
H63A New Sharon 50.41 68 P P 09 06 10.6 -0.4
baz=330,SNR=7.2
W41B Gary Mavity, V 50.42 93 P P 09 06 09.9 -1.4
baz=332,SNR=14
Q51A Peebles 50.43 83 P P 09 06 10.7 -0.6
baz=331,SNR=11
Q51A Peebles 50.43 83 IAmb IAmb 09 06 13.8
comp=Z,43nm,0.9s
Q51A IAMs_20 IAMs_20 09 28 56.6
comp=Z,4µm,21.0s
J60A Lant Hill Farm 50.44 71 P P 09 06 10.5 -0.7
baz=330,SNR=20
HNH Hanover 50.44 70 IAmb IAmb 09 06 15.1
comp=Z,60nm,1.0s
HNH IAMs_20 IAMs_20 09 30 13.4
comp=Z,4µm,20.0s
MIAR Mount Ida 50.47 95 P P 09 06 11.0 -0.7
baz=333,SNR=45
MIAR Mount Ida 50.47 95 IAmb IAmb 09 06 14.4
comp=Z,50nm,0.8s
N55A Marion Center 50.53 78 P P 09 06 10.2 -1.9
baz=331,SNR=33
O54A Avella 50.53 79 P P 09 06 11.2 -0.9
baz=331,SNR=24
O54A Avella 50.53 79 IAmb IAmb 09 06 14.5
comp=Z,69nm,0.9s
BJI Beijing 50.57 280 P P 09 06 12.0 -0.3
BJI PP **PP** **09 08 10.4 +2.6**
BJI S **S** **09 13 28.6 +2.3**
BJI SS **SS** **09 16 59.8 0.0**
BJI pmax pmax
comp=Z,11nm,1.5s
BJI LR LR
comp=Z,7µm,17.9s
BJI LR LR
comp=Z,10µm,17.7s
BJI LR LR
comp=Z,3µm,18.2s
DRLN Deer Lake 50.58 55 IAmb IAmb 09 06 19.4
comp=Z,83nm,1.1s
BJT Baijiatuan 50.59 280 IAMs_20 IAMs_20 09 25 54.3
comp=Z,4µm,18.0s
L58A Harry Jones Me 50.59 74 P P 09 06 12.1 -0.4
baz=330,SNR=12
WVL Waterville 50.63 67 P P 09 06 13.9 +1.2
WVL IAmb IAmb 09 06 16.0
comp=Z,84nm,1.6s
I62A Tamworth 50.64 69 P P 09 06 12.7 -0.1
baz=330
I62A Tamworth 50.64 69 IAmb IAmb 09 06 19.5
comp=Z,106nm,1.8s
J61A Chester 50.66 71 P P 09 06 12.9 -0.1
baz=330,SNR=7.9
N56A West Decatur 50.67 77 P P 09 06 12.2 -0.9
baz=331,SNR=11
HBAR Harrisburg 50.69 91 IAmb IAmb 09 06 16.0
comp=Z,76nm,0.9s
HBAR IAMs_20 IAMs_20 09 26 15.4
comp=Z,4µm,19.0s
H64A Troy 50.72 67 P P 09 06 13.3 -0.1
baz=330,SNR=9.7
M57A Sunshine Farm, 50.74 76 P P 09 06 12.2 -1.4
baz=331,SNR=12
M57A Sunshine Farm, 50.74 76 IAmb IAmb 09 06 15.8
comp=Z,50nm,1.2s
UALR University of 50.74 93 IAmb IAmb 09 06 16.0
comp=Z,46nm,0.9s
UALR IAMs_20 IAMs_20 09 26 05.6
comp=Z,3µm,19.0s
KLMR Klimovskoe 50.75 346 *d iP* P 09 06 13.2 -0.2
KLMR 09 08 08.8
KLMR S S **09 13 25.8 -2.4**
KLMR pmax pmax
comp=Z,107nm,1.0s
KLMR MLR MLR
comp=Z,2µm,19.0s
KLMR Klimovskoe 50.75 346 *i iP* P 09 06 13.2 -0.2
KLMR *i iP* P 09 06 13.2 -0.2
KLMR *i iP* P 09 06 13.2 -0.2
KLMR AMP 09 06 25.4
comp=Z,107nm,1.0s
KLMR PP **PP** **09 08 08.9 0.0**
KLMR S S **09 13 25.8 -2.4**
KLMR S S **09 13 25.8 -2.4**
KLMR LR LR 09 22 06.5
KLMR AMP 09 30 17.9
comp=Z,2µm,18.5s
I63A Otisfield 50.75 69 P P 09 06 13.9 +0.2
baz=330
I63A Otisfield 50.75 69 IAmb IAmb 09 06 19.6
comp=Z,156nm,1.9s
I63A IAMs_20 IAMs_20 09 31 03.5
comp=Z,4µm,20.0s
L59A Walton 50.76 73 P P 09 06 13.1 -0.8
baz=330,SNR=5.9
L59A Walton 50.76 73 IAMs_20 IAMs_20 09 28 56.7
comp=Z,4µm,18.0s
P53A Whipple 50.76 81 P P 09 06 13.3 -0.5
baz=331,SNR=21
P53A Whipple 50.76 81 IAmb IAmb 09 06 16.1
comp=Z,65nm,1.0s
T47A Sharon Grove 50.78 87 P P 09 06 12.6 -1.4
T47A IAMs_20 IAMs_20 09 29 15.0
comp=Z,3µm,19.0s
X40A Basin Creek Fa 50.80 94 P P 09 06 13.1 -1.1
baz=333,SNR=32
X40A Basin Creek Fa 50.80 94 IAmb IAmb 09 06 16.4
comp=Z,59nm,1.2s
G65A Princeton 50.81 65 P P 09 06 12.9 -1.1
baz=331,SNR=5.9
G65A Princeton 50.81 65 IAmb IAmb 09 06 17.2
comp=Z,57nm,1.2s
K60A Five Rivers En 50.81 72 P P 09 06 12.5 -1.6
baz=330
Q52A Bidwell 50.89 82 P P 09 06 13.9 -0.9
baz=331,SNR=10
O55A Ligonier 50.91 78 P P 09 06 14.1 -0.9
baz=331,SNR=9.2
M58A Price's Panora 50.95 75 P P 09 06 14.9 -0.4
baz=331,SNR=7.4
FIA1 FINESS Array S 50.99 355 IAmb IAmb 09 06 30.1
comp=Z,47nm,0.9s
FINES FINESS Array B 50.99 355 P P 09 06 14.9 -0.3
comp=Z,13nm,0.7s,baz=20,slow=7.1,SNR=60
FINES LR LR 09 29 31.7
comp=Z,1µm,18.5s,baz=5.0,slow=38
FINES FINESS Array B 50.99 355 *i* P P 09 06 14.8 -0.4
FINES pmax pmax
comp=Z,13nm,0.7s
K61A Williamstown 50.99 72 P P 09 06 15.3 -0.2
baz=331,SNR=8.4
P54A Burton 51.00 80 P P 09 06 14.9 -0.7
baz=331,SNR=24
H65A Eastbrook 51.01 66 P P 09 06 14.3 -1.3
baz=331,SNR=8.5
J62A Henniker 51.03 70 P P 09 06 15.5 -0.3
baz=331,SNR=8.1
SSPA Standing Stone 51.07 77 P P 09 06 14.7 -1.4
baz=331
SSPA Standing Stone 51.07 77 P P 09 06 14.5 -1.6
SSPA IAmb IAmb 09 06 18.2
comp=Z,51nm,1.1s
JNU Nakatsue 51.08 263 P P 09 06 17.3 +1.0
comp=Z,9.9nm,0.8s,baz=41,slow=5.3,SNR=3.9
JNU LR LR 09 27 56.8

	comp=Z,54nm,1.0s						
CLTN				IAMs_20	IAMs_20	09 29 59.7	
	comp=Z,3µm,21.0s						
O58A	**Lewisberry**	**51.87**	**76**	P	**P**	**09 06 21.4**	**-0.8**
	baz=331,SNR=23						
N60A	**Cedar Hill Far**	**51.89**	**74**	P	**P**	**09 06 21.6**	**-0.7**
	baz=331,SNR=13						
DGZ	**Jazzator, Alta**	**51.90**	**309**	*i* P	**P**	**09 06 20.8**	**-1.6**
DGZ				pmax	pmax		
	comp=Z,26nm,1.0s						
Z41A	**Richland Creek**	**51.91**	**95**	P	**P**	**09 06 22.2**	**-0.3**
	baz=333,SNR=7.1						
WES	**Weston**	**51.94**	**70**	IAMs_20	IAMs_20	09 31 30.0	
	comp=Z,4µm,20.0s						
Q56A	**Snyder Ridge,**	**51.98**	**79**	P	**P**	**09 06 22.2**	**-0.7**
	baz=331,SNR=8.9						
O59A	**Robesonia**	**51.98**	**76**	P	**P**	**09 06 22.3**	**-0.7**
	baz=331,SNR=14						
V48A	**Smith Brothers**	**51.99**	**88**	IAmb	IAmb	09 06 25.8	
	comp=Z,38nm,0.9s						
V48A				IAMs_20	IAMs_20	09 29 53.9	
	comp=Z,4µm,20.0s						
M61A	**Granite Spring**	**51.99**	**73**	P	**P**	**09 06 22.4**	**-0.6**
	baz=331						
P57A	**Homestead Farm**	**52.03**	**78**	P	**P**	**09 06 22.6**	**-0.7**
	baz=331,SNR=9.5						
P57A	**Homestead Farm**	**52.03**	**78**	IAmb	IAmb	09 06 28.5	
	comp=Z,93nm,1.6s						
P57A				IAMs_20	IAMs_20	09 31 33.2	
	comp=Z,3µm,18.0s						
BCX	**Boston College**	**52.04**	**70**	P	**P**	**09 06 24.2**	**+0.9**
BCX				IAmb	IAmb	09 06 26.6	
	comp=Z,75nm,1.3s						
BCX				IAMs_20	IAMs_20	09 31 43.6	
	comp=Z,4µm,20.0s						
R54A	**Victor**	**52.05**	**81**	P	**P**	**09 06 22.5**	**-1.0**
	baz=331,SNR=13						
S53A	**Williamson**	**52.06**	**82**	P	**P**	**09 06 22.7**	**-0.9**
	baz=332,SNR=12						
OXF	**Oxford**	**52.09**	**91**	P	**P**	**09 06 23.1**	**-0.7**
	baz=332,SNR=60						
OXF	**Oxford**	**52.09**	**91**	IAMs_20	IAMs_20	09 32 21.4	
	comp=Z,3µm,18.0s						
M62A	**Hamden**	**52.20**	**72**	P	**P**	**09 06 23.5**	**-0.9**
	baz=331						
PAL	**Palisades**	**52.21**	**73**	P	**P**	**09 06 23.7**	**-0.9**
	baz=331,SNR=9.7						
O60A	**Telford**	**52.26**	**75**	P	**P**	**09 06 23.8**	**-1.2**
	baz=331,SNR=6.3						
S54A	**Dingess, Beckl**	**52.27**	**81**	P	**P**	**09 06 24.1**	**-1.1**
	baz=332,SNR=7.5						
S54A	**Dingess, Beckl**	**52.27**	**81**	IAmb	IAmb	09 06 27.5	
	comp=Z,116nm,1.6s						
BRYW	**Bryant College**	**52.27**	**71**	P	**P**	**09 06 25.2**	**+0.1**
BRYW				IAmb	IAmb	09 06 32.5	
	comp=Z,40nm,0.7s						
BRYW				IAMs_20	IAMs_20	09 31 51.7	
	comp=Z,4µm,20.0s						
Q57A	**Strasburg**	**52.27**	**78**	P	**P**	**09 06 23.6**	**-1.5**
	baz=331,SNR=7.7						
P58A	**Pank, Wackersv**	**52.29**	**77**	P	**P**	**09 06 24.0**	**-1.2**
	baz=331,SNR=8.9						
N61A	**South Mountain**	**52.29**	**74**	P	**P**	**09 06 25.2**	**0.0**
	baz=331						
L63A	**North Scituate**	**52.29**	**71**	P	**P**	**09 06 26.3**	**+1.1**
	baz=331						
R55A	**Marlinton**	**52.29**	**80**	P	**P**	**09 06 24.7**	**-0.7**
	baz=332,SNR=7.2						
YLE	**Yale**	**52.29**	**72**	IAmb	IAmb	09 06 27.5	
	comp=Z,49nm,1.1s						
YLE				IAMs_20	IAMs_20	09 26 25.3	
	comp=Z,4µm,19.0s						
435B	**Jarrell**	**52.31**	**101**	P	**P**	**09 06 24.4**	**-1.1**
	baz=334						
JCJ	**Chichijima**	**52.35**	**248**	LR	LR	09 29 41.1	
	comp=Z,393nm,20.2s,baz=6.5,slow=37						
BTO	**Baotou**	**52.36**	**286**	*e*P	P	09 06 33.5	+7.6
ODD1	**Odda**	**52.40**	**7**	*e*P	**P**	**09 06 26.2**	**+0.3**
HFS	**Hagfors**	**52.41**	**3**	P	**P**	**09 06 24.9**	**-1.0**
	comp=Z,13nm,0.8s,baz=37,slow=5.9,SNR=16						
N62A	**Caumsett State**	**52.44**	**73**	P	**P**	**09 06 25.2**	**-1.1**
	baz=331						
P59A	**Jarrettsville**	**52.50**	**76**	P	**P**	**09 06 25.7**	**-1.1**
	baz=331,SNR=9.7						
L64A	**Middleborough**	**52.51**	**70**	P	**P**	**09 06 24.8**	**-1.9**
	baz=331						
T53A	**Wise**	**52.52**	**83**	P	**P**	**09 06 26.5**	**-0.6**
	baz=332,SNR=22						
SDMD	**Soldier's Deli**	**52.53**	**77**	IAMs_20	IAMs_20	09 26 07.4	
	comp=Z,2µm,19.0s						
ARU	**Arti**	**52.53**	**333**	P	**P**	**09 06 25.9**	**-0.9**
	comp=Z,3.9nm,0.5s,baz=23,slow=4.7,SNR=19						
ARU	**Arti**	**52.53**	**333**	*d i*P	**P**	**09 06 26.0**	**-0.8**
ARU						09 07 33.3	
ARU						09 08 22.5	
ARU				S	**S**	**09 13 54.4**	**+1.5**
ARU						09 16 16.4	
ARU				SS	**SS**	**09 17 23.3**	**-6.8**
ARU				pmax	pmax		
	comp=Z,45nm,1.4s						
ARU				MLR	MLR		
	comp=Z,3µm,21.0s						
ARU	**Arti**	**52.53**	**333**	P	**P**	**09 06 25.7**	**-1.1**
ARU				IAmb	IAmb	09 06 32.8	
	comp=Z,63nm,0.7s						
ARU				IAMs_20	IAMs_20	09 30 36.5	
	comp=Z,3µm,20.0s						
M63A	**Gales Ferry**	**52.54**	**71**	P	**P**	**09 06 24.5**	**-2.5**
	baz=331						
NATX	**Nacogdoches**	**52.54**	**97**	P	**P**	**09 06 26.7**	**-0.5**
	baz=334						
NATX	**Nacogdoches**	**52.54**	**97**	IAmb	IAmb	09 07 42.2	
	comp=Z,110nm,1.5s						
S55A	**Lewisburg**	**52.60**	**81**	P	**P**	**09 06 27.1**	**-0.5**
	baz=332,SNR=5.8						
Y45A	**Yeager Farm, C**	**52.61**	**91**	IAMs_20	IAMs_20	09 27 25.2	
	comp=Z,4µm,20.0s						
P60A	**Greenville**	**52.62**	**75**	P	**P**	**09 06 26.3**	**-1.4**
	baz=331						
Q58A	**Fox Den Farm,**	**52.63**	**78**	P	**P**	**09 06 25.8**	**-2.0**
	baz=331,SNR=16						
M64A	**Tiverton**	**52.71**	**71**	P	**P**	**09 06 26.8**	**-1.4**
	baz=331						
N63A	**Mattituck**	**52.73**	**72**	P	**P**	**09 06 27.0**	**-1.4**
	baz=331						
O61A	**Allentown**	**52.77**	**74**	P	**P**	**09 06 27.9**	**-0.9**
	baz=331						
KONO	**Kongsberg**	**52.79**	**5**	*ce*P	**P**	**09 06 28.8**	**+0.2**
KONO				pmax	pmax		
	comp=Z,57nm,1.3s						
KONO	**Kongsberg**	**52.79**	**5**	P	**P**	**09 06 28.9**	**+0.3**
KONO				IAmb	IAmb	09 06 39.5	
	comp=Z,113nm,1.4s						
KONO	**Kongsberg**	**52.79**	**5**	*e*P	**P**	**09 06 29.4**	**+0.7**
SWET	**Sewanee**	**52.79**	**87**	IAmb	IAmb	09 06 31.3	
	comp=Z,33nm,0.8s						
SWET				IAMs_20	IAMs_20	09 30 26.1	
	comp=Z,3µm,18.0s						
T54A	**Tazewell**	**52.82**	**82**	P	**P**	**09 06 28.9**	**-0.4**
	baz=332,SNR=9.2						
HPIG		**52.83**	**111**	IAmb	IAmb	09 06 33.4	
	comp=Z,67nm,0.8s						
HPIG				IAMs_20	IAMs_20	09 30 02.7	
	comp=Z,2µm,19.0s						
V51A	**Loudon**	**52.87**	**85**	IAmb	IAmb	09 06 32.7	
	comp=Z,119nm,1.3s						
R57A	**Stanardsville**	**52.88**	**79**	P	**P**	**09 06 28.6**	**-1.0**
	baz=332,SNR=26						
BLS5	**Blasjo**	**52.88**	**7**	*e*P	**P**	**09 06 28.2**	**-1.2**
M65A	**Busby, Falmout**	**52.90**	**70**	P	**P**	**09 06 27.8**	**-1.9**
	baz=331						
M65A	**Busby, Falmout**	**52.90**	**70**	IAMs_20	IAMs_20	09 32 09.5	
	comp=Z,4µm,19.0s						
143A	**Socs Landing,**	**52.93**	**94**	IAMs_20	IAMs_20	09 32 42.7	
	comp=Z,4µm,19.0s						
S56A	**Natural Bridge**	**53.03**	**80**	P	**P**	**09 06 31.5**	**+0.7**
	baz=332						
W50A	**Signal Mountai**	**53.04**	**87**	IAmb	IAmb	09 06 36.9	
	comp=Z,70nm,1.4s						
W50A				IAMs_20	IAMs_20	09 30 33.7	
	comp=Z,2µm,19.0s						
X48A	**Hartselle**	**53.04**	**89**	IAmb	IAmb	09 06 33.3	
	comp=Z,34nm,0.8s						
X48A				IAMs_20	IAMs_20	09 29 02.7	
	comp=Z,3µm,18.0s						
P61A	**Hammonton**	**53.05**	**75**	P	**P**	**09 06 29.6**	**-1.2**
	baz=332						
T55A	**Pulaski**	**53.07**	**81**	P	**P**	**09 06 31.5**	**+0.4**
	baz=332						
R58A	**Rapidan**	**53.07**	**78**	P	**P**	**09 06 30.2**	**-0.8**
	baz=332,SNR=6.4						
Q59A	**Harwood**	**53.08**	**77**	P	**P**	**09 06 30.5**	**-0.5**
	baz=332,SNR=8.8						
BIGH	**Upper Bighouse**	**53.08**	**14**	*e*P	**P**	**09 06 30.7**	**0.0**
BIGH				IAmb	IAmb	09 06 37.3	
	comp=Z,71nm,0.8s						
BLA	**Blacksburg**	**53.12**	**81**	P	**P**	**09 06 32.0**	**+0.5**
BLA				pmax	pmax		
	comp=Z,22nm,0.9s						
BLA	**Blacksburg**	**53.12**	**81**	P	**P**	**09 06 31.5**	**+0.1**
	baz=332						
BLA	**Blacksburg**	**53.12**	**81**	P	**P**	**09 06 32.0**	**+0.5**
BLA				IAMs_20	IAMs_20	09 28 21.0	
	comp=Z,3µm,19.0s						
CPCT	**Cooper Cave**	**53.12**	**86**	IAmb	IAmb	09 06 34.4	
	comp=Z,73nm,1.5s						
CPCT				IAMs_20	IAMs_20	09 29 40.9	
	comp=Z,4µm,19.0s						
V52A	**Sevierville**	**53.13**	**85**	IAMs_20	IAMs_20	09 26 43.1	
	comp=Z,2µm,21.0s						
S57A	**Dark Hollow, R**	**53.19**	**79**	P	**P**	**09 06 31.3**	**-0.6**
	baz=332,SNR=10.0						
U54A	**Nelsons Funny**	**53.20**	**83**	P	**P**	**09 06 31.9**	**-0.1**
	baz=332,SNR=12						
TKL	**Tuckaleechee C**	**53.22**	**85**	IAmb	IAmb	09 06 35.2	
	comp=Z,85nm,1.0s						
TKL				IAMs_20	IAMs_20	09 29 43.6	
	comp=Z,3µm,18.0s						
Q60A	**Greensboro**	**53.26**	**76**	P	**P**	**09 06 31.3**	**-1.1**
	baz=332,SNR=5.9						
Q60A	**Greensboro**	**53.26**	**76**	IAmb	IAmb	09 06 35.1	
	comp=Z,66nm,1.0s						
SEM	**Semipalatinsk**	**53.30**	**315**	*e*P	**P**	**09 06 30.4**	**-2.4**
SEM	**Semipalatinsk**	**53.30**	**315**	*e*P	**P**	**09 06 30.4**	**-2.4**
BRVK	**Borovoye**	**53.34**	**323**	P	**P**	**09 06 32.6**	**-0.2**
BRVK				P	**P**	**09 06 32.6**	**-0.2**
BRVK	**Borovoye**	**53.34**	**323**	P	**P**	**09 06 31.9**	**-1.0**
BRVK				MLR	MLR		
	comp=Z,3µm,20.0s						
BRVK	**Borovoye**	**53.34**	**323**	P	**P**	**09 06 31.9**	**-1.0**
BRVK	**Borovoye**	**53.34**	**323**	IAMs_20	IAMs_20	09 32 26.9	
	comp=Z,3µm,20.0s						
CBN	**Corbin Frederi**	**53.39**	**78**	P	**P**	**09 06 32.0**	**-1.4**
	baz=332,SNR=5.8						
CBN	**Corbin Frederi**	**53.39**	**78**	IAmb	IAmb	09 06 35.5	
	comp=Z,44nm,0.8s						
CBN				IAMs_20	IAMs_20	09 27 36.2	
	comp=Z,2µm,19.0s						
R58B	**Mineral**	**53.41**	**78**	P	**P**	**09 06 32.4**	**-1.1**
	baz=332,SNR=14						
T56A	**Rocky Mt**	**53.43**	**81**	P	**P**	**09 06 32.6**	**-1.1**
	baz=332,SNR=7.3						
KURK	**Kurchatov**	**53.45**	**316**	P	**P**	**09 06 32.4**	**-1.3**
KURK	**Kurchatov**	**53.45**	**316**	*ce*P	**P**	**09 06 32.6**	**-1.0**
KURK				pmax	pmax		
	comp=Z,61nm,0.8s						
KURK	**Kurchatov**	**53.45**	**316**	P	**P**	**09 06 32.1**	**-1.5**
KURK	**Kurchatov**	**53.45**	**316**	IAMs_20	IAMs_20	09 32 07.6	
	comp=Z,2µm,20.0s						
R59A	**King George, V**	**53.49**	**78**	P	**P**	**09 06 33.0**	**-1.0**
	baz=332,SNR=7.4						
U55A	**TA2, Sparta**	**53.51**	**82**	P	**P**	**09 06 34.1**	**-0.3**
	baz=332,SNR=14						
FPAL	**Fort Paine**	**53.51**	**87**	IAMs_20	IAMs_20	09 31 33.2	
	comp=Z,3µm,19.0s						
Q61A	**Milford**	**53.55**	**76**	P	**P**	**09 06 33.0**	**-1.5**
	baz=332						
KURBB	**Kurchatov Arra**	**53.56**	**316**	P	**P**	**09 06 32.6**	**-1.8**
TIA	**Tai'an**	**53.57**	**277**	P	**P**	**09 06 35.8**	**+1.1**
TIA				S	**S**	**09 14 08.2**	**+0.6**
TIA				pmax	pmax		
	comp=Z,490nm,5.1s						
TIA				LR	LR		
	comp=Z,5µm,19.6s						
TIA				LR	LR		
	comp=Z,11µm,19.6s						
TIA				LR	LR		
	comp=Z,2µm,18.2s						
R60A	**Leonardtown, M**	**53.63**	**77**	P	**P**	**09 06 34.3**	**-0.8**
	baz=332,SNR=5.8						
S58A	**Poland Farm, P**	**53.66**	**79**	P	**P**	**09 06 34.3**	**-1.0**
	baz=332,SNR=13						
S58A	**Poland Farm, P**	**53.66**	**79**	IAmb	IAmb	09 06 37.7	
	comp=Z,45nm,0.9s						
W52A	**Murphy**	**53.66**	**85**	IAMs_20	IAMs_20	09 28 15.2	
	comp=Z,3µm,19.0s						
VBMS	**Vicksburg**	**53.70**	**93**	P	**P**	**09 06 35.0**	**-0.7**
	baz=333,SNR=5.4						
VBMS	**Vicksburg**	**53.70**	**93**	IAmb	IAmb	09 07 46.6	
	comp=Z,77nm,1.1s						
VBMS				IAMs_20	IAMs_20	09 29 33.1	
	comp=Z,4µm,20.0s						
HKT	**Hockley**	**53.72**	**99**	P	**P**	**09 06 35.7**	**-0.1**
HKT				pmax	pmax		
	comp=Z,53nm,1.7s						
HKT	**Hockley**	**53.72**	**99**	P	**P**	**09 06 35.7**	**-0.1**
HKT	**Hockley**	**53.72**	**99**	IAMs_20	IAMs_20	09 27 32.0	
	comp=Z,4µm,21.0s						
T57A	**Hurt**	**53.75**	**80**	P	**P**	**09 06 34.6**	**-1.5**
	baz=332,SNR=7.8						
Z47A	**Carrollton**	**53.76**	**90**	IAMs_20	IAMs_20	09 29 13.8	
	comp=Z,3µm,20.0s						
X51A	**Calhoun**	**53.77**	**87**	IAmb	IAmb	09 06 39.0	
	comp=Z,39nm,0.7s						
X51A				IAMs_20	IAMs_20	09 28 20.2	
	comp=Z,4µm,20.0s						
S59A	**Mechanicsville**	**53.81**	**78**	P	**P**	**09 06 35.3**	**-1.1**
	baz=332,SNR=9.1						
V54A	**Nebo**	**53.81**	**83**	P	**P**	**09 06 35.6**	**-0.9**
	baz=332,SNR=9.3						
Y49A	**Blount Mountai**	**53.81**	**88**	IAmb	IAmb	09 06 39.1	
	comp=Z,40nm,0.8s						
Y49A				IAMs_20	IAMs_20	09 29 28.1	
	comp=Z,4µm,19.0s						
833A	**Chaparral WMA,**	**53.85**	**104**	P	**P**	**09 06 36.6**	**-0.3**
	baz=335,SNR=8.3						
146A	**Union**	**53.89**	**92**	IAMs_20	IAMs_20	09 29 46.0	
	comp=Z,3µm,20.0s						
U56A	**King**	**53.90**	**82**	P	**P**	**09 06 36.6**	**-0.5**
	baz=332,SNR=9.4						
U56A	**King**	**53.90**	**82**	IAmb	IAmb	09 06 39.8	
	comp=Z,64nm,1.2s						
KAC	**Achnashellach**	**53.93**	**15**	*e*P	**P**	**09 06 37.0**	**-0.1**
VSU	**Vasula**	**53.95**	**354**	*e*P	**P**	**09 06 37.2**	**0.0**
VSU	**Vasula**	**53.95**	**354**	*i* P	**P**	**09 06 36.3**	**-0.8**
VSU				pmax	pmax		
	comp=Z,54nm,0.9s						
735A	**Kenedy**	**53.96**	**102**	IAMs_20	IAMs_20	09 32 14.8	
	comp=Z,4µm,18.0s						
SNART	**Snartemo**	**54.00**	**7**	*e*P	**P**	**09 06 37.5**	**0.0**
V55A	**Taylorsville**	**54.02**	**83**	P	**P**	**09 06 37.5**	**-0.5**
	baz=332,SNR=7.9						
R61A	**Willards**	**54.03**	**76**	P	**P**	**09 06 37.4**	**-0.7**
	baz=332						
KPL	**Plockton**	**54.05**	**15**	*e*P	**P**	**09 06 37.8**	**-0.1**
KPL				IAmb	IAmb	09 06 44.5	
	comp=Z,56nm,0.9s						
KPL				IAMs_20	IAMs_20	09 29 15.3	
	comp=Z,2µm,18.7s						
T58A	**Grand View Acr**	**54.06**	**80**	P	**P**	**09 06 37.2**	**-1.1**
	baz=332,SNR=5.2						
S60A	**Water View**	**54.10**	**77**	P	**P**	**09 06 36.3**	**-2.2**
	baz=332						
HOMB	**Homborsund**	**54.13**	**6**	*e*P	**P**	**09 06 38.1**	**-0.3**
U57A	**Blanch**	**54.22**	**81**	P	**P**	**09 06 38.3**	**-1.1**
	baz=332,SNR=30						
344A	**Westbrook Farm**	**54.30**	**94**	IAmb	IAmb	09 06 43.6	
	comp=Z,50nm,0.8s						
LRAL	**Lakeview Retre**	**54.32**	**89**	P	**P**	**09 06 39.4**	**-0.8**
	baz=333,SNR=23						
LRAL	**Lakeview Retre**	**54.32**	**89**	P	**P**	**09 06 38.8**	**-1.4**
LRAL				IAmb	IAmb	09 06 42.4	
	comp=Z,32nm,0.8s						
LRAL				IAMs_20	IAMs_20	09 30 14.5	
	comp=Z,4µm,20.0s						
V56A	**Mocksville**	**54.33**	**82**	P	**P**	**09 06 38.6**	**-1.7**
	baz=332						
W54A	**Cherokee Point**	**54.33**	**84**	P	**P**	**09 06 39.5**	**-0.8**
	baz=332,SNR=21						
T59A	**Double "B" Far**	**54.41**	**79**	P	**P**	**09 06 39.5**	**-1.3**
	baz=332,SNR=9.0						
S61A	**Accomac**	**54.48**	**77**	IAMs_20	IAMs_20	09 27 16.2	
	comp=Z,3µm,18.0s						
V57A	**Coltrane Farms**	**54.53**	**81**	P	**P**	**09 06 41.0**	**-0.7**
	baz=332,SNR=6.3						
Z50A	**Ashland**	**54.53**	**88**	P	**P**	**09 06 41.2**	**-0.6**
	baz=333,SNR=38						
Z50A	**Ashland**	**54.53**	**88**	IAMs_20	IAMs_20	09 28 30.2	
	comp=Z,3µm,20.0s						
U58A	**Oxford**	**54.55**	**80**	P	**P**	**09 06 40.2**	**-1.7**
	baz=332,SNR=6.4						
T60A	**Surry**	**54.56**	**78**	P	**P**	**09 06 40.6**	**-1.3**
	baz=332,SNR=12						
T60A	**Surry**	**54.56**	**78**	IAMs_20	IAMs_20	09 28 20.3	
	comp=Z,3µm,22.0s						
KMSC	**Kings Mountain**	**54.60**	**83**	P	**P**	**09 06 41.4**	**-0.9**
	baz=332						
KMSC	**Kings Mountain**	**54.60**	**83**	IAmb	IAmb	09 06 44.9	
	comp=Z,43nm,1.1s						
ZSN	**Zaisan**	**54.68**	**310**	*e*P	**P**	**09 06 42.2**	**-0.5**
	comp=Z,20nm,1.2s						
ZSN				*e*S	**S**	**09 14 22.6**	**+0.2**
ZSN				*e*LR	LR	09 31 25.7	
	comp=Z,493nm,12.1s						
ZSN	**Zaisan**	**54.68**	**310**	*e*P	**P**	**09 06 42.2**	**-0.5**
ZSN				*e*S	**S**	**09 14 22.5**	**+0.2**
ZSN				pmax	pmax		
	comp=Z,20nm,1.2s						
ZSN				MLR	MLR		
	comp=Z,493nm,12.0s						
Y52A	**Lilburn**	**54.70**	**86**	P	**P**	**09 06 42.8**	**-0.2**
	baz=333,SNR=27						
Y52A	**Lilburn**	**54.70**	**86**	IAmb	IAmb	09 06 46.3	
	comp=Z,57nm,0.9s						
Y52A				IAMs_20	IAMs_20	09 34 21.7	
	comp=Z,3µm,20.0s						
PAULI	**Pauline**	**54.70**	**84**	P	**P**	**09 06 42.7**	**-0.3**
PAULI				IAmb	IAmb	09 06 45.8	
	comp=Z,60nm,1.0s						
PAULI				IAMs_20	IAMs_20	09 31 31.9	
	comp=Z,3µm,18.0s						
X54A	**Belton**	**54.73**	**84**	P	**P**	**09 06 42.8**	**-0.4**
	baz=333,SNR=51						
DRUM	**Mains of Drumt**	**54.77**	**13**	*e*P	**P**	**09 06 42.8**	**-0.4**
DRUM				IAmb	IAmb	09 06 44.3	
	comp=Z,62nm,0.9s						
346A	**Big Creek Wild**	**54.84**	**93**	IAmb	IAmb	09 06 47.3	
	comp=Z,47nm,0.8s						
346A				IAMs_20	IAMs_20	09 28 43.4	
	comp=Z,3µm,20.0s						
V58A	**Windy Hill, Pi**	**54.86**	**81**	P	**P**	**09 06 42.3**	**-1.9**
	baz=332,SNR=8.8						
V58A	**Windy Hill, Pi**	**54.86**	**81**	IAmb	IAmb	09 06 46.4	
	comp=Z,42nm,1.0s						
U59A	**Littleton**	**54.87**	**79**	P	**P**	**09 06 42.4**	**-1.7**
	baz=332						
W56A	**Indian Trail**	**54.89**	**82**	P	**P**	**09 06 43.7**	**-0.7**
	baz=332,SNR=5.9						
SLIT	**Slitere, Latvi**	**54.91**	**357**	*e*P	**P**	**09 06 44.0**	**-0.2**
U60A	**Pendleton**	**55.00**	**79**	P	**P**	**09 06 44.2**	**-0.9**
	baz=332,SNR=5.7						
X55A	**Gracelyn & Ava**	**55.08**	**84**	P	**P**	**09 06 44.8**	**-0.9**
	baz=333,SNR=24						
W57A	**Gilead**	**55.10**	**82**	P	**P**	**09 06 45.1**	**-0.7**
	baz=333,SNR=5.3						
INVG	**Invergeldie, C**	**55.11**	**15**	*e*P	**P**	**09 06 45.2**	**-0.4**
INVG				IAmb	IAmb	09 06 46.1	
	comp=Z,19nm,0.8s						
INVG				IAMs_20	IAMs_20	09 30 32.6	
	comp=Z,2µm,21.1s						
LAWE	**Loch Awe, Argy**	**55.14**	**16**	*e*P	**P**	**09 06 45.7**	**-0.1**
LAWE				IAMs_20	IAMs_20	09 26 22.4	
	comp=Z,2µm,23.3s						
V59A	**Middlesex**	**55.22**	**80**	P	**P**	**09 06 46.2**	**-0.5**
	baz=332,SNR=11						
X56A	**White Oak**	**55.29**	**83**	P	**P**	**09 06 46.6**	**-0.7**
	baz=333,SNR=7.1						
EAB	**Aberfoyle**	**55.31**	**15**	*e*P	**P**	**09 06 47.0**	**-0.1**
GOGA	**Godfrey**	**55.33**	**86**	P	**P**	**09 06 48.7**	**+1.2**
GOGA				pmax	pmax		
	comp=Z,124nm,2.0s						
GOGA				MLR	MLR		
	comp=Z,4µm,20.0s						
GOGA	**Godfrey**	**55.33**	**86**	P	**P**	**09 06 46.9**	**-0.6**
	baz=333,SNR=6.9						
GOGA	**Godfrey**	**55.33**	**86**	P	**P**	**09 06 48.7**	**+1.2**
GOGA				IAmb	IAmb	09 06 53.7	
	comp=Z,124nm,2.0s						
BIRD	**Birdtown, Kers**	**55.37**	**83**	IAMs_20	IAMs_20	09 32 06.6	
	comp=Z,3µm,20.0s						
U61A	**Possum Corner**	**55.39**	**78**	P	**P**	**09 06 46.9**	**-1.0**
	baz=332,SNR=9.9						
U61A	**Possum Corner**	**55.39**	**78**	IAMs_20	IAMs_20	09 33 30.1	
	comp=Z,3µm,20.0s						
Y55A	**Saluda**	**55.47**	**84**	P	**P**	**09 06 47.9**	**-0.7**
	baz=333,SNR=33						
W58A	**Raeford**	**55.50**	**81**	P	**P**	**09 06 48.2**	**-0.6**
	baz=333,SNR=9.1						
152A	**Waverly Hall**	**55.51**	**87**	IAmb	IAmb	09 06 51.2	
	comp=Z,49nm,0.8s						
152A				IAMs_20	IAMs_20	09 31 54.1	
	comp=Z,3µm,18.0s						
250A	**Grady**	**55.54**	**89**	IAMs_20	IAMs_20	09 30 32.8	
	comp=Z,3µm,18.0s						
V60A	**Jim Taylor Roa**	**55.58**	**79**	P	**P**	**09 06 47.6**	**-1.8**
	baz=333,SNR=5.8						
V60A	**Jim Taylor Roa**	**55.58**	**79**	IAmb	IAmb	09 06 51.4	
	comp=Z,33nm,0.7s						
W59A	**Clinton**	**55.67**	**80**	P	**P**	**09 06 48.9**	**-1.1**
	baz=333						
PGBU	**Glenifferbraes**	**55.67**	**15**	*e*P	**P**	**09 06 49.7**	**0.0**
X57A	**Johnson Farm,**	**55.67**	**82**	P	**P**	**09 06 48.7**	**-1.3**
	baz=333,SNR=5.3						
ESY	**Stoneypath**	**55.74**	**14**	*e*P	**P**	**09 06 50.0**	**-0.2**
Y56A	**Pelion**	**55.81**	**84**	P	**P**	**09 06 50.3**	**-0.7**
	baz=333,SNR=5.6						
CNNC	**Cliffs of the**	**55.81**	**80**	P	**P**	**09 06 49.9**	**-1.1**
	baz=333						
V61A	**Roper**	**55.82**	**79**	P	**P**	**09 06 50.5**	**-0.5**
	baz=333						
EBL	**Broad Law**	**55.85**	**14**	*e*P	**P**	**09 06 51.2**	**+0.2**
X58A	**Rowland**	**55.88**	**82**	P	**P**	**09 06 50.3**	**-1.1**
	baz=333,SNR=5.5						
X58A	**Rowland**	**55.88**	**82**	P	**P**	**09 06 51.1**	**-0.3**
X58A				IAmb	IAmb	09 06 57.4	
	comp=Z,73nm,1.4s						
X58A				IAMs_20	IAMs_20	09 27 58.9	
	comp=Z,3µm,21.0s						
Y57A	**Sumter**	**55.96**	**83**	P	**P**	**09 06 50.8**	**-1.2**
	baz=333						
Y57A	**Sumter**	**55.96**	**83**	IAMs_20	IAMs_20	09 32 18.0	
	comp=Z,4µm,20.0s						
BRAL	**Brewton**	**55.96**	**90**	P	**P**	**09 06 51.1**	**-1.0**
	baz=334,SNR=6.8						
MUD	**Monsted U'grnd**	**55.97**	**6**	*e*P	**P**	**09 06 52.4**	**+0.6**
MUD	**Monsted U'grnd**	**55.97**	**6**	*i* P	**P**	**09 06 52.4**	**+0.6**
MOS	**Moscow**	**55.97**	**347**	*e*P	**P**	**09 06 51.5**	**-0.3**
MOS				*e*		09 08 57.3	
MOS				*e*PPP	PPP	09 10 13.4	
MOS				*e*S	**S**	**09 14 40.0**	**+0.7**
MOS				pmax	pmax		
	comp=Z,46nm,1.0s						
MOS				MLR	MLR		
	comp=Z,2µm,19.0s						
MK31	**Makanchi Array**	**56.01**	**312**	*i* P	**P**	**09 06 50.5**	**-1.8**
MKAR	**Makanchi Array**	**56.01**	**312**	P	**P**	**09 06 50.8**	**-1.6**
	comp=Z,13nm,0.8s,baz=38,slow=6.1,SNR=42						
MKAR				LR	LR	09 33 59.8	
	comp=Z,3µm,18.0s,baz=6.0,slow=40						
MKAR				PKPPKP	**P'P'df**	**09 37 04.7**	**+7.6**
	comp=Z,2.2nm,1.2s,baz=197,slow=3.7,SNR=5.6						
MKAR	**Makanchi Array**	**56.01**	**312**	*i* P	**P**	**09 06 50.7**	**-1.6**
MKAR				pmax	pmax		
	comp=Z,14nm,0.8s						
W60A	**Pink Hill**	**56.05**	**80**	P	**P**	**09 06 51.6**	**-1.1**
	baz=333						
MAKZ	**Makanchi**	**56.09**	**312**	P	**P**	**09 06 51.1**	**-1.8**
MAKZ	**Makanchi**	**56.09**	**312**	P	**P**	**09 06 51.1**	**-1.8**
MAKZ				IAMs_20	IAMs_20	09 33 43.4	
	comp=Z,4µm,20.0s						
X59A	**McDuffie Farm,**	**56.14**	**81**	P	**P**	**09 06 52.7**	**-0.6**
	baz=333,SNR=6.4						
154A	**Montrose**	**56.17**	**86**	IAmb	IAmb	09 06 56.2	
	comp=Z,51nm,0.8s						
154A				IAMs_20	IAMs_20	09 30 24.7	
	comp=Z,2µm,20.0s						
Z56A	**Williston**	**56.20**	**84**	P	**P**	**09 06 53.6**	**-0.2**
	baz=333,SNR=9.1						
W61A	**Ground Anchor**	**56.21**	**79**	P	**P**	**09 06 52.2**	**-1.5**
	baz=333						
V62A	**Hyde County Ai**	**56.25**	**78**	IAMs_20	IAMs_20	09 29 23.0	
	comp=Z,2µm,22.0s						

EKA Eskdalemuir Ar 56.27 14 P **P** **09 06 53.9 -0.1**
comp=Z,36nm,0.8s,baz=359,slow=5.6,SNR=55
ESK Eskdalemuir 56.28 14 *e*P **P** **09 06 54.0 0.0**
ESK IAmb IAmb 09 06 55.0
comp=Z,47nm,0.9s
ESK IAMs_20 IAMs_20 09 24 39.2
comp=Z,3μm,39.3s
ESK Eskdalemuir 56.28 14 P **P** **09 06 53.7 -0.4**
ESK pmax pmax
comp=Z,80nm,0.7s
ESK MLR MLR
comp=Z,1μm,18.0s
ESK Eskdalemuir 56.28 14 P **P** **09 06 53.7 -0.4**
Y58A Scranton 56.33 82 P **P** **09 06 53.7 -1.0**
baz=333
Y58A Scranton 56.33 82 IAMs_20 IAMs_20 09 32 53.9
comp=Z,3μm,19.0s
X60A Albert Glenn T 56.37 80 P **P** **09 06 53.4 -1.5**
baz=333
NEWG New Galloway 56.38 15 *e*P **P** **09 06 54.3 -0.4**
NEWG IAmb IAmb 09 07 01.1
comp=Z,28nm,0.8s
NEWG IAMs_20 IAMs_20 09 31 21.0
comp=Z,2μm,19.7s
Z57A Bowman 56.48 84 P **P** **09 06 55.3 -0.4**
baz=333,SNR=15
352A Blakely 56.49 88 IAMs_20 IAMs_20 09 33 04.1
comp=Z,3μm,18.0s
PBUR Paburge 56.53 357 *e*P **P** **09 06 56.8 +1.0**
Y59A Loris 56.55 82 P **P** **09 06 55.4 -0.9**
baz=333
Y59A Loris 56.55 82 IAmb IAmb 09 07 05.0
comp=Z,53nm,0.8s
Y59A IAMs_20 IAMs_20 09 34 24.9
comp=Z,2μm,19.0s
SSE Sheshan 56.57 271 P **P** **09 06 56.0 -0.4**
SSE S **S** **09 14 47.5 -0.3**
SSE pmax pmax
comp=Z,13nm,0.6s
SSE pmax pmax
comp=Z,230nm,6.9s
SSE LR LR
comp=Z,1μm,19.2s
SSE LR LR
comp=Z,2μm,14.9s
SSE Sheshan 56.57 271 IAMs_20 IAMs_20 09 31 40.3
comp=Z,2μm,21.0s
NJ2 Nanjing 56.60 273 *e*P **P** **09 06 55.4 -1.3**
NJ2 S **S** **09 14 48.2 -0.1**
NJ2 pmax pmax
comp=Z,24nm,0.5s
NJ2 pmax pmax
comp=Z,420nm,7.1s
NJ2 LR LR
comp=Z,4μm,22.7s
NJ2 LR LR
comp=Z,14μm,15.6s
NJ2 LR LR
comp=Z,4μm,18.9s
IZAR Zarasai 56.68 354 *e*P **P** **09 06 58.1 +1.2**
OBN Obninsk 56.68 347 P **P** **09 06 56.5 -0.4**
comp=Z,6.0nm,0.4s,baz=5.9,slow=17,SNR=5.7
OBN Obninsk 56.68 347 ⇓*i*P **P** **09 06 56.9 0.0**
OBN *e**PP **pP** **09 06 59.5 -0.6**
OBN *e**SP **sP** **09 07 01.7 +0.4**
OBN 09 07 51.0
OBN *e* 09 09 02.9
OBN PPP PPP 09 10 17.0
OBN *e*S **S** **09 14 50.4 +1.7**
OBN pmax pmax
comp=Z,65nm,1.7s
OBN MLR MLR
comp=Z,2μm,19.0s
OBN Obninsk 56.68 347 P **P** **09 06 55.9 -1.0**
OBN IAmb IAmb 09 07 03.2
comp=Z,46nm,0.7s
OBN IAMs_20 IAMs_20 09 34 27.2
comp=Z,2μm,19.0s
Z58A St. Stephen 56.78 83 P **P** **09 06 56.8 -1.1**
baz=333
Y60A Bolivia 56.79 81 P **P** **09 06 56.9 -1.0**
baz=333
NHSC New Hope 56.85 83 P **P** **09 06 58.6 +0.3**
baz=333,SNR=8.3
ISAL Salakas 56.86 354 *e*P **P** **09 06 59.3 +1.2**
EDMD Edmundbyers 56.88 13 *e*P **P** **09 06 57.4 -0.9**
EDMD IAMs_20 IAMs_20 09 24 52.7
comp=Z,2μm,37.3s
157A Early Branch 56.92 84 P **P** **09 06 57.8 -1.1**
baz=333
451A Vernon 56.95 90 IAMs_20 IAMs_20 09 31 43.2
comp=Z,3μm,21.0s
PABE Paberze 57.00 356 *e*P **P** **09 07 00.5 +1.4**
255A Hazlehurst 57.03 86 IAMs_20 IAMs_20 09 32 46.3
comp=Z,3μm,19.0s
TIGA Tifton 57.04 87 P **P** **09 06 59.4 -0.3**
baz=334,SNR=5.5
TIGA Tifton 57.04 87 IAmb IAmb 09 07 02.2
comp=Z,91nm,1.2s
TIGA IAMs_20 IAMs_20 09 30 12.5
comp=Z,4μm,22.0s
Z59A Georgetown, SC 57.07 82 P **P** **09 06 59.1 -0.8**
baz=333
GTA Gaotai 57.07 294 ⇓P **P** **09 07 00.1 0.0**
GTA pP sP 09 07 05.2 +0.7
GTA sP pP 09 07 08.9 +5.6
GTA S **S** **09 14 53.7 -0.9**
GTA SS **SS** **09 18 39.5 -3.0**
GTA pmax pmax
comp=Z,11nm,1.3s
GTA pmax pmax
comp=Z,340nm,6.5s
GTA LR LR
comp=Z,4μm,16.2s
GTA LR LR
comp=Z,9μm,16.2s
GTA LR LR
comp=Z,6μm,14.3s
IIGN Ignalina 57.08 354 *e*P **P** **09 07 00.0 +0.3**
WMQ Urumqi 57.10 306 *e*P **P** **09 07 03.1 +2.9**
WMQ pP sP 09 07 06.2 +1.6
WMQ sP pP 09 07 08.3 +4.9
WMQ S **S** **09 14 54.8 0.0**
WMQ pmax pmax
comp=Z,19nm,1.1s
WMQ pmax pmax
comp=Z,350nm,5.1s
WMQ LR LR
comp=Z,2μm,20.3s
WMQ LR LR
comp=Z,2μm,16.3s
WMQ LR LR
comp=Z,1μm,20.5s
WMQ Urumqi 57.10 306 IAMs_20 IAMs_20 09 33 57.2
comp=Z,3μm,20.0s
158A Hollywood 57.17 83 P **P** **09 06 59.7 -1.0**
baz=333
OTUK Ortayu 57.33 320 P **P** **09 07 00.1 -1.6**
BSD Bornholm Skovb 57.46 2 ⇓*i*P **P** **09 07 02.2 -0.2**
BSD pmax pmax
comp=Z,19nm,0.7s
BSD Bornholm Skovb 57.46 2 ⇓*i*P **P** **09 07 02.2 -0.2**
comp=Z,19nm,0.7s
NACGM Naroch 57.50 354 *e*P **P** **09 07 02.0 -0.7**
NACGM *e*S **S** **09 14 55.0 -4.6**
NACGM *e*LR LR 09 23 47.0
NACGM LRM MLR 09 29 15.0
comp=Z,2.9nm,24.0s
JOW Kunigami 57.70 262 P **P** **09 07 06.2 +1.7**
comp=Z,2.5nm,0.8s,baz=115,slow=14,SNR=7.7
JOW Kunigami 57.70 262 IAmb IAmb 09 07 34.8
comp=Z,50nm,1.3s
ZAIG Zacatecas 57.76 110 IAMs_20 IAMs_20 09 34 31.1
comp=Z,3μm,20.0s
HPK Haverah Park 57.77 13 *e*P **P** **09 07 04.5 -0.2**
HPK IAMs_20 IAMs_20 09 33 37.2
comp=Z,1μm,18.2s
MICGM Minsk 57.86 353 *e*P **P** **09 07 06.0 +0.8**
MICGM *e*S **S** **09 15 08.0 +3.8**
MICGM *e*LR LR 09 26 40.0
MICGM LRM MLR 09 32 26.0
comp=Z,4.1nm,18.0s
MNK Minsk 57.86 353 *e*P **P** **09 07 06.0 +0.8**
MNK *e*S **S** **09 15 08.0 +3.8**
KLNR Kaliningrad 57.98 358 *i*P **P** **09 07 06.3 +0.3**
RGN Rugen 58.00 3 *e*P **P** **09 07 07.2 +1.1**
RGN Rugen 58.00 3 *e*P **P** **09 07 07.3 +1.1**
comp=Z,67nm,0.9s,baz=357,slow=6.8
DSB Dublin 58.00 17 IAmb IAmb 09 07 12.7
comp=Z,39nm,0.9s
WPS Cemaes, Angles 58.05 16 *e*P **P** **09 07 05.9 -0.6**
WPS IAmb IAmb 09 07 12.7
comp=Z,35nm,0.7s
WME Myndd Eilian 58.07 15 *e*P **P** **09 07 06.1 -0.6**
WLF1 Llynfaes 58.17 15 *e*P **P** **09 07 06.8 -0.6**
WLF1 IAmb IAmb 09 07 07.7
comp=Z,70nm,1.1s
456A Hilliard 58.27 86 IAMs_20 IAMs_20 09 32 41.3
comp=Z,3μm,19.0s
LBWR Ladybower, Pea 58.31 14 *e*P **P** **09 07 08.1 -0.3**
LBWR IAmb IAmb 09 07 14.8
comp=Z,53nm,0.9s
LBWR IAMs_20 IAMs_20 09 33 51.0
comp=Z,1μm,24.2s
AKTO Aktyubinsk 58.36 331 P **P** **09 07 07.8 -1.0**
comp=Z,18nm,0.8s,baz=32,slow=6.7,SNR=27
BSEG Bad Segeberg 58.53 5 *e*P **P** **09 07 10.8 +0.9**
comp=Z,76nm,1.3s,baz=357,slow=6.8
BSEG Bad Segeberg 58.53 5 P **P** **09 07 11.8 +1.9**
XAN Xi'an 58.57 283 P **P** **09 07 08.5 -2.1**
XAN PP **PP** **09 09 18.3 -1.5**
XAN S **S** **09 15 11.7 -2.5**
XAN SS **SS** **09 19 06.9 +0.7**
XAN pmax pmax
comp=Z,7.0nm,0.8s
XAN pmax pmax
comp=Z,350nm,8.7s
XAN LR LR
comp=Z,12μm,17.6s
XAN LR LR
comp=Z,20μm,18.4s
XAN LR LR
comp=Z,5μm,17.9s
LZH Lanzhou 58.61 289 *e*P **P** **09 07 11.9 +1.0**
LZH sP sP 09 07 20.0 +4.6
LZH PP **PP** **09 09 21.6 +1.5**
LZH S **S** **09 15 18.7 +3.9**
LZH sS sS 09 15 30.2 +10
LZH pmax pmax
comp=Z,52nm,1.3s
LZH pmax pmax
comp=Z,680nm,4.9s
LZH LR LR
comp=Z,5μm,11.9s
LZH LR LR
comp=Z,4μm,13.6s
LZH LR LR
comp=Z,5μm,14.0s
FOEL Foel Wylfa 58.68 15 *e*P **P** **09 07 11.0 -0.1**
FOEL IAmb IAmb 09 07 18.8
comp=Z,46nm,0.8s
TDK Taldyqorghan 58.74 314 *e*P **P** **09 07 11.0 -0.6**
comp=Z,2μm,13.9s
TDK *e*S S 09 15 00.2 -16
TDK *e*LR LR 09 33 54.8
TDK Taldyqorghan 58.74 314 *e*P **P** **09 07 11.0 -0.6**
LPSR Galich'ya Gora 58.95 345 *e*P **P** **09 07 12.4 -0.5**
LPSR pmax pmax
comp=Z,40nm,0.8s
CWF Charnwood Fore 59.01 13 *e*P **P** **09 07 13.7 +0.4**
CWF IAMs_20 IAMs_20 09 34 15.4
comp=Z,2μm,18.1s
HLM1 Long Mynd 59.08 15 *e*P **P** **09 07 13.8 -0.1**
HLM1 IAmb IAmb 09 07 20.4
comp=Z,36nm,0.9s
ABKAR Akbulak array 59.12 329 P **P** **09 07 13.4 -0.7**
MCH1 Michaelchurch 59.59 15 *e*P **P** **09 07 17.0 -0.3**
MCH1 IAmb IAmb 09 07 24.1
comp=Z,46nm,0.8s
WHN Wuhan 59.66 277 ⇑P **P** **09 07 20.3 +2.2**
WHN S **S** **09 15 28.2 0.0**
WHN LR LR
comp=Z,14μm,15.8s
WHN LR LR
comp=Z,5μm,17.7s
WHN LR LR
comp=Z,7μm,14.3s
BTLS Baital 59.88 317 *e*P **P** **09 07 18.5 -1.0**
comp=Z,14nm,1.1s
BTLS *e*S **S** **09 15 26.1 -4.6**
BTLS *e*LR LR 09 34 03.6
comp=Z,302nm,12.4s
BTLS Baital 59.88 317 *e*P **P** **09 07 18.4 -1.0**
BTLS *e*S **S** **09 15 26.1 -4.6**
BTLS pmax pmax
comp=Z,14nm,1.1s
BTLS MLR MLR
comp=Z,302nm,12.0s
NRDL Niedersach Rie 59.96 5 *e*P **P** **09 07 20.6 +0.8**
comp=Z,70nm,1.2s,baz=357,slow=6.8
PDGK Podgornoye 59.98 312 P **P** **09 07 19.4 -0.9**
VRH Novokhopyorsk 60.04 343 *e*P **P** **09 07 18.2 -2.2**
VRH pmax pmax
comp=Z,20nm,0.3s
IBBN Ibbenburen 60.05 7 *e*P **P** **09 07 21.3 +0.8**
comp=Z,89nm,1.0s,baz=357,slow=6.8
RUE Ruedersdorf 60.08 3 *e*P **P** **09 07 22.4 +1.7**
SHLS Shalkode 60.15 312 *e*P **P** **09 07 20.6 -0.9**
comp=Z,20nm,0.8s
SHLS *e*S **S** **09 15 33.4 -1.1**
SHLS *e*LR LR 09 35 17.5
comp=Z,757nm,13.5s
SHLS Shalkode 60.15 312 *e*P **P** **09 07 20.5 -0.9**
SHLS *e*S **S** **09 15 33.4 -1.1**
SHLS pmax pmax
comp=Z,20nm,0.8s
SHLS MLR MLR
comp=Z,757nm,13.0s
UZB Uzynbulak 60.28 312 *e*P **P** **09 07 21.7 -0.7**
comp=Z,10nm,1.1s
UZB *e*S **S** **09 15 38.0 +1.7**
UZB *e*LR LR 09 36 05.5
comp=Z,484nm,12.3s
UZB Uzynbulak 60.28 312 *e*P **P** **09 07 21.7 -0.7**
UZB *e*S **S** **09 15 38.0 +1.7**
UZB pmax pmax
comp=Z,11nm,1.1s
UZB MLR MLR
comp=Z,484nm,12.0s
VSR Storozhevoye 60.30 345 *e*P **P** **09 07 21.6 -0.6**
VSR pmax pmax
comp=Z,40nm,0.6s
KUU Kurty 60.34 315 *e*P **P** **09 07 21.2 -1.4**
comp=Z,156nm,3.2s
KUU *e*S **S** **09 15 35.0 -1.7**
KUU *e*LR LR 09 36 08.1
comp=Z,907nm,12.6s
KUU Kurty 60.34 315 *e*P **P** **09 07 21.2 -1.4**
KUU *e*S **S** **09 15 35.0 -1.7**
KUU pmax pmax
comp=Z,156nm,3.2s
KUU MLR MLR
comp=Z,907nm,13.0s
ASSE Asse, Remlinge 60.35 5 *e*P **P** **09 07 23.0 +0.6**
comp=Z,43nm,1.6s,baz=357,slow=6.8
VORD Divnogorie 60.53 345 *e*P **P** **09 07 22.2 -1.6**
VORD pmax pmax
comp=Z,80nm,1.5s
SATY Saty 60.54 313 *e*P **P** **09 07 23.5 -0.6**
SATY Saty 60.54 313 *e*P **P** **09 07 23.5 -0.6**
CLZ Clausthal 60.63 5 *e*P **P** **09 07 25.4 +0.9**
comp=Z,86nm,1.2s,baz=357,slow=6.8
BEL Belsk 60.74 358 *e*P **P** **09 07 26.0 +0.8**
BEL LMZ LR 09 31 40.8
comp=Z,1.3nm,23.4s
BEL Belsk 60.74 358 P **P** **09 07 26.9 +1.7**
AAA Alma-Ata 60.81 314 *e*P **P** **09 07 24.9 -1.0**
AAA Alma-Ata 60.81 314 *e*P **P** **09 07 25.3 -0.6**
AAA *e*S **S** **09 15 48.9 +6.0**
AAA pmax pmax
comp=Z,300nm,4.6s
AAA smax smax
comp=Z,400nm,10.7s
MDOK Medeo 60.82 314 *e*P **P** **09 07 25.2 -0.8**
MDOK *e*LR LR 09 35 45.0
comp=Z,1μm,15.2s
MDOK Medeo 60.82 314 *e*P **P** **09 07 25.2 -0.8**
MDOK MLR MLR
comp=Z,1μm,15.0s
DWPF Disney Wildern 60.84 87 IAMs_20 IAMs_20 09 32 28.3
comp=Z,3μm,21.0s
BUG Bochum--Univer 60.90 8 *e*P **P** **09 07 26.5 +0.3**
comp=Z,53nm,1.2s,baz=357,slow=6.8
BUG Bochum--Univer 60.90 8 P **P** **09 07 29.4 +3.2**
BUG pmax pmax
comp=Z,38nm,1.3s
GTTG Gottingen 60.91 6 *e*P **P** **09 07 27.3 +1.0**
comp=Z,76nm,1.4s,baz=357,slow=6.8
TNSS Tian-Shan 60.96 314 *e*P **P** **09 07 25.8 -1.6**
TNSS Tian-Shan 60.96 314 *e*P **P** **09 07 25.7 -1.6**
PRZ Przheval'sk 61.07 313 IAMs_20 IAMs_20 09 37 22.5
comp=Z,2μm,19.0s
SGDS Sogindy 61.20 316 ⇓*i*P **P** **09 07 28.1 -0.5**
comp=Z,29nm,1.4s
SGDS *e*LR LR 09 37 21.2
comp=Z,922nm,12.1s
CLL Collm 61.24 3 ⇓*i*P **P** **09 07 29.8 +1.2**
comp=Z,51nm,1.2s
CLL *e*Plp 09 07 33.0
CLL *e*PP **PP** **09 08 38.0 -4.8**
CLL *e*PPP PPP 09 11 18.0
CLL *e*S **S** **09 15 51.0 +3.1**
CLL *e*PS **PnS** **09 16 00.0 -1.1**
CLL *e*SS **SS** **09 19 54.0 +7.1**
CLL *e*SSS SSS 09 22 54.0
CLL Collm 61.24 3 *e*P **P** **09 07 29.8 +1.2**
comp=Z,55nm,1.5s,baz=357,slow=6.8
CLL Collm 61.24 3 ⇓*i*P **P** **09 07 29.8 +1.2**
CLL *e*S **S** **09 15 51.0 +3.1**
CLL pmax pmax
comp=Z,51nm,1.2s
CLL Collm 61.24 3 IAmb IAmb 09 07 43.6
comp=Z,44nm,1.2s
NEUB Neuenburg 61.30 4 *e*P **P** **09 07 29.6 +0.6**
comp=Z,111nm,1.6s,baz=357,slow=6.8
USP Ospenovka 61.41 316 P **P** **09 07 29.5 -0.4**
SNR=13
TKM2 Tokmak 2 61.44 315 P **P** **09 07 29.9 -0.5**
SNR=18
TKM2 Tokmak 2 61.44 315 *i* P **P** **09 07 29.7 -0.6**
TKM2 pmax pmax
comp=Z,42nm,0.7s
AKASG Malin Array Be 61.59 352 P **P** **09 07 30.1 -0.8**
comp=Z,18nm,0.6s,baz=6.8,slow=6.6,SNR=55
AKASG LR LR 09 35 03.9
comp=Z,2μm,19.4s,baz=0.0,slow=37
AKASG PKPPKP **P'P'df** **09 36 47.9 -1.8**
comp=Z,1.1nm,0.8s,baz=186,slow=2.2,SNR=5.0
AKBB Malin Array Si 61.59 352 *ce*P **P** **09 07 30.6 -0.3**
CHMS Chumysh 61.59 316 P **P** **09 07 30.6 -0.5**
SNR=14
KIEV Kiev 61.59 352 P **P** **09 07 30.0 -1.0**
FBE Freiberg 61.63 3 *e*P **P** **09 07 31.9 +0.7**
comp=Z,60nm,1.6s,baz=357,slow=6.8
UBBA Unterbreizbach 61.64 6 *e*P **P** **09 07 31.7 +0.6**
comp=Z,51nm,1.4s,baz=357,slow=6.8
SNF Seneffe 61.65 10 P **P** **09 07 31.3 -0.1**
comp=Z,29nm,1.0s
BSTI Sart Tilman 61.66 9 P **P** **09 07 31.7 +0.3**
MEM Membach 61.66 8 P **P** **09 07 31.4 0.0**
BRG Berggiesshubel 61.69 3 *i* P **P** **09 07 32.0 +0.4**
comp=Z,16nm,1.0s
BRG S **S** **09 15 57.0 +3.3**
BRG SS **SS** **09 19 58.0 +3.9**
comp=N,1μm,22.7s
comp=E,1μm,20.1s
comp=Z,1μm,25.3s
BRG Berggiesshubel 61.69 3 *e*P **P** **09 07 32.1 +0.4**
comp=Z,30nm,1.0s,baz=357,slow=6.8
BRG Berggiesshubel 61.69 3 *i* P **P** **09 07 32.0 +0.4**
BRG S **S** **09 15 57.0 +3.3**
BRG SS **SS** **09 19 58.0 +3.9**
BRG pmax pmax
comp=Z,19nm,1.0s
BRG MLR MLR
comp=N,1μm,22.7s
BRG MLR MLR
comp=E,1μm,20.1s
BRG MLR MLR
comp=Z,1μm,25.3s
ENH Enshi 61.74 281 IAMs_20 IAMs_20 09 32 39.2
comp=Z,3μm,19.0s
KDJ Kajisay 61.74 313 IAMs_20 IAMs_20 09 37 01.1
comp=Z,3μm,21.0s
BOOM Boomskoye usch 61.74 314 IAmb IAmb 09 07 38.8
comp=Z,31nm,0.7s
BOOM IAMs_20 IAMs_20 09 37 00.0
comp=Z,3μm,20.0s
KSP Ksiaz 61.75 1 *e*P **P** **09 07 32.4 +0.4**
KSP *e*S **S** **09 15 56.6 +2.1**
KSP LMZ LR 09 27 18.0
comp=Z,2.4nm,35.8s
KSP Ksiaz 61.75 1 P **P** **09 07 33.3 +1.2**
AHRW Bad Neuenahr-A 61.78 8 *e*P **P** **09 07 33.0 +0.8**
comp=Z,34nm,1.1s,baz=357,slow=6.8
FRU1 Bishkek 61.80 316 IAMs_20 IAMs_20 09 39 22.5
comp=Z,2μm,21.0s
BCLA Clavier 61.81 9 P **P** **09 07 35.1 +2.7**
BGES Gesves 61.83 9 P **P** **09 07 32.2 -0.4**
YOJ Yonaguni jima 61.84 266 IAMs_20 IAMs_20 09 34 24.7
comp=Z,2μm,18.0s
KBK Karagaybulak 61.86 315 P **P** **09 07 33.8 +0.6**
SNR=9.2
MOX Moxa 61.86 4 *e*P **P** **09 07 33.5 +0.6**
comp=Z,47nm,1.4s,baz=357,slow=6.8
MOX *e*L L 09 38 59.4
comp=Z,660nm,21.1s
MOX Moxa 61.86 4 P **P** **09 07 34.1 +1.3**
BMRD Maredsous 61.89 9 P **P** **09 07 33.0 0.0**
comp=Z,22nm,1.3s
TATO Taipei 61.95 267 IAMs_20 IAMs_20 09 32 55.9
comp=Z,2μm,20.0s
AAK Ala-Archa 62.00 316 P **P** **09 07 34.3 +0.2**
SNR=25
AAK Ala-Archa 62.00 316 *i* P **P** **09 07 34.0 -0.1**
SNR=50
AAK Ala-Archa 62.00 316 P **P** **09 07 33.9 -0.1**
AAK Ala-Archa 62.00 316 P **P** **09 07 33.7 -0.4**
AAK Ala-Archa 62.00 316 P **P** **09 07 33.6 -0.4**
AAK Ala-Archa 62.00 316 IAMs_20 IAMs_20 09 35 09.7
comp=Z,2μm,19.0s
CHVC Chvalec 62.00 1 *e*P **P** **09 07 34.1 +0.3**
CHVC AMS AMS 09 37 30.0
comp=Z,1μm,18.5s
OSTC Ostas 62.04 1 *e*P **P** **09 07 34.8 +0.8**
OSTC AMS AMS 09 37 40.0
comp=Z,900nm,17.0s
PLN Plauen 62.04 4 *e*P **P** **09 07 34.7 +0.7**
comp=Z,40nm,1.4s,baz=357,slow=6.8
PVCC Panska Ves 62.05 2 *e*P **P** **09 07 35.2 +1.2**
PVCC MLR MLR
comp=Z,1μm,15.8s
PVCC Panska Ves 62.05 2 *e*P **P** **09 07 35.2 +1.2**
PVCC AMS AMS 09 42 40.0
comp=Z,1μm,15.8s
DOU Dourbes 62.09 10 P **P** **09 07 34.5 +0.2**
comp=Z,23nm,1.2s
DOU Dourbes 62.09 10 P **P** **09 07 36.3 +2.0**
UPC Upice 62.09 1 *e*P **P** **09 07 34.7 +0.4**
UPC *e*S **S** **09 15 57.2 -1.5**
UPC MLR MLR
comp=Z,1μm,17.1s
UPC Upice 62.09 1 *e*P **P** **09 07 34.7 +0.4**
UPC *e*S **S** **09 15 57.2 -1.5**
UPC AMS AMS 09 37 30.0
comp=Z,1μm,17.1s
GIVF Givet 62.09 9 *e*P **P** **09 07 34.7 +0.3**
GIVF pmax pmax
comp=Z,29nm,1.0s
BAIF Baives 62.10 10 *e*P **P** **09 07 34.1 -0.3**
BAIF pmax pmax
comp=Z,53nm,1.1s
TANN Tannenbergstha 62.12 4 *e*P **P** **09 07 35.4 +0.8**
comp=Z,92nm,1.3s,baz=357,slow=6.8
UNM Universidad Na 62.13 108 IAMs_20 IAMs_20 09 36 13.1
comp=Z,3μm,19.0s
EKS2 Erkin-Say 62.16 316 P **P** **09 07 35.4 +0.2**
SNR=14
GUNZ Gunzen 62.16 4 *e*P **P** **09 07 35.7 +0.8**
comp=Z,46nm,1.5s,baz=357,slow=6.8
TNS Taunus Mts 62.17 7 *e*P **P** **09 07 35.5 +0.6**
comp=Z,37nm,1.2s,baz=357,slow=6.8
TNS Taunus Mts 62.17 7 P **P** **09 07 36.9 +2.0**
060A Indiantown 62.22 86 IAMs_20 IAMs_20 09 32 40.7
comp=Z,3μm,21.0s
WERN Wernitzgruen 62.24 4 *e*P **P** **09 07 36.2 +0.8**
comp=Z,65nm,1.5s,baz=357,slow=6.8

DPC Dobruska-Polom 62.24 1 *e*P **P** **09 07 35.8 +0.4**
DPC *e*S **S** **09 16 04.9 +4.1**
DPC MLR MLR
comp=Z,800nm,16.3s
DPC Dobruska-Polom 62.24 1 *e*P **P** **09 07 35.8 +0.4**
DPC *e*S **S** **09 16 04.9 +4.1**
DPC AMS AMS 09 42 40.0
comp=Z,800nm,16.3s
YHNB Yeheng 62.27 267 IAMs_20 IAMs_20 09 33 26.4
comp=Z,2µm,18.0s
NKC Novy Kostel 62.30 4 *e*P **P** **09 07 36.0 +0.2**
NKC MLR MLR
comp=Z,1µm,17.4s
NKC Novy Kostel 62.30 4 *e*P **P** **09 07 36.0 +0.2**
NKC AMS AMS 09 39 10.0
comp=Z,1µm,17.4s
KZA Kyzart 62.32 315 P **P** **09 07 36.1 -0.4**
SNR=16
OJC Ojcow 62.37 359 *e*P **P** **09 07 36.6 +0.4**
OJC *e*S **S** **09 16 00.9 -1.4**
OJC LMZ LR 09 28 22.0
comp=Z,1.5nm,27.6s
OJC Ojcow 62.37 359 P **P** **09 07 37.9 +1.7**
OJC Ojcow 62.37 359 IAmb IAmb 09 07 47.5
comp=Z,33nm,0.9s
UCH Uchtor 62.37 316 P **P** **09 07 36.8 -0.1**
SNR=12
PRA Prague 62.50 2 *e*S **S** **09 16 01.1 -2.8**
PRA AMS AMS 09 43 20.0
comp=Z,600nm,17.9s
KRLC Kraliky 62.52 1 *e*P **P** **09 07 37.9 +0.6**
KRLC *e*S **S** **09 16 06.0 +1.7**
KRLC MLR MLR
comp=Z,800nm,20.0s
KRLC Kraliky 62.52 1 *e*P **P** **09 07 37.9 +0.6**
KRLC *e*S **S** **09 16 06.0 +1.7**
KRLC AMS AMS 09 38 50.0
comp=Z,800nm,20.0s
DZA Taraz 62.58 318 *e*P **P** **09 07 37.1 -0.8**
DZA Taraz 62.58 318 *e*P **P** **09 07 37.0 -0.8**
PRU Pruhonice 62.59 2 *e*P **P** **09 07 38.3 +0.6**
PRU *e* 09 07 43.4
PRU *e*S **S** **09 16 01.3 -3.7**
PRU MLR MLR
comp=Z,1µm,17.7s
PRU Pruhonice 62.59 2 *e*P **P** **09 07 38.3 +0.6**
PRU *e*pP **sP** **09 07 43.4 +1.2**
PRU *e*S **S** **09 16 01.3 -3.7**
PRU AMS AMS 09 43 10.0
comp=Z,1µm,17.7s
KK31 Karatay Array 62.59 319 *i* P **P** **09 07 36.6 -1.2**
WLF Walferdange 62.61 8 P **P** **09 07 38.4 +0.6**
WLF Walferdange 62.61 8 *e*P **P** **09 07 38.6 +0.8**
comp=Z,46nm,1.3s,baz=357,slow=6.8
WLF Walferdange 62.61 8 IAmb IAmb 09 07 49.9
comp=Z,47nm,1.3s
NACB Ninganchiao 62.64 267 IAMs_20 IAMs_20 09 33 46.0
comp=Z,3µm,18.0s
GOPC GO Pecny, Ondr 62.66 2 *e*P **P** **09 07 38.5 +0.3**
GOPC *e*S **S** **09 16 06.5 +0.4**
GOPC MLR MLR
comp=Z,1µm,18.3s
GOPC GO Pecny, Ondr 62.66 2 *e*P **P** **09 07 38.5 +0.3**
GOPC *e*S **S** **09 16 06.5 +0.4**
GOPC AMS AMS 09 39 10.0
comp=Z,1µm,18.3s
AML Almayashu 62.68 316 P **P** **09 07 38.6 -0.4**
SNR=28
LVV L'vov 62.69 355 *e*P **P** **09 07 37.7 -0.6**
LVV *e* 09 08 17.4
LVV *e* 09 09 52.0
LVV *e*PPP PPP 09 11 34.5
LVV *e*S **S** **09 16 04.1 -2.2**
LVV *e*PS **PnS** **09 16 26.1 +5.1**
LVV MLR MLR
comp=E,700nm,18.0s
LVV MLR MLR
comp=N,1µm,19.0s
LVV MLR MLR
comp=Z,1µm,19.0s
ROTZ Rotzenmuhle 62.76 4 *e*P **P** **09 07 39.7 +0.9**
comp=Z,49nm,1.6s,baz=357,slow=6.8
OKC Ostrava-Krasne 62.76 360 *e*P **P** **09 07 39.0 +0.2**
OKC *e*S **S** **09 16 08.7 +1.5**
OKC MLR MLR
comp=Z,1µm,17.9s
OKC Ostrava-Krasne 62.76 360 *e*P **P** **09 07 39.0 +0.2**
OKC *e*S **S** **09 16 08.7 +1.5**
OKC AMS AMS 09 38 50.0
comp=Z,1µm,17.9s
GRA1 Grafenberg Arr 62.80 5 P **P** **09 07 39.0 -0.1**
GRF Grafenberg Arr 62.80 5 *e*P **P** **09 07 40.2 +1.1**
comp=Z,72nm,1.2s,baz=357,slow=6.8
GRF *e*L L 09 40 03.0
comp=Z,677nm,20.3s
GRF Grafenberg Arr 62.80 5 P **P** **09 07 39.0 -0.1**
GRF pmax pmax
comp=Z,53nm,1.0s
GRF MLR MLR
comp=Z,700nm,20.0s
MORC Moravsky Berou 62.82 0 *e*P **P** **09 07 39.7 +0.4**
MORC *e*S **S** **09 16 09.9 +1.8**
MORC Moravsky Berou 62.82 0 ⇑P **P** **09 07 39.5 +0.2**
MORC Moravsky Berou 62.82 0 ⇑P **P** **09 07 39.5 +0.2**
MORC Moravsky Berou 62.82 0 IAmb IAmb 09 07 43.2
comp=Z,81nm,1.8s
BRLS Boroldav 62.83 319 *e*S **S** **09 16 13.0 +4.7**
PBCC Pribram 62.88 3 *e*P **P** **09 07 39.6 -0.1**
KWP Kalwaria Pacla 62.91 356 *e*P **P** **09 07 40.7 +0.9**
KWP LMZ LR 09 29 30.1
comp=Z,1.9nm,32.3s
KWP Kalwaria Pacla 62.91 356 IAMs_20 IAMs_20 09 34 59.0
comp=Z,2µm,22.0s
FLN La Foliniere 63.02 13 *e*P **P** **09 07 40.6 0.0**
FLN pmax pmax
comp=Z,20nm,0.8s
061Z Ochoppi 63.06 87 IAMs_20 IAMs_20 09 37 52.1
comp=Z,2µm,20.0s
QZH Quanzhou 63.09 270 ⇑*i*P **P** **09 07 43.7 +2.4**
QZH S **S** **09 16 18.4 +6.5**
QZH LR LR
comp=Z,2µm,19.0s
QZH LR LR
comp=Z,6µm,16.9s
QZH LR LR
comp=Z,3µm,13.0s
NIE Niedzica 63.17 358 *e*P **P** **09 07 42.5 +0.9**
NIE LMZ LR 09 31 34.0
comp=Z,0.7nm,25.9s
NIE Niedzica 63.17 358 P **P** **09 07 42.8 +1.2**
ROSF Rostrenen 63.18 16 *e*P **P** **09 07 41.2 -0.4**
ROSF pmax pmax
comp=Z,37nm,0.9s
HORU Horodok 63.20 354 P **P** **09 07 41.2 -0.6**
JBG Jabagly 63.22 319 *e*P **P** **09 07 41.5 -0.7**
JBG pmax pmax
comp=Z,27nm,1.3s
BBSR BB Station 63.23 70 IAMs_20 IAMs_20 09 37 53.9
comp=Z,2µm,18.0s
SSLB Suanglung 63.23 267 IAMs_20 IAMs_20 09 34 45.8
comp=Z,3µm,18.0s
CD2 Chengdu 63.28 286 P **P** **09 07 41.5 -1.1**
CD2 PP **PP** **09 10 01.5 +0.1**
CD2 S **S** **09 16 12.7 -1.7**
CD2 SS **SS** **09 20 23.1 +3.0**
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,500nm,6.3s
CD2 LR LR
comp=Z,7µm,15.7s
CD2 LR LR
comp=Z,9µm,14.7s
CD2 LR LR
comp=Z,8µm,16.7s
VRAC Vranov 63.29 1 P **P** **09 07 42.8 +0.4**
comp=Z,7.2nm,0.7s,baz=356,slow=7.5,SNR=10
VRAC Vranov 63.29 1 *e*P **P** **09 07 43.0 +0.6**
VRAC *e*S **S** **09 16 16.8 +2.9**
VRAC Vranov 63.29 1 ⇓P **P** **09 07 42.1 -0.2**
TREC Trest 63.29 2 AMS AMS 09 38 30.0
comp=Z,1µm,18.9s
GRR Gorron 63.36 14 *e*P **P** **09 07 45.4 +2.6**
GRR pmax pmax
comp=Z,87nm,1.4s

MORS Morshin 63.38 356 P **P** **09 07 43.5 +0.6**
WET Wettzell 63.40 4 *e*P **P** **09 07 44.2 +1.1**
comp=Z,40nm,1.4s,baz=357,slow=6.8
WET Wettzell 63.40 4 P **P** **09 07 44.9 +1.8**
KHC Kasperske Hory 63.43 3*ce*P **P** **09 07 44.4 +1.1**
KHC pmax pmax
comp=Z,118nm,1.7s
KHC Kasperske Hory 63.43 3 *e*P **P** **09 07 44.0 +0.7**
KHC *ex* x 09 07 49.5
KHC *e*S **S** **09 16 15.1 -0.6**
KHC AMS AMS 09 36 50.0
comp=Z,1µm,20.6s
LANS Liptovska Anna 63.44 359 *e*P **P** **09 07 44.9 +1.5**
LANS pmax pmax
comp=Z,24nm,1.1s
LANS Liptovska Anna 63.44 359 *e*P **P** **09 07 44.9 +1.5**
KRUC Moravsky 63.53 1 *e*P **P** **09 07 44.6 +0.6**
KRUC *e*S **S** **09 16 17.4 +0.5**
CHM Chimkent 63.55 319 *e*P **P** **09 07 43.3 -1.0**
CHM Chimkent 63.55 319 *e*P **P** **09 07 43.2 -1.0**
KNMB Chin-men Tao 63.60 270 IAMs_20 IAMs_20 09 33 35.5
comp=Z,2µm,21.0s
IUG Iuzhnay 63.61 319 *e*P **P** **09 07 44.4 -0.4**
IUG *e*S **S** **09 16 15.8 -2.6**
IUG Iuzhnay 63.61 319 *e*P **P** **09 07 44.3 -0.4**
IUG *e*S **S** **09 16 15.7 -2.6**
KOLS Kolonicke sedl 63.62 357 *e*P **P** **09 07 44.8 +0.2**
KOLS pmax pmax
comp=Z,25nm,1.0s
KOLS Kolonicke sedl 63.62 357 *e*P **P** **09 07 44.8 +0.2**
GEC2 GERESS Array S 63.72 3 *e*P **P** **09 07 46.2 +0.9**
comp=Z,79nm,1.3s,baz=357,slow=6.8
GERES GERESS Array B 63.72 3 P **P** **09 07 45.8 +0.5**
comp=Z,9.6nm,0.8s,baz=1.7,slow=4.5,SNR=60
GERES PKPPKP **P'P'df** **09 36 48.1 +1.8**
comp=Z,1.0nm,0.9s,baz=163,slow=5.2,SNR=3.6
JAVC Velka Javorina 63.74 0 *e*P **P** **09 07 47.0 +1.6**
JAVC *e*S **S** **09 16 23.1 +3.5**
TPUB Ta-pu 63.80 268 IAMs_20 IAMs_20 09 35 23.7
comp=Z,3µm,18.0s
KMPD K-Podol'skiy 63.85 354 P **P** **09 07 46.0 -0.1**
UZH Uzhgorod 63.92 357 *e*P **P** **09 07 46.9 +0.4**
UZH *e* 09 07 50.0
UZH *i* 09 07 52.3
UZH *i* 09 08 22.7
UZH *e* 09 10 13.0
UZH *i*S **S** **09 16 20.3 -1.4**
UZH *i* 09 16 39.8
UZH *e* 09 20 31.7
BFO Black Forest 64.05 7 *e*P **P** **09 07 47.9 +0.4**
comp=Z,62nm,1.7s,baz=357,slow=6.8
BFO Black Forest 64.05 7 P **P** **09 07 47.6 +0.1**
BFO pmax pmax
comp=Z,39nm,1.4s
BFO Black Forest 64.05 7 P **P** **09 07 47.6 +0.1**
BFO IAmb IAmb 09 08 01.7
comp=Z,38nm,1.4s
KECS Kecovo 64.10 358 *e*P **P** **09 07 48.5 +0.8**
KECS pmax pmax
comp=Z,17nm,1.0s
KECS Kecovo 64.10 358 *e*P **P** **09 07 48.5 +0.8**
VYHS Vyhne 64.11 359 *e*P **P** **09 07 48.6 +0.8**
VYHS pmax pmax
comp=Z,39nm,1.0s
VYHS Vyhne 64.11 359 *e*P **P** **09 07 48.6 +0.8**
ECH Echery 64.11 8 P **P** **09 07 48.6 +0.8**
ECH Echery 64.11 8 IAmb IAmb 09 07 58.9
comp=Z,53nm,1.3s
KSV Kosov 64.16 355 P **P** **09 07 47.8 -0.3**
SORM Soroca 64.19 352 ⇓P **P** **09 07 48.7 +0.4**
SORM Soroca 64.19 352 ⇓P **P** **09 07 48.7 +0.4**
MODS Modra-Piesok 64.23 0 *e*P **P** **09 07 48.7 +0.1**
MODS pmax pmax
comp=Z,44nm,1.2s
MODS Modra-Piesok 64.23 0 *e*P **P** **09 07 48.7 +0.1**
HAU Haudompre 64.27 8 *e*P **P** **09 07 48.5 -0.4**
HAU pmax pmax
comp=Z,25nm,0.9s
TRPA Tarpa 64.42 356 ⇑P **P** **09 07 50.5 +0.8**
HINF Hinteralfeld 64.49 8 *e*P **P** **09 07 49.7 -0.6**
HINF pmax pmax
comp=Z,22nm,1.2s
KSH Kashi 64.50 313 P **P** **09 07 53.9 +3.2**
KSH pP sP 09 07 58.9 +3.8
KSH S **S** **09 16 31.4 +1.9**
KSH ScS **SKSac** **09 17 43.9 -0.8**
KSH SS **SS** **09 20 45.1 +6.3**
KSH pmax pmax
comp=Z,43nm,1.2s
KSH pmax pmax
comp=Z,1µm,4.4s
KSH LR LR
comp=Z,400nm,5.9s
KSH LR LR
comp=Z,700nm,8.9s
KSH LR LR
comp=Z,3µm,11.9s
TAS Tashkent 64.57 319 IAMs_20 IAMs_20 09 38 47.6
comp=Z,2µm,21.0s
SLE Schleitheim 64.62 7 P **P** **09 07 52.2 +1.0**
SLE pmax pmax
comp=Z,33nm,1.2s
CONA Conrad Observa 64.67 1 *ep*P **P** **09 07 52.5 +0.9**
comp=Z,77nm,2.0s,SNR=17
PSZ Piszkesteto 64.67 358 ⇑P **P** **09 07 51.5 -0.1**
PSZ Piszkesteto 64.67 358 ⇑P **P** **09 07 51.5 -0.1**
PSZ Piszkesteto 64.67 358 IAmb IAmb 09 08 06.7
comp=Z,36nm,1.0s
MOA Molln 64.72 3 *ep*P **P** **09 07 52.5 +0.7**
comp=Z,62nm,1.7s,SNR=19
UBR Ueberruh 64.78 6 *e*P **P** **09 07 53.0 +0.7**
comp=Z,45nm,1.2s,baz=357,slow=6.8
RJOB Jochberg 64.80 4 *e*P **P** **09 07 53.3 +0.9**
comp=Z,38nm,0.9s,baz=357,slow=6.8
BUR08 Bucovina Ar. S 64.82 354 IAmb IAmb 09 08 07.6
comp=Z,31nm,0.9s
BMR Baia Mare 64.85 356 ⇑P **P** **09 07 53.2 +0.6**
BMR Baia Mare 64.85 356 ⇑P **P** **09 07 53.2 +0.6**
BURAR Bucovina Array 64.85 354 ⇑P **P** **09 07 52.7 -0.1**
BURAR Bucovina Array 64.85 354 ⇑P **P** **09 07 52.7 -0.1**
LOR Lormes 64.85 10 *e*P **P** **09 07 52.1 -0.6**
LOR pmax pmax
comp=Z,35nm,1.1s
SOP Sopron 64.92 1 P **P** **09 07 56.6 +3.6**
SOP pmax pmax
comp=Z,30nm,1.4s
RETA Reutte 64.99 5 *i* pP **P** **09 07 54.0 +0.4**
comp=Z,24nm,1.1s
MOTA Moosalm 65.15 5 *ep*P **P** **09 07 55.4 +0.6**
comp=Z,45nm,1.4s,SNR=9.6
DAVA Damuels 65.16 6 *i* pP **P** **09 07 57.2 +2.4**
comp=Z,18nm,1.2s
WATA Walderalm 65.17 5 *i* pP **P** **09 07 55.7 +0.7**
comp=Z,46nm,1.6s
WTTA Wattenberg 65.25 5 *i* pP **P** **09 07 56.4 +1.0**
comp=Z,65nm,1.6s,SNR=18
WTTA Wattenberg 65.25 5 P **P** **09 07 57.6 +2.2**
SQTA Sankt Quirin 65.27 5 *ep*P **P** **09 07 56.3 +0.8**
comp=Z,59nm,1.7s,SNR=14
AVF Avril sur Loir 65.29 11 *e*P **P** **09 07 55.0 -0.5**
AVF pmax pmax
comp=Z,24nm,0.9s
KIS Kishinev 65.30 352 *e*P **P** **09 07 55.0 -0.5**
KIS Kishinev 65.30 352 *e*PP PP 09 10 20.0 +1.5
KIS *e*S **S** **09 16 37.0 -1.7**
KIS Kishinev 65.30 352 *e*P **P** **09 07 55.0 -0.5**
KIS *e* 09 08 00.0
KIS *e* 09 08 34.0
KIS *e* 09 10 20.0
KIS *e*S **S** **09 16 37.0 -1.7**
KIS *e*PS **PnS** **09 16 54.0 -2.8**
KIS MLR MLR
comp=Z,2µm,20.0s
ARSA Arzberg 65.34 2 pP **P** **09 07 56.8 +1.0**
comp=Z,30nm,1.6s
TEIG Tepich 65.37 97 P **P** **09 07 56.3 0.0**
TEIG IAmb IAmb 09 07 59.1
comp=Z,39nm,0.9s
FETA Feichten 65.46 5 *ep*P **P** **09 07 57.8 +1.0**
comp=Z,77nm,1.4s,SNR=12
SMF Signal de Mont 65.47 11 *e*P **P** **09 07 56.0 -0.7**
SMF pmax pmax
comp=Z,27nm,1.0s
KBA Koelnbreinsper 65.47 3 pP **P** **09 07 58.1 +1.2**
comp=Z,54nm,1.0s,SNR=14
KBA Koelnbreinsper 65.47 3 P **P** **09 07 58.9 +2.0**
BGF Bois d'Agland 65.49 11 *e*P **P** **09 07 56.2 -0.6**
BGF pmax pmax
comp=Z,36nm,0.8s
BIZ Bicaz 65.49 354 ⇑P **P** **09 07 57.2 +0.3**
CABF La Chapelle 65.65 9 *e*P **P** **09 07 57.8 -0.1**
CABF pmax pmax
comp=Z,83nm,1.6s
DAVOX Davos/Dischmat 65.67 6 P **P** **09 07 58.8 +0.6**
comp=Z,13nm,0.6s,baz=341,slow=13,SNR=24
TCF Toulx Ste Croi 65.71 12 *e*P **P** **09 07 57.6 -0.6**
TCF pmax pmax
comp=Z,23nm,0.9s
DRGR 65.75 356 ⇑P **P** **09 07 58.5 -0.1**
DRGR 65.75 356 ⇑P **P** **09 07 58.5 -0.1**
ABTA Abfaltersbach 65.79 4 *ep*P **P** **09 07 59.5 +0.6**
comp=Z,38nm,0.8s,SNR=8.8
CJR Cluj-Napoca 65.81 356 ⇑P **P** **09 07 59.8 +0.9**
CJR Cluj-Napoca 65.81 356 ⇑P **P** **09 07 59.8 +0.9**
FUORN Ofenpass-Fuorn 65.84 6 IAmb IAmb 09 08 16.3
comp=Z,38nm,0.9s
TESR Tescani 65.89 353 ⇑P **P** **09 07 58.9 -0.5**
SOKA Soboth 65.91 2 *ep*P **P** **09 08 00.1 +0.5**
comp=Z,15nm,1.2s
MYKA Terra Mystica 65.93 3 *ep*P **P** **09 08 00.2 +0.4**
comp=Z,42nm,1.2s
GOF Gofitskoye 65.93 341⇑*e*P **P** **09 07 59.6 -0.1**
GOF *e*S **S** **09 16 49.3 +2.7**
GOF pmax pmax
comp=Z,83nm,1.0s
PERS Pernice 65.95 2 *i* P **P** **09 08 03.0 +3.2**
PERS *i* S **S** **09 16 50.8 +3.9**
OBKA Obir 66.07 2 *ep*P **P** **09 08 01.4 +0.8**
comp=Z,73nm,0.8s,SNR=11
GROS Grobnik 66.13 2 *i* P **P** **09 08 01.1 +0.1**
SIRR Siria 66.30 357 ⇑P **P** **09 08 02.1 +0.1**
CADS Cadrg 66.33 3 *i* P **P** **09 08 01.9 -0.4**
CADS *e*S **S** **09 16 54.5 +3.0**
CTI Castel Tesino 66.46 5 IAmb IAmb 09 08 23.7
comp=Z,25nm,1.1s
DOPR Dopca 66.49 354 ⇓P **P** **09 08 02.5 -0.8**
VRI Vrincioaia 66.53 353 ⇑P **P** **09 08 04.0 +0.5**
VRI Vrincioaia 66.53 353 ⇑P **P** **09 08 04.0 +0.5**
PLOR Plostina 66.55 353 ⇑P **P** **09 08 04.3 +0.6**
PLOR Plostina 66.55 353 ⇑P **P** **09 08 04.3 +0.6**
RJF Les Rejaudoux 66.63 12 *e*P **P** **09 08 06.3 +2.2**
RJF pmax pmax
comp=Z,26nm,1.0s
LPL La Plagne 66.78 8 *e*P **P** **09 08 05.7 +0.3**
LPL pmax pmax
comp=Z,33nm,1.0s
LPG La Plagne 66.80 8 *e*P **P** **09 08 06.0 +0.4**
LPG pmax pmax
comp=Z,32nm,1.2s
ANN Anapa 66.82 345 P **P** **09 08 05.6 +0.3**
ANN *e*S **S** **09 16 56.1 -1.2**
ANN pmax pmax
comp=Z,28nm,0.9s
ANN MLR MLR
comp=Z,1µm,16.0s
SSB Saint Sauveur 66.88 10 IAmb IAmb 09 08 19.5
comp=Z,33nm,1.1s
MLR Muntele Rosu 66.94 354 P **P** **09 08 07.0 +0.7**
comp=Z,2.7nm,0.7s,baz=29,slow=5.3,SNR=11
MLR Muntele Rosu 66.94 354 ⇑P **P** **09 08 07.1 +0.8**
MLR Muntele Rosu 66.94 354 IAmb IAmb 09 08 23.2
comp=Z,32nm,1.2s
MLR IAMs_20 IAMs_20 09 40 32.7
comp=Z,2µm,20.0s
BZS Buzias 66.95 357 ⇑P **P** **09 08 06.1 0.0**
BZS Buzias 66.95 357 ⇑P **P** **09 08 06.1 0.0**
SIM Simferopol' 66.97 347*ce*P **P** **09 08 06.8 +0.5**
SIM *e*S **S** **09 17 01.0 +1.8**
SIM *e*PS PnS 09 17 37.0 +17
SIM *e*SS **SS** **09 21 17.0 +0.5**
SIM pmax pmax
comp=Z,150nm,9.3s
SIM MLR MLR
comp=Z,1µm,16.6s
VOIR 67.03 354 ⇑P **P** **09 08 07.6 +0.8**
VOIR 67.03 354 ⇑P **P** **09 08 07.6 +0.8**
CAF Calviac 67.05 12 *e*P **P** **09 08 06.5 -0.4**
CAF pmax pmax
comp=Z,23nm,0.8s
KVAR Kislovodsk Arr 67.06 341 P **P** **09 08 07.5 +0.4**
comp=Z,12nm,0.8s,baz=270,slow=20,SNR=5.3
KIV Kislovodsk 67.06 341 ⇑P **P** **09 08 07.5 +0.5**
KIV Kislovodsk 67.06 341 *i* P **P** **09 08 06.9 -0.2**
SNR=14
KIV Kislovodsk 67.06 341 *e*P **P** **09 08 07.3 +0.3**
KIV *e*S **S** **09 17 01.8 +1.3**
KIV *e*SS **SS** **09 21 21.8 +3.6**
KIV pmax pmax
comp=Z,343nm,3.8s
KIV pmax pmax
comp=Z,159nm,1.1s
KIV MLR MLR
comp=Z,3µm,17.0s
KIV Kislovodsk 67.06 341 P **P** **09 08 06.9 -0.2**
ARR Arges 67.12 355 ⇓P **P** **09 08 07.9 +0.6**
GZR Gura Zlata 67.15 356 ⇑P **P** **09 08 07.6 +0.1**
GZR Gura Zlata 67.15 356 ⇑P **P** **09 08 07.6 +0.1**
CFR Carcaliu 67.15 352 ⇑P **P** **09 08 07.7 +0.3**
CFR Carcaliu 67.15 352 ⇑P **P** **09 08 07.7 +0.3**
BNI Bardonecchia 67.24 9 IAmb IAmb 09 08 21.1
comp=Z,48nm,1.4s
BNI IAMs_20 IAMs_20 09 40 13.4
comp=Z,1µm,20.0s
KBZ Khabaz 67.26 341 P **P** **09 08 08.5 +0.4**
comp=Z,9.1nm,0.8s,baz=3.5,slow=7.7,SNR=22
KBZ LR LR 09 41 56.5
comp=Z,1µm,18.8s,baz=356,slow=40
KBZ Khabaz 67.26 341*ce*P **P** **09 08 08.7 +0.6**
VIVF Saint-Julien-l 67.31 10 *e*P **P** **09 08 08.3 -0.2**
VIVF pmax pmax
comp=Z,23nm,1.0s
ORIF Oris-en-Rattie 67.32 9 *e*P **P** **09 08 08.7 0.0**
ORIF pmax pmax
comp=Z,65nm,1.6s
MAK Makhachkala 67.37 337 *e*P **P** **09 08 04.4 -4.5**
MAK *e* 09 10 36.2
MAK *e*S **S** **09 16 58.8 -5.2**
MAK pmax pmax
comp=Z,153nm,1.4s
GROC Groznyy 67.39 338 *e*P **P** **09 08 09.1 +0.1**
GROC *e* 09 08 39.4
GROC *e* 09 10 42.9
GROC S **S** **09 17 09.0 +4.8**
GROC pmax pmax
comp=Z,19nm,0.5s
NCK Nalchik 67.40 340 *i* P **P** **09 08 08.8 -0.3**
NCK pmax pmax
comp=Z,57nm,1.2s
TOPG Topolog 67.44 352 ⇑P **P** **09 08 09.8 +0.5**
CCIG Comitan 67.52 102 P **P** **09 08 09.8 -0.6**
CCIG IAmb IAmb 09 08 17.2
comp=Z,23nm,0.9s
CCIG IAMs_20 IAMs_20 09 43 15.0
comp=Z,1µm,18.0s
MBDF Montbardon 67.57 8 *e*P **P** **09 08 10.8 +0.5**
MBDF pmax pmax
comp=Z,34nm,0.8s
HARR Harsova 67.65 352 ⇑P **P** **09 08 10.8 +0.2**
HARR Harsova 67.65 352 ⇑P **P** **09 08 10.8 +0.2**
HERR Herculane 67.67 356 ⇑P **P** **09 08 10.4 -0.3**
MDVR Moldovita 67.78 357 ⇑P **P** **09 08 10.1 -1.4**
SOC Sochi 67.78 343 *e*P **P** **09 08 12.8 +1.3**
SOC *e* 09 10 38.2
SOC *e*PPP PPP 09 12 18.3
SOC *e*S **S** **09 17 13.6 +4.7**
SOC *e* 09 21 29.5
SOC pmax pmax
comp=Z,12nm,0.6s
SOC MLR MLR
comp=Z,2µm,22.0s
TIRR Tirgusor 67.86 352 ⇑P **P** **09 08 12.2 +0.3**
TIRR Tirgusor 67.86 352 ⇑P **P** **09 08 12.2 +0.3**
ZEI Tsey 68.06 340 *e*P **P** **09 08 12.3 -1.2**
ZEI pmax pmax
comp=Z,35nm,1.0s
MSSA Maissana 68.11 6 IAmb IAmb 09 08 21.5
comp=Z,25nm,0.8s
ZCCA Zocca 68.13 5 IAMs_20 IAMs_20 09 39 58.2

comp=Z,1µm,19.0s
GUDG Gudauri 68.30 339 P **P** **09 08 17.4 +2.4**
ONI Oni 68.31 340 P **P** **09 08 15.9 +1.0**
SBF Sospel 68.46 8 *eP* **P** **09 08 15.8 0.0**
SBF pmax pmax
comp=Z,77nm,0.9s
MTLF Montolieu 68.64 12 *eP* **P** **09 08 16.7 -0.1**
MTLF pmax pmax
comp=Z,61nm,1.6s
PSN Preselentsi 68.64 352 *eP* **P** **09 08 17.4 +0.6**
LGD Lagodekhi 68.66 338 P **P** **09 08 16.7 -0.3**
FRF La Foret Royal 68.72 9 *eP* **P** **09 08 17.5 +0.1**
FRF pmax pmax
comp=Z,64nm,1.4s
EPF Esparros 68.78 14 *eP* **P** **09 08 16.8 -1.0**
EPF pmax pmax
comp=Z,16nm,1.0s
AKT Akhty 68.79 336 *eP* **P** **09 08 18.0 0.0**
AKT *e* 09 08 41.8
AKT *e* 09 10 49.6
AKT pmax pmax
comp=Z,21nm,0.8s
ETSF Etsaut 68.83 14 *eP* **P** **09 08 18.2 0.0**
ETSF pmax pmax
comp=Z,42nm,1.3s
LSA Lhasa 68.85 297 P **P** **09 08 19.9 +1.0**
LSA Lhasa 68.85 297 IAMs_20 IAMs_20 09 40 20.2
comp=Z,2µm,19.0s
PGAV Gavieira, Arco 68.87 21 *eP* **P** **09 08 19.3 +0.8**
comp=Z,136nm,1.5s
PGAV *eS* **S** **09 17 26.3 +4.1**
PGAV *eSS* **SS** **09 21 55.7 +10**
PGAV *eLR* LR 09 30 30.0
comp=Z,1µm,18.0s
KMI Kunming 68.90 285 P **P** **09 08 20.7 +1.7**
KMI pP sP 09 08 25.0 +1.5
KMI sP pP 09 08 28.2 +5.9
KMI PP **PP** **09 10 51.9 +1.2**
KMI S **S** **09 17 20.8 -2.4**
KMI sS sS 09 17 31.4 +2.8
KMI SKS **SKSac** **09 18 18.2 -0.4**
KMI SS **SS** **09 21 46.3 -1.5**
KMI pmax pmax
comp=Z,21nm,1.4s
KMI pmax pmax
comp=Z,410nm,6.0s
KMI LR LR
comp=Z,9µm,17.4s
KMI LR LR
comp=Z,16µm,17.7s
KMI LR LR
comp=Z,4µm,17.7s
LMR La Mourre 68.94 9 *eP* **P** **09 08 18.5 -0.2**
LMR pmax pmax
comp=Z,38nm,1.3s
OSSC Osservatorio P 68.97 5 IAmb IAmb 09 08 46.0
comp=Z,52nm,1.2s
SEKA Sheki 69.14 337 P **P** **09 08 19.4 -0.7**
PCAB Cabril 69.16 20 *eP* **P** **09 08 20.8 +0.7**
comp=Z,83nm,1.5s
PRD Provadia 69.16 352 *eP* **P** **09 08 22.9 +2.8**
SZH Strazhica 69.16 354 *eP* **P** **09 08 19.5 -0.6**
KZRT Kazreti 69.36 339 P **P** **09 08 23.8 +2.3**
MNGR Mingechevir, A 69.58 337 P **P** **09 08 22.4 -0.3**
BGD Bogdanovka 69.59 339 P **P** **09 08 25.6 +2.5**
NRCA Norcia 69.71 4 P **P** **09 08 24.1 +0.5**
GANJ Ganja 69.82 337 P **P** **09 08 23.8 -0.4**
MVO Moncorvo 69.82 20 *eP* **P** **09 08 24.9 +0.6**
comp=Z,67nm,1.6s
MVO *eS* **S** **09 17 39.1 +5.7**
MVO *eSS* **SS** **09 22 10.7 +10**
MVO *eLR* LR 09 30 32.1
comp=Z,799nm,20.0s
VTS Vitosha 69.91 356 P P 09 08 17.4 -7.5
VTS Vitosha 69.91 356 ⇑P **P** **09 08 24.0 -0.9**
VTS Vitosha 69.91 356 *eP* **P** **09 08 24.0 -0.9**
VTS Vitosha 69.91 356 ⇑P **P** **09 08 24.0 -0.9**
VTS Vitosha 69.91 356 IAmb IAmb 09 08 38.5
comp=Z,30nm,1.0s
VTS IAMs_20 IAMs_20 09 41 13.1
comp=Z,1µm,20.0s
DIKM Dikmen 70.15 346 ⇑P **P** **09 08 26.6 +0.4**
PVIS Viseu 70.15 20 *eP* **P** **09 08 26.6 +0.3**
comp=Z,55nm,1.8s
PDG Podgorica 70.17 359 ⇓P **P** **09 08 25.0 -1.3**
PDG Podgorica 70.17 359 IAmb IAmb 09 08 40.0
comp=Z,53nm,1.0s
PDG IAMs_20 IAMs_20 09 40 46.0
comp=Z,2µm,22.0s
GEYT Alibeck 70.36 327 P **P** **09 08 26.8 -0.8**
comp=Z,12nm,0.9s,baz=330,slow=5.1,SNR=19
GEYT LR LR 09 44 57.5
comp=Z,2µm,18.4s,baz=10.0,slow=41
GYA0 ALIBECK ARRAY 70.36 327 P **P** **09 08 27.2 -0.4**
GYA0B ALIBECK ARRAY 70.36 327 IAmb IAmb 09 08 40.5
comp=Z,39nm,1.1s
INTR Introdacqua 70.55 3 IAmb IAmb 09 08 49.6
comp=Z,51nm,1.1s
SKO Skopje 70.59 357 *i* P **P** **09 08 29.2 +0.3**
SKO Skopje 70.59 357 *i* P **P** **09 08 29.2 +0.3**
KVT Kavak 70.64 345 P **P** **09 08 30.3 +1.0**
GTBY Guantanamo Bay 70.65 85 IAmb IAmb 09 08 56.3
comp=Z,60nm,1.1s
GTBY IAMs_20 IAMs_20 09 39 49.2
comp=Z,2µm,22.0s
KKB Krupnik 70.66 356 *eP* **P** **09 08 31.0 +1.6**
PCAS Casmilo, Conde 70.72 21 *eP* **P** **09 08 30.7 +1.0**
comp=Z,132nm,1.6s
NIL Nilore 70.75 313 P **P** **09 08 32.1 +2.0**
NIL Nilore 70.75 313 P **P** **09 08 29.2 -0.9**
NIL pmax pmax
comp=Z,79nm,1.1s
NIL MLR MLR
comp=Z,3µm,18.0s
NIL Nilore 70.75 313 P **P** **09 08 29.2 -0.9**
ILGA Ilgaz 70.88 347 IAMs_20 IAMs_20 09 41 54.8
comp=Z,2µm,20.0s
MMB Musomiste 70.92 355 *eP* **P** **09 08 31.1 +0.1**
SNET Serv Nac Est T 70.99 101 IAMs_20 IAMs_20 09 40 30.8
comp=Z,2µm,21.0s
KBL Kabul 71.04 317 P **P** **09 08 33.3 +1.3**
KBL P **P** **09 08 33.3 +1.3**
KBL Kabul 71.04 317 P **P** **09 08 33.0 +0.9**
KBL pmax pmax
comp=Z,23nm,1.0s
KBL MLR MLR
comp=Z,2µm,22.0s
KBL Kabul 71.04 317 P **P** **09 08 33.0 +0.9**
KBL IAMs_20 IAMs_20 09 42 16.2
comp=Z,2µm,22.0s
PCBR Castelo Branco 71.07 20 *eP* **P** **09 08 32.2 +0.4**
comp=Z,69nm,1.7s
TEZP TEZPUR 71.11 294 *eP* **P** **09 08 35.8 +3.5**
TEZP IAmb IAmb 09 08 41.5
comp=Z,9.4nm,1.0s
DHRM DHARAMSHALA 71.20 310 *eP* **P** **09 08 34.4 +1.4**
TIR Tirane 71.24 358 IAMs_20 IAMs_20 09 38 19.5
comp=Z,1µm,21.0s
MTDJ Mount Denham 71.28 88 IAMs_20 IAMs_20 09 39 55.8
comp=Z,2µm,18.0s
LKRN Lenkeran, Azer 71.33 335 P **P** **09 08 33.4 0.0**
KNT Kendrikon 71.37 356 P **P** **09 08 34.9 +1.2**
NAX Nakhchivan 71.38 338 P **P** **09 08 33.5 -0.4**
TGUH Tegucigalpa,Un 71.38 99 IAmb IAmb 09 09 05.7
comp=Z,57nm,1.2s
TGUH IAMs_20 IAMs_20 09 39 53.4
comp=Z,1µm,22.0s
SRS Serrai 71.39 355 P **P** **09 08 37.4 +3.6**
OHR Ohrid 71.47 358 *i* P **P** **09 08 34.1 -0.2**
OHR Ohrid 71.47 358 *i* P **P** **09 08 34.1 -0.2**
PMRV Marv??o 71.48 20 *eP* **P** **09 08 37.7 +3.3**
PMRV *eS* **S** **09 17 55.4 +2.8**
PMRV *eSS* SS 09 22 37.4 +11
PMRV *eLR* LR 09 30 56.6
comp=Z,809nm,18.0s
ALN Alexandroupoli 71.52 353 P **P** **09 08 35.9 +1.4**
ALN Alexandroupoli 71.52 353 P **P** **09 08 36.7 +2.2**
ALN Alexandroupoli 71.52 353 IAmb IAmb 09 08 49.5
comp=Z,34nm,1.1s
GRG Griva 71.59 356 P **P** **09 08 35.4 +0.4**
GRG Griva 71.59 356 P **P** **09 08 36.5 +1.5**
ESDC Sonseca Array 71.67 18 P **P** **09 08 35.5 0.0**
comp=Z,13nm,0.8s,baz=350,slow=6.3,SNR=67
ESDC LR LR 09 39 35.1
comp=Z,564nm,21.2s,baz=335,slow=36

PMAFR Mafra 71.69 22 *eP* **P** **09 08 36.4 +0.8**
comp=Z,176nm,1.5s
PMTG Montargil 71.73 21 *eP* **P** **09 08 37.8 +2.0**
comp=Z,82nm,1.7s
PAB San Pablo 71.75 18 P **P** **09 08 35.9 -0.2**
PAB pmax pmax
comp=Z,24nm,1.1s
PAB San Pablo 71.75 18 P **P** **09 08 35.9 -0.2**
FNA Florina 71.78 357 P **P** **09 08 38.3 +2.1**
FNA pmax pmax
comp=Z,63nm,1.1s
QIZ Qiongzhong 71.78 276 P **P** **09 08 36.2 -0.2**
QIZ PP **PP** **09 11 14.2 -1.2**
QIZ S **S** **09 17 59.8 +3.3**
QIZ SS **SS** **09 22 33.7 +1.8**
QIZ pmax pmax
comp=Z,410nm,7.3s
QIZ LR LR
comp=Z,4µm,17.5s
QIZ LR LR
comp=Z,9µm,16.7s
QIZ LR LR
comp=Z,3µm,14.2s
GTK Tadong 71.91 298 *ex* P 09 08 42.7 +5.5
LIS Lisbon 71.94 22 *eP* **P** **09 08 37.5 +0.3**
LIS AMS AMS 09 45 05.9
comp=Z,987nm,18.8s
LIS Lisbon 71.94 22 *eP* **P** **09 08 37.4 +0.3**
SMLA Simla 72.00 309 *eP* **P** **09 08 39.4 +1.8**
SMLA IAmb IAmb 09 08 53.9
comp=Z,42nm,1.3s
ANTO Ankara 72.13 348 ⇑P **P** **09 08 39.2 +0.9**
ANTO Ankara 72.13 348 P **P** **09 08 37.1 -1.3**
ANTO P **P** **09 08 37.1 -1.3**
ANTO Ankara 72.13 348 ⇑P **P** **09 08 39.2 +0.9**
ANTO Ankara 72.13 348 P **P** **09 08 38.3 0.0**
ANTO IAmb IAmb 09 08 45.3
comp=Z,34nm,0.8s
ANTO Ankara 72.13 348 IAMs_20 IAMs_20 09 45 01.0
comp=Z,2µm,19.0s
OUR Ouranopolis 72.16 355 P **P** **09 08 38.3 -0.1**
TAPN Taplejung 72.18 299 *eP* **P** **09 08 38.7 -0.4**
comp=Z,147nm,1.0s
BR131 Keskin Array S 72.20 347 P **P** **09 08 38.4 -0.4**
SNR=16
BR131 P **P** **09 08 38.4 -0.4**
SNR=16
BRTR Keskin Array B 72.20 347 P **P** **09 08 38.2 -0.7**
comp=Z,4.9nm,0.8s,baz=20,slow=3.9,SNR=23
BRTR LR LR 09 45 17.7
comp=Z,1µm,19.5s,baz=346,slow=40
GUN Gumba 72.27 300 *eP* **P** **09 08 39.8 +0.2**
comp=Z,202nm,1.1s
JIRN Jiri 72.39 300 *eP* **P** **09 08 40.4 -0.1**
comp=Z,416nm,1.2s
SHL Shillong 72.39 294 *eP* **P** **09 08 41.1 +0.9**
SHL IAmb IAmb 09 08 49.5
comp=Z,8.4nm,0.9s
LIT Litokhoron 72.44 356 P **P** **09 08 44.0 +3.9**
LIT Litokhoron 72.44 356 IAmb IAmb 09 08 54.0
comp=Z,38nm,1.1s
DANN Dangsing 72.55 302 *eP* **P** **09 08 41.2 -0.1**
comp=Z,224nm,1.1s
KKN Kakani 72.57 301 *eP* **P** **09 08 41.4 +0.1**
GKN Gorkha 72.58 302 *eP* **P** **09 08 41.3 0.0**
comp=Z,221nm,1.1s
PNCL Nicolau / Gran 72.62 21 *eP* **P** **09 08 41.8 +0.6**
comp=Z,86nm,1.6s
PKIN Phulchoki 72.73 301 *eP* **P** **09 08 41.9 -0.4**
comp=Z,174nm,1.4s
PKI Pulchoki 72.73 301 *eP* **P** **09 08 42.0 -0.4**
comp=Z,143nm,1.3s
ODAN Odare 72.73 299 *eP* **P** **09 08 42.5 +0.2**
comp=Z,283nm,1.2s
DMN Daman 72.80 301 *eP* **P** **09 08 42.8 +0.1**
comp=Z,57nm,0.8s
PBEJ Beja 72.80 21 *eP* **P** **09 08 45.6 +3.3**
comp=Z,38nm,1.8s
HRA Herat 72.86 323 IAMs_20 IAMs_20 09 46 12.3
comp=Z,2µm,20.0s
RAMN Ramite 72.92 299 *eP* **P** **09 08 43.0 -0.4**
comp=Z,176nm,1.1s
MESJ Messejana 72.93 21 *eP* **P** **09 08 43.4 +0.3**
MESJ *eS* **S** **09 18 10.0 +0.8**
MESJ AMS AMS 09 45 42.5
comp=Z,795nm,19.5s
MESJ Messejana 72.93 21 *eP* **P** **09 08 43.3 +0.3**
MESJ *eS* **S** **09 18 10.0 +0.8**
MESJ Messejana 72.93 21 *eP* **P** **09 08 46.2 +3.2**
SDDR Presa de Saban 72.96 82 P **P** **09 08 42.6 -0.9**
THL Klokotos Trika 72.99 357 P **P** **09 08 42.7 -0.6**
PYUN Piuthan 73.03 303 *eP* **P** **09 08 44.7 +0.7**
comp=Z,324nm,1.1s
MALT Malatya 73.14 343 P **P** **09 08 45.3 +0.9**
KOLN Koldanda 73.14 302 *eP* **P** **09 08 44.6 -0.1**
comp=Z,42nm,0.7s
PTEO Sao Teotonio 73.15 22 *eP* **P** **09 08 48.0 +3.7**
comp=Z,87nm,1.6s
MORF Marmelete 73.40 22 *eP* **P** **09 08 46.3 +0.4**
MORF *eS* **S** **09 18 15.4 +0.7**
MORF AMS AMS 09 43 06.7
comp=Z,852nm,19.0s
MORF Marmelete 73.40 22 *eP* **P** **09 08 46.2 +0.4**
MORF *eS* **S** **09 18 15.4 +0.7**
MORF Marmelete 73.40 22 *eP* **P** **09 08 46.6 +0.7**
comp=Z,80nm,2.3s
TIP Timpagrande 73.42 1 ⇑P **P** **09 08 44.5 -1.5**
TIP Timpagrande 73.42 1 IAmb IAmb 09 09 09.4
comp=Z,51nm,1.4s
PVAQ Vaqueiros 73.43 21 *eP* **P** **09 08 46.6 +0.6**
comp=Z,58nm,1.6s
PVAQ *eS* **S** **09 18 18.2 +3.3**
PVAQ *eSS* SS 09 23 17.1 +21
PVAQ *eLR* LR 09 32 17.2
comp=Z,760nm,18.0s
PVAQ Vaqueiros 73.43 21 IAmb IAmb 09 08 53.5
comp=Z,25nm,0.8s
PFVI Vila Bisbo 73.54 22 *eP* **P** **09 08 49.4 +2.7**
comp=Z,131nm,1.5s
PBDV Barranco-do-Ve 73.56 21 *eP* **P** **09 08 50.5 +3.7**
comp=Z,92nm,1.7s
AXAR Agios Charalam 73.77 356 P P 09 09 00.5 +13
MRKA Markates 73.80 355 P **P** **09 08 46.1 -2.1**
DR12 Loma Pena Alta 73.86 80 P **P** **09 08 48.7 -0.1**
ACON Acoyapa 74.09 97 IAmb IAmb 09 08 52.5
comp=Z,57nm,1.4s
EFP Efpalio 74.12 357 P **P** **09 08 50.7 +0.7**
KALE Kalithea 74.16 356 P **P** **09 08 49.2 -1.1**
NDI New Delhi 74.27 308 *eP* **P** **09 08 51.0 0.0**
GAZ Gaziantep 74.39 344 IAMs_20 IAMs_20 09 46 10.9
comp=Z,1µm,20.0s
KLV Kalavryta, Ach 74.50 356 P **P** **09 08 50.8 -1.5**
RLS Riolos of Patr 74.50 357 P **P** **09 08 52.5 +0.3**
CLTB Caltabellotta 74.96 4 P **P** **09 08 56.6 +1.6**
ITM Ithomi 75.37 357 IAmb IAmb 09 09 12.7
comp=Z,54nm,1.1s
ITM IAMs_20 IAMs_20 09 44 55.7
comp=Z,2µm,22.0s
GCPR Guaynabo City 75.53 77 P **P** **09 08 59.2 +0.9**
GCPR IAmb IAmb 09 09 00.7
comp=Z,61nm,1.1s
OBIP Obispado Ponce 75.57 78 IAMs_20 IAMs_20 09 43 39.7
comp=Z,2µm,19.0s
SJG San Juan 75.68 77 IAMs_20 IAMs_20 09 42 47.6
comp=Z,2µm,20.0s
JTS Las Juntas de 75.71 98 IAMs_20 IAMs_20 09 44 21.1
comp=Z,2µm,19.0s
VLI Velai 75.80 356 P P 09 08 54.1 -5.7
MTP Monte Pirata 75.92 77 IAmb IAmb 09 09 03.3
comp=Z,39nm,1.1s
CHTO Chiang Mai 76.06 285 P **P** **09 09 00.3 -1.2**
CHTO P **P** **09 09 00.3 -1.2**
CHTO Chiang Mai 76.06 285 P **P** **09 08 59.9 -1.6**
CHTO pmax pmax
comp=Z,41nm,1.5s
CHTO MLR MLR
comp=Z,3µm,18.0s
CHTO Chiang Mai 76.06 285 P **P** **09 08 59.9 -1.6**
CHTO IAmb IAmb 09 09 11.4
comp=Z,41nm,1.4s
BOK Bokaro 76.07 299 IAmb IAmb 09 03 15.1
comp=Z,136nm,0.2s
BUKP Musuan 76.23 257 *eP* **P** **09 09 02.6 +0.2**
HDC Heredia 76.30 97 IAMs_20 IAMs_20 09 45 17.6
comp=Z,1µm,22.0s

PMOZ Porto Moniz, M 76.37 30 *eP* **P** **09 09 05.1 +1.9**
PMOZ *eS* **S** **09 18 48.8 +0.8**
PMOZ Porto Moniz, M 76.37 30 *eLR* LR 09 33 13.0
comp=Z,561nm,18.0s
CMAR Chiang Mai Arr 76.39 285 P **P** **09 09 03.1 -0.2**
comp=Z,9.8nm,0.9s,baz=3.6,slow=6.3,SNR=19
CMAR LR LR 09 46 22.7
comp=Z,3µm,18.5s,baz=33,slow=39
KEST Kesra 76.66 7 P **P** **09 09 04.2 -0.6**
comp=Z,47nm,1.2s,baz=264,slow=4.2,SNR=8.6
LEF Lefka 76.84 347 ⇓P **P** **09 09 03.2 -2.4**
KCP Kidapawan 77.02 257 ⇑*eP* **P** **09 09 07.5 +0.6**
IMMV Iera Moni Meta 77.03 355 P **P** **09 09 02.5 -4.2**
IDI Anoyia 77.16 354 P **P** **09 09 06.9 -0.6**
comp=Z,4.1nm,0.5s,baz=39,slow=12,SNR=4.8
IDI Anoyia 77.16 354 ⇓P **P** **09 09 05.7 -1.9**
SKI Saint Kitts 77.66 75 IAMs_20 IAMs_20 09 45 12.9
comp=Z,2µm,20.0s
TAOE Nuku Hiva Isla 78.01 158 *eLR* LR 09 32 58.1
comp=Z,898nm,22.5s
BCIP Isla Barro Col 78.68 94 IAMs_20 IAMs_20 09 46 20.9
comp=Z,1µm,19.0s
MMAI Mount Meron Ar 78.69 345 P **P** **09 09 15.7 -0.4**
comp=Z,12nm,0.8s,baz=1.6,slow=5.8,SNR=14
DLV T Lat 78.77 274 IAmb IAmb 09 09 29.0
comp=Z,67nm,1.3s
SMRC Santa Marta, M 78.99 88 *eP* **P** **09 09 17.8 -0.1**
BHPL Bhopal 79.31 306 *eP* **P** **09 09 20.9 +1.3**
BHPL IAmb IAmb 09 09 29.1
comp=Z,56nm,1.1s
BWNR Bhubaneshwar 79.35 298 *ex* P **P** **09 09 17.2 -2.5**
ASF Jabal al Asfar 79.37 344 P **P** **09 09 19.7 -0.2**
comp=Z,22nm,1.1s,baz=318,slow=0.5,SNR=21
SJCC San Jacinto, C 79.79 89 *eP* **P** **09 09 23.4 +1.1**
JAY Jayapura 80.40 238 P **P** **09 09 27.4 +1.9**
comp=Z,16nm,1.0s,baz=41,slow=5.5,SNR=5.0
JAY LR LR 09 45 20.7
comp=Z,494nm,19.3s,baz=20,slow=36
SMLC San Martn de 81.22 88 *eP* **P** **09 09 29.1 -0.7**
KKM Kota Kinabalu 81.24 264 IAMs_20 IAMs_20 09 45 06.9
comp=Z,1µm,20.0s
HNR Honiara 81.57 218 IAMs_20 IAMs_20 09 42 10.0
comp=Z,1µm,22.0s
UREC San Jos de Ur 81.62 90 *eP* **P** **09 09 33.0 +0.9**
SVB Belmont 81.94 75 IAMs_20 IAMs_20 09 50 58.3
comp=Z,1µm,20.0s
OCAC Ocana 82.02 88 *eP* **P** **09 09 36.1 +1.8**
EIL Elat 82.05 345 P **P** **09 09 33.4 -0.8**
comp=Z,8.3nm,0.9s,baz=32,slow=1.5,SNR=10
SIJI Sorong 82.07 248 P **P** **09 09 33.9 -0.5**
comp=Z,31nm,0.9s,baz=14,slow=7.4,SNR=20
SIJI LR LR 09 44 50.6
comp=Z,185nm,19.4s,baz=7.0,slow=35
ZARC Zaragoza, Cauc 82.12 90 *eP* **P** **09 09 34.7 0.0**
SHME Shamm 82.25 326 P **P** **09 09 33.6 -1.7**
BANOM Banah 82.34 326 P **P** **09 09 33.9 -1.9**
BANOM Banah 82.34 326 P **P** **09 09 34.6 -1.1**
BANOM P **P** **09 09 34.6 -1.1**
SDV Santo Domingo 82.45 85 *eP* **P** **09 09 36.9 +0.4**
SDV Santo Domingo 82.45 85 P **P** **09 09 37.0 +0.4**
SDV Santo Domingo 82.45 85 *eP* **P** **09 09 37.1 +0.5**
RPR Rampur 82.83 303 *eP* **P** **09 09 38.9 +0.6**
GRGR Grenville 82.84 76 IAMs_20 IAMs_20 09 51 42.2
comp=Z,1µm,19.0s
MSFE Esma-Masafi 82.91 326 P **P** **09 09 36.7 -2.1**
MDH Madha 82.94 325 P **P** **09 09 39.8 +0.9**
MDH P **P** **09 09 39.8 +0.9**
HELC Santa Helena 83.05 91 *eP* **P** **09 09 39.9 -0.1**
SRSP Sriramsagar 83.07 304 *eP* **P** **09 09 40.9 +1.3**
SRSP IAmb IAmb 09 09 49.2
comp=Z,19nm,1.1s
PAMC Pamplona, Colo 83.08 88 *eP* **P** **09 09 39.3 -0.9**
PTBC PUERTO BERRIO, 83.14 90 *eP* **P** **09 09 38.5 -1.5**
CBOC Ciudad Bolivar 83.17 91 *eP* **P** **09 09 40.0 -0.4**
LBMI Labuha 83.20 251 P **P** **09 09 41.1 +0.9**
comp=Z,1µmcomp=Z,53nm,0.9s
UOSS Minazif 83.30 325 P **P** **09 09 37.6 -3.1**
UOSS Minazif 83.30 325 P **P** **09 09 38.3 -2.4**
UOSS P **P** **09 09 38.3 -2.4**
UOSS Minazif 83.30 325 P **P** **09 09 40.3 -0.4**
UOSS IAmb IAmb 09 09 53.3
comp=Z,22nm,0.9s
HATD Hatta, Dubai 83.44 325 *i* P **P** **09 09 39.1 -2.3**
SNR=5.5
HATD Hatta, Dubai 83.44 325 P **P** **09 09 40.2 -1.3**
SNR=7.9
HATD P **P** **09 09 40.2 -1.3**
SNR=7.9
DGPR DIGLIPUR 83.44 289 *eP* **P** **09 09 45.5 +4.1**
DGPR IAmb IAmb 09 09 49.2
comp=Z,65nm,1.0s
PVM Polavaram 83.58 300 *eP* **P** **09 09 44.4 +2.2**
PVM IAmb IAmb 09 09 52.7
comp=Z,35nm,1.3s
ASHO Ashiyiah 83.59 325 P **P** **09 09 40.6 -1.7**
ASHO Ashiyiah 83.59 325 P **P** **09 09 40.6 -1.7**
SNR=8.3
ASHO P **P** **09 09 40.6 -1.7**
SNR=8.3
FAKI Fak Fak 83.63 246 P **P** **09 09 43.9 +1.5**
comp=Z,39nm,1.6s
FAKI Fak Fak 83.63 246 IAmb IAmb 09 09 47.2
comp=Z,40nm,1.1s
NORC Norcasia 83.88 90 *eP* **P** **09 09 43.1 -0.8**
GUY2C Guyana, Caldas 84.00 91 *eP* **P** **09 09 44.3 -0.6**
SPBC San Pablo de B 84.10 90 *eP* **P** **09 09 44.0 -1.0**
MRSI Marisa 84.21 257 P **P** **09 09 46.0 +0.6**
comp=Z,2µmcomp=Z,127nm,1.4s
RUSC La Rusia 84.26 89 *eP* **P** **09 09 45.9 -0.4**
RREF El Recreo 84.31 91 *eP* **P** **09 09 50.7 +4.0**
MYLAV Mylavaram 84.37 301 *eP* **P** **09 09 48.4 +2.2**
MYLAV IAmb IAmb 09 09 56.4
comp=Z,31nm,1.2s
HOQ Hoqain 84.38 324 P **P** **09 09 44.8 -1.4**
SNR=9.7
HOQ P **P** **09 09 44.8 -1.4**
SNR=9.7
HYBB Hyderabad (bro 84.42 303 *eP* **P** **09 09 47.9 +1.4**
HYBB IAmb IAmb 09 09 48.4
comp=Z,20nm,1.0s
HYB Hyderabad 84.42 303 *i* P **P** **09 09 45.5 -1.0**
HYB *ePcP* **pP** **09 09 47.5 -2.4**
HYB Hyderabad 84.42 303 *eP* **P** **09 09 48.9 +2.4**
KLRI Killari 84.42 305 *eP* **P** **09 09 47.6 +1.0**
KLRI IAmb IAmb 09 09 56.2
comp=Z,25nm,1.1s
ROSC El Rosal 84.75 90 P **P** **09 09 49.4 +0.7**
comp=Z,82nm,1.0s,baz=98,slow=2.2,SNR=22
ROSC LR LR 09 50 28.0
comp=Z,1µm,20.7s,baz=346,slow=38
ROSC El Rosal 84.75 90 *eP* **P** **09 09 49.7 +1.0**
ROSC El Rosal 84.75 90 IAMs_20 IAMs_20 09 50 15.7
comp=Z,2µm,21.0s
YOTC Yotoco, Valle 84.77 92 *eP* **P** **09 09 44.4 -4.1**
ARQ Araqi 84.79 325 P **P** **09 09 47.1 -1.3**
SNR=9.1
ARQ P **P** **09 09 47.1 -1.3**
SNR=9.1
POO Poona 84.83 308 *eP* **P** **09 09 49.9 +1.3**
POO *eP* **P** **09 09 50.5 +1.9**
PMG Port Moresby 84.92 230 P **P** **09 09 50.0 +1.1**
PMG pmax pmax
comp=Z,33nm,1.0s
PMG Port Moresby 84.92 230 P **P** **09 09 50.0 +1.1**
PMG IAmb IAmb 09 09 59.9
comp=Z,32nm,1.0s
NJS Nagarjunasagar 84.98 302 *eP* **P** **09 09 50.9 +1.5**
NJS IAmb IAmb 09 09 59.4
comp=Z,20nm,1.1s
MPSI Mapaga 85.10 259 P **P** **09 09 49.6 -0.3**
comp=Z,56nm,1.4s
CHIC Chingaza 85.17 90 *eP* **P** **09 09 50.6 -0.2**
BSY Bisya 85.21 324 P **P** **09 09 49.5 -1.0**
SNR=12
BSY P **P** **09 09 49.5 -1.0**
SNR=12
ORTC Ortega, Tolima 85.26 91 *eP* **P** **09 09 49.0 -1.8**
JMDO Jabal Madar 85.37 323 P **P** **09 09 50.5 -0.7**
SNR=8.3
JMDO P **P** **09 09 50.5 -0.7**
SNR=8.3
ADKI Addanki 85.43 301 *eP* **P** **09 09 53.6 +2.0**
ADKI IAmb IAmb 09 10 02.0
comp=Z,30nm,1.2s
SRLM Srisailam 85.54 302 *eP* **P** **09 09 53.7 +1.5**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRLM				IAmb	IAmb	09 10 02.0	
	comp=Z,33nm,1.2s						
PPT	Papeete	85.55	168	LR	LR	09 41 17.4	
	comp=Z,700nm,19.6s,baz=352,slow=31						
PPT2	Papeete2	85.58	168	eS	S	09 20 16.4	-7.3
	comp=Z,601nm,24.5s						
PPT2	Papeete2	85.58	168	eLQ	LQ	09 32 55.0	
	comp=Z,3μm,39.0s						
PPT2				eLR	LR	09 36 21.3	
	comp=Z,1μm,27.0s,baz=354						
SBUM	Sibu	86.06	267	P	P	09 09 55.0	+0.3
PTGC	Puerto Gaitan,	86.18	88	eP	P	09 09 55.2	-0.1
PCON	Cinco Dias	86.27	93	eP	P	09 09 56.1	-0.3
SOTA	Rioblanco	86.37	93	eP	P	09 09 57.1	+0.3
RAYN	Ar Rayn	86.73	335	P	P	09 09 57.0	-1.0
RAYN				pmax	pmax		
	comp=Z,57nm,1.1s						
RAYN	Ar Rayn	86.73	335	P	P	09 09 57.0	-1.0
RAYN				IAMs_20	IAMs_20	09 53 45.5	
	comp=Z,1μm,22.0s						
MHTO	MHTO	86.73	323	P	P	09 09 59.2	+1.2
	SNR=8.6						
MHTO				P	P	09 09 59.2	+1.2
	SNR=8.6						
GARC	Garzon, Huila	86.74	92	eP	P	09 09 56.8	-1.6
GCUF	Volcan Galeras	86.92	94	eP	P	09 10 01.7	+2.1
URV	Uravakonda	87.15	304	eP	P	09 10 00.6	+0.5
CUSE	Cuicocha Este	87.37	96	eP	P	09 10 02.4	+0.7
BKB	Balikpapan	87.70	261	IAMs_20	IAMs_20	09 52 09.2	
	comp=Z,897nm,18.0s						
COEN	Coen	90.41	232	P	P	09 10 14.4	-0.9
COEN				IAmb	IAmb	09 10 25.5	
	comp=Z,33nm,1.2s						
COEN				IAMs_20	IAMs_20	09 43 19.4	
	comp=Z,943nm,21.0s						
PSI	Prapat	90.79	279	P	P	09 10 16.5	-0.9
	comp=Z,12nm,0.9s,baz=1.2,slow=3.6,SNR=10						
RPSI	Rantau Prapat	90.89	279	IAMs_20	IAMs_20	09 51 54.7	
	comp=Z,1μm,18.0s						
TBI	Tubuai	91.29	168	eLQ	LQ	09 35 13.8	
	comp=Z,1μm,25.5s						
TBI				eLR	LR	09 38 58.6	
	comp=Z,1μm,32.8s,baz=352						
DZM	Mont Dzumac	92.48	209	eP	P	09 10 25.0	+0.2
	comp=Z,52nm,1.2s						
DZM	Mont Dzumac	92.48	209	ePP	PP	09 14 01.2	-5.2
	comp=Z,140nm,27.1s						
DZM				eSKSac	SKSac	09 20 54.3	-3.7
	comp=Z,426nm,25.2s						
DZM	Mont Dzumac	92.48	209	ePS	PS	09 22 35.8	-4.8
	comp=Z,1μm,27.9s						
DZM				eSS	SS	09 27 35.3	-5.2
	comp=Z,2μm,30.2s						
DZM	Mont Dzumac	92.48	209	eLR	LR	09 39 33.8	
	comp=Z,2μm,33.4s						
EDFI	Ende, Flores	92.82	254	P	P	09 10 24.6	-2.0
	comp=Z,8.9nm,1.6s						
PDSI	Padang	93.62	276	P	P	09 10 30.4	+0.1
PTGA	Pitinga	95.31	79	IAMs_20	IAMs_20	09 56 25.8	
	comp=Z,810nm,20.0s						
PTGA	Pitinga	95.31	79	eP	P	09 10 39.3	+1.2
CTAO	Charters Tower	95.32	228	P	P	09 10 39.1	+1.2
CTAO				pmax	pmax		
	comp=Z,20nm,1.3s						
CTAO	Charters Tower	95.32	228	P	P	09 10 39.1	+1.2
CTAO				IAmb	IAmb	09 10 47.3	
	comp=Z,20nm,1.3s						
DAMY	Dhamar	95.67	334	IAMs_20	IAMs_20	09 59 07.6	
	comp=Z,1μm,21.0s						
SOCY	Socotra	96.14	324	IAMs_20	IAMs_20	10 01 33.3	
	comp=Z,701nm,19.0s						
LEM	Lembang	96.33	268	LR	LR	09 58 45.9	
	comp=Z,604nm,18.1s,baz=332,slow=38						
CISI	Cisompet, Garu	96.92	267	IAMs_20	IAMs_20	09 58 25.6	
	comp=Z,977nm,18.0s						
MACA	Manacapuru-AM	97.28	81	eP	Pdif	09 10 48.1	+1.1
TOC1	Torodi Ar. Sit	98.48	16	IAMs_20	IAMs_20	09 59 49.8	
	comp=Z,744nm,20.0s						
TORD	Torodi Ar. Bea	98.50	16	P	P	09 10 50.8	-1.7
	comp=Z,1.0nm,0.9s,baz=333,slow=4.6,SNR=4.2						
TORD				LR	LR	09 58 14.6	
	comp=Z,404nm,18.5s,baz=320,slow=37						
WB3	Warramunga Arr	98.78	238	IAMs_20	IAMs_20	09 58 08.3	
	comp=Z,883nm,21.0s						
WB2	Warramunga Arr	98.80	238	P	P	09 10 52.8	-0.9
WB2				IAmb	IAmb	09 11 03.9	
	comp=Z,10nm,1.1s						
WR1	Warramunga Arr	98.81	238	IAMs_20	IAMs_20	09 55 21.9	
	comp=Z,788nm,22.0s						
WRA	Warramunga Arr	98.81	238	P	P	09 10 52.3	-1.4
	comp=Z,1.9nm,0.9s,baz=22,slow=5.5,SNR=7.7						
WRA				LR	LR	10 00 27.6	
	comp=Z,204nm,18.2s,baz=45,slow=38						
WRA	Warramunga Arr	98.81	238	iP	P	09 10 51.2	-2.4
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
EIDS	Eidsvold	99.06	222	IAMs_20	IAMs_20	09 48 26.1	
	comp=Z,812nm,21.0s						
SAML	Samuel	101.66	85	IAMs_20	IAMs_20	10 01 43.9	
	comp=Z,772nm,21.0s						
ASAR	Alice Springs	102.42	237	P	Pdif	09 11 09.2	-0.4
	comp=Z,0.5nm,0.8s,baz=27,slow=6.3,SNR=3.9						
PSAD1	Pilbara Seismi	105.19	251	IAMs_20	IAMs_20	09 50 03.4	
	comp=Z,888nm,19.0s						
PSAA1	Pilbara Seismi	105.30	251	IAMs_20	IAMs_20	10 06 22.3	
	comp=Z,1μm,21.0s						
LPAZ	La Paz	106.49	93	PP	PP	09 15 51.8	-1.7
	comp=Z,2.8nm,1.0s,baz=5.2,slow=13,SNR=4.7						
PB16	IPOC Station P	107.83	95	IAMs_20	IAMs_20	09 59 37.3	
	comp=Z,833nm,21.0s						
PB11	IPOC Station P	109.07	95	IAMs_20	IAMs_20	10 01 26.3	
	comp=Z,787nm,22.0s						
MBAR	Mbarara	112.41	346	IAMs_20	IAMs_20	09 53 40.0	
	comp=Z,628nm,20.0s						
BDFB	Brasilia	113.47	73	IAMs_20	IAMs_20	10 05 54.1	
	comp=Z,994nm,21.0s						
CPUP	Villa Florida	119.72	87	PKP	PKiKP	09 16 04.4	+0.8
	comp=Z,2.7nm,1.0s,baz=54,slow=5.7,SNR=3.2						
PTGB	Pitanga	120.26	81	eP	PKiKP	09 16 06.3	+1.5
VAO	Valinhos	120.60	76	eP	PKiKP	09 16 07.4	+1.8
SPB	Sao Paulo	120.97	76	eP	PKiKP	09 16 07.7	+1.6
PARB	Paraibuna	121.40	74	eP	PKiKP	09 16 08.1	+0.9
ITAB	Concordia	122.51	83	eP	PKiKP	09 16 10.6	+1.5
CPSB	Cacapava Do Su	124.86	85	eP	PKPdf	09 16 13.4	+0.1
PLTB	Pedras Altas	126.01	86	eP	PKiKP	09 16 17.4	+1.4
LSZ	Lusaka	127.15	347	IAMs_20	IAMs_20	10 22 21.8	
	comp=Z,468nm,20.0s						
PLCA	Paso Flores	127.54	107	PKP	PKiKP	09 16 20.4	+1.6
	comp=Z,5.6nm,0.7s,baz=334,slow=2.6,SNR=11						
PLCA	Paso Flores	127.54	107	PKIKP	PKiKP	09 16 19.3	+0.5
PLCA	Paso Flores	127.54	107		PKiKP	09 16 19.3	+0.5
PLCA	Paso Flores	127.54	107	eP	PKiKP	09 16 20.2	+1.4
TSUM	Tsumeb	131.49	0		PKiKP	09 16 28.0	+0.5
TSUM	Tsumeb	131.49	0	IAMs_20	IAMs_20	10 21 33.8	
	comp=Z,433nm,20.0s						
LBTB	Lobatse	137.01	350	PKIKP	PKPdf	09 16 36.2	-0.4
LBTB	Lobatse	137.01	350		PKPdf	09 16 36.2	-0.4
BOSA	Boshof	140.60	350	PKP	PKPdf	09 16 40.9	-2.3
	comp=Z,2.1nm,0.5s,baz=285,slow=5.8,SNR=4.3						
SUR	Sutherland	144.57	356	PKP	PKPbc	09 16 49.0	+0.2
	comp=Z,26nm,0.9s,baz=340,slow=1.8,SNR=16						
VNDA	Vanda	146.63	193	PKPbc	PKPbc	09 16 53.8	+0.1
	comp=Z,13nm,0.8s,baz=337,slow=4.5,SNR=28						
VNDA	Vanda	146.63	193		PKPdf	09 16 52.5	+0.5
CASY	Casey	146.93	228		PKPbc	09 16 54.7	0.0
PMSA	Palmer Station	149.15	124	PKPbc	PKiKP	09 17 03.4	+1.5
	comp=Z,66nm,0.8s,baz=122,slow=7.3,SNR=5.0						
PMSA	Palmer Station	149.15	124		PKiKP	09 17 02.9	+1.1
PMSA	Palmer Station	149.15	124	eP	PKPbc	09 16 58.6	-2.0
QSPA	South Pole Qui	157.54	180		PKPdf	09 17 07.3	-1.2
MAW	Mawson	163.15	249	PKPab	PKPab	09 18 04.5	-0.6
	comp=Z,4.3nm,0.9s,baz=48,slow=9.4,SNR=4.8						
MAW	Mawson	163.15	249		PKPab	09 18 05.8	+0.7
VNA3	Neumayer Olymp	169.81	123	PKPab	PKPab	09 18 34.6	+0.2
VNA1	Neumayer--Stat	170.33	119	PKPab	PKPab	09 18 38.0	+1.3
SNAA	Sanae	171.84	128	PKPab	PKPab	09 18 44.2	+0.6
SNAA	Sanae	171.84	128	PKPab	PKPab	09 18 43.4	-0.2
	comp=Z,9.7nm,1.1s,baz=214,slow=5.0,SNR=12						
SNAA	Sanae	171.84	128		PKPab	09 18 43.9	+0.3
SYO	Syowa Base	171.85	251⇑	ePKPdf	PKPdf	09 17 22.0	+1.2
SYO	Syowa Base	171.85	251⇑	epPKPdf	pPKPdf	09 17 24.2	-0.1
SYO	Syowa Base	171.85	251⇓	ePKPab	PKPab	09 18 43.2	-0.4
SYO	Syowa Base	171.85	251⇑	epPKPab	pPKPab	09 18 48.0	+1.1

AEIC 03 09:03:51.7±2.3**, 67°.69N**±0°.05×**162°.4W**±0°.2**, h18km**±8km**, ML3.6**/16**, Error ellipse: s-maj=10.0km s-min=5.2km az=129.0, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.41	333		Pg	09 04 00.1	+0.1
RDOG					Sb	09 04 06.6	+0.2
ANM	Nome	3.36	202		Pn	09 04 43.3	+0.1
ANM					Pb	09 04 44.0	-6.6
ANM					Sn	09 05 25.0	+2.4
IM03		3.83	113		Pn	09 04 50.2	+0.6
TOLK	Toolik Lake Re	4.89	73		Pn	09 05 06.0	+1.7
TOLK	Toolik Lake Re	4.89	73		Sn	09 06 02.1	+1.8
MLY	Manley	5.40	114		Pn	09 05 11.0	-0.3
TT01	Tatalina	5.50	148		Pn	09 05 13.7	+1.1
BPAW	Bear Paw Mtn.	5.90	122	Pn	Pn	09 05 18.4	+0.3
BPAW				Sn	Sn	09 06 25.6	+0.3
MDM	Murphy Dome	6.33	109	Pn	Pn	09 05 25.9	+1.9
PPLA	Purkeypile	6.44	134	Pn	Pn	09 05 26.9	+1.3
COLA	College	6.51	109	Pn	Pn	09 05 28.4	+1.9
COLA	College	6.51	109	Sn	Sn	09 06 40.4	+0.2
POKR	Poker Plat Res	6.54	106		Pn	09 05 28.0	+1.1
TRF	Thorofare Moun	6.58	125	Pn	Pn	09 05 27.7	+0.1
WRH	Wood River Hil	6.65	112	Pn	Pn	09 05 30.2	+1.8
CCB	Clear Creek Bu	6.66	110		Pn	09 05 29.4	+1.0
CCB				Sn	Sn	09 06 42.6	-1.1
BM03	Burnt Mountain	6.82	84		Pn	09 05 32.0	+1.2
IL31		6.92	108		Pn	09 05 34.1	+2.1
RND	Reindeer	7.07	121	Pn	Pn	09 05 35.4	+1.2
HDA	Harding Lake	7.10	110	Pn	Pn	09 05 35.4	+0.9
HDA				Sn	Sn	09 06 53.8	-0.8
DHY	Denali Highway	7.79	119	Pn	Pn	09 05 45.7	+1.5
DHY				Sn	Sn	09 07 13.3	+1.5

IDC 03 09:07:52.8±135.0**, 20°.47N**×**144°.51E, h0km, Error ellipse: s-maj=266.7km s-min=24.3km az=101.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	21.00	92	H	H	09 34 10.3	
	baz=279,slow=75,SNR=817						
H11S1	WAKE ISLAND Hy	21.01	92	H	H	09 34 11.1	
	baz=279,slow=75,SNR=876						
H11S2	WAKE ISLAND Hy	21.02	92	H	H	09 34 11.6	
	baz=279,slow=75,SNR=637						
H11N1	WAKE ISLAND Hy	21.03	88	H	H	09 34 13.1	
	baz=276,slow=74,SNR=432						
H11N2	WAKE ISLAND Hy	21.04	88	H	H	09 34 13.4	
	baz=276,slow=74,SNR=261						
H11N3	WAKE ISLAND Hy	21.05	88	H	H	09 34 14.4	
	baz=276,slow=74,SNR=220						
H03S2	Juan Fernandez	139.41	118	H	H	12 02 20.9	
	baz=259,slow=76,SNR=3.9						
H03S3	Juan Fernandez	139.43	118	H	H	12 02 20.3	
	baz=259,slow=76,SNR=3.9						
H03S1	Juan Fernandez	139.43	118	H	H	12 02 21.7	
	baz=259,slow=76,SNR=4.0						
H03N2	Juan Fernandez	139.46	118	H	H	12 02 18.8	
	baz=267,slow=74,SNR=22						
H03N3	Juan Fernandez	139.47	118	H	H	12 02 20.0	
	baz=267,slow=74,SNR=30						
H03N1	Juan Fernandez	139.48	118	H	H	12 02 19.5	
	baz=267,slow=74,SNR=42						

*NEIC **03** 09:11:51.0±1.4, 4°.17S±0°.05×152°.81E±0°.07, h46km±8km, mb4.4/15, Error ellipse: s-maj=12.0km s-min=5.8km az=58.0*

*IDC **03** 09:11:52.5±1.4, 4°.31S×152°.74E, h58km±10km, mb3.8/7, mb1 3.9/8, mb1mx3.5/48, mbtmp4.0/8, Error ellipse: s-maj=20.8km s-min=13.8km az=117.0*

ISC 03 09:11:50.0±0.7**, 4°.22S**±0°.08×**152°.93E**±0°.08**, h35km, n37, σ1s81**/32**, mb4.4**/16**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.77	272		Pn	09 12 05.1	+0.7
RABL				Sn	Sn	09 12 15.2	+0.5
KRVT	Keravat (AS076	0.91	265	P	Pn	09 12 06.9	+0.6
	482nm,0.3s,baz=85,slow=0.4,SNR=298						
KRVT				LR	LR	09 12 12.6	
	comp=Z,105nm,21.7s,baz=183,slow=28						
KRVT				S	Sn	09 12 18.6	+0.5
	797nm,0.3s,baz=162,slow=22,SNR=11						
PMG	Port Moresby	7.71	228		Pn	09 13 43.8	+4.0
PMG				Sn	Sn	09 15 12.2	+6.3
CTA	Charters Tower	17.06	202	P	Pn	09 15 44.1	-1.8
	0.1nm,0.3s,baz=21,slow=14,SNR=1.6						
CTAO	Charters Tower	17.06	202	P	P	09 15 46.9	-0.5
DZM	Mont Dzumac	22.06	145	P	P	09 16 42.2	+0.2
	6.2nm,0.8s,baz=297,slow=9.9,SNR=7.2						
DZM	Mont Dzumac	22.06	145	P	P	09 16 43.7	+1.7
DZM				IAmb	IAmb	09 16 55.9	
	comp=Z,12nm,1.1s						
MTN	Manton Dam	23.18	247	P	P	09 16 53.5	-0.3
MTN				IAmb	IAmb	09 17 12.4	
	comp=Z,27nm,1.4s						
WB0	Warramunga Arr	23.78	228	P	P	09 16 59.1	-0.5
WB0				IAmb	IAmb	09 17 00.1	
	comp=Z,11nm,0.9s						
WR0	Warramunga Arr	23.79	227	P	P	09 16 59.2	-0.5
WR0				IAmb	IAmb	09 17 00.3	
	comp=Z,8.1nm,0.7s						
WRAB	Tennant Creek	23.91	228	P	P	09 17 00.0	-0.8
WRAB				IAmb	IAmb	09 17 01.4	
	comp=Z,16nm,1.0s						
WB2	Warramunga Arr	23.92	228	P	P	09 17 00.4	-0.5
WB2				IAmb	IAmb	09 17 01.8	
	comp=Z,21nm,1.1s						
WRA	Warramunga Arr	23.93	228	P	P	09 17 00.0	-0.9
	comp=Z,6.3nm,0.4s,baz=54,slow=9.3,SNR=104						
WRA				S	S	09 21 10.6	-4.8
	comp=Z,1.3nm,0.9s,baz=44,slow=15,SNR=6.1						
H11S3	WAKE ISLAND Hy	26.33	31	T	T	09 44 59.1	
	baz=206,slow=74,SNR=16						
H11S2	WAKE ISLAND Hy	26.33	31	T	T	09 45 14.0	
	baz=206,slow=74,SNR=15						
H11S1	WAKE ISLAND Hy	26.35	31	T	T	09 45 14.8	
	baz=206						
KNRA	Kununurra	26.35	243	P	P	09 17 23.1	+0.1
KNRA				IAmb	IAmb	09 17 24.8	
	comp=Z,8.7nm,0.8s						
AS31	Alice Springs	26.66	222	P	P	09 17 25.5	-0.3
ASAR	Alice Springs	26.67	222	P	P	09 17 25.1	-0.7
	comp=Z,1.4nm,0.5s,baz=54,slow=9.1,SNR=55						
H11N1	WAKE ISLAND Hy	27.46	30	T	T	09 46 43.0	
	baz=196						
H11N3	WAKE ISLAND Hy	27.47	30	T	T	09 46 40.8	
	baz=196,slow=74,SNR=9.6						
H11N2	WAKE ISLAND Hy	27.48	30	T	T	09 46 59.2	
	baz=196,slow=74,SNR=6.8						
STKA	Stephens Creek	29.50	200	P	P	09 17 52.0	+1.0
	comp=Z,12nm,0.3s,baz=20,slow=11,SNR=46						
FITZ	Fitzroy Crossi	30.05	241	P	P	09 17 54.9	-1.1
BBOO	Buckleboo	32.53	207	P	P	09 18 16.7	-1.0
FORT	Forrest	35.32	219	P	P	09 18 41.5	-0.5
MORW	Morawa	42.81	231	P	P	09 19 43.3	-1.4
MORW				IAmb	IAmb	09 19 48.8	
	comp=Z,6.5nm,1.1s						
USRK	Ussuriysk Ar.	51.75	341	P	P	09 20 54.8	+0.8
	comp=Z,2.3nm,0.8s,baz=134,slow=6.2,SNR=3.6						
PEA0B	Petropavlovsk-	57.26	3	P	P	09 21 35.7	+1.9
PETK	Petropavlovsk-	57.26	3	P	P	09 21 34.8	+1.0
	comp=Z,1.1nm,0.7s,baz=171,slow=8.6,SNR=11						
SONM	Songino Array	65.91	328	P	P	09 22 33.3	+0.8
	comp=Z,0.4nm,0.5s,baz=106,slow=4.7,SNR=3.8						
H02S1	DAWSON INLET T	84.20	36	T	T	10 57 13.4	
	SNR=10						
QSPA	South Pole Qui	85.74	180	P	P	09 24 26.6	+1.2
QSPA				IAmb	IAmb	09 24 36.7	
	comp=Z,3.3nm,1.2s						
YKA	Yellowknife Ar	94.85	28	P	P	09 25 07.9	-0.1
	comp=Z,0.2nm,0.6s,baz=269,slow=4.8,SNR=4.4						
H06E1	SOCORRO T-PHAS	97.15	72	T	T	11 13 22.8	
	SNR=26						
GERES	GERESS Array B	123.63	329	PKP	PKPdf	09 30 41.6	-2.5
	comp=Z,0.3nm,0.5s,baz=58,slow=5.0,SNR=4.4						
TORD	Torodi Ar. Bea	150.25	289	PKPbc	PKPbc	09 31 37.0	-1.5
	comp=Z,0.6nm,0.3s,baz=65,slow=2.1,SNR=9.5						

*IDC **03** 09:21:30.5±4.7, 68°.27N×163°.36W, h0km, mb3.4/4, mb1 4.0/7, mb1mx3.5/57, mbtmp3.7/7, ML3.7/3, Error ellipse: s-maj=72.1km s-min=37.5km az=118.0*

*AEIC **03** 09:21:34.9±1.5, 67°.68N±0°.09×162°.3W±0°.2, h12km±6km, ML3.3/36, Error ellipse: s-maj=14.5km s-min=9.7km az=144.0*

*NEIC **03** 09:21:36.7±1.4, 67°.73N±0°.08×162°.5W±0°.2, h31km±7km, Error ellipse: s-maj=13.2km s-min=9.4km az=134.0*

ISC 03 09:21:34.6±1.0**, 67°.72N**±0°.06×**162°.43W**±0°.07**, h10km, n54, σ1s58**/60**, mb3.3**/3**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.38	332		Pb	09 21 43.4	0.0
ANM	Nome	3.39	202		Pn	09 22 28.2	+0.8
IM03		3.85	113		Pn	09 22 33.7	0.0
IM03					Sn	09 23 18.2	-0.6
IM01	Indian Mountai	3.85	113		Pn	09 22 33.9	+0.1
IM01					Sn	09 23 18.4	-0.6
IM05	Indian Mountai	3.86	113		Pn	09 22 34.0	+0.1
COLD	Coldfoot	4.73	90		Pn	09 22 48.0	+2.1
COLD	Coldfoot	4.73	90		Sn	09 23 40.7	0.0
TOLK	Toolik Lake Re	4.89	73	P	Pn	09 22 50.4	+2.4
	baz=264						
TOLK				S	Sn	09 23 44.1	-0.5
	baz=264						
TOLK	Toolik Lake Re	4.89	73		Sn	09 23 44.1	-0.5
TOLK	Toolik Lake Re	4.89	73	Pn	Pn	09 22 49.6	+1.6
MLY	Manley	5.42	114		Pn	09 22 54.8	-0.6
GAMB	Gambell	5.50	228	Pn	Pn	09 22 55.7	-0.7
TTA	Tatalina	5.51	148		Sn	09 23 58.1	-1.8
TTA	Tatalina	5.51	148	Pn	Pn	09 22 55.5	-1.1
TT01	Tatalina	5.53	148		Pn	09 22 57.1	+0.3
PS01	TAPS Pump Stn	5.58	57		Pn	09 22 58.0	+0.5
BPAW	Bear Paw Mtn.	5.92	122		Pn	09 23 02.9	+0.6
PS07	TAPS Pump Stn7	6.15	107		Pn	09 23 05.8	+0.5
KTH	Kantishna Hill	6.33	126		Pn	09 23 08.4	+0.5
MDM	Murphy Dome	6.35	109		Pn	09 23 08.9	+0.8
PPLA	Purkeypile	6.46	134		Pn	09 23 10.5	+0.7
TCOL	CIGO, UAF Yank	6.53	109	P	Pn	09 23 11.7	+1.2
	baz=302						
TCOL				S	Sn	09 24 22.9	-1.9
	baz=302						
TCOL	CIGO, UAF Yank	6.53	109		Pn	09 23 11.5	+1.0
COLA	College	6.53	109		Pn	09 23 11.2	+0.7
COLA	College	6.53	109		Sn	09 24 24.1	-0.8
POKR	Poker Plat Res	6.55	106	P	Pn	09 23 11.8	+0.9
	baz=300						
POKR	Poker Plat Res	6.55	106		Pn	09 23 11.1	+0.2
TRF	Thorofare Moun	6.60	125		Pn	09 23 12.3	+0.6
CCB	Clear Creek Bu	6.67	111		Pn	09 23 13.1	+0.6
FYU	Fort Yukon	6.79	92		Pn	09 23 13.7	-0.4
BM03	Burnt Mountain	6.82	84		Pn	09 23 14.9	+0.3
MCK	McKinley	6.84	119		Pn	09 23 14.6	-0.3
IL31		6.93	108		Pn	09 23 15.8	-0.2
ILAR	Eielson Array	6.93	108	Pn	Pn	09 23 16.1	0.0
	3.8nm,0.3s,baz=302,slow=14,SNR=156						
ILAR				Sn	Sn	09 24 31.4	-3.5
	0.9nm,0.3s,baz=307,slow=25,SNR=7.3						
RND	Reindeer	7.09	121		Pn	09 23 19.1	+0.7
HDA	Harding Lake	7.11	111	S	Sn	09 24 36.1	-3.2
	baz=305						
HDA	Harding Lake	7.11	111		Pn	09 23 18.8	+0.2
WAT2	Susitna Watana	7.49	123		Pn	09 23 24.9	+1.0
WAT1	Susitna Watana	7.60	124		Pn	09 23 26.2	+1.0
DHY	Denali Highway	7.81	119		Pn	09 23 29.1	+0.9
DHY	Denali Highway	7.81	119		Sn	09 24 57.6	+1.0
GHO	Glory Hole Cre	8.29	130		Pn	09 23 38.4	+3.7
PMR	Palmer	8.37	131		Pn	09 23 39.4	+3.6
SML	Sawmill	8.44	128		Pn	09 23 38.7	+2.0
DOT	Dot Lake	8.59	110		Pn	09 23 41.8	+3.0
EPYK	Eagle Plains	10.10	86		Pn	09 24 00.2	+0.7
INK	Inuvik	10.80	74	Pn	Pn	09 24 08.0	-1.0
	0.4nm,0.3s,baz=291,slow=8.2,SNR=35						
INK				Sn	Sn	09 26 04.2	-5.5
	0.7nm,0.3s,baz=150,slow=22,SNR=9.5						
INK	Inuvik	10.80	74		Pn	09 24 08.0	-1.0
KDAK	Kodiak Island	10.93	151	Pn	Pn	09 24 12.3	+1.6
	0.1nm,0.3s,baz=24,slow=10.0,SNR=2.4						
A36M	Sachs Harbour	13.32	55	P	Pn	09 24 41.6	-1.8
	baz=269						
YKA	Yellowknife Ar	20.34	82	P	P	09 26 10.4	-0.2
	0.7nm,0.6s,baz=304,slow=10,SNR=12						
PDAR	Pinedale Array	37.35	105	P	P	09 28 48.4	+1.3
	0.3nm,0.5s,baz=348,slow=6.6,SNR=4.2						
NVAR	Mina Array Bea	38.08	118	P	P	09 28 54.9	+1.6
	0.4nm,0.7s,baz=318,slow=9.6,SNR=3.2						
TXAR	Lajitas Array	51.45	107	P	P	09 30 41.1	+1.4
	0.6nm,0.6s,baz=331,slow=5.3,SNR=12						

*IDC **03** 09:27:35.6±1.4, 6°.78S×154°.43E, h0km, mb3.8/6, mb1 4.1/7, mb1mx3.7/39, mbtmp3.9/7, ML3.9/1, MS4.3/2, Ms1 4.3/2, ms1mx3.3/46, Error ellipse: s-maj=42.2km s-min=24.8km az=108.0*

ISC 03 09:27:41.9±1.2**, 6°.7S**±0°.1×**154°.2E**±0°.2**, h39km, n10, σ0s65**/9**, mb3.8**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.27	317	Pn	Pn	09 28 30.6	0.0
	11nm,0.3s,baz=186,slow=1.7,SNR=13						
KRVT				Sn	Sn	09 29 07.8	-0.5
	10.0nm,0.3s,baz=191,slow=20,SNR=2.8						
WRA	Warramunga Arr	23.36	234	P	P	09 32 47.1	0.0
	3.7nm,0.9s,baz=58,slow=10,SNR=10.0						
ASAR	Alice Springs	25.79	227	P	P	09 33 10.0	+0.5
	1.0nm,0.9s,baz=57,slow=8.7,SNR=7.6						
STKA	Stephens Creek	27.66	204	P	P	09 33 25.8	-0.4
	0.9nm,0.7s,baz=21,slow=14,SNR=1.5						
BATI	Baumata	30.43	261	LR	LR	09 48 14.7	
	comp=Z,475nm,21.1s,baz=22,slow=40						
SONM	Songino Array	68.71	328	P	P	09 38 42.5	+0.7
	0.6nm,0.5s,baz=108,slow=4.7,SNR=1.5						
MKAR	Makanchi Array	82.72	319	P	P	09 40 02.4	+0.6
	0.6nm,0.7s,baz=99,slow=8.5,SNR=1.4						
NRIK	Noril'sk	88.25	341	LR	LR	10 20 51.7	
	comp=Z,231nm,21.2s,baz=54,slow=36						
NVAR	Mina Array Bea	92.15	52	P	P	09 40 47.6	-0.4
	0.9nm,1.0s,baz=256,slow=5.1,SNR=3.7						
TORD	Torodi Ar. Bea	152.23	285	PKPbc	PKPbc	09 47 33.7	-0.9
	0.3nm,0.4s,baz=360,slow=3.1,SNR=5.1						

*IDC **03** 09:28:13.8±1.4, 51°.25N×174°.30W, h0km, mb3.6/9, mb1 3.8/11, mb1mx3.5/58, mbtmp3.7/11, ML3.6/2, Error ellipse: s-maj=36.4km s-min=19.9km az=165.0*

*AEIC **03** 09:28:17.1±1.6, 51°.3N±0°.2×174°.32W±0°.08, h13km±6km, ML3.9/11, mb3.8/40(NEIC), Error ellipse: s-maj=29.7km s-min=6.4km az=172.0*

*NEIC **03** 09:28:18.9±2.1, 51°.3N±0°.2×174°.3W±0°.1, h34km±8km, Error ellipse: s-maj=24.2km s-min=11.5km az=178.0*

ISC 03 09:28:19.5±0.9**, 51°.3N**±0°.1×**174°.32W**±0°.06**, h38km, n64, σ1s33**/63**, mb3.7**/10**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	0.93	5	Pg	Pn	09 28 34.8	-1.1
ADK	Adak	1.59	293		Pn	09 28 44.8	-0.3
NIKH	Nikolski High	3.77	61	Pn	Pn	09 29 16.0	+1.0
OKWE	Okmok W'ng Wal	4.33	57		Pn	09 29 24.6	+2.0
MSW	Makushin Switc	5.30	57		Pn	09 29 36.5	+0.6
MNAT	Makushin Natee	5.34	58		Pn	09 29 36.6	+0.1
UNV	Unalaska Valle	5.42	59		Pn	09 29 41.0	+3.5
SPIA	Saint Paul Isl	6.37	20		Pn	09 29 52.9	+2.3
SDPT	Sand Point	9.23	58	Pn	Pn	09 30 28.5	-1.3
CNBA	Chernabura Isl	9.55	62	Pn	Pn	09 30 33.5	-0.7
KDAK	Kodiak Island	14.16	54	Pn	Pn	09 31 34.2	-2.9
	0.5nm,0.3s,baz=284,slow=3.3,SNR=11						
KDAK	Kodiak Island	14.16	54	Pn	Pn	09 31 35.2	-1.9
HOM	Homer	15.29	48	Pn	Pn	09 31 52.2	+0.1
CNPM	China Poot	15.43	49	Pn	Pn	09 31 52.7	-1.3
CNPM				IAmb	IAmb	09 32 04.2	
	comp=Z,6.9nm,1.4s						
BRLK	Bradley Lake	15.68	48	Pn	Pn	09 31 55.3	-2.1
BRLK				IAmb	IAmb	09 32 00.7	
	comp=Z,4.2nm,0.4s						
SEW	Seward	16.48	48	Pn	Pn	09 32 04.5	-2.9
RC01	Rabbit Creek A	16.74	45	Pn	Pn	09 32 09.5	-1.2
PEA0B	Petropavlovsk-	17.21	287	P	P	09 32 19.0	+1.1
PEA0B				IAmb	IAmb	09 32 24.8	
	comp=Z,14nm,1.4s						
PETK	Petropavlovsk-	17.21	287	P	Pn	09 32 16.8	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,0.2nm,0.3s,baz=91,slow=14,SNR=11						
PMR	**Palmer**	**17.22**	**43**		**Pn**	**09 32 15.9**	**-0.8**
GHO	**Glory Hole Cre**	**17.38**	**43**		**Pn**	**09 32 17.0**	**-1.8**
GHO				IAmb	IAmb	09 32 21.1	
	comp=Z,3.1nm,0.4s						
KNK	**Knik Glacier**	**17.43**	**44**	P	**Pn**	**09 32 18.3**	**-1.1**
KTH	**Kantishna Hill**	**17.47**	**36**	P	**P**	**09 32 21.3**	**+0.5**
TRF	**Thorofare Moun**	**17.65**	**37**		**P**	**09 32 22.3**	**-0.5**
SML	**Sawmill**	**17.65**	**43**	P	**Pn**	**09 32 21.4**	**-0.7**
SML				IAmb	IAmb	09 32 36.0	
	comp=Z,7.4nm,1.2s						
BPAW	**Bear Paw Mtn.**	**17.75**	**35**	P	**P**	**09 32 24.3**	**+0.5**
GLI	**Glacier Island**	**17.84**	**47**	P	**Pn**	**09 32 22.1**	**-2.3**
GLI				IAmb	IAmb	09 32 22.9	
	comp=Z,8.3nm,1.3s						
HIN	**Hinchinbrook I**	**17.96**	**49**	P	**Pn**	**09 32 23.7**	**-2.2**
FID	**Port Fidalgo**	**18.09**	**48**	P	**Pn**	**09 32 23.6**	**-3.9**
FID				IAmb	IAmb	09 32 30.9	
	comp=Z,3.8nm,0.4s						
SCM	**Sheep Creek Mo**	**18.10**	**44**	P	**Pn**	**09 32 26.3**	**-1.3**
SCM				IAmb	IAmb	09 32 30.4	
	comp=Z,7.0nm,1.2s						
RND	**Reindeer**	**18.18**	**38**	P	**Pn**	**09 32 27.9**	**-0.7**
EYAK	**Cordova Ski Ar**	**18.36**	**49**	P	**P**	**09 32 28.0**	**-2.5**
MLY	**Manley**	**18.39**	**33**	P	**Pn**	**09 32 31.8**	**+0.6**
MLY				IAmb	IAmb	09 32 40.0	
	comp=Z,8.9nm,1.5s						
DHY	**Denali Highway**	**18.61**	**40**	P	**P**	**09 32 32.6**	**-0.8**
DHY				IAmb	IAmb	09 32 47.0	
	comp=Z,4.7nm,1.2s						
RAGM	**Ragged Mountai**	**18.83**	**50**	P	**Pn**	**09 32 36.1**	**-0.4**
RAGM				IAmb	IAmb	09 32 50.7	
	comp=Z,4.8nm,0.6s						
SUCK	**Suckling Hills**	**19.18**	**51**	P	**Pn**	**09 32 40.5**	**-0.1**
CCB	**Clear Creek Bu**	**19.21**	**36**	P	**P**	**09 32 38.7**	**-1.1**
CCB				IAmb	IAmb	09 32 41.6	
	comp=Z,3.7nm,0.5s						
HDA	**Harding Lake**	**19.41**	**37**	P	**P**	**09 32 41.5**	**-0.5**
GLB	**Gilahina Butte**	**19.54**	**47**	P	**P**	**09 32 43.7**	**+0.3**
GLB				IAmb	IAmb	09 32 54.8	
	comp=Z,4.7nm,1.4s						
IL31		**19.61**	**36**	P	**P**	**09 32 43.8**	**-0.4**
ILAR	**Eielson Array**	**19.61**	**36**	P	**P**	**09 32 43.5**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=236,slow=9.1,SNR=50						
CRQM	**Cirque**	**19.66**	**49**	P	**P**	**09 32 44.0**	**-0.9**
CRQM				IAmb	IAmb	09 32 45.8	
	comp=Z,6.7nm,1.4s						
WAX	**Waxell Ridge**	**19.72**	**50**	P	**P**	**09 32 44.9**	**-0.6**
TGL	**Tana Glacier**	**19.80**	**49**	P	**P**	**09 32 46.0**	**-0.4**
TGL				IAmb	IAmb	09 32 49.2	
	comp=Z,3.6nm,1.0s						
RIDG	**Independent Ri**	**19.92**	**40**	P	**P**	**09 32 46.8**	**-0.9**
MENT	**Mentasta**	**20.07**	**43**	P	Pn	09 32 50.4	-0.8
MENT				IAmb	IAmb	09 33 04.9	
	comp=Z,2.3nm,0.6s						
DOT	**Dot Lake**	**20.20**	**41**	P	**P**	**09 32 49.9**	**-0.8**
DOT				IAmb	IAmb	09 33 03.4	
	comp=Z,2.5nm,0.6s						
SCRK	**Sand Creek**	**20.37**	**40**	P	**P**	**09 32 51.9**	**-0.7**
TOLK	**Toolik Lake Re**	**21.09**	**25**	P	**P**	**09 33 00.5**	**+0.3**
SEY	**Seymchan**	**21.23**	**316**	P	**P**	**09 33 02.9**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=101,slow=16,SNR=1.8						
EGAK	**Eagle**	**21.82**	**39**	P	**P**	**09 33 07.9**	**-0.1**
DAWY	**Dawson**	**22.29**	**42**	P	**P**	**09 33 13.0**	**0.0**
WHY	**Whitehorse**	**23.63**	**51**	P	**P**	**09 33 26.7**	**-0.2**
EPYK	**Eagle Plains**	**24.12**	**37**	P	**P**	**09 33 31.3**	**0.0**
EPYK				IAmb	IAmb	09 33 44.2	
	comp=Z,2.2nm,0.8s						
INK	**Inuvik**	**25.95**	**34**	P	**P**	**09 33 47.7**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=280,slow=5.0,SNR=6.0						
INK	**Inuvik**	**25.95**	**34**	P	**P**	**09 33 48.1**	**+0.3**
YKA	**Yellowknife Ar**	**33.25**	**47**	P	**P**	**09 34 52.4**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=275,slow=6.4,SNR=1.9						
USRK	**Ussuriysk Ar.**	**36.09**	**280**	P	**P**	**09 35 16.6**	**-0.6**
	comp=Z,1.7nm,0.7s,baz=71,slow=11,SNR=5.2						
PDAR	**Pinedale Array**	**43.64**	**75**	P	**P**	**09 36 20.2**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=318,slow=3.9,SNR=4.0						
SPITS	**Spitsbergen Ar**	**50.64**	**357**	P	**P**	**09 37 14.2**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=56,slow=5.2,SNR=9.1						
ARCES	**ARCESS Array B**	**58.62**	**352**	P	**P**	**09 38 11.2**	**-0.8**
	comp=Z,5.1nm,1.0s,baz=13,slow=7.2,SNR=5.1						
MKAR	**Makanchi Array**	**62.26**	**311**	P	**P**	**09 38 37.0**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=45,slow=6.7,SNR=11						
CLL	**Collm**	**77.60**	**355**	*e*P	**P**	**09 40 12.0**	**+0.8**
ASAR	**Alice Springs**	**87.38**	**226**	P	**P**	**09 41 02.8**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=16,slow=4.8,SNR=3.7						

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*AEIC **03** 09:28:31.1±3.2, 51°.49N±0°.06×174°.19W±0°.08, h20km±1km, mb4.6/111(NEIC), Error ellipse: s-maj=10.7km s-min=7.4km az=147.0*
*IDC **03** 09:28:33.6±4.0, 51°.46N×174°.36W, h28km±27km, mb4.1/31, mb1 4.2/33, mb1mx4.1/58, mbtmp4.2/33, ML4.0/2, Error ellipse: s-maj=18.1km s-min=9.9km az=168.0*
*NEIC **03** 09:28:35.0±2.5, 51°.49N±0°.05×174°.36W±0°.08, h43km±6km, Error ellipse: s-maj=8.4km s-min=6.8km az=139.0*
*BGR **03** 09:28:42.8±0.0, 52°.22N×175°.17W, h46km, mb4.8*
ISC 03 09:28:32.6±1.3, **51°.34N**±0°.08×**174°.23W**±0°.05, **h25**km±8km, **n227**, σ1°.**35**/225, **mb4.6**/102, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.87**	**1**		**Pn**	**09 28 46.5**	**-2.6**
ATKA	**Atka Island**	**0.87**	**1**		**Sn**	**09 28 59.1**	**-1.9**
ADK	**Adak**	**1.63**	**291**		**Pn**	**09 28 59.0**	**-0.6**
ADK	**Adak**	**1.63**	**291**	Sn	**Sn**	**09 29 19.3**	**-0.4**
MSW	**Makushin Switc**	**5.22**	**57**		**Pn**	**09 29 49.5**	**+0.5**
UNV	**Unalaska Valle**	**5.34**	**59**		**Pn**	**09 29 51.1**	**+0.6**
AKUT	**Akutan**	**5.85**	**58**	Pn	**Pn**	**09 29 58.6**	**+1.0**
SDPT	**Sand Point**	**9.15**	**59**	Pn	**Pn**	**09 30 41.6**	**-1.2**
CNBA	**Chernabura Isl**	**9.47**	**63**	Pn	**Pn**	**09 30 47.3**	**0.0**
CHGN	**Chignik**	**10.58**	**56**	Pn	**Pn**	**09 31 03.3**	**+0.9**
OHAK	**Old Harbor**	**13.55**	**56**	Pn	**Pn**	**09 31 39.6**	**-3.3**
ANM	**Nome**	**14.05**	**16**	Pn	Pn	09 31 43.1	-6.6
KDAK	**Kodiak Island**	**14.08**	**54**	Pn	**Pn**	**09 31 50.4**	**+0.3**
	1.9nm,0.3s,baz=229,slow=12,SNR=7.8						
KDAK	**Kodiak Island**	**14.08**	**54**		Pn	09 31 45.1	-5.0
RSO	**Redoubt South**	**15.05**	**44**	Pn	**Pn**	**09 31 59.0**	**-4.5**
PEA0B	**Petropavlovsk-**	**17.25**	**287**	P	**Pn**	**09 32 32.1**	**+0.6**
PETK	**Petropavlovsk-**	**17.25**	**287**	P	**Pn**	**09 32 31.7**	**+0.3**
	0.5nm,0.3s,baz=92,slow=14,SNR=13						
GHO	**Glory Hole Cre**	**17.30**	**43**		**Pn**	**09 32 32.2**	**0.0**
KNK	**Knik Glacier**	**17.35**	**45**	P	**Pn**	**09 32 32.6**	**-0.1**
KNK				IAmb	IAmb	09 32 36.2	
	comp=Z,12nm,0.5s						
SML	**Sawmill**	**17.57**	**43**	P	**Pn**	**09 32 35.4**	**0.0**
GLI	**Glacier Island**	**17.76**	**47**	P	**Pn**	**09 32 37.6**	**-0.2**
HIN	**Hinchinbrook I**	**17.88**	**49**	P	**Pn**	**09 32 38.7**	**-0.6**
FID	**Port Fidalgo**	**18.00**	**48**	P	**Pn**	**09 32 39.7**	**-1.0**
SCM	**Sheep Creek Mo**	**18.02**	**44**	P	**Pn**	**09 32 40.1**	**-0.9**
SCM				IAmb	IAmb	09 32 42.3	
	comp=Z,15nm,0.6s						
RND	**Reindeer**	**18.10**	**38**	P	**Pn**	**09 32 41.5**	**-0.4**
MCK	**McKinley**	**18.23**	**37**	P	**P**	**09 32 42.6**	**-1.0**
MCK				IAmb	IAmb	09 32 44.5	
	comp=Z,18nm,1.0s						
BWN	**Browne**	**18.27**	**36**	IAmb	IAmb	09 32 54.3	
	comp=Z,38nm,1.2s						
EYAK	**Cordova Ski Ar**	**18.28**	**49**	P	**Pn**	**09 32 44.6**	**+0.5**
MLY	**Manley**	**18.32**	**33**	P	**Pn**	**09 32 46.0**	**+1.4**
DHY	**Denali Highway**	**18.53**	**40**	P	**Pn**	**09 32 47.8**	**+0.6**
HMT	**Hamilton**	**18.93**	**50**	P	**Pn**	**09 32 52.7**	**+0.7**
HMT				IAmb	IAmb	09 33 01.4	
	comp=Z,23nm,1.2s						
SUCK	**Suckling Hills**	**19.10**	**51**	P	**Pn**	**09 32 55.7**	**+1.6**
SUCK				IAmb	IAmb	09 33 05.3	
	comp=Z,30nm,1.4s						
CCB	**Clear Creek Bu**	**19.13**	**36**	P	**Pn**	**09 32 55.5**	**+1.1**
CCB				IAmb	IAmb	09 32 55.9	
	comp=Z,14nm,0.5s						
COLA	**College**	**19.23**	**35**	P	**Pn**	**09 32 56.2**	**+0.6**
BILL	**Bilibino**	**19.26**	**338**	P	**Pn**	**09 32 56.5**	**+0.6**
BILL				IAmb	IAmb	09 33 02.7	
	comp=Z,37nm,1.2s						
IL31		**19.53**	**36**	P	**P**	**09 32 57.9**	**+0.1**
IL31				IAmb	IAmb	09 33 00.0	
	comp=Z,10nm,0.5s						
ILAR	**Eielson Array**	**19.53**	**36**	P	**P**	**09 32 57.8**	**0.0**
	comp=Z,2.5nm,0.3s,baz=233,slow=8.9,SNR=20						
VRDI	**Verde Repeater**	**19.55**	**48**	P	**Pn**	**09 32 59.3**	**-0.4**
CRQM	**Cirque**	**19.57**	**49**	P	**Pn**	**09 32 59.7**	**-0.2**
WAX	**Waxell Ridge**	**19.64**	**50**	P	**P**	**09 32 59.2**	**+0.1**
WAX				IAmb	IAmb	09 33 11.5	
	comp=Z,13nm,0.8s						
TGL	**Tana Glacier**	**19.72**	**49**	P	**P**	**09 33 00.7**	**+0.7**
MCARA	**McCarthy VSAT**	**19.80**	**47**	P	**Pn**	**09 33 02.8**	**+0.4**
RIDG	**Independent Ri**	**19.84**	**40**	P	**P**	**09 33 01.6**	**+0.3**
RIDG				IAmb	IAmb	09 33 08.4	
	comp=Z,14nm,0.5s						
COLD	**Coldfoot**	**19.88**	**28**	P	**P**	**09 33 02.5**	**+0.9**
BARN	**Barnard Glacie**	**20.35**	**49**	P	**P**	**09 33 06.2**	**-0.8**
CTGM	**Chitina Glacie**	**20.48**	**49**		**P**	**09 33 09.3**	**+0.9**
SEY	**Seymchan**	**21.23**	**316**	P	**P**	**09 33 18.7**	**+2.4**
	comp=Z,4.2nm,0.8s,baz=146,slow=10,SNR=9.9						
HYT	**Haines Junctio**	**22.29**	**51**	P	**P**	**09 33 29.3**	**+1.5**
EPYK	**Eagle Plains**	**24.04**	**37**	P	**P**	**09 33 44.9**	**-0.3**
EPYK				IAmb	IAmb	09 33 52.9	
	comp=Z,8.5nm,0.8s						
INK	**Inuvik**	**25.87**	**34**	P	**P**	**09 34 01.8**	**0.0**
	comp=Z,1.7nm,0.5s,baz=231,slow=11,SNR=5.3						
INK				PcP	**PcP**	**09 37 30.1**	**0.0**
	comp=Z,1.0nm,0.7s,baz=286,slow=1.3,SNR=2.8						
INK	**Inuvik**	**25.87**	**34**	P	**P**	**09 33 58.0**	**-3.8**
DLBC	**Dease Lake**	**25.99**	**57**	P	**P**	**09 34 05.5**	**+2.4**
	comp=Z,5.0nm,0.8s,baz=284,slow=9.6,SNR=8.7						
DLBC	**Dease Lake**	**25.99**	**57**	P	**P**	**09 34 06.2**	**+3.2**
DLBC				IAmb	IAmb	09 34 14.0	
	comp=Z,6.6nm,0.9s						
YKA	**Yellowknife Ar**	**33.17**	**47**	P	**P**	**09 35 06.6**	**0.0**
	comp=Z,0.3nm,0.4s,baz=275,slow=8.1,SNR=8.6						
YKA				PcP	**PcP**	**09 37 49.2**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=280,slow=2.5,SNR=8.6						
USRK	**Ussuriysk Ar.**	**36.13**	**280**	P	**P**	**09 35 31.9**	**-0.4**
	comp=Z,9.7nm,0.8s,baz=49,slow=8.3,SNR=17						
NEW	**Newport**	**36.19**	**72**	P	**P**	**09 35 35.3**	**+2.4**
	comp=Z,2.2nm,0.6s,baz=346,slow=5.9,SNR=4.1						
MJAR	**Matsushiro Arr**	**36.62**	**265**	P	**P**	**09 35 36.9**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=48,slow=10,SNR=6.1						
MOD	**Modoc Plateau**	**37.45**	**83**	P	**P**	**09 35 47.1**	**+3.3**
RES	**Resolute Bay**	**38.59**	**25**	P	**P**	**09 35 53.0**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=310,slow=8.0,SNR=4.6						
RES				PcP	**PcP**	**09 38 05.9**	**+1.3**
	comp=Z,2.2nm,0.9s,baz=326,slow=3.7,SNR=5.3						
MSO	**Missoula**	**38.77**	**72**		sP	09 36 10.0	+6.5
NVAR	**Mina Array Bea**	**40.70**	**86**	P	**P**	**09 36 12.4**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=299,slow=7.8,SNR=5.0						
NVAR				ScP	**ScP**	**09 42 00.4**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=282,slow=4.5,SNR=3.5						
ELK	**Elko**	**41.25**	**81**	P	**P**	**09 36 16.5**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=298,slow=9.1,SNR=7.4						
ELK	**Elko**	**41.25**	**81**	P	**P**	**09 36 18.4**	**+2.8**
YHH	**Holmes Hill**	**41.67**	**73**	P	**P**	**09 36 20.4**	**+1.2**
FFC	**Flin Flon**	**41.82**	**56**	P	**P**	**09 36 20.6**	**+0.9**
FFC				IAmb	IAmb	09 36 21.2	
	comp=Z,5.8nm,0.7s						
RLMT	**Red Lodge**	**42.44**	**72**	P	**P**	**09 36 28.1**	**+2.8**
RLMT				IAmb	IAmb	09 36 41.3	
	comp=Z,8.8nm,1.0s						
R11A	**Troy Canyon, C**	**42.45**	**84**	P	**P**	**09 36 27.9**	**+2.5**
KSRS	**Korea Array**	**42.50**	**274**	P	**P**	**09 36 25.9**	**+0.4**
	comp=Z,1.8nm,0.7s,baz=60,slow=7.2,SNR=6.2						
TPNV	**Topopah Spring**	**42.90**	**86**	P	**P**	**09 36 30.9**	**+1.9**
PSUT	**Pine Spring**	**43.42**	**83**		sP	09 36 45.2	+3.2
JNU	**Nakatsue**	**43.42**	**267**	P	**P**	**09 36 33.0**	**-0.1**
	comp=Z,11nm,0.9s,baz=78,slow=4.1,SNR=4.9						
JNU	**Nakatsue**	**43.42**	**267**	IAmb	IAmb	09 36 35.2	
	comp=Z,12nm,0.9s						
BW06	**Boulder Array**	**43.57**	**75**	P	**P**	**09 36 36.3**	**+1.9**
BW06				IAmb	IAmb	09 36 49.3	
	comp=Z,3.1nm,0.7s						
PDAR	**Pinedale Array**	**43.57**	**75**	P	**P**	**09 36 34.5**	**0.0**
	comp=Z,1.5nm,0.7s,baz=314,slow=2.9,SNR=14						
GSC	**Goldstone, Bar**	**43.59**	**89**	P	**P**	**09 36 37.4**	**+2.8**
GSC				IAmb	IAmb	09 36 49.6	
	comp=Z,3.8nm,0.8s						
NLU	**North Lily Min**	**43.67**	**80**	P	**P**	**09 36 38.1**	**+2.9**
RDMU	**Red Mountain**	**44.84**	**78**	P	**P**	**09 36 46.1**	**+1.5**
SRU	**San Rafael Swe**	**45.13**	**80**	P	**P**	**09 36 50.0**	**+3.1**
U15A	**North Rim**	**45.70**	**84**	P	**P**	**09 36 53.2**	**+1.6**
U15A				IAmb	IAmb	09 37 05.1	
	comp=Z,8.0nm,1.4s						
PV13	**Radium Mtn., P**	**46.77**	**80**	P	**P**	**09 37 01.1**	**+1.2**
PV13				IAmb	IAmb	09 37 13.7	
	comp=Z,6.4nm,1.0s						
ULM	**Lac du Bonnet**	**47.28**	**59**	P	**P**	**09 37 03.4**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=307,slow=6.3,SNR=4.7						
ULM	**Lac du Bonnet**	**47.28**	**59**	IAmb	IAmb	09 37 04.0	
	comp=Z,6.8nm,1.2s						
AGMN	**Agassiz Nation**	**48.38**	**61**	P	**P**	**09 37 11.9**	**-0.1**
AGMN				IAmb	IAmb	09 37 26.3	
	comp=Z,7.3nm,0.8s						
TLY	**Talaya**	**48.48**	**305**	P	**P**	**09 37 12.8**	**+0.1**
TLY				IAmb	IAmb	09 37 13.5	
	comp=Z,8.9nm,1.0s						
SONM	**Songino Array**	**49.20**	**299**	P	**P**	**09 37 18.2**	**-0.3**
	comp=Z,3.5nm,0.9s,baz=52,slow=8.6,SNR=11						
B35A	**Bob, Littlefor**	**49.51**	**60**	P	**P**	**09 37 21.2**	**+0.5**
B35A				IAmb	IAmb	09 37 34.8	
	comp=Z,7.1nm,0.7s						
SPITS	**Spitsbergen Ar**	**50.59**	**357**	P	**P**	**09 37 27.6**	**-0.8**
	comp=Z,3.2nm,0.6s,baz=37,slow=7.3,SNR=9.5						
I37A	**Lemond, Waseca**	**52.31**	**64**	P	**P**	**09 37 42.4**	**+0.6**
I37A				IAmb	IAmb	09 37 56.5	
	comp=Z,9.1nm,0.8s						
E43A	**Lone Tree Farm**	**54.34**	**58**	P	**P**	**09 37 56.7**	**0.0**
TXAR	**Lajitas Array**	**55.82**	**84**	P	**P**	**09 38 07.9**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=299,slow=5.5,SNR=8.5						
SSLB	**Suanglung**	**56.16**	**266**	P	**P**	**09 38 10.6**	**+0.5**
XAN	**Xi'an**	**56.47**	**284**	P	**P**	**09 38 11.8**	**-0.4**
XAN				pmax	pmax		
	comp=Z,11nm,1.1s						
VLDQ	**Val d'Or**	**58.10**	**52**	P	**P**	**09 38 22.4**	**-1.0**
VLDQ				IAmb	IAmb	09 38 23.0	
	comp=Z,11nm,0.9s						
GTA	**Gaotai**	**58.22**	**295**	*e*P	**P**	**09 38 24.4**	**-0.2**
GTA				pP	pP	09 38 29.0	-2.0
GTA				sP	sP	09 38 31.6	-1.8
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SCHQ	**Schefferville**	**58.22**	**41**	P	**P**	**09 38 24.7**	**+0.5**
	comp=Z,4.1nm,0.8s,baz=353,slow=5.4,SNR=4.1						
SCHQ	**Schefferville**	**58.22**	**41**	IAmb	IAmb	09 38 25.0	
	comp=Z,3.3nm,0.8s						
FCAR	**Ozark Folk Cen**	**58.37**	**71**	P	**P**	**09 38 24.6**	**-0.9**
FCAR				IAmb	IAmb	09 38 31.2	
	comp=Z,4.5nm,0.9s						
ARCES	**ARCESS Array B**	**58.58**	**352**	P	**P**	**09 38 25.4**	**-1.0**
	comp=Z,4.5nm,0.8s,baz=26,slow=7.6,SNR=13						
ARCES				PcP	**PcP**	**09 39 16.4**	**0.0**
	comp=Z,6.5nm,0.8s,baz=7.6,slow=3.7,SNR=8.1						
PLVO	**Plevna**	**60.41**	**54**	P	**P**	**09 38 40.5**	**+1.0**
DELO	**Deloro Mine**	**60.49**	**55**	P	**P**	**09 38 41.7**	**+1.6**
DELO				IAmb	IAmb	09 38 41.9	
	comp=Z,8.1nm,0.7s						
TRQ	**Mont Tremblant**	**60.84**	**52**	P	**P**	**09 38 42.4**	**-0.1**
ORIO	**Orleans, Innes**	**60.91**	**53**	P	**P**	**09 38 43.0**	**+0.2**
ORIO				IAmb	IAmb	09 38 43.5	
	comp=Z,5.3nm,0.9s						
KURK	**Kurchatov**	**61.08**	**316**	P	**P**	**09 38 43.2**	**-0.7**
KURK				IAmb	IAmb	09 38 57.7	
	comp=Z,3.0nm,0.8s						
PECO	**Prince Edward**	**61.22**	**55**	P	**P**	**09 38 46.6**	**+1.6**
441A	**DeRidder**	**61.29**	**76**	P	**P**	**09 38 45.5**	**-0.1**
LONY	**Lake Ozonia**	**61.96**	**53**	P	**P**	**09 38 49.5**	**-0.5**
M55A	**Ridgway**	**62.04**	**58**	P	**P**	**09 38 51.8**	**+1.2**
O54A	**Avella**	**62.08**	**60**	P	**P**	**09 38 51.5**	**+0.7**
O54A				IAmb	IAmb	09 39 05.2	
	comp=Z,6.3nm,0.7s						
J57A	**Williamstown**	**62.11**	**55**	P	**P**	**09 38 51.9**	**+0.9**
L56A	**Greenwood**	**62.20**	**57**	P	**P**	**09 38 53.1**	**+1.4**
MK31	**Makanchi Array**	**62.26**	**311**	P	**P**	**09 38 51.2**	**-0.8**
MK31				IAmb	IAmb	09 38 52.8	
	comp=Z,2.3nm,0.9s						
MKAR	**Makanchi Array**	**62.26**	**311**	P	**P**	**09 38 51.0**	**-1.0**
	comp=Z,1.6nm,0.5s,baz=48,slow=5.5,SNR=17						
M56A	**Emporium**	**62.34**	**58**	P	**P**	**09 38 53.3**	**+0.8**
M56A				IAmb	IAmb	09 39 07.5	
	comp=Z,4.9nm,0.7s						
J58A	**Remsen**	**62.51**	**54**	P	**P**	**09 38 50.9**	**-2.8**
MOQ	**Mont Orford**	**62.61**	**51**	P	**P**	**09 38 52.2**	**-2.2**
BRVK	**Borovoye**	**62.74**	**322**	P	**P**	**09 38 54.7**	**-0.4**
BRVK				IAmb	IAmb	09 38 55.7	
	comp=Z,5.8nm,1.4s						
J59A	**Piesco**	**62.83**	**54**	P	**P**	**09 38 54.6**	**-1.2**
J59A				IAmb	IAmb	09 38 56.9	
	comp=Z,8.3nm,0.8s						
W50A	**Signal Mountai**	**62.83**	**67**	P	**P**	**09 38 54.9**	**-1.1**
D62A	**Allapoint, All**	**62.85**	**48**	P	**P**	**09 38 54.7**	**-1.1**
V51A	**Loudon**	**62.96**	**66**	P	**P**	**09 38 55.8**	**-1.0**
V51A				IAmb	IAmb	09 39 08.8	
	comp=Z,9.9nm,1.3s						
SSPA	**Standing Stone**	**63.10**	**58**	P	**P**	**09 38 56.1**	**-1.6**
SSPA				IAmb	IAmb	09 39 06.1	
	comp=Z,4.9nm,0.7s						
L59A	**Walton**	**63.47**	**55**	P	**P**	**09 38 58.9**	**-1.2**
G62A	**West of Eustis**	**63.52**	**50**	P	**P**	**09 39 00.1**	**-0.2**
E63A	**Oxbow**	**63.63**	**48**	P	**P**	**09 38 59.6**	**-1.4**
E63A				IAmb	IAmb	09 39 01.4	
	comp=Z,7.7nm,0.8s						
H62A	**Milan**	**63.69**	**51**	P	**P**	**09 39 01.7**	**+0.2**
N59A	**State Game Lan**	**64.01**	**57**	P	**P**	**09 39 04.3**	**+0.6**
N59A				IAmb	IAmb	09 39 18.4	
	comp=Z,10nm,0.9s						
K62A	**Royalston**	**64.55**	**53**	P	**P**	**09 39 06.3**	**-0.9**
QUA2	**Belchertown**	**64.77**	**53**	P	**P**	**09 39 06.1**	**-2.5**
PSUB	**Penn St. - Bra**	**64.90**	**57**	P	**P**	**09 39 07.6**	**-1.8**
PSUB				IAmb	IAmb	09 39 09.9	
	comp=Z,12nm,1.4s						
PAL	**Palisades**	**64.91**	**55**		sP	09 39 24.3	+5.9
U59A	**Littleton**	**66.24**	**61**	P	**P**	**09 39 16.3**	**-1.9**
U59A				IAmb	IAmb	09 39 25.7	
	comp=Z,15nm,1.5s						
FINES	**FINESS Array B**	**66.40**	**350**	P	**P**	**09 39 17.4**	**-1.3**
	comp=Z,1.6nm,0.6s,baz=357,slow=7.8,SNR=8.8						
FINES				PcP	**PcP**	**09 39 48.3**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=45,slow=3.9,SNR=8.7						
Y59A	**Loris**	**67.37**	**64**	P	**P**	**09 39 24.3**	**-1.1**
NB2	**NORSAR Subarra**	**67.89**	**357**	P	**P**	**09 39 27.6**	**-0.7**
	comp=Z,11nm,1.2s,baz=4.6,slow=6.9						
NOA	**NORSAR Array B**	**67.89**	**357**	P	**P**	**09 39 27.2**	**-1.1**
	comp=Z,3.7nm,0.9s,baz=2.7,slow=6.3,SNR=10						
AAK	**Ala-Archa**	**69.05**	**313**	P	**P**	**09 39 36.6**	**+0.6**
	comp=Z,2.5nm,0.5s,baz=112,slow=2.8,SNR=7.0						
AAK	**Ala-Archa**	**69.05**	**313**	P	**P**	**09 39 35.3**	**-0.8**
AAK				IAmb	IAmb	09 39 37.2	
	comp=Z,6.9nm,1.1s						
LSA	**Lhasa**	**70.13**	**293**	P	**P**	**09 39 42.5**	**-0.8**
KK31	**Karatay Array**	**70.48**	**315**	P	**P**	**09 39 44.5**	**-0.2**
KK31				IAmb	IAmb	09 39 45.2	
	comp=Z,3.3nm,0.6s						
ARSB	**Arslanbob**	**70.77**	**313**	P	**P**	**09 39 44.7**	**-2.0**
ARSB				IAmb	IAmb	09 39 48.4	
	comp=Z,9.0nm,1.1s						
KSH	**Kashi**	**70.78**	**310**	P	**P**	**09 39 50.5**	**+3.8**
KSH				pP	pP	09 39 55.2	+2.0
KSH				PP	**PP**	**09 42 29.8**	**+6.7**
KSH				S	**S**	**09 49 03.8**	**+4.0**
KSH	**Kashi**	**70.78**	**310**	ScS	**ScS**	**09 49 51.7**	**+3.1**
KSH	**Kashi**	**70.78**	**310**	SS	SS	09 53 36.7	+5.5
KSH				pmax	pmax		
	comp=Z,29nm,0.9s						
KSH				pmax	pmax		
	comp=Z,650nm,5.3s						
KSH				LR	LR		
	comp=N,220nm,11.9s						
KSH				LR	LR		
	comp=E,96nm,9.0s						
KSH				LR	LR		
	comp=Z,260nm,12.6s						
SHL	**Shillong**	**72.79**	**289**	P	**P**	**09 39 58.5**	**-0.5**
GAR	**Garm**	**73.86**	**313**	P	**P**	**09 40 03.5**	**-1.5**
CMAR	**Chiang Mai Arr**	**73.86**	**279**	P	**P**	**09 40 05.8**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=25,slow=6.8,SNR=8.9						
TAPN	**Taplejung**	**73.88**	**294**	*e*P	**P**	**09 40 06.2**	**+0.6**
	comp=Z,64nm,0.9s						
SUW	**Suwalki**	**74.01**	**349**	P	**P**	**09 40 04.3**	**-1.2**
GUN	**Gumba**	**74.50**	**295**	*e*P	**P**	**09 40 09.9**	**+0.7**
	comp=Z,57nm,0.7s						
JIRN	**Jiri**	**74.51**	**295**	*e*P	**P**	**09 40 10.0**	**+0.7**
	comp=Z,139nm,0.9s						
CHGR	**Chuyangaron**	**74.66**	**313**	P	**P**	**09 40 09.6**	**-0.1**
RAMN	**Ramite**	**74.82**	**294**	*e*P	**P**	**09 40 11.4**	**+0.4**
	comp=Z,64nm,0.7s						
KKN	**Kakani**	**74.93**	**296**	*e*P	**P**	**09 40 12.1**	**+0.5**
PKI	**Pulchoki**	**75.03**	**295**	*e*P	**P**	**09 40 12.5**	**+0.2**
	comp=Z,55nm,1.1s						
PKIN	**Phulchoki**	**75.03**	**295**	*e*P	**P**	**09 40 12.5**	**+0.3**
BSEG	**Bad Segeberg**	**75.03**	**357**	*e*P	**P**	**09 40 12.3**	**+0.9**
	comp=Z,14nm,0.8s,baz=4.0,slow=5.5						
GKN	**Gorkha**	**75.13**	**296**	*e*P	**P**	**09 40 13.0**	**+0.3**
DMN	**Daman**	**75.17**	**296**	*e*P	**P**	**09 40 13.4**	**+0.4**
	comp=Z,39nm,1.0s						
DANN	**Dangsing**	**75.36**	**297**	*e*P	**P**	**09 40 14.6**	**+0.5**
	comp=Z,87nm,0.8s						
KOLN	**Koldanda**	**75.89**	**297**	*e*P	**P**	**09 40 17.4**	**+0.3**
	comp=Z,17nm,0.6s						
AKASG	**Malin Array Be**	**76.40**	**345**	P	**P**	**09 40 18.2**	**-1.1**
	comp=Z,2.3nm,0.6s,baz=21,slow=6.2,SNR=6.9						
NRDL	**Niedersach Rie**	**76.48**	**357**	*e*P	**P**	**09 40 20.1**	**+0.5**
	comp=Z,11nm,1.0s,baz=4.0,slow=5.5						
IBBN	**Ibbenburen**	**76.72**	**359**	*e*P	**P**	**09 40 21.9**	**+0.9**
	comp=Z,26nm,1.0s,baz=4.0,slow=5.5						
NIL	**Nilore**	**76.75**	**308**	P	**P**	**09 40 20.3**	**-1.3**
CLZ	**Clausthal**	**77.12**	**357**	*e*P	**P**	**09 40 24.4**	**+0.9**
	comp=Z,14nm,0.9s,baz=4.0,slow=5.5						
GTTG	**Gottingen**	**77.43**	**357**	*e*P	**P**	**09 40 26.0**	**+0.9**
	comp=Z,11nm,0.7s,baz=4.0,slow=5.5						
CLL	**Collm**	**77.55**	**355**	*e*P	**P**	**09 40 26.9**	**+1.1**
	comp=Z,5.1nm,0.8s,baz=4.0,slow=5.5						
CLL	**Collm**	**77.55**	**355**	P	**P**	**09 40 25.0**	**-0.8**
CLL				IAmb	IAmb	09 40 27.3	
	comp=Z,4.8nm,0.7s						
CLL	**Collm**	**77.55**	**355**	*i* pPcP	**P**	**09 40 26.4**	**+0.6**
	comp=Z,5.0nm,0.8s						
BUG	**Bochum--Univer**	**77.59**	**359**	*e*P	**P**	**09 40 26.3**	**+0.3**
	comp=Z,11nm,1.1s,baz=4.0,slow=5.5						
NEUB	**Neuenburg**	**77.70**	**356**	*e*P	**P**	**09 40 27.3**	**+0.7**
	comp=Z,16nm,0.9s,baz=4.0,slow=5.5						
SBUM	**Sibu**	**77.85**	**259**	P	**P**	**09 40 24.5**	**-3.5**
FBE	**Freiberg**	**77.91**	**355**	*e*P	**P**	**09 40 28.5**	**+0.7**
	comp=Z,9.4nm,1.0s,baz=4.0,slow=5.5						
BRG	**Berggiesshubel**	**77.93**	**355**	*i* P	**P**	**09 40 27.4**	**-0.5**
	comp=Z,5.4nm,0.9s						
BRG	**Berggiesshubel**	**77.93**	**355**	*e*P	**P**	**09 40 28.1**	**+0.2**
	comp=Z,6.9nm,1.1s,baz=4.0,slow=5.5						
KBL	**Kabul**	**78.07**	**311**	P	**P**	**09 40 28.3**	**-1.0**
OSTC	**Ostas**	**78.09**	**353**	*e*P	**P**	**09 40 29.4**	**+0.5**
UBBA	**Unterbreizbach**	**78.16**	**357**	*e*P	**P**	**09 40 29.5**	**+0.5**
	comp=Z,14nm,1.6s,baz=4.0,slow=5.5						
MOX	**Moxa**	**78.27**	**356**	*e*P	**P**	**09 40 30.4**	**+0.6**
	comp=Z,6.5nm,0.9s,baz=4.0,slow=5.5						
DPC	**Dobruska-Polom**	**78.29**	**353**	*e*P	**P**	**09 40 30.3**	**+0.3**
PLN	**Plauen**	**78.41**	**356**	*e*P	**P**	**09 40 31.1**	**+0.5**
	comp=Z,3.0nm,0.8s,baz=4.0,slow=5.5						
TANN	**Tannenbergstha**	**78.47**	**356**	*e*P	**P**	**09 40 31.5**	**+0.5**
	comp=Z,26nm,1.6s,baz=4.0,slow=5.5						
AHRW	**Bad Neuenahr-A**	**78.49**	**359**	*e*P	**P**	**09 40 31.9**	**+0.9**
	comp=Z,14nm,1.0s,baz=4.0,slow=5.5						
GUNZ	**Gunzen**	**78.52**	**356**	*e*P	**P**	**09 40 31.8**	**+0.5**
	comp=Z,3.1nm,0.8s,baz=4.0,slow=5.5						
KRLC	**Kraliky**	**78.53**	**353**	*e*P	**P**	**09 40 31.3**	**0.0**
WERN	**Wernitzgruen**	**78.60**	**356**	*e*P	**P**	**09 40 32.4**	**+0.7**
	comp=Z,9.9nm,0.9s,baz=4.0,slow=5.5						
PRU	**Pruhonice**	**78.78**	**354**	*e*P	**P**	**09 40 32.3**	**-0.3**
TNS	**Taunus Mts**	**78.79**	**358**	*e*P	**P**	**09 40 33.4**	**+0.7**
	comp=Z,11nm,0.8s,baz=4.0,slow=5.5						
KOLS	**Kolonicke sedl**	**79.11**	**349**	*e*P	**P**	**09 40 34.4**	**-0.1**
ROTZ	**Rotzenmuhle**	**79.12**	**356**	*e*P	**P**	**09 40 35.2**	**+0.6**
	comp=Z,5.9nm,1.3s,baz=4.0,slow=5.5						
GRF	**Grafenberg Arr**	**79.24**	**356**	*e*P	**P**	**09 40 36.1**	**+1.0**
	comp=Z,13nm,0.9s,baz=4.0,slow=5.5						
GRF				*e*pP	**pwP**	**09 40 49.4**	**+1.4**
WLF	**Walferdange**	**79.38**	**360**	*e*P	**P**	**09 40 37.0**	**+1.1**
	comp=Z,7.9nm,0.8s,baz=4.0,slow=5.5						
KHC	**Kasperske Hory**	**79.69**	**355**	*e*P	**P**	**09 40 37.8**	**+0.1**
WET	**Wettzell**	**79.71**	**355**	*e*P	**P**	**09 40 38.3**	**+0.6**
	comp=Z,3.8nm,1.1s,baz=4.0,slow=5.5						
KSM	**Kuching**	**79.79**	**259**	P	**P**	**09 40 36.6**	**-2.0**
KSM				IAmb	IAmb	09 40 43.1	
	comp=Z,7.9nm,1.3s						
VYHS	**Vyhne**	**79.92**	**351**	*e*P	**P**	**09 40 39.0**	**+0.1**
GEC2	**GERESS Array S**	**79.97**	**355**	*e*P	**P**	**09 40 39.5**	**+0.3**
	comp=Z,2.7nm,0.9s,baz=4.0,slow=5.5						
GERES	**GERESS Array B**	**79.97**	**355**	P	**P**	**09 40 39.3**	**0.0**
	comp=Z,1.9nm,0.8s,baz=18,slow=5.6,SNR=13						
GEYT	**Alibeck**	**80.00**	**321**	P	**P**	**09 40 40.2**	**+0.6**
	comp=Z,7.3nm,1.0s,baz=344,slow=3.2,SNR=11						
STU	**Stuttgart**	**80.23**	**358**	*e*P	**P**	**09 40 41.0**	**+0.5**
	comp=Z,17nm,0.9s,baz=4.0,slow=5.5						
BFO	**Black Forest**	**80.69**	**358**	*e*P	**P**	**09 40 43.6**	**+0.5**
	comp=Z,6.3nm,1.0s,baz=4.0,slow=5.5						
CONA	**Conrad Observa**	**80.73**	**353**	*e*pP	**P**	**09 40 43.7**	**+0.4**
	comp=Z,2.7nm,0.6s						
WATA	**Walderalm**	**81.58**	**356**	*e*PcP	**P**	**09 40 48.7**	**+0.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,3.2nm,0.6s						
MOTA	**Moosalm**	**81.59**	**356**	*e*PcP	**P**	**09 40 48.8**	**+0.8**
	comp=Z,5.2nm,1.1s						
WTTA	**Wattenberg**	**81.65**	**356**	*e*PcP	**P**	**09 40 48.2**	**-0.2**
	comp=Z,9.5nm,1.2s						
DAVA	**Damuels**	**81.69**	**357**	*e*PcP	**P**	**09 40 49.5**	**+0.9**
	comp=Z,8.0nm,1.4s						
KBA	**Koelnbreinsper**	**81.75**	**355**	*e*PcP	**P**	**09 40 49.3**	**+0.4**
	comp=Z,9.9nm,1.2s						
FETA	**Feichten**	**81.93**	**357**	*e*PcP	**P**	**09 40 50.1**	**+0.3**
	comp=Z,5.8nm,0.9s						
MLR	**Muntele Rosu**	**81.99**	**346**	P	**P**	**09 40 50.2**	**+0.1**
MLR				IAmb	IAmb	09 40 51.8	
	comp=Z,4.4nm,1.0s						
SOKA	**Soboth**	**82.04**	**354**	*e*PcP	**P**	**09 40 51.1**	**+0.8**
	comp=Z,9.7nm,1.5s						
FUORN	**Ofenpass-Fuorn**	**82.34**	**357**	P	**P**	**09 40 51.2**	**-0.9**
FUORN				IAmb	IAmb	09 40 54.4	
	comp=Z,9.8nm,1.4s						
TIRR	**Tirgusor**	**82.59**	**344**	P	**P**	**09 40 51.2**	**-1.9**
BNI	**Bardonecchia**	**83.99**	**359**	P	**P**	**09 40 58.6**	**-1.8**
BNI				IAmb	IAmb	09 41 04.2	
	comp=Z,9.4nm,1.0s						
WRA	**Warramunga Arr**	**84.04**	**228**	P	**P**	**09 40 59.5**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=33,slow=5.4,SNR=5.0						
DR12	**Loma Pena Alta**	**84.43**	**67**	P	**P**	**09 41 00.7**	**-2.3**
ILGA	**Ilgaz**	**84.81**	**339**	P	**P**	**09 41 03.8**	**-1.1**
ILGA				IAmb	IAmb	09 41 06.8	
	comp=Z,7.9nm,1.1s						
BR131	**Keskin Array S**	**86.10**	**339**	P	**P**	**09 41 10.7**	**-0.5**
BR131				IAmb	IAmb	09 41 12.0	
	comp=Z,4.4nm,1.1s						
BRTR	**Keskin Array B**	**86.10**	**339**	P	**P**	**09 41 11.0**	**-0.2**
	comp=Z,2.4nm,1.0s,baz=58,slow=3.2,SNR=9.9						
FITZ	**Fitzroy Crossi**	**86.75**	**236**	P	**P**	**09 41 13.8**	**-0.5**
	comp=Z,4.3nm,0.8s,baz=49,slow=1.7,SNR=6.7						
FITZ	**Fitzroy Crossi**	**86.75**	**236**	IAmb	IAmb	09 41 15.8	
	comp=Z,4.8nm,0.9s						
FNA	**Florina**	**87.25**	**348**	P	**P**	**09 41 15.0**	**-1.7**
FNA				IAmb	IAmb	09 41 17.2	
	comp=Z,5.1nm,0.9s						
ASAR	**Alice Springs**	**87.46**	**226**	P	**P**	**09 41 17.8**	**+0.1**
	comp=Z,1.9nm,0.8s,baz=24,slow=5.2,SNR=14						
ACER	**Acerenza**	**87.83**	**352**	P	**P**	**09 41 18.5**	**-0.9**
POO	**Poona**	**88.64**	**298**	*e*x	**P**	**09 41 23.0**	**-0.6**
ESDC	**Sonseca Array**	**88.97**	**7**	P	**P**	**09 41 24.0**	**-0.9**
	comp=Z,2.1nm,0.9s,baz=344,slow=4.5,SNR=8.8						
MAW	**Mawson**	**148.20**	**218**	PKPbc	**PKiKP**	**09 48 15.9**	**-0.4**
	comp=Z,2.9nm,0.9s,baz=112,slow=4.5,SNR=4.2						
BOSA	**Boshof**	**153.00**	**320**	PKPbc	**PKPbc**	**09 48 27.3**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=41,slow=3.1,SNR=4.0						

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*NEIC **03** 09:39:08.0±0.6, 36°.586N±0°.009×97°.83W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.8km az=51.0*
*TUL **03** 09:39:07.7±0.7, 36°.60N±0°.02×97°.84W±0°.02, h5^{km}±2^{km}, ML3.6, Error ellipse: s-maj=3.1km s-min=2.9km az=34.0*
*IDC **03** 09:39:08.8±1.8, 36°.74N×98°.06W, h0^{km}, mb3.3/1, mb1 3.7/4, mb1mx3.3/42, mbtmp3.3/4, ML4.1/2, Error ellipse: s-maj=28.8km s-min=11.9km az=100.0*
*ANF **03** 09:39:09.1±1.0, 36°.61N×97°.81W, h15^{km}±7^{km}, ML4.3/17, ML4.3/17, Error ellipse: s-maj=2.2km s-min=2.0km az=149.0*
ISC 03 09:39:08.3±0.6**, 36°.61N**±0°.04×**97°.78W**±0°.03**, h10**^{km}**, n109,** σ**1^{s}06**/121**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**1.01**	**161**	Pg	**Pg**	**09 39 27.1**	**-0.6**
U32A	**Winter Ranch,**	**1.01**	**257**		**Pg**	**09 39 26.0**	**-1.8**
U32A				Sg	**Sg**	**09 39 39.2**	**-1.8**
T35A	**Sooner Cattle**	**1.06**	**73**		**Pb**	**09 39 28.7**	**0.0**
OKCFA	**Oklahoma City**	**1.22**	**167**		**Pn**	**09 39 30.6**	**-0.9**
OKCSW	**OKLAHOMA CITY**	**1.23**	**167**		**Pn**	**09 39 30.9**	**-0.7**
FNO	**Franklin**	**1.38**	**167**		**Pn**	**09 39 33.6**	**0.0**
W35A	**Tecumseh**	**1.63**	**153**		**Pn**	**09 39 37.4**	**+0.4**
TUL1	**Leonard**	**1.75**	**113**	P	**Pn**	**09 39 39.6**	**+0.9**
	baz=293,SNR=134						
TUL1				S	**Sb**	**09 40 04.4**	**+1.9**
	baz=293						
TUL1	**Leonard**	**1.75**	**113**		**Pn**	**09 39 39.6**	**+0.9**
R32A	**Long Quarter,**	**1.96**	**338**		**Pn**	**09 39 42.6**	**+1.0**
X34A	**Smith Ranch, M**	**2.00**	**181**		**Pn**	**09 39 43.6**	**+1.4**
WMOK	**Wichita Mounta**	**2.04**	**204**	P	**Pn**	**09 39 42.7**	**0.0**
	baz=22,SNR=215						
WMOK				S	**Sn**	**09 40 09.8**	**+1.5**
	baz=22						
WMOK	**Wichita Mounta**	**2.04**	**204**		**Pn**	**09 39 42.8**	**+0.1**
KSU1	**Kansas State U**	**2.65**	**20**	P	**Pn**	**09 39 52.3**	**+1.1**
	baz=201						
KSU1				S	**Sn**	**09 40 24.9**	**+1.5**
	baz=201						
KSU1	**Kansas State U**	**2.65**	**20**		**Pn**	**09 39 52.2**	**+1.1**
CBKS	**Cedar Bluff**	**2.70**	**325**	P	**Pn**	**09 39 52.1**	**+0.3**
	baz=145,SNR=18						
HHAR	**Hobbs**	**3.11**	**95**		**Pn**	**09 39 58.6**	**+1.2**
Z35A	**Perchaven, San**	**3.30**	**172**		**Pn**	**09 40 00.8**	**+0.8**
W39A	**Magazine**	**3.53**	**112**	P	**Pn**	**09 40 03.7**	**+0.5**
	baz=294,SNR=54						
W39A	**Magazine**	**3.53**	**112**		**Pn**	**09 40 03.8**	**+0.6**
AMTX	**Amarillo**	**3.61**	**243**	P	**Pn**	**09 40 04.5**	**+0.1**
	baz=60						
AMTX				Sb	**Sb**	**09 40 58.5**	**+2.2**
	baz=60						
AMTX	**Amarillo**	**3.61**	**243**	Pn	**Pn**	**09 40 05.0**	**+0.6**
S39A	**Bolivar**	**3.72**	**72**		**Pn**	**09 40 06.8**	**+1.0**
U40A	**Yellville**	**3.97**	**92**	P	**Pn**	**09 40 10.1**	**+0.9**
	baz=275						
U40A	**Yellville**	**3.97**	**92**		**Pn**	**09 40 10.2**	**+0.9**
MIAR	**Mount Ida**	**3.99**	**120**	P	**Pn**	**09 40 10.1**	**+0.6**
	baz=302,SNR=14						
MIAR				S	**Sn**	**09 40 58.5**	**+2.1**
	baz=302						
MIAR	**Mount Ida**	**3.99**	**120**		**Pn**	**09 40 10.2**	**+0.6**
Z38A	**Mt. Pleasant**	**4.05**	**145**		**Pn**	**09 40 10.6**	**+0.2**
N33A	**J Bar K, Exete**	**4.13**	**3**		**Pn**	**09 40 11.0**	**-0.5**
ABTX	**Abilene, Hawle**	**4.26**	**202**	P	**Pn**	**09 40 12.7**	**-0.7**
	baz=20,SNR=32						
ABTX	**Abilene, Hawle**	**4.26**	**202**		**Pn**	**09 40 12.9**	**-0.4**
P38A	**Dawn**	**4.50**	**47**		**Pn**	**09 40 17.5**	**+1.0**
KSCO	**Kaye Shedlock'**	**4.53**	**303**	P	**Pn**	**09 40 17.2**	**+0.2**
	baz=121						
KSCO				S	**Sn**	**09 41 09.7**	**-0.1**
	baz=121						
KSCO	**Kaye Shedlock'**	**4.53**	**303**		**Pn**	**09 40 17.8**	**+0.7**
X40A	**Basin Creek Fa**	**4.55**	**116**	P	**Pn**	**09 40 17.7**	**+0.5**
	baz=299,SNR=14						
N35A	**Tabor**	**4.56**	**21**		**Pn**	**09 40 18.2**	**+0.9**
WHTX	**Lake Whitney,**	**4.61**	**177**	P	**Pn**	**09 40 18.2**	**+0.2**
	baz=356,SNR=11						
WHTX				S	**Sn**	**09 41 11.5**	**-0.3**
	baz=356						
WHTX	**Lake Whitney,**	**4.61**	**177**		**Pn**	**09 40 18.5**	**+0.4**
R40A	**Maddies Statio**	**4.69**	**67**		**Pn**	**09 40 20.1**	**+1.0**
W41B	**Gary Mavity, V**	**4.71**	**106**	P	**Pn**	**09 40 19.7**	**+0.3**
	baz=289,SNR=11						
BGNE	**Belgrade**	**4.80**	**357**	P	**Pn**	**09 40 20.9**	**+0.2**
	baz=177						
BGNE				S	**Sn**	**09 41 16.6**	**+0.2**
	baz=177						
BGNE	**Belgrade**	**4.80**	**357**		**Pn**	**09 40 21.1**	**+0.4**
MSTX	**Muleshoe**	**4.86**	**239**	Sb	**Sb**	**09 41 36.0**	**+3.8**
	baz=56						
Z41A	**Richland Creek**	**5.28**	**128**	P	**Pn**	**09 40 27.3**	**+0.1**
	baz=310						
T25A	**Trinidad**	**5.35**	**278**	P	**Pn**	**09 40 28.2**	**-0.1**
	baz=94,SNR=6.6						
T25A				Sb	**Sb**	**09 41 51.1**	**+4.9**
	baz=94						
CCM	**Cathedral Cave**	**5.40**	**73**	P	**Pn**	**09 40 29.2**	**+0.4**
	baz=256						
CCM				S	**Sn**	**09 41 32.2**	**+1.1**
	baz=256						
N38A	**Joes South For**	**5.48**	**39**		**Pn**	**09 40 31.0**	**+1.0**
NATX	**Nacogdoches**	**5.48**	**151**	S	**Sn**	**09 41 33.0**	**-0.2**
	baz=332						
435B	**Jarrell**	**5.81**	**178**	P	**Pn**	**09 40 34.6**	**0.0**
	baz=358						
SDCO	**Great Sand Dun**	**6.27**	**283**	P	**Pn**	**09 40 41.6**	**+0.5**
	baz=98,SNR=7.4						
JCT	**Junction City**	**6.34**	**196**		**Pn**	**09 40 41.8**	**-0.1**
SCIA	**State Center**	**6.36**	**32**	P	**Pn**	**09 40 43.4**	**+1.3**
	baz=215						
SCIA				S	**Sn**	**09 41 54.6**	**-0.2**
	baz=215						
SCIA	**State Center**	**6.36**	**32**	Pn	**Pn**	**09 40 42.4**	**+0.3**
S44A	**Carbondale**	**6.89**	**78**		**Pn**	**09 40 50.5**	**+1.1**
SIUC	**Southern Illin**	**6.92**	**78**	Pn	**Pn**	**09 40 50.0**	**+0.2**
ISCO	**Idaho Springs**	**6.95**	**300**	P	**Pn**	**09 40 50.3**	**-0.1**
	baz=115,SNR=9.2						
OXF	**Oxford**	**7.13**	**105**	P	**Pn**	**09 40 53.1**	**+0.4**
	baz=289						
OXF	**Oxford**	**7.13**	**105**	Pn	**Pn**	**09 40 52.9**	**+0.3**
K38A	**Parkersburg**	**7.16**	**31**		**Pn**	**09 40 52.8**	**-0.2**
ECSD	**EROS Data Cent**	**7.17**	**7**	P	**Pn**	**09 40 52.0**	**-1.2**
	baz=188						
ECSD				S	**Sn**	**09 42 13.1**	**-1.6**
	baz=188						
P43A	**Skaggs, Pawnee**	**7.17**	**63**	Pn	**Pn**	**09 40 54.3**	**+1.1**
Y45A	**Yeager Farm, C**	**7.27**	**110**	Pn	**Pn**	**09 40 54.0**	**-0.6**
N23A	**Red Feather La**	**7.68**	**306**	P	**Pn**	**09 41 00.5**	**0.0**
	baz=122,SNR=10.0						
SMCO	**Snowmass**	**7.71**	**292**	Pn	**Pn**	**09 41 01.7**	**+0.7**
HDIL	**Hopedale**	**7.72**	**57**	P	**Pn**	**09 41 01.7**	**+1.0**
	baz=242						
HDIL	**Hopedale**	**7.72**	**57**		**Pn**	**09 41 01.0**	**+0.3**
MNTX	**Cornudas Mount**	**7.98**	**234**	P	**Pn**	**09 41 04.5**	**+0.1**
	baz=50						
MNTX	**Cornudas Mount**	**7.98**	**234**		**Pn**	**09 41 03.5**	**-0.9**
WVT	**Waverly**	**8.04**	**90**	Pn	**Pn**	**09 41 04.8**	**-0.2**
O44A	**Mansfield**	**8.12**	**61**	Pn	**Pn**	**09 41 06.3**	**+0.1**
L42A	**Oliver, Polo**	**8.28**	**47**	Pn	**Pn**	**09 41 09.1**	**+0.7**
JFWS	**Jewell Farm**	**8.55**	**40**	P	**Pn**	**09 41 12.4**	**+0.2**
	baz=225						
TX31	**Lajitas Ar. Si**	**8.78**	**216**		**Pn**	**09 41 14.7**	**-0.7**
TX32	**Lajitas Array**	**8.78**	**216**		**Pn**	**09 41 14.4**	**-1.0**
TXAR	**Lajitas Array**	**8.78**	**216**	Pn	**Pn**	**09 41 14.2**	**-1.2**
	0.2nm,0.3s,baz=27,slow=10,SNR=12						
TXAR				Pg	Pg	09 41 47.8	-8.6
	0.8nm,0.3s,baz=38,slow=12,SNR=11						
TXAR				Lg	Lg	09 43 42.8	
	1.2nm,0.3s,baz=25,slow=24,SNR=8.1						
K22A	**Casper**	**9.05**	**314**	Pn	**Pn**	**09 41 18.7**	**-0.4**
PV05	**Paradox Valley**	**9.14**	**283**	Pn	**Pn**	**09 41 19.9**	**-0.5**
SFIN	**Lafayette**	**9.18**	**63**	P	**Pn**	**09 41 22.1**	**+1.4**
	baz=249						
SFIN	**Lafayette**	**9.18**	**63**	Pn	**Pn**	**09 41 22.2**	**+1.5**
WCI	**Wyandotte Cave**	**9.28**	**77**	P	**Pn**	**09 41 22.7**	**+0.6**
	baz=263						
WCI	**Wyandotte Cave**	**9.28**	**77**	Pn	**Pn**	**09 41 22.0**	**-0.1**
SPMN	**Marine on St.**	**9.39**	**22**		**Pn**	**09 41 23.6**	**0.0**
K43A	**Burlington**	**9.49**	**47**	Pn	**Pn**	**09 41 25.6**	**+0.6**
LRAL	**Lakeview Retre**	**9.55**	**109**	Pn	**Pn**	**09 41 26.5**	**+0.7**
U49A	**Red Boiling Sp**	**9.65**	**87**	Pn	**Pn**	**09 41 27.4**	**+0.2**
Y49A	**Blount Mountai**	**9.69**	**103**	Pn	**Pn**	**09 41 27.1**	**-0.7**
F36A	**Milaca**	**9.78**	**18**	Pn	**Pn**	**09 41 28.2**	**-0.7**
I42A	**Draeger Farm,**	**9.93**	**40**		**Pn**	**09 41 31.4**	**+0.3**
G40A	**Rib Lake**	**10.37**	**31**	Pn	**Pn**	**09 41 36.7**	**-0.3**
M47A	**Cromwell**	**10.58**	**60**	P	**Pn**	**09 41 39.7**	**-0.2**
	baz=247						
P49A	**Miami Univ. Ec**	**10.70**	**70**	P	**Pn**	**09 41 41.6**	**0.0**
	baz=258						
CPCT	**Cooper Cave**	**10.80**	**92**	Pn	**Pn**	**09 41 43.6**	**+0.7**
V51A	**Loudon**	**10.88**	**90**	Pn	**Pn**	**09 41 45.0**	**+1.0**
H43A	**Windswept, Lux**	**10.93**	**41**	Pn	**Pn**	**09 41 43.5**	**-1.2**
PDAR	**Pinedale Array**	**10.96**	**308**	Pn	**Pn**	**09 41 44.9**	**-0.5**
	0.3nm,0.3s,baz=121,slow=15,SNR=7.6						
PDAR				Pg		09 42 29.9	
	0.5nm,0.3s,baz=109,slow=17,SNR=6.3						
PDAR				Lg	Lg	09 44 41.1	
	0.3nm,0.3s,baz=107,slow=31,SNR=2.3						
S51A	**Beattyville**	**11.37**	**81**	Pn	**Pn**	**09 41 51.1**	**+0.3**
N49A	**Columbus Grove**	**11.45**	**64**	P	**Pn**	**09 41 50.5**	**-1.3**
	baz=252						
V52A	**Sevierville**	**11.48**	**90**	Pn	**Pn**	**09 41 52.9**	**+0.6**
L48A	**N Adams**	**11.63**	**59**	P	**Pn**	**09 41 54.6**	**+0.3**
	baz=247						
AGMN	**Agassiz Nation**	**11.77**	**6**	Pn	**Pn**	**09 41 54.2**	**-2.0**
RLMT	**Red Lodge**	**12.15**	**318**	Pn	**Pn**	**09 42 00.0**	**-1.6**
EYMN	**Ely**	**12.24**	**20**	Pn	**Pn**	**09 42 00.1**	**-2.5**
G45A	**Suttons Bay**	**12.45**	**44**	Pn	**Pn**	**09 42 04.7**	**-0.8**
D41A	**Chassel**	**12.49**	**30**	Pn	**Pn**	**09 42 04.7**	**-1.3**
I47A	**Gladwin**	**12.53**	**50**	Pn	**Pn**	**09 42 06.8**	**+0.2**
J48A	**Bridge Port**	**12.63**	**54**	Pn	**Pn**	**09 42 06.9**	**-1.1**
N51A	**Ashland**	**12.76**	**66**	Pn	**Pn**	**09 42 09.6**	**-0.2**
ULM	**Lac du Bonnet**	**13.70**	**5**	Pn	Pn	09 42 17.8	-4.8
	0.2nm,0.3s,baz=184,slow=12,SNR=1.8						
ULM				Sn	Sn	09 44 40.9	-14
	0.3nm,0.3s,baz=278,slow=18,SNR=1.9						
ULM				Lg	Lg	09 46 16.0	
	0.3nm,0.3s,baz=283,slow=21,SNR=5.5						
ILAR	**Eielson Array**	**40.34**	**330**	P	**P**	**09 46 47.6**	**+2.0**
	0.3nm,0.7s,baz=123,slow=7.8,SNR=3.0						

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*IDC **03** 09:47:45.9±1.8, 68°.18N×162°.68W, h0^{km}, mb3.6/4, mb1 4.1/8, mb1mx3.6/79, mbtmp3.8/8, ML3.8/4, Error ellipse: s-maj=32.8km s-min=24.1km az=4.0*
*AEIC **03** 09:47:48.0±1.8, 67°.69N±0°.03×162°.5W±0°.2, h23^{km}±7^{km}, ML3.6/40, Error ellipse: s-maj=10.8km s-min=3.6km az=106.0*
*NEIC **03** 09:47:49.2±1.6, 67°.75N±0°.07×162°.6W±0°.2, h30^{km}±7^{km}, Error ellipse: s-maj=13.4km s-min=8.5km az=128.0*
ISC 03 09:47:48.4±0.7**, 67°.69N**±0°.05×**162°.27W**±0°.05**, h10**^{km}**, n63,** σ**1^{s}58**/77**, mb3.7**/6**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.43**	**327**		**Pg**	**09 47 56.4**	**-0.5**
RDOG					**Sg**	**09 48 03.0**	**+0.3**
ANM	**Nome**	**3.38**	**203**	Pn	**Pn**	**09 48 39.8**	**-1.4**
ANM					**Pn**	**09 48 40.1**	**-1.1**
ANM				Sn	**Sn**	**09 49 18.4**	**-2.9**
IM03		**3.78**	**113**		**Pn**	**09 48 46.0**	**-0.5**
IM03					**Sn**	**09 49 30.2**	**-0.8**
IM01	**Indian Mountai**	**3.78**	**113**		**Pn**	**09 48 46.1**	**-0.5**
PS05	**TAPS Pump Stn5**	**4.59**	**96**		**Pn**	**09 48 58.2**	**+0.4**
PS05					**Sn**	**09 49 52.8**	**+1.7**
COLD	**Coldfoot**	**4.67**	**90**		**Pn**	**09 48 59.7**	**+0.9**
COLD	**Coldfoot**	**4.67**	**90**		**Pn**	**09 49 00.8**	**+2.0**
COLD				Sn	**Sn**	**09 49 52.1**	**-0.9**
TOLK	**Toolik Lake Re**	**4.84**	**73**	P	**Pn**	**09 49 02.2**	**+1.1**
	baz=265						
TOLK	**Toolik Lake Re**	**4.84**	**73**		**Pn**	**09 49 03.1**	**+2.0**
TOLK					**Pn**	**09 49 04.1**	**+2.9**
PS06	**TAPS Pump Stn6**	**5.29**	**105**		**Pn**	**09 49 08.0**	**+0.7**
MLY	**Manley**	**5.35**	**115**		**Pn**	**09 49 07.8**	**-0.5**
TTA	**Tatalina**	**5.45**	**148**		**Pn**	**09 49 09.5**	**-0.1**
TT01	**Tatalina**	**5.47**	**148**		**Pn**	**09 49 09.3**	**-0.5**
PS01	**TAPS Pump Stn**	**5.55**	**56**		**Pn**	**09 49 10.9**	**+0.1**
PS01					**Sn**	**09 50 12.5**	**-2.0**
BPAW	**Bear Paw Mtn.**	**5.86**	**123**		**Pn**	**09 49 15.5**	**+0.3**
NEA	**Nenana**	**6.20**	**114**		**Pn**	**09 49 17.5**	**-2.3**
KTH	**Kantishna Hill**	**6.27**	**126**		**Pn**	**09 49 21.2**	**+0.4**
KTH				Sn	**Sn**	**09 50 30.2**	**-2.2**
MDM	**Murphy Dome**	**6.28**	**109**		**Pn**	**09 49 21.9**	**+1.0**
BWN	**Browne**	**6.31**	**118**		**Pn**	**09 49 25.4**	**+4.0**
PPLA	**Purkeypile**	**6.40**	**134**		**Pn**	**09 49 23.3**	**+0.6**
PPLA				Sn	**Sn**	**09 50 35.8**	**0.0**
TCOL	**CIGO, UAF Yank**	**6.46**	**109**	P	**Pn**	**09 49 24.1**	**+0.7**
	baz=302						
TCOL				S	**Sn**	**09 50 37.6**	**+0.6**
	baz=302						
TCOL	**CIGO, UAF Yank**	**6.46**	**109**		**Pn**	**09 49 23.9**	**+0.5**
COLA	**College**	**6.46**	**109**		**Pn**	**09 49 24.4**	**+1.0**
POKR	**Poker Plat Res**	**6.49**	**106**	P	**Pn**	**09 49 23.9**	**+0.1**
	baz=300						
POKR				S	**Sn**	**09 50 36.7**	**-1.1**
	baz=300						
POKR	**Poker Plat Res**	**6.49**	**106**		**Pn**	**09 49 24.1**	**+0.3**
TRF	**Thorofare Moun**	**6.54**	**125**		**Pn**	**09 49 25.3**	**+0.7**
WRH	**Wood River Hil**	**6.61**	**113**		**Pn**	**09 49 25.9**	**+0.6**
CCB	**Clear Creek Bu**	**6.61**	**111**		**Pn**	**09 49 25.7**	**+0.4**
FYU	**Fort Yukon**	**6.73**	**92**		**Pn**	**09 49 27.9**	**+0.9**
BM03	**Burnt Mountain**	**6.77**	**84**		**Pn**	**09 49 28.1**	**+0.4**
MCK	**McKinley**	**6.78**	**120**		**Pn**	**09 49 28.7**	**+0.9**
IL31		**6.87**	**108**		**Pn**	**09 49 29.5**	**+0.5**
ILAR	**Eielson Array**	**6.87**	**108**	Pn	**Pn**	**09 49 28.7**	**-0.3**
	3.4nm,0.3s,baz=304,slow=14,SNR=182						
ILAR				Sn	**Sn**	**09 50 45.1**	**-2.0**
	1.5nm,0.3s,baz=299,slow=26,SNR=7.7						
RND	**Reindeer**	**7.03**	**121**		**Pn**	**09 49 31.6**	**+0.4**
HDA	**Harding Lake**	**7.05**	**111**	S	**Sn**	**09 50 48.4**	**-3.1**
	baz=304						
HDA	**Harding Lake**	**7.05**	**111**		**Pn**	**09 49 31.5**	**+0.1**
WAT2	**Susitna Watana**	**7.43**	**123**		**Pn**	**09 49 37.5**	**+0.8**
STLK	**Strandline Lak**	**7.66**	**139**		**Pn**	**09 49 39.8**	**-0.1**
SPWE	**Spurr West**	**7.68**	**142**		**Pn**	**09 49 40.8**	**+0.6**
DHY	**Denali Highway**	**7.74**	**120**		**Pn**	**09 49 41.5**	**+0.4**
RIDG	**Independent Ri**	**8.19**	**111**		**Pn**	**09 49 45.5**	**-1.6**
GHO	**Glory Hole Cre**	**8.22**	**130**		**Pn**	**09 49 48.9**	**+1.3**
PMR	**Palmer**	**8.31**	**131**		**Pn**	**09 49 49.0**	**+0.3**
RSO	**Redoubt South**	**8.36**	**146**		**Pn**	**09 49 51.3**	**+1.7**
SCRK	**Sand Creek**	**8.36**	**108**		**Pn**	**09 49 50.3**	**+0.8**
SML	**Sawmill**	**8.37**	**128**		**Pn**	**09 49 50.2**	**+0.5**
DOT	**Dot Lake**	**8.52**	**110**		**Pn**	**09 49 51.7**	**0.0**
SCM	**Sheep Creek Mo**	**8.66**	**126**		**Pn**	**09 49 52.9**	**-0.7**
EGAK	**Eagle**	**8.99**	**99**	Pn	**Pn**	**09 49 56.6**	**-1.5**
MENT	**Mentasta**	**9.09**	**113**		**Pn**	**09 50 00.4**	**+1.0**
EPYK	**Eagle Plains**	**10.04**	**86**		**Pn**	**09 50 12.9**	**+0.5**
INK	**Inuvik**	**10.75**	**73**	Pn	**Pn**	**09 50 20.4**	**-1.6**
	1.0nm,0.3s,baz=328,slow=5.4,SNR=44						
INK				Sn	**Sn**	**09 52 15.8**	**-6.5**
	0.5nm,0.3s,baz=280,slow=8.0,SNR=3.5						
KDAK	**Kodiak Island**	**10.87**	**151**	Pn	**Pn**	**09 50 27.0**	**+3.2**
	0.3nm,0.3s,baz=1.8,slow=9.6,SNR=15						
A36M	**Sachs Harbour**	**13.29**	**55**	P	**Pn**	**09 50 54.2**	**-2.5**
	baz=270						
SEY	**Seymchan**	**19.16**	**277**	P	**P**	**09 52 08.2**	**-3.2**
	0.1nm,0.3s,baz=72,slow=20,SNR=1.7						
YKA	**Yellowknife Ar**	**20.29**	**82**	P	**P**	**09 52 22.8**	**-0.9**
	1.8nm,0.6s,baz=305,slow=9.7,SNR=30						
RES	**Resolute Bay**	**21.56**	**42**	P	**P**	**09 52 39.0**	**+1.6**
	0.7nm,0.7s,baz=281,slow=18,SNR=4.5						
PDAR	**Pinedale Array**	**37.29**	**105**	P	**P**	**09 55 01.4**	**+1.0**
	0.4nm,0.6s,baz=335,slow=5.4,SNR=4.5						
NVAR	**Mina Array Bea**	**38.01**	**118**	P	**P**	**09 55 07.6**	**+1.1**
	0.6nm,0.7s,baz=323,slow=7.9,SNR=7.9						
TXAR	**Lajitas Array**	**51.38**	**107**	P	**P**	**09 56 53.5**	**+0.5**
	1.3nm,0.7s,baz=335,slow=5.8,SNR=18						
HHC	**Hu-ho-hao-te**	**51.57**	**285**	P	**P**	**09 56 54.0**	**-0.3**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,8.8s						
WMQ	**Urumqi**	**57.11**	**306**	*e*P	**P**	**09 57 36.3**	**+1.8**
KSH	**Kashi**	**64.51**	**313**	P	**P**	**09 58 26.4**	**+1.4**
KSH				pP	sP	09 58 32.6	+3.1
KSH				sP	pP	09 58 35.4	+7.1
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,120nm,5.7s						

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*IDC **03** 09:48:44.4±1.6, 46°.79N×145°.26E, h0^{km}, mb4.0/7, mb1 4.0/9, mb1mx3.7/70, mbtmp3.9/9, ML3.4/2, Error ellipse: s-maj=40.3km s-min=26.2km az=145.0*
*NEIC **03** 09:48:47.6±1.0, 46°.60N±0°.07×145°.36E±0°.09, h26^{km}±4^{km}, mb4.5/8, Error ellipse: s-maj=11.0km s-min=8.1km az=147.0*
*MOS **03** 09:48:47.3±0.9, 46°.64N×145°.40E, h42^{km}, mb4.4/5, Error ellipse: s-maj=14.2km s-min=8.1km az=93.6*
*JMA **03** 09:48:47.6±0.3, 46°.56N×145°.40E, h33^{km}, M3.6*
*SKHL **03** 09:48:49.4±0.3, 46°.52N×145°.23E, h60^{km}±4^{km}, mb4.4/9*
ISC 03 09:48:48.9±0.8**, 46°.61N**±0°.04×**145°.37E**±0°.04**, h39**^{km}±3^{km}**, n58,** σ**1^{s}17**/79**, mb4.2**/14**, 2C-1D, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**1.83**	**282**	*i* P	**Pn**	**09 49 16.8**	**-1.0**
YSS				AMB	AMB	09 49 17.2	
	180nm,0.4s						
YSS				*e*S	**Sn**	**09 49 37.3**	**-2.4**
YSS				A	A	09 49 41.1	
	360nm,0.6s						
YSS				A	A	09 49 41.1	
	540nm,0.6s						
YSS	**Yuzh-Sakhalins**	**1.83**	**282**	PN	**Pn**	**09 49 17.1**	**-0.7**
YSS						09 49 39.7	
YSS	**Yuzh-Sakhalins**	**1.83**	**282**		**Pn**	**09 49 17.1**	**-0.7**
YSS				Sn	**Sn**	**09 49 39.7**	**0.0**
KUR	**Kuril'sk**	**2.22**	**127**	*e*P	**Pn**	**09 49 24.0**	**+0.9**
KUR				AMB	AMB	09 49 25.4	
	20nm,0.2s						
KUR				*e*S	**Sn**	**09 49 49.6**	**+0.4**
KUR				A	A	09 49 49.9	
	440nm,0.5s						
KUR				A	A	09 49 49.9	
	250nm,0.5s						
KUR	**Kuril'sk**	**2.22**	**127**	*e*PN	**Pn**	**09 49 22.9**	**-0.2**
KUR				*e*S	**Sn**	**09 49 47.1**	**-2.1**
KUR				pmax	pmax		
	comp=N,5.0nm,0.1s						
KUR				pmax	pmax		
	comp=E,15nm,0.1s						
KUR				pmax	pmax		
	comp=Z,18nm,0.1s						
KUR				smax	smax		
	comp=E,251nm,0.3s						
KUR				smax	smax		
	comp=N,444nm,0.2s						
JSE	**Soyaes**	**2.55**	**231**	P	**Pn**	**09 49 27.6**	**-0.1**
JSE				*e*S	**Sn**	**09 49 57.4**	**-0.1**
LAGR	**Lagunnoye**	**2.57**	**173**	*e*S	**Sn**	**09 49 57.0**	**-0.8**
YUK	**Yuzh-Kuril'sk**	**2.59**	**172**	*i* P	**Pn**	**09 49 27.9**	**-0.4**
YUK				AMB	AMB	09 49 29.0	
	comp=N,50nm,0.3s						
YUK				AMB	AMB	09 49 29.0	
	comp=N,30nm,0.3s						
YUK				AMB	AMB	09 49 29.0	
	comp=N,120nm,0.3s						
YUK				*i* S	**Sn**	**09 49 57.5**	**-1.0**
YUK				A	A	09 49 58.8	
	comp=N,260nm,0.4s						
YUK				A	A	09 49 58.8	
	comp=N,320nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.59**	**172***c*	*i*PN	**Pn**	**09 49 27.9**	**-0.4**
YUK				*i* S	**Sn**	**09 49 57.5**	**-1.0**
YUK				pmax	pmax		
	comp=N,52nm,0.2s						
YUK				pmax	pmax		
	comp=Z,118nm,0.2s						
YUK				pmax	pmax		
	comp=E,27nm,0.1s						
YUK				smax	smax		
	comp=N,258nm,0.3s						
YUK				smax	smax		
	comp=E,322nm,0.4s						
GRPR	**Tuman**	**2.63**	**174**	*e*P	**Pn**	**09 49 28.2**	**-0.5**
GRPR				AMB	AMB	09 49 30.0	
	comp=E,140nm,0.4s						
GRPR				*e*S	**Sn**	**09 49 57.5**	**-1.9**
GRPR				A	A	09 50 00.0	
	comp=E,440nm,0.5s						
GRPR				A	A	09 50 00.0	
	comp=E,140nm,0.5s						
GRPR	**Tuman**	**2.63**	**174**	*e*PN	**Pn**	**09 49 28.2**	**-0.5**
GRPR				*e*S	**Sn**	**09 49 57.5**	**-1.9**
GRPR				pmax	pmax		
	comp=E,60nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,143nm,0.4s						
GRPR				pmax	pmax		
	comp=N,56nm,0.2s						
GRPR				smax	smax		
	comp=N,440nm,0.4s						
GRPR				smax	smax		
	comp=E,144nm,0.3s						
JRA	**Rausu**	**2.67**	**184**	P	**Pn**	**09 49 29.4**	**+0.1**
JTKR	**Abashiri--Toko**	**2.83**	**202**	P	**Pn**	**09 49 31.5**	**0.0**
JTKR				*e*S	**Sn**	**09 50 04.8**	**+0.5**
GLVR	**Golovnino**	**2.87**	**178**	*e*P	**Pn**	**09 49 32.0**	**0.0**
GLVR				*e*S	**Sn**	**09 50 05.3**	**0.0**
GLVR				A	A	09 50 08.0	
	comp=E,240nm,0.5s						
GLVR				A	A	09 50 08.0	
	comp=E,240nm,0.5s						
GLVR	**Golovnino**	**2.87**	**178**	*e*PN	**Pn**	**09 49 33.1**	**+1.1**
GLVR				*e*S	**Sn**	**09 50 07.3**	**+2.0**
GLVR				smax	smax		
	comp=N,235nm,0.5s						
GLVR				smax	smax		
	comp=E,239nm,0.5s						
JKA	**Kamikawa-asahi**	**3.16**	**219**		**Pn**	**09 49 36.5**	**+0.3**
JKA					**Sn**	**09 50 12.2**	**-0.3**
ASAJ	**Asahikawa**	**3.17**	**219**	Pn	**Pn**	**09 49 36.5**	**+0.3**
	comp=E,4.1nm,0.3s,baz=41,slow=12,SNR=21						
ASAJ				Sn	**Sn**	**09 50 12.2**	**-0.4**
	comp=E,5.9nm,0.3s,baz=94,slow=32,SNR=3.5						
JRBN	**Rebuntou**	**3.23**	**250**	P	**Pn**	**09 49 37.3**	**+0.4**

NMR	**Nemuro--Hokkai**	**3.25**	**175**	*i* P	**Pn**	**09 49 37.5**	**+0.3**
NMR				*i* S	**Sn**	**09 50 14.6**	**0.0**
NMR	**Nemuro--Hokkai**	**3.25**	**175**	*d i* PN	**Pn**	**09 49 37.5**	**+0.3**
NMR				*i* S	**Sn**	**09 50 15.8**	**+1.2**
NEM2	**Nemuro 2**	**3.25**	**175**	P	**Pn**	**09 49 37.2**	**-0.1**
NEM2				*e*S	**Sn**	**09 50 15.5**	**+0.8**
JKK2	**Kamakawa 2**	**3.30**	**215**	P	**Pn**	**09 49 38.5**	**+0.5**
JKK2				*e*S	**Sn**	**09 50 16.1**	**+0.1**
JAR	**Ashorobuto**	**3.50**	**200**	P	**Pn**	**09 49 41.7**	**+1.0**
JAR				*e*S	**Sn**	**09 50 22.7**	**+1.9**
JAK	**Akkeshi**	**3.64**	**188**	P	**Pn**	**09 49 43.1**	**+0.5**
JFR	**Furan**	**3.97**	**211**	P	**Pn**	**09 49 49.0**	**+1.8**
JCH	**Churui**	**4.24**	**200**	P	**Pn**	**09 49 51.9**	**+1.0**
TYV	**Tymovskoe**	**4.62**	**338**	*e*P	**Pn**	**09 49 57.7**	**+1.6**
TYV				AMB	AMB	09 50 25.2	
	comp=E,30nm,0.7s						
TYV				*e*S	**Sn**	**09 50 48.9**	**+0.4**
TYV				A	A	09 50 58.7	
	comp=E,30nm,0.9s						
TYV				A	A	09 50 58.7	
	comp=E,50nm,0.9s						
SKR	**Severo-Kuril's**	**8.20**	**56**	*e*P	**Pn**	**09 50 48.6**	**+3.4**
SKR				AMB	AMB	09 50 49.6	
	comp=E,20nm,0.7s						
SKR	**Severo-Kuril's**	**8.20**	**56**	*e*PN	**Pn**	**09 50 48.6**	**+3.4**
SKR				pmax	pmax		
	comp=Z,22nm,0.8s						
PEA0B	**Petropavlovsk-**	**10.27**	**46**	PN	**Pn**	**09 51 13.2**	**-0.4**
PEA0B	**Petropavlovsk-**	**10.27**	**46**	Pn	**Pn**	**09 51 13.2**	**-0.4**
PETK	**Petropavlovsk-**	**10.27**	**46**	Pn	**Pn**	**09 51 13.1**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=210,slow=11,SNR=53						
EKMR	**Ekimchan**	**10.30**	**313**	*e*P	**Pn**	**09 51 15.1**	**+1.2**
BILL	**Bilibino**	**24.02**	**19**	*c i*P	**P**	**09 53 54.8**	**-4.9**
BILL				*i*		09 54 02.5	
BILL				*e*PPP	PPP	09 54 09.5	
BILL				pmax	pmax		
	comp=Z,24nm,1.0s						
MK31	**Makanchi Array**	**42.20**	**294**	P	**P**	**09 56 38.1**	**+0.3**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	**Makanchi Array**	**42.20**	**294**	P	**P**	**09 56 38.1**	**+0.3**
MKAR	**Makanchi Array**	**42.20**	**294**	P	**P**	**09 56 38.6**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=67,slow=9.3,SNR=6.4						
MKAR				PcP	**PcP**	**09 58 32.1**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=54,slow=2.5,SNR=2.2						
MCARA	**McCarthy VSAT**	**42.30**	**43**	P	**P**	**09 56 39.2**	**+0.9**
MAKZ	**Makanchi**	**42.40**	**294**	P	**P**	**09 56 39.9**	**+0.6**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MAKZ	**Makanchi**	**42.40**	**294**	P	**P**	**09 56 39.9**	**+0.6**
KURK	**Kurchatov**	**42.93**	**301**	*e*P	**P**	**09 56 43.6**	**0.0**
KURK	**Kurchatov**	**42.93**	**301**	P	**P**	**09 56 43.6**	**0.0**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
KURK	**Kurchatov**	**42.93**	**301**	P	**P**	**09 56 43.6**	**0.0**
KURK				IAmb	IAmb	09 56 54.1	
	comp=Z,5.0nm,1.5s						
BRVK	**Borovoye**	**46.80**	**307**	*e*P	**P**	**09 57 14.9**	**+0.6**
BRVK	**Borovoye**	**46.80**	**307**	P	**P**	**09 57 14.9**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRVK	**Borovoye**	**46.80**	**307**	P	**P**	**09 57 14.9**	**+0.6**
BRVK				IAmb	IAmb	09 57 16.2	
	comp=Z,4.3nm,1.0s						
JIS	**Juneau Island**	**47.41**	**45**	P	**P**	**09 57 19.9**	**+0.9**
JIS				IAmb	IAmb	09 57 20.6	
	comp=Z,11nm,1.0s						
TNTI	**Ternate**	**48.29**	**204**	P	**P**	**09 57 25.4**	**-0.9**
ARU	**Arti**	**51.42**	**315**	*e*P	**P**	**09 57 50.1**	**+0.5**
ARU	**Arti**	**51.42**	**315**	P	**P**	**09 57 50.1**	**+0.5**
ARU	**Arti**	**51.42**	**315**	P	**P**	**09 57 48.8**	**-0.7**
ARU				IAmb	IAmb	09 57 51.0	
	comp=Z,6.5nm,0.7s						
AKTO	**Aktyubinsk**	**54.74**	**309**	P	**P**	**09 58 14.3**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=66,slow=12,SNR=2.9						
FINES	**FINESS Array B**	**61.76**	**332**	P	**P**	**09 59 02.2**	**-0.7**
	comp=Z,2.5nm,0.7s,baz=25,slow=10,SNR=8.5						
NB2	**NORSAR Subarra**	**66.48**	**338**	P	**P**	**09 59 34.0**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=32,slow=6.5						
NOA	**NORSAR Array B**	**66.48**	**338**	P	**P**	**09 59 34.1**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=34,slow=6.2,SNR=7.1						
HFS	**Hagfors**	**66.57**	**336**	P	**P**	**09 59 34.3**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=55,slow=5.6,SNR=8.5						
AKASG	**Malin Array Be**	**68.54**	**322**	P	**P**	**09 59 46.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=36,slow=8.1,SNR=2.0						
PDAR	**Pinedale Array**	**69.02**	**50**	P	**P**	**09 59 51.6**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=310,slow=2.3,SNR=3.9						

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*IDC **03** 09:50:35.8±2.8, 36°.64N×141°.89E, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.5/71, mbtmp3.7/4, ML3.3/2, Error ellipse: s-maj=49.8km s-min=32.5km az=52.0*

*JMA **03** 09:50:39.1±0.3, 36°.64N×141°.67E, h55km±5km, M3.2*

ISC 03 09:50:36.5±2.1**, 36°.67N**±0°.04×**141°.80E**±0°.08**, h6**km±11km**,**
n20, σ1**s51**/28**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.92**	**299**	P	**Pg**	**09 50 55.4**	**+1.3**
JHO	**Hitachi**	**0.99**	**267**	P	**Pg**	**09 50 55.2**	**-0.4**
JFK	**Kawauchi**	**1.02**	**313**	P	**Pg**	**09 50 56.2**	**+0.1**
JHYU	**Hitachinakayam**	**1.03**	**252**	P	**Pg**	**09 50 56.1**	**-0.2**
JHYU				*e*S	**Sg**	**09 51 08.2**	**-1.5**
JFFD	**Fukushimafurud**	**1.08**	**293**	P	**Pg**	**09 50 57.3**	**0.0**
JMM	**Marumori**	**1.44**	**326**	P	**Pn**	**09 51 02.7**	**-0.4**
JMM				*e*S	**Sn**	**09 51 19.8**	**-2.5**
JFT	**Otama**	**1.45**	**306**	P	**Pn**	**09 51 03.6**	**+0.4**
JFT				*e*S	**Sn**	**09 51 20.7**	**-1.8**
JIO	**Ouri**	**1.82**	**349**	P	**Pn**	**09 51 08.3**	**0.0**
JAG	**Ashikaga**	**1.91**	**263**	P	**Pn**	**09 51 09.0**	**-0.5**
JAG				*e*S	**Sn**	**09 51 30.6**	**-3.2**
JOU	**Okura**	**1.92**	**332**	P	**Pn**	**09 51 10.9**	**+1.2**
JOU				S	**Sn**	**09 51 33.9**	**-0.3**
MJAR	**Matsushiro Arr**	**2.90**	**269**	Pn	**Pn**	**09 51 24.1**	**+1.0**
	2.1nm,0.3s,baz=109,slow=9.6,SNR=154						
MJAR				Sn	**Sn**	**09 51 58.8**	**+0.6**
	0.4nm,0.3s,baz=87,slow=17,SNR=1.6						
MJAR	**Matsushiro Arr**	**2.90**	**269**	PN	**Pn**	**09 51 24.1**	**+1.0**
MAJO	**Matsushiro**	**2.90**	**269**	PN	**Pn**	**09 51 23.5**	**+0.4**
MAJO	**Matsushiro**	**2.90**	**269**		**Pn**	**09 51 23.5**	**+0.4**
MAT	**Matsushiro**	**2.90**	**269**	P	**Pn**	**09 51 24.2**	**+1.1**
MAT				S	**Sn**	**09 52 00.8**	**+2.5**
MJB9	**Matsu-Tunnel**	**2.90**	**269**		**Pn**	**09 51 23.3**	**+0.1**
JHJ	**Hachijo jima 2**	**3.91**	**206**	Pn	**Pn**	**09 51 37.8**	**+0.8**
	9.8nm,0.3s,baz=237,slow=23,SNR=1.4						
JHJ				Sn	**Sn**	**09 52 20.9**	**-2.3**
	13nm,0.3s,baz=254,slow=23,SNR=6.0						
INU	**Inuyama**	**4.10**	**253**		**Pn**	**09 51 43.0**	**+3.4**
MKAR	**Makanchi Array**	**44.58**	**302**	P	**P**	**09 58 50.1**	**+0.9**
	0.3nm,0.7s,baz=85,slow=9.1,SNR=2.8						
WRA	**Warramunga Arr**	**56.74**	**188**	P	**P**	**10 00 20.9**	**-0.2**
	0.6nm,0.8s,baz=11,slow=5.1,SNR=2.1						

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*IDC **03** 09:51:06.5±0.3, 67°.74N×162°.34W, h0km, mb4.6/54, mb1 4.7/57, mb1mx4.6/80, mbtmp4.6/57, ML4.5/3, MS4.0/7, Ms1 4.0/7, ms1mx3.5/65, Error ellipse: s-maj=11.1km s-min=7.6km az=18.0*

*BJI **03** 09:51:06.0±0.0, 67°.90N×161°.80W, h26km, mB5.2/26, mb4.8/40, Ms4.8/8, Ms7 4.7/3*

*AEIC **03** 09:51:07.6±2.3, 67°.70N±0°.05×162°.5W±0°.1, h27km±3km, ML4.9/65, mb5.0/369(NEIC), Error ellipse: s-maj=7.8km s-min=6.7km az=167.0*

*NEIC **03** 09:51:08.8±2.2, 67°.70N±0°.04×162°.4W±0°.1, h18km±3km, Error ellipse: s-maj=7.0km s-min=6.0km az=51.0*

*PMR **03** 09:51:09±2.0, 67°.86N±0°.06×162°.3W±0°.1, h22km±1km, Error ellipse: s-maj=9.6km s-min=8.0km az=351.0*

*GCMT **03** 09:51:09.6±0.3, 67°.82N±0°.02×162°.0W±0°.1, h22km±1km, MW5.0/87, Moment Tensor Solution. s22,c23; s87,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.46±.27; $M_{\theta\theta}$3.05±.17; $M_{\phi\phi}$0.41±.14; $M_{r\theta}$-0.38±.21; $M_{\theta\phi}$-0.53±.09; $M_{\phi r}$-0.34±.25; Best double couple: $M_0$3.34200×10^{16} NP1:ϕ_s287.00000°,δ43.00000°,λ-81.00000°. NP2: ϕ_s95.00000°,δ48.00000°,λ-98.00000°. Principal axes: T 3.1660, Plg3.0000°, Azm190.0000°; N 0.3530, Plg6.0000°, Azm100.0000°; P -3.5170, Plg83.0000°, Azm305.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **03** 09:51:22.0±0.0, 68°.93N×160°.46W, h33km, mb4.8*

ISC 03 09:51:07.8±1.4**, 67°.70N**±0°.04×**162°.29W**±0°.03**, h11**km±8km**,**
n996, σ1**s12**/1012**, mb4.9**/264**, 12C-2D, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.42**	**327**		**Pg**	**09 51 16.2**	**0.0**
RDOG				Sg	**Sg**	**09 51 22.7**	**+0.9**
ANM	**Nome**	**3.39**	**203**	Pn	**Pn**	**09 51 59.5**	**-1.0**
ANM				Sn	**Sn**	**09 52 38.4**	**-2.2**
IM03		**3.79**	**113**		**Pn**	**09 52 05.5**	**-0.4**
IM03					**Sn**	**09 52 49.9**	**-0.5**
IM01	**Indian Mountai**	**3.79**	**113**		**Sn**	**09 52 49.4**	**-1.1**
IM05	**Indian Mountai**	**3.80**	**113**		**Pn**	**09 52 05.8**	**-0.4**
PS05	**TAPS Pump Stn5**	**4.60**	**96**		**Pn**	**09 52 16.8**	**-0.3**
PS05					**Sn**	**09 53 09.3**	**-1.2**
COLD	**Coldfoot**	**4.68**	**90**	Pn	**Pn**	**09 52 19.7**	**+1.6**
COLD	**Coldfoot**	**4.68**	**90**		**Sn**	**09 53 10.4**	**-1.9**
TOLK	**Toolik Lake Re**	**4.84**	**73**	P	**Pn**	**09 52 20.7**	**+0.2**
	baz=265						
TOLK	**Toolik Lake Re**	**4.84**	**73**	Pn	**Pn**	**09 52 21.4**	**+1.0**
TOLK					**Sn**	**09 53 14.3**	**-2.1**
PS06	**TAPS Pump Stn6**	**5.30**	**105**		**Pn**	**09 52 26.1**	**-0.7**
PS06					**Sn**	**09 53 28.9**	**+1.2**
MLY	**Manley**	**5.36**	**115**	Pn	**Pn**	**09 52 26.7**	**-1.0**
TT01	**Tatalina**	**5.48**	**148**		**Pn**	**09 52 28.7**	**-0.5**
GAMB	**Gambell**	**5.53**	**229**		**Pn**	**09 52 27.1**	**-2.6**
GAMB				Sn	**Sn**	**09 53 30.2**	**-2.9**
PS01	**TAPS Pump Stn**	**5.55**	**56**		**Pn**	**09 52 30.4**	**+0.4**
PS01					**Sn**	**09 53 31.3**	**-2.4**
CHUM	**Lake Minchumin**	**5.61**	**128**		**Pn**	**09 52 30.8**	**-0.2**
BPAW	**Bear Paw Mtn.**	**5.87**	**123**	Pn	**Pn**	**09 52 34.5**	**0.0**
PS07	**TAPS Pump Stn7**	**6.09**	**107**		**Pn**	**09 52 37.2**	**-0.4**
NEA	**Nenana**	**6.21**	**114**		**Pn**	**09 52 39.5**	**+0.4**
NEA				Sn	**Sn**	**09 53 50.0**	**0.0**
KTH	**Kantishna Hill**	**6.28**	**126**	Pn	**Pn**	**09 52 40.1**	**-0.1**
MDM	**Murphy Dome**	**6.29**	**109**		**Pn**	**09 52 39.6**	**-0.8**
BWN	**Browne**	**6.33**	**118**		**Pn**	**09 52 41.5**	**+0.8**
PPLA	**Purkeypile**	**6.41**	**134**	Pn	**Pn**	**09 52 42.1**	**0.0**
TCOL	**CIGO, UAF Yank**	**6.47**	**109**	P	**Pn**	**09 52 41.9**	**-0.9**
	baz=302,SNR=177						
TCOL	**CIGO, UAF Yank**	**6.47**	**109**		**Pn**	**09 52 42.4**	**-0.4**
COLA	**College**	**6.47**	**109**		**Pn**	**09 52 42.2**	**-0.6**
POKR	**Poker Plat Res**	**6.50**	**107**	P	**Pn**	**09 52 42.6**	**-0.6**
	baz=300,SNR=68						
POKR	**Poker Plat Res**	**6.50**	**107**		**Pn**	**09 52 42.7**	**-0.4**
TRF	**Thorofare Moun**	**6.55**	**125**	Pn	**Pn**	**09 52 42.9**	**-1.1**
TRF				Sn	**Sn**	**09 53 57.7**	**-0.9**
WRH	**Wood River Hil**	**6.62**	**113**		**Pn**	**09 52 43.7**	**-1.0**
CCB	**Clear Creek Bu**	**6.62**	**111**	Pn	**Pn**	**09 52 43.9**	**-0.8**
FYU	**Fort Yukon**	**6.74**	**92**	Pn	**Pn**	**09 52 46.4**	**-0.1**
BM03	**Burnt Mountain**	**6.77**	**84**		**Pn**	**09 52 47.1**	**+0.2**
MCK	**McKinley**	**6.79**	**120**		**Pn**	**09 52 46.7**	**-0.5**
IL31		**6.88**	**108**	Pn	**Pn**	**09 52 48.1**	**-0.2**
IL31				Sn	**Sn**	**09 54 03.7**	**-2.6**
ILAR	**Eielson Array**	**6.88**	**108**	Pn	**Pn**	**09 52 47.5**	**-0.8**
	75nm,0.3s,baz=304,slow=13,SNR=514						
ILAR				Sn	**Sn**	**09 54 05.0**	**-1.5**
	21nm,0.3s,baz=307,slow=24,SNR=9.5						
ILAR				LR	LR	09 55 03.4	
	comp=Z,339nm,19.3s,baz=238,slow=34						
PRP	**Porcupine Dome**	**7.02**	**100**		**Pn**	**09 52 49.1**	**-1.3**
PS08	**TAPS Pump Stn8**	**7.03**	**110**		**Pn**	**09 52 50.1**	**-0.3**
RND	**Reindeer**	**7.04**	**121**		**Pn**	**09 52 50.5**	**-0.1**
HDA	**Harding Lake**	**7.06**	**111**	P	**Pn**	**09 52 49.9**	**-0.9**
	baz=305,SNR=83						
HDA	**Harding Lake**	**7.06**	**111**		**Pn**	**09 52 50.2**	**-0.6**
HDA				Sn	**Sn**	**09 54 09.3**	**-1.5**
WAT2	**Susitna Watana**	**7.44**	**123**		**Pn**	**09 52 56.5**	**+0.4**
STLK	**Strandline Lak**	**7.67**	**139**		**Pn**	**09 52 59.6**	**+0.4**
SPWE	**Spurr West**	**7.69**	**142**		**Pn**	**09 53 00.1**	**+0.5**
DHY	**Denali Highway**	**7.75**	**120**		**Pn**	**09 53 00.5**	**0.0**
RIDG	**Independent Ri**	**8.20**	**111**		**Pn**	**09 53 06.2**	**-0.3**
GHO	**Glory Hole Cre**	**8.23**	**130**		**Pn**	**09 53 07.7**	**+0.7**
PMR	**Palmer**	**8.32**	**131**		**Pn**	**09 53 08.9**	**+0.8**
RSO	**Redoubt South**	**8.37**	**146**		**Pn**	**09 53 09.6**	**+0.6**
SCRK	**Sand Creek**	**8.37**	**108**		**Pn**	**09 53 08.3**	**-0.7**
SML	**Sawmill**	**8.38**	**128**		**Pn**	**09 53 09.1**	**+0.1**
DOT	**Dot Lake**	**8.53**	**110**		**Pn**	**09 53 10.5**	**-0.6**
RC01	**Rabbit Creek A**	**8.56**	**135**		**Pn**	**09 53 13.8**	**+2.4**
KNK	**Knik Glacier**	**8.66**	**130**		**Pn**	**09 53 15.2**	**+2.5**
SCM	**Sheep Creek Mo**	**8.67**	**126**		**Pn**	**09 53 13.5**	**+0.5**
EGAK	**Eagle**	**9.00**	**99**		**Pn**	**09 53 17.3**	**-0.1**
MENT	**Mentasta**	**9.10**	**113**		**Pn**	**09 53 19.3**	**+0.5**
PWL	**Port Wells**	**9.14**	**132**		**Pn**	**09 53 20.6**	**+1.3**
HOM	**Homer**	**9.34**	**145**		**Pn**	**09 53 22.6**	**+0.5**
BRLK	**Bradley Lake**	**9.41**	**142**		**Pn**	**09 53 23.5**	**+0.3**
SEW	**Seward**	**9.47**	**137**		**Pn**	**09 53 25.7**	**+1.8**
GLI	**Glacier Island**	**9.48**	**129**		**Pn**	**09 53 25.1**	**+1.0**
CNPM	**China Poot**	**9.55**	**144**		**Pn**	**09 53 25.9**	**+0.9**
KAHC	**Katmai Hardscr**	**9.65**	**157**		**Pn**	**09 53 25.7**	**-0.8**
BC03		**9.71**	**109**		**Pn**	**09 53 26.7**	**-0.3**
FID	**Port Fidalgo**	**9.77**	**128**		**Pn**	**09 53 28.8**	**+0.9**
DAWY	**Dawson**	**10.02**	**100**		**Pn**	**09 53 31.2**	**-0.2**
HIN	**Hinchinbrook I**	**10.05**	**129**		**Pn**	**09 53 34.0**	**+2.2**
EPYK	**Eagle Plains**	**10.05**	**86**	P	**Pn**	**09 53 30.4**	**-1.4**
	baz=289,SNR=111						
EPYK	**Eagle Plains**	**10.05**	**86**		**Pn**	**09 53 32.0**	**+0.2**
GLB	**Gilahina Butte**	**10.09**	**120**		**Pn**	**09 53 33.6**	**+1.2**
EYAK	**Cordova Ski Ar**	**10.15**	**127**		**Pn**	**09 53 34.4**	**+1.2**
VRDI	**Verde Repeater**	**10.37**	**120**		**Pn**	**09 53 37.1**	**+0.8**
MCARA	**McCarthy VSAT**	**10.40**	**118**		**Pn**	**09 53 38.4**	**+1.9**
INK	**Inuvik**	**10.76**	**73**	Pn	**Pn**	**09 53 39.8**	**-1.6**
	7.7nm,0.3s,baz=288,slow=12,SNR=45						
INK				Sn	**Sn**	**09 55 34.9**	**-6.6**
	10.0nm,0.3s,baz=185,slow=16,SNR=6.7						
INK				LR	LR	09 58 54.6	
	comp=Z,755nm,21.6s,baz=267,slow=44						
INK	**Inuvik**	**10.76**	**73**		**Pn**	**09 53 40.1**	**-1.3**
HMT	**Hamilton**	**10.78**	**125**		**Pn**	**09 53 43.6**	**+1.8**
CRQM	**Cirque**	**10.82**	**121**		**Pn**	**09 53 42.9**	**+0.5**
BALM	**Baldy**	**10.88**	**118**		**Pn**	**09 53 45.8**	**+2.6**
KDAK	**Kodiak Island**	**10.88**	**151**	Pn	**Pn**	**09 53 44.5**	**+1.3**
	2.4nm,0.3s,baz=16,slow=8.0,SNR=42						
KDAK				Lg	Lg	09 56 47.4	
	baz=12,slow=22,SNR=1.9						
KDAK	**Kodiak Island**	**10.88**	**151**		**Pn**	**09 53 44.6**	**+1.4**
MID	**Middleton Isla**	**10.89**	**132**	Pn	**Pn**	**09 53 43.8**	**+0.6**
TGL	**Tana Glacier**	**10.92**	**120**		**Pn**	**09 53 44.1**	**+0.3**
BARN	**Barnard Glacie**	**11.09**	**117**		**Pn**	**09 53 47.5**	**+1.3**
WAX	**Waxell Ridge**	**11.14**	**121**		**Pn**	**09 53 47.5**	**+0.7**
SPIA	**Saint Paul Isl**	**11.17**	**203**	Pn	**Pn**	**09 53 46.3**	**-0.9**
CTGM	**Chitina Glacie**	**11.27**	**117**		**Pn**	**09 53 49.7**	**+1.1**
OHAK	**Old Harbor**	**11.29**	**154**		**Pn**	**09 53 50.1**	**+1.4**
CHGN	**Chignik**	**11.58**	**169**		**Pn**	**09 53 51.1**	**-1.6**
BILL	**Bilibino**	**11.79**	**286**		**Pn**	**09 53 52.5**	**-3.0**
HYT	**Haines Junctio**	**12.70**	**111**		**Pn**	**09 54 08.7**	**+0.5**
CNBA	**Chernabura Isl**	**12.99**	**173**		**Pn**	**09 54 12.4**	**+0.4**
A36M	**Sachs Harbour**	**13.29**	**55**	P	**Pn**	**09 54 13.4**	**-2.6**
	baz=270,SNR=129						
WHY	**Whitehorse**	**13.76**	**108**		**Pn**	**09 54 24.1**	**+1.5**
C36M	**Paulatuk**	**13.94**	**66**	P	**Pn**	**09 54 20.5**	**-4.3**
	baz=281,SNR=28						
C36M	**Paulatuk**	**13.94**	**66**		**Pn**	**09 54 20.7**	**-4.1**
SIT	**Sitka**	**16.26**	**118**	Pn	**Pn**	**09 54 53.7**	**-2.0**
DLBC	**Dease Lake**	**17.09**	**107**	Pn	**Pn**	**09 55 07.1**	**+0.8**
	0.5nm,0.3s,baz=311,slow=8.4,SNR=6.9						
DLBC				Lg	Lg	10 00 02.9	
	0.1nm,0.3s,baz=134,slow=0.3,SNR=6.8						
DLBC	**Dease Lake**	**17.09**	**107**	P	**Pn**	**09 55 04.8**	**-1.4**
SEY	**Seymchan**	**19.15**	**277**	P	**Pn**	**09 55 31.6**	**+0.2**
	0.7nm,0.3s,baz=94,slow=9.3,SNR=25						
YKA	**Yellowknife Ar**	**20.29**	**82**	P	**P**	**09 55 42.6**	**-0.4**
	39nm,0.7s,baz=306,slow=10,SNR=106						
DIB	**Dawson Inlet,**	**20.36**	**121**	P	**P**	**09 55 42.3**	**-1.5**
RES	**Resolute Bay**	**21.55**	**42**	P	**P**	**09 55 55.1**	**-1.4**
	7.5nm,0.7s,baz=277,slow=16,SNR=25						
RES				S	**S**	**09 59 53.1**	**-1.7**
	24nm,0.8s,baz=179,slow=10,SNR=5.0						
RES	**Resolute Bay**	**21.55**	**42**	P	**P**	**09 55 55.9**	**-0.6**
MA2	**Magadan**	**21.83**	**271**	P	**P**	**09 55 58.7**	**-1.0**
	13nm,0.9s,baz=36,slow=14,SNR=4.2						
BBB	**Bella Bella**	**22.67**	**116**	P	**P**	**09 56 15.2**	**+6.6**
	17nm,1.0s,baz=303,slow=8.3,SNR=3.3						
PEA0B	**Petropavlovsk-**	**23.98**	**252**	P	**P**	**09 56 19.9**	**-1.9**
PETK	**Petropavlovsk-**	**23.98**	**252**	P	**P**	**09 56 21.9**	**+0.1**
	5.6nm,0.8s,baz=74,slow=8.4,SNR=21						
TULEG	**Thule**	**26.73**	**31**	P	**P**	**09 56 45.5**	**-1.0**
TULEG				IAmb	IAmb	09 57 01.9	
	comp=Z,48nm,1.5s						
B05A	**Bryant**	**28.06**	**114**	P	**P**	**09 56 57.1**	**-1.6**
	baz=328						
D03D	**Eldon**	**28.34**	**116**	P	**P**	**09 57 00.1**	**-1.1**
	baz=330						
D05A	**Enumclaw**	**29.02**	**115**	P	**P**	**09 57 09.5**	**+2.3**
D05A				IAmb	IAmb	09 57 12.8	
	comp=Z,23nm,0.9s						
E04D	**Cinebar**	**29.36**	**116**	P	**P**	**09 57 09.7**	**-0.6**
	baz=330						
LTY	**Liberty**	**29.42**	**113**	P	**P**	**09 57 11.7**	**+0.8**
LON	**Longmire**	**29.46**	**115**	P	**P**	**09 57 13.7**	**+2.4**
NOR	**Nord**	**29.78**	**10**	*i* P	**P**	**09 57 14.0**	**+0.4**
	comp=Z,7.6nm,1.0s						
NEW	**Newport**	**29.84**	**108**	P	**P**	**09 57 16.8**	**+2.2**
	comp=Z,1.8nm,0.6s,baz=307,slow=9.3,SNR=4.8						
NEW				PcP	**PcP**	**10 00 20.8**	**+3.5**
	comp=Z,4.5nm,0.9s,baz=268,slow=1.3,SNR=4.8						
NEW	**Newport**	**29.84**	**108**	P	**P**	**09 57 13.2**	**-1.3**
	baz=327						
KULLO	**Kullorsuaq**	**30.22**	**31**	*i* P	**P**	**09 57 18.2**	**+0.6**
	comp=Z,16nm,0.9s						
WALA	**Waterton Lakes**	**30.35**	**103**	P	**P**	**09 57 20.5**	**+1.3**
WALA				IAmb	IAmb	09 57 25.3	
	comp=Z,13nm,0.8s						
I02D	**Swisshome**	**31.09**	**120**	P	**P**	**09 57 26.9**	**+1.4**
	baz=333						
H04D	**Lebanon**	**31.09**	**118**	P	**P**	**09 57 26.9**	**+1.3**
	baz=332						
JTMT	**Jette**	**31.31**	**105**	P	**P**	**09 57 28.8**	**+1.2**
JTMT				IAmb	IAmb	09 57 33.9	
	comp=Z,17nm,0.9s						
I03D	**Drain, OR**	**31.61**	**120**	P	**P**	**09 57 31.7**	**+1.6**
	baz=333						
G08A	**Pilot Rock**	**31.72**	**113**	P	**P**	**09 57 32.2**	**+0.9**
I05D	**Terrebonne, OR**	**31.72**	**117**	P	**P**	**09 57 32.4**	**+1.2**
	baz=332						
F10A	**Beach Ranch, E**	**31.74**	**110**	P	**P**	**09 57 32.5**	**+1.0**
I04A	**Tendick Farm,**	**31.84**	**118**	P	**P**	**09 57 32.5**	**+0.2**
	baz=332						
J01E	**Myrtle Point**	**31.90**	**121**	P	**P**	**09 57 34.1**	**+1.4**
	baz=333						
MSO	**Missoula**	**32.21**	**106**	P	**P**	**09 57 35.6**	**+0.1**
	baz=328,SNR=6.5						
MSO	**Missoula**	**32.21**	**106**	P	**P**	**09 57 36.3**	**+0.8**
PINE	**Pine Mountain**	**32.34**	**117**	P	**P**	**09 57 38.2**	**+1.4**
PINE				IAmb	IAmb	09 57 44.5	
	comp=Z,18nm,1.1s						
K02D	**Willamette Mer**	**32.40**	**121**	P	**P**	**09 57 38.1**	**+0.9**
	baz=334						
J04D	**Umpqua Nationa**	**32.43**	**118**	P	**P**	**09 57 38.4**	**+0.7**
	baz=333						
I07A	**Izee**	**32.58**	**115**	P	**P**	**09 57 40.0**	**+1.2**
BMO	**Blue Mountains**	**32.68**	**111**	P	**P**	**09 57 40.4**	**+0.7**
J05D	**Fort Rock, OR**	**32.69**	**117**	P	**P**	**09 57 41.3**	**+1.4**
	baz=332,SNR=10						
HUMO	**Hull Mountain**	**32.72**	**120**	P	**P**	**09 57 42.8**	**+2.9**
EGMT	**Eagleton**	**32.76**	**100**	P	**P**	**09 57 40.3**	**-0.1**
	baz=326,SNR=10.0						
EGMT	**Eagleton**	**32.76**	**100**	P	**P**	**09 57 40.2**	**-0.1**
EGMT				IAmb	IAmb	09 57 47.8	
	comp=Z,11nm,0.9s						
L04D	**Klamath Falls**	**33.28**	**120**	P	**P**	**09 57 45.9**	**+0.9**
	baz=334						
K05A	**Summer Lake**	**33.30**	**117**	P	**P**	**09 57 47.3**	**+2.1**
K05A				IAmb	IAmb	09 57 51.0	
	comp=Z,34nm,1.5s						
KBS	**Kingsbay**	**33.54**	**2**	P	**P**	**09 57 48.4**	**+1.7**
KBS	**Kingsbay**	**33.54**	**2**	P	**P**	**09 57 48.4**	**+1.7**
KBS	**Kingsbay**	**33.54**	**2**	pmax	pmax		
	comp=Z,34nm,1.2s						
J08A	**Circle Bar Ran**	**33.57**	**114**	P	**P**	**09 57 48.9**	**+1.4**
YBH	**Yreka Blue Hor**	**33.58**	**120**	P	**P**	**09 57 49.0**	**+1.5**
	comp=Z,2.2nm,0.8s,baz=67,slow=7.8,SNR=4.9						
YBH				LR	LR	10 10 10.0	
	comp=Z,442nm,20.9s,baz=85,slow=34						
YBH	**Yreka Blue Hor**	**33.58**	**120**	P	**P**	**09 57 49.6**	**+2.0**
LRM	**Limekiln Ridge**	**33.61**	**105**	P	**P**	**09 57 49.0**	**+1.0**
M04C	**Macdoel**	**33.82**	**119**	P	**P**	**09 57 50.2**	**+0.5**
	baz=334						
M02C	**Callahan**	**33.84**	**121**	P	**P**	**09 57 51.0**	**+1.3**
	baz=334						
DLMT	**Dillon**	**33.95**	**106**	P	**P**	**09 57 51.9**	**+1.1**
DAG	**Danmarks Havn**	**34.03**	**14**	*i* P	**P**	**09 57 51.0**	**0.0**
	comp=Z,7.5nm,0.9s						
MOD	**Modoc Plateau**	**34.23**	**117**	P	**P**	**09 57 54.9**	**+1.6**
N02D	**Trinity Center**	**34.26**	**121**	P	**P**	**09 57 55.3**	**+1.8**
	baz=334,SNR=8.9						
MCMT	**McKenzie Canyo**	**34.31**	**106**	P	**P**	**09 57 55.0**	**+1.0**
WVOR	**Wild Horse Val**	**34.33**	**115**	P	**P**	**09 57 55.8**	**+1.7**
SPITS	**Spitsbergen Ar**	**34.33**	**0**	P	**P**	**09 57 53.1**	**-0.5**
	comp=Z,4.9nm,0.8s,baz=23,slow=7.8,SNR=5.3						
SPITS				PcP	**PcP**	**10 00 29.0**	**0.0**
	comp=Z,8.9nm,0.8s,baz=78,slow=3.8,SNR=9.3						
SPITS	**Spitsbergen Ar**	**34.33**	**0**	P	**P**	**09 57 53.1**	**-0.5**
MFID	**Camas Ranch**	**34.46**	**111**	P	**P**	**09 57 55.6**	**+0.5**
DGMT	**Dagmar**	**34.50**	**94**	P	**P**	**09 57 55.6**	**+0.2**
	baz=325,SNR=10						
DGMT	**Dagmar**	**34.50**	**94**	P	**P**	**09 57 55.6**	**+0.2**
WDC	**Whiskeytown Da**	**34.67**	**121**	P	**P**	**09 57 58.6**	**+1.7**
QLMT	**Earthquake Lak**	**34.83**	**105**	P	**P**	**09 58 00.2**	**+1.7**
YHL	**Hebgen Lake**	**34.90**	**105**	P	**P**	**09 58 00.5**	**+1.3**
O02D	**Mt. Diablo Mer**	**34.96**	**122**	P	**P**	**09 57 59.7**	**+0.2**
	baz=335						
YHB	**Horse Butte**	**34.98**	**105**	P	**P**	**09 58 01.5**	**+1.6**
YHH	**Holmes Hill**	**35.08**	**104**	P	**P**	**09 58 01.8**	**+1.0**
YMR	**Madison River**	**35.14**	**105**	P	**P**	**09 58 02.5**	**+1.3**
NRIK	**Noril'sk**	**35.17**	**325**	P	**P**	**09 58 01.5**	**+0.7**
	comp=Z,11nm,0.6s,baz=45,slow=8.0,SNR=18						
O03E	**Paynes Creek**	**35.17**	**120**	P	**P**	**09 58 01.8**	**+0.5**
	baz=335,SNR=10						
SUMG	**Summit**	**35.18**	**26**	P	**P**	**09 58 01.8**	**+0.4**
SUMG				IAmb	IAmb	09 58 03.4	
	comp=Z,26nm,0.9s						
SUMG	**Summit**	**35.18**	**26**	*i* P	**P**	**09 58 02.0**	**+0.6**
	comp=Z,59nm,0.8s						
YNE	**Yellowstone No**	**35.21**	**103**	P	**P**	**09 58 03.0**	**+1.3**
YNR	**Norris Junctio**	**35.21**	**104**	P	**P**	**09 58 03.9**	**+2.1**
LAO	**LASA Array**	**35.21**	**98**	P	**P**	**09 58 02.0**	**+0.4**
	baz=327						
LAO	**LASA Array**	**35.21**	**98**	P	**P**	**09 58 02.7**	**+1.2**
LAO				IAmb	IAmb	09 58 06.8	
	comp=Z,18nm,0.8s						
FRB	**Frobisher Bay**	**35.24**	**50**	P	**P**	**09 58 00.9**	**-0.5**
	comp=Z,9.8nm,0.8s,baz=324,slow=7.8,SNR=20						
YMP	**Mirror Lake Pl**	**35.38**	**104**	P	**P**	**09 58 04.8**	**+1.5**
RLMT	**Red Lodge**	**35.38**	**102**	P	**P**	**09 58 03.9**	**+0.6**
	baz=328,SNR=12						
RLMT	**Red Lodge**	**35.38**	**102**	P	**P**	**09 58 04.3**	**+1.1**
LKWY	**Lake**	**35.44**	**104**	P	**P**	**09 58 06.5**	**+2.7**
LKWY				IAmb	IAmb	09 58 14.2	
	comp=Z,35nm,1.4s						
H17A	**Grant Village**	**35.52**	**104**	P	**P**	**09 58 05.8**	**+1.3**
	baz=329						
H17A	**Grant Village**	**35.52**	**104**	P	**P**	**09 58 07.4**	**+2.9**
H17A				IAmb	IAmb	09 58 12.6	
	comp=Z,22nm,1.4s						
YPP	**Pitchstone Pla**	**35.54**	**105**	P	**P**	**09 58 07.8**	**+3.1**
FLWY	**Flagg Ranch**	**35.74**	**105**	P	**P**	**09 58 08.3**	**+2.0**
FLWY				IAmb	IAmb	09 58 12.3	
	comp=Z,41nm,1.4s						
IMW	**Indian Meadow**	**35.81**	**105**	P	**P**	**09 58 08.5**	**+1.5**
IMW				IAmb	IAmb	09 58 14.2	
	comp=Z,25nm,0.9s						
ORV	**Oroville**	**35.94**	**121**	P	**P**	**09 58 09.9**	**+2.1**
FXWY	**Fox Creek**	**36.00**	**106**	P	**P**	**09 58 10.0**	**+1.4**
TPAW	**Teton Pass**	**36.16**	**106**	P	**P**	**09 58 11.6**	**+1.7**
TPAW				IAmb	IAmb	09 58 17.0	
	comp=Z,15nm,0.9s						
ULM	**Lac du Bonnet**	**36.23**	**85**	P	**P**	**09 58 09.3**	**-0.8**
	comp=Z,4.3nm,0.8s,baz=308,slow=4.7,SNR=6.1						
ULM				PcP	**PcP**	**10 00 35.2**	**+0.2**
	comp=Z,8.4nm,0.8s,baz=335,slow=2.7,SNR=4.8						
ULM	**Lac du Bonnet**	**36.23**	**85**	P	**P**	**09 58 10.0**	**-0.2**
SNOW	**Snow King Moun**	**36.25**	**105**	P	**P**	**09 58 12.5**	**+1.7**
SNOW				IAmb	IAmb	09 58 16.4	
	comp=Z,14nm,0.8s						
REDW	**Red Top Meadow**	**36.30**	**106**	P	**P**	**09 58 12.7**	**+1.5**
REDW				IAmb	IAmb	09 58 18.2	
	comp=Z,15nm,1.1s						
PAHR	**Pah Rah Range**	**36.51**	**118**	P	**P**	**09 58 14.2**	**+1.4**
AHID	**Auburn Hatcher**	**36.73**	**106**	P	**P**	**09 58 16.0**	**+1.2**
MDND	**Maddock**	**36.76**	**90**	P	**P**	**09 58 15.2**	**+0.4**
	baz=326						
MDND	**Maddock**	**36.76**	**90**	P	**P**	**09 58 16.1**	**+1.3**
VCNR	**Virginia City**	**36.79**	**119**	P	**P**	**09 58 16.8**	**+1.5**
VCNR				IAmb	IAmb	09 58 22.2	
	comp=Z,12nm,0.8s						
KLR	**Kul'dur**	**36.88**	**274**	P	**P**	**09 58 16.0**	**+0.3**

comp=Z,5.1nm,0.8s,baz=27,slow=12,SNR=11
PNTR Pine Nut 36.99 119 P **P** **09 58 18.6 +1.6**
PNTR IAmb IAmb 09 58 23.6

comp=Z,16nm,0.8s
ELK Elko 37.01 112 P **P** **09 58 18.5 +1.3**
comp=Z,5.3nm,0.9s,baz=330,slow=8.4,SNR=21
ELK Elko 37.01 112 P **P** **09 58 19.0 +1.7**
ASAJ Asahikawa 37.02 259 P **P** **09 58 16.8 -0.2**
comp=Z,15nm,1.0s,baz=247,slow=0.7,SNR=3.6
JKA Kamikawa-asahi 37.02 259 P **P** **09 58 16.8 -0.2**
BW06 Boulder Array 37.30 105 P **P** **09 58 19.0 -0.6**
baz=330,SNR=15
BW06 Boulder Array 37.30 105 P **P** **09 58 20.4 +0.8**
BW06 IAmb IAmb 09 58 26.5

comp=Z,13nm,0.8s
PDAR Pinedale Array 37.30 105 P **P** **09 58 20.3 +0.7**
comp=Z,7.6nm,0.5s,baz=335,slow=7.3,SNR=81
PDAR PcP **PcP** **10 00 38.8 +0.1**
comp=Z,3.9nm,0.8s,baz=77,slow=1.3,SNR=3.9
E28A Huff 37.40 93 P **P** **09 58 21.5 +1.2**
KVN Kaiserville 37.53 117 P **P** **09 58 23.0 +1.4**
HWUT Hardware Ranch 37.57 108 P **P** **09 58 22.6 +0.7**
WAKR Walker 37.57 119 P **P** **09 58 23.7 +1.8**
WAKR IAmb IAmb 09 58 28.8

comp=Z,18nm,0.8s
BGU Big Grassy Mou 37.64 110 P **P** **09 58 23.9 +1.4**
CMB Columbia Colle 37.68 120 P **P** **09 58 23.8 +1.1**
RYN Ryan 37.77 118 P **P** **09 58 25.1 +1.6**
AGMN Agassiz Nation 37.82 87 P **P** **09 58 23.4 -0.4**
baz=325,SNR=11
AGMN Agassiz Nation 37.82 87 P **P** **09 58 23.8 +0.1**
AGMN IAmb IAmb 09 58 27.6

comp=Z,13nm,0.8s
NVAR Mina Array Bea 38.02 118 P **P** **09 58 27.1 +1.3**
comp=Z,14nm,0.8s,baz=319,slow=7.2,SNR=67
NVAR PcP **PcP** **10 00 42.5 +1.5**
comp=Z,2.5nm,0.7s,baz=273,slow=2.7,SNR=5.2
TCUT Toone Canyon 38.05 108 P **P** **09 58 27.5 +1.4**
NV11 Mina Array Sit 38.07 118 P **P** **09 58 27.4 +1.4**
NV11 IAmb IAmb 09 58 32.9

comp=Z,18nm,0.8s
RSSD Black Hills 38.20 98 P **P** **09 58 26.9 -0.3**
baz=328
RSSD Black Hills 38.20 98 P **P** **09 58 27.6 +0.4**
CTU Camp Tracy 38.30 109 P **P** **09 58 29.1 +1.1**
DUG Dugway, Tooele 38.36 110 P **P** **09 58 29.4 +0.8**
baz=332,SNR=19
DUG Dugway, Tooele 38.36 110 P **P** **09 58 29.6 +1.1**
DUG IAmb IAmb 09 58 35.0

comp=Z,14nm,0.8s
MDPB Devils Postpil 38.48 119 P **P** **09 58 31.4 +1.7**
MDPB IAmb IAmb 09 58 36.8

comp=Z,16nm,1.0s
JLU Jordanelle 38.49 108 P **P** **09 58 30.9 +1.2**
K22A Casper 38.52 102 P **P** **09 58 29.3 -0.6**
baz=330
K22A Casper 38.52 102 P **P** **09 58 30.2 +0.3**
OMMB Old Mammoth Mi 38.52 119 P **P** **09 58 31.9 +1.8**
OMMB IAmb IAmb 09 58 37.3

comp=Z,18nm,1.0s
MLAC Mammoth, Mammo 38.56 119 P **P** **09 58 31.9 +1.5**
baz=335
B35A Bob, Littlefor 38.58 85 P **P** **09 58 30.2 0.0**
NLU North Lily Min 38.84 110 P **P** **09 58 33.5 +0.9**
MPU Maple Canyon 38.94 109 P **P** **09 58 34.6 +1.2**
R11A Troy Canyon, C 39.02 115 P **P** **09 58 34.6 +0.4**
baz=334,SNR=22
R11A Troy Canyon, C 39.02 115 P **P** **09 58 35.1 +1.0**
RWWY Rawlins 39.10 103 P **P** **09 58 35.5 +0.7**
RWWY IAmb IAmb 09 58 39.1

comp=Z,15nm,0.8s
RDMU Red Mountain 39.20 106 P **P** **09 58 36.4 +0.7**
PSUT Pine Spring 39.46 113 P **P** **09 58 39.1 +1.3**
SCO Scoresbysund 39.48 20 P **P** **09 58 38.0 +0.7**
F33A 5 Mile Ranch, 39.70 89 P **P** **09 58 39.8 +0.4**
F33A IAmb IAmb 09 58 43.6

comp=Z,43nm,1.1s
TMUT Trail Mountain 39.73 109 P **P** **09 58 41.3 +1.1**
P17A Butcher Ranch, 39.74 109 P **P** **09 58 41.5 +1.3**
EYMN Ely 39.77 83 P **P** **09 58 39.9 -0.1**
baz=326,SNR=20
EYMN Ely 39.77 83 P **P** **09 58 40.3 +0.2**
EYMN IAmb IAmb 09 58 44.1

comp=Z,28nm,0.8s
PAGB Antelope Grade 39.83 122 P **P** **09 58 43.0 +2.3**
PAGB IAmb IAmb 09 58 47.6

comp=Z,20nm,0.9s
SUSD Miller 39.86 93 P **P** **09 58 40.6 -0.3**
baz=328
SUSD Miller 39.86 93 P **P** **09 58 41.4 +0.6**
SUSD IAmb IAmb 09 58 46.4

comp=Z,28nm,0.9s
CWC Cottonwood Cre 39.90 119 P **P** **09 58 42.5 +1.0**
baz=336
TPNV Topopah Spring 40.05 116 P **P** **09 58 43.7 +0.9**
baz=335
TPNV Topopah Spring 40.05 116 P **P** **09 58 43.6 +0.9**
O20A White River Ci 40.07 105 P **P** **09 58 42.0 -0.9**
baz=331
O20A White River Ci 40.07 105 P **P** **09 58 43.4 +0.5**
MSU Marysvale 40.08 111 P **P** **09 58 44.9 +1.9**
Q16A Castle Valley 40.08 109 P **P** **09 58 44.2 +1.2**
VES Vestal, Richgr 40.11 120 P **P** **09 58 43.2 +0.2**
baz=336,SNR=8.2
SRU San Rafael Swe 40.14 109 P **P** **09 58 44.5 +1.1**
N23A Red Feather La 40.26 102 P **P** **09 58 44.4 -0.1**
baz=331,SNR=9.6
SMMC Simmler 40.29 122 P **P** **09 58 45.7 +1.1**
baz=337
MPMC Manual Prospec 40.44 118 P **P** **09 58 46.1 +0.2**
baz=336,SNR=14
ISA Isabella, Lake 40.47 120 P **P** **09 58 46.2 +0.1**
baz=336,SNR=8.7
ISA Isabella, Lake 40.47 120 P **P** **09 58 47.1 +1.0**
MTPU Mount Pierson 40.49 111 P **P** **09 58 48.2 +1.6**
CCUT Cedar City 40.52 113 P **P** **09 58 47.8 +1.2**
SZCU Shurtz Canyon 40.57 112 P **P** **09 58 48.2 +1.1**
F36A Milaca 40.73 87 P **P** **09 58 48.1 0.0**
PKM Mcpherson Peak 40.74 122 P **P** **09 58 50.1 +1.7**
baz=337
SHPR Sheep Range 40.83 115 P **P** **09 58 50.3 +1.1**
ARVC Arvin 40.84 120 P **P** **09 58 48.3 -0.8**
baz=336
E38A The Farm, Brul 40.86 84 P **P** **09 58 49.2 +0.1**
E38A IAmb IAmb 09 58 52.7

comp=Z,20nm,0.7s
LRMC Laurel Mtn Rad 40.90 119 P **P** **09 58 50.4 +0.6**
baz=336,SNR=8.6
USRK Ussuriysk Ar. 40.97 269 P **P** **09 58 50.0 -0.1**
comp=Z,5.4nm,0.9s,baz=46,slow=10.0,SNR=7.1
PKCU Pink Cliffs 40.98 112 P **P** **09 58 52.6 +2.0**
SHOC Shoshone, Teco 40.99 117 P **P** **09 58 50.5 +0.2**
baz=335,SNR=9.1
LCMT Little Creek M 41.04 113 P **P** **09 58 52.0 +1.1**
KNB Kanab 41.19 112 P **P** **09 58 53.5 +1.4**
PV09 Paradox Valley 41.19 108 P **P** **09 58 52.7 +0.4**
PV21 Cone Mtn., Par 41.19 107 P **P** **09 58 53.0 +0.9**
PV23 Carpenter Ridg 41.27 107 P **P** **09 58 53.8 +0.9**
PV23 IAmb IAmb 09 58 54.5

comp=Z,18nm,1.0s
PV22 Blue Mesa, Par 41.28 107 P **P** **09 58 53.5 +0.6**
PV22 IAmb IAmb 09 58 54.3

comp=Z,24nm,0.8s
ISCO Idaho Springs 41.34 103 P **P** **09 58 54.1 +0.6**
baz=331,SNR=14
ISCO Idaho Springs 41.34 103 P **P** **09 58 54.3 +0.8**
PV14 Lion Creek, Pa 41.34 107 P **P** **09 58 54.2 +0.8**
PV14 IAmb IAmb 09 58 58.7

comp=Z,38nm,1.2s
EDW2 Edwards Air Fo 41.34 120 P **P** **09 58 53.1 -0.2**
baz=336
OSI Osito Audit: C 41.35 121 P **P** **09 58 54.0 +0.7**
baz=337
ECSD EROS Data Cent 41.35 91 P **P** **09 58 52.7 -0.5**
baz=328,SNR=19
ECSD EROS Data Cent 41.35 91 P **P** **09 58 53.1 -0.1**
GSC Goldstone, Bar 41.36 118 P **P** **09 58 54.3 +0.9**
baz=336,SNR=13
GSC Goldstone, Bar 41.36 118 P **P** **09 58 54.7 +1.3**
PV04 Paradox Valley 41.36 107 P **P** **09 58 54.5 +0.9**
PV04 IAmb IAmb 09 58 55.2

comp=Z,17nm,0.9s
SMCO Snowmass 41.38 105 P **P** **09 58 54.2 +0.2**
PV20 West Nyswonger 41.39 107 P **P** **09 58 54.5 +0.8**
PV20 IAmb IAmb 09 58 58.9

comp=Z,40nm,1.5s
PV19 Morning Glory 41.41 107 P **P** **09 58 55.4 +1.4**
PV19 IAmb IAmb 09 58 59.2

comp=Z,35nm,1.5s
PV07 Paradox Valley 41.42 107 P **P** **09 58 54.8 +0.7**
PV16 Nyswonger Mesa 41.43 107 P **P** **09 58 55.0 +0.9**
PV16 IAmb IAmb 09 58 59.4

comp=Z,36nm,1.4s
PV17 East Wray Mesa 41.45 107 P **P** **09 58 55.1 +0.8**
PV17 IAmb IAmb 09 59 00.3

comp=Z,29nm,1.2s
PV11 David Mesa, Pa 41.46 107 P **P** **09 58 55.3 +0.9**
PV11 IAmb IAmb 09 58 59.0

comp=Z,42nm,1.3s
PV12 Saucer Basin, 41.47 107 P **P** **09 58 55.1 +0.6**
PV12 IAmb IAmb 09 58 56.1

comp=Z,16nm,0.8s
K31A O'Neill 41.48 94 P **P** **09 58 54.5 +0.2**
K31A IAmb IAmb 09 58 59.5

comp=Z,66nm,1.5s
PV18 Skein Mesa, Pa 41.49 107 P **P** **09 58 55.5 +0.9**
PV03 Paradox Valley 41.51 107 P **P** **09 58 55.6 +0.8**
PV03 IAmb IAmb 09 58 56.4

comp=Z,24nm,1.3s
TUQ Turquoise Moun 41.53 117 P **P** **09 58 55.9 +1.0**
baz=336
SPMN Marine on St. 41.54 86 P **P** **09 58 54.8 +0.1**
baz=328,SNR=9.9
SPMN Marine on St. 41.54 86 P **P** **09 58 55.1 +0.3**
SPMN IAmb IAmb 09 58 58.9

comp=Z,24nm,0.8s
PV15 Paradox Valley 41.56 107 P **P** **09 58 56.1 +0.8**
PV15 IAmb IAmb 09 58 56.7

comp=Z,20nm,0.9s
PV05 Paradox Valley 41.57 108 P **P** **09 58 56.1 +0.8**
PV02 Paradox Valley 41.59 107 P **P** **09 58 56.4 +1.0**
PV02 IAmb IAmb 09 58 57.1

comp=Z,16nm,0.8s
PV13 Radium Mtn., P 41.60 107 P **P** **09 58 56.2 +0.6**
PV13 IAmb IAmb 09 58 57.3

comp=Z,28nm,1.0s
D41A Chassel 41.61 81 P **P** **09 58 55.8 +0.5**
D41A IAmb IAmb 09 58 59.9

comp=Z,25nm,1.0s
RRX Edison Barstow 41.68 119 P **P** **09 58 57.0 +1.1**
baz=336
PV01 Paradox Valley 41.72 107 P **P** **09 58 57.3 +0.8**
PV01 IAmb IAmb 09 58 58.2

comp=Z,38nm,0.9s
DECC Green Verdugo 41.81 120 P **P** **09 58 57.8 +0.8**
baz=337
PASC Pasadena Art C 41.93 120 P **P** **09 58 59.6 +1.6**
HEC Hector, Ludlow 41.95 118 P **P** **09 58 58.7 +0.4**
baz=336
BFSC Mount Baldy Ra 42.04 120 P **P** **09 59 00.3 +1.2**
baz=336,SNR=19
GMRC Granite Mounta 42.22 117 P **P** **09 59 01.3 +0.8**
baz=336,SNR=12
BBRC Big Bear Solar 42.27 119 P **P** **09 59 02.0 +1.0**
baz=336
I37A Lemond, Waseca 42.34 88 P **P** **09 59 01.8 +0.6**
I37A IAmb IAmb 09 59 05.7

comp=Z,45nm,1.0s
G40A Rib Lake 42.50 84 P **P** **09 59 02.6 0.0**
W13A Hualapai Mount 42.54 115 P **P** **09 59 04.7 +1.5**
CIS Catalina Islan 42.56 121 P **P** **09 59 03.8 +0.6**
baz=337
MVCO Mesa Verde 42.56 108 P **P** **09 59 04.0 +0.6**
baz=333
MVCO Mesa Verde 42.56 108 P **P** **09 59 04.1 +0.7**
S22A 4UR Ranch, Cre 42.70 106 P **P** **09 59 05.7 +1.1**
baz=332,SNR=13
BGNE Belgrade 42.76 94 P **P** **09 59 04.3 -0.4**
baz=330
E43A Lone Tree Farm 42.78 80 P **P** **09 59 04.5 -0.3**
E43A IAmb IAmb 09 59 08.3

comp=Z,17nm,0.8s
MURC Murrieta 42.78 119 P **P** **09 59 05.7 +0.7**
baz=337
BELC Belle Mtn. Jos 42.81 118 P **P** **09 59 06.0 +0.6**
baz=336,SNR=7.7
F42A Maple Grove Fa 42.87 82 P **P** **09 59 06.0 +0.5**
F42A IAmb IAmb 09 59 09.5

comp=Z,15nm,0.8s
SCHQ Schefferville 42.87 58 P **P** **09 59 05.1 -0.3**
comp=Z,10nm,0.8s,baz=335,slow=9.2,SNR=12
SCHQ PcP **PcP** **10 00 55.9 -0.2**
comp=Z,4.7nm,0.7s,baz=322,slow=8.5,SNR=2.8
SCHQ LR LR 10 19 15.6
comp=Z,145nm,20.6s,baz=334,slow=39
SCI2 San Clemente I 42.90 121 P **P** **09 59 07.3 +1.4**
baz=337
ARCES ARCESS Array B 42.92 356 P **P** **09 59 05.3 -0.3**
comp=Z,4.0nm,0.8s,baz=15,slow=10.0,SNR=7.0
ARCES PcP **PcP** **10 00 55.8 -0.2**
comp=Z,7.0nm,0.6s,baz=355,slow=2.7,SNR=16
L34A Svendsen Farm, 42.95 92 P **P** **09 59 06.1 -0.2**
IRM Iron Mountain 42.96 117 P **P** **09 59 07.5 +1.1**
baz=336,SNR=9.1
E44A Grand Marais A 42.98 79 P **P** **09 59 06.3 0.0**
baz=327
E44A Grand Marais A 42.98 79 P **P** **09 59 06.8 +0.5**
E44A IAmb IAmb 09 59 10.4

comp=Z,53nm,1.2s
PFO Pinyon Flats O 43.02 119 P **P** **09 59 07.0 +0.1**
comp=Z,6.4nm,1.0s,baz=8.1,slow=9.4,SNR=11
PFO PcP **PcP** **10 00 57.9 +0.9**
comp=Z,3.2nm,0.9s,baz=346,slow=4.8,SNR=4.0
PFO Pinyon Flats O 43.02 119 P **P** **09 59 07.4 +0.4**
baz=336,SNR=7.9
PFO Pinyon Flats O 43.02 119 P **P** **09 59 07.5 +0.5**
XPFO Pion Flat 43.02 119 P **P** **09 59 07.4 +0.4**
WUAZ Wupatki 43.04 112 P **P** **09 59 07.7 +0.5**
baz=334,SNR=18
WUAZ Wupatki 43.04 112 P **P** **09 59 08.4 +1.2**
WUAZ IAmb IAmb 09 59 13.7

comp=Z,42nm,1.4s
KSCO Kaye Shedlock' 43.15 100 P **P** **09 59 07.9 -0.1**
baz=331
PDMCI Parker Dam,Lak 43.17 116 P **P** **09 59 08.7 +0.7**
baz=336
SDCO Great Sand Dun 43.19 104 P **P** **09 59 09.2 +0.7**
baz=332,SNR=16
SDCO Great Sand Dun 43.19 104 P **P** **09 59 09.0 +0.5**
BC3 Big Chuckawall 43.31 118 P **P** **09 59 10.3 +0.9**
baz=336
MATQ Matagami 43.40 70 P **P** **09 59 07.6 -2.1**
baz=326,SNR=6.3
D46A Sault St. Mari 43.45 78 P **P** **09 59 09.1 -1.1**
baz=327
109C Camp Elliot, M 43.46 120 P **P** **09 59 10.9 +0.5**
baz=337
109C Camp Elliot, M 43.46 120 P **P** **09 59 12.0 +1.6**
109C IAmb IAmb 09 59 17.0

comp=Z,14nm,0.9s
I40A Norwalk 43.50 86 P **P** **09 59 11.3 +0.6**
I40A IAmb IAmb 09 59 14.8

comp=Z,16nm,0.6s
Y12C Blythe 43.54 116 P **P** **09 59 11.8 +0.7**
baz=336
Y12C Blythe 43.54 116 P **P** **09 59 12.7 +1.6**
D47A Chapleau 43.66 77 P **P** **09 59 11.3 -0.6**
baz=327,SNR=15
MONP2 Monument Peak 43.69 119 P **P** **09 59 13.3 +0.8**
baz=337,SNR=33
K38A Parkersburg 43.74 88 P **P** **09 59 12.8 +0.2**
E46A Sault Ste Mari 43.79 78 P **P** **09 59 12.5 -0.5**
BAR Barrett 43.80 119 P **P** **09 59 14.5 +1.3**
SWSC Sam W. Stewart 43.84 118 P **P** **09 59 14.1 +0.6**
baz=336
F45A CMU Biological 43.92 80 P **P** **09 59 13.3 -0.7**
baz=328
W18A Petrified Fore 43.98 110 P **P** **09 59 15.4 +0.6**
baz=334
W18A Petrified Fore 43.98 110 P **P** **09 59 16.5 +1.6**
W18A IAmb IAmb 09 59 20.8

comp=Z,35nm,1.3s
X16A Lo Mia Camp, P 44.01 113 P **P** **09 59 16.7 +1.7**
IKP In-Ko-Pah, Jac 44.01 119 P **P** **09 59 15.7 +0.7**
baz=337,SNR=9.3
D48A Paudash Townsh 44.04 75 P **P** **09 59 14.2 -0.8**
baz=327,SNR=7.6
GLA Glamis 44.08 117 P **P** **09 59 16.4 +1.0**
baz=336
GLA Glamis 44.08 117 P **P** **09 59 16.9 +1.5**
E47A Iron Bridge 44.10 77 P **P** **09 59 14.3 -1.1**
baz=328,SNR=7.7
T25A Trinidad 44.13 104 P **P** **09 59 16.3 +0.2**
baz=332
I42A Draeger Farm, 44.15 84 P **P** **09 59 16.1 +0.2**
LVZ Lovozero 44.16 351 P **P** **09 59 16.1 +0.4**
LVZ IAmb IAmb 09 59 17.3

comp=Z,20nm,1.0s
N35A Tabor 44.18 92 P **P** **09 59 16.6 +0.4**
SCIA State Center 44.21 89 P **P** **09 59 16.3 0.0**
baz=329
SCIA State Center 44.21 89 P **P** **09 59 16.9 +0.6**
CBKS Cedar Bluff 44.41 98 P **P** **09 59 17.6 -0.5**
baz=331
CBKS Cedar Bluff 44.41 98 P **P** **09 59 18.3 +0.2**
CBKS IAmb IAmb 09 59 21.9

comp=Z,18nm,1.1s
G45A Suttons Bay 44.41 80 P **P** **09 59 17.6 -0.3**
baz=328
G45A Suttons Bay 44.41 80 P **P** **09 59 17.4 -0.4**
G45A IAmb IAmb 09 59 31.1

comp=Z,14nm,0.6s
CHGQ Chibougamau 44.43 67 P **P** **09 59 15.9 -2.2**
baz=327
X18A Snowflake 44.44 111 P **P** **09 59 19.9 +1.5**
X18A IAmb IAmb 09 59 24.4

comp=Z,24nm,1.2s
G46A Petoskey 44.47 79 P **P** **09 59 17.9 -0.5**
baz=328
JFWS Jewell Farm 44.48 86 P **P** **09 59 17.8 -0.7**
baz=329,SNR=5.6
JFWS Jewell Farm 44.48 86 P **P** **09 59 18.1 -0.4**
JFWS IAmb IAmb 09 59 21.9

comp=Z,12nm,0.7s
E48A Lockeyer 44.49 76 P **P** **09 59 18.0 -0.6**
baz=328,SNR=7.9
H45A Beulah 44.62 81 P **P** **09 59 19.3 -0.3**
baz=328
113A Mohawk Valley, 44.70 116 P **P** **09 59 21.6 +1.3**
D50A G1974 Best Tow 44.77 74 P **P** **09 59 20.5 -0.3**
baz=328,SNR=7.2
L40A Anamosa 44.84 87 P **P** **09 59 20.7 -0.7**
VLDQ Val d'Or 44.84 71 P **P** **09 59 19.9 -1.4**
VLDQ IAmb IAmb 09 59 23.3

comp=Z,13nm,0.9s
F48A Evansville 44.88 77 P **P** **09 59 21.0 -0.6**
baz=328
G47A Hillman 44.97 79 P **P** **09 59 21.5 -0.9**
baz=328
GLMI Grayling 44.98 80 P **P** **09 59 22.5 0.0**
baz=328
D51A Lot 18 Range I 45.01 74 P **P** **09 59 21.9 -0.7**
baz=328
I45A Fountain 45.04 82 P **P** **09 59 22.2 -0.8**
baz=328
TLY Talaya 45.05 299 P **P** **09 59 25.4 +2.4**
comp=Z,1.9nm,0.3s,baz=6.3,slow=9.2,SNR=3.7
TLY Talaya 45.05 299 IAmb IAmb 09 59 34.1
comp=Z,4.8nm,0.7s
R32A Long Quarter, 45.14 97 P **P** **09 59 23.6 -0.2**
R32A IAmb IAmb 09 59 27.3

comp=Z,19nm,0.9s
F49A Sandfield 45.15 77 P **P** **09 59 22.6 -1.1**
baz=328
N38A Joes South For 45.16 90 P **P** **09 59 23.9 0.0**
MAT Matsushiro 45.26 258 P **P** **09 59 25.1 +0.3**
MJAR Matsushiro Arr 45.26 258 P **P** **09 59 25.5 +0.7**
comp=Z,6.1nm,0.9s,baz=358,slow=8.9,SNR=11
ANMO Albuquerque 45.32 107 P **P** **09 59 26.9 +1.3**
comp=Z,12nm,1.0s,baz=328,slow=8.0,SNR=41
ANMO Albuquerque 45.32 107 P **P** **09 59 26.3 +0.8**
baz=334
ANMO Albuquerque 45.32 107 P **P** **09 59 26.5 +0.9**
ANMO IAmb IAmb 09 59 30.6

comp=Z,16nm,1.0s
H47A Mio 45.33 79 P **P** **09 59 24.5 -0.7**
baz=328
KSU1 Kansas State U 45.34 95 P **P** **09 59 24.7 -0.7**
baz=331,SNR=12
KSU1 Kansas State U 45.34 95 P **P** **09 59 25.0 -0.5**
I46A Reed City 45.42 81 P **P** **09 59 25.1 -0.8**
baz=329
E51A G1948 Merrick 45.44 74 P **P** **09 59 25.1 -1.0**
baz=328,SNR=7.2
J45A Montague 45.50 82 P **P** **09 59 25.6 -0.9**
baz=329
H48A Harrisville 45.57 79 P **P** **09 59 26.8 -0.4**
baz=328
H48A Harrisville 45.57 79 P **P** **09 59 26.9 -0.2**
H48A IAmb IAmb 09 59 30.1

comp=Z,16nm,0.8s
D53A Lac Vacive, Po 45.63 72 P **P** **09 59 27.0 -0.6**
baz=328
D53A Lac Vacive, Po 45.63 72 P **P** **09 59 27.6 0.0**
D53A IAmb IAmb 09 59 31.4

comp=Z,12nm,0.9s
I47A Gladwin 45.71 80 P **P** **09 59 27.2 -1.0**
baz=329
I47A Gladwin 45.71 80 P **P** **09 59 27.6 -0.7**
I47A IAmb IAmb 09 59 32.6

comp=Z,26nm,0.9s
214A Organ Pipe Nat 45.77 116 P **P** **09 59 29.8 +0.9**
baz=336,SNR=9.6
214A Organ Pipe Nat 45.77 116 P **P** **09 59 30.1 +1.2**
214A IAmb IAmb 09 59 31.1

comp=Z,12nm,1.1s
F51A Arnstein 45.79 75 P **P** **09 59 27.7 -1.2**
baz=328
I48A Sherman Twp 45.87 79 P **P** **09 59 27.8 -1.7**
baz=329,SNR=7.2
Y22D IRIS PASSCAL I 45.94 108 P **P** **09 59 30.5 +0.2**
baz=334
D54A Lac Fusel, La 45.94 71 P **P** **09 59 29.5 -0.5**
baz=328,SNR=6.6
E52A Mattawa 45.95 74 P **P** **09 59 29.4 -0.7**
baz=328,SNR=12
BNM Barren Site 45.97 108 P **P** **09 59 31.7 +0.9**
L44A Lake County Fo 46.00 84 P **P** **09 59 30.2 -0.3**
baz=329
P38A Dawn 46.06 91 P **P** **09 59 30.7 -0.4**
F52A Sundridge 46.12 74 P **P** **09 59 30.1 -1.4**
baz=328
TUC Tucson 46.15 113 P **P** **09 59 32.1 +0.1**
baz=336
TUC Tucson 46.15 113 P **P** **09 59 33.0 +1.0**
E53A Dumoine, Ponti 46.23 73 P **P** **09 59 31.1 -1.3**
baz=328
J47A Sunmer 46.26 81 P **P** **09 59 31.2 -1.3**
baz=329
E54A Lac Daplat, Po 46.36 72 P **P** **09 59 32.9 -0.5**
baz=328,SNR=9.4
K46A Dorr 46.37 82 P **P** **09 59 32.3 -1.1**
baz=329
I49A Point Hope 46.41 79 P **P** **09 59 32.3 -1.4**
baz=329
ALGO Algonquin Park 46.45 73 P **P** **09 59 33.0 -1.1**
baz=328
D55A Sainte-Anne-du 46.48 70 P **P** **09 59 33.9 -0.4**
baz=328,SNR=6.3
J48A Bridge Port 46.59 80 P **P** **09 59 34.4 -0.8**
baz=329
M44A Midewin, Midew 46.63 85 P **P** **09 59 34.7 -0.8**
K47A Vermontville 46.68 81 P **P** **09 59 34.2 -1.7**
baz=329
P40A Paris 46.71 90 P **P** **09 59 35.7 -0.5**
D56A ZEC Mazanza, M 46.71 70 P **P** **09 59 35.4 -0.7**
baz=328,SNR=6.7
L46A Eue Claire 46.75 83 P **P** **09 59 35.7 -0.7**
baz=330
HDIL Hopedale 46.87 87 P **P** **09 59 36.8 -0.6**
baz=330,SNR=12
HDIL Hopedale 46.87 87 P **P** **09 59 37.3 -0.1**
K48A Perry 46.89 81 P **P** **09 59 36.6 -1.0**
baz=329
H52A Wyevale 46.90 76 P **P** **09 59 36.2 -1.3**
baz=329
G54A Lake Saint Pet 46.91 74 P **P** **09 59 36.9 -0.9**
baz=329,SNR=6.1
G53A Haliburton 46.95 74 P **P** **09 59 36.5 -1.6**
baz=329,SNR=11
121A Cookes Peak, D 47.01 110 P **P** **09 59 39.8 +1.0**
baz=335,SNR=11
121A Cookes Peak, D 47.01 110 P **P** **09 59 40.5 +1.6**
121A IAmb IAmb 09 59 41.2

comp=Z,14nm,0.9s
E56A St. Veronique 47.05 70 P **P** **09 59 37.5 -1.2**
baz=329
D57A Chemin Vers le 47.05 69 P **P** **09 59 38.1 -0.7**

baz=329
AMTX Amarillo 47.14 102 P P 09 59 39.6 -0.1
baz=333
AMTX Amarillo 47.14 102 P P 09 59 39.8 +0.1
AMTX IAmb IAmb 09 59 43.4
comp=Z,13nm,1.1s
K49A Clarkson 47.16 80 P P 09 59 38.3 -1.4
baz=329
F55A Otter Lake 47.18 72 P P 09 59 38.6 -1.1
baz=329
I51A Listowel 47.20 77 P P 09 59 39.5 -0.4
baz=329
T35A Sooner Cattle 47.29 96 P P 09 59 40.0 -0.8
T35A IAmb IAmb 09 59 43.9
comp=Z,22nm,1.0s
D58A Chemin du LacG 47.34 68 P P 09 59 40.3 -0.8
baz=329,SNR=6.9
SONM Songino Array 47.38 294 P P 09 59 43.0 +1.6
comp=Z,2.2nm,0.7s,baz=24,slow=6.9,SNR=12
H53A Bobcaygeon 47.44 75 P P 09 59 40.6 -1.2
baz=329
E57A Chemin Saint G 47.48 70 P P 09 59 41.2 -0.9
baz=329
K50A Casco 47.48 79 P P 09 59 40.4 -1.7
baz=330
TRQ Mont Tremblant 47.49 70 P P 09 59 42.0 -0.3
AAM Ann Arbor 47.50 81 P P 09 59 41.7 -0.6
baz=330
L48A N Adams 47.52 81 P P 09 59 41.3 -1.2
baz=330
O44A Mansfield 47.53 86 P P 09 59 42.2 -0.4
G55A Calabogie 47.54 73 P P 09 59 41.5 -1.1
baz=329
MSTX Muleshoe 47.55 104 P P 09 59 42.6 -0.4
baz=334,SNR=9.9
MSTX Muleshoe 47.55 104 P P 09 59 43.1 +0.2
M47A Cromwell 47.57 83 P P 09 59 41.4 -1.4
baz=330
P43A Skaggs, Pawnee 47.58 88 P P 09 59 41.9 -1.0
PLVO Plevna 47.59 73 P P 09 59 42.8 -0.2
PLVO IAmb IAmb 09 59 46.4
comp=Z,15nm,0.9s
R40A Maddies Statio 47.70 91 P P 09 59 43.4 -0.6
R40A IAmb IAmb 09 59 48.6
comp=Z,14nm,0.8s
ORIO Orleans, Innes 47.81 72 P P 09 59 43.8 -0.9
baz=329,SNR=8.1
ORIO Orleans, Innes 47.81 72 P P 09 59 44.3 -0.3
ORIO IAmb IAmb 09 59 47.9
comp=Z,8.5nm,0.9s
E58A La Victoria 47.82 69 P P 09 59 44.1 -0.7
baz=329
DELO Deloro Mine 47.84 74 P P 09 59 44.8 -0.2
DELO IAmb IAmb 09 59 45.3
comp=Z,12nm,0.9s
SFIN Lafayette 47.86 85 P P 09 59 44.8 -0.3
baz=330,SNR=8.7
SFIN Lafayette 47.86 85 P P 09 59 44.9 -0.3
N47A Urbana 47.96 83 P P 09 59 45.1 -0.7
baz=330,SNR=8.1
N47A Urbana 47.96 83 P P 09 59 45.5 -0.4
H55A Tweed 47.97 74 P P 09 59 45.1 -0.8
baz=329,SNR=7.1
L50A Kingsville 48.04 80 P P 09 59 45.7 -0.8
baz=330
I55A Frankford 48.08 74 P P 09 59 45.5 -1.2
baz=329
M49A Liberty Center 48.09 81 P P 09 59 46.0 -1.0
baz=330
N48A Decatur 48.23 83 P P 09 59 46.7 -1.3
baz=330
H56A Elgin 48.27 73 P P 09 59 46.7 -1.6
baz=329
G57A Newington 48.30 71 P P 09 59 47.1 -1.3
baz=329
CCM Cathedral Cave 48.30 90 P P 09 59 47.7 -0.9
baz=331
CCM Cathedral Cave 48.30 90 P P 09 59 47.6 -0.9
KSRS Korea Array 48.34 268 P P 09 59 50.0 +1.2
comp=Z,9.4nm,0.8s,baz=22,slow=8.0,SNR=25
KSRS LR LR 10 20 08.9
comp=Z,138nm,19.1s,baz=10.0,slow=36
WMOK Wichita Mounta 48.36 99 P P 09 59 48.4 -0.7
baz=333,SNR=15
WMOK Wichita Mounta 48.36 99 P P 09 59 48.6 -0.5
WMOK IAmb IAmb 09 59 52.6
comp=Z,12nm,1.0s
Q44A Meyer Farm, Va 48.41 88 P P 09 59 49.0 -0.4
FNO Franklin 48.42 98 P P 09 59 49.7 +0.2
TUL1 Leonard 48.45 96 P P 09 59 48.8 -0.9
baz=332,SNR=8.7
TUL1 Leonard 48.45 96 P P 09 59 49.3 -0.4
E60A Ste Agathe de 48.47 68 P P 09 59 48.7 -1.1
baz=329
P46A Rosedale 48.48 86 P P 09 59 49.6 -0.3
N49A Columbus Grove 48.49 82 P P 09 59 48.9 -1.1
baz=330
N49A Columbus Grove 48.49 82 P P 09 59 49.8 -0.2
N49A IAmb IAmb 09 59 53.4
comp=Z,19nm,1.1s
M50A Fremont 48.51 81 P P 09 59 49.3 -0.8
baz=330
M50A Fremont 48.51 81 P P 09 59 53.0 +2.9
U38A Gravette 48.52 94 P P 09 59 48.8 -1.5
U38A IAmb IAmb 09 59 54.8
comp=Z,12nm,1.0s
GDL2 Guadalupe Moun 48.55 107 P P 09 59 51.3 +0.6
G58A Ormstown 48.59 71 P P 09 59 49.8 -0.9
baz=330
MNTX Cornudas Mount 48.63 108 P P 09 59 51.9 +0.7
baz=335,SNR=24
MNTX Cornudas Mount 48.63 108 P P 09 59 52.0 +0.8
MNTX IAmb IAmb 09 59 53.1
comp=Z,13nm,0.8s
F60A Warwick 48.64 68 P P 09 59 49.7 -1.4
baz=330
CLNB Carlsbad 48.67 106 P P 09 59 52.4 +0.8
D62A Allapoint, All 48.70 65 P P 09 59 50.9 -0.6
baz=330
O48A Farmland 48.70 83 P P 09 59 50.1 -1.5
baz=330,SNR=12
W35A Tecumseh 48.71 97 P P 09 59 51.3 -0.5
E61A Lac Etchemin 48.76 67 P P 09 59 51.0 -1.0
baz=330
HHAR Hobbs 48.83 94 P P 09 59 51.3 -1.4
HHAR IAmb IAmb 09 59 56.4
comp=Z,12nm,1.2s
J55A Hilton 48.85 75 P P 09 59 51.3 -1.3
baz=330
LONY Lake Ozonia 48.86 71 P P 09 59 52.0 -0.8
baz=330,SNR=9.4
LONY Lake Ozonia 48.86 71 P P 09 59 52.1 -0.7
LONY IAmb IAmb 09 59 56.1
comp=Z,20nm,0.9s
ZAA0 Zalesovo Array 48.87 314 P P 09 59 52.4 -0.3
ZAA0 IAmb IAmb 09 59 53.3
comp=Z,13nm,0.8s
ZALV Zalesovo Beam 48.87 314 P P 09 59 52.3 -0.4
comp=Z,15nm,0.7s,baz=24,slow=6.9,SNR=35
OLIL Olney 48.91 87 P P 09 59 52.9 -0.3
F61A St Evariste 48.97 68 P P 09 59 53.3 -0.4
baz=330
N50A Nevada 49.01 81 P P 09 59 52.9 -1.1
baz=330
M52A Chesterland 49.02 79 P P 09 59 54.3 +0.2
baz=330
ERPA Erie 49.03 78 P P 09 59 52.9 -1.3
baz=330
I57A Carthage 49.06 73 P P 09 59 53.4 -0.9
baz=330
D63A Stockholm 49.06 65 P P 09 59 53.1 -1.2
baz=330
O49A Covington 49.07 83 P P 09 59 53.5 -0.9
baz=330
O49A Covington 49.07 83 P P 09 59 54.0 -0.5
L53A Girard 49.07 78 P P 09 59 53.0 -1.4
baz=330
K54A Basiliko Farm, 49.09 76 P P 09 59 53.3 -1.3
baz=330
BLO Bloomington 49.13 85 P P 09 59 54.2 -0.7
BLO IAmb IAmb 09 59 57.4
comp=Z,12nm,0.7s
H59A Cadyville 49.16 71 P P 09 59 53.9 -1.2
baz=330
U40A Yellville 49.18 93 P P 09 59 53.8 -1.5
baz=332,SNR=11
U40A Yellville 49.18 93 P P 09 59 53.9 -1.5
U40A IAmb IAmb 09 59 59.7
comp=Z,12nm,0.8s
N51A Ashland 49.18 80 P P 09 59 54.2 -1.1
baz=330,SNR=7.2
N51A Ashland 49.18 80 P P 09 59 54.8 -0.5
H58A Gabriels 49.18 71 P P 09 59 54.7 -0.5
baz=330,SNR=16
L54A Sinclairville 49.18 77 P P 09 59 54.2 -1.1
baz=330
K55A Perry 49.22 76 P P 09 59 54.4 -1.2
baz=330
G60A Masonville 49.26 69 P P 09 59 54.4 -1.4
baz=330
T42A Van Buren 49.26 91 P P 09 59 55.0 -0.9
T42A IAmb IAmb 09 59 55.4
comp=Z,7.3nm,0.6s
MMNY Mt. Morris Dam 49.27 75 P P 09 59 58.2 +2.2
MMNY IAmb IAmb 09 59 58.6
comp=Z,11nm,0.9s
WVNY West Valley, N 49.30 76 P P 09 59 55.4 -0.8
WVNY IAmb IAmb 10 00 00.3
comp=Z,23nm,1.2s
M53A WI Miller and 49.36 79 P P 09 59 56.0 -0.6
baz=330,SNR=5.3
SIUC Southern Illin 49.37 89 P P 09 59 56.1 -0.6
S44A Carbondale 49.38 89 P P 09 59 56.5 -0.3
O50A Cable 49.38 82 P P 09 59 55.9 -0.9
baz=331,SNR=8.4
ALLY Alegheny Colle 49.38 78 P P 09 59 56.2 -0.6
G61A St-Isidore-de- 49.38 68 P P 09 59 55.0 -1.8
baz=330
J57A Williamstown 49.39 73 P P 09 59 55.6 -1.2
baz=330
J57A Williamstown 49.39 73 P P 09 59 56.2 -0.7
J57A IAmb IAmb 10 00 00.2
comp=Z,13nm,0.9s
E63A Oxbow 49.48 65 P P 09 59 55.4 -2.2
baz=330
P49A Miami Univ. Ec 49.50 83 P P 09 59 56.6 -1.1
baz=331,SNR=9.3
K56A Middlesex 49.52 75 P P 09 59 56.5 -1.4
baz=330
I58A Old Forge 49.52 72 P P 09 59 56.2 -1.7
baz=330
N52A McGinn's Farm, 49.53 80 P P 09 59 56.1 -1.9
baz=330
ACSO Alum Creek Sta 49.55 81 P P 09 59 57.0 -1.1
baz=331,SNR=7.8
ACSO Alum Creek Sta 49.55 81 P P 09 59 57.5 -0.6
NCB Newcomb 49.55 71 P P 09 59 58.0 -0.1
L55A Hinsdale 49.55 76 P P 09 59 57.3 -0.9
baz=330,SNR=6.9
BATG Bathurst New B 49.55 63 P P 09 59 58.5 +0.4
BATG IAmb IAmb 09 59 59.1
comp=Z,13nm,0.8s
H60A Morristown 49.59 70 P P 09 59 57.0 -1.4
baz=330
Q48A North Vernon 49.64 85 P P 09 59 58.0 -0.8
baz=331
M54A Oil Creek Stat 49.68 78 P P 09 59 57.9 -1.2
baz=330,SNR=8.0
M54A Oil Creek Stat 49.68 78 P P 09 59 58.5 -0.6
J58A Remsen 49.69 73 P P 09 59 57.9 -1.3
baz=330
J58A Remsen 49.69 73 P P 10 00 01.8 +2.6
J58A IAmb IAmb 10 00 02.4
comp=Z,11nm,0.9s
E64A Bridgewater 49.69 65 P P 09 59 58.3 -0.8
baz=330
PBMO Poplar Bluff 49.73 90 P P 09 59 58.7 -0.8
USIN University of 49.74 87 P P 09 59 59.3 -0.3
O51A Pataskala 49.76 81 P P 09 59 58.7 -1.1
baz=331,SNR=13
VT1 Waterbury 49.77 70 P P 10 00 00.4 +0.6
VT1 IAmb IAmb 10 00 03.4
comp=Z,12nm,0.9s
X37A Clayton 49.78 96 P P 09 59 59.6 -0.3
X37A IAmb IAmb 10 00 03.5
comp=Z,18nm,1.2s
P50A Jamestown 49.78 82 P P 09 59 59.1 -0.8
baz=331,SNR=5.5
K57A Scipio Center 49.79 74 P P 09 59 58.9 -1.0
baz=330
G62A West of Eustis 49.79 68 P P 09 59 58.5 -1.4
baz=330
G62A West of Eustis 49.79 68 P P 09 59 59.9 0.0
G62A IAmb IAmb 10 00 03.9
comp=Z,26nm,1.3s
I59A Olmsteadville 49.83 71 P P 09 59 59.3 -0.9
baz=330,SNR=9.7
W39A Magazine 49.84 94 P P 09 59 59.3 -1.1
baz=332
W39A Magazine 49.84 94 P P 09 59 59.4 -1.0
W39A IAmb IAmb 10 00 03.5
comp=Z,11nm,1.1s
N53A Lisbon 49.85 79 P P 09 59 59.7 -0.8
baz=330,SNR=6.6
N53A Lisbon 49.85 79 P P 10 00 00.0 -0.4
FCAR Ozark Folk Cen 49.86 92 P P 09 59 59.1 -1.4
F63A Nahmakanta, Br 49.87 66 P P 09 59 59.6 -0.9
baz=330
F63A Nahmakanta, Br 49.87 66 P P 10 00 00.6 +0.1
F63A IAmb IAmb 10 00 04.6
comp=Z,16nm,0.9s
J59A Piesco 49.89 72 P P 09 59 59.4 -1.3
baz=330
J59A Piesco 49.89 72 P P 10 00 00.1 -0.6
J59A IAmb IAmb 10 00 03.8
comp=Z,10.0nm,0.9s
H61A Lyndonville 49.89 69 P P 09 59 59.8 -0.9
baz=330
Q49A Aurora 49.89 84 P P 09 59 59.5 -1.2
baz=331
ABTX Abilene, Hawle 49.92 102 P P 10 00 00.6 -0.4
baz=334
ABTX Abilene, Hawle 49.92 102 P P 10 00 00.5 -0.6
ABTX IAmb IAmb 10 00 05.7
comp=Z,10nm,1.1s
L56A Greenwood 49.92 75 P P 10 00 00.0 -0.9
baz=330,SNR=9.1
L56A Greenwood 49.92 75 P P 10 00 00.3 -0.7
F64A Sherman 49.99 66 P P 10 00 00.3 -1.1
baz=330
I60A Shoreham 50.00 71 P P 09 59 59.5 -2.0
baz=330
N54A Moraine State 50.03 78 P P 10 00 00.6 -1.3
baz=330
N54A Moraine State 50.03 78 P P 10 00 01.1 -0.7
N54A IAmb IAmb 10 00 04.8
comp=Z,21nm,1.1s
WCI Wyandotte Cave 50.03 86 P P 10 00 00.7 -1.1
baz=331
WCI Wyandotte Cave 50.03 86 P P 10 00 01.2 -0.7
M55A Ridgway 50.05 77 P P 10 00 01.2 -0.7
baz=330,SNR=9.1
M55A Ridgway 50.05 77 P P 10 00 01.4 -0.6
LCAR Lake Charles 50.08 91 P P 10 00 01.9 -0.2
K58A Earlville 50.08 73 P P 10 00 01.1 -1.1
baz=330
O52A Adamsville 50.08 80 P P 10 00 00.9 -1.2
baz=331,SNR=8.9
O52A Adamsville 50.08 80 P P 10 00 01.6 -0.6
PARMO Parma 50.09 90 P P 10 00 02.4 +0.1
H62A Milan 50.13 69 P P 10 00 01.2 -1.2
baz=330
LBNH Lisbon 50.14 69 P P 10 00 02.1 -0.5
baz=330
LBNH Lisbon 50.14 69 P P 10 00 03.0 +0.4
LBNH IAmb IAmb 10 00 06.8
comp=Z,11nm,0.8s
HENM Henderson Moun 50.15 89 P P 10 00 03.0 +0.3
P51A Williamsport 50.17 82 P P 10 00 02.1 -0.7
baz=331
P51A Williamsport 50.17 82 P P 10 00 02.1 -0.7
P51A IAmb IAmb 10 00 05.7
comp=Z,21nm,0.9s
PKME Peaks-Kenny Pk 50.19 67 P P 10 00 02.0 -0.9
baz=330
PKME Peaks-Kenny Pk 50.19 67 P P 10 00 02.7 -0.1
PKME IAmb IAmb 10 00 07.0
comp=Z,16nm,0.9s
O53A New Philadelph 50.20 80 P P 10 00 01.8 -1.2
baz=331,SNR=10.0
G63A Kingsbury 50.20 67 P P 10 00 02.6 -0.4
baz=330
M56A Emporium 50.25 76 P P 10 00 02.2 -1.3
baz=330,SNR=5.5
M56A Emporium 50.25 76 P P 10 00 02.6 -0.8
M56A IAmb IAmb 10 00 06.3
comp=Z,14nm,0.8s
ACCN Adirondack Com 50.26 71 P P 10 00 03.4 -0.1
ACCN IAmb IAmb 10 00 03.6
comp=Z,10nm,0.9s
L57A Andrews Acres 50.30 75 P P 10 00 02.3 -1.6
baz=330
I61A Oroboro, Fairl 50.31 70 P P 10 00 03.2 -0.6
baz=330
WHAR Wooly Hollow 50.33 93 P P 10 00 04.3 +0.2
K59A Cooperstown 50.36 73 P P 10 00 03.2 -1.1
baz=330
G64A Maxfield 50.38 66 P P 10 00 02.2 -2.1
baz=330
P52A Corning 50.39 81 P P 10 00 03.5 -1.0
baz=331
BINY Binghamton 50.44 74 P P 10 00 03.7 -1.2
baz=330
BINY Binghamton 50.44 74 P P 10 00 04.3 -0.6
BINY IAmb IAmb 10 00 08.4
comp=Z,19nm,1.1s
W41B Gary Mavity, V 50.45 93 P P 10 00 04.0 -1.0
baz=332
Q51A Peebles 50.46 82 P P 10 00 04.0 -1.1
baz=331
Q51A Peebles 50.46 82 P P 10 00 04.7 -0.4
Q51A IAmb IAmb 10 00 09.6
comp=Z,13nm,0.9s
J60A Lant Hill Farm 50.47 71 P P 10 00 04.5 -0.6
baz=330
HNH Hanover 50.48 70 P P 10 00 05.9 +0.8
HNH IAmb IAmb 10 00 09.5
comp=Z,15nm,0.9s
MIAR Mount Ida 50.50 95 P P 10 00 04.3 -1.0
baz=333,SNR=19
MIAR Mount Ida 50.50 95 P P 10 00 04.7 -0.7
MIAR IAmb IAmb 10 00 08.8
comp=Z,20nm,0.9s
N55A Marion Center 50.57 78 P P 10 00 04.8 -1.1
baz=331,SNR=7.2
O54A Avella 50.57 79 P P 10 00 04.9 -1.0
baz=331,SNR=9.3
O54A Avella 50.57 79 P P 10 00 05.1 -0.8
DRLN Deer Lake 50.62 55 P P 10 00 06.4 +0.3
L58A Harry Jones Me 50.63 74 P P 10 00 05.2 -1.0
baz=331
I62A Tamworth 50.67 69 P P 10 00 04.9 -1.7
baz=330
J61A Chester 50.69 71 P P 10 00 05.6 -1.1
baz=330
N56A West Decatur 50.70 77 P P 10 00 05.9 -1.0
baz=331
R50A Paris 50.74 84 P P 10 00 06.7 -0.4
H64A Troy 50.75 67 P P 10 00 05.8 -1.4
baz=331
KLMR Klimovskoe 50.76 346 eP P 10 00 06.6 -0.4
KLMR AMP 10 00 16.6
comp=Z,45nm,1.3s
UALR University of 50.77 93 P P 10 00 06.9 -0.5
UALR IAmb IAmb 10 00 10.4
comp=Z,13nm,0.9s
M57A Sunshine Farm, 50.77 76 P P 10 00 06.4 -1.0
baz=331
M57A Sunshine Farm, 50.77 76 P P 10 00 06.6 -0.8
M57A IAmb IAmb 10 00 10.7
comp=Z,18nm,1.1s
P53A Whipple 50.79 80 P P 10 00 06.8 -0.8
baz=331
P53A Whipple 50.79 80 P P 10 00 06.8 -0.8
P53A IAmb IAmb 10 00 10.6
comp=Z,23nm,1.1s
L59A Walton 50.80 73 P P 10 00 06.5 -1.1
baz=331
L59A Walton 50.80 73 P P 10 00 07.0 -0.6
L59A IAmb IAmb 10 00 11.2
comp=Z,22nm,1.1s
T47A Sharon Grove 50.81 87 P P 10 00 07.2 -0.5
X40A Basin Creek Fa 50.83 94 P P 10 00 06.7 -1.2
baz=333,SNR=9.5
X40A Basin Creek Fa 50.83 94 P P 10 00 07.0 -0.9
X40A IAmb IAmb 10 00 11.5
comp=Z,26nm,1.4s
Q52A Bidwell 50.92 82 P P 10 00 06.8 -1.7
baz=331,SNR=9.1
O55A Ligonier 50.95 78 P P 10 00 07.3 -1.4
baz=331
M58A Price's Panora 50.99 75 P P 10 00 07.8 -1.2
baz=331
FIA1 FINESS Array S 51.01 355 P P 10 00 08.8 0.0
FIA1 IAmb IAmb 10 00 17.9
comp=Z,8.6nm,0.7s
FINES FINESS Array B 51.01 355 P P 10 00 08.8 -0.1
comp=Z,4.5nm,0.6s,baz=1.4,slow=7.8,SNR=14
K61A Williamstown 51.02 72 P P 10 00 08.7 -0.6
baz=331
P54A Burton 51.04 80 P P 10 00 08.3 -1.1
baz=331,SNR=12
J62A Henniker 51.06 70 P P 10 00 09.3 -0.3
baz=331
SSPA Standing Stone 51.10 77 P P 10 00 08.6 -1.3
baz=331
SSPA Standing Stone 51.10 77 P P 10 00 09.0 -0.9
SSPA IAmb IAmb 10 00 12.6
comp=Z,12nm,0.9s
N57A Milroy 51.12 76 P P 10 00 08.4 -1.6
baz=331
O56A Blue Knob Stat 51.17 78 P P 10 00 09.0 -1.5
baz=331
O56A Blue Knob Stat 51.17 78 P P 10 00 09.1 -1.3
O56A IAmb IAmb 10 00 13.1
comp=Z,15nm,0.9s
M59A Waymart 51.22 74 P P 10 00 08.5 -2.3
baz=331
L60A Shokan 51.27 73 P P 10 00 10.2 -0.9
baz=331
Q53A Leroy 51.29 81 P P 10 00 10.4 -0.9
baz=331,SNR=6.8
WVT Waverly 51.29 88 P P 10 00 11.0 -0.3
baz=332
WVT Waverly 51.29 88 P P 10 00 11.3 0.0
WVT IAmb IAmb 10 00 14.9
comp=Z,19nm,0.8s
L61A Hillsdale 1, H 51.34 72 P P 10 00 10.5 -1.1
baz=331
N58A Sunbury 51.36 76 P P 10 00 10.3 -1.5
baz=331
N58A Sunbury 51.36 76 P P 10 00 10.8 -1.0
N58A IAmb IAmb 10 00 14.3
comp=Z,19nm,0.9s
P55A Reedsville 51.36 79 P P 10 00 11.0 -0.9
baz=331
TX31 Lajitas Ar. Si 51.39 107 P P 10 00 12.9 +0.7
TX32 Lajitas Array 51.39 107 P P 10 00 12.9 +0.7
TXAR Lajitas Array 51.39 107 P P 10 00 12.8 +0.6
comp=Z,26nm,0.8s,baz=335,slow=5.8,SNR=299
K62A Royalston 51.40 71 P P 10 00 10.9 -1.2
baz=331
WLAR White Oak Lake 51.44 95 P P 10 00 12.6 +0.2
Q54A Coxs Mills 51.44 80 P P 10 00 11.1 -1.3
baz=331
Q54A Coxs Mills 51.44 80 P P 10 00 11.8 -0.6
Q54A IAmb IAmb 10 00 15.3
comp=Z,15nm,0.9s
NB2 NORSAR Subarra 51.47 4 P P 10 00 12.5 +0.1
comp=Z,1.2nm,0.7s,baz=356,slow=7.4
NOA NORSAR Array B 51.47 4 P P 10 00 12.3 -0.1
comp=Z,2.8nm,0.9s,baz=356,slow=7.2,SNR=7.3
X43A Marvell 51.55 92 P P 10 00 12.4 -0.8
baz=333
HHC Hu-ho-hao-te 51.56 285 P P 10 00 11.3 -2.1
HHC pmax pmax
comp=Z,10.0nm,0.8s
HHC pmax pmax
comp=Z,59nm,7.0s
O57A Amberson 51.57 77 P P 10 00 12.0 -1.3
baz=331,SNR=7.8
S51A Beattyville 51.58 84 P P 10 00 13.2 -0.3
R53A Hurricane 51.59 82 P P 10 00 12.7 -0.9
baz=331,SNR=10
R53A Hurricane 51.59 82 P P 10 00 12.9 -0.6
W45A Hickory Valley 51.63 90 P P 10 00 13.8 -0.1
K63A Dunstable 51.63 70 P P 10 00 13.8 0.0
baz=331,SNR=5.4
N59A State Game Lan 51.64 75 P P 10 00 13.2 -0.6
baz=331

N59A **State Game Lan** 51.64 75 P P 10 00 13.3 -0.6
N59A IAmb IAmb 10 00 17.3
comp=Z,19nm,1.2s

T50A **Nancy** 51.65 85 P P 10 00 14.1 +0.1
T50A IAmb IAmb 10 00 18.6
comp=Z,26nm,0.9s

M60A **Port Jervis** 51.70 74 P P 10 00 12.8 -1.5
baz=331

Q55A **Buckhannon** 51.72 80 P P 10 00 13.8 -0.8
baz=331,SNR=7.4

P56A **Dayton Farm, R** 51.73 78 P P 10 00 12.9 -1.7
baz=331

U49A **Red Boiling Sp** 51.74 86 P P 10 00 14.2 -0.4
U49A IAmb IAmb 10 00 18.2
comp=Z,24nm,0.9s

JCT **Junction City** 51.78 103 P P 10 00 14.7 -0.4
baz=335,SNR=18

JCT **Junction City** 51.78 103 P P 10 00 14.9 -0.2

HRV **Adam Dziewonsk** 51.78 70 P P 10 00 12.9 -2.0
baz=331

KIRV **Kirov** 51.88 340 P P 10 00 17.0 +1.6
comp=Z,4.2nm,0.5s,baz=345,slow=3.9,SNR=4.0

PAGS **Pennsylvania G** 51.89 76 P P 10 00 14.8 -0.9
PAGS IAmb IAmb 10 00 15.3
comp=Z,16nm,0.8s

CLTN **Cedars of Leba** 51.90 87 P P 10 00 15.9 0.0
CLTN IAmb IAmb 10 00 19.6
comp=Z,17nm,0.9s

O58A **Lewisberry** 51.91 76 P P 10 00 14.7 -1.2
baz=331,SNR=8.7

ODNJ **Ogdensburg** 51.92 74 P P 10 00 15.2 -0.8
ODNJ IAmb IAmb 10 00 19.0
comp=Z,12nm,1.1s

N60A **Cedar Hill Far** 51.93 74 P P 10 00 14.5 -1.5
baz=331

Z41A **Richland Creek** 51.94 95 P P 10 00 15.9 -0.2
baz=333

WES **Weston** 51.98 70 P P 10 00 15.9 -0.4

Q56A **Snyder Ridge,** 52.01 79 P P 10 00 15.7 -1.0
baz=331

Q56A **Snyder Ridge,** 52.01 79 P P 10 00 15.7 -1.0
Q56A IAmb IAmb 10 00 21.2
comp=Z,17nm,1.2s

O59A **Robesonia** 52.02 75 P P 10 00 14.9 -1.8
baz=331

V48A **Smith Brothers** 52.02 88 P P 10 00 16.6 -0.2
V48A IAmb IAmb 10 00 20.2
comp=Z,15nm,0.9s

M61A **Granite Spring** 52.03 73 P P 10 00 14.9 -1.9
baz=331

P57A **Homestead Farm** 52.06 78 P P 10 00 15.5 -1.6
baz=331

LUPA **Lehigh Univers** 52.06 75 P P 10 00 16.2 -0.8

R54A **Victor** 52.09 81 P P 10 00 16.4 -0.9
baz=332,SNR=7.9

S53A **Williamson** 52.10 82 P P 10 00 16.6 -0.8
baz=332,SNR=6.0

OXF **Oxford** 52.12 91 P P 10 00 17.1 -0.4
baz=333,SNR=18

OXF **Oxford** 52.12 91 P P 10 00 17.4 -0.1

PLAL **Pickwick Lake** 52.21 89 P P 10 00 17.7 -0.5

PAL **Palisades** 52.24 73 P P 10 00 17.5 -0.8
baz=331

PAL **Palisades** 52.24 73 P P 10 00 17.9 -0.4
PAL IAmb IAmb 10 00 21.1
comp=Z,15nm,0.8s

O60A **Telford** 52.30 75 P P 10 00 16.8 -2.0
baz=331

S54A **Dingess, Beckl** 52.30 81 P P 10 00 17.8 -1.1
baz=332

Q57A **Strasburg** 52.31 78 P P 10 00 17.0 -1.9
baz=331

P58A **Pank, Wackersv** 52.32 77 P P 10 00 17.7 -1.2
baz=331

R55A **Marlinton** 52.33 80 P P 10 00 17.7 -1.4
baz=332

R55A **Marlinton** 52.33 80 P P 10 00 18.6 -0.5
R55A IAmb IAmb 10 00 19.1
comp=Z,13nm,0.8s

L63A **North Scituate** 52.33 71 P P 10 00 17.5 -1.4
baz=331

HFS **Hagfors** 52.43 3 P P 10 00 19.5 0.0
comp=Z,6.1nm,0.6s,baz=30,slow=6.8,SNR=13

P59A **Jarrettsville** 52.54 76 P P 10 00 19.5 -1.1
baz=331

ARU **Arti** 52.54 333 P P 10 00 19.8 -0.6
comp=Z,2.2nm,0.5s,baz=260,slow=22,SNR=7.7

ARU **Arti** 52.54 333 P P 10 00 20.3 -0.1
ARU IAmb IAmb 10 00 32.6
comp=Z,13nm,0.9s

L64A **Middleborough** 52.54 70 P P 10 00 19.4 -1.1
baz=331

T53A **Wise** 52.56 83 P P 10 00 19.9 -0.9
baz=332

SDMD **Soldier's Deli** 52.56 77 P P 10 00 18.9 -1.8
SDMD IAmb IAmb 10 00 24.4
comp=Z,23nm,1.5s

NATX **Nacogdoches** 52.56 97 P P 10 00 20.2 -0.6
baz=334

M63A **Gales Ferry** 52.57 71 P P 10 00 19.6 -1.2
baz=331

S55A **Lewisburg** 52.63 81 P P 10 00 20.2 -1.2
baz=332

Y45A **Yeager Farm, C** 52.64 91 P P 10 00 21.6 +0.2

P60A **Greenville** 52.66 75 P P 10 00 20.3 -1.1
baz=332

Q58A **Fox Den Farm,** 52.66 78 P P 10 00 20.2 -1.3
baz=332,SNR=7.2

M64A **Tiverton** 52.74 71 P P 10 00 21.3 -0.7
baz=331

SWET **Sewanee** 52.82 87 P P 10 00 22.1 -0.7
SWET IAmb IAmb 10 00 25.7
comp=Z,13nm,0.9s

T54A **Tazewell** 52.85 82 P P 10 00 22.2 -0.8
baz=332

HPIG 52.85 111 P P 10 00 23.8 +0.5
HPIG IAmb IAmb 10 00 27.9
comp=Z,23nm,0.9s

V51A **Loudon** 52.91 85 P P 10 00 23.2 -0.1
V51A IAmb IAmb 10 00 27.1
comp=Z,23nm,1.1s

R57A **Stanardsville** 52.91 79 P P 10 00 22.4 -1.0
baz=332

143A **Socs Landing,** 52.96 94 P P 10 00 24.2 +0.5

X48A **Hartselle** 53.07 89 P P 10 00 23.8 -0.8
X48A IAmb IAmb 10 00 27.8
comp=Z,13nm,0.9s

T55A **Pulaski** 53.10 81 P P 10 00 24.2 -0.6
baz=332

Q59A **Harwood** 53.11 77 P P 10 00 25.0 +0.2
baz=332

CPCT **Cooper Cave** 53.15 86 P P 10 00 25.0 -0.1
CPCT IAmb IAmb 10 00 28.7
comp=Z,24nm,1.5s

BLA **Blacksburg** 53.15 81 P P 10 00 24.4 -0.8
baz=332

V52A **Sevierville** 53.16 85 P P 10 00 25.1 -0.1
V52A IAmb IAmb 10 00 29.1
comp=Z,26nm,1.1s

S57A **Dark Hollow, R** 53.22 79 P P 10 00 24.3 -1.3
baz=332

S57A **Dark Hollow, R** 53.22 79 P P 10 00 25.2 -0.4

U54A **Nelsons Funny** 53.23 83 P P 10 00 24.5 -1.3
baz=332

TKL **Tuckaleechee C** 53.25 85 P P 10 00 25.7 -0.2
TKL IAmb IAmb 10 00 26.7
comp=Z,23nm,0.9s

BRVK **Borovoye** 53.35 323 P P 10 00 26.4 0.0
BRVK IAmb IAmb 10 00 29.2
comp=Z,14nm,0.7s

R58B **Mineral** 53.45 78 P P 10 00 25.9 -1.3
baz=332

R58B **Mineral** 53.45 78 P P 10 00 27.7 +0.5

KURK **Kurchatov** 53.45 316 P P 10 00 26.9 -0.2
KURK IAmb IAmb 10 00 29.9
comp=Z,17nm,0.8s

T56A **Rocky Mt** 53.46 81 P P 10 00 26.5 -0.9
baz=332

R59A **King George, V** 53.52 78 P P 10 00 26.5 -1.3
baz=332

FPAL **Fort Paine** 53.54 87 P P 10 00 27.9 -0.2

U55A **TA2, Sparta** 53.54 82 P P 10 00 27.0 -1.1
baz=332

V53A **Saluda** 53.61 84 P P 10 00 28.4 -0.1

S58A **Poland Farm, P** 53.69 79 P P 10 00 28.6 -0.4
baz=332

S58A **Poland Farm, P** 53.69 79 P P 10 00 28.4 -0.6

W52A **Murphy** 53.69 85 P P 10 00 29.2 0.0

T57A **Hurt** 53.78 80 P P 10 00 28.5 -1.3
baz=332

Z47A **Carrollton** 53.79 90 P P 10 00 29.6 -0.2

V54A **Nebo** 53.84 83 P P 10 00 29.7 -0.5
baz=332

Y49A **Blount Mountai** 53.84 88 P P 10 00 29.9 -0.3
Y49A IAmb IAmb 10 00 35.7
comp=Z,14nm,0.8s

S59A **Mechanicsville** 53.84 78 P P 10 00 29.4 -0.8
baz=332

833A **Chaparral WMA,** 53.88 104 P P 10 00 30.4 -0.2
baz=335

146A **Union** 53.91 91 P P 10 00 31.2 +0.4

U56A **King** 53.93 81 P P 10 00 30.0 -0.9
baz=332

U56A **King** 53.93 81 P P 10 00 30.6 -0.3
U56A IAmb IAmb 10 00 34.1
comp=Z,18nm,1.1s

V55A **Taylorsville** 54.05 82 P P 10 00 30.9 -0.8
baz=332

T58A **Grand View Acr** 54.10 79 P P 10 00 30.8 -1.3
baz=332

BG3 **Lake Jocassee** 54.16 84 P P 10 00 32.9 +0.3

U57A **Blanch** 54.25 80 P P 10 00 31.9 -1.3
baz=332,SNR=11

LRAL **Lakeview Retre** 54.35 89 P P 10 00 32.6 -1.3
baz=333,SNR=5.8

LRAL **Lakeview Retre** 54.35 89 P P 10 00 33.2 -0.7
LRAL IAmb IAmb 10 00 37.5
comp=Z,26nm,1.4s

V56A **Mocksville** 54.36 82 P P 10 00 33.1 -0.9
baz=332

W54A **Cherokee Point** 54.36 84 P P 10 00 33.4 -0.6
baz=333

Z50A **Ashland** 54.56 88 P P 10 00 34.5 -1.0
baz=333,SNR=14

Z50A **Ashland** 54.56 88 P P 10 00 34.9 -0.6

V57A **Coltrane Farms** 54.56 81 P P 10 00 34.1 -1.4
baz=332

U58A **Oxford** 54.58 80 P P 10 00 35.7 +0.1
baz=332

T60A **Surry** 54.60 78 P P 10 00 34.9 -0.8
baz=332

T60A **Surry** 54.60 78 P P 10 00 35.1 -0.5

KMSC **Kings Mountain** 54.63 83 P P 10 00 34.9 -1.1
baz=333

KMSC **Kings Mountain** 54.63 83 P P 10 00 35.6 -0.4
KMSC IAmb IAmb 10 00 39.3
comp=Z,9.5nm,0.8s

Y52A **Lilburn** 54.73 86 P P 10 00 36.4 -0.3
baz=333,SNR=7.7

Y52A **Lilburn** 54.73 86 P P 10 00 36.7 0.0
Y52A IAmb IAmb 10 00 40.8
comp=Z,24nm,1.1s

PAULI **Pauline** 54.74 84 P P 10 00 36.5 -0.2
PAULI IAmb IAmb 10 00 40.2
comp=Z,20nm,0.9s

X54A **Belton** 54.77 84 P P 10 00 36.4 -0.6
baz=333,SNR=14

V58A **Windy Hill, Pi** 54.90 81 P P 10 00 36.6 -1.2
baz=332

U59A **Littleton** 54.90 79 P P 10 00 36.8 -1.1
baz=332

U60A **Pendleton** 55.03 79 P P 10 00 37.9 -0.9
baz=332

X55A **Gracelyn & Ava** 55.12 84 P P 10 00 38.7 -0.7
baz=333,SNR=8.1

W57A **Gilead** 55.13 82 P P 10 00 38.6 -1.0
baz=333

V59A **Middlesex** 55.25 80 P P 10 00 39.2 -1.2
baz=333

X56A **White Oak** 55.32 83 P P 10 00 40.4 -0.6
baz=333

GOGA **Godfrey** 55.36 86 P P 10 00 40.6 -0.7
baz=333

U61A **Possum Corner** 55.42 78 P P 10 00 40.2 -1.5
baz=333

Y55A **Saluda** 55.50 84 P P 10 00 41.8 -0.4
baz=333,SNR=12

W58A **Raeford** 55.53 81 P P 10 00 41.3 -1.2
baz=333

152A **Waverly Hall** 55.54 87 P P 10 00 41.9 -0.7

V60A **Jim Taylor Roa** 55.62 79 P P 10 00 42.2 -0.9
baz=333

X57A **Johnson Farm,** 55.70 82 P P 10 00 42.0 -1.7
baz=333

X58A **Rowland** 55.91 82 P P 10 00 44.4 -0.8
baz=333

BRAL **Brewton** 55.99 90 P P 10 00 44.3 -1.5
baz=334

Y57A **Sumter** 55.99 83 P P 10 00 45.5 -0.2

MK31 **Makanchi Array** 56.01 312 P P 10 00 44.8 -1.0

MKAR **Makanchi Array** 56.01 312 P P 10 00 44.9 -0.9
comp=Z,6.9nm,0.7s,baz=43,slow=6.2,SNR=45

MAKZ **Makanchi** 56.09 312 P P 10 00 45.9 -0.5

Z56A **Williston** 56.23 84 P P 10 00 47.0 -0.5
baz=333

EKA **Eskdalemuir Ar** 56.30 14 P P 10 00 48.4 +0.7
comp=Z,12nm,0.7s,baz=355,slow=5.6,SNR=33

ESK **Eskdalemuir** 56.31 14 P P 10 00 48.5 +0.7
ESK IAmb IAmb 10 00 52.5
comp=Z,16nm,0.8s

Y58A **Scranton** 56.36 82 P P 10 00 47.5 -0.9
baz=333

Z57A **Bowman** 56.51 83 P P 10 00 48.6 -0.9
baz=333

NJ2 **Nanjing** 56.58 273 *eP* P 10 00 50.1 +0.1
NJ2 pmax pmax
comp=Z,24nm,0.7s

NHSC **New Hope** 56.88 83 P P 10 00 51.5 -0.5
baz=333

NHSC **New Hope** 56.88 83 P P 10 00 52.6 +0.5

GTA **Gaotai** 57.05 294 ⇑P P 10 00 54.7 +1.3
GTA pP sP 10 01 02.1 +3.6
GTA sP pP 10 01 05.6 +8.5
GTA pmax pmax
comp=Z,10.0nm,0.9s
GTA LR LR
comp=Z,180nm,15.9s
GTA LR LR
comp=Z,270nm,15.9s

255A **Hazlehurst** 57.06 86 P P 10 00 53.6 +0.2

WMQ **Urumqi** 57.10 306 *eP* P 10 00 54.3 +0.7
WMQ pmax pmax
comp=Z,15nm,0.9s
WMQ pmax pmax
comp=Z,170nm,10.1s
WMQ LR LR
comp=Z,360nm,28.8s
WMQ LR LR
comp=Z,860nm,28.8s

NACGM **Naroch** 57.52 354 *e* P 10 00 56.0 -0.4

ZAIG **Zacatecas** 57.77 110 P P 10 00 59.0 +0.1
ZAIG IAmb IAmb 10 01 04.9
comp=Z,26nm,1.3s

AKTO **Aktyubinsk** 58.37 331 P P 10 01 02.3 -0.1
comp=Z,8.5nm,0.8s,baz=27,slow=7.7,SNR=14

XAN **Xi'an** 58.55 283 P P 10 01 07.8 +3.9
XAN pmax pmax
comp=Z,3.0nm,0.7s
XAN pmax pmax
comp=Z,75nm,4.9s

BSEG **Bad Segeberg** 58.56 5 *eP* P 10 01 04.7 +1.1
comp=Z,13nm,0.7s,baz=357,slow=6.8

LZH **Lanzhou** 58.59 289 *eP* P 10 01 04.6 +0.3
LZH pP sP 10 01 10.2 +0.8
LZH sP pP 10 01 13.5 +5.5
LZH pmax pmax
comp=Z,33nm,1.1s

NRDL **Niedersach Rie** 59.99 5 *eP* P 10 01 14.3 +0.9
comp=Z,11nm,1.0s,baz=357,slow=6.8

IBBN **Ibbenburen** 60.08 7 *eP* P 10 01 15.1 +1.0
comp=Z,15nm,0.8s,baz=357,slow=6.8

CLZ **Clausthal** 60.65 5 *eP* P 10 01 19.3 +1.1
comp=Z,18nm,1.0s,baz=357,slow=6.8

BUG **Bochum--Univer** 60.92 7 *eP* P 10 01 20.3 +0.4
comp=Z,17nm,1.2s,baz=357,slow=6.8

CLL **Collm** 61.26 3 *i* P P 10 01 23.6 +1.4
comp=Z,10.0nm,1.0s

CLL **Collm** 61.26 3 *eP* P 10 01 23.6 +1.4
comp=Z,10.0nm,1.0s,baz=357,slow=6.8

CLL **Collm** 61.26 3 P P 10 01 23.6 +1.4
CLL IAmb IAmb 10 01 28.3
comp=Z,14nm,1.2s

TKM2 **Tokmak 2** 61.43 315 P P 10 01 24.5 +0.7
SNR=9.3

AKASG **Malin Array Be** 61.60 352 P P 10 01 24.6 0.0
comp=Z,8.2nm,0.6s,baz=6.5,slow=6.6,SNR=34

AKBB **Malin Array Si** 61.60 352 P P 10 01 24.7 +0.2

FBE **Freiberg** 61.66 3 *eP* P 10 01 25.9 +1.0
comp=Z,14nm,1.4s,baz=357,slow=6.8

UBBA **Unterbreizbach** 61.66 6 *eP* P 10 01 25.7 +0.9
comp=Z,30nm,1.8s,baz=357,slow=6.8

MEM **Membach** 61.69 8 P P 10 01 25.3 +0.2
MEM PcP **PcP** 10 02 04.8 -1.6

ENH **Enshi** 61.71 281 P P 10 01 25.2 -0.5
ENH IAmb IAmb 10 01 25.7
comp=Z,10nm,0.7s

BRG **Berggiesshubel** 61.72 3 *i* P P 10 01 25.8 +0.5
comp=Z,7.5nm,0.9s

BRG **Berggiesshubel** 61.72 3 *eP* P 10 01 25.9 +0.6
comp=Z,7.5nm,0.9s,baz=357,slow=6.8

KDJ **Kajisay** 61.73 313 P P 10 01 26.3 +0.4
KDJ IAmb IAmb 10 01 39.6
comp=Z,8.6nm,1.0s

BOOM **Boomskoye usch** 61.74 314 P P 10 01 26.4 +0.6
BOOM IAmb IAmb 10 01 28.9
comp=Z,6.7nm,0.8s

AHRW **Bad Neuenahr-A** 61.81 8 *eP* P 10 01 26.6 +0.7
comp=Z,20nm,1.4s,baz=357,slow=6.8

KBK **Karagaybulak** 61.85 315 P P 10 01 27.4 +0.8
SNR=6.7

MOX **Moxa** 61.89 4 *eP* P 10 01 27.3 +0.8
comp=Z,6.6nm,1.0s,baz=357,slow=6.8

AAK **Ala-Archa** 61.99 316 P P 10 01 28.3 +0.7
SNR=7.8

AAK **Ala-Archa** 61.99 316 P P 10 01 28.2 +0.7
AAK IAmb IAmb 10 01 41.6
comp=Z,12nm,0.9s

OSTC **Ostas** 62.06 1 *eP* P 10 01 28.6 +0.9

PLN **Plauen** 62.06 4 *eP* P 10 01 28.6 +0.9
comp=Z,8.4nm,0.9s,baz=357,slow=6.8

UPC **Upice** 62.11 1 *eP* P 10 01 29.1 +1.1

TANN **Tannenbergstha** 62.14 4 *eP* P 10 01 29.2 +0.9
comp=Z,17nm,0.9s,baz=357,slow=6.8

EKS2 **Erkin-Say** 62.16 316 P P 10 01 29.4 +0.8
SNR=10

GUNZ **Gunzen** 62.19 4 *eP* P 10 01 29.5 +0.9
comp=Z,15nm,1.5s,baz=357,slow=6.8

TNS **Taunus Mts** 62.20 7 *eP* P 10 01 29.3 +0.7
comp=Z,8.0nm,1.0s,baz=357,slow=6.8

WERN **Wernitzgruen** 62.27 4 *eP* P 10 01 30.1 +1.1
comp=Z,25nm,1.8s,baz=357,slow=6.8

DPC **Dobruska-Polom** 62.27 1 *eP* P 10 01 30.0 +0.9

KRLC **Kraliky** 62.55 1 *eP* P 10 01 31.7 +0.7

KK31 **Karatay Array** 62.59 319 P P 10 01 31.6 +0.2

KKAR **Karatay Array** 62.59 319 P P 10 01 31.6 +0.2

PRU **Pruhonice** 62.61 2 *eP* P 10 01 32.2 +0.9

AML **Almayashu** 62.68 316 P P 10 01 33.5 +1.0
SNR=12

GOPC **GO Pecny, Ondr** 62.69 2 *eP* P 10 01 32.5 +0.6

NRN **Naryn** 62.71 314 P P 10 01 33.8 +1.3
NRN IAmb IAmb 10 01 47.3
comp=Z,8.0nm,1.1s

ROTZ **Rotzenmuhle** 62.78 4 *eP* P 10 01 33.5 +1.0
comp=Z,4.4nm,0.8s,baz=357,slow=6.8

GRF **Grafenberg Arr** 62.83 5 *eP* P 10 01 34.0 +1.2
comp=Z,8.5nm,0.6s,baz=357,slow=6.8

MORC **Moravsky Berou** 62.85 0 *eP* P 10 01 33.4 +0.4

MORC **Moravsky Berou** 62.85 0 ⇑P P 10 01 34.0 +1.0

MORC **Moravsky Berou** 62.85 0 P P 10 01 33.7 +0.7

CD2 **Chengdu** 63.26 286 *eP* P 10 01 33.0 -3.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s

VRAC **Vranov** 63.31 1 P P 10 01 37.2 +1.2
comp=Z,5.2nm,0.8s,baz=13,slow=7.0,SNR=6.7

VRAC **Vranov** 63.31 1 *eP* P 10 01 35.8 -0.2

VRAC **Vranov** 63.31 1 ⇑P P 10 01 37.3 +1.3

TREC **Trest** 63.32 2 *eP* P 10 01 33.0 -3.1

WET **Wettzell** 63.42 4 *eP* P 10 01 38.1 +1.3
comp=Z,7.0nm,1.1s,baz=357,slow=6.8

KHC **Kasperske Hory** 63.45 3 *eP* P 10 01 38.2 +1.2

KHC **Kasperske Hory** 63.45 3 P P 10 01 38.2 +1.2

LANS **Liptovska Anna** 63.47 359 *eP* P 10 01 39.0 +1.9

KRUC **Moravsky** 63.56 1 *eP* P 10 01 37.9 +0.3

ARSB **Arslanbob** 63.62 316 P P 10 01 39.1 +0.7
ARSB IAmb IAmb 10 01 43.1
comp=Z,8.2nm,0.8s

KOLS **Kolonicke sedl** 63.64 357 *eP* P 10 01 39.3 +1.1

STU **Stuttgart** 63.68 6 *eP* P 10 01 39.2 +0.8
comp=Z,8.7nm,0.7s,baz=357,slow=6.8

GEC2 **GERESS Array S** 63.74 3 *eP* P 10 01 40.1 +1.1
comp=Z,30nm,1.6s,baz=357,slow=6.8

GEC2 **GERESS Array S** 63.74 3 P P 10 01 40.3 +1.3
GEC2 IAmb IAmb 10 01 47.9
comp=Z,20nm,1.3s

GERES **GERESS Array B** 63.74 3 P P 10 01 39.9 +0.9
comp=Z,5.4nm,0.8s,baz=1.7,slow=4.5,SNR=28

JAVC **Velka Javorina** 63.77 0 *eP* P 10 01 40.4 +1.3

TLIG **Tlapa** 64.00 108 P P 10 01 41.4 +0.3

BFO **Black Forest** 64.08 7 *eP* P 10 01 41.8 +0.7
comp=Z,18nm,1.8s,baz=357,slow=6.8

VYHS **Vyhne** 64.13 359 *eP* P 10 01 42.4 +1.0

ECH **Echery** 64.14 8 P P 10 01 42.3 +0.8
ECH IAmb IAmb 10 01 45.6
comp=Z,12nm,1.3s

MODS **Modra-Piesok** 64.25 0 *eP* P 10 01 41.6 -0.6

ZST **Bratislava** 64.43 0 *eP* P 10 01 43.0 -0.4

TRPA **Tarpa** 64.44 356 ⇑P P 10 01 44.9 +1.5

CONA **Conrad Observa** 64.69 1 *epP* P 10 01 46.7 +1.5
comp=Z,8.1nm,0.8s

PSZ **Piszkesteto** 64.70 358 ⇓P P 10 01 47.3 +2.1

PSZ **Piszkesteto** 64.70 358 P P 10 01 46.9 +1.7
PSZ IAmb IAmb 10 01 54.0
comp=Z,23nm,1.4s

MOA **Molln** 64.75 3 *epP* P 10 01 46.7 +1.2
comp=Z,7.1nm,0.8s

UBR **Ueberruh** 64.80 6 *eP* P 10 01 46.8 +0.9
comp=Z,10nm,1.2s,baz=357,slow=6.8

RJOB **Jochberg** 64.83 4 *eP* P 10 01 47.1 +1.1
comp=Z,14nm,1.3s,baz=357,slow=6.8

BUR08 **Bucovina Ar. S** 64.84 354 P P 10 01 47.2 +1.0

BURAR **Bucovina Array** 64.87 354 ⇓P P 10 01 46.9 +0.5

RETA **Reutte** 65.02 5 *epP* P 10 01 48.5 +1.1
comp=Z,7.6nm,1.3s

MOTA **Moosalm** 65.17 5 *epP* P 10 01 49.4 +1.0
comp=Z,6.4nm,1.1s

DAVA **Damuels** 65.19 6 *epP* P 10 01 49.7 +1.2
comp=Z,5.6nm,1.0s

WTTA **Wattenberg** 65.27 5 *eP* P 10 01 47.2 -1.9
comp=Z,11nm,1.1s

ARSA **Arzberg** 65.36 2 *epP* P 10 01 51.0 +1.4
comp=Z,5.3nm,1.0s

FETA **Feichten** 65.48 5 *epP* P 10 01 52.0 +1.5
comp=Z,11nm,0.9s

KBA **Koelnbreinsper** 65.50 3 *epP* P 10 01 51.2 +0.6
comp=Z,7.9nm,0.8s

BIZ **Bicaz** 65.51 354 ⇑P P 10 01 51.6 +1.2

DAVOX **Davos/Dischmat** 65.69 6 P P 10 01 53.1 +1.2
comp=Z,6.9nm,0.6s,baz=347,slow=4.1,SNR=17

DRGR 65.77 356 ⇑P P 10 01 53.1 +0.8

ABTA **Abfaltersbach** 65.81 4 *i* pP P 10 01 53.0 +0.5
comp=Z,10nm,1.0s

FUORN **Ofenpass-Fuorn** 65.87 6 P P 10 01 54.4 +1.3
FUORN IAmb IAmb 10 01 58.7
comp=Z,10nm,0.8s

SOKA **Soboth** 65.93 2 *epP* P 10 01 55.4 +2.1
comp=Z,4.0nm,1.2s

MYKA **Terra Mystica** 65.95 3 *epP* P 10 01 54.4 +1.0
comp=Z,3.1nm,0.6s

TUE **Stuetta** 65.98 6 P P 10 01 55.0 +1.3
TUE IAmb IAmb 10 01 58.5
comp=Z,6.5nm,0.7s

OBKA **Obir** 66.09 2 *epP* P 10 01 55.7 +1.4
comp=Z,16nm,0.8s

SIRR **Siria** 66.32 357 ⇑P P 10 01 57.0 +1.3

GAR **Garm** 66.50 318 P P 10 01 57.5 +0.4
GAR IAmb IAmb 10 02 02.0
comp=Z,15nm,0.9s

MLR **Muntele Rosu** 66.96 354 P P 10 02 01.7 +1.8
comp=Z,1.5nm,0.6s,baz=345,slow=12,SNR=3.8

MLR **Muntele Rosu** 66.96 354 ⇑P P 10 02 03.1 +3.2

MLR **Muntele Rosu** 66.96 354 IAmb IAmb 10 02 03.5
comp=Z,5.8nm,1.2s

BZS **Buzias** 66.97 357 ⇑P P 10 02 00.8 +1.0

VOIR 67.05 354 ⇑P P 10 02 03.7 +3.3

KIV **Kislovodsk** 67.08 341 P P 10 02 01.2 +0.5
KIV IAmb IAmb 10 02 03.2
comp=Z,12nm,0.7s

CHGR **Chuyangaron** 67.12 318 P P 10 02 01.1 +0.1

GZR **Gura Zlata** 67.17 356 ⇑P P 10 02 02.0 +0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KBZ	Khabaz	67.27	340	P	P	10 02 01.8	+0.1
	comp=Z,5.2nm,0.9s,baz=134,slow=5.9,SNR=12						
KBZ				LR	LR	10 34 27.9	
	comp=Z,157nm,19.4s,baz=350,slow=39						
CCIG	Comitan	67.55	102	P	P	10 02 06.3	+2.3
CCIG				IAmb	IAmb	10 02 07.5	
	comp=Z,16nm,1.1s						
TIRR	Tirgusor	67.88	352	P	P	10 02 05.9	+0.4
NRCA	Norcia	69.74	4	P	P	10 02 18.5	+1.2
NRCA				IAmb	IAmb	10 02 27.4	
	comp=Z,29nm,1.5s						
VTS	Vitosha	69.93	356	P	P	10 02 19.8	+1.3
DIKM	Dikmen	70.17	346	⇑P	P	10 02 20.9	+1.0
GEYT	Alibeck	70.37	327	P	P	10 02 20.9	-0.3
	comp=Z,2.9nm,0.8s,baz=253,slow=1.5,SNR=5.0						
ESDC	Sonseca Array	71.70	17	P	P	10 02 29.8	+0.6
	comp=Z,4.1nm,0.6s,baz=352,slow=6.2,SNR=27						
FNA	Florina	71.81	357	P	P	10 02 31.5	+1.7
FNA				IAmb	IAmb	10 02 34.1	
	comp=Z,11nm,0.8s						
SLVN	Son La	71.90	282	P	P	10 02 31.2	+0.6
BR131	Keskin Array S	72.22	347	P	P	10 02 33.1	+0.6
BRTR	Keskin Array B	72.22	347	P	P	10 02 32.7	+0.2
	comp=Z,2.3nm,0.8s,baz=38,slow=2.2,SNR=13						
MATN	Matagalpa	72.95	98	P	P	10 02 37.0	0.0
SDDR	Presa de Saban	72.99	82	P	P	10 02 36.8	-0.4
CMAR	Chiang Mai Arr	76.37	285	P	P	10 02 56.9	+0.2
	comp=Z,7.4nm,0.8s,baz=6.0,slow=6.6,SNR=32						
CMAR				LR	LR	10 40 05.8	
	comp=Z,196nm,18.1s,baz=20,slow=38						
KEST	Kesra	76.69	7	P	P	10 02 59.1	+0.7
	comp=Z,15nm,0.8s,baz=320,slow=10.0,SNR=4.2						
KEST	Kesra	76.69	7	IAmb	IAmb	10 03 04.2	
	comp=Z,25nm,1.0s						
IDI	Anoyia	77.18	354	P	P	10 03 02.5	+1.3
	comp=Z,3.7nm,0.6s,baz=315,slow=11,SNR=4.1						
IDI	Anoyia	77.18	354	IAmb	IAmb	10 03 03.3	
	comp=Z,5.9nm,0.9s						
MDT	Midelt	78.39	19	P	P	10 03 08.4	+0.4
	comp=Z,2.5nm,0.8s,baz=337,slow=6.4,SNR=4.1						
MMAI	Mount Meron Ar	78.71	345	P	P	10 03 10.5	+0.8
	comp=Z,0.6nm,0.3s,baz=314,slow=8.7,SNR=4.7						
ASF	Jabal al Asfar	79.39	344	P	P	10 03 13.3	-0.2
	comp=Z,4.5nm,0.8s,baz=349,slow=5.2,SNR=5.2						
SIJI	Sorong	82.03	248	P	P	10 03 27.2	-0.4
	comp=Z,10nm,0.7s,baz=296,slow=4.6,SNR=4.5						
ZARC	Zaragoza, Cauc	82.14	90	eP	P	10 03 27.3	-1.0
SDV	Santo Domingo	82.48	85	P	P	10 03 30.1	-0.2
	comp=Z,25nm,1.0s,baz=6.7,slow=3.6,SNR=15						
SDV	Santo Domingo	82.48	85	eP	P	10 03 30.1	-0.2
SDV	Santo Domingo	82.48	85	P	P	10 03 30.4	+0.1
PAMC	Pamplona, Colo	83.11	88	eP	P	10 03 33.5	-0.3
PTBC	PUERTO BERRIO,	83.17	90	eP	P	10 03 32.5	-1.1
NORC	Norcasia	83.91	90	eP	P	10 03 36.4	-1.0
SPBC	San Pablo de B	84.13	89	eP	P	10 03 37.7	-0.9
RUSC	La Rusia	84.29	88	eP	P	10 03 39.8	-0.2
RUSC	La Rusia	84.29	88	P	P	10 03 39.8	-0.2
HYB	Hyderabad	84.41	303	iP	P	10 03 40.0	0.0
ROSC	El Rosal	84.78	90	P	P	10 03 42.8	+0.5
	comp=Z,21nm,0.8s,baz=109,slow=23,SNR=5.5						
ROSC	El Rosal	84.78	90	P	P	10 03 43.7	+1.3
CHIC	Chingaza	85.20	90	eP	P	10 03 41.9	-2.6
RAYN	Ar Rayn	86.73	335	P	P	10 03 51.6	+0.1
RAYN				IAmb	IAmb	10 03 56.5	
	comp=Z,12nm,0.9s						
PSI	Prapat	90.76	279	P	P	10 04 10.3	-0.4
	comp=Z,3.1nm,0.5s,baz=359,slow=10,SNR=3.2						
RPSI	Rantau Prapat	90.86	279	P	P	10 04 10.3	-0.7
ATAH	Atahualpa	94.23	98	P	P	10 04 28.3	+1.3
	comp=Z,8.1nm,0.9s,baz=115,slow=2.9,SNR=3.6						
TORD	Torodi Ar. Bea	98.53	16	P	Pdif	10 04 47.4	+1.2
	comp=Z,0.3nm,0.8s,baz=319,slow=5.7,SNR=1.8						
WRA	Warramunga Arr	98.77	238	P	P	10 04 46.1	-0.9
	comp=Z,0.8nm,0.8s,baz=19,slow=5.5,SNR=5.1						
PLCA	Paso Flores	127.56	107	PKP	PKPdf	10 10 11.7	-0.1
	comp=Z,4.8nm,0.9s,baz=302,slow=1.5,SNR=5.6						
SUR	Sutherland	144.59	355	PKP	PKPbc	10 10 42.5	+0.1
	comp=Z,16nm,0.8s,baz=304,slow=3.3,SNR=16						
SUR	Sutherland	144.59	355		PKPbc	10 10 42.8	+0.4
VNDA	Vanda	146.60	193	PKPbc	PKPbc	10 10 47.4	+0.2
	comp=Z,3.1nm,0.9s,baz=321,slow=5.6,SNR=9.3						
VNDA	Vanda	146.60	193		PKPab	10 10 48.0	-0.2
VNA3	Neumayer Olymp	169.82	123	PKPab	PKPab	10 12 28.4	+0.4
SNAA	Sanae	171.85	128	PKPab	PKPab	10 12 36.5	-0.6
	comp=Z,1.6nm,0.8s,baz=294,slow=5.3,SNR=4.4						

*IDC **03** 09:52:51.9±1.2, 9.°84N×124.°35E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.6/64, mbtmp3.8/5, MS4.0/4, Ms1 4.0/4, ms1mx3.4/54, Error ellipse: s-maj=45.0km s-min=23.4km az=67.0*
*MAN **03** 09:52:52.2, 9.°89N×124.°30E, h2km, mb5.1, ML4.0, MS4.1*
MAN Intensity IV - San Miguel Bohol; Intensity II - Cebu City.
*NEIC **03** 09:52:53.6±1.5, 9.°87N±0.°08×124.°26E±0.°08, h10km±1km, mb4.4/10, Error ellipse: s-maj=17.3km s-min=7.9km az=42.0*
ISC 03 09:52:52.0±1.2**, 9.°91N**±0.°03×**124.°32E**±0.°03**, h2**km±9km**, n41,** σ1.s08/51**, mb4.4**/11**, MS4.0**/3**, 3C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.50	245	eP	Pn	09 53 05.8	-0.5
TBP				iS	Sb	09 53 13.7	+2.2
LLP	Lapu-Lapu	0.54	319	⇓iP	Pg	09 53 02.6	+0.2
LLP				iS	Sg	09 53 11.0	+1.6
MSLP	Maasin	0.57	67	eP	Pg	09 53 04.2	+1.2
MSLP				eS	Sb	09 53 14.5	+1.0
OCLP	Ormoc	1.17	14	eP	Pg	09 53 14.3	-0.2
OCLP				eS	Sn	09 53 32.3	+0.2
SNPH	Sibulan	1.21	242	⇓iP	Pb	09 53 15.6	-0.2
SNPH				iS	Sn	09 53 34.3	+1.1
CGP	Cagayan de Oro	1.49	166	⇓eP	Pb	09 53 20.2	-0.3
CGP				eS	Sn	09 53 40.3	+0.3
DCPH	Dipolog City	1.63	216	⇓iP	Pn	09 53 21.4	-0.4
DCPH				iS	Sg	09 53 43.6	-0.8
PAGZ	Pagadian	2.25	204	eP	Pn	09 53 29.6	-0.8
PAGZ				eS	Sn	09 53 58.3	-0.4
RCP	Roxas	2.26	317	⇑eP	Pn	09 53 30.9	+0.4
RCP				eS	Sb	09 54 00.7	-1.4
JAP	San Jose, Anti	2.48	290	⇑eP	Pb	09 53 36.3	-1.1
KCP	Kidapawan	2.98	165	⇑eP	Pn	09 53 42.0	+1.5
KCP				iS	Sg	09 54 27.7	-0.2
DAV	Davao City (W)	3.08	156	Pn	Pb	09 53 46.2	-1.4
	42nm,0.3s,baz=72,slow=2.4,SNR=3.7						
DAV				Sn	Sb	09 54 27.4	+1.7
	45nm,0.3s,baz=255,slow=23,SNR=3.5						
DAV	Davao City (W)	3.08	156	Pn	Pn	09 53 42.5	+0.7
DAV				Sn	Sn	09 54 19.1	-0.2
SKMP	Bagumbayan, Su	3.37	176	eP	Pn	09 53 46.6	+0.7
SKMP				eS	Sn	09 54 26.8	+0.2
MATI	Mati	3.51	147	eP	Pb	09 53 53.3	-1.7
MATI				eS	Sn	09 54 27.6	-2.3
PVCP	Virac	3.67	357	eP	Pn	09 53 48.9	-1.0
PVCP				eS	Sg	09 54 49.0	-1.0
TNTI	Ternate	9.57	161	Pn	Pn	09 55 12.4	+1.4
LUWI	Luwuk	10.99	188	Pn	Pn	09 55 31.2	+0.8
SIJI	Sorong	12.74	147	LR	LR	10 01 01.8	
	comp=Z,265nm,20.5s,baz=306,slow=39						
SBUM	Sibu	14.12	239	Pn	Pn	09 56 13.4	0.0
SSLB	Suanglung	14.17	347	Pn	Pn	09 56 14.9	+0.9
FAKI	Fak Fak	14.99	148	Pn	Pn	09 56 23.6	-1.6
JAGI	Jajag, Banyuwa	20.88	209	P	P	09 57 35.7	0.0
MTN	Manton Dam	23.59	163	P	P	09 58 04.1	-0.3
MTN				IAmb	IAmb	09 58 16.4	
	comp=Z,11nm,0.8s						
IPM	Ipoh	23.73	259	P	P	09 58 05.8	-0.1
IPM				IAmb	IAmb	09 58 12.3	
	comp=Z,14nm,1.2s						
KULM	Kulim	23.90	261	P	P	09 58 06.4	-1.1
KULM				IAmb	IAmb	09 58 15.1	
	comp=Z,13nm,1.1s						
ENH	Enshi	24.54	328	P	P	09 58 13.1	-0.2
CMAR	Chiang Mai Arr	26.00	292	P	P	09 58 27.0	+0.3
	comp=Z,1.1nm,0.3s,baz=84,slow=10,SNR=1.5						
RPSI	Rantau Prapat	26.23	256	P	P	09 58 26.2	-2.5
RPSI				IAmb	IAmb	09 58 32.6	
	comp=Z,7.4nm,0.9s						
FITZ	Fitzroy Crossi	27.86	177	P	P	09 58 42.7	-0.6
WRA	Warramunga Arr	31.26	162	P	P	09 59 13.1	-0.4
	comp=Z,0.5nm,0.8s,baz=346,slow=9.5,SNR=2.7						
WB2	Warramunga Arr	31.26	162	P	P	09 59 12.4	-1.1
WB2				IAmb	IAmb	09 59 30.2	
	comp=Z,6.5nm,1.1s						
ASAR	Alice Springs	34.66	164	P	P	09 59 42.6	-0.7
	comp=Z,0.7nm,0.7s,baz=345,slow=7.2,SNR=9.6						
SONM	Songino Array	40.72	341	LR	LR	10 19 08.9	
	comp=Z,228nm,19.1s,baz=230,slow=39						
PETK	Petropavlovsk-	50.77	25	P	P	10 01 54.4	+0.7
	comp=Z,2.4nm,0.9s,baz=186,slow=1.5,SNR=4.1						
MKAR	Makanchi Array	51.17	324	P	P	10 01 57.3	+0.5
	comp=Z,0.8nm,0.7s,baz=112,slow=11,SNR=1.6						
KSH	Kashi	52.06	313	P	P	10 01 55.3	-8.4
KSH				sP	sP	10 02 10.7	+6.2
KSH				pmax	pmax		
	comp=Z,19nm,0.5s						
KURK	Kurchatov	55.29	326	P	P	10 02 28.4	+1.4
BKZ	Black Stump Fm	68.76	139	P	P	10 03 58.7	+0.9
MAW	Mawson	88.71	200	LR	LR	10 46 30.1	
	comp=Z,187nm,18.8s,baz=267,slow=36						
BBB	Bella Bella	92.77	36	LR	LR	10 52 20.5	
	comp=Z,57nm,18.4s,baz=176,slow=38						

*IDC **03** 09:54:19.2±0.8, 67.°93N×162.°03W, h0km, mb4.0/14, mb1 4.3/14, mb1mx3.9/73, mbtmp4.0/14, Error ellipse: s-maj=24.9km s-min=15.9km az=19.0*
*AEIC **03** 09:54:19.1±3.8, 67.°74N±0.°06×162.°4W±0.°2, h26km±5km, ML3.9/15, mb4.4/6(NEIC), Error ellipse: s-maj=9.5km s-min=8.6km az=204.0*
ISC 03 09:54:19.0±0.5**, 67.°72N**±0.°06×**162.°24W**±0.°05**, h10**km**, n40,** σ1.s76/42**, mb4.1**/16**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.42	323		Pb	09 54 27.2	-1.2
RDOG				Sg	Sb	09 54 33.6	-1.2
ANM	Nome	3.42	203		Pn	09 55 10.8	-1.4
IM03		3.78	114		Pn	09 55 17.5	+0.4
IM03					Sn	09 56 02.2	+0.6
MLY	Manley	5.35	115		Pn	09 55 38.6	-0.3
TTA	Tatalina	5.47	149		Pn	09 55 40.8	+0.3
TT01	Tatalina	5.49	149		Pn	09 55 40.8	+0.1
PS01	TAPS Pump Stn	5.52	56		Pn	09 55 41.0	0.0
PS01					Sn	09 56 42.0	-2.4
GAMB	Gambell	5.56	229	Pn	Pn	09 55 38.4	-3.2
BPAW	Bear Paw Mtn.	5.87	123		Pn	09 55 45.3	-0.5
KTH	Kantishna Hill	6.27	126	Pn	Pn	09 55 50.9	-0.6
PPLA	Purkeypile	6.41	134	Pn	Pn	09 55 52.4	-1.1
CCB	Clear Creek Bu	6.60	111	Pn	Pn	09 55 55.7	-0.2
ILAR	Eielson Array	6.87	108	Pn	Pn	09 56 00.8	+1.3
	19nm,0.3s,baz=302,slow=14,SNR=15						
ILAR				Sn	Sn	09 57 16.6	-0.9
	3.8nm,0.3s,baz=312,slow=25,SNR=1.3						
BALM	Baldy	10.87	119	Pn	Pn	09 56 52.5	-2.0
KDAK	Kodiak Island	10.89	152	Pn	Pn	09 56 50.6	-4.1
SUCK	Suckling Hills	11.13	125	Pn	Pn	09 56 58.1	+0.1
CTGM	Chitina Glacie	11.26	117	Pn	Pn	09 56 57.7	-2.2
OHAK	Old Harbor	11.30	154	Pn	Pn	09 56 55.0	-5.3
BILL	Bilibino	11.80	286	Pn	Pn	09 57 04.0	-3.0
YKA	Yellowknife Ar	20.27	82	P	P	09 58 54.6	+0.4
	4.3nm,0.6s,baz=304,slow=9.6,SNR=6.2						
MA2	Magadan	21.85	271	P	P	09 59 14.7	+3.5
	5.7nm,0.8s,baz=8.7,slow=13,SNR=3.3						
PETK	Petropavlovsk-	24.01	252	P	P	09 59 35.9	+2.4
	1.1nm,0.6s,baz=69,slow=8.1,SNR=3.0						
B08A	Colville Reser	28.95	110	P	P	10 00 15.4	-2.6
B08A				IAmb	IAmb	10 00 20.3	
	comp=Z,5.9nm,0.8s						
D05A	Enumclaw	29.01	115	P	P	10 00 16.4	-2.1
D05A				IAmb	IAmb	10 00 23.2	
	comp=Z,13nm,1.2s						
NEW	Newport	29.82	108	P	P	10 00 21.7	-4.1
YHL	Hebgen Lake	34.89	105	P	P	10 01 08.8	-1.7
NRIK	Noril'sk	35.16	325	P	P	10 01 12.0	-0.2
	comp=Z,1.8nm,0.3s,baz=23,slow=6.9,SNR=2.6						
PDAR	Pinedale Array	37.28	105	P	P	10 01 32.4	+1.5
	comp=Z,1.2nm,0.5s,baz=336,slow=7.3,SNR=9.4						
NVAR	Mina Array Bea	38.01	118	P	P	10 01 39.3	+2.2
	comp=Z,1.5nm,0.7s,baz=324,slow=7.3,SNR=4.4						
ARCES	ARCESS Array B	42.90	356	PcP	PcP	10 04 07.3	0.0
	comp=Z,1.1nm,0.6s,baz=339,slow=3.1,SNR=6.0						
KSRS	Korea Array	48.37	268	P	P	10 03 04.1	+3.6
	comp=Z,1.5nm,0.7s,baz=40,slow=5.8,SNR=4.2						
FINES	FINESS Array B	50.99	355	P	P	10 03 20.8	+0.7
	comp=Z,1.4nm,0.7s,baz=12,slow=7.1,SNR=2.4						
TX31	Lajitas Ar. Si	51.38	108	P	P	10 03 22.5	-1.1
TX32	Lajitas Array	51.38	108	P	P	10 03 22.6	-1.0
TX32				IAmb	IAmb	10 03 25.6	
	comp=Z,2.9nm,0.7s						
TXAR	Lajitas Array	51.38	108	P	P	10 03 24.8	+1.2
	comp=Z,2.7nm,0.6s,baz=323,slow=5.9,SNR=12						
MKAR	Makanchi Array	56.01	312	P	P	10 03 57.1	-0.1
	comp=Z,1.0nm,0.7s,baz=46,slow=8.0,SNR=2.5						
EKA	Eskdalemuir Ar	56.28	14	P	P	10 03 59.2	+0.2
	comp=Z,1.7nm,0.5s,baz=354,slow=5.5,SNR=7.1						
AKASG	Malin Array Be	61.59	352	P	P	10 04 35.5	-0.4
	comp=Z,0.5nm,0.4s,baz=8.2,slow=6.6,SNR=4.2						
GERES	GERESS Array B	63.72	3	P	P	10 04 51.0	+0.7
	comp=Z,0.8nm,0.8s,baz=339,slow=5.2,SNR=3.7						
ESDC	Sonseca Array	71.67	18	P	P	10 05 42.4	+1.9
	comp=Z,1.0nm,0.5s,baz=351,slow=5.8,SNR=5.9						

*BJI **03** 09:57:05.8±0.0, 67.°43N×162.°10W, h24km, mB5.0/21, mb4.8/32, Ms4.8/10, Ms7 4.4/10*
*IDC **03** 09:57:07.2±0.4, 67.°80N×162.°37W, h0km, mb4.6/43, mb1 4.7/46, mb1mx4.6/73, mbtmp4.6/46, ML4.7/3, MS4.2/1, Ms1 4.2/1, ms1mx3.1/64, Error ellipse: s-maj=12.0km s-min=8.2km az=18.0*
*AEIC **03** 09:57:08.4±2.2, 67.°71N±0.°07×162.°6W±0.°2, h30km±3km, ML4.7/57, mb4.8/275(NEIC), Error ellipse: s-maj=9.7km s-min=8.5km az=157.0*
*NEIC **03** 09:57:08.7±2.1, 67.°69N±0.°04×162.°4W±0.°1, h10km±1km, Error ellipse: s-maj=8.7km s-min=7.0km az=245.0*
*GCMT **03** 09:57:10.4±0.4, 68.°05N±0.°03×162.°62W±0.°08, h30km, MW5.0/72, Moment Tensor Solution. s33,c34; s72,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.69±.25; $M_{\theta\theta}$2.80±.17; $M_{\phi\phi}$0.89±.15; $M_{r\theta}$1.41±.20; $M_{\theta\phi}$-1.07±.09; $M_{\phi r}$0.34±.20; Best double couple: $M_0$3.75800×10^{16} NP1:ϕ_s124.00000°,δ37.00000°,λ-72.00000°. NP2: ϕ_s282.00000°,δ55.00000°,λ-103.00000°. Principal axes: T 3.4710, Plg9.0000°, Azm21.0000°; N 0.5790, Plg11.0000°, Azm290.0000°; P -4.0460, Plg76.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **03** 09:57:25.4±0.0, 69.°44N×162.°81W, h33km, mb4.9*
ISC 03 09:57:10.2±1.1**, 67.°77N**±0.°05×**162.°33W**±0.°04**, h24**km±7km**, n841,** σ1.s13/855**, mb4.8**/205**, 4C-9D, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.36	323	Pg	Pb	09 57 16.6	-1.5
RDOG					Sb	09 57 22.6	-0.9
ANM	Nome	3.44	202	Pn	Pn	09 58 00.0	-2.3
ANM				Sn	Sn	09 58 38.9	-3.5
IM03		3.83	114		Pn	09 58 07.0	-0.5
IM03					Sn	09 58 51.4	-0.3
IM01	Indian Mountai	3.83	114		Pn	09 58 06.9	-0.7
IM01					Sn	09 58 51.6	-0.2
PS05	TAPS Pump Stn5	4.62	97		Pn	09 58 18.9	+0.4
PS05					Sn	09 59 10.7	-0.7
COLD	Coldfoot	4.69	91	Pn	Pn	09 58 20.1	+0.7
TOLK	Toolik Lake Re	4.83	74	P	Pn	09 58 22.1	+0.7
	baz=265						
TOLK	Toolik Lake Re	4.83	74	Pn	Pn	09 58 22.1	+0.7
TOLK					Pn	09 58 23.9	+2.5
TOLK					Sn	09 59 16.9	+0.2
PS06	TAPS Pump Stn6	5.33	105		Pn	09 58 27.8	-0.4
MLY	Manley	5.40	115	Pn	Pn	09 58 28.1	-1.1
PS01	TAPS Pump Stn	5.52	57		Pn	09 58 31.4	+0.6
TT01	Tatalina	5.55	149		Pn	09 58 30.1	-1.0
BPAW	Bear Paw Mtn.	5.92	123	Pn	Pn	09 58 35.9	-0.4
PS07	TAPS Pump Stn7	6.12	107		Pn	09 58 38.5	-0.5
NEA	Nenana	6.25	115		Pn	09 58 40.4	-0.3
MDM	Murphy Dome	6.33	110	Pn	Pn	09 58 40.6	-1.2
KTH	Kantishna Hill	6.33	127	Pn	Pn	09 58 41.7	-0.3
BWN	Browne	6.37	118	Pn	Pn	09 58 42.6	+0.2
PPLA	Purkeypile	6.47	134	Pn	Pn	09 58 42.1	-1.9
TCOL	CIGO, UAF Yank	6.50	110	P	Pn	09 58 44.5	+0.3
	baz=302,SNR=27						
TCOL	CIGO, UAF Yank	6.50	110		Pn	09 58 44.6	+0.3
COLA	College	6.51	110	Pn	Pn	09 58 43.7	-0.7
POKR	Poker Plat Res	6.53	107	P	Pn	09 58 44.2	-0.5
	baz=300,SNR=18						
POKR	Poker Plat Res	6.53	107		Pn	09 58 44.0	-0.6
TRF	Thorofare Moun	6.60	125	Pn	Pn	09 58 43.4	-2.4
CCB	Clear Creek Bu	6.65	111	Pn	Pn	09 58 45.0	-1.3
WRH	Wood River Hil	6.65	113	Pn	Pn	09 58 45.4	-1.0
FYU	Fort Yukon	6.76	92	Pn	Pn	09 58 47.5	-0.2
BM03	Burnt Mountain	6.78	85		Pn	09 58 48.8	+0.6
MCK	McKinley	6.83	120	Pn	Pn	09 58 48.0	-0.9
IL31		6.91	109	Pn	Pn	09 58 49.8	0.0
ILAR	Eielson Array	6.91	109	Pn	Pn	09 58 49.2	-0.7
	64nm,0.3s,baz=303,slow=13,SNR=111						
ILAR				Sn	Sn	10 00 05.4	-2.2
	14nm,0.3s,baz=296,slow=24,SNR=11						
PRP	Porcupine Dome	7.04	101		Pn	09 58 50.1	-1.7
PS08	TAPS Pump Stn8	7.06	110		Pn	09 58 51.7	-0.3
RND	Reindeer	7.08	122	Pn	Pn	09 58 51.8	-0.6
HDA	Harding Lake	7.09	111	P	Pn	09 58 51.8	-0.5
	baz=304,SNR=11						
HDA	Harding Lake	7.09	111	Pn	Pn	09 58 51.4	-0.9
WAT2	Susitna Watana	7.48	124		Pn	09 58 58.0	+0.2
STLK	Strandline Lak	7.73	139		Pn	09 59 00.8	-0.4
SPWE	Spurr West	7.75	143		Pn	09 59 01.4	-0.1
DHY	Denali Highway	7.80	120	Pn	Pn	09 59 01.3	-0.8
DHY				Sn	Sn	10 00 31.9	+2.3
PS10	TAPS Pump St10	8.11	115		Pn	09 59 06.2	-0.1
RIDG	Independent Ri	8.23	111	Pn	Pn	09 59 05.0	-3.0
GHO	Glory Hole Cre	8.29	130	Pn	Pn	09 59 06.5	-2.4
PMR	Palmer	8.37	131	Pn	Pn	09 59 07.5	-2.4
SCRK	Sand Creek	8.40	108		Pn	09 59 10.4	0.0
RSO	Redoubt South	8.43	146	Pn	Pn	09 59 11.1	+0.2
SML	Sawmill	8.43	128	Pn	Pn	09 59 10.5	-0.3
DOT	Dot Lake	8.57	110	Pn	Pn	09 59 12.5	-0.1
RC01	Rabbit Creek A	8.62	135		Pn	09 59 14.7	+1.4
KNK	Knik Glacier	8.71	130		Pn	09 59 11.6	-3.0
SCM	Sheep Creek Mo	8.72	126	Pn	Pn	09 59 10.1	-4.6
MENT	Mentasta	9.13	113	Pn	Pn	09 59 19.4	-1.0
PWL	Port Wells	9.19	132		Pn	09 59 20.8	-0.3
HOM	Homer	9.40	145		Pn	09 59 24.5	+0.6
BRLK	Bradley Lake	9.47	142	Pn	Pn	09 59 25.7	+0.6
SEW	Seward	9.53	138	Pn	Pn	09 59 28.2	+2.5
GLI	Glacier Island	9.53	129		Pn	09 59 24.1	-1.7
CNPM	China Poot	9.61	144		Pn	09 59 27.1	+0.3
KAHC	Katmai Hardscr	9.72	157		Pn	09 59 27.1	-1.4
BC03		9.74	109		Pn	09 59 28.0	-0.6
FID	Port Fidalgo	9.82	128	Pn	Pn	09 59 30.6	+0.9
DAWY	Dawson	10.05	101		Pn	09 59 33.2	+0.4
EPYK	Eagle Plains	10.06	86	P	Pn	09 59 33.2	+0.2
	baz=289,SNR=9.8						
EPYK	Eagle Plains	10.06	86	Pn	Pn	09 59 32.6	-0.4
HIN	Hinchinbrook I	10.10	129		Pn	09 59 34.7	+1.2
GLB	Gilahina Butte	10.13	120	Pn	Pn	09 59 34.1	0.0
EYAK	Cordova Ski Ar	10.20	127		Pn	09 59 36.8	+1.9
VRDI	Verde Repeater	10.41	120		Pn	09 59 39.5	+1.5
RAGM	Ragged Mountai	10.66	125		Pn	09 59 40.0	-1.2
INK	Inuvik	10.75	74	Pn	Pn	09 59 41.0	-1.3
	13nm,0.3s,baz=285,slow=11,SNR=30						
INK				Sn	Sn	10 01 36.4	-5.4
	6.7nm,0.3s,baz=323,slow=12,SNR=10.0						
INK	Inuvik	10.75	74		Pn	09 59 40.7	-1.6
HMT	Hamilton	10.82	125		Pn	09 59 45.1	+1.6
BALM	Baldy	10.92	119		Pn	09 59 43.0	-1.8
KDAK	Kodiak Island	10.95	151	Pn	Pn	09 59 45.7	+0.5
	1.9nm,0.3s,baz=6.5,slow=9.0,SNR=19						
KDAK				Lg	Lg	10 02 55.3	
	baz=206,slow=23,SNR=2.2						
KDAK				LR	LR	10 04 11.8	
	comp=Z,1µm,18.1s,baz=16,slow=39						
KDAK	Kodiak Island	10.95	151		Pn	09 59 46.0	+0.9
WAX	Waxell Ridge	11.19	122		Pn	09 59 49.7	+1.2
OHAK	Old Harbor	11.36	154		Pn	09 59 52.1	+1.4
A36M	Sachs Harbour	13.26	55	P	Pn	10 00 14.4	-2.3
	baz=270,SNR=81						
C36M	Paulatuk	13.92	66	P	Pn	10 00 24.3	-1.4
	baz=282						
C36M	Paulatuk	13.92	66		Pn	10 00 24.3	-1.4
SIT	Sitka	16.30	118	P	Pn	10 00 58.2	+0.9
DLBC	Dease Lake	17.12	107	Pn	P	10 01 08.5	-0.7
	1.1nm,0.3s,baz=28,slow=5.7,SNR=12						
DLBC				Lg	Lg	10 06 12.4	
	0.1nm,0.3s,baz=241,slow=17,SNR=5.6						
DLBC	Dease Lake	17.12	107	IAmb	IAmb	10 01 14.6	
	comp=Z,46nm,1.4s						
WRAK	Wrangell Islan	17.82	115	P	P	10 01 19.3	+2.5
WRAK				IAmb	IAmb	10 01 21.1	
	comp=Z,73nm,1.1s						
CRAG	Craig	18.32	118	P	Pn	10 01 23.5	+1.2
CRAG				IAmb	IAmb	10 01 26.8	
	comp=Z,78nm,1.2s						
SEY	Seymchan	19.13	277	P	Pn	10 01 32.5	+0.4
	comp=Z,0.8nm,0.3s,baz=70,slow=9.2,SNR=22						
SEY				Lg	Lg	10 07 07.5	
	comp=Z,0.1nm,0.3s,baz=332,slow=23,SNR=1.7						
YKA	Yellowknife Ar	20.30	82	P	P	10 01 44.0	+0.2
	comp=Z,18nm,0.5s,baz=304,slow=9.7,SNR=29						
YKA				S	S	10 05 21.9	-8.1
	comp=Z,3.9nm,0.7s,baz=303,slow=23,SNR=7.2						
RES	Resolute Bay	21.51	42	P	P	10 01 57.4	+0.5
	comp=Z,10nm,0.7s,baz=311,slow=12,SNR=1.6						
RES				S	S	10 05 47.8	-6.0
	comp=Z,8.1nm,0.5s,baz=324,slow=23,SNR=5.4						
MA2	Magadan	21.82	271	P	P	10 02 00.3	-0.1
	comp=Z,16nm,0.8s,baz=55,slow=10,SNR=10						
MA2	Magadan	21.82	271	IAmb	IAmb	10 02 07.2	
	comp=Z,25nm,0.9s						
BBB	Bella Bella	22.71	116	P	P	10 02 09.7	-0.2
	comp=Z,22nm,1.0s,baz=307,slow=5.9,SNR=3.8						
BBB	Bella Bella	22.71	116	IAmb	IAmb	10 02 17.2	
	comp=Z,43nm,1.2s						
PEA0B	Petropavlovsk-	23.99	252	P	P	10 02 22.6	0.0
PEA0B				IAmb	IAmb	10 02 26.2	
	comp=Z,51nm,1.4s						
PETK	Petropavlovsk-	23.99	252	P	P	10 02 22.4	-0.2
	comp=Z,9.6nm,0.8s,baz=60,slow=9.6,SNR=20						
LLLB	Lillooet	26.20	111	P	P	10 02 44.2	+1.5
B05A	Bryant	28.10	114	P	P	10 02 58.5	-1.2
	baz=328						
D03D	Eldon	28.38	116	P	P	10 03 01.8	-0.4
	baz=329						
D05A	Enumclaw	29.06	115	P	P	10 03 10.4	+2.1
D05A				IAmb	IAmb	10 03 10.9	
	comp=Z,16nm,0.7s						
E04D	Cinebar	29.41	116	P	P	10 03 11.0	-0.3
	baz=330						
LTY	Liberty	29.46	113	P	P	10 03 12.4	+0.6
LTY				IAmb	IAmb	10 03 13.2	
	comp=Z,9.9nm,0.6s						
LON	Longmire	29.50	115	P	P	10 03 13.6	+1.4
C09A	Chrisman Ranch	29.84	110	P	P	10 03 15.8	+0.5
NEW	Newport	29.87	108	P	P	10 03 16.0	+0.5
	comp=Z,2.0nm,0.7s,baz=47,slow=4.9,SNR=3.2						
NEW	Newport	29.87	108	IAmb	IAmb	10 03 20.0	
	comp=Z,6.0nm,1.2s						
WALA	Waterton Lakes	30.38	103	P	P	10 03 21.1	+1.0
WALA				IAmb	IAmb	10 03 21.9	
	comp=Z,7.7nm,0.8s						
H04D	Lebanon	31.13	118	P	P	10 03 27.1	+0.5
	baz=332						
H04A	Detroit Lake	31.17	117	P	P	10 03 28.5	+1.5
JTMT	Jette	31.34	105	P	P	10 03 29.8	+1.3
JTMT				IAmb	IAmb	10 03 30.4	
	comp=Z,11nm,0.8s						
I03D	Drain, OR	31.66	120	P	P	10 03 31.9	+0.7
	baz=333						
G08A	Pilot Rock	31.75	113	P	P	10 03 33.2	+1.0
I05D	Terrebonne, OR	31.76	117	P	P	10 03 33.3	+1.1
	baz=332,SNR=8.5						
F10A	Beach Ranch, E	31.78	110	P	P	10 03 32.9	+0.5
I04A	Tendick Farm,	31.88	118	P	P	10 03 34.0	+0.7
	baz=332						
MSO	Missoula	32.24	106	P	P	10 03 37.0	+0.5
	baz=328						
MSO	Missoula	32.24	106	P	P	10 03 37.2	+0.8
PINE	Pine Mountain	32.38	117	P	P	10 03 39.4	+1.5
PINE				IAmb	IAmb	10 03 40.4	
	comp=Z,17nm,1.2s						
K02D	Willamette Mer	32.45	121	P	P	10 03 39.8	+1.5
	baz=334						
J04D	Umpqua Nationa	32.48	119	P	P	10 03 39.8	+1.2
	baz=333						
I07A	Izee	32.62	115	P	P	10 03 40.8	+1.0
I07A				IAmb	IAmb	10 03 41.5	
	comp=Z,5.9nm,0.7s						
BMO	Blue Mountains	32.72	111	P	P	10 03 41.6	+1.0

J05D Fort Rock, OR 32.73 117 P P 10 03 42.4 +1.5
baz=332,SNR=7.0
HUMO Hull Mountain 32.76 120 P P 10 03 43.0 +2.1
HUMO IAmb IAmb 10 03 49.6
comp=Z,14nm,1.5s
EGMT Eagleton 32.79 100 P P 10 03 41.9 +0.7
baz=326
L04D Klamath Falls 33.32 120 P P 10 03 47.0 +1.0
baz=333
K05A Summer Lake 33.34 117 P P 10 03 48.3 +2.1
K05A IAmb IAmb 10 03 49.1
comp=Z,12nm,1.3s
J08A Circle Bar Ran 33.61 114 P P 10 03 50.2 +1.7
J08A IAmb IAmb 10 03 50.9
comp=Z,15nm,1.4s
YBH Yreka Blue Hor 33.62 120 P P 10 03 50.8 +2.3
comp=Z,2.9nm,0.9s,baz=292,slow=5.8,SNR=6.0
YBH Yreka Blue Hor 33.62 120 P P 10 03 50.5 +1.9
LRM Limekiln Ridge 33.64 105 P P 10 03 50.8 +1.9
M04C Macdoel 33.87 119 P P 10 03 52.1 +1.3
baz=334
M02C Callahan 33.88 121 P P 10 03 52.4 +1.6
baz=334
DLMT Dillon 33.98 106 P P 10 03 53.0 +1.3
SPITS Spitsbergen Ar 34.27 0 P P 10 03 54.1 +0.4
comp=Z,4.7nm,0.8s,baz=30,slow=6.8,SNR=4.9
SPITS PcP PcP 10 06 29.5 +0.2
comp=Z,4.6nm,0.6s,baz=28,slow=2.0,SNR=11
MOD Modoc Plateau 34.27 117 P P 10 03 55.6 +1.3
N02D Trinity Center 34.31 121 P P 10 03 56.4 +1.9
baz=334,SNR=8.2
MCMT McKenzie Canyo 34.34 106 P P 10 03 56.2 +1.2
WVOR Wild Horse Val 34.37 115 P P 10 03 56.3 +1.2
WVOR IAmb IAmb 10 03 57.5
comp=Z,12nm,1.2s
MFID Camas Ranch 34.49 111 P P 10 03 56.7 +0.6
DGMT Dagmar 34.52 94 P P 10 03 56.6 +0.4
baz=325,SNR=5.3
DGMT Dagmar 34.52 94 P P 10 03 57.0 +0.8
DGMT IAmb IAmb 10 04 03.9
comp=Z,17nm,1.1s
KMRM Mail Ridge 34.66 123 P P 10 04 00.3 +2.7
WDC Whiskeytown Da 34.72 121 P P 10 03 59.2 +1.3
QLMT Earthquake Lak 34.86 105 P P 10 04 01.3 +1.9
YHL Hebgen Lake 34.93 105 P P 10 04 01.9 +1.8
O02D Mt. Diablo Mer 35.00 122 P P 10 04 01.4 +0.9
baz=335
NRIK Noril'sk 35.11 325 P P 10 04 02.1 +1.1
comp=Z,15nm,0.8s,baz=52,slow=8.0,SNR=20
YHH Holmes Hill 35.11 104 P P 10 04 03.0 +1.4
SUMG Summit 35.13 26 P P 10 04 02.0 +0.4
YMR Madison River 35.17 105 P P 10 04 03.8 +1.8
FRB Frobisher Bay 35.20 50 P P 10 04 01.6 -0.3
comp=Z,14nm,0.8s,baz=322,slow=8.9,SNR=16
O03E Paynes Creek 35.22 120 P P 10 04 02.5 +0.2
baz=334,SNR=10
LAO LASA Array 35.23 98 P P 10 04 03.1 +0.8
baz=327
LAO LASA Array 35.23 98 P P 10 04 03.7 +1.3
LAO IAmb IAmb 10 04 04.3
comp=Z,17nm,1.1s
YNE Yellowstone No 35.23 103 P P 10 04 04.1 +1.4
YNR Norris Junctio 35.23 104 P P 10 04 04.9 +2.2
YMP Mirror Lake Pl 35.41 104 P P 10 04 05.9 +1.7
RLMT Red Lodge 35.41 102 P P 10 04 04.7 +0.6
baz=328,SNR=6.9
RLMT Red Lodge 35.41 102 P P 10 04 05.5 +1.3
RLMT IAmb IAmb 10 04 06.5
comp=Z,12nm,1.2s
H17A Grant Village 35.55 104 P P 10 04 07.5 +2.1
baz=329
H17A Grant Village 35.55 104 P P 10 04 08.3 +2.9
YPP Pitchstone Pla 35.57 105 P P 10 04 08.7 +3.0
FLWY Flagg Ranch 35.77 105 P P 10 04 09.4 +2.2
FLWY IAmb IAmb 10 04 13.3
comp=Z,16nm,1.2s
IMW Indian Meadow 35.84 105 P P 10 04 09.8 +1.9
IMW IAmb IAmb 10 04 13.4
comp=Z,12nm,0.9s
ORV Oroville 35.98 121 P P 10 04 09.4 +0.6
FXWY Fox Creek 36.03 106 P P 10 04 11.0 +1.5
TPAW Teton Pass 36.19 106 P P 10 04 12.7 +1.8
ULM Lac du Bonnet 36.23 85 PcP PcP 10 06 35.6 +0.2
comp=Z,5.7nm,0.8s,baz=241,slow=1.6,SNR=5.2
SNOW Snow King Moun 36.28 105 P P 10 04 13.3 +1.6
SNOW IAmb IAmb 10 04 14.5
comp=Z,11nm,0.6s
REDW Red Top Meadow 36.33 106 P P 10 04 14.0 +2.0
REDW IAmb IAmb 10 04 17.9
comp=Z,9.1nm,1.1s
PAHR Pah Rah Range 36.55 118 P P 10 04 14.9 +1.1
PAHR IAmb IAmb 10 04 16.0
comp=Z,14nm,1.2s
AHID Auburn Hatcher 36.76 106 P P 10 04 17.1 +1.4
MDND Maddock 36.78 90 P P 10 04 16.2 +0.7
baz=326
VCNR Virginia City 36.83 119 P P 10 04 17.9 +1.5
VCNR IAmb IAmb 10 04 18.4
comp=Z,12nm,1.0s
KLR Kul'dur 36.86 274 P P 10 04 16.3 +0.1
comp=Z,2.6nm,0.6s,baz=42,slow=9.3,SNR=8.9
PNTR Pine Nut 37.03 119 P P 10 04 19.6 +1.5
PNTR IAmb IAmb 10 04 20.1
comp=Z,10nm,0.9s
ELK Elko 37.05 113 P P 10 04 19.8 +1.6
comp=Z,7.0nm,0.9s,baz=329,slow=8.5,SNR=23
ELK Elko 37.05 113 P P 10 04 19.7 +1.6
YERR Yerington 37.25 118 P P 10 04 21.3 +1.5
YERR IAmb IAmb 10 04 21.9
comp=Z,19nm,1.1s
BW06 Boulder Array 37.33 105 P P 10 04 21.4 +0.9
baz=330,SNR=12
BW06 Boulder Array 37.33 105 P P 10 04 21.8 +1.2
BW06 IAmb IAmb 10 04 23.0
comp=Z,20nm,1.2s
PDAR Pinedale Array 37.33 105 P P 10 04 21.4 +0.9
comp=Z,9.2nm,0.5s,baz=340,slow=6.8,SNR=96
PDAR PcP PcP 10 06 39.7 +0.5
comp=Z,1.3nm,0.7s,baz=72,slow=0.7,SNR=3.8
E28A Huff 37.42 93 P P 10 04 22.6 +1.6
KVN Kaiserville 37.57 117 P P 10 04 24.0 +1.4
KVN IAmb IAmb 10 04 25.0
comp=Z,10nm,1.1s
HWUT Hardware Ranch 37.60 108 P P 10 04 24.0 +1.2
BGU Big Grassy Mou 37.67 110 P P 10 04 24.9 +1.6
CMB Columbia Colle 37.73 120 P P 10 04 24.8 +1.1
RYN Ryan 37.81 118 P P 10 04 25.9 +1.3
AGMN Agassiz Nation 37.83 87 P P 10 04 24.7 +0.2
baz=325
AGMN Agassiz Nation 37.83 87 P P 10 04 25.2 +0.7
AGMN IAmb IAmb 10 04 28.3
comp=Z,21nm,1.5s
NVAR Mina Array Bea 38.06 118 P P 10 04 28.1 +1.4
comp=Z,11nm,0.7s,baz=319,slow=7.6,SNR=69
NVAR PcP PcP 10 06 42.6 +1.0
comp=Z,1.2nm,0.8s,baz=300,slow=2.0,SNR=3.9
TCUT Toone Canyon 38.09 108 P P 10 04 28.6 +1.6
NV11 Mina Array Sit 38.11 118 P P 10 04 28.4 +1.4
NV11 IAmb IAmb 10 04 29.5
comp=Z,12nm,0.9s
RSSD Black Hills 38.22 98 P P 10 04 28.1 +0.1
baz=328
RSSD Black Hills 38.22 98 PcP 10 06 43.3 +1.3
CTU Camp Tracy 38.34 109 P P 10 04 30.6 +1.6
DUG Dugway, Tooele 38.39 110 P P 10 04 30.5 +1.0
baz=332,SNR=10
DUG Dugway, Tooele 38.39 110 P P 10 04 30.7 +1.2
DUG IAmb IAmb 10 04 31.5
comp=Z,7.3nm,0.7s
MDPB Devils Postpil 38.52 119 P P 10 04 32.8 +2.1
MDPB IAmb IAmb 10 04 34.0
comp=Z,23nm,1.1s
JLU Jordanelle 38.52 108 P P 10 04 32.5 +1.8
K22A Casper 38.55 102 P P 10 04 31.0 +0.3
baz=330
K22A Casper 38.55 102 P P 10 04 31.7 +1.0
K22A IAmb IAmb 10 04 34.9
comp=Z,15nm,1.4s
OMMB Old Mammoth Mi 38.57 119 P P 10 04 33.0 +1.8
OMMB IAmb IAmb 10 04 34.5
comp=Z,18nm,1.0s
B35A Bob, Littlefor 38.59 85 P P 10 04 31.3 +0.5
MLAC Mammoth, Mammo 38.61 119 P P 10 04 32.1 +0.8
baz=335
NLU North Lily Min 38.87 110 P P 10 04 34.9 +1.4
MPU Maple Canyon 38.98 109 P P 10 04 35.7 +1.3
R11A Troy Canyon, C 39.06 115 P P 10 04 36.0 +0.9
baz=334,SNR=28
R11A Troy Canyon, C 39.06 115 P P 10 04 36.0 +0.9
R11A IAmb IAmb 10 04 37.2
comp=Z,18nm,1.2s
RWWY Rawlins 39.13 103 P P 10 04 36.6 +0.9
RWWY IAmb IAmb 10 04 37.1
comp=Z,12nm,0.6s
RDMU Red Mountain 39.23 107 P P 10 04 37.4 +0.8
PSUT Pine Spring 39.50 113 P P 10 04 40.1 +1.3
GRAC Grapevine Rang 39.67 118 P P 10 04 40.6 +0.5
baz=335
F33A 5 Mile Ranch, 39.71 89 P 10 04 40.1 0.0
TMUT Trail Mountain 39.76 109 P 10 04 42.3 +1.2
EYMN Ely 39.77 83 P P 10 04 41.2 +0.5
baz=326,SNR=7.3
EYMN Ely 39.77 83 P 10 04 41.2 +0.5
P17A Butcher Ranch, 39.78 109 P 10 04 42.8 +1.7
PAGB Antelope Grade 39.87 122 P 10 04 43.6 +1.9
SUSD Miller 39.87 93 P P 10 04 42.0 +0.4
baz=328
CWC Cottonwood Cre 39.94 119 P P 10 04 43.3 +0.9
baz=336
TPNV Topopah Spring 40.09 116 P P 10 04 44.6 +0.9
baz=335
TPNV Topopah Spring 40.09 116 P 10 04 44.8 +1.0
O20A White River Ci 40.10 105 P P 10 04 43.4 -0.3
baz=331
O20A White River Ci 40.10 105 P P 10 04 44.0 +0.2
Q16A Castle Valley 40.11 109 P P 10 04 45.6 +1.7
MSU Marysvale 40.11 111 P 10 04 45.9 +2.0
VES Vestal, Richgr 40.15 120 P P 10 04 44.6 +0.6
baz=336,SNR=5.3
SRU San Rafael Swe 40.17 109 P P 10 04 45.5 +1.2
N23A Red Feather La 40.29 102 P P 10 04 45.6 +0.2
baz=331,SNR=5.9
FURC Furnace Creek, 40.32 117 P P 10 04 46.7 +1.4
baz=335,SNR=6.2
SMMC Simmler 40.34 122 P P 10 04 46.1 +0.6
baz=337
MPMC Manual Prospec 40.48 118 P P 10 04 48.3 +1.3
baz=336,SNR=10.0
ISA Isabella, Lake 40.52 120 P P 10 04 47.8 +0.7
baz=336,SNR=9.2
ISA Isabella, Lake 40.52 120 P P 10 04 48.2 +1.1
MTPU Mount Pierson 40.53 111 P P 10 04 49.6 +2.1
CCUT Cedar City 40.55 113 P P 10 04 49.1 +1.6
SZCU Shurtz Canyon 40.61 112 P P 10 04 49.5 +1.5
F36A Milaca 40.74 87 P P 10 04 49.5 +0.7
F36A IAmb IAmb 10 04 52.7
comp=Z,18nm,1.4s
PKM Mcpherson Peak 40.78 122 P P 10 04 51.0 +1.5
baz=337,SNR=7.2
E38A The Farm, Brul 40.87 84 P P 10 04 50.4 +0.6
E38A IAmb IAmb 10 04 53.8
comp=Z,14nm,1.1s
SHPR Sheep Range 40.87 115 P P 10 04 51.3 +1.2
LRMC Laurel Mtn Rad 40.95 119 P P 10 04 51.7 +1.0
baz=336,SNR=5.9
USRK Ussuriysk Ar. 40.96 269 P P 10 04 50.4 -0.2
comp=Z,3.8nm,0.8s,baz=50,slow=12,SNR=5.6
PKCU Pink Cliffs 41.02 112 P P 10 04 53.6 +2.1
SHOC Shoshone, Teco 41.04 117 P P 10 04 52.8 +1.5
baz=335,SNR=10
LCMT Little Creek M 41.08 113 P P 10 04 53.2 +1.4
PV09 Paradox Valley 41.22 108 P P 10 04 54.1 +1.0
KNB Kanab 41.22 113 P P 10 04 54.6 +1.6
PV21 Cone Mtn., Par 41.22 107 P P 10 04 54.1 +1.0
PV21 IAmb IAmb 10 04 55.4
comp=Z,9.4nm,0.7s
SBC Santa Barbara 41.23 122 P P 10 04 54.2 +1.3
baz=337
PV23 Carpenter Ridg 41.30 107 P P 10 04 55.3 +1.5
PV22 Blue Mesa, Par 41.31 107 P P 10 04 54.8 +1.0
PV22 IAmb IAmb 10 04 55.3
comp=Z,23nm,0.8s
ECSD EROS Data Cent 41.37 91 P P 10 04 54.1 +0.2
baz=328,SNR=7.1
ECSD EROS Data Cent 41.37 91 P P 10 04 54.2 +0.3
ISCO Idaho Springs 41.37 103 P P 10 04 55.2 +0.9
baz=331,SNR=11
ISCO Idaho Springs 41.37 103 P P 10 04 55.4 +1.0
PV14 Lion Creek, Pa 41.37 108 P P 10 04 55.3 +1.0
PV14 IAmb IAmb 10 04 57.2
comp=Z,12nm,1.0s
EDW2 Edwards Air Fo 41.39 120 P P 10 04 55.0 +0.8
baz=335
OSI Osito Audit: C 41.39 121 P P 10 04 54.9 +0.7
baz=336
PV04 Paradox Valley 41.40 107 P P 10 04 55.6 +1.2
PV04 IAmb IAmb 10 04 56.2
comp=Z,15nm,0.9s
GSC Goldstone, Bar 41.40 118 P P 10 04 55.7 +1.3
baz=336,SNR=15
GSC Goldstone, Bar 41.40 118 P P 10 04 55.9 +1.6
GSC IAmb IAmb 10 04 56.7
comp=Z,25nm,1.1s
SMCO Snowmass 41.41 105 P P 10 04 55.5 +0.7
PV20 West Nyswonger 41.42 107 P P 10 04 56.1 +1.5
PV19 Morning Glory 41.44 108 P P 10 04 57.3 +2.4
PV19 IAmb IAmb 10 04 58.9
comp=Z,18nm,1.4s
PV07 Paradox Valley 41.45 107 P P 10 04 55.8 +0.9
PV07 IAmb IAmb 10 04 56.3
comp=Z,15nm,0.8s
PV16 Nyswonger Mesa 41.46 107 P P 10 04 55.8 +0.8
PV17 East Wray Mesa 41.48 108 P P 10 04 56.2 +1.0
PV17 IAmb IAmb 10 05 00.5
comp=Z,9.0nm,0.7s
PV11 David Mesa, Pa 41.49 107 P P 10 04 56.3 +1.1
PV11 IAmb IAmb 10 04 57.6
comp=Z,12nm,0.6s
PV12 Saucer Basin, 41.50 107 P P 10 04 56.4 +1.1
PV12 IAmb IAmb 10 04 57.1
comp=Z,15nm,0.8s
PV18 Skein Mesa, Pa 41.52 108 P P 10 04 56.6 +1.0
PV03 Paradox Valley 41.54 107 P P 10 04 56.6 +1.0
SPMN Marine on St. 41.55 86 P P 10 04 56.2 +0.8
baz=328
SPMN Marine on St. 41.55 86 P P 10 04 56.5 +1.1
SPMN IAmb IAmb 10 05 10.2
comp=Z,11nm,0.8s
TUQ Turquoise Moun 41.58 117 P P 10 04 56.8 +0.9
baz=335
PV15 Paradox Valley 41.59 107 P P 10 04 57.1 +1.0
PV15 IAmb IAmb 10 04 57.6
comp=Z,15nm,0.8s
PV05 Paradox Valley 41.60 108 P P 10 04 56.9 +0.7
D41A Chassel 41.61 81 P P 10 04 56.6 +0.7
D41A IAmb IAmb 10 04 58.4
comp=Z,13nm,1.1s
PV02 Paradox Valley 41.62 107 P P 10 04 57.6 +1.2
PV02 IAmb IAmb 10 04 58.1
comp=Z,13nm,0.7s
PV13 Radium Mtn., P 41.63 107 P P 10 04 57.3 +0.9
PV13 IAmb IAmb 10 04 58.8
comp=Z,25nm,1.1s
OGNE Ogallala 41.71 99 P P 10 04 57.9 +1.0
baz=330
RRX Edison Barstow 41.72 119 P P 10 04 57.9 +0.9
baz=336
PV01 Paradox Valley 41.75 107 P P 10 04 58.4 +1.0
U15A North Rim 41.94 112 P P 10 04 59.9 +0.9
HEC Hector,Ludlow 41.99 118 P P 10 05 00.1 +0.9
baz=336
BFSC Mount Baldy Ra 42.09 120 P P 10 05 01.2 +1.1
baz=336,SNR=17
GMRC Granite Mounta 42.26 117 P P 10 05 02.8 +1.3
baz=336,SNR=9.1
BBRC Big Bear Solar 42.31 119 P P 10 05 02.8 +0.8
baz=336,SNR=6.5
I37A Lemond, Waseca 42.35 88 P P 10 05 03.0 +1.0
I37A IAmb IAmb 10 05 03.9
comp=Z,22nm,0.9s
G40A Rib Lake 42.50 84 P P 10 05 03.9 +0.7
W13A Hualapai Mount 42.58 115 P P 10 05 05.5 +1.3
MVCO Mesa Verde 42.59 108 P P 10 05 04.7 +0.4
baz=333
MVCO Mesa Verde 42.59 108 P P 10 05 05.1 +0.8
CIS Catalina Islan 42.60 121 P P 10 05 04.6 +0.5
baz=337
S22A 4UR Ranch, Cre 42.73 106 P P 10 05 06.6 +1.2
baz=332,SNR=12
BGNE Belgrade 42.77 94 P P 10 05 06.6 +1.1
baz=330
E43A Lone Tree Farm 42.78 80 P P 10 05 05.8 +0.4
IVI Ivigtut 42.80 41 P P 10 05 05.8 +0.5
MURC Murrieta 42.82 120 P P 10 05 06.3 +0.4
baz=337
SCHQ Schefferville 42.84 58 P P 10 05 05.8 -0.1
comp=Z,11nm,0.8s,baz=322,slow=10.0,SNR=11
SCHQ Schefferville 42.84 58 P P 10 05 06.5 +0.6
SCHQ IAmb IAmb 10 05 07.6
comp=Z,14nm,0.9s
ARCES ARCESS Array B 42.85 356 P P 10 05 05.9 +0.1
comp=Z,5.6nm,0.9s,baz=9.2,slow=9.8,SNR=6.7
ARCES PcP PcP 10 06 56.5 +0.3
comp=Z,7.2nm,0.7s,baz=4.7,slow=3.1,SNR=16
BELC Belle Mtn. Jos 42.86 118 P P 10 05 07.3 +0.9
baz=336,SNR=5.5
SCI2 San Clemente I 42.95 121 P P 10 05 07.7 +0.8
baz=337
L34A Svendsen Farm, 42.97 92 P P 10 05 07.0 0.0
E44A Grand Marais A 42.98 79 P P 10 05 07.4 +0.4
baz=327
E44A Grand Marais A 42.98 79 P P 10 05 07.9 +0.9
E44A IAmb IAmb 10 05 09.2
comp=Z,30nm,1.3s
IRM Iron Mountain 43.00 117 P P 10 05 08.6 +1.2
baz=336,SNR=8.6
PFO Pinyon Flats O 43.06 119 P P 10 05 08.0 +0.1
comp=Z,6.0nm,0.9s,baz=323,slow=5.8,SNR=13
PFO Pinyon Flats O 43.06 119 P P 10 05 08.4 +0.5
baz=336,SNR=7.6
PFO Pinyon Flats O 43.06 119 P P 10 05 08.5 +0.5
XPFO Pion Flat 43.06 119 P P 10 05 08.2 +0.3
WUAZ Wupatki 43.08 112 P P 10 05 09.2 +1.1
baz=334,SNR=16
WUAZ Wupatki 43.08 112 P P 10 05 09.4 +1.3
WUAZ IAmb IAmb 10 05 10.4
comp=Z,18nm,1.0s
PDMCI Parker Dam,Lak 43.21 116 P P 10 05 10.0 +1.0
baz=336
SDCO Great Sand Dun 43.21 104 P P 10 05 10.3 +0.9
baz=332,SNR=11
SDCO Great Sand Dun 43.21 104 P P 10 05 10.6 +1.2
BC3 Big Chuckawall 43.35 118 P P 10 05 11.1 +0.7
baz=336,SNR=6.5
MATQ Matagami 43.38 70 P P 10 05 11.2 +0.9
baz=326
D46A Sault St. Mari 43.45 78 P P 10 05 11.2 +0.4
baz=327
109C Camp Elliot, M 43.51 120 P P 10 05 12.1 +0.7
baz=337
109C Camp Elliot, M 43.51 120 P P 10 05 12.9 +1.5
109C IAmb IAmb 10 05 13.5
comp=Z,12nm,0.9s
Y12C Blythe 43.58 116 P P 10 05 13.2 +1.1
baz=336,SNR=7.1
Y12C Blythe 43.58 116 P P 10 05 13.4 +1.4
Y12C IAmb IAmb 10 05 14.3
comp=Z,10nm,0.8s
D47A Chapleau 43.66 77 P P 10 05 12.6 +0.1
baz=327,SNR=9.0
MONP2 Monument Peak 43.73 119 P P 10 05 14.6 +1.1
baz=337,SNR=35
K38A Parkersburg 43.76 88 P P 10 05 14.3 +1.0
BAR Barrett 43.84 119 P P 10 05 15.4 +1.3
SWSC Sam W. Stewart 43.89 118 P P 10 05 15.1 +0.7
baz=336
F45A CMU Biological 43.92 80 P P 10 05 14.6 +0.1
baz=328
D48A Paudash Townsh 44.04 75 P P 10 05 15.7 +0.1
baz=327
X16A Lo Mia Camp, P 44.05 113 P P 10 05 17.4 +1.4
IKP In-Ko-Pah, Jac 44.05 119 P P 10 05 17.1 +1.2
baz=337,SNR=9.4
E47A Iron Bridge 44.10 77 P P 10 05 16.3 +0.3
baz=328
GLA Glamis 44.12 117 P P 10 05 17.3 +0.9
baz=336
GLA Glamis 44.12 117 P P 10 05 17.6 +1.2
GLA IAmb IAmb 10 05 18.4
comp=Z,9.3nm,0.8s
T25A Trinidad 44.15 104 P P 10 05 17.3 +0.5
baz=332
N35A Tabor 44.20 92 P P 10 05 17.6 +0.6
G45A Suttons Bay 44.41 80 P P 10 05 18.6 0.0
baz=328
CHGQ Chibougamau 44.41 67 P P 10 05 17.7 -0.8
baz=327
CBKS Cedar Bluff 44.43 98 P P 10 05 19.1 +0.3
baz=331
G46A Petoskey 44.47 79 P P 10 05 19.3 +0.3
baz=328
X18A Snowflake 44.47 111 P P 10 05 20.8 +1.4
X18A IAmb IAmb 10 05 21.8
comp=Z,16nm,1.1s
JFWS Jewell Farm 44.48 86 P P 10 05 19.1 0.0
baz=329
E48A Lockeyer 44.49 76 P P 10 05 19.2 0.0
baz=328
113A Mohawk Valley, 44.74 116 P P 10 05 22.6 +1.3
D50A G1974 Best Tow 44.76 74 P P 10 05 21.7 +0.3
baz=328
L40A Anamosa 44.84 87 P P 10 05 22.0 -0.1
F48A Evansville 44.87 77 P P 10 05 22.9 +0.7
baz=328,SNR=5.3
G47A Hillman 44.97 79 P P 10 05 23.5 +0.5
baz=328
GLMI Grayling 44.98 80 P P 10 05 23.2 +0.1
baz=328
R32A Long Quarter, 45.16 97 P P 10 05 24.6 0.0
R32A IAmb IAmb 10 05 26.3
comp=Z,10.0nm,0.9s
N38A Joes South For 45.17 90 P P 10 05 25.0 +0.3
MAT Matsushiro 45.26 258 P P 10 05 24.4 -1.0
MJAR Matsushiro Arr 45.26 258 P P 10 05 26.0 +0.6
comp=Z,6.0nm,0.8s,baz=24,slow=8.5,SNR=15
ANMO Albuquerque 45.35 107 P P 10 05 27.4 +1.0
baz=334
KSU1 Kansas State U 45.36 95 P P 10 05 26.0 -0.2
baz=331,SNR=7.2
KSU1 Kansas State U 45.36 95 P P 10 05 26.1 -0.1
I46A Reed City 45.42 81 P P 10 05 26.8 +0.2
baz=329
E51A G1948 Merrick 45.43 74 P P 10 05 26.6 0.0
baz=328
H48A Harrisville 45.57 79 P P 10 05 27.8 0.0
baz=328
D53A Lac Vacive, Po 45.62 72 P P 10 05 28.3 +0.2
baz=328
I47A Gladwin 45.71 80 P P 10 05 28.9 0.0
baz=329
F51A Arnstein 45.79 75 P P 10 05 29.5 0.0
baz=328
214A Organ Pipe Nat 45.80 116 P P 10 05 30.6 +0.8
baz=336,SNR=8.5
214A Organ Pipe Nat 45.80 116 P P 10 05 30.0 +0.2
214A IAmb IAmb 10 05 32.0
comp=Z,12nm,1.0s
I48A Sherman Twp 45.87 79 P P 10 05 30.3 +0.2
baz=329
D54A Lac Fusel, La 45.93 71 P P 10 05 30.8 +0.2
baz=328
E52A Mattawa 45.94 74 P P 10 05 30.7 0.0
baz=328,SNR=7.3
Y22D IRIS PASSCAL I 45.97 108 P P 10 05 32.6 +1.4
baz=334
BNM Barren Site 46.00 108 P P 10 05 32.8 +1.2
P38A Dawn 46.07 91 P P 10 05 30.6 -1.2
F52A Sundridge 46.12 74 P P 10 05 31.9 -0.2
baz=328
TUC Tucson 46.18 113 P P 10 05 33.4 +0.6
baz=336
TUC Tucson 46.18 113 P P 10 05 34.0 +1.1
E53A Dumoine, Ponti 46.23 73 P P 10 05 32.7 -0.2
baz=328
J47A Sunmer 46.26 81 P P 10 05 32.8 -0.4
baz=329
E54A Lac Daplat, Po 46.35 72 P P 10 05 33.9 0.0
baz=328,SNR=6.0
K46A Dorr 46.37 82 P P 10 05 33.9 -0.2
baz=329
ALGO Algonquin Park 46.45 73 P P 10 05 34.2 -0.4
baz=328
D55A Sainte-Anne-du 46.47 70 P P 10 05 35.0 +0.2
baz=328
J48A Bridge Port 46.60 80 P P 10 05 35.3 -0.5
baz=329
M44A Midewin, Midew 46.63 85 P P 10 05 36.8 +0.7

K47A Vermontville 46.68 82 P P 10 05 36.3 -0.2
baz=329
D56A ZEC Mazanza, M 46.70 70 P P 10 05 36.4 -0.3
baz=328
P40A Paris 46.72 90 P P 10 05 36.7 -0.2
P40A IAmb IAmb 10 05 37.7
comp=Z,19nm,1.2s
L46A Eue Claire 46.76 83 P P 10 05 38.2 +1.1
baz=330
HDIL Hopedale 46.88 87 P P 10 05 37.7 -0.4
baz=330
HDIL Hopedale 46.88 87 P P 10 05 38.1 0.0
H52A Wyevale 46.89 76 P P 10 05 37.5 -0.7
baz=329
K48A Perry 46.90 81 P P 10 05 38.6 +0.4
baz=329
G54A Lake Saint Pet 46.91 74 P P 10 05 37.8 -0.5
baz=329
G53A Haliburton 46.95 74 P P 10 05 38.6 0.0
baz=329
E56A St. Veronique 47.03 70 P P 10 05 40.0 +0.8
baz=329
D57A Chemin Vers le 47.04 69 P P 10 05 39.4 +0.1
baz=329
121A Cookes Peak, D 47.04 110 P P 10 05 40.9 +1.2
baz=335,SNR=6.3
121A Cookes Peak, D 47.04 110 P P 10 05 41.5 +1.8
121A IAmb IAmb 10 05 42.2
comp=Z,11nm,0.9s
AMTX Amarillo 47.17 102 P P 10 05 40.4 -0.2
baz=333
I51A Listowel 47.19 77 P P 10 05 40.4 -0.1
baz=329
T35A Sooner Cattle 47.31 96 P P 10 05 41.0 -0.5
D58A Chemin du LacG 47.33 68 P P 10 05 41.7 +0.2
baz=329
SONM Songino Array 47.34 294 P P 10 05 43.2 +1.4
comp=Z,2.4nm,0.8s,baz=40,slow=8.0,SNR=11
H53A Bobcaygeon 47.43 75 P P 10 05 42.2 -0.2
baz=329
E57A Chemin Saint G 47.47 70 P P 10 05 42.7 0.0
baz=329
L48A N Adams 47.52 82 P P 10 05 43.1 0.0
baz=330
G55A Calabogie 47.53 73 P P 10 05 43.1 0.0
baz=329
O44A Mansfield 47.54 86 P P 10 05 43.3 0.0
MSTX Muleshoe 47.58 104 P P 10 05 43.7 0.0
baz=334,SNR=8.9
MSTX Muleshoe 47.58 104 P P 10 05 44.2 +0.4
P43A Skaggs, Pawnee 47.59 88 P P 10 05 43.6 0.0
P43A IAmb IAmb 10 05 47.7
comp=Z,12nm,0.9s
R40A Maddies Statio 47.72 91 P P 10 05 44.1 -0.5
R40A IAmb IAmb 10 05 45.0
comp=Z,8.3nm,0.8s
ORIO Orleans, Innes 47.80 72 P P 10 05 45.3 +0.1
baz=329
ORIO Orleans, Innes 47.80 72 P P 10 05 45.6 +0.4
E58A La Victoria 47.81 69 P P 10 05 45.5 +0.2
baz=329
SFIN Lafayette 47.87 85 P P 10 05 46.0 +0.2
baz=330
SFIN Lafayette 47.87 85 P P 10 05 46.3 +0.5
J52A Paris 47.88 77 P P 10 05 45.7 -0.2
baz=330
K51A Iona Station 47.94 78 P P 10 05 46.6 +0.3
baz=330
N47A Urbana 47.96 83 P P 10 05 46.2 -0.3
baz=330,SNR=5.8
N47A Urbana 47.96 83 P P 10 05 46.6 +0.1
H55A Tweed 47.97 74 P P 10 05 46.3 -0.2
baz=329,SNR=5.3
I55A Frankford 48.07 74 P P 10 05 47.2 -0.1
baz=329
M49A Liberty Center 48.10 81 P P 10 05 47.5 0.0
baz=330
N48A Decatur 48.23 83 P P 10 05 48.3 -0.3
baz=330
H56A Elgin 48.27 73 P P 10 05 49.0 +0.2
baz=329
G57A Newington 48.29 71 P P 10 05 49.4 +0.5
baz=329
CCM Cathedral Cave 48.31 90 P P 10 05 49.2 -0.1
baz=331
CCM Cathedral Cave 48.31 90 P P 10 05 49.0 -0.2
CCM IAmb IAmb 10 05 49.7
comp=Z,9.9nm,0.8s
KSRS Korea Array 48.33 268 P P 10 05 50.6 +1.2
comp=Z,6.4nm,0.7s,baz=22,slow=7.9,SNR=16
WMOK Wichita Mounta 48.38 100 P P 10 05 49.4 -0.4
baz=333,SNR=8.6
WMOK Wichita Mounta 48.38 100 P P 10 05 49.8 -0.1
WMOK IAmb IAmb 10 05 50.7
comp=Z,7.1nm,0.9s
Q44A Meyer Farm, Va 48.42 88 P P 10 05 50.6 +0.6
FNO Franklin 48.44 98 P P 10 05 51.0 +0.8
E60A Ste Agathe de 48.46 68 P P 10 05 50.6 +0.3
baz=330
TUL1 Leonard 48.47 96 P P 10 05 49.7 -0.8
baz=332,SNR=5.7
TUL1 Leonard 48.47 96 P P 10 05 50.1 -0.4
P46A Rosedale 48.48 86 P P 10 05 50.9 +0.3
N49A Columbus Grove 48.50 82 P P 10 05 50.8 +0.2
baz=330
U38A Gravette 48.54 94 P P 10 05 50.1 -0.9
U38A IAmb IAmb 10 05 50.8
comp=Z,5.5nm,0.8s
GDL2 Guadalupe Moun 48.58 107 P P 10 05 52.6 +1.1
F60A Warwick 48.63 68 P P 10 05 51.7 +0.1
baz=330
MNTX Cornudas Mount 48.66 108 P P 10 05 53.1 +1.1
baz=335,SNR=20
MNTX Cornudas Mount 48.66 108 P P 10 05 53.2 +1.1
MNTX IAmb IAmb 10 05 54.1
comp=Z,11nm,0.8s
D62A Allapoint, All 48.68 65 P P 10 05 52.6 +0.6
baz=330
CLNB Carlsbad 48.70 106 P P 10 05 53.4 +1.0
O48A Farmland 48.71 83 P P 10 05 51.9 -0.4
baz=330,SNR=7.1
W35A Tecumseh 48.73 97 P P 10 05 52.1 -0.4
E61A Lac Etchemin 48.74 67 P P 10 05 52.4 -0.1
baz=330
ZAA0 Zalesovo Array 48.81 314 P P 10 05 52.9 0.0
ZALV Zalesovo Beam 48.81 314 P P 10 05 52.8 -0.1
comp=Z,12nm,0.7s,baz=23,slow=6.7,SNR=34
J55A Hilton 48.84 75 P P 10 05 52.5 -0.8
baz=330
HHAR Hobbs 48.84 94 P P 10 05 52.4 -1.0
LONY Lake Ozonia 48.85 71 P P 10 05 53.2 -0.1
baz=330,SNR=6.2
LONY Lake Ozonia 48.85 71 P P 10 05 53.5 +0.2
LONY IAmb IAmb 10 05 54.6
comp=Z,11nm,0.8s
M51A Elyria 48.89 80 P P 10 05 53.8 +0.2
baz=330
OLIL Olney 48.92 87 P P 10 05 53.9 +0.1
F61A St Evariste 48.96 68 P P 10 05 53.7 -0.5
baz=330
N50A Nevada 49.02 81 P P 10 05 54.5 -0.1
baz=330
D63A Stockholm 49.05 65 P P 10 05 54.6 -0.1
baz=330
I57A Carthage 49.05 73 P P 10 05 54.6 -0.2
baz=330
L53A Girard 49.07 78 P P 10 05 54.9 -0.2
baz=330
O49A Covington 49.08 83 P P 10 05 55.4 +0.3
baz=330
O49A Covington 49.08 83 P P 10 05 55.6 +0.6
O49A IAmb IAmb 10 06 03.6
comp=Z,8.3nm,0.9s
K54A Basiliko Farm, 49.09 76 P P 10 05 55.7 +0.6
baz=330
H59A Cadyville 49.15 71 P P 10 05 55.9 +0.3
baz=330
H58A Gabriels 49.17 71 P P 10 05 55.9 +0.1
baz=330,SNR=5.7
L54A Sinclairville 49.18 77 P P 10 05 55.3 -0.6
baz=330
N51A Ashland 49.18 80 P P 10 05 55.3 -0.6
baz=330
U40A Yellville 49.19 93 P P 10 05 54.7 -1.3
baz=332,SNR=5.6
U40A Yellville 49.19 93 P P 10 05 55.2 -0.8
U40A IAmb IAmb 10 05 55.8
comp=Z,9.4nm,1.2s
K55A Perry 49.21 76 P P 10 05 55.5 -0.7
baz=330
G60A Masonville 49.24 69 P P 10 05 55.7 -0.6
baz=330
T42A Van Buren 49.27 91 P P 10 05 56.0 -0.6
T42A IAmb IAmb 10 05 56.4
comp=Z,5.4nm,0.6s
M53A WI Miller and 49.36 79 P P 10 05 56.8 -0.5
baz=330
ALLY Alegheny Colle 49.38 78 P P 10 05 57.7 +0.2
O50A Cable 49.38 82 P P 10 05 56.9 -0.5
baz=331
SIUC Southern Illin 49.38 89 P P 10 05 57.5 0.0
J57A Williamstown 49.38 73 P P 10 05 57.1 -0.3
baz=330
S44A Carbondale 49.39 89 P P 10 05 57.4 -0.1
P49A Miami Univ. Ec 49.50 83 P P 10 05 58.1 -0.3
baz=331
I58A Old Forge 49.51 72 P P 10 05 58.3 -0.2
baz=330
K56A Middlesex 49.51 75 P P 10 05 58.1 -0.4
baz=330
N52A McGinn's Farm, 49.53 80 P P 10 05 58.3 -0.3
baz=330
ACSO Alum Creek Sta 49.55 81 P P 10 05 58.8 +0.1
baz=331
ACSO Alum Creek Sta 49.55 81 P P 10 05 58.9 +0.2
L55A Hinsdale 49.55 76 P P 10 05 58.0 -0.7
baz=330
H60A Morristown 49.58 70 P P 10 05 59.4 +0.5
baz=330
Q48A North Vernon 49.64 85 P P 10 05 59.0 -0.5
baz=331
M54A Oil Creek Stat 49.68 78 P P 10 05 59.3 -0.4
baz=330
M54A Oil Creek Stat 49.68 78 P P 10 05 59.6 -0.1
M54A IAmb IAmb 10 06 01.2
comp=Z,19nm,1.3s
J58A Remsen 49.68 73 P P 10 05 59.0 -0.7
baz=330
PBMO Poplar Bluff 49.74 90 P P 10 06 00.0 -0.2
PBMO IAmb IAmb 10 06 00.6
comp=Z,13nm,0.9s
O51A Pataskala 49.76 81 P P 10 05 59.8 -0.5
baz=331,SNR=5.8
G62A West of Eustis 49.78 68 P P 10 06 00.2 -0.2
baz=330
K57A Scipio Center 49.78 74 P P 10 05 59.9 -0.6
baz=330
P50A Jamestown 49.78 83 P P 10 06 00.1 -0.4
baz=331,SNR=5.2
I59A Olmsteadville 49.82 71 P P 10 06 00.7 -0.1
baz=330,SNR=5.2
N53A Lisbon 49.85 79 P P 10 06 00.8 -0.2
baz=330
F63A Nanakanta, Br 49.86 66 P P 10 06 01.4 +0.4
baz=330
W39A Magazine 49.86 94 P P 10 06 00.4 -0.7
baz=332
H61A Lyndonville 49.88 69 P P 10 06 01.5 +0.3
baz=330
J59A Piesco 49.88 72 P P 10 05 59.9 -1.3
baz=330
FCAR Ozark Folk Cen 49.88 92 P P 10 06 00.2 -1.1
Q49A Aurora 49.89 84 P P 10 06 01.0 -0.4
baz=331
L56A Greenwood 49.91 75 P P 10 06 01.0 -0.5
baz=330,SNR=5.3
L56A Greenwood 49.91 75 P P 10 06 01.0 -0.5
L56A IAmb IAmb 10 06 02.6
comp=Z,15nm,1.1s
F64A Sherman 49.98 66 P P 10 06 01.7 -0.2
baz=330
I60A Shoreham 49.99 71 P P 10 06 01.4 -0.5
baz=330
N54A Moraine State 50.03 78 P P 10 06 02.3 -0.1
baz=331
WCI Wyandotte Cave 50.04 86 P P 10 06 02.3 -0.2
baz=331
WCI Wyandotte Cave 50.04 86 P P 10 06 02.3 -0.2
WCI IAmb IAmb 10 06 03.3
comp=Z,16nm,1.1s
M55A Ridgway 50.05 77 P P 10 06 02.1 -0.5
baz=330
M55A Ridgway 50.05 77 P P 10 06 02.5 -0.1
M55A IAmb IAmb 10 06 03.1
comp=Z,9.1nm,0.9s
O52A Adamsville 50.08 80 P P 10 06 02.5 -0.3
baz=331
O52A Adamsville 50.08 80 P P 10 06 02.3 -0.4
LCAR Lake Charles 50.09 91 PcP 10 07 23.6 +1.4
PARMO Parma 50.10 90 P P 10 06 03.1 +0.2
H62A Milan 50.11 69 P P 10 06 02.5 -0.5
baz=330
LBNH Lisbon 50.13 69 P P 10 06 03.4 +0.3
baz=330
P51A Williamsport 50.17 82 P P 10 06 03.2 -0.2
baz=331
PKME Peaks-Kenny Pk 50.17 67 P P 10 06 03.2 -0.1
baz=330
PKME Peaks-Kenny Pk 50.17 67 P P 10 06 04.5 +1.2
G63A Kingsbury 50.19 67 P P 10 06 04.4 +0.9
baz=330
O53A New Philadelph 50.20 80 P P 10 06 03.1 -0.5
baz=331
M56A Emporium 50.25 76 P P 10 06 03.6 -0.5
baz=330
L57A Andrews Acres 50.29 75 P P 10 06 04.0 -0.4
baz=330
I61A Oroboro, Fairl 50.30 70 P P 10 06 03.9 -0.5
baz=330
K59A Cooperstown 50.35 73 P P 10 06 04.7 -0.2
baz=330
G64A Maxfield 50.37 66 P P 10 06 04.8 0.0
baz=330
P52A Corning 50.39 81 P P 10 06 04.8 -0.3
baz=331
BINY Binghamton 50.44 74 P P 10 06 05.1 -0.4
baz=330
BINY Binghamton 50.44 74 P P 10 06 05.7 +0.2
BINY IAmb IAmb 10 06 06.0
comp=Z,21nm,1.4s
J60A Lant Hill Farm 50.46 71 P P 10 06 06.2 +0.6
baz=330
Q51A Peebles 50.46 82 P P 10 06 05.7 +0.1
baz=331
W41B Gary Mavity, V 50.47 93 P P 10 06 05.2 -0.5
baz=332
MIAR Mount Ida 50.52 95 P P 10 06 05.7 -0.4
baz=333,SNR=8.8
MIAR Mount Ida 50.52 95 P P 10 06 05.7 -0.4
MIAR IAmb IAmb 10 06 06.8
comp=Z,9.4nm,0.8s
N55A Marion Center 50.56 78 P P 10 06 05.8 -0.7
baz=331
O54A Avella 50.57 79 P P 10 06 05.7 -0.7
baz=331
O54A Avella 50.57 79 P P 10 06 06.4 0.0
L58A Harry Jones Me 50.62 74 P P 10 06 06.2 -0.7
baz=331
J61A Chester 50.68 71 P P 10 06 07.6 +0.3
baz=331
KLMR Klimovskoe 50.70 346 eP P 10 06 06.7 -0.4
KLMR AMP 10 06 08.6
comp=Z,25nm,0.9s
H64A Troy 50.74 67 P P 10 06 08.0 +0.3
baz=331
R50A Paris 50.74 84 P P 10 06 08.1 +0.3
R50A IAmb IAmb 10 06 08.8
comp=Z,13nm,0.9s
M57A Sunshine Farm, 50.77 76 P P 10 06 06.4 -1.6
baz=331
M57A Sunshine Farm, 50.77 76 P P 10 06 07.3 -0.6
M57A IAmb IAmb 10 06 08.9
comp=Z,12nm,1.1s
UALR University of 50.78 93 P P 10 06 08.0 -0.1
UALR IAmb IAmb 10 06 08.9
comp=Z,10nm,1.0s
L59A Walton 50.79 73 P P 10 06 07.8 -0.4
baz=331
P53A Whipple 50.80 80 P P 10 06 08.1 0.0
baz=331
T47A Sharon Grove 50.82 87 P P 10 06 08.6 +0.2
G65A Princeton 50.83 65 P P 10 06 08.3 0.0
baz=331
X40A Basin Creek Fa 50.85 94 P P 10 06 08.2 -0.3
baz=333
X40A Basin Creek Fa 50.85 94 P P 10 06 08.3 -0.3
X40A IAmb IAmb 10 06 11.9
comp=Z,6.5nm,0.8s
Q52A Bidwell 50.92 82 P P 10 06 08.2 -0.9
baz=331
FIA1 FINESS Array S 50.94 355 P P 10 06 09.5 +0.6
FIA1 IAmb IAmb 10 06 22.6
comp=Z,16nm,0.9s
FINES FINESS Array B 50.94 355 P P 10 06 09.4 +0.4
comp=Z,9.8nm,0.8s,baz=17,slow=8.6,SNR=21
O55A Ligonier 50.95 78 P P 10 06 09.0 -0.3
baz=331
K61A Williamstown 51.02 72 P P 10 06 10.2 +0.4
baz=331
H65A Eastbrook 51.03 66 P P 10 06 10.4 +0.5
baz=331
P54A Burton 51.04 80 P P 10 06 09.6 -0.4
baz=331,SNR=6.4
JNU Nakatsue 51.04 263 P P 10 06 10.1 0.0
comp=Z,5.8nm,1.0s,baz=167,slow=11,SNR=3.7
JNU Nakatsue 51.04 263 IAmb IAmb 10 06 13.1
comp=Z,12nm,1.0s
J62A Henniker 51.05 70 P P 10 06 10.3 +0.2
baz=331
SSPA Standing Stone 51.10 77 P P 10 06 10.1 -0.3
baz=331
N57A Milroy 51.12 76 P P 10 06 09.8 -0.8
baz=331
O56A Blue Knob Stat 51.17 78 P P 10 06 10.2 -0.8
baz=331
O56A Blue Knob Stat 51.17 78 P P 10 06 10.6 -0.4
O56A IAmb IAmb 10 06 10.8
comp=Z,8.4nm,0.9s
M59A Waymart 51.21 74 P P 10 06 11.0 -0.3
baz=331
MCWV Mont Chateau 51.22 79 P P 10 06 11.3 0.0
baz=331
L60A Shokan 51.26 73 P P 10 06 11.8 +0.1
baz=331
J63A Strafford 51.27 69 P P 10 06 11.5 -0.1
baz=331
Q53A Leroy 51.29 81 P P 10 06 11.5 -0.4
baz=331
WVT Waverly 51.30 88 P P 10 06 11.8 -0.2
baz=332
WVT Waverly 51.30 88 P P 10 06 12.3 +0.3
WVT IAmb IAmb 10 06 12.9
comp=Z,6.5nm,0.8s
L61A Hillsdale 1, H 51.33 72 P P 10 06 11.7 -0.4
baz=331
N58A Sunbury 51.35 76 P P 10 06 11.5 -0.9
baz=331
N58A Sunbury 51.35 76 P P 10 06 11.7 -0.7
N58A IAmb IAmb 10 06 12.4
comp=Z,13nm,0.9s
P55A Reedsville 51.36 79 P P 10 06 12.1 -0.3
baz=331
K62A Royalston 51.39 71 P P 10 06 13.0 +0.4
baz=331
NB2 NORSAR Subarra 51.41 4 P P 10 06 12.4 -0.2
comp=Z,8.7nm,1.1s,baz=355,slow=7.9
NOA NORSAR Array B 51.41 4 P P 10 06 12.3 -0.2
comp=Z,3.3nm,0.9s,baz=357,slow=7.4,SNR=7.8
NOA PcP PcP 10 07 26.9 +0.2
comp=Z,1.3nm,0.7s,baz=347,slow=3.0,SNR=5.3
TX31 Lajitas Ar. Si 51.42 107 P P 10 06 14.0 +0.9
TX32 Lajitas Array 51.42 107 P P 10 06 14.0 +0.9
TXAR Lajitas Array 51.42 107 P P 10 06 13.9 +0.8
comp=Z,26nm,0.8s,baz=324,slow=6.4,SNR=188
Q54A Coxs Mills 51.44 80 P P 10 06 12.4 -0.6
baz=331
WLAR White Oak Lake 51.45 95 P P 10 06 13.7 +0.6
HHC Hu-ho-hao-te 51.53 285 P P 10 06 11.3 -2.5
HHC sP pP 10 06 21.2 +0.1
HHC S S 10 13 22.0 -11
HHC pmax pmax
comp=Z,13nm,0.7s
HHC pmax pmax
comp=Z,82nm,6.0s
HHC LR LR
comp=Z,240nm,12.2s
HHC LR LR
comp=Z,220nm,14.3s
HHC LR LR
comp=Z,140nm,14.6s
O57A Amberson 51.56 77 P P 10 06 13.4 -0.5
baz=331
S51A Beattyville 51.58 84 P P 10 06 14.1 0.0
R53A Hurricane 51.60 82 P P 10 06 13.8 -0.4
baz=331
R53A Hurricane 51.60 82 P P 10 06 14.0 -0.2
R53A IAmb IAmb 10 06 15.0
comp=Z,14nm,0.8s
K63A Dunstable 51.62 70 P P 10 06 14.7 +0.4
baz=331
N59A State Game Lan 51.63 75 P P 10 06 14.0 -0.5
baz=331
W45A Hickory Valley 51.64 90 P P 10 06 15.1 +0.6
T50A Nancy 51.65 85 P P 10 06 15.1 +0.4
T50A IAmb IAmb 10 06 21.6
comp=Z,8.3nm,0.8s
M60A Port Jervis 51.70 74 P P 10 06 14.4 -0.4
baz=331
Q55A Buckhannon 51.72 80 P P 10 06 15.0 -0.1
baz=331
P56A Dayton Farm, R 51.73 78 P P 10 06 14.4 -0.8
baz=331
U49A Red Boiling Sp 51.74 86 P P 10 06 15.3 0.0
U49A IAmb IAmb 10 06 16.3
comp=Z,14nm,1.0s
HRV Adam Dziewonsk 51.77 70 P P 10 06 14.4 -1.0
baz=331
JCT Junction City 51.81 103 P P 10 06 15.7 -0.2
baz=335,SNR=20
JCT Junction City 51.81 103 P P 10 06 15.9 +0.1
PAGS Pennsylvania G 51.89 76 P P 10 06 15.9 -0.4
PAGS IAmb IAmb 10 06 17.5
comp=Z,9.7nm,0.8s
O58A Lewisberry 51.90 76 P P 10 06 16.0 -0.4
baz=331
CLTN Cedars of Leba 51.91 87 P P 10 06 16.9 +0.4
CLTN IAmb IAmb 10 06 17.6
comp=Z,7.5nm,0.9s
N60A Cedar Hill Far 51.92 74 P P 10 06 16.0 -0.5
baz=331
WES Weston 51.96 70 P P 10 06 16.7 -0.1
Q56A Snyder Ridge, 52.01 79 P P 10 06 17.4 +0.2
baz=331
O59A Robesonia 52.01 75 P P 10 06 16.8 -0.4
baz=331
V48A Smith Brothers 52.03 88 P P 10 06 17.7 +0.3
R54A Victor 52.09 81 P P 10 06 16.9 -1.0
baz=332
S53A Williamson 52.10 82 P P 10 06 17.7 -0.3
baz=332
OXF Oxford 52.13 91 P P 10 06 18.8 +0.7
baz=333
OXF Oxford 52.13 91 P P 10 06 18.6 +0.4
PLAL Pickwick Lake 52.22 89 P P 10 06 18.6 -0.2
PLAL IAmb IAmb 10 06 19.5
comp=Z,15nm,0.9s
M62A Hamden 52.22 72 P P 10 06 18.7 -0.1
baz=331
S54A Dingess, Beckl 52.30 81 P P 10 06 19.2 -0.3
baz=332
P58A Pank, Wackersv 52.32 77 P P 10 06 18.8 -0.7
baz=331
R55A Marlinton 52.33 80 P P 10 06 19.3 -0.5
baz=332
HFS Hagfors 52.37 3 P P 10 06 20.2 +0.6
comp=Z,7.9nm,0.8s,baz=28,slow=6.7,SNR=11
N62A Caumsett State 52.46 73 P P 10 06 20.2 -0.4
baz=331
ARU Arti 52.48 333 P P 10 06 21.0 +0.5
comp=Z,2.9nm,0.7s,baz=3,slow=6.6,SNR=12
ARU Arti 52.48 333 P P 10 06 20.8 +0.3
ARU IAmb IAmb 10 06 21.5
comp=Z,12nm,0.8s
P59A Jarrettsville 52.53 76 P P 10 06 20.4 -0.7
baz=332
T53A Wise 52.56 83 P P 10 06 21.7 +0.3
baz=332
M63A Gales Ferry 52.56 71 P P 10 06 21.1 -0.2
baz=331
S55A Lewisburg 52.63 81 P P 10 06 21.8 -0.2
baz=332

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
P60A	Greenville	52.65	75	P	P	10 06 21.1	-0.8
	baz=332						
Y45A	Yeager Farm, C	52.65	91	P	P	10 06 22.9	+0.9
Q58A	Fox Den Farm,	52.66	78	P	P	10 06 21.5	-0.6
	baz=332						
T54A	Tazewell	52.85	82	P	P	10 06 23.5	-0.1
	baz=332						
HPIG		52.89	111	P	P	10 06 24.9	+0.8
HPIG				IAmb	IAmb	10 06 25.8	
	comp=Z,14nm,0.8s						
R57A	Stanardsville	52.91	79	P	P	10 06 24.0	+0.1
	baz=332						
V51A	Loudon	52.91	85	P	P	10 06 24.1	+0.2
V51A				IAmb	IAmb	10 06 25.6	
	comp=Z,12nm,1.1s						
X48A	Hartselle	53.08	89	P	P	10 06 25.0	-0.2
X48A				IAmb	IAmb	10 06 25.8	
	comp=Z,12nm,1.1s						
R58A	Rapidan	53.10	78	P	P	10 06 24.4	-0.9
	baz=332						
V52A	Sevierville	53.16	85	P	P	10 06 26.4	+0.6
V52A				IAmb	IAmb	10 06 39.2	
	comp=Z,10nm,0.8s						
TKL	Tuckaleechee C	53.26	85	P	P	10 06 26.9	+0.3
TKL				IAmb	IAmb	10 06 27.7	
	comp=Z,13nm,0.9s						
BRVK	Borovoye	53.29	323	P	P	10 06 26.9	+0.4
KURK	Kurchatov	53.39	316	P	P	10 06 27.5	+0.2
T56A	Rocky Mt	53.46	81	P	P	10 06 27.4	-0.6
	baz=332						
U55A	TA2, Sparta	53.54	82	P	P	10 06 28.5	-0.2
	baz=332						
FPAL	Fort Paine	53.55	87	P	P	10 06 28.9	+0.2
FPAL				IAmb	IAmb	10 06 29.4	
	comp=Z,9.2nm,0.7s						
V53A	Saluda	53.61	84	P	P	10 06 29.7	+0.5
S58A	Poland Farm, P	53.69	79	P	P	10 06 29.4	-0.2
	baz=332						
W52A	Murphy	53.70	85	P	P	10 06 30.5	+0.7
T57A	Hurt	53.78	80	P	P	10 06 29.8	-0.6
	baz=332						
Z47A	Carrollton	53.80	90	P	P	10 06 30.6	+0.1
S59A	Mechanicsville	53.84	78	P	P	10 06 30.4	-0.3
	baz=332						
V54A	Nebo	53.84	83	P	P	10 06 31.1	+0.2
	baz=332						
833A	Chaparral WMA,	53.90	104	P	P	10 06 32.0	+0.7
	baz=335						
V55A	Taylorsville	54.05	82	P	P	10 06 32.6	+0.2
	baz=332						
T58A	Grand View Acr	54.10	79	P	P	10 06 33.0	+0.4
	baz=332						
BG3	Lake Jocassee	54.17	85	P	P	10 06 34.0	+0.8
BG3				IAmb	IAmb	10 06 35.8	
	comp=Z,6.5nm,0.9s						
U57A	Blanch	54.25	80	P	P	10 06 33.2	-0.5
	baz=332,SNR=5.3						
LRAL	Lakeview Retre	54.36	89	P	P	10 06 33.9	-0.7
	baz=333,SNR=5.1						
LRAL	Lakeview Retre	54.36	89	P	P	10 06 34.2	-0.4
LRAL				IAmb	IAmb	10 06 34.8	
	comp=Z,7.2nm,0.9s						
W54A	Cherokee Point	54.37	84	P	P	10 06 34.9	+0.3
	baz=333						
T59A	Double "B" Far	54.44	79	P	P	10 06 35.0	-0.1
	baz=332						
Z50A	Ashland	54.57	88	P	P	10 06 35.5	-0.7
	baz=333,SNR=5.6						
Z50A	Ashland	54.57	88	P	P	10 06 36.3	+0.1
Z50A				IAmb	IAmb	10 06 36.9	
	comp=Z,15nm,1.0s						
T60A	Surry	54.60	78	P	P	10 06 36.0	-0.2
	baz=332						
KMSC	Kings Mountain	54.64	83	P	P	10 06 36.0	-0.6
	baz=333						
Y52A	Lilburn	54.74	86	P	P	10 06 37.5	+0.2
	baz=333						
X54A	Belton	54.77	84	P	P	10 06 37.5	-0.1
	baz=333,SNR=5.3						
V58A	Windy Hill, Pi	54.90	81	P	P	10 06 38.2	-0.3
	baz=332						
U59A	Littleton	54.90	79	P	P	10 06 38.3	-0.2
	baz=332						
U60A	Pendleton	55.03	79	P	P	10 06 39.0	-0.4
	baz=332						
X55A	Gracelyn & Ava	55.12	84	P	P	10 06 39.8	-0.3
	baz=333						
V59A	Middlesex	55.25	80	P	P	10 06 40.6	-0.4
	baz=333						
X56A	White Oak	55.33	83	P	P	10 06 41.5	0.0
	baz=333						
GOGA	Godfrey	55.37	86	P	P	10 06 41.6	-0.2
	baz=333						
GOGA	Godfrey	55.37	86	P	P	10 06 44.0	+2.2
GOGA				IAmb	IAmb	10 06 45.4	
	comp=Z,15nm,1.2s						
U61A	Possum Corner	55.42	78	P	P	10 06 41.7	-0.5
	baz=333						
Y55A	Saluda	55.51	84	P	P	10 06 42.6	-0.3
	baz=333						
W58A	Raeford	55.54	81	P	P	10 06 42.9	-0.2
	baz=333						
V60A	Jim Taylor Roa	55.62	79	P	P	10 06 43.6	-0.1
	baz=333						
MK31	Makanchi Array	55.96	311	P	P	10 06 45.5	-0.6
MKAR	Makanchi Array	55.96	311	P	P	10 06 45.4	-0.6
	comp=Z,6.4nm,0.8s,baz=43,slow=6.4,SNR=34						
MAKZ	Makanchi	56.03	312	P	P	10 06 46.1	-0.4
X59A	McDuffie Farm,	56.17	81	P	P	10 06 47.7	+0.1
	baz=333						
Z56A	Williston	56.24	84	P	P	10 06 48.4	+0.3
	baz=333						
EKA	Eskdalemuir Ar	56.24	14	P	P	10 06 47.6	-0.3
	comp=Z,17nm,0.7s,baz=359,slow=5.7,SNR=52						
ESK	Eskdalemuir	56.25	14	P	P	10 06 49.2	+1.3
Y58A	Scranton	56.36	82	P	P	10 06 49.1	+0.1
	baz=333						
Z57A	Bowman	56.51	83	P	P	10 06 50.4	+0.3
	baz=333						
SSE	Sheshan	56.53	271		S	10 14 40.9	+0.9
NJ2	Nanjing	56.56	273	*e*P	P	10 06 49.7	-0.7
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
Y59A	Loris	56.59	81	P	P	10 06 50.6	0.0
	baz=333						
GTA	Gaotai	57.02	294	P	P	10 06 54.4	+0.6
GTA				pP	pP	10 06 57.8	-3.4
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GTA				LR	LR		
	comp=Z,330nm,14.6s						
GTA				LR	LR		
	comp=Z,310nm,17.8s						
GTA				LR	LR		
	comp=Z,220nm,18.7s						
WMQ	Urumqi	57.05	306	*e*P	P	10 06 55.4	+1.5
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,89nm,6.5s						
WMQ				LR	LR		
	comp=Z,150nm,17.7s						
WMQ				LR	LR		
	comp=Z,210nm,15.9s						
WMQ				LR	LR		
	comp=Z,140nm,18.9s						
ZAIG	Zacatecas	57.81	110	P	P	10 07 00.5	+0.8
ZAIG				IAmb	IAmb	10 07 01.5	
	comp=Z,15nm,1.2s						
HLG	Helgoland	58.15	7	*e*P	P	10 07 03.4	+2.1
	comp=Z,230nm,1.3s,baz=358,slow=6.8						
AKTO	Aktyubinsk	58.30	331	P	P	10 07 02.9	+0.4
	comp=Z,8.3nm,0.7s,baz=24,slow=6.6,SNR=25						
BSEG	Bad Segeberg	58.49	5	*e*P	P	10 07 04.7	+1.0
	comp=Z,12nm,0.8s,baz=358,slow=6.8						
XAN	Xi'an	58.52	283	pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,96nm,6.0s						
NRDL	Niedersach Rie	59.93	5	*e*P	P	10 07 14.6	+1.0
	comp=Z,12nm,0.9s,baz=358,slow=6.8						
IBBN	Ibbenburen	60.02	7	*e*P	P	10 07 15.5	+1.2
	comp=Z,20nm,0.9s,baz=358,slow=6.8						
CLZ	Clausthal	60.59	5	*e*P	P	10 07 19.6	+1.3
	comp=Z,21nm,0.8s,baz=358,slow=6.8						
BUG	Bochum--Univer	60.86	7	*e*P	P	10 07 20.7	+0.6
	comp=Z,8.8nm,0.8s,baz=358,slow=6.8						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GTTG	Gottingen	60.87	6	*e*P	P	10 07 21.5	+1.3
	comp=Z,15nm,0.9s,baz=358,slow=6.8						
CLL	Collm	61.20	3	⇓*i*P	P	10 07 24.1	+1.8
	comp=Z,10.0nm,1.0s						
CLL				*i*		10 07 28.6	
	comp=Z,7.0nm,1.1s						
CLL	Collm	61.20	3	*e*P	P	10 07 23.9	+1.5
	comp=Z,9.8nm,1.0s,baz=358,slow=6.8						
CLL	Collm	61.20	3	P	P	10 07 24.2	+1.8
CLL				IAmb	IAmb	10 07 24.9	
	comp=Z,8.5nm,1.0s						
USP	Ospenovka	61.35	316	P	P	10 07 24.6	+1.0
	SNR=6.0						
TKM2	Tokmak 2	61.38	315	P	P	10 07 25.0	+1.0
	SNR=9.9						
CHMS	Chumysh	61.53	316	P	P	10 07 25.9	+1.1
	SNR=5.8						
AKASG	Malin Array Be	61.54	352	P	P	10 07 25.1	+0.4
	comp=Z,10.0nm,0.7s,baz=6.9,slow=6.6,SNR=36						
AKBB	Malin Array Si	61.54	352	P	P	10 07 25.4	+0.7
FBE	Freiberg	61.59	3	*e*P	P	10 07 26.1	+1.1
	comp=Z,9.1nm,0.9s,baz=358,slow=6.8						
UBBA	Unterbreizbach	61.60	6	*e*P	P	10 07 25.9	+1.0
	comp=Z,27nm,1.9s,baz=358,slow=6.8						
BSTI	Sart Tilman	61.62	9	P	P	10 07 26.3	+1.0
MEM	Membach	61.62	8	P	P	10 07 25.6	+0.4
BRG	Berggiesshubel	61.65	3	*i* P	P	10 07 26.1	+0.6
	comp=Z,8.5nm,0.8s						
BRG	Berggiesshubel	61.65	3	*e*P	P	10 07 26.3	+0.8
	comp=Z,8.5nm,0.8s,baz=358,slow=6.8						
KDJ	Kajisay	61.68	313	P	P	10 07 26.8	+0.8
KDJ				IAmb	IAmb	10 07 27.4	
	comp=Z,6.6nm,0.8s						
BOOM	Boomskoye usch	61.69	314	P	P	10 07 27.1	+1.0
BOOM				IAmb	IAmb	10 07 27.5	
	comp=Z,5.9nm,0.8s						
AHRW	Bad Neuenahr-A	61.75	8	*e*P	P	10 07 27.2	+1.1
	comp=Z,6.4nm,0.6s,baz=358,slow=6.8						
KBK	Karagaybulak	61.80	315	P	P	10 07 27.8	+1.0
	SNR=8.0						
MOX	Moxa	61.83	4	*e*P	P	10 07 27.7	+1.1
	comp=Z,8.3nm,0.9s,baz=358,slow=6.8						
BMRD	Maredsous	61.86	9	P	P	10 07 27.3	+0.5
AAK	Ala-Archa	61.94	316	P	P	10 07 28.8	+1.0
	SNR=7.2						
AAK	Ala-Archa	61.94	316	P	P	10 07 28.7	+1.0
CHVC	Chvalec	61.96	1	*e*P	P	10 07 28.8	+1.2
OSTC	Ostas	62.00	1	*e*P	P	10 07 29.4	+1.6
PLN	Plauen	62.00	4	*e*P	P	10 07 28.9	+1.0
	comp=Z,7.2nm,0.8s,baz=358,slow=6.8						
DOU	Dourbes	62.05	9	P	P	10 07 28.8	+0.7
TANN	Tannenbergstha	62.08	4	*e*P	P	10 07 29.6	+1.2
	comp=Z,18nm,0.9s,baz=358,slow=6.8						
EKS2	Erkin-Say	62.11	316	P	P	10 07 30.0	+1.2
	SNR=7.7						
GUNZ	Gunzen	62.13	4	*e*P	P	10 07 29.9	+1.2
	comp=Z,4.2nm,0.9s,baz=358,slow=6.8						
TNS	Taunus Mts	62.13	7	*e*P	P	10 07 29.7	+1.0
	comp=Z,8.6nm,0.8s,baz=358,slow=6.8						
DPC	Dobruska-Polom	62.20	1	*e*P	P	10 07 30.7	+1.5
WERN	Wernitzgruen	62.20	4	*e*P	P	10 07 30.3	+1.1
	comp=Z,4.4nm,0.8s,baz=358,slow=6.8						
KZA	Kyzart	62.26	315	P	P	10 07 31.2	+1.0
	SNR=7.5						
NKC	Novy Kostel	62.26	4	*e*P	P	10 07 31.0	+1.4
OJC	Ojcow	62.33	358	P	P	10 07 31.3	+1.3
OJC				IAmb	IAmb	10 07 32.5	
	comp=Z,8.2nm,0.9s						
KRLC	Kraliky	62.48	1	*e*P	P	10 07 32.3	+1.2
KK31	Karatay Array	62.53	319	P	P	10 07 31.5	0.0
KK31				IAmb	IAmb	10 07 32.5	
	comp=Z,4.4nm,0.8s						
KKAR	Karatay Array	62.53	319	P	P	10 07 31.5	0.0
KKAR				IAmb	IAmb	10 07 32.5	
	comp=Z,4.4nm,0.8s						
PRU	Pruhonice	62.55	2	*e*P	P	10 07 32.8	+1.3
WLF	Walferdange	62.57	8	*e*P	P	10 07 32.9	+1.2
	comp=Z,13nm,1.0s,baz=358,slow=6.8						
AML	Almayashu	62.62	316	P	P	10 07 34.0	+1.4
	SNR=10						
GOPC	GO Pecny, Ondr	62.62	2	*e*P	P	10 07 33.7	+1.7
ROTZ	Rotzenmuhle	62.72	4	*e*P	P	10 07 33.7	+1.0
	comp=Z,4.6nm,0.9s,baz=358,slow=6.8						
GRF	Grafenberg Arr	62.77	5	*e*P	P	10 07 34.5	+1.5
	comp=Z,20nm,1.3s,baz=358,slow=6.8						
MORC	Moravsky Berou	62.78	0	*e*P	P	10 07 33.8	+0.7
MORC	Moravsky Berou	62.78	0	⇓P	P	10 07 34.3	+1.2
PBCC	Pribram	62.84	3	*e*P	P	10 07 35.1	+1.7
VRAC	Vranov	63.25	1	*e*P	P	10 07 37.2	+1.0
WET	Wettzell	63.36	4	*e*P	P	10 07 38.3	+1.4
	comp=Z,7.8nm,1.1s,baz=358,slow=6.8						
KHC	Kasperske Hory	63.39	3	*e*P	P	10 07 38.7	+1.6
KHC	Kasperske Hory	63.39	3	P	P	10 07 38.9	+1.8
LANS	Liptovska Anna	63.40	359	*e*P	P	10 07 39.3	+2.1
KRUC	Moravsky	63.49	1	*e*P	P	10 07 38.5	+0.7
ARSB	Arslanbob	63.57	316	P	P	10 07 39.8	+1.2
ARSB				IAmb	IAmb	10 07 50.8	
	comp=Z,10nm,0.9s						
KOLS	Kolonicke sedl	63.57	357	*e*P	P	10 07 39.5	+1.2
GEC2	GERESS Array S	63.68	3	*e*P	P	10 07 40.4	+1.3
	comp=Z,14nm,1.0s,baz=358,slow=6.8						
GEC2	GERESS Array S	63.68	3	P	P	10 07 40.6	+1.5
GERES	GERESS Array B	63.68	3	P	P	10 07 40.5	+1.5
	comp=Z,6.9nm,0.8s,baz=1.4,slow=5.3,SNR=42						
JAVC	Velka Javorina	63.70	0	*e*P	P	10 07 40.8	+1.6
TLIG	Tlapa	64.03	108	P	P	10 07 42.8	+0.9
VYHS	Vyhne	64.06	359	*e*P	P	10 07 42.6	+1.1
ECH	Echery	64.07	8	P	P	10 07 42.7	+1.1
ECH				IAmb	IAmb	10 07 43.3	
	comp=Z,6.9nm,0.8s						
MODS	Modra-Piesok	64.19	0	*e*P	P	10 07 43.3	+0.9
TRPA	Tarpa	64.37	356	⇓P	P	10 07 45.2	+1.7
KSH	Kashi	64.44	313	P	P	10 07 48.4	+4.1
KSH				pP	sP	10 08 00.5	+5.9
KSH				PP	PP	10 10 11.3	+5.7
KSH				S	S	10 16 22.8	+1.4
KSH				ScS	ScS	10 17 33.2	-3.6
KSH				pmax	pmax		
	comp=Z,54nm,1.4s						
KSH				pmax	pmax		
	comp=Z,160nm,4.4s						
KSH				LR	LR		
	comp=Z,330nm,19.6s						
KSH				LR	LR		
	comp=Z,460nm,13.7s						
KSH				LR	LR		
	comp=Z,230nm,12.0s						
CONA	Conrad Observa	64.62	1	*e*pP	P	10 07 47.0	+1.7
	comp=Z,11nm,0.9s,SNR=6.2						
PSZ	Piszkesteto	64.63	358	⇑P	P	10 07 47.5	+2.1
MOA	Molln	64.68	3	*e*pP	P	10 07 46.9	+1.3
	comp=Z,9.3nm,0.8s,SNR=6.8						
RJOB	Jochberg	64.76	4	*e*P	P	10 07 47.4	+1.2
	comp=Z,11nm,0.8s,baz=358,slow=6.8						
BUR08	Bucovina Ar. S	64.78	354	P	P	10 07 47.5	+1.1
BURAR	Bucovina Array	64.81	354	⇓P	P	10 07 47.5	+0.9
RETA	Reutte	64.95	5	*e*pP	P	10 07 48.8	+1.4
	comp=Z,3.9nm,0.7s						
MOTA	Moosalm	65.11	5	*e*pP	P	10 07 49.9	+1.3
	comp=Z,8.0nm,1.0s						
WATA	Walderalm	65.13	5	*e*pP	P	10 07 50.0	+1.3
	comp=Z,8.6nm,1.2s						
WTTA	Wattenberg	65.21	5	*e*pP	P	10 07 50.6	+1.4
	comp=Z,14nm,1.1s						
SQTA	Sankt Quirin	65.24	5	*e*pP	P	10 07 50.9	+1.5
	comp=Z,7.8nm,1.0s						
FETA	Feichten	65.42	5	*e*pP	P	10 07 52.3	+1.7
	comp=Z,11nm,0.9s,SNR=5.1						
KBA	Koelnbreinsper	65.44	3	*e*pP	P	10 07 52.7	+2.0
	comp=Z,13nm,1.0s,SNR=6.0						
BIZ	Bicaz	65.44	354	⇓P	P	10 07 51.9	+1.3
DRGR		65.71	356	⇓P	P	10 07 53.3	+1.0
ABTA	Abfaltersbach	65.75	4	*e*pP	P	10 07 54.0	+1.4
	comp=Z,8.0nm,0.8s						
FUORN	Ofenpass-Fuorn	65.80	6	P	P	10 07 55.1	+1.9
FUORN				IAmb	IAmb	10 07 55.7	
	comp=Z,9.8nm,0.8s						
TUE	Stuetta	65.92	6	P	P	10 07 55.7	+1.8
OBKA	Obir	66.03	2	*e*pP	P	10 07 56.2	+1.7
	comp=Z,24nm,0.8s,SNR=6.5						
SIRR	Siria	66.25	357	⇑P	P	10 07 57.0	+1.2
GAR	Garm	66.44	317	P	P	10 07 57.8	+0.6
MLR	Muntele Rosu	66.90	354	⇑P	P	10 08 02.1	+2.0
BZS	Buzias	66.91	357	⇓P	P	10 08 01.0	+1.1
VOIR		66.99	354	⇑P	P	10 08 03.7	+3.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CHGR	Chuyangaron	67.06	318	P	P	10 08 01.6	+0.4
GZR	Gura Zlata	67.10	356	⇓P	P	10 08 02.4	+1.1
KBZ	Khabaz	67.21	340	P	P	10 08 03.1	+1.3
	comp=Z,5.1nm,0.7s,baz=346,slow=6.6,SNR=15						
TIRR	Tirgusor	67.81	352	P	P	10 08 06.6	+1.0
PGAV	Gavieira, Arco	68.85	20	*e*P	P	10 08 13.9	+1.6
	comp=Z,37nm,1.6s						
MVO	Moncorvo	69.80	20	*e*P	P	10 08 19.4	+1.2
	comp=Z,13nm,1.3s						
DIKM	Dikmen	70.10	346	⇓P	P	10 08 21.4	+1.5
PVIS	Viseu	70.13	20	*e*P	P	10 08 21.6	+1.4
GEYT	Alibeck	70.30	327	P	P	10 08 22.5	+1.2
	comp=Z,3.3nm,0.8s,baz=333,slow=2.0,SNR=5.2						
PCAS	Casmilo, Conde	70.70	21	*e*P	P	10 08 25.3	+1.7
PCBR	Castelo Branco	71.04	20	*e*P	P	10 08 26.4	+0.7
	comp=Z,17nm,1.5s						
ALN	Alexandroupoli	71.48	353	P	P	10 08 30.4	+2.1
ESDC	Sonseca Array	71.64	17	P	P	10 08 30.6	+1.2
	comp=Z,8.1nm,0.7s,baz=351,slow=6.4,SNR=57						
PMAFR	Mafra	71.67	22	*e*P	P	10 08 31.1	+1.6
	comp=Z,118nm,1.8s						
PAB	San Pablo	71.72	18	P	P	10 08 31.2	+1.2
PAB				IAmb	IAmb	10 08 32.1	
	comp=Z,9.1nm,1.0s						
ANTO	Ankara	72.08	348	P	P	10 08 33.5	+1.4
BR131	Keskin Array S	72.15	347	P	P	10 08 33.4	+0.8
BRTR	Keskin Array B	72.15	347	P	P	10 08 33.4	+0.8
	comp=Z,3.1nm,0.8s,baz=37,slow=4.8,SNR=12						
EVO	Evora	72.26	21	*e*P	P	10 08 34.5	+1.5
	comp=Z,20nm,1.6s						
PNCL	Nicolau / Gran	72.60	21	*e*P	P	10 08 36.4	+1.3
	comp=Z,27nm,1.6s						
SDDR	Presa de Saban	72.99	82	P	P	10 08 37.3	-0.4
MORF	Marmelete	73.38	22	*e*P	P	10 08 41.1	+1.3
	comp=Z,52nm,1.7s						
PVAQ	Vaqueiros	73.41	21	*e*P	P	10 08 41.3	+1.4
CMAR	Chiang Mai Arr	76.34	285	P	P	10 08 57.4	+0.3
	comp=Z,4.4nm,0.8s,baz=6.3,slow=6.6,SNR=16						
KEST	Kesra	76.63	7	P	P	10 08 58.8	+0.2
	comp=Z,9.5nm,0.9s,baz=288,slow=3.3,SNR=5.5						
IDI	Anoyia	77.12	354	P	P	10 08 59.8	-1.5
	comp=Z,2.5nm,0.6s,baz=41,slow=10,SNR=3.8						
IDI	Anoyia	77.12	354	P	P	10 08 58.4	-3.0
IDI				IAmb	IAmb	10 09 15.8	
	comp=Z,8.1nm,1.1s						
MDT	Midelt	78.33	19	P	P	10 09 08.2	0.0
	comp=Z,1.8nm,0.6s,baz=15,slow=3.6,SNR=4.8						
MMAI	Mount Meron Ar	78.64	345	P	P	10 09 09.8	-0.1
	comp=Z,4.3nm,0.8s,baz=10,slow=5.3,SNR=7.0						
ASF	Jabal al Asfar	79.32	343	P	P	10 09 14.3	+0.7
	comp=Z,6.8nm,0.8s,baz=333,slow=2.3,SNR=9.8						
SDV	Santo Domingo	82.48	85	P	P	10 09 29.6	-1.2
SDV				IAmb	IAmb	10 09 32.5	
	comp=Z,14nm,1.1s						
UOSS	Minazif	83.25	325	P	P	10 09 32.3	-2.1
UOSS				IAmb	IAmb	10 09 34.0	
	comp=Z,4.8nm,0.7s						
RUSC	La Rusia	84.30	88	P	P	10 09 38.2	-2.2
SBUM	Sibu	86.02	267	P	P	10 09 45.6	-2.9
SBUM				IAmb	IAmb	10 10 00.7	
	comp=Z,6.0nm,1.4s						
RAYN	Ar Rayn	86.67	335	P	P	10 09 48.9	-2.8
IPM	Ipoh	88.41	278	P	P	10 09 55.2	-4.9
PSI	Prapat	90.74	279	P	P	10 10 11.1	-0.1
	comp=Z,4.0nm,0.7s,baz=357,slow=2.9,SNR=3.9						
RPSI	Rantau Prapat	90.84	279	P	P	10 10 11.1	-0.3
TORD	Torodi Ar. Bea	98.47	16	P	P	10 10 45.9	-0.5
	comp=Z,0.6nm,0.8s,baz=348,slow=7.4,SNR=3.5						
PLCA	Paso Flores	127.59	107	PKP	PKPdf	10 16 12.5	+0.3
	comp=Z,3.2nm,1.0s,baz=295,slow=2.3,SNR=4.3						
BOSA	Boshof	140.56	349	PKP	PKPdf	10 16 37.2	+0.3
	comp=Z,1.0nm,0.6s,baz=358,slow=2.6,SNR=3.7						
SUR	Sutherland	144.53	355	PKP	PKPdf	10 16 43.7	-0.3
	comp=Z,12nm,0.8s,baz=344,slow=0.9,SNR=12						
SUR	Sutherland	144.53	355		PKPab	10 16 41.2	-1.2
VNDA	Vanda	146.67	193	PKPbc	PKPab	10 16 48.7	-0.3
	comp=Z,3.3nm,0.8s,baz=327,slow=5.3,SNR=12						
VNDA	Vanda	146.67	193		PKPab	10 16 48.5	-0.4
VNA3	Neumayer Olymp	169.86	122	PKPab	PKPab	10 18 29.2	+0.5
SNAA	Sanae	171.90	128	PKPab	PKPab	10 18 38.1	+0.3
SNAA	Sanae	171.90	128	PKPab	PKPab	10 18 36.7	-1.1
	comp=Z,2.2nm,0.9s,baz=194,slow=5.3,SNR=5.0						
SNAA	Sanae	171.90	128	PKPdf	PKPdf	10 17 13.8	-1.0
SNAA					PKPab	10 18 37.3	-0.5

IDC ***03*** *10:01:39.5±0.7, 6°.85S×154°.74E, h0km, mb4.3/15, mb1 4.4/16, mb1mx4.2/50, mbtmp4.3/16, ML4.4/1, MS4.1/7, Ms1 4.1/7, ms1mx3.5/50, Error ellipse: s-maj=22.5km s-min=16.7km az=110.0*

NEIC ***03*** *10:01:45.8±1.8, 6°.79S±0°.08×154°.61E±0°.07, h43km±5km, mb4.7/44, Error ellipse: s-maj=11.8km s-min=9.6km az=201.0*

ISC 03 10:01:46.2±0.4**, 6°.78S**±0°.06×**154°.61E**±0°.06**, h39km, n102,** σ1s.61/102**, mb4.6**/44**, MS4.3**/8**, 1C, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.55	316	Pn	Pn	10 02 38.0	-0.8
KRVT	Keravat (AS076	3.56	314	Pn	Pn	10 02 39.9	+1.0
	27nm,0.3s,baz=182,slow=4.1,SNR=25						
KRVT				Sn	Sn	10 03 23.5	+3.7
	56nm,0.3s,baz=8.9,slow=15,SNR=4.0						
HNR	Honiara	5.90	117	Pn	Pn	10 03 13.8	+2.7
	15nm,0.3s,baz=235,slow=2.6,SNR=2.4						
HNR				Sn	Sn	10 04 22.9	+5.4
	11nm,0.3s,baz=171,slow=21,SNR=1.6						
HNR				LR	LR	10 05 35.9	
	comp=Z,2μm,19.4s,baz=252,slow=41						
HNR	Honiara	5.90	117	Pn	Pn	10 03 13.1	+2.0
PMG	Port Moresby	7.83	250		Pn	10 03 39.2	+1.6
PMG				Sn	Sn	10 05 09.2	+4.2
COEN	Coen	13.31	237	Pn	Pn	10 04 52.3	-0.4
PATS	Pohnpei	14.02	15	Pn	Pn	10 05 03.3	+0.9
CTA	Charters Tower	15.52	211	Pn	Pn	10 05 23.7	+1.4
	0.2nm,0.3s,baz=37,slow=12,SNR=7.7						
CTAO	Charters Tower	15.52	211	Pn	Pn	10 05 21.2	-1.1
DZM	Mont Dzumac	19.01	144	P	P	10 06 04.7	-0.1
	0.5nm,0.3s,baz=224,slow=12,SNR=6.5						
DZM				LR	LR	10 12 24.6	
	comp=Z,291nm,21.2s,baz=358,slow=34						
DZM	Mont Dzumac	19.01	144	P	P	10 06 05.0	+0.1
FAKI	Fak Fak	22.61	279	P	P	10 06 42.6	-1.2
WR0	Warramunga Arr	23.48	234	P	P	10 06 51.0	-1.5
WR0				IAmb	IAmb	10 07 05.9	
	comp=Z,15nm,1.1s						
WB0	Warramunga Arr	23.50	235	P	P	10 06 51.2	-1.5
WRAB	Tennant Creek	23.61	234	P	P	10 06 52.3	-1.6
WB2	Warramunga Arr	23.62	234	P	P	10 06 52.8	-1.1
WB2				IAmb	IAmb	10 07 06.7	
	comp=Z,14nm,1.0s						
WRA	Warramunga Arr	23.63	234	P	P	10 06 52.7	-1.3
	comp=Z,4.3nm,0.7s,baz=54,slow=9.6,SNR=22						
WRA				LR	LR	10 16 31.1	
	comp=Z,602nm,18.4s,baz=50,slow=38						
SIJI	Sorong	24.02	283	P	P	10 06 57.4	-0.2
	comp=Z,11nm,0.7s,baz=174,slow=19,SNR=1.7						
MSVF	Nonsavu	25.32	118	P	P	10 07 08.4	-1.1
MSVF				IAmb	IAmb	10 07 10.5	
	comp=Z,29nm,1.1s						
AS31	Alice Springs	26.03	228	P	P	10 07 13.9	-2.1
ASAR	Alice Springs	26.03	228	P	P	10 07 14.4	-1.5
	comp=Z,2.5nm,0.8s,baz=61,slow=9.2,SNR=15						
ASAR				ScP	ScP	10 14 24.7	+4.4
	comp=Z,1.6nm,1.0s,baz=68,slow=2.7,SNR=7.6						
ASAR				LR	LR	10 17 35.1	
	comp=Z,406nm,19.1s,baz=334,slow=37						
KNRA	Kununurra	26.82	249	P	P	10 07 21.6	-1.5
KNRA				IAmb	IAmb	10 07 25.3	
	comp=Z,20nm,1.2s						
STKA	Stephens Creek	27.77	204	P	P	10 07 30.9	-0.5
	comp=Z,1.5nm,0.6s,baz=26,slow=15,SNR=4.9						
STKA				LR	LR	10 18 58.3	
	comp=Z,343nm,18.1s,baz=309,slow=37						
STKA	Stephens Creek	27.77	204	P	P	10 07 30.0	-1.4
FITZ	Fitzroy Crossi	30.39	246	P	P	10 07 53.6	-1.2
	comp=Z,2.8nm,0.6s,baz=50,slow=5.8,SNR=6.3						
FITZ	Fitzroy Crossi	30.39	246	P	P	10 07 54.3	-0.6
PSAC2	Pilbara Seismi	36.60	243	P	P	10 08 48.3	-0.6
PSAC2				IAmb	IAmb	10 08 49.4	
	comp=Z,22nm,1.2s						
PSAA3	Pilbara Seismi	36.65	243	P	P	10 08 48.8	-0.5
PSAC1	Pilbara Seismi	36.68	243	P	P	10 08 48.9	-0.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSAC1				IAmb	IAmb	10 08 59.5	
	comp=Z,29nm,1.4s						
BKZ	Black Stump Fm	37.79	152	P	P	10 08 58.4	-0.5
JNU	Nakatsue	45.65	332	P	P	10 10 01.5	-1.5
	comp=Z,4.5nm,0.8s,baz=116,slow=12,SNR=3.7						
JNU	Nakatsue	45.65	332	P	P	10 10 02.2	-0.9
KSRS	Korea Array	50.58	332	P	P	10 10 40.9	-0.2
	comp=Z,1.2nm,0.7s,baz=141,slow=8.1,SNR=4.7						
NJ2	Nanjing	51.51	321	eP	P	10 10 48.1	-0.1
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
WHN	Wuhan	53.53	316	⇑P	P	10 11 05.1	+2.0
ENH	Enshi	56.82	313	P	P	10 11 24.6	-2.3
GYA	Guiyang	57.02	307	eP	P	10 11 28.2	-0.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GSI	Gunungsitoli	57.48	276	P	P	10 11 30.8	-1.2
GSI				IAmb	IAmb	10 11 46.5	
	comp=Z,11nm,0.9s						
KLR	Kul'dur	59.25	343	P	P	10 11 43.0	-0.6
	comp=Z,1.8nm,0.9s,baz=230,slow=5.1,SNR=3.6						
XAN	Xi'an	59.29	316	P	P	10 11 44.5	+0.2
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,70nm,5.1s						
XAN	Xi'an	59.29	316	P	P	10 11 44.2	0.0
XAN				IAmb	IAmb	10 11 45.3	
	comp=Z,5.8nm,0.6s						
KMI	Kunming	59.59	304	P	P	10 12 00.5	+14
KMI				pmax	pmax		
	comp=Z,16nm,1.1s						
KMI				LR	LR		
	comp=N,280nm,17.3s						
KMI				LR	LR		
	comp=E,570nm,17.7s						
KMI				LR	LR		
	comp=Z,380nm,17.5s						
PEA0B	Petropavlovsk-	59.72	2	P	P	10 11 46.1	-0.7
PETK	Petropavlovsk-	59.72	2	P	P	10 11 45.9	-0.9
	comp=Z,0.6nm,0.5s,baz=155,slow=7.3,SNR=8.6						
CMAR	Chiang Mai Arr	60.35	296	P	P	10 11 53.2	+1.4
	comp=Z,2.4nm,0.5s,baz=122,slow=4.4,SNR=13						
HHC	Hu-ho-hao-te	61.70	324	P	P	10 12 01.0	+0.4
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,61nm,7.7s						
LZH	Lanzhou	63.90	316	eP	P	10 12 17.2	+1.7
LZH				pP	pP	10 12 28.0	+2.8
LZH				sP	pwP	10 12 34.4	+1.4
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
PBA	Port Blair	64.21	286	P	P	10 12 14.6	-3.0
GTA	Gaotai	68.33	317	P	P	10 12 45.3	+1.5
GTA				pP	pP	10 12 56.4	+2.8
GTA				sP	pwP	10 13 01.8	+0.3
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GTA				LR	LR		
	comp=N,170nm,16.2s						
GTA				LR	LR		
	comp=E,260nm,17.5s						
GTA				LR	LR		
	comp=Z,150nm,16.2s						
ULN	Ulaanbaatar	68.62	328	P	P	10 12 44.9	-0.6
SONM	Songino Array	68.95	327	P	P	10 12 47.5	0.0
	comp=Z,2.6nm,0.8s,baz=133,slow=6.5,SNR=8.4						
SDPT	Sand Point	72.22	25	P	P	10 13 05.6	-1.4
ODAN	Odare	73.10	301	eP	P	10 13 14.7	+1.5
	comp=Z,43nm,0.7s						
RAMN	Ramite	73.80	300	eP	P	10 13 18.8	+1.4
JIRN	Jiri	74.35	301	eP	P	10 13 22.2	+1.5
GUN	Gumba	74.69	301	eP	P	10 13 23.9	+1.3
	comp=Z,33nm,0.6s						
PKI	Pulchoki	74.99	301	eP	P	10 13 25.2	+0.8
	comp=Z,13nm,0.6s						
DMN	Daman	75.26	301	eP	P	10 13 27.2	+1.4
	comp=Z,34nm,0.8s						
GKN	Gorkha	75.77	301	eP	P	10 13 29.8	+1.2
KOLN	Koldanda	76.59	301	eP	P	10 13 34.1	+0.7
	comp=Z,13nm,0.7s						
DANN	Dangsing	76.61	301	eP	P	10 13 34.1	+0.5
	comp=Z,17nm,0.7s						
KDAK	Kodiak Island	77.14	26	LR	LR	10 40 48.2	
	comp=Z,128nm,20.1s,baz=337,slow=30						
PYUN	Piuthan	77.20	301	eP	P	10 13 37.7	+0.9
WMQ	Urumqi	78.41	317	eP	P	10 13 43.8	+0.8
HOM	Homer	78.63	25	P	P	10 13 40.9	-2.8
CNPM	China Poot	78.73	25	P	P	10 13 45.0	+0.7
BRLK	Bradley Lake	79.01	25	P	P	10 13 43.8	-2.1
BRLK				IAmb	IAmb	10 14 00.8	
	comp=Z,10nm,0.6s						
SEW	Seward	79.80	25	P	P	10 13 48.9	-1.2
SEW				IAmb	IAmb	10 13 59.7	
	comp=Z,7.2nm,0.7s						
MK31	Makanchi Array	83.00	319	P	P	10 14 06.4	-1.1
MKAR	Makanchi Array	83.00	319	P	P	10 14 07.8	+0.4
	comp=Z,2.6nm,0.7s,baz=104,slow=5.5,SNR=32						
QSPA	South Pole Qui	83.19	180	P	P	10 14 07.3	-0.9
QSPA				IAmb	IAmb	10 14 20.6	
	comp=Z,17nm,1.4s						
MAKZ	Makanchi	83.21	319	P	P	10 14 07.8	-0.8
MAKZ				IAmb	IAmb	10 14 10.2	
	comp=Z,4.4nm,0.8s						
CTGM	Chitina Glacie	83.71	26	P	P	10 14 09.5	-1.5
ZALV	Zalesovo Beam	83.79	326	P	P	10 14 10.4	-0.9
	comp=Z,1.0nm,0.5s,baz=124,slow=4.8,SNR=4.7						
HYT	Haines Junctio	85.36	27	P	P	10 14 18.7	-0.6
HYT				IAmb	IAmb	10 14 28.7	
	comp=Z,4.9nm,0.8s						
KSH	Kashi	85.59	310	P	P	10 14 23.5	+2.6
KSH				pP	sP	10 14 35.2	+0.6
KSH				PP	PP	10 17 44.9	+4.8
KSH	Kashi	85.59	310	S	S	10 24 51.5	+1.2
KSH	Kashi	85.59	310	SS	SS	10 30 30.0	+3.0
KSH				pmax	pmax		
	comp=Z,32nm,1.0s						
KSH				pmax	pmax		
	comp=Z,270nm,5.7s						
KSH				LR	LR		
	comp=N,190nm,14.1s						
KSH				LR	LR		
	comp=E,110nm,12.8s						
KSH				LR	LR		
	comp=Z,300nm,15.7s						
NIL	Nilore	86.58	304	P	P	10 14 25.6	-0.2
NIL				IAmb	IAmb	10 14 30.6	
	comp=Z,7.7nm,1.1s						
YBH	Yreka Blue Hor	89.03	48	LR	LR	10 47 56.9	
	comp=Z,145nm,20.4s,baz=318,slow=31						
ORV	Oroville	89.58	50	P	P	10 14 39.3	-0.7
ORV				IAmb	IAmb	10 14 40.5	
	comp=Z,1.8nm,0.8s						
AFDM	Forest Hills D	89.89	51	P	P	10 14 40.3	-1.2
AFDM				IAmb	IAmb	10 14 43.1	
	comp=Z,2.8nm,0.9s						
F04A	Amboy	89.95	44	P	P	10 14 38.9	-2.6
RYN	Ryan	91.74	51	P	P	10 14 49.9	-0.3
RYN				IAmb	IAmb	10 14 51.0	
	comp=Z,4.0nm,1.0s						
NVAR	Mina Array Bea	91.89	52	P	P	10 14 51.0	0.0
	comp=Z,2.7nm,0.8s,baz=250,slow=6.1,SNR=22						
NV11	Mina Array Sit	92.00	52	P	P	10 14 51.1	-0.3
NV11				IAmb	IAmb	10 14 52.3	
	comp=Z,4.0nm,0.9s						
KVN	Kaiserville	92.12	51	P	P	10 14 50.3	-1.8
KVN				IAmb	IAmb	10 14 52.7	
	comp=Z,3.2nm,0.9s						
R11A	Troy Canyon, C	94.00	52	P	P	10 14 58.9	-1.8
R11A				IAmb	IAmb	10 15 01.6	
	comp=Z,2.8nm,1.1s						
SHPR	Sheep Range	94.17	54	P	P	10 15 01.1	-0.4
SHPR				IAmb	IAmb	10 15 02.7	
	comp=Z,2.6nm,0.9s						
CCUT	Cedar City	95.69	53	P	P	10 15 09.1	+0.6
U15A	North Rim	96.47	54	P	P	10 15 12.6	+0.5
U15A				IAmb	IAmb	10 15 14.4	
	comp=Z,2.0nm,0.9s						
RDMU	Red Mountain	98.78	50	P	P	10 15 22.2	-0.2
PDAR	Pinedale Array	98.84	48	P	P	10 15 20.9	-1.7
	comp=Z,0.5nm,0.8s,baz=250,slow=4.4,SNR=4.4						
ARCES	ARCESS Array B	109.28	343	PKiKP	PKiKP	10 20 11.1	-0.5
	comp=Z,3.2nm,1.1s,baz=60,slow=2.2,SNR=1.4						
FINES	FINESS Array B	113.59	336	PKiKP	PKiKP	10 20 19.4	-0.6
	comp=Z,0.9nm,0.7s,baz=83,slow=3.5,SNR=1.7						
AKASG	Malin Array Be	117.15	324	PKP	PKPdf	10 20 25.5	-1.6
	comp=Z,0.9nm,0.5s,baz=48,slow=2.3,SNR=3.3						
BRTR	Keskin Array B	117.96	312	PKP	PKPdf	10 20 27.3	-2.0
	comp=Z,0.4nm,0.7s,baz=49,slow=3.6,SNR=2.5						
GERES	GERESS Array B	126.68	329	PKP	PKPdf	10 20 45.5	-0.2
	comp=Z,1.5nm,0.7s,baz=76,slow=2.0,SNR=9.1						
BDFB	Brasilia	148.40	135	PKPbc	PKPbc	10 21 28.8	-0.9
	comp=Z,3.1nm,0.7s,baz=24,slow=0.9,SNR=5.1						
BDFB	Brasilia	148.40	135	PKPdf	PKPdf	10 21 22.9	-3.2
TOA0	Torodi Ar. Sit	152.60	285		PKPbc	10 21 39.9	+0.3
TORD	Torodi Ar. Bea	152.60	285	PKPbc	PKPbc	10 21 39.5	-0.2
	comp=Z,4.0nm,0.8s,baz=93,slow=2.4,SNR=18						

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*IDC **03** 10:09:45.6±0.7, 68°.03N×162°.26W, h0km, mb3.9/14, mb1 4.1/18, mb1mx3.9/68, mbtmp3.9/18, ML4.1/5, MS3.7/1, Ms1 3.7/1, ms1mx3.0/52, Error ellipse: s-maj=20.8km s-min=12.1km az=33.0*

*AEIC **03** 10:09:45.1±2.7, 67°.66N±0°.04×162°.4W±0°.1, h11km±4km, ML4.3/49, mb4.1/15(NEIC), Error ellipse: s-maj=8.1km s-min=5.8km az=82.0*

*NEIC **03** 10:09:45.7±2.5, 67°.67N±0°.04×162°.5W±0°.1, h12km±3km, Error ellipse: s-maj=7.3km s-min=5.1km az=218.0*

ISC 03 10:09:45.8±0.5, **67°.70N**±0°.05×**162°.32W**±0°.05, **h10**km, **n108**, σ**1**§**29**/106, **mb4.0**/22, **Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.42	329		Pg	10 09 53.8	-0.3
RDOG					Sg	10 10 00.0	+0.3
ANM	Nome	3.38	203	Pn	Pn	10 10 36.7	-1.8
ANM					Pn	10 10 37.1	-1.4
ANM				Sn	Sn	10 11 15.8	-2.9
IM03		3.80	113		Pn	10 10 44.0	-0.3
IM03					Lg	10 11 29.9	
PS05	TAPS Pump Stn5	4.61	96		Pn	10 10 54.5	-0.9
PS05					Lg	10 11 49.2	
COLD	Coldfoot	4.69	90		Pn	10 10 57.6	+1.1
TOLK	Toolik Lake Re	4.85	73	P	Pn	10 10 59.8	+1.0
	baz=264						
TOLK				S	Sn	10 11 55.5	+0.6
	baz=264						
TOLK	Toolik Lake Re	4.85	73		Pn	10 10 59.5	+0.7
TOLK	Toolik Lake Re	4.85	73	Sn	Sn	10 11 55.3	+0.3
PS06	TAPS Pump Stn6	5.31	104		Pn	10 11 04.9	-0.1
MLY	Manley	5.37	114		Pn	10 11 05.0	-0.9
TTA	Tatalina	5.46	148		Pn	10 11 06.8	-0.4
TT01	Tatalina	5.48	148		Pn	10 11 07.1	-0.3
PS01	TAPS Pump Stn	5.56	56		Pn	10 11 08.8	+0.4
BPAW	Bear Paw Mtn.	5.88	123		Pn	10 11 12.5	-0.3
PS07	TAPS Pump Stn7	6.10	107		Pn	10 11 15.9	0.0
NEA	Nenana	6.21	114		Pn	10 11 17.0	-0.5
KTH	Kantishna Hill	6.28	126		Pn	10 11 18.2	-0.2
MDM	Murphy Dome	6.30	109		Pn	10 11 19.1	+0.4
BWN	Browne	6.33	118		Pn	10 11 19.7	+0.6
PPLA	Purkeypile	6.42	134		Pn	10 11 20.1	-0.2
TCOL	CIGO, UAF Yank	6.48	109	P	Pn	10 11 21.7	+0.7
	baz=302						
TCOL	CIGO, UAF Yank	6.48	109		Pn	10 11 21.5	+0.5
COLA	College	6.48	109		Pn	10 11 21.0	-0.1
POKR	Poker Plat Res	6.51	106	P	Pn	10 11 21.7	+0.3
	baz=300						
POKR	Poker Plat Res	6.51	106		Pn	10 11 21.9	+0.4
TRF	Thorofare Moun	6.55	125		Pn	10 11 21.7	-0.5
WRH	Wood River Hil	6.62	113		Pn	10 11 22.8	-0.2
CCB	Clear Creek Bu	6.62	111		Pn	10 11 22.6	-0.5
FYU	Fort Yukon	6.75	92		Pn	10 11 24.4	-0.4
BM03	Burnt Mountain	6.78	84		Pn	10 11 25.6	+0.4
MCK	McKinley	6.79	119		Pn	10 11 25.0	-0.5
IL31		6.88	108		Pn	10 11 26.9	+0.3
ILAR	Eielson Array	6.88	108	Pn	Pn	10 11 26.1	-0.6
	21nm,0.3s,baz=302,slow=13,SNR=530						
ILAR				Sn	Sn	10 12 43.3	-1.6
	baz=304,slow=23,SNR=4.3						
RND	Reindeer	7.04	121		Pn	10 11 28.9	0.0
HDA	Harding Lake	7.06	111	P	Pn	10 11 28.7	-0.4
	baz=304						
HDA	Harding Lake	7.06	111		Pn	10 11 28.8	-0.3
WAT2	Susitna Watana	7.44	123		Pn	10 11 35.0	+0.6
STLK	Strandline Lak	7.67	139		Pn	10 11 38.3	+0.8
SPWE	Spurr West	7.69	142		Pn	10 11 38.6	+0.8
DHY	Denali Highway	7.76	120		Pn	10 11 39.1	+0.4
RIDG	Independent Ri	8.21	111		Pn	10 11 44.9	+0.1
GHO	Glory Hole Cre	8.24	130		Pn	10 11 46.2	+0.9
RSO	Redoubt South	8.37	146		Pn	10 11 47.9	+0.7
SCRK	Sand Creek	8.38	108		Pn	10 11 46.9	-0.3
SML	Sawmill	8.39	128		Pn	10 11 47.5	+0.2
DOT	Dot Lake	8.54	110		Pn	10 11 49.2	-0.2
SCM	Sheep Creek Mo	8.67	126		Pn	10 11 51.6	+0.4
EGAK	Eagle	9.01	99		Pn	10 11 55.7	-0.1
HOM	Homer	9.34	145	Pn	Pn	10 12 01.1	+0.9
BRLK	Bradley Lake	9.42	142		Pn	10 12 02.7	+1.4
SEW	Seward	9.47	137		Pn	10 12 04.4	+2.3
GLI	Glacier Island	9.49	129		Pn	10 12 03.6	+1.3
CNPM	China Poot	9.55	144		Pn	10 12 04.0	+0.8
FID	Port Fidalgo	9.78	128		Pn	10 12 06.6	+0.4
DAWY	Dawson	10.03	100		Pn	10 12 09.4	-0.4
EPYK	Eagle Plains	10.06	86	P	Pn	10 12 10.5	+0.4
	baz=289						
GLB	Gilahina Butte	10.10	120		Pn	10 12 12.5	+1.8
INK	Inuvik	10.77	73	Pn	Pn	10 12 18.8	-0.9
	2.0nm,0.3s,baz=294,slow=9.2,SNR=47						
INK	Inuvik	10.77	73		Pn	10 12 18.6	-1.1
CRQM	Cirque	10.82	121		Pn	10 12 23.5	+2.7
BALM	Baldy	10.88	118		Pn	10 12 22.8	+1.3
KDAK	Kodiak Island	10.88	151	Pn	Pn	10 12 22.6	+1.3
	0.5nm,0.3s,baz=0.2,slow=9.6,SNR=18						
KDAK	Kodiak Island	10.88	151		Pn	10 12 23.0	+1.6
WAX	Waxell Ridge	11.15	121		Pn	10 12 26.4	+1.3
CTGM	Chitina Glacie	11.28	117	Pn	Pn	10 12 26.2	-0.6
OHAK	Old Harbor	11.29	154	Pn	Pn	10 12 28.5	+1.5
BILL	Bilibino	11.78	286		Pn	10 12 32.2	-1.4
HYT	Haines Junctio	12.71	111		Pn	10 12 46.5	0.0
A36M	Sachs Harbour	13.30	55	P	Pn	10 12 51.6	-2.8
	baz=270						
WHY	Whitehorse	13.77	108		Pn	10 12 59.2	-1.7
C36M	Paulatuk	13.95	66	P	Pn	10 12 59.0	-4.2
	baz=281						
C36M	Paulatuk	13.95	66		Pn	10 12 59.1	-4.0
DLBC	Dease Lake	17.09	107	P	P	10 13 45.8	-0.6
	0.2nm,0.3s,baz=299,slow=9.3,SNR=4.0						
DLBC	Dease Lake	17.09	107	IAmb	IAmb	10 13 50.5	
	comp=Z,18nm,1.5s						
SEY	Seymchan	19.14	277	P	Pn	10 14 11.1	+1.6
	comp=Z,0.1nm,0.3s,baz=39,slow=23,SNR=2.6						
YKA	Yellowknife Ar	20.30	82	P	P	10 14 21.5	+0.1
	comp=Z,2.8nm,0.6s,baz=303,slow=9.6,SNR=23						
RES	Resolute Bay	21.57	42	P	P	10 14 33.7	-1.1
	comp=Z,1.9nm,0.8s,baz=253,slow=19,SNR=2.7						
RES	Resolute Bay	21.57	42	P	P	10 14 34.7	-0.2
MA2	Magadan	21.82	271	LR	LR	10 23 16.1	
	comp=Z,180nm,18.3s,baz=347,slow=37						
PETK	Petropavlovsk-	23.97	252	P	P	10 15 01.3	+1.4
	comp=Z,1.6nm,1.0s,baz=20,slow=9.2,SNR=2.0						
SPITS	Spitsbergen Ar	34.34	0	P	P	10 16 29.0	-2.9
	comp=Z,6.1nm,1.0s,baz=294,slow=11,SNR=1.7						
YHH	Holmes Hill	35.09	104	P	P	10 16 40.7	+1.6
SNOW	Snow King Moun	36.26	105	IAmb	IAmb	10 16 54.2	
	comp=Z,1.9nm,0.7s						
PDAR	Pinedale Array	37.30	105	P	P	10 16 59.0	+1.1
	comp=Z,1.1nm,0.6s,baz=335,slow=8.0,SNR=11						
WAKR	Walker	37.58	119	P	P	10 16 57.6	-2.7
NVAR	Mina Array Bea	38.03	118	P	P	10 17 05.9	+1.8
	comp=Z,2.1nm,0.8s,baz=313,slow=6.7,SNR=15						
NV11	Mina Array Sit	38.08	117	IAmb	IAmb	10 17 07.0	
	comp=Z,3.0nm,0.9s						
R11A	Troy Canyon, C	39.03	115	P	P	10 17 13.8	+1.3
GSC	Goldstone, Bar	41.36	118	P	P	10 17 33.6	+1.9
GSC				IAmb	IAmb	10 17 34.2	
	comp=Z,5.1nm,1.2s						
PV13	Radium Mtn., P	41.61	107	P	P	10 17 35.1	+1.2
PV01	Paradox Valley	41.72	107	IAmb	IAmb	10 17 37.1	
	comp=Z,5.7nm,1.1s						
WUAZ	Wupatki	43.05	112	IAmb	IAmb	10 17 47.9	
	comp=Z,3.3nm,0.9s						
ANMO	Albuquerque	45.33	107	P	P	10 18 05.3	+1.5
ANMO				IAmb	IAmb	10 18 11.2	
	comp=Z,3.4nm,1.4s						
ZALV	Zalesovo Beam	48.86	314	P	P	10 18 30.1	-0.8
	comp=Z,0.9nm,0.6s,baz=44,slow=6.6,SNR=2.2						
FINES	FINESS Array B	51.01	355	P	P	10 18 46.5	-0.6
	comp=Z,1.6nm,0.7s,baz=12,slow=7.1,SNR=5.9						
TX31	Lajitas Ar. Si	51.40	107	P	P	10 18 51.6	+1.0
TX32	Lajitas Array	51.40	107	P	P	10 18 51.6	+1.0
TXAR	Lajitas Array	51.40	107	P	P	10 18 51.5	+1.0
	comp=Z,2.9nm,0.6s,baz=335,slow=6.0,SNR=37						
HHC	Hu-ho-hao-te	51.55	285	P	P	10 18 52.6	+1.0
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,73nm,7.3s						
JCT	Junction City	51.79	103	IAmb	IAmb	10 19 12.9	
	comp=Z,3.9nm,0.9s						
MKAR	Makanchi Array	56.01	312	P	P	10 19 23.0	-1.0
	comp=Z,0.3nm,0.4s,baz=35,slow=5.9,SNR=5.4						
WMQ	Urumqi	57.09	306	eP	P	10 19 34.0	+2.2
AKASG	Malin Array Be	61.61	352	P	P	10 20 02.2	-0.6
	comp=Z,0.4nm,0.3s,baz=2.0,slow=6.6,SNR=1.8						
GERES	GERESS Array B	63.75	3	P	P	10 20 17.1	-0.1
	comp=Z,0.9nm,1.0s,baz=46,slow=7.0,SNR=3.9						
KSH	Kashi	64.50	313	P	P	10 20 25.0	+2.6
KSH				pP	sP	10 20 29.7	+2.9
KSH				sP	pP	10 20 31.4	+5.8
KSH				pmax	pmax		
	comp=Z,33nm,1.3s						
KSH				pmax	pmax		
	comp=Z,160nm,4.8s						
MSSA	Maissana	68.14	6	P	P	10 20 46.7	+1.1
ESDC	Sonseca Array	71.71	17	P	P	10 21 07.4	-0.2
	comp=Z,0.6nm,0.7s,baz=352,slow=6.8,SNR=5.0						
CMAR	Chiang Mai Arr	76.36	285	P	P	10 21 37.6	+2.7
	comp=Z,0.9nm,0.5s,baz=24,slow=6.9,SNR=1.2						

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*IDC **03** 10:11:24.5±0.6, 67°.96N×162°.44W, h0km, mb3.9/24, mb1 4.2/28, mb1mx4.0/70, mbtmp4.0/28, ML4.1/5, MS3.7/5, Ms1 3.7/5, ms1mx3.2/55, Error ellipse: s-maj=17.1km s-min=10.2km az=20.0*

*AEIC **03** 10:11:24.3±3.0, 67°.69N±0°.06×162°.67W±0°.07, h26km±4km, ML4.3/25, mb4.3/12(NEIC), Error ellipse: s-maj=9.5km s-min=2.9km az=166.0*

*NEIC **03** 10:11:26.2±2.3, 67°.76N±0°.07×162°.4W±0°.2, h21km±4km, Error ellipse: s-maj=10.3km s-min=8.3km az=199.0*

ISC 03 10:11:25.0±0.5, **67°.80N**±0°.06×**162°.28W**±0°.05, **h10**km, **n90**, σ**1**§**26**/90, **mb4.1**/30, **MS3.7**/4, **Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.35	318		Pb	10 11 32.7	-0.7
RDOG					Sb	10 11 38.9	-0.1
IM03		3.82	114		Pn	10 12 23.1	-0.7
IM03					Sn	10 13 09.5	+0.8
TOLK	Toolik Lake Re	4.81	74	S	Sn	10 13 35.0	+1.9
	baz=265						
MLY	Manley	5.40	116	Pn	Pn	10 12 46.1	+0.5
PS01	TAPS Pump Stn	5.49	57		Pn	10 12 46.8	+0.1
PS01					Sn	10 13 49.7	0.0
TTA	Tatalina	5.54	149	Pn	Pn	10 12 46.1	-1.4
TT01	Tatalina	5.56	149		Pn	10 12 46.1	-1.6
GAMB	Gambell	5.59	228	Pn	Pn	10 12 44.5	-3.6
BPAW	Bear Paw Mtn.	5.92	123		Pn	10 12 52.9	+0.3
PS07	TAPS Pump Stn7	6.12	107		Pn	10 12 54.6	-0.7
NEA	Nenana	6.24	115		Pn	10 12 56.6	-0.4
MDM	Murphy Dome	6.32	110		Pn	10 12 58.5	+0.3
KTH	Kantishna Hill	6.33	127		Pn	10 12 57.4	-0.9
PPLA	Purkeypile	6.47	135		Pn	10 12 59.8	-0.6
TCOL	CIGO, UAF Yank	6.50	110	P	Pn	10 13 01.0	+0.4
	baz=302						
TCOL	CIGO, UAF Yank	6.50	110		Pn	10 13 00.8	+0.2
COLA	College	6.50	110		Pn	10 13 00.4	-0.1
COLA	College	6.50	110		Pn	10 13 01.2	+0.7
POKR	Poker Plat Res	6.52	107	P	Pn	10 13 01.2	+0.4
	baz=300						
POKR	Poker Plat Res	6.52	107		Pn	10 13 00.8	-0.1
CCB	Clear Creek Bu	6.64	112		Pn	10 13 02.4	-0.2
WRH	Wood River Hil	6.65	113	Pn	Pn	10 13 02.5	-0.1
BM03	Burnt Mountain	6.76	85		Pn	10 13 04.8	+0.7
MCK	McKinley	6.83	120	Pn	Pn	10 13 04.7	-0.4
IL31		6.90	109	Pn	Pn	10 13 05.9	-0.2
ILAR	Eielson Array	6.90	109	Pn	Pn	10 13 05.5	-0.6
	18nm,0.3s,baz=300,slow=14,SNR=35						
ILAR				Sn	Sn	10 14 22.8	-1.8
	baz=306,slow=24,SNR=4.5						
RND	Reindeer	7.08	122	Pn	Pn	10 13 08.2	-0.4
HDA	Harding Lake	7.08	111	P	Pn	10 13 08.8	+0.2
	baz=304						
HDA	Harding Lake	7.08	111		Pn	10 13 08.8	+0.2
RIDG	Independent Ri	8.23	111	Pn	Pn	10 13 24.6	+0.3
PMR	Palmer	8.38	132	Pn	Pn	10 13 25.7	-0.5
SML	Sawmill	8.44	129	Pn	Pn	10 13 27.2	+0.1
DOT	Dot Lake	8.56	110	Pn	Pn	10 13 30.3	+1.5
RC01	Rabbit Creek A	8.62	135	Pn	Pn	10 13 29.1	-0.6
SCM	Sheep Creek Mo	8.72	126	Pn	Pn	10 13 31.6	+0.6
EGAK	Eagle	9.01	100	Pn	Pn	10 13 33.7	-1.2
GLI	Glacier Island	9.54	129	Pn	Pn	10 13 40.7	-1.6
FID	Port Fidalgo	9.82	128	Pn	Pn	10 13 45.0	-1.1
EPYK	Eagle Plains	10.04	86	P	Pn	10 13 49.4	+0.3
	baz=289						
EPYK	Eagle Plains	10.04	86	Pn	Pn	10 13 49.9	+0.9
GLB	Gilahina Butte	10.13	120	Pn	Pn	10 13 51.1	+0.7
INK	Inuvik	10.72	74	Pn	Pn	10 13 57.5	-0.8
	1.6nm,0.3s,baz=311,slow=15,SNR=8.6						
INK				Sn	Sn	10 15 50.5	-7.7
	0.6nm,0.3s,baz=252,slow=15,SNR=7.0						
INK				LR	LR	10 18 51.1	
	comp=Z,322nm,18.1s,baz=263,slow=42						
INK	Inuvik	10.72	74		Pn	10 13 58.1	-0.3
KDAK	Kodiak Island	10.96	152	Pn	Pn	10 14 01.8	+0.1
	1.0nm,0.3s,baz=19,slow=10,SNR=8.9						
A36M	Sachs Harbour	13.23	55	S	Sn	10 16 49.9	-10
	baz=270						
DLBC	Dease Lake	17.11	107	P	P	10 15 27.7	+1.9
	0.3nm,0.3s,baz=320,slow=9.7,SNR=4.7						
SEY	Seymchan	19.14	277	P	Pn	10 15 49.8	+1.0
	0.1nm,0.3s,baz=38,slow=22,SNR=4.8						
YKA	Yellowknife Ar	20.27	82	P	P	10 16 00.8	+0.5
	5.5nm,0.6s,baz=303,slow=10.0,SNR=13						
RES	Resolute Bay	21.48	42	P	P	10 16 14.4	+1.2
	1.8nm,0.7s,baz=260,slow=18,SNR=1.9						
RES				LR	LR	10 26 49.3	
	comp=Z,157nm,19.6s,baz=300,slow=43						
MA2	Magadan	21.84	271	P	P	10 16 17.5	+0.4
	4.7nm,0.7s,baz=67,slow=13,SNR=3.0						
PETK	Petropavlovsk-	24.02	252	P	P	10 16 40.1	+0.5
	2.4nm,1.0s,baz=101,slow=4.6,SNR=4.8						
NRIK	Noril'sk	35.09	325	P	P	10 18 17.4	-0.2
	2.4nm,0.6s,baz=68,slow=11,SNR=3.9						
KLR	Kul'dur	36.88	274	P	P	10 18 33.5	+0.3
	1.0nm,0.6s,baz=28,slow=15,SNR=2.5						
PDAR	Pinedale Array	37.31	105	P	P	10 18 38.3	+1.0
	0.8nm,0.5s,baz=334,slow=6.9,SNR=7.1						
NVAR	Mina Array Bea	38.06	118	P	P	10 18 44.8	+1.3
	1.9nm,0.7s,baz=316,slow=7.3,SNR=11						
NV11	Mina Array Sit	38.11	118	P	P	10 18 45.1	+1.3
NV11				IAmb	IAmb	10 18 48.9	
	comp=Z,3.7nm,0.9s						
R11A	Troy Canyon, C	39.06	115	P	P	10 18 52.8	+0.8
SZCU	Shurtz Canyon	40.60	113	P	P	10 19 06.0	+1.2
PV13	Radium Mtn., P	41.63	108	P	P	10 19 14.4	+1.2
PV13				IAmb	IAmb	10 19 14.6	
	comp=Z,3.6nm,1.0s						
ARCES	ARCESS Array B	42.83	356	PcP	PcP	10 21 12.0	-1.1
	comp=Z,1.8nm,0.8s,baz=15,slow=5.8,SNR=4.2						
MJAR	Matsushiro Arr	45.28	258	P	P	10 19 42.8	+0.3
	comp=Z,1.4nm,0.6s,baz=24,slow=8.3,SNR=2.9						
SONM	Songino Array	47.35	294	P	P	10 19 59.1	+0.4
	comp=Z,0.2nm,0.3s,baz=64,slow=6.6,SNR=1.6						
KSRS	Korea Array	48.35	268	P	P	10 20 07.5	+1.1
	comp=Z,1.5nm,0.7s,baz=17,slow=8.0,SNR=3.8						
KSRS				LR	LR	10 41 06.6	
	comp=Z,60nm,18.0s,baz=330,slow=37						
ZAA0	Zalesovo Array	48.80	314	P	P	10 20 10.8	+1.1
ZAA0				IAmb	IAmb	10 20 15.9	
	comp=Z,4.7nm,1.1s						
ZALV	Zalesovo Beam	48.80	314	P	P	10 20 09.0	-0.7
	comp=Z,2.0nm,0.6s,baz=23,slow=7.8,SNR=3.9						
ZALV				LR	LR	10 43 36.0	
	comp=Z,98nm,19.2s,baz=346,slow=40						
X34A	Smith Ranch, M	48.84	99	P	P	10 20 09.6	-0.7
FINES	FINESS Array B	50.91	355	P	P	10 20 25.5	-0.1
	comp=Z,0.8nm,0.5s,baz=14,slow=6.9,SNR=5.3						
NOA	NORSAR Array B	51.38	4	P	P	10 20 29.2	+0.1
	comp=Z,0.4nm,0.7s,baz=8.8,slow=7.0,SNR=3.4						
TX31	Lajitas Ar. Si	51.41	108	P	P	10 20 30.4	+0.5
TX32	Lajitas Array	51.41	108	P	P	10 20 30.4	+0.5
TX32				IAmb	IAmb	10 20 30.9	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,2.4nm,0.8s						
TXAR	Lajitas Array	51.41	108	P	P	10 20 30.6	+0.7
	comp=Z,1.9nm,0.8s,baz=332,slow=5.8,SNR=11						
HHC	Hu-ho-hao-te	51.54	285	P	P	10 20 27.8	-2.9
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,65nm,9.4s						
JCT	Junction City	51.80	103		S	10 27 52.5	-2.0
TKL	Tuckaleechee C	53.24	85	P	P	10 20 43.6	+0.4
	comp=Z,3.9nm,0.9s,baz=331,slow=4.1,SNR=4.3						
TKL	Tuckaleechee C	53.24	85	IAmb	IAmb	10 20 46.6	
	comp=Z,8.2nm,1.1s						
KURK	Kurchatov	53.38	316	P	P	10 20 43.6	-0.5
KURK				IAmb	IAmb	10 20 51.0	
	comp=Z,4.9nm,0.8s						
MK31	Makanchi Array	55.95	312	P	P	10 21 02.2	-0.6
MKAR	Makanchi Array	55.95	312	P	P	10 21 01.7	-1.1
	comp=Z,1.0nm,0.7s,baz=40,slow=6.3,SNR=6.4						
MAKZ	Makanchi	56.03	312		pP	10 21 08.7	+2.1
WMQ	Urumqi	57.05	306	*e*P	P	10 21 10.0	-0.7
AKASG	Malin Array Be	61.51	352	P	P	10 21 41.2	-0.2
	comp=Z,1.1nm,0.4s,baz=6.6,slow=6.5,SNR=5.1						
AAK	Ala-Archa	61.93	316	P	P	10 21 44.2	-0.4
	comp=Z,1.6nm,0.7s,baz=252,slow=6.4,SNR=2.3						
AAK	Ala-Archa	61.93	316	IAmb	IAmb	10 21 59.0	
	comp=Z,3.2nm,0.9s						
GERES	GERESS Array B	63.65	3	P	P	10 21 56.4	+0.6
	comp=Z,0.8nm,0.8s,baz=12,slow=5.1,SNR=3.9						
KSH	Kashi	64.44	313	P	P	10 22 02.1	+0.9
KSH				pP	sP	10 22 09.2	+3.5
KSH				sP	pP	10 22 12.8	+8.3
KSH				pmax	pmax		
	comp=Z,20nm,1.1s						
KSH				pmax	pmax		
	comp=Z,60nm,4.8s						
KBZ	Khabaz	67.19	340	P	P	10 22 19.4	+0.8
	comp=Z,0.9nm,0.6s,baz=281,slow=3.3,SNR=2.3						
ESDC	Sonseca Array	71.61	17	P	P	10 22 47.0	+0.9
	comp=Z,0.9nm,0.7s,baz=355,slow=6.3,SNR=6.7						
BRTR	Keskin Array B	72.13	347	P	P	10 22 49.1	-0.3
	comp=Z,0.6nm,0.8s,baz=34,slow=3.6,SNR=2.9						
CMAR	Chiang Mai Arr	76.35	285	P	P	10 23 14.5	+0.4
	comp=Z,0.6nm,0.3s,baz=7.5,slow=6.9,SNR=4.1						
NNA	Nana	99.28	99	LR	LR	11 17 34.0	
	comp=Z,31nm,18.4s,baz=134,slow=40						

IDC 03 10:12:21.0±1.7**,6°.91S**×**154°.69E,h0km,mb3.6**/4**, mb1 3.9**/4**,mb1mx3.5**/46**,mbtmp3.6**/4**,Error ellipse: s-maj=75.8km s-min=30.0km az=132.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.61	235	P	P	10 17 33.6	-0.3
	1.1nm,0.8s,baz=59,slow=9.2,SNR=5.7						
ASAR	Alice Springs	26.00	228	P	P	10 17 56.0	+0.1
	0.6nm,0.8s,baz=60,slow=8.8,SNR=9.5						
MKAR	Makanchi Array	83.14	319	P	P	10 24 49.8	+0.8
	0.6nm,0.7s,baz=103,slow=5.4,SNR=5.8						
NVAR	Mina Array Bea	91.91	52	P	P	10 25 32.2	+0.3
	0.4nm,0.7s,baz=254,slow=6.5,SNR=3.8						
TORD	Torodi Ar. Bea	152.71	285	PKPbc	PKPbc	10 32 19.6	-1.3
	0.6nm,0.7s,baz=67,slow=2.4,SNR=3.6						

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*NEIC **03** 10:15:32.5±2.0, 67°.62N±0°.03×162°.4W±0°.1, h9km±5km, Error ellipse: s-maj=8.5km s-min=2.8km az=68.0*
*AEIC **03** 10:15:32.1±2.2, 67°.69N±0°.05×162°.4W±0°.1, h19km±3km, ML3.6/15, Error ellipse: s-maj=7.4km s-min=6.4km az=210.0*
*IDC **03** 10:15:32.3±1.0, 67°.89N×162°.55W, h0km, mb3.7/9, mb1 4.0/11, mb1mx3.7/68, mbtmp3.8/11, ML4.1/3, Error ellipse: s-maj=24.7km s-min=15.5km az=35.0*
ISC 03 10:15:32.8±0.7**,67°.65N**±0°.06×**162°.34W**±0°.05**,h10km,n46,** σ**1s.45**/50**,mb3.6**/8**,Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.46	332		Pg	10 15 41.0	-0.8
RDOG					Sg	10 15 48.1	+0.3
ANM	Nome	3.34	203	Pn	Pn	10 16 24.3	-0.6
ANM					Sn	10 17 03.0	-1.5
IM03		3.79	112		Pn	10 16 31.0	0.0
IM03					Sn	10 17 14.8	-0.8
IM01	Indian Mountai	3.79	112		Pn	10 16 31.1	0.0
COLD	Coldfoot	4.70	90		Pn	10 16 44.7	+1.1
COLD	Coldfoot	4.70	90		Sn	10 17 37.8	-0.1
COLD	Coldfoot	4.70	90		Pn	10 16 45.7	+2.1
TOLK	Toolik Lake Re	4.87	72	P	Pn	10 16 48.6	+2.6
	baz=265						
TOLK				S	Sn	10 17 42.1	-0.3
	baz=265						
TOLK	Toolik Lake Re	4.87	72		Pn	10 16 47.4	+1.4
TOLK					Sn	10 17 41.1	-1.3
MLY	Manley	5.36	114		Pn	10 16 52.0	-0.7
TTA	Tatalina	5.43	148		Pn	10 16 53.9	+0.2
TT01	Tatalina	5.45	148		Pn	10 16 53.8	-0.1
PS01	TAPS Pump Stn	5.59	56		Pn	10 16 55.6	-0.2
BPAW	Bear Paw Mtn.	5.86	122		Pn	10 16 49.5	-10
MDM	Murphy Dome	6.29	109	Pn	Pn	10 17 06.0	+0.5
PPLA	Purkeypile	6.39	134		Pn	10 16 48.2	-19
TCOL	CIGO, UAF Yank	6.47	109	P	Pn	10 17 08.8	+0.9
	baz=302						
COLA	College	6.47	109		Pn	10 17 09.0	+1.1
POKR	Poker Plat Res	6.50	106	P	Pn	10 17 09.0	+0.7
	baz=300						
WRH	Wood River Hil	6.61	112		Pn	10 17 08.2	-1.6
CCB	Clear Creek Bu	6.61	110	Pn	Pn	10 17 10.2	+0.3
IL31		6.88	108	Pn	Pn	10 17 14.2	+0.8
ILAR	Eielson Array	6.88	108	Pn	Pn	10 17 13.6	+0.1
	14nm,0.3s,baz=302,slow=14,SNR=52						
ILAR				Sn	Sn	10 18 31.0	-0.7
	1.1nm,0.3s,baz=155,slow=44,SNR=0.9						
HDA	Harding Lake	7.05	110	P	Pn	10 17 15.5	-0.4
	baz=305						
HDA	Harding Lake	7.05	110	Pn	Pn	10 17 15.0	-0.9
RIDG	Independent Ri	8.20	110	Pn	Pn	10 17 28.4	-3.3
RSO	Redoubt South	8.34	145	Pn	Pn	10 17 29.9	-3.7
SCRK	Sand Creek	8.37	107	Pn	Pn	10 17 34.3	+0.2
DOT	Dot Lake	8.53	109	Pn	Pn	10 17 36.2	0.0
EPYK	Eagle Plains	10.07	85	Pn	Pn	10 17 57.6	+0.4
INK	Inuvik	10.79	73	Pn	Pn	10 18 05.3	-1.7
	1.1nm,0.3s,baz=286,slow=12,SNR=12						
INK				Sn	Sn	10 20 02.6	-4.9
	3.5nm,0.3s,baz=73,slow=23,SNR=7.2						
INK	Inuvik	10.79	73		Pn	10 18 04.9	-2.1
KDAK	Kodiak Island	10.85	151	Pn	Pn	10 18 09.6	+1.7
	0.3nm,0.3s,baz=9.6,slow=8.9,SNR=5.2						
YKA	Yellowknife Ar	20.32	82	P	P	10 20 08.2	-0.2
	1.5nm,0.4s,baz=304,slow=10,SNR=8.9						
PETK	Petropavlovsk-	23.95	253	P	P	10 20 46.3	-0.4
	1.0nm,0.8s,baz=46,slow=12,SNR=5.2						
LKWY	Lake	35.44	104	P	P	10 22 28.4	-0.6
PDAR	Pinedale Array	37.30	105	P	P	10 22 46.5	+1.6
	0.6nm,0.5s,baz=337,slow=7.3,SNR=7.7						
NVAR	Mina Array Bea	38.01	118	P	P	10 22 52.8	+1.9
	1.2nm,0.7s,baz=314,slow=7.3,SNR=9.4						
SCO	Scoresbysund	39.54	20	*i* P	P	10 23 12.5	+9.5
FINES	FINESS Array B	51.06	355	P	P	10 24 34.8	+0.3
	0.6nm,0.6s,baz=12,slow=8.5,SNR=1.4						
TX31	Lajitas Ar. Si	51.39	107	P	P	10 24 38.5	+1.0
TX32	Lajitas Array	51.39	107	P	P	10 24 38.5	+1.0
TXAR	Lajitas Array	51.39	107	P	P	10 24 38.6	+1.1
	1.5nm,0.6s,baz=334,slow=5.7,SNR=22						
AKASG	Malin Array Be	61.65	352	P	P	10 25 49.6	-0.4
	0.5nm,0.4s,baz=1.7,slow=6.6,SNR=4.5						
ESDC	Sonseca Array	71.75	17	P	P	10 26 54.8	0.0
	0.4nm,0.8s,baz=350,slow=6.5,SNR=2.4						
BRTR	Keskin Array B	72.27	347	P	P	10 26 59.0	+1.1
	0.2nm,0.4s,baz=28,slow=3.4,SNR=1.9						

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*IDC **03** 10:19:43.9±3.2, 5°.92S×152°.02E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.4/40, mbtmp3.8/3, Error ellipse: s-maj=95.7km s-min=19.0km az=108.0*
*NEIC **03** 10:19:50.4±1.0, 5°.92S±0°.10×152°.2E±0°.2, h35km±2km, mb4.0/8, Error ellipse: s-maj=35.0km s-min=9.0km az=114.0*
ISC 03 10:19:49.7±1.5**,5°.9S**±0°.1×**152°.1E**±0°.2**,h36km,n15,** σ**1s.43**/17**,mb3.9**/8**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.59	357	Pn	Pn	10 20 15.3	-0.1
	154nm,0.3s,baz=164,slow=1.8,SNR=148						
KRVT				Sn	Sn	10 20 34.7	0.0
	232nm,0.3s,baz=22,slow=21,SNR=5.3						
KRVT				LR	LR	10 20 57.1	
	comp=Z,180nm,20.2s,baz=281,slow=46						
RABL	Rabaul	1.71	2		Pn	10 20 18.0	+1.1
RABL				Sn	Sn	10 20 38.2	+0.6
PMG	Port Moresby	6.00	234	Pn	Pn	10 21 19.2	+3.2
PMG					Sn	10 22 24.5	+1.0
WB0	Warramunga Arr	22.05	230	P	P	10 24 42.9	+1.4
WB0				IAmb	IAmb	10 24 49.9	
	comp=Z,9.7nm,1.4s						
WR0	Warramunga Arr	22.05	229	P	P	10 24 43.1	+1.6
WR0				IAmb	IAmb	10 24 44.9	
	comp=Z,6.2nm,1.2s						
WRAB	Tennant Creek	22.18	229	P	P	10 24 43.6	+0.7
WRAB				IAmb	IAmb	10 24 46.9	
	comp=Z,7.7nm,1.4s						
WB2	Warramunga Arr	22.18	229	P	P	10 24 44.4	+1.4
WB2				IAmb	IAmb	10 24 47.9	
	comp=Z,6.2nm,1.2s						
WRA	Warramunga Arr	22.19	229	P	P	10 24 41.6	-1.4
	comp=Z,1.6nm,0.6s,baz=53,slow=9.9,SNR=20						
AS31	Alice Springs	24.86	223	P	P	10 25 10.9	+1.8
ASAR	Alice Springs	24.86	223	P	P	10 25 09.4	+0.3
	comp=Z,0.6nm,0.6s,baz=60,slow=8.6,SNR=18						
KNRA	Kununurra	24.86	245	P	P	10 25 07.7	-1.4
KNRA				IAmb	IAmb	10 25 09.8	
	comp=Z,22nm,1.4s						
FITZ	Fitzroy Crossi	28.52	243	P	P	10 25 39.8	-2.2
	comp=Z,0.8nm,0.3s,baz=55,slow=8.6,SNR=13						
FITZ	Fitzroy Crossi	28.52	243	P	P	10 25 43.0	+1.0
WAKE	Wake Island	28.85	29	P	P	10 25 45.5	+0.6
TORD	Torodi Ar. Bea	149.96	286	PKPbc	PKPbc	10 39 35.1	-2.2
	comp=Z,0.4nm,0.3s,baz=72,slow=2.3,SNR=6.9						

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*IDC **03** 10:25:05.1±1.3, 7°.06S×154°.92E, h0km, mb3.8/8, mb1 4.1/9, mb1mx3.8/40, mbtmp3.8/9, ML3.8/1, Error ellipse: s-maj=40.7km s-min=22.7km az=129.0*
ISC 03 10:25:11.4±1.0**,6°.9S**±0°.1×**154°.8E**±0°.1**,h39km,n10,** σ**1s.00**/11**,mb3.9**/8**,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.76	314	Pn	Pn	10 26 06.7	-0.2
	6.5nm,0.3s,baz=149,slow=2.7,SNR=12						
KRVT				Sn	Sn	10 26 49.3	-0.6
	6.6nm,0.3s,baz=55,slow=23,SNR=2.4						
WRA	Warramunga Arr	23.66	235	P	P	10 30 18.7	-0.8
	2.1nm,0.8s,baz=57,slow=9.2,SNR=10						
ASAR	Alice Springs	26.04	228	P	P	10 30 41.0	-0.3
	0.7nm,0.7s,baz=61,slow=8.4,SNR=9.4						
FITZ	Fitzroy Crossi	30.46	246	P	P	10 31 19.9	-0.8
	0.8nm,0.4s,baz=101,slow=10,SNR=1.4						
PETK	Petropavlovsk-	59.86	2	P	P	10 35 12.4	-0.5
	0.8nm,0.9s,baz=152,slow=6.5,SNR=2.2						
CMAR	Chiang Mai Arr	60.54	296	P	P	10 35 20.2	+2.0
	0.4nm,0.3s,baz=111,slow=4.9,SNR=5.4						
MKAR	Makanchi Array	83.19	319	P	P	10 37 34.7	+1.0
	0.5nm,0.6s,baz=104,slow=5.2,SNR=6.1						
NVAR	Mina Array Bea	91.87	52	P	P	10 38 16.4	+0.3
	0.4nm,0.8s,baz=253,slow=4.6,SNR=3.4						
YKA	Yellowknife Ar	96.39	28	P	P	10 38 34.9	-1.0
	0.2nm,0.4s,baz=242,slow=3.4,SNR=3.2						
TORD	Torodi Ar. Bea	152.77	285	PKPbc	PKiKP	10 45 05.4	0.0
	0.5nm,0.6s,baz=74,slow=3.6,SNR=2.9						

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*IDC **03** 10:33:57.8±1.2, 6°.92S×153°.75E, h0km, mb4.2/8, mb1 4.3/9, mb1mx3.9/53, mbtmp4.2/9, ML4.1/1, Error ellipse: s-maj=33.9km s-min=21.4km az=98.0*
*NEIC **03** 10:34:03.8±1.3, 7°.15S±0°.08×153°.81E±0°.09, h35km±2km, mb4.1/11, Error ellipse: s-maj=16.2km s-min=12.8km az=230.0*
ISC 03 10:34:03.7±0.7**,7°.06S**±0°.09×**153°.82E**±0°.09**,h35km,n25,** σ**1s.39**/25**,mb4.1**/14**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.29	330	Pn	Pn	10 34 56.2	+3.4
HNR	Honiara	6.51	112	Pn	Pn	10 35 37.7	+0.6
PMG	Port Moresby	6.99	250		Pn	10 35 45.9	+2.2
COEN	Coen	12.51	236	Pn	Pn	10 36 59.9	+0.5
DZM	Mont Dzumac	19.27	142	P	P	10 38 25.3	-0.2
	0.6nm,0.3s,baz=120,slow=20,SNR=7.2						
DZM	Mont Dzumac	19.27	142	P	P	10 38 25.5	0.0
DZM				IAmb	IAmb	10 38 27.2	
	comp=Z,14nm,1.1s						
WR0	Warramunga Arr	22.67	234	P	P	10 39 01.5	-0.8
WR0				IAmb	IAmb	10 39 03.9	
	comp=Z,5.8nm,0.8s						
WB0	Warramunga Arr	22.69	234	P	P	10 39 01.6	-1.0
WB0				IAmb	IAmb	10 39 03.5	
	comp=Z,3.3nm,0.6s						
WRAB	Tennant Creek	22.81	234	P	P	10 39 03.4	-0.4
WRAB				IAmb	IAmb	10 39 05.2	
	comp=Z,5.1nm,0.8s						
WB2	Warramunga Arr	22.82	234	P	P	10 39 02.9	-1.0
WB2				IAmb	IAmb	10 39 05.3	
	comp=Z,4.8nm,0.8s						
WRA	Warramunga Arr	22.83	234	P	P	10 39 02.6	-1.3
	comp=Z,3.3nm,0.7s,baz=59,slow=9.4,SNR=23						
ARMA	Armidale	23.33	185	P	P	10 39 11.1	+2.1
ARMA				IAmb	IAmb	10 39 28.1	
	comp=Z,19nm,1.2s						
AS31	Alice Springs	25.26	227	P	P	10 39 26.4	-0.5
ASAR	Alice Springs	25.26	227	P	P	10 39 26.3	-0.6
	comp=Z,3.9nm,0.7s,baz=60,slow=8.5,SNR=50						
KNRA	Kununurra	25.99	249	P	P	10 39 33.5	+0.1
STKA	Stephens Creek	27.20	203	P	P	10 39 45.1	+0.9
	comp=Z,4.2nm,0.7s,baz=48,slow=16,SNR=6.0						
STKA	Stephens Creek	27.20	203	P	P	10 39 44.5	+0.3
FITZ	Fitzroy Crossi	29.56	246	P	P	10 40 04.7	-0.7
	comp=Z,5.6nm,0.5s,baz=70,slow=7.4,SNR=28						
FITZ	Fitzroy Crossi	29.56	246	P	P	10 40 04.8	-0.6
KLR	Kul'dur	59.29	343	P	P	10 44 00.9	-0.9
	comp=Z,1.6nm,0.8s,baz=141,slow=4.7,SNR=4.4						
CMAR	Chiang Mai Arr	59.76	296	P	P	10 44 03.1	-2.6
	comp=Z,0.6nm,0.3s,baz=117,slow=7.5,SNR=5.5						
MKAR	Makanchi Array	82.68	319	P	P	10 46 23.9	0.0
	comp=Z,1.0nm,0.9s,baz=104,slow=6.1,SNR=5.8						
ZALV	Zalesovo Beam	83.58	326	P	P	10 46 26.0	-2.2
	comp=Z,0.4nm,0.3s,baz=110,slow=7.8,SNR=1.9						
KDJ	Kajisay	84.89	313	P	P	10 46 36.1	+0.7
KDJ				IAmb	IAmb	10 46 37.1	
	comp=Z,3.0nm,1.1s						
TORD	Torodi Ar. Bea	151.91	285	PKPbc	PKPbc	10 53 54.8	-1.3
	comp=Z,1.4nm,0.7s,baz=61,slow=2.1,SNR=8.3						

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*IDC **03** 10:37:06.6±7.9, 4°.54S×29°.36E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.5/38, mbtmp3.8/4, ML3.2/1, Error ellipse: s-maj=225.3km s-min=24.0km az=173.0*
ISC 03 10:37:02.9±1.6**,5°.6S**±0°.1×**29°.6E**±0°.1**,h10km,n7,** σ**2s.62**/11**, mb3.8**/3**,Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBAR	Mbarara	5.07	13	*e*P	Pb	10 38 28.5	-3.4
MBAR				*e*S	Sb	10 39 33.8	+0.9
KMBO	Kilima Mbogo	8.83	60	Pn	Pn	10 39 14.5	+3.5
	0.3nm,0.3s,baz=219,slow=16,SNR=3.8						
KMBO				Sn	Sn	10 40 50.3	-0.5
	2.6nm,0.3s,baz=206,slow=13,SNR=11						
KMBO				Lg	Lg	10 41 39.9	
	1.5nm,0.3s,baz=284,slow=13,SNR=4.8						
KIBK	Kibwezi	9.03	70	*i* P	Pn	10 39 15.0	+1.5
KIBK				*i* S	Sn	10 40 51.8	-3.6
LODK	Lodwar	10.63	33	*i* P	Pn	10 39 39.1	+3.6
LODK				*i* S	Sn	10 41 35.0	+0.3
TORD	Torodi Ar. Bea	33.37	304	P	P	10 43 40.8	-0.9
	1.3nm,0.8s,baz=117,slow=7.9,SNR=8.5						
MKAR	Makanchi Array	69.86	36	P	P	10 48 14.3	+0.3
	0.5nm,0.7s,baz=239,slow=6.9,SNR=5.7						
KURBB	Kurchatov Arra	70.00	31	P	P	10 48 15.5	+0.8
	0.4nm,0.6s,baz=243,slow=6.8,SNR=3.2						

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*JMA **03** 10:37:54.9, 24°.44N×123°.95E, h0km, M3.5*
JMA Felt I J1.
*IDC **03** 10:37:54.1±1.5, 24°.40N×123°.96E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/55, mbtmp3.5/3, ML1.9/1, Error ellipse: s-maj=44.9km s-min=29.2km az=72.0*
ISC 03 10:37:54.9±1.0**,24°.47N**±0°.06×**123°.97E**±0°.03**,h10km**±8km**, n12,** σ**0s.72**/21**,Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIJ	Ishigaki jima	0.19	123	P	Pg	10 37 59.0	+0.1
JIJ				S	Sg	10 38 01.7	+0.1
JKRS	Kuro-shima	0.23	171	P	Pg	10 37 59.4	-0.2
JKRS				S	Sg	10 38 02.7	-0.1
IRIF	Iriomote-Funau	0.26	239	P	Pg	10 37 59.7	-0.4
IRIF				S	Sg	10 38 03.2	-0.3
JISG	Ishigakijimahi	0.33	69	P	Pb	10 38 02.5	-0.5
JISG				S	Sb	10 38 08.0	-0.4
HATJ	Hateruma jima	0.43	200	P	Pg	10 38 03.0	-0.4
HATJ				S	Sg	10 38 09.1	0.0
JTJ	Tarama	0.69	75	P	Pb	10 38 09.3	+0.3
JTJ				S	Sn	10 38 19.7	-1.8
YOJ	Yonaguni jima	0.87	270	P	Pg	10 38 11.6	-0.1
YOJ				S	Sg	10 38 23.3	+0.2
JYNG	Yonagunijimaku	0.93	269	P	Pg	10 38 12.5	-0.4
JYNG				*e*S	Sg	10 38 24.8	-0.2
JOW	Kunigami	4.54	58	Pn	Pn	10 39 04.6	+0.8
	0.1nm,0.3s,baz=105,slow=18,SNR=1.2						
JOW				Sn	Sn	10 39 55.3	-1.4
	0.1nm,0.3s,baz=136,slow=14,SNR=2.1						
MKAR	Makanchi Array	39.93	315	P	P	10 45 30.3	+1.0
	0.2nm,0.6s,baz=115,slow=8.8,SNR=2.5						
WRA	Warramunga Arr	45.28	166	P	P	10 46 12.6	-0.3
	1.1nm,0.7s,baz=347,slow=8.6,SNR=9.5						
ASAR	Alice Springs	48.81	168	P	P	10 46 41.2	+0.8
	0.2nm,0.5s,baz=354,slow=7.1,SNR=8.0						

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*ANF **03** 10:39:12.2±0.9, 41°.45N×123°.60W, h29km±6km, ML2.0/3, Error ellipse: s-maj=8.7km s-min=4.7km az=75.0*
NCEDC 03 10:39:13.0,41°.51N×123°.51W,h37km,Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
M02C	Callahan	0.56	96	P	Pb	10 39 23.8	+0.1
	baz=284,SNR=143						
M02C				S	Sb	10 39 31.8	+0.3
	baz=284						
N02D	Trinity Center	0.83	125	P	Pb	10 39 28.0	0.0
	baz=312,SNR=43						
N02D				S	Sn	10 39 39.4	+0.1
	baz=312						
L04D	Klamath Falls	1.23	51	P	Pn	10 39 34.0	+0.3
	baz=232,SNR=12						
L04D				Sb	Sb	10 39 51.5	+1.0
	baz=232						
K02D	Willamette Mer	1.24	358	P	Pn	10 39 33.5	-0.2
	baz=174,SNR=12						
M04C	Macdoel	1.36	75	P	Pn	10 39 35.3	0.0
	baz=258,SNR=6.6						
M04C				Sb	Sb	10 39 55.8	+1.6
	baz=258						
O03E	Paynes Creek	1.79	130	S	Sn	10 40 03.4	+0.5
	baz=314						

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*IDC **03** 10:40:52.2±0.5, 67°.90N×162°.30W, h0km, mb4.0/23, mb1 4.2/27, mb1mx4.1/55, mbtmp4.1/27, ML3.9/5, Error ellipse: s-maj=15.6km s-min=9.7km az=25.0*
*AEIC **03** 10:40:52.4±2.7, 67°.69N±0°.06×162°.4W±0°.1, h22km±5km, ML4.1/51, mb4.2/22(NEIC), Error ellipse: s-maj=8.2km s-min=5.7km az=173.0*
*NEIC **03** 10:40:53.7±3.2, 67°.72N±0°.05×162°.3W±0°.1, h23km±4km, Error ellipse: s-maj=7.6km s-min=6.8km az=92.0*
ISC 03 10:40:52.3±0.4**,67°.72N**±0°.05×**162°.07W**±0°.04**,h10km, n129,** σ**1s.57**/148**,mb4.2**/39**,Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.47	318		Pg	10 41 00.8	-0.6
RDOG					Sg	10 41 07.5	0.0
ANM	Nome	3.44	205		Pn	10 41 43.9	-1.9
ANM					Sn	10 42 24.4	-2.1
IM03		3.72	114		Pn	10 41 50.5	+0.9
IM03					Sn	10 42 34.4	+1.0
IM01	Indian Mountai	3.72	114		Pn	10 41 50.2	+0.5
IM01					Sn	10 42 34.6	+1.1
PS05	TAPS Pump Stn5	4.52	96		Pn	10 42 02.6	+2.0
PS05					Sn	10 42 57.0	+3.8
COLD	Coldfoot	4.59	91		Pn	10 42 02.4	+0.7
TOLK	Toolik Lake Re	4.76	73	P	Pn	10 42 06.5	+2.5
	baz=265						
TOLK				S	Sn	10 43 01.7	+2.6
	baz=265						
TOLK	Toolik Lake Re	4.76	73		Pn	10 42 05.3	+1.4
TOLK					Sn	10 43 01.1	+2.0
PS06	TAPS Pump Stn6	5.22	105		Pn	10 42 11.5	+1.1
MLY	Manley	5.29	115		Pn	10 42 11.6	+0.2
MLY					Sn	10 43 12.0	-0.3
TT01	Tatalina	5.45	149		Pn	10 42 13.7	+0.2
PS01	TAPS Pump Stn	5.47	56		Pn	10 42 15.3	+1.6
BPAW	Bear Paw Mtn.	5.81	123		Pn	10 42 19.3	+0.9
PS07	TAPS Pump Stn7	6.02	107		Pn	10 42 22.7	+1.5
MDM	Murphy Dome	6.22	110		Pn	10 42 25.7	+1.7
KTH	Kantishna Hill	6.22	127		Pn	10 42 24.9	+0.8
BWN	Browne	6.26	119		Pn	10 42 26.3	+1.8
PPLA	Purkeypile	6.36	135		Pn	10 42 25.9	-0.1
TCOL	CIGO, UAF Yank	6.39	110	P	Pn	10 42 28.1	+1.7
	baz=302						
TCOL				S	Sn	10 43 38.3	-1.0
	baz=302						
TCOL	CIGO, UAF Yank	6.39	110		Pn	10 42 27.8	+1.4
COLA	College	6.40	110		Pn	10 42 27.8	+1.3
COLA				Sn	Sn	10 43 40.1	+0.7
POKR	Poker Plat Res	6.42	107	P	Pn	10 42 28.2	+1.4
	baz=300						
POKR				S	Sn	10 43 40.7	+0.7
	baz=300						
POKR	Poker Plat Res	6.42	107		Pn	10 42 28.1	+1.4
TRF	Thorofare Moun	6.49	126		Pn	10 42 28.9	+1.0
CCB	Clear Creek Bu	6.54	111		Pn	10 42 29.3	+0.9
CCB				Sn	Sn	10 43 42.3	-0.7
WRH	Wood River Hil	6.54	113		Pn	10 42 29.2	+0.7
FYU	Fort Yukon	6.66	92		Pn	10 42 31.4	+1.4
BM03	Burnt Mountain	6.69	84		Pn	10 42 31.9	+1.4
MCK	McKinley	6.72	120		Pn	10 42 32.0	+1.0
IL31		6.80	109		Pn	10 42 33.3	+1.3
ILAR	Eielson Array	6.80	109	Pn	Pn	10 42 32.3	+0.4
	11nm,0.3s,baz=301,slow=14,SNR=301						
ILAR				Sn	Sn	10 43 49.0	-0.3
	5.4nm,0.3s,baz=304,slow=25,SNR=9.6						
PRP	Porcupine Dome	6.94	101		Pn	10 42 34.4	+0.4
RND	Reindeer	6.97	122		Pn	10 42 35.8	+1.4
HDA	Harding Lake	6.98	111	P	Pn	10 42 35.5	+1.0
	baz=304						
HDA				S	Sn	10 43 53.1	-0.7
	baz=304						
HDA				S	Sn	10 43 53.1	-0.7
	baz=304						
HDA	Harding Lake	6.98	111		Pn	10 42 35.1	+0.6
WAT2	Susitna Watana	7.38	124		Pn	10 42 41.5	+1.5
STLK	Strandline Lak	7.62	140		Pn	10 42 44.9	+1.6
SPWE	Spurr West	7.65	143		Pn	10 42 45.0	+1.2
DHY	Denali Highway	7.69	120		Pn	10 42 45.6	+1.4
DHY	Denali Highway	7.69	120	Sn	Sn	10 44 13.4	+2.1
RIDG	Independent Ri	8.12	111		Pn	10 42 51.1	+0.9
GHO	Glory Hole Cre	8.18	131		Pn	10 42 51.3	+0.3
SCRK	Sand Creek	8.29	108		Pn	10 42 53.6	+1.0
SML	Sawmill	8.33	129		Pn	10 42 54.4	+1.4
DOT	Dot Lake	8.46	110		Pn	10 42 55.9	+1.1
RC01	Rabbit Creek A	8.51	135		Pn	10 42 58.2	+2.7
SCM	Sheep Creek Mo	8.61	126		Pn	10 42 57.8	+0.9
EGAK	Eagle	8.92	99		Pn	10 43 02.8	+1.8
MENT	Mentasta	9.02	113		Pn	10 43 04.0	+1.6
BRLK	Bradley Lake	9.38	143		Pn	10 43 08.9	+1.7
CNPM	China Poot	9.51	145		Pn	10 43 10.8	+1.7
BC03		9.63	109		Pn	10 43 11.3	+0.6
KAHC	Katmai Hardscr	9.63	157		Pn	10 43 10.3	-0.6
FID	Port Fidalgo	9.71	129		Pn	10 43 14.0	+2.1
DAWY	Dawson	9.94	101		Pn	10 43 15.4	+0.4
EPYK	Eagle Plains	9.96	86	P	Pn	10 43 16.8	+1.4
	baz=289						
EYAK	Cordova Ski Ar	10.09	128		Pn	10 43 20.3	+3.3
RAGM	Ragged Mountai	10.55	126		Pn	10 43 28.8	+5.5

INK	Inuvik	10.67	74	Pn	Pn	10 43 24.8	-0.1
	0.7nm,0.3s,baz=295,slow=11,SNR=51						
INK				Sn	Sn	10 45 19.2	-5.0
	1.6nm,0.3s,baz=71,slow=9.7,SNR=4.5						
INK	Inuvik	10.67	74		Pn	10 43 24.5	-0.4
KDAK	Kodiak Island	10.86	152	Pn	Pn	10 43 29.0	+1.5
	0.4nm,0.3s,baz=12,slow=6.9,SNR=18						
KDAK				Sn	Sn	10 45 18.3	-11
	baz=158,slow=23,SNR=0.9						
KDAK	Kodiak Island	10.86	152		Pn	10 43 29.7	+2.2
BARN	Barnard Glacie	11.02	117		Pn	10 43 29.2	-0.7
OHAK	Old Harbor	11.27	155		Pn	10 43 31.1	-2.0
BILL	Bilibino	11.86	286		Pn	10 43 37.5	-3.7
A36M	Sachs Harbour	13.22	55	P	Pn	10 43 58.3	-1.3
	baz=270						
C36M	Paulatuk	13.86	66	P	Pn	10 44 05.0	-3.4
	baz=281						
C36M	Paulatuk	13.86	66		Pn	10 44 05.3	-3.1
DLBC	Dease Lake	17.01	107	P	P	10 44 51.6	-0.3
	0.1nm,0.3s,baz=301,slow=11,SNR=3.8						
DLBC	Dease Lake	17.01	107	P	P	10 44 51.1	-0.7
SEY	Seymchan	19.23	278	P	Pn	10 45 17.5	+0.4
	0.3nm,0.3s,baz=80,slow=7.7,SNR=8.7						
YKA	Yellowknife Ar	20.21	82	P	P	10 45 27.8	+1.0
	4.2nm,0.7s,baz=303,slow=10,SNR=41						
RES	Resolute Bay	21.49	42	P	P	10 45 40.8	+0.2
	1.7nm,0.8s,baz=276,slow=17,SNR=9.1						
RES				S	S	10 49 34.1	-4.2
	1.9nm,0.7s,baz=14,slow=23,SNR=3.8						
RES	Resolute Bay	21.49	42	P	P	10 45 40.5	-0.1
MA2	Magadan	21.92	271	P	P	10 45 47.4	+2.1
	3.8nm,0.6s,baz=94,slow=13,SNR=3.0						
MA2	Magadan	21.92	271	P	P	10 45 42.5	-2.8
MA2				IAmb	IAmb	10 45 50.8	
	comp=Z,5.3nm,0.9s						
PETK	Petropavlovsk-	24.07	253	P	P	10 46 07.3	0.0
	comp=Z,5.6nm,1.2s,baz=58,slow=14,SNR=5.6						
NEW	Newport	29.76	108	P	P	10 46 57.9	-0.6
MCMT	McKenzie Canyo	34.23	107	P	P	10 47 40.2	+2.1
QLMT	Earthquake Lak	34.75	105	P	P	10 47 43.2	+0.7
YHH	Holmes Hill	35.00	105	P	P	10 47 46.2	+1.4
YNE	Yellowstone No	35.13	104	P	P	10 47 45.8	-0.1
SUMG	Summit	35.13	26	P	P	10 47 45.3	-0.4
NRIK	Noril'sk	35.20	325	P	P	10 47 46.3	+0.4
	comp=Z,2.9nm,0.6s,baz=54,slow=8.0,SNR=6.0						
KLR	Kul'dur	36.96	274	P	P	10 48 02.4	+1.3
	comp=Z,1.7nm,0.9s,baz=346,slow=9.2,SNR=2.7						
PDAR	Pinedale Array	37.22	105	P	P	10 48 05.7	+2.0
	comp=Z,1.1nm,0.6s,baz=329,slow=7.5,SNR=12						
PDAR				PcP	PcP	10 50 24.2	+1.0
	comp=Z,0.3nm,0.5s,baz=18,slow=3.1,SNR=2.3						
NVAR	Mina Array Bea	37.95	118	P	P	10 48 12.4	+2.5
	comp=Z,1.8nm,0.7s,baz=314,slow=6.7,SNR=13						
NVAR				PcP	PcP	10 50 27.0	+1.5
	comp=Z,0.5nm,0.7s,baz=295,slow=2.8,SNR=3.6						
ISA	Isabella, Lake	40.41	120	P	P	10 48 28.1	-2.2
ISA				IAmb	IAmb	10 48 36.8	
	comp=Z,3.7nm,1.1s						
PV22	Blue Mesa, Par	41.20	107	P	P	10 48 35.9	-1.1
PV22				IAmb	IAmb	10 48 39.2	
	comp=Z,3.9nm,0.9s						
PV04	Paradox Valley	41.29	108	P	P	10 48 36.2	-1.5
PV04				IAmb	IAmb	10 48 46.2	
	comp=Z,3.0nm,1.0s						
PV13	Radium Mtn., P	41.53	108	P	P	10 48 39.1	-0.6
PV13				IAmb	IAmb	10 48 42.6	
	comp=Z,3.3nm,0.9s						
PV01	Paradox Valley	41.64	107	P	P	10 48 39.6	-1.0
PV01				IAmb	IAmb	10 48 43.1	
	comp=Z,4.6nm,0.8s						
ARCES	ARCESS Array B	42.91	356	PcP	PcP	10 50 41.1	+0.4
	comp=Z,1.4nm,0.5s,baz=352,slow=3.3,SNR=15						
ANMO	Albuquerque	45.25	107	P	P	10 49 11.9	+2.2
	comp=Z,1.6nm,0.9s,baz=300,slow=7.6,SNR=6.1						
ANMO				PcP	PcP	10 50 50.9	+1.5
	comp=Z,0.8nm,0.7s,baz=267,slow=2.1,SNR=4.3						
ANMO	Albuquerque	45.25	107	P	P	10 49 09.1	-0.6
MJAR	Matsushiro Arr	45.34	258	P	P	10 49 10.8	+0.6
	comp=Z,1.8nm,0.8s,baz=17,slow=8.8,SNR=4.1						
KSRS	Korea Array	48.43	268	P	P	10 49 34.5	+0.2
	comp=Z,1.6nm,0.7s,baz=25,slow=7.5,SNR=5.6						
ZAA0	Zalesovo Array	48.92	314	P	P	10 49 37.0	-0.8
ZAA0				IAmb	IAmb	10 49 38.2	
	comp=Z,2.7nm,0.8s						
ZALV	Zalesovo Beam	48.92	314	P	P	10 49 37.6	-0.2
	comp=Z,2.5nm,0.6s,baz=28,slow=6.7,SNR=9.0						
KLMR	Klimovskoe	50.77	347	*e*P	P	10 49 51.3	-0.5
KLMR				AMP		10 49 52.5	
	comp=Z,17nm,1.9s						
FINES	FINESS Array B	51.00	355	P	P	10 49 53.6	0.0
	comp=Z,1.5nm,0.6s,baz=18,slow=6.6,SNR=9.1						
TX31	Lajitas Ar. Si	51.31	108	P	P	10 49 57.9	+1.5
TX32	Lajitas Array	51.31	108	P	P	10 49 58.0	+1.6
TX32				IAmb	IAmb	10 49 59.1	
	comp=Z,4.3nm,0.9s						
TXAR	Lajitas Array	51.31	108	P	P	10 49 58.0	+1.5
	comp=Z,3.6nm,0.8s,baz=334,slow=5.8,SNR=54						
NC405	NORSAR Array S	51.39	4	P	P	10 49 55.2	-1.3
NOA	NORSAR Array B	51.45	4	P	P	10 49 56.6	-0.4
	comp=Z,0.5nm,0.6s,baz=357,slow=7.4,SNR=2.3						
HHC	Hu-ho-hao-te	51.64	285	P	P	10 49 58.5	-0.2
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,45nm,6.3s						
PLAL	Pickwick Lake	52.12	89	P	P	10 50 02.0	-0.3
HPIG		52.78	111	P	P	10 50 05.6	-1.9
HPIG				IAmb	IAmb	10 50 09.7	
	comp=Z,2.7nm,0.8s						
BVAR	Borovoye Array	53.39	323	P	P	10 50 11.6	+0.1
	comp=Z,2.4nm,0.6s,baz=35,slow=7.9,SNR=14						
KURK	Kurchatov	53.50	316	P	P	10 50 09.4	-2.8
KURK				IAmb	IAmb	10 50 12.8	
	comp=Z,5.0nm,0.9s						
MK31	Makanchi Array	56.06	312	P	P	10 50 28.1	-2.9
MKAR	Makanchi Array	56.06	312	P	P	10 50 30.1	-0.8
	comp=Z,1.4nm,0.8s,baz=44,slow=7.1,SNR=13						
WMQ	Urumqi	57.16	306	*e*P	P	10 50 42.0	+3.2
AKASG	Malin Array Be	61.60	352	P	P	10 51 09.7	+0.4
	comp=Z,2.4nm,0.6s,baz=5.0,slow=6.6,SNR=10						
GERES	GERESS Array B	63.72	3	P	P	10 51 24.9	+1.3
	comp=Z,1.2nm,0.7s,baz=359,slow=5.7,SNR=11						
KSH	Kashi	64.55	313	P	P	10 51 28.3	-0.9
KSH				pP	sP	10 51 35.5	+1.7
KSH				sP	pP	10 51 37.7	+5.2
KSH				pmax	pmax		
	comp=Z,62nm,1.6s						
KSH				pmax	pmax		
	comp=Z,67nm,4.9s						
CONA	Conrad Observa	64.67	2	*e*pP	P	10 51 31.4	+1.5
	comp=Z,1.5nm,0.6s						
MOA	Molln	64.73	3	*i* pP	P	10 51 31.3	+1.2
	comp=Z,0.9nm,0.4s						
KBA	Koelnbreinsper	65.48	3	*e*pP	P	10 51 36.6	+1.4
	comp=Z,1.4nm,0.5s						
ABTA	Abfaltersbach	65.79	4	*e*pP	P	10 51 38.4	+1.3
	comp=Z,2.2nm,0.4s						
SOKA	Soboth	65.91	2	*e*pP	P	10 51 40.9	+3.1
	comp=Z,0.9nm,0.5s						
OBKA	Obir	66.08	3	*e*pP	P	10 51 40.4	+1.5
	comp=Z,5.6nm,0.7s						
KBZ	Khabaz	67.29	341	P	P	10 51 47.3	+0.8
	comp=Z,1.1nm,0.6s,baz=300,slow=5.9,SNR=5.3						
ESDC	Sonseca Array	71.66	18	P	P	10 52 14.7	+0.9
	comp=Z,1.5nm,0.7s,baz=349,slow=6.6,SNR=12						
BRTR	Keskin Array B	72.22	347	P	P	10 52 18.2	+1.0
	comp=Z,0.8nm,0.8s,baz=3.8,slow=3.7,SNR=5.2						
ACON	Acoyapa	74.03	98	P	P	10 52 26.7	-1.3
CMAR	Chiang Mai Arr	76.45	285	P	P	10 52 42.2	+0.3
	comp=Z,1.5nm,0.5s,baz=4.7,slow=6.3,SNR=6.2						
VNDA	Vanda	146.64	193	PKPbc	PKPab	11 00 33.2	+0.1
	comp=Z,0.7nm,0.6s,baz=354,slow=4.4,SNR=4.2						

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*BJI **03** 10:57:11.1±0.0, 22°38N×144°05E, h74km, mB5.3/58, mb5.6/81, Ms5.0/86, Ms7 4.8/80*

*MOS **03** 10:57:13.3±1.0, 22°23N×144°07E, h104km, mb5.7/159, Error ellipse: s-maj=6.6km s-min=3.9km az=107.8*

*NEIC **03** 10:57:13.7±1.6, 22°28N±0°06×144°01E±0°08, h90km±3km, mb5.5/445, Mww5.6, Mwc5.7(GCMT), Error ellipse: s-maj=10.8km s-min=8.6km az=71.0*

*IDC **03** 10:57:14.5±1.1, 22°27N×144°05E, h98km±9km, mb5.2/33, mb1 5.2/36, mb1mx5.2/36, mbtmp5.5/36, MS4.6/30, Ms1 4.6/30, ms1mx4.5/34, Error ellipse: s-maj=12.1km s-min=8.2km az=85.0*

*JMA **03** 10:57:14.0±0.2, 22°58N×144°37E, h107km±2km, M6.0*

JMA Felt II J1.

*GCMT **03** 10:57:14.6±0.1, 22°40N±0°01×144°23E±0°01, h95km, MW5.6/164, Moment Tensor Solution. s146,c292; s164,c354; Duration: 1^{s}6 Moment tensor: Scale 10^{17} Nm; M_{rr}1.27±.03; $M_{\theta\theta}$0.95±.04; $M_{\phi\phi}$-2.21±.04; $M_{r\theta}$-2.80±.02; $M_{\theta\phi}$-0.98±.03; $M_{\phi r}$0.71±.03; Best double couple: $M_0$3.31500×10^{17} NP1:ϕ_s342.00000°, δ57.00000°, λ33.00000°. NP2:ϕ_s232.00000°, δ62.00000°, λ142.00000°. Principal axes: T 4.1360, Plg45.0000°, Azm195.0000°; N -1.6370, Plg45.0000°, Azm21.0000°; P -2.4930, Plg3.0000°, Azm288.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **03** 10:57:15, 22°40N×144°26E, h94km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.35; $M_{\theta\theta}$1.02; $M_{\phi\phi}$-2.37; $M_{r\theta}$-2.87; $M_{\theta\phi}$-1.05; $M_{\phi r}$0.74; Fault plane solution: $M_0$3.76000×10^{17} NP1:ϕ_s232.00000°, δ62.00000°, λ143.00000°. NP2:ϕ_s342.00000°, δ58.00000°, λ34.00000°. Principal axes: T 4.2981, Plg45.0000°, Azm195.0000°; N -1.6263, Plg45.0000°, Azm20.0000°; P -2.6718, Plg2.0000°, Azm288.0000°;*

*NEIC **03** 10:57:17, 22°28N×144°11E, h90km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.04; $M_{\theta\theta}$0.41; $M_{\phi\phi}$-1.45; $M_{r\theta}$-2.65; $M_{\theta\phi}$-1.42; $M_{\phi r}$0.84; Fault plane solution: $M_0$3.38000×10^{17} NP1:ϕ_s254.00000°, δ75.00000°, λ130.00000°. NP2:ϕ_s0.00000°, δ43.00000°, λ22.00000°. Principal axes: T 3.8653, Plg44.0000°, Azm204.0000°; N -1.4490, Plg39.0000°, Azm61.0000°; P -2.4162, Plg20.0000°, Azm314.0000°;*

*BGR **03** 10:57:18.9±0.0, 22°28N×142°34E, h101km±12km, mb5.3*

ISC 03 10:57:13.9±0.3, **22°30N**±0°03×**144°06E**±0°03, **h95km**±1km, **h95km:pP-P, n1372,** σ1^s**61**/1574, **mb5.5**/444, **39C-40D,**

Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	4.64	339	P	Pn	10 58 21.5	-0.2
JHH2				*e*S	Sn	10 59 13.3	-1.1
CBIJ	Chichi jima	5.07	341	P	Pn	10 58 26.5	-1.0
CBIJ				S	Sn	10 59 22.7	-2.1
JCJ	Chichijima	5.07	341	P	Pn	10 58 27.0	-0.5
	494nm,0.3s,baz=107,slow=2.2,SNR=390						
JCJ				S	Sn	10 59 22.8	-2.0
	1μm,0.3s,baz=242,slow=22,SNR=13						
GUMO	Guam	8.70	175	P	Pn	10 59 16.0	-1.0
GUMO	Guam	8.70	175		Pn	10 59 15.9	-1.0
JAOM	Aogashimamukai	10.82	340	P	Pn	10 59 43.0	-2.8
JAOM				S	Sn	11 01 41.5	-3.3
JHCJ	Hachijojimakas	11.37	342	P	Pn	10 59 51.3	-2.0
JHCJ				S	Sn	11 01 51.1	-7.2
JHJ2	Mitsune	11.40	342	P	Pn	10 59 53.4	-0.3
JHJ2	Mitsune	11.40	342		Pn	10 59 51.0	-2.7
JHJ2				Sn	Sn	11 01 53.2	-5.9
JHJ	Hachijo jima 2	11.42	342	P	Pn	10 59 51.3	-2.6
	120nm,0.3s,baz=303,slow=1.9,SNR=40						
JHJ				S	Sn	11 01 49.8	-10
	97nm,0.3s,baz=109,slow=15,SNR=5.2						
JMKN	Mikurajimanish	12.20	342	P	Pn	11 00 01.1	-3.2
JMKN				S	Sn	11 02 10.4	-8.0
JMZ	Minamidaito 2	12.24	289	P	P	11 00 10.3	-3.1
JMZ				S	Sn	11 02 25.3	+5.7
BSO1	Boso 1	12.60	348	P	Pn	11 00 07.2	-1.9
BSO1				S	Sn	11 02 22.8	-4.5
BSO3	Boso 3	12.84	347	P	Pn	11 00 11.1	-1.4
BSO4	Boso 4	13.06	346	P	Pn	11 00 13.7	-1.9
JOD2	Odawara 2	13.63	342	P	Pn	11 00 21.1	-2.1
JOD2				S	Sn	11 02 46.8	-6.3
JIE	Ise	13.67	333	P	Pn	11 00 23.1	-0.6
JTNC	Tanabenakahech	13.68	329	P	Pn	11 00 23.1	-0.7
HMMJ	Hamamatsu 2	13.69	337	P	Pn	11 00 22.1	-1.8
JKN2	Miekihoku	13.72	332	P	Pn	11 00 24.3	-0.1
JNY	Yasuok	14.09	339	P	Pn	11 00 27.8	-1.5
JNY				S	Sn	11 03 01.5	-2.9
JHU	Hanno	14.13	344	P	Pn	11 00 27.8	-1.9
JHU				S	Sn	11 02 55.0	-10
JAO	Obara	14.22	337	P	Pn	11 00 29.0	-1.9
JYT	Yasato	14.28	347	S	Sn	11 03 01.8	-7.0
INU	Inuyama	14.38	336		Pn	11 00 31.5	-1.5
JRY	Ryogami san	14.39	343	P	Pn	11 00 30.8	-2.2
JRY				S	Sn	11 03 03.1	-8.4
JEG	Eigenji	14.44	334	P	Pn	11 00 34.0	+0.3
JTO	Tosashimizu	14.49	319	P	Pn	11 00 34.8	+0.5
JHO	Hitachi	14.58	349	*e*S	Sn	11 03 09.6	-6.4
JAG	Ashikaga	14.63	345	P	Pn	11 00 33.5	-2.6
JAG				S	Sn	11 03 07.2	-10
JAMN	Amaminishikomi	14.71	297	P	P	11 00 40.8	+0.1
JOW	Kunigami	15.05	291	P	P	11 00 43.7	-1.0
	1.2nm,0.3s,baz=92,slow=11,SNR=50						
JOW	Kunigami	15.05	291	P	P	11 00 43.4	-1.3
JOW	Kunigami	15.05	291		Pn	11 00 39.9	-1.7
JOW				IAmb	IAmb	11 00 49.2	
	comp=Z,317nm,0.7s						
JOW				S	Sn	11 03 32.6	+4.9
MJAR	Matsushiro Arr	15.07	342	P	Pn	11 00 39.5	-2.3
	comp=Z,3.2nm,0.3s,baz=156,slow=11,SNR=124						
MJAR				S	Sn	11 03 15.9	-12
	comp=Z,0.7nm,0.3s,baz=135,slow=13,SNR=3.8						
MJAR				LR	LR	11 06 39.4	
	comp=Z,2μm,18.8s,baz=155,slow=38						
MAJO	Matsushiro	15.07	342	*i* P	Pn	11 00 41.3	-0.5
MAJO	Matsushiro	15.07	342		Pn	11 00 40.0	-1.8
MAT	Matsushiro	15.07	342	P	Pn	11 00 39.8	-2.0
MAT				S	Sn	11 03 27.6	-0.5
MJB9	Matsu-Tunnel	15.08	342		Pn	11 00 40.2	-1.7
JFK	Kawauchi	15.26	350	*e*S	Sn	11 03 25.1	-7.6
JSJ	Shimokoshiki	15.82	309	P	P	11 00 53.6	+0.5
JHS	Saijyo	15.87	325	P	Pn	11 00 52.4	+0.6
JNU	Nakatsue	15.87	316	P	P	11 00 53.8	+0.1
	comp=Z,3.9nm,0.3s,baz=113,slow=7.1,SNR=63						
JNU	Nakatsue	15.87	316	P	P	11 00 53.8	+0.1
JNU				IAmb	IAmb	11 00 58.4	
	comp=Z,278nm,0.9s						
JKE	Kume jima 2	16.25	288	P	P	11 00 59.4	+1.5
JMK	Ichinoseki	16.77	352	P	Pn	11 01 02.3	-0.6
JOI	OKI	16.81	328	P	P	11 01 04.2	+0.2
JOGS	Gusukube	17.28	282	P	P	11 01 13.7	+4.4
JTU	Tsushima	17.71	317	P	Pn	11 01 16.4	+2.0
YOJ	Yonaguni jima	19.44	280	P	P	11 01 32.6	-0.4
YOJ				pmax	pmax		
	comp=Z,1μm,0.8s						
YOJ	Yonaguni jima	19.44	280	P	P	11 01 32.6	-0.4
ERM	Erimo	19.67	358	*ce*P	Pn	11 01 37.7	+0.1
ERM				pmax	pmax		
	comp=Z,660nm,1.7s						
ERM	Erimo	19.67	358	P	P	11 01 36.1	+0.8
ERM				IAmb	IAmb	11 01 40.2	
	comp=Z,326nm,0.9s						
TJN	Taejon	20.17	318	*ce*P	P	11 01 39.9	-0.9
KSRS	Korea Array	20.54	321	P	P	11 01 44.9	+0.1
	comp=Z,41nm,0.7s,baz=136,slow=10,SNR=111						
KSRS				S	Sn	11 05 36.5	-3.0
	comp=Z,71nm,1.3s,baz=149,slow=16,SNR=4.7						
KSRS				ScP	ScP	11 09 19.5	-1.0
	comp=Z,12nm,1.0s,baz=140,slow=2.5,SNR=17						
KSRS				LR	LR	11 10 14.6	
	comp=Z,2μm,18.2s,baz=130,slow=38						
KS19	Wonju Array Si	20.61	321	P	P	11 01 44.9	-0.6
PATS	Pohnpei	20.62	136	P	P	11 01 46.2	+0.3
BBP	Basco	20.66	269	*e*P	P	11 01 47.1	+0.9
NACB	Ninganchiao	20.73	280	P	P	11 01 47.6	+0.7
NACB				IAmb	IAmb	11 01 52.8	
	comp=Z,158nm,0.6s						
PVCP	Virac	20.81	249	*e*P	Pn	11 01 50.8	-0.3
TATO	Taipei	20.85	282	P	P	11 01 49.0	+0.8
TATO	Taipei	20.85	282	P	P	11 01 49.2	+1.0
TATO				IAmb	IAmb	11 01 52.6	
	comp=Z,189nm,0.8s						
CNP	Catarman	20.89	245	*e*P	Pn	11 01 52.8	+0.7
YHNB	Yeheng	20.94	281	P	P	11 01 50.8	+1.5
YULB	Yu-li	21.01	277	P	P	11 01 52.3	+2.3
YULB					P	11 01 52.6	+2.6
TWG	Pinlang	21.24	276	P	P	11 01 53.7	+1.3
INCN	Inchon	21.33	319	P	P	11 01 52.1	-1.2
INCN				S	S	11 05 49.9	+5.1
INCN	Inchon	21.33	319	P	P	11 01 52.3	-1.0
INCN				pmax	pmax		
	comp=Z,189nm,0.8s						
INCN	Inchon	21.33	319	P	P	11 01 52.2	-1.0
INCN				IAmb	IAmb	11 01 57.7	
	comp=Z,189nm,0.8s						
H11N1	WAKE ISLAND Hy	21.46	93	P	P	11 01 55.2	+0.6
	baz=261,slow=13,SNR=20						
H11N1				T	T	11 24 42.7	
	baz=285						
H11N2	WAKE ISLAND Hy	21.47	93	P	P	11 01 53.4	-1.3
	baz=261,slow=13,SNR=16						
H11N2				T	T	11 24 45.3	
	baz=285						
H11N3	WAKE ISLAND Hy	21.48	93	P	P	11 02 03.2	+8.4
	baz=261,slow=13,SNR=16						
H11N3				T	T	11 24 30.8	
	baz=285						
H11S3	WAKE ISLAND Hy	21.54	96	P	P	11 01 56.2	+0.8
	baz=295,slow=6.4,SNR=7.0						
H11S3				T	T	11 25 23.0	
	baz=283,slow=75,SNR=36						
H11S1	WAKE ISLAND Hy	21.55	96	P	P	11 01 55.5	0.0
	baz=295,slow=6.4,SNR=5.5						
H11S1				T	T	11 25 23.8	
	baz=283,slow=75,SNR=76						
H11S2	WAKE ISLAND Hy	21.55	96	P	P	11 01 57.9	+2.3
	baz=295,slow=6.4,SNR=6.7						
H11S2				T	T	11 25 01.9	
	baz=283,slow=75,SNR=53						
CAUP	Cauayan	21.61	260	*e*P	P	11 02 00.0	+3.7
TPUB	Ta-pu	21.62	277	P	P	11 01 57.7	+1.1
OCLP	Ormoc	21.71	242	*e*P	P	11 02 00.4	+2.9
YUK	Yuzh-Kuril'sk	21.73	4	*e*P	P	11 01 56.3	-1.0
YUK				*e*S	S	11 05 53.2	+1.0
YUK				pmax	pmax		
	comp=Z,312nm,0.8s						
YUK				pmax	pmax		
	comp=E,104nm,0.7s						
YUK				pmax	pmax		
	comp=Z,664nm,1.6s						
YUK				MLR	MLR		
	comp=Z,1μm,18.0s						
YUK				MLR	MLR		
	comp=E,481nm,13.0s						
YUK				MLR	MLR		
	comp=N,2μm,17.0s						
JKA	Kamikawa-asahi	21.79	357	P	P	11 01 60.0	+1.9
ASAJ	Asahikawa	21.79	357	P	P	11 01 60.0	+1.9
	comp=N,81nm,0.7s,baz=212,slow=8.0,SNR=29						
ASAJ				S	S	11 06 00.6	+7.1
	comp=N,20nm,0.7s,baz=47,slow=26,SNR=2.7						
ASAJ	Asahikawa	21.79	357	P	P	11 02 00.0	+1.9
APYP	Conner	21.88	262	*e*P	P	11 02 00.2	+1.0
MSLP	Maasin	22.02	240	*e*P	P	11 02 03.0	+2.2
BUTP	Butuan	22.12	236	*e*P	P	11 02 04.1	+2.2
SSE	Sheshan	22.20	298	P	P	11 02 01.4	-1.2
SSE				S	S	11 06 02.0	+1.0
SSE				LR	LR		
	comp=N,710nm,23.4s						
SSE				LR	LR		
	comp=N,630nm,15.9s						
SSE	Sheshan	22.20	298	P	P	11 02 02.7	+0.2
BALP	Baler	22.22	257	*e*P	P	11 02 04.2	+1.3
POLP	Polilio Island	22.27	254	*e*P	P	11 02 04.8	+1.4
ABRA	Dolores	22.42	262	*e*P	P	11 02 05.1	+0.1
LQP	Lukban	22.87	253⇑	*e*P	P	11 02 01.3	-8.5
BOAC	Boac	22.88	251	*e*P	P	11 02 11.7	+2.0
MSHR	Mys Shultsa	22.91	335	*d i*P	P	11 02 10.8	+1.0
MATI	Mati	22.98	231	*e*P	P	11 02 11.0	+0.4
RCP	Roxas	22.99	246⇓	*e*P	P	11 02 12.6	+1.8
KUR	Kuril'sk	23.09	7	*c i*P	P	11 02 10.8	-0.6
KUR				S	S	11 06 16.1	+1.2
KUR				*e*SS	SnSn	11 06 57.8	-0.7
KUR				pmax	pmax		
	comp=Z,921nm,1.3s						
KUR				pmax	pmax		
	comp=N,188nm,1.4s						
KUR				pmax	pmax		
	comp=E,118nm,0.9s						
KUR				pmax	pmax		
	comp=Z,3μm,3.9s						
KUR				MLR	MLR		
	comp=Z,700nm,16.0s						
VLA	Vladivostok	23.10	337	*d i*P	P	11 02 13.4	+1.9
CGP	Cagayan de Oro	23.16	237⇓	*e*P	P	11 02 14.1	+1.7
OTRP	Odiongan	23.22	248	*e*P	P	11 02 15.2	+2.3
DAV	Davao City (W)	23.39	232	P	P	11 02 15.2	+0.7
	comp=Z,118nm,0.4s,baz=64,slow=2.3,SNR=7.4						
DAV	Davao City (W)	23.39	232⇓	*e*P	P	11 02 11.1	-3.4
DAV	Davao City (W)	23.39	232	P	P	11 02 16.2	+1.7
DAV	Davao City (W)	23.39	232	IAmb	IAmb	11 02 25.8	
	comp=Z,166nm,0.6s						
QZH	Quanzhou	23.48	281 ⇓	*i*P	P	11 02 16.0	+0.8
QZH				sP	sP	11 02 42.9	-3.0
QZH				S	S	11 06 24.5	+2.8
QZH				pmax	pmax		
	comp=Z,260nm,0.6s						
QZH				LR	LR		
	comp=Z,1μm,12.2s						
QZH				LR	LR		
	comp=Z,1μm,11.3s						
QZH				LR	LR		
	comp=Z,1μm,15.0s						
TEY	Ternei	23.49	347 ⇑	*i*P	P	11 02 16.9	+1.8
TEY				pmax	pmax		
	comp=N,130nm,0.8s						
TEY				pmax	pmax		
	comp=Z,220nm,0.7s						
TEY				pmax	pmax		
	comp=E,90nm,1.4s						
TEY				pmax	pmax		
	comp=E,1μm,3.5s						
BOLP	Bolinao	23.52	260	*e*P	P	11 02 14.3	-1.3
GUIM	Jordan	23.60	244	*e*P	P	11 02 17.7	+1.2
PGP	Puerto Galera	23.64	252⇑	*e*P	P	11 02 16.7	-0.2
KNMB	Chin-men Tao	23.66	280	P	P	11 02 17.4	+0.5
DDMP	Don Marcelino,	23.95	230	*e*P	P	11 02 19.9	+0.4
SJMP	San Jose	23.95	250	*e*P	P	11 02 21.5	+1.9
CNOP	Candoni, Negro	23.99	242	*e*P	P	11 02 20.6	+0.7
USA0B	Ussuriysk Arra	24.01	338	*d i*P	P	11 02 21.7	+2.0
USA0B	Ussuriysk Arra	24.01	338	P	P	11 02 21.8	+2.0
USA0B				IAmb	IAmb	11 02 24.3	
	comp=Z,350nm,1.1s						
USRK	Ussuriysk Ar.	24.01	338	P	P	11 02 21.5	+1.7
	comp=Z,128nm,0.6s,baz=136,slow=9.1,SNR=383						
JAP	San Jose, Anti	24.08	245⇑	*e*P	P	11 02 10.6	-10
DCPH	Dipolog City	24.13	239⇓	*e*P	P	11 02 23.6	+2.4
LUBP	Lubang	24.17	253	*e*P	P	11 02 22.4	+0.8
NJ2	Nanjing	24.39	299	*e*P	P	11 02 23.9	+0.5
NJ2				PP	sP	11 02 56.1	+2.1
NJ2				S	S	11 06 35.4	-0.9
NJ2				sS	sS	11 07 07.4	-4.0
NJ2				pmax	pmax		
	comp=Z,83nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,590nm,5.4s						
NJ2				LR	LR		
	comp=Z,910nm,14.2s						
NJ2				LR	LR		
	comp=Z,1μm,14.7s						
NJ2				LR	LR		
	comp=Z,1μm,13.7s						
SKMP	Bagumbayan, Su	24.52	233	*e*P	P	11 02 25.1	+0.4
PAGZ	Pagadian	24.55	237	*e*P	P	11 02 26.7	+1.7
YSS	Yuzh-Sakhalins	24.62	358 ⇑	*i*P	P	11 02 26.9	+1.6
YSS				*e*		11 02 51.0	
YSS				*e*S	S	11 06 43.9	+4.3
YSS				pmax	pmax		
	comp=Z,210nm,0.9s						
YSS				pmax	pmax		
	comp=Z,1μm,3.6s						
YSS				MLR	MLR		
	comp=N,1μm,16.0s						
YSS	Yuzh-Sakhalins	24.62	358	P	P	11 02 26.4	+1.2
YSS				IAmb	IAmb	11 02 29.0	
	comp=Z,190nm,0.9s						
SMPI	Sarmi	24.70	193	P	P	11 02 27.9	+1.6
	comp=Z,4μmcomp=Z,4μmcomp=Z,185nm,1.8s						
CUYO	Cuyo Island	24.81	246	*e*P	P	11 02 28.0	+0.6
JAY	Jayapura	24.88	188	P	P	11 02 28.4	+0.4
	comp=Z,86nm,1.0s,baz=336,slow=5.7,SNR=23						
JAY	Jayapura	24.88	188	P	P	11 02 27.9	-0.1
	comp=Z,3μmcomp=Z,2μmcomp=Z,124nm,1.0s						
BUSP	Coron	24.96	250	*e*P	P	11 02 30.6	+1.9
GENI	Genyem	25.03	189	P	P	11 02 30.8	+1.4
	comp=Z,6μmcomp=Z,6μmcomp=Z,358nm,1.5s						
MDJ	Mudanjiang	25.24	335	P	P	11 02 33.4	+2.4

MDJ pP pP 11 02 49.8 -1.2
MDJ sP pwP 11 02 58.4 +2.4
MDJ S **S** **11 06 54.4 +4.8**
MDJ sS sS 11 07 22.9 -1.9
MDJ SS **SnSn** **11 07 51.9 +0.9**
MDJ pmax pmax
comp=Z,200nm,0.8s
MDJ LR LR
comp=Z,2μm,21.4s
MDJ LR LR
comp=Z,2μm,18.5s
MDJ LR LR
comp=Z,5μm,27.1s
MDJ Mudanjiang 25.24 335 P **P** **11 02 31.4 +0.4**
MDJ IAmb IAmb 11 02 38.3
comp=Z,168nm,0.8s
DL2 Dalian 25.33 316 P **P** **11 02 32.1 +0.3**
DL2 sP **sP** **11 03 02.7 +0.6**
DL2 S **S** **11 06 48.8 -2.3**
DL2 sS sS 11 07 18.2 -8.1
DL2 pmax pmax
comp=Z,860nm,4.0s
ENPP El Nido 26.00 249 *e*P **P** **11 02 39.3 +1.1**
SIJI Sorong 26.20 210 P **P** **11 02 39.2 -0.7**
comp=Z,46nm,0.7s,baz=14,slow=10,SNR=18
KWAJ Kwajalein Atol 26.31 117 P **P** **11 02 40.1 -0.8**
KWAJ pmax pmax
comp=Z,116nm,0.8s
KWAJ Kwajalein Atol 26.31 117 P **P** **11 02 40.1 -0.8**
KWAJ IAmb IAmb 11 02 50.7
comp=Z,116nm,0.8s
CN2 Changchun 26.40 329 *e*P **P** **11 02 42.0 +0.5**
CN2 *e*S **S** **11 07 10.9 +3.0**
CN2 pmax pmax
comp=Z,30nm,0.7s
CN2 LR LR
comp=Z,2μm,18.0s
CN2 LR LR
comp=Z,2μm,18.0s
CN2 LR LR
comp=Z,2μm,20.0s
WAMI Wamena 26.55 192 P **P** **11 02 46.0 +3.0**
comp=Z,96nm,0.8s
TNTI Ternate 26.87 219 P **P** **11 02 47.0 +1.0**
comp=Z,2μmcomp=Z,1μmcomp=Z,42nm,0.7s
TNTI Ternate 26.87 219 P **P** **11 02 45.7 -0.3**
TIA Tai'an 27.18 307 P **P** **11 02 49.6 +1.0**
TIA S **S** **11 07 19.8 -0.6**
TIA pmax pmax
comp=Z,98nm,0.9s
TIA pmax pmax
comp=Z,640nm,3.8s
TIA LR LR
comp=Z,930nm,15.3s
TIA LR LR
comp=Z,880nm,13.5s
TIA LR LR
comp=Z,1μm,15.0s
RABL Rabaul 27.50 162 P **P** **11 02 49.9 -1.7**
RABL IAmb IAmb 11 02 52.3
comp=Z,162nm,1.1s
KRVT Keravat (AS076 27.57 163 P **P** **11 02 50.6 -1.6**
comp=Z,41nm,0.5s,baz=154,slow=6.2,SNR=6.7
FAKI Fak Fak 27.60 206 P **P** **11 02 53.6 +1.1**
comp=Z,4μmcomp=Z,1μmcomp=Z,76nm,1.0s
FAKI Fak Fak 27.60 206 P **P** **11 02 51.6 -0.9**
WHN Wuhan 27.78 293 ⇓P **P** **11 02 54.8 +0.8**
WHN S **S** **11 07 21.9 -8.1**
WHN pmax pmax
comp=Z,98nm,0.8s
WHN LR LR
comp=Z,3μm,13.7s
WHN LR LR
comp=Z,1μm,8.8s
WHN LR LR
comp=Z,7μm,38.8s
MNI Manado 27.92 225 P **P** **11 02 55.0 -0.4**
LBMI Labuha 27.94 217 P **P** **11 02 56.5 +1.0**
comp=Z,4μmcomp=Z,166nm,2.1s
TYV Tymovskoe 28.53 358 *e*P **P** **11 03 01.6 +1.2**
TYV *e*S **S** **11 07 47.8 +6.5**
TYV pmax pmax
comp=Z,500nm,3.2s
TYV pmax pmax
comp=Z,96nm,0.7s
TYV smax smax
comp=N,400nm,6.5s
BATP Bataraza 28.58 246 *e*P **P** **11 03 03.8 +2.6**
KLR Kul'dur 28.59 343 P **P** **11 03 02.2 +1.2**
comp=N,164nm,0.6s,baz=157,slow=7.7,SNR=572
KLR Kul'dur 28.59 343⇑ *e*P **P** **11 03 02.2 +1.2**
KLR MLR MLR
comp=Z,1μm,17.8s
GRNR Gornyy 29.04 350⇓ *i*P **P** **11 03 06.8 +1.9**
GRNR *e*S **S** **11 07 57.5 +8.2**
GRNR pmax pmax
comp=Z,320nm,0.6s
GRNR smax smax
comp=N,6.0nm,0.9s
KMSI Cibinong 29.13 225 P **P** **11 03 06.0 -0.1**
comp=N,114nm,0.8s
MSAI Masohi 29.47 212 P **P** **11 03 09.8 +0.7**
comp=N,464nmcomp=N,29nm,0.8s
BJT Baijiatuau 29.52 313 P **P** **11 03 08.9 -0.4**
BJT pmax pmax
comp=Z,47nm,0.8s
BJT Baijiatuau 29.52 313 P **P** **11 03 08.9 -0.4**
BJI Beijing 29.52 313 P **P** **11 03 09.3 0.0**
BJI pmax pmax
comp=Z,23nm,0.9s
BJI LR LR
comp=Z,890nm,14.3s
BJI LR LR
comp=Z,650nm,9.6s
BJI LR LR
comp=Z,1μm,36.4s
SKR Severo-Kuril's 29.86 15 *e*P P 11 03 07.0 -5.1
SKR *e* 11 03 30.9
SKR *e*PPP PPP 11 04 09.9
SKR *e*S **S** **11 08 02.6 +0.5**
SKR pmax pmax
comp=Z,300nm,4.0s
SKR pmax pmax
comp=Z,42nm,1.1s
SKR MLR MLR
comp=Z,800nm,20.0s
SKR MLR MLR
comp=Z,1μm,16.0s
SANI Sanana 29.95 218 P **P** **11 03 15.6 +2.2**
comp=Z,4μmcomp=Z,1μmcomp=Z,62nm,0.8s
BNDI Bandanaira 30.04 209 P **P** **11 03 18.4 +4.2**
comp=Z,4μmcomp=Z,254nm,0.7s
AAI Ambon 30.13 213 P **P** **11 03 17.5 +2.6**
comp=Z,3μmcomp=Z,2μmcomp=Z,130nm,0.8s
AAI Ambon 30.13 213 P **P** **11 03 15.4 +0.5**
AAI pmax pmax
comp=Z,130nm,0.8s
NLAI Namlea 30.32 215 P **P** **11 03 18.4 +1.8**
comp=Z,1μmcomp=Z,67nm,0.7s
MRSI Marisa 30.57 228 P P 11 03 24.1 +5.3
comp=Z,3μmcomp=Z,2μmcomp=Z,126nm,1.6s
NKL Nikolayevsk 30.91 356 *e*P **P** **11 03 20.8 -0.5**
NKL pmax pmax
comp=Z,323nm,1.0s
LUWI Luwuk 31.14 225 P **P** **11 03 27.9 +4.1**
comp=Z,5μmcomp=Z,108nm,1.1s
LUWI Luwuk 31.14 225 P **P** **11 03 22.8 -1.0**
LUWI IAmb IAmb 11 03 35.4
comp=Z,119nm,1.1s
TIY Taiyuan 31.22 307 *e*P **P** **11 03 26.1 +1.6**
TIY sP **pwP** **11 03 51.1 +0.8**
TIY S **S** **11 08 24.6 +0.6**
TIY LR LR
comp=Z,740nm,12.3s
TIY LR LR
comp=Z,310nm,8.5s
TIY LR LR
comp=Z,810nm,22.2s
KKM Kota Kinabalu 31.37 243 P **P** **11 03 25.4 -0.7**
KKM IAmb IAmb 11 03 30.3
comp=Z,46nm,0.8s
PMG Port Moresby 31.66 174*ce*P **P** **11 03 26.5 -1.8**
PMG pmax pmax
comp=Z,632nm,1.3s
PMG Port Moresby 31.66 174 P **P** **11 03 26.8 -1.5**
PMG IAmb IAmb 11 03 29.6
comp=Z,190nm,1.3s
ENH Enshi 31.91 292 P **P** **11 03 30.4 -0.1**
ENH IAmb IAmb 11 03 31.9
comp=Z,62nm,0.7s
ENH **S** **11 08 31.8 -3.0**
SPMM Sapulut 31.92 241 P **P** **11 03 32.0 +1.2**
MPSI Mapaga 32.10 230 P **P** **11 03 33.7 +1.4**
comp=Z,1μmcomp=Z,51nm,1.3s
QIZ Qiongzhong 32.14 271 P **P** **11 03 33.6 +0.9**
QIZ S **S** **11 08 36.7 -1.9**
QIZ pmax pmax
comp=Z,17nm,0.8s
QIZ LR LR
comp=Z,1μm,13.7s
QIZ LR LR
comp=Z,890nm,16.7s
QIZ LR LR
comp=Z,1μm,29.4s
PEA0B Petropavlovsk- 32.48 15*ce*P **P** **11 03 36.4 +1.2**
PEA0B Petropavlovsk- 32.48 15 P **P** **11 03 34.6 -0.5**
PEA0B IAmb IAmb 11 03 37.8
comp=Z,100nm,1.4s
PETK Petropavlovsk- 32.48 15 P **P** **11 03 36.3 +1.1**
comp=Z,12nm,0.9s,baz=188,slow=9.9,SNR=25
PETK PcP **PcP** **11 06 19.5 -0.5**
comp=Z,9.6nm,0.8s,baz=151,slow=3.4,SNR=3.6
PETK ScP **ScP** **11 09 53.3 -2.1**
comp=Z,6.9nm,1.1s,baz=174,slow=4.1,SNR=4.7
PETK LR LR 11 19 35.5
comp=Z,938nm,18.0s,baz=207,slow=41
PET Petropavlovsk 32.64 16 *e*P **P** **11 03 37.2 +0.6**
PET *e**PP **pP** **11 03 56.4 -0.6**
PET *e* 11 04 49.4
PET *e*S **S** **11 08 46.7 +1.2**
PET pmax pmax
comp=Z,600nm,11.9s
PET pmax pmax
comp=Z,140nm,1.5s
PET pmax pmax
comp=Z,300nm,14.6s
PET MLR MLR
comp=Z,700nm,18.0s
PET Petropavlovsk 32.64 16 P **P** **11 03 37.2 +0.6**
XAN Xi'an 32.96 299 P **P** **11 03 40.3 +0.6**
XAN pP pP 11 03 54.9 -5.2
XAN sP pwP 11 04 02.4 -2.7
XAN PP **PnPn** **11 04 48.9 -3.3**
XAN S **S** **11 08 44.7 -6.4**
XAN pmax pmax
comp=Z,47nm,0.9s
XAN pmax pmax
comp=Z,250nm,4.2s
XAN LR LR
comp=Z,610nm,16.0s
XAN LR LR
comp=Z,600nm,16.0s
XAN LR LR
comp=Z,610nm,16.3s
XAN Xi'an 32.96 299 P **P** **11 03 40.1 +0.4**
XAN pmax pmax
comp=Z,34nm,0.7s
XAN Xi'an 32.96 299 P **P** **11 03 40.1 +0.4**
XAN IAmb IAmb 11 03 40.8
comp=Z,34nm,0.7s
HHC Hu-ho-hao-te 33.03 312 P **P** **11 03 41.3 +0.9**
HHC sP pwP 11 04 03.5 -2.6
HHC PP **PP** **11 04 56.6 -0.1**
HHC S **S** **11 08 55.3 +3.1**
HHC sS sS 11 09 30.2 +2.3
HHC pmax pmax
comp=Z,49nm,1.0s
HHC pmax pmax
comp=Z,250nm,6.6s
HHC LR LR
comp=Z,500nm,14.5s
HHC LR LR
comp=Z,400nm,15.3s
HHC LR LR
comp=Z,560nm,16.2s
HIA Hailar 33.08 330 P **P** **11 03 41.0 +0.4**
HIA pmax pmax
comp=Z,106nm,0.8s
HIA Hailar 33.08 330 P **P** **11 03 41.0 +0.4**
HIA IAmb IAmb 11 03 42.7
comp=Z,106nm,0.8s
ZEA Zeya 33.89 342 *e*P **P** **11 03 48.4 +1.0**
ZEA *e* 11 04 08.0
ZEA *e* 11 05 08.0
ZEA *e*S **S** **11 09 06.0 +1.2**
ZEA pmax pmax
comp=Z,600nm,2.0s
ZEA pmax pmax
comp=E,52nm,0.8s
ZEA pmax pmax
comp=N,170nm,1.0s
ZEA pmax pmax
comp=Z,230nm,1.0s
ZEA pmax pmax
comp=Z,500nm,9.0s
ZEA smax smax
comp=N,600nm,11.0s
ZEA MLR MLR
comp=E,1μm,14.0s
ZEA MLR MLR
comp=N,2μm,16.0s
BTO Baotou 34.02 310 *e*P **P** **11 03 50.3 +1.4**
GYA Guiyang 34.24 285⇓ *i*P **P** **11 03 52.1 +1.1**
GYA pP pP 11 04 09.3 -2.6
GYA sP pwP 11 04 15.9 +0.9
GYA PcP **PcP** **11 06 26.5 +0.8**
GYA S **S** **11 09 08.3 -2.8**
GYA sS sS 11 09 39.8 -7.2
GYA ScP **ScP** **11 10 02.4 +0.2**
GYA pmax pmax
comp=N,100nm,0.9s
GYA pmax pmax
comp=N,380nm,3.5s
GYA LR LR
comp=N,950nm,15.9s
GYA LR LR
comp=N,700nm,16.8s
GYA LR LR
comp=N,730nm,17.3s
TTSI Tana Toraja 34.58 226 P **P** **11 03 55.6 +1.7**
comp=N,2μmcomp=N,83nm,1.0s
SMKI Samarinda 34.59 233 P **P** **11 03 58.7 +4.8**
comp=N,5μmcomp=N,270nm,0.5s
HNR Honiara 35.17 152 P **P** **11 03 55.7 -3.2**
HNR pmax pmax
comp=Z,78nm,0.9s
SPSI Sidrap Palu 35.30 225 P **P** **11 04 01.3 +1.3**
comp=Z,3μmcomp=Z,4μmcomp=Z,222nm,0.7s
BKB Balikpapan 35.37 232 P **P** **11 04 03.7 +3.1**
comp=Z,4μmcomp=Z,8μmcomp=Z,585nm,0.9s
BKB Balikpapan 35.37 232 P **P** **11 04 02.1 +1.5**
BNSI Bone 35.40 224 P **P** **11 04 03.6 +2.7**
comp=Z,4μmcomp=Z,196nm,2.1s
DLV T Lat 35.44 259 P **P** **11 04 02.7 +1.1**
DLV IAmb IAmb 11 04 05.2
comp=Z,39nm,0.7s
COEN Coen 36.05 181 P **P** **11 04 06.6 +0.3**
BKSI Bulukumba 36.09 223 P **P** **11 04 10.4 +3.6**
comp=Z,1μmcomp=Z,30nm,0.7s
KAPI Kappang 36.10 224 P **P** **11 04 07.7 +0.8**
KAPI Kappang 36.10 224 P **P** **11 04 07.3 +0.5**
KAPI pmax pmax
comp=Z,98nm,1.3s
KAPI Kappang 36.10 224 P **P** **11 04 07.3 +0.5**
KAPI IAmb IAmb 11 04 10.6
comp=Z,98nm,1.2s
SBUM Sibu 36.68 242 P **P** **11 04 13.0 +1.1**
SBUM IAmb IAmb 11 04 17.4
comp=Z,69nm,1.5s
SBUM Sibu 36.68 242 P **P** **11 04 14.0 +2.2**
CD2 Chengdu 36.88 292⇑ P **P** **11 04 14.1 +0.6**
CD2 sP pwP 11 04 38.4 -0.5
CD2 PP **PnPn** **11 05 40.4 -0.1**
CD2 S **S** **11 09 47.8 -3.6**
CD2 sS sS 11 10 20.4 -7.1
CD2 pmax pmax
comp=Z,280nm,0.6s
CD2 pmax pmax
comp=Z,130nm,4.5s
CD2 LR LR
comp=Z,2μm,13.1s
CD2 LR LR
comp=Z,920nm,14.5s
CD2 LR LR
comp=Z,1μm,13.1s
MTN Manton Dam 37.16 201 P **P** **11 04 15.0 -0.8**
MTN IAmb IAmb 11 04 25.9
comp=Z,90nm,1.1s
SLVN Son La 37.22 276 P **P** **11 04 17.5 +1.0**
SLVN IAmb IAmb 11 04 18.6
comp=Z,38nm,0.7s
SOEI Soe 37.31 213 P **P** **11 04 16.5 -0.7**
comp=Z,2μmcomp=Z,125nm,1.4s
SOEI Soe 37.31 213 P **P** **11 04 15.9 -1.3**
SOEI **S** **11 09 55.4 -2.7**
LZH Lanzhou 37.43 301 *e*P **P** **11 04 19.9 +1.7**
LZH pP pwP 11 04 42.2 -2.0
LZH sP sP 11 04 51.4 +2.1
LZH S **S** **11 09 58.6 -1.3**
LZH sS sS 11 10 33.3 -2.8
LZH pmax pmax
comp=Z,190nm,1.4s
LZH pmax pmax
comp=Z,470nm,6.0s
LZH LR LR
comp=Z,1μm,12.9s
LZH LR LR
comp=Z,960nm,14.8s
LZH LR LR
comp=Z,1μm,15.7s
MMRI Maumere 37.46 217 P **P** **11 04 18.4 0.0**
MA2 Magadan 37.54 6*di*P **P** **11 04 19.7 +1.1**
MA2 pmax pmax
comp=Z,88nm,0.7s
MA2 Magadan 37.54 6 **11 04 19.6 +1.0**
MA2 Magadan 37.54 6 P **P** **11 04 19.2 +0.6**
MA2 IAmb IAmb 11 04 22.5
comp=Z,95nm,0.8s
KMI Kunming 37.84 283 P **P** **11 04 23.8 +2.0**
KMI pP pP 11 04 41.7 -1.0
KMI sP pwP 11 04 47.3 +0.1
KMI PP **PnPn** **11 05 55.4 +3.2**
KMI S **S** **11 10 05.4 -1.0**
KMI SS **SS** **11 12 43.0 -13**
KMI pmax pmax
comp=Z,72nm,0.9s
KMI pmax pmax
comp=Z,170nm,4.3s
KMI LR LR
comp=Z,1μm,18.5s
KMI LR LR
comp=Z,320nm,20.7s
KMI LR LR
comp=Z,1μm,31.6s
KMI Kunming 37.84 283 P **P** **11 04 21.6 -0.3**
KMI pmax pmax
comp=Z,65nm,0.9s
KMI Kunming 37.84 283 P **P** **11 04 21.6 -0.3**
KMI IAmb IAmb 11 04 25.2
comp=Z,65nm,0.9s
CIT Chita 37.84 329 *e*P **P** **11 04 21.9 +0.6**
CIT *e* 11 05 49.8
CIT *e* 11 10 07.0
CIT pmax pmax
comp=Z,195nm,2.6s
EDFI Ende, Flores 37.86 218 P **P** **11 04 21.9 0.0**
comp=Z,2μmcomp=Z,69nm,1.1s
BATI Baumata 38.00 214 P **P** **11 04 22.7 -0.3**
comp=Z,1μmcomp=Z,92nm,1.4s
SMY Shemya 38.09 30 P **P** **11 04 23.9 +0.7**
SMY pmax pmax
comp=Z,267nm,1.3s
SMY Shemya 38.09 30 P **P** **11 04 23.9 +0.7**
KSM Kuching 38.80 242 P **P** **11 04 29.2 -0.6**
KSM IAmb IAmb 11 04 31.5
comp=Z,76nm,1.4s
KSM Kuching 38.80 242 P **P** **11 04 30.0 +0.3**
ULN Ulaanbaatar 39.02 320 P **P** **11 04 32.0 +0.6**
ULN S **S** **11 10 17.6 -6.0**
ULN Ulaanbaatar 39.02 320*ce*P **P** **11 04 32.3 +0.9**
ULN pmax pmax
comp=Z,79nm,0.6s
ULN Ulaanbaatar 39.02 320 P **P** **11 04 32.3 +0.9**
ULN IAmb IAmb 11 04 33.7
comp=Z,88nm,0.7s
ULN **ScP** **11 10 19.4 -0.2**
SONM Songino Array 39.40 320 P **P** **11 04 35.1 +0.6**
comp=Z,51nm,0.6s,baz=133,slow=9.2,SNR=225
SONM ScP **ScP** **11 10 20.4 -0.7**
comp=Z,7.8nm,1.2s,baz=129,slow=3.9,SNR=4.1
SONM LR LR 11 21 47.8
comp=Z,918nm,18.5s,baz=113,slow=37
BASI Baing, Sumba 39.69 218 P **P** **11 04 38.0 +1.0**
comp=Z,3μmcomp=Z,318nm,1.4s
WBSI Waikabubak, Su 39.91 220 P **P** **11 04 42.8 +3.8**
comp=Z,857nmcomp=Z,66nm,0.8s
PLAI Plampang 40.26 223 P **P** **11 04 42.4 +0.6**
comp=Z,3μmcomp=Z,179nm,1.9s
KNRA Kununurra 40.61 203 P **P** **11 04 44.5 -0.1**
YAK Yakutsk 40.92 350*di*P **P** **11 04 47.3 +0.7**
YAK *e**PP **pP** **11 05 07.6 -0.1**
YAK *e* 11 06 19.2
YAK *e* 11 06 50.7
YAK *e*S **S** **11 10 49.2 -1.8**
YAK *e* 11 14 36.6
YAK pmax pmax
comp=Z,193nm,0.8s
YAK pmax pmax
comp=N,158nm,1.3s
YAK pmax pmax
comp=E,46nm,1.2s
YAK pmax pmax
comp=Z,66nm,1.4s
YAK pmax pmax
comp=E,28nm,1.0s
YAK pmax pmax
comp=N,59nm,1.4s
YAK smax smax
comp=E,59nm,1.4s
YAK smax smax
comp=N,206nm,2.1s
YAK Yakutsk 40.92 350 P **P** **11 04 47.1 +0.5**
SEY Seymchan 41.00 6⇓ *i*P **P** **11 04 48.5 +1.2**
GTA Gaotai 41.19 305⇓ P **P** **11 04 50.7 +1.3**
GTA pP pP 11 05 05.4 -5.0
GTA PP **PP** **11 06 28.1 +1.9**
GTA ScP **ScP** **11 10 29.1 +0.8**
GTA S **S** **11 10 56.3 +0.2**
GTA sS sS 11 11 25.6 -7.1
GTA ScS **ScS** **11 14 44.3 0.0**
GTA pmax pmax
comp=N,67nm,1.4s
GTA pmax pmax
comp=N,350nm,3.9s
GTA LR LR
comp=N,880nm,15.2s
GTA LR LR
comp=N,610nm,16.2s
GTA LR LR
comp=N,580nm,18.1s
KMMI Kalianget 41.47 229 P **P** **11 04 55.3 +3.5**
comp=N,4μmcomp=N,284nm,1.3s
BOD Bodaibo 41.61 336 *e*P **P** **11 04 52.3 -0.1**
BOD *e* 11 14 41.9
BOD pmax pmax
comp=Z,96nm,1.8s
CTA Charters Tower 42.19 177 P **P** **11 04 58.7 +1.2**
CTA pmax pmax
comp=Z,163nm,1.8s
CTAO Charters Tower 42.19 177 P **P** **11 04 56.8 -0.7**
CTAO pmax pmax
comp=Z,284nm,1.4s
CTAO Charters Tower 42.19 177 P **P** **11 04 56.8 -0.7**
ADK Adak 42.22 36 P **P** **11 04 58.5 +1.1**
ADK pmax pmax
comp=Z,203nm,1.2s
ADK Adak 42.22 36 P **P** **11 04 58.5 +1.1**
CHTO Chiang Mai 42.27 274 P **P** **11 04 58.6 +0.2**
CHTO Chiang Mai 42.27 274 P **P** **11 04 58.8 +0.4**
CHTO pmax pmax
comp=Z,41nm,1.0s
CHTO Chiang Mai 42.27 274 P **P** **11 04 58.8 +0.4**
CM31 Chiang Mai Arr 42.35 273 P **P** **11 05 00.3 +1.4**
SNR=13
CM31 Chiang Mai Arr 42.35 273 P **P** **11 04 59.8 +0.8**
CM31 IAmb IAmb 11 05 01.3

comp=Z,28nm,0.6s
CMAR Chiang Mai Arr 42.35 273 P **P** **11 04 59.9 +0.9**
comp=Z,22nm,0.7s,baz=59,slow=8.4,SNR=132
CMAR ScP **ScP** **11 10 32.6 -0.5**
comp=Z,4.7nm,1.0s,baz=94,slow=1.9,SNR=6.3
JAGI Jajag, Banyuwa 42.36 227 P **P** **11 04 57.8 -1.2**
JAGI lAmb lAmb 11 05 14.8
comp=Z,90nm,1.4s
ZAK Zakamensk 42.37 322 *e*P **P** **11 04 59.4 +0.6**
ZAK pmax pmax
comp=Z,58nm,1.3s
IRK Irkutsk 42.69 325 *e*P **P** **11 05 02.1 +0.9**
IRK pmax pmax
comp=Z,105nm,2.3s
TLY Talaya 42.76 324 P **P** **11 05 03.2 +1.4**
TLY S **S** **11 11 19.5 +0.9**
TLY Talaya 42.76 324 *d* iP **P** **11 05 03.0 +1.1**
TLY *e* 11 06 43.9
TLY *e*S **S** **11 11 19.9 +1.3**
TLY pmax pmax
comp=Z,102nm,1.1s
TLY MLR MLR
comp=Z,4µm,17.0s
TLY Talaya 42.76 324 P **P** **11 05 03.0 +1.1**
WB0 Warramunga Arr 42.87 193 P **P** **11 05 02.8 -0.2**
WR0 Warramunga Arr 43.02 193 P **P** **11 05 04.0 -0.3**
WRAB Tennant Creek 43.04 193 *ce*P **P** **11 05 04.2 -0.2**
WRAB pmax pmax
comp=Z,331nm,1.3s
WRAB Tennant Creek 43.04 193 P **P** **11 05 04.1 -0.2**
WB2 Warramunga Arr 43.05 193 P **P** **11 05 04.2 -0.2**
WRA Warramunga Arr 43.05 193 P **P** **11 05 04.0 -0.5**
comp=Z,49nm,0.5s,baz=16,slow=8.9,SNR=285
WRA ScP **ScP** **11 10 35.6 -0.1**
comp=Z,21nm,1.1s,baz=11,slow=4.2,SNR=21
WRA PKiKP **PKiKP** **11 13 55.4 -1.2**
comp=Z,0.6nm,0.6s,baz=325,slow=1.5,SNR=5.4
WRA LR LR 11 22 47.3
comp=Z,564nm,21.7s,baz=25,slow=36
WRA Warramunga Arr 43.05 193 *i* P **P** **11 05 01.2 -3.3**
WRA pmax pmax
comp=Z,49nm,0.5s
ATKA Atka Island 43.73 36 P **P** **11 05 09.6 +0.1**
TPRI Tanjung Pinang 43.94 247 P **P** **11 05 15.2 +3.5**
comp=Z,6µmcomp=Z,87nm,0.9s
SMRI Semarang 43.99 232 P **P** **11 05 11.8 -0.4**
SMRI lAmb lAmb 11 05 26.6
comp=Z,64nm,0.9s
FITZ Fitzroy Crossi 44.01 206 P **P** **11 05 12.1 -0.1**
FITZ lAmb lAmb 11 05 13.9
comp=Z,68nm,0.7s
WOJI Wonogiri, Jawa 44.18 231 P **P** **11 05 14.3 +0.7**
comp=Z,58nm,0.8s
MOY Mondy 44.23 322 *e*P **P** **11 05 14.4 +0.6**
MOY pmax pmax
comp=Z,83nm,2.5s
PCJI Pacitan 44.24 230 P **P** **11 05 15.2 +1.1**
comp=Z,3µmcomp=Z,169nm,1.4s
UGM Wanagama 44.52 231 P **P** **11 05 17.4 +1.0**
comp=Z,292nm,1.2s
UGM Wanagama 44.52 231 P **P** **11 05 15.8 -0.5**
YOGI Yogyakarta 44.62 232 P **P** **11 05 18.3 +1.1**
comp=Z,4µmcomp=Z,219nm,0.9s
KULM Kulim 45.21 255 P **P** **11 05 23.2 +1.3**
KULM lAmb lAmb 11 05 33.1
comp=Z,52nm,0.8s
KULM Kulim 45.21 255 P **P** **11 05 24.0 +2.1**
IPM Ipoh 45.24 253 P **P** **11 05 22.8 +0.6**
IPM lAmb lAmb 11 05 33.0
comp=Z,50nm,0.9s
IPM Ipoh 45.24 253 P **P** **11 05 24.0 +1.8**
LEM Lembang 45.96 235 P **P** **11 05 28.5 +0.6**
LEM pmax pmax
comp=Z,223nm,1.1s
CISI Cisompet, Garu 46.28 234 P **P** **11 05 29.9 -0.4**
comp=Z,3µmcomp=Z,173nm,0.7s
CISI Cisompet, Garu 46.28 234 P **P** **11 05 28.8 -1.5**
CBJI Citeko 46.29 236 P **P** **11 05 33.0 +2.7**
comp=Z,10µmcomp=Z,395nm,0.9s
DBJI Dramaga 46.45 236 P **P** **11 05 33.1 +1.5**
comp=Z,16µmcomp=Z,137nm,1.4s
AS31 Alice Springs 46.75 193 P **P** **11 05 33.4 -0.4**
ASAR Alice Springs 46.75 193 P **P** **11 05 33.2 -0.6**
comp=Z,17nm,0.5s,baz=12,slow=6.6,SNR=331
ASAR PcP **PcP** **11 07 06.7 +1.0**
comp=Z,7.6nm,0.6s,baz=20,slow=3.0,SNR=4.8
ASAR PP **PP** **11 07 23.9 -1.2**
comp=Z,6.5nm,0.9s,baz=16,slow=11,SNR=4.4
ASAR ScP **ScP** **11 10 51.2 +0.3**
comp=Z,5.9nm,0.9s,baz=16,slow=3.9,SNR=7.1
ASAR S **S** **11 12 14.1 -2.7**
comp=Z,7.1nm,1.1s,baz=20,slow=20,SNR=10
ASAR LR LR 11 25 31.5
comp=Z,739nm,19.8s,baz=20,slow=36
SKJI Sukabumi 46.88 236 P **P** **11 05 39.0 +4.0**
comp=Z,170nm,0.7s
BLSI Bandar Lampung 46.89 239 P **P** **11 05 36.8 +1.7**
comp=Z,111nm,0.4s
BKNI Bangkinang 47.22 248 P **P** **11 05 40.8 +3.1**
comp=Z,6µmcomp=Z,126nm,0.8s
BKNI Bangkinang 47.22 248 P **P** **11 05 38.2 +0.5**
MDSI Maura Dua 47.22 241 P **P** **11 05 37.0 -0.6**
comp=Z,895nmcomp=Z,61nm,1.5s
SDSI Sungai Dareh 47.54 247 P **P** **11 05 42.0 +1.9**
comp=Z,60nm,0.8s
SHL Shillong 47.56 285 P **P** **11 05 41.1 +0.7**
SNR=18
SHL Shillong 47.56 285 P **P** **11 05 40.4 0.0**
SHL pmax pmax
comp=Z,109nm,0.7s
SHL Shillong 47.56 285 P **P** **11 05 40.4 0.0**
LWLI Liwa 47.63 240 P **P** **11 05 41.8 +0.9**
comp=Z,105nm,0.7s
BILL Bilibino 47.77 11 *d* iP **P** **11 05 41.3 +0.1**
BILL *e**SP **pwP** **11 06 08.1 +1.6**
BILL 11 07 09.0
BILL *i* S **S** **11 12 30.7 +0.4**
BILL *i* PS 11 12 42.9
BILL *i* 11 15 25.0
BILL *e*SSS SSS 11 17 18.8
BILL pmax pmax
comp=Z,216nm,1.7s
BILL MLR MLR
comp=Z,606nm,17.0s
BILL Bilibino 47.77 11 P **P** **11 05 41.9 +0.7**
BILL lAmb lAmb 11 05 43.7
comp=Z,94nm,0.8s
LSA Lhasa 47.79 290 P **P** **11 05 44.4 +2.0**
LSA Lhasa 47.79 290 P **P** **11 05 44.2 +1.7**
LSA S **S** **11 12 33.0 +0.4**
LSA Lhasa 47.79 290 P **P** **11 05 44.5 +2.0**
LSA pmax pmax
comp=Z,97nm,0.6s
LSA Lhasa 47.79 290 P **P** **11 05 44.5 +2.0**
PSI Prapat 47.87 253 LR LR 11 24 42.7
comp=Z,408nm,22.0s,baz=90,slow=34
PSI Prapat 47.87 253 P **P** **11 05 43.1 +0.2**
PSI pmax pmax
comp=Z,57nm,0.8s
EIDS Eidsvold 47.88 171 P **P** **11 05 41.9 -0.6**
RPSI Rantau Prapat 47.92 253 P **P** **11 05 43.1 0.0**
RPSI lAmb lAmb 11 05 53.6
comp=Z,57nm,0.8s
SPIA Saint Paul Isl 48.03 32 P **P** **11 05 43.3 0.0**
KSI Kapahiang 48.04 243 P **P** **11 05 45.0 +1.0**
comp=Z,11µmcomp=Z,103nm,0.9s
MASI Maura Aman, Be 48.04 244 P **P** **11 05 47.0 +2.9**
comp=Z,9µmcomp=Z,305nm,1.2s
KRJI Kerinci 48.12 245 P **P** **11 05 48.1 +3.4**
comp=Z,7µmcomp=Z,224nm,0.7s
MNAI Manna 48.14 242 P **P** **11 05 44.3 -0.5**
MNSI Mandailing Nat 48.25 250 P **P** **11 05 46.7 +1.1**
comp=Z,82nm,0.5s
PDSI Padang 48.35 247 P **P** **11 05 47.6 +1.2**
comp=Z,930nmcomp=Z,54nm,0.7s
KCSI Kotacane, Aceh 48.57 254 P **P** **11 05 47.9 -0.2**
comp=Z,659nmcomp=Z,66nm,0.9s
UNV Unalaska Valle 48.64 37 P **P** **11 05 47.8 -0.2**
AKUT Akutan 49.14 37 P **P** **11 05 52.3 +0.5**
DZM Mont Dzumac 49.20 152 *e*P **P** **11 05 52.6 -0.2**
comp=Z,296nm,1.4s
DZM *e*S **S** **11 12 53.5 +1.9**
comp=Z,616nm,28.9s
DZM *e*LR LR 11 20 08.8
comp=Z,5µm,26.7s
DZM Mont Dzumac 49.20 152 P **P** **11 05 53.1 +0.3**

TPTI 49.21 254 P **P** **11 05 52.4 -0.6**
comp=Z,14nm,0.5s
MBWA Marble Bar 49.29 210 P **P** **11 05 52.8 -0.6**
MBWA lAmb lAmb 11 05 54.9
comp=Z,56nm,0.8s
MLSI Meulaboh, Aceh 49.46 256 P **P** **11 05 55.5 +0.6**
comp=Z,5µmcomp=Z,54nm,0.7s
PSAD1 Pilbara Seismi 49.50 210 P **P** **11 05 55.2 +0.2**
PSAD1 lAmb lAmb 11 05 56.0
comp=Z,42nm,0.8s
PSA00 Pilbara Seismi 49.59 210 P **P** **11 05 56.1 +0.4**
SISI Saibi 49.74 248 P **P** **11 05 57.4 +0.4**
GSI Gunungsitoli 49.76 252 P **P** **11 05 57.6 +0.4**
comp=Z,28µmcomp=Z,624nm,0.8s
GSI Gunungsitoli 49.76 252 P **P** **11 05 57.3 +0.1**
XMIS Christmas Isla 49.80 233 P **P** **11 05 56.5 -0.9**
KNTN Kanton 49.85 114 P **P** **11 05 58.1 +0.3**
KNTN lAmb lAmb 11 05 59.1
comp=Z,34nm,0.8s
GAMB Gambell 50.74 24 P **P** **11 06 04.2 +0.4**
GAMB lAmb lAmb 11 06 06.6
comp=Z,98nm,1.2s
WMQ Urumqi 50.83 309 *e*P **P** **11 06 06.8 +1.8**
WMQ pP pwP 11 06 30.4 -1.5
WMQ sP sP 11 06 36.2 -0.5
WMQ S **S** **11 13 16.5 +2.6**
WMQ sS sS 11 13 47.3 -4.3
WMQ ScS **ScS** **11 15 44.4 -2.2**
WMQ pmax pmax
comp=Z,180nm,1.1s
WMQ pmax pmax
comp=Z,190nm,3.8s
WMQ LR LR
comp=Z,290nm,18.3s
WMQ LR LR
comp=Z,320nm,16.7s
WMQ LR LR
comp=Z,790nm,20.3s
WMQ Urumqi 50.83 309 P **P** **11 06 07.0 +2.1**
WMQ pmax pmax
comp=Z,189nm,0.8s
WMQ Urumqi 50.83 309 P **P** **11 06 07.0 +2.1**
TAPN Taplejung 51.04 288 *e*P **P** **11 06 08.0 +1.0**
comp=Z,117nm,0.5s
ODAN Odare 51.38 287 *e*P **P** **11 06 10.4 +0.8**
comp=Z,160nm,0.6s
DGZ Jazzator, Alta 51.85 316 *i* P **P** **11 06 13.9 +1.3**
DGZ pmax pmax
comp=Z,82nm,0.7s
MSVF Nonsavu 51.86 137 P **P** **11 06 13.8 +0.9**
MSVF pmax pmax
comp=Z,58nm,1.2s
MSVF Nonsavu 51.86 137 P **P** **11 06 13.8 +0.9**
MSVF lAmb lAmb 11 06 26.0
comp=Z,58nm,1.1s
RAMN Ramite 52.07 287 *e*P **P** **11 06 15.4 +0.7**
comp=Z,86nm,0.6s
JIRN Jiri 52.33 288 *e*P **P** **11 06 17.9 +1.1**
comp=Z,353nm,0.5s
SDPT Sand Point 52.44 36 P **P** **11 06 17.1 +0.5**
GUN Gumba 52.57 289 *e*P **P** **11 06 19.6 +1.1**
comp=Z,186nm,0.7s
CNBA Chernabura Isl 52.79 37 P **P** **11 06 19.8 +0.6**
CNBA lAmb lAmb 11 06 20.9
comp=Z,71nm,0.9s
ARMA Armidale 52.92 172 P **P** **11 06 20.7 +0.2**
ARMA lAmb lAmb 11 06 23.9
comp=Z,46nm,1.1s
PKI Pulchoki 53.03 288 *e*P **P** **11 06 22.2 +0.3**
comp=Z,108nm,0.6s
PKIN Phulchoki 53.04 288 *e*P **P** **11 06 22.2 +0.3**
comp=Z,108nm,0.6s
KKN Kakani 53.11 289 *e*P **P** **11 06 23.0 +0.7**
GIRL Giralia 53.29 215 P **P** **11 06 24.4 +1.2**
DMN Daman 53.29 288 *e*P **P** **11 06 24.3 +0.6**
comp=Z,96nm,0.6s
KIP Kipapa 53.47 79 *ce*P **P** **11 06 26.8 +2.1**
KIP pmax pmax
comp=Z,43nm,0.7s
KIP Kipapa 53.47 79 P **P** **11 06 25.3 +0.6**
ANM Nome 53.53 25 P **P** **11 06 25.6 +1.1**
ANM pmax pmax
comp=Z,125nm,1.3s
ANM Nome 53.53 25 P **P** **11 06 25.6 +1.1**
GKN Gorkha 53.65 289 *e*P **P** **11 06 27.1 +0.9**
comp=Z,210nm,0.7s
CHGN Chignik 53.81 36 P **P** **11 06 26.1 -0.6**
STKA Stephens Creek 53.92 183 P **P** **11 06 27.2 -0.5**
comp=Z,101nm,0.7s,baz=355,slow=7.9,SNR=137
STKA LR LR 11 28 58.2
comp=Z,729nm,22.0s,baz=354,slow=35
STKA Stephens Creek 53.92 183 P **P** **11 06 27.6 -0.1**
STKA pmax pmax
comp=Z,26nm,0.8s
STKA Stephens Creek 53.92 183 P **P** **11 06 27.6 -0.1**
STKA lAmb lAmb 11 06 28.9
comp=Z,26nm,0.8s
ZAA0 Zalesovo Array 54.25 321 P **P** **11 06 30.1 +0.2**
ZAA0 lAmb lAmb 11 06 31.1
comp=Z,95nm,1.1s
ZALV Zalesovo Beam 54.25 321 P **P** **11 06 29.6 -0.3**
comp=Z,54nm,0.5s,baz=104,slow=7.2,SNR=182
ZALV LR LR 11 30 44.8
comp=Z,846nm,19.6s,baz=94,slow=37
DANN Dangsing 54.37 290 *e*P **P** **11 06 32.8 +1.2**
comp=Z,1µm,0.6s
KOLN Koldanda 54.59 289 *e*P **P** **11 06 33.8 +0.7**
comp=Z,132nm,0.7s
MK31 Makanchi Array 54.89 312 *i* P **P** **11 06 35.5 +0.7**
MK31 Makanchi Array 54.89 312 P **P** **11 06 36.0 +1.2**
MKAR Makanchi Array 54.89 312 P **P** **11 06 35.5 +0.8**
comp=Z,134nm,0.6s,baz=91,slow=9.1,SNR=1331
MKAR S **S** **11 14 09.6 +0.6**
comp=Z,4.8nm,1.0s,baz=95,slow=18,SNR=8.4
MKAR LR LR 11 31 48.9
comp=Z,476nm,18.4s,baz=86,slow=38
MKAR Makanchi Array 54.89 312 *i* P **P** **11 06 35.5 +0.8**
MKAR pmax pmax
comp=Z,137nm,0.6s
FORT Forrest 54.97 197 P **P** **11 06 35.0 -0.3**
PYUN Piuthan 55.07 289 *e*P **P** **11 06 37.8 +1.2**
comp=Z,182nm,0.4s
MAKZ Makanchi 55.11 312 P **P** **11 06 37.3 +1.0**
MAKZ S **S** **11 14 12.7 +0.8**
MAKZ pmax pmax
comp=Z,206nm,0.9s
MAKZ Makanchi 55.11 312 P **P** **11 06 37.3 +1.0**
MAKZ **S** **11 14 12.7 +0.8**
BBOO Buckleboo 55.33 188 P **P** **11 06 37.7 -0.2**
RDOG Red Dog Mine 56.01 21 P **P** **11 06 43.6 +1.2**
AFI Afiamalu 56.29 126 P **P** **11 06 45.2 +0.1**
AFI pmax pmax
comp=Z,45nm,1.3s
AFI Afiamalu 56.29 126 P **P** **11 06 45.2 +0.1**
AFI lAmb lAmb 11 07 00.6
comp=Z,46nm,1.2s
PDGK Podgornoye 56.76 308 P **P** **11 06 49.2 +0.9**
OHAK Old Harbor 56.77 35 P **P** **11 06 48.3 +0.4**
OHAK lAmb lAmb 11 06 49.7
comp=Z,55nm,0.9s
TTA Tatalina 56.78 28 P **P** **11 06 48.5 +0.5**
TTA Tatalina 56.78 28 P **P** **11 06 48.5 +0.5**
UZB Uzunbulak 57.10 308 *e*P **P** **11 06 51.6 +0.9**
comp=Z,32nm,0.6s
UZB *i* S **S** **11 14 39.2 +0.5**
comp=Z,133nm,3.6s
UZB Uzunbulak 57.10 308 *e*P **P** **11 06 51.6 +0.9**
UZB *i* S **S** **11 14 39.2 +0.5**
UZB pmax pmax
comp=Z,31nm,0.6s
UZB smax smax
comp=E,133nm,3.6s
KDAK Kodiak Island 57.24 35 LR LR 11 29 17.6
comp=E,310nm,21.3s,baz=239,slow=34
KDAK Kodiak Island 57.24 35 P **P** **11 06 51.6 +0.4**
KDAK pmax pmax
comp=Z,36nm,1.0s
KDAK Kodiak Island 57.24 35 P **P** **11 06 51.6 +0.4**
KDAK lAmb lAmb 11 07 00.8
comp=Z,36nm,1.0s
CAN Canberra 57.50 175 P **P** **11 06 53.5 +0.2**
CAN pmax pmax
comp=Z,39nm,1.0s
CAN Canberra 57.50 175 P **P** **11 06 53.5 +0.2**
CAN lAmb lAmb 11 06 57.3

comp=Z,39nm,1.0s
SATY Saty 57.56 308 ⇓ *i* P **P** **11 06 55.6 +1.7**
comp=Z,86nm,1.5s
SATY *e*S **S** **11 14 45.3 +0.7**
comp=Z,150nm,2.8s
SATY Saty 57.56 308 *d i* P **P** **11 06 55.6 +1.7**
SATY *e*S **S** **11 14 45.3 +0.7**
SATY pmax pmax
comp=Z,86nm,1.5s
SATY smax smax
comp=E,150nm,2.8s
PRZ Przheval'sk 57.57 307 P **P** **11 06 57.2 +3.1**
PRZ pmax pmax
comp=Z,283nm,1.0s
PRZ Przheval'sk 57.57 307 P **P** **11 06 57.1 +3.1**
KURK Kurchatov 57.59 317 P **P** **11 06 54.2 +0.3**
KURK Kurchatov 57.59 317 *d* iP **P** **11 06 53.8 0.0**
KURK pmax pmax
comp=Z,193nm,0.8s
KURK Kurchatov 57.59 317 P **P** **11 06 54.1 +0.3**
COCO West Island 57.61 238 P **P** **11 06 53.5 -0.9**
COCO pmax pmax
comp=Z,132nm,0.7s
COCO West Island 57.61 238 P **P** **11 06 53.5 -0.9**
KURBB Kurchatov Arra 57.64 317 PKPPKP PKPPKPdf 11 36 35.3
comp=Z,0.7nm,1.0s,baz=273,slow=3.1,SNR=4.4
KURBB PKP2bc 11 36 44.6
comp=Z,1.7nm,1.1s,baz=302,slow=3.0,SNR=6.3
KURBB Kurchatov Arra 57.64 317 P **P** **11 06 54.4 +0.2**
RSO Redoubt South 57.67 32 P **P** **11 06 55.0 +0.6**
NRIK Noril'sk 57.72 340 P **P** **11 06 55.1 +0.7**
comp=Z,105nm,0.7s,baz=111,slow=8.3,SNR=141
NRIK LR LR 11 32 16.0
comp=Z,1µm,21.5s,baz=114,slow=36
NRIK Noril'sk 57.72 340 ⇑ *e*P **P** **11 06 54.4 0.0**
NRIK pmax pmax
comp=Z,116nm,0.7s
MORW Morawa 57.77 209 P **P** **11 06 54.7 -0.6**
HOM Homer 58.06 33 P **P** **11 06 57.3 +0.4**
HOM lAmb lAmb 11 06 59.0
comp=Z,63nm,0.8s
CNPM China Poot 58.24 33 P **P** **11 06 57.6 -0.6**
BRLK Bradley Lake 58.46 33 P **P** **11 06 59.4 -0.3**
BRLK lAmb lAmb 11 07 00.5
comp=Z,46nm,0.9s
PPLA Purkeypile 58.46 29 P **P** **11 07 00.4 +0.5**
PPLA lAmb lAmb 11 07 07.3
comp=Z,35nm,1.0s
KDJ Kajisay 58.49 307 P **P** **11 07 02.2 +1.7**
KDJ pmax pmax
comp=Z,182nm,1.5s
KDJ Kajisay 58.49 307 P **P** **11 07 02.1 +1.7**
KNDC Almaty 58.61 308 P **P** **11 07 03.5 +2.4**
PVM Polavaram 58.62 277 *e*P **P** **11 07 02.1 +0.6**
PVM IVmB_BB 11 07 28.3
comp=Z,298nm,2.1s
TNSS Tian-Shan 58.63 308 *e*P **P** **11 07 03.5 +1.7**
TNSS Tian-Shan 58.63 308 *e*P **P** **11 07 03.4 +1.7**
AAA Alma-Ata 58.64 308 *e*P **P** **11 07 03.9 +2.5**
AAA *e*S **S** **11 15 01.7 +3.1**
AAA pmax pmax
comp=Z,300nm,1.4s
AAA smax smax
comp=N,400nm,3.4s
AAA MLR MLR
comp=Z,300nm,12.0s
KUU Kurty 59.04 309 *e*P **P** **11 07 05.0 +0.9**
comp=Z,269nm,0.6s
KUU *e*S **S** **11 15 04.5 +0.8**
KUU Kurty 59.04 309 *e*P **P** **11 07 04.9 +0.9**
KUU *e*S **S** **11 15 04.4 +0.8**
KUU pmax pmax
comp=Z,269nm,0.6s
KTH Kantishna Hill 59.17 28 P **P** **11 07 04.9 +0.2**
ULHL Ulahol 59.18 307 P **P** **11 07 06.5 +1.2**
SNR=65
SEW Seward 59.23 32 P **P** **11 07 04.5 -0.5**
RC01 Rabbit Creek A 59.24 31 P **P** **11 07 04.7 -0.4**
BPAW Bear Paw Mtn. 59.26 28 P **P** **11 07 06.0 +0.8**
BOOM Boomskoye usch 59.39 307 P **P** **11 07 08.3 +1.6**
BOOM pmax pmax
comp=Z,179nm,0.6s
BOOM Boomskoye usch 59.39 307 P **P** **11 07 08.3 +1.6**
BOOM P **P** **11 07 08.5 +1.8**
NRN Naryn 59.41 306 P **P** **11 07 08.7 +1.6**
NRN pmax pmax
comp=Z,93nm,1.3s
NRN Naryn 59.41 306 P **P** **11 07 08.7 +1.6**
TRF Thorofare Moun 59.42 28 P **P** **11 07 06.4 -0.1**
MLY Manley 59.57 27 P **P** **11 07 08.2 +0.9**
MLY lAmb lAmb 11 07 09.9
comp=Z,73nm,1.1s
TOO Toolangi 59.57 179 P **P** **11 07 07.3 -0.3**
TOO pmax pmax
comp=Z,63nm,1.2s
TOO Toolangi 59.57 179 P **P** **11 07 07.3 -0.3**
TOO lAmb lAmb 11 07 08.7
comp=Z,63nm,1.1s
KSH Kashi 59.57 304 P **P** **11 07 12.4 +4.4**
KSH pP pP 11 07 32.7 +2.5
KSH sP sP 11 07 41.2 +0.9
KSH PP **PP** **11 09 27.3 +7.0**
KSH S **S** **11 15 16.1 +5.2**
KSH sS sS 11 15 51.0 +1.3
KSH SS **SS** **11 19 14.7 +7.2**
KSH pmax pmax
comp=Z,98nm,0.6s
KSH pmax pmax
comp=Z,830nm,5.7s
KSH LR LR
comp=Z,970nm,12.6s
KSH LR LR
comp=Z,710nm,12.2s
KSH LR LR
comp=Z,610nm,16.0s
PMR Palmer 59.62 31 P **P** **11 07 07.2 -0.5**
PMR pmax pmax
comp=Z,85nm,1.0s
PMR Palmer 59.62 31 P **P** **11 07 07.2 -0.5**
TKM2 Tokmak 2 59.62 308 P **P** **11 07 10.1 +1.8**
SNR=188
TKM2 Tokmak 2 59.62 308 *i* P **P** **11 07 09.7 +1.4**
TKM2 pmax pmax
comp=Z,92nm,0.6s
MYLAV Mylavaram 59.67 277 *e*P **P** **11 07 09.2 +0.4**
MYLAV IVmB_BB 11 07 35.9
comp=Z,210nm,2.3s
GHO Glory Hole Cre 59.74 30 P **P** **11 07 08.4 -0.3**
KNK Knik Glacier 59.91 31 P **P** **11 07 09.8 0.0**
BWN Browne 59.92 28 P **P** **11 07 10.3 +0.5**
KZA Kyzart 59.93 307 P **P** **11 07 13.0 +2.3**
SNR=140
NDI New Delhi 59.99 291 *ex* **P** **11 07 09.0 -1.8**
SML Sawmill 60.03 30 P **P** **11 07 10.6 0.0**
SML pmax pmax
comp=Z,154nm,0.9s
SML Sawmill 60.03 30 P **P** **11 07 10.4 -0.2**
RND Reindeer 60.05 29 P **P** **11 07 10.2 -0.6**
RND pmax pmax
comp=Z,44nm,1.0s
RND Reindeer 60.05 29 P **P** **11 07 10.2 -0.6**
RND lAmb lAmb 11 07 11.9
comp=Z,44nm,1.0s
MCK McKinley 60.07 28 P **P** **11 07 10.6 -0.2**
MCK pmax pmax
comp=Z,88nm,1.0s
MCK McKinley 60.07 28 P **P** **11 07 10.6 -0.2**
KBK Karagaybulak 60.11 307 P **P** **11 07 13.2 +1.6**
SNR=71
BHK Bhakra 60.21 294 *e*P **P** **11 07 14.8 +2.5**
CHMS Chumysh 60.24 308 P **P** **11 07 14.0 +1.6**
SNR=19
COLD Coldfoot 60.28 24 P **P** **11 07 12.9 +0.8**
COLD S **S** **11 15 22.1 +3.3**
SGDS Sogindy 60.30 308 *e*P **P** **11 07 13.7 +0.9**
comp=Z,32nm,0.6s
SGDS *e*S **S** **11 15 18.6 -1.3**
RPR Rampur 60.33 280 *e*P **P** **11 07 13.1 -0.1**
RPR lVmBBB 11 07 39.4
comp=Z,188nm,1.2s
USP Ospenovka 60.40 308 P **P** **11 07 14.8 +1.4**
SNR=69
AAK Ala-Archa 60.45 307 LR LR 11 34 03.8
comp=Z,385nm,20.0s,baz=77,slow=36
AAK Ala-Archa 60.45 307 P **P** **11 07 15.8 +1.9**

SNR=8.0
AAK Ala-Archa 60.45 307 *i* P **P 11 07 15.4 +1.4**
SNR=12
AAK Ala-Archa 60.45 307 P **P 11 07 15.4 +1.4**
AAK S **S 11 15 24.2 +2.2**
AAK Ala-Archa 60.45 307 *i* P **P 11 07 15.2 +1.3**
AAK pmax pmax
comp=Z,45nm,0.6s
AAK Ala-Archa 60.45 307 P **P 11 07 15.5 +1.6**
UCH Uchtor 60.46 307 P **P 11 07 16.0 +1.6**
SNR=175
GLI Glacier Island 60.49 32 P **P 11 07 13.5 -0.1**
SCM Sheep Creek Mo 60.50 31 P **P 11 07 14.1 +0.3**
SCM pmax pmax
comp=Z,154nm,0.9s
SCM Sheep Creek Mo 60.50 31 P **P 11 07 14.1 +0.3**
ADKI Addanki 60.54 276 *eP* **P 11 07 15.2 +0.5**
ADKI IVmB_BB 11 07 42.0
comp=Z,204nm,2.3s
WRH Wood River Hil 60.57 27 P **P 11 07 13.8 -0.3**
WRH IAmb IAmb 11 07 15.5
comp=Z,35nm,1.0s
MDM Murphy Dome 60.60 27 P **P 11 07 14.8 +0.4**
NWAO Narrogin (SRO) 60.60 206 P **P 11 07 14.0 -0.7**
NWAO pmax pmax
comp=Z,71nm,1.1s
NWAO Narrogin (SRO) 60.60 206 P **P 11 07 13.9 -0.7**
NWAO IAmb IAmb 11 07 16.2
comp=Z,71nm,1.1s
NWAO Narrogin (SRO) 60.60 206 P **P 11 07 13.6 -1.2**
NWAO IAmb IAmb 11 07 16.2
comp=Z,57nm,1.1s
BTLS Baital 60.63 310 *eP* **P 11 07 15.6 +0.6**
comp=Z,70nm,0.5s
BTLS *i* S **S 11 15 23.4 -0.6**
comp=Z,104nm,3.1s
BTLS Baital 60.63 310 *eP* **P 11 07 15.5 +0.6**
BTLS *i* S **S 11 15 23.3 -0.6**
BTLS pmax pmax
comp=Z,70nm,0.5s
BTLS smax smax
comp=E,104nm,3.1s
THN Thein Dam 60.63 296 *ex* **P 11 07 16.0 +0.9**
DHY Denali Highway 60.66 29 P **P 11 07 14.5 -0.4**
DHY IAmb IAmb 11 07 16.7
comp=Z,37nm,1.1s
MID Middleton Isla 60.70 33 P **P 11 07 15.7 +0.6**
MID pmax pmax
comp=Z,119nm,1.0s
MID Middleton Isla 60.70 33 P **P 11 07 15.7 +0.6**
CCB Clear Creek Bu 60.72 27 P **P 11 07 15.1 0.0**
HIN Hinchinbrook I 60.72 32 P **P 11 07 15.7 +0.4**
TCOL CIGO, UAF Yank 60.74 27 P **P 11 07 15.2 -0.1**
baz=260,SNR=9.0
COLA College 60.74 27 *d iP* **P 11 07 15.1 -0.2**
COLA pmax pmax
comp=Z,25nm,0.9s
COLA College 60.74 27 P **P 11 07 15.6 +0.4**
COLA IAmb IAmb 11 07 18.8
comp=Z,24nm,0.8s
FID Port Fidalgo 60.77 32 P **P 11 07 15.7 +0.1**
TOLK Toolik Lake Re 60.85 23 P **P 11 07 17.2 +1.1**
baz=256
TOLK Toolik Lake Re 60.85 23 P **P 11 07 16.9 +0.9**
NJS Nagarjunasagar 60.95 277 *eP* **P 11 07 17.7 +0.3**
NJS IVmB_BB 11 07 44.3
comp=Z,228nm,2.2s
POKR Poker Plat Res 60.96 27 P **P 11 07 16.7 -0.1**
baz=260,SNR=15
EKS2 Erkin-Say 60.98 307 P **P 11 07 19.0 +1.5**
SNR=31
HDA Harding Lake 61.05 28 P **P 11 07 16.6 -0.8**
baz=261,SNR=43
HDA Harding Lake 61.05 28 P **P 11 07 17.3 -0.1**
HDA IAmb IAmb 11 07 18.2
comp=Z,37nm,0.8s
AML Almayashu 61.08 307 P **P 11 07 20.4 +1.9**
SNR=183
EYAK Cordova Ski Ar 61.11 32 P **P 11 07 18.3 +0.5**
EYAK IAmb IAmb 11 07 20.1
comp=Z,56nm,1.0s
IL31 61.13 27 P **P 11 07 17.2 -0.7**
IL31 IAmb IAmb 11 07 18.7
comp=Z,52nm,0.9s
ILAR Eielson Array 61.13 27 P **P 11 07 16.9 -1.1**
comp=Z,31nm,0.8s,baz=258,slow=5.1,SNR=284
ILAR LR LR 11 33 36.6
comp=Z,398nm,19.4s,baz=257,slow=36
ILAR PKPPKP **P'P'df 11 36 32.4 -2.3**
comp=Z,0.7nm,0.9s,baz=126,slow=1.8,SNR=2.2
SRSP Sriramsagar 61.17 280 *eP* **P 11 07 18.7 -0.3**
SRSP IVmBBB 11 07 45.0
comp=Z,216nm,1.2s
HYB Hyderabad 61.40 278 *i* P **P 11 07 21.0 +0.5**
HYB *ep*P **pP 11 07 42.0 -1.0**
HYB *e* 11 07 46.0
HYB *eS* **S 11 15 34.0 -0.5**
HYBB Hyderabad (bro 61.40 278 *eP* **P 11 07 20.3 -0.3**
HYBB IVmBBB 11 07 46.8
comp=Z,242nm,1.5s
SKHT Srikalahasti 61.41 274 *eP* **P 11 07 20.7 +0.1**
SKHT IVmBBB 11 07 47.4
comp=Z,158nm,1.7s
SRLM Srisailam 61.46 277 *eP* **P 11 07 21.1 +0.2**
SRLM IVmB_BB 11 07 47.5
comp=Z,254nm,2.3s
RAGM Ragged Mountai 61.62 32 P **P 11 07 21.9 +0.5**
RAGM IAmb IAmb 11 07 23.7
comp=Z,70nm,1.1s
OTUK Ortayu 61.66 314 P **P 11 07 22.5 +0.7**
ARSB Arslanbob 61.68 306 P **P 11 07 22.4 +0.1**
ARSB pmax pmax
comp=Z,272nm,1.3s
ARSB Arslanbob 61.68 306 P **P 11 07 22.4 +0.1**
PRP Porcupine Dome 61.81 26 P **P 11 07 21.9 -0.8**
HMT Hamilton 61.83 32 P **P 11 07 23.1 +0.4**
HMT IAmb IAmb 11 07 25.0
comp=Z,58nm,1.0s
RIDG Independent Ri 61.87 29 P **P 11 07 23.2 +0.1**
RIDG IAmb IAmb 11 07 24.6
comp=Z,75nm,1.0s
SUCK Suckling Hills 62.05 33 P **P 11 07 25.2 +0.9**
FYU Fort Yukon 62.08 25 P **P 11 07 25.5 +1.2**
GLB Gilahina Butte 62.13 31 P **P 11 07 25.7 +0.9**
GLB IAmb IAmb 11 07 27.0
comp=Z,88nm,1.2s
DOT Dot Lake 62.21 29 P **P 11 07 25.5 +0.3**
DOT IAmb IAmb 11 07 26.9
comp=Z,63nm,1.1s
SCRK Sand Creek 62.28 28 P **P 11 07 26.0 +0.2**
SCRK IAmb IAmb 11 07 27.4
comp=Z,77nm,0.9s
VRDI Verde Repeater 62.29 31 P **P 11 07 26.3 +0.3**
VRDI IAmb IAmb 11 07 28.0
comp=Z,53nm,1.0s
MENT Mentasta 62.30 29 P **P 11 07 26.5 +0.7**
CRQM Cirque 62.41 32 P **P 11 07 27.2 +0.3**
NIL Nilore 62.48 297 P **P 11 07 28.6 +0.9**
NIL Nilore 62.48 297 P **P 11 07 28.9 +1.3**
NIL pmax pmax
comp=Z,164nm,0.9s
NIL Nilore 62.48 297 P **P 11 07 28.9 +1.3**
NIL **S 11 15 48.8 +1.0**
MCARA McCarthy VSAT 62.50 31 P **P 11 07 28.2 +1.0**
MCARA IAmb IAmb 11 07 29.9
comp=Z,76nm,0.9s
WAX Waxell Ridge 62.53 32 P **P 11 07 28.6 +1.1**
WAX IAmb IAmb 11 07 29.8
comp=Z,59nm,1.0s
TGL Tana Glacier 62.56 32 P **P 11 07 28.6 +0.9**
TGL IAmb IAmb 11 07 30.4
comp=Z,66nm,1.0s
BVAR Borovoye Array 62.74 319 PKPPKP PKPPKPdf1 36 31.2
comp=Z,0.3nm,0.5s,baz=45,slow=2.2,SNR=1.9
DZA Taraz 62.75 308 *eP* **P 11 07 29.4 +0.2**
DZA Taraz 62.75 308 *eP* **P 11 07 29.4 +0.2**
BRVK Borovoye 62.81 319 P **P 11 07 29.7 +0.4**
BRVK Borovoye 62.81 319 P **P 11 07 29.8 +0.4**
BRVK S **S 11 15 50.0 -1.2**
BRVK pmax pmax
comp=Z,194nm,1.0s
BRVK Borovoye 62.81 319 P **P 11 07 29.8 +0.4**
BRVK **S 11 15 50.0 -1.2**
BALM Baldy 62.81 32 P **P 11 07 30.0 +0.6**
BALM IAmb IAmb 11 07 31.2
comp=Z,43nm,0.9s
KLRI Killari 63.00 280 *eP* **P 11 07 30.7 -0.6**
KLRI IVmB_BB 11 07 58.5
comp=Z,298nm,1.6s
BARN Barnard Glacie 63.15 32 P **P 11 07 32.2 +0.4**
CTGM Chitina Glacie 63.30 32 P **P 11 07 33.1 +0.4**
CTGM IAmb IAmb 11 07 34.9
comp=Z,49nm,1.0s
URV Uravakonda 63.30 276 *eP* **P 11 07 33.2 -0.1**
URV IVmB_BB 11 08 00.7
comp=Z,370nm,1.8s
KK31 Karatay Array 63.32 308 *i* P **P 11 07 34.1 +1.1**
KK31 Karatay Array 63.32 308 P **P 11 07 34.2 +1.2**
KKAR Karatay Array 63.32 308 P **P 11 07 34.2 +1.2**
KKAR pmax pmax
comp=Z,194nm,0.9s
KKAR Karatay Array 63.32 308 P **P 11 07 34.2 +1.2**
JBG Jabagly 63.38 307 *eP* **P 11 07 34.7 +1.2**
JBG pmax pmax
comp=Z,35nm,0.7s
EGAK Eagle 63.57 27 P **P 11 07 34.6 +0.4**
EGAK IAmb IAmb 11 07 35.9
comp=Z,52nm,1.4s
OUZ Omahuta 63.70 153 P **P 11 07 36.0 +0.7**
OUZ IAmb IAmb 11 07 38.4
comp=Z,92nm,1.5s
IUG luznay 63.79 307 *eP* **P 11 07 37.4 +1.1**
IUG *i* S **S 11 16 04.9 +0.9**
IUG luznay 63.79 307 *eP* **P 11 07 37.3 +1.1**
IUG *i* S **S 11 16 04.8 +0.9**
BRLS Boroldaу 63.82 308 *eS* **S 11 16 06.6 +2.4**
GAR Garm 63.99 304 P **P 11 07 38.6 +1.0**
GAR **S 11 16 08.9 +2.2**
DAWY Dawson 64.30 28 P **P 11 07 39.9 +0.8**
DAWY IAmb IAmb 11 07 41.5
comp=Z,44nm,1.0s
DHAK Deception Hill 64.86 34 P **P 11 07 44.0 +1.2**
DHAK IAmb IAmb 11 07 45.5
comp=Z,84nm,1.0s
CHGR Chuyangaron 64.94 303 P **P 11 07 44.8 +1.0**
HYT Haines Junctio 65.17 32 P **P 11 07 46.6 +1.7**
HYT IAmb IAmb 11 07 47.9
comp=Z,88nm,1.1s
EPYK Eagle Plains 65.47 26 P **P 11 07 47.2 +0.6**
baz=270,SNR=66
EPYK Eagle Plains 65.47 26 P **P 11 07 47.2 +0.6**
EPYK IAmb IAmb 11 07 49.0
comp=Z,108nm,1.1s
KBL Kabul 65.76 299 P **P 11 07 49.8 +0.5**
KBL S **S 11 16 27.8 -0.8**
KBL Kabul 65.76 299 P **P 11 07 50.0 +0.7**
KBL pmax pmax
comp=Z,130nm,0.7s
KBL Kabul 65.76 299 P **P 11 07 50.0 +0.7**
SKAG Skagway 66.32 33 P **P 11 07 53.7 +1.6**
SKAG IAmb IAmb 11 07 54.9
comp=Z,39nm,1.0s
WHY Whitehorse 66.47 32 P **P 11 07 53.8 +0.6**
WHY IAmb IAmb 11 07 55.9
comp=Z,59nm,1.1s
SIT Sitka 66.51 36 P **P 11 07 54.3 +1.0**
SIT pmax pmax
comp=Z,31nm,1.2s
SIT Sitka 66.51 36 P **P 11 07 54.3 +1.0**
BESE Bessie Mountai 66.64 34 P **P 11 07 54.7 +0.5**
BESE IAmb IAmb 11 07 56.9
comp=Z,78nm,1.1s
INK Inuvik 66.69 24 PKPPKP PKPPKPdf1 36 22.4
comp=Z,18nm,1.3s,baz=57,slow=3.5,SNR=13
INK Inuvik 66.69 24 P **P 11 07 54.6 +0.3**
INK pmax pmax
comp=Z,79nm,1.1s
INK Inuvik 66.69 24 P **P 11 07 54.4 +0.1**
INK IAmb IAmb 11 07 56.7
comp=Z,75nm,1.1s
INK **P'P'df 11 36 23.1 -2.4**
JIS Juneau Island 66.91 35 P **P 11 07 57.2 +1.4**
JIS IAmb IAmb 11 07 58.7
comp=Z,78nm,1.1s
HIZ Hauiti 67.04 154 P **P 11 07 57.3 +0.4**
URZ Urewera 67.76 152 P **P 11 07 59.5 -1.9**
URZ IAmb IAmb 11 08 00.8
comp=Z,115nm,1.4s
CRAG Craig 67.91 38 P **P 11 08 02.5 +0.3**
CRAG IAmb IAmb 11 08 06.8
comp=Z,49nm,1.3s
SVE Sverdlovsk 68.07 324 *de*P **P 11 08 03.8 +0.6**
SVE *eS* **S 11 16 54.1 -1.1**
SVE pmax pmax
comp=Z,184nm,0.9s
QRZ Quartz Range 68.16 157 P **P 11 08 03.8 -0.1**
QRZ IAmb IAmb 11 08 05.3
comp=Z,121nm,1.2s
WRAK Wrangell Islan 68.21 36 P **P 11 08 04.8 +0.7**
BKZ Black Stump Fm 68.26 153 P **P 11 08 03.7 -0.9**
BKZ IAmb IAmb 11 08 05.1
comp=Z,87nm,1.1s
DIB Dawson Inlet, 68.60 40 P **P 11 08 07.4 +0.8**
NNZ Nelson 68.81 157 P **P 11 08 07.3 -0.6**
NNZ IAmb IAmb 11 08 09.3
comp=Z,108nm,1.4s
DLBC Dease Lake 69.17 34 P **P 11 08 11.2 +1.1**
DLBC IAmb IAmb 11 08 13.1
comp=Z,79nm,1.1s
A36M Sachs Harbour 69.20 19 P **P 11 08 10.4 +0.5**
baz=278
TUWZ Tuamarina 69.20 156 P **P 11 08 09.0 -1.3**
ARU Arti 69.26 324 PKP2bc PKPPKPbd1 36 16.8
comp=Z,0.5nm,0.3s,baz=273,slow=1.0,SNR=4.7
ARU LR LR 11 39 24.0
comp=Z,477nm,22.0s,baz=68,slow=36
ARU Arti 69.26 324 *d iP* **P 11 08 10.6 0.0**
ARU 11 08 35.6
ARU 11 10 44.1
ARU S **S 11 17 10.7 +1.4**
ARU *SS **pS 11 17 40.6 +4.4**
ARU 11 17 58.9
ARU SS **SS 11 21 38.0 +0.9**
ARU pmax pmax
comp=Z,119nm,0.6s
ARU MLR MLR
comp=Z,476nm,19.0s
ARU Arti 69.26 324 P **P 11 08 10.6 0.0**
SNZO South Karori 69.38 156 P **P 11 08 10.0 -1.4**
SNZO IAmb IAmb 11 08 11.5
comp=Z,152nm,1.2s
BSWZ Blackbirch Sta 69.42 157 P **P 11 08 09.7 -2.0**
BFZ Birch Farm 69.45 154 P **P 11 08 10.9 -1.0**
BHW Baring Head 69.53 156 P **P 11 08 10.9 -1.5**
MSWZ Moikau Station 69.68 155 P **P 11 08 12.3 -1.0**
LTZ Lake Taylor 69.79 158 P **P 11 08 13.7 -0.3**
PLWZ Palliser 69.82 156 P **P 11 08 13.3 -0.9**
KHZ Kahutara 69.91 157 P **P 11 08 13.4 -1.3**
C36M Paulatuk 70.00 22 P **P 11 08 15.2 +0.3**
baz=280
C36M Paulatuk 70.00 22 P **P 11 08 14.9 0.0**
C36M IAmb IAmb 11 08 16.6
comp=Z,72nm,1.1s
OXZ Oxford 70.19 159 P **P 11 08 14.8 -1.6**
RPZ Rata Peaks 70.21 160 P **P 11 08 15.0 -1.5**
RPZ IAmb IAmb 11 08 19.3
comp=Z,59nm,1.0s
LBZ Lake Benmore 70.54 160 P **P 11 08 18.1 -0.4**
AKTO Aktyubinsk 70.68 317 LR LR 11 40 52.8
comp=Z,346nm,19.1s,baz=72,slow=37
MQZ McQueen's Vall 70.74 158 P **P 11 08 18.6 -1.0**
MLZ Mavora Lakes 70.82 162 P **P 11 08 19.1 -1.1**
HRA Herat 71.27 300 P **P 11 08 24.7 +1.1**
HRA IAmb IAmb 11 08 26.4
comp=Z,43nm,0.8s
GEYT Alibeck 73.58 305 P **P 11 08 38.1 +1.1**
comp=Z,36nm,0.9s,baz=79,slow=3.2,SNR=64
GEYT LR LR 11 42 58.9
comp=Z,219nm,20.9s,baz=55,slow=37
GYA0 ALIBECK ARRAY 73.58 305 P **P 11 08 37.9 +0.9**
GYA0B ALIBECK ARRAY 73.58 305 P **P 11 08 38.0 +1.0**
GYA0B IAmb IAmb 11 08 39.7
comp=Z,52nm,0.9s
PRGR Permogore 74.54 331 *eP* **P 11 08 41.0 -1.0**
PRGR *e*PP **pP 11 09 02.9 -2.5**
PRGR *eS* **S 11 18 08.9 -0.6**
PRGR pmax pmax
comp=Z,92nm,0.9s
HOPEN Hopen 74.86 348 *eP* **P 11 08 45.1 +1.4**
NLWA Neilton Lookou 75.28 45 P **P 11 08 47.2 +0.5**
NLWA IAmb IAmb 11 08 49.9
comp=Z,52nm,1.2s
SPA0 Spitsbergen Ar 75.38 350 P **P 11 08 47.1 +0.5**
SPA0 IAmb IAmb 11 08 48.7
comp=Z,64nm,1.1s
SPA0 Spitsbergen Ar 75.38 350 *eP* **P 11 08 47.2 +0.5**
SPITS Spitsbergen Ar 75.38 350 P **P 11 08 47.2 +0.5**
SPITS pmax pmax
comp=Z,11nm,0.5s
KBS Kingsbay 75.52 351 *ceP* **P 11 08 49.0 +1.6**
KBS pmax pmax
comp=Z,128nm,1.3s
KBS Kingsbay 75.52 351 P **P 11 08 48.1 +0.7**
KBS IAmb IAmb 11 08 49.6
comp=Z,80nm,0.7s
KBS Kingsbay 75.52 351 *eP* **P 11 08 48.4 +1.0**
YKA Yellowknife Ar 75.54 28 P **P 11 08 47.8 0.0**
comp=Z,23nm,0.7s,baz=289,slow=5.1,SNR=237
YKA PKP2bc 11 35 42.0
comp=Z,0.5nm,0.9s,baz=110,slow=5.0,SNR=5.3
YKA LR LR 11 41 38.9
comp=Z,226nm,20.2s,baz=0.0,slow=35
LLLB Lillooet 75.58 41 P **P 11 08 49.8 +1.4**
LLLB IAmb IAmb 11 08 51.0
comp=Z,55nm,1.1s
A04D Lummi Island 75.63 43 P **P 11 08 50.0 +1.4**
baz=288
E03A Lebam 75.73 45 P **P 11 08 50.2 +1.0**
E03A IAmb IAmb 11 09 01.7
comp=Z,64nm,1.0s
D03D Eldon 75.74 44 P **P 11 08 50.7 +1.5**
baz=288
NOR Nord 75.84 357 *i* P **P 11 08 49.6 +0.4**
NOR Nord 75.84 357 *i* P **P 11 08 49.6 +0.4**
F03A Seaside 75.91 46 P **P 11 08 52.1 +1.8**
F03A IAmb IAmb 11 08 53.3
comp=Z,90nm,1.0s
PPT Papeete 76.05 116 P **P 11 08 52.8 +1.4**
comp=Z,40nm,0.9s,baz=77,slow=14,SNR=4.3
PPT LR LR 11 38 55.3
comp=Z,279nm,18.6s,baz=302,slow=33
D04E Lakebay 76.05 45 P **P 11 08 52.4 +1.4**
baz=288
PPT2 Papeete2 76.06 116 *eS* **S 11 18 26.2 -1.7**
comp=Z,767nm,26.2s
PPT2 Papeete2 76.06 116 *eLR* LR 11 32 07.4
comp=Z,3µm,36.0s
PAE Paea 76.09 116 *eP* **P 11 08 52.8 +1.1**
comp=Z,11nm,1.1s
B05A Bryant 76.16 43 P **P 11 08 52.6 +1.0**
baz=288
F04D Rainier, OR 76.23 46 P **P 11 08 53.0 +0.9**
baz=288
TIAR Tiarei 76.24 116 *eP* **P 11 08 53.7 +1.2**
comp=Z,18nm,0.9s
PMOR Pomariorio Ree 76.26 113 *eP* **P 11 08 53.7 +1.1**
PMOR Pomariorio Ree 76.26 113 *eT* T 12 31 40.2
comp=Z,5.9nm,0.2s
I02D Swieshome 76.27 48 P **P 11 08 53.9 +1.6**
baz=288
HSPB Hornsund (broa 76.29 349 *eP* **P 11 08 53.0 +1.1**
RES Resolute Bay 76.30 14 LR LR 11 48 00.7
comp=Z,298nm,18.7s,baz=314,slow=40
RES Resolute Bay 76.30 14 P **P 11 08 52.5 +0.6**
RES pmax pmax
comp=Z,41nm,0.9s
RES Resolute Bay 76.30 14 P **P 11 08 52.5 +0.6**
RES IAmb IAmb 11 08 54.1
comp=Z,40nm,0.9s
G03D McMinnville, O 76.33 47 P **P 11 08 54.0 +1.3**
baz=288
E04D Cinebar 76.38 45 P **P 11 08 54.2 +1.3**
baz=288
TVO Taravao 76.43 116 *eP* **P 11 08 54.8 +1.2**
comp=Z,25nm,1.1s
B06A Marblemount 76.47 43 P **P 11 08 53.9 +0.6**
B06A IAmb IAmb 11 08 55.7
comp=Z,65nm,1.5s
J01E Myrtle Point 76.50 49 P **P 11 08 55.3 +1.7**
baz=288,SNR=5.6
LVZ Lovozero 76.54 338 *ceP* **P 11 08 53.1 -0.4**
LVZ pmax pmax
comp=Z,62nm,1.3s
LVZ Lovozero 76.54 338 P **P 11 08 53.0 -0.4**
LVZ IAmb IAmb 11 08 55.5
comp=Z,62nm,1.2s
D05A Enumclaw 76.56 44 P **P 11 08 54.9 +1.0**
D05A IAmb IAmb 11 08 57.0
comp=Z,58nm,1.1s
F04A Amboy 76.67 46 P **P 11 08 56.0 +1.5**
F04A IAmb IAmb 11 08 57.7
comp=Z,88nm,1.1s
I03D Drain, OR 76.74 48 P **P 11 08 56.5 +1.6**
baz=288,SNR=14
LON Longmire 76.81 45 P **P 11 08 55.7 +0.2**
LON pmax pmax
comp=Z,29nm,1.3s
LON Longmire 76.81 45 P **P 11 08 55.7 +0.2**
K02D Willamette Mer 76.83 49 P **P 11 08 57.1 +1.5**
baz=288,SNR=11
TMCR Tamitsa 76.87 334 *eP* **P 11 08 54.1 -1.2**
TMCR pmax pmax
comp=Z,137nm,0.7s
H04D Lebanon 76.90 47 P **P 11 08 57.2 +1.3**
baz=288,SNR=7.2
KRMB Red Mountain 77.02 50 P **P 11 08 57.7 +0.9**
C06D Leavenworth 77.03 43 P **P 11 08 57.5 +1.0**
baz=289
APA Apatity 77.11 338 ⇓ *iP* **P 11 08 56.2 -0.4**
APA pmax pmax
comp=Z,61nm,0.8s
JCC Jacoby Creek, 77.16 51 P **P 11 08 59.7 +2.3**
JCC IAmb IAmb 11 09 00.5
comp=Z,72nm,1.4s
H04A Detroit Lake 77.22 47 P **P 11 08 58.9 +1.2**
H04A IAmb IAmb 11 09 00.8
comp=Z,75nm,1.1s
I04A Tendick Farm, 77.35 48 P **P 11 08 59.1 +0.5**
baz=289,SNR=17
HUMO Hull Mountain 77.35 49 P **P 11 09 00.7 +2.2**
KHMM Horse Mountain 77.35 51 P **P 11 08 59.5 +0.8**
KHMM IAmb IAmb 11 09 01.9
comp=Z,54nm,1.1s
LTY Liberty 77.39 44 P **P 11 08 59.5 +0.9**
WBK Wadi Bani Khal 77.44 289 P **P 11 08 60.0 +0.6**
SNR=7.7
WBK S **S 11 18 39.5 -3.4**
WSAR Wadi Sarin 77.53 290 P **P 11 09 00.7 +0.9**
WSAR S **S 11 18 42.8 -1.1**
KLMR Klimovskoe 77.58 331 *d iP* **P 11 08 58.9 -0.4**
KLMR *e*PP **pP 11 09 20.8 -2.0**
KLMR S **S 11 18 38.8 -4.1**
KLMR SS **SS 11 23 40.6 -2.7**
KLMR SSS SSS 11 27 06.4
KLMR pmax pmax
comp=Z,92nm,1.1s
KLMR Klimovskoe 77.58 331 ⇓ *iP* **P 11 08 58.9 -0.4**
KLMR ⇑ *iP* **P 11 08 58.9 -0.4**
KLMR ⇑ *iP* **P 11 08 58.9 -0.4**
KLMR AMP 11 09 00.4
comp=Z,92nm,1.1s
KLMR *ep*P **pP 11 09 20.8 -2.0**
KLMR S **S 11 18 38.9 -4.0**
KLMR S **S 11 18 38.9 -4.0**
KLMR SS **SS 11 23 40.7 -2.6**
KLMR SS **SS 11 23 40.7 -2.6**
KLMR SSS SSS 11 27 06.5
KLMR SSS SSS 11 27 06.5
KLMR LR LR 11 36 58.5
KLMR AMP 11 39 39.4
comp=Z,641nm,21.9s
KMRM Mail Ridge 77.58 52 P **P 11 09 01.4 +1.5**
G05D Wamic, OR 77.62 46 P **P 11 09 00.9 +0.9**
baz=289
J04D Umpqua Nationa 77.74 48 P **P 11 09 02.2 +1.3**
baz=289,SNR=6.2
YBH Yreka Blue Hor 77.81 50 P **P 11 09 02.2 +1.1**
YBH pmax pmax
comp=Z,33nm,1.0s
YBH Yreka Blue Hor 77.81 50 P **P 11 09 02.2 +1.1**
M02C Callahan 77.82 50 P **P 11 09 02.7 +1.5**
baz=289,SNR=23
KCPM Cahto Peak 77.84 52 P **P 11 09 02.3 +0.8**
KCPM IAmb IAmb 11 09 04.3

comp=Z,66nm,1.0s
B08A Colville Reser 77.87 43 P **P** **11 09 02.2 +0.9**
B08A IAmb IAmb 11 09 03.5
comp=Z,40nm,0.9s
BIDO Bidbid 77.88 291 P **P** **11 09 03.0 +1.3**
SNR=15
BIDO S **S** **11 18 46.3 -1.2**
I05D Terrebonne, OR 77.91 47 P **P** **11 09 02.4 +0.8**
baz=289,SNR=10
L04D Klamath Falls 77.94 49 P **P** **11 09 02.6 +0.7**
baz=289,SNR=18
KEV Kevo 78.05 342 P **P** **11 09 01.7 -0.1**
KEV pmax pmax
comp=Z,119nm,1.5s
KEV Kevo 78.05 342 P **P** **11 09 01.7 -0.1**
KEV IAmb IAmb 11 09 03.5
comp=Z,119nm,1.5s
N02D Trinity Center 78.06 51 P **P** **11 09 03.6 +1.1**
baz=289,SNR=21
G06A Carlson Farm, 78.08 46 P **P** **11 09 03.4 +0.9**
SMDO Samad 78.10 290 P **P** **11 09 04.0 +0.9**
SNR=8.6
E07A Sunnyside 78.15 45 P **P** **11 09 03.1 +0.3**
K04D Chiloquin, OR 78.19 49 P **P** **11 09 04.4 +1.1**
baz=289,SNR=5.6
O02D Mt. Diablo Mer 78.26 51 P **P** **11 09 05.1 +1.4**
baz=289,SNR=26
WDC Whiskeytown Da 78.31 51 P **P** **11 09 05.0 +1.2**
WDC pmax pmax
comp=Z,30nm,1.1s
WDC Whiskeytown Da 78.31 51 P **P** **11 09 05.0 +1.2**
F07A Phinny Hill Vi 78.33 45 P **P** **11 09 04.8 +1.0**
J05D Fort Rock, OR 78.33 48 P **P** **11 09 05.1 +1.1**
baz=290,SNR=44
PINE Pine Mountain 78.36 47 P **P** **11 09 05.5 +1.3**
PINE IAmb IAmb 11 09 07.3
comp=Z,90nm,0.9s
M04C Macdoel 78.41 50 P **P** **11 09 05.4 +0.9**
baz=290,SNR=38
HAWA Hanford 78.42 45 P **P** **11 09 05.6 +1.3**
HAMF Hammerfest 78.49 343 *eP* **P** **11 09 04.1 -0.1**
HOQ Hoqain 78.57 291 P **P** **11 09 06.1 +0.5**
SNR=15
D08A Wollman Farm, 78.58 44 P **P** **11 09 06.3 +1.1**
ARCES ARCESS Array B 78.61 342 P **P** **11 09 05.4 +0.5**
comp=Z,29nm,0.6s,baz=63,slow=5.5,SNR=148
ARCES LR LR 11 46 55.2
comp=Z,672nm,21.4s,baz=54,slow=38
ARE0 ARCESS Array S 78.61 342 P **P** **11 09 05.2 +0.3**
ARE0 ARCESS Array S 78.61 342 *eP* **P** **11 09 05.5 +0.5**
BANOM Banah 78.66 293 *i* P **P** **11 09 06.6 +0.5**
SNR=13
E08A Dider Farm, El 78.69 44 P **P** **11 09 06.9 +1.1**
GDXM Geysers 78.71 53 P **P** **11 09 07.2 +1.0**
C09A Chrisman Ranch 78.73 43 P **P** **11 09 07.0 +1.0**
K05A Summer Lake 78.75 48 P **P** **11 09 08.1 +1.6**
K05A IAmb IAmb 11 09 09.3
comp=Z,77nm,1.0s
SHME Shamm 78.75 294 *i* P **P** **11 09 07.5 +0.9**
SNR=19
MHTO MHTO 78.86 288 P **P** **11 09 07.5 +0.4**
SNR=12
O03E Paynes Creek 78.93 51 P **P** **11 09 07.5 +0.1**
baz=290,SNR=42
BSY Bisya 78.94 290 P **P** **11 09 08.1 +0.5**
SNR=9.8
MSFE Esma-Masafi 78.97 293 *i* P **P** **11 09 08.6 +0.8**
SNR=14
TBI Tubuai 78.99 121 *eP* **P** **11 09 09.2 +1.5**
comp=Z,140nm,1.3s
TBI *eS* **S** **11 18 56.6 -2.5**
comp=Z,1μm,26.2s
TBI Tubuai 78.99 121 *e*LQ LQ 11 30 06.7
comp=Z,725nm,35.2s
TBI *e*LR LR 11 33 20.0
comp=Z,1μm,36.2s,baz=307
SOHO SOHO 79.05 292 P **P** **11 09 09.0 +0.8**
SNR=32
UOSS Minazif 79.07 292 *i* P **P** **11 09 08.7 +0.5**
SNR=25
UOSS Minazif 79.07 292 P **P** **11 09 08.8 +0.5**
UOSS IAmb IAmb 11 09 10.1
comp=Z,49nm,0.8s
HATD Hatta, Dubai 79.17 292 *i* P **P** **11 09 09.4 +0.6**
SNR=29
HATD Hatta, Dubai 79.17 292 P **P** **11 09 09.7 +0.9**
SNR=17
HATD S **S** **11 19 01.3 0.0**
G08A Pilot Rock 79.17 46 P **P** **11 09 09.8 +1.2**
I07A Izee 79.23 47 P **P** **11 09 09.8 +0.8**
E09A Wood Farm, Sta 79.27 44 P **P** **11 09 09.2 +0.3**
E09A IAmb IAmb 11 09 11.5
comp=Z,48nm,1.1s
ASHO Ashiyiah 79.28 292 *i* P **P** **11 09 09.8 +0.3**
SNR=26
ASHO Ashiyiah 79.28 292 P **P** **11 09 10.1 +0.6**
SNR=14
NEW Newport 79.29 42 P **P** **11 09 10.1 +1.0**
NEW pmax pmax
comp=Z,37nm,0.9s
NEW Newport 79.29 42 P **P** **11 09 09.8 +0.7**
baz=292
NEW Newport 79.29 42 P **P** **11 09 10.1 +1.0**
NEW IAmb IAmb 11 09 11.3
comp=Z,37nm,0.8s
ARQ Araqi 79.33 291 P **P** **11 09 10.6 +0.8**
SNR=10
TULEG Thule 79.36 7 P **P** **11 09 09.4 +0.6**
TULEG IAmb IAmb 11 09 10.9
comp=Z,68nm,0.9s
ORV Oroville 79.40 52 P **P** **11 09 09.6 -0.2**
ORV pmax pmax
comp=Z,38nm,1.0s
ORV Oroville 79.40 52 P **P** **11 09 09.6 -0.2**
MOD Modoc Plateau 79.44 49 P **P** **11 09 10.9 +0.7**
SGF Sodankyl 79.46 340 P **P** **11 09 10.1 +0.5**
SGF pmax pmax
comp=Z,131nm,0.9s
NAZ Nazwa, Dubai 79.52 293 *i* P **P** **11 09 11.1 +0.4**
SNR=5.5
NAZ Nazwa, Dubai 79.52 293 P **P** **11 09 11.4 +0.7**
SNR=7.5
KTK1 Kautokeino 79.57 342 *eP* **P** **11 09 10.3 +0.1**
FAQ Al Faqa, Dubai 79.66 292 P **P** **11 09 11.8 +0.3**
MAK Makhachkala 79.71 312 *eP* **P** **11 09 08.9 -2.5**
MAK *e**SP **pwP** **11 09 37.8 -1.8**
MAK *e* 11 12 17.6
MAK *e*S **S** **11 19 03.5 -2.9**
MAK pmax pmax
comp=Z,77nm,0.6s
MAK MLR MLR
comp=Z,885nm,16.0s
ALNE Al Ain 79.75 292 *i* P **P** **11 09 12.9 +0.8**
SNR=7.7
AFDM Forest Hills D 80.00 52 P **P** **11 09 14.0 +0.9**
F10A Beach Ranch, E 80.06 44 P **P** **11 09 14.8 +1.4**
AKT Akhty 80.08 311 *eP* **P** **11 09 14.4 +0.8**
AKT *e* 11 19 08.1
AKT pmax pmax
comp=Z,109nm,0.8s
JOF Joensuu 80.12 335 P **P** **11 09 13.3 +0.1**
JOF pmax pmax
comp=Z,73nm,0.9s
J08A Circle Bar Ran 80.19 47 P **P** **11 09 15.2 +1.0**
J08A IAmb IAmb 11 09 16.7
comp=Z,53nm,0.9s
AJN Ajban 80.24 293 *i* P **P** **11 09 14.9 +0.4**
SNR=5.9
AJN Ajban 80.24 293 P **P** **11 09 15.1 +0.5**
SNR=8.3
VRH Novokhopyorsk 80.28 321 *eP* **P** **11 09 14.3 0.0**
VRH *e**SP **pwP** **11 09 40.7 -1.6**
VRH *e*S **S** **11 19 09.4 -2.6**
VRH pmax pmax
comp=Z,150nm,0.6s
VRH pmax pmax
comp=Z,170nm,0.6s
VRH smax smax
comp=N,290nm,1.8s
LKRN Lenkeran, Azer 80.31 308 P **P** **11 09 15.2 +0.5**
TAOE Nuku Hiva Isla 80.39 104 *e*S **S** **11 19 11.6 -2.9**
comp=N,2μm,30.8s
TAOE Nuku Hiva Isla 80.39 104 *e*LR LR 11 34 15.3
comp=N,664nm,28.3s
TRO Tromso 80.40 343 *eP* **P** **11 09 14.5 0.0**
SAO San Andreas Ge 80.41 54 P **P** **11 09 15.6 +0.3**

SAO pmax pmax
comp=Z,26nm,1.2s
SAO San Andreas Ge 80.41 54 P **P** **11 09 15.6 +0.3**
WVOR Wild Horse Val 80.41 48 P **P** **11 09 15.9 +0.5**
WVOR pmax pmax
comp=Z,37nm,1.0s
WVOR Wild Horse Val 80.41 48 P **P** **11 09 15.9 +0.5**
BMO Blue Mountains 80.42 45 P **P** **11 09 15.9 +0.5**
BMO pmax pmax
comp=Z,40nm,0.9s
BMO Blue Mountains 80.42 45 P **P** **11 09 15.9 +0.5**
BMO IAmb IAmb 11 09 17.7
comp=Z,40nm,0.9s
SEKA Sheki 80.55 311 P **P** **11 09 16.3 +0.2**
DAG Danmarks Havn 80.59 356 *i* P **P** **11 09 15.4 -0.1**
DAG *i* 11 09 37.1
DAG pmax pmax
comp=Z,25nm,0.9s
DAG Danmarks Havn 80.59 356 *i* P **P** **11 09 15.4 -0.1**
comp=Z,24nm,0.9s
DAG *i* 11 09 37.1
MOS Moscow 80.62 327 *eP* **P** **11 09 15.6 -0.4**
MOS *e* 11 09 39.2
MOS *eS* **S** **11 19 09.8 -5.6**
MOS *e* 11 19 54.5
MOS pmax pmax
comp=Z,73nm,0.8s
MOS MLR MLR
comp=Z,600nm,19.0s
CMB Columbia Colle 80.75 53 P **P** **11 09 17.8 +0.6**
CMB pmax pmax
comp=Z,48nm,0.9s
CMB Columbia Colle 80.75 53 P **P** **11 09 17.8 +0.6**
CMB IAmb IAmb 11 09 19.5
comp=Z,48nm,0.9s
GROC Groznyy 80.79 313 *eP* **P** **11 09 17.6 +0.4**
GROC *e**PP **pwP** **11 09 43.4 -2.1**
GROC *e**SP **sP** **11 09 53.6 +3.1**
GROC *eS* **S** **11 19 19.6 +1.9**
GROC pmax pmax
comp=Z,113nm,1.0s
MNGR Mingechevir, A 80.79 310 P **P** **11 09 17.7 +0.5**
VCNR Virginia City 80.83 51 P **P** **11 09 18.2 +0.4**
PAHR Pah Rah Range 80.88 51 P **P** **11 09 18.8 +0.8**
PNTR Pine Nut 80.94 52 P **P** **11 09 19.7 +1.3**
PNTR IAmb IAmb 11 09 21.0
comp=Z,60nm,0.8s
WALA Waterton Lakes 80.95 41 P **P** **11 09 19.5 +1.4**
WALA IAmb IAmb 11 09 20.9
comp=Z,42nm,0.9s
OUL Oulu 80.99 338 P **P** **11 09 17.9 +0.1**
OUL pmax pmax
comp=Z,76nm,0.8s
LGD Lagodekhi 80.99 311 P **P** **11 09 18.9 +0.6**
PMPB Monarch Peak 81.09 55 P **P** **11 09 21.4 +2.3**
YERR Yerington 81.24 52 P **P** **11 09 20.8 +0.8**
YERR IAmb IAmb 11 09 22.4
comp=Z,43nm,0.9s
JTMT Jette 81.25 42 P **P** **11 09 20.4 +0.7**
JTMT IAmb IAmb 11 09 22.0
comp=Z,47nm,0.9s
WAKR Walker 81.28 52 P **P** **11 09 18.9 -1.2**
WAKR IAmb IAmb 11 09 22.8
comp=Z,37nm,0.8s
LPSR Galich'ya Gora 81.28 323 *eP* **P** **11 09 19.6 0.0**
LPSR *e**SP **pwP** **11 09 46.1 -1.6**
LPSR *eS* **S** **11 19 17.5 -4.9**
LPSR pmax pmax
comp=Z,140nm,0.7s
LPSR pmax pmax
comp=Z,140nm,0.7s
LPSR smax smax
comp=N,260nm,2.0s
GANJ Ganja 81.38 310 P **P** **11 09 21.0 +0.6**
OBN Obninsk 81.44 326‖ *eP* **P** **11 09 19.6 -0.7**
OBN *e**SP **pP** **11 09 43.6 -0.3**
OBN *i* S **S** **11 19 20.7 -3.2**
OBN SSS SSS 11 28 13.0
OBN pmax pmax
comp=Z,70nm,1.2s
OBN MLR MLR
comp=Z,721nm,19.0s
OBN Obninsk 81.44 326 P **P** **11 09 20.3 0.0**
OBN IAmb IAmb 11 09 21.6
comp=Z,89nm,1.3s
PAGB Antelope Grade 81.68 55 P **P** **11 09 24.0 +1.9**
PAGB IAmb IAmb 11 09 24.8
comp=Z,43nm,1.0s
VSR Storozhevoye 81.74 322 *eP* **P** **11 09 22.3 +0.2**
VSR *e**SP **pP** **11 09 46.6 +0.9**
VSR *eS* **S** **11 19 22.7 -4.5**
VSR pmax pmax
comp=Z,160nm,0.7s
VSR pmax pmax
comp=Z,340nm,1.4s
VSR smax smax
comp=N,640nm,4.3s
VORD Divnogorie 81.78 322 *eP* **P** **11 09 22.1 -0.1**
VORD *e**SP **pP** **11 09 47.0 +1.1**
VORD pmax pmax
comp=Z,100nm,0.9s
MSO Missoula 81.83 43 P **P** **11 09 22.9 +0.1**
baz=294
MSO Missoula 81.83 43 P **P** **11 09 23.7 +0.9**
MDPB Devils Postpil 81.86 53 P **P** **11 09 24.8 +1.4**
RYN Ryan 81.90 52 P **P** **11 09 24.1 +0.7**
GOF Gofitskoye 81.91 315‖ *eP* **P** **11 09 23.3 +0.2**
GOF *eS* **S** **11 19 28.4 -0.8**
GOF pmax pmax
comp=Z,94nm,1.4s
OMMB Old Mammoth Mi 81.92 53 P **P** **11 09 25.4 +1.6**
MFID Camas Ranch 81.95 46 P **P** **11 09 24.0 +0.5**
MFID IAmb IAmb 11 09 25.9
comp=Z,51nm,0.9s
GUDG Gudauri 81.97 313 P **P** **11 09 24.8 +1.1**
SMMC Simmler 82.03 55 P **P** **11 09 24.6 +0.6**
baz=292
MLAC Mammoth, Mammo 82.04 53 P **P** **11 09 25.0 +0.7**
baz=292
KVN Kaiserville 82.04 51 P **P** **11 09 24.3 +0.1**
KVN Kaiserville 82.04 51 P **P** **11 09 24.3 +0.1**
TBLG Delisi 82.07 312 P **P** **11 09 25.1 +1.0**
TBLG Delisi 82.07 312 P **P** **11 09 25.1 +1.0**
VOG Valley Oaks Go 82.12 54 P **P** **11 09 24.5 +0.1**
baz=292,SNR=5.2
NVAR Mina Array Bea 82.13 52 P **P** **11 09 25.8 +1.1**
comp=Z,38nm,0.7s,baz=270,slow=5.6,SNR=277
NVAR LR LR 11 40 56.1
comp=Z,185nm,19.3s,baz=304,slow=32
SUF Sumiainen 82.23 336 P **P** **11 09 23.9 -0.5**
SUF pmax pmax
comp=Z,83nm,0.7s
ZEI Tsey 82.23 313 *eP* **P** **11 09 23.2 -1.9**
ZEI *eS* **S** **11 19 34.6 +1.5**
ZEI pmax pmax
comp=Z,60nm,0.9s
NV11 Mina Array Sit 82.24 52 P **P** **11 09 25.7 +0.6**
PKM Mcpherson Peak 82.32 56 P **P** **11 09 26.7 +1.0**
baz=292,SNR=9.2
KULLO Kullorsuaq 82.38 6 *i* P **P** **11 09 25.6 +0.7**
KULLO pmax pmax
comp=Z,73nm,0.9s
KULLO Kullorsuaq 82.38 6 *i* P **P** **11 09 25.6 +0.7**
comp=Z,73nm,0.9s
KZRT Kazreti 82.44 312 P **P** **11 09 27.4 +1.4**
VES Vestal, Richgr 82.52 54 P **P** **11 09 26.4 -0.1**
baz=292,SNR=23
NAX Nakhchivan 82.52 309 P **P** **11 09 26.8 +0.3**
STEI Steigen 82.53 343 *eP* **P** **11 09 25.9 +0.1**
KBZ Khabaz 82.54 314 P **P** **11 09 27.2 +0.9**
comp=Z,142nm,0.8s,baz=122,slow=2.2,SNR=355
KBZ LR LR 11 49 57.6
comp=Z,477nm,19.3s,baz=64,slow=38
KBZ Khabaz 82.54 314 *ce*P **P** **11 09 27.1 +0.8**
SBC Santa Barbara 82.56 56 P **P** **11 09 27.3 +0.6**
baz=292
KIV Kislovodsk 82.58 314 ⇑P **P** **11 09 27.4 +0.6**
KIV Kislovodsk 82.58 314 *i* P **P** **11 09 27.5 +0.7**
SNR=17
KIV Kislovodsk 82.58 314 *eP* **P** **11 09 27.3 +0.6**
KIV *eS* **S** **11 19 36.4 0.0**
KIV *eSS* **SS** **11 25 04.9 +5.7**
KIV pmax pmax
comp=Z,76nm,4.4s

KIV pmax pmax
comp=Z,318nm,1.1s
KIV MLR MLR
comp=Z,885nm,19.0s
KIV Kislovodsk 82.58 314 P **P** **11 09 27.8 +1.0**
KIV IAmb IAmb 11 09 30.3
comp=Z,83nm,0.9s
ONI Oni 82.62 313 P **P** **11 09 28.3 +1.4**
TIN Tinemaha, Big 82.70 53 P **P** **11 09 28.4 +0.9**
baz=292
SCZ2 Santa Cruz Isl 82.79 56 P **P** **11 09 28.4 +0.4**
baz=292
NEY Neytrino 82.85 314 *i* P **P** **11 09 29.3 +1.1**
NEY pmax pmax
comp=Z,16nm,0.8s
LOF Lofoten 82.85 343 *eP* **P** **11 09 27.3 -0.2**
ARVC Arvin 82.98 55 P **P** **11 09 29.4 +0.6**
baz=292
FIA1 FINESS Array S 82.99 335 P **P** **11 09 27.6 -0.7**
FINES FINESS Array B 82.99 335 P **P** **11 09 27.5 -0.8**
comp=Z,68nm,0.5s,baz=69,slow=4.8,SNR=560
FINES LR LR 11 50 53.8
comp=Z,228nm,18.1s,baz=44,slow=39
FINES FINESS Array B 82.99 335 *i* P **P** **11 09 27.5 -0.8**
FINES pmax pmax
comp=Z,68nm,0.5s
BGD Bogdanovka 83.04 312 P **P** **11 09 29.4 0.0**
CWC Cottonwood Cre 83.05 54 P **P** **11 09 29.8 +0.3**
baz=293
ISA Isabella, Lake 83.05 54 P **P** **11 09 29.5 +0.2**
ISA pmax pmax
comp=Z,18nm,1.0s
ISA Isabella, Lake 83.05 54 P **P** **11 09 29.1 -0.2**
baz=292,SNR=14
ISA Isabella, Lake 83.05 54 P **P** **11 09 29.5 +0.2**
AKH Akhalkalaki 83.06 312 ⇑P **P** **11 09 31.0 +1.6**
AKH Akhalkalaki 83.06 312 P **P** **11 09 30.8 +1.4**
AKH pmax pmax
comp=Z,128nm,0.9s
AKH Akhalkalaki 83.06 312 P **P** **11 09 30.8 +1.4**
LRM Limekiln Ridge 83.18 43 P **P** **11 09 30.8 +0.8**
OSI Osito Audit: C 83.25 55 P **P** **11 09 31.2 +0.8**
baz=292
DLMT Dillon 83.28 44 P **P** **11 09 31.0 +0.5**
VAF Ylistaro 83.34 337 P **P** **11 09 29.8 -0.3**
VAF pmax pmax
comp=Z,101nm,0.7s
MCMT McKenzie Canyo 83.35 44 P **P** **11 09 31.5 +0.6**
GRAC Grapevine Rang 83.36 53 P **P** **11 09 31.5 +0.7**
baz=293,SNR=6.1
ELK Elko 83.41 49 P **P** **11 09 32.0 +0.7**
ELK pmax pmax
comp=Z,28nm,1.0s
ELK Elko 83.41 49 P **P** **11 09 31.9 +0.7**
WHFO Wadi Hawf 83.63 287 P **P** **11 09 32.3 -0.3**
SNR=5.3
MPMC Manual Prospec 83.64 54 P **P** **11 09 32.9 +0.5**
baz=293,SNR=60
KARS Kars 83.66 311 P **P** **11 09 34.2 +1.8**
DECC Green Verdugo 83.69 56 P **P** **11 09 32.9 +0.3**
baz=293
EDW2 Edwards Air Fo 83.71 55 P **P** **11 09 33.5 +0.8**
baz=293,SNR=12
LRMC Laurel Mtn Rad 83.71 54 P **P** **11 09 33.5 +0.7**
baz=293,SNR=40
PASC Pasadena Art C 83.84 56 P **P** **11 09 33.6 +0.3**
EGMT Eagleton 83.89 40 P **P** **11 09 33.7 +0.3**
baz=297
EGMT Eagleton 83.89 40 P **P** **11 09 34.0 +0.6**
FMP Fort Macarthur 83.93 56 P **P** **11 09 34.2 +0.5**
baz=293
FURC Furnace Creek, 83.94 53 P **P** **11 09 34.7 +0.9**
baz=293,SNR=18
CIS Catalina Islan 83.95 57 P **P** **11 09 34.5 +0.6**
baz=293,SNR=7.6
MOR8 Moi Rana 83.98 342 *eP* **P** **11 09 31.7 -1.7**
SCI2 San Clemente I 84.01 57 P **P** **11 09 34.3 +0.1**
baz=293
R11A Troy Canyon, C 84.13 51 P **P** **11 09 35.6 +0.7**
baz=294,SNR=33
R11A Troy Canyon, C 84.13 51 P **P** **11 09 35.4 +0.5**
TPNV Topopah Spring 84.20 53 P **P** **11 09 36.2 +0.9**
TPNV pmax pmax
comp=Z,37nm,0.9s
TPNV Topopah Spring 84.20 53 P **P** **11 09 35.8 +0.4**
baz=294
TPNV Topopah Spring 84.20 53 P **P** **11 09 36.2 +0.9**
TPNV IAmb IAmb 11 09 37.5
comp=Z,37nm,0.8s
BFSC Mount Baldy Ra 84.21 55 P **P** **11 09 35.5 +0.1**
baz=293
BATM Batumi 84.21 313 P **P** **11 09 36.3 +1.3**
ABTO Aybut 84.26 286 P **P** **11 09 36.0 +0.3**
SNR=6.2
QLMT Earthquake Lak 84.26 44 P **P** **11 09 37.0 +1.5**
STOK Stokkvaagen 84.28 342 *eP* **P** **11 09 35.0 +0.2**
BCA Borcka 84.33 312‖P **P** **11 09 36.2 +0.6**
VSU Vasula 84.40 332 *eP* **P** **11 09 35.2 -0.4**
YHL Hebgen Lake 84.41 44 P **P** **11 09 37.9 +1.6**
GSC Goldstone, Bar 84.44 54 P **P** **11 09 37.4 +0.9**
GSC pmax pmax
comp=Z,28nm,0.8s
GSC Goldstone, Bar 84.44 54 P **P** **11 09 37.2 +0.8**
baz=293,SNR=26
GSC Goldstone, Bar 84.44 54 P **P** **11 09 37.4 +0.9**
GSC IAmb IAmb 11 09 38.7
comp=Z,28nm,0.8s
YHB Horse Butte 84.44 44 P **P** **11 09 37.7 +1.3**
RRX Edison Barstow 84.47 55 P **P** **11 09 37.3 +0.9**
baz=293
SHOC Shoshone, Teco 84.60 54 P **P** **11 09 37.7 +0.6**
baz=294,SNR=19
YMR Madison River 84.63 44 P **P** **11 09 39.2 +1.9**
YHH Holmes Hill 84.65 44 P **P** **11 09 39.1 +1.5**
HVU Hansel Valley 84.68 47 P **P** **11 09 39.8 +2.2**
HVU pmax pmax
comp=Z,41nm,1.0s
HVU Hansel Valley 84.68 47 P **P** **11 09 39.8 +2.2**
SOC Sochi 84.69 315 *eP* **P** **11 09 38.3 +0.9**
SOC *e* 11 12 53.5
SOC *e*PPP PPP 11 14 58.5
SOC *eS* **S** **11 19 56.1 -1.2**
SOC *e*SS **SS** **11 25 35.6 +5.5**
SOC pmax pmax
comp=Z,18nm,0.5s
BBRC Big Bear Solar 84.77 55 P **P** **11 09 39.1 +0.8**
baz=293,SNR=5.2
YNR Norris Junctio 84.79 44 P **P** **11 09 41.4 +3.1**
MURC Murrieta 84.82 56 P **P** **11 09 38.7 +0.4**
baz=293,SNR=7.0
BGU Big Grassy Mou 84.87 48 P **P** **11 09 39.4 +0.8**
FFC Flin Flon 84.88 32 P **P** **11 09 38.6 +0.5**
FFC pmax pmax
comp=Z,77nm,0.9s
FFC Flin Flon 84.88 32 P **P** **11 09 38.6 +0.5**
FFC IAmb IAmb 11 09 40.3
comp=Z,77nm,0.8s
YPP Pitchstone Pla 84.91 44 P **P** **11 09 41.7 +2.8**
GCMT Greycliff 84.95 42 P **P** **11 09 40.0 +1.1**
IMW Indian Meadow 84.98 45 P **P** **11 09 40.8 +1.5**
IMW IAmb IAmb 11 09 42.1
comp=Z,30nm,0.8s
HEC Hector,Ludlow 84.98 55 P **P** **11 09 39.6 +0.5**
baz=294,SNR=5.4
H17A Grant Village 85.00 44 P **P** **11 09 41.1 +1.8**
baz=296
H17A Grant Village 85.00 44 P **P** **11 09 42.2 +2.9**
H17A IAmb IAmb 11 09 44.2
comp=Z,47nm,1.2s
LKWY Lake 85.03 44 P **P** **11 09 42.4 +2.9**
LKWY pmax pmax
comp=Z,37nm,0.9s
LKWY Lake 85.03 44 P **P** **11 09 42.4 +2.9**
LKWY IAmb IAmb 11 09 43.7
comp=Z,37nm,0.9s
FXWY Fox Creek 85.04 45 P **P** **11 09 40.8 +1.3**
TUQ Turquoise Moun 85.05 54 P **P** **11 09 40.1 +0.6**
baz=294,SNR=6.1
FLWY Flagg Ranch 85.06 44 P **P** **11 09 41.1 +1.5**
FLWY IAmb IAmb 11 09 42.7
comp=Z,41nm,0.8s
YNE Yellowstone No 85.09 43 P **P** **11 09 41.3 +1.6**
SPUT South Promonto 85.10 47 P **P** **11 09 41.0 +1.3**
YMP Mirror Lake Pl 85.11 43 P **P** **11 09 42.0 +2.1**
TPAW Teton Pass 85.16 45 P **P** **11 09 41.4 +1.3**

109C Camp Elliot, M 85.17 57 P P 11 09 40.7 +0.7
baz=293,SNR=7.3
109C Camp Elliot, M 85.17 57 P P 11 09 40.6 +0.7
SHPR Sheep Range 85.18 53 P P 11 09 41.5 +1.2
REDW Red Top Meadow 85.28 45 P P 11 09 41.8 +1.1
PSUT Pine Spring 85.29 50 P P 11 09 41.7 +0.8
SNOW Snow King Moun 85.30 45 P P 11 09 40.7 -0.1
DUG Dugway, Tooele 85.33 48 P P 11 09 41.8 +0.9
DUG pmax pmax
comp=Z,35nm,0.8s
DUG Dugway, Tooele 85.33 48 P P 11 09 41.3 +0.4
baz=295
DUG Dugway, Tooele 85.33 48 P P 11 09 41.8 +0.9
DUG IAmb IAmb 11 09 43.1
comp=Z,35nm,0.8s
SUMG Summit 85.35 1 *i* P P 11 09 42.1 +1.5
SUMG pmax pmax
comp=Z,220nm,0.9s
SUMG Summit 85.35 1 P P 11 09 41.6 +1.0
SUMG Summit 85.35 1 *i* P P 11 09 42.1 +1.5
comp=Z,218nm,0.9s
AHID Auburn Hatcher 85.38 46 P P 11 09 41.7 +0.6
PFO Pinyon Flats O 85.38 56 P P 11 09 41.0 -0.2
PFO pmax pmax
comp=Z,25nm,1.0s
PFO Pinyon Flats O 85.38 56 P P 11 09 41.5 +0.3
baz=294,SNR=29
PFO Pinyon Flats O 85.38 56 P P 11 09 41.0 -0.2
XPFO Pion Flat 85.38 56 P P 11 09 41.8 +0.5
RLMT Red Lodge 85.50 43 P P 11 09 42.9 +1.1
baz=297
RLMT Red Lodge 85.50 43 P P 11 09 42.9 +1.1
RLMT IAmb IAmb 11 09 44.6
comp=Z,61nm,0.7s
GMRC Granite Mounta 85.51 54 P P 11 09 42.3 +0.5
baz=294,SNR=19
SOCY Socotra 85.53 281 P P 11 09 41.3 -0.9
SOCY IAmb IAmb 11 09 43.8
comp=Z,83nm,1.3s
BELC Belle Mtn. Jos 85.57 55 P P 11 09 42.0 -0.2
baz=294,SNR=22
HWUT Hardware Ranch 85.57 47 P P 11 09 43.0 +0.9
HWUT IAmb IAmb 11 09 44.4
comp=Z,44nm,0.8s
BAR Barrett 85.58 57 P P 11 09 42.5 +0.4
ANN Anapa 85.62 317 *e*P P 11 09 41.2 -0.8
ANN *e**PP **pwP** 11 10 08.5 -1.6
ANN *e*S S 11 19 57.2 -9.2
ANN pmax pmax
comp=Z,41nm,0.7s
MONP2 Monument Peak 85.69 56 P P 11 09 42.9 +0.1
baz=294,SNR=33
CTU Camp Tracy 85.84 48 P P 11 09 44.4 +0.9
NSS Namsos 85.88 341 *e*P P 11 09 42.1 -0.8
TCUT Toone Canyon 85.89 47 P P 11 09 44.2 +0.4
NLU North Lily Min 85.94 48 P P 11 09 44.8 +0.8
IKP In-Ko-Pah, Jac 86.03 56 P P 11 09 44.9 +0.5
baz=294,SNR=17
CCUT Cedar City 86.06 51 P P 11 09 46.0 +1.3
JLU Jordanelle 86.09 48 P P 11 09 45.6 +0.9
MICGM Minsk 86.09 328 *e*P P 11 09 43.0 -1.1
MICGM *e*LR LR 11 45 25.0
MNK Minsk 86.09 328 *e*P P 11 09 43.0 -1.1
BC3 Big Chuckawall 86.12 55 P P 11 09 45.4 +0.5
baz=294,SNR=33
FCC Fort Churchill 86.14 26 P P 11 09 44.8 +0.6
FCC IAmb IAmb 11 09 45.9
comp=Z,31nm,1.0s
FCC **pwP** 11 10 10.8 -2.0
SWSC Sam W. Stewart 86.15 56 P P 11 09 45.7 +0.8
baz=294,SNR=11
IRM Iron Mountain 86.15 55 P P 11 09 45.5 +0.6
baz=294,SNR=12
IZAR Zarasai 86.17 330 *e*P P 11 09 44.4 -0.1
MPU Maple Canyon 86.22 48 P P 11 09 46.2 +0.8
SZCU Shurtz Canyon 86.24 51 P P 11 09 46.6 +1.1
NEE2 Needles Airpor 86.30 54 P P 11 09 45.9 +0.3
baz=295
ISAL Salakas 86.32 330 *e*P P 11 09 44.9 -0.3
LCMT Little Creek M 86.37 51 P P 11 09 47.3 +1.2
BW06 Boulder Array 86.39 45 P P 11 09 46.8 +0.6
baz=297,SNR=10
BW06 Boulder Array 86.39 45 P P 11 09 46.4 +0.2
PDAR Pinedale Array 86.39 45 P P 11 09 46.3 +0.1
comp=Z,9.3nm,0.8s,baz=264,slow=2.8,SNR=70
NACGM Naroch 86.39 329 *e* P 11 09 44.0 -1.6
NACGM *e*LQ LQ 11 42 27.0
NACGM *e*LR LR 11 54 16.0
IIGN Ignalina 86.41 330 *e*P P 11 09 45.2 -0.4
MSU Marysvale 86.49 50 P P 11 09 48.1 +1.3
MSU Marysvale 86.49 50 P P 11 09 48.1 +1.3
LAO LASA Array 86.64 40 P P 11 09 47.8 +0.7
baz=299,SNR=18
LAO LASA Array 86.64 40 P P 11 09 47.1 0.0
KNB Kanab 86.68 51 P P 11 09 48.8 +1.2
KNB pmax pmax
comp=Z,105nm,0.9s
KNB Kanab 86.68 51 P P 11 09 48.8 +1.2
MTPU Mount Pierson 86.69 50 P P 11 09 49.2 +1.3
W13A Hualapai Mount 86.71 53 P P 11 09 48.6 +0.8
Y12C Blythe 86.79 55 P P 11 09 48.9 +0.9
baz=295,SNR=9.7
Y12C Blythe 86.79 55 P P 11 09 49.2 +1.2
Y12C IAmb IAmb 11 09 51.0
comp=Z,26nm,0.9s
Y12C **pP** 11 10 11.8 0.0
TMUT Trail Mountain 86.83 49 P P 11 09 49.3 +0.8
PDMCI Parker Dam,Lak 86.85 54 P P 11 09 49.3 +1.0
baz=295,SNR=17
GLA Glamis 86.85 56 P P 11 09 49.4 +1.1
GLA pmax pmax
comp=Z,43nm,0.8s
GLA Glamis 86.85 56 P P 11 09 49.0 +0.6
baz=295,SNR=20
GLA Glamis 86.85 56 P P 11 09 49.4 +1.1
GLA IAmb IAmb 11 09 50.8
comp=Z,43nm,0.8s
PKCU Pink Cliffs 86.86 51 P P 11 09 50.3 +1.6
SCO Scoresbysund 86.94 355 *i* P P 11 09 48.0 0.0
SCO pmax pmax
comp=Z,21nm,1.0s
SCO Scoresbysund 86.94 355 P P 11 09 48.5 +0.6
SCO Scoresbysund 86.94 355 *i* P P 11 09 48.0 0.0
comp=Z,21nm,1.0s
DGMT Dagmar 86.94 38 P P 11 09 48.6 +0.1
baz=301,SNR=7.7
DGMT Dagmar 86.94 38 P P 11 09 49.2 +0.7
DGMT IAmb IAmb 11 09 50.1
comp=Z,25nm,0.9s
Q16A Castle Valley 87.02 49 P P 11 09 50.2 +0.9
P17A Butcher Ranch, 87.08 48 P P 11 09 50.8 +1.3
U15A North Rim 87.31 52 P P 11 09 52.1 +1.3
U15A IAmb IAmb 11 09 53.5
comp=Z,34nm,0.8s
PABE Paberze 87.36 330 *e*P P 11 09 49.2 -1.0
RDMU Red Mountain 87.38 47 P P 11 09 51.4 +0.4
SRU San Rafael Swe 87.39 49 P P 11 09 51.6 +0.6
SRU pmax pmax
comp=Z,38nm,0.8s
SRU San Rafael Swe 87.39 49 P P 11 09 51.6 +0.6
AKASG Malin Array Be 87.49 325 P P 11 09 49.9 -1.1
comp=Z,21nm,0.5s,baz=52,slow=5.2,SNR=18
AKASG LR LR 11 51 46.5
comp=Z,605nm,18.4s,baz=55,slow=37
AKBB Malin Array Si 87.49 325 *ce*P P 11 09 49.7 -1.3
AKBB Malin Array Si 87.49 325 P P 11 09 49.7 -1.3
AKBB IAmb IAmb 11 09 50.6
comp=Z,39nm,0.6s
KIEV Kiev 87.50 325 P P 11 09 49.0 -2.0
SIM Simferopol' 87.63 318 *e*P P 11 09 50.9 -0.9
SIM *e*S **SKSac** 11 20 10.0 -1.3
SIM pmax pmax
comp=Z,47nm,0.7s
113A Mohawk Valley, 87.78 56 P P 11 09 53.5 +0.8
113A IAmb IAmb 11 09 55.0
comp=Z,21nm,0.8s
MALT Malatya 87.90 311 P P 11 09 53.8 +0.4
PBUR Paburge 87.95 332 *e*P P 11 09 52.3 -0.7
WUAZ Wupatki 88.38 52 P P 11 09 56.5 +0.7
baz=296,SNR=38
WUAZ Wupatki 88.38 52 P P 11 09 57.1 +1.3
WUAZ IAmb IAmb 11 09 58.5
comp=Z,37nm,0.8s
K22A Casper 88.42 44 P P 11 09 56.2 +0.4
baz=299
K22A Casper 88.42 44 P P 11 09 56.5 +0.7
RWWY Rawlins 88.44 45 P P 11 09 57.8 +1.8
NC405 NORSAR Array S 88.46 339 P P 11 09 54.4 -1.0
HFS Hagfors 88.48 338 PKKPbc PKKPbc 11 27 35.7 -2.8
comp=Z,1.2nm,0.7s,baz=168,slow=7.4,SNR=5.9
O20A White River Ci 88.48 47 P P 11 09 56.6 +0.4
baz=298,SNR=18
O20A White River Ci 88.48 47 P P 11 09 56.7 +0.5
O20A IAmb IAmb 11 09 58.7
comp=Z,23nm,0.9s
NC303 NORSAR Array S 88.49 339 P P 11 09 54.8 -0.8
NC303 IAmb IAmb 11 09 56.8
comp=Z,90nm,1.4s
NC303 NORSAR Array S 88.49 339 *e*P P 11 09 54.2 -1.3
DIKM Dikmen 88.50 315 ⇑P P 11 09 56.2 +0.2
DOMB Dombas 88.61 341 *e*P P 11 09 55.5 -0.7
SUW Suwalki 88.62 330 *e*P P 11 09 55.4 -0.9
SUW Suwalki 88.62 330 P P 11 09 55.4 -0.9
SUW pmax pmax
comp=Z,99nm,0.9s
SUW Suwalki 88.62 330 P P 11 09 55.4 -0.9
PV09 Paradox Valley 88.64 49 P P 11 09 58.0 +0.9
NB201 NORSAR Array S 88.64 339 P P 11 09 55.5 -0.8
NB201 IAmb IAmb 11 09 56.0
comp=Z,33nm,0.6s
NC204 NORSAR Array S 88.65 339 P P 11 09 55.5 -0.9
NC204 IAmb IAmb 11 09 56.3
comp=Z,45nm,0.8s
RAYN Ar Rayn 88.67 295 P P 11 09 57.1 -0.1
RAYN pmax pmax
comp=Z,28nm,1.1s
RAYN Ar Rayn 88.67 295 P P 11 09 57.1 -0.1
RAYN IAmb IAmb 11 09 58.2
comp=Z,28nm,1.1s
NB2 NORSAR Subarra 88.68 339 P P 11 09 55.3 -1.2
comp=Z,13nm,0.6s,baz=55,slow=4.8
NB2 NORSAR Subarra 88.68 339 P P 11 09 54.9 -1.6
NB2 pmax pmax
comp=Z,23nm,0.8s
NB2 NORSAR Subarra 88.68 339 P P 11 09 55.3 -1.2
baz=55,slow=4.8
NOA NORSAR Array B 88.68 339 P P 11 09 55.3 -1.2
comp=Z,11nm,0.7s,baz=49,slow=4.8,SNR=76
NOA PP PP 11 13 25.3 -0.3
comp=Z,8.8nm,0.9s,baz=37,slow=7.9,SNR=8.3
NOA LR LR 11 52 40.0
comp=Z,368nm,21.4s,baz=40,slow=38
PV21 Cone Mtn., Par 88.72 49 P P 11 09 58.2 +0.8
PV21 IAmb IAmb 11 09 59.5
comp=Z,38nm,0.8s
PV23 Carpenter Ridg 88.74 49 P P 11 09 58.4 +0.9
PV23 IAmb IAmb 11 09 59.7
comp=Z,55nm,0.8s
PV10 Paradox Valley 88.76 49 P P 11 09 59.0 +1.4
PV10 IAmb IAmb 11 10 00.4
comp=Z,60nm,0.9s
PV14 Lion Creek, Pa 88.77 49 P P 11 09 58.4 +0.7
NC602 NORSAR Array S 88.79 339 P P 11 09 55.7 -1.3
NC602 IAmb IAmb 11 09 56.7
comp=Z,21nm,0.8s
NC602 NORSAR Array S 88.79 339 *e*P P 11 09 55.4 -1.6
NORES NORESS Array B 88.79 339 P P 11 09 56.3 -0.7
NORES pmax pmax
comp=Z,10.0nm,0.6s
X16A Lo Mia Camp, P 88.82 53 P P 11 09 59.3 +1.4
PV20 West Nyswonger 88.82 49 P P 11 09 58.7 +0.8
PV20 IAmb IAmb 11 09 59.9
comp=Z,45nm,0.9s
PV19 Morning Glory 88.83 49 P P 11 09 59.1 +1.2
PV19 IAmb IAmb 11 10 00.0
comp=Z,52nm,0.8s
NBO00 NORSAR Array S 88.83 339 P P 11 09 56.4 -0.7
NBO00 IAmb IAmb 11 09 56.9
comp=Z,21nm,0.7s
PV04 Paradox Valley 88.84 49 P P 11 09 59.2 +1.3
PV04 IAmb IAmb 11 10 00.1
comp=Z,30nm,0.8s
PV05 Paradox Valley 88.85 49 P P 11 09 58.9 +0.8
PV05 IAmb IAmb 11 10 00.2
comp=Z,26nm,0.8s
214A Organ Pipe Nat 88.86 56 P P 11 09 58.5 +0.5
baz=296,SNR=32
214A Organ Pipe Nat 88.86 56 P P 11 09 59.3 +1.4
214A IAmb IAmb 11 10 01.2
comp=Z,41nm,1.1s
PV17 East Wray Mesa 88.86 49 P P 11 09 58.7 +0.7
PV17 IAmb IAmb 11 10 00.1
comp=Z,51nm,0.9s
PV22 Blue Mesa, Par 88.86 49 P P 11 09 59.4 +1.4
PV16 Nyswonger Mesa 88.87 49 P P 11 09 58.8 +0.7
PV16 IAmb IAmb 11 10 00.2
comp=Z,38nm,0.8s
PV18 Skein Mesa, Pa 88.91 49 P P 11 09 59.3 +1.0
PV18 IAmb IAmb 11 10 00.3
comp=Z,37nm,0.9s
PV11 David Mesa, Pa 88.91 49 P P 11 09 59.0 +0.8
PV11 IAmb IAmb 11 10 01.5
comp=Z,39nm,0.7s
NAO01 NORSAR Array S 88.93 339 P P 11 09 56.6 -1.0
NAO01 IAmb IAmb 11 09 59.4
comp=Z,58nm,1.4s
PV03 Paradox Valley 88.95 49 P P 11 09 59.1 +0.6
PV03 IAmb IAmb 11 10 00.4
comp=Z,28nm,0.9s
PV12 Saucer Basin, 88.95 49 P P 11 09 59.4 +0.9
PV12 IAmb IAmb 11 10 01.2
comp=Z,39nm,0.9s
PV07 Paradox Valley 89.00 49 P P 11 09 58.2 -0.5
PV13 Radium Mtn., P 89.01 49 P P 11 09 59.4 +0.6
PV13 IAmb IAmb 11 10 00.6
comp=Z,28nm,0.8s
PV02 Paradox Valley 89.05 49 P P 11 09 58.7 -0.3
PV02 IAmb IAmb 11 10 00.9
comp=Z,28nm,0.8s
AKN Aaknes 89.14 341 *e*P P 11 09 58.6 +0.1
PV15 Paradox Valley 89.16 49 P P 11 10 00.7 +1.2
BZK Bozkurt 89.17 316 ⇑P P 11 09 59.1 0.0
PV01 Paradox Valley 89.20 49 P P 11 10 00.3 +0.7
PV01 IAmb IAmb 11 10 01.5
comp=Z,25nm,0.8s
RSSD Black Hills 89.26 42 P P 11 10 00.4 +0.6
RSSD pmax pmax
comp=Z,14nm,1.2s
RSSD Black Hills 89.26 42 P P 11 10 00.2 +0.4
baz=301
RSSD Black Hills 89.26 42 P P 11 10 00.4 +0.6
GAZ Gaziantep 89.28 310 P P 11 09 59.5 -0.3
GAZ IAmb IAmb 11 10 01.2
comp=Z,33nm,0.8s
N23A Red Feather La 89.66 45 P P 11 10 02.7 +0.9
baz=300,SNR=12
OSL Oslo 89.66 339 *e*P P 11 10 00.4 -0.5
MVCO Mesa Verde 89.68 50 P P 11 10 02.7 +0.8
baz=298,SNR=10
MVCO Mesa Verde 89.68 50 P P 11 10 02.7 +0.8
W18A Petrified Fore 89.76 52 P P 11 10 03.2 +0.9
baz=297,SNR=7.9
W18A Petrified Fore 89.76 52 P P 11 10 03.6 +1.4
SMCO Snowmass 89.80 47 P P 11 10 03.7 +1.0
SMCO IAmb IAmb 11 10 05.1
comp=Z,24nm,0.8s
ILGA Ilgaz 89.81 315 P P 11 10 02.5 0.0
ILGA IAmb IAmb 11 10 03.6
comp=Z,21nm,0.8s
X18A Snowflake 89.87 53 P P 11 10 04.4 +1.6
MDND Maddock 89.88 37 P P 11 10 02.8 +0.4
baz=304
SKAR Skarslia 89.89 340 *e*P P 11 10 02.2 0.0
E28A Huff 89.96 39 P P 11 10 04.2 +1.4
E28A IAmb IAmb 11 10 04.8
comp=Z,26nm,0.9s
TUC Tucson 90.25 55 P P 11 10 05.9 +1.4
TUC pmax pmax
comp=Z,37nm,1.4s
TUC Tucson 90.25 55 P P 11 10 05.4 +0.9
baz=297
TUC Tucson 90.25 55 P P 11 10 05.9 +1.4
TUC IAmb IAmb 11 10 08.0
comp=Z,37nm,1.4s
SFJD Kangerlussuaq 90.29 6 *i* P P 11 10 03.9 +0.1
SFJD pmax pmax
comp=Z,2.0nm,1.0s
SFJD Kangerlussuaq 90.29 6 P P 11 10 04.4 +0.6
SFJD IAmb IAmb 11 10 06.0
comp=Z,32nm,1.0s
SFJD Kangerlussuaq 90.29 6 *i* P P 11 10 03.9 +0.1
comp=Z,1.9nm,1.0s
ISCO Idaho Springs 90.42 46 P P 11 10 06.7 +1.3
ISCO pmax pmax
comp=Z,12nm,0.9s
ISCO Idaho Springs 90.42 46 P P 11 10 06.2 +0.8
baz=300,SNR=14
ISCO Idaho Springs 90.42 46 P P 11 10 06.7 +1.3
ULM Lac du Bonnet 90.49 34 P P 11 10 04.7 -0.4
comp=Z,11nm,0.8s,baz=300,slow=4.8,SNR=18
ULM LR LR 11 50 26.7
comp=Z,317nm,19.9s,baz=325,slow=35
ULM Lac du Bonnet 90.49 34 P P 11 10 05.1 0.0
ULM pmax pmax
comp=Z,13nm,0.9s
ULM Lac du Bonnet 90.49 34 P P 11 10 05.1 0.0
FRB Frobisher Bay 90.52 14 P P 11 10 05.3 +0.4
FRB pmax pmax
comp=Z,22nm,1.2s
BR131 Keskin Array S 90.52 314 P P 11 10 04.8 -0.9
SNR=35
BR131 Keskin Array S 90.52 314 P P 11 10 05.2 -0.5
BR131 pmax pmax
comp=Z,36nm,0.9s
BR131 Keskin Array S 90.52 314 P P 11 10 05.2 -0.5
BR131 IAmb IAmb 11 10 06.2
comp=Z,36nm,0.8s
BRTR Keskin Array B 90.52 314 P P 11 10 05.0 -0.7
comp=Z,28nm,0.8s,baz=93,slow=3.6,SNR=142
BRTR LR LR 11 55 17.2
comp=Z,139nm,19.5s,baz=20,slow=38
BRTR Keskin Array B 90.52 314 *i* P P 11 10 05.0 -0.7
BRTR pmax pmax
comp=Z,29nm,0.8s
S22A 4UR Ranch, Cre 90.59 49 P P 11 10 07.1 +0.8
baz=299,SNR=34
TLCR 90.72 320 ⇑P P 11 10 05.9 -0.3
TLCR 90.72 320 P P 11 10 06.0 -0.3
LVV L'vov 90.73 326 *e*P P 11 10 05.7 -0.6
LVV *e**PP **pwP** 11 10 32.7 -2.0
LVV *e* 11 20 26.3
LVV *e*S S 11 20 50.6 -4.0
LVV *e*PS PS 11 22 06.1 -7.8
LVV pmax pmax
comp=Z,30nm,1.3s
LVV MLR MLR
comp=E,500nm,17.0s
LVV MLR MLR
comp=N,300nm,20.0s
LVV MLR MLR
comp=Z,500nm,18.0s
ANTO Ankara 91.01 314 ⇓P P 11 10 07.5 -0.4
ANTO Ankara 91.01 314 P P 11 10 07.7 -0.2
ANTO pmax pmax
comp=Z,27nm,0.9s
ANTO Ankara 91.01 314 P P 11 10 07.7 -0.2
ANTO IAmb IAmb 11 10 08.6
comp=Z,27nm,0.8s
KSV Kosov 91.07 324 P P 11 10 06.0 -1.9
BEL Belsk 91.11 329 *e*P P 11 10 07.8 -0.1
BEL Belsk 91.11 329 P P 11 10 08.1 +0.2
BEL pmax pmax
comp=Z,139nm,0.7s
CFR Carcaliu 91.13 320 ⇓P P 11 10 07.4 -0.8
CFR Carcaliu 91.13 320 P P 11 10 07.2 -0.9
CFR pmax pmax
comp=Z,10.0nm,1.2s
TOPG Topolog 91.15 320 ⇓P P 11 10 08.1 -0.2
KDZE Karadeniz Ereo 91.16 316 ⇓P P 11 10 08.8 +0.3
MORS Morshin 91.21 325 P P 11 10 08.0 -0.5
TESR Tescani 91.24 322 ⇓P P 11 10 08.0 -0.7
SRIG Santa Rosalia 91.31 60 P P 11 10 10.9 +1.6
SRIG IAmb IAmb 11 10 12.4
comp=Z,29nm,1.1s
TIRR Tirgusor 91.36 320 ⇓P P 11 10 08.6 -0.6
TIRR Tirgusor 91.36 320 P P 11 10 08.6 -0.6
TIRR pmax pmax
comp=Z,26nm,1.0s
TIRR Tirgusor 91.36 320 P P 11 10 08.6 -0.6
TIRR IAmb IAmb 11 10 11.1
comp=Z,26nm,1.0s
BUR08 Bucovina Ar. S 91.39 324 P P 11 10 09.1 -0.5
BURAR Bucovina Array 91.40 324 ⇑P P 11 10 09.0 -0.6
BURAR Bucovina Array 91.40 324 P P 11 10 10.0 +0.5
BLS5 Blasjo 91.45 340 *e*P P 11 10 08.7 -0.7
SDCO Great Sand Dun 91.51 48 P P 11 10 11.1 +0.6
baz=300,SNR=37
SDCO Great Sand Dun 91.51 48 P P 11 10 11.4 +0.9
SDCO IAmb IAmb 11 10 12.8
comp=Z,16nm,0.8s
HARR Harsova 91.52 320 ⇓P P 11 10 09.8 -0.2
HARR Harsova 91.52 320 P P 11 10 10.1 +0.1
BSD Bornholm Skovb 91.55 334 *i* P P 11 10 07.0 -2.9
BSD pmax pmax
comp=Z,20nm,0.8s
BSD Bornholm Skovb 91.55 334 *i* P P 11 10 07.0 -2.9
comp=Z,20nm,0.8s
VRI Vrincioaia 91.56 322 ⇓P P 11 10 09.8 -0.4
VRI Vrincioaia 91.56 322 P P 11 10 10.6 +0.4
VRI pmax pmax
comp=Z,11nm,1.0s
HSIG 91.58 58 P P 11 10 12.3 +1.7
HSIG IAmb IAmb 11 10 13.8
comp=Z,24nm,1.1s
PLOR Plostina 91.61 322 ⇑P P 11 10 10.3 -0.3
PLOR Plostina 91.61 322 P P 11 10 10.2 -0.3
AGMN Agassiz Nation 91.66 35 P P 11 10 10.7 +0.1
baz=307
AGMN Agassiz Nation 91.66 35 P P 11 10 10.8 +0.1
AGMN IAmb IAmb 11 10 12.7
comp=Z,24nm,0.9s
GKP Gorka Klasztor 91.82 331 *e*P P 11 10 10.7 -0.5
CASY Casey 91.88 193 P P 11 10 11.7 +0.8
CASY IAmb IAmb 11 10 12.0
comp=Z,42nm,1.5s
SUSD Miller 92.16 40 P P 11 10 12.9 -0.1
baz=304
SUSD Miller 92.16 40 P P 11 10 13.6 +0.5
OGNE Ogallala 92.17 44 P P 11 10 13.6 +0.4
baz=302
KOLS Kolonicke sedl 92.18 326 *e*P P 11 10 12.6 -0.4
KOLS pmax pmax
comp=Z,11nm,1.2s
KOLS Kolonicke sedl 92.18 326 *e*P P 11 10 12.6 -0.4
ANMO Albuquerque 92.21 51 P P 11 10 14.7 +1.0
ANMO pmax pmax
comp=Z,19nm,1.0s
ANMO Albuquerque 92.21 51 P P 11 10 14.5 +0.8
baz=299
ANMO Albuquerque 92.21 51 P P 11 10 14.7 +1.0
ANMO IAmb IAmb 11 10 16.7
comp=Z,18nm,0.9s
MLR Muntele Rosu 92.22 322 ⇑P P 11 10 13.0 -0.5
MLR Muntele Rosu 92.22 322 P P 11 10 12.6 -0.9
MLR pmax pmax
comp=Z,8.0nm,1.2s
MLR Muntele Rosu 92.22 322 P P 11 10 12.6 -0.9
Y22D IRIS PASSCAL I 92.30 52 P P 11 10 14.9 +0.9
baz=299
UZH Uzhgorod 92.36 326 ⇑ *i* P P 11 10 13.7 -0.1
UZH *i* 11 10 40.0
UZH *i* 11 10 47.4
UZH *i* 11 16 03.3
UZH *i* 11 20 35.2
UZH *i* S S 11 21 06.3 -3.0
UZH *i* 11 22 18.2
121A Cookes Peak, D 92.39 53 P P 11 10 15.8 +1.3
baz=298,SNR=18
121A Cookes Peak, D 92.39 53 P P 11 10 16.2 +1.7
121A IAmb IAmb 11 10 18.2
comp=Z,33nm,0.9s
BNM Barren Site 92.47 52 P P 11 10 16.3 +1.4
TRPA Tarpa 92.54 325 ⇓P P 11 10 14.5 -0.2
T25A Trinidad 92.56 48 P P 11 10 16.2 +0.9
baz=301,SNR=15
OJC Ojcow 92.62 328 *e*P P 11 10 14.8 -0.2
OJC Ojcow 92.62 328 P P 11 10 14.6 -0.4
OJC pmax pmax
comp=Z,10.0nm,0.9s
OJC Ojcow 92.62 328 P P 11 10 14.6 -0.4
B35A Bob, Littlefor 92.76 34 P P 11 10 16.5 +0.9
B35A IAmb IAmb 11 10 18.0
comp=Z,25nm,1.2s

VOIR 92.77 322 P **P** 11 10 15.7 -0.2
VOIR pmax pmax
comp=Z,4.0nm,0.8s
KSCO Kaye Shedlock' 92.81 46 P **P** 11 10 16.5 +0.2
baz=302
KSCO Kaye Shedlock' 92.81 46 P **P** 11 10 17.4 +1.1
NIE Niedzica 92.89 327 *eP* **P** 11 10 16.4 +0.2
NIE Niedzica 92.89 327 P **P** 11 10 16.5 +0.2
NIE pmax pmax
comp=Z,7.0nm,1.1s
F33A 5 Mile Ranch, 92.89 37 P **P** 11 10 16.7 +0.4
F33A IAmb IAmb 11 10 18.0
comp=Z,24nm,0.8s
ARR Arges 93.05 322 ⇑P **P** 11 10 16.8 -0.3
CSS Mathiatis 93.10 310 P **P** 11 10 16.8 -0.7
CSS IAmb IAmb 11 10 18.0
comp=Z,28nm,1.2s
DRGR 93.26 324 ⇓P **P** 11 10 17.6 -0.5
DRGR 93.26 324 P **P** 11 10 17.8 -0.3
DRGR pmax pmax
comp=Z,24nm,0.9s
K31A O'Neill 93.31 41 P **P** 11 10 18.7 +0.3
KECS Kecovo 93.39 326 *eP* **P** 11 10 18.1 -0.5
KECS pmax pmax
comp=Z,7.0nm,1.0s
KECS Kecovo 93.39 326 *eP* **P** 11 10 18.1 -0.5
OKC Ostrava-Krasne 93.68 328 AMS AMS 11 55 20.0
comp=Z,400nm,17.3s
KSP Ksiaz 93.89 330 *eP* **P** 11 10 20.4 -0.4
KSP Ksiaz 93.89 330 P **P** 11 10 20.4 -0.4
KSP pmax pmax
comp=Z,20nm,0.8s
ECSD EROS Data Cent 93.95 39 P **P** 11 10 21.2 0.0
baz=306
MORC Moravsky Berou 94.01 329 *eP* **P** 11 10 20.5 -1.0
MORC *e* 11 10 48.1
MORC Moravsky Berou 94.01 329 ⇓P **P** 11 10 21.0 -0.5
MORC Moravsky Berou 94.01 329 P **P** 11 10 20.7 -0.8
MORC pmax pmax
comp=Z,7.0nm,1.0s
MORC Moravsky Berou 94.01 329 P **P** 11 10 20.7 -0.8
PSZ Piszkesteto 94.05 326 ⇑P **P** 11 10 21.3 -0.4
PSZ Piszkesteto 94.05 326 P **P** 11 10 21.4 -0.3
PSZ pmax pmax
comp=Z,15nm,1.3s
PSZ Piszkesteto 94.05 326 P **P** 11 10 21.4 -0.3
PSZ IAmb IAmb 11 10 30.4
comp=Z,15nm,1.3s
OSTC Ostas 94.12 330 *eP* **P** 11 10 21.4 -0.5
OSTC AMS AMS 11 52 40.0
comp=Z,600nm,20.8s
CHVC Chvalec 94.17 330 *eP* **P** 11 10 21.7 -0.5
EYMN Ely 94.18 34 P **P** 11 10 22.1 -0.2
baz=310
EYMN Ely 94.18 34 P **P** 11 10 23.5 +1.3
EYMN **pP** 11 10 47.2 +1.0
KRLC Kraliky 94.18 329 *eP* **P** 11 10 21.5 -0.7
KRLC MLR MLR
comp=Z,500nm,21.2s
KRLC Kraliky 94.18 329 *eP* **P** 11 10 21.5 -0.7
KRLC AMS AMS 11 52 40.0
comp=Z,500nm,21.2s
DPC Dobruska-Polom 94.21 329 *eP* **P** 11 10 22.0 -0.4
DPC MLR MLR
comp=Z,600nm,19.4s
DPC Dobruska-Polom 94.21 329 *eP* **P** 11 10 22.0 -0.4
DPC AMS AMS 11 52 50.0
comp=Z,600nm,19.4s
VYHS Vyhne 94.22 327 *eP* **P** 11 10 22.1 -0.4
VYHS pmax pmax
comp=Z,17nm,1.2s
VYHS Vyhne 94.22 327 *eP* **P** 11 10 22.0 -0.4
UPC Upice 94.25 330 *eP* **P** 11 10 22.2 -0.3
UPC MLR MLR
comp=Z,700nm,21.1s
UPC Upice 94.25 330 *eP* **P** 11 10 22.2 -0.3
UPC AMS AMS 11 52 50.0
comp=Z,700nm,21.1s
BSEG Bad Segeberg 94.26 335 *eP* **P** 11 10 22.3 -0.1
comp=Z,19nm,1.1s,baz=44,slow=4.5
BSEG *epP* **pP** 11 10 48.7 +2.3
BGNE Belgrade 94.37 42 P **P** 11 10 22.5 -0.8
baz=305
BGNE Belgrade 94.37 42 P **P** 11 10 23.9 +0.6
F36A Milaca 94.42 36 P **P** 11 10 23.8 +0.4
F36A IAmb IAmb 11 10 24.8
comp=Z,15nm,1.1s
JAVC Velka Javorina 94.56 328 *eP* **P** 11 10 24.2 +0.2
MNTX Cornudas Mount 94.58 53 P **P** 11 10 25.3 +0.9
baz=300
MNTX Cornudas Mount 94.58 53 P **P** 11 10 25.4 +1.0
MNTX IAmb IAmb 11 10 27.4
comp=Z,13nm,0.9s
BZS Buzias 94.58 324 ⇑P **P** 11 10 23.4 -0.7
BZS Buzias 94.58 324 P **P** 11 10 23.2 -0.9
BZS pmax pmax
comp=Z,5.0nm,1.1s
VRAC Vranov 94.79 329 *eP* **P** 11 10 24.4 -0.6
VRAC *e* 11 10 51.1
VRAC Vranov 94.79 329 ⇑P **P** 11 10 24.6 -0.3
VRAC Vranov 94.79 329 P **P** 11 10 26.2 +1.2
CBKS Cedar Bluff 94.81 45 P **P** 11 10 25.9 +0.5
CBKS pmax pmax
comp=Z,15nm,1.0s
CBKS Cedar Bluff 94.81 45 P **P** 11 10 25.3 -0.1
baz=304
CBKS Cedar Bluff 94.81 45 P **P** 11 10 25.9 +0.5
CBKS IAmb IAmb 11 10 27.0
comp=Z,15nm,0.9s
PVCC Panska Ves 94.90 330 AMS AMS 11 53 40.0
comp=Z,500nm,18.8s
BRG Berggiesshubel 94.94 331 *i* P **P** 11 10 24.9 -0.8
comp=Z,4.5nm,0.7s
BRG *epP* **pP** 11 10 51.8 +2.1
comp=Z,24nm,1.5s
BRG sP **pwP** 11 10 52.0 -2.0
BRG SKS **SKSac** 11 20 49.0 -3.7
BRG S **S** 11 21 28.0 -3.9
BRG SS **SS** 11 27 53.0 -4.5
comp=N,771nm,22.9s
comp=E,802nm,25.1s
comp=Z,889nm,31.9s
BRG Berggiesshubel 94.94 331 *eP* **P** 11 10 24.8 -0.8
comp=Z,9.6nm,1.1s,baz=44,slow=4.5
BRG *epP* **pP** 11 10 51.9 +2.1
BRG Berggiesshubel 94.94 331 *i* P **P** 11 10 24.9 -0.8
BRG *SP **pwP** 11 10 52.0 -2.0
BRG 11 20 49.0
BRG S **S** 11 21 28.0 -3.9
BRG SS **SS** 11 27 53.0 -4.5
BRG pmax pmax
comp=Z,5.0nm,0.7s
BRG MLR MLR
comp=N,771nm,22.9s
BRG MLR MLR
comp=E,802nm,25.1s
KRUC Moravsky 95.05 328 *eP* **P** 11 10 25.1 -1.1
KRUC Moravsky 95.05 328 P **P** 11 10 25.6 -0.6
KRUC pmax pmax
comp=Z,8.0nm,0.7s
MDVR Moldovita 95.05 323 ⇓P **P** 11 10 26.1 -0.2
CLL Collm 95.06 332 *i* P **P** 11 10 26.2 +0.1
comp=Z,12nm,0.7s
CLL *i* pP **pP** 11 10 52.3 +2.1
comp=Z,39nm,1.6s
CLL *es*P **sP** 11 11 02.0 +2.1
CLL *e*PP **PP** 11 14 17.0 +1.1
CLL *ep*PP 11 14 38.0
CLL *e*PPP PPP 11 16 21.0
CLL *e*SKSac **SKSac** 11 20 52.0 -1.2
CLL *e*S **S** 11 21 31.0 -1.9
CLL *es*S **sS** 11 22 10.0 -4.0
CLL *e*SP **SP** 11 22 50.0 +0.8
CLL *e*SS **SS** 11 28 08.0 +8.9
CLL *es*SS 11 28 33.0
CLL *e*SSS SSS 11 32 00.0
CLL L L 11 54 00.0
comp=Z,500nm,20.0s
CLL Collm 95.06 332 *eP* **P** 11 10 26.0 -0.1
comp=Z,12nm,0.7s,baz=44,slow=4.5
CLL Collm 95.06 332 *i* P **P** 11 10 26.2 +0.1
CLL *i *SP **pwP** 11 10 52.8 -1.7
CLL *e* 11 20 52.0
CLL pmax pmax
comp=Z,12nm,0.7s
CLL MLR MLR
comp=Z,500nm,20.0s
CLL Collm 95.06 332 P **P** 11 10 26.8 -0.3
CLL IAmb IAmb 11 10 26.8
comp=Z,11nm,0.7s
GDL2 Guadalupe Moun 95.08 52 P **P** 11 10 28.1 +1.3
L34A Svendsen Farm, 95.13 41 P **P** 11 10 27.0 +0.3
L34A IAmb IAmb 11 10 27.6
comp=Z,21nm,0.9s
FBE Freiberg 95.17 331 *eP* **P** 11 10 26.2 -0.5
comp=Z,28nm,1.5s,baz=44,slow=4.5
FBE *epP* **pwP** 11 10 53.1 -1.9
SPMN Marine on St. 95.21 36 P **P** 11 10 27.3 +0.3
baz=309
SPMN Marine on St. 95.21 36 P **P** 11 10 27.4 +0.4
SPMN IAmb IAmb 11 10 29.1
comp=Z,20nm,1.1s
GOPC GO Pecny, Ondr 95.23 330 *eP* **P** 11 10 26.2 -0.8
GOPC *e* 11 20 51.9
GOPC MLR MLR
comp=Z,600nm,19.0s
GOPC GO Pecny, Ondr 95.23 330 *eP* **P** 11 10 26.2 -0.8
GOPC *e*SKS **SKSac** 11 20 51.9 -2.4
GOPC AMS AMS 11 57 00.0
comp=Z,600nm,19.0s
PRA Prague 95.28 330 AMS AMS 11 53 50.0
comp=Z,300nm,22.1s
PRU Pruhonice 95.29 330 P **P** 11 10 26.4 -0.8
PRU pmax pmax
comp=Z,4.0nm,1.4s
PRU Pruhonice 95.29 330 AMS AMS 11 54 00.0
comp=Z,600nm,19.0s
VTS Vitosha 95.50 320 ⇑P **P** 11 10 27.9 -0.6
VTS Vitosha 95.50 320 P **P** 11 10 27.8 -0.7
VTS pmax pmax
comp=Z,7.0nm,0.9s
VTS Vitosha 95.50 320 P **P** 11 10 27.8 -0.7
AMTX Amarillo 95.62 49 P **P** 11 10 30.2 +1.0
baz=302
AMTX Amarillo 95.62 49 P **P** 11 10 29.7 +0.5
AMTX IAmb IAmb 11 10 32.6
comp=Z,20nm,0.8s
AMTX **pP** 11 10 54.2 +1.0
I37A Lemond, Waseca 95.63 38 P **P** 11 10 29.6 +0.6
I37A IAmb IAmb 11 10 30.8
comp=Z,14nm,0.9s
NEUB Neuenburg 95.66 332 *eP* **P** 11 10 27.9 -1.0
comp=Z,13nm,0.8s,baz=44,slow=4.5
CLZ Clausthal 95.79 333 *eP* **P** 11 10 28.7 -0.9
comp=Z,9.0nm,0.8s,baz=44,slow=4.5
CLZ *ep*P **pwP** 11 10 56.0 -1.9
TANN Tannenbergstha 95.93 331 *ep*P **pP** 11 10 56.4 +2.1
PLN Plauen 96.02 331 *eP* **P** 11 10 29.5 -1.1
comp=Z,5.2nm,1.0s,baz=44,slow=4.5
PLN *ep*P **pP** 11 10 56.7 +2.0
GUNZ Gunzen 96.03 331 *eP* **P** 11 10 30.0 -0.7
comp=Z,9.0nm,0.9s,baz=44,slow=4.5
GUNZ *ep*P **pP** 11 10 56.9 +2.2
WERN Wernitzgruen 96.06 331 *eP* **P** 11 10 30.2 -0.6
comp=Z,18nm,1.5s,baz=44,slow=4.5
WERN *ep*P **pP** 11 10 57.1 +2.2
NKC Novy Kostel 96.07 331 AMS AMS 11 59 00.0
comp=Z,400nm,15.1s
CONA Conrad Observa 96.08 328 *e*PcP **P** 11 10 30.7 -0.3
comp=Z,2.6nm,0.6s
CONA PP **PP** 11 14 24.4 +0.3
comp=Z,6.5nm,1.2s
MOX Moxa 96.14 332 *eP* **P** 11 10 30.2 -0.9
comp=Z,6.2nm,0.9s,baz=44,slow=4.5
MOX *ep*P **pP** 11 10 57.2 +2.0
MOX Moxa 96.14 332 P **P** 11 10 30.6 -0.5
MOX pmax pmax
comp=Z,6.0nm,0.9s
SRS Serrai 96.18 319 P **P** 11 10 30.6 -0.9
SRS pmax pmax
comp=Z,7.0nm,1.3s
KHC Kasperske Hory 96.34 330 *eP* **P** 11 10 31.3 -0.8
KHC *e* 11 14 26.5
KHC *e* 11 20 56.1
KHC MLR MLR
comp=Z,800nm,22.4s
KHC Kasperske Hory 96.34 330 *eP* **P** 11 10 31.3 -0.8
KHC *ex* x 11 13 48.0
KHC *eP* **PP** 11 14 26.5 +0.5
KHC *eS* **SKSac** 11 20 56.1 -4.1
KHC AMS AMS 11 53 50.0
comp=Z,800nm,22.4s
KHC Kasperske Hory 96.34 330 P **P** 11 10 31.1 -1.0
KHC **pP** 11 10 57.9 +1.8
GEC2 GERESS Array S 96.48 330 *eP* **P** 11 10 31.6 -1.2
comp=Z,5.2nm,1.0s,baz=44,slow=4.5
GEC2 GERESS Array S 96.48 330 P **P** 11 10 32.1 -0.7
GEC2 pmax pmax
comp=Z,6.0nm,1.0s
GEC2 GERESS Array S 96.48 330 P **P** 11 10 31.5 -1.3
GEC2 **pwP** 11 10 59.9 -1.6
GERES GERESS Array B 96.48 330 P **P** 11 10 31.5 -1.3
comp=Z,2.9nm,0.7s,baz=44,slow=4.6,SNR=20
GERES PP **PP** 11 14 27.8 +0.6
comp=Z,2.5nm,0.9s,baz=45,slow=6.4,SNR=5.5
IBBN Ibbenburen 96.51 335 *eP* **P** 11 10 32.6 -0.1
comp=Z,20nm,1.3s,baz=44,slow=4.5
ROTZ Rotzenmuhle 96.51 331 *eP* **P** 11 10 32.6 -0.2
comp=Z,23nm,1.8s,baz=44,slow=4.5
KNT Kendrikon 96.57 319 P **P** 11 10 32.6 -0.7
KNT pmax pmax
comp=Z,10.0nm,1.3s
G40A Rib Lake 96.59 35 P **P** 11 10 33.5 +0.2
KSU1 Kansas State U 96.66 43 P **P** 11 10 34.3 +0.6
baz=306
KSU1 Kansas State U 96.66 43 P **P** 11 10 33.9 +0.1
KSU1 IAmb IAmb 11 10 35.3
comp=Z,23nm,0.8s
KSU1 **pP** 11 10 56.5 -1.0
ARSA Arzberg 96.71 328 *e*PcP **P** 11 10 33.5 -0.3
comp=Z,1.1nm,0.5s
MOA Molln 96.91 329 *e*PcP **P** 11 10 33.9 -0.8
comp=Z,1.9nm,0.6s
MOA *ePP **PP** 11 14 31.6 +1.2
comp=Z,14nm,1.8s
GRG Griva 97.00 319 P **P** 11 10 34.2 -1.0
GRG pmax pmax
comp=Z,6.0nm,1.0s
GRF Grafenberg Arr 97.01 331 *eP* **P** 11 10 34.5 -0.6
comp=Z,20nm,1.3s,baz=44,slow=4.5
GRF *epP **pwP** 11 11 01.6 -1.8
GRF *ePP **PP** 11 14 29.4 -1.6
GRF *epPP 11 14 50.9
TX31 Lajitas Ar. Si 97.04 55 P Pdif 11 10 36.5 +0.7
TX31 IAmb IAmb 11 10 38.1
comp=Z,15nm,1.0s
TX32 Lajitas Array 97.04 55 P Pdif 11 10 36.5 +0.7
TXAR Lajitas Array 97.04 55 P Pdif 11 10 36.5 +0.6
comp=Z,3.5nm,0.9s,baz=304,slow=2.5,SNR=37
TXAR PKKPbc **PKKPdf** 11 27 16.6 -0.3
comp=Z,1.2nm,0.8s,baz=133,slow=5.0,SNR=13
TXAR LR LR 11 53 03.4
comp=Z,162nm,18.8s,baz=0.0,slow=34
SOKA Soboth 97.35 327 *e*PcP **P** 11 10 35.5 -1.2
comp=Z,1.2nm,0.4s
SOKA *ePP **PP** 11 14 31.4 -2.5
comp=Z,7.6nm,1.1s
LIT Litokhoron 97.46 319 P **P** 11 10 35.8 -1.5
LIT pmax pmax
comp=Z,30nm,1.2s
LIT Litokhoron 97.46 319 P **P** 11 10 35.8 -1.5
LIT IAmb IAmb 11 10 37.2
comp=Z,30nm,1.2s
WMOK Wichita Mounta 97.70 48 P Pdif 11 10 39.1 +0.5
WMOK pmax pmax
comp=Z,4.0nm,0.9s
WMOK Wichita Mounta 97.70 48 P Pdif 11 10 38.8 +0.2
baz=304
WMOK Wichita Mounta 97.70 48 P Pdif 11 10 39.1 +0.5
OBKA Obir 97.71 327 *e*PcP **P** 11 10 37.3 -1.1
comp=Z,2.3nm,0.6s
OBKA PP **PP** 11 14 32.4 -4.2
comp=Z,14nm,1.6s
KBA Koelnbreinsper 97.90 328 *e*PcP **P** 11 10 38.2 -1.1
comp=Z,2.0nm,0.5s
KBA PP **PP** 11 14 37.3 -0.8
comp=Z,16nm,1.5s
MYKA Terra Mystica 98.07 328 *eP* **P** 11 10 37.9 -2.1
comp=Z,1.8nm,0.5s
MYKA PP **PP** 11 14 39.9 +0.5
comp=Z,6.9nm,0.7s
AHRW Bad Neuenahr-A 98.14 334 *eP* **P** 11 10 40.0 -0.1
comp=Z,21nm,1.6s,baz=44,slow=4.5
ABTX Abilene, Hawle 98.26 50 P Pdif 11 10 42.1 +0.9
baz=303
ABTX Abilene, Hawle 98.26 50 P Pdif 11 10 41.8 +0.7
ABTX pP 11 11 06.8 +1.8
ABTA Abfaltersbach 98.54 329 *i* Pdiff **P** 11 10 40.5 -1.6
comp=Z,3.9nm,0.7s
ABTA *ePP **PP** 11 14 39.6 -3.3
comp=Z,9.0nm,1.3s
WATA Walderalm 98.56 330 *eP* **PP** 11 14 40.9 -2.2
comp=Z,11nm,1.5s
WTTA Wattenberg 98.58 329 *i* PP **PP** 11 14 43.1 -0.2
comp=Z,12nm,1.3s
SCHQ Schefferville 98.74 17 P Pdif 11 10 42.9 +0.1
comp=Z,4.4nm,0.9s,baz=341,slow=3.4,SNR=4.9
SCHQ LR LR 11 57 02.8
comp=Z,134nm,20.6s,baz=325,slow=36
SCHQ Schefferville 98.74 17 IAmb IAmb 11 10 44.1
comp=Z,8.4nm,1.1s
MOTA Moosalm 98.77 330 *e*Pdiff **P** 11 10 42.2 -1.1
comp=Z,1.8nm,0.6s
MOTA PP **PP** 11 14 43.8 -1.0
comp=Z,7.4nm,1.2s
SQTA Sankt Quirin 98.82 330 *e*Pdiff **P** 11 10 42.3 -1.1
comp=Z,1.2nm,0.4s
SQTA PP **PP** 11 14 44.5 -0.6
comp=Z,11nm,1.1s
E46A Sault Ste Mari 98.85 32 P Pdif 11 10 44.2 +0.8
E46A IAmb IAmb 11 10 48.0
comp=Z,15nm,1.2s
E46A pP 11 11 06.5 -0.9
D47A Chapleau 98.93 31 P Pdif 11 10 44.2 +0.5
baz=317
FETA Feichten 99.19 330 *e*Pdiff **Pdif** 11 10 43.9 -1.2
comp=Z,1.5nm,0.5s
FETA PP **PP** 11 14 47.2 -0.8
comp=Z,6.0nm,1.2s
WLF Walferdange 99.19 334 *ep*P pP 11 11 10.6 +1.6
BFO Black Forest 99.30 332 *eP* **Pdif** 11 10 44.2 -1.1
comp=Z,4.5nm,0.7s,baz=44,slow=4.5
JCT Junction City 99.31 52 P **Pdif** 11 10 46.7 +0.9
JCT Junction City 99.31 52 P **Pdif** 11 10 46.7 +0.9
DAVA Damuels 99.38 330 *eP* **PP** 11 14 47.7 -1.7
comp=Z,6.8nm,1.3s
D48A Paudash Townsh 99.44 30 P **Pdif** 11 10 45.9 -0.1
baz=318
FUORN Ofenpass-Fuorn 99.70 330 **Pdif** 11 10 46.1 -1.4
FUORN IAmb IAmb 11 10 48.0
comp=Z,12nm,1.1s
VNDA Vanda 100.16 176 PP **PP** 11 14 56.1 +0.6
comp=Z,1.7nm,0.9s,baz=326,slow=7.9,SNR=7.0
D50A G1974 Best Tow 100.34 29 P **Pdif** 11 10 49.9 -0.1
baz=319
U40A Yellville 100.68 43 P **Pdif** 11 10 51.6 -0.2
baz=308
MIAR Mount Ida 101.31 45 P **Pdif** 11 10 55.1 +0.5
MIAR Mount Ida 101.31 45 P **Pdif** 11 10 54.5 -0.2
baz=307
MIAR Mount Ida 101.31 45 **Pdif** 11 10 55.1 +0.5
D56A ZEC Mazanza, M 102.60 26 P **Pdif** 11 10 60.0 -0.1
baz=324
K54A Basiliko Farm, 104.33 31 P **Pdif** 11 11 08.0 +0.1
baz=320
I57A Carthage 104.70 29 P **Pdif** 11 11 09.1 -0.4
baz=322
Z50A Ashland 107.04 42 P **PKiKP** 11 15 29.2 -0.1
baz=312
MAW Mawson 107.11 203 PKKPbc PKKPbc 11 26 46.3 -1.5
comp=Z,2.6nm,0.8s,baz=271,slow=12,SNR=3.8
R58A Rapidan 107.94 34 P **PKiKP** 11 15 31.0 +0.2
baz=320
V55A Taylorsville 108.02 37 P **PKiKP** 11 15 31.2 +0.2
baz=316
T57A Hurt 108.26 35 P **PKiKP** 11 15 31.5 +0.1
baz=318
L64A Middleborough 108.39 27 P **PKiKP** 11 15 32.2 +0.8
baz=326
X55A Gracelyn & Ava 108.77 39 P **PKiKP** 11 15 32.5 +0.1
baz=316
U58A Oxford 109.09 35 P **PKiKP** 11 15 32.7 -0.2
baz=319
X56A White Oak 109.10 38 P **PKiKP** 11 15 33.1 +0.1
baz=316
S61A Accomac 109.59 33 P **PKiKP** 11 15 34.3 +0.5
baz=321
ESDC Sonseca Array 111.49 334 PP PP 11 16 03.7 -15
comp=Z,1.8nm,0.8s,baz=22,slow=6.3,SNR=6.7
ESDC PKKP **PKKPab** 11 26 41.5 -3.1
comp=Z,1.4nm,0.9s,baz=222,slow=7.0,SNR=4.9
SYO Syowa Base 115.81 203⇑ *eP* **Pdif** 11 12 06.0 +7.9
SYO Syowa Base 115.81 203⇑ *eP* **Pdif** 11 12 10.0 +12
LSZ Lusaka 119.26 265 PKIKP **PKPdf** 11 15 52.9 -0.1
LSZ Lusaka 119.26 265 **PKPdf** 11 15 52.9 -0.1
LBTB Lobatse 124.00 254 PKIKP **PKiKP** 11 16 02.2 +0.1
LBTB Lobatse 124.00 254 **PKiKP** 11 16 02.2 +0.1
NVL N'lazarevskaya 124.21 197 *e*PKIKP **PKPdf** 11 16 00.8 +0.1
NVL pmax pmax
comp=Z,27nm,1.3s
BOSA Boshof 124.90 250 PKP **PKPdf** 11 16 03.5 0.0
comp=Z,3.8nm,0.7s,baz=66,slow=1.8,SNR=8.5
BOSA Boshof 124.90 250 PKIKP **PKPdf** 11 16 03.3 -0.2
BOSA Boshof 124.90 250 **PKPdf** 11 16 03.3 -0.2
SNAA Sanae 127.11 193 PKPdf **PKPdf** 11 16 06.0 -0.5
SNAA Sanae 127.11 193 PKIKP **PKPdf** 11 16 05.9 -0.5
SNAA Sanae 127.11 193 **PKPdf** 11 16 05.9 -0.5
VNA3 Neumayer Olymp 128.73 191 PKPdf **PKPdf** 11 16 09.5 0.0
VNA1 Neumayer--Stat 128.98 191 PKPdf **PKiKP** 11 16 10.6 +0.1
TOA0 Torodi Ar. Sit 128.99 310 **PKPdf** 11 16 11.0 -0.5
TORD Torodi Ar. Bea 128.99 310 PKP **PKPdf** 11 16 11.6 0.0
comp=Z,4.1nm,0.6s,baz=36,slow=1.4,SNR=30
TORD PP **PP** 11 18 13.0 -6.2
comp=Z,4.5nm,0.7s,baz=34,slow=5.3,SNR=5.8
TORD SKPbc SKPbc 11 19 21.9
comp=Z,8.1nm,1.0s,baz=42,slow=4.4,SNR=4.0
TSUM Tsumeb 130.07 263 **PKPdf** 11 16 11.6 -2.0
PMSA Palmer Station 133.71 164 *eP* **PKPdf** 11 16 18.5 -0.4
SDV Santo Domingo 133.99 51 PKP **PKPdf** 11 16 20.8 -0.5
comp=Z,13nm,0.7s,baz=342,slow=1.5,SNR=18
SDV SKPbc **SKPbc** 11 19 40.3 -1.7
comp=Z,36nm,0.9s,baz=295,slow=2.2,SNR=16
SDV Santo Domingo 133.99 51 **PKPdf** 11 16 19.6 -1.7
SDV Santo Domingo 133.99 51 *eP* **PKPdf** 11 16 21.6 +0.3
RUSC La Rusia 134.09 57 **PKPdf** 11 16 21.2 -0.7
ATAH Atahualpa 136.43 76 PKP **PKPdf** 11 16 25.8 -0.3
comp=Z,7.9nm,0.9s,baz=173,slow=2.6,SNR=4.4
ATAH SKPbc **SKPbc** 11 19 49.8 -0.2
comp=Z,16nm,1.1s,baz=282,slow=1.7,SNR=10
PCRV Puerto La Cruz 137.18 44 PKhKP **PKPdf** 11 16 23.7 -3.4
comp=Z,5.0nm,0.5s,baz=353,slow=15,SNR=1.6
PLCV Puerto La Cruz 137.22 44 **PKPdf** 11 16 23.7 -3.4
DBIC Dimbokro 138.10 310 PKP **PKPdf** 11 16 29.1 +0.4
comp=Z,2.5nm,0.4s,baz=38,slow=1.8,SNR=6.4
DBIC SKPbc **SKPbc** 11 19 52.6 -1.8
comp=Z,26nm,1.1s,baz=23,slow=4.6,SNR=8.7
DBIC Dimbokro 138.10 310 **PKPdf** 11 16 27.8 -0.9
DBIC **SKPbc** 11 19 53.4 -1.0
KIC Kosan Boka 138.23 309 *eP* **PKPdf** 11 16 28.2 -0.8
comp=Z,17nm,0.9s
TIC Toumodi 138.23 310 *eP* **PKiKP** 11 16 30.2 -0.9
LIC Lamto 138.53 310 *eP* **PKiKP** 11 16 31.2 -0.4
comp=Z,13nm,0.4s
PLCA Paso Flores 145.53 130 PKPbc **PKPab** 11 16 42.0 +0.1
comp=Z,33nm,1.1s,baz=244,slow=4.1,SNR=59
PLCA Paso Flores 145.53 130 PKP2 **PKPdf** 11 16 41.3 0.0
PLCA Paso Flores 145.53 130 **PKPdf** 11 16 41.3 0.0
BOAV Boa Vista 145.66 47 *eP* **PKPab** 11 16 42.9 -0.2
EFI East Falkland 146.04 155 PKP2 **PKPbc** 11 16 42.4 -0.2
EFI East Falkland 146.04 155 **PKPbc** 11 16 42.4 -0.2
GO05 Huala 146.16 120 **PKPdf** 11 16 42.0 -0.5
ROC1 El Roble 147.29 117 **PKPdf** 11 16 42.9 -1.8
ROC1 PKPbc **PKPbc** 11 16 48.1 +1.0
PEL Peldehue 147.54 117 PKP2 **PKPbc** 11 16 48.0 +0.4
PEL Peldehue 147.54 117 **PKPdf** 11 16 43.6 -1.2
PEL PKPbc **PKPbc** 11 16 48.0 +0.4
PB12 IPOC Station P 147.61 90 **PKPdf** 11 16 44.7 -0.7
GO04 Tololo Observa 147.86 112 **PKPbc** 11 16 49.1 +0.3
PSGCX Pisagua 148.00 92 **PKPdf** 11 16 45.4 -0.7
PSGCX PKPbc **PKPbc** 11 16 49.6 +0.4
HOPE Hope Point 148.06 179 PKIKP **PKPdf** 11 16 44.8 -0.1
HOPE 11 16 48.1
HOPE Hope Point 148.06 179 **PKPdf** 11 16 44.8 -0.1
HOPE PKPbc **PKPbc** 11 16 48.1 -0.1
PB10 IPOC Station P 148.13 99 PKPdf **PKPdf** 11 16 45.0 -1.0

PB10					PKiKP	11 16 50.4	-0.7
PATCX	**Punta Patache**	**148.18**	**94**	PKPdf	**PKPdf**	**11 16 45.6**	**-0.6**
PATCX					**PKiKP**	**11 16 50.6**	**-0.7**
MDP	**Montagnes des**	**148.24**	**33**	PKPbc	**PKPbc**	**11 16 50.5**	**+0.6**
	comp=Z,71nm,0.8s,baz=292,slow=4.2,SNR=18						
PTGA	**Pitinga**	**148.27**	**51**	PKP	**PKPdf**	**11 16 47.2**	**+0.6**
	comp=Z,21nm,0.7s,baz=297,slow=11,SNR=26						
PTGA				PKPbc	**PKPbc**	**11 16 50.3**	**+0.3**
	comp=Z,23nm,0.7s,baz=313,slow=6.3,SNR=18						
PTGA	**Pitinga**	**148.27**	**51**		**PKPdf**	**11 16 46.4**	**-0.2**
PTGA				PKPbc	**PKPbc**	**11 16 50.4**	**+0.4**
PTGA	**Pitinga**	**148.27**	**51**	*e*P	**PKPdf**	**11 16 47.5**	**+1.0**
PB16	**IPOC Station P**	**148.31**	**89**		**PKPdf**	**11 16 47.5**	**+0.3**
PB16				PKPbc	**PKiKP**	**11 16 52.2**	**-0.1**
MNMC	**Minye Minye**	**148.40**	**91**		**PKPdf**	**11 16 47.0**	**+0.1**
MNMC				PKPbc	**PKiKP**	**11 16 51.5**	**-0.6**
PB11	**IPOC Station P**	**148.46**	**92**		**PKPdf**	**11 16 46.9**	**0.0**
PB11				PKPbc	**PKiKP**	**11 16 51.4**	**-0.6**
PB07	**IPOC Station P**	**148.56**	**95**		**PKPdf**	**11 16 46.2**	**-0.8**
PB07				PKPbc	**PKiKP**	**11 16 51.5**	**-0.7**
PB01	**IPOC Station P**	**148.83**	**94**		**PKPdf**	**11 16 47.2**	**-0.1**
PB01				PKPbc	**PKiKP**	**11 16 52.3**	**-0.4**
GO01	**Chusmiza**	**148.87**	**91**		**PKPdf**	**11 16 48.4**	**+0.5**
GO01				PKPbc	**PKiKP**	**11 16 53.1**	**-0.1**
PB06	**IPOC Station P**	**148.96**	**97**		**PKiKP**	**11 16 52.5**	**-0.5**
LPAZ	**La Paz**	**149.07**	**85**	PKP	**PKPdf**	**11 16 49.0**	**+0.6**
	comp=Z,43nm,1.0s,baz=355,slow=3.1,SNR=23						
LPAZ				PKPbc	**PKiKP**	**11 16 53.7**	**-0.3**
	comp=Z,29nm,0.6s,baz=332,slow=1.8,SNR=51						
LPAZ	**La Paz**	**149.07**	**85**	PKIKP	**PKPdf**	**11 16 48.1**	**-0.4**
LPAZ						11 16 53.9	
LPAZ	**La Paz**	**149.07**	**85**		**PKPdf**	**11 16 48.1**	**-0.4**
LPAZ				PKPbc	**PKiKP**	**11 16 53.9**	**0.0**
LPAZ	**La Paz**	**149.07**	**85**	*e*P	**PKPdf**	**11 16 49.2**	**+0.7**
PB15	**IPOC Station P**	**149.10**	**98**		**PKPdf**	**11 16 48.2**	**+0.3**
PB15				PKPbc	**PKiKP**	**11 16 53.1**	**-0.2**
GO02	**Mina Guanaco**	**149.11**	**102**		**PKPdf**	**11 16 47.4**	**-0.6**
GO02				PKPbc	**PKiKP**	**11 16 53.1**	**-0.3**
PB09	**IPOC Station P**	**149.16**	**95**		**PKPdf**	**11 16 47.8**	**-0.2**
PB09				PKPbc	**PKiKP**	**11 16 53.9**	**+0.4**
MACA	**Manacapuru-AM**	**149.37**	**55**	*e*P	**PKPdf**	**11 16 48.9**	**+0.6**
LVC	**Limon Verde**	**149.56**	**97**	PKPbc	**PKiKP**	**11 16 54.4**	**-0.1**
	comp=Z,10nm,0.4s,baz=241,slow=2.4,SNR=3.3						
LVC	**Limon Verde**	**149.56**	**97**	PKP2	**PKiKP**	**11 16 54.8**	**+0.3**
LVC	**Limon Verde**	**149.56**	**97**		**PKPdf**	**11 16 47.5**	**-1.4**
LVC				PKPbc	**PKiKP**	**11 16 54.8**	**+0.3**
LVC				PKPab	**PKPab**	**11 17 00.9**	**+2.2**
LVC	**Limon Verde**	**149.56**	**97**	*e*P	**PKPdf**	**11 16 50.0**	**+1.2**
SAML	**Samuel**	**150.66**	**67**		**PKPdf**	**11 16 49.9**	**-0.5**
SAML				PKPbc	**PKPbc**	**11 16 56.2**	**+0.3**
SAML				PKPab	**PKPab**	**11 17 02.6**	**-0.4**
SAML	**Samuel**	**150.66**	**67**	*e*P	**PKPdf**	**11 16 51.4**	**+1.1**
VILB	**Vilhena**	**155.11**	**72**	*e*P	**PKPdf**	**11 16 58.0**	**+1.2**
SIV	**San Ignacio**	**155.46**	**80**	PKP	**PKPdf**	**11 16 57.1**	**-0.2**
	comp=Z,5.0nm,0.9s,baz=348,slow=1.4,SNR=18						
PTLB	**Pontes e Lacer**	**157.03**	**77**	*e*P	**PKPdf**	**11 17 00.1**	**+0.9**
CLDB	**Colider**	**157.86**	**62**	*e*P	**PKPdf**	**11 16 60.0**	**-0.4**
CPUP	**Villa Florida**	**160.10**	**106**	PKPab	**PKPab**	**11 17 42.7**	**-0.4**
	comp=Z,10nm,1.0s,baz=283,slow=4.3,SNR=8.9						
CPUP	**Villa Florida**	**160.10**	**106**	PKIKP	**PKPdf**	**11 17 01.1**	**-1.5**
CPUP						11 17 43.1	
CPUP	**Villa Florida**	**160.10**	**106**		**PKPdf**	**11 17 01.1**	**-1.5**
CPUP					**PKPab**	**11 17 43.1**	**0.0**
CPUP	**Villa Florida**	**160.10**	**106**	*e*P	**PKPdf**	**11 17 02.6**	**0.0**
SALV	**Santo Antonio**	**160.28**	**75**	*e*P	**PKPdf**	**11 17 04.3**	**+1.1**
NBMO	**Morrinhos-CE**	**160.71**	**12**	*e*P	**PKPdf**	**11 17 06.1**	**+2.3**
AQDB	**Aquidauana**	**161.51**	**88**	*e*P	**PKPdf**	**11 17 04.8**	**+0.5**
CPSB	**Cacapava Do Su**	**162.38**	**121**	*e*P	**PKPdf**	**11 17 05.8**	**+0.8**
RCBR	**Riachuelo**	**163.62**	**360**	*e*P	**PKPdf**	**11 17 08.7**	**+2.0**
ARAG	**Araguaiana, MT**	**163.62**	**69**	*e*P	**PKPdf**	**11 17 07.3**	**+0.8**
ITAB	**Concordia**	**164.50**	**112**	*e*P	**PKPdf**	**11 17 08.6**	**+1.5**
TRCB	**Terra Rica**	**164.56**	**95**	*e*P	**PKPdf**	**11 17 08.0**	**+0.7**
PTGB	**Pitanga**	**165.01**	**102**	*e*P	**PKPdf**	**11 17 08.4**	**+0.7**
PCMB	**Pacaembu**	**165.76**	**90**	*e*P	**PKPdf**	**11 17 09.9**	**+1.6**
ITRB	**Iturama**	**166.28**	**82**	*e*P	**PKPdf**	**11 17 09.7**	**+0.9**
BDFB	**Brasilia**	**166.80**	**62**	PKP	**PKPdf**	**11 17 08.7**	**-0.6**
	comp=Z,4.1nm,0.9s,baz=21,slow=6.6,SNR=5.5						
BDFB				PKPab	**PKPab**	**11 18 12.6**	**-0.2**
	comp=Z,11nm,0.8s,baz=202,slow=2.5,SNR=10						
BDFB	**Brasilia**	**166.80**	**62**	PKIKP	**PKPdf**	**11 17 08.5**	**-0.9**
BDFB						11 18 12.9	
BDFB	**Brasilia**	**166.80**	**62**		**PKPdf**	**11 17 08.5**	**-0.9**
BDFB					**PKPab**	**11 18 12.9**	**+0.1**
FRTB	**Fartura**	**167.39**	**97**	*e*P	**PKPdf**	**11 17 10.3**	**+0.8**
IPMB	**Ipameri, GO**	**167.70**	**72**	*e*P	**PKPdf**	**11 17 10.5**	**+0.6**
JANB	**Januaria**	**169.28**	**49**	*e*P	**PKPdf**	**11 17 11.4**	**+0.5**
VAO	**Valinhos**	**169.79**	**96**	*e*P	**PKPdf**	**11 17 13.2**	**+2.1**
PARB	**Paraibuna**	**171.01**	**98**	*e*P	**PKPdf**	**11 17 13.2**	**+1.4**
BSCB	**Bom Sucesso**	**171.68**	**83**	*e*P	**PKPdf**	**11 17 13.4**	**+1.2**
SJMB	**Sao Joao De Ma**	**173.92**	**55**	*e*P	**PKPdf**	**11 17 13.7**	**+0.6**

*NEIC **03** 11:19:09.8±1.5, 67°.70N±0°.05×162°.2W±0°.1, h10km±1km, Error ellipse: s-maj=9.8km s-min=7.0km az=226.0*

*AEIC **03** 11:19:09±1.7, 67°.69N±0°.05×162°.4W±0°.1, h9km±4km, ML4.3/47, mb4.4/101(NEIC), Error ellipse: s-maj=8.2km s-min=6.0km az=58.0*

*IDC **03** 11:19:09.8±0.5, 67°.89N×162°.31W, h0km, mb4.1/32, mb1 4.3/36, mb1mx4.2/66, mbtmp4.2/36, ML4.3/5, MS4.1/4, Ms1 4.1/4, ms1mx3.3/58, Error ellipse: s-maj=13.6km s-min=9.2km az=20.0*

ISC 03 11:19:10.0±0.3**, 67°.74N**±0°.05×**162°.16W**±0°.04**, h10**km**, n314,** σ**0.s96**/304**, mb4.4**/76**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.42**	**319**	Pg	**Pg**	**11 19 17.8**	**-0.6**
RDOG				Sg	**Sg**	**11 19 24.4**	**+0.4**
ANM	**Nome**	**3.44**	**204**	Pn	**Pn**	**11 20 01.5**	**-2.1**
IM03		**3.76**	**114**		**Pn**	**11 20 07.4**	**-0.5**
IM03					**Sn**	**11 20 52.2**	**0.0**
IM05	**Indian Mountai**	**3.77**	**114**		**Pn**	**11 20 07.7**	**-0.5**
IM05					**Sn**	**11 20 51.8**	**-0.8**
PS05	**TAPS Pump Stn5**	**4.56**	**96**		**Pn**	**11 20 18.7**	**-0.2**
COLD	**Coldfoot**	**4.63**	**91**		**Pn**	**11 20 20.6**	**+0.7**
TOLK	**Toolik Lake Re**	**4.78**	**73**	P	**Pn**	**11 20 23.2**	**+1.2**
	baz=265,SNR=280						
TOLK	**Toolik Lake Re**	**4.78**	**73**		**Pn**	**11 20 22.9**	**+0.8**
TOLK					**Sn**	**11 21 17.9**	**+0.4**
PS06	**TAPS Pump Stn6**	**5.26**	**105**		**Pn**	**11 20 28.5**	**-0.1**
MLY	**Manley**	**5.33**	**115**		**Pn**	**11 20 28.9**	**-0.7**
PS01	**TAPS Pump Stn**	**5.49**	**56**		**Pn**	**11 20 31.7**	**+0.1**
TT01	**Tatalina**	**5.49**	**149**		**Pn**	**11 20 30.9**	**-0.9**
GAMB	**Gambell**	**5.59**	**229**		**Pn**	**11 20 32.4**	**-0.7**
BPAW	**Bear Paw Mtn.**	**5.85**	**123**		**Pn**	**11 20 36.5**	**-0.2**
PS07	**TAPS Pump Stn7**	**6.05**	**107**		**Pn**	**11 20 39.3**	**-0.2**
NEA	**Nenana**	**6.18**	**115**		**Pn**	**11 20 41.3**	**+0.1**
MDM	**Murphy Dome**	**6.26**	**110**		**Pn**	**11 20 42.5**	**+0.2**
KTH	**Kantishna Hill**	**6.26**	**127**		**Pn**	**11 20 42.1**	**-0.2**
BWN	**Browne**	**6.30**	**119**		**Pn**	**11 20 43.9**	**+1.1**
PPLA	**Purkeypile**	**6.40**	**135**		**Pn**	**11 20 44.5**	**+0.1**
TCOL	**CIGO, UAF Yank**	**6.43**	**110**	P	**Pn**	**11 20 45.2**	**+0.5**
	baz=302,SNR=188						
TCOL	**CIGO, UAF Yank**	**6.43**	**110**		**Pn**	**11 20 45.2**	**+0.5**
COLA	**College**	**6.44**	**110**		**Pn**	**11 20 45.3**	**+0.6**
POKR	**Poker Plat Res**	**6.46**	**107**	P	**Pn**	**11 20 44.7**	**-0.4**
	baz=300,SNR=31						
POKR	**Poker Plat Res**	**6.46**	**107**		**Pn**	**11 20 44.9**	**-0.1**
TRF	**Thorofare Moun**	**6.53**	**126**		**Pn**	**11 20 46.2**	**+0.1**
CCB	**Clear Creek Bu**	**6.58**	**111**		**Pn**	**11 20 46.5**	**-0.2**
WRH	**Wood River Hil**	**6.58**	**113**		**Pn**	**11 20 47.0**	**+0.3**
FYU	**Fort Yukon**	**6.69**	**92**		**Pn**	**11 20 47.9**	**-0.3**
BM03	**Burnt Mountain**	**6.72**	**85**		**Pn**	**11 20 49.0**	**+0.4**
MCK	**McKinley**	**6.76**	**120**		**Pn**	**11 20 49.1**	**-0.2**
IL31		**6.84**	**109**		**Pn**	**11 20 50.0**	**-0.3**
ILAR	**Eielson Array**	**6.84**	**109**	Pn	**Pn**	**11 20 49.9**	**-0.3**
	32nm,0.3s,baz=303,slow=14,SNR=1177						
ILAR				Sn	**Sn**	**11 22 06.2**	**-1.8**
	2.5nm,0.3s,baz=307,slow=21,SNR=0.6						
PRP	**Porcupine Dome**	**6.98**	**101**		**Pn**	**11 20 52.0**	**-0.2**
PS08	**TAPS Pump Stn8**	**6.99**	**110**		**Pn**	**11 20 52.5**	**+0.2**
RND	**Reindeer**	**7.01**	**122**		**Pn**	**11 20 52.8**	**0.0**
HDA	**Harding Lake**	**7.02**	**111**	P	**Pn**	**11 20 52.1**	**-0.6**
	baz=304,SNR=46						
HDA	**Harding Lake**	**7.02**	**111**		**Pn**	**11 20 52.9**	**+0.1**
SVW2	**Sparrevohn**	**7.25**	**154**	Pn	**Pn**	**11 20 54.6**	**-1.2**
WAT2	**Susitna Watana**	**7.42**	**124**		**Pn**	**11 20 58.9**	**+0.6**
WAT1	**Susitna Watana**	**7.53**	**124**		**Pn**	**11 20 59.9**	**+0.2**
STLK	**Strandline Lak**	**7.67**	**140**		**Pn**	**11 21 02.3**	**+0.7**
SPWE	**Spurr West**	**7.69**	**143**		**Pn**	**11 21 02.6**	**+0.6**
DHY	**Denali Highway**	**7.73**	**120**		**Pn**	**11 21 02.9**	**+0.3**
RIDG	**Independent Ri**	**8.16**	**111**		**Pn**	**11 21 08.7**	**+0.3**
SML	**Sawmill**	**8.37**	**129**		**Pn**	**11 21 11.5**	**+0.3**
DOT	**Dot Lake**	**8.50**	**110**		**Pn**	**11 21 12.7**	**-0.3**
EGAK	**Eagle**	**8.96**	**99**		**Pn**	**11 21 18.5**	**-0.7**
EPYK	**Eagle Plains**	**10.00**	**86**	P	**Pn**	**11 21 33.6**	**+0.1**
	baz=289,SNR=88						
GLB	**Gilahina Butte**	**10.07**	**120**		**Pn**	**11 21 35.3**	**+0.8**
MCARA	**McCarthy VSAT**	**10.37**	**119**		**Pn**	**11 21 41.0**	**+2.4**
INK	**Inuvik**	**10.70**	**74**	Pn	**Pn**	**11 21 42.1**	**-0.8**
	1.9nm,0.3s,baz=281,slow=11,SNR=82						
INK				Sn	**Sn**	**11 23 36.2**	**-6.3**
	1.9nm,0.3s,baz=325,slow=11,SNR=6.1						
HMT	**Hamilton**	**10.76**	**125**		**Pn**	**11 21 45.6**	**+1.7**
KDAK	**Kodiak Island**	**10.89**	**152**	Pn	**Pn**	**11 21 46.3**	**+0.6**
	0.7nm,0.3s,baz=2.6,slow=13,SNR=15						
KDAK	**Kodiak Island**	**10.89**	**152**		**Pn**	**11 21 46.2**	**+0.5**
SPIA	**Saint Paul Isl**	**11.23**	**203**	Pn	**Pn**	**11 21 47.6**	**-2.7**
CTGM	**Chitina Glacie**	**11.24**	**117**		**Pn**	**11 21 52.4**	**+1.7**
OHAK	**Old Harbor**	**11.30**	**155**		**Pn**	**11 21 52.1**	**+0.7**
BILL	**Bilibino**	**11.82**	**286**		**Pn**	**11 21 56.9**	**-1.6**
HYT	**Haines Junctio**	**12.67**	**111**		**Pn**	**11 22 10.7**	**+0.6**
CNBA	**Chernabura Isl**	**13.02**	**173**	Pn	**Pn**	**11 22 14.5**	**-0.3**
A36M	**Sachs Harbour**	**13.23**	**55**	P	**Pn**	**11 22 15.8**	**-1.7**
	baz=270,SNR=117						
WHY	**Whitehorse**	**13.72**	**108**		**Pn**	**11 22 23.7**	**-0.8**
C36M	**Paulatuk**	**13.88**	**66**	P	**Pn**	**11 22 22.3**	**-4.1**
	baz=281,SNR=28						
C36M	**Paulatuk**	**13.88**	**66**		**Pn**	**11 22 22.2**	**-4.1**
UNV	**Unalaska Valle**	**14.10**	**191**		**P**	**11 22 36.2**	**-1.0**
SKAG	**Skagway**	**14.41**	**112**		**Pn**	**11 22 34.6**	**+0.9**
DLBC	**Dease Lake**	**17.05**	**107**	P	**P**	**11 23 10.6**	**+0.5**
	0.5nm,0.3s,baz=310,slow=11,SNR=17						
DLBC	**Dease Lake**	**17.05**	**107**		**Pn**	**11 23 08.4**	**+0.2**
SEY	**Seymchan**	**19.19**	**277**	P	**Pn**	**11 23 34.8**	**+0.4**
	0.2nm,0.3s,baz=76,slow=9.7,SNR=10						
YKA	**Yellowknife Ar**	**20.24**	**82**	P	**P**	**11 23 45.1**	**+0.3**
	8.3nm,0.7s,baz=304,slow=9.6,SNR=56						
RES	**Resolute Bay**	**21.49**	**42**	P	**P**	**11 23 58.8**	**+0.4**
	1.8nm,0.7s,baz=252,slow=16,SNR=10						
RES				S	**S**	**11 27 53.7**	**-2.5**
	4.2nm,0.5s,baz=231,slow=12,SNR=7.5						
RES	**Resolute Bay**	**21.49**	**42**	P	**P**	**11 23 57.5**	**-0.8**
MA2	**Magadan**	**21.88**	**271**	P	**P**	**11 24 03.0**	**+0.3**
	5.3nm,0.8s,baz=119,slow=19,SNR=3.3						
MA2	**Magadan**	**21.88**	**271**	P	**P**	**11 24 01.6**	**-1.1**
MA2				IAmb	IAmb	11 24 18.1	
	comp=Z,13nm,1.2s						
PEA0B	**Petropavlovsk-**	**24.04**	**253**	P	**P**	**11 24 23.8**	**-1.0**
PEA0B				IAmb	IAmb	11 24 29.4	
	comp=Z,28nm,1.5s						
PETK	**Petropavlovsk-**	**24.04**	**253**	P	**P**	**11 24 25.0**	**+0.1**
	comp=Z,2.7nm,0.9s,baz=72,slow=9.1,SNR=6.0						
TULEG	**Thule**	**26.67**	**31**	P	**P**	**11 24 48.3**	**-0.1**
TULEG				IAmb	IAmb	11 24 57.7	
	comp=Z,16nm,1.3s						
YAK	**Yakutsk**	**28.09**	**292**	P	**P**	**11 24 58.7**	**-2.6**
FFC	**Flin Flon**	**30.34**	**85**	P	**P**	**11 25 21.6**	**+0.3**
MSO	**Missoula**	**32.17**	**106**	P	**P**	**11 25 38.1**	**+0.5**
	baz=328						
PINE	**Pine Mountain**	**32.31**	**117**	P	**P**	**11 25 38.9**	**-0.2**
PINE				IAmb	IAmb	11 25 47.5	
	comp=Z,14nm,1.4s						
J05D	**Fort Rock, OR**	**32.66**	**118**	P	**P**	**11 25 43.3**	**+1.3**
	baz=332						
EGMT	**Eagleton**	**32.72**	**100**	P	**P**	**11 25 43.2**	**+0.7**
	baz=326						
WVOR	**Wild Horse Val**	**34.30**	**115**	IAmb	IAmb	11 26 01.7	
	comp=Z,7.4nm,1.4s						
YHB	**Horse Butte**	**34.95**	**105**	P	**P**	**11 26 01.5**	**-0.5**
LAO	**LASA Array**	**35.16**	**98**	P	**P**	**11 26 04.4**	**+0.8**
	baz=327						
NRIK	**Noril'sk**	**35.16**	**325**	P	**P**	**11 26 04.2**	**+0.9**
	comp=Z,5.7nm,0.9s,baz=51,slow=7.5,SNR=9.0						
RLMT	**Red Lodge**	**35.34**	**103**	P	**P**	**11 26 06.6**	**+1.2**
	baz=328						
LKWY	**Lake**	**35.40**	**104**	IAmb	IAmb	11 26 23.9	
	comp=Z,7.6nm,1.2s						
IMW	**Indian Meadow**	**35.77**	**105**	IAmb	IAmb	11 26 15.9	
	comp=Z,5.6nm,0.9s						
TPAW	**Teton Pass**	**36.12**	**106**	P	**P**	**11 26 13.6**	**+1.5**
ULM	**Lac du Bonnet**	**36.17**	**85**	PcP	**PcP**	**11 28 37.7**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=312,slow=3.3,SNR=5.2						
SNOW	**Snow King Moun**	**36.22**	**106**	IAmb	IAmb	11 26 19.5	
	comp=Z,3.2nm,0.7s						
VCNR	**Virginia City**	**36.76**	**119**	P	**P**	**11 26 17.1**	**-0.4**
KLR	**Kul'dur**	**36.92**	**274**	P	**P**	**11 26 19.7**	**+1.1**
	comp=Z,1.7nm,0.9s,baz=246,slow=12,SNR=2.7						
BW06	**Boulder Array**	**37.26**	**105**	P	**P**	**11 26 22.7**	**+0.9**
	baz=330						
PDAR	**Pinedale Array**	**37.26**	**105**	P	**P**	**11 26 22.9**	**+1.2**
	comp=Z,2.0nm,0.6s,baz=328,slow=7.5,SNR=16						
PDAR				PcP	**PcP**	**11 28 41.5**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=5.4,slow=1.9,SNR=4.0						
AGMN	**Agassiz Nation**	**37.77**	**87**	P	**P**	**11 26 26.2**	**+0.5**
	baz=325						
AGMN	**Agassiz Nation**	**37.77**	**87**	P	**P**	**11 26 26.2**	**+0.5**
AGMN				IAmb	IAmb	11 26 29.5	
	comp=Z,8.2nm,1.3s						
NVAR	**Mina Array Bea**	**37.99**	**118**	P	**P**	**11 26 29.8**	**+1.8**
	comp=Z,3.2nm,0.7s,baz=319,slow=6.7,SNR=24						
NVAR				PcP	**PcP**	**11 28 45.5**	**+2.2**
	comp=Z,0.6nm,0.7s,baz=259,slow=1.8,SNR=3.6						
NV11	**Mina Array Sit**	**38.04**	**118**	P	**P**	**11 26 27.6**	**-0.8**
NV11				IAmb	IAmb	11 26 34.5	
	comp=Z,3.6nm,0.8s						
DUG	**Dugway, Tooele**	**38.33**	**110**	P	**P**	**11 26 31.9**	**+1.2**
	baz=332						
MDPB	**Devils Postpil**	**38.45**	**119**	P	**P**	**11 26 31.4**	**-0.5**
MDPB				IAmb	IAmb	11 26 38.4	
	comp=Z,4.6nm,0.9s						
OMMB	**Old Mammoth Mi**	**38.50**	**119**	P	**P**	**11 26 32.2**	**-0.2**
R11A	**Troy Canyon, C**	**38.99**	**115**	P	**P**	**11 26 37.8**	**+1.4**
	baz=334						
R11A	**Troy Canyon, C**	**38.99**	**115**	P	**P**	**11 26 35.6**	**-0.8**
SCO	**Scoresbysund**	**39.43**	**20**	P	**P**	**11 26 40.4**	**+1.0**
F33A	**5 Mile Ranch,**	**39.65**	**89**	IAmb	IAmb	11 26 45.4	
	comp=Z,12nm,1.1s						
EYMN	**Ely**	**39.71**	**83**	P	**P**	**11 26 42.3**	**+0.2**
	baz=326						
EYMN	**Ely**	**39.71**	**83**	P	**P**	**11 26 41.4**	**-0.7**
EYMN				IAmb	IAmb	11 26 45.8	
	comp=Z,5.4nm,0.8s						
CWC	**Cottonwood Cre**	**39.87**	**119**	P	**P**	**11 26 45.4**	**+1.8**
	baz=336						
TPNV	**Topopah Spring**	**40.03**	**117**	P	**P**	**11 26 46.4**	**+1.4**
	baz=335						
TPNV	**Topopah Spring**	**40.03**	**117**	IAmb	IAmb	11 26 49.4	
	comp=Z,5.1nm,0.9s						
N23A	**Red Feather La**	**40.22**	**103**	P	**P**	**11 26 46.9**	**+0.2**
	baz=331						
MPMC	**Manual Prospec**	**40.41**	**119**	P	**P**	**11 26 50.5**	**+2.3**
	baz=336						
ISA	**Isabella, Lake**	**40.45**	**120**	P	**P**	**11 26 47.9**	**-0.5**
ISA				IAmb	IAmb	11 26 52.5	
	comp=Z,6.1nm,1.1s						
SHPR	**Sheep Range**	**40.80**	**116**	P	**P**	**11 26 51.3**	**0.0**
LRMC	**Laurel Mtn Rad**	**40.88**	**119**	P	**P**	**11 26 53.5**	**+1.5**
	baz=336						
SHOC	**Shoshone, Teco**	**40.97**	**117**	P	**P**	**11 26 54.2**	**+1.7**
	baz=335						
USRK	**Ussuriysk Ar.**	**41.02**	**269**	P	**P**	**11 26 53.3**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=23,slow=7.8,SNR=3.4						
ISCO	**Idaho Springs**	**41.30**	**103**	P	**P**	**11 26 56.6**	**+1.0**
	baz=331						
ISCO	**Idaho Springs**	**41.30**	**103**	P	**P**	**11 26 55.5**	**-0.2**
ECSD	**EROS Data Cent**	**41.30**	**91**	P	**P**	**11 26 55.1**	**-0.2**
	baz=328						
GSC	**Goldstone, Bar**	**41.33**	**118**	P	**P**	**11 26 57.2**	**+1.5**
	baz=336						
GSC	**Goldstone, Bar**	**41.33**	**118**	P	**P**	**11 26 55.5**	**-0.1**
GSC				IAmb	IAmb	11 26 58.1	
	comp=Z,7.3nm,1.2s						
PV20	**West Nyswonger**	**41.35**	**108**	P	**P**	**11 26 56.5**	**+0.6**
PV20				IAmb	IAmb	11 27 01.5	
	comp=Z,12nm,1.4s						
PV16	**Nyswonger Mesa**	**41.40**	**108**	P	**P**	**11 26 56.6**	**+0.3**
SPMN	**Marine on St.**	**41.49**	**87**	P	**P**	**11 26 57.5**	**+0.7**
	baz=328						
SPMN	**Marine on St.**	**41.49**	**87**	P	**P**	**11 26 57.0**	**+0.2**
SPMN				IAmb	IAmb	11 27 00.7	
	comp=Z,6.4nm,0.7s						
TUQ	**Turquoise Moun**	**41.51**	**117**	P	**P**	**11 26 58.7**	**+1.5**
	baz=335						
BFSC	**Mount Baldy Ra**	**42.02**	**120**	P	**P**	**11 27 02.9**	**+1.5**
	baz=336						
GMRC	**Granite Mounta**	**42.19**	**117**	P	**P**	**11 27 04.0**	**+1.3**
	baz=336						
BBRC	**Big Bear Solar**	**42.24**	**119**	P	**P**	**11 27 04.6**	**+1.3**
	baz=336						
I37A	**Lemond, Waseca**	**42.29**	**88**	IAmb	IAmb	11 27 10.2	
	comp=Z,9.5nm,0.8s						
MVCO	**Mesa Verde**	**42.52**	**108**	P	**P**	**11 27 06.5**	**+0.9**
	baz=333						
S22A	**4UR Ranch, Cre**	**42.66**	**106**	P	**P**	**11 27 07.9**	**+1.2**
	baz=332						
SCHQ	**Schefferville**	**42.81**	**58**	P	**P**	**11 27 08.4**	**+0.9**
	comp=Z,2.6nm,0.6s,baz=34,slow=3.6,SNR=3.4						
SCHQ	**Schefferville**	**42.81**	**58**	P	**P**	**11 27 07.2**	**-0.2**
SCHQ				IAmb	IAmb	11 27 12.9	
	comp=Z,5.2nm,1.0s						
SCI2	**San Clemente I**	**42.88**	**122**	P	**P**	**11 27 10.2**	**+2.0**
	baz=337						
ARCES	**ARCESS Array B**	**42.89**	**356**	P	**P**	**11 27 08.6**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=20,slow=11,SNR=1.6						
ARCES				PcP	**PcP**	**11 28 57.5**	**-0.9**
	comp=Z,2.8nm,0.8s,baz=349,slow=3.9,SNR=8.1						
IRM	**Iron Mountain**	**42.93**	**117**	P	**P**	**11 27 10.2**	**+1.5**
	baz=336						
PFO	**Pinyon Flats O**	**42.99**	**119**	P	**P**	**11 27 10.6**	**+1.4**
	baz=336						
WUAZ	**Wupatki**	**43.01**	**112**	P	**P**	**11 27 10.7**	**+1.3**
	baz=334						
WUAZ	**Wupatki**	**43.01**	**112**	P	**P**	**11 27 10.0**	**+0.6**
WUAZ				IAmb	IAmb	11 27 14.1	
	comp=Z,5.2nm,0.8s						
SDCO	**Great Sand Dun**	**43.15**	**104**	P	**P**	**11 27 11.5**	**+0.8**
	baz=332						
SDCO	**Great Sand Dun**	**43.15**	**104**	P	**P**	**11 27 10.1**	**-0.6**
BC3	**Big Chuckawall**	**43.29**	**118**	P	**P**	**11 27 13.1**	**+1.5**
	baz=336						
MATQ	**Matagami**	**43.34**	**70**	P	**P**	**11 27 11.8**	**+0.1**
	baz=326						
D46A	**Sault St. Mari**	**43.40**	**78**	P	**P**	**11 27 12.4**	**+0.1**
	baz=327						
Y12C	**Blythe**	**43.52**	**117**	P	**P**	**11 27 15.1**	**+1.8**
	baz=336						
D47A	**Chapleau**	**43.60**	**77**	P	**P**	**11 27 14.1**	**+0.2**
	baz=327						
MONP2	**Monument Peak**	**43.66**	**119**	P	**P**	**11 27 16.6**	**+1.8**
	baz=337						
W18A	**Petrified Fore**	**43.95**	**111**	P	**P**	**11 27 18.7**	**+1.7**
	baz=334						
D48A	**Paudash Townsh**	**43.98**	**76**	P	**P**	**11 27 17.4**	**+0.4**
	baz=327						
IKP	**In-Ko-Pah, Jac**	**43.98**	**119**	P	**P**	**11 27 18.6**	**+1.4**
	baz=337						
E47A	**Iron Bridge**	**44.04**	**77**	P	**P**	**11 27 17.8**	**+0.4**
	baz=328						
JFWS	**Jewell Farm**	**44.42**	**86**	P	**P**	**11 27 20.6**	**0.0**
	baz=329						
E48A	**Lockeyer**	**44.44**	**76**	P	**P**	**11 27 20.5**	**-0.1**
	baz=328						
D50A	**G1974 Best Tow**	**44.71**	**74**	P	**P**	**11 27 23.0**	**+0.2**
	baz=328						
BORG	**Borgarnes**	**44.89**	**23**	LR	LR	11 45 46.5	
	comp=Z,85nm,20.4s,baz=15,slow=36						
ANMO	**Albuquerque**	**45.28**	**107**	P	**P**	**11 27 28.8**	**+1.1**
	baz=334						
ANMO	**Albuquerque**	**45.28**	**107**	P	**P**	**11 27 28.2**	**+0.5**
ANMO				IAmb	IAmb	11 27 33.8	
	comp=Z,8.6nm,1.5s						
KSU1	**Kansas State U**	**45.30**	**95**	P	**P**	**11 27 27.2**	**-0.3**
MJB9	**Matsu-Tunnel**	**45.31**	**258**	P	**P**	**11 27 28.4**	**+0.7**
MAJO	**Matsushiro**	**45.31**	**258**	P	**P**	**11 27 27.8**	**+0.1**
MJAR	**Matsushiro Arr**	**45.31**	**258**	P	**P**	**11 27 29.1**	**+1.4**
	comp=Z,2.3nm,0.9s,baz=24,slow=8.4,SNR=5.7						
214A	**Organ Pipe Nat**	**45.73**	**116**	P	**P**	**11 27 32.8**	**+1.7**
	baz=336						
D54A	**Lac Fusel, La**	**45.88**	**71**	P	**P**	**11 27 32.1**	**0.0**
	baz=328						
F52A	**Sundridge**	**46.06**	**75**	P	**P**	**11 27 32.6**	**-0.9**
	baz=328						
TUC	**Tucson**	**46.12**	**113**	P	**P**	**11 27 35.7**	**+1.5**
	baz=336						
E54A	**Lac Daplat, Po**	**46.30**	**72**	P	**P**	**11 27 35.1**	**-0.3**
	baz=328						
I49A	**Point Hope**	**46.35**	**79**	P	**P**	**11 27 35.7**	**-0.1**
	baz=329						
D56A	**ZEC Mazanza, M**	**46.65**	**70**	P	**P**	**11 27 38.3**	**+0.1**
	baz=328						
G54A	**Lake Saint Pet**	**46.85**	**74**	P	**P**	**11 27 39.4**	**-0.4**
	baz=329						
G53A	**Haliburton**	**46.90**	**74**	P	**P**	**11 27 40.2**	**+0.1**
	baz=329						
121A	**Cookes Peak, D**	**46.98**	**110**	P	**P**	**11 27 41.8**	**+0.8**
	baz=335						
121A	**Cookes Peak, D**	**46.98**	**110**	IAmb	IAmb	11 27 45.8	
	comp=Z,4.8nm,1.0s						
D57A	**Chemin Vers le**	**46.99**	**69**	P	**P**	**11 27 40.9**	**+0.1**
	baz=329						
AMTX	**Amarillo**	**47.10**	**102**	P	**P**	**11 27 42.7**	**+0.8**
	baz=333						
I51A	**Listowel**	**47.14**	**77**	P	**P**	**11 27 41.8**	**-0.1**
	baz=329						
SONM	**Songino Array**	**47.41**	**294**	P	**P**	**11 27 45.3**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=40,slow=5.8,SNR=4.9						
MSTX	**Muleshoe**	**47.51**	**104**	P	**P**	**11 27 46.0**	**+0.9**
	baz=334						
MSTX	**Muleshoe**	**47.51**	**104**	IAmb	IAmb	11 27 49.9	
	comp=Z,7.7nm,1.0s						
N47A	**Urbana**	**47.90**	**83**	P	**P**	**11 27 48.1**	**+0.2**
	baz=330						
H55A	**Tweed**	**47.91**	**74**	P	**P**	**11 27 47.1**	**-0.9**
	baz=329						
H56A	**Elgin**	**48.21**	**73**	P	**P**	**11 27 50.3**	**0.0**
	baz=329						
G57A	**Newington**	**48.24**	**71**	P	**P**	**11 27 50.7**	**+0.2**
	baz=329						
CCM	**Cathedral Cave**	**48.25**	**90**	P	**P**	**11 27 50.8**	**+0.2**
	baz=331						
CCM	**Cathedral Cave**	**48.25**	**90**	P	**P**	**11 27 50.5**	**-0.1**
CCM				IAmb	IAmb	11 27 53.4	
	comp=Z,5.7nm,0.8s						
WMOK	**Wichita Mounta**	**48.31**	**100**	P	**P**	**11 27 51.9**	**+0.7**
	baz=333						
Q44A	**Meyer Farm, Va**	**48.36**	**88**	P	**P**	**11 27 50.5**	**-0.9**
KSRS	**Korea Array**	**48.40**	**268**	P	**P**	**11 27 53.0**	**+1.3**
	comp=Z,1.8nm,0.8s,baz=22,slow=7.2,SNR=6.5						
E60A	**Ste Agathe de**	**48.41**	**68**	P	**P**	**11 27 52.1**	**+0.3**
	baz=329						
MNTX	**Cornudas Mount**	**48.59**	**108**	P	**P**	**11 27 54.6**	**+1.2**
	baz=335						
MNTX	**Cornudas Mount**	**48.59**	**108**	IAmb	IAmb	11 27 59.3	
	comp=Z,3.1nm,0.8s						
O48A	**Farmland**	**48.65**	**83**	P	**P**	**11 27 54.0**	**+0.3**
	baz=330						
LONY	**Lake Ozonia**	**48.80**	**71**	P	**P**	**11 27 54.7**	**-0.1**
	baz=330						
ZAA0	**Zalesovo Array**	**48.88**	**314**	P	**P**	**11 27 54.4**	**-0.9**
ZAA0				IAmb	IAmb	11 27 55.9	
	comp=Z,3.5nm,0.8s						
ZALV	**Zalesovo Beam**	**48.88**	**314**	P	**P**	**11 27 55.2**	**0.0**
	comp=Z,3.8nm,0.7s,baz=27,slow=6.7,SNR=13						
N50A	**Nevada**	**48.96**	**81**	P	**P**	**11 27 56.4**	**+0.4**
	baz=330						
H58A	**Gabriels**	**49.12**	**71**	P	**P**	**11 27 57.0**	**-0.3**
	baz=330						
N51A	**Ashland**	**49.12**	**81**	P	**P**	**11 27 57.3**	**0.0**
	baz=330						
L54A	**Sinclairville**	**49.12**	**77**	P	**P**	**11 27 57.2**	**-0.1**
	baz=330						
T42A	**Van Buren**	**49.20**	**91**	IAmb	IAmb	11 28 02.4	
	comp=Z,2.1nm,0.6s						
J57A	**Williamstown**	**49.33**	**73**	P	**P**	**11 27 58.7**	**-0.2**
	baz=330						
P49A	**Miami Univ. Ec**	**49.44**	**83**	P	**P**	**11 27 60.0**	**+0.2**
	baz=331						
L55A	**Hinsdale**	**49.49**	**76**	P	**P**	**11 28 00.2**	**0.0**
	baz=330						
Q48A	**North Vernon**	**49.58**	**85**	P	**P**	**11 28 00.9**	**0.0**
	baz=331						
M54A	**Oil Creek Stat**	**49.62**	**78**	P	**P**	**11 28 01.1**	**-0.1**
	baz=330						
PBMO	**Poplar Bluff**	**49.68**	**90**	IAmb	IAmb	11 28 04.4	
	comp=Z,6.1nm,0.9s						
O51A	**Pataskala**	**49.70**	**81**	P	**P**	**11 28 01.8**	**0.0**
	baz=331						
P50A	**Jamestown**	**49.72**	**83**	P	**P**	**11 28 02.5**	**+0.5**
	baz=331						
I59A	**Olmsteadville**	**49.77**	**71**	P	**P**	**11 28 02.0**	**-0.2**
	baz=330						
F63A	**Nahmakanta, Br**	**49.81**	**66**	P	**P**	**11 28 02.8**	**+0.3**
	baz=330						

FCAR	Ozark Folk Cen	49.81	93	IAmb	IAmb	11 28 04.7	
	comp=Z,4.5nm,0.6s						
L56A	Greenwood	49.86	76	P	P	11 28 02.7	-0.3
	baz=330						
WCI	Wyandotte Cave	49.98	86	P	P	11 28 03.7	-0.2
	baz=331						
M55A	Ridgway	49.99	77	P	P	11 28 03.9	-0.1
	baz=330						
O52A	Adamsville	50.02	81	P	P	11 28 03.6	-0.6
	baz=331						
G63A	Kingsbury	50.14	67	P	P	11 28 05.3	+0.3
	baz=330						
M56A	Emporium	50.20	77	P	P	11 28 05.4	-0.1
	baz=330						
L57A	Andrews Acres	50.24	75	P	P	11 28 05.6	-0.3
	baz=330						
K59A	Cooperstown	50.30	73	P	P	11 28 06.2	-0.1
	baz=330						
W41B	Gary Mavity, V	50.40	93	P	P	11 28 07.6	+0.5
	baz=332						
J60A	Lant Hill Farm	50.41	71	P	P	11 28 06.9	-0.2
	baz=330						
MIAR	Mount Ida	50.45	95	P	P	11 28 07.2	-0.3
	baz=333						
N55A	Marion Center	50.51	78	P	P	11 28 07.8	-0.1
	baz=331						
L58A	Harry Jones Me	50.57	74	P	P	11 28 08.5	+0.2
	baz=331						
J61A	Chester	50.63	71	P	P	11 28 09.1	+0.4
	baz=330						
R50A	Paris	50.68	84	IAmb	IAmb	11 28 12.4	
	comp=Z,9.7nm,0.9s						
KLMR	Klimovskoe	50.74	346	eP	P	11 28 02.0	-7.3
KLMR				AMP		11 28 18.5	
	comp=Z,24nm,1.5s						
X40A	Basin Creek Fa	50.78	94	P	P	11 28 10.3	+0.3
	baz=333						
Q52A	Bidwell	50.87	82	P	P	11 28 10.0	-0.6
	baz=331						
O55A	Ligonier	50.89	78	P	P	11 28 09.8	-1.0
	baz=331						
FIA1	FINESS Array S	50.98	355	P	P	11 28 10.8	-0.3
FINES	FINESS Array B	50.98	355	P	P	11 28 11.5	+0.4
	comp=Z,2.3nm,0.7s,baz=0.0,slow=9.5,SNR=6.7						
P54A	Burton	50.98	80	P	P	11 28 11.2	-0.2
	baz=331						
SSPA	Standing Stone	51.04	77	P	P	11 28 11.6	-0.3
	baz=331						
O56A	Blue Knob Stat	51.11	78	P	P	11 28 12.0	-0.4
	baz=331						
Q53A	Leroy	51.24	81	P	P	11 28 13.3	0.0
	baz=331						
WVT	Waverly	51.24	88	P	P	11 28 13.6	+0.2
	baz=332						
L61A	Hillsdale 1, H	51.28	72	P	P	11 28 13.5	-0.1
	baz=331						
N58A	Sunbury	51.30	76	P	P	11 28 13.4	-0.4
	baz=331						
TX31	Lajitas Ar. Si	51.35	108	P	P	11 28 14.7	+0.2
TXAR	Lajitas Array	51.35	108	P	P	11 28 15.3	+0.9
	comp=Z,6.1nm,0.7s,baz=336,slow=5.4,SNR=36						
Q54A	Coxs Mills	51.39	80	P	P	11 28 14.2	-0.3
	baz=331						
O57A	Amberson	51.51	77	P	P	11 28 14.6	-0.8
	baz=331						
R53A	Hurricane	51.54	82	P	P	11 28 15.3	-0.4
	baz=331						
T50A	Nancy	51.59	85	P	P	11 28 16.0	-0.1
T50A				IAmb	IAmb	11 28 20.2	
	comp=Z,6.4nm,0.9s						
HHC	Hu-ho-hao-te	51.60	285	P	P	11 28 15.0	-1.2
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,5.7s						
Q55A	Buckhannon	51.66	80	P	P	11 28 16.6	0.0
	baz=331						
JCT	Junction City	51.74	103	P	P	11 28 17.8	+0.5
	baz=335						
O58A	Lewisberry	51.85	76	P	P	11 28 17.6	-0.4
	baz=331						
O59A	Robesonia	51.96	76	P	P	11 28 18.1	-0.6
	baz=331						
R54A	Victor	52.03	81	P	P	11 28 19.1	-0.2
	baz=332						
PLAL	Pickwick Lake	52.16	89	IAmb	IAmb	11 28 23.3	
	comp=Z,7.6nm,0.9s						
HFS	Hagfors	52.39	3	P	P	11 28 20.7	-1.0
	comp=Z,2.6nm,0.7s,baz=29,slow=3.4,SNR=5.2						
P59A	Jarrettsville	52.48	76	P	P	11 28 22.1	-0.5
	baz=331						
T53A	Wise	52.50	83	P	P	11 28 22.2	-0.7
	baz=332						
ARU	Arti	52.53	333	P	P	11 28 22.8	+0.1
	comp=Z,0.6nm,0.3s,baz=304,slow=6.8,SNR=3.8						
ARU	Arti	52.53	333	P	P	11 28 22.2	-0.5
ARU				IAmb	IAmb	11 28 30.2	
	comp=Z,9.5nm,1.3s						
HPIG		52.82	111	IAmb	IAmb	11 28 29.6	
	comp=Z,5.7nm,1.0s						
BRVK	Borovoye	53.35	323	P	P	11 28 28.5	-0.3
BRVK				IAmb	IAmb	11 28 35.6	
	comp=Z,4.2nm,0.8s						
BVAR	Borovoye Array	53.35	323	P	P	11 28 28.5	-0.4
	comp=Z,2.1nm,0.6s,baz=36,slow=7.9,SNR=14						
BVAR				PcP	PcP	11 29 36.7	+0.5
	comp=Z,1.1nm,0.5s,baz=45,slow=4.3,SNR=2.4						
KURK	Kurchatov	53.45	316	P	P	11 28 29.1	-0.5
KURK				IAmb	IAmb	11 28 30.5	
	comp=Z,5.2nm,0.9s						
KURBB	Kurchatov Arra	53.56	316	P	P	11 28 29.9	-0.6
	comp=Z,3.8nm,0.9s,baz=28,slow=7.5,SNR=21						
KURBB				PcP	PcP	11 29 37.0	+0.1
	comp=Z,0.9nm,0.9s,baz=27,slow=4.7,SNR=2.0						
S58A	Poland Farm, P	53.63	79	P	P	11 28 31.0	-0.1
	baz=332						
U57A	Blanch	54.19	81	P	P	11 28 35.1	-0.2
	baz=332						
W54A	Cherokee Point	54.31	84	P	P	11 28 36.2	+0.1
	baz=332						
T59A	Double "B" Far	54.38	79	P	P	11 28 36.5	-0.1
	baz=332						
Z50A	Ashland	54.51	88	P	P	11 28 37.8	+0.2
	baz=333						
KMSC	Kings Mountain	54.58	83	P	P	11 28 38.0	-0.1
	baz=333						
Y52A	Lilburn	54.68	86	P	P	11 28 39.3	+0.5
	baz=333						
X54A	Belton	54.71	84	P	P	11 28 39.5	+0.4
	baz=333						
V58A	Windy Hill, Pi	54.84	81	P	P	11 28 39.6	-0.4
	baz=332						
X55A	Gracelyn & Ava	55.06	84	P	P	11 28 41.6	+0.1
	baz=333						
X56A	White Oak	55.27	83	P	P	11 28 43.2	+0.2
	baz=333						
Y55A	Saluda	55.45	84	P	P	11 28 44.8	+0.4
	baz=333						
MK31	Makanchi Array	56.02	312	P	P	11 28 47.0	-1.3
MKAR	Makanchi Array	56.02	312	P	P	11 28 47.8	-0.6
	comp=Z,1.3nm,0.7s,baz=44,slow=6.5,SNR=17						
MAKZ	Makanchi	56.10	312	P	P	11 28 47.9	-1.0
MAKZ				IAmb	IAmb	11 29 00.0	
	comp=Z,4.0nm,1.4s						
ESK	Eskdalemuir	56.27	14	P	P	11 28 49.3	-0.6
GTA	Gaotai	57.08	294	eP	P	11 29 08.4	+12
GTA				pP	sP	11 29 13.7	+13
GTA				sP	pP	11 29 16.3	+17
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WMQ	Urumqi	57.12	306	eP	P	11 28 58.1	+1.9
AKTO	Aktyubinsk	58.36	331	P	P	11 29 05.1	+0.3
	comp=Z,1.7nm,0.6s,baz=38,slow=5.6,SNR=5.0						
LZH	Lanzhou	58.62	289	eP	P	11 29 00.9	-6.1
LZH				pP	pP	11 29 04.1	-6.2
LZH				sP	sP	11 29 06.9	-4.6
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
AKASG	Malin Array Be	61.57	352	P	P	11 29 27.1	+0.3
	comp=Z,2.7nm,0.7s,baz=5.7,slow=6.6,SNR=9.6						
AKBB	Malin Array Si	61.57	352	P	P	11 29 26.3	-0.5
AKBB				IAmb	IAmb	11 29 28.1	
	comp=Z,4.1nm,0.8s						
KDJ	Kajisay	61.74	313	P	P	11 29 28.2	-0.1
KDJ				IAmb	IAmb	11 29 40.7	
	comp=Z,1.9nm,0.9s						
AAK	Ala-Archa	62.00	316	P	P	11 29 30.6	+0.6
	comp=Z,1.9nm,0.6s,baz=86,slow=4.6,SNR=6.2						
AAK	Ala-Archa	62.00	316	P	P	11 29 30.2	+0.1
AAK				IAmb	IAmb	11 29 31.8	
	comp=Z,3.1nm,0.9s						
DPC	Dobruska-Polom	62.23	1	eP	P	11 29 32.5	+1.2
KK31	Karatay Array	62.59	319	P	P	11 29 33.7	-0.2
KK31				IAmb	IAmb	11 29 34.9	
	comp=Z,2.2nm,1.1s						
KHC	Kasperske Hory	63.41	3	eP	P	11 29 40.6	+1.4
KHC	Kasperske Hory	63.41	3	P	P	11 29 40.4	+1.2
KHC				IAmb	IAmb	11 29 44.5	
	comp=Z,3.9nm,1.5s						
GERES	GERESS Array B	63.70	3	P	P	11 29 42.3	+1.1
	comp=Z,1.3nm,0.8s,baz=354,slow=4.9,SNR=9.5						
DAVOX	Davos/Dischmat	65.65	6	P	P	11 29 55.5	+1.4
	comp=Z,1.9nm,0.5s,baz=50,slow=3.6,SNR=6.3						
GAR	Garm	66.51	318	P	P	11 29 59.1	-0.5
KIV	Kislovodsk	67.06	341	P	P	11 30 02.8	-0.2
CHGR	Chuyangaron	67.12	318	P	P	11 30 03.3	-0.2
KBZ	Khabaz	67.25	341	P	P	11 30 05.1	+1.0
	comp=Z,1.8nm,0.7s,baz=353,slow=7.2,SNR=5.7						
ESDC	Sonseca Array	71.65	18	P	P	11 30 32.2	+0.8
	comp=Z,1.6nm,0.7s,baz=351,slow=6.2,SNR=14						
BR131	Keskin Array S	72.19	347	P	P	11 30 34.4	-0.4
BRTR	Keskin Array B	72.19	347	P	P	11 30 35.1	+0.3
	comp=Z,0.6nm,0.7s,baz=35,slow=4.5,SNR=3.5						
CM31	Chiang Mai Arr	76.41	285	P	P	11 30 59.0	-0.4
CM31				IAmb	IAmb	11 31 13.6	
	comp=Z,3.3nm,0.6s						
CMAR	Chiang Mai Arr	76.41	285	P	P	11 30 59.9	+0.5
	comp=Z,1.6nm,0.7s,baz=5.6,slow=6.5,SNR=8.8						
KEST	Kesra	76.65	7	P	P	11 31 02.1	+1.4
	comp=Z,7.4nm,0.9s,baz=271,slow=8.5,SNR=3.5						
KEST				LR	LR	12 05 14.2	
	comp=Z,345nm,19.5s,baz=330,slow=36						
DAV	Davao City (W)	76.81	256	P	P	11 31 02.8	+1.2
	comp=Z,319nm,0.6s,baz=304,slow=23,SNR=5.1						
SDV	Santo Domingo	82.42	85	P	P	11 31 32.1	-0.4
RAYN	Ar Rayn	86.72	335	P	P	11 31 53.6	-0.3
RAYN				IAmb	IAmb	11 31 58.3	
	comp=Z,3.8nm,0.9s						
PTGA	Pitinga	95.29	79	LR	LR	12 18 01.6	
	comp=Z,107nm,21.9s,baz=342,slow=37						
TORD	Torodi Ar. Bea	98.48	16	LR	LR	12 22 32.3	
	comp=Z,79nm,18.1s,baz=0.0,slow=39						
VNDA	Vanda	146.65	193	PKPbc	PKPab	11 38 50.7	-0.2
	comp=Z,1.8nm,0.8s,baz=316,slow=3.5,SNR=6.1						

IDC 03 11:27:48.7±1.8**, 5.33S**×**139.03E, h0**km**, mb3.8**/2**, mb1 3.8**/5**, mb1mx3.5**/37**, mbtmp3.6**/5**, ML3.4**/3**, Error ellipse: s-maj=39.7km s-min=13.9km az=106.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.22	197	Pn	Pn	11 31 24.6	-0.6
	0.1nm,0.3s,baz=13,slow=13,SNR=6.4						
WRA				Sn	Sn	11 34 19.5	+4.8
	0.2nm,0.3s,baz=10,slow=22,SNR=4.8						
FITZ	Fitzroy Crossi	18.22	225	P	P	11 32 05.0	+1.4
	0.2nm,0.3s,baz=47,slow=11,SNR=1.8						
FITZ				S	Sn	11 35 28.4	+0.9
	0.1nm,0.3s,baz=258,slow=20,SNR=2.5						
ASAR	Alice Springs	18.89	195	P	P	11 32 10.0	-0.9
	0.2nm,0.3s,baz=28,slow=9.3,SNR=19						
ASAR				S	Sn	11 35 44.8	+1.3
	0.0nm,0.3s,baz=8.9,slow=28,SNR=3.3						
MKAR	Makanchi Array	72.05	323	P	P	11 39 13.7	-1.1
	0.7nm,0.6s,baz=125,slow=7.7,SNR=5.3						
KURBB	Kurchatov Arra	76.04	325	P	P	11 39 39.5	+1.6
	0.5nm,0.6s,baz=122,slow=6.1,SNR=2.8						

*UPA **03** 11:43:30.6±0.9, 9.14N×82.26W, h6km±2km, MW4.1*
*UCR **03** 11:43:31.0±1.9, 9.31N×82.30W, h13km±5km, MD3.4*
ISC 03 11:43:29.6±1.2**, 9.17N**±0.03×**82.24W**±0.02**, h6**km±9km**, n36, σ1s28**/68**, 1C, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGR2	Aguacate	0.25	158	eP	Pg	11 43 36.0	+1.5
CHGR2				eS	Sg	11 43 38.8	+0.9
BCO2	Palmira	0.53	212	eP	Pb	11 43 41.6	+0.2
BCO2				eS	Sb	11 43 50.0	+0.6
RGM0	Gandoca	0.55	319	i P	Pg	11 43 42.1	+1.8
RGM0				eS	Sb	11 43 50.6	+0.7
BRU2	Volcan	0.58	230	⇑iP	Pg	11 43 41.9	+1.0
BRU2				eS	Sb	11 43 50.9	0.0
MLIR3	Monte Lirio, C	0.69	237	eP	Pb	11 43 44.4	+0.3
MLIR3				eS	Sb	11 43 54.5	+0.6
LOMA3	Las Lomas, Chi	0.75	191	eP	Pb	11 43 45.5	+0.4
LOMA3				eS	Sb	11 43 55.9	+0.4
DVD	David	0.76	196	eP	Pb	11 43 45.6	+0.4
DVD				eS	Sb	11 43 56.9	+1.1
CHIR3	Chiriqui UPA,	0.78	187	i P	Pb	11 43 45.8	+0.3
CHIR3				eS	Sb	11 43 56.6	+0.3
LOCO3	Loma Colorada,	0.78	193	eP	Pb	11 43 45.6	+0.1
LOCO3				eS	Sb	11 43 56.2	-0.1
PEDE3	Pedregal, Chir	0.80	193	eP	Pb	11 43 46.2	+0.2
PEDE3				eS	Sb	11 43 56.9	-0.2
EDSV	San Vito	0.80	244	eP	Pg	11 43 45.7	+0.6
REME3	Remedios, Chir	1.02	157	eP	Pg	11 43 48.1	-1.1
REME3				eS	Sg	11 43 55.6	-6.9
NANC3	Nancito, Chiri	1.05	151	eP	Pg	11 43 50.2	+0.4
NANC3				eS	Sb	11 44 04.8	+0.5
SBAR3	San Bartolo, C	1.06	217	eP	Pg	11 43 37.4	-13
SBAR3				eS	Sn	11 44 07.9	+1.8
EDPN	Palmar Norte	1.22	260	eP	Pg	11 43 52.7	-0.4
EDPN				eS	Sn	11 44 10.8	+0.8
PTJ1	Puerto Jimnez	1.22	239	eP	Pg	11 43 52.4	-0.7
PTJ1				eS	Sg	11 44 09.2	+0.1
PVID3	Puerto Vidal,	1.28	151	i P	Pg	11 43 53.9	-0.2
PVID3				eS	Sg	11 44 10.4	-0.3
EDLM	Las Mercedes	1.34	275	eP	Pn	11 43 53.4	-1.5
EDLM				eS	Sg	11 44 11.3	-1.3
MESA3	La Mesa, Verag	1.46	134	eP	Pn	11 43 56.0	-0.4
MESA3				eS	Sb	11 44 15.5	-0.4
SFRA3	San Francisco,	1.55	126	eP	Pn	11 43 57.8	0.0
SFRA3				eS	Sn	11 44 18.4	+0.1
RSUS3	Rio de Jesus,	1.59	138	eP	Pn	11 43 58.5	+0.1
RSUS3				i S	Sn	11 44 20.1	+0.9
EDDO	Dominical	1.60	273	eP	Pn	11 43 58.4	-0.1
EDDO				eS	Sn	11 44 19.1	-0.5
STIA3	Santiago, Vera	1.65	130	eP	Pn	11 43 59.0	0.0
STIA3				eS	Sn	11 44 20.8	+0.2
GMAL	Guarumal, Vera	1.72	144	eP	Pn	11 43 59.6	-0.5
GMAL				eS	Sn	11 44 21.8	-0.5
GMAL	Guarumal, Vera	1.72	144	eP	Pn	11 43 59.6	-0.5
CVTR	Volcan Turrial	1.72	300	eP	Pn	11 43 59.1	-1.4
CVTR				eS	Sn	11 44 20.6	-2.4
LCR2	La Lucha 2	1.83	288	eP	Pn	11 44 01.3	-0.5
LCR2				eS	Sn	11 44 23.7	-1.7
CRIS3	El Cristo, Coc	1.84	119	eP	Pn	11 44 02.5	+0.7
CRIS3				eS	Sn	11 44 25.5	0.0
OCU3	Ocu, Herrera	1.89	130	eP	Pn	11 44 02.6	+0.1
OCU3				eS	Sn	11 44 27.2	+0.6
MARI3	Mariato, Verag	1.95	141	eP	Pn	11 44 04.1	+0.8
MARI3				eS	Sb	11 44 31.2	+1.0
CACAO	El Cacao, Vera	2.27	143	eP	Pn	11 44 08.9	+1.2
CACAO				eS	Sn	11 44 36.8	+0.8
BCIP	Isla Barro Col	2.37	90	eP	Pn	11 44 08.8	-0.3
BCIP				eS	Sn	11 44 38.8	+0.3
AZU	Azuero	2.38	125	eP	Pn	11 44 10.4	+1.3
AZU				eS	Sn	11 44 40.1	+1.4
AZU	Azuero	2.38	125	eP	Pn	11 44 10.4	+1.3
UPA	Univ. de Panam	2.68	94	eP	Pn	11 44 10.7	-2.6
UPA				eS	Sn	11 44 46.8	+0.7
JTS	Las Juntas de	2.90	293	eP	Pn	11 44 18.2	+1.8
JTS				eS	Sn	11 44 53.1	+1.6

*AEIC **03** 11:54:33.9±1.2, 67.74N±0.05×162.5W±0.1, h24km±4km, ML4.0/49, mb4.2/20(NEIC), Error ellipse: s-maj=8.3km s-min=4.9km az=205.0*
*IDC **03** 11:54:33.2±0.6, 67.93N×162.51W, h0km, mb4.0/20, mb1 4.2/24, mb1mx4.0/65, mbtmp4.0/24, ML4.0/5, Error ellipse: s-maj=18.1km s-min=10.2km az=27.0*
*NEIC **03** 11:54:33.6±1.5, 67.68N±0.04×162.4W±0.1, h10km±1km, Error ellipse: s-maj=8.3km s-min=6.8km az=44.0*
ISC 03 11:54:33.5±0.4**, 67.77N**±0.05×**162.30W**±0.04**, h10**km**, n118, σ1s27**/131**, mb4.2**/30**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.37	322		Pb	11 54 41.7	-0.4
RDOG				Sg	Sb	11 54 47.9	0.0
ANM	Nome	3.45	203		Pn	11 55 25.8	-1.4
ANM				Sn	Sn	11 56 05.8	-2.3
IM03		3.82	114		Pn	11 55 32.3	0.0
IM03					Sn	11 56 16.9	-0.2
IM05	Indian Mountai	3.83	114		Pn	11 55 32.6	+0.1
PS05	TAPS Pump Stn5	4.61	97		Sn	11 56 37.0	+0.2
COLD	Coldfoot	4.68	91		Pn	11 55 46.0	+1.9
TOLK	Toolik Lake Re	4.83	74	P	Pn	11 55 48.3	+2.1
	baz=265						
TOLK				S	Sn	11 56 42.2	+0.2
	baz=265						
TOLK	Toolik Lake Re	4.83	74		Pn	11 55 47.4	+1.3
TOLK				Sn	Sn	11 56 39.8	-2.3
PS06	TAPS Pump Stn6	5.32	105		Pn	11 55 53.2	+0.3
MLY	Manley	5.39	115		Pn	11 55 53.6	-0.3
PS01	TAPS Pump Stn	5.51	57		Pn	11 55 56.6	+1.1
TTA	Tatalina	5.52	149	Pn	Pn	11 55 55.4	-0.3
TT01	Tatalina	5.54	149		Pn	11 55 55.6	-0.3
BPAW	Bear Paw Mtn.	5.91	123		Pn	11 56 01.4	+0.4
NEA	Nenana	6.24	115		Pn	11 56 05.8	+0.3
MDM	Murphy Dome	6.32	110		Pn	11 56 07.7	+1.1
KTH	Kantishna Hill	6.32	127		Pn	11 56 06.5	-0.2
BWN	Browne	6.36	119		Pn	11 56 08.2	+1.1
PPLA	Purkeypile	6.46	134		Pn	11 56 08.9	+0.2
TCOL	CIGO, UAF Yank	6.50	110	P	Pn	11 56 09.9	+0.9
	baz=303						
TCOL				S	Sn	11 57 22.2	-0.8
	baz=303						
TCOL	CIGO, UAF Yank	6.50	110		Pn	11 56 09.8	+0.9
COLA	College	6.50	110		Pn	11 56 09.9	+0.9
POKR	Poker Plat Res	6.52	107	P	Pn	11 56 10.8	+1.4
	baz=300						
POKR				S	Sn	11 57 23.0	-0.8
	baz=300						
POKR	Poker Plat Res	6.52	107		Pn	11 56 09.8	+0.5
TRF	Thorofare Moun	6.59	125		Pn	11 56 10.8	+0.4
CCB	Clear Creek Bu	6.64	111		Pn	11 56 11.4	+0.4
WRH	Wood River Hil	6.64	113		Pn	11 56 11.6	+0.5
FYU	Fort Yukon	6.75	92		Pn	11 56 13.3	+0.9
BM03	Burnt Mountain	6.77	85		Pn	11 56 13.5	+0.7
MCK	McKinley	6.83	120		Pn	11 56 13.9	+0.3
IL31		6.90	109		Pn	11 56 14.8	+0.3
ILAR	Eielson Array	6.90	109	Pn	Pn	11 56 14.4	-0.2
	12nm,0.3s,baz=299,slow=14,SNR=252						
ILAR				Sn	Sn	11 57 31.7	-1.4
	4.1nm,0.3s,baz=304,slow=24,SNR=13						
PRP	Porcupine Dome	7.04	101	Pn	Pn	11 56 17.0	+0.5
RND	Reindeer	7.08	122		Pn	11 56 17.6	+0.5
HDA	Harding Lake	7.08	111	P	Pn	11 56 17.6	+0.5
	baz=305						
HDA				S	Sn	11 57 35.4	-2.1
	baz=305						
HDA				S	Sn	11 57 35.4	-2.1
	baz=305						
HDA	Harding Lake	7.08	111		Pn	11 56 16.7	-0.4
WAT2	Susitna Watana	7.48	124		Pn	11 56 23.5	+0.9
STLK	Strandline Lak	7.72	140		Pn	11 56 26.8	+0.9
SPWE	Spurr West	7.75	143		Pn	11 56 26.7	+0.5
DHY	Denali Highway	7.79	120		Pn	11 56 27.8	+0.9
RIDG	Independent Ri	8.23	111		Pn	11 56 33.5	+0.8
GHO	Glory Hole Cre	8.28	130		Pn	11 56 34.5	+1.0
PMR	Palmer	8.37	131		Pn	11 56 35.0	+0.4
SCRK	Sand Creek	8.39	108		Pn	11 56 36.4	+1.2
RSO	Redoubt South	8.43	146		Pn	11 56 36.4	+0.7
SML	Sawmill	8.43	129		Pn	11 56 35.4	-0.2
DOT	Dot Lake	8.56	110		Pn	11 56 37.6	+0.2
RC01	Rabbit Creek A	8.61	135		Pn	11 56 38.9	+0.8
SCM	Sheep Creek Mo	8.71	126		Pn	11 56 40.0	+0.6
EGAK	Eagle	9.02	99		Pn	11 56 44.0	+0.4
MENT	Mentasta	9.13	113		Pn	11 56 45.8	+0.7
BRLK	Bradley Lake	9.47	142	Pn	Pn	11 56 50.7	+0.9
CNPM	China Poot	9.61	144		Pn	11 56 52.1	+0.4
BC03		9.73	109		Pn	11 56 52.6	-0.7
FID	Port Fidalgo	9.81	128		Pn	11 56 55.0	+0.5
DAWY	Dawson	10.04	101		Pn	11 56 58.7	+1.1
EPYK	Eagle Plains	10.05	86	P	Pn	11 56 58.4	+0.7
	baz=290						
EPYK	Eagle Plains	10.05	86		Pn	11 56 58.2	+0.5
GLB	Gilahina Butte	10.13	120		Pn	11 56 59.6	+0.7
INK	Inuvik	10.74	74	Pn	Pn	11 57 05.3	-1.8
	0.9nm,0.3s,baz=299,slow=9.5,SNR=38						
INK				Sn	Sn	11 59 01.8	-5.4
	2.3nm,0.3s,baz=106,slow=23,SNR=10						
INK	Inuvik	10.74	74		Pn	11 57 06.3	-0.7
KDAK	Kodiak Island	10.95	152	Pn	Pn	11 57 10.8	+0.9
	0.4nm,0.3s,baz=19,slow=6.5,SNR=10						
KDAK	Kodiak Island	10.95	152		Pn	11 57 10.9	+1.0
SPIA	Saint Paul Isl	11.23	203	Pn	Pn	11 57 13.6	-0.3
CTGM	Chitina Glacie	11.30	117	Pn	Pn	11 57 17.3	+2.3
OHAK	Old Harbor	11.36	154	Pn	Pn	11 57 16.4	+0.9
BILL	Bilibino	11.77	286		Pn	11 57 19.5	-1.5
HYT	Haines Junctio	12.73	111	Pn	Pn	11 57 37.4	+3.0
A36M	Sachs Harbour	13.26	55	P	Pn	11 57 40.3	-1.1
	baz=270						
WHY	Whitehorse	13.79	108	Pn	Pn	11 57 49.3	+0.5
DLBC	Dease Lake	17.11	107	P	Pn	11 58 33.8	+1.3
	0.3nm,0.3s,baz=340,slow=4.8,SNR=5.8						
SEY	Seymchan	19.14	277	P	Pn	11 58 58.4	+1.2
	0.4nm,0.3s,baz=78,slow=8.0,SNR=21						
YKA	Yellowknife Ar	20.29	82	P	P	11 59 09.4	+0.5
	3.4nm,0.7s,baz=304,slow=9.9,SNR=45						
RES	Resolute Bay	21.51	42	P	P	11 59 23.7	+1.7
	1.3nm,0.7s,baz=274,slow=8.4,SNR=8.8						
RES				S	S	12 03 13.3	-6.7
	0.6nm,0.5s,baz=358,slow=7.6,SNR=2.8						
RES	Resolute Bay	21.51	42	P	P	11 59 23.1	+1.1
PEA0B	Petropavlovsk-	24.00	252	P	P	11 59 46.6	-1.3
PEA0B				IAmb	IAmb	11 59 47.7	
	comp=Z,15nm,1.4s						
PETK	Petropavlovsk-	24.00	252	P	P	11 59 47.9	0.0
	comp=Z,2.3nm,0.8s,baz=76,slow=9.3,SNR=8.5						
PETK				S	S	12 04 03.7	-0.8
	comp=Z,0.4nm,0.5s,baz=140,slow=51,SNR=6.6						
MCMT	McKenzie Canyo	34.34	107	P	P	12 01 19.9	-0.3
NRIK	Noril'sk	35.11	325	P	P	12 01 27.0	+0.7
	comp=Z,1.7nm,0.5s,baz=51,slow=8.5,SNR=4.6						
ELK	Elko	37.04	113	P	P	12 01 43.1	-0.3
PDAR	Pinedale Array	37.32	105	P	P	12 01 47.5	+1.8
	comp=Z,2.2nm,0.5s,baz=325,slow=8.0,SNR=19						
NVAR	Mina Array Bea	38.06	118	P	P	12 01 54.1	+2.1
	comp=Z,2.5nm,0.7s,baz=322,slow=7.4,SNR=24						
NV11	Mina Array Sit	38.10	118	P	P	12 01 52.6	+0.3
NV11				IAmb	IAmb	12 01 55.0	
	comp=Z,1.9nm,0.7s						
R11A	Troy Canyon, C	39.06	115	P	P	12 02 00.2	-0.2
PV22	Blue Mesa, Par	41.30	107	P	P	12 02 19.6	+0.6
ARCES	ARCESS Array B	42.85	356	PcP	PcP	12 04 21.6	-0.1
	comp=Z,4.4nm,1.1s,baz=17,slow=4.0,SNR=6.3						
WUAZ	Wupatki	43.07	112	P	P	12 02 33.3	-0.1
WUAZ				IAmb	IAmb	12 02 35.9	
	comp=Z,3.7nm,0.8s						
ANMO	Albuquerque	45.35	107	P	P	12 02 51.8	+0.1
ANMO				IAmb	IAmb	12 02 54.0	
	comp=Z,1.8nm,0.8s						
SONM	Songino Array	47.35	294	P	P	12 03 07.2	0.0
	comp=Z,0.3nm,0.4s,baz=8.9,slow=10,SNR=1.8						
KSRS	Korea Array	48.34	268	P	P	12 03 15.6	+0.8
	comp=Z,1.0nm,0.6s,baz=18,slow=7.5,SNR=5.4						
MNTX	Cornudas Mount	48.66	108	P	P	12 03 18.2	+0.8
MNTX				IAmb	IAmb	12 03 19.6	
	comp=Z,2.6nm,0.7s						
ZAA0	Zalesovo Array	48.82	314	P	P	12 03 17.3	-1.0
ZAA0				IAmb	IAmb	12 03 19.1	
	comp=Z,2.3nm,0.8s						
ZALV	Zalesovo Beam	48.82	314	P	P	12 03 17.6	-0.7
	comp=Z,2.7nm,0.6s,baz=19,slow=7.1,SNR=9.5						
FCAR	Ozark Folk Cen	49.87	92	P	P	12 03 25.8	-0.7
FINES	FINESS Array B	50.94	355	P	P	12 03 34.3	0.0
	comp=Z,0.6nm,0.5s,baz=28,slow=8.6,SNR=5.7						
TX31	Lajitas Ar. Si	51.41	107	P	P	12 03 38.9	+0.5
TXAR	Lajitas Array	51.42	107	P	P	12 03 39.5	+1.0
	comp=Z,4.2nm,0.6s,baz=333,slow=5.8,SNR=82						
HHC	Hu-ho-hao-te	51.54	285	P	P	12 03 40.3	+1.1
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,66nm,6.0s						
JCT	Junction City	51.80	103	P	P	12 03 40.6	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HPIG		**52.88**	**111**	P	**P**	**12 03 48.3**	**-1.1**
BRVK	**Borovoye**	**53.29**	**323**	P	**P**	**12 03 51.5**	**-0.4**
BRVK				IAmb	IAmb	12 03 56.1	
	comp=Z,2.5nm,0.8s						
BVAR	**Borovoye Array**	**53.30**	**323**	P	**P**	**12 03 52.2**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=30,slow=7.3,SNR=13						
KURK	**Kurchatov**	**53.40**	**316**	P	**P**	**12 03 52.1**	**-0.6**
KURK				IAmb	IAmb	12 03 53.4	
	comp=Z,2.6nm,0.8s						
KURBB	**Kurchatov Arra**	**53.50**	**316**	P	**P**	**12 03 53.4**	**-0.1**
	comp=Z,1.8nm,0.7s,baz=27,slow=7.6,SNR=5.4						
MK31	**Makanchi Array**	**55.96**	**312**	P	**P**	**12 04 10.0**	**-1.4**
MKAR	**Makanchi Array**	**55.96**	**312**	P	**P**	**12 04 10.9**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=43,slow=7.3,SNR=5.6						
WMQ	**Urumqi**	**57.05**	**306**	*e*P	**P**	**12 04 22.3**	**+3.0**
AKTO	**Aktyubinsk**	**58.30**	**331**	P	**P**	**12 04 28.1**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=354,slow=4.3,SNR=5.4						
AKASG	**Malin Array Be**	**61.54**	**352**	P	**P**	**12 04 50.0**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=7.4,slow=6.4,SNR=11						
AAK	**Ala-Archa**	**61.94**	**316**	P	**P**	**12 04 53.8**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=219,slow=3.4,SNR=4.2						
AAK	**Ala-Archa**	**61.94**	**316**	P	**P**	**12 04 52.8**	**-0.4**
AAK				IAmb	IAmb	12 04 57.3	
	comp=Z,2.2nm,1.0s						
KK31	**Karatay Array**	**62.54**	**319**	P	**P**	**12 04 56.6**	**-0.4**
KK31				IAmb	IAmb	12 04 57.3	
	comp=Z,1.3nm,0.5s						
GERES	**GERESS Array B**	**63.67**	**3**	P	**P**	**12 05 05.4**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=20,slow=3.1,SNR=4.4						
KSH	**Kashi**	**64.45**	**313**	P	**P**	**12 05 13.1**	**+3.3**
KSH				pP	sP	12 05 16.8	+2.6
KSH				sP	pP	12 05 19.1	+6.1
KSH				pmax	pmax		
	comp=Z,69nm,1.7s						
KSH				pmax	pmax		
	comp=Z,52nm,4.2s						
ESDC	**Sonseca Array**	**71.63**	**17**	P	**P**	**12 05 55.3**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=353,slow=6.7,SNR=5.7						
CMAR	**Chiang Mai Arr**	**76.35**	**285**	P	**P**	**12 06 22.6**	**0.0**
	comp=Z,0.5nm,0.3s,baz=6.0,slow=6.0,SNR=4.7						
USHA	**Ushuaia**	**140.28**	**115**	PKP	**PKiKP**	**12 14 03.4**	**0.0**
	comp=Z,6.8nm,0.5s,baz=16,slow=3.8,SNR=2.0						
VNDA	**Vanda**	**146.67**	**193**	PKPbc	**PKPab**	**12 14 13.9**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=326,slow=5.5,SNR=4.8						

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*IDC **03** 11:57:18.0±1.6, 5°.61S×128°.53E, h317^{km}±19^{km}, mb3.0/1, mb1 3.4/6, mb1mx2.9/52, mbtmp4.1/6, Error ellipse: s-maj=24.7km s-min=13.8km az=86.0*

ISC 03 11:57:17.8±0.9**, 5°.34S**±0°.08×**128°.4E**±0°.1**, h337^{km}, n6, σ3^{s}91**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.29**	**33**	P	**Pn**	**11 58 39.9**	**-0.2**
	0.7nm,0.3s,baz=31,slow=23,SNR=6.6						
SIJI				S	**S**	**11 59 43.6**	**-3.0**
	3.1nm,0.3s,baz=294,slow=22,SNR=8.1						
BATI	**Baumata**	**6.74**	**224**	P	**Pn**	**11 58 57.0**	**+0.1**
	13nm,0.3s,baz=74,slow=2.2,SNR=8.1						
BATI				S	**S**	**12 00 13.1**	**-4.0**
	6.3nm,0.3s,baz=90,slow=12,SNR=2.7						
FITZ	**Fitzroy Crossi**	**12.96**	**192**	P	**P**	**12 00 08.3**	**-2.4**
	0.3nm,0.3s,baz=6.4,slow=11,SNR=9.4						
FITZ				S	**S**	**12 02 40.1**	**+6.4**
	0.2nm,0.3s,baz=353,slow=11,SNR=6.1						
WRA	**Warramunga Arr**	**15.62**	**159**	P	**P**	**12 00 38.8**	**-1.1**
	0.9nm,0.3s,baz=335,slow=12,SNR=66						
WRA				S	**S**	**12 03 31.6**	**+4.0**
	0.1nm,0.3s,baz=339,slow=19,SNR=2.5						
ASAR	**Alice Springs**	**18.98**	**164**	P	**P**	**12 01 15.4**	**-0.4**
	0.9nm,0.3s,baz=343,slow=11,SNR=82						
ASAR				S	**S**	**12 04 29.4**	**-4.0**
	0.1nm,0.3s,baz=344,slow=20,SNR=6.0						
MKAR	**Makanchi Array**	**65.98**	**327**	P	**P**	**12 07 32.9**	**+4.1**
	0.4nm,0.5s,baz=118,slow=7.2,SNR=5.2						

IDC 03 12:02:14.1±10.0**, 6°.98S**×**146°.52E, h200^{km}**±107^{km}**, mb3.2**/4**, mb1 3.3**/6**, mb1mx3.0**/43**, mbtmp3.7**/6**, Error ellipse: s-maj=66.6km s-min=39.8km az=156.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**13.03**	**181**	P	P	12 05 13.8	-1.5
	0.2nm,0.3s,baz=8.1,slow=14,SNR=1.7						
WRA	**Warramunga Arr**	**17.48**	**221**	P	P	12 06 03.6	-0.8
	0.5nm,0.3s,baz=48,slow=11,SNR=15						
ASAR	**Alice Springs**	**20.54**	**215**	P	P	12 06 37.3	-0.1
	1.1nm,0.3s,baz=53,slow=8.3,SNR=23						
FITZ	**Fitzroy Crossi**	**23.15**	**240**	P	P	12 07 02.5	-0.5
	2.3nm,0.4s,baz=59,slow=11,SNR=8.3						
MKAR	**Makanchi Array**	**77.95**	**321**	P	P	12 13 50.5	+0.4
	0.4nm,0.4s,baz=121,slow=7.2,SNR=5.8						
ILAR	**Eielson Array**	**86.57**	**23**	P	P	12 14 33.5	-0.9
	0.2nm,0.5s,baz=250,slow=5.4,SNR=2.4						
TORD	**Torodi Ar. Bea**	**144.86**	**283**	PKP	PKPdf	12 21 29.2	+0.9
	0.8nm,0.7s,baz=68,slow=3.6,SNR=5.3						

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*IDC **03** 12:06:24.5±5.6, 68°.41N×163°.74W, h0^{km}, mb3.4/4, mb1 3.8/6, mb1mx3.3/61, mbtmp3.5/6, ML3.6/3, MS3.3/1, Ms1 3.3/1, ms1mx2.6/32, Error ellipse: s-maj=86.2km s-min=41.9km az=109.0*

*AEIC **03** 12:06:30.6±1.4, 67°.72N±0°.07×162°.4W±0°.2, h24^{km}±8^{km}, ML3.1/35, Error ellipse: s-maj=12.3km s-min=8.7km az=131.0*

*NEIC **03** 12:06:31.5±1.7, 67°.72N±0°.08×162°.6W±0°.2, h32^{km}±8^{km}, Error ellipse: s-maj=13.0km s-min=6.5km az=149.0*

ISC 03 12:06:30.4±0.8**, 67°.71N**±0°.05×**162°.24W**±0°.06**, h10^{km}, n52, σ1^{s}46**/62**, mb3.2**/3**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.43**	**324**		**Pg**	**12 06 38.8**	**+0.1**
RDOG					**Sb**	**12 06 45.3**	**-1.1**
ANM	**Nome**	**3.41**	**203**		**Pn**	**12 07 22.8**	**-0.7**
ANM					**Sn**	**12 08 01.4**	**-2.5**
IM03		**3.78**	**113**		**Pn**	**12 07 28.6**	**+0.1**
IM03					**Sn**	**12 08 12.7**	**-0.3**
PS05	**TAPS Pump Stn5**	**4.58**	**96**		**Pn**	**12 07 39.6**	**-0.1**
COLD	**Coldfoot**	**4.66**	**90**		**Pn**	**12 07 42.8**	**+2.1**
COLD	**Coldfoot**	**4.66**	**90**		**Sn**	**12 08 34.9**	**+0.1**
TOLK	**Toolik Lake Re**	**4.82**	**73**	P	**Pn**	**12 07 44.9**	**+2.0**
	baz=265						
TOLK				S	**Sn**	**12 08 38.1**	**-0.6**
	baz=265						
TOLK	**Toolik Lake Re**	**4.82**	**73**		**Pn**	**12 07 44.5**	**+1.6**
TOLK					**Sn**	**12 08 40.0**	**+1.3**
MLY	**Manley**	**5.35**	**115**		**Pn**	**12 07 50.0**	**-0.3**
MLY				Sn	**Sn**	**12 08 52.7**	**+0.8**
TTA	**Tatalina**	**5.46**	**149**		**Pn**	**12 07 51.9**	**0.0**
TTA					**Sn**	**12 08 52.8**	**-1.9**
TT01	**Tatalina**	**5.48**	**149**		**Pn**	**12 07 52.1**	**+0.1**
PS01	**TAPS Pump Stn**	**5.53**	**56**		**Pn**	**12 07 53.2**	**+0.7**
BPAW	**Bear Paw Mtn.**	**5.86**	**123**		**Pn**	**12 07 57.8**	**+0.6**
KTH	**Kantishna Hill**	**6.27**	**126**		**Pn**	**12 08 03.1**	**+0.3**
KTH				Sn	**Sn**	**12 09 12.6**	**-1.9**
MDM	**Murphy Dome**	**6.28**	**110**		**Pn**	**12 08 04.1**	**+1.2**
BWN	**Browne**	**6.31**	**118**		**Pn**	**12 08 04.5**	**+1.1**
PPLA	**Purkeypile**	**6.41**	**134**		**Pn**	**12 08 05.3**	**+0.5**
TCOL	**CIGO, UAF Yank**	**6.46**	**109**	P	**Pn**	**12 08 06.6**	**+1.2**
	baz=302						
TCOL				S	**Sn**	**12 09 18.8**	**-0.1**
	baz=302						
TCOL	**CIGO, UAF Yank**	**6.46**	**109**		**Pn**	**12 08 06.5**	**+1.2**
COLA	**College**	**6.46**	**109**		**Pn**	**12 08 06.0**	**+0.6**
POKR	**Poker Plat Res**	**6.48**	**107**	P	**Pn**	**12 08 06.9**	**+1.1**
	baz=300						
TRF	**Thorofare Moun**	**6.54**	**125**		**Pn**	**12 08 06.4**	**-0.3**
CCB	**Clear Creek Bu**	**6.60**	**111**		**Pn**	**12 08 07.7**	**+0.4**
WRH	**Wood River Hil**	**6.60**	**113**		**Pn**	**12 08 07.1**	**-0.3**
FYU	**Fort Yukon**	**6.72**	**92**	Pn	**Pn**	**12 08 08.8**	**-0.2**
BM03	**Burnt Mountain**	**6.75**	**84**		**Pn**	**12 08 09.8**	**+0.4**
MCK	**McKinley**	**6.78**	**120**		**Pn**	**12 08 08.9**	**-0.9**
IL31		**6.86**	**108**		**Pn**	**12 08 11.2**	**+0.3**
ILAR	**Eielson Array**	**6.86**	**108**	Pn	**Pn**	**12 08 11.4**	**+0.5**
	5.1nm,0.3s,baz=303,slow=14,SNR=277						
ILAR				Sn	**Sn**	**12 09 26.8**	**-2.2**
	0.5nm,0.3s,baz=298,slow=24,SNR=3.0						
RND	**Reindeer**	**7.03**	**122**		**Pn**	**12 08 13.4**	**+0.1**
HDA	**Harding Lake**	**7.04**	**111**	P	**Pn**	**12 08 13.8**	**+0.4**
	baz=305						
HDA	**Harding Lake**	**7.04**	**111**		**Pn**	**12 08 13.7**	**+0.4**
WAT2	**Susitna Watana**	**7.43**	**123**		**Pn**	**12 08 19.9**	**+1.1**
SPWE	**Spurr West**	**7.69**	**143**		**Pn**	**12 08 23.7**	**+1.3**
DHY	**Denali Highway**	**7.74**	**120**		**Pn**	**12 08 23.9**	**+0.8**
RIDG	**Independent Ri**	**8.19**	**111**	Pn	**Pn**	**12 08 29.2**	**+0.1**
GHO	**Glory Hole Cre**	**8.23**	**130**	Pn	**Pn**	**12 08 30.8**	**+1.0**
SML	**Sawmill**	**8.38**	**128**	Pn	**Pn**	**12 08 32.1**	**+0.4**
SCM	**Sheep Creek Mo**	**8.66**	**126**	Pn	**Pn**	**12 08 35.8**	**+0.2**
BC03		**9.69**	**109**		**Pn**	**12 08 50.3**	**+0.7**
EPYK	**Eagle Plains**	**10.03**	**86**	P	**Pn**	**12 08 54.8**	**+0.5**
	baz=289						
EPYK	**Eagle Plains**	**10.03**	**86**		**Pn**	**12 08 54.4**	**+0.1**
INK	**Inuvik**	**10.73**	**74**	Pn	**Pn**	**12 09 03.0**	**-0.9**
	0.3nm,0.3s,baz=286,slow=15,SNR=18						
INK				Sn	**Sn**	**12 10 57.9**	**-6.0**
	0.5nm,0.3s,baz=152,slow=27,SNR=12						
KDAK	**Kodiak Island**	**10.88**	**152**	Pn	**Pn**	**12 09 09.4**	**+3.4**
	0.0nm,0.3s,baz=347,slow=18,SNR=2.4						
A36M	**Sachs Harbour**	**13.27**	**55**	P	**Pn**	**12 09 37.1**	**-1.4**
	baz=270						
C36M	**Paulatuk**	**13.92**	**66**	Pn	**Pn**	**12 09 43.5**	**-3.8**
DLBC	**Dease Lake**	**17.07**	**107**	Pn	**Pn**	**12 10 27.7**	**-1.2**
YKA	**Yellowknife Ar**	**20.27**	**82**	P	**P**	**12 11 05.9**	**+0.3**
	0.6nm,0.5s,baz=304,slow=10,SNR=9.6						
PDAR	**Pinedale Array**	**37.28**	**105**	P	**P**	**12 13 44.2**	**+1.9**
	0.2nm,0.5s,baz=338,slow=6.9,SNR=2.3						
NVAR	**Mina Array Bea**	**38.01**	**118**	P	**P**	**12 13 50.7**	**+2.2**
	0.1nm,0.3s,baz=335,slow=6.3,SNR=2.7						
FINES	**FINESS Array B**	**51.00**	**355**	LR	LR	12 37 35.6	
	comp=Z,31nm,18.7s,baz=346,slow=37						
TXAR	**Lajitas Array**	**51.38**	**107**	P	**P**	**12 15 36.1**	**+1.1**
	0.6nm,0.6s,baz=330,slow=5.8,SNR=11						

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*THE **03** 12:17:30.5, 38°.26N×20°.41E, h11^{km}, ML2.5/9, Error ellipse: s-maj=1.0km s-min=0.4km az=233.0*

*ATH **03** 12:17:30.2, 38°.25N×20°.39E, h13^{km}±1^{km}, ML2.6/12, Error ellipse: s-maj=1.9km s-min=1.0km az=249.0*

ISC 03 12:17:30.0±0.8**, 38°.25N**±0°.03×**20°.39E**±0°.04**, h14^{km}**±4^{km}**, n43, σ0^{s}52**/69**, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AGT1	**Agia Thekli**	**0.01**	**328**	P	**Pg**	**12 17 32.2**	**-0.2**
AGT1				S	**Sg**	**12 17 33.4**	**-0.7**
KEF4	**Livadi, Kephal**	**0.03**	**68**	P	**Pg**	**12 17 32.2**	**-0.3**
KEF4				S	**Sg**	**12 17 33.6**	**-0.6**
KEF3	**Kipouria, Keph**	**0.05**	**216**	P	**Pg**	**12 17 32.8**	**+0.2**
KEF3				S	**Sg**	**12 17 34.4**	**0.0**
LXRA	**Lixouri, Kepha**	**0.06**	**140**	P	**Pg**	**12 17 32.8**	**+0.1**
LXRA				S	**Sg**	**12 17 34.5**	**-0.1**
CHV1	**Chavriata, Kef**	**0.06**	**184**	P	**Pg**	**12 17 32.9**	**+0.2**
CHV1				S	**Sg**	**12 17 34.8**	**+0.3**
ARGA	**Argostoli. Kep**	**0.10**	**134**	P	**Pg**	**12 17 33.2**	**+0.1**
ARGA				S	**Sg**	**12 17 35.2**	**0.0**
ARG2	**Argostoli**	**0.10**	**131**	P	**Pg**	**12 17 33.3**	**+0.2**
ARG2				S	**Sg**	**12 17 35.2**	**-0.1**
KEF2	**Argostoli. Kep**	**0.11**	**136**	P	**Pg**	**12 17 33.5**	**+0.2**
KEF2				S	**Sg**	**12 17 35.4**	**-0.1**
VLS	**Valsamata**	**0.17**	**113**	P	**Pg**	**12 17 34.2**	**0.0**
VLS				S	**Sg**	**12 17 37.0**	**0.0**
VLS	**Valsamata**	**0.17**	**113**	P	**Pg**	**12 17 34.2**	**0.0**
VLS				S	**Sg**	**12 17 37.0**	**0.0**
VLS				AML	AML	12 17 37.1	
	comp=N,28977µm,0.2s						
VLS				AML	AML	12 17 37.1	
	comp=E,21701µm,0.1s						
FSK	**Fiskardo**	**0.25**	**33**	P	**Pg**	**12 17 35.5**	**0.0**
FSK	**Fiskardo**	**0.25**	**33**	P	**Pg**	**12 17 35.5**	**0.0**
FSK				S	**Sg**	**12 17 39.2**	**+0.1**
FSK				AML	AML	12 17 40.0	
	comp=N,3793µm,0.6s						
FSK				AML	AML	12 17 40.1	
	comp=E,2703µm,0.3s						
KFL	**Anninata**	**0.34**	**113**	P	**Pg**	**12 17 37.2**	**+0.2**
KFL				S	**Sg**	**12 17 42.6**	**+0.8**
	comp=E,4µm,0.3s						
KFL	**Anninata**	**0.34**	**113**	P	**Pg**	**12 17 37.2**	**+0.2**
KFL				S	**Sg**	**12 17 42.4**	**+0.6**
KFL				AML	AML	12 17 43.2	
	comp=E,9435µm,0.4s						
KFL				AML	AML	12 17 45.9	
	comp=N,4918µm,0.2s						
EVGI	**Lefkada island**	**0.43**	**29**	P	**Pg**	**12 17 38.7**	**+0.1**
EVGI				S	**Sg**	**12 17 44.9**	**+0.5**
EVGI	**Lefkada island**	**0.43**	**29**	P	**Pg**	**12 17 38.7**	**+0.1**
EVGI				S	**Sb**	**12 17 45.3**	**-0.5**
MGNA	**Meganis**	**0.52**	**38**	P	**Pg**	**12 17 40.2**	**0.0**
LKD2	**Lefkada island**	**0.58**	**21**	P	**Pg**	**12 17 41.0**	**-0.5**
LKD2	**Lefkada island**	**0.58**	**21**	P	**Pg**	**12 17 41.2**	**-0.3**
LKD2				AML	AML	12 17 57.5	
	comp=E,638µm,0.5s						
LKD2				AML	AML	12 17 59.0	
	comp=N,589µm,0.7s						
VTN	**Vitineika**	**0.71**	**117**	P	**Pg**	**12 17 43.2**	**-0.7**
RLS	**Riolos of Patr**	**0.87**	**102**	P	**Pg**	**12 17 46.1**	**-0.7**
RLS				S	**Sb**	**12 17 58.7**	**+0.3**
	comp=N,258nm,0.4s						
RLS	**Riolos of Patr**	**0.87**	**102**	P	**Pg**	**12 17 46.2**	**-0.7**
RLS				AML	AML	12 18 05.8	
	comp=N,605µm,0.4s						
RLS				AML	AML	12 18 08.3	
	comp=E,416µm,0.4s						
DRO	**Drossia**	**1.08**	**105**	P	**Pb**	**12 17 50.6**	**0.0**
DRO				S	**Sn**	**12 18 05.7**	**0.0**
DRO	**Drossia**	**1.08**	**105**	P	**Pb**	**12 17 50.5**	**-0.1**
DRO				AML	AML	12 18 14.8	
	comp=E,1658µm,0.7s						
DRO				AML	AML	12 18 14.8	
	comp=N,864µm,0.5s						
EFP	**Efpalio**	**1.21**	**81**	P	**Pn**	**12 17 51.8**	**-0.7**
EFP				S	**Sg**	**12 18 09.2**	**+0.2**
	comp=N,248nm,0.4s						
LAKA	**Lakka**	**1.25**	**90**	P	**Pn**	**12 17 53.0**	**-0.2**
LAKA				S	**Sg**	**12 18 10.6**	**+0.1**
	comp=N,120nm,0.5s						
LAKA	**Lakka**	**1.25**	**90**	P	**Pn**	**12 17 53.2**	**0.0**
LAKA				AML	AML	12 18 17.3	
	comp=E,276µm,0.5s						
LAKA				AML	AML	12 18 18.8	
	comp=N,235µm,0.6s						
IGT	**Igoumenitsa**	**1.28**	**358**	P	**Pb**	**12 17 54.3**	**+0.3**
IGT				S	**Sn**	**12 18 11.0**	**+0.3**
	comp=N,90nm,0.5s						
SERG	**Sergoula**	**1.32**	**82**	P	**Pn**	**12 17 54.3**	**+0.2**
SERG				S	**Sn**	**12 18 12.1**	**+0.5**
	comp=N,245nm,0.4s						
SERG	**Sergoula**	**1.32**	**82**	P	**Pb**	**12 17 54.7**	**0.0**
SERG				AML	AML	12 18 20.1	
	comp=N,486µm,0.5s						
SERG				AML	AML	12 18 20.5	
	comp=E,490µm,0.3s						
TRIZ	**Trizonia**	**1.33**	**84**	P	**Pn**	**12 17 54.1**	**-0.1**
TRIZ				S	**Sg**	**12 18 12.5**	**-0.4**
	comp=E,215nm,0.5s						
TRIZ	**Trizonia**	**1.33**	**84**	P	**Pn**	**12 17 54.5**	**+0.3**
ALIK	**Aliki, Aigiali**	**1.36**	**89**	P	**Pn**	**12 17 54.2**	**-0.3**
ALIK				S	**Sb**	**12 18 13.0**	**+0.6**
KALE	**Kalithea**	**1.39**	**83**	P	**Pn**	**12 17 55.1**	**+0.1**
KALE				S	**Sb**	**12 18 13.7**	**+0.4**
	comp=E,188nm,0.5s						
KALE	**Kalithea**	**1.39**	**83**	P	**Pn**	**12 17 55.3**	**+0.2**
KALE				AML	AML	12 18 22.0	
	comp=N,391µm,0.6s						
KALE				AML	AML	12 18 24.0	
	comp=E,352µm,0.8s						
KLV	**Kalavryta, Ach**	**1.40**	**98**	P	**Pn**	**12 17 54.8**	**-0.5**
KLV				S	**Sn**	**12 18 13.5**	**-0.1**
	comp=E,100nm,0.6s						
KLV	**Kalavryta, Ach**	**1.40**	**98**	P	**Pb**	**12 17 56.0**	**0.0**
KLV				AML	AML	12 18 23.1	
	comp=N,217µm,0.6s						
KLV				AML	AML	12 18 23.7	
	comp=E,191µm,0.7s						
MAKR	**Makrakomi, Fth**	**1.57**	**60**	P	**Pg**	**12 18 00.5**	**+0.4**
MAKR				AML	AML	12 18 27.3	
	comp=N,278µm,1.2s						
MAKR				AML	AML	12 18 33.4	
	comp=E,320µm,0.3s						
AGG	**Agios Georgios**	**1.71**	**62**	P	**Pg**	**12 18 02.6**	**-0.2**
AGG				AML	AML	12 18 33.3	
	comp=E,161µm,0.8s						
AGG				AML	AML	12 18 33.9	
	comp=N,212µm,0.6s						
PYL	**PYLOS**	**1.73**	**141**	P	**Pb**	**12 18 01.4**	**-0.1**
ZIRJ	**Zirje**	**6.49**	**328**	Sn	**Sn**	**12 20 16.6**	**-2.2**
KIJV	**Kijevo**	**6.49**	**334**	*i* Pn	**Pn**	**12 19 06.7**	**+1.6**
KIJV				Sn	**Sn**	**12 20 17.6**	**-1.4**
MORI	**Morici**	**6.63**	**329**	*e*Pn	**Pn**	**12 19 08.0**	**+0.9**

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*SOME **03** 12:19:29.8, 40°.87N×70°.18E, h10^{km}*

*NNC **03** 12:19:30.8±2.0, 40°.91N×70°.16E, h0^{km}, mb3.1, mpv2.9, Error ellipse: s-maj=14.5km s-min=7.4km az=29.0*

*KRNET **03** 12:19:31.6±0.1, 41°.13N×69°.94E, mb2.6*

ISC 03 12:19:32.3±1.4**, 41°.03N**±0°.06×**69°.85E**±0°.07**, h10^{km}, n16, σ1^{s}51**/27**, 12C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**1.12**	**7**	*e*P	**Pn**	**12 19 54.5**	**+0.3**
	3.5nm,0.3s						
IUG				*e*S	**Sn**	**12 20 11.8**	**+2.0**
	63nm,0.4s						
IUG	**Iuzhnay**	**1.12**	**7**	P	**Pn**	**12 19 54.5**	**+0.3**
	3.5nm,0.3s						
IUG				S	**Sn**	**12 20 11.8**	**+2.0**
	34nm,0.3s						
BTK	**Batken**	**1.22**	**143**	⇑*i*P	**Pg**	**12 19 56.1**	**+0.4**
	baz=48						
BTK				⇑*i*S	**Sn**	**12 20 13.3**	**+1.2**
	baz=48						
ARK	**Arkit**	**1.76**	**63**	⇑*i*P	**Pn**	**12 20 02.7**	**-0.3**
	baz=66						
ARK				⇑*i*S	**Sb**	**12 20 26.0**	**-1.1**
	baz=66						
BRLS	**Borolday**	**2.00**	**360**	*e*P	**Pn**	**12 20 05.8**	**-0.4**
	13nm,0.5s						
BRLS				*e*S	**Sn**	**12 20 31.3**	**0.0**
	2.3nm,0.5s						
BRLS	**Borolday**	**2.00**	**360**	Pg	**Pn**	**12 20 05.8**	**-0.4**
	13nm,0.5s						
BRLS				Lg	Lg	12 20 31.3	
	2.3nm,0.5s						
KK31	**Karatay Array**	**2.13**	**13**	⇑Pg	**Pb**	**12 20 10.5**	**-0.5**
	2.2nm,0.5s,baz=190,slow=15,SNR=29						
KK31				⇑Lg	Lg	12 20 39.8	
	1.7nm,0.3s,baz=188,slow=27,SNR=5.8						
ARSB	**Arslanbob**	**2.38**	**82**	⇑*i*P	**Pb**	**12 20 12.9**	**-2.5**
	baz=84						
ARSB				⇑*i*S	**Sb**	**12 20 43.7**	**-1.1**
	baz=84						
MRKS	**Merke**	**3.05**	**55**	*e*P	**Pb**	**12 20 24.8**	**-1.9**
	2.0nm,0.3s						
MRKS				*e*S	**Sb**	**12 21 04.4**	**+0.4**
	4.6nm,0.5s						
MRKS	**Merke**	**3.05**	**55**	Pg	**Pb**	**12 20 24.8**	**-1.9**
	3.6nm,0.5s						
MRKS				Lg	Lg	12 21 03.6	
	4.6nm,0.5s						
AML	**Almayashu**	**3.08**	**68**	⇓*e*P	**Pn**	**12 20 23.0**	**+1.5**
	baz=69						
AML				⇓*i*S	**Sn**	**12 21 00.4**	**+1.8**
	baz=69						
EKS2	**Erkin-Say**	**3.35**	**60**	⇓*i*P	**Pn**	**12 20 26.3**	**+1.4**
	baz=61						
EKS2				⇓*i*S	**Sn**	**12 21 05.9**	**+1.0**
	baz=61						
UCH	**Uchtor**	**3.69**	**70**	⇑*e*P	**Pn**	**12 20 31.2**	**+1.3**
	baz=71						
UCH				⇑*i*S	**Sn**	**12 21 14.7**	**+1.0**
	baz=71						
AAK	**Ala-Archa**	**3.82**	**64**	⇑Pg	**Pb**	**12 20 36.1**	**-3.8**
	3.3nm,1.1s						
AAK				⇑Lg	Lg	12 21 25.5	
	4.2nm,0.8s						
KZA	**Kyzart**	**4.18**	**74**	⇓*e*P	**Pn**	**12 20 37.8**	**+1.2**
	baz=75						
KZA				⇓*i*S	**Sn**	**12 21 26.8**	**+1.1**
	baz=75						
TKM2	**Tokmak 2**	**4.68**	**64**	⇓Pg	**Pb**	**12 20 55.3**	**+0.7**
	1.8nm,0.8s						
TKM2				⇓Lg	Lg	12 21 53.1	
	4.6nm,0.8s						

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*DJA **03** 12:21:24.4±0.8, 1°S±5°×13°9E±°, h10^{km}±5^{km}, M4.8/9, mB5.9/3, mb4.5/5, MLv4.8/9, Mw(mB)5.5/3*

*IDC **03** 12:21:27.8±0.6, 1°.90S×138°.79E, h0^{km}, mb4.0/12, mb1 4.4/16, mb1mx4.1/39, mbtmp4.3/16, ML4.7/5, MS3.6/12, Ms1 3.6/12, ms1mx3.3/44, Error ellipse: s-maj=18.8km s-min=13.9km az=65.0*

*NEIC **03** 12:21:33.6±1.2, 2°.01S±0°.08×138°.69E±0°.04, h36^{km}±6^{km}, mb4.6/44, Error ellipse: s-maj=11.5km s-min=4.3km az=159.0*

ISC 03 12:21:32.5±0.8**, 2°.06S**±0°.05×**138°.70E**±0°.04**, h26^{km}**±5^{km}**, n97, σ1^{s}62**/95**, mb4.5**/31**, MS3.6**/9**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.07**	**10**	P	**Pb**	**12 21 37.1**	**0.0**
SMPI				S	**Sb**	**12 21 39.5**	**-0.7**
GENI	**Genyem**	**1.56**	**110**	P	**Pn**	**12 21 56.4**	**-2.2**
GENI				S	**Sb**	**12 22 21.3**	**+1.2**
JAY	**Jayapura**	**2.06**	**103**	Pn	**Pn**	**12 22 03.0**	**-2.5**
	177nm,0.3s,baz=221,slow=7.6,SNR=143						
JAY				Sn	**Sn**	**12 22 29.1**	**-1.1**
	131nm,0.3s,baz=322,slow=23,SNR=7.6						
JAY	**Jayapura**	**2.06**	**103**	P	**Pn**	**12 22 01.9**	**-3.5**
JAY				S	**Sn**	**12 22 31.0**	**+0.7**
SRPI	**Serui, Papua**	**2.46**	**274**	P	Pn	12 22 05.6	-5.4
SRPI				S	**Sn**	**12 22 37.7**	**-2.6**
BAKI	**Biak**	**2.73**	**288**	P	Pn	12 22 09.6	-5.1
RKPI	**Ransiki, Papua**	**4.55**	**277**	P	Pn	12 22 32.6	-7.1
RKPI				S	**Pb**	**12 22 51.5**	**-0.2**
FAKI	**Fak Fak**	**6.50**	**262**	P	**Pn**	**12 23 02.2**	**-4.3**
FAKI	**Fak Fak**	**6.50**	**262**		**Pn**	**12 23 08.0**	**+1.5**
FAKI				Sn	**Sn**	**12 24 19.5**	**-0.3**
MMPI	**Merauke**	**6.58**	**165**	P	**Pn**	**12 23 11.7**	**+4.1**
	2.1nm12µm448nm,0.8s						
SIJI	**Sorong**	**7.52**	**279**	Pn	**Pn**	**12 23 24.2**	**+3.6**
	4.7nm,0.3s,baz=173,slow=17,SNR=9.8						
SIJI				LR	LR	12 26 31.9	
	comp=Z,854nm,18.3s,baz=44,slow=40						
BNDI	**Bandanaira**	**9.11**	**254**	P	**Pn**	**12 23 39.5**	**-2.9**
	24µm57nm,0.7s						
SAUI	**Saumlaki**	**9.43**	**231**	Pn	**Pn**	**12 23 46.6**	**-0.1**
PMG	**Port Moresby**	**11.14**	**131**		**Pn**	**12 24 10.2**	**+0.1**
TNTI	**Ternate**	**11.67**	**284**	Pn	**Pn**	**12 24 16.7**	**-0.8**
COEN	**Coen**	**12.62**	**160**		**Pn**	**12 24 32.8**	**+2.3**
MTN	**Manton Dam**	**13.07**	**215**		**Pn**	**12 24 37.0**	**+0.4**
KRVT	**Keravat (AS076**	**13.49**	**100**	Pn	**Pn**	**12 24 40.2**	**-2.2**
	2.8nm,0.3s,baz=326,slow=7.3,SNR=1.9						
KRVT				LR	LR	12 29 09.7	
	comp=Z,239nm,20.2s,baz=284,slow=34						
LUWI	**Luwuk**	**15.95**	**273**	Pn	**Pn**	**12 25 16.0**	**+0.6**
SOEI	**Soe**	**16.25**	**241**		**Pn**	**12 25 19.4**	**+0.1**
KNRA	**Kununurra**	**16.70**	**215**	P	**P**	**12 25 26.1**	**-0.9**
KNRA				IAmb	IAmb	12 25 29.3	
	comp=Z,58nm,0.9s						
BATI	**Baumata**	**16.99**	**241**	P	**Pn**	**12 25 28.8**	**+0.3**
	comp=Z,4.2nm,0.3s,baz=90,slow=16,SNR=6.4						
MMRI	**Maumere**	**17.63**	**248**	P	**P**	**12 25 37.2**	**-0.2**
MMRI				IAmb	IAmb	12 25 48.4	
	comp=Z,47nm,1.1s						
WB0	**Warramunga Arr**	**18.09**	**193**	P	**Pn**	**12 25 42.5**	**+0.3**
WB0				IAmb	IAmb	12 25 46.7	
	comp=Z,31nm,0.8s						
WR0	**Warramunga Arr**	**18.25**	**193**	P	**Pn**	**12 25 44.7**	**+0.7**
WR0				IAmb	IAmb	12 25 48.4	
	comp=Z,38nm,0.7s						
WRAB	**Tennant Creek**	**18.26**	**193**	P	**Pn**	**12 25 44.6**	**+0.4**
WRAB				IAmb	IAmb	12 25 50.1	
	comp=Z,27nm,0.8s						
WB2	**Warramunga Arr**	**18.27**	**193**	P	**Pn**	**12 25 44.8**	**+0.5**
WB2				IAmb	IAmb	12 25 48.7	
	comp=Z,31nm,0.7s						
WRA	**Warramunga Arr**	**18.27**	**193**	P	**Pn**	**12 25 45.2**	**+0.8**
	comp=Z,2.8nm,0.3s,baz=17,slow=11,SNR=58						
WRA				S	**Sn**	**12 29 02.6**	**-5.2**
	comp=Z,0.6nm,0.3s,baz=10,slow=23,SNR=5.6						
KAPI	**Kappang**	**19.13**	**261**	LR	LR	12 34 43.4	
	comp=Z,81nm,19.3s,baz=112,slow=41						
KAPI	**Kappang**	**19.13**	**261**		**P**	**12 25 54.1**	**+0.2**
KAPI				IAmb	IAmb	12 26 04.2	
	comp=Z,39nm,1.4s						
CTA	**Charters Tower**	**19.38**	**158**	P	**Pn**	**12 25 57.6**	**-0.1**
	comp=Z,1.2nm,0.3s,baz=335,slow=11,SNR=16						
CTAO	**Charters Tower**	**19.38**	**158**	P	**Pn**	**12 25 57.9**	**+0.1**

FITZ	Fitzroy Crossi	20.45	218	P	Pn	12 26 09.4	-1.0
	comp=Z,6.8nm,0.7s,baz=33,slow=13,SNR=17						
FITZ				S	S	12 29 52.3	-3.7
	comp=Z,4.0nm,0.4s,baz=154,slow=12,SNR=4.5						
FITZ				LR	LR	12 35 14.9	
	comp=Z,268nm,21.5s,baz=34,slow=40						
FITZ	Fitzroy Crossi	20.45	218	P	P	12 26 08.9	+0.7
FITZ				IAmb	IAmb	12 26 13.4	
	comp=Z,30nm,1.4s						
AS31	Alice Springs	21.97	192	P	P	12 26 25.4	+0.8
ASAR	Alice Springs	21.97	192	P	P	12 26 25.9	+1.3
	comp=Z,16nm,0.7s,baz=23,slow=9.7,SNR=158						
ASAR				S	S	12 30 28.2	+2.2
	comp=Z,3.8nm,1.0s,baz=16,slow=24,SNR=4.7						
ASAR				LR	LR	12 35 49.0	
	comp=Z,248nm,20.5s,baz=6.5,slow=39						
HNR	Honiara	22.36	110	P	P	12 26 29.1	+0.3
KKM	Kota Kinabalu	23.85	290	P	P	12 26 43.6	-0.4
EIDS	Eidsvold	26.07	154	P	P	12 27 05.5	+1.4
PSA00	Pilbara Seismi	26.70	222	P	P	12 27 10.2	+0.4
PSA00				IAmb	IAmb	12 27 28.2	
	comp=Z,20nm,1.1s						
SBUM	Sibu	26.85	279	P	P	12 27 10.8	-0.4
STKA	Stephens Creek	29.78	175	P	P	12 27 37.7	+0.5
	comp=Z,4.0nm,0.8s,baz=332,slow=10.0,SNR=3.9						
STKA				LR	LR	12 40 46.2	
	comp=Z,158nm,21.0s,baz=356,slow=39						
STKA	Stephens Creek	29.78	175	P	P	12 27 37.5	+0.3
FORT	Forrest	30.29	198	P	P	12 27 42.3	+0.7
BBOO	Buckleboo	30.69	184	P	P	12 27 45.5	+0.3
ARMA	Armidale	30.75	158	P	P	12 27 47.6	+1.7
ARMA				IAmb	IAmb	12 27 58.3	
	comp=Z,23nm,1.4s						
MORW	Morawa	34.45	217	P	P	12 28 18.5	+0.3
JHJ	Hachijo jima 2	35.01	2	LR	LR	12 40 57.5	
	comp=Z,64nm,19.9s,baz=54,slow=34						
NWAO	Narrogin (SRO)	36.72	211	LR	LR	12 45 07.0	
	comp=Z,283nm,19.1s,baz=18,slow=38						
NWAO	Narrogin (SRO)	36.72	211	P	P	12 28 37.3	-0.4
IPM	Ipoh	38.20	280	P	P	12 28 50.2	-0.3
IPM				IAmb	IAmb	12 29 05.3	
	comp=Z,5.4nm,0.6s						
MJAR	Matsushiro Arr	38.41	359	LR	LR	12 43 21.2	
	comp=Z,42nm,18.8s,baz=155,slow=34						
NJ2	Nanjing	38.80	333	eP	P	12 28 58.7	+3.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
RPSI	Rantau Prapat	40.04	277	P	P	12 29 05.2	-0.7
RPSI				IAmb	IAmb	12 29 16.2	
	comp=Z,17nm,1.2s						
PSI	Prapat	40.05	277	P	P	12 29 05.0	-1.2
	comp=Z,6.1nm,0.7s,baz=181,slow=7.7,SNR=3.6						
KSRS	Korea Array	40.57	347	LR	LR	12 44 38.2	
	comp=Z,36nm,20.3s,baz=165,slow=34						
GSI	Gunungsitoli	41.25	274	P	P	12 29 15.0	-0.9
GSI				IAmb	IAmb	12 29 16.0	
	comp=Z,12nm,0.6s						
KMI	Kunming	44.09	310	P	P	12 29 40.9	+1.8
KMI				sP	sP	12 30 02.5	+12
KMI				pmax	pmax		
	comp=Z,26nm,1.3s						
CMAR	Chiang Mai Arr	44.11	299	P	P	12 29 38.4	-0.7
	comp=Z,0.7nm,0.4s,baz=119,slow=6.9,SNR=8.1						
CHTO	Chiang Mai	44.25	300	P	P	12 29 39.8	-0.4
XAN	Xi'an	45.54	325	P	P	12 29 55.5	+5.2
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,49nm,6.5s						
MDJ	Mudanjiang	47.18	351	P	P	12 30 02.8	-0.1
HHC	Hu-ho-hao-te	49.35	333	P	P	12 30 23.9	+4.0
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,55nm,8.0s						
TUWZ	Tuamarina	50.41	146	P	P	12 30 27.5	-0.3
RPZ	Rata Peaks	50.45	150	LR	LR	12 52 19.5	
	comp=Z,82nm,19.1s,baz=12,slow=37						
BKZ	Black Stump Fm	50.48	142	P	P	12 30 28.0	-0.4
BKZ				IAmb	IAmb	12 30 41.9	
	comp=Z,6.2nm,1.1s						
KHZ	Kahutara	50.85	147	P	P	12 30 30.8	-0.3
SHL	Shillong	52.96	304	P	P	12 30 47.0	-0.3
HIA	Hailar	53.69	345	P	P	12 30 52.2	+0.1
HIA				IAmb	IAmb	12 30 53.8	
	comp=Z,5.6nm,0.6s						
GTA	Gaotai	54.55	323	eP	P	12 30 59.5	+0.9
GTA				pP	sP	12 31 11.6	+1.7
GTA				sP	pP	12 31 17.4	+11
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	57.13	335	P	P	12 31 15.6	-1.4
	comp=Z,0.3nm,0.5s,baz=152,slow=6.5,SNR=2.5						
PETK	Petropavlovsk-	57.24	13	P	P	12 31 15.6	-1.9
	comp=Z,0.6nm,0.7s,baz=181,slow=7.2,SNR=2.5						
YAK	Yakutsk	64.29	355	P	P	12 32 05.3	0.0
WMQ	Urumqi	64.50	321	eP	P	12 32 09.5	+2.3
SEY	Seymchan	65.64	7	P	P	12 32 12.6	-1.5
	comp=Z,0.3nm,0.4s,baz=138,slow=4.4,SNR=2.2						
MK31	Makanchi Array	69.27	322	P	P	12 32 36.2	-1.3
MKAR	Makanchi Array	69.27	322	P	P	12 32 36.2	-1.2
	comp=Z,0.9nm,0.6s,baz=98,slow=9.9,SNR=9.8						
MAKZ	Makanchi	69.47	322	P	P	12 32 37.8	-0.9
MAKZ				IAmb	IAmb	12 32 49.6	
	comp=Z,9.1nm,1.3s						
KSH	Kashi	70.63	313	P	P	12 32 50.2	+4.1
KSH				pP	PcP	12 33 06.2	-0.9
KSH				sP	sP	12 33 12.6	+15
KSH				pmax	pmax		
	comp=Z,17nm,1.2s						
KSH				pmax	pmax		
	comp=Z,150nm,5.3s						
KDJ	Kajisay	70.69	316	P	P	12 32 46.0	-0.5
ZALV	Zalesovo Beam	71.37	330	P	P	12 32 49.0	-1.1
	comp=Z,0.7nm,0.6s,baz=125,slow=9.4,SNR=4.9						
AAK	Ala-Archa	72.73	316	P	P	12 32 58.6	-0.2
KURK	Kurchatov	73.18	325	P	P	12 33 01.0	0.0
KURK				IAmb	IAmb	12 33 15.9	
	comp=Z,4.4nm,0.9s						
ARSB	Arslanbob	73.38	314	P	P	12 33 02.4	-0.2
KBL	Kabul	74.53	307	P	P	12 33 09.3	-0.2
KBL				IAmb	IAmb	12 33 24.2	
	comp=Z,3.1nm,0.7s						
GAR	Garm	74.66	311	P	P	12 33 10.0	-0.1
GAR				IAmb	IAmb	12 33 28.9	
	comp=Z,14nm,1.3s						
CHGR	Chuyangaron	75.45	311	P	P	12 33 13.9	-0.7
CHGR				IAmb	IAmb	12 33 23.5	
	comp=Z,8.4nm,0.9s						
VNDA	Vanda	76.42	175	P	P	12 33 19.5	+0.2
	comp=Z,2.1nm,0.8s,baz=323,slow=6.6,SNR=7.9						
VNDA	Vanda	76.42	175	P	P	12 33 19.4	+0.1
BRVK	Borovoye	78.85	325	P	P	12 33 32.2	-1.0
BRVK				IAmb	IAmb	12 33 51.4	
	comp=Z,4.2nm,0.9s						
NRIK	Noril'sk	79.10	344	P	P	12 33 34.3	0.0
	comp=Z,0.6nm,0.3s,baz=126,slow=5.3,SNR=1.4						
QSPA	South Pole Qui	87.88	180	P	P	12 34 19.2	-0.4
QSPA				IAmb	IAmb	12 34 31.2	
	comp=Z,6.4nm,1.1s						
ARCES	ARCESS Array B	99.90	341	LR	LR	13 23 53.8	
	comp=Z,21nm,21.7s,baz=108,slow=38						
TORD	Torodi Ar. Bea	136.06	287	PKP	PKPdf	12 40 52.0	-0.4
	comp=Z,0.6nm,1.0s,baz=66,slow=3.6,SNR=3.0						
CPUP	Villa Florida	147.80	152	PKPbc	PKPbc	12 41 14.4	-1.5
	comp=Z,1.9nm,0.8s,baz=236,slow=2.3,SNR=4.2						
LPAZ	La Paz	147.83	126	PKPbc	PKPdf	12 41 14.6	+0.5
	comp=Z,1.6nm,0.8s,baz=204,slow=4.6,SNR=5.2						
LPAZ	La Paz	147.83	126		PKPdf	12 41 14.1	0.0

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*IDC **03** 12:29:10.4±0.7, 67°.81N×162°.53W, h0km, mb3.8/17, mb1 4.0/20, mb1mx3.9/54, mbtmp3.8/20, ML3.7/3, MS3.2/5, Ms1 3.2/5, ms1mx2.8/48, Error ellipse: s-maj=23.0km s-min=12.4km az=9.0*

*AEIC **03** 12:29:11±2.0, 67°.72N±0°.04×162°.6W±0°.1, h10km±1km, ML4.0/39, mb4.0/14(NEIC), Error ellipse: s-maj=9.1km s-min=7.0km az=254.0*

*NEIC **03** 12:29:11.4±1.6, 67°.69N±0°.04×162°.5W±0°.1, h10km±1km, Error ellipse: s-maj=8.7km s-min=6.2km az=232.0*

ISC 03 12:29:11.5±0.5**, 67°.76N**±0°.05×**162°.41W**±0°.04**, h10**km**, n96,** σ1s**34**/104**, mb4.0**/23**, MS3.1**/4**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.35	328		Pg	12 29 18.8	+0.4
RDOG				Sg	Sb	12 29 24.8	-0.6
ANM	Nome	3.43	202		Pn	12 30 03.2	-1.7
ANM					Sn	12 30 42.8	-2.6
IM03		3.85	114		Pn	12 30 10.1	-0.6
IM03					Sn	12 30 56.8	+0.8
IM05	Indian Mountai	3.87	114		Pn	12 30 09.8	-1.1
PS05	TAPS Pump Stn5	4.65	96		Pn	12 30 21.0	-0.6
COLD	Coldfoot	4.72	91		Pn	12 30 23.8	+1.2
TOLK	Toolik Lake Re	4.87	74	P	Pn	12 30 25.0	+0.4
	baz=265						
TOLK				S	Sn	12 31 21.0	0.0
	baz=265						
TOLK	Toolik Lake Re	4.87	74		Pn	12 30 25.1	+0.4
TOLK					Sn	12 31 21.8	+0.8
PS06	TAPS Pump Stn6	5.36	105		Pn	12 30 31.0	-0.4
MLY	Manley	5.43	115		Pn	12 30 31.5	-0.8
TTA	Tatalina	5.54	148		Pn	12 30 33.4	-0.5
PS01	TAPS Pump Stn	5.55	57		Pn	12 30 34.0	0.0
TT01	Tatalina	5.56	148		Pn	12 30 33.2	-0.9
BPAW	Bear Paw Mtn.	5.94	123		Pn	12 30 39.1	-0.3
KTH	Kantishna Hill	6.35	126		Pn	12 30 45.0	0.0
KTH				Sn	Sn	12 31 58.5	+1.0
MDM	Murphy Dome	6.35	110		Pn	12 30 45.4	+0.3
BWN	Browne	6.39	118		Pn	12 30 46.0	+0.5
PPLA	Purkeypile	6.48	134		Pn	12 30 46.8	-0.1
TCOL	CIGO, UAF Yank	6.53	109	P	Pn	12 30 47.9	+0.5
	baz=302						
TCOL	CIGO, UAF Yank	6.53	109		Pn	12 30 47.6	+0.2
COLA	College	6.54	109		Pn	12 30 47.5	0.0
POKR	Poker Plat Res	6.56	107	P	Pn	12 30 47.5	-0.3
	baz=300						
POKR	Poker Plat Res	6.56	107		Pn	12 30 47.4	-0.4
TRF	Thorofare Moun	6.62	125		Pn	12 30 49.0	+0.2
CCB	Clear Creek Bu	6.68	111		Pn	12 30 49.0	-0.4
WRH	Wood River Hil	6.68	113	Pn	Pn	12 30 49.1	-0.3
FYU	Fort Yukon	6.79	92		Pn	12 30 51.2	+0.3
BM03	Burnt Mountain	6.81	85		Pn	12 30 51.7	+0.4
MCK	McKinley	6.86	120		Pn	12 30 51.3	-0.6
IL31		6.94	108		Pn	12 30 52.9	-0.1
ILAR	Eielson Array	6.94	108	Pn	Pn	12 30 52.8	-0.3
	4.8nm,0.3s,baz=301,slow=13,SNR=566						
ILAR				Sn	Sn	12 32 07.2	-4.7
	baz=302,slow=17,SNR=0.9						
ILAR				LR	LR	12 33 27.7	
	comp=Z,78nm,20.1s,baz=306,slow=37						
PRP	Porcupine Dome	7.07	101		Pn	12 30 56.0	+1.0
RND	Reindeer	7.11	121		Pn	12 30 55.1	-0.3
HDA	Harding Lake	7.12	111	P	Pn	12 30 55.0	-0.5
	baz=304						
HDA				S	Sn	12 32 13.0	-3.3
	baz=304						
HDA				S	Sn	12 32 13.0	-3.3
	baz=304						
HDA	Harding Lake	7.12	111		Pn	12 30 55.0	-0.5
WAT2	Susitna Watana	7.51	123		Pn	12 31 01.2	+0.3
WAT1	Susitna Watana	7.61	124		Pn	12 31 02.3	-0.1
DHY	Denali Highway	7.82	120		Pn	12 31 05.3	0.0
RIDG	Independent Ri	8.26	111		Pn	12 31 11.6	+0.3
GHO	Glory Hole Cre	8.31	130		Pn	12 31 12.7	+0.8
PMR	Palmer	8.39	131		Pn	12 31 13.0	+0.1
SCRK	Sand Creek	8.43	108		Pn	12 31 14.3	+0.7
SML	Sawmill	8.45	128		Pn	12 31 14.0	+0.1
DOT	Dot Lake	8.60	110		Pn	12 31 15.3	-0.4
EGAK	Eagle	9.05	99		Pn	12 31 22.9	+0.9
CNPM	China Poot	9.62	144	Pn	Pn	12 31 31.5	+1.7
BC03		9.77	109		Pn	12 31 31.6	-0.1
DAWY	Dawson	10.08	101		Pn	12 31 37.3	+1.3
EPYK	Eagle Plains	10.09	86	P	Pn	12 31 36.2	0.0
	baz=289						
EPYK	Eagle Plains	10.09	86		Pn	12 31 36.2	0.0
INK	Inuvik	10.78	74	Pn	Pn	12 31 43.8	-1.8
	1.0nm,0.3s,baz=283,slow=9.7,SNR=61						
INK				Sn	Sn	12 33 39.6	-6.5
	0.8nm,0.3s,baz=127,slow=7.4,SNR=6.6						
INK	Inuvik	10.78	74		Pn	12 31 44.0	-1.6
KDAK	Kodiak Island	10.96	151	Pn	Pn	12 31 50.9	+2.9
	0.3nm,0.3s,baz=352,slow=14,SNR=11						
KDAK	Kodiak Island	10.96	151		Pn	12 31 50.6	+2.6
OHAK	Old Harbor	11.37	154	Pn	Pn	12 31 54.8	+1.2
BILL	Bilibino	11.73	286		Pn	12 31 57.1	-1.4
A36M	Sachs Harbour	13.29	55	P	Pn	12 32 17.0	-2.9
	baz=270						
WHY	Whitehorse	13.82	108	Pn	Pn	12 32 28.4	+1.2
DLBC	Dease Lake	17.15	107	P	P	12 33 13.2	+0.6
	0.1nm,0.3s,baz=311,slow=13,SNR=2.5						
SEY	Seymchan	19.10	277	P	Pn	12 33 34.5	-0.2
	0.1nm,0.3s,baz=81,slow=8.5,SNR=11						
YKA	Yellowknife Ar	20.33	82	P	P	12 33 47.2	-0.1
	3.5nm,0.8s,baz=304,slow=9.9,SNR=26						
RES	Resolute Bay	21.54	42	P	P	12 34 01.0	+0.7
	1.2nm,0.8s,baz=266,slow=15,SNR=4.8						
RES				S	S	12 37 55.1	-3.4
	0.9nm,0.7s,baz=348,slow=5.8,SNR=3.6						
RES				LR	LR	12 45 03.6	
	comp=Z,70nm,18.1s,baz=286,slow=44						
RES	Resolute Bay	21.54	42	P	P	12 34 01.5	+1.3
MA2	Magadan	21.79	271	P	P	12 34 03.2	+0.1
	2.5nm,0.6s,baz=48,slow=11,SNR=3.7						
MA2	Magadan	21.79	271	P	P	12 34 02.5	-0.6
MA2				IAmb	IAmb	12 34 07.1	
	comp=Z,7.6nm,1.2s						
BBB	Bella Bella	22.74	116	LR	LR	12 42 16.9	
	comp=Z,71nm,20.3s,baz=326,slow=34						
PETK	Petropavlovsk-	23.96	252	P	P	12 34 25.5	0.0
	comp=Z,0.7nm,0.3s,baz=64,slow=9.8,SNR=6.0						
NRIK	Noril'sk	35.09	325	LR	LR	12 54 37.3	
	comp=Z,37nm,18.4s,baz=137,slow=44						
YHH	Holmes Hill	35.14	104	P	P	12 36 05.2	0.0
YNE	Yellowstone No	35.26	103	P	P	12 36 06.8	+0.6
KLR	Kul'dur	36.83	274	LR	LR	12 52 31.3	
	comp=Z,38nm,19.4s,baz=286,slow=38						
PDAR	Pinedale Array	37.35	105	P	P	12 36 24.9	+0.9
	comp=Z,0.7nm,0.6s,baz=338,slow=6.9,SNR=4.8						
NVAR	Mina Array Bea	38.09	118	P	P	12 36 31.5	+1.3
	comp=Z,1.2nm,0.7s,baz=314,slow=6.8,SNR=9.3						
NV11	Mina Array Sit	38.13	117	P	P	12 36 31.3	+0.8
NV11				IAmb	IAmb	12 36 35.6	
	comp=Z,1.9nm,0.8s						
EYMN	Ely	39.80	83	P	P	12 36 44.7	+0.4
EYMN				IAmb	IAmb	12 36 59.5	
	comp=Z,6.1nm,1.1s						
PV13	Radium Mtn., P	41.66	107	P	P	12 37 00.3	+0.3
PV13				IAmb	IAmb	12 37 02.0	
	comp=Z,3.4nm,1.0s						
SONM	Songino Array	47.31	294	P	P	12 37 44.4	-0.5
	comp=Z,0.7nm,0.8s,baz=31,slow=6.7,SNR=3.0						
KSRS	Korea Array	48.30	268	P	P	12 37 53.1	+0.6
	comp=Z,1.2nm,0.7s,baz=18,slow=7.7,SNR=4.8						
ZAA0	Zalesovo Array	48.79	314	P	P	12 37 55.7	-0.3
ZAA0				IAmb	IAmb	12 37 56.0	
	comp=Z,2.2nm,0.8s						
ZALV	Zalesovo Beam	48.79	314	P	P	12 37 55.5	-0.5
	comp=Z,2.4nm,0.6s,baz=22,slow=6.6,SNR=9.5						
FINES	FINESS Array B	50.95	355	P	P	12 38 11.5	-0.8
	comp=Z,3.7nm,1.1s,baz=12,slow=7.7,SNR=2.1						
TX31	Lajitas Ar. Si	51.45	107	P	P	12 38 17.3	+0.6
TXAR	Lajitas Array	51.45	107	P	P	12 38 17.3	+0.7
	comp=Z,2.0nm,0.8s,baz=333,slow=5.7,SNR=14						
HHC	Hu-ho-hao-te	51.50	285	P	P	12 38 17.3	+0.4
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,36nm,6.7s						
KURK	Kurchatov	53.38	316	P	P	12 38 29.7	-0.8
MK31	Makanchi Array	55.94	311	P	P	12 38 47.9	-1.3
MK31				IAmb	IAmb	12 38 49.4	
	comp=Z,0.9nm,0.7s						
MKAR	Makanchi Array	55.94	311	P	P	12 38 48.4	-0.8
	comp=Z,1.2nm,0.7s,baz=44,slow=6.9,SNR=14						
WMQ	Urumqi	57.03	306	eP	P	12 38 59.3	+2.3
AKASG	Malin Array Be	61.54	352	P	P	12 39 28.8	+0.8
	comp=Z,0.3nm,0.3s,baz=8.9,slow=6.5,SNR=2.1						
GERES	GERESS Array B	63.69	3	P	P	12 39 43.8	+1.3
	comp=Z,0.3nm,0.5s,baz=3.4,slow=6.7,SNR=3.6						
KSH	Kashi	64.43	313	P	P	12 39 48.2	+0.6
KSH				pP	sP	12 39 53.9	+1.8
KSH				sP	pP	12 39 56.2	+5.4
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,190nm,4.5s						
GAR	Garm	66.43	317	P	P	12 40 00.1	-0.4
CHGR	Chuyangaron	67.05	318	P	P	12 40 04.1	-0.3
KBZ	Khabaz	67.20	340	P	P	12 40 06.2	+1.0
	comp=Z,0.4nm,0.3s,baz=359,slow=7.4,SNR=2.4						
ESDC	Sonseca Array	71.66	17	P	P	12 40 33.6	+0.7
	comp=Z,0.4nm,0.6s,baz=351,slow=6.3,SNR=2.4						
CMAR	Chiang Mai Arr	76.31	285	P	P	12 41 00.3	0.0
	comp=Z,0.6nm,0.5s,baz=2.6,slow=7.7,SNR=4.9						

WEL 03 12:35:48.8±0.4**, 34°S**±5°×**18°0W**±1°0**, h33**km**, M3.9**/15**, mB4.4**/1**, ML4.1**/15**, MLv3.9**/15**, Mw(mB)3.6**/1**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.47	208	P	Pn	12 36 41.9	+1.4
WMGZ	Waiomatatini S	3.66	204	P	Pn	12 36 44.6	+1.5
WMGZ				S	Sn	12 37 28.6	+3.5
PKGZ	Pakihiroa	3.84	208	P	Pn	12 36 45.8	+0.1
PKGZ				S	Sn	12 37 30.0	+0.3
HAZ	Te Kaha	3.85	212	P	Pn	12 36 47.2	+1.5
HAZ				S	Sn	12 37 32.0	+2.2
PUZ	Puketiti	3.94	204	P	Pn	12 36 46.8	-0.2
PUZ				S	Sn	12 37 31.1	-0.9
RUGZ	Raukumara Rang	4.07	211	P	Pn	12 36 49.7	+0.9
RUGZ				S	Sn	12 37 36.3	+0.9
CNGZ	Carnagh Statio	4.33	203	P	Pn	12 36 52.5	+0.1
KUZ	Kuaotunu	4.37	238	P	Pn	12 36 54.6	+1.8
MWZ	Matawai	4.44	210	P	Pn	12 36 53.7	-0.2
MWZ				S	Sn	12 37 41.8	-2.7
URZ	Urewera	4.56	214	P	Pn	12 36 55.8	+0.3
URZ				S	Sn	12 37 45.7	-1.6
TGRZ	Tauranga	4.61	224	P	Pn	12 36 59.2	+3.0
RAGZ	Rawiri	4.63	210	P	Pn	12 36 56.8	+0.3
RAGZ				S	Sn	12 37 48.3	-0.8
RIGZ	Rimuhau	4.68	205	P	Pn	12 36 57.4	+0.2
RIGZ				S	Sn	12 37 52.6	+2.3
MUGZ	Murupara	4.90	215	P	Pn	12 37 00.8	+0.7
MUGZ				S	Sn	12 37 53.5	-2.2
SNGZ	Shannon Statio	4.90	208	P	Pn	12 37 01.1	+0.8
SNGZ				S	Sn	12 37 52.6	-3.2
RTZ	Ruatahuna	4.91	212	P	Pn	12 37 00.7	+0.3
RTZ				S	Sn	12 37 55.2	-1.0
TOZ	Tahuroa Road	5.06	229	P	Pn	12 37 05.2	+2.8
RAHZ	Arahi	5.12	210	P	Pn	12 37 04.6	+1.4
MRHZ	Matea Rd	5.35	215	P	Pn	12 37 06.7	+0.3
GLKZ	Green Lake	5.43	16	P	Pn	12 37 06.2	-1.3
GLKZ				S	Sn	12 38 07.1	-1.6

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*IDC **03** 12:36:37.3±1.0, 20°.06S×173°.20W, h0km, mb4.3/18, mb1 4.5/19, mb1mx4.3/44, mbtmp4.4/19, ML3.7/1, MS3.8/7, Ms1 3.8/7, ms1mx3.3/41, Error ellipse: s-maj=39.5km s-min=15.3km az=156.0*

*NEIC **03** 12:36:39.6±2.5, 19°.8S±0°.1×173°.12W±0°.09, h10km±1km, mb4.8/28, Error ellipse: s-maj=20.0km s-min=13.8km az=195.0*

ISC 03 12:36:39.9±0.5**, 19°.60S**±0°.09×**173°.29W**±0°.09**, h10**km**, n71,** σ1s**25**/65**, mb4.6**/31**, MS3.7**/7**, 4C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	3.22	81		Pn	12 37 23.9	-6.7
NIUE					Sn	12 37 55.8	-13
AFI	Afiamalu	5.84	15		Pn	12 38 03.7	-3.1
MSVF	Nonsavu	8.41	281		Pn	12 38 44.5	+2.4
RAR	Rarotonga	12.78	100	Pn	Pn	12 39 36.2	-5.6
	4.6nm,0.3s,baz=280,slow=10,SNR=9.3						
RAR				LR	LR	12 44 26.5	
	comp=Z,252nm,18.8s,baz=292,slow=37						
RAR	Rarotonga	12.78	100		Pn	12 39 35.4	-6.4
DZM	Mont Dzumac	19.10	259	eP	Pn	12 41 04.4	+0.5
	58nm,1.0s						
DZM				eLQ	LQ	12 44 49.6	
	634nm,26.1s						
DZM				eLR	LR	12 45 40.8	
	comp=Z,276nm,23.0s						
DZM	Mont Dzumac	19.10	259	P	Pn	12 41 04.3	+0.5
	1.2nm,0.3s,baz=84,slow=20,SNR=14						
DZM				LR	LR	12 47 41.1	
	comp=Z,240nm,18.7s,baz=71,slow=35						
DZM	Mont Dzumac	19.10	259	P	Pn	12 41 04.5	+0.6
URZ	Urewera	20.38	202	P	P	12 41 17.8	+1.0
	0.7nm,0.3s,baz=309,slow=3.8,SNR=2.5						
URZ	Urewera	20.38	202	P	P	12 41 17.3	+0.5
BKZ	Black Stump Fm	21.40	202	P	P	12 41 27.0	-0.9
TBI	Tubuai	22.48	104	eLR	LR	12 46 38.0	
	comp=Z,276nm,30.0s						
PPT2	Papeete2	22.56	89	eLQ	LQ	12 45 39.8	
	327nm,24.5s						
PPT2				eLR	LR	12 46 37.0	
	comp=Z,356nm,28.2s						
PPT	Papeete	22.57	89	LR	LR	12 48 57.8	
	comp=Z,220nm,18.6s,baz=304,slow=33						
BFZ	Birch Farm	22.84	201	P	P	12 41 44.1	+0.8
BFZ				IAmb	IAmb	12 41 51.8	
	comp=Z,58nm,1.5s						
LTZ	Lake Taylor	26.13	205	P	P	12 42 15.8	+1.6
RPZ	Rata Peaks	27.39	205	P	P	12 42 29.5	+3.9
	comp=Z,5.4nm,0.5s,baz=76,slow=14,SNR=4.0						
ARMA	Armidale	33.44	244	P	P	12 43 18.4	-0.9
ARMA				IAmb	IAmb	12 43 20.1	
	comp=Z,29nm,1.5s						
CAN	Canberra	36.69	237	P	P	12 43 46.6	-0.6
CAN				IAmb	IAmb	12 43 53.6	
	comp=Z,36nm,1.2s						
KRVT	Keravat (AS076	37.06	290	LR	LR	12 58 59.8	
	comp=Z,108nm,18.7s,baz=152,slow=36						
CTA	Charters Tower	37.99	262	P	P	12 43 57.0	-1.3
	comp=Z,11nm,0.6s,baz=97,slow=11,SNR=20						
CTAO	Charters Tower	37.99	262	P	P	12 43 56.2	-2.2
CTAO				IAmb	IAmb	12 43 59.5	
	comp=Z,14nm,0.8s						
PMG	Port Moresby	39.52	279	P	P	12 44 09.6	-1.7
PMG				IAmb	IAmb	12 44 13.6	
	comp=Z,12nm,0.8s						
TOO	Toolangi	40.01	235	P	P	12 44 13.9	-1.2
TOO				IAmb	IAmb	12 44 26.4	
	comp=Z,15nm,1.0s						
COEN	Coen	41.97	271	P	P	12 44 30.7	-0.8
STKA	Stephens Creek	42.16	244	P	P	12 44 30.5	-2.4
	comp=Z,1.8nm,0.5s,baz=85,slow=12,SNR=3.8						
STKA				LR	LR	13 00 51.2	
	comp=Z,178nm,18.4s,baz=29,slow=35						
STKA	Stephens Creek	42.16	244	P	P	12 44 31.7	-1.2
JAY	Jayapura	48.03	285	P	P	12 45 19.8	0.0
	comp=Z,9.0nm,0.8s,baz=153,slow=4.5,SNR=1.9						
AS31	Alice Springs	49.03	255	P	P	12 45 25.7	-1.7
ASAR	Alice Springs	49.03	255	P	P	12 45 25.9	-1.6
	comp=Z,14nm,0.9s,baz=85,slow=8.5,SNR=37						
ASAR				LR	LR	13 05 55.9	
	comp=Z,153nm,18.6s,baz=96,slow=36						
WRA	Warramunga Arr	49.11	260	P	P	12 45 26.4	-1.7
	comp=Z,2.6nm,0.5s,baz=96,slow=7.5,SNR=8.4						
MTN	Manton Dam	53.60	268	P	P	12 46 00.0	-1.7
KNRA	Kununurra	55.14	264	P	P	12 46 11.7	-1.3
KNRA				IAmb	IAmb	12 46 14.0	
	comp=Z,8.8nm,0.7s						
SIJI	Sorong	57.33	282	P	P	12 46 28.1	-0.6
	comp=Z,11nm,0.6s,baz=125,slow=6.6,SNR=5.5						
FITZ	Fitzroy Crossi	57.54	261	P	P	12 46 29.4	-0.7
	comp=Z,5.3nm,0.6s,baz=100,slow=4.1,SNR=9.0						
FITZ	Fitzroy Crossi	57.54	261	P	P	12 46 29.5	-0.6
FITZ				IAmb	IAmb	12 46 30.5	
	comp=Z,5.5nm,0.7s						
SOEI	Soe	60.92	270	P	P	12 46 54.1	+0.4
NWAO	Narrogin (SRO)	62.72	242	P	P	12 47 05.2	-0.2
QSPA	South Pole Qui	70.47	180	P	P	12 47 55.6	+1.1
	comp=Z,1.4nm,0.8s,baz=3.1,slow=3.0,SNR=4.7						
QSPA	South Pole Qui	70.47	180	P	P	12 47 54.8	+0.3
QSPA				IAmb	IAmb	12 48 09.2	
	comp=Z,5.7nm,1.1s						
MJAR	Matsushiro Arr	72.22	321	P	P	12 48 06.4	+1.1
	comp=Z,0.5nm,0.3s,baz=136,slow=6.1,SNR=4.0						
PEA0B	Petropavlovsk-	76.64	343	P	P	12 48 32.1	+1.5
PETK	Petropavlovsk-	76.64	343	P	P	12 48 31.8	+1.1
	comp=Z,3.9nm,0.9s,baz=116,slow=9.1,SNR=10						
TPUB	Ta-pu	77.27	301	P	P	12 48 34.4	-0.5
NVAR	Mina Array Bea	77.38	41	P	P	12 48 36.0	+0.5
	comp=Z,1.1nm,0.8s,baz=227,slow=9.0,SNR=9.2						
NVAR				LR	LR	13 15 43.4	
	comp=Z,64nm,21.6s,baz=263,slow=30						
KSM	Kuching	77.70	276	P	P	12 48 37.4	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSM				IAmb	IAmb	12 48 39.6	
	comp=Z,22nm,1.4s						
KSRS	**Korea Array**	**79.23**	**316**	P	**P**	**12 48 47.7**	**+2.3**
	comp=Z,1.2nm,0.8s,baz=130,slow=5.3,SNR=2.9						
TXAR	**Lajitas Array**	**82.87**	**56**	P	**P**	**12 49 05.8**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=204,slow=8.2,SNR=7.4						
PDAR	**Pinedale Array**	**85.32**	**41**	P	**P**	**12 49 18.0**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=229,slow=4.2,SNR=2.2						
HDA	**Harding Lake**	**86.18**	**11**	P	**P**	**12 49 21.0**	**0.0**
HDA				IAmb	IAmb	12 49 23.8	
	comp=Z,5.2nm,0.8s						
CCB	**Clear Creek Bu**	**86.25**	**11**	P	**P**	**12 49 21.5**	**+0.2**
CCB				IAmb	IAmb	12 49 24.0	
	comp=Z,7.2nm,0.9s						
COLA	**College**	**86.45**	**11**	P	**P**	**12 49 22.2**	**0.0**
ILAR	**Eielson Array**	**86.53**	**11**	P	**P**	**12 49 23.0**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=216,slow=6.2,SNR=15						
SEY	**Seymchan**	**86.58**	**345**	P	**P**	**12 49 23.9**	**+0.9**
	comp=Z,2.6nm,0.9s,baz=128,slow=4.6,SNR=9.3						
DAWY	**Dawson**	**87.44**	**14**	P	**P**	**12 49 28.0**	**+0.8**
DAWY				IAmb	IAmb	12 49 30.9	
	comp=Z,4.7nm,1.0s						
SYO	**Syowa Base**	**88.52**	**191**	⇑eP	**P**	**12 49 31.4**	**-1.0**
SNAA	**Sanae**	**88.73**	**177**	P	**P**	**12 49 32.4**	**-1.1**
SNAA				IAmb	IAmb	12 49 48.5	
	comp=Z,4.3nm,1.2s						
INK	**Inuvik**	**92.30**	**14**	P	**P**	**12 49 50.5**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=212,slow=7.7,SNR=6.1						
INK	**Inuvik**	**92.30**	**14**	P	**P**	**12 49 49.5**	**-0.2**
YKA	**Yellowknife Ar**	**93.89**	**23**	P	**P**	**12 49 57.9**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=231,slow=4.0,SNR=12						
CMAR	**Chiang Mai Arr**	**94.02**	**288**	P	**P**	**12 50 00.4**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=121,slow=3.0,SNR=7.2						
CLL	**Collm**	**147.97**	**353**	ePKPbc	**PKPab**	**12 56 29.0**	**+1.0**
	comp=Z,6.0nm,1.2s						
CLL				e		12 56 43.0	
CLL	**Collm**	**147.97**	**353**		**PKiKP**	**12 56 26.7**	**-0.6**
OSTC	**Ostas**	**148.20**	**348**	⇑ePKP	**PKPab**	**12 56 29.3**	**+0.3**
BRG	**Berggiesshubel**	**148.27**	**351**	ePKP	**PKiKP**	**12 56 27.6**	**-0.4**
	comp=Z,5.3nm,1.2s						
KRLC	**Kraliky**	**148.55**	**348**	⇑ePKP	**PKPab**	**12 56 29.7**	**-0.7**
BR131	**Keskin Array S**	**149.37**	**317**		**PKPbc**	**12 56 30.0**	**+0.4**
BR131				PKPab	**pPKPab**	**12 56 35.9**	**+0.2**
BRTR	**Keskin Array B**	**149.37**	**317**	PKPbc	**PKiKP**	**12 56 30.2**	**-0.6**
	comp=Z,1.6nm,0.9s,baz=135,slow=0.9,SNR=7.9						
VYHS	**Vyhne**	**149.55**	**344**	ePKP	**PKPab**	**12 56 32.7**	**-1.8**
KHC	**Kasperske Hory**	**150.02**	**351**	⇑ePKP	**PKiKP**	**12 56 32.3**	**+0.6**
GERES	**GERESS Array B**	**150.28**	**351**	PKPbc	**PKPbc**	**12 56 32.0**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=33,slow=3.2,SNR=5.8						

*NEIC **03** 12:36:48.9±1.4, 7°.76S±0°.07×119°.55E±0°.07, h272km±8km, mb4.3/25, Error ellipse: s-maj=11.9km s-min=8.9km az=223.0*
*IDC **03** 12:36:49.1±1.0, 7°.69S×119°.68E, h269km±8km, mb3.5/15, mb1 3.7/20, mb1mx3.5/47, mbtmp4.3/20, Error ellipse: s-maj=20.7km s-min=7.2km az=59.0*
*KLM **03** 12:36:49.0, 7°.97S×119°.43E, h247km, mb4.6*
*DJA **03** 12:36:49.7±0.2, 8°S±3°×12°0E±°, h256km±3km, M4.4/19, mB5.0/9, mb4.4/19, MLv4.6/19, Mw(mB)4.3/9*
ISC 03 12:36:48.5±0.6**, 7°.80S**±0°.05×**119°.56E**±0°.05**, h268**km±6km**, n99,** σ1s20/111**, mb4.0**/23**, Flores Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.84**	**185**	P	**Pn**	**12 37 31.1**	**-0.1**
WBSI				S	**S**	**12 38 03.2**	**-1.8**
PLAI	**Plampang**	**2.04**	**240**	P	**Pn**	**12 37 33.6**	**+0.8**
PLAI				S	**S**	**12 38 07.1**	**-0.7**
EDFI	**Ende, Flores**	**2.31**	**114**	P	**Pn**	**12 37 35.3**	**-0.1**
EDFI				S	**S**	**12 38 11.9**	**-0.7**
BKSI	**Bulukumba**	**2.52**	**13**	P	**Pn**	**12 37 38.7**	**+1.4**
BASI	**Baing, Sumba**	**2.61**	**157**	P	**Pn**	**12 37 37.9**	**-0.2**
BASI				S	**S**	**12 38 16.1**	**-1.5**
KAPI	**Kappang**	**2.77**	**4**	P	**Pn**	**12 37 40.2**	**+0.5**
	4.8nm,0.3s,baz=169,slow=8.8,SNR=8.2						
KAPI				S	**S**	**12 38 19.3**	**-1.2**
	0.9nm,0.3s,baz=0.0,slow=20,SNR=1.2						
KAPI	**Kappang**	**2.77**	**4**		**Pn**	**12 37 40.3**	**+0.6**
KAPI				S	**S**	**12 38 20.9**	**+0.4**
MMRI	**Maumere**	**2.78**	**108**	P	**Pn**	**12 37 40.1**	**+0.2**
MMRI	**Maumere**	**2.78**	**108**		**Pn**	**12 37 40.0**	**+0.2**
MMRI				S	**S**	**12 38 23.7**	**+3.1**
BNSI	**Bone**	**3.42**	**9**	P	**Pn**	**12 37 48.8**	**+2.2**
BBSI	**Bau Bau**	**3.77**	**53**	P	**Pn**	**12 37 51.6**	**+1.1**
SPSI	**Sidrap Palu**	**3.81**	**3**	P	**Pn**	**12 37 52.8**	**+1.8**
SRBI	**Singaraja**	**4.31**	**266**	P	**Pn**	**12 37 58.1**	**+1.4**
BATI	**Baumata**	**4.71**	**121**	P	**Pn**	**12 38 02.2**	**+0.8**
	45nm,0.3s,baz=286,slow=4.1,SNR=69						
BATI				S	**S**	**12 38 56.3**	**-3.4**
	40nm,0.3s,baz=31,slow=7.2,SNR=2.1						
BATI	**Baumata**	**4.71**	**121**	P	**Pn**	**12 38 01.5**	**0.0**
TTSI	**Tana Toraja**	**4.73**	**3**	P	**Pn**	**12 38 03.5**	**+1.9**
SOEI	**Soe**	**5.05**	**113**	P	**Pn**	**12 38 06.3**	**+0.7**
	2.1nm9µm579nm,0.9s						
SOEI	**Soe**	**5.05**	**113**		**Pn**	**12 38 05.9**	**+0.4**
SOEI				S	**S**	**12 39 04.1**	**-3.1**
JAGI	**Jajag, Banyuwa**	**5.39**	**262**	P	**Pn**	**12 38 10.5**	**+0.9**
	1.1nm4µm83nm,0.8s						
JAGI	**Jajag, Banyuwa**	**5.39**	**262**		**Pn**	**12 38 08.8**	**-0.8**
LUWI	**Luwuk**	**7.43**	**26**	P	**Pn**	**12 38 36.1**	**+1.2**
	0.4nm2µm127nm,0.8s						
LUWI	**Luwuk**	**7.43**	**26**		**Pn**	**12 38 35.0**	**+0.2**
PCJI	**Pacitan**	**8.31**	**267**	P	**Pn**	**12 38 46.2**	**+0.4**
	2µm131nm,0.7s						
WOJI	**Wonogiri, Jawa**	**8.55**	**269**	P	**Pn**	**12 38 49.9**	**+1.1**
	26nm,0.7s						
MRSI	**Marisa**	**8.55**	**16**	P	**Pn**	**12 38 50.1**	**+1.2**
	0.1nm42nm,0.9s						
SANI	**Sanana**	**8.58**	**49**	P	**Pn**	**12 38 51.3**	**+2.1**
	752nm56nm,1.3s						
NLAI	**Namlea**	**8.77**	**59**	P	**P**	**12 38 55.0**	**-3.0**
	0.3nm5µm92nm,0.9s						
UGM	**Wanagama**	**8.95**	**269**	Pn	**Pn**	**12 38 53.2**	**-0.6**
LBMI	**Labuha**	**10.64**	**48**	P	**P**	**12 39 21.7**	**+2.6**
BNDI	**Bandanaira**	**10.79**	**73**	P	**P**	**12 39 22.4**	**+1.7**
TNTI	**Ternate**	**11.54**	**43**		**Pn**	**12 39 26.8**	**+0.7**
FITZ	**Fitzroy Crossi**	**11.83**	**151**	P	**Pn**	**12 39 30.9**	**+1.3**
	2.0nm,0.3s,baz=335,slow=8.5,SNR=55						
FITZ				S	**S**	**12 41 43.4**	**+1.8**
	1.4nm,0.3s,baz=181,slow=10,SNR=5.6						
FITZ	**Fitzroy Crossi**	**11.83**	**151**		**Pn**	**12 39 30.5**	**+0.9**
KNRA	**Kununurra**	**11.94**	**132**		**Pn**	**12 39 30.4**	**-0.5**
MTN	**Manton Dam**	**12.44**	**115**		**Pn**	**12 39 36.8**	**-0.4**
SBUM	**Sibu**	**12.54**	**324**		**Pn**	**12 39 38.4**	**+0.1**
SBUM	**Sibu**	**12.54**	**324**	P	**P**	**12 39 40.0**	**-0.1**
KSM	**Kuching**	**13.03**	**315**	P	**Pn**	**12 39 44.5**	**0.0**
KSM	**Kuching**	**13.03**	**315**	P	**P**	**12 39 46.0**	**+0.3**
FAKI	**Fak Fak**	**13.53**	**70**	P	**Pn**	**12 39 50.7**	**+0.2**
	718nm44nm,0.7s						
FAKI	**Fak Fak**	**13.53**	**70**		**Pn**	**12 39 49.1**	**-1.5**
SIJI	**Sorong**	**13.55**	**60**	P	**Pn**	**12 39 50.3**	**-0.4**
	3.4nm,0.3s,baz=268,slow=7.8,SNR=20						
KKM	**Kota Kinabalu**	**14.15**	**346**		**Pn**	**12 39 58.0**	**0.0**
MDSI	**Maura Dua**	**15.64**	**281**	P	**Pn**	**12 40 18.8**	**+3.1**
	6.7nm,0.5s						
TPRI	**Tanjung Pinang**	**17.31**	**299**	P	**Pn**	**12 40 37.4**	**+2.1**
MYKOM	**Kota Tinggi**	**18.33**	**301**	P	**P**	**12 40 44.0**	**+0.2**
MYKOM				IAmb	IAmb	12 40 50.3	
	comp=Z,8.6nm,0.7s						
MYKOM	**Kota Tinggi**	**18.33**	**301**	P	**P**	**12 40 46.0**	**+2.2**
WB0	**Warramunga Arr**	**18.67**	**131**	P	**P**	**12 40 48.0**	**+0.7**
WB0				IAmb	IAmb	12 40 52.5	
	comp=Z,10.0nm,0.8s						
WRA	**Warramunga Arr**	**18.73**	**132**	P	**P**	**12 40 48.9**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=306,slow=12,SNR=127						
WRA				S	**S**	**12 44 04.7**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=303,slow=21,SNR=6.8						
WRAB	**Tennant Creek**	**18.74**	**132**	P	**P**	**12 40 49.0**	**+0.9**
WB2	**Warramunga Arr**	**18.74**	**132**	P	**P**	**12 40 49.0**	**+0.8**
WB2				IAmb	IAmb	12 40 52.9	
	comp=Z,8.6nm,0.6s						
WR0	**Warramunga Arr**	**18.89**	**131**	P	**P**	**12 40 50.5**	**+0.7**
AS31	**Alice Springs**	**20.94**	**141**	P	**P**	**12 41 12.0**	**+0.7**
ASAR	**Alice Springs**	**20.94**	**141**	P	**P**	**12 41 12.2**	**+0.9**
	comp=Z,3.7nm,0.5s,baz=315,slow=8.6,SNR=128						
ASAR				S	**S**	**12 44 46.9**	**-0.3**
	comp=Z,1.2nm,0.9s,baz=310,slow=16,SNR=5.0						
MORW	**Morawa**	**21.42**	**188**	P	**P**	**12 41 16.9**	**+1.1**
MORW				IAmb	IAmb	12 41 35.8	
	comp=Z,19nm,1.4s						
IPM	**Ipoh**	**22.15**	**303**	P	**P**	**12 41 21.8**	**-0.8**
IPM				IAmb	IAmb	12 41 25.7	
	comp=Z,10.0nm,0.9s						
KULM	**Kulim**	**22.91**	**304**	P	**P**	**12 41 29.2**	**-0.3**
KULM				IAmb	IAmb	12 41 30.3	
	comp=Z,14nm,1.1s						
RPSI	**Rantau Prapat**	**23.07**	**296**	P	**P**	**12 41 32.1**	**+1.1**
PSI	**Prapat**	**23.12**	**296**	P	**P**	**12 41 32.1**	**+0.6**
	comp=Z,3.4nm,0.4s,baz=178,slow=3.9,SNR=4.2						
GSI	**Gunungsitoli**	**23.71**	**291**	P	**P**	**12 41 35.7**	**-1.1**
GSI				IAmb	IAmb	12 41 41.9	
	comp=Z,8.4nm,0.6s						
COEN	**Coen**	**23.98**	**107**	P	**P**	**12 41 38.4**	**-0.9**
CTA	**Charters Tower**	**28.59**	**118**	P	**P**	**12 42 22.1**	**+1.6**
	comp=Z,2.2nm,0.8s,baz=293,slow=11,SNR=3.9						
BBOO	**Buckleboo**	**29.22**	**151**	P	**P**	**12 42 26.2**	**+0.4**
STKA	**Stephens Creek**	**31.55**	**142**	P	**P**	**12 42 47.6**	**+1.4**
	comp=Z,2.2nm,0.7s,baz=324,slow=8.7,SNR=5.6						
STKA	**Stephens Creek**	**31.55**	**142**	P	**P**	**12 42 47.8**	**+1.6**
CMAR	**Chiang Mai Arr**	**33.08**	**322**	P	**P**	**12 43 00.2**	**+0.6**
	comp=Z,2.2nm,0.9s,baz=152,slow=6.8,SNR=12						
CHTO	**Chiang Mai**	**33.35**	**323**	P	**P**	**12 43 01.4**	**-0.6**
CHTO				IAmb	IAmb	12 43 04.1	
	comp=Z,4.5nm,0.8s						
SHL	**Shillong**	**42.71**	**322**	P	**P**	**12 44 19.7**	**-0.3**
SHL				IAmb	IAmb	12 44 20.9	
	comp=Z,6.9nm,0.8s						
KSRS	**Korea Array**	**45.69**	**9**	P	**P**	**12 44 43.0**	**0.0**
	comp=Z,1.5nm,0.6s,baz=184,slow=9.8,SNR=6.8						
LSA	**Lhasa**	**46.22**	**325**	P	**P**	**12 44 48.3**	**+0.4**
LSA				IAmb	IAmb	12 44 49.7	
	comp=Z,17nm,1.3s						
TAPN	**Taplejung**	**46.60**	**320**	eP	**P**	**12 44 50.8**	**+0.1**
	comp=Z,9.4nm,0.4s						
RAMN	**Ramite**	**47.05**	**318**	eP	**P**	**12 44 54.5**	**+0.4**
	comp=Z,16nm,0.5s						
MJAR	**Matsushiro Arr**	**47.45**	**20**	P	**P**	**12 44 54.7**	**-2.1**
	comp=Z,2.0nm,0.9s,baz=175,slow=7.1,SNR=3.1						
JIRN	**Jiri**	**47.79**	**319**	eP	**P**	**12 44 59.9**	**0.0**
	comp=Z,24nm,0.6s						
GUN	**Gumba**	**48.16**	**319**	eP	**P**	**12 45 02.6**	**-0.1**
	comp=Z,22nm,0.7s						
PKI	**Pulchoki**	**48.25**	**318**	eP	**P**	**12 45 02.7**	**-0.6**
	comp=Z,12nm,0.5s						
PKIN	**Phulchoki**	**48.26**	**318**	eP	**P**	**12 45 02.7**	**-0.7**
	comp=Z,12nm,0.4s						
DMN	**Daman**	**48.47**	**318**	eP	**P**	**12 45 04.6**	**-0.4**
	comp=Z,8.7nm,0.5s						
KOLN	**Koldanda**	**49.59**	**317**	eP	**P**	**12 45 12.8**	**-0.5**
	comp=Z,12nm,0.6s						
DANN	**Dangsing**	**49.85**	**318**	eP	**P**	**12 45 15.0**	**-0.4**
	comp=Z,36nm,0.5s						
USRK	**Ussuriysk Ar.**	**52.96**	**11**	P	**P**	**12 45 36.7**	**-1.0**
	comp=Z,1.8nm,0.7s,baz=136,slow=7.1,SNR=4.3						
SONM	**Songino Array**	**56.60**	**349**	P	**P**	**12 46 03.5**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=161,slow=7.8,SNR=5.0						
RPZ	**Rata Peaks**	**57.31**	**138**	P	**P**	**12 46 10.3**	**+1.5**
	comp=Z,6.4nm,0.6s,baz=342,slow=3.2,SNR=4.0						
RPZ	**Rata Peaks**	**57.31**	**138**	P	**P**	**12 46 10.2**	**+1.3**
MK31	**Makanchi Array**	**63.65**	**332**	P	**P**	**12 46 51.0**	**-0.3**
MKAR	**Makanchi Array**	**63.65**	**332**	P	**P**	**12 46 51.5**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=143,slow=7.3,SNR=12						
AAK	**Ala-Archa**	**64.82**	**325**	P	**P**	**12 46 58.6**	**-0.6**
AAK				IAmb	IAmb	12 46 59.9	
	comp=Z,2.2nm,0.7s						
ARSB	**Arslanbob**	**64.89**	**323**	P	**P**	**12 46 59.3**	**-0.4**
GAR	**Garm**	**65.19**	**319**	P	**P**	**12 47 00.8**	**-0.9**
GAR				IAmb	IAmb	12 47 01.9	
	comp=Z,6.8nm,0.9s						
ZAA0	**Zalesovo Array**	**68.12**	**339**	P	**P**	**12 47 18.7**	**-0.9**
ZALV	**Zalesovo Beam**	**68.12**	**339**	P	**P**	**12 47 18.9**	**-0.7**
	comp=Z,1.6nm,0.4s,baz=144,slow=5.7,SNR=7.3						
KURK	**Kurchatov**	**68.17**	**333**	P	**P**	**12 47 19.6**	**-0.3**
PEA0B	**Petropavlovsk-**	**68.76**	**24**	P	**P**	**12 47 23.5**	**0.0**
PETK	**Petropavlovsk-**	**68.76**	**24**	P	**P**	**12 47 23.6**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=195,slow=6.4,SNR=13						
MA2	**Magadan**	**71.62**	**16**	P	**P**	**12 47 40.4**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=198,slow=15,SNR=3.9						
MA2	**Magadan**	**71.62**	**16**	P	**P**	**12 47 40.9**	**+0.1**
SEY	**Seymchan**	**74.86**	**15**	P	**P**	**12 47 59.6**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=189,slow=2.7,SNR=10.0						
YKA	**Yellowknife Ar**	**112.87**	**24**	PKiKP	**PKiKP**	**12 54 52.4**	**-0.8**
	comp=Z,0.1nm,0.5s,baz=288,slow=2.0,SNR=4.8						
TORD	**Torodi Ar. Bea**	**118.79**	**281**	PKP	**PKPdf**	**12 55 05.1**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=99,slow=1.4,SNR=1.7						

*NEIC **03** 12:39:24.3±0.9, 25°.7S±0°.1×179°.6E±0°.2, h496km±11km, mb4.3/15, Error ellipse: s-maj=22.1km s-min=19.2km az=221.0*
*IDC **03** 12:39:25.1±1.6, 25°.70S×179°.58E, h505km±19km, mb3.5/9, mb1 3.7/11, mb1mx3.3/42, mbtmp4.4/11, Error ellipse: s-maj=27.5km s-min=14.8km az=1.0*
ISC 03 12:39:25.2±0.7**, 25°.74S**±0°.09×**179°.59E**±0°.09**, h507**km**, n33,** σ1s03/33**, mb4.3**/16**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.14**	**148**	P	**P**	**12 40 44.9**	**-0.2**
	64nm,0.3s,baz=30,slow=20,SNR=4.3						
RAO	**Raoul Island**	**4.14**	**148**	P	**P**	**12 40 43.8**	**-1.3**
MSVF	**Nonsavu**	**8.09**	**350**	P	**P**	**12 41 20.9**	**-2.0**
DZM	**Mont Dzumac**	**12.57**	**284**	P	**P**	**12 42 10.4**	**+0.5**
	0.5nm,0.3s,baz=114,slow=17,SNR=1.3						
DZM	**Mont Dzumac**	**12.57**	**284**	P	**P**	**12 42 10.2**	**+0.3**
URZ	**Urewera**	**12.66**	**189**	S	**S**	**12 44 23.5**	**-3.3**
	0.3nm,0.3s,baz=49,slow=19,SNR=1.4						
EIDS	**Eidsvold**	**25.71**	**265**	P	**P**	**12 44 14.4**	**-0.1**
EIDS				IAmb	IAmb	12 44 24.3	
	comp=Z,15nm,1.3s						
CTA	**Charters Tower**	**31.16**	**273**	P	**P**	**12 45 02.7**	**+0.4**
	comp=Z,3.9nm,0.3s,baz=107,slow=9.3,SNR=6.1						
CTAO	**Charters Tower**	**31.16**	**273**	P	**P**	**12 45 02.2**	**-0.1**
CTAO				IAmb	IAmb	12 45 03.6	
	comp=Z,7.8nm,0.9s						
TOO	**Toolangi**	**31.17**	**239**	P	**P**	**12 45 02.6**	**+0.4**
STKA	**Stephens Creek**	**33.73**	**251**	P	**P**	**12 45 24.4**	**+0.4**
	comp=Z,2.7nm,0.4s,baz=96,slow=13,SNR=8.8						
STKA	**Stephens Creek**	**33.73**	**251**	P	**P**	**12 45 24.1**	**+0.1**
PMG	**Port Moresby**	**34.79**	**292**	P	**P**	**12 45 33.1**	**+0.1**
PMG				IAmb	IAmb	12 45 33.8	
	comp=Z,6.3nm,0.7s						
COEN	**Coen**	**36.08**	**282**	P	**P**	**12 45 44.6**	**+0.7**
COEN				IAmb	IAmb	12 45 45.2	
	comp=Z,6.7nm,0.6s						
BBOO	**Buckleboo**	**38.41**	**249**	P	**P**	**12 46 01.9**	**-0.9**
BBOO				IAmb	IAmb	12 46 11.8	
	comp=Z,22nm,1.3s						
AS31	**Alice Springs**	**41.40**	**263**	P	**P**	**12 46 27.0**	**0.0**
AS31				IAmb	IAmb	12 46 27.9	
	comp=Z,3.3nm,0.5s						
ASAR	**Alice Springs**	**41.40**	**263**	P	**P**	**12 46 26.9**	**-0.2**
	comp=Z,6.6nm,0.4s,baz=93,slow=7.5,SNR=29						
ASAR				S	**S**	**12 52 06.1**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=98,slow=15,SNR=4.3						
WR0	**Warramunga Arr**	**41.76**	**268**	P	**P**	**12 46 29.0**	**-0.8**
WR0				IAmb	IAmb	12 46 30.7	
	comp=Z,5.5nm,0.7s						
WB2	**Warramunga Arr**	**41.94**	**268**	P	**P**	**12 46 30.7**	**-0.5**
WB2				IAmb	IAmb	12 46 31.4	
	comp=Z,13nm,0.9s						
WRA	**Warramunga Arr**	**41.95**	**268**	P	**P**	**12 46 30.7**	**-0.6**
	comp=Z,5.2nm,0.4s,baz=104,slow=7.7,SNR=13						
WRA				S	**S**	**12 52 13.2**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=99,slow=14,SNR=3.8						
FORT	**Forrest**	**45.35**	**251**	P	**P**	**12 46 56.8**	**-0.8**
KNRA	**Kununurra**	**48.34**	**272**	P	**P**	**12 47 20.6**	**+0.2**
FITZ	**Fitzroy Crossi**	**50.34**	**267**	P	**P**	**12 47 35.4**	**+0.1**
	comp=Z,2.9nm,0.5s,baz=98,slow=6.9,SNR=2.5						
FITZ	**Fitzroy Crossi**	**50.34**	**267**	P	**P**	**12 47 35.1**	**-0.1**
FITZ				IAmb	IAmb	12 47 36.7	
	comp=Z,4.1nm,0.8s						
VNDA	**Vanda**	**52.53**	**185**	P	**P**	**12 47 52.9**	**+2.7**
SIJI	**Sorong**	**52.69**	**290**	P	**P**	**12 47 51.9**	**-0.5**
	comp=Z,7.0nm,0.4s,baz=196,slow=5.1,SNR=2.7						
QSPA	**South Pole Qui**	**64.36**	**180**	P	**P**	**12 49 10.8**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=8.1,slow=7.1,SNR=7.5						
QSPA	**South Pole Qui**	**64.36**	**180**	P	**P**	**12 49 10.7**	**+0.2**
NVAR	**Mina Array Bea**	**86.32**	**44**	P	**P**	**12 51 13.0**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=230,slow=6.7,SNR=3.8						
TXAR	**Lajitas Array**	**91.71**	**58**	P	**P**	**12 51 39.8**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=202,slow=6.8,SNR=3.8						
NB2	**NORSAR Subarra**	**143.82**	**350**	PKP	PKPab	12 58 00.1	-0.7
	comp=Z,0.6nm,0.5s,baz=20,slow=3.3						
NOA	**NORSAR Array B**	**143.82**	**350**	PKP	PKPab	12 58 00.1	-0.7
	comp=Z,1.7nm,0.8s,baz=19,slow=2.5,SNR=6.5						
CLL	**Collm**	**152.48**	**342**	ePKPbc	**PKiKP**	**12 58 24.0**	**+0.5**

*IDC **03** 12:48:18.1±2.2, 11°.67S×162°.25E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.6/37, mbtmp3.9/5, ML3.9/1, MS3.5/2, Ms1 3.5/2, ms1mx2.8/38, Error ellipse: s-maj=55.2km s-min=32.5km az=127.0*
*NEIC **03** 12:48:20.2±1.2, 11°.67S±0°.09×162°.16E±0°.09, h10km±1km, mb4.6/12, Error ellipse: s-maj=19.5km s-min=10.0km az=42.0*
ISC 03 12:48:23.7±0.7**, 11°.63S**±0°.08×**162°.17E**±0°.10**, h39**km**, n24,** σ1s40/25**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.10**	**315**	Pn	**Pn**	**12 49 09.3**	**-0.7**
	13nm,0.3s,baz=149,slow=5.9,SNR=2.5						
HNR				Sn	**Sn**	**12 49 44.6**	**-1.1**
	47nm,0.3s,baz=65,slow=22,SNR=6.1						
HNR	**Honiara**	**3.10**	**315**		**Pn**	**12 49 08.9**	**-1.1**
HNR					**Sn**	**12 49 43.7**	**-2.1**
DZM	**Mont Dzumac**	**11.15**	**159**	Pn	**Pn**	**12 51 02.3**	**+1.6**
	0.4nm,0.3s,baz=19,slow=8.9,SNR=16						
DZM				Sn	**Sn**	**12 53 01.2**	**-3.0**
	0.1nm,0.3s,baz=312,slow=18,SNR=1.1						
DZM	**Mont Dzumac**	**11.15**	**159**		**Pn**	**12 50 57.9**	**-2.9**
PMG	**Port Moresby**	**14.93**	**277**	Pn	**Pn**	**12 51 51.3**	**-0.8**
COEN	**Coen**	**18.67**	**261**	Pn	**Pn**	**12 52 41.7**	**+2.5**
PATS	**Pohnpei**	**18.75**	**348**		**P**	**12 52 39.4**	**0.0**
ARMA	**Armidale**	**21.10**	**206**	P	**P**	**12 53 05.2**	**+0.2**
ARMA				IAmb	IAmb	12 53 09.3	
	comp=Z,29nm,1.2s						
WB0	**Warramunga Arr**	**27.91**	**250**	P	**P**	**12 54 10.4**	**+0.1**
WB0				IAmb	IAmb	12 54 25.1	
	comp=Z,9.7nm,1.4s						
WB2	**Warramunga Arr**	**27.98**	**249**	P	**P**	**12 54 10.4**	**-0.6**
WRA	**Warramunga Arr**	**28.00**	**249**	P	**P**	**12 54 11.4**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=78,slow=9.6,SNR=7.9						
ASAR	**Alice Springs**	**29.41**	**242**	P	**P**	**12 54 23.9**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=70,slow=9.9,SNR=10.0						
TOO	**Toolangi**	**29.85**	**207**	P	**P**	**12 54 27.0**	**-0.4**
TOO				IAmb	IAmb	12 54 35.6	
	comp=Z,18nm,1.2s						
MTN	**Manton Dam**	**30.35**	**264**	P	**P**	**12 54 32.5**	**+0.5**
MTN				IAmb	IAmb	12 54 47.4	
	comp=Z,17nm,1.3s						
BFZ	**Birch Farm**	**31.48**	**159**	P	**P**	**12 54 41.5**	**-0.2**
BBOO	**Buckleboo**	**31.91**	**225**	P	**P**	**12 54 45.9**	**+0.3**
KNRA	**Kununurra**	**32.69**	**259**	P	**P**	**12 54 52.5**	**-0.2**
KNRA				IAmb	IAmb	12 55 04.9	
	comp=Z,11nm,1.2s						
FORT	**Forrest**	**36.86**	**234**	P	**P**	**12 55 29.4**	**+1.0**
BATI	**Baumata**	**37.82**	**268**	LR	LR	13 13 37.5	
	comp=Z,102nm,18.3s,baz=349,slow=40						
XMAS	**Kiritimati**	**42.38**	**74**	P	**P**	**12 56 14.8**	**+0.2**
KSRS	**Korea Array**	**58.46**	**328**	LR	LR	13 19 34.5	
	comp=Z,23nm,21.4s,baz=130,slow=32						
SONM	**Songino Array**	**77.10**	**325**	P	**P**	**13 00 14.7**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=139,slow=6.8,SNR=3.9						
QSPA	**South Pole Qui**	**78.37**	**180**	P	**P**	**13 00 22.2**	**+2.2**
YKA	**Yellowknife Ar**	**97.11**	**28**	P	**P**	**13 01 51.2**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=260,slow=4.4,SNR=3.8						

*SOME **03** 13:09:08.6, 40°.85N×69°.62E, h15km*
*NNC **03** 13:09:09.7±2.5, 40°.82N×69°.76E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=19.3km s-min=13.0km az=55.0*
*KRNET **03** 13:09:11.9±0.1, 40°.97N×69°.62E, h21km, mb3.1*
ISC 03 13:09:10.2±1.8**, 40°.90N**±0°.06×**69°.31E**±0°.08**, h32**km±12km**, n19,** σ1s68/32**, 19C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TAS	**Tashkent**	**0.42**	**358**	⇑iP	**Pn**	**13 09 20.5**	**+0.4**
	baz=26						
TAS				⇑iS	**Sb**	**13 09 26.8**	**+0.8**
	baz=26						
IUG	**Iuzhnay**	**1.35**	**23**	eP	**Pb**	**13 09 35.1**	**0.0**
	25nm,0.3s						
IUG				eS	**Sb**	**13 09 54.4**	**+2.3**
	280nm,0.5s						
IUG	**Iuzhnay**	**1.35**	**23**	P	**Pb**	**13 09 35.1**	**0.0**
	25nm,0.3s						
IUG				S	**Sb**	**13 09 54.4**	**+2.3**
	280nm,0.5s						
BTK	**Batken**	**1.43**	**126**	⇑iP	**Pb**	**13 09 35.7**	**-0.6**
	baz=35						
BTK				⇑iS	**Sb**	**13 09 52.9**	**-1.2**
	baz=35						
BRLS	**Boroldav**	**2.16**	**10**	eP	**Pn**	**13 09 43.8**	**-0.2**
	10nm,0.4s						
BRLS				eS	**Sn**	**13 10 09.4**	**-0.2**
	66nm,0.7s						
BRLS	**Boroldav**	**2.16**	**10**	Pg	**Pn**	**13 09 43.8**	**-0.2**
	10nm,0.4s						
BRLS				Lg	Lg	13 10 09.4	
	66nm,0.7s						
ARK	**Arkit**	**2.19**	**65**	⇑iP	**Pb**	**13 09 46.9**	**-2.3**
	baz=65						
ARK				⇑iS	**Sn**	**13 10 12.3**	**+1.8**
	baz=65						
KK31	**Karatay Array**	**2.37**	**22**	P	**Pb**	**13 09 50.5**	**-1.7**
	6.8nm,0.5s,baz=204,slow=16,SNR=45						
KK31				⇑S	**Sb**	**13 10 20.3**	**-0.8**
	34nm,0.5s,baz=187,slow=15,SNR=22						
ARSB	**Arslanbob**	**2.80**	**80**	⇑iP	**Pn**	**13 09 55.3**	**+2.3**
	baz=81						
ARSB				⇑iS	**Sn**	**13 10 26.5**	**+0.8**
	baz=81						
MRKS	**Merke**	**3.46**	**57**	eP	**Pb**	**13 10 08.1**	**-2.7**
	5.1nm,0.4s						
MRKS				eS	**Sb**	**13 10 51.5**	**-0.8**
	14nm,0.6s						
MRKS	**Merke**	**3.46**	**57**	Pg	**Pb**	**13 10 08.1**	**-2.7**
	5.1nm,0.4s						
MRKS				Lg	Lg	13 10 51.5	
	14nm,0.6s						
AML	**Almayashu**	**3.51**	**68**	⇓iP	**Pn**	**13 10 04.8**	**+1.9**
	baz=68						
AML				⇓iS	**Sn**	**13 10 42.9**	**-0.6**
	baz=68						
EKS2	**Erkin-Say**	**3.77**	**61**	⇑iP	**Pn**	**13 10 08.4**	**+2.2**
	baz=60						
EKS2				⇑iS	**Sn**	**13 10 49.0**	**-0.6**
	baz=60						
UCH	**Uchtor**	**4.12**	**70**	⇑iP	**Pn**	**13 10 13.4**	**+2.1**
	baz=69						
UCH				⇑iS	**Sn**	**13 10 57.6**	**-1.0**
	baz=69						
AAK	**Ala-Archa**	**4.25**	**64**	⇑iP	**Pn**	**13 10 15.1**	**+2.3**
	baz=64						
AAK				⇑iS	**Sn**	**13 11 00.4**	**-0.9**
	baz=64						
AAK	**Ala-Archa**	**4.25**	**64**	⇓Pg	**Pb**	**13 10 22.7**	**-1.6**
	2.1nm,0.5s						
AAK				⇑Lg	Lg	13 11 15.4	
	6.6nm,0.7s						
KZA	**Kyzart**	**4.61**	**73**	⇑iP	**Pn**	**13 10 20.2**	**+2.2**
	baz=73						
KZA				⇑iS	**Sn**	**13 11 09.7**	**-1.0**
	baz=73						
TKM2	**Tokmak 2**	**5.10**	**65**	⇓Pg	**Pb**	**13 10 36.9**	**-2.0**
	3.3nm,1.1s						
TKM2				⇓Lg	Lg	13 11 42.3	
	5.3nm,0.6s						
MAKZ	**Makanchi**	**10.88**	**53**	⇑Lg	Lg	13 11 17.7	
	2.4nm,0.9s						

*KLM **03** 13:18:41.0, 8°.03S×103°.97E, h10km, mb4.1*
*IDC **03** 13:18:43.2±0.8, 7°.76S×104°.15E, h0km, mb4.3/20, mb1 4.4/22, mb1mx4.1/50, mbtmp4.3/22, ML4.0/2, MS3.6/9, Ms1 3.6/9, ms1mx3.2/38, Error ellipse: s-maj=22.0km s-min=11.1km az=35.0*
*DJA **03** 13:18:46.4±0.3, 8°S±3°×10°4E±°, h10km, M4.5/19, mB5.1/7, mb4.7/19, MLv4.5/13, Mw(mB)4.5/7*
*NEIC **03** 13:18:49.1±2.8, 7°.95S±0°.09×104°.20E±0°.08, h43km±4km, mb4.6/14, Error ellipse: s-maj=14.4km s-min=9.8km az=218.0*
ISC 03 13:18:44.8±2.2**, 7°.88S**±0°.06×**104°.11E**±0°.06**, h13**km±13km**, n96,** σ2s06/95**, mb4.6**/36**, MS3.7**/13**, 1D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**2.58**	**71**	P	**Pn**	**13 19 26.6**	**+0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SKJI				S	Sn	13 19 57.4	-0.2
BLSI	Bandar Lampung	2.74	24	P	Pn	13 19 26.9	-1.6
BLSI				S	Sn	13 19 58.7	-2.8
LWLI	Liwa	2.84	359	P	Pn	13 19 29.2	-0.8
LWLI				S	Sn	13 20 01.5	-2.7
DBJI	Dramaga	2.94	64	P	Pn	13 19 30.6	-0.6
DBJI				S	Sn	13 20 06.3	-0.1
XMIS	Christmas Isla	3.00	150	Pn	Pn	13 19 28.4	-3.8
CNJI	Cibinong	3.05	80	P	Pn	13 19 34.1	+1.3
CNJI				S	Sn	13 20 11.3	+2.1
MDSI	Maura Dua	3.37	1	P	Pn	13 19 35.5	-1.7
LEM	Lembang	3.64	74	Pn	Pn	13 19 41.4	+0.4
	5.3nm,0.3s,baz=188,slow=13,SNR=20						
LEM				Sn	Sn	13 20 20.7	-3.2
	9.5nm,0.3s,baz=97,slow=22,SNR=6.9						
MNAI	Manna	3.68	342	P	Pn	13 19 41.3	-0.1
MNAI	Manna	3.68	342		Pn	13 19 39.8	-1.7
CISI	Cisompet, Garu	3.69	85	P	Pn	13 19 42.2	+0.5
CISI	Cisompet, Garu	3.69	85		Pn	13 19 39.3	-2.4
KSI	Kapahiang	4.46	340	P	Pn	13 19 51.7	-0.6
KRJI	Kerinci	6.32	335	P	Pn	13 20 16.8	-1.1
	1.1nm3µm219nm,1.2s						
UGM	Wanagama	6.36	91		Pn	13 20 17.5	-0.9
PDSI	Padang	7.81	332	P	Pn	13 20 38.1	-0.2
	0.1nm13nm,0.9s						
SISI	Saibi	8.21	322	P	Pn	13 20 43.3	-0.4
	26nm,0.9s						
MNSI	Mandailing Nat	9.73	332	P	Pn	13 21 09.2	+4.6
RPSI	Rantau Prapat	11.71	334		Sn	13 23 41.3	-1.1
PSI	Prapat	11.80	334	Sn	Sn	13 23 41.3	-3.6
	1.0nm,0.3s,baz=360,slow=15,SNR=16						
IPM	Ipoh	12.65	346	P	Pn	13 21 44.0	-0.7
KCSI	Kotacane, Aceh	12.97	331	P	Pn	13 21 49.6	+0.6
	7.5nm,1.1s						
SBUM	Sibu	13.07	39	P	Pn	13 21 51.0	+0.7
MLSI	Meulaboh, Aceh	14.30	327	P	Pn	13 22 06.3	-0.9
	36nm,1.3s						
KAPI	Kappang	15.80	81	LR	LR	13 29 07.0	
	comp=Z,289nm,20.9s,baz=119,slow=40						
EDFI	Ende, Flores	17.42	94	P	P	13 22 51.2	+2.0
	10nm,1.1s						
SPMM	Sapulut	17.56	45	P	Pn	13 22 50.0	+0.4
MPSI	Mapaga	17.73	63	P	Pn	13 22 52.2	+0.5
	709nm63nm,1.3s						
MMRI	Maumere	17.96	94	Pn	Pn	13 22 49.9	-4.6
MMRI				IAmb	IAmb	13 23 03.1	
	comp=Z,28nm,0.7s						
BATI	Baumata	19.45	98	P	Pn	13 23 12.5	-0.2
	comp=Z,1.2nm,0.3s,baz=182,slow=1.8,SNR=1.7						
BATI				S	Sn	13 26 51.3	+0.3
	comp=Z,1.3nm,0.3s,baz=90,slow=20,SNR=2.9						
BATI	Baumata	19.45	98	P	Pn	13 23 13.5	+0.8
	comp=Z,22nm,0.8s						
SOEI	Soe	20.01	97	P	P	13 23 18.4	+0.7
	comp=Z,50nm,1.2s						
PSA00	Pilbara Seismi	20.39	134	P	Pn	13 23 23.3	-0.4
SANI	Sanana	22.55	76	P	P	13 23 43.6	-1.3
FITZ	Fitzroy Crossi	23.29	118	P	P	13 23 54.4	+1.8
	comp=Z,2.4nm,0.8s,baz=331,slow=17,SNR=3.7						
NLAI	Namlea	23.34	80	P	P	13 23 53.9	+0.8
	comp=Z,514nmcomp=Z,15nm,0.8s						
LBMI	Labuha	24.40	74	P	P	13 24 04.2	+0.9
	comp=Z,902nmcomp=Z,31nm,1.3s						
KNRA	Kununurra	25.33	110	P	P	13 24 12.5	+0.8
KNRA				IAmb	IAmb	13 24 15.1	
	comp=Z,19nm,1.1s						
CMAR	Chiang Mai Arr	26.66	349	P	P	13 24 23.1	-0.5
	comp=Z,18nm,1.0s,baz=183,slow=8.2,SNR=99						
CMAR				LR	LR	13 36 47.9	
	comp=Z,159nm,18.1s,baz=195,slow=41						
CHTO	Chiang Mai	27.01	349	P	P	13 24 26.3	-0.4
QIZ	Qiongzhong	27.33	12	P	P	13 24 35.6	+6.0
QIZ				S	S	13 29 14.9	+5.7
QIZ				LR	LR		
	comp=N,190nm,13.7s						
QIZ				LR	LR		
	comp=E,250nm,13.7s						
QIZ				LR	LR		
	comp=Z,200nm,16.7s						
NWAO	Narrogin (SRO)	27.74	156	LR	LR	13 33 15.9	
	comp=Z,127nm,21.6s,baz=308,slow=31						
H01W3	Cape Leeuwin H	28.41	162	T	T	13 54 35.9	
	baz=341						
H01W2	Cape Leeuwin H	28.43	163	T	T	13 54 52.6	
	baz=341						
H01W1	Cape Leeuwin H	28.43	162	T	T	13 54 43.7	
	baz=341						
H08S2	Diego Garcia H	31.32	268	T	T	13 58 49.9	
	baz=91,slow=74,SNR=34						
H08S3	Diego Garcia H	31.33	268	T	T	13 58 47.8	
	baz=91,slow=74,SNR=29						
H08S1	Diego Carcia H	31.34	268	T	T	13 58 44.5	
	baz=91,slow=74,SNR=37						
WB0	Warramunga Arr	31.63	115	P	P	13 25 07.6	-0.3
WB0				IAmb	IAmb	13 25 11.6	
	comp=Z,11nm,1.1s						
WRA	Warramunga Arr	31.64	115	P	P	13 25 08.1	+0.1
	comp=Z,6.0nm,0.9s,baz=286,slow=11,SNR=14						
WRAB	Tennant Creek	31.64	115	P	P	13 25 07.8	-0.2
WRAB				IAmb	IAmb	13 25 11.9	
	comp=Z,11nm,1.1s						
WB2	Warramunga Arr	31.65	115	P	P	13 25 08.1	+0.1
WB2				IAmb	IAmb	13 25 11.8	
	comp=Z,12nm,1.1s						
WR0	Warramunga Arr	31.82	115	P	P	13 25 07.8	-1.8
WR0				IAmb	IAmb	13 25 13.6	
	comp=Z,6.0nm,1.0s						
FORT	Forrest	31.95	139	P	P	13 25 10.2	-0.3
ASAR	Alice Springs	32.59	122	P	P	13 25 16.8	+0.5
	comp=Z,2.0nm,0.9s,baz=298,slow=7.9,SNR=14						
ASAR				PcP	PcP	13 28 03.4	+0.6
	comp=Z,0.8nm,0.9s,baz=288,slow=2.3,SNR=3.8						
KMI	Kunming	32.83	358	P	P	13 25 19.9	+1.4
KMI				pP	pwP	13 25 28.0	-0.2
KMI				sP	sP	13 25 32.0	+11
KMI				S	S	13 30 41.1	+5.3
KMI				pmax	pmax		
	comp=Z,20nm,1.0s						
KMI				pmax	pmax		
	comp=Z,58nm,3.1s						
KMI				LR	LR		
	comp=N,500nm,10.8s						
KMI				LR	LR		
	comp=E,260nm,9.9s						
KMI				LR	LR		
	comp=Z,380nm,13.1s						
GYA	Guiyang	34.22	4⇓	*i*P	P	13 25 30.5	0.0
GYA				PP	PP	13 26 57.6	+9.4
GYA				S	S	13 30 59.5	+2.3
GYA				SS	SnSn	13 33 07.2	+1.1
GYA				pmax	pmax		
	comp=Z,20nm,1.1s						
GYA				pmax	pmax		
	comp=Z,60nm,3.5s						
GYA				LR	LR		
	comp=N,240nm,10.8s						
GYA				LR	LR		
	comp=E,270nm,13.9s						
GYA				LR	LR		
	comp=Z,350nm,13.9s						
CD2	Chengdu	38.57	360	*e*P	P	13 26 13.0	+5.5
COEN	Coen	38.80	102	P	P	13 26 05.9	-3.8
COEN				IAmb	IAmb	13 26 09.2	
	comp=Z,12nm,1.4s						
XAN	Xi'an	41.94	6	P	P	13 26 34.0	-1.4
XAN				pP	sP	13 26 42.4	+4.2
XAN				PP	PP	13 28 14.4	+1.7
XAN				S	S	13 32 49.4	-4.3
XAN				sS	sS	13 33 05.0	+7.6
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
XAN				pmax	pmax		
	comp=Z,91nm,4.4s						
XAN				LR	LR		
	comp=N,200nm,14.6s						
XAN				LR	LR		
	comp=E,170nm,13.6s						
XAN				LR	LR		
	comp=Z,260nm,15.2s						
STKA	Stephens Creek	42.24	130	P	P	13 26 38.4	+0.4
	comp=Z,3.2nm,0.8s,baz=282,slow=11,SNR=4.9						
STKA				LR	LR	13 45 36.0	
	comp=Z,72nm,19.5s,baz=284,slow=38						
STKA	Stephens Creek	42.24	130	P	P	13 26 38.2	+0.2
LZH	Lanzhou	43.73	360	*e*P	P	13 26 50.7	+0.6
LZH				pP	pwP	13 26 59.6	-0.2
LZH				sP	sP	13 27 04.3	+11
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
GTA	Gaotai	47.22	355	*e*P	P	13 27 17.6	0.0
GTA				pP	pwP	13 27 26.8	-0.5
GTA				sP	sP	13 27 30.6	+10
GTA				S	S	13 34 08.4	-2.0
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,45nm,5.7s						
GTA				LR	LR		
	comp=N,110nm,14.0s						
GTA				LR	LR		
	comp=E,200nm,15.2s						
GTA				LR	LR		
	comp=Z,100nm,16.2s						
TOO	Toolangi	47.68	135	P	P	13 27 21.2	-0.1
EIDS	Eidsvold	47.97	117	P	P	13 27 23.1	-0.6
EIDS				IAmb	IAmb	13 27 38.4	
	comp=Z,8.5nm,1.1s						
JNU	Nakatsue	48.07	31	LR	LR	13 49 19.9	
	comp=Z,25nm,18.3s,baz=170,slow=38						
HHC	Hu-ho-hao-te	48.97	8	P	P	13 27 33.8	+2.6
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,50nm,6.9s						
KSRS	Korea Array	50.30	25	P	P	13 27 40.5	-0.7
	comp=Z,2.1nm,0.7s,baz=199,slow=9.1,SNR=9.5						
JCJ	Chichijima	50.69	45	LR	LR	13 52 03.8	
	comp=Z,20nm,18.7s,baz=320,slow=40						
WMQ	Urumqi	53.56	345	*e*P	P	13 28 11.2	+5.6
KSH	Kashi	53.88	333	P	P	13 28 00.3	-7.7
KSH				pP	pP	13 28 04.6	-5.5
KSH				pmax	pmax		
	comp=Z,25nm,1.1s						
SONM	Songino Array	55.51	2	P	P	13 28 19.8	+0.1
	comp=Z,6.2nm,1.0s,baz=182,slow=8.6,SNR=29						
USRK	Ussuriysk Ar.	57.64	23	P	P	13 28 33.8	-0.9
	comp=Z,6.3nm,0.9s,baz=214,slow=8.6,SNR=7.7						
MKAR	Makanchi Array	57.79	342	P	P	13 28 35.7	-0.2
	comp=Z,2.5nm,0.6s,baz=150,slow=7.3,SNR=24						
KLR	Kul'dur	61.80	20	P	P	13 29 02.1	-1.3
	comp=Z,3.7nm,1.0s,baz=233,slow=5.8,SNR=6.7						
KURBB	Kurchatov Arra	62.34	342	P	P	13 29 06.5	-0.3
	comp=Z,2.4nm,0.9s,baz=160,slow=6.3,SNR=17						
ZALV	Zalesovo Beam	63.71	347	P	P	13 29 15.6	-0.3
	comp=Z,3.1nm,0.5s,baz=147,slow=3.5,SNR=28						
ZALV				LR	LR	14 00 18.2	
	comp=Z,46nm,18.1s,baz=99,slow=39						
MAW	Mawson	65.72	196	LR	LR	13 50 34.8	
	comp=Z,46nm,21.8s,baz=58,slow=29						
YAK	Yakutsk	72.47	12	P	P	13 30 09.7	-1.1
	comp=Z,12nm,0.8s,baz=111,slow=1.3,SNR=2.7						
MATP	Matopo	73.85	251	P	P	13 30 19.8	-0.3
	comp=Z,1.0nm,0.6s,baz=106,slow=6.6,SNR=2.2						
KBZ	Khabaz	75.40	319	P	P	13 30 29.3	+1.0
	comp=Z,1.0nm,0.7s,baz=297,slow=13,SNR=3.8						
PETK	Petropavlovsk-	75.77	30	P	P	13 30 29.5	-0.9
	comp=Z,0.8nm,0.8s,baz=229,slow=5.4,SNR=4.1						
MA2	Magadan	76.77	22	P	P	13 30 35.4	-0.5
	comp=Z,5.2nm,1.0s,baz=191,slow=2.8,SNR=7.0						
NRIK	Noril'sk	77.89	354	P	P	13 30 41.7	-0.2
	comp=Z,4.4nm,0.9s,baz=162,slow=4.2,SNR=7.2						
SEY	Seymchan	79.60	20	P	P	13 30 51.0	-0.4
	comp=Z,1.0nm,0.9s,baz=207,slow=6.9,SNR=5.6						
BRTR	Keskin Array B	80.28	312	P	P	13 30 56.5	+0.6
	comp=Z,0.8nm,0.9s,baz=111,slow=6.8,SNR=5.0						
KLMR	Klimovskoe	84.87	334	*e*P	P	13 31 18.2	-0.9
KLMR				AMP		13 31 21.6	
	comp=Z,11nm,1.3s						
KOLS	Kolonicke sedl	90.55	319	*e*P	P	13 31 49.3	+2.5
KEST	Kesra	98.40	305	LR	LR	14 20 55.1	
	comp=Z,53nm,18.6s,baz=209,slow=38						
YKA	Yellowknife Ar	118.65	19	PKP	PKPdf	13 37 32.5	+0.1
	comp=Z,0.2nm,0.8s,baz=336,slow=0.6,SNR=3.9						
TX31	Lajitas Ar. Si	146.28	47	PKPbc	PKPab	13 38 27.8	+1.0
TX32	Lajitas Array	146.28	47	PKPbc	PKPab	13 38 27.6	+0.8
TXAR	Lajitas Array	146.28	47	PKPbc	PKPab	13 38 26.7	-0.1
	comp=Z,3.3nm,0.9s,baz=298,slow=2.7,SNR=25						
V52A	Sevierville	151.29	13	PKPbc	PKiKP	13 38 39.5	+0.2
TKL	Tuckaleechee C	151.42	13	PKPbc	PKPbc	13 38 39.4	+0.3
	comp=Z,4.5nm,0.7s,baz=36,slow=2.4,SNR=5.9						

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*MEX **03** 13:37:27.6±0.7, 15.°89N×98.°26W, h13km±8km, MD4.6*
*IDC **03** 13:37:28.3±1.0, 16.°32N×97.°93W, h0km, mb4.3/19, mb1 4.5/23, mb1mx4.3/40, mbtmp4.3/23, ML3.8/4, MS3.7/17, Ms1 3.7/17, ms1mx3.5/36, Error ellipse: s-maj=26.1km s-min=11.7km az=35.0*
*NEIC **03** 13:37:31.4±1.8, 16.°4N±0.°1×97.°9W±0.°1, h24km±6km, Error ellipse: s-maj=19.2km s-min=11.5km az=218.0*
ISC 03 13:37:29.8±1.2**, 16.°24N**±0.°05**×97.°94W**±0.°03**, h14**km±7km**, n346, σ0.s97**/329**, mb4.6**/46**, MS3.7**/14**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.23	309		Pg	13 37 36.0	+1.0
PNIG					Sb	13 37 42.1	+2.2
PNIG	Pinotepa	0.23	309	*i* P	Pg	13 37 36.0	+1.0
PNIG				*i* S	Sb	13 37 43.4	+3.5
YOIG	Yosondua	0.72	32	*i* P	Pn	13 37 46.4	+0.7
YOIG				*e*S	Sn	13 38 01.7	+5.0
PEIG	Puerto Escondi	0.80	108	*i* P	Pb	13 37 44.6	-0.9
PEIG				*i* S	Sb	13 37 58.0	+1.8
TXIG	Tlaxiaco	1.02	9	*i* P	Pn	13 37 50.3	+0.4
TXIG				*i* S	Sn	13 38 07.0	+2.9
CRIG	Cruz Grande	1.25	293	*i* P	Pn	13 37 46.1	-6.7
CRIG				*i* S	Sb	13 38 00.6	-8.4
VHO	Vista Hermosa	1.42	54	*e*P	Pg	13 37 56.5	-0.7
VHO				*i* S	Sg	13 38 18.9	+3.2
TLIG	Tlapa	1.44	335		Sg	13 38 15.3	-1.1
TLIG	Tlapa	1.44	335		Pn	13 37 54.4	-1.2
TLIG	Tlapa	1.44	335	*e*P	Pn	13 37 54.2	-1.4
TLIG				*i* S	Sg	13 38 14.2	-2.2
HLIG	Huajuapan de L	1.58	5	*e*P	Pb	13 37 58.4	-0.6
HLIG				*i* S	Sg	13 38 20.8	-0.2
FTIG	Fresnillo de T	1.67	354	*e*P	Pb	13 37 59.0	-1.4
FTIG				*i* S	Sg	13 38 22.7	-0.9
HUIG	Huatulco	1.82	105		Pn	13 37 58.5	-2.2
HUIG	Huatulco	1.82	105	*e*P	Pn	13 37 58.5	-2.2
HUIG				*i* S	Sn	13 38 23.6	0.0
TOIG	Toxpalan	2.02	24	*e*P	Pb	13 38 04.8	-1.6
TOIG				*i* S	Sg	13 38 33.8	-1.1
CMIG	Matias Romero	3.05	74	Pn	Pn	13 38 17.8	+0.2
	20nm,0.3s,baz=230,slow=12,SNR=183						
CMIG				Sn	Sn	13 38 54.0	+0.2
	38nm,0.3s,baz=274,slow=17,SNR=6.9						
CMIG	Matias Romero	3.05	74	*e*P	Pn	13 38 17.8	+0.2
CMIG				*i* S	Sb	13 38 58.3	-2.6
CCIG	Comitan	5.57	89		Pn	13 38 56.0	+3.6
APG	El Apazote	7.30	99	Pn	Pn	13 39 16.8	+0.4
	0.8nm,0.3s,baz=300,slow=8.8,SNR=4.7						
APG				Sn	Sn	13 40 41.2	+2.0
	2.3nm,0.3s,baz=45,slow=20,SNR=2.2						
TEIG	Tepich	10.00	65	Pn	Pn	13 39 53.7	+0.7
	6.2nm,0.3s,baz=49,slow=0.0,SNR=26						
TEIG				LR	LR	13 44 01.7	
	comp=Z,394nm,20.9s,baz=255,slow=40						
TEIG	Tepich	10.00	65		Pn	13 39 52.7	-0.4
833A	Chaparral WMA,	12.10	354	P	Pn	13 40 21.6	-0.2
	baz=173,SNR=5.3						
JTS	Las Juntas de	13.95	113	Pn	Pn	13 40 50.1	+2.8
	0.8nm,0.3s,baz=340,slow=10.0,SNR=10						
JTS	Las Juntas de	13.95	113		Pn	13 40 50.0	+2.8
LPIG	La Paz	13.99	306	LR	LR	13 45 02.7	
	comp=Z,194nm,20.8s,baz=124,slow=33						
TXAR	Lajitas Array	14.05	339	Pn	Pn	13 40 49.8	+1.1
	0.0nm,0.3s,baz=158,slow=14,SNR=13						
TXAR				Lg	Lg	13 44 50.7	
	0.0nm,0.3s,baz=161,slow=24,SNR=1.7						
TXAR				LR	LR	13 46 56.1	
	comp=Z,638nm,19.4s,baz=0.0,slow=41						
TX31	Lajitas Ar. Si	14.05	339		Pn	13 40 44.0	-4.6
TX32	Lajitas Array	14.05	339		Pn	13 40 44.2	-4.5
JCT	Junction City	14.27	353	P	Pn	13 40 52.7	+1.1
	baz=172						
JCT	Junction City	14.27	353		Pn	13 40 49.8	-1.8
WHTX	Lake Whitney,	15.68	2	P	Pn	13 41 10.1	-0.3
	baz=182,SNR=14						
WHTX	Lake Whitney,	15.68	2		Pn	13 41 09.2	-1.2
WHTX				IAmb	IAmb	13 41 21.0	
	comp=Z,62nm,0.8s						
ABTX	Abilene, Hawle	16.38	355	P	Pn	13 41 19.6	+0.2
	baz=174,SNR=33						
ABTX	Abilene, Hawle	16.38	355	P	P	13 41 21.4	-0.8
MNTX	Cornudas Mount	16.81	338	P	Pn	13 41 25.4	+0.5
	baz=154,SNR=17						
MNTX	Cornudas Mount	16.81	338	P	Pn	13 41 25.9	+1.0
VBMS	Vicksburg	17.27	22	P	Pn	13 41 31.1	+0.5
	baz=205						
MSTX	Muleshoe	18.18	347	P	Pn	13 41 41.5	-0.5
	baz=165,SNR=12						
X37A	Clayton	18.41	7	P	P	13 41 45.5	+0.8
WMOK	Wichita Mounta	18.43	358	P	Pn	13 41 44.0	-0.9
	baz=177,SNR=8.3						
121A	Cookes Peak, D	18.51	333	P	Pn	13 41 47.1	+1.0
	baz=149,SNR=12						
121A	Cookes Peak, D	18.51	333	P	P	13 41 45.8	-0.1
121A				IAmb	IAmb	13 41 55.6	
	comp=Z,60nm,1.2s						
MIAR	Mount Ida	18.64	11	P	P	13 41 46.7	-0.5
	baz=193,SNR=10.0						
MIAR	Mount Ida	18.64	11	P	P	13 41 45.7	-1.5
X40A	Basin Creek Fa	18.74	13	P	P	13 41 47.9	-0.2
	baz=195						
AMTX	Amarillo	18.86	350	P	P	13 41 49.1	-0.6
	baz=169						
AMTX	Amarillo	18.86	350	P	P	13 41 49.2	-0.6
AMTX				IAmb	IAmb	13 42 00.6	
	comp=Z,35nm,0.9s						
W39A	Magazine	19.24	10	P	P	13 41 53.7	0.0
	baz=192,SNR=17						
W39A	Magazine	19.24	10	P	Pn	13 41 54.7	0.0
W39A				IAmb	IAmb	13 42 06.9	
	comp=Z,42nm,1.2s						
DWPF	Disney Wildern	19.29	49	P	P	13 41 53.4	-0.9
	baz=236						
LRAL	Lakeview Retre	19.43	29	P	P	13 41 55.3	-0.5
	baz=213						
W41B	Gary Mavity, V	19.53	14	P	P	13 41 56.4	-0.5
	baz=196,SNR=7.4						
TUL1	Leonard	19.68	5	P	P	13 41 58.1	-0.4
	baz=186,SNR=16						
OXF	Oxford	19.74	21	P	P	13 41 58.6	-0.5
	baz=205,SNR=6.2						
TUC	Tucson	19.79	326	P	P	13 42 00.5	+0.6
	baz=141						
Z50A	Ashland	20.12	30	P	P	13 42 03.4	0.0
	baz=216						
ANMO	Albuquerque	20.13	339	P	P	13 42 04.6	+1.0
	comp=Z,22nm,1.0s,baz=148,slow=12,SNR=58						
ANMO	Albuquerque	20.13	339	P	P	13 42 04.7	+1.0
	baz=155						
ANMO	Albuquerque	20.13	339	P	Pn	13 42 05.0	-0.5
FCAR	Ozark Folk Cen	20.24	14	P	P	13 42 03.6	-1.0
HHAR	Hobbs	20.27	9	P	P	13 42 02.8	-2.2
HHAR				IAmb	IAmb	13 42 15.6	
	comp=Z,25nm,0.9s						
Y49A	Blount Mountai	20.38	29	P	P	13 42 04.5	-1.7
U40A	Yellville	20.54	12	P	P	13 42 08.1	+0.2
	baz=194,SNR=54						
PLAL	Pickwick Lake	20.65	24	IAmb	IAmb	13 42 14.7	
	comp=Z,28nm,0.9s						
214A	Organ Pipe Nat	20.67	322	P	P	13 42 10.1	+0.7
	baz=135,SNR=8.8						
GOGA	Godfrey	21.51	35	P	P	13 42 17.9	-0.5
	baz=221,SNR=5.4						
Y52A	Lilburn	21.54	33	P	P	13 42 18.4	-0.3
	baz=219,SNR=7.4						
W18A	Petrified Fore	21.56	333	P	P	13 42 18.8	-0.3
	baz=148,SNR=7.5						
T25A	Trinidad	21.59	346	P	P	13 42 20.1	+0.7
	baz=163,SNR=44						
SWET	Sewanee	21.73	27	IAmb	IAmb	13 42 39.4	
	comp=Z,23nm,1.0s						
WVT	Waverly	21.76	23	P	P	13 42 20.5	-0.5
	baz=207						
WVT	Waverly	21.76	23	P	P	13 42 19.8	-1.1
WVT				IAmb	IAmb	13 42 24.3	
	comp=Z,27nm,0.8s						
X16A	Lo Mia Camp, P	21.79	329	IAmb	IAmb	13 42 30.9	
	comp=Z,42nm,0.8s						
V48A	Smith Brothers	21.80	25	IAmb	IAmb	13 42 23.3	
	comp=Z,26nm,0.8s						
W50A	Signal Mountai	22.00	29	IAmb	IAmb	13 42 43.2	
	comp=Z,30nm,1.0s						
GTBY	Guantanamo Bay	22.00	77	P	P	13 42 24.1	+0.3
157A	Early Branch	22.43	40	P	P	13 42 27.2	-1.0
	baz=227						
SDCO	Great Sand Dun	22.43	344	P	P	13 42 28.9	+0.3
	baz=160,SNR=23						
CCM	Cathedral Cave	22.52	14	P	P	13 42 29.4	+0.2
	baz=197						
CBKS	Cedar Bluff	22.54	356	P	P	13 42 30.2	+0.8
	baz=175						
CPCT	Cooper Cave	22.57	30	P	P	13 42 28.7	-1.1
CPCT				IAmb	IAmb	13 42 41.1	
	comp=Z,24nm,1.1s						
WUAZ	Wupatki	22.64	330	P	P	13 42 31.8	+1.2
	baz=144,SNR=19						
Z56A	Williston	22.65	38	P	P	13 42 30.1	-0.5
	baz=225						
GLA	Glamis	22.65	321	P	P	13 42 31.0	+0.3
	baz=133						
KSU1	Kansas State U	22.80	3	P	P	13 42 31.7	-0.4
	baz=183						
Y55A	Saluda	22.80	36	P	P	13 42 32.1	-0.1
	baz=223,SNR=5.9						
S22A	4UR Ranch, Cre	22.81	342	P	P	13 42 32.3	-0.3
	baz=157,SNR=42						
MVCO	Mesa Verde	22.88	338	P	P	13 42 33.9	+0.6
	baz=153,SNR=38						
Y12C	Blythe	22.96	322	P	P	13 42 34.3	+0.4
	baz=135						
X54A	Belton	22.96	35	P	P	13 42 33.2	-0.6
	baz=221						
158A	Hollywood	22.97	41	P	P	13 42 33.4	-0.5
	baz=229						
Z57A	Bowman	23.03	39	P	P	13 42 34.5	-0.1
	baz=227,SNR=7.0						
KSCO	Kaye Shedlock’	23.05	351	P	P	13 42 34.8	-0.1
	baz=168						
TKL	Tuckaleechee C	23.10	31	P	P	13 42 35.3	0.0
	comp=Z,6.2nm,0.8s,baz=190,slow=11,SNR=6.3						
PDMCI	Parker Dam,Lak	23.14	324	P	P	13 42 35.8	+0.1
	baz=137						
SWSC	Sam W. Stewart	23.18	319	P	P	13 42 36.4	+0.3
	baz=131						
IKP	In-Ko-Pah, Jac	23.19	318	P	P	13 42 36.6	+0.3
	baz=130						
NHSC	New Hope	23.23	40	P	P	13 42 36.0	-0.6
	baz=228						
X55A	Gracelyn & Ava	23.32	36	P	P	13 42 37.2	-0.3
	baz=223						
BC3	Big Chuckawall	23.45	321	P	P	13 42 39.1	+0.1
	baz=133,SNR=15						
W54A	Cherokee Point	23.47	34	P	P	13 42 39.5	+0.5
	baz=221,SNR=6.1						
MONP2	Monument Peak	23.55	318	P	P	13 42 39.9	-0.1
	baz=130,SNR=10						
Z58A	St. Stephen	23.61	41	P	P	13 42 39.7	-0.7
	baz=228						
IRM	Iron Mountain	23.61	322	P	P	13 42 40.5	0.0
	baz=135,SNR=14						
X56A	White Oak	23.68	37	P	P	13 42 41.9	+0.9
	baz=224,SNR=6.8						
Y57A	Sumter	23.72	39	P	P	13 42 40.7	-0.7
	baz=226						
T50A	Nancy	23.73	27	IAmb	IAmb	13 42 43.4	
	comp=Z,14nm,0.8s						
NEE2	Needles Airpor	23.75	324	P	P	13 42 41.6	-0.1
	baz=137						
U15A	North Rim	23.81	330	IAmb	IAmb	13 42 50.1	
	comp=Z,25nm,0.8s						
KMSC	Kings Mountain	23.98	35	P	P	13 42 43.9	0.0
	baz=222,SNR=5.7						
BELC	Belle Mtn. Jos	24.02	321	P	P	13 42 44.3	-0.1
	baz=133,SNR=5.8						
XPFO	Pion Flat	24.04	319	P	P	13 42 43.5	-1.2
PFO	Pinyon Flats O	24.04	319	P	P	13 42 45.3	+0.6
	comp=Z,2.8nm,0.9s,baz=132,slow=9.5,SNR=7.6						
PFO				LR	LR	13 52 30.7	
	comp=Z,220nm,19.1s,baz=134,slow=38						
PFO	Pinyon Flats O	24.04	319	P	P	13 42 44.5	-0.1
	baz=131						
PFO	Pinyon Flats O	24.04	319	P	P	13 42 43.6	-1.1
Y58A	Scranton	24.08	40	P	P	13 42 44.8	0.0
	baz=228						
V54A	Nebo	24.12	33	P	P	13 42 44.9	-0.4

baz=220
SMCO **Snowmass** 24.18 343 P P 13 42 45.6 -0.6
SMCO IAmb IAmb 13 42 56.5
comp=Z,32nm,1.1s
WCI **Wyandotte Cave** 24.18 23 P P 13 42 45.3 -0.5
baz=208
WCI **Wyandotte Cave** 24.18 23 P P 13 42 44.3 -1.4
GMRC **Granite Mounta** 24.36 323 P P 13 42 47.5 -0.1
baz=135
W56A **Indian Trail** 24.39 36 P P 13 42 48.0 +0.3
baz=224,SNR=9.2
ISCO **Idaho Springs** 24.41 346 P P 13 42 49.1 +0.9
baz=162,SNR=40
ISCO **Idaho Springs** 24.41 346 P P 13 42 50.0 +1.8
MURC **Murrieta** 24.50 318 P P 13 42 49.0 +0.3
baz=130
V55A **Taylorsville** 24.57 34 P P 13 42 48.9 -0.4
baz=222
Y59A **Loris** 24.63 41 P P 13 42 49.9 0.0
baz=229
X58A **Rowland** 24.72 39 P P 13 42 51.1 +0.4
baz=227,SNR=5.2
W57A **Gilead** 24.75 37 P P 13 42 50.7 -0.3
baz=225
U54A **Nelsons Funny** 24.76 32 P P 13 42 51.5 +0.4
baz=220,SNR=12
T53A **Wise** 24.76 31 P P 13 42 51.4 +0.3
baz=218
HEC **Hector,Ludlow** 24.79 322 P P 13 42 51.9 +0.5
baz=133
OGNE **Ogallala** 24.87 353 P P 13 42 52.1 0.0
baz=170,SNR=5.4
V56A **Mocksville** 24.93 35 P P 13 42 52.8 +0.2
baz=223
TUQ **Turquoise Moun** 24.97 323 P P 13 42 53.0 -0.1
baz=135,SNR=14
SCI2 **San Clemente I** 25.00 316 P P 13 42 53.2 -0.1
baz=127
Q48A **North Vernon** 25.01 23 P P 13 42 52.7 -0.6
baz=209,SNR=11
BGNE **Belgrade** 25.08 360 P P 13 42 54.1 +0.2
baz=179
MTPU **Mount Pierson** 25.08 333 P P 13 42 56.1 +1.7
W58A **Raeford** 25.10 38 P P 13 42 54.8 +0.7
baz=227
U55A **TA2, Sparta** 25.14 33 P P 13 42 54.4 -0.2
baz=221,SNR=12
X59A **McDuffie Farm,** 25.18 40 P P 13 42 54.5 -0.4
baz=228
BFSC **Mount Baldy Ra** 25.20 319 P P 13 42 55.1 -0.1
baz=130
T54A **Tazewell** 25.30 32 P P 13 42 55.4 -0.6
baz=219,SNR=7.2
SRU **San Rafael Swe** 25.31 337 P P 13 42 56.8 +0.6
HDIL **Hopedale** 25.36 16 P P 13 42 56.8 +0.3
baz=200
GSC **Goldstone, Bar** 25.39 322 P P 13 42 57.3 +0.4
baz=133
V57A **Coltrane Farms** 25.39 36 P P 13 42 56.9 +0.1
baz=224
Q49A **Aurora** 25.39 24 P P 13 42 56.8 0.0
baz=210
O20A **White River Ci** 25.44 341 P P 13 42 58.2 +0.8
baz=156,SNR=20
S53A **Williamson** 25.51 30 P P 13 42 58.2 +0.3
baz=217
N23A **Red Feather La** 25.52 346 P P 13 42 58.8 +0.6
baz=162,SNR=29
V58A **Windy Hill, Pi** 25.70 37 P P 13 42 59.8 +0.2
baz=226,SNR=12
T55A **Pulaski** 25.75 33 P P 13 43 00.6 +0.5
baz=221
ROSC **El Rosal** 25.80 113 P P 13 43 03.1 +1.9
comp=Z,6.6nm,0.4s,baz=270,slow=20,SNR=1.2
ROSC **El Rosal** 25.80 113 IAmb IAmb 13 43 20.0
comp=Z,20nm,1.1s
SNCC **San Nicolas Is** 25.82 315 P P 13 43 01.2 +0.5
baz=126
EDW2 **Edwards Air Fo** 25.83 320 P P 13 43 00.0 -0.8
baz=131
SFIN **Lafayette** 25.83 19 P P 13 43 00.4 -0.3
baz=204,SNR=6.7
SCIA **State Center** 25.90 8 P P 13 43 01.4 +0.1
baz=190
P49A **Miami Univ. Ec** 25.92 24 P P 13 43 01.1 -0.5
baz=210,SNR=14
S54A **Dingess, Beckl** 26.00 31 P P 13 43 02.3 0.0
baz=219
BLA **Blacksburg** 26.01 33 P P 13 43 02.8 +0.4
baz=221
U57A **Blanch** 26.03 36 P P 13 43 03.3 +0.8
baz=224,SNR=14
LRMC **Laurel Mtn Rad** 26.03 321 P P 13 43 03.3 +0.6
baz=132
Q51A **Peebles** 26.05 27 P P 13 43 02.9 +0.2
baz=213
T56A **Rocky Mt** 26.08 34 P P 13 43 03.6 +0.5
baz=222
R53A **Hurricane** 26.11 29 P P 13 43 03.6 +0.3
baz=217
OSI **Osito Audit: C** 26.12 318 P P 13 43 04.5 +1.0
baz=129
V59A **Middlesex** 26.20 38 P P 13 43 04.2 +0.1
baz=227,SNR=7.8
FURC **Furnace Creek,** 26.24 324 P P 13 43 05.3 +0.9
baz=135
TPNV **Topopah Spring** 26.24 325 P P 13 43 05.4 +0.7
baz=137
TPNV **Topopah Spring** 26.24 325 IAmb IAmb 13 43 13.7
comp=Z,15nm,0.9s
MPMC **Manual Prospec** 26.31 322 P P 13 43 05.3 -0.1
baz=133
P50A **Jamestown** 26.35 25 P P 13 43 05.5 +0.1
baz=212
O48A **Farmland** 26.38 22 P P 13 43 05.1 -0.7
baz=208,SNR=9.6
U58A **Oxford** 26.45 37 P P 13 43 05.8 -0.6
baz=226,SNR=9.1
R54A **Victor** 26.46 31 P P 13 43 06.2 -0.3
baz=219
Q52A **Bidwell** 26.47 28 P P 13 43 06.5 0.0
baz=216
T57A **Hurt** 26.48 35 P P 13 43 06.8 +0.1
baz=224,SNR=6.8
T57A **Hurt** 26.48 35 P P 13 43 07.0 +0.3
T57A IAmb IAmb 13 43 10.3
comp=Z,24nm,0.9s
ARVC **Arvin** 26.51 319 P P 13 43 07.8 +0.8
baz=130
P51A **Williamsport** 26.55 26 P P 13 43 07.8 +0.6
baz=214
O49A **Covington** 26.63 24 P P 13 43 07.9 -0.1
baz=210
Q53A **Leroy** 26.73 29 P P 13 43 09.0 +0.1
baz=217
V60A **Jim Taylor Roa** 26.79 40 P P 13 43 10.2 +0.8
baz=229
T58A **Grand View Acr** 26.85 36 P P 13 43 09.8 -0.1
baz=225,SNR=8.3
U59A **Littleton** 26.86 38 P P 13 43 11.0 +0.9
baz=227
O50A **Cable** 26.88 25 P P 13 43 09.8 -0.4
baz=212
GRAC **Grapevine Rang** 26.89 324 P P 13 43 10.9 +0.4
baz=135
CWC **Cottonwood Cre** 26.92 322 P P 13 43 11.2 +0.4
baz=133
R11A **Troy Canyon, C** 26.94 328 P P 13 43 11.5 +0.5
baz=140,SNR=11
N48A **Decatur** 26.96 22 P P 13 43 11.1 +0.2
baz=208
R55A **Marlinton** 26.97 32 P P 13 43 11.2 +0.1
baz=220
P52A **Corning** 27.08 28 P P 13 43 12.1 +0.1
baz=215
VES **Vestal, Richgr** 27.13 320 P P 13 43 13.1 +0.6
baz=130
DUG **Dugway, Tooele** 27.15 334 P P 13 43 13.3 +0.5
baz=147,SNR=24
Q54A **Coxs Mills** 27.16 30 P P 13 43 12.8 +0.1
baz=218
S57A **Dark Hollow, R** 27.20 34 P P 13 43 12.7 -0.5
baz=223,SNR=6.8
ACSO **Alum Creek Sta** 27.21 26 P P 13 43 13.2 0.0
baz=213
U60A **Pendleton** 27.32 39 P P 13 43 13.7 -0.5
baz=228,SNR=6.3
SMMC **Simmler** 27.37 318 P P 13 43 14.6 -0.1
baz=128,SNR=5.4
JFWS **Jewell Farm** 27.38 12 P P 13 43 14.8 +0.1
baz=196
ECSD **EROS Data Cent** 27.42 2 P P 13 43 15.0 -0.1
baz=183
ECSD **EROS Data Cent** 27.42 2 P P 13 43 12.5 -2.6
T59A **Double "B" Far** 27.43 37 P P 13 43 15.0 -0.1
baz=227
S58A **Poland Farm, P** 27.59 36 P P 13 43 17.3 +0.7
baz=225
N50A **Nevada** 27.60 25 P P 13 43 16.5 -0.1
baz=212
O52A **Adamsville** 27.61 27 P P 13 43 16.9 +0.2
baz=215
SDV **Santo Domingo** 27.61 102 P P 13 43 18.3 +1.0
comp=Z,7.5nm,0.7s,baz=278,slow=5.1,SNR=10
SDV LR LR 13 54 56.0
comp=Z,93nm,21.0s,baz=37,slow=38
SDV **Santo Domingo** 27.61 102 P P 13 43 17.6 +0.3
SDV IAmb IAmb 13 43 25.3
comp=Z,13nm,0.8s
P54A **Burton** 27.82 30 P P 13 43 18.7 0.0
baz=218
R57A **Stanardsville** 27.82 34 P P 13 43 19.0 +0.4
baz=223
M49A **Liberty Center** 27.88 23 P P 13 43 19.1 -0.1
baz=210
R58B **Mineral** 27.93 35 P P 13 43 20.3 +0.6
baz=225
R58A **Rapidan** 28.11 35 P P 13 43 20.9 -0.3
baz=224,SNR=7.4
L48A **N Adams** 28.12 22 P P 13 43 21.3 -0.1
baz=208
BW06 **Boulder Array** 28.24 342 P P 13 43 23.3 +0.6
baz=156
PDAR **Pinedale Array** 28.24 342 P P 13 43 22.9 +0.2
comp=Z,2.3nm,0.7s,baz=136,slow=11,SNR=15
NVAR **Mina Array Bea** 28.43 325 P P 13 43 25.4 +0.9
comp=Z,2.9nm,0.8s,baz=156,slow=9.7,SNR=27
NVAR LR LR 13 56 00.0
comp=Z,207nm,19.8s,baz=159,slow=39
ELK **Elko** 28.65 332 P P 13 43 27.3 +1.0
comp=Z,3.3nm,0.9s,baz=163,slow=6.9,SNR=9.3
ELK LR LR 13 55 09.9
comp=Z,188nm,18.6s,baz=165,slow=37
K48A **Perry** 28.99 21 P P 13 43 28.6 -0.4
baz=208
REDW **Red Top Meadow** 29.18 340 P P 13 43 29.7 -1.4
REDW IAmb IAmb 13 43 37.7
comp=Z,20nm,1.2s
SPMN **Marine on St.** 29.21 7 P P 13 43 31.0 0.0
baz=190
I45A **Fountain** 29.43 17 P P 13 43 33.5 +0.6
baz=203
L53A **Girard** 29.79 27 P P 13 43 36.4 +0.2
baz=216
SSPA **Standing Stone** 29.88 32 P P 13 43 36.8 -0.2
baz=221
M55A **Ridgway** 30.09 29 P P 13 43 37.7 -1.1
baz=219
ATAH **Atahualpa** 30.23 139 LR LR 13 53 33.5
comp=Z,116nm,19.1s,baz=279,slow=32
RLMT **Red Lodge** 30.33 344 P P 13 43 40.9 -0.2
baz=155,SNR=12
RLMT **Red Lodge** 30.33 344 IAmb IAmb 13 43 47.7
comp=Z,8.9nm,0.8s
I48A **Sherman Twp** 30.35 20 P P 13 43 40.7 -0.4
baz=208
BEKR **Beckworth** 30.58 325 P P 13 43 43.4 0.0
I51A **Listowel** 31.00 24 P P 13 43 46.3 -0.6
baz=213
F45A **CMU Biological** 31.14 17 P P 13 43 47.6 -0.4
baz=204,SNR=5.7
M58A **Pris's Panora** 31.15 32 P P 13 43 47.8 -0.5
baz=223
K55A **Perry** 31.39 29 P P 13 43 50.8 +0.5
baz=219
MDND **Maddock** 31.55 358 P P 13 43 52.3 +0.7
baz=177
K56A **Middlesex** 31.72 30 P P 13 43 53.7 +0.5
baz=220
E44A **Grand Marais A** 31.90 16 P P 13 43 55.0 +0.4
baz=202
MOD **Modoc Plateau** 31.99 328 P P 13 43 55.9 +0.1
MOD IAmb IAmb 13 44 02.0
comp=Z,12nm,1.2s
AGMN **Agassiz Nation** 32.01 3 P P 13 43 55.1 -0.5
baz=184,SNR=11
EYMN **Ely** 32.06 8 P P 13 43 55.8 -0.3
baz=192
M60A **Port Jervis** 32.08 34 P P 13 43 55.7 -0.7
baz=226
B35A **Bob, Littlefor** 32.22 5 P P 13 43 56.0 -1.4
B35A IAmb IAmb 13 43 58.9
comp=Z,7.7nm,0.8s
PAL **Palisades** 32.26 35 P P 13 43 57.5 -0.3
baz=227
F49A **Sandfield** 32.30 21 P P 13 43 57.3 -1.0
baz=209,SNR=8.1
L59A **Walton** 32.47 33 P P 13 43 59.6 -0.3
baz=224
M61A **Granite Spring** 32.54 35 P P 13 44 00.4 0.0
baz=227
K58A **Earlville** 32.58 31 P P 13 44 00.5 -0.2
baz=223
H53A **Bobcaygeon** 32.63 26 P P 13 44 01.1 0.0
baz=216
M04C **Macdoel** 32.72 326 P P 13 44 01.8 -0.3
baz=134
E48A **Lockeyer** 32.89 20 P P 13 44 03.6 +0.3
baz=209
J57A **Williamstown** 32.89 30 P P 13 44 03.6 +0.1
baz=221
D47A **Chapleau** 33.10 19 P P 13 44 05.4 +0.1
baz=207
M62A **Hamden** 33.11 36 P P 13 44 05.2 -0.1
baz=228
EGMT **Eagleton** 33.15 345 P P 13 44 06.2 +0.4
baz=159
J58A **Remsen** 33.20 31 P P 13 44 06.4 +0.2
baz=222
H55A **Tweed** 33.22 28 P P 13 44 06.6 +0.3
baz=218
MSO **Missoula** 33.27 340 P P 13 44 07.3 +0.4
baz=151
G54A **Lake Saint Pet** 33.50 26 P P 13 44 08.6 -0.2
baz=216
I58A **Old Forge** 33.60 31 P P 13 44 09.5 -0.2
baz=223
D48A **Paudash Townsh** 33.61 20 P P 13 44 09.2 -0.6
baz=209
K61A **Williamstown** 33.74 34 P P 13 44 10.6 -0.3
baz=226
D49A **Beulah Townshi** 33.85 20 P P 13 44 12.1 +0.4
baz=209
E51A **G1948 Merrick** 33.88 23 P P 13 44 12.0 0.0
baz=213
J04D **Umpqua Nationa** 33.88 328 P P 13 44 12.6 +0.3
baz=135
ULM **Lac du Bonnet** 33.96 2 P P 13 44 12.8 +0.1
comp=Z,3.2nm,0.7s,baz=179,slow=10,SNR=8.1
ULM LR LR 13 58 33.9
comp=Z,83nm,19.0s,baz=164,slow=37
D50A **G1974 Best Tow** 34.29 22 P P 13 44 15.4 -0.1
baz=212
E53A **Dumoine, Ponti** 34.47 25 P P 13 44 17.1 -0.1
baz=216
LONY **Lake Ozonia** 34.47 30 P P 13 44 17.5 +0.3
baz=222
I60A **Shoreham** 34.55 32 P P 13 44 18.0 +0.1
baz=225
K63A **Dunstable** 34.70 35 P P 13 44 19.5 +0.3
baz=229
E54A **Lac Daplat, Po** 34.71 25 P P 13 44 19.4 +0.2
baz=217
J01E **Myrtle Point** 34.79 326 P P 13 44 20.2 +0.3
baz=132
I03D **Drain, OR** 34.84 327 P P 13 44 19.8 -0.6
baz=134
H59A **Cadyville** 34.93 31 P P 13 44 20.3 -0.8
baz=224
I61A **Oroboro, Fairl** 35.17 33 P P 13 44 24.0 +0.7
baz=226
I02D **Swisshome** 35.39 327 P P 13 44 25.8 +0.7
baz=133
F05D **White Salmon** 35.50 331 P P 13 44 27.2 +1.2
baz=139
D54A **Lac Fusel, La** 35.50 25 P P 13 44 26.2 +0.1
baz=217
I62A **Tamworth** 35.60 34 P P 13 44 27.2 +0.3
baz=228
D55A **Sainte-Anne-du** 35.90 26 P P 13 44 30.2 +0.8
baz=219
H62A **Milan** 36.17 33 P P 13 44 32.5 +0.7
baz=227
D56A **ZEC Mazanza, M** 36.23 27 P P 13 44 33.1 +0.8
baz=220
LON **Longmire** 36.31 332 IAmb IAmb 13 44 40.8
comp=Z,7.5nm,0.8s
F60A **Warwick** 36.73 31 P P 13 44 37.1 +0.5
baz=225
G62A **West of Eustis** 36.93 33 P P 13 44 39.1 +0.8
baz=227
MATQ **Matagami** 37.26 22 P P 13 44 40.9 -0.1
baz=213
D03D **Eldon** 37.47 332 P P 13 44 43.2 +0.4
baz=138
H65A **Eastbrook** 37.81 35 P P 13 44 46.1 +0.3
baz=231
G64A **Maxfield** 37.89 34 P P 13 44 46.9 +0.5
baz=230
A04D **Lummi Island** 38.20 333 P P 13 44 48.7 -0.2
baz=139
H66A **Whiting** 38.39 36 P P 13 44 51.5 +0.9
baz=232
F64A **Sherman** 38.50 34 P P 13 44 51.5 -0.1
baz=230
G65A **Princeton** 38.51 35 P P 13 44 52.2 +0.6
baz=231
G65A **Princeton** 38.51 35 IAmb IAmb 13 44 54.8
comp=Z,16nm,0.9s
CHGQ **Chibougamau** 38.62 24 P P 13 44 51.7 -0.8
baz=218
E63A **Oxbow** 38.83 33 P P 13 44 54.1 -0.2
baz=229
D62A **Allapoint, All** 38.95 32 P P 13 44 55.6 +0.4
baz=228
E64A **Bridgewater** 39.14 33 P P 13 44 57.5 +0.6
baz=230
D63A **Stockholm** 39.40 32 P P 13 44 59.6 +0.6
baz=229
PTGA **Pitinga** 41.09 111 P P 13 45 12.5 -1.1
comp=Z,1.8nm,0.5s,baz=316,slow=12,SNR=5.3
PTGA **Pitinga** 41.09 111 IAmb IAmb 13 45 12.7
comp=Z,4.5nm,0.9s
SAML **Samuel** 42.54 124 P P 13 45 22.4 -3.0
LPAZ **La Paz** 43.70 136 LR LR 14 02 35.5
comp=Z,72nm,18.4s,baz=302,slow=34
PB16 **IPOC Station P** 44.32 140 P P 13 45 39.4 -0.9
SCHQ **Schefferville** 45.36 25 P P 13 45 47.4 -0.1
comp=Z,10nm,0.8s,baz=226,slow=4.8,SNR=15
SCHQ LR LR 14 07 49.8
comp=Z,51nm,18.5s,baz=7.0,slow=40
SCHQ **Schefferville** 45.36 25 P P 13 45 44.6 -2.9
SCHQ IAmb IAmb 13 45 48.1
comp=Z,11nm,0.9s
YKA **Yellowknife Ar** 47.66 350 P P 13 46 04.8 -0.6
comp=Z,4.8nm,0.9s,baz=156,slow=7.7,SNR=47
YKA LR LR 14 09 49.1
comp=Z,93nm,18.1s,baz=0.0,slow=41
SIV **San Ignacio** 48.47 130 P P 13 46 09.6 -2.7
comp=Z,0.8nm,0.6s,baz=343,slow=11,SNR=3.6
BALM **Baldy** 54.77 335 IAmb IAmb 13 47 01.0
comp=Z,5.4nm,0.9s
VRDI **Verde Repeater** 55.32 335 IAmb IAmb 13 47 09.7
comp=Z,16nm,1.4s
C36M **Paulatuk** 55.54 349 P P 13 47 03.5 -0.7
baz=149
GLB **Gilahina Butte** 55.59 335 IAmb IAmb 13 47 06.5
comp=Z,8.9nm,0.8s
EYAK **Cordova Ski Ar** 55.91 334 IAmb IAmb 13 47 14.0
comp=Z,10nm,1.0s
EPYK **Eagle Plains** 56.20 342 P P 13 47 08.4 -0.7
baz=134
EGAK **Eagle** 56.56 339 IAmb IAmb 13 47 11.7
comp=Z,5.6nm,0.8s
INK **Inuvik** 56.74 345 P P 13 47 12.3 -0.4
comp=Z,8.9nm,0.8s,baz=119,slow=7.2,SNR=49
INK **Inuvik** 56.74 345 IAmb IAmb 13 47 13.4
comp=Z,10.0nm,0.8s
BRLK **Bradley Lake** 57.81 331 P P 13 47 19.9 -0.7
BRLK IAmb IAmb 13 47 21.3
comp=Z,10nm,0.8s
KDAK **Kodiak Island** 57.83 329 P P 13 47 20.7 +0.1
comp=Z,1.4nm,0.7s,baz=124,slow=7.3,SNR=2.9
KDAK **Kodiak Island** 57.83 329 IAmb IAmb 13 47 21.2
comp=Z,13nm,1.4s
PMR **Palmer** 57.86 334 IAmb IAmb 13 47 21.5
comp=Z,8.4nm,0.7s
CNPM **China Poot** 57.87 331 P P 13 47 20.0 -1.0
CNPM IAmb IAmb 13 47 21.3
comp=Z,5.2nm,0.8s
RC01 **Rabbit Creek A** 57.88 333 IAmb IAmb 13 47 21.3
comp=Z,6.5nm,0.8s
A36M **Sachs Harbour** 58.01 350 P P 13 47 20.3 -1.4
baz=149,SNR=18
HDA **Harding Lake** 58.40 337 P P 13 47 22.9 -1.6
baz=122,SNR=6.2
RES **Resolute Bay** 58.47 1 P P 13 47 24.3 -0.6
ILAR **Eielson Array** 58.56 338 P P 13 47 25.4 -0.3
comp=Z,3.8nm,0.9s,baz=138,slow=4.8,SNR=37
ILAR LR LR 14 12 46.9
comp=Z,102nm,18.9s,baz=123,slow=36
BDFB **Brasilia** 58.58 120 P P 13 47 29.1 +2.4
comp=Z,3.3nm,0.6s,baz=272,slow=9.6,SNR=4.7
RND **Reindeer** 58.61 336 P P 13 47 25.6 -0.6
POKR **Poker Plat Res** 58.95 338 P P 13 47 27.9 -0.5
baz=121
TCOL **CIGO, UAF Yank** 58.97 338 P P 13 47 27.4 -1.1
baz=121
MLY **Manley** 60.12 337 P P 13 47 36.5 0.0
TOLK **Toolik Lake Re** 61.51 341 P P 13 47 45.4 -0.6
baz=121,SNR=8.3
TOLK **Toolik Lake Re** 61.51 341 P P 13 47 45.2 -0.7
TOLK IAmb IAmb 13 47 46.2
comp=Z,5.8nm,0.8s
ESDC **Sonseca Array** 82.80 51 P P 13 49 53.5 -0.4
comp=Z,1.1nm,0.8s,baz=289,slow=5.6,SNR=7.1
ESDC LR LR 14 24 37.5
comp=Z,31nm,19.4s,baz=300,slow=34
NOA **NORSAR Array B** 84.87 27 P P 13 50 04.1 +0.1
comp=Z,0.5nm,0.6s,baz=299,slow=5.2,SNR=3.5
NOA LR LR 14 31 05.6
comp=Z,9.2nm,18.2s,baz=270,slow=38
PETK **Petropavlovsk-** 85.52 324 P P 13 50 06.5 -0.9
comp=Z,0.7nm,0.7s,baz=81,slow=9.2,SNR=3.6
ARCES **ARCESS Array B** 85.75 17 LR LR 14 31 27.8
comp=Z,44nm,18.7s,baz=158,slow=38
URZ **Urewera** 96.02 232 LR LR 14 24 56.1
comp=Z,58nm,18.2s,baz=2.0,slow=30
WRA **Warramunga Arr** 130.33 257 PKP PKPdf 13 56 41.3 +0.7
comp=Z,0.7nm,0.9s,baz=90,slow=2.3,SNR=3.1
ASAR **Alice Springs** 130.93 253 PKhKP PKPpre 13 56 36.7
comp=Z,0.2nm,0.8s,baz=123,slow=3.4,SNR=2.1
CMAR **Chiang Mai Arr** 141.72 334 PKP PKPdf 13 57 02.5 +0.7
comp=Z,0.4nm,0.3s,baz=318,slow=2.6,SNR=3.2
HYB **Hyderabad** 146.37 6 *i* PKP PKPdf 13 57 09.0 -1.0

NIED ***03*** *13:39:00,37˚.30N×141˚.40E,h53km,Mw4.1 Best double couple: M₀1.34000×10¹⁵ NP1:φ₀216.00000°,δ73.00000°, λ74.00000°. NP2:φ₀80.00000°,δ23.00000°,λ132.00000°.*
NEIC ***03*** *13:39:04.2±2.4,37˚.27N±0˚.05×141˚.50E±0˚.10,h49km±7km, mb4.5/13,Error ellipse: s-maj=11.6km s-min=6.7km az=106.0*
JMA ***03*** *13:39:04.9±0.1,37˚.33N×141˚.33E,h57km±1km,M4.1 JMA Felt II J1.*
IDC ***03*** *13:39:04.2±1.3,37˚.28N×141˚.37E,h48km±13km,mb3.8/18, mb1 3.9/25,mb1mx3.8/51,mbtmp4.1/25,ML3.5/5,MS3.2/4, Ms1 3.2/4,ms1mx2.7/40,Error ellipse: s-maj=13.8km s-min=9.0km az=103.0*
ISC 03 13:39:02.7±0.6,37˚.25N±0˚.04×141˚.60E±0˚.05,h38km±1km, n74,σ1.958/82,mb4.2/27,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.59**	**281**	P		**Pn**	**13 39 15.2**	**+0.4**
JFK				S		**Sn**	**13 39 22.4**	**-0.8**
ONAJ	**Iwakimizuishiy**	**0.66**	**257**	P		**Pn**	**13 39 16.4**	**+0.7**
ONAJ				S		**Sn**	**13 39 24.7**	**-0.1**
JMST	**Minamisoumatoc**	**0.74**	**310**	P		**Pn**	**13 39 16.9**	**+0.3**
JMST				S		**Sn**	**13 39 25.6**	**-1.0**

JFFD	**Fukushimafurud**	**0.85**	**259**	P	**Pn**	**13 39 18.4**	**+0.3**
JFFD				S	**Sn**	**13 39 28.4**	**-1.0**
JMM	**Marumori**	**0.89**	**314**	P	**Pn**	**13 39 18.9**	**+0.3**
JMM				S	**Sn**	**13 39 28.9**	**-1.4**
JFT	**Otama**	**1.04**	**285**	P	**Pn**	**13 39 21.1**	**+0.3**
JFT				*e*S	**Sn**	**13 39 32.4**	**-1.7**
JHO	**Hitachi**	**1.05**	**233**	P	**Pn**	**13 39 21.6**	**+0.8**
JHO				S	**Sn**	**13 39 33.7**	**-0.5**
JIO	**Ouri**	**1.22**	**351**	P	**Pn**	**13 39 24.5**	**+1.4**
JIO				S	**Sn**	**13 39 38.7**	**+0.4**
JOU	**Okura**	**1.34**	**327**	P	**Pn**	**13 39 25.0**	**+0.2**
MJAR	**Matsushiro Arr**	**2.81**	**256**	P	**Pn**	**13 39 46.0**	**+0.9**
	2.3nm,0.3s,baz=81,slow=16,SNR=78						
MJAR				S	**Sn**	**13 40 15.4**	**-2.4**
	2.3nm,0.3s,baz=86,slow=32,SNR=2.9						
MJAR				LR	LR	13 41 07.6	
	comp=Z,200nm,20.6s,baz=75,slow=47						
MAJO	**Matsushiro**	**2.81**	**256**		**Pn**	**13 39 46.4**	**+1.3**
MAT	**Matsushiro**	**2.81**	**256**	P	**Pn**	**13 39 46.3**	**+1.2**
MAT				*e*S	**Sn**	**13 40 21.3**	**+3.5**
MJB9	**Matsu-Tunnel**	**2.81**	**256**		**Pn**	**13 39 46.3**	**+1.2**
INU	**Inuyama**	**4.16**	**244**		**Pn**	**13 40 05.9**	**+2.3**
JHJ2	**Mitsune**	**4.38**	**200**	Pn	**Pn**	**13 40 08.2**	**+1.6**
JHJ2					**Sn**	**13 40 58.1**	**+1.6**
JHJ	**Hachijo jima 2**	**4.38**	**200**	P	**Pn**	**13 40 07.9**	**+1.2**
	31nm,0.3s,baz=330,slow=16,SNR=21						
JHJ				S	**Sn**	**13 40 57.7**	**+1.2**
	106nm,0.3s,baz=223,slow=22,SNR=7.9						
ERM	**Erimo**	**4.91**	**14**	Pn	**Pn**	**13 40 14.1**	**+0.3**
ERM					**Sn**	**13 41 10.9**	**+1.7**
ASAJ	**Asahikawa**	**6.90**	**6**	P	**Pn**	**13 40 42.8**	**+1.6**
	3.1nm,0.3s,baz=214,slow=11,SNR=24						
ASAJ				S	**Sn**	**13 41 58.1**	**-0.2**
	1.0nm,0.3s,baz=210,slow=20,SNR=2.6						
JKA	**Kamikawa-asahi**	**6.90**	**6**		**Pn**	**13 40 42.8**	**+1.6**
JKA					**Sn**	**13 41 58.1**	**-0.2**
JNU	**Nakatsue**	**9.69**	**248**	P	**Pn**	**13 41 19.7**	**+0.1**
	0.1nm,0.3s,baz=45,slow=5.7,SNR=1.8						
YSS	**Yuzh-Sakhalins**	**9.73**	**5**	Pn	**Pn**	**13 41 21.9**	**+1.9**
USA0B	**Ussuriysk Arra**	**10.06**	**317**		**Pn**	**13 41 28.3**	**+3.8**
USRK	**Ussuriysk Ar.**	**10.06**	**317**	P	**Pn**	**13 41 27.5**	**+3.0**
	baz=129,slow=13,SNR=24						
USRK				LR	LR	13 45 13.8	
	comp=Z,49nm,18.6s,baz=96,slow=37						
JCJ	**Chichijima**	**10.14**	**177**	P	**Pn**	**13 41 26.1**	**+0.4**
	8.6nm,0.3s,baz=74,slow=20,SNR=13						
JCJ				S	**Sn**	**13 43 12.2**	**-5.9**
	10nm,0.3s,baz=295,slow=23,SNR=9.1						
KSRS	**Korea Array**	**10.89**	**275**	P	**Pn**	**13 41 38.7**	**+2.8**
	0.2nm,0.3s,baz=88,slow=14,SNR=19						
KLR	**Kul'dur**	**13.94**	**332**	P	**Pn**	**13 42 17.8**	**+0.2**
	0.1nm,0.3s,baz=131,slow=14,SNR=2.0						
NJ2	**Nanjing**	**19.40**	**261**	*e*P	**P**	**13 43 24.8**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
PETK	**Petropavlovsk-**	**19.42**	**30**	P	**Pn**	**13 43 27.3**	**+0.4**
	comp=Z,0.0nm,0.3s,baz=200,slow=12,SNR=2.5						
MA2	**Magadan**	**23.11**	**12**	P	**P**	**13 44 05.7**	**+0.7**
	comp=Z,1.3nm,0.2s,baz=200,slow=10,SNR=5.7						
MA2	**Magadan**	**23.11**	**12**	IAmb	IAmb	13 44 11.4	
	comp=Z,4.8nm,1.1s						
HHC	**Hu-ho-hao-te**	**23.55**	**288**	P	**P**	**13 44 08.9**	**-0.7**
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,78nm,6.3s						
YAK	**Yakutsk**	**25.89**	**347**	P	**P**	**13 44 30.1**	**-0.6**
	comp=Z,3.9nm,0.6s,baz=8.3,slow=1.3,SNR=4.9						
YAK	**Yakutsk**	**25.89**	**347**	P	**P**	**13 44 28.2**	**-2.4**
YAK				IAmb	IAmb	13 44 37.4	
	comp=Z,7.6nm,0.6s						
SEY	**Seymchan**	**26.55**	**11**	P	**P**	**13 44 38.0**	**+1.4**
	comp=Z,1.0nm,0.6s,baz=97,slow=14,SNR=6.0						
XAN	**Xi'an**	**26.68**	**273**	P	**P**	**13 44 39.6**	**+1.4**
XAN				S	**S**	**13 49 12.5**	**+1.6**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,93nm,3.5s						
XAN				LR	LR		
	comp=N,170nm,13.6s						
XAN				LR	LR		
	comp=E,140nm,13.0s						
XAN				LR	LR		
	comp=Z,150nm,13.6s						
ULN	**Ulaanbaatar**	**27.36**	**304**	P	**P**	**13 44 41.9**	**-2.4**
SMY	**Shemya**	**27.41**	**45**	P	**P**	**13 44 42.5**	**-1.9**
SONM	**Songino Array**	**27.79**	**304**	P	**P**	**13 44 47.0**	**-1.1**
	comp=Z,3.2nm,0.6s,baz=110,slow=8.8,SNR=21						
SONM				LR	LR	13 56 22.5	
	comp=Z,95nm,19.9s,baz=218,slow=38						
H11N2	**WAKE ISLAND Hy**	**28.13**	**121**	T	T	14 15 10.6	
	baz=316						
H11N1	**WAKE ISLAND Hy**	**28.14**	**121**	T	T	14 15 11.6	
	baz=316						
H11N3	**WAKE ISLAND Hy**	**28.15**	**121**	T	T	14 15 12.1	
	baz=316						
H11S1	**WAKE ISLAND Hy**	**28.85**	**123**	T	T	14 15 45.3	
	baz=315,slow=75,SNR=46						
H11S3	**WAKE ISLAND Hy**	**28.85**	**124**	T	T	14 15 45.2	
	baz=315,slow=75,SNR=19						
H11S2	**WAKE ISLAND Hy**	**28.87**	**123**	T	T	14 16 09.1	
	baz=315,slow=75,SNR=39						
LZH	**Lanzhou**	**30.18**	**279**	*e*P	**P**	**13 45 07.4**	**-2.1**
LZH				pP	sP	13 45 24.7	-0.2
LZH				sP	pP	13 45 31.2	+11
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
CD2	**Chengdu**	**31.82**	**270**	*e*P	**P**	**13 45 22.0**	**-1.9**
GTA	**Gaotai**	**32.64**	**287**	*e*P	**P**	**13 45 31.8**	**+0.7**
GTA				pP	sP	13 45 46.8	+0.3
GTA				sP	pP	13 45 54.6	+13
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WMQ	**Urumqi**	**40.88**	**297**	*e*P	**P**	**13 46 41.1**	**+0.1**
ZAA0	**Zalesovo Array**	**41.88**	**312**	P	**P**	**13 46 46.6**	**-2.4**
ZAA0				IAmb	IAmb	13 46 48.7	
	comp=Z,11nm,0.8s						
ZALV	**Zalesovo Beam**	**41.88**	**312**	P	**P**	**13 46 48.0**	**-1.0**
	comp=Z,8.4nm,0.7s,baz=92,slow=6.9,SNR=34						
MK31	**Makanchi Array**	**44.13**	**302**	P	**P**	**13 47 05.7**	**-1.7**
MK31				IAmb	IAmb	13 47 07.1	
	comp=Z,3.2nm,0.8s						
MKAR	**Makanchi Array**	**44.13**	**302**	P	**P**	**13 47 05.7**	**-1.6**
	comp=Z,2.8nm,0.7s,baz=88,slow=9.9,SNR=36						
MKAR				LR	LR	14 04 28.4	
	comp=Z,61nm,18.2s,baz=172,slow=35						
MAKZ	**Makanchi**	**44.34**	**302**	P	**P**	**13 47 07.2**	**-1.8**
MAKZ				IAmb	IAmb	13 47 08.5	
	comp=Z,3.3nm,0.8s						
KURK	**Kurchatov**	**45.92**	**308**	P	**P**	**13 47 19.6**	**-1.8**
OHAK	**Old Harbor**	**46.49**	**43**	P	P	13 47 21.3	-4.5
OHAK				IAmb	IAmb	13 47 27.6	
	comp=Z,13nm,1.1s						
RSO	**Redoubt South**	**46.64**	**38**	P	**P**	**13 47 27.9**	**+0.7**
KDAK	**Kodiak Island**	**46.84**	**42**	P	**P**	**13 47 29.7**	**+1.2**
	comp=Z,2.3nm,0.6s,baz=105,slow=9.6,SNR=5.4						
KDAK	**Kodiak Island**	**46.84**	**42**	IAmb	IAmb	13 47 31.5	
	comp=Z,13nm,1.5s						
BPAW	**Bear Paw Mtn.**	**47.46**	**33**	P	**P**	**13 47 32.0**	**-1.4**
BPAW				IAmb	IAmb	13 47 34.5	
	comp=Z,5.3nm,1.0s						
KTH	**Kantishna Hill**	**47.48**	**34**	P	**P**	**13 47 31.9**	**-1.7**
ILAR	**Eielson Array**	**49.23**	**32**	P	**P**	**13 47 48.0**	**+1.1**
	comp=Z,1.1nm,0.7s,baz=271,slow=7.1,SNR=11						
WRA	**Warramunga Arr**	**57.30**	**188**	P	**P**	**13 48 46.3**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=5.9,slow=7.3,SNR=15						
ASAR	**Alice Springs**	**61.03**	**188**	P	**P**	**13 49 12.8**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=7.1,slow=5.9,SNR=17						
YKA	**Yellowknife Ar**	**63.54**	**30**	P	**P**	**13 49 29.4**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=303,slow=6.2,SNR=4.1						
ARCES	**ARCESS Array B**	**63.84**	**339**	P	**P**	**13 49 31.2**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=60,slow=7.2,SNR=4.1						
FINES	**FINESS Array B**	**68.69**	**332**	P	**P**	**13 50 01.6**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=25,slow=6.3,SNR=3.4						
STKA	**Stephens Creek**	**68.77**	**180**	P	**P**	**13 50 03.5**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=342,slow=4.4,SNR=3.0						
STKA	**Stephens Creek**	**68.77**	**180**	IAmb	IAmb	13 50 04.1	
	comp=Z,1.8nm,1.2s						
KBZ	**Khabaz**	**70.87**	**311**	P	**P**	**13 50 15.3**	**-0.3**
	comp=Z,1.3nm,0.9s,baz=353,slow=6.8,SNR=4.0						
NVAR	**Mina Array Bea**	**74.74**	**53**	P	**P**	**13 50 40.8**	**+1.9**
	comp=Z,0.7nm,0.7s,baz=295,slow=6.4,SNR=7.1						
PDAR	**Pinedale Array**	**77.41**	**46**	P	**P**	**13 50 55.1**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=236,slow=1.5,SNR=7.9						
KHC	**Kasperske Hory**	**82.44**	**329**	*e*P	**P**	**13 51 22.0**	**+1.1**
KHC				*e*pP	**pP**	**13 51 32.0**	**-0.6**
TXAR	**Lajitas Array**	**89.87**	**52**	P	**P**	**13 51 59.3**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=294,slow=3.0,SNR=8.5						
LPAZ	**La Paz**	**146.45**	**60**	PKPbc	**PKPbc**	**13 58 41.4**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=332,slow=3.0,SNR=6.3						

JMA ***03*** *13:50:08.5±0.1, 24°.78N×122°.31E, h44km±5km, M2.4*
TAP ***03*** *13:50:08.9, 24°.80N×122°.29E, h13km, ML3.3, C*
ISC 03 13:50:07.1±1.1**, 24°.79N**±0°.02×**122°.36E**±0°.03**, h15**km±8km**,**
n68, σ0s.53/114**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.32**	**222**	P	**Pb**	**13 50 15.1**	**+0.7**
	baz=210						
EOS1				S	**Sb**	**13 50 20.3**	**+1.0**
	baz=210						
NTC	**Toucheng**	**0.48**	**278**	*e*P	**Pg**	**13 50 16.5**	**-0.2**
	baz=277						
NTC				*e*S	**Sg**	**13 50 23.5**	**+0.2**
	baz=277						
TWC	**Suao**	**0.50**	**249**	P	**Pg**	**13 50 16.7**	**-0.3**
	baz=244						
TWC				*e*S	**Sg**	**13 50 22.9**	**-0.8**
	baz=244						
TIPB	**Shuangxi**	**0.52**	**291**	P	**Pg**	**13 50 17.1**	**-0.3**
	baz=292						
TIPB				*e*S	**Sg**	**13 50 24.9**	**+0.6**
	baz=292						
ILA	**Ilan**	**0.56**	**268**	*e*P	**Pb**	**13 50 19.2**	**+0.7**
	baz=266						
ILA				*e*S	**Sg**	**13 50 25.9**	**+0.4**
	baz=266						
NWF	**Wu-fen Shan**	**0.59**	**298**	P	**Pb**	**13 50 19.7**	**+0.4**
	baz=300						
NWF				S	**Sg**	**13 50 26.3**	**-0.5**
	baz=300						
WFSB	**Wu-fen Shan**	**0.59**	**298**	P	**Pb**	**13 50 19.6**	**+0.4**
	baz=300						
WFSB				*e*S	**Sg**	**13 50 26.1**	**-0.6**
	baz=300						
JYNG	**Yonagunijimaku**	**0.63**	**122**	P	**Pn**	**13 50 21.6**	**+0.1**
JYNG				*e*S	**Sn**	**13 50 30.6**	**-0.7**
TWE	**Neicheng**	**0.63**	**264**	*i* P	**Pg**	**13 50 19.0**	**-0.5**
	baz=261						
TWE				*e*S	**Sg**	**13 50 27.1**	**-0.7**
	baz=261						
SLBB	**Yuanshan**	**0.66**	**267**	P	**Pb**	**13 50 20.3**	**0.0**
	baz=265						
SLBB				*e*S	**Sg**	**13 50 29.1**	**+0.4**
	baz=265						
ENA	**Nanau**	**0.67**	**238**	P	**Pg**	**13 50 20.2**	**+0.1**
	baz=232						
ENA				*e*S	**Sg**	**13 50 28.6**	**-0.3**
	baz=232						
YOJ	**Yonaguni jima**	**0.68**	**118**	P	**Pn**	**13 50 22.6**	**+0.5**
	baz=116						
YOJ				S	**Sn**	**13 50 32.7**	**+0.3**
	baz=116						
YOJ	**Yonaguni jima**	**0.68**	**118**	P	**Pn**	**13 50 22.4**	**+0.3**
YOJ				S	**Sn**	**13 50 32.3**	**-0.1**
TWA	**Mucha**	**0.73**	**285**	P	**Pg**	**13 50 21.9**	**+0.6**
	baz=285						
TWA				*e*S	**Sb**	**13 50 31.8**	**+0.5**
	baz=285						
ENTT	**Nioudou**	**0.73**	**259**	*e*P	**Pb**	**13 50 21.4**	**-0.2**
	baz=256						
ENTT				*e*S	**Sb**	**13 50 31.8**	**+0.4**
	baz=256						
NHDH	**Xindian Distri**	**0.78**	**283**	P	**Pn**	**13 50 23.1**	**-0.4**
	baz=283						
NHDH				*e*S	**Sg**	**13 50 33.0**	**+0.6**
	baz=283						
NWLT	**Wulai**	**0.78**	**269**	*e*P	**Pb**	**13 50 22.2**	**-0.1**
	baz=268						
NDT	**Datong Townshi**	**0.79**	**257**	*e*P	**Pg**	**13 50 22.8**	**+0.3**
	baz=254						
NDT				*e*S	**Sb**	**13 50 32.7**	**-0.3**
	baz=254						
YM01	**YM01**	**0.80**	**297**	P	**Pg**	**13 50 22.9**	**+0.2**
	baz=298						
YM01				*e*S	**Sb**	**13 50 32.6**	**-0.7**
	baz=298						
YM08	**YM08**	**0.80**	**300**	*e*P	**Pb**	**13 50 22.6**	**-0.2**
	baz=301						
YM08				*e*S	**Sb**	**13 50 32.7**	**-0.8**
	baz=301						
YM11	**YM11**	**0.81**	**298**	P	**Pb**	**13 50 22.9**	**+0.1**
	baz=299						
YM11				*e*S	**Sb**	**13 50 33.3**	**-0.3**
	baz=299						
YM05	**YM05**	**0.81**	**298**	*e*P	**Pb**	**13 50 22.9**	**0.0**
	baz=299						
YM05				*e*S	**Sb**	**13 50 33.3**	**-0.4**
	baz=299						
YM10	**YM10**	**0.81**	**297**	*e*P	**Pb**	**13 50 23.0**	**+0.1**
	baz=298						
YM10				*e*S	**Sb**	**13 50 32.7**	**-1.1**
	baz=298						
TATO	**Taipei**	**0.81**	**284**	*e*P	**Pg**	**13 50 23.4**	**+0.5**
	baz=283						
TATO				*e*S	**Sb**	**13 50 33.1**	**-0.6**
	baz=283						
YM04	**YM04**	**0.83**	**296**	*e*P	**Pb**	**13 50 23.1**	**-0.1**
	baz=297						
YM04				*e*S	**Sb**	**13 50 33.8**	**-0.4**
	baz=297						
YM03	**YM03**	**0.84**	**298**	*e*P	**Pb**	**13 50 23.3**	**-0.1**
	baz=299						
YM03				*e*S	**Sb**	**13 50 34.4**	**-0.2**
	baz=299						
TWY	**Chenhua**	**0.84**	**305**	P	**Pg**	**13 50 23.6**	**+0.1**
	baz=307						
TWY				*e*S	**Sb**	**13 50 34.5**	**-0.1**
	baz=307						
ANP	**Anpu**	**0.86**	**298**	*e*P	**Pb**	**13 50 23.5**	**-0.2**
	baz=299						
PCYT	**Pengchaiyu**	**0.88**	**343**	*e*P	**Pb**	**13 50 23.9**	**-0.1**
	baz=347						
PCYT				*e*S	**Sb**	**13 50 35.7**	**+0.1**
	baz=347						
YHNB	**Yeheng**	**0.90**	**263**	*e*P	**Pb**	**13 50 24.1**	**-0.3**
	baz=261						
YHNB				*e*S	**Sb**	**13 50 35.5**	**-0.8**
	baz=261						
NTST	**Danshui**	**0.91**	**295**	*e*P	**Pb**	**13 50 24.5**	**0.0**
	baz=295						
TWS1	**Kuangyinshan**	**0.91**	**290**	*e*P	**Pb**	**13 50 24.6**	**0.0**
	baz=291						
NSK	**Sanguang**	**0.92**	**263**	*e*P	**Pb**	**13 50 24.2**	**-0.5**
	baz=261						
NACB	**Ninganchiao**	**0.93**	**229**	*e*P	**Pb**	**13 50 25.0**	**+0.2**
	baz=225						
NACB				*e*S	**Sb**	**13 50 36.6**	**-0.4**
	baz=225						
NNSB	**Datong**	**0.96**	**248**	*e*P	**Pb**	**13 50 25.2**	**-0.2**
	baz=245						
NNSB				*e*S	**Sb**	**13 50 37.1**	**-0.9**
	baz=245						
NNSH	**Datong**	**0.96**	**248**	*e*P	**Pn**	**13 50 26.0**	**-0.1**
	baz=245						
NNSH				*e*S	**Sb**	**13 50 37.1**	**-0.9**
	baz=245						
NNS	**Nan Shan**	**0.96**	**249**	*e*P	**Pb**	**13 50 25.5**	**0.0**
	baz=246						
NNS				*e*S	**Sb**	**13 50 37.0**	**-1.1**
	baz=246						
ETLH	**Xiulin Townshi**	**0.98**	**234**	*e*P	**Pb**	**13 50 26.0**	**+0.1**
	baz=231						
ETLH				*e*S	**Sb**	**13 50 38.3**	**-0.4**
	baz=231						
TWD	**Chiawan**	**0.99**	**225**	*e*P	**Pb**	**13 50 26.0**	**+0.1**
	baz=221						
TWD				*e*S	**Sb**	**13 50 38.3**	**-0.5**
	baz=221						
WLTB	**Daxi**	**1.01**	**274**	*e*P	**Pg**	**13 50 27.7**	**+1.1**
	baz=273						
WLTB				*e*S	**Sg**	**13 50 40.1**	**+0.3**
	baz=273						
WHF	**Hehuan Shan**	**1.18**	**238**	*e*P	**Pg**	**13 50 30.0**	**0.0**
	baz=234						
WHF				*e*S	**Sn**	**13 50 45.3**	**-0.3**
	baz=234						
TWT	**Tachien**	**1.20**	**244**	*e*P	**Pg**	**13 50 30.4**	**+0.1**
	baz=241						
TDCB	**Techi**	**1.22**	**244**	*e*P	**Pg**	**13 50 30.9**	**+0.4**
	baz=242						
TDCB				*e*S	**Sn**	**13 50 46.0**	**+0.1**
	baz=242						
LIOB	**Emei**	**1.23**	**264**	*e*P	**Pb**	**13 50 30.2**	**+0.2**
	baz=262						
LIOB				*e*S	**Sg**	**13 50 48.0**	**+1.1**
	baz=262						
ESL	**Shilin**	**1.28**	**221**	*e*P	**Pg**	**13 50 32.1**	**+0.3**
	baz=218						
CHGB	**Renai**	**1.30**	**236**	*e*P	**Pg**	**13 50 32.1**	**0.0**
	baz=234						
CHGB				*e*S	**Sb**	**13 50 47.4**	**-0.6**
	baz=234						
IRIF	**Iriomote-Funau**	**1.33**	**110**	P	**Pn**	**13 50 31.1**	**0.0**
OWD	**Renai**	**1.36**	**233**	*e*P	**Pg**	**13 50 33.0**	**-0.3**
	baz=230						
OWD				*e*S	**Sn**	**13 50 49.2**	**-0.3**
	baz=230						
WHP	**Taichung City**	**1.38**	**249**	*e*P	**Pg**	**13 50 33.9**	**+0.1**
	baz=247						
WHP				*e*S	**Sn**	**13 50 49.8**	**-0.2**
	baz=247						
NMLH	**Miaoli**	**1.45**	**260**	*e*P	**Pg**	**13 50 35.5**	**+0.6**
	baz=259						
NMLH				*e*S	**Sg**	**13 50 55.1**	**+1.3**
	baz=259						
DPDB	**Guoxing**	**1.50**	**240**	*e*P	**Pg**	**13 50 36.3**	**+0.2**
	baz=238						
VWDT	**VWDT**	**1.51**	**227**	*e*P	**Pg**	**13 50 36.3**	**+0.1**
	baz=225						
VWDT				*e*S	**Sg**	**13 50 57.1**	**+1.2**
	baz=225						
HGSD	**Ruisui**	**1.55**	**214**	*e*P	**Pg**	**13 50 37.4**	**+0.5**
	baz=211						
SMLT	**Sun Moon Lake**	**1.61**	**236**	*e*P	**Pg**	**13 50 38.1**	**+0.1**
	baz=234						
SSLB	**Suanglung**	**1.62**	**232**	*e*P	**Pg**	**13 50 37.7**	**-0.6**
	baz=230						
SSLB				*e*S	**Sb**	**13 50 57.2**	**+0.1**
	baz=230						
JIJ	**Ishigaki jima**	**1.68**	**104**	P	**Pb**	**13 50 37.1**	**-0.6**
YULB	**Yu-li**	**1.69**	**215**	*e*P	**Pb**	**13 50 37.3**	**-0.7**
	baz=212						
YULB				*e*S	**Sn**	**13 50 57.7**	**+0.1**
	baz=212						
TWF1	**Yuli**	**1.73**	**214**	*e*P	**Pb**	**13 50 37.6**	**-0.9**
	baz=211						
JISG	**Ishigakijimahi**	**1.79**	**96**	P	**Pn**	**13 50 38.4**	**+1.0**
YUS	**Yu-Shan**	**1.82**	**225**	*e*P	**Pb**	**13 50 40.9**	**+0.4**
	baz=223						
YUS				*e*S	**Sg**	**13 51 04.8**	**-1.0**
	baz=223						
FULB	**Fuli**	**1.86**	**212**	*e*P	**Pb**	**13 50 40.5**	**-0.2**
	baz=209						
ALS	**Alishan**	**1.90**	**228**	*e*P	**Pb**	**13 50 42.7**	**+1.0**
	baz=226						
CHN5	**Tsauling**	**1.94**	**233**	*e*P	**Pg**	**13 50 43.7**	**-0.6**
	baz=230						
CHN4	**Tsaushan**	**2.15**	**229**	*e*P	**Pb**	**13 50 46.6**	**+0.8**
	baz=227						
TPUB	**Ta-pu**	**2.17**	**227**	*e*P	**Pb**	**13 50 46.6**	**+0.6**
	baz=225						
WTP	**Ta-pu**	**2.21**	**226**	*e*P	**Pb**	**13 50 47.8**	**+1.0**
	baz=224						
TWK	**Hsinying**	**2.28**	**229**	*e*P	**Pb**	**13 50 48.1**	**+0.1**
	baz=226						
MASBT	**Mashibuluo**	**2.68**	**216**	*e*P	**Pb**	**13 50 54.2**	**-0.6**
	baz=214						

NEIC ***03*** *14:06:12.6±1.3, 8°.6S±0°.1×159°.2E±0°.2, h10km±2km, mb4.2/5, Error ellipse: s-maj=34.6km s-min=23.9km az=105.0*
IDC ***03*** *14:06:28.2±0.8, 8°.63S×158°.92E, h142km±13km, mb3.7/15, mb1 3.8/18, mb1mx3.6/45, mbtmp4.1/18, Error ellipse: s-maj=20.9km s-min=13.1km az=130.0*
ISC 03 14:06:25.3±0.6**, 8°.39S**±0°.09×**158°.63E**±0°.09**, h100**km**, n23, σ0s.96**/22**, mb4.0**/17**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.66**	**129**	P	**Pn**	**14 06 55.0**	**+1.4**
	367nm,0.3s,baz=217,slow=6.1,SNR=427						
HNR				S	**Sn**	**14 07 15.4**	**+0.3**
	231nm,0.3s,baz=196,slow=23,SNR=23						
HNR				LR	LR	14 07 20.2	
	comp=Z,100nm,18.5s,baz=358,slow=40						
KRVT	**Keravat (AS076**	**7.71**	**301**	P	Pn	14 08 22.8	+7.8
	0.8nm,0.3s,baz=74,slow=7.4,SNR=1.5						
CTA	**Charters Tower**	**16.70**	**225**	P	**P**	**14 10 14.4**	**+0.4**
	0.2nm,0.3s,baz=45,slow=9.9,SNR=2.4						
JAY	**Jayapura**	**18.77**	**287**	P	**Pn**	**14 10 40.5**	**+2.1**
	1.5nm,0.3s,baz=91,slow=4.1,SNR=7.0						
WR0	**Warramunga Arr**	**26.00**	**241**	P	**P**	**14 11 49.3**	**+0.3**
WR0				IAmb	IAmb	14 11 51.1	
	comp=Z,8.8nm,1.1s						
WRA	**Warramunga Arr**	**26.16**	**241**	P	**P**	**14 11 51.0**	**+0.5**
	comp=Z,4.2nm,0.7s,baz=65,slow=8.9,SNR=22						
AS31	**Alice Springs**	**28.13**	**234**	P	**P**	**14 12 07.7**	**-0.5**
AS31				IAmb	IAmb	14 12 11.0	
	comp=Z,1.1nm,0.5s						
ASAR	**Alice Springs**	**28.13**	**234**	P	**P**	**14 12 07.5**	**-0.6**
	comp=Z,2.1nm,0.6s,baz=64,slow=10,SNR=66						
STKA	**Stephens Creek**	**28.24**	**212**	P	**P**	**14 12 08.0**	**-1.0**
	comp=Z,1.4nm,0.4s,baz=45,slow=15,SNR=7.5						
KNRA	**Kununurra**	**30.07**	**253**	P	**P**	**14 12 24.9**	**-0.5**
FITZ	**Fitzroy Crossi**	**33.48**	**250**	P	**P**	**14 12 55.6**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=73,slow=6.6,SNR=2.0						
MJAR	**Matsushiro Arr**	**48.64**	**338**	P	**P**	**14 14 59.9**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=165,slow=6.4,SNR=9.5						
KSRS	**Korea Array**	**53.90**	**330**	P	**P**	**14 15 39.0**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=140,slow=7.2,SNR=4.1						
PETK	**Petropavlovsk-**	**61.26**	**359**	P	**P**	**14 16 30.2**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=174,slow=8.3,SNR=9.6						
KLR	**Kul'dur**	**62.02**	**340**	P	**P**	**14 16 36.0**	**+1.1**
	comp=Z,1.4nm,0.7s,baz=165,slow=2.0,SNR=6.4						
MA2	**Magadan**	**68.03**	**356**	P	**P**	**14 17 13.3**	**-0.4**
	comp=Z,1.1nm,0.2s,baz=144,slow=4.8,SNR=3.6						
MA2	**Magadan**	**68.03**	**356**	IAmb	IAmb	14 17 14.5	
	comp=Z,3.5nm,1.1s						
SEY	**Seymchan**	**71.27**	**357**	P	**P**	**14 17 33.9**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=166,slow=4.2,SNR=1.6						
SONM	**Songino Array**	**72.47**	**326**	P	**P**	**14 17 41.4**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=139,slow=6.0,SNR=8.6						
TLY	**Talaya**	**76.11**	**328**	P	**P**	**14 18 01.8**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=284,slow=16,SNR=3.4						
ILAR	**Eielson Array**	**83.37**	**21**	P	**P**	**14 18 39.5**	**-1.6**
	comp=Z,1.0nm,0.4s,baz=249,slow=4.9,SNR=27						
MKAR	**Makanchi Array**	**86.83**	**318**	P	**P**	**14 18 58.6**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=98,slow=6.2,SNR=9.9						
YKA	**Yellowknife Ar**	**95.88**	**28**	P	**P**	**14 19 38.6**	**-1.7**
	comp=Z,0.1nm,0.6s,baz=259,slow=4.3,SNR=2.8						

IDC 03 14:07:17.5±13.0**, 38°.46S**×**93°.91W, h0**km**, mb3.7**/4**, mb1 4.1**/4**, mb1mx3.9**/24**, mbtmp3.7**/4**, MS3.4**/3**, Ms1 3.4**/3**, ms1mx3.0**/21**, Error ellipse: s-maj=343.7km s-min=55.2km az=1.0, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**12.95**	**74**	T	T	14 23 47.3	
	baz=248,slow=74						
H03S1	**Juan Fernandez**	**12.96**	**74**	T	T	14 23 48.4	
	baz=248,slow=74						
H03S3	**Juan Fernandez**	**12.97**	**74**	T	T	14 23 47.1	
	baz=248						
H03N3	**Juan Fernandez**	**13.12**	**72**	T	T	14 23 56.3	
	baz=249,slow=72						
H03N2	**Juan Fernandez**	**13.12**	**72**	T	T	14 23 53.0	
	baz=249,slow=72						
H03N1	**Juan Fernandez**	**13.14**	**72**	T	T	14 23 56.9	
	baz=249,slow=72						
LPAZ	**La Paz**	**31.61**	**53**	P	P	14 13 42.9	0.0
	0.5nm,0.5s,baz=197,slow=6.9,SNR=1.8						
LPAZ				LR	LR	14 23 23.2	
	comp=Z,53nm,21.9s,baz=207,slow=30						
CPUP	**Villa Florida**	**32.96**	**79**	LR	LR	14 25 37.6	
	comp=Z,59nm,19.4s,baz=223,slow=33						
BDFB	**Brasilia**	**46.18**	**73**	LR	LR	14 34 08.1	
	comp=Z,69nm,21.6s,baz=307,slow=35						
TXAR	**Lajitas Array**	**68.06**	**351**	P	P	14 18 18.8	0.0
	0.7nm,0.8s,baz=168,slow=8.8,SNR=7.2						
NVAR	**Mina Array Bea**	**79.74**	**341**	P	P	14 19 27.3	0.0
	0.7nm,1.0s,baz=177,slow=5.4,SNR=4.2						
PDAR	**Pinedale Array**	**82.09**	**348**	P	P	14 19 39.9	+0.1
	0.8nm,0.9s,baz=142,slow=7.4,SNR=7.4						

IDC 03 14:09:57.9±20.0**,37.36S×93.66W,h0km,mb3.5**/3**,**
mb1 4.0/3**,mb1mx3.8**/23**,mbtmp3.5**/3**,Error ellipse:**
s-maj=692.9km s-min=326.0km az=118.0,West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**12.50**	**78**	T	T	14 26 20.8	
	baz=248,slow=73,SNR=24						
H03S1	**Juan Fernandez**	**12.51**	**78**	T	T	14 26 32.0	
	baz=248,slow=73,SNR=26						
H03S3	**Juan Fernandez**	**12.52**	**78**	T	T	14 26 19.6	
	baz=248,slow=73,SNR=29						
H03N2	**Juan Fernandez**	**12.64**	**76**	T	T	14 26 36.5	
	baz=252,slow=72,SNR=20						
H03N3	**Juan Fernandez**	**12.64**	**76**	T	T	14 26 41.9	
	baz=252,slow=72,SNR=20						
H03N1	**Juan Fernandez**	**12.65**	**76**	T	T	14 26 31.5	
	baz=252,slow=72,SNR=23						
TXAR	**Lajitas Array**	**67.01**	**351**	P	P	14 20 52.6	0.0
	0.6nm,0.9s,baz=165,slow=6.3,SNR=6.4						
NVAR	**Mina Array Bea**	**78.77**	**340**	P	P	14 22 02.4	0.0
	0.3nm,0.5s,baz=163,slow=7.4,SNR=4.1						
PDAR	**Pinedale Array**	**81.06**	**348**	P	P	14 22 14.8	+0.1
	0.2nm,0.4s,baz=142,slow=4.6,SNR=5.2						

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*DJA **03** 14:12:03.8±0.6,2°N±4°×12°9E±°,h126km±9km,M4.0/11,*
mB5.1/4,mb4.0/3,MLv3.8/11,Mw(mB)4.5/4
*IDC **03** 14:12:04.4±2.1,1.58N×126.65E,h0km,mb3.6/3,*
mb1 3.8/3,mb1mx3.3/42,mbtmp3.6/3,Error ellipse:
s-maj=183.6km s-min=24.5km az=66.0
ISC 03 14:12:10.4±2.9**,1.9N**±0.2×**128.7E**±0.2**,h50km,n9,**σ**2.75**/8**,**
Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.78**	**229**	P	**Pn**	**14 12 38.8**	**+0.1**
LBMI	**Labuha**	**2.83**	**205**	P	**Pn**	**14 12 51.2**	**-2.0**
LBMI				S	**Sn**	**14 13 28.2**	**+2.1**
SANI	**Sanana**	**4.81**	**215**	P	**Pn**	**14 13 17.8**	**-2.5**
	1.0nm9μm18nm,0.5s						
KMSI	**Cibinong**	**4.92**	**254**	P	**Pn**	**14 13 20.0**	**-1.9**
	0.5nm2μm23nm,0.6s						
MSAI	**Masohi**	**5.25**	**178**	P	Pn	14 13 21.5	-4.9
	0.0nm1μm5.0nm,0.8s						
NLAI	**Namlea**	**5.39**	**197**	P	**Pn**	**14 13 25.0**	**-3.3**
WRA	**Warramunga Arr**	**22.44**	**166**	P	**P**	**14 17 07.8**	**+2.6**
	0.9nm,0.3s,baz=340,slow=11,SNR=18						
ASAR	**Alice Springs**	**25.95**	**169**	P	**P**	**14 17 39.8**	**+1.5**
	0.3nm,0.3s,baz=343,slow=10,SNR=10						
MKAR	**Makanchi Array**	**60.15**	**325**	P	P	14 22 07.8	-5.1
	0.5nm,0.4s,baz=119,slow=7.7,SNR=7.5						

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*JMA **03** 14:18:55.6±0.2,43.95N×147.96E,h0km,M3.8*
*SKHL **03** 14:18:56.5±0.4,44.31N×148.21E,h55km±5km,mb4.7/6*
ISC 03 14:18:53.7±3.4**,44.26N**±0.08×**148.4E**±0.2**,h27km**±26km**,**
n22,σ**1.38**/36**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.03**	**341**	*i* P	**Pn**	**14 19 13.0**	**+0.7**
KUR				AMB	AMB	14 19 13.0	
	400nm,0.3s						
KUR				*e*S	**Sb**	**14 19 25.0**	**-0.9**
KUR				A	A	14 19 27.1	
	880nm,0.3s						
KUR				A	A	14 19 27.1	
	950nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.80**	**264**	*e*P	**Pn**	**14 19 23.0**	**+0.1**
YUK				AMB	AMB	14 19 25.0	
	360nm,0.4s						
YUK				*i* S	**Sn**	**14 19 43.0**	**-1.8**
YUK				A	A	14 19 49.0	
	830nm,0.3s						
YUK				A	A	14 19 49.0	
	700nm,0.3s						
LAGR	**Lagunnoye**	**1.85**	**264**	*i* P	**Pn**	**14 19 24.2**	**+0.6**
LAGR				AMB	AMB	14 19 27.0	
	160nm,0.2s						
LAGR				*e*S	**Sn**	**14 19 45.1**	**-1.0**
LAGR				A	A	14 19 46.0	
	530nm,0.3s						
LAGR				A	A	14 19 46.0	
	400nm,0.3s						
GRPR	**Tuman**	**1.87**	**263**	*i* P	**Pn**	**14 19 24.2**	**+0.3**
GRPR				AMB	AMB	14 19 27.0	
	160nm,0.2s						
GRPR				*e*S	**Sn**	**14 19 46.8**	**+0.2**
GRPR				A	A	14 19 50.0	
	710nm,0.3s						
GRPR				A	A	14 19 50.0	
	280nm,0.3s						
NEM2	**Nemuro 2**	**2.09**	**245**	P	**Pn**	**14 19 26.9**	**+0.1**
NEM2				*e*S	**Sn**	**14 19 49.9**	**-1.9**
NMR	**Nemuro--Hokkai**	**2.09**	**246**	*i* P	**Pn**	**14 19 27.2**	**+0.3**
NMR				*e*S	**Sn**	**14 19 50.1**	**-1.9**
GLVR	**Golovnino**	**2.11**	**257**	*i* P	**Pn**	**14 19 27.8**	**+0.7**
GLVR				AMB	AMB	14 19 30.0	
	170nm,0.4s						
GLVR				*e*S	**Sn**	**14 19 52.6**	**+0.3**
GLVR				A	A	14 19 53.0	
	750nm,0.3s						
GLVR				A	A	14 19 53.0	
	210nm,0.3s						
JRA	**Rausu**	**2.34**	**263**	P	**Pn**	**14 19 31.8**	**+1.5**
JRA				*e*S	**Sn**	**14 19 58.2**	**0.0**
JNSB	**Nemuroshibetsu**	**2.46**	**260**	P	**Pn**	**14 19 33.2**	**+1.3**
JKHN	**Kushirohamanak**	**2.59**	**244**	P	**Pn**	**14 19 34.3**	**+0.5**
JNK	**Nakash**	**2.71**	**257**	P	**Pn**	**14 19 36.5**	**+1.2**
JNK				*e*S	**Sn**	**14 20 06.2**	**-1.0**
AKK	**Akkeshi**	**2.83**	**245**	*e*P	**Pn**	**14 19 37.7**	**+0.7**
JAK	**Akkeshi**	**2.94**	**246**	P	**Pn**	**14 19 39.1**	**+0.6**
JTKR	**Abashiri--Toko**	**3.21**	**266**	P	**Pn**	**14 19 45.6**	**+3.4**
JAR	**Ashorobuto**	**3.45**	**255**	P	**Pn**	**14 19 47.5**	**+1.9**
JAR				*e*S	**Sn**	**14 20 25.7**	**+0.2**
JOB	**Onbets**	**3.55**	**249**	P	**Pn**	**14 19 48.4**	**+1.5**
JOB				*e*S	**Sn**	**14 20 27.3**	**-0.6**
JMP	**Maruseppu**	**3.60**	**268**	P	**Pn**	**14 19 49.6**	**+2.0**
JCH	**Churui**	**3.98**	**247**	P	**Pn**	**14 19 54.7**	**+1.8**
JCH				*e*S	**Sn**	**14 20 38.0**	**-0.7**
JNBK	**Urakawa-nobuka**	**4.54**	**246**	P	**Pn**	**14 20 02.5**	**+2.0**
YSS	**Yuzh-Sakhalins**	**4.76**	**306**	*i* P	**Pn**	**14 20 04.9**	**+1.4**
YSS				AMB	AMB	14 20 05.1	
	40nm,0.3s						
YSS				*e*S	**Sn**	**14 20 56.5**	**-1.2**
YSS				A	A	14 20 57.8	
	70nm,0.3s						
YSS				A	A	14 20 57.8	
	30nm,0.3s						
JKB	**Kayabe**	**5.86**	**249**	P	**Pn**	**14 20 20.4**	**+1.8**
JKB				*e*S	**Sn**	**14 21 22.9**	**-1.9**
EKMR	**Ekimchan**	**13.44**	**316**	*e*P	**Pn**	**14 22 02.0**	**-0.4**

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*JMA **03** 14:30:15.3±0.1,23.20N×121.46E,h43km±2km,M3.0*
*TAP **03** 14:30:16.4,23.22N×121.48E,h39km,ML3.6,B*
ISC 03 14:30:16.6±0.9**,23.20N**±0.02×**121.53E**±0.02**,h32km**±6km**,**
n114,σ**0.94**/176**,16C-9D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.18**	**236**	⇓*i*P	**Pn**	**14 30 23.5**	**+0.4**
	baz=217						
CHKT				*e*S	**Sb**	**14 30 28.3**	**+1.2**
	baz=217						
FULB	**Fuli**	**0.22**	**269**	⇓*i*P	**Pn**	**14 30 23.7**	**0.0**
	baz=256						
FULB				*e*S	**Sb**	**14 30 29.5**	**+1.7**
	baz=256						
TWF1	**Yuli**	**0.26**	**305**	⇑*i*P	**Pb**	**14 30 23.7**	**-0.1**
	baz=295						
TWF1				*e*S	**Sn**	**14 30 28.5**	**-0.8**
	baz=295						
YULB	**Yu-li**	**0.29**	**311**	⇑*i*P	**Pb**	**14 30 23.8**	**-0.3**
	baz=303						
YULB				*e*S	**Sn**	**14 30 28.7**	**-1.2**
	baz=303						
HGSD	**Ruisui**	**0.31**	**341**	⇑*i*P	**Pb**	**14 30 24.5**	**+0.2**
	baz=346						
HGSD				*e*S	**Sb**	**14 30 30.6**	**+1.1**
	baz=346						
EHY	**Hungye**	**0.36**	**328**	⇑*i*P	**Pb**	**14 30 24.5**	**-0.5**
	baz=323						
EHY				*e*S	**Sb**	**14 30 29.8**	**-1.0**
	baz=323						
ELDTW	**Lidau**	**0.47**	**269**	⇓*i*P	**Pb**	**14 30 25.9**	**-0.9**
	baz=262						
ELDTW				*e*S	**Sb**	**14 30 31.8**	**-2.0**
	baz=262						
EGFH	**Guangfu**	**0.47**	**348**	⇑*i*P	**Pb**	**14 30 26.2**	**-0.5**
	baz=341						
TWH	**Lutao**	**0.49**	**186**	⇓*i*P	**Pb**	**14 30 27.2**	**+0.3**
	baz=179						
TWH				*e*S	**Sb**	**14 30 34.5**	**+0.4**
	baz=179						
TWGBT	**Beinan**	**0.56**	**228**	⇓*i*P	**Pb**	**14 30 27.0**	**-1.1**
	baz=232						
TWGBT				*e*S	**Sb**	**14 30 34.8**	**-1.3**
	baz=232						
TWG	**Pinlang**	**0.57**	**228**	⇓*i*P	**Pb**	**14 30 27.0**	**-1.2**
	baz=232						
TWG				*e*S	**Sb**	**14 30 34.8**	**-1.4**
	baz=232						
TTN	**Taitung**	**0.57**	**219**	*e*P	**Pb**	**14 30 28.4**	**+0.1**
	baz=224						
TTN				*e*S	**Sn**	**14 30 37.4**	**+0.6**
	baz=224						
YUS	**Yu-Shan**	**0.60**	**298**	⇑*i*P	**Pb**	**14 30 28.6**	**-0.6**
	baz=298						
YUS				*e*S	**Sb**	**14 30 36.6**	**-1.1**
	baz=298						
ESL	**Shilin**	**0.62**	**352**	⇑*i*P	**Pn**	**14 30 27.6**	**-1.6**
	baz=348						
ESL				*e*S	**Sb**	**14 30 37.7**	**+0.2**
	baz=348						
VWDT	**VWDT**	**0.66**	**327**	⇑*i*P	**Pn**	**14 30 29.0**	**-0.7**
	baz=328						
VWDT				*e*S	**Sb**	**14 30 37.1**	**-1.4**
	baz=328						
ALS	**Alishan**	**0.73**	**295**	⇑*i*P	**Pn**	**14 30 30.8**	**-0.3**
	baz=294						
ALS				*e*S	**Sn**	**14 30 40.4**	**-0.9**
	baz=294						
HWA	**Hwalien**	**0.78**	**5**	*e*P	**Pn**	**14 30 30.9**	**-0.4**
	baz=20						
SSLB	**Suanglung**	**0.79**	**318**	⇑*i*P	**Pn**	**14 30 30.7**	**-0.8**
	baz=321						
SSLB				*e*S	**Sn**	**14 30 40.5**	**-1.8**
	baz=321						
WHYT	**Xinyi Township**	**0.79**	**308**	⇑*i*P	**Pn**	**14 30 31.6**	**-0.1**
	baz=310						
WHYT				*e*S	**Sn**	**14 30 41.8**	**-0.7**
	baz=310						
ECL	**Taimali**	**0.80**	**222**	P	**Pn**	**14 30 29.9**	**-1.8**
	baz=217						
ECL				*e*S	**Sn**	**14 30 39.5**	**-3.0**
	baz=217						
OWD	**Renai**	**0.82**	**337**	*e*P	**Pn**	**14 30 31.0**	**-1.1**
	baz=336						
OWD				*e*S	**Sn**	**14 30 41.6**	**-1.5**
	baz=336						
TPUB	**Ta-pu**	**0.84**	**277**	*e*P	**Pn**	**14 30 31.8**	**-0.4**
	baz=275						
TPUB				*e*S	**Sn**	**14 30 43.1**	**-0.3**
	baz=275						
SLGT	**Liugui**	**0.84**	**256**	⇓*i*P	**Pn**	**14 30 32.2**	**0.0**
	baz=254						
SLGT				*e*S	**Sn**	**14 30 43.2**	**-0.4**
	baz=254						
WTP	**Ta-pu**	**0.84**	**273**	⇓P	**Pn**	**14 30 32.5**	**+0.1**
	baz=271						
WTP				*e*S	**Sn**	**14 30 44.0**	**+0.3**
	baz=271						
CHN4	**Tsaushan**	**0.88**	**280**	*e*P	**Pn**	**14 30 33.1**	**+0.4**
	baz=279						
CHN4				*e*S	**Sn**	**14 30 45.1**	**+0.7**
	baz=279						
CHN5	**Tsauling**	**0.88**	**297**	⇑*i*P	**Pn**	**14 30 33.1**	**+0.2**
	baz=296						
CHN5				*e*S	**Sn**	**14 30 45.3**	**+0.7**
	baz=296						
SGST	**Jiashian**	**0.88**	**262**	*e*P	**Pn**	**14 30 32.1**	**-0.7**
	baz=256						
SGST				*e*S	**Sn**	**14 30 43.6**	**-1.0**
	baz=256						
SMLT	**Sun Moon Lake**	**0.89**	**320**	⇑*i*P	**Pn**	**14 30 32.8**	**-0.2**
	baz=321						
SMLT				*e*S	**Sn**	**14 30 45.0**	**0.0**
	baz=321						
CHGB	**Renai**	**0.92**	**339**	⇑*i*P	**Pn**	**14 30 32.8**	**-0.7**
	baz=339						
CHGB				*e*S	**Sn**	**14 30 43.6**	**-2.1**
	baz=339						
CHN1	**Nanshi**	**0.92**	**269**	*e*P	**Pn**	**14 30 34.0**	**+0.6**
	baz=268						
CHN1				*e*S	**Sn**	**14 30 46.4**	**+0.8**
	baz=268						
TYC	**Yuchr**	**0.93**	**319**	⇑*i*P	**Pn**	**14 30 33.5**	**0.0**
	baz=324						
TYC				*e*S	**Sn**	**14 30 45.6**	**-0.2**
	baz=324						
SSD	**Sandimen**	**0.94**	**242**	*e*P	**Pn**	**14 30 32.8**	**-0.9**
	baz=236						
SNST	**Tainan City**	**0.95**	**271**	*e*P	**Pn**	**14 30 34.3**	**+0.6**
	baz=270						
SNST				*e*S	**Sn**	**14 30 47.0**	**+0.8**
	baz=270						
TWK	**Hsinying**	**0.96**	**274**	*e*P	**Pn**	**14 30 34.3**	**+0.3**
	baz=272						
TWK				*e*S	**Sn**	**14 30 46.6**	**0.0**
	baz=272						
WJS	**Zhushan**	**0.96**	**310**	*e*P	**Pn**	**14 30 34.3**	**+0.4**
	baz=308						
WJS				*e*S	**Sn**	**14 30 46.9**	**+0.3**
	baz=308						
NACB	**Ninganchiao**	**0.97**	**3**	*e*P	**Pn**	**14 30 32.5**	**-1.5**
	baz=353						
NACB				*e*S	**Sn**	**14 30 45.4**	**-1.4**
	baz=353						
WHF	**Hehuan Shan**	**0.97**	**345**	*e*P	**Pn**	**14 30 33.1**	**-1.3**
	baz=345						
WHF				*e*S	**Sn**	**14 30 45.9**	**-1.4**
	baz=345						
DPDB	**Guoxing**	**1.00**	**326**	⇑*i*P	**Pn**	**14 30 34.5**	**0.0**
	baz=331						
DPDB				*e*S	**Sn**	**14 30 47.1**	**-0.4**
	baz=331						
ETLH	**Xiulin Townshi**	**1.00**	**357**	*e*P	**Pn**	**14 30 33.1**	**-1.4**
	baz=359						
WGK	**Gukeng**	**1.01**	**299**	*e*P	**Pn**	**14 30 35.5**	**+0.9**
	baz=306						
WGK				*e*S	**Sb**	**14 30 49.2**	**+0.6**
	baz=306						
MASBT	**Mashibuluo**	**1.02**	**235**	⇓*i*P	**Pn**	**14 30 34.0**	**-0.7**
	baz=230						
MASBT				*e*S	**Sn**	**14 30 47.7**	**-0.2**
	baz=230						
WNT	**Mingjian**	**1.03**	**311**	*e*P	**Pn**	**14 30 35.3**	**+0.5**
	baz=309						
WNT				*e*S	**Sn**	**14 30 48.9**	**+0.8**
	baz=309						
EAST	**Anshuo**	**1.03**	**218**	*e*P	**Pn**	**14 30 33.4**	**-1.5**
	baz=208						
WDLH	**Douliu**	**1.03**	**298**	*e*P	**Pn**	**14 30 35.5**	**+0.6**
	baz=305						
WDLH				*e*S	**Sn**	**14 30 49.6**	**+1.4**
	baz=305						
CHY	**Chiayi**	**1.06**	**286**	*e*P	**Pn**	**14 30 36.2**	**+1.0**
	baz=285						
CHY				*e*S	**Sn**	**14 30 50.0**	**+1.1**
	baz=285						
SGLT	**Jiouru**	**1.07**	**244**	*e*P	**Pb**	**14 30 37.4**	**+0.9**
	baz=242						
SGLT				*e*S	**Sb**	**14 30 51.6**	**+1.4**
	baz=242						
CHN3	**Shinhua**	**1.08**	**264**	*e*P	**Pb**	**14 30 37.6**	**+0.8**
	baz=278						
TWM1	**Shoushan**	**1.09**	**250**	*e*P	**Pb**	**14 30 37.7**	**+0.8**
	baz=249						
TDCB	**Techi**	**1.10**	**342**	*e*P	**Pn**	**14 30 35.6**	**-0.3**
	baz=333						
SSPT	**Xinbi**	**1.14**	**231**	*e*P	**Pn**	**14 30 37.0**	**+0.6**
	baz=223						
LAY	**Lan-yu**	**1.16**	**179**	*e*P	**Pn**	**14 30 35.6**	**-1.0**
	baz=169						
LAY				*e*S	**Sn**	**14 30 50.4**	**-1.0**
	baz=169						
WLGB	**Puzi**	**1.17**	**284**	*e*S	**Sn**	**14 30 52.3**	**+0.8**
	baz=282						
SCZT	**Fangliau**	**1.18**	**226**	*e*P	**Pn**	**14 30 37.0**	**+0.1**
	baz=216						
SNJT	**Kaohsiung City**	**1.19**	**248**	*e*P	**Pb**	**14 30 39.1**	**+0.6**
	baz=247						
SNJT				*e*S	**Sb**	**14 30 55.7**	**+2.1**
	baz=247						
WHP	**Taichung City**	**1.20**	**333**	*e*P	**Pn**	**14 30 38.0**	**+0.8**
	baz=338						
CHN8	**Yiju**	**1.22**	**277**	*e*P	**Pn**	**14 30 37.9**	**+0.4**
	baz=276						
CHN8				*e*S	**Sb**	**14 30 54.7**	**+0.1**
	baz=276						
TCU	**Taichung**	**1.23**	**320**	*e*P	**Pn**	**14 30 38.3**	**+0.8**
	baz=307						
TCU				*e*S	**Sn**	**14 30 53.8**	**+0.8**
	baz=307						
NNSB	**Datong**	**1.23**	**354**	*e*P	**Pn**	**14 30 37.2**	**-0.5**
	baz=4.0						
NNSH	**Datong**	**1.23**	**354**	*e*P	**Pn**	**14 30 37.0**	**-0.7**
	baz=4.0						
NNSH				*e*S	**Sn**	**14 30 52.4**	**-0.9**
	baz=4.0						
ENA	**Nanau**	**1.24**	**9**	*e*P	**Pn**	**14 30 36.7**	**-1.0**
	baz=358						
NNS	**Nan Shan**	**1.24**	**353**	*e*P	**Pn**	**14 30 37.4**	**-0.5**
	baz=5.0						
NNS				*e*S	**Sn**	**14 30 52.7**	**-0.9**
	baz=5.0						
WCHH	**Zhanghua**	**1.25**	**315**	*e*P	**Pn**	**14 30 38.1**	**+0.3**
	baz=313						
RLNB	**Erlin**	**1.28**	**303**	*e*P	**Pn**	**14 30 38.6**	**+0.4**
	baz=300						
RLNB				*e*S	**Sn**	**14 30 54.9**	**+0.7**
	baz=300						
WSF	**Szhu**	**1.28**	**290**	*e*P	**Pn**	**14 30 38.5**	**+0.2**
	baz=288						
WSF				*e*S	**Sn**	**14 30 55.0**	**+0.7**
	baz=288						
TWQ1	**Liyutan**	**1.34**	**329**	*e*P	**Pn**	**14 30 40.3**	**+1.3**
	baz=325						
TWQ1				*e*S	**Sn**	**14 30 57.3**	**+1.5**
	baz=325						
WLCH	**Liuqiu**	**1.36**	**232**	*e*P	**Pb**	**14 30 42.8**	**+1.3**
	baz=230						
NDT	**Datong Townshi**	**1.40**	**359**	*e*P	**Pn**	**14 30 39.5**	**-0.4**
	baz=10.0						
NSY	**Sanyi**	**1.40**	**330**	*e*P	**Pn**	**14 30 41.2**	**+1.2**
	baz=326						
NSY				*e*S	**Sb**	**14 30 59.5**	**-0.2**
	baz=326						
WDJ	**Dajia District**	**1.40**	**325**	*e*P	**Pn**	**14 30 41.5**	**+1.5**
	baz=321						
WDJ				*e*S	**Sn**	**14 30 59.4**	**+2.0**
	baz=321						
TWKBT	**Hengchun**	**1.42**	**208**	*e*P	**Pn**	**14 30 39.9**	**-0.4**
	baz=198						
TSEB	**Hengchuen, Pin**	**1.42**	**204**	*e*S	**Sn**	**14 30 58.0**	**+0.1**
	baz=194						
TWK1	**Hengchun**	**1.42**	**208**	*e*P	**Pn**	**14 30 39.7**	**-0.5**
	baz=198						
TWC	**Suao**	**1.43**	**12**	*e*P	**Pn**	**14 30 40.8**	**+0.5**
	baz=360						
ENTT	**Nioudou**	**1.43**	**1**	*e*P	**Pn**	**14 30 39.9**	**-0.5**
	baz=1.0						
EOS1	**EOS1**	**1.45**	**22**	*e*P	**Pn**	**14 30 41.3**	**+0.8**
	baz=39						
EOS1				*e*S	**Sn**	**14 30 57.4**	**-1.1**
	baz=39						
PTSB	**Yuanli**	**1.45**	**329**	*e*P	**Pn**	**14 30 41.6**	**+1.0**
	baz=325						
PTSB				*e*S	**Sn**	**14 31 00.2**	**+1.5**
	baz=325						
YHNB	**Yeheng**	**1.47**	**354**	*e*P	**Pn**	**14 30 40.9**	**0.0**
	baz=6.0						
YHNB				*e*S	**Sn**	**14 30 58.6**	**-0.6**
	baz=6.0						
NMLH	**Miaoli**	**1.49**	**333**	*e*P	**Pn**	**14 30 42.2**	**+1.0**
	baz=330						
LIOB	**Emei**	**1.51**	**342**	*e*P	**Pn**	**14 30 42.4**	**+0.8**
	baz=337						
LIOB				*e*S	**Sn**	**14 31 01.2**	**+1.0**
	baz=337						
TWE	**Neicheng**	**1.52**	**5**	*e*P	**Pn**	**14 30 41.2**	**-0.3**
	baz=6.0						
SLBB	**Yuanshan**	**1.55**	**3**	*e*P	**Pn**	**14 30 41.7**	**-0.3**
	baz=3.0						
NWLT	**Wulai**	**1.57**	**359**	*e*P	**Pn**	**14 30 42.2**	**-0.1**
	baz=12						
WLTB	**Daxi**	**1.66**	**351**	*e*P	**Pn**	**14 30 45.0**	**+1.4**
	baz=360						
NHDH	**Xindian Distri**	**1.75**	**360**	*e*P	**Pn**	**14 30 45.6**	**+0.8**
	baz=359						
TATO	**Taipei**	**1.77**	**359**	*e*P	**Pn**	**14 30 45.1**	**+0.1**
	baz=9.0						
TWA	**Mucha**	**1.77**	**2**	*e*P	**Pn**	**14 30 46.7**	**+1.7**
	baz=10.0						
TIPB	**Shuangxi**	**1.78**	**9**	*e*P	**Pn**	**14 30 45.1**	**-0.1**
	baz=359						
NCUH	**Zhongli**	**1.79**	**350**	*e*P	**Pn**	**14 30 46.5**	**+1.3**
	baz=346						
JYNG	**Yonagunijimaku**	**1.79**	**46**	P	**Pn**	**14 30 46.4**	**+1.0**
JYNG				S	**Sn**	**14 31 07.6**	**+0.5**
PHUB	**P'eng-hu**	**1.83**	**280**	*e*P	**Pn**	**14 30 45.6**	**-0.2**
	baz=279						
YOJ	**Yonaguni jima**	**1.85**	**47**	*e*P	**Pn**	**14 30 47.0**	**+1.0**
	baz=51						
YOJ	**Yonaguni jima**	**1.85**	**47**	P	**Pn**	**14 30 47.2**	**+1.1**
YOJ				*e*S	**Sn**	**14 31 08.3**	**0.0**
PNG	**Penghu**	**1.85**	**282**	*e*P	**Pn**	**14 30 45.7**	**-0.4**
	baz=281						
NWF	**Wu-fen Shan**	**1.88**	**7**	*e*P	**Pn**	**14 30 48.4**	**+1.8**
	baz=6.0						
WFSB	**Wu-fen Shan**	**1.88**	**7**	*e*P	**Pn**	**14 30 48.3**	**+1.8**
	baz=6.0						
TWS1	**Kuangyinshan**	**1.89**	**357**	*e*P	**Pn**	**14 30 48.6**	**+1.9**
	baz=11						
VCHM	**Qimei**	**1.93**	**271**	*e*P	**Pn**	**14 30 47.0**	**-0.3**
	baz=270						
YM01	**YM01**	**1.94**	**1**	*e*P	**Pn**	**14 30 47.7**	**+0.4**
	baz=360						
YM04	**YM04**	**1.94**	**0**	*e*P	**Pn**	**14 30 47.2**	**-0.3**
	baz=359						
YM10	**YM10**	**1.94**	**1**	*e*P	**Pn**	**14 30 47.5**	**0.0**
	baz=359						
YM05	**YM05**	**1.95**	**1**	*e*P	**Pn**	**14 30 47.1**	**-0.5**
	baz=359						
YM03	**YM03**	**1.97**	**0**	*e*P	**Pn**	**14 30 48.5**	**+0.7**
	baz=359						
ANP	**Anpu**	**1.98**	**360**	*e*P	**Pn**	**14 30 48.0**	**+0.1**
	baz=358						
HATJ	**Hateruma jima**	**2.25**	**67**	*e*S	**Sn**	**14 31 18.2**	**-0.1**
IRIF	**Iriomote-Funau**	**2.31**	**60**	P	**Pn**	**14 30 53.5**	**+1.1**
JKRS	**Kuro-shima**	**2.49**	**65**	P	**Pn**	**14 30 55.7**	**+0.7**
JKRS				*e*S	**Sn**	**14 31 24.9**	**+0.6**
VWUC	**VWUC**	**2.61**	**314**	*e*P	**Pn**	**14 30 55.7**	**-0.9**
	baz=312						
JIJ	**Ishigaki jima**	**2.66**	**64**	P	**Pn**	**14 30 57.5**	**+0.3**
JIJ				*e*S	**Sn**	**14 31 28.0**	**-0.4**
PTTC	**Pingtan**	**2.80**	**325**	*e*P	**Pn**	**14 30 59.0**	**-0.1**
	baz=322						
PTMZ	**Houxiangcun**	**2.86**	**310**	*e*P	**Pn**	**14 30 59.7**	**-0.4**
	baz=300						
JISG	**Ishigakijimahi**	**2.89**	**61**	P	**Pn**	**14 31 00.6**	**+0.1**
JISG				S	**Sn**	**14 31 33.1**	**-1.1**
KNMB	**Chin-men Tao**	**3.14**	**294**	*e*P	**Pn**	**14 31 02.5**	**-1.3**
	baz=293						
JTJ	**Tarama**	**3.23**	**63**	P	**Pn**	**14 31 05.8**	**+0.6**
JTJ				S	**Sn**	**14 31 43.4**	**+0.8**
AXDP	**Jialang**	**3.67**	**298**	*e*P	**Pn**	**14 31 10.0**	**-1.1**
	baz=297						

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*NIED **03** 14:41:00,39.00N×142.80E,h32km,Mw4.4 Best double*
couple: $M_0$4.57000×10^{15} NP1:ϕ_s235.00000°,δ58.00000°,
λ-110.00000°. NP2:ϕ_s90.00000°,δ37.00000°,
λ-61.00000°.
*JMA **03** 14:41:42.6±0.1,39.05N×142.73E,h28km±1km,M4.4*
JMA Felt I J1.
*IDC **03** 14:41:44.2±2.3,38.97N×142.75E,h38km±21km,mb3.7/19,*
mb1 3.9/27,mb1mx3.8/53,mbtmp4.0/27,ML3.4/6,MS3.6/9,
Ms1 3.6/9,ms1mx3.3/41,Error ellipse: s-maj=17.1km
s-min=11.9km az=106.0
*NEIC **03** 14:41:46.1±2.5,38.92N±0.04×142.8E±0.1,h59km±7km,*
mb4.5/13,Error ellipse: s-maj=12.3km s-min=6.4km
az=87.0
ISC 03 14:41:44.1±1.8**,39.01N**±0.05×**142.83E**±0.07**,h34km**±5km**,**
n66,σ**1.73**/67**,mb4.1**/24**,MS3.7**/3**,Near east coast of**

eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.91**	**275**	P	**Pn**	**14 41 58.0**	**-2.4**
OFUJ				*e*S	**Sn**	**14 42 08.9**	**-3.4**
MIYJ	**Miyakonagasawa**	**0.97**	**306**	P	**Pn**	**14 41 58.6**	**-2.6**
MIYJ				*e*S	**Sn**	**14 42 10.0**	**-3.8**
JKMT	**Kesennumamotoy**	**1.08**	**260**	P	**Pn**	**14 42 00.6**	**-2.1**
JKMT				S	**Sn**	**14 42 13.4**	**-3.1**
JTH	**Tanohata**	**1.19**	**321**	P	**Pn**	**14 42 02.4**	**-1.9**
JMK	**Ichinoseki**	**1.26**	**268**	P	**Pn**	**14 42 03.4**	**-1.8**
JMK				S	**Sn**	**14 42 18.7**	**-2.2**
JOM	**Ohasama**	**1.28**	**292**	P	**Pn**	**14 42 03.8**	**-1.8**
JOM				*e*S	**Sn**	**14 42 19.0**	**-2.6**
JIO	**Ouri**	**1.28**	**245**	P	**Pn**	**14 42 03.8**	**-1.8**
JIO				S	**Sn**	**14 42 19.2**	**-2.4**
JANG	**Nango**	**1.70**	**324**	P	**Pn**	**14 42 09.5**	**-1.8**
JANG				*e*S	**Sn**	**14 42 30.0**	**-1.9**
JRG	**Rokugo**	**1.75**	**283**	P	**Pn**	**14 42 11.4**	**-0.6**
ERM	**Erimo**	**3.01**	**5**		**Pn**	**14 42 29.6**	**+0.2**
MJAR	**Matsushiro Arr**	**4.41**	**237**	Pn	**Pn**	**14 42 49.6**	**+1.0**
	1.2nm,0.3s,baz=335,slow=24,SNR=86						
MJAR				LR	LR	14 44 43.4	
	comp=Z,701nm,19.2s,baz=60,slow=41						
MAJO	**Matsushiro**	**4.41**	**238**		**Pn**	**14 42 50.4**	**+1.7**
MAT	**Matsushiro**	**4.41**	**238**	P	**Pn**	**14 42 50.1**	**+1.4**
MAT				*e*S	**Sn**	**14 43 43.3**	**+4.4**
MJB9	**Matsu-Tunnel**	**4.41**	**238**		**Pn**	**14 42 50.5**	**+1.8**
JKA	**Kamikawa-asahi**	**5.10**	**358**		**Pn**	**14 42 58.6**	**+0.6**
JKA					**Sn**	**14 43 54.6**	**-1.2**
ASAJ	**Asahikawa**	**5.11**	**358**	Pn	**Pn**	**14 42 58.6**	**+0.5**
	1.7nm,0.3s,baz=214,slow=16,SNR=13						
ASAJ				Sn	**Sn**	**14 43 54.6**	**-1.2**
	1.8nm,0.3s,baz=197,slow=20,SNR=1.6						
INU	**Inuyama**	**5.91**	**234**		**Pn**	**14 43 10.4**	**+1.2**
JHJ	**Hachijo jima 2**	**6.38**	**204**	Pn	**Pn**	**14 43 14.5**	**-1.1**
	16nm,0.3s,baz=83,slow=21,SNR=17						
JHJ				Sn	**Sn**	**14 44 22.2**	**-5.0**
	49nm,0.3s,baz=109,slow=23,SNR=7.5						
USA0B	**Ussuriysk Arra**	**9.63**	**306**		**Pn**	**14 44 01.0**	**+0.8**
USRK	**Ussuriysk Ar.**	**9.63**	**306**	Pn	**Pn**	**14 43 59.0**	**-1.2**
	baz=110,slow=12,SNR=1.7						
USRK				LR	LR	14 47 34.1	
	comp=Z,570nm,18.6s,baz=98,slow=36						
JNU	**Nakatsue**	**11.31**	**242**	Pn	**Pn**	**14 44 22.7**	**-0.6**
	0.2nm,0.3s,baz=5.6,slow=4.9,SNR=2.3						
JNU				LR	LR	14 49 02.8	
	comp=Z,231nm,20.6s,baz=62,slow=39						
JNU	**Nakatsue**	**11.31**	**242**		**Pn**	**14 44 21.5**	**-1.8**
KSRS	**Korea Array**	**11.83**	**267**	Pn	**Pn**	**14 44 29.6**	**-0.7**
	0.1nm,0.3s,baz=86,slow=13,SNR=3.5						
KSRS				LR	LR	14 48 48.5	
	comp=Z,235nm,18.3s,baz=74,slow=36						
JCJ	**Chichijima**	**11.89**	**183**	Pn	**Pn**	**14 44 29.1**	**-2.1**
	4.1nm,0.3s,baz=275,slow=24,SNR=7.2						
JCJ				Sn	Sn	14 46 30.8	-12
	1.6nm,0.3s,baz=16,slow=21,SNR=1.5						
KLR	**Kul'dur**	**12.94**	**326**	Pn	**Pn**	**14 44 44.9**	**-0.5**
	0.1nm,0.3s,baz=183,slow=15,SNR=2.6						
KLR				LR	LR	14 49 43.3	
	comp=Z,388nm,19.4s,baz=150,slow=37						
PETK	**Petropavlovsk-**	**17.42**	**31**	LR	LR	14 53 02.6	
	comp=Z,81nm,19.0s,baz=239,slow=39						
MA2	**Magadan**	**21.20**	**11**	P	**P**	**14 46 26.6**	**+0.2**
	5.0nm,0.8s,baz=189,slow=9.8,SNR=6.6						
MA2				LR	LR	14 56 11.8	
	comp=Z,76nm,18.1s,baz=206,slow=41						
MA2	**Magadan**	**21.20**	**11**	P	**P**	**14 46 25.1**	**-1.4**
YAK	**Yakutsk**	**24.42**	**345**	P	**P**	**14 46 58.7**	**-0.5**
	3.8nm,0.5s,baz=299,slow=0.7,SNR=2.8						
SEY	**Seymchan**	**24.64**	**10**	P	**P**	**14 47 01.4**	**+0.2**
	2.4nm,0.7s,baz=200,slow=7.4,SNR=9.4						
SONM	**Songino Array**	**27.68**	**301**	P	**P**	**14 47 27.9**	**-1.0**
	0.5nm,0.4s,baz=94,slow=7.6,SNR=2.8						
H11N2	**WAKE ISLAND Hy**	**28.30**	**126**	T	T	15 18 04.6	
	baz=318,slow=75,SNR=406						
H11N1	**WAKE ISLAND Hy**	**28.31**	**126**	T	T	15 18 09.5	
	baz=318,slow=75,SNR=326						
H11N3	**WAKE ISLAND Hy**	**28.32**	**126**	T	T	15 18 19.5	
	baz=318,slow=75,SNR=323						
H11S1	**WAKE ISLAND Hy**	**29.09**	**128**	T	T	15 19 06.0	
	baz=318,slow=76,SNR=24						
H11S3	**WAKE ISLAND Hy**	**29.09**	**128**	T	T	15 19 09.8	
	baz=318,slow=76,SNR=34						
H11S2	**WAKE ISLAND Hy**	**29.11**	**128**	T	T	15 19 10.2	
	baz=318,slow=76,SNR=22						
TLY	**Talaya**	**29.94**	**308**	LR	LR	15 00 21.2	
	comp=Z,175nm,19.0s,baz=98,slow=37						
ZALV	**Zalesovo Beam**	**41.44**	**311**	P	**P**	**14 49 27.0**	**-0.2**
	1.3nm,0.5s,baz=89,slow=7.7,SNR=8.1						
MK31	**Makanchi Array**	**44.05**	**301**	P	**P**	**14 49 48.1**	**-0.3**
MKAR	**Makanchi Array**	**44.05**	**301**	P	**P**	**14 49 47.9**	**-0.6**
	1.1nm,0.8s,baz=86,slow=8.7,SNR=13						
MAKZ	**Makanchi**	**44.25**	**301**	P	**P**	**14 49 50.4**	**+0.3**
KDAK	**Kodiak Island**	**44.89**	**43**	P	**P**	**14 49 55.2**	**+0.2**
	1.5nm,0.4s,baz=268,slow=4.5,SNR=7.6						
KDAK	**Kodiak Island**	**44.89**	**43**	P	**P**	**14 49 55.2**	**+0.2**
KDAK				IAmb	IAmb	14 50 08.7	
	comp=Z,8.5nm,1.4s						
KTH	**Kantishna Hill**	**45.49**	**35**	P	**P**	**14 50 00.8**	**+1.0**
KTH				IAmb	IAmb	14 50 02.5	
	comp=Z,7.5nm,1.3s						
KURK	**Kurchatov**	**45.62**	**307**	P	**P**	**14 49 59.6**	**-1.3**
KURK				IAmb	IAmb	14 50 12.7	
	comp=Z,10.0nm,1.2s						
KURBB	**Kurchatov Arra**	**45.70**	**307**	P	**P**	**14 50 00.3**	**-1.1**
	comp=Z,2.0nm,0.4s,baz=81,slow=8.4,SNR=25						
RND	**Reindeer**	**46.42**	**35**	P	**P**	**14 50 05.4**	**-1.7**
RND				IAmb	IAmb	14 50 08.7	
	comp=Z,12nm,1.4s						
GHO	**Glory Hole Cre**	**46.46**	**38**	P	**P**	**14 50 06.5**	**-1.0**
ILAR	**Eielson Array**	**47.23**	**33**	P	**P**	**14 50 13.5**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=261,slow=5.6,SNR=12						
FID	**Port Fidalgo**	**47.73**	**39**	P	**P**	**14 50 14.7**	**-2.6**
FID				IAmb	IAmb	14 50 20.6	
	comp=Z,2.6nm,0.6s						
HNR	**Honiara**	**50.76**	**158**	LR	LR	15 10 02.7	
	comp=Z,78nm,19.1s,baz=273,slow=34						
INK	**Inuvik**	**52.12**	**28**	P	**P**	**14 50 51.2**	**+0.8**
	comp=Z,1.2nm,0.4s,baz=298,slow=7.0,SNR=14						
INK	**Inuvik**	**52.12**	**28**	IAmb	IAmb	14 51 03.8	
	comp=Z,8.0nm,1.5s						
WB0	**Warramunga Arr**	**59.00**	**189**	P	**P**	**14 51 39.6**	**-0.8**
WR0	**Warramunga Arr**	**59.17**	**189**	P	**P**	**14 51 40.7**	**-0.9**
WRA	**Warramunga Arr**	**59.18**	**189**	P	**P**	**14 51 40.6**	**-1.0**
	comp=Z,2.7nm,0.4s,baz=6.5,slow=7.0,SNR=80						
RES	**Resolute Bay**	**60.41**	**15**	P	**P**	**14 51 49.3**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=309,slow=11,SNR=5.2						
YKA	**Yellowknife Ar**	**61.54**	**31**	P	**P**	**14 51 57.5**	**+0.2**
	comp=Z,1.5nm,1.1s,baz=297,slow=5.9,SNR=10						
ASAR	**Alice Springs**	**62.91**	**189**	P	**P**	**14 52 06.2**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=353,slow=4.5,SNR=32						
FINES	**FINESS Array B**	**67.59**	**332**	P	**P**	**14 52 36.3**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=15,slow=5.8,SNR=1.5						
FFC	**Flin Flon**	**71.44**	**34**	P	**P**	**14 52 58.9**	**-1.9**
FFC				IAmb	IAmb	14 53 02.6	
	comp=Z,4.8nm,1.2s						
NVAR	**Mina Array Bea**	**72.92**	**54**	P	**P**	**14 53 09.4**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=290,slow=5.9,SNR=5.9						
AKASG	**Malin Array Be**	**73.42**	**323**	P	**P**	**14 53 12.1**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=44,slow=6.2,SNR=2.1						
PDAR	**Pinedale Array**	**75.49**	**46**	P	**P**	**14 53 25.2**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=250,slow=0.9,SNR=6.1						
TXAR	**Lajitas Array**	**88.04**	**53**	P	**P**	**14 54 30.9**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=226,slow=2.7,SNR=4.5						

BGR ***03*** *14:47:05.0±0.0, 1°.50N×97°.20E, h33km, mb5.3, Ms4.3*

BJI ***03*** *14:47:04.1±0.0, 1°.90N×98°.01E, h59km, mB5.0/63, mb5.2/74, Ms4.9/74, Ms7 4.7/69*

NEIC ***03*** *14:47:04.8±2.0, 1°.87N±0°.04×97°.88E±0°.05, h43km±4km, mb5.4/145, Error ellipse: s-maj=8.3km s-min=6.0km az=116.0*

IDC ***03*** *14:47:06.4±1.5, 1°.89N×98°.01E, h58km±13km, mb4.8/45, mb1 4.8/47, mb1mx4.8/52, mbtmp5.1/47, MS4.4/27, Ms1 4.4/27, ms1mx4.3/35, Error ellipse: s-maj=9.0km s-min=8.3km az=62.0*

GCMT ***03*** *14:47:06.8±0.1, 1°.82N±0°.01×97°.84E±0°.01, h45km, MW5.3/119, Moment Tensor Solution. s119,c189; s118,c207; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; M_{rr}0.74±.01; $M_{\theta\theta}$-0.42±.01; $M_{\phi\phi}$-0.32±.01; $M_{r\theta}$0.51±.01; $M_{\theta\phi}$0.33±.01; $M_{\phi r}$-0.40±.01; Best double couple: $M_0$0.97100×10^{17} NP1:ϕ_s312.00000°, δ24.00000°, λ93.00000°. NP2:ϕ_s129.00000°, δ66.00000°, λ89.00000°. Principal axes: T 0.9900, Plg69.0000°, Azm37.0000°; N -0.0390, Plg1.0000°, Azm130.0000°; P -0.9510, Plg21.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***03*** *14:47:06.9±0.9, 2°.03N×98°.04E, h73km, mb5.7/91 Error ellipse: s-maj=6.7km s-min=3.3km az=118.9*

KLM ***03*** *14:47:07.0, 1°.97N×97°.83E, h76km, mb5.3*

DJA ***03*** *14:47:08.9±0.2, 2°N±2°×9°8E±°, h65km±2km, M5.1/60, mB5.5/47, mb5.4/60, MLv5.6/23, Mw(mB)5.0/47, Mwp5.2/12*

ISC 03 14:47:06.5±0.3, **1°.96N**±0°.03×**97°.90E**±0°.03, **h60**km±2km, **h60**km**:pP-P, n1090,** σ**1s39**/1150, **mb5.3**/282, **139C-23D,**

Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.73**	**207**	P	**Pn**	**14 47 19.2**	**-1.9**
GSI				S	**Sn**	**14 47 30.4**	**-1.4**
GSI	**Gunungsitoli**	**0.73**	**207**		**Pn**	**14 47 18.8**	**-2.3**
GSI					**Sn**	**14 47 33.1**	**+1.4**
RPSI	**Rantau Prapat**	**1.26**	**54**		**Pn**	**14 47 28.9**	**+0.9**
RPSI	**Rantau Prapat**	**1.26**	**54**		**Pn**	**14 47 28.5**	**+0.6**
PSI	**Prapat**	**1.32**	**51**	P	**Pn**	**14 47 28.5**	**-0.4**
	708nm,0.3s,baz=180,slow=5.7,SNR=2190						
TPTI		**1.48**	**331**	P	**Pn**	**14 47 32.2**	**+1.2**
TPTI				S	**Sn**	**14 47 50.1**	**+0.8**
KCSI	**Kotacane, Aceh**	**1.56**	**355**	P	**Pn**	**14 47 33.0**	**+1.0**
KCSI				S	**Sn**	**14 47 53.5**	**+2.2**
SNSI	**Sinabang, Aceh**	**1.64**	**286**	P	**Pn**	**14 47 34.8**	**+1.8**
SNSI				S	**Sn**	**14 47 59.1**	**+6.0**
PBSI	**Pulau Batu**	**2.04**	**169**	P	**Pn**	**14 47 40.1**	**+1.6**
MNSI	**Mandailing Nat**	**2.04**	**124**	P	**Pn**	**14 47 40.5**	**+2.0**
MLSI	**Meulaboh, Aceh**	**2.74**	**327**	P	**Pn**	**14 47 49.5**	**+1.4**
LHMI	**Lhok Sumawe**	**3.39**	**344**	P	**Pn**	**14 47 58.4**	**+1.5**
LHMI	**Lhok Sumawe**	**3.39**	**344**		**Pn**	**14 47 58.5**	**+1.6**
SISI	**Saibi**	**3.47**	**160**	P	**Pn**	**14 47 58.9**	**+0.8**
BKNI	**Bangkinang**	**3.53**	**117**	P	**Pn**	**14 48 01.2**	**+2.3**
BKNI	**Bangkinang**	**3.53**	**117**		**Pn**	**14 47 59.3**	**+0.4**
PDSI	**Padang**	**3.83**	**138**	P	**Pn**	**14 48 03.9**	**+0.8**
IPM	**Ipoh**	**4.00**	**51**		**Pn**	**14 48 07.3**	**+1.9**
IPM	**Ipoh**	**4.00**	**51**	P	**Pn**	**14 48 08.0**	**+2.6**
KULM	**Kulim**	**4.30**	**40**		**Pn**	**14 48 10.7**	**+1.2**
KULM	**Kulim**	**4.30**	**40**	P	**Pn**	**14 48 11.0**	**+1.6**
SDSI	**Sungai Dareh**	**4.55**	**129**	P	**Pn**	**14 48 15.1**	**+2.3**
RGRI	**Rengat**	**4.99**	**117**	P	**Pn**	**14 48 20.5**	**+1.6**
PPSI	**Pulau Pagai**	**5.14**	**156**	P	**Pn**	**14 48 23.3**	**+2.3**
	16nm18µm2µm,1.2s						
KRJI	**Kerinci**	**5.37**	**138**	P	**Pn**	**14 48 26.0**	**+1.8**
	29nm5µm45µm4µm,1.0s						
MYKOM	**Kota Tinggi**	**5.95**	**92**		**Pn**	**14 48 31.7**	**-0.3**
MYKOM	**Kota Tinggi**	**5.95**	**92**	P	**Pn**	**14 48 33.0**	**+1.0**
MASI	**Maura Aman, Be**	**6.67**	**139**	P	**Pn**	**14 48 44.4**	**+2.4**
	11nm15µm1µm,1.0s						
TPRI	**Tanjung Pinang**	**6.70**	**99**	P	**Pn**	**14 48 44.1**	**+1.7**
	1.7nm16µm289nm,0.7s						
KSI	**Kapahiang**	**7.28**	**140**	P	**Pn**	**14 48 52.9**	**+2.5**
	2.6nm6µm506nm,0.8s						
KSI	**Kapahiang**	**7.28**	**140**	P	**Pn**	**14 48 51.4**	**+1.0**
KSI				pmax	pmax		
	comp=Z,506nm,0.8s						
MNAI	**Manna**	**8.06**	**141**	P	**Pn**	**14 49 00.1**	**-0.8**
MNAI	**Manna**	**8.06**	**141**		**Pn**	**14 48 59.9**	**-1.1**
MDSI	**Maura Dua**	**8.96**	**136**	P	**Pn**	**14 49 13.4**	**+0.1**
	comp=Z,2µmcomp=Z,192nm,0.8s						
LWLI	**Liwa**	**9.27**	**138**	P	**Pn**	**14 49 19.2**	**+1.6**
	comp=Z,4µmcomp=Z,398nm,0.8s						
DGPR	**DIGLIPUR**	**12.19**	**336**	*i* x	**Pn**	**14 49 53.2**	**-4.2**
DGPR				*e*P	**Pn**	**14 49 53.2**	**-4.2**
DBJI	**Dramaga**	**12.23**	**134**	P	P	14 50 03.3	-5.1
	comp=Z,14µmcomp=Z,104nm,1.0s						
SKJI	**Sukabumi**	**12.41**	**136**	P	**P**	**14 50 12.4**	**+2.0**
KSM	**Kuching**	**12.41**	**92**	P	**Pn**	**14 50 04.0**	**+3.5**
CNJI	**Cibinong**	**13.02**	**135**	P	**P**	**14 50 19.9**	**+2.7**
LEM	**Lembang**	**13.05**	**132**	P	**Pn**	**14 50 06.4**	**-2.9**
	comp=Z,1.4nm,0.3s,baz=132,slow=21,SNR=1.7						
LEM	**Lembang**	**13.05**	**132**	P	**Pn**	**14 50 10.3**	**+1.0**
LEM				pmax	pmax		
	comp=Z,80nm,1.0s						
CISI	**Cisompet, Garu**	**13.68**	**134**	P	**P**	**14 50 23.4**	**-1.2**
	comp=Z,2µmcomp=Z,99nm,0.6s						
CISI	**Cisompet, Garu**	**13.68**	**134**		**Pn**	**14 50 14.7**	**-3.1**
SBUM	**Sibu**	**14.32**	**88**		**Pn**	**14 50 28.7**	**+2.5**
SBUM	**Sibu**	**14.32**	**88**	P	**P**	**14 50 29.0**	**-2.7**
DLV	**T Lat**	**14.44**	**46**		**Pn**	**14 50 29.7**	**+1.7**
CM31	**Chiang Mai Arr**	**16.43**	**4**	P	**Pn**	**14 50 53.7**	**+0.4**
CMAR	**Chiang Mai Arr**	**16.43**	**4**	P	**Pn**	**14 50 53.8**	**+0.5**
	comp=Z,7.7nm,0.3s,baz=195,slow=12,SNR=267						
CMAR				LR	LR	14 57 46.7	
	comp=Z,2µm,20.4s,baz=196,slow=39						
CMAR	**Chiang Mai Arr**	**16.43**	**4**	*i* P	**Pn**	**14 50 53.7**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,64nm,0.7s						
CHTO	**Chiang Mai**	**16.78**	**3**	P	**Pn**	**14 50 57.7**	**0.0**
CHTO				pmax	pmax		
	comp=Z,68nm,0.9s						
CHTO	**Chiang Mai**	**16.78**	**3**		**Pn**	**14 50 57.7**	**0.0**
GRJI	**Gresik**	**17.01**	**121**	P	**P**	**14 51 06.2**	**+4.6**
KMMI	**Kalianget**	**18.36**	**119**	P	**Pn**	**14 51 21.1**	**+4.0**
	comp=Z,173nm,0.9s						
KKM	**Kota Kinabalu**	**18.71**	**77**	P	**Pn**	**14 51 21.7**	**+0.3**
KKM				IAmb	IAmb	14 51 26.1	
	comp=Z,160nm,0.8s						
JAGI	**Jajag, Banyuwa**	**19.23**	**123**	P	Pn	14 51 35.6	+8.1
BKB	**Balikpapan**	**19.26**	**99**	P	**Pn**	**14 51 29.9**	**+2.0**
	comp=Z,3µmcomp=Z,4µmcomp=Z,292nm,0.8s						
SMKI	**Samarinda**	**19.45**	**97**	P	**Pn**	**14 51 31.6**	**+1.5**
	comp=Z,5µmcomp=Z,200nm,1.1s						
SRBI	**Singaraja**	**19.94**	**120**	P	**Pn**	**14 51 37.5**	**+1.6**
	comp=Z,2µmcomp=Z,287nm,0.8s						
SLVN	**Son La**	**20.13**	**16**	P	**P**	**14 51 35.8**	**0.0**
SLVN				IAmb	IAmb	14 51 41.0	
	comp=Z,96nm,0.8s						
QIZ	**Qiongzhong**	**20.61**	**34**	P	**P**	**14 51 41.1**	**+0.2**
QIZ				pP	**pP**	**14 51 54.5**	**+0.4**
QIZ				pmax	pmax		
	comp=Z,43nm,1.4s						
QIZ				LR	LR		
	comp=Z,770nm,18.3s						
QIZ				LR	LR		
	comp=Z,560nm,19.2s						
QIZ				LR	LR		
	comp=Z,1µm,27.5s						
QIZ	**Qiongzhong**	**20.61**	**34**	P	**P**	**14 51 41.7**	**+0.8**
MDRS	**Chennai**	**20.67**	**303**	*e*P	**P**	**14 51 41.1**	**-0.5**
BRDH	**Bariadhala**	**21.47**	**344**	P	**P**	**14 51 49.9**	**-0.3**
	comp=Z,138nm,0.4s,baz=46,slow=23,SNR=4.2						
BWNR	**Bhubaneshwar**	**21.72**	**328**	*e*P	**P**	**14 51 52.4**	**-0.5**
BWNR				IAmb	IAmb	14 51 57.0	
	comp=Z,72nm,0.5s						
MPSI	**Mapaga**	**22.05**	**94**	P	**P**	**14 51 56.9**	**+0.4**
	comp=Z,2µmcomp=Z,1µmcomp=Z,107nm,0.8s						
TTSI	**Tana Toraja**	**22.47**	**103**	P	**P**	**14 52 02.9**	**+1.9**
	comp=Z,2µmcomp=Z,1µmcomp=Z,110nm,0.8s						
PLAI	**Plampang**	**22.52**	**119**	P	**P**	**14 52 04.4**	**+2.8**
	comp=Z,941nmcomp=Z,118nm,0.8s						
SPSI	**Sidrap Palu**	**22.63**	**105**	P	**P**	**14 52 03.6**	**+0.9**
	comp=Z,2µmcomp=Z,926nmcomp=Z,78nm,0.9s						
KAPI	**Kappang**	**22.90**	**108**	P	**P**	**14 52 04.6**	**-0.9**
	comp=Z,74nm,0.8s,baz=274,slow=7.6,SNR=21						
KAPI				LR	LR	15 02 02.5	
	comp=Z,1µm,19.9s,baz=119,slow=39						
KAPI	**Kappang**	**22.90**	**108**	P	**P**	**14 52 04.6**	**-0.9**
KAPI				IAmb	IAmb	14 52 08.4	
	comp=Z,85nm,0.9s						
BNSI	**Bone**	**23.07**	**106**	P	**P**	**14 52 08.5**	**+1.3**
	comp=Z,1µmcomp=Z,128nm,1.0s						
ENPP	**El Nido**	**23.25**	**66**	*e*P	**P**	**14 52 08.5**	**-0.4**
BKSI	**Bulukumba**	**23.35**	**108**	P	**P**	**14 52 10.2**	**+0.3**
	comp=Z,1µmcomp=Z,130nm,0.8s						
KMI	**Kunming**	**23.50**	**11**	P	**P**	**14 52 12.0**	**+0.6**
KMI				pP	pP	14 52 26.7	+1.3
KMI				sP	sP	14 52 33.5	+0.7
KMI				S	**S**	**14 56 22.2**	**+1.2**
KMI				pmax	pmax		
	comp=Z,57nm,1.3s						
KMI				pmax	pmax		
	comp=Z,400nm,4.9s						
KMI				LR	LR		
	comp=Z,3µm,15.4s						
KMI				LR	LR		
	comp=Z,1µm,17.3s						
KMI				LR	LR		
	comp=Z,3µm,15.4s						
MRSI	**Marisa**	**24.08**	**93**	P	**P**	**14 52 15.9**	**-0.7**
	comp=Z,1µmcomp=Z,151nm,0.8s						
SHL	**Shillong**	**24.18**	**347** ⇑	*i*P	**P**	**14 52 17.7**	**+0.1**
SHL				IAmb	IAmb	14 52 20.4	
	comp=Z,125nm,0.4s						
SHL	**Shillong**	**24.18**	**347**	P	**P**	**14 52 16.9**	**-0.7**
SHL				pmax	pmax		
	comp=Z,153nm,0.6s						
SHL	**Shillong**	**24.18**	**347**	P	**P**	**14 52 16.9**	**-0.7**
BUSP	**Coron**	**24.25**	**65**	*e*P	**P**	**14 52 17.7**	**-0.5**
WBSI	**Waikabubak, Su**	**24.31**	**119**	P	**P**	**14 52 16.6**	**-2.1**
HYB	**Hyderabad**	**24.44**	**310**	*i* P	**P**	**14 52 22.0**	**+2.1**
	comp=Z,342nm,0.8s						
HYB				*e*pP	**pP**	**14 52 32.0**	**-2.6**
HYB				*e*sP	**sP**	**14 52 37.0**	**-4.8**
HYB				*e*S	**S**	**14 56 38.0**	**+2.0**
HYB	**Hyderabad**	**24.44**	**310**	*e*P	**P**	**14 52 20.2**	**+0.3**
CUYO	**Cuyo Island**	**24.59**	**68**	*e*P	**P**	**14 52 20.8**	**-0.4**
BOK	**Bokaro**	**24.63**	**333**	*e*P	**P**	**14 52 22.1**	**+0.6**
BOK				IAmb	IAmb	14 52 26.1	
	comp=Z,382nm,1.0s						
BOK				*i* x	x	14 59 19.8	
LUWI	**Luwuk**	**25.05**	**97**	P	**P**	**14 52 25.8**	**+0.4**
	comp=Z,9µmcomp=Z,421nm,0.7s						
LUWI	**Luwuk**	**25.05**	**97**	P	**P**	**14 52 25.3**	**-0.1**
SJMP	**San Jose**	**25.26**	**64**	*e*P	**P**	**14 52 27.4**	**+0.1**
BASI	**Baing, Sumba**	**25.61**	**119**	P	**P**	**14 52 34.6**	**+4.1**
	comp=Z,2µmcomp=Z,206nm,0.9s						
BBSI	**Bau Bau**	**25.73**	**107**	P	**P**	**14 52 33.0**	**+1.4**
	comp=Z,439nmcomp=Z,60nm,0.8s						
GYA	**Guiyang**	**25.77**	**18** ⇑	*i*P	**P**	**14 52 31.3**	**-0.7**
GYA				pP	pP	14 52 49.2	+2.5
GYA				PP	**PnPn**	**14 53 09.8**	**-1.9**
GYA				PcP	**PcP**	**14 56 01.6**	**+0.9**
GYA				sS	sS	14 57 18.5	-3.8
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,200nm,7.1s						
GYA				LR	LR		
	comp=Z,830nm,17.9s						
GYA				LR	LR		
	comp=Z,680nm,15.5s						
GYA				LR	LR		
	comp=Z,1µm,16.0s						
CNOP	**Candoni, Negro**	**25.80**	**71**	*e*P	**P**	**14 52 32.6**	**+0.4**
EDFI	**Ende, Flores**	**25.99**	**115**	P	**P**	**14 52 30.5**	**-3.6**
OTRP	**Odiongan**	**26.04**	**65**	*e*P	**P**	**14 52 34.1**	**-0.3**
PAGZ	**Pagadian**	**26.04**	**76**	*e*P	**P**	**14 52 34.1**	**-0.4**
KMSI	**Cibinong**	**26.11**	**93**	P	**P**	**14 52 39.7**	**+4.6**
	comp=Z,2µmcomp=Z,170nm,0.6s						
LQP	**Lukban**	**26.30**	**61**	*e*P	**P**	**14 52 36.8**	**-0.2**
BOAC	**Boac**	**26.30**	**63**	*e*P	**P**	**14 52 36.9**	**+0.2**
MMRI	**Maumere**	**26.45**	**114**	P	**P**	**14 52 40.1**	**+2.0**
	comp=Z,2µmcomp=Z,65nm,0.8s						
NGP	**Nagpur**	**26.48**	**317**	*e*P	**P**	**14 52 38.4**	**0.0**
ODAN	**Odare**	**26.74**	**339**	*e*P	**P**	**14 52 41.6**	**+0.8**
	comp=Z,145nm,0.6s						
GTK	**Tadong**	**26.75**	**341**	*e*P	**P**	**14 52 41.7**	**+0.9**
POLP	**Polilio Island**	**26.91**	**61**	*e*P	**P**	**14 52 41.8**	**-0.4**
SKMP	**Bagumbayan, Su**	**26.95**	**79**	*e*P	**P**	**14 52 42.1**	**-0.5**
DGAR	**Diego Garcia**	**27.04**	**250**	*ce*P	**P**	**14 52 42.8**	**-0.7**
DGAR				pmax	pmax		
	comp=Z,415nm,1.7s						
TAPN	**Taplejung**	**27.07**	**340**	*e*P	**P**	**14 52 45.0**	**+1.1**
	comp=Z,281nm,0.8s						
H08S2	**Diego Garcia H**	**27.08**	**249**	T	T	15 20 06.0	
	baz=70,slow=75,SNR=4988						
H08S3	**Diego Garcia H**	**27.09**	**249**	T	T	15 20 06.0	
	baz=70,slow=75,SNR=4835						
H08S1	**Diego Carcia H**	**27.10**	**249**	T	T	15 20 07.2	
	baz=70,slow=75,SNR=6240						
RAMN	**Ramite**	**27.11**	**337**	*e*P	**P**	**14 52 45.5**	**+1.3**
	comp=Z,137nm,0.4s						
KCP	**Kidapawan**	**27.56**	**79** ⇓	*i*P	**P**	**14 52 48.8**	**+0.6**
BUKP	**Musuan**	**27.68**	**77**	*e*P	**P**	**14 52 49.4**	**+0.2**
CAUP	**Cauayan**	**27.84**	**56**	*e*P	**P**	**14 52 50.5**	**-0.1**
JIRN	**Jiri**	**27.91**	**337**	*e*P	**P**	**14 52 52.5**	**+1.0**
	comp=Z,247nm,0.8s						
MSLP	**Maasin**	**27.99**	**72**	*e*P	**P**	**14 52 50.0**	**-1.9**
DDMP	**Don Marcelino,**	**28.04**	**81**	*e*P	**P**	**14 52 54.0**	**+1.6**
DAV	**Davao City (W)**	**28.05**	**79**	LR	LR	15 06 02.7	
	comp=Z,334nm,19.0s,baz=237,slow=41						
PKI	**Pulchoki**	**28.14**	**336**	*e*P	**P**	**14 52 54.3**	**+0.8**
	comp=Z,181nm,0.7s						
PKIN	**Phulchoki**	**28.15**	**336**	*e*P	**P**	**14 52 54.2**	**+0.7**
	comp=Z,122nm,0.6s						
GUN	**Gumba**	**28.25**	**337**	*e*P	**P**	**14 52 55.6**	**+1.1**
	comp=Z,314nm,0.7s						
DMN	**Daman**	**28.30**	**336**	*e*P	**P**	**14 52 55.8**	**+1.0**
	comp=Z,102nm,0.6s						
LSA	**Lhasa**	**28.33**	**348**	*i* P	**P**	**14 52 56.8**	**+1.6**
	SNR=33						
LSA	**Lhasa**	**28.33**	**348**	P	**P**	**14 52 55.9**	**+0.6**
LSA				pmax	pmax		
	comp=Z,80nm,0.6s						
LSA	**Lhasa**	**28.33**	**348**	P	**P**	**14 52 55.9**	**+0.6**
LSA				IAmb	IAmb	14 52 58.2	
	comp=Z,80nm,0.6s						
BATI	**Baumata**	**28.35**	**116**	P	**P**	**14 52 52.3**	**-2.9**
	comp=Z,39nm,0.6s,baz=291,slow=1.1,SNR=22						
BATI				S	S	14 57 27.8	-10
	comp=Z,37nm,0.8s,baz=4.9,slow=19,SNR=5.7						
BATI	**Baumata**	**28.35**	**116**	P	**P**	**14 52 52.1**	**-3.1**
SANI	**Sanana**	**28.36**	**98**	P	**P**	**14 52 54.5**	**-0.8**
	comp=Z,2µmcomp=Z,24nm,1.0s						
KKN	**Kakani**	**28.38**	**336**	*e*P	**P**	**14 52 56.4**	**+0.9**
	comp=Z,7.6nm,0.6s						
BUTP	**Butuan**	**28.44**	**75**	*e*P	**P**	**14 52 55.5**	**-0.4**
SOEI	**Soe**	**28.72**	**114**	P	**P**	**14 52 55.2**	**-3.4**
SOEI	**Soe**	**28.72**	**114**	P	**P**	**14 52 55.3**	**-3.3**
SOEI				IAmb	IAmb	14 53 11.6	
	comp=Z,54nm,0.8s						
POO	**Poona**	**28.76**	**307**	*e*x	**P**	**14 53 00.6**	**+1.8**
POO				IAmb	IAmb	14 53 08.0	
	comp=Z,13nm,0.8s						
GKN	**Gorkha**	**28.84**	**335**	*e*P	**P**	**14 53 00.5**	**+1.0**
	comp=Z,138nm,0.4s						
BHPL	**Bhopal**	**29.01**	**318**	*e*P	**P**	**14 53 00.9**	**-0.1**
BHPL				IAmb	IAmb	14 53 04.5	
	comp=Z,39nm,0.8s						
KOLN	**Koldanda**	**29.09**	**333**	*e*P	**P**	**14 53 03.3**	**+1.5**
	comp=Z,245nm,0.6s						
CD2	**Chengdu**	**29.32**	**10**	P	**P**	**14 53 04.2**	**+0.5**
CD2				pP	pP	14 53 18.0	-0.5
CD2				S	**S**	**14 57 58.4**	**+5.5**
CD2				pmax	pmax		
	comp=Z,50nm,0.6s						
CD2				pmax	pmax		
	comp=Z,200nm,7.6s						
CD2				LR	LR		
	comp=Z,2µm,16.1s						
CD2				LR	LR		
	comp=Z,2µm,16.3s						
CD2				LR	LR		
	comp=Z,4µm,17.3s						
DANN	**Dangsing**	**29.52**	**334**	*e*P	**P**	**14 53 06.7**	**+1.0**
	comp=Z,196nm,0.5s						
NLAI	**Namlea**	**29.64**	**100**	P	**P**	**14 53 07.2**	**+0.6**
	comp=Z,2µmcomp=Z,150nm,0.8s						
PYUN	**Piuthan**	**29.65**	**333**	*e*P	**P**	**14 53 08.5**	**+1.8**
	comp=Z,203nm,0.5s						
LBMI	**Labuha**	**29.71**	**95**	P	**P**	**14 53 08.8**	**+1.6**
	comp=Z,1µmcomp=Z,83nm,1.2s						
ENH	**Enshi**	**30.23**	**20**	P	**P**	**14 53 10.6**	**-1.1**
ENH				IAmb	IAmb	14 53 11.0	
	comp=Z,38nm,0.7s						
QZH	**Quanzhou**	**30.35**	**39**	P	P	14 53 22.5	+10
QZH				S	S	14 58 23.7	+15
QZH				LR	LR		
	comp=N,900nm,15.8s						
QZH				LR	LR		
	comp=E,530nm,14.4s						
QZH				LR	LR		
	comp=Z,1µm,13.0s						
TPUB	**Ta-pu**	**30.59**	**44**	P	**P**	**14 53 12.8**	**-2.1**
TPUB				IAmb	IAmb	14 53 16.7	
	comp=Z,41nm,1.0s						
AAI	**Ambon**	**30.79**	**100**	P	**P**	**14 53 16.8**	**0.0**
	comp=Z,156nm,0.8s						
YULB	**Yu-li**	**31.11**	**45**	P	**P**	**14 53 20.1**	**+0.6**
MSAI	**Masohi**	**31.46**	**100**	P	**P**	**14 53 22.1**	**-0.6**
	comp=Z,331nmcomp=Z,18nm,1.2s						
PSA00	**Pilbara Seismi**	**31.74**	**139**	P	**P**	**14 53 23.8**	**-1.2**

PSA00 IAmb IAmb 14 53 25.1
comp=Z,28nm,0.8s
YHNB Yeheng 32.00 43 P **P** **14 53 25.3 -2.1**
YHNB IAmb IAmb 14 53 30.8
comp=Z,75nm,1.4s
WHN Wuhan 32.42 27 ⇓P **P** **14 53 31.0 +0.1**
WHN LR LR
comp=Z,1µm,10.0s
WHN LR LR
comp=Z,2µm,17.0s
WHN LR LR
comp=Z,2µm,24.4s
SIJI Sorong 33.48 95 P **P** **14 53 39.1 -1.3**
comp=Z,36nm,0.8s,baz=298,slow=6.5,SNR=20
SIJI LR LR 15 08 05.8
comp=Z,339nm,21.9s,baz=306,slow=38
XAN Xi'an 33.54 17 P **P** **14 53 39.6 -1.1**
XAN pP pP 14 53 54.9 -0.7
XAN sP sP 14 54 02.8 +0.1
XAN PP **PnPn** **14 54 53.0 -0.9**
XAN S **S** **14 58 59.2 +0.6**
XAN sS sS 14 59 25.2 +1.2
XAN SS **SnSn** **15 01 08.6 +2.1**
XAN pmax pmax
comp=Z,52nm,0.8s
XAN pmax pmax
comp=Z,190nm,6.0s
XAN LR LR
comp=Z,550nm,17.4s
XAN LR LR
comp=Z,760nm,16.3s
XAN LR LR
comp=Z,1µm,20.6s
XAN Xi'an 33.54 17 P **P** **14 53 39.8 -0.9**
XAN pmax pmax
comp=Z,88nm,1.1s
XAN Xi'an 33.54 17 P **P** **14 53 39.8 -0.9**
XAN IAmb IAmb 14 53 40.5
comp=Z,88nm,1.1s
FITZ Fitzroy Crossi 33.81 127 P **P** **14 53 40.6 -2.5**
baz=34,SNR=22
FITZ Fitzroy Crossi 33.81 127 P **P** **14 53 40.9 -2.3**
comp=Z,16nm,0.7s,baz=314,slow=7.8
FITZ PcP **PcP** **14 56 21.8 +0.5**
comp=Z,5.9nm,0.5s,baz=333,slow=4.2,SNR=6.5
FITZ LR LR 15 08 06.2
comp=Z,500nm,21.9s,baz=306,slow=37
FITZ Fitzroy Crossi 33.81 127 IAmb IAmb 14 53 42.0
comp=Z,16nm,0.7s
DDI Dehra Dun 33.91 328⇑*i*P **P** **14 53 45.4 +1.4**
DDI *i* x x 15 05 47.4
LZH Lanzhou 34.40 9 *e*P **P** **14 53 48.0 -0.3**
LZH pP pP 14 54 03.2 -0.1
LZH sP sP 14 54 10.4 +0.1
LZH *e*PP **PP** **14 55 07.3 +0.1**
LZH pmax pmax
comp=Z,26nm,1.1s
LZH pmax pmax
comp=Z,110nm,5.1s
LZH LR LR
comp=Z,320nm,13.2s
LZH LR LR
comp=Z,490nm,14.8s
LZH LR LR
comp=Z,700nm,15.1s
FAKI Fak Fak 34.68 98 P P 14 53 55.9 +5.1
FAKI Fak Fak 34.68 98 P **P** **14 53 48.7 -2.1**
FAKI IAmb IAmb 14 53 59.5
comp=Z,42nm,0.9s
MEEK Meekatharra 34.76 146 P **P** **14 53 52.3 +1.0**
baz=35,SNR=14
SMLA Simla 35.02 328 *e*P **P** **14 53 54.6 +1.2**
SMLA IAmb IAmb 14 54 02.9
comp=Z,77nm,0.7s
KNRA Kununurra 35.19 121 P **P** **14 53 52.5 -2.5**
baz=35,SNR=20
KNRA Kununurra 35.19 121 P **P** **14 53 52.6 -2.5**
KNRA IAmb IAmb 14 54 08.1
comp=Z,29nm,0.8s
MORW Morawa 35.41 152 P **P** **14 53 58.8 +2.0**
baz=36,SNR=6.4
MORW Morawa 35.41 152 P **P** **14 53 58.9 +2.1**
MORW IAmb IAmb 14 54 11.5
comp=Z,59nm,1.1s
BHK Bhakra 35.64 327 *ex* **P** **14 54 01.5 +2.7**
NJ2 Nanjing 35.86 31 *e*P **P** **14 54 03.3 +2.7**
NJ2 pmax pmax
comp=Z,12nm,0.5s
NJ2 LR LR
comp=Z,930nm,15.2s
NJ2 LR LR
comp=Z,630nm,16.1s
NJ2 LR LR
comp=Z,1µm,16.1s
MTN Manton Dam 36.12 115 P **P** **14 54 00.9 -2.1**
baz=36,SNR=23
MTN Manton Dam 36.12 115 P **P** **14 54 01.1 -2.0**
DHRM DHARAMSHALA 36.35 328⇑*i*P **P** **14 54 06.2 +1.0**
KDU Kakadu 37.28 114 P **P** **14 54 11.0 -2.0**
baz=37,SNR=7.6
GTA Gaotai 37.32 2 P **P** **14 54 13.2 +0.1**
GTA pP pP 14 54 26.7 -1.6
GTA sP sP 14 54 33.1 -2.2
GTA PcP **PcP** **14 56 33.1 +1.7**
GTA S **S** **14 59 54.7 -2.0**
GTA ScP **ScP** **15 00 15.2 +1.6**
GTA ScS **ScS** **15 04 20.6 -1.1**
GTA pmax pmax
comp=Z,87nm,0.9s
GTA pmax pmax
comp=Z,200nm,5.6s
GTA LR LR
comp=Z,310nm,15.6s
GTA LR LR
comp=Z,390nm,14.9s
GTA LR LR
comp=Z,360nm,17.8s
MUN Mundaring 37.96 154 P **P** **14 54 21.0 +2.6**
baz=38,SNR=12
JOW Kunigami 38.22 47 P **P** **14 54 20.9 +0.1**
comp=Z,3.0nm,0.4s,baz=353,slow=19,SNR=20
JOW Kunigami 38.22 47 IAmb IAmb 14 54 22.4
comp=Z,28nm,0.5s
KLBR Kellerberrin 38.33 152 P **P** **14 54 23.6 +2.0**
baz=38,SNR=6.8
TIA Tai'an 38.45 25 P **P** **14 54 22.1 -0.5**
TIA pmax pmax
comp=Z,13nm,0.5s
NIL Nilore 39.07 326 P **P** **14 54 28.8 +1.0**
NIL pmax pmax
comp=Z,241nm,0.7s
NIL Nilore 39.07 326 P **P** **14 54 28.8 +1.0**
NWAO Narrogin (SRO) 39.22 154 P **P** **14 54 31.3 +2.3**
baz=39,SNR=13
NWAO Narrogin (SRO) 39.22 154 P **P** **14 54 28.5 -0.5**
comp=Z,23nm,0.7s,baz=326,slow=7.9,SNR=8.0
NWAO LR LR 15 09 32.4
comp=Z,609nm,21.4s,baz=337,slow=34
NWAO Narrogin (SRO) 39.22 154 P **P** **14 54 31.4 +2.3**
NWAO pmax pmax
comp=Z,42nm,1.0s
NWAO Narrogin (SRO) 39.22 154 P **P** **14 54 31.6 +2.6**
NWAO IAmb IAmb 14 54 42.4
comp=Z,48nm,0.9s
NWAO Narrogin (SRO) 39.22 154 P **P** **14 54 31.4 +2.3**
NWAO IAmb IAmb 14 54 42.4
comp=Z,42nm,0.9s
WRKA Warakurna 39.85 134 P **P** **14 54 33.6 -0.9**
baz=40,SNR=32
HHC Hu-ho-hao-te 40.64 16 P **P** **14 54 41.6 +0.7**
HHC pP sP 14 55 00.1 -3.1
HHC S **S** **15 00 51.0 +4.5**
HHC sS sS 15 01 15.4 +3.1
HHC pmax pmax
comp=Z,15nm,1.0s
HHC pmax pmax
comp=Z,160nm,5.4s
HHC LR LR
comp=Z,650nm,17.0s
HHC LR LR
comp=Z,410nm,17.0s
HHC LR LR
comp=Z,610nm,17.0s
SMPI Sarmi 40.99 95 P **P** **14 54 44.2 +0.2**
comp=Z,726nmcomp=Z,47nm,1.0s
BJT Baijiatuau 41.36 21 IAmb IAmb 14 54 49.6
comp=Z,51nm,0.8s
BJI Beijing 41.38 21 P **P** **14 54 47.5 +0.7**
BJI S **S** **15 01 02.3 +5.0**
BJI pmax pmax
comp=Z,37nm,0.7s
BJI LR LR
comp=Z,370nm,26.6s
BJI LR LR
comp=Z,310nm,22.0s
BJI LR LR
comp=Z,1µm,40.0s
WB0 Warramunga Arr 41.81 123 IAmb IAmb 14 54 50.3
comp=Z,81nm,0.8s
WRA Warramunga Arr 41.85 123 P **P** **14 54 49.6 -1.4**
comp=Z,82nm,0.8s,baz=301,slow=9.1,SNR=292
WRA PcP **PcP** **14 56 46.4 +0.3**
comp=Z,14nm,0.7s,baz=312,slow=2.6,SNR=6.1
WRA S S 15 00 45.0 -20
comp=Z,0.2nm,0.3s,baz=294,slow=17,SNR=1.6
WRA Warramunga Arr 41.85 123 *i* P **P** **14 54 49.5 -1.5**
WRA pmax pmax
comp=Z,82nm,0.8s
WRAB Tennant Creek 41.85 123*ce*P **P** **14 54 49.7 -1.3**
WRAB pmax pmax
comp=Z,94nm,0.8s
WRAB Tennant Creek 41.85 123 P **P** **14 54 50.3 -0.8**
WRAB IAmb IAmb 14 54 58.6
comp=Z,92nm,0.7s
WB2 Warramunga Arr 41.86 123 P **P** **14 54 50.1 -1.0**
WB2 IAmb IAmb 14 54 50.8
comp=Z,82nm,0.8s
WR0 Warramunga Arr 42.03 123 P **P** **14 54 51.4 -1.0**
KBL Kabul 42.12 324 P **P** **14 54 52.9 -0.4**
KBL pmax pmax
comp=Z,28nm,0.9s
KBL Kabul 42.12 324 P **P** **14 54 52.9 -0.4**
KSH Kashi 42.38 335 P **P** **14 54 55.1 -0.1**
KSH sP sP 14 55 20.3 +2.8
KSH PP **PP** **14 56 39.4 +5.0**
KSH S **S** **15 01 08.9 -3.5**
KSH SS **SS** **15 04 15.1 -8.3**
KSH pmax pmax
comp=Z,110nm,0.6s
KSH pmax pmax
comp=Z,310nm,4.8s
KSH LR LR
comp=Z,500nm,12.9s
KSH LR LR
comp=Z,400nm,11.3s
KSH LR LR
comp=Z,830nm,19.1s
GENI Genyem 42.50 96 P **P** **14 54 54.9 -1.5**
WMQ Urumqi 42.66 349 *e*P **P** **14 54 58.9 +1.6**
WMQ pP pP 14 55 14.4 +1.7
WMQ sP sP 14 55 21.1 +1.4
WMQ PP **PcP** **14 56 43.6 -4.8**
WMQ pmax pmax
comp=Z,130nm,0.9s
WMQ pmax pmax
comp=Z,360nm,3.6s
WMQ LR LR
comp=Z,230nm,29.5s
WMQ LR LR
comp=Z,130nm,29.7s
WMQ LR LR
comp=Z,580nm,29.0s
JAY Jayapura 43.02 96 P **P** **14 54 58.5 -2.2**
comp=Z,41nm,0.8s,baz=78,slow=21,SNR=11
JAY Jayapura 43.02 96 P **P** **14 55 00.7 0.0**
comp=Z,26nm,0.8s
ASAR Alice Springs 43.30 128 P **P** **14 55 01.6 -1.2**
comp=Z,20nm,0.8s,baz=298,slow=7.6,SNR=218
ASAR PcP **PcP** **14 56 51.4 +0.5**
comp=Z,17nm,0.8s,baz=309,slow=3.1,SNR=18
ASAR ScP **ScP** **15 00 37.0 -0.3**
comp=Z,2.4nm,0.9s,baz=296,slow=3.9,SNR=4.5
ASAR S **S** **15 01 19.5 -6.7**
comp=Z,6.6nm,0.9s,baz=300,slow=14,SNR=17
AS31 Alice Springs 43.30 128 P **P** **14 55 01.7 -1.1**
FORT Forrest 43.41 141 P **P** **14 55 04.2 +0.8**
baz=44,SNR=38
FORT Forrest 43.41 141 P **P** **14 55 04.3 +0.8**
FORT IAmb IAmb 14 55 16.4
comp=Z,83nm,0.7s
TJN Taejon 43.76 35*ce*P **P** **14 55 05.6 -0.6**
JNU Nakatsue 43.78 41 P **P** **14 55 05.9 -0.5**
comp=Z,19nm,0.7s,baz=245,slow=4.8,SNR=24
SHLS Shalkode 44.20 341⇑*i*P **P** **14 55 10.0 +0.2**
comp=Z,66nm,0.6s
SHLS Shalkode 44.20 341*c i*P **P** **14 55 09.9 +0.2**
SHLS pmax pmax
comp=Z,66nm,0.6s
UZB Uzunbulak 44.34 340⇑*i*P **P** **14 55 12.0 +1.1**
comp=Z,50nm,0.6s
UZB Uzunbulak 44.34 340*c i*P **P** **14 55 12.0 +1.1**
UZB pmax pmax
comp=Z,50nm,0.6s
PDGK Podgornoye 44.34 341 P **P** **14 55 11.9 +1.0**
SATY Saty 44.47 340⇑*i*P **P** **14 55 13.5 +1.5**
comp=Z,70nm,0.8s
SATY *e*S **S** **15 01 43.5 +0.6**
SATY Saty 44.47 340*c i*P **P** **14 55 13.4 +1.5**
SATY *e*S **S** **15 01 43.4 +0.6**
SATY pmax pmax
comp=Z,70nm,0.8s
ULHL Ulahol 44.57 337 P **P** **14 55 14.2 +1.3**
SNR=60
KZA Kyzart 44.82 336 P **P** **14 55 16.6 +1.5**
SNR=33
KSRS Korea Array 44.83 34 P **P** **14 55 14.2 -0.5**
comp=Z,36nm,0.8s,baz=221,slow=9.1,SNR=126
KSRS LR LR 15 14 27.1
comp=Z,475nm,21.1s,baz=235,slow=37
KS19 Wonju Array Si 44.83 34 P **P** **14 55 14.4 -0.4**
KS19 IAmb IAmb 14 55 15.7
comp=Z,50nm,0.8s
BOOM Boomskoye usch 44.89 337 IAmb IAmb 14 55 17.8
comp=Z,48nm,0.8s
TNSS Tian-Shan 44.98 338⇑*i*P **P** **14 55 17.4 +1.1**
TNSS Tian-Shan 44.98 338⇑*i*P **P** **14 55 17.4 +1.1**
KNDC Almaty 45.13 338 P **P** **14 55 18.8 +1.7**
AAA Alma-Ata 45.14 338 *e*P **P** **14 55 18.8 +1.6**
AAA *e*S **S** **15 01 53.8 +1.4**
AAA pmax pmax
comp=Z,400nm,2.3s
AAA smax smax
comp=N,200nm,7.0s
UCH Uchtor 45.25 335 P **P** **14 55 20.2 +1.7**
SNR=122
TKM2 Tokmak 2 45.39 337 P **P** **14 55 20.9 +1.6**
SNR=93
KBK Karagaybulak 45.43 336 P **P** **14 55 21.9 +2.2**
SNR=71
AML Almayashu 45.51 335 P **P** **14 55 22.3 +1.7**
SNR=134
AAK Ala-Archa 45.60 336 P **P** **14 55 22.7 +1.8**
SNR=26
AAK Ala-Archa 45.60 336 *i* P **P** **14 55 22.5 +1.5**
SNR=44
AAK Ala-Archa 45.60 336*ce*P **P** **14 55 22.5 +1.5**
AAK pmax pmax
comp=Z,101nm,2.5s
AAK Ala-Archa 45.60 336 P **P** **14 55 23.0 +2.1**
AAK IAmb IAmb 14 55 28.4
comp=Z,38nm,1.0s
CHMS Chumysh 45.79 336 P **P** **14 55 23.7 +1.4**
SNR=36
EKS2 Erkin-Say 45.91 335 P **P** **14 55 25.4 +2.0**
SNR=91
KUU Kurty 45.94 338⇑*i*P **P** **14 55 24.2 +0.7**
comp=Z,87nm,1.0s
KUU *e*S **S** **15 02 03.9 +0.1**
KUU Kurty 45.94 338*c i*P **P** **14 55 24.1 +0.7**
KUU *e*S **S** **15 02 03.9 +0.1**
KUU pmax pmax
comp=Z,87nm,1.0s
USP Ospenovka 46.12 336 P **P** **14 55 26.5 +1.6**
SNR=87
TDK Taldyqorghan 46.19 341 *e*P **P** **14 55 25.9 +0.5**
comp=Z,121nm,1.1s
TDK *e*LR LR 15 14 14.2
comp=Z,444nm,26.4s
TDK Taldyqorghan 46.19 341 *e*P **P** **14 55 25.9 +0.5**
TDK pmax pmax
comp=Z,121nm,1.1s
TDK MLR MLR
comp=Z,444nm,26.0s
SGDS Sogindy 46.22 337⇑*i*P **P** **14 55 26.7 +1.0**
comp=Z,104nm,2.3s
SGDS *e*S **S** **15 02 08.7 +0.7**
HATD Hatta, Dubai 46.25 303 P **P** **14 55 28.1 +1.9**
ASHO Ashiyiah 46.26 303 P **P** **14 55 28.1 +1.8**
ALNE Al Ain 46.28 302 P **P** **14 55 28.6 +2.1**
SONM Songino Array 46.29 8 P **P** **14 55 27.0 +0.7**
comp=Z,50nm,0.7s,baz=189,slow=8.9,SNR=285
SONM PcP **PcP** **14 57 01.5 +0.7**
comp=Z,9.4nm,0.5s,baz=187,slow=4.2,SNR=7.6
SONM ScP **ScP** **15 00 48.4 -0.8**
comp=Z,2.0nm,0.8s,baz=207,slow=2.7,SNR=3.6
SONM LR LR 15 17 02.5
comp=Z,909nm,19.5s,baz=184,slow=39
MDH Madha 46.30 304 P **P** **14 55 28.0 +1.5**
ULN Ulaanbaatar 46.41 9*ce*P **P** **14 55 27.0 -0.2**
ULN pmax pmax
comp=Z,47nm,0.8s
ULN Ulaanbaatar 46.41 9 P **P** **14 55 28.2 +1.0**
ULN IAmb IAmb 14 55 29.0
comp=Z,58nm,1.1s
MSFE Esma-Masafi 46.44 304 P **P** **14 55 29.2 +1.5**
BANOM Banah 46.55 305 P **P** **14 55 29.4 +0.9**
QIS Mount Isa 46.58 121 P **P** **14 55 28.2 -0.6**
baz=46,SNR=15
MK31 Makanchi Array 46.69 345 *i* P **P** **14 55 30.2 +0.9**
MK31 Makanchi Array 46.69 345 P **P** **14 55 30.5 +1.2**
MKAR Makanchi Array 46.69 345 P **P** **14 55 30.3 +1.0**
comp=Z,128nm,0.7s,baz=158,slow=8.0,SNR=1099
MKAR PcP **PcP** **14 57 03.2 +1.1**
comp=Z,11nm,0.8s,baz=142,slow=4.9,SNR=2.0
MKAR LR LR 15 19 55.9
comp=Z,264nm,18.3s,baz=169,slow=42
MAKZ Makanchi 46.78 345 P **P** **14 55 31.1 +1.1**
MAKZ pmax pmax
comp=Z,114nm,0.8s
MAKZ Makanchi 46.78 345 P **P** **14 55 31.1 +1.1**
JBG Jabagly 47.15 332*c i*P **P** **14 55 34.6 +1.5**
JBG pmax pmax
comp=Z,45nm,1.0s
DZA Taraz 47.16 333 *e*P **P** **14 55 32.8 -0.3**
DZA Taraz 47.16 333 *e*P **P** **14 55 32.8 -0.3**
IUG Iuzhnay 47.18 332⇑*i*P **P** **14 55 34.6 +1.3**
IUG Iuzhnay 47.18 332*c i*P **P** **14 55 34.6 +1.3**
COEN Coen 47.57 111 P **P** **14 55 35.5 -1.1**
baz=47,SNR=14
COEN Coen 47.57 111 P **P** **14 55 35.6 -1.0**
COEN IAmb IAmb 14 55 36.4
comp=Z,24nm,0.9s
KK31 Karatay Array 47.70 333 *i* P **P** **14 55 37.8 +0.6**
KK31 Karatay Array 47.70 333 P **P** **14 55 38.3 +1.1**
KK31 IAmb IAmb 14 55 43.2
comp=Z,25nm,0.9s
KKAR Karatay Array 47.70 333 P **P** **14 55 38.3 +1.1**
KKAR pmax pmax
comp=Z,25nm,0.9s
KKAR Karatay Array 47.70 333 P **P** **14 55 38.3 +1.1**
KKAR IAmb IAmb 14 55 43.2
comp=Z,25nm,0.9s
BTLS Baital 47.78 337⇑*i*P **P** **14 55 38.6 +0.7**
comp=Z,24nm,0.9s
BTLS Baital 47.78 337*c i*P **P** **14 55 38.5 +0.7**
BTLS pmax pmax
comp=Z,24nm,0.9s
CN2 Changchun 48.32 27 *e*P **P** **14 55 41.3 -0.6**
CN2 *e*S **S** **15 02 36.8 -0.8**
CN2 pmax pmax
comp=Z,20nm,0.6s
CN2 LR LR
comp=Z,710nm,16.0s
CN2 LR LR
comp=Z,540nm,16.0s
DGZ Jazzator, Alta 48.40 351*c i*P **P** **14 55 44.4 +1.7**
DGZ pmax pmax
comp=Z,236nm,1.3s
ZAK Zakamensk 48.46 5 *e*P **P** **14 55 42.6 -0.5**
ZAK pmax pmax
comp=Z,29nm,0.9s
INU Inuyama 49.20 43 P **P** **14 55 48.5 -0.4**
INU IAmb IAmb 14 55 51.1
comp=Z,27nm,1.2s
JCJ Chichijima 49.22 55 P **P** **14 55 48.0 -1.1**
comp=Z,174nm,0.6s,baz=267,slow=4.1,SNR=34
MOY Mondy 49.60 3 *e*P **P** **14 55 52.4 +0.6**
MOY pmax pmax
comp=Z,61nm,2.7s
TLY Talaya 49.78 5 P **P** **14 55 54.0 +1.0**
comp=Z,38nm,0.7s,baz=242,slow=5.6,SNR=22
TLY Talaya 49.78 5 *e*P **P** **14 55 54.6 +1.6**
TLY *e*S **S** **15 02 57.9 -0.1**
TLY pmax pmax
comp=Z,102nm,0.7s
TLY MLR MLR
comp=Z,3µm,17.0s
TLY Talaya 49.78 5 IAmb IAmb 14 55 55.4
comp=Z,44nm,0.7s
MTSU Mount Surprise 49.85 116 P **P** **14 55 54.2 0.0**
baz=50,SNR=54
BBOO Buckleboo 49.95 137 P **P** **14 55 54.1 -0.5**
baz=50,SNR=9.7
JHJ Hachijo jima 2 49.99 47 P **P** **14 55 54.2 -0.7**
comp=Z,73nm,0.8s,baz=244,slow=18,SNR=2.2
PMG Port Moresby 50.35 104*ce*P **P** **14 55 57.2 -0.7**
PMG pmax pmax
comp=Z,156nm,0.6s
PMG Port Moresby 50.35 104 P **P** **14 55 56.9 -1.0**
PMG IAmb IAmb 14 55 58.2
comp=Z,47nm,0.8s
IRK Irkutsk 50.40 5 *e*P **P** **14 55 56.4 -1.2**
IRK pmax pmax
comp=Z,76nm,2.7s
SEM Semipalatinsk 50.55 345 *e*P **P** **14 55 59.2 0.0**
SEM Semipalatinsk 50.55 345 *e*P **P** **14 55 59.1 0.0**
MJB9 Matsu-Tunnel 50.66 42 P **P** **14 55 59.8 -0.1**
MAJO Matsushiro 50.66 42 *i* P **P** **14 55 59.8 -0.2**
MAJO Matsushiro 50.66 42 P **P** **14 55 59.6 -0.4**
MAT Matsushiro 50.66 42 P **P** **14 55 58.9 -1.1**
MAT *e*S **S** **15 03 12.0 +1.3**
MJAR Matsushiro Arr 50.66 42 P **P** **14 56 00.1 +0.1**
comp=Z,9.7nm,0.7s,baz=210,slow=6.9,SNR=60
MJAR PcP **PcP** **14 57 17.5 +0.8**
comp=Z,6.0nm,0.8s,baz=225,slow=3.3,SNR=4.5
MJAR LR LR 15 19 32.8
comp=Z,259nm,19.0s,baz=255,slow=38
HIA Hailar 50.70 18 IAmb IAmb 14 56 01.1
comp=Z,19nm,0.8s
GEYT Alibeck 51.09 319 P **P** **14 56 04.4 +1.2**
comp=Z,30nm,0.7s,baz=148,slow=8.7,SNR=67
GYA0 ALIBECK ARRAY 51.09 319 P **P** **14 56 04.1 +0.9**
GYA0B ALIBECK ARRAY 51.09 319 P **P** **14 56 04.2 +1.0**
GYA0B IAmb IAmb 14 56 10.4
comp=Z,46nm,0.7s
OTUK Ortayu 51.10 338 P **P** **14 56 04.4 +1.3**
KURBB Kurchatov Arra 51.19 344 P **P** **14 56 04.6 +1.0**
KURK Kurchatov 51.25 344*ce*P **P** **14 56 05.1 +1.0**
KURK pmax pmax
comp=Z,160nm,0.8s
KURK Kurchatov 51.25 344 P **P** **14 56 05.4 +1.3**
USA0B Ussuriysk Arra 51.76 31 IAmb IAmb 14 56 16.7
comp=Z,30nm,0.9s
USRK Ussuriysk Ar. 51.76 31 P **P** **14 56 08.3 +0.2**
comp=Z,9.2nm,0.4s,baz=234,slow=7.8,SNR=70
USRK LR LR 15 18 50.2
comp=Z,642nm,21.7s,baz=214,slow=37
CTAO Charters Tower 52.22 117 P **P** **14 56 11.9 0.0**
CTAO pmax pmax
comp=Z,56nm,0.9s
CTAO Charters Tower 52.22 117 P **P** **14 56 11.9 0.0**
CTAO IAmb IAmb 14 56 12.9
comp=Z,56nm,0.9s
HTT Hallett 52.27 136 P **P** **14 56 12.2 +0.1**
baz=52,SNR=15
QLP Quilpie 52.93 126 P **P** **14 56 17.3 +0.3**
baz=53,SNR=14
ZALV Zalesovo Beam 52.93 350 P **P** **14 56 17.3 +0.8**
comp=Z,145nm,0.4s,baz=177,slow=6.9,SNR=859
ZALV LR LR 15 21 30.1
comp=Z,288nm,21.7s,baz=170,slow=39
STKA Stephens Creek 53.35 133 P **P** **14 56 20.0 0.0**
baz=53,SNR=19
STKA Stephens Creek 53.35 133 P **P** **14 56 19.7 -0.3**
comp=Z,11nm,0.7s,baz=308,slow=7.3,SNR=34
STKA LR LR 15 19 52.6
comp=Z,340nm,21.5s,baz=300,slow=37
OPO Ambohidratompo 53.87 245 P **P** **14 56 24.1 -0.1**

comp=Z,3.1nm,0.7s,baz=111,slow=18
RAYN Ar Rayn 55.02 297 P **P** **14 56 33.3 +0.9**
RAYN pmax pmax
comp=Z,19nm,0.9s
RAYN Ar Rayn 55.02 297 P **P** **14 56 33.3 +0.9**
RAYN lAmb lAmb 14 56 48.4
comp=Z,19nm,0.8s
KLR Kul'dur 55.27 26*ce*P **P** **14 56 34.0 +0.4**
BRVK Borovoye 55.84 340*ce*P **P** **14 56 37.9 +0.3**
BRVK pmax pmax
comp=Z,87nm,1.0s
BRVK Borovoye 55.84 340 P **P** **14 56 38.1 +0.5**
CMSA Cobar Meteorol 56.24 130 P **P** **14 56 41.3 +0.4**
baz=56,SNR=67
RMQ Roma 56.61 124 P **P** **14 56 44.6 +0.9**
baz=56,SNR=9.8
ZEA Zeya 56.99 20 *e*P **P** **14 56 46.4 +0.6**
ZEA pmax pmax
comp=E,24nm,1.0s
ZEA pmax pmax
comp=N,21nm,0.8s
ZEA pmax pmax
comp=Z,36nm,0.8s
ZEA MLR MLR
comp=E,400nm,16.0s
BOD Bodaibo 57.14 10 *e*P **P** **14 56 47.5 +0.7**
BOD pmax pmax
comp=Z,68nm,0.9s
AB31 Akbulak array 57.18 331 *i* P **P** **14 56 47.4 +0.1**
ASAJ Asahikawa 57.64 37 P **P** **14 56 51.3 +0.7**
comp=Z,16nm,0.5s,baz=252,slow=11,SNR=37
LKRN Lenkeran, Azer 57.80 316 P **P** **14 56 52.8 +1.0**
EIDS Eidsvold 58.17 122 P **P** **14 56 54.9 +0.3**
baz=58,SNR=16
EIDS Eidsvold 58.17 122 lAmb lAmb 14 56 55.7
comp=Z,29nm,0.7s
GRNR Gornyy 58.48 28⇑ *i*P **P** **14 56 57.1 +0.7**
GRNR pmax pmax
comp=Z,10.0nm,1.1s
YSS Yuzh-Sakhalins 59.33 34⇑ *i*P **P** **14 57 03.2 +0.9**
YSS *e* 14 57 18.9
YSS pmax pmax
comp=E,50nm,0.9s
YSS pmax pmax
comp=Z,200nm,0.9s
YSS pmax pmax
comp=N,50nm,1.0s
YSS pmax pmax
comp=Z,600nm,3.5s
YSS pmax pmax
comp=N,300nm,3.0s
YSS Yuzh-Sakhalins 59.33 34 P **P** **14 57 03.5 +1.3**
YUK Yuzh-Kuril'sk 59.59 38*c i*P **P** **14 57 01.6 -2.5**
YUK S **S** **15 05 08.2 -1.6**
YUK pmax pmax
comp=Z,164nm,1.0s
YUK MLR MLR
comp=N,545nm,21.0s
YUK MLR MLR
comp=Z,439nm,21.0s
YUK MLR MLR
comp=E,904nm,20.0s
AKT Akhty 59.78 318 *e*P **P** **14 57 06.3 +0.7**
AKT *e* 14 57 51.3
AKT *e* 14 59 20.1
AKT pmax pmax
comp=Z,27nm,1.0s
MNGR Mingechevir, A 59.89 317 P **P** **14 57 07.1 +0.8**
SEKA Sheki 60.01 318 P **P** **14 57 07.9 +0.7**
NAX Nakhchivan 60.31 315 P **P** **14 57 10.4 +1.1**
GANJ Ganja 60.36 317 P **P** **14 57 10.9 +1.4**
PATS Pohnpei 60.40 83 P **P** **14 57 08.3 -1.9**
baz=60,SNR=4.0
PATS Pohnpei 60.40 83 P **P** **14 57 10.1 -0.1**
ARMA Armidale 60.42 127 P **P** **14 57 09.8 -0.4**
baz=60,SNR=15
ARMA Armidale 60.42 127 P **P** **14 57 11.7 +1.4**
ARMA lAmb lAmb 14 57 12.8
comp=Z,26nm,0.8s
MAK Makhachkala 60.61 320 *e*P **P** **14 57 09.1 -2.0**
MAK *e**PP **pP** **14 57 26.3 -1.0**
MAK *e**SP **sP** **14 57 33.1 -0.9**
MAK *e*S **S** **15 05 17.5 -5.4**
MAK *e**SS **sS** **15 05 51.0 +1.1**
MAK pmax pmax
comp=Z,91nm,1.2s
KMBO Kilima Mbogo 60.72 268 P **P** **14 57 13.8 +1.0**
comp=Z,2.8nm,0.8s,baz=54,slow=12,SNR=7.4
KMBO LR LR 15 18 56.8
comp=Z,427nm,21.5s,baz=96,slow=31
KMBO Kilima Mbogo 60.72 268 P **P** **14 57 13.3 +0.6**
KMBO Kilima Mbogo 60.72 268 *i* P P 14 57 17.7 +5.0
KMBO pmax pmax
comp=Z,3.0nm,0.6s
KMBO Kilima Mbogo 60.72 268 P **P** **14 57 12.2 -0.5**
LGD Lagodekhi 60.93 318 P **P** **14 57 14.4 +1.0**
TYV Tymovskoe 61.58 30 *e*P **P** **14 57 18.4 +0.9**
TYV pmax pmax
comp=Z,23nm,1.1s
TYV pmax pmax
comp=Z,200nm,3.9s
GROC Groznyy 61.83 319 *e*P **P** **14 57 18.1 -1.3**
GROC *e**PP **pP** **14 57 34.0 -1.6**
GROC *e**SP **sP** **14 57 41.1 -1.3**
GROC *e* 14 59 38.3
GROC *e*S **S** **15 05 39.2 +0.7**
GROC *e**SS **sS** **15 06 08.5 +3.0**
GROC pmax pmax
comp=Z,75nm,0.8s
KZRT Kazreti 61.99 317 P **P** **14 57 21.3 +0.7**
SVE Sverdlovsk 62.25 338*d i*P **P** **14 57 22.7 +0.7**
SVE *e*S **S** **15 05 46.1 +2.8**
SVE pmax pmax
comp=Z,86nm,0.8s
SVE MLR MLR
comp=Z,571nm,23.0s
GUDG Gudauri 62.39 318 P **P** **14 57 25.2 +1.8**
BGD Bogdanovka 62.49 316 P **P** **14 57 25.2 +1.1**
KARS Kars 62.60 316 P **P** **14 57 26.9 +2.1**
AKH Akhalkalaki 62.62 316 ⇓P **P** **14 57 26.7 +1.7**
AKH Akhalkalaki 62.62 316 P **P** **14 57 26.7 +1.7**
AKH pmax pmax
comp=Z,32nm,1.0s
AKH Akhalkalaki 62.62 316 lAmb lAmb 14 57 27.4
comp=Z,32nm,1.0s
ARU Arti 62.77 337*c i*P **P** **14 57 25.5 +0.1**
ARU *PP **pP** **14 57 40.5 -1.1**
ARU 14 58 02.8
ARU 14 59 41.6
ARU S **S** **15 05 51.2 +1.4**
ARU SS **SS** **15 09 48.7 -6.8**
ARU pmax pmax
comp=Z,36nm,0.8s
ARU MLR MLR
comp=Z,412nm,21.0s
ARU Arti 62.77 337 P **P** **14 57 24.7 -0.7**
ARU lAmb lAmb 14 57 26.1
comp=Z,29nm,0.7s
HNR Honiara 62.83 102 P **P** **14 57 25.7 -0.9**
HNR pmax pmax
comp=Z,98nm,0.9s
ZEI Tsey 62.91 318 *e*P **P** **14 57 25.1 -1.8**
ZEI pmax pmax
comp=Z,40nm,0.6s
ONI Oni 63.13 318 P **P** **14 57 29.8 +1.6**
NEY Neytrino 63.89 318 *i* P **P** **14 57 34.8 +1.5**
NEY pmax pmax
comp=Z,6.0nm,0.7s
BCA Borcka 63.93 316 ⇓P **P** **14 57 34.3 +0.9**
BATM Batumi 63.94 316 ⇓P **P** **14 57 34.6 +1.1**
BATM Batumi 63.94 316 ⇓P **P** **14 57 34.6 +1.1**
KBZ Khabaz 63.97 319 P **P** **14 57 34.5 +0.9**
comp=Z,54nm,0.8s,baz=119,slow=5.6,SNR=152
KBZ LR LR 15 29 24.5
comp=Z,116nm,20.9s,baz=120,slow=40
KBZ Khabaz 63.97 319*ce*P **P** **14 57 34.2 +0.6**
SHA1 Shidzhatmaz 64.13 319*c i*P **P** **14 57 36.0 +1.0**
KIV Kislovodsk 64.20 319 ⇓P **P** **14 57 36.4 +1.1**
KIV Kislovodsk 64.20 319 *i* P **P** **14 57 35.7 +0.4**
SNR=8.1
KIV Kislovodsk 64.20 319 *e*P **P** **14 57 36.0 +0.8**
KIV *e* 14 59 57.3
KIV *e*S **S** **15 06 09.7 +1.4**
KIV *e*SS **SS** **15 10 21.4 +2.8**
KIV pmax pmax
comp=Z,214nm,1.1s
KIV pmax pmax
comp=Z,73nm,3.8s
KIV MLR MLR
comp=Z,353nm,17.0s
KIV Kislovodsk 64.20 319 P **P** **14 57 35.1 -0.2**
GOF Gofitskoye 64.43 320⇑ *e*P **P** **14 57 36.8 +0.2**
GOF pmax pmax
comp=Z,58nm,0.9s
YAK Yakutsk 64.50 16 P **P** **14 57 36.6 -0.1**
comp=Z,89nm,0.5s,baz=332,slow=0.3,SNR=105
YAK Yakutsk 64.50 16*c i*P **P** **14 57 36.8 +0.1**
YAK *e* 14 57 52.8
YAK *e*S **S** **15 06 05.6 -5.5**
YAK *e*SS **SS** **15 10 14.9 -7.5**
YAK pmax pmax
comp=Z,163nm,0.9s
YAK pmax pmax
comp=E,38nm,1.2s
YAK pmax pmax
comp=N,50nm,1.0s
YAK smax smax
comp=E,38nm,11.8s
YAK smax smax
comp=N,47nm,11.2s
YAK MLR MLR
comp=Z,719nm,15.0s
YAK MLR MLR
comp=E,374nm,16.0s
YAK MLR MLR
comp=N,463nm,17.0s
YAK Yakutsk 64.50 16 P **P** **14 57 36.6 -0.1**
MALT Malatya 65.15 312 P **P** **14 57 43.0 +1.4**
MBAR Mbarara 67.20 269*ce*P **P** **14 57 56.9 +1.6**
MBAR pmax pmax
comp=Z,12nm,1.0s
NRIK Noril'sk 67.62 356 P **P** **14 57 56.8 +0.2**
comp=Z,43nm,0.8s,baz=159,slow=6.2,SNR=101
NRIK LR LR 15 31 10.5
comp=Z,325nm,20.5s,baz=176,slow=39
KVT Kavak 67.75 314 P **P** **14 57 59.7 +1.6**
VRH Novokhopyorsk 67.89 326 *e*P **P** **14 57 58.3 -0.3**
VRH pmax pmax
comp=Z,100nm,0.7s
KIRV Kirov 67.92 335⇑ *e*P **P** **14 57 59.3 +0.6**
ANN Anapa 68.00 318 *e*P **P** **14 57 58.7 -0.8**
ANN *e**PP **pP** **14 58 16.0 +0.1**
ANN *e*S **S** **15 06 51.0 -3.2**
ANN pmax pmax
comp=Z,24nm,0.8s
ANN MLR MLR
comp=Z,38nm,6.0s
CSS Mathiatis 68.17 307 P **P** **14 58 01.2 +0.4**
CSS lAmb lAmb 14 58 16.8
comp=Z,33nm,0.9s
DIKM Dikmen 68.49 314 ⇑P **P** **14 58 00.9 -1.7**
SKR Severo-Kuril's 68.83 35 *e*P **P** **14 58 03.8 -0.7**
SKR *e**PP **pP** **14 58 21.0 +0.1**
SKR *e*S **S** **15 07 01.5 -2.4**
SKR *e**SS **sS** **15 07 30.6 -1.5**
SKR *e*SSS SSS 15 14 28.7
SKR pmax pmax
comp=Z,31nm,0.7s
SKR MLR MLR
comp=Z,100nm,20.0s
BR131 Keskin Array S 69.12 312 lAmb lAmb 14 58 07.7
comp=Z,18nm,0.7s
BRTR Keskin Array B 69.12 312 P **P** **14 58 06.8 -0.1**
comp=Z,14nm,0.7s,baz=131,slow=7.2,SNR=108
VORD Divnogorie 69.18 325 *e*P **P** **14 58 05.7 -1.0**
VORD pmax pmax
comp=Z,40nm,0.9s
VSR Storozhevoye 69.35 325 *e*P **P** **14 58 06.9 -0.9**
VSR pmax pmax
comp=Z,40nm,0.6s
BZK Bozkurt 69.48 314 ⇓P **P** **14 58 08.3 -0.4**
ANTO Ankara 69.79 312 ⇑P **P** **14 58 11.1 +0.3**
ANTO Ankara 69.79 312 P **P** **14 58 11.3 +0.5**
ANTO pmax pmax
comp=Z,26nm,0.8s
ANTO Ankara 69.79 312 P **P** **14 58 11.3 +0.5**
ANTO lAmb lAmb 14 58 12.1
comp=Z,26nm,0.8s
LPSR Galich'ya Gora 70.06 326 *e*P **P** **14 58 11.8 -0.2**
LPSR pmax pmax
comp=Z,90nm,0.8s
SIM Simferopol' 70.28 317*ce*P **P** **14 58 14.1 +0.5**
SIM *e*S **S** **15 07 19.0 -2.2**
SIM pmax pmax
comp=Z,46nm,0.7s
MA2 Magadan 70.35 26*ce*P **P** **14 58 14.5 +0.8**
MA2 pmax pmax
comp=Z,60nm,0.7s
MA2 Magadan 70.35 26 P **P** **14 58 14.6 +0.8**
PEA0B Petropavlovsk- 70.72 34*ce*P **P** **14 58 17.3 +1.2**
PETK Petropavlovsk- 70.72 34 P **P** **14 58 16.4 +0.2**
comp=Z,17nm,0.7s,baz=221,slow=1.6,SNR=60
PETK LR LR 15 32 38.2
comp=Z,168nm,18.2s,baz=240,slow=39
DZM Mont Dzumac 70.95 114 *e*P **P** **14 58 18.4 +0.2**
comp=Z,62nm,1.1s
DZM Mont Dzumac 70.95 114 *e*LR LR 15 20 00.2
comp=Z,341nm,24.8s
DZM Mont Dzumac 70.95 114 P **P** **14 58 18.4 +0.2**
DZM lAmb lAmb 14 58 19.9
comp=Z,26nm,0.9s
LSZ Lusaka 71.00 253 P **P** **14 58 20.0 +1.3**
comp=Z,1.5nm,0.3s,baz=55,slow=4.6,SNR=7.6
LSZ Lusaka 71.00 253 P **P** **14 58 20.0 +1.3**
PET Petropavlovsk 71.22 34*c i*P **P** **14 58 19.6 +0.5**
PET *e**PP **pP** **14 58 35.8 +0.2**
PET *e*S **S** **15 07 31.8 +0.2**
PET pmax pmax
comp=Z,400nm,7.0s
PET pmax pmax
comp=Z,107nm,0.6s
PET pmax pmax
comp=Z,100nm,5.4s
PET MLR MLR
comp=Z,200nm,22.0s
PET Petropavlovsk 71.22 34 P **P** **14 58 19.8 +0.7**
PRGR Permogore 71.22 336*i*P **P** **14 58 19.2 +0.2**
PRGR *e**PP **pP** **14 58 34.0 -1.5**
PRGR *e*S **S** **15 07 31.4 0.0**
PRGR pmax pmax
comp=Z,112nm,0.6s
ELL Elmali 71.28 308 P **P** **14 58 21.0 +1.0**
MATP Matopo 71.46 248 P **P** **14 58 20.1 -1.3**
comp=Z,17nm,0.9s,baz=84,slow=6.2,SNR=39
MOS Moscow 72.05 329 *e*P **P** **14 58 23.5 -0.5**
MOS *e* 14 58 40.1
MOS *e*S **S** **15 07 38.0 -3.1**
MOS pmax pmax
comp=Z,126nm,0.6s
OBN Obninsk 72.35 328 ⇑P **P** **14 58 26.2 +0.4**
OBN Obninsk 72.35 328*c i*P **P** **14 58 26.1 +0.3**
OBN *e* 14 58 43.3
OBN *e**SP **sP** **14 58 50.8 +1.8**
OBN *e*S **S** **15 07 43.4 -1.2**
OBN *e**SS **sS** **15 08 11.7 -0.8**
OBN *e*SS **SS** **15 12 27.0 +3.2**
OBN pmax pmax
comp=Z,74nm,1.3s
OBN MLR MLR
comp=Z,193nm,18.0s
OBN Obninsk 72.35 328 P **P** **14 58 26.3 +0.5**
SEY Seymchan 72.80 23 P **P** **14 58 29.1 +0.7**
comp=Z,38nm,0.7s,baz=235,slow=5.1,SNR=229
SEY Seymchan 72.80 23 *i* P **P** **14 58 28.6 +0.2**
KLMR Klimovskoe 73.38 334 *e*P **P** **14 58 30.3 -1.5**
KLMR pmax pmax
comp=Z,25nm,0.7s
KLMR Klimovskoe 73.38 334 *e*P **P** **14 58 30.3 -1.5**
KLMR AMP 14 58 32.6
comp=Z,25nm,0.7s
NFK Norfolk Island 73.60 121 P **P** **14 58 35.3 +1.5**
baz=74,SNR=3.7
MAW Mawson 73.61 193 P **P** **14 58 33.1 +0.1**
comp=Z,2.9nm,0.7s,baz=38,slow=7.9,SNR=5.5
MAW LR LR 15 24 19.2
comp=Z,386nm,20.1s,baz=52,slow=30
MAW Mawson 73.61 193 P **P** **14 58 31.9 -1.1**
JURR Jurilovca 73.82 316 ⇑P **P** **14 58 32.6 -2.2**
TLCR 73.96 317 ⇑P **P** **14 58 36.5 +0.9**
PSN Preselentsi 74.06 315 *e*P **P** **14 58 38.0 +1.8**
TIRR Tirgusor 74.07 316 ⇑P **P** **14 58 36.9 +0.7**
TIRR Tirgusor 74.07 316 ⇑P **P** **14 58 36.9 +0.7**
TOPG Topolog 74.19 316 ⇑P **P** **14 58 37.3 +0.3**
MILM Milestii Mici 74.38 318 ⇑P **P** **14 58 38.3 +0.3**
CFR Carcaliu 74.43 316 ⇑P **P** **14 58 38.7 +0.4**
CFR Carcaliu 74.43 316 ⇑P **P** **14 58 38.7 +0.4**
HARR Harsova 74.46 316 ⇑P **P** **14 58 39.2 +0.7**
HARR Harsova 74.46 316 ⇑P **P** **14 58 39.2 +0.7**
PRD Provadia 74.51 314 *e*P **P** **14 58 39.3 +0.5**
EZN Ezine 74.64 311 P **P** **14 58 40.2 +0.6**
LEOM Leova 74.65 318 P **P** **14 58 40.8 +1.2**
SANT Santorini 74.73 307 ⇓P **P** **14 58 40.2 -0.1**
LBTB Lobatse 74.85 244 P **P** **14 58 42.4 +1.0**
comp=Z,6.3nm,0.8s,baz=107,slow=6.5,SNR=9.6
LBTB Lobatse 74.85 244 P **P** **14 58 42.9 +1.6**
LBTB pmax pmax
comp=Z,18nm,1.0s
LBTB Lobatse 74.85 244 P **P** **14 58 42.9 +1.6**
SORM Soroca 74.98 319 ⇓P **P** **14 58 45.9 +4.4**
SORM Soroca 74.98 319 ⇓P **P** **14 58 45.9 +4.4**
VASR Vaslui 75.00 318 ⇓P **P** **14 58 42.3 +0.7**
IDI Anoyia 75.02 306 ⇑P **P** **14 58 42.0 -0.1**
IDI Anoyia 75.02 306 lAmb lAmb 14 58 43.7
comp=Z,27nm,0.8s
ALN Alexandroupoli 75.04 312 P **P** **14 58 42.5 +0.5**
AKASG Malin Array Be 75.09 322 P **P** **14 58 41.9 -0.1**
comp=Z,18nm,0.5s,baz=87,slow=5.0,SNR=146
AKASG PP **PP** **15 01 31.2 +0.4**
comp=Z,2.4nm,0.8s,baz=93,slow=6.0,SNR=3.7
AKASG LR LR 15 37 44.0
comp=Z,91nm,18.2s,baz=80,slow=40
AKBB Malin Array Si 75.09 322 lAmb lAmb 14 58 42.8
comp=Z,43nm,0.8s
KIEV Kiev 75.10 322 P **P** **14 58 41.0 -1.1**
RAZG Razgrad 75.22 315 ⇓P **P** **14 58 44.0 +1.0**
TMCR Tamitsa 75.50 337 *e*P **P** **14 58 44.1 0.0**
TMCR pmax pmax
comp=Z,49nm,0.6s
VRI Vrincioaia 75.54 317 ⇑P **P** **14 58 46.2 +1.4**
VRI Vrincioaia 75.54 317 ⇑P **P** **14 58 46.2 +1.4**
PLOR Plostina 75.59 317 ⇑P **P** **14 58 46.1 +1.0**
PLOR Plostina 75.59 317 ⇑P **P** **14 58 46.1 +1.0**
KDZ Kurdzhali 75.65 312 *e*P **P** **14 58 45.0 -0.5**
TESR Tescani 75.74 318 ⇑P **P** **14 58 46.8 +1.0**
BOSA Boshof 75.76 240 P **P** **14 58 48.2 +1.7**
comp=Z,4.0nm,0.7s,baz=87,slow=5.2,SNR=8.5
BOSA LR LR 15 26 56.0
comp=Z,416nm,20.8s,baz=62,slow=32
BOSA Boshof 75.76 240 P **P** **14 58 48.0 +1.5**
MLR Muntele Rosu 76.00 316 ⇑P **P** **14 58 48.6 +1.1**
MLR Muntele Rosu 76.00 316 ⇑P **P** **14 58 48.6 +1.1**
MLR Muntele Rosu 76.00 316 lAmb lAmb 14 58 49.7
comp=Z,38nm,1.0s
BIZ Bicaz 76.19 318 ⇑P **P** **14 58 49.3 +0.8**
PLD Plovdiv 76.25 313 P **P** **14 58 49.3 +0.4**
PLD pmax pmax
comp=Z,57nm,0.8s
KMPD K-Podol'skiy 76.31 320 P **P** **14 58 50.0 +1.0**
HORU Horodok 76.48 320 P **P** **14 58 50.3 +0.3**
DOPR Dopca 76.48 317 ⇑P **P** **14 58 50.6 +0.5**
PLVE Pleven 76.53 314 ⇑P **P** **14 58 50.8 +0.4**
VOIR 76.61 316 ⇑P **P** **14 58 51.1 +0.2**
VOIR 76.61 316 ⇑P **P** **14 58 51.1 +0.2**
PAIG Paliouri 76.66 310 P **P** **14 58 51.9 +0.7**
ARR Arges 76.89 316 ⇑P **P** **14 58 52.9 +0.5**
SRS Serrai 76.91 312 P **P** **14 58 52.0 -0.6**
SRS pmax pmax
comp=Z,20nm,0.8s
BURAR Bucovina Array 76.92 318 ⇑P **P** **14 58 54.4 +1.7**
BURAR Bucovina Array 76.92 318 ⇑P **P** **14 58 54.4 +1.7**
BUR08 Bucovina Ar. S 76.94 318 lAmb lAmb 14 58 55.3
comp=Z,32nm,0.9s
KSV Kosov 77.16 319 P **P** **14 58 52.0 -1.9**
DYR Agios Nikonas 77.28 307 P **P** **14 58 54.7 -0.1**
KKB Krupnik 77.40 312 *e*P **P** **14 58 52.0 -3.4**
VTS Vitosha 77.41 313 P **P** **14 58 55.6 0.0**
VTS Vitosha 77.41 313 ⇑P **P** **14 58 56.0 +0.4**
VTS Vitosha 77.41 313 *e*P **P** **14 58 54.0 -1.6**
VTS Vitosha 77.41 313 ⇑P **P** **14 58 56.0 +0.4**
VTS Vitosha 77.41 313 lAmb lAmb 14 58 56.9
comp=Z,22nm,0.8s
AGG Agios Georgios 77.57 309 P **P** **14 58 55.7 -0.7**
AGG Agios Georgios 77.57 309 lAmb lAmb 14 58 56.0
comp=Z,16nm,0.7s
KLV Kalavryta, Ach 77.58 308 P **P** **14 58 55.8 -0.7**
LIT Litokhoron 77.59 311 P **P** **14 58 55.6 -0.9**
LIT Litokhoron 77.59 311 P **P** **14 58 55.9 -0.6**
LIT Litokhoron 77.59 311 lAmb lAmb 14 58 56.8
comp=Z,39nm,0.7s
NACGM Naroch 77.61 326 *e* **P** **14 58 56.0 -0.2**
KALE Kalithea 77.63 309 P **P** **14 58 55.9 -0.9**
ITM Ithomi 77.65 308 lAmb lAmb 14 58 57.6
comp=Z,39nm,0.8s
SERG Sergoula 77.70 309 P **P** **14 58 56.3 -0.8**
LAKA Lakka 77.74 309 P **P** **14 58 57.0 -0.4**
GRG Griva 77.78 311 P **P** **14 58 57.2 -0.3**
CJR Cluj-Napoca 77.84 317 ⇓P **P** **14 58 59.7 +1.9**
CJR Cluj-Napoca 77.84 317 ⇓P **P** **14 58 59.7 +1.9**
DRO Drossia 77.91 308 P **P** **14 58 58.7 +0.4**
IIGN Ignalina 78.04 326 *e*P **P** **14 58 59.4 +0.8**
BMR Baia Mare 78.08 318 ⇑P **P** **14 59 00.6 +1.6**
BMR Baia Mare 78.08 318 ⇑P **P** **14 59 00.6 +1.6**
MORS Morshin 78.08 320 P **P** **14 59 00.3 +1.3**
IZAR Zarasai 78.12 327 *e*P **P** **14 58 59.8 +0.8**
LVV L'vov 78.13 321 *e*P **P** **14 58 59.8 +0.6**
LVV *e*S **S** **15 08 42.4 -6.6**
LVV *e*PS **PnS** **15 09 33.3 -3.7**
LVV pmax pmax
comp=Z,50nm,1.4s
ISAL Salakas 78.14 327 *e*P **P** **14 58 59.7 +0.5**
DEV Deva 78.17 316 ⇓P **P** **14 59 01.2 +1.7**
DEV Deva 78.17 316 ⇓P **P** **14 59 01.2 +1.7**
GZR Gura Zlata 78.18 316 ⇓P **P** **14 59 00.6 +0.9**
GZR Gura Zlata 78.18 316 ⇓P **P** **14 59 00.6 +0.9**
HERR Herculane 78.35 315 ⇑P **P** **14 59 01.4 +0.9**
LVZ Lovozero 78.37 340*ce*P **P** **14 58 59.1 -1.1**
LVZ pmax pmax
comp=Z,27nm,0.7s
LVZ Lovozero 78.37 340 P **P** **14 59 00.6 +0.3**
LVZ lAmb lAmb 14 59 01.4
comp=Z,32nm,0.6s
DRGR 78.45 317 ⇑P **P** **14 59 02.5 +1.3**
DRGR 78.45 317 ⇑P **P** **14 59 02.5 +1.3**
TRSU Trosnyk 78.51 319 P **P** **14 59 01.7 +0.4**
FNA Florina 78.53 311 P **P** **14 59 01.3 -0.4**
FNA pmax pmax
comp=Z,17nm,0.8s
VSU Vasula 78.55 329 *e*P **P** **14 59 01.8 +0.5**
SKO Skopje 78.63 312 *i* P **P** **14 59 01.6 -0.5**
SKO Skopje 78.63 312 *i* P **P** **14 59 01.6 -0.5**
APA Apatity 78.67 339⇓ *i*P **P** **14 59 01.2 -0.6**
APA pmax pmax
comp=Z,27nm,0.7s
TRPA Tarpa 78.79 319 ⇑P **P** **14 59 04.2 +1.3**
MDVR Moldovita 78.83 315 ⇑P **P** **14 59 03.6 +0.3**
LKD2 Lefkada island 78.83 309 P **P** **14 59 03.4 0.0**
OHR Ohrid 79.00 311 *i* P **P** **14 59 03.4 -0.9**
OHR Ohrid 79.00 311 *i* P **P** **14 59 03.4 -0.9**
BZS Buzias 79.02 316 ⇑P **P** **14 59 05.0 +0.8**
BZS Buzias 79.02 316 ⇑P **P** **14 59 05.0 +0.8**
UZH Uzhgorod 79.04 319 *e*P **P** **14 59 04.2 0.0**
UZH *e* 14 59 10.4
UZH *i* 14 59 18.7
SIRR Siria 79.09 317 ⇑P **P** **14 59 05.9 +1.3**
KOLS Kolonicke sedl 79.10 319 *e*P **P** **14 59 06.1 +1.4**
KOLS pmax pmax
comp=Z,22nm,1.0s
KOLS Kolonicke sedl 79.10 319 *e*P **P** **14 59 06.0 +1.4**
IGT Igoumenitsa 79.17 310 P **P** **14 59 05.1 -0.1**
IGT pmax pmax
comp=Z,28nm,1.6s
RPZ Rata Peaks 79.24 135 P **P** **14 59 05.9 +0.4**
RPZ lAmb lAmb 14 59 06.9
comp=Z,28nm,0.9s
BANR Banloc 79.32 316 ⇑P **P** **14 59 05.8 -0.1**
PABE Paberze 79.32 326 *e*P **P** **14 59 06.1 +0.5**
FIA1 FINESS Array S 79.66 332 lAmb lAmb 14 59 08.4
comp=Z,40nm,0.6s
FINES FINESS Array B 79.66 332 P **P** **14 59 07.9 +0.6**
comp=Z,27nm,0.4s,baz=104,slow=5.5,SNR=380

FINES LR LR 15 39 30.3
comp=Z,316nm,21.2s,baz=110,slow=39
QRZ Quartz Range 79.69 132 IAmb IAmb 14 59 21.6
comp=Z,54nm,1.0s
PVY Plav 79.80 313⇑ *i*P **P 14 59 07.8 -0.9**
IVA Berane 79.88 313⇑ *i*P **P 14 59 08.5 -0.6**
DIVS Divibare 79.96 314⇑ *i*P **P 14 59 09.8 +0.3**
SMY Shemya 80.10 37 P **P 14 59 10.4 +0.5**
SMY pmax pmax
comp=Z,170nm,1.5s
KOME Kolasin 80.16 313⇑ *i*P **P 14 59 09.9 -0.7**
THZ Tophouse 80.16 133 IAmb IAmb 14 59 30.5
comp=Z,30nm,0.6s
SUR Sutherland 80.16 237 P **P 14 59 11.6 +0.7**
comp=Z,6.8nm,0.8s,baz=116,slow=12,SNR=2.8
SUR Sutherland 80.16 237 P **P 14 59 10.0 -0.9**
KECS Kecovo 80.20 319 *e*P **P 14 59 11.6 +1.0**
KECS pmax pmax
comp=Z,9.0nm,0.7s
KECS Kecovo 80.20 319 *e*P **P 14 59 11.6 +1.0**
BILL Bilibino 80.21 21 *c i*P **P 14 59 09.7 -0.5**
BILL *PP **pP 14 59 28.0 +1.0**
BILL *e*SP **sP 14 59 35.1 +1.5**
BILL S **S 15 09 03.0 -7.4**
BILL *SS sS 15 09 52.0 +13
BILL pmax pmax
comp=Z,13nm,1.3s
BILL MLR MLR
comp=Z,242nm,18.0s
FRGS Fruska Gora 80.22 315⇑ *i*P **P 14 59 11.0 +0.2**
ULC Ulcinj 80.26 312⇓ *i*P **P 14 59 10.4 -0.7**
PDG Podgorica 80.30 313⇑⇑ *i*P **P 14 59 11.5 +0.3**
PDG Podgorica 80.30 313⇑ *i*P **P 14 59 11.3 +0.1**
TTG Podgorica 80.30 313⇑ *i*P **P 14 59 11.3 +0.1**
PLE Pljevlja 80.30 313 P **P 14 59 13.5 +2.1**
PLE Pljevlja 80.30 313⇑ *i*P **P 14 59 10.8 -0.6**
DRME Dracevica, Mon 80.33 312⇑ *i*P **P 14 59 11.5 +0.1**
DRME Dracevica, Mon 80.33 312⇑ *i*P **P 14 59 10.9 -0.5**
BBLS Lazići 80.35 314⇑ *i*P **P 14 59 12.5 +0.9**
NIE Niedzica 80.45 320 *e*P **P 14 59 13.3 +1.3**
BEL Belsk 80.51 322 *e*P **P 14 59 13.5 +1.3**
PSZ Piszkesteto 80.51 318⇑⇑ *i*P **P 14 59 13.4 +1.0**
PSZ Piszkesteto 80.51 318⇑⇑ *i*P **P 14 59 13.4 +1.0**
NKY Niksic 80.53 313⇑ *i*P **P 14 59 12.0 -0.6**
BUM Brajici-Budva 80.55 312⇑ *i*P **P 14 59 12.1 -0.6**
PBUR Paburge 80.56 326 *e*P **P 14 59 13.0 +0.7**
NKME Niksic 80.56 313⇑ *i*P **P 14 59 12.2 -0.5**
CEME Cevo 80.56 313⇑ *i*P **P 14 59 12.2 -0.5**
UPM Unac-Piva 80.64 313⇑ *i*P **P 14 59 13.2 -0.1**
UPM Unac-Piva 80.64 313⇑ *i*P **P 14 59 13.2 -0.1**
HAPS Han Pijesak,Bl 80.70 314 *e*P **P 14 59 17.1 +3.6**
HCY Herceg Novi 80.86 313⇑ *i*P **P 14 59 14.0 -0.3**
BRY Bratogost 80.88 313⇑ *i*P **P 14 59 14.4 -0.1**
BRY Bratogost 80.88 313⇑ *i*P **P 14 59 13.9 -0.6**
OJC Ojcow 80.89 320 *e*P **P 14 59 15.1 +0.8**
OJC Ojcow 80.89 320 P **P 14 59 15.2 +1.0**
SYO Syowa Base 80.94 198⇑ *i*X P 14 59 25.4 +11
SYO Syowa Base 80.94 198⇓ *i*X P 14 59 29.8 +16
LANS Liptovska Anna 80.96 319 *e*P **P 14 59 15.7 +1.0**
LANS pmax pmax
comp=Z,5.0nm,0.8s
LANS Liptovska Anna 80.96 319 *e*P **P 14 59 15.7 +1.0**
TREB Trebinje 81.00 313 *e*P **P 14 59 14.6 -0.4**
MORH Mrgy, Hungar 81.15 316⇑ *i*P **P 14 59 16.2 +0.5**
VYHS Vyhne 81.29 319 *e*P **P 14 59 17.2 +0.8**
VYHS pmax pmax
comp=Z,10.0nm,0.7s
VYHS Vyhne 81.29 319 *e*P **P 14 59 17.2 +0.8**
STON Ston 81.49 313⇑ *i*P **P 14 59 17.3 -0.2**
SRO2 Moca 81.50 318 *e*P **P 14 59 17.9 +0.4**
SRO2 pmax pmax
comp=Z,29nm,0.7s
SRO2 Moca 81.50 318 *e*P **P 14 59 17.9 +0.4**
TSUM Tsumeb 81.50 250 P **P 14 59 18.8 +0.6**
comp=Z,4.9nm,0.9s,baz=71,slow=6.7,SNR=7.3
TSUM Tsumeb 81.50 250 P **P 14 59 17.1 -1.2**
KEV Kevo 81.62 341 P **P 14 59 17.4 -0.3**
KEV pmax pmax
comp=Z,28nm,0.9s
KEV Kevo 81.62 341 P **P 14 59 17.4 -0.3**
KEV IAmb IAmb 14 59 19.0
comp=Z,28nm,0.9s
OKC Ostrava-Krasne 81.90 320 *e*P **P 14 59 20.4 +0.9**
OKC Ostrava-Krasne 81.90 320 *e*P **P 14 59 20.4 +0.9**
TIP Timpagrande 81.90 309⇑⇑ *i*P **P 14 59 21.1 +1.2**
BLY Banja Luka 82.03 315⇑⇑ *i*P **P 14 59 21.4 +1.1**
BLY Banja Luka 82.03 315⇑⇑ *i*P **P 14 59 21.1 +0.7**
MATE Matera 82.04 311⇑⇑ *i*P **P 14 59 21.4 +0.9**
ARCES ARCESS Array B 82.06 340 P **P 14 59 20.9 +0.9**
comp=Z,11nm,0.4s,baz=100,slow=4.5,SNR=216
ARCES LR LR 15 39 10.8
comp=Z,386nm,21.3s,baz=120,slow=38
ARE0 ARCESS Array S 82.06 340 P **P 14 59 21.0 +0.9**
ARE0 ARCESS Array S 82.06 340 *e*P **P 14 59 20.9 +0.9**
MGRS Mrkonjic Grad 82.07 314 *e*P **P 14 59 20.6 0.0**
JAVC Velka Javorina 82.10 319 *e*P **P 14 59 22.3 +1.6**
MORC Moravsky Berou 82.28 320 *e*P **P 14 59 22.7 +1.1**
MORC Moravsky Berou 82.28 320⇑⇑ *i*P **P 14 59 22.6 +1.0**
MORC Moravsky Berou 82.28 320⇑⇑ *i*P **P 14 59 22.6 +1.0**
MODS Modra-Piesok 82.31 318 *e*P **P 14 59 21.9 +0.1**
MODS pmax pmax
comp=Z,12nm,1.0s
MODS Modra-Piesok 82.31 318 *e*P **P 14 59 21.9 +0.1**
BKZ Black Stump Fm 82.40 130 IAmb IAmb 14 59 23.4
comp=Z,44nm,0.7s
ZST Bratislava 82.41 318 *e*P **P 14 59 22.4 +0.1**
ZST pmax pmax
comp=Z,27nm,0.9s
ZST Bratislava 82.41 318 *e*P **P 14 59 22.4 +0.1**
KTK1 Kautokeino 82.71 339 *e*P **P 14 59 24.1 +0.7**
KRLC Kraliky 82.80 320 *e*P **P 14 59 25.6 +1.3**
KRLC Kraliky 82.80 320 *e*P **P 14 59 25.6 +1.3**
KRLC *eSP **pP 14 59 38.4 -2.8**
GKP Gorka Klasztor 82.85 323 *e*P **P 14 59 25.3 +0.9**
VRAC Vranov 82.85 319 *e*P **P 14 59 25.1 +0.5**
VRAC Vranov 82.85 319⇑⇑ *i*P **P 14 59 25.4 +0.8**
VRAC Vranov 82.85 319⇑⇑ *i*P **P 14 59 25.4 +0.8**
KRUC Moravsky 82.95 319 *e*P **P 14 59 25.6 +0.5**
HAMF Hammerfest 82.96 341 *e*P **P 14 59 25.4 +0.8**
DPC Dobruska-Polom 83.12 320 *e*P **P 14 59 27.3 +1.3**
DPC Dobruska-Polom 83.12 320 *e*P **P 14 59 27.3 +1.3**
DPC AMS AMS 15 42 40.0
comp=Z,100nm,15.8s
KSP Ksiaz 83.18 321 *e*P **P 14 59 27.6 +1.4**
OSTC Ostas 83.20 321 *e*P **P 14 59 27.5 +1.1**
CONA Conrad Observa 83.21 318 *e*P **P 14 59 26.9 +0.4**
comp=Z,9.5nm,0.8s
CHVC Chvalec 83.31 321 *e*P **P 14 59 28.1 +1.2**
UPC Upice 83.33 320 *e*P **P 14 59 28.3 +1.3**
UPC Upice 83.33 320 *e*P **P 14 59 28.3 +1.3**
UPC AMS AMS 15 42 50.0
comp=Z,200nm,18.7s
CRES Cresnjev 83.33 316⇑⇑ *i*P **P 14 59 27.9 +0.8**
ARSA Arzberg 83.39 317 *e*P **P 14 59 28.5 +1.0**
comp=Z,17nm,0.8s,SNR=8.9
BOJS Bojanci 83.45 315 *i* P **P 14 59 28.6 +0.9**
PERS Pernice 83.62 317 *i* P **P 14 59 29.7 +1.0**
SOKA Soboth 83.68 317 *e*P **P 14 59 30.1 +1.1**
comp=Z,36nm,0.9s,SNR=11
LJU Ljubljana 83.99 316 *i* P **P 14 59 31.6 +1.1**
LJU Ljubljana 83.99 316⇑⇑ *i*P **P 14 59 31.4 +0.9**
OBKA Obir 84.00 316 *i* P **P 14 59 31.8 +1.1**
comp=Z,16nm,0.8s
CEY Cerknica 84.04 316⇑⇑ *i*P **P 14 59 30.4 -0.4**
GOPC GO Pecny, Ondr 84.07 320 *e*P **P 14 59 31.6 +0.8**
GOPC *e 15 09 47.6
GOPC GO Pecny, Ondr 84.07 320 *e*P **P 14 59 31.6 +0.8**
GOPC *eSKS **S 15 09 47.6 -3.1**
HOPEN Hopen 84.14 347 *e*P **P 14 59 31.1 +0.5**
PRU Pruhonice 84.23 320 *e*P **P 14 59 32.6 +1.0**
PRU *e 15 09 50.7
PRU Pruhonice 84.23 320 *e*P **P 14 59 32.6 +1.0**
PRU *eSKS **S 15 09 50.7 -1.6**
MOA Molln 84.28 318 *e*P **P 14 59 32.5 +0.6**
comp=Z,11nm,0.8s,SNR=5.2
TRO Tromso 84.33 340 *e*P **P 14 59 31.2 -0.5**
BSD Bornholm Skovb 84.38 325⇑ *i*P **P 14 59 32.4 +0.2**
BSD pmax pmax
comp=Z,28nm,0.9s
BSD Bornholm Skovb 84.38 325⇑ *i*P **P 14 59 32.4 +0.2**
comp=Z,28nm,0.9s
TRI Trieste 84.50 316 P **P 14 59 33.1 0.0**
TRI pmax pmax
comp=Z,21nm,0.6s
TRI Trieste 84.50 316 P **P 14 59 33.1 0.0**
TRI IAmb IAmb 14 59 33.7
comp=Z,22nm,0.6s
AQU L'Aquila 84.62 312⇑ *i*P **P 14 59 34.7 +0.9**
AQU L'Aquila 84.62 312 IAmb IAmb 14 59 35.9
comp=Z,34nm,0.8s
MYKA Terra Mystica 84.64 316 *e*P **P 14 59 34.6 +0.8**
comp=Z,14nm,0.6s
BRG Berggiesshubel 84.67 321 *e*P **P 14 59 34.7 +1.0**
comp=Z,11nm,0.9s
BRG *epP **pP 14 59 50.0 -0.7**
comp=Z,11nm,1.2s
BRG *ePP **PP 15 02 49.2 -1.0**
comp=Z,3.8nm,1.1s
BRG SKS **S 15 09 56.0 -0.6**
BRG S **ScS 15 10 11.0 +3.4**
BRG SS **SS 15 15 19.0 -10**
comp=N,105nm,11.2s
comp=E,87nm,21.3s
comp=Z,144nm,19.8s
BRG Berggiesshubel 84.67 321 *e*P **P 14 59 34.8 +1.0**
comp=Z,11nm,0.9s,baz=92,slow=4.9
BRG Berggiesshubel 84.67 321 *e*P **P 14 59 34.7 +1.0**
BRG *ePP **pP 14 59 50.0 -0.7**
BRG *e 15 02 49.2
BRG 15 09 56.0
BRG pmax pmax
comp=Z,11nm,0.9s
BRG MLR MLR
comp=N,105nm,11.2s
BRG MLR MLR
comp=E,87nm,21.3s
BRG MLR MLR
comp=Z,144nm,19.8s
GEC2 GERESS Array S 84.71 319 *e*P **P 14 59 35.2 +1.0**
comp=Z,22nm,1.1s,baz=92,slow=4.9
GERES GERESS Array B 84.71 319 P **P 14 59 35.0 +0.9**
comp=Z,5.8nm,0.5s,baz=98,slow=6.9,SNR=54
GERES LR LR 15 42 56.9
comp=Z,67nm,20.4s,baz=78,slow=40
KHC Kasperske Hory 84.81 319 *c e*P **P 14 59 35.5 +0.9**
KHC pmax pmax
comp=Z,19nm,0.8s
KHC Kasperske Hory 84.81 319 *e*P **P 14 59 35.1 +0.5**
KHC *epP **pP 14 59 47.4 -4.1**
KHC *eSKS **S 15 09 56.6 -1.5**
KHC AMS AMS 15 39 30.0
comp=Z,200nm,24.1s
NRCA Norcia 84.85 313 IAmb IAmb 14 59 36.7
comp=Z,23nm,0.6s
KBA Koelnbreinsper 84.86 317 *e*P **P 14 59 35.2 +0.1**
comp=Z,12nm,1.0s
RUE Ruedersdorf 84.87 322 *e*P **P 14 59 35.6 +0.9**
RUE Ruedersdorf 84.87 322 *e*P **P 14 59 35.9 +1.2**
comp=Z,38nm,0.7s,baz=92,slow=4.9
FBE Freiberg 85.04 321 *e*P **P 14 59 37.1 +1.4**
comp=Z,16nm,0.9s,baz=92,slow=4.9
RJOB Jochberg 85.26 318 *e*P **P 14 59 37.1 +0.2**
comp=Z,16nm,0.8s,baz=92,slow=4.9
STAL STALIGIAL 85.26 316 IAmb IAmb 14 59 38.5
comp=Z,33nm,1.0s
WET Wettzell 85.27 319 *e*P **P 14 59 38.0 +1.1**
comp=Z,17nm,0.8s,baz=92,slow=4.9
WET Wettzell 85.27 319 P **P 14 59 37.7 +0.8**
CLL Collm 85.28 321⇑ *i*P **P 14 59 38.4 +1.5**
comp=Z,13nm,1.3s
CLL *ePP **PP 15 02 56.0 +0.8**
CLL *eSKSac **SKSac 15 09 55.0 -1.7**
CLL *eS **S 15 10 08.0 +5.3**
CLL *esS **sS 15 10 31.0 -0.3**
CLL LmV 15 43 00.0
comp=Z,100nm,19.8s
CLL Collm 85.28 321 *e*P **P 14 59 38.5 +1.7**
comp=Z,13nm,1.3s,baz=92,slow=4.9
CLL Collm 85.28 321⇑ *i*P **P 14 59 38.4 +1.5**
CLL *e 15 09 55.0
CLL pmax pmax
comp=Z,13nm,1.3s
ABTA Abfaltersbach 85.42 317 *e*P **P 14 59 37.3 -0.4**
comp=Z,11nm,0.9s
STEI Steigen 85.43 338 *e*P **P 14 59 37.9 +0.7**
MOR8 Moi Rana 85.57 336 *e*P **P 14 59 37.6 -0.4**
TANN Tannenbergstha 85.59 320 *e*P **P 14 59 39.3 +0.8**
comp=Z,14nm,1.1s,baz=92,slow=4.9
NKC Novy Kostel 85.59 320 *e*P **P 14 59 39.7 +1.2**
NKC Novy Kostel 85.59 320 *e*P **P 14 59 39.7 +1.2**
ADK Adak 85.63 38 P **P 14 59 38.6 0.0**
ADK Adak 85.63 38 P **P 14 59 38.6 0.0**
WERN Wernitzgruen 85.64 320 *e*P **P 14 59 39.9 +1.2**
comp=Z,6.8nm,0.9s,baz=92,slow=4.9
GUNZ Gunzen 85.67 320 *e*P **P 14 59 39.8 +0.9**
comp=Z,10nm,0.9s,baz=92,slow=4.9
ROTZ Rotzenmuhle 85.73 320 *e*P **P 14 59 40.6 +1.4**
comp=Z,14nm,0.8s,baz=92,slow=4.9
PLN Plauen 85.78 320 *e*P **P 14 59 40.4 +1.0**
comp=Z,8.6nm,0.9s,baz=92,slow=4.9
WTTA Wattenberg 86.03 317 *e*P **P 14 59 41.1 +0.2**
comp=Z,27nm,0.9s,SNR=9.9
WTTA Wattenberg 86.03 317 P **P 14 59 41.1 +0.2**
NEUB Neuenburg 86.05 321 *e*P **P 14 59 41.7 +1.0**
comp=Z,16nm,0.9s,baz=92,slow=4.9
WATA Walderalm 86.08 317 *e*P **P 14 59 41.0 -0.1**
comp=Z,13nm,0.8s,SNR=7.0
LOF Lofoten 86.08 338 *e*P **P 14 59 40.9 +0.4**
KONS Konsvik 86.13 336 *e*P **P 14 59 41.2 +0.5**
MOX Moxa 86.14 320 *e*P **P 14 59 42.1 +1.0**
comp=Z,9.6nm,1.0s,baz=92,slow=4.9
MOX *eL L 15 43 24.4
comp=Z,112nm,20.4s
FUR Furstenfeldbru 86.30 318 *e*P **P 14 59 42.6 +0.6**
comp=Z,20nm,0.9s,baz=92,slow=4.9
SQTA Sankt Quirin 86.32 317 *e*P **P 14 59 42.6 +0.3**
comp=Z,16nm,0.5s,SNR=9.3
SPA0 Spitsbergen Ar 86.36 348 IAmb IAmb 14 59 42.9
comp=Z,32nm,0.9s
SPA0 Spitsbergen Ar 86.36 348 *e*P **P 14 59 41.8 +0.1**
SPITS Spitsbergen Ar 86.36 348 P **P 14 59 41.8 +0.1**
SPITS pmax pmax
comp=Z,8.0nm,0.4s
GRF Grafenberg Arr 86.36 319 *e*P **P 14 59 43.7 +1.4**
comp=Z,23nm,0.8s,baz=92,slow=4.9
GRF *eL L 15 46 31.0
comp=Z,130nm,19.7s
GRF Grafenberg Arr 86.36 319 P **P 14 59 43.9 +1.6**
HSPB Hornsund (broa 86.38 347 *e*P **P 14 59 42.4 +0.6**
HSPB Hornsund (broa 86.38 347 *e*P **P 14 59 41.9 +0.1**
MOTA Moosalm 86.40 317 *e*P **P 14 59 42.8 +0.1**
comp=Z,19nm,0.8s,SNR=7.8
VNDA Vanda 86.42 169 P **P 14 59 42.2 +0.2**
comp=Z,1.8nm,0.8s,baz=319,slow=4.9,SNR=8.3
VNDA LR LR 15 32 59.6
comp=Z,223nm,20.1s,baz=306,slow=32
VNDA Vanda 86.42 169 P **P 14 59 43.4 +1.4**
VNDA pmax pmax
comp=Z,8.0nm,1.1s
VNDA Vanda 86.42 169 P **P 14 59 43.4 +1.4**
ZCCA Zocca 86.44 314 IAmb IAmb 15 00 03.9
comp=Z,41nm,1.2s
NSS Namsos 86.49 334 *e*P **P 14 59 42.9 +0.4**
NC602 NORSAR Array S 86.52 331 *e*P **P 14 59 43.3 +0.5**
NORES NORESS Array B 86.52 331 P **P 14 59 47.0 +4.2**
NORES pmax pmax
comp=Z,4.0nm,0.5s
RETA Reutte 86.63 317 *e*P **P 14 59 44.2 +0.5**
comp=Z,24nm,0.8s,SNR=6.9
FETA Feichten 86.65 317 *i* P **P 14 59 44.5 +0.5**
comp=Z,12nm,0.9s,SNR=6.8
NB201 NORSAR Array S 86.65 331 IAmb IAmb 14 59 44.6
comp=Z,42nm,1.0s
NB2 NORSAR Subarra 86.69 331 P **P 14 59 44.1 +0.4**
comp=Z,29nm,0.8s,baz=96,slow=4.6
NB2 NORSAR Subarra 86.69 331 P **P 14 59 44.1 +0.4**
baz=96,slow=4.6
NOA NORSAR Array B 86.69 331 P **P 14 59 44.1 +0.4**
comp=Z,21nm,0.7s,baz=94,slow=4.9,SNR=91
NOA PP **PP 15 03 04.5 -1.9**
comp=Z,1.3nm,0.8s,baz=96,slow=7.6,SNR=4.0
NOA LR LR 15 41 34.7
comp=Z,184nm,21.2s,baz=85,slow=38
ASSE Asse, Remlinge 86.76 322 *e*P **P 14 59 44.9 +0.9**
comp=Z,22nm,1.1s,baz=92,slow=4.9
SALO Salr 86.77 315 P **P 14 59 46.3 +1.9**
OSL Oslo 86.90 330 *e*P **P 14 59 45.5 +0.9**
CLZ Clausthal 86.94 322 *e*P **P 14 59 46.3 +1.3**
comp=Z,16nm,0.8s,baz=92,slow=4.9
FUORN Ofenpass-Fuorn 86.96 316 IAmb IAmb 14 59 48.7
comp=Z,18nm,0.8s
BSEG Bad Segeberg 87.00 324 *e*P **P 14 59 46.8 +1.6**
comp=Z,30nm,0.9s,baz=92,slow=4.9
UBR Ueberruh 87.08 317 *e*P **P 14 59 46.4 +0.5**
comp=Z,12nm,0.8s,baz=92,slow=4.9
NRDL Niedersach Rie 87.11 322 *e*P **P 14 59 47.4 +1.7**
comp=Z,30nm,1.1s,baz=92,slow=4.9
UBBA Unterbreizbach 87.16 321 *e*P **P 14 59 46.9 +0.9**
comp=Z,28nm,1.8s,baz=92,slow=4.9
GTTG Gottingen 87.19 321 *e*P **P 14 59 47.5 +1.2**
comp=Z,16nm,1.0s,baz=92,slow=4.9
DAVA Damuels 87.23 317 *e*P **P 14 59 47.5 +0.7**
comp=Z,28nm,0.9s,SNR=8.2
KBS Kingsbay 87.31 349 *c e*P **P 14 59 47.6 +1.3**
KBS pmax pmax
comp=Z,19nm,1.3s
KBS Kingsbay 87.31 349 *e*P **P 14 59 45.5 -0.8**
KONO Kongsberg 87.46 329 *c e*P **P 14 59 48.9 +1.5**
KONO pmax pmax
comp=Z,17nm,0.8s
KONO Kongsberg 87.46 329 P **P 14 59 47.9 +0.6**
KONO IAmb IAmb 14 59 49.2
comp=Z,20nm,0.7s
KONO Kongsberg 87.46 329 *e*P **P 14 59 48.1 +0.8**
MUD Monsted U'grnd 87.68 326 *i* P **P 14 59 50.3 +1.9**
MUD pmax pmax
comp=Z,31nm,0.6s
MUD Monsted U'grnd 87.68 326 *i* P **P 14 59 50.3 +1.9**
comp=Z,31nm,0.6s
STU Stuttgart 87.69 319 *e*P **P 14 59 49.5 +0.8**
comp=Z,10nm,0.8s,baz=92,slow=4.9
KEST Kesra 87.69 306 P **P 14 59 50.5 +1.3**
comp=Z,20nm,0.7s,baz=0.2,slow=0.8,SNR=13
KEST Kesra 87.69 306 IAmb IAmb 14 59 52.0
comp=Z,26nm,0.8s
DOMB Dombas 87.74 332 *e*P **P 14 59 49.4 +0.7**
SKAR Skarsila 88.11 330 *e*P **P 14 59 52.0 +1.5**
TNS Taunus Mts 88.16 320 *e*P **P 14 59 52.2 +1.2**
comp=Z,20nm,1.1s,baz=92,slow=4.9
BFO Black Forest 88.27 318 *e*P **P 14 59 52.1 +0.6**
comp=Z,9.3nm,0.8s,baz=92,slow=4.9
BFO Black Forest 88.27 318 P **P 14 59 51.4 -0.1**
BFO pmax pmax
comp=Z,8.0nm,0.8s
BFO Black Forest 88.27 318 P **P 14 59 51.4 -0.1**
HLG Helgoland 88.44 324 *e*P **P 14 59 53.4 +1.4**
comp=Z,180nm,1.3s,baz=92,slow=4.9
MOL Molde 88.44 332 *e*P **P 14 59 52.4 +0.4**
IBBN Ibbenburen 88.55 322 *e*P **P 14 59 54.2 +1.5**
comp=Z,46nm,0.7s,baz=92,slow=4.9
BUG Bochum--Univer 88.88 321 *e*P **P 14 59 55.7 +1.5**
comp=Z,36nm,0.8s,baz=92,slow=4.9
AHRW Bad Neuenahr-A 89.03 320 *e*P **P 14 59 56.5 +1.5**
comp=Z,21nm,0.8s,baz=92,slow=4.9
LPG La Plagne 89.43 315 *e*P **P 14 59 58.3 +0.9**
LPG pmax pmax
comp=Z,18nm,0.8s
LPL La Plagne 89.44 315 *e*P **P 14 59 57.5 +0.2**
LPL pmax pmax
comp=Z,26nm,0.8s
FRF La Foret Royal 89.58 313 *e*P **P 14 59 57.9 +0.2**
FRF pmax pmax
comp=Z,23nm,0.9s
HAU Haudompre 89.60 318 *e*P **P 14 59 57.6 -0.2**
HAU pmax pmax
comp=Z,15nm,0.7s
WLF Walferdange 89.66 319 P **P 14 59 59.5 +1.5**
WLF Walferdange 89.66 319 *e*P **P 14 59 59.6 +1.7**
comp=Z,22nm,0.9s,baz=92,slow=4.9
MEM Membach 89.71 320 P **P 14 59 59.2 +1.0**
comp=Z,19nm,1.0s
CABF La Chapelle 89.84 316 *e*P **P 14 59 59.3 +0.3**
CABF pmax pmax
comp=Z,18nm,0.8s
BGES Gesves 90.31 320 P **P 15 00 01.8 +0.9**
comp=Z,14nm,0.7s
BMRD Maredsous 90.52 320 P **P 15 00 03.3 +1.4**
NVL N'lazarevskaya 90.53 199 *e*P P 15 00 16.3 +15
NVL pmax pmax
comp=Z,20nm,1.1s
DOU Dourbes 90.64 320 P **P 15 00 03.8 +1.3**
SNF Seneffe 90.81 320 P **P 15 00 04.9 +1.6**
BAIF Baives 90.89 320 *e*P **P 15 00 04.3 +0.6**
BAIF pmax pmax
comp=Z,35nm,0.8s
VIVF Saint-Julien-l 90.93 315 *e*P **P 15 00 04.3 +0.2**
VIVF pmax pmax
comp=Z,13nm,0.8s
SSB Saint Sauveur 90.99 315 IAmb IAmb 15 00 06.4
comp=Z,22nm,0.9s
LOR Lormes 91.33 317 *e*P **P 15 00 06.0 +0.2**
LOR pmax pmax
comp=Z,30nm,0.8s
NOR Nord 91.58 352 *i* P **P 15 00 06.4 +0.1**
NOR pmax pmax
comp=Z,9.0nm,0.7s
NOR Nord 91.58 352 *i* P **P 15 00 06.4 +0.1**
comp=Z,9.2nm,0.7s
RDOG Red Dog Mine 91.64 22 IAmb IAmb 15 00 07.9
comp=Z,7.5nm,0.7s
AVF Avril sur Loir 91.71 317 *e*P **P 15 00 07.7 +0.1**
AVF pmax pmax
comp=Z,19nm,0.9s
QSPA South Pole Qui 91.89 180 P **P 15 00 09.5 +1.3**
TCF Toulx Ste Croi 92.54 316 *e*P **P 15 00 11.9 +0.4**
TCF pmax pmax
comp=Z,11nm,1.0s
RJF Les Rejaudoux 93.12 315 *e*P **P 15 00 14.8 +0.7**
RJF pmax pmax
comp=Z,10.0nm,0.9s
LFF La Frestale 93.70 315 *e*P **P 15 00 18.5 +1.7**
LFF pmax pmax
comp=Z,32nm,1.4s
DAG Danmarks Havn 94.01 348⇑ *i*P **P 15 00 17.2 -0.3**
DAG pmax pmax
comp=Z,13nm,0.7s
DAG Danmarks Havn 94.01 348⇑ *i*P **P 15 00 17.2 -0.3**
comp=Z,13nm,0.7s
FLN La Foliniere 94.07 319 *e*P **P 15 00 18.3 -0.1**
FLN pmax pmax
comp=Z,50nm,1.6s
EKA Eskdalemuir Ar 94.69 326 P **P 15 00 21.8 +0.7**
EKA pmax pmax
comp=Z,1.0nm,0.6s
ETSF Etsaut 94.88 313 *e*P **P 15 00 24.7 +2.3**
ETSF pmax pmax
comp=Z,11nm,1.1s
TTA Tatalina 95.54 26 P **P 15 00 25.6 +0.6**
TTA pmax pmax
comp=Z,7.0nm,1.0s
TTA Tatalina 95.54 26 P **P 15 00 25.6 +0.6**
TORD Torodi Ar. Bea 95.60 283 P **P 15 00 26.6 +0.5**
comp=Z,0.8nm,0.5s,baz=103,slow=4.3,SNR=6.7
TORD PP **PP 15 04 19.8 +1.7**
comp=Z,1.6nm,1.0s,baz=62,slow=4.7,SNR=4.5
TORD PKKP **PKKPbc 15 17 16.9 +0.1**
comp=Z,1.1nm,0.4s,baz=306,slow=3.0,SNR=9.3
TORD LR LR 15 42 14.1
comp=Z,264nm,19.6s,baz=55,slow=35
TOLK Toolik Lake Re 96.24 20 P **P 15 00 28.7 +0.7**
baz=292
TOLK Toolik Lake Re 96.24 20 P **P 15 00 28.6 +0.7**
TOLK IAmb IAmb 15 00 29.9
comp=Z,13nm,1.2s
BPAW Bear Paw Mtn. 97.33 24 IAmb IAmb 15 00 34.5
comp=Z,10nm,0.9s
ESDC Sonseca Array 97.87 310 P Pdif 15 00 36.3 +0.2
comp=Z,1.3nm,0.9s,baz=61,slow=3.8,SNR=6.5
ESDC PP **PP 15 04 36.5 +1.5**
comp=Z,0.8nm,0.9s,baz=69,slow=8.4,SNR=4.2
ESDC PKKPbc **PKKPbc 15 17 10.2 -1.2**
comp=Z,0.3nm,0.6s,baz=257,slow=2.7,SNR=4.2
ESDC LR LR 15 47 39.8
comp=Z,119nm,21.3s,baz=135,slow=37
NEA Nenana 97.94 24 pP 15 00 49.5 -3.3
ILAR Eielson Array 98.73 23 P **P 15 00 38.3 -0.9**
comp=Z,0.9nm,0.7s,baz=294,slow=5.3,SNR=12
ILAR PKKPbc **PKKPbc 15 17 07.8 -2.2**
comp=Z,0.6nm,0.8s,baz=148,slow=2.9,SNR=6.4
A36M Sachs Harbour 101.22 13 P **Pdif 15 00 49.5 -0.6**
baz=316,SNR=9.0
EPYK Eagle Plains 101.67 20 P **Pdif 15 00 52.0 -0.3**
baz=304
C36M Paulatuk 103.41 14 P **Pdif 15 00 59.5 -0.4**

baz=317,SNR=8.6
YKA **Yellowknife Ar** 111.18 16 Pdiff **Pdif** 15 01 34.4 -0.2
comp=Z,0.3nm,0.7s,baz=331,slow=4.4,SNR=4.6
YKA PKiKP **PKiKP** 15 05 33.1 -0.1
comp=Z,0.5nm,0.6s,baz=333,slow=1.6,SNR=10
YKA PP **PP** 15 06 13.4 +0.9
comp=Z,1.4nm,0.9s,baz=329,slow=6.0,SNR=4.1
YKA PKKPbc **PKKPbc** 15 16 30.1 -1.9
comp=Z,0.2nm,0.7s,baz=145,slow=3.9,SNR=6.3
TBI Tubuai 111.53 114 *e*LR LR 15 38 54.3
comp=Z,224nm,23.8s
PPT2 Papeete2 112.05 108 *e*LR LR 15 39 05.3
comp=Z,318nm,30.0s
B05A Bryant 119.10 29 P **PKiKP** 15 05 49.0 +0.2
baz=313
E04D Cinebar 120.01 31 P **PKiKP** 15 05 51.4 +0.7
baz=312
FFC Flin Flon 121.17 13 PKIKP **PKiKP** 15 05 52.8 +0.1
FFC Flin Flon 121.17 13 **PKiKP** 15 05 52.8 +0.1
H04D Lebanon 121.25 33 P **PKiKP** 15 05 54.0 +0.8
baz=310
NEW Newport 121.44 27 P **PKiKP** 15 05 54.2 +0.7
baz=318
I03D Drain, OR 121.44 34 P **PKiKP** 15 05 54.1 +0.6
baz=310
J01E Myrtle Point 121.45 35 P **PKiKP** 15 05 54.3 +0.7
baz=309
G05D Wamic, OR 121.54 32 P **PKiKP** 15 05 54.9 +1.1
baz=312
K02D Willamette Mer 121.89 35 P **PKiKP** 15 05 55.2 +0.6
baz=309
I04A Tendick Farm, 121.90 33 P **PKiKP** 15 05 54.8 +0.2
baz=310
SCHQ Schefferville 122.02 350 PKP **PKPdf** 15 05 53.9 -0.4
comp=Z,5.3nm,0.6s,baz=24,slow=4.0,SNR=8.2
SCHQ PP **PP** 15 07 29.2 +1.1
comp=Z,8.7nm,0.9s,baz=27,slow=7.1,SNR=7.7
I05D Terrebonne, OR 122.13 32 P **PKiKP** 15 05 55.7 +0.7
baz=312
J04D Umpqua Nationa 122.43 34 P **PKiKP** 15 05 56.5 +0.7
baz=310,SNR=5.7
J05D Fort Rock, OR 122.88 33 P **PKiKP** 15 05 57.8 +1.2
baz=311,SNR=8.0
L04D Klamath Falls 122.98 35 P **PKiKP** 15 05 57.2 +0.3
baz=310,SNR=5.9
K04D Chiloquin, OR 123.03 34 P **PKiKP** 15 05 57.5 +0.6
baz=310
M02C Callahan 123.18 36 P **PKiKP** 15 05 58.1 +1.0
baz=309,SNR=9.1
M04C Macdoel 123.52 35 P **PKiKP** 15 05 58.5 +0.5
baz=310,SNR=5.5
N02D Trinity Center 123.53 36 P **PKiKP** 15 05 58.6 +0.7
baz=309,SNR=5.7
MSO Missoula 123.94 26 P **PKPdf** 15 05 58.4 +0.1
baz=321
O02D Mt. Diablo Mer 123.97 37 P **PKiKP** 15 05 59.6 +0.7
baz=308,SNR=9.9
O03E Paynes Creek 124.49 36 P **PKiKP** 15 06 00.1 +0.2
baz=309,SNR=11
EGMT Eagleton 124.69 22 P **PKiKP** 15 06 00.3 +0.3
baz=326
DGMT Dagmar 126.22 18 P **PKiKP** 15 06 03.3 +0.3
baz=332
ULM Lac du Bonnet 126.67 11 PKP **PKPdf** 15 06 03.4 +0.2
comp=Z,13nm,0.7s,baz=354,slow=2.7,SNR=30
LAO LASA Array 127.11 21 P **PKiKP** 15 06 05.8 +0.9
baz=329
RLMT Red Lodge 127.27 24 P **PKiKP** 15 06 06.0 +0.6
baz=325
H17A Grant Village 127.31 25 P **PKiKP** 15 06 07.0 +1.4
baz=323
NVAR Mina Array Bea 127.76 36 PKP **PKPdf** 15 06 05.9 -0.1
comp=Z,9.9nm,0.9s,baz=265,slow=1.9,SNR=47
NVAR PP **PP** 15 08 07.5 0.0
comp=Z,1.4nm,0.9s,baz=308,slow=4.4,SNR=3.2
CHGQ Chibougamau 127.91 354 P **PKiKP** 15 06 06.8 +0.5
baz=9.8,SNR=5.7
MATQ Matagami 128.34 356 P **PKiKP** 15 06 07.9 +0.8
baz=5.7,SNR=5.3
AGMN Agassiz Nation 128.53 12 P **PKPdf** 15 06 06.9 +0.1
baz=342
BW06 Boulder Array 129.06 26 P **PKiKP** 15 06 09.2 +0.2
baz=324
PDAR Pinedale Array 129.06 26 PKP **PKPdf** 15 06 08.5 +0.1
comp=Z,2.9nm,0.7s,baz=207,slow=1.0,SNR=23
PDAR PP **PP** 15 08 15.3 -0.4
comp=Z,1.5nm,0.9s,baz=10,slow=1.9,SNR=5.1
CWC Cottonwood Cre 129.21 38 P **PKiKP** 15 06 09.9 +0.5
baz=311
GRAC Grapevine Rang 129.27 37 P **PKiKP** 15 06 10.2 +0.7
baz=312,SNR=6.1
R11A Troy Canyon, C 129.38 34 P **PKiKP** 15 06 10.9 +1.1
baz=315
DUG Dugway, Tooele 129.52 30 P **PKiKP** 15 06 10.7 +0.7
baz=319,SNR=15
EYMN Ely 129.63 8 P **PKiKP** 15 06 10.0 +0.3
baz=348
MPMC Manual Prospec 129.81 38 P **PKiKP** 15 06 11.4 +0.7
baz=311,SNR=13
FURC Furnace Creek, 129.92 37 P **PKiKP** 15 06 12.1 +1.4
baz=312
TPNV Topopah Spring 129.96 36 P **PKiKP** 15 06 12.0 +1.1
baz=313
RSSD Black Hills 130.10 21 PKIKP **PKiKP** 15 06 11.4 +0.3
RSSD Black Hills 130.10 21 P **PKiKP** 15 06 11.5 +0.4
baz=331
RSSD Black Hills 130.10 21 **PKiKP** 15 06 11.4 +0.3
EDW2 Edwards Air Fo 130.26 39 P **PKiKP** 15 06 12.9 +1.4
baz=310
E63A Oxbow 130.34 348 P **PKiKP** 15 06 11.6 +0.4
baz=18
K22A Casper 130.42 24 P **PKPdf** 15 06 11.2 +0.3
baz=327,SNR=5.9
D58A Chemin du LacG 130.48 352 P **PKPdf** 15 06 11.0 +0.4
baz=12
SHOC Shoshone, Teco 130.66 37 P **PKiKP** 15 06 13.3 +1.1
baz=312,SNR=6.5
D57A Chemin Vers le 130.70 353 P **PKiKP** 15 06 11.8 -0.1
baz=11
E61A Lac Etchemin 130.74 349 P **PKiKP** 15 06 12.0 -0.1
baz=15
D56A ZEC Mazanza, M 130.77 353 P **PKPdf** 15 06 11.6 +0.4
baz=9.8
F64A Sherman 130.85 347 P **PKiKP** 15 06 12.2 0.0
baz=18
D54A Lac Fusel, La 130.86 355 P **PKPdf** 15 06 11.5 +0.2
baz=7.2
D55A Sainte-Anne-du 130.88 354 P **PKiKP** 15 06 11.9 -0.4
baz=8.8
BFSC Mount Baldy Ra 130.89 40 P **PKiKP** 15 06 13.6 +0.7
baz=310
D49A Beulah Townshi 130.97 359 P **PKPdf** 15 06 11.6 +0.1
baz=1.0
D53A Lac Vacive, Po 131.01 356 P **PKiKP** 15 06 12.3 -0.3
baz=5.9
D53A Lac Vacive, Po 131.01 356 **PKiKP** 15 06 12.3 -0.3
D50A G1974 Best Tow 131.04 358 P **PKPdf** 15 06 12.0 +0.3
baz=3.0
D48A Paudash Townsh 131.07 360 P **PKPdf** 15 06 12.0 +0.3
baz=0.4,SNR=5.3
D51A Lot 18 Range I 131.10 358 P **PKPdf** 15 06 12.1 +0.3
baz=3.7
F63A Nahmakanta, Br 131.16 348 P **PKiKP** 15 06 12.9 0.0
baz=17
TUQ Turquoise Moun 131.18 37 P **PKiKP** 15 06 14.7 +1.2
baz=312
D47A Chapleau 131.18 1 P **PKPdf** 15 06 12.1 +0.2
baz=359,SNR=6.8
E58A La Victoria 131.25 352 P **PKiKP** 15 06 13.4 +0.4
baz=12
F61A St Evariste 131.27 350 P **PKiKP** 15 06 13.5 +0.4
baz=15
E56A St. Veronique 131.30 354 P **PKiKP** 15 06 12.8 -0.3
baz=9.5
D46A Sault St. Mari 131.33 2 P **PKiKP** 15 06 13.2 0.0
baz=358,SNR=5.6
E57A Chemin Saint G 131.33 353 P **PKPdf** 15 06 12.7 +0.5
baz=11
F60A Warwick 131.44 351 P **PKPdf** 15 06 12.8 +0.4
baz=14
E44A Grand Marais A 131.51 4 P **PKiKP** 15 06 13.9 +0.3
baz=355
G64A Maxfield 131.52 347 P **PKiKP** 15 06 13.9 +0.3
baz=18
MURC Murrieta 131.59 40 P **PKiKP** 15 06 15.3 +1.2
baz=310
E54A Lac Daplat, Po 131.62 355 P **PKPdf** 15 06 13.3 +0.5
baz=6.6
PKME Peaks-Kenny Pk 131.62 348 P **PKiKP** 15 06 14.2 +0.4
baz=17
H66A Whiting 131.63 346 P **PKiKP** 15 06 13.8 -0.1
baz=20
E51A G1948 Merrick 131.66 358 P **PKPdf** 15 06 12.7 -0.2
baz=3.5
E53A Dumoine, Ponti 131.71 356 P **PKPdf** 15 06 13.0 0.0
baz=6.0
O20A White River Ci 131.76 27 P **PKiKP** 15 06 14.7 +0.1
baz=324,SNR=14
E48A Lockeyer 131.77 0 P **PKiKP** 15 06 13.7 -0.4
baz=360,SNR=5.5
GMRC Granite Mounta 131.78 38 P **PKiKP** 15 06 15.7 +1.0
baz=312,SNR=14
E47A Iron Bridge 131.78 1 P **PKiKP** 15 06 13.8 -0.3
baz=358
G63A Kingsbury 131.83 348 P **PKiKP** 15 06 14.3 0.0
baz=17
E52A Mattawa 131.87 357 P **PKPdf** 15 06 13.5 +0.3
baz=4.7
G62A West of Eustis 131.91 349 P **PKiKP** 15 06 14.4 0.0
baz=16
H65A Eastbrook 131.93 347 P **PKiKP** 15 06 14.5 0.0
baz=19
G61A St-Isidore-de- 132.03 350 P **PKiKP** 15 06 14.3 -0.4
baz=14
PFO Pinyon Flats O 132.05 39 PKIKP **PKiKP** 15 06 17.0 +1.8
PFO Pinyon Flats O 132.05 39 P **PKiKP** 15 06 16.1 +0.8
baz=311
PFO Pinyon Flats O 132.05 39 **PKiKP** 15 06 17.0 +1.8
SPMN Marine on St. 132.07 10 P **PKiKP** 15 06 15.1 +0.3
baz=346
BELC Belle Mtn. Jos 132.09 39 P **PKiKP** 15 06 16.1 +0.8
baz=311
F51A Arnstein 132.28 358 P **PKPdf** 15 06 14.1 0.0
baz=3.0,SNR=6.8
G60A Masonville 132.35 351 P **PKiKP** 15 06 15.2 -0.1
baz=13
H63A New Sharon 132.35 348 P **PKiKP** 15 06 15.0 -0.3
baz=16
F52A Sundridge 132.39 357 P **PKPdf** 15 06 14.9 +0.6
baz=3.8
F48A Evansville 132.42 0 P **PKiKP** 15 06 14.9 -0.5
baz=359,SNR=5.7
ORIO Orleans, Innes 132.44 354 P **PKiKP** 15 06 15.3 -0.2
baz=9.0
F45A CMU Biological 132.47 3 P **PKiKP** 15 06 15.6 +0.1
baz=355,SNR=8.0
F49A Sandfield 132.49 360 P **PKiKP** 15 06 15.4 -0.2
baz=0.1,SNR=6.8
IRM Iron Mountain 132.51 38 P **PKiKP** 15 06 16.6 +0.6
baz=312,SNR=5.4
MONP2 Monument Peak 132.54 40 P **PKiKP** 15 06 17.3 +1.0
baz=310
BC3 Big Chockawall 132.66 39 P **PKiKP** 15 06 17.2 +0.8
baz=312
ECSD EROS Data Cent 132.68 14 P **PKPdf** 15 06 15.4 +0.5
baz=340,SNR=8.7
G54A Lake Saint Pet 132.72 356 P **PKiKP** 15 06 15.7 -0.4
baz=5.5
G57A Newington 132.72 353 P **PKiKP** 15 06 15.9 -0.1
baz=9.7
G55A Calabogie 132.75 355 P **PKiKP** 15 06 15.8 -0.3
baz=7.4
H61A Lyndonville 132.83 350 P **PKiKP** 15 06 16.4 0.0
baz=14
G46A Petoskey 132.87 3 P **PKPdf** 15 06 15.6 +0.5
baz=356,SNR=5.5
IKP In-Ko-Pah, Jac 132.90 40 P **PKiKP** 15 06 18.7 +1.8
baz=310
SWSC Sam W. Stewart 132.91 40 P **PKiKP** 15 06 18.4 +1.6
baz=311
H60A Morristown 132.93 351 P **PKiKP** 15 06 16.4 -0.1
baz=13
I64A Boothbay 132.98 348 P **PKiKP** 15 06 16.6 +0.1
baz=17
H59A Cadyville 133.00 352 P **PKiKP** 15 06 16.3 -0.3
baz=12
G53A Haliburton 133.02 357 P **PKiKP** 15 06 16.5 -0.2
baz=4.8
I63A Otisfield 133.05 349 P **PKiKP** 15 06 16.9 +0.1
baz=16
G47A Hillman 133.05 2 P **PKPdf** 15 06 15.9 +0.3
baz=358,SNR=8.3
LBNH Lisbon 133.12 350 P **PKiKP** 15 06 16.8 -0.1
baz=14
LONY Lake Ozonia 133.15 353 P **PKiKP** 15 06 16.8 -0.1
baz=10
H58A Gabriels 133.29 352 P **PKiKP** 15 06 17.1 -0.2
baz=11
H56A Elgin 133.36 354 P **PKiKP** 15 06 17.1 -0.2
baz=8.1
I62A Tamworth 133.36 349 P **PKiKP** 15 06 17.3 0.0
baz=15
GLA Glamis 133.45 39 P **PKiKP** 15 06 19.2 +1.3
baz=312
H55A Tweed 133.49 355 P **PKiKP** 15 06 17.0 -0.6
baz=6.8
H53A Bobcaygeon 133.57 357 P **PKiKP** 15 06 17.3 -0.5
baz=4.9
I60A Shoreham 133.72 351 P **PKiKP** 15 06 18.7 +0.6
baz=12
WUAZ Wupatki 133.75 34 P **PKiKP** 15 06 19.8 +1.1
baz=318
I59A Olmsteadville 133.86 352 P **PKiKP** 15 06 18.7 +0.3
baz=12
I57A Carthage 133.95 354 P **PKiKP** 15 06 18.1 -0.5
baz=9.0
MVCO Mesa Verde 133.97 30 P **PKiKP** 15 06 19.2 0.0
baz=322
I48A Sherman Twp 134.04 2 P **PKiKP** 15 06 18.4 -0.4
baz=358
J62A Henniker 134.08 350 P **PKiKP** 15 06 19.1 +0.3
baz=14
J61A Chester 134.09 350 P **PKiKP** 15 06 19.0 +0.2
baz=13
I58A Old Forge 134.11 353 P **PKiKP** 15 06 18.7 -0.2
baz=10.0
I52A Shelburne 134.15 358 P **PKPdf** 15 06 18.2 +0.6
baz=2.7
I46A Reed City 134.21 3 P **PKiKP** 15 06 19.0 -0.1
baz=355
J59A Piesco 134.27 352 P **PKiKP** 15 06 19.0 -0.3
baz=11
J59A Piesco 134.27 352 **PKiKP** 15 06 19.4 +0.1
J60A Lant Hill Farm 134.33 351 P **PKPdf** 15 06 18.7 +0.7
baz=12
S22A 4UR Ranch, Cre 134.34 28 P **PKiKP** 15 06 19.8 -0.1
baz=324
I51A Listowel 134.43 359 P **PKiKP** 15 06 19.2 -0.4
baz=1.6
BGNE Belgrade 134.44 17 P **PKiKP** 15 06 19.2 -0.5
baz=337
J58A Remsen 134.47 353 P **PKiKP** 15 06 19.5 -0.2
baz=9.6
J57A Williamstown 134.50 354 P **PKiKP** 15 06 19.7 0.0
baz=8.6
K62A Royalston 134.70 350 P **PKiKP** 15 06 20.1 -0.1
baz=14
J56A Wolcott 134.72 355 P **PKiKP** 15 06 20.1 0.0
baz=7.4
HRV Adam Dziewonsk 134.73 349 P **PKiKP** 15 06 20.1 -0.1
baz=15
JFWS Jewell Farm 134.73 8 P **PKiKP** 15 06 19.8 -0.4
baz=349
J55A Hilton 134.82 356 P **PKiKP** 15 06 20.3 -0.1
baz=6.1
J48A Bridge Port 134.92 2 P **PKiKP** 15 06 20.1 -0.4
baz=358
J47A Sunmer 134.94 3 P **PKiKP** 15 06 20.5 -0.1
baz=356
W18A Petrified Fore 134.94 32 P **PKiKP** 15 06 22.0 +0.9
baz=319
SDCO Great Sand Dun 134.94 26 P **PKiKP** 15 06 20.9 -0.2
baz=326
J52A Paris 134.98 358 P **PKiKP** 15 06 20.9 +0.2
baz=2.4
L61B Northampton 134.98 350 P **PKiKP** 15 06 20.6 -0.1
baz=13
K59A Cooperstown 134.99 352 P **PKiKP** 15 06 21.3 +0.5
baz=10
K58A Earlville 135.10 353 P **PKiKP** 15 06 21.0 0.0
baz=9.2
K57A Scipio Center 135.23 354 P **PKiKP** 15 06 20.7 -0.5
baz=8.0
K56A Middlesex 135.34 355 P **PKPdf** 15 06 20.2 +0.3
baz=6.8
K55A Perry 135.37 356 P **PKiKP** 15 06 21.3 -0.2
baz=5.8
L61A Hillsdale 1, H 135.38 351 P **PKiKP** 15 06 21.4 -0.1
baz=12
K48A Perry 135.41 2 P **PKiKP** 15 06 20.9 -0.6
baz=357
214A Organ Pipe Nat 135.44 38 P **PKiKP** 15 06 22.1 +0.1
baz=313
K47A Vermontville 135.50 3 P **PKPdf** 15 06 20.2 0.0
baz=356
K54A Basiliko Farm, 135.53 356 P **PKPdf** 15 06 20.5 +0.2
baz=4.9
L59A Walton 135.59 353 P **PKiKP** 15 06 22.1 0.0
baz=10
BINY Binghamton 135.70 353 P **PKiKP** 15 06 22.1 -0.1
baz=8.8
L44A Lake County Fo 135.75 6 P **PKiKP** 15 06 22.7 +0.4
baz=352
L58A Harry Jones Me 135.84 353 P **PKiKP** 15 06 22.8 +0.3
baz=9.0
L56A Greenwood 135.92 355 P **PKiKP** 15 06 22.3 -0.4
baz=6.6
L56A Greenwood 135.92 355 **PKPdf** 15 06 21.4 +0.4
T25A Trinidad 135.93 26 P **PKiKP** 15 06 22.6 -0.5
baz=327
L55A Hinsdale 135.94 356 P **PKiKP** 15 06 22.5 -0.3
baz=5.3
L54A Sinclairville 135.94 357 P **PKiKP** 15 06 22.2 -0.5
baz=4.1
L57A Andrews Acres 135.99 354 P **PKiKP** 15 06 22.4 -0.4
baz=7.6
L48A N Adams 136.25 3 P **PKiKP** 15 06 22.6 -0.7
baz=357
M61A Granite Spring 136.27 351 P **PKiKP** 15 06 22.9 -0.5
baz=12
M59A Waymart 136.28 353 P **PKiKP** 15 06 23.0 -0.4
baz=9.7
M60A Port Jervis 136.39 352 P **PKiKP** 15 06 23.7 +0.1
baz=11
TUC Tucson 136.42 36 P **PKiKP** 15 06 23.9 -0.1
baz=316
M58A Price's Panora 136.57 354 P **PKiKP** 15 06 23.5 -0.5
baz=8.3
M56A Emporium 136.62 356 P **PKiKP** 15 06 23.7 -0.4
baz=5.8
M55A Ridgway 136.67 356 P **PKiKP** 15 06 23.7 -0.5
baz=4.9
M57A Sunshine Farm, 136.67 355 P **PKiKP** 15 06 23.6 -0.6
baz=7.3
M54A Oil Creek Stat 136.68 357 P **PKiKP** 15 06 23.6 -0.6
baz=3.6
M49A Liberty Center 136.74 2 P **PKiKP** 15 06 24.3 0.0
baz=357
ANMO Albuquerque 136.77 30 P **PKiKP** 15 06 24.4 -0.4
baz=323
M53A WI Miller and 136.79 358 P **PKiKP** 15 06 24.1 -0.3
baz=2.1
N60A Cedar Hill Far 136.90 352 P **PKiKP** 15 06 24.8 +0.1
baz=10
N59A State Game Lan 136.94 353 P **PKiKP** 15 06 24.1 -0.7
baz=9.3
KSU1 Kansas State U 137.01 17 P **PKiKP** 15 06 24.3 -0.7
baz=338
N58A Sunbury 137.12 354 P **PKiKP** 15 06 24.4 -0.7
baz=8.0
HDIL Hopedale 137.18 8 P **PKiKP** 15 06 24.8 -0.5
baz=350
N56A West Decatur 137.19 356 P **PKiKP** 15 06 25.1 -0.2
baz=5.7
N49A Columbus Grove 137.28 2 P **PKiKP** 15 06 24.6 -0.8
baz=357
N57A Milroy 137.29 355 P **PKiKP** 15 06 24.8 -0.6
baz=6.8
N48A Decatur 137.30 3 P **PKPdf** 15 06 24.2 +0.6
baz=356
N51A Ashland 137.33 0 P **PKPdf** 15 06 24.5 +0.8
baz=360
N55A Marion Center 137.37 357 P **PKPdf** 15 06 24.8 +1.0
baz=4.7
N53A Lisbon 137.42 359 P **PKPdf** 15 06 24.5 +0.7
baz=1.9
SSPA Standing Stone 137.44 355 P **PKiKP** 15 06 25.2 -0.6
baz=6.3
N50A Nevada 137.46 1 P **PKPdf** 15 06 24.4 +0.5
baz=358
O60A Telford 137.48 352 P **PKPdf** 15 06 24.2 +0.2
baz=10.0
O59A Robesonia 137.59 353 P **PKiKP** 15 06 25.5 -0.6
baz=8.8
SFIN Lafayette 137.62 6 P **PKiKP** 15 06 25.6 -0.6
baz=353
O57A Amberson 137.84 355 P **PKiKP** 15 06 25.7 -0.9
baz=6.7
O56A Blue Knob Stat 137.85 356 P **PKPdf** 15 06 25.6 +0.9
baz=5.3
O58A Lewisberry 137.85 354 P **PKiKP** 15 06 25.8 -0.9
baz=7.8
O48A Farmland 137.90 3 P **PKiKP** 15 06 26.0 -0.8
baz=356
121A Cookes Peak, D 137.96 33 P **PKiKP** 15 06 26.6 -0.7
baz=320
O55A Ligonier 137.96 357 P **PKiKP** 15 06 25.9 -0.9
baz=4.2
O53A New Philadelph 137.99 359 P **PKPdf** 15 06 25.8 +0.9
baz=1.4
ACSO Alum Creek Sta 138.00 1 P **PKPdf** 15 06 25.2 +0.3
baz=359
O49A Covington 138.01 3 P **PKPdf** 15 06 25.6 +0.7
baz=357
O54A Avella 138.03 358 P **PKPdf** 15 06 25.9 +0.9
baz=2.6
O50A Cable 138.07 2 P **PKPdf** 15 06 25.7 +0.6
baz=358
O51A Pataskala 138.09 1 P **PKPdf** 15 06 25.7 +0.6
baz=359
O52A Adamsville 138.13 360 P **PKPdf** 15 06 25.8 +0.6
baz=0.5
P59A Jarrettsville 138.31 353 P **PKPdf** 15 06 26.1 +0.6
baz=8.6
P58A Pank, Wackersv 138.52 354 P **PKPdf** 15 06 26.7 +0.9
baz=7.3
P57A Homestead Farm 138.59 355 P **PKPdf** 15 06 26.9 +0.9
baz=6.2
P50A Jamestown 138.61 2 P **PKPdf** 15 06 26.6 +0.5
baz=358
P52A Corning 138.61 0 P **PKPdf** 15 06 26.5 +0.4
baz=0.0
P54A Burton 138.62 358 P **PKPdf** 15 06 26.6 +0.5
baz=2.5
P56A Dayton Farm, R 138.63 356 P **PKiKP** 15 06 27.5 -0.7
baz=5.0
P55A Reedsville 138.68 357 P **PKiKP** 15 06 27.5 -0.9
baz=3.5
P51A Williamsport 138.75 1 P **PKiKP** 15 06 27.6 -0.9
baz=359
Q57A Strasburg 139.07 356 P **PKiKP** 15 06 28.5 -0.6
baz=5.7
Q58A Fox Den Farm, 139.10 355 P **PKPdf** 15 06 28.0 +1.1
baz=6.8
Q56A Snyder Ridge, 139.11 357 P **PKPdf** 15 06 27.8 +0.8
baz=4.5
Q49A Aurora 139.16 3 P **PKiKP** 15 06 28.4 -1.0
baz=356
Q55A Buckhannon 139.21 358 P **PKPdf** 15 06 28.3 +1.1
baz=3.1
Q54A Coxs Mills 139.24 358 P **PKPdf** 15 06 28.2 +0.9
baz=2.0
Q52A Bidwell 139.28 0 P **PKiKP** 15 06 28.7 -0.9
baz=360
MSTX Muleshoe 139.31 27 P **PKiKP** 15 06 28.9 -1.0
baz=327
Q53A Leroy 139.38 359 P **PKiKP** 15 06 29.1 -0.7
baz=0.9
R61A Willards 139.43 352 P **PKiKP** 15 06 29.1 -0.8
baz=10
R57A Stanardsville 139.81 356 P **PKPdf** 15 06 29.1 +0.8
baz=5.6
WCI Wyandotte Cave 139.83 5 P **PKPdf** 15 06 28.9 +0.6
baz=354
MNTX Cornudas Mount 139.89 32 P **PKPdf** 15 06 29.0 +0.3
baz=322,SNR=7.3
R53A Hurricane 139.91 360 P **PKPdf** 15 06 29.0 +0.6
baz=0.3
PLCA Paso Flores 140.01 194 PKhKP **PKPdf** 15 06 25.1 -3.6
comp=Z,1.8nm,0.7s,baz=311,slow=0.1,SNR=4.8
R54A Victor 140.05 359 P **PKPdf** 15 06 29.8 +1.1
baz=1.8
TUL1 Leonard 140.22 17 P **PKiKP** 15 06 31.2 -0.4
baz=338

S57A	Dark Hollow, R	140.37	356	P	PKiKP	15 06 30.9	-1.0
	baz=5.0						
S57A	Dark Hollow, R	140.37	356		PKPdf	15 06 30.4	+1.1
HHAR	Hobbs	140.39	15		PKPdf	15 06 29.7	+0.2
S54A	Dingess, Beckl	140.44	359	P	PKiKP	15 06 31.1	-0.9
	baz=1.3						
S55A	Lewisburg	140.44	358	P	PKiKP	15 06 31.0	-1.1
	baz=2.6						
S58A	Poland Farm, P	140.45	355	P	PKiKP	15 06 31.0	-1.0
	baz=6.4						
S53A	Williamson	140.56	0	P	PKiKP	15 06 31.1	-1.2
	baz=0.0						
U40A	Yellville	140.59	14	P	PKiKP	15 06 31.4	-0.9
	baz=343						
T59A	Double "B" Far	141.04	354	P	PKiKP	15 06 32.6	-0.6
	baz=7.3						
T55A	Pulaski	141.10	358	P	PKiKP	15 06 32.4	-1.0
	baz=2.2						
T57A	Hurt	141.15	356	P	PKiKP	15 06 32.4	-1.1
	baz=4.6						
T58A	Grand View Acr	141.15	355	P	PKPdf	15 06 32.0	+1.3
	baz=5.7						
T56A	Rocky Mt	141.16	357	P	PKiKP	15 06 33.5	0.0
	baz=3.4						
T54A	Tazewell	141.18	359	P	PKiKP	15 06 32.8	-0.9
	baz=0.9						
U58A	Oxford	141.70	355	P	PKiKP	15 06 33.3	-1.4
	baz=5.8						
U54A	Nelsons Funny	141.72	360	P	PKiKP	15 06 34.3	-0.4
	baz=0.5						
U57A	Blanch	141.72	356	P	PKiKP	15 06 33.6	-1.0
	baz=4.5						
U55A	TA2, Sparta	141.72	359	P	PKiKP	15 06 34.7	-0.1
	baz=1.8						
ABTX	Abilene, Hawle	141.81	24	P	PKiKP	15 06 34.4	-0.6
	baz=331						
MIAR	Mount Ida	142.12	16	P	PKiKP	15 06 34.9	-0.6
	baz=341						
V62A	Hyde County Ai	142.24	352	P	PKiKP	15 06 34.3	-1.4
	baz=10						
V57A	Coltrane Farms	142.29	357	P	PKiKP	15 06 35.2	-0.6
	baz=3.9						
V55A	Taylorsville	142.38	359	P	PKiKP	15 06 35.4	-0.7
	baz=1.5						
V54A	Nebo	142.46	360	P	PKiKP	15 06 35.7	-0.5
	baz=0.3						
TXAR	Lajitas Array	142.66	32	PKP	PKPdf	15 06 30.9	-2.9
	comp=Z,3.0nm,0.7s,baz=252,slow=1.2,SNR=21						
TXAR				PP	PP	15 09 41.1	-0.2
	comp=Z,1.3nm,1.0s,baz=302,slow=2.8,SNR=4.2						
W61A	Ground Anchor	142.75	353	P	PKiKP	15 06 36.1	-0.6
	baz=8.5						
W57A	Gilead	143.03	357	P	PKiKP	15 06 36.5	-0.9
	baz=3.6						
JCT	Junction City	143.59	26	P	PKPbc	15 06 32.6	-0.2
	baz=329,SNR=26						
BDFB	Brasilia	143.76	246	PKP	PKPbc	15 06 34.8	+1.0
	comp=Z,3.6nm,0.4s,baz=157,slow=6.2,SNR=7.0						
BDFB	Brasilia	143.76	246	PKIKP	PKPdf	15 06 35.3	-0.7
BDFB	Brasilia	143.76	246		PKPdf	15 06 35.3	-0.7
Y52A	Lilburn	144.32	3	P	PKPab	15 06 34.7	+0.2
	baz=357,SNR=6.2						
Z50A	Ashland	144.79	6	P	PKPab	15 06 35.8	-0.4
	baz=353,SNR=9.8						
GOGA	Godfrey	144.80	2	PKIKP	PKPdf	15 06 37.5	+0.2
GOGA	Godfrey	144.80	2	P	PKPab	15 06 36.2	-0.1
	baz=358,SNR=10.0						
GOGA	Godfrey	144.80	2		PKPdf	15 06 37.5	+0.2
LRAL	Lakeview Retre	144.89	7	P	PKPab	15 06 36.5	-0.1
	baz=352,SNR=6.1						
VBMS	Vicksburg	145.09	13	P	PKPdf	15 06 37.7	-0.1
	baz=345,SNR=7.1						
CPUP	Villa Florida	146.03	222	PKPbc	PKPbc	15 06 40.7	+0.2
	comp=Z,19nm,0.7s,baz=105,slow=1.9,SNR=44						
CPUP	Villa Florida	146.03	222	PKP2	PKPab	15 06 41.0	-0.1
CPUP	Villa Florida	146.03	222		PKPab	15 06 41.0	-0.1
AAGR	Agrelo	146.62	201	*e*P	PKPab	15 06 43.7	+0.4
ACAN	Cantantal	146.74	203	*i* P	PKPab	15 06 43.6	0.0
ASAL	Salagasta	147.07	201	*e*P	PKPab	15 06 45.0	0.0
ROC1	El Roble	147.44	197	*e*P	PKPbc	15 06 45.5	+0.8
RTCV	Cerro Valdivia	147.62	202	*e*P	PKPbc	15 06 46.0	+1.1
RTLS	Leoncito	147.96	201	*e*P	PKiKP	15 06 47.5	-0.6
AMOG	MOGNA	148.43	203	*e*P	PKPbc	15 06 47.5	+0.4
ACCO	Cerro Coronel	148.96	202	*e*P	PKiKP	15 06 49.6	-0.6
CYA	Choya	149.41	209	*e*P	PKPbc	15 06 49.5	-0.1
AROD	Rodeo	149.49	202	*e*P	PKPbc	15 06 50.6	+0.5
GO04	Tololo Observa	149.96	200		PKiKP	15 06 52.2	+0.1
GO04	Tololo Observa	149.96	200	*e*P	PKPdf	15 06 48.6	+2.3
VCA	Vinchina	150.25	205	*e*P	PKiKP	15 06 52.9	+0.2
LVC	Limon Verde	155.80	211	PKPab	PKPab	15 07 21.6	-0.1
	comp=Z,5.2nm,0.8s,baz=201,slow=1.7,SNR=4.8						
SDDR	Presa de Saban	156.63	333		PKPab	15 07 26.6	+1.6
LPAZ	La Paz	160.20	223	PKP	PKPdf	15 07 00.8	-0.2
	comp=Z,2.6nm,0.8s,baz=181,slow=1.1,SNR=12						
LPAZ				PKPab	PKPab	15 07 40.8	-0.5
	comp=Z,2.4nm,0.8s,baz=92,slow=3.9,SNR=4.3						

*DDA **03** 14:51:13.6, 39°.99N×42°.98E, h7^{km}±3^{km}, ML2.5*
*ISK **03** 14:51:13.3, 39°.97N×42°.94E, h17^{km}, ML3.0/6*
*TIF **03** 14:51:14.7, 39°.98N×42°.80E, h26^{km}±2^{km}*
ISC 03 14:51:14.0±1.1**, 39°.98N**±0°.03×**42°.95E**±0°.03**, h19**^{km}±3^{km}**, n14, σ0^{s}91**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EATA	Eleskirt	0.37	251	*i* P	Pg	14 51 21.3	-0.6
EATA				*i* S	Sb	14 51 28.6	+0.9
EATA				IAML		14 51 30.0	
	comp=N,835nm,0.3s						
EATA				IAML		14 51 31.0	
	comp=E,922nm,0.4s						
AGRB	Hanur-Agry	0.41	175	PG	Pg	14 51 21.9	-0.6
AGRB				SG	Sg	14 51 28.0	-0.3
KARS	Kars	0.65	9	PG	Pb	14 51 26.7	-0.2
KARS				SG	Sg	14 51 36.4	+0.6
DYDN	Diyadin	0.72	127	*i* P	Pb	14 51 27.2	-0.9
DYDN				*i* S	Sb	14 51 37.6	0.0
DYDN				IAML		14 51 40.0	
	comp=E,202nm,0.2s						
DYDN				IAML		14 51 41.0	
	comp=N,262nm,0.3s						
SENK	Senkaya-Erzuru	0.74	322	PG	Pb	14 51 27.7	-0.7
SENK				SG	Sg	14 51 39.2	+0.8
HOMI	Horasan	0.80	275	*i* P	Pb	14 51 29.3	-0.1
KOPR	Koprukoy-ERZUR	0.84	271	PG	Pb	14 51 29.4	-0.7
KOPR				SG	Sn	14 51 42.2	-0.7
EAK	Akyaka	0.87	35	*i* P	Pg	14 51 31.0	0.0
TASB	TASBURUN-IGDIR	0.99	89	PG	Pn	14 51 33.1	+0.1
VMUR	Van-Muradiye	1.10	154	*i* P	Pb	14 51 34.6	0.0
VMUR				IAML		14 51 51.0	
	comp=E,71nm,0.4s						
VMUR				*i* S	Sg	14 51 51.1	+1.2
CLDR	Caldiran	1.12	138	PN	Pb	14 51 34.7	-0.3
ADCV	BITLIS_Adilcev	1.18	188	*i* P	Pn	14 51 35.4	-0.4
ADCV				IAML		14 51 55.0	
	comp=E,94nm,1.0s						
ADCV				*i* S	Sg	14 51 55.3	+2.9
DBAD	Bademkaya	1.41	318	*i* P	Pb	14 51 40.0	+0.2
MUSM	Mu-Merkez	1.68	222	*i* P	Pb	14 51 44.0	-0.4

IDC 03 14:54:41.1±1.8**, 5°.61S**×**130°.66E, h0**^{km}**, mb3.8**/1**, mb1 3.9**/5**, mb1mx3.6**/44**, mbtmp3.8**/5**, ML3.7**/4**, Error ellipse: s-maj=74.6km s-min=25.0km az=86.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.75	7	Pn	Pn	14 55 54.9	+0.8
	5.1nm,0.3s,baz=180,slow=10,SNR=35						
SIJI				Sn	Sn	14 56 41.7	-8.3
	11nm,0.3s,baz=248,slow=23,SNR=13						
FITZ	Fitzroy Crossi	13.34	201	Pn	Pn	14 57 53.6	+1.7
	0.4nm,0.3s,baz=23,slow=9.4,SNR=13						
FITZ				Sn	Sn	15 00 19.3	-1.7
	0.4nm,0.3s,baz=170,slow=20,SNR=6.2						
WRA	Warramunga Arr	14.69	166	Pn	Pn	14 58 09.4	-0.9
	0.3nm,0.3s,baz=348,slow=13,SNR=1.9						
ASAR	Alice Springs	18.22	170	P	Pn	14 58 55.2	-0.5
	0.1nm,0.3s,baz=355,slow=11,SNR=1.4						
MKAR	Makanchi Array	67.44	326	P	P	15 05 38.5	-0.2
	0.4nm,0.4s,baz=124,slow=7.3,SNR=7.3						

*IDC **03** 15:00:37.8±0.5, 5°.07S×151°.63E, h121^{km}±4^{km}, mb4.1/24, mb1 4.2/26, mb1mx4.1/37, mbtmp4.5/26, MS3.4/1, Ms1 3.4/1, ms1mx2.8/28, Error ellipse: s-maj=12.7km s-min=9.5km az=93.0*
*NEIC **03** 15:00:38.0±1.2, 5°.08S±0°.08×151°.57E±0°.09, h124^{km}±5^{km}, mb4.5/17, Error ellipse: s-maj=14.4km s-min=9.8km az=118.0*
*DJA **03** 15:00:46.3±0.8, 5°S±6°×15°1E±°, h178^{km}±8^{km}, M5.1/19, mB5.1/5, mb4.5/19, MLv5.8/1, Mw(mB)4.4/5*
ISC 03 15:00:38.7±0.4**, 5°.10S**±0°.06×**151°.60E**±0°.07**, h129**^{km}**, n63, σ1^{s}03**/68**, mb4.5**/35**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.89	28	P	Pn	15 00 59.8	-0.8
	447nm,0.3s,baz=215,slow=1.5,SNR=1213						
KRVT				S	Sn	15 01 15.0	-2.1
	903nm,0.3s,baz=158,slow=18,SNR=18						
RABL	Rabaul	1.06	32		Pn	15 01 01.1	-1.0
PMG	Port Moresby	6.14	226		Pn	15 02 06.7	-0.4
PMG				Sn	Sn	15 03 15.4	-0.8
HNR	Honiara	9.33	118	P	Pn	15 02 49.6	-0.5
	2.1nm,0.3s,baz=140,slow=14,SNR=6.7						
HNR	Honiara	9.33	118	Pn	Pn	15 02 50.7	+0.6
COEN	Coen	12.10	223		Pn	15 03 27.8	+0.8
COEN				Sn	Sn	15 05 38.3	-2.2
CTA	Charters Tower	15.78	199	P	P	15 04 15.8	+0.7
	0.6nm,0.3s,baz=29,slow=12,SNR=8.2						
FAKI	Fak Fak	19.42	276	P	P	15 04 55.0	-0.2
	21nm,1.1s						
SIJI	Sorong	20.73	281	P	P	15 05 09.2	0.0
	23nm,0.9s,baz=84,slow=7.1,SNR=14						
MTN	Manton Dam	21.62	248	P	P	15 05 18.8	+0.1
DZM	Mont Dzumac	22.16	141	P	P	15 05 24.7	+0.3
	29nm,0.7s,baz=326,slow=10,SNR=27						
DZM				LR	LR	15 12 31.7	
	comp=Z,100nm,20.0s,baz=30,slow=32						
DZM	Mont Dzumac	22.16	141	P	P	15 05 24.7	+0.3
WB0	Warramunga Arr	22.21	227	P	P	15 05 24.0	-0.8
WB0				IAmb	IAmb	15 05 26.9	
	comp=Z,30nm,1.1s						
WR0	Warramunga Arr	22.22	227	P	P	15 05 24.2	-0.7
WR0				IAmb	IAmb	15 05 26.5	
	comp=Z,24nm,1.1s						
WRAB	Tennant Creek	22.35	227	P	P	15 05 23.8	-2.4
WRAB				IAmb	IAmb	15 05 27.6	
	comp=Z,19nm,0.7s						
WB2	Warramunga Arr	22.35	227	P	P	15 05 25.2	-1.0
WB2				IAmb	IAmb	15 05 27.4	
	comp=Z,20nm,0.9s						
WRA	Warramunga Arr	22.36	227	P	P	15 05 25.3	-1.1
	comp=Z,16nm,0.7s,baz=50,slow=10,SNR=70						
WRA				S	S	15 09 20.6	-2.5
	comp=Z,3.3nm,0.9s,baz=51,slow=16,SNR=5.3						
WRA				ScP	ScP	15 12 43.3	+0.5
	comp=Z,3.4nm,0.8s,baz=46,slow=2.5,SNR=10						
LBMI	Labuha	24.47	280	P	P	15 05 45.8	-0.1
	comp=Z,646nmcomp=Z,19nm,0.9s						
KNRA	Kununurra	24.77	243	P	P	15 05 48.5	-0.2
AS31	Alice Springs	25.13	221	P	P	15 05 51.9	0.0
ASAR	Alice Springs	25.13	221	P	P	15 05 51.8	-0.1
	comp=Z,14nm,0.6s,baz=58,slow=8.4,SNR=78						
ASAR				PcP	PcP	15 09 22.6	-0.3
	comp=Z,1.4nm,0.9s,baz=50,slow=1.4,SNR=4.7						
ASAR				S	S	15 10 11.2	+3.8
	comp=Z,1.1nm,0.8s,baz=41,slow=18,SNR=4.4						
ASAR				ScP	ScP	15 12 51.8	+1.5
	comp=Z,1.6nm,0.8s,baz=48,slow=2.9,SNR=12						
SANI	Sanana	25.74	276	P	P	15 05 57.6	+0.1
	comp=Z,1μmcomp=Z,41nm,0.8s						
SOEI	Soe	27.49	259	P	P	15 06 12.7	-0.6
	comp=Z,28nm,0.8s						
SOEI	Soe	27.49	259	P	P	15 06 12.1	-1.2
BATI	Baumata	28.14	258	P	P	15 06 19.7	+0.7
	comp=Z,31nm,0.6s,baz=237,slow=0.7,SNR=14						
BATI	Baumata	28.14	258	P	P	15 06 18.6	-0.4
	comp=Z,23nm,0.7s						
STKA	Stephens Creek	28.24	198	P	P	15 06 18.6	-1.0
	comp=Z,2.6nm,0.8s,baz=56,slow=15,SNR=2.8						
STKA	Stephens Creek	28.24	198	IAmb	IAmb	15 06 19.6	
	comp=Z,3.7nm,1.5s						
FITZ	Fitzroy Crossi	28.47	241	P	P	15 06 21.1	-0.7
	comp=Z,16nm,0.7s,baz=67,slow=5.5,SNR=49						
FITZ	Fitzroy Crossi	28.47	241	P	P	15 06 21.0	-0.8
FITZ				IAmb	IAmb	15 06 23.5	
	comp=Z,16nm,0.8s						
EDFI	Ende, Flores	29.91	261	P	P	15 06 33.3	-1.4
	comp=Z,5.2nm,0.7s						
URZ	Urewera	40.35	148	P	P	15 08 04.3	+0.6
	comp=Z,2.6nm,0.5s,baz=232,slow=0.7,SNR=6.3						
URZ	Urewera	40.35	148	IAmb	IAmb	15 08 15.4	
	comp=Z,12nm,1.2s						
TUWZ	Tuamarina	41.32	154	P	P	15 08 12.7	+1.0
RPZ	Rata Peaks	42.11	159	P	P	15 08 18.1	0.0
	comp=Z,8.9nm,0.9s,baz=345,slow=6.0,SNR=3.7						
RPZ	Rata Peaks	42.11	159	IAmb	IAmb	15 08 24.1	
	comp=Z,14nm,1.2s						
KSRS	Korea Array	47.74	334	P	P	15 09 02.8	+0.2
	comp=Z,1.0nm,1.0s,baz=151,slow=8.6,SNR=5.4						
NJ2	Nanjing	48.33	322	*e*P	P	15 09 08.0	+0.7
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USRK	Ussuriysk Ar.	52.15	342	P	P	15 09 35.3	-0.6
	comp=Z,1.7nm,0.7s,baz=106,slow=6.9,SNR=4.1						
GYA	Guiyang	53.63	308	*e*P	P	15 09 48.9	+1.7
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KMI	Kunming	56.17	305	P	P	15 10 06.7	+1.1
KMI				pmax	pmax		
	comp=Z,12nm,1.1s						
CMAR	Chiang Mai Arr	56.92	296	P	P	15 10 11.3	+0.5
	comp=Z,6.2nm,1.2s,baz=123,slow=5.3,SNR=14						
PETK	Petropavlovsk-	58.22	4	P	P	15 10 18.7	-0.5
	comp=Z,1.6nm,1.0s,baz=170,slow=7.8,SNR=4.2						
HHC	Hu-ho-hao-te	58.60	325	P	P	15 10 23.9	+1.6
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,97nm,7.2s						
SONM	Songino Array	65.94	328	P	P	15 11 12.0	+0.9
	comp=Z,3.1nm,0.6s,baz=145,slow=5.7,SNR=17						
VNDA	Vanda	72.58	178	P	P	15 11 51.4	0.0
	comp=Z,2.2nm,0.8s,baz=316,slow=7.0,SNR=11						
VNDA	Vanda	72.58	178	P	P	15 11 51.6	+0.3
VNDA				IAmb	IAmb	15 11 53.0	
	comp=Z,3.8nm,0.9s						
WMQ	Urumqi	75.15	318	*e*P	P	15 12 07.9	+0.9
MKAR	Makanchi Array	79.77	319	P	P	15 12 32.2	-0.4
	comp=Z,2.7nm,1.0s,baz=106,slow=6.4,SNR=16						
ZALV	Zalesovo Beam	80.74	327	P	P	15 12 37.3	-0.3
	comp=Z,2.1nm,0.6s,baz=83,slow=4.5,SNR=6.8						
KSH	Kashi	82.22	311	P	P	15 12 47.3	+1.4
KSH				pP	pP	15 13 19.0	+0.6
KSH				pP	pP	15 13 19.0	+0.6
KSH				pmax	pmax		
	comp=Z,38nm,1.6s						
KSH				pmax	pmax		
	comp=Z,240nm,5.1s						
IL31		82.88	22	P	P	15 12 48.3	-0.2
ILAR	Eielson Array	82.88	22	P	P	15 12 47.1	-1.5
	comp=Z,1.6nm,0.8s,baz=253,slow=5.1,SNR=17						
MAW	Mawson	84.84	203	P	P	15 12 58.5	0.0
	comp=Z,4.9nm,0.7s,baz=64,slow=7.1,SNR=9.2						
MAW	Mawson	84.84	203	P	P	15 12 58.3	-0.2
QSPA	South Pole Qui	84.86	180	P	P	15 12 58.5	-0.3
	comp=Z,8.0nm,0.7s,baz=323,slow=0.9,SNR=34						
QSPA	South Pole Qui	84.86	180	P	P	15 12 59.2	+0.3
QSPA				IAmb	IAmb	15 13 00.0	
	comp=Z,11nm,0.8s						
NRIK	Noril'sk	85.86	341	P	P	15 13 03.2	-0.2
	comp=Z,2.3nm,0.8s,baz=114,slow=6.6,SNR=5.0						
NVAR	Mina Array Bea	93.21	52	P	P	15 13 39.8	+0.8
	comp=Z,4.8nm,0.9s,baz=256,slow=5.9,SNR=20						
YKA	Yellowknife Ar	96.25	28	P	P	15 13 51.8	-0.3
	comp=Z,0.3nm,0.9s,baz=264,slow=5.9,SNR=3.1						
PDAR	Pinedale Array	99.93	48	P	Pdif	15 14 09.5	+0.1
	comp=Z,0.5nm,0.8s,baz=272,slow=4.0,SNR=4.4						
GERES	GERESS Array B	123.67	328	PKP	PKPdf	15 19 21.4	0.0
	comp=Z,0.7nm,0.5s,baz=66,slow=1.6,SNR=9.1						
TORD	Torodi Ar. Bea	149.26	287	PKPbc	PKPbc	15 20 12.8	-0.4
	comp=Z,8.4nm,0.8s,baz=82,slow=2.9,SNR=32						

*JMA **03** 15:13:29.9±0.1, 24°.73N×122°.27E, h0^{km}, M2.4*
*TAP **03** 15:13:30.5, 24°.83N×122°.23E, h11^{km}, ML3.2, C*

ISC 03 15:13:30.1±1.0**, 24°.79N**±0°.02×**122°.27E**±0°.02**, h8**^{km}±9^{km}**, n58, σ0^{s}58**/108**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.27	207	*i* P	Pb	15 13 36.9	-0.4
	baz=212						
EOS1				S	Sb	15 13 42.1	+0.1
	baz=212						
NTC	Toucheng	0.40	279	*e*P	Pg	15 13 38.4	+0.4
	baz=274						
NTC				*e*S	Sb	15 13 44.7	-1.0
	baz=274						
TWC	Suao	0.42	244	*i* P	Pg	15 13 38.4	+0.1
	baz=238						
TWC				S	Sg	15 13 44.4	+0.4
	baz=238						
TIPB	Shuangxi	0.44	294	P	Pg	15 13 38.9	+0.2
	baz=290						
TIPB				*e*S	Sg	15 13 44.4	-0.1
	baz=290						
ILA	Ilan	0.47	267	*e*P	Pb	15 13 40.0	-0.6
	baz=253						
ILA				*e*S	Sb	15 13 47.1	-0.6
	baz=253						
NWF	Wu-fen Shan	0.52	302	*e*P	Pb	15 13 41.5	-0.1
	baz=299						
NWF				*e*S	Sg	15 13 48.0	+0.9
	baz=299						
WFSB	Wu-fen Shan	0.52	302	*e*P	Pb	15 13 41.5	0.0
	baz=299						
WFSB				*e*S	Sg	15 13 47.8	+0.8
	baz=299						
TWE	Neicheng	0.55	263	*i* P	Pg	15 13 40.8	0.0
	baz=250						
TWE				*e*S	Sb	15 13 48.9	-1.1
	baz=250						
SLBB	Yuanshan	0.57	266	*e*P	Pb	15 13 41.8	-0.7
	baz=255						
SLBB				*e*S	Sb	15 13 49.5	-1.2
	baz=255						
ENA	Nanau	0.60	233	*e*P	Pg	15 13 41.9	+0.1
	baz=219						
ENA				*e*S	Sb	15 13 50.1	-1.3
	baz=219						
TWA	Mucha	0.65	287	P	Pb	15 13 43.8	+0.1
	baz=272						
TWA				*e*S	Sb	15 13 52.6	-0.2
	baz=272						
ENTT	Nioudou	0.66	257	P	Pb	15 13 43.2	-0.6
	baz=253						
ENTT				*e*S	Sb	15 13 52.9	-0.2
	baz=253						
NHDH	Xindian Distri	0.69	284	P	Pb	15 13 44.8	+0.4
	baz=272						
NHDH				*e*S	Sb	15 13 54.3	+0.1
	baz=272						
NWLT	Wulai	0.69	269	*e*P	Pb	15 13 44.0	-0.4
	baz=266						
NWLT				*e*S	Sb	15 13 53.5	-0.7
	baz=266						
JYNG	Yonagunijimaku	0.70	119	P	Pg	15 13 43.4	-0.3
JYNG				S	Sg	15 13 53.7	+0.8
NDT	Datong Townshi	0.71	255	*e*P	Pb	15 13 44.4	-0.4
	baz=252						
NDT				*e*S	Sb	15 13 53.9	-0.8
	baz=252						
YM01	YM01	0.72	299	P	Pb	15 13 44.7	-0.3
	baz=296						
YM01				*e*S	Sb	15 13 54.6	-0.5
	baz=296						
YM08	YM08	0.73	303	*e*P	Pg	15 13 44.5	+0.3
	baz=300						
YM08				*e*S	Sb	15 13 54.7	-0.5
	baz=300						
TATO	Taipei	0.73	285	*e*P	Pb	15 13 45.2	+0.1
	baz=271						
TATO				*e*S	Sb	15 13 55.4	+0.2
	baz=271						
YM11	YM11	0.73	301	*e*P	Pb	15 13 44.9	-0.2
	baz=298						
YM11				*e*S	Sb	15 13 55.5	+0.2
	baz=298						
YM10	YM10	0.73	299	*e*P	Pb	15 13 45.0	-0.2
	baz=297						
YM05	YM05	0.74	300	*e*P	Pg	15 13 44.7	+0.4
	baz=298						
YOJ	Yonaguni jima	0.75	116	*e*P	Pg	15 13 44.5	-0.2
	baz=117						
YOJ				*e*S	Sg	15 13 54.6	+0.1
	baz=117						
YOJ	Yonaguni jima	0.75	116	P	Pg	15 13 44.2	-0.4
YOJ				*e*S	Sg	15 13 54.6	+0.1
YM04	YM04	0.75	299	P	Pg	15 13 45.1	+0.5
	baz=296						
YM04				*e*S	Sb	15 13 55.4	-0.6
	baz=296						
YHNB	Yeheng	0.82	262	P	Pg	15 13 45.7	-0.2
	baz=253						
YHNB				*e*S	Sg	15 13 56.3	-0.3
	baz=253						
TWS1	Kuangyinshan	0.83	292	*e*P	Pb	15 13 47.2	+0.5
	baz=290						
NSK	Sanguang	0.83	262	P	Pg	15 13 45.9	-0.3
	baz=254						
NSK				*e*S	Sg	15 13 56.8	-0.3
	baz=254						
PCYT	Pengchaiyu	0.85	348	*e*P	Pg	15 13 45.1	-1.4
	baz=340						
PCYT				*e*S	Sg	15 13 56.2	-1.4
	baz=340						
NACB	Ninganchiao	0.87	225	P	Pb	15 13 47.0	-0.5
	baz=224						
NACB				S	Sb	15 13 58.3	-0.9
	baz=224						
NNSB	Datong	0.88	246	*e*P	Pb	15 13 47.3	-0.5
	baz=234						
NNSB				*e*S	Sb	15 13 59.3	-0.4
	baz=234						
NNSH	Datong	0.88	246	*e*P	Pg	15 13 47.2	0.0
	baz=236						
NNSH				*e*S	Sb	15 13 58.9	-0.8
	baz=236						
NNS	Nan Shan	0.89	247	*e*P	Pg	15 13 47.3	+0.1
	baz=235						
NNS				*e*S	Sb	15 13 59.4	-0.5
	baz=235						
ETLH	Xiulin Townshi	0.92	231	*e*P	Pg	15 13 47.8	-0.1
	baz=230						
ETLH				*e*S	Sg	15 13 60.0	0.0
	baz=230						
TWD	Chiawan	0.94	221	*e*P	Pb	15 13 48.2	-0.4
	baz=228						
TWD				*e*S	Sb	15 14 00.3	-0.8
	baz=228						
WHF	Hehuan Shan	1.12	235	*e*P	Pb	15 13 51.7	-0.2
	baz=234						
WHF				*e*S	Sb	15 14 07.0	+0.2
	baz=234						
TWT	Tachien	1.13	242	*e*P	Pn	15 13 53.2	+0.8
	baz=234						
TWT				*e*S	Sn	15 14 08.6	+0.4
	baz=234						
TDCB	Techi	1.14	242	P	Pn	15 13 52.9	+0.3
	baz=235						
TDCB				*e*S	Sb	15 14 07.0	-0.2
	baz=235						
LIOB	Emei	1.15	263	P	Pb	15 13 52.2	0.0
	baz=260						
LIOB				*e*S	Sn	15 14 08.3	-0.1
	baz=260						
CHGB	Renai	1.23	234	P	Pn	15 13 53.9	+0.1
	baz=234						
CHGB				S	Sb	15 14 10.2	+0.2
	baz=234						
ESL	Shilin	1.24	218	*e*P	Pn	15 13 54.5	+0.8
	baz=202						
OWD	Renai	1.30	230	*e*P	Pn	15 13 54.8	+0.1
	baz=224						
OWD				*e*S	Sb	15 14 11.4	-0.3
	baz=224						
WHP	Taichung City	1.31	247	*e*P	Pb	15 13 55.8	+0.8
	baz=246						
WHP				*e*S	Sn	15 14 12.3	-0.1
	baz=246						
EGFH	Guangfu	1.36	215	*e*P	Pb	15 13 55.6	-0.1
	baz=234						
EGFH				*e*S	Sn	15 14 14.7	+1.2
	baz=234						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	1.41	109	P	Pn	15 13 56.3	+0.3
IRIF				eS	Sb	15 14 14.0	-0.7
VWDT	VWDT	1.46	225	eP	Pg	15 13 58.2	+0.1
	baz=226						
VWDT				eS	Sg	15 14 16.7	-0.4
	baz=226						
HGSD	Ruisui	1.51	211	eP	Pg	15 13 59.6	+0.6
	baz=199						
HGSD				eS	Sg	15 14 18.6	0.0
	baz=199						
SMLT	Sun Moon Lake	1.54	234	eP	Pg	15 14 00.3	+0.6
	baz=234						
SMLT				eS	Sg	15 14 19.9	+0.2
	baz=234						
SSLB	Suanglung	1.56	230	eP	Pg	15 13 59.6	-0.5
	baz=231						
SSLB				eS	Sb	15 14 19.2	0.0
	baz=231						
HATJ	Hateruma jima	1.58	117	P	Pn	15 13 59.1	+0.7
JKRS	Kuro-shima	1.68	109	P	Pn	15 14 00.3	+0.5
JIJ	Ishigaki jima	1.76	104	P	Pn	15 14 02.2	+1.3
YUS	Yu-Shan	1.77	223	eP	Pb	15 14 02.6	-0.5
	baz=226						
YUS				eS	Sg	15 14 26.7	-0.4
	baz=226						
ALS	Alishan	1.85	227	eP	Pb	15 14 04.4	+0.1
	baz=229						
ALS				eS	Sg	15 14 29.5	-0.1
	baz=229						
JISG	Ishigakijimahi	1.87	96	P	Pn	15 14 03.4	+1.0
CHN5	Tsauling	1.88	231	eP	Pg	15 14 05.4	-0.8
	baz=233						
CHN5				eS	Sg	15 14 30.4	-0.1
	baz=233						
CHN4	Tsaushan	2.10	227	eP	Pb	15 14 08.4	0.0
	baz=230						
CHN4				eS	Sg	15 14 37.1	-0.5
	baz=230						
TPUB	Ta-pu	2.11	226	eP	Pb	15 14 08.2	-0.4
	baz=228						
TPUB				eS	Sg	15 14 36.3	-1.6
	baz=228						

*NIC **03** 15:22:27.6±0.0, 35°.57N×32°.34E, h60km±2km, Ml3.0/5*
*DDA **03** 15:22:28.6, 35°.51N×32°.37E, h47km±1km, ML2.5*
*ISK **03** 15:22:28.3, 35°.46N×32°.40E, h20km, ML3.1/18*
ISC 03 15:22:30.5±1.4**, 35°.47N**±0°.03×**32°.36E**±0°.05**, h44**km±14km**, n38, σ0s.97**/57**, 2C-2D, Cyprus region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ALFC	Alefka	0.37	148	P	Pn	15 22 39.2	-0.7
ALFC				AML	AML	15 22 47.3	
	4.8nm,0.2s						
ALFC				AML	AML	15 22 47.3	
	4.8nm,0.2s						
ALFC				AML	AML	15 22 47.5	
	8.3nm,0.2s						
ALFC				AML	AML	15 22 47.5	
	8.3nm,0.2s						
ALFC				S	Sn	15 22 47.7	+1.2
AKMS	Akamas	0.45	182	⇑P	Pn	15 22 40.1	-0.7
AKMS				S	Sn	15 22 50.0	+1.9
AKMS				AML	AML	15 22 50.5	
	1.8nm,0.3s						
AKMS				AML	AML	15 22 50.5	
	1.8nm,0.3s						
AKMS				AML	AML	15 22 54.0	
	1.3nm,0.4s						
AKMS				AML	AML	15 22 54.0	
	1.3nm,0.4s						
LEF	Lefka	0.56	128	PG	Pn	15 22 40.1	-2.0
LEF	Lefka	0.56	128	iP	Pn	15 22 41.1	-1.0
LEF				iS	Sn	15 22 50.2	-0.2
LEF				IAML		15 22 51.0	
	comp=E,280nm,0.4s						
LEF				IAML		15 22 52.0	
	comp=N,242nm,0.4s						
NATA	Nata	0.71	166	⇑P	Pn	15 22 43.3	-0.8
NATA				S	Sn	15 22 56.0	+1.9
NATA				AML	AML	15 23 05.5	
	comp=N,2.3nm,0.6s						
NATA				AML	AML	15 23 05.5	
	comp=N,2.3nm,0.6s						
NATA				AML	AML	15 23 08.4	
	comp=N,2.0nm,0.7s						
NATA				AML	AML	15 23 08.4	
	comp=N,2.0nm,0.7s						
GAZI	Gazipasa	0.77	357	PG	Pn	15 22 43.9	-1.1
GAZI				SG	Sn	15 22 55.3	-0.1
GAZI	Gazipasa	0.77	357	iP	Pn	15 22 43.9	-1.1
GAZI				iS	Sn	15 22 55.0	-0.5
GAZI				IAML		15 22 55.0	
	comp=N,170nm,0.5s						
GAZI				IAML		15 22 56.0	
	comp=E,218nm,0.3s						
SZAC	Souni	0.83	149	⇓P	Pn	15 22 44.9	-0.9
SZAC				S	Sn	15 22 58.3	+1.3
SZAC				AML	AML	15 22 58.6	
	comp=E,1.6nm,0.3s						
SZAC				AML	AML	15 22 58.6	
	comp=E,1.6nm,0.3s						
SZAC				AML	AML	15 22 58.9	
	comp=E,1.3nm,0.2s						
SZAC				AML	AML	15 22 58.9	
	comp=E,1.3nm,0.2s						
ATHAL	Athalassa	0.91	111	P	Pn	15 22 46.0	-0.8
ATHAL				S	Sn	15 22 59.3	+0.5
TEKE	Tekeli-Mersin	0.91	42	PG	Pn	15 22 46.3	-0.6
TEKE				SG	Sn	15 22 59.3	+0.4
CSS	Mathiatis	0.94	122	PG	Pn	15 22 45.9	-1.5
CSS				SG	Sn	15 22 59.8	+0.1
CSS	Mathiatis	0.94	122	P	Pn	15 22 45.8	-1.5
ASGA	Asgata	1.00	133	⇓P	Pn	15 22 46.7	-1.3
ASGA				S	Sn	15 23 01.5	+0.6
ASGA				AML	AML	15 23 08.1	
	comp=E,0.6nm,0.4s						
ASGA				AML	AML	15 23 08.1	
	comp=E,0.6nm,0.4s						
ASGA				AML	AML	15 23 09.7	
	comp=E,0.7nm,0.4s						
ASGA				AML	AML	15 23 09.7	
	comp=E,0.7nm,0.4s						
YORU	Yoruktepe-Mers	1.09	51	PG	Pn	15 22 48.7	-0.7
BERE	Bereket-Mersin	1.12	38	PN	Pn	15 22 49.4	-0.5
BERE				SN	Sn	15 23 05.0	+0.7
MVOU	Mavrovouni	1.14	113	P	Pn	15 22 48.3	-1.7
OREN	Orenkoy-Mersin	1.16	50	PN	Pn	15 22 49.7	-0.6
AKK1	Akkuyu-Mersin	1.17	55	PN	Pn	15 22 49.8	-0.7
AKK2	Akkuyu-Mersin	1.18	55	PN	Pn	15 22 49.9	-0.6
AKKU	Akkuyu-Mersin	1.19	54	PN	Pn	15 22 50.1	-0.6
AKKU				SN	Sn	15 23 05.7	0.0
GULN	MERSIN_Gulnar	1.20	53	iP	Pn	15 22 49.8	-1.0
GULN				iS	Sn	15 23 06.1	+0.2
GULN				IAML		15 23 07.0	
	comp=N,70nm,0.2s						
TEPK	Tepekoy-MERSIN	1.23	52	PN	Pn	15 22 50.6	-0.6
ERMK	Ermenek	1.25	21	iP	Pn	15 22 51.0	-0.8
ERMK				iS	Sn	15 23 09.9	+2.3
ERMK				IAML		15 23 11.0	
	comp=E,137nm,0.3s						
ERMK				IAML		15 23 12.0	
	comp=N,147nm,0.3s						
YESI	Yesilovacik-Me	1.27	55	PN	Pn	15 22 51.1	-0.7
TISA	Tisan-Mersin	1.28	57	PN	Pn	15 22 51.7	-0.2
TEVE	Tevekalti-Mers	1.31	42	PN	Pn	15 22 52.1	-0.3
KARG	Kargicak-Mersi	1.32	56	PN	Pn	15 22 52.3	-0.2
IKL	Isikli	1.32	54	PN	Pn	15 22 51.6	-0.9
KEBE	Keben-Mersin	1.47	48	PN	Pn	15 22 54.2	-0.4
EREN	Erenkoy	1.48	87	PN	Pn	15 22 54.5	-0.1
KEPZ	Antalya-Kepez	1.56	337	iP	Pn	15 22 54.7	-1.1
KEPZ				IAML		15 23 14.0	
	comp=N,46nm,0.6s						
KEPZ				iS	Sn	15 23 14.5	-0.2
KEPZ				IAML		15 23 15.0	
	comp=E,31nm,0.3s						
SILI	Silifke-Mersin	1.56	54	PN	Pn	15 22 55.6	-0.1
KIZK	Mersin	1.77	55	PN	Pn	15 22 58.6	0.0
KIZK	Mersin	1.77	55	iP	Pn	15 22 58.5	0.0
KIZK				iS	Sn	15 23 19.5	-0.3
KIZK				IAML		15 23 21.0	
	comp=E,36nm,0.2s						
KIZK				IAML		15 23 22.0	
	comp=N,33nm,0.5s						
KRMN	Karaman	1.85	23	PN	Pn	15 23 00.1	+0.2
MERS	Mersin	2.24	51	PN	Pn	15 23 05.5	+0.3
OSC2	CSNet OBS 4	2.39	182	P	Pn	15 23 06.4	-0.7
OSC2				S	Sn	15 23 36.1	+1.0
KERG	Konya-Eregli	2.41	36	iP	Pn	15 23 09.1	+1.5
KERG				iS	Sn	15 23 36.7	+0.8
KERG				IAML		15 23 37.0	
	comp=E,23nm,0.5s						
KERG				IAML		15 23 39.0	
	comp=N,37nm,0.2s						

ROM 03 15:26:20.2±0.2**, 45°.90N**±0°.01×**9°.86E**±0°.01**, h10**km**, ML0.9**/2**, Error ellipse: s-maj=1.8km s-min=0.6km az=329.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MDI	Monti di Nese	0.15	220	P	Pg	15 26 24.2	+0.6
MDI				S	Sg	15 26 27.0	+0.9
MDI				AML	AML		
	comp=E,74μm,0.2s						
MDI				AML	AML		
	comp=N,65μm,0.1s						
MABI	Malga Bissina	0.49	71	P	Pg	15 26 30.2	+0.5
MABI				S	Sg	15 26 36.8	+0.6
MABI				AML	AML		
	comp=N,29μm,0.1s						
MABI				AML	AML		
	comp=E,17μm,1.4s						
BERNI	Berninapass	0.53	13	P	Pg	15 26 30.6	0.0
MAGA	Magasa	0.55	102	P	Pg	15 26 31.4	+0.5
MAGA				S	Sg	15 26 39.1	+0.8

*IDC **03** 15:38:06.7±0.7, 5°.88N×77°.66W, h0km, mb3.8/15, mb1 4.0/17, mb1mx3.9/33, mbtmp3.8/17, ML3.3/2, MS3.7/2, Ms1 3.7/2, ms1mx3.0/30, Error ellipse: s-maj=25.4km s-min=15.2km az=57.0*
*RSNC **03** 15:38:08.9±1.5, 5°.95N×77°.71W, h9km±10km, ML3.5, Mw4.3*
*NEIC **03** 15:38:11.0±1.6, 5°.85N±0°.10×77°.74W±0°.08, h28km±5km, mb4.6/5, Error ellipse: s-maj=16.5km s-min=7.9km az=213.0*
ISC 03 15:38:08.5±2.1**, 5°.90N**±0°.03×**77°.69W**±0°.04**, h12**km±13km**, n64, σ2s.19**/78**, mb3.8**/17**, 4C, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PIZC	Pizarro, Choco	0.98	161	eP	Pn	15 38 27.6	-0.6
PIZC				eS	Sn	15 38 40.8	-1.2
PIZC				i		15 38 44.9	
	comp=Z,1μm,0.9s						
PTAC	Punta Ardita,	1.25	354	eP	Pn	15 38 30.0	-1.8
PTAC				eS	Sb	15 38 45.6	-2.4
PTAC				i		15 38 48.7	
	comp=Z,2μm,0.2s						
CBOC	Ciudad Bolivar	1.66	91	eP	Pn	15 38 35.3	-2.4
CBOC				eS	Sn	15 38 53.0	-6.1
CBOC				i		15 39 09.0	
	comp=Z,577nm,1.8s						
DBBC	Dabeiba	1.84	53	eP	Pn	15 38 38.6	-1.4
MALC	Bahia Malaga	1.91	169	eP	Pn	15 38 40.0	-0.8
MALC				eS	Sn	15 39 04.4	-0.4
MALC				i		15 39 20.5	
	comp=Z,173nm,0.9s						
HELC	Santa Helena	2.16	82	⇑eP	Pn	15 38 43.7	-1.1
HELC				eS	Sn	15 39 12.9	+1.2
HELC				i		15 39 22.3	
	comp=Z,230nm,1.8s						
YOTC	Yotoco, Valle	2.32	145	eP	Pn	15 38 46.1	-0.6
YOTC				eS	Sn	15 39 09.6	-5.7
GUY2C	Guyana, Caldas	2.40	106	⇑eP	Pn	15 38 47.4	-0.7
GUY2C				i		15 39 35.2	
	comp=Z,126nm,0.7s						
RREF	El Recreo	2.53	113	⇑eP	Pn	15 38 50.1	+0.1
RREF				eS	Sn	15 39 22.6	+1.5
RREF				i		15 39 41.1	
	comp=Z,166nm,1.1s						
HORQ	Saladito	2.62	156	eP	Pn	15 38 51.0	0.0
HORQ				i		15 39 49.9	
	comp=Z,125nm,1.5s						
UPD2	Meteti	2.65	353	eP	Pb	15 38 55.8	-0.2
UPD2				eS	Sg	15 39 32.6	-1.2
UPD2				i		15 39 45.5	
	comp=Z,420nm,1.0s						
ANIL	Santa Ana	2.67	122	eP	Pn	15 38 53.9	+2.3
ANIL				i		15 39 36.9	
	comp=Z,138nm,0.8s						
CAPC	Capurgana	2.74	7	eP	Pb	15 38 56.4	-1.0
CAPC				i		15 39 43.7	
	comp=Z,177nm,1.8s						
UREC	San Jos de Ur	2.82	49	eP	Pn	15 38 53.2	-0.3
UREC				eS	Sn	15 39 21.2	-6.3
UREC				i		15 39 52.3	
	comp=Z,196nm,1.4s						
NORC	Norcasia	2.82	97	eP	Pn	15 38 53.7	+0.2
NORC				eS	Sn	15 39 29.0	+1.5
NORC				i		15 39 40.4	
	comp=Z,97nm,0.9s						
ORTC	Ortega, Tolima	3.13	129	eP	Pn	15 38 59.1	+1.3
ORTC				i		15 39 41.4	
	comp=Z,121nm,1.1s						
AZU	Azuero	3.19	306	eP	Pn	15 38 57.2	-1.3
AZU				eS	Sn	15 39 32.9	-3.6
AZU				i		15 39 38.3	
	comp=Z,210nm,0.8s						
LCBC	Los crdobas,	3.22	24	eP	Pn	15 38 58.7	-0.2
LCBC				eS	Sn	15 39 42.1	+4.9
LCBC				i		15 39 52.4	
	comp=Z,181nm,2.4s						
ZARC	Zaragoza, Cauc	3.22	60	eP	Pn	15 38 59.5	+0.5
PTBC	PUERTO BERRIO,	3.27	79	⇑eP	Pn	15 39 00.1	+0.4
PTBC				eS	Sn	15 39 37.7	-0.9
PTBC				i		15 40 06.3	
	comp=Z,138nm,1.5s						
ROSC	El Rosal	3.51	107	Pn	Pn	15 39 05.7	+2.4
	comp=Z,3.8nm,0.3s,baz=328,slow=19,SNR=3.1						
ROSC	El Rosal	3.51	107	eP	Pn	15 39 07.1	+3.8
ROSC				i		15 40 25.2	
	comp=Z,107nm,1.7s						
SPBC	San Pablo de B	3.60	94	eP	Pn	15 39 04.8	+0.4
SPBC				i		15 40 06.2	
	comp=Z,65nm,1.7s						
PCON	Cinco Dias	3.77	160	eP	Pb	15 39 15.8	+0.4
PCON				i		15 40 22.2	
	comp=Z,73nm,1.9s						
BCIP	Isla Barro Col	3.88	327	eP	Pn	15 39 06.7	-1.4
BCIP				eS	Sn	15 39 51.5	-2.2
BCIP				i		15 40 11.5	
	comp=Z,62nm,1.9s						
BCIP	Isla Barro Col	3.88	327		Pn	15 39 07.0	-1.1
SOTA	Rioblanco	3.89	164	eP	Pn	15 39 10.4	+1.8
SOTA				i		15 39 59.2	
	comp=Z,42nm,0.8s						
BRRC	Barranca, Sant	4.13	73	eP	Pn	15 39 15.0	+3.6
BRRC				i		15 40 12.5	
	comp=Z,66nm,0.9s						
CHIC	Chingaza	4.13	108	eP	Pn	15 39 13.9	+2.0
CHIC				i		15 40 34.8	
	comp=Z,47nm,1.7s						
GARC	Garzon, Huila	4.29	149	eP	Pn	15 39 16.7	+2.9
GARC				i		15 40 21.7	
	comp=Z,28nm,1.1s						
VILC	Villavicencio,	4.35	114	eP	Pn	15 39 19.3	+4.6
VILC				i		15 40 33.5	
	comp=Z,52nm,1.4s						
RUSC	La Rusia	4.58	90	eP	Pn	15 39 19.7	+1.7
RUSC				eS	Sn	15 40 12.1	+0.6
RUSC				i		15 40 47.3	
	comp=Z,96nm,1.2s						
RUSC	La Rusia	4.58	90		Pn	15 39 20.1	+2.1
SMLC	San Martn de	4.60	51	eP	Pn	15 39 18.4	+0.4
SMLC				i		15 40 35.2	
	comp=Z,30nm,1.0s						
SJCC	San Jacinto, C	4.68	32	eP	Pn	15 39 22.8	+3.7
OCAC	Ocana	4.92	62	eP	Pn	15 39 29.0	+6.6
OCAC				i		15 40 52.4	
	comp=Z,51nm,0.7s						
PAMC	Pamplona, Colo	5.16	74	eP	Pn	15 39 27.4	+1.4
PAMC				eS	Sn	15 40 29.3	+3.6
PAMC				i		15 40 48.1	
	comp=Z,53nm,1.8s						
SDV	Santo Domingo	7.60	67	Pn	Pn	15 40 00.8	+1.5
	comp=Z,2.1nm,0.3s,baz=245,slow=10.0,SNR=19						
SDV				Sn	Sn	15 41 20.1	-5.4
	comp=Z,0.6nm,0.3s,baz=118,slow=22,SNR=0.9						
SDV				LR	LR	15 43 05.8	
	comp=Z,771nm,18.5s,baz=270,slow=40						
SDV	Santo Domingo	7.60	67		Pn	15 40 01.4	+2.1
JTS	Las Juntas de	8.41	302	Pn	Pn	15 40 12.6	+2.2
	comp=Z,0.9nm,0.3s,baz=188,slow=9.1,SNR=5.9						
JTS				LR	LR	15 43 28.8	
	comp=Z,366nm,19.9s,baz=170,slow=38						
JTS	Las Juntas de	8.41	302		Pn	15 40 11.9	+1.5
SAML	Samuel	20.65	135	P	P	15 42 47.1	-1.2
LPAZ	La Paz	23.99	157	P	P	15 43 23.9	0.0
	comp=Z,0.6nm,0.4s,baz=330,slow=6.1,SNR=2.3						
SIV	San Ignacio	27.27	143	P	P	15 43 52.0	-1.0
	comp=Z,2.4nm,0.8s,baz=337,slow=10,SNR=15						
TXAR	Lajitas Array	33.84	317	P	P	15 44 50.7	-0.4
	comp=Z,0.1nm,0.6s,baz=130,slow=8.4,SNR=2.1						
CCM	Cathedral Cave	34.30	341	P	P	15 44 55.4	+0.5
CCM				IAmb	IAmb	15 45 02.7	
	comp=Z,6.8nm,0.7s						
PDAR	Pinedale Array	46.28	327	P	P	15 46 35.0	+0.7
	comp=Z,0.6nm,0.8s,baz=134,slow=11,SNR=5.3						
ULM	Lac du Bonnet	46.77	344	P	P	15 46 37.5	-0.1
	comp=Z,0.8nm,0.3s,baz=227,slow=5.6,SNR=3.5						
PLCA	Paso Flores	46.86	173	P	P	15 46 40.2	+1.6
	comp=Z,1.8nm,0.9s,baz=355,slow=11,SNR=3.9						
PLCA	Paso Flores	46.86	173	IAmb	IAmb	15 46 49.0	
	comp=Z,13nm,1.3s						
NVAR	Mina Array Bea	48.99	317	P	P	15 46 55.6	+0.2
	comp=Z,0.6nm,0.7s,baz=119,slow=5.8,SNR=6.8						
SCHQ	Schefferville	49.57	8	P	P	15 47 00.6	+1.2
	comp=Z,1.4nm,0.7s,baz=203,slow=5.1,SNR=4.4						
SCHQ	Schefferville	49.57	8	IAmb	IAmb	15 47 11.2	
	comp=Z,6.0nm,1.3s						
YKA	Yellowknife Ar	62.63	342	P	P	15 48 32.4	-0.2
	comp=Z,0.4nm,0.6s,baz=130,slow=7.4,SNR=14						
INK	Inuvik	72.39	341	P	P	15 49 35.0	+0.8
	comp=Z,0.3nm,0.5s,baz=49,slow=4.0,SNR=2.0						
ESDC	Sonseca Array	73.73	51	P	P	15 49 43.5	+0.7
	comp=Z,1.1nm,1.0s,baz=302,slow=4.9,SNR=4.6						
ILAR	Eielson Array	75.90	336	P	P	15 49 54.8	0.0
	comp=Z,0.3nm,0.6s,baz=125,slow=4.3,SNR=6.0						
RND	Reindeer	76.37	334	P	P	15 49 57.9	+0.4
RND				IAmb	IAmb	15 50 08.2	
	comp=Z,6.3nm,1.1s						
TORD	Torodi Ar. Bea	78.36	78	P	P	15 50 08.8	-0.8
	comp=Z,0.8nm,0.8s,baz=289,slow=6.0,SNR=3.5						
GERES	GERESS Array B	86.52	41	P	P	15 50 51.7	0.0
	comp=Z,0.5nm,0.7s,baz=299,slow=6.0,SNR=4.2						
ARCES	ARCESS Array B	89.10	20	P	P	15 51 03.0	-0.5
	comp=Z,3.9nm,1.1s,baz=286,slow=6.5,SNR=4.2						
ASAR	Alice Springs	144.85	237	PKP	PKPdf	15 57 45.4	-1.1
	comp=Z,0.8nm,0.7s,baz=122,slow=3.8,SNR=12						
WRA	Warramunga Arr	145.90	243	PKPbc	PKPab	15 57 48.2	-1.2
	comp=Z,1.1nm,0.8s,baz=102,slow=3.6,SNR=6.3						
CMAR	Chiang Mai Arr	155.57	8	PKPab	PKPab	15 58 28.9	+0.1
	comp=Z,0.4nm,0.6s,baz=336,slow=3.8,SNR=4.4						

*IDC **03** 15:40:35.0±1.2, 5°.79N×77°.71W, h0km, mb3.4/3, mb1 3.8/5, mb1mx3.5/32, mbtmp3.6/5, ML2.3/2, Error ellipse: s-maj=37.3km s-min=28.3km az=43.0*
*RSNC **03** 15:40:38.8±1.4, 5°.95N×77°.56W, h4km±7km, ML3.0, Mw4.0*
ISC 03 15:40:35.2±1.4**, 5°.97N**±0°.03×**77°.58W**±0°.05**, h4**km±10km**, n27, σ1s.48**/42**, mb3.2**/3**, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PIZC	Pizarro, Choco	1.02	168	eP	Pg	15 40 55.0	+0.1
PIZC				eS	Sg	15 41 09.0	+0.8
PIZC				i		15 41 23.0	
	comp=Z,450nm,0.7s						
PTAC	Punta Ardita,	1.19	349	eP	Pg	15 40 59.0	+1.0
PTAC				eS	Sg	15 41 10.0	-3.4
CBOC	Ciudad Bolivar	1.56	94	eP	Pn	15 41 02.9	-1.1
CBOC				eS	Sn	15 41 21.5	-3.2
CBOC				i		15 41 25.6	
	comp=Z,157nm,0.9s						
DBBC	Dabeiba	1.71	53	eP	Pn	15 41 05.8	-0.1
DBBC				eS	Sn	15 41 25.9	-2.4
MALC	Bahia Malaga	1.96	173	eP	Pn	15 41 09.0	-0.3
MALC				eS	Sn	15 41 32.6	-1.8
MALC				i		15 41 49.5	
	comp=Z,101nm,2.4s						
HELC	Santa Helena	2.05	84	eP	Pn	15 41 11.0	+0.1
HELC				eS	Sn	15 41 35.6	-1.5
HELC				i		15 41 43.3	
	comp=Z,89nm,0.7s						
GUY2C	Guyana, Caldas	2.33	109	eP	Pn	15 41 14.7	0.0
YOTC	Yotoco, Valle	2.33	148	eP	Pn	15 41 14.0	-0.5
YOTC				eS	Sn	15 41 37.0	-6.6
RREF	El Recreo	2.46	116	eP	Pn	15 41 16.8	0.0
RREF				eS	Sn	15 41 46.3	-1.4
RREF				i		15 41 59.9	
	comp=Z,70nm,1.3s						
HORQ	Saladito	2.65	159	eP	Pn	15 41 18.7	-0.4
HORQ				eS	Sn	15 41 53.9	+2.0
CAPC	Capurgana	2.65	5	eP	Pn	15 41 19.8	+0.9
CAPC				eS	Sn	15 41 51.1	-0.4
CAPC				i		15 42 10.7	
	comp=Z,56nm,1.0s						
UREC	San Jos de Ur	2.69	49	eP	Pn	15 41 20.2	+0.8
UREC				eS	Sn	15 41 51.6	-0.9
UREC				i		15 42 02.5	
	comp=Z,106nm,1.1s						
NORC	Norcasia	2.73	98	eP	Pn	15 41 19.5	-0.4
NORC				eS	Sn	15 41 51.6	-1.8
NORC				i		15 42 08.0	
	comp=Z,60nm,0.8s						
ZARC	Zaragoza, Cauc	3.10	61	eP	Pn	15 41 26.3	+1.4
ZARC				eS	Sn	15 42 02.3	-0.1
ZARC				i		15 42 19.3	
	comp=Z,63nm,0.7s						
ORTC	Ortega, Tolima	3.10	131	eP	Pn	15 41 25.1	+0.1
ORTC				i		15 42 09.5	
	comp=Z,48nm,1.6s						
LCBC	Los crdobas,	3.11	23	eS	Sn	15 42 01.9	-0.8
PTBC	PUERTO BERRIO,	3.15	80	eP	Pn	15 41 27.9	+2.1
PTBC				eS	Sn	15 42 02.3	-1.6
PTBC				i		15 42 22.6	
	comp=Z,57nm,1.0s						
ROSC	El Rosal	3.43	109	Pn	Pn	15 41 32.0	+2.0
	comp=Z,3.9nm,0.3s,baz=275,slow=22,SNR=1.2						
SPBC	San Pablo de B	3.50	95	eP	Pn	15 41 32.0	+1.4
SPBC				eS	Sn	15 42 14.3	+1.7
SPBC				i		15 42 22.5	
	comp=Z,25nm,1.7s						
RUSC	La Rusia	4.47	91	eP	Pn	15 41 44.2	-0.1
RUSC				eS	Sn	15 42 39.0	+1.9
RUSC				i		15 42 51.9	
	comp=Z,25nm,0.9s						
PAMC	Pamplona, Colo	5.03	74	eP	Pn	15 41 51.8	-0.2
PAMC				i		15 43 06.9	
	comp=Z,22nm,0.8s						
SDV	Santo Domingo	7.47	67	Pn	Pn	15 42 26.7	+1.4
	comp=Z,0.9nm,0.3s,baz=341,slow=9.6,SNR=2.8						
PLCA	Paso Flores	46.92	173	P	P	15 49 06.4	-0.8
	comp=Z,2.0nm,1.0s,baz=350,slow=6.1,SNR=1.4						
NVAR	Mina Array Bea	49.00	317	P	P	15 49 23.3	-0.3
	comp=Z,0.1nm,0.4s,baz=119,slow=7.3,SNR=1.5						
YKA	Yellowknife Ar	62.60	342	P	P	15 51 03.0	+2.7
	comp=Z,0.1nm,0.6s,baz=126,slow=6.9,SNR=1.6						
ASAR	Alice Springs	144.98	237	PKP	PKPab	16 00 12.5	-1.5
	comp=Z,0.2nm,0.8s,baz=106,slow=3.7,SNR=4.3						
WRA	Warramunga Arr	146.03	243	PKPbc	PKPdf	16 00 16.7	0.0
	comp=Z,0.5nm,0.8s,baz=104,slow=3.2,SNR=1.8						

*IDC **03** 15:46:03.0±1.2, 1°.89S×138°.79E, h0km, mb3.6/5, mb1 4.0/10, mb1mx3.6/44, mbtmp3.9/10, ML4.1/5, MS3.5/1, Ms1 3.5/1, ms1mx2.4/40, Error ellipse: s-maj=24.3km s-min=18.7km az=44.0*
*NEIC **03** 15:46:07.3±2.3, 1°.83S±0°.09×138°.84E±0°.06, h38km±9km, mb4.2/16, Error ellipse: s-maj=13.8km s-min=7.8km az=202.0*
ISC 03 15:46:06.1±0.7**, 1°.83S**±0°.08×**138°.85E**±0°.07**, h29**km**, n34, σ0s.99**/31**, mb3.9**/6**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAY	Jayapura	1.97	110	Pn	Pn	15 46 38.3	+0.7
	53nm,0.3s,baz=265,slow=17,SNR=41						

JAY				Sn	Sb	15 47 05.5	-0.1
	35nm,0.3s,baz=105,slow=20,SNR=6.7						
FAKI	Fak Fak	6.68	261		Pn	15 47 43.6	+1.2
SIJI	Sorong	7.64	277	Pn	Pn	15 47 56.0	+0.4
	0.3nm,0.3s,baz=50,slow=17,SNR=1.7						
MTN	Manton Dam	13.35	215		Pn	15 49 14.4	+0.7
GUMO	Guam	16.44	21	Pn	Pn	15 49 54.8	-0.1
SOEI	Soe	16.50	241		Pn	15 49 54.6	-1.1
SOEI				IAmb	IAmb	15 50 10.4	
	comp=Z,14nm,0.8s						
KNRA	Kununurra	16.98	215		Pn	15 50 01.8	+0.2
KNRA				IAmb	IAmb	15 50 07.6	
	comp=Z,9.5nm,0.6s						
BATI	Baumata	17.23	241	P	P	15 50 05.3	-0.9
	comp=Z,0.9nm,0.3s,baz=225,slow=2.9,SNR=5.8						
WB0	Warramunga Arr	18.35	193	P	Pn	15 50 18.8	+0.2
WB0				IAmb	IAmb	15 50 22.2	
	comp=Z,6.5nm,0.6s						
WR0	Warramunga Arr	18.50	193	P	Pn	15 50 20.5	0.0
WR0				IAmb	IAmb	15 50 23.6	
	comp=Z,8.6nm,0.8s						
WRAB	Tennant Creek	18.52	193	P	Pn	15 50 21.4	+0.7
WRAB				IAmb	IAmb	15 50 26.8	
	comp=Z,8.0nm,0.6s						
WB2	Warramunga Arr	18.53	193	P	Pn	15 50 20.8	0.0
WB2				IAmb	IAmb	15 50 24.3	
	comp=Z,6.6nm,0.7s						
WRA	Warramunga Arr	18.53	193	P	Pn	15 50 20.4	-0.4
	comp=Z,1.3nm,0.3s,baz=16,slow=12,SNR=37						
WRA				Sn	Sn	15 53 35.1	-12
	comp=Z,0.1nm,0.3s,baz=26,slow=23,SNR=2.8						
CTA	Charters Tower	19.53	159	P	Pn	15 50 32.6	-0.2
	comp=Z,0.4nm,0.3s,baz=335,slow=12,SNR=5.3						
CTAO	Charters Tower	19.53	159	P	P	15 50 29.8	-1.6
FITZ	Fitzroy Crossi	20.72	218	P	P	15 50 43.9	-0.5
	comp=Z,2.0nm,0.8s,baz=19,slow=9.1,SNR=2.4						
FITZ	Fitzroy Crossi	20.72	218	P	P	15 50 43.7	-0.7
AS31	Alice Springs	22.23	192	P	P	15 51 01.6	+1.1
ASAR	Alice Springs	22.23	192	P	P	15 51 01.1	+0.5
	comp=Z,3.5nm,0.6s,baz=23,slow=9.9,SNR=85						
ASAR				S	S	15 55 02.7	-1.2
	comp=Z,0.3nm,0.8s,baz=10.0,slow=27,SNR=2.5						
EIDS	Eidsvold	26.20	154	P	P	15 51 37.7	-0.8
EIDS				IAmb	IAmb	15 51 54.7	
	comp=Z,11nm,1.1s						
PSA00	Pilbara Seismi	26.97	222	P	P	15 51 45.8	+0.3
PSA00				IAmb	IAmb	15 51 46.5	
	comp=Z,21nm,1.2s						
STKA	Stephens Creek	30.00	175	P	P	15 52 13.0	+0.7
	comp=Z,1.2nm,0.8s,baz=356,slow=14,SNR=3.6						
STKA	Stephens Creek	30.00	175	P	P	15 52 13.2	+0.9
NACB	Ninganchiao	30.82	328	P	P	15 52 17.4	-2.2
ARMA	Armidale	30.90	158	P	P	15 52 18.9	-1.5
BBOO	Buckleboo	30.93	185	P	P	15 52 21.5	+1.0
H11S3	WAKE ISLAND Hy	34.03	52	T	T	16 28 39.0	
	baz=236,slow=76,SNR=28						
H11S2	WAKE ISLAND Hy	34.04	52	T	T	16 28 45.9	
	baz=236,slow=76,SNR=30						
H11S1	WAKE ISLAND Hy	34.05	52	T	T	16 28 40.7	
	baz=236,slow=76,SNR=25						
URZ	Urewera	50.40	141	LR	LR	16 16 22.6	
	comp=Z,43nm,18.1s,baz=322,slow=36						
MKAR	Makanchi Array	69.19	322	P	P	15 57 11.2	+1.0
	comp=Z,0.2nm,0.4s,baz=122,slow=6.1,SNR=5.0						
KURK	Kurchatov	73.09	325	P	P	15 57 35.1	+1.5
KURK	Kurchatov	73.09	325	IAmb	IAmb	15 57 39.7	
	comp=Z,1.2nm,0.9s						
KURBB	Kurchatov Arra	73.10	325	P	P	15 57 35.1	+1.5
	comp=Z,0.3nm,0.7s,baz=121,slow=5.2,SNR=2.4						

RSNC 03 15:51:48.3±1.0, 5°.82N×77°.55W, h20km±7km, ML2.8, Mw3.5, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIZC	Pizarro, Choco	0.87	167	eP	Pb	15 52 02.9	-1.9
PIZC				eS	Sb	15 52 15.8	-0.3
PIZC				i		15 52 28.2	
	comp=Z,113nm,0.5s						
PTAC	Punta Ardita,	1.34	349	eP	Pn	15 52 10.5	-1.4
CBOC	Ciudad Bolivar	1.54	88	eP	Pn	15 52 14.2	-0.5
CBOC				i		15 52 47.4	
	comp=Z,160nm,0.9s						
DBBC	Dabeiba	1.79	48	eP	Pn	15 52 17.1	-1.1
DBBC				eS	Sn	15 52 40.0	-0.4
MALC	Bahia Malaga	1.81	173	eP	Pn	15 52 17.8	-0.7
MALC				i		15 52 39.8	
	comp=Z,50nm,1.9s						
MALC				eS	Sn	15 52 40.2	-0.6
HELC	Santa Helena	2.05	80	eP	Pn	15 52 22.0	0.0
HELC				eS	Sn	15 52 47.2	0.0
HELC				i		15 52 59.9	
	comp=Z,53nm,0.8s						
YOTC	Yotoco, Valle	2.19	147	eP	Pn	15 52 22.9	-0.9
YOTC				eS	Sn	15 52 50.0	-0.4
GUY2C	Guyana, Caldas	2.26	105	eP	Pn	15 52 26.2	+1.1
GUY2C				eS	Sn	15 52 51.4	-1.2
GUY2C				i		15 53 16.8	
	comp=Z,38nm,1.6s						
TOLC	Tolima	2.54	119	eP	Pn	15 52 31.0	+2.2
NORC	Norcasia	2.68	95	eP	Pn	15 52 32.1	+1.6
NORC				eS	Sn	15 53 02.8	+0.2
NORC				i		15 53 19.1	
	comp=Z,37nm,0.6s						
UPD2	Meteti	2.75	350	eP	Pn	15 52 33.0	+1.7
UPD2				eS	Sn	15 53 03.7	-0.2
UREC	San Jos de Ur	2.78	46	eP	Pn	15 52 31.8	0.0
UREC				i		15 53 20.5	
	comp=Z,46nm,0.9s						
CAPC	Capurgana	2.80	4	eP	Pn	15 52 31.7	-0.4
CAPC				eS	Sn	15 53 04.3	-1.1
CAPC				i		15 53 22.5	
	comp=Z,54nm,1.8s						
ORTC	Ortega, Tolima	2.98	129	eP	Pb	15 52 37.8	-3.1
ORTC				eS	Sn	15 53 09.1	-0.8
ORTC				i		15 53 20.3	
	comp=Z,26nm,0.8s						
ZARC	Zaragoza, Cauc	3.15	58	eP	Pn	15 52 38.1	+1.2
ZARC				eS	Sn	15 53 11.8	-2.1
ZARC				i		15 53 32.0	
	comp=Z,28nm,0.8s						
PTBC	PUERTO BERRIO,	3.16	77	eP	Pn	15 52 38.7	+1.6
PTBC				eS	Sn	15 53 13.1	-1.1
PTBC				i		15 53 33.9	
	comp=Z,27nm,0.7s						
AZU	Azuero	3.33	306	eP	Pn	15 52 36.2	-3.2
AZU				eS	Sn	15 53 08.3	-10
SPBC	San Pablo de B	3.47	93	eP	Pn	15 52 42.7	+1.4
SPBC				i		15 53 49.7	
	comp=Z,14nm,1.3s						
RUSC	La Rusia	4.45	89	eP	Pn	15 52 55.0	-0.2
RUSC				i		15 54 11.6	
	comp=Z,15nm,1.1s						
SMLC	San Martn de	4.55	49	eP	Pn	15 52 55.6	-0.5
SMLC				eS	Sn	15 53 45.9	-2.6
SMLC				i		15 54 09.2	
	comp=Z,9.9nm,0.8s						
PAMC	Pamplona, Colo	5.05	72	eP	Pn	15 53 05.7	+2.2
PAMC				eS	Sn	15 53 58.9	-2.7
PAMC				i		15 54 18.5	
	comp=Z,13nm,0.9s						

JMA 03 15:53:53.7±0.4, 29°.78N×142°.13E, h13km±4km, M4.2
IDC 03 15:53:54.2±0.6, 29°.59N×141°.26E, h0km, mb3.8/18, mb1 4.0/21, mb1mx3.8/61, mbtmp3.8/21, ML3.3/4, MS2.8/2, Ms1 2.8/2, ms1mx2.3/44, Error ellipse: s-maj=21.3km s-min=13.8km az=79.0
NEIC 03 15:53:59.5±2.2, 29°.55N±0°.06×141°.3E±0°.1, h36km±5km, mb4.2/10, Error ellipse: s-maj=19.8km s-min=6.2km az=69.0
ISC 03 15:54:00.3±0.5, 29°.64N±0°.05×141°.4E±0°.1, h46km, n53, σ1s.90/53, mb3.9/24, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.63	164	P	Pn	15 54 37.5	-2.7
CBIJ				eS	Sn	15 55 10.0	-0.9
JCJ	Chichijima	2.63	164	Pn	Pn	15 54 36.7	-3.5
	3.0nm,0.3s,baz=133,slow=20,SNR=13						
JCJ				Sn	Sn	15 55 06.5	-4.4
	28nm,0.3s,baz=286,slow=24,SNR=6.0						
JHH2	Haha-jima-NKT2	3.07	167	eS	Sn	15 55 22.2	+0.4
JHJ2	Mitsune	3.71	339	P	Pn	15 54 54.4	-0.7
JHJ2	Mitsune	3.71	339	Pn	Pn	15 54 55.0	-0.1
JHJ	Hachijo jima 2	3.73	339	Pn	Pn	15 54 53.3	-2.1
	8.0nm,0.3s,baz=23,slow=21,SNR=5.5						
JHJ				Sn	Sn	15 55 33.3	-4.8
	13nm,0.3s,baz=58,slow=20,SNR=1.8						
BSO1	Boso 1	5.01	356	eS	Sn	15 56 08.2	-0.7
JOD2	Odawara 2	5.94	342	P	Pn	15 55 25.9	+0.3
JHU	Hanno	6.45	345	eS	Sn	15 56 43.6	-1.3
JYT	Yasato	6.65	352	eS	Sn	15 56 48.2	-1.6
JRY	Ryogami san	6.70	342	eS	Sn	15 56 51.0	-0.1
JAG	Ashikaga	6.96	347	P	Pn	15 55 39.4	-0.3
JHO	Hitachi	6.99	355	P	Pn	15 55 38.6	-1.5
MJAR	Matsushiro Arr	7.38	340	Pn	Pn	15 55 44.9	-0.6
	0.2nm,0.3s,baz=157,slow=11,SNR=19						
MJAR				Sn	Sn	15 57 05.0	-2.9
	baz=136,slow=12,SNR=1.5						
MAJO	Matsushiro	7.38	340		Pn	15 55 47.2	+1.7
MJB9	Matsu-Tunnel	7.39	340		Pn	15 55 47.3	+1.7
JFK	Kawauchi	7.72	357	eS	Sn	15 57 08.8	-7.5
JNU	Nakatsue	9.63	294	LR	LR	15 59 52.0	
	comp=Z,61nm,19.7s,baz=126,slow=38						
KSRS	Korea Array	13.66	308	LR	LR	16 02 27.1	
	comp=Z,33nm,18.5s,baz=85,slow=38						
ASAJ	Asahikawa	14.48	3	Pn	Pn	15 57 21.1	-1.3
	0.4nm,0.3s,baz=302,slow=9.5,SNR=1.9						
JKA	Kamikawa-asahi	14.48	4		Pn	15 57 21.1	-1.2
KLR	Kul'dur	20.90	342	P	Pn	15 58 42.0	+0.4
	0.8nm,0.4s,baz=168,slow=9.6,SNR=5.3						
CMAR	Chiang Mai Arr	40.12	264	P	P	16 01 31.0	-0.9
	0.3nm,0.7s,baz=67,slow=6.9,SNR=1.8						
MK31	Makanchi Array	48.34	308	P	P	16 02 36.5	-0.8
MKAR	Makanchi Array	48.34	308	P	P	16 02 35.9	-1.4
	0.1nm,0.3s,baz=84,slow=8.8,SNR=1.6						
MKAR				PcP	PcP	16 04 03.8	+0.4
	0.2nm,0.5s,baz=85,slow=6.1,SNR=4.0						
WB0	Warramunga Arr	49.58	189	P	P	16 02 46.9	0.0
WB0				IAmb	IAmb	16 03 00.5	
	comp=Z,4.0nm,1.0s						
WR0	Warramunga Arr	49.75	188	P	P	16 02 50.6	+2.5
WB2	Warramunga Arr	49.76	189	P	P	16 02 49.2	+0.9
WB2				IAmb	IAmb	16 02 58.3	
	comp=Z,7.8nm,1.4s						
WRA	Warramunga Arr	49.76	189	P	P	16 02 48.5	+0.2
	comp=Z,0.8nm,0.3s,baz=5.6,slow=7.6,SNR=27						
WRA				PcP	PcP	16 04 08.7	0.0
	comp=Z,0.3nm,0.5s,baz=7.0,slow=4.4,SNR=1.2						
NRIK	Noril'sk	50.03	338	P	P	16 02 50.1	+0.3
	comp=Z,0.9nm,0.4s,baz=113,slow=3.3,SNR=3.9						
KURK	Kurchatov	50.72	313	P	P	16 02 55.1	-0.2
KURK	Kurchatov	50.72	313	IAmb	IAmb	16 02 59.5	
	comp=Z,1.4nm,1.0s						
KURBB	Kurchatov Arra	50.78	313	P	P	16 02 55.1	-0.7
	comp=Z,0.4nm,0.3s,baz=92,slow=9.4,SNR=8.3						
RSO	Redoubt South	52.86	35	P	P	16 03 12.8	+1.5
BOOM	Boomskoye usch	53.22	303		P	16 03 12.9	-1.4
BOOM				IAmb	IAmb	16 03 25.8	
	comp=Z,1.2nm,0.7s						
PPLA	Purkeypile	53.36	32	P	P	16 03 17.1	+2.2
PPLA				IAmb	IAmb	16 03 21.8	
	comp=Z,5.1nm,1.2s						
AS31	Alice Springs	53.48	189	P	P	16 03 17.1	+1.0
AS31				IAmb	IAmb	16 03 30.9	
	comp=Z,1.1nm,1.3s						
ASAR	Alice Springs	53.48	189	P	P	16 03 16.1	0.0
	comp=Z,0.2nm,0.5s,baz=6.4,slow=7.2,SNR=11						
BVAR	Borovoye Array	55.71	316	P	P	16 03 32.1	+0.1
	comp=Z,0.5nm,0.5s,baz=87,slow=6.1,SNR=4.1						
ILAR	Eielson Array	55.84	29	P	P	16 03 33.4	+0.7
	comp=Z,0.7nm,0.9s,baz=261,slow=5.8,SNR=6.4						
INK	Inuvik	61.02	25	P	P	16 04 09.6	+0.8
	comp=Z,0.4nm,0.5s,baz=328,slow=4.4,SNR=5.3						
INK	Inuvik	61.02	25	IAmb	IAmb	16 04 11.4	
	comp=Z,0.6nm,1.1s						
YKA	Yellowknife Ar	70.25	29	P	P	16 05 09.1	+0.8
	comp=Z,0.2nm,0.5s,baz=297,slow=6.0,SNR=3.4						
ARCES	ARCESS Array B	70.92	340	P	P	16 05 12.0	-0.3
	comp=Z,1.7nm,0.9s,baz=42,slow=8.7,SNR=1.4						
URZ	Urewera	75.34	152	P	P	16 05 39.6	+0.9
	comp=Z,3.6nm,0.9s,baz=188,slow=5.0,SNR=3.6						
URZ	Urewera	75.34	152	IAmb	IAmb	16 05 41.2	
	comp=Z,15nm,1.1s						
FINES	FINESS Array B	75.37	333	P	P	16 05 39.4	+0.8
	comp=Z,2.0nm,1.0s,baz=80,slow=4.5,SNR=5.5						
KBZ	Khabaz	75.78	312	P	P	16 05 42.3	+1.0
	comp=Z,0.5nm,0.5s,baz=173,slow=6.1,SNR=1.7						
NVAR	Mina Array Bea	79.51	52	P	P	16 06 04.1	+1.5
	comp=Z,0.9nm,0.7s,baz=292,slow=6.1,SNR=7.3						
AKASG	Malin Array Be	80.16	323	P	P	16 06 06.6	+1.0
	comp=Z,0.1nm,0.3s,baz=52,slow=5.6,SNR=4.1						
BRTR	Keskin Array B	83.77	312	P	P	16 06 25.4	+0.5
	comp=Z,1.5nm,0.9s,baz=95,slow=3.4,SNR=10						
TXAR	Lajitas Array	94.64	53	P	P	16 07 18.5	+1.7
	comp=Z,0.6nm,0.9s,baz=290,slow=3.6,SNR=4.5						
LPAZ	La Paz	149.85	70	PKPbc	PKiKP	16 13 47.4	-0.3
	comp=Z,0.5nm,0.4s,baz=18,slow=3.2,SNR=2.3						

NIED 03 16:03:00, 24°.20N×121°.70E, h8km, Mw4.2 Best double couple: Mo1.96000×10^15 NP1:φs58.00000°, δ77.00000°, λ87.00000°. NP2:φs251.00000°, δ14.00000°, λ103.00000°.
NEIC 03 16:03:14.8±0.8, 24°.17N±0°.03×121°.73E±0°.04, h13km±5km, mb4.2/14, ML4.1(TAP), Error ellipse: s-maj=5.6km s-min=2.8km az=118.0
ASIES 03 16:03:14.7, 24°.23N×121°.71E, h22km, MW3.8
JMA 03 16:03:14.3±0.1, 24°.15N×121°.67E, h12km±1km, M3.7
TAP 03 16:03:14.7, 24°.20N×121°.72E, h15km, ML4.3, C
BJI 03 16:03:17.0±0.0, 24°.14N×121°.82E, h20km, mb3.9/6, ML3.9/4, Ms3.9/1, Ms7 3.9/3
IDC 03 16:03:27.7±4.8, 24°.13N×121°.72E, h132km±46km, mb3.3/11, mb1 3.4/13, mb1mx3.2/53, mbtmp3.7/13, MS3.1/6, Ms1 3.1/6, ms1mx2.8/20, Error ellipse: s-maj=22.0km s-min=14.8km az=70.0
ISC 03 16:03:14.7±0.8, 24°.18N±0°.01×121°.73E±0°.02, h12km±5km, n184, σ0s.97/277, mb3.9/20, MS3.2/4, 1C-23D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.13	269	⇓iP	Pb	16 03 18.1	-1.1
	baz=257						
NACB				iS	Sg	16 03 20.5	+0.2
	baz=257						
NACB	Ninganchiao	0.13	269		Pb	16 03 18.2	-0.9
NACB				Sg	Sg	16 03 20.8	+0.5
TWD	Chiawan	0.16	233	⇓iP	Pb	16 03 18.8	-0.8
	baz=223						
TWD				iS	Sg	16 03 21.7	+0.7
	baz=223						
HWA	Hwalien	0.23	211	eP	Pb	16 03 20.8	-0.1
	baz=211						
ETLH	Xiulin Townshi	0.23	277	P	Pb	16 03 19.8	-1.2
	baz=272						
ETLH				eS	Sg	16 03 23.0	-0.1
	baz=272						
ENA	Nanau	0.25	1	⇓iP	Pg	16 03 19.7	-0.3
	baz=4.0						
ENA				eS	Sg	16 03 23.2	-0.3
	baz=4.0						
NNSB	Datong	0.41	308	⇓iP	Pg	16 03 22.7	-0.2
	baz=306						
NNSB				eS	Sg	16 03 27.8	-0.5
	baz=306						
NNSH	Datong	0.41	308	⇓iP	Pg	16 03 22.7	-0.2
	baz=305						
NNSH				eS	Sg	16 03 27.8	-0.6
	baz=305						
NNS	Nan Shan	0.42	309	⇓iP	Pg	16 03 22.9	-0.2
	baz=307						
NNS				eS	Sg	16 03 28.5	-0.4
	baz=307						
WHF	Hehuan Shan	0.43	266	⇓iP	Pb	16 03 23.4	-1.1
	baz=263						
WHF				eS	Sg	16 03 29.0	-0.2
	baz=263						
TWC	Suao	0.44	14	P	Pg	16 03 23.2	-0.3
	baz=9.0						
TWC				eS	Sg	16 03 28.3	-1.2
	baz=9.0						
ESL	Shilin	0.45	217	⇓iP	Pb	16 03 23.9	-0.8
	baz=221						
ESL				eS	Sb	16 03 31.7	+0.3
	baz=221						
NDT	Datong Townshi	0.47	335	⇓iP	Pg	16 03 23.9	-0.1
	baz=333						
NDT				S	Sg	16 03 30.2	-0.1
	baz=333						
ENTT	Nioudou	0.49	342	⇓iP	Pg	16 03 24.1	-0.2
	baz=341						
ENTT				eS	Sg	16 03 30.6	-0.2
	baz=341						
EOS1	EOS1	0.52	44	eP	Pb	16 03 25.7	-0.1
	baz=39						
EOS1				eS	Sb	16 03 33.7	+0.5
	baz=39						
CHGB	Renai	0.53	257	⇓iP	Pb	16 03 25.4	-0.6
	baz=250						
CHGB				S	Sg	16 03 32.1	-0.1
	baz=250						
TDCB	Techi	0.53	278	⇓iP	Pb	16 03 25.4	-0.7
	baz=276						
TDCB				iS	Sg	16 03 32.0	-0.3
	baz=276						
TWE	Neicheng	0.55	354	⇓iP	Pg	16 03 25.3	-0.1
	baz=354						
TWE				eS	Sg	16 03 32.5	-0.1
	baz=354						
OWD	Renai	0.56	247	⇓P	Pb	16 03 25.9	-0.6
	baz=245						
OWD				S	Sb	16 03 33.1	-1.4
	baz=245						
EGFH	Guangfu	0.58	209	⇓P	Pb	16 03 26.7	-0.2
	baz=222						
EGFH				eS	Sb	16 03 35.8	+0.9
	baz=222						
SLBB	Yuanshan	0.58	351	iP	Pb	16 03 26.3	-0.6
	baz=350						
SLBB				eS	Sb	16 03 34.2	-1.0
	baz=350						
ILA	Ilan	0.59	1	eP	Pb	16 03 26.2	-0.7
	baz=356						
ILA				eS	Sg	16 03 34.1	+0.1
	baz=356						
YHNB	Yeheng	0.59	326	⇓iP	Pg	16 03 26.1	-0.2
	baz=325						
YHNB				S	Sg	16 03 32.9	-1.2
	baz=325						
YHNB	Yeheng	0.59	326		Pb	16 03 26.6	-0.5
NSK	Sanguang	0.60	325	⇓iP	Pg	16 03 26.4	-0.2
	baz=325						
NSK				S	Sg	16 03 34.0	-0.6
	baz=325						
NWLT	Wulai	0.63	341	⇓iP	Pb	16 03 27.0	-0.8
	baz=345						
NWLT				S	Sg	16 03 34.5	-1.0
	baz=345						
NTC	Toucheng	0.68	7	⇓iP	Pg	16 03 27.7	-0.3
	baz=7.0						
NTC				eS	Sg	16 03 36.7	-0.3
	baz=7.0						
VWDT	VWDT	0.69	232	⇓iP	Pb	16 03 28.3	-0.4
	baz=231						
VWDT				eS	Sn	16 03 39.6	-1.3
	baz=231						
WHP	Taichung City	0.73	278	P	Pb	16 03 29.2	-0.2
	baz=277						
WHP				S	Sb	16 03 38.7	-0.7
	baz=277						
HGSD	Ruisui	0.74	203	P	Pn	16 03 30.0	-1.0
	baz=191						
HGSD				eS	Sn	16 03 40.9	-1.3
	baz=191						
DPDB	Guoxing	0.75	259	⇓iP	Pb	16 03 29.6	-0.2
	baz=250						
DPDB				eS	Sg	16 03 38.2	-1.0
	baz=250						
EHY	Hungye	0.77	210	P	Pb	16 03 29.2	-0.8
	baz=220						
TIPB	Shuangxi	0.80	6	⇓iP	Pg	16 03 29.9	-0.3
	baz=357						
TIPB				eS	Sg	16 03 39.3	-1.3
	baz=357						
WLTB	Daxi	0.80	327	eP	Pb	16 03 30.9	+0.2
	baz=326						
WLTB				eS	Sb	16 03 41.5	0.0
	baz=326						
LIOB	Emei	0.80	306	P	Pb	16 03 30.5	-0.2
	baz=304						
LIOB				eS	Sb	16 03 40.8	-0.8
	baz=304						
NHDH	Xindian Distri	0.81	346	iP	Pb	16 03 30.6	-0.1
	baz=345						
NHDH				S	Sg	16 03 40.2	-0.7
	baz=345						
SSLB	Suanglung	0.81	242	⇓iP	Pb	16 03 30.4	-0.4
	baz=249						
SSLB				eS	Sb	16 03 40.8	-1.0
	baz=249						
SSLB	Suanglung	0.81	242		Pb	16 03 30.7	-0.1
TWA	Mucha	0.81	350	⇑iP	Pb	16 03 30.5	-0.3
	baz=350						
TWA				eS	Sg	16 03 39.9	-1.2
	baz=350						
SMLT	Sun Moon Lake	0.82	249	P	Pb	16 03 30.8	-0.2
	baz=241						
SMLT				eS	Sb	16 03 41.7	-0.2
	baz=241						
TATO	Taipei	0.83	344	iP	Pb	16 03 30.9	-0.2
	baz=344						
TATO	Taipei	0.83	344		Pb	16 03 30.9	-0.2
TYC	Yuchr	0.85	251	iP	Pb	16 03 31.1	-0.3
	baz=243						
TYC				eS	Sb	16 03 42.8	+0.1
	baz=243						
YULB	Yu-li	0.88	207	P	Pg	16 03 30.7	-1.0
	baz=219						
YULB	Yu-li	0.88	207		Pb	16 03 31.3	-0.6
TAP1	Taipei	0.88	347	eP	Pg	16 03 30.5	-1.3
	baz=346						
TAP1				eS	Sg	16 03 42.5	-0.8
	baz=346						
TAP	Taipei	0.88	346	eP	Pn	16 03 32.2	-0.8
	baz=346						
TAP				eS	Sb	16 03 43.6	-0.2
	baz=346						
NWF	Wu-fen Shan	0.89	3	eP	Pb	16 03 32.2	0.0
	baz=353						
NWF				eS	Sb	16 03 44.0	-0.1
	baz=353						
WFSB	Wu-fen Shan	0.89	3	eP	Pb	16 03 32.0	-0.1
	baz=355						
WFSB				eS	Sg	16 03 42.2	-1.5
	baz=355						
TWF1	Yuli	0.91	206	eP	Pg	16 03 31.3	-1.1
	baz=217						
SBCB	Hsinchu	0.92	312	eP	Pn	16 03 33.1	-0.4
	baz=311						
SBCB				eS	Sn	16 03 45.5	-1.1
	baz=311						
NSY	Sanyi	0.92	285	eP	Pn	16 03 33.5	0.0
	baz=284						
NSY				eS	Sb	16 03 44.5	-0.4
	baz=284						
NMLH	Miaoli	0.93	293	eP	Pn	16 03 33.7	0.0
	baz=292						
NMLH				eS	Sb	16 03 45.2	0.0
	baz=292						
NCUH	Zhongli	0.93	328	eP	Pn	16 03 33.6	-0.1
	baz=327						
NCUH				eS	Sn	16 03 46.3	-0.7
	baz=327						
HSN	Hsinchu	0.93	312	eP	Pn	16 03 33.4	-0.3
	baz=305						
HSN				eS	Sn	16 03 46.7	-0.3
	baz=305						
NCU	National Centr	0.93	328	eP	Pn	16 03 33.5	-0.2
	baz=327						
NCU				eS	Sn	16 03 46.1	-0.9
	baz=327						
WHYT	Xinyi Township	0.94	239	eP	Pn	16 03 33.1	-0.7
	baz=246						
WHYT				eS	Sn	16 03 46.9	-0.3
	baz=246						
TWS1	Kuangyinshan	0.96	343	eP	Pn	16 03 33.9	-0.2
	baz=348						
TWS1				eS	Sg	16 03 45.0	-1.0
	baz=348						
TCU	Taichung	0.97	268	eP	Pn	16 03 34.6	+0.4
	baz=268						
TCU				eS	Sn	16 03 48.0	+0.2
	baz=268						
PTSB	Yuanli	0.98	286	eP	Pn	16 03 34.7	+0.4
	baz=285						
PTSB				eS	Sg	16 03 45.5	-0.9

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	baz=285						
YM01	**YM01**	**0.98**	**351**	*e*P	**Pb**	**16 03 33.3**	**-0.4**
	baz=358						
YM01				*e*S	**Sb**	**16 03 46.2**	**-0.3**
	baz=358						
WJS	**Zhushan**	**0.99**	**249**	*e*P	**Pn**	**16 03 34.8**	**+0.4**
	baz=244						
WJS				S	**Sn**	**16 03 49.0**	**+0.7**
	baz=244						
YM10	**YM10**	**0.99**	**351**	*e*P	**Pn**	**16 03 33.9**	**-0.6**
	baz=357						
YM10				*e*S	**Sg**	**16 03 46.2**	**-0.5**
	baz=357						
YM04	**YM04**	**0.99**	**350**	*e*P	**Pb**	**16 03 33.4**	**-0.4**
	baz=359						
YUS	**Yu-Shan**	**0.99**	**226**	P	**Pn**	**16 03 34.1**	**-0.8**
	baz=227						
YUS				*e*S	**Sb**	**16 03 47.3**	**-0.1**
	baz=227						
YM05	**YM05**	**0.99**	**351**	P	**Pb**	**16 03 33.9**	**-0.1**
YM11	**YM11**	**0.99**	**352**	*e*P	**Pn**	**16 03 34.1**	**-0.6**
	baz=1.0						
WDJ	**Dajia District**	**1.01**	**280**	*e*P	**Pn**	**16 03 35.6**	**+0.9**
	baz=280						
WDJ				*e*S	**Sn**	**16 03 48.0**	**-1.0**
	baz=280						
YM03	**YM03**	**1.01**	**350**	*e*P	**Pn**	**16 03 34.5**	**-0.4**
	baz=359						
YM08	**YM08**	**1.01**	**353**	*e*P	**Pb**	**16 03 34.0**	**-0.3**
	baz=352						
NTST	**Danshui**	**1.02**	**345**	*e*P	**Pn**	**16 03 34.8**	**0.0**
	baz=352						
NTST				*e*S	**Sn**	**16 03 48.6**	**-0.5**
	baz=352						
ANP	**Anpu**	**1.02**	**349**	*e*P	**Pn**	**16 03 34.6**	**-0.5**
	baz=356						
ANP				*e*S	**Sb**	**16 03 48.3**	**+0.3**
	baz=356						
FULB	**Fuli**	**1.05**	**203**	*e*P	**Pb**	**16 03 34.3**	**-0.7**
	baz=219						
FULB				*e*S	**Sn**	**16 03 50.8**	**+0.8**
	baz=219						
ALS	**Alishan**	**1.08**	**232**	*e*P	**Pn**	**16 03 35.9**	**-0.1**
	baz=219						
ALS				*e*S	**Sn**	**16 03 50.2**	**-0.8**
	baz=219						
WCHH	**Zhanghua**	**1.08**	**265**	*e*P	**Pn**	**16 03 37.0**	**+1.3**
	baz=265						
WCHH				*e*S	**Sn**	**16 03 51.5**	**+0.9**
	baz=265						
TWY	**Chenhua**	**1.10**	**354**	*e*P	**Pn**	**16 03 36.1**	**+0.1**
	baz=353						
TWY				*e*S	**Sb**	**16 03 50.0**	**-0.1**
	baz=353						
CHKT	**Chengkung**	**1.12**	**198**	*e*P	**Pb**	**16 03 35.2**	**-1.0**
	baz=184						
CHN5	**Tsauling**	**1.13**	**239**	P	**Pn**	**16 03 37.1**	**+0.7**
	baz=241						
CHN5				*e*S	**Sn**	**16 03 53.1**	**+1.2**
	baz=241						
JYNG	**Yonagunijimaku**	**1.14**	**76**	P	**Pn**	**16 03 36.4**	**-0.1**
WGK	**Gukeng**	**1.18**	**246**	P	**Pg**	**16 03 38.1**	**+0.6**
	baz=247						
WGK				*e*S	**Sn**	**16 03 54.7**	**+1.6**
	baz=247						
ELDTW	**Lidau**	**1.18**	**214**	P	**Pb**	**16 03 35.9**	**-1.4**
	baz=227						
ELDTW				*e*S	**Sn**	**16 03 53.3**	**0.0**
	baz=227						
WDLH	**Douliu**	**1.20**	**246**	*e*P	**Pg**	**16 03 38.4**	**+0.6**
	baz=248						
WDLH				*e*S	**Sn**	**16 03 55.1**	**+1.6**
	baz=248						
YOJ	**Yonaguni jima**	**1.20**	**76**	*e*P	**Pn**	**16 03 37.1**	**-0.3**
	baz=65						
YOJ	**Yonaguni jima**	**1.20**	**76**	P	**Pb**	**16 03 37.2**	**-0.2**
YOJ				*e*S	**Sn**	**16 03 54.2**	**+0.7**
YOJ	**Yonaguni jima**	**1.20**	**76**		**Pg**	**16 03 37.3**	**-0.5**
RLNB	**Erlin**	**1.29**	**258**	*e*P	**Pg**	**16 03 39.5**	**-0.1**
	baz=258						
RLNB				*e*S	**Sg**	**16 03 58.2**	**+1.9**
	baz=258						
CHN4	**Tsaushan**	**1.33**	**232**	*e*P	**Pg**	**16 03 40.5**	**+0.1**
	baz=235						
CHN4				*e*S	**Sg**	**16 03 59.5**	**+1.9**
	baz=235						
TPUB	**Ta-pu**	**1.34**	**229**	*e*P	**Pg**	**16 03 40.4**	**0.0**
	baz=232						
TPUB				*e*S	**Sg**	**16 03 58.9**	**+1.1**
	baz=232						
TPUB	**Ta-pu**	**1.34**	**229**		**Pg**	**16 03 40.4**	**0.0**
STYT	**Tauyuan**	**1.35**	**222**	*e*P	**Pg**	**16 03 39.8**	**-0.9**
	baz=224						
STYT				*e*S	**Sg**	**16 03 58.6**	**+0.3**
	baz=224						
CHY	**Chiayi**	**1.38**	**241**	*e*P	**Pg**	**16 03 41.0**	**-0.3**
	baz=243						
CHY				*e*S	**Sg**	**16 04 00.3**	**+1.1**
	baz=243						
WTP	**Ta-pu**	**1.38**	**228**	*e*P	**Pg**	**16 03 41.1**	**-0.2**
	baz=231						
WTP				*e*S	**Sg**	**16 04 01.2**	**+1.9**
	baz=231						
WMLT	**Mailiao**	**1.43**	**255**	*e*S	**Sg**	**16 04 03.3**	**+2.4**
	baz=257						
TWK	**Hsinying**	**1.46**	**232**	*e*P	**Pg**	**16 03 42.2**	**-0.5**
	baz=235						
TWK				*e*S	**Sg**	**16 04 02.4**	**+0.7**
	baz=235						
PCYT	**Pengchaiyu**	**1.48**	**12**	*e*P	**Pn**	**16 03 39.5**	**-1.7**
	baz=352						
PCYT				*e*S	**Sn**	**16 04 00.4**	**-0.1**
	baz=352						
TWH	**Lutao**	**1.48**	**189**	*e*P	**Pn**	**16 03 39.2**	**-1.9**
	baz=177						
TWH				*e*S	**Sn**	**16 03 57.9**	**-2.5**
	baz=177						
TWG	**Pinlang**	**1.48**	**204**	*e*P	**Pn**	**16 03 39.5**	**-1.8**
	baz=204						
TWG				*e*S	**Sg**	**16 04 02.6**	**+0.2**
	baz=204						
TWG	**Pinlang**	**1.48**	**204**		**Pn**	**16 03 39.7**	**-1.5**
TWGBT	**Beinan**	**1.48**	**204**	*e*P	**Pn**	**16 03 39.2**	**-2.0**
	baz=189						
SNST	**Tainan City**	**1.48**	**230**	*e*P	**Pg**	**16 03 42.8**	**-0.4**
	baz=232						
CHN1	**Nanshi**	**1.48**	**228**	*e*P	**Pg**	**16 03 42.8**	**-0.4**
	baz=230						
WSF	**Szhu**	**1.48**	**249**	*e*P	**Pg**	**16 03 42.5**	**-0.8**
	baz=260						
WSF				*e*S	**Sg**	**16 04 03.4**	**+0.8**
	baz=260						
WLGB	**Puzi**	**1.49**	**242**	*e*P	**Pg**	**16 03 43.1**	**-0.2**
	baz=245						
WLGB				*e*S	**Sg**	**16 04 03.4**	**+0.8**
	baz=245						
TTN	**Taitung**	**1.52**	**201**	*e*P	**Pg**	**16 03 43.3**	**-0.6**
	baz=201						
SGST	**Jiashian**	**1.52**	**224**	*e*P	**Pb**	**16 03 42.4**	**-0.5**
	baz=227						
SGST				*e*S	**Sg**	**16 04 04.9**	**+1.2**
	baz=227						
SLGT	**Liugui**	**1.54**	**220**	*e*P	**Pg**	**16 03 43.3**	**-1.1**
	baz=222						
CHN8	**Yiju**	**1.62**	**240**	*e*P	**Pg**	**16 03 44.6**	**-1.3**
	baz=229						
CHN8				*e*S	**Sg**	**16 04 07.8**	**+0.8**
	baz=229						
CHN3	**Shinhua**	**1.67**	**229**	*e*P	**Pg**	**16 03 46.0**	**-0.8**
	baz=235						
CHN3				*e*S	**Sg**	**16 04 10.8**	**+2.4**
	baz=235						
ECL	**Taimali**	**1.73**	**205**	*e*P	**Pn**	**16 03 44.0**	**-0.6**
	baz=191						
SCLT	**Jiali**	**1.73**	**235**	*e*P	**Pg**	**16 03 46.7**	**-1.2**
	baz=240						
SCLT				*e*S	**Sg**	**16 04 10.2**	**-0.2**
	baz=240						
SSD	**Sandimen**	**1.75**	**216**	*e*P	**Pb**	**16 03 46.2**	**-0.6**
	baz=231						
SSD				*e*S	**Sg**	**16 04 10.3**	**-0.7**
	baz=231						
TWM1	**Shoushan**	**1.81**	**222**	*e*P	**Pg**	**16 03 48.9**	**-0.5**
	baz=225						
IRIF	**Iriomote-Funau**	**1.83**	**85**	P	**Pn**	**16 03 45.9**	**-0.1**
IRIF				*e*S	**Sb**	**16 04 10.5**	**-0.5**
MASBT	**Mashibuluo**	**1.86**	**213**	*e*P	**Pb**	**16 03 47.1**	**-1.6**
	baz=216						
MASBT				*e*S	**Sg**	**16 04 13.1**	**-1.4**
	baz=216						
HATJ	**Hateruma jima**	**1.90**	**93**	P	**Pn**	**16 03 47.3**	**+0.4**
HATJ				*e*S	**Sb**	**16 04 12.1**	**-0.8**
SNJT	**Kaohsiung City**	**1.91**	**222**	*e*P	**Pb**	**16 03 49.4**	**-0.2**
	baz=226						
EAST	**Anshuo**	**1.96**	**205**	*e*P	**Pn**	**16 03 46.8**	**-1.1**
	baz=192						
TAW	**Tawu**	**1.97**	**203**	*e*P	**Pn**	**16 03 47.5**	**-0.4**
	baz=192						
SSPT	**Xinbi**	**2.00**	**213**	*e*P	**Pb**	**16 03 50.6**	**-0.4**
	baz=194						
SCZT	**Fangliau**	**2.07**	**210**	*e*P	**Pb**	**16 03 51.0**	**-1.2**
	baz=193						
JKRS	**Kuro-shima**	**2.08**	**88**	P	**Pn**	**16 03 50.0**	**+0.6**
JKRS				*e*S	**Sb**	**16 04 17.7**	**-0.5**
PNG	**Penghu**	**2.08**	**254**	*e*P	**Pn**	**16 03 50.0**	**+0.5**
	baz=257						
PNG				*e*S	**Sb**	**16 04 17.1**	**-1.3**
	baz=257						
PHUB	**P'eng-hu**	**2.09**	**252**	*e*P	**Pn**	**16 03 49.8**	**+0.3**
	baz=256						
PHUB				*e*S	**Sb**	**16 04 16.4**	**-2.0**
	baz=256						
WDGT	**Dungji**	**2.11**	**245**	*e*P	**Pn**	**16 03 50.4**	**+0.6**
	baz=235						
WDGT				*e*S	**Sb**	**16 04 17.6**	**-1.4**
	baz=235						
LAY	**Lan-yu**	**2.13**	**185**	*e*P	**Pn**	**16 03 48.4**	**-1.8**
	baz=185						
WLCH	**Liuqiu**	**2.20**	**215**	*e*P	**Pb**	**16 03 53.6**	**-0.9**
	baz=236						
JIJ	**Ishigaki jima**	**2.21**	**85**	P	**Pn**	**16 03 51.2**	**0.0**
JIJ				*e*S	**Sn**	**16 04 18.4**	**0.0**
PTTC	**Pingtan**	**2.22**	**307**	*e*P	**Pn**	**16 03 50.7**	**-0.7**
	baz=305						
VWUC	**VWUC**	**2.23**	**292**	*e*P	**Pn**	**16 03 51.3**	**-0.3**
	baz=279						
VCHM	**Qimei**	**2.32**	**246**	*e*P	**Pn**	**16 03 53.6**	**+0.8**
	baz=234						
HEN	**Hengchun**	**2.35**	**203**	*e*P	**Pb**	**16 03 55.0**	**-2.0**
	baz=193						
TWK1	**Hengchun**	**2.38**	**201**	*e*P	**Pn**	**16 03 54.0**	**+0.4**
	baz=188						
TWKBT	**Hengchun**	**2.38**	**201**	*e*P	**Pn**	**16 03 53.4**	**-0.3**
	baz=188						
JISG	**Ishigakijimahi**	**2.38**	**80**	P	**Pn**	**16 03 53.2**	**-0.4**
JISG				*e*S	**Sn**	**16 04 22.0**	**-0.8**
PTMZ	**Houxiangcun**	**2.53**	**290**	*e*P	**Pn**	**16 03 55.3**	**-0.3**
	baz=289						
MATB	**Ma-tsu**	**2.55**	**321**	*e*P	**Pn**	**16 03 55.3**	**-0.6**
	baz=319						
JTJ	**Tarama**	**2.75**	**80**	P	**Pn**	**16 03 59.6**	**+1.0**
JTJ				*e*S	**Sn**	**16 04 34.2**	**+2.5**
QZH	**Quanzhou**	**2.96**	**286**	Pn	**Pn**	**16 04 01.6**	**0.0**
QZH				Sn	**Sn**	**16 04 35.1**	**-1.9**
LYJJ	**Jianjiangzhen**	**2.96**	**323**	*e*P	**Pn**	**16 04 01.1**	**-0.5**
	baz=321						
KNM	**Kinmen**	**3.02**	**275**	*e*P	**Pn**	**16 04 03.8**	**+1.4**
	baz=274						
KNMB	**Chin-men Tao**	**3.07**	**276**	*e*P	**Pn**	**16 04 02.4**	**-0.6**
	baz=275						
KNMB	**Chin-men Tao**	**3.07**	**276**		**Pn**	**16 04 03.0**	**0.0**
XPSS	**Dashiqiu**	**3.08**	**333**	*e*P	**Pn**	**16 04 02.4**	**-0.8**
	baz=331						
MHZQ	**Yeshan**	**3.11**	**309**	*e*P	**Pn**	**16 04 03.1**	**-0.5**
	baz=306						
JIRB	**Irabujima**	**3.20**	**78**	P	**Pn**	**16 04 06.4**	**+1.6**
JMJ	**Miyako jima 2**	**3.30**	**78**	*e*P	**Pn**	**16 04 07.6**	**+1.3**
	baz=78						
JMJ2	**Miyako jima3**	**3.32**	**80**	P	**Pn**	**16 04 08.3**	**+1.8**
JOGS	**Gusukube**	**3.40**	**79**	P	**Pn**	**16 04 09.4**	**+1.8**
AXDP	**Jialang**	**3.50**	**283**	*e*P	**Pn**	**16 04 09.2**	**+0.2**
	baz=281						
ZPLA	**Ao Xicun**	**3.65**	**267**	*e*P	**Pn**	**16 04 11.1**	**0.0**
	baz=265						
ZZJH	**Jiuhuzhen**	**3.75**	**275**	*e*P	**Pn**	**16 04 12.6**	**+0.1**
	baz=274						
KSRS	**Korea Array**	**14.26**	**20**	P	**P**	**16 06 44.4**	**+0.7**
	0.2nm,0.3s,baz=201,slow=11,SNR=9.5						
JHJ	**Hachijo jima 2**	**18.16**	**57**	LR	LR	16 14 21.1	
	comp=Z,34nm,20.4s,baz=112,slow=36						
JCJ	**Chichijima**	**18.67**	**77**	LR	LR	16 14 04.3	
	comp=Z,41nm,20.3s,baz=219,slow=34						
HHC	**Hu-ho-hao-te**	**18.68**	**335**	P	**Pn**	**16 07 35.1**	**+1.9**
HHC				S	**Sn**	**16 11 01.2**	**-0.9**
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				LR	LR		
	comp=Z,68nm,9.4s						
MJAR	**Matsushiro Arr**	**18.78**	**45**	P	**Pn**	**16 07 36.6**	**+2.3**
	0.0nm,0.3s,baz=217,slow=9.9,SNR=2.9						
CMAR	**Chiang Mai Arr**	**21.97**	**259**	P	**P**	**16 08 10.5**	**+1.9**
	0.8nm,0.8s,baz=62,slow=7.7,SNR=4.8						
CMAR				LR	LR	16 16 25.0	
	comp=Z,29nm,18.1s,baz=136,slow=35						
GTA	**Gaotai**	**23.95**	**315**	*e*P	**P**	**16 08 35.0**	**+6.0**
GTA				pP	sP	16 08 39.5	+5.2
GTA				sP	pP	16 08 41.9	+9.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**26.57**	**337**	P	**P**	**16 08 55.2**	**+2.5**
	0.3nm,0.3s,baz=162,slow=9.7,SNR=2.3						
SONM				LR	LR	16 20 32.7	
	comp=Z,76nm,18.2s,baz=97,slow=38						
SHL	**Shillong**	**27.09**	**279**	P	**P**	**16 08 56.7**	**-1.0**
WMQ	**Urumqi**	**34.02**	**314**	*e*P	**P**	**16 10 00.0**	**+1.3**
MTN	**Manton Dam**	**37.92**	**165**	P	**P**	**16 10 31.7**	**-0.4**
YAK	**Yakutsk**	**38.22**	**6**	P	**P**	**16 10 34.1**	**-0.1**
YAK				IAmb	IAmb	16 10 40.8	
	comp=Z,3.0nm,0.6s						
MK31	**Makanchi Array**	**38.69**	**316**	P	**P**	**16 10 38.4**	**-0.1**
MKAR	**Makanchi Array**	**38.69**	**316**	P	**P**	**16 10 38.4**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=110,slow=9.1,SNR=11						
MAKZ	**Makanchi**	**38.90**	**316**	P	**P**	**16 10 40.2**	**0.0**
MAKZ				IAmb	IAmb	16 10 53.5	
	comp=Z,2.6nm,1.1s						
KNRA	**Kununurra**	**40.20**	**169**	P	**P**	**16 10 50.0**	**-1.2**
KNRA				IAmb	IAmb	16 11 01.9	
	comp=Z,14nm,1.4s						
ZALV	**Zalesovo Beam**	**40.52**	**327**	P	**P**	**16 10 54.1**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=109,slow=7.9,SNR=3.6						
ZALV				LR	LR	16 28 40.4	
	comp=Z,30nm,18.9s,baz=70,slow=37						
KURK	**Kurchatov**	**42.42**	**320**	P	**P**	**16 11 08.1**	**-1.1**
AAK	**Ala-Archa**	**42.91**	**307**	LR	LR	16 31 25.4	
	comp=Z,28nm,19.8s,baz=12,slow=39						
COEN	**Coen**	**43.30**	**149**	P	**P**	**16 11 16.8**	**+0.1**
COEN				IAmb	IAmb	16 11 21.2	
	comp=Z,5.8nm,1.3s						
WB0	**Warramunga Arr**	**45.39**	**163**	P	**P**	**16 11 31.8**	**-1.5**
WB0				IAmb	IAmb	16 11 40.1	
	comp=Z,3.6nm,1.1s						
WRAB	**Tennant Creek**	**45.53**	**163**	P	**P**	**16 11 33.7**	**-0.8**
WRA	**Warramunga Arr**	**45.54**	**163**	P	**P**	**16 11 33.7**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=345,slow=8.8,SNR=11						
WB2	**Warramunga Arr**	**45.54**	**163**	P	**P**	**16 11 34.5**	**-0.1**
WB2				IAmb	IAmb	16 11 40.4	
	comp=Z,3.7nm,1.1s						
WR0	**Warramunga Arr**	**45.61**	**163**		**P**	**16 11 34.6**	**-0.4**
WR0				IAmb	IAmb	16 11 40.5	
	comp=Z,2.8nm,0.9s						
AS31	**Alice Springs**	**49.00**	**165**	P	**P**	**16 12 02.3**	**+0.8**
ASAR	**Alice Springs**	**49.00**	**165**	P	**P**	**16 12 01.4**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=338,slow=6.8,SNR=10						
CTAO	**Charters Tower**	**50.06**	**149**	P	**P**	**16 12 09.0**	**-0.6**
CTAO				IAmb	IAmb	16 12 25.5	
	comp=Z,4.2nm,1.1s						
KBZ	**Khabaz**	**65.88**	**309**	P	**P**	**16 14 00.1**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=14,slow=7.3,SNR=4.0						
FINES	**FINESS Array B**	**71.70**	**330**	P	**P**	**16 14 35.1**	**-1.3**
	comp=Z,0.6nm,0.6s,baz=53,slow=7.4,SNR=3.9						
INK	**Inuvik**	**73.04**	**22**	P	**P**	**16 14 42.9**	**-1.3**
	comp=Z,0.8nm,0.8s,baz=323,slow=4.8,SNR=3.1						
BRTR	**Keskin Array B**	**73.58**	**307**	P	**P**	**16 14 46.4**	**-1.8**
	comp=Z,0.6nm,0.9s,baz=96,slow=4.3,SNR=3.1						
YKA	**Yellowknife Ar**	**82.78**	**23**	P	**P**	**16 15 37.0**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=312,slow=4.6,SNR=9.5						

IDC 03 16:12:10.9±7.5**, 9°.23S**×**114°.27E, h0**km**, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.3**/37**, mbtmp3.7**/4**, ML3.2**/1**, Error ellipse: s-maj=122.0km s-min=47.2km az=103.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**6.86**	**53**	Pn	Pn	16 13 53.4	+0.5
	0.5nm,0.3s,baz=265,slow=24,SNR=3.7						
WRA	**Warramunga Arr**	**22.12**	**121**	P	P	16 17 07.2	-1.1
	0.8nm,0.4s,baz=301,slow=11,SNR=16						
ASAR	**Alice Springs**	**23.63**	**130**	P	P	16 17 24.2	+0.2
	0.6nm,0.5s,baz=306,slow=9.1,SNR=4.3						
STKA	**Stephens Creek**	**33.91**	**136**	P	P	16 18 56.2	+0.4
	1.5nm,0.5s,baz=307,slow=6.6,SNR=7.1						

WEL 03 16:18:26.0, 40°S±1°×**17°4E**±°**, h72**km±3km**, M3.3**/44**, ML3.6**/44**, MLv3.3**/44**, Error ellipse: s-maj=0.0km s-min=0.0km az=46.9, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.59**	**221**	P	Pn	16 18 40.2	+0.3
DUWZ				S	Sn	16 18 50.2	+0.1
KIW	**Kapiti Island**	**0.62**	**144**	P	Pn	16 18 40.6	+0.4
KIW				S	Sn	16 18 50.8	+0.2
OHWZ	**Ohakea**	**0.69**	**78**	P	Pn	16 18 41.9	+1.0
OHWZ				S	Sn	16 18 53.6	+1.6
OGWZ	**Otaki Gorge**	**0.73**	**129**	P	Pn	16 18 41.8	+0.4
OGWZ				S	Sn	16 18 53.1	+0.5
WAZ	**Wanganui**	**0.74**	**35**	P	Pn	16 18 42.3	+0.8
TCW	**Tory Channel**	**0.86**	**188**	P	Pn	16 18 43.5	+0.6
TCW				S	Sn	16 18 55.9	+0.5
CAW	**Cannon Point**	**0.89**	**147**	P	Pn	16 18 43.7	+0.4
CAW				S	Sn	16 18 56.6	+0.5
LREZ	**Lake Rotokare**	**0.90**	**359**	P	Pn	16 18 43.7	+0.4
MRZ	**Mangatainoka R**	**0.93**	**109**	P	Pn	16 18 43.9	+0.2
MRZ				S	Sn	16 18 57.0	+0.2
WEL	**Wellington**	**0.96**	**165**	P	Pn	16 18 44.9	+0.8
HOWZ	**Holdsworth Sta**	**0.99**	**123**	P	Pn	16 18 44.5	+0.1
POWZ	**Post Office Ro**	**1.02**	**92**	P	Pn	16 18 45.1	+0.3
NMEZ	**Namu Road**	**1.03**	**336**	P	Pn	16 18 45.2	+0.2
PREZ	**Palmer Road**	**1.04**	**348**	P	Pn	16 18 45.7	+0.7
BHW	**Baring Head**	**1.10**	**162**	P	Pn	16 18 46.6	+0.7
KHEZ	**Kahui Hut**	**1.11**	**343**	P	Pn	16 18 46.4	+0.3
TUWZ	**Tuamarina**	**1.13**	**199**	P	Pn	16 18 46.6	+0.4
MTW	**Mount Morrison**	**1.14**	**135**	P	Pn	16 18 47.2	+0.8
NBEZ	**Newall Road No**	**1.17**	**338**	P	Pn	16 18 46.9	+0.2
NNZ	**Nelson**	**1.17**	**223**	P	Pn	16 18 47.3	+0.6
DREZ	**Durham Road**	**1.18**	**351**	P	Pn	16 18 47.4	+0.6
TIWZ	**Tintock**	**1.19**	**111**	P	Pn	16 18 47.8	+0.9
PRWZ	**Pori Road**	**1.19**	**100**	P	Pn	16 18 47.6	+0.6
TSZ	**Takapari Road**	**1.21**	**76**	P	Pn	16 18 47.5	+0.2
PKE	**Pukeiti**	**1.21**	**343**	P	Pn	16 18 47.6	+0.3
MSWZ	**Moikau Station**	**1.23**	**150**	P	Pn	16 18 48.3	+0.8
VRZ	**Vera Road**	**1.26**	**12**	P	Pn	16 18 48.3	+0.4
MTVZ	**Mangateitei**	**1.26**	**40**	P	Pn	16 18 48.2	+0.3
PAWZ	**Paruwai Farm**	**1.27**	**144**	P	Pn	16 18 48.8	+0.7
PKVZ	**Pokaka**	**1.28**	**34**	P	Pn	16 18 48.6	+0.4
MHEZ	**Mangahewa**	**1.28**	**356**	P	Pn	16 18 49.0	+0.9
DVHZ	**Dannevirke**	**1.33**	**88**	P	Pn	16 18 48.5	-0.3
TMWZ	**Te Maipa**	**1.34**	**124**	P	Pn	16 18 49.6	+0.7
PLWZ	**Palliser**	**1.36**	**153**	P	Pn	16 18 49.7	+0.5
TRVZ	**Turoa**	**1.36**	**39**	P	Pn	16 18 49.8	+0.3
DRZ	**Dome Shelter**	**1.39**	**39**	P	Pn	16 18 51.5	+1.6
MOVZ	**Moawhango**	**1.39**	**47**	P	Pn	16 18 49.9	+0.3
WHVZ	**Whangaehu Hut**	**1.40**	**40**	P	Pn	16 18 50.4	+0.5
CMWZ	**Cape Campbell**	**1.40**	**187**	P	Pn	16 18 53.2	+3.5
FWVZ	**Far West T-bar**	**1.40**	**38**	P	Pn	16 18 50.2	+0.3
TRWZ	**Traveller**	**1.41**	**138**	P	Pn	16 18 51.2	+1.4
BSWZ	**Blackbirch Sta**	**1.42**	**197**	P	Pn	16 18 51.3	+1.3
BFZ	**Birch Farm**	**1.42**	**104**	P	Pn	16 18 49.8	-0.1
PNHZ	**Pukenui**	**1.43**	**72**	P	Pn	16 18 50.0	-0.1
TUVZ	**Tukino**	**1.44**	**41**	P	Pn	16 18 51.0	+0.6
CPWZ	**Castlepoint**	**1.46**	**113**	P	Pn	16 18 51.4	+1.0
NGZ	**Ngauruhoe**	**1.49**	**38**	P	Pn	16 18 51.5	+0.5
QRZ	**Quartz Range**	**1.52**	**251**	P	Pn	16 18 50.9	-0.3
BHHZ	**Black Hill Sta**	**1.53**	**56**	P	Pn	16 18 51.4	0.0
WTVZ	**West Tongariro**	**1.53**	**36**	P	Pn	16 18 51.8	+0.2
ANWZ	**Angora Road**	**1.56**	**94**	P	Pn	16 18 51.8	-0.1
WPHZ	**Waipukurau**	**1.57**	**80**	P	Pn	16 18 51.8	-0.1
KRVZ	**Karewarewa**	**1.57**	**37**	P	Pn	16 18 52.5	+0.5
KRHZ	**Kereru**	**1.65**	**65**	P	Pn	16 18 52.8	-0.3
PRHZ	**Porangahau**	**1.69**	**88**	P	Pn	16 18 53.4	-0.1
KATZ	**Kakaramea**	**1.69**	**36**	P	Pn	16 18 54.0	+0.3
RITZ	**Rihia Road**	**1.77**	**39**	P	Pn	16 18 55.7	+1.1
KWHZ	**Kaweka Forest**	**1.79**	**59**	P	Pn	16 18 55.5	+0.5
RATZ	**Rangitukua**	**1.81**	**35**	P	Pn	16 18 55.9	+0.7
THZ	**Tophouse**	**1.82**	**219**	P	Pn	16 18 56.3	+1.0
HIZ	**Hauiti**	**1.87**	**10**	P	Pn	16 18 56.1	+0.2
PXZ	**Pawanui**	**1.89**	**81**	P	Pn	16 18 55.5	-0.7
WATZ	**Wairara**	**1.93**	**32**	P	Pn	16 18 58.3	+1.5
HATZ	**Hinemaiaia**	**1.95**	**42**	P	Pn	16 18 56.7	-0.3
KAHZ	**Kahuranaki**	**1.96**	**74**	P	Pn	16 18 56.6	-0.5
MCHZ	**McNeill Hill**	**1.97**	**63**	P	Pn	16 18 57.0	-0.3
BKZ	**Black Stump Fm**	**1.99**	**54**	P	Pn	16 18 57.1	-0.5
WHTZ	**Whakaora**	**2.06**	**35**	P	Pn	16 19 01.0	+2.5
CKHZ	**Cape Kidnapper**	**2.15**	**72**	P	Pn	16 18 59.5	-0.2
KUTZ	**Kaahu Road**	**2.15**	**30**	P	Pn	16 19 03.4	+3.6
MRHZ	**Matea Rd**	**2.16**	**46**	P	Pn	16 18 59.1	-0.8
KHZ	**Kahutara**	**2.16**	**198**	P	Pn	16 19 00.3	+0.5
TLZ	**Tolley Road**	**2.20**	**23**	P	Pn	16 19 00.7	+0.3
NMHZ	**Naumai**	**2.22**	**56**	P	Pn	16 19 00.3	-0.5
ARHZ	**Aropaoanui**	**2.26**	**62**	P	Pn	16 19 01.6	+0.4
MTHZ	**Maungataniwha**	**2.39**	**52**	P	Pn	16 19 02.1	-1.0
PRRZ	**Plateau Road**	**2.40**	**40**	P	Pn	16 19 02.8	-0.2
DSZ	**Denniston Nort**	**2.42**	**234**	P	Pn	16 19 03.5	+0.1
RAHZ	**Arahi**	**2.50**	**56**	P	Pn	16 19 08.5	+4.0
MUGZ	**Murupara**	**2.61**	**45**	P	Pn	16 19 06.2	+0.2
RTZ	**Ruatahuna**	**2.63**	**49**	P	Pn	16 19 04.9	-1.3
SNGZ	**Shannon Statio**	**2.75**	**56**	P	Pn	16 19 10.0	+2.2
TOZ	**Tahuroa Road**	**2.75**	**18**	P	Pn	16 19 08.4	+0.6
GVZ	**Greta Valley S**	**2.81**	**201**	P	Pn	16 19 08.1	-0.5
KNZ	**Kokohu**	**2.84**	**63**	P	Pn	16 19 07.1	-1.8
LTZ	**Lake Taylor**	**2.91**	**213**	P	Pn	16 19 09.7	-0.4
URZ	**Urewera**	**2.95**	**46**	P	Pn	16 19 08.6	-2.0
RAGZ	**Rawiri**	**2.97**	**52**	P	Pn	16 19 12.0	+1.2
RIGZ	**Rimuhau**	**3.06**	**58**	P	Pn	16 19 10.6	-1.4
AMCZ	**Amberley**	**3.12**	**205**	P	Pn	16 19 12.3	-0.4
INZ	**Inchbonnie**	**3.26**	**222**	P	Pn	16 19 14.5	-0.2
KBAZ	**Karaka Road Bo**	**3.28**	**6**	P	Pn	16 19 15.7	+0.8
AWAZ	**Awhitu Peninsu**	**3.29**	**3**	P	Pn	16 19 15.6	+0.4
MKAZ	**Moumakai**	**3.30**	**10**	P	Pn	16 19 15.8	+0.6
ETAZ	**East Tamaki Re**	**3.42**	**7**	P	Pn	16 19 17.6	+0.6
RUGZ	**Raukumara Rang**	**3.48**	**48**	P	Pn	16 19 16.3	-1.5
RVAZ	**Riverhead Bore**	**3.58**	**2**	P	Pn	16 19 19.4	+0.3
MBAZ	**Motutapu North**	**3.60**	**6**	P	Pn	16 19 20.3	+0.9
WIAZ	**Waiheke Island**	**3.60**	**9**	P	Pn	16 19 20.4	+1.0
HAZ	**Te Kaha**	**3.68**	**46**	P	Pn	16 19 19.6	-0.9
ABAZ	**Army Bay**	**3.77**	**5**	P	Pn	16 19 22.1	+0.5
WVZ	**Waitaha Valley**	**3.87**	**224**	P	Pn	16 19 24.0	+0.9
RPZ	**Rata Peaks**	**4.19**	**216**	P	Pn	16 19 29.7	+2.3
FOZ	**Fox Glacier**	**4.68**	**226**	P	Pn	16 19 34.0	-0.1
JCZ	**Jackson Bay**	**5.60**	**227**	P	Pn	16 19 46.8	+0.1
WKZ	**Wanaka**	**5.99**	**220**	P	Pn	16 19 52.5	+0.4
MSZ	**Milford Sound**	**6.46**	**226**	P	Pn	16 19 59.3	+0.9
WHZ	**Wether Hill Ro**	**7.28**	**218**	P	Pn	16 20 10.8	+1.1
CTZ	**Chatham Island**	**7.47**	**120**	P	Pn	16 20 11.6	-0.5
PYZ	**Puysegur Point**	**8.10**	**222**	P	Pn	16 20 23.5	+2.7

TAP 03 16:24:00.4, 24°.22N×**121°.68E, h11**km**, ML1.9, 1C-2D, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.09**	**241**	⇓*i*P	Pg	16 24 03.7	+0.7
	baz=240						
NACB				S	Sg	16 24 06.0	+1.0
	baz=240						
TWD	**Chiawan**	**0.16**	**210**	*e*P	Pg	16 24 04.5	+0.6
	baz=207						
TWD				S	Sg	16 24 07.3	+0.8
	baz=207						
ETLH	**Xiulin Townshi**	**0.18**	**266**	P	Pb	16 24 05.2	-0.6
	baz=266						
ETLH				*e*S	Sg	16 24 08.8	+1.5
	baz=266						
ENA	**Nanau**	**0.21**	**14**	⇓*i*P	Pg	16 24 05.3	+0.3
	baz=16						
ENA				*e*S	Sg	16 24 09.4	+1.4
	baz=16						
NNSB	**Datong**	**0.34**	**307**	*i* P	Pb	16 24 08.3	-0.3
	baz=307						
NNSB				S	Sb	16 24 13.7	-0.5
	baz=307						

NNSH	Datong	0.34	307	iP	Pb	16 24 08.3	-0.3
	baz=307						
NNSH				S	Sb	16 24 13.6	-0.6
	baz=307						
NNS	Nan Shan	0.36	308	eP	Pb	16 24 08.6	-0.3
	baz=308						
NNS				eS	Sb	16 24 14.1	-0.4
	baz=308						
WHF	Hehuan Shan	0.39	259	P	Pb	16 24 09.1	-0.4
	baz=258						
WHF				S	Sg	16 24 14.6	+1.1
	baz=258						
NDT	Datong Townshi	0.41	338	eP	Pb	16 24 09.3	-0.4
	baz=337						
NDT				eS	Sb	16 24 16.2	+0.2
	baz=337						
TWC	Suao	0.42	21	eS	Sb	16 24 15.3	-0.8
	baz=22						
ENTT	Nioudou	0.43	346	⇑iP	Pb	16 24 09.9	-0.2
	baz=346						
ENTT				eS	Sb	16 24 16.0	-0.5
	baz=346						
ESL	Shilin	0.46	210	eP	Pb	16 24 10.3	-0.3
	baz=208						
CHGB	Renai	0.49	251	P	Pb	16 24 11.2	+0.1
	baz=251						
CHGB				eS	Sb	16 24 18.2	-0.2
	baz=251						
TWE	Neicheng	0.50	358	P	Pb	16 24 10.9	-0.2
	baz=359						
YHNB	Yeheng	0.53	328	P	Pb	16 24 11.9	+0.2
	baz=327						
YHNB				eS	Sb	16 24 19.3	-0.1
	baz=327						
OWD	Renai	0.53	241	eP	Pb	16 24 11.7	-0.1
	baz=240						
OWD				eS	Sg	16 24 18.7	+0.7
	baz=240						
SLBB	Yuanshan	0.53	355	eS	Sb	16 24 20.1	+0.5
	baz=355						
NSK	Sanguang	0.54	327	eP	Pb	16 24 12.4	+0.4
	baz=327						
NSK				eS	Sb	16 24 19.8	0.0
	baz=327						
NWLT	Wulai	0.58	343	eP	Pb	16 24 12.8	+0.2
	baz=343						
NWLT				eS	Sb	16 24 20.7	-0.1
	baz=343						
EGFH	Guangfu	0.60	203	eP	Pb	16 24 12.6	-0.2
	baz=203						
WHP	Taichung City	0.68	275	eS	Sb	16 24 24.6	+0.9
	baz=274						
VWDT	VWDT	0.68	227	eS	Sb	16 24 24.8	+1.2
	baz=226						
DPDB	Guoxing	0.72	255	eS	Sb	16 24 25.3	+0.5
	baz=255						
SSLB	Suanglung	0.79	237	eP	Pb	16 24 16.7	+0.5
	baz=237						
SSLB				eS	Sb	16 24 27.0	0.0
	baz=237						

JMA 03 16:24:34.2±0.2, 24°.94N×123°.38E, h26km±5km, M1.9, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.58	215	P	Pb	16 24 45.6	-0.2
YOJ				S	Sb	16 24 53.2	-0.5
JYNG	Yonagunijimaku	0.63	219	P	Pb	16 24 46.3	-0.3
JYNG				eS	Sb	16 24 54.8	-0.2
IRIF	Iriomote-Funau	0.68	152	P	Pb	16 24 47.3	-0.2
IRIF				S	Sb	16 24 56.4	-0.1
JIJ	Ishigaki jima	0.90	129	P	Pn	16 24 50.8	-0.4
JIJ				S	Sb	16 25 01.6	-1.2
JKRS	Kuro-shima	0.90	141	P	Pn	16 24 50.9	-0.3
JKRS				S	Sb	16 25 02.8	-0.1
JISG	Ishigakijimahi	0.92	112	P	Pn	16 24 50.7	-0.7
JISG				S	Sb	16 25 02.7	-0.5
HATJ	Hateruma jima	0.96	156	P	Pn	16 24 52.0	0.0
HATJ				S	Sb	16 25 04.3	-0.2

DJA 03 16:28:49.0±0.5, 2°S±9°×13°9E±°, h10km, M3.1/5, mb4.2/5, MLv2.6/4, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	0.44	264	P	Pg	16 28 58.0	+0.3
SMPI				S	Sb	16 29 06.7	+1.1
GENI	Genyem	1.21	123	P	Pb	16 29 12.0	0.0
GENI				S	Sb	16 29 27.1	-0.5
JAY	Jayapura	1.66	110	P	Pn	16 29 17.5	-0.7
TNTI	Ternate	12.09	283	P	Pn	16 31 41.5	+0.1
	7.4nm,0.9s						
NLAI	Namlea	12.11	264	P	Pn	16 31 41.9	+0.2
	6.8nm,0.5s						

TAP 03 16:33:38.8, 24°.22N×121°.70E, h10km±1km, ML1.4, 1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.11	248	⇓iP	Pb	16 33 42.3	-0.6
	baz=247						
NACB				S	Sg	16 33 44.6	+1.1
	baz=247						
TWD	Chiawan	0.17	216	iP	Pg	16 33 43.2	+0.7
	baz=214						
TWD				eS	Sg	16 33 46.0	+1.0
	baz=214						
ETLH	Xiulin Townshi	0.20	268	iP	Pb	16 33 44.2	-0.4
	baz=267						
ETLH				eS	Sg	16 33 47.5	+1.4
	baz=267						
ENA	Nanau	0.21	9	eP	Pg	16 33 43.9	+0.6
	baz=10.0						
ENA				eS	Sg	16 33 47.5	+1.1
	baz=10.0						
HWA	Hwalien	0.25	201	iP	Pb	16 33 44.9	-0.5
	baz=199						
HWA				eS	Sb	16 33 48.9	-0.9
	baz=199						
WHF	Hehuan Shan	0.41	260	P	Pb	16 33 47.7	-0.6
	baz=259						
WHF				eS	Sb	16 33 53.8	-0.9
	baz=259						
ENTT	Nioudou	0.44	343	iP	Pb	16 33 48.5	-0.2
	baz=344						
ENTT				eS	Sb	16 33 54.9	-0.4
	baz=344						

JMA 03 16:33:40.0±0.1, 24°.90N×123°.38E, h28km, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.55	218	P	Pb	16 33 50.8	-0.4
IRIF	Iriomote-Funau	0.65	150	P	Pb	16 33 52.3	-0.5
IRIF				eS	Sb	16 34 01.3	-0.1
JKRS	Kuro-shima	0.87	139	P	Pn	16 33 56.1	-0.3
JKRS				eS	Sb	16 34 07.8	-0.1
JIJ	Ishigaki jima	0.88	127	P	Pn	16 33 56.1	-0.4
JIJ				S	Sb	16 34 06.6	-1.4
JISG	Ishigakijimahi	0.90	110	eS	Sb	16 34 08.4	-0.3
HATJ	Hateruma jima	0.93	155	S	Sb	16 34 09.0	-0.3

IDC 03 16:37:10.8±0.8, 43°.68N×141°.46E, h193km±7km, mb3.1/8, mb1 3.2/11, mb1mx3.0/46, mbtmp3.6/11, Error ellipse: s-maj=27.6km s-min=14.4km az=110.0
JMA 03 16:37:10.9±0.2, 43°.60N×141°.47E, h199km±2km, M2.7
ISC 03 16:37:10.9±0.7, 43°.59N±0°.05×141°.50E±0°.06, h199km±6km, n30, σ0s81/42, mb3.3/7, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHR	Hokuryu	0.22	47	P	Pn	16 37 37.6	+0.5
JHR				eS	Sn	16 37 58.0	+0.6
JISS	Ishikarishitsu	0.32	191	P	Pn	16 37 37.8	+0.5
JISS				eS	Sn	16 37 57.9	+0.2
JAB	Ashibetsu	0.53	99	P	Pn	16 37 38.3	+0.3
JAB				eS	Sn	16 37 59.1	+0.3
JEW	Eniwo	0.75	183	P	Pn	16 37 39.5	+0.4
JEW				eS	Sn	16 38 01.1	+0.3
JSK	Shakotan	0.79	253	P	Pn	16 37 39.1	-0.1
JYG	Yagishiri	0.83	356	P	Pn	16 37 39.1	-0.3
JFR	Furan	0.90	118	P	Pn	16 37 39.9	0.0
JKK2	Kamakawa 2	0.94	72	P	Pn	16 37 40.3	+0.1
JKK2				eS	Sn	16 38 02.5	-0.3
ASAJ	Asahikawa	0.95	56	P	Pn	16 37 39.9	-0.3
	2.8nm,0.3s,baz=247,slow=9.8,SNR=26						
ASAJ				S	Sn	16 38 01.7	-1.2
	0.9nm,0.3s,baz=108,slow=29,SNR=6.0						
JNBK	Urakawa-nobuka	1.60	145	P	Pn	16 37 45.9	+0.5
JNBK				eS	Sn	16 38 12.4	+0.3
JAR	Ashorobuto	1.68	99	P	Pn	16 37 46.5	+0.4
JAR				eS	Sn	16 38 13.7	+0.3
JCH	Churui	1.68	125	P	Pn	16 37 45.2	-0.9
JCH				eS	Sn	16 38 10.6	-2.8
JKB	Kayabe	1.74	192	P	Pn	16 37 46.6	-0.1
JKB				eS	Sn	16 38 13.4	-1.1
JTKR	Abashiri--Toko	1.78	77	P	Pn	16 37 47.5	+0.4
JTKR				eS	Sn	16 38 15.6	+0.4
JRBN	Rebuntou	1.86	350	P	Pn	16 37 47.4	-0.4
JOSM	Okushiri--Mats	2.12	225	P	Pn	16 37 50.2	-0.4
JOT	Ohata	2.23	189	P	Pn	16 37 51.4	-0.4
JOT				eS	Sn	16 38 23.5	-0.1
JAK	Akkeshi	2.41	103	eS	Sn	16 38 25.2	-1.7
JRA	Rausu	2.64	81	P	Pn	16 37 57.0	+0.7
MJAR	Matsushiro Arr	7.48	201	P	Pn	16 38 57.3	-0.1
	0.1nm,0.3s,baz=18,slow=14,SNR=10						
PETK	Petropavlovsk-	14.34	43	P	Pn	16 40 25.4	+0.5
	0.1nm,0.3s,baz=224,slow=11,SNR=5.4						
MA2	Magadan	16.98	16	P	P	16 40 54.1	-1.2
	0.3nm,0.3s,baz=171,slow=13,SNR=2.6						
SEY	Seymchan	20.38	14	P	P	16 41 30.9	-1.2
	2.3nm,0.5s,baz=203,slow=7.6,SNR=11						
MKAR	Makanchi Array	41.00	296	P	P	16 44 34.2	-0.1
	0.2nm,0.5s,baz=89,slow=10,SNR=1.8						
ILAR	Eielson Array	44.02	36	P	P	16 44 57.9	-0.5
	0.5nm,0.6s,baz=280,slow=8.4,SNR=4.8						
INK	Inuvik	48.58	30	P	P	16 45 33.8	+0.1
	0.5nm,0.4s,baz=260,slow=6.3,SNR=6.4						
FINES	FINESS Array B	63.08	331	P	P	16 47 16.5	-0.2
	1.0nm,0.4s,baz=44,slow=8.4,SNR=13						
WRA	Warramunga Arr	63.56	188	P	P	16 47 20.8	+0.5
	0.4nm,0.9s,baz=2.9,slow=6.9,SNR=2.4						
ASAR	Alice Springs	67.29	188	P	P	16 47 45.9	+1.8
	0.2nm,0.8s,baz=359,slow=6.2,SNR=1.8						
NOA	NORSAR Array B	68.19	336	P	P	16 47 49.9	+0.6
	0.5nm,0.8s,baz=35,slow=6.4,SNR=2.5						

JMA 03 17:02:36.5±0.5, 32°.11N×138°.00E, h400km, M3.1
IDC 03 17:02:37.0±0.8, 32°.10N×138°.10E, h399km±28km, mb2.5/3, mb1 2.7/6, mb1mx2.5/38, mbtmp3.4/6, Error ellipse: s-maj=67.4km s-min=15.5km az=62.0
ISC 03 17:02:36.0±0.9, 32°.08N±0°.07×138°.16E±0°.09, h400km, n20, σ1s90/28, mb2.7/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.72	53	P	Pn	17 03 32.8	+2.5
	2.7nm,0.3s,baz=231,slow=19,SNR=12						
JHJ				S	S	17 04 15.6	+1.5
	8.7nm,0.3s,baz=3.9,slow=23,SNR=7.7						
JHJ2	Mitsune	1.73	53	P	Pn	17 03 32.5	+2.2
TTO3	TONANKAI O.B.S	1.89	340	P	Pn	17 03 32.7	+1.7
JIE	Ise	2.60	333	P	Pn	17 03 36.7	+0.7
JKN2	Miekihoku	2.67	324	P	Pn	17 03 36.5	0.0
JTNC	Tanabenakahech	2.75	310	P	Pn	17 03 36.6	-0.6
JWY	Kouya	3.03	315	P	Pn	17 03 39.4	-0.1
JOD2	Odawara 2	3.27	13	P	Pn	17 03 43.3	+1.9
JYN	Shimob	3.42	5	P	Pn	17 03 44.7	+1.9
JHU	Hanno	3.87	14	P	Pn	17 03 47.7	+0.9
JHU				eS	S	17 04 41.9	-2.4
JRY	Ryogami san	3.97	9	P	Pn	17 03 49.2	+1.4
JRY				eS	S	17 04 45.6	-0.4
MJAR	Matsushiro Arr	4.45	1	P	Pn	17 03 52.5	+0.1
	0.3nm,0.3s,baz=177,slow=10,SNR=42						
MJAR				S	S	17 04 55.6	+1.1
	baz=172,slow=20,SNR=2.5						
MAT	Matsushiro	4.45	0	P	Pn	17 03 53.0	+0.6
MAT				eS	S	17 04 53.2	-1.2
JAG	Ashikaga	4.46	14	P	Pn	17 03 52.5	0.0
JAG				eS	S	17 04 50.7	-3.9
JHO	Hitachi	4.94	23	P	Pn	17 03 57.4	+0.1
JHO				eS	S	17 04 59.3	-4.1
JCJ	Chichijima	6.08	144	P	Pn	17 04 09.6	0.0
	2.6nm,0.3s,baz=357,slow=19,SNR=8.7						
JCJ				S	S	17 05 21.6	-4.2
	2.9nm,0.3s,baz=244,slow=17,SNR=1.6						
KSRS	Korea Array	9.98	305	P	P	17 04 53.5	+0.2
	0.1nm,0.3s,baz=124,slow=10,SNR=4.5						
MKAR	Makanchi Array	44.66	306	P	P	17 10 10.8	-0.1
	0.2nm,0.5s,baz=79,slow=7.5,SNR=2.9						
WRA	Warramunga Arr	51.86	185	P	P	17 11 06.3	+0.9
	0.2nm,0.3s,baz=360,slow=7.7,SNR=17						
ASAR	Alice Springs	55.58	185	P	P	17 11 33.8	+1.9
	0.2nm,0.6s,baz=1.8,slow=6.4,SNR=5.9						

AEIC 03 17:15:28.9±1.8, 67°.72N±0°.03×162°.7W±0°.2, h27km±5km, ML3.6/35, Error ellipse: s-maj=8.6km s-min=4.5km az=77.0
IDC 03 17:15:28.4±0.8, 68°.11N×162°.35W, h0km, mb3.7/9, mb1 3.9/12, mb1mx3.6/44, mbtmp3.7/12, ML3.8/4, MS2.9/3, Ms1 2.9/3, ms1mx2.4/46, Error ellipse: s-maj=28.7km s-min=12.9km az=28.0
NEIC 03 17:15:29.3±1.6, 67°.69N±0°.04×162°.6W±0°.1, h17km±4km, Error ellipse: s-maj=8.3km s-min=6.3km az=89.0
ISC 03 17:15:28.3±0.6, 67°.70N±0°.05×162°.50W±0°.05, h10km, n81, σ1s29/84, mb3.8/8, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.39	337		Pb	17 15 36.4	-0.9
RDOG	Red Dog Mine	0.39	337		Sb	17 15 42.9	-0.3
ANM	Nome	3.36	202		Pn	17 16 20.5	-0.3
ANM	Nome	3.36	202		Sn	17 16 58.7	-1.9
IM03		3.86	112		Pn	17 16 27.8	+0.1
IM01	Indian Mountai	3.87	112		Pn	17 16 27.6	-0.1
PS05	TAPS Pump Stn5	4.68	95		Pn	17 16 39.6	+0.7
COLD	Coldfoot	4.76	90		Pn	17 16 41.3	+1.4
COLD	Coldfoot	4.76	90		Sn	17 17 38.1	+3.1
TOLK	Toolik Lake Re	4.92	73	P	Pn	17 16 43.6	+1.5
	baz=264						
TOLK				S	Sn	17 17 38.6	-0.4
	baz=264						
TOLK	Toolik Lake Re	4.92	73		Pn	17 16 42.4	+0.2
TOLK	Toolik Lake Re	4.92	73		Sn	17 17 38.8	-0.2
MLY	Manley	5.44	114		Pn	17 16 49.8	+0.5
GAMB	Gambell	5.47	228	Pn	Pn	17 16 50.5	+0.9
TTA	Tatalina	5.51	147		Pn	17 16 50.6	+0.3
TT01	Tatalina	5.53	148		Pn	17 16 51.0	+0.5
PS01	TAPS Pump Stn	5.62	56		Pn	17 16 50.6	-1.0
BPAW	Bear Paw Mtn.	5.94	122		Pn	17 16 56.6	+0.4
NEA	Nenana	6.28	114		Pn	17 17 01.3	+0.5
KTH	Kantishna Hill	6.34	126		Pn	17 17 02.1	+0.4
MDM	Murphy Dome	6.37	109		Pn	17 17 02.3	+0.3
BWN	Browne	6.39	117		Pn	17 17 01.1	-1.3
PPLA	Purkeypile	6.47	133		Pn	17 17 03.8	+0.2
TCOL	CIGO, UAF Yank	6.55	109	P	Pn	17 17 05.7	+1.2
	baz=301						
TCOL				S	Sn	17 18 17.4	-1.6
	baz=301						
TCOL	CIGO, UAF Yank	6.55	109		Pn	17 17 06.1	+1.7
COLA	College	6.55	109		Pn	17 17 03.1	-1.4
POKR	Poker Plat Res	6.58	106	P	Pn	17 17 05.8	+0.9
	baz=299						
POKR	Poker Plat Res	6.58	106		Pn	17 17 05.7	+0.8
TRF	Thorofare Moun	6.62	124		Pn	17 17 06.5	+0.9
WRH	Wood River Hil	6.69	112		Pn	17 17 06.7	+0.3
CCB	Clear Creek Bu	6.69	110		Pn	17 17 06.8	+0.4
FYU	Fort Yukon	6.82	92		Pn	17 17 08.4	+0.2
BM03	Burnt Mountain	6.85	84		Pn	17 17 09.2	+0.5
MCK	McKinley	6.86	119		Pn	17 17 09.2	+0.4
IL31		6.95	108		Pn	17 17 10.3	+0.3
ILAR	Eielson Array	6.95	108	Pn	Pn	17 17 09.9	-0.2
	6.6nm,0.3s,baz=301,slow=14,SNR=132						
ILAR				Sn	Sn	17 18 26.9	-2.1
	0.2nm,0.3s,baz=301,slow=24,SNR=4.7						
PRP	Porcupine Dome	7.10	100		Pn	17 17 13.3	+1.2
RND	Reindeer	7.11	121		Pn	17 17 12.6	+0.4
HDA	Harding Lake	7.13	110	P	Pn	17 17 13.5	+1.0
	baz=303						
HDA				S	Sn	17 18 31.5	-2.0
	baz=303						
HDA				S	Sn	17 18 31.5	-2.0
	baz=303						
HDA	Harding Lake	7.13	110		Pn	17 17 12.9	+0.4
WAT2	Susitna Watana	7.50	123		Pn	17 17 19.1	+1.3
DHY	Denali Highway	7.82	119		Pn	17 17 22.4	+0.3
RIDG	Independent Ri	8.27	110		Pn	17 17 29.3	+1.1
GHO	Glory Hole Cre	8.30	129		Pn	17 17 29.8	+1.2
RSO	Redoubt South	8.41	145		Pn	17 17 29.2	-1.0
SCRK	Sand Creek	8.45	107		Pn	17 17 28.6	-2.0
SML	Sawmill	8.45	128		Pn	17 17 30.3	-0.3
DOT	Dot Lake	8.61	109		Pn	17 17 33.2	+0.4
KNK	Knik Glacier	8.72	130		Pn	17 17 36.0	+1.8
SCM	Sheep Creek Mo	8.73	125		Pn	17 17 36.4	+1.9
MENT	Mentasta	9.17	112		Pn	17 17 40.8	+0.4
GLI	Glacier Island	9.55	128	Pn	Pn	17 17 45.9	+0.3
CNPM	China Poot	9.60	143	Pn	Pn	17 17 45.8	-0.5
FID	Port Fidalgo	9.83	127	Pn	Pn	17 17 49.4	-0.2
DAWY	Dawson	10.10	100	Pn	Pn	17 17 53.3	+0.1
HIN	Hinchinbrook I	10.11	129	Pn	Pn	17 17 49.7	-3.6
EPYK	Eagle Plains	10.13	86	P	Pn	17 17 53.8	+0.2
	baz=289						
EPYK	Eagle Plains	10.13	86		Pn	17 17 53.0	-0.5
INK	Inuvik	10.83	73	Pn	Pn	17 18 01.6	-1.5
	0.7nm,0.3s,baz=303,slow=12,SNR=28						
INK				Sn	Sn	17 19 54.5	-10
	0.1nm,0.3s,baz=245,slow=12,SNR=4.4						
INK				LR	LR	17 23 00.7	
	comp=Z,50nm,18.8s,baz=193,slow=42						
INK	Inuvik	10.83	73		Pn	17 18 01.8	-1.3
KDAK	Kodiak Island	10.92	151	Pn	Pn	17 18 07.6	+3.3
	0.2nm,0.3s,baz=354,slow=14,SNR=4.3						
KDAK	Kodiak Island	10.92	151		Pn	17 18 04.8	+0.4
A36M	Sachs Harbour	13.36	55	P	Pn	17 18 35.4	-2.1
	baz=270						
C36M	Paulatuk	14.01	66		Pn	17 18 41.7	-4.8
SEY	Seymchan	19.07	277	P	Pn	17 19 52.3	+1.1
	0.1nm,0.3s,baz=83,slow=11,SNR=7.6						
YKA	Yellowknife Ar	20.37	82	P	P	17 20 04.7	+0.1
	1.3nm,0.5s,baz=303,slow=9.4,SNR=18						
PETK	Petropavlovsk-	23.91	252	LR	LR	17 30 41.9	
	comp=Z,28nm,18.6s,baz=242,slow=38						
PDAR	Pinedale Array	37.37	104	P	P	17 22 42.1	+1.1
	0.5nm,0.5s,baz=327,slow=7.2,SNR=8.1						
NVAR	Mina Array Bea	38.09	117	P	P	17 22 48.9	+1.8
	0.7nm,0.6s,baz=321,slow=7.3,SNR=9.7						
NV11	Mina Array Sit	38.14	117	P	P	17 22 48.1	+0.7
SCHQ	Schefferville	42.94	58	LR	LR	17 43 53.0	
	comp=Z,21nm,20.1s,baz=349,slow=40						
ZALV	Zalesovo Beam	48.81	314	P	P	17 24 13.1	+0.2
	1.6nm,0.7s,baz=46,slow=7.6,SNR=4.0						
FINES	FINESS Array B	51.00	355	P	P	17 24 28.9	-0.6
	1.4nm,0.9s,baz=170,slow=35,SNR=1.2						
TX32	Lajitas Array	51.47	107	P	P	17 24 34.4	+0.8
TXAR	Lajitas Array	51.47	107	P	P	17 24 34.9	+1.3
	1.0nm,0.6s,baz=336,slow=5.8,SNR=17						
KURK	Kurchatov	53.39	316	P	P	17 24 46.3	-1.1
MK31	Makanchi Array	55.95	311	P	P	17 25 05.1	-1.0
MKAR	Makanchi Array	55.95	311	P	P	17 25 05.8	-0.3
	0.6nm,0.7s,baz=45,slow=7.2,SNR=8.9						
MAKZ	Makanchi	56.02	312	P	P	17 25 07.1	+0.5
AKASG	Malin Array Be	61.59	352	P	P	17 25 45.3	+0.1
	0.2nm,0.3s,baz=8.6,slow=6.4,SNR=2.2						
CMAR	Chiang Mai Arr	76.29	285	P	P	17 27 17.9	+0.8
	0.2nm,0.5s,baz=1.6,slow=6.9,SNR=4.7						

IDC 03 17:25:39.1±384.0, 22°.65S×68°.54W, h0km, Error ellipse: s-maj=176.9km s-min=131.1km az=9.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I08BO	LAS PENAS INFR	6.40	1	i		18 03 50.0	
	baz=181,slow=326,SNR=2.1						
I41PY	VILLA FLORIDA	10.87	112	i		18 28 50.0	
	baz=286,slow=316,SNR=1.3						
I09BR	BRASILIA INFRA	20.59	74	i		19 35 30.0	
	baz=248,slow=317,SNR=1.8						

IDC 03 17:31:19.0±1.9, 67°.99N×162°.49W, h0km, mb3.3/5, mb1 3.6/6, mb1mx3.2/48, mbtmp3.4/6, ML3.7/1, Error ellipse: s-maj=82.3km s-min=22.0km az=21.0
AEIC 03 17:31:19.4±1.8, 67°.65N±0°.05×162°.5W±0°.2, h9km±5km, ML3.2/25, Error ellipse: s-maj=9.5km s-min=6.9km az=85.0
NEIC 03 17:31:20.5±2.0, 67°.71N±0°.06×162°.7W±0°.2, h25km±6km, Error ellipse: s-maj=12.7km s-min=3.4km az=135.0
ISC 03 17:31:19.6±0.8, 67°.69N±0°.06×162°.50W±0°.06, h10km, n47, σ0s97/49, mb3.3/4, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.40	337		Pg	17 31 27.7	+0.2
RDOG	Red Dog Mine	0.40	337		Sb	17 31 34.4	-0.4
ANM	Nome	3.35	202		Pn	17 32 09.7	-2.2
ANM	Nome	3.35	202		Sn	17 32 51.0	-0.7
IM03		3.86	112		Pn	17 32 18.9	-0.1
COLD	Coldfoot	4.76	90		Pn	17 32 30.6	-0.7
TOLK	Toolik Lake Re	4.92	73		Pn	17 32 32.8	-0.8
TOLK	Toolik Lake Re	4.92	73		Sn	17 33 30.4	0.0
MLY	Manley	5.43	114		Pn	17 32 41.0	+0.4
TTA	Tatalina	5.50	147		Pn	17 32 41.6	0.0
TT01	Tatalina	5.52	147		Pn	17 32 41.9	+0.1
BPAW	Bear Paw Mtn.	5.93	122		Pn	17 32 48.6	+1.1
NEA	Nenana	6.28	114		Pn	17 32 52.7	+0.6
KTH	Kantishna Hill	6.34	125		Pn	17 32 53.0	0.0
MDM	Murphy Dome	6.37	109	Pn	Pn	17 32 51.9	-1.5
BWN	Browne	6.39	117	Pn	Pn	17 32 53.9	+0.1
PPLA	Purkeypile	6.46	133	Pn	Pn	17 32 55.6	+0.7
COLA	College	6.55	109		Pn	17 32 56.8	+1.0
TRF	Thorofare Moun	6.61	124		Pn	17 32 56.2	-0.6
WRH	Wood River Hil	6.69	112		Pn	17 32 57.6	-0.1
CCB	Clear Creek Bu	6.69	110		Pn	17 32 57.9	+0.2
FYU	Fort Yukon	6.82	91	Pn	Pn	17 32 58.1	-1.5
BM03	Burnt Mountain	6.85	84		Pn	17 33 00.1	0.0
MCK	McKinley	6.86	119	Pn	Pn	17 33 00.6	+0.5
IL31		6.95	108		Pn	17 33 01.4	+0.1
ILAR	Eielson Array	6.95	108	Pn	Pn	17 33 02.2	+0.8
	1.4nm,0.3s,baz=302,slow=14,SNR=83						
ILAR				Sn	Sn	17 34 18.1	-2.3
	0.2nm,0.3s,baz=132,slow=26,SNR=3.6						
PRP	Porcupine Dome	7.10	100		Pn	17 33 02.8	-0.7
RND	Reindeer	7.10	121		Pn	17 33 02.9	-0.6
HDA	Harding Lake	7.13	110		Pn	17 33 03.5	-0.3
WAT2	Susitna Watana	7.50	123		Pn	17 33 10.4	+1.3
SPWE	Spurr West	7.73	142		Pn	17 33 13.3	+1.1
DHY	Denali Highway	7.82	119		Pn	17 33 12.8	-0.6
DHY					Sn	17 34 40.6	-1.4
RIDG	Independent Ri	8.27	110	Pn	Pn	17 33 20.4	+0.8
GHO	Glory Hole Cre	8.29	129	Pn	Pn	17 33 19.8	0.0
SML	Sawmill	8.44	128		Pn	17 33 21.6	-0.3
SCRK	Sand Creek	8.44	107	Pn	Pn	17 33 22.1	+0.1
DOT	Dot Lake	8.61	109		Pn	17 33 23.7	-0.4
SCM	Sheep Creek Mo	8.73	125	Pn	Pn	17 33 26.1	+0.2
EPYK	Eagle Plains	10.13	85		Pn	17 33 44.6	-0.3
INK	Inuvik	10.84	73	Pn	Pn	17 33 52.7	-1.8
	0.3nm,0.3s,baz=315,slow=6.0,SNR=16						
INK				Sn	Sn	17 35 43.7	-12
	0.1nm,0.3s,baz=44,slow=7.9,SNR=1.5						
INK	Inuvik	10.84	73		Pn	17 33 53.1	-1.4
KDAK	Kodiak Island	10.91	151	Pn	Pn	17 33 53.7	-2.0
YKA	Yellowknife Ar	20.38	82	P	P	17 35 55.5	-0.4
	0.6nm,0.8s,baz=304,slow=10,SNR=5.6						
PDAR	Pinedale Array	37.37	104	P	P	17 38 34.0	+1.7
	0.1nm,0.4s,baz=303,slow=5.2,SNR=2.0						
ZALV	Zalesovo Beam	48.81	314	P	P	17 40 04.0	-0.3
	0.8nm,0.6s,baz=25,slow=4.9,SNR=3.9						
TXAR	Lajitas Array	51.47	107	P	P	17 40 26.3	+1.4
	0.2nm,0.6s,baz=330,slow=4.8,SNR=5.3						
MKAR	Makanchi Array	55.95	311	P	P	17 40 56.5	-1.0
	0.2nm,0.5s,baz=33,slow=5.8,SNR=4.0						

ATH 03 17:42:15.9, 38°.38N×20°.47E, h12km±1km, ML2.8/10, Error ellipse: s-maj=1.8km s-min=0.6km az=263.0
THE 03 17:42:16.2, 38°.38N×20°.45E, h9km, ML2.8/8, Error ellipse: s-maj=0.8km s-min=0.3km az=286.0
ISC 03 17:42:15.6±0.8, 38°.38N±0°.02×20°.44E±0°.03, h13km±5km, n57, σ0s74/90, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.11**	**74**	P	**Pg**	**17 42 18.4**	**-0.3**
VSK1				S	**Sg**	**17 42 20.3**	**-0.6**
KEF4	**Livadi, Kephal**	**0.12**	**184**	P	**Pg**	**17 42 18.9**	**0.0**
KEF4				S	**Sg**	**17 42 20.8**	**-0.3**
FSK	**Fiskardo**	**0.13**	**52**	P	**Pg**	**17 42 19.0**	**0.0**
FSK				S	**Sg**	**17 42 21.1**	**-0.3**
FSK	**Fiskardo**	**0.13**	**52**	P	**Pg**	**17 42 18.8**	**-0.2**
FSK				S	**Sg**	**17 42 20.9**	**-0.4**
FSK				AML	AML	17 42 21.7	
	comp=E,19028μm,0.3s						
FSK				AML	AML	17 42 24.3	
	comp=N,11998μm,0.4s						
AGT1	**Agia Thekli**	**0.14**	**197**	P	**Pg**	**17 42 19.1**	**0.0**
AGT1				S	**Sg**	**17 42 21.6**	**+0.1**
LXRA	**Lixouri, Kepha**	**0.18**	**179**	P	**Pg**	**17 42 20.0**	**+0.2**
LXRA				S	**Sg**	**17 42 23.0**	**+0.4**
KEF3	**Kipouria, Keph**	**0.19**	**201**	P	**Pg**	**17 42 20.0**	**+0.1**
KEF3				S	**Sg**	**17 42 23.4**	**+0.6**
CHV1	**Chavriata, Kef**	**0.20**	**192**	P	**Pg**	**17 42 20.3**	**+0.2**
CHV1				S	**Sg**	**17 42 23.9**	**+0.8**
ARG2	**Argostoli**	**0.20**	**168**	P	**Pg**	**17 42 20.2**	**0.0**
ARG2				S	**Sg**	**17 42 23.4**	**+0.2**
ARGA	**Argostoli. Kep**	**0.20**	**170**	P	**Pg**	**17 42 20.1**	**-0.1**
ARGA				S	**Sg**	**17 42 23.6**	**+0.4**
KEF2	**Argostoli. Kep**	**0.22**	**169**	P	**Pg**	**17 42 20.2**	**-0.2**
KEF2				S	**Sg**	**17 42 23.7**	**+0.1**
VLS	**Valsamata**	**0.24**	**149**	P	**Pg**	**17 42 20.5**	**-0.2**
VLS				S	**Sg**	**17 42 24.7**	**+0.6**
	comp=N,4μm,0.3s						
VLS	**Valsamata**	**0.24**	**149**	P	**Pg**	**17 42 20.5**	**-0.2**
VLS				S	**Sg**	**17 42 24.4**	**+0.2**
VLS				AML	AML	17 42 24.4	
	comp=E,6552μm,0.3s						
VLS				AML	AML	17 42 26.8	
	comp=N,9956μm,0.4s						
EVGI	**Lefkada island**	**0.30**	**36**	P	**Pg**	**17 42 22.4**	**+0.6**
EVGI				S	**Sg**	**17 42 26.0**	**+0.1**
EVGI	**Lefkada island**	**0.30**	**36**	P	**Pg**	**17 42 22.3**	**+0.5**
EVGI				S	**Sg**	**17 42 26.8**	**+0.9**
KFL	**Anninata**	**0.39**	**134**	P	**Pg**	**17 42 23.3**	**-0.1**
KFL				S	**Sb**	**17 42 29.5**	**-0.7**
	comp=N,3μm,0.2s						
KFL	**Anninata**	**0.39**	**134**	P	**Pg**	**17 42 23.2**	**-0.1**
KFL				S	**Sg**	**17 42 29.1**	**+0.4**
KFL				AML	AML	17 42 30.9	
	comp=E,6812μm,0.3s						
KFL				AML	AML	17 42 31.3	
	comp=N,6434μm,0.2s						
MGNA	**Meganis**	**0.39**	**45**	P	**Pg**	**17 42 23.9**	**+0.3**
MGNA				S	**Sg**	**17 42 28.8**	**0.0**
MGNA				AML	AML	17 42 30.7	
	comp=N,7225μm,0.4s						
MGNA				AML	AML	17 42 30.9	
	comp=E,6003μm,0.4s						
LKD2	**Lefkada island**	**0.45**	**23**	P	**Pg**	**17 42 24.8**	**+0.3**
LKD2	**Lefkada island**	**0.45**	**23**	P	**Pg**	**17 42 24.8**	**+0.3**
LKD2				S	**Sg**	**17 42 30.9**	**+0.4**
LKD2				AML	AML	17 42 39.8	
	comp=N,1330μm,0.3s						
LKD2				AML	AML	17 42 40.0	
	comp=E,1823μm,0.4s						
VTN	**Vitineika**	**0.75**	**128**	P	**Pg**	**17 42 30.3**	**+0.1**
RLS	**Riolos of Patr**	**0.87**	**111**	P	**Pg**	**17 42 32.5**	**-0.1**
RLS	**Riolos of Patr**	**0.87**	**111**	P	**Pg**	**17 42 32.4**	**-0.1**
RLS				S	**Sb**	**17 42 44.1**	**-0.1**
RLS				AML	AML	17 42 52.6	
	comp=E,545μm,0.4s						
RLS				AML	AML	17 42 52.7	
	comp=N,559μm,0.4s						
DRO	**Drossia**	**1.09**	**113**	P	**Pb**	**17 42 36.2**	**-0.2**
DRO				S	**Sn**	**17 42 52.3**	**+0.7**
	comp=N,638nm,0.4s						
DRO	**Drossia**	**1.09**	**113**	P	**Pb**	**17 42 36.2**	**-0.2**
DRO				AML	AML	17 43 01.9	
	comp=N,1488μm,0.5s						
DRO				AML	AML	17 43 03.1	
	comp=E,1175μm,0.6s						
IGT	**Igoumenitsa**	**1.15**	**356**	P	**Pb**	**17 42 37.8**	**+0.4**
EFP	**Efpalio**	**1.16**	**87**	P	**Pb**	**17 42 37.1**	**-0.4**
EFP				S	**Sg**	**17 42 52.9**	**-0.1**
EFP				AML	AML	17 43 03.3	
	comp=N,958μm,0.6s						
EFP				AML	AML	17 43 04.2	
	comp=E,803μm,0.7s						
EVR	**Evrytania**	**1.20**	**63**	P	**Pb**	**17 42 38.0**	**-0.3**
LAKA	**Lakka**	**1.22**	**96**	P	**Pn**	**17 42 37.9**	**-0.6**
LAKA				S	**Sn**	**17 42 55.1**	**+0.2**
	comp=E,168nm,0.5s						
LAKA	**Lakka**	**1.22**	**96**	P	**Pn**	**17 42 38.3**	**-0.2**
LAKA				S	**Sn**	**17 42 55.3**	**+0.5**
LAKA				AML	AML	17 43 03.7	
	comp=N,376μm,0.5s						
LAKA				AML	AML	17 43 07.1	
	comp=E,337μm,0.6s						
SERG	**Sergoula**	**1.27**	**88**	P	**Pn**	**17 42 39.0**	**-0.2**
SERG				S	**Sn**	**17 42 57.0**	**+0.8**
	comp=E,340nm,0.5s						
SERG	**Sergoula**	**1.27**	**88**	P	**Pn**	**17 42 39.0**	**-0.2**
SERG				AML	AML	17 43 06.9	
	comp=N,604μm,0.5s						
SERG				AML	AML	17 43 07.2	
	comp=E,440μm,0.7s						
TRIZ	**Trizonia**	**1.29**	**90**	P	**Pn**	**17 42 38.9**	**-0.4**
TRIZ	**Trizonia**	**1.29**	**90**	P	**Pn**	**17 42 39.1**	**-0.2**
AMT	**Artemida-Makis**	**1.31**	**130**	P	**Pn**	**17 42 39.9**	**+0.2**
AMT				S	**Sg**	**17 42 58.2**	**+0.2**
	comp=E,325nm,0.6s						
AMT	**Artemida-Makis**	**1.31**	**130**	P	**Pb**	**17 42 40.4**	**+0.2**
ALIK	**Aliki, Aigiali**	**1.32**	**95**	P	**Pn**	**17 42 40.0**	**+0.2**
ALIK				S	**Sg**	**17 42 58.2**	**-0.1**
KALE	**Kalithea**	**1.34**	**89**	P	**Pn**	**17 42 40.0**	**-0.1**
KALE				S	**Sg**	**17 42 58.6**	**-0.2**
	comp=E,212nm,0.7s						
KALE	**Kalithea**	**1.34**	**89**	P	**Pn**	**17 42 39.9**	**-0.1**
KLV	**Kalavryta, Ach**	**1.39**	**103**	P	**Pn**	**17 42 41.0**	**+0.2**
KLV	**Kalavryta, Ach**	**1.39**	**103**	P	**Pn**	**17 42 41.2**	**+0.4**
KEK	**Kerkira**	**1.42**	**340**	P	**Pb**	**17 42 42.7**	**+0.7**
MAKR	**Makrakomi, Fth**	**1.47**	**64**	P	**Pn**	**17 42 42.3**	**+0.4**
MAKR				S	**Sb**	**17 43 02.0**	**+0.5**
	comp=E,275nm,0.6s						
MAKR	**Makrakomi, Fth**	**1.47**	**64**	P	**Pb**	**17 42 43.5**	**+0.6**
AGG	**Agios Georgios**	**1.62**	**66**	P	**Pn**	**17 42 44.2**	**+0.3**
AGG				S	**Sn**	**17 43 05.2**	**+0.6**
AGG	**Agios Georgios**	**1.62**	**66**	P	**Pb**	**17 42 45.6**	**+0.3**
TRIP	**Tripoli**	**1.68**	**120**	P	**Pb**	**17 42 47.1**	**+0.6**
ITM	**Ithomi**	**1.68**	**135**	P	**Pb**	**17 42 47.0**	**+0.6**
DID	**Didima**	**2.38**	**111**	P	**Pb**	**17 42 57.3**	**-1.1**
STON	**Ston**	**4.95**	**336**	*i* Pn	**Pn**	**17 43 29.9**	**+0.3**
STON				Sn	**Sn**	**17 44 23.5**	**-3.1**
MAKA	**Makarska**	**5.54**	**333**	*e*Pn	**Pn**	**17 43 37.9**	**+0.1**
MAKA				Sn	**Sn**	**17 44 38.8**	**-2.5**
KIJV	**Kijevo**	**6.39**	**333**	*e*Pn	**Pn**	**17 43 50.5**	**+1.0**
ZIRJ	**Zirje**	**6.39**	**327**	*e*Pn	**Pn**	**17 43 49.7**	**+0.2**
ZIRJ				Sn	**Sn**	**17 44 59.2**	**-3.1**
MORI	**Morici**	**6.54**	**328**	*e*Pn	**Pn**	**17 43 52.5**	**+1.0**
DUGI	**Dugi Otok**	**6.92**	**326**	*e*Pn	**Pn**	**17 43 57.6**	**+1.0**
UDBI	**Udbina**	**7.07**	**332**	*e*Pn	**Pn**	**17 44 00.7**	**+1.9**
NVLJ	**Novalja**	**7.46**	**328**	*e*Pn	**Pn**	**17 44 05.3**	**+1.3**

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*IDC **03** 18:21:22.4±6.8, 14°.14S×166°.99E, h226km±71km, mb3.5/5, mb1 3.6/6, mb1mx3.1/44, mbtmp4.0/6, Error ellipse: s-maj=67.2km s-min=34.7km az=153.0*

*NEIC **03** 18:21:26.0±1.6, 14°.4S±0°.2×167°.0E±0°.3, h263km±12km, mb4.1/13, Error ellipse: s-maj=38.0km s-min=20.8km az=110.0*

ISC 03 18:21:24.3±1.5**, 14°.4S**±0°.1×**167°.1E**±0°.2**, h250**km**, n21, σ1s.05**/22**, mb4.0**/12**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.67**	**185**	P	**Pn**	**18 23 14.3**	**+0.8**
	0.1nm,0.3s,baz=40,slow=10,SNR=2.1						
DZM				S	**S**	**18 24 39.3**	**-2.1**
	baz=216,slow=14,SNR=1.9						
DZM	**Mont Dzumac**	**7.67**	**185**		**Pn**	**18 23 15.3**	**+1.8**
STKA	**Stephens Creek**	**29.10**	**229**	P	**P**	**18 27 03.6**	**+1.6**
	2.2nm,0.5s,baz=47,slow=6.2,SNR=7.1						
STKA	**Stephens Creek**	**29.10**	**229**	P	**P**	**18 27 03.2**	**+1.2**
TOO	**Toolangi**	**30.04**	**216**	P	**P**	**18 27 09.6**	**-0.7**
WR0	**Warramunga Arr**	**31.57**	**255**	P	**P**	**18 27 22.7**	**-1.1**
WR0				IAmb	IAmb	18 27 35.0	
	comp=Z,4.2nm,1.1s						
WB0	**Warramunga Arr**	**31.69**	**256**	P	**P**	**18 27 24.5**	**-0.5**
WB0				IAmb	IAmb	18 27 40.0	
	comp=Z,3.8nm,1.1s						
WB2	**Warramunga Arr**	**31.75**	**255**	P	**P**	**18 27 24.7**	**-0.7**
WB2				IAmb	IAmb	18 27 26.0	
	comp=Z,8.4nm,1.4s						
WRA	**Warramunga Arr**	**31.76**	**255**	P	**P**	**18 27 25.2**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=86,slow=9.5,SNR=25						
AS31	**Alice Springs**	**32.65**	**249**	P	**P**	**18 27 31.9**	**-1.3**
ASAR	**Alice Springs**	**32.65**	**249**	P	**P**	**18 27 32.8**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=77,slow=9.5,SNR=76						
BBOO	**Buckleboo**	**33.67**	**232**	P	**P**	**18 27 42.9**	**+1.0**
KNRA	**Kununurra**	**37.02**	**263**	P	**P**	**18 28 10.5**	**-0.1**
KNRA				IAmb	IAmb	18 28 11.2	
	comp=Z,7.8nm,1.1s						
FORT	**Forrest**	**39.34**	**239**	P	**P**	**18 28 30.1**	**+0.4**
FORT				IAmb	IAmb	18 28 37.7	
	comp=Z,12nm,0.9s						
FITZ	**Fitzroy Crossi**	**39.92**	**259**	P	**P**	**18 28 35.6**	**+0.9**
NWAO	**Narrogin (SRO)**	**48.79**	**239**	P	**P**	**18 29 44.4**	**-0.2**
NWAO	**Narrogin (SRO)**	**48.79**	**239**	P	**P**	**18 29 44.3**	**-0.2**
NWAO				IAmb	IAmb	18 29 52.8	
	comp=Z,27nm,1.6s						
CASY	**Casey**	**63.78**	**202**	P	**P**	**18 31 29.5**	**+0.1**
CASY				IAmb	IAmb	18 31 46.5	
	comp=Z,4.8nm,1.1s						
SONM	**Songino Array**	**82.13**	**324**	P	**P**	**18 33 17.8**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=129,slow=5.9,SNR=2.1						
MKAR	**Makanchi Array**	**96.85**	**316**	P	**P**	**18 34 25.7**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=87,slow=5.9,SNR=3.8						
ARCES	**ARCESS Array B**	**119.88**	**345**	PKP	**PKiKP**	**18 39 43.9**	**-0.5**
	comp=Z,3.9nm,1.0s,baz=333,slow=1.4,SNR=4.1						

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*IDC **03** 18:28:07.5±6.8, 33°.06S×179°.06E, h510km±95km, mb2.5/2, mb1 2.9/3, mb1mx2.7/44, mbtmp3.6/3, Error ellipse: s-maj=137.1km s-min=47.3km az=4.0*

*WEL **03** 18:29:08.0, 37°S±44'×17°8E±3°9, h198km±52km, M2.6/13, MLv2.6/13, Error ellipse: s-maj=0.1km s-min=0.0km az=139.5*

ISC 03 18:28:10.5±2.1**, 33°.0S**±0°.2×**178°.4E**±0°.3**, h500**km**, n20, σ1s.43**/20**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**4.79**	**186**	P	**P**	**18 29 37.1**	**+1.7**
WMGZ	**Waiomatatini S**	**4.82**	**180**	P	**P**	**18 29 37.1**	**+1.4**
PKGZ	**Pakihiroa**	**4.90**	**183**	P	**P**	**18 29 37.0**	**+0.5**
RUGZ	**Raukumara Rang**	**5.01**	**187**	P	**P**	**18 29 38.7**	**+1.2**
PUZ	**Puketiti**	**5.08**	**182**	P	**P**	**18 29 39.2**	**+1.2**
URZ	**Urewera**	**5.37**	**191**	P	**P**	**18 29 40.6**	**-0.1**
	3.0nm,0.3s,baz=326,slow=3.0,SNR=24						
URZ				S	**S**	**18 30 52.3**	**-2.3**
	2.0nm,0.3s,baz=234,slow=24,SNR=15						
URZ	**Urewera**	**5.37**	**191**	P	**P**	**18 29 40.7**	**0.0**
MWZ	**Matawai**	**5.39**	**188**	P	**P**	**18 29 41.2**	**+0.2**
CNGZ	**Carnagh Statio**	**5.49**	**182**	P	**P**	**18 29 43.8**	**+1.9**
RAGZ	**Rawiri**	**5.56**	**188**	P	**P**	**18 29 43.8**	**+1.1**
MUGZ	**Murupara**	**5.64**	**193**	P	**P**	**18 29 44.1**	**+0.8**
RTZ	**Ruatahuna**	**5.74**	**191**	P	**P**	**18 29 43.7**	**-0.6**
TLZ	**Tolley Road**	**5.83**	**203**	P	P	18 29 49.9	+4.8
NMHZ	**Naumai**	**6.24**	**192**	P	**P**	**18 29 51.2**	**+2.0**
BKZ	**Black Stump Fm**	**6.37**	**194**	P	**P**	**18 29 51.8**	**+1.5**
KWHZ	**Kaweka Forest**	**6.63**	**194**	P	**P**	**18 29 54.9**	**+2.0**
BHHZ	**Black Hill Sta**	**6.77**	**196**	P	**P**	**18 29 55.2**	**+0.9**
ASAR	**Alice Springs**	**40.04**	**272**	P	**P**	**18 35 02.6**	**+0.7**
	0.3nm,0.9s,baz=111,slow=7.2,SNR=2.1						
WRA	**Warramunga Arr**	**41.27**	**277**	P	**P**	**18 35 12.2**	**+0.3**
	0.5nm,0.4s,baz=114,slow=7.8,SNR=4.7						
FINES	**FINESS Array B**	**146.40**	**336**	PKPbc	**PKPdf**	**18 46 50.0**	**-2.0**
	1.9nm,0.9s,baz=27,slow=2.1,SNR=4.5						

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*IDC **03** 18:48:07.0±1.4, 68°.16N×162°.31W, h0km, mb3.6/5, mb1 3.9/8, mb1mx3.4/75, mbtmp3.6/8, ML3.3/3, MS2.7/1, Ms1 2.7/1, ms1mx2.1/59, Error ellipse: s-maj=39.9km s-min=19.4km az=178.0*

*AEIC **03** 18:48:08.0±1.0, 67°.73N±0°.08×162°.4W±0°.2, h20km±6km, ML3.6/41, Error ellipse: s-maj=11.3km s-min=9.2km az=183.0*

*NEIC **03** 18:48:08.8±0.9, 67°.75N±0°.07×162°.4W±0°.1, h21km±6km, Error ellipse: s-maj=10.7km s-min=7.6km az=154.0*

ISC 03 18:48:07.4±0.7**, 67°.78N**±0°.07×**162°.33W**±0°.05**, h10**km**, n65, σ1s.48**/71**, mb3.6**/4**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.36**	**322**		**Pb**	**18 48 15.9**	**+0.1**
RDOG				Sg	**Sb**	**18 48 22.3**	**+0.8**
ANM	**Nome**	**3.45**	**202**		**Pn**	**18 49 00.5**	**-0.7**
ANM	**Nome**	**3.45**	**202**		LR	18 49 40.8	
IM03		**3.83**	**114**		**Pn**	**18 49 06.6**	**+0.3**
IM03					LR	18 49 51.1	
COLD	**Coldfoot**	**4.69**	**91**		**Pn**	**18 49 18.1**	**0.0**
TOLK	**Toolik Lake Re**	**4.83**	**74**	P	**Pn**	**18 49 22.5**	**+2.4**
	baz=265						
TOLK				S	**Sn**	**18 50 17.2**	**+1.1**
	baz=265						
TOLK	**Toolik Lake Re**	**4.83**	**74**		**Pn**	**18 49 20.7**	**+0.6**
TOLK	**Toolik Lake Re**	**4.83**	**74**		**Sn**	**18 50 17.9**	**+1.8**
MLY	**Manley**	**5.41**	**115**		**Pn**	**18 49 27.8**	**-0.2**
TTA	**Tatalina**	**5.53**	**149**		**Pn**	**18 49 29.7**	**-0.1**
TT01	**Tatalina**	**5.55**	**149**		**Pn**	**18 49 30.1**	**+0.1**
BPAW	**Bear Paw Mtn.**	**5.92**	**123**		**Pn**	**18 49 35.1**	**0.0**
PS07	**TAPS Pump Stn7**	**6.13**	**107**		**Pn**	**18 49 38.2**	**+0.4**
NEA	**Nenana**	**6.25**	**115**		**Pn**	**18 49 39.9**	**+0.4**
MDM	**Murphy Dome**	**6.33**	**110**		**Pn**	**18 49 41.4**	**+0.7**
KTH	**Kantishna Hill**	**6.33**	**127**		**Pn**	**18 49 41.0**	**+0.2**
BWN	**Browne**	**6.37**	**119**		**Pn**	**18 49 42.3**	**+1.1**
PPLA	**Purkeypile**	**6.47**	**134**		**Pn**	**18 49 43.5**	**+0.7**
TCOL	**CIGO, UAF Yank**	**6.51**	**110**	P	**Pn**	**18 49 44.6**	**+1.5**
	baz=303						
TCOL				S	**Sn**	**18 50 55.8**	**-1.4**
	baz=303						
COLA	**College**	**6.51**	**110**		**Pn**	**18 49 43.6**	**+0.5**
COLA	**College**	**6.51**	**110**		**Sn**	**18 50 57.1**	**-0.2**
POKR	**Poker Plat Res**	**6.53**	**107**	P	**Pn**	**18 49 44.4**	**+0.9**
	baz=300						
POKR				S	**Sn**	**18 50 57.6**	**-0.3**
	baz=300						
POKR	**Poker Plat Res**	**6.53**	**107**		**Pn**	**18 49 43.8**	**+0.4**
TRF	**Thorofare Moun**	**6.60**	**125**		**Pn**	**18 49 45.1**	**+0.6**
CCB	**Clear Creek Bu**	**6.66**	**111**		**Pn**	**18 49 45.5**	**+0.4**
CCB					**Sn**	**18 50 58.5**	**-2.4**
WRH	**Wood River Hil**	**6.66**	**113**		**Pn**	**18 49 45.7**	**+0.6**
FYU	**Fort Yukon**	**6.76**	**92**		**Pn**	**18 49 47.6**	**+1.1**
BM03	**Burnt Mountain**	**6.78**	**85**		**Pn**	**18 49 48.0**	**+1.2**
MCK	**McKinley**	**6.84**	**120**		**Pn**	**18 49 47.9**	**+0.3**
IL31		**6.91**	**109**		**Pn**	**18 49 49.0**	**+0.4**
ILAR	**Eielson Array**	**6.91**	**109**	Pn	**Pn**	**18 49 50.2**	**+1.6**
	15nm,0.3s,baz=303,slow=14,SNR=570						
ILAR				Sn	**Sn**	**18 51 05.7**	**-1.5**
	2.9nm,0.3s,baz=218,slow=8.6,SNR=9.1						
PRP	**Porcupine Dome**	**7.05**	**101**		**Pn**	**18 49 50.7**	**+0.1**
RND	**Reindeer**	**7.09**	**122**		**Pn**	**18 49 51.7**	**+0.6**
HDA	**Harding Lake**	**7.09**	**111**	P	**Pn**	**18 49 51.9**	**+0.7**
	baz=305						
HDA				S	**Sn**	**18 51 08.9**	**-2.8**
	baz=305						
HDA				S	**Sn**	**18 51 08.9**	**-2.8**
	baz=305						
HDA	**Harding Lake**	**7.09**	**111**		**Pn**	**18 49 51.6**	**+0.4**
WAT2	**Susitna Watana**	**7.49**	**124**		**Pn**	**18 49 57.7**	**+1.1**
WAT1	**Susitna Watana**	**7.60**	**124**		**Pn**	**18 49 59.1**	**+1.0**
STLK	**Strandline Lak**	**7.74**	**140**		**Pn**	**18 50 01.1**	**+1.2**
SPWE	**Spurr West**	**7.76**	**143**		**Pn**	**18 50 01.5**	**+1.2**
DHY	**Denali Highway**	**7.80**	**120**		**Pn**	**18 50 01.9**	**+0.9**
RIDG	**Independent Ri**	**8.24**	**111**		**Pn**	**18 50 07.3**	**+0.5**
GHO	**Glory Hole Cre**	**8.29**	**130**		**Pn**	**18 50 06.1**	**-1.5**
SCRK	**Sand Creek**	**8.41**	**108**		**Pn**	**18 50 08.3**	**-0.9**
SML	**Sawmill**	**8.44**	**129**		**Pn**	**18 50 10.0**	**+0.4**
DOT	**Dot Lake**	**8.57**	**110**		**Pn**	**18 50 11.9**	**+0.5**
SCM	**Sheep Creek Mo**	**8.72**	**126**		**Pn**	**18 50 13.8**	**+0.2**
FID	**Port Fidalgo**	**9.83**	**128**	Pn	**Pn**	**18 50 30.0**	**+1.5**
DAWY	**Dawson**	**10.05**	**101**	Pn	**Pn**	**18 50 32.5**	**+0.8**
EPYK	**Eagle Plains**	**10.06**	**86**	P	**Pn**	**18 50 32.9**	**+1.2**
	baz=289						
EPYK	**Eagle Plains**	**10.06**	**86**		**Pn**	**18 50 32.6**	**+0.9**
INK	**Inuvik**	**10.75**	**74**	Pn	**Pn**	**18 50 39.9**	**-1.2**
	0.5nm,0.3s,baz=295,slow=12,SNR=15						
INK				Sn	**Sn**	**18 52 34.5**	**-6.7**
	1.1nm,0.3s,baz=147,slow=18,SNR=11						
INK	**Inuvik**	**10.75**	**74**		**Pn**	**18 50 41.0**	**0.0**
KDAK	**Kodiak Island**	**10.96**	**152**	Pn	**Pn**	**18 50 45.9**	**+1.9**
	0.1nm,0.3s,baz=353,slow=14,SNR=3.2						
KDAK	**Kodiak Island**	**10.96**	**152**		**Pn**	**18 50 43.0**	**-0.9**
BILL	**Bilibino**	**11.75**	**286**		**Pn**	**18 50 53.6**	**-1.3**
A36M	**Sachs Harbour**	**13.26**	**55**	P	**Pn**	**18 51 15.0**	**-0.3**
	baz=270						
C36M	**Paulatuk**	**13.92**	**66**		**Pn**	**18 51 21.3**	**-3.1**
SEY	**Seymchan**	**19.13**	**277**	P	**Pn**	**18 52 32.5**	**+1.5**
	0.0nm,0.3s,baz=14,slow=23,SNR=2.3						
YKA	**Yellowknife Ar**	**20.30**	**82**	P	Pn	18 52 43.5	-1.4
	0.8nm,0.4s,baz=303,slow=10,SNR=13						
MA2	**Magadan**	**21.82**	**271**	LR	LR	19 02 43.9	
	comp=Z,19nm,18.8s,baz=40,slow=40						
PETK	**Petropavlovsk-**	**23.99**	**252**	P	**P**	**18 53 23.2**	**+1.4**
	1.0nm,0.9s,baz=67,slow=5.6,SNR=4.8						
YAK	**Yakutsk**	**28.02**	**291**	P	**P**	**18 53 55.2**	**-2.8**
PDAR	**Pinedale Array**	**37.33**	**105**	P	**P**	**18 55 21.5**	**+1.8**
	0.7nm,0.5s,baz=335,slow=7.6,SNR=8.5						
NVAR	**Mina Array Bea**	**38.07**	**118**	P	**P**	**18 55 28.1**	**+2.1**
	0.5nm,0.5s,baz=326,slow=7.9,SNR=6.1						
TXAR	**Lajitas Array**	**51.43**	**107**	P	**P**	**18 57 14.0**	**+1.6**
	1.2nm,0.6s,baz=336,slow=5.7,SNR=17						

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*BJI **03** 18:49:37.6±0.0, 35°.20N×72°.20E, h40km, mB4.6/16, mb4.3/14, ML4.1/1, Ms3.6/7, Ms7 3.5/5*

*NEIC **03** 18:49:39.2±2.8, 35°.23N±0°.06×72°.19E±0°.08, h39km±7km, mb4.4/27, Mwr3.9/13, Error ellipse: s-maj=10.2km s-min=7.6km az=61.0*

*NEIC **03** 18:49:39.2, 35°.23N×72°.19E, h24km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}8.39; $M_{\theta\theta}$-4.17; $M_{\phi\phi}$-4.22; $M_{r\theta}$6.24; $M_{\theta\phi}$0.52; $M_{\phi r}$0.56; Fault plane solution: $M_0$9.61000×10^{14} NP1:ϕ_s92.53000°, δ67.19000°, λ84.80000°. NP2:ϕ_s285.74000°, δ23.37000°, λ102.16000°. Principal axes: T 10.9985, Plg67.0000°, Azm353.0000°; N -4.2269, Plg5.0000°, Azm95.0000°; P -6.7716, Plg22.0000°, Azm186.0000°;*

*MOS **03** 18:49:40.0±1.1, 35°.32N×72°.23E, h64km, mb4.3/11 Error ellipse: s-maj=9.2km s-min=4.6km az=86.7*

*IDC **03** 18:49:40.2±2.8, 35°.23N×72°.14E, h49km±25km, mb3.6/14, mb1 3.8/18, mb1mx3.5/56, mbtmp4.0/18, ML3.9/4, MS3.2/19, Ms1 3.3/19, ms1mx3.0/64, Error ellipse: s-maj=20.2km s-min=14.8km az=9.0*

*NNC **03** 18:49:41.6±3.2, 35°.24N×72°.25E, h92km±25km, mb4.0, mpv4.5, Error ellipse: s-maj=28.6km s-min=21.1km az=37.0*

ISC 03 18:49:38.5±0.4**, 35°.19N**±0°.04×**72°.16E**±0°.05**, h35**km**, n153, σ2s.28**/157**, mb4.2**/34**, MS3.2**/15**, 10C-8D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIL	**Nilore**	**1.78**	**149**	PN	**Pn**	**18 50 10.8**	**+4.0**
NIL	**Nilore**	**1.78**	**149**		**Pn**	**18 50 10.3**	**+3.6**
THW	**Thamme Wali**	**2.41**	**188**	P	**Pn**	**18 50 18.8**	**+3.3**
KBL	**Kabul**	**2.64**	**257**	PN	**Pn**	**18 50 23.3**	**+4.5**
KBL	**Kabul**	**2.64**	**257**		**Pn**	**18 50 22.8**	**+4.0**
SARP	**Sargodha**	**3.29**	**172**	P	**Pn**	**18 50 29.5**	**+2.1**
JMU	**Jammu**	**3.35**	**136**	*e*P	Pn	18 50 19.5	-8.9
JMU				*e*S	**Sn**	**18 51 04.0**	**-3.0**
THN	**Thein Dam**	**4.04**	**132**	*e*P	**Pn**	**18 50 42.5**	**+4.7**
THN				*e*S	**Sn**	**18 51 30.5**	**+6.7**
GAR	**Garm**	**4.08**	**339**		**Pn**	**18 50 42.3**	**+3.8**
CHGR	**Chuyangaron**	**4.22**	**326**		**Pn**	**18 50 43.0**	**+2.7**
DHRM	**DHARAMSHALA**	**4.53**	**129**	*e*P	**Pn**	**18 50 48.0**	**+3.3**
DHRM				*e*S	**Sn**	**18 51 40.2**	**+4.0**
DHRM				IAML		18 52 05.9	
	comp=E,2μm,1.7s						
DHRM				IAML		18 52 06.1	
	comp=N,1μm,0.6s						
BHK	**Bhakra**	**5.18**	**135**	*e*P	**Pn**	**18 50 58.2**	**+4.7**
BHK				*e*x	x	18 52 03.6	
KSH	**Kashi**	**5.28**	**34**	P	**Pn**	**18 50 53.4**	**-1.6**
KSH				pP		18 51 05.8	
KSH				S	**Sn**	**18 51 48.3**	**-6.4**
KSH				pmax	pmax		
	comp=Z,44nm,0.7s						
KSH				pmax	pmax		
	comp=Z,250nm,4.0s						
KSH				LR	LR		
	comp=N,860nm,7.8s						
KSH				LR	LR		
	comp=E,940nm,7.3s						
KSH				LR	LR		
	comp=Z,1μm,9.5s						
SMLA	**Simla**	**5.83**	**133**	*e*P	**Pn**	**18 51 04.8**	**+2.3**
SMLA				*e*S	**Sn**	**18 52 10.2**	**+2.1**
SMLA				IAML		18 52 46.4	
	comp=N,337nm,0.3s						
SMLA				IAML		18 52 47.0	
	comp=E,465nm,0.2s						
ARSB	**Arslanbob**	**6.16**	**6**	PN	**Pn**	**18 51 09.2**	**+2.1**
ARSB	**Arslanbob**	**6.16**	**6**		**Pn**	**18 51 09.2**	**+2.1**
TAS	**Tashkent**	**6.53**	**341**	PN	**Pn**	**18 51 15.9**	**+3.9**
TAS	**Tashkent**	**6.53**	**341**	Pn	**Pn**	**18 51 15.9**	**+3.9**
AML	**Almayashu**	**7.04**	**9**	P	**Pn**	**18 51 22.0**	**+2.7**
	SNR=67						
UCH	**Uchtor**	**7.27**	**14**	P	**Pn**	**18 51 25.1**	**+2.6**
	SNR=89						
KZA	**Kyzart**	**7.29**	**18**	P	**Pn**	**18 51 25.0**	**+2.2**
	SNR=30						
EKS2	**Erkin-Say**	**7.57**	**9**	P	**Pn**	**18 51 29.5**	**+3.1**
	SNR=51						
AAK	**Ala-Archa**	**7.66**	**13**	P	**Pn**	**18 51 30.6**	**+3.0**
	comp=E,4.0nm,0.3s,baz=177,slow=9.5,SNR=55						
AAK				S	**Sn**	**18 52 53.5**	**+0.2**
	baz=287,slow=19,SNR=1.0						
AAK				LR	LR	18 54 36.9	
	comp=E,303nm,18.5s,baz=166,slow=39						
AAK	**Ala-Archa**	**7.66**	**13**	P	**Pn**	**18 51 30.6**	**+3.0**
	SNR=27						
AAK	**Ala-Archa**	**7.66**	**13**	⇓P	**Pn**	**18 51 30.3**	**+2.7**
	comp=E,15nm,0.8s						
AAK				⇓S	**Sn**	**18 52 55.8**	**+2.6**
	comp=E,30nm,0.9s						
AAK	**Ala-Archa**	**7.66**	**13**	*i* P	**Pn**	**18 51 29.8**	**+2.2**
AAK	**Ala-Archa**	**7.66**	**13**		**Pn**	**18 51 30.3**	**+2.7**
ULHL	**Ulahol**	**7.74**	**23**	P	**Pn**	**18 51 31.2**	**+2.4**
	SNR=20						
KBK	**Karagaybulak**	**7.77**	**15**	P	**Pn**	**18 51 31.7**	**+2.6**
	SNR=15						
NDI	**New Delhi**	**7.78**	**145**	*e*P9	**Pn**	**18 51 30.0**	**+0.8**
NDI				*e*S	**Sn**	**18 52 56.0**	**0.0**
FRU1	**Bishkek**	**7.85**	**13**	P	**Pn**	**18 51 31.6**	**+1.4**
FRU1	**Bishkek**	**7.85**	**13**		**Pn**	**18 51 31.6**	**+1.4**
KDJ	**Kajisay**	**7.96**	**28**	P	**Pn**	**18 51 34.1**	**+2.2**
KDJ	**Kajisay**	**7.96**	**28**		**Pn**	**18 51 34.1**	**+2.2**
KK31	**Karatay Array**	**8.01**	**351**	⇑P	**Pn**	**18 51 34.5**	**+2.2**
	comp=E,25nm,0.5s,baz=178,slow=12,SNR=439						
KK31				⇓S	**Sn**	**18 53 03.2**	**+1.6**
	comp=E,5.9nm,0.5s,baz=339,slow=21,SNR=3.5						
KK31	**Karatay Array**	**8.01**	**351**	P	**Pn**	**18 51 34.5**	**+2.2**
KK31				S	**Sn**	**18 53 03.2**	**+1.6**
KK31	**Karatay Array**	**8.01**	**351**		**Pn**	**18 51 34.5**	**+2.2**
KKAR	**Karatay Array**	**8.01**	**351**	P	**Pn**	**18 51 34.4**	**+2.1**
KKAR	**Karatay Array**	**8.01**	**351**		**Pn**	**18 51 34.4**	**+2.1**
CHMS	**Chumysh**	**8.06**	**14**	P	**Pn**	**18 51 35.7**	**+2.7**
	SNR=29						
TKM2	**Tokmak 2**	**8.17**	**18**	P	**Pn**	**18 51 37.3**	**+2.6**
	SNR=29						
TKM2	**Tokmak 2**	**8.17**	**18**	⇑P	**Pn**	**18 51 36.8**	**+2.1**
	comp=E,6.1nm,0.5s						
TKM2	**Tokmak 2**	**8.17**	**18**	P	**Pn**	**18 51 36.8**	**+2.1**
USP	**Ospenovka**	**8.27**	**12**	P	**Pn**	**18 51 38.9**	**+3.0**
	SNR=7.7						
PRZ	**Przheval'sk**	**8.76**	**32**	P	**Pn**	**18 51 45.0**	**+2.2**
PRZ	**Przheval'sk**	**8.76**	**32**		**Pn**	**18 51 45.0**	**+2.2**
MDOK	**Medeo**	**8.82**	**24**	⇑P	**Pn**	**18 51 45.6**	**+2.0**
	comp=E,12nm,0.6s						
MDOK	**Medeo**	**8.82**	**24**	P	**Pn**	**18 51 45.6**	**+2.0**
KNDC	**Almaty**	**8.84**	**23**	⇓P	**Pn**	**18 51 46.7**	**+2.9**
	comp=E,34nm,0.9s						
KNDC	**Almaty**	**8.84**	**23**	P	**Pn**	**18 51 46.7**	**+2.9**
PDGK	**Podgornoye**	**9.91**	**33**	⇑P	**Pn**	**18 51 59.4**	**+0.8**
	comp=E,11nm,0.8s						
PDGK	**Podgornoye**	**9.91**	**33**	P	**Pn**	**18 51 59.4**	**+0.8**
GEYT	**Alibeck**	**11.62**	**288**	P	**Pn**	**18 52 22.5**	**+0.6**
	comp=E,0.3nm,0.3s,baz=111,slow=11,SNR=5.8						
GEYT				S	**Sn**	**18 54 31.3**	**+1.0**

comp=E,0.3nm,0.3s,baz=91,slow=18,SNR=1.3
GEYT LR LR 18 58 35.0
comp=E,25nm,19.9s,baz=165,slow=46
BHUJ Bhuj 12.09 191 *ex* Pn 18 52 20.8 -7.4
BHUJ *eS* **Sn** **18 54 40.3 -1.5**
BHPL Bhopal 12.76 158 *ex* **Pn** **18 52 33.7 -3.7**
BHPL *eS* **Sn** **18 54 54.0 -4.3**
OTUK Ortayu 13.05 1 ⇑P **Pn** **18 52 40.3 -0.9**
comp=E,8.2nm,1.1s
OTUK Ortayu 13.05 1 P **Pn** **18 52 40.3 -0.9**
MAKZ Makanchi 13.76 29 ⇓P **Pn** **18 52 49.6 -1.3**
comp=E,4.3nm,0.8s
MAKZ Makanchi 13.76 29 P **Pn** **18 52 49.5 -1.5**
MAKZ Makanchi 13.76 29 P **Pn** **18 52 49.5 -1.5**
MK31 Makanchi Array 13.88 30 P **Pn** **18 52 52.6 0.0**
comp=E,4.0nm,0.8s,baz=212,slow=13,SNR=29
MK31 Makanchi Array 13.88 30 P **Pn** **18 52 52.2 -0.4**
MK31 Makanchi Array 13.88 30 P **Pn** **18 52 52.2 -0.4**
MKAR Makanchi Array 13.88 30 P **Pn** **18 52 52.6 +0.1**
comp=E,0.1nm,0.3s,baz=211,slow=14,SNR=37
MKAR LR LR 18 58 45.0
comp=E,199nm,19.3s,baz=242,slow=39
MKAR Makanchi Array 13.88 30 *eP* **Pn** **18 52 53.1 +0.5**
WMQ Urumqi 14.75 50 *eP* **Pn** **18 53 06.4 +1.9**
KURBB Kurchatov Arra 16.11 15 P **Pn** **18 53 18.9 -3.2**
comp=E,0.0nm,0.3s,baz=207,slow=12,SNR=26
KURBB Kurchatov Arra 16.11 15 ⇓P **Pn** **18 53 18.3 -3.8**
comp=E,8.6nm,0.7s
KURK Kurchatov 16.21 15 *i* P **Pn** **18 53 19.2 -4.2**
KURK pmax pmax
comp=Z,10.0nm,0.9s
KURK Kurchatov 16.21 15 P **Pn** **18 53 19.9 -3.6**
AB31 Akbulak array 16.69 331 ⇑P **Pn** **18 53 29.3 -0.2**
comp=Z,2.8nm,0.4s,baz=139,slow=13,SNR=52
AB31 Akbulak array 16.69 331 P **Pn** **18 53 29.2 -0.2**
WSAR Wadi Sarin 16.75 228 LR LR 19 01 52.1
comp=Z,60nm,20.2s,baz=82,slow=44
LSA Lhasa 16.93 104 P **Pn** **18 53 31.7 -1.4**
LSA pmax pmax
comp=Z,5.0nm,0.8s
LSA Lhasa 16.93 104 P **Pn** **18 53 31.7 -1.4**
BVAR Borovoye Array 17.88 357 P **Pn** **18 53 42.3 -1.9**
comp=Z,0.5nm,0.3s,baz=163,slow=12,SNR=42
BRVK Borovoye 17.92 356 ⇑P **Pn** **18 53 42.3 -2.4**
comp=Z,10nm,0.8s
BRVK Borovoye 17.92 356 *ce*P **Pn** **18 53 42.5 -2.2**
BRVK pmax pmax
comp=Z,8.0nm,0.7s
BRVK Borovoye 17.92 356 P **Pn** **18 53 42.7 -2.0**
BRVK IAmb IAmb 18 53 45.0
comp=Z,11nm,0.8s
DGZ Jazzator, Alta 18.31 33 *i* P **P** **18 53 49.5 -0.1**
DGZ pmax pmax
comp=Z,6.0nm,0.6s
AKTO Aktyubinsk 18.39 330 P **Pn** **18 53 51.3 +0.8**
comp=Z,1.6nm,0.3s,baz=141,slow=8.1,SNR=22
AKTO LR LR 19 01 21.9
comp=Z,56nm,20.0s,baz=141,slow=38
AKTO Aktyubinsk 18.39 330 ⇑P **Pn** **18 53 50.6 +0.1**
comp=Z,14nm,1.1s
HYB Hyderabad 18.59 161 *i* P **Pn** **18 53 54.5 +1.3**
HYB *eS* **Sn** **18 57 20.5 +0.4**
SHL Shillong 19.50 114 P **P** **18 54 00.3 -2.6**
SHL pmax pmax
comp=Z,8.0nm,0.5s
SHL Shillong 19.50 114 P **P** **18 54 00.3 -2.6**
SHL IAmb IAmb 18 54 09.0
comp=Z,7.6nm,0.5s
ZAA0 Zalesovo Array 20.75 21 ⇓P **P** **18 54 14.7 -1.4**
comp=Z,2.9nm,1.1s
ZAA0 Zalesovo Array 20.75 21 P **P** **18 54 14.6 -1.4**
ZAA0 IAmb IAmb 18 54 24.7
comp=Z,15nm,1.1s
ZALV Zalesovo Beam 20.75 21 P **P** **18 54 14.9 -1.0**
comp=Z,7.1nm,0.5s,baz=217,slow=11,SNR=39
ZALV LR LR 19 02 38.2
comp=Z,82nm,19.0s,baz=212,slow=38
GTA Gaotai 22.36 71 *eP* P 18 54 43.6 +10
GTA pP sP 18 55 02.3 +13
GTA sP pP 18 55 13.2 +29
GTA pmax pmax
comp=Z,4.0nm,1.1s
SVE Sverdlovsk 23.01 344 *eP* **P** **18 54 46.3 +6.2**
SVE pmax pmax
comp=Z,10.0nm,1.0s
ZEI Tsey 23.16 298 *eP* **P** **18 54 48.3 +6.3**
ZEI pmax pmax
comp=Z,2.0nm,0.6s
ARU Arti 23.18 341 P **P** **18 54 40.7 -1.1**
comp=Z,0.5nm,0.3s,baz=120,slow=8.1,SNR=2.7
ARU LR LR 19 04 39.5
comp=Z,117nm,21.1s,baz=152,slow=39
ARU Arti 23.18 341 *d* *iP* **P** **18 54 40.1 -1.7**
ARU 18 55 04.5
ARU S **S** **18 58 48.0 -2.9**
ARU SS Sn 18 59 16.0 +6.3
ARU pmax pmax
comp=Z,5.0nm,1.0s
ARU Arti 23.18 341 P **P** **18 54 40.0 -1.7**
ARU IAmb IAmb 18 54 51.9
comp=Z,8.6nm,1.0s
AKH Akhalkalaki 23.28 294 P **P** **18 54 42.1 -1.0**
AKH pmax pmax
comp=Z,12nm,1.4s
AKH Akhalkalaki 23.28 294 P **P** **18 54 42.1 -1.0**
AKH IAmb IAmb 18 54 54.2
comp=Z,12nm,1.4s
KIV Kislovodsk 24.25 300 *eP* **P** **18 54 51.9 -0.3**
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV MLR MLR
comp=Z,76nm,14.0s
MOY Mondy 26.40 42 *eP* P 18 55 22.2 +11
ZAK Zakamensk 27.18 46 *eP* **P** **18 55 19.1 +0.5**
ZAK pmax pmax
comp=Z,3.0nm,1.1s
KIRV Kirov 27.83 334 LR LR 19 07 44.3
comp=Z,26nm,20.3s,baz=210,slow=39
SONM Songino Array 28.34 53 P **P** **18 55 29.9 +0.8**
comp=Z,1.1nm,0.7s,baz=253,slow=10,SNR=12
SONM LR LR 19 07 56.3
comp=Z,59nm,18.2s,baz=250,slow=39
SONM Songino Array 28.34 53 *eP* **P** **18 55 30.2 +1.1**
SONM pmax pmax
comp=Z,1.0nm,0.7s
CHTO Chiang Mai 28.77 118 P **P** **18 55 33.4 +0.4**
CHTO pmax pmax
comp=Z,2.0nm,0.7s
CHTO Chiang Mai 28.77 118 P **P** **18 55 33.4 +0.4**
CM31 Chiang Mai Arr 29.00 118 P **P** **18 55 35.1 0.0**
CMAR Chiang Mai Arr 29.00 118 P **P** **18 55 35.6 +0.5**
comp=Z,0.7nm,0.5s,baz=300,slow=8.1,SNR=8.8
CMAR LR LR 19 10 11.5
comp=Z,28nm,19.6s,baz=295,slow=42
BR131 Keskin Array S 30.75 290 P **P** **18 55 50.1 -0.4**
BR131 pmax pmax
comp=Z,1.0nm,0.7s
BR131 Keskin Array S 30.75 290 P **P** **18 55 50.1 -0.4**
BRTR Keskin Array B 30.75 290 P **P** **18 55 52.4 +1.8**
comp=Z,0.5nm,0.7s,baz=104,slow=10,SNR=4.3
BRTR Keskin Array B 30.75 290 *eP* **P** **18 55 53.2 +2.6**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
HHC Hu-ho-hao-te 31.36 68 P **P** **18 55 55.7 -0.2**
HHC pmax pmax
comp=Z,10.0nm,0.9s
HHC pmax pmax
comp=Z,64nm,5.6s
PBKT Sadao Pong 31.69 118 P **P** **18 55 59.8 +0.9**
KLMR Klimovskoe 33.08 331 *eP* **P** **18 56 09.4 -1.1**
KLMR pmax pmax
comp=Z,9.0nm,1.1s
KLMR Klimovskoe 33.08 331 *eP* **P** **18 56 09.5 -1.1**
KLMR AMP 18 56 17.5
comp=Z,9.0nm,1.1s
NRIK Noril'sk 35.26 9 P **P** **18 56 30.0 +0.7**
comp=Z,3.3nm,0.9s,baz=183,slow=3.5,SNR=5.5
NRIK LR LR 19 12 45.9
comp=Z,90nm,18.1s,baz=204,slow=39
NRIK Noril'sk 35.26 9ll *eP* **P** **18 56 29.1 -0.2**
IDI Anoyia 38.32 284 P **P** **18 56 53.6 -2.2**
FIA1 FINESS Array S 39.10 327 P **P** **18 56 59.4 -2.5**
FIA1 IAmb IAmb 18 57 11.7
comp=Z,8.8nm,1.0s
FINES FINESS Array B 39.10 327 P **P** **18 57 02.1 +0.2**
comp=Z,1.9nm,0.6s,baz=125,slow=10,SNR=12
FINES LR LR 19 14 05.5
comp=Z,39nm,21.8s,baz=162,slow=38
FINES FINESS Array B 39.10 327 *eP* **P** **18 57 02.5 +0.5**
FINES pmax pmax
comp=Z,2.0nm,0.6s
FNA Florina 39.96 294 P **P** **18 57 07.9 -1.6**
FNA pmax pmax
comp=Z,7.0nm,1.2s
FNA Florina 39.96 294 P **P** **18 57 07.8 -1.6**
FNA IAmb IAmb 18 57 42.4
comp=Z,7.0nm,1.2s
IPM Ipoh 40.56 132 P **P** **18 57 14.1 -0.6**
IPM IAmb IAmb 18 57 15.3
comp=Z,5.1nm,0.6s
GSI Gunungsitoli 41.18 139 P **P** **18 57 19.9 +0.1**
GSI IAmb IAmb 18 57 42.8
comp=Z,10nm,1.2s
ARCES ARCESS Array B 42.71 338 P **P** **18 57 31.5 -0.2**
comp=Z,1.8nm,0.7s,baz=109,slow=8.0,SNR=12
ARCES LR LR 19 16 34.8
comp=Z,73nm,19.1s,baz=146,slow=38
ARE0 ARCESS Array S 42.71 338 P **P** **18 57 30.8 -0.9**
KSRS Korea Array 44.43 70 LR LR 19 19 29.6
comp=Z,26nm,18.2s,baz=306,slow=40
GERES GERESS Array B 44.46 307 LR LR 19 19 37.2
comp=Z,16nm,19.5s,baz=88,slow=40
KLR Kul'dur 45.17 53 LR LR 19 18 53.4
comp=Z,39nm,18.4s,baz=244,slow=39
NC405 NORSAR Array S 45.76 324 P **P** **18 57 56.1 0.0**
NC602 NORSAR Array S 45.81 323 P **P** **18 57 56.1 -0.4**
NORES NORESS Array B 45.81 323 P **P** **18 57 56.2 -0.3**
NORES pmax pmax
comp=Z,1.0nm,0.3s
NC303 NORSAR Array S 45.94 324 P **P** **18 57 57.6 0.0**
NB201 NORSAR Array S 45.96 324 P **P** **18 57 57.2 -0.6**
NB2 NORSAR Subarra 45.99 324 P **P** **18 57 57.1 -1.0**
comp=Z,1.3nm,0.5s,baz=98,slow=7.9
NOA NORSAR Array B 45.99 324 P **P** **18 57 57.5 -0.5**
comp=Z,1.5nm,0.6s,baz=97,slow=7.7,SNR=10
NOA LR LR 19 20 38.0
comp=Z,19nm,18.4s,baz=110,slow=40
NC204 NORSAR Array S 46.23 324 P **P** **18 57 59.6 -0.3**
NC204 IAmb IAmb 18 58 11.2
comp=Z,26nm,1.3s
SPA0 Spitsbergen Ar 48.98 347 P **P** **18 58 21.9 +0.9**
SEY Seymchan 54.99 33 P **P** **18 59 06.1 +0.3**
comp=Z,0.9nm,0.8s,baz=274,slow=11,SNR=4.8
DAG Danmarks Havn 56.25 344 P **P** **18 59 16.1 +1.4**
DAG pmax pmax
comp=Z,4.0nm,1.0s
PETK Petropavlovsk- 60.26 44 LR LR 19 27 40.8
comp=Z,31nm,18.1s,baz=238,slow=38
SUMG Summit 62.60 341 P **P** **18 59 59.5 +0.4**
SUMG pmax pmax
comp=Z,6.0nm,0.9s
SUMG Summit 62.60 341 P **P** **18 59 59.5 +0.4**
SUMG IAmb IAmb 19 00 00.6
comp=Z,5.6nm,0.9s
TOA0 Torodi Ar. Sit 66.64 270 P **P** **19 00 23.8 -2.0**
TOA0 IAmb IAmb 19 00 40.9
comp=Z,4.8nm,1.2s
TORD Torodi Ar. Bea 66.64 270 P **P** **19 00 25.1 -0.7**
comp=Z,0.6nm,0.5s,baz=51,slow=6.5,SNR=7.7
INK Inuvik 75.04 10 P **P** **19 01 16.3 +0.3**
INK pmax pmax
comp=Z,2.0nm,0.8s
INK Inuvik 75.04 10 P **P** **19 01 16.3 +0.3**
INK IAmb IAmb 19 01 16.5
comp=Z,1.9nm,0.8s
C36M Paulatuk 75.09 6 P **P** **19 01 15.7 -0.5**
C36M IAmb IAmb 19 01 16.2
comp=Z,3.1nm,0.6s
NEA Nenana 75.43 17 P **P** **19 01 17.4 -0.9**
NEA IAmb IAmb 19 01 22.6
comp=Z,7.0nm,1.6s
WRA Warramunga Arr 80.50 122 P **P** **19 01 47.5 +0.5**
comp=Z,0.4nm,0.9s,baz=313,slow=6.5,SNR=2.1
WRA Warramunga Arr 80.50 122 *eP* P 19 01 54.5 +7.4
WRA pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 82.51 3 P **P** **19 01 56.7 -0.4**
comp=Z,1.9nm,0.6s,baz=351,slow=4.9,SNR=22
YKA LR LR 19 43 23.7
comp=Z,24nm,18.4s,baz=0.0,slow=39
ASAR Alice Springs 82.73 125 P **P** **19 01 59.2 +0.4**
comp=Z,0.3nm,0.8s,baz=292,slow=4.9,SNR=2.6

*INET **03** 18:52:40.8, 15.73N×88.17W, h31km, ML4.7*
*SNET **03** 18:52:42.6±1.9, 15.34N×87.86W, h9km±47km, ML4.3*
*UCR **03** 18:52:42.4±1.2, 15.37N×87.88W, h8km±32km, ML4.2*
*IDC **03** 18:52:43.3±1.4, 15.29N×87.94W, h0km, mb3.3/2, mb1 3.8/6, mb1mx3.5/46, mbtmp3.5/6, ML3.3/4, MS2.3/2, Ms1 2.3/2, ms1mx2.1/26, Error ellipse: s-maj=20.8km s-min=15.5km az=7.0*
ISC 03 18:52:43.1±3.7, 15.35N±0.05×87.90W±0.06, h10km±24km, n34, σ1s31/52, Honduras

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ESQI	**Esquipulas**	**1.60**	**241**	*eP*	**Pn**		**18 53 11.7**	**0.0**
ESQI				*eS*	**Sb**		**18 53 33.7**	**+0.5**
ESQI				IAML			18 53 43.5	
	comp=Z,1μm,0.5s							
FAGO	**Alcalda de S**	**1.66**	**187**	*eP*	**Pn**		**18 53 10.5**	**-1.9**
FAGO				*eS*	**Sn**		**18 53 31.5**	**-2.4**
FAGO				IAML			18 53 32.7	
	comp=Z,1μm,0.4s							
FAGO	**Alcalda de S**	**1.66**	**187**	*eP*	**Pn**		**18 53 10.5**	**-1.9**
FAGO				*eS*	**Sn**		**18 53 31.5**	**-2.4**
FAGO				IAML			18 53 32.7	
	comp=Z,1μm,0.4s							
MTO3	**Montecristo**	**1.70**	**236**	*eP*	**Pn**		**18 53 12.8**	**-0.4**
MTO3				*eS*	**Sb**		**18 53 36.2**	**0.0**
MTO3	**Montecristo**	**1.70**	**236**	*eP*	**Pn**		**18 53 12.8**	**-0.4**
MTO3				*eS*	**Sb**		**18 53 36.2**	**0.0**
PACA	**Pacayal**	**1.92**	**192**	*eP*	**Pn**		**18 53 15.0**	**-1.1**
PACA				*eS*	**Sn**		**18 53 40.3**	**-0.1**
PACA				IAML			18 53 44.6	
	comp=Z,16μm,0.5s							
PACA	**Pacayal**	**1.92**	**192**	*eP*	**Pn**		**18 53 15.0**	**-1.1**
PACA				*eS*	**Sn**		**18 53 40.3**	**-0.1**
PACA				IAML			18 53 44.6	
	comp=Z,16μm,0.5s							
BLLM	**Bellamira**	**1.93**	**190**	*eP*	**Pn**		**18 53 15.3**	**-0.8**
BLLM	**Bellamira**	**1.93**	**190**	*eP*	**Pn**		**18 53 15.3**	**-0.8**
TECA	**Tecapa**	**1.94**	**198**	*eP*	**Pn**		**18 53 15.3**	**-1.1**
TECA	**Tecapa**	**1.94**	**198**	*eP*	**Pn**		**18 53 15.3**	**-1.1**
COEB	**Comit de Eme**	**1.94**	**198**	*eP*	**Pn**		**18 53 16.2**	**-0.2**
COEB				*eS*	**Sn**		**18 53 41.6**	**+0.6**
COEB				IAML			18 53 52.7	
	comp=Z,2μm,0.4s							
COEB	**Comit de Eme**	**1.94**	**198**	*eP*	**Pn**		**18 53 16.2**	**-0.2**
COEB				*eS*	**Sn**		**18 53 41.6**	**+0.6**
COEB				IAML			18 53 52.7	
	comp=Z,2μm,0.4s							
LBRS	**Las Brisas**	**1.95**	**215**	*eP*	**Pn**		**18 53 16.1**	**-0.4**
LBRS	**Las Brisas**	**1.95**	**215**	*eP*	**Pn**		**18 53 16.1**	**-0.4**
LCY	**Lacayo**	**1.96**	**191**	*eP*	**Pn**		**18 53 15.9**	**-0.7**
LCY	**Lacayo**	**1.96**	**191**	*eP*	**Pn**		**18 53 15.9**	**-0.7**
COEG	**Centro de Oper**	**1.97**	**209**	*eP*	**Pn**		**18 53 16.2**	**-0.5**
COEG				*eS*	**Sb**		**18 53 43.1**	**-0.7**
COEG				IAML			18 53 50.8	
	comp=Z,1μm,0.4s							
COEG	**Centro de Oper**	**1.97**	**209**	*eP*	**Pn**		**18 53 16.2**	**-0.5**
COEG				*eS*	**Sb**		**18 53 43.1**	**-0.7**
COEG				IAML			18 53 50.8	
	comp=Z,1μm,0.4s							
LCND	**La Caada**	**2.03**	**180**	*eP*	**Pn**		**18 53 16.4**	**-1.2**
LCND				*eS*	**Sn**		**18 53 43.5**	**+0.4**
LCND				IAML			18 53 46.2	
	comp=Z,3μm,0.2s							
LCND	**La Caada**	**2.03**	**180**	*eP*	**Pn**		**18 53 16.4**	**-1.2**
LCND				*eS*	**Sn**		**18 53 43.5**	**+0.4**
LCND				IAML			18 53 46.2	
	comp=Z,3μm,0.2s							
LFRS	**El Faro**	**2.05**	**213**	*eP*	**Pn**		**18 53 18.0**	**0.0**
LFRS	**El Faro**	**2.05**	**213**	*eP*	**Pn**		**18 53 18.0**	**0.0**
CNCH	**Conchagua**	**2.07**	**178**	*eP*	**Pn**		**18 53 17.0**	**-1.1**
CNCH				*eS*	**Sb**		**18 53 45.4**	**-1.4**
CNCH				IAML			18 53 48.8	
	comp=Z,8μm,0.3s							
CNCH	**Conchagua**	**2.07**	**178**	*eP*	**Pn**		**18 53 17.0**	**-1.1**

*NEIC **03** 19:22:51.9±1.3, 6.88S×0.09×155.4E±0.2, h35km±2km, mb4.3/16, Error ellipse: s-maj=26.1km s-min=14.7km az=79.0*
*IDC **03** 19:22:56.9±2.1, 6.89S×155.31E, h79km±18km, mb3.6/14, mb1 3.7/17, mb1mx3.6/47, mbtmp3.9/17, MS3.1/4, Ms1 3.0/4, ms1mx2.6/33, Error ellipse: s-maj=17.0km s-min=13.8km az=66.0*
ISC 03 19:22:53.4±0.6, 6.94S±0.07×155.53E±0.08, h50km, n41, σ1s52/41, mb4.1/20, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
RABL	**Rabaul**	**4.32**	**309**			**Pn**	**19 23 58.9**	**+2.3**
RABL					Sn	**Sn**	**19 24 51.8**	**+5.9**
KRVT	**Keravat (AS076**	**4.36**	**307**	P		**Pn**	**19 23 56.9**	**-0.3**
	3.5nm,0.3s,baz=272,slow=14,SNR=3.1							
KRVT				S		**Sn**	**19 24 46.6**	**-0.1**
	8.4nm,0.3s,baz=231,slow=23,SNR=3.7							
KRVT				LR	LR		19 25 58.9	
	comp=Z,209nm,19.1s,baz=144,slow=44							
HNR	**Honiara**	**5.03**	**120**	P		Pn	19 24 12.7	+6.4
	5.5nm,0.3s,baz=268,slow=3.8,SNR=5.1							
HNR				LR	LR		19 26 17.5	
	comp=Z,275nm,19.3s,baz=256,slow=38							
HNR	**Honiara**	**5.03**	**120**			Pn	19 24 13.4	+7.1
HNR					Sn	Sn	19 25 15.6	+12
PMG	**Port Moresby**	**8.64**	**253**		Pn	**Pn**	**19 24 57.8**	**+1.9**
PMG					Sn	**Sn**	**19 26 33.2**	**+1.2**
DZM	**Mont Dzumac**	**18.36**	**146**	P		Pn	**19 27 08.1**	**+3.4**
	0.2nm,0.3s,baz=317,slow=18,SNR=1.4							
DZM	**Mont Dzumac**	**18.36**	**146**	P		**Pn**	**19 27 07.1**	**+2.5**
WR0	**Warramunga Arr**	**24.12**	**236**	P		**P**	**19 28 04.9**	**+0.1**
WR0				IAmb	IAmb		19 28 15.9	
	comp=Z,5.6nm,0.9s							
WB2	**Warramunga Arr**	**24.27**	**236**	P		**P**	**19 28 05.4**	**-0.7**
WB2				IAmb	IAmb		19 28 17.7	
	comp=Z,7.4nm,0.9s							
WRA	**Warramunga Arr**	**24.28**	**236**	P		**P**	**19 28 05.7**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=60,slow=9.5,SNR=26							
WRA				PcP		**PcP**	**19 31 45.8**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=63,slow=2.7,SNR=5.1							
SIJI	**Sorong**	**24.93**	**283**	P		**P**	**19 28 11.9**	**-0.4**
	comp=Z,3.0nm,0.6s,baz=61,slow=17,SNR=4.5							
AS31	**Alice Springs**	**26.60**	**229**	P		**P**	**19 28 25.8**	**-1.5**
ASAR	**Alice Springs**	**26.60**	**229**	P		**P**	**19 28 26.4**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=62,slow=9.4,SNR=9.9							
ASAR				PcP		**PcP**	**19 31 50.9**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=76,slow=2.2,SNR=6.0							
H11S3	**WAKE ISLAND Hy**	**27.57**	**23**	T		T	19 56 55.3	
	baz=203,slow=74,SNR=26							
H11S2	**WAKE ISLAND Hy**	**27.57**	**23**	T		T	19 56 55.9	
	baz=203,slow=74,SNR=29							
H11S1	**WAKE ISLAND Hy**	**27.59**	**23**	T		T	19 56 54.3	
	baz=203,slow=74,SNR=22							
STKA	**Stephens Creek**	**28.01**	**206**	P		**P**	**19 28 39.2**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=24,slow=22,SNR=1.6							
STKA				LR		LR	19 38 40.0	
	comp=Z,38nm,19.5s,baz=24,slow=34							
STKA	**Stephens Creek**	**28.01**	**206**	P		**P**	**19 28 39.2**	**-0.6**
FITZ	**Fitzroy Crossi**	**31.16**	**246**	P		**P**	**19 29 06.4**	**-1.4**
FITZ				IAmb	IAmb		19 29 12.8	
	comp=Z,8.1nm,1.4s							
KKM	**Kota Kinabalu**	**41.29**	**287**	P		**P**	**19 30 33.0**	**-1.5**
KKM				IAmb	IAmb		19 30 42.8	
	comp=Z,11nm,1.1s							
KSRS	**Korea Array**	**51.14**	**332**	P		**P**	**19 31 52.5**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=148,slow=7.2,SNR=1.1							
PEA0B	**Petropavlovsk-**	**59.85**	**2**	P		**P**	**19 32 54.1**	**+0.4**
PETK	**Petropavlovsk-**	**59.85**	**2**	P		**P**	**19 32 54.1**	**+0.5**
	comp=Z,2.3nm,0.7s,baz=150,slow=6.3,SNR=8.4							
PETK				LR		LR	19 54 20.9	
	comp=Z,8.7nm,21.9s,baz=242,slow=32							
CM31	**Chiang Mai Arr**	**61.24**	**295**	P		**P**	**19 33 03.6**	**-0.3**
CMAR	**Chiang Mai Arr**	**61.24**	**295**	P		**P**	**19 33 02.5**	**-1.4**
	comp=Z,2.1nm,0.6s,baz=122,slow=5.4,SNR=28							
CHTO	**Chiang Mai**	**61.35**	**296**	P		**P**	**19 33 04.2**	**-0.5**
CHTO				IAmb	IAmb		19 33 14.6	
	comp=Z,2.7nm,1.1s							
MA2	**Magadan**	**66.41**	**357**	P		**P**	**19 33 36.3**	**-0.8**
	comp=Z,1.9nm,0.6s,baz=211,slow=6.7,SNR=5.7							
MA2	**Magadan**	**66.41**	**357**	P		**P**	**19 33 36.7**	**-0.4**
MA2				IAmb	IAmb		19 33 38.0	
	comp=Z,1.9nm,0.7s							
SONM	**Songino Array**	**69.58**	**327**	P		**P**	**19 33 55.9**	**-1.5**
	comp=Z,0.5nm,0.8s,baz=108,slow=4.7,SNR=3.2							
SEY	**Seymchan**	**69.72**	**358**	P		**P**	**19 33 57.4**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=185,slow=24,SNR=2.0							
ANM	**Nome**	**77.03**	**16**	P		**P**	**19 34 40.9**	**+0.2**
QSPA	**South Pole Qui**	**83.03**	**180**	P		**P**	**19 35 14.1**	**+0.8**
ILAR	**Eielson Array**	**83.13**	**21**	P		**P**	**19 35 13.0**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=278,slow=2.5,SNR=4.3							
MKAR	**Makanchi Array**	**83.72**	**319**	P		**P**	**19 35 15.2**	**-1.9**
	comp=Z,0.2nm,0.4s,baz=97,slow=6.0,SNR=1.6							
TOLK	**Toolik Lake Re**	**84.41**	**18**	P		**P**	**19 35 20.7**	**+0.5**
TOLK				IAmb	IAmb		19 35 22.4	
	comp=Z,2.5nm,1.1s							
EPYK	**Eagle Plains**	**87.61**	**22**	P		**P**	**19 35 37.2**	**+1.1**
INK	**Inuvik**	**89.48**	**21**	P		**P**	**19 35 45.0**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=260,slow=3.6,SNR=7.6							
INK	**Inuvik**	**89.48**	**21**	P		**P**	**19 35 45.0**	**+0.3**
INK				IAmb	IAmb		19 36 02.9	
	comp=Z,3.3nm,1.4s							
YKA	**Yellowknife Ar**	**96.04**	**28**	P		**P**	**19 36 15.3**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=260,slow=4.2,SNR=6.7							
BDFB	**Brasilia**	**147.64**	**134**	PKPbc		**PKPbc**	**19 42 34.1**	**+0.5**
	comp=Z,2.9nm,0.5s,baz=156,slow=4.6,SNR=6.1							
TORD	**Torodi Ar. Bea**	**153.52**	**286**	PKPbc		**PKPbc**	**19 42 46.5**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=63,slow=1.5,SNR=3.4							

*IDC **03** 19:34:45.6±3.1, 7.96N×123.62E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/42, mbtmp3.3/3, Error ellipse: s-maj=338.7km s-min=29.4km az=64.0*
*MAN **03** 19:34:47.0, 6.90N×122.48E, h15km, mb4.6, ML3.5, MS3.4*
ISC 03 19:34:45.3±1.2, 7.00N±0.04×122.52E±0.04, h6km±11km, n15, σ1s72/21, mb3.2/3, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ZCP	**Zamboanga City**	**0.45**	**261**	⇓*iP*		**Pg**	**19 34 54.2**	**+0.2**
ZCP				*i* S		**Sg**	**19 35 00.3**	**+0.4**
PAGZ	**Pagadian**	**1.20**	**45**	*eP*		**Pg**	**19 35 09.3**	**+1.1**
PAGZ				*eS*		**Sg**	**19 35 26.3**	**+2.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DCPH	**Dipolog City**	**1.77**	**28**	⇑iP	**Pg**	**19 35 18.3**	**-0.9**
DCPH				iS	**Sg**	**19 35 43.2**	**+1.0**
SKMP	**Bagumbayan, Su**	**2.06**	**103**	eP	**Pb**	**19 35 21.7**	**-1.5**
SKMP				eS	**Sb**	**19 35 47.8**	**-1.2**
SNPH	**Sibulan**	**2.43**	**17**	iP	**Pb**	**19 35 27.5**	**-1.9**
KCP	**Kidapawan**	**2.55**	**90**	⇑iP	**Pb**	**19 35 29.9**	**-1.5**
GSPH	**General Santos**	**2.58**	**111**	eP	**Pg**	**19 35 33.3**	**-1.4**
BUKP	**Musuan**	**2.66**	**71**	eP	**Pb**	**19 35 32.0**	**-1.4**
BUKP				eS	**Sb**	**19 36 05.5**	**-0.9**
TBP	**Tagbilaran**	**2.98**	**26**	eP	**Pb**	**19 35 36.7**	**-2.1**
TBP				iS	**Sb**	**19 36 13.2**	**-2.3**
DDMP	**Don Marcelino,**	**3.29**	**106**	eP	**Pn**	**19 35 39.2**	**+1.8**
DDMP				eS	**Sn**	**19 36 18.9**	**+2.1**
MATI	**Mati**	**3.71**	**91**	eP	**Pn**	**19 35 44.1**	**+1.0**
MSLP	**Maasin**	**3.87**	**36**	eP	**Pn**	**19 35 48.2**	**+2.8**
MSLP				eS	**Sn**	**19 36 30.6**	**-0.7**
WRA	**Warramunga Arr** 0.3nm,0.7s,baz=339,slow=9.4,SNR=1.9	**29.19**	**157**	P	P	19 40 52.9	+5.1
ASAR	**Alice Springs** 0.2nm,0.6s,baz=345,slow=8.3,SNR=5.4	**32.45**	**160**	P	P	19 41 22.8	+6.3
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=134,slow=8.7,SNR=3.6	**52.51**	**326**	P	**P**	**19 43 59.3**	**0.0**

*JMA **03** 19:45:31.1±0.2, 24°.91N×122°.38E, h0km, M2.2*
*TAP **03** 19:45:32.2, 24°.90N×122°.39E, h27km, ML2.5, C*
ISC 03 19:45:31.5±1.1,**24°.92N**±0°.03×**122°.40E**±0°.02,**h13**km±9km, **n54,**σ**0s.59**/100,**Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EOS1	**EOS1** baz=226	**0.44**	**214**	P	**Pb**	**19 45 41.5**	**+0.5**
EOS1	baz=226			S	**Sb**	**19 45 48.1**	**+0.6**
NTC	**Toucheng** baz=274	**0.52**	**263**	eP	**Pb**	**19 45 42.9**	**+0.5**
NTC	baz=274			eS	**Sb**	**19 45 50.4**	**+0.6**
TIPB	**Shuangxi** baz=277	**0.52**	**276**	iP	**Pb**	**19 45 42.7**	**+0.2**
TIPB	baz=277			S	**Sb**	**19 45 50.0**	**0.0**
NWF	**Wu-fen Shan** baz=287	**0.58**	**286**	P	**Pb**	**19 45 44.0**	**+0.4**
NWF	baz=287			S	**Sb**	**19 45 52.3**	**+0.6**
WFSB	**Wu-fen Shan** baz=286	**0.58**	**286**	P	**Pb**	**19 45 44.0**	**+0.5**
WFSB	baz=286			S	**Sb**	**19 45 52.5**	**+0.9**
TWC	**Suao** baz=229	**0.58**	**239**	P	**Pb**	**19 45 43.4**	**-0.2**
TWC	baz=229			S	**Sg**	**19 45 50.7**	**+0.1**
JYNG	**Yonagunijimaku**	**0.68**	**133**	P	**Pg**	**19 45 44.9**	**+0.2**
JYNG				S	**Sb**	**19 45 54.7**	**+0.1**
TWE	**Neicheng** baz=254	**0.69**	**254**	iP	**Pg**	**19 45 45.1**	**+0.2**
TWE	baz=254			S	**Sb**	**19 45 54.8**	**0.0**
SLBB	**Yuanshan** baz=268	**0.71**	**257**	P	**Pb**	**19 45 46.1**	**+0.4**
SLBB	baz=268			S	**Sb**	**19 45 55.4**	**0.0**
YOJ	**Yonaguni jima** baz=118	**0.72**	**129**	P	**Pg**	**19 45 45.4**	**0.0**
YOJ	baz=118			eS	**Sb**	**19 45 55.8**	**+0.1**
YOJ	**Yonaguni jima**	**0.72**	**129**	P	**Pg**	**19 45 45.3**	**-0.1**
YOJ				eS	**Sb**	**19 45 55.6**	**-0.1**
TWA	**Mucha** baz=276	**0.74**	**275**	P	**Pb**	**19 45 46.3**	**+0.1**
TWA	baz=276			S	**Sb**	**19 45 56.3**	**0.0**
ENA	**Nanau** baz=231	**0.77**	**231**	P	**Pb**	**19 45 46.6**	**-0.1**
ENA	baz=231			eS	**Sb**	**19 45 56.8**	**-0.3**
PCYT	**Pengchaiyu** baz=338	**0.77**	**338**	eP	**Pg**	**19 45 45.5**	**-0.9**
PCYT	baz=338			eS	**Sb**	**19 45 57.3**	**+0.1**
YM08	**YM08** baz=291	**0.78**	**291**	P	**Pg**	**19 45 46.5**	**-0.1**
YM08	baz=291			S	**Sb**	**19 45 57.5**	**0.0**
YM01	**YM01** baz=288	**0.78**	**287**	iP	**Pb**	**19 45 47.1**	**+0.1**
YM01	baz=288			S	**Sb**	**19 45 58.4**	**+0.8**
YM11	**YM11** baz=289	**0.79**	**289**	eP	**Pb**	**19 45 47.6**	**+0.6**
NHDH	**Xindian Distri** baz=274	**0.79**	**274**	P	**Pb**	**19 45 47.5**	**+0.4**
NHDH	baz=274			S	**Sb**	**19 45 58.1**	**+0.4**
YM10	**YM10** baz=288	**0.79**	**288**	eP	**Pn**	**19 45 48.0**	**-0.5**
YM10	baz=288			eS	**Sb**	**19 45 58.8**	**+0.9**
ENTT	**Nioudou** baz=243	**0.80**	**250**	iP	**Pb**	**19 45 47.4**	**+0.1**
ENTT	baz=243			S	**Sb**	**19 45 57.7**	**-0.3**
TWY	**Chenhua** baz=297	**0.81**	**297**	P	**Pg**	**19 45 47.2**	**+0.1**
TWY	baz=297			S	**Sn**	**19 45 59.5**	**-0.9**
YM03	**YM03** baz=281	**0.82**	**289**	eP	**Pb**	**19 45 48.0**	**+0.3**
YM03	baz=281			eS	**Sb**	**19 45 59.0**	**+0.4**
NWLT	**Wulai** baz=261	**0.82**	**261**	P	**Pb**	**19 45 47.7**	**+0.1**
NWLT	baz=261			S	**Sb**	**19 45 58.4**	**-0.3**
TATO	**Taipei** baz=265	**0.82**	**274**	eP	**Pb**	**19 45 47.9**	**+0.2**
TATO	baz=265			S	**Sb**	**19 45 59.3**	**+0.6**
ANP	**Anpu** baz=281	**0.84**	**289**	P	**Pn**	**19 45 48.6**	**-0.5**
ANP	baz=281			eS	**Sb**	**19 45 59.1**	**-0.1**
NDT	**Datong Townshi** baz=243	**0.86**	**249**	iP	**Pg**	**19 45 48.2**	**+0.1**
NDT	baz=243			S	**Sb**	**19 45 59.8**	**+0.1**
TWS1	**Kuangyinshan** baz=282	**0.91**	**282**	eP	**Pn**	**19 45 49.9**	**-0.1**
TWS1	baz=282			eS	**Sn**	**19 46 02.5**	**-0.4**
YHNB	**Yeheng** baz=244	**0.96**	**255**	P	**Pg**	**19 45 50.2**	**+0.2**
YHNB	baz=244			eS	**Sb**	**19 46 02.5**	**-0.2**
NSK	**Sanguang** baz=268	**0.97**	**256**	P	**Pg**	**19 45 50.5**	**+0.2**
NSK	baz=268			S	**Sb**	**19 46 02.5**	**-0.5**
NACB	**Ninganchiao** baz=231	**1.04**	**225**	P	**Pb**	**19 45 51.1**	**-0.2**
NACB	baz=231			S	**Sb**	**19 46 04.3**	**-0.5**
NNSB	**Datong** baz=243	**1.04**	**242**	P	**Pg**	**19 45 51.7**	**+0.1**
NNSB	baz=243			S	**Sb**	**19 46 04.8**	**-0.3**
NNSH	**Datong** baz=243	**1.04**	**242**	iP	**Pg**	**19 45 51.7**	**+0.1**
NNSH	baz=243			S	**Sb**	**19 46 04.4**	**-0.7**
NNS	**Nan Shan** baz=244	**1.04**	**243**	P	**Pn**	**19 45 51.8**	**-0.2**
NNS	baz=244			S	**Sb**	**19 46 04.8**	**-0.4**
ETLH	**Xiulin Townshi** baz=231	**1.09**	**230**	P	**Pb**	**19 45 52.0**	**-0.2**
ETLH	baz=231			S	**Sb**	**19 46 05.9**	**-0.5**
TWD	**Chiawan** baz=227	**1.10**	**221**	eS	**Sg**	**19 46 07.2**	**0.0**
LIOB	**Emei** baz=259	**1.28**	**258**	eP	**Pn**	**19 45 55.3**	**+0.1**
WHF	**Hehuan Shan** baz=243	**1.28**	**234**	P	**Pb**	**19 45 55.6**	**-0.1**
WHF	baz=243			S	**Sb**	**19 46 11.7**	**-0.6**
IRIF	**Iriomote-Funau**	**1.34**	**115**	P	**Pb**	**19 45 57.0**	**+0.4**
CHGB	**Renai** baz=242	**1.40**	**233**	P	**Pb**	**19 45 57.6**	**0.0**
CHGB	baz=242			S	**Sg**	**19 46 15.9**	**-0.7**
WHP	**Taichung City** baz=245	**1.46**	**245**	eP	**Pb**	**19 45 58.4**	**-0.3**
WHP	baz=245			S	**Sb**	**19 46 17.5**	**+0.3**
OWD	**Renai** baz=240	**1.47**	**230**	iP	**Pb**	**19 45 58.7**	**0.0**
OWD	baz=240			eS	**Sn**	**19 46 16.7**	**-0.2**
EGFH	**Guangfu** baz=201	**1.52**	**216**	eS	**Sn**	**19 46 16.8**	**-1.4**
DPDB	**Guoxing** baz=238	**1.60**	**237**	eP	**Pb**	**19 46 01.0**	**0.0**
DPDB	baz=238			eS	**Sn**	**19 46 19.8**	**-0.3**
VWDT	**VWDT** baz=210	**1.63**	**225**	P	**Pn**	**19 46 00.3**	**+0.5**
VWDT	baz=210			eS	**Sn**	**19 46 20.6**	**0.0**
HGSD	**Ruisui** baz=200	**1.67**	**212**	eP	**Pn**	**19 46 00.6**	**+0.1**
HGSD	baz=200			eS	**Sn**	**19 46 21.0**	**-0.8**
SMLT	**Sun Moon Lake** baz=243	**1.71**	**233**	eP	**Pn**	**19 46 01.6**	**+0.5**
SMLT	baz=243			eS	**Sn**	**19 46 23.1**	**+0.3**
TYC	**Yuchr** baz=235	**1.73**	**235**	eP	**Pb**	**19 46 03.1**	**+0.1**
TYC	baz=235			eS	**Sn**	**19 46 23.0**	**-0.1**
SSLB	**Suanglung** baz=238	**1.73**	**230**	eP	**Pn**	**19 46 01.8**	**+0.5**
SSLB	baz=238			eS	**Sn**	**19 46 23.2**	**0.0**
YULB	**Yu-li** baz=214	**1.82**	**214**	eS	**Sn**	**19 46 24.9**	**-0.5**
FULB	**Fuli** baz=196	**1.98**	**211**	eS	**Sn**	**19 46 29.1**	**-0.4**
CHN5	**Tsauling** baz=216	**2.04**	**230**	eP	**Pb**	**19 46 07.6**	**-0.9**
CHN5	baz=216			eS	**Sn**	**19 46 32.2**	**+1.1**
ELDTW	**Lidau** baz=204	**2.13**	**217**	eS	**Sn**	**19 46 30.3**	**-3.0**
CHN4	**Tsaushan** baz=213	**2.27**	**227**	eP	**Pn**	**19 46 10.0**	**+1.3**
CHN4	baz=213			eS	**Sn**	**19 46 37.1**	**+0.6**
TPUB	**Ta-pu** baz=212	**2.28**	**225**	eP	**Pn**	**19 46 10.5**	**+1.7**
TPUB	baz=212			eS	**Sn**	**19 46 38.3**	**+1.5**

*JMA **03** 19:46:52.4±0.1, 24°.87N×122°.37E, h0km, M2.2*
*TAP **03** 19:46:53.0, 24°.92N×122°.40E, h21km, ML2.6, C*
ISC 03 19:46:52.6±1.1,**24°.89N**±0°.03×**122°.39E**±0°.02,**h11**km±9km, **n53,**σ**0s.36**/101,**Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EOS1	**EOS1** baz=225	**0.42**	**215**	P	**Pb**	**19 47 02.2**	**+0.2**
EOS1	baz=225			S	**Sb**	**19 47 09.4**	**+1.1**
NTC	**Toucheng** baz=272	**0.51**	**266**	eP	**Pb**	**19 47 03.8**	**+0.2**
NTC	baz=272			eS	**Sb**	**19 47 11.4**	**+0.3**
TIPB	**Shuangxi** baz=275	**0.52**	**279**	P	**Pb**	**19 47 03.7**	**-0.1**
TIPB	baz=275			S	**Sb**	**19 47 10.7**	**-0.7**
TWC	**Suao** baz=224	**0.57**	**240**	iP	**Pg**	**19 47 03.9**	**+0.3**
TWC	baz=224			S	**Sg**	**19 47 11.4**	**+0.2**
NWF	**Wu-fen Shan** baz=285	**0.58**	**288**	iP	**Pb**	**19 47 05.1**	**+0.2**
NWF	baz=285			S	**Sb**	**19 47 13.0**	**-0.2**
WFSB	**Wu-fen Shan** baz=285	**0.58**	**288**	eP	**Pb**	**19 47 05.2**	**+0.3**
WFSB	baz=285			eS	**Sb**	**19 47 13.1**	**0.0**
JYNG	**Yonagunijimaku**	**0.67**	**131**	P	**Pg**	**19 47 05.7**	**+0.1**
JYNG				eS	**Sb**	**19 47 15.4**	**-0.3**
TWE	**Neicheng** baz=253	**0.68**	**256**	iP	**Pb**	**19 47 06.5**	**0.0**
TWE	baz=253			S	**Sb**	**19 47 15.6**	**-0.4**
SLBB	**Yuanshan** baz=256	**0.70**	**259**	P	**Pb**	**19 47 07.2**	**+0.3**
SLBB	baz=256			eS	**Sb**	**19 47 17.3**	**+0.7**
YOJ	**Yonaguni jima** baz=123	**0.71**	**127**	P	**Pg**	**19 47 06.4**	**0.0**
YOJ	baz=123			eS	**Sb**	**19 47 17.1**	**+0.2**
YOJ	**Yonaguni jima**	**0.71**	**127**	P	**Pg**	**19 47 06.3**	**0.0**
YOJ				eS	**Sb**	**19 47 16.5**	**-0.3**
TWA	**Mucha** baz=274	**0.74**	**277**	iP	**Pb**	**19 47 07.5**	**0.0**
TWA	baz=274			S	**Sb**	**19 47 17.7**	**+0.1**
ENA	**Nanau** baz=230	**0.75**	**232**	iP	**Pb**	**19 47 07.6**	**-0.1**
ENA	baz=230			S	**Sg**	**19 47 17.1**	**+0.2**
YM08	**YM08** baz=277	**0.78**	**292**	P	**Pb**	**19 47 08.1**	**-0.3**
YM08	baz=277			S	**Sb**	**19 47 18.9**	**-0.1**
YM01	**YM01** baz=274	**0.79**	**289**	P	**Pb**	**19 47 08.2**	**-0.2**
YM01	baz=274			S	**Sb**	**19 47 19.0**	**0.0**
NHDH	**Xindian Distri** baz=273	**0.79**	**275**	P	**Pb**	**19 47 08.5**	**+0.1**
NHDH	baz=273			S	**Sb**	**19 47 19.1**	**0.0**
PCYT	**Pengchaiyu** baz=338	**0.79**	**339**	eP	**Pg**	**19 47 07.5**	**-0.4**
PCYT	baz=338			eS	**Sg**	**19 47 18.6**	**+0.4**
YM11	**YM11** baz=275	**0.79**	**290**	P	**Pb**	**19 47 08.6**	**+0.1**
YM11	baz=275			eS	**Sb**	**19 47 19.1**	**-0.1**
ENTT	**Nioudou** baz=238	**0.79**	**252**	iP	**Pb**	**19 47 08.7**	**+0.3**
ENTT	baz=238			S	**Sb**	**19 47 19.2**	**+0.1**
YM10	**YM10** baz=274	**0.80**	**289**	iP	**Pb**	**19 47 08.6**	**0.0**
YM10	baz=274			eS	**Sb**	**19 47 19.5**	**+0.1**
TWY	**Chenhua** baz=296	**0.81**	**298**	P	**Pb**	**19 47 08.7**	**-0.1**
TWY	baz=296			S	**Sb**	**19 47 20.1**	**+0.4**
NWLT	**Wulai** baz=260	**0.81**	**262**	P	**Pb**	**19 47 08.9**	**0.0**
NWLT	baz=260			S	**Sg**	**19 47 19.1**	**+0.1**
YM03	**YM03** baz=276	**0.82**	**290**	eP	**Pb**	**19 47 09.4**	**+0.4**
YM03	baz=276			eS	**Sb**	**19 47 20.2**	**+0.1**
TATO	**Taipei** baz=273	**0.82**	**276**	S	**Sb**	**19 47 20.5**	**+0.4**
ANP	**Anpu** baz=277	**0.84**	**291**	P	**Pn**	**19 47 10.1**	**-0.5**
ANP	baz=277			eS	**Sb**	**19 47 21.1**	**+0.4**
NDT	**Datong Townshi** baz=238	**0.85**	**250**	iP	**Pb**	**19 47 09.6**	**+0.2**
NDT	baz=238			S	**Sb**	**19 47 20.7**	**-0.1**
TWS1	**Kuangyinshan** baz=281	**0.91**	**283**	eP	**Pb**	**19 47 10.8**	**+0.4**
TWS1	baz=281			eS	**Sb**	**19 47 23.1**	**+0.6**
YHNB	**Yeheng** baz=268	**0.95**	**257**	P	**Pg**	**19 47 11.0**	**+0.1**
YHNB	baz=268			S	**Sg**	**19 47 23.2**	**0.0**
NSK	**Sanguang** baz=268	**0.96**	**257**	iP	**Pb**	**19 47 11.6**	**+0.2**
NSK	baz=268			iS	**Sg**	**19 47 23.8**	**+0.1**
NACB	**Ninganchiao** baz=224	**1.02**	**226**	P	**Pg**	**19 47 12.2**	**0.0**
NACB	baz=224			S	**Sb**	**19 47 25.6**	**-0.1**
NNSB	**Datong** baz=242	**1.03**	**243**	P	**Pb**	**19 47 12.7**	**+0.2**
NNSB	baz=242			S	**Sb**	**19 47 26.0**	**-0.1**
NNSH	**Datong** baz=242	**1.03**	**243**	P	**Pb**	**19 47 12.5**	**0.0**
NNSH	baz=242			S	**Sg**	**19 47 25.6**	**-0.2**
NNS	**Nan Shan** baz=242	**1.03**	**244**	iP	**Pb**	**19 47 12.8**	**+0.3**
NNS	baz=242			S	**Sg**	**19 47 25.7**	**-0.2**
WLTB	**Daxi** baz=266	**1.03**	**268**	eS	**Sg**	**19 47 25.6**	**-0.4**
ETLH	**Xiulin Townshi** baz=229	**1.07**	**231**	P	**Pb**	**19 47 13.3**	**0.0**
ETLH	baz=229			S	**Sg**	**19 47 27.0**	**-0.2**
WHF	**Hehuan Shan** baz=233	**1.27**	**234**	P	**Pg**	**19 47 17.4**	**+0.4**
WHF	baz=233			iS	**Sg**	**19 47 33.5**	**0.0**
LIOB	**Emei** baz=257	**1.27**	**259**	eP	**Pn**	**19 47 16.2**	**-0.2**
LIOB	baz=257			eS	**Sb**	**19 47 32.1**	**-1.0**
TDCB	**Techi** baz=239	**1.29**	**241**	eS	**Sb**	**19 47 33.1**	**-0.6**
IRIF	**Iriomote-Funau**	**1.34**	**114**	P	**Pg**	**19 47 18.5**	**+0.1**
IRIF				eS	**Sn**	**19 47 35.6**	**+0.4**
CHGB	**Renai** baz=232	**1.38**	**233**	P	**Pg**	**19 47 19.3**	**+0.1**
CHGB	baz=232			S	**Sg**	**19 47 37.4**	**+0.1**
ESL	**Shilin** baz=203	**1.38**	**219**	eP	**Pn**	**19 47 17.3**	**-0.6**
ESL	baz=203			eS	**Sb**	**19 47 35.8**	**-0.5**
OWD	**Renai** baz=240	**1.45**	**230**	iP	**Pb**	**19 47 19.4**	**-0.3**
OWD	baz=240			iS	**Sb**	**19 47 38.3**	**0.0**
WHP	**Taichung City** baz=234	**1.45**	**245**	P	**Pg**	**19 47 20.4**	**-0.1**
WHP	baz=234			S	**Sg**	**19 47 38.8**	**-0.5**
EGFH	**Guangfu** baz=201	**1.50**	**216**	eP	**Pn**	**19 47 19.4**	**-0.2**
EGFH	baz=201			eS	**Sn**	**19 47 39.1**	**0.0**
DPDB	**Guoxing** baz=237	**1.58**	**238**	eP	**Pn**	**19 47 21.4**	**+0.6**
DPDB	baz=237			eS	**Sb**	**19 47 41.9**	**-0.2**
VWDT	**VWDT** baz=209	**1.61**	**225**	P	**Pn**	**19 47 21.2**	**+0.2**
VWDT	baz=209			S	**Sn**	**19 47 41.6**	**-0.1**
HGSD	**Ruisui** baz=200	**1.65**	**213**	eS	**Sn**	**19 47 42.3**	**-0.5**
SMLT	**Sun Moon Lake** baz=233	**1.69**	**234**	eP	**Pb**	**19 47 24.0**	**+0.2**
SMLT	baz=233			eS	**Sb**	**19 47 45.0**	**-0.2**
TYC	**Yuchr** baz=234	**1.71**	**235**	eP	**Pb**	**19 47 23.8**	**-0.3**
TYC	baz=234			eS	**Sb**	**19 47 45.4**	**-0.2**
SSLB	**Suanglung** baz=239	**1.71**	**230**	eP	**Pb**	**19 47 23.7**	**-0.5**
SSLB	baz=239			eS	**Sn**	**19 47 44.2**	**-0.2**
YULB	**Yu-li** baz=214	**1.80**	**214**	eP	**Pn**	**19 47 23.3**	**-0.3**
CHN5	**Tsauling** baz=216	**2.03**	**231**	eP	**Pb**	**19 47 28.6**	**-0.9**
CHN5	baz=216			S	**Sb**	**19 47 54.8**	**-0.1**
TPUB	**Ta-pu** baz=212	**2.26**	**226**	P	**Pn**	**19 47 31.0**	**+1.0**
TPUB	baz=212			eS	**Sn**	**19 47 58.8**	**+0.9**

IDC 03 19:50:51.8±27.0,**16°.90S**×**173°.92W**,**h0**km,**mb4.1**/4, **mb1 4.3**/4,**mb1mx3.6**/47,**mbtmp4.1**/4,**Error ellipse: s-maj=509.1km s-min=164.9km az=73.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower** 1.9nm,0.6s,baz=102,slow=8.4,SNR=2.1	**37.84**	**259**	P	P	19 58 11.4	+0.9
STKA	**Stephens Creek** 0.5nm,0.5s,baz=86,slow=13,SNR=4.0	**42.87**	**241**	P	P	19 58 52.7	+0.7
WRA	**Warramunga Arr** 1.2nm,0.3s,baz=96,slow=7.5,SNR=74	**49.03**	**258**	P	P	19 59 40.2	-0.7
ASAR	**Alice Springs** 3.3nm,0.7s,baz=91,slow=7.8,SNR=136	**49.19**	**253**	P	P	19 59 41.4	-0.7

*IDC **03** 20:05:36.7±0.9, 6°.84S×125°.33E, h528km±13km, mb2.9/7, mb1 2.9/11, mb1mx2.7/50, mbtmp3.7/11, Error ellipse: s-maj=23.6km s-min=14.8km az=100.0*
ISC 03 20:05:36.3±0.7,**6°.76S**±0°.09×**125°.3E**±0°.2,**h511**km,**n12,** σ**1s.30**/14,**mb3.2**/7,**Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Baumata** 38nm,0.3s,baz=29,slow=1.7,SNR=71	**3.78**	**205**	P	**P**	**20 06 55.9**	**+2.1**
BATI	2.9nm,0.3s,baz=266,slow=19,SNR=1.7			S	**S**	**20 07 58.8**	**+1.8**
SIJI	**Sorong** 4.0nm,0.3s,baz=209,slow=12,SNR=20	**8.36**	**46**	P	**P**	**20 07 38.5**	**+1.7**
SIJI	0.6nm,0.3s,baz=112,slow=19,SNR=3.5			S	**S**	**20 09 16.1**	**+0.5**
FITZ	**Fitzroy Crossi** 0.8nm,0.3s,baz=1.4,slow=7.1,SNR=59	**11.28**	**178**	P	**P**	**20 08 06.5**	**-0.8**
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=334,slow=7.8,SNR=5.7	**15.79**	**147**	P	**P**	**20 08 53.4**	**-1.2**
ASAR	**Alice Springs** 0.1nm,0.3s,baz=328,slow=8.6,SNR=10	**18.75**	**155**	P	**P**	**20 09 21.6**	**-1.4**
NWAO	**Narrogin (SRO)** 5.3nm,0.7s,baz=56,slow=7.3,SNR=2.2	**27.09**	**195**	P	**P**	**20 10 36.5**	**-1.2**
MJAR	**Matsushiro Arr** 0.3nm,0.4s,baz=202,slow=14,SNR=1.3	**44.75**	**15**	P	**P**	**20 13 02.9**	**-1.0**
SONM	**Songino Array** 0.2nm,0.4s,baz=151,slow=9.5,SNR=2.3	**56.86**	**345**	P	**P**	**20 14 32.1**	**+0.1**
MKAR	**Makanchi Array** 0.3nm,0.4s,baz=128,slow=7.1,SNR=7.9	**65.53**	**329**	P	**P**	**20 15 28.8**	**-0.2**
PETK	**Petropavlovsk-** 0.6nm,0.5s,baz=193,slow=6.1,SNR=5.5	**65.66**	**21**	P	**P**	**20 15 29.4**	**-0.1**
ZALV	**Zalesovo Beam** 0.8nm,0.4s,baz=132,slow=2.1,SNR=5.4	**69.37**	**336**	P	**P**	**20 15 51.0**	**-1.2**
KURBB	**Kurchatov Arra** 0.3nm,0.6s,baz=139,slow=5.0,SNR=4.9	**69.92**	**330**	P	**P**	**20 15 55.2**	**-0.4**

*MOS **03** 20:10:26.1±1.3, 29°.45N×51°.44E, h11km, mb4.8/44, Error ellipse: s-maj=5.9km s-min=3.5km az=122.4*
*IDC **03** 20:10:26.2±0.6, 29°.51N×51°.35E, h0km, mb4.1/25, mb1 4.1/33, mb1mx4.1/44, mbtmp4.0/33, ML3.7/8, MS3.4/19, Ms1 3.4/19, ms1mx3.2/47, Error ellipse: s-maj=14.5km s-min=12.1km az=166.0*
*THR **03** 20:10:27.7±0.6, 29°.61N×51°.72E, h15km±5km, ML4.2*
*TEH **03** 20:10:28.7, 29°.56N×51°.33E, h24km, ML4.4*
*NEIC **03** 20:10:29.5±1.6, 29°.47N±0°.05×51°.31E±0°.05, h28km±5km, Error ellipse: s-maj=7.5km s-min=6.0km az=177.0*
*OMAN **03** 20:10:34.4±3.4, 29°.02N×51°.26E, h94km±28km, mb5.0/19, Mwp4.7/3, Error ellipse: s-maj=19.7km s-min=15.3km az=252.0*

BGR 03 20:10:43.0±0.0, 30.81N×50.50E, h10km, mb4.5

ISC 03 20:10:28.5±0.3, 29.44N±0.04×51.35E±0.03, h20km, n421, σ1.75/441, mb4.5/113, MS3.5/19, 48C-7D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHBU	AHRAM	0.57	184	ePg	Pn	20 10 43.3	+1.8
SHI	Shiraz	1.04	79	P	Pb	20 10 47.0	-0.8
SHI	Shiraz	1.04	79	ePg	Pb	20 10 47.7	-0.1
SHI				eSg	Sn	20 11 02.7	+0.6
SHI				e		20 11 08.9	
SHI	Shiraz	1.04	79		Pb	20 10 47.6	-0.2
SHI					Sn	20 11 02.6	+0.5
KLNJ	Kolanjah	1.58	8	ePn	Pn	20 10 54.1	-1.6
KLNJ				e		20 11 20.1	
KLNJ	Kolanjah	1.58	8	Pn	Pn	20 10 54.1	-1.6
JHRM	Jahrom	2.17	115	e		20 11 51.1	
JHRM				ePn	Pn	20 11 06.5	+3.0
IRAM	Ramesheh	2.52	20	ePn	Pn	20 11 08.9	+0.3
IRAM	Ramesheh	2.52	20	Pn	Pn	20 11 08.9	+0.3
LMD1	Lamerd	2.64	142	e		20 12 31.2	
JHBN	Jahan bin	2.84	348	ePn	Pn	20 11 13.6	+0.5
JHBN				e		20 11 59.1	
JHBN	Jahan bin	2.84	348	Pn	Pn	20 11 13.5	+0.5
ROKH	ROKH	2.91	355	ePn	Pn	20 11 14.3	+0.5
ROKH	ROKH	2.91	355	Pn	Pn	20 11 14.3	+0.5
AHWZ	Ahwaz	3.00	310	ePn	Pn	20 11 15.0	+0.2
AHWZ	Ahwaz	3.00	310	Pn	Pn	20 11 15.0	+0.2
IGAR	Gharneh	3.02	11	ePn	Pn	20 11 15.7	+0.4
IGAR	Gharneh	3.02	11	Pn	Pn	20 11 15.7	+0.4
ISAD	Sadrabad	3.19	39	ePn	Pn	20 11 18.9	+1.2
ISAD	Sadrabad	3.19	39	Pn	Pn	20 11 18.9	+1.2
LAR1	LAR	3.19	123	ePn	Pn	20 11 19.8	+2.2
IPIR	Pirpir	3.26	353	ePn	Pn	20 11 18.5	-0.2
IPIR	Pirpir	3.26	353	Pn	Pn	20 11 18.5	-0.2
IMEH	Mehriz	3.43	55	ePn	Pn	20 11 22.9	+1.9
IMEH	Mehriz	3.43	55	Pn	Pn	20 11 22.9	+1.9
SHGR	Shooshtar-Gavs	3.44	321	IAML		20 12 38.8	
	comp=E,996nm,0.6s						
IZEF	Zefreh	3.55	14	ePn	Pn	20 11 23.1	+0.4
IZEF	Zefreh	3.55	14	Pn	Pn	20 11 23.0	+0.4
IKLH	Kolahrood	3.87	3	ePn	Pn	20 11 27.2	+0.1
YZKH	Yazd	4.05	43	ePn	Pn	20 11 26.9	-2.6
YZKH				eSg	Sb	20 12 23.1	-4.7
YZKH	Yazd	4.05	43	ePn	Pn	20 11 26.9	-2.6
ANAR	Anarak	4.26	28	ePn	Pn	20 11 32.5	+0.2
KHMZ	Khomeyn	4.45	345	ePn	Pn	20 11 35.9	+0.9
KHMZ				IAML		20 12 40.7	
	comp=E,121nm,0.5s						
KHMZ	Khomeyn	4.45	345	ePn	Pn	20 11 35.9	+0.9
KHGB	Koh Gabri	4.55	77	ePn	Pn	20 11 38.3	+1.9
KHGB				e		20 13 08.1	
NGRK	Negar Kerman	4.70	86	ePn	Pn	20 11 41.0	+2.4
NGRK				e		20 12 40.5	
BNDS	Bandar-Abbas	4.71	114	ePn	Pn	20 11 37.1	-1.5
BNDS	Bandar-Abbas	4.71	114	ePn	Pn	20 11 37.1	-1.5
GENO	Geno	4.71	114	ePn	Pn	20 11 41.3	+2.7
BMDN	Meydan	4.74	334	ePn	Pn	20 11 38.6	-0.3
KRBR	Kerman	4.74	82	ePn	Pn	20 11 36.8	-2.3
KRBR				IAML		20 12 42.7	
	comp=E,113nm,0.4s						
KRBR	Kerman	4.74	82	ePn	Pn	20 11 36.8	-2.3
TVBK	TV Kerman	4.74	82	ePn	Pn	20 11 41.4	+2.2
IKMR	Kamar-syah	4.79	329	ePn	Pn	20 11 39.1	-0.3
ISFB	Sefidab	4.96	9	ePn	Pn	20 11 42.2	+0.4
IBND	Bandar-abas	4.99	112	ePn	Pn	20 11 44.5	+2.3
IKFM	Kafar-mosalman	5.05	325	ePn	Pn	20 11 43.0	0.0
IDOB	Doab	5.11	329	ePn	Pn	20 11 43.2	-0.8
NIAN	Nian	5.18	110	ePn	Pn	20 11 46.4	+1.5
NIAN				e		20 13 01.8	
ASAO	Ashtian	5.21	348	ePn	Pn	20 11 46.4	+0.8
ASAO	Ashtian	5.21	348	ePn	Pn	20 11 46.4	+0.8
HSAM	Samen	5.30	335	ePn	Pn	20 11 46.6	-0.1
SLWR	Sila	5.36	177	ePn	Pn	20 11 50.6	+3.3
IQOM	Qom	5.39	358	ePn	Pn	20 11 47.2	-0.8
CHMN	Cheshme madani	5.41	84	ePn	Pn	20 11 50.7	+2.4
SHME	Shamm	5.43	127	ePn	Pn	20 11 49.3	+1.0
IVRN	Varamin	5.55	3	ePn	Pn	20 11 49.3	-0.7
BANOM	Banah	5.62	127	P	Pn	20 11 52.6	+1.8
	SNR=38						
BANOM				S	Sn	20 12 55.5	+0.6
BANOM	Banah	5.62	127	ePn	Pn	20 11 52.7	+1.8
HAGD	Aghdareh	5.68	341	ePn	Pn	20 11 51.7	-0.3
IKOM	Komasi	5.74	326	ePn	Pn	20 11 52.7	0.0
TPRV	Parvadeh(Tabas	5.81	51	ePn	Pn	20 11 54.2	+0.7
IBZA	Bozab	5.82	330	ePn	Pn	20 11 52.6	-1.3
AJN	Ajban	5.84	145	ePn	Pn	20 11 57.1	+3.1
NAZ	Nazwa, Dubai	5.87	138	P	Pn	20 11 56.7	+2.4
NAZ				P	Pn	20 11 56.7	+2.4
NAZ	Nazwa, Dubai	5.87	138	ePn	Pn	20 11 56.6	+2.4
MSFE	Esma-Masafi	5.90	132	ePn	Pn	20 11 56.4	+1.6
IHSB	Hasanabad	5.98	359	ePn	Pn	20 11 56.6	+0.7
MDH	Madha	6.03	132	P	Pn	20 11 59.4	+2.8
MDH				P	Pn	20 11 59.4	+2.8
MDH	Madha	6.03	132	ePn	Pn	20 11 58.3	+1.7
IALM	Almabolaq	6.04	334	ePn	Pn	20 11 55.8	-1.1
KCHF	Cheshme Sefid,	6.05	324	ePn	Pn	20 11 57.2	+0.2
IRAZ	Razeghan	6.07	349	ePn	Pn	20 11 57.6	+0.4
ILAS	Lasjerd	6.08	13	ePn	Pn	20 11 57.2	-0.2
IDMV	Damavand	6.15	5	ePn	Pn	20 11 58.3	-0.1
UOSS	Minazif	6.22	135	P	Pn	20 12 01.0	+1.8
UOSS	Minazif	6.22	135	ePn	Pn	20 12 01.0	+1.8
UOSS	Minazif	6.22	135		Pn	20 12 00.7	+1.5
UOSS				Sn	Sn	20 13 09.1	-0.7
HATD	Hatta, Dubai	6.27	136	P	Pn	20 12 01.9	+2.0
HATD				S	Sn	20 13 10.1	-0.9
HATD	Hatta, Dubai	6.27	136	ePn	Pn	20 12 02.4	+2.6
ASHO	Ashiyiah	6.33	137	P	Pn	20 12 03.0	+2.2
ASHO				P	Pn	20 12 03.0	+2.2
ASHO	Ashiyiah	6.33	137	ePn	Pn	20 12 02.7	+2.0
TNSJ	Nastanj	6.36	44	ePn	Pn	20 12 02.1	+1.0
IANJ	Anjilo	6.39	19	ePn	Pn	20 12 01.5	-0.2
QABG	Abgarm-Qazvin	6.42	347	ePn	Pn	20 12 01.8	-0.4
TKDS	Koohdasht(Taba	6.45	48	ePn	Pn	20 12 03.1	+0.7
ISHM	Shahmirzad	6.56	14	ePn	Pn	20 12 03.8	-0.2
ALNE	Al Ain	6.65	143	ePn	Pn	20 12 07.3	+2.2
IDHR	Dehrash	6.72	323	ePn	Pn	20 12 04.8	-1.4
IALA	Alasht	6.74	10	ePn	Pn	20 12 07.4	+0.9
IPRN	Peran	6.83	7	ePn	Pn	20 12 08.8	+1.1
QALM	Alamut, Qazvin	7.00	355	ePn	Pn	20 12 10.7	+0.7
SOHO	SOHO	7.03	138	P	Pn	20 12 12.0	+1.7
	SNR=8.9						
SOHO				S	Sn	20 13 28.4	-1.2
SOHO	SOHO	7.03	138	ePn	Pn	20 12 11.3	+1.0
ITEG	Tejag	7.22	60	ePn	Pn	20 12 13.8	+0.8
IGLO	Ghaloghah	7.35	16	ePn	Pn	20 12 16.3	+1.5
UMZA	Um Al Zommool	7.53	152	ePn	Pn	20 12 18.9	+1.8
ARQ	Araqi	7.65	141	P	Pn	20 12 20.0	+1.2
	SNR=22						
ARQ				S	Sn	20 13 43.6	-1.3
NHDN	Nehbandan	7.76	73	ePn	Pn	20 12 22.9	+2.4
RAYN	Ar Rayn	7.88	223		Pn	20 12 22.9	+0.8
RAYN				Sn	Sn	20 13 48.5	-2.1
HOQ	Hoqain	7.91	136	P	Pn	20 12 23.4	+1.0
HOQ				S	Sn	20 13 47.8	-3.5
IDAH	Dahanechah	8.01	64	ePn	Pn	20 12 26.0	+2.0
BSY	Bisya	8.49	140	P	Pn	20 12 32.1	+1.7
BSY				S	Sn	20 14 03.8	-1.9
IMND	Minoodasht	8.50	22	ePn	Pn	20 12 30.8	+0.3
MAHB	Mahabad	8.70	329	ePn	Pn	20 12 32.6	-0.7
SMDO	Samad	8.75	135	S	Sn	20 14 10.9	-1.2
WSAR	Wadi Sarin	8.99	132	Pn	Pn	20 12 37.9	+0.8
	comp=E,1.3nm,0.3s,baz=318,slow=6.7,SNR=23						
WSAR				Sn	Sn	20 14 15.3	-2.6
	comp=E,2.2nm,0.3s,baz=311,slow=20,SNR=2.2						
WSAR				LR	LR	20 16 43.7	
	comp=E,81nm,18.3s,baz=337,slow=42						
WSAR	Wadi Sarin	8.99	132	P	Pn	20 12 38.0	+0.8
	SNR=14						
JMDO	Jabal Madar	9.30	138	P	Pn	20 12 41.6	+0.1
IKRD	Kardeh	9.47	38	ePn	Pn	20 12 52.6	+8.7
IAKL	Akhelmad	9.47	39	ePn	Pn	20 12 44.6	+0.6
IHRS	Heris	9.55	339	ePn	Pn	20 12 44.4	-0.6
WBK	Wadi Bani Khal	9.65	133	P	Pn	20 12 47.0	+0.6
	SNR=7.2						
WBK				S	Sn	20 14 31.4	-2.8
GEYT	Alibeck	10.17	32	Pn	Pn	20 12 54.4	+1.1
	comp=E,0.2nm,0.3s,baz=223,slow=12,SNR=10						
GYA0B	ALIBECK ARRAY	10.17	32		Pn	20 12 52.5	-0.8
MHTO	MHTO	10.33	143	P	Pn	20 12 56.2	+0.7
MHTO				S	Sn	20 14 45.9	-4.9
HRA	Herat	10.49	59	Pn	Pn	20 12 57.7	-0.2
WHFO	Wadi Hawf	11.68	169	P	Pn	20 13 14.0	-0.1
	SNR=19						
DMTO	DMTO	12.13	163	P	Pn	20 13 20.4	+0.2
	SNR=62						
DMTO				S	Sn	20 15 28.4	-6.5
ABTO	Aybut	12.16	171	P	Pn	20 13 20.4	-0.3
ABTO				S	Sn	20 15 29.9	-6.0
RBK	Rabkut	12.17	167	P	Pn	20 13 20.4	-0.3
RBK				S	Sn	20 15 28.4	-7.5
ASF	Jabal al Asfar	12.72	286	Pn	Pn	20 13 25.7	-2.6
	comp=E,1.2nm,0.3s,baz=210,slow=1.7,SNR=7.9						
ASF				Sn	Sn	20 15 38.1	-11
	comp=E,0.5nm,0.3s,baz=263,slow=16,SNR=2.1						
ASF				Lg	Lg	20 17 14.6	
	baz=229,slow=19,SNR=1.8						
AKH	Akhalkalaki	13.54	334	⇑P	Pn	20 13 42.5	+2.9
AKH	Akhalkalaki	13.54	334	P	Pn	20 13 39.0	-0.6
AKH	Akhalkalaki	13.54	334	Pn	Pn	20 13 39.0	-0.6
MAK	Makhachkala	13.84	348	eP	Pn	20 13 41.3	-2.2
MAK				eS	Sn	20 16 13.7	-2.8
MAK				pmax	pmax		
	comp=Z,22nm,0.3s						
MAK				MLR	MLR		
	comp=Z,148nm,14.0s						
MALT	Malatya	13.90	313	P	Pn	20 13 41.8	-2.6
MMAI	Mount Meron Ar	14.10	289	Pn	Pn	20 13 46.4	-0.7
	comp=Z,0.9nm,0.3s,baz=98,slow=16,SNR=9.6						
MMAI				Sn	Sn	20 16 13.5	-10
	comp=Z,0.7nm,0.3s,baz=86,slow=19,SNR=1.9						
MMAI				Lg	Lg	20 18 28.0	
	baz=126,slow=30,SNR=4.8						
GAZ	Gaziantep	14.10	307	Pn	Pn	20 13 46.5	-0.7
EIL	Elat	14.27	275	Pn	Pn	20 13 49.9	+0.4
	comp=Z,0.2nm,0.3s,baz=31,slow=12,SNR=2.8						
EIL				Sn	Sn	20 16 08.5	-19
	comp=Z,0.2nm,0.3s,baz=77,slow=14,SNR=2.0						
EIL				Lg	Lg	20 18 08.1	
	comp=Z,0.3nm,0.3s,baz=280,slow=19,SNR=1.7						
BCA	Borcka	14.35	329	⇑P	Pn	20 13 51.1	+0.6
GROC	Groznyy	14.44	344	eP	P	20 13 56.6	-1.7
GROC				pmax	pmax		
	comp=Z,16nm,0.6s						
ZEI	Tsey	14.61	338	eP	Pn	20 13 57.1	+3.0
ZEI				pmax	pmax		
	comp=Z,12nm,0.7s						
NCK	Nalchik	15.34	338	iP	P	20 14 06.2	-2.2
NEY	Neytrino	15.42	336	iP	Pn	20 14 07.0	+2.0
KBZ	Khabaz	15.78	337	Pn	P	20 14 13.0	-0.1
	comp=Z,0.3nm,0.3s,baz=166,slow=10.0,SNR=16						
KBZ	Khabaz	15.78	337	ceP	P	20 14 12.3	-0.9
KBL	Kabul	15.85	67	P	Pn	20 14 09.4	-1.2
KBL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KBL	Kabul	15.85	67	Pn	Pn	20 14 09.4	-1.2
SHA1	Shidzhatmaz	15.87	336	iP	P	20 14 14.0	-0.5
KVAR	Kislovodsk Arr	16.05	337	Pn	Pn	20 14 13.5	+0.5
	baz=225,slow=13,SNR=2.0						
KIV	Kislovodsk	16.05	337	⇑P	P	20 14 17.3	+1.0
KIV	Kislovodsk	16.05	337	eP	P	20 14 17.3	+1.0
KIV				eS	S	20 17 17.6	-6.3
KIV				pmax	pmax		
	comp=Z,91nm,1.0s						
KIV	Kislovodsk	16.05	337		Pn	20 14 12.9	-0.1
KIV				IAmb	IAmb	20 14 23.6	
	comp=Z,27nm,0.9s						
DAMY	Dhamar	16.13	205		Pn	20 14 14.6	+0.1
DAMY				IAmb	IAmb	20 14 28.4	
	comp=Z,18nm,0.7s						
CSS	Mathiatis	16.21	294		Pn	20 14 15.7	+0.7
CSS				IAmb	IAmb	20 14 32.9	
	comp=Z,14nm,0.9s						
SOC	Sochi	16.90	330	eP	P	20 14 31.7	+6.0
GOF	Gofitskoye	16.92	339	⇑eP	Pn	20 14 20.1	-3.8
GOF				pmax	pmax		
	comp=Z,12nm,0.9s						
KVT	Kavak	17.03	317	P	Pn	20 14 25.2	-0.2
SOCY	Socotra	17.34	171		Pn	20 14 27.2	-2.3
SOCY				IAmb	IAmb	20 14 34.5	
	comp=Z,51nm,1.4s						
CHGR	Chuyangaron	17.37	53	Pn	Pn	20 14 27.7	-2.0
THW	Thamme Wali	17.78	74	P	P	20 14 35.7	+0.2
BR131	Keskin Array S	17.80	310	P	Pn	20 14 34.0	-1.1
BR131				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BR131	Keskin Array S	17.80	310	P	Pn	20 14 34.0	-1.1
BRTR	Keskin Array B	17.80	310	P	Pn	20 14 34.5	-0.6
	comp=Z,0.2nm,0.3s,baz=134,slow=12,SNR=14						
BRTR				LR	LR	20 23 11.4	
	comp=Z,74nm,19.5s,baz=102,slow=43						
DIKM	Dikmen	17.85	317	⇑P	Pn	20 14 31.8	-3.7
GAR	Garm	18.33	54	P	Pn	20 14 39.7	-1.9
GAR				IAmb	IAmb	20 14 50.8	
	comp=Z,21nm,1.2s						
ANTO	Ankara	18.44	309	P	P	20 14 41.9	-0.8
ANTO				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ANTO	Ankara	18.44	309	P	P	20 14 41.9	-0.8
ANTO				IAmb	IAmb	20 14 49.7	
	comp=Z,7.0nm,0.5s						
ILGA	Ilgaz	18.44	314	P	P	20 14 41.9	-1.0
TAS	Tashkent	18.80	46	P	P	20 14 46.5	-0.1
TAS				pmax	pmax		
	comp=Z,35nm,0.3s						
TAS	Tashkent	18.80	46	P	P	20 14 46.5	-0.1
ANN	Anapa	18.88	328	P	Pn	20 14 51.1	+3.0
ANN				pmax	pmax		
	comp=Z,12nm,0.9s						
ANN				MLR	MLR		
	comp=Z,119nm,17.0s						
NIL	Nilore	19.13	72	P	P	20 14 50.4	+0.1
NIL				pmax	pmax		
	comp=Z,18nm,1.1s						
NIL	Nilore	19.13	72	P	P	20 14 50.4	+0.1
NIL				IAmb	IAmb	20 14 59.8	
	comp=Z,18nm,1.1s						
ELL	Elmali	19.36	298	P	P	20 14 52.4	-0.5
ELL				pmax	pmax		
	comp=Z,39nm,0.8s						
ELL	Elmali	19.36	298	P	P	20 14 52.4	-0.5
ATD	Arta Tunnel	19.50	206	P	P	20 14 55.1	+0.6
	comp=Z,0.6nm,0.3s,baz=307,slow=20,SNR=2.5						
ATD	Arta Tunnel	19.50	206	P	P	20 14 54.9	+0.3
ATD				IAmb	IAmb	20 15 10.8	
	comp=Z,19nm,1.2s						
KK31	Karatay Array	20.54	43	P	P	20 15 05.1	-0.6
KK31				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KK31	Karatay Array	20.54	43	P	P	20 15 05.1	-0.6
KKAR	Karatay Array	20.54	43	P	P	20 15 06.1	+0.4
KKAR				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KKAR	Karatay Array	20.54	43	P	P	20 15 06.1	+0.4
SIM	Simferopol'	20.62	323	eP	Pn	20 15 09.6	+0.8
SIM				e*PP	pP	20 15 13.0	+0.7
SIM				eS	S	20 18 54.0	-2.0
SIM				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MANT	Manisa	20.90	302	P	P	20 15 08.3	-1.6
ARSB	Arslanbob	21.19	50	P	P	20 15 11.7	-1.1
ARSB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARSB	Arslanbob	21.19	50	P	P	20 15 11.7	-1.1
ARSB				IAmb	IAmb	20 15 22.9	
	comp=Z,6.8nm,0.8s						
AKTO	Aktyubinsk	21.57	12	P	P	20 15 16.3	-0.3
	comp=Z,3.1nm,0.5s,baz=192,slow=10,SNR=17						
KSH	Kashi	22.59	57	P	P	20 15 24.9	-2.9
KSH				pP	pP	20 15 28.9	-4.8
KSH				PP	PnPn	20 15 53.9	+2.4
KSH				S	S	20 19 21.6	-13
KSH				SS	SnSn	20 20 03.2	-0.9
KSH				pmax	pmax		
	comp=Z,17nm,0.7s						
KSH				pmax	pmax		
	comp=Z,290nm,4.6s						
KSH				LR	LR		
	comp=N,280nm,8.4s						
KSH				LR	LR		
	comp=E,320nm,6.5s						
KSH				LR	LR		
	comp=Z,340nm,7.5s						
AAK	Ala-Archa	22.80	48	P	P	20 15 30.7	+0.7
	comp=Z,1.6nm,0.7s,baz=220,slow=12,SNR=7.5						
AAK	Ala-Archa	22.80	48	ceP	P	20 15 31.1	+1.1
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AAK	Ala-Archa	22.80	48	P	P	20 15 29.0	-1.1
VRH	Novokhopyorsk	22.90	344	eP	P	20 15 30.3	-0.5
VRH				eS	S	20 19 35.6	-3.9
VRH				pmax	pmax		
	comp=Z,40nm,0.6s						
VRH				smax	smax		
	comp=E,160nm,2.1s						
EZN	Ezine	22.98	303	P	P	20 15 36.5	+4.8
IDI	Anoyia	23.06	291	P	P	20 15 30.6	-2.1
	comp=E,15nm,1.0s,baz=330,slow=8.1,SNR=2.3						
IDI	Anoyia	23.06	291	P	P	20 15 31.5	-1.2
VORD	Divnogorie	23.33	341	eP	P	20 15 37.4	+2.2
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MFTR	Murfatlar	23.41	315	⇑P	P	20 15 35.7	-0.4
JURR	Jurilovca	23.45	317	⇑P	P	20 15 38.9	+2.5
ALN	Alexandroupoli	23.55	306	P	P	20 15 36.7	-0.7
ALN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ALN	Alexandroupoli	23.55	306	P	P	20 15 36.7	-0.7
TIRR	Tirgusor	23.57	316	P	P	20 15 38.5	+0.9
TIRR				pmax	pmax		
	comp=Z,32nm,0.7s						
VSR	Storozhevoye	23.59	341	eP	P	20 15 38.0	+0.3
VSR				eS	S	20 19 47.3	-3.6
VSR				pmax	pmax		
	comp=Z,20nm,0.8s						
VSR				smax	smax		
	comp=E,80nm,1.3s						
TOPG	Topolog	23.81	317	⇑P	P	20 15 42.0	+2.1
CFR	Carcaliu	24.12	317	⇓P	P	20 15 45.0	+2.3
CFR	Carcaliu	24.12	317	P	P	20 15 42.5	-0.3
CFR				pmax	pmax		
	comp=Z,12nm,1.0s						
RAZG	Razgrad	24.32	312	⇑P	P	20 15 45.0	+0.3
KDJ	Kajisay	24.38	52	P	P	20 15 44.5	-1.0
KDJ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KDJ	Kajisay	24.38	52	P	P	20 15 44.5	-1.0
ELND	Elena	24.46	310	⇑P	P	20 15 47.3	+1.3
SZH	Strazhica	24.57	311	eP	P	20 15 49.6	+2.6
MILM	Milestii Mici	24.73	321	⇑P	P	20 15 48.4	+0.1
LPSR	Galich'ya Gora	24.89	342	eP	P	20 15 49.2	-0.6
LPSR				eS	S	20 20 12.3	+0.5
LPSR				pmax	pmax		
	comp=Z,20nm,1.2s						
LPSR				smax	smax		
	comp=E,90nm,1.9s						
VASR	Vaslui	25.13	320	⇑P	P	20 15 54.6	+2.6
BISRR	Bisoca	25.17	316	⇑P	P	20 15 54.9	+2.4
SECR		25.30	315	⇑P	P	20 15 56.8	+3.3
VRI	Vrincioaia	25.32	317	⇑P	P	20 15 55.3	+1.5
VRI	Vrincioaia	25.32	317	⇑P	P	20 15 55.3	+1.5
PRZ	Przheval'sk	25.35	52	P	P	20 15 54.1	-0.2
PRZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PRZ	Przheval'sk	25.35	52	P	P	20 15 54.1	-0.2
PRZ				IAmb	IAmb	20 15 57.3	
	comp=Z,6.6nm,0.8s						
PLOR	Plostina	25.36	317	⇑P	P	20 15 55.8	+1.6
PLOR	Plostina	25.36	317	⇑P	P	20 15 55.8	+1.6
SRS	Serrai	25.37	305	P	P	20 15 56.8	+2.6
SRS				pmax	pmax		
	comp=Z,12nm,1.1s						
COPA	Copaceanca	25.41	312	⇑P	P	20 15 57.8	+3.2
PGB	Panagyurishte	25.46	308	eP	P	20 15 57.8	+2.7
PLVB	Pleven	25.48	310	⇑P	P	20 15 57.5	+2.2
MLR	Muntele Rosu	25.60	316	P	P	20 15 58.8	+2.4
	comp=Z,16nm,0.9s,baz=185,slow=4.3,SNR=20						
MLR	Muntele Rosu	25.60	316	⇑P	P	20 15 58.7	+2.3
MLR	Muntele Rosu	25.60	316	P	P	20 15 57.0	+0.6
MLR				pmax	pmax		
	comp=Z,15nm,0.7s						
MLR	Muntele Rosu	25.60	316	P	P	20 15 57.0	+0.6
ITM	Ithomi	25.70	295	P	P	20 15 57.0	-0.2
ITM				IAmb	IAmb	20 16 12.0	
	comp=Z,16nm,1.3s						
TESR	Tescani	25.71	318	⇓P	P	20 15 58.6	+1.2
SORM	Soroca	25.71	323	⇑P	P	20 15 57.9	+0.6
SORM	Soroca	25.71	323	⇑P	P	20 15 57.9	+0.6
HUMR	Humele	25.74	313	⇑P	P	20 16 00.1	+2.5
VOIR		26.12	315	⇑P	P	20 16 02.8	+1.6
VOIR		26.12	315	⇑P	P	20 16 02.8	+1.6
VTS	Vitosha	26.13	308	⇑P	P	20 16 03.3	+2.0
VTS	Vitosha	26.13	308	eP	P	20 16 04.1	+2.8
VTS	Vitosha	26.13	308	P	P	20 16 00.8	-0.5
VTS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VTS	Vitosha	26.13	308	P	P	20 16 00.8	-0.5
VTS				IAmb	IAmb	20 16 06.9	
	comp=Z,5.3nm,0.8s						
DOPR	Dopca	26.18	316	⇑P	P	20 16 02.5	+1.0
BIZ	Bicaz	26.26	319	⇑P	P	20 16 03.6	+1.3
ARR	Arges	26.35	314	⇑P	P	20 16 05.2	+2.0
FNA	Florina	26.88	303	P	P	20 16 11.2	+3.2
FNA				pmax	pmax		
	comp=Z,14nm,0.9s						
AKASG	Malin Array Be	26.97	328	P	P	20 16 08.3	-0.3
	comp=Z,1.4nm,0.5s,baz=132,slow=9.4,SNR=8.8						
AKBB	Malin Array Si	26.97	328	P	P	20 16 07.1	-1.5
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKBB	Malin Array Si	26.97	328	P	P	20 16 07.1	-1.5
AKBB				IAmb	IAmb	20 16 14.8	
	comp=Z,4.8nm,0.6s						
KIEV	Kiev	26.97	328	P	P	20 16 08.0	-0.6
KMPD	K-Podol'skiy	26.98	322	P	P	20 16 09.0	+0.3
BURAR	Bucovina Array	27.13	319	⇑P	P	20 16 12.5	+2.2
BURAR	Bucovina Array	27.13	319	⇑P	P	20 16 12.5	+2.2
BUR08	Bucovina Ar. S	27.16	319	P	P	20 16 10.2	-0.2
BUR08				IAmb	IAmb	20 16 18.0	
	comp=Z,5.8nm,0.8s						
BRVK	Borovoye	27.39	25	P	P	20 16 11.6	-0.8
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BRVK	Borovoye	27.39	25	P	P	20 16 11.6	-0.8
BRVK				IAmb	IAmb	20 16 13.8	
	comp=Z,7.3nm,1.3s						
BVAR	Borovoye Array	27.41	25	P	P	20 16 13.3	+0.8
	comp=Z,1.7nm,0.4s,baz=220,slow=6.8,SNR=20						
ARU	Arti	27.46	9	P	P	20 16 14.3	+1.3
	comp=Z,0.4nm,0.3s,baz=147,slow=17,SNR=2.1						
ARU	Arti	27.46	9	d iP	P	20 16 14.2	+1.3
ARU						20 16 55.2	
ARU				S	S	20 20 56.6	+4.3
ARU				SS	SnSn	20 22 06.6	+4.0
ARU				pmax	pmax		
	comp=Z,11nm,2.0s						
ARU	Arti	27.46	9	P	P	20 16 12.8	-0.1
GZR	Gura Zlata	27.53	313	⇑P	P	20 16 16.9	+3.1
PYUN	Piuthan	27.73	85	eP	P	20 16 16.6	+0.7
OBN	Obninsk	27.77	342	P	P	20 16 21.3	+5.6
	comp=Z,1.9nm,0.3s,baz=133,slow=3.6,SNR=4.6						
OBN	Obninsk	27.77	342	⇓iP	P	20 16 21.9	+6.2
OBN				*PP	sP	20 16 24.0	-0.5
OBN				e		20 16 30.3	
OBN						20 17 09.0	
OBN				eSS	SS	20 22 11.5	-43
OBN				pmax	pmax		
	comp=Z,15nm,0.8s						
OBN				MLR	MLR		
	comp=Z,45nm,17.0s						
OBN	Obninsk	27.77	342	P	P	20 16 15.5	-0.2
MDVR	Moldovita	27.96	311	⇑P	P	20 16 18.0	+0.3
DRGR		28.20	316	⇓P	P	20 16 21.5	+1.7
DRGR		28.20	316	⇓P	P	20 16 21.5	+1.7
KOLN	Koldanda	28.32	85	eP	P	20 16 21.9	+0.7
	comp=Z,4.2nm,0.3s						
DANN	Dangsing	28.35	84	eP	P	20 16 22.6	+1.0
	comp=Z,27nm,0.6s						
BZS	Buzias	28.36	313	⇑P	P	20 16 24.3	+3.2
BZS	Buzias	28.36	313	⇑P	P	20 16 24.3	+3.2
KIRV	Kirov	29.17	358	P	P	20 16 28.8	+0.7
	comp=Z,5.9nm,0.7s,baz=190,slow=11,SNR=2.6						
KIRV	Kirov	29.17	358	⇑eP	P	20 16 29.5	+1.4
GKN	Gorkha	29.18	85	eP	P	20 16 29.1	+0.3
	comp=Z,7.5nm,0.3s						
UZH	Uzhgorod	29.34	319	eP	P	20 16 29.7	0.0
UZH				i		20 16 31.8	
UZH				i		20 16 38.1	
KURBB	Kurchatov Arra	29.40	36	P	P	20 16 30.9	+0.6

comp=Z,2.5nm,0.8s,baz=236,slow=9.3,SNR=20
MAKZ Makanchi 29.43 45 P **P** **20 16 30.4 -0.3**
MAKZ pmax pmax
comp=Z,2.0nm,0.8s
MAKZ Makanchi 29.43 45 P **P** **20 16 30.4 -0.3**
KOLS Kolonicke sedl 29.50 319 *eP* **P** **20 16 32.2 +1.0**
KOLS pmax pmax
comp=Z,3.0nm,0.7s
KOLS Kolonicke sedl 29.50 319 *eP* **P** **20 16 32.2 +1.0**
KURK Kurchatov 29.50 36 *ceP* **P** **20 16 32.1 +0.9**
KURK pmax pmax
comp=Z,8.0nm,1.3s
KURK Kurchatov 29.50 36 P **P** **20 16 30.4 -0.8**
KURK IAmb IAmb 20 16 33.6
comp=Z,6.0nm,1.1s
MK31 Makanchi Array 29.62 46 P **P** **20 16 31.9 -0.5**
MK31 pmax pmax
comp=Z,3.0nm,1.1s
MK31 Makanchi Array 29.62 46 P **P** **20 16 31.9 -0.5**
MKAR Makanchi Array 29.62 46 P **P** **20 16 32.9 +0.5**
comp=Z,0.6nm,0.5s,baz=238,slow=8.7,SNR=14
MKAR LR LR 20 29 12.4
comp=Z,66nm,21.2s,baz=228,slow=38
KWP Kalwaria Pacla 29.62 321 P **P** **20 16 33.1 +0.8**
KWP pmax pmax
comp=Z,7.0nm,1.9s
DMN Daman 29.66 85 *eP* **P** **20 16 33.6 +0.4**
comp=Z,7.8nm,0.3s
KKN Kakani 29.78 85 *eP* **P** **20 16 34.6 +0.4**
comp=Z,11nm,0.2s
PKIN Phulchoki 29.92 85 *eP* **P** **20 16 35.7 +0.2**
comp=Z,8.8nm,0.4s
PKI Pulchoki 29.93 85 *eP* **P** **20 16 36.0 +0.3**
comp=Z,4.5nm,0.3s
GUN Gumba 30.27 84 *eP* **P** **20 16 39.4 +0.7**
comp=Z,17nm,0.6s
JIRN Jiri 30.59 85 *eP* **P** **20 16 42.0 +0.4**
comp=Z,12nm,0.3s
RAMN Ramite 31.10 86 *eP* **P** **20 16 45.4 -0.5**
comp=Z,9.9nm,0.5s
VYHS Vyhne 31.30 317 *eP* **P** **20 16 50.1 +2.9**
VYHS pmax pmax
comp=Z,4.0nm,0.9s
VYHS Vyhne 31.30 317 *eP* **P** **20 16 50.1 +2.9**
ODAN Odare 31.81 86 *eP* **P** **20 16 52.5 +0.4**
comp=Z,7.4nm,0.6s
TAPN Taplejung 31.98 85 *eP* **P** **20 16 54.2 +0.5**
comp=Z,4.9nm,0.5s
JAVC Velka Javorina 32.16 317 *eP* **P** **20 16 58.9 +4.2**
KLMR Klimovskoe 32.40 349 *eP* **P** **20 16 54.5 -2.1**
KLMR pmax pmax
comp=Z,12nm,1.3s
KLMR Klimovskoe 32.40 349 *eP* **P** **20 16 54.5 -2.1**
KLMR AMP 20 17 02.6
comp=Z,12nm,1.3s
MORC Moravsky Berou 32.62 318 *eP* **P** **20 17 01.6 +2.8**
MORC Moravsky Berou 32.62 318 ⇑P **P** **20 16 59.7 +0.9**
MORC Moravsky Berou 32.62 318 ⇑P **P** **20 16 59.7 +0.9**
MORC Moravsky Berou 32.62 318 P **P** **20 16 58.2 -0.6**
MORC IAmb IAmb 20 17 03.0
comp=Z,5.1nm,0.8s
ARSA Arzberg 32.88 313 *eP* **P** **20 17 02.3 +1.3**
comp=Z,5.1nm,1.2s
CONA Conrad Observa 32.90 314 *eP* **P** **20 17 02.8 +1.4**
comp=Z,6.3nm,1.2s
VRAC Vranov 32.99 317 *eP* **P** **20 17 04.5 +2.6**
VRAC Vranov 32.99 317 ⇑P **P** **20 17 03.0 +1.1**
VRAC Vranov 32.99 317 ⇑P **P** **20 17 03.0 +1.1**
KRUC Moravsky 33.01 316 *eP* **P** **20 17 04.8 +2.7**
KRUC Moravsky 33.01 316 P **P** **20 17 05.6 +3.5**
KRUC pmax pmax
comp=Z,5.0nm,1.0s
KRLC Kraliky 33.20 318 *eP* **P** **20 17 01.0 -2.8**
KRLC Kraliky 33.20 318 *eP* **P** **20 17 01.0 -2.8**
KMBO Kilima Mbogo 33.25 206 LR LR 20 31 53.3
comp=Z,133nm,18.8s,baz=94,slow=39
DPC Dobruska-Polom 33.58 318 P **P** **20 17 07.7 +0.6**
DPC pmax pmax
comp=Z,47nm,1.8s
DPC Dobruska-Polom 33.58 318 *eP* **P** **20 17 10.1 +3.0**
TREC Trest 33.65 316 P **P** **20 17 10.7 +3.0**
TREC pmax pmax
comp=Z,2.0nm,1.3s
OSTC Ostas 33.73 319 *eP* **P** **20 17 08.9 +0.5**
KSP Ksiaz 33.81 319 P **P** **20 17 10.2 +1.1**
KSP pmax pmax
comp=Z,5.0nm,1.1s
CHVC Chvalec 33.84 319 *eP* **P** **20 17 09.3 -0.1**
CHVC *ex* x 20 17 12.3
MOA Molln 33.88 313 *eP* **P** **20 17 10.6 +0.9**
comp=Z,8.4nm,0.9s,SNR=6.9
KBA Koelnbreinsper 34.23 312 *eP* **P** **20 17 14.2 +1.2**
comp=Z,8.6nm,0.7s,SNR=7.8
KBA Koelnbreinsper 34.23 312 P **P** **20 17 14.4 +1.4**
KBA pmax pmax
comp=Z,13nm,0.9s
ZAA0 Zalesovo Array 34.46 35 P **P** **20 17 14.0 -0.6**
ZAA0 IAmb IAmb 20 17 16.3
comp=Z,11nm,1.2s
ZALV Zalesovo Beam 34.46 35 P **P** **20 17 15.0 +0.4**
comp=Z,3.8nm,0.6s,baz=262,slow=8.8,SNR=22
ZALV LR LR 20 32 07.5
comp=Z,28nm,21.9s,baz=234,slow=38
PRU Pruhonice 34.48 317 *eP* P 20 17 20.0 +5.1
PRU Pruhonice 34.48 317 *eP* P 20 17 20.0 +5.1
LSA Lhasa 34.50 80 P **P** **20 17 16.3 +0.4**
LSA pmax pmax
comp=Z,3.0nm,0.9s
LSA Lhasa 34.50 80 P **P** **20 17 16.3 +0.4**
LSA IAmb IAmb 20 17 28.6
comp=Z,2.7nm,0.9s
GERES GERESS Array B 34.58 315 P **P** **20 17 16.3 +0.5**
comp=Z,1.3nm,0.7s,baz=108,slow=4.3,SNR=8.8
ABTA Abfaltersbach 34.69 311 *eP* **P** **20 17 18.3 +1.5**
comp=Z,5.8nm,0.9s,SNR=4.0
KHC Kasperske Hory 34.75 315 *ceP* **P** **20 17 20.6 +3.3**
KHC pmax pmax
comp=Z,18nm,1.7s
KHC Kasperske Hory 34.75 315 *eP* **P** **20 17 18.5 +1.2**
KHC *ex* x 20 17 20.5
KHC Kasperske Hory 34.75 315 P **P** **20 17 17.4 +0.2**
ZCCA Zocca 35.17 306 P **P** **20 17 21.2 +0.2**
BRG Berggiesshubel 35.18 318 *eP* **P** **20 17 23.1 +2.2**
comp=Z,3.8nm,1.0s
BRG Berggiesshubel 35.18 318 *eP* **P** **20 17 23.1 +2.2**
BRG pmax pmax
comp=Z,4.0nm,1.0s
WET Wettzell 35.19 315 P **P** **20 17 23.2 +2.1**
WET pmax pmax
comp=Z,3.0nm,1.0s
WTTA Wattenberg 35.40 311 *eP* **P** **20 17 22.3 -0.9**
comp=Z,13nm,0.9s,SNR=8.1
WTTA Wattenberg 35.40 311 P **P** **20 17 22.8 -0.3**
WTTA pmax pmax
comp=Z,17nm,0.9s
WATA Walderalm 35.46 311 *eP* **P** **20 17 23.5 -0.1**
comp=Z,16nm,1.1s
SQTA Sankt Quirin 35.67 311 P **P** **20 17 24.6 -0.7**
comp=Z,11nm,0.6s,SNR=5.5
MBAR Mbarara 35.77 217 *ceP* P 20 17 33.9 +7.3
MBAR pmax pmax
comp=Z,7.0nm,1.7s
MOTA Moosalm 35.77 311 *eP* **P** **20 17 25.9 -0.4**
comp=Z,12nm,0.8s,SNR=9.5
NKC Novy Kostel 35.83 316 *eP* **P** **20 17 29.6 +3.1**
NKC Novy Kostel 35.83 316 *eP* **P** **20 17 29.6 +3.1**
FUR Furstenfeldbru 35.89 313 P **P** **20 17 30.0 +2.9**
FUR pmax pmax
comp=Z,28nm,0.9s
CLL Collm 35.89 318 *i* P **P** **20 17 29.7 +2.7**
comp=Z,9.0nm,1.1s
CLL Collm 35.89 318 *i* P **P** **20 17 29.7 +2.7**
CLL pmax pmax
comp=Z,9.0nm,1.1s
CLL Collm 35.89 318 P **P** **20 17 26.7 -0.3**
CLL IAmb IAmb 20 17 32.1
comp=Z,7.2nm,1.0s
FETA Feichten 35.94 311 P **P** **20 17 27.7 0.0**
comp=Z,10nm,1.0s,SNR=6.4
RETA Reutte 36.04 311 *eP* **P** **20 17 27.2 -1.2**
comp=Z,5.4nm,0.6s,SNR=5.6
SHL Shillong 36.04 86 P **P** **20 17 27.5 -1.3**
SHL pmax pmax
comp=Z,4.0nm,0.9s
SHL Shillong 36.04 86 P **P** **20 17 27.5 -1.3**
SHL IAmb IAmb 20 17 28.6
comp=Z,4.4nm,0.9s
FIA1 FINESS Array S 36.11 340 P **P** **20 17 28.4 -0.4**
FINES FINESS Array B 36.11 340 P **P** **20 17 27.9 -0.8**
comp=Z,1.2nm,0.5s,baz=148,slow=11,SNR=8.8
FINES LR LR 20 33 25.6
comp=Z,57nm,18.2s,baz=141,slow=38
GRF Grafenberg Arr 36.39 315 *eP* **P** **20 17 34.4 +3.1**
comp=Z,5.8nm,0.9s,baz=112,slow=9.4
GRF Grafenberg Arr 36.39 315 P **P** **20 17 33.2 +1.9**
GRF pmax pmax
comp=Z,11nm,0.9s
DAVA Damuels 36.56 311 *eP* **P** **20 17 32.2 -0.8**
comp=Z,27nm,0.9s,SNR=14
SLE Schleitheim 37.59 311 P **P** **20 17 43.7 +2.1**
SLE pmax pmax
comp=Z,7.0nm,0.7s
CLZ Clausthal 37.62 318 P **P** **20 17 43.1 +1.3**
CLZ pmax pmax
comp=Z,15nm,0.8s
MBDF Montbardon 38.20 306 *eP* **P** **20 17 46.6 -0.3**
MBDF pmax pmax
comp=Z,12nm,0.6s
BNI Bardonecchia 38.31 307 P **P** **20 17 47.1 -0.7**
BNI pmax pmax
comp=Z,9.0nm,0.8s
BNI Bardonecchia 38.31 307 P **P** **20 17 47.1 -0.7**
BNI IAmb IAmb 20 17 51.0
comp=Z,9.5nm,0.8s
LPG La Plagne 38.33 307 *eP* **P** **20 17 50.0 +1.9**
LPG pmax pmax
comp=Z,9.0nm,0.7s
LPL La Plagne 38.34 307 *eP* **P** **20 17 50.1 +1.9**
LPL pmax pmax
comp=Z,9.0nm,0.6s
RSL Roselend 38.44 308 P **P** **20 17 51.2 +2.2**
CDF Champ du Feu 38.53 312 *eP* **P** **20 17 51.9 +2.3**
CDF pmax pmax
comp=Z,1.0nm,0.6s
ECH Echery 38.57 312 P **P** **20 17 49.9 +0.1**
ECH pmax pmax
comp=Z,5.0nm,0.8s
ECH Echery 38.57 312 P **P** **20 17 49.9 +0.1**
ECH IAmb IAmb 20 17 52.6
comp=Z,5.1nm,0.8s
HINF Hinteralfeld 38.68 311 *eP* **P** **20 17 52.4 +1.6**
HINF pmax pmax
comp=Z,6.0nm,1.0s
CABF La Chapelle 38.97 309 *eP* **P** **20 17 54.0 +0.7**
CABF pmax pmax
comp=Z,13nm,0.8s
VIVF Saint-Julien-l 39.70 306 *eP* **P** **20 18 01.0 +1.7**
VIVF pmax pmax
comp=Z,16nm,1.4s
LOR Lormes 40.58 309 *eP* **P** **20 18 08.8 +2.2**
LOR pmax pmax
comp=Z,6.0nm,1.6s
GTA Gaotai 40.78 63 *eP* **P** **20 18 10.7 +2.2**
GTA pP pP 20 18 15.1 +0.2
GTA sP sP 20 18 17.6 +0.2
GTA pmax pmax
comp=Z,4.0nm,1.3s
AVF Avril sur Loir 40.85 309 *eP* **P** **20 18 10.8 +2.0**
AVF pmax pmax
comp=Z,9.0nm,1.4s
NORES NORESS Array B 40.96 331 P **P** **20 18 10.0 +0.5**
NC405 NORSAR Array S 41.09 332 P **P** **20 18 09.4 -1.2**
NC405 IAmb IAmb 20 18 19.0
comp=Z,5.8nm,0.7s
BGF Bois d'Agland 41.17 308 *eP* **P** **20 18 13.3 +1.9**
BGF pmax pmax
comp=Z,2.0nm,0.2s
NB2 NORSAR Subarra 41.26 332 P **P** **20 18 10.7 -1.3**
comp=Z,1.1nm,0.5s,baz=122,slow=8.6
NOA NORSAR Array B 41.26 332 P **P** **20 18 10.6 -1.4**
comp=Z,0.7nm,0.4s,baz=122,slow=8.3,SNR=8.7
NOA PP **PP** **20 19 45.2 -2.0**
comp=Z,0.8nm,0.8s,baz=117,slow=10,SNR=2.6
NOA LR LR 20 37 01.9
comp=Z,28nm,20.9s,baz=150,slow=39
RJF Les Rejaudoux 41.97 306 *eP* **P** **20 18 20.5 +2.5**
RJF pmax pmax
comp=Z,65nm,2.3s
ARCES ARCESS Array B 42.79 347 P **P** **20 18 24.5 +0.2**
comp=Z,1.3nm,0.6s,baz=149,slow=8.1,SNR=14
ARCES PP **PP** **20 20 03.0 -0.6**
comp=Z,1.2nm,0.7s,baz=143,slow=9.1,SNR=1.8
ARCES LR LR 20 37 04.2
comp=Z,55nm,19.5s,baz=146,slow=37
FLN La Foliniere 43.67 311 *eP* **P** **20 18 32.5 +0.8**
FLN pmax pmax
comp=Z,14nm,1.2s
GRR Gorron 43.87 311 *eP* **P** **20 18 32.4 -1.0**
GRR pmax pmax
comp=Z,27nm,1.4s
CMAR Chiang Mai Arr 44.59 93 P **P** **20 18 39.0 -0.4**
comp=Z,0.7nm,0.6s,baz=293,slow=9.4,SNR=3.6
CMAR LR LR 20 41 15.7
comp=Z,31nm,18.7s,baz=297,slow=42
SGMF Saint Gilles 44.99 310 *eP* **P** **20 18 44.8 +2.5**
SGMF pmax pmax
comp=Z,15nm,1.0s
NRIK Noril'sk 45.01 17 LR LR 20 40 39.5
comp=Z,51nm,18.6s,baz=212,slow=40
NRIK Noril'sk 45.01 17⇑ *eP* **P** **20 18 44.1 +1.9**
QUIF Quistinic 45.37 310 *eP* **P** **20 18 47.3 +2.0**
QUIF pmax pmax
comp=Z,9.0nm,0.7s
ROSF Rostrenen 45.47 310 *eP* **P** **20 18 48.1 +1.9**
ROSF pmax pmax
comp=Z,62nm,1.7s
KMI Kunming 45.59 83 P **P** **20 18 48.3 +0.7**
KMI pP pP 20 18 55.9 +1.8
KMI pmax pmax
comp=Z,9.0nm,0.9s
KMI Kunming 45.59 83 P **P** **20 18 47.4 -0.3**
KMI pmax pmax
comp=Z,11nm,0.8s
KMI Kunming 45.59 83 P **P** **20 18 47.4 -0.3**
SONM Songino Array 45.73 50 P **P** **20 18 48.7 +0.4**
comp=Z,0.5nm,0.6s,baz=268,slow=9.1,SNR=6.8
SONM LR LR 20 40 39.1
comp=Z,89nm,19.4s,baz=264,slow=40
ESDC Sonseca Array 46.04 298 P **P** **20 18 51.5 +0.7**
comp=Z,0.5nm,0.5s,baz=69,slow=7.9,SNR=7.2
ULN Ulaanbaatar 46.17 50 *ceP* **P** **20 18 53.5 +1.6**
ULN pmax pmax
comp=Z,4.0nm,1.7s
EKA Eskdalemuir Ar 46.31 320 P **P** **20 18 51.7 -1.0**
PAB San Pablo 46.35 298 P **P** **20 18 57.0 +3.7**
PAB pmax pmax
comp=Z,8.0nm,1.3s
XAN Xi'an 48.64 69 P **P** **20 19 11.5 +0.4**
XAN pmax pmax
comp=Z,5.0nm,0.7s
XAN pmax pmax
comp=Z,56nm,3.8s
TOA0 Torodi Ar. Sit 48.65 261 P **P** **20 19 11.9 +0.5**
TORD Torodi Ar. Bea 48.65 261 P **P** **20 19 12.1 +0.8**
comp=Z,8.0nm,0.8s,baz=60,slow=8.2,SNR=40
TORD LR LR 20 42 20.9
comp=Z,51nm,18.1s,baz=65,slow=39
BOD Bodaibo 51.13 38 *eP* **P** **20 19 28.5 -1.2**
BOD pmax pmax
comp=Z,7.0nm,1.8s
SPA0 Spitsbergen Ar 51.25 351 P **P** **20 19 30.3 0.0**
SPITS Spitsbergen Ar 51.25 351 P **P** **20 19 30.4 0.0**
SPITS pmax pmax
comp=Z,3.0nm,0.4s
DBIC Dimbokro 57.42 258 P **P** **20 20 17.7 +1.6**
comp=Z,7.7nm,0.8s,baz=35,slow=7.1,SNR=12
DBIC LR LR 20 46 33.6
comp=Z,55nm,18.2s,baz=36,slow=38
DBIC Dimbokro 57.42 258 P **P** **20 20 16.2 +0.1**
KIC Kosan Boka 57.48 258 *eP* **P** **20 20 17.3 +0.8**
comp=Z,45nm,1.4s
TIC Toumodi 57.58 258 *eP* **P** **20 20 18.2 +1.0**
LIC Lamto 57.80 258 *eP* **P** **20 20 20.3 +1.6**
comp=Z,6.0nm,0.5s
YAK Yakutsk 59.04 33 P **P** **20 20 25.9 -0.8**
YAK pmax pmax
comp=Z,4.0nm,0.6s
YAK Yakutsk 59.04 33 P **P** **20 20 25.9 -0.8**
LBTB Lobatse 59.52 207 P **P** **20 20 30.9 +0.4**
LBTB pmax pmax
comp=Z,3.0nm,0.9s
LBTB Lobatse 59.52 207 P **P** **20 20 30.9 +0.4**
LBTB IAmb IAmb 20 20 36.6
comp=Z,2.9nm,0.8s
KLR Kul'dur 62.32 47 LR LR 20 51 13.7
comp=Z,49nm,18.4s,baz=280,slow=39
KSRS Korea Array 62.79 61 P **P** **20 20 52.7 +0.1**
comp=Z,0.8nm,0.5s,baz=281,slow=6.5,SNR=6.8
KSRS LR LR 20 51 09.5
comp=Z,37nm,18.8s,baz=240,slow=39
BOSA Boshof 62.88 206 P **P** **20 20 56.0 +2.7**
comp=Z,2.1nm,0.8s,baz=40,slow=17,SNR=2.2
BOSA LR LR 20 50 07.9
comp=Z,34nm,18.4s,baz=44,slow=38
BOSA Boshof 62.88 206 P **P** **20 20 56.0 +2.7**
BOSA Boshof 62.88 206 P **P** **20 20 54.1 +0.8**
BOSA IAmb IAmb 20 21 07.2
comp=Z,6.6nm,1.2s
USRK Ussuriysk Ar. 63.78 52 LR LR 20 52 07.7
comp=Z,47nm,18.4s,baz=302,slow=39
JNU Nakatsue 66.49 64 LR LR 20 54 12.2
comp=Z,32nm,19.2s,baz=350,slow=40
ASAJ Asahikawa 71.00 50 LR LR 20 54 51.6
comp=Z,29nm,19.4s,baz=228,slow=38
BILL Bilibino 71.65 21 *i* P **P** **20 21 49.7 +1.4**
BILL *e**PP **pP** **20 21 54.0 -1.0**
BILL *e**SP **sP** **20 21 57.8 +0.3**
BILL *e* 20 22 07.3
BILL pmax pmax
comp=Z,6.0nm,1.2s
BILL MLR MLR
comp=Z,60nm,16.0s
BILL Bilibino 71.65 21 P **P** **20 21 48.4 +0.2**
BILL IAmb IAmb 20 21 50.6
comp=Z,4.0nm,1.0s
SCHQ Schefferville 80.76 329 P **P** **20 22 40.5 +0.2**
comp=Z,2.6nm,0.7s,baz=39,slow=4.9,SNR=5.1
SCHQ Schefferville 80.76 329 P **P** **20 22 38.6 -1.7**
SCHQ IAmb IAmb 20 22 45.3
comp=Z,4.6nm,0.9s
ILAR Eielson Array 85.02 8 P **P** **20 23 02.7 +0.4**
comp=Z,0.6nm,0.7s,baz=321,slow=3.8,SNR=8.1
BPAW Bear Paw Mtn. 85.13 10 P **P** **20 23 02.8 0.0**
BPAW IAmb IAmb 20 23 04.5
comp=Z,3.3nm,0.8s
YKA Yellowknife Ar 87.69 354 P **P** **20 23 16.2 +0.9**
comp=Z,1.1nm,0.9s,baz=16,slow=4.4,SNR=11
WRA Warramunga Arr 93.77 111 P **P** **20 23 46.2 +1.8**
comp=Z,0.2nm,0.5s,baz=320,slow=4.2,SNR=5.7
ASAR Alice Springs 95.26 114 P **P** **20 23 51.4 +0.2**
comp=Z,0.2nm,0.5s,baz=310,slow=4.2,SNR=2.3

WEL 03 20:13:24.3, 40.0°S ± 0.7 × 17.7°E ± , h34 km ± 1 km, M3.5/73, ML3.9/25, MLv3.5/73, Error ellipse: s-maj=0.0km s-min=0.0km az=85.9, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PXZ	**Pawanui**	**0.04**	**197**	P	Pb	20 13 30.2	+0.3
PXZ				S	Sb	20 13 35.0	+1.2
KAHZ	**Kahuranaki**	**0.20**	**360**	P	Pb	20 13 30.7	-0.2
KAHZ				S	Sb	20 13 36.1	+0.6
PRHZ	**Porangahau**	**0.33**	**214**	P	Pn	20 13 33.5	+0.8
PRHZ				S	Sb	20 13 40.9	+2.7
WPHZ	**Waipukurau**	**0.34**	**258**	P	Pn	20 13 32.9	0.0
WPHZ				S	Sb	20 13 39.4	+1.0
CKHZ	**Cape Kidnapper**	**0.37**	**25**	P	Pn	20 13 33.3	0.0
CKHZ				S	Sn	20 13 40.1	+1.1
KRHZ	**Kereru**	**0.52**	**312**	P	Pb	20 13 34.6	-0.7
KRHZ				S	Sb	20 13 42.1	-0.8
PNHZ	**Pukenui**	**0.53**	**278**	P	Pb	20 13 35.0	-0.4
PNHZ				S	Sb	20 13 43.0	0.0
ANWZ	**Angora Road**	**0.56**	**213**	P	Pb	20 13 36.6	+0.8
ANWZ				S	Sn	20 13 46.2	+2.2
MCHZ	**McNeill Hill**	**0.56**	**346**	P	Pb	20 13 36.0	0.0
MCHZ				S	Sn	20 13 44.7	+0.7
DVHZ	**Dannevirke**	**0.62**	**240**	P	Pb	20 13 37.2	+0.3
DVHZ				S	Sb	20 13 47.0	+1.4
KWHZ	**Kaweka Forest**	**0.67**	**328**	P	Pn	20 13 36.9	-0.4
KWHZ				S	Sb	20 13 46.9	+0.1
TSZ	**Takapari Road**	**0.71**	**264**	P	Pn	20 13 37.9	-0.1
TSZ				S	Sb	20 13 48.0	+0.2
ARHZ	**Aropaoanui**	**0.73**	**7**	P	Pb	20 13 38.5	-0.2
ARHZ				S	Sb	20 13 49.5	+1.0
BHHZ	**Black Hill Sta**	**0.80**	**308**	P	Pn	20 13 38.9	-0.3
BFZ	**Birch Farm**	**0.84**	**215**	P	Pn	20 13 40.1	+0.3
BKZ	**Black Stump Fm**	**0.88**	**340**	P	Pn	20 13 40.2	-0.1
PRWZ	**Pori Road**	**0.89**	**231**	P	Pb	20 13 41.2	-0.1
NMHZ	**Naumai**	**0.90**	**356**	P	Pn	20 13 41.0	+0.4
POWZ	**Post Office Ro**	**0.94**	**244**	P	Pn	20 13 41.6	+0.5
WHHZ	**Waihua**	**0.95**	**17**	P	Pn	20 13 42.1	-0.3
MOVZ	**Moawhango**	**1.05**	**304**	P	Pn	20 13 42.9	+0.3
CPWZ	**Castlepoint**	**1.05**	**209**	P	Pb	20 13 44.2	+0.2
RAHZ	**Arahi**	**1.09**	**9**	P	Pn	20 13 43.4	+0.2
TIWZ	**Tintock**	**1.09**	**224**	P	Pn	20 13 43.5	+0.3
MTHZ	**Maungataniwha**	**1.14**	**359**	P	Pn	20 13 43.9	0.0
KNZ	**Kokohu**	**1.15**	**33**	P	Pn	20 13 43.5	-0.5
TUVZ	**Tukino**	**1.19**	**307**	P	Pb	20 13 45.7	-0.7
MRZ	**Mangatainoka R**	**1.20**	**236**	P	Pn	20 13 44.8	+0.2
MRHZ	**Matea Rd**	**1.21**	**343**	P	Pn	20 13 45.4	+0.5
OHWZ	**Ohakea**	**1.22**	**259**	P	Pb	20 13 46.3	-0.5
WHVZ	**Whangaehu Hut**	**1.22**	**305**	P	Pb	20 13 46.1	-0.9
TRVZ	**Turoa**	**1.24**	**304**	P	Pb	20 13 46.4	-0.9
DRZ	**Dome Shelter**	**1.24**	**305**	P	Pb	20 13 47.0	-0.4
MTVZ	**Mangateitei**	**1.24**	**299**	P	Pb	20 13 46.3	-0.9
HATZ	**Hinemaiaia**	**1.26**	**331**	P	Pb	20 13 46.5	-0.9
FWVZ	**Far West T-bar**	**1.26**	**305**	P	Pn	20 13 46.6	+0.9
SNGZ	**Shannon Statio**	**1.26**	**17**	P	Pn	20 13 45.8	+0.3
NGZ	**Ngauruhoe**	**1.28**	**309**	P	Pb	20 13 47.1	-0.8
RITZ	**Rihia Road**	**1.28**	**322**	P	Pb	20 13 47.5	-0.4
KRVZ	**Karewarewa**	**1.31**	**313**	P	Pb	20 13 47.7	-0.7
WTVZ	**West Tongariro**	**1.33**	**311**	P	Pb	20 13 48.0	-0.7
TMWZ	**Te Maipa**	**1.34**	**214**	P	Pn	20 13 46.3	-0.4
KATZ	**Kakaramea**	**1.37**	**318**	P	Pb	20 13 48.8	-0.6
PKVZ	**Pokaka**	**1.38**	**300**	P	Pb	20 13 48.5	-1.0
RTZ	**Ruatahuna**	**1.38**	**3**	P	Pn	20 13 47.4	+0.2
HOWZ	**Holdsworth Sta**	**1.38**	**229**	P	Pn	20 13 46.8	-0.3
RIGZ	**Rimuhau**	**1.46**	**28**	P	Pn	20 13 48.1	-0.1
ALRZ	**Allen Road**	**1.49**	**344**	P	Pn	20 13 49.2	+0.5
MUGZ	**Murupara**	**1.52**	**357**	P	Pn	20 13 49.1	0.0
PRRZ	**Plateau Road**	**1.54**	**346**	P	Pn	20 13 50.5	+1.2
OGWZ	**Otaki Gorge**	**1.54**	**237**	P	Pn	20 13 49.2	-0.1
MTW	**Mount Morrison**	**1.57**	**222**	P	Pn	20 13 48.9	-0.9
TRWZ	**Traveller**	**1.67**	**212**	P	Pn	20 13 50.5	-0.7
RRRZ	**Republican Roa**	**1.67**	**350**	P	Pn	20 13 51.8	+0.6
KUTZ	**Kaahu Road**	**1.71**	**331**	P	Pn	20 13 52.6	+0.8
MWZ	**Matawai**	**1.73**	**17**	P	Pn	20 13 51.4	-0.6
KIW	**Kapiti Island**	**1.73**	**239**	P	Pn	20 13 52.1	0.0
URZ	**Urewera**	**1.74**	**6**	P	Pn	20 13 51.8	-0.3
PAWZ	**Paruwai Farm**	**1.77**	**218**	P	Pn	20 13 51.7	-0.9
CAW	**Cannon Point**	**1.77**	**230**	P	Pn	20 13 51.9	-0.7
TARZ	**Mount Tarawera**	**1.78**	**351**	P	Pn	20 13 53.2	+0.5
MSWZ	**Moikau Station**	**1.89**	**220**	P	Pn	20 13 52.8	-1.4
OMRZ	**Omania**	**1.92**	**348**	P	Pn	20 13 54.3	-0.4
TLZ	**Tolley Road**	**1.96**	**327**	P	Pn	20 13 56.8	+1.6
LREZ	**Lake Rotokare**	**1.98**	**285**	P	Pb	20 13 58.9	-0.8
PLWZ	**Palliser**	**2.00**	**218**	P	Pn	20 13 54.4	-1.4
BHW	**Baring Head**	**2.08**	**227**	P	Pn	20 13 55.5	-1.3
RUGZ	**Raukumara Rang**	**2.12**	**17**	P	Pn	20 13 56.9	-0.5
HIZ	**Hauiti**	**2.15**	**313**	P	Pn	20 13 59.0	+1.1
HAZ	**Te Kaha**	**2.34**	**18**	P	Pn	20 14 00.1	-0.3
DUWZ	**D'Urville Isla**	**2.40**	**249**	P	Pn	20 14 01.0	-0.1
WMGZ	**Waiomatatini S**	**2.48**	**29**	P	Pn	20 14 01.0	-1.3
TOZ	**Tahuroa Road**	**2.50**	**334**	P	Pn	20 14 02.6	0.0
TUWZ	**Tuamarina**	**2.65**	**236**	P	Pn	20 14 03.6	-1.1
BSWZ	**Blackbirch Sta**	**2.85**	**232**	P	Pn	20 14 06.5	-0.9
NNZ	**Nelson**	**2.93**	**244**	P	Pn	20 14 08.0	-0.4
QRZ	**Quartz Range**	**3.42**	**255**	P	Pn	20 14 14.4	-0.9
THZ	**Tophouse**	**3.49**	**238**	P	Pn	20 14 14.3	-2.0
KHZ	**Kahutara**	**3.49**	**225**	P	Pn	20 14 15.3	-0.8
LTZ	**Lake Taylor**	**4.45**	**230**	P	Pn	20 14 26.8	-2.5
OKCZ	**Okains Bay**	**4.69**	**216**	P	Pn	20 14 30.7	-2.1
MQZ	**McQueen's Vall**	**4.87**	**219**	P	Pn	20 14 32.9	-2.2
CTZ	**Chatham Island**	**6.13**	**130**	P	Pn	20 14 53.6	+1.2

*IDC **03** 20:21:00.2 ± 1.3, 24.31°S × 175.79°W, h0 km, mb4.0/6, mb1 4.2/6, mb1mx3.8/40, mbtmp4.0/6, MS3.3/7, Ms1 3.3/7, ms1mx3.0/36, Error ellipse: s-maj=48.1km s-min=34.4km az=140.0*
*NEIC **03** 20:21:05.9 ± 1.5, 24.25°S ± 0.05 × 176.0°W ± 0.2, h35 km ± 8 km,*

mb4.3/7, Error ellipse: s-maj=24.3km s-min=4.1km az=73.0

ISC 03 20:21:05.6±1.0, 24°.2S±0°.1×176°.0W±0°.2, h31km, n25, σ1s.13/20, mb4.3/10, MS3.2/5, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	5.28	199	Pn	Pn	20 22 21.7	-0.7
MSVF	Nonsavu	8.53	318	Pn	Pn	20 23 07.5	+0.3
RAR	Rarotonga	15.27	82	Pn	Pn	20 24 28.7	-10
	0.8nm,0.3s,baz=264,slow=11,SNR=3.6						
RAR				LR	LR	20 30 56.7	
	comp=Z,68nm,19.1s,baz=276,slow=40						
DZM	Mont Dzumac	16.30	274	LR	LR	20 30 05.5	
	comp=Z,119nm,19.6s,baz=37,slow=33						
KHZ	Kahutara	20.10	203	P	P	20 25 36.1	-0.6
OXZ	Oxford	21.44	204	P	P	20 25 50.2	-0.9
OXZ				IAmb	IAmb	20 25 59.0	
	comp=Z,19nm,1.3s						
PPT	Papeete	25.53	80	LR	LR	20 35 50.5	
	comp=Z,64nm,18.9s,baz=332,slow=35						
HNR	Honiara	27.26	299	LR	LR	20 35 53.7	
	comp=Z,56nm,21.3s,baz=206,slow=32						
HNR	Honiara	27.26	299	eP	P	20 26 45.0	-2.3
CTAO	Charters Tower	35.14	269	P	P	20 27 57.8	+1.2
STKA	Stephens Creek	38.01	249	LR	LR	20 42 41.0	
	comp=Z,73nm,18.3s,baz=27,slow=34						
PMG	Port Moresby	38.08	286	P	P	20 28 21.6	-0.3
PMG				IAmb	IAmb	20 28 23.5	
	comp=Z,7.9nm,0.8s						
ASAR	Alice Springs	45.59	260	P	P	20 29 23.9	+0.8
	comp=Z,1.2nm,0.9s,baz=107,slow=8.6,SNR=8.2						
WR0	Warramunga Arr	45.84	265	P	P	20 29 25.8	+0.6
WR0				IAmb	IAmb	20 29 40.5	
	comp=Z,5.5nm,1.2s						
WB2	Warramunga Arr	46.02	265	P	P	20 29 26.6	0.0
WB2				IAmb	IAmb	20 29 32.8	
	comp=Z,4.5nm,1.1s						
WRA	Warramunga Arr	46.03	265	P	P	20 29 26.5	-0.2
	comp=Z,0.8nm,0.7s,baz=96,slow=8.4,SNR=12						
WRA				LR	LR	20 49 21.0	
	comp=Z,46nm,18.5s,baz=180,slow=37						
PETK	Petropavlovsk-	80.35	344	P	P	20 33 13.1	-0.3
	comp=Z,1.0nm,0.7s,baz=151,slow=9.5,SNR=3.9						
SNAA	Sanae	84.23	178	P	P	20 33 35.9	+2.1
SNAA	Sanae	84.23	178	P	P	20 33 32.7	-1.1
	comp=Z,1.5nm,0.9s,baz=343,slow=19,SNR=3.8						
SNAA	Sanae	84.23	178	P	P	20 33 34.7	+0.9
SNAA				IAmb	IAmb	20 33 36.6	
	comp=Z,2.4nm,1.0s						
VNA3	Neumayer Olymp	84.30	176	P	P	20 33 35.8	+1.7
ILAR	Eielson Array	91.55	12	P	P	20 34 08.0	-0.7
	comp=Z,0.5nm,1.0s,baz=228,slow=6.3,SNR=4.4						
CMAR	Chiang Mai Arr	93.09	289	P	P	20 34 18.2	+1.3
	comp=Z,2.4nm,1.0s,baz=128,slow=2.6,SNR=11						
CMAR				LR	LR	21 15 06.9	
	comp=Z,6.8nm,19.9s,baz=185,slow=35						
AKASG	Malin Array Be	147.16	330	PKPbc	PKPbc	20 40 45.2	-0.2
	comp=Z,0.2nm,0.4s,baz=45,slow=4.4,SNR=5.5						
BRTR	Keskin Array B	150.67	309	PKPbc	PKiKP	20 40 55.2	-0.4
	comp=Z,0.9nm,0.8s,baz=149,slow=2.9,SNR=5.9						

IDC 03 20:30:04.3±48.0, 17°.59S×172°.98W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.6/47, mbtmp4.2/3, Error ellipse: s-maj=920.5km s-min=187.0km az=81.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	43.33	242	P	P	20 38 08.2	-0.1
	1.1nm,0.5s,baz=76,slow=8.3,SNR=2.8						
WRA	Warramunga Arr	49.77	259	P	P	20 38 58.4	-0.8
	0.6nm,0.3s,baz=97,slow=7.0,SNR=27						
ASAR	Alice Springs	49.84	254	P	P	20 39 00.2	+0.5
	8.1nm,0.6s,baz=89,slow=8.4,SNR=92						

IDC 03 20:42:56.0±1.6, 35°.60N×135°.78E, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.2/52, mbtmp3.8/3, ML2.4/2, Error ellipse: s-maj=34.0km s-min=26.7km az=32.0
JMA 03 20:43:13.2, 34°.08N×135°.32E, h6km
ISC 03 20:42:53.8±1.2, 35°.04N±0°.07×135°.71E±0°.08, h10km, n6, σ2s.57/7, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWY	Kouya	0.82	187	P	Pn	20 43 18.5	+7.0
JWY				S	Sb	20 43 22.4	+1.1
JWM	Minabe	1.22	194	P	Pg	20 43 18.0	+0.8
JWM				S	Sb	20 43 21.2	-12
MJAR	Matsushiro Arr	2.53	53	Pn	Pn	20 43 34.4	-0.5
	0.2nm,0.3s,baz=239,slow=21,SNR=19						
MJAR				Sn	Sg	20 44 16.6	+1.5
	0.2nm,0.3s,baz=77,slow=30,SNR=4.1						
JHJ	Hachijo jima 2	3.89	118	Pn	Pb	20 43 59.0	-3.4
	3.9nm,0.3s,baz=252,slow=18,SNR=1.8						
JHJ				Sn	Sb	20 44 52.7	+3.2
	8.1nm,0.3s,baz=91,slow=22,SNR=5.9						
ZALV	Zalesovo Beam	39.92	314	P	P	20 50 28.3	+0.5
	0.2nm,0.3s,baz=90,slow=10,SNR=1.6						
WRA	Warramunga Arr	54.69	182	P	P	20 52 31.1	+8.0
	0.4nm,0.7s,baz=5.2,slow=7.6,SNR=5.7						

TAP 03 20:45:25.8, 24°.20N×121°.72E, h13km, ML3.0, B
JMA 03 20:45:25.5, 24°.16N×121°.69E, h11km±1km, M2.3
ISC 03 20:45:23.3±0.9, 24°.17N±0°.02×121°.86E±0°.02, h16km±7km, n94, σ1s.28/135, 18D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.25	270	⇓iP	Pg	20 45 29.0	+0.2
	baz=256						
NACB				i S	Sg	20 45 31.0	-1.5
	baz=256						
TWD	Chiawan	0.26	249	⇓iP	Pb	20 45 29.8	+0.2
	baz=222						
TWD				i S	Sg	20 45 32.5	-0.4
	baz=222						
ENA	Nanau	0.28	336	⇓iP	Pn	20 45 30.8	-1.9
	baz=6.0						
ENA				eS	Sb	20 45 34.0	-0.3
	baz=6.0						
HWA	Hwalien	0.31	230	eP	Pn	20 45 31.7	-1.4
	baz=205						
HWA				eS	Sb	20 45 36.0	+0.8
	baz=205						
ETLH	Xiulin Townshi	0.35	275	⇓iP	Pg	20 45 30.7	+0.1
	baz=271						
ETLH				eS	Sg	20 45 34.0	-1.6
	baz=271						
TWC	Suao	0.43	358	P	Pn	20 45 34.4	-0.5
	baz=10.0						
TWC				eS	Sn	20 45 40.1	-2.3
	baz=10.0						
EOS1	EOS1	0.45	33	eP	Pn	20 45 36.6	+1.6
	baz=38						
NNSB	Datong	0.51	300	⇓iP	Pg	20 45 33.8	+0.3
	baz=306						
NNSB				eS	Sb	20 45 38.7	-2.4
	baz=306						
NNSH	Datong	0.51	300	⇓iP	Pg	20 45 33.7	+0.3
	baz=305						
NNSH				eS	Sb	20 45 38.7	-2.4
	baz=305						
NNS	Nan Shan	0.52	301	⇓iP	Pg	20 45 33.9	+0.2
	baz=307						
NNS				eS	Sb	20 45 39.7	-1.8
	baz=307						
ESL	Shilin	0.53	228	⇓eP	Pn	20 45 34.9	-1.3
	baz=220						
NDT	Datong Townshi	0.53	323	⇓iP	Pn	20 45 35.0	-1.2
	baz=334						
NDT				S	Sb	20 45 41.2	-0.5
	baz=334						
ENTT	Nioudou	0.54	330	⇓iP	Pn	20 45 35.3	-1.1
	baz=342						
ENTT				i S	Sb	20 45 41.3	-0.6
	baz=342						
WHF	Hehuan Shan	0.55	267	⇓iP	Pb	20 45 34.5	-0.3
	baz=262						
WHF				eS	Sb	20 45 40.1	-2.5
	baz=262						
TWE	Neicheng	0.57	342	⇓iP	Pn	20 45 36.4	-0.4
TWE				eS	Sn	20 45 43.6	-2.3
ILA	Ilan	0.60	350	eP	Pn	20 45 37.2	0.0
	baz=353						
SLBB	Yuanshan	0.61	340	eP	Pn	20 45 37.2	-0.2
	baz=351						
SLBB				eS	Sg	20 45 44.4	+0.8
	baz=351						
TWT	Tachien	0.63	277	⇓iP	Pg	20 45 36.5	+0.6
	baz=275						
TWT				eS	Sb	20 45 43.2	-1.6
	baz=275						
CHGB	Renai	0.64	260	⇓iP	Pg	20 45 36.4	+0.4
	baz=250						
CHGB				S	Sb	20 45 43.6	-1.5
	baz=250						
EGFH	Guangfu	0.64	219	eP	Pn	20 45 37.4	-0.3
	baz=213						
EGFH				eS	Sn	20 45 46.6	-1.0
	baz=213						
TDCB	Techi	0.65	277	⇓iP	Pg	20 45 36.5	+0.4
	baz=276						
TDCB				eS	Sb	20 45 42.9	-2.3
	baz=276						
YHNB	Yeheng	0.66	318	⇓iP	Pn	20 45 37.1	-1.0
	baz=325						
YHNB				eS	Sb	20 45 44.4	-1.2
	baz=325						
OWD	Renai	0.67	251	eP	Pg	20 45 36.8	+0.4
	baz=245						
OWD				eS	Sb	20 45 44.7	-1.0
	baz=245						
NSK	Sanguang	0.68	317	⇓iP	Pn	20 45 37.3	-1.0
	baz=325						
NSK				eS	Sb	20 45 45.0	-1.0
	baz=325						
NWLT	Wulai	0.69	331	⇓iP	Pn	20 45 38.1	-0.3
	baz=345						
NWLT				eS	Sb	20 45 45.8	-0.4
	baz=345						
VWDT	VWDT	0.78	238	P	Pn	20 45 39.4	-0.2
	baz=231						
VWDT				eS	Sg	20 45 50.0	+1.1
	baz=231						
HGSD	Ruisui	0.79	211	eP	Pn	20 45 41.0	+1.2
	baz=216						
HGSD				eS	Sn	20 45 54.1	+2.8
	baz=216						
TIPB	Shuangxi	0.80	358	eP	Pn	20 45 41.0	+1.1
	baz=358						
TIPB				eS	Sn	20 45 50.4	-1.1
	baz=358						
EHY	Hungye	0.83	217	eP	Pn	20 45 40.2	-0.1
	baz=208						
TWA	Mucha	0.84	342	eP	Pn	20 45 42.1	+1.6
	baz=350						
TWA				eS	Sg	20 45 50.8	0.0
	baz=350						
NHDH	Xindian Distri	0.84	339	eP	Pn	20 45 41.3	+0.7
	baz=347						
WHP	Taichung City	0.84	277	eP	Pg	20 45 40.1	+0.3
	baz=276						
WHP				eS	Sb	20 45 49.7	-1.1
	baz=276						
DPDB	Guoxing	0.87	261	eP	Pn	20 45 40.4	-0.5
	baz=257						
TATO	Taipei	0.87	337	eP	Pg	20 45 41.4	+1.2
	baz=353						
TATO				eS	Sg	20 45 51.6	0.0
	baz=353						
WLTB	Daxi	0.88	321	eP	Pg	20 45 42.2	+1.9
	baz=326						
WLTB				eS	Sn	20 45 52.8	-0.6
	baz=326						
NWF	Wu-fen Shan	0.90	355	eP	Pn	20 45 44.1	+2.8
	baz=3.0						
WFSB	Wu-fen Shan	0.90	355	eP	Pg	20 45 43.3	+2.5
	baz=3.0						
LIOB	Emei	0.90	301	eP	Pg	20 45 41.5	+0.6
	baz=305						
TAP1	Taipei	0.92	340	eP	Pg	20 45 43.5	+2.4
	baz=347						
SSLB	Suanglung	0.92	245	eP	Pg	20 45 41.4	+0.3
	baz=250						
SSLB				eS	Sb	20 45 51.5	-1.3
	baz=250						
SMLT	Sun Moon Lake	0.93	252	eP	Pg	20 45 41.6	+0.3
	baz=240						
SMLT				eS	Sb	20 45 53.2	0.0
	baz=240						
YULB	Yu-li	0.94	214	eP	Pg	20 45 41.7	+0.2
	baz=219						
TYC	Yuchr	0.96	254	P	Pg	20 45 42.3	+0.4
	baz=243						
TYC				eS	Sb	20 45 54.5	+0.5
	baz=243						
TWF1	Yuli	0.97	213	eP	Pg	20 45 44.0	+1.9
	baz=216						
TWF1				eS	Sg	20 45 56.7	+1.9
	baz=216						
NCUH	Zhongli	1.00	322	eP	Pg	20 45 44.4	+1.6
	baz=327						
YM01	YM01	1.00	345	eP	Pg	20 45 45.2	+2.4
	baz=350						
YM01				eS	Sg	20 45 57.5	+1.5
	baz=350						
TWQ1	Liyutan	1.01	280	eP	Pg	20 45 43.8	+0.9
	baz=280						
YM10	YM10	1.01	344	eP	Pg	20 45 45.2	+2.2
	baz=1.0						
YM04	YM04	1.02	343	eP	Pg	20 45 45.3	+2.2
	baz=349						
YM05	YM05	1.02	345	eP	Pg	20 45 44.6	+1.4
	baz=2.0						
NSY	Sanyi	1.03	284	eP	Pg	20 45 44.4	+1.1
	baz=284						
WHYT	Xinyi Township	1.04	243	eP	Pg	20 45 44.1	+0.7
	baz=238						
YM08	YM08	1.04	346	eP	Pg	20 45 45.3	+1.8
	baz=352						
NMLH	Miaoli	1.04	291	eP	Pg	20 45 44.3	+0.8
	baz=292						
YM03	YM03	1.04	344	eP	Pg	20 45 45.5	+2.0
	baz=349						
ANP	Anpu	1.05	343	eP	Pg	20 45 43.5	-0.2
	baz=349						
NTST	Danshui	1.06	339	eP	Pg	20 45 45.9	+2.1
	baz=345						
YUS	Yu-Shan	1.08	231	eP	Pg	20 45 45.1	+0.8
	baz=226						
TCU	Taichung	1.08	269	eP	Pg	20 45 46.1	+1.8
	baz=267						
YOJ	Yonaguni jima	1.08	74	eP	Pg	20 45 48.3	+4.0
	baz=65						
YOJ	Yonaguni jima	1.08	74	P	Pg	20 45 48.4	+4.1
PTSB	Yuanli	1.09	285	eP	Pg	20 45 45.4	+0.9
	baz=285						
WJS	Zhushan	1.10	252	eP	Pg	20 45 45.1	+0.6
	baz=244						
WJS				eS	Sg	20 46 00.1	+1.2
	baz=244						
FULB	Fuli	1.10	208	eP	Pg	20 45 45.8	+1.1
	baz=215						
WNT	Mingjian	1.12	255	eP	Pg	20 45 46.4	+1.4
	baz=249						
WNT				eS	Sg	20 46 01.6	+2.1
	baz=249						
TWY	Chenhua	1.12	348	eP	Pg	20 45 47.4	+2.4
	baz=340						
WDJ	Dajia District	1.13	279	eP	Pg	20 45 46.8	+1.7
	baz=279						
ALS	Alishan	1.17	236	eP	Pg	20 45 46.9	+0.9
	baz=219						
WCHH	Zhanghua	1.20	266	eP	Pg	20 45 47.5	+1.1
	baz=264						
CHN5	Tsauling	1.23	242	eP	Pg	20 45 48.3	+1.3
	baz=240						
CHN5				eS	Sg	20 46 04.6	+1.5
	baz=240						
ELDTW	Lidau	1.25	219	eP	Pg	20 45 46.9	-0.6
	baz=227						
ELDTW				eS	Sg	20 46 04.1	+0.3
	baz=227						
WGK	Gukeng	1.29	248	eP	Pg	20 45 48.4	+0.3
	baz=245						
WDLH	Douliu	1.30	249	eP	Pg	20 45 48.4	-0.1
	baz=246						
RLNB	Erlin	1.40	259	eP	Pb	20 45 49.6	+0.5
	baz=257						
CHN4	Tsaushan	1.42	235	eP	Pg	20 45 51.5	+0.8
	baz=234						
CHN4				eS	Sg	20 46 11.8	+2.5
	baz=234						
TPUB	Ta-pu	1.43	233	eP	Pg	20 45 51.3	+0.5
	baz=220						
TPUB				eS	Sb	20 46 08.3	+0.8
	baz=220						
STYT	Tauyuan	1.43	225	eP	Pg	20 45 50.4	-0.4
	baz=223						
WTP	Ta-pu	1.47	231	eP	Pg	20 45 52.3	+0.6
	baz=229						
CHY	Chiayi	1.48	243	eP	Pg	20 45 52.3	+0.5
	baz=241						
TWG	Pinlang	1.53	208	eP	Pg	20 45 53.8	+1.0
	baz=189						
TWK	Hsinying	1.55	235	eP	Pg	20 45 53.4	+0.2
	baz=233						
CHN1	Nanshi	1.57	231	eP	Pg	20 45 54.2	+0.7
	baz=230						
SNST	Tainan City	1.57	233	eP	Pg	20 45 54.2	+0.7
	baz=231						
SGST	Jiashian	1.60	227	eP	Pg	20 45 53.0	-1.0
	baz=225						
SLGT	Liugui	1.62	224	eP	Pg	20 45 54.9	+0.4
	baz=222						
IRIF	Iriomote-Funau	1.71	84	P	Pg	20 45 57.8	+1.6
IRIF				eS	Sg	20 46 19.3	+0.8
SSD	Sandimen	1.82	219	eP	Pg	20 45 58.9	+0.6
	baz=229						
MASBT	Mashibuluo	1.92	216	eP	Pb	20 45 57.9	-0.1
	baz=217						
JIJ	Ishigaki jima	2.09	84	P	Pg	20 46 02.4	-1.0
JIJ				eS	Sg	20 46 29.6	-0.9
SCZT	Fangliau	2.13	213	eP	Pb	20 46 01.7	+0.2
	baz=194						
PHUB	P'eng-hu	2.20	253	eP	Pb	20 46 02.7	0.0
	baz=253						
JISG	Ishigakijimahi	2.27	79	P	Pg	20 46 04.9	-2.0
JISG				eS	Sg	20 46 34.5	-1.8
VWUC	VWUC	2.34	291	eP	Pn	20 46 01.7	+0.6
	baz=278						
PTMZ	Houxiangcun	2.64	290	eP	Pn	20 46 06.3	+1.1
	baz=289						

JMA 03 20:50:22.2±0.1, 37°.99N×144°.13E, h43km, M3.7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.12	279	P	Pn	20 50 56.3	+1.1
JIKH				S	Sn	20 51 21.0	+0.7
OFUJ	Ofunato	2.22	300	P	Pn	20 50 57.7	+1.3
OFUJ				eS	Sn	20 51 24.0	+1.4
JIO	Ouri	2.24	283	P	Pn	20 50 58.0	+1.3
JIO				S	Sn	20 51 24.3	+1.2
JKMT	Kesennumamotoy	2.24	292	P	Pn	20 50 58.0	+1.2
JKMT				S	Sn	20 51 24.5	+1.3
JMK	Ichinoseki	2.48	294	P	Pn	20 51 01.7	+1.7
JMK				S	Sn	20 51 31.2	+2.2
JOM	Ohasama	2.67	305	P	Pn	20 51 04.4	+1.7
JOM				S	Sn	20 51 35.9	+2.2
JFT	Otama	3.04	262	P	Pn	20 51 09.9	+2.1
JFT				eS	Sn	20 51 45.0	+2.0
JYK	Kaneyama	3.10	289	P	Pn	20 51 10.8	+2.2
JYK				eS	Sn	20 51 46.9	+2.5
JANG	Nango	3.13	320	P	Pn	20 51 10.4	+1.4
JOT	Ohata	4.14	326	eS	Sn	20 52 10.0	+0.1
BSO1	Boso 1	4.19	218	P	Pn	20 51 22.8	-0.3
JKB	Kayabe	4.56	330	P	Pn	20 51 30.9	+2.3
JKB				eS	Sn	20 52 19.6	-0.8
JRY	Ryogami san	4.62	246	P	Pn	20 51 30.5	+0.9
JRY				eS	Sn	20 52 20.7	-1.3
JCH	Churui	4.66	353	P	Pn	20 51 30.4	+0.5
JCH				eS	Sn	20 52 20.1	-2.6
JOD2	Odawara 2	4.88	238	eS	Sn	20 52 26.0	-2.4
NEM2	Nemuro 2	5.51	12	P	Pn	20 51 39.9	-1.7
NEM2				eS	Sn	20 52 38.4	-5.2
JTKR	Abashiri--Toko	5.98	358	P	Pn	20 51 48.1	0.0
JTKR				eS	Sn	20 52 52.1	-3.1

NIC 03 20:50:26.0±0.0, 34°.07N×26°.12E, h76km±2km, Ml4.1/3
IDC 03 20:50:30.1±0.7, 34°.61N×26°.54E, h0km, mb3.9/17, mb1 3.9/26, mb1mx3.8/53, mbtmp3.8/26, ML3.7/9, MS2.8/8, Ms1 2.8/8, ms1mx2.5/55, Error ellipse: s-maj=15.1km s-min=13.0km az=12.0
THE 03 20:50:31.6, 34°.50N×26°.71E, h4km±1km, ML3.6/9, Error ellipse: s-maj=1.8km s-min=1.0km az=122.0
ISK 03 20:50:32.8, 34°.59N×26°.69E, h11km, ML3.8/19
ATH 03 20:50:33.8, 34°.59N×26°.58E, h19km±1km, ML3.5/10, Error ellipse: s-maj=2.4km s-min=1.0km az=346.0
HLW 03 20:50:34.4, 34°.42N×26°.77E, h22km±12km, Md3.8, Ml3.8
GII 03 20:50:39.7±0.0, 34°.30N×27°.13E, h30km, Mm3.6/9
ISC 03 20:50:30.3±1.4, 34°.44N±0°.03×26°.70E±0°.03, h4km±9km, n131, σ1s.78/170, mb3.9/18, MS2.7/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	Zakros	0.79	330	P	Pg	20 50 45.4	0.0
ZKR				S	Sb	20 50 57.2	-0.4
	4µm,0.7s						
ZKR	Zakros	0.79	330	P	Pg	20 50 45.5	+0.1
ZKR				S	Sg	20 50 54.2	-1.4
ZKR				AML	AML	20 51 04.3	
	comp=N,6010µm,0.5s						
ZKR				AML	AML	20 51 06.6	
	comp=E,10484µm,0.5s						
ZKR	Zakros	0.79	330	PG	Pg	20 50 45.6	+0.1
ZKR				SG	Sg	20 50 55.4	-0.2
ZKR	Zakros	0.79	330	P	Pg	20 50 45.5	+0.1
ZKR				S	Sn	20 51 00.8	+0.3
ZKR				AML	AML	20 51 04.0	
	comp=E,6.0nm,0.5s						
ZKR				AML	AML	20 51 04.0	
	comp=E,6.0nm,0.5s						
ZKR				AML	AML	20 51 06.2	
	comp=E,11nm,0.9s						
ZKR				AML	AML	20 51 06.2	
	comp=E,11nm,0.9s						
STIA	Sitia Lasithi	0.91	327	P	Pg	20 50 47.9	0.0
STIA				S	Sb	20 51 01.9	+0.6
FRMA	Ierapetra Chan	0.98	306	P	Pg	20 50 47.9	-1.3
KARP	Karpathos	1.17	19	P	Pg	20 50 52.6	-0.2
KARP				S	Sg	20 51 07.7	-0.3
	comp=E,3µm,0.8s						
KARP	Karpathos	1.17	19	P	Pn	20 50 54.3	+0.7
KARP				S	Sn	20 51 09.1	-1.0
KARP				AML	AML	20 51 26.0	
	comp=E,6404µm,0.7s						
KARP				AML	AML	20 51 28.7	
	comp=N,5658µm,0.7s						
KARP	Karpathos	1.17	19	PG	Pb	20 50 53.5	+0.3
KARP				SG	Sb	20 51 08.0	-0.8
KARP	Karpathos	1.17	19	P	Pn	20 50 54.1	+0.5
KARP				S	Sn	20 51 16.2	+6.1
KARP				AML	AML	20 51 22.5	
	comp=N,5.6nm,0.9s						
KARP				AML	AML	20 51 22.5	
	comp=N,5.6nm,0.9s						
KARP				AML	AML	20 51 25.2	
	comp=N,6.4nm,0.7s						
KARP				AML	AML	20 51 25.2	
	comp=N,6.4nm,0.7s						
NPS	Neapolis	1.22	313	P	Pg	20 50 53.3	-0.3
NPS				S	Sb	20 51 10.2	+0.2
	comp=N,2µm,0.8s						
NPS	Neapolis	1.22	313	P	Pg	20 50 53.4	-0.3
NPS				S	Sg	20 51 08.0	-1.4
NPS				AML	AML	20 51 18.2	
	comp=E,5024µm,0.7s						
NPS				AML	AML	20 51 19.1	
	comp=N,4055µm,0.7s						
LAST	Lasithi	1.24	306	P	Pg	20 50 53.4	-0.7
LAST				S	Sb	20 51 10.9	+0.2
	comp=N,2µm,1.0s						
LAST	Lasithi	1.24	306	P	Pg	20 50 53.5	-0.5
LAST				S	Sg	20 51 09.2	-0.9
LAST				AML	AML	20 51 20.9	
	comp=N,4327µm,0.8s						
LAST				AML	AML	20 51 23.9	
	comp=E,3971µm,1.1s						
HRKL	Herakleio	1.58	304	PN	Pn	20 51 00.1	+1.0
HRKL				SN	Sn	20 51 20.1	+0.1

KSTL	Kastelli Herak	1.59	303	P	Pn	20 50 55.6	-3.7
KSTL				S	Sn	20 51 13.6	-6.8
IACM	Heraklion	1.59	303	P	Pb	20 51 01.6	+1.2
SIVA	Sivas	1.66	291	P	Pn	20 50 59.8	-0.5
SIVA				S	Sn	20 51 20.9	-1.1
	comp=E,2μm,0.7s						
SIVA	Sivas	1.66	291	P	Pb	20 51 02.2	+0.7
SIVA				S	Sn	20 51 22.4	+0.4
IDI	Anoyia	1.71	300	P	Pn	20 51 00.7	-0.4
IDI	Anoyia	1.71	300	Pn	Pb	20 51 03.1	+0.7
	comp=E,38nm,0.3s,baz=120,slow=16,SNR=232						
IDI				Sn	Sb	20 51 25.4	+1.0
	comp=E,20nm,0.3s,baz=218,slow=22,SNR=9.4						
IDI	Anoyia	1.71	300	P	Pb	20 51 02.8	+0.3
IDI				S	Sn	20 51 23.2	-0.3
IDI				AML	AML	20 51 33.9	
	comp=E,930μm,0.5s						
IDI				AML	AML	20 51 36.3	
	comp=N,948μm,0.6s						
IDI	Anoyia	1.71	300	PN	Pb	20 51 02.8	+0.3
IDI				SN	Sn	20 51 23.9	+0.4
ANAF	Anafi Island	2.06	339	P	Pn	20 51 03.8	-2.0
ANAF				S	Sn	20 51 29.9	-2.1
	comp=N,1μm,0.4s						
ANAF	Anafi Island	2.06	339	P	Pn	20 51 07.2	+1.4
ANAF				S	Sn	20 51 31.7	-0.3
ANAF				AML	AML	20 51 43.5	
	comp=N,2346μm,0.4s						
ANAF				AML	AML	20 51 47.3	
	comp=E,4278μm,0.7s						
ARG	Arkhangelos	2.12	33	P	Pn	20 51 05.4	-1.3
ARG	Arkhangelos	2.12	33	P	Pb	20 51 09.3	-0.2
ARG	Arkhangelos	2.12	33	PN	Pn	20 51 07.6	+0.9
ARG	Arkhangelos	2.12	33	P	Pn	20 51 07.5	+0.9
SANT	Santorini	2.18	333	P	Pn	20 51 08.3	+0.8
SANT	Santorini	2.18	333	PN	Pn	20 51 07.6	+0.1
GVD	Gavdhos	2.19	281	P	Pn	20 51 07.9	+0.3
GVD				S	Sn	20 51 35.4	+0.3
	comp=E,400nm,0.7s						
GVD	Gavdhos	2.19	281	P	Pn	20 51 10.0	+2.4
GVD				S	Sn	20 51 36.1	+0.9
GVD				AML	AML	20 52 00.3	
	comp=E,1280μm,0.5s						
GVD				AML	AML	20 52 02.3	
	comp=N,1054μm,0.9s						
GVD	Gavdhos	2.19	281	PN	Pn	20 51 09.5	+1.9
THT2	Imerovigli	2.25	333	PN	Pn	20 51 08.9	+0.5
VAM	Vamos	2.27	296	P	Pn	20 51 10.8	+2.2
VAM				S	Sn	20 51 37.4	+0.3
VAM				AML	AML	20 51 59.0	
	comp=N,1609μm,0.9s						
VAM				AML	AML	20 52 11.4	
	comp=E,1331μm,1.0s						
DAT	Datca	2.40	17	PN	Pn	20 51 11.1	+0.6
IMMV	Iera Moni Meta	2.46	295	P	Pn	20 51 11.3	+0.1
IMMV				S	Sn	20 51 40.4	-1.3
	comp=E,580nm,0.7s						
IMMV	Iera Moni Meta	2.46	295	P	Pn	20 51 13.5	+2.3
IMMV				S	Sn	20 51 41.7	+0.1
IMMV				AML	AML	20 51 59.8	
	comp=N,717μm,0.5s						
IMMV				AML	AML	20 52 05.3	
	comp=E,1526μm,1.1s						
IMMV	Iera Moni Meta	2.46	295	PN	Pn	20 51 12.9	+1.7
AMGA	Amorgos Island	2.48	345	P	Pn	20 51 13.4	+1.8
AMGA				S	Sn	20 51 42.6	+0.3
AMGA				AML	AML	20 51 57.7	
	comp=N,588μm,0.8s						
AMGA				AML	AML	20 52 07.2	
	comp=E,793μm,0.7s						
RODP	Rodopos	2.66	296	PN	Pn	20 51 16.3	+2.2
BODT	Bodrum	2.67	11	PN	Pn	20 51 13.9	-0.2
YKAV	Yalikavak-Bodr	2.72	10	PN	Pn	20 51 15.7	+0.8
APE	Apeiranthos	2.79	340	P	Pn	20 51 15.0	-0.9
APE				S	Sn	20 51 48.9	-1.2
	comp=E,120nm,0.4s						
APE	Apeiranthos	2.79	340	P	Pn	20 51 15.9	0.0
APE	Apeiranthos	2.79	340	PN	Pn	20 51 15.7	-0.2
DALY	Dalyan (Mula)	2.86	33	PN	Pn	20 51 18.5	+1.8
TURN	Turunc	2.88	32	PN	Pn	20 51 15.3	-1.8
FETY	Fethiye	2.93	41	PN	Pn	20 51 18.9	+1.1
MHLA	Plaka, Milos I	2.96	322	P	Pn	20 51 19.3	+1.2
AKAS	Kas	2.98	52	PN	Pn	20 51 18.9	+0.4
YER	Yerkesik	2.98	25	PN	Pn	20 51 19.7	+1.1
MATC	Matruh	3.11	172	P	Pn	20 51 22.0	+1.8
	baz=172						
SLUM	Salum	3.19	203	P	Pn	20 51 22.9	+1.6
	baz=205						
SLUM				S	Sn	20 51 58.6	-1.2
	baz=205						
SLUM				AMP		20 52 00.0	
	baz=205						
SERI	Serifos	3.26	327	P	Pn	20 51 22.8	+0.5
SMG	Samos	3.27	2	P	Pn	20 51 22.9	+0.5
GCAM	G?zelcaml?	3.29	7	PN	Pn	20 51 23.2	+0.6
ELL	Elmali	3.49	48	PN	Pn	20 51 27.2	+1.7
ELL	Elmali	3.49	48	P	Pn	20 51 27.8	+2.3
AYDB	Zeytinkoy-Aydi	3.63	15	PN	Pn	20 51 28.3	+0.8
VLI	Veliai	3.82	308	P	Pn	20 51 29.7	-0.3
OSC1	CSNet OBS 1	3.92	103	P	Pn	20 51 31.7	+0.4
KORT	Korkueli	3.92	48	PN	Pn	20 51 34.2	+2.7
CHOS	Chios island	3.98	353	PN	Pn	20 51 32.5	+0.3
AKMS	Akamas	4.68	81	P	Pn	20 51 42.8	+1.0
AKMS				AML	AML	20 52 38.7	
	comp=E,0.4nm,0.3s						
OSC2	CSNet OBS 4	4.83	105	S	Sn	20 52 43.2	+2.9
NATA	Nata	4.85	84	P	Pn	20 51 45.3	+1.1
ALFC	Alefka	4.91	80	P	Pn	20 51 46.1	+1.1
SZAC	Souni	5.11	85	P	Pn	20 51 48.8	+1.1
SWA2		5.28	192	P	Pn	20 51 51.5	+1.5
	baz=193						
SWA2				AMP		20 53 00.0	
	baz=193						
ASGA	Asgata	5.41	84	P	Pn	20 51 52.8	+1.0
CSS	Mathiatis	5.49	83	P	Pn	20 51 53.8	+0.8
CSS	Mathiatis	5.49	83	Pn	Pn	20 51 54.4	+1.5
CSS	Mathiatis	5.49	83	P	Pn	20 51 53.8	+0.8
MVOU	Mavrovouni	5.74	82	P	Pn	20 51 57.9	+1.5
HNAT	Natroun	5.83	144	P	Pn	20 51 59.5	+1.9
	baz=144						
HNAT				AMP		20 53 00.0	
	baz=144						
KOT	Kottamia	6.25	135	P	Pn	20 52 05.4	+2.0
	baz=134						
KOT				AMP		20 53 00.0	
	baz=134						
KOT				S	Sn	20 53 10.7	-4.8
	baz=134						
HSAF	As Saff	6.33	138	P	Pn	20 52 06.2	+1.8
	baz=138						
GLL	Jalalah	6.45	137	P	Pn	20 52 06.9	+0.8
	baz=137						
SUZ	Suez	6.93	130	P	Pn	20 52 14.0	+1.2
	baz=129						
OFRI	\`Ofer	7.15	102	Pn	Pn	20 52 17.7	+1.9
SLTI	Sal'it	7.32	105	Pn	Pn	20 52 19.3	+1.3
MMA0B	Mount Meron ar	7.39	99	Pn	Pn	20 52 20.7	+1.6
MMAI	Mount Meron Ar	7.39	99	Pn	Pn	20 52 19.7	+0.6
	comp=E,1.9nm,0.3s,baz=294,slow=11,SNR=19						
MMAI				Sn	Sn	20 53 40.3	-3.2
	comp=E,2.5nm,0.3s,baz=290,slow=17,SNR=1.8						
HFRF	Wahat Farafira	7.39	169	P	Pn	20 52 20.4	+1.3
	baz=169						
AMAZ	Amatzia	7.49	110	Pn	Pn	20 52 22.1	+1.7
AMAZ				Sn	Sn	20 53 41.9	-3.8
GEM	Giv'at Ha'Em	7.56	97	Pn	Pn	20 52 23.4	+2.0
GEM				Sn	Sn	20 53 43.6	-3.9
KSDI	Kefar Szold	7.56	97	Pn	Pn	20 52 22.9	+1.6
NATI	Neve Ativ	7.61	96	Pn	Pn	20 52 24.7	+2.7
BRTR	Keskin Array B	7.66	44	Pn	Pn	20 52 24.7	+1.9
	comp=E,0.2nm,0.3s,baz=5.3,slow=9.6,SNR=7.9						
BRTR				Sn	Sn	20 53 48.8	-1.3
	comp=E,0.2nm,0.3s,baz=210,slow=25,SNR=5.6						
BRTR				LR	LR	20 56 17.1	
	comp=E,114nm,18.5s,baz=212,slow=46						
HMDT	Nahal Hemdat	7.70	104	Pn	Pn	20 52 24.6	+1.3
HMDT				Sn	Sn	20 53 48.0	-3.0
YTIR	Yattir	7.71	111	Pn	Pn	20 52 25.3	+1.8
DSI	Dead Sea	7.83	109	Pn	Pn	20 52 26.8	+1.7
KRMI	Paran Flat	8.04	120	Pn	Pn	20 52 29.9	+1.9
KRMI				Sn	Sn	20 53 55.2	-4.3
GRB	Gharib	8.05	138	P	Pn	20 52 30.1	+2.0
	baz=138						
GHAJ	Ghor Haditha	8.09	110	Pn	Pn	20 52 30.2	+1.6
PRNI	Paran	8.12	118	Pn	Pn	20 52 30.7	+1.7
PRNI				Sn	Sn	20 53 57.0	-4.3
HRFI	Mount Harif	8.31	120	Pn	Pn	20 52 33.6	+1.9
HRFI				Sn	Sn	20 54 01.8	-4.3
MBRI	Mt Berech	8.36	121	Pn	Pn	20 52 34.6	+2.1
EIL	Elat	8.46	122	Pn	Pn	20 52 35.9	+2.1
	comp=E,0.5nm,0.3s,baz=336,slow=5.4,SNR=14						
EIL				Sn	Sn	20 54 00.9	-8.8
	comp=E,0.7nm,0.3s,baz=356,slow=14,SNR=1.6						
EIL	Elat	8.46	122	Pn	Pn	20 52 35.5	+1.8
EIL				Sn	Sn	20 54 06.6	-3.1
ASF	Jabal al Asfar	8.83	102	Pn	Pn	20 52 40.1	+1.2
	comp=E,0.2nm,0.3s,baz=135,slow=2.4,SNR=2.4						
ASF				Sn	Sn	20 54 16.2	-2.7
	comp=E,0.2nm,0.3s,baz=156,slow=20,SNR=1.3						
HDK1	Dakhla	9.17	164	P	Pn	20 52 45.5	+2.1
	baz=164						
HHRG	Al Ghardaqah	9.30	139	P	Pn	20 52 49.0	+3.7
	baz=139						
VAE	Valguarnera	10.41	290	Pn	Pn	20 53 00.7	+0.2
	comp=E,2.9nm,0.3s,baz=172,slow=5.8,SNR=13						
VAE				Sn	Sn	20 54 46.4	-11
	comp=E,0.7nm,0.3s,baz=170,slow=19,SNR=4.7						
MLR	Muntele Rosu	11.06	357	LR	LR	20 58 14.4	
	comp=E,97nm,18.2s,baz=118,slow=43						
KBZ	Khabaz	15.61	49	Pn	P	20 54 15.3	-0.2
	comp=E,0.1nm,0.3s,baz=248,slow=9.1,SNR=4.8						
AKASG	Malin Array Be	16.36	6	Pn	Pn	20 54 18.5	-2.3
	comp=E,1.1nm,0.3s,baz=192,slow=11,SNR=7.2						
VRAC	Vranov	16.63	336	Pn	Pn	20 54 23.0	-1.3
	comp=E,0.2nm,0.3s,baz=219,slow=14,SNR=1.9						
VRAC				LR	LR	21 00 32.3	
	comp=E,21nm,20.5s,baz=100,slow=37						
GERES	GERESS Array B	17.33	330	Pn	Pn	20 54 32.8	-0.3
	comp=E,0.1nm,0.3s,baz=142,slow=11,SNR=4.6						
GERES				LR	LR	21 02 43.7	
	comp=E,29nm,18.4s,baz=102,slow=43						
DAVOX	Davos/Dischmat	17.71	319	P	Pn	20 54 38.4	+0.5
	comp=E,0.2nm,0.3s,baz=127,slow=10,SNR=2.0						
DAVOX				LR	LR	21 02 03.7	
	comp=E,27nm,19.2s,baz=80,slow=40						
ESDC	Sonseca Array	24.95	291	P	P	20 55 53.9	-1.0
	comp=E,0.3nm,0.5s,baz=82,slow=9.5,SNR=7.3						
GEYT	Alibeck	25.54	73	P	P	20 56 02.2	+2.0
	comp=E,1.8nm,0.5s,baz=273,slow=8.3,SNR=6.4						
FINES	FINESS Array B	27.03	359	P	P	20 56 11.1	-2.2
	comp=E,1.5nm,0.7s,baz=163,slow=11,SNR=5.7						
FINES				LR	LR	21 07 22.9	
	comp=E,28nm,21.1s,baz=196,slow=38						
HFS	Hagfors	27.08	346	P	P	20 56 11.1	-2.7
	comp=E,3.7nm,1.0s,baz=144,slow=10,SNR=7.5						
AKTO	Aktyubinsk	27.83	45	P	P	20 56 24.0	+3.3
	comp=E,1.3nm,0.4s,baz=252,slow=8.8,SNR=4.9						
NOA	NORSAR Array B	28.43	344	P	P	20 56 25.1	-0.8
	comp=E,0.7nm,0.9s,baz=164,slow=8.3,SNR=1.8						
NOA				LR	LR	21 08 38.5	
	comp=E,12nm,19.2s,baz=60,slow=39						
KIRV	Kirov	28.50	25	LR	LR	21 09 18.5	
	comp=E,17nm,18.3s,baz=212,slow=40						
EKA	Eskdalemuir Ar	29.36	325	P	P	20 56 32.4	-1.8
	comp=E,0.2nm,0.3s,baz=126,slow=10.0,SNR=4.8						
TORD	Torodi Ar. Bea	31.03	233	P	P	20 56 48.9	-0.4
	comp=E,0.6nm,0.4s,baz=43,slow=8.0,SNR=5.0						
ARCES	ARCESS Array B	35.16	359	P	P	20 57 22.4	-2.4
	comp=E,0.7nm,0.4s,baz=183,slow=9.1,SNR=14						
DBIC	Dimbokro	40.13	234	P	P	20 58 07.1	-0.4
	comp=E,1.0nm,0.5s,baz=36,slow=12,SNR=2.0						
MKAR	Makanchi Array	43.12	56	P	P	20 58 32.5	+0.7
	comp=E,1.2nm,0.7s,baz=279,slow=6.1,SNR=18						
ZALV	Zalesovo Beam	44.60	46	P	P	20 58 43.4	-0.1
	comp=E,0.7nm,0.4s,baz=271,slow=7.3,SNR=4.9						
OPO	Ambohidratompo	56.20	156	P	P	21 00 14.3	+2.5
	comp=E,1.8nm,0.8s,baz=294,slow=20						
SONM	Songino Array	58.97	51	P	P	21 00 31.4	+0.4
	comp=E,0.8nm,0.7s,baz=284,slow=8.2,SNR=7.6						
SCHQ	Schefferville	64.55	320	P	P	21 01 07.3	-1.2
	comp=E,1.2nm,0.5s,baz=81,slow=5.8,SNR=2.4						
PSI	Prapat	73.78	98	P	P	21 02 08.7	+2.3
	comp=E,2.0nm,0.5s,baz=315,slow=1.4,SNR=2.2						
USRK	Ussuriysk Ar.	76.45	46	P	P	21 02 21.1	-0.1
	comp=E,1.1nm,0.6s,baz=333,slow=4.2,SNR=5.8						
YKA	Yellowknife Ar	78.52	343	P	P	21 02 33.2	+0.7
	comp=E,0.1nm,0.6s,baz=38,slow=5.1,SNR=2.7						

*IDC **03** 20:56:00.4±1.1, 5°48S×102°77E, h0km, mb4.1/15, mb1 4.1/15, mb1mx3.9/44, mbtmp4.1/15, MS3.1/2, Ms1 3.1/2, ms1mx2.5/37, Error ellipse: s-maj=38.5km s-min=13.9km az=52.0*
*DJA **03** 20:56:01.3±0.4, 6°S±3°×10°3E±°, h10km, M4.6/21, mB5.2/6, mb4.5/10, MLv4.7/21, Mw(mB)4.5/6*
*NEIC **03** 20:56:02.6±2.0, 5°76S±0°06×102°53E±0°09, h26km±5km, mb4.3/25, Error ellipse: s-maj=13.5km s-min=7.5km az=61.0*
*KLM **03** 20:56:10.0, 6°04S×102°80E, h145km, mb4.4*
ISC 03 20:56:05.1±1.5**, 5°74S**±0°08×**102°61E**±0°07**, h44**km±12km**,**
n96, σ1.61/96, mb4.2/27, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	1.41	14	P	Pn	20 56 27.4	-1.0
MNAI				S	Sn	20 56 48.9	+3.1
MNAI	Manna	1.41	14		Pn	20 56 26.6	-1.8
MNAI				Sn	Sn	20 56 43.9	-1.9
LWLI	Liwa	1.61	64	P	Pn	20 56 30.4	-0.8
LWLI				S	Sn	20 56 54.8	+3.9
KSI	Kapahiang	2.07	360	P	Pn	20 56 37.9	+0.4
MASI	Maura Aman, Be	2.61	352	P	Pn	20 56 44.6	-0.2
MASI				S	Sn	20 57 17.9	+2.6
BLSI	Bandar Lampung	2.65	82	P	Pn	20 56 46.0	+0.6
BLSI				S	Sn	20 57 19.3	+2.9
PMBI	Palembang	3.53	38	P	Pn	20 56 57.5	0.0
PMBI	Palembang	3.53	38	Pn	Pn	20 56 56.7	-0.8
KRJI	Kerinci	3.80	342	P	Pn	20 57 00.5	-0.7
PPSI	Pulau Pagai	3.93	319	P	Pn	20 57 02.4	-0.5
SKJI	Sukabumi	4.12	108	P	Pn	20 57 05.1	-0.5
DBJI	Dramaga	4.20	101	P	Pn	20 57 06.7	0.0
CNJI	Cibinong	4.76	109	P	Pn	20 57 12.8	-1.5
SDSI	Sungai Dareh	4.92	346	P	Pn	20 57 16.6	+0.1
LEM	Lembang	5.10	102	Pn	Pn	20 57 20.8	+1.6
	22nm,0.3s,baz=139,slow=12,SNR=15						
LEM				Sn	Sn	20 58 20.1	+3.2
	2.9nm,0.3s,baz=319,slow=19,SNR=1.0						
LEM	Lembang	5.10	102	P	Pn	20 57 18.8	-0.3
	0.2nm37nm,0.7s						
PDSI	Padang	5.25	336	P	Pn	20 57 20.4	-0.7
CISI	Cisompet, Garu	5.48	110	P	Pn	20 57 24.1	-0.2
	1.5nm10μm143nm,0.4s						
CISI	Cisompet, Garu	5.48	110		Pn	20 57 23.7	-0.6
CISI				Sn	Sn	20 58 22.1	-4.1
XMIS	Christmas Isla	5.59	148	Pn	Pn	20 57 21.5	-4.4
SISI	Saibi	5.62	321	P	Pn	20 57 24.5	-1.6
	0.3nm2μm44nm,0.4s						
BKNI	Bangkinang	6.22	345	P	Pn	20 57 34.9	+0.4
	0.4nm814nm40nm,0.8s						
TPRI	Tanjung Pinang	6.89	16	P	Pn	20 57 44.3	+0.7
	0.2nm2μm33nm,0.5s						
PBSI	Pulau Batu	7.11	322	P	Pn	20 57 45.9	-0.7
	0.3nm35nm,0.8s						
MNSI	Mandailing Nat	7.16	335	P	Pn	20 57 45.9	-1.4
	0.2nm900nm20nm,0.7s						
MYKOM	Kota Tinggi	7.58	9		Pn	20 57 52.6	-0.5
UGM	Wanagama	8.15	106	Pn	Pn	20 58 01.1	+0.2
GSI	Gunungsitoli	8.61	324	P	Pn	20 58 17.3	+10
GSI	Gunungsitoli	8.61	324		Pn	20 58 04.4	-2.9
PSI	Prapat	9.25	336	LR	LR	21 02 18.7	
	comp=Z,109nm,20.8s,baz=240,slow=42						
IPM	Ipoh	10.27	351	Pn	Pn	20 58 28.4	-1.6
KSM	Kuching	10.51	47	Pn	Pn	20 58 32.6	-0.7
KULM	Kulim	11.13	350	Pn	Pn	20 58 39.7	-2.0
JAGI	Jajag, Banyuwa	11.78	104		Pn	20 58 49.8	-0.7
SBUM	Sibu	12.59	50		Pn	20 59 02.8	+1.2
SBUM	Sibu	12.59	50	P	Pn	20 59 04.0	+2.4
SPMM	Sapulut	17.30	53	P	Pn	20 59 59.0	-4.6
KKM	Kota Kinabalu	17.93	49		Pn	21 00 10.8	-0.7
KKM				IAmb	IAmb	21 00 11.6	
	comp=Z,23nm,1.3s						
DLV	T Lat	18.52	18	P	P	21 00 16.1	-2.0
MMRI	Maumere	19.69	100	P	P	21 00 30.8	0.0
MMRI				IAmb	IAmb	21 00 45.8	
	comp=Z,26nm,1.2s						
LUWI	Luwuk	20.66	78	Pn	P	21 00 43.0	+1.6
BATI	Baumata	21.32	103	P	P	21 00 48.8	+0.3
	comp=Z,11nm,0.3s,baz=242,slow=2.1,SNR=14						
BATI				S	S	21 04 37.0	-6.0
	comp=Z,5.1nm,0.4s,baz=314,slow=20,SNR=2.0						
BATI	Baumata	21.32	103	P	P	21 00 52.1	+3.6
SOEI	Soe	21.83	102	P	P	21 00 52.6	-1.4
SOEI				IAmb	IAmb	21 01 11.5	
	comp=Z,11nm,0.7s						
CM31	Chiang Mai Arr	24.31	352	P	P	21 01 17.5	-1.2
CMAR	Chiang Mai Arr	24.31	352	P	P	21 01 17.4	-1.4
	comp=Z,1.6nm,0.5s,baz=182,slow=8.8,SNR=18						
CHTO	Chiang Mai	24.66	352	P	P	21 01 21.1	-0.8
FITZ	Fitzroy Crossi	25.62	121	P	P	21 01 31.6	+0.9
	comp=Z,2.0nm,0.9s,baz=297,slow=9.0,SNR=2.1						
FITZ	Fitzroy Crossi	25.62	121	P	P	21 01 31.4	+0.7
SLVN	Son La	26.93	3	P	P	21 01 41.0	-1.6
SLVN				IAmb	IAmb	21 01 41.5	
	comp=Z,7.7nm,1.5s						
KNRA	Kununurra	27.50	113	P	P	21 01 48.0	+0.4
MTN	Manton Dam	29.00	106	P	P	21 02 00.9	-0.2
H08S2	Diego Garcia H	29.96	265	T	T	21 33 16.7	
	baz=88,slow=76,SNR=186						
H08S3	Diego Garcia H	29.97	265	T	T	21 33 15.3	
	baz=88,slow=76,SNR=132						
H08S1	Diego Carcia H	29.98	265	T	T	21 33 06.4	
	baz=88,slow=76,SNR=132						
H01W3	Cape Leeuwin H	30.90	161	T	T	21 34 47.3	
	baz=338,slow=76,SNR=20						
H01W2	Cape Leeuwin H	30.91	161	T	T	21 34 45.6	
	baz=338,slow=76,SNR=24						
H01W1	Cape Leeuwin H	30.91	161	T	T	21 34 45.5	
	baz=338,slow=76,SNR=20						
WB0	Warramunga Arr	33.91	117	P	P	21 02 44.4	+0.2
WB0				IAmb	IAmb	21 03 02.0	
	comp=Z,3.3nm,1.2s						
WRA	Warramunga Arr	33.92	118	P	P	21 02 45.0	+0.8
	comp=Z,0.5nm,0.3s,baz=320,slow=11,SNR=20						
WRA				PcP	PcP	21 05 23.6	+1.4
	comp=Z,0.5nm,0.9s,baz=300,slow=2.0,SNR=2.3						
WB2	Warramunga Arr	33.93	118	P	P	21 02 44.4	0.0
WB2				IAmb	IAmb	21 02 57.8	
	comp=Z,3.4nm,0.9s						
ASAR	Alice Springs	34.99	124	P	P	21 02 54.9	+1.3
	comp=Z,0.4nm,0.3s,baz=300,slow=8.1,SNR=16						
ASAR				LR	LR	21 20 21.1	
	comp=Z,26nm,18.0s,baz=256,slow=42						
AS31	Alice Springs	34.99	124	P	P	21 02 54.5	+0.9
AS31				IAmb	IAmb	21 03 08.4	
	comp=Z,1.0nm,0.3s						
ODAN	Odare	35.60	336	eP	P	21 02 59.4	+0.5
	comp=Z,7.1nm,0.5s						
TAPN	Taplejung	35.91	337	eP	P	21 03 02.4	+0.8
RAMN	Ramite	36.00	335	eP	P	21 03 03.3	+0.9
	comp=Z,4.6nm,0.4s						
ENH	Enshi	36.41	10	P	P	21 03 04.3	-1.2
JIRN	Jiri	36.80	335	eP	P	21 03 10.2	+0.9
	comp=Z,10nm,0.5s						
LSA	Lhasa	36.91	343	P	P	21 03 09.3	-1.0
PKI	Pulchoki	37.05	334	eP	P	21 03 12.5	+1.1
GUN	Gumba	37.15	335	eP	P	21 03 12.7	+0.5
	comp=Z,17nm,0.7s						
GKN	Gorkha	37.76	334	eP	P	21 03 18.1	+0.9
	comp=Z,5.5nm,0.2s						
KOLN	Koldanda	38.04	332	eP	P	21 03 20.8	+1.2
	comp=Z,15nm,0.7s						
DANN	Dangsing	38.46	333	eP	P	21 03 24.1	+0.9
	comp=Z,23nm,0.5s						
STKA	Stephens Creek	44.75	131	P	P	21 04 15.9	+1.4
	comp=Z,1.4nm,0.5s,baz=308,slow=8.5,SNR=7.4						
STKA	Stephens Creek	44.75	131	P	P	21 04 15.7	+1.3
NIL	Nilore	48.04	327	P	P	21 04 40.6	+0.4
KSRS	Korea Array	49.03	27	P	P	21 04 47.1	-0.6
	comp=Z,0.8nm,0.6s,baz=228,slow=7.0,SNR=5.8						
KSH	Kashi	51.31	334	P	P	21 05 05.9	+0.8
KSH				pP	pP	21 05 18.8	+1.4
KSH				sP	sP	21 05 24.4	+2.0
KSH				pmax	pmax		
	comp=Z,12nm,1.1s						
KSH				pmax	pmax		
	comp=Z,180nm,4.4s						
KDJ	Kajisay	52.98	336	P	P	21 05 17.8	+0.2
KDJ				IAmb	IAmb	21 05 33.7	
	comp=Z,5.8nm,0.9s						
SONM	Songino Array	53.45	3	P	P	21 05 20.9	+0.1
	comp=Z,5.0nm,0.5s,baz=184,slow=9.2,SNR=42						
GAR	Garm	53.62	329	P	P	21 05 21.7	-0.5
GAR				IAmb	IAmb	21 05 41.2	
	comp=Z,3.1nm,0.7s						
MK31	Makanchi Array	55.32	343	P	P	21 05 34.0	-0.4
MK31				IAmb	IAmb	21 05 49.2	
	comp=Z,1.9nm,0.7s						
MKAR	Makanchi Array	55.32	343	P	P	21 05 33.9	-0.5
	comp=Z,1.5nm,0.6s,baz=150,slow=7.5,SNR=27						
USA0B	Ussuriysk Arra	56.32	25	P	P	21 05 41.1	-0.4
USA0B				IAmb	IAmb	21 05 43.7	
	comp=Z,3.5nm,0.8s						
USRK	Ussuriysk Ar.	56.32	25	P	P	21 05 40.5	-1.0
	comp=Z,2.1nm,0.6s,baz=218,slow=5.8,SNR=11						
KURK	Kurchatov	59.92	343	P	P	21 06 06.5	0.0
KURK				IAmb	IAmb	21 06 21.7	
	comp=Z,3.0nm,0.8s						
GEYT	Alibeck	59.97	320	P	P	21 06 07.7	+0.5
	comp=Z,0.6nm,0.4s,baz=159,slow=9.6,SNR=2.0						
ZAA0	Zalesovo Array	61.32	348	P	P	21 06 15.7	-0.3
ZALV	Zalesovo Beam	61.32	348	P	P	21 06 15.8	-0.2
	comp=Z,3.9nm,0.4s,baz=161,slow=5.8,SNR=27						
BRVK	Borovoye	64.64	339	P	P	21 06 37.6	-0.5
BRVK				IAmb	IAmb	21 06 38.0	
	comp=Z,1.3nm,0.7s						
PETK	Petropavlovsk-	74.69	31	P	P	21 07 39.0	-1.0
	comp=Z,0.4nm,0.6s,baz=195,slow=3.9,SNR=2.0						
FINES	FINESS Array B	88.61	332	P	P	21 08 54.8	+1.6
	comp=Z,0.8nm,0.7s,baz=116,slow=3.2,SNR=1.4						
ARCES	ARCESS Array B	90.85	340	P	P	21 09 06.2	+2.7
	comp=Z,2.3nm,1.0s,baz=108,slow=5.1,SNR=4.2						
TORD	Torodi Ar. Bea	101.88	282	P	Pdif	21 09 57.0	+2.3
	comp=Z,0.3nm,0.8s,baz=121,slow=5.3,SNR=1.7						
TXAR	Lajitas Array	145.84	44	PKPbc	PKPab	21 15 41.5	+0.6
	comp=Z,0.8nm,0.8s,baz=249,slow=0.9,SNR=10.0						

*JMA **03** 21:39:39.3±0.1, 23°02N×122°52E, h43km, M3.4*
*TAP **03** 21:39:39.6, 22°98N×122°58E, h42km±1km, ML3.7, D*
ISC 03 21:39:36.3±1.2**, 23°03N**±0°02×**122°53E**±0°02**, h6**km±10km**,**
n121, σ0.89/226, 1C-10D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWH	Lutao	1.02	252 ⇓	iP	Pn	21 39 57.1	-0.1
	baz=262						
TWH				S	Sb	21 40 09.5	-0.6
	baz=262						
CHKT	Chengkung	1.08	274	i P	Pn	21 39 57.8	-0.1
	baz=276						
CHKT				S	Sb	21 40 11.1	-0.6
	baz=276						
HGSD	Ruisui	1.12	295	P	Pn	21 39 58.4	-0.1
	baz=296						
HGSD				S	Sb	21 40 12.4	-0.5
	baz=296						
FULB	Fuli	1.15	279 ⇓	iP	Pn	21 39 59.1	0.0
	baz=281						
FULB				i S	Sg	21 40 12.5	-1.0
	baz=281						
TWF1	Yuli	1.18	286 ⇓	iP	Pn	21 39 59.8	+0.4
	baz=288						
YULB	Yu-li	1.19	288	P	Pn	21 39 59.9	+0.3
	baz=289						
YULB				S	Sn	21 40 15.8	-0.4
	baz=289						
EGFH	Guangfu	1.20	302	i P	Pn	21 40 00.3	+0.7
	baz=303						
EGFH				S	Sn	21 40 16.1	-0.2
	baz=303						
EHY	Hungye	1.21	293	P	Pn	21 40 00.0	+0.2
	baz=295						
EHY				S	Sb	21 40 15.3	-0.3
	baz=295						
HWA	Hwalien	1.27	318	eS	Sn	21 40 18.7	+0.6
	baz=318						
ESL	Shilin	1.28	308 ⇓	iP	Pn	21 40 00.7	-0.1
	baz=309						
ESL				S	Sb	21 40 16.0	-1.5
	baz=309						
TTN	Taitung	1.31	258	i P	Pg	21 40 02.0	+0.6
	baz=260						
TTN				i S	Sg	21 40 18.1	-0.2
	baz=260						
LAY	Lan-yu	1.34	223	P	Pn	21 40 00.9	-0.7

baz=234
LAY S Sb 21 40 16.8 -2.4
baz=234
TWGBT Beinan 1.35 261 P Pg 21 40 02.4 +0.1
baz=263
TWGBT S Sb 21 40 19.1 -0.7
baz=263
TWD Chiawan 1.36 321 *i* P Pb 21 40 02.1 0.0
baz=321
TWD *i* S Sb 21 40 17.6 -2.1
baz=321
TWG Pinlang 1.36 262 *i* P Pb 21 40 02.4 +0.2
baz=263
TWG *i* S Sb 21 40 19.1 -0.8
baz=263
ELDTW Lidau 1.41 277⇓*i* P Pb 21 40 02.9 -0.1
baz=287
ELDTW *i* S Sb 21 40 20.6 -0.7
baz=287
NACB Ninganchiao 1.43 323 ⇓P Pn 21 40 03.2 +0.4
baz=323
NACB S Sb 21 40 19.8 -2.0
baz=323
JYNG Yonagunijimaku 1.47 15 P Pb 21 40 04.4 +0.4
JYNG *e*S Sn 21 40 22.1 -0.8
VWDT VWDT 1.47 300 ⇓P Pg 21 40 04.6 +0.1
baz=292
VWDT S Sn 21 40 22.2 -0.7
baz=292
YOJ Yonaguni jima 1.50 17 P Pb 21 40 05.0 +0.5
baz=4.0
YOJ S Sb 21 40 24.4 +0.7
baz=4.0
YOJ Yonaguni jima 1.50 17 P Pb 21 40 05.2 +0.7
YOJ *e*S Sn 21 40 22.9 -0.6
ECL Taimali 1.52 254 *i* P Pb 21 40 04.6 -0.3
baz=256
ETLH Xiulin Townshi 1.52 321 P Pb 21 40 05.0 0.0
baz=326
ETLH S Sn 21 40 23.0 -1.3
baz=326
OWD Renai 1.55 307 *e*P Pb 21 40 05.6 +0.1
baz=307
OWD *e*S Sn 21 40 23.1 -2.1
baz=307
HATJ Hateruma jima 1.55 48 P Pn 21 40 05.4 +0.9
HATJ S Sn 21 40 24.5 -0.5
EOS1 EOS1 1.56 346 *e*P Pb 21 40 06.0 +0.4
baz=335
EOS1 *e*S Sn 21 40 25.1 0.0
baz=335
ENA Nanau 1.57 333 P Pn 21 40 05.4 +0.6
baz=322
ENA S Sn 21 40 25.5 +0.1
baz=322
WHF Hehuan Shan 1.61 314 *i* P Pn 21 40 06.0 +0.3
baz=323
WHF S Sn 21 40 25.0 -2.0
baz=323
CHGB Renai 1.62 310 P Pb 21 40 06.5 -0.2
baz=321
CHGB S Sn 21 40 25.7 -1.2
baz=321
SSLB Suanglung 1.64 298 P Pb 21 40 06.9 0.0
baz=291
SSLB S Sb 21 40 27.2 -0.6
baz=291
STYT Tauyuan 1.64 275⇓*i*P Pb 21 40 07.1 +0.1
baz=282
STYT S Sb 21 40 26.9 -0.4
baz=282
TAW Tawu 1.65 247 P Pb 21 40 06.8 -0.4
baz=258
TAW S Sn 21 40 26.3 -1.1
baz=258
ALS Alishan 1.66 287⇓*i*P Pg 21 40 08.1 -0.1
baz=282
ALS *i* S Sb 21 40 28.8 0.0
baz=282
WHYT Xinyi Township 1.68 294 *i* P Pg 21 40 08.3 -0.3
baz=301
WHYT *i* S Sn 21 40 27.6 -0.6
baz=301
EAST Anshuo 1.68 248 P Pb 21 40 07.1 -0.6
baz=259
EAST S Sn 21 40 28.0 -0.2
baz=259
TWC Suao 1.70 338 P Pb 21 40 07.9 0.0
baz=338
TWC S Sn 21 40 28.2 -0.3
baz=338
IRIF Iriomote-Funau 1.70 40 P Pn 21 40 07.7 +1.1
IRIF S Sn 21 40 28.3 -0.4
SMLT Sun Moon Lake 1.73 300 *i* P Pb 21 40 08.3 -0.2
baz=308
SMLT *i* S Sb 21 40 28.8 -0.6
baz=308
SLGT Liugui 1.74 269 P Pb 21 40 09.2 +0.6
baz=271
NNSB Datong 1.75 323 P Pn 21 40 08.3 +0.9
baz=323
NNSB S Sb 21 40 29.3 -0.7
baz=323
NNSH Datong 1.75 323 *i* P Pb 21 40 08.8 -0.1
baz=323
NNSH S Sn 21 40 28.9 -1.1
baz=323
TDCB Techi 1.75 314 P Pb 21 40 09.1 0.0
baz=325
TDCB S Sn 21 40 29.5 -0.7
baz=325
NNS Nan Shan 1.76 323 *i* P Pb 21 40 08.8 -0.3
baz=323
NNS *i* S Sn 21 40 29.9 -0.5
baz=323
TPUB Ta-pu 1.77 279 ⇓P Pg 21 40 09.9 -0.4
baz=285
TPUB *e*S Sn 21 40 30.6 +0.1
baz=285
SSD Sandimen 1.77 261 P Pb 21 40 08.6 -0.6
baz=262
SSD *e*S Sn 21 40 30.6 +0.2
baz=262
WTP Ta-pu 1.78 277 *i* P Pb 21 40 09.6 +0.2
baz=285
DPDB Guoxing 1.78 305 *i* P Pb 21 40 09.6 +0.1
baz=313
DPDB *i* S Sb 21 40 31.2 -0.9
baz=313
CHN5 Tsauling 1.80 289⇑*i*P Pg 21 40 10.9 +0.1
baz=295
CHN5 S Sg 21 40 34.2 +0.1
baz=295
SGST Jiashian 1.80 272 *i* P Pb 21 40 09.6 -0.1
baz=274
SGST S Sb 21 40 32.9 +0.5
baz=274
MASBT Mashibuluo 1.80 257 P Pb 21 40 09.0 -0.7
baz=258
MASBT *e*S Sb 21 40 31.6 -0.9
baz=258
JKRS Kuro-shima 1.81 48 P Pn 21 40 09.3 +1.2
JKRS S Sn 21 40 30.7 -0.7
CHN4 Tsaushan 1.81 281 *i* P Pg 21 40 10.7 -0.4
baz=282
CHN4 S Sn 21 40 31.8 +0.4
baz=282
NDT Datong Townshi 1.83 329 *e*P Pb 21 40 10.5 +0.4
baz=329
NDT S Sn 21 40 30.6 -1.1
baz=329
ENTT Nioudou 1.83 331 P Pb 21 40 10.2 -0.1
baz=323
ENTT S Sn 21 40 31.4 -0.5
baz=323
WJS Zhushan 1.84 296 P Pg 21 40 11.3 -0.3
baz=296
WJS S Sb 21 40 34.1 +0.5
baz=296
CHN1 Nanshi 1.85 275 *i* P Pg 21 40 11.3 -0.5
baz=282
CHN1 *i* S Sg 21 40 35.8 -0.1
baz=282
TWE Neicheng 1.86 335 P Pb 21 40 10.9 +0.1
baz=334
TWE *e*S Sn 21 40 32.2 -0.5
baz=334
TSEB Hengchuen, Pin 1.88 234 *e*P Pg 21 40 12.8 +0.4
baz=236
TSEB *e*S Sb 21 40 35.6 +0.8
baz=236
SCZT Fangliau 1.88 250 P Pn 21 40 10.0 +0.9
baz=251
SCZT S Sn 21 40 32.4 -0.7
baz=251
SNST Tainan City 1.88 276 P Pg 21 40 12.4 0.0
baz=285
SNST *e*S Sg 21 40 36.0 -0.9
baz=285
SSPT Xinbi 1.89 254 *e*P Pb 21 40 11.1 -0.2
baz=255
TWK Hsinying 1.90 278 *i* P Pg 21 40 12.4 -0.3
baz=286
TWK *e*S Sg 21 40 36.5 -0.8
baz=286
WNT Mingjian 1.90 297 *i* P Pg 21 40 12.6 -0.1
baz=298
WNT S Sg 21 40 36.3 -1.0
baz=298
SLBB Yuanshan 1.91 335 P Pb 21 40 11.5 -0.1
baz=334
SLBB S Sn 21 40 34.4 +0.7
baz=334
WHP Taichung City 1.92 311 *e*P Pb 21 40 11.7 0.0
baz=321
WHP S Sb 21 40 34.8 -1.1
baz=321
TWKBT Hengchun 1.92 236 *e*P Pb 21 40 11.5 -0.3
baz=237
TWKBT *e*S Sn 21 40 33.5 -0.6
baz=237
WGK Gukeng 1.93 290 *i* P Pb 21 40 12.6 +0.8
baz=291
WGK S Sg 21 40 37.3 -1.0
baz=291
TWK1 Hengchun 1.93 236 P Pb 21 40 11.3 -0.6
baz=237
TWK1 S Sn 21 40 34.1 -0.1
baz=237
NTC Toucheng 1.93 341 *e*P Pb 21 40 11.7 -0.2
baz=350
NTC *e*S Sb 21 40 37.3 +1.0
baz=350
HEN Hengchun 1.95 239 *e*P Pb 21 40 12.4 +0.3
baz=232
HEN S Sn 21 40 35.2 +0.6
baz=232
WDLH Douliu 1.95 290 P Pg 21 40 13.6 -0.1
baz=291
WDLH *e*S Sg 21 40 38.2 -0.7
baz=291
YHNB Yeheng 1.95 327 P Pb 21 40 12.1 -0.2
baz=327
YHNB S Sn 21 40 33.7 -1.2
baz=327
TWM1 Shoushan 1.96 264 P Pg 21 40 14.1 +0.3
baz=266
TWM1 *e*S Sg 21 40 38.6 -0.6
baz=266
CHN2 Minshiung 1.96 285 P Pg 21 40 13.4 -0.5
baz=296
CHN2 S Sg 21 40 39.2 -0.1
baz=296
NSK Sanguang 1.96 327 *i* P Pb 21 40 12.1 -0.5
baz=327
NSK *i* S Sn 21 40 33.7 -1.5
baz=327
NWLT Wulai 1.98 332 *e*P Pb 21 40 13.2 +0.4
baz=331
NWLT *e*S Sn 21 40 34.6 -1.0
baz=331
JIJ Ishigaki jima 1.99 48 P Pn 21 40 11.1 +0.6
JIJ *e*S Sn 21 40 34.2 -1.5
CHY Chiayi 2.00 284 *e*P Pg 21 40 13.9 -0.6
baz=285
CHY *e*S Sg 21 40 39.4 -1.1
baz=285
CHN3 Shinhua 2.00 272 P Pg 21 40 15.5 +0.9
baz=282
CHN3 S Sg 21 40 42.4 +1.9
baz=282
TCU Taichung 2.04 304 P Pg 21 40 15.5 +0.1
baz=304
TCU *e*S Sb 21 40 39.9 +0.6
baz=304
TIPB Shuangxi 2.04 342 P Pb 21 40 13.2 -0.7
baz=341
TIPB S Sn 21 40 38.2 +1.1
baz=341
SNJT Kaohsiung City 2.04 263 *e*P Pg 21 40 15.7 +0.1
baz=264
SNJT *e*S Sg 21 40 43.9 +1.9
baz=264
WCHH Zhanghua 2.09 300 *e*P Pg 21 40 16.2 -0.2
baz=310
WCHH *e*S Sb 21 40 41.5 +0.5
baz=310
WLCH Liuqiu 2.10 252 *e*P Pg 21 40 16.8 +0.2
baz=242
WLCH *e*S Sb 21 40 42.0 +0.9
baz=242
WLGB Puzi 2.10 283 *e*P Pb 21 40 15.5 +0.6
baz=284
WLGB *e*S Sb 21 40 41.1 -0.1
baz=284
LIOB Emei 2.13 320 P Pb 21 40 15.7 +0.4
baz=319
LIOB *e*S Sb 21 40 40.5 -1.5
baz=319
TWA Mucha 2.13 336 P Pb 21 40 15.3 -0.1
baz=327
TWA S Sn 21 40 40.5 +1.3
baz=327
NSY Sanyi 2.13 311 P Pb 21 40 15.7 +0.3
baz=320
NSY S Sb 21 40 42.8 +0.7
baz=320
NWF Wu-fen Shan 2.15 341 P Pb 21 40 16.2 +0.5
baz=354
NWF S Sb 21 40 41.8 -0.8
baz=354
WFSB Wu-fen Shan 2.15 341 P Pb 21 40 16.2 +0.6
baz=354
WFSB *e*S Sb 21 40 42.2 -0.3
baz=354
CHN8 Yiju 2.16 279 P Pb 21 40 16.2 +0.4
baz=291
CHN8 S Sb 21 40 43.2 +0.3
baz=291
WLTB Daxi 2.16 327 *e*P Pb 21 40 15.8 0.0
baz=327
WLTB *e*S Sb 21 40 41.6 -1.3
baz=327
RLNB Erlin 2.17 294 *e*P Pb 21 40 16.0 0.0
baz=294
RLNB *e*S Sb 21 40 43.9 +0.7
baz=294
WDJ Dajia District 2.18 308 P Pg 21 40 17.4 -0.7
baz=318
WDJ S Sb 21 40 44.3 +0.9
baz=318
PTSB Yuanli 2.19 311 P Pb 21 40 16.4 0.0
baz=322
PTSB S Sb 21 40 43.2 -0.7
baz=322
NMLH Miaoli 2.19 314 *e*P Pb 21 40 16.2 -0.2
baz=323
NMLH *e*S Sb 21 40 42.4 -1.4
baz=323
JISG Ishigakijimahi 2.25 46 P Pn 21 40 14.6 +0.5
JISG *e*S Sn 21 40 41.2 -1.0
SBCB Hsinchu 2.26 321 *e*P Pb 21 40 16.6 -0.9
baz=321
SBCB *e*S Sb 21 40 44.1 -1.6
baz=321
YM01 YM01 2.29 338 P Pb 21 40 17.2 -0.8
baz=337
YM01 *e*S Sn 21 40 43.7 +0.6
baz=337
NCUH Zhongli 2.29 328 *e*P Pb 21 40 17.6 -0.5
baz=327
NCUH *e*S Sb 21 40 45.2 -1.5
baz=327
NCU National Centr 2.29 328 *e*S Sn 21 40 44.7 +1.4
baz=327
YM10 YM10 2.30 337 *e*P Pb 21 40 17.4 -0.9
baz=337
YM10 *e*S Sn 21 40 43.4 -0.1
baz=337
TWS1 Kuangyinshan 2.30 334 *e*P Pb 21 40 17.2 -1.1
baz=333
TWS1 *e*S Sb 21 40 45.6 -1.4
baz=333
YM11 YM11 2.30 338 *e*P Pb 21 40 17.6 -0.8
baz=337
YM11 *e*S Sn 21 40 44.1 +0.5
baz=337
YM05 YM05 2.30 338 *e*P Pn 21 40 16.8 +1.9
baz=337
YM05 *e*S Sn 21 40 44.7 +1.0
baz=337
TWY Chenhua 2.40 339 *e*S Sb 21 40 47.9 -1.8
baz=338
JTJ Tarama 2.56 51 P Pn 21 40 19.4 +1.1
JTJ *e*S Sn 21 40 49.1 -0.6
WDGT Dungji 2.65 276 *e*P Pb 21 40 22.3 -2.0
baz=276
WDGT *e*S Sn 21 40 52.3 +0.1
baz=276
PHUB P'eng-hu 2.77 281 *e*P Pn 21 40 23.6 +2.5
baz=281
PHUB *e*S Sn 21 40 55.1 +0.2
baz=281
PNG Penghu 2.79 282 *e*P Pn 21 40 24.0 +2.5
baz=283
VCHM Qimei 2.86 274 *e*P Pn 21 40 24.6 +2.1
baz=275
JIRB Irabujima 3.01 53 P Pn 21 40 25.5 +1.0
JIRB S Sn 21 40 59.6 -1.3
JMJ2 Miyako jima3 3.08 56 P Pn 21 40 26.5 +1.1
JMJ2 *e*S Sn 21 41 01.5 -1.0
JMJ Miyako jima 2 3.09 54 *e*P Pn 21 40 26.7 +1.0
baz=54
JMJ *e*S Sn 21 41 01.8 -1.2
baz=54
JIKM Ikemajima 3.12 52 P Pn 21 40 27.3 +1.3
JIKM *e*S Sn 21 41 03.2 -0.4
JOGS Gusukube 3.15 56 P Pn 21 40 27.6 +1.2
VWUC VWUC 3.43 305 *e*P Pn 21 40 32.4 +2.0
baz=316
PTTC Pingtan 3.52 315 *e*P Pn 21 40 33.1 +1.5
baz=315
PTMZ Houxiangcun 3.71 303 *e*P Pn 21 40 36.1 +2.0
baz=314
LYJJ Jianjiangzhen 4.32 325 *e*P Pn 21 40 45.4 +2.9
baz=324
MHZQ Yeshan 4.42 315 *e*P Pn 21 40 45.2 +1.3
baz=315

IDC 03 21:42:35.2±5.8, 5°.93S×155°.42E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.4/35, mbtmp3.4/5, Error ellipse: s-maj=160.5km s-min=33.7km az=106.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.68	128	Sn	Sn	21 45 00.5	-6.4
	6.0nm,0.3s,baz=288,slow=16,SNR=1.7						
WRA	Warramunga Arr	24.77	234	P	P	21 47 57.9	-1.1
	0.3nm,0.4s,baz=60,slow=9.6,SNR=2.7						
H11S3	WAKE ISLAND Hy	26.69	24	T	T	22 16 21.4	
	baz=203,slow=75,SNR=19						
H11S2	WAKE ISLAND Hy	26.70	24	T	T	22 16 45.2	
	baz=203,slow=75,SNR=19						
H11S1	WAKE ISLAND Hy	26.71	24	T	T	22 16 43.2	
	baz=203,slow=75,SNR=16						
ASAR	Alice Springs	27.20	227	P	P	21 48 21.9	+1.0
	0.2nm,0.6s,baz=61,slow=9.4,SNR=5.3						
CMAR	Chiang Mai Arr	60.71	295	P	P	21 52 48.9	-0.2
	0.4nm,0.6s,baz=108,slow=5.8,SNR=2.2						
SONM	Songino Array	68.67	327	P	P	21 53 41.6	+0.9
	0.3nm,0.5s,baz=140,slow=4.4,SNR=3.5						
MKAR	Makanchi Array	82.89	319	P	P	21 55 01.1	-0.8
	0.3nm,0.5s,baz=106,slow=5.4,SNR=5.0						

MEX 03 21:43:16.3±0.6, 14°.28N×93°.32W, h15km, MD4.0
NEIC 03 21:43:17.7±3.0, 14°.33N±0°.09×93°.25W±0°.06, h40km±10km, Error ellipse: s-maj=14.3km s-min=6.9km az=203.0
GCG 03 21:43:17.3±0.3, 14°.20N×92°.94W, h0km, MD4.1
IDC 03 21:43:20.6±4.2, 14°.68N×93°.07W, h47km±26km, mb3.4/3, mb1 3.9/7, mb1mx3.5/49, mbtmp3.7/7, ML3.6/3, MS2.7/2, Ms1 2.7/2, ms1mx2.3/39, Error ellipse: s-maj=57.9km s-min=9.0km az=25.0
ISC 03 21:43:14.6±2.0, 14°.53N±0°.07×93°.11W±0°.05, h7km±11km, n34, σ1°.77/42, mb3.8/5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.90	65		Pn	21 43 35.0	+1.3
THIG					Sn	21 43 49.3	+2.4
THIG		0.90	65	*i* P	Pn	21 43 35.0	+1.3
THIG				*e*S	Sn	21 43 49.3	+2.4
PCIG		1.18	355		Pb	21 43 37.2	-0.1
PCIG		1.18	355	*e*P	Pn	21 43 37.5	0.0
PCIG				*i* S	Sn	21 43 55.2	+1.3
STG3	Santiaguito 3,	1.50	83	*e*P	Pg	21 43 44.1	+0.7
CCIG	Comitan	1.98	28		Pg	21 43 53.0	+0.4
CCIG	Comitan	1.98	28	*e*P	Pb	21 43 50.3	-0.8
CCIG				*i* S	Sg	21 44 16.9	-1.4
FUG	Fuego 3	2.19	92	*e*P	Pn	21 43 53.4	+1.6
TGIG		2.24	360		Pb	21 43 55.0	-0.5
TGIG		2.24	360	*i* P	Pn	21 43 53.3	+1.0
TGIG				*i* S	Sb	21 44 22.5	-0.9
APG	El Apazote	2.60	79	P	Pb	21 44 00.2	-1.5
	17nm,0.3s,baz=258,slow=9.3,SNR=38						
APG				S	Sb	21 44 29.7	-4.3
	10nm,0.3s,baz=322,slow=13,SNR=4.1						
IXG	Ixpaco	2.61	97	*e*P	Pn	21 43 58.6	+1.2
IXG				*e*S	Sn	21 44 27.8	-1.6
CMIG	Matias Romero	3.07	326	P	Pn	21 44 03.7	+0.1
	3.6nm,0.3s,baz=149,slow=13,SNR=32						
CMIG				S	Sn	21 44 40.2	-0.5
	14nm,0.3s,baz=154,slow=15,SNR=9.9						
CMIG	Matias Romero	3.07	326		Pn	21 44 03.9	+0.3
CMIG	Matias Romero	3.07	326	*e*P	Pn	21 44 03.9	+0.3
CMIG				*i* S	Sn	21 44 40.5	-0.2
CSGN	Cosiguina Volc	5.61	105	Pn	Pn	21 44 40.1	+1.5
TEIG	Tepich	7.30	38	P	Pn	21 45 04.3	+2.4
TEIG				LR	LR	21 48 10.9	
	comp=Z,56nm,21.6s,baz=330,slow=40						
H06E1	SOCORRO T-PHASI	17.59	286	T	T	22 05 11.1	
	SNR=7.7						
TX31	Lajitas Ar. Si	17.68	328		Pn	21 47 23.0	+1.4
TX31				IAmb	IAmb	21 47 28.2	
	comp=Z,17nm,1.4s						
TX32	Lajitas Array	17.68	328	P	P	21 47 26.9	+4.4
TXAR	Lajitas Array	17.68	328	P	P	21 47 23.7	+1.1
	comp=Z,0.1nm,0.3s,baz=146,slow=13,SNR=9.4						
TXAR				S	Sn	21 50 36.6	-2.2
	comp=Z,0.1nm,0.3s,baz=35,slow=14,SNR=4.8						
GTBY	Guantanamo Bay	18.00	70	Pn	Pn	21 47 24.0	-1.6
GTBY				IAmb	IAmb	21 47 28.4	
	comp=Z,33nm,0.9s						
MIAR	Mount Ida	19.94	359	P	Pn	21 47 48.9	0.0
MIAR				IAmb	IAmb	21 47 56.5	
	comp=Z,2.4nm,0.8s						
MNTX	Cornudas Mount	20.45	329	P	P	21 47 54.2	+1.3
URIC	Uribia, Colomb	20.75	95	P	P	21 47 56.4	+0.2
MSTX	Muleshoe	21.25	337	P	P	21 48 02.7	+1.2
MSTX				IAmb	IAmb	21 48 07.3	
	comp=Z,4.2nm,0.9s						
121A	Cookes Peak, D	22.37	326	P	P	21 48 16.3	+2.6
121A				IAmb	IAmb	21 48 27.3	
	comp=Z,5.0nm,0.9s						
TKL	Tuckaleechee C	22.65	20	LR	LR	21 59 02.4	
	comp=Z,25nm,18.4s,baz=302,slow=42						
TPNV	Topopah Spring	30.39	322	P	P	21 49 25.7	-2.0
NVAR	Mina Array Bea	32.59	322	P	P	21 49 48.2	+1.0
	comp=Z,0.6nm,0.8s,baz=128,slow=9.6,SNR=4.2						
I07A	Izee	37.06	328	P	P	21 50 28.6	+3.0
YKA	Yellowknife Ar	50.27	347	P	P	21 52 10.7	-0.8
	comp=Z,1.6nm,0.7s,baz=152,slow=7.7,SNR=31						
ILAR	Eielson Array	61.94	337	P	P	21 53 34.3	-0.6
	comp=Z,0.6nm,1.0s,baz=99,slow=2.8,SNR=3.3						
CMAR	Chiang Mai Arr	145.14	340	PKPbc	PKPab	22 02 51.1	-2.3
	comp=Z,0.7nm,0.7s,baz=351,slow=4.2,SNR=4.2						

*IDC **03** 21:52:47.7±0.6, 24°.91N×45°.83W, h0km, mb3.9/25, mb1 4.1/25, mb1mx3.9/68, mbtmp3.9/25, MS3.8/28, Ms1 3.8/28, ms1mx3.6/53, Error ellipse: s-maj=18.8km s-min=14.4km az=160.0*

*NEIC **03** 21:52:48.4±1.7, 24°.8N±0°.1×45°.8W±0°.1, h10km±1km, mb4.7/64, Error ellipse: s-maj=19.6km s-min=16.6km az=160.0*

*GCMT **03** 21:52:52.4±0.3, 24°.88N±0°.03×45°.86W±0°.02, h12km±1km, MW4.8/93, Moment Tensor Solution. s15,c18; s93,c111; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.77±.12; $M_{\theta\theta}$0.54±.08; $M_{\phi\phi}$1.23±.08; $M_{r\theta}$-1.29±.30; $M_{\theta\phi}$0.85±.05; $M_{\phi r}$-0.38±.23; Best double couple: $M_0$2.22500×10^{16} NP1:ϕ_s197.00000°, δ32.00000°, λ-124.00000°. NP2: ϕ_s55.00000°, δ63.00000°, λ-71.00000°. Principal axes: T 2.1030, Plg16.0000°, Azm131.0000°; N 0.2430, Plg17.0000°, Azm226.0000°; P -2.3470, Plg66.0000°, Azm360.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 21:52:48.5±0.5**, 24°.83N**±0°.09×**45°.83W**±0°.07**, h10**km**, n106,** σ**0s.95**/82**, mb4.5**/49**, MS3.8**/28**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	20.05	254	LR	LR	22 03 35.0	
	comp=Z,158nm,21.3s,baz=80,slow=32						
MACI	Morro de la Ar	26.42	76	P	P	21 58 24.9	-0.8
WES	Weston	27.36	316	P	P	21 58 32.9	-1.0
WES				IAmb	IAmb	21 58 47.9	
	comp=Z,36nm,1.6s						
GTBY	Guantanamo Bay	27.49	266	P	P	21 58 35.8	+0.6
PTGA	Pitinga	28.87	210	P	P	21 58 47.8	+0.3
	comp=Z,3.4nm,1.0s,baz=25,slow=14,SNR=2.9						
PTGA				LR	LR	22 09 20.8	
	comp=Z,84nm,18.9s,baz=26,slow=34						
MCWV	Mont Chateau	32.13	306	P	P	21 59 17.5	+1.3
MCWV				IAmb	IAmb	21 59 27.0	
	comp=Z,15nm,1.6s						
RUSC	La Rusia	32.21	239	P	P	21 59 15.7	-2.0
SADO	Sadowa	33.49	315	LR	LR	22 10 20.1	
	comp=Z,354nm,21.5s,baz=136,slow=32						
O52A	Adamsville	33.73	306		S	22 04 53.8	+0.2
SCHQ	Schefferville	33.76	338	LR	LR	22 11 42.9	
	comp=Z,217nm,21.0s,baz=129,slow=34						
ROSC	El Rosal	33.82	239	LR	LR	22 12 51.2	
	comp=Z,91nm,20.8s,baz=34,slow=36						
TKL	Tuckaleechee C	34.33	297	LR	LR	22 10 41.3	
	comp=Z,461nm,21.9s,baz=108,slow=31						
X48A	Hartselle	36.88	295	P	P	21 59 57.3	0.0
X48A				IAmb	IAmb	21 59 59.5	
	comp=Z,24nm,1.7s						
SAML	Samuel	37.60	209	P	P	22 00 03.4	-0.1
PLAL	Pickwick Lake	37.76	296	P	P	22 00 05.0	+0.2
ESDC	Sonseca Array	38.02	57	LR	LR	22 12 05.2	
	comp=Z,33nm,20.0s,baz=285,slow=30						
ESPN	Las Esperanzas	38.45	258	P	P	22 00 11.6	+0.8
ESPN				IAmb	IAmb	22 01 38.7	
	comp=Z,7.8nm,0.7s						
JTS	Las Juntas de	39.84	256	LR	LR	22 13 48.0	
	comp=Z,54nm,21.1s,baz=114,slow=32						
BDFB	Brasilia	40.28	183	LR	LR	22 15 45.8	
	comp=Z,172nm,18.1s,baz=14,slow=34						
WHAR	Wooly Hollow	41.22	296	P	P	22 00 34.9	+1.3
WHAR				IAmb	IAmb	22 00 41.9	
	comp=Z,34nm,1.8s						
UALR	University of	41.25	295	P	P	22 00 35.1	+1.1
UALR				IAmb	IAmb	22 00 42.1	
	comp=Z,24nm,1.6s						
X40A	Basin Creek Fa	41.66	295	P	P	22 00 37.1	-0.2
U40A	Yellville	41.72	297	P	P	22 00 38.4	+0.6
DBIC	Dimbokro	43.14	108	LR	LR	22 15 51.7	
	comp=Z,256nm,20.0s,baz=276,slow=32						
H10N2	ASCENSION HYDR	44.57	133	T	T	22 48 22.6	
	baz=318,slow=75,SNR=72						
H10N3	ASCENSION HYDR	44.57	133	T	T	22 48 24.5	
	baz=318,slow=75,SNR=74						
H10N1	ASCENSION HYDR	44.58	133	T	T	22 48 24.8	
	baz=318,slow=75,SNR=72						
H10S3	ASCENSION HYDR	45.28	134	T	T	22 49 30.8	
	baz=317,slow=74,SNR=57						
H10S2	ASCENSION HYDR	45.30	134	T	T	22 49 32.0	
	baz=263,slow=74,SNR=44						
ULM	Lac du Bonnet	45.99	317	P	P	22 01 13.3	+1.4
	comp=Z,1.9nm,0.7s,baz=67,slow=6.2,SNR=2.6						
ULM				LR	LR	22 18 52.3	
	comp=Z,243nm,18.6s,baz=75,slow=34						
ULM	Lac du Bonnet	45.99	317	P	P	22 01 12.8	+0.9
ULM				IAmb	IAmb	22 01 26.7	
	comp=Z,10nm,1.4s						
TORD	Torodi Ar. Bea	46.20	96	P	P	22 01 15.4	+1.4
	comp=Z,1.3nm,0.8s,baz=294,slow=6.6,SNR=6.5						
TORD				LR	LR	22 19 09.2	
	comp=Z,265nm,18.9s,baz=280,slow=34						
LPAZ	La Paz	46.30	210	P	P	22 01 16.3	+1.0
	comp=Z,7.9nm,1.0s,baz=21,slow=9.3,SNR=16						
LPAZ				LR	LR	22 19 52.2	
	comp=Z,65nm,21.2s,baz=32,slow=35						
LPAZ	La Paz	46.30	210	P	P	22 01 16.4	+1.0
LPAZ				IAmb	IAmb	22 01 19.4	
	comp=Z,16nm,1.2s						
WMOK	Wichita Mounta	46.55	295	P	P	22 01 17.3	+0.7
WMOK				IAmb	IAmb	22 01 25.7	
	comp=Z,6.0nm,1.1s						
KEST	Kesra	48.32	63	LR	LR	22 20 36.0	
	comp=Z,37nm,18.1s,baz=235,slow=35						
GO01	Chusmiza	49.74	209	P	P	22 01 40.7	-1.1
GO01				IAmb	IAmb	22 01 44.3	
	comp=Z,16nm,1.1s						
MSTX	Muleshoe	49.90	294	P	P	22 01 42.2	-0.4
MSTX				IAmb	IAmb	22 01 45.9	
	comp=Z,7.3nm,1.1s						
PAYG	Puerto Ayora	49.94	246	P	P	22 01 41.8	-1.2
PB11	IPOC Station P	50.02	210	P	P	22 01 42.7	-0.9
PB08	IPOC Station P	50.13	209	P	P	22 01 44.4	-0.3
PB08				IAmb	IAmb	22 01 45.6	
	comp=Z,16nm,1.1s						
FFC	Flin Flon	50.67	321	P	P	22 01 49.2	+1.3
FFC				IAmb	IAmb	22 01 56.1	
	comp=Z,16nm,1.7s						
MURB	Monte Urbino	50.69	53	P	P	22 01 47.1	-1.3
TXAR	Lajitas Array	51.26	289	P	P	22 01 52.8	-0.1
	comp=Z,0.7nm,0.9s,baz=103,slow=9.1,SNR=6.7						
TXAR				PcP	PcP	22 03 08.4	+0.4
	comp=Z,0.7nm,0.9s,baz=100,slow=3.9,SNR=4.5						
TXAR				LR	LR	22 25 11.9	
	comp=Z,38nm,18.0s,baz=0.0,slow=38						
TX31	Lajitas Ar. Si	51.26	289	P	P	22 01 53.0	+0.1
KHC	Kasperske Hory	51.78	46	P	P	22 01 55.7	-0.7
ISCO	Idaho Springs	51.79	302	P	P	22 01 57.2	+0.2
GEC2	GERESS Array S	51.84	46	P	P	22 01 57.1	+0.2
GEC2				IAmb	IAmb	22 02 05.9	
	comp=Z,11nm,1.5s						
GERES	GERESS Array B	51.84	46	P	P	22 01 57.5	+0.5
	comp=Z,0.8nm,0.8s,baz=234,slow=18,SNR=3.5						
CPUP	Villa Florida	52.06	193	LR	LR	22 26 14.5	
	comp=Z,26nm,18.1s,baz=38,slow=38						
LVC	Limon Verde	52.21	207	P	P	22 02 00.4	+0.2
LVC				IAmb	IAmb	22 02 05.2	
	comp=Z,16nm,1.4s						
K22A	Casper	52.41	306	P	P	22 02 02.4	+1.0
NC204	NORSAR Array S	52.60	31	P	P	22 02 02.0	-0.4
NOA	NORSAR Array B	52.74	31	P	P	22 02 03.9	+0.6
	comp=Z,0.7nm,0.8s,baz=254,slow=7.8,SNR=2.1						
NOA				LR	LR	22 20 07.5	
	comp=Z,50nm,21.5s,baz=260,slow=31						
ANMO	Albuquerque	52.83	296	P	P	22 02 06.7	+2.0
	comp=Z,0.4nm,0.4s,baz=99,slow=15,SNR=2.5						
ANMO	Albuquerque	52.83	296	P	P	22 02 04.3	-0.3
PDAR	Pinedale Array	54.65	306	P	P	22 02 18.2	+0.3
	comp=Z,1.7nm,1.0s,baz=100,slow=4.5,SNR=9.0						
GO02	Mina Guanaco	54.76	207	P	P	22 02 18.3	-0.6
TPAW	Teton Pass	55.63	307	P	P	22 02 24.9	-0.2
SRU	San Rafael Swe	55.63	302	P	P	22 02 25.5	+0.5
NLU	North Lily Min	56.74	303	P	P	22 02 33.0	0.0
WUAZ	Wupatki	56.75	297	P	P	22 02 33.8	+0.8
TUC	Tucson	56.78	294	P	P	22 02 34.6	+1.3
SPUT	South Promonto	56.89	304	P	P	22 02 35.1	+1.2
DUG	Dugway, Tooele	57.28	303	P	P	22 02 36.5	-0.2
BGU	Big Grassy Mou	57.37	304	P	P	22 02 37.1	-0.2
CCUT	Cedar City	58.04	300	P	P	22 02 41.9	-0.3
YKA	Yellowknife Ar	58.50	329	P	P	22 02 43.1	-1.5
	comp=Z,0.4nm,0.7s,baz=98,slow=7.8,SNR=7.8						
YKA				PcP	PcP	22 03 35.1	0.0
	comp=Z,0.2nm,0.8s,baz=113,slow=5.8,SNR=3.8						
YKA				LR	LR	22 28 33.4	
	comp=Z,141nm,18.2s,baz=0.0,slow=37						
214A	Organ Pipe Nat	58.54	293	P	P	22 02 44.8	-0.8
214A				IAmb	IAmb	22 02 49.6	
	comp=Z,4.9nm,1.0s						
ELK	Elko	59.05	304	P	P	22 02 51.4	+2.2
	comp=Z,1.3nm,0.7s,baz=79,slow=2.0,SNR=4.9						
ELK	Elko	59.05	304	P	P	22 02 49.1	-0.1
MFID	Camas Ranch	59.17	307	P	P	22 02 50.2	+0.3
MFID				IAmb	IAmb	22 03 05.3	
	comp=Z,11nm,1.6s						
NEW	Newport	59.64	313	P	P	22 02 53.7	+0.8
	comp=Z,1.8nm,0.6s,baz=90,slow=10,SNR=2.0						
NEW	Newport	59.64	313	IAmb	IAmb	22 03 01.2	
	comp=Z,12nm,1.2s						
FINES	FINESS Array B	59.88	32	P	P	22 02 54.5	+0.2
	comp=Z,1.2nm,0.7s,baz=198,slow=5.4,SNR=4.7						
FINES				LR	LR	22 25 34.5	
	comp=Z,40nm,20.1s,baz=283,slow=33						
ARCES	ARCESS Array B	60.45	23	P	P	22 02 57.4	-0.7
	comp=Z,1.2nm,0.6s,baz=293,slow=6.3,SNR=7.1						
ARCES				LR	LR	22 22 13.5	
	comp=Z,40nm,20.9s,baz=22,slow=29						
NVAR	Mina Array Bea	61.75	302	P	P	22 03 07.6	-0.1
	comp=Z,0.1nm,0.4s,baz=45,slow=9.0,SNR=2.2						
NVAR				LR	LR	22 27 47.7	
	comp=Z,350nm,21.5s,baz=55,slow=34						
AKASG	Malin Array Be	61.88	44	P	P	22 03 07.5	-0.5
	comp=Z,0.2nm,0.3s,baz=283,slow=5.6,SNR=4.9						
AKASG				LR	LR	22 27 46.8	
	comp=Z,24nm,18.9s,baz=260,slow=34						
PAHR	Pah Rah Range	62.35	303	P	P	22 03 12.8	+1.2
PAHR				IAmb	IAmb	22 03 17.6	
	comp=Z,5.9nm,0.8s						
OMMB	Old Mammoth Mi	62.44	301	P	P	22 03 11.3	-1.1
OMMB				IAmb	IAmb	22 03 11.9	
	comp=Z,7.5nm,0.9s						
INK	Inuvik	66.35	336	P	P	22 03 36.8	-0.3
	comp=Z,0.9nm,0.9s,baz=113,slow=4.0,SNR=2.0						
INK	Inuvik	66.35	336	IAmb	IAmb	22 03 47.5	
	comp=Z,8.1nm,1.9s						
BRTR	Keskin Array B	66.80	56	P	P	22 03 40.3	-0.4
	comp=Z,0.6nm,0.8s,baz=282,slow=5.8,SNR=6.1						
PLCA	Paso Flores	69.16	200	P	P	22 03 57.0	+1.8
	comp=Z,5.2nm,1.2s,baz=297,slow=6.8,SNR=2.8						
PLCA				LR	LR	22 34 17.8	
	comp=Z,39nm,19.9s,baz=28,slow=36						
EIL	Elat	70.58	66	P	P	22 04 06.0	+1.7
	comp=Z,1.3nm,0.4s,baz=309,slow=7.5,SNR=4.1						
BARN	Barnard Glacie	71.34	329	IAmb	IAmb	22 04 24.6	
	comp=Z,6.0nm,1.1s						
ILAR	Eielson Array	72.39	334	P	P	22 04 14.9	+0.4
	comp=Z,1.0nm,0.9s,baz=73,slow=4.4,SNR=8.5						
ILAR				LR	LR	22 36 26.6	
	comp=Z,216nm,18.4s,baz=83,slow=36						
KTH	Kantishna Hill	74.49	333	IAmb	IAmb	22 04 42.4	
	comp=Z,21nm,1.6s						
PMR	Palmer	74.53	331	IAmb	IAmb	22 05 30.0	
	comp=Z,7.6nm,1.0s						
RC01	Rabbit Creek A	75.00	331	IAmb	IAmb	22 06 03.5	
	comp=Z,7.5nm,0.9s						
PPLA	Purkeypile	75.29	333	P	P	22 04 33.1	+1.3
KDAK	Kodiak Island	77.75	328	LR	LR	22 41 29.9	
	comp=Z,98nm,18.1s,baz=94,slow=38						
AKTO	Aktyubinsk	79.51	39	P	P	22 04 56.4	+0.9
	comp=Z,1.4nm,0.9s,baz=292,slow=5.9,SNR=6.9						
NRIK	Noril'sk	80.28	15	P	P	22 05 00.5	+1.2
	comp=Z,0.7nm,0.3s,baz=180,slow=8.1,SNR=1.4						
CHGN	Chignik	81.25	329	P	P	22 05 02.8	-1.8
KMBO	Kilima Mbogo	84.18	94	LR	LR	22 41 08.8	
	comp=Z,83nm,20.7s,baz=266,slow=34						
DAMY	Dhamar	84.20	77	P	P	22 05 18.9	-2.3
BILL	Bilibino	84.41	348	P	P	22 05 20.4	-0.5
BRVK	Borovoye	84.75	33	P	P	22 05 22.1	-0.7
BRVK				IAmb	IAmb	22 05 37.5	
	comp=Z,6.4nm,1.6s						
BVAR	Borovoye Array	84.82	33	P	P	22 05 24.4	+1.2
	comp=Z,0.9nm,0.7s,baz=297,slow=3.9,SNR=9.1						
BOSA	Boshof	86.56	124	LR	LR	22 37 08.2	
	comp=Z,44nm,18.8s,baz=343,slow=31						
KURK	Kurchatov	90.25	32	P	P	22 05 50.4	+1.0
KURK				IAmb	IAmb	22 05 51.4	
	comp=Z,10.0nm,1.6s						
ZAA0	Zalesovo Array	90.75	27	P	P	22 05 50.9	-0.8
ZAA0				IAmb	IAmb	22 05 53.5	
	comp=Z,3.9nm,1.1s						
ZALV	Zalesovo Beam	90.75	27	P	P	22 05 52.0	+0.3
	comp=Z,0.3nm,0.4s,baz=75,slow=23,SNR=5.6						
GAR	Garm	92.88	44	P	P	22 06 02.2	+0.1
GAR				IAmb	IAmb	22 06 11.6	
	comp=Z,4.6nm,1.0s						
PETK	Petropavlovsk-	99.74	346	LR	LR	22 51 53.4	
	comp=Z,67nm,21.8s,baz=62,slow=36						

*EAF **03** 22:24:27.9±1.1, 26°.64S×23°.50E, h10km, MD3.5*
*PRE **03** 22:24:30.6±1.2, 26°.92S×26°.71E, h2km, ML2.2*
*NAM **03** 22:24:38.0±14.0, 26°.91S×24°.19E, h0km±559km, MD3.8*

ISC 03 22:24:29.9±0.8**, 26°.86S**±0°.03×**26°.64E**±0°.04**, h10**km**, n14,** σ**2s.17**/26**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLOF	Kloof	1.00	60	eP	Pn	22 24 49.8	-0.4
KLOF				eS	Sb	22 25 02.4	-0.4
KLOF				AML	AML	22 25 07.7	
	comp=Z,314nm,0.2s						
KSR	Koster	1.03	13	eP	Pn	22 24 51.0	+0.5
KSR				eS	Sn	22 25 06.3	+1.2
KSR				AML	AML	22 25 10.2	
	comp=Z,30nm,0.3s						
ERPM	east rand prop	1.52	71	eP	Pg	22 24 59.9	+0.8
ERPM				eS	Sg	22 25 20.4	+1.5
ERPM				AML	AML	22 25 22.4	
	comp=Z,23nm,0.2s						
SLR	Silverton	1.85	53	eP	Pg	22 25 04.2	-1.2
SLR				eS	Sg	22 25 28.8	-0.5
SLR				AML	AML	22 25 30.4	
	comp=Z,50nm,0.3s						
LBTB	Lobatse	2.06	333	i P	Pg	22 25 08.9	-0.6
LBTB				i S	Sg	22 25 37.2	+0.9
LBTB	Lobatse	2.06	333	i P	Pb	22 25 07.8	+0.3
LBTB				i S	Sg	22 25 36.8	+0.5
LBTB	Lobatse	2.06	333	i P	Pg	22 25 08.9	-0.6
LBTB				i S	Sg	22 25 37.2	+0.9
BOSA	Boshof	2.14	215	i P	Pb	22 25 08.6	-0.2
BOSA				i S	Sg	22 25 38.4	-0.3
BOSA	Boshof	2.14	215	eP	Pb	22 25 08.3	-0.5
BOSA				eS	Sb	22 25 34.1	-1.3
BOSA				AML	AML	22 25 38.7	
	comp=Z,12nm,0.2s						
BOSA	Boshof	2.14	215	i P	Pn	22 25 06.7	+0.9
BOSA				i S	Sb	22 25 36.8	+1.4
BOSA	Boshof	2.14	215	i P	Pb	22 25 08.6	-0.2
BOSA				i S	Sg	22 25 38.4	-0.3
MATP	Matopo	6.63	15	i P	Pb	22 26 17.8	-7.6
MATP				i S	Sb	22 27 40.6	-4.1
MATP	Matopo	6.63	15	i P	Pg	22 26 34.9	-2.0
MATP				i S	Sb	22 27 52.2	+7.5
MATP	Matopo	6.63	15	i P	Pb	22 26 17.8	-7.6
MATP				i S	Sb	22 27 40.6	-4.1

*KRSC **03** 22:30:00.4±2.8, 50°.39N×157°.09E, h83km±27km, ML5.0, FELT [III] at lighthouse Kurbatova, lighthouse Chibuiny, RNS Podgornay; [II-III] at Severo-Kurilsk.*
*MOS **03** 22:30:02.3±1.0, 50°.66N×156°.37E, h109km, mb4.1/9, Error ellipse: s-maj=9.1km s-min=3.4km az=74.4*
MOS Felt (II) at Severo-Kuril'sk.
*NEIC **03** 22:30:05.8±1.9, 50°.9N±0°.1×156°.4E±0°.1, h121km±6km, mb4.3/60, Error ellipse: s-maj=16.6km s-min=11.2km az=176.0*
*IDC **03** 22:30:07.9±1.7, 50°.98N×156°.20E, h136km±15km, mb3.5/28, mb1 3.7/36, mb1mx3.6/64, mbtmp4.0/36, MS3.0/2, Ms1 3.1/2, ms1mx2.4/40, Error ellipse: s-maj=14.4km s-min=8.9km az=149.0*

ISC 03 22:30:02.7±0.8**, 50°.62N**±0°.06×**156°.62E**±0°.05**, h101**km±6km**, n229,** σ**1s.76**/243**, mb4.2**/66**, 8C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.33	282	eP	Pn	22 30 17.5	0.0
SKR				eS	Sn	22 30 27.8	-0.8
SKR	Severo-Kuril's	0.33	282	cePN	Pn	22 30 17.4	-0.1
ALID	Alaid	0.72	291	eP	Pn	22 30 20.6	0.0
ALID	Alaid	0.72	291	PN	Pn	22 30 20.6	0.0
PAU	Pauzhetka	0.86	8	eP	Pn	22 30 21.8	+0.1
PAU				eS	Sn	22 30 35.9	-0.1
PAU	Pauzhetka	0.86	8	PN	Pn	22 30 21.8	+0.1
PAU				S	Sn	22 30 35.9	-0.1
KDTR	Khodutka, Kamc	1.50	37	eP	Pn	22 30 29.0	0.0
KDTR				eS	Sn	22 30 48.2	-0.8
KDTR	Khodutka, Kamc	1.50	37	PN	Pn	22 30 29.0	0.0
KDTR				S	Sn	22 30 48.2	-0.8
MIPR	Malaya Ipel'ka	1.66	3	eP	Pn	22 30 31.5	+0.5
MIPR				eS	Sn	22 30 53.6	+1.0
MIPR	Malaya Ipel'ka	1.66	3	PN	Pn	22 30 31.5	+0.5
MIPR				S	Sn	22 30 53.6	+1.0
ASAK	Asacha	1.94	24	eP	Pn	22 30 35.9	+1.3
ASAK				eS	Sn	22 31 01.6	+2.7
ASAK	Asacha	1.94	24	PN	Pn	22 30 35.9	+1.3
ASAK				S	Sn	22 31 01.6	+2.7
MTVR	Mutnovka	2.11	27	eP	Pn	22 30 38.0	+1.2
MTVR				eS	Sn	22 31 04.3	+1.4
MTVR	Mutnovka	2.11	27	PN	Pn	22 30 38.0	+1.2
MTVR				S	Sn	22 31 04.3	+1.4
GRL	Gorelyy	2.14	25	eP	Pn	22 30 38.7	+1.5
GRL				eS	Sn	22 31 05.9	+2.4
GRL	Gorelyy	2.14	25	PN	Pn	22 30 38.7	+1.5
GRL				S	Sn	22 31 05.9	+2.4
RUS	Russkaya	2.17	32	eP	Pn	22 30 37.6	+0.2
RUS				eS	Sn	22 31 03.8	-0.2
RUS	Russkaya	2.17	32	PN	Pn	22 30 37.6	+0.2
RUS				S	Sn	22 31 03.8	-0.2
APC	Apacha	2.33	8	eP	Pn	22 30 40.1	+0.5
APC	Apacha	2.33	8	PN	Pn	22 30 40.1	+0.5
KRMR	Karymshinskiy	2.41	22	eP	Pn	22 30 43.1	+2.6
KRMR				eS	Sn	22 31 13.9	+4.3
KRMR	Karymshinskiy	2.41	22	PN	Pn	22 30 43.1	+2.6
KRMR				S	Sn	22 31 13.9	+4.3
PEA0B	Petropavlovsk-	2.58	15	cePN	Pn	22 30 44.2	+1.3
PEA0B	Petropavlovsk-	2.58	15		Pn	22 30 44.4	+1.5
PETK	Petropavlovsk-	2.58	15	P	Pn	22 30 44.2	+1.4
	29nm,0.3s,baz=175,slow=12,SNR=797						
PETK				S	Sn	22 31 17.0	+3.2
	13nm,0.3s,baz=123,slow=18,SNR=5.7						
PET	Petropavlovsk	2.72	27	eP	Pn	22 30 45.9	+1.2
PET				eS	Sn	22 31 18.5	+1.6
PET	Petropavlovsk	2.72	27	ePN	Pn	22 30 45.7	+1.1
PET				eS	Sn	22 31 18.6	+1.6
PET				pmax	pmax		
	comp=Z,120nm,0.5s						
PET	Petropavlovsk	2.72	27		Pn	22 30 45.8	+1.1
DALK	Dalny	2.75	28	eP	Pn	22 30 46.2	+1.1
DALK				eS	Sn	22 31 18.4	+0.6
DALK	Dalny	2.75	28	PN	Pn	22 30 46.2	+1.1
DALK				S	Sn	22 31 18.4	+0.6
UGLR	Uglovaya	2.93	27	eP	Pn	22 30 49.6	+2.0
UGLR	Uglovaya	2.93	27	PN	Pn	22 30 49.6	+2.0
KOK	Koryaka	2.95	24	eP	Pn	22 30 50.1	+2.2
KOK	Koryaka	2.95	24	PN	Pn	22 30 50.1	+2.2
AVH	Avacha	2.96	25	eP	Pn	22 30 50.7	+2.8
AVH				eS	Sn	22 31 27.5	+4.8
AVH	Avacha	2.96	25	PN	Pn	22 30 50.7	+2.8
AVH				S	Sn	22 31 27.5	+4.8
SMAR	Somma	2.97	26	eP	Pn	22 30 50.2	+1.9
SMAR	Somma	2.97	26	PN	Pn	22 30 50.2	+1.9
KRER	Koryakskii	2.99	25	eP	Pn	22 30 50.6	+2.1
KRER				eS	Sn	22 31 27.5	+3.7
KRER	Koryakskii	2.99	25	PN	Pn	22 30 50.6	+2.1
KRER				S	Sn	22 31 27.5	+3.7
SDLR	Sedlovina	3.01	27	eP	Pn	22 30 50.1	+1.4
SDLR	Sedlovina	3.01	27	PN	Pn	22 30 50.1	+1.4
KRX	Arik	3.02	24	eP	Pn	22 30 50.8	+2.0
KRX	Arik	3.02	24	PN	Pn	22 30 50.8	+2.0
NLC	Nalytchevo	3.06	32	eP	Pn	22 30 48.8	-0.4
NLC				eS	Sn	22 31 23.3	-1.8
NLC	Nalytchevo	3.06	32	PN	Pn	22 30 48.8	-0.4
NLC				S	Sn	22 31 23.3	-1.8
SPN	Mys Shipunski	3.26	39	eP	Pn	22 30 52.1	+0.3
SPN				eS	Sn	22 31 28.0	-1.8
SPN	Mys Shipunski	3.26	39	PN	Pn	22 30 52.1	+0.3
SPN				S	Sn	22 31 28.0	-1.8
KII	Karymskiy	3.84	26	eP	Pn	22 31 01.7	+2.0
KII	Karymskiy	3.84	26	PN	Pn	22 31 01.7	+2.0
KZV	Kizimen	5.02	25	eP	Pn	22 31 16.6	+0.8
KZV	Kizimen	5.02	25	PN	Pn	22 31 16.6	+0.8
TUMD	Tumrok D	5.13	25	eP	Pn	22 31 18.3	+1.2
TUMR	Tumrok	5.13	23	eP	Pn	22 31 19.3	+2.0
TUMR	Tumrok	5.13	23	PN	Pn	22 31 18.3	+1.0
KMNR	Kamenistaya	5.59	21	eP	Pn	22 31 26.2	+2.8
KMNR	Kamenistaya	5.59	21	PN	Pn	22 31 26.2	+2.8
KPT	Kopyto	5.78	21	eP	Pn	22 31 28.9	+3.0
KPT	Kopyto	5.78	21	PN	Pn	22 31 28.9	+3.0
KOZ	Kozyrevsk	5.79	18	eP	Pn	22 31 29.2	+3.2
KOZ	Kozyrevsk	5.79	18	PN	Pn	22 31 29.2	+3.2
BZWR	Bezymyannyi-We	5.84	22	eP	Pn	22 31 28.6	+1.8
BZWR	Bezymyannyi-We	5.84	22	PN	Pn	22 31 28.6	+1.8
BZGR	Bezymyannyi-Gr	5.86	23	eP	Pn	22 31 29.7	+2.6
BZGR	Bezymyannyi-Gr	5.86	23	PN	Pn	22 31 29.7	+2.6
ZLN	Zelenaya	5.96	23	eP	Pn	22 31 30.8	+2.4
ZLN	Zelenaya	5.96	23	PN	Pn	22 31 30.8	+2.4
LGNR	Loginova	5.99	22	eP	Pn	22 31 30.9	+1.9
LGNR	Loginova	5.99	22	PN	Pn	22 31 30.9	+1.9
SRDR	Sredinnyy	6.00	17	eP	Pn	22 31 32.4	+3.5
SRDR	Sredinnyy	6.00	17	PN	Pn	22 31 32.4	+3.5
CIRR	Tsirk	6.03	23	eP	Pn	22 31 32.0	+2.5
CIRR	Tsirk	6.03	23	PN	Pn	22 31 32.0	+2.5
KRSR	Krestovskiy	6.08	21	eP	Pn	22 31 31.2	+1.1
KRSR	Krestovskiy	6.08	21	PN	Pn	22 31 31.2	+1.1
BDR	Baidarnaya	6.55	23	eP	Pn	22 31 38.0	+1.5
BDR	Baidarnaya	6.55	23	PN	Pn	22 31 38.0	+1.5
SRKR	Sorokina	6.62	22	eP	Pn	22 31 38.7	+1.3
SRKR	Sorokina	6.62	22	PN	Pn	22 31 38.7	+1.3
KBTR	Krutoberegovo	6.71	31	eP	Pn	22 31 38.3	-0.2
KBTR	Krutoberegovo	6.71	31	PN	Pn	22 31 38.3	-0.2
KBG	Krutoberegovo	6.71	30	eP	Pn	22 31 38.3	-0.2
KBG	Krutoberegovo	6.71	30	PN	Pn	22 31 38.3	-0.2
BKI	Bering	7.28	47	eP	Pn	22 31 45.3	-0.9
BKI				eS	Sn	22 32 58.5	-8.7
BKI	Bering	7.28	47	PN	Pn	22 31 45.3	-0.9
MA2	Magadan	9.58	342	P	Pn	22 32 17.7	+0.3
	comp=Z,1.1nm,0.3s,baz=145,slow=9.4,SNR=9.3						
MA2	Magadan	9.58	342	cePN	Pn	22 32 17.8	+0.3
MA2				pmax	pmax		
	comp=Z,12nm,0.6s						
MA2	Magadan	9.58	342		Pn	22 32 18.0	+0.6
YSS	Yuzh-Sakhalins	9.86	254	ePN	Pn	22 32 29.4	+8.1
SMY	Shemya	11.06	72		Sn	22 34 36.0	-3.0
ASAJ	Asahikawa	11.51	241	P	Pn	22 32 47.0	+3.3
	comp=Z,1.7nm,0.3s,baz=65,slow=14,SNR=13						
ASAJ	Asahikawa	11.51	241	PN	Pn	22 32 47.0	+3.3
SEY	Seymchan	12.56	351	P	Pn	22 32 57.5	+0.1
	comp=Z,0.1nm,0.3s,baz=148,slow=11,SNR=9.9						
SEY	Seymchan	12.56	351	i PN	Pn	22 32 57.8	+0.4
KLR	Kul'dur	16.06	275	P	P	22 33 43.7	-0.1
	comp=Z,0.3nm,0.3s,baz=66,slow=14,SNR=9.4						
KLR				LR	LR	22 39 37.7	
	comp=Z,22nm,21.3s,baz=57,slow=36						
KLR	Kul'dur	16.06	275	i P	Pn	22 33 42.3	-0.1
KLR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
USRK	Ussuriysk Ar.	17.82	258	P	Pn	22 34 04.7	+0.7
	baz=58,slow=12,SNR=2.7						
BILL	Bilibino	18.11	12⇑	eP	Pn	22 34 06.7	-0.5
BILL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BILL	Bilibino	18.11	12	P	Pn	22 34 06.8	-0.5
ZEA	Zeya	18.22	291	eP	Pn	22 34 08.0	-0.7
ZEA				pmax	pmax		
	comp=Z,46nm,1.4s						
YAK	Yakutsk	18.64	318	P	P	22 34 10.8	-1.3
	comp=Z,0.4nm,0.3s,baz=98,slow=2.7,SNR=18						
YAK	Yakutsk	18.64	318	eP	P	22 34 11.4	-0.7
YAK				eS	S	22 37 35.3	-3.6
YAK				pmax	pmax		
	comp=Z,21nm,0.7s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,11nm,0.9s						
YAK				smax	smax		
	comp=E,223nm,6.2s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
YAK				smax	smax		
	comp=N,146nm,4.2s						
YAK	Yakutsk	18.64	318	P	P	22 34 11.1	-1.0
MJAR	Matsushiro Arr	19.31	230	P	Pn	22 34 23.1	+1.4
	comp=N,0.1nm,0.3s,baz=47,slow=8.1,SNR=15						
MAT	Matsushiro	19.31	230	P	P	22 34 20.7	+1.0
KSRS	Korea Array	24.29	248	P	P	22 35 12.3	+1.9
	comp=N,1.0nm,0.5s,baz=46,slow=10,SNR=4.5						
BOD	Bodaibo	25.57	303	eP	P	22 35 19.4	-2.5
BOD				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KDAK	Kodiak Island	29.93	56	P	P	22 36 04.6	+3.9
	comp=Z,1.1nm,0.3s,baz=287,slow=14,SNR=5.5						
BWN	Browne	30.98	43	P	P	22 36 12.3	+2.4
TOLK	Toolik Lake Re	31.23	35	P	P	22 36 11.7	-0.5
TOLK				IAmb	IAmb	22 36 15.2	
	comp=Z,1.7nm,0.6s						
SEW	Seward	31.23	51	P	P	22 36 12.2	+0.1
SEW				IAmb	IAmb	22 36 22.2	
	comp=Z,9.1nm,0.9s						
RND	Reindeer	31.27	45	P	P	22 36 14.2	+1.7
RND				pmax	pmax		
	comp=Z,2.0nm,0.9s						
RND	Reindeer	31.27	45	P	P	22 36 14.2	+1.7
GHO	Glory Hole Cre	31.33	48	P	P	22 36 15.9	+2.8
WRH	Wood River Hil	31.58	43	P	P	22 36 16.9	+1.7
SML	Sawmill	31.60	48	P	P	22 36 16.1	+0.6
SML				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SML	Sawmill	31.60	48	P	P	22 36 16.1	+0.6
SML				IAmb	IAmb	22 36 22.0	
	comp=Z,3.4nm,0.8s						
H11N2	WAKE ISLAND Hy	31.88	161	T	T	23 10 07.4	
	baz=351						
H11N1	WAKE ISLAND Hy	31.90	161	T	T	23 10 10.6	
	baz=351						
H11N3	WAKE ISLAND Hy	31.90	161	T	T	23 10 08.4	
	baz=351						
DHY	Denali Highway	31.95	45	P	P	22 36 19.5	+0.8
ULN	Ulaanbaatar	32.00	285	iP	P	22 36 18.4	-0.8
SCM	Sheep Creek Mo	32.08	48	P	P	22 36 20.4	+0.7
SCM				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SCM	Sheep Creek Mo	32.08	48	P	P	22 36 20.4	+0.7
SCM				IAmb	IAmb	22 36 21.2	
	comp=Z,7.3nm,1.1s						
HDA	Harding Lake	32.08	43	P	P	22 36 19.8	+0.2
ILAR	Eielson Array	32.09	42	P	P	22 36 20.4	+0.7
	comp=Z,0.3nm,0.5s,baz=271,slow=7.2,SNR=5.1						
GLI	Glacier Island	32.30	50	P	P	22 36 22.9	+1.4
SONM	Songino Array	32.41	285	P	P	22 36 21.7	-1.1
	comp=Z,0.4nm,0.5s,baz=68,slow=8.2,SNR=4.4						
HHC	Hu-ho-hao-te	32.48	270	P	P	22 36 23.8	+0.4
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,37nm,7.3s						
TLY	Talaya	32.65	293	iP	P	22 36 24.4	-0.3
PRP	Porcupine Dome	32.65	41	P	P	22 36 25.7	+1.0
HIN	Hinchinbrook I	32.65	50	P	P	22 36 24.4	-0.2
HIN				IAmb	IAmb	22 36 39.2	
	comp=Z,6.0nm,1.1s						
H11S1	WAKE ISLAND Hy	33.03	162	T	T	23 11 34.8	
	baz=348,slow=76,SNR=72						
H11S3	WAKE ISLAND Hy	33.04	162	T	T	23 11 35.5	
	baz=348,slow=76,SNR=99						
H11S2	WAKE ISLAND Hy	33.05	162	T	T	23 11 37.8	
	baz=348,slow=76,SNR=50						
CRQM	Cirque	34.23	49		PcP	22 39 12.7	0.0
HYT	Haines Junctio	36.91	48	P	P	22 37 03.3	+1.9
HYT				IAmb	IAmb	22 37 07.8	
	comp=Z,1.4nm,0.6s						
INK	Inuvik	37.14	35	P	P	22 37 04.4	+1.4
	comp=Z,0.8nm,0.4s,baz=283,slow=7.9,SNR=8.5						
INK	Inuvik	37.14	35	P	P	22 37 05.0	+2.0
WHY	Whitehorse	38.20	48	P	P	22 37 12.9	+0.7
WHY				IAmb	IAmb	22 37 15.3	
	comp=Z,2.9nm,1.1s						
ZALV	Zalesovo Beam	42.32	303	P	P	22 37 44.6	-1.5
	comp=Z,0.3nm,0.3s,baz=76,slow=9.8,SNR=2.1						
ZALV				PcP	PcP	22 39 37.4	-0.3
	comp=Z,0.6nm,0.4s,baz=64,slow=2.0,SNR=2.3						
DGZ	Jazzator, Alta	42.84	297	iP	P	22 37 49.7	-0.9
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WMQ	Urumqi	45.76	289	eP	P	22 38 14.8	+1.0
RES	Resolute Bay	46.41	20	P	P	22 38 17.8	-0.6
	comp=Z,0.4nm,0.4s,baz=297,slow=2.3,SNR=1.6						
YKA	Yellowknife Ar	46.45	40	P	P	22 38 18.9	+0.2
	comp=Z,0.3nm,0.6s,baz=293,slow=7.3,SNR=5.3						
YKA				PcP	PcP	22 39 52.6	+0.9
	comp=Z,0.2nm,0.6s,baz=308,slow=3.0,SNR=2.3						
KURK	Kurchatov	47.22	302	ceP	P	22 38 23.2	-1.7
KURK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KURK	Kurchatov	47.22	302	P	P	22 38 23.3	-1.7
KURK				IAmb	IAmb	22 38 24.8	
	comp=Z,3.3nm,0.5s						
MK31	Makanchi Array	47.29	296	P	P	22 38 23.8	-1.9
MK31				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MK31	Makanchi Array	47.29	296	P	P	22 38 23.8	-1.9
MKAR	Makanchi Array	47.29	296	P	P	22 38 23.6	-2.0
	comp=Z,0.8nm,0.5s,baz=57,slow=6.4,SNR=18						
MAKZ	Makanchi	47.46	296	P	P	22 38 25.4	-1.5
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MAKZ	Makanchi	47.46	296	P	P	22 38 25.4	-1.5
BRVK	Borovoye	50.27	308	ceP	P	22 38 47.2	-1.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KDJ	Kajisay	52.99	294	P	P	22 39 07.6	-1.3
KDJ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KDJ	Kajisay	52.99	294	P	P	22 39 07.6	-1.3
KDJ				IAmb	IAmb	22 39 08.8	
	comp=Z,1.9nm,0.5s						
AAK	Ala-Archa	54.22	296	P	P	22 39 16.5	-1.3
	comp=Z,0.7nm,0.4s,baz=50,slow=2.1,SNR=7.3						
AAK	Ala-Archa	54.22	296	ceP	P	22 39 16.6	-1.3
AAK				pmax	pmax		
	comp=Z,5.0nm,2.0s						
AAK	Ala-Archa	54.22	296	P	P	22 39 16.6	-1.3
AAK				IAmb	IAmb	22 39 19.1	
	comp=Z,1.5nm,0.8s						
ARCES	ARCESS Array B	54.95	341	P	P	22 39 20.6	-2.0
	comp=Z,5.3nm,1.1s,baz=31,slow=7.3,SNR=3.6						
CHTO	Chiang Mai	55.27	257	P	P	22 39 26.2	+0.7
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CHTO	Chiang Mai	55.27	257	P	P	22 39 26.2	+0.7
KSH	Kashi	55.35	292	P	P	22 39 28.2	+2.2
KSH				pP	pP	22 39 52.6	+2.1
KSH				pmax	pmax		
	comp=Z,46nm,1.7s						
KSH				pmax	pmax		
	comp=Z,120nm,4.5s						
CMAR	Chiang Mai Arr	55.54	257	P	P	22 39 28.7	+1.3
	comp=Z,3.2nm,0.7s,baz=33,slow=6.7,SNR=15						
CMAR				LR	LR	23 07 36.3	
	comp=Z,31nm,18.2s,baz=227,slow=41						
LRM	Limekiln Ridge	57.06	56	P	P	22 39 38.9	+0.7
WAKR	Walker	57.95	67	P	P	22 39 46.4	+1.9
WAKR				IAmb	IAmb	22 39 47.9	
	comp=Z,3.5nm,0.6s						
KVN	Kaiserville	58.37	66	P	P	22 39 49.8	+2.4
KVN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KVN	Kaiserville	58.37	66	P	P	22 39 49.8	+2.4
NVAR	Mina Array Bea	58.66	66	P	P	22 39 52.1	+2.6
	comp=Z,1.7nm,0.5s,baz=298,slow=6.7,SNR=15						
H17A	Grant Village	59.00	57	P	P	22 39 54.4	+2.6
RLMT	Red Lodge	59.20	55	P	P	22 39 54.6	+1.5
RLMT				IAmb	IAmb	22 39 56.4	
	comp=Z,4.3nm,1.0s						
FXWY	Fox Creek	59.26	58	P	P	22 39 55.6	+2.0
FXWY				IAmb	IAmb	22 39 57.5	
	comp=Z,1.8nm,0.8s						
TPAW	Teton Pass	59.40	58	P	P	22 39 56.8	+2.2
REDW	Red Top Meadow	59.54	58	P	P	22 39 56.0	+0.5
REDW				IAmb	IAmb	22 39 58.7	
	comp=Z,2.5nm,0.8s						
HWUT	Hardware Ranch	60.34	60	P	P	22 40 02.4	+1.4
HWUT				IAmb	IAmb	22 40 05.2	
	comp=Z,3.5nm,0.9s						
DUG	Dugway, Tooele	60.61	62	P	P	22 40 03.0	+0.3
DUG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DUG	Dugway, Tooele	60.61	62	P	P	22 40 03.0	+0.3
DUG				IAmb	IAmb	22 40 06.0	
	comp=Z,2.6nm,1.0s						
FRB	Frobisher Bay	60.62	21	P	P	22 40 00.9	-1.3
	comp=Z,0.8nm,0.4s,baz=344,slow=6.6,SNR=5.4						
BW06	Boulder Array	60.64	57	P	P	22 40 04.2	+1.1
BW06				IAmb	IAmb	22 40 05.8	
	comp=Z,4.0nm,0.9s						
PDAR	Pinedale Array	60.64	57	P	P	22 40 05.2	+2.2
	comp=Z,2.3nm,0.7s,baz=312,slow=2.7,SNR=25						
TPNV	Topopah Spring	60.86	66	P	P	22 40 05.0	+0.5
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TPNV	Topopah Spring	60.86	66	P	P	22 40 05.0	+0.5
TPNV				IAmb	IAmb	22 40 07.7	
	comp=Z,4.7nm,0.8s						
NIL	Nilore	60.89	288	P	P	22 40 03.9	-0.7
NIL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NIL	Nilore	60.89	288	P	P	22 40 03.9	-0.7
NIL				IAmb	IAmb	22 40 05.9	
	comp=Z,4.2nm,0.8s						
PSUT	Pine Spring	61.16	64	P	P	22 40 08.4	+1.8
NLU	North Lily Min	61.19	61	P	P	22 40 08.3	+1.6
FINES	FINESS Array B	61.51	335	P	P	22 40 06.0	-2.2
	comp=Z,4.0nm,1.2s,baz=51,slow=7.6,SNR=8.3						
FINES	FINESS Array B	61.51	335	P	P	22 40 06.0	-2.2
RDMU	Red Mountain	62.15	59	P	P	22 40 14.8	+1.6
RSSD	Black Hills	62.59	53	P	P	22 40 16.8	+0.7
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.7s						
RSSD	Black Hills	62.59	53	P	P	22 40 16.8	+0.7
RSSD				IAmb	IAmb	22 40 20.5	
	comp=Z,3.4nm,0.7s						
SRU	San Rafael Swe	62.64	61	P	P	22 40 18.0	+1.6
SRU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SRU	San Rafael Swe	62.64	61	P	P	22 40 18.0	+1.6
KSM	Kuching	62.64	234	P	P	22 40 16.6	+0.2
KSM				IAmb	IAmb	22 40 20.3	
	comp=Z,5.0nm,1.1s						
RWWY	Rawlins	62.65	57	P	P	22 40 16.6	+0.1
PV20	West Nyswonger	64.04	61	P	P	22 40 27.5	+1.8
PV20				IAmb	IAmb	22 40 30.1	
	comp=Z,3.8nm,0.8s						
PV17	East Wray Mesa	64.09	61	P	P	22 40 27.6	+1.5
PV16	Nyswonger Mesa	64.09	61	IAmb	IAmb	22 40 28.9	
	comp=Z,5.7nm,1.2s						
PV11	David Mesa, Pa	64.13	61	P	P	22 40 28.3	+2.1
PV05	Paradox Valley	64.16	61	P	P	22 40 28.1	+1.6
PV03	Paradox Valley	64.17	61	P	P	22 40 27.8	+1.2
PV03				IAmb	IAmb	22 40 29.5	
	comp=Z,4.5nm,1.1s						
ISCO	Idaho Springs	64.84	57	P	P	22 40 32.8	+1.8
ISCO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ISCO	Idaho Springs	64.84	57	P	P	22 40 32.8	+1.8
ISCO				IAmb	IAmb	22 40 34.2	
	comp=Z,2.9nm,0.9s						
NOA	NORSAR Array B	65.28	342	P	P	22 40 31.4	-1.7
	comp=Z,0.2nm,0.4s,baz=29,slow=6.4,SNR=3.9						
HFS	Hagfors	65.61	341	P	P	22 40 33.8	-1.4
	comp=Z,0.5nm,0.4s,baz=57,slow=5.3,SNR=9.2						
ANMO	Albuquerque	67.88	62	ceP	P	22 40 53.6	+3.2
SCHQ	Schefferville	68.83	25	P	P	22 40 55.4	-0.3
	comp=Z,0.8nm,0.4s,baz=326,slow=9.6,SNR=4.0						
AKASG	Malin Array Be	69.58	327	P	P	22 40 57.7	-2.6
	comp=Z,0.6nm,0.4s,baz=30,slow=6.6,SNR=3.3						
WMOK	Wichita Mounta	72.24	57	IAmb	IAmb	22 41 18.7	
	comp=Z,4.3nm,1.1s						
WRA	Warramunga Arr	72.95	202	P	P	22 41 22.4	+1.5
	comp=Z,0.7nm,0.9s,baz=19,slow=6.1,SNR=4.7						
WRA	Warramunga Arr	72.95	202	iP	P	22 41 23.0	+2.1
EKA	Eskdalemuir Ar	73.08	348	P	P	22 41 20.4	-0.9
	comp=Z,0.3nm,0.4s,baz=20,slow=5.5,SNR=6.6						
BUR08	Bucovina Ar. S	73.57	328	P	P	22 41 23.1	-1.4
TX32	Lajitas Array	73.63	64	IAmb	IAmb	22 41 27.5	
	comp=Z,2.4nm,0.6s						
TXAR	Lajitas Array	73.63	64	P	P	22 41 27.0	+1.9
	comp=Z,1.9nm,0.5s,baz=300,slow=5.1,SNR=46						
TXAR	Lajitas Array	73.63	64	P	P	22 41 27.0	+1.9
FITZ	Fitzroy Crossi	73.65	211	P	P	22 41 27.1	+2.1
	comp=Z,1.6nm,0.8s,baz=27,slow=6.8,SNR=2.3						
U40A	Yellville	74.06	52	IAmb	IAmb	22 41 28.5	
	comp=Z,3.7nm,0.8s						
KHC	Kasperske Hory	75.71	336	eP	P	22 41 41.0	+4.3
KHC	Kasperske Hory	75.71	336	eP	P	22 41 41.0	+4.3
F64A	Sherman	76.32	31	P	P	22 41 40.5	+0.3
ASAR	Alice Springs	76.64	201	P	P	22 41 43.8	+1.6
	comp=Z,0.5nm,0.8s,baz=6.0,slow=9.7,SNR=4.5						
BRTR	Keskin Array B	77.10	318	P	P	22 41 44.0	-0.9
	comp=Z,0.3nm,0.6s,baz=21,slow=4.0,SNR=2.4						
BRTR	Keskin Array B	77.10	318	P	P	22 41 44.0	-0.9
DAVOX	Davos/Dischmat	78.82	337	P	P	22 41 53.5	-0.9
	comp=Z,1.3nm,0.6s,baz=14,slow=8.3,SNR=3.6						
ESDC	Sonseca Array	88.48	345	P	P	22 42 42.2	-1.3
	comp=Z,0.8nm,0.7s,baz=4.9,slow=3.9,SNR=11						
H03N2	Juan Fernandez	136.39	89	T	T	01 20 18.5	
	baz=314,slow=77,SNR=67						
H03N1	Juan Fernandez	136.41	89	T	T	01 20 22.0	
	baz=314,slow=77,SNR=85						
H03N3	Juan Fernandez	136.41	89	T	T	01 20 19.2	
	baz=314,slow=77,SNR=79						
CPUP	Villa Florida	144.52	60	PKP	PKPbc	22 49 26.8	+1.0
	comp=Z,1.2nm,0.5s,baz=0.0,slow=3.0,SNR=4.9						

NIED 03 22:32:00, 24°.40N×127°.10E, h8km, Mw3.8 Best double couple: $M_0$4.78000×10^{14} NP1:ϕ_s35.00000°, δ58.00000°, λ-120.00000°. NP2:ϕ_s262.00000°, δ42.00000°, λ-51.00000°.

IDC 03 22:32:48.2±1.0, 24°.26N×127°.35E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.6/51, mbtmp3.7/8, ML3.0/2, MS3.3/1, Ms1 3.3/1, ms1mx2.4/37, Error ellipse: s-maj=40.4km s-min=18.5km az=80.0

JMA 03 22:32:51.6±0.3, 24°.41N×127°.14E, h65km, M3.6

ISC 03 22:32:45.5±1.8, 24°.43N±0°.06×127°.30E±0°.05, h6km±11km, n32, σ1s.98/38, mb3.7/7, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	Gusukube	1.76	281	P	Pg	22 33 18.9	-0.3
JOGS				S	Sn	22 33 38.2	-1.0
JJT3	Tamagusuku3	1.77	14	S	Sg	22 33 42.9	+0.7
JMJ2	Miyako jima3	1.82	280	P	Pb	22 33 18.9	-0.4
JMJ2				eS	Sn	22 33 39.9	-1.0
JIKM	Ikemajima	1.93	285	P	Pb	22 33 21.1	0.0
JIKM				S	Sn	22 33 43.1	-0.5
JKE	Kume jima 2	1.95	346	P	Pg	22 33 23.4	+0.6
JKE				eS	Sb	22 33 46.2	+0.2
JIRB	Irabujima	1.98	282	P	Pb	22 33 21.7	-0.2
JIRB				eS	Sn	22 33 43.3	-1.4
JAGN	Aguni-jima	2.15	359	P	Pg	22 33 26.6	-0.2
JAGN				eS	Sb	22 33 52.0	+0.1
JNTH	Nagotoyohara	2.18	17	P	Pg	22 33 26.6	-0.7
JTJ	Tarama	2.38	276	P	Pb	22 33 27.1	-1.6
JTJ				S	Sn	22 33 52.7	-1.8
JOW	Kunigami	2.55	20	Pn	Pg	22 33 32.9	-1.5
	1.2nm,0.3s,baz=32,slow=11,SNR=45						
JOW				Sn	Sb	22 34 01.2	-2.2
	6.9nm,0.3s,baz=92,slow=18,SNR=17						
JOW	Kunigami	2.55	20	P	Pb	22 33 31.8	+0.1
JOW				eS	Sb	22 34 01.6	-1.8
JIH	Iheya	2.67	13	P	Pb	22 33 34.4	+0.8
JIH				eS	Sb	22 34 04.4	-2.2
JISG	Ishigakijimahi	2.73	274	P	Pn	22 33 31.4	+1.5
JISG				eS	Sn	22 33 59.5	-3.7
JYRO	Yoronjima	2.79	22	S	Sb	22 34 07.4	-2.7
JIJ	Ishigaki jima	2.88	269	P	Pn	22 33 33.5	+1.5
JIJ				eS	Sn	22 34 03.3	-3.7
JKRS	Kuro-shima	3.01	267	S	Sn	22 34 07.2	-2.9
JOKE	Okinoerabujima	3.14	21	eS	Sb	22 34 17.1	-3.1
HATJ	Hateruma jima	3.21	264	S	Sn	22 34 11.5	-3.7
IRIF	Iriomote-Funau	3.26	269	S	Sn	22 34 13.4	-2.9
JTK	Tokunoshima	3.66	24	S	Sn	22 34 27.9	+1.7
JMZ	Minamidaito 2	3.81	68	S	Sn	22 34 28.4	-1.5
JKDJ	Kitadaitoujima	3.92	66	S	Sn	22 34 33.0	+0.3
JAMN	Amaminishikomi	4.16	23	S	Sn	22 34 40.5	+2.1
JNU	Nakatsue	9.21	19	Pn	Pn	22 35 03.9	+4.9
	0.6nm,0.3s,baz=190,slow=10,SNR=2.0						
JNU				Sn	Sn	22 36 40.5	-2.5
	0.0nm,0.3s,baz=174,slow=22,SNR=0.8						
SONM	Songino Array	28.65	330	P	P	22 38 49.2	+6.2
	0.4nm,0.4s,baz=149,slow=11,SNR=7.5						
MKAR	Makanchi Array	42.14	314	P	P	22 40 42.2	+3.6
	0.4nm,0.5s,baz=98,slow=9.5,SNR=5.1						
ZALV	Zalesovo Beam	43.19	324	P	P	22 40 52.1	+5.1
	0.7nm,0.4s,baz=132,slow=8.7,SNR=2.9						
WRA	Warramunga Arr	44.63	171	P	P	22 41 00.8	+1.9
	0.7nm,0.4s,baz=350,slow=8.8,SNR=7.3						
HNR	Honiara	46.34	133	LR	LR	22 57 17.0	
	comp=Z,32nm,19.6s,baz=184,slow=32						
ASAR	Alice Springs	48.23	172	P	P	22 41 29.8	+2.5
	0.6nm,0.8s,baz=349,slow=6.5,SNR=7.1						
YKA	Yellowknife Ar	80.51	25	P	P	22 45 02.6	+4.4
	0.3nm,0.7s,baz=303,slow=5.4,SNR=2.8						
GERES	GERESS Array B	86.12	323	P	P	22 45 32.2	+4.6
	0.4nm,0.6s,baz=61,slow=6.9,SNR=2.6						

BGR 03 22:48:32.5±0.0, 34°.75N×72°.56E, h33km, mb4.9

BJI 03 22:48:53.9±0.0, 36°.64N×71°.39E, h122km, mB4.5/23, mb4.6/37

MOS 03 22:48:53.6±0.9, 36°.60N×71°.42E, h129km, mb4.7/60, Error ellipse: s-maj=4.5km s-min=3.0km az=101.7

IDC 03 22:48:53.2±2.5, 36°.38N×71°.27E, h122km±22km, mb4.1/33, mb1 4.2/38, mb1mx4.1/58, mbtmp4.6/38, MS3.5/6, Ms1 3.5/6, ms1mx2.8/50, Error ellipse: s-maj=14.0km s-min=8.5km az=7.0

NEIC 03 22:48:54.6±1.8, 36°.60N±0°.07×71°.28E±0°.09, h127km±6km, mb4.6/97, Error ellipse: s-maj=12.1km s-min=9.3km az=46.0

NNC 03 22:48:55.3±1.8, 36°.78N×71°.02E, h138km±21km, mb4.5, mpv5.3, Error ellipse: s-maj=16.2km s-min=8.8km az=163.0

SOME 03 22:48:58.3±0.0, 36°.89N×71°.46E, h109km

ISC 03 22:48:53.0±0.3, 36°.52N±0°.03×71°.28E±0°.03, h114km, n511, σ1s.78/538, mb4.6/184, 35C-47D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.69	223	PN	Pn	22 49 37.7	+2.4
KBL	Kabul	2.69	223		Pn	22 49 37.1	+1.9
NIL	Nilore	3.29	150	PN	Pn	22 49 45.8	+2.8
NIL	Nilore	3.29	150		Pn	22 49 45.8	+2.8
THW	Thamme Wali	3.74	174	P	Pn	22 49 50.6	+1.6
SARP	Sargodha	4.73	166	P	Pn	22 50 02.8	+0.5
KSH	Kashi	4.76	50	P	Pn	22 49 59.9	-2.8
KSH				sP		22 50 30.0	
KSH				S	Sn	22 50 47.0	-10
KSH				LR	LR		
	comp=N,3μm,7.5s						
KSH				LR	LR		
	comp=E,5μm,9.6s						
KSH				LR	LR		
	comp=Z,2μm,4.5s						
JMU	Jammu	4.83	141	ex	Pn	22 49 51.0	-13
JMU				ex	Sn	22 50 43.0	-15
ARSB	Arslanbob	4.97	15	PN	Pn	22 50 06.0	+0.4
ARSB	Arslanbob	4.97	15		Pn	22 50 06.0	+0.4
TAS	Tashkent	5.04	343	PN	Pn	22 50 07.3	+1.0
TAS	Tashkent	5.04	343		Pn	22 50 07.3	+1.0
THN	Thein Dam	5.48	137	ex	Pn	22 50 14.5	+2.2
THN				ex	Sn	22 51 14.0	-0.1
IUG	Iuzhnay	5.70	351	⇓iP	Pn	22 50 16.1	+0.8
IUG				eS	Sn	22 51 17.2	-2.3
IUG	Iuzhnay	5.70	351	d iPN	Pn	22 50 16.1	+0.8
AML	Almayashu	5.90	18	P	Pn	22 50 19.1	+0.8
	SNR=489						
CHM	Chimkent	5.93	348	⇓iP	Pn	22 50 19.3	+0.9
CHM				eS	Sn	22 51 23.5	-1.5
CHM	Chimkent	5.93	348	d iPN	Pn	22 50 19.2	+0.9
DHRM	DHARAMSHALA	5.95	134	eP	Pn	22 50 19.6	+0.8
DHRM				eS	Sn	22 51 23.4	-2.4
UCH	Uchtor	6.22	23	P	Pn	22 50 23.5	+0.8
	SNR=572						
KZA	Kyzart	6.34	28	P	Pn	22 50 25.3	+1.0
	SNR=116						
DZA	Taraz	6.36	0	⇓iP	Pn	22 50 25.0	+0.7
DZA	Taraz	6.36	0	d iPN	Pn	22 50 24.9	+0.7
EKS2	Erkin-Say	6.42	17	P	Pn	22 50 26.3	+1.1
	SNR=68						
AAK	Ala-Archa	6.59	21	P	Pn	22 50 28.4	+0.9
	73nm,0.3s,baz=171,slow=6.9,SNR=398						
AAK				S	Sn	22 51 39.9	-1.3
	30nm,0.3s,baz=324,slow=16,SNR=10						
AAK	Ala-Archa	6.59	21	P	Pn	22 50 28.4	+0.9
	SNR=354						
AAK	Ala-Archa	6.59	21	⇑P	Pn	22 50 28.3	+0.9
	80nm,0.3s						
AAK				⇑S	Sn	22 51 40.2	-1.0
	368nm,1.0s						
AAK	Ala-Archa	6.59	21	i PN	Pn	22 50 28.3	+0.9
AAK				pmax	pmax		
	comp=Z,80nm,0.3s						
AAK	Ala-Archa	6.59	21		Pn	22 50 28.2	+0.8
BRLS	Borolday	6.59	351	eS	Sn	22 51 34.0	-7.0
KK31	Karatay Array	6.60	355	P	Pn	22 50 27.8	+0.4
	comp=Z,412nm,0.5s,baz=183,slow=14,SNR=3353						
KK31				⇑S	Sn	22 51 36.6	-4.5
	comp=Z,124nm,0.5s,baz=182,slow=22,SNR=5.6						
KK31	Karatay Array	6.60	355	PN	Pn	22 50 28.0	+0.6
KK31	Karatay Array	6.60	355		Pn	22 50 27.9	+0.6
KKAR	Karatay Array	6.60	355	PN	Pn	22 50 28.0	+0.6
KKAR	Karatay Array	6.60	355		Pn	22 50 27.9	+0.6
BHK	Bhakra	6.64	139	ex	Pn	22 50 30.0	+1.9
BHK				ex	Sn	22 51 40.2	-2.2
KBK	Karagaybulak	6.75	24	P	Pn	22 50 30.6	+1.1
	SNR=93						
FRU1	Bishkek	6.79	21	PN	Pn	22 50 31.6	+1.6
FRU1	Bishkek	6.79	21		Pn	22 50 31.6	+1.6
ULHL	Ulahol	6.88	32	P	Pn	22 50 32.0	+0.6
	SNR=180						
CHMS	Chumysh	7.00	21	P	Pn	22 50 34.7	+1.9
	SNR=105						
USP	Ospenovka	7.17	19	P	Pn	22 50 36.6	+1.4
	SNR=124						
TKM2	Tokmak 2	7.20	26	P	Pn	22 50 36.5	+0.8
	SNR=51						
TKM2	Tokmak 2	7.20	26	⇑P	Pn	22 50 36.1	+0.3
	comp=Z,93nm,0.8s						
TKM2				⇓S	Sn	22 51 58.5	+2.4
	comp=Z,119nm,1.4s						
TKM2	Tokmak 2	7.20	26	i PN	Pn	22 50 36.0	+0.3
TKM2				pmax	pmax		
	comp=Z,93nm,0.8s						
KDJ	Kajisay	7.23	37	PN	Pn	22 50 36.5	+0.4
KDJ	Kajisay	7.23	37		Pn	22 50 36.5	+0.4
SMLA	Simla	7.27	136	eP	Pn	22 50 37.0	+0.4
SMLA				eS	Sn	22 51 54.0	-3.6
SMLA				IAML		22 52 01.1	
	comp=E,1μm,0.3s						
SGDS	Sogindy	7.38	19	⇓iP	Pn	22 50 37.7	-0.3
SGDS				eS	Sn	22 51 56.3	-3.9
TNSS	Tian-Shan	7.83	32	⇓iP	Pn	22 50 44.7	+0.2
TNSS	Tian-Shan	7.83	32	⇓iPN	Pn	22 50 44.6	+0.2
AAA	Alma-Ata	7.96	31	eP	Pn	22 50 46.9	+1.0
AAA	Alma-Ata	7.96	31	ePN	Pn	22 50 47.5	+1.7
AAA				pmax	pmax		
	comp=Z,113nm,0.6s						
MDOK	Medeo	7.97	32	i P	Pn	22 50 46.5	+0.3
MDOK	Medeo	7.97	32	⇑P	Pn	22 50 46.7	+0.5
	comp=Z,55nm,0.6s						
MDOK				⇓S	Sn	22 52 15.9	+1.2
	comp=Z,67nm,1.3s						
MDOK	Medeo	7.97	32	i PN	Pn	22 50 46.4	+0.3
KNDC	Almaty	7.99	31	⇑P	Pn	22 50 47.3	+1.1
	comp=Z,122nm,0.6s						
KNDC				⇓S	Sn	22 52 15.1	+0.3
	comp=Z,96nm,0.7s						
KNDC	Almaty	7.99	31	PN	Pn	22 50 47.3	+1.1
PRZ	Przheval'sk	8.10	41	PN	Pn	22 50 49.1	+1.2
PRZ	Przheval'sk	8.10	41		Pn	22 50 49.1	+1.2
KUU	Kurty	8.31	26	eP	Pn	22 50 49.6	-1.0
KUU				eS	Sn	22 52 18.8	-4.0
KUU	Kurty	8.31	26	ePN	Pn	22 50 49.6	-1.0
DDI	Dehra Dun	8.38	136	eP	Pn	22 50 52.4	+0.7
DDI				ex	Sn	22 52 21.0	-3.6
DDI				IAML		22 52 26.0	
	comp=E,625nm,0.3s						
SATY	Saty	8.52	38	⇓iP	Pn	22 50 53.5	-0.1

SATY Saty 8.52 38*d* iPN Pn 22 50 53.4 -0.1
BTLS Baital 8.76 13⇓ iP Pn 22 50 55.8 -0.9
BTLS Baital 8.76 13*d* iPN Pn 22 50 55.7 -0.9
UZB Uzynbulak 8.90 40⇓ iP Pn 22 50 58.6 0.0
UZB eS Sn 22 52 34.2 -2.9
UZB Uzynbulak 8.90 40*d* iPN Pn 22 50 58.6 0.0
SHLS Shalkode 9.13 41 eP Pn 22 51 04.9 +3.1
SHLS eS Sn 22 52 45.4 +2.5
SHLS Shalkode 9.13 41 eP Pn 22 51 04.9 +3.1
SHLS eS Sn 22 52 45.3 +2.5
PDGK Podgornoye 9.27 40 ⇑P Pn 22 51 03.3 -0.4
comp=E,56nm,0.8s
PDGK Podgornoye 9.27 40 *i* P Pn 22 51 03.2 -0.4
PDGK pmax pmax
comp=Z,56nm,0.7s
NDI New Delhi 9.28 146 eP Pn 22 51 01.0 -2.8
NDI eS Sn 22 52 39.0 -7.4
TDK Taldyqorghan 10.04 30 eP Pn 22 51 13.7 -0.4
TDK Taldyqorghan 10.04 30 eP Pn 22 51 13.6 -0.4
AJM Ajmer 10.41 163⇑ *i* x Pn 22 51 18.0 -1.2
AJM *i* x Sn 22 53 06.0 -8.0
GEYT Alibeck 10.59 282 P Pn 22 51 20.3 -1.2
comp=Z,7.9nm,0.3s,baz=101,slow=9.4,SNR=109
GEYT S Sn 22 53 15.2 -3.0
comp=Z,4.2nm,0.3s,baz=95,slow=16,SNR=2.9
GYA0B ALIBECK ARRAY 10.59 282 ⇓P Pn 22 51 20.0 -1.6
GYA0B ⇓S Sn 22 53 15.1 -3.1
GYA0B ALIBECK ARRAY 10.59 282 Pn 22 51 20.2 -1.4
OTUK Ortayu 11.74 3 ⇓P Pn 22 51 34.8 -2.0
comp=Z,25nm,0.5s
OTUK Ortayu 11.74 3 *i* P Pn 22 51 34.8 -2.0
OTUK pmax pmax
comp=Z,25nm,0.5s
PYUN Piuthan 12.97 127 *e*P Pn 22 51 51.0 -2.3
comp=Z,383nm,0.4s
MAKZ Makanchi 13.01 34 ⇓P Pn 22 51 52.4 -0.9
comp=Z,27nm,0.6s
MAKZ Makanchi 13.01 34 P Pn 22 51 51.9 -1.4
MAKZ Makanchi 13.01 34 Pn 22 51 51.9 -1.4
MK31 Makanchi Array 13.14 35 ⇑P Pn 22 51 54.9 -0.2
comp=Z,16nm,0.6s,baz=189,slow=7.4,SNR=239
MK31 Makanchi Array 13.14 35 P Pn 22 51 54.3 -0.8
MK31 Makanchi Array 13.14 35 Pn 22 51 54.3 -0.8
MKAR Makanchi Array 13.14 35 P Pn 22 51 55.4 +0.3
comp=Z,1.5nm,0.3s,baz=222,slow=15,SNR=86
MKAR S Sn 22 54 16.1 -3.6
baz=209,slow=17,SNR=1.1
MKAR Makanchi Array 13.14 35 *i* P Pn 22 51 54.2 -0.9
MKAR pmax pmax
comp=Z,6.0nm,0.6s
DANN Dangsing 13.31 124 eP Pn 22 51 55.2 -2.5
comp=Z,353nm,0.4s
KOLN Koldanda 13.59 126 eP Pn 22 51 58.6 -2.7
comp=Z,117nm,0.3s
GKN Gorkha 14.12 123 eP Pn 22 52 05.6 -2.5
comp=Z,234nm,0.3s
BHPL Bhopal 14.26 156 eP Pn 22 52 07.6 -2.2
BHPL *ex* x 22 54 37.6
WMQ Urumqi 14.50 55 Pn P 22 52 21.7 +5.6
WMQ Sn S 22 55 01.2 -3.1
WMQ smax smax
comp=N,34nm,0.5s
WMQ smax smax
comp=E,28nm,0.6s
WMQ Urumqi 14.50 55 eP P 22 52 15.0 -1.1
WMQ S Sn 22 54 43.2 -9.4
WMQ pmax pmax
comp=E,19nm,0.7s
WMQ pmax pmax
comp=E,47nm,5.7s
WMQ LR LR
comp=E,230nm,29.0s
WMQ LR LR
comp=E,630nm,28.9s
WMQ LR LR
comp=E,44nm,29.2s
DMN Daman 14.70 123 eP Pn 22 52 12.9 -2.6
comp=E,110nm,0.4s
KKN Kakani 14.70 122 eP Pn 22 52 13.4 -2.0
comp=E,114nm,0.5s
ZSN Zaisan 14.85 38 eP Pn 22 52 17.9 +0.9
ZSN Zaisan 14.85 38 eP Pn 22 52 17.9 +0.9
PKIN Phulchoki 14.91 123 eP Pn 22 52 16.5 -1.7
comp=E,212nm,0.4s
PKI Pulchoki 14.93 123 eP Pn 22 52 16.4 -2.0
comp=E,106nm,0.4s
KURBB Kurchatov Arra 15.03 18 P Pn 22 52 16.5 -2.7
comp=E,0.3nm,0.3s,baz=206,slow=11,SNR=36
KURBB S Sn 22 55 09.1 +3.9
baz=234,slow=46,SNR=2.8
KURBB Kurchatov Arra 15.03 18 ⇑P Pn 22 52 16.0 -3.2
comp=E,25nm,0.6s
GUN Gumba 15.03 121 eP Pn 22 52 17.4 -2.4
comp=E,138nm,0.4s
KURK Kurchatov 15.14 18*c* eP Pn 22 52 17.8 -2.8
KURK pmax pmax
comp=Z,7.0nm,1.3s
KURK Kurchatov 15.14 18 Pn 22 52 17.6 -2.9
KURK IAmb IAmb 22 52 26.2
comp=Z,21nm,0.8s
AB31 Akbulak array 15.17 331 ⇓P Pn 22 52 18.8 -2.3
comp=Z,17nm,0.4s,baz=140,slow=13,SNR=1136
AB31 ⇓S Sn 22 55 01.7 -7.0
comp=Z,21nm,0.8s,baz=147,slow=23,SNR=7.7
AB31 Akbulak array 15.17 331⇑ *e*P Pn 22 52 20.6 -0.5
AB31 pmax pmax
comp=Z,17nm,0.4s
ABKAR Akbulak array 15.17 331 Pn 22 52 20.3 -0.8
SEM Semipalatinsk 15.31 22 eP Pn 22 52 23.7 +0.6
SEM Semipalatinsk 15.31 22 eP Pn 22 52 23.6 +0.6
JIRN Jiri 15.40 121 eP Pn 22 52 22.6 -1.9
comp=Z,459nm,0.3s
RAMN Ramite 16.13 122 eP Pn 22 52 30.7 -2.7
comp=Z,161nm,0.5s
BVAR Borovoye Array 16.51 358 P Pn 22 52 37.0 -0.7
comp=Z,5.1nm,0.3s,baz=168,slow=13,SNR=48
BRVK Borovoye 16.55 358 ⇓P Pn 22 52 36.2 -1.9
comp=Z,21nm,0.5s
BRVK Borovoye 16.55 358 *i* P P 22 52 38.7 +0.1
BRVK pmax pmax
comp=Z,21nm,0.5s
BRVK Borovoye 16.55 358 P Pn 22 52 37.3 -0.7
TAPN Taplejung 16.66 119 eP Pn 22 52 37.8 -2.1
comp=Z,333nm,0.7s
ODAN Odare 16.73 121 eP Pn 22 52 38.3 -2.5
comp=Z,93nm,0.5s
AKTO Aktyubinsk 16.87 330 P P 22 52 42.9 +0.6
comp=Z,13nm,0.3s,baz=139,slow=10,SNR=189
AKTO S Sn 22 55 43.2 -6.4
comp=Z,1.1nm,0.3s,baz=181,slow=18,SNR=3.7
AKTO Aktyubinsk 16.87 330 ⇓P Pn 22 52 39.0 -3.0
comp=Z,110nm,0.8s
AKTO ⇑S Sn 22 55 45.4 -4.2
comp=Z,44nm,0.9s
DGZ Jazzator, Alta 17.62 37*c* iP P 22 52 50.8 +0.1
DGZ pmax pmax
comp=Z,23nm,0.6s
BOK Bokaro 17.87 131 *ex* P 22 52 53.9 +0.4
BOK *i* x Pn 22 52 55.3 +1.0
LKRN Lenkeran, Azer 17.96 284 P Pn 22 52 56.9 +1.7
POO Poona 18.07 172 *ex* Pn 22 52 59.0 +2.2
AKT Akhty 18.94 292 eP Pn 22 53 07.6 +0.6
AKT eS Sn 22 56 39.1 -0.5
AKT pmax pmax
comp=Z,12nm,0.4s
AKT smax smax
comp=E,7.0nm,0.5s
AKT smax smax
comp=N,16nm,0.6s
SEKA Sheki 19.31 291 P Pn 22 53 10.9 -0.4
MAK Makhachkala 19.35 297 eP P 22 53 08.1 -1.3
MAK eS S 22 56 40.5 -1.6
MAK pmax pmax
comp=Z,24nm,0.4s
MAK MLR MLR
comp=Z,82nm,17.0s
ZAA0 Zalesovo Array 19.80 24 ⇑P P 22 53 13.9 -0.3
comp=Z,2.3nm,0.4s
ZAA0 Zalesovo Array 19.80 24 IAmb IAmb 22 53 17.1
comp=Z,28nm,0.8s
ZALV Zalesovo Beam 19.80 24 P P 22 53 13.9 -0.2
comp=Z,12nm,0.3s,baz=216,slow=11,SNR=124
ZALV S S 22 56 47.0 -3.8
comp=Z,0.4nm,0.3s,baz=213,slow=17,SNR=3.8
ZALV Zalesovo Beam 19.80 24 P P 22 53 14.0 -0.2

GANJ Ganja 19.92 290 P Pn 22 53 17.4 -1.0
HYB Hyderabad 20.09 159 *i* P P 22 53 18.0 +0.4
HYB eS S 22 57 00.0 +2.8
LGD Lagodekhi 20.09 293 P Pn 22 53 19.8 -0.5
NAX Nakhchivan 20.52 285 P Pn 22 53 25.0 -0.4
GROC Groznyy 20.62 297 eP P 22 53 23.2 +0.1
GROC eS S 22 57 09.2 +1.9
GROC pmax pmax
comp=Z,75nm,1.1s
SHL Shillong 20.71 116 P P 22 53 25.5 +1.0
SHL pmax pmax
comp=Z,22nm,0.6s
SHL Shillong 20.71 116 P P 22 53 25.5 +1.0
SHL IAmb IAmb 22 53 28.5
comp=Z,22nm,0.6s
TBLG Delisi 21.20 292 P P 22 53 30.2 +0.8
TBLG pmax pmax
comp=Z,24nm,0.8s
TBLG Delisi 21.20 292 P P 22 53 30.2 +0.8
TBLG IAmb IAmb 22 53 33.2
comp=Z,24nm,0.8s
KZRT Kazreti 21.42 291 P P 22 53 36.1 +4.3
GUDG Gudauri 21.47 294 P P 22 53 36.6 +4.1
SVE Sverdlovsk 21.53 344 eP P 22 53 33.4 +0.7
SVE pmax pmax
comp=Z,34nm,0.8s
ARU Arti 21.68 341 P P 22 53 35.3 +0.9
comp=Z,13nm,0.7s,baz=162,slow=6.1,SNR=26
ARU S S 22 57 31.1 +3.8
comp=Z,0.8nm,0.4s,baz=1.5,slow=23,SNR=1.8
ARU Arti 21.68 341*c* iP P 22 53 35.0 +0.6
ARU 22 54 04.6
ARU S S 22 57 27.9 +0.6
ARU SS SnSn 22 58 11.1 +8.2
ARU pmax pmax
comp=Z,60nm,0.9s
ARU Arti 21.68 341 P P 22 53 34.8 +0.5
ZEI Tsey 21.93 295 eP P 22 53 39.2 +1.8
ZEI pmax pmax
comp=Z,13nm,0.9s
BGD Bogdanovka 22.02 291 P P 22 53 41.0 +2.7
AKH Akhalkalaki 22.11 291 P P 22 53 40.0 +0.8
AKH pmax pmax
comp=Z,21nm,1.1s
AKH Akhalkalaki 22.11 291 P P 22 53 40.0 +0.8
AKH IAmb IAmb 22 53 45.9
comp=Z,21nm,1.1s
NCK Nalchik 22.26 297 *i* P P 22 53 42.1 +1.6
NCK pmax pmax
comp=Z,35nm,0.9s
GTA Gaotai 22.64 74 P P 22 53 45.4 +0.9
GTA pP pP 22 54 13.9 +6.3
GTA sP sP 22 54 26.1 +3.9
GTA pmax pmax
comp=Z,27nm,0.9s
GTA pmax pmax
comp=Z,100nm,4.7s
KBZ Khabaz 22.79 297 P P 22 53 46.8 +1.0
comp=Z,11nm,1.1s,baz=131,slow=7.4,SNR=14
KBZ Khabaz 22.79 297*c* eP P 22 53 46.3 +0.5
NEY Neytrino 22.85 296 *i* P P 22 53 49.6 +3.0
NEY pmax pmax
comp=Z,3.0nm,0.9s
GOF Gofitskoye 22.93 301⇑ eP P 22 53 49.1 +2.0
GOF pmax pmax
comp=Z,37nm,0.9s
KIV Kislovodsk 22.98 298 eP P 22 53 48.8 +1.0
KIV eS S 22 57 49.5 +0.2
KIV pmax pmax
comp=Z,19nm,1.0s
KIV MLR MLR
comp=Z,104nm,14.0s
KIV Kislovodsk 22.98 298 P P 22 53 49.2 +1.4
VRH Novokhopyorsk 25.66 314 eP P 22 54 27.6 +16
VRH pmax pmax
comp=Z,10.0nm,0.6s
MOY Mondy 25.93 45 eP P 22 54 15.6 +1.1
LZH Lanzhou 26.18 81 eP P 22 54 22.0 +5.0
LZH pP pP 22 54 49.5 +6.5
LZH sP sP 22 55 00.5 +3.7
LZH pmax pmax
comp=Z,24nm,1.1s
KIRV Kirov 26.32 334 P P 22 54 18.9 +1.2
comp=Z,26nm,0.6s,baz=189,slow=3.9,SNR=13
KIRV Kirov 26.32 334⇑ eP P 22 54 19.1 +1.4
ZAK Zakamensk 26.80 49 eP P 22 54 22.7 +0.3
ZAK pmax pmax
comp=Z,4.0nm,1.2s
ANN Anapa 26.82 298 eP P 22 54 22.9 +0.5
ANN e*PP pP 22 54 52.9 +5.1
ANN eS S 22 58 54.7 +4.5
ANN pmax pmax
comp=Z,10.0nm,0.8s
VORD Divnogorie 26.99 312 eP P 22 54 24.5 +0.6
VORD pmax pmax
comp=Z,9.0nm,1.0s
VSR Storozhevoye 27.15 313 eP P 22 54 25.6 +0.3
VSR pmax pmax
comp=Z,10.0nm,1.3s
TLY Talaya 27.46 46 P P 22 54 29.5 +1.4
comp=Z,1.5nm,0.4s,baz=236,slow=11,SNR=3.5
TLY Talaya 27.46 46 P P 22 54 27.4 -0.7
TLY pmax pmax
comp=Z,4.0nm,1.0s
TLY Talaya 27.46 46 P P 22 54 27.4 -0.7
CD2 Chengdu 27.51 92 eP P 22 54 29.0 +0.2
CD2 pmax pmax
comp=Z,10.0nm,0.5s
LPSR Galich'ya Gora 27.80 316 eP P 22 54 31.7 +0.7
LPSR pmax pmax
comp=Z,10.0nm,0.8s
SONM Songino Array 28.14 55 P P 22 54 35.1 +0.8
comp=Z,4.5nm,0.4s,baz=264,slow=9.3,SNR=48
ULN Ulaanbaatar 28.58 55*c* eP P 22 54 38.9 +0.7
ULN pmax pmax
comp=Z,7.0nm,0.8s
ULN Ulaanbaatar 28.58 55 P P 22 54 38.5 +0.3
ULN IAmb IAmb 22 54 39.9
comp=Z,5.8nm,0.7s
BR131 Keskin Array S 29.64 288 P P 22 54 48.4 +0.6
BR131 pmax pmax
comp=Z,2.0nm,0.7s
BR131 Keskin Array S 29.64 288 P P 22 54 48.4 +0.6
BRTR Keskin Array B 29.64 288 P P 22 54 49.2 +1.4
comp=Z,0.5nm,0.5s,baz=99,slow=8.7,SNR=6.4
BRTR Keskin Array B 29.64 288*c* eP P 22 54 49.9 +2.1
BRTR pmax pmax
comp=Z,1.0nm,0.5s
MOS Moscow 29.79 321 eP P 22 54 49.3 +0.7
MOS *e* 22 55 32.7
MOS *e* 22 55 49.9
PRGR Permogore 29.84 335 eP P 22 54 47.7 -1.4
PRGR pmax pmax
comp=Z,15nm,0.6s
OBN Obninsk 30.07 319*d* iP P 22 54 52.1 +1.0
OBN *SP sP 22 55 33.0 +2.9
OBN 22 55 55.6
OBN eS S 22 59 40.4 -0.6
OBN *e* 23 00 25.1
OBN pmax pmax
comp=Z,33nm,0.6s
OBN MLR MLR
comp=Z,29nm,16.0s
OBN Obninsk 30.07 319 P P 22 54 51.8 +0.7
CMAR Chiang Mai Arr 30.27 119 P P 22 54 54.1 +0.8
comp=Z,0.6nm,0.4s,baz=308,slow=9.0,SNR=4.9
HHC Hu-ho-hao-te 31.54 70 P P 22 55 05.8 +1.4
HHC pmax pmax
comp=Z,11nm,0.9s
HHC pmax pmax
comp=Z,42nm,8.3s
KLMR Klimovskoe 31.57 331 eP P 22 55 03.6 -0.7
KLMR pmax pmax
comp=Z,24nm,1.0s
KLMR Klimovskoe 31.57 331 eP P 22 55 03.6 -0.7
KLMR AMP 22 55 06.1
comp=Z,24nm,1.0s
MILM Milestii Mici 32.99 302 ⇓P P 22 55 18.2 +1.3
AKASG Malin Array Be 33.11 309 P P 22 55 18.3 +0.5
comp=Z,9.7nm,0.6s,baz=81,slow=7.0,SNR=45
AKASG Malin Array Be 33.11 309*c* eP P 22 55 18.2 +0.4
AKASG pmax pmax
comp=Z,15nm,0.7s
AKBB Malin Array Si 33.11 309*c* eP P 22 55 18.0 +0.2

AKBB Malin Array Si 33.11 309 IAmb IAmb 22 55 19.7
comp=Z,12nm,0.7s
SORM Soroca 33.38 304 ⇓P P 22 55 21.3 +1.1
SORM Soroca 33.38 304 ⇓P P 22 55 21.3 +1.1
NRIK Noril'sk 34.06 10 P P 22 55 27.0 +1.1
comp=Z,32nm,0.6s,baz=199,slow=5.4,SNR=91
NRIK LR LR 23 10 47.2
comp=Z,30nm,18.4s,baz=208,slow=38
NRIK Noril'sk 34.06 10‖ eP P 22 55 26.7 +0.8
NRIK pmax pmax
comp=Z,33nm,0.7s
TMCR Tamitsa 34.12 335 eP P 22 55 27.2 +0.8
TMCR pmax pmax
comp=Z,22nm,0.6s
VRI Vrincioaia 34.41 300 P P 22 55 32.6 +3.3
VRI pmax pmax
comp=Z,7.0nm,1.0s
PLOR Plostina 34.47 300 ⇓P P 22 55 32.6 +2.8
PLOR Plostina 34.47 300 ⇓P P 22 55 32.6 +2.8
TESR Tescani 34.47 301 ⇓P P 22 55 31.7 +2.0
BIZ Bicaz 34.85 302 ⇓P P 22 55 34.6 +1.6
MLR Muntele Rosu 34.97 299 ⇓P P 22 55 37.2 +3.0
MLR Muntele Rosu 34.97 299 ⇓P P 22 55 37.2 +3.0
MLR Muntele Rosu 34.97 299 P P 22 55 35.0 +0.9
MLR IAmb IAmb 22 55 38.2
comp=Z,13nm,1.0s
BOD Bodaibo 35.19 39 eP P 22 55 34.4 -1.3
BOD pmax pmax
comp=Z,7.0nm,1.0s
NACGM Naroch 35.36 316 *e* P 22 55 38.0 +0.8
BURAR Bucovina Array 35.46 303 ⇓P P 22 55 40.4 +2.0
BURAR Bucovina Array 35.46 303 P P 22 55 40.3 +2.0
BUR08 Bucovina Ar. S 35.48 303 P P 22 55 38.5 0.0
VOIR 35.60 299 P P 22 55 42.1 +2.6
VOIR pmax pmax
comp=Z,3.0nm,0.8s
IIGN Ignalina 35.77 316 eP P 22 55 42.5 +1.7
IZAR Zarasai 35.85 317 eP P 22 55 42.8 +1.4
ISAL Salakas 35.87 317 eP P 22 55 42.6 +1.0
ARR Arges 35.90 299 ⇓P P 22 55 44.4 +2.3
JOF Joensuu 35.96 330 P P 22 55 43.3 +1.0
JOF pmax pmax
comp=Z,21nm,0.7s
ARCR ARCALIA 36.05 302 ⇓P P 22 55 45.4 +2.2
VSU Vasula 36.31 321 eP P 22 55 46.3 +1.0
VSU Vasula 36.31 321 *i* P P 22 55 45.5 +0.3
VSU pmax pmax
comp=Z,50nm,0.9s
LVV L'vov 36.33 307 eP P 22 55 46.2 +0.6
TIA Tai'an 36.64 76 P P 22 55 50.4 +2.0
TIA pmax pmax
comp=Z,14nm,0.8s
PABE Paberze 37.06 316 eP P 22 55 53.4 +1.7
DRGR 37.18 302 ⇓P P 22 55 55.0 +2.1
DRGR 37.18 302 ⇓P P 22 55 55.0 +2.1
KWP Kalwaria Pacla 37.18 306 eP P 22 55 54.6 +1.8
KWP Kalwaria Pacla 37.18 306 P P 22 55 53.0 +0.2
KWP pmax pmax
comp=Z,16nm,0.8s
KWP Kalwaria Pacla 37.18 306 P P 22 55 53.0 +0.2
SUW Suwalki 37.27 313 P P 22 55 53.3 -0.1
SUW pmax pmax
comp=Z,23nm,0.9s
SUW Suwalki 37.27 313 P P 22 55 53.3 -0.1
UZH Uzhgorod 37.43 305⇓ *i* P P 22 55 56.7 +1.8
KOLS Kolonicke sedl 37.45 305 eP P 22 55 56.8 +1.7
KOLS pmax pmax
comp=Z,8.0nm,1.0s
KOLS Kolonicke sedl 37.45 305 eP P 22 55 56.8 +1.7
LVZ Lovozero 37.52 338 P P 22 55 56.3 +0.8
LVZ pmax pmax
comp=Z,14nm,0.9s
LVZ Lovozero 37.52 338 P P 22 55 56.3 +0.8
LVZ IAmb IAmb 22 55 56.9
comp=Z,14nm,0.9s
FIA1 FINESS Array S 37.59 326 P P 22 55 57.0 +1.0
FINES FINESS Array B 37.59 326 P P 22 55 56.5 +0.4
comp=Z,11nm,0.5s,baz=116,slow=9.8,SNR=102
FINES LR LR 23 11 24.2
comp=Z,31nm,21.2s,baz=123,slow=36
APA Apatity 37.70 337⇓ *i* P P 22 55 56.7 -0.2
APA pmax pmax
comp=Z,5.0nm,0.7s
SIRR Siria 37.93 301 ⇓P P 22 56 01.9 +2.8
BZS Buzias 38.00 300 ⇓P P 22 56 02.0 +2.3
BZS Buzias 38.00 300 ⇓P P 22 56 02.0 +2.3
MDVR Moldovita 38.00 298 ⇓P P 22 56 01.9 +2.1
SUF Sumiainen 38.02 328 P P 22 56 00.6 +0.9
SUF pmax pmax
comp=Z,42nm,0.8s
PBUR Paburge 38.28 317 eP P 22 56 03.5 +1.6
BEL Belsk 38.49 310 eP P 22 56 05.7 +1.9
NIE Niedzica 38.75 306 eP P 22 56 07.5 +1.6
NIE Niedzica 38.75 306 P P 22 56 08.1 +2.1
OUL Oulu 39.07 331 P P 22 56 10.2 +1.9
OUL pmax pmax
comp=Z,23nm,0.9s
OJC Ojcow 39.07 307 eP P 22 56 09.1 +0.5
OJC Ojcow 39.07 307 P P 22 56 11.0 +2.4
OJC pmax pmax
comp=Z,17nm,1.0s
OJC Ojcow 39.07 307 IAmb IAmb 22 56 11.5
comp=Z,14nm,1.0s
NJ2 Nanjing 39.25 82 eP P 22 56 11.4 +1.1
NJ2 pmax pmax
comp=Z,11nm,0.9s
VAF Ylistaro 39.63 328 P P 22 56 15.2 +2.1
VAF pmax pmax
comp=Z,25nm,0.9s
VYHS Vyhne 39.73 304 eP P 22 56 15.4 +1.2
VYHS pmax pmax
comp=Z,5.0nm,1.2s
VYHS Vyhne 39.73 304 eP P 22 56 15.4 +1.2
SGF Sodankyl 39.88 335 P P 22 56 17.2 +2.1
SGF pmax pmax
comp=Z,60nm,0.8s
SRO2 Moca 40.07 303 eP P 22 56 18.0 +1.1
SRO2 pmax pmax
comp=Z,10.0nm,0.9s
SRO2 Moca 40.07 303 eP P 22 56 18.0 +1.1
MORC Moravsky Berou 40.53 306 eP P 22 56 22.0 +1.2
MORC Moravsky Berou 40.53 306 ⇑P P 22 56 22.8 +2.0
MORC Moravsky Berou 40.53 306 ⇑P P 22 56 22.8 +2.0
MORC Moravsky Berou 40.53 306 P P 22 56 21.9 +1.1
MORC IAmb IAmb 22 56 23.5
comp=Z,8.4nm,1.0s
GKP Gorka Klasztor 40.73 312 eP P 22 56 23.2 +0.9
GKP Gorka Klasztor 40.73 312 P P 22 56 24.5 +2.3
GKP pmax pmax
comp=Z,86nm,0.8s
KEV Kevo 40.86 338 P P 22 56 22.7 -0.5
KEV pmax pmax
comp=Z,20nm,1.1s
KEV Kevo 40.86 338 P P 22 56 22.7 -0.5
KEV IAmb IAmb 22 56 25.6
comp=Z,20nm,1.1s
KRLC Kraliky 41.01 307 eP P 22 56 25.6 +0.9
KRLC Kraliky 41.01 307 eP P 22 56 25.6 +0.9
VRAC Vranov 41.17 306 eP P 22 56 27.3 +1.3
VRAC Vranov 41.17 306 ⇑P P 22 56 27.9 +1.9
VRAC Vranov 41.17 306 ⇑P P 22 56 27.9 +1.9
ARCES ARCESS Array B 41.21 338 P P 22 56 26.6 +0.6
comp=Z,22nm,0.8s,baz=111,slow=7.9,SNR=72
ARCES LR LR 23 14 56.4
comp=Z,66nm,18.3s,baz=185,slow=38
ARE0 ARCESS Array S 41.21 338 P P 22 56 26.2 +0.2
ARE0 ARCESS Array S 41.21 338 eP P 22 56 27.3 +1.3
DPC Dobruska-Polom 41.30 307 eP P 22 56 29.0 +1.9
DPC Dobruska-Polom 41.30 307 eP P 22 56 29.0 +1.9
KSP Ksiaz 41.30 308 P P 22 56 29.6 +2.6
KSP pmax pmax
comp=Z,8.0nm,1.5s
KRUC Moravsky 41.31 305 eP P 22 56 28.7 +1.5
OSTC Ostas 41.36 308 eP P 22 56 28.9 +1.4
CHVC Chvalec 41.46 308 eP P 22 56 30.1 +1.7
UPC Upice 41.49 308 eP P 22 56 29.9 +1.3
UPC Upice 41.49 308 eP P 22 56 29.9 +1.3
KTK1 Kautokeino 41.69 336 eP P 22 56 30.4 +0.5
CONA Conrad Observa 41.76 304 P P 22 56 32.3 +1.4
comp=Z,7.6nm,0.9s
IPM Ipoh 41.99 132 P P 22 56 33.7 +0.6
ARSA Arzberg 42.05 303 P P 22 56 33.9 +0.7
comp=Z,3.1nm,1.2s

PSI	Prapat	42.14	136	LR	LR	23 14 32.8	
	comp=Z,59nm,18.6s,baz=98,slow=36						
BSD	Bornholm Skovb	42.16	315	iP	P	22 56 34.0	+0.1
BSD				pmax	pmax		
	comp=Z,21nm,0.9s						
BSD	Bornholm Skovb	42.16	315	iP	P	22 56 34.0	+0.1
	comp=Z,21nm,0.9s						
HAMF	Hammerfest	42.29	339	eP	P	22 56 35.7	+0.9
PVCC	Panska Ves	42.41	308	eP	P	22 56 38.1	+2.1
PVCC	Panska Ves	42.41	308	eP	P	22 56 38.1	+2.1
SOKA	Soboth	42.45	302	eP	P	22 56 37.0	+0.5
	comp=Z,6.7nm,0.9s						
PRU	Pruhonice	42.46	307	eP	P	22 56 37.5	+1.0
PRU	Pruhonice	42.46	307	eP	P	22 56 37.5	+1.0
GSI	Gunungsitoli	42.66	139	P	P	22 56 40.0	+1.6
GSI				IAmb	IAmb	22 56 44.0	
	comp=Z,21nm,1.4s						
BRG	Berggiesshubel	42.79	308	iP	P	22 56 40.1	+1.0
	comp=Z,15nm,1.0s						
BRG	Berggiesshubel	42.79	308	eP	P	22 56 40.8	+1.7
	comp=Z,15nm,1.0s,baz=85,slow=7.8						
BRG	Berggiesshubel	42.79	308	iP	P	22 56 40.1	+1.0
BRG				pmax	pmax		
	comp=Z,15nm,1.0s						
RUE	Ruedersdorf	42.82	311	eP	P	22 56 40.1	+0.9
RUE	Ruedersdorf	42.82	311	eP	P	22 56 40.4	+1.1
	comp=Z,25nm,1.1s,baz=85,slow=7.8						
MOA	Molln	42.83	304	eP	P	22 56 40.0	+0.5
	comp=Z,4.9nm,1.0s						
GERES	GERESS Array B	43.10	305	P	P	22 56 42.9	+1.1
	comp=Z,0.9nm,0.9s,baz=48,slow=2.0,SNR=8.0						
KHC	Kasperske Hory	43.16	306	ceP	P	22 56 43.8	+1.7
KHC				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KHC	Kasperske Hory	43.16	306	eP	P	22 56 44.2	+2.1
KHC				ex	x	22 57 34.2	
KHC				ePP	PP	22 58 26.0	+1.6
KHC	Kasperske Hory	43.16	306	P	P	22 56 42.4	+0.3
FBE	Freiberg	43.16	308	eP	P	22 56 44.0	+1.9
	comp=Z,17nm,0.9s,baz=85,slow=7.8						
TRO	Tromso	43.34	336	eP	P	22 56 43.1	-0.1
CLL	Collm	43.35	309	iP	P	22 56 44.9	+1.3
	comp=Z,7.0nm,0.9s						
CLL	Collm	43.35	309	eP	P	22 56 45.8	+2.2
	comp=Z,7.0nm,0.9s,baz=85,slow=7.8						
CLL	Collm	43.35	309	iP	P	22 56 44.9	+1.3
CLL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CLL	Collm	43.35	309	P	P	22 56 44.6	+0.9
CLL				IAmb	IAmb	22 56 46.7	
	comp=Z,6.4nm,0.8s						
KBA	Koelnbreinsper	43.55	303	P	P	22 56 45.5	0.0
	comp=Z,9.0nm,1.4s						
TANN	Tannenbergstha	43.76	308	eP	P	22 56 48.6	+1.6
	comp=Z,13nm,1.1s,baz=85,slow=7.8						
YAK	Yakutsk	43.81	35	P	P	22 56 47.2	+0.1
	comp=Z,6.3nm,0.3s,baz=251,slow=1.9,SNR=8.4						
YAK	Yakutsk	43.81	35	eP	P	22 56 45.1	-2.0
YAK				e		22 58 25.3	
YAK				ePPP	PPP	22 59 08.5	
YAK				eS	S	23 03 04.0	-5.1
YAK				pmax	pmax		
	comp=Z,20nm,0.9s						
YAK				pmax	pmax		
	comp=N,1.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
YAK				smax	smax		
	comp=E,119nm,4.3s						
YAK				smax	smax		
	comp=N,68nm,3.8s						
YAK	Yakutsk	43.81	35	P	P	22 56 46.7	-0.4
GUNZ	Gunzen	43.85	308	eP	P	22 56 49.4	+1.7
	comp=N,4.8nm,0.9s,baz=85,slow=7.8						
MOR8	Moi Rana	43.91	331	eP	P	22 56 48.2	+0.3
PLN	Plauen	43.95	308	eP	P	22 56 50.0	+1.6
	comp=N,9.6nm,1.3s,baz=85,slow=7.8						
ROTZ	Rotzenmuhle	43.98	307	eP	P	22 56 50.8	+2.1
	comp=N,12nm,1.2s,baz=85,slow=7.8						
STEI	Steigen	44.05	333	eP	P	22 56 49.5	+0.5
NEUB	Neuenburg	44.13	309	eP	P	22 56 51.1	+1.3
	comp=N,31nm,1.4s,baz=85,slow=7.8						
NC405	NORSAR Array S	44.26	323	P	P	22 56 51.3	+0.5
MOX	Moxa	44.28	308	eP	P	22 56 52.6	+1.5
	comp=N,8.1nm,1.1s,baz=85,slow=7.8						
MOX	Moxa	44.28	308	P	P	22 56 53.8	+2.7
MOX				pmax	pmax		
	comp=Z,7.0nm,1.3s						
NC602	NORSAR Array S	44.31	323	eP	P	22 56 51.4	+0.3
NORES	NORESS Array B	44.31	323	P	P	22 56 52.2	+1.0
NORES				pmax	pmax		
	comp=Z,4.0nm,0.3s						
SSLB	Suanglung	44.34	92	P	P	22 56 52.5	+0.5
NB2	NORSAR Subarra	44.50	323	P	P	22 56 52.4	-0.3
	comp=Z,23nm,0.6s,baz=96,slow=7.9						
NB2	NORSAR Subarra	44.50	323	P	P	22 56 52.4	-0.3
	baz=96,slow=7.9						
NOA	NORSAR Array B	44.50	323	P	P	22 56 52.9	+0.2
	comp=Z,33nm,0.7s,baz=96,slow=7.7,SNR=168						
KONS	Konsvik	44.50	331	eP	P	22 56 53.4	+0.9
GRA1	Grafenberg Arr	44.63	307	P	P	22 56 53.9	+0.1
GRA1				IAmb	IAmb	22 57 13.1	
	comp=Z,10nm,1.1s						
GRF	Grafenberg Arr	44.63	307	eP	P	22 56 56.1	+2.2
	comp=Z,9.7nm,1.2s,baz=85,slow=7.8						
GRF	Grafenberg Arr	44.63	307	P	P	22 56 53.9	+0.1
GRF				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KSRS	Korea Array	44.66	71	P	P	22 56 54.2	0.0
	comp=Z,2.2nm,0.6s,baz=277,slow=7.2,SNR=9.2						
WTTA	Wattenberg	44.67	303	eP	P	22 56 54.9	+0.4
	comp=Z,11nm,1.2s						
WATA	Walderalm	44.70	303	P	P	22 56 55.6	+1.0
	comp=Z,8.8nm,1.3s						
LOF	Lofoten	44.73	333	eP	P	22 56 54.5	+0.2
YULB	Yu-li	44.80	93	P	P	22 56 55.4	-0.2
BSEG	Bad Segeberg	44.84	313	eP	P	22 56 57.2	+1.8
	comp=Z,19nm,0.8s,baz=85,slow=7.8						
BSEG	Bad Segeberg	44.84	313	P	P	22 56 58.2	+2.8
BSEG				pmax	pmax		
	comp=Z,25nm,0.9s						
KLR	Kul'dur	44.95	54	P	P	22 56 56.8	+0.5
	comp=Z,2.0nm,0.5s,baz=291,slow=6.6,SNR=11						
KLR	Kul'dur	44.95	54	ceP	P	22 56 57.0	+0.6
KLR				pmax	pmax		
	comp=Z,4.0nm,1.4s						
CLZ	Clausthal	44.95	310	eP	P	22 56 57.9	+1.5
	comp=Z,12nm,1.0s,baz=85,slow=7.8						
CLZ	Clausthal	44.95	310	P	P	22 56 59.0	+2.6
CLZ				pmax	pmax		
	comp=Z,14nm,1.0s						
SQTA	Sankt Quirin	44.97	303	eP	P	22 56 57.0	+0.3
	comp=Z,3.5nm,0.6s						
MOTA	Moosalm	45.02	303	eP	P	22 56 57.2	+0.1
	comp=Z,7.9nm,1.2s						
HOPEN	Hopen	45.03	346	eP	P	22 56 58.7	+2.1
NRDL	Niedersach Rie	45.06	311	eP	P	22 56 58.9	+1.7
	comp=Z,16nm,1.3s,baz=85,slow=7.8						
KONO	Kongsberg	45.21	321	ceP	P	22 56 58.5	+0.2
KONO				pmax	pmax		
	comp=Z,18nm,0.6s						
KONO	Kongsberg	45.21	321	P	P	22 56 58.6	+0.4
KONO	Kongsberg	45.21	321	eP	P	22 56 58.7	+0.4
RETA	Reutte	45.23	304	eP	P	22 56 58.0	-0.8
	comp=Z,6.2nm,1.2s						
GTTG	Gottingen	45.23	309	eP	P	22 57 00.2	+1.7
	comp=Z,23nm,1.1s,baz=85,slow=7.8						
BJO1	Bjornoya	45.31	343	eP	P	22 56 59.8	+1.0
FETA	Feichten	45.32	303	eP	P	22 56 59.8	+0.2
	comp=Z,5.7nm,1.3s						
DOMB	Dombas	45.61	324	eP	P	22 57 01.9	+0.5
SALO	Salr	45.71	301	P	P	22 57 03.4	+0.9
SALO				IAmb	IAmb	22 57 10.2	
	comp=Z,14nm,1.1s						
HOMB	Homborsund	45.75	319	eP	P	22 57 03.5	+0.9
DAVA	Damuels	45.85	304	eP	P	22 57 03.8	+0.1
	comp=Z,24nm,1.2s						
SKAR	Skarslia	45.90	322	eP	P	22 57 04.8	+1.1
USRK	Ussuriysk Ar.	45.96	61	P	P	22 57 04.5	+0.1
	comp=Z,3.3nm,0.7s,baz=255,slow=8.1,SNR=4.8						
TNS	Taunus Mts	46.34	308	eP	P	22 57 08.6	+1.2
	comp=Z,5.6nm,1.0s,baz=85,slow=7.8						
IBBN	Ibbenburen	46.51	311	eP	P	22 57 10.1	+1.5
	comp=Z,21nm,1.0s,baz=85,slow=7.8						
AKN	Aaknes	46.59	324	eP	P	22 57 09.5	+0.4
ODD1	Odda	46.72	321	eP	P	22 57 12.3	+2.1
BLS5	Blasjo	46.81	321	eP	P	22 57 12.5	+1.6
BUG	Bochum--Univer	46.92	310	eP	P	22 57 13.0	+1.3
	comp=Z,14nm,1.1s,baz=85,slow=7.8						
AHRW	Bad Neuenahr-A	47.16	308	eP	P	22 57 15.2	+1.5
	comp=Z,11nm,0.9s,baz=85,slow=7.8						
HSPB	Hornsund (broa	47.17	345	eP	P	22 57 15.3	+1.9
HSPB	Hornsund (broa	47.17	345	eP	P	22 57 15.2	+1.9
BER	Bergen	47.36	322	eP	P	22 57 16.4	+1.3
CDF	Champ du Feu	47.38	306	eP	P	22 57 16.6	+1.0
CDF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ASK	Askoy	47.43	322	eP	P	22 57 16.5	+0.9
SPA0	Spitsbergen Ar	47.52	347	P	P	22 57 16.4	+0.3
SPA0				IAmb	IAmb	22 57 18.8	
	comp=Z,12nm,0.8s						
SPA0	Spitsbergen Ar	47.52	347	eP	P	22 57 17.7	+1.6
SPITS	Spitsbergen Ar	47.52	347	P	P	22 57 17.0	+0.9
SPITS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HINF	Hinteralfeld	47.77	305	eP	P	22 57 19.1	+0.6
HINF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MEM	Membach	47.83	309	P	P	22 57 19.8	+1.0
	comp=Z,7.1nm,1.0s						
WLF	Walferdange	47.89	307	P	P	22 57 21.4	+2.1
	comp=Z,13nm,1.1s						
WLF	Walferdange	47.89	307	eP	P	22 57 21.1	+1.8
	comp=Z,15nm,1.0s,baz=85,slow=7.8						
WLF	Walferdange	47.89	307	P	P	22 57 21.4	+2.1
WLF				pmax	pmax		
	comp=Z,14nm,0.9s						
WLF	Walferdange	47.89	307	P	P	22 57 21.4	+2.1
WLF				IAmb	IAmb	22 57 22.6	
	comp=Z,14nm,0.9s						
HAU	Haudompre	48.07	305	eP	P	22 57 20.7	-0.1
HAU				pmax	pmax		
	comp=Z,15nm,1.1s						
LPG	La Plagne	48.33	302	eP	P	22 57 24.2	+1.1
LPG				pmax	pmax		
	comp=Z,11nm,1.3s						
LPL	La Plagne	48.34	302	eP	P	22 57 24.2	+1.1
LPL				pmax	pmax		
	comp=Z,34nm,2.0s						
JNU	Nakatsue	48.37	76	P	P	22 57 24.0	+0.7
	comp=Z,11nm,0.9s,baz=255,slow=4.5,SNR=7.3						
JNU	Nakatsue	48.37	76	P	P	22 57 23.5	+0.2
JNU				IAmb	IAmb	22 57 25.4	
	comp=Z,15nm,0.9s						
RSL	Roselend	48.37	302	P	P	22 57 27.5	+4.2
MBDF	Montbardon	48.49	301	eP	P	22 57 25.6	+1.3
MBDF				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CABF	La Chapelle	48.53	303	eP	P	22 57 26.6	+2.2
CABF				pmax	pmax		
	comp=Z,15nm,1.2s						
KBS	Kingsbay	48.64	347	P	P	22 57 25.0	+0.3
KBS				pmax	pmax		
	comp=Z,23nm,0.7s						
KBS	Kingsbay	48.64	347	P	P	22 57 25.0	+0.3
KBS	Kingsbay	48.64	347	eP	P	22 57 26.2	+1.5
BMRD	Maredsous	48.66	308	P	P	22 57 27.0	+1.8
GIVF	Givet	48.66	308	eP	P	22 57 27.9	+2.6
GIVF				pmax	pmax		
	comp=Z,17nm,1.3s						
JOW	Kunigami	48.84	84	P	P	22 57 27.2	+0.2
	comp=Z,1.0nm,0.4s,baz=24,slow=12,SNR=8.2						
SNF	Seneffe	48.93	309	P	P	22 57 28.4	+1.1
BAIF	Baives	49.06	308	eP	P	22 57 29.8	+1.5
BAIF				pmax	pmax		
	comp=Z,15nm,1.1s						
LOR	Lormes	49.87	305	eP	P	22 57 35.0	+0.5
LOR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
VIVF	Saint-Julien-l	49.91	301	eP	P	22 57 36.0	+1.1
VIVF				pmax	pmax		
	comp=Z,15nm,1.4s						
SMF	Signal de Mont	50.03	304	eP	P	22 57 36.4	+0.7
SMF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AVF	Avril sur Loir	50.32	304	eP	P	22 57 38.2	+0.3
AVF				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LRW	Lerwick	50.62	322	eP	P	22 57 40.5	+0.6
TCF	Toulx Ste Croi	51.21	304	eP	P	22 57 45.2	+0.6
TCF				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CAF	Calviac	51.68	302	eP	P	22 57 49.1	+1.0
CAF				pmax	pmax		
	comp=Z,11nm,1.3s						
DRUM	Mains of Drumt	51.76	318	eP	P	22 57 48.8	+0.3
DRUM				IAmb	IAmb	22 57 50.0	
	comp=Z,54nm,1.4s						
HPK	Haverah Park	51.83	314	eP	P	22 57 49.8	+0.7
HPK				IAmb	IAmb	22 57 50.3	
	comp=Z,23nm,0.8s						
EDMD	Edmundbyers	51.85	315	eP	P	22 57 49.9	+0.6
EDMD				IAmb	IAmb	22 57 51.0	
	comp=Z,55nm,1.3s						
ESY	Stoneypath	52.01	317	eP	P	22 57 50.9	+0.5
MCD	Coleburn Disti	52.05	319	eP	P	22 57 51.6	+0.9
EBL	Broad Law	52.27	317	eP	P	22 57 52.7	+0.4
EDI	Edinburgh	52.32	317	eP	P	22 57 53.2	+0.6
EDI				IAmb	IAmb	22 57 53.8	
	comp=Z,25nm,0.8s						
EKA	Eskdalemuir Ar	52.43	316	P	P	22 57 53.5	0.0
EKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ESK	Eskdalemuir	52.46	316	eP	P	22 57 54.1	+0.4
YSS	Yuzh-Sakhalins	52.62	55⇑	eP	P	22 57 55.9	+0.9
YSS				pmax	pmax		
	comp=Z,17nm,1.0s						
GRR	Gorron	52.67	307	eP	P	22 57 55.7	+0.3
GRR				pmax	pmax		
	comp=Z,20nm,1.4s						
MAT	Matsushiro	52.73	69	P	P	22 57 55.4	-0.6
MJAR	Matsushiro Arr	52.73	69	P	P	22 57 56.1	0.0
	comp=Z,2.9nm,0.8s,baz=293,slow=9.0,SNR=6.1						
EAB	Aberfoyle	52.91	317	eP	P	22 57 57.4	+0.4
PGBU	Glenifferbraes	53.06	317	eP	P	22 57 58.9	+0.8
NEWG	New Galloway	53.07	316	eP	P	22 57 59.0	+0.8
NEWG				IAmb	IAmb	22 57 59.6	
	comp=Z,18nm,0.8s						
KAC	Achnashellach	53.15	319	eP	P	22 57 59.3	+0.5
LAWE	Loch Awe, Argy	53.47	317	eP	P	22 58 01.0	-0.1
LAWE				IAmb	IAmb	22 58 01.9	
	comp=Z,17nm,1.0s						
NOR	Nord	53.82	350	iP	P	22 58 03.6	+0.3
NOR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NOR	Nord	53.82	350	iP	P	22 58 03.6	+0.3
	comp=Z,3.5nm,0.6s						
ETSF	Etsaut	54.10	300	eP	P	22 58 07.1	+1.1
ETSF				pmax	pmax		
	comp=Z,13nm,1.1s						
RSBS	Rosebush, Pemb	54.14	312	eP	P	22 58 06.4	+0.3
MA2	Magadan	54.20	38	ceP	P	22 58 06.5	+0.1
MA2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ROSF	Rostrenen	54.23	308	eP	P	22 58 07.2	+0.4
ROSF				pmax	pmax		
	comp=Z,33nm,1.5s						
SEY	Seymchan	54.27	34	iP	P	22 58 07.2	+0.4
DAG	Danmarks Havn	54.77	344	iP	P	22 58 10.5	+0.3
DAG				pmax	pmax		
	comp=Z,23nm,0.8s						
DAG	Danmarks Havn	54.77	344	iP	P	22 58 10.5	+0.3
	comp=Z,23nm,0.8s						
ESDC	Sonseca Array	57.65	298	P	P	22 58 31.2	-0.1
	comp=Z,1.0nm,0.6s,baz=52,slow=7.6,SNR=18						
BILL	Bilibino	58.49	26⇑	eP	P	22 58 37.1	+0.5
BILL				e*PP	pP	22 59 10.8	+5.2
BILL				e*SP	PcP	22 59 23.8	-2.1
BILL				S	S	23 06 38.0	+7.2
BILL				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PETK	Petropavlovsk-	59.79	44	P	P	22 58 45.0	-0.9
	comp=Z,1.2nm,0.8s,baz=136,slow=11,SNR=8.3						
PETK	Petropavlovsk-	59.79	44	P	P	22 58 45.0	-0.9
SUMG	Summit	61.11	341	iP	P	22 58 55.9	+0.9
SUMG				pmax	pmax		
	comp=Z,61nm,0.7s						
SUMG	Summit	61.11	341	P	P	22 58 55.6	+0.6
SUMG	Summit	61.11	341	iP	P	22 58 55.9	+0.9
	comp=Z,61nm,0.7s						
KULLO	Kullorsuaq	64.10	347	iP	P	22 59 14.7	+0.4
KULLO				pmax	pmax		
	comp=Z,13nm,0.8s						
KULLO	Kullorsuaq	64.10	347	iP	P	22 59 14.7	+0.4
	comp=Z,12nm,0.8s						
TULEG	Thule	64.45	350	P	P	22 59 16.4	-0.2
TULEG				IAmb	IAmb	22 59 22.5	
	comp=Z,6.7nm,0.9s						
TORD	Torodi Ar. Bea	65.95	269	P	P	22 59 24.6	-2.6
	comp=Z,2.4nm,0.5s,baz=49,slow=5.8,SNR=21						
RDOG	Red Dog Mine	68.16	19	P	P	22 59 39.8	-0.6
RDOG				IAmb	IAmb	22 59 46.2	
	comp=Z,4.6nm,0.6s						
RES	Resolute Bay	68.69	356	P	P	22 59 43.6	+0.1
RES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RES	Resolute Bay	68.69	356	P	P	22 59 43.6	+0.1
NRS	Narsarsuaq	69.95	333	P	P	22 59 48.7	-2.8
NRS				pmax	pmax		
	comp=Z,44nm,0.7s						
NRS	Narsarsuaq	69.95	333	P	P	22 59 48.7	-2.8
TOLK	Toolik Lake Re	70.84	15	P	P	22 59 56.5	-0.4
TOLK				IAmb	IAmb	22 59 57.9	
	comp=Z,13nm,0.8s						
MLY	Manley	73.59	17	IAmb	IAmb	23 00 14.8	
	comp=Z,11nm,1.4s						
C36M	Paulatuk	73.83	6		P	23 00 13.9	-0.7
INK	Inuvik	73.84	9	P	P	23 00 15.0	+0.4
	comp=Z,6.4nm,0.5s,baz=345,slow=6.3,SNR=76						
INK	Inuvik	73.84	9	IAmb	IAmb	23 00 15.8	
	comp=Z,15nm,1.2s						
BPAW	Bear Paw Mtn.	74.30	18	IAmb	IAmb	23 00 18.6	
	comp=Z,16nm,1.4s						
PRP	Porcupine Dome	74.34	15	P	P	23 00 18.2	+0.4
NEA	Nenana	74.36	17	IAmb	IAmb	23 00 18.3	
	comp=Z,10nm,0.7s						
COLA	College	74.39	16	P	P	23 00 17.6	-0.3
COLA				pmax	pmax		
	comp=Z,13nm,0.7s						
COLA	College	74.39	16	P	P	23 00 17.6	-0.3
COLA				IAmb	IAmb	23 00 18.7	
	comp=Z,13nm,0.7s						
BWN	Browne	74.61	17	P	P	23 00 18.5	-0.7
BWN				IAmb	IAmb	23 00 20.5	
	comp=Z,15nm,0.8s						
ILAR	Eielson Array	74.69	16	P	P	23 00 18.7	-1.0
	comp=Z,2.3nm,0.7s,baz=327,slow=4.1,SNR=22						
KTH	Kantishna Hill	74.77	18	P	P	23 00 19.2	-1.1
KTH				IAmb	IAmb	23 00 20.8	
	comp=Z,11nm,0.9s						
LBTB	Lobatse	74.85	222	P	P	23 00 20.9	-0.3
LBTB				pmax	pmax		
	comp=Z,4.0nm,0.5s						
LBTB	Lobatse	74.85	222	P	P	23 00 20.9	-0.3
LBTB				IAmb	IAmb	23 00 23.8	
	comp=Z,3.6nm,0.5s						
PPLA	Purkeypile	74.99	19	IAmb	IAmb	23 00 22.8	
	comp=Z,9.9nm,0.6s						
HDA	Harding Lake	74.99	16	P	P	23 00 20.3	-1.1
TRF	Thorofare Moun	75.02	18	P	P	23 00 21.8	+0.1
FRB	Frobisher Bay	75.11	343	P	P	23 00 22.2	+0.2
	comp=Z,4.7nm,0.6s,baz=26,slow=5.7,SNR=17						
MCK	McKinley	75.11	17	IAmb	IAmb	23 00 22.4	
	comp=Z,5.4nm,0.4s						
RND	Reindeer	75.41	17	IAmb	IAmb	23 00 23.5	
	comp=Z,4.9nm,0.6s						
SCRK	Sand Creek	76.01	15	P	P	23 00 24.9	-2.5
RIDG	Independent Ri	76.04	16	P	P	23 00 26.6	-0.9
RIDG				IAmb	IAmb	23 00 28.2	
	comp=Z,14nm,1.4s						
DHY	Denali Highway	76.04	17	IAmb	IAmb	23 00 28.2	
	comp=Z,10nm,0.7s						
GHO	Glory Hole Cre	76.77	18	IAmb	IAmb	23 00 33.4	
	comp=Z,8.0nm,0.8s						
SCM	Sheep Creek Mo	77.12	18	P	P	23 00 32.6	-1.0
SCM				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SCM	Sheep Creek Mo	77.12	18	P	P	23 00 32.6	-1.0
SCM				IAmb	IAmb	23 00 33.6	
	comp=Z,9.0nm,0.6s						
RC01	Rabbit Creek A	77.14	19	P	P	23 00 32.2	-1.4
RC01				IAmb	IAmb	23 00 33.6	
	comp=Z,5.7nm,0.6s						
KNK	Knik Glacier	77.20	18	P	P	23 00 32.8	-1.2
KNK					P	23 00 34.1	+0.1
KNK				IAmb	IAmb	23 00 34.6	
	comp=Z,8.0nm,0.9s						
BOSA	Boshof	77.91	220	P	P	23 00 37.9	-0.6
	comp=Z,5.3nm,0.9s,baz=10,slow=5.2,SNR=9.0						
BRLK	Bradley Lake	77.94	20	IAmb	IAmb	23 00 37.7	
	comp=Z,6.2nm,0.9s						
GLI	Glacier Island	78.00	18	P	P	23 00 37.4	-1.0
GLI				IAmb	IAmb	23 00 38.7	
	comp=Z,6.7nm,0.7s						
FID	Port Fidalgo	78.26	18	P	P	23 00 39.2	-0.7
FID					P	23 00 39.6	-0.2
FID				IAmb	IAmb	23 00 40.5	
	comp=Z,5.7nm,0.8s						
MCARA	McCarthy VSAT	78.52	16	P	P	23 00 41.1	-0.2
EYAK	Cordova Ski Ar	78.62	18	IAmb	IAmb	23 00 42.9	
	comp=Z,8.5nm,0.7s						
KDAK	Kodiak Island	79.09	22	P	P	23 00 43.7	-0.7
KDAK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KDAK	Kodiak Island	79.09	22	P	P	23 00 43.7	-0.7
KDAK				IAmb	IAmb	23 00 44.9	
	comp=Z,9.9nm,0.7s						
CNBA	Chernabura Isl	79.10	27	P	P	23 00 43.3	-1.2
BARN	Barnard Glacie	79.11	16	P	P	23 00 45.0	+0.3
TGL	Tana Glacier	79.12	16	P	P	23 00 44.7	0.0
TGL					P	23 00 45.4	+0.7
TGL				IAmb	IAmb	23 00 46.1	
	comp=Z,6.3nm,0.9s						
CTGM	Chitina Glacie	79.26	16	P	P	23 00 45.2	-0.4
CTGM				IAmb	IAmb	23 00 46.7	
	comp=Z,6.7nm,0.8s						
OHAK	Old Harbor	79.33	23	P	P	23 00 45.3	-0.5
OHAK				IAmb	IAmb	23 00 47.6	
	comp=Z,12nm,1.1s						
HYT	Haines Junctio	80.17	14	P	P	23 00 50.7	+0.3
HYT				IAmb	IAmb	23 00 51.8	
	comp=Z,8.4nm,0.9s						
WHY	Whitehorse	80.81	13	P	P	23 00 52.7	-1.1
YKA	Yellowknife Ar	81.21	3	P	P	23 00 54.9	-0.8
	comp=Z,7.5nm,0.6s,baz=353,slow=5.1,SNR=183						
WRA	Warramunga Arr	81.81	122	P	P	23 00 57.5	-2.0
	comp=Z,1.2nm,0.3s,baz=324,slow=4.9,SNR=27						
SCHQ	Schefferville	82.16	337	P	P	23 01 01.1	+0.2
	comp=Z,1.7nm,0.5s,baz=15,slow=3.4,SNR=7.7						
DLBC	Dease Lake	83.73	11	P	P	23 01 09.4	+0.5
	comp=Z,2.1nm,0.5s,baz=11,slow=3.5,SNR=5.1						
ASAR	Alice Springs	84.08	125	P	P	23 01 09.2	-1.9
	comp=Z,1.6nm,0.7s,baz=310,slow=4.9,SNR=22						
PMG	Port Moresby	84.39	106	ceP	P	23 01 16.2	+3.3
PMG				pmax	pmax		
	comp=Z,58nm,1.7s						
FFC	Flin Flon	88.93	356	P	P	23 01 34.1	-0.3
FFC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
FFC	Flin Flon	88.93	356	P	P	23 01 34.1	-0.3
FFC				IAmb	IAmb	23 01 36.1	
	comp=Z,5.0nm,1.1s						
SHEL	Horse Pasture	89.31	250	P	P	23 01 34.0	-2.7
SHEL	Horse Pasture	89.31	250	P	P	23 01 34.0	-2.7
CTA	Charters Tower	90.34	115	LR	LR	23 46 19.7	
	comp=Z,191nm,22.0s,baz=75,slow=38						
ULM	Lac du Bonnet	92.86	352	P	P	23 01 52.5	-0.2
	comp=Z,1.8nm,0.6s,baz=3.5,slow=4.2,SNR=3.5						
NEW	Newport	95.25	6	LR	LR	23 50 32.6	
	comp=Z,23nm,20.2s,baz=46,slow=39						
F33A	5 Mile Ranch,	97.25	351		pP	23 02 46.5	+2.8

*AEIC **03** 23:35:52.9±1.4, 67.72N±0.06×162.4W±0.1, h19km±8km, ML3.1/22, Error ellipse: s-maj=9.6km s-min=7.2km az=148.0*

*IDC **03** 23:35:53.6±1.5, 68.13N×162.04W, h0km, mb3.4/5, mb1 3.9/8, mb1mx3.5/59, mbtmp3.6/8, ML3.7/3, MS2.9/1, Ms1 2.9/1, ms1mx2.1/31, Error ellipse: s-maj=36.8km s-min=20.0km az=27.0*

*NEIC **03** 23:35:54.5±1.6, 67.81N±0.06×162.5W±0.2, h36km±8km, Error ellipse: s-maj=9.3km s-min=8.1km az=58.0*

ISC 03 23:35:53.3±0.8**, 67.76N**±0.06×**162.22W**±0.05**, h10km, n44,** σ1§**30**/48**, mb3.4**/4**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.39**	**319**		**Pg**	**23 36 00.8**	**-0.1**
RDOG				Sg	**Sb**	**23 36 07.5**	**-0.9**
ANM	**Nome**	**3.46**	**203**	Pn	**Pn**	**23 36 45.8**	**-1.3**
ANM					**Pn**	**23 36 46.0**	**-1.1**
ANM	**Nome**	**3.46**	**203**		**Sn**	**23 37 26.4**	**-1.6**
IM03		**3.79**	**114**		**Pn**	**23 36 51.5**	**-0.1**
IM03					**Sn**	**23 37 35.0**	**-1.2**
COLD	**Coldfoot**	**4.65**	**91**	Pn	**Pn**	**23 37 04.6**	**+1.2**
TOLK	**Toolik Lake Re**	**4.80**	**74**		**Sn**	**23 38 01.5**	**+0.4**
TOLK	**Toolik Lake Re**	**4.80**	**74**	Pn	**Pn**	**23 37 05.8**	**+0.3**
MLY	**Manley**	**5.37**	**115**		**Pn**	**23 37 12.9**	**-0.4**
TTA	**Tatalina**	**5.50**	**149**	Pn	**Pn**	**23 37 14.1**	**-1.1**
TT01	**Tatalina**	**5.52**	**149**		**Pn**	**23 37 14.8**	**-0.6**
GAMB	**Gambell**	**5.59**	**229**	Pn	**Pn**	**23 37 15.6**	**-0.7**
BPAW	**Bear Paw Mtn.**	**5.88**	**123**		**Pn**	**23 37 21.1**	**+0.7**
NEA	**Nenana**	**6.21**	**115**		**Pn**	**23 37 25.0**	**+0.2**
MDM	**Murphy Dome**	**6.29**	**110**		**Pn**	**23 37 26.2**	**+0.3**
KTH	**Kantishna Hill**	**6.29**	**127**		**Pn**	**23 37 26.3**	**+0.2**
PPLA	**Purkeypile**	**6.44**	**135**		**Pn**	**23 37 28.5**	**+0.4**
COLA	**College**	**6.47**	**110**		**Pn**	**23 37 28.8**	**+0.4**
COLA	**College**	**6.47**	**110**		**Pn**	**23 37 29.2**	**+0.8**
TRF	**Thorofare Moun**	**6.56**	**126**		**Pn**	**23 37 30.8**	**+0.9**
CCB	**Clear Creek Bu**	**6.61**	**111**		**Pn**	**23 37 30.5**	**+0.1**
WRH	**Wood River Hil**	**6.62**	**113**		**Pn**	**23 37 30.6**	**+0.2**
FYU	**Fort Yukon**	**6.72**	**92**	Pn	**Pn**	**23 37 32.5**	**+0.8**
BM03	**Burnt Mountain**	**6.74**	**85**		**Pn**	**23 37 32.6**	**+0.5**
MCK	**McKinley**	**6.80**	**120**	Pn	**Pn**	**23 37 33.2**	**+0.3**
IL31		**6.87**	**109**		**Pn**	**23 37 34.0**	**+0.1**
ILAR	**Eielson Array**	**6.87**	**109**	Pn	**Pn**	**23 37 33.7**	**-0.2**
	3.3nm,0.3s,baz=304,slow=14,SNR=164						
ILAR				Sn	**Sn**	**23 38 49.8**	**-2.3**
	0.5nm,0.3s,baz=309,slow=25,SNR=4.5						
ILAR				Lg	Lg	23 39 35.4	
	baz=308,slow=30,SNR=1.9						
PRP	**Porcupine Dome**	**7.00**	**101**		**Pn**	**23 37 35.8**	**-0.1**
RND	**Reindeer**	**7.05**	**122**		**Pn**	**23 37 36.3**	**-0.1**
HDA	**Harding Lake**	**7.05**	**111**		**Pn**	**23 37 35.5**	**-0.9**
DHY	**Denali Highway**	**7.76**	**120**		**Pn**	**23 37 45.7**	**-0.5**
RIDG	**Independent Ri**	**8.20**	**111**		**Pn**	**23 37 53.0**	**+0.9**
DOT	**Dot Lake**	**8.53**	**110**		**Pn**	**23 37 55.6**	**-1.1**
EPYK	**Eagle Plains**	**10.02**	**86**	Pn	**Pn**	**23 38 17.5**	**+0.5**
HIN	**Hinchinbrook I**	**10.06**	**130**	Pn	**Pn**	**23 38 17.7**	**0.0**
GLB	**Gilahina Butte**	**10.10**	**120**	Pn	**Pn**	**23 38 18.8**	**+0.6**
INK	**Inuvik**	**10.71**	**74**	Pn	**Pn**	**23 38 25.2**	**-1.3**
	0.3nm,0.3s,baz=292,slow=12,SNR=15						
INK				Sn	**Sn**	**23 40 20.0**	**-6.2**
	0.3nm,0.3s,baz=97,slow=20,SNR=5.5						
INK	**Inuvik**	**10.71**	**74**		**Pn**	**23 38 25.7**	**-0.8**
KDAK	**Kodiak Island**	**10.93**	**152**	Pn	**Pn**	**23 38 31.1**	**+1.7**
	0.2nm,0.3s,baz=310,slow=16,SNR=1.9						
YKA	**Yellowknife Ar**	**20.26**	**82**	P	**P**	**23 40 28.5**	**+0.2**
	0.7nm,0.5s,baz=304,slow=11,SNR=12						
BBB	**Bella Bella**	**22.68**	**116**	LR	LR	23 49 35.2	
	comp=Z,30nm,19.6s,baz=172,slow=36						
PDAR	**Pinedale Array**	**37.29**	**105**	P	**P**	**23 43 06.6**	**+1.3**
	0.4nm,0.5s,baz=335,slow=7.4,SNR=5.7						
NVAR	**Mina Array Bea**	**38.03**	**118**	P	**P**	**23 43 13.2**	**+1.6**
	0.3nm,0.5s,baz=327,slow=9.7,SNR=2.6						
TXAR	**Lajitas Array**	**51.38**	**108**	P	**P**	**23 44 59.0**	**+1.0**
	0.9nm,0.7s,baz=334,slow=5.9,SNR=12						
MKAR	**Makanchi Array**	**55.99**	**312**	P	**P**	**23 45 33.1**	**+1.7**
	0.1nm,0.5s,baz=25,slow=8.0,SNR=2.2						

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*WEL **03** 23:47:13.1, 40°.3S±0°.9×17°5E±°, h12^{km}±2^{km}, M3.7/37, ML4.0/37, MLv3.7/37, Error ellipse: s-maj=0.0km s-min=0.0km az=67.2*
*IDC **03** 23:47:19.0±2.3, 40°.13S×175°.15E, h67^{km}±28^{km}, mb3.1/2, mb1 3.5/4, mb1mx3.3/37, mbtmp3.5/4, ML3.3/2, Error ellipse: s-maj=47.0km s-min=19.1km az=134.0*
ISC 03 23:47:12.9±0.9**, 40°.28S**±0°.02×**174°.99E**±0°.02**, h17**^{km}±6^{km}**, n98, σ1^{s}.64**/112**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHWZ	**Ohakea**	**0.26**	**74**	P	**Pg**	**23 47 19.9**	**+1.3**
OHWZ				S	**Sg**	**23 47 24.8**	**+2.2**
WAZ	**Wanganui**	**0.52**	**359**	P	**Pn**	**23 47 25.6**	**0.0**
WAZ				S	**Sb**	**23 47 34.2**	**+3.3**
OGWZ	**Otaki Gorge**	**0.55**	**166**	P	**Pg**	**23 47 23.9**	**-0.1**
OGWZ				S	**Sg**	**23 47 30.4**	**-1.1**
KIW	**Kapiti Island**	**0.58**	**186**	P	**Pg**	**23 47 24.0**	**-0.6**
KIW				S	**Sg**	**23 47 30.8**	**-1.6**
MRZ	**Mangatainoka R**	**0.59**	**131**	P	**Pb**	**23 47 24.9**	**+0.1**
MRZ				S	**Sg**	**23 47 32.7**	**+0.2**
POWZ	**Post Office Ro**	**0.60**	**101**	P	**Pb**	**23 47 25.4**	**+0.4**
POWZ				S	**Sb**	**23 47 33.6**	**+0.4**
HOWZ	**Holdsworth Sta**	**0.73**	**147**	P	**Pb**	**23 47 27.4**	**+0.1**
HOWZ				S	**Sg**	**23 47 36.9**	**-0.3**
TSZ	**Takapari Road**	**0.77**	**74**	P	**Pn**	**23 47 28.6**	**-0.5**
PRWZ	**Pori Road**	**0.80**	**111**	P	**Pn**	**23 47 29.4**	**0.0**
PRWZ				S	**Sb**	**23 47 40.5**	**+1.8**
CAW	**Cannon Point**	**0.83**	**176**	P	**Pg**	**23 47 28.7**	**-0.5**
CAW				S	**Sg**	**23 47 38.7**	**-1.4**
TIWZ	**Tintock**	**0.84**	**126**	P	**Pb**	**23 47 29.9**	**+0.8**
TIWZ				S	**Sb**	**23 47 41.4**	**+1.2**
DVHZ	**Dannevirke**	**0.90**	**92**	P	**Pn**	**23 47 31.2**	**+0.4**
DVHZ				S	**Sn**	**23 47 43.0**	**-0.3**
LREZ	**Lake Rotokare**	**0.94**	**331**	P	**Pn**	**23 47 33.8**	**+2.6**
LREZ				S	**Sn**	**23 47 47.6**	**+3.5**
MTW	**Mount Morrison**	**0.96**	**156**	P	**Pb**	**23 47 31.8**	**+0.7**
MTVZ	**Mangateitei**	**0.97**	**23**	P	**Pn**	**23 47 32.2**	**+0.4**
DUWZ	**D'Urville Isla**	**0.97**	**237**	P	**Pg**	**23 47 31.1**	**-0.7**
PNHZ	**Pukenui**	**0.99**	**69**	P	**Pn**	**23 47 32.4**	**+0.3**
PKVZ	**Pokaka**	**1.02**	**16**	P	**Pn**	**23 47 33.3**	**+0.8**
BFZ	**Birch Farm**	**1.04**	**113**	P	**Pn**	**23 47 33.8**	**+1.2**
MOVZ	**Moawhango**	**1.05**	**34**	P	**Pn**	**23 47 32.9**	**0.0**
TRVZ	**Turoa**	**1.07**	**24**	P	**Pn**	**23 47 33.8**	**+0.5**
TMWZ	**Te Maipa**	**1.07**	**141**	P	**Pn**	**23 47 34.1**	**+0.9**
TCW	**Tory Channel**	**1.08**	**210**	P	**Pg**	**23 47 31.9**	**-1.9**
DRZ	**Dome Shelter**	**1.09**	**24**	P	**Pn**	**23 47 34.4**	**+0.7**
WHVZ	**Whangaehu Hut**	**1.09**	**25**	P	**Pn**	**23 47 34.2**	**+0.6**
FWVZ	**Far West T-bar**	**1.11**	**23**	P	**Pn**	**23 47 34.4**	**+0.6**
CPWZ	**Castlepoint**	**1.11**	**125**	P	**Pn**	**23 47 35.7**	**+2.0**
WPHZ	**Waipukurau**	**1.13**	**80**	P	**Pn**	**23 47 35.8**	**+1.9**
TUVZ	**Tukino**	**1.13**	**27**	P	**Pn**	**23 47 34.8**	**+0.7**
BHW	**Baring Head**	**1.13**	**185**	P	**Pg**	**23 47 33.8**	**-1.0**
PREZ	**Palmer Road**	**1.14**	**325**	P	**Pn**	**23 47 37.3**	**+3.2**
BHHZ	**Black Hill Sta**	**1.14**	**47**	P	**Pn**	**23 47 34.4**	**+0.3**
ANWZ	**Angora Road**	**1.15**	**100**	P	**Pn**	**23 47 35.9**	**+1.7**
PAWZ	**Paruwai Farm**	**1.15**	**164**	P	**Pn**	**23 47 35.3**	**+1.0**
MSWZ	**Moikau Station**	**1.15**	**170**	P	**Pb**	**23 47 35.1**	**+0.7**
VRZ	**Vera Road**	**1.17**	**351**	P	**Pn**	**23 47 36.6**	**+2.2**
NGZ	**Ngauruhoe**	**1.20**	**23**	P	**Pn**	**23 47 36.0**	**+1.0**
NMEZ	**Namu Road**	**1.22**	**315**	P	**Pn**	**23 47 38.2**	**+3.1**
KRHZ	**Kereru**	**1.23**	**59**	P	**Pn**	**23 47 36.4**	**+1.0**
TRWZ	**Traveller**	**1.24**	**155**	P	**Pg**	**23 47 36.7**	**-0.1**
DREZ	**Durham Road**	**1.25**	**330**	P	**Pn**	**23 47 38.8**	**+3.2**
WTVZ	**West Tongariro**	**1.25**	**22**	P	**Pn**	**23 47 36.9**	**+1.2**
TWVZ	**Taurewa**	**1.25**	**16**	P	**Pn**	**23 47 36.8**	**+1.1**
PRHZ	**Porangahau**	**1.26**	**90**	P	**Pg**	**23 47 37.8**	**+0.6**
KRVZ	**Karewarewa**	**1.28**	**23**	P	**Pn**	**23 47 37.4**	**+1.3**
PLWZ	**Palliser**	**1.30**	**171**	P	**Pb**	**23 47 37.6**	**+0.6**
MHEZ	**Mangahewa**	**1.31**	**336**	P	**Pg**	**23 47 39.7**	**+1.6**
NBEZ	**Newall Road No**	**1.33**	**319**	P	**Pg**	**23 47 40.1**	**+1.5**
KWHZ	**Kaweka Forest**	**1.39**	**53**	P	**Pg**	**23 47 39.2**	**-0.5**
TUWZ	**Tuamarina**	**1.40**	**214**	P	**Pn**	**23 47 37.5**	**-0.1**
KATZ	**Kakaramea**	**1.41**	**23**	P	**Pg**	**23 47 39.7**	**-0.4**
PXZ	**Pawanui**	**1.45**	**81**	P	**Pg**	**23 47 40.2**	**-0.7**
RITZ	**Rihia Road**	**1.46**	**27**	P	**Pg**	**23 47 40.6**	**-0.5**
KAHZ	**Kahuranaki**	**1.52**	**72**	P	**Pg**	**23 47 41.5**	**-0.8**
RATZ	**Rangitukua**	**1.53**	**23**	P	**Pg**	**23 47 41.9**	**-0.6**
NNZ	**Nelson**	**1.54**	**232**	P	**Pb**	**23 47 40.8**	**-0.2**
MCHZ	**McNeill Hill**	**1.55**	**58**	P	**Pg**	**23 47 42.6**	**-0.2**
BKZ	**Black Stump Fm**	**1.60**	**47**	P	**Pg**	**23 47 42.6**	**-1.2**
HATZ	**Hinemaiaia**	**1.62**	**32**	P	**Pg**	**23 47 42.8**	**-1.4**
BSWZ	**Blackbirch Sta**	**1.67**	**210**	P	**Pn**	**23 47 42.6**	**+1.3**
WATZ	**Wairara**	**1.67**	**20**	P	**Pg**	**23 47 43.8**	**-1.2**
HIZ	**Hauiti**	**1.77**	**356**	P	**Pg**	**23 47 45.1**	**-1.8**
WHTZ	**Whakaora**	**1.77**	**25**	P	**Pg**	**23 47 46.2**	**-0.8**
MRHZ	**Matea Rd**	**1.81**	**38**	P	**Pg**	**23 47 45.8**	**-2.0**
NMHZ	**Naumai**	**1.83**	**50**	P	**Pg**	**23 47 46.5**	**-1.6**
KUTZ	**Kaahu Road**	**1.90**	**20**	P	**Pg**	**23 47 47.4**	**-2.0**
QRZ	**Quartz Range**	**1.96**	**253**	P	**Pb**	**23 47 47.1**	**-0.9**
WPRZ	**Whakapapatarin**	**1.98**	**28**	P	**Pg**	**23 47 48.5**	**-2.4**
TLZ	**Tolley Road**	**1.99**	**12**	P	**Pb**	**23 47 47.7**	**-1.0**
ALRZ	**Allen Road**	**2.01**	**32**	P	**Pb**	**23 47 48.2**	**-0.7**
MTHZ	**Maungataniwha**	**2.02**	**46**	P	**Pg**	**23 47 48.7**	**-3.0**
PRRZ	**Plateau Road**	**2.08**	**32**	P	**Pg**	**23 47 50.4**	**-2.5**
WHHZ	**Waihua**	**2.10**	**56**	P	**Pb**	**23 47 50.2**	**-0.4**
RAHZ	**Arahi**	**2.11**	**51**	P	**Pb**	**23 47 49.7**	**-1.1**
THZ	**Tophouse**	**2.17**	**226**	P	**Pn**	**23 47 50.3**	**+2.0**
RTZ	**Ruatahuna**	**2.26**	**43**	P	**Pb**	**23 47 52.0**	**-1.4**
MUGZ	**Murupara**	**2.27**	**38**	P	**Pb**	**23 47 51.9**	**-1.4**
RRRZ	**Republican Roa**	**2.27**	**32**	P	**Pg**	**23 47 53.1**	**-3.3**
KHZ	**Kahutara**	**2.40**	**207**	P	**Pn**	**23 47 52.5**	**+1.2**
KNZ	**Kokohu**	**2.42**	**60**	P	**Pn**	**23 47 52.6**	**+1.0**
TOZ	**Tahuroa Road**	**2.58**	**9**	P	**Pb**	**23 47 55.8**	**-2.7**
URZ	**Urewera**	**2.60**	**40**	P	**Pb**	**23 47 55.7**	**-3.3**
	4.1nm,0.3s,baz=242,slow=10,SNR=18						
URZ				S	**Sn**	**23 48 25.5**	**+0.2**
	4.9nm,0.3s,baz=166,slow=15,SNR=4.3						
URZ	**Urewera**	**2.60**	**40**	P	**Pb**	**23 47 55.8**	**-3.3**
PRGZ	**Paritu Road**	**2.61**	**60**	P	**Pn**	**23 47 55.1**	**+0.8**
RIGZ	**Rimuhau**	**2.66**	**55**	P	**Pn**	**23 47 56.5**	**+1.6**
MWZ	**Matawai**	**2.76**	**46**	P	**Pn**	**23 47 58.1**	**+1.7**
GVZ	**Greta Valley S**	**3.06**	**208**	P	**Pn**	**23 48 00.8**	**+0.3**
RUGZ	**Raukumara Rang**	**3.11**	**43**	P	**Pn**	**23 48 03.4**	**+2.1**
MKAZ	**Moumakai**	**3.17**	**2**	P	**Pn**	**23 48 03.9**	**+2.0**
AWAZ	**Awhitu Peninsu**	**3.22**	**355**	P	**Pb**	**23 48 06.2**	**-3.4**
LTZ	**Lake Taylor**	**3.23**	**218**	P	**Pn**	**23 48 03.6**	**+0.7**
ETAZ	**East Tamaki Re**	**3.32**	**359**	P	**Pb**	**23 48 07.0**	**-4.3**
HAZ	**Te Kaha**	**3.33**	**42**	P	**Pn**	**23 48 06.0**	**+1.9**
RPZ	**Rata Peaks**	**4.52**	**219**	P	**Pb**	**23 48 27.6**	**-4.1**
	1.8nm,0.3s,baz=156,slow=16,SNR=2.8						
RPZ				S	**Sn**	**23 49 10.0**	**-2.6**
	2.4nm,0.3s,baz=337,slow=19,SNR=6.9						
ODZ	**Otahua Downs**	**5.74**	**213**	P	**Pn**	**23 48 36.8**	**-0.4**
ASAR	**Alice Springs**	**38.21**	**283**	P	**P**	**23 54 32.8**	**+0.9**
	0.2nm,0.5s,baz=124,slow=6.4,SNR=7.1						
WRA	**Warramunga Arr**	**40.15**	**288**	P	**P**	**23 54 49.2**	**+1.2**
	0.3nm,0.3s,baz=126,slow=8.5,SNR=2.2						
TORD	**Torodi Ar. Bea**	**152.34**	**194**	PKPbc	**PKPbc**	**00 07 08.0**	**-0.2**
	0.2nm,0.4s,baz=153,slow=3.5,SNR=2.0						

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*NIED **04** 00:20:00, 36°.30N×137°.60E, h5^{km}, Mw4.3 Best double couple: M₀2.77000×10^{15} NP1:φs93.00000°, δ74.00000°, λ156.00000°. NP2:φs189.00000°, δ67.00000°, λ17.00000°.*
*JMA **04** 00:20:59.3, 36°.27N×137°.60E, h3^{km}±1^{km}, M3.6 Broadband fault plane solution: P waves. NP1: φs97.00000°, δ57.00000°, λ-178.00000°. NP2:φs5.00000°, δ88.00000°, λ-33.00000°. Principal axes: T Plg21.0000°, Azm56.0000°; N Plg57.0000°, Azm182.0000°; P Plg24.0000°, Azm316.0000°;*
JMA Felt III J1.
*IDC **04** 00:20:59.6±1.2, 36°.38N×137°.57E, h0^{km}, mb3.6/5, mb1 3.7/6, mb1mx3.4/52, mbtmp3.5/6, ML3.3/1, MS3.4/22, Ms1 3.4/22, ms1mx3.3/38 Error ellipse: s-maj=31.0km s-min=8.6km az=172.0*
ISC 04 00:20:59.8±1.3**, 36°.24N**±0°.05×**137°.62E**±0°.03**, h2**^{km}±9^{km}**, n32, σ0^{s}.92**/20**, mb3.5**/5**, MS3.5**/17**, 3C-1D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.24**	**265**	⇑P	**Pg**	**00 21 04.2**	**-0.3**
JGN				S	**Sg**	**00 21 07.6**	**-0.1**
JNG	**Nsakai**	**0.42**	**67**	⇑P	**Pg**	**00 21 07.8**	**-0.1**
JNG				S	**Sg**	**00 21 13.6**	**+0.2**
JTT	**Ttatey**	**0.43**	**328**	⇓P	**Pg**	**00 21 07.6**	**-0.4**
JTT				*e*S	**Sg**	**00 21 13.1**	**-0.4**
MAT	**Matsushiro**	**0.56**	**58**	P	**Pg**	**00 21 10.1**	**-0.5**
MAT				S	**Sg**	**00 21 17.5**	**-0.4**
MAT	**Matsushiro**	**0.56**	**58**	P	**Pg**	**00 21 10.1**	**-0.5**
MAT				S	**Sg**	**00 21 17.4**	**-0.4**
MJAR	**Matsushiro Arr**	**0.56**	**58**	Pg	**Pg**	**00 21 10.6**	**0.0**
	44nm,0.3s,baz=244,slow=18,SNR=2997						
MJAR				Lg	Lg	00 21 18.1	
	83nm,0.3s,baz=245,slow=36,SNR=26						
MJAR				LR	LR	00 21 34.6	
	comp=Z,1μm,18.8s,baz=260,slow=62						
JYTA	**Yamagatataniai**	**0.96**	**228**	⇑P	**Pg**	**00 21 17.8**	**-0.5**
JYTA				S	**Sg**	**00 21 30.7**	**-0.1**
JHJ	**Hachijo jima 2**	**3.59**	**150**	LR	LR	00 23 29.7	
	comp=Z,951nm,18.2s,baz=67,slow=40						
JNU	**Nakatsue**	**6.36**	**243**	LR	LR	00 25 06.3	
	comp=Z,281nm,19.6s,baz=112,slow=39						
KSRS	**Korea Array**	**7.87**	**282**	Pn	**Pn**	**00 22 56.4**	**+1.3**
	0.5nm,0.3s,baz=95,slow=15,SNR=4.1						
KSRS				LR	LR	00 25 45.4	
	comp=Z,230nm,20.8s,baz=104,slow=36						
JCJ	**Chichijima**	**9.91**	**156**	LR	LR	00 26 58.7	
	comp=Z,121nm,18.3s,baz=322,slow=36						
KLR	**Kul'dur**	**13.67**	**344**	Pn	**Pn**	**00 24 16.7**	**+2.2**
	0.1nm,0.3s,baz=150,slow=9.8,SNR=4.6						
KLR				LR	LR	00 29 01.2	
	comp=Z,125nm,20.5s,baz=160,slow=36						
PETK	**Petropavlovsk-**	**21.97**	**34**	LR	LR	00 34 53.5	
	comp=Z,121nm,18.1s,baz=237,slow=38						
SONM	**Songino Array**	**25.74**	**306**	P	**P**	**00 26 31.0**	**-0.7**
	0.5nm,0.5s,baz=103,slow=9.7,SNR=4.1						
SONM				LR	LR	00 37 09.7	
	comp=Z,175nm,18.9s,baz=90,slow=38						
TLY	**Talaya**	**28.59**	**313**	LR	LR	00 39 00.8	
	comp=Z,62nm,18.3s,baz=124,slow=38						
CMAR	**Chiang Mai Arr**	**38.34**	**253**	LR	LR	00 44 21.5	
	comp=Z,31nm,20.8s,baz=52,slow=37						
ZALV	**Zalesovo Beam**	**40.21**	**313**	LR	LR	00 44 55.3	
	comp=Z,28nm,20.9s,baz=93,slow=36						
MKAR	**Makanchi Array**	**41.95**	**302**	LR	LR	00 47 02.8	
	comp=Z,78nm,19.5s,baz=87,slow=37						
NRIK	**Noril'sk**	**42.73**	**336**	LR	LR	00 47 46.8	
	comp=Z,75nm,19.4s,baz=110,slow=38						
KURBB	**Kurchatov Arra**	**44.08**	**308**	P	**P**	**00 29 07.3**	**-1.9**
	0.7nm,0.8s,baz=85,slow=8.5,SNR=5.1						
PSI	**Prapat**	**48.79**	**236**	LR	LR	00 51 22.2	
	comp=Z,59nm,18.4s,baz=88,slow=37						
ILAR	**Eielson Array**	**51.79**	**32**	LR	LR	00 54 23.9	
	comp=Z,17nm,18.1s,baz=124,slow=39						
ASAR	**Alice Springs**	**59.69**	**184**	P	**P**	**00 31 06.5**	**+0.8**
	0.3nm,0.8s,baz=16,slow=10,SNR=4.3						
GEYT	**Alibeck**	**61.52**	**298**	LR	LR	01 00 10.6	
	comp=Z,32nm,18.4s,baz=105,slow=38						
ARCES	**ARCESS Array B**	**63.64**	**339**	LR	LR	01 02 49.0	
	comp=Z,49nm,18.9s,baz=257,slow=40						
YKA	**Yellowknife Ar**	**66.00**	**29**	P	**P**	**00 31 47.4**	**0.0**
	0.2nm,0.6s,baz=301,slow=5.9,SNR=3.3						
FINES	**FINESS Array B**	**68.06**	**331**	P	**P**	**00 31 59.4**	**-1.1**
	1.3nm,1.0s,baz=20,slow=4.4,SNR=3.9						
FINES				LR	LR	01 03 08.7	
	comp=Z,20nm,19.6s,baz=34,slow=37						
KBZ	**Khabaz**	**69.07**	**309**	LR	LR	01 05 45.1	
	comp=Z,35nm,18.8s,baz=56,slow=39						
AKASG	**Malin Array Be**	**73.02**	**321**	LR	LR	01 07 28.3	
	comp=Z,26nm,18.1s,baz=25,slow=38						
NOA	**NORSAR Array B**	**73.70**	**336**	LR	LR	01 08 16.7	
	comp=Z,21nm,18.8s,baz=55,slow=39						
BRTR	**Keskin Array B**	**77.05**	**310**	LR	LR	01 10 02.2	
	comp=Z,16nm,18.4s,baz=18,slow=38						
ULM	**Lac du Bonnet**	**81.80**	**31**	LR	LR	01 12 55.0	
	comp=Z,25nm,18.0s,baz=70,slow=38						

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*NNC **04** 00:28:52.0±1.6, 44°.35N×80°.84E, h0^{km}, mb2.8, mpv2.6, Error ellipse: s-maj=11.4km s-min=8.3km az=88.0*
*SOME **04** 00:28:54.0, 44°.35N×80°.67E, h20^{km}*
ISC 04 00:28:53.2±1.3**, 44°.29N**±0°.04×**80°.89E**±0°.06**, h27**^{km}**, n19, σ1^{s}.10**/34**, 4C, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**0.93**	**205**	*e*P	**Pn**	**00 29 10.6**	**0.0**
	1.3nm,0.1s						
KTMS				*e*S	**Sb**	**00 29 23.4**	**+0.7**
	14nm,0.1s						
KTMS	**Ketmen**	**0.93**	**205**	P	**Pn**	**00 29 10.6**	**0.0**
	1.3nm,0.1s						
KTMS				S	**Sb**	**00 29 23.5**	**+0.7**
	14nm,0.1s						
PDGK	**Podgornoye**	**1.40**	**227**	P	**Pn**	**00 29 18.6**	**+1.6**
	1.6nm,0.1s						
PDGK				S	**Sb**	**00 29 37.0**	**+0.9**
	3.2nm,0.2s						
PDGK	**Podgornoye**	**1.40**	**227**	⇑Pg	**Pn**	**00 29 17.6**	**+0.6**
	0.3nm,0.2s						
PDGK				⇑Lg	Lg	00 29 36.8	
	1.1nm,0.3s						
KAPS	**Kapalarasan**	**1.47**	**313**	*e*P	**Pn**	**00 29 18.0**	**0.0**
	2.3nm,0.2s						
KAPS				*e*S	**Sn**	**00 29 35.7**	**-0.8**
	8.0nm,0.2s						
SHLS	**Shalkode**	**1.53**	**223**	*e*P	**Pn**	**00 29 18.0**	**-0.9**
	9.6nm,0.3s						
SHLS				*e*S	**Sn**	**00 29 36.0**	**-1.9**
	20nm,0.2s						
SHLS	**Shalkode**	**1.53**	**223**	P	**Pn**	**00 29 18.0**	**-0.9**
SHLS				S	**Sn**	**00 29 36.0**	**-1.9**
	20nm,0.2s						
UZB	**Uzynbulak**	**1.77**	**230**	*e*P	**Pb**	**00 29 25.0**	**0.0**
	1.1nm,0.1s						
UZB				*e*S	**Sb**	**00 29 48.1**	**+1.2**
	3.5nm,0.1s						
UZB	**Uzynbulak**	**1.77**	**230**	P	**Pb**	**00 29 25.0**	**0.0**
	1.1nm,0.1s						
UZB				S	**Sb**	**00 29 48.1**	**+1.2**
	3.5nm,0.1s						
MNBS	**Baschi**	**1.80**	**264**	*e*P	**Pb**	**00 29 24.6**	**-0.9**
	1.7nm,0.1s						
MNBS				*e*S	**Sb**	**00 29 47.2**	**-0.5**
	19nm,0.3s						
MNBS	**Baschi**	**1.80**	**264**	P	**Pb**	**00 29 24.6**	**-0.9**
	1.7nm,0.1s						
MNBS				S	**Sb**	**00 29 47.2**	**-0.5**
	19nm,0.3s						
KURS	**Kuram**	**2.12**	**249**	*e*P	**Pb**	**00 29 30.9**	**0.0**
	0.6nm,0.2s						
KURS				*e*S	**Sb**	**00 29 57.9**	**+1.0**
	2.4nm,0.3s						
SATY	**Saty**	**2.18**	**236**	*e*P	**Pb**	**00 29 32.2**	**+0.2**
	1.6nm,0.2s						
SATY				*e*S	**Sb**	**00 30 00.2**	**+1.5**
	9.2nm,0.3s						
ARXS	**Arharly**	**2.20**	**269**	*e*P	**Pb**	**00 29 31.9**	**-0.3**
	4.0nm,0.2s						
ARXS				*e*S	**Sb**	**00 29 59.8**	**+0.7**
	13nm,0.3s						
ARXS	**Arharly**	**2.20**	**269**	Pg	**Pb**	**00 29 32.0**	**-0.3**
	4.0nm,0.2s						
ARXS				Lg	Lg	00 29 59.8	
	13nm,0.3s						
MK31	**Makanchi Array**	**2.69**	**21**	⇑Pg	**Pb**	**00 29 40.8**	**+0.2**
	0.1nm,0.2s,baz=200,slow=15,SNR=5.2						
MK31				⇑Lg	Lg	00 30 07.8	
	0.1nm,0.2s,baz=206,slow=28,SNR=4.9						
KTBS	**Karatobe**	**3.09**	**261**	*e*P	**Pb**	**00 29 48.2**	**+0.8**
	0.3nm,0.2s						
KTBS				*e*S	**Sb**	**00 30 27.9**	**+3.3**
	12nm,0.3s						
KTBS	**Karatobe**	**3.09**	**261**	Pg	**Pb**	**00 29 48.2**	**+0.8**
	0.3nm,0.2s						
KTBS				Lg	Lg	00 30 28.0	
	12nm,0.3s						
KUU	**Kurty**	**3.30**	**265**	*e*P	**Pb**	**00 29 50.7**	**-0.3**
	0.8nm,0.5s						
KUU				*e*S	**Sb**	**00 30 31.9**	**+1.2**
	3.9nm,0.4s						

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*PRE **04** 00:47:09.1±1.1, 26°.95S×26°.86E, h2^{km}, ML2.1*
*EAF **04** 00:47:11.0±0.8, 27°.03S×26°.84E, h0^{km}±10^{km}, MD3.7*
ISC 04 00:47:10.4±1.3**, 26°.93S**±0°.04×**26°.87E**±0°.05**, h13**^{km}±10^{km}**, n14, σ1^{s}.55**/28**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.43**	**90**	*e*P	**Pg**	**00 47 18.3**	**-0.8**
PRYS				*e*S	**Sg**	**00 47 24.4**	**-0.6**
PRYS				AML	AML	00 47 32.0	
	comp=Z,135nm,0.6s						
WDLM	**Western Deep L**	**0.70**	**44**	*e*P	**Pg**	**00 47 23.5**	**-0.7**
WDLM				*e*S	**Sg**	**00 47 33.4**	**-0.1**
WDLM				AML	AML	00 47 36.1	
	comp=Z,127nm,0.2s						
KSR	**Koster**	**1.07**	**1**	*e*P	**Pb**	**00 47 30.0**	**-0.9**
KSR				*e*S	**Sg**	**00 47 45.5**	**+0.3**
KSR				AML	AML	00 47 50.3	
	comp=Z,30nm,0.3s						
ERPM	**east rand prop**	**1.36**	**65**	*e*P	**Pb**	**00 47 35.8**	**0.0**
ERPM				*e*S	**Sg**	**00 47 55.5**	**+1.3**
ERPM				AML	AML	00 47 59.0	
	comp=Z,27nm,0.3s						
SLR	**Silverton**	**1.74**	**47**	*e*P	**Pb**	**00 47 42.0**	**-0.3**
SLR				*e*S	**Sb**	**00 48 05.2**	**+1.3**
SLR				AML	AML	00 48 09.2	
	comp=Z,34nm,0.5s						
BOSA	**Boshof**	**2.21**	**220**	*i* P	**Pn**	**00 47 47.2**	**+0.4**
BOSA				*i* S	**Sn**	**00 48 13.7**	**-0.4**
BOSA	**Boshof**	**2.21**	**220**	*e*P	**Pn**	**00 47 47.2**	**+0.4**
BOSA				*e*S	**Sn**	**00 48 14.3**	**+0.2**
BOSA				AML	AML	00 48 17.5	
	comp=Z,7.7nm,0.3s						
BOSA	**Boshof**	**2.21**	**220**	*i* P	**Pn**	**00 47 47.2**	**+0.4**
BOSA				*i* S	**Sn**	**00 48 13.7**	**-0.4**
LBTB	**Lobatse**	**2.23**	**329**	*i* P	**Pn**	**00 47 49.2**	**+2.1**
LBTB				*i* S	**Sb**	**00 48 18.2**	**+0.2**
LBTB	**Lobatse**	**2.23**	**329**	*i* P	**Pn**	**00 47 49.2**	**+2.1**
LBTB				*i* S	**Sb**	**00 48 18.2**	**+0.2**
MATP	**Matopo**	**6.64**	**13**	*i* P	**Pn**	**00 48 50.9**	**+3.0**
MATP				*i* S	**Sn**	**00 50 02.5**	**-1.0**
MATP	**Matopo**	**6.64**	**13**	*i* P	**Pn**	**00 48 50.9**	**+3.0**
MATP				*i* S	**Sn**	**00 50 02.5**	**-1.0**
CHIPN	**CHIPINGE**	**8.51**	**40**	*i* P	**Pn**	**00 49 14.6**	**+1.1**
CHIPN				*i* S	**Sn**	**00 50 46.4**	**-3.1**
CHIPN	**CHIPINGE**	**8.51**	**40**	*i* P	**Pn**	**00 49 14.6**	**+1.1**
CHIPN				*i* S	**Sn**	**00 50 46.4**	**-3.1**

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*NDI **04** 00:59:38.5±2.6, 32°.40N×96°.43E, h10^{km}, mb4.0, mb4.0(NEIC)*
*IDC **04** 00:59:44.3±0.6, 32°.00N×95°.51E, h0^{km}, mb4.0/21, mb1 4.2/25, mb1mx4.0/49, mbtmp4.0/25, ML4.0/4, MS3.2/6, Ms1 3.3/6, ms1mx2.8/46, Error ellipse: s-maj=19.4km s-min=12.1km az=53.0*
*NEIC **04** 00:59:46.2±1.4, 32°.0N±0°.1×95°.8E±0°.1, h15^{km}±6^{km}, mb4.0/22, Error ellipse: s-maj=16.4km s-min=12.5km az=160.0*
*MOS **04** 00:59:46.6±0.9, 32°.02N×95°.63E, h26^{km}, mb4.6/18, Error ellipse: s-maj=8.9km s-min=5.4km az=114.2*
*BJI **04** 00:59:47.6±0.0, 32°.00N×95°.50E, h10^{km}, mB4.5/3, mb4.5/14, ML4.0/5, Ms3.9/15, Ms7 3.8/17*
ISC 04 00:59:46.2±0.4**, 32°.09N**±0°.05×**95°.64E**±0°.05**, h10**^{km}**, n125, σ1^{s}.41**/121**, mb4.3**/41**, MS3.2**/4**, 8C-2D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.54**	**239**	Pn	**Pn**	**01 00 58.4**	**+3.0**
LSA				LR	LR		
	comp=N,2μm,7.5s						
LSA				LR	LR		
	comp=E,3μm,10.0s						
LSA				LR	LR		
	comp=Z,4μm,8.5s						
LSA	**Lhasa**	**4.54**	**239**	P	**Pn**	**01 00 56.0**	**+0.6**
LSA	**Lhasa**	**4.54**	**239**		**Pn**	**01 00 56.0**	**+0.6**
TEZP	**TEZPUR**	**5.99**	**205**	*e*P	**Pn**	**01 01 15.1**	**+0.2**
KOHI	**KOHIMA**	**6.49**	**192**	*e*x	**Pn**	**01 01 22.5**	**+0.6**
KOHI				*e*x	**Sn**	**01 02 40.5**	**+4.3**
CD2	**Chengdu**	**7.03**	**98**	Pn	**Pn**	**01 01 27.4**	**-1.9**
CD2				Sn	**Sn**	**01 02 49.2**	**-0.1**
CD2				LR	LR		
	comp=E,970nm,9.2s						
CD2				LR	LR		
	comp=Z,1μm,8.2s						
SHL	**Shillong**	**7.29**	**208**	*e*P	**Pn**	**01 01 32.8**	**-0.2**
SHL				*e*S	**Sn**	**01 02 56.7**	**+0.8**
SHL	**Shillong**	**7.29**	**208**	P	**Pn**	**01 01 32.5**	**-0.5**
SHL	**Shillong**	**7.29**	**208**		**Pn**	**01 01 32.5**	**-0.5**
GTA	**Gaotai**	**8.05**	**24**	*e*P	Pb	01 01 58.0	-7.8
GTA				pP	Pg	01 02 01.9	-18
GTA				sP	Pn	01 02 04.8	+21
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,86nm,4.7s						
GTA				LR	LR		
	comp=N,270nm,13.3s						
GTA				LR	LR		
	comp=E,630nm,12.3s						
GTA				LR	LR		
	comp=Z,240nm,12.0s						
TAPN	**Taplejung**	**8.36**	**238**	*e*P	**Pn**	**01 01 47.3**	**-0.4**
	comp=Z,17nm,0.4s						
ODAN	**Odare**	**8.88**	**236**	*e*P	**Pn**	**01 01 55.1**	**+0.3**
	comp=Z,76nm,0.7s						
JIRN	**Jiri**	**9.32**	**244**	*e*P	**Pn**	**01 02 00.5**	**-0.4**

comp=Z,40nm,0.7s
RAMN Ramite 9.39 239 *e*P **Pn 01 02 01.4 -0.5**
comp=Z,25nm,0.4s
GUN Gumba 9.43 246 *e*P **Pn 01 02 02.1 -0.4**
comp=Z,64nm,0.8s
KKN Kakani 9.96 247 *e*P **Pn 01 02 08.3 -1.3**
PKI Pulchoki 9.96 246 *e*P **Pn 01 02 09.1 -0.6**
comp=Z,36nm,0.7s
PKIN Phulchoki 9.97 246 *e*P **Pn 01 02 09.0 -0.8**
comp=Z,24nm,0.5s
DMN Daman 10.18 247 *e*P **Pn 01 02 11.5 -1.2**
GKN Gorkha 10.37 250 *e*P **Pn 01 02 13.3 -1.9**
comp=Z,14nm,0.3s
DANN Dangsing 10.93 253 *e*P **Pn 01 02 21.3 -1.7**
comp=Z,26nm,0.6s
KOLN Koldanda 11.30 251 *e*P **Pn 01 02 26.0 -1.9**
comp=Z,16nm,0.6s
XAN Xi'an 11.31 77 P Pn 01 02 33.5 +5.6
XAN S Sn 01 04 52.1 +18
XAN pmax pmax
comp=Z,5.0nm,0.8s
XAN pmax pmax
comp=Z,58nm,4.1s
XAN LR LR
comp=Z,200nm,6.8s
XAN LR LR
comp=Z,220nm,6.2s
XAN LR LR
comp=Z,310nm,8.1s
XAN Xi'an 11.31 77 P **Pn 01 02 26.4 -1.6**
XAN Xi'an 11.31 77 Pn **Pn 01 02 26.4 -1.6**
PYUN Piuthan 11.65 253 *e*P **Pn 01 02 30.9 -1.9**
BOK Bokaro 11.94 229 *e*P **Pn 01 02 33.8 -2.8**
ENH Enshi 11.99 95 Pn **Pn 01 02 34.9 -2.4**
WMQ Urumqi 13.27 334 *e*P **Pn 01 02 54.3 -0.4**
CHTO Chiang Mai 13.55 167 P **Pn 01 03 02.3 +3.7**
CHTO pmax pmax
comp=Z,5.0nm,1.1s
CMAR Chiang Mai Arr 13.90 167 Pn **Pn 01 03 03.5 +0.1**
comp=Z,0.9nm,0.3s,baz=338,slow=12,SNR=4.1
CMAR LR LR 01 08 33.5
comp=Z,122nm,18.1s,baz=345,slow=38
HHC Hu-ho-hao-te 15.49 51 P **Pn 01 03 23.7 -1.1**
HHC sP pP 01 03 33.4 +0.1
HHC S **Sn 01 06 16.3 -0.2**
HHC sS S 01 06 29.3 -3.1
HHC pmax pmax
comp=Z,5.0nm,0.8s
HHC pmax pmax
comp=Z,32nm,5.4s
HHC LR LR
comp=N,150nm,9.4s
HHC LR LR
comp=E,140nm,8.0s
HHC LR LR
comp=Z,160nm,9.3s
SMLA Simla 15.77 271 *e*P **Pn 01 03 29.1 +0.7**
SMLA IAmb IAmb 01 03 30.1
comp=Z,15nm,0.9s
DHRM DHARAMSHALA 16.38 276 *e*P **Pn 01 03 37.2 +0.7**
PRZ Przheval'sk 17.17 312 P **P 01 03 49.1 +1.1**
PRZ pmax pmax
comp=Z,11nm,0.6s
PRZ Przheval'sk 17.17 312 P **P 01 03 49.1 +1.1**
PRZ IAmb IAmb 01 03 52.7
comp=Z,11nm,0.6s
SONM Songino Array 17.72 24 P **P 01 03 54.7 +0.7**
comp=Z,0.2nm,0.3s,baz=214,slow=12,SNR=2.4
SONM LR LR 01 11 32.1
comp=Z,66nm,19.1s,baz=246,slow=40
KDJ Kajisay 17.78 310 P **P 01 03 55.7 +1.0**
KDJ pmax pmax
comp=Z,11nm,1.1s
KDJ Kajisay 17.78 310 P **P 01 03 55.7 +1.0**
KDJ IAmb IAmb 01 04 02.5
comp=Z,11nm,1.1s
MK31 Makanchi Array 17.90 329 P **P 01 03 56.4 +0.5**
MK31 pmax pmax
comp=Z,3.0nm,1.0s
MK31 Makanchi Array 17.90 329 P **P 01 03 56.4 +0.5**
MKAR Makanchi Array 17.90 329 P **Pn 01 03 53.6 -1.7**
comp=Z,0.3nm,0.3s,baz=134,slow=13,SNR=19
ULN Ulaanbaatar 17.98 26*ce*P **P 01 04 00.7 +3.8**
ULN pmax pmax
comp=Z,4.0nm,1.3s
ULN Ulaanbaatar 17.98 26 Pn 01 03 55.8 -0.6
MAKZ Makanchi 18.05 328 P **P 01 03 58.5 +1.0**
MAKZ pmax pmax
comp=Z,4.0nm,0.9s
MAKZ Makanchi 18.05 328 P **P 01 03 58.5 +1.0**
BJT Baijiatuan 18.36 59 P **Pn 01 04 00.1 -0.8**
BJT pmax pmax
comp=Z,10.0nm,1.1s
BJT Baijiatuan 18.36 59 Pn 01 04 00.1 -0.8
BJT IAmb IAmb 01 04 08.6
comp=Z,10.0nm,1.1s
BHPL Bhopal 18.37 246 IAmb IAmb 01 04 00.3
comp=Z,4.4nm,0.5s
DGZ Jazzator, Alta 18.63 343 *i* P **Pn 01 04 06.2 +1.9**
DGZ pmax pmax
comp=Z,8.0nm,3.2s
NIL Nilore 18.87 281 P **P 01 04 06.6 -0.1**
NIL pmax pmax
comp=Z,10.0nm,0.8s
NIL Nilore 18.87 281 P **P 01 04 06.6 -0.1**
NIL IAmb IAmb 01 04 13.3
comp=Z,9.9nm,0.8s
ZAK Zakamensk 19.14 15 *e*P **Pn 01 04 10.5 +0.2**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
AAK Ala-Archa 19.78 308 P **P 01 04 16.6 -0.1**
comp=Z,0.3nm,0.3s,baz=116,slow=7.2,SNR=18
AAK Ala-Archa 19.78 308*ce*P **Pn 01 04 18.1 -0.1**
AAK pmax pmax
comp=Z,4.0nm,0.9s
AAK Ala-Archa 19.78 308 P **Pn 01 04 17.8 -0.4**
AAK IAmb IAmb 01 04 27.7
comp=Z,4.9nm,0.8s
MOY Mondy 19.95 10 *e*P **Pn 01 04 21.6 +1.5**
MOY pmax pmax
comp=Z,27nm,1.8s
ARSB Arslanbob 20.32 303 P Pn 01 04 24.2 -0.4
ARSB pmax pmax
comp=Z,7.0nm,1.0s
ARSB Arslanbob 20.32 303 P Pn 01 04 24.2 -0.4
ARSB IAmb IAmb 01 04 29.8
comp=Z,7.0nm,0.9s
TLY Talaya 20.44 14 P Pn 01 04 25.4 -0.3
comp=Z,2.9nm,0.6s,baz=281,slow=15,SNR=3.1
TLY Talaya 20.44 14 *i* P Pn 01 04 25.7 0.0
TLY pmax pmax
comp=Z,2.0nm,0.8s
TLY Talaya 20.44 14 P **P 01 04 24.0 +0.4**
PBA Port Blair 20.51 188 P **P** 01 04 23.3 -1.3
HYB Hyderabad 21.27 231 *i* P **P 01 04 31.5 -1.4**
KBL Kabul 22.34 284 P **P 01 04 45.1 +0.6**
KBL pmax pmax
comp=Z,12nm,0.8s
KBL Kabul 22.34 284 P **P 01 04 45.1 +0.6**
KURBB Kurchatov Arra 22.43 331 P **P 01 04 45.0 0.0**
comp=Z,8.3nm,0.9s,baz=139,slow=11,SNR=43
KURK Kurchatov 22.47 331*ce*P **P 01 04 44.9 -0.5**
KURK pmax pmax
comp=Z,14nm,1.0s
KURK Kurchatov 22.47 331 P **P 01 04 45.3 -0.1**
KK31 Karatay Array 22.66 306 P **P 01 04 46.7 -0.9**
KK31 pmax pmax
comp=Z,3.0nm,0.9s
KK31 Karatay Array 22.66 306 P **P 01 04 46.7 -0.9**
KK31 IAmb IAmb 01 05 00.4
comp=Z,3.1nm,0.9s
KKAR Karatay Array 22.66 306 P **P 01 04 47.4 -0.2**
KKAR pmax pmax
comp=Z,3.0nm,0.9s
KKAR Karatay Array 22.66 306 P **P 01 04 47.4 -0.2**
ZAA0 Zalesovo Array 23.18 344 P **P 01 04 53.2 +0.4**
ZAA0 IAmb IAmb 01 04 56.1
comp=Z,3.0nm,0.8s
ZALV Zalesovo Beam 23.18 344 P **P 01 04 53.1 +0.3**
comp=Z,3.1nm,0.8s,baz=157,slow=9.4,SNR=9.2
NACB Ninganchiao 24.17 102 P **P 01 05 00.4 -2.3**
YULB Yu-li 24.26 104 P **P 01 05 00.4 -3.2**
YULB IAmb IAmb 01 05 11.6
comp=Z,5.1nm,0.8s
CN2 Changchun 26.11 55 *e*P **P 01 05 26.5 +6.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
KSRS Korea Array 26.97 70 P **P 01 05 28.9 +0.9**
comp=Z,1.0nm,0.6s,baz=266,slow=9.8,SNR=5.3
KSRS LR LR 01 15 27.6
comp=Z,25nm,18.8s,baz=245,slow=35
BVAR Borovoye Array 27.74 326 P **P 01 05 34.8 0.0**
comp=Z,1.7nm,0.7s,baz=117,slow=8.8,SNR=12
BRVK Borovoye 27.81 326*ce*P **P 01 05 36.0 +0.6**
BRVK pmax pmax
comp=Z,5.0nm,1.0s
BRVK Borovoye 27.81 326 P **P 01 05 34.9 -0.5**
BRVK IAmb IAmb 01 05 36.8
comp=Z,3.8nm,0.6s
JNU Nakatsue 29.62 78 LR LR 01 17 54.3
comp=Z,27nm,18.4s,baz=183,slow=37
KLR Kul'dur 31.92 47 *i* P **P 01 06 13.3 +1.5**
KLR pmax pmax
comp=Z,3.0nm,1.1s
SDSI Sungai Dareh 33.30 169 P P 01 06 35.0 +11
comp=Z,6µmcomp=Z,67nm,2.3s
ARU Arti 35.33 325*d* iP **P 01 06 41.8 +0.4**
ARU S **S 01 12 18.8 +3.4**
ARU SS **SnSn 01 14 34.0 +0.5**
ARU pmax pmax
comp=Z,9.0nm,0.8s
ARU Arti 35.33 325 P **P 01 06 41.3 -0.1**
NRIK Noril'sk 37.58 355 P **P 01 07 00.2 -0.2**
comp=Z,1.5nm,0.5s,baz=143,slow=5.4,SNR=2.4
LEM Lembang 40.35 161 LR LR 01 24 48.8
comp=Z,60nm,19.0s,baz=151,slow=37
KIRV Kirov 40.72 325 *ie*P **P 01 07 27.6 +0.9**
KBZ Khabaz 42.55 301 P **P 01 07 41.6 -0.3**
comp=Z,1.6nm,0.9s,baz=272,slow=0.9,SNR=4.3
KBZ Khabaz 42.55 301*ce*P **P 01 07 42.5 +0.5**
KIV Kislovodsk 42.69 302 *e*P **P 01 07 44.6 +1.3**
KIV pmax pmax
comp=Z,12nm,1.0s
PRGR Permogore 43.53 328 *e*P **P 01 07 47.7 -2.0**
PRGR pmax pmax
comp=Z,9.0nm,0.9s
VSR Storozhevoye 45.10 312 *e*P **P 01 08 00.9 -1.5**
VSR pmax pmax
comp=Z,8.0nm,1.2s
LPSR Galich'ya Gora 45.32 314 *e*P **P 01 08 04.0 -0.2**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
KLMR Klimovskoe 46.16 326 *e*P **P 01 08 08.9 -1.8**
KLMR pmax pmax
comp=Z,19nm,1.0s
KLMR Klimovskoe 46.16 326 *e*P **P 01 08 08.9 -1.8**
KLMR AMP 01 08 11.8
comp=Z,19nm,1.0s
MOS Moscow 46.34 318 *e*P **P 01 08 11.9 -0.3**
OBN Obninsk 46.89 318*d* *e*P **P 01 08 15.9 -0.6**
OBN *e* 01 09 47.5
OBN *e* 01 10 05.5
OBN *i* S S 01 15 16.5 +9.4
OBN *e*SS **SS 01 18 31.6 -1.8**
OBN pmax pmax
comp=Z,17nm,1.7s
TMCR Tamitsa 47.58 330 *e*P **P 01 08 22.4 +0.7**
PETK Petropavlovsk- 48.58 45 P **P 01 08 31.8 +2.2**
comp=Z,1.6nm,0.8s,baz=294,slow=4.7,SNR=3.9
BR131 Keskin Array S 49.92 297 P **P 01 08 39.9 -0.4**
BR131 pmax pmax
comp=Z,2.0nm,0.9s
BR131 Keskin Array S 49.92 297 P **P 01 08 39.9 -0.4**
BR131 IAmb IAmb 01 08 42.1
comp=Z,1.9nm,0.8s
BRTR Keskin Array B 49.92 297 P **P 01 08 39.8 -0.4**
comp=Z,1.3nm,0.8s,baz=125,slow=7.2,SNR=8.9
SUF Sumiainen 52.68 327 P **P 01 09 01.0 +0.6**
SUF pmax pmax
comp=Z,17nm,1.0s
FINES FINESS Array B 52.69 326 P **P 01 09 00.4 -0.1**
comp=Z,2.4nm,0.5s,baz=86,slow=7.5,SNR=27
FINES LR LR 01 35 15.0
comp=Z,42nm,18.4s,baz=324,slow=40
FINES FINESS Array B 52.69 326 *i* P **P 01 09 01.3 +0.8**
FINES pmax pmax
comp=Z,2.0nm,0.5s
ARCES ARCESS Array B 53.39 336 P **P 01 09 06.2 +0.7**
comp=Z,2.1nm,0.8s,baz=89,slow=7.5,SNR=5.5
KWP Kalwaria Pacla 55.69 311 P **P 01 09 22.6 0.0**
KWP pmax pmax
comp=Z,7.0nm,1.0s
FITZ Fitzroy Crossi 57.59 146 P **P 01 09 35.5 -0.9**
comp=Z,1.3nm,0.7s,baz=320,slow=2.4,SNR=3.7
NB2 NORSAR Subarra 59.87 326 P **P 01 09 51.1 -0.7**
comp=Z,2.4nm,0.7s,baz=78,slow=6.9
NOA NORSAR Array B 59.87 326 P **P 01 09 51.4 -0.4**
comp=Z,3.0nm,0.8s,baz=78,slow=6.9,SNR=11
WRAB Tennant Creek 63.64 139*ce*P **P 01 10 18.5 +0.8**
WRAB pmax pmax
comp=Z,27nm,2.5s
WRA Warramunga Arr 63.64 139 P **P 01 10 17.6 -0.1**
comp=Z,4.0nm,0.9s,baz=330,slow=7.3,SNR=15
PMG Port Moresby 64.19 121*ce*P **P 01 10 22.6 +1.2**
PMG pmax pmax
comp=Z,26nm,1.3s
KMBO Kilima Mbogo 64.25 251 P **P 01 10 21.5 -0.7**
comp=Z,1.8nm,0.8s,baz=50,slow=14,SNR=3.9
ASAR Alice Springs 66.42 142 P **P 01 10 35.6 -0.1**
comp=Z,3.3nm,0.6s,baz=326,slow=6.7,SNR=78
ILAR Eielson Array 71.95 24 P **P 01 11 08.7 -0.8**
comp=Z,0.9nm,0.8s,baz=293,slow=4.9,SNR=9.1
INK Inuvik 73.47 17 P **P 01 11 18.3 -0.1**
INK pmax pmax
comp=Z,4.0nm,2.0s
ESDC Sonseca Array 76.89 309 P **P 01 11 38.6 -0.1**
comp=Z,1.0nm,1.1s,baz=58,slow=8.1,SNR=4.5
STKA Stephens Creek 77.05 141 P **P 01 11 38.8 -0.7**
comp=Z,1.3nm,0.7s,baz=349,slow=10,SNR=1.7
YKA Yellowknife Ar 82.66 14 P **P 01 12 08.8 -0.7**
comp=Z,1.2nm,0.7s,baz=328,slow=4.4,SNR=12
TORD Torodi Ar. Bea 86.41 283 P **P 01 12 26.7 -2.7**
comp=Z,0.8nm,0.9s,baz=52,slow=5.9,SNR=4.9
FFC Flin Flon 92.21 10 P **P 01 12 55.9 -0.1**
FFC pmax pmax
comp=Z,4.0nm,1.8s

IDC ***04*** *01:24:14.3±0.9, 65°.27N×16°.40W, h0km, mb3.5/6, mb1 3.8/13, mb1mx3.5/50, mbtmp3.6/13, ML3.1/7, MS3.4/20, Ms1 3.4/20, ms1mx3.3/34, Error ellipse: s-maj=21.5km s-min=14.9km az=11.0*
REY ***04*** *01:24:15.1, 65°.10N×16°.39W, h8km*
NEIC ***04*** *01:24:16.0±2.5, 65°.23N±0°.08×16°.5W±0°.1, h10km±1km, mb4.0/2, Error ellipse: s-maj=14.6km s-min=3.3km az=152.0*
ISC 04 01:24:14.4±0.9, 65°.11N±0°.02×16°.45W±0°.03, h5km±7km, n73, σ1s 86/66, mb3.6/7, MS3.5/27, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
IASK	**Askja**	**0.10**	**238**	P	**Pg**		**01 24 17.9**	**+1.3**
baz=249								
IMKO	**Mokollar**	**0.14**	**160**	P	**Pg**		**01 24 17.8**	**+0.6**
baz=170								
IMKO				S	**Sg**		**01 24 20.1**	**+1.0**
baz=170								
IKRE	**Kreppuhraun**	**0.32**	**175**	P	**Pg**		**01 24 21.1**	**+0.4**
baz=180								
IKRE				S	**Sg**		**01 24 25.7**	**+0.7**
baz=180								
IADA	**Aoalbol**	**0.38**	**103**	P	**Pg**		**01 24 21.7**	**-0.1**
baz=102								
IADA				S	**Sg**		**01 24 26.8**	**+0.1**
baz=102								
ISVA	**Svartarkot**	**0.41**	**305**	P	**Pg**		**01 24 23.1**	**+0.7**
baz=304								
ISVA				S	**Sb**		**01 24 29.3**	**-1.4**
baz=304								
IVSH	**V-Sauoahnukur**	**0.43**	**134**	P	**Pg**		**01 24 22.6**	**-0.1**
baz=136								
IVSH				S	**Sg**		**01 24 28.4**	**+0.1**
baz=136								
IGRS	**Grimsstaoir**	**0.55**	**14**	S	**Sg**		**01 24 33.1**	**+0.9**
baz=11								
IGRS				P	**Pg**		**01 24 25.1**	**+0.1**
baz=11								
IREN	**Reynihlio**	**0.58**	**341**	P	**Pg**		**01 24 25.7**	**+0.2**
baz=339								
IREN				S	**Sg**		**01 24 34.1**	**+1.1**
baz=339								
IVON	**Vonarskard**	**0.71**	**233**	P	**Pg**		**01 24 27.7**	**-0.3**
baz=235								
IVON				S	**Sg**		**01 24 37.8**	**+0.7**
baz=235								
IGHA	**Grjothals**	**0.75**	**353**	P	**Pg**		**01 24 28.4**	**-0.3**
baz=351								
IGHA				S	**Sg**		**01 24 38.8**	**+0.4**
baz=351								
IDIM	**Dimmadalss**	**0.88**	**347**	P	**Pg**		**01 24 30.6**	**-0.7**
baz=346								
IDIM				S	**Sg**		**01 24 43.2**	**+0.4**
baz=346								
IVOT	**Vottur**	**0.90**	**201**	P	**Pg**		**01 24 30.9**	**-0.7**
baz=203								
IKSK	**Karasker**	**0.95**	**181**	P	**Pg**		**01 24 30.9**	**-1.7**
baz=182								
IKSK				S	**Sg**		**01 24 43.5**	**-1.4**
baz=182								
ISKR	**Skrokkalda**	**0.99**	**237**	P	**Pg**		**01 24 32.6**	**-0.8**
baz=239								
IHED	**Heoinshofoi**	**1.04**	**340**	P	**Pg**		**01 24 33.1**	**-1.3**
baz=339								
IHED				S	**Sg**		**01 24 47.7**	**-0.2**
baz=339								
IHAE	**Haedir**	**1.11**	**192**	P	**Pb**		**01 24 34.1**	**-1.9**
baz=194								
IHLA	**Hella**	**1.17**	**317**	P	**Pb**		**01 24 35.4**	**-1.6**
baz=317								
IHLA				S	**Sb**		**01 24 51.3**	**-1.1**
baz=317								
IBRE	**Brettingsstaoi**	**1.19**	**330**	P	**Pb**		**01 24 35.4**	**-2.0**
baz=329								
IFLA	**Flatey**	**1.21**	**332**	P	**Pb**		**01 24 36.2**	**-1.5**
baz=331								
IFAG	**Fagurholsmyri**	**1.24**	**184**	P	**Pn**		**01 24 36.1**	**-2.2**
baz=186								
IIEY	**Innrieyrar**	**1.25**	**216**	P	**Pn**		**01 24 36.6**	**-1.9**
baz=218								
IKAL	**Kalfafell**	**1.28**	**205**	P	**Pn**		**01 24 37.0**	**-1.9**
baz=207								
ILEI	**Leirhofn**	**1.31**	**359**	P	**Pn**		**01 24 37.4**	**-1.8**
baz=358								
IHVE	**Hveravellir**	**1.35**	**261**	P	**Pn**		**01 24 38.5**	**-1.4**
baz=262								
BORG	**Borgarnes**	**2.11**	**262**	Pn	**Pn**		**01 24 50.7**	**+0.4**
27nm,0.3s,baz=79,slow=6.0,SNR=78								
BORG				Sn	**Sb**		**01 25 18.8**	**-0.7**
18nm,0.3s,baz=29,slow=22,SNR=8.8								
BORG				LR	LR		01 25 33.3	
comp=Z,68nm,20.1s,baz=76,slow=37								
BORG	**Borgarnes**	**2.11**	**262**		**Pn**		**01 24 51.0**	**+0.8**
SCO	**Scoresbysund**	**5.79**	**341**	Pn	**Pn**		**01 25 41.0**	**+0.2**
SCO	**Scoresbysund**	**5.79**	**341**	*i* P	**Pn**		**01 25 42.3**	**+1.5**
JMIC	**Jan Mayen**	**6.61**	**23**	Pn	**Pn**		**01 25 49.5**	**-2.5**
1.6nm,0.3s,baz=158,slow=13,SNR=1.8								
JMIC				Sn	**Sn**		**01 27 07.0**	**-0.6**
0.9nm,0.3s,baz=184,slow=20,SNR=1.1								
JMIC				LR	LR		01 27 52.7	
comp=Z,164nm,18.2s,baz=228,slow=34								
SUMG	**Summit**	**10.85**	**323**	*i* P	Pn		01 26 57.2	+6.8
DAG	**Danmarks Havn**	**11.75**	**358**	*i* P	Pn		01 27 08.0	+5.7
EKA	**Eskdalemuir Ar**	**11.79**	**140**	Pn	**Pn**		**01 27 03.5**	**+0.6**
baz=328,slow=13,SNR=7.7								
NOA	**NORSAR Array B**	**13.12**	**95**	Pn	**Pn**		**01 27 18.2**	**-2.9**
0.0nm,0.3s,baz=302,slow=12,SNR=2.7								
NOA				Sn	**Sn**		**01 29 50.1**	**+3.0**
0.0nm,0.3s,baz=306,slow=24,SNR=3.4								
NOA				LR	LR		01 32 42.5	
comp=Z,89nm,18.4s,baz=300,slow=39								
HFS	**Hagfors**	**14.63**	**96**	Pn	**Pn**		**01 27 41.1**	**-0.6**
0.0nm,0.3s,baz=309,slow=17,SNR=2.3								
HFS				LR	LR		01 33 47.9	
comp=Z,121nm,18.5s,baz=270,slow=39								
SPITS	**Spitsbergen Ar**	**16.29**	**23**	LR	LR		01 32 37.2	
comp=Z,105nm,19.1s,baz=185,slow=31								
ARCES	**ARCESS Array B**	**16.50**	**56**	Pn	**Pn**		**01 28 03.6**	**-2.6**
0.1nm,0.3s,baz=266,slow=12,SNR=2.4								
FINES	**FINESS Array B**	**19.19**	**81**	P	**Pn**		**01 28 39.4**	**0.0**
0.1nm,0.3s,baz=308,slow=9.5,SNR=4.2								
CLL	**Collm**	**20.50**	**118**	*i* (P)	Pn		01 28 57.8	+2.7
comp=Z,4.0nm,1.0s								
CLL				L	L		01 37 00.0	
comp=Z,100nm,18.5s								
NKC	**Novy Kostel**	**21.18**	**121**	*e*P	P		01 29 07.6	+7.3
NKC				AMS	AMS		01 41 10.0	
comp=Z,200nm,18.6s								
BRG	**Berggiesshubel**	**21.21**	**118**	*e*P	**P**		**01 29 02.7**	**+2.1**
comp=Z,4.4nm,1.0s								
comp=N,115nm,13.5s								
comp=E,161nm,12.9s								
comp=Z,182nm,13.8s								
PVCC	**Panska Ves**	**21.72**	**117**	*e*P	P		01 29 13.4	+7.3
PVCC				AMS	AMS		01 39 10.0	
comp=Z,200nm,19.4s								
FRB	**Frobisher Bay**	**22.01**	**291**	LR	LR		01 37 05.5	
comp=Z,192nm,21.0s,baz=24,slow=35								
PRA	**Prague**	**22.04**	**118**	AMS	AMS		01 41 30.0	
comp=Z,100nm,11.5s								
PRU	**Pruhonice**	**22.15**	**118**	*e*P	**P**		**01 29 12.7**	**+2.0**
PRU				*ex*	x		01 29 23.1	
PRU				AMS	AMS		01 39 50.0	
comp=Z,100nm,10.9s								
CHVC	**Chvalec**	**22.24**	**115**	*e*P	**P**		**01 29 16.5**	**+4.9**
CHVC				*ex*	x		01 29 28.5	
UPC	**Upice**	**22.29**	**115**	AMS	AMS		01 39 20.0	
comp=Z,200nm,22.4s								
GOPC	**GO Pecny, Ondr**	**22.30**	**118**	*e*P	**P**		**01 29 16.4**	**+4.1**
GOPC				AMS	AMS		01 43 10.0	
comp=Z,100nm,12.9s								
OSTC	**Ostas**	**22.32**	**115**	*e*P	**P**		**01 29 16.7**	**+4.1**
OSTC				*ex*	x		01 29 29.8	
OSTC				AMS	AMS		01 39 30.0	
comp=Z,200nm,15.7s								
KHC	**Kasperske Hory**	**22.50**	**121**	*e*P	**P**		**01 29 18.0**	**+3.5**
KHC				*ex*	x		01 29 23.3	
KHC				*ex*	x		01 29 30.6	
KHC				AMS	AMS		01 41 40.0	
comp=Z,200nm,14.5s								
DPC	**Dobruska-Polom**	**22.53**	**115**	AMS	AMS		01 39 30.0	
comp=Z,200nm,12.9s								
GEC2	**GERESS Array S**	**22.79**	**121**	P	**P**		**01 29 19.7**	**+2.2**
GEC2				IAmb	IAmb		01 29 27.7	
comp=Z,7.7nm,1.1s								
GERES	**GERESS Array B**	**22.79**	**121**	P	**P**		**01 29 19.1**	**+1.5**
comp=Z,1.3nm,1.0s,baz=338,slow=10,SNR=6.3								
KRLC	**Kraliky**	**22.93**	**115**	*e*P	**P**		**01 29 22.7**	**+3.7**
KRLC				AMS	AMS		01 40 00.0	
comp=Z,100nm,12.6s								
TREC	**Trest**	**23.07**	**118**	AMS	AMS		01 42 50.0	
comp=Z,200nm,6.5s								
DAVOX	**Davos/Dischmat**	**23.24**	**129**	LR	LR		01 38 02.8	
comp=Z,68nm,21.1s,baz=83,slow=36								
VYHS	**Vyhne**	**25.00**	**115**	*e*P	**P**		**01 29 42.6**	**+3.9**
RES	**Resolute Bay**	**26.37**	**324**	LR	LR		01 40 13.2	
comp=Z,122nm,19.4s,baz=5.5,slow=36								
SCHQ	**Schefferville**	**26.48**	**271**	LR	LR		01 38 55.3	
comp=Z,51nm,19.3s,baz=9.0,slow=33								
ESDC	**Sonseca Array**	**26.48**	**158**	P	**P**		**01 29 55.0**	**+2.7**
comp=Z,1.2nm,1.0s,baz=345,slow=8.5,SNR=6.8								
ESDC				LR	LR		01 40 10.8	
comp=Z,63nm,18.6s,baz=340,slow=36								
AKASG	**Malin Array Be**	**27.46**	**99**	LR	LR		01 40 48.4	
comp=Z,66nm,19.1s,baz=290,slow=36								
NRIK	**Noril'sk**	**35.84**	**36**	LR	LR		01 48 50.4	
comp=Z,26nm,18.9s,baz=90,slow=41								
BR131	**Keskin Array S**	**38.17**	**107**	P	**P**		**01 31 35.8**	**+1.2**
BR131				IAmb	IAmb		01 31 39.4	
comp=Z,2.9nm,1.1s								
BRTR	**Keskin Array B**	**38.17**	**107**	P	**P**		**01 31 36.2**	**+1.7**
comp=Z,1.3nm,1.0s,baz=335,slow=5.5,SNR=4.4								
BRTR				LR	LR		01 50 21.3	
comp=Z,24nm,18.4s,baz=344,slow=41								
KBZ	**Khabaz**	**38.69**	**94**	LR	LR		01 47 39.1	
comp=Z,67nm,21.5s,baz=318,slow=36								
YKA	**Yellowknife Ar**	**39.24**	**313**	P	**P**		**01 31 44.4**	**+1.3**
comp=Z,0.8nm,0.7s,baz=46,slow=9.0,SNR=11								
YKA				LR	LR		01 47 36.0	
comp=Z,84nm,18.2s,baz=0.0,slow=36								
ULM	**Lac du Bonnet**	**41.88**	**289**	LR	LR		01 48 46.6	
comp=Z,133nm,18.4s,baz=50,slow=35								
ILAR	**Eielson Array**	**45.50**	**333**	LR	LR		01 53 25.6	
comp=Z,25nm,19.1s,baz=355,slow=39								
ZALV	**Zalesovo Beam**	**47.01**	**52**	LR	LR		01 54 04.9	
comp=Z,15nm,19.0s,baz=20,slow=38								
GEYT	**Alibeck**	**49.93**	**85**	LR	LR		01 56 20.0	
comp=Z,36nm,18.1s,baz=255,slow=39								

MKAR Makanchi Array 52.11 59 P P 01 33 23.6 -1.5
comp=Z,0.7nm,0.9s,baz=316,slow=6.9,SNR=5.3
PDAR Pinedale Array 53.41 294 P P 01 33 34.0 -1.0
comp=Z,0.1nm,0.4s,baz=52,slow=5.8,SNR=1.5
NVAR Mina Array Bea 60.49 298 LR LR 02 00 28.3
comp=Z,81nm,18.2s,baz=332,slow=36
TXAR Lajitas Array 62.64 281 LR LR 02 01 24.1
comp=Z,68nm,18.1s,baz=0.0,slow=36

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*IDC **04** 01:34:07.5±1.5, 6°76S×154°61E, h0km, mb3.9/8, mb1 4.1/10, mb1mx3.9/34, mbtmp3.9/10, ML3.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/32, Error ellipse: s-maj=39.1km s-min=21.6km az=107.0*

*NEIC **04** 01:34:14.2±0.6, 6°8S±0°1×154°6E±0°1, h48km±9km, mb4.2/6, Error ellipse: s-maj=18.5km s-min=14.0km az=122.0*

ISC 04 01:34:14.8±1.1**, 6°70S**±0°08×**154°5E**±0°1**, h48km, n19, σ1s06**/19**, mb4.0**/11**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.39**	**317**	Pn	**Pn**	**01 35 05.9**	**+0.6**
KRVT	**Keravat (AS076**	**3.40**	**314**	Pn	**Pn**	**01 35 05.5**	**+0.1**
	7.0nm,0.3s,baz=116,slow=2.4,SNR=8.7						
KRVT				Sn	**Sn**	**01 35 42.6**	**-1.9**
	8.2nm,0.3s,baz=228,slow=18,SNR=4.1						
HNR	**Honiara**	**6.06**	**117**	LR	LR	01 38 14.3	
	comp=Z,217nm,18.4s,baz=322,slow=42						
PMG	**Port Moresby**	**7.72**	**249**		**Pn**	**01 36 05.0**	**+0.2**
PMG					**Sn**	**01 37 32.7**	**+1.7**
CTA	**Charters Tower**	**15.52**	**210**	Pn	**Pn**	**01 37 48.4**	**-2.2**
	0.3nm,0.3s,baz=66,slow=20,SNR=2.4						
WR0	**Warramunga Arr**	**23.41**	**234**	P	**P**	**01 39 20.0**	**+0.2**
WR0				IAmb	IAmb	01 39 21.5	
	comp=Z,19nm,1.4s						
WB2	**Warramunga Arr**	**23.55**	**234**	P	**P**	**01 39 21.1**	**0.0**
WB2				IAmb	IAmb	01 39 22.9	
	comp=Z,13nm,1.3s						
WRA	**Warramunga Arr**	**23.56**	**234**	P	**P**	**01 39 19.9**	**-1.3**
	comp=Z,6.8nm,1.1s,baz=58,slow=9.5,SNR=9.6						
SIJI	**Sorong**	**23.86**	**283**	P	**P**	**01 39 24.9**	**+0.9**
	comp=Z,1.7nm,0.3s,baz=135,slow=9.6,SNR=5.2						
AS31	**Alice Springs**	**25.98**	**227**	P	**P**	**01 39 42.8**	**-0.5**
ASAR	**Alice Springs**	**25.98**	**227**	P	**P**	**01 39 43.3**	**0.0**
	comp=Z,1.0nm,0.8s,baz=56,slow=9.6,SNR=7.0						
STKA	**Stephens Creek**	**27.79**	**204**	P	**P**	**01 39 58.8**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=25,slow=14,SNR=6.3						
STKA	**Stephens Creek**	**27.79**	**204**	IAmb	IAmb	01 40 15.3	
	comp=Z,5.1nm,1.7s						
FITZ	**Fitzroy Crossi**	**30.30**	**245**	P	**P**	**01 40 21.9**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=89,slow=14,SNR=4.2						
SONM	**Songino Array**	**68.81**	**327**	P	**P**	**01 45 14.4**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=143,slow=5.0,SNR=2.4						
MK31	**Makanchi Array**	**82.84**	**319**	P	**P**	**01 46 35.0**	**+0.8**
MK31				IAmb	IAmb	01 47 53.6	
	comp=Z,4.6nm,1.7s						
MKAR	**Makanchi Array**	**82.84**	**319**	P	**P**	**01 46 33.4**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=106,slow=4.7,SNR=9.0						
ILAR	**Eielson Array**	**83.29**	**22**	P	**P**	**01 46 37.3**	**+1.2**
	comp=Z,0.3nm,0.9s,baz=235,slow=3.2,SNR=2.1						
TORD	**Torodi Ar. Bea**	**152.45**	**286**	PKPbc	**PKPbc**	**01 54 06.7**	**-0.1**
	comp=Z,1.8nm,0.7s,baz=68,slow=2.4,SNR=14						

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*IDC **04** 01:36:31.3±1.4, 3°09S×142°64E, h0km, mb3.6/4, mb1 4.0/6, mb1mx3.7/31, mbtmp3.8/6, ML3.9/2, MS3.4/1, Ms1 3.4/1, ms1mx2.5/30, Error ellipse: s-maj=24.6km s-min=19.2km az=26.0*

ISC 04 01:36:35.7±1.5**, 3°2S**±0°2×**142°6E**±0°2**, h27km, n6, σ0s80**/6**, mb3.8**/4**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.02**	**290**	Pn	**Pn**	**01 37 07.6**	**-0.5**
	14nm,0.3s,baz=162,slow=9.0,SNR=39						
JAY				Lg	Lg	01 37 33.0	
	18nm,0.3s,baz=360,slow=12,SNR=3.9						
WRA	**Warramunga Arr**	**18.48**	**205**	P	**P**	**01 40 49.7**	**-0.1**
	0.6nm,0.3s,baz=32,slow=10,SNR=13						
ASAR	**Alice Springs**	**22.00**	**202**	P	**P**	**01 41 28.0**	**0.0**
	1.9nm,0.6s,baz=31,slow=10,SNR=13						
ASAR				LR	LR	01 50 31.7	
	comp=Z,96nm,20.0s,baz=358,slow=38						
FITZ	**Fitzroy Crossi**	**22.25**	**227**	P	**P**	**01 41 30.8**	**+0.1**
	2.5nm,0.6s,baz=35,slow=13,SNR=2.2						
MKAR	**Makanchi Array**	**72.59**	**321**	P	**P**	**01 48 01.8**	**+1.1**
	0.2nm,0.5s,baz=107,slow=8.0,SNR=1.8						
ILAR	**Eielson Array**	**84.69**	**24**	P	**P**	**01 49 06.2**	**-0.7**
	0.6nm,0.9s,baz=248,slow=4.8,SNR=4.7						

IDC 04 02:05:39.5±1.7**, 32°22N×95°89E, h0km, mb3.7**/4**, mb1 3.8**/5**, mb1mx3.3**/55**, mbtmp3.6**/5**, ML3.1**/1**, MS3.2**/4**, Ms1 3.2**/4**, ms1mx2.7**/41**, Error ellipse: s-maj=389.3km s-min=21.6km az=55.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**17.90**	**328**	P	Pn	02 09 49.9	0.0
	0.1nm,0.3s,baz=142,slow=12,SNR=2.9						
KURBB	**Kurchatov Arra**	**22.43**	**330**	P	P	02 10 39.7	0.0
	0.6nm,0.7s,baz=137,slow=11,SNR=7.0						
MJAR	**Matsushiro Arr**	**34.99**	**71**	LR	LR	02 27 14.3	
	comp=Z,28nm,19.6s,baz=260,slow=37						
JCJ	**Chichijima**	**40.32**	**85**	LR	LR	02 31 19.5	
	comp=Z,24nm,18.3s,baz=44,slow=38						
FINES	**FINESS Array B**	**52.71**	**325**	P	P	02 14 55.5	-0.1
	1.8nm,1.0s,baz=97,slow=4.6,SNR=3.8						
WRA	**Warramunga Arr**	**63.60**	**139**	P	P	02 16 11.7	-0.7
	0.6nm,0.8s,baz=329,slow=7.0,SNR=2.8						
ASAR	**Alice Springs**	**66.39**	**142**	P	P	02 16 30.9	+0.4
	0.4nm,0.4s,baz=327,slow=6.8,SNR=8.7						
ILAR	**Eielson Array**	**71.75**	**24**	LR	LR	02 52 44.5	
	comp=Z,18nm,19.4s,baz=39,slow=39						
ESDC	**Sonseca Array**	**76.97**	**309**	LR	LR	02 54 30.3	
	comp=Z,14nm,20.1s,baz=80,slow=38						

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*IDC **04** 02:06:26.3±0.6, 32°09N×95°60E, h0km, mb4.0/25, mb1 4.1/29, mb1mx4.0/58, mbtmp4.0/29, ML3.9/4, MS3.2/2, Ms1 3.2/2, ms1mx2.6/41, Error ellipse: s-maj=18.6km s-min=12.3km az=47.0*

*MOS **04** 02:06:27.4±1.0, 32°14N×95°68E, h14km, mb4.7/25, Error ellipse: s-maj=8.8km s-min=5.1km az=117.7*

*BJI **04** 02:06:29.7±0.0, 31°99N×95°52E, h10km, mB4.4/8, mb4.5/20, ML4.0/5, Ms3.9/26, Ms7 3.9/25*

*NEIC **04** 02:06:29.1±2.0, 32°23N±0°05×95°62E±0°08, h10km±1km, mb4.4/45, Error ellipse: s-maj=13.3km s-min=5.4km az=58.0*

*NDI **04** 02:06:29.4±2.6, 32°14N×95°36E, h10km, mb4.4, mb4.4(NEIC)*

ISC 04 02:06:29.5±0.4**, 32°14N**±0°05×**95°55E**±0°04**, h10km, n155, σ1s63**/135**, mb4.4**/53**, MS3.3**/4**, 9C-2D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.50**	**238**	Pn	**Pn**	**02 07 40.9**	**+2.8**
LSA				Sg	**Sb**	**02 08 48.0**	**+4.8**
LSA				LR	LR		
	comp=N,3μm,8.2s						
LSA				LR	LR		
	comp=E,3μm,11.0s						
LSA				LR	LR		
	comp=Z,5μm,9.3s						
LSA	**Lhasa**	**4.50**	**238**	P	**Pn**	**02 07 39.9**	**+1.8**
LSA	**Lhasa**	**4.50**	**238**		**Pn**	**02 07 39.9**	**+1.8**
TEZP	**TEZPUR**	**6.00**	**204**	*e*P	**Pn**	**02 07 57.0**	**-1.5**
KOHI	**KOHIMA**	**6.52**	**192**	*e*P	**Pn**	**02 08 04.2**	**-1.5**
CD2	**Chengdu**	**7.12**	**98**	Pn	Pn	02 08 11.2	-2.5
CD2				Sn	**Sn**	**02 09 33.3**	**-1.4**
CD2				LR	LR		
	comp=E,1μm,9.2s						
CD2				LR	LR		
	comp=Z,1μm,8.2s						
SHL	**Shillong**	**7.30**	**207**	*e*P	**Pn**	**02 08 14.7**	**-1.6**
GTK	**Tadong**	**7.72**	**233**	*e*x	Pn	02 08 09.3	-13
GTA	**Gaotai**	**8.04**	**24**	*e*P	**Pn**	**02 08 29.9**	**+3.5**
GTA				sP	Pb	02 08 43.1	-5.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,32nm,4.5s						
GTA				LR	LR		
	comp=N,220nm,12.7s						
GTA				LR	LR		
	comp=E,790nm,14.1s						
GTA				LR	LR		
	comp=Z,300nm,12.0s						
TAPN	**Taplejung**	**8.32**	**237**	*e*P	**Pn**	**02 08 30.0**	**-0.5**
	18nm,0.5s						
ODAN	**Odare**	**8.84**	**236**	*e*P	**Pn**	**02 08 37.9**	**+0.3**
	101nm,0.8s						
JIRN	**Jiri**	**9.27**	**244**	*e*P	**Pn**	**02 08 42.8**	**-0.8**
RAMN	**Ramite**	**9.35**	**239**	*e*P	**Pn**	**02 08 44.1**	**-0.5**
	18nm,0.5s						
GUN	**Gumba**	**9.38**	**246**	*e*P	**Pn**	**02 08 43.4**	**-1.7**
	70nm,0.7s						
KMI	**Kunming**	**9.42**	**136**	P	Pn	02 08 50.7	+5.2
KMI				pmax	pmax		
	comp=Z,15nm,0.9s						
KKN	**Kakani**	**9.90**	**247**	*e*P	**Pn**	**02 08 50.7**	**-1.4**
	22nm,0.5s						
PKI	**Pulchoki**	**9.91**	**245**	*e*P	**Pn**	**02 08 50.8**	**-1.5**
	54nm,0.6s						
PKIN	**Phulchoki**	**9.92**	**245**	*e*P	**Pn**	**02 08 50.7**	**-1.7**
	28nm,0.5s						
DMN	**Daman**	**10.13**	**246**	*e*P	**Pn**	**02 08 53.6**	**-1.6**
	27nm,0.7s						
DANN	**Dangsing**	**10.87**	**253**	*e*P	Pn	02 09 02.3	-3.2
	37nm,0.7s						
KOLN	**Koldanda**	**11.24**	**250**	*e*P	Pn	02 09 07.9	-2.5
XAN	**Xi'an**	**11.38**	**77**	P	**Pn**	**02 09 14.4**	**+2.3**
XAN				S	**Sn**	**02 11 22.5**	**+3.2**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,88nm,4.6s						
XAN				LR	LR		
	comp=N,260nm,7.0s						
XAN				LR	LR		
	comp=E,310nm,6.0s						
XAN				LR	LR		
	comp=Z,410nm,7.9s						
XAN	**Xi'an**	**11.38**	**77**	P	Pn	02 09 10.4	-1.7
XAN	**Xi'an**	**11.38**	**77**	Pn	Pn	02 09 10.4	-1.8
PYUN	**Piuthan**	**11.59**	**253**	*e*P	Pn	02 09 12.6	-2.7
	86nm,0.7s						
BOK	**Bokaro**	**11.91**	**228**	*e*P	Pn	02 09 16.3	-3.2
BOK				*e*x	Pn	02 09 16.4	-3.1
BOK				IAmb	IAmb	02 09 19.4	
	comp=Z,15nm,0.7s						
ENH	**Enshi**	**12.08**	**95**	Pn	**Pn**	**02 09 21.6**	**-0.1**
SLVN	**Son La**	**13.09**	**143**		**Pn**	**02 09 38.6**	**+2.9**
WMQ	**Urumqi**	**13.19**	**334**	*e*P	**Pn**	**02 09 38.7**	**+1.8**
WMQ				pP	P	02 09 43.1	-3.9
WMQ				pmax	pmax		
	comp=Z,12nm,3.6s						
WMQ				LR	LR		
	comp=Z,240nm,7.5s						
WMQ				LR	LR		
	comp=Z,200nm,9.5s						
WMQ				LR	LR		
	comp=Z,140nm,10.7s						
CHTO	**Chiang Mai**	**13.62**	**166**	P	**Pn**	**02 09 44.0**	**+1.2**
CHTO	**Chiang Mai**	**13.62**	**166**	Pn	**Pn**	**02 09 44.0**	**+1.2**
CMAR	**Chiang Mai Arr**	**13.97**	**167**	Pn	**Pn**	**02 09 45.3**	**-2.3**
	comp=Z,0.9nm,0.3s,baz=341,slow=12,SNR=6.5						
CMAR	**Chiang Mai Arr**	**13.97**	**167**	*ce*P	**Pn**	**02 09 48.7**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HHC	**Hu-ho-hao-te**	**15.52**	**51**	P	**Pn**	**02 10 08.4**	**-0.1**
HHC				sP	P	02 10 15.1	+2.2
HHC				S	**Sn**	**02 13 02.4**	**+1.9**
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,46nm,5.5s						
HHC				LR	LR		
	comp=Z,210nm,8.4s						
HHC				LR	LR		
	comp=Z,190nm,8.4s						
SMLA	**Simla**	**15.69**	**271**	*e*x	**Pn**	**02 10 08.0**	**-2.7**
SMLA				*e*P	P	02 10 08.1	-6.7
WHN	**Wuhan**	**16.14**	**91**	P	**Pn**	**02 10 17.7**	**+1.2**
WHN				LR	LR		
	comp=Z,720nm,5.5s						
WHN				LR	LR		
	comp=Z,910nm,7.8s						
WHN				LR	LR		
	comp=Z,930nm,8.5s						
DHRM	**DHARAMSHALA**	**16.30**	**276**	*e*x	**P**	**02 10 20.4**	**-1.4**
DHRM				IAmb	IAmb	02 10 22.5	
	comp=Z,90nm,1.7s						
PRZ	**Przheval'sk**	**17.08**	**312**	P	**Pn**	**02 10 32.5**	**+4.0**
PRZ				pmax	pmax		
	comp=Z,23nm,1.2s						
PRZ	**Przheval'sk**	**17.08**	**312**		**Pn**	**02 10 32.5**	**+4.0**
KSH	**Kashi**	**17.48**	**300**	P	**Pn**	**02 10 34.6**	**+1.1**
KSH				pP	P	02 10 38.2	+3.5
KSH				sP	pP	02 10 42.4	+3.6
KSH				pmax	pmax		
	comp=Z,20nm,1.0s						
KSH				pmax	pmax		
	comp=Z,110nm,5.2s						
KDJ	**Kajisay**	**17.68**	**309**	P	**Pn**	**02 10 38.1**	**+2.0**
KDJ				pmax	pmax		
	comp=Z,18nm,1.3s						
KDJ	**Kajisay**	**17.68**	**309**		**Pn**	**02 10 38.1**	**+2.0**
SONM	**Songino Array**	**17.71**	**25**	P	**Pn**	**02 10 35.6**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=208,slow=13,SNR=5.4						
MK31	**Makanchi Array**	**17.82**	**329**	P	**Pn**	**02 10 36.1**	**-1.4**
MK31				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MK31	**Makanchi Array**	**17.82**	**329**		**Pn**	**02 10 36.1**	**-1.4**
MKAR	**Makanchi Array**	**17.82**	**329**	P	**Pn**	**02 10 34.9**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=143,slow=13,SNR=8.7						
MKAR	**Makanchi Array**	**17.82**	**329**	*i* P	**Pn**	**02 10 38.2**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MAKZ	**Makanchi**	**17.97**	**328**	P	**Pn**	**02 10 36.2**	**-3.1**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MAKZ	**Makanchi**	**17.97**	**328**	Pn	**Pn**	**02 10 36.2**	**-3.1**
ULN	**Ulaanbaatar**	**17.98**	**26**	P	**Pn**	**02 10 38.9**	**-0.7**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ULN	**Ulaanbaatar**	**17.98**	**26**		**Pn**	**02 10 38.9**	**-0.7**
BHPL	**Bhopal**	**18.32**	**246**	*e*P	**Pn**	**02 10 42.9**	**-0.9**
BHPL				*e*x	x	02 10 44.4	
BHPL				IAmb	IAmb	02 10 47.1	
	comp=Z,9.2nm,0.5s						
QIZ	**Qiongzhong**	**18.32**	**132**	P	**Pn**	**02 10 44.4**	**+0.5**
QIZ				S	**Sn**	**02 14 12.8**	**+4.2**
QIZ				pmax	pmax		
	comp=Z,16nm,1.4s						
QIZ				LR	LR		
	comp=Z,190nm,10.8s						
QIZ				LR	LR		
	comp=Z,190nm,12.1s						
QIZ				LR	LR		
	comp=Z,240nm,12.5s						
DGZ	**Jazzator, Alta**	**18.56**	**343**	*i* P	**P**	**02 10 48.1**	**+1.5**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOOM	**Boomskoye usch**	**18.66**	**309**	P	**P**	**02 10 49.9**	**+2.1**
BOOM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BOOM	**Boomskoye usch**	**18.66**	**309**		**P**	**02 10 49.9**	**+2.1**
NIL	**Nilore**	**18.78**	**281**	P	**P**	**02 10 48.6**	**-0.4**
NIL				pmax	pmax		
	comp=Z,17nm,1.0s						
NIL	**Nilore**	**18.78**	**281**	P	**P**	**02 10 48.6**	**-0.4**
NIL				IAmb	IAmb	02 10 55.4	
	comp=Z,17nm,0.9s						
ZAK	**Zakamensk**	**19.11**	**15**	*e*P	**P**	**02 10 53.3**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
FRU1	**Bishkek**	**19.67**	**309**	P	**P**	**02 10 59.3**	**+0.6**
FRU1				pmax	pmax		
	comp=Z,29nm,0.4s						
FRU1	**Bishkek**	**19.67**	**309**	P	**P**	**02 10 59.3**	**+0.6**
AAK	**Ala-Archa**	**19.69**	**308**	P	**P**	**02 10 58.8**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=120,slow=5.3,SNR=13						
AAK	**Ala-Archa**	**19.69**	**308**	*ce*P	**P**	**02 11 00.3**	**+1.3**
AAK				pmax	pmax		
	comp=Z,13nm,1.7s						
AAK	**Ala-Archa**	**19.69**	**308**	P	**P**	**02 10 59.3**	**+0.3**
MOY	**Mondy**	**19.91**	**10**	*e*P	**P**	**02 11 02.4**	**+1.1**
MOY				pmax	pmax		
	comp=Z,23nm,1.8s						
ARSB	**Arslanbob**	**20.23**	**303**	P	**P**	**02 11 06.4**	**+1.5**
ARSB				pmax	pmax		
	comp=Z,16nm,1.2s						
ARSB	**Arslanbob**	**20.23**	**303**	P	**P**	**02 11 06.4**	**+1.5**
ARSB				IAmb	IAmb	02 11 28.6	
	comp=Z,16nm,1.2s						
TLY	**Talaya**	**20.41**	**15**	LR	LR	02 19 58.0	
	comp=Z,74nm,20.9s,baz=190,slow=40						
HYB	**Hyderabad**	**21.24**	**230**	*i* P	**P**	**02 11 13.5**	**-2.3**
KBL	**Kabul**	**22.25**	**283**	P	**P**	**02 11 26.8**	**0.0**
KBL				pmax	pmax		
	comp=Z,20nm,1.1s						
KBL	**Kabul**	**22.25**	**283**	P	**P**	**02 11 26.8**	**0.0**
KBL				IAmb	IAmb	02 11 50.1	
	comp=Z,20nm,1.1s						
KURBB	**Kurchatov Arra**	**22.35**	**331**	P	**P**	**02 11 27.2**	**-0.3**
	comp=Z,8.6nm,1.0s,baz=140,slow=10,SNR=28						
KURK	**Kurchatov**	**22.39**	**331**	*ce*P	**P**	**02 11 26.6**	**-1.2**
KURK				pmax	pmax		
	comp=Z,15nm,1.0s						
KURK	**Kurchatov**	**22.39**	**331**	P	**P**	**02 11 27.5**	**-0.3**
KURK				IAmb	IAmb	02 11 30.3	
	comp=Z,14nm,1.0s						
KKAR	**Karatay Array**	**22.57**	**306**	P	**P**	**02 11 29.9**	**0.0**
KKAR				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KKAR	**Karatay Array**	**22.57**	**306**	P	**P**	**02 11 29.9**	**0.0**
ZAA0	**Zalesovo Array**	**23.11**	**344**	P	**P**	**02 11 34.2**	**-1.2**
ZALV	**Zalesovo Beam**	**23.11**	**344**	P	**P**	**02 11 34.8**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=148,slow=8.7,SNR=8.3						
CN2	**Changchun**	**26.14**	**55**	*e*P	**P**	**02 12 06.2**	**+2.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSRS	**Korea Array**	**27.03**	**70**	P	**P**	**02 12 10.3**	**-1.5**
	comp=Z,1.1nm,0.6s,baz=260,slow=9.2,SNR=3.8						
BVAR	**Borovoye Array**	**27.65**	**326**	P	**P**	**02 12 16.7**	**-0.6**
	comp=Z,2.7nm,0.9s,baz=128,slow=12,SNR=9.7						
BRVK	**Borovoye**	**27.72**	**326**	*i* P	**P**	**02 12 18.1**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRVK	**Borovoye**	**27.72**	**326**	P	**P**	**02 12 17.5**	**-0.4**
BRVK				IAmb	IAmb	02 12 19.4	
	comp=Z,4.9nm,0.9s						
JOW	**Kunigami**	**28.91**	**92**	P	**P**	**02 12 29.4**	**+0.7**
GEYT	**Alibeck**	**31.04**	**291**	P	**P**	**02 12 46.8**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=46,slow=11,SNR=4.4						
KLR	**Kul'dur**	**31.94**	**47**	*i* P	**P**	**02 12 54.2**	**-1.1**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AKTO	**Aktyubinsk**	**33.15**	**315**	P	**P**	**02 13 04.3**	**-1.5**
	comp=Z,2.5nm,0.8s,baz=110,slow=8.8,SNR=7.4						
ARU	**Arti**	**35.24**	**325**	*d i*P	**P**	**02 13 24.4**	**+0.4**
ARU						02 14 38.4	
ARU				S	**S**	**02 19 00.3**	**+2.9**
ARU				SS	**SnSn**	**02 21 19.4**	**+4.7**
ARU				pmax	pmax		
	comp=Z,12nm,1.1s						
ARU	**Arti**	**35.24**	**325**	P	**P**	**02 13 23.9**	**-0.1**
YAK	**Yakutsk**	**37.06**	**26**	LR	LR	02 29 10.4	
	comp=Z,1μm,22.0s,baz=348,slow=37						
NRIK	**Noril'sk**	**37.52**	**355**	P	**P**	**02 13 42.7**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=154,slow=7.6,SNR=4.3						
NRIK	**Noril'sk**	**37.52**	**355⇑**	*e*P	**P**	**02 13 43.1**	**-0.1**
KIRV	**Kirov**	**40.63**	**325⇑**	*e*P	**P**	**02 14 10.0**	**+0.7**
AKH	**Akhalkalaki**	**42.16**	**298**	P	**P**	**02 14 22.8**	**+0.4**
AKH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
AKH	**Akhalkalaki**	**42.16**	**298**	P	**P**	**02 14 22.8**	**+0.4**
AKH				IAmb	IAmb	02 14 24.7	
	comp=Z,10nm,1.1s						
KBZ	**Khabaz**	**42.46**	**301**	P	**P**	**02 14 23.3**	**-1.2**
	comp=Z,1.7nm,0.9s,baz=152,slow=2.7,SNR=5.2						
KIV	**Kislovodsk**	**42.60**	**302**	*e*P	**P**	**02 14 27.3**	**+1.4**
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
KIV	**Kislovodsk**	**42.60**	**302**	P	**P**	**02 14 26.8**	**+0.9**
KIV				IAmb	IAmb	02 14 29.2	
	comp=Z,4.4nm,0.8s						
PRGR	**Permogore**	**43.45**	**328**	*e*P	**P**	**02 14 31.3**	**-1.0**
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	**Storozhevoye**	**45.01**	**312**	*e*P	**P**	**02 14 43.5**	**-1.5**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LPSR	**Galich'ya Gora**	**45.23**	**314**	*e*P	**P**	**02 14 45.9**	**-0.8**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MA2	**Magadan**	**45.41**	**36**	*ce*P	P	02 14 45.8	-2.3
MA2				pmax	pmax		
	comp=Z,7.0nm,1.7s						
MA2	**Magadan**	**45.41**	**36**	P	**P**	**02 14 47.3**	**-0.7**
MA2				IAmb	IAmb	02 14 52.7	
	comp=Z,3.8nm,0.9s						
KLMR	**Klimovskoe**	**46.07**	**326**	*e*P	**P**	**02 14 52.3**	**-1.0**
KLMR				pmax	pmax		
	comp=Z,16nm,0.8s						
KLMR	**Klimovskoe**	**46.07**	**326**	*e*P	**P**	**02 14 52.3**	**-1.0**
KLMR				AMP		02 14 54.4	
	comp=Z,16nm,0.8s						
ANN	**Anapa**	**46.30**	**303**	*e*P	**P**	**02 14 54.2**	**-1.1**
ANN				*e**PP	**pP**	**02 14 57.5**	**-2.5**
ANN				*e*S	**S**	**02 21 43.2**	**+0.9**
ANN				pmax	pmax		
	comp=Z,11nm,0.9s						
OBN	**Obninsk**	**46.80**	**318⇓**	*e*P	**P**	**02 14 59.0**	**-0.1**
OBN				*e*		02 16 35.9	
OBN				*e*		02 16 53.4	
OBN				pmax	pmax		
	comp=Z,19nm,1.7s						
OBN				MLR	MLR		
	comp=Z,34nm,17.0s						
SEY	**Seymchan**	**46.91**	**32**	*i* P	P	02 14 53.8	-6.0
TMCR	**Tamitsa**	**47.50**	**330**	*e*P	**P**	**02 15 03.6**	**-0.8**
TMCR				pmax	pmax		
	comp=Z,23nm,1.0s						
GAZ	**Gaziantep**	**47.60**	**293**	P	**P**	**02 15 05.3**	**-0.4**
BR131	**Keskin Array S**	**49.83**	**297**	IAmb	IAmb	02 16 12.6	
	comp=Z,12nm,2.0s						
BRTR	**Keskin Array B**	**49.83**	**297**	P	**P**	**02 15 22.0**	**-0.9**
	comp=Z,1.6nm,0.9s,baz=111,slow=4.3,SNR=9.0						
SOEI	**Soe**	**49.89**	**142**	P	**P**	**02 15 26.4**	**+2.9**
AKASG	**Malin Array Be**	**51.30**	**312**	P	**P**	**02 15 32.2**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=76,slow=6.7,SNR=6.2						
AKBB	**Malin Array Si**	**51.30**	**312**	*ce*P	**P**	**02 15 33.8**	**+0.2**
FINES	**FINESS Array B**	**52.61**	**326**	P	P	02 15 41.6	-1.6
	comp=Z,3.1nm,0.9s,baz=120,slow=11,SNR=7.5						
FINES	**FINESS Array B**	**52.61**	**326**	*ce*P	**P**	**02 15 43.2**	**0.0**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	**ARCESS Array B**	**53.31**	**336**	P	**P**	**02 15 49.1**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=72,slow=8.6,SNR=1.1						
VRI	**Vrincioaia**	**53.64**	**306**	P	**P**	**02 15 52.0**	**+0.9**
VRI				pmax	pmax		
	comp=Z,6.0nm,1.8s						
MLR	**Muntele Rosu**	**54.25**	**306**	P	**P**	**02 15 56.0**	**+0.3**
MLR				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KWP	**Kalwaria Pacla**	**55.60**	**311**	P	**P**	**02 16 04.7**	**-0.6**
KWP				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NB2	**NORSAR Subarra**	**59.78**	**326**	P	P	02 16 32.9	-1.6
	comp=Z,1.6nm,0.8s,baz=77,slow=6.9						
NOA	**NORSAR Array B**	**59.78**	**326**	P	P	02 16 32.7	-1.9
	comp=Z,1.9nm,0.8s,baz=78,slow=6.9,SNR=9.9						
GEC2	**GERESS Array S**	**61.51**	**312**	P	**P**	**02 16 45.7**	**-0.9**
GEC2				pmax	pmax		
	comp=Z,3.0nm,1.7s						
GERES	**GERESS Array B**	**61.51**	**312**	P	P	02 16 44.5	-2.1
	comp=Z,0.1nm,0.3s,baz=54,slow=7.4,SNR=1.4						
GERES				LR	LR	02 45 17.7	
	comp=Z,17nm,18.8s,baz=87,slow=38						
WRAB	**Tennant Creek**	**63.73**	**139**	*ce*P	**P**	**02 17 00.3**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,24nm,2.5s						
WRA	**Warramunga Arr**	**63.73**	**139**	P	P	02 16 59.2	-2.4
	comp=Z,3.4nm,0.8s,baz=331,slow=7.2,SNR=17						
KMBO	**Kilima Mbogo**	**64.19**	**251**	P	**P**	**02 17 04.8**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=44,slow=7.8,SNR=4.5						
KMBO	**Kilima Mbogo**	**64.19**	**251**	IAmb	IAmb	02 17 58.9	
	comp=Z,4.6nm,1.1s						
AS31	**Alice Springs**	**66.51**	**142**	P	**P**	**02 17 20.9**	**+1.2**
AS31				IAmb	IAmb	02 17 22.2	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,7.3nm,1.9s						
ASAR	Alice Springs	66.51	142	P	P	02 17 17.8	-1.9
	comp=Z,3.2nm,0.7s,baz=326,slow=6.7,SNR=27						
BPAW	Bear Paw Mtn.	70.89	25	P	P	02 17 46.0	-0.5
BPAW				IAmb	IAmb	02 17 49.3	
	comp=Z,2.6nm,0.8s						
PPLA	Purkeypile	71.13	27	P	P	02 17 47.6	-0.5
PRP	Porcupine Dome	71.92	23	P	P	02 17 52.2	-0.6
PRP				IAmb	IAmb	02 17 56.5	
	comp=Z,3.7nm,0.9s						
ILAR	Eielson Array	71.93	24	P	P	02 17 50.9	-1.9
	comp=Z,1.0nm,0.8s,baz=294,slow=5.3,SNR=11						
RES	Resolute Bay	73.22	3	P	P	02 17 58.7	-1.5
	comp=Z,1.5nm,0.9s,baz=311,slow=3.6,SNR=6.3						
SML	Sawmill	73.23	26	P	P	02 17 59.3	-1.2
SCRK	Sand Creek	73.42	23	P	P	02 18 00.3	-1.4
SCRK				IAmb	IAmb	02 18 04.4	
	comp=Z,4.8nm,0.9s						
KNK	Knik Glacier	73.42	27	P	P	02 18 00.9	-0.7
INK	Inuvik	73.45	17	P	P	02 18 00.4	-1.2
	comp=Z,2.7nm,0.9s,baz=310,slow=7.6,SNR=9.9						
INK	Inuvik	73.45	17	IAmb	IAmb	02 18 04.8	
	comp=Z,3.3nm,0.9s						
EGAK	Eagle	73.81	22	IAmb	IAmb	02 18 26.3	
	comp=Z,3.5nm,1.1s						
KDAK	Kodiak Island	73.87	31	P	P	02 18 02.9	-1.3
	comp=Z,4.7nm,1.0s,baz=310,slow=4.7,SNR=4.6						
KDAK	Kodiak Island	73.87	31	P	P	02 18 02.5	-1.8
KDAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KDAK	Kodiak Island	73.87	31	P	P	02 18 02.9	-1.3
KDAK	Kodiak Island	73.87	31	P	P	02 18 02.5	-1.8
C36M	Paulatuk	74.74	14	P	P	02 18 07.4	-1.7
C36M				IAmb	IAmb	02 18 11.9	
	comp=Z,5.3nm,0.9s						
ESDC	Sonseca Array	76.79	309	P	P	02 18 19.0	-2.5
	comp=Z,0.7nm,1.0s,baz=12,slow=6.6,SNR=3.7						
STKA	Stephens Creek	77.13	141	P	P	02 18 21.6	-1.7
	comp=Z,1.3nm,0.6s,baz=343,slow=10,SNR=3.6						
STKA	Stephens Creek	77.13	141	IAmb	IAmb	02 21 00.4	
	comp=Z,8.7nm,1.9s						
SKAG	Skagway	79.52	24	IAmb	IAmb	02 18 40.5	
	comp=Z,5.1nm,0.8s						
YKA	Yellowknife Ar	82.63	14	P	P	02 18 51.5	-1.2
	comp=Z,1.3nm,0.7s,baz=330,slow=4.5,SNR=14						
TORD	Torodi Ar. Bea	86.32	283	P	P	02 19 11.0	-1.3
	comp=Z,1.4nm,1.1s,baz=43,slow=3.9,SNR=5.6						
FFC	Flin Flon	92.18	10	P	P	02 19 37.8	-1.4
FFC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FFC	Flin Flon	92.18	10	P	P	02 19 37.8	-1.4

IDC 04 02:10:47.4±24.0, 21°.74S×177°.11W, h494km±209km, mb3.0/3, mb1 3.3/3, mb1mx2.9/40, mbtmp3.9/3, Error ellipse: s-maj=299.9km s-min=45.8km az=135.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	45.06	258	P	P	02 18 18.9	+0.1
	1.1nm,0.8s,baz=91,slow=7.8,SNR=8.3						
ASAR				PcP	pP	02 19 50.4	+0.6
	0.3nm,0.4s,baz=109,slow=3.8,SNR=4.0						
WRA	Warramunga Arr	45.27	263	P	P	02 18 20.1	-0.3
	0.6nm,0.3s,baz=97,slow=7.4,SNR=14						
WRA				PcP	PcP	02 19 47.9	-2.2
	0.3nm,0.3s,baz=87,slow=1.9,SNR=2.6						
ILAR	Eielson Array	89.34	12	P	P	02 22 49.8	-0.3
	0.4nm,0.4s,baz=218,slow=5.6,SNR=6.4						
ARCES	ARCESS Array B	130.29	350	PKP	PKPdf	02 29 00.5	+0.2
	2.8nm,0.9s,baz=337,slow=5.3,SNR=4.0						
AKASG	Malin Array Be	144.50	331	PKP	PKPbc	02 29 24.7	-2.0
	0.8nm,0.5s,baz=42,slow=4.4,SNR=9.7						
BRTR	Keskin Array B	148.29	311	PKPbc	PKPbc	02 29 37.6	-0.2
	0.5nm,0.6s,baz=137,slow=5.3,SNR=4.8						
GERES	GERESS Array B	151.61	345	PKPbc	PKiKP	02 29 46.0	+0.4
	0.4nm,0.6s,baz=333,slow=1.5,SNR=5.4						

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*MOS **04** 02:10:53.2±1.4, 44°.53N×147°.49E, h114km, mb3.9/2, Error ellipse: s-maj=20.8km s-min=10.8km az=46.1*
*SKHL **04** 02:10:54.8±0.2, 44°.41N×147°.44E, h114km±4km, mb5.2/5, msh5.3/5*
*JMA **04** 02:10:55.3±0.3, 44°.17N×147°.58E, h90km, M3.6*
*IDC **04** 02:10:56.7±2.9, 44°.99N×147°.26E, h104km±25km, mb3.3/9, mb1 3.6/11, mb1mx3.2/55, mbtmp3.7/11, Error ellipse: s-maj=52.3km s-min=18.7km az=170.0*
ISC 04 02:10:53.6±0.9, 44°.35N±0°.08×147°.53E±0°.08, h109km±6km, n44, σ1s53/58, mb3.7/13, 1C-5D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.92	15	*i* P	Pn	02 11 15.0	+1.2
KUR				AMB	AMB	02 11 17.0	
	70nm,0.2s						
KUR				*i* S	Sn	02 11 30.3	+1.2
KUR				A	A	02 11 30.4	
	290nm,0.3s						
KUR				A	A	02 11 30.4	
	320nm,0.3s						
KUR	Kuril'sk	0.92	15	*d i*PN	Pn	02 11 15.0	+1.2
KUR				*i* S	Sn	02 11 29.8	+0.7
KUR				pmax	pmax		
	comp=Z,70nm,0.3s						
KUR				smax	smax		
	comp=N,208nm,0.4s						
KUR				smax	smax		
	comp=E,210nm,0.6s						
YUK	Yuzh-Kuril'sk	1.24	256	*i* P	Pn	02 11 18.4	+1.2
YUK				AMB	AMB	02 11 18.9	
	comp=E,170nm,0.4s						
YUK				AMB	AMB	02 11 18.9	
	comp=E,120nm,0.4s						
YUK				AMB	AMB	02 11 18.9	
	comp=E,2μm,0.4s						
YUK				*i* S	Sn	02 11 36.1	+0.9
YUK				A	A	02 11 37.0	
	comp=E,540nm,0.4s						
YUK				A	A	02 11 37.0	
	comp=E,590nm,0.4s						
YUK	Yuzh-Kuril'sk	1.24	256	*d i*PN	Pn	02 11 18.3	+1.1
YUK				*i* S	Sn	02 11 35.5	+0.3
YUK				pmax	pmax		
	comp=N,169nm,0.2s						
YUK				pmax	pmax		
	comp=Z,2μm,0.2s						
YUK				pmax	pmax		
	comp=E,122nm,0.1s						
YUK				smax	smax		
	comp=E,591nm,0.2s						
YUK				smax	smax		
	comp=N,541nm,0.3s						
LAGR	Lagunnoye	1.29	258	*i* P	Pn	02 11 18.4	+0.6
LAGR				AMB	AMB	02 11 18.8	
	comp=N,60nm,0.3s						
LAGR				AMB	AMB	02 11 18.8	
	comp=N,110nm,0.3s						
LAGR				AMB	AMB	02 11 18.8	
	comp=N,1μm,0.3s						
LAGR				*i* S	Sn	02 11 36.2	+0.1
LAGR				A	A	02 11 39.0	
	comp=N,550nm,0.4s						
LAGR				A	A	02 11 39.0	
	comp=N,930nm,0.4s						
LAGR	Lagunnoye	1.29	258	⇓ *i*PN	Pn	02 11 18.4	+0.6
LAGR				*i* S	Sn	02 11 36.2	+0.1
LAGR				pmax	pmax		
	comp=E,109nm,0.2s						
LAGR				pmax	pmax		
	comp=Z,1μm,0.2s						
LAGR				pmax	pmax		
	comp=N,61nm,0.1s						
LAGR				smax	smax		
	comp=N,551nm,0.4s						
LAGR				smax	smax		
	comp=E,926nm,0.4s						
GRPR	Tuman	1.31	255	*e*P	Pn	02 11 19.0	+0.9
GRPR				AMB	AMB	02 11 23.0	
	comp=E,140nm,0.4s						
GRPR				AMB	AMB	02 11 23.0	
	comp=E,680nm,0.4s						
GRPR				AMB	AMB	02 11 23.0	
	comp=E,700nm,0.4s						
GRPR				*e*S	Sn	02 11 37.0	+0.3
GRPR				A	A	02 11 38.0	
	comp=E,700nm,0.4s						
GRPR				A	A	02 11 38.0	
	comp=E,290nm,0.4s						
GRPR	Tuman	1.31	255	*e*PN	Pn	02 11 19.0	+0.9
GRPR				*e*S	Sn	02 11 37.0	+0.3
GRPR				pmax	pmax		
	comp=Z,699nm,0.4s						
GRPR				pmax	pmax		
	comp=N,144nm,0.2s						
GRPR				pmax	pmax		
	comp=E,679nm,0.3s						
GRPR				smax	smax		
	comp=E,286nm,0.2s						
GRPR				smax	smax		
	comp=N,695nm,0.4s						
GLVR	Golovnino	1.57	248	*i* P	Pn	02 11 22.3	+1.2
GLVR				AMB	AMB	02 11 22.6	
	comp=N,20nm,0.3s						
GLVR				AMB	AMB	02 11 22.6	
	comp=N,20nm,0.3s						
GLVR				AMB	AMB	02 11 22.6	
	comp=N,580nm,0.3s						
GLVR				*i* S	Sn	02 11 42.9	+0.8
GLVR				A	A	02 11 43.0	
	comp=N,400nm,0.4s						
GLVR				A	A	02 11 43.0	
	comp=N,560nm,0.4s						
GLVR	Golovnino	1.57	248	*d i*PN	Pn	02 11 22.3	+1.2
GLVR				*i* S	Sn	02 11 42.9	+0.8
GLVR				pmax	pmax		
	comp=N,15nm,0.1s						
GLVR				pmax	pmax		
	comp=E,21nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,578nm,0.1s						
GLVR				smax	smax		
	comp=N,398nm,0.3s						
GLVR				smax	smax		
	comp=E,560nm,0.3s						
NEM2	Nemuro 2	1.62	233	P	Pn	02 11 22.1	+0.3
NEM2				*e*S	Sn	02 11 42.4	-0.8
NMR	Nemuro--Hokkai	1.63	234	*i* P	Pn	02 11 22.4	+0.6
NMR	Nemuro--Hokkai	1.63	234	⇓ *i*PN	Pn	02 11 22.3	+0.5
NMR				*i* S	Sn	02 11 42.7	-0.6
JRA	Rausu	1.78	258	P	Pn	02 11 25.1	+1.4
JNSB	Nemuroshibetsu	1.91	253	P	Pn	02 11 26.6	+1.3
JKHN	Kushirohamanak	2.13	235	P	Pn	02 11 28.8	+0.6
JKHN				*e*S	Sn	02 11 53.8	-0.8
JNK	Nakash	2.17	250	P	Pn	02 11 30.1	+1.5
JAK	Akkeshi	2.46	238	P	Pn	02 11 32.9	+0.5
JAK				*e*S	Sn	02 12 01.5	-0.7
JTKR	Abashiri--Toko	2.63	263	P	Pn	02 11 36.2	+1.6
JAR	Ashorobuto	2.92	250	P	Pn	02 11 40.3	+1.9
JAR				*e*S	Sn	02 12 14.5	+1.5
JOB	Onbets	3.05	243	P	Pn	02 11 41.5	+1.4
JOB				*e*S	Sn	02 12 16.1	+0.1
JKK2	Kamakawa 2	3.48	264	P	Pn	02 11 48.4	+2.5
JCH	Churui	3.49	242	P	Pn	02 11 46.9	+0.8
JCH				*e*S	Sn	02 12 25.8	-0.8
JKA	Kamikawa-asahi	3.55	268	*i* P	Pn	02 11 48.2	+1.4
ASAJ	Asahikawa	3.56	268	P	Pn	02 11 48.2	+1.3
	comp=E,1.7nm,0.3s,baz=60,slow=23,SNR=8.1						
ERM	Erimo	3.96	235	*i* PN	Pn	02 11 54.4	+2.1
JNBK	Urakawa-nobuka	4.05	241	P	Pn	02 11 53.8	+0.3
PETK	Petropavlovsk-	11.03	34	P	Pn	02 13 25.7	-2.2
	comp=E,0.1nm,0.3s,baz=193,slow=12,SNR=2.4						
BMKR	Bomnak	15.91	317	*e*P	Pn	02 14 28.6	-2.4
BILL	Bilibino	25.71	16	⇑ *e*P	P	02 16 06.8	-6.4
BILL				*e*S	S	02 20 21.6	-12
BILL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BILL				MLR	MLR		
	comp=Z,46nm,17.0s						
HHC	Hu-ho-hao-te	26.57	275	*e*P	P	02 16 11.9	-9.5
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,170nm,8.9s						
TLY	Talaya	29.88	300	*i* P	P	02 16 38.8	-12
TLY				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	Makanchi Array	44.55	297	P	P	02 18 54.4	+0.1
	comp=Z,0.4nm,0.5s,baz=82,slow=8.2,SNR=5.7						
KURK	Kurchatov	45.43	304	*e*P	P	02 19 01.1	0.0
KURK	Kurchatov	45.43	304	P	P	02 19 01.1	0.0
KURBB	Kurchatov Arra	45.51	304	P	P	02 19 01.1	-0.7
	comp=Z,0.7nm,0.3s,baz=76,slow=8.5,SNR=7.8						
INK	Inuvik	45.75	31	P	P	02 19 03.6	+0.3
	comp=Z,0.7nm,0.8s,baz=252,slow=6.3,SNR=4.1						
KSH	Kashi	51.90	291	P	P	02 19 43.4	-7.6
KSH				pP	pP	02 20 06.2	-11
KSH				pmax	pmax		
	comp=Z,27nm,1.2s						
YKA	Yellowknife Ar	55.15	34	P	P	02 20 15.8	+1.7
	comp=Z,0.2nm,0.7s,baz=291,slow=6.1,SNR=3.1						
FINES	FINESS Array B	64.47	333	P	P	02 21 15.4	-2.5
	comp=Z,1.7nm,0.8s,baz=13,slow=6.5,SNR=8.6						
NVAR	Mina Array Bea	67.03	58	P	P	02 21 37.4	+2.4
	comp=Z,0.3nm,0.6s,baz=309,slow=9.2,SNR=2.4						
KBZ	Khabaz	69.61	312	P	P	02 21 52.7	+1.9
	comp=Z,1.1nm,0.5s,baz=166,slow=4.1,SNR=4.4						
GERES	GERESS Array B	78.77	331	P	P	02 22 44.3	+0.3
	comp=Z,0.3nm,0.4s,baz=34,slow=5.3,SNR=5.5						
TXAR	Lajitas Array	82.09	57	P	P	02 23 04.2	+2.1
	comp=Z,0.4nm,0.5s,baz=304,slow=4.2,SNR=8.3						

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*IDC **04** 02:23:31.6±2.1, 6°.92S×129°.75E, h144km±27km, mb3.2/1, mb1 3.4/6, mb1mx3.1/35, mbtmp3.9/6, Error ellipse: s-maj=37.6km s-min=20.0km az=95.0*
ISC 04 02:23:29.9±0.9, 7°.00S±0°.06×129°.9E±0°.1, h150km, n6, σ3s08/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.25	13	P	Pn	02 25 00.8	+0.8
	5.9nm,0.3s,baz=236,slow=22,SNR=23						
SIJI				S	Sn	02 26 06.2	-4.4
	3.3nm,0.3s,baz=83,slow=22,SNR=5.6						
BATI	Baumata	6.91	242	P	Pn	02 25 10.6	+1.7
	8.9nm,0.3s,baz=52,slow=3.7,SNR=4.6						
BATI				S	Sn	02 26 23.4	-3.0
	12nm,0.3s,baz=71,slow=21,SNR=12						
FITZ	Fitzroy Crossi	11.77	200	P	Pn	02 26 14.6	+1.3
	1.0nm,0.3s,baz=27,slow=12,SNR=17						
FITZ				S	Sn	02 28 19.4	-4.1
	1.3nm,0.3s,baz=279,slow=20,SNR=6.2						
WRA	Warramunga Arr	13.58	162	P	P	02 26 39.5	-0.9
	0.7nm,0.3s,baz=342,slow=13,SNR=21						
WRA				S	Sn	02 29 04.4	-2.5
	1.5nm,0.3s,baz=333,slow=24,SNR=6.4						
ASAR	Alice Springs	17.02	167	P	Pn	02 27 23.1	+4.1
	0.2nm,0.3s,baz=356,slow=13,SNR=13						
ASAR				S	S	02 30 27.9	-0.5
	0.6nm,0.3s,baz=318,slow=16,SNR=9.0						
MKAR	Makanchi Array	68.16	327	P	P	02 34 15.4	+1.5
	0.3nm,0.5s,baz=122,slow=7.3,SNR=5.0						

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*IDC **04** 02:42:04.4±6.4, 52°.14N×174°.79W, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.2/47, mbtmp3.4/5, ML3.9/1, MS2.9/1, Ms1 2.9/1, ms1mx2.2/30, Error ellipse: s-maj=174.1km s-min=27.6km az=163.0*
*NEIC **04** 02:42:05.3±0.9, 51°.32N±0°.08×174°.32W±0°.09, h35km±2km, mb3.8/5, Error ellipse: s-maj=14.5km s-min=7.3km az=153.0*
ISC 04 02:42:05.3±1.3, 51°.3N±0°.1×174°.29W±0°.07, h38km, n18, σ0s75/19, mb3.7/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	Atka Island	0.92	4		Pn	02 42 21.0	-0.7
ATKA				Sn	Sn	02 42 32.9	-0.8
ADK	Adak	1.61	293		Pn	02 42 30.7	-0.4
ADK				Sn	Sn	02 42 51.5	+0.9
NIKH	Nikolski High	3.75	61	Pn	Pn	02 43 00.6	+0.1
UNV	Unalaska Valle	5.40	59	Pn	Pn	02 43 24.2	+1.1
SPIA	Saint Paul Isl	6.36	20	Pn	Pn	02 43 37.7	+1.4
SMY	Shemya	7.31	286	Pn	Pn	02 43 49.0	-0.3
FID	Port Fidalgo	18.07	48	P	Pn	02 46 13.0	0.0
FID				IAmb	IAmb	02 46 30.2	
	comp=Z,5.4nm,0.6s						
CCB	Clear Creek Bu	19.20	36	P	P	02 46 25.4	0.0
IL31		19.60	36	P	P	02 46 30.6	+0.8
ILAR	Eielson Array	19.60	36	P	P	02 46 28.5	-1.4
	comp=Z,0.3nm,0.3s,baz=236,slow=8.5,SNR=17						
TOLK	Toolik Lake Re	21.08	25	P	P	02 46 46.5	+0.6
EGAK	Eagle	21.80	39	P	P	02 46 53.5	0.0
EGAK				IAmb	IAmb	02 47 01.9	
	comp=Z,3.6nm,0.8s						
INK	Inuvik	25.94	34	P	P	02 47 33.8	+0.3
	comp=Z,0.5nm,0.7s,baz=250,slow=6.0,SNR=2.4						
INK	Inuvik	25.94	34	P	P	02 47 33.3	-0.2
INK				IAmb	IAmb	02 47 34.7	
	comp=Z,4.3nm,1.5s						
YKA	Yellowknife Ar	33.24	47	P	P	02 48 38.7	+0.4
	comp=Z,0.1nm,0.4s,baz=292,slow=9.9,SNR=2.3						
KLR	Kul'dur	33.91	288	P	P	02 48 44.3	0.0
	comp=Z,0.8nm,0.5s,baz=54,slow=8.7,SNR=2.1						
TXAR	Lajitas Array	55.86	84	LR	LR	03 15 08.9	
	comp=Z,10nm,18.4s,baz=0.0,slow=35						
MKAR	Makanchi Array	62.27	311	P	P	02 52 22.4	-0.7
	comp=Z,0.2nm,0.3s,baz=49,slow=6.4,SNR=4.2						

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*IDC **04** 03:07:21.5±0.5, 6°.39S×154°.95E, h0km, mb4.4/20, mb1 4.5/22, mb1mx4.3/46, mbtmp4.4/22, ML3.9/2, MS3.3/9, Ms1 3.3/9, ms1mx3.0/32, Error ellipse: s-maj=17.7km s-min=12.4km az=110.0*
*NEIC **04** 03:07:24.9±1.8, 6°.4S±0°.1×155°.0E±0°.1, h21km±4km, mb4.5/31, Error ellipse: s-maj=17.6km s-min=13.3km az=46.0*
*DJA **04** 03:07:35.5±0.6, 8°S±7°×15°5E±°, h159km±8km, M4.5/14, mB5.6/7, mb4.6/14, MLv3.9/1, Mw(mB)5.1/7*
ISC 04 03:07:29.3±0.4, 6°.45S±0°.07×155°.01E±0°.07, h56km, n87, σ1s29/82, mb4.5/38, MS3.3/9, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.62	308		Pn	03 08 26.8	+3.9
KRVT	Keravat (AS076	3.66	305	Pn	Pn	03 08 17.9	-5.5
	2.3nm,0.3s,baz=282,slow=23,SNR=1.0						
KRVT				Sn	Sn	03 09 05.2	-0.1
	62nm,0.3s,baz=37,slow=23,SNR=6.6						
HNR	Honiara	5.72	122	Pn	Pn	03 08 52.8	+1.2
	14nm,0.3s,baz=360,slow=3.5,SNR=4.0						
HNR				LR	LR	03 11 19.4	
	comp=Z,320nm,18.1s,baz=328,slow=41						
HNR	Honiara	5.72	122	Pn	Pn	03 08 50.1	-1.6
PMG	Port Moresby	8.32	249		Pn	03 09 27.3	0.0
CTA	Charters Tower	16.01	211	Pn	Pn	03 11 11.3	+0.3
	0.2nm,0.3s,baz=31,slow=14,SNR=4.4						
DZM	Mont Dzumac	19.06	146	P	P	03 11 48.0	+0.7
	1.9nm,0.3s,baz=273,slow=8.2,SNR=21						
DZM				LR	LR	03 18 18.2	
	comp=Z,111nm,19.6s,baz=258,slow=34						
DZM	Mont Dzumac	19.06	146	IAmb	IAmb	03 11 50.7	
	comp=Z,18nm,0.8s						
FAKI	Fak Fak	22.95	278	P	P	03 12 30.7	+1.5
	comp=Z,16nm,0.9s						
WR0	Warramunga Arr	23.99	234	P	P	03 12 39.3	+0.3
WB0	Warramunga Arr	24.01	235	P	P	03 12 39.6	+0.5
WB0				IAmb	IAmb	03 12 41.0	
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	24.13	234	P	P	03 12 40.4	+0.2
WB2	Warramunga Arr	24.14	234	P	P	03 12 41.0	+0.7
WRA	Warramunga Arr	24.15	234	P	P	03 12 41.0	+0.6
	comp=Z,6.4nm,0.5s,baz=58,slow=9.8,SNR=40						
WRA				PcP	PcP	03 16 20.1	-0.2
	comp=Z,0.3nm,0.3s,baz=60,slow=2.6,SNR=6.2						
WRA				S	S	03 16 58.4	+3.8
	comp=Z,2.7nm,1.2s,baz=61,slow=16,SNR=4.8						
SIJI	Sorong	24.33	282	P	P	03 12 41.2	-0.8
	comp=Z,7.8nm,0.5s,baz=88,slow=8.5,SNR=11						
AS31	Alice Springs	26.55	228	P	P	03 13 02.0	-0.2
ASAR	Alice Springs	26.55	228	P	P	03 13 01.8	-0.4
	comp=Z,2.0nm,0.7s,baz=57,slow=9.3,SNR=42						
ASAR				PcP	PcP	03 16 26.1	+0.4
	comp=Z,2.1nm,0.6s,baz=64,slow=2.4,SNR=14						
ASAR				LR	LR	03 22 42.3	
	comp=Z,86nm,18.4s,baz=110,slow=35						
LBMI	Labuha	28.05	281	P	P	03 13 16.3	+0.7
	comp=Z,1μmcomp=Z,46nm,0.8s						
STKA	Stephens Creek	28.24	205	P	P	03 13 16.8	-0.4
	comp=Z,1.2nm,0.5s,baz=31,slow=13,SNR=5.1						
STKA				LR	LR	03 24 42.2	
	comp=Z,90nm,18.8s,baz=24,slow=37						
STKA	Stephens Creek	28.24	205	IAmb	IAmb	03 13 22.4	
	comp=Z,5.2nm,1.6s						
H11N1	WAKE ISLAND Hy	28.50	24	H	H	03 43 10.4	
	baz=276,slow=75,SNR=192						
H11N3	WAKE ISLAND Hy	28.52	24	H	H	03 43 11.6	
	baz=276,slow=75,SNR=47						
H11N2	WAKE ISLAND Hy	28.52	24	T	T	03 43 10.6	
	baz=276,slow=75,SNR=217						
EDFI	Ende, Flores	33.10	264	P	P	03 13 56.9	-3.5
	comp=Z,15nm,0.8s						
MPSI	Mapaga	35.69	280	P	P	03 14 23.0	+0.4
	comp=Z,11nm,0.9s						
PLAI	Plampang	36.97	264	P	P	03 14 30.8	-2.8
	comp=Z,44nm,0.7s						
JNU	Nakatsue	45.54	331	P	P	03 15 42.2	-1.4
	comp=Z,5.0nm,0.7s,baz=195,slow=2.9,SNR=4.6						
MJAR	Matsushiro Arr	45.57	341	LR	LR	03 35 04.7	
	comp=Z,12nm,18.6s,baz=170,slow=37						
KSRS	Korea Array	50.47	332	P	P	03 16 20.9	-0.6
	comp=Z,2.1nm,0.7s,baz=139,slow=7.2,SNR=7.5						
KSRS				LR	LR	03 36 30.1	
	comp=Z,10nm,19.5s,baz=156,slow=35						
NJ2	Nanjing	51.51	320	*e*P	P	03 16 28.7	-0.8
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
IPM	Ipoh	54.98	280	P	P	03 16 54.2	-1.2
MNSI	Mandailing Nat	55.79	275	P	P	03 16 59.9	-1.3
GSI	Gunungsitoli	57.85	276	P	P	03 17 14.1	-1.7
KLR	Kul'dur	59.05	342	P	P	03 17 23.5	0.0
	comp=Z,1.2nm,0.5s,baz=174,slow=5.9,SNR=5.1						
XAN	Xi'an	59.33	316	P	P	03 17 29.4	+3.6
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,100nm,4.1s						
PETK	Petropavlovsk-	59.37	2	P	P	03 17 26.1	+0.5
	comp=Z,6.6nm,0.7s,baz=181,slow=8.3,SNR=11						
PETK				LR	LR	03 38 53.4	
	comp=Z,26nm,21.6s,baz=240,slow=32						
CM31	Chiang Mai Arr	60.57	295	P	P	03 17 34.9	+0.4
CMAR	Chiang Mai Arr	60.57	295	P	P	03 17 35.2	+0.7
	comp=Z,12nm,0.8s,baz=115,slow=5.0,SNR=46						
CHTO	Chiang Mai	60.68	296	P	P	03 17 34.6	-0.7
HHC	Hu-ho-hao-te	61.66	324	*e*P	P	03 17 43.3	+1.6
HHC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,41nm,5.2s						
ULN	Ulaanbaatar	68.55	328	P	P	03 18 25.9	-0.3
ULN				IAmb	IAmb	03 18 27.1	
	comp=Z,4.2nm,1.1s						
SONM	Songino Array	68.89	327	P	P	03 18 27.8	-0.6
	comp=Z,2.7nm,0.7s,baz=128,slow=5.6,SNR=14						
SHL	Shillong	69.03	300	P	P	03 18 29.6	-0.2
SEY	Seymchan	69.21	359	P	P	03 18 29.8	0.0
	comp=Z,1.6nm,0.6s,baz=164,slow=8.7,SNR=7.2						
TAPN	Taplejung	73.14	301	*e*P	P	03 18 54.3	-0.4
	comp=Z,8.5nm,0.6s						
ODAN	Odare	73.27	300	*e*P	P	03 18 55.6	+0.1
	comp=Z,19nm,0.5s						
RAMN	Ramite	73.97	300	*e*P	P	03 18 59.3	-0.3
	comp=Z,6.1nm,0.5s						
JIRN	Jiri	74.52	301	*e*P	P	03 19 02.2	-0.7
BILL	Bilibino	74.74	4	P	P	03 19 02.1	-0.7
GUN	Gumba	74.85	301	*e*P	P	03 19 04.1	-0.7
	comp=Z,25nm,0.7s						
PKI	Pulchoki	75.16	301	*e*P	P	03 19 06.3	-0.3
PKIN	Phulchoki	75.17	301	*e*P	P	03 19 06.1	-0.5
	comp=Z,5.7nm,0.4s						
KKN	Kakani	75.33	301	*e*P	P	03 19 07.4	0.0
DMN	Daman	75.43	301	*e*P	P	03 19 08.1	+0.1
	comp=Z,17nm,0.6s						
GKN	Gorkha	75.94	301	*e*P	P	03 19 10.9	+0.1
KOLN	Koldanda	76.76	300	*e*P	P	03 19 15.3	-0.2
DANN	Dangsing	76.77	301	*e*P	P	03 19 15.6	-0.1
CNPM	China Poot	78.26	25	P	P	03 19 23.5	+0.5
WMQ	Urumqi	78.44	317	*e*P	P	03 19 25.3	+0.9
WMQ				pP	PcP	03 19 31.1	-2.3
WMQ				sP	pP	03 19 33.6	-6.5
WMQ				LR	LR		
	comp=N,92nm,19.1s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WMQ				LR	LR		
	comp=E,190nm,22.1s						
WMQ				LR	LR		
	comp=Z,84nm,22.1s						
RC01	Rabbit Creek A	79.76	24	P	P	03 19 31.6	+0.5
PMR	Palmer	80.28	24	P	P	03 19 34.7	+0.8
PMR				IAmb	IAmb	03 19 54.6	
	comp=Z,8.7nm,1.6s						
GLI	Glacier Island	80.73	25	P	P	03 19 37.0	+0.7
GLI				IAmb	IAmb	03 19 38.2	
	comp=Z,4.4nm,0.7s						
CCB	Clear Creek Bu	82.46	21	IAmb	IAmb	03 20 41.4	
	comp=Z,9.4nm,1.9s						
ILAR	Eielson Array	82.86	22	P	P	03 19 46.4	-1.1
	comp=Z,0.7nm,0.8s,baz=227,slow=5.8,SNR=9.5						
ILAR				LR	LR	03 53 58.8	
	comp=Z,37nm,18.8s,baz=250,slow=34						
MK31	Makanchi Array	83.01	319	P	P	03 19 48.1	-0.5
MK31				IAmb	IAmb	03 19 49.2	
	comp=Z,4.0nm,0.8s						
MKAR	Makanchi Array	83.01	319	P	P	03 19 48.1	-0.6
	comp=Z,4.8nm,0.8s,baz=105,slow=5.3,SNR=46						
MAKZ	Makanchi	83.22	319	P	P	03 19 49.2	-0.6
QSPA	South Pole Qui	83.53	180	P	P	03 19 51.5	+0.4
	comp=Z,4.5nm,0.6s,baz=286,slow=0.4,SNR=57						
QSPA	South Pole Qui	83.53	180	P	P	03 19 51.6	+0.5
ZAA0	Zalesovo Array	83.74	326	P	P	03 19 50.6	-1.5
ZAA0				IAmb	IAmb	03 19 51.6	
	comp=Z,2.9nm,0.8s						
ZALV	Zalesovo Beam	83.74	326	P	P	03 19 50.6	-1.6
	comp=Z,2.1nm,0.6s,baz=100,slow=4.7,SNR=12						
ZALV				LR	LR	03 57 31.7	
	comp=Z,8.4nm,19.5s,baz=105,slow=36						
HYT	Haines Junctio	84.88	27	IAmb	IAmb	03 19 59.8	
	comp=Z,3.8nm,0.9s						
MAW	Mawson	84.91	203	P	P	03 19 58.0	+0.1
	comp=Z,5.1nm,0.6s,baz=105,slow=5.6,SNR=17						
KDJ	Kajisay	85.34	313	P	P	03 20 00.5	-0.4
KSH	Kashi	85.67	310	P	P	03 20 04.9	+2.4
KSH				pP	pP	03 20 13.5	-4.9
KSH				PP	PP	03 23 27.9	+5.7
KSH	Kashi	85.67	310	S	S	03 30 32.2	+1.4
KSH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,190nm,6.2s						
KSH				LR	LR		
	comp=N,83nm,11.3s						
KSH				LR	LR		
	comp=E,72nm,10.5s						
KSH				LR	LR		
	comp=Z,34nm,8.6s						
KURK	Kurchatov	86.42	322	P	P	03 20 04.6	-1.0
KURK				IAmb	IAmb	03 20 18.5	
	comp=Z,3.5nm,1.2s						
INK	Inuvik	89.20	21	P	P	03 20 18.6	+0.1
	comp=Z,0.8nm,0.7s,baz=233,slow=4.9,SNR=5.1						
NVAR	Mina Array Bea	91.37	52	P	P	03 20 30.7	+1.0
	comp=Z,1.9nm,0.8s,baz=255,slow=6.5,SNR=12						
BVAR	Borovoye Array	91.87	323	P	P	03 20 29.7	-1.7
	comp=Z,1.0nm,0.7s,baz=108,slow=6.7,SNR=3.9						
YKA	Yellowknife Ar	95.85	28	P	P	03 20 50.0	+0.5
	comp=Z,1.7nm,0.9s,baz=261,slow=4.2,SNR=17						
BOSA	Boshof	120.38	232	PKP	PKPdf	03 26 14.7	-0.6
	comp=Z,2.4nm,0.8s,baz=89,slow=2.3,SNR=4.0						
GERES	GERESS Array B	126.59	329	PKP	PKPdf	03 26 26.2	-0.3
	comp=Z,0.3nm,0.6s,baz=48,slow=2.0,SNR=4.2						
SDV	Santo Domingo	134.72	84	PKP	PKPdf	03 26 43.1	+0.1
	comp=Z,5.9nm,0.7s,baz=236,slow=2.3,SNR=9.0						
SDV	Santo Domingo	134.72	84		PKPdf	03 26 42.8	-0.3
BDFB	Brasilia	148.35	134	PKPbc	PKPbc	03 27 10.3	-0.3
	comp=Z,2.1nm,0.6s,baz=154,slow=1.7,SNR=3.3						
TORD	Torodi Ar. Bea	152.90	286	PKPbc	PKPbc	03 27 20.1	-1.3
	comp=Z,1.2nm,0.3s,baz=53,slow=2.3,SNR=30						

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*IDC **04** 03:12:46.9±2.1, 40°.75S×174°.77E, h46km±19km, mb3.8/2, mb1 4.0/4, mb1mx3.7/26, mbtmp3.9/4, ML3.3/2, MS3.1/3, Ms1 3.1/3, ms1mx2.7/25, Error ellipse: s-maj=31.8km s-min=16.1km az=139.0*

*WEL **04** 03:12:48.8, 41°S±1°×17°5E±°, h42km±3km, M4.4/125, ML4.8/13, MLv4.4/125, Error ellipse: s-maj=0.0km s-min=0.0km az=89.1*

*NEIC **04** 03:12:48.5±1.7, 40°.85S±0°.03×174°.83E±0°.06, h62km±6km, Error ellipse: s-maj=7.3km s-min=2.6km az=114.0*

ISC 04 03:12:47.9±0.8**, 40°.84S**±0°.03×**174°.81E**±0°.03**, h59**km±6km**, n171, σ1s.22**/168**, mb4.3**/3**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIW	Kapiti Island	0.08	104	P	Pn	03 12 56.2	-0.6
KIW				S	Sn	03 13 01.5	-1.7
WEL	Wellington	0.44	184	P	Pn	03 13 00.1	+0.9
WEL				S	Sn	03 13 08.3	+0.9
SNZO	South Karori	0.47	189		Pn	03 13 00.3	+0.8
HOWZ	Holdsworth Sta	0.54	96	P	Pn	03 13 01.4	+1.1
TCW	Tory Channel	0.54	227	P	Pn	03 13 00.3	+0.1
TCW				S	Sn	03 13 08.9	-0.4
BHW	Baring Head	0.57	175		Pn	03 13 01.7	+1.2
BHW	Baring Head	0.57	175	P	Pn	03 13 01.7	+1.2
MRZ	Mangatainoka R	0.61	73	P	Pn	03 13 02.0	+0.9
MSWZ	Moikau Station	0.67	150		Pn	03 13 02.9	+1.1
MSWZ	Moikau Station	0.67	150	P	Pn	03 13 03.1	+1.4
DUWZ	D'Urville Isla	0.67	273	P	Pn	03 13 01.1	-0.7
PAWZ	Paruwai Farm	0.72	139	P	Pn	03 13 03.6	+1.3
OHWZ	Ohakea	0.74	32	P	Pn	03 13 03.4	+0.7
PLWZ	Palliser	0.80	155		Pn	03 13 04.6	+1.2
PLWZ	Palliser	0.80	155	P	Pn	03 13 04.6	+1.2
TIWZ	Tintock	0.82	86	P	Pn	03 13 04.7	+1.0
POWZ	Post Office Ro	0.86	59	P	Pn	03 13 04.8	+0.7
TMWZ	Te Maipa	0.86	108	P	Pn	03 13 05.3	+1.1
TRWZ	Traveller	0.87	130	P	Pn	03 13 05.4	+1.1
TUWZ	Tuamarina	0.88	228		Pn	03 13 05.1	+0.8
TUWZ	Tuamarina	0.88	228	P	Pn	03 13 05.2	+0.8
PRWZ	Pori Road	0.93	72	P	Pn	03 13 06.1	+1.0
CMWZ	Cape Campbell	1.01	206		Pn	03 13 08.3	+2.2
CMWZ	Cape Campbell	1.01	206	P	Pn	03 13 08.5	+2.4
CPWZ	Castlepoint	1.06	94	P	Pn	03 13 08.3	+1.6
WAZ	Wanganui	1.09	7	P	Pn	03 13 07.9	+0.7
BFZ	Birch Farm	1.11	82		Pn	03 13 08.2	+0.9
BFZ	Birch Farm	1.11	82	P	Pn	03 13 07.9	+0.6
BSWZ	Blackbirch Sta	1.12	218		Pn	03 13 08.6	+1.2
BSWZ	Blackbirch Sta	1.12	218	P	Pn	03 13 08.8	+1.4
NNZ	Nelson	1.14	250		Pn	03 13 08.6	+0.8
NNZ	Nelson	1.14	250	P	Pn	03 13 08.3	+0.6
DVHZ	Dannevirke	1.17	63	P	Pn	03 13 08.5	+0.3
TSZ	Takapari Road	1.18	49	P	Pn	03 13 08.8	+0.5
ANWZ	Angora Road	1.33	74	P	Pn	03 13 11.0	+0.7
PNHZ	Pukenui	1.41	49	P	Pn	03 13 11.6	+0.2
LREZ	Lake Rotokare	1.41	347	P	Pn	03 13 12.0	+0.6
WPHZ	Waipukurau	1.47	59	P	Pn	03 13 12.5	+0.3
PRHZ	Porangahau	1.51	68	P	Pn	03 13 13.1	+0.4
MTVZ	Mangateitei	1.54	20	P	Pn	03 13 14.3	+1.0
PREZ	Palmer Road	1.58	341	P	Pn	03 13 14.6	+0.9
NMEZ	Namu Road	1.59	333	P	Pn	03 13 14.5	+0.7
PKVZ	Pokaka	1.60	15	P	Pn	03 13 14.9	+0.8
MOVZ	Moawhango	1.61	27	P	Pn	03 13 14.5	+0.4
TRVZ	Turoa	1.64	21	P	Pn	03 13 15.7	+1.0
BHHZ	Black Hill Sta	1.66	36	P	Pn	03 13 15.3	+0.5
KHEZ	Kahui Hut	1.66	338	P	Pn	03 13 15.6	+0.8
DRZ	Dome Shelter	1.67	21	P	Pn	03 13 16.4	+1.2
WHVZ	Whangaehu Hut	1.67	21	P	Pn	03 13 16.1	+1.0
FWVZ	Far West T-bar	1.69	20	P	Pn	03 13 16.2	+0.9
KRHZ	Kereru	1.69	46	P	Pn	03 13 15.2	-0.1
THZ	Tophouse	1.70	237		Pn	03 13 16.4	+1.0
THZ	Tophouse	1.70	237	P	Pn	03 13 16.3	+0.9
TUVZ	Tukino	1.70	23	P	Pn	03 13 16.4	+0.9
DREZ	Durham Road	1.71	344	P	Pn	03 13 16.6	+1.1
VRZ	Vera Road	1.71	359	P	Pn	03 13 16.2	+0.7
QRZ	Quartz Range	1.73	270		Pn	03 13 15.8	+0.2
QRZ	Quartz Range	1.73	270	P	Pn	03 13 15.9	+0.2
NBEZ	Newall Road No	1.73	335	P	Pn	03 13 16.2	+0.5
PKE	Pukeiti	1.76	339	P	Pn	03 13 17.0	+0.8
PXZ	Pawanui	1.77	63	P	Pn	03 13 16.1	0.0
NGZ	Ngauruhoe	1.77	20	P	Pn	03 13 17.6	+1.2
MHEZ	Mangahewa	1.80	348	P	Pn	03 13 18.1	+1.5
WTVZ	West Tongariro	1.83	20	P	Pn	03 13 18.2	+1.1
TWVZ	Taurewa	1.83	16	P	Pn	03 13 17.8	+0.5
KHZ	Kahutara	1.84	211		Pn	03 13 18.2	+1.0
KHZ	Kahutara	1.84	211	P	Pn	03 13 18.1	+1.0
KRVZ	Karewarewa	1.86	20	P	Pn	03 13 18.6	+1.0
KWHZ	Kaweka Forest	1.88	42	P	Pn	03 13 17.8	0.0
KAHZ	Kahuranaki	1.90	57	P	Pn	03 13 17.9	-0.1
KATZ	Kakaramea	1.99	20	P	Pn	03 13 20.3	+1.0
MCHZ	McNeill Hill	2.01	47	P	Pn	03 13 20.2	+0.6
RITZ	Rihia Road	2.03	24	P	Pn	03 13 20.7	+0.9
CKHZ	Cape Kidnapper	2.10	57	P	Pn	03 13 20.6	-0.2
RATZ	Rangitukua	2.11	21	P	Pn	03 13 22.1	+1.2
BKZ	Black Stump Fm	2.12	38		Pn	03 13 20.8	-0.2
BKZ	Black Stump Fm	2.12	38	P	Pn	03 13 20.9	-0.2
HATZ	Hinemaiaia	2.19	27	P	Pn	03 13 23.2	+1.3
WATZ	Wairara	2.25	19	P	Pn	03 13 23.7	+0.9
ARHZ	Aropaoanui	2.31	48	P	Pn	03 13 23.1	-0.4
NMHZ	Naumai	2.32	42	P	Pn	03 13 23.6	-0.2
HIZ	Hauiti	2.33	1		Pn	03 13 25.4	+1.5
HIZ	Hauiti	2.33	1	P	Pn	03 13 25.1	+1.2
MRHZ	Matea Rd	2.36	32	P	Pn	03 13 23.7	-0.6
DSZ	Denniston Nort	2.43	247	P	Pn	03 13 25.8	+0.5
KUTZ	Kaahu Road	2.48	19	P	Pn	03 13 27.9	+2.0
GVZ	Greta Valley S	2.50	211	P	Pn	03 13 26.6	+0.4
GVZ				P		03 13 26.7	
MTHZ	Maungataniwha	2.53	39	P	Pn	03 13 26.1	-0.5
WPRZ	Whakapapatarin	2.54	25	P	Pn	03 13 29.9	+3.0
ALRZ	Allen Road	2.57	28	P	Pn	03 13 26.7	-0.5
WHHZ	Waihua	2.57	47	P	Pn	03 13 26.5	-0.6
TLZ	Tolley Road	2.57	13	P	Pn	03 13 27.6	+0.4
RAHZ	Arahi	2.60	43	P	Pn	03 13 26.9	-0.7
PRRZ	Plateau Road	2.64	28	P	Pn	03 13 32.2	+4.1
GRRZ	Galatos Road	2.69	22	P	Pn	03 13 29.7	+0.9
HRRZ	Handcock Road	2.70	25	P	Pn	03 13 32.1	+3.1
LTZ	Lake Taylor	2.71	223		Pn	03 13 29.7	+0.6
LTZ	Lake Taylor	2.71	223	P	Pn	03 13 29.4	+0.3
HSRZ	Hossack Road	2.76	24	P	Pn	03 13 33.2	+3.4
MUGZ	Murupara	2.81	33	P	Pn	03 13 29.3	-1.1
RRRZ	Republican Roa	2.83	28	P	Pn	03 13 35.3	+4.6
AMCZ	Amberley	2.83	214	P	Pn	03 13 30.9	+0.2
SNGZ	Shannon Statio	2.84	44	P	Pn	03 13 29.7	-1.1
HLRZ	Highlands Stat	2.85	25	P	Pn	03 13 36.4	+5.4
KNZ	Kokohu	2.86	51	P	Pn	03 13 29.5	-1.6
TARZ	Mount Tarawera	2.92	27	P	Pn	03 13 32.4	+0.4
MHGZ	Mahia Peninsul	2.92	56	P	Pn	03 13 30.8	-1.1
OMRZ	Omania	2.99	24	P	Pn	03 13 36.3	+3.4
KARZ	Kaharoa	3.03	22	P	Pn	03 13 39.3	+5.8
PRGZ	Paritu Road	3.05	52	P	Pn	03 13 32.4	-1.3
RAGZ	Rawiri	3.09	42	P	Pn	03 13 33.0	-1.3
EDRZ	Edgecumbe	3.12	29	P	Pn	03 13 39.8	+5.2
KMRZ	Kaimai	3.12	17	P	Pn	03 13 42.0	+7.3
RIGZ	Rimuhau	3.12	48	P	Pn	03 13 33.5	-1.2
URZ	Urewera	3.13	35	P	Pn	03 13 33.1	-1.7
	2.2nm,0.3s,baz=253,slow=5.8,SNR=35						
URZ				S	Sn	03 14 09.1	-2.0
	26nm,0.3s,baz=126,slow=19,SNR=2.7						
URZ				LR	LR	03 15 07.5	
	comp=Z,233nm,18.9s,baz=213,slow=46						
URZ	Urewera	3.13	35	P	Pn	03 13 33.2	-1.7
INZ	Inchbonnie	3.14	232	P	Pn	03 13 35.1	+0.2
TOZ	Tahuroa Road	3.15	10	P	Pn	03 13 35.7	+0.6
MARZ	Manawahe	3.20	28	P	Pn	03 13 41.2	+5.5
OXZ	Oxford	3.23	219		Pn	03 13 35.6	-0.4
OXZ	Oxford	3.23	219	P	Pn	03 13 35.3	-0.8
MWZ	Matawai	3.27	41	P	Pn	03 13 35.0	-1.8
MQZ	McQueen's Vall	3.28	208		Pn	03 13 35.8	-0.9
MQZ	McQueen's Vall	3.28	208	P	Pn	03 13 35.5	-1.3
OPRZ	Ohinepanea	3.29	25	P	Pn	03 13 41.5	+4.6
TGRZ	Tauranga	3.31	20	P	Pn	03 13 40.8	+3.6
AKCZ	Akaroa Harbour	3.34	204	P	Pn	03 13 37.1	-0.5
TKGZ	Te Karaka	3.36	45	P	Pn	03 13 38.8	+0.9
RUGZ	Raukumara Rang	3.63	39	P	Pn	03 13 39.8	-2.0
KBAZ	Karaka Road Bo	3.74	1	P	Pn	03 13 44.4	+1.3
MKAZ	Moumakai	3.74	4	P	Pn	03 13 43.6	+0.5
WVZ	Waitaha Valley	3.77	232	P	Pn	03 13 43.2	-0.2
AWAZ	Awhitu Peninsu	3.77	358	P	Pn	03 13 44.4	+0.8
PUZ	Puketiti	3.85	45	P	Pn	03 13 42.6	-2.1
ETAZ	East Tamaki Re	3.88	1	P	Pn	03 13 46.3	+1.2
WTAZ	Waiatarua	3.91	357	P	Pn	03 13 46.9	+1.5
EPAZ	Eden Park BICE	3.96	359	P	Pn	03 13 48.9	+2.7
HBAZ	Herne Bay Bore	3.99	359	P	Pn	03 13 48.0	+1.5
RPZ	Rata Peaks	4.00	223	P	Pn	03 13 44.4	-2.3
	3.3nm,0.3s,baz=44,slow=3.0,SNR=14						
RPZ				S	Sn	03 14 29.4	-2.9
	16nm,0.3s,baz=130,slow=22,SNR=18						
RPZ				LR	LR	03 15 39.6	
	comp=Z,298nm,20.6s,baz=56,slow=43						
RPZ	Rata Peaks	4.00	223	P	Pn	03 13 46.3	-0.3
WIAZ	Waiheke Island	4.05	4	P	Pn	03 13 48.1	+0.7
MBAZ	Motutapu North	4.07	1	P	Pn	03 13 48.4	+0.8
RVAZ	Riverhead Bore	4.07	357	P	Pn	03 13 49.1	+1.5
KUZ	Kuaotunu	4.15	10	P	Pn	03 13 48.9	+0.1
ABAZ	Army Bay	4.24	0	P	Pn	03 13 50.9	+1.0
MXZ	Matakaoa Point	4.26	41	P	Pn	03 13 48.3	-1.9
MXZ				P		03 13 48.4	
FOZ	Fox Glacier	4.58	232		Pn	03 13 59.4	+4.8
FOZ	Fox Glacier	4.58	232	P	Pn	03 13 53.8	-0.7
WCZ	Waipu Caves	4.91	356	P	Pn	03 13 59.7	+0.6
LBZ	Lake Benmore	4.92	222	P	Pn	03 13 58.7	-0.6
ODZ	Otahua Downs	5.19	215	P	Pn	03 14 01.6	-1.4
JCZ	Jackson Bay	5.50	232	P	Pn	03 14 06.3	-1.0
OUZ	Omahuta	5.69	350		Pn	03 14 11.0	+1.2
OUZ	Omahuta	5.69	350	P	Pn	03 14 10.8	+0.9
MLZ	Mavora Lakes	6.66	225	Pn	Pn	03 14 24.8	+1.6
CTZ	Chatham Island	6.99	117	P	Pn	03 14 28.8	+1.3
VNDA	Vanda	37.18	185	LR	LR	03 32 09.3	
	comp=Z,26nm,19.7s,baz=340,slow=31						
ASAR	Alice Springs	38.20	284	P	P	03 20 02.3	+0.2
	1.0nm,0.7s,baz=130,slow=7.5,SNR=16						
ASAR				PcP	PcP	03 22 14.9	-0.7
	0.3nm,0.5s,baz=120,slow=3.5,SNR=4.6						
WB2	Warramunga Arr	40.18	289	P	P	03 20 18.5	-0.1
WB2				IAmb	IAmb	03 20 19.2	
	comp=Z,4.8nm,0.7s						
WRA	Warramunga Arr	40.19	289	P	P	03 20 19.0	+0.3
	comp=Z,2.5nm,0.6s,baz=127,slow=7.9,SNR=13						
WB0	Warramunga Arr	40.27	289	P	P	03 20 19.2	-0.1
YKA	Yellowknife Ar	117.38	30	PKP	PKPdf	03 31 24.6	-1.0
	comp=Z,0.2nm,0.6s,baz=227,slow=1.4,SNR=2.8						
MKAR	Makanchi Array	119.75	308	PKP	PKPdf	03 31 29.4	-1.4
	comp=Z,0.4nm,0.8s,baz=209,slow=2.2,SNR=4.1						
KURBB	Kurchatov Arra	123.71	310	PKP	PKPdf	03 31 37.5	-0.7
	comp=Z,0.5nm,0.7s,baz=108,slow=1.6,SNR=6.2						
DBIC	Dimbokro	145.97	181	PKPbc	PKPdf	03 32 22.8	+2.2
	comp=Z,1.9nm,0.7s,baz=191,slow=1.3,SNR=4.8						
ARCES	ARCESS Array B	147.06	341	PKPbc	PKPdf	03 32 22.7	+2.0
	comp=Z,3.0nm,0.8s,baz=53,slow=3.2,SNR=12						
BRTR	Keskin Array B	150.51	281	PKPbc	PKPbc	03 32 32.9	0.0
	comp=Z,0.6nm,0.7s,baz=140,slow=7.8,SNR=5.4						
TORD	Torodi Ar. Bea	151.76	194	PKP	PKPdf	03 32 31.4	+1.6
	comp=Z,0.9nm,0.8s,baz=124,slow=1.7,SNR=3.7						
TORD				PKPbc	PKPbc	03 32 37.6	+1.3
	comp=Z,1.9nm,0.6s,baz=158,slow=2.7,SNR=20						
FINES	FINESS Array B	152.00	328	PKPbc	PKPbc	03 32 34.5	-0.9
	comp=Z,1.4nm,0.6s,baz=33,slow=7.3,SNR=8.3						
NB2	NORSAR Subarra	157.41	339	PKP	PKPab	03 33 07.7	-0.5
	comp=Z,1.3nm,0.8s,baz=33,slow=4.4						
NOA	NORSAR Array B	157.41	339	PKPab	PKPab	03 33 07.3	-0.9
	comp=Z,1.0nm,0.8s,baz=30,slow=3.4,SNR=4.2						

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*SJA **04** 03:16:52.8±1.1, 20°.04S×71°.11W, h10km, ML4.2, MW3.9*

*VAO **04** 03:16:52.8±1.1, 20°.07S×71°.40W, h10km, mb4.3*

*IDC **04** 03:16:55.6±0.8, 19°.79S×70°.68W, h0km, mb4.1/10, mb1 4.2/12, mb1mx4.0/34, mbtmp4.1/12, ML4.1/2, MS3.4/6, Ms1 3.4/6, ms1mx3.1/20, Error ellipse: s-maj=23.6km s-min=20.1km az=54.0*

*NEIC **04** 03:16:56.3, 20°.00S×71°.07W, h18km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.41; $M_{\theta\theta}$0.01; $M_{\phi\phi}$-2.42; $M_{r\theta}$0.18; $M_{\theta\phi}$0.69; $M_{\phi r}$-0.54; Fault plane solution: $M_0$2.58000×10^{15} NP1:ϕ_s346.31000°, δ38.65000°, λ91.61000°. NP2:ϕ_s164.25000°, δ51.37000°, λ88.72000°. Principal axes: T 2.4783, Plg84.0000°, Azm66.0000°; N 0.1854, Plg1.0000°, Azm165.0000°; P -2.6637, Plg6.0000°, Azm255.0000°;*

*GUC **04** 03:16:57.4±0.9, 19°.99S×71°.00W, h39km±2km, ML4.2*

*NEIC **04** 03:16:57.0±1.9, 20°.05S±0°.04×71°.02W±0°.05, h19km±4km, mb4.4/8, Mwr4.2/48, ML4.3(GUC), Error ellipse: s-maj=8.3km s-min=4.9km az=125.0*

ISC 04 03:16:55.5±1.6**, 20°.04S**±0°.02×**71°.02W**±0°.05**, h11**km±9km**, n115, σ1s.22**/123**, mb4.5**/12**, MS3.4**/4**, 5C-6D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	Huaiquique	0.86	105	eP	Pb	03 17 12.9	+0.4
TA02				eS	Sb	03 17 24.8	+0.7
TA02				IAML		03 17 27.7	
	comp=N,14µm,0.1s						
TA01	Diego Aracena	0.94	124	eP	Pn	03 17 15.1	+0.4
TA01				i S	Sn	03 17 27.9	-0.2
PSGC	Pisagua	0.95	62	⇓eP	Pg	03 17 13.9	+0.1
PSGC				eS	Sb	03 17 26.9	+0.2
PSGCX	Pisagua	0.95	62	Pn	Pb	03 17 14.2	0.0
PSGCX	Pisagua	0.95	62	i P	Pb	03 17 14.1	0.0
PSGCX				IAML		03 17 34.8	
	comp=Z,3µm,0.5s						
PATCX	Punta Patache	1.12	134	⇑iP	Pn	03 17 17.9	+0.7
PATCX				i S	Sn	03 17 33.2	+0.5
PATCX				IAML		03 17 39.8	
	comp=N,6µm,0.6s						
PATCX	Punta Patache	1.12	134	Pn	Pn	03 17 17.9	+0.7
PATCX	Punta Patache	1.12	134	eP	Pn	03 17 17.9	+0.7
PATCX				eS	Sn	03 17 32.5	-0.2
PATCX				IAML		03 17 42.7	
	comp=Z,4µm,0.4s						
PB11	IPOC Station P	1.31	78	eP	Pn	03 17 20.1	+0.3
PB11				i S	Sn	03 17 37.7	+0.2
PB11				IAML		03 17 39.5	
	comp=E,15µm,0.8s						
PB11	IPOC Station P	1.31	78		Pn	03 17 20.2	+0.3
PB11					Sb	03 17 37.2	+0.1
PB11	IPOC Station P	1.31	78	i P	Pn	03 17 20.2	+0.3
PB11				IAML		03 17 43.1	
	comp=Z,5µm,0.6s						
PB12	IPOC Station P	1.56	25	⇑iP	Pn	03 17 23.3	0.0
PB12				eS	Sn	03 17 42.9	-0.7
PB12				IAML		03 17 51.8	
	comp=E,4µm,0.4s						
PB12	IPOC Station P	1.56	25		Pn	03 17 22.9	-0.4
PB12					Sg	03 17 46.2	+0.4
PB12	IPOC Station P	1.56	25	eP	Pn	03 17 23.3	0.0
PB12				eS	Sn	03 17 42.9	-0.7
PB12				IAML		03 17 52.5	
	comp=Z,3µm,0.4s						
MNMC	Minye Minye	1.62	56	eP	Pn	03 17 24.6	+0.4
MNMC				eS	Sn	03 17 45.8	+0.5
MNMC				IAML		03 17 54.6	
	comp=E,12µm,0.7s						
MNMC	Minye Minye	1.62	56		Pn	03 17 24.1	-0.2
MNMCX	Minye Minye	1.62	56	eP	Pn	03 17 24.6	+0.4
MNMCX				IAML		03 17 51.2	
	comp=Z,6µm,0.7s						
PB02	IPOC Station P	1.65	141	eP	Pn	03 17 24.1	-0.5
PB02				eS	Sb	03 17 47.9	+1.0
PB02				IAML		03 17 55.6	
	comp=E,7µm,0.6s						
PB01	IPOC Station P	1.75	125	eP	Pb	03 17 27.2	-0.5
PB01				i S	Sb	03 17 49.6	0.0
PB01				IAML		03 17 57.4	
	comp=E,3µm,0.5s						
PB01	IPOC Station P	1.75	125		Pn	03 17 26.9	+1.0
PB08	IPOC Station P	1.75	94	eP	Pb	03 17 27.3	-0.7
PB08				i S	Sb	03 17 50.7	+0.5
PB08				IAML		03 17 57.5	
	comp=N,3µm,0.5s						
PB08	IPOC Station P	1.75	94		Pn	03 17 26.8	+0.6
PB08	IPOC Station P	1.75	94	eP	Pb	03 17 27.8	-0.1
PB08				⇓eS	Sg	03 17 51.3	-0.7
PB08				IAML		03 17 52.1	
	comp=Z,2µm,1.4s						
GO01	Chusmiza	1.75	78	eP	Pb	03 17 27.7	-0.3
GO01				i S	Sb	03 17 50.5	+0.3
GO01	Chusmiza	1.75	78		Pn	03 17 26.8	+0.5
GO01					Sb	03 17 50.7	+0.4
AP01	Chacalluta	1.78	21	⇑eP	Pn	03 17 27.0	+0.8
AP01				eS	Sn	03 17 49.2	+0.3
AP01				IAML		03 17 54.9	
	comp=E,10µm,0.6s						
PB07	IPOC Station P	1.98	148	⇓eP	Pn	03 17 29.2	0.0
PB07				⇓eS	Sb	03 17 56.0	-0.5
PB07				IAML		03 18 13.6	
	comp=E,2µm,0.4s						
PB07	IPOC Station P	1.98	148		Pn	03 17 29.2	0.0
PB07	IPOC Station P	1.98	148	eP	Pn	03 17 29.2	0.0
PB07				IAML		03 18 10.7	
	comp=Z,2µm,0.4s						
PB16	IPOC Station P	2.22	40	⇑eP	Pn	03 17 33.5	+0.7
PB16				eS	Sn	03 18 01.5	+1.0
PB16				IAML		03 18 13.1	
	comp=E,2µm,0.4s						
PB16	IPOC Station P	2.22	40		Pn	03 17 33.3	+0.5
PB16	IPOC Station P	2.22	40	i P	Pb	03 17 35.3	-0.6
PB16				IAML		03 18 10.4	
	comp=Z,3µm,0.4s						
PB03	IPOC Station P	2.32	150	⇓eP	Pn	03 17 33.9	+0.1
PB09	IPOC Station P	2.41	137	⇑eP	Pn	03 17 35.6	+0.6
PB09				eS	Sn	03 18 05.2	+0.6
PB09				IAML		03 18 21.9	
	comp=E,2µm,0.2s						
PB09	IPOC Station P	2.41	137		Pn	03 17 35.4	+0.4
PB09	IPOC Station P	2.41	137	i P	Pn	03 17 35.8	+0.8
PB09				IAML		03 18 23.0	
	comp=Z,2µm,1.3s						
PB04	IPOC Station P	2.42	161	⇓eP	Pn	03 17 35.8	+0.6
PB04				eS	Sn	03 18 03.4	-1.5
PB04				IAML		03 18 30.5	
	comp=E,1µm,0.5s						
PB04	IPOC Station P	2.42	161		Pn	03 17 35.8	+0.6
PB04	IPOC Station P	2.42	161	i P	Pn	03 17 35.8	+0.6
PB04				IAML		03 18 24.8	
	comp=Z,1µm,1.1s						
PB06	IPOC Station P	2.97	153		Pn	03 17 42.9	+0.1
PB06	IPOC Station P	2.97	153	i P	Pn	03 17 42.7	-0.1
PB06				IAML		03 18 37.7	
	comp=Z,608nm,0.8s						
LVC	Limon Verde	3.22	143	Pn	Pn	03 17 47.1	+0.7
	comp=Z,15nm,0.3s,baz=309,slow=9.3,SNR=98						
LVC				Sn	Sn	03 18 27.9	+2.9
	comp=Z,40nm,0.3s,baz=69,slow=16,SNR=7.5						
LVC	Limon Verde	3.22	143		Pn	03 17 49.1	+2.6
LVC	Limon Verde	3.22	143	i P	Pn	03 17 49.0	+2.6
LVC				IAML		03 18 46.3	
	comp=Z,284nm,0.7s						
LVC	Limon Verde	3.22	143	eP	Pn	03 17 47.0	+0.6
PB15	IPOC Station P	3.46	156		Pn	03 17 50.2	+0.6
PB15	IPOC Station P	3.46	156	i P	Pn	03 17 50.4	+0.8
PB15				IAML		03 18 56.8	
	comp=Z,707nm,0.3s						
PB10	IPOC Station P	3.48	173		Pn	03 17 50.3	+0.6
PB10	IPOC Station P	3.48	173	i P	Pn	03 17 49.9	+0.2
PB10				IAML		03 19 02.9	
	comp=Z,120nm,0.6s						
PB14	IPOC Station P	4.60	173		Pn	03 18 05.4	+0.2
LPAZ	La Paz	4.63	37	Pn	Pn	03 18 09.4	+3.4
	comp=Z,2.7nm,0.3s,baz=205,slow=3.5,SNR=31						
LPAZ	La Paz	4.63	37		Pn	03 18 05.7	-0.3
LPAZ	La Paz	4.63	37	eP	Pn	03 18 08.2	+2.2
GO02	Mina Guanaco	5.26	166		Pn	03 18 15.3	+0.9
NNA	Nana	9.77	324	LR	LR	03 23 14.4	
	comp=Z,89nm,18.6s,baz=155,slow=39						
SIV	San Ignacio	10.28	69	Pn	Pn	03 19 20.7	-2.4
	comp=Z,2.5nm,0.3s,baz=275,slow=10,SNR=65						
PTLB	Pontes e Lacer	12.20	70	eP	Pn	03 19 51.6	+2.3
VILB	Vilhena	12.54	57	eP	Pn	03 19 56.5	+2.5
ROC1	El Roble	12.88	180	Pn	Pn	03 19 58.4	-0.4
CPUP	Villa Florida	14.05	119	Pn	P	03 20 18.8	-3.6
	comp=Z,0.1nm,0.3s,baz=315,slow=11,SNR=3.0						
CPUP				LR	LR	03 26 51.4	
	comp=Z,112nm,20.2s,baz=300,slow=43						
CPUP	Villa Florida	14.05	119	Pn	Pn	03 20 15.8	+1.2
AQDB	Aquidauana	14.38	94	eP	Pn	03 20 20.9	+1.7
H03N1	Juan Fernandez	15.09	206	T	T	03 36 08.9	
	baz=32,slow=72,SNR=136						
H03N2	Juan Fernandez	15.09	206	T	T	03 36 08.6	
	baz=32,slow=72,SNR=97						
H03N3	Juan Fernandez	15.10	206	T	T	03 36 07.5	
	baz=32,slow=72,SNR=94						
SALV	Santo Antonio	15.15	77	eP	Pn	03 20 30.8	+1.3
PTGB	Pitanga	18.13	108	eP	P	03 21 08.6	+0.8
PCMB	Pacaembu	18.53	98	eP	Pn	03 21 14.7	+2.3
ITAB	Concordia	18.71	116	eP	Pn	03 21 14.6	+0.1
CPSB	Cacapava Do Su	18.93	126	eP	Pn	03 21 17.6	+0.5
MACA	Manacapuru-AM	19.57	32	eP	P	03 21 22.8	-0.9
FRTB	Fartura	20.20	103	eP	P	03 21 31.6	+1.1
PLCA	Paso Flores	20.63	179	P	Pn	03 21 41.0	+3.7
	comp=Z,4.5nm,1.1s,baz=8.9,slow=13,SNR=3.1						
PLCA	Paso Flores	20.63	179	P	P	03 21 34.0	-1.0
BB19B	Bebedouro	21.08	97	eP	P	03 21 40.2	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PTGA	**Pitinga**	**22.03**	**31**	P	**P**	**03 21 48.1**	**-2.1**
	comp=Z,5.9nm,0.3s,baz=286,slow=23,SNR=11						
PTGA	**Pitinga**	**22.03**	**31**	P	**P**	**03 21 49.1**	**-1.1**
PTGA				IAmb	IAmb	03 21 52.0	
	comp=Z,8.7nm,0.7s						
PTGA	**Pitinga**	**22.03**	**31**	*e*P	**P**	**03 21 49.3**	**-0.9**
SPB	**Sao Paulo**	**22.17**	**103**	P	**P**	**03 21 53.2**	**+1.5**
SPB				IAmb	IAmb	03 22 01.0	
	comp=Z,29nm,1.3s						
SPB	**Sao Paulo**	**22.17**	**103**	*e*P	**P**	**03 21 54.0**	**+2.3**
BDFB	**Brasilia**	**22.32**	**82**	P	**P**	**03 21 52.0**	**-1.5**
	comp=Z,1.4nm,0.5s,baz=286,slow=11,SNR=3.5						
BDFB				LR	LR	03 31 16.7	
	comp=Z,81nm,19.2s,baz=280,slow=39						
BDFB	**Brasilia**	**22.32**	**82**	IAmb	IAmb	03 21 58.5	
	comp=Z,20nm,1.5s						
VAO	**Valinhos**	**22.56**	**102**	*e*P	**P**	**03 21 57.4**	**+1.4**
ROSC	**El Rosal**	**24.94**	**352**	LR	LR	03 31 42.5	
	comp=Z,101nm,18.3s,baz=206,slow=36						
SMTB	**Santa Maria do**	**25.22**	**67**	*e*P	**P**	**03 22 22.4**	**+0.7**
RUSC	**La Rusia**	**25.85**	**355**	P	**P**	**03 22 28.1**	**+0.3**
JANB	**Januaria**	**25.93**	**83**	*e*P	**P**	**03 22 26.9**	**-1.1**
RCBR	**Riachuelo**	**36.92**	**72**	P	**P**	**03 24 02.3**	**-2.5**
	comp=Z,11nm,0.9s,baz=241,slow=12,SNR=4.7						
LIC	**Lamto**	**69.90**	**75**	*e*PKP2	**P**	**03 28 02.9**	**-4.2**
	comp=Z,25nm,0.9s						
TIC	**Toumodi**	**70.08**	**75**	*e*PKP2	P	03 28 02.8	-5.4
KIC	**Kosan Boka**	**70.22**	**75**	*e*PKP2	P	03 28 01.7	-7.4
	comp=Z,10nm,0.7s						
DBIC	**Dimbokro**	**70.24**	**75**	P	**P**	**03 28 08.5**	**-0.7**
	comp=Z,6.2nm,1.1s,baz=223,slow=9.7,SNR=4.0						
NVAR	**Mina Array Bea**	**73.14**	**323**	P	**P**	**03 28 28.4**	**+1.9**
	comp=Z,0.1nm,0.5s,baz=122,slow=8.6,SNR=1.6						
ULM	**Lac du Bonnet**	**73.36**	**344**	P	**P**	**03 28 27.2**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=235,slow=4.0,SNR=3.1						
ULM				LR	LR	04 04 37.7	
	comp=Z,49nm,18.8s,baz=328,slow=39						
PPT	**Papeete**	**73.73**	**257**	LR	LR	03 53 42.1	
	comp=Z,26nm,19.5s,baz=325,slow=30						
TOA0	**Torodi Ar. Sit**	**78.75**	**72**	P	**P**	**03 28 57.9**	**-0.8**
TORD	**Torodi Ar. Bea**	**78.75**	**72**	P	**P**	**03 28 58.2**	**-0.5**
	comp=Z,4.5nm,0.6s,baz=251,slow=5.2,SNR=26						
ESDC	**Sonseca Array**	**86.20**	**45**	P	**P**	**03 29 38.1**	**+1.0**
	comp=Z,0.5nm,0.9s,baz=270,slow=5.1,SNR=3.7						
YKA	**Yellowknife Ar**	**89.17**	**341**	P	**P**	**03 29 51.4**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=135,slow=5.0,SNR=14						
KBZ	**Khabaz**	**120.73**	**50**	PKP	**PKiKP**	**03 35 48.2**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=79,slow=5.2,SNR=3.7						
H11S2	**WAKE ISLAND Hy**	**125.72**	**279**	T	T	05 55 27.8	
	baz=102,slow=74,SNR=50						
H11S1	**WAKE ISLAND Hy**	**125.73**	**279**	T	T	05 55 34.2	
	baz=102,slow=74,SNR=25						
H11S3	**WAKE ISLAND Hy**	**125.74**	**279**	T	T	05 55 22.0	
	baz=102,slow=74,SNR=25						
H11N3	**WAKE ISLAND Hy**	**125.77**	**280**	T	T	05 55 33.9	
	baz=102,slow=74,SNR=2.3						
H11N2	**WAKE ISLAND Hy**	**125.79**	**280**	T	T	05 55 29.3	
	baz=102,slow=74,SNR=12						
H11N1	**WAKE ISLAND Hy**	**125.79**	**280**	T	T	05 55 37.2	
	baz=102,slow=74,SNR=11						
ASAR	**Alice Springs**	**130.22**	**210**	PKP	**PKiKP**	**03 36 08.3**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=159,slow=2.8,SNR=2.1						
WRA	**Warramunga Arr**	**133.14**	**214**	PKP	**PKiKP**	**03 36 14.1**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=167,slow=1.6,SNR=2.4						
ZALV	**Zalesovo Beam**	**141.43**	**23**	PKP	**PKiKP**	**03 36 28.3**	**-0.9**
	comp=Z,1.6nm,0.6s,baz=306,slow=1.2,SNR=6.8						
MAKZ	**Makanchi**	**145.38**	**33**		**PKPab**	**03 36 34.3**	**+0.7**
MK31	**Makanchi Array**	**145.55**	**33**		**PKPab**	**03 36 34.6**	**+0.3**
MKAR	**Makanchi Array**	**145.55**	**33**	PKPbc	**PKPab**	**03 36 35.2**	**+0.9**
	comp=Z,2.5nm,0.8s,baz=322,slow=4.3,SNR=25						
KLR	**Kul'dur**	**145.65**	**333**	PKPbc	**PKPab**	**03 36 35.6**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=79,slow=3.2,SNR=4.2						
KSH	**Kashi**	**145.67**	**48**	PKPbc	**PKPdf**	**03 36 31.2**	**-3.3**
KSH				pPKP	PKiKP	03 36 43.1	+4.6
KSH				PP	**PP**	**03 39 57.6**	**+2.2**
SONM	**Songino Array**	**152.20**	**4**	PKPbc	**PKiKP**	**03 36 53.2**	**+1.5**
	comp=Z,1.5nm,0.7s,baz=309,slow=2.5,SNR=9.5						

*IDC **04** 03:24:28.0±1.1, 25.°84N×127.°50E, h0km, mb3.6/9, mb1 3.7/9, mb1mx3.5/49, mbtmp3.6/9, MS3.2/2, Ms1 3.3/2, ms1mx2.5/35, Error ellipse: s-maj=59.0km s-min=21.7km az=67.0*

*JMA **04** 03:24:27.6±0.1, 25.°29N×127.°65E, h36km±3km, M3.1*

ISC 04 03:24:27.4±0.8**, 25.°27N**±0.°05×**127.°68E**±0.°04**, h27**km**, n28,** σ**1.s32**/35**, mb3.5**/9**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**0.87**	**6**	*e*S	**Sn**	**03 24 54.8**	**-1.0**
JNTH	**Nagotoyohara**	**1.28**	**14**	P	**Pb**	**03 24 49.6**	**-1.3**
JNTH				*e*S	**Sb**	**03 25 05.7**	**-1.2**
JKE	**Kume jima 2**	**1.32**	**323**	P	**Pb**	**03 24 49.9**	**-1.7**
JKE				*e*S	**Sb**	**03 25 06.5**	**-1.7**
JAGN	**Aguni-jima**	**1.37**	**343**	P	**Pb**	**03 24 50.8**	**-1.6**
JAGN				*e*S	**Sn**	**03 25 07.3**	**-0.8**
JOW	**Kunigami**	**1.64**	**19**	P	**Pn**	**03 24 54.9**	**+0.3**
JOW				*e*S	**Sn**	**03 25 14.5**	**-0.4**
JIH	**Iheya**	**1.78**	**8**	P	**Pb**	**03 24 57.2**	**-2.1**
JIH				*e*S	**Sn**	**03 25 18.0**	**-0.1**
JYRO	**Yoronjima**	**1.88**	**21**	P	**Pn**	**03 24 57.9**	**+0.1**
JYRO				*e*S	**Sn**	**03 25 19.7**	**-0.9**
JOGS	**Gusukube**	**2.12**	**257**	*e*S	**Sb**	**03 25 27.7**	**-3.5**
JOKE	**Okinoerabujima**	**2.23**	**21**	*e*S	**Sn**	**03 25 30.1**	**+0.8**
JIKM	**Ikemajima**	**2.23**	**262**	P	**Pn**	**03 25 03.0**	**+0.4**
JIRB	**Irabujima**	**2.32**	**260**	*e*S	**Sn**	**03 25 31.8**	**+0.4**
JTK	**Tokunoshima**	**2.75**	**24**	P	**Pn**	**03 25 10.9**	**+1.1**
JTK				*e*S	**Sn**	**03 25 42.3**	**+0.1**
JTJ	**Tarama**	**2.77**	**258**	P	**Pn**	**03 25 10.8**	**+0.7**
JTJ				*e*S	**Sn**	**03 25 41.6**	**-1.1**
JISG	**Ishigakijimahi**	**3.13**	**258**	*e*S	**Sn**	**03 25 52.0**	**+0.4**
JMZ	**Minamidaito 2**	**3.25**	**80**	P	**Pn**	**03 25 16.7**	**+0.1**
JMZ				*e*S	**Sn**	**03 25 52.1**	**-2.2**
JAMN	**Amaminishikomi**	**3.25**	**24**	P	**Pn**	**03 25 18.2**	**+1.6**
JAMN				*e*S	**Sn**	**03 25 53.8**	**-0.6**
JKDJ	**Kitadaitoujima**	**3.33**	**78**	P	**Pn**	**03 25 18.1**	**+0.3**
JKDJ				*e*S	**Sn**	**03 25 54.8**	**-1.8**
CMAR	**Chiang Mai Arr**	**27.48**	**261**	LR	LR	03 41 02.4	
	comp=Z,21nm,18.9s,baz=128,slow=36						
SONM	**Songino Array**	**28.10**	**329**	P	**P**	**03 30 17.0**	**0.0**
	0.3nm,0.4s,baz=126,slow=7.3,SNR=2.4						
PSI	**Prapat**	**35.57**	**236**	LR	LR	03 46 34.9	
	comp=Z,79nm,18.3s,baz=266,slow=37						
MKAR	**Makanchi Array**	**41.81**	**313**	P	**P**	**03 32 15.2**	**+0.3**
	0.8nm,0.5s,baz=102,slow=9.8,SNR=13						
ZALV	**Zalesovo Beam**	**42.72**	**324**	P	**P**	**03 32 22.5**	**+0.5**
	0.9nm,0.6s,baz=106,slow=11,SNR=2.6						
KURBB	**Kurchatov Arra**	**45.21**	**317**	P	**P**	**03 32 42.3**	**+0.2**
	0.3nm,0.4s,baz=106,slow=8.7,SNR=3.1						
WRA	**Warramunga Arr**	**45.41**	**171**	P	P	03 32 53.1	+9.2
	0.3nm,0.6s,baz=343,slow=4.5,SNR=1.7						
ASAR	**Alice Springs**	**49.02**	**172**	P	P	03 33 21.2	+9.1
	0.2nm,0.6s,baz=355,slow=6.2,SNR=2.2						
FINES	**FINESS Array B**	**73.45**	**331**	P	**P**	**03 35 58.0**	**+0.9**
	1.3nm,0.9s,baz=51,slow=4.4,SNR=4.1						
YKA	**Yellowknife Ar**	**79.60**	**25**	P	**P**	**03 36 34.5**	**+2.6**
	0.1nm,0.5s,baz=307,slow=4.5,SNR=2.6						
NOA	**NORSAR Array B**	**79.95**	**334**	P	**P**	**03 36 35.2**	**+1.3**
	0.8nm,0.8s,baz=53,slow=5.8,SNR=3.8						

*NEIC **04** 03:53:08.9±1.6, 17.°9S±0.°3×178.°6W±0.°2, h603km±11km, mb4.1/16, Error ellipse: s-maj=46.5km s-min=20.7km az=160.0*

*IDC **04** 03:53:08.5±15.0, 17.°11S×178.°99W, h583km±196km, mb3.3/9, mb1 3.6/9, mb1mx3.3/29, mbtmp4.2/9, Error ellipse: s-maj=73.4km s-min=56.7km az=162.0*

ISC 04 03:53:06.7±1.2**, 18.°0S**±0.°3×**178.°5W**±0.°2**, h579**km**, n26,** σ**1.s38**/26**, mb4.1**/16**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.33**	**273**	P	**P**	**03 54 29.6**	**+3.3**
RABL	**Rabaul**	**31.84**	**292**	P	**P**	**03 58 45.8**	**+0.2**
CTA	**Charters Tower**	**33.39**	**261**	P	**P**	**03 58 56.9**	**-1.7**
	5.0nm,0.6s,baz=98,slow=10,SNR=9.2						
PMG	**Port Moresby**	**34.42**	**280**	P	**P**	**03 59 07.4**	**+0.1**
COEN	**Coen**	**37.06**	**270**	P	**P**	**03 59 29.1**	**+0.1**
STKA	**Stephens Creek**	**38.56**	**241**	P	**P**	**03 59 41.8**	**+0.7**
	4.9nm,0.7s,baz=86,slow=9.4,SNR=12						
STKA	**Stephens Creek**	**38.56**	**241**	P	**P**	**03 59 41.6**	**+0.6**
WB0	**Warramunga Arr**	**44.54**	**260**	P	**P**	**04 00 27.2**	**-1.1**
WB0				IAmb	IAmb	04 00 28.3	
	comp=Z,6.1nm,0.6s						
WB2	**Warramunga Arr**	**44.56**	**260**	P	**P**	**04 00 27.5**	**-0.9**
WB2				IAmb	IAmb	04 00 28.6	
	comp=Z,6.4nm,0.6s						
WRA	**Warramunga Arr**	**44.58**	**260**	P	**P**	**04 00 27.2**	**-1.3**
	comp=Z,3.3nm,0.5s,baz=96,slow=7.1,SNR=36						
AS31	**Alice Springs**	**44.73**	**254**	P	**P**	**04 00 29.3**	**-0.5**
AS31				IAmb	IAmb	04 00 30.3	
	comp=Z,5.9nm,0.7s						
ASAR	**Alice Springs**	**44.73**	**254**	P	**P**	**04 00 29.6**	**-0.1**
	comp=Z,23nm,0.6s,baz=88,slow=8.5,SNR=232						
KSM	**Kuching**	**72.64**	**277**	P	**P**	**04 03 36.6**	**-0.4**
NVAR	**Mina Array Bea**	**79.49**	**44**	P	**P**	**04 04 14.9**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=222,slow=9.5,SNR=7.6						
X16A	**Lo Mia Camp, P**	**82.25**	**50**	P	**P**	**04 04 29.9**	**+1.3**
U15A	**North Rim**	**82.59**	**48**	P	**P**	**04 04 30.4**	**0.0**
U15A				IAmb	IAmb	04 04 32.3	
	comp=Z,3.3nm,0.9s						
WUAZ	**Wupatki**	**82.81**	**49**	P	**P**	**04 04 31.8**	**+0.4**
WUAZ				IAmb	IAmb	04 05 34.1	
	comp=Z,3.0nm,0.9s						
RPSI	**Rantau Prapat**	**83.81**	**275**	P	**P**	**04 04 35.0**	**-1.6**
RPSI				IAmb	IAmb	04 04 36.9	
	comp=Z,3.5nm,0.8s						
F10A	**Beach Ranch, E**	**84.27**	**38**	P	**P**	**04 04 39.2**	**+0.9**
ILAR	**Eielson Array**	**85.95**	**13**	P	**P**	**04 04 43.6**	**-2.1**
	comp=Z,0.5nm,0.8s,baz=221,slow=5.7,SNR=5.2						
TX31	**Lajitas Ar. Si**	**86.06**	**58**	P	**P**	**04 04 47.6**	**+0.4**
TX31				IAmb	IAmb	04 04 49.8	
	comp=Z,5.8nm,1.0s						
TX32	**Lajitas Array**	**86.06**	**58**	P	**P**	**04 04 47.2**	**-0.1**
TXAR	**Lajitas Array**	**86.06**	**58**	P	**P**	**04 04 48.5**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=223,slow=6.1,SNR=19						
BILL	**Bilibino**	**86.48**	**354**	P	**P**	**04 04 51.1**	**+2.9**
PDAR	**Pinedale Array**	**87.42**	**43**	P	**P**	**04 04 53.6**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=223,slow=5.1,SNR=6.5						
YKA	**Yellowknife Ar**	**94.40**	**25**	P	**P**	**04 05 22.7**	**-2.2**
	comp=Z,0.3nm,0.7s,baz=254,slow=6.8,SNR=1.8						

*GCG **04** 04:13:07.8±0.3, 14.°86N×91.°16W, h137km±8km, MD3.5*

*MEX **04** 04:13:12.1±0.6, 14.°31N×91.°19W, h100km±15km, MD3.8*

ISC 04 04:13:12.2±3.3**, 14.°1N**±0.°4×**91.°4W**±0.°1**, h100**km**, n7,** σ**0.s91**/10**, Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.59**	**347**	*e*P	**Pn**	**04 13 28.0**	**-0.9**
FUG	**Fuego 3**	**0.65**	**61**	*e*P	**Pn**	**04 13 28.4**	**-1.0**
PCG	**Pacaya**	**0.84**	**72**	*e*S	**Sn**	**04 13 47.3**	**+1.8**
IXG	**Ixpaco**	**0.96**	**87**	*e*P	**Pn**	**04 13 31.9**	**-0.4**
THIG		**1.12**	**314**	*e*P	**Pn**	**04 13 33.7**	**-0.2**
THIG				*e*S	**Sn**	**04 13 50.5**	**+0.2**
PCIG		**2.33**	**312**	*e*P	**Pn**	**04 13 49.6**	**+0.6**
PCIG				*i* S	**Sn**	**04 14 17.4**	**0.0**
CMIG	**Matias Romero**	**4.44**	**312**	*e*P	**Pn**	**04 14 17.3**	**-0.1**
CMIG				*i* S	**Sn**	**04 15 07.8**	**-0.2**

*IDC **04** 04:43:13.0±2.0, 0.°49S×122.°93E, h86km±18km, mb3.3/5, mb1 3.7/7, mb1mx3.2/45, mbtmp3.8/7, MS2.6/3, Ms1 2.6/3, ms1mx2.3/24, Error ellipse: s-maj=17.1km s-min=16.4km az=160.0*

*DJA **04** 04:43:13.3±0.6, 0°S±2°×12°3E±°, h28km±6km, M4.4/21, mB4.8/5, mb4.6/9, MLv4.5/21, Mw(mB)4.1/5*

ISC 04 04:43:12.4±0.7**, 0.°49S**±0.°05×**122.°99E**±0.°05**, h78**km**, n30,** σ**1.s72**/33**, mb3.7**/6**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.59**	**202**	P	**Pn**	**04 43 26.3**	**-0.5**
LUWI				S	**Sn**	**04 43 35.3**	**-2.1**
APSI	**Ampana**	**1.40**	**253**	P	**Pn**	**04 43 37.5**	**+1.1**
MRSI	**Marisa**	**1.42**	**313**	P	**Pn**	**04 43 37.8**	**+1.2**
MRSI				S	**Sn**	**04 43 56.2**	**+1.3**
KMSI	**Cibinong**	**1.45**	**43**	P	**Pn**	**04 43 37.8**	**+0.8**
KMSI				S	**Sn**	**04 43 55.5**	**-0.1**
MPSI	**Mapaga**	**3.20**	**285**	P	**Pn**	**04 44 02.2**	**+1.8**
SANI	**Sanana**	**3.38**	**117**	P	**Pn**	**04 44 00.2**	**-2.6**
TTSI	**Tana Toraja**	**4.06**	**231**	P	**Pn**	**04 44 13.7**	**+1.6**
LBMI	**Labuha**	**4.52**	**92**	P	**Pn**	**04 44 19.1**	**+0.7**
TNTI	**Ternate**	**4.56**	**74**	P	**Pn**	**04 44 20.1**	**+1.2**
SPSI	**Sidrap Palu**	**4.72**	**223**	P	**Pn**	**04 44 23.8**	**+2.7**
BNSI	**Bone**	**4.83**	**216**	P	**Pn**	**04 44 24.2**	**+1.5**
NLAI	**Namlea**	**4.93**	**124**	P	**Pn**	**04 44 24.4**	**+0.3**
BBSI	**Bau Bau**	**4.98**	**185**	P	**Pn**	**04 44 26.0**	**+1.3**
KAPI	**Kappang**	**5.53**	**216**	P	**Pn**	**04 44 33.7**	**+1.4**
	4.0nm,0.3s,baz=144,slow=14,SNR=8.3						
KAPI				S	**Sn**	**04 45 34.4**	**-0.2**
	7.1nm,0.3s,baz=216,slow=23,SNR=11						
KAPI				LR	LR	04 46 56.7	
	comp=Z,44nm,18.6s,baz=306,slow=41						
BKSI	**Bulukumba**	**5.59**	**211**	P	**Pn**	**04 44 35.1**	**+2.1**
	0.2nm385nm31nm,0.8s						
SMKI	**Samarinda**	**5.78**	**270**	P	**Pn**	**04 44 38.2**	**+2.6**
	1.6nm93nm,0.7s						
AAI	**Ambon**	**6.09**	**121**	P	**Pn**	**04 44 41.7**	**+1.7**
	0.4nm104nm,1.2s						
MSAI	**Masohi**	**6.58**	**116**	P	**Pn**	**04 44 47.8**	**+1.2**
	0.2nm2μm18nm,0.6s						
SIJI	**Sorong**	**8.29**	**93**	P	**Pn**	**04 45 10.8**	**+0.9**
	2.0nm,0.3s,baz=268,slow=7.0,SNR=15						
SIJI				S	**Sn**	**04 46 45.8**	**+3.8**
	0.4nm,0.3s,baz=143,slow=20,SNR=1.3						
EDFI	**Ende, Flores**	**8.30**	**189**	P	**Pn**	**04 45 13.0**	**+2.8**
FAKI	**Fak Fak**	**9.57**	**105**	P	**Pn**	**04 45 25.0**	**-2.4**
BATI	**Baumata**	**9.67**	**176**	LR	LR	04 49 23.8	
	comp=Z,33nm,21.4s,baz=231,slow=38						
FITZ	**Fitzroy Crossi**	**17.69**	**172**	LR	LR	04 54 13.2	
	comp=Z,19nm,19.0s,baz=52,slow=37						
WRA	**Warramunga Arr**	**22.30**	**151**	P	**P**	**04 48 03.2**	**-0.4**
	2.1nm,0.9s,baz=335,slow=9.9,SNR=14						
ASAR	**Alice Springs**	**25.36**	**156**	P	**P**	**04 48 33.0**	**+0.6**
	0.7nm,0.8s,baz=320,slow=7.4,SNR=9.2						
ASAR				ScP	**ScP**	**04 55 35.0**	**-0.9**
	0.6nm,0.8s,baz=358,slow=2.8,SNR=5.1						
CMAR	**Chiang Mai Arr**	**30.22**	**310**	P	**P**	**04 49 16.6**	**+0.8**
	0.7nm,0.3s,baz=132,slow=7.8,SNR=4.4						
SONM	**Songino Array**	**50.26**	**346**	P	**P**	**04 51 59.7**	**-1.2**
	1.1nm,0.8s,baz=158,slow=9.1,SNR=5.1						
KSH	**Kashi**	**58.53**	**318**	P	P	04 53 10.4	+9.3
KSH				pP	pP	04 53 23.1	+2.3
KSH				sP	sP	04 53 29.0	-0.5
KSH				pmax	pmax		
	comp=Z,76nm,1.7s						
KSH				pmax	pmax		
	comp=Z,200nm,5.2s						
MKAR	**Makanchi Array**	**59.02**	**328**	P	**P**	**04 53 03.0**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=125,slow=8.9,SNR=2.9						
TORD	**Torodi Ar. Bea**	**120.52**	**285**	PKP	**PKPdf**	**05 01 54.4**	**-1.7**
	comp=Z,0.5nm,0.6s,baz=51,slow=1.9,SNR=1.5						

*IDC **04** 04:46:46.0±0.5, 19.°93S×70.°73W, h0km, mb4.3/17, mb1 4.4/20, mb1mx4.4/31, mbtmp4.4/20, ML3.9/3, MS4.3/21, Ms1 4.3/21, ms1mx4.3/24, Error ellipse: s-maj=19.7km s-min=12.0km az=64.0*

*NEIC **04** 04:46:46.7, 20.°04S×71.°01W, h18km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; Mrr3.29; Mθθ-0.15; Mφφ-3.15; Mrθ0.23; Mθφ1.31; Mφr-1.65; Fault plane solution: M₀3.86000×10^{16} NP1:φs332.80000°, δ32.77000°, λ79.30000°. NP2:φs165.46000°, δ57.87000°, λ96.81000°. Principal axes: T 3.6935, Plg76.0000°, Azm96.0000°; N 0.3084, Plg6.0000°, Azm342.0000°; P -4.0019, Plg13.0000°, Azm251.0000°;*

*NEIC **04** 04:46:46.6±1.9, 20.°04S±0.°03×70.°98W±0.°05, h10km±3km, mb5.0/165, Mwr5.0/48, Mww5.0, ML4.8(GUC) Error ellipse: s-maj=6.5km s-min=4.6km az=113.0*

*GUC **04** 04:46:48.1±0.8, 20.°01S×71.°06W, h32km±2km, ML4.9*

*NEIC **04** 04:46:49, 20.°03S×71.°06W, h16km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; Mrr2.83; Mθθ-0.17; Mφφ-2.66; Mrθ2.02; Mθφ0.86; Mφr-2.99; Fault plane solution: M₀4.62000×10^{16} NP1:φs150.00000°, δ71.00000°, λ81.00000°. NP2:φs355.00000°, δ21.00000°, λ114.00000°. Principal axes: T 4.6445, Plg63.0000°, Azm46.0000°; N -0.0551, Plg8.0000°, Azm153.0000°; P -4.5893, Plg26.0000°, Azm247.0000°;*

*VAO **04** 04:46:51.3±1.0, 19.°89S×70.°75W, h39km±7km, mb4.8*

*GCMT **04** 04:46:52.6±0.2, 20.°02S±0.°02×71.°18W±0.°02, h19km, MW5.1/108, Moment Tensor Solution. s46,c54; s108,c158; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr3.91±.16; Mθθ-0.20±.09; Mφφ-3.70±.12; Mrθ0.81±.18; Mθφ1.00±.07; Mφr-3.40±.23; Best double couple: M₀5.26400×10^{16} NP1:φs344.00000°, δ24.00000°, λ88.00000°. NP2:φs166.00000°, δ66.00000°, λ91.00000°. Principal axes: T 5.2370, Plg69.0000°, Azm78.0000°; N 0.0590, Plg1.0000°, Azm346.0000°; P -5.2910, Plg21.0000°, Azm256.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 04:46:46.6±1.0**, 20.°00S**±0.°02×**70.°97W**±0.°04**, h12**km±5km**, n493,** σ**1.s29**/454**, mb5.0**/83**, MS4.5**/23**, 14C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.83**	**109**⇑	*e*P	**Pb**	**04 47 03.3**	**+0.4**
TA02				*e*S	**Sn**	**04 47 15.3**	**-1.0**
TA02				IAML		04 47 16.9	
	comp=N,34μm,0.1s						
PSGC	**Pisagua**	**0.89**	**63**⇓	*i*P	**Pb**	**04 47 04.1**	**+0.1**
PSGC				*e*S	**Sn**	**04 47 17.1**	**-0.8**
PSGCX	**Pisagua**	**0.89**	**63**		**Pn**	**04 47 05.0**	**-0.1**
PSGCX				Sg	**Sn**	**04 47 16.5**	**-1.4**
TA01	**Diego Aracena**	**0.93**	**127**⇑	*i*P	**Pb**	**04 47 04.8**	**+0.2**
TA01				*i* S	**Sn**	**04 47 18.2**	**-0.5**
PATCX	**Punta Patache**	**1.11**	**137**⇑	*i*P	**Pb**	**04 47 07.7**	**-0.2**
PATCX				*e*S	**Sb**	**04 47 22.9**	**+0.4**
PATCX	**Punta Patache**	**1.11**	**137**		**Pb**	**04 47 07.4**	**-0.4**
PB11	**IPOC Station P**	**1.26**	**79**⇑	*i*P	**Pb**	**04 47 10.0**	**-0.3**
PB11				*i* S	**Sn**	**04 47 27.7**	**+0.6**
PB11				IAML		04 47 29.0	
	comp=E,62μm,0.7s						
PB11	**IPOC Station P**	**1.26**	**79**		**Pg**	**04 47 10.2**	**-0.6**
PB11					**Sn**	**04 47 27.8**	**+0.7**
PB12	**IPOC Station P**	**1.51**	**24**⇑	*i*P	**Pb**	**04 47 13.8**	**-0.8**
PB12				*e*S	**Sg**	**04 47 33.8**	**-1.3**
PB12				IAML		04 47 40.7	
	comp=E,25μm,0.7s						
PB12	**IPOC Station P**	**1.51**	**24**		**Pn**	**04 47 13.6**	**+0.1**
MNMC	**Minye Minye**	**1.56**	**56**⇑	*i*P	**Pb**	**04 47 14.8**	**-0.7**
MNMC				*i* S	**Sg**	**04 47 36.7**	**0.0**
MNMC				IAML		04 47 44.4	
	comp=E,51μm,0.5s						
MNMC	**Minye Minye**	**1.56**	**56**		**Pn**	**04 47 14.4**	**0.0**
MNMC					**Pb**	**04 47 15.1**	**-0.4**
PB02	**IPOC Station P**	**1.65**	**143**⇓	*i*P	**Pn**	**04 47 15.4**	**-0.1**
PB02				*i* S	**Sb**	**04 47 37.6**	**-0.3**
PB02				IAML		04 47 48.9	
	comp=E,23μm,0.4s						
GO01	**Chusmiza**	**1.70**	**79**⇑	*i*P	**Pb**	**04 47 17.4**	**-0.7**
GO01				*i* S	**Sg**	**04 47 41.0**	**-0.4**
GO01	**Chusmiza**	**1.70**	**79**		**Pn**	**04 47 16.9**	**+0.4**
PB08	**IPOC Station P**	**1.71**	**95**⇑	*i*P	**Pb**	**04 47 17.4**	**-0.8**
PB08				*i* S	**Sg**	**04 47 40.7**	**-1.0**
PB08				IAML		04 47 44.8	
	comp=N,11μm,0.5s						
PB08	**IPOC Station P**	**1.71**	**95**		**Pn**	**04 47 17.1**	**+0.5**
AP01	**Chacalluta**	**1.73**	**20**⇑	*e*P	**Pn**	**04 47 16.8**	**+0.3**
AP01				*e*S	**Sb**	**04 47 39.3**	**-0.6**
PB01	**IPOC Station P**	**1.73**	**127**⇑	*i*P	**Pn**	**04 47 16.8**	**+0.2**
PB01				*e*S	**Sb**	**04 47 39.4**	**-0.7**
PB01				IAML		04 47 48.2	
	comp=N,14μm,0.5s						
PB01	**IPOC Station P**	**1.73**	**127**		**Pn**	**04 47 16.6**	**0.0**
PB01					**Pb**	**04 47 17.0**	**-1.4**
PB07	**IPOC Station P**	**1.99**	**150**⇑	*i*P	**Pn**	**04 47 19.5**	**-0.7**
PB07	**IPOC Station P**	**1.99**	**150**		**Pn**	**04 47 20.3**	**0.0**
PB16	**IPOC Station P**	**2.16**	**40**⇑	*e*P	**Pn**	**04 47 23.9**	**+1.0**
PB16				*e*S	**Sb**	**04 47 52.4**	**-0.5**
PB16				IAML		04 48 00.6	
	comp=E,14μm,0.7s						
PB16	**IPOC Station P**	**2.16**	**40**		**Pb**	**04 47 24.8**	**-1.1**
PB03	**IPOC Station P**	**2.33**	**151**⇑	*e*P	**Pn**	**04 47 24.1**	**-0.8**
PB03				*e*S	**Sn**	**04 47 54.2**	**+0.6**
PB09	**IPOC Station P**	**2.41**	**138**	*e*P	**Pn**	**04 47 27.0**	**+1.0**
PB09				*e*S	**Sn**	**04 47 56.1**	**+0.6**
PB09				IAML		04 48 11.1	
	comp=E,9μm,0.5s						
PB09	**IPOC Station P**	**2.41**	**138**		**Pn**	**04 47 27.1**	**+1.1**
PB04	**IPOC Station P**	**2.44**	**162**	*e*P	**Pn**	**04 47 25.4**	**-1.1**
PB04				*e*S	**Sn**	**04 47 53.5**	**-2.9**
PB04	**IPOC Station P**	**2.44**	**162**		**Pn**	**04 47 25.9**	**-0.5**
PB05	**IPOC Station P**	**2.92**	**166**	IAML		04 48 37.0	
	comp=N,1μm,0.5s						
PB06	**IPOC Station P**	**2.99**	**154**		**Pn**	**04 47 33.4**	**-0.6**
LVC	**Limon Verde**	**3.23**	**144**	Pn	**Pn**	**04 47 38.2**	**+0.8**
	comp=N,17nm,0.3s,baz=15,slow=6.8,SNR=325						
LVC				Sn	**Sn**	**04 48 17.3**	**+1.3**
	comp=N,171nm,0.3s,baz=312,slow=22,SNR=6.7						
LVC				Lg	Lg	04 48 27.4	
	comp=N,139nm,0.3s,baz=59,slow=17,SNR=11						
LVC	**Limon Verde**	**3.23**	**144**	*e*P	**Pn**	**04 47 38.8**	**+1.4**
PB15	**IPOC Station P**	**3.48**	**157**		**Pn**	**04 47 40.1**	**-0.7**
PB10	**IPOC Station P**	**3.52**	**174**		**Pn**	**04 47 39.5**	**-1.6**
LPAZ	**La Paz**	**4.57**	**37**	Pn	**Pn**	**04 48 00.1**	**+3.9**
	comp=N,1.2nm,0.3s,baz=202,slow=9.4,SNR=34						
LPAZ				Lg	Lg	04 49 09.0	
	comp=N,8.5nm,0.3s,baz=209,slow=20,SNR=1.2						
LPAZ				LR	LR	04 49 53.0	
	comp=N,4μm,19.1s,baz=242,slow=43						
LPAZ	**La Paz**	**4.57**	**37**		**Pn**	**04 47 58.9**	**+2.7**
PB14	**IPOC Station P**	**4.63**	**174**		**Pn**	**04 47 56.0**	**-0.7**
NNA	**Nana**	**9.77**	**324**	Pn	**Pn**	**04 49 08.3**	**+1.2**
	comp=N,0.9nm,0.3s,baz=187,slow=8.1,SNR=1.5						
NNA				Sn	**Sn**	**04 50 50.4**	**-6.4**
	comp=N,1.9nm,0.3s,baz=201,slow=13,SNR=2.1						
NNA				LR	LR	04 52 42.5	
	comp=N,861nm,18.6s,baz=156,slow=36						
NNA	**Nana**	**9.77**	**324**	Pn	**Pn**	**04 49 05.8**	**-1.3**
SIV	**San Ignacio**	**10.22**	**69**	Pn	**Pn**	**04 49 12.5**	**-0.8**
	comp=N,1.6nm,0.3s,baz=255,slow=12,SNR=44						
PTLB	**Pontes e Lacer**	**12.14**	**70**	*e*P	**Pn**	**04 49 38.4**	**-1.2**
VILB	**Vilhena**	**12.47**	**57**	*e*P	**Pn**	**04 49 44.7**	**+0.6**
SAML	**Samuel**	**13.32**	**36**		**Pn**	**04 49 55.0**	**-0.6**
SAML	**Samuel**	**13.32**	**36**	*e*P	**Pn**	**04 49 55.0**	**-0.6**
CPUP	**Villa Florida**	**14.03**	**119**	Pn	**Pn**	**04 50 07.7**	**+2.4**
	comp=N,0.1nm,0.3s,baz=309,slow=14,SNR=3.0						
CPUP				LR	LR	04 56 08.3	
	comp=N,1μm,19.8s,baz=298,slow=40						
CPUP	**Villa Florida**	**14.03**	**119**	Pn	**Pn**	**04 50 06.2**	**+1.0**
CPUP	**Villa Florida**	**14.03**	**119**	*e*P	**Pn**	**04 50 05.8**	**+0.6**
AQDB	**Aquidauana**	**14.34**	**95**	*e*P	**Pn**	**04 50 08.6**	**-1.0**
ATAH	**Atahualpa**	**14.68**	**330**	Pn	**P**	**04 50 21.1**	**+0.2**
	comp=N,0.1nm,0.3s,baz=145,slow=18,SNR=1.7						
ATAH				LR	LR	04 55 23.6	
	comp=N,474nm,20.7s,baz=158,slow=35						
SALV	**Santo Antonio**	**15.09**	**77**	*e*P	**Pn**	**04 50 19.0**	**-0.8**
H03N1	**Juan Fernandez**	**15.14**	**206**	T	T	05 06 04.9	
	baz=32,slow=72						
H03N2	**Juan Fernandez**	**15.15**	**206**	T	T	05 06 08.5	
	baz=32,slow=72						
H03N3	**Juan Fernandez**	**15.16**	**206**	T	T	05 06 02.1	
	baz=32,slow=72						
ITQB	**Itaqui**	**16.18**	**129**	*e*P	**Pn**	**04 50 33.9**	**+0.1**
C2SB	**Chapadao do Su**	**17.15**	**89**	*e*P	**Pn**	**04 50 45.8**	**-0.4**
CLDB	**Colider**	**17.20**	**60**	*e*P	**Pn**	**04 50 45.1**	**-1.8**
TRCB	**Terra Rica**	**17.30**	**103**	*e*P	**Pn**	**04 50 47.0**	**-1.1**
PTGB	**Pitanga**	**18.10**	**108**	*e*P	**P**	**04 50 59.0**	**+0.6**
PCMB	**Pacaembu**	**18.49**	**98**	*e*P	**Pn**	**04 51 02.9**	**0.0**
ITAB	**Concordia**	**18.69**	**116**	*e*P	**P**	**04 51 04.4**	**-0.4**
ARAG	**Araguaiana, MT**	**18.72**	**80**	*e*P	**P**	**04 51 04.2**	**-1.1**
LPA	**La Plata**	**18.79**	**145**	*e*P	P	04 50 57.2	-8.7
LPA				PPP	PPP	04 51 23.8	
LPA				S	**Sn**	**04 54 37.1**	**+0.5**
LPA				SS	**SnSn**	**04 54 52.4**	**+1.7**
LPA				SSS	SSS	04 55 03.0	
LPA				PCP	**PcP**	**04 55 28.7**	**-4.4**
LPA				SCS	**ScS**	**05 02 41.8**	**-8.2**
LPA				PKIKP	**PKiKP**	**05 03 23.3**	**-0.4**
CPSB	**Cacapava Do Su**	**18.92**	**127**	*e*P	**Pn**	**04 51 09.2**	**+1.2**
ITRB	**Iturama**	**19.39**	**93**	*e*P	**P**	**04 51 11.4**	**-1.2**
PLTB	**Pedras Altas**	**19.49**	**130**	*e*P	**Pn**	**04 51 14.5**	**-0.4**
MACA	**Manacapuru-AM**	**19.52**	**32**	*e*P	**P**	**04 51 13.2**	**-0.7**
FRTB	**Fartura**	**20.16**	**103**	*e*P	**P**	**04 51 21.2**	**+0.2**
CNLB	**Canela**	**20.47**	**121**	*e*P	**P**	**04 51 24.4**	**0.0**
PLCA	**Paso Flores**	**20.67**	**179**	P	Pn	04 51 28.0	-0.7
	comp=N,8.2nm,0.9s,baz=354,slow=12,SNR=11						
PLCA				LR	LR	04 59 49.5	
	comp=N,512nm,19.1s,baz=358,slow=38						
PLCA	**Paso Flores**	**20.67**	**179**	P	**P**	**04 51 26.6**	**+0.2**
PLCA	**Paso Flores**	**20.67**	**179**	*e*P	Pn	04 51 29.0	+0.3
BB19B	**Bebedouro**	**21.04**	**97**	*e*P	**P**	**04 51 29.5**	**-1.1**

PUAC **Puerto Asis, P** 21.15 344 *e*P P 04 51 34.6 +2.8
IPMB **Ipameri, GO** 21.61 88 *e*P P 04 51 36.3 -0.4
PTGA **Pitinga** 21.97 31 P P 04 51 39.1 -1.4
comp=N,18nm,0.5s,baz=243,slow=23,SNR=29
PTGA LR LR 05 01 21.1
comp=N,920nm,21.1s,baz=208,slow=40
PTGA **Pitinga** 21.97 31 P P 04 51 39.1 -1.4
PTGA **Pitinga** 21.97 31 *e*P P 04 51 39.5 -1.0
RCLB **Rio Claro- Sao** 21.98 100 *e*P P 04 51 39.4 -1.2
SPB **Sao Paulo** 22.14 104 P P 04 51 41.3 -1.0
SPB **Sao Paulo** 22.14 104 *e*P P 04 51 41.6 -0.7
CRUC **La Cruz** 22.23 344 *e*P P 04 51 51.0 +7.3
BDFB **Brasilia** 22.27 82 P P 04 51 41.8 -2.1
comp=N,15nm,0.8s,baz=261,slow=10,SNR=14
BDFB LR LR 05 01 53.0
comp=N,1µm,20.5s,baz=272,slow=41
BDFB **Brasilia** 22.27 82 P P 04 51 43.8 -0.2
BDFB IAmb IAmb 04 51 49.2
comp=Z,85nm,1.5s
PET01 **Itanhaem-SP** 22.34 105 *e*P P 04 51 44.4 -0.1
GARC **Garzon, Huila** 22.50 348 *e*P P 04 51 49.5 +3.0
VAO **Valinhos** 22.52 102 *e*P P 04 51 43.8 -2.7
SOTA **Rioblanco** 22.69 345 *e*P P 04 51 53.6 +4.9
BETC **Betania** 22.97 348 *e*P P 04 51 53.9 +2.7
PARB **Paraibuna** 23.78 103 *e*P P 04 51 58.4 -0.9
ORTC **Ortega, Tolima** 24.13 350 *e*P P 04 52 03.6 +0.9
YOTC **Yotoco, Valle** 24.41 347 *e*P P 04 52 09.6 +4.2
BSCB **Bom Sucesso** 24.55 97 *e*P P 04 52 06.5 0.0
CHIC **Chingaza** 24.63 353 *e*P P 04 52 06.9 -0.7
ESAR **Angra dos Reis** 24.85 102 *e*P P 04 52 09.0 -0.1
ROSC **El Rosal** 24.91 352 P P 04 52 12.6 +2.5
comp=Z,3.0nm,0.4s,baz=74,slow=18,SNR=2.2
ROSC LR LR 05 03 17.2
comp=Z,1µm,18.0s,baz=202,slow=40
ROSC **El Rosal** 24.91 352 P P 04 52 09.3 -0.8
ROSC IAmb IAmb 04 52 53.7
comp=Z,62nm,1.4s
SMTB **Santa Maria do** 25.16 67 *e*P P 04 52 11.5 -0.5
MAN01 **Angra dos Reis** 25.28 101 *e*P P 04 52 12.7 -0.4
RUSC **La Rusia** 25.82 355 *e*P P 04 52 19.0 +0.5
RUSC **La Rusia** 25.82 355 P P 04 52 19.0 +0.5
JANB **Januaria** 25.87 83 *e*P P 04 52 17.1 -1.4
CBOC **Ciudad Bolivar** 26.18 349 *e*P P 04 52 24.9 +3.5
SJMB **Sao Joao De Ma** 28.11 92 *e*P P 04 52 37.7 -0.9
BSFB **Barra de Sao F** 28.41 93 *e*P P 04 52 41.2 -0.1
SDV **Santo Domingo** 28.71 1 P P 04 52 45.6 +1.6
comp=Z,4.3nm,0.9s,baz=358,slow=5.0,SNR=3.1
SDV LR LR 05 03 31.9
comp=Z,801nm,19.8s,baz=234,slow=35
SDV **Santo Domingo** 28.71 1 P P 04 52 43.4 -0.7
SDV **Santo Domingo** 28.71 1 *e*P P 04 52 43.9 -0.2
MDP **Montagnes des** 30.77 38 P P 04 53 02.1 -0.1
comp=Z,11nm,1.0s,baz=212,slow=9.5,SNR=1.2
MDP LR LR 05 06 05.6
comp=Z,2µm,19.2s,baz=212,slow=38
ROSB **Rosrio** 31.23 60 *e*P P 04 53 05.3 -1.0
RPN **Rapa Nui** 35.77 251 LR LR 05 04 51.8
comp=Z,999nm,18.0s,baz=86,slow=30
OBIP **Obispado Ponce** 38.05 7 P P 04 54 04.7 -0.4
TEIG **Tepich** 43.43 336 P P 04 54 50.7 +1.2
comp=Z,10nm,1.0s,baz=46,slow=0.0,SNR=2.0
TIGA **Tifton** 52.56 346 P P 04 56 00.9 +0.9
baz=165
352A **Blakely** 52.91 345 IAmb IAmb 04 56 24.3
comp=Z,27nm,1.1s
Z59A **Georgetown, SC** 53.54 351 P P 04 56 08.4 +1.2
baz=170
NHSC **New Hope** 53.54 350 P P 04 56 08.6 +1.4
baz=169
Z58A **St. Stephen** 53.71 351 P P 04 56 09.9 +1.5
baz=170
Z57A **Bowman** 53.81 350 P P 04 56 10.1 +0.9
baz=169
Y60A **Bolivia** 54.15 353 P P 04 56 12.8 +1.1
baz=172
Y58A **Scranton** 54.24 351 P P 04 56 13.5 +1.2
baz=170
Y55A **Saluda** 54.63 349 P P 04 56 16.0 +0.8
baz=168
X60A **Albert Glenn T** 54.69 353 P P 04 56 16.6 +1.0
baz=172
X59A **McDuffie Farm,** 54.76 352 P P 04 56 17.0 +0.9
baz=171
X58A **Rowland** 54.84 352 P P 04 56 17.8 +1.2
baz=170
Z50A **Ashland** 54.85 345 P P 04 56 17.2 +0.3
baz=163
LRAL **Lakeview Retre** 54.92 344 P P 04 56 16.8 -0.5
baz=162
Y52A **Lilburn** 55.00 347 P P 04 56 17.3 -0.6
baz=165
X56A **White Oak** 55.03 350 P P 04 56 19.1 +1.0
baz=169
BIRD **Birdtown, Kers** 55.09 350 IAmb IAmb 04 56 46.4
comp=Z,19nm,1.1s
X55A **Gracelyn & Ava** 55.11 349 P P 04 56 19.7 +1.0
baz=168
W60A **Pink Hill** 55.12 353 P P 04 56 19.9 +1.1
baz=172
W61A **Ground Anchor** 55.17 354 P P 04 56 20.2 +1.2
baz=173
W58A **Raeford** 55.28 352 P P 04 56 21.0 +1.2
baz=171
X54A **Belton** 55.32 349 P P 04 56 21.3 +1.1
baz=167
CNNC **Cliffs of the** 55.33 353 P P 04 56 21.1 +0.9
baz=172
V62A **Hyde County Ai** 55.46 355 P P 04 56 22.2 +1.1
baz=174
PAULI **Pauline** 55.49 349 P P 04 56 21.0 -0.4
PAULI IAmb IAmb 04 56 23.3
comp=Z,22nm,1.4s
W57A **Gilead** 55.52 351 P P 04 56 22.8 +1.2
baz=170
W57A **Gilead** 55.52 351 IAmb IAmb 04 56 23.6
comp=Z,23nm,1.4s
W56A **Indian Trail** 55.59 350 P P 04 56 23.0 +0.9
baz=169
KMSC **Kings Mountain** 55.72 350 P P 04 56 23.9 +0.8
baz=168
W54A **Cherokee Point** 55.81 349 P P 04 56 24.5 +0.7
baz=167
V59A **Middlesex** 55.89 353 P P 04 56 25.4 +1.2
baz=172,SNR=6.8
V58A **Windy Hill, Pi** 56.03 352 P P 04 56 25.9 +0.7
baz=171
V58A **Windy Hill, Pi** 56.03 352 IAmb IAmb 04 56 27.2
comp=Z,40nm,1.6s
W52A **Murphy** 56.16 347 IAmb IAmb 04 56 27.8
comp=Z,27nm,1.6s
V57A **Coltrane Farms** 56.21 351 P P 04 56 27.2 +0.7
baz=170
V56A **Mocksville** 56.24 351 P P 04 56 27.7 +0.9
baz=169
U61A **Possum Corner** 56.27 355 P P 04 56 27.7 +0.8
baz=174
X48A **Hartselle** 56.27 344 IAmb IAmb 04 56 29.0
comp=Z,19nm,1.6s
V55A **Taylorsville** 56.39 350 P P 04 56 28.7 +0.9
baz=169
V55A **Taylorsville** 56.39 350 IAmb IAmb 04 57 25.8
comp=Z,13nm,1.0s
U59A **Littleton** 56.42 353 P P 04 56 28.9 +0.9
baz=172
V54A **Nebo** 56.44 349 P P 04 56 28.9 +0.6
baz=168
U60A **Pendleton** 56.47 354 P P 04 56 29.3 +0.9
baz=173
U58A **Oxford** 56.55 353 P P 04 56 29.9 +1.0
baz=172
CPCT **Cooper Cave** 56.63 347 P P 04 56 30.1 +0.5
U57A **Blanch** 56.68 352 P P 04 56 30.9 +1.0
baz=171
U56A **King** 56.75 351 P P 04 56 31.7 +1.3
baz=170
U56A **King** 56.75 351 IAmb IAmb 04 56 33.5
comp=Z,16nm,1.1s
V52A **Sevierville** 56.81 348 P P 04 56 30.9 +0.1
V52A IAmb IAmb 04 56 32.2
comp=Z,39nm,1.6s
Z41A **Richland Creek** 56.92 338 P P 04 56 32.5 +0.9
baz=156
OXF **Oxford** 56.98 342 P P 04 56 32.4 +0.4
baz=159
U55A **TA2, Sparta** 57.00 350 P P 04 56 32.9 +0.6
baz=169

T59A **Double "B" Far** 57.01 354 P P 04 56 33.2 +1.0
baz=173,SNR=9.3
T59A **Double "B" Far** 57.01 354 P P 04 56 32.7 +0.5
T59A pP 04 56 33.5 -1.6
T58A **Grand View Acr** 57.09 353 P P 04 56 33.8 +1.0
baz=172,SNR=8.7
U54A **Nelsons Funny** 57.15 350 P P 04 56 33.9 +0.6
baz=168
T57A **Hurt** 57.23 352 P P 04 56 34.8 +1.0
baz=171,SNR=5.3
T57A **Hurt** 57.23 352 IAmb IAmb 04 56 36.0
comp=Z,26nm,1.4s
T56A **Rocky Mt** 57.37 351 P P 04 56 35.8 +1.0
baz=170
WLAR **White Oak Lake** 57.42 338 P P 04 56 35.1 -0.1
V48A **Smith Brothers** 57.44 345 IAmb IAmb 04 56 36.5
comp=Z,26nm,1.5s
HPIG 57.52 323 P P 04 56 35.2 -1.1
W45A **Hickory Valley** 57.52 342 P P 04 56 35.2 -0.6
W45A IAmb IAmb 04 57 04.1
comp=Z,39nm,1.4s
T55A **Pulaski** 57.56 351 P P 04 56 37.2 +1.0
baz=169
WHTX **Lake Whitney,** 57.59 333 P P 04 56 37.0 +0.6
baz=150
BLA **Blacksburg** 57.60 351 P P 04 56 37.3 +0.9
baz=170
T54A **Tazewell** 57.63 350 P P 04 56 37.3 +0.6
baz=168
S58A **Poland Farm, P** 57.69 353 P P 04 56 37.7 +0.7
baz=172
T53A **Wise** 57.72 349 P P 04 56 38.0 +0.7
baz=167
S59A **Mechanicsville** 57.76 354 P P 04 56 38.3 +0.8
baz=173
S57A **Dark Hollow, R** 57.94 353 P P 04 56 39.8 +1.0
baz=171,SNR=5.9
S57A **Dark Hollow, R** 57.94 353 IAmb IAmb 04 56 41.1
comp=Z,38nm,1.6s
R58B **Mineral** 58.02 354 P P 04 56 40.4 +1.1
baz=172,SNR=8.8
WVT **Waverly** 58.06 344 P P 04 56 39.4 -0.3
baz=161
WVT **Waverly** 58.06 344 P P 04 56 39.1 -0.6
WVT IAmb IAmb 04 56 40.5
comp=Z,33nm,1.9s
S55A **Lewisburg** 58.16 351 P P 04 56 40.9 +0.5
baz=170
R59A **King George, V** 58.18 354 P P 04 56 40.6 +0.2
baz=173
T50A **Nancy** 58.21 347 IAmb IAmb 04 56 41.9
comp=Z,19nm,1.6s
CBN **Corbin Frederi** 58.21 354 P P 04 56 41.0 +0.4
baz=173
S54A **Dingess, Beckl** 58.31 350 P P 04 56 41.5 +0.1
baz=169
S54A **Dingess, Beckl** 58.31 350 IAmb IAmb 04 57 10.8
comp=Z,9.7nm,0.8s
TXAR **Lajitas Array** 58.31 326 P P 04 56 42.8 +1.1
comp=Z,0.4nm,0.6s,baz=149,slow=5.3,SNR=9.0
TXAR LR LR 05 20 44.4
comp=Z,128nm,19.2s,baz=0.0,slow=35
S53A **Williamson** 58.33 350 P P 04 56 41.7 +0.2
baz=168
MIAR **Mount Ida** 58.35 338 P P 04 56 41.8 0.0
baz=155
R58A **Rapidan** 58.37 353 P P 04 56 42.4 +0.7
baz=172
R57A **Stanardsville** 58.42 353 P P 04 56 43.4 +1.2
baz=172,SNR=6.2
W41B **Gary Mavity, V** 58.48 340 P P 04 56 42.8 +0.3
baz=157
R55A **Marlinton** 58.61 352 P P 04 56 44.6 +1.1
baz=170
Z35A **Perchaven, San** 58.67 334 P P 04 56 44.5 +0.5
Z35A IAmb IAmb 04 56 46.4
comp=Z,25nm,1.3s
Q60A **Greensboro** 58.87 356 P P 04 56 46.1 +0.9
baz=175
Q58A **Fox Den Farm,** 58.97 354 P P 04 56 47.1 +1.1
baz=173,SNR=6.0
W39A **Magazine** 59.02 338 P P 04 56 47.4 +1.0
baz=155
W39A **Magazine** 59.02 338 IAmb IAmb 04 57 18.7
comp=Z,13nm,1.1s
FCAR **Ozark Folk Cen** 59.09 340 IAmb IAmb 04 56 48.2
comp=Z,29nm,2.0s
Q57A **Strasburg** 59.14 353 P P 04 56 48.5 +1.4
baz=172,SNR=7.5
Q56A **Snyder Ridge,** 59.23 353 P P 04 56 49.3 +1.5
baz=171,SNR=5.8
Q55A **Buckhannon** 59.30 352 P P 04 56 49.5 +1.2
baz=170
R50A **Paris** 59.32 348 P P 04 56 49.2 +0.8
Q53A **Leroy** 59.38 350 P P 04 56 49.6 +0.8
baz=169
PBMO **Poplar Bluff** 59.39 342 IAmb IAmb 04 57 08.7
comp=Z,7.7nm,0.7s
Q54A **Coxs Mills** 59.40 351 P P 04 56 50.0 +1.1
baz=169
P58A **Pank, Wackersv** 59.48 354 P P 04 56 50.5 +1.1
baz=173
P59A **Jarrettsville** 59.52 355 P P 04 56 51.0 +1.3
baz=174,SNR=5.2
P57A **Homestead Farm** 59.54 354 P P 04 56 51.0 +1.2
baz=172
P57A **Homestead Farm** 59.54 354 IAmb IAmb 04 56 53.5
comp=Z,17nm,1.1s
Q52A **Bidwell** 59.60 350 P P 04 56 50.5 +0.2
baz=168
P56A **Dayton Farm, R** 59.65 353 P P 04 56 52.0 +1.3
baz=172,SNR=5.2
P60A **Greenville** 59.66 356 P P 04 56 51.4 +0.7
baz=175
WCI **Wyandotte Cave** 59.69 346 P P 04 56 50.8 -0.1
baz=163
WCI **Wyandotte Cave** 59.69 346 P P 04 56 51.3 +0.4
WCI IAmb IAmb 04 56 51.9
comp=Z,18nm,1.3s
U40A **Yellville** 59.75 340 P P 04 56 51.7 +0.2
baz=156
P55A **Reedsville** 59.78 352 P P 04 56 52.4 +0.8
baz=170
Q51A **Peebles** 59.85 349 P P 04 56 52.1 +0.1
baz=167
O61A **Allentown** 59.88 357 P P 04 56 52.6 +0.4
baz=176
S44A **Carbondale** 59.91 343 P P 04 56 52.9 +0.4
MCWV **Mont Chateau** 59.93 352 P P 04 56 53.4 +0.9
baz=170
P54A **Burton** 59.96 352 P P 04 56 53.7 +0.9
baz=170,SNR=5.2
P53A **Whipple** 59.98 351 P P 04 56 53.6 +0.7
baz=169
HHAR **Hobbs** 60.05 339 IAmb IAmb 04 56 59.8
comp=Z,16nm,1.4s
O58A **Lewisberry** 60.07 355 P P 04 56 54.7 +1.2
baz=174
O60A **Telford** 60.15 356 P P 04 56 55.0 +1.0
baz=175
PAGS **Pennsylvania G** 60.16 355 IAmb IAmb 04 56 55.6
comp=Z,14nm,1.2s
O59A **Robesonia** 60.20 355 P P 04 56 55.4 +1.1
baz=174
O57A **Amberson** 60.22 354 P P 04 56 55.9 +1.4
baz=173
P52A **Corning** 60.24 350 P P 04 56 55.6 +1.0
baz=168
P51A **Williamsport** 60.24 349 P P 04 56 55.6 +0.9
baz=167
U38A **Grette** 60.35 338 IAmb IAmb 04 56 57.4
comp=Z,23nm,1.8s
O56A **Blue Knob Stat** 60.38 353 P P 04 56 56.8 +1.1
baz=172,SNR=5.8
O56A **Blue Knob Stat** 60.38 353 IAmb IAmb 04 56 59.0
comp=Z,24nm,1.2s
TUL1 **Leonard** 60.38 337 P P 04 56 56.5 +0.8
baz=153
TUL1 **Leonard** 60.38 337 IAmb IAmb 04 56 57.5
comp=Z,18nm,1.2s
O55A **Ligonier** 60.40 353 P P 04 56 56.9 +1.1
baz=171,SNR=5.9
P50A **Jamestown** 60.50 349 P P 04 56 56.4 0.0
baz=166
N61A **South Mountain** 60.52 357 P P 04 56 57.3 +0.8
baz=176
WMOK **Wichita Mounta** 60.52 334 P P 04 56 56.9 +0.1
baz=150

O52A **Adamsville** 60.66 350 P P 04 56 58.6 +1.1
baz=168
SSPA **Standing Stone** 60.67 354 P P 04 56 58.5 +0.9
baz=173
SSPA **Standing Stone** 60.67 354 P P 04 56 58.5 +0.9
SSPA IAmb IAmb 04 57 00.1
comp=Z,32nm,1.6s
N60A **Cedar Hill Far** 60.68 356 P P 04 56 58.5 +0.9
baz=176
O53A **New Philadelph** 60.70 351 P P 04 56 58.2 +0.4
baz=169
N57A **Milroy** 60.75 354 P P 04 56 59.1 +0.9
baz=173,SNR=5.7
PAL **Palisades** 60.76 357 P P 04 56 59.0 +0.9
baz=177
N58A **Sunbury** 60.76 355 P P 04 56 59.2 +1.0
baz=174
N59A **State Game Lan** 60.77 356 P P 04 56 59.6 +1.3
baz=175
O51A **Pataskala** 60.81 350 P P 04 56 59.0 +0.3
baz=168
CCM **Cathedral Cave** 60.81 342 P P 04 56 59.0 +0.4
baz=158
CCM **Cathedral Cave** 60.81 342 P P 04 56 59.0 +0.4
N55A **Marion Center** 60.93 353 P P 04 57 00.5 +1.1
baz=172,SNR=14
ACSO **Alum Creek Sta** 60.96 349 P P 04 56 59.8 +0.2
baz=167
N56A **West Decatur** 60.99 354 P P 04 57 00.8 +1.0
baz=172,SNR=8.4
Q44A **Meyer Farm, Va** 60.99 344 IAmb IAmb 04 57 27.4
comp=Z,7.2nm,0.7s
O50A **Cable** 60.99 349 P P 04 57 00.4 +0.6
baz=166
MNTX **Cornudas Mount** 61.09 327 P P 04 57 00.6 -0.1
baz=143
M63A **Gales Ferry** 61.10 359 P P 04 57 01.8 +1.3
baz=179
M62A **Hamden** 61.16 358 P P 04 57 01.9 +1.1
baz=178
O49A **Covington** 61.16 348 P P 04 57 01.7 +0.7
baz=166
N54A **Moraine State** 61.23 352 P P 04 57 02.5 +1.1
baz=170
M58A **Price's Panora** 61.27 355 P P 04 57 03.0 +1.3
baz=174,SNR=7.0
M57A **Sunshine Farm,** 61.29 355 P P 04 57 03.1 +1.2
baz=174,SNR=5.4
R40A **Maddies Statio** 61.34 341 IAmb IAmb 04 57 03.7
comp=Z,33nm,1.8s
M59A **Waymart** 61.37 356 P P 04 57 03.5 +1.2
baz=175,SNR=5.2
O48A **Farmland** 61.39 348 P P 04 57 03.4 +0.9
baz=165
N50A **Nevada** 61.51 349 P P 04 57 04.0 +0.7
baz=167
T35A **Sooner Cattle** 61.53 337 P P 04 57 04.9 +1.3
T35A IAmb IAmb 04 57 10.2
comp=Z,13nm,1.1s
M56A **Emporium** 61.54 354 P P 04 57 04.6 +1.1
baz=172,SNR=9.0
L63A **North Scituate** 61.55 359 P P 04 57 04.6 +1.1
baz=179
M55A **Ridgway** 61.58 353 P P 04 57 04.8 +1.0
baz=172,SNR=8.1
L64A **Middleborough** 61.62 0 P P 04 57 05.0 +0.9
baz=180
MSTX **Muleshoe** 61.64 330 P P 04 57 04.6 +0.1
baz=146
MSTX **Muleshoe** 61.64 330 IAmb IAmb 04 57 33.1
comp=Z,10nm,1.1s
M54A **Oil Creek Stat** 61.73 353 P P 04 57 05.5 +0.8
baz=171,SNR=5.3
L60A **Shokan** 61.75 357 P P 04 57 06.0 +1.1
baz=177
N49A **Columbus Grove** 61.84 349 P P 04 57 05.5 -0.1
baz=166
L58A **Harry Jones Me** 61.90 356 P P 04 57 07.0 +1.1
baz=175,SNR=7.8
L61A **Hillsdale 1, H** 61.93 358 P P 04 57 07.2 +1.1
baz=177
L57A **Andrews Acres** 61.93 355 P P 04 57 07.2 +1.0
baz=174
N48A **Decatur** 61.95 348 P P 04 57 05.8 -0.4
baz=165
L59A **Walton** 61.99 357 P P 04 57 07.9 +1.3
baz=176,SNR=9.5
BINY **Binghamton** 62.06 356 P P 04 57 08.4 +1.4
baz=175,SNR=6.4
N47A **Urbana** 62.10 347 P P 04 57 07.8 +0.6
baz=164
VNA3 **Neumayer Olymp** 62.10 161 P P 04 57 07.9 +0.9
L56A **Greenwood** 62.12 354 P P 04 57 08.4 +1.0
baz=173,SNR=6.5
L56A **Greenwood** 62.12 354 IAmb IAmb 04 57 17.2
comp=Z,12nm,0.9s
L61B **Northampton** 62.16 359 P P 04 57 08.5 +0.9
baz=178
HRV **Adam Dziewonsk** 62.20 360 P P 04 57 08.9 +1.0
baz=180
HRV **Adam Dziewonsk** 62.20 360 P P 04 57 09.4 +1.5
L55A **Hinsdale** 62.26 354 P P 04 57 09.5 +1.1
baz=172
K62A **Royalston** 62.36 359 P P 04 57 10.6 +1.6
baz=179
K63A **Dunstable** 62.38 360 P P 04 57 10.4 +1.3
baz=180
K61A **Williamstown** 62.39 358 P P 04 57 10.2 +1.0
baz=178
L54A **Sinclairville** 62.40 353 P P 04 57 10.5 +1.3
baz=171
TRY **Troy** 62.47 358 IAmb IAmb 04 57 13.0
comp=Z,19nm,1.1s
K59A **Cooperstown** 62.56 357 P P 04 57 11.5 +1.1
baz=176,SNR=13
K58A **Earlville** 62.60 356 P P 04 57 11.6 +1.0
baz=175,SNR=6.9
HDIL **Hopedale** 62.62 344 P P 04 57 11.3 +0.6
baz=161
K57A **Scipio Center** 62.63 355 P P 04 57 11.6 +0.8
baz=174
K56A **Middlesex** 62.66 355 P P 04 57 11.8 +0.7
baz=173
VNA2 **Neumayer--Watz** 62.69 161 P P 04 57 11.9 +0.9
baz=294,slow=9.4
K54A **Basiliko Farm,** 62.70 354 P P 04 57 12.3 +1.0
baz=172
K55A **Perry** 62.76 354 P P 04 57 12.7 +1.0
baz=173
J62A **Henniker** 62.92 359 P P 04 57 14.0 +1.3
baz=179
P38A **Dawn** 62.95 341 P P 04 57 12.7 -0.3
J60A **Lant Hill Farm** 62.97 358 P P 04 57 14.2 +1.2
baz=178
J61A **Chester** 63.05 359 P P 04 57 14.7 +1.2
baz=178
K52A **Tillsonburg** 63.11 352 P P 04 57 15.1 +1.2
baz=170
ACCN **Adirondack Com** 63.12 358 IAmb IAmb 04 57 17.3
comp=Z,22nm,1.4s
J58A **Remsen** 63.17 356 P P 04 57 15.6 +1.2
baz=176
J59A **Piesco** 63.24 357 P P 04 57 15.9 +1.1
baz=176,SNR=9.2
J57A **Williamstown** 63.27 356 P P 04 57 15.5 +0.5
baz=175
I58A **Old Forge** 63.48 357 P P 04 57 17.1 +0.6
baz=176,SNR=7.8
K49A **Clarkson** 63.52 350 P P 04 57 17.2 +0.5
baz=167
J52A **Paris** 63.53 352 P P 04 57 17.0 +0.3
baz=170
I59A **Olmsteadville** 63.54 358 P P 04 57 17.9 +1.1
baz=177,SNR=6.9
I60A **Shoreham** 63.57 358 P P 04 57 18.0 +1.0
baz=178
I61A **Oroboro, Fairl** 63.63 359 P P 04 57 18.7 +1.3
baz=179,SNR=9.7
NCB **Newcomb** 63.73 357 IAmb IAmb 04 57 20.4
comp=Z,23nm,1.6s
I57A **Carthage** 63.77 356 P P 04 57 19.1 +0.8
baz=175
K46A **Dorr** 63.85 348 P P 04 57 19.3 +0.4
baz=165
LBNH **Lisbon** 63.93 359 P P 04 57 20.7 +1.3
baz=179
LBNH **Lisbon** 63.93 359 IAmb IAmb 04 57 30.6
comp=Z,11nm,0.9s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
J48A	**Bridge Port**	**64.08**	**350**	P	**P**	**04 57 21.0**	**+0.6**
	baz=167						
I51A	**Listowel**	**64.16**	**352**	P	**P**	**04 57 21.8**	**+0.9**
	baz=170						
H58A	**Gabriels**	**64.17**	**357**	P	**P**	**04 57 22.0**	**+1.0**
	baz=177,SNR=7.0						
I55A	**Frankford**	**64.20**	**355**	P	**P**	**04 57 22.1**	**+1.0**
	baz=173						
J47A	**Sunmer**	**64.20**	**349**	P	**P**	**04 57 21.9**	**+0.7**
	baz=166						
ANMO	**Albuquerque**	**64.21**	**328**	P	**P**	**04 57 21.4**	**-0.2**
H61A	**Lyndonville**	**64.23**	**359**	P	**P**	**04 57 22.7**	**+1.4**
	baz=179						
H62A	**Milan**	**64.26**	**360**	P	**P**	**04 57 22.9**	**+1.4**
	baz=180						
SNAA	**Sanae**	**64.32**	**161**	P	**P**	**04 57 23.1**	**+1.4**
SNAA	**Sanae**	**64.32**	**161**	P	**P**	**04 57 22.5**	**+0.7**
H64A	**Troy**	**64.35**	**1**	P	**P**	**04 57 23.3**	**+1.2**
	baz=182						
H63A	**New Sharon**	**64.35**	**1**	P	**P**	**04 57 23.7**	**+1.5**
	baz=181						
H59A	**Cadyville**	**64.38**	**358**	P	**P**	**04 57 23.5**	**+1.2**
	baz=177,SNR=5.2						
LONY	**Lake Ozonia**	**64.39**	**357**	P	**P**	**04 57 23.6**	**+1.2**
	baz=176						
H65A	**Eastbrook**	**64.43**	**2**	P	**P**	**04 57 23.8**	**+1.2**
	baz=183						
H56A	**Elgin**	**64.46**	**356**	P	**P**	**04 57 23.7**	**+0.9**
	baz=175						
H55A	**Tweed**	**64.49**	**355**	P	**P**	**04 57 23.8**	**+0.8**
	baz=174						
L40A	**Anamosa**	**64.53**	**343**	IAmb	IAmb	04 57 24.4	
	comp=Z,23nm,1.4s						
H66A	**Whiting**	**64.56**	**3**	P	**P**	**04 57 24.6**	**+1.1**
	baz=184						
H53A	**Bobcaygeon**	**64.64**	**354**	P	**P**	**04 57 24.4**	**+0.4**
	baz=172						
G60A	**Masonville**	**64.80**	**359**	P	**P**	**04 57 26.7**	**+1.6**
	baz=179						
G63A	**Kingsbury**	**64.81**	**1**	P	**P**	**04 57 26.7**	**+1.5**
	baz=182						
G57A	**Newington**	**64.89**	**357**	P	**P**	**04 57 26.7**	**+1.1**
	baz=176						
G62A	**West of Eustis**	**64.91**	**0**	P	**P**	**04 57 27.6**	**+1.8**
	baz=180,SNR=11						
G62A	**West of Eustis**	**64.91**	**0**	P	**P**	**04 57 26.7**	**+0.9**
SCIA	**State Center**	**64.95**	**342**	P	**P**	**04 57 26.6**	**+0.5**
SCIA				IAmb	IAmb	04 57 28.3	
	comp=Z,8.6nm,0.6s						
PKME	**Peaks-Kenny Pk**	**64.97**	**1**	P	**P**	**04 57 27.6**	**+1.4**
	baz=182						
G61A	**St-Isidore-de-**	**64.97**	**360**	P	**P**	**04 57 27.8**	**+1.6**
	baz=180,SNR=5.4						
G64A	**Maxfield**	**64.97**	**2**	P	**P**	**04 57 27.7**	**+1.5**
	baz=182						
T25A	**Trinidad**	**65.00**	**331**	P	**P**	**04 57 27.4**	**+0.6**
	baz=145						
I46A	**Reed City**	**65.00**	**349**	P	**P**	**04 57 26.7**	**+0.3**
	baz=165						
JFWS	**Jewell Farm**	**65.08**	**344**	P	**P**	**04 57 27.3**	**+0.4**
	baz=160						
JFWS	**Jewell Farm**	**65.08**	**344**	IAmb	IAmb	04 57 29.0	
	comp=Z,14nm,1.1s						
G55A	**Calabogie**	**65.15**	**356**	P	**P**	**04 57 28.1**	**+0.8**
	baz=174						
G53A	**Haliburton**	**65.18**	**354**	P	**P**	**04 57 28.0**	**+0.4**
	baz=172						
214A	**Organ Pipe Nat**	**65.39**	**321**	IAmb	IAmb	04 57 37.7	
	comp=Z,24nm,1.9s						
H47A	**Mio**	**65.42**	**350**	P	**P**	**04 57 30.1**	**+1.0**
	baz=166						
F64A	**Sherman**	**65.59**	**2**	P	**P**	**04 57 31.6**	**+1.5**
	baz=183						
F64A	**Sherman**	**65.59**	**2**	P	**P**	**04 57 31.7**	**+1.5**
F64A				IAmb	IAmb	04 58 06.0	
	comp=Z,14nm,1.1s						
F61A	**St Evariste**	**65.66**	**360**	P	**P**	**04 57 32.0**	**+1.4**
	baz=180						
F60A	**Warwick**	**65.66**	**359**	P	**P**	**04 57 31.9**	**+1.3**
	baz=179						
F52A	**Sundridge**	**65.92**	**354**	P	**P**	**04 57 32.7**	**+0.4**
	baz=172						
ALGO	**Algonquin Park**	**65.96**	**355**	P	**P**	**04 57 32.8**	**+0.3**
	baz=173						
SDCO	**Great Sand Dun**	**65.99**	**331**	P	**P**	**04 57 34.4**	**+1.1**
	baz=144						
SDCO	**Great Sand Dun**	**65.99**	**331**	IAmb	IAmb	04 57 41.1	
	comp=Z,12nm,1.4s						
E60A	**Ste Agathe de**	**66.06**	**360**	P	**P**	**04 57 34.6**	**+1.4**
	baz=180						
BGNE	**Belgrade**	**66.10**	**338**	P	**P**	**04 57 34.7**	**+1.2**
	baz=152						
F51A	**Arnstein**	**66.12**	**353**	P	**P**	**04 57 34.4**	**+0.8**
	baz=171						
E61A	**Lac Etchemin**	**66.12**	**0**	P	**P**	**04 57 35.0**	**+1.4**
	baz=181						
E63A	**Oxbow**	**66.15**	**2**	P	**P**	**04 57 35.1**	**+1.3**
	baz=183						
E63A	**Oxbow**	**66.15**	**2**	P	**P**	**04 57 34.2**	**+0.4**
E63A				IAmb	IAmb	04 57 36.8	
	comp=Z,12nm,1.1s						
E56A	**St. Veronique**	**66.33**	**357**	P	**P**	**04 57 35.9**	**+1.0**
	baz=176						
E53A	**Dumoine, Ponti**	**66.34**	**355**	P	**P**	**04 57 36.6**	**+1.6**
	baz=173						
E54A	**Lac Daplat, Po**	**66.36**	**355**	P	**P**	**04 57 36.6**	**+1.5**
	baz=174						
E51A	**G1948 Merrick**	**66.67**	**354**	P	**P**	**04 57 38.7**	**+1.6**
	baz=171						
D57A	**Chemin Vers le**	**66.76**	**358**	P	**P**	**04 57 38.8**	**+1.1**
	baz=177						
D62A	**Allapoint, All**	**66.79**	**1**	P	**P**	**04 57 39.1**	**+1.3**
	baz=182						
D58A	**Chemin du LacG**	**66.81**	**359**	P	**P**	**04 57 38.9**	**+0.9**
	baz=178						
D56A	**ZEC Mazanza, M**	**66.82**	**357**	P	**P**	**04 57 39.0**	**+0.9**
	baz=176						
D55A	**Sainte-Anne-du**	**66.83**	**357**	P	**P**	**04 57 39.1**	**+1.0**
	baz=176						
MVCO	**Mesa Verde**	**67.01**	**328**	IAmb	IAmb	04 57 59.0	
	comp=Z,11nm,1.2s						
D54A	**Lac Fusel, La**	**67.04**	**356**	P	**P**	**04 57 39.8**	**+0.4**
	baz=174						
D53A	**Lac Vacive, Po**	**67.04**	**355**	P	**P**	**04 57 40.1**	**+0.6**
	baz=173						
D53A	**Lac Vacive, Po**	**67.04**	**355**	IAmb	IAmb	04 58 03.9	
	comp=Z,30nm,1.8s						
D50A	**G1974 Best Tow**	**67.33**	**353**	P	**P**	**04 57 41.7**	**+0.4**
	baz=171						
K31A	**O'Neill**	**67.38**	**338**	P	**P**	**04 57 42.2**	**+0.5**
ECSD	**EROS Data Cent**	**67.65**	**340**	P	**P**	**04 57 44.0**	**+0.6**
	baz=154						
ECSD	**EROS Data Cent**	**67.65**	**340**	IAmb	IAmb	04 57 45.9	
	comp=Z,21nm,1.5s						
ISCO	**Idaho Springs**	**67.72**	**332**	P	**P**	**04 57 45.8**	**+1.5**
	baz=145						
SPMN	**Marine on St.**	**67.89**	**344**	P	**P**	**04 57 44.9**	**0.0**
SPMN				IAmb	IAmb	04 57 56.9	
	comp=Z,12nm,1.3s						
VLDQ	**Val d'Or**	**68.05**	**355**	IAmb	IAmb	04 57 47.8	
	comp=Z,19nm,1.5s						
U15A	**North Rim**	**68.38**	**325**	IAmb	IAmb	04 57 57.1	
	comp=Z,12nm,1.3s						
F36A	**Milaca**	**68.68**	**343**	IAmb	IAmb	04 57 51.0	
	comp=Z,12nm,1.4s						
N23A	**Red Feather La**	**68.75**	**332**	P	**P**	**04 57 51.7**	**+1.0**
	baz=145						
PHWY	**Pilot Hill**	**68.88**	**333**	IAmb	IAmb	04 57 59.0	
	comp=Z,15nm,1.6s						
CHGQ	**Chibougamau**	**69.67**	**358**	P	**P**	**04 57 57.3**	**+1.5**
	baz=177						
MATQ	**Matagami**	**69.70**	**355**	P	**P**	**04 57 57.3**	**+1.2**
	baz=173						
LIC	**Lamto**	**69.84**	**75**	*e*PKP1	**P**	**04 57 57.7**	**0.0**
	comp=Z,20nm,1.0s						
TIC	**Toumodi**	**70.02**	**75**	*e*PKP1	**P**	**04 57 57.7**	**-1.1**
KIC	**Kosan Boka**	**70.16**	**75**	*e*PKP1	**P**	**04 57 58.5**	**-1.2**
	comp=Z,20nm,0.9s						
QSPA	**South Pole Qui**	**70.18**	**180**	P	**P**	**04 57 59.9**	**+0.7**
QSPA				IAmb	IAmb	04 58 07.4	
	comp=Z,23nm,1.6s						
K22A	**Casper**	**70.44**	**333**	P	**P**	**04 58 02.1**	**+1.1**
	baz=145						
RSSD	**Black Hills**	**70.63**	**335**	P	**P**	**04 58 03.6**	**+1.4**
	baz=147						
RSSD	**Black Hills**	**70.63**	**335**	P	**P**	**04 58 01.8**	**-0.4**
RSSD				IAmb	IAmb	04 58 30.1	
	comp=Z,15nm,1.6s						
B35A	**Bob, Littlefor**	**71.03**	**344**	IAmb	IAmb	04 59 31.9	
	comp=Z,23nm,2.0s						
DUG	**Dugway, Tooele**	**71.46**	**327**	P	**P**	**04 58 09.2**	**+2.0**
	baz=139						
DUG	**Dugway, Tooele**	**71.46**	**327**	IAmb	IAmb	04 58 15.6	
	comp=Z,26nm,1.8s						
AGMN	**Agassiz Nation**	**71.55**	**343**	P	**P**	**04 58 08.5**	**+1.1**
	baz=156						
R11A	**Troy Canyon, C**	**71.57**	**324**	P	**P**	**04 58 09.1**	**+1.2**
	baz=136						
PDAR	**Pinedale Array**	**71.87**	**331**	P	**P**	**04 58 12.0**	**+2.3**
	comp=Z,0.6nm,0.8s,baz=126,slow=7.5,SNR=6.7						
BW06	**Boulder Array**	**71.87**	**331**	P	**P**	**04 58 10.3**	**+0.6**
	baz=142						
HWUT	**Hardware Ranch**	**71.91**	**329**	P	**P**	**04 58 11.3**	**+1.4**
TBI	**Tubuai**	**72.16**	**251**	*e*S	**SKiKP**	**05 07 46.8**	**-1.8**
	comp=Z,142nm,25.8s						
TBI	**Tubuai**	**72.16**	**251**	*e*LR	LR	05 20 29.9	
	comp=Z,448nm,28.0s,baz=102						
MDND	**Maddock**	**72.27**	**340**	P	**P**	**04 58 12.8**	**+1.1**
	baz=152						
REDW	**Red Top Meadow**	**72.92**	**331**	IAmb	IAmb	04 58 23.8	
	comp=Z,28nm,1.8s						
TPAW	**Teton Pass**	**73.07**	**331**	IAmb	IAmb	04 58 24.0	
	comp=Z,25nm,1.9s						
NVAR	**Mina Array Bea**	**73.14**	**323**	P	**P**	**04 58 19.8**	**+2.4**
	comp=Z,1.1nm,0.8s,baz=140,slow=4.7,SNR=8.1						
NVAR				LR	LR	05 27 06.7	
	comp=Z,83nm,20.3s,baz=189,slow=33						
ULM	**Lac du Bonnet**	**73.33**	**344**	P	**P**	**04 58 18.2**	**+0.3**
	comp=Z,2.1nm,0.7s,baz=162,slow=5.5,SNR=6.2						
ULM				LR	LR	05 32 36.9	
	comp=Z,186nm,21.2s,baz=148,slow=38						
RLMT	**Red Lodge**	**73.60**	**333**	P	**P**	**04 58 21.1**	**+1.2**
	baz=143						
RLMT	**Red Lodge**	**73.60**	**333**	IAmb	IAmb	04 58 23.3	
	comp=Z,18nm,1.7s						
LAO	**LASA Array**	**73.62**	**336**	P	**P**	**04 58 21.2**	**+1.4**
	baz=146						
PPT2	**Papeete2**	**73.78**	**257**	*e*S	S	05 08 04.1	+11
	comp=Z,176nm,25.5s						
PPT2	**Papeete2**	**73.78**	**257**	*e*LR	LR	05 21 28.8	
	comp=Z,341nm,24.2s,baz=114						
PPT	**Papeete**	**73.79**	**257**	LR	LR	05 22 50.0	
	comp=Z,113nm,19.2s,baz=126,slow=29						
YNE	**Yellowstone No**	**73.83**	**332**	P	**P**	**04 58 22.0**	**+0.7**
YMR	**Madison River**	**73.99**	**332**	P	**P**	**04 58 23.1**	**+0.8**
YHB	**Horse Butte**	**74.16**	**331**	P	**P**	**04 58 26.6**	**+3.4**
DGMT	**Dagmar**	**74.35**	**338**	P	**P**	**04 58 25.4**	**+1.4**
	baz=148						
SCHQ	**Schefferville**	**74.61**	**2**	P	**P**	**04 58 25.8**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=167,slow=3.2,SNR=1.8						
SCHQ	**Schefferville**	**74.61**	**2**	IAmb	IAmb	04 58 53.7	
	comp=Z,24nm,1.7s						
DLMT	**Dillon**	**75.26**	**331**	IAmb	IAmb	04 59 05.5	
	comp=Z,26nm,1.9s						
MFID	**Camas Ranch**	**75.35**	**328**	IAmb	IAmb	04 58 38.5	
	comp=Z,18nm,1.4s						
ORV	**Oroville**	**75.73**	**322**	IAmb	IAmb	04 58 40.7	
	comp=Z,28nm,1.4s						
EGMT	**Eagleton**	**76.11**	**334**	P	**P**	**04 58 35.6**	**+1.4**
	baz=143						
VNDA	**Vanda**	**77.98**	**190**	P	**P**	**04 58 46.8**	**+2.5**
	comp=Z,1.0nm,1.0s,baz=180,slow=3.5,SNR=4.1						
SYO	**Syowa Base**	**78.57**	**160**⇑	*e*pP	**P**	**04 58 48.3**	**+0.6**
TOA0	**Torodi Ar. Sit**	**78.69**	**71**	P	**P**	**04 58 48.4**	**-0.9**
TORD	**Torodi Ar. Bea**	**78.69**	**71**	P	**P**	**04 58 48.5**	**-0.7**
	comp=Z,19nm,0.8s,baz=252,slow=5.1,SNR=89						
TORD				LR	LR	05 31 58.5	
	comp=Z,432nm,20.8s,baz=235,slow=35						
FFC	**Flin Flon**	**79.01**	**342**	P	**P**	**04 58 51.0**	**+0.8**
MESJ	**Messejana**	**82.34**	**45**	*e*P	**P**	**04 59 10.1**	**+1.6**
MESJ				AMb	AMB	04 59 17.4	
	comp=Z,19nm,1.9s						
PAB	**San Pablo**	**85.82**	**45**	P	**P**	**04 59 26.9**	**+0.6**
PAB				IAmb	IAmb	04 59 28.7	
	comp=Z,19nm,1.4s						
BOSA	**Boshof**	**85.85**	**119**	LR	LR	05 34 43.7	
	comp=Z,207nm,18.7s,baz=192,slow=34						
ESDC	**Sonseca Array**	**86.14**	**45**	P	**P**	**04 59 28.1**	**+0.3**
	comp=Z,3.5nm,1.1s,baz=247,slow=4.9,SNR=14						
ESDC				LR	LR	05 33 53.3	
	comp=Z,160nm,21.2s,baz=240,slow=33						
MAW	**Mawson**	**86.30**	**164**	P	**P**	**04 59 29.1**	**+1.1**
	comp=Z,2.0nm,0.7s,baz=196,slow=14,SNR=3.9						
MAW				LR	LR	05 40 29.7	
	comp=Z,119nm,18.2s,baz=239,slow=37						
MAW	**Mawson**	**86.30**	**164**	P	**P**	**04 59 28.1**	**0.0**
YKA	**Yellowknife Ar**	**89.15**	**341**	P	**P**	**04 59 42.3**	**+0.7**
	comp=Z,1.8nm,0.7s,baz=134,slow=5.3,SNR=32						
YKA				LR	LR	05 42 14.6	
	comp=Z,180nm,21.6s,baz=0.0,slow=37						
KEST	**Kesra**	**93.95**	**54**	LR	LR	05 43 14.4	
	comp=Z,284nm,19.9s,baz=216,slow=36						
C36M	**Paulatuk**	**96.75**	**343**	P	**P**	**05 00 17.9**	**+1.3**
	baz=131						
EPYK	**Eagle Plains**	**98.95**	**338**	P	Pdif	05 00 26.9	+0.4
	baz=120						
CLL	**Collm**	**101.69**	**40**	*e*PP	**PP**	**05 04 51.0**	**+1.2**
CLL				*e*PS	**PS**	**05 13 53.0**	**-1.1**
CLL				L	L	05 43 00.0	
	comp=Z,200nm,20.9s						
DZM	**Mont Dzumac**	**110.05**	**236**	*e*LR	LR	05 38 18.5	
	comp=Z,204nm,22.7s						
H11S2	**WAKE ISLAND Hy**	**125.77**	**279**	T	T	07 24 34.0	
	baz=102,slow=74						
H11S1	**WAKE ISLAND Hy**	**125.77**	**279**	T	T	07 24 29.2	
	baz=102,slow=74						
H11S3	**WAKE ISLAND Hy**	**125.78**	**279**	T	T	07 24 31.7	
	baz=102,slow=74						
H11N3	**WAKE ISLAND Hy**	**125.81**	**280**	T	T	07 24 32.5	
	baz=101,slow=75						
H11N2	**WAKE ISLAND Hy**	**125.83**	**280**	T	T	07 24 31.3	
	baz=101,slow=75						
H11N1	**WAKE ISLAND Hy**	**125.83**	**280**	T	T	07 24 31.2	
	baz=101,slow=75						
ASAR	**Alice Springs**	**130.28**	**210**	PKP	**PKPdf**	**05 05 57.6**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=144,slow=1.9,SNR=6.1						
WRA	**Warramunga Arr**	**133.20**	**213**	PKP	**PKiKP**	**05 06 05.0**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=159,slow=1.9,SNR=1.4						
ZAA0	**Zalesovo Array**	**141.37**	**23**		**PKPdf**	**05 06 18.1**	**+0.9**
ZALV	**Zalesovo Beam**	**141.37**	**23**	PKP	**PKPdf**	**05 06 18.2**	**+1.0**
	comp=Z,3.8nm,0.6s,baz=277,slow=2.3,SNR=14						
KDJ	**Kajisay**	**145.23**	**44**		**PKPdf**	**05 06 25.9**	**+1.3**
MAKZ	**Makanchi**	**145.32**	**33**		**PKPdf**	**05 06 25.0**	**+0.6**
NIL	**Nilore**	**145.48**	**59**		**PKPab**	**05 06 26.1**	**+0.7**
MK31	**Makanchi Array**	**145.50**	**33**		**PKPab**	**05 06 25.6**	**+0.5**
MKAR	**Makanchi Array**	**145.50**	**33**	PKPbc	**PKPab**	**05 06 25.6**	**+0.5**
	comp=Z,7.6nm,0.8s,baz=323,slow=3.6,SNR=47						
KSH	**Kashi**	**145.60**	**48**	PKPbc	**PKPab**	**05 06 26.9**	**+1.1**
KSH				PP	**PP**	**05 09 49.7**	**+3.8**
KSH				PKS	**PKSdf**	**05 10 00.8**	**0.0**
KSH				SKKS		05 16 39.5	
KSH				SS	**SS**	**05 28 38.2**	**-0.9**
KSH				AMB	AMB		
	comp=Z,110nm,4.5s						
KSH				LR	LR		
	comp=Z,89nm,10.1s						
KSH				LR	LR		
	comp=Z,67nm,8.0s						
KSH				LR	LR		
	comp=Z,85nm,9.7s						
KLR	**Kul'dur**	**145.63**	**333**	PKPbc	**PKPab**	**05 06 26.1**	**+0.8**
	comp=Z,5.1nm,0.8s,baz=52,slow=4.1,SNR=11						
USRK	**Ussuriysk Ar.**	**149.21**	**327**	PKPbc	**PKiKP**	**05 06 37.0**	**+0.5**
	comp=Z,8.1nm,1.1s,baz=57,slow=4.9,SNR=5.3						
MJAR	**Matsushiro Arr**	**149.64**	**309**	PKPbc	**PKiKP**	**05 06 37.7**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=117,slow=1.3,SNR=9.8						
MAT	**Matsushiro**	**149.64**	**309**	PKP	**PKPbc**	**05 06 37.1**	**+0.6**
WMQ	**Urumqi**	**150.30**	**32**	*e*PKPbc	**PKPdf**	**05 06 33.0**	**+0.2**
HYB	**Hyderabad**	**151.03**	**90**	*i* PKP	**PKiKP**	**05 06 41.0**	**0.0**
SONM	**Songino Array**	**152.15**	**4**	PKP	**PKPdf**	**05 06 35.6**	**0.0**
	comp=Z,0.4nm,0.4s,baz=314,slow=1.7,SNR=2.0						
SONM				PKPbc	**PKiKP**	**05 06 43.2**	**+0.7**
	comp=Z,3.1nm,0.6s,baz=322,slow=1.6,SNR=14						
HHC	**Hu-ho-hao-te**	**159.11**	**355**	*e*PKP	**PKPdf**	**05 06 45.4**	**+0.3**
HHC				PP	**PP**	**05 11 00.3**	**-1.2**
HHC				SS	SS	05 31 09.8	+4.5
HHC				AMB	AMB		
	comp=Z,45nm,8.4s						
HHC				LR	LR		
	comp=Z,180nm,22.6s						
HHC				LR	LR		
	comp=Z,83nm,18.0s						
LZH	**Lanzhou**	**163.34**	**15**	*e*PKP	**PKPdf**	**05 06 43.5**	**-6.3**
LZH				pPKP	sPKPdf	05 06 55.0	+1.3
NJ2	**Nanjing**	**165.12**	**326**	*e*PKP	**PKPdf**	**05 06 50.6**	**-0.7**
CD2	**Chengdu**	**168.14**	**23**	PKP	**PKPdf**	**05 06 52.0**	**-1.7**
GYA	**Guiyang**	**173.21**	**18**	*e*PKP	**PKPdf**	**05 06 50.8**	**-5.9**

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*NIED **04** 04:52:00, 38.°00N×144.°20E, h11km, Mw3.7 Best double couple: $M_0$4.43000×10[14] NP1:ϕ_s167.00000°, δ72.00000°, λ-101.00000°. NP2:ϕ_s18.00000°, δ21.00000°, λ-61.00000°.*

*IDC **04** 04:52:14.8±1.0, 37.°82N×144.°37E, h0km, mb3.8/8, mb1 4.0/13, mb1mx3.7/54, mbtmp3.9/13, ML3.6/4, MS4.1/3, Ms1 4.1/3, ms1mx2.8/41, Error ellipse: s-maj=27.2km s-min=16.7km az=138.0*

*JMA **04** 04:52:18.5±0.1, 37.°96N×144.°17E, h47km, M3.9*

*NEIC **04** 04:52:19.6±2.2, 37.°86N±0.°07×144.°4E±0.°1, h35km±6km, mb4.1/8, Error ellipse: s-maj=15.4km s-min=8.9km az=112.0*

ISC 04 04:52:19.9±0.7**, 37.°96N**±0.°05×**144.°22E**±0.°07**, h35km, n48, σ1.ˢ99**/63**, mb4.0**/10**, MS4.2**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.20**	**280**	P	**Pn**	**04 52 53.0**	**-1.0**
JIKH				*e*S	**Sn**	**04 53 18.4**	**-1.6**
OFUJ	**Ofunato**	**2.29**	**300**	P	**Pn**	**04 52 54.5**	**-0.8**
OFUJ				*e*S	**Sn**	**04 53 21.0**	**-1.3**
JIO	**Ouri**	**2.32**	**283**	P	**Pn**	**04 52 54.8**	**-0.8**
JIO				S	**Sn**	**04 53 21.4**	**-1.4**
JKMT	**Kesennumamotoy**	**2.32**	**292**	P	**Pn**	**04 52 54.7**	**-0.9**
JKMT				S	**Sn**	**04 53 21.6**	**-1.3**
JMK	**Ichinoseki**	**2.56**	**294**	P	**Pn**	**04 52 58.5**	**-0.4**
JMK				*e*S	**Sn**	**04 53 28.3**	**-0.4**
JOM	**Ohasama**	**2.75**	**304**	P	**Pn**	**04 53 01.1**	**-0.4**
JOM				*e*S	**Sn**	**04 53 32.8**	**-0.6**
JFT	**Otama**	**3.11**	**263**	P	**Pn**	**04 53 06.2**	**-0.3**
JFT				S	**Sn**	**04 53 42.0**	**-0.5**
JYK	**Kaneyama**	**3.18**	**289**	P	**Pn**	**04 53 07.6**	**+0.1**
JYK				S	**Sn**	**04 53 44.2**	**0.0**
JANG	**Nango**	**3.20**	**320**	P	**Pn**	**04 53 07.1**	**-0.6**
JANG				S	**Sn**	**04 53 43.1**	**-1.5**
ERM	**Erimo**	**4.13**	**349**	Pn	**Pn**	**04 53 20.9**	**+0.5**
JOT	**Ohata**	**4.20**	**325**	*e*S	**Sn**	**04 54 06.4**	**-3.0**
BSO1	**Boso 1**	**4.21**	**219**	P	**Pn**	**04 53 19.0**	**-2.2**
JKB	**Kayabe**	**4.62**	**329**	*e*S	**Sn**	**04 54 16.9**	**-2.8**
JRY	**Ryogami san**	**4.68**	**247**	P	**Pn**	**04 53 26.9**	**-1.2**
JRY				S	**Sn**	**04 54 17.7**	**-3.5**
JCH	**Churui**	**4.69**	**352**	P	**Pn**	**04 53 27.3**	**-0.9**
JCH				*e*S	**Sn**	**04 54 18.5**	**-2.9**
JOD2	**Odawara 2**	**4.93**	**238**	P	**Pn**	**04 53 29.6**	**-1.9**
JOD2				*e*S	**Sn**	**04 54 22.9**	**-4.5**
MJAR	**Matsushiro Arr**	**5.00**	**255**	Pn	**Pn**	**04 53 32.9**	**+0.3**
	1.1nm,0.3s,baz=77,slow=14,SNR=97						
MJAR				Sn	**Sn**	**04 54 30.9**	**+1.7**
	baz=83,slow=34,SNR=1.3						
MAJO	**Matsushiro**	**5.00**	**255**		**Pn**	**04 53 32.2**	**-0.4**
MAT	**Matsushiro**	**5.00**	**255**	P	**Pn**	**04 53 33.2**	**+0.6**
MAT				*e*S	**Sn**	**04 54 27.3**	**-1.9**
MJB9	**Matsu-Tunnel**	**5.00**	**255**		**Pn**	**04 53 32.3**	**-0.2**
NEM2	**Nemuro 2**	**5.52**	**12**	P	**Pn**	**04 53 36.5**	**-3.1**
NEM2				*e*S	**Sn**	**04 54 35.0**	**-6.8**
JTKR	**Abashiri--Toko**	**6.01**	**358**	P	**Pn**	**04 53 44.9**	**-1.4**
JTKR				*e*S	**Sn**	**04 54 50.1**	**-3.7**
JHJ	**Hachijo jima 2**	**6.04**	**218**	Pn	**Pn**	**04 53 43.9**	**-2.8**
	15nm,0.3s,baz=72,slow=19,SNR=1.4						
JHJ				Sn	**Sn**	**04 54 48.2**	**-6.4**
	15nm,0.3s,baz=255,slow=20,SNR=2.1						
JKA	**Kamikawa-asahi**	**6.27**	**349**		**Pn**	**04 53 49.1**	**-0.8**
JKA					**Sn**	**04 54 59.1**	**-1.2**
ASAJ	**Asahikawa**	**6.27**	**349**	Pn	**Pn**	**04 53 49.1**	**-0.8**
	1.5nm,0.3s,baz=175,slow=13,SNR=5.4						
ASAJ				Sn	**Sn**	**04 54 59.1**	**-1.2**
	1.2nm,0.3s,baz=358,slow=34,SNR=2.6						
INU	**Inuyama**	**6.35**	**248**		**Pn**	**04 53 50.3**	**-0.7**
KSRS	**Korea Array**	**12.92**	**273**	Pn	**Pn**	**04 55 22.4**	**+1.4**
	0.2nm,0.3s,baz=80,slow=15,SNR=5.4						
KSRS				LR	LR	05 00 42.9	
	comp=Z,15nm,18.6s,baz=122,slow=39						
PETK	**Petropavlovsk-**	**17.80**	**27**	P	**P**	**04 56 26.0**	**+0.8**
	0.1nm,0.3s,baz=221,slow=15,SNR=3.5						
SEY	**Seymchan**	**25.49**	**9**	P	**P**	**04 57 46.2**	**+1.7**
	1.0nm,0.3s,baz=171,slow=8.6,SNR=6.2						
ENH	**Enshi**	**29.64**	**265**	P	**P**	**04 58 24.0**	**+1.9**
FAKI	**Fak Fak**	**42.16**	**198**	P	**P**	**05 00 08.1**	**-1.1**
KDAK	**Kodiak Island**	**44.91**	**43**	P	**P**	**05 00 30.2**	**-0.7**
MK31	**Makanchi Array**	**45.52**	**302**	P	**P**	**05 00 36.9**	**+0.9**
MKAR	**Makanchi Array**	**45.52**	**302**	P	**P**	**05 00 37.4**	**+1.4**
	0.3nm,0.6s,baz=95,slow=8.5,SNR=2.8						
KURK	**Kurchatov**	**47.12**	**308**	P	**P**	**05 00 50.0**	**+1.6**
KURK	**Kurchatov**	**47.12**	**308**	IAmb	IAmb	05 01 12.1	
	comp=Z,3.0nm,1.2s						
KURBB	**Kurchatov Arra**	**47.20**	**308**	P	**P**	**05 00 50.1**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=82,slow=7.6,SNR=5.8						
IL31		**47.51**	**33**	P	**P**	**05 00 51.3**	**+0.1**
IL31				IAmb	IAmb	05 00 55.2	
	comp=Z,2.1nm,0.9s						
ILAR	**Eielson Array**	**47.51**	**33**	P	**P**	**05 00 51.0**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=266,slow=5.9,SNR=15						
HYT	**Haines Junctio**	**52.21**	**37**	P	**P**	**05 01 28.7**	**+1.5**
INK	**Inuvik**	**52.53**	**28**	P	**P**	**05 01 30.4**	**+1.2**
	comp=Z,1.0nm,0.6s,baz=300,slow=4.7,SNR=9.1						
INK	**Inuvik**	**52.53**	**28**	P	**P**	**05 01 29.6**	**+0.4**
WRA	**Warramunga Arr**	**58.34**	**191**	P	**P**	**05 02 10.8**	**-0.8**
	comp=Z,1.3nm,0.9s,baz=11,slow=7.2,SNR=5.2						
YKA	**Yellowknife Ar**	**61.87**	**31**	P	**P**	**05 02 35.4**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=301,slow=6.2,SNR=5.3						
NVAR	**Mina Array Bea**	**72.64**	**55**	P	**P**	**05 03 44.6**	**+0.4**
	comp=Z,0.9nm,0.9s,baz=294,slow=4.6,SNR=4.0						
GERES	**GERESS Array B**	**83.07**	**330**	LR	LR	05 44 07.3	
	comp=Z,153nm,20.0s,baz=258,slow=37						
IDI	**Anoyia**	**87.97**	**314**	LR	LR	05 49 28.1	
	comp=Z,63nm,21.0s,baz=264,slow=39						
ATD	**Arta Tunnel**	**91.78**	**286**	LR	LR	05 51 14.9	
	comp=Z,97nm,20.9s,baz=177,slow=38						

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*IDC **04** 04:55:53.4±0.7, 19.°83S×70.°75W, h0km, mb3.9/9, mb1 4.2/11, mb1mx4.0/33, mbtmp4.0/11, ML4.3/2, MS3.3/2, Ms1 3.3/2, ms1mx3.1/20, Error ellipse: s-maj=24.0km s-min=14.6km az=59.0*

*NEIC **04** 04:55:55.3±1.1, 20.°04S±0.°04×70.°96W±0.°05, h15km±3km, mb4.5/24, Mwr4.3/38, ML4.6(GUC), Error ellipse: s-maj=7.7km s-min=5.1km az=105.0*

*NEIC **04** 04:55:55.4, 20.°06S×71.°00W, h19km, Moment Tensor Solution. Moment tensor: Scale 10[15]Nm; M_{rr}3.70; $M_{\theta\theta}$-0.36; $M_{\phi\phi}$-3.34; $M_{r\theta}$-0.69; $M_{\theta\phi}$2.08; $M_{\phi r}$-0.27; Fault plane solution: $M_0$4.17000×10[15] NP1:ϕ_s165.69000°, δ45.96000°, λ108.46000°. NP2:ϕ_s320.04000°, δ47.01000°, λ71.87000°. Principal axes: T 3.8764, Plg77.0000°, Azm155.0000°; N 0.5308, Plg13.0000°, Azm333.0000°; P -4.4072, Plg1.0000°, Azm63.0000°;*

*GUC **04** 04:55:56.4±0.8, 20.°01S×71.°02W, h42km±4km, ML4.5*

*VAO **04** 04:55:59.9±0.9, 20.°13S×70.°84W, h65km±7km, mb4.5*

ISC 04 04:55:54.3±1.5**, 20.°02S**±0.°03×**71.°02W**±0.°05**, h10km**±8km**, n98, σ1.ˢ39**/123**, 13C-3D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.87**	**107**⇓	*e*P	**Pg**	**04 56 11.3**	**+0.2**
TA02				*e*S	**Sb**	**04 56 23.5**	**+0.3**
TA02				IAML		04 56 24.7	
	comp=E,18μm,0.4s						
PSGC	**Pisagua**	**0.94**	**63**⇓	*e*P	**Pg**	**04 56 11.9**	**-0.6**
PSGC				*e*S	**Sg**	**04 56 24.4**	**-0.5**
PSGCX	**Pisagua**	**0.94**	**63**		**Pg**	**04 56 11.8**	**-0.7**
PSGCX					**Sg**	**04 56 24.4**	**-0.5**
TA01	**Diego Aracena**	**0.95**	**125**⇑	*i*P	**Pg**	**04 56 13.1**	**+0.4**
TA01				*i* S	**Sb**	**04 56 25.5**	**-0.1**
PATCX	**Punta Patache**	**1.14**	**134**	*i* P	**Pb**	**04 56 15.9**	**-0.1**
PATCX				*i* S	**Sb**	**04 56 30.4**	**-0.5**
PATCX	**Punta Patache**	**1.14**	**134**		**Pb**	**04 56 15.7**	**-0.3**
PATCX					**Sb**	**04 56 30.6**	**-0.3**
PB11	**IPOC Station P**	**1.31**	**79**⇑	*i*P	**Pn**	**04 56 18.0**	**-0.8**
PB11				*e*S	**Sb**	**04 56 35.1**	**-0.9**
PB11				IAML		04 56 37.8	
	comp=E,20μm,0.4s						
PB11	**IPOC Station P**	**1.31**	**79**		**Pn**	**04 56 18.0**	**-0.8**
PB11					**Sb**	**04 56 35.1**	**-0.9**
PB12	**IPOC Station P**	**1.55**	**25**	*e*P	**Pn**	**04 56 21.0**	**-1.0**
PB12				*e*S	**Sn**	**04 56 41.1**	**-1.0**
PB12	**IPOC Station P**	**1.55**	**25**		**Pn**	**04 56 20.8**	**-1.2**
MNMC	**Minye Minye**	**1.61**	**57**⇑	*i*P	**Pn**	**04 56 22.7**	**-0.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNMC				*i* S	**Sn**	**04 56 43.2**	**-0.8**
MNMC				IAML		04 56 51.7	
	comp=N,19µm,0.5s						
MNMC	**Minye Minye**	**1.61**	**57**		**Pn**	**04 56 22.7**	**-0.3**
PB02	**IPOC Station P**	**1.67**	**141**	⇑*i*P	**Pn**	**04 56 23.6**	**0.0**
PB02				*e*S	**Sn**	**04 56 43.9**	**-1.2**
PB02				IAML		04 56 51.7	
	comp=E,10µm,0.4s						
GO01	**Chusmiza**	**1.75**	**79**	⇑*i*P	**Pn**	**04 56 24.9**	**-0.3**
GO01				*e*S	**Sn**	**04 56 47.7**	**-0.1**
GO01				IAML		04 56 50.6	
	comp=N,14µm,0.3s						
GO01	**Chusmiza**	**1.75**	**79**		**Pn**	**04 56 24.9**	**-0.3**
PB08	**IPOC Station P**	**1.76**	**94**	⇑*i*P	**Pn**	**04 56 24.9**	**-0.2**
PB08				*i* S	**Sn**	**04 56 47.7**	**0.0**
PB08	**IPOC Station P**	**1.76**	**94**		**Pn**	**04 56 25.0**	**-0.2**
PB08					**Sb**	**04 56 48.7**	**-0.5**
PB01	**IPOC Station P**	**1.76**	**125**	⇑*i*P	**Pn**	**04 56 24.9**	**+0.1**
PB01				*e*S	**Sn**	**04 56 46.4**	**-1.0**
PB01	**IPOC Station P**	**1.76**	**125**		**Pn**	**04 56 25.1**	**+0.2**
AP01	**Chacalluta**	**1.77**	**21**	⇑*e*P	**Pn**	**04 56 24.3**	**-0.6**
AP01				*e*S	**Sn**	**04 56 46.1**	**-1.3**
AP01				IAML		04 57 03.6	
	comp=E,12µm,0.6s						
PB07	**IPOC Station P**	**2.00**	**148**	⇑*e*P	**Pn**	**04 56 28.1**	**-0.2**
PB07				*e*S	**Sn**	**04 56 52.9**	**-0.5**
PB07				IAML		04 57 04.7	
	comp=E,3µm,0.6s						
PB07	**IPOC Station P**	**2.00**	**148**		**Pn**	**04 56 28.2**	**-0.1**
PB16	**IPOC Station P**	**2.21**	**41**	*e*P	**Pn**	**04 56 31.2**	**-0.3**
PB16				*e*S	**Sn**	**04 56 58.9**	**-0.1**
PB16				IAML		04 57 07.0	
	comp=N,4µm,0.6s						
PB16	**IPOC Station P**	**2.21**	**41**		**Pn**	**04 56 32.6**	**+1.1**
PB03	**IPOC Station P**	**2.34**	**150**	*e*P	**Pn**	**04 56 32.8**	**-0.1**
PB03				*e*S	**Sn**	**04 57 00.1**	**-1.7**
PB03				IAML		04 57 21.6	
	comp=E,2µm,0.8s						
PB09	**IPOC Station P**	**2.42**	**137**	⇑*i*P	**Pn**	**04 56 35.2**	**+1.1**
PB09				*e*S	**Sn**	**04 57 03.1**	**-0.8**
PB09				IAML		04 57 20.5	
	comp=E,3µm,0.4s						
PB09	**IPOC Station P**	**2.42**	**137**		**Pn**	**04 56 34.9**	**+0.7**
PB04	**IPOC Station P**	**2.44**	**161**	⇑*e*P	**Pn**	**04 56 33.8**	**-0.5**
PB04				*e*S	**Sn**	**04 57 01.5**	**-2.8**
PB04				IAML		04 57 23.2	
	comp=N,2µm,0.5s						
PB04	**IPOC Station P**	**2.44**	**161**		**Pn**	**04 56 33.9**	**-0.5**
PB05	**IPOC Station P**	**2.92**	**165**	*e*P	**Pn**	**04 56 40.1**	**-0.7**
PB05				⇑*e*S	**Sn**	**04 57 15.2**	**-0.8**
PB05				IAML		04 57 39.2	
	comp=N,843nm,0.4s						
PB06	**IPOC Station P**	**2.99**	**153**	⇑*e*P	**Pn**	**04 56 41.6**	**-0.3**
PB06				⇓*e*S	**Sn**	**04 57 16.5**	**-1.4**
PB06				IAML		04 57 36.8	
	comp=E,1µm,0.8s						
PB06	**IPOC Station P**	**2.99**	**153**		**Pn**	**04 56 41.6**	**-0.3**
LVC	**Limon Verde**	**3.24**	**143**	Pn	**Pn**	**04 56 46.9**	**+1.4**
	comp=E,24nm,0.3s,baz=341,slow=7.0,SNR=152						
LVC				Sn	**Sn**	**04 57 24.8**	**+0.5**
	comp=E,79nm,0.3s,baz=91,slow=18,SNR=8.9						
LVC				LR	LR	04 57 31.7	
	comp=E,226nm,21.7s,baz=320,slow=30						
LVC				Lg	Lg	04 57 37.6	
	comp=E,103nm,0.3s,baz=193,slow=10,SNR=14						
LVC	**Limon Verde**	**3.24**	**143**		**Pn**	**04 56 46.5**	**+1.0**
LVC	**Limon Verde**	**3.24**	**143**	*e*P	**Pn**	**04 56 46.9**	**+1.4**
LVC				*e*S	**Sn**	**04 57 20.5**	**-3.8**
PB15	**IPOC Station P**	**3.48**	**156**		**Pn**	**04 56 48.3**	**-0.4**
PB10	**IPOC Station P**	**3.50**	**173**		**Pn**	**04 56 48.1**	**-0.6**
PB14	**IPOC Station P**	**4.62**	**173**		**Pn**	**04 57 02.5**	**-1.9**
LPAZ	**La Paz**	**4.62**	**37**	Pn	**Pn**	**04 57 07.2**	**+2.4**
	comp=E,4.6nm,0.3s,baz=239,slow=9.0,SNR=36						
LPAZ	**La Paz**	**4.62**	**37**		**Pn**	**04 57 07.6**	**+2.9**
LPAZ	**La Paz**	**4.62**	**37**	*e*P	**Pn**	**04 57 07.4**	**+2.7**
GO02	**Mina Guanaco**	**5.28**	**166**		**Pn**	**04 57 13.2**	**-0.4**
NNA	**Nana**	**9.75**	**324**	Pn	Pn	04 58 21.0	+6.3
	comp=E,0.8nm,0.3s,baz=180,slow=13,SNR=1.9						
NNA				Sn	**Sn**	**04 59 59.2**	**-5.2**
	comp=E,1.5nm,0.3s,baz=229,slow=18,SNR=2.6						
GO04	**Tololo Observa**	**10.11**	**179**	Pn	**Pn**	**04 58 18.7**	**-1.1**
SIV	**San Ignacio**	**10.28**	**69**	Pn	**Pn**	**04 58 19.5**	**-2.4**
	comp=E,3.5nm,0.3s,baz=272,slow=9.7,SNR=44						
SIV				LR	LR	05 02 42.9	
	comp=E,380nm,19.3s,baz=246,slow=41						
PTLB	**Pontes e Lacer**	**12.20**	**70**	*e*P	**Pn**	**04 58 48.5**	**+0.4**
PTLB				*e*S	**Sn**	**05 01 02.5**	**-1.8**
VILB	**Vilhena**	**12.53**	**58**	*e*P	**Pn**	**04 58 54.5**	**+1.7**
VILB				*e*S	**Sn**	**05 01 12.5**	**0.0**
ROC1	**El Roble**	**12.90**	**180**	Pn	**Pn**	**04 58 56.3**	**-1.7**
CPUP	**Villa Florida**	**14.06**	**119**	Pn	**Pn**	**04 59 17.1**	**+3.4**
	comp=E,0.1nm,0.3s,baz=305,slow=2.1,SNR=3.1						
H03N1	**Juan Fernandez**	**15.10**	**206**	T	T	05 15 18.3	
	baz=32,slow=72						
H03N2	**Juan Fernandez**	**15.11**	**206**	T	T	05 15 10.9	
	baz=32,slow=72						
H03N3	**Juan Fernandez**	**15.12**	**206**	T	T	05 15 07.0	
	baz=32,slow=72						
SALV	**Santo Antonio**	**15.15**	**77**	*e*P	**Pn**	**04 59 28.7**	**+0.3**
ITAB	**Concordia**	**18.72**	**116**	*e*P	**P**	**05 00 11.4**	**-1.7**
MACA	**Manacapuru-AM**	**19.56**	**32**	*e*P	**P**	**05 00 20.6**	**-1.8**
PLCA	**Paso Flores**	**20.65**	**179**	P	Pn	05 00 36.3	-0.1
	comp=E,5.8nm,1.0s,baz=6.2,slow=10,SNR=6.8						
PLCA	**Paso Flores**	**20.65**	**179**	IAmb	IAmb	05 01 07.6	
	comp=Z,42nm,1.7s						
IPMB	**Ipameri, GO**	**21.66**	**88**	*e*P	**P**	**05 00 43.7**	**-1.5**
PTGA	**Pitinga**	**22.02**	**31**	P	**P**	**05 00 45.9**	**-3.1**
	comp=Z,8.6nm,0.3s,baz=212,slow=16,SNR=12						
PTGA	**Pitinga**	**22.02**	**31**	P	**P**	**05 00 48.3**	**-0.7**
PTGA				IAmb	IAmb	05 00 50.0	
	comp=Z,11nm,0.6s						
BDFB	**Brasilia**	**22.32**	**82**	P	**P**	**05 00 49.5**	**-2.9**
	comp=Z,1.9nm,0.4s,baz=227,slow=4.8,SNR=5.2						
BDFB	**Brasilia**	**22.32**	**82**	P	**P**	**05 00 54.0**	**+1.6**
BDFB				IAmb	IAmb	05 01 10.5	
	comp=Z,17nm,1.1s						
BSCB	**Bom Sucesso**	**24.59**	**97**	*e*P	**P**	**05 01 13.4**	**-1.5**
RUSC	**La Rusia**	**25.83**	**355**	P	**P**	**05 01 27.2**	**+0.7**
JANB	**Januaria**	**25.93**	**83**	*e*P	**P**	**05 01 24.8**	**-2.2**
MLPR	**Magueyes Islan**	**37.96**	**6**	P	**P**	**05 03 14.1**	**+1.9**
WLAR	**White Oak Lake**	**57.42**	**338**	P	**P**	**05 05 43.9**	**+0.8**
WHTX	**Lake Whitney,**	**57.59**	**333**	P	**P**	**05 05 45.1**	**+0.8**
TXAR	**Lajitas Array**	**58.30**	**326**	P	**P**	**05 05 50.0**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=134,slow=7.2,SNR=5.4						
MSTX	**Muleshoe**	**61.63**	**330**	P	**P**	**05 06 13.0**	**+0.6**
MSTX				IAmb	IAmb	05 06 50.3	
	comp=Z,3.3nm,0.9s						
VNA3	**Neumayer Olymp**	**62.10**	**161**	P	**P**	**05 06 15.2**	**+0.3**
VNA1	**Neumayer--Stat**	**62.33**	**160**	P	**P**	**05 06 20.9**	**+4.4**
WVNY	**West Valley, N**	**62.51**	**354**	P	**P**	**05 06 18.6**	**+0.7**
J59A	**Piesco**	**63.25**	**357**	P	**P**	**05 06 23.4**	**+0.5**
HNH	**Hanover**	**63.42**	**359**	P	**P**	**05 06 25.1**	**+1.1**
SNAA	**Sanae**	**64.31**	**161**	P	**P**	**05 06 31.0**	**+1.3**
LONY	**Lake Ozonia**	**64.41**	**357**	P	**P**	**05 06 31.1**	**+0.6**
G62A	**West of Eustis**	**64.93**	**0**	P	**P**	**05 06 34.7**	**+0.8**
SDCO	**Great Sand Dun**	**65.99**	**331**	P	**P**	**05 06 42.1**	**+0.9**
PDAR	**Pinedale Array**	**71.86**	**331**	P	**P**	**05 07 17.2**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=130,slow=8.3,SNR=2.6						
MDND	**Maddock**	**72.27**	**340**	P	**P**	**05 07 19.9**	**+0.3**
NVAR	**Mina Array Bea**	**73.12**	**323**	P	**P**	**05 07 27.1**	**+1.9**
	comp=Z,0.3nm,0.6s,baz=122,slow=6.5,SNR=2.8						
TOA0	**Torodi Ar. Sit**	**78.74**	**72**	P	**P**	**05 07 56.1**	**-1.4**
TORD	**Torodi Ar. Bea**	**78.74**	**72**	P	**P**	**05 07 55.9**	**-1.7**
	comp=Z,6.8nm,0.6s,baz=252,slow=5.1,SNR=46						
ESDC	**Sonseca Array**	**86.19**	**45**	P	**P**	**05 08 35.6**	**-0.4**
	comp=Z,1.4nm,1.1s,baz=259,slow=5.9,SNR=5.6						
YKA	**Yellowknife Ar**	**89.15**	**341**	P	**P**	**05 08 49.6**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=135,slow=5.0,SNR=12						
ASAR	**Alice Springs**	**130.24**	**210**	PKP	**PKPdf**	**05 15 05.6**	**0.0**
	comp=Z,0.6nm,0.7s,baz=149,slow=1.7,SNR=2.9						
WRA	**Warramunga Arr**	**133.15**	**214**	PKP	**PKPdf**	**05 15 11.6**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=146,slow=1.9,SNR=1.4						
ZALV	**Zalesovo Beam**	**141.41**	**23**	PKhKP	PKPpre	05 15 19.4	
	comp=Z,0.5nm,0.5s,baz=324,slow=4.2,SNR=3.6						
ZALV				PKP	**PKPdf**	**05 15 26.1**	**+0.9**
	comp=Z,2.3nm,0.6s,baz=225,slow=1.8,SNR=8.8						
KDJ	**Kajisay**	**145.28**	**43**		**PKPdf**	**05 15 33.3**	**+0.6**
MAKZ	**Makanchi**	**145.37**	**33**		**PKPdf**	**05 15 32.4**	**-0.1**
NIL	**Nilore**	**145.53**	**59**		**PKPab**	**05 15 33.5**	**0.0**
NIL					**PKPbc**	**05 15 33.9**	**+0.6**
MK31	**Makanchi Array**	**145.54**	**33**		**PKPab**	**05 15 33.1**	**0.0**
MKAR	**Makanchi Array**	**145.54**	**33**	PKPbc	**PKPab**	**05 15 33.0**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=324,slow=4.7,SNR=23						
KLR	**Kul'dur**	**145.63**	**333**	PKPbc	**PKPab**	**05 15 33.4**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=45,slow=5.7,SNR=5.5						
KSH	**Kashi**	**145.66**	**48**	PKPbc	**PKPab**	**05 15 34.5**	**+0.6**
KSH				PP	**PP**	**05 18 57.4**	**+3.2**
KSH				PKS	**PKSdf**	**05 19 06.2**	**-2.7**
MJAR	**Matsushiro Arr**	**149.61**	**309**	PKPbc	**PKiKP**	**05 15 45.2**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=138,slow=2.6,SNR=4.3						
SONM	**Songino Array**	**152.18**	**4**	PKPbc	**PKiKP**	**05 15 50.8**	**+0.2**
	comp=Z,1.8nm,0.6s,baz=332,slow=1.1,SNR=11						

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*NNC **04** 05:25:10.4±1.2, 44.°73N×79.°78E, h0^{km}, mb2.2, mpv2.6, Error ellipse: s-maj=13.4km s-min=6.5km az=104.0*
*SOME **04** 05:25:10.1, 44.°78N×79.°73E, h15^{km}*
ISC 04 05:25:11.2±1.8**, 44.°65N**±0.°05×**79.°91E**±0.°08**, h4**^{km}±14^{km}**, n9,** σ**1^{s}14**/16**, 1C-1D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**0.33**	**195**	*e*P	**Pg**	**05 25 17.7**	**+0.2**
	11nm,0.1s						
DJR				*e*S	**Sb**	**05 25 23.5**	**-1.8**
	22nm,0.3s						
DJR	**Jarkent**	**0.33**	**195**	P	**Pg**	**05 25 17.7**	**+0.2**
	11nm,0.1s						
DJR				S	**Sb**	**05 25 23.5**	**-1.8**
	22nm,0.3s						
KAPS	**Kapalarasan**	**0.74**	**329**	*e*P	Pg	05 25 18.4	-7.1
KAPS				*e*S	Sg	05 25 24.6	-11
KTMS	**Ketmen**	**1.25**	**165**	*e*P	**Pn**	**05 25 35.8**	**+0.3**
	0.7nm,0.1s						
KTMS				*e*S	**Sn**	**05 25 54.5**	**+1.7**
	2.3nm,0.1s						
KTMS	**Ketmen**	**1.25**	**165**	P	**Pn**	**05 25 35.8**	**+0.3**
	0.7nm,0.1s						
KTMS				S	**Sn**	**05 25 54.4**	**+1.7**
	2.3nm,0.1s						
ARXS	**Arharly**	**1.55**	**254**	*e*P	**Pg**	**05 25 40.9**	**0.0**
	0.7nm,0.1s						
ARXS				*e*S	**Sg**	**05 26 02.5**	**+1.5**
UZB	**Uzynbulak**	**1.63**	**203**	*e*P	**Pb**	**05 25 41.3**	**-0.6**
	0.6nm,0.1s						
UZB				*e*S	**Sg**	**05 26 03.8**	**+0.1**
	5.3nm,0.1s						
UZB	**Uzynbulak**	**1.63**	**203**	P	**Pb**	**05 25 41.3**	**-0.6**
	0.6nm,0.1s						
UZB				S	**Sg**	**05 26 03.8**	**+0.1**
	5.3nm,0.1s						
MK31	**Makanchi Array**	**2.72**	**37**	⇓Pn	**Pn**	**05 25 55.7**	**+0.1**
	0.1nm,0.2s,baz=213,slow=14,SNR=6.3						
MK31				⇑Sn	**Sn**	**05 26 29.0**	**+0.1**
	0.1nm,0.2s,baz=216,slow=27,SNR=11						

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*GUC **04** 06:07:04.8±0.6, 19.°48S×70.°75W, h30^{km}±2^{km}, ML3.5*
*IDC **04** 06:07:07.5±1.8, 19.°55S×70.°50W, h0^{km}, mb3.6/1, mb1 3.6/4, mb1mx3.4/24, mbtmp3.4/4, ML3.0/3, MS2.4/2, Ms1 2.5/2, ms1mx2.3/27, Error ellipse: s-maj=32.7km s-min=16.8km az=86.0*
ISC 04 06:07:03.8±1.7**, 19.°47S**±0.°03×**70.°77W**±0.°07**, h7**^{km}±10^{km}**, n26,** σ**1^{s}29**/38**, 5C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.62**	**102**	⇓*i*P	**Pg**	**06 07 16.2**	**+0.5**
PSGC				*i* S	**Sg**	**06 07 24.9**	**+1.1**
PB12	**IPOC Station P**	**0.95**	**26**	⇓*i*P	**Pg**	**06 07 21.7**	**-0.4**
PB12				*i* S	**Sg**	**06 07 34.8**	**+0.4**
TA02	**Huaiquique**	**0.99**	**143**	⇑*i*P	**Pb**	**06 07 22.1**	**-1.2**
TA02				*e*S	**Sb**	**06 07 34.7**	**-1.8**
TA02				IAML		06 07 38.3	
	comp=N,2µm,0.1s						
PB11	**IPOC Station P**	**1.08**	**105**	⇓*i*P	**Pb**	**06 07 24.1**	**-0.8**
PB11				*i* S	**Sb**	**06 07 38.3**	**-1.0**
PB11				IAML		06 07 40.3	
	comp=N,2µm,0.4s						
MNMC	**Minye Minye**	**1.16**	**73**	*i* P	**Pb**	**06 07 25.7**	**-0.5**
MNMC				*i* S	**Sb**	**06 07 41.2**	**-0.3**
MNMC				IAML		06 07 47.5	
	comp=N,3µm,0.5s						
AP01	**Chacalluta**	**1.17**	**20**	*e*P	**Pn**	**06 07 25.1**	**-1.4**
AP01				*i* S	**Sb**	**06 07 40.7**	**-0.8**
AP01				IAML		06 07 50.5	
	comp=N,4µm,0.5s						
TA01	**Diego Aracena**	**1.22**	**153**	⇓*e*P	**Pn**	**06 07 25.7**	**-1.5**
TA01				*e*S	**Sb**	**06 07 41.5**	**-1.6**
PATCX	**Punta Patache**	**1.46**	**157**	*e*P	**Pn**	**06 07 29.7**	**-0.8**
PATCX				*i* S	**Sn**	**06 07 49.4**	**-0.6**
GO01	**Chusmiza**	**1.49**	**98**	⇑*i*P	**Pn**	**06 07 31.3**	**-0.1**
GO01				*i* S	**Sn**	**06 07 51.3**	**-0.1**
PB16	**IPOC Station P**	**1.64**	**47**	⇓*i*P	**Pn**	**06 07 33.7**	**+0.1**
PB16				*i* S	**Sb**	**06 07 55.6**	**-0.2**
PB16				IAML		06 07 59.9	
	comp=N,611nm,0.5s						
PB08	**IPOC Station P**	**1.66**	**114**	⇓*i*P	**Pn**	**06 07 33.5**	**-0.1**
PB08				*i* S	**Sn**	**06 07 55.2**	**-0.1**
PB01	**IPOC Station P**	**1.97**	**143**	*i* P	**Pn**	**06 07 37.9**	**+0.3**
PB01				*i* S	**Sn**	**06 08 03.1**	**+0.5**
PB01				IAML		06 08 08.9	
	comp=N,419nm,0.8s						
PB02	**IPOC Station P**	**2.01**	**156**	*i* P	**Pn**	**06 07 38.6**	**+0.4**
PB02				*i* S	**Sn**	**06 08 04.2**	**+0.5**
PB02				IAML		06 08 15.2	
	comp=N,789nm,0.6s						
PB07	**IPOC Station P**	**2.39**	**160**	*i* P	**Pn**	**06 07 43.1**	**-0.4**
PB07				*i* S	**Sn**	**06 08 14.2**	**+1.1**
PB07				IAML		06 08 28.9	
	comp=E,243nm,0.5s						
PB09	**IPOC Station P**	**2.72**	**149**	⇑*e*P	**Pn**	**06 07 49.0**	**+1.0**
PB09				*e*S	**Sn**	**06 08 22.7**	**+1.5**
PB09				IAML		06 08 44.6	
	comp=E,282nm,0.6s						
PB03	**IPOC Station P**	**2.73**	**160**	⇑*e*P	**Pn**	**06 07 48.7**	**+0.6**
PB03				*e*S	**Sn**	**06 08 22.2**	**+0.7**
PB04	**IPOC Station P**	**2.90**	**169**	IAML		06 08 40.8	
	comp=E,190nm,0.5s						
PB04				⇑*e*		06 08 54.3	
LVC	**Limon Verde**	**3.57**	**151**	Pn	**Pn**	**06 08 02.3**	**+2.5**
	comp=E,2.0nm,0.3s,baz=330,slow=11,SNR=30						
LVC				Sn	**Sn**	**06 08 44.8**	**+2.3**
	comp=E,2.5nm,0.3s,baz=167,slow=18,SNR=3.6						
LVC				LR	LR	06 08 53.9	
	comp=E,43nm,19.4s,baz=23,slow=31						
LVC				Lg	Lg	06 08 55.0	
	comp=E,9.5nm,0.3s,baz=214,slow=11,SNR=8.8						
LPAZ	**La Paz**	**4.04**	**39**	Pn	**Pn**	**06 08 10.7**	**+4.1**
	comp=E,0.7nm,0.3s,baz=214,slow=6.0,SNR=21						
LPAZ				Lg	Lg	06 09 14.0	
	comp=E,0.2nm,0.3s,baz=194,slow=4.2,SNR=1.8						
LPAZ				LR	LR	06 09 47.9	
	comp=E,55nm,19.5s,baz=240,slow=41						
SIV	**San Ignacio**	**9.86**	**71**	Pn	**Pn**	**06 09 26.1**	**0.0**
	comp=E,0.1nm,0.3s,baz=261,slow=13,SNR=3.8						
H03N1	**Juan Fernandez**	**15.70**	**206**	T	T	06 26 50.9	
	baz=30,slow=72						
H03N2	**Juan Fernandez**	**15.70**	**206**	T	T	06 26 46.1	
	baz=30,slow=72						
H03N3	**Juan Fernandez**	**15.71**	**206**	T	T	06 26 44.9	
	baz=30,slow=72						
PTGA	**Pitinga**	**21.42**	**31**	P	**P**	**06 11 50.5**	**-2.0**
	comp=E,3.3nm,0.9s,baz=210,slow=6.8,SNR=4.7						
YKA	**Yellowknife Ar**	**88.71**	**341**	P	P	06 20 02.7	+5.3
	comp=E,0.3nm,0.6s,baz=136,slow=5.4,SNR=5.9						
MKAR	**Makanchi Array**	**144.95**	**33**	PKP	**PKiKP**	**06 26 46.7**	**+1.1**
	comp=E,0.9nm,0.9s,baz=321,slow=2.0,SNR=5.9						

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*IDC **04** 06:17:20.9±3.2, 22.°38S×171.°56E, h108^{km}±26^{km}, mb3.9/13, mb1 4.1/16, mb1mx4.0/28, mbtmp4.4/16, MS3.2/8, Ms1 3.2/8, ms1mx2.9/35, Error ellipse: s-maj=22.0km s-min=15.9km az=69.0*
*NEIC **04** 06:17:22.2±2.1, 22.°3S±0.°1×171.°54E±0.°06, h118^{km}±6^{km}, mb4.5/24, Error ellipse: s-maj=16.7km s-min=6.4km az=199.0*
ISC 04 06:17:20.4±0.6**, 22.°27S**±0.°08×**171.°61E**±0.°08**, h100**^{km}**, n66,** σ**1^{s}20**/68**, mb4.4**/23**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.79**	**271**	P	**Pn**	**06 18 31.7**	**+1.2**
	22nm,0.3s,baz=130,slow=12,SNR=1043						
DZM				S	**Sn**	**06 19 23.7**	**-1.2**
	48nm,0.3s,baz=122,slow=22,SNR=27						
DZM				LR	LR	06 19 36.5	
	comp=Z,96nm,18.1s,baz=52,slow=29						
DZM	**Mont Dzumac**	**4.79**	**271**		**Pn**	**06 18 31.6**	**+1.2**
DZM					**Sn**	**06 19 24.1**	**-0.7**
OUZ	**Omahuta**	**13.02**	**173**	Pn	**Pn**	**06 20 22.7**	**+1.2**
OUZ	**Omahuta**	**13.02**	**173**	P	**Pn**	**06 20 24.0**	**+2.6**
WCZ	**Waipu Caves**	**13.82**	**171**	P	**P**	**06 20 36.3**	**-0.7**
URZ	**Urewera**	**16.62**	**165**	P	**Pn**	**06 21 07.4**	**+0.1**
	0.8nm,0.3s,baz=342,slow=4.8,SNR=13						
URZ				LR	LR	06 25 26.6	
	comp=Z,97nm,21.3s,baz=343,slow=29						
URZ	**Urewera**	**16.62**	**165**	P	**P**	**06 21 09.9**	**+1.9**
MWZ	**Matawai**	**16.80**	**164**	P	**P**	**06 21 12.5**	**+2.5**
HNR	**Honiara**	**16.98**	**317**	P	**P**	**06 21 13.6**	**+1.4**
	5.1nm,0.3s,baz=135,slow=4.3,SNR=1.5						
HNR				LR	LR	06 26 33.0	
	comp=Z,62nm,20.8s,baz=206,slow=32						
SNGZ	**Shannon Statio**	**17.17**	**165**	P	**P**	**06 21 15.8**	**+1.7**
RIGZ	**Rimuhau**	**17.21**	**164**	P	**P**	**06 21 16.1**	**+1.5**
BKZ	**Black Stump Fm**	**17.35**	**167**	P	**Pn**	**06 21 17.8**	**+1.5**
NMHZ	**Naumai**	**17.35**	**166**	P	**Pn**	**06 21 18.0**	**+1.8**
BHHZ	**Black Hill Sta**	**17.58**	**169**	P	**Pn**	**06 21 20.5**	**+1.4**
KWHZ	**Kaweka Forest**	**17.58**	**168**	P	**Pn**	**06 21 20.7**	**+1.6**
KRHZ	**Kereru**	**17.78**	**168**	P	**Pn**	**06 21 22.1**	**+0.6**
KAHZ	**Kahuranaki**	**18.03**	**167**	P	**P**	**06 21 24.4**	**+0.8**
QRZ	**Quartz Range**	**18.51**	**178**	P	**P**	**06 21 27.8**	**-1.0**
MRZ	**Mangatainoka R**	**18.64**	**171**	P	**P**	**06 21 30.5**	**+0.3**
BFZ	**Birch Farm**	**18.77**	**169**	P	**P**	**06 21 31.9**	**+0.3**
BFZ				IAmb	IAmb	06 21 34.3	
	comp=Z,20nm,0.6s						
BFZ	**Birch Farm**	**18.77**	**169**	P	**P**	**06 21 31.6**	**0.0**
NNZ	**Nelson**	**18.95**	**176**	P	**P**	**06 21 34.6**	**+1.0**
EIDS	**Eidsvold**	**19.03**	**257**	P	**P**	**06 21 34.8**	**+0.1**
EIDS				IAmb	IAmb	06 21 41.3	
	comp=Z,23nm,1.1s						
RPZ	**Rata Peaks**	**21.39**	**181**	P	**P**	**06 21 58.3**	**-1.6**
	comp=Z,14nm,0.8s,baz=141,slow=3.7,SNR=3.7						
RPZ				LR	LR	06 28 34.2	
	comp=Z,69nm,21.8s,baz=12,slow=32						
MQZ	**McQueen's Vall**	**21.39**	**178**	P	**P**	**06 21 59.0**	**-0.9**
CAN	**Canberra**	**23.63**	**232**	P	**P**	**06 22 24.8**	**+2.1**
CTA	**Charters Tower**	**23.73**	**271**	P	**P**	**06 22 24.0**	**+0.3**
	comp=Z,5.8nm,1.0s,baz=91,slow=13,SNR=3.7						
CTAO	**Charters Tower**	**23.73**	**271**	P	**P**	**06 22 25.9**	**+2.3**
COEN	**Coen**	**28.22**	**282**	P	**P**	**06 23 05.4**	**+1.3**
COEN				IAmb	IAmb	06 23 05.6	
	comp=Z,10nm,1.0s						
STKA	**Stephens Creek**	**28.31**	**244**	P	**P**	**06 23 04.5**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=74,slow=10,SNR=5.2						
STKA				LR	LR	06 32 49.4	
	comp=Z,32nm,20.1s,baz=29,slow=33						
BBOO	**Buckleboo**	**33.08**	**244**	P	**P**	**06 23 47.6**	**+0.8**
BBOO				IAmb	IAmb	06 23 56.8	
	comp=Z,12nm,1.3s						
WR0	**Warramunga Arr**	**34.60**	**267**	P	**P**	**06 23 58.7**	**-1.4**
WR0				IAmb	IAmb	06 24 13.6	
	comp=Z,7.0nm,1.2s						
AS31	**Alice Springs**	**34.68**	**260**	P	**P**	**06 24 00.8**	**+0.1**
ASAR	**Alice Springs**	**34.68**	**260**	P	**P**	**06 24 00.1**	**-0.6**
	comp=Z,7.3nm,0.8s,baz=84,slow=8.9,SNR=59						
ASAR				PcP	**PcP**	**06 26 31.7**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=96,slow=2.7,SNR=2.5						
WB0	**Warramunga Arr**	**34.77**	**267**	P	**P**	**06 24 00.3**	**-1.3**
WB0				IAmb	IAmb	06 24 04.4	
	comp=Z,15nm,1.4s						
WB2	**Warramunga Arr**	**34.78**	**267**	P	**P**	**06 24 00.3**	**-1.3**
WB2				IAmb	IAmb	06 24 14.9	
	comp=Z,8.1nm,1.4s						
WRAB	**Tennant Creek**	**34.78**	**267**	P	**P**	**06 24 00.4**	**-1.2**
WRAB				IAmb	IAmb	06 24 15.6	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	**34.79**	**267**	P	**P**	**06 24 00.3**	**-1.4**
	comp=Z,1.2nm,0.3s,baz=97,slow=8.6,SNR=27						
PPT	**Papeete**	**36.72**	**90**	LR	LR	06 35 48.7	
	comp=Z,70nm,21.4s,baz=286,slow=30						
MTN	**Manton Dam**	**39.61**	**277**	P	**P**	**06 24 42.2**	**-0.3**
FORT	**Forrest**	**39.67**	**248**	P	**P**	**06 24 43.3**	**+0.5**
KNRA	**Kununurra**	**40.94**	**272**	P	**P**	**06 24 52.9**	**-0.6**
KNRA				IAmb	IAmb	06 24 53.8	
	comp=Z,11nm,0.8s						
FAKI	**Fak Fak**	**42.75**	**291**	P	**P**	**06 25 08.5**	**+0.3**
FAKI				IAmb	IAmb	06 25 20.2	
	comp=Z,19nm,1.2s						
FITZ	**Fitzroy Crossi**	**43.22**	**267**	P	**P**	**06 25 12.4**	**+0.4**
PSA00	**Pilbara Seismi**	**47.83**	**261**	P	**P**	**06 25 47.7**	**-0.6**
MORW	**Morawa**	**50.16**	**250**	P	**P**	**06 26 05.9**	**-0.2**
VNDA	**Vanda**	**55.50**	**183**	P	**P**	**06 26 42.9**	**-1.7**
	comp=Z,0.7nm,0.7s,baz=2.1,slow=7.1,SNR=8.0						
VNDA				LR	LR	06 46 47.5	
	comp=Z,24nm,18.4s,baz=336,slow=32						
VNDA	**Vanda**	**55.50**	**183**	P	**P**	**06 26 44.4**	**-0.1**
CASY	**Casey**	**58.27**	**205**	P	**P**	**06 27 03.5**	**-0.7**
CASY				IAmb	IAmb	06 27 03.7	
	comp=Z,2.8nm,0.6s						
MJAR	**Matsushiro Arr**	**66.46**	**331**	P	**P**	**06 27 58.6**	**-0.6**
	comp=Z,2.5nm,0.7s,baz=158,slow=7.2,SNR=9.2						
QSPA	**South Pole Qui**	**67.80**	**180**	P	**P**	**06 28 07.0**	**-0.4**
KSRS	**Korea Array**	**72.25**	**325**	P	**P**	**06 28 35.2**	**+0.4**
	comp=Z,3.0nm,0.8s,baz=142,slow=6.4,SNR=8.8						
IPM	**Ipoh**	**73.87**	**282**	P	**P**	**06 28 44.3**	**-0.7**
IPM				IAmb	IAmb	06 28 45.9	
	comp=Z,14nm,1.1s						
PETK	**Petropavlovsk-**	**76.03**	**351**	P	**P**	**06 28 56.8**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=152,slow=6.4,SNR=6.1						
CMAR	**Chiang Mai Arr**	**81.76**	**294**	P	**P**	**06 29 28.9**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=131,slow=3.2,SNR=6.7						
KDAK	**Kodiak Island**	**85.17**	**18**	LR	LR	07 08 43.6	
	comp=Z,21nm,18.4s,baz=279,slow=36						
SNAA	**Sanae**	**86.23**	**182**	P	**P**	**06 29 48.6**	**-1.8**
VNA3	**Neumayer Olymp**	**86.73**	**180**	P	**P**	**06 29 51.0**	**-1.9**
VNA2	**Neumayer--Watz**	**87.05**	**180**	P	**P**	**06 29 53.1**	**-1.3**
	baz=182,slow=4.8						
NVAR	**Mina Array Bea**	**89.17**	**48**	P	**P**	**06 30 05.8**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=227,slow=8.5,SNR=8.9						
SONM	**Songino Array**	**90.97**	**322**	P	**P**	**06 30 13.3**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=145,slow=4.5,SNR=11						
ILAR	**Eielson Array**	**92.47**	**17**	P	**P**	**06 30 18.1**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=229,slow=5.8,SNR=5.9						
MKAR	**Makanchi Array**	**105.44**	**315**	Pdiff	**Pdif**	**06 31 17.9**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=89,slow=4.4,SNR=4.0						
CLL	**Collm**	**146.59**	**335**	*e*PKPbc	**PKPab**	**06 36 52.0**	**+0.7**
GERES	**GERESS Array B**	**148.20**	**332**	PKPbc	**PKPdf**	**06 36 53.1**	**+1.7**
	comp=Z,0.7nm,0.6s,baz=64,slow=3.1,SNR=6.9						
TORD	**Torodi Ar. Bea**	**166.79**	**228**	PKP	**PKPdf**	**06 37 14.0**	**-1.1**
	comp=Z,0.7nm,0.9s,baz=222,slow=1.9,SNR=3.1						
TORD				PKPab	**PKPab**	**06 38 17.1**	**-1.4**
	comp=Z,0.6nm,0.8s,baz=99,slow=3.2,SNR=3.8						

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*IDC **04** 06:43:46.4±2.2, 6.°49S×130.°17E, h154^{km}±25^{km}, mb3.2/1, mb1 3.3/6, mb1mx3.0/39, mbtmp3.7/6, Error ellipse: s-maj=29.1km s-min=18.8km az=109.0*
ISC 04 06:43:45.3±1.0**, 6.°68S**±0.°07×**130.°3E**±0.°1**, h150**^{km}**, n6,** σ**2^{s}67**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.85**	**10**	P	**Pn**	**06 45 09.7**	**-0.5**
	1.1nm,0.3s,baz=248,slow=24,SNR=9.4						
SIJI				S	Sn	06 46 06.3	-10
	4.1nm,0.3s,baz=194,slow=24,SNR=8.9						
BATI	**Baumata**	**7.44**	**241**	P	**Pn**	**06 45 32.3**	**+0.9**
	4.6nm,0.3s,baz=90,slow=11,SNR=1.7						
BATI				S	**Sn**	**06 46 54.5**	**-0.1**
	10nm,0.3s,baz=311,slow=22,SNR=6.8						
FITZ	**Fitzroy Crossi**	**12.23**	**201**	P	**Pn**	**06 46 37.4**	**+2.8**
	0.2nm,0.3s,baz=32,slow=9.9,SNR=1.8						
FITZ				S	**Sn**	**06 48 45.5**	**-4.3**
	0.9nm,0.3s,baz=275,slow=22,SNR=7.1						
WRA	**Warramunga Arr**	**13.76**	**164**	P	**P**	**06 46 56.9**	**-1.0**
	0.1nm,0.3s,baz=348,slow=11,SNR=1.9						
WRA				S	**Sn**	**06 49 24.1**	**-2.6**
	0.6nm,0.3s,baz=316,slow=8.3,SNR=4.5						
ASAR	**Alice Springs**	**17.24**	**169**	P	**Pn**	**06 47 40.9**	**+3.7**
	0.2nm,0.3s,baz=349,slow=11,SNR=16						
ASAR				S	**Sn**	**06 50 49.9**	**-0.4**
	0.1nm,0.3s,baz=0.3,slow=29,SNR=2.8						
MKAR	**Makanchi Array**	**68.12**	**327**	P	**P**	**06 54 28.1**	**-1.0**
	0.4nm,0.6s,baz=129,slow=7.2,SNR=6.8						

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*NEIC **04** 06:56:00.3±0.9, 17.°68N±0.°07×145.°5E±0.°2, h263^{km}±8^{km}, mb4.3/45, Error ellipse: s-maj=21.9km s-min=10.1km az=86.0*
*IDC **04** 06:56:00.1±2.9, 17.°73N×145.°61E, h266^{km}±29^{km}, mb3.6/15, mb1 3.5/18, mb1mx3.3/62, mbtmp4.2/18, Error*

ellipse: s-maj=18.2km s-min=9.4km az=82.0

ISC 04 06:55:59.1±0.5**, 17°.70N**±0°.05×**145°.5E**±0°.1**, h250**km**, n66, σ1s.00**/66**, mb4.3**/36**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.14	189	Pn	Pn	06 57 05.9	+1.3
GUMO				S	S	06 57 57.7	+1.1
JCJ	Chichijima	9.85	342	P	Pn	06 58 17.6	+1.9
	2.7nm,0.3s,baz=292,slow=19,SNR=1.9						
JCJ				S	S	07 00 04.2	-2.5
	1.9nm,0.3s,baz=294,slow=19,SNR=1.5						
JOW	Kunigami	18.36	303	P	P	06 59 57.8	+2.1
	0.4nm,0.3s,baz=94,slow=17,SNR=8.9						
MJAR	Matsushiro Arr	19.86	342	P	P	07 00 09.7	-1.9
	0.1nm,0.3s,baz=161,slow=8.8,SNR=6.1						
KSRS	Korea Array	25.04	325	P	P	07 01 00.7	+0.1
	1.3nm,0.6s,baz=144,slow=9.6,SNR=5.6						
JKA	Kamikawa-asahi	26.45	355	P	P	07 01 11.6	-1.5
ASAJ	Asahikawa	26.45	355	P	P	07 01 11.6	-1.5
	2.5nm,0.4s,baz=197,slow=19,SNR=1.3						
COEN	Coen	31.54	184	P	P	07 01 58.1	-0.3
COEN				IAmb	IAmb	07 02 22.0	
	comp=Z,9.1nm,1.2s						
MTN	Manton Dam	33.51	206	P	P	07 02 15.5	+0.1
SOEI	Soe	34.43	219	P	P	07 02 22.5	-1.1
SOEI				IAmb	IAmb	07 02 36.4	
	comp=Z,12nm,0.9s						
KNRA	Kununurra	37.06	207	P	P	07 02 45.6	0.0
KNRA				IAmb	IAmb	07 02 46.3	
	comp=Z,15nm,0.8s						
WB0	Warramunga Arr	38.81	197	P	P	07 03 00.1	0.0
WB0				IAmb	IAmb	07 03 00.6	
	comp=Z,21nm,1.2s						
WR0	Warramunga Arr	38.95	197	P	P	07 03 01.0	-0.3
WR0				IAmb	IAmb	07 03 02.4	
	comp=Z,6.3nm,0.7s						
WRAB	Tennant Creek	38.98	197	P	P	07 03 01.5	0.0
WRAB				IAmb	IAmb	07 03 02.3	
	comp=Z,20nm,1.1s						
WB2	Warramunga Arr	38.98	197	P	P	07 03 01.6	0.0
WB2				IAmb	IAmb	07 03 02.2	
	comp=Z,17nm,1.1s						
WRA	Warramunga Arr	38.99	197	P	P	07 03 01.3	-0.3
	comp=Z,4.8nm,0.4s,baz=18,slow=8.8,SNR=96						
FITZ	Fitzroy Crossi	40.60	210	P	P	07 03 14.9	0.0
FITZ				IAmb	IAmb	07 03 15.8	
	comp=Z,9.1nm,0.8s						
MA2	Magadan	41.99	4	P	P	07 03 27.0	+1.4
AS31	Alice Springs	42.65	196	P	P	07 03 31.2	-0.2
ASAR	Alice Springs	42.65	196	P	P	07 03 30.8	-0.6
	comp=Z,2.1nm,0.4s,baz=20,slow=8.8,SNR=55						
EIDS	Eidsvold	43.15	173	P	P	07 03 34.0	-1.3
EIDS				IAmb	IAmb	07 03 40.9	
	comp=Z,32nm,1.8s						
SONM	Songino Array	43.83	322	P	P	07 03 41.4	+0.7
	comp=Z,3.0nm,1.0s,baz=132,slow=8.3,SNR=11						
DZM	Mont Dzumac	44.51	152	P	P	07 03 46.6	+0.3
	comp=Z,13nm,0.8s,baz=283,slow=5.3,SNR=8.3						
DZM	Mont Dzumac	44.51	152	P	P	07 03 46.7	+0.4
PSA00	Pilbara Seismi	46.44	214	P	P	07 04 01.4	+0.1
STKA	Stephens Creek	49.44	184	P	P	07 04 23.0	-1.0
	comp=Z,0.7nm,0.3s,baz=15,slow=6.6,SNR=5.0						
STKA	Stephens Creek	49.44	184	P	P	07 04 23.3	-0.7
BBOO	Buckleboo	51.03	190	P	P	07 04 35.8	-0.2
FORT	Forrest	51.05	199	P	P	07 04 35.9	-0.1
MORW	Morawa	54.53	212	P	P	07 05 01.2	-0.4
NWAO	Narrogin (SRO)	57.15	208	P	P	07 05 20.0	-0.1
ZALV	Zalesovo Beam	58.71	323	P	P	07 05 30.4	-0.1
	comp=Z,1.3nm,0.7s,baz=120,slow=5.7,SNR=4.8						
MK31	Makanchi Array	59.05	314	P	P	07 05 34.8	+1.7
MKAR	Makanchi Array	59.05	314	P	P	07 05 33.0	-0.1
	comp=Z,0.7nm,0.5s,baz=96,slow=7.4,SNR=9.7						
KDAK	Kodiak Island	60.27	33	P	P	07 05 41.0	-0.1
	comp=Z,0.8nm,0.3s,baz=274,slow=4.5,SNR=4.8						
KDAK	Kodiak Island	60.27	33	P	P	07 05 41.6	+0.4
KDAK				IAmb	IAmb	07 06 32.8	
	comp=Z,14nm,1.6s						
TAU	Tasmania Unive	60.33	178	P	P	07 05 41.2	-0.4
CNPM	China Poot	61.39	31	P	P	07 05 48.8	+0.1
CNPM				IAmb	IAmb	07 05 49.9	
	comp=Z,11nm,1.2s						
KURK	Kurchatov	61.91	318	P	P	07 05 52.8	+0.6
KURBB	Kurchatov Arra	61.96	318	P	P	07 05 52.1	-0.5
	comp=Z,1.2nm,0.5s,baz=94,slow=7.2,SNR=22						
RC01	Rabbit Creek A	62.49	30	P	P	07 05 56.4	+0.5
RC01				IAmb	IAmb	07 06 30.5	
	comp=Z,6.8nm,1.2s						
BPAW	Bear Paw Mtn.	62.72	26	P	P	07 05 57.9	+0.5
BPAW				IAmb	IAmb	07 06 27.5	
	comp=Z,7.5nm,1.6s						
TRF	Thorofare Moun	62.84	27	P	P	07 05 58.2	-0.1
TRF				IAmb	IAmb	07 08 18.2	
	comp=Z,17nm,2.0s						
GHO	Glory Hole Cre	63.03	29	P	P	07 05 59.5	-0.1
MLY	Manley	63.08	25	P	P	07 06 00.4	+0.6
SML	Sawmill	63.31	29	P	P	07 06 01.8	+0.4
QRZ	Quartz Range	63.40	157	P	P	07 06 01.5	-0.6
RND	Reindeer	63.45	27	P	P	07 06 01.8	-0.4
RND				IAmb	IAmb	07 07 12.4	
	comp=Z,15nm,2.0s						
BKZ	Black Stump Fm	63.55	153	P	P	07 06 02.3	-0.8
SCM	Sheep Creek Mo	63.79	29	IAmb	IAmb	07 06 06.1	
	comp=Z,6.7nm,1.1s						
FID	Port Fidalgo	63.98	30	P	P	07 06 05.6	-0.1
FID				IAmb	IAmb	07 07 50.3	
	comp=Z,7.7nm,1.3s						
WRH	Wood River Hil	64.03	26	P	P	07 06 05.9	0.0
WRH				IAmb	IAmb	07 06 55.3	
	comp=Z,10nm,1.8s						
NNZ	Nelson	64.05	157	P	P	07 06 05.5	-0.8
EYAK	Cordova Ski Ar	64.30	31	P	P	07 06 08.7	+1.1
EYAK				IAmb	IAmb	07 07 51.9	
	comp=Z,14nm,1.5s						
IL31		64.61	26	P	P	07 06 08.8	-0.8
ILAR	Eielson Array	64.61	26	P	P	07 06 08.3	-1.4
	comp=Z,0.9nm,0.4s,baz=250,slow=5.9,SNR=24						
DOT	Dot Lake	65.60	27	IAmb	IAmb	07 06 16.7	
	comp=Z,16nm,2.0s						
SCRK	Sand Creek	65.69	27	P	P	07 06 17.1	+0.4
BVAR	Borovoye Array	67.15	321	P	P	07 06 25.4	-0.7
	comp=Z,2.0nm,0.5s,baz=98,slow=8.3,SNR=13						
HYT	Haines Junctio	68.36	31	P	P	07 06 35.4	+1.8
INK	Inuvik	70.35	23	P	P	07 06 44.5	-0.9
	comp=Z,0.6nm,0.7s,baz=238,slow=1.5,SNR=5.1						
INK	Inuvik	70.35	23	P	P	07 06 44.8	-0.6
INK				IAmb	IAmb	07 08 36.9	
	comp=Z,12nm,1.9s						
RES	Resolute Bay	80.43	14	P	P	07 07 42.3	-0.2
RES				IAmb	IAmb	07 10 15.9	
	comp=Z,9.8nm,2.0s						
KVN	Kaiserville	83.84	51	P	P	07 08 02.0	+0.9
KVN				IAmb	IAmb	07 10 42.2	
	comp=Z,10.0nm,2.0s						
FINES	FINESS Array B	87.72	335	P	P	07 08 16.9	-2.5
	comp=Z,0.7nm,0.6s,baz=51,slow=7.3,SNR=4.5						
LPAZ	La Paz	147.79	93	PKPbc	PKPdf	07 15 15.7	+2.8
	comp=Z,0.4nm,0.3s,baz=32,slow=6.5,SNR=4.9						

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*IDC **04** 07:00:41.3±2.5, 31°.19S×68°.81W, h78km±22km, mb3.4/3, mb1 3.8/8, mb1mx3.5/27, mbtmp3.8/8, Error ellipse: s-maj=33.0km s-min=21.7km az=85.0*

*NEIC **04** 07:00:42.9±2.2, 31°.27S±0°.05×68°.68W±0°.08, h95km±4km, mb4.5/8, Md4.1(SJA), Error ellipse: s-maj=10.0km s-min=7.5km az=104.0*

*SJA **04** 07:00:44.5±1.0, 31°.23S×68°.99W, h108km±6km, ML3.8, MW3.8*

ISC 04 07:00:44.1±0.7**, 31°.21S**±0°.04×**68°.83W**±0°.05**, h115**km±6km**, n54, σ1s.69**/69**, mb4.3**/7**, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMOG	MOGNA	0.40	47	eP	Pn	07 01 02.1	+1.2
AMOG				eS	Sn	07 01 14.9	+1.3
AMOG				IAML		07 01 17.3	
	comp=Z,2μm,0.4s						
ACCO	Cerro Coronel	0.65	342	iP	Pn	07 01 03.5	+0.7
ACCO				eS	Sn	07 01 18.0	+1.0
RTLS	Leoncito	0.71	214	iP	Pn	07 01 03.8	+0.5
RTLS				eS	Sn	07 01 17.9	+0.1
RTLS				IAML		07 01 20.9	
	comp=Z,684nm,0.4s						
ACDV	Cuesta del Vie	1.06	346	iP	Pn	07 01 07.5	+1.0
ACDV				eS	Sn	07 01 24.1	+0.7
ACDV				IAML		07 01 27.5	
	comp=Z,1μm,0.2s						
AROD	Rodeo	1.18	332	eP	Pn	07 01 09.4	+1.6
ASAL	Salagasta	1.38	180	iP	Pn	07 01 10.9	+1.0
ASAL				eS	Sn	07 01 29.1	-0.3
ASAL				IAML		07 01 31.8	
	comp=Z,1μm,0.5s						
ARCO	CERRO ARCO	1.63	183	iP	Pn	07 01 13.7	+0.9
ARCO				eS	Sn	07 01 35.5	+0.7
ARCO				IAML		07 01 37.2	
	comp=Z,3μm,0.6s						
CO03	El Pedregal	1.64	282	Pn	Pn	07 01 13.8	+1.0
CO03				Sn	Sn	07 01 35.3	+0.6
CO02	Combarbal	1.86	270	Pn	Pn	07 01 16.3	+0.7
CO02				Sn	Sn	07 01 40.3	+0.6
GO04	Tololo Observa	1.98	301		Pn	07 01 17.7	+0.4
GO04				Sn	Sn	07 01 43.2	+0.6
CO04	Los Peladeros	2.01	245	Pn	Pn	07 01 17.7	+0.1
CO04				Sn	Sn	07 01 43.5	+0.2
VA03	San Esteban	2.13	223	Pn	Pn	07 01 19.7	+0.7
PEL	Peldehue	2.49	219		Pn	07 01 23.6	0.0
ROC1	El Roble	2.56	226		Pn	07 01 24.3	-0.3
ROC1	El Roble	2.56	226	iP	Pn	07 01 24.1	-0.5
ROC1				eS	Sn	07 01 54.1	-1.6
AC05	El Transito	2.67	332	Pn	Pn	07 01 28.2	+2.2
MT05	Renca	2.71	216	Pn	Pn	07 01 26.7	+0.2
LCO	Las Campanas	2.72	323	Pn	Pn	07 01 27.8	+0.9
MT02	Curacav	2.83	223	Pn	Pn	07 01 27.3	-0.6
MT01	Popeta	3.34	217	Pn	Pn	07 01 33.1	-1.6
BO02	Sierra Bellavi	3.93	204	Pn	Pn	07 01 42.5	-0.2
AC02	Maricunga	4.36	357	Pn	Pn	07 01 50.8	+1.9
GO05	Huala	4.60	214		Pn	07 01 48.4	-3.1
GO05				Sn	Sn	07 02 40.6	-3.3
BI02	San Fabin de	5.81	200	Pn	Pn	07 02 06.3	-1.6
BI02				Sn	Sn	07 03 12.5	-0.7
GO02	Mina Guanaco	6.06	353		Pn	07 02 11.4	-0.1
GO02				Sn	Sn	07 03 18.2	-1.6
PB14	IPOC Station P	6.70	348		Pn	07 02 19.0	-1.3
PB10	IPOC Station P	7.81	348	Pn	Pn	07 02 34.7	-0.4
PB15	IPOC Station P	7.99	356		Pn	07 02 36.8	-0.8
PB06	IPOC Station P	8.49	355	Pn	Pn	07 02 43.2	-1.2
LVC	Limon Verde	8.56	360	P	Pn	07 02 44.0	-1.5
	comp=Z,1.2nm,0.3s,baz=144,slow=7.7,SNR=21						
LVC				S	Sn	07 04 14.0	-6.6
	comp=Z,1.0nm,0.3s,baz=146,slow=9.1,SNR=2.1						
LVC	Limon Verde	8.56	360		Pn	07 02 44.1	-1.4
PB04	IPOC Station P	8.92	352	Pn	Pn	07 02 47.0	-3.2
PB09	IPOC Station P	9.38	358	Pn	Pn	07 02 55.2	-1.2
PB07	IPOC Station P	9.49	354	Pn	Pn	07 02 55.8	-2.1
PLCA	Paso Flores	9.61	188	P	Pn	07 02 56.0	-3.2
	comp=Z,0.2nm,0.3s,baz=356,slow=8.5,SNR=6.0						
PLCA	Paso Flores	9.61	188		Pn	07 02 56.6	-2.7
PB01	IPOC Station P	10.14	357	Pn	Pn	07 03 03.2	-3.4
PB08	IPOC Station P	11.02	358	Pn	Pn	07 03 18.1	-0.7
CPUP	Villa Florida	11.20	67	P	Pn	07 03 18.6	-2.2
	comp=Z,0.2nm,0.3s,baz=221,slow=15,SNR=5.1						
CPUP	Villa Florida	11.20	67		Pn	07 03 18.1	-2.7
LPAZ	La Paz	14.87	3	P	Pn	07 04 09.1	0.0
	comp=Z,0.2nm,0.3s,baz=189,slow=8.6,SNR=11						
SIV	San Ignacio	16.72	27	P	P	07 04 32.0	+0.1
	comp=Z,0.4nm,0.3s,baz=208,slow=9.6,SNR=36						
SAML	Samuel	22.76	15	P	P	07 05 37.0	+0.1
RUSC	La Rusia	37.11	353	P	P	07 07 46.1	+1.9
QSPA	South Pole Qui	59.02	180	P	P	07 10 33.0	+1.4
SWET	Sewanee	68.00	345	P	P	07 11 32.6	+1.7
SWET				IAmb	IAmb	07 11 32.6	
	comp=Z,3.4nm,0.8s						
V52A	Sevierville	68.12	347	P	P	07 11 32.0	+0.5
V52A				IAmb	IAmb	07 11 41.9	
	comp=Z,8.1nm,1.3s						
V48A	Smith Brothers	68.71	344	P	P	07 11 36.5	+1.4
V48A				IAmb	IAmb	07 11 37.6	
	comp=Z,12nm,1.4s						
TXAR	Lajitas Array	68.73	328	P	P	07 11 36.9	+1.3
	comp=Z,0.4nm,0.6s,baz=147,slow=8.9,SNR=7.2						
WVT	Waverly	69.32	344	P	P	07 11 40.1	+1.2
WVT				IAmb	IAmb	07 11 40.6	
	comp=Z,5.9nm,0.6s						
SRIG	Santa Rosalia	71.43	320	P	P	07 11 53.5	+1.5
TORD	Torodi Ar. Bea	80.69	69	P	P	07 12 45.5	+0.7
	comp=Z,1.8nm,0.9s,baz=254,slow=5.4,SNR=6.7						
PDAR	Pinedale Array	82.57	331	P	P	07 12 56.2	+1.9
	comp=Z,0.3nm,0.7s,baz=133,slow=6.3,SNR=3.5						
ZALV	Zalesovo Beam	150.43	32	PKPbc	PKiKP	07 20 23.0	+0.7
	comp=Z,1.4nm,0.4s,baz=313,slow=4.1,SNR=5.5						

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*IDC **04** 07:04:28.8±0.6, 11°.08S×161°.99E, h0km, mb4.3/21, mb1 4.4/24, mb1mx4.3/49, mbtmp4.3/24, ML4.4/3, MS3.9/20, Ms1 3.9/20, ms1mx3.7/34, Error ellipse: s-maj=16.5km s-min=14.2km az=100.0*

*BJI **04** 07:04:30.0±0.0, 11°.20S×162°.20E, h20km, mB5.1/8, mb4.8/15, Ms4.6/4, Ms7 4.3/3*

*NEIC **04** 07:04:32.7±1.3, 11°.21S±0°.08×162°.10E±0°.09, h33km±5km, mb4.8/42, Error ellipse: s-maj=16.8km s-min=2.7km az=49.0*

ISC 04 07:04:33.7±0.4**, 11°.20S**±0°.06×**162°.09E**±0°.07**, h36**km**, n118, σ1s.55**/101**, mb4.8**/52**, MS3.9**/23**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.74	310	Pn	Pn	07 05 13.5	-1.7
	56nm,0.3s,baz=153,slow=1.5,SNR=18						
HNR				Sn	Sn	07 05 45.6	-1.6
	214nm,0.3s,baz=111,slow=11,SNR=5.8						
HNR				LR	LR	07 06 25.1	
	comp=Z,3μm,20.4s,baz=129,slow=45						
HNR	Honiara	2.74	310		Pn	07 05 14.9	-0.3
HNR					Sn	07 05 45.2	-1.9
DZM	Mont Dzumac	11.59	159	ePn	Pn	07 07 18.7	+2.0
	18nm,0.8s						
DZM				eSn	Sn	07 09 21.0	-3.9
	8.2nm,0.6s						
DZM				eLR	LR	07 10 03.7	
	comp=Z,522nm,21.2s						
DZM	Mont Dzumac	11.59	159	Pn	Pn	07 07 18.5	+1.8
	0.5nm,0.3s,baz=27,slow=9.3,SNR=32						
DZM				Sn	Sn	07 09 22.0	-2.9
	0.3nm,0.3s,baz=273,slow=23,SNR=2.2						
DZM				LR	LR	07 11 24.1	
	comp=Z,680nm,18.6s,baz=348,slow=35						
DZM	Mont Dzumac	11.59	159	Pn	Pn	07 07 16.2	-0.5
PMG	Port Moresby	14.80	276	P	P	07 08 03.9	-2.0
MSVF	Nonsavu	16.76	115	Pn	Pn	07 08 21.3	-4.6
EIDS	Eidsvold	17.53	215	P	Pn	07 08 35.0	-0.3
CTA	Charters Tower	17.61	238	P	Pn	07 08 36.2	-0.2
	2.5nm,0.3s,baz=72,slow=15,SNR=46						
CTAO	Charters Tower	17.61	238	P	P	07 08 37.4	+0.3
PATS	Pohnpei	18.31	348	P	P	07 08 42.3	-2.6
PATS				IAmb	IAmb	07 08 59.1	
	comp=Z,64nm,1.1s						
COEN	Coen	18.66	260	P	P	07 08 47.8	-1.0
COEN				IAmb	IAmb	07 08 56.2	
	comp=Z,36nm,0.8s						
ARMA	Armidale	21.45	205	P	P	07 09 19.0	-0.1
ARMA				IAmb	IAmb	07 09 37.7	
	comp=Z,49nm,1.5s						
JAY	Jayapura	22.90	291	P	P	07 09 32.5	-2.1
	comp=Z,7.2nm,0.8s,baz=157,slow=15,SNR=1.4						
SMPI	Sarmi	24.94	290	P	P	07 09 55.9	+2.0
	comp=Z,31nm,1.0s						
WR0	Warramunga Arr	27.89	248	P	P	07 10 20.3	-0.2
STKA	Stephens Creek	27.95	219	P	P	07 10 21.0	+0.1
	comp=Z,5.7nm,0.6s,baz=53,slow=10,SNR=16						
STKA				LR	LR	07 20 56.2	
	comp=Z,649nm,20.3s,baz=32,slow=35						
STKA	Stephens Creek	27.95	219	P	P	07 10 20.3	-0.6
WB0	Warramunga Arr	27.98	249	P	P	07 10 19.5	-1.8
WB0				IAmb	IAmb	07 10 25.3	
	comp=Z,26nm,1.4s						
WRAB	Tennant Creek	28.06	249	P	P	07 10 21.0	-1.1
WB2	Warramunga Arr	28.06	249	P	P	07 10 21.9	-0.1
WRA	Warramunga Arr	28.07	249	P	P	07 10 21.9	-0.2
	comp=Z,6.9nm,0.9s,baz=78,slow=9.6,SNR=17						
WRA				LR	LR	07 21 42.6	
	comp=Z,794nm,18.2s,baz=70,slow=37						
AS31	Alice Springs	29.54	241	P	P	07 10 34.2	-1.0
ASAR	Alice Springs	29.54	241	P	P	07 10 34.4	-0.8
	comp=Z,3.0nm,0.7s,baz=68,slow=9.9,SNR=51						
URZ	Urewera	30.11	156	P	P	07 10 42.1	+2.1
	comp=Z,3.5nm,0.7s,baz=7.2,slow=20,SNR=3.2						
URZ	Urewera	30.11	156	IAmb	IAmb	07 10 47.3	
	comp=Z,6.4nm,1.0s						
TOO	Toolangi	30.19	207	P	P	07 10 38.9	-1.9
TOO				IAmb	IAmb	07 10 46.4	
	comp=Z,35nm,1.4s						
MTN	Manton Dam	30.31	264	P	P	07 10 41.8	-0.3
MTN				IAmb	IAmb	07 10 57.2	
	comp=Z,32nm,1.3s						
BBOO	Buckleboo	32.16	224	P	P	07 10 58.8	+0.7
BBOO				IAmb	IAmb	07 11 02.6	
	comp=Z,12nm,0.9s						
SIJI	Sorong	32.28	286	LR	LR	07 26 17.5	
	comp=Z,247nm,18.3s,baz=212,slow=41						
KNRA	Kununurra	32.69	258	P	P	07 11 03.0	0.0
NLAI	Namlea	35.57	280	P	P	07 11 32.1	+4.1
	comp=Z,36nm,1.2s						
FITZ	Fitzroy Crossi	35.87	255	P	P	07 11 29.6	-1.0
	comp=Z,3.9nm,0.6s,baz=81,slow=7.9,SNR=16						
FITZ				LR	LR	07 25 20.1	
	comp=Z,312nm,21.1s,baz=78,slow=35						
FITZ	Fitzroy Crossi	35.87	255	P	P	07 11 30.1	-0.5
FITZ				IAmb	IAmb	07 11 43.8	
	comp=Z,6.7nm,0.8s						
SANI	Sanana	36.95	282	P	P	07 11 41.3	+1.5
	comp=Z,46nm,1.1s						
FORT	Forrest	37.05	233	P	P	07 11 40.3	-0.1
BATI	Baumata	37.75	268	LR	LR	07 27 54.7	
	comp=Z,204nm,19.6s,baz=83,slow=37						
APSI	Ampana	41.43	281	P	P	07 12 22.2	+4.9
	comp=Z,3μmcomp=Z,458nmcomp=Z,39nm,1.3s						
MRSI	Marisa	41.55	284	P	P	07 12 36.4	+18
PSAD2	Pilbara Seismi	41.59	250	P	P	07 12 18.4	-0.2
PSAD2				IAmb	IAmb	07 12 35.9	
	comp=Z,27nm,1.2s						
PSAB3	Pilbara Seismi	41.69	250	P	P	07 12 18.9	-0.4
PSAB3				IAmb	IAmb	07 12 31.7	
	comp=Z,43nm,1.4s						
PSA00	Pilbara Seismi	41.70	250	P	P	07 12 18.0	-1.4
PSA00				IAmb	IAmb	07 12 31.2	
	comp=Z,33nm,1.3s						
KAPI	Kappang	42.33	275	P	P	07 12 23.7	-0.9
	comp=Z,6.9nm,0.4s,baz=106,slow=11,SNR=1.7						
KAPI	Kappang	42.33	275	P	P	07 12 23.8	-0.7
KAPI				IAmb	IAmb	07 12 29.7	
	comp=Z,16nm,0.8s						
JCJ	Chichijima	42.69	333	LR	LR	07 29 02.7	
	comp=Z,89nm,18.6s,baz=113,slow=35						
MPSI	Mapaga	43.46	282	P	P	07 12 36.2	+2.4
	comp=Z,17nm,1.3s						
MORW	Morawa	46.41	240	P	P	07 12 56.5	-0.7
MORW				IAmb	IAmb	07 13 01.9	
	comp=Z,20nm,1.1s						
NWAO	Narrogin (SRO)	46.42	235	P	P	07 12 55.9	-1.2
NWAO				IAmb	IAmb	07 13 13.7	
	comp=Z,16nm,1.0s						
PPT	Papeete	47.15	104	LR	LR	07 28 55.8	
	comp=Z,110nm,19.9s,baz=300,slow=31						
PPT2	Papeete2	47.15	104	eLR	LR	07 26 29.5	
	comp=Z,188nm,22.2s,baz=279						
JAGI	Jajag, Banyuwa	47.27	269	P	P	07 13 15.8	+12
TBI	Tubuai	47.61	111	eLR	LR	07 26 42.3	
	comp=Z,141nm,32.5s						
SPMM	Sapulut	48.07	287	P	P	07 13 11.0	+0.8
SBUM	Sibu	51.41	282	P	P	07 13 37.0	+1.3
KSM	Kuching	52.99	280	P	P	07 13 46.8	-0.6
KSM	Kuching	52.99	280	P	P	07 13 49.0	+1.6
LEM	Lembang	53.91	270	LR	LR	07 38 59.1	
	comp=Z,46nm,20.0s,baz=136,slow=38						
PPBI	Pangkal Pinang	56.20	275	P	P	07 14 15.1	+4.4
TAOE	Nuku Hiva Isla	56.86	93	eLR	LR	07 30 58.9	
	comp=Z,125nm,24.0s						
MDSI	Maura Dua	57.68	272	P	P	07 14 21.5	+0.3
	comp=Z,16nm,1.1s						
ASAJ	Asahikawa	57.84	344	LR	LR	07 35 23.2	
	comp=Z,58nm,21.2s,baz=116,slow=32						
KSRS	Korea Array	58.05	328	P	P	07 14 24.4	+1.1
	comp=Z,2.0nm,1.0s,baz=162,slow=8.7,SNR=4.1						
NJ2	Nanjing	59.66	318	eP	P	07 14 35.5	+0.9
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
USRK	Ussuriysk Ar.	61.54	336	P	P	07 14 48.3	+1.1
	comp=Z,2.8nm,0.8s,baz=141,slow=3.9,SNR=4.7						
BKNI	Bangkinang	61.71	276	P	P	07 14 54.6	+5.6
	comp=Z,2μmcomp=Z,96nm,1.0s						
BKNI	Bangkinang	61.71	276	P	P	07 14 49.5	+0.5
IPM	Ipoh	62.72	281	P	P	07 14 55.7	0.0
IPM	Ipoh	62.72	281	P	P	07 14 57.0	+1.3
MNSI	Mandailing Nat	63.24	277	P	P	07 14 59.7	+0.5
KULM	Kulim	63.29	282	P	P	07 14 58.2	-1.3
KULM				IAmb	IAmb	07 15 07.8	
	comp=Z,7.5nm,1.0s						
KULM	Kulim	63.29	282	P	P	07 15 00.0	+0.5
RPSI	Rantau Prapat	64.31	278	P	P	07 15 06.0	-0.2
RPSI	Rantau Prapat	64.31	278	P	P	07 15 05.7	-0.5
RPSI				IAmb	IAmb	07 15 12.5	
	comp=Z,8.4nm,0.9s						
PSI	Prapat	64.34	279	P	P	07 15 06.0	-0.5
	comp=Z,1.5nm,0.5s,baz=181,slow=4.1,SNR=5.6						
CASY	Casey	64.95	200	P	P	07 15 08.8	-0.7
CASY				IAmb	IAmb	07 15 25.3	
	comp=Z,18nm,1.5s						
GSI	Gunungsitoli	65.31	277	P	P	07 15 16.2	+3.5
	comp=Z,221nm,1.1s						
GSI	Gunungsitoli	65.31	277	P	P	07 15 11.4	-1.4
GYA	Guiyang	65.56	306	eP	P	07 15 12.1	-2.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KCSI	Kotacane, Aceh	65.62	279	P	P	07 15 19.7	+4.9
	comp=Z,16nm,0.7s						
VNDA	Vanda	66.31	180	P	P	07 15 20.1	+2.1
	comp=Z,3.3nm,0.8s,baz=337,slow=6.7,SNR=16						
VNDA				LR	LR	07 39 29.3	
	comp=Z,38nm,20.5s,baz=351,slow=32						
CMAR	Chiang Mai Arr	68.90	295	P	P	07 15 36.4	+0.9
	comp=Z,1.6nm,0.3s,baz=118,slow=5.9,SNR=8.4						
CMAR				LR	LR	07 47 03.6	
	comp=Z,26nm,19.1s,baz=48,slow=37						
HHC	Hu-ho-hao-te	69.67	321	eP	P	07 15 42.4	+2.5
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,64nm,6.4s						
HHC				LR	LR		
	comp=Z,100nm,16.6s						
CD2	Chengdu	69.87	309	smax	smax		
	comp=N,270nm,0.7s						
CD2				smax	smax		
	comp=E,200nm,0.9s						
CD2	Chengdu	69.87	309	eP	P	07 15 42.0	+0.7
LZH	Lanzhou	72.23	314	eP	P	07 15 58.6	+2.9
LZH				pmax	pmax		
	comp=E,27nm,1.1s						
SDPT	Sand Point	73.35	21	P	P	07 16 00.3	-1.2
SEY	Seymchan	74.29	355	P	P	07 16 06.2	-0.8
	comp=E,0.6nm,0.6s,baz=180,slow=10,SNR=1.7						
SONM	Songino Array	76.70	325	P	P	07 16 20.5	-0.8
	comp=E,4.6nm,0.9s,baz=137,slow=5.3,SNR=16						
SONM				LR	LR	07 52 06.4	
	comp=E,51nm,18.1s,baz=110,slow=37						
YAK	Yakutsk	77.27	345	P	P	07 16 23.6	-0.4
KDAK	Kodiak Island	78.08	23	P	P	07 16 28.7	+0.1
	comp=E,3.0nm,0.8s,baz=295,slow=6.0,SNR=4.3						
KDAK	Kodiak Island	78.08	23	P	P	07 16 27.6	-0.9
KDAK				IAmb	IAmb	07 16 41.2	
	comp=Z,5.1nm,0.9s						
QSPA	South Pole Qui	78.80	180	P	P	07 16 35.1	+2.3
BILL	Bilibino	79.09	2	P	P	07 16 33.8	-0.2
BILL				IAmb	IAmb	07 16 49.2	
	comp=Z,10nm,1.1s						
TLY	Talaya	80.29	327	LR	LR	07 49 04.6	
	comp=Z,40nm,20.5s,baz=112,slow=33						
MAW	Mawson	83.22	202	P	P	07 16 57.1	+1.1
	comp=Z,5.8nm,0.9s,baz=112,slow=5.2,SNR=3.9						
MAW	Mawson	83.22	202	P	P	07 16 54.6	-1.5
CRQM	Cirque	83.70	24	P	P	07 16 58.4	-0.4
ILAR	Eielson Array	84.83	20	P	P	07 17 04.1	-0.1
	comp=Z,0.9nm,0.5s,baz=252,slow=5.0,SNR=12						
ILAR				LR	LR	07 51 14.8	
	comp=Z,82nm,18.7s,baz=253,slow=33						
SKAG	Skagway	86.29	27	P	P	07 17 05.8	-5.8
SKAG				IAmb	IAmb	07 17 07.3	
	comp=Z,5.8nm,0.8s						
WMQ	Urumqi	86.68	316	eP	P	07 17 14.4	+0.4
WMQ				pP	pP	07 17 25.5	+1.3
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WMQ				LR	LR		
	comp=Z,120nm,24.5s						
EGAK	Eagle	86.78	21	P	P	07 17 12.9	-1.0
EGAK				IAmb	IAmb	07 17 26.8	
	comp=Z,7.4nm,1.1s						
DAWY	Dawson	87.02	22	P	P	07 17 14.0	-1.1
DAWY				IAmb	IAmb	07 17 26.0	
	comp=Z,6.1nm,1.2s						
NVAR	Mina Array Bea	88.88	51	P	P	07 17 25.3	+0.5
	comp=Z,0.1nm,0.3s,baz=259,slow=0.8,SNR=3.5						
MKAR	Makanchi Array	91.19	317	P	P	07 17 34.2	-1.0
	comp=Z,0.9nm,0.6s,baz=86,slow=5.5,SNR=10						
MKAR				LR	LR	07 57 53.8	
	comp=Z,45nm,21.0s,baz=101,slow=35						
INK	Inuvik	91.23	20	P	P	07 17 35.1	+0.3
	comp=Z,0.8nm,1.1s,baz=249,slow=29,SNR=1.6						
ZALV	Zalesovo Beam	91.60	325	LR	LR	07 57 34.8	
	comp=Z,47nm,21.2s,baz=74,slow=35						
SNAA	Sanae	96.70	185	P	P	07 18 01.5	+1.4
YKA	Yellowknife Ar	96.77	28	P	P	07 18 00.4	+0.1
	comp=Z,0.1nm,0.4s,baz=259,slow=9.4,SNR=3.1						
YKA				LR	LR	07 55 26.2	
	comp=Z,38nm,20.7s,baz=0.0,slow=32						
VNA3	Neumayer Olymp	97.56	183	P	Pdif	07 18 05.1	+1.1
VNA2	Neumayer--Watz	97.75	183	P	Pdif	07 18 09.6	+4.8
	baz=187,slow=3.2						
TXAR	Lajitas Array	99.06	62	LR	LR	07 53 50.5	
	comp=Z,60nm,21.8s,baz=0.0,slow=30						
ARCES	ARCESS Array B	115.55	344	PKP	PKiKP	07 23 11.2	-0.3
	comp=Z,0.9nm,0.6s,baz=79,slow=1.7,SNR=7.4						
BOSA	Boshof	122.50	225	PKP	PKiKP	07 23 27.9	+1.4
	comp=Z,2.3nm,0.7s,baz=165,slow=2.3,SNR=5.7						
AKASG	Malin Array Be	124.99	325	PKP	PKPdf	07 23 29.5	-0.5
	comp=Z,0.4nm,0.4s,baz=45,slow=2.1,SNR=2.1						
NB2	NORSAR Subarra	125.86	343	PKPdf	PKiKP	07 23 34.9	+3.0
	comp=Z,0.7nm,0.8s,baz=38,slow=1.9						
NOA	NORSAR Array B	125.86	343	PKP	PKPdf	07 23 31.1	-0.5
	comp=Z,1.1nm,0.8s,baz=31,slow=2.0,SNR=4.6						
ESDC	Sonseca Array	149.06	339	PKPbc	PKPbc	07 24 18.9	+0.4
	comp=Z,0.7nm,0.8s,baz=359,slow=3.0,SNR=4.6						
TORD	Torodi Ar. Bea	160.74	278	PKP	PKPdf	07 24 31.6	+0.6
	comp=Z,0.5nm,0.9s,baz=50,slow=3.4,SNR=2.8						
TORD				PKPab	PKPab	07 25 11.7	-1.4
	comp=Z,0.9nm,1.0s,baz=112,slow=0.7,SNR=2.3						

*NEIC **04** 07:09:18.4±1.9, 8°.14S±0°.05×123°.92E±0°.07, h172km±4km, mb4.4/18, Error ellipse: s-maj=11.3km s-min=5.8km az=62.0*

*IDC **04** 07:09:18.4±0.9, 8°.12S×123°.88E, h164km±10km, mb3.8/13, mb1 4.0/20, mb1mx3.7/50, mbtmp4.4/20, Error ellipse: s-maj=18.5km s-min=9.8km az=70.0*

*DJA **04** 07:09:18.1±0.3, 8°S±4°×12°4E±°, h166km±4km, M4.5/9, mB5.2/3, mb4.6/7, MLv4.4/9, Mw(mB)4.5/3*

ISC 04 07:09:16.8±0.4, **8°.19S**±0°.04×**123°.92E**±0°.05, **h150**km, **n80**, σ**2.29**/90, **mb4.2**/15, **Flores region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOEI	Soe	1.59	168	P	Pn	07 09 51.4	+3.9
SOEI	Soe	1.59	168		Pn	07 09 51.5	+4.0
SOEI				Sn	Sn	07 10 16.4	+5.2
MMRI	Maumere	1.73	255	P	Pn	07 09 51.6	+2.8
MMRI	Maumere	1.73	255		Pn	07 09 52.2	+3.4
BATI	Baumata	2.02	187	P	Pn	07 09 56.0	+3.7
	235nm,0.3s,baz=68,slow=1.8,SNR=64						
BATI				S	Sn	07 10 24.3	+4.8
	105nm,0.3s,baz=75,slow=20,SNR=4.0						
BATI	Baumata	2.02	187	P	Pn	07 09 55.5	+3.2
BATI				S	Sn	07 10 23.0	+3.5
EDFI	Ende, Flores	2.28	256	P	Pn	07 09 58.2	+2.8
BASI	Baing, Sumba	3.87	238	P	Pn	07 10 17.5	+2.1
WBSI	Waikabubak, Su	4.71	252	P	Pn	07 10 27.2	+0.8
BKSI	Bulukumba	4.73	307	P	Pn	07 10 27.9	+1.2
KAPI	Kappang	5.21	307	P	Pn	07 10 33.4	+0.4
	3.4nm,0.3s,baz=176,slow=16,SNR=2.5						
KAPI	Kappang	5.21	307		Pn	07 10 33.2	+0.2
BNSI	Bone	5.34	315	P	Pn	07 10 39.5	+4.7
PLAI	Plampang	6.11	264	P	Pn	07 10 45.9	+0.8
SANI	Sanana	6.44	19	P	Pn	07 10 51.3	+1.9
	0.2nm17nm,0.9s						
SAUI	Saumlaki	7.31	89	Pn	Pn	07 11 01.9	+0.8
MTN	Manton Dam	8.46	124	Pn	Pn	07 11 18.0	+1.6
MTN				Sn	Sn	07 12 45.2	-5.4
KNRA	Kununurra	8.82	148	Pn	Pn	07 11 22.6	+1.4
KNRA				Sn	Sn	07 12 56.2	-3.0
JAGI	Jajag, Banyuwa	9.67	268	P	Pn	07 11 31.7	-0.9
JAGI	Jajag, Banyuwa	9.67	268	Pn	Pn	07 11 30.8	-1.8
JAGI				Sn	Sn	07 13 14.3	-5.6
FAKI	Fak Fak	9.80	58		Pn	07 11 36.8	+2.5
FITZ	Fitzroy Crossi	9.99	171	P	Pn	07 11 37.6	+0.8
	1.6nm,0.3s,baz=5.5,slow=8.9,SNR=37						
FITZ				S	Sn	07 13 23.2	-4.2
	7.5nm,0.3s,baz=127,slow=20,SNR=10						
FITZ	Fitzroy Crossi	9.99	171		Pn	07 11 37.7	+1.0
FITZ					Sn	07 13 23.5	-3.9
SIJI	Sorong	10.31	46	P	Pn	07 11 42.0	+0.9
	3.3nm,0.3s,baz=182,slow=22,SNR=5.3						
PWJI	Pagerwojo	12.00	270	P	Pn	07 12 01.8	-1.4
	44nm,0.9s						
PCJI	Pacitan	12.62	269	P	Pn	07 12 09.8	-1.4
	120nm,0.5s						
WB0	Warramunga Arr	15.34	140	P	Pn	07 12 46.4	+0.8
WB0				IAmb	IAmb	07 12 51.0	
	comp=Z,10nm,0.7s						
WRA	Warramunga Arr	15.44	140	P	Pn	07 12 47.5	+0.8
	comp=Z,3.1nm,0.3s,baz=306,slow=12,SNR=46						
WRA				S	Sn	07 15 30.2	-8.4
	comp=Z,1.3nm,0.3s,baz=319,slow=26,SNR=7.3						
WRAB	Tennant Creek	15.44	140	P	P	07 12 48.7	+0.8
WRAB				IAmb	IAmb	07 12 50.5	
	comp=Z,14nm,0.6s						
WB2	Warramunga Arr	15.44	140	P	P	07 12 48.8	+0.7
WB2				IAmb	IAmb	07 12 50.5	
	comp=Z,14nm,0.6s						
WR0	Warramunga Arr	15.58	140	P	Pn	07 12 49.5	+1.1
WR0				IAmb	IAmb	07 12 52.4	
	comp=Z,16nm,0.8s						
LEM	Lembang	16.22	274	P	Pn	07 12 57.0	+0.4
	comp=Z,3.9nm,0.3s,baz=13,slow=17,SNR=5.1						
GIRL	Giralia	17.13	212	P	P	07 13 07.0	+0.4
AS31	Alice Springs	18.12	149	P	Pn	07 13 19.5	+0.3
ASAR	Alice Springs	18.12	149	P	Pn	07 13 19.4	+0.3
	comp=Z,1.7nm,0.3s,baz=328,slow=12,SNR=41						
ASAR				S	S	07 16 35.2	-2.2
	comp=Z,0.5nm,0.3s,baz=328,slow=24,SNR=13						
ASAR				ScP	ScP	07 21 02.8	-3.4
	comp=Z,0.2nm,0.3s,baz=345,slow=1.7,SNR=6.0						
PPBI	Pangkal Pinang	18.69	288	P	P	07 13 24.2	+0.4
COEN	Coen	19.74	109	P	P	07 13 36.0	+0.9
COEN				IAmb	IAmb	07 13 37.1	
	comp=Z,17nm,1.1s						
COEN					S	07 17 10.7	+1.1
MORW	Morawa	22.06	199	P	P	07 13 59.8	+0.1
MORW				IAmb	IAmb	07 14 00.5	
	comp=Z,9.9nm,0.8s						
FORT	Forrest	22.81	171	P	P	07 14 04.8	-2.0
CTA	Charters Tower	24.64	121	P	P	07 14 25.5	+1.9
	comp=Z,5.1nm,0.6s,baz=300,slow=12,SNR=9.0						
CTAO	Charters Tower	24.64	121	P	P	07 14 27.1	+3.5
CTAO				IAmb	IAmb	07 14 28.2	
	comp=Z,18nm,1.3s						
NWAO	Narrogin (SRO)	25.39	193	P	P	07 14 30.2	-0.1
	comp=Z,3.2nm,0.3s,baz=34,slow=7.4,SNR=2.1						
NWAO	Narrogin (SRO)	25.39	193	P	P	07 14 30.8	+0.5
BBOO	Buckleboo	26.96	157	P	P	07 14 45.0	+0.6
STKA	Stephens Creek	28.74	148	P	P	07 15 00.9	+0.7
	comp=Z,1.6nm,0.5s,baz=330,slow=9.5,SNR=5.7						
STKA	Stephens Creek	28.74	148	P	P	07 15 01.5	+1.2
LHMI	Lhok Sumawe	30.03	295	P	P	07 15 10.9	-0.9
EIDS	Eidsvold	31.00	127	P	P	07 15 16.8	-3.6
DZM	Mont Dzumac	43.14	114	P	P	07 17 03.1	+0.2
	comp=Z,2.7nm,0.5s,baz=241,slow=10,SNR=8.0						
DZM	Mont Dzumac	43.14	114	P	P	07 17 03.6	+0.7
MAT	Matsushiro	46.47	16	P	P	07 17 27.8	-1.1
MJAR	Matsushiro Arr	46.47	16	P	P	07 17 27.4	-1.5
	comp=Z,1.2nm,0.4s,baz=189,slow=8.4,SNR=10						
TAPN	Taplejung	49.78	317	eP	P	07 17 55.1	+0.3
	comp=Z,7.9nm,0.4s						
RAMN	Ramite	50.29	315	eP	P	07 17 58.8	+0.2
	comp=Z,9.2nm,0.4s						
JIRN	Jiri	51.02	316	eP	P	07 18 04.8	+0.7
GUN	Gumba	51.39	316	eP	P	07 18 07.7	+0.8
	comp=Z,8.8nm,0.4s						
PKI	Pulchoki	51.50	315	eP	P	07 18 07.8	+0.1
	comp=Z,10nm,0.3s						
PKIN	Phulchoki	51.52	315	eP	P	07 18 08.1	+0.3
	comp=Z,12nm,0.3s						
CN2	Changchun	51.76	1	eP	P	07 18 12.3	+3.4
GKN	Gorkha	52.31	315	eP	P	07 18 14.1	+0.6
	comp=Z,24nm,0.2s						
USRK	Ussuriysk Ar.	52.65	7	P	P	07 18 15.4	-0.1
	comp=Z,3.7nm,0.7s,baz=182,slow=5.3,SNR=7.6						
KOLN	Koldanda	52.90	314	eP	P	07 18 18.5	+0.6
	comp=Z,7.0nm,0.2s						
DANN	Dangsing	53.13	315	eP	P	07 18 20.7	+1.0
PYUN	Piuthan	53.53	314	eP	P	07 18 23.4	+0.9
RPZ	Rata Peaks	54.14	139	P	P	07 18 27.3	+0.8
	comp=Z,6.5nm,0.6s,baz=259,slow=10,SNR=1.5						
URZ	Urewera	56.34	131	P	P	07 18 43.2	+0.9
	baz=198,slow=6.4						
URZ	Urewera	56.34	131	IAmb	IAmb	07 18 54.3	
	comp=Z,9.3nm,1.2s						
KLR	Kul'dur	57.59	6	P	P	07 18 50.4	-0.4
	comp=Z,0.6nm,0.3s,baz=196,slow=5.6,SNR=4.2						
SONM	Songino Array	57.90	346	P	P	07 18 52.5	-0.6
	comp=Z,0.9nm,0.6s,baz=148,slow=8.7,SNR=3.9						
CASY	Casey	58.73	186	P	P	07 18 59.4	+0.9
MKAR	Makanchi Array	66.07	330	P	P	07 19 47.8	+0.2
	comp=Z,0.6nm,0.4s,baz=129,slow=5.4,SNR=11						
PETK	Petropavlovsk-	67.47	21	P	P	07 19 56.8	+0.5
	comp=Z,2.5nm,0.6s,baz=180,slow=10.0,SNR=5.6						
VNDA	Vanda	72.06	172	P	P	07 20 22.9	-1.1
SEY	Seymchan	74.20	13	P	P	07 20 36.7	0.0
	comp=Z,4.4nm,0.6s,baz=211,slow=4.8,SNR=21						
ILAR	Eielson Array	97.00	26	P	P	07 22 29.0	-2.1
	comp=Z,0.1nm,0.7s,baz=258,slow=4.5,SNR=3.0						
ILAR	Eielson Array	97.00	26	P	P	07 22 29.0	-2.1
PDAR	Pinedale Array	121.97	44	PKP	PKPdf	07 27 52.7	-1.3
	comp=Z,0.1nm,0.5s,baz=214,slow=0.3,SNR=3.0						
TORD	Torodi Ar. Bea	123.11	280	PKP	PKPdf	07 27 55.2	-1.4
	comp=Z,0.3nm,0.6s,baz=25,slow=0.6,SNR=2.1						
TXAR	Lajitas Array	130.69	58	PKP	PKPdf	07 28 10.7	-0.2
	comp=Z,0.2nm,0.6s,baz=214,slow=6.2,SNR=2.1						
CPUP	Villa Florida	145.67	178	PKPbc	PKPbc	07 28 39.7	+1.0
	comp=Z,2.8nm,0.9s,baz=136,slow=7.0,SNR=3.7						

BJI 04 07:09:41.9±0.0, **31°.93N**×**104°.48E**, **h16**km, **ML3.5**/15, **Sichuan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.19	211	Pg	Pn	07 10 02.2	-1.7
CD2				Sg	Sg	07 10 21.7	+1.3
CD2				smax	smax		
	comp=N,2μm,0.8s						
CD2				smax	smax		
	comp=E,1μm,0.7s						
LZH	Lanzhou	4.18	353	ePg	Pb	07 10 58.4	+3.2
LZH				smax	smax		
	comp=N,96nm,1.0s						
LZH				smax	smax		
	comp=E,100nm,0.9s						
XAN	Xi'an	4.28	59	Pn	Pn	07 10 44.3	-2.2
XAN				Pg	Pb	07 10 56.6	-0.3
XAN				Sn	Sn	07 11 33.7	-2.5
XAN				Sg	Sb	07 11 47.2	-1.2
XAN				smax	smax		
	comp=N,150nm,0.8s						
XAN				smax	smax		
	comp=E,110nm,0.7s						
GYA	Guiyang	5.78	160	ePn	Pn	07 11 05.9	-1.2
GYA				Sn	Sn	07 12 17.8	+4.7
GYA				smax	smax		
	comp=N,60nm,0.7s						
GYA				smax	smax		
	comp=E,60nm,0.9s						
WHN	Wuhan	8.56	97	P	Pn	07 11 35.2	-10
WMQ	Urumqi	17.75	317	eP	Pn	07 13 47.7	-0.7

*NIED **04** 07:10:00, 38°.90N×141°.90E, h47km, Mw3.8 Best double couple: M₀5.37000×10¹⁴ NP1:φs14.00000°, δ69.00000°, λ93.00000°. NP2:φs187.00000°, δ21.00000°, λ83.00000°.*

*NEIC **04** 07:10:55.9±0.9, 38°.90N±0°.06×141°.98E±0°.03, h62km±8km, mb4.2/15, Error ellipse: s-maj=9.5km s-min=1.8km az=166.0*

*JMA **04** 07:10:55.3±0.1, 38°.92N×141°.93E, h51km±1km, M3.9*

JMA Felt II J1.

*IDC **04** 07:10:56.7±2.4, 38°.93N×142°.00E, h68km±19km, mb3.6/12, mb1 3.7/16, mb1mx3.5/52, mbtmp3.9/16, MS2.4/5, Ms1 2.4/5, ms1mx2.3/40, Error ellipse: s-maj=25.6km s-min=14.8km az=109.0*

ISC 04 07:10:54.9±1.0, **38°.89N**±0°.05×**141°.97E**±0°.09, **h53**km±7km, **n54**, σ**1.25**/62, **mb4.1**/21, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.30	309	P	Pn	07 11 04.3	+0.1
OFUJ				S	Sn	07 11 10.5	-0.4
JKMT	Kesennumamotoy	0.39	258	P	Pn	07 11 05.2	+0.1
JKMT				S	Sn	07 11 11.9	-0.5
JMK	Ichinoseki	0.58	276	P	Pn	07 11 07.3	0.0
JMK				S	Sn	07 11 15.8	-0.4
JIO	Ouri	0.65	228	P	Pn	07 11 08.2	+0.1
JIO				S	Sn	07 11 17.0	-0.6
JOM	Ohasama	0.78	318	P	Pn	07 11 09.8	0.0
JOM				S	Sn	07 11 20.3	-0.3
JOU	Okura	1.15	243	P	Pn	07 11 14.7	+0.1
JOU				S	Sn	07 11 29.2	-0.1
JRG	Rokugo	1.15	296	P	Pn	07 11 14.6	-0.1
JRG				eS	Sn	07 11 29.0	-0.4
JYK	Kaneyama	1.25	272	P	Pn	07 11 16.2	+0.2
JMM	Marumori	1.38	222	P	Pn	07 11 17.6	-0.1
JMM				S	Sn	07 11 34.4	-0.4
JANG	Nango	1.52	347	P	Pn	07 11 19.3	-0.4
ERM	Erimo	3.25	16	Pn	Pn	07 11 44.0	+0.7
ERM				Sn	Sn	07 12 21.5	+0.8
MAJO	Matsushiro	3.79	233		Pn	07 11 52.2	+1.4
MAT	Matsushiro	3.79	233	P	Pn	07 11 52.7	+1.9
MAT				S	Sn	07 12 34.7	+0.6
MJAR	Matsushiro Arr	3.79	233	P	Pn	07 11 53.1	+2.3
	0.9nm,0.3s,baz=38,slow=13,SNR=54						
MJAR				LR	LR	07 13 32.7	
	comp=Z,43nm,21.8s,baz=45,slow=41						
MJB9	Matsu-Tunnel	3.79	233		Pn	07 11 52.1	+1.3
ASAJ	Asahikawa	5.24	5	P	Pn	07 12 11.0	+0.4
	1.4nm,0.3s,baz=218,slow=13,SNR=7.7						
ASAJ				S	Sn	07 13 11.8	+2.1
	1.3nm,0.3s,baz=113,slow=31,SNR=1.6						
JKA	Kamikawa-asahi	5.24	5		Pn	07 12 11.0	+0.4
JKA					Sn	07 13 11.8	+2.1
INU	Inuyama	5.30	230		Pn	07 12 11.0	-0.5
JHJ2	Mitsune	6.02	197	Pn	Pn	07 12 23.0	+1.6
JHJ2				Sn	Sn	07 13 28.4	-0.6
USA0B	Ussuriysk Arra	9.17	309		Pn	07 13 04.9	+0.5
USRK	Ussuriysk Ar.	9.17	309	P	Pn	07 13 05.5	+1.2
	baz=117,slow=14,SNR=13						
USRK				LR	LR	07 16 18.2	
	comp=Z,54nm,19.5s,baz=58,slow=35						
JNU	Nakatsue	10.66	241	LR	LR	07 18 12.8	
	comp=Z,14nm,20.9s,baz=25,slow=41						
KSRS	Korea Array	11.15	267	P	Pn	07 13 35.2	+3.8
	0.2nm,0.3s,baz=76,slow=14,SNR=2.2						
KSRS				LR	LR	07 17 37.8	
	comp=Z,16nm,19.7s,baz=125,slow=36						
KLR	Kul'dur	12.67	328	LR	LR	07 18 42.9	
	comp=Z,24nm,20.1s,baz=156,slow=37						
ULN	Ulaanbaatar	26.72	301	P	P	07 16 22.8	-6.5
ULN				IAmb	IAmb	07 16 23.8	
	comp=Z,5.1nm,0.9s						
XAN	Xi'an	26.92	270	P	P	07 16 31.4	+0.3
XAN				IAmb	IAmb	07 16 44.1	
	comp=Z,4.7nm,0.6s						
ENH	Enshi	27.97	262	P	P	07 16 40.6	+0.1
H11N2	WAKE ISLAND Hy	28.78	124	T	T	07 47 18.4	
	baz=317,slow=75,SNR=103						
H11N1	WAKE ISLAND Hy	28.79	124	T	T	07 47 22.7	
	baz=317,slow=75,SNR=93						
H11N3	WAKE ISLAND Hy	28.80	124	T	T	07 47 15.8	
	baz=317,slow=75,SNR=66						
ZAA0	Zalesovo Array	41.01	311	P	P	07 18 32.4	-0.2
ZAA0				IAmb	IAmb	07 18 33.7	
	comp=Z,2.6nm,0.8s						
ZALV	Zalesovo Beam	41.01	311	P	P	07 18 32.8	+0.2
	comp=Z,2.6nm,0.6s,baz=89,slow=8.7,SNR=7.6						
SDPT	Sand Point	41.20	47	P	P	07 18 34.1	0.0
MK31	Makanchi Array	43.53	301	P	P	07 18 53.7	+0.5
MK31				IAmb	IAmb	07 18 54.2	
	comp=Z,3.1nm,0.8s						
MKAR	Makanchi Array	43.53	301	P	P	07 18 53.5	+0.3
	comp=Z,3.2nm,0.7s,baz=86,slow=10,SNR=16						
MAKZ	Makanchi	43.73	301	P	P	07 18 55.3	+0.5
MAKZ				IAmb	IAmb	07 18 55.9	
	comp=Z,3.6nm,0.8s						
KURK	Kurchatov	45.15	307	P	P	07 19 06.3	+0.2
KURK				IAmb	IAmb	07 19 07.3	
	comp=Z,4.6nm,0.8s						
ILAR	Eielson Array	47.70	33	P	P	07 19 25.3	-0.5
	comp=Z,0.3nm,0.7s,baz=262,slow=6.3,SNR=2.5						
BRVK	Borovoye	49.72	311	P	P	07 19 41.7	+0.3
BRVK				IAmb	IAmb	07 20 00.3	
	comp=Z,4.2nm,1.2s						
AAK	Ala-Archa	50.01	297	P	P	07 19 44.4	+0.4
INK	Inuvik	52.54	28	P	P	07 20 02.8	+0.4
	comp=Z,0.6nm,0.7s,baz=293,slow=3.5,SNR=3.9						
INK	Inuvik	52.54	28	P	P	07 20 02.3	-0.1
KK31	Karatay Array	52.59	299	P	P	07 20 03.1	0.0
KK31				IAmb	IAmb	07 20 22.5	
	comp=Z,2.4nm,0.9s						
KKAR	Karatay Array	52.59	299	P	P	07 20 03.3	+0.1
KKAR				IAmb	IAmb	07 20 22.5	
	comp=Z,2.4nm,0.9s						
ARU	Arti	55.27	318	P	P	07 20 22.3	-0.2
	comp=Z,0.9nm,0.3s,baz=90,slow=1.0,SNR=4.7						
ARU	Arti	55.27	318	P	P	07 20 21.9	-0.6
WRA	Warramunga Arr	58.96	188	P	P	07 20 48.9	0.0
	comp=Z,0.4nm,0.4s,baz=9.3,slow=4.8,SNR=2.4						
ASAR	Alice Springs	62.69	188	P	P	07 21 14.7	+0.5
	comp=Z,0.5nm,0.5s,baz=338,slow=2.3,SNR=2.9						
FINES	FINESS Array B	67.38	332	P	P	07 21 43.6	-0.5
	comp=Z,2.1nm,0.7s,baz=33,slow=11,SNR=8.1						
NOA	NORSAR Array B	72.64	337	P	P	07 22 16.8	+0.2
	comp=Z,0.4nm,0.6s,baz=38,slow=6.0,SNR=2.4						
AKASG	Malin Array Be	73.10	322	P	P	07 22 19.0	-0.3
	comp=Z,0.5nm,0.4s,baz=44,slow=6.0,SNR=2.5						
BUR08	Bucovina Ar. S	77.11	322	P	P	07 22 43.9	+1.2
BRTR	Keskin Array B	77.95	312	P	P	07 22 48.0	+0.4
	comp=Z,0.4nm,0.4s,baz=110,slow=3.3,SNR=4.7						
GERES	GERESS Array B	81.36	328	P	P	07 23 06.0	+0.2
	comp=Z,0.2nm,0.5s,baz=60,slow=6.0,SNR=2.3						

WEL 04 07:46:58.7, **41°S**±1°×**17°5E**±°, **h42**km±3km, **M3.2**/13, **ML3.5**/13, **MLv3.2**/13, **Error ellipse: s-maj=0.0km s-min=0.0km az=95.4**, **Cook Strait**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KIW	Kapiti Island	0.16	114	P	Pn	07 47 06.1	+0.2
KIW				S	Sn	07 47 11.4	+0.4
OGWZ	Otaki Gorge	0.35	94	P	Pn	07 47 07.9	+0.3
OGWZ				S	Sn	07 47 14.5	+0.6
CAW	Cannon Point	0.41	139	P	Pn	07 47 08.8	+0.4
CAW				S	Sn	07 47 16.3	+1.1
WEL	Wellington	0.49	175	P	Pn	07 47 10.0	+0.6
TCW	Tory Channel	0.53	218	P	Pn	07 47 10.2	+0.3
TCW				S	Sn	07 47 18.8	+1.0
DUWZ	D'Urville Isla	0.60	269	P	Pn	07 47 11.0	+0.1
HOWZ	Holdsworth Sta	0.62	100	P	Pn	07 47 11.5	+0.4
BHW	Baring Head	0.62	169	P	Pn	07 47 11.6	+0.5
BHW				S	Sn	07 47 21.2	+1.2
MRZ	Mangatainoka R	0.67	79	P	Pn	07 47 11.9	+0.1
MTW	Mount Morrison	0.70	121	P	Pn	07 47 12.2	0.0
MSWZ	Moikau Station	0.74	147	P	Pn	07 47 13.0	+0.2
OHWZ	Ohakea	0.75	38	P	Pn	07 47 13.3	+0.5
PAWZ	Paruwai Farm	0.80	138	P	Pn	07 47 13.6	0.0
TUWZ	Tuamarina	0.86	222	P	Pn	07 47 15.0	+0.7
PLWZ	Palliser	0.87	152	P	Pn	07 47 14.6	-0.1
TIWZ	Tintock	0.89	89	P	Pn	07 47 14.6	-0.2
POWZ	Post Office Ro	0.90	64	P	Pn	07 47 14.7	-0.2
TMWZ	Te Maipa	0.94	110	P	Pn	07 47 15.8	+0.2
TRWZ	Traveller	0.95	130	P	Pn	07 47 15.3	-0.3
PRWZ	Pori Road	0.99	76	P	Pn	07 47 16.0	-0.1
CMWZ	Cape Campbell	1.02	201	P	Pn	07 47 18.7	+2.1
WAZ	Wanganui	1.06	11	P	Pn	07 47 17.8	+0.6
NNZ	Nelson	1.09	247	P	Pn	07 47 18.4	+0.9
BSWZ	Blackbirch Sta	1.11	214	P	Pn	07 47 18.8	+0.9
CPWZ	Castlepoint	1.14	96	P	Pn	07 47 18.5	+0.4
BFZ	Birch Farm	1.17	85	P	Pn	07 47 17.9	-0.7
TSZ	Takapari Road	1.20	53	P	Pn	07 47 18.8	-0.3
DVHZ	Dannevirke	1.21	66	P	Pn	07 47 18.4	-0.8
LREZ	Lake Rotokare	1.35	350	P	Pn	07 47 21.9	+0.8
ANWZ	Angora Road	1.38	77	P	Pn	07 47 20.9	-0.6
PNHZ	Pukenui	1.44	53	P	Pn	07 47 21.6	-0.8
WPHZ	Waipukurau	1.51	62	P	Pn	07 47 25.3	+2.0
PREZ	Palmer Road	1.51	343	P	Pn	07 47 24.6	+1.2
NMEZ	Namu Road	1.52	335	P	Pn	07 47 24.8	+1.4
MTVZ	Mangateitei	1.52	23	P	Pn	07 47 24.2	+0.7
PRHZ	Porangahau	1.56	71	P	Pn	07 47 23.5	-0.4
PKVZ	Pokaka	1.58	18	P	Pn	07 47 25.0	+0.7
KHEZ	Kahui Hut	1.59	340	P	Pn	07 47 25.6	+1.2
MOVZ	Moawhango	1.60	30	P	Pn	07 47 24.4	-0.1
TRVZ	Turoa	1.63	23	P	Pn	07 47 25.8	+0.7
DREZ	Durham Road	1.65	346	P	Pn	07 47 26.6	+1.4
DRZ	Dome Shelter	1.65	24	P	Pn	07 47 26.7	+1.1
WHVZ	Whangaehu Hut	1.65	24	P	Pn	07 47 26.2	+0.7
NBEZ	Newall Road No	1.66	337	P	Pn	07 47 26.4	+1.2
QRZ	Quartz Range	1.66	268	P	Pn	07 47 25.7	+0.4
BHHZ	Black Hill Sta	1.67	39	P	Pn	07 47 25.3	-0.2
FWVZ	Far West T-bar	1.67	23	P	Pn	07 47 26.2	+0.5
THZ	Tophouse	1.67	234	P	Pn	07 47 26.3	+0.7
VRZ	Vera Road	1.67	1	P	Pn	07 47 26.1	+0.7
TUVZ	Tukino	1.69	26	P	Pn	07 47 26.6	+0.7
PKE	Pukeiti	1.69	341	P	Pn	07 47 27.0	+1.2
KRHZ	Kereru	1.71	48	P	Pn	07 47 25.4	-0.7
MHEZ	Mangahewa	1.74	350	P	Pn	07 47 27.9	+1.5
NGZ	Ngauruhoe	1.76	23	P	Pn	07 47 27.7	+0.9
WTVZ	West Tongariro	1.81	22	P	Pn	07 47 28.1	+0.7
TWVZ	Taurewa	1.81	18	P	Pn	07 47 28.1	+0.6
KHZ	Kahutara	1.84	208	P	Pn	07 47 28.0	+0.2
KRVZ	Karewarewa	1.84	23	P	Pn	07 47 28.8	+0.8
KWHZ	Kaweka Forest	1.90	44	P	Pn	07 47 28.1	-0.5
KAHZ	Kahuranaki	1.93	60	P	Pn	07 47 28.0	-1.1
KATZ	Kakaramea	1.97	23	P	Pn	07 47 31.4	+1.7
RITZ	Rihia Road	2.02	26	P	Pn	07 47 32.7	+2.4
MCHZ	McNeill Hill	2.03	49	P	Pn	07 47 35.3	+4.9
RATZ	Rangitukua	2.09	23	P	Pn	07 47 32.6	+1.3
BKZ	Black Stump Fm	2.13	41	P	Pn	07 47 30.7	-1.0
WATZ	Wairara	2.23	21	P	Pn	07 47 35.5	+2.3
HIZ	Hauiti	2.28	3	P	Pn	07 47 35.0	+1.2
NMHZ	Naumai	2.34	44	P	Pn	07 47 33.9	-0.8
MRHZ	Matea Rd	2.36	34	P	Pn	07 47 33.7	-1.2
DSZ	Denniston Nort	2.39	246	P	Pn	07 47 35.8	+0.4
KUTZ	Kaahu Road	2.46	21	P	Pn	07 47 40.1	+3.7
GVZ	Greta Valley S	2.51	209	P	Pn	07 47 36.5	-0.5
MTHZ	Maungataniwha	2.54	41	P	Pn	07 47 36.4	-1.1
TLZ	Tolley Road	2.54	15	P	Pn	07 47 37.6	+0.1
ALRZ	Allen Road	2.56	30	P	Pn	07 47 40.4	+2.7
RAHZ	Arahi	2.62	45	P	Pn	07 47 45.0	+6.5
PRRZ	Plateau Road	2.63	30	P	Pn	07 47 41.4	+2.7
LTZ	Lake Taylor	2.70	222	P	Pn	07 47 39.4	-0.2
RTZ	Ruatahuna	2.79	40	P	Pn	07 47 39.2	-1.7
INZ	Inchbonnie	3.11	231	P	Pn	07 47 44.9	-0.3
TOZ	Tahuroa Road	3.12	12	P	Pn	07 47 45.7	+0.3
URZ	Urewera	3.14	37	P	Pn	07 47 49.3	+3.7
OKCZ	Okains Bay	3.17	202	P	Pn	07 47 44.9	-1.2
OXZ	Oxford	3.22	217	P	Pn	07 47 45.1	-1.7
MWZ	Matawai	3.28	42	P	Pn	07 47 45.1	-2.5
MQZ	McQueen's Vall	3.29	207	P	Pn	07 47 45.4	-2.2
AKCZ	Akaroa Harbour	3.35	203	P	Pn	07 47 47.4	-1.2
WHRZ	Whale Island	3.42	32	P	Pn	07 47 47.3	-2.2
RUGZ	Raukumara Rang	3.64	40	P	Pn	07 47 51.0	-1.7
MKAZ	Moumakai	3.70	6	P	Pn	07 47 53.8	+0.4
AWAZ	Awhitu Peninsu	3.73	359	P	Pn	07 47 54.6	+0.9
WVZ	Waitaha Valley	3.74	231	P	Pn	07 47 53.7	-0.1
ETAZ	East Tamaki Re	3.84	3	P	Pn	07 47 56.3	+1.0
HAZ	Te Kaha	3.86	39	P	Pn	07 47 57.5	+2.0
ODZ	Otahua Downs	5.19	214	P	Pn	07 48 11.5	-2.3
WKZ	Wanaka	5.81	224	P	Pn	07 48 25.1	+2.8

*NEIC **04** 07:48:48.2±2.1, 15°.86N±0°.04×98°.15W±0°.04, h15km±6km, Error ellipse: s-maj=6.5km s-min=4.1km az=53.0*

*MEX **04** 07:48:50.7±0.8, 15°.90N×98°.24W, h14km±39km, MD4.0*

ISC 04 07:48:48.4±2.2, **15°.86N**±0°.08×**98°.21W**±0°.07, **h23**km±13km, **n18**, σ**1.01**/33, **Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.53	8		Pb	07 48 58.8	-0.5
PNIG					Sb	07 49 05.7	-0.8
PNIG	Pinotepa	0.53	8	*i* P	Pb	07 48 58.8	-0.5
PNIG				*e*S	Sb	07 49 05.7	-0.8
PEIG	Puerto Escondi	1.03	82	*i* P	Pn	07 49 07.0	-0.5
PEIG				*i* S	Sb	07 49 20.4	-0.3
TXIG	Tlaxiaco	1.45	17	*e*P	Pn	07 49 13.0	-0.5
TXIG				*e*S	Sn	07 49 31.0	-1.0
TLIG	Tlapa	1.73	349		Pn	07 49 17.2	0.0
TLIG				Sn	Sb	07 49 42.5	+1.6
VHO	Vista Hermosa	1.86	49	*i* P	Pn	07 49 19.2	+0.1
VHO				*e*S	Sn	07 49 41.6	-0.4
HLIG	Huajuapan de L	2.00	11	*e*P	Pn	07 49 20.6	-0.4
HLIG				*e*S	Sn	07 49 44.6	-0.8
HUIG	Huatulco	2.02	92		Pn	07 49 21.8	+0.6
HUIG					Sn	07 49 42.7	-3.1
HUIG	Huatulco	2.02	92	*i* P	Pn	07 49 21.8	+0.6
HUIG				*i* S	Sn	07 49 46.7	+0.9
FTIG	Fresnillo de T	2.04	2	*e*P	Pn	07 49 21.9	+0.4
FTIG				*i* S	Sn	07 49 45.0	-1.3
TOIG	Toxpalan	2.48	26	*i* P	Pn	07 49 28.3	+0.8
TOIG				*i* S	Sn	07 49 56.6	-0.5
TPIG	Tehuac#an	2.67	18		Pn	07 49 31.3	+1.0
TPIG					Sn	07 50 02.4	+0.4
TPIG	Tehuac#an	2.67	18	*e*P	Pn	07 49 30.2	0.0
TPIG				*i* S	Sn	07 50 01.6	-0.4
CMIG	Matias Romero	3.41	69		Pn	07 49 40.6	+0.2
CMIG					Sb	07 50 28.4	-1.0
CMIG	Matias Romero	3.41	69	*e*P	Pn	07 49 40.6	+0.2
CMIG				*i* S	Sn	07 50 20.7	+0.6
UNM	Universidad Na	3.57	345	Pn	Pn	07 49 42.5	-0.2
LVIG	Laguna Verde	4.20	24		Pb	07 50 04.2	+2.5
B06A	Marblemount	37.75	335	P	P	07 56 02.4	-0.1

*IDC **04** 08:15:27.4±0.7, 8.°11N×38.°11W, h0km, mb3.9/19, mb1 4.1/20, mb1mx4.0/37, mbtmp3.9/20, ML4.0/1, MS3.6/27, Ms1 3.6/27, ms1mx3.5/34, Error ellipse: s-maj=23.1km s-min=14.5km az=142.0*

*NEIC **04** 08:15:28.5±1.4, 7.°92N±0.°03×38.°0W±0.°1, h10km±1km, mb4.6/46, Error ellipse: s-maj=19.1km s-min=5.9km az=91.0*

ISC 04 08:15:28.6±0.5**, 7.°93N**±0.°07×**37.°99W**±0.°08**, h10km, n83, σ0s.99**/68**, mb4.5**/38**, MS3.5**/25**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	13.82	171	Pn	Pn	08 18 47.6	+2.8
	0.7nm,0.3s,baz=338,slow=10,SNR=7.8						
RCBR				Sn	Sn	08 21 14.9	-3.6
	0.4nm,0.3s,baz=20,slow=21,SNR=1.0						
RCBR				LR	LR	08 22 49.9	
	comp=Z,112nm,20.1s,baz=322,slow=32						
RCBR	Riachuelo	13.82	171		Pn	08 18 44.5	-0.3
MDP	Montagnes des	14.83	260	LR	LR	08 23 40.4	
	comp=Z,397nm,21.0s,baz=82,slow=33						
SVB	Belmont	23.47	285	P	P	08 20 39.3	+0.7
PTGA	Pitinga	23.55	250	P	P	08 20 39.2	-0.2
	3.3nm,0.9s,baz=82,slow=14,SNR=4.4						
PTGA				LR	LR	08 30 11.6	
	comp=Z,87nm,18.6s,baz=62,slow=38						
GRGR	Grenville	23.67	282	P	P	08 20 38.8	-1.8
BDFB	Brasilia	25.44	203	P	P	08 20 58.4	+1.5
	3.4nm,0.9s,baz=18,slow=7.5,SNR=3.5						
BDFB				LR	LR	08 30 30.6	
	comp=Z,92nm,19.8s,baz=345,slow=35						
BDFB	Brasilia	25.44	203	P	P	08 20 57.0	+0.2
H10N3	ASCENSION HYDR	28.17	123	T	T	08 51 01.5	
	baz=304,slow=75,SNR=147						
H10N2	ASCENSION HYDR	28.17	123	T	T	08 51 01.9	
	baz=304,slow=75,SNR=158						
H10N1	ASCENSION HYDR	28.19	123	T	T	08 51 03.1	
	baz=304,slow=75,SNR=211						
SJG	San Juan	29.20	293	LR	LR	08 30 39.2	
	comp=Z,245nm,20.9s,baz=95,slow=31						
SAML	Samuel	30.19	237	P	P	08 21 40.3	+0.9
PCDR	Punta Cana, DR	31.35	293	P	P	08 21 50.0	+0.3
CMLA	Cha da Macela	31.77	19	P	P	08 21 52.4	-0.8
SDV	Santo Domingo	32.31	274	P	P	08 21 59.1	+0.8
DBIC	Dimbokro	32.88	90	LR	LR	08 33 09.6	
	comp=Z,195nm,20.2s,baz=238,slow=32						
SIV	San Ignacio	32.98	224	P	P	08 22 04.2	+0.3
	0.3nm,0.3s,baz=79,slow=13,SNR=1.8						
SIV				LR	LR	08 35 08.4	
	comp=Z,195nm,18.4s,baz=74,slow=36						
PAPH	Port-au-Prince	34.96	291	P	P	08 22 20.8	-0.4
ROSC	El Rosal	36.23	267	LR	LR	08 37 12.0	
	comp=Z,191nm,19.0s,baz=54,slow=36						
LPAZ	La Paz	38.33	231	P	P	08 22 50.9	+0.3
	3.3nm,1.1s,baz=49,slow=8.9,SNR=6.1						
LPAZ				LR	LR	08 39 19.4	
	comp=Z,78nm,18.6s,baz=50,slow=37						
LPAZ	La Paz	38.33	231	P	P	08 22 51.6	+1.0
LPAZ	La Paz	38.33	231		sP	08 22 52.9	-0.3
CPUP	Villa Florida	38.89	208	LR	LR	08 39 24.2	
	comp=Z,137nm,18.0s,baz=33,slow=37						
CPUP	Villa Florida	38.89	208	P	P	08 22 54.7	+0.2
TOA0	Torodi Ar. Sit	39.32	79	P	P	08 22 57.7	-0.6
TOA0				IAmb	IAmb	08 23 08.6	
	comp=Z,16nm,1.4s						
TORD	Torodi Ar. Bea	39.32	79	P	P	08 22 58.4	+0.1
	comp=Z,3.3nm,0.8s,baz=274,slow=9.7,SNR=15						
TORD				LR	LR	08 37 27.7	
	comp=Z,303nm,19.5s,baz=265,slow=34						
PB01	IPOC Station P	42.27	227	P	P	08 23 24.0	+1.4
PB01				IAmb	IAmb	08 23 25.1	
	comp=Z,16nm,1.5s						
LVC	Limon Verde	42.88	224	LR	LR	08 41 49.8	
	comp=Z,61nm,18.3s,baz=27,slow=37						
NNA	Nana	43.41	243	LR	LR	08 41 59.2	
	comp=Z,173nm,20.0s,baz=67,slow=37						
ESDC	Sonseca Array	43.88	39	P	P	08 23 35.7	+0.2
	comp=Z,0.7nm,1.0s,baz=263,slow=7.2,SNR=4.1						
ESDC				LR	LR	08 39 37.5	
	comp=Z,95nm,18.7s,baz=255,slow=33						
T59A	Double "B" Far	46.09	315	P	P	08 23 53.3	+0.4
T59A				IAmb	IAmb	08 24 04.2	
	comp=Z,14nm,1.5s						
CBN	Corbin Frederi	46.56	316	P	P	08 23 56.2	-0.4
CBN				IAmb	IAmb	08 24 02.7	
	comp=Z,8.9nm,1.1s						
S51A	Beattyville	50.70	313	P	P	08 24 29.3	+0.8
S51A				IAmb	IAmb	08 24 40.0	
	comp=Z,7.7nm,1.4s						
SCHQ	Schefferville	52.14	339	LR	LR	08 43 53.2	
	comp=Z,34nm,20.8s,baz=355,slow=33						
S44A	Carbondale	54.90	311	P	P	08 24 59.9	+0.3
S44A				IAmb	IAmb	08 25 01.4	
	comp=Z,3.9nm,0.8s						
GNAR	Gosnell	54.94	309	P	P	08 24 59.3	-0.6
BFO	Black Forest	56.04	36	P	P	08 25 07.4	-0.3
BFO				IAmb	IAmb	08 25 17.1	
	comp=Z,13nm,1.3s						
I42A	Draeger Farm,	56.90	318	P	P	08 25 14.6	+0.8
I42A				IAmb	IAmb	08 25 15.1	
	comp=Z,8.9nm,1.1s						
PLCA	Paso Flores	56.95	209	LR	LR	08 50 42.0	
	comp=Z,91nm,18.5s,baz=22,slow=37						
R40A	Maddies Statio	57.34	311	P	P	08 25 16.7	-0.4
R40A				IAmb	IAmb	08 25 19.3	
	comp=Z,7.5nm,1.4s						
GERES	GERESS Array B	59.43	37	P	P	08 25 30.3	-1.3
	comp=Z,0.2nm,0.4s,baz=219,slow=4.5,SNR=2.3						
GERES				LR	LR	08 48 24.9	
	comp=Z,22nm,20.6s,baz=275,slow=33						
TUL1	Leonard	59.44	307	P	P	08 25 32.5	+0.7
TUL1				IAmb	IAmb	08 25 40.2	
	comp=Z,3.9nm,0.8s						
I37A	Lemond, Waseca	59.96	317	P	P	08 25 34.9	-0.4
I37A				IAmb	IAmb	08 25 50.1	
	comp=Z,11nm,1.2s						
SPMN	Marine on St.	59.98	318	P	P	08 25 35.7	+0.4
WHTX	Lake Whitney,	60.01	302	P	P	08 25 36.2	+0.4
WHTX				IAmb	IAmb	08 25 37.9	
	comp=Z,3.5nm,0.7s						
F36A	Milaca	60.68	319	P	P	08 25 39.9	-0.2
F36A				IAmb	IAmb	08 25 47.6	
	comp=Z,4.4nm,1.2s						
ECSD	EROS Data Cent	62.08	316	P	P	08 25 49.4	-0.3
BGNE	Belgrade	62.55	313	P	P	08 25 52.5	-0.3
ULM	Lac du Bonnet	63.70	323	P	P	08 25 58.2	-2.1
	comp=Z,2.6nm,0.6s,baz=116,slow=7.3,SNR=8.4						
ULM				LR	LR	08 49 13.5	
	comp=Z,37nm,21.6s,baz=118,slow=32						
ULM	Lac du Bonnet	63.70	323	P	P	08 25 59.8	-0.5
ULM				IAmb	IAmb	08 26 00.4	
	comp=Z,5.6nm,0.9s						
NB2	NORSAR Subarra	64.23	24	P	P	08 26 04.9	+1.3
	comp=Z,2.8nm,0.9s,baz=229,slow=6.5						
NOA	NORSAR Array B	64.23	24	P	P	08 26 02.7	-0.9
	comp=Z,1.0nm,0.7s,baz=237,slow=6.5,SNR=4.4						
NOA				LR	LR	08 48 53.6	
	comp=Z,22nm,21.8s,baz=240,slow=31						
TXAR	Lajitas Array	64.98	299	P	P	08 26 08.7	-0.5
	comp=Z,0.2nm,0.5s,baz=99,slow=6.3,SNR=5.6						
TXAR				LR	LR	08 54 19.3	
	comp=Z,15nm,20.7s,baz=0.0,slow=36						
TX31	Lajitas Ar. Si	64.98	299	P	P	08 26 07.9	-1.3
ISCO	Idaho Springs	67.80	310	P	P	08 26 27.3	-0.1
ANMO	Albuquerque	67.87	304	P	P	08 26 26.4	-1.4
DGMT	Dagmar	68.40	319	P	P	08 26 30.9	+0.3
FFC	Flin Flon	68.68	326	P	P	08 26 32.5	+0.3
AKASG	Malin Array Be	69.53	39	P	P	08 26 37.4	-0.1
	comp=Z,0.8nm,0.6s,baz=261,slow=6.3,SNR=4.0						
AKASG				LR	LR	08 54 56.9	
	comp=Z,28nm,20.9s,baz=270,slow=34						
FINES	FINESS Array B	70.83	27	P	P	08 26 45.8	+0.5
	comp=Z,3.6nm,1.1s,baz=246,slow=9.6,SNR=3.7						
FINES				LR	LR	08 54 19.6	
	comp=Z,27nm,21.3s,baz=186,slow=33						
BRTR	Keskin Array B	70.85	51	P	P	08 26 47.4	+1.3
	comp=Z,0.7nm,0.7s,baz=282,slow=6.2,SNR=3.6						
BRTR				LR	LR	08 59 59.1	
	comp=Z,13nm,18.5s,baz=214,slow=38						
BOSA	Boshof	70.92	124	LR	LR	08 51 45.1	
	comp=Z,92nm,20.6s,baz=233,slow=31						
PDAR	Pinedale Array	71.14	312	P	P	08 26 48.8	+0.9
	comp=Z,0.2nm,0.6s,baz=76,slow=3.8,SNR=2.2						
YMP	Mirror Lake Pl	71.80	314	P	P	08 26 51.9	0.0
LKWY	Lake	71.96	314	P	P	08 26 52.0	-0.8
LKWY				IAmb	IAmb	08 26 57.0	
	comp=Z,4.6nm,1.2s						
TPAW	Teton Pass	72.23	313	P	P	08 26 55.0	+0.5
TPAW				IAmb	IAmb	08 27 03.4	
	comp=Z,8.4nm,1.2s						
IMW	Indian Meadow	72.27	313	P	P	08 26 54.4	-0.3
IMW				IAmb	IAmb	08 26 57.8	
	comp=Z,9.7nm,1.4s						
YHH	Holmes Hill	72.30	314	P	P	08 26 53.7	-1.2
FXWY	Fox Creek	72.30	313	P	P	08 26 54.8	-0.1
HWUT	Hardware Ranch	72.50	311	P	P	08 26 55.8	-0.2
HWUT				IAmb	IAmb	08 26 59.1	
	comp=Z,5.9nm,0.9s						
YHB	Horse Butte	72.54	314	P	P	08 26 55.8	-0.5
YHL	Hebgen Lake	72.54	314	P	P	08 26 56.2	-0.1
ARCES	ARCESS Array B	73.51	19	P	P	08 27 00.7	-0.5
	comp=Z,1.1nm,0.6s,baz=249,slow=5.1,SNR=9.9						
ARCES				LR	LR	08 57 24.1	
	comp=Z,12nm,18.5s,baz=332,slow=34						
BGU	Big Grassy Mou	73.55	310	P	P	08 27 01.5	-0.7
DLMT	Dillon	73.59	315	P	P	08 27 01.7	-0.6
DLMT				IAmb	IAmb	08 27 04.9	
	comp=Z,6.9nm,1.4s						
RES	Resolute Bay	73.99	347	P	P	08 27 04.6	+0.7
KMBO	Kilima Mbogo	75.54	93	LR	LR	08 58 35.2	
	comp=Z,52nm,19.2s,baz=272,slow=34						
YKA	Yellowknife Ar	76.83	332	P	P	08 27 19.4	-1.1
	comp=Z,1.2nm,0.7s,baz=103,slow=6.4,SNR=11						
YKA				LR	LR	09 00 12.6	
	comp=Z,31nm,18.6s,baz=0.0,slow=35						
NVAR	Mina Array Bea	77.55	308	P	P	08 27 24.4	-0.9
	comp=Z,0.1nm,0.3s,baz=79,slow=5.7,SNR=2.1						
KBZ	Khabaz	77.98	47	P	P	08 27 29.5	+2.2
	comp=Z,1.2nm,0.6s,baz=189,slow=4.1,SNR=4.8						
INK	Inuvik	84.74	338	IAmb	IAmb	08 28 05.0	
	comp=Z,2.2nm,0.7s						
ILAR	Eielson Array	90.79	336	P	P	08 28 32.0	+0.2
	comp=Z,0.6nm,0.8s,baz=46,slow=4.5,SNR=6.0						

*KRNET **04** 08:15:33.4±0.1, 43.°17N×78.°03E, h25km, mb2.3*

*NNC **04** 08:15:33.1±0.3, 43.°21N×78.°02E, h0km, mb2.1, mpv2.6, Error ellipse: s-maj=3.7km s-min=2.1km az=7.0*

*SOME **04** 08:15:33.2, 43.°25N×78.°02E, h5km*

ISC 04 08:15:33.0±1.0**, 43.°21N**±0.°02×**78.°04E**±0.°03**, h9km**±10km**, n25, σ0s.53**/50**, 10C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.31	119	*e*P	Pg	08 15 39.3	+0.1
	3.3nm,0.1s						
SATY				*e*S	Sg	08 15 43.9	+0.6
	78nm,0.1s						
SATY	Saty	0.31	119	P	Pg	08 15 39.3	+0.1
	3.3nm,0.1s						
SATY				S	Sg	08 15 43.9	+0.6
	78nm,0.1s						
ANVS	Anan'yevo	0.51	213	⇑*i*P	Pg	08 15 42.8	-0.1
	baz=15						
ANVS				⇑*i*S	Sg	08 15 50.2	+0.6
	baz=15						
KOTS	Kotyrbulak	0.68	272	*e*P	Pg	08 15 46.6	+0.5
	baz=76						
KOTS				*e*S	Sb	08 15 56.2	-0.4
	baz=76						
KOTS	Kotyrbulak	0.68	272	*e*P	Pg	08 15 46.6	+0.5
	6.6nm,0.2s						
KOTS				*e*S	Sb	08 15 56.2	-0.4
	9.4nm,0.3s						
KOTS	Kotyrbulak	0.68	272	P	Pg	08 15 46.6	+0.5
	6.6nm,0.2s						
KOTS				S	Sb	08 15 56.2	-0.4
	9.4nm,0.3s						
PRZ	Przheval'sk	0.77	160	⇑*i*P	Pg	08 15 47.3	-0.6
	baz=57						
PRZ				⇑*i*S	Sg	08 15 57.8	-0.2
	baz=57						
TNSS	Tian-Shan	0.82	258	*e*P	Pg	08 15 48.8	0.0
	baz=61						
TNSS				*e*S	Sb	08 16 00.2	-0.7
	baz=61						
TNSS	Tian-Shan	0.82	258	*e*P	Pg	08 15 48.8	0.0
	1.1nm,0.1s						
TNSS				*e*S	Sb	08 16 00.1	-0.7
	3.4nm,0.2s						
TNSS	Tian-Shan	0.82	258	P	Pg	08 15 48.8	0.0
	1.1nm,0.1s						
TNSS				S	Sb	08 16 00.1	-0.7
	3.4nm,0.2s						
MNBS	Baschi	0.91	17	*e*P	Pg	08 15 50.0	-0.4
	baz=23						
MNBS				*e*S	Sg	08 16 02.2	-0.1
	baz=23						
MNBS	Baschi	0.91	17	*e*P	Pg	08 15 50.0	-0.4
	3.0nm,0.2s						
MNBS				*e*S	Sg	08 16 02.2	-0.1
	8.5nm,0.2s						
MNBS	Baschi	0.91	17	P	Pg	08 15 50.0	-0.4
	3.0nm,0.2s						
MNBS				S	Sg	08 16 02.2	-0.1
	8.5nm,0.2s						
ARXS	Arharly	1.01	351	*e*P	Pg	08 15 52.0	-0.5
	3.1nm,0.2s						
ARXS				*e*S	Sg	08 16 05.5	-0.2
	2.8nm,0.1s						
KTBS	Karatobe	1.11	297	*e*P	Pg	08 15 53.8	-0.4
	0.7nm,0.1s						
KTBS				*e*S	Sg	08 16 08.7	0.0
	9.9nm,0.3s						
KTBS	Karatobe	1.11	297	P	Pg	08 15 53.8	-0.4
	0.7nm,0.1s						
KTBS				S	Sg	08 16 08.7	0.0
	9.9nm,0.3s						
KDJ	Kajisay	1.25	211	⇑*i*P	Pg	08 15 55.8	-1.2
	baz=11						
KDJ				⇑*i*S	Sg	08 16 11.8	-1.5
	baz=11						
KUU	Kurty	1.41	299	*e*P	Pn	08 15 58.9	0.0
	baz=1.0						
KUU				*e*S	Sb	08 16 17.4	-0.2
	baz=1.0						
KUU	Kurty	1.41	299	*e*P	Pn	08 15 58.9	0.0
	0.6nm,0.2s						
KUU				*e*S	Sb	08 16 17.4	-0.2
	3.8nm,0.2s						
KUU	Kurty	1.41	299	P	Pn	08 15 58.9	0.0
	0.6nm,0.2s						
KUU				S	Sb	08 16 17.4	-0.2
	3.8nm,0.2s						
ULHL	Ulahol	1.64	235	⇓*i*P	Pn	08 16 02.5	+0.4
	baz=36						
ULHL				⇓*i*S	Sn	08 16 23.7	+0.3
	baz=36						
BOOM	Boomskoye usch	1.70	246	⇑*i*P	Pn	08 16 03.7	+0.7
	baz=47						
BOOM				⇑*i*S	Sn	08 16 25.5	+0.5
	baz=47						
KRBS	Karabastau	1.79	287	*e*P	Pb	08 16 05.7	-0.3
	0.5nm,0.1s						
KRBS				*e*S	Sb	08 16 28.9	+0.4
	2.3nm,0.3s						
KRBS	Karabastau	1.79	287	P	Pb	08 16 05.7	-0.3
	0.5nm,0.1s						
KRBS				S	Sb	08 16 28.9	+0.4
	2.3nm,0.3s						
TKM2	Tokmak 2	1.81	262	⇑*i*P	Pn	08 16 05.3	+0.7
	baz=63						
TKM2				⇑*i*S	Sn	08 16 29.0	+1.2
	baz=63						

*IDC **04** 08:35:48.0±1.0, 55.°82S×27.°95W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/20, mbtmp4.1/3, Error ellipse: s-maj=42.3km s-min=29.4km az=86.0*

*NEIC **04** 08:35:52.3±1.0, 55.°5S±0.°2×28.°2W±0.°2, h17km±3km, mb4.4/10, Error ellipse: s-maj=24.6km s-min=15.1km az=209.0*

ISC 04 08:35:55.4±0.7**, 55.°6S**±0.°1×**28.°4W**±0.°1**, h45km, n32, σ1s.25**/31**, mb4.3**/7**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	4.85	283		Pn	08 37 05.6	-0.1
HOPE				Sn	Sn	08 37 59.6	-0.9
VNA1	Neumayer--Stat	17.44	157	P	P	08 39 58.5	+2.8
VNA3	Neumayer Olymp	17.62	160	P	P	08 39 58.8	+1.1
VNA2	Neumayer--Watz	17.84	157	P	P	08 40 01.3	+1.2
	baz=314,slow=13						
SNAA	Sanae	19.40	156	P	P	08 40 17.5	+0.1
SNAA	Sanae	19.40	156	P	P	08 40 17.4	+0.1
QSPA	South Pole Qui	34.62	180	P	P	08 42 40.6	+0.8
QSPA				IAmb	IAmb	08 42 43.2	
	comp=Z,2.8nm,0.6s						
GO05	Huala	36.10	286	P	P	08 42 52.6	-0.1
CO02	Combarbal	38.52	291	P	P	08 43 14.5	+1.2
CO02				IAmb	IAmb	08 43 33.6	
	comp=Z,16nm,1.4s						
VNDA	Vanda	46.95	183	P	P	08 44 18.2	-2.7
	comp=Z,1.0nm,0.4s,baz=202,slow=1.2,SNR=22						
VNDA	Vanda	46.95	183	P	P	08 44 18.4	-2.6
VNDA				IAmb	IAmb	08 44 19.8	
	comp=Z,2.5nm,0.8s						
GO01	Chusmiza	47.14	303	P	P	08 44 25.3	+1.7
GO01				IAmb	IAmb	08 44 33.2	
	comp=Z,5.2nm,1.0s						
MNMC	Minye Minye	47.79	303	P	P	08 44 29.7	+1.2
H10N1	ASCENSION HYDR	48.93	18	T	T	09 37 41.1	
	baz=190,slow=75,SNR=4.0						
H10N3	ASCENSION HYDR	48.93	18	T	T	09 37 48.1	
	baz=190,slow=75,SNR=9.7						
H10N2	ASCENSION HYDR	48.95	18	T	T	09 37 24.0	
	baz=190,slow=75,SNR=6.2						
LPAZ	La Paz	49.57	306	P	P	08 44 43.6	+1.1
	comp=Z,2.4nm,0.8s,baz=157,slow=5.8,SNR=11						
LPAZ	La Paz	49.57	306	P	P	08 44 43.9	+1.3
LPAZ				IAmb	IAmb	08 44 44.8	
	comp=Z,2.2nm,0.8s						
CASY	Casey	54.53	161	P	P	08 45 19.0	+1.0
CASY				IAmb	IAmb	08 45 30.1	
	comp=Z,4.3nm,1.2s						
TOA0	Torodi Ar. Sit	73.04	31	P	P	08 47 19.9	-0.5
TORD	Torodi Ar. Bea	73.04	31	P	P	08 47 19.6	-0.8
	comp=Z,1.1nm,0.5s,baz=199,slow=6.9,SNR=11						
YKA	Yellowknife Ar	135.40	319	PKP	PKPdf	08 55 06.8	-1.9
	comp=Z,0.4nm,0.8s,baz=132,slow=2.6,SNR=5.9						
INK	Inuvik	145.04	321		PKPdf	08 55 26.2	+0.3
DOT	Dot Lake	147.85	311		PKiKP	08 55 35.1	-0.7
RIDG	Independent Ri	148.21	311		PKiKP	08 55 36.2	-0.4
IL31		149.32	312		PKiKP	08 55 38.5	-0.1
ILAR	Eielson Array	149.32	312	PKPbc	PKiKP	08 55 38.0	-0.7
	comp=Z,2.0nm,0.8s,baz=124,slow=2.0,SNR=19						
RND	Reindeer	149.87	309		PKiKP	08 55 40.5	+0.5
MCK	McKinley	149.97	310		PKiKP	08 55 40.0	-0.2
MCK				PKPab	PKPab	08 55 45.9	+0.6
TOLK	Toolik Lake Re	150.92	320		PKiKP	08 55 42.3	+0.3
BPAW	Bear Paw Mtn.	150.94	310		PKiKP	08 55 42.2	+0.1
SONM	Songino Array	151.39	87	PKPbc	PKPbc	08 55 42.3	-1.0
	comp=Z,0.5nm,0.5s,baz=211,slow=3.0,SNR=3.9						

WEL 04 08:48:43.7±0.3**, 33°S**±3°×**18°0E**±°**, h33km, M3.9**/19**, mB4.5**/6**, ML4.3**/19**, MLv4.1**/19**, Mw(mB)3.7**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	4.51	192	P	Pn	08 49 50.5	+0.8
WMGZ				S	Sn	08 50 45.7	+4.7
HAZ	Te Kaha	4.59	199	P	Pn	08 49 51.0	+0.2
HAZ				S	Sn	08 50 45.5	+2.6
GLKZ	Green Lake	4.64	28	P	Pn	08 49 50.8	-0.7
GLKZ				S	Sn	08 50 44.9	+0.7
PKGZ	Pakihiroa	4.64	195	P	Pn	08 49 50.8	-0.8
PKGZ				S	Sn	08 50 45.1	+0.7
RIZ	Raoul Island	4.65	27	P	Pn	08 49 54.4	+2.7
PUZ	Puketiti	4.78	193	P	Pn	08 49 54.1	+0.7
PUZ				S	Sn	08 50 48.5	+0.7
RUGZ	Raukumara Rang	4.81	199	P	Pn	08 49 54.1	+0.1
RUGZ				S	Sn	08 50 49.2	+0.6
WCZ	Waipu Caves	5.03	238	P	Pn	08 49 57.7	+0.9
CNGZ	Carnagh Statio	5.19	192	P	Pn	08 50 01.1	+2.0
MWZ	Matawai	5.20	198	P	Pn	08 49 59.9	+0.7
MWZ				S	Sn	08 50 57.9	-0.2
TKGZ	Te Karaka	5.22	195	P	Pn	08 49 58.1	-1.4
URZ	Urewera	5.25	202	P	Pn	08 49 59.7	-0.2
URZ				S	Sn	08 50 59.8	+0.6
OUZ	Omahuta	5.30	248	P	Pn	08 50 01.4	+0.8
RAGZ	Rawiri	5.38	199	P	Pn	08 50 00.5	-1.3
TOZ	Tahuroa Road	5.46	217	P	Pn	08 50 04.7	+2.0
RIGZ	Rimuhau	5.50	195	P	Pn	08 50 02.8	-0.5
MUGZ	Murupara	5.56	204	P	Pn	08 50 03.6	-0.5
RTZ	Ruatahuna	5.62	202	P	Pn	08 50 03.3	-1.7
SNGZ	Shannon Statio	5.67	198	P	Pn	08 50 04.5	-1.2
RAHZ	Arahi	5.87	200	P	Pn	08 50 06.9	-1.4
MTHZ	Maungataniwha	5.88	202	P	Pn	08 50 07.8	-0.8
MHGZ	Mahia Peninsul	5.90	193	P	Pn	08 50 08.5	-0.2
TLZ	Tolley Road	5.92	213	P	Pn	08 50 10.3	+1.1
MRHZ	Matea Rd	6.00	205	P	Pn	08 50 08.7	-1.5
NMHZ	Naumai	6.11	201	P	Pn	08 50 10.3	-1.5
ARHZ	Aropaoanui	6.21	199	P	Pn	08 50 11.0	-2.1
HIZ	Hauiti	6.39	216	P	Pn	08 50 15.5	0.0
MCHZ	McNeill Hill	6.47	201	P	Pn	08 50 14.4	-2.2
FWVZ	Far West T-bar	6.69	208	P	Pn	08 50 16.7	-3.2
BHHZ	Black Hill Sta	6.71	204	P	Pn	08 50 15.7	-4.3
KAHZ	Kahuranaki	6.74	198	P	Pn	08 50 17.2	-3.2
MTVZ	Mangateitei	6.84	208	P	Pn	08 50 18.7	-3.0
VRZ	Vera Road	6.92	213	P	Pn	08 50 25.3	+2.5
PRHZ	Porangahau	7.25	198	P	Pn	08 50 22.7	-4.6

KRSC 04 08:52:08.4±1.4**, 48.°50N**×**156.°50E, h61km**±32km**, ML3.8, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.20	354	P	Pn	08 52 43.8	+1.2
SKR				S	Sn	08 53 11.5	+2.9
ALID	Alaid	2.45	346	P	Pn	08 52 47.5	+1.4
PAU	Pauzhetka	2.98	4	P	Pn	08 52 56.0	+2.8
PAU				S	Sn	08 53 32.2	+4.5
KDTR	Khodutka, Kamc	3.47	16	P	Pn	08 53 03.0	+3.2
KDTR				S	Sn	08 53 42.8	+3.2
ASAK	Asacha	3.99	12	P	Pn	08 53 11.2	+4.1
MTVR	Mutnovka	4.13	14	P	Pn	08 53 12.5	+3.4
MTVR				S	Sn	08 54 00.3	+4.1
RUS	Russkaya	4.14	17	P	Pn	08 53 11.7	+2.6
RUS				S	Sn	08 53 59.6	+3.4
GRL	Gorelyy	4.18	13	P	Pn	08 53 13.5	+3.8
GRL				S	Sn	08 54 00.7	+3.4
KRMR	Karymshinskiy	4.46	13	P	Pn	08 53 16.8	+3.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KRMR				S	Sn	08 54 06.6	+2.6
DALK	**Dalny**	**4.76**	**17**	P	Pn	08 53 20.4	+2.9
UGLR	**Uglovaya**	**4.94**	**16**	P	Pn	08 53 23.9	+3.8
AVH	**Avacha**	**4.98**	**16**	P	Pn	08 53 25.1	+4.5
KOK	**Koryaka**	**4.99**	**15**	P	Pn	08 53 25.5	+4.8
SMAR	**Somma**	**4.99**	**16**	P	Pn	08 53 25.4	+4.5
SDLR	**Sedlovina**	**5.02**	**17**	P	Pn	08 53 24.3	+3.1
SDLR				S	Sn	08 54 20.4	+2.5
KRX	**Arik**	**5.05**	**15**	P	Pn	08 53 25.9	+4.2
SPN	**Mys Shipunski**	**5.12**	**25**	P	Pn	08 53 26.3	+3.9
SPN				S	Sn	08 54 24.3	+4.2

*BJI **04** 08:53:52.6±0.0, 4°.02N×126°.60E, h75km, mB5.0/48, mb5.0/72, Ms4.4/31, Ms7 4.1/24*

*GCMT **04** 08:53:55.6±0.3, 4°.39N±0°.02×126°.78E±0°.03, h97km±2km, MW5.2/53, Moment Tensor Solution. s53,c65; s45,c52; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.29±.20; $M_{\theta\theta}$1.98±.28; $M_{\phi\phi}$-1.69±.33; $M_{r\theta}$-2.48±.22; $M_{\theta\phi}$-6.28±.24; $M_{\phi r}$1.97±.22; Best double couple: $M_0$7.15500×10^{16} NP1:ϕ_s260.00000°,δ75.00000°,λ165.00000°. NP2: ϕ_s354.00000°,δ76.00000°,λ16.00000°. Principal axes: T 7.9110, Plg21.0000°, Azm217.0000°; N -1.5070, Plg69.0000°, Azm34.0000°; P -6.3990, Plg1.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **04** 08:53:55.7±1.5, 4°.17N×126°.44E, h78km±13km, mb4.4/34, mb1 4.4/36, mb1mx4.4/43, mbtmp4.7/36, MS3.8/7, Ms1 3.8/7, ms1mx3.6/60 Error ellipse: s-maj=13.0km s-min=8.0km az=79.0*

*KLM **04** 08:53:56.0, 4°.35N×126°.99E, h101km, mb5.2*

*NEIC **04** 08:53:56.6±1.5, 4°.26N±0°.05×126°.61E±0°.07, h84km±5km, mb5.0/106, Error ellipse: s-maj=11.3km s-min=7.1km az=65.0*

*MAN **04** 08:53:57.2, 4°.26N×126°.73E, h52km, mb5.7, ML4.7, MS5.1*

*DJA **04** 08:53:58.6±0.3, 4°N±2°×12°7E±°, h87km±3km, M5.1/61, mB5.5/37, mb5.3/61, MLv5.7/12, Mw(mB)5.0/37, Mwp5.1/6*

ISC 04 08:53:58.2±0.3, **4°.18N**±0°.03×**126°.58E**±0°.05, **h100**km, **n325**, σ**1s.70**/346, **mb4.9**/97, **19C-8D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**2.10**	**336**	eP	**Pn**	**08 54 30.7**	**-1.4**
DDMP				eS	**Sn**	**08 54 56.1**	**-1.9**
GSPH	**General Santos**	**2.50**	**320**	⇓iP	**Pn**	**08 54 36.3**	**-1.0**
MATI	**Mati**	**2.77**	**353**	eP	**Pn**	**08 54 39.7**	**-1.2**
MATI				eS	**Sn**	**08 55 09.7**	**-4.0**
DAV	**Davao City (W)**	**3.04**	**341**	P	**Pn**	**08 54 43.0**	**-1.5**
DAV	**Davao City (W)**	**3.04**	**341**		**Pn**	**08 54 42.5**	**-2.0**
DAV				Sn	**Sn**	**08 55 14.3**	**-5.9**
DMPH	**Davao City--Mi**	**3.08**	**340**	⇓eP	**Pn**	**08 54 45.0**	**0.0**
DMPH				iS	**Sn**	**08 55 27.3**	**+6.2**
SKMP	**Bagumbayan, Su**	**3.09**	**319**	eP	**Pn**	**08 54 45.6**	**+0.5**
SKMP				eS	**Sn**	**08 55 22.0**	**+0.7**
KCP	**Kidapawan**	**3.18**	**332**	⇑iP	**Pn**	**08 54 48.6**	**+2.2**
KCP				iS	Sn	08 55 33.1	+9.4
TNTI	**Ternate**	**3.47**	**167**	P	**Pn**	**08 54 50.0**	**-0.3**
TNTI				S	**Sn**	**08 55 30.6**	**0.0**
TNTI	**Ternate**	**3.47**	**167**		**Pn**	**08 54 50.2**	**-0.1**
TNTI				Sn	**Sn**	**08 55 29.2**	**-1.4**
BUKP	**Musuan**	**3.98**	**338**	eP	**Pn**	**08 54 57.0**	**-0.1**
BUKP				eS	**Sn**	**08 55 42.4**	**-0.4**
KMSI	**Cibinong**	**4.42**	**216**	P	**Pn**	**08 55 04.9**	**+1.8**
CGP	**Cagayan de Oro**	**4.64**	**336**	⇑eP	**Pn**	**08 55 07.0**	**+0.9**
CGP				iS	Sn	08 56 08.7	+10
PAGZ	**Pagadian**	**4.84**	**319**	eP	**Pn**	**08 55 08.3**	**-0.4**
PAGZ				eS	**Pn**	**08 55 08.8**	**+0.1**
BUTP	**Butuan**	**4.86**	**349**	eP	**Pn**	**08 55 08.3**	**-0.6**
BUTP				eS	**Sn**	**08 56 08.6**	**+4.6**
LBMI	**Labuha**	**4.87**	**169**	P	**Pn**	**08 55 09.5**	**+0.3**
ZCP	**Zamboanga City**	**5.25**	**302**	⇑iP	**Pn**	**08 55 14.0**	**-0.4**
ZCP				iS	**Sn**	**08 56 11.5**	**-2.2**
MRSI	**Marisa**	**5.91**	**232**	P	**Pn**	**08 55 25.4**	**+2.1**
	12nm37μm3μm,0.6s						
TBP	**Tagbilaran**	**6.11**	**334**	eP	**Pn**	**08 55 28.2**	**+2.2**
MSLP	**Maasin**	**6.16**	**344**	eP	**Pn**	**08 55 27.5**	**+0.8**
MSLP				eS	**Sn**	**08 56 36.3**	**+0.5**
SANI	**Sanana**	**6.21**	**185**	P	**Pn**	**08 55 25.4**	**-2.0**
LUWI	**Luwuk**	**6.43**	**216**	P	**Pn**	**08 55 32.1**	**+1.7**
	6.1nm6μm18μm2μm,1.0s						
LUWI	**Luwuk**	**6.43**	**216**		**Pn**	**08 55 32.1**	**+1.7**
LLP	**Lapu-Lapu**	**6.63**	**337**	eP	**Pn**	**08 55 32.3**	**-0.8**
LLP				eS	**Sn**	**08 56 52.2**	**+5.1**
SIJI	**Sorong**	**6.86**	**137**	P	**Pn**	**08 55 35.5**	**-0.8**
	171nm,0.3s,baz=167,slow=20,SNR=205						
SIJI				S	**Sn**	**08 56 49.0**	**-3.9**
	33nm,0.3s,baz=166,slow=22,SNR=9.7						
SIJI				LR	LR	08 58 25.4	
	comp=Z,1μm,22.0s,baz=297,slow=39						
APSI	**Ampana**	**7.06**	**224**	P	**Pn**	**08 55 42.6**	**+3.7**
	2.2nm6μm626nm,0.8s						
NLAI	**Namlea**	**7.38**	**176**	P	**Pn**	**08 55 42.4**	**-0.9**
	4.2nm16μm294nm,0.8s						
GUIM	**Jordan**	**7.53**	**329**	eP	**Pn**	**08 55 43.0**	**-2.3**
MPSI	**Mapaga**	**7.69**	**240**	P	**Pn**	**08 55 50.2**	**+2.7**
	0.8nm3μm3μm269nm,1.2s						
AAI	**Ambon**	**7.98**	**168**	P	Pn	08 55 57.4	+6.0
RCP	**Roxas**	**8.26**	**333**	⇑eP	**Pn**	**08 55 55.5**	**+0.3**
FAKI	**Fak Fak**	**9.04**	**141**	P	**Pn**	**08 56 05.6**	**-0.3**
	2μm4μm554nm,0.9s						
FAKI	**Fak Fak**	**9.04**	**141**		**Pn**	**08 56 04.9**	**-1.1**
RKPI	**Ransiki, Papua**	**9.46**	**126**	P	**Pn**	**08 56 14.5**	**+2.8**
TTSI	**Tana Toraja**	**9.85**	**223**	P	**Pn**	**08 56 19.3**	**+2.4**
	4μm326nm,0.9s						
BATP	**Bataraza**	**9.85**	**298**	eP	**Pn**	**08 56 20.0**	**+3.0**
SMKI	**Samarinda**	**10.43**	**244**	P	Pn	08 56 30.3	+5.5
KKM	**Kota Kinabalu**	**10.49**	**281**		**Pn**	**08 56 23.2**	**-2.4**
SPSI	**Sidrap Palu**	**10.57**	**220**	P	**Pn**	**08 56 28.2**	**+1.5**
	2μm155nm,1.0s						
BNSI	**Bone**	**10.70**	**217**	P	**Pn**	**08 56 29.9**	**+1.5**
	2μm136nm,0.8s						
BKB	**Balikpapan**	**11.08**	**241**	P	Pn	08 56 38.0	+4.4
BKB	**Balikpapan**	**11.08**	**241**		**Pn**	**08 56 32.7**	**-0.9**
KAPI	**Kappang**	**11.39**	**217**	P	**Pn**	**08 56 37.6**	**-0.2**
	2.8nm,0.3s,baz=19,slow=9.8,SNR=33						
KAPI	**Kappang**	**11.39**	**217**		**Pn**	**08 56 37.8**	**-0.1**
BKSI	**Bulukumba**	**11.43**	**214**	P	**Pn**	**08 56 39.2**	**+0.9**
	1μm89nm,0.9s						
SMPP	**San Manuel, Pa**	**13.24**	**334**	eP	**Pn**	**08 56 58.6**	**-3.6**
MMRI	**Maumere**	**13.44**	**199**	P	P	08 57 20.6	+10
MMRI	**Maumere**	**13.44**	**199**		**Pn**	**08 57 04.8**	**-0.1**
SMPI	**Sarmi**	**13.58**	**117**	P	**Pn**	**08 57 07.5**	**+0.7**
	2μm41nm,1.5s						
EDFI	**Ende, Flores**	**13.73**	**201**	P	**Pn**	**08 57 09.3**	**+0.4**
	737nm78nm,0.7s						
SOEI	**Soe**	**14.03**	**189**	P	**P**	**08 57 15.1**	**-2.3**
	4μm404nm,1.0s						
SOEI	**Soe**	**14.03**	**189**		**Pn**	**08 57 12.9**	**+0.2**
SBUM	**Sibu**	**14.44**	**264**	P	**P**	**08 57 20.1**	**-1.6**
SBUM	**Sibu**	**14.44**	**264**	P	**P**	**08 57 22.0**	**+0.2**
BATI	**Baumata**	**14.58**	**191**	P	**Pn**	**08 57 19.4**	**-0.3**
	3.7nm,0.3s,baz=213,slow=3.4,SNR=12						
BATI				LR	LR	09 03 54.7	
	comp=Z,336nm,20.0s,baz=32,slow=41						
BATI	**Baumata**	**14.58**	**191**	P	**P**	**08 57 21.6**	**-1.8**
	1μm192nm,0.9s						
GENI	**Genyem**	**15.15**	**116**	P	**P**	**08 57 27.9**	**-1.8**
	5μm168nm,1.0s						
WBSI	**Waikabubak, Su**	**15.48**	**208**	P	**P**	**08 57 32.2**	**-1.2**
	3μm303nm,0.9s						
BASI	**Baing, Sumba**	**15.50**	**203**	P	**P**	**08 57 35.2**	**+1.6**
	3μm297nm,1.3s						
JAY	**Jayapura**	**15.60**	**115**	P	**Pn**	**08 57 31.3**	**-1.4**
	0.6nm,0.3s,baz=134,slow=10,SNR=3.6						
PLAI	**Plampang**	**15.62**	**214**	P	**P**	**08 57 34.0**	**-0.9**
	4μm291nm,1.1s						
PBKI	**Pangkalan Bun**	**16.39**	**246**	P	**P**	**08 57 46.7**	**+3.2**
	308nm,0.9s						
KSM	**Kuching**	**16.47**	**261**	P	**P**	**08 57 44.9**	**+0.5**
KSM				IAmb	IAmb	08 57 54.2	
	comp=Z,99nm,1.2s						
SRBI	**Singaraja**	**16.64**	**223**	P	**P**	**08 57 47.7**	**+1.5**
	comp=Z,1μmcomp=Z,102nm,1.2s						
MTN	**Manton Dam**	**17.50**	**165**	P	**Pn**	**08 57 55.2**	**-0.8**
	baz=18,SNR=4.3						
MTN	**Manton Dam**	**17.50**	**165**	P	**P**	**08 57 53.3**	**-2.4**
MTN				IAmb	IAmb	08 58 00.2	
	comp=Z,49nm,0.7s						
JAGI	**Jajag, Banyuwa**	**17.65**	**225**	P	**Pn**	**08 58 01.5**	**+3.7**
	comp=Z,4μmcomp=Z,175nm,0.6s						
JAGI	**Jajag, Banyuwa**	**17.65**	**225**	P	**Pn**	**08 57 57.1**	**-0.6**
JAGI				IAmb	IAmb	08 58 03.4	
	comp=Z,113nm,0.8s						
KDU	**Kakadu**	**17.75**	**161**	P	**P**	**08 57 57.2**	**-1.2**
	baz=18,SNR=32						
PWJI	**Pagerwojo**	**19.08**	**231**	P	**Pn**	**08 58 13.4**	**-1.5**
	comp=Z,49nm,0.9s						
TWG	**Pinlang**	**19.29**	**344**	P	**P**	**08 58 12.1**	**-3.1**
DLV	**T Lat**	**19.49**	**294**	P	**P**	**08 58 17.3**	**-0.5**
DLV				IAmb	IAmb	08 58 20.9	
	comp=Z,116nm,0.9s						
SMRI	**Semarang**	**19.59**	**235**	P	**Pn**	**08 58 19.4**	**-1.5**
WOJI	**Wonogiri, Jawa**	**19.66**	**233**	P	**Pn**	**08 58 23.4**	**+1.8**
	comp=Z,44nm,0.9s						
PCJI	**Pacitan**	**19.67**	**231**	P	**Pn**	**08 58 25.5**	**+3.7**
YULB	**Yu-li**	**19.77**	**346**	P	**P**	**08 58 17.1**	**-3.4**
KNRA	**Kununurra**	**19.84**	**174**	P	**Pn**	**08 58 22.2**	**-1.6**
	baz=20,SNR=46						
KNRA	**Kununurra**	**19.84**	**174**	P	**Pn**	**08 58 22.3**	**-1.4**
KNRA				IAmb	IAmb	08 58 35.4	
	comp=Z,134nm,0.9s						
TPUB	**Ta-pu**	**19.86**	**344**	P	**P**	**08 58 19.2**	**-2.3**
TPUB				IAmb	IAmb	08 58 20.6	
	comp=Z,83nm,0.8s						
UGM	**Wanagama**	**20.02**	**233**	P	Pn	08 58 35.9	+10
UGM	**Wanagama**	**20.02**	**233**	P	**P**	**08 58 23.4**	**+0.1**
UGM				IAmb	IAmb	08 58 36.6	
	comp=Z,130nm,1.0s						
SSLB	**Suanglung**	**20.24**	**345**	P	**P**	**08 58 22.9**	**-2.7**
SSLB				IAmb	IAmb	08 58 27.1	
	comp=Z,57nm,0.8s						
NACB	**Ninganchiao**	**20.45**	**347**	P	**P**	**08 58 25.3**	**-2.5**
YOJ	**Yonaguni jima**	**20.46**	**351**	P	**P**	**08 58 26.1**	**-1.8**
YHNB	**Yeheng**	**20.98**	**347**	P	**P**	**08 58 31.6**	**-2.0**
YHNB				IAmb	IAmb	08 58 36.7	
	comp=Z,39nm,0.8s						
PPBI	**Pangkal Pinang**	**21.38**	**253**	P	**P**	**08 58 40.8**	**+3.0**
HKPS	**Hong Kong Po S**	**21.66**	**327**	P	**P**	**08 58 37.8**	**-2.9**
HKPS				IAmb	IAmb	08 58 40.6	
	comp=Z,113nm,1.1s						
KNMB	**Chin-men Tao**	**21.66**	**339**	P	**P**	**08 58 35.9**	**-4.8**
KNMB				IAmb	IAmb	08 58 43.4	
	comp=Z,103nm,0.9s						
LEM	**Lembang**	**21.86**	**240**	P	**P**	**08 58 41.0**	**-2.2**
	comp=Z,136nm,1.0s,baz=309,slow=23,SNR=3.0						
LEM				LR	LR	09 09 00.3	
	comp=Z,344nm,20.0s,baz=62,slow=42						
QIZ	**Qiongzhong**	**22.02**	**313**	P	**P**	**08 58 43.0**	**-1.7**
QIZ				sP	**pwP**	**08 59 07.4**	**+1.4**
QIZ				S	**S**	**09 02 43.5**	**+1.8**
QIZ				sS	**sS**	**09 03 10.9**	**-2.8**
QIZ				pmax	pmax		
	comp=Z,21nm,1.2s						
QIZ				LR	LR		
	comp=Z,440nm,15.9s						
QIZ	**Qiongzhong**	**22.02**	**313**	P	**P**	**08 58 42.9**	**-1.7**
QIZ				IAmb	IAmb	08 58 48.1	
	comp=Z,37nm,0.9s						
QZH	**Quanzhou**	**22.03**	**340**	⇑iP	**P**	**08 58 42.9**	**-1.7**
QZH				S	**S**	**09 02 37.3**	**-4.3**
QZH				SS	**SnSn**	**09 03 25.2**	**+7.6**
QZH				pmax	pmax		
	comp=Z,47nm,0.7s						
CISI	**Cisompet, Garu**	**22.05**	**238**	P	**P**	**08 58 45.4**	**+0.3**
	comp=Z,1μmcomp=Z,67nm,0.8s						
CISI	**Cisompet, Garu**	**22.05**	**238**	P	**P**	**08 58 43.2**	**-1.9**
CISI				IAmb	IAmb	08 58 46.1	
	comp=Z,86nm,1.0s						
FITZ	**Fitzroy Crossi**	**22.15**	**182**	P	**P**	**08 58 46.3**	**+0.3**
	baz=22,SNR=81						
FITZ	**Fitzroy Crossi**	**22.15**	**182**	P	**P**	**08 58 46.0**	**0.0**
	comp=Z,37nm,0.4s,baz=22,slow=9.8,SNR=106						
FITZ				S	**S**	**09 02 37.4**	**-6.4**
	comp=Z,3.4nm,0.8s,baz=105,slow=22,SNR=1.3						
FITZ	**Fitzroy Crossi**	**22.15**	**182**	P	**P**	**08 58 46.6**	**+0.6**
TPRI	**Tanjung Pinang**	**22.26**	**262**	P	**P**	**08 58 51.2**	**+3.9**
	comp=Z,7μmcomp=Z,55nm,0.5s						
DBJI	**Dramaga**	**22.48**	**242**	P	**P**	**08 58 51.7**	**+2.2**
	comp=Z,123nm,1.3s						
JOW	**Kunigami**	**22.59**	**4**	P	**P**	**08 58 50.0**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=183,slow=14,SNR=4.0						
JOW	**Kunigami**	**22.59**	**4**	P	**P**	**08 58 48.6**	**-1.8**
MYKOM	**Kota Tinggi**	**22.82**	**265**	P	**P**	**08 58 53.9**	**+0.9**
PMBI	**Palembang**	**22.91**	**252**	P	**P**	**08 58 58.6**	**+4.8**
	comp=Z,272nm,0.5s						
PMBI	**Palembang**	**22.91**	**252**	P	**P**	**08 58 56.0**	**+2.3**
BLSI	**Bandar Lampung**	**23.32**	**246**	P	**P**	**08 58 59.9**	**+2.2**
	comp=Z,159nm,0.9s						
MDSI	**Maura Dua**	**23.98**	**249**	P	**P**	**08 59 04.4**	**+0.8**
	comp=Z,1μmcomp=Z,19nm,0.8s						
KASI	**Kota Agung**	**24.07**	**247**	P	**P**	**08 59 06.4**	**+2.0**
	comp=Z,74nm,1.0s						
LWLI	**Liwa**	**24.28**	**248**	P	**P**	**08 59 09.7**	**+3.2**
	comp=Z,51nm,0.7s						
COEN	**Coen**	**24.41**	**138**	P	**P**	**08 59 08.5**	**+1.0**
	baz=24,SNR=7.8						
COEN	**Coen**	**24.41**	**138**	P	**P**	**08 59 07.4**	**-0.1**
PMG	**Port Moresby**	**24.55**	**123**	P	**P**	**08 59 08.1**	**-0.7**
WB0	**Warramunga Arr**	**25.00**	**162**	P	**P**	**08 59 13.5**	**+0.6**
WB0				IAmb	IAmb	08 59 15.6	
	comp=Z,81nm,0.7s						
WB9	**Warramunga Arr**	**25.02**	**162**	P	**P**	**08 59 13.6**	**+0.5**
	baz=25						
WRAB	**Tennant Creek**	**25.15**	**163**	P	**P**	**08 59 14.3**	**+0.2**
WRAB				IAmb	IAmb	08 59 17.1	
	comp=Z,86nm,1.0s						
WRA	**Warramunga Arr**	**25.15**	**163**	P	**P**	**08 59 14.6**	**+0.3**
	comp=Z,56nm,0.8s,baz=343,slow=10.0,SNR=143						
WRA				S	**S**	**09 03 33.8**	**+1.7**
	comp=Z,1.5nm,0.7s,baz=228,slow=33,SNR=1.5						
WB2	**Warramunga Arr**	**25.16**	**163**	P	**P**	**08 59 14.4**	**+0.1**
WB2				IAmb	IAmb	08 59 17.2	
	comp=Z,91nm,0.9s						
WR0	**Warramunga Arr**	**25.23**	**162**	P	**P**	**08 59 15.6**	**+0.6**
WR0				IAmb	IAmb	08 59 17.9	
	comp=Z,57nm,1.0s						
MASI	**Maura Aman, Be**	**25.39**	**254**	P	P	08 59 33.7	+17
XMIS	**Christmas Isla**	**25.42**	**235**	P	**P**	**08 59 17.8**	**+1.0**
XMIS				IAmb	IAmb	08 59 22.1	
	comp=Z,112nm,1.0s						
IPM	**Ipoh**	**25.48**	**272**	P	**P**	**08 59 17.0**	**-0.3**
IPM	**Ipoh**	**25.48**	**272**	P	**P**	**08 59 19.0**	**+1.6**
SDSI	**Sungai Dareh**	**25.64**	**259**	P	P	08 59 36.0	+17
BKNI	**Bangkinang**	**25.80**	**262**	P	P	08 59 37.2	+17
BKNI	**Bangkinang**	**25.80**	**262**	P	**P**	**08 59 20.2**	**0.0**
KULM	**Kulim**	**25.86**	**273**	P	**P**	**08 59 22.0**	**+1.2**
MBWA	**Marble Bar**	**26.06**	**195**	P	**P**	**08 59 23.6**	**+1.2**
PSA00	**Pilbara Seismi**	**26.43**	**194**	P	**P**	**08 59 26.6**	**+0.9**
PDSI	**Padang**	**26.58**	**260**	P	P	08 59 45.9	+19
KRVT	**Keravat (AS076**	**26.78**	**108**	P	**P**	**08 59 30.2**	**+1.2**
	comp=Z,18nm,0.5s,baz=260,slow=22,SNR=1.3						
JCJ	**Chichijima**	**27.23**	**32**	P	**P**	**08 59 32.9**	**-0.1**
	comp=Z,43nm,0.8s,baz=286,slow=17,SNR=2.5						
JCJ				LR	LR	09 09 15.7	
	comp=Z,204nm,20.9s,baz=202,slow=34						
SSE	**Sheshan**	**27.25**	**350**	P	**P**	**08 59 34.2**	**+1.2**
SSE				S	**S**	**09 04 07.0**	**+2.0**
SSE				pmax	pmax		
	comp=Z,28nm,0.7s						
SSE				LR	LR		
	comp=Z,100nm,17.5s						
SSE				LR	LR		
	comp=Z,180nm,22.0s						
PSI	**Prapat**	**27.64**	**268**	P	**P**	**08 59 35.0**	**-1.8**
	comp=Z,3.8nm,0.6s,baz=182,slow=7.4,SNR=1.9						
PSI				S	**S**	**09 04 12.0**	**+0.3**
	comp=Z,2.7nm,0.4s,baz=180,slow=22,SNR=2.2						
RPSI	**Rantau Prapat**	**27.64**	**268**	P	**P**	**08 59 36.9**	**+0.1**
RPSI	**Rantau Prapat**	**27.64**	**268**	P	**P**	**08 59 35.0**	**-1.7**
QIS	**Mount Isa**	**27.71**	**153**	P	**P**	**08 59 38.8**	**+1.6**
	baz=28,SNR=22						
SLVN	**Son La**	**27.85**	**310**	P	**P**	**08 59 38.0**	**-0.6**
PBKT	**Sadao Pong**	**27.99**	**298**	P	**P**	**08 59 40.3**	**+0.5**
PBKT				IAmb	IAmb	08 59 41.3	
	comp=Z,32nm,0.9s						
MTSU	**Mount Surprise**	**28.24**	**142**	P	**P**	**08 59 43.9**	**+1.9**
	baz=28,SNR=8.2						
AS31	**Alice Springs**	**28.58**	**166**	P	**P**	**08 59 45.7**	**+0.7**
ASAR	**Alice Springs**	**28.58**	**166**	P	**P**	**08 59 45.1**	**+0.1**
	comp=Z,3.5nm,0.5s,baz=349,slow=7.4,SNR=67						
ASAR				S	S	09 04 39.6	+13
	comp=Z,0.7nm,0.6s,baz=88,slow=34,SNR=3.0						
ASAR				ScP	**ScP**	**09 06 29.0**	**+2.6**
	comp=Z,1.5nm,1.0s,baz=338,slow=3.0,SNR=4.8						
AS17	**Alice Springs**	**28.60**	**166**	P	**P**	**08 59 45.8**	**+0.6**
	baz=29						
WHN	**Wuhan**	**28.65**	**338**	P	**P**	**08 59 45.9**	**+0.4**
WHN				S	**S**	**09 04 21.1**	**-6.0**
WHN				LR	LR		
	comp=Z,570nm,14.4s						
NJ2	**Nanjing**	**28.66**	**346**	eP	**P**	**08 59 46.7**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
KCSI	**Kotacane, Aceh**	**28.75**	**270**	P	P	08 59 59.5	+13
JNU	**Nakatsue**	**29.08**	**7**	P	**P**	**08 59 48.4**	**-0.9**
	comp=Z,5.4nm,0.7s,baz=286,slow=3.6,SNR=5.4						
JNU				LR	LR	09 11 57.6	
	comp=Z,144nm,20.5s,baz=190,slow=37						
WRKA	**Warakurna**	**29.09**	**177**	P	**P**	**08 59 50.6**	**+1.1**
	baz=29,SNR=54						
GSI	**Gunungsitoli**	**29.11**	**265**	P	**P**	**08 59 51.5**	**+1.7**
	comp=Z,105nm,0.6s						
GSI	**Gunungsitoli**	**29.11**	**265**	P	**P**	**08 59 49.4**	**-0.4**
GSI				IAmb	IAmb	09 00 03.9	
	comp=Z,21nm,0.8s						
GYA	**Guiyang**	**29.23**	**321**	⇑iP	**P**	**08 59 51.3**	**+0.5**
GYA				pP	pP	09 00 08.6	-3.7
GYA				sP	pwP	09 00 19.0	+2.9
GYA				PP	**PnPn**	**09 00 47.7**	**-1.2**
GYA				PcP	**PcP**	**09 02 57.6**	**+1.8**
GYA				S	**S**	**09 04 37.0**	**+0.5**
GYA				sS	sS	09 05 08.0	-6.4
GYA				pmax	pmax		
	comp=Z,20nm,1.1s						
GYA				pmax	pmax		
	comp=Z,180nm,3.5s						
GYA				LR	LR		
	comp=Z,260nm,15.8s						
GYA				LR	LR		
	comp=Z,200nm,16.3s						
GYA				LR	LR		
	comp=Z,220nm,15.1s						
CMAR	**Chiang Mai Arr**	**30.52**	**300**	P	**P**	**09 00 02.2**	**0.0**
	comp=Z,16nm,0.8s,baz=111,slow=6.9,SNR=83						
CMAR				ScP	**ScP**	**09 06 35.5**	**+2.7**
	comp=Z,0.9nm,0.3s,baz=145,slow=1.9,SNR=9.5						
CMAR				LR	LR	09 14 30.4	
	comp=Z,164nm,18.4s,baz=114,slow=41						
ENH	**Enshi**	**30.57**	**330**	P	**P**	**09 00 01.6**	**-1.0**
ENH				IAmb	IAmb	09 00 04.0	
	comp=Z,88nm,1.4s						
CHTO	**Chiang Mai**	**30.66**	**301**	P	**P**	**09 00 03.7**	**+0.2**
CHTO				IAmb	IAmb	09 00 05.7	
	comp=Z,31nm,0.8s						
CTAO	**Charters Tower**	**30.91**	**142**	P	**P**	**09 00 05.9**	**+0.3**
KMI	**Kunming**	**30.96**	**315**	P	**P**	**09 00 06.2**	**-0.1**
KMI				pP	pP	09 00 25.7	-2.1
KMI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MEEK	**Meekatharra**	**31.59**	**194**	P	**P**	**09 00 12.8**	**+1.3**
	baz=32,SNR=87						
TIA	**Tai'an**	**33.05**	**346**	P	**P**	**09 00 25.0**	**+0.8**
TIA				pmax	pmax		
	comp=Z,18nm,0.7s						
KSRS	**Korea Array**	**33.14**	**2**	P	**P**	**09 00 24.9**	**0.0**
	comp=Z,2.7nm,0.6s,baz=184,slow=9.5,SNR=8.4						
KSRS				LR	LR	09 14 15.1	
	comp=Z,132nm,19.7s,baz=180,slow=37						
MAT	**Matsushiro**	**33.94**	**17**	P	**P**	**09 00 31.1**	**-0.8**
MJAR	**Matsushiro Arr**	**33.94**	**17**	P	**P**	**09 00 31.8**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=185,slow=7.6,SNR=4.7						
XAN	**Xi'an**	**33.95**	**333**	P	**P**	**09 00 30.3**	**-1.8**
XAN				pP	pP	09 00 46.8	-6.8
XAN				sP	pwP	09 00 56.4	-2.1
XAN				S	**S**	**09 05 49.4**	**-0.4**
XAN				sS	sS	09 06 22.0	-6.1
XAN				SS	**SnSn**	**09 08 04.7**	**-2.2**
XAN				pmax	pmax		
	comp=Z,50nm,1.1s						
XAN				pmax	pmax		
	comp=Z,160nm,3.8s						
XAN				LR	LR		
	comp=Z,190nm,16.3s						
XAN				LR	LR		
	comp=Z,250nm,17.6s						
XAN	**Xi'an**	**33.95**	**333**	P	**P**	**09 00 30.7**	**-1.4**
CD2	**Chengdu**	**34.20**	**324**	P	**P**	**09 00 33.8**	**-0.5**
CD2				S	**S**	**09 05 56.0**	**+2.3**
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
CD2				LR	LR		
	comp=Z,490nm,16.1s						
CD2				LR	LR		
	comp=Z,370nm,15.1s						
CD2				LR	LR		
	comp=Z,390nm,15.7s						
MORW	**Morawa**	**34.57**	**196**	P	**P**	**09 00 38.6**	**+1.2**
	baz=35,SNR=17						
MORW	**Morawa**	**34.57**	**196**	P	**P**	**09 00 38.1**	**+0.6**
MORW				IAmb	IAmb	09 00 39.2	
	comp=Z,25nm,0.8s						
FORT	**Forrest**	**34.79**	**178**	P	**P**	**09 00 40.4**	**+1.1**
	baz=35,SNR=56						
FORT	**Forrest**	**34.79**	**178**	P	**P**	**09 00 40.0**	**+0.8**
QLP	**Quilpie**	**35.03**	**152**	P	**P**	**09 00 43.1**	**+1.7**
	baz=35,SNR=4.4						
KMBL	**Kambalda**	**35.63**	**187**	P	**P**	**09 00 47.7**	**+1.2**
	baz=36,SNR=12						
BLDU	**Ballidu**	**35.86**	**195**	P	**P**	**09 00 49.6**	**+1.2**
	baz=36,SNR=60						
KLBR	**Kellerberrin**	**36.55**	**193**	P	**P**	**09 00 55.6**	**+1.3**
	baz=37,SNR=26						
BJT	**Baijiatuau**	**36.90**	**347**	P	**P**	**09 00 57.8**	**+0.6**
BJI	**Beijing**	**36.92**	**347**	P	**P**	**09 00 57.7**	**+0.4**
BJI				S	**S**	**09 06 37.5**	**+2.5**
BJI				pmax	pmax		
	comp=Z,93nm,1.4s						
BJI				LR	LR		
	comp=Z,150nm,19.0s						
MUN	**Mundaring**	**37.28**	**195**	P	**P**	**09 01 01.9**	**+1.4**
	baz=38,SNR=20						
EIDS	**Eidsvold**	**37.79**	**142**	P	**P**	**09 01 06.5**	**+1.5**
	baz=38,SNR=3.5						
EIDS	**Eidsvold**	**37.79**	**142**	P	**P**	**09 01 06.2**	**+1.2**
EIDS				IAmb	IAmb	09 01 16.1	
	comp=Z,20nm,1.2s						
BBOO	**Buckleboo**	**37.87**	**167**	P	**P**	**09 01 06.4**	**+1.0**
	baz=38,SNR=30						
BBOO	**Buckleboo**	**37.87**	**167**	P	**P**	**09 01 06.0**	**+0.5**
BBOO				IAmb	IAmb	09 01 25.5	
	comp=Z,38nm,1.1s						
NWAO	**Narrogin (SRO)**	**37.95**	**193**	P	**P**	**09 01 07.8**	**+1.7**
	baz=38,SNR=7.7						
NWAO	**Narrogin (SRO)**	**37.95**	**193**	P	**P**	**09 01 07.8**	**+1.7**
NWAO	**Narrogin (SRO)**	**37.95**	**193**	P	**P**	**09 01 07.8**	**+1.7**
NWAO				IAmb	IAmb	09 01 08.8	
	comp=Z,63nm,1.1s						
LZH	**Lanzhou**	**38.04**	**329**	eP	**P**	**09 01 07.3**	**+0.2**
LZH				pmax	pmax		
	comp=Z,26nm,1.2s						
LZH				pmax	pmax		
	comp=Z,100nm,4.3s						
LZH				LR	LR		
	comp=Z,330nm,13.0s						
LZH				LR	LR		
	comp=Z,450nm,13.6s						
LZH				LR	LR		
	comp=Z,500nm,14.0s						
STKA	**Stephens Creek**	**38.60**	**159**	P	**P**	**09 01 12.0**	**+0.4**
	baz=39,SNR=20						
STKA	**Stephens Creek**	**38.60**	**159**	P	**P**	**09 01 12.2**	**+0.6**
	comp=Z,9.4nm,0.5s,baz=341,slow=7.6,SNR=33						
STKA	**Stephens Creek**	**38.60**	**159**	P	**P**	**09 01 12.6**	**+1.0**
HHC	**Hu-ho-hao-te**	**38.93**	**342**	P	**P**	**09 01 14.5**	**+0.1**
HHC				pP	pP	09 01 33.5	-2.8
HHC				sP	sP	09 01 43.9	-3.4
HHC				S	**S**	**09 07 11.2**	**+5.6**
HHC				sS	sS	09 07 38.2	-6.2
HHC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,74nm,4.7s						
HHC				LR	LR		
	comp=Z,240nm,17.9s						
HHC				LR	LR		
	comp=Z,140nm,14.0s						
HTT	**Hallett**	**39.19**	**164**	P	**P**	**09 01 19.1**	**+2.5**
	baz=39,SNR=10						
SHL	**Shillong**	**39.49**	**306**	P	**P**	**09 01 18.7**	**-0.7**
CMSA	**Cobar Meteorol**	**39.91**	**154**	P	**P**	**09 01 24.1**	**+1.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=40,SNR=7.9						
USA0B	Ussuriysk Arra	40.14	6	P	P	09 01 23.9	-0.3
USA0B				IAmb	IAmb	09 01 39.6	
	comp=Z,9.5nm,0.8s						
USRK	Ussuriysk Ar.	40.14	6	P	P	09 01 24.2	0.0
	comp=Z,6.6nm,0.9s,baz=186,slow=7.4,SNR=9.5						
MDJ	Mudanjiang	40.36	3	P	P	09 01 26.3	+0.2
MDJ				IAmb	IAmb	09 01 27.6	
	comp=Z,33nm,1.1s						
ARMA	Armidale	41.92	147	P	P	09 01 41.1	+2.0
	baz=42,SNR=13						
ARMA	Armidale	41.92	147	P	P	09 01 41.2	+2.0
ARMA				IAmb	IAmb	09 01 43.6	
	comp=Z,48nm,1.1s						
LSA	Lhasa	42.03	311	P	P	09 01 41.5	+0.9
LSA				IAmb	IAmb	09 01 44.1	
	comp=Z,15nm,0.7s						
ASAJ	Asahikawa	42.21	17	P	P	09 01 41.2	0.0
	comp=Z,5.1nm,0.7s,baz=247,slow=13,SNR=2.2						
JKA	Kamikawa-asahi	42.21	17	P	P	09 01 41.2	0.0
GTA	Gaotai	42.64	329	eP	P	09 01 44.6	-0.4
GTA				pP	pP	09 02 01.5	-5.6
GTA				sP	pwP	09 02 10.7	-1.4
GTA				S	S	09 07 59.1	-1.7
GTA				pmax	pmax		
	comp=Z,19nm,1.2s						
GTA				pmax	pmax		
	comp=Z,110nm,4.7s						
GTA				LR	LR		
	comp=Z,150nm,13.7s						
GTA				LR	LR		
	comp=Z,140nm,15.9s						
GTA				LR	LR		
	comp=Z,150nm,16.8s						
TAPN	Taplejung	43.63	306	eP	P	09 01 53.1	-0.3
	comp=Z,33nm,0.4s						
ODAN	Odare	43.69	305	eP	P	09 01 53.6	-0.1
RAMN	Ramite	44.37	305	eP	P	09 01 59.1	-0.1
	comp=Z,48nm,0.8s						
JIRN	Jiri	44.99	306	eP	P	09 02 03.9	-0.4
KLR	Kul'dur	45.11	5	P	P	09 02 04.2	-0.2
	comp=Z,3.4nm,0.3s,baz=204,slow=6.4,SNR=21						
HIA	Hailar	45.30	354	P	P	09 02 06.5	+0.5
HIA				IAmb	IAmb	09 02 09.6	
	comp=Z,30nm,0.9s						
GUN	Gumba	45.34	306	eP	P	09 02 06.5	-0.5
PKI	Pulchoki	45.59	305	eP	P	09 02 08.2	-0.8
PKIN	Phulchoki	45.60	305	eP	P	09 02 08.1	-0.9
KKN	Kakani	45.78	305	eP	P	09 02 09.7	-0.6
	comp=Z,35nm,0.7s						
DMN	Daman	45.85	305	eP	P	09 02 10.6	-0.3
GKN	Gorkha	46.39	305	eP	P	09 02 14.5	-0.5
	comp=Z,16nm,0.3s						
ULN	Ulaanbaatar	46.65	342	P	P	09 02 16.6	-0.1
SONM	Songino Array	46.83	341	P	P	09 02 17.4	-0.6
	comp=Z,11nm,1.1s,baz=162,slow=8.8,SNR=54						
KOLN	Koldanda	47.15	305	eP	P	09 02 20.9	-0.1
	comp=Z,77nm,0.5s						
DANN	Dangsing	47.23	305	eP	P	09 02 21.3	-0.5
	comp=Z,97nm,0.5s						
HYB	Hyderabad	48.83	289	i P	P	09 02 35.0	+1.1
HYB				epP	pP	09 02 54.5	-2.6
TLY	Talaya	51.06	342	P	P	09 02 50.6	+0.4
WMQ	Urumqi	52.27	325	eP	P	09 03 00.0	+0.5
WMQ				pP	pP	09 03 18.9	-3.5
WMQ				ScP	ScP	09 08 01.3	+3.6
WMQ				pmax	pmax		
	comp=Z,28nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,12nm,3.7s						
WMQ				LR	LR		
	comp=Z,220nm,20.3s						
WMQ				LR	LR		
	comp=Z,290nm,16.9s						
WMQ				LR	LR		
	comp=Z,220nm,25.3s						
WMQ	Urumqi	52.27	325	P	P	09 02 59.1	-0.3
PETK	Petropavlovsk-	55.08	22	P	P	09 03 19.9	+0.3
	comp=Z,6.3nm,0.8s,baz=194,slow=5.4,SNR=11						
MK31	Makanchi Array	57.10	325	P	P	09 03 34.2	0.0
MK31				IAmb	IAmb	09 03 35.4	
	comp=Z,16nm,0.9s						
MKAR	Makanchi Array	57.10	325	P	P	09 03 34.0	-0.3
	comp=Z,12nm,0.4s,baz=120,slow=7.2,SNR=200						
MKAR				ScP	ScP	09 08 22.7	+4.0
	comp=Z,2.0nm,0.9s,baz=134,slow=4.2,SNR=3.4						
PRZ	Przheval'sk	57.27	319	P	P	09 03 35.8	+0.1
MAKZ	Makanchi	57.29	325	P	P	09 03 35.3	-0.2
NIL	Nilore	57.53	308	P	P	09 03 37.2	-0.4
KSH	Kashi	57.62	315	P	P	09 03 39.8	+1.6
KSH				PcP	PcP	09 04 32.2	+1.9
KSH				S	S	09 11 27.2	-1.7
KSH				ScS	ScS	09 13 14.8	-3.6
KSH				SS	SS	09 15 22.4	+1.8
KSH				pmax	pmax		
	comp=Z,42nm,1.0s						
KSH				pmax	pmax		
	comp=Z,150nm,4.9s						
KSH				LR	LR		
	comp=Z,220nm,6.4s						
KSH				LR	LR		
	comp=Z,120nm,5.8s						
YAK	Yakutsk	57.77	2	P	P	09 03 38.3	-0.3
KDJ	Kajisay	57.91	318	P	P	09 03 40.0	-0.2
KDJ				IAmb	IAmb	09 03 41.9	
	comp=Z,21nm,1.1s						
MA2	Magadan	58.31	14	P	P	09 03 43.0	+0.6
	comp=Z,4.0nm,0.8s,baz=331,slow=23,SNR=3.8						
MA2	Magadan	58.31	14	P	P	09 03 42.7	+0.3
MA2				IAmb	IAmb	09 03 56.6	
	comp=Z,8.1nm,1.0s						
BOOM	Boomskoye usch	58.90	318	P	P	09 03 46.6	-0.5
BOOM				IAmb	IAmb	09 03 49.2	
	comp=Z,6.4nm,0.9s						
KZA	Kyzart	59.19	317	P	P	09 03 49.9	+0.5
	SNR=16						
TKM2	Tokmak 2	59.31	318	P	P	09 03 50.0	+0.1
	SNR=13						
KBK	Karagaybulak	59.63	318	P	P	09 03 53.1	+1.0
	SNR=7.9						
UCH	Uchtor	59.74	317	P	P	09 03 54.3	+1.1
	SNR=23						
AAK	Ala-Archa	59.93	318	P	P	09 03 54.3	+0.2
AAK				IAmb	IAmb	09 03 57.9	
	comp=Z,9.1nm,1.1s						
ZAA0	Zalesovo Array	60.12	333	P	P	09 03 54.0	-1.0
ZAA0				IAmb	IAmb	09 03 55.4	
	comp=Z,17nm,1.1s						
ZALV	Zalesovo Beam	60.12	333	P	P	09 03 54.0	-1.0
	comp=Z,4.0nm,0.4s,baz=125,slow=7.4,SNR=20						
USP	Ospenovka	60.19	318	P	P	09 03 55.7	0.0
	SNR=15						
AML	Almayashu	60.26	317	P	P	09 03 57.1	+0.4
	SNR=21						
EKS2	Erkin-Say	60.42	317	P	P	09 03 57.1	-0.3
	SNR=11						
ARSB	Arslanbob	60.44	316	P	P	09 03 58.3	+0.7
ARSB				IAmb	IAmb	09 03 59.7	
	comp=Z,10nm,0.9s						
KBL	Kabul	61.13	307	P	P	09 04 02.2	-0.3
KBL				IAmb	IAmb	09 04 03.3	
	comp=Z,8.4nm,0.8s						
KURK	Kurchatov	61.28	327	P	P	09 04 02.8	-0.1
GAR	Garm	61.51	313	P	P	09 04 05.1	+0.3
SEY	Seymchan	61.63	13	P	P	09 04 05.3	+0.3
	comp=Z,6.8nm,1.1s,baz=215,slow=6.0,SNR=17						
CHGR	Chuyangaron	62.26	312	P	P	09 04 09.2	-0.7
CHGR				IAmb	IAmb	09 04 13.4	
	comp=Z,12nm,0.7s						
KK31	Karatay Array	62.80	317	P	P	09 04 13.2	-0.1
KK31				IAmb	IAmb	09 04 15.1	
	comp=Z,8.7nm,0.9s						
KKAR	Karatay Array	62.80	317	P	P	09 04 13.2	-0.1
KKAR				IAmb	IAmb	09 04 15.1	
	comp=Z,8.7nm,0.9s						
URZ	Urewera	62.97	137	P	P	09 04 14.8	+0.4
	comp=Z,3.4nm,0.7s,baz=21,slow=19,SNR=2.4						
URZ	Urewera	62.97	137	IAmb	IAmb	09 04 26.1	
	comp=Z,19nm,1.4s						
BRVK	Borovoye	66.94	327	P	P	09 04 39.8	0.0
BRVK				IAmb	IAmb	09 04 41.0	
	comp=Z,32nm,0.8s						
NRIK	Noril'sk	69.96	346	P	P	09 04 58.4	0.0
	comp=Z,12nm,0.5s,baz=121,slow=6.5,SNR=26						
GEYT	Alibeck	70.50	309	P	P	09 05 00.9	-1.4
	comp=Z,4.0nm,0.8s,baz=160,slow=4.6,SNR=7.8						
GYA0B	ALIBECK ARRAY	70.50	309	P	P	09 05 00.5	-1.9
CASY	Casey	71.24	187	P	P	09 05 07.8	+1.6
CASY				IAmb	IAmb	09 05 09.2	
	comp=Z,13nm,1.2s						
ABKAR	Akbulak array	71.71	321	P	P	09 05 09.7	+0.3
ABKAR				IAmb	IAmb	09 05 11.2	
	comp=Z,14nm,0.8s						
ARU	Arti	74.48	328	P	P	09 05 24.6	-0.9
RAYN	Ar Rayn	80.17	293	P	P	09 05 57.9	-0.2
KDAK	Kodiak Island	81.59	32	P	P	09 06 04.3	-0.6
KDAK				IAmb	IAmb	09 06 19.7	
	comp=Z,7.8nm,0.6s						
AKH	Akhalkalaki	82.07	311	P	P	09 06 09.2	+1.2
KBZ	Khabaz	82.56	313	P	P	09 06 10.2	0.0
	comp=Z,1.7nm,0.8s,baz=152,slow=9.7,SNR=5.0						
BPAW	Bear Paw Mtn.	82.95	26	P	P	09 06 12.5	+0.6
MLY	Manley	83.14	25	P	P	09 06 12.9	0.0
PMR	Palmer	83.63	29	P	P	09 06 15.7	+0.3
MCK	McKinley	83.83	26	P	P	09 06 16.9	+0.5
MCK				IAmb	IAmb	09 06 34.3	
	comp=Z,9.3nm,1.0s						
RND	Reindeer	83.85	27	P	P	09 06 16.7	+0.1
VNDA	Vanda	83.89	173	P	P	09 06 15.4	-0.9
	comp=Z,0.8nm,0.5s,baz=290,slow=3.0,SNR=4.5						
VNDA				LR	LR	09 41 44.3	
	comp=Z,1μm,21.0s,baz=210,slow=34						
TOLK	Toolik Lake Re	83.89	21	P	P	09 06 17.8	+1.2
SML	Sawmill	84.02	28	P	P	09 06 18.1	+0.7
SML				IAmb	IAmb	09 06 32.3	
	comp=Z,8.2nm,0.8s						
MAW	Mawson	84.12	200	P	P	09 06 16.2	-1.5
	comp=Z,2.9nm,0.7s,baz=32,slow=2.1,SNR=3.9						
MAW	Mawson	84.12	200	P	P	09 06 18.9	+1.3
CCB	Clear Creek Bu	84.37	26	P	P	09 06 18.9	-0.2
GLI	Glacier Island	84.58	29	P	P	09 06 19.8	-0.4
GLI				IAmb	IAmb	09 06 32.6	
	comp=Z,7.7nm,0.7s						
HDA	Harding Lake	84.73	26	P	P	09 06 21.0	+0.1
ILAR	Eielson Array	84.77	25	P	P	09 06 21.8	+0.7
	comp=Z,0.5nm,0.7s,baz=238,slow=5.2,SNR=8.7						
FID	Port Fidalgo	84.89	29	P	P	09 06 21.7	0.0
KLMR	Klimovskoe	84.94	331	eP	P	09 06 19.3	-2.7
KLMR				AMP		09 06 23.5	
	comp=Z,68nm,0.9s						
OBN	Obninsk	86.61	325	⇓P	P	09 06 30.2	-0.2
OBN	Obninsk	86.61	325	P	P	09 06 29.5	-0.8
GAZ	Gaziantep	87.00	307	P	P	09 06 33.0	+0.2
GAZ				IAmb	IAmb	09 06 34.7	
	comp=Z,33nm,1.5s						
BR131	Keskin Array S	89.62	310	P	P	09 06 44.6	-0.7
BR131				IAmb	IAmb	09 06 47.6	
	comp=Z,6.6nm,0.9s						
BRTR	Keskin Array B	89.62	310	P	P	09 06 44.2	-1.0
	comp=Z,4.6nm,0.9s,baz=111,slow=5.4,SNR=18						
ARCES	ARCESS Array B	89.98	340	P	P	09 06 45.3	-0.7
	comp=Z,4.3nm,0.8s,baz=86,slow=5.9,SNR=18						
FINES	FINESS Array B	91.37	332	P	P	09 06 51.8	-0.9
	comp=Z,2.8nm,0.8s,baz=97,slow=2.1,SNR=11						
AKASG	Malin Array Be	91.45	321	P	P	09 06 52.7	-0.6
	comp=Z,5.9nm,0.8s,baz=69,slow=4.3,SNR=21						
AKBB	Malin Array Si	91.45	321	P	P	09 06 52.6	-0.7
AKBB				IAmb	IAmb	09 06 53.7	
	comp=Z,12nm,1.1s						
SYO	Syowa Base	92.78	201	⇑epP	pP	09 07 23.0	-1.3
SYO	Syowa Base	92.78	201	⇑esP	sP	09 07 33.2	-1.4
C36M	Paulatuk	92.84	20	P	P	09 06 59.4	+0.1
CFR	Carcaliu	93.00	316	⇑P	P	09 07 00.2	-0.3
GHRR		93.37	316	⇑P	P	09 06 57.0	-5.2
TESR	Tescani	93.81	317	⇑P	P	09 07 04.7	+0.5
VRI	Vrincioaia	93.87	316	⇑P	P	09 07 04.0	-0.6
PLOR	Plostina	93.92	316	⇓P	P	09 07 05.5	+0.7
BIZ	Bicaz	94.10	318	⇑P	P	09 07 06.2	+0.6
MLR	Muntele Rosu	94.48	316	⇑P	P	09 07 07.8	+0.3
MLR	Muntele Rosu	94.48	316	P	P	09 07 07.9	+0.4
BURAR	Bucovina Array	94.57	318	⇓P	P	09 07 07.7	-0.2
BUR08	Bucovina Ar. S	94.58	318	P	P	09 07 08.2	+0.3
BUR08				IAmb	IAmb	09 07 09.9	
	comp=Z,12nm,1.1s						
ARR	Arges	95.41	316	⇑P	P	09 07 11.5	-0.2
DRGR		96.41	318	⇑P	P	09 07 16.9	+0.6
DEV	Deva	96.48	317	⇑P	P	09 07 16.8	+0.3
BAIL	Bailesti	96.58	315	⇑P	P	09 07 10.1	-6.9
GZR	Gura Zlata	96.68	316	⇓P	P	09 07 32.2	+15
DAG	Danmarks Havn	96.79	352	i P	P	09 07 16.4	-0.8
	comp=Z,5.1nm,0.9s						
HERR	Herculane	97.04	316	⇓P	Pdif	09 07 19.3	+0.1
SIRR	Siria	97.24	317	⇓P	Pdif	09 07 20.7	+0.6
BZS	Buzias	97.42	317	⇑P	Pdif	09 07 20.8	0.0
NB2	NORSAR Subarra	98.32	334	P	Pdif	09 07 23.4	-1.1
	comp=Z,0.4nm,0.6s,baz=67,slow=4.6						
NOA	NORSAR Array B	98.32	334	P	P	09 07 22.9	-1.5
	comp=Z,0.7nm,0.7s,baz=66,slow=4.6,SNR=4.8						
VYHS	Vyhne	98.52	320	ePDIFF	Pdif	09 07 26.3	+0.7
YKA	Yellowknife Ar	99.16	24	P	Pdif	09 07 28.0	-0.1
	comp=Z,0.2nm,0.5s,baz=283,slow=9.2,SNR=4.3						
BRG	Berggiesshubel	100.79	323	ePKP	Pdif	09 07 36.5	+0.9
	comp=Z,4.5nm,1.0s						
BRG				e		09 07 45.0	
	comp=Z,4.4nm,0.8s						
GERES	GERESS Array B	101.64	322	P	Pdif	09 07 38.5	-1.2
	comp=Z,1.8nm,0.9s,baz=86,slow=5.5,SNR=10						
ESDC	Sonseca Array	117.02	319	PKP	PKiKP	09 12 31.1	-0.8
	comp=Z,0.1nm,0.4s,baz=107,slow=2.4,SNR=2.3						
SCHQ	Schefferville	120.15	9	PKP	PKiKP	09 12 37.4	-0.1
	comp=Z,1.4nm,0.4s,baz=347,slow=1.8,SNR=5.2						
SCHQ	Schefferville	120.15	9		PKPdf	09 12 36.1	-1.3
TXAR	Lajitas Array	121.44	52	PKP	PKiKP	09 12 40.6	-0.3
	comp=Z,0.5nm,0.7s,baz=226,slow=0.8,SNR=9.4						
TORD	Torodi Ar. Bea	122.64	288	PKP	PKiKP	09 12 43.0	-0.5
	comp=Z,2.2nm,0.6s,baz=82,slow=1.8,SNR=21						
JCT	Junction City	123.88	49		PKiKP	09 12 45.6	0.0
U38A	Gravette	124.37	40		PKiKP	09 12 46.3	-0.1
R40A	Maddies Statio	124.51	37		PKiKP	09 12 46.7	+0.1
U40A	Yellville	125.39	39		PKiKP	09 12 48.2	-0.2
KIC	Kosan Boka	130.28	282	ePKIKP	PKiKP	09 12 59.7	+0.9
	comp=Z,5.2nm,0.6s						
TIC	Toumodi	130.50	282	ePKIKP	PKiKP	09 12 59.9	+0.7
LIC	Lamto	130.59	282	ePKIKP	PKiKP	09 13 00.2	+0.8
	comp=Z,12nm,0.7s						

WEL 04 08:55:59.0, 37°S±4°×17°7E±°, h12km, M3.4/18, ML3.6/18, MLv3.4/18, Error ellipse: s-maj=0.0km s-min=0.0km az=0.3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	White Island	0.69	180	P	Pb	08 56 13.5	+0.5
WIZ				S	Sb	08 56 23.7	+1.3
WHRZ	Whale Island	1.03	189	P	Pn	08 56 22.5	+3.1
HAZ	Te Kaha	1.03	153	P	Pb	08 56 17.9	-0.9
OPRZ	Ohinepanea	1.12	206	P	Pb	08 56 20.3	-0.1
MXZ	Matakaoa Point	1.15	129	P	Pb	08 56 19.7	-1.2
MXZ				S	Sb	08 56 35.6	-0.2
TGRZ	Tauranga	1.16	219	P	Pb	08 56 20.8	-0.2
KUZ	Kuaotunu	1.18	274	P	Pn	08 56 20.4	-0.9
KUZ				S	Sb	08 56 36.1	-0.5
RUGZ	Raukumara Rang	1.19	161	P	Pn	08 56 21.1	-0.6
RUGZ				S	Sb	08 56 36.1	-1.0
MARZ	Manawahe	1.22	199	P	Pn	08 56 21.6	-0.3
PKGZ	Pakihiroa	1.27	146	P	Pn	08 56 21.8	-0.8
EDRZ	Edgecumbe	1.32	196	P	Pg	08 56 28.4	+4.0
LIRZ	Lichensteins R	1.33	208	P	Pb	08 56 24.2	+0.3
WMGZ	Waiomatatini S	1.39	135	P	Pb	08 56 25.2	+0.3
KARZ	Kaharoa	1.40	212	P	Pn	08 56 24.6	+0.2
KMRZ	Kaimai	1.41	224	P	Pb	08 56 25.1	-0.3
MKRZ	Makatiti	1.42	204	P	Pg	08 56 29.9	+3.6
URZ	Urewera	1.42	182	P	Pn	08 56 24.7	0.0
OMRZ	Omania	1.42	207	P	Pg	08 56 30.0	+3.5
NGRZ	Ngongotaha	1.49	212	P	Pg	08 56 33.4	+5.7
PUZ	Puketiti	1.50	146	P	Pb	08 56 27.3	+0.5
GRZ	Great Barrier	1.51	292	P	Pn	08 56 25.4	-0.5
MWZ	Matawai	1.52	170	P	Pn	08 56 25.7	-0.4
UTU	Utuhina	1.55	210	P	Pg	08 56 33.0	+4.1
TOZ	Tahuroa Road	1.61	236	P	Pn	08 56 27.5	+0.2
MKAZ	Moumakai	1.64	260	P	Pn	08 56 27.7	0.0
WIAZ	Waiheke Island	1.65	271	P	Pn	08 56 27.8	0.0
RAGZ	Rawiri	1.67	174	P	Pn	08 56 28.3	+0.2
MUGZ	Murupara	1.67	191	P	Pn	08 56 28.1	0.0
TKGZ	Te Karaka	1.68	162	P	Pb	08 56 29.8	-0.1
RTZ	Ruatahuna	1.78	185	P	Pn	08 56 29.9	+0.1
ETAZ	East Tamaki Re	1.81	266	P	Pn	08 56 30.4	+0.4
CNGZ	Carnagh Statio	1.83	154	P	Pb	08 56 32.9	+0.4
MBAZ	Motutapu North	1.84	271	P	Pn	08 56 30.6	+0.2
KBAZ	Karaka Road Bo	1.86	261	P	Pb	08 56 32.5	-0.4
ABAZ	Army Bay	1.91	276	P	Pn	08 56 32.1	+0.8
RIGZ	Rimuhau	1.92	166	P	Pb	08 56 34.1	+0.1
SNGZ	Shannon Statio	1.95	176	P	Pn	08 56 33.2	+1.3
EPAZ	Eden Park BICE	1.96	268	P	Pn	08 56 33.3	+1.2
HBAZ	Herne Bay Bore	1.97	269	P	Pb	08 56 33.5	-1.3
KUTZ	Kaahu Road	1.97	213	P	Pn	08 56 32.9	+0.6
TLZ	Tolley Road	1.98	221	P	Pn	08 56 32.9	+0.5
MTHZ	Maungataniwha	2.03	188	P	Pn	08 56 34.1	+1.0
AWAZ	Awhitu Peninsu	2.05	263	P	Pn	08 56 34.0	+0.7
RAHZ	Arahi	2.08	182	P	Pb	08 56 35.7	-1.0
RVAZ	Riverhead Bore	2.09	271	P	Pn	08 56 34.8	+0.9
WTAZ	Waiatarua	2.10	267	P	Pn	08 56 34.8	+0.9
KNZ	Kokohu	2.22	170	P	Pb	08 56 37.4	-1.6
NMHZ	Naumai	2.28	187	P	Pb	08 56 40.1	0.0
RITZ	Rihia Road	2.38	206	P	Pg	08 56 44.6	-0.1
BKZ	Black Stump Fm	2.39	193	P	Pn	08 56 39.5	+1.5
WCZ	Waipu Caves	2.46	291	P	Pn	08 56 39.1	+0.1
HIZ	Hauiti	2.49	227	P	Pn	08 56 40.3	+0.9
KRVZ	Karewarewa	2.56	208	P	Pg	08 56 47.3	-0.9
MCHZ	McNeill Hill	2.63	188	P	Pb	08 56 44.5	-1.6
NGZ	Ngauruhoe	2.65	208	P	Pb	08 56 47.7	+1.2
KWHZ	Kaweka Forest	2.65	193	P	Pb	08 56 44.4	-2.1
FWVZ	Far West T-bar	2.74	208	P	Pb	08 56 48.6	+0.6
WHVZ	Whangaehu Hut	2.75	207	P	Pb	08 56 48.7	+0.5
TRVZ	Turoa	2.78	207	P	Pb	08 56 48.8	+0.1
BHHZ	Black Hill Sta	2.79	198	P	Pb	08 56 47.2	-1.7
MOVZ	Moawhango	2.80	203	P	Pb	08 56 47.9	-1.2
KRHZ	Kereru	2.88	193	P	Pn	08 56 47.1	+2.4
MTVZ	Mangateitei	2.88	207	P	Pb	08 56 50.2	-0.2
KAHZ	Kahuranaki	2.96	185	P	Pn	08 56 48.4	+2.5
VRZ	Vera Road	2.98	219	P	Pn	08 56 47.8	+1.6
OUZ	Omahuta	3.33	298	P	Pn	08 56 51.2	+0.3
TSZ	Takapari Road	3.36	196	P	Pn	08 56 53.4	+2.1
WAZ	Wanganui	3.39	210	P	Pb	08 56 56.2	-2.8
LREZ	Lake Rotokare	3.42	219	P	Pn	08 56 54.9	+2.8
BFZ	Birch Farm	3.91	191	P	Pn	08 57 00.1	+1.3
MRZ	Mangatainoka R	4.02	198	P	Pn	08 57 01.9	+1.5
HOWZ	Holdsworth Sta	4.26	197	P	Pn	08 57 04.6	+0.9
DUWZ	D'Urville Isla	4.71	212	P	Pn	08 57 15.7	+5.8
NNZ	Nelson	5.28	213	P	Pn	08 57 21.5	+3.8
THZ	Tophouse	5.93	213	P	Pn	08 57 27.9	+1.1
KHZ	Kahutara	6.24	206	P	Pn	08 57 35.1	+4.2
LTZ	Lake Taylor	7.04	211	P	Pn	08 57 48.9	+7.0

IDC ***04*** *09:07:50.3±0.6, 16°68N×124°49E, h0km, mb4.1/24, mb1 4.2/24, mb1mx4.1/50, mbtmp4.1/24, ML3.0/1, Error ellipse: s-maj=20.9km s-min=13.4km az=85.0*

MAN ***04*** *09:07:54.1, 16°73N×124°41E, h32km, mb5.1, ML4.1, MS4.2*

NEIC ***04*** *09:07:54.9±1.4, 16°70N±0°09×124°6E±0°1, h28km±4km, mb4.4/39, Error ellipse: s-maj=17.2km s-min=12.9km az=76.0*

ISC 04 09:07:55.7±0.4**, 16°70N**±0°04×**124°52E**±0°05**, h35km, n99,** σ**1$73**/106**, mb4.3**/45**, 1C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	2.04	281	eP	Pn	09 08 24.1	-3.4
PALP				eS	Sn	09 08 45.7	-6.1
CAUP	Cauayan	2.59	276	eP	Pn	09 08 34.0	-1.2
CAUP				eS	Sn	09 09 06.0	+0.5
BALP	Baler	2.98	252	eP	Pn	09 08 36.9	-3.7
BALP				eS	Sn	09 09 10.3	-4.8
PVCP	Virac	3.11	187	eP	Pn	09 08 40.7	-1.5
PVCP				eS	Sn	09 09 15.9	-2.2
POLP	Polilio Island	3.17	232	eP	Pn	09 08 40.9	-2.1
POLP				eS	Sn	09 09 17.8	-1.7
APYP	Conner	3.34	291	eP	Pn	09 08 43.3	-2.0
APYP				eS	Sn	09 09 21.2	-2.6
GQP	Guinayangan	3.42	216	⇓eP	Pn	09 08 47.4	+0.8
GQP				eS	Sn	09 09 25.6	-0.3
PCPH	Palayan	3.48	252	⇑eP	Pn	09 08 44.5	-2.8
PCPH				eS	Sn	09 09 24.5	-2.9
SMPP	San Manuel, Pa	3.73	262	eP	Pn	09 08 48.3	-2.5
SMPP				eS	Sn	09 09 30.3	-3.2
ABRA	Dolores	3.76	285	eP	Pn	09 08 49.1	-2.1
ABRA				eS	Sn	09 09 32.7	-1.6
LQP	Lukban	3.86	229	eP	Pn	09 08 53.0	+0.3
LQP				eS	Sn	09 09 38.3	+1.3
BOAC	Boac	4.13	219	eP	Pn	09 08 56.5	+0.2
BOAC				eS	Sn	09 09 42.8	-0.6
CNP	Catarman	4.17	178	eP	Pn	09 08 57.7	+1.0
BOLP	Bolinao	4.43	267	eP	Pn	09 09 00.5	+0.1
BOLP				eS	Sn	09 09 52.7	+1.9
OTRP	Odiongan	4.95	210	eP	Pn	09 09 07.0	-0.4
SJMP	San Jose	5.35	218	eP	Pn	09 09 14.2	+1.2
TWG	Pinlang	6.90	332	Pn	Pn	09 09 35.3	+1.0
YULB	Yu-li	7.32	336		Pn	09 09 36.4	-3.7
TPUB	Ta-pu	7.52	332	Pn	Pn	09 09 42.7	-0.2
SSLB	Suanglung	7.81	335		Pn	09 09 47.5	+0.6
YOJ	Yonaguni jima	7.85	350	Pn	Pn	09 09 44.6	-2.8
NACB	Ninganchiao	7.93	340	Pn	Pn	09 09 45.1	-3.3
YHNB	Yeheng	8.46	340		Pn	09 09 54.4	-1.4
JOW	Kunigami	10.67	18	Pn	Pn	09 10 24.5	-1.6
	0.2nm,0.3s,baz=27,slow=12,SNR=5.2						
SBUM	Sibu	18.62	222	P	Pn	09 12 12.3	+1.4
TIA	Tai'an	20.52	343	P	Pn	09 12 31.5	-1.7
TIA				pmax	pmax		
	comp=Z,32nm,0.8s						
KSM	Kuching	20.61	224	P	Pn	09 12 36.5	+2.1
KSRS	Korea Array	20.89	8	P	P	09 12 35.2	+0.3
	comp=Z,24nm,0.8s,baz=190,slow=11,SNR=53						
KS19	Wonju Array Si	20.93	7	P	P	09 12 35.4	0.0
XAN	Xi'an	22.24	324	P	P	09 12 50.8	+1.4
MJAR	Matsushiro Arr	23.20	29	P	P	09 12 57.7	-1.7
	comp=Z,3.2nm,1.1s,baz=225,slow=10,SNR=7.6						
BJT	Baijiatuau	24.34	344	P	P	09 13 10.1	-0.2
BJT				IAmb	IAmb	09 13 11.1	
	comp=Z,15nm,1.0s						
CMAR	Chiang Mai Arr	24.44	278	P	P	09 13 11.7	+0.3
	comp=Z,1.0nm,0.3s,baz=76,slow=9.1,SNR=4.3						
HHC	Hu-ho-hao-te	26.55	338	eP	P	09 13 32.8	+2.5
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,43nm,5.1s						
USRK	Ussuriysk Ar.	28.13	11	P	P	09 13 45.3	+1.0
	comp=Z,2.5nm,0.9s,baz=218,slow=11,SNR=4.4						
ULN	Ulaanbaatar	34.24	339	P	P	09 14 37.9	-0.4
ULN				IAmb	IAmb	09 14 39.5	
	comp=Z,8.4nm,1.1s						
SONM	Songino Array	34.44	338	P	P	09 14 40.3	+0.2
	comp=Z,3.6nm,1.0s,baz=161,slow=9.0,SNR=16						
SONM				PcP	PcP	09 17 14.5	-0.4
	comp=Z,0.4nm,0.5s,baz=180,slow=2.6,SNR=2.6						
WB0	Warramunga Arr	37.52	165	P	P	09 15 05.6	-0.8
WB0				IAmb	IAmb	09 15 17.5	
	comp=Z,4.6nm,1.1s						
WRA	Warramunga Arr	37.67	165	P	P	09 15 07.0	-0.7
	comp=Z,2.6nm,0.8s,baz=344,slow=9.7,SNR=16						
WB2	Warramunga Arr	37.67	165	P	P	09 15 05.8	-2.0
WR0	Warramunga Arr	37.74	164	P	P	09 15 06.7	-1.6
WR0				IAmb	IAmb	09 15 08.4	
	comp=Z,4.3nm,0.8s						
H11S3	WAKE ISLAND Hy	40.17	81	T	T	09 58 12.3	
	baz=274,slow=74,SNR=167						
H11S1	WAKE ISLAND Hy	40.18	81	T	T	09 58 17.1	
	baz=274,slow=74,SNR=20						
H11S2	WAKE ISLAND Hy	40.19	81	T	T	09 58 12.1	
	baz=274,slow=74,SNR=26						
H11N1	WAKE ISLAND Hy	40.29	79	T	T	09 58 31.4	
	baz=271						
H11N2	WAKE ISLAND Hy	40.29	79	T	T	09 58 31.7	
	baz=271						
H11N3	WAKE ISLAND Hy	40.30	79	T	T	09 58 32.8	
	baz=271						
AS31	Alice Springs	41.15	167	P	P	09 15 36.9	+0.2
ASAR	Alice Springs	41.15	167	P	P	09 15 37.0	+0.2
	comp=Z,2.9nm,0.7s,baz=348,slow=6.6,SNR=54						
ASAR				PcP	PcP	09 17 35.6	-0.1
	comp=Z,0.6nm,0.7s,baz=354,slow=2.9,SNR=4.6						
WMQ	Urumqi	41.21	319	eP	P	09 15 39.2	+2.0
WMQ				pP	pP	09 15 46.8	+0.2
WMQ				LR	LR		
	comp=N,410nm,28.9s						
WMQ				LR	LR		
	comp=E,760nm,29.2s						
WMQ				LR	LR		
	comp=Z,1μm,21.9s						

PETK	**Petropavlovsk-**	**44.65**	**28**	P	**P**	**09 16 05.0**	**+0.3**
	comp=Z,3.7nm,0.9s,baz=202,slow=11,SNR=5.3						
MK31	**Makanchi Array**	**45.97**	**320**	P	**P**	**09 16 15.7**	**+0.3**
MK31				IAmb	IAmb	09 16 16.5	
	comp=Z,5.3nm,1.2s						
MKAR	**Makanchi Array**	**45.97**	**320**	P	**P**	**09 16 15.8**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=110,slow=9.5,SNR=20						
MAKZ	**Makanchi**	**46.17**	**320**	P	**P**	**09 16 15.2**	**-1.7**
MAKZ				IAmb	IAmb	09 16 18.1	
	comp=Z,8.6nm,1.3s						
MA2	**Magadan**	**46.90**	**18**	P	**P**	**09 16 22.1**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=308,slow=20,SNR=3.0						
MA2	**Magadan**	**46.90**	**18**	P	**P**	**09 16 21.3**	**-1.1**
MA2				IAmb	IAmb	09 16 23.4	
	comp=Z,3.7nm,0.9s						
KDJ	**Kajisay**	**47.63**	**312**	P	**P**	**09 16 29.1**	**+0.5**
KDJ				IAmb	IAmb	09 16 37.2	
	comp=Z,5.3nm,1.3s						
KSH	**Kashi**	**47.80**	**308**	P	**P**	**09 16 33.3**	**+3.4**
KSH				PP	**PP**	**09 18 22.9**	**+1.0**
KSH				S	**S**	**09 23 31.3**	**+6.8**
KSH				pmax	pmax		
	comp=Z,14nm,1.2s						
KSH				pmax	pmax		
	comp=Z,150nm,4.5s						
KURK	**Kurchatov**	**49.88**	**323**	P	**P**	**09 16 45.1**	**-0.4**
SEY	**Seymchan**	**50.09**	**16**	P	**P**	**09 16 47.7**	**+0.8**
	comp=Z,1.7nm,0.6s,baz=210,slow=5.0,SNR=13						
STKA	**Stephens Creek**	**51.00**	**161**	P	**P**	**09 16 54.7**	**+0.5**
	comp=Z,2.3nm,1.0s,baz=10,slow=17,SNR=2.8						
STKA	**Stephens Creek**	**51.00**	**161**	IAmb	IAmb	09 17 00.5	
	comp=Z,0.7nm,1.4s						
GAR	**Garm**	**51.99**	**307**	P	**P**	**09 17 02.0**	**+0.2**
KK31	**Karatay Array**	**52.63**	**312**	P	**P**	**09 17 06.8**	**+0.4**
KKAR	**Karatay Array**	**52.63**	**312**	P	**P**	**09 17 07.0**	**+0.6**
BRVK	**Borovoye**	**55.55**	**324**	P	**P**	**09 17 27.6**	**+0.2**
NRIK	**Noril'sk**	**57.40**	**345**	P	**P**	**09 17 40.8**	**+0.5**
	comp=Z,11nm,0.9s,baz=133,slow=6.9,SNR=19						
BILL	**Bilibino**	**57.76**	**17**	P	**P**	**09 17 42.8**	**-0.1**
BILL				IAmb	IAmb	09 17 44.1	
	comp=Z,5.8nm,0.9s						
ATKA	**Atka Island**	**59.44**	**39**	P	**P**	**09 17 54.4**	**-0.4**
ABKAR	**Akbulak array**	**60.97**	**317**	P	**P**	**09 18 05.7**	**+0.4**
ABKAR				IAmb	IAmb	09 18 06.3	
	comp=Z,2.4nm,0.7s						
GEYT	**Alibeck**	**61.43**	**304**	P	**P**	**09 18 09.5**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=236,slow=10,SNR=3.5						
OHAK	**Old Harbor**	**71.91**	**35**	P	**P**	**09 19 15.6**	**+0.4**
KBZ	**Khabaz**	**72.67**	**311**	P	**P**	**09 19 19.5**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=115,slow=2.1,SNR=3.8						
BPAW	**Bear Paw Mtn.**	**72.72**	**27**	P	**P**	**09 19 20.9**	**+0.9**
BPAW				IAmb	IAmb	09 19 21.7	
	comp=Z,5.3nm,1.0s						
MLY	**Manley**	**72.79**	**26**	P	**P**	**09 19 21.8**	**+1.4**
MLY				IAmb	IAmb	09 19 22.2	
	comp=Z,2.9nm,0.8s						
MCK	**McKinley**	**73.65**	**28**	P	**P**	**09 19 24.9**	**-0.6**
MCK				IAmb	IAmb	09 19 26.3	
	comp=Z,6.0nm,0.9s						
RND	**Reindeer**	**73.72**	**28**	P	**P**	**09 19 26.7**	**+0.8**
RND				IAmb	IAmb	09 19 37.7	
	comp=Z,5.3nm,1.4s						
PMR	**Palmer**	**73.74**	**30**	P	**P**	**09 19 26.2**	**+0.3**
PMR				IAmb	IAmb	09 19 30.5	
	comp=Z,3.6nm,1.3s						
HLK	**Haleakala**	**74.44**	**73**	P	**P**	**09 19 30.8**	**-0.4**
ILAR	**Eielson Array**	**74.45**	**26**	P	**P**	**09 19 30.5**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=245,slow=6.7,SNR=5.9						
RIDG	**Independent Ri**	**75.46**	**27**	P	**P**	**09 19 36.2**	**+0.2**
RIDG				IAmb	IAmb	09 19 37.9	
	comp=Z,8.8nm,1.4s						
SCRK	**Sand Creek**	**75.80**	**27**	P	**P**	**09 19 37.7**	**-0.3**
DOT	**Dot Lake**	**75.82**	**27**	P	**P**	**09 19 38.2**	**+0.2**
DOT				IAmb	IAmb	09 19 38.9	
	comp=Z,3.7nm,1.0s						
GLB	**Gilahina Butte**	**76.29**	**30**	P	**P**	**09 19 40.5**	**-0.2**
GLB				IAmb	IAmb	09 19 41.6	
	comp=Z,5.5nm,1.2s						
BARN	**Barnard Glacie**	**77.38**	**30**	P	**P**	**09 19 48.1**	**+1.0**
BARN				IAmb	IAmb	09 19 48.8	
	comp=Z,3.5nm,0.8s						
CTGM	**Chitina Glacie**	**77.56**	**30**	P	**P**	**09 19 49.9**	**+1.9**
CTGM				IAmb	IAmb	09 19 50.2	
	comp=Z,2.7nm,0.7s						
ARCES	**ARCESS Array B**	**77.61**	**339**	P	**P**	**09 19 48.6**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=57,slow=8.8,SNR=4.6						
EPYK	**Eagle Plains**	**78.32**	**24**	P	**P**	**09 19 52.1**	**+0.1**
EPYK				IAmb	IAmb	09 20 01.4	
	comp=Z,4.1nm,1.3s						
INK	**Inuvik**	**78.97**	**22**	P	**P**	**09 19 55.6**	**+0.2**
	comp=Z,2.1nm,1.1s,baz=290,slow=7.6,SNR=5.8						
INK	**Inuvik**	**78.97**	**22**	P	**P**	**09 19 55.7**	**+0.3**
FINES	**FINESS Array B**	**79.47**	**331**	P	**P**	**09 19 56.9**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=310,slow=7.2,SNR=3.9						
BRTR	**Keskin Array B**	**80.19**	**309**	P	**P**	**09 20 02.6**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=20,slow=4.6,SNR=2.2						
AKASG	**Malin Array Be**	**80.55**	**320**	P	**P**	**09 20 02.7**	**-1.7**
	comp=Z,1.7nm,0.8s,baz=60,slow=5.1,SNR=4.8						
RES	**Resolute Bay**	**85.49**	**10**	P	**P**	**09 20 30.0**	**+0.5**
	comp=Z,3.8nm,0.8s,baz=317,slow=4.2,SNR=14						
RES	**Resolute Bay**	**85.49**	**10**	P	**P**	**09 20 29.5**	**0.0**
NOA	**NORSAR Array B**	**86.28**	**333**	P	**P**	**09 20 33.0**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=188,slow=18,SNR=3.4						
YKA	**Yellowknife Ar**	**88.59**	**23**	P	**P**	**09 20 44.2**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=295,slow=4.5,SNR=4.0						
TXAR	**Lajitas Array**	**114.75**	**46**	PKP	PKPdf	09 26 33.2	-0.1
	comp=Z,0.2nm,0.8s,baz=190,slow=1.6,SNR=2.4						
TORD	**Torodi Ar. Bea**	**116.20**	**294**	PKP	**PKiKP**	**09 26 35.4**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=46,slow=4.2,SNR=1.9						

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*IDC **04** 09:10:29.6±5.7, 68.28N×163.96W, h0km, mb3.3/4, mb1 3.9/6, mb1mx3.4/52, mbtmp3.5/6, ML3.8/2, Error ellipse: s-maj=94.9km s-min=65.4km az=132.0*

*AEIC **04** 09:10:36±0.9, 67.66N±0.04×162.3W±0.1, h9km±6km, ML3.1, Error ellipse: s-maj=7.6km s-min=4.3km az=122.0*

*NEIC **04** 09:10:38.6±1.0, 67.74N±0.09×162.4W±0.2, h29km±7km, Error ellipse: s-maj=13.8km s-min=8.7km az=144.0*

ISC 04 09:10:36.9±0.8**, 67.72N**±0.06×**162.14W**±0.05**, h10km, n44,** σ**1.60**/51**, mb3.2**/3**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.45**	**319**		**Pg**	**09 10 45.6**	**0.0**
RDOG				Sg	**Sg**	**09 10 52.2**	**+0.7**
ANM	**Nome**	**3.43**	**204**		**Pn**	**09 11 29.9**	**-0.4**
ANM				Sn	**Sn**	**09 12 11.4**	**+0.4**
IM03		**3.74**	**114**		**Pn**	**09 11 35.4**	**+0.8**
IM03					**Sn**	**09 12 20.3**	**+1.6**
COLD	**Coldfoot**	**4.62**	**91**		**Pn**	**09 11 49.1**	**+2.4**
TOLK	**Toolik Lake Re**	**4.78**	**73**		**Pn**	**09 11 51.7**	**+2.8**
TOLK					**Sn**	**09 12 45.5**	**+1.2**
MLY	**Manley**	**5.32**	**115**		**Pn**	**09 11 57.2**	**+0.8**
MLY				Sn	**Sn**	**09 12 57.1**	**-0.4**
TTA	**Tatalina**	**5.45**	**149**		**Pn**	**09 11 58.6**	**+0.4**
TT01	**Tatalina**	**5.47**	**149**		**Pn**	**09 11 58.8**	**+0.4**
CHUM	**Lake Minchumin**	**5.58**	**129**		**Pn**	**09 12 00.7**	**+0.9**
GAMB	**Gambell**	**5.58**	**229**		**Pn**	**09 11 58.9**	**-1.0**
BPAW	**Bear Paw Mtn.**	**5.83**	**123**		**Pn**	**09 12 04.2**	**+0.8**
NEA	**Nenana**	**6.16**	**115**		**Pn**	**09 12 08.8**	**+1.0**
KTH	**Kantishna Hill**	**6.24**	**127**	Pn	**Pn**	**09 12 09.9**	**+0.9**
MDM	**Murphy Dome**	**6.24**	**110**		**Pn**	**09 12 11.0**	**+2.0**
BWN	**Browne**	**6.28**	**119**		**Pn**	**09 12 09.7**	**+0.2**
PPLA	**Purkeypile**	**6.38**	**135**	Pn	**Pn**	**09 12 11.5**	**+0.4**
TCOL	**CIGO, UAF Yank**	**6.42**	**110**		**Pn**	**09 12 13.2**	**+1.9**
COLA	**College**	**6.42**	**110**		**Pn**	**09 12 13.3**	**+1.9**
POKR	**Poker Plat Res**	**6.45**	**107**		**Pn**	**09 12 13.7**	**+1.9**
TRF	**Thorofare Moun**	**6.51**	**126**		**Pn**	**09 12 14.2**	**+1.4**
CCB	**Clear Creek Bu**	**6.57**	**111**		**Pn**	**09 12 14.5**	**+1.1**
WRH	**Wood River Hil**	**6.57**	**113**		**Pn**	**09 12 14.5**	**+1.1**
FYU	**Fort Yukon**	**6.68**	**92**	Pn	**Pn**	**09 12 16.4**	**+1.4**
BM03	**Burnt Mountain**	**6.71**	**84**		**Pn**	**09 12 17.2**	**+1.8**
MCK	**McKinley**	**6.75**	**120**	Pn	**Pn**	**09 12 16.8**	**+0.9**
IL31		**6.83**	**108**		**Pn**	**09 12 18.2**	**+1.3**
ILAR	**Eielson Array**	**6.83**	**108**	Pn	**Pn**	**09 12 17.9**	**+0.9**
	2.7nm,0.3s,baz=303,slow=14,SNR=143						
ILAR				Sn	**Sn**	**09 13 32.9**	**-1.8**
	0.2nm,0.3s,baz=306,slow=23,SNR=4.8						
PS08	**TAPS Pump Stn8**	**6.98**	**110**		**Pn**	**09 12 20.5**	**+1.5**
RND	**Reindeer**	**7.00**	**122**		**Pn**	**09 12 20.4**	**+1.0**
HDA	**Harding Lake**	**7.01**	**111**		**Pn**	**09 12 20.2**	**+0.7**
WAT2	**Susitna Watana**	**7.40**	**124**		**Pn**	**09 12 26.5**	**+1.6**
WAT1	**Susitna Watana**	**7.51**	**124**		**Pn**	**09 12 27.4**	**+1.1**
DHY	**Denali Highway**	**7.71**	**120**		**Pn**	**09 12 30.0**	**+0.7**
SCRK	**Sand Creek**	**8.32**	**108**		**Pn**	**09 12 38.5**	**+1.0**
DOT	**Dot Lake**	**8.48**	**110**		**Pn**	**09 12 40.5**	**+0.8**
BC03		**9.66**	**109**		**Pn**	**09 12 56.0**	**+0.3**
EPYK	**Eagle Plains**	**9.99**	**86**		**Pn**	**09 13 01.6**	**+1.3**
INK	**Inuvik**	**10.69**	**74**	Pn	**Pn**	**09 13 09.7**	**-0.1**
	0.3nm,0.3s,baz=291,slow=13,SNR=14						
INK				Sn	**Sn**	**09 15 03.1**	**-6.3**
	0.2nm,0.3s,baz=39,slow=19,SNR=3.6						
INK	**Inuvik**	**10.69**	**74**	Pn	**Pn**	**09 13 10.4**	**+0.6**
YKA	**Yellowknife Ar**	**20.23**	**82**	P	**P**	**09 15 11.4**	**-0.3**
	0.6nm,0.6s,baz=303,slow=10.0,SNR=6.0						
RES	**Resolute Bay**	**21.50**	**42**	S	**S**	**09 19 20.0**	**-3.3**
	0.5nm,0.9s,baz=200,slow=9.1,SNR=1.8						
PDAR	**Pinedale Array**	**37.24**	**105**	P	**P**	**09 17 48.0**	**-0.5**
	0.2nm,0.6s,baz=333,slow=12,SNR=2.5						
NVAR	**Mina Array Bea**	**37.98**	**118**	P	**P**	**09 17 55.3**	**+0.5**
	0.3nm,0.6s,baz=334,slow=6.0,SNR=2.3						
TXAR	**Lajitas Array**	**51.34**	**108**	P	**P**	**09 19 43.0**	**+1.7**
	0.6nm,0.7s,baz=337,slow=5.5,SNR=10						

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*BJI **04** 09:15:50.3±0.0, 24.64S×179.08E, h520km, mB6.4/74, mb6.0/76*

*MOS **04** 09:15:51.8±0.8, 24.63S×179.02E, h521km, mb6.4/36, Error ellipse: s-maj=8.3km s-min=7.0km az=129.4*

*NEIC **04** 09:15:52.6, 24.60S×179.11E, h527km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr-8.70; Mθθ3.28; Mφφ5.42; Mrθ-3.58; Mθφ-4.50; Mφr-1.69; Fault plane solution: M0 9.69000×10^18 NP1:φs121.44000°, δ51.71000°, λ-117.24000°. NP2:φs341.16000°, δ45.75000°, λ-59.90000°. Principal axes: T 9.0267, Plg3.0000°, Azm230.0000°; N 1.2137, Plg21.0000°, Azm139.0000°; P -10.2404, Plg69.0000°, Azm329.0000°;*

*NEIC **04** 09:15:52.9±2.1, 24.61S±0.08×179.09E±0.09, h527km±1km, mb6.1/442, Mwb6.6/81, Mwc6.6/89, Mww6.6, Mwc6.6(GCMT) Error ellipse: s-maj=13.6km s-min=13.0km az=87.0*

*IDC **04** 09:15:52.8±0.3, 24.66S×179.02E, h521km±3km, mb5.6/44, mb1 5.6/46, mb1mx5.6/46, mbtmp6.4/46, Error ellipse: s-maj=6.8km s-min=5.4km az=14.0*

*GCMT **04** 09:15:55.9±0.1, 24.67S±0.01×179.12E, h530km, MW6.6/174, Moment Tensor Solution. s174, c452; s164, c294; Duration: 4.7s Moment tensor: Scale 10^19 Nm; Mrr-0.75±.00; Mθθ0.12±.01; Mφφ0.62±.01; Mrθ-0.29±.00; Mθφ-0.46±.00; Mφr-0.18±.00; Best double couple: M0 0.90200×10^19 NP1:φs127.00000°, δ50.00000°, λ-122.00000°. NP2:φs352.00000°, δ50.00000°, λ-58.00000°. Principal axes: T 0.9010, Plg0.0000°, Azm59.0000°; N 0.0020, Plg24.0000°, Azm150.0000°; P -0.9030, Plg66.0000°, Azm329.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

*NEIC **04** 09:15:57, 24.66S×179.16E, h533km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr-7.67; Mθθ1.27; Mφφ6.40; Mrθ-2.81; Mθφ-4.37; Mφr-2.04; Fault plane solution: M0 9.05000×10^18 NP1:φs352.00000°, δ51.00000°, λ-59.00000°. NP2:φs129.00000°, δ48.00000°, λ-122.00000°. Principal axes: T 8.9112, Plg1.0000°, Azm61.0000°; N 0.2664, Plg23.0000°, Azm151.0000°; P -9.1777, Plg66.0000°, Azm327.0000°;*

*NEIC **04** 09:15:59, 24.64S×178.97E, h520km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr-6.97; Mθθ1.43; Mφφ5.54; Mrθ-3.30; Mθφ-4.84; Mφr-1.98; Fault plane solution: M0 8.88000×10^18 NP1:φs121.00000°, δ52.00000°, λ-126.00000°. NP2:φs352.00000°, δ51.00000°, λ-52.00000°. Principal axes: T 8.7451, Plg1.0000°, Azm236.0000°; N 0.2669, Plg28.0000°, Azm146.0000°; P -9.0120, Plg62.0000°, Azm328.0000°;*

*BGR **04** 09:16:01.2±0.0, 21.92S×179.92E, h552km±3km*

*NEIC **04** 09:16:11, 24.79S×179.08E, h556km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr-8.24; Mθθ1.99; Mφφ6.25; Mrθ-2.04; Mθφ-5.07; Mφr-2.15; Fault plane solution: M0 9.48000×10^18 NP1:φs345.23000°, δ50.43000°, λ-63.71000°. NP2:φs127.44000°, δ46.28000°, λ-118.18000°. Principal axes: T 9.6422, Plg2.0000°, Azm57.0000°; N -0.3276, Plg20.0000°, Azm148.0000°; P -9.3145, Plg70.0000°, Azm321.0000°;*

ISC 04 09:15:52.2±0.2**, 24.73S**±0.03×**179.04E**±0.03**, h523km**±1km**, h523km:pP-P, n2264,** σ**2.03**/2592**, mb6.1**/364**, 129C-163D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.25**	**150**	P	**P**	**09 17 24.0**	**+1.4**
	1μm,0.3s,baz=299,slow=1.9,SNR=212						
RAO				S	**S**	**09 18 39.2**	**+2.7**
	2μm,0.3s,baz=86,slow=24,SNR=6.2						
RAO	**Raoul Island**	**5.25**	**150**	P	**P**	**09 17 23.5**	**+0.9**
RAO				S	**S**	**09 18 39.2**	**+2.7**
GLKZ	**Green Lake**	**5.26**	**150**	P	**P**	**09 17 23.7**	**+1.0**
GLKZ				S	**S**	**09 18 30.8**	**-5.9**
MSVF	**Nonsavu**	**7.03**	**352**c	iP	**P**	**09 17 40.0**	**+0.3**
MSVF	**Nonsavu**	**7.03**	**352**	P	**P**	**09 17 39.5**	**-0.2**
NFK	**Norfolk Island**	**10.80**	**244**	P	**P**	**09 18 21.2**	**+3.1**
	baz=11						
OUZ	**Omahuta**	**11.46**	**203**	P	**P**	**09 18 28.1**	**+3.2**
OUZ	**Omahuta**	**11.46**	**203**	P	**P**	**09 18 25.0**	**+0.1**
NIUE	**Niue**	**11.68**	**63**	P	**P**	**09 18 26.3**	**-1.2**
	baz=12						
NIUE				S	**S**	**09 20 35.5**	**+0.1**
	baz=12						
NIUE	**Niue**	**11.68**	**63**	P	**P**	**09 18 25.8**	**-1.7**
DZM	**Mont Dzumac**	**11.87**	**280**	eP	**P**	**09 18 31.7**	**+2.2**
	17μm,1.2s						
DZM	**Mont Dzumac**	**11.87**	**280**	P	**P**	**09 18 32.0**	**+2.5**
	118nm,0.3s,baz=84,slow=15,SNR=565						
DZM				S	**S**	**09 20 45.6**	**+6.6**
	baz=340,slow=19,SNR=4.1						
WCZ	**Waipu Caves**	**11.88**	**199**	P	**P**	**09 18 31.5**	**+2.2**
KUZ	**Kuaotunu**	**12.31**	**193**	P	**P**	**09 18 35.9**	**+2.1**
MXZ	**Matakaoa Point**	**12.80**	**183**	P	**P**	**09 18 37.2**	**-1.8**
MXZ	**Matakaoa Point**	**12.80**	**183**	P	**P**	**09 18 37.7**	**-1.3**
MXZ				S	**S**	**09 20 49.4**	**-7.0**
WIZ	**White Island**	**12.85**	**187**	P	**P**	**09 18 40.7**	**+1.2**
WIZ				S	**S**	**09 20 53.3**	**-3.9**
HAZ	**Te Kaha**	**13.03**	**184**	P	**P**	**09 18 39.7**	**-1.6**
HAZ				S	S	09 20 50.9	-10
WMGZ	**Waiomatatini S**	**13.06**	**182**	P	**P**	**09 18 40.3**	**-1.3**
WMGZ				S	**S**	**09 20 54.0**	**-7.2**
TGRZ	**Tauranga**	**13.17**	**190**	P	**P**	**09 18 45.1**	**+2.3**
WHRZ	**Whale Island**	**13.20**	**187**	P	**P**	**09 18 45.3**	**+2.1**
WHRZ				S	**S**	**09 21 01.2**	**-2.8**
OPRZ	**Ohinepanea**	**13.24**	**189**	P	**P**	**09 18 44.7**	**+1.1**
RUGZ	**Raukumara Rang**	**13.24**	**185**	P	**P**	**09 18 41.8**	**-1.9**
RUGZ				S	**S**	**09 20 58.8**	**-6.2**
TOZ	**Tahuroa Road**	**13.30**	**192**	P	**P**	**09 18 44.6**	**+0.4**
PUZ	**Puketiti**	**13.31**	**183**	P	**P**	**09 18 42.2**	**-2.1**
PUZ				S	**S**	**09 20 58.8**	**-7.4**
KMRZ	**Kaimai**	**13.34**	**191**	P	**P**	**09 18 46.9**	**+2.3**
MARZ	**Manawahe**	**13.36**	**188**	P	**P**	**09 18 45.7**	**+0.8**
LIRZ	**Lichensteins R**	**13.42**	**189**	P	**P**	**09 18 47.3**	**+1.8**
KARZ	**Kaharoa**	**13.46**	**190**	P	**P**	**09 18 47.3**	**+1.5**
EDRZ	**Edgecumbe**	**13.47**	**188**	P	**P**	**09 18 46.5**	**+0.4**
EDRZ				S	S	09 20 59.9	-9.5
OMRZ	**Omania**	**13.52**	**189**	P	**P**	**09 18 48.1**	**+1.5**
MKRZ	**Makatiti**	**13.54**	**189**	P	**P**	**09 18 49.8**	**+3.0**
NGRZ	**Ngongotaha**	**13.55**	**190**	P	**P**	**09 18 48.8**	**+2.0**
URZ	**Urewera**	**13.58**	**186**	P	**P**	**09 18 45.6**	**-1.6**
	363nm,0.3s,baz=353,slow=1.8,SNR=406						
URZ				S	**S**	**09 21 07.4**	**-3.9**
	187nm,0.3s,baz=184,slow=21,SNR=7.2						
URZ	**Urewera**	**13.58**	**186**	P	**P**	**09 18 45.0**	**-2.2**
UTU	**Utuhina**	**13.62**	**190**	P	**P**	**09 18 49.9**	**+2.4**
MWZ	**Matawai**	**13.62**	**185**	P	**P**	**09 18 45.7**	**-1.9**
MWZ				S	**S**	**09 21 04.0**	**-8.1**
TARZ	**Mount Tarawera**	**13.63**	**188**	P	**P**	**09 18 48.3**	**+0.5**
TKGZ	**Te Karaka**	**13.70**	**184**	P	**P**	**09 18 46.5**	**-1.9**
TKGZ				S	**S**	**09 21 10.8**	**-2.8**
CNGZ	**Carnagh Statio**	**13.73**	**183**	P	**P**	**09 18 48.2**	**-0.4**
CNGZ				S	**S**	**09 21 06.8**	**-7.2**
RRRZ	**Republican Roa**	**13.73**	**188**	P	**P**	**09 18 48.9**	**+0.2**
RAGZ	**Rawiri**	**13.79**	**185**	P	**P**	**09 18 47.4**	**-1.9**
AFI	**Afiamalu**	**13.81**	**40**	P	**P**	**09 18 45.5**	**-4.5**
AFI	**Afiamalu**	**13.81**	**40**	P	**P**	**09 18 45.5**	**-4.5**
HRRZ	**Handcock Road**	**13.81**	**189**	P	**P**	**09 18 49.8**	**+0.2**
MUGZ	**Murupara**	**13.84**	**187**	P	**P**	**09 18 48.1**	**-1.7**
RIGZ	**Rimuhau**	**13.97**	**184**	P	**P**	**09 18 49.4**	**-1.9**
HIZ	**Hauiti**	**14.19**	**194**	P	**P**	**09 18 55.1**	**+1.6**
BKZ	**Black Stump Fm**	**14.55**	**188**	P	**P**	**09 18 54.4**	**-2.9**
BFZ	**Birch Farm**	**16.07**	**188**	P	**P**	**09 19 09.2**	**-3.8**
FUNA	**Funafuti**	**16.12**	**1**	P	**P**	**09 19 10.8**	**-3.0**
SNZO	**South Karori**	**16.92**	**191**	P	**P**	**09 19 18.1**	**-3.2**
MSWZ	**Moikau Station**	**16.93**	**190**	P	**P**	**09 19 18.2**	**-3.2**
QRZ	**Quartz Range**	**16.95**	**197**	P	**P**	**09 19 21.8**	**+0.3**
BHW	**Baring Head**	**16.99**	**191**	P	**P**	**09 19 18.5**	**-3.4**
PLWZ	**Palliser**	**17.08**	**190**	P	**P**	**09 19 19.2**	**-3.7**
NNZ	**Nelson**	**17.10**	**195**	P	**P**	**09 19 21.0**	**-2.0**
TUWZ	**Tuamarina**	**17.18**	**193**	P	**P**	**09 19 21.6**	**-2.2**
CMWZ	**Cape Campbell**	**17.44**	**192**	P	**P**	**09 19 25.1**	**-1.1**
BSWZ	**Blackbirch Sta**	**17.47**	**193**	P	**P**	**09 19 25.2**	**-1.2**
THZ	**Tophouse**	**17.73**	**195**	P	**P**	**09 19 27.9**	**-1.0**
KHZ	**Kahutara**	**18.21**	**193**	P	**P**	**09 19 31.8**	**-1.4**
LTZ	**Lake Taylor**	**18.85**	**196**	P	**P**	**09 19 38.5**	**-0.6**
LHI	**Lord Howe Isla**	**18.86**	**245**	P	**P**	**09 19 42.2**	**+3.0**
	baz=19,SNR=55						
LHI	**Lord Howe Isla**	**18.86**	**245**	P	**P**	**09 19 42.3**	**+3.0**
LHI				PcP	**PcP**	**09 23 39.6**	**+0.4**
RAR	**Rarotonga**	**19.82**	**84**	P	**P**	**09 19 47.6**	**-0.5**
	31nm,0.3s,baz=241,slow=8.4,SNR=67						
RAR				ScP	**ScP**	**09 26 27.9**	**+0.1**
	2.4nm,0.3s,baz=146,slow=3.1,SNR=3.7						
RAR	**Rarotonga**	**19.82**	**84**	P	**P**	**09 19 47.0**	**-1.0**
RPZ	**Rata Peaks**	**20.03**	**197**	P	**P**	**09 19 49.4**	**-0.4**
	818nm,0.6s,baz=357,slow=1.7,SNR=158						
RPZ				S	**S**	**09 23 00.4**	**-2.3**
	702nm,0.9s,baz=101,slow=8.0,SNR=4.6						
RPZ				ScP	**ScP**	**09 26 29.1**	**+1.0**
	114nm,1.0s,baz=69,slow=5.8,SNR=4.2						
RPZ	**Rata Peaks**	**20.03**	**197**	P	**P**	**09 19 49.4**	**-0.4**
LBZ	**Lake Benmore**	**20.89**	**198**	IAmb	IAmb	09 20 16.7	
	comp=Z,743nm,0.8s						
ODZ	**Otahua Downs**	**21.38**	**196**	P	**P**	**09 20 01.6**	**-0.4**
ODZ				IAmb	IAmb	09 20 05.7	
	comp=Z,380nm,0.8s						
WKZ	**Wanaka**	**21.64**	**200**	P	**P**	**09 20 03.7**	**-0.6**
WKZ				IAmb	IAmb	09 20 29.5	
	comp=Z,665nm,0.9s						
WHZ	**Wether Hill Ro**	**22.93**	**200**	P	**P**	**09 20 16.2**	**+0.4**
PYZ	**Puysegur Point**	**23.58**	**202**	IAmb	IAmb	09 20 29.7	
	comp=Z,470nm,0.9s						
KNTN	**Kanton**	**23.58**	**24**	P	**P**	**09 20 20.7**	**-1.3**
KNTN				IAmb	IAmb	09 20 23.6	
	comp=Z,731nm,0.8s						
HNR	**Honiara**	**23.71**	**307**	P	**P**	**09 20 22.4**	**-0.9**
	comp=Z,2μm,0.9s,baz=206,slow=2.8,SNR=79						
HNR				S	**S**	**09 23 59.5**	**-2.0**
	comp=Z,753nm,1.2s,baz=306,slow=22,SNR=6.4						
HNR	**Honiara**	**23.71**	**307**	P	**P**	**09 20 22.3**	**-0.9**
ARMA	**Armidale**	**24.92**	**251**	P	**P**	**09 20 36.2**	**+2.3**
	baz=25,SNR=464						
ARMA	**Armidale**	**24.92**	**251**	P	**P**	**09 20 36.2**	**+2.3**
EIDS	**Eidsvold**	**25.32**	**263**	P	**P**	**09 20 38.6**	**+1.2**
	baz=25,SNR=388						
MGCD	**Mangrove Creek**	**25.80**	**244**	P	**P**	**09 20 43.9**	**+2.4**
	baz=26,SNR=409						
RIV	**Riverview**	**25.89**	**243**	P	**P**	**09 20 44.5**	**+2.3**
	baz=26,SNR=32						
RIV	**Riverview**	**25.89**	**243**	P	**P**	**09 20 44.7**	**+2.4**
RIV				pmax	pmax		
	comp=Z,1μm,1.0s						
TARA	**Tarawa**	**26.60**	**346**	P	**P**	**09 20 48.1**	**-0.6**
RMQ	**Roma**	**27.34**	**260**	P	**P**	**09 20 57.3**	**+2.2**
	baz=27,SNR=385						
CNB	**Canberra Magne**	**27.68**	**241**	P	**P**	**09 21 00.1**	**+2.0**
	baz=28,SNR=345						
CAN	**Canberra**	**27.97**	**241**	P	**P**	**09 21 02.8**	**+2.2**
CAN				pmax	pmax		
	comp=Z,2μm,1.1s						
YNG	**Young**	**28.23**	**243**	P	**P**	**09 21 05.0**	**+2.2**
	baz=28,SNR=19						
MILA	**Mila**	**28.31**	**237**	P	**P**	**09 21 05.6**	**+2.0**
	baz=28,SNR=56						
TBI	**Tubuai**	**28.77**	**94**	eP	**P**	**09 21 08.3**	**+0.6**
	comp=Z,590nm,0.8s						
TBI				eScP	**ScP**	**09 26 54.9**	**+2.0**
	comp=Z,226nm,0.9s						
PAE	**Paea**	**30.04**	**83**	eP	**P**	**09 21 18.8**	**0.0**
	comp=Z,57nm,0.7s						
PAE				epP	**pP**	**09 22 40.9**	**-2.8**
	comp=Z,130nm,1.4s						
PAE				eScP	**ScP**	**09 26 58.6**	**+1.5**
	comp=Z,27nm,1.0s						
PPT2	**Papeete2**	**30.07**	**82**	eP	**P**	**09 21 19.3**	**+0.2**
	comp=Z,646nm,1.0s						
PPT2				epP	**pP**	**09 22 41.4**	**-2.7**
	comp=Z,509nm,1.4s						
PPT2				eScP	**ScP**	**09 26 58.8**	**+1.4**
	comp=Z,196nm,1.3s						
PPT	**Papeete**	**30.08**	**82**	P	**P**	**09 21 20.0**	**+0.9**
	comp=Z,837nm,0.9s,baz=306,slow=0.2,SNR=47						
PPT				ScP	**ScP**	**09 26 58.4**	**+1.1**
	comp=Z,139nm,0.9s,baz=308,slow=5.8,SNR=3.8						
PPT	**Papeete**	**30.08**	**82**	P	**P**	**09 21 20.0**	**+0.9**
PPTF	**Pamatai, Papee**	**30.08**	**82**	P	**P**	**09 21 18.8**	**-0.3**
PPTF				IAmb	IAmb	09 21 23.7	
	comp=Z,951nm,1.0s						
CMSA	**Cobar Meteorol**	**30.10**	**249**	P	**P**	**09 21 20.3**	**+1.2**
	baz=30,SNR=1000						
TIAR	**Tiarei**	**30.29**	**83**	eP	**P**	**09 21 21.2**	**+0.3**
	comp=Z,217nm,0.9s						
TIAR				eScP	**ScP**	**09 26 59.5**	**+1.5**
	comp=Z,51nm,1.0s						
TVO	**Taravao**	**30.30**	**83**	eP	**P**	**09 21 21.2**	**+0.1**
	comp=Z,134nm,0.7s						
TVO				epP	**pP**	**09 22 43.4**	**-2.9**
	comp=Z,307nm,1.5s						
TVO				eScP	**ScP**	**09 26 59.9**	**+1.8**
	comp=Z,30nm,1.0s						
CTA	**Charters Tower**	**30.62**	**272**	P	**P**	**09 21 25.1**	**+1.4**
	comp=Z,1μm,0.9s,baz=93,slow=10,SNR=640						
CTA				PcP	**PcP**	**09 24 06.8**	**+0.8**
	comp=Z,186nm,0.8s,baz=203,slow=2.5,SNR=4.3						
CTA				S	**S**	**09 25 50.9**	**+1.8**
	comp=Z,722nm,1.3s,baz=316,slow=18,SNR=26						
CTA				ScP	**ScP**	**09 27 02.5**	**+3.5**
	comp=Z,214nm,0.9s,baz=124,slow=3.0,SNR=7.4						
CTA				P3KPbc		09 53 02.7	
	comp=Z,14nm,0.6s,baz=287,slow=5.1,SNR=27						
CTAO	**Charters Tower**	**30.62**	**272**	P	**P**	**09 21 25.1**	**+1.4**
CTAO				pmax	pmax		
	comp=Z,2μm,1.0s						
CTAO	**Charters Tower**	**30.62**	**272**	P	**P**	**09 21 25.1**	**+1.4**
TOO	**Toolangi**	**31.26**	**238**	P	**P**	**09 21 30.3**	**+1.2**
	baz=31,SNR=458						
TOO	**Toolangi**	**31.26**	**238**	P	**P**	**09 21 30.6**	**+1.5**
TOO				pmax	pmax		
	comp=Z,2μm,1.3s						
TOO	**Toolangi**	**31.26**	**238**	P	**P**	**09 21 30.6**	**+1.5**
MEH	**Mehetia**	**31.34**	**84**	eP	**P**	**09 21 30.3**	**+0.3**
	comp=Z,125nm,1.0s						
MEH				epP	**pP**	**09 22 52.8**	**-2.7**
	comp=Z,141nm,1.3s						
MEH				eScP	**ScP**	**09 27 02.3**	**+0.8**
	comp=Z,44nm,1.0s						
QLP	**Quilpie**	**31.37**	**259**	P	**P**	**09 21 30.9**	**+0.8**
	baz=32,SNR=518						
MOO	**Moorlands**	**31.62**	**228**	P	**P**	**09 21 33.9**	**+1.9**
	baz=32,SNR=105						
TAU	**Tasmania Unive**	**31.73**	**227**	P	**P**	**09 21 34.6**	**+1.7**
TAU				pmax	pmax		
	comp=Z,980nm,0.7s						
TAU	**Tasmania Unive**	**31.73**	**227**	P	**P**	**09 21 34.6**	**+1.7**
TAU				PcP	**PcP**	**09 24 11.8**	**+3.1**
PMOR	**Pomariorio Ree**	**32.49**	**79**	eP	**P**	**09 21 40.0**	**+0.2**
	comp=Z,714nm,0.8s						
PMOR				epP	**pP**	**09 23 02.9**	**-3.5**
	comp=Z,1μm,1.4s						
PMOR				eScP	**ScP**	**09 27 06.9**	**+1.4**
	comp=Z,866nm,1.1s						
VAH	**Vaihoa**	**32.64**	**80**	eP	**P**	**09 21 40.9**	**-0.2**
	comp=Z,547nm,0.9s						
VAH				epP	**pP**	**09 23 04.2**	**-3.6**
	comp=Z,629nm,1.4s						
VAH				eScP	**ScP**	**09 27 07.5**	**+1.5**
	comp=Z,385nm,1.0s						
MTSU	**Mount Surprise**	**32.92**	**275**	P	**P**	**09 21 44.8**	**+1.4**
	baz=33,SNR=851						
KRVT	**Keravat (AS076**	**32.98**	**304**	P	**P**	**09 21 42.8**	**-1.2**
	comp=Z,2μm,0.7s,baz=340,slow=0.7,SNR=110						
KRVT				S	**S**	**09 26 20.6**	**-4.7**

comp=Z,491nm,1.0s,baz=246,slow=19,SNR=3.7
MCQ Macquarie Isla 33.27 201 P **P** **09 21 47.1 +1.3**
baz=34,SNR=9.6
MCQ Macquarie Isla 33.27 201 IAmb IAmb 09 21 49.1
comp=Z,308nm,0.8s
STKA Stephens Creek 33.60 249 P **P** **09 21 50.2 +1.2**
baz=34,SNR=94
STKA Stephens Creek 33.60 249 P **P** **09 21 50.2 +1.2**
comp=Z,341nm,0.7s,baz=98,slow=7.9,SNR=1255
STKA S **S** **09 26 34.8 +0.4**
comp=Z,173nm,0.9s,baz=260,slow=18,SNR=8.1
STKA ScP **ScP** **09 27 13.1 +3.9**
comp=Z,317nm,1.0s,baz=110,slow=8.4,SNR=5.1
STKA P3KPbc 09 52 45.4
comp=Z,4.8nm,0.7s,baz=322,slow=6.5,SNR=5.7
STKA Stephens Creek 33.60 249 P **P** **09 21 50.3 +1.2**
STKA pmax pmax
comp=Z,400nm,1.5s
STKA Stephens Creek 33.60 249 P **P** **09 21 50.3 +1.3**
ARPS Mount Arapiles 33.95 240 P **P** **09 21 53.0 +1.2**
baz=34,SNR=340
PMG Port Moresby 33.96 291*d i* P **P** **09 21 52.6 +0.4**
PMG pmax pmax
comp=Z,7μm,1.2s
PMG Port Moresby 33.96 291 P **P** **09 21 52.6 +0.4**
XMAS Kiritimati 35.06 44 P **P** **09 22 01.9 +0.5**
KWAJ Kwajalein Atol 35.15 340 P **P** **09 22 01.9 -0.2**
KWAJ pmax pmax
comp=Z,2μm,1.5s
KWAJ Kwajalein Atol 35.15 340 P **P** **09 22 01.9 -0.2**
COEN Coen 35.40 281 P **P** **09 22 05.5 +1.2**
baz=35,SNR=257
COEN Coen 35.40 281 P **P** **09 22 05.2 +0.9**
COEN IAmb IAmb 09 22 08.0
comp=Z,844nm,0.9s
HTT Hallett 35.94 247 P **P** **09 22 09.4 +0.8**
baz=36,SNR=842
QIS Mount Isa 36.55 268 P **P** **09 22 14.2 +0.5**
baz=37,SNR=141
PATS Pohnpei 37.32 325 P **P** **09 22 20.2 +0.1**
baz=37,SNR=41
PATS Pohnpei 37.32 325 P **P** **09 22 19.8 -0.3**
BBOO Buckleboo 38.32 248 P **P** **09 22 28.3 +0.2**
baz=38,SNR=1000
MMPI Merauke 40.24 287 P **P** **09 22 45.6 +1.8**
comp=Z,19μmcomp=Z,28μmcomp=Z,3μm,0.8s
AS02 Alice Springs 41.01 262 P **P** **09 22 50.5 +0.6**
baz=41
AS31 Alice Springs 41.04 262 P **P** **09 22 51.0 +0.8**
AS31 IAmb IAmb 09 22 53.7
comp=Z,862nm,1.4s
ASAR Alice Springs 41.04 262 P **P** **09 22 50.8 +0.6**
comp=Z,2μm,1.0s,baz=87,slow=7.0,SNR=5423
ASAR PcP **PcP** **09 24 37.7 +0.1**
comp=Z,191nm,0.8s,baz=88,slow=3.6,SNR=9.5
ASAR ScP **ScP** **09 27 39.8 +2.1**
comp=Z,128nm,1.1s,baz=116,slow=3.8,SNR=6.4
ASAR S **S** **09 28 25.3 +0.3**
comp=Z,586nm,1.1s,baz=98,slow=14,SNR=23
ASAR P3KPbc 09 52 15.3
comp=Z,4.4nm,0.7s,baz=288,slow=3.9,SNR=12
WR0 Warramunga Arr 41.30 267 IAmb IAmb 09 22 54.1
comp=Z,819nm,0.8s
WB5 Warramunga Arr 41.48 268 P **P** **09 22 53.9 +0.3**
baz=42
WRAB Tennant Creek 41.48 267*c i* P **P** **09 22 53.4 -0.2**
WRAB pmax pmax
comp=Z,1μm,0.7s
WRAB Tennant Creek 41.48 267 P **P** **09 22 53.7 +0.1**
WRA Warramunga Ar 41.49 267 P **P** **09 22 54.1 +0.4**
comp=Z,2μm,0.7s,baz=104,slow=8.0,SNR=494
WRA PcP **PcP** **09 24 39.8 +0.7**
comp=Z,233nm,1.0s,baz=104,slow=4.0,SNR=13
WRA ScP **ScP** **09 27 43.5 +4.1**
comp=Z,177nm,0.9s,baz=102,slow=4.5,SNR=16
WRA S **S** **09 28 28.0 -3.5**
comp=Z,344nm,1.1s,baz=102,slow=15,SNR=10
WRA PKiKP **PKiKP** **09 31 43.2 -1.3**
comp=Z,16nm,0.9s,baz=100,slow=0.3,SNR=5.7
WRA P3KPbc 09 52 13.5
comp=Z,3.7nm,0.7s,baz=301,slow=3.2,SNR=7.3
WRA P4KPbc 10 00 49.5
comp=Z,3.3nm,0.7s,baz=95,slow=4.1,SNR=21
TAOE Nuku Hiva Isla 41.95 75*eP* **P** **09 22 58.0 +0.5**
comp=Z,2μm,1.1s
TAOE *e*ScP **ScP** **09 27 41.9 +0.5**
comp=Z,539nm,1.2s
TAOE Nuku Hiva Isla 41.95 75 P **P** **09 22 57.9 +0.5**
TAOE IAmb IAmb 09 23 00.4
comp=Z,1μm,1.3s
JOHN Johnston Islan 42.70 16 P **P** **09 23 03.1 0.0**
JOHN IAmb IAmb 09 23 05.1
comp=Z,736nm,0.8s
JAY Jayapura 43.05 295 P **P** **09 23 06.2 0.0**
comp=Z,723nm,1.0s,baz=84,slow=1.0,SNR=122
JAY S **S** **09 28 54.7 +0.6**
comp=Z,135nm,1.0s,baz=289,slow=2.3,SNR=18
JAY Jayapura 43.05 295 P **P** **09 23 06.1 0.0**
comp=Z,10μmcomp=Z,8μmcomp=Z,643nm,1.4s
GENI Genyem 43.45 294 P **P** **09 23 09.3 +0.1**
comp=Z,24μmcomp=Z,28μmcomp=Z,3μm,1.3s
H11S2 WAKE ISLAND Hy 44.61 343 P **P** **09 23 17.4 -0.4**
baz=152,slow=4.5,SNR=30
H11S3 WAKE ISLAND Hy 44.62 343 P **P** **09 23 17.7 -0.1**
baz=152,slow=4.5,SNR=30
H11S1 WAKE ISLAND Hy 44.63 343 P **P** **09 23 17.7 -0.2**
baz=152,slow=4.5,SNR=26
SMPI Sarmi 45.00 294 P **P** **09 23 21.2 +0.1**
comp=Z,11μmcomp=Z,8μmcomp=Z,726nm,1.4s
FORT Forrest 45.20 250 P **P** **09 23 22.3 -0.2**
baz=45,SNR=688
FORT Forrest 45.20 250 P **P** **09 23 22.4 -0.1**
WAKE Wake Island 45.38 343 P **P** **09 23 23.9 0.0**
KDU Kakadu 45.50 276 P **P** **09 23 24.9 0.0**
baz=46,SNR=191
H11N3 WAKE ISLAND Hy 45.73 344 P **P** **09 23 26.6 +0.3**
baz=192,slow=11,SNR=63
H11N1 WAKE ISLAND Hy 45.74 344 P **P** **09 23 26.4 +0.1**
baz=192,slow=11,SNR=40
H11N2 WAKE ISLAND Hy 45.75 344 P **P** **09 23 26.6 +0.1**
baz=192,slow=11,SNR=34
WRKA Warakurna 45.81 258 P **P** **09 23 27.5 +0.3**
baz=46,SNR=1000
PTCN Pitcairn Islan 45.91 102 P **P** **09 23 30.1 +2.2**
PTCN IAmb IAmb 09 23 32.7
comp=Z,2μm,1.6s
MTN Manton Dam 46.66 276 P **P** **09 23 33.8 +0.1**
baz=47,SNR=69
SRPI Serui, Papua 47.13 292 P **P** **09 23 38.1 +0.7**
comp=Z,3.9nm,1.2s
KNRA Kununurra 47.82 271 P **P** **09 23 42.9 +0.4**
baz=48,SNR=515
SAUI Saumlaki 48.47 282 P **P** **09 23 50.0 +2.6**
comp=Z,22μmcomp=Z,23μmcomp=Z,2μm,1.1s
SAUI Saumlaki 48.47 282 P **P** **09 23 49.0 +1.7**
RKPI Ransiki, Papua 49.06 291 P **P** **09 23 53.3 +1.5**
comp=Z,12μmcomp=Z,463nm,1.1s
FITZ Fitzroy Crossi 49.90 267 P **P** **09 23 58.7 +0.8**
baz=50,SNR=483
FITZ Fitzroy Crossi 49.90 267 P **P** **09 23 59.2 +1.3**
comp=Z,725nm,0.9s,baz=111,slow=5.6,SNR=433
FITZ ScP **ScP** **09 28 18.7 +4.2**
comp=Z,82nm,0.8s,baz=102,slow=5.4,SNR=5.7
FITZ S **S** **09 30 25.5 -3.8**
comp=Z,72nm,1.2s,baz=148,slow=14,SNR=4.7
FITZ Fitzroy Crossi 49.90 267 IAmb IAmb 09 24 01.0
comp=Z,913nm,1.0s
FAKI Fak Fak 50.00 288 P **P** **09 23 58.3 -0.4**
comp=Z,20μmcomp=Z,15μmcomp=Z,976nm,1.3s
FAKI Fak Fak 50.00 288 P **P** **09 23 58.0 -0.7**
FAKI IAmb IAmb 09 24 00.8
comp=Z,1μm,1.2s
FAKI PcP **PcP** **09 25 08.1 -1.3**
KHLU Kahalu`u 50.37 31 IAmb IAmb 09 24 03.4
comp=Z,1μm,0.8s
AIN Ainahou 50.38 32 P **P** **09 24 01.4 -0.1**
AIN PcP **PcP** **09 25 11.8 +1.0**
AIN IAmb IAmb 09 25 13.8
comp=Z,520nm,0.9s
HLP Hilina Pali 50.39 32 IAmb IAmb 09 24 05.9
comp=Z,629nm,1.0s
MLOA Mauna Loa Obse 50.47 32 IAmb IAmb 09 24 11.8
comp=Z,616nm,0.9s
HUH Hualalai 50.47 31 IAmb IAmb 09 24 04.4
comp=Z,516nm,1.0s
SDHHI Sand Hill 50.48 32 IAmb IAmb 09 24 04.2
comp=Z,926nm,0.9s

WRMHI West Rim 50.49 32 IAmb IAmb 09 24 04.2
comp=Z,898nm,0.9s
RIM Rim 50.49 32 IAmb IAmb 09 24 04.3
comp=Z,952nm,0.9s
KKO Keanakako`i 50.50 32 IAmb IAmb 09 24 04.4
comp=Z,946nm,0.9s
NPH North Pit 50.50 32 IAmb IAmb 09 24 05.7
comp=Z,590nm,1.2s
UWE Uwekahuna 50.51 32 IAmb IAmb 09 24 04.4
comp=Z,846nm,0.9s
OBL Observatory Le 50.51 32 IAmb IAmb 09 24 04.3
comp=Z,707nm,0.9s
BYL Byron's Ledge 50.51 32 IAmb IAmb 09 24 04.4
comp=Z,668nm,0.9s
UWB Uwekahuna B 50.52 32 IAmb IAmb 09 24 04.3
comp=Z,491nm,0.9s
HATHI Halema'uma'u T 50.52 32 IAmb IAmb 09 24 04.4
comp=Z,557nm,0.9s
SBLHI Steaming Bluff 50.52 32 IAmb IAmb 09 24 04.4
comp=Z,472nm,1.0s
GUMO Guam 50.62 315 P **P** **09 24 02.6 -0.5**
GUMO pmax pmax
comp=Z,8μm,1.9s
GUMO Guam 50.62 315 P **P** **09 24 02.6 -0.5**
POHA Pohakuloa 50.68 32 P **P** **09 24 03.7 -0.1**
POHA IAmb IAmb 09 24 05.9
comp=Z,797nm,0.9s
KEKH Kekaha 50.82 26 IAmb IAmb 09 24 06.5
comp=Z,874nm,0.8s
HON Honolulu 50.93 28 IAmb IAmb 09 24 07.4
comp=Z,936nm,0.9s
KIP Kipapa 51.02 28 P **P** **09 24 05.3 -0.6**
KIP pmax pmax
comp=Z,352nm,1.1s
KIP Kipapa 51.02 28 P **P** **09 24 05.3 -0.6**
HLK Haleakala 51.21 30 IAmb IAmb 09 24 09.6
comp=Z,711nm,0.9s
KHLH Kahului Airpor 51.25 30 IAmb IAmb 09 24 10.0
comp=Z,668nm,0.9s
OPA Opana 51.25 28 IAmb IAmb 09 24 09.6
comp=Z,612nm,0.9s
BNDI Bandanaira 51.27 285 P **P** **09 24 09.5 +1.6**
comp=Z,17μmcomp=Z,51μmcomp=Z,2μm,0.9s
SIJI Sorong 51.88 290 P **P** **09 24 12.6 +0.2**
comp=Z,2μm,0.9s,baz=76,slow=5.9,SNR=276
SIJI S **S** **09 30 56.2 +0.1**
comp=Z,47nm,1.0s,baz=261,slow=21,SNR=14
MSAI Masohi 52.68 286 P **P** **09 24 19.0 +0.9**
comp=Z,3μmcomp=Z,254nm,0.9s
MIDW Midway 52.76 4 P **P** **09 24 17.8 -0.5**
MIDW IAmb IAmb 09 24 21.9
comp=Z,670nm,0.8s
AAI Ambon 53.16 285 P **P** **09 24 21.6 0.0**
comp=Z,17μmcomp=Z,20μmcomp=Z,2μm,1.4s
VNDA Vanda 53.48 185 P **P** **09 24 24.4 +1.6**
comp=Z,38nm,0.5s,baz=6.6,slow=8.4,SNR=374
VNDA PcP **PcP** **09 25 23.1 +1.7**
comp=Z,75nm,0.8s,baz=341,slow=4.1,SNR=8.5
VNDA ScP **ScP** **09 28 30.1 +1.1**
comp=Z,69nm,0.9s,baz=359,slow=4.7,SNR=7.5
VNDA S **S** **09 31 18.8 +3.2**
comp=Z,16nm,1.0s,baz=89,slow=22,SNR=26
VNDA PKPPKP **P'P'df** **09 54 40.2 +4.9**
comp=Z,3.1nm,0.9s,baz=163,slow=3.4,SNR=4.3
VNDA Vanda 53.48 185 P **P** **09 24 24.0 +1.2**
VNDA PcP **PcP** **09 25 24.4 +3.0**
KLBR Kellerberrin 53.86 248 P **P** **09 24 26.3 -0.1**
baz=54,SNR=107
MEEK Meekatharra 54.04 254 P **P** **09 24 27.2 -0.5**
baz=54,SNR=114
SOEI Soe 54.05 276 P **P** **09 24 29.6 +1.6**
comp=Z,16μmcomp=Z,20μmcomp=Z,2μm,1.1s
NWAO Narrogin (SRO) 54.10 246 P **P** **09 24 27.9 0.0**
baz=54,SNR=72
NWAO Narrogin (SRO) 54.10 246 P **P** **09 24 27.8 -0.2**
comp=Z,351nm,1.0s,baz=114,slow=6.1,SNR=60
NWAO PcP **PcP** **09 25 25.0 +0.4**
comp=Z,92nm,0.9s,baz=103,slow=3.3,SNR=5.4
NWAO ScP **ScP** **09 28 33.7 +1.1**
comp=Z,59nm,1.1s,baz=73,slow=5.2,SNR=4.1
NWAO S **S** **09 31 24.3 -0.7**
comp=Z,17nm,0.9s,baz=325,slow=19,SNR=9.6
NWAO Narrogin (SRO) 54.10 246 P **P** **09 24 27.7 -0.2**
NWAO Narrogin (SRO) 54.10 246 P **P** **09 24 27.6 -0.3**
NLAI Namlea 54.34 285 P **P** **09 24 29.9 0.0**
comp=Z,18μmcomp=Z,2μm,1.3s
MBWA Marble Bar 54.37 261 P **P** **09 24 30.2 +0.2**
MBWA Marble Bar 54.37 261 P **P** **09 24 30.1 0.0**
MBWA IAmb IAmb 09 24 32.8
comp=Z,1μm,1.5s
BATI Baumata 54.42 275 P **P** **09 24 32.2 +1.7**
comp=Z,564nm,0.6s,baz=135,slow=0.9,SNR=66
BATI S **S** **09 31 32.3 +2.5**
comp=Z,84nm,1.0s,baz=163,slow=13,SNR=3.5
BATI Baumata 54.42 275 P **P** **09 24 32.1 +1.6**
comp=Z,8μmcomp=Z,7μmcomp=Z,454nm,1.1s
BLDU Balidu 54.91 249 P **P** **09 24 33.4 -0.3**
baz=55,SNR=158
MUN Mundaring 55.10 247 P **P** **09 24 35.2 +0.2**
baz=55,SNR=119
LBMI Labuha 55.24 288 P **P** **09 24 36.8 +0.6**
comp=Z,14μmcomp=Z,1μm,1.3s
MORW Morawa 55.77 251 P **P** **09 24 39.6 -0.1**
baz=56,SNR=107
SANI Sanana 55.87 285 P **P** **09 24 39.9 -0.7**
comp=Z,20μmcomp=Z,13μmcomp=Z,1μm,1.3s
TNTI Ternate 56.06 289 P **P** **09 24 41.7 -0.2**
comp=Z,9μmcomp=Z,15μmcomp=Z,1μm,1.1s
TNTI Ternate 56.06 289 IAmb IAmb 09 24 44.2
comp=Z,1μm,1.0s
MMRI Maumere 56.33 276 P **P** **09 24 44.6 +0.8**
comp=Z,15μmcomp=Z,13μmcomp=Z,1μm,1.1s
MMRI Maumere 56.33 276 IAmb IAmb 09 24 46.0
comp=Z,1μm,1.0s
H01W1 Cape Leeuwin H 56.34 243 P **P** **09 24 45.5 +2.2**
baz=105,slow=8.2,SNR=17
H01W2 Cape Leeuwin H 56.36 243 P **P** **09 24 45.6 +2.1**
baz=105,slow=8.2,SNR=15
H01W3 Cape Leeuwin H 56.36 243 P **P** **09 24 45.3 +1.9**
baz=105,slow=8.2,SNR=18
EDFI Ende, Flores 56.78 276 P **P** **09 24 46.7 -0.3**
comp=Z,7μmcomp=Z,6μmcomp=Z,657nm,1.1s
BASI Baing, Sumba 57.21 274 P **P** **09 24 51.5 +1.7**
comp=Z,8μmcomp=Z,19μmcomp=Z,1μm,1.2s
BBSI Bau Bau 57.35 280 P **P** **09 24 53.4 +2.6**
comp=Z,2μmcomp=Z,227nm,1.0s
WBSI Waikabubak, Su 58.51 274 P **P** **09 24 58.7 0.0**
comp=Z,13μmcomp=Z,1μm,1.1s
GIRL Giralia 58.88 258 P **P** **09 25 03.0 +2.0**
baz=59,SNR=23
KMSI Cibinong 58.89 287 P **P** **09 25 01.4 +0.2**
comp=Z,569nmcomp=Z,11μmcomp=Z,902nm,0.8s
CASY Casey 58.98 200 P **P** **09 25 01.1 +0.2**
LUWI Luuk 59.18 284 P **P** **09 25 03.4 +0.3**
comp=Z,18μmcomp=Z,22μmcomp=Z,2μm,1.3s
BKSI Bulukumba 59.62 279 P **P** **09 25 05.6 -0.5**
comp=Z,12μmcomp=Z,10μmcomp=Z,1μm,1.0s
BNSI Bone 60.03 280 P **P** **09 25 08.8 0.0**
comp=Z,12μmcomp=Z,1μm,1.4s
KAPI Kappang 60.08 279 P **P** **09 25 09.4 +0.2**
comp=Z,511nm,1.1s,baz=94,slow=2.4,SNR=96
KAPI S **S** **09 32 42.1 -0.1**
comp=Z,9.7nm,0.4s,baz=176,slow=17,SNR=4.7
KAPI Kappang 60.08 279*ceP* **P** **09 25 09.6 +0.4**
KAPI pmax pmax
comp=Z,1μm,1.7s
KAPI Kappang 60.08 279 P **P** **09 25 09.8 +0.6**
APSI Ampana 60.23 284 P **P** **09 25 10.5 +0.3**
comp=Z,9μmcomp=Z,11μmcomp=Z,1μm,1.2s
PLAI Plampang 60.30 274 P **P** **09 25 10.4 -0.2**
comp=Z,14μmcomp=Z,27μmcomp=Z,2μm,1.0s
SPSI Sidrap Palu 60.52 280 P **P** **09 25 10.9 -1.2**
comp=Z,11μmcomp=Z,6μmcomp=Z,501nm,1.0s
MRSI Marisa 60.63 286 P **P** **09 25 11.5 -1.3**
comp=Z,14μmcomp=Z,8μmcomp=Z,522nm,1.0s
TTSI Tana Toraja 60.88 281 P **P** **09 25 14.0 -0.5**
comp=Z,10μmcomp=Z,7μmcomp=Z,518nm,1.1s
DAV Davao City (W) 60.89 294*eP* **P** **09 25 10.0 -4.5**
DAV Davao City (W) 60.89 294 P **P** **09 25 14.3 -0.2**
DAV IAmb IAmb 09 25 18.3
comp=Z,1μm,1.0s
DMPH Davao City--Mi 60.96 294*eP* P 09 25 27.4 +12
KCP Kidapawan 61.27 294*eP* **P** **09 25 17.0 -0.1**
MPSI Mapaga 62.36 284 P **P** **09 25 23.4 -0.7**
comp=Z,12μmcomp=Z,10μmcomp=Z,741nm,0.9s
CGP Cagayan de Oro 62.38 295*eP* **P** **09 25 24.8 +0.6**
JCJ Chichijima 62.60 323 P **P** **09 25 24.9 -0.5**

comp=Z,498nm,0.6s,baz=94,slow=11,SNR=69
JCJ S **S** **09 33 10.0 -2.8**
comp=Z,27nm,0.8s,baz=274,slow=19,SNR=1.3
DNP Denpasar 62.69 273 P **P** **09 25 27.8 +1.6**
comp=Z,33μmcomp=Z,2μm,1.6s
SRBI Singaraja 62.92 274 P **P** **09 25 27.5 -0.2**
comp=Z,14μmcomp=Z,16μmcomp=Z,1μm,1.0s
RPN Rapa Nui 63.63 109 P **P** **09 25 34.6 +2.5**
comp=Z,253nm,0.7s,baz=288,slow=4.8,SNR=23
RPN Rapa Nui 63.63 109 P **P** **09 25 34.7 +2.5**
RPN pmax pmax
comp=Z,2μm,1.9s
RPN Rapa Nui 63.63 109 P **P** **09 25 34.6 +2.5**
JAGI Jajag, Banyuwa 63.73 273 P **P** **09 25 32.0 -1.0**
comp=Z,12μmcomp=Z,13μmcomp=Z,1μm,1.2s
JAGI Jajag, Banyuwa 63.73 273 IAmb IAmb 09 25 34.3
comp=Z,1μm,1.0s
TBP Tagbilaran 63.75 296*eP* **P** **09 25 35.0 +2.0**
BKB Balikpapan 64.29 281 P **P** **09 25 39.8 +3.3**
comp=Z,20μmcomp=Z,12μmcomp=Z,781nm,1.0s
BKB Balikpapan 64.29 281 P **P** **09 25 39.1 +2.6**
BKB IAmb IAmb 09 25 42.0
comp=Z,621nm,0.9s
SMKI Samarinda 64.38 282 P **P** **09 25 39.6 +2.5**
comp=Z,20μmcomp=Z,20μmcomp=Z,2μm,1.6s
KMMI Kalianget 64.46 274 P **P** **09 25 38.6 +1.0**
comp=Z,15μmcomp=Z,1μm,1.3s
QSPA South Pole Qui 65.35 180 P **P** **09 25 44.0 +1.5**
comp=Z,657nm,0.8s,baz=299,slow=0.3,SNR=3674
QSPA S **S** **09 33 45.9 +0.7**
comp=Z,185nm,1.1s,baz=18,slow=3.2,SNR=4.4
QSPA South Pole Qui 65.35 180 P **P** **09 25 43.7 +1.1**
QSPA IAmb IAmb 09 25 45.6
comp=Z,792nm,0.9s
RCP Roxas 65.69 297*eP* **P** **09 25 44.7 -0.6**
RCP Roxas 65.69 297*eP* **S** **09 33 49.5 -1.0**
GRJI Gresik 65.87 273 P **P** **09 25 47.1 +0.7**
comp=Z,824nmcomp=Z,16μmcomp=Z,2μm,0.8s
PWJI Pagerwojo 66.04 272 P **P** **09 25 47.2 -0.3**
comp=Z,10μmcomp=Z,9μmcomp=Z,1μm,0.8s
PCJI Pacitan 66.54 272 P **P** **09 25 50.8 +0.2**
comp=Z,24μmcomp=Z,3μm,1.0s
WOJI Wonogiri, Jawa 66.91 272 P **P** **09 25 53.0 +0.1**
comp=Z,8μmcomp=Z,12μmcomp=Z,1μm,1.6s
GQP Guinayangan 67.25 298*i* P **P** **09 25 54.2 -0.7**
UGM Wanagama 67.25 272 P **P** **09 25 55.2 +0.2**
comp=Z,13μmcomp=Z,11μmcomp=Z,930nm,1.1s
UGM Wanagama 67.25 272 P **P** **09 25 55.0 -0.1**
SPMM Sapulut 67.45 287 P **P** **09 25 58.0 +1.7**
UWJI Ujung Watu 67.46 273 P **P** **09 25 57.0 +0.7**
comp=Z,778nmcomp=Z,6μmcomp=Z,479nm,0.9s
YOGI Yogyakarta 67.49 272 P **P** **09 25 57.2 +0.7**
comp=Z,7μmcomp=Z,9μmcomp=Z,856nm,0.9s
SMRI Semarang 67.66 272 P **P** **09 25 59.0 +1.4**
comp=Z,16μmcomp=Z,12μmcomp=Z,684nm,1.7s
SMRI Semarang 67.66 272 P **P** **09 25 57.7 +0.1**
PGP Puerto Galera 68.22 297*i* P **P** **09 25 59.0 -1.9**
KKM Kota Kinabalu 68.32 288 IAmb IAmb 09 26 04.1
comp=Z,1μm,1.2s
PBKI Pangkalan Bun 68.35 277 P **P** **09 26 02.6 +0.9**
comp=Z,22μmcomp=Z,29μmcomp=Z,3μm,1.0s
JHJ2 Mitsune 68.59 325 P **P** **09 26 02.4 -0.4**
JHJ Hachijo jima 2 68.62 325 P **P** **09 26 02.9 0.0**
comp=Z,898nm,0.5s,baz=204,slow=18,SNR=28
CISI Cisompet, Garu 69.85 271 P **P** **09 26 09.9 -0.9**
comp=Z,12μmcomp=Z,26μmcomp=Z,1μm,1.1s
CISI Cisompet, Garu 69.85 271 IAmb IAmb 09 26 12.2
comp=Z,1μm,1.1s
SMPP San Manuel, Pa 69.92 299*eS* **ScS** **09 35 26.6 +3.2**
SMPP San Manuel, Pa 69.92 299*eP* **S** **09 34 33.4 -6.3**
SBUM Sibu 70.13 282 P **P** **09 26 13.0 +0.6**
LEM Lembang 70.32 271 P **P** **09 26 14.3 +0.5**
comp=Z,825nm,0.8s,baz=104,slow=5.7,SNR=171
LEM S **S** **09 34 44.7 -0.1**
comp=Z,337nm,1.2s,baz=299,slow=20,SNR=28
LEM PKPPKP **P'P'df** **09 54 05.8 -4.5**
comp=Z,8.7nm,0.3s,baz=323,slow=2.8,SNR=7.8
CNJI Cibinong 70.57 271 P **P** **09 26 14.3 -0.7**
comp=Z,14μmcomp=Z,13μmcomp=Z,1μm,1.1s
XMIS Christmas Isla 70.68 267 P **P** **09 26 15.6 -0.1**
XMIS IAmb IAmb 09 26 17.9
comp=Z,817nm,1.1s
JOW Kunigami 70.91 313 P **P** **09 26 17.3 +0.6**
comp=Z,62nm,0.9s,baz=138,slow=10,SNR=94
JOW PP **PP** **09 29 03.7 +0.4**
comp=Z,23nm,1.1s,baz=133,slow=13,SNR=9.0
JOW Kunigami 70.91 313 IAmb IAmb 09 26 19.4
comp=Z,1μm,1.6s
CBJI Citeko 71.18 272 P **P** **09 26 18.2 -0.4**
comp=Z,36μmcomp=Z,1μm,0.8s
SKJI Sukabumi 71.21 271 P **P** **09 26 18.7 -0.1**
comp=Z,12μmcomp=Z,12μmcomp=Z,1μm,1.1s
DBJI Dramaga 71.22 271 P **P** **09 26 18.7 -0.2**
comp=Z,25μmcomp=Z,2μm,1.2s
KSM Kuching 71.39 281 P **P** **09 26 20.0 +0.1**
INU Inuyama 71.79 325 P **P** **09 26 21.5 -0.1**
INU IAmb IAmb 09 26 24.2
comp=Z,2μm,1.5s
SBJI Serang 71.95 272 P **P** **09 26 23.5 +0.3**
comp=Z,15μmcomp=Z,1μm,1.8s
MJAR Matsushiro Arr 72.10 326 P **P** **09 26 23.1 -0.3**
comp=Z,424nm,0.9s,baz=150,slow=5.8,SNR=684
MJAR pP **pP** **09 28 11.1 -0.6**
comp=Z,32nm,0.9s,baz=153,slow=5.5,SNR=3.7
MJAR S **S** **09 35 03.8 +0.2**
comp=Z,5.8nm,1.1s,baz=168,slow=12,SNR=4.8
MJAR PKPPKP **P'P'df** **09 54 01.0 -2.7**
comp=Z,8.5nm,0.9s,baz=336,slow=3.7,SNR=13
MAJO Matsushiro 72.10 326*d i* P **P** **09 26 23.2 -0.3**
MAJO pmax pmax
comp=Z,866nm,1.0s
MAJO Matsushiro 72.10 326 P **P** **09 26 23.3 -0.2**
MAT Matsushiro 72.10 326 P **P** **09 26 23.1 -0.4**
MAT S **S** **09 35 04.4 +0.8**
BLSI Bandar Lampung 73.06 272 P **P** **09 26 28.9 -0.7**
comp=Z,9μmcomp=Z,11μmcomp=Z,887nm,1.0s
TWG Pinlang 73.47 305 IAmb IAmb 09 26 33.0
comp=Z,628nm,0.9s
JNU Nakatsue 73.58 319 P **P** **09 26 31.9 -0.2**
comp=Z,393nm,0.9s,baz=92,slow=3.9,SNR=103
PPBI Pangkal Pinang 73.58 275 P **P** **09 26 32.6 +0.1**
comp=Z,17μmcomp=Z,676nm,1.4s
KASI Kota Agung 73.68 271 P **P** **09 26 31.9 -1.2**
comp=Z,11μmcomp=Z,14μmcomp=Z,2μm,1.0s
NACB Ninganchiao 73.89 307 IAmb IAmb 09 26 35.3
comp=Z,2μm,1.3s
TPUB Ta-pu 74.08 305 IAmb IAmb 09 26 35.0
comp=Z,423nm,1.0s
SSLB Suanglung 74.13 306 IAmb IAmb 09 26 35.9
comp=Z,713nm,1.4s
ERM Erimo 74.24 333*d i* P **P** **09 26 37.0 +1.4**
ERM pmax pmax
comp=Z,866nm,1.6s
ERM Erimo 74.24 333 P **P** **09 26 36.9 +1.4**
ERM IAmb IAmb 09 26 39.8
comp=Z,1μm,1.6s
LWLI Liwa 74.28 272 P **P** **09 26 35.9 -0.8**
comp=Z,15μmcomp=Z,2μm,0.8s
YHNB Yeheng 74.35 307 IAmb IAmb 09 26 41.0
comp=Z,927nm,1.2s
MDSI Maura Dua 74.39 272 P **P** **09 26 35.5 -1.6**
comp=Z,8μmcomp=Z,10μmcomp=Z,1μm,0.8s
TATO Taipei 74.45 307 P **P** **09 26 37.1 -0.1**
TATO Taipei 74.45 307 P **P** **09 26 36.3 -0.9**
PMBI Palembang 74.50 274 P **P** **09 26 39.2 +1.5**
comp=Z,14μmcomp=Z,16μmcomp=Z,913nm,1.5s
PMBI Palembang 74.50 274 IAmb IAmb 09 26 40.0
comp=Z,850nm,1.0s
YUK Yuzh-Kuril'sk 74.89 336*d i* P **P** **09 26 40.2 +1.0**
YUK *i* 09 26 50.9
YUK *i* *PP **pwP** **09 28 31.3 -2.7**
YUK *i* 09 29 34.5
YUK *i* PPP PPP 09 31 25.4
YUK *i* S **S** **09 35 33.7 -0.1**
YUK *i* 09 36 01.3
YUK pmax pmax
comp=Z,3μm,2.3s
YUK pmax pmax
comp=Z,2μm,1.4s
YUK pmax pmax
comp=N,728nm,1.2s
YUK pmax pmax
comp=E,1μm,1.5s
KUR Kuril'sk 75.21 338*d i* P **P** **09 26 42.0 +1.1**
KUR *e* 09 26 52.4
KUR *e* 09 29 39.9

KUR *i* S **S** **09 35 41.8 +4.6**
KUR *e* 09 36 04.6
KUR *eSS* **SS** **09 40 42.7 +0.8**
KUR pmax pmax
comp=Z,2μm,2.3s
KUR pmax pmax
comp=N,510nm,1.7s
KUR pmax pmax
comp=E,481nm,2.2s
KUR pmax pmax
comp=Z,10μm,6.9s
MNAI Manna 75.55 272 P **P** **09 26 43.7 0.0**
comp=Z,14μmcomp=Z,20μmcomp=Z,2μm,1.0s
KSI Kapahiang 76.17 272 P **P** **09 26 46.2 -1.0**
comp=Z,23μmcomp=Z,3μm,1.0s
TPRI Tanjung Pinang 76.34 277 P **P** **09 26 48.2 +0.2**
comp=Z,11μmcomp=Z,534nm,1.0s
ADK Adak 76.38 3 P **P** **09 26 47.0 -0.3**
ADK pmax pmax
comp=Z,1μm,0.8s
ADK Adak 76.38 3 P **P** **09 26 47.0 -0.3**
KNMB Chin-men Tao 76.42 305 IAmb IAmb 09 26 50.7
comp=Z,1μm,1.6s
QZH Quanzhou 76.55 306⇓ *i* P **P** **09 26 48.9 +0.1**
QZH *sP* **sP** **09 29 29.5 -2.5**
QZH S **S** **09 35 50.9 -1.6**
QZH pmax pmax
comp=Z,310nm,1.3s
QZH pmax pmax
comp=Z,5μm,7.0s
MAW Mawson 76.67 201 P **P** **09 26 49.6 +0.9**
baz=77,SNR=206
MAW Mawson 76.67 201 P **P** **09 26 49.7 +0.9**
comp=Z,367nm,1.0s,baz=132,slow=5.8,SNR=269
MAW pP **pP** **09 28 40.5 +2.0**
comp=Z,26nm,0.7s,baz=132,slow=4.3,SNR=2.0
MAW Mawson 76.67 201 P **P** **09 26 49.4 +0.6**
MASI Maura Aman, Be 76.70 273 P **P** **09 26 49.6 -0.5**
comp=Z,38μmcomp=Z,4μm,1.0s
ATKA Atka Island 76.83 4 IAmb IAmb 09 26 50.7
comp=Z,1μm,0.9s
SMY Shemya 77.25 357 P **P** **09 26 51.7 -0.3**
SMY Shemya 77.25 357 IAmb IAmb 09 26 53.3
comp=Z,898nm,0.9s
MYKOM **Kota Tinggi 77.33 278** IAmb IAmb 09 26 55.9
comp=Z,844nm,1.2s
MYKOM **Kota Tinggi 77.33 278** P **P** **09 26 54.0 +0.6**
SKR Severo-Kuril's 77.78 345 *eP* **P** **09 26 52.3 -2.6**
SKR *e*PP **sP** **09 29 38.6 0.0**
SKR *eS* **S** **09 36 04.4 +0.1**
SKR pmax pmax
comp=Z,4μm,9.0s
SKR pmax pmax
comp=Z,419nm,0.7s
RGRI Rengat 77.78 275 P **P** **09 26 57.1 +1.2**
comp=Z,898nmcomp=Z,2μm,0.8s
DLV T Lat 77.84 289 IAmb IAmb 09 26 59.6
comp=Z,1μm,1.2s
KRJI Kerinci 77.85 273 P **P** **09 26 56.0 -0.3**
comp=Z,11μmcomp=Z,24μmcomp=Z,1μm,1.2s
TJN Taejon 77.92 320 *d iP* **P** **09 26 56.2 +0.2**
COCO West Island 78.00 262 P **P** **09 26 58.3 +1.3**
COCO pmax pmax
comp=Z,2μm,1.5s
COCO West Island 78.00 262 P **P** **09 26 58.3 +1.3**
COCO IAmb IAmb 09 27 00.4
comp=Z,2μm,1.5s
KSRS Korea Array 78.33 321 P **P** **09 26 59.0 +0.9**
comp=Z,144nm,0.8s,baz=137,slow=5.7,SNR=263
KSRS PP **PP** **09 30 03.2 -1.8**
comp=Z,24nm,0.9s,baz=140,slow=8.2,SNR=4.6
KSRS PKiKP **PKiKP** **09 32 30.4 +0.9**
comp=Z,4.9nm,1.0s,baz=132,slow=1.7,SNR=4.7
KSRS PKPPKP **P'P'df** **09 53 52.5 -0.5**
comp=Z,2.4nm,0.8s,baz=335,slow=3.0,SNR=4.9
SDSI Sungai Dareh 78.36 274 P **P** **09 26 57.6 -1.4**
comp=Z,143μmcomp=Z,6μmcomp=Z,378nm,1.0s
SSE Sheshan 78.39 312 P **P** **09 26 58.4 -0.3**
SSE *sP* **sP** **09 29 37.5 -4.9**
SSE S **S** **09 36 10.6 -1.1**
SSE pmax pmax
comp=Z,110nm,1.2s
SSE pmax pmax
comp=Z,2μm,6.2s
HKC Hong Kong Obse 78.42 301⇑ P **P** **09 27 01.0 +1.9**
HKPS Hong Kong Po S 78.44 301 IAmb IAmb 09 27 02.4
comp=Z,1μm,1.4s
PMSA Palmer Station 78.49 157 P **P** **09 26 59.7 +1.0**
comp=Z,186nm,0.7s,baz=230,slow=3.1,SNR=32
PMSA pP **pwP** **09 28 53.9 +0.6**
comp=Z,161nm,1.1s,baz=236,slow=6.4,SNR=5.1
PMSA Palmer Station 78.49 157 P **P** **09 26 59.9 +1.2**
PMSA Palmer Station 78.49 157 *eP* **P** **09 27 00.2 +1.6**
YSS Yuzh-Sakhalins 78.52 336ĸ *iP* **P** **09 27 00.6 +1.6**
YSS *e* 09 27 07.5
YSS *e**PP **pP** **09 28 51.7 +2.1**
YSS *e**SP **sP** **09 29 43.1 -0.3**
YSS *e* 09 30 07.2
YSS *eS* **S** **09 36 12.4 +0.1**
YSS *eSS* **SS** **09 41 31.6 +0.3**
YSS *e*SSS SSS 09 44 55.5
YSS pmax pmax
comp=Z,1μm,0.8s
YSS pmax pmax
comp=Z,11μm,6.7s
YSS pmax pmax
comp=N,3μm,6.3s
YSS pmax pmax
comp=E,2μm,6.8s
YSS smax smax
comp=N,4μm,6.3s
YSS smax smax
comp=E,4μm,6.2s
YSS Yuzh-Sakhalins 78.52 336 P **P** **09 27 00.5 +1.6**
PPSI Pulau Pagai 78.89 272 P **P** **09 27 03.2 +1.4**
comp=E,20μmcomp=E,2μm,1.0s
INCN Inchon 79.10 320 P **P** **09 27 03.4 +1.0**
INCN Inchon 79.10 320 P **P** **09 27 02.1 -0.3**
INCN pmax pmax
comp=Z,3μm,2.0s
INCN Inchon 79.10 320 P **P** **09 27 02.1 -0.3**
INCN IAmb IAmb 09 27 05.4
comp=Z,3μm,1.9s
BKNI Bangkinang 79.24 275 P **P** **09 27 03.6 -0.1**
comp=Z,15μmcomp=Z,12μmcomp=Z,891nm,1.2s
BKNI Bangkinang 79.24 275 IAmb IAmb 09 27 05.4
comp=Z,1μm,1.1s
PDSI Padang 79.25 274 P **P** **09 27 01.9 -1.8**
comp=Z,6μmcomp=Z,4μmcomp=Z,237nm,1.4s
UNV Unalaska Valle 79.25 9 IAmb IAmb 09 27 04.0
comp=Z,600nm,0.8s
PET Petropavlovsk 79.44 348ĸ *iP* **P** **09 27 03.8 +0.1**
PET *e**SP **sP** **09 29 48.7 +0.9**
PET *eS* **S** **09 36 21.5 -0.1**
PET *e* 09 36 37.2
PET *eSP* **SPn** **09 37 12.7 +3.1**
PET *eSS* **SS** **09 41 48.8 +4.1**
PET pmax pmax
comp=Z,363nm,1.2s
PET pmax pmax
comp=Z,7μm,8.0s
PET pmax pmax
comp=Z,5μm,12.7s
PET Petropavlovsk 79.44 348 P **P** **09 27 03.2 -0.5**
PET IAmb IAmb 09 27 06.0
comp=Z,1μm,1.6s
TEY Ternei 79.49 331⇑ *iP* **P** **09 27 05.6 +1.4**
TEY *eS* **S** **09 36 25.0 +2.5**
TEY pmax pmax
comp=Z,180nm,1.2s
TEY pmax pmax
comp=E,2μm,3.4s
TEY pmax pmax
comp=Z,7μm,7.4s
TEY pmax pmax
comp=N,3μm,5.2s
TEY smax smax
comp=N,3600μm,10.6s
TEY smax smax
comp=E,2μm,4.9s
GZH Guangzhou 79.49 301 P **P** **09 27 06.2 +1.5**
GZH *sP* **sP** **09 29 49.6 +0.9**
GZH S **S** **09 36 24.6 +1.2**
GZH SS **SS** **09 41 47.2 +0.8**
GZH pmax pmax
comp=E,6μm,7.5s

AKUT Akutan 79.63 9 IAmb IAmb 09 27 06.3
comp=Z,2μm,1.7s
PEA0B Petropavlovsk- 79.71 347 *d iP* **P** **09 27 05.5 +0.3**
PETK Petropavlovsk- 79.71 347 P **P** **09 27 06.0 +0.8**
comp=Z,673nm,0.8s,baz=122,slow=6.9,SNR=537
PETK PKiKP **PKiKP** **09 32 30.4 -0.7**
comp=Z,9.5nm,0.7s,baz=136,slow=4.5,SNR=6.6
PETK PKKPbc **PKKPbc** **09 45 47.7 -2.4**
comp=Z,1.7nm,0.4s,baz=71,slow=3.3,SNR=14
PETK PKPPKP **P'P'df** **09 53 55.9 +6.8**
comp=Z,6.7nm,1.1s,baz=83,slow=4.6,SNR=4.3
QIZ Qiongzhong 80.17 296 P **P** **09 27 09.1 +0.7**
QIZ pP **pP** **09 29 01.4 +1.9**
QIZ sP **sP** **09 29 55.7 +3.1**
QIZ S S 09 36 19.6 -11
QIZ ScS **ScS** **09 36 46.5 +0.2**
QIZ sS **sS** **09 39 52.6 +2.8**
QIZ pmax pmax
comp=Z,170nm,1.2s
QIZ pmax pmax
comp=Z,3μm,8.8s
MSHR Mys Shultsa 80.22 326 *d iP* **P** **09 27 09.2 +1.1**
VLA Vladivostok 80.25 327 *d iP* **P** **09 27 08.8 +0.6**
SISI Saibi 80.32 273 P **P** **09 27 10.1 +0.8**
comp=Z,7μmcomp=Z,466nm,1.3s
NJ2 Nanjing 80.55 312⇓ *iP* **P** **09 27 10.7 +0.6**
NJ2 sP **sP** **09 29 57.4 +3.0**
NJ2 PP **PP** **09 30 22.0 -1.4**
NJ2 S **S** **09 36 34.0 +0.1**
NJ2 SS **SS** **09 42 05.2 +3.3**
NJ2 pmax pmax
comp=Z,430nm,1.4s
NJ2 pmax pmax
comp=Z,5μm,7.3s
H06S1 SOCORRO T 80.69 64 P **P** **09 27 12.2 +1.1**
FALS False Pass 80.69 10 IAmb IAmb 09 27 12.8
comp=Z,608nm,0.9s
H06N1 SOCORRO T-PHAS 80.72 64 P **P** **09 27 12.3 +1.1**
H06E1 SOCORRO T-PHAS 80.73 64 P **P** **09 27 12.4 +1.1**
MNSI Mandailing Nat 80.76 275 P **P** **09 27 10.0 -1.6**
comp=Z,8μmcomp=Z,742nm,0.9s
USRK Ussuriysk Ar. 80.99 328 P **P** **09 27 13.1 +1.0**
comp=Z,216nm,0.6s,baz=137,slow=3.9,SNR=414
USRK PP **PP** **09 30 30.8 +4.1**
comp=Z,16nm,0.9s,baz=134,slow=8.2,SNR=5.1
USRK PKKPbc **PKKPbc** **09 45 44.1 -2.5**
comp=Z,3.2nm,0.8s,baz=302,slow=2.3,SNR=8.3
USRK PKPPKP **P'P'df** **09 53 47.9 +0.2**
comp=Z,4.6nm,1.0s,baz=288,slow=1.8,SNR=4.8
IPM Ipoh 81.03 279 IAmb IAmb 09 27 15.2
comp=Z,1μm,1.2s
IPM Ipoh 81.03 279 P **P** **09 27 13.0 0.0**
CNBA Chernabura Isl 81.33 12 IAmb IAmb 09 27 15.0
comp=Z,436nm,0.9s
PBSI Pulau Batu 81.58 274 P **P** **09 27 16.5 +0.6**
comp=Z,17μmcomp=Z,12μmcomp=Z,590nm,0.9s
GO10 Punta Arenas 81.62 145 IAmb IAmb 09 27 19.1
comp=Z,452nm,0.8s
SDPT Sand Point 81.66 12 IAmb IAmb 09 27 18.0
comp=Z,1μm,1.3s
KULM Kulim 81.71 280 IAmb IAmb 09 27 19.0
comp=Z,542nm,1.1s
KULM Kulim 81.71 280 P **P** **09 27 17.0 +0.5**
TYV Tymovskoe 81.83 338 *eP* **P** **09 27 17.1 +0.9**
TYV pmax pmax
comp=Z,674nm,1.7s
TYV pmax pmax
comp=Z,6μm,2.3s
SYO Syowa Base 82.00 194⇑ *iP* **P** **09 27 15.2 -1.7**
SYO Syowa Base 82.00 194⇓ *i* PcP **PcP** **09 27 20.6 -0.3**
USHA Ushuaia 82.08 147 P **P** **09 27 19.4 +1.8**
comp=Z,62nm,0.9s,baz=163,slow=2.1,SNR=10
USHA PKPPKP **P'P'df** **09 53 48.3 0.0**
comp=Z,10nm,0.4s,baz=18,slow=3.2,SNR=2.0
SNCC San Nicolas Is 82.11 48 P **P** **09 27 19.3 +1.2**
baz=234
RPSI Rantau Prapat 82.16 277 IAmb IAmb 09 27 20.1
comp=Z,879nm,1.1s
PSI Prapat 82.20 277 P **P** **09 27 17.9 -1.3**
comp=Z,393nm,0.8s,baz=180,slow=4.0,SNR=195
PSI PKKPbc **PKKPbc** **09 45 42.7 +0.6**
comp=Z,4.7nm,0.3s,baz=3.8,slow=4.2,SNR=7.4
MDJ Mudanjiang 82.47 327 P **P** **09 27 21.4 +1.8**
MDJ sP sP 09 30 10.2 +5.7
MDJ PP **PP** **09 30 40.2 +1.5**
MDJ S **S** **09 36 54.6 +1.9**
MDJ SS **SS** **09 42 31.0 +1.2**
MDJ pmax pmax
comp=Z,350nm,1.0s
MDJ pmax pmax
comp=Z,11μm,5.5s
MDJ Mudanjiang 82.47 327 IAmb IAmb 09 27 23.1
comp=Z,1μm,1.3s
SCZ2 Santa Cruz Isl 82.48 47 P **P** **09 27 21.3 +1.4**
baz=234,SNR=15
SCI2 San Clemente I 82.61 49 P **P** **09 27 21.7 +1.0**
baz=234,SNR=14
SBC Santa Barbara 82.69 47 P **P** **09 27 22.5 +1.5**
baz=233
GSI Gunungsitoli 82.79 275 P **P** **09 27 22.3 +0.3**
comp=Z,70μmcomp=Z,63μmcomp=Z,4μm,1.5s
GSI Gunungsitoli 82.79 275 IAmb IAmb 09 27 24.9
comp=Z,1μm,1.2s
WHN Wuhan 82.82 308⇓ P **P** **09 27 22.0 +0.3**
WHN pP **pP** **09 29 11.2 -2.5**
WHN S **S** **09 36 54.5 -2.3**
WHN pmax pmax
comp=Z,380nm,1.0s
WHN pmax pmax
comp=Z,11μm,6.0s
PKM Mcpherson Peak 82.89 47 P **P** **09 27 23.4 +1.2**
baz=233,SNR=40
MCCM Marconi Confer 82.92 42 IAmb IAmb 09 27 26.3
comp=Z,533nm,0.9s
PAF Port-aux-Franc 82.94 219 P **P** **09 27 23.9 +1.8**
PAF pmax pmax
comp=Z,1μm,1.1s
PAF Port-aux-Franc 82.94 219 P **P** **09 27 23.9 +1.8**
CIS Catalina Islan 82.95 48 P **P** **09 27 23.0 +0.6**
baz=234,SNR=17
DL2 Dalian 83.00 319 P **P** **09 27 23.0 +0.6**
DL2 PP **PP** **09 30 48.1 +5.0**
DL2 S **S** **09 36 56.8 -1.4**
DL2 sS **sS** **09 40 22.0 +3.1**
DL2 pmax pmax
comp=Z,410nm,1.2s
DL2 pmax pmax
comp=Z,6μm,6.7s
SMMC Simmler 83.02 46 P **P** **09 27 24.1 +1.4**
baz=233,SNR=42
FMP Fort Macarthur 83.21 48 P **P** **09 27 24.5 +0.9**
baz=234,SNR=14
HOPS Hopland Field 83.34 42 IAmb IAmb 09 27 29.8
comp=Z,489nm,0.9s
OSI Osito Audit: C 83.45 47 P **P** **09 27 26.1 +1.2**
baz=234,SNR=62
KCPM Cahto Peak 83.47 41 IAmb IAmb 09 27 28.4
comp=Z,404nm,0.8s
DECC Green Verdugo 83.50 48 P **P** **09 27 25.6 +0.5**
baz=234,SNR=44
KCSI Kotacane, Aceh 83.55 277 P **P** **09 27 24.5 -1.3**
comp=Z,12μmcomp=Z,5μmcomp=Z,173nm,1.4s
109C Camp Elliot, M 83.55 49 P **P** **09 27 26.2 +0.9**
baz=235,SNR=87
ARVC Arvin 83.68 47 P **P** **09 27 26.9 +1.0**
baz=234,SNR=134
BAR Barrett 83.74 50 IAmb IAmb 09 27 29.7
comp=Z,1μm,2.0s
KMRM Mail Ridge 83.74 40 IAmb IAmb 09 27 30.0
comp=Z,590nm,0.9s
SNY Shenyang 83.75 322⇓ P **P** **09 27 26.1 0.0**
SNY pP **pwP** **09 29 24.6 +0.8**
SNY sP **sP** **09 30 09.3 -1.9**
SNY S **S** **09 37 03.2 -2.2**
SNY sS **sS** **09 40 28.1 +1.3**
SNY SS **SS** **09 42 44.8 -3.7**
SNY pmax pmax
comp=Z,270nm,1.4s
SNY pmax pmax
comp=Z,6μm,6.5s
SNAA Sanae 83.85 179 P **P** **09 27 26.0 -0.3**
SNAA Sanae 83.85 179 P **P** **09 27 25.9 -0.3**
comp=Z,194nm,0.9s,baz=206,slow=6.8,SNR=391
SNAA pP **pP** **09 29 20.2 +1.5**
comp=Z,144nm,1.1s,baz=194,slow=4.0,SNR=3.8
SNAA PKKPbc **PKKPbc** **09 45 37.6 -2.7**
comp=Z,4.8nm,0.6s,baz=258,slow=5.0,SNR=8.4
SNAA PKPPKP **P'P'df** **09 53 38.3 -6.2**
comp=Z,10nm,1.1s,baz=337,slow=5.8,SNR=3.3
SNAA Sanae 83.85 179 *d iP* **P** **09 27 25.7 -0.6**
SNAA Sanae 83.85 179 P **P** **09 27 25.6 -0.6**
SNAA IAmb IAmb 09 27 28.0
comp=Z,637nm,1.4s
LPIG La Paz 83.89 60 P **P** **09 27 28.6 +1.4**
comp=Z,198nm,0.8s,baz=12,slow=1.6,SNR=62
MURC Murrieta 83.90 49 P **P** **09 27 27.9 +0.8**
baz=235,SNR=125
VES Vestal, Richgr 83.93 46 P **P** **09 27 27.7 +0.5**
baz=234,SNR=268
JCC Jacoby Creek, 83.94 40 IAmb IAmb 09 27 31.8
comp=Z,374nm,1.0s
BFSC Mount Baldy Ra 83.95 48 P **P** **09 27 28.1 +0.6**
baz=235,SNR=108
TPTI 83.97 276 P **P** **09 27 27.5 -0.4**
comp=Z,2μmcomp=Z,148nm,1.1s
VOG Valley Oaks Go 84.02 46 P **P** **09 27 28.4 +0.8**
baz=234,SNR=36
MONP2 **Monument Peak 84.03 50** P **P** **09 27 29.1 +1.1**
baz=236,SNR=579
CN2 Changchun 84.04 324⇓ *iP* **P** **09 27 28.2 +0.7**
CN2 *e*pP pP 09 29 21.2 +1.2
CN2 *es*P sP 09 30 12.4 -0.3
CN2 PP **PP** **09 30 51.6 +0.2**
CN2 *eS* **S** **09 37 11.3 +3.1**
CN2 pmax pmax
comp=Z,2μm,1.4s
GRNR Gornyy 84.06 334⇓ *iP* **P** **09 27 29.2 +1.8**
GRNR *eS* **S** **09 37 05.1 -3.0**
GRNR pmax pmax
comp=Z,710nm,0.9s
GRNR smax smax
comp=N,10.0nm,1.2s
GRNR MLR MLR
comp=Z,510nm,16.0s
VNA3 Neumayer Olymp 84.09 177 P **P** **09 27 27.0 -0.5**
EDW2 Edwards Air Fo 84.09 47 P **P** **09 27 29.0 +1.0**
baz=234,SNR=330
IKP In-Ko-Pah, Jac 84.11 50 P **P** **09 27 29.6 +1.4**
baz=236,SNR=284
KHMM Horse Mountain 84.14 40 IAmb IAmb 09 27 33.2
comp=Z,429nm,0.8s
TIA Tai'an 84.18 314 P **P** **09 27 29.2 +0.8**
TIA pmax pmax
comp=Z,200nm,0.8s
TIA pmax pmax
comp=Z,4μm,3.3s
ISA Isabella, Lake 84.23 47 P **P** **09 27 29.6 +0.9**
baz=234,SNR=564
ISA Isabella, Lake 84.23 47 IAmb IAmb 09 27 31.8
comp=Z,569nm,0.8s
O02D Mt. Diablo Mer 84.26 41 P **P** **09 27 30.5 +1.7**
baz=231,SNR=413
SNSI Sinabang, Aceh 84.39 275 P **P** **09 27 31.0 +1.1**
comp=Z,17μmcomp=Z,1μm,1.7s
CMB Columbia Colle 84.41 44 IAmb IAmb 09 27 32.3
comp=Z,371nm,0.8s
PFO Pinyon Flats O 84.41 49 P **P** **09 27 30.7 +1.0**
comp=Z,112nm,0.8s,baz=261,slow=3.9,SNR=143
PFO PKPPKP **P'P'df** **09 53 42.3 -0.6**
comp=Z,12nm,1.0s,baz=239,slow=1.9,SNR=4.2
PFO Pinyon Flats O 84.41 49 *d iP* **P** **09 27 30.8 +1.0**
PFO pmax pmax
comp=Z,861nm,2.2s
PFO Pinyon Flats O 84.41 49 P **P** **09 27 30.7 +1.0**
baz=236,SNR=89
PFO Pinyon Flats O 84.41 49 P **P** **09 27 30.5 +0.8**
XPFO Pion Flat 84.41 49 P **P** **09 27 30.7 +1.0**
NKL Nikolayevsk 84.42 338 *eP* **P** **09 27 30.2 +1.1**
NKL *e* 09 30 13.3
NKL pmax pmax
comp=Z,829nm,1.3s
KRMB Red Mountain 84.46 39 IAmb IAmb 09 27 33.0
comp=Z,330nm,0.9s
BBRC Big Bear Solar 84.46 48 P **P** **09 27 31.2 +1.0**
baz=235,SNR=70
SWSC Sam W. Stewart 84.49 50 P **P** **09 27 31.2 +1.2**
baz=236,SNR=159
VNA2 Neumayer--Watz 84.50 178 P **P** **09 27 29.1 -0.3**
baz=170,slow=3.7
AFDM Forest Hills D 84.60 43 IAmb IAmb 09 27 33.3
comp=Z,330nm,1.0s
LRMC Laurel Mtn Rad 84.65 47 P **P** **09 27 31.6 +0.8**
baz=235,SNR=33
WDC Whiskeytown Da 84.66 41 IAmb IAmb 09 27 33.9
comp=Z,293nm,0.9s
VNA1 Neumayer--Stat 84.74 178 P **P** **09 27 30.4 -0.2**
RRX Edison Barstow 84.76 48 P **P** **09 27 32.4 +1.1**
baz=235,SNR=6.1
N02D Trinity Center 84.81 40 P **P** **09 27 33.0 +1.5**
baz=231,SNR=96
KLR Kul'dur 84.83 331 PKKPbc PKKPbc 09 45 35.6 -2.3
comp=Z,4.8nm,0.8s,baz=266,slow=0.6,SNR=6.2
KLR PKPPKP **P'P'df** **09 53 41.8 +1.3**
comp=Z,4.0nm,0.9s,baz=299,slow=5.6,SNR=3.6
KLR Kul'dur 84.83 331 *d iP* **P** **09 27 32.5 +1.3**
KLR pmax pmax
comp=Z,1μm,1.7s
OHAK Old Harbor 84.90 15 IAmb IAmb 09 27 33.2
comp=Z,570nm,0.9s
O03E Paynes Creek 84.92 41 P **P** **09 27 32.6 +0.6**
baz=232,SNR=290
CWC Cottonwood Cre 84.94 46 P **P** **09 27 33.3 +1.0**
baz=234
BELC Belle Mtn. Jos 84.94 49 P **P** **09 27 33.4 +1.0**
baz=236,SNR=298
M02C Callahan 84.98 40 P **P** **09 27 34.1 +1.8**
baz=231,SNR=107
LHMI Lhok Sumawe 85.02 278 P **P** **09 27 33.9 +0.9**
comp=Z,17μmcomp=Z,16μmcomp=Z,2μm,0.9s
OMMB Old Mammoth Mi 85.03 45 IAmb IAmb 09 27 36.2
comp=Z,829nm,2.0s
MLSI Meulaboh, Aceh 85.10 277 P **P** **09 27 32.9 -0.5**
comp=Z,14μmcomp=Z,2μm,1.0s
MPMC Manual Prospec 85.11 47 P **P** **09 27 33.9 +0.7**
baz=235,SNR=189
BC3 Big Chuckawall 85.13 50 P **P** **09 27 34.7 +1.5**
baz=236,SNR=226
GSC Goldstone, Bar 85.13 48 P **P** **09 27 34.0 +0.8**
baz=235,SNR=175
MLAC Mammoth, Mammo 85.15 45 P **P** **09 27 34.4 +1.0**
baz=234,SNR=18
RUBR Rubicon Trail 85.17 43 IAmb IAmb 09 27 38.9
comp=Z,327nm,0.9s
HEC Hector,Ludlow 85.18 48 P **P** **09 27 34.3 +0.9**
baz=236,SNR=208
TIN Tinemaha, Big 85.20 46 P **P** **09 27 34.6 +1.1**
baz=234,SNR=46
TIN S **S** **09 37 28.0 +8.0**
baz=234
GLA Glamis 85.23 50 P **P** **09 27 35.3 +1.6**
baz=236,SNR=149
GLA S S 09 37 30.3 +10
baz=236
GLA Glamis 85.23 50 IAmb IAmb 09 27 37.3
comp=Z,594nm,0.9s
YBH Yreka Blue Hor 85.28 40 PKKPbc PKKPbc 09 45 33.5 -3.1
comp=Z,3.2nm,0.9s,baz=80,slow=4.7,SNR=3.7
YBH PKPPKP **P'P'df** **09 53 42.3 +1.8**
comp=Z,7.6nm,1.0s,baz=118,slow=3.8,SNR=6.4
YBH Yreka Blue Hor 85.28 40 IAmb IAmb 09 27 38.5
comp=Z,293nm,0.9s
WAKR Walker 85.28 44 IAmb IAmb 09 27 38.5
comp=Z,372nm,1.0s
K02D Willamette Mer 85.35 38 P **P** **09 27 35.5 +1.5**
baz=230,SNR=20
K02D S **S** **09 37 28.3 +7.2**
baz=230
J01E Myrtle Point 85.50 38 P **P** **09 27 35.9 +1.3**
baz=230,SNR=52
J01E S **S** **09 37 29.2 +6.9**
baz=230
BEKR Beckworth 85.53 42 IAmb IAmb 09 27 39.1
comp=Z,404nm,1.2s
PNTR Pine Nut 85.53 43 IAmb IAmb 09 27 38.1
comp=Z,526nm,0.8s
KDAK Kodiak Island 85.57 15 PKiKP **PKiKP** **09 32 40.4 +0.1**
comp=Z,4.0nm,0.6s,baz=162,slow=3.2,SNR=1.7
KDAK PKPPKP **P'P'df** **09 53 42.2 +3.8**
comp=Z,15nm,1.0s,baz=176,slow=4.0,SNR=7.2
KDAK Kodiak Island 85.57 15 P **P** **09 27 34.5 -0.1**
KDAK IAmb IAmb 09 27 38.1
comp=Z,648nm,1.4s
GMRC Granite Mounta 85.61 49 P **P** **09 27 36.6 +1.0**

baz=236,SNR=180
GMRC S **S** **09 37 32.3 +8.2**
baz=236
IRM **Iron Mountain** **85.62 49** P **P** **09 27 36.8 +1.3**
baz=236,SNR=380
IRM S **S** **09 37 32.7 +8.7**
baz=236
YERR **Yerington** **85.69 43** IAmb IAmb 09 27 39.9
comp=Z,256nm,0.8s
GRAC **Grapevine Rang** **85.73 46** P **P** **09 27 37.0 +1.0**
baz=235,SNR=312
GRAC S **S** **09 37 32.5 +7.6**
baz=235
FURC **Furnace Creek,** **85.76 47** P **P** **09 27 36.6 +0.6**
baz=235,SNR=106
FURC S **S** **09 37 32.5 +7.5**
baz=235
TUQ **Turquoise Moun** **85.80 48** P **P** **09 27 37.4 +0.9**
baz=236,SNR=68
TUQ S **S** **09 37 34.4 +8.6**
baz=236
M04C **Macdoel** **85.82 40** P **P** **09 27 37.5 +1.1**
baz=231,SNR=92
M04C S **S** **09 37 33.3 +7.5**
baz=231
H03S2 **Juan Fernandez** **85.82 125** P **P** **09 27 37.4 +1.2**
L04D **Klamath Falls** **85.82 40** P **P** **09 27 37.4 +1.0**
baz=231,SNR=79
L04D S **S** **09 37 32.6 +6.8**
baz=231
SHOC **Shoshone, Teco** **85.83 47** P **P** **09 27 37.0 +0.6**
baz=235,SNR=45
SHOC S **S** **09 37 33.8 +8.0**
baz=235
Y12C **Blythe** **85.83 50** P **P** **09 27 37.8 +1.4**
baz=237,SNR=128
Y12C S S 09 37 34.9 +9.0
baz=237
Y12C **Blythe** **85.83 50** IAmb IAmb 09 27 41.0
comp=Z,330nm,0.9s
H03S1 **Juan Fernandez** **85.84 125** P **P** **09 27 39.1 +2.8**
H03S3 **Juan Fernandez** **85.84 125** P **P** **09 27 37.4 +1.1**
HSIG **85.90 56** IAmb IAmb 09 27 40.1
comp=Z,435nm,0.8s
NVAR **Mina Array Bea** **85.96 44** P **P** **09 27 38.0 +0.7**
comp=Z,170nm,0.8s,baz=223,slow=8.0,SNR=705
NVAR pP **pP** **09 29 32.5 +1.3**
comp=Z,14nm,0.8s,baz=225,slow=9.8,SNR=2.4
NVAR PKiKP **PKiKP** **09 32 42.4 +0.4**
comp=Z,2.3nm,0.7s,baz=214,slow=2.9,SNR=2.7
NVAR PKKPbc **PKKPbc** **09 45 36.2 +1.3**
comp=Z,7.6nm,0.7s,baz=90,slow=3.7,SNR=12
NVAR PKPPKP **P'P'df** **09 53 37.1 -2.6**
comp=Z,9.5nm,1.0s,baz=97,slow=3.7,SNR=8.4
H03N2 **Juan Fernandez** **86.00 125** P **P** **09 27 39.4 +2.3**
H03N3 **Juan Fernandez** **86.00 125** P **P** **09 27 38.0 +0.8**
H03N1 **Juan Fernandez** **86.01 125** P **P** **09 27 38.3 +1.1**
PAHR **Pah Rah Range** **86.03 43** IAmb IAmb 09 27 41.5
comp=Z,452nm,0.9s
214A **Organ Pipe Nat** **86.07 52** P **P** **09 27 39.4 +1.7**
baz=238
214A S S 09 37 37.4 +9.0
baz=238
214A **Organ Pipe Nat** **86.07 52** IAmb IAmb 09 27 42.4
comp=Z,424nm,1.0s
I02D **Swisshome** **86.15 37** P **P** **09 27 39.5 +1.8**
baz=230
I02D S **S** **09 37 35.5 +7.0**
baz=230
I03D **Drain, OR** **86.17 38** P **P** **09 27 39.1 +1.4**
baz=230,SNR=40
NEE2 **Needles Airpor** **86.32 49** P **P** **09 27 40.1 +1.4**
baz=236,SNR=34
NEE2 S S 09 37 39.8 +9.3
baz=236
PDMCI **Parker Dam,Lak** **86.39 50** P **P** **09 27 40.1 +1.0**
baz=237,SNR=132
PDMCI S S 09 37 40.7 +9.5
baz=237
K04D **Chiloquin, OR** **86.40 39** P **P** **09 27 40.1 +1.0**
baz=231,SNR=49
K04D S **S** **09 37 37.9 +6.7**
baz=231
GYA **Guiyang** **86.42 301** ⇓*i*P **P** **09 27 39.9 +0.3**
GYA pP pP 09 29 34.3 +1.5
GYA sP sP 09 30 27.8 +2.4
GYA PP **PP** **09 31 11.2 +0.3**
GYA SKS **SKSac** **09 37 18.0 +1.6**
GYA S **S** **09 37 31.4 -0.7**
GYA sS sS 09 40 53.8 -1.0
GYA SS **SS** **09 43 26.9 -1.3**
GYA pmax pmax
comp=Z,170nm,1.3s
GYA pmax pmax
comp=Z,4μm,7.0s
TPNV **Topopah Spring** **86.44 47** P **P** **09 27 40.3 +0.8**
baz=235,SNR=539
TPNV S **S** **09 37 39.6 +7.7**
baz=235
TPNV **Topopah Spring** **86.44 47** IAmb IAmb 09 27 43.6
comp=Z,413nm,0.9s
KVN **Kaiserville** **86.45 44** IAmb IAmb 09 27 42.1
comp=Z,251nm,0.8s
J04D **Umpqua Nationa** **86.58 39** P **P** **09 27 41.4 +1.4**
baz=231,SNR=120
J04D S **S** **09 37 40.0 +6.9**
baz=231
I04A **Tendick Farm,** **86.75 38** P **P** **09 27 41.4 +0.8**
baz=231,SNR=48
I04A S **S** **09 37 39.8 +5.5**
baz=231
COR **Corvallis** **86.76 37** P **P** **09 27 42.4 +1.8**
COR pmax pmax
comp=Z,937nm,1.6s
COR **Corvallis** **86.76 37** P **P** **09 27 42.4 +1.8**
COR IAmb IAmb 09 27 45.3
comp=Z,937nm,1.6s
H04D **Lebanon** **87.03 38** P **P** **09 27 43.2 +1.3**
baz=231,SNR=43
H04D S **S** **09 37 42.7 +6.0**
baz=231
BJI **Beijing** **87.03 317** P **P** **09 27 42.8 +0.8**
BJI pP **pP** **09 29 35.2 -0.4**
BJI sP **sP** **09 30 28.1 +0.1**
BJI PP **PP** **09 31 16.3 +1.0**
BJI S **S** **09 37 39.6 +2.7**
BJI sS **sS** **09 41 02.1 +1.9**
J05D **Fort Rock, OR** **87.11 39** P **P** **09 27 43.8 +1.3**
baz=232,SNR=363
J05D S **S** **09 37 45.0 +7.2**
baz=232
MA2 **Magadan** **87.17 346** P **P** **09 27 42.9 +0.7**
baz=130,slow=6.4
MA2 PKKPbc **PKKPdf** **09 45 28.7 +1.8**
comp=Z,13nm,0.8s,baz=4.9,slow=3.4,SNR=9.4
MA2 **Magadan** **87.17 346***d i*P **P** **09 27 42.2 +0.1**
MA2 pmax pmax
comp=Z,1μm,1.9s
MA2 **Magadan** **87.17 346** P **P** **09 27 41.9 -0.2**
MA2 IAmb IAmb 09 27 43.7
comp=Z,638nm,0.9s
G03D **McMinnville, O** **87.18 37** P **P** **09 27 43.9 +1.4**
baz=230,SNR=21
G03D S **S** **09 37 44.9 +6.8**
baz=230
H04A **Detroit Lake** **87.44 38** IAmb IAmb 09 27 47.7
comp=Z,516nm,1.0s
CNPM **China Poot** **87.45 15** IAmb IAmb 09 27 45.1
comp=Z,512nm,0.8s
F03A **Seaside** **87.48 36** IAmb IAmb 09 27 47.4
comp=Z,618nm,0.9s
R11A **Troy Canyon, C** **87.66 46** P **P** **09 27 45.5 +0.2**
baz=236,SNR=130
R11A S **S** **09 37 48.3 +5.0**
baz=236
I05D **Terrebonne, OR** **87.70 38** P **P** **09 27 46.2 +1.1**
baz=232,SNR=219
I05D S **S** **09 37 49.4 +6.3**
baz=232
TUC **Tucson** **87.72 53** P **P** **09 27 47.2 +1.7**
TUC pmax pmax
comp=Z,402nm,0.9s
TUC **Tucson** **87.72 53** P **P** **09 27 47.6 +2.1**
baz=239
TUC S S 09 37 53.9 +10
baz=239
TUC **Tucson** **87.72 53** P **P** **09 27 47.1 +1.7**
TUC IAmb IAmb 09 27 49.4
comp=Z,402nm,0.9s
BRLK **Bradley Lake** **87.74 15** IAmb IAmb 09 27 47.0
comp=Z,843nm,1.4s
F04D **Rainier, OR** **87.87 36** P **P** **09 27 47.5 +1.7**
baz=230,SNR=35
F04D S **S** **09 37 51.6 +7.1**
baz=230
TIY **Taiyuan** **88.12 313** *e*P **P** **09 27 48.1 +0.9**
TIY pP **pP** **09 29 42.2 +1.1**
TIY sP **sP** **09 30 32.2 -1.3**
TIY S **S** **09 37 51.0 +3.7**
TIY sS **sS** **09 41 04.9 -6.4**
TIY pmax pmax
comp=Z,320nm,1.0s
NLWA **Neilton Lookou** **88.26 35** IAmb IAmb 09 27 51.0
comp=Z,391nm,0.9s
G05D **Wamic, OR** **88.27 38** P **P** **09 27 48.6 +0.9**
baz=232,SNR=46
G05D S **S** **09 37 55.1 +6.8**
baz=232
H02S1 **DAWSON INLET T** **88.27 27** P **P** **09 27 48.5 +1.1**
PLCA **Paso Flores** **88.31 135** P **P** **09 27 49.7 +1.4**
comp=Z,42nm,0.7s,baz=235,slow=4.9,SNR=88
PLCA pP **pP** **09 29 45.2 +2.2**
comp=Z,47nm,1.0s,baz=236,slow=5.4,SNR=5.4
PLCA PKKPbc **PKKPbc** **09 45 28.2 -0.6**
comp=Z,13nm,0.8s,baz=53,slow=1.6,SNR=8.6
PLCA PKPPKP **P'P'df** **09 53 34.1 -3.3**
comp=Z,21nm,1.0s,baz=41,slow=2.7,SNR=12
PLCA **Paso Flores** **88.31 135** P **P** **09 27 49.6 +1.4**
PLCA IAmb IAmb 09 27 51.6
comp=Z,832nm,1.9s
PLCA **Paso Flores** **88.31 135** *e*P **P** **09 27 49.7 +1.4**
X16A **Lo Mia Camp, P** **88.34 51** IAmb IAmb 09 27 52.1
comp=Z,257nm,0.9s
SEW **Seward** **88.38 15** IAmb IAmb 09 27 49.5
comp=Z,341nm,0.9s
E04D **Cinebar** **88.41 36** P **P** **09 27 49.7 +1.4**
baz=231,SNR=80
E04D S **S** **09 37 55.8 +6.3**
baz=231
MOBC **Moresby Island** **88.44 27** IAmb IAmb 09 27 52.5
comp=Z,333nm,1.1s
GAMB **Gambell** **88.51 4** IAmb IAmb 09 27 52.3
comp=Z,312nm,1.1s
XAN **Xi'an** **88.57 309** P **P** **09 27 50.4 +1.0**
XAN pP pP 09 29 43.7 +0.4
XAN sP sP 09 30 39.0 +3.3
XAN SKS **SKSac** **09 37 26.4 -2.3**
XAN S **S** **09 37 52.7 +1.1**
XAN SS **SS** **09 43 59.0 +0.2**
XAN pmax pmax
comp=Z,250nm,1.1s
XAN pmax pmax
comp=Z,6μm,7.8s
F05D **White Salmon** **88.59 37** P **P** **09 27 50.0 +0.9**
baz=232,SNR=31
F05D S **S** **09 37 57.8 +6.6**
baz=232
G06A **Carlson Farm,** **88.64 38** IAmb IAmb 09 27 53.5
comp=Z,465nm,1.0s
D04E **Lakebay** **88.70 35** P **P** **09 27 50.5 +1.0**
baz=231,SNR=85
D03D **Eldon** **88.76 35** P **P** **09 27 50.8 +1.0**
baz=230,SNR=139
D03D S **S** **09 37 59.1 +6.5**
baz=230
U15A **North Rim** **88.81 49** IAmb IAmb 09 27 54.2
comp=Z,343nm,0.8s
KMI **Kunming** **88.88 298** P **P** **09 27 52.3 +1.0**
KMI pP pP 09 29 44.7 -0.6
KMI sP sP 09 30 37.7 +0.1
KMI S **S** **09 37 54.6 -0.6**
KMI pmax pmax
comp=Z,440nm,1.3s
KMI pmax pmax
comp=Z,4μm,9.4s
HPIG **88.93 60** IAmb IAmb 09 27 54.2
comp=Z,337nm,0.8s
LON **Longmire** **88.94 36** IAmb IAmb 09 27 53.3
comp=Z,252nm,0.8s
WUAZ **Wupatki** **88.96 50** P **P** **09 27 52.6 +1.3**
baz=238
WUAZ S S 09 38 06.5 +11
baz=238
WUAZ **Wupatki** **88.96 50** IAmb IAmb 09 27 56.2
comp=Z,179nm,0.9s
EFI **East Falkland** **88.97 148***d i*P **P** **09 27 51.7 +0.8**
EFI pmax pmax
comp=Z,672nm,1.0s
EFI **East Falkland** **88.97 148** P **P** **09 27 51.5 +0.6**
CM31 **Chiang Mai Arr** **89.00 291** P **P** **09 27 53.1 +1.4**
SNR=271
CMAR **Chiang Mai Arr** **89.00 291** P **P** **09 27 53.2 +1.5**
comp=Z,290nm,1.0s,baz=134,slow=2.9,SNR=434
CMAR pP **pP** **09 29 48.3 +2.5**
comp=Z,5.4nm,0.7s,baz=136,slow=3.2,SNR=0.8
CMAR PP **PP** **09 31 33.5 +2.3**
comp=Z,33nm,1.0s,baz=136,slow=6.4,SNR=5.7
CMAR PKiKP **PKiKP** **09 32 47.8 +0.6**
comp=Z,21nm,0.8s,baz=184,slow=1.2,SNR=8.7
CMAR PKKPbc **PKKPbc** **09 45 27.4 +0.9**
comp=Z,17nm,0.9s,baz=288,slow=4.3,SNR=14
CMAR PKPPKP **P'P'df** **09 53 34.5 -1.1**
comp=Z,5.5nm,0.8s,baz=291,slow=3.9,SNR=9.7
CHTO **Chiang Mai** **89.16 291** P **P** **09 27 54.3 +1.9**
CHTO **Chiang Mai** **89.16 291** P **P** **09 27 53.4 +1.0**
CHTO pmax pmax
comp=Z,835nm,1.2s
CHTO **Chiang Mai** **89.16 291** P **P** **09 27 53.4 +1.0**
ELK **Elko** **89.22 44** IAmb IAmb 09 27 55.3
comp=Z,227nm,0.9s
MOIG **Morelia** **89.26 68** IAmb IAmb 09 27 55.8
comp=Z,371nm,0.9s
HIN **Hinchinbrook I** **89.36 16** IAmb IAmb 09 27 54.4
comp=Z,382nm,1.1s
BBB **Bella Bella** **89.41 29** IAmb IAmb 09 27 55.4
comp=Z,299nm,0.9s
F07A **Phinny Hill Vi** **89.44 38** IAmb IAmb 09 27 56.1
comp=Z,224nm,0.9s
X18A **Snowflake** **89.45 51** IAmb IAmb 09 27 58.0
comp=Z,237nm,0.8s
FID **Port Fidalgo** **89.67 16** IAmb IAmb 09 27 55.6
comp=Z,420nm,1.0s
CRAG **Craig** **89.68 25** IAmb IAmb 09 27 56.8
comp=Z,175nm,0.9s
EYAK **Cordova Ski Ar** **89.69 17** IAmb IAmb 09 27 56.0
comp=Z,432nm,1.2s
A04D **Lummi Island** **89.71 34** P **P** **09 27 55.3 +1.1**
baz=231,SNR=46
A04D S **S** **09 38 07.4 +6.2**
baz=231
B05A **Bryant** **89.74 35** P **P** **09 27 55.5 +1.1**
baz=231,SNR=102
B05A S **S** **09 38 07.1 +5.7**
baz=231
KNK **Knik Glacier** **89.77 15** IAmb IAmb 09 27 55.7
comp=Z,374nm,0.9s
PMR **Palmer** **89.77 15** IAmb IAmb 09 27 55.5
comp=Z,297nm,0.8s
RAGM **Ragged Mountai** **89.83 17** IAmb IAmb 09 27 57.0
comp=Z,446nm,1.1s
LTY **Liberty** **89.86 36** IAmb IAmb 09 27 58.9
comp=Z,236nm,1.0s
E07A **Sunnyside** **89.88 37** P **P** **09 27 56.2 +1.0**
SEY **Seymchan** **89.90 348** PKKPbc PKKPbc 09 45 24.2 -1.9
comp=Z,21nm,0.8s,baz=276,slow=0.3,SNR=14
SEY PKPPKP **P'P'df** **09 53 32.7 +2.4**
comp=Z,5.7nm,0.9s,baz=262,slow=5.2,SNR=5.4
SEY **Seymchan** **89.90 348***d i*P **P** **09 27 55.2 +0.4**
W18A **Petrified Fore** **89.91 51** P **P** **09 27 56.9 +1.1**
baz=239
W18A S S 09 38 14.7 +11
baz=239
W18A **Petrified Fore** **89.91 51** IAmb IAmb 09 27 58.8
comp=Z,188nm,1.1s
HAWA **Hanford** **89.96 37** IAmb IAmb 09 27 59.6
comp=Z,314nm,1.1s
121A **Cookes Peak, D** **90.02 54** P **P** **09 27 57.8 +1.4**
baz=240,SNR=117
121A S S 09 38 16.5 +11
baz=240
121A **Cookes Peak, D** **90.02 54** IAmb IAmb 09 27 59.4
comp=Z,139nm,0.8s
ZEA **Zeya** **90.03 332***de*P **P** **09 27 56.2 +0.6**
ZEA *e* 09 30 40.0
ZEA *e* 09 31 36.0
ZEA *e*S **SKSac** **09 37 37.0 +1.0**
ZEA *e*PS **S** **09 38 10.5 +6.6**
ZEA *e* 09 39 16.0
ZEA pmax pmax
comp=N,370nm,1.2s
ZEA pmax pmax
comp=Z,690nm,1.2s
ZEA pmax pmax
comp=Z,5μm,9.0s
ZEA pmax pmax
comp=E,2μm,8.0s
ZEA pmax pmax
comp=N,2μm,7.0s
ZEA pmax pmax
comp=Z,1μm,14.0s
ZEA smax smax
comp=N,1μm,6.0s
ZEA smax smax
comp=E,900nm,6.0s
SML **Sawmill** **90.14 15** IAmb IAmb 09 27 59.0
comp=Z,435nm,1.4s
C06D **Leavenworth** **90.16 36** P **P** **09 27 56.8 +0.4**
baz=232,SNR=20
B06A **Marblemount** **90.21 35** IAmb IAmb 09 27 58.4
comp=Z,206nm,0.7s
BMO **Blue Mountains** **90.31 40** IAmb IAmb 09 28 00.1
comp=Z,143nm,0.8s
GO05 **Huala** **90.33 129** IAmb IAmb 09 27 60.0
comp=Z,230nm,1.1s
MFID **Camas Ranch** **90.36 41** P **P** **09 27 58.2 +0.6**
MFID IAmb IAmb 09 28 00.4
comp=Z,264nm,0.8s
HHC **Hu-ho-hao-te** **90.39 316** P **P** **09 27 59.0 +1.2**
HHC pP pP 09 29 52.3 +0.2
HHC sP sP 09 30 46.7 +2.4
HHC SKS **SKSac** **09 37 32.5 -6.5**
HHC S **ScS** **09 38 09.4 -0.8**
HHC pmax pmax
comp=Z,290nm,1.2s
HHC pmax pmax
comp=Z,3μm,7.5s
DUG **Dugway, Tooele** **90.47 45** P **P** **09 27 58.8 +0.6**
baz=238
DUG S **S** **09 38 17.3 +8.6**
baz=238
HIA **Hailar** **90.59 326** IAmb IAmb 09 28 00.9
comp=Z,466nm,1.4s
DHAK **Deception Hill** **90.67 21** IAmb IAmb 09 28 04.0
comp=Z,238nm,0.7s
WRAK **Wrangell Islan** **90.68 25** IAmb IAmb 09 28 01.0
comp=Z,213nm,0.8s
BGU **Big Grassy Mou** **90.72 45** P **P** **09 27 59.9 +0.5**
E09A **Wood Farm, Sta** **90.80 38** IAmb IAmb 09 28 03.0
comp=Z,186nm,0.9s
CD2 **Chengdu** **90.81 304** ⇓P **P** **09 28 00.9 +1.0**
CD2 pP pP 09 29 55.2 +1.0
CD2 sP sP 09 30 47.8 +1.5
CD2 PP **PP** **09 31 45.9 +0.7**
CD2 S **S** **09 38 13.5 +1.5**
CD2 pmax pmax
comp=Z,1μm,1.1s
CD2 pmax pmax
comp=Z,4μm,4.1s
VRDI **Verde Repeater** **90.87 17** IAmb IAmb 09 28 02.9
comp=Z,295nm,1.2s
GLB **Gilahina Butte** **90.95 17** IAmb IAmb 09 28 03.0
comp=Z,265nm,1.0s
F10A **Beach Ranch, E** **91.00 39** IAmb IAmb 09 28 03.7
comp=Z,326nm,0.8s
BALM **Baldy** **91.01 18** IAmb IAmb 09 28 01.8
comp=Z,205nm,0.8s
MCARA **McCarthy VSAT** **91.11 17** IAmb IAmb 09 28 02.9
comp=Z,364nm,1.1s
KTH **Kantishna Hill** **91.12 13** IAmb IAmb 09 28 02.8
comp=Z,198nm,0.8s
TRF **Thorofare Moun** **91.16 13** P **P** **09 27 59.8 -1.1**
TRF IAmb IAmb 09 28 01.4
comp=Z,258nm,0.8s
BARN **Barnard Glacie** **91.22 18** IAmb IAmb 09 28 03.0
comp=Z,259nm,0.8s
CTGM **Chitina Glacie** **91.23 18** IAmb IAmb 09 28 03.0
comp=Z,250nm,0.8s
B08A **Colville Reser** **91.25 36** IAmb IAmb 09 28 03.7
comp=Z,544nm,1.9s
BTO **Baotou** **91.25 315** *e*P **P** **09 28 02.9 +1.2**
LLLB **Lillooet** **91.32 33** IAmb IAmb 09 28 06.4
comp=Z,177nm,0.9s
BESE **Bessie Mountai** **91.38 22** P **P** **09 28 01.9 +0.1**
Y22D **IRIS PASSCAL I** **91.40 53** P **P** **09 28 03.7 +1.0**
baz=241,SNR=26
Y22D S S 09 38 28.0 +11
baz=241
Y22D **IRIS PASSCAL I** **91.40 53** IAmb IAmb 09 28 05.5
comp=Z,182nm,0.8s
MNTX **Cornudas Mount** **91.41 56** P **P** **09 28 03.7 +1.2**
baz=242
MNTX S S 09 38 26.7 +10
baz=242
RND **Reindeer** **91.43 14** IAmb IAmb 09 28 03.0
comp=Z,315nm,0.9s
DHY **Denali Highway** **91.47 15** IAmb IAmb 09 28 06.8
comp=Z,92nm,0.7s
PBA **Port Blair** **91.49 282** ⇓*i*P P 09 28 03.4 +0.1
PBA IAmb IAmb 09 28 14.2
comp=Z,135nm,0.8s
PBA *ex* x 09 37 09.7
PBA *i* x 09 44 36.7
PBA **Port Blair** **91.49 282** IAmb IAmb 09 28 13.7
comp=Z,255nm,0.9s
BPAW **Bear Paw Mtn.** **91.60 13** P **P** **09 28 00.9 -1.7**
BPAW IAmb IAmb 09 28 03.5
comp=Z,338nm,1.9s
TX32 **Lajitas Array** **91.61 58** IAmb IAmb 09 28 06.8
comp=Z,176nm,0.8s
TXAR **Lajitas Array** **91.61 58** P **P** **09 28 04.7 +1.1**
comp=Z,159nm,0.7s,baz=214,slow=5.9,SNR=1074
TXAR pP **pP** **09 29 59.2 0.0**
comp=Z,30nm,1.1s,baz=225,slow=8.8,SNR=1.8
TXAR PKKP **PKKPdf** **09 45 14.5 -3.1**
comp=Z,3.5nm,0.9s,baz=120,slow=5.3,SNR=4.2
TXAR PKKPbc **PKKPbc** **09 45 22.1 +1.6**
comp=Z,24nm,0.9s,baz=99,slow=3.0,SNR=22
TXAR PKPPKP **P'P'df** **09 53 31.4 +1.3**
comp=Z,6.9nm,1.0s,baz=64,slow=2.9,SNR=9.7
MCK **McKinley** **91.70 14** IAmb IAmb 09 28 05.8
comp=Z,170nm,0.8s
MVCO **Mesa Verde** **91.82 50** P **P** **09 28 04.8 +0.2**
baz=240,SNR=67
MVCO S **S** **09 38 28.6 +7.5**
baz=240
PV05 **Paradox Valley** **91.84 49** IAmb IAmb 09 28 07.6
comp=Z,133nm,0.8s
SKAG **Skagway** **91.89 21** P **P** **09 28 04.8 +0.8**
SKAG IAmb IAmb 09 28 08.5
comp=Z,262nm,1.5s
HWUT **Hardware Ranch** **92.02 45** P **P** **09 28 05.7 +0.3**
HWUT IAmb IAmb 09 28 07.1
comp=Z,132nm,0.8s
PV10 **Paradox Valley** **92.03 48** IAmb IAmb 09 28 08.8
comp=Z,154nm,0.8s
PV14 **Lion Creek, Pa** **92.04 48** IAmb IAmb 09 28 09.1
comp=Z,180nm,0.9s
PV16 **Nyswonger Mesa** **92.08 48** P **P** **09 28 05.5 -0.2**
PV23 **Carpenter Ridg** **92.09 48** IAmb IAmb 09 28 09.5
comp=Z,281nm,0.8s
PV04 **Paradox Valley** **92.13 48** IAmb IAmb 09 28 09.6
comp=Z,157nm,0.8s
ANMO **Albuquerque** **92.16 52***d i*P **P** **09 28 06.8 +0.7**
ANMO pmax pmax
comp=Z,119nm,0.9s
ANMO **Albuquerque** **92.16 52** P **P** **09 28 06.9 +0.7**
baz=241
ANMO S **S** **09 38 32.2 +8.2**
baz=241
ANMO **Albuquerque** **92.16 52** P **P** **09 28 06.8 +0.7**
PV21 **Cone Mtn., Par** **92.17 48** IAmb IAmb 09 28 09.8
comp=Z,183nm,0.8s
PEL **Peldehue** **92.17 128** IAmb IAmb 09 28 08.6
comp=Z,125nm,1.0s
MENT **Mentasta** **92.23 16** IAmb IAmb 09 28 07.2
comp=Z,150nm,0.8s
PV01 **Paradox Valley** **92.23 49** IAmb IAmb 09 28 08.7
comp=Z,119nm,0.8s
PV22 **Blue Mesa, Par** **92.28 48** IAmb IAmb 09 28 10.3
comp=Z,151nm,0.9s
NEW **Newport** **92.39 37** P **P** **09 28 06.6 -0.1**

comp=Z,64nm,0.8s,baz=235,slow=4.6,SNR=65
NEW PKKPbc **PKKPdf** **09 45 17.5 +0.3**
comp=Z,7.5nm,0.6s,baz=36,slow=2.9,SNR=13
NEW **Newport** **92.39 37** P **P** **09 28 06.5 -0.1**
baz=235,SNR=74
NEW S **S** **09 38 30.7 +5.6**
baz=235
PV15 **Paradox Valley** **92.39 49** IAmb IAmb 09 28 10.7
comp=Z,133nm,0.8s
WRH **Wood River Hil** **92.52 14** IAmb IAmb 09 28 09.4
comp=Z,183nm,0.8s
RIDG **Independent Ri** **92.63 15** IAmb IAmb 09 28 08.7
comp=Z,163nm,0.9s
HDA **Harding Lake** **92.72 14** P **P** **09 28 07.1 -0.7**
baz=211
HDA S **S** **09 38 25.0 -2.1**
baz=211
HDA S **S** **09 38 25.0 -2.1**
baz=211
HDA **Harding Lake** **92.72 14** IAmb IAmb 09 28 09.5
comp=Z,172nm,1.0s
CCB **Clear Creek Bu** **92.74 14** IAmb IAmb 09 28 08.3
comp=Z,144nm,0.8s
DOT **Dot Lake** **92.74 16** IAmb IAmb 09 28 09.2
comp=Z,143nm,0.8s
AHID **Auburn Hatcher** **92.92 44** IAmb IAmb 09 28 12.4
comp=Z,207nm,1.2s
MDM **Murphy Dome** **92.92 13** IAmb IAmb 09 28 09.1
comp=Z,131nm,0.9s
TCOL **CIGO, UAF Yank** **92.92 14** P **P** **09 28 08.0 -0.6**
baz=210
TCOL S **S** **09 38 27.9 -0.9**
baz=210
COLA **College** **92.93 14***d* *i*P **P** **09 28 07.7 -1.0**
COLA pmax pmax
comp=Z,169nm,0.9s
COLA **College** **92.93 14** P **P** **09 28 07.6 -1.0**
COLA IAmb IAmb 09 28 09.2
comp=Z,160nm,0.8s
BILL **Bilibino** **92.98 355**‖ *e*P **P** **09 28 09.1 +0.2**
BILL *e**PP **pwP** **09 30 06.6 -2.0**
BILL *e* 09 32 06.0
BILL *e*PPP PPP 09 34 11.5
BILL *e*SSS SSS 09 48 43.4
BILL pmax pmax
comp=Z,559nm,2.2s
BILL **Bilibino** **92.98 355** P **P** **09 28 08.8 -0.1**
BILL IAmb IAmb 09 28 10.8
comp=Z,250nm,1.1s
SCRK **Sand Creek** **93.04 15** IAmb IAmb 09 28 12.4
comp=Z,123nm,0.8s
ILAR **Eielson Array** **93.05 14** P **P** **09 28 08.2 -1.1**
comp=Z,72nm,1.0s,baz=225,slow=5.2,SNR=292
ILAR pP **pP** **09 30 04.7 +0.5**
comp=Z,16nm,1.0s,baz=204,slow=5.7,SNR=2.3
ILAR PP **PP** **09 31 55.0 -6.8**
comp=Z,19nm,0.9s,baz=215,slow=7.1,SNR=4.2
ILAR PKiKP **PKiKP** **09 32 51.9 -0.8**
comp=Z,4.2nm,0.5s,baz=271,slow=2.8,SNR=9.2
ILAR ScS **ScS** **09 38 32.0 +1.1**
comp=Z,8.1nm,0.9s,baz=222,slow=9.2,SNR=5.1
ILAR PKKP **PKKPdf** **09 45 09.9 -6.5**
comp=Z,2.9nm,0.8s,baz=339,slow=2.6,SNR=4.5
ILAR PKKPbc **PKKPbc** **09 45 15.2 -2.9**
comp=Z,4.3nm,0.7s,baz=345,slow=2.2,SNR=9.1
ILAR PKPPKP **P'P'df** **09 53 20.8 -3.7**
comp=Z,2.1nm,0.9s,baz=343,slow=2.3,SNR=4.8
LZH **Lanzhou** **93.20 308**‖ P **P** **09 28 12.2 +1.3**
LZH pP pwP 09 30 08.4 -2.7
LZH sP sP 09 31 00.9 +3.4
LZH PP **PP** **09 32 03.6 -0.2**
LZH SKS **SKSac** **09 37 52.0 -2.8**
LZH S **ScS** **09 38 38.1 +4.2**
LZH SS **SS** **09 45 09.2 +4.3**
LZH pmax pmax
comp=Z,260nm,1.2s
LZH pmax pmax
comp=Z,3μm,7.1s
POKR **Poker Plat Res** **93.23 14** P **P** **09 28 09.0 -1.1**
baz=210
POKR S **S** **09 38 28.9 -2.6**
baz=210
S22A **4UR Ranch, Cre** **93.24 50** P **P** **09 28 12.1 +0.9**
baz=241,SNR=274
S22A S **S** **09 38 41.4 +7.8**
baz=241
MSO **Missoula** **93.37 39** P **P** **09 28 10.7 -0.6**
baz=237,SNR=46
MSO S **S** **09 38 39.2 +5.4**
baz=237
REDW **Red Top Meadow** **93.38 43** IAmb IAmb 09 28 15.4
comp=Z,134nm,1.0s
O20A **White River Ci** **93.44 47** P **P** **09 28 12.4 +0.4**
baz=240,SNR=151
O20A S **S** **09 38 42.8 +7.8**
baz=240
O20A **White River Ci** **93.44 47** IAmb IAmb 09 28 16.4
comp=Z,112nm,0.8s
RDOG **Red Dog Mine** **93.47 7** IAmb IAmb 09 28 13.0
comp=Z,201nm,0.9s
SNOW **Snow King Moun** **93.50 43** IAmb IAmb 09 28 16.0
comp=Z,162nm,0.8s
FLWY **Flagg Ranch** **93.85 43** IAmb IAmb 09 28 19.2
comp=Z,136nm,0.8s
BW06 **Boulder Array** **93.89 44** P **P** **09 28 13.8 -0.2**
baz=240,SNR=54
BW06 S **S** **09 38 44.9 +6.0**
baz=240
PDAR **Pinedale Array** **93.90 44** P **P** **09 28 13.8 -0.1**
comp=Z,32nm,0.7s,baz=208,slow=2.9,SNR=267
PDAR pP **pP** **09 30 10.3 +1.0**
comp=Z,16nm,1.1s,baz=213,slow=4.8,SNR=2.0
PDAR PP PP 09 32 00.9 -8.2
comp=Z,9.7nm,1.0s,baz=249,slow=7.6,SNR=2.4
PDAR PKiKP **PKiKP** **09 32 55.3 +0.1**
comp=Z,1.6nm,0.8s,baz=230,slow=7.0,SNR=1.0
PDAR PKKPbc **PKKPdf** **09 45 14.2 -0.1**
comp=Z,5.8nm,0.7s,baz=90,slow=4.9,SNR=10
PDAR PKPPKP P'P'df 09 53 16.4 -8.6
comp=Z,1.9nm,0.9s,baz=148,slow=3.5,SNR=3.7
PRP **Porcupine Dome** **93.98 14** IAmb IAmb 09 28 18.4
comp=Z,135nm,0.9s
H17A **Grant Village** **94.08 43** P **P** **09 28 16.4 +1.6**
baz=239,SNR=85
H17A S S 09 38 51.1 +11
baz=239
SDCO **Great Sand Dun** **94.17 50** P **P** **09 28 15.7 +0.3**
baz=242,SNR=176
SDCO S **S** **09 38 49.0 +7.5**
baz=242
DAWY **Dawson** **94.28 17** IAmb IAmb 09 28 17.0
comp=Z,175nm,0.8s
EGAK **Eagle** **94.39 16** IAmb IAmb 09 28 16.8
comp=Z,162nm,0.8s
MSTX **Muleshoe** **94.40 55** P **P** **09 28 16.6 +0.2**
baz=243
MSTX S **S** **09 38 50.5 +7.2**
baz=243
833A **Chaparral WMA,** **94.52 61** P **P** **09 28 17.2 +0.3**
baz=244,SNR=19
833A S **S** **09 38 49.3 +4.9**
baz=244
T25A **Trinidad** **94.65 51** P **P** **09 28 18.0 +0.4**
baz=242,SNR=77
T25A S **S** **09 38 52.4 +6.8**
baz=242
YAK **Yakutsk** **95.03 339** P **P** **09 28 17.6 -0.7**
comp=Z,52nm,0.6s,baz=346,slow=0.6,SNR=40
YAK pP **pP** **09 30 13.5 +0.3**
comp=Z,3.4nm,0.3s,baz=191,slow=5.2,SNR=0.9
YAK **Yakutsk** **95.03 339***d* *i*P **P** **09 28 17.7 -0.6**
YAK *e**PP **pP** **09 30 11.6 -1.6**
YAK *e*S **SKSac** **09 37 58.2 -4.7**
YAK *e* 09 38 48.5
YAK pmax pmax
comp=Z,201nm,1.1s
YAK pmax pmax
comp=N,65nm,1.5s
YAK pmax pmax
comp=E,51nm,1.5s
YAK smax smax
comp=N,927nm,5.8s
YAK smax smax
comp=E,443nm,5.3s
YAK **Yakutsk** **95.03 339** P **P** **09 28 17.6 -0.7**
ISCO **Idaho Springs** **95.05 48** P **P** **09 28 19.9 +0.5**
baz=242,SNR=86

ISCO S **S** **09 38 56.1 +7.0**
baz=242
JCT **Junction City** **95.12 59** P **P** **09 28 20.0 +0.4**
baz=244,SNR=47
JCT S **S** **09 38 53.6 +4.0**
baz=244
RLMT **Red Lodge** **95.26 42** P **P** **09 28 20.6 +0.5**
baz=240,SNR=47
RLMT S **S** **09 38 58.0 +7.5**
baz=240
N23A **Red Feather La** **95.34 47** P **P** **09 28 21.6 +0.9**
baz=242,SNR=40
N23A S **S** **09 38 57.8 +6.3**
baz=242
CIT **Chita** **95.39 326** *e*P **P** **09 28 21.0 +0.7**
CIT *e* 09 32 15.0
CIT pmax pmax
comp=Z,455nm,2.1s
HOPE **Hope Point** **95.56 160** P **P** **09 28 21.0 -0.1**
HOPE pmax pmax
comp=Z,98nm,1.0s
HOPE **Hope Point** **95.56 160** P **P** **09 28 21.0 -0.1**
HOPE IAmb IAmb 09 28 23.4
comp=Z,98nm,1.0s
AMTX **Amarillo** **95.61 54** P **P** **09 28 21.9 +0.1**
baz=244
AMTX S **S** **09 38 59.8 +6.1**
baz=244
K22A **Casper** **95.79 46** P **P** **09 28 22.9 +0.4**
baz=242,SNR=62
K22A S **S** **09 39 02.1 +7.0**
baz=242
TOLK **Toolik Lake Re** **95.90 11** P **P** **09 28 22.2 -0.1**
baz=208
TOLK S **S** **09 38 55.1 +0.5**
baz=208
735A **Kenedy** **96.01 61** IAmb IAmb 09 28 27.7
comp=Z,107nm,0.9s
ABTX **Abilene, Hawle** **96.17 57** P **P** **09 28 24.4 +0.2**
baz=245
ABTX S **S** **09 39 02.7 +4.4**
baz=245
EGMT **Eagleton** **96.42 40** Pdiff **P** **09 28 25.5 +0.4**
baz=240
EGMT S **S** **09 39 06.1 +6.2**
baz=240
KSCO **Kaye Shedlock'** **96.75 50** Pdiff **P** **09 28 27.5 +0.6**
baz=244
KSCO S **S** **09 39 10.0 +6.7**
baz=244
KSCO **Kaye Shedlock'** **96.75 50** IAmb IAmb 09 28 31.0
comp=Z,149nm,0.9s
EPYK **Eagle Plains** **96.79 16** Pdiff **P** **09 28 26.9 +0.7**
baz=220
EPYK S **S** **09 39 02.8 +0.7**
baz=220
EPYK **Eagle Plains** **96.79 16** IAmb IAmb 09 28 27.5
comp=Z,129nm,0.9s
ULN **Ulaanbaatar** **96.79 320** P **P** **09 28 24.9 -2.0**
ULN **Ulaanbaatar** **96.79 320***d* *i*P **P** **09 28 26.7 -0.2**
ULN pmax pmax
comp=Z,261nm,1.3s
ULN **Ulaanbaatar** **96.79 320** P **P** **09 28 26.9 +0.1**
ULN IAmb IAmb 09 28 29.3
comp=Z,211nm,1.1s
BRDH **Bariadhala** **96.97 292** P **P** **09 28 28.8 +0.8**
comp=Z,127nm,0.4s,baz=77,slow=11,SNR=4.6
BRDH PP **PP** **09 32 31.2 -1.5**
comp=Z,105nm,0.4s,baz=68,slow=12,SNR=4.1
BRDH PKKPbc **PKKPbc** **09 45 05.3 -0.7**
comp=Z,82nm,0.4s,baz=91,slow=18,SNR=1.7
435B **Jarrell** **96.98 59** Pdiff **P** **09 28 28.4 +0.5**
baz=246
435B S **S** **09 39 10.1 +4.8**
baz=246
SONM **Songino Array** **97.17 320** P **P** **09 28 28.2 -0.3**
comp=Z,63nm,0.9s,baz=133,slow=4.0,SNR=158
SONM pP **pwP** **09 30 26.5 -2.5**
comp=Z,13nm,1.0s,baz=143,slow=3.6,SNR=3.3
SONM PP **PP** **09 32 30.9 -2.9**
comp=Z,33nm,1.1s,baz=131,slow=6.8,SNR=6.1
SONM PKiKP **PKiKP** **09 33 00.6 0.0**
comp=Z,13nm,1.1s,baz=91,slow=1.3,SNR=13
SONM PKKPbc **PKKPbc** **09 45 06.1 -0.6**
comp=Z,14nm,0.7s,baz=281,slow=2.2,SNR=14
SONM PKKPab PKKPab 09 45 39.4
comp=Z,7.7nm,0.9s,baz=281,slow=3.7,SNR=4.6
SONM PKPPKP **P'P'df** **09 53 14.9 -3.5**
comp=Z,4.2nm,1.0s,baz=282,slow=3.0,SNR=6.3
NNA **Nana** **97.54 107** P **P** **09 28 32.2 +1.3**
comp=Z,5.9nm,0.7s,baz=248,slow=11,SNR=1.7
NNA PKiKP **PKiKP** **09 33 02.2 0.0**
comp=Z,13nm,0.9s,baz=286,slow=7.4,SNR=2.4
NNA PKPPKP **P'P'df** **09 53 17.6 -3.1**
comp=Z,12nm,1.0s,baz=25,slow=14,SNR=2.2
GTA **Gaotai** **97.55 310**‖ P **P** **09 28 31.0 +0.6**
GTA pP pwP 09 30 31.6 +0.6
GTA S **S** **09 39 11.6 +1.6**
GTA pmax pmax
comp=Z,160nm,1.3s
GTA pmax pmax
comp=Z,2μm,7.3s
WHTX **Lake Whitney,** **97.58 58** Pdiff **P** **09 28 30.7 +0.1**
baz=246
TEZP **TEZPUR** **97.59 296**‖ *i*P Pdif 09 28 29.1 -1.6
WMOK **Wichita Mounta** **97.71 55** Pdiff Pdif 09 28 30.9 -0.2
baz=245
AGT **Agartala** **97.78 293** *e*P **P** **09 28 32.6 +1.0**
AGT *ex* x 09 32 39.7
LAO **LASA Array** **97.88 42** Pdiff **P** **09 28 32.7 +1.1**
baz=242
SHL **Shillong** **97.92 294** *i* P Pdif 09 28 30.4 -2.1
SHL IAmb IAmb 09 28 38.1
comp=Z,82nm,1.1s
SHL *ex* x 09 32 39.1
OGNE **Ogallala** **98.01 49** Pdiff **P** **09 28 32.8 +0.4**
baz=244
HKT **Hockley** **98.03 61** *i* P **P** **09 28 32.6 +0.1**
HKT pmax pmax
comp=Z,42nm,1.8s
RSSD **Black Hills** **98.08 45** P Pdif 09 28 32.7 -0.1
RSSD **Black Hills** **98.08 45** Pdiff **P** **09 28 32.9 +0.1**
baz=243
Z35A **Perchaven, San** **98.28 57** **P** **09 28 33.8 0.0**
GUWA **GUWAHATI** **98.33 295** *e*P Pdif 09 28 31.6 -2.4
GUWA IAmb IAmb 09 28 38.6
comp=Z,25nm,0.8s
GUWA *ex* x 09 32 37.8
ATAH **Atahualpa** **98.33 102** P **P** **09 28 38.1 +3.2**
comp=Z,5.8nm,0.7s,baz=309,slow=3.6,SNR=8.4
ATAH pP **pP** **09 30 32.1 +1.2**
comp=Z,3.8nm,0.8s,baz=249,slow=9.3,SNR=1.9
ATAH PP **PP** **09 32 44.3 +1.0**
comp=Z,6.6nm,0.9s,baz=315,slow=20,SNR=2.6
ATAH PKPPKP **P'P'df** **09 53 16.9 -2.8**
comp=Z,5.8nm,1.0s,baz=99,slow=13,SNR=2.2
BOD **Bodaibo** **98.40 331** *e*P Pdif 09 28 32.7 -0.8
BOD pmax pmax
comp=Z,49nm,1.9s
CBKS **Cedar Bluff** **98.70 51** Pdiff **P** **09 28 35.9 +0.4**
baz=245
LVC **Limon Verde** **99.00 120** P **P** **09 28 39.4 +1.7**
comp=Z,12nm,0.9s,baz=241,slow=4.2,SNR=9.3
LVC PP **PP** **09 32 47.6 -0.1**
comp=Z,24nm,1.4s,baz=166,slow=4.8,SNR=3.4
LVC PKKPbc **PKKPbc** **09 45 01.3 +0.2**
comp=Z,25nm,0.7s,baz=355,slow=1.5,SNR=15
LVC PKKPab PKKPab 09 45 30.8
comp=Z,20nm,1.0s,baz=140,slow=6.1,SNR=4.9
LVC PKPPKP **P'P'df** **09 53 15.4 -2.8**
comp=Z,5.7nm,1.0s,baz=259,slow=2.4,SNR=3.8
LVC **Limon Verde** **99.00 120** **P** **09 28 39.4 +1.7**
LVC **Limon Verde** **99.00 120** *e*P **PKKPbc** **09 45 02.5 +1.3**
LVC **Limon Verde** **99.00 120** *e*P **P** **09 28 39.7 +2.0**
INK **Inuvik** **99.07 16** PP **PP** **09 32 51.3 +3.9**
comp=Z,41nm,1.2s,baz=217,slow=9.0,SNR=4.4
INK PKiKP **PKiKP** **09 33 03.3 +0.1**
comp=Z,15nm,0.8s,baz=281,slow=6.9,SNR=23
INK PKKPab PKKPab 09 45 29.3
baz=6.6,slow=3.8
INK PKPPKP **P'P'df** **09 53 14.3 +1.3**
comp=Z,6.1nm,1.0s,baz=351,slow=8.6,SNR=3.6
W35A **Tecumseh** **99.31 56** **Pdif** **09 28 38.3 +0.1**
JTS **Las Juntas de** **99.64 83** PP **PP** **09 32 52.6 -0.2**
comp=Z,16nm,1.1s,baz=348,slow=5.3,SNR=5.1
JTS **Las Juntas de** **99.64 83***d* *i*P **Pdif** **09 28 41.3 +1.2**
JTS pmax pmax

comp=Z,30nm,1.1s
DHUB **DHUBRI** **99.67 294** *e*P **Pdif** **09 28 38.2 -1.7**
DHUB IAmb IAmb 09 28 43.8
comp=Z,37nm,0.9s
NATX **Nacogdoches** **99.67 60** Pdiff **Pdif** **09 28 40.4 +0.5**
baz=247
LPA **La Plata** **99.81 136** PDIFF **Pdif** **09 28 40.4 -0.1**
LPA pP **pP** **09 30 31.9 -4.8**
LPA PP **PP** **09 32 53.0 +0.3**
LPA PKiKP **PKiKP** **09 33 06.1 +0.5**
LPA pPP 09 34 28.9
LPA PPP PPP 09 35 03.7
LPA SKIKS **SKiKP** **09 35 47.1 -3.9**
LPA SKS **SKSac** **09 38 25.2 -3.5**
LPA SDIFF **Sdif** **09 39 24.2 -4.7**
LPA PS **PS** **09 42 06.7 -1.4**
LPA sS **sS** **09 42 53.3 -4.2**
LPA SS **SS** **09 46 35.4 +0.5**
LPA SSS SSS 09 50 28.1
DGMT **Dagmar** **99.90 41** Pdiff **Pdif** **09 28 41.0 +0.4**
baz=244
LSA **Lhasa** **100.14 298** Pdiff **Pdif** **09 28 42.9 +0.3**
ZAK **Zakamensk** **100.16 321** *e*P **Pdif** **09 28 41.3 -0.4**
ZAK pmax pmax
comp=Z,56nm,1.6s
TUL1 **Leonard** **100.42 55** Pdiff **Pdif** **09 28 43.5 +0.4**
baz=247
IRK **Irkutsk** **100.44 323** *e*P **Pdif** **09 28 40.5 -2.3**
IRK pmax pmax
comp=Z,105nm,2.5s
TLY **Talaya** **100.54 322** PKiKP **PKiKP** **09 33 06.3 0.0**
comp=Z,10.0nm,0.7s,baz=153,slow=1.5,SNR=4.0
TLY PKKPbc **PKKPbc** **09 44 57.7 +0.4**
comp=Z,5.6nm,0.7s,baz=216,slow=3.8,SNR=6.4
TLY PKPPKP **P'P'df** **09 53 09.9 -1.7**
comp=Z,1.4nm,0.3s,baz=225,slow=5.5,SNR=4.2
TLY **Talaya** **100.54 322***d* *i*P **Pdif** **09 28 42.8 -0.4**
TLY *e* 09 38 32.3
TLY *e* 09 39 35.7
TLY *e*PS PS 09 41 12.8 -63
TLY *e* 09 42 02.2
TLY pmax pmax
comp=Z,129nm,1.4s
BGNE **Belgrade** **100.87 49** Pdiff **Pdif** **09 28 45.4 +0.4**
baz=247
BWNR **Bhubaneshwar** **101.05 287** *e*P **Pdif** **09 28 46.0 -0.2**
BWNR *i* x x 09 41 12.8
KSU1 **Kansas State U** **101.05 52** Pdiff **Pdif** **09 28 46.1 +0.2**
baz=247
YKA **Yellowknife Ar** **101.49 26** P **Pdif** **09 28 47.3 +0.2**
comp=Z,10nm,0.8s,baz=238,slow=4.3,SNR=98
YKA PP **PP** **09 33 01.0 -4.6**
comp=Z,12nm,0.8s,baz=237,slow=7.5,SNR=9.4
YKA PKiKP **PKiKP** **09 33 07.8 +0.1**
comp=Z,8.7nm,0.7s,baz=226,slow=1.4,SNR=19
YKA PKKPbc **PKKPbc** **09 44 52.5 -2.3**
comp=Z,19nm,0.7s,baz=56,slow=2.4,SNR=24
YKA PKKPab PKKPab 09 45 18.6
comp=Z,25nm,1.0s,baz=61,slow=4.9,SNR=13
YKA PKPPKP **P'P'df** **09 53 10.8 +1.8**
comp=Z,6.0nm,1.0s,baz=51,slow=1.6,SNR=10
SUSD **Miller** **101.52 46** Pdiff **Pdif** **09 28 48.0 +0.2**
baz=247
MIAR **Mount Ida** **101.57 57** Pdiff **Pdif** **09 28 48.6 +0.3**
baz=248
W39A **Magazine** **101.66 57** Pdiff **Pdif** **09 28 49.4 +0.8**
baz=248
Z41A **Richland Creek** **101.69 59** Pdiff **Pdif** **09 28 49.0 +0.2**
baz=248
MOY **Mondy** **102.02 321** *e*P **Pdif** **09 28 50.6 +0.6**
MOY *e* 09 33 10.1
MOY pmax pmax
comp=Z,156nm,3.5s
TAPN **Taplejung** **102.06 295** *e*P **Pdif** **09 28 51.7 +0.7**
TAPN **Taplejung** **102.06 295** *e*P **PKiKP** **09 33 10.3 +0.1**
TAPN **Taplejung** **102.06 295** *e*P **PKKPbc** **09 44 52.8 +0.4**
comp=Z,22nm,0.6s
X40A **Basin Creek Fa** **102.12 58** Pdiff **Pdif** **09 28 50.8 +0.2**
baz=248
ODAN **Odare** **102.14 294** *e*P **Pdif** **09 28 51.8 +0.5**
comp=Z,46nm,0.7s
ODAN **Odare** **102.14 294** *e*P **PKiKP** **09 33 10.8 +0.5**
comp=Z,226nm,0.9s
ODAN **Odare** **102.14 294** *e*P **PKKPbc** **09 44 52.2 +0.1**
comp=Z,73nm,0.8s
BOK **Bokaro** **102.28 291** *e*P **Pdif** **09 28 50.0 -1.7**
BOK IAmb IAmb 09 28 55.4
comp=Z,16nm,0.8s
BOK *ex* x 09 33 06.3
BOK *i* x x 09 41 22.8
C36M **Paulatuk** **102.29 18** Pdiff **Pdif** **09 28 50.3 -0.2**
baz=231
MDND **Maddock** **102.44 43** Pdiff **Pdif** **09 28 52.1 +0.3**
baz=247
U40A **Yellville** **102.79 56** Pdiff **Pdif** **09 28 53.6 0.0**
baz=249
ECSD **EROS Data Cent** **102.81 48** Pdiff **Pdif** **09 28 53.9 +0.3**
baz=248
W41B **Gary Mavity, V** **102.82 57** Pdiff **Pdif** **09 28 53.9 +0.2**
baz=249
RAMN **Ramite** **102.83 294** *e*P **Pdif** **09 28 54.8 +0.4**
comp=Z,54nm,0.9s
RAMN **Ramite** **102.83 294** *e*P **PKiKP** **09 33 11.6 0.0**
RAMN **Ramite** **102.83 294** *e*P **PKKPbc** **09 44 49.5 -0.6**
comp=Z,40nm,0.6s
LPAZ **La Paz** **102.88 115** P **Pdif** **09 28 57.1 +1.8**
comp=Z,5.2nm,0.7s,baz=222,slow=3.3,SNR=16
LPAZ pP **pPdif** **09 30 54.6 +3.0**
comp=Z,4.2nm,1.0s,baz=359,slow=1.9,SNR=3.7
LPAZ PKiKP **PKiKP** **09 33 12.1 -0.4**
comp=Z,9.3nm,1.0s,baz=329,slow=4.2,SNR=5.6
LPAZ PKKPbc **PKKPbc** **09 44 49.8 -0.5**
comp=Z,13nm,1.0s,baz=44,slow=2.9,SNR=7.6
LPAZ PKPPKP **P'P'df** **09 53 06.4 -4.8**
comp=Z,2.0nm,0.8s,baz=58,slow=4.3,SNR=4.2
LPAZ **La Paz** **102.88 115** *e*P **Pdif** **09 28 56.4 +1.1**
VBMS **Vicksburg** **103.10 60** Pdiff **Pdif** **09 28 55.6 +0.5**
baz=249
PUAC **Puerto Asis, P** **103.29 96** *e*P **PKiKP** **09 33 11.4 -1.2**
JIRN **Jiri** **103.43 294** *e*P **Pdif** **09 28 57.9 +0.8**
comp=Z,150nm,1.1s
JIRN **Jiri** **103.43 294** *e*P **PKiKP** **09 33 12.2 -0.6**
comp=Z,144nm,0.7s
JIRN **Jiri** **103.43 294** *e*P **PKKPbc** **09 44 48.8 +0.3**
PVM **Polavaram** **103.58 283** *e*Pdif **Pdif** **09 28 57.7 +0.2**
PVM *e*PKiKP **PKiKP** **09 33 13.9 +1.1**
X43A **Marvell** **103.64 58** Pdiff **Pdif** **09 28 57.0 -0.4**
baz=249
A36M **Sachs Harbour** **103.65 15** Pdiff **Pdif** **09 28 57.4 +0.8**
baz=231
GUN **Gumba** **103.78 295** *e*P **Pdif** **09 28 59.2 +0.5**
comp=Z,114nm,0.8s
GUN **Gumba** **103.78 295** *e*P **PKiKP** **09 33 13.3 -0.1**
comp=Z,333nm,1.0s
GUN **Gumba** **103.78 295** *e*P **PKKPbc** **09 44 48.1 +0.6**
comp=Z,116nm,0.7s
SKHT **Srikalahasti** **103.97 279** *e*Pdif **Pdif** **09 29 00.1 +0.8**
SKHT *e*PKiKP **PKiKP** **09 33 13.3 -0.3**
PKI **Pulchoki** **104.05 294** *e*P **Pdif** **09 29 00.3 +0.5**
comp=Z,133nm,1.1s
PKI **Pulchoki** **104.05 294** *e*P **PKiKP** **09 33 13.1 -0.8**
PKI **Pulchoki** **104.05 294** *e*P **PKKPbc** **09 44 46.6 -0.1**
comp=Z,35nm,0.8s
PKIN **Phulchoki** **104.06 294** *e*P **Pdif** **09 29 00.3 +0.5**
comp=Z,140nm,1.1s
PKIN **Phulchoki** **104.06 294** *e*P **PKiKP** **09 33 13.1 -0.8**
comp=Z,168nm,0.9s
PKIN **Phulchoki** **104.06 294** *e*P **PKKPbc** **09 44 45.9 -0.6**
comp=Z,35nm,0.8s
KKN **Kakani** **104.23 294** *e*P **Pdif** **09 29 01.1 +0.6**
comp=Z,114nm,1.0s
KKN **Kakani** **104.23 294** *e*P **PKiKP** **09 33 14.1 0.0**
comp=Z,88nm,0.7s
KKN **Kakani** **104.23 294** *e*P **PKKPbc** **09 44 45.8 -0.2**
comp=Z,59nm,0.8s
MYLAV **Mylavaram** **104.27 282** *e*Pdif **Pdif** **09 29 00.3 -0.3**
MYLAV *e* 09 33 11.3
DMN **Daman** **104.31 294** *e*P **Pdif** **09 29 01.8 +0.9**
comp=Z,167nm,1.0s
DMN **Daman** **104.31 294** *e*P **PKiKP** **09 33 13.1 -1.2**
DMN **Daman** **104.31 294** *e*P **PKKPbc** **09 44 45.9 +0.1**
TRD **Trivandrum** **104.44 273** *e*P **Pdif** **09 28 59.3 -2.2**
TRD *ex* x 09 33 26.6
TRD *i* x x 09 41 48.2
TRD **Trivandrum** **104.44 273** *ex* **SP** **09 42 01.3 +10**
ADKI **Addanki** **104.53 281** *e*Pdif **Pdif** **09 29 02.0 +0.2**

ADKI ePKiKP **PKiKP** 09 33 14.3 -0.3
GKN Gorkha 104.84 294 eP **Pdif** 09 29 03.2 +0.1
comp=Z,174nm,1.1s
GKN Gorkha 104.84 294 eP **PKiKP** 09 33 13.6 -1.5
GKN Gorkha 104.84 294 eP **PKKPbc** 09 44 44.6 +0.5
comp=Z,117nm,0.8s
YOTC Yotoco, Valle 104.93 92 eP **PKiKP** 09 33 15.3 -0.3
AGMN Agassiz Nation 104.94 44 Pdiff **Pdif** 09 29 02.7 -0.2
baz=250
NJS Nagarjunasagar 105.38 281 ePdif **Pdif** 09 29 05.6 0.0
NJS ePiKP **PKiKP** 09 33 16.7 +0.5
CPUP Villa Florida 105.57 129 Pdiff **Pdif** 09 29 09.3 +3.0
comp=Z,1.8nm,0.9s,baz=231,slow=17,SNR=3.6
CPUP PKiKP **PKiKP** 09 33 16.3 -0.1
comp=Z,5.8nm,0.9s,baz=15,slow=1.0,SNR=6.5
CPUP PKKPbc **PKKPbc** 09 44 41.0 -1.0
comp=Z,24nm,1.0s,baz=53,slow=2.7,SNR=11
CPUP PKKP **PKKPdf** 09 44 52.6 +2.0
comp=Z,8.7nm,0.7s,baz=40,slow=2.5,SNR=7.5
CPUP PKKPab **PKKPab** 09 45 02.5 -0.3
comp=Z,13nm,1.0s,baz=52,slow=6.2,SNR=4.9
CPUP PKPPKP **P'P'df** 09 52 58.3 -6.6
comp=Z,5.2nm,0.9s,baz=15,slow=2.5,SNR=5.8
SRLM Srisailam 105.59 281 ePdif **Pdif** 09 29 06.6 +0.1
SRLM ePiKiP **PKiKP** 09 33 16.4 -0.2
ULM Lac du Bonnet 105.61 42 Pdiff **Pdif** 09 29 05.8 +0.1
comp=Z,7.9nm,0.8s,baz=243,slow=4.1,SNR=6.4
ULM PKiKP **PKiKP** 09 33 14.7 -0.9
comp=Z,17nm,0.7s,baz=297,slow=2.7,SNR=12
ULM PP **PP** 09 33 34.5 -1.7
comp=Z,10nm,0.9s,baz=246,slow=6.4,SNR=5.1
ULM PKKPbc **PKKPbc** 09 44 40.9 -1.4
comp=Z,26nm,0.8s,baz=58,slow=2.6,SNR=13
ULM PKPPKP **P'P'df** 09 53 02.4 +0.2
comp=Z,5.1nm,0.9s,baz=57,slow=0.4,SNR=4.7
KOLN Koldanda 105.62 294 eP **Pdif** 09 29 07.2 +0.5
comp=Z,45nm,0.9s
KOLN Koldanda 105.62 294 eP **PKiKP** 09 33 16.5 -0.2
comp=Z,35nm,0.5s
DANN Dangsing 105.68 294 eP **Pdif** 09 29 06.9 -0.2
comp=Z,99nm,1.0s
DANN Dangsing 105.68 294 eP **PKiKP** 09 33 15.9 -1.0
DANN Dangsing 105.68 294 eP **PKKPbc** 09 44 42.6 +0.9
comp=Z,164nm,0.8s
SPMN Marine on St. 105.89 47 Pdiff **Pdif** 09 29 06.0 -1.2
baz=251
CBOC Ciudad Bolivar 106.00 91 eP **PKiKP** 09 33 15.3 -2.4
LRAL Lakeview Retre 106.17 61 Pdiff **Pdif** 09 29 08.0 -0.8
baz=251
RPR Rampur 106.23 284 ePdif **Pdif** 09 29 09.4 +0.1
RPR ePiKiP **PKiKP** 09 33 16.7 -1.1
PYUN Piuthan 106.24 294 eP **PKiKP** 09 33 16.8 -1.0
HYB Hyderabad 106.37 282 *i* Pdif **Pdif** 09 29 10.0 0.0
HYB *e* 09 33 18.0
HYB ePP **PP** 09 33 40.0 -2.4
HYB ePPP PPP 09 36 08.0
HYB eSKS **SKSac** 09 38 58.0 -1.3
HYB eSKKS **SKKSac** 09 39 48.0 -3.4
HYB eSdif **Sdif** 09 40 24.0 -0.2
HYB ePKKPbc **PKKPbc** 09 44 40.0 +0.9
HYB ePKKPab **PKKPab** 09 44 59.0 +2.1
HYB *e* 09 45 34.0
HYB eSS **SS** 09 48 12.0 +5.5
HYB Hyderabad 106.37 282 eP **Pdif** 09 29 09.4 -0.5
HYB IAmb IAmb 09 29 21.8
comp=Z,6.2nm,0.8s
HYB *ex* x 09 33 37.0
HYB *i* x x 09 42 04.9
HYBB Hyderabad (bro 106.37 282 ePdif **Pdif** 09 29 09.8 -0.2
HYBB ePiKiP **PKiKP** 09 33 18.0 -0.1
WVT Waverly 106.53 57 Pdiff **Pdif** 09 29 09.9 -0.3
baz=251
HELC Santa Helena 106.57 91 eP **PKiKP** 09 33 18.0 -1.0
URV Uravakonda 106.62 279 ePdif **Pdif** 09 29 11.4 +0.2
URV ePiKiP **PKiKP** 09 33 17.8 -0.8
HDIL Hopedale 106.83 53 Pdiff **Pdif** 09 29 10.7 -0.8
baz=252
JFWS Jewell Farm 106.89 50 Pdiff **Pdif** 09 29 11.7 0.0
baz=252
NORC Norcasia 106.91 92 eP **PKiKP** 09 33 16.7 -2.6
SRSP Sriramsagar 107.09 283 ePdif **Pdif** 09 29 12.0 -1.2
SRSP ePiKiP **PKiKP** 09 33 17.9 -1.5
Z50A Ashland 107.10 61 Pdiff **Pdif** 09 29 11.6 -1.2
baz=251
ROSC El Rosal 107.12 93 Pdiff **Pdif** 09 29 16.1 +2.2
comp=Z,3.4nm,0.5s,baz=108,slow=20,SNR=1.4
ROSC PKiKP **PKiKP** 09 33 19.5 -0.6
comp=Z,7.9nm,0.5s,baz=81,slow=11,SNR=6.8
ROSC PKKPbc **PKKPbc** 09 44 37.8 +0.6
comp=Z,28nm,0.7s,baz=141,slow=10,SNR=8.4
ROSC PKPPKP **P'P'df** 09 52 59.5 -3.3
comp=Z,3.3nm,0.3s,baz=343,slow=19,SNR=1.3
UREC San Jos de Ur 107.19 89 eP **PKiKP** 09 33 20.7 +1.0
NGP Nagpur 107.25 286 *ex* **PP** 09 33 45.8 -2.9
NGP *i* x **SP** 09 42 19.9 +0.5
NGP Nagpur 107.25 286 *ex* **SP** 09 42 20.0 +0.5
CHIC Chingaza 107.57 93 eP **PKiKP** 09 33 21.3 +0.4
EYMN Ely 107.60 45 Pdiff **Pdif** 09 29 14.5 -0.2
baz=253
SPBC San Pablo de B 107.67 92 eP **PKiKP** 09 33 19.3 -1.4
ZARC Zaragoza, Cauc 107.70 90 eP **PKiKP** 09 33 18.8 -1.8
L44A Lake County Fo 108.32 51 Pdiff **Pdif** 09 29 16.5 -1.5
baz=253
KLRI Killari 108.34 282 ePdif **Pdif** 09 29 18.2 -0.6
KLRI ePiKiP **PKiKP** 09 33 21.0 -0.7
WCI Wyandotte Cave 108.34 56 Pdiff **Pdif** 09 29 16.1 -2.1
baz=253
SFIN Lafayette 108.38 53 Pdiff **Pdif** 09 29 17.7 -0.6
baz=253
TIGA Tifton 108.40 63 Pdiff **Pdif** 09 29 18.4 -0.3
baz=252
RUSC La Rusia 108.67 92 eP **PKiKP** 09 33 20.7 -2.4
Y52A Lilburn 108.76 61 Pdiff **Pdif** 09 29 19.7 -0.5
baz=252
SIV San Ignacio 108.78 118 Pdiff **Pdif** 09 29 24.1 +3.3
comp=Z,2.0nm,1.0s,baz=234,slow=4.4,SNR=7.5
SIV PKiKP **PKiKP** 09 33 22.0 -0.7
comp=Z,7.6nm,0.7s,baz=254,slow=2.0,SNR=21
SIV PP **PP** 09 34 00.3 +1.2
comp=Z,4.3nm,0.9s,baz=246,slow=11,SNR=5.1
SIV PKKPbc **PKKPbc** 09 44 31.8 -0.1
comp=Z,11nm,0.7s,baz=306,slow=0.9,SNR=10
SIV PKKPab **PKKPab** 09 44 47.5 -0.7
comp=Z,9.5nm,0.8s,baz=126,slow=7.4,SNR=7.6
SIV PKPPKP **P'P'df** 09 52 52.5 -6.7
comp=Z,2.9nm,1.0s,baz=288,slow=6.3,SNR=2.9
SMLC San Martn de 108.92 89 eP **PKiKP** 09 33 20.0 -2.9
GOGA Godfrey 109.10 61 Pdiff **Pdif** 09 29 20.8 -0.9
baz=253
DWPF Disney Wildern 109.15 67 Pdiff **Pdif** 09 29 21.9 -0.1
baz=252
BHPL Bhopal 109.37 287 eP **Pdif** 09 29 22.6 -0.7
BHPL IAmb IAmb 09 29 27.9
comp=Z,5.6nm,0.8s
BHPL *ex* x 09 30 48.9
BHPL *i* x x 09 42 46.4
L46A Eue Claire 109.42 52 PKiKP **PKiKP** 09 33 22.2 -0.8
baz=254
DGZ Jazzator, Alta 109.45 317 *d i* P **Pdif** 09 29 23.8 +0.7
TKL Tuckaleechee C 109.52 59 PKKPbc PKKPbc 09 44 29.7 0.0
comp=Z,9.7nm,0.7s,baz=107,slow=5.0,SNR=3.4
N47A Urbana 109.55 53 Pdiff **Pdif** 09 29 23.4 -0.2
baz=254
PAMC Pamplona, Colo 109.60 91 eP **PKiKP** 09 33 22.7 -2.2
SMRC Santa Marta, M 109.69 87 eP **PKiKP** 09 33 23.3 -1.0
M47A Cromwell 109.73 53 Pdiff **Pdif** 09 29 24.2 -0.2
baz=254
J45A Montague 109.75 50 PKiKP **PKiKP** 09 33 22.3 -1.3
baz=254
O48A Farmland 109.77 54 PKiKP **PKiKP** 09 33 22.6 -1.2
baz=254
P49A Miami Univ. Ec 109.89 55 PKiKP **PKiKP** 09 33 22.6 -1.4
baz=254
GOA Goa 109.91 278 eP **Pdif** 09 29 23.7 -2.0
K46A Dorr 109.97 51 PKiKP **PKiKP** 09 33 23.0 -1.1
baz=254
I45A Fountain 110.01 50 PKiKP **PKiKP** 09 33 23.1 -1.0
baz=255
N48A Decatur 110.03 53 PKiKP **PKiKP** 09 33 22.7 -1.5
baz=254
PTGB Pitanga 110.26 131 eP **PKKPbc** 09 44 27.8 +0.2
PTGB Pitanga 110.26 131 eP **PKKPbc** 09 44 28.5 +0.9
H45A Beulah 110.30 49 PKiKP **PKiKP** 09 33 23.0 -1.6
baz=255
X54A Belton 110.30 60 PKiKP **PKiKP** 09 33 23.0 -2.0
baz=254
O49A Covington 110.35 54 PKiKP **PKiKP** 09 33 23.3 -1.6
baz=254
M48A Edgerton 110.42 53 PKiKP **PKiKP** 09 33 23.4 -1.5
baz=255
ZSN Zaisan 110.52 314 ePP **PP** 09 34 09.5 -2.0
K47A Vermontville 110.53 52 PKiKP **PKiKP** 09 33 23.8 -1.3
baz=255
Y55A Saluda 110.54 61 PKiKP **PKiKP** 09 33 24.5 -0.9
baz=254
I46A Reed City 110.54 50 PKiKP **PKiKP** 09 33 23.9 -1.2
baz=255
P50A Jamestown 110.60 55 PKiKP **PKiKP** 09 33 23.4 -2.0
baz=255
W54A Cherokee Point 110.60 60 PKiKP **PKiKP** 09 33 24.4 -1.1
baz=254
PTLB Pontes e Lacer 110.62 119 eP PKKPbc 09 44 36.1 +10
N49A Columbus Grove 110.66 54 PKiKP **PKiKP** 09 33 24.5 -0.9
baz=255
G45A Suttons Bay 110.67 49 PKiKP **PKiKP** 09 33 23.9 -1.4
baz=255
L48A N Adams 110.74 52 PKiKP **PKiKP** 09 33 24.7 -0.9
baz=255
Z56A Williston 110.75 62 PKiKP **PKiKP** 09 33 24.7 -1.2
baz=254
Q51A Peebles 110.78 56 PKiKP **PKiKP** 09 33 24.5 -1.2
baz=255
J47A Sumner 110.80 51 PKiKP **PKiKP** 09 33 25.0 -0.6
baz=255
T53A Wise 110.85 58 PKiKP **PKiKP** 09 33 25.7 -0.3
baz=254
H46A Fife Lake 110.86 50 PKiKP **PKiKP** 09 33 25.1 -0.6
baz=256
X55A Gracelyn & Ava 110.86 61 PKiKP **PKiKP** 09 33 25.5 -0.5
baz=254
O50A Cable 110.87 54 PKiKP **PKiKP** 09 33 24.3 -1.6
baz=255
E44A Grand Marais A 110.89 47 PKiKP **PKiKP** 09 33 24.3 -1.3
baz=256
Y56A Pelion 110.94 62 PKiKP **PKiKP** 09 33 25.2 -1.0
baz=254
M49A Liberty Center 110.95 53 PKiKP **PKiKP** 09 33 25.1 -0.9
baz=255
V54A Nebo 110.98 59 PKiKP **PKiKP** 09 33 25.3 -0.9
baz=254
TRCB Terra Rica 111.11 129 eP **PKKPbc** 09 44 23.6 -1.2
TRCB Terra Rica 111.11 129 eP **PKKPbc** 09 44 19.8 -5.0
P51A Williamsport 111.11 55 PKiKP **PKiKP** 09 33 24.7 -1.6
baz=255
K48A Perry 111.19 52 PKiKP **PKiKP** 09 33 25.3 -1.1
baz=256
U54A Nelsons Funny 111.28 59 PKiKP **PKiKP** 09 33 25.7 -1.2
baz=254
Z57A Bowman 111.28 62 PKiKP **PKiKP** 09 33 25.9 -1.0
baz=254
G46A Petoskey 111.28 49 PKiKP **PKiKP** 09 33 25.3 -1.2
baz=256
S53A Williamson 111.35 57 PKiKP **PKiKP** 09 33 25.6 -1.3
baz=255
X56A White Oak 111.35 61 PKiKP **PKiKP** 09 33 25.8 -1.1
baz=254
ACSO Alum Creek Sta 111.36 54 PKiKP **PKiKP** 09 33 25.5 -1.3
baz=255
N50A Nevada 111.38 54 PKiKP **PKiKP** 09 33 25.6 -1.2
baz=255
AAM Ann Arbor 111.39 52 PKiKP **PKiKP** 09 33 26.0 -0.8
baz=256
J48A Bridge Port 111.55 51 PKiKP **PKiKP** 09 33 26.3 -0.8
baz=256
H47A Mio 111.56 50 PKiKP **PKiKP** 09 33 26.3 -0.7
baz=256
V55A Taylorsville 111.57 59 PKiKP **PKiKP** 09 33 26.4 -0.9
baz=254
Q52A Bidwell 111.58 56 PKiKP **PKiKP** 09 33 26.1 -1.2
baz=255
T54A Tazewell 111.61 58 PKiKP **PKiKP** 09 33 26.4 -1.0
baz=255
M50A Fremont 111.61 53 PKiKP **PKiKP** 09 33 26.0 -1.2
baz=256
O51A Pataskala 111.62 55 PKiKP **PKiKP** 09 33 25.9 -1.4
baz=255
NHSC New Hope 111.65 63 PKiKP **PKiKP** 09 33 26.4 -1.2
baz=254
R53A Hurricane 111.65 57 PKiKP **PKiKP** 09 33 26.4 -1.0
baz=255
K49A Clarkson 111.66 52 PKiKP **PKiKP** 09 33 26.2 -1.1
baz=256
Y57A Sumter 111.73 62 PKiKP **PKiKP** 09 33 26.6 -1.1
baz=254
I48A Sherman Twp 111.82 50 PKiKP **PKiKP** 09 33 26.5 -1.0
baz=256
P52A Corning 111.85 55 PKiKP **PKiKP** 09 33 26.7 -1.1
baz=256
U55A TA2, Sparta 111.87 59 PKiKP **PKiKP** 09 33 27.0 -1.0
baz=255
W56A Indian Trail 111.88 60 PKiKP **PKiKP** 09 33 26.9 -1.0
baz=255
L50A Kingsville 111.94 53 PKiKP **PKiKP** 09 33 26.9 -1.0
baz=256
G47A Hillman 111.94 49 PKiKP **PKiKP** 09 33 26.7 -1.0
baz=257
N51A Ashland 111.98 54 PKiKP **PKiKP** 09 33 26.6 -1.3
baz=256
SMLA Simla 111.99 295 *i* x **PKiKP** 09 33 27.9 -0.4
S54A Dingess, Beckl 112.00 57 PKiKP **PKiKP** 09 33 27.1 -1.0
baz=255
Z58A St. Stephen 112.01 62 PKiKP **PKiKP** 09 33 26.9 -1.3
baz=254
J49A Marlette 112.02 51 PKiKP **PKiKP** 09 33 26.5 -1.4
baz=256
ZALV Zalesovo Beam 112.04 321 Pdiff **Pdif** 09 29 34.8 +0.5
comp=Z,8.7nm,1.0s,baz=114,slow=3.6,SNR=21
ZALV PKiKP **PKiKP** 09 33 26.6 -1.1
comp=Z,20nm,0.5s,baz=155,slow=1.2,SNR=31
ZALV PP **PP** 09 34 22.1 +0.1
comp=Z,11nm,0.9s,baz=103,slow=6.2,SNR=1.5
ZALV PKKPbc **PKKPbc** 09 44 21.4 -0.7
comp=Z,5.1nm,0.5s,baz=254,slow=2.7,SNR=2.5
MK31 Makanchi Array 112.07 313 *i* PKiKP **PKiKP** 09 33 27.0 -1.0
MKAR Makanchi Array 112.07 313 Pdiff **Pdif** 09 29 36.3 +1.6
comp=Z,5.6nm,0.6s,baz=91,slow=6.9,SNR=34
MKAR PKiKP **PKiKP** 09 33 27.2 -0.8
comp=Z,59nm,0.9s,baz=70,slow=2.5,SNR=36
MKAR PP **PP** 09 34 21.6 -0.9
comp=Z,15nm,0.9s,baz=76,slow=6.1,SNR=1.8
MKAR SKP **SKPdf** 09 36 15.8 +2.1
comp=Z,14nm,0.8s,baz=125,slow=0.9,SNR=3.1
MKAR PKKPbc **PKKPbc** 09 44 21.7 -0.1
comp=Z,24nm,0.8s,baz=284,slow=3.7,SNR=12
MKAR PKKPab **PKKPab** 09 44 32.0 +1.5
comp=Z,18nm,0.8s,baz=264,slow=2.9,SNR=5.5
MKAR PKPPKP **P'P'df** 09 52 50.4 0.0
comp=Z,3.1nm,0.8s,baz=321,slow=1.7,SNR=6.2
SDV Santo Domingo 112.08 90 Pdiff **Pdif** 09 29 41.1 +5.4
comp=Z,1.7nm,0.3s,baz=119,slow=19,SNR=1.8
SDV PKiKP **PKiKP** 09 33 28.5 -0.7
comp=Z,42nm,0.8s,baz=262,slow=2.6,SNR=31
SDV Santo Domingo 112.08 90 eP **PKiKP** 09 33 28.6 -0.5
SDV Santo Domingo 112.08 90 eP **PKiKP** 09 33 28.2 -0.9
X57A Johnson Farm, 112.09 61 PKiKP **PKiKP** 09 33 27.3 -1.1
baz=255
Q53A Leroy 112.11 56 PKiKP **PKiKP** 09 33 27.3 -0.9
baz=256
V56A Mocksville 112.12 60 PKiKP **PKiKP** 09 33 27.6 -0.7
baz=255
O52A Adamsville 112.19 55 PKiKP **PKiKP** 09 33 27.2 -1.1
baz=256
H48A Harrisville 112.20 50 PKiKP **PKiKP** 09 33 27.1 -1.1
baz=257
D46A Sault St. Mari 112.21 47 PKiKP **PKiKP** 09 33 27.1 -1.1
baz=257
M51A Elyria 112.22 54 PKiKP **PKiKP** 09 33 27.1 -1.3
baz=256
T55A Pulaski 112.24 58 PKiKP **PKiKP** 09 33 27.6 -1.0
baz=255
K50A Casco 112.25 52 PKiKP **PKiKP** 09 33 27.4 -1.0
baz=256
Y58A Scranton 112.28 62 PKiKP **PKiKP** 09 33 27.7 -1.0
baz=254
MAKZ Makanchi 112.28 313 PKiKP **PKiKP** 09 33 26.8 -1.6
R54A Victor 112.35 57 PKiKP **PKiKP** 09 33 27.8 -1.0
baz=256
W57A Gilead 112.35 60 PKiKP **PKiKP** 09 33 27.9 -0.9
baz=255
U56A King 112.35 59 PKiKP **PKiKP** 09 33 28.1 -0.7
baz=255
P53A Whipple 112.37 56 PKiKP **PKiKP** 09 33 27.7 -1.1
baz=256
I49A Point Hope 112.38 51 PKiKP **PKiKP** 09 33 27.4 -1.2
baz=257
ELOV Elorza 112.39 93 eP **PKiKP** 09 33 26.5 -3.0
N52A McGinn's Farm, 112.46 54 PKiKP **PKiKP** 09 33 28.0 -0.9
baz=256
BLA Blacksburg 112.54 58 PKiKP **PKiKP** 09 33 28.0 -1.2
baz=256
RES Resolute Bay 112.61 17 PKKPbc PKKPbc 09 44 19.8 -0.8
comp=Z,16nm,1.1s,baz=8.3,slow=1.8,SNR=5.2
RES PKKPab **PKKPab** 09 44 28.7 +1.5
comp=Z,16nm,0.8s,baz=95,slow=4.5,SNR=5.7
RES PKPPKP **P'P'df** 09 52 50.0 +2.8
comp=Z,3.1nm,0.9s,baz=113,slow=11,SNR=2.5
S55A Lewisburg 112.62 58 PKiKP **PKiKP** 09 33 27.5 -1.8
baz=256
E47A Iron Bridge 112.62 48 PKiKP **PKiKP** 09 33 27.7 -1.3
baz=258
Q54A Cox's Mills 112.66 56 PKiKP **PKiKP** 09 33 28.1 -1.2
baz=256
O53A New Philadelph 112.68 55 PKiKP **PKiKP** 09 33 28.2 -1.1
baz=256
BHK Bhakra 112.69 295 eP **PKiKP** 09 33 31.6 +2.0
V57A Coltrane Farms 112.71 60 PKiKP **PKiKP** 09 33 28.4 -1.1
baz=255
X58A Rowland 112.71 61 PKiKP **PKiKP** 09 33 28.5 -1.0
baz=255
AJM Ajmer 112.78 290 ‖ *i* P **PKiKP** 09 33 29.0 -1.0
T56A Rocky Mt 112.80 58 PKiKP **PKiKP** 09 33 28.6 -1.0
baz=256
PCMB Pacaembu 112.84 129 eP **PS** 09 44 08.2 -3.4
D47A Chapleau 112.87 47 PKiKP **PKiKP** 09 33 28.3 -1.1
baz=258
FRTB Fartura 112.88 132 eP **PKKPbc** 09 44 18.0 -1.1
M52A Chesterland 112.88 53 PKiKP **PKiKP** 09 33 28.5 -1.2
baz=257
W58A Raeford 112.92 61 PKiKP **PKiKP** 09 33 28.7 -1.2
baz=255
F48A Evansville 112.94 49 PKiKP **PKiKP** 09 33 28.5 -1.1
baz=258
Y59A Loris 112.94 62 PKiKP **PKiKP** 09 33 28.7 -1.2
baz=255
DHRM DHARAMSHALA 113.01 296 *ex* **PKiKP** 09 33 23.4 -7.1
DHRM *i* x **SP** 09 43 16.1 +3.5
R55A Marlinton 113.03 57 PKiKP **PKiKP** 09 33 28.9 -1.3
baz=256
K51A Iona Station 113.04 52 PKiKP **PKiKP** 09 33 28.9 -1.0
baz=257
SALV Santo Antonio 113.07 121 eP **PKKPbc** 09 44 16.7 -1.5
P54A Burton 113.08 56 PKiKP **PKiKP** 09 33 28.9 -1.2
baz=256
N53A Lisbon 113.09 54 PKiKP **PKiKP** 09 33 29.1 -1.0
baz=257
U57A Blanch 113.19 59 PKiKP **PKiKP** 09 33 29.3 -1.1
baz=256
V58A Windy Hill, Pi 113.20 60 PKiKP **PKiKP** 09 33 29.2 -1.2
baz=256
Q55A Buckhannon 113.23 56 PKiKP **PKiKP** 09 33 29.0 -1.5
baz=256
PDGK Podgornoye 113.24 308 PKiKP **PKiKP** 09 33 29.3 -1.2
O54A Avella 113.29 55 PKiKP **PKiKP** 09 33 29.4 -1.1
baz=257
X59A McDuffie Farm, 113.30 61 PKiKP **PKiKP** 09 33 29.4 -1.2
baz=255
S56A Natural Bridge 113.31 58 PKiKP **PKiKP** 09 33 29.3 -1.3
baz=256
F49A Sandfield 113.32 49 PKiKP **PKiKP** 09 33 29.1 -1.2
baz=258
M53A WI Miller and 113.35 54 PKiKP **PKiKP** 09 33 29.3 -1.2
baz=257
E48A Lockeyer 113.38 48 PKiKP **PKiKP** 09 33 29.4 -1.1
baz=258
T57A Hurt 113.39 59 PKiKP **PKiKP** 09 33 29.5 -1.3
baz=256
NRIK Noril'sk 113.41 337 Pdiff **Pdif** 09 29 40.3 +0.3
comp=Z,20nm,1.3s,baz=105,slow=4.8,SNR=19
NRIK PKiKP **PKiKP** 09 33 29.4 -0.4
comp=Z,22nm,0.5s,baz=84,slow=3.6,SNR=21
NRIK PP **PP** 09 34 27.9 -3.3
comp=Z,58nm,1.3s,baz=117,slow=7.8,SNR=8.7
NRIK SKP **SKPdf** 09 36 16.8 +1.2
comp=Z,17nm,1.0s,baz=125,slow=7.9,SNR=2.6
NRIK Noril'sk 113.41 337 *i* P **Pdif** 09 29 40.8 +0.7
Y60A Bolivia 113.47 62 PKiKP **PKiKP** 09 33 29.8 -1.2
baz=255
UZB Uzynbulak 113.53 308 ePdif **Pdif** 09 29 40.6 -0.8
UZB ePP **PP** 09 34 28.6 -4.4
UZB Uzynbulak 113.53 308 eP **Pdif** 09 29 40.6 -0.8
P55A Reedsville 113.55 56 PKiKP **PKiKP** 09 33 29.7 -1.3
baz=257
MCWV Mont Chateau 113.57 56 PKiKP **PKiKP** 09 33 29.9 -1.1
baz=257
W59A Clinton 113.58 61 PKiKP **PKiKP** 09 33 30.2 -1.0
baz=256
I51A Listowel 113.62 51 PKiKP **PKiKP** 09 33 29.8 -1.2
baz=258
K52A Tillsonburg 113.62 52 PKiKP **PKiKP** 09 33 29.9 -1.1
baz=258
N54A Moraine State 113.75 54 PKiKP **PKiKP** 09 33 30.0 -1.4
baz=257
D48A Paudash Townsh 113.76 47 PKiKP **PKiKP** 09 33 29.8 -1.4
baz=259
L53A Girard 113.77 53 PKiKP **PKiKP** 09 33 30.2 -1.2
baz=258
U58A Oxford 113.80 59 PKiKP **PKiKP** 09 33 30.5 -1.1
baz=256
X60A Albert Glenn T 113.81 61 PKiKP **PKiKP** 09 33 30.2 -1.4
baz=256
S57A Dark Hollow, R 113.81 58 PKiKP **PKiKP** 09 33 30.3 -1.3
baz=256
J52A Paris 113.89 52 PKiKP **PKiKP** 09 33 30.4 -1.1
baz=258
V59A Middlesex 113.89 60 PKiKP **PKiKP** 09 33 30.5 -1.2
baz=256
Q56A Snyder Ridge, 113.92 57 PKiKP **PKiKP** 09 33 30.7 -1.0
baz=257
T58A Grand View Acr 113.94 59 PKiKP **PKiKP** 09 33 30.6 -1.2
baz=256
SATY Saty 113.96 308 ePP **PP** 09 34 31.7 -4.3
SATY ePS **PS** 09 44 19.8 -2.2
ERPA Erie 114.00 53 PKiKP PKPdf 09 33 30.8 -1.0
baz=258
CNNC Cliffs of the 114.04 61 PKiKP PKPdf 09 33 30.8 -1.2
baz=256
D49A Beulah Townshi 114.08 47 PKiKP PKPdf 09 33 30.5 -1.3
baz=259
O55A Igonier 114.09 55 PKiKP PKPdf 09 33 31.0 -1.0
baz=257
M54A Oil Creek Stat 114.11 54 PKiKP PKPdf 09 33 30.8 -1.3
baz=258
W60A Pink Hill 114.13 61 PKiKP PKPdf 09 33 31.0 -1.2
baz=256
SPB Sao Paulo 114.14 133 eP **PKKPbc** 09 44 15.6 +0.7
R57A Stanardsville 114.26 57 PKiKP PKPdf 09 33 31.3 -1.1
baz=257
I52A Shelburne 114.27 51 PKiKP PKPdf 09 33 31.2 -1.0
baz=258
P56A Dayton Farm, R 114.29 56 PKiKP PKPdf 09 33 31.2 -1.2
baz=257
VOI Vohitsoka 114.42 229 P PKPdf 09 33 34.0 +0.6
SNR=8.3
N55A Marion Center 114.45 55 PKiKP PKPdf 09 33 31.5 -1.2
baz=258
S58A Poland Farm, P 114.47 58 PKiKP PKPdf 09 33 31.7 -1.1
baz=257
Q57A Strasburg 114.51 57 PKiKP PKPdf 09 33 31.5 -1.3
baz=257
L54A Sinclairville 114.52 53 PKiKP PKPdf 09 33 31.5 -1.2
baz=258
H52A Wyevale 114.58 50 PKiKP PKPdf 09 33 31.4 -1.4
baz=259
O56A Blue Knob Stat 114.66 55 PKiKP PKPdf 09 33 32.2 -1.0
baz=258
R58A Rapidan 114.66 58 PKiKP PKPdf 09 33 31.8 -1.3
baz=257
V60A Jim Taylor Roa 114.66 60 PKiKP PKPdf 09 33 32.0 -1.2
baz=256
R58B Mineral 114.68 58 PKiKP PKPdf 09 33 32.0 -1.2
baz=257
T59A Double "B" Far 114.71 59 PKiKP PKPdf 09 33 32.4 -0.9
baz=257
W61A Ground Anchor 114.74 61 PKiKP PKPdf 09 33 32.6 -0.7
baz=256
M55A Ridgway 114.76 54 PKiKP PKPdf 09 33 32.2 -1.1
baz=258
F51A Arnstein 114.81 49 PKiKP PKPdf 09 33 31.9 -1.2
baz=260
U60A Pendleton 114.90 60 PKiKP PKPdf 09 33 32.6 -1.1
baz=257

P57A	Homestead Farm	114.91	56	PKiKP	PKPdf	09 33 32.7	-0.9
	baz=258						
MDOK	Medeo	114.95	308	ePdif	Pdif	09 29 45.8	-2.0
MDOK				ePKP	PKPdf	09 33 33.0	-0.8
MDOK				ePP	PP	09 34 39.8	-3.1
MDOK				ePS	PKKPab	09 44 20.1	+2.1
MDOK				eSS	SS	09 50 03.6	+4.5
MDOK	Medeo	114.95	308	eP	Pdif	09 29 45.7	-2.0
MDOK				e		09 33 32.9	
MDOK				e		09 34 39.7	
MDOK				eSS	SS	09 50 03.6	+4.4
N56A	West Decatur	115.00	55	PKiKP	PKPdf	09 33 32.8	-1.0
	baz=258						
TNSS	Tian-Shan	115.00	308	ePKP	PKPdf	09 33 33.8	-0.5
TNSS	Tian-Shan	115.00	308	ePKIKP	PKPdf	09 33 33.7	-0.5
KSH	Kashi	115.01	304	PKP	PKiKP	09 33 34.7	+0.7
KSH				PKS	PKSdf	09 37 08.3	-2.4
KSH				SKS	SKSdf	09 39 53.2	-3.3
KSH				SKKS	SKKSac	09 40 44.3	-5.5
KSH				SS	SS	09 50 05.1	+5.1
KSH				AMB	AMB		
	comp=Z,630nm,7.4s						
K54A	Basiliko Farm,	115.04	53	PKiKP	PKPdf	09 33 32.4	-1.4
	baz=259						
Q58A	Fox Den Farm,	115.04	57	PKiKP	PKPdf	09 33 32.7	-1.2
	baz=258						
D50A	G1974 Best Tow	115.08	48	PKiKP	PKPdf	09 33 32.5	-1.2
	baz=260						
S59A	Mechanicsville	115.09	58	PKiKP	PKPdf	09 33 32.6	-1.3
	baz=257						
CBN	Corbin Frederi	115.12	58	PKiKP	PKPdf	09 33 32.8	-1.3
	baz=258						
L55A	Hinsdale	115.14	53	PKiKP	PKPdf	09 33 33.0	-1.1
	baz=259						
F52A	Sundridge	115.19	49	PKiKP	PKPdf	09 33 32.6	-1.4
	baz=260						
M56A	Emporium	115.19	54	PKiKP	PKPdf	09 33 32.8	-1.3
	baz=259						
KURK	Kurchatov	115.20	316	P	PKPdf	09 33 33.5	-0.2
KURK	Kurchatov	115.20	316	d iP	Pdif	09 29 48.2	-0.2
KURK	Kurchatov	115.20	316		PKPdf	09 33 33.1	-0.7
E51A	G1948 Merrick	115.20	48	PKiKP	PKPdf	09 33 32.7	-1.3
	baz=260						
V61A	Roper	115.21	61	PKiKP	PKPdf	09 33 33.2	-1.1
	baz=257						
J54A	Appleton	115.21	52	PKiKP	PKPdf	09 33 32.7	-1.3
	baz=259						
KURBB	Kurchatov Arra	115.24	316	PKKPbc	PKKPbc	09 44 10.5	-0.7
	comp=Z,5.9nm,0.8s,baz=108,slow=7.3,SNR=4.4						
KURBB				PKKPab	PKKPab	09 44 17.7	+1.5
	comp=Z,17nm,0.8s,baz=276,slow=4.8,SNR=7.1						
KURBB				SKKPbc	SKKPbc	09 47 05.9	-2.3
	comp=Z,7.9nm,1.0s,baz=272,slow=4.2,SNR=4.0						
KURBB	Kurchatov Arra	115.24	316	PKIKP	PKPdf	09 33 32.9	-1.0
SSPA	Standing Stone	115.24	55	PKiKP	PKPdf	09 33 33.0	-1.2
	baz=258						
SSPA	Standing Stone	115.24	55		PKPdf	09 33 32.9	-1.3
R59A	King George, V	115.32	58	PKiKP	PKPdf	09 33 33.2	-1.2
	baz=258						
O57A	Amberson	115.34	56	PKiKP	PKPdf	09 33 33.2	-1.2
	baz=258						
ULHL	Ulahol	115.36	307	P	PKiKP	09 33 34.9	+0.2
	SNR=54						
D51A	Lot 18 Range I	115.38	48	PKiKP	PKPdf	09 33 32.9	-1.4
	baz=260						
T60A	Surry	115.39	59	PKiKP	PKPdf	09 33 33.3	-1.2
	baz=257						
U61A	Possum Corner	115.43	60	PKiKP	PKPdf	09 33 33.6	-1.1
	baz=257						
P58A	Pank, Wackersv	115.45	56	PKiKP	PKPdf	09 33 33.5	-1.1
	baz=258						
H53A	Bobcaygeon	115.49	51	PKiKP	PKPdf	09 33 33.5	-1.1
	baz=260						
PARB	Paraibuna	115.50	134	eP	PKKPbc	09 44 11.9	+1.5
K55A	Perry	115.52	53	PKiKP	PKPdf	09 33 33.4	-1.3
	baz=259						
N57A	Milroy	115.52	55	PKiKP	PKPdf	09 33 33.4	-1.3
	baz=259						
G53A	Haliburton	115.56	50	PKiKP	PKPdf	09 33 33.5	-1.1
	baz=260						
S60A	Water View	115.57	58	PKiKP	PKPdf	09 33 34.0	-0.9
	baz=258						
KUU	Kurty	115.60	309	ePdif	Pdif	09 29 50.7	+0.3
KUU				⇓iPKP	PKPdf	09 33 33.7	-1.1
KUU				ePP	PP	09 34 45.4	-1.8
KUU	Kurty	115.60	309	deP	Pdif	09 29 50.7	+0.3
KUU				i		09 33 33.7	
KUU				e		09 34 45.3	
E52A	Mattawa	115.73	49	PKiKP	PKPdf	09 33 33.8	-1.2
	baz=260						
R60A	Leonardtown, M	115.75	58	PKiKP	PKPdf	09 33 34.2	-1.0
	baz=258						
L56A	Greenwood	115.78	53	PKiKP	PKPdf	09 33 34.0	-1.2
	baz=259						
MACA	Manacapuru-AM	115.78	107	eP	PKKPbc	09 44 12.8	+4.0
J55A	Hilton	115.80	52	PKiKP	PKPdf	09 33 34.4	-0.8
	baz=260						
Q59A	Harwood	115.81	57	PKiKP	PKPdf	09 33 34.5	-0.8
	baz=258						
NIL	Nilore	115.84	297	P	PKPdf	09 33 35.2	-0.4
NIL	Nilore	115.84	297	PKIKP	PKPdf	09 33 34.5	-1.1
NIL	Nilore	115.84	297		PKPdf	09 33 34.5	-1.1
O58A	Lewisberry	115.86	56	PKiKP	PKPdf	09 33 34.4	-1.0
	baz=259						
CLDB	Colider	115.88	117	eP	PKPdf	09 33 34.8	-1.5
M57A	Sunshine Farm,	115.94	54	PKiKP	PKPdf	09 33 34.6	-0.9
	baz=259						
TKM2	Tokmak 2	115.95	307	P	PKPdf	09 33 35.4	-0.4
	SNR=78						
TKM2	Tokmak 2	115.95	307	PKIKP	PKPdf	09 33 35.0	-0.8
G54A	Lake Saint Pet	115.97	50	PKiKP	PKPdf	09 33 34.2	-1.2
	baz=260						
ABPO	Ambohimpanom	116.03	232	PKIKP	PKiKP	09 33 37.1	+0.5
ABPO	Ambohimpanom	116.03	232		PKiKP	09 33 37.1	+0.5
K56A	Middlesex	116.05	53	PKiKP	PKPdf	09 33 34.6	-1.1
	baz=260						
KZA	Kyzart	116.05	306	P	PKiKP	09 33 36.6	+0.3
	SNR=63						
I55A	Frankford	116.06	51	PKiKP	PKPdf	09 33 34.4	-1.2
	baz=260						
ALGO	Algonquin Park	116.09	49	PKiKP	PKPdf	09 33 34.5	-1.2
	baz=261						
P59A	Jarrettsville	116.13	56	PKiKP	PKPdf	09 33 34.8	-1.1
	baz=259						
N58A	Sunbury	116.16	55	PKiKP	PKPdf	09 33 34.8	-1.1
	baz=259						
ARAG	Araguaiana, MT	116.17	124	eP	PKPdf	09 33 36.1	-0.6
L57A	Andrews Acres	116.27	54	PKiKP	PKPdf	09 33 35.1	-1.1
	baz=260						
S61A	Accomac	116.33	59	PKiKP	PKPdf	09 33 35.2	-1.1
	baz=258						
OPO	Ambohidratompo	116.35	232	PKKPbc	PKKPbc	09 44 07.4	-0.1
	comp=Z,7.7nm,0.7s,baz=275,slow=2.6,SNR=4.9						
KBK	Karagaybulak	116.38	307	P	PKPdf	09 33 36.5	-0.1
	SNR=36						
E53A	Dumoine, Ponti	116.42	49	PKiKP	PKPdf	09 33 35.3	-1.0
	baz=261						
M58A	Price's Panora	116.44	54	PKiKP	PKPdf	09 33 35.7	-0.9
	baz=260						
O59A	Robesonia	116.45	56	PKiKP	PKPdf	09 33 35.5	-1.1
	baz=259						
Q60A	Greensboro	116.46	57	PKiKP	PKPdf	09 33 35.8	-0.8
	baz=259						
H55A	Tweed	116.47	51	PKiKP	PKPdf	09 33 35.0	-1.5
	baz=261						
J56A	Wolcott	116.49	52	PKiKP	PKPdf	09 33 35.0	-1.5
	baz=260						
D53A	Lac Vacive, Po	116.51	48	PKiKP	PKPdf	09 33 35.0	-1.4
	baz=262						
CHMS	Chumysh	116.58	307	P	PKPdf	09 33 36.4	-0.3
	SNR=54						
UCH	Uchtor	116.62	306	P	PKiKP	09 33 37.5	+0.1
	SNR=92						
K57A	Scipio Center	116.64	53	PKiKP	PKPdf	09 33 35.6	-1.3
	baz=260						
AAK	Ala-Archa	116.70	307	PKP	PKPdf	09 33 37.0	-0.2
	comp=Z,78nm,1.0s,baz=138,slow=2.1,SNR=52						
AAK				PKKPbc	PKKPbc	09 44 06.6	+0.4
	comp=Z,34nm,0.8s,baz=246,slow=4.4,SNR=11						
AAK	Ala-Archa	116.70	307	P	PKPdf	09 33 37.0	-0.2
	SNR=49						
AAK	Ala-Archa	116.70	307	i PKPdf	PKPdf	09 33 36.9	-0.3
	SNR=54						
AAK	Ala-Archa	116.70	307	P	PKiKP	09 33 37.4	+0.2
AAK	Ala-Archa	116.70	307	PKIKP	PKPdf	09 33 37.0	-0.2
AAK	Ala-Archa	116.70	307		PKPdf	09 33 36.7	-0.5
SGDS	Sogindy	116.74	308	⇓iPKP	PKPdf	09 33 36.3	-0.8
SGDS				ePP	PP	09 34 53.0	-2.1
E54A	Lac Daplat, Po	116.76	49	PKiKP	PKPdf	09 33 35.4	-1.5
	baz=262						
P60A	Greenville	116.77	56	PKiKP	PKPdf	09 33 35.9	-1.2
	baz=259						
USP	Ospenovka	116.80	308	P	PKPdf	09 33 36.9	-0.3
	SNR=89						
Q61A	Milford	116.83	57	PKiKP	PKPdf	09 33 35.9	-1.4
	baz=259						
N59A	State Game Lan	116.87	55	PKiKP	PKPdf	09 33 36.5	-0.9
	baz=260						
G55A	Calabogie	116.91	50	PKiKP	PKPdf	09 33 35.9	-1.4
	baz=261						
MATQ	Matagami	116.91	45	PKiKP	PKPdf	09 33 35.4	-1.7
	baz=263						
BINY	Binghamton	116.94	54	PKiKP	PKPdf	09 33 36.4	-1.1
	baz=260						
L58A	Harry Jones Me	117.01	54	PKiKP	PKPdf	09 33 36.8	-0.8
	baz=260						
O60A	Telford	117.04	56	PKiKP	PKPdf	09 33 36.4	-1.2
	baz=260						
H56A	Elgin	117.13	51	PKiKP	PKPdf	09 33 36.4	-1.2
	baz=261						
J57A	Williamstown	117.13	52	PKiKP	PKPdf	09 33 36.7	-1.1
	baz=261						
AML	Almayashu	117.20	306	P	PKiKP	09 33 38.5	0.0
	SNR=12						
D54A	Lac Fusel, La	117.22	48	PKiKP	PKPdf	09 33 36.1	-1.7
	baz=262						
EKS2	Erkin-Say	117.23	307	P	PKiKP	09 33 38.2	+0.1
	SNR=57						
M59A	Waymart	117.23	54	PKiKP	PKPdf	09 33 37.3	-0.8
	baz=260						
F55A	Otter Lake	117.25	50	PKiKP	PKPdf	09 33 36.4	-1.5
	baz=262						
K58A	Earlville	117.28	53	PKiKP	PKPdf	09 33 37.1	-1.0
	baz=261						
N60A	Cedar Hill Far	117.37	55	PKiKP	PKPdf	09 33 37.1	-1.2
	baz=260						
IPMB	Ipameri, GO	117.37	128	eP	PKPdf	09 33 38.6	-0.5
P61A	Hammonton	117.39	57	PKiKP	PKPdf	09 33 37.3	-1.0
	baz=260						
BTLS	Baital	117.40	310	ePdif	Pdif	09 29 59.1	+0.7
BTLS				⇓iPKP	PKPdf	09 33 37.6	-0.6
BTLS				ePP	PP	09 34 57.6	-1.9
BTLS				eSKS	SKSac	09 39 42.0	0.0
BTLS	Baital	117.40	310	deP	Pdif	09 29 59.1	+0.7
BTLS				i		09 33 37.6	
BTLS				e		09 34 57.6	
BTLS				e		09 39 41.9	
I57A	Carthage	117.45	52	PKiKP	PKPdf	09 33 37.2	-1.1
	baz=261						
SBV	Sambava	117.51	238	P	PKPdf	09 33 39.0	-0.3
E55A	Montcerf-Lytto	117.54	49	PKiKP	PKPdf	09 33 37.1	-1.3
	baz=262						
PTGA	Pitinga	117.58	105		PKPdf	09 33 38.8	-0.8
PTGA	Pitinga	117.58	105	eP	PKKPbc	09 44 05.2	+2.6
L59A	Walton	117.63	54	PKiKP	PKPdf	09 33 37.7	-1.1
	baz=261						
J58A	Remsen	117.64	52	PKiKP	PKPdf	09 33 37.9	-0.9
	baz=261						
O61A	Allentown	117.64	56	PKiKP	PKPdf	09 33 37.5	-1.3
	baz=260						
ORIO	Orleans, Innes	117.78	50	PKiKP	PKPdf	09 33 37.8	-1.1
	baz=262						
M60A	Port Jervis	117.80	55	PKiKP	PKPdf	09 33 38.1	-1.0
	baz=261						
K59A	Cooperstown	117.86	53	PKiKP	PKPdf	09 33 38.3	-0.9
	baz=261						
MSEY	Mahe Island	117.86	250	PKIKP	PKPdf	09 33 40.1	0.0
MSEY	Mahe Island	117.86	250	PKPdf	PKPdf	09 33 40.1	0.0
I58A	Old Forge	117.91	52	PKiKP	PKPdf	09 33 38.4	-0.9
	baz=262						
N61A	South Mountain	117.95	55	PKiKP	PKPdf	09 33 38.6	-0.8
	baz=260						
D55A	Sainte-Anne-du	118.01	48	PKiKP	PKPdf	09 33 38.0	-1.3
	baz=263						
G57A	Newington	118.10	51	PKiKP	PKPdf	09 33 38.3	-1.2
	baz=262						
L60A	Shokan	118.20	54	PKiKP	PKPdf	09 33 38.9	-0.9
	baz=261						
J59A	Piesco	118.21	52	PKiKP	PKPdf	09 33 38.6	-1.3
	baz=262						
E56A	St. Veronique	118.25	49	PKiKP	PKPdf	09 33 38.4	-1.4
	baz=263						
PAL	Palisades	118.28	55	PKiKP	PKPdf	09 33 39.3	-0.8
	baz=261						
LONY	Lake Ozonia	118.32	51	PKiKP	PKPdf	09 33 38.8	-1.2
	baz=262						
F57A	Harrington	118.39	50	PKiKP	PKPdf	09 33 38.9	-1.2
	baz=263						
M61A	Granite Spring	118.43	55	PKiKP	PKPdf	09 33 39.5	-0.8
	baz=261						
NCB	Newcomb	118.49	52		PKPdf	09 33 39.1	-1.3
D56A	ZEC Mazanza, M	118.50	48	PKiKP	PKPdf	09 33 39.1	-1.2
	baz=264						
K60A	Five Rivers En	118.54	53	PKiKP	PKPdf	09 33 39.3	-1.2
	baz=262						
H58A	Gabriels	118.58	51	PKiKP	PKPdf	09 33 39.4	-1.1
	baz=262						
N62A	Caumsett State	118.60	55	PKiKP	PKPdf	09 33 39.6	-1.1
	baz=261						
I59A	Olmsteadville	118.71	52	PKiKP	PKPdf	09 33 39.9	-1.0
	baz=262						
L61A	Hillsdale 1, H	118.72	54	PKiKP	PKPdf	09 33 39.9	-1.0
	baz=262						
E57A	Chemin Saint G	118.84	49	PKiKP	PKPdf	09 33 39.6	-1.4
	baz=264						
BRZS	Berezniki	118.89	315	ePKP	PKPdf	09 33 39.3	-1.6
BRZS				ePP	PP	09 35 07.5	-2.0
BRZS	Berezniki	118.89	315	ePKIKP	PKPdf	09 33 39.3	-1.6
BRZS				e		09 35 07.5	
H59A	Cadyville	118.95	51	PKiKP	PKPdf	09 33 39.8	-1.5
	baz=263						
OTUK	Ortayu	118.96	313	PKIKP	PKPdf	09 33 40.7	-0.5
J60A	Lant Hill Farm	118.97	53	PKiKP	PKPdf	09 33 40.4	-0.9
	baz=262						
K61A	Williamstown	119.00	53	PKiKP	PKPdf	09 33 40.6	-0.8
	baz=262						
CHGQ	Chibougamau	119.03	45	PKiKP	PKPdf	09 33 39.3	-1.9
	baz=265						
BDFB	Brasilia	119.04	126	PKP	PKPdf	09 33 41.8	-0.7
	comp=Z,43nm,0.8s,baz=210,slow=2.3,SNR=64						
BDFB				PKKPbc	PKKPbc	09 43 59.4	+1.4
	comp=Z,35nm,0.8s,baz=119,slow=4.8,SNR=12						
DZA	Taraz	119.04	307	ePKP	PKPdf	09 33 40.7	-0.8
DZA	Taraz	119.04	307	ePKIKP	PKPdf	09 33 40.6	-0.9
D57A	Chemin Vers le	119.08	48	PKiKP	PKPdf	09 33 40.4	-1.0
	baz=264						
M62A	Hamden	119.10	55	PKiKP	PKPdf	09 33 40.4	-1.1
	baz=262						
I60A	Shoreham	119.14	52	PKiKP	PKPdf	09 33 40.8	-0.8
	baz=263						
N63A	Mattituck	119.31	55	PKiKP	PKPdf	09 33 40.9	-1.1
	baz=262						
L62A	Suffield	119.36	54	PKiKP	PKPdf	09 33 41.2	-0.8
	baz=262						
L61B	Northampton	119.40	54	PKiKP	PKPdf	09 33 41.2	-0.9
	baz=262						
E58A	La Victoria	119.44	49	PKiKP	PKPdf	09 33 41.3	-0.8
	baz=264						
SJG	San Juan	119.44	82	PKIKP	PKPdf	09 33 41.5	-1.4
SJG	San Juan	119.44	82		PKPdf	09 33 41.5	-1.4
KBL	Kabul	119.44	297	P	PKiKP	09 33 43.6	+0.8
KBL	Kabul	119.44	297	PKIKP	PKiKP	09 33 42.9	0.0
KBL	Kabul	119.44	297		PKiKP	09 33 42.9	0.0
SUR	Sutherland	119.52	201	PKP	PKiKP	09 33 43.2	0.0
	comp=Z,343nm,0.8s,baz=157,slow=2.7,SNR=11						
SUR				PKKPbc	PKKPbc	09 43 56.6	-0.4
	comp=Z,43nm,0.8s,baz=350,slow=2.1,SNR=11						
SUR	Sutherland	119.52	201	P	PKPdf	09 33 42.9	-0.2
SUR	Sutherland	119.52	201		PKiKP	09 33 43.4	+0.2
JBG	Jabagly	119.56	306	d iPKIKP	PKPdf	09 33 42.4	-0.3
JBG				e		09 35 13.0	
J61A	Chester	119.61	53	PKiKP	PKPdf	09 33 41.9	-0.6
	baz=263						
H60A	Morristown	119.65	51	PKiKP	PKPdf	09 33 41.6	-1.0
	baz=264						
KK31	Karatay Array	119.67	307	i PKIKP	PKPdf	09 33 42.0	-0.7
F59A	Saint Guilaume	119.72	50	PKiKP	PKPdf	09 33 41.7	-0.9
	baz=264						
M63A	Gales Ferry	119.73	55	PKiKP	PKPdf	09 33 41.6	-1.1
	baz=262						
K62A	Royalston	119.75	54	PKiKP	PKPdf	09 33 42.1	-0.7
	baz=263						
D58A	Chemin du LacG	119.78	48	PKiKP	PKPdf	09 33 41.6	-1.1
	baz=265						
IUG	Iuzhnay	119.90	306	⇓iPKP	PKPdf	09 33 43.0	-0.3
IUG				ePP	PP	09 35 14.8	-1.9
IUG				eSKS	SKSac	09 39 54.0	+2.8
IUG	Iuzhnay	119.90	306	d iPKIKP	PKPdf	09 33 43.0	-0.3
IUG				e		09 35 14.7	
IUG				e		09 39 53.9	
I61A	Oroboro, Fairl	119.92	52	PKiKP	PKPdf	09 33 42.5	-0.6
	baz=264						
G60A	Masonville	119.96	51	PKiKP	PKPdf	09 33 42.2	-0.9
	baz=264						
E59A	St. Maurice	119.97	49	PKiKP	PKPdf	09 33 42.0	-1.1
	baz=265						
L63A	North Scituate	120.11	55	PKiKP	PKPdf	09 33 42.7	-0.8
	baz=263						
J62A	Henniker	120.13	53	PKiKP	PKPdf	09 33 43.0	-0.5
	baz=263						
BRLS	Borolday	120.15	307	eSS	SS	09 51 04.6	-0.9
LBNH	Lisbon	120.16	52	PKIKP	PKPdf	09 33 42.8	-0.8
LBNH	Lisbon	120.16	52	PKIKP	PKPdf	09 33 43.0	-0.6
	baz=264						
LBNH	Lisbon	120.16	52		PKPdf	09 33 42.8	-0.8
H61A	Lyndonville	120.19	51	PKiKP	PKPdf	09 33 43.0	-0.7
	baz=264						
HRV	Adam Dziewonsk	120.23	54	PKIKP	PKPdf	09 33 42.8	-0.9
HRV	Adam Dziewonsk	120.23	54	PKIKP	PKPdf	09 33 43.0	-0.8
	baz=263						
HRV	Adam Dziewonsk	120.23	54		PKPdf	09 33 42.8	-0.9
K63A	Dunstable	120.27	54	PKiKP	PKPdf	09 33 43.1	-0.7
	baz=263						
F60A	Warwick	120.31	50	PKiKP	PKPdf	09 33 42.8	-1.0
	baz=265						
M64A	Tiverton	120.37	55	PKiKP	PKPdf	09 33 43.0	-1.0
	baz=263						
D59A	Saint-Raymond	120.48	49	PKiKP	PKPdf	09 33 43.1	-0.9
	baz=266						
I62A	Tamworth	120.55	52	PKiKP	PKPdf	09 33 43.4	-0.9
	baz=264						
BRVK	Borovoye	120.55	318	P	PKPdf	09 33 43.6	-0.4
BRVK	Borovoye	120.55	318	i PKIKP	PKPdf	09 33 43.2	-0.8
BRVK	Borovoye	120.55	318		PKPdf	09 33 43.5	-0.5
G61A	St-Isidore-de-	120.55	51	PKiKP	PKPdf	09 33 43.3	-0.9
	baz=265						
CDVI	St. Croix	120.57	83	eP	PKPdf	09 33 44.1	-1.0
J63A	Strafford	120.67	53	PKiKP	PKPdf	09 33 43.7	-0.8
	baz=264						
L64A	Middleborough	120.69	55	PKiKP	PKPdf	09 33 43.6	-1.0
	baz=263						
E60A	Ste Agathe de	120.70	49	PKiKP	PKPdf	09 33 43.6	-0.9
	baz=266						
H62A	Milan	120.74	51	PKiKP	PKPdf	09 33 44.3	-0.3
	baz=265						
M65A	Busby, Falmout	120.79	55	PKiKP	PKPdf	09 33 44.3	-0.5
	baz=263						
F61A	St Evariste	120.98	50	PKiKP	PKPdf	09 33 44.6	-0.5
	baz=266						
D60A	Saint Jean D'O	121.10	49	PKiKP	PKPdf	09 33 43.9	-1.3
	baz=266						
I63A	Otisfield	121.11	52	PKiKP	PKPdf	09 33 44.9	-0.4
	baz=265						
TRN	Trinidad (W)	121.15	92	eP	PKPdf	09 33 46.1	-0.2
G62A	West of Eustis	121.24	51	PKiKP	PKPdf	09 33 44.8	-0.8
	baz=265						
G62A	West of Eustis	121.24	51		PKPdf	09 33 44.5	-1.1
BOSA	Boshof	121.27	207	i P	PKiKP	09 33 47.4	+0.8
BOSA	Boshof	121.27	207	PKP	PKiKP	09 33 46.6	0.0
	comp=Z,140nm,0.9s,baz=144,slow=2.0,SNR=97						
BOSA				PKKPbc	PKKPbc	09 43 49.2	-1.3
	comp=Z,51nm,0.7s,baz=344,slow=3.5,SNR=16						
BOSA	Boshof	121.27	207	i S	PKiKP	09 33 58.7	+12
BOSA	Boshof	121.27	207	i P	PKiKP	09 33 47.4	+0.8
BOSA	Boshof	121.27	207	i P	PKPdf	09 33 46.4	-0.1
L65A	Cape Cod Natio	121.28	55	PKiKP	PKPdf	09 33 45.3	-0.5
	baz=264						
E61A	Lac Etchemin	121.36	49	PKiKP	PKPdf	09 33 45.4	-0.5
	baz=266						
H63A	New Sharon	121.55	51	PKiKP	PKPdf	09 33 45.6	-0.6
	baz=265						
D61A	St Aubert, Com	121.62	48	PKiKP	PKPdf	09 33 45.3	-0.9
	baz=267						
SJMB	Sao Joao De Ma	121.70	134	eP	PKPdf	09 33 46.8	-0.5
I64A	Boothbay	121.77	52	PKiKP	PKPdf	09 33 46.1	-0.5
	baz=265						
FRB	Frobisher Bay	121.79	29	PKKPbc	PKKPbc	09 43 46.9	-1.3
	comp=Z,29nm,0.7s,baz=116,slow=4.8,SNR=5.7						
G63A	Kingsbury	121.88	51	PKiKP	PKPdf	09 33 46.3	-0.6
	baz=266						
PKME	Peaks-Kenny Pk	122.12	51	PKiKP	PKPdf	09 33 46.7	-0.5
	baz=266						
H64A	Troy	122.13	52	PKiKP	PKPdf	09 33 46.4	-0.9
	baz=266						
TOSP	Speyside	122.19	92	eP	PKiKP	09 33 48.7	+0.2
SKI	Saint Kitts	122.27	84	eP	PKPdf	09 33 48.4	0.0
F63A	Nahmakanta, Br	122.28	50	PKiKP	PKPdf	09 33 47.0	-0.6
	baz=267						
SVV	Soufriere Volc	122.30	90	eP	PKiKP	09 33 48.7	0.0
D62A	Allapoint, All	122.39	49	PKiKP	PKPdf	09 33 46.6	-1.1
	baz=268						
KULLO	Kullorsuaq	122.42	15	⇓iPKIKP	PKPdf	09 33 46.1	-0.9
KULLO				pmax	pmax		
	comp=Z,190nm,0.8s						
KULLO	Kullorsuaq	122.42	15	⇓iP	PKPdf	09 33 46.1	-0.9
	comp=Z,193nm,0.8s						
KULLO				i		09 35 28.6	
G64A	Maxfield	122.50	51	PKiKP	PKPdf	09 33 47.3	-0.7
	baz=267						
MLYT	Lee's Yard	122.57	85	eP	PKPdf	09 33 48.6	-0.4
SLB	Belfond	122.64	89	eP	PKiKP	09 33 49.4	-0.1
NOR	Nord	122.70	3	⇓iPKIKP	PKPdf	09 33 46.5	-0.9
NOR				i		09 35 31.0	
NOR	Nord	122.70	3	⇓iP	PKPdf	09 33 46.5	-0.9
NOR				i		09 35 31.0	
SLBI	Saint Lucia, B	122.77	89	eP	PKPdf	09 33 48.4	-0.9
TDBA	Terre de Bas,	122.79	87	eP	PKiKP	09 33 50.2	+0.5
E63A	Oxbow	122.79	49	PKiKP	PKPdf	09 33 47.5	-1.1
	baz=268						
SLAC	Saint Lucia, A	122.80	89	eP	PKPdf	09 33 48.8	-0.6
F64A	Sherman	122.81	50	PKiKP	PKPdf	09 33 47.8	-0.8
	baz=267						
H65A	Eastbrook	122.82	52	PKiKP	PKPdf	09 33 47.8	-0.9
	baz=267						
BIM	Bigot	122.85	88	eP	PKPdf	09 33 49.6	0.0
FDF	Fort de France	122.86	88	eP	PKPdf	09 33 48.8	-0.8
CBE	Ff, Capester	122.89	86	eP	PKPdf	09 33 49.1	-0.5
D63A	Stockholm	123.03	49	PKiKP	PKPdf	09 33 48.0	-1.0
	baz=268						
ABD	La Joyeuse, An	123.13	86	eP	PKPdf	09 33 43.8	-6.2
E64A	Bridgewater	123.20	49	PKiKP	PKPdf	09 33 48.5	-0.8
	baz=268						
ANWB	Willy Bob	123.24	84	eP	PKPdf	09 33 49.3	-0.9
G65A	Princeton	123.34	51	PKiKP	PKPdf	09 33 48.8	-0.8
	baz=267						
H05N1	Guadeloupe/Mar	123.47	86	PKP	PKPdf	09 33 49.8	-0.9
H66A	Whiting	123.50	51	PKiKP	PKPdf	09 33 49.1	-0.8
	baz=267						
SMTB	Santa Maria do	123.60	120	eP	PKPdf	09 33 51.0	-0.1
SMTB	Santa Maria do	123.60	120	eP	PKPdf	09 33 51.1	0.0
SCHQ	Schefferville	123.67	39	PKP	PKPdf	09 33 49.0	-1.0
	comp=Z,111nm,0.9s,baz=329,slow=1.8,SNR=67						
SCHQ				PKKPbc	PKKPbc	09 43 40.5	-0.4
	comp=Z,5.4nm,0.4s,baz=98,slow=3.6,SNR=4.5						
BBSR	BB Station	124.21	67		PKPdf	09 33 51.1	-0.6
LBTB	Lobatse	124.26	209	i P	PKiKP	09 33 52.6	0.0
LBTB	Lobatse	124.26	209	SKP	SKPdf	09 36 40.2	+2.1
	comp=Z,10.0nm,0.7s,baz=284,slow=3.6,SNR=3.5						
LBTB				PKKPbc	PKKPbc	09 43 38.2	-0.9
	comp=Z,26nm,0.8s,baz=312,slow=4.8,SNR=8.3						
LBTB	Lobatse	124.26	209	i S	PKiKP	09 34 11.1	+19
LBTB	Lobatse	124.26	209	i P	PKiKP	09 33 52.6	0.0
LBTB	Lobatse	124.26	209	i P	PKPdf	09 33 43.0	-9.3
JLN	Jalan Bani Buh	124.94	281	P	PKPdf	09 33 52.9	-0.4
JLN				P	PKiKP	09 33 55.0	+1.2
	SNR=13						
KBS	Kingsbay	125.42	357	PKIKP	PKPdf	09 33 51.6	-1.1
KBS	Kingsbay	125.42	357		PKPdf	09 33 51.6	-1.1
KBS	Kingsbay	125.42	357	ePKPdf	PKPdf	09 33 52.7	0.0
KBS				IVmB_BB		09 33 53.8	
	comp=Z,2µm,1.4s						
KBS				ePP	PP	09 35 49.1	-3.0
KBS				eSS	SS	09 52 12.0	+2.8
WBK	Wadi Bani Khal	125.46	281	P	PKiKP	09 33 55.0	+0.2
	SNR=12						
SVE	Sverdlovsk	125.83	323	c iPKIKP	PKPdf	09 33 53.7	-0.3
SVE				pmax	pmax		

comp=Z,508nm,1.3s
SPA0 Spitsbergen Ar 125.88 356 *e*PKPdf **PKPdf** **09 33 53.3 -0.4**
SPA0 IVmB_BB 09 33 54.5
comp=Z,6μm,1.2s
SPA0 *e*PP **pPKPdf** **09 35 55.7 +0.1**
SPA0 *e*SKPdf **SKPdf** **09 36 37.2 -2.1**
SPITS Spitsbergen Ar 125.88 356 pPKP **pPKPdf** **09 35 56.2 +0.6**
comp=Z,39nm,0.9s,baz=72,slow=11,SNR=2.5
SPITS SKP **SKPdf** **09 36 41.0 +1.7**
comp=Z,14nm,0.5s,baz=92,slow=4.3,SNR=4.3
SPITS Spitsbergen Ar 125.88 356 PKIKP **PKPdf** **09 33 52.9 -0.7**
SPITS pmax pmax
comp=Z,234nm,0.8s
WSAR Wadi Sarin 125.92 282 PKP **PKPdf** **09 33 55.0 -0.2**
comp=Z,186nm,1.1s,baz=207,slow=2.2,SNR=5.7
WSAR Wadi Sarin 125.92 282 P **PKiKP** **09 33 56.4 +0.6**
SNR=42
MHTO MHTO 125.92 279 P **PKPdf** **09 33 55.2 -0.1**
SNR=102
JMDO Jabal Madar 126.17 280 P **PKPdf** **09 33 55.6 -0.2**
JMDO P **PKiKP** **09 33 56.0 -0.3**
SNR=56
SMDO Samad 126.39 281 P **PKiKP** **09 33 57.0 +0.2**
SNR=71
BIDO Bidbid 126.44 282 P **PKiKP** **09 33 57.1 +0.3**
SNR=46
HOPEN Hopen 126.61 353 *e*PKPdf **PKPdf** **09 33 55.0 0.0**
HOPEN *e*PP **PP** **09 35 59.2 -0.6**
HOPEN *e*SP SP 09 45 09.9 -0.8
ILULI Ilulissat 126.63 20⇓ *i*PKIKP **PKPdf** **09 33 54.7 -0.5**
ILULI pmax pmax
comp=Z,200nm,0.7s
ILULI Ilulissat 126.63 20⇓ *i*P **PKPdf** **09 33 54.7 -0.5**
comp=Z,203nm,0.7s
SOCY Socotra 126.72 267 P **PKiKP** **09 33 57.5 -0.2**
SNR=38
MATP Matopo 126.74 215 *i* P **PKPdf** **09 33 54.6 -2.6**
MATP Matopo 126.74 215 SKPbc SKPbc 09 36 22.2
comp=Z,94nm,1.0s,baz=153,slow=5.1,SNR=11
MATP Matopo 126.74 215 *i* S **PKiKP** **09 33 58.4 +0.7**
MATP Matopo 126.74 215 *i* P **PKPdf** **09 33 54.6 -2.6**
MATP Matopo 126.74 215 *i* P PKPdf 09 33 40.5 -17
MDP Montagnes des 126.75 103 PKP **PKPdf** **09 33 57.0 -0.1**
comp=Z,99nm,0.7s,baz=224,slow=3.6,SNR=39
MDP pPKP **PP** **09 36 01.1 -1.3**
comp=Z,34nm,1.0s,baz=220,slow=5.2,SNR=2.9
MDP SKPbc SKPbc 09 36 23.4
comp=Z,69nm,1.2s,baz=254,slow=6.1,SNR=3.7
ARU Arti 127.03 323 *i* PKIKP **PKPdf** **09 33 55.2 -1.1**
ARU 09 36 01.4
ARU 09 40 12.5
ARU Arti 127.03 323 PKPpre
ARU PKPdf **PKPdf** **09 33 55.8 -0.5**
HSPB Hornsund (broa 127.06 355 *e*PKPdf **PKPdf** **09 33 55.6 -0.2**
HSPB IVmB_BB 09 33 56.3
comp=Z,2μm,1.1s
HSPB *e*PP **PP** **09 36 03.0 +0.3**
HSPB *e*SP SP 09 45 15.2 +0.7
HSPB *e*SS **SS** **09 52 30.2 +0.7**
BSY Bisya 127.07 281 P **PKiKP** **09 33 58.0 -0.1**
SNR=68
AB31 Akbulak array 127.16 314 PKIKP **PKPdf** **09 33 56.3 -0.5**
HOQ Hoqain 127.18 282 P **PKiKP** **09 33 59.0 +0.7**
SNR=39
DAG Danmarks Havn 127.19 5⇓ *i*PKIKP **PKPdf** **09 33 54.6 -1.5**
DAG pmax pmax
comp=Z,120nm,0.7s
DAG Danmarks Havn 127.19 5⇓ *i*P **PKPdf** **09 33 54.6 -1.5**
comp=Z,122nm,0.7s
SHAO Shalim 127.19 274 *i* PKPdf **PKPdf** **09 33 57.4 -0.4**
SNR=7.8
SHAO Shalim 127.19 274 P **PKPdf** **09 33 57.8 0.0**
DMTO DMTO 127.71 274 P **PKPdf** **09 33 59.0 +0.2**
SNR=28
ARQ Araqi 127.82 281 P **PKiKP** **09 33 60.0 +0.4**
SNR=53
SFJD Kangerlussuaq 127.88 22 pPKP pPKPdf 09 36 02.1 +2.3
comp=Z,22nm,0.8s,baz=282,slow=7.7,SNR=2.4
SFJD Kangerlussuaq 127.88 22 *i* PKIKP **PKPdf** **09 33 56.4 -1.2**
SFJD Kangerlussuaq 127.88 22 **PKPdf** **09 33 55.5 -2.1**
SFJD Kangerlussuaq 127.88 22 *i* P **PKPdf** **09 33 56.4 -1.2**
SUMG Summit 127.89 13 *i* PKIKP **PKPdf** **09 33 57.5 -0.6**
SUMG *i* 09 36 04.3
SUMG pmax pmax
comp=Z,2μm,1.3s
SUMG Summit 127.89 13 *i* P **PKPdf** **09 33 57.5 -0.6**
comp=Z,2μm,1.3s
SUMG *i* 09 36 04.3
SOHO SOHO 128.00 282 P **PKiKP** **09 33 60.0 +0.2**
SNR=8.6
RBK Rabkut 128.32 273 P **PKiKP** **09 34 01.0 +0.3**
SNR=9.8
MDH Madha 128.46 283 *i* PKPdf **PKPdf** **09 33 59.1 -0.9**
SNR=14
MDH Madha 128.46 283 P **PKiKP** **09 34 01.0 +0.2**
SNR=15
UOSS Minazif 128.47 283 *i* PKPdf **PKPdf** **09 33 59.1 -1.0**
SNR=14
UOSS Minazif 128.47 283 **PKPdf** **09 33 59.1 -1.0**
HATD Hatta, Dubai 128.51 283 *i* PKPdf **PKPdf** **09 33 59.7 -0.5**
SNR=53
HATD Hatta, Dubai 128.51 283 P **PKPdf** **09 34 00.3 +0.1**
SNR=11
ASHO Ashiyiah 128.54 283 *i* PKPdf **PKPdf** **09 33 59.8 -0.5**
SNR=42
ASHO Ashiyiah 128.54 283 P **PKiKP** **09 34 01.1 +0.1**
SNR=41
BANOM Banah 128.59 284 *i* PKPdf **PKPdf** **09 34 00.0 -0.3**
SNR=6.4
MSFE Esma-Masafi 128.60 284 *i* PKPdf **PKPdf** **09 34 00.2 -0.2**
SNR=33
GEYT Alibeck 128.62 300 PKhKP PKPpre 09 33 46.6
comp=Z,9.6nm,0.8s,baz=225,slow=0.6,SNR=14
GEYT PKP **PKiKP** **09 34 00.8 +0.1**
comp=Z,170nm,0.8s,baz=236,slow=1.6,SNR=65
GEYT pPKP pPKPdf 09 36 03.1 +1.3
comp=Z,22nm,1.1s,baz=25,slow=5.1,SNR=2.3
GEYT SKPbc SKPbc 09 36 35.2
comp=Z,71nm,1.0s,baz=208,slow=2.9,SNR=7.1
ALNE Al Ain 128.68 282 *i* PKPdf **PKPdf** **09 34 00.2 -0.3**
SNR=24
SHME Shamm 128.76 284 *i* PKPdf **PKPdf** **09 34 00.3 -0.3**
SNR=9.2
WHFO Wadi Hawf 128.84 274 P **PKiKP** **09 34 02.1 +0.3**
SNR=34
NAZ Nazwa, Dubai 128.96 283 *i* PKPdf **PKPdf** **09 34 00.9 -0.1**
SNR=32
NAZ Nazwa, Dubai 128.96 283 P **PKiKP** **09 34 02.0 +0.3**
SNR=37
FAQ Al Faqa, Dubai 128.97 283 *i* PKPdf **PKPdf** **09 34 00.7 -0.3**
SNR=10
FAQ Al Faqa, Dubai 128.97 283 P **PKiKP** **09 34 03.0 +1.2**
SNR=13
UMQ Umm Al-Quwin 129.07 284 *i* PKPdf **PKPdf** **09 34 01.3 +0.1**
SNR=12
UMQ Umm Al-Quwin 129.07 284 P **PKiKP** **09 34 03.6 +1.6**
SNR=11
BJO1 Bjornoya 129.09 353 *e*PKPdf **PKPdf** **09 33 59.6 -0.2**
BJO1 *e*SS SS 09 52 56.6 +2.3
ABTO Aybut 129.10 273 P **PKiKP** **09 34 02.5 +0.2**
SNR=18
AJN Ajban 129.47 282 *i* PKPdf **PKPdf** **09 34 01.8 -0.2**
SNR=11
AJN Ajban 129.47 282 P **PKiKP** **09 34 03.1 +0.3**
SNR=17
ROSB Rosrio 129.91 117 *e*P **PKPdf** **09 34 03.2 +0.1**
ROSB Rosrio 129.91 117 *e*P **PKPdf** **09 34 03.3 +0.2**
MZR Muzera 130.46 280 P **PKiKP** **09 34 06.0 +1.1**
SNR=22
LSZ Lusaka 131.11 219 SKPbc **SKPab** **09 36 43.5 +1.2**
comp=Z,961nm,1.4s,baz=149,slow=4.0,SNR=29
LSZ Lusaka 131.11 219 PKHKP PKPpre 09 33 55.6
LSZ 09 34 06.7
LSZ Lusaka 131.11 219 PKPpre PKPpre 09 33 55.6
LSZ PKPdf **PKiKP** **09 34 06.7 +0.2**
KIRV Kirov 131.16 328 SKPbc **SKPab** **09 36 41.8 +0.9**
comp=Z,161nm,0.6s,baz=54,slow=1.0,SNR=14
PRGR Permogore 131.61 332 *e*PKIKP **PKPdf** **09 34 03.0 -1.8**
PRGR *e* 09 36 40.9
PRGR pmax pmax
comp=Z,212nm,1.2s
LVZ Lovozero 131.68 343 PKHKP PKPpre 09 33 54.4
LVZ 09 34 03.9
LVZ Lovozero 131.68 343 PKPpre 09 33 54.4
LVZ PKPdf **PKPdf** **09 34 03.9 -1.0**
HAMF Hammerfest 131.90 349 *e*PKPdf **PKPdf** **09 34 04.8 -0.4**
HAMF IVmB_BB 09 34 05.8
comp=Z,2μm,1.0s
HAMF *e*PP **PP** **09 36 33.7 -0.2**
HAMF *e*SKSac **SKSac** **09 40 21.2 -5.0**
HAMF *e*SS **SS** **09 53 30.1 +1.8**
ITZ Itezhi-Tezhi 131.92 216 *e*P **PKPdf** **09 34 07.4 +0.4**
ITZ *e*S **SKPbc** **09 36 44.0 -0.3**
KEV Kevo 132.04 347 PKIKP **PKPdf** **09 34 04.3 -1.1**
KEV Kevo 132.04 347 PKPpre 09 33 54.9
KEV PKPdf **PKPdf** **09 34 04.3 -1.1**
APA Apatity 132.24 343⇓ *i*PKIKP **PKPdf** **09 34 02.7 -3.2**
APA *i* 09 36 44.3
APA *i* 09 40 24.0
APA pmax pmax
comp=Z,98nm,0.9s
ARCES ARCESS Array B 132.52 348 PKhKP PKPpre 09 33 51.7
comp=Z,4.0nm,0.6s,baz=20,slow=2.4,SNR=16
ARCES PKP **PKPdf** **09 34 06.7 +0.3**
comp=Z,145nm,0.6s,baz=27,slow=1.0,SNR=41
ARCES SKPbc **SKPab** **09 36 46.5 0.0**
comp=Z,423nm,1.1s,baz=22,slow=3.9,SNR=20
ARCES PKPPKP PKPPKPdf 09 52 17.8
comp=Z,2.7nm,0.7s,baz=209,slow=2.4,SNR=6.4
ARCES P4KPbc 10 06 05.2
comp=Z,1.6nm,0.8s,baz=27,slow=2.2,SNR=2.0
ARE0 ARCESS Array S 132.52 348 *e*PKPdf **PKPdf** **09 34 06.2 -0.2**
ARE0 *e*PP **PP** **09 36 35.1 -2.7**
ARE0 *e*PS **PS** **09 46 55.4 -7.1**
ARE0 *e*SS SS 09 53 37.7 +1.9
SCO Scoresbysund 132.63 9⇓ *i*PKIKP **PKPdf** **09 34 06.3 -0.2**
SCO Scoresbysund 132.63 9⇓ *i*P **PKPdf** **09 34 06.3 -0.2**
TSUM Tsumeb 132.74 204 PKPpre 09 33 56.8
TSUM PKPdf **PKiKP** **09 34 09.3 -0.5**
NBMO Morrinhos-CE 132.91 121 *e*P **PKPdf** **09 34 08.7 -0.1**
TMCR Tamitsa 133.13 338 *e*PKIKP **PKPdf** **09 34 05.4 -2.2**
TMCR pmax pmax
comp=Z,258nm,1.5s
KTK1 Kautokeino 133.39 348 *e* PKPdf 09 33 59.7 -8.3
KTK1 *e*PKPdf **PKiKP** **09 34 08.0 -1.4**
KTK1 *e*PP **PP** **09 36 41.5 -1.9**
KTK1 *e*SS SS 09 53 48.0 +1.9
JMIC Jan Mayen 133.52 3 PP PP 09 36 43.6 -0.4
comp=Z,36nm,1.0s,baz=25,slow=2.9,SNR=4.9
JMIC SKPbc **SKPbc** **09 36 48.5 +0.7**
comp=Z,47nm,1.1s,baz=130,slow=4.4,SNR=3.3
JMIC Jan Mayen 133.52 3 *e*PKPdf **PKPdf** **09 34 08.4 +0.2**
JMIC *e*pPKPdf **pPKPdf** **09 36 12.7 +2.4**
JMIC *e*PP **PP** **09 36 41.0 -3.0**
JMIC *e*SKSac **SKSac** **09 40 29.3 -1.1**
JMIC *e*SS **SS** **09 53 49.9 +2.4**
TRO Tromso 133.56 351 *e*PKPdf **PKPdf** **09 34 08.0 -0.3**
TRO IVmBBB 09 34 08.5
comp=Z,2μm,1.4s
TRO *e*PP **PP** **09 36 43.0 -1.3**
TRO *e*SKSac **SKSac** **09 40 28.8 -1.8**
TRO *e*SS **SS** **09 53 49.7 +1.6**
RCBR Riachuelo 134.40 127 PKhKP PKPpre 09 33 57.6
comp=Z,16nm,0.8s,baz=247,slow=4.7,SNR=11
RCBR PKP **PKPdf** **09 34 11.5 -0.1**
comp=Z,68nm,0.8s,baz=155,slow=1.9,SNR=12
RCBR SKPbc **SKPbc** **09 36 51.3 -1.2**
comp=Z,95nm,0.8s,baz=244,slow=4.8,SNR=21
KLMR Klimovskoe 134.54 334 09 40 35.0
KLMR SS SS 09 53 56.5 -3.9
KLMR pmax pmax
comp=Z,378nm,1.1s
KLMR Klimovskoe 134.54 334 *e*PKPdf PKPdf 09 33 57.6 -13
KLMR AMP 09 34 11.8
comp=Z,378nm,1.1s
KLMR PP pPKPdf 09 36 21.3 +9.0
KLMR *e*PKS **PKSbc** **09 37 40.6 -1.9**
KLMR *e*PKS **PKSbc** **09 37 40.6 -1.9**
KLMR SKS **SKSdf** **09 40 35.0 +3.5**
KLMR SKS **SKSdf** **09 40 35.0 +3.5**
KLMR SS **SS** **09 53 56.6 -3.8**
KLMR SS **SS** **09 53 56.6 -3.8**
KMBO Kilima Mbogo 134.93 241 PKhKP PKPpre 09 34 02.9
comp=Z,14nm,0.8s,baz=58,slow=3.2,SNR=11
KMBO SKPbc **PKiKP** **09 34 14.0 -0.5**
comp=Z,120nm,0.9s,baz=45,slow=2.7,SNR=28
KMBO SKPbc **SKPab** **09 36 58.0 -1.2**
comp=Z,393nm,1.0s,baz=79,slow=2.5,SNR=46
KMBO Kilima Mbogo 134.93 241⇑ *e*P PKPdf 09 34 00.7 -12
KMBO *e*S **SKPdf** **09 36 56.4 -2.0**
KMBO Kilima Mbogo 134.93 241 *i* PKiKP **PKiKP** **09 34 14.1 -0.4**
SNR=5.9
KMBO Kilima Mbogo 134.93 241 PKIKP **PKiKP** **09 34 14.0 -0.5**
KMBO Kilima Mbogo 134.93 241 *e*S **SKPdf** **09 36 56.4 -2.0**
KMBO Kilima Mbogo 134.93 241 PKPpre 09 34 00.6
KMBO PKPdf **PKiKP** **09 34 13.7 -0.8**
KMBO Kilima Mbogo 134.93 241⇑ *e*P PKPdf 09 34 00.7 -12
STEI Steigen 135.66 351 *e* **PKPdf** **09 34 04.7 -7.5**
STEI *e*PKPdf **PKiKP** **09 34 12.2 -1.8**
STEI *e*SKPdf **SKPbc** **09 36 54.7 +0.1**
STEI *e*SKSac **SKSdf** **09 40 33.8 +0.7**
STEI *e*SS **SS** **09 54 16.4 +3.4**
LOF Lofoten 135.69 352 *e* **PKPdf** **09 34 06.7 -5.6**
LOF *e*PKPdf **PKiKP** **09 34 11.9 -2.1**
LOF IVmB_BB 09 34 14.1
comp=Z,3μm,3.2s
LOF *e*pPKPdf **pPKPdf** **09 36 19.6 +5.2**
LOF *e*SKPdf **SKPbc** **09 36 54.2 -0.5**
LOF *e*PKSdf **PKSdf** **09 37 47.7 -0.4**
LOF *e*SS **SS** **09 54 14.6 +1.3**
DAMY Dhamar 136.28 265 P **PKiKP** **09 34 18.1 +0.9**
SNR=100
MAK Makhachkala 136.48 307 *e*P **Pdif** **09 31 21.0 -2.2**
MAK *i* 09 34 16.0
MAK *e* 09 37 01.9
MAK *e*PPP PPP 09 40 11.9
MAK *e* 09 40 37.0
MAK pmax pmax
comp=Z,615nm,1.0s
AKT Akhty 136.52 305 *e*PKHKP PKPpre 09 34 00.2
AKT *e* 09 34 12.6
AKT *e* 09 37 03.4
AKT pmax pmax
comp=Z,322nm,1.0s
ATD Arta Tunnel 136.54 260 PP PP 09 37 03.3 -1.4
comp=Z,210nm,1.0s,baz=314,slow=0.6,SNR=19
ATD Arta Tunnel 136.54 260⇓ *e*P PKPdf 09 34 02.4 -13
ATD Arta Tunnel 136.54 260 P **PKiKP** **09 34 17.1 -0.3**
SNR=75
ATD Arta Tunnel 136.54 260 *e*S pPKiKP 09 36 30.7 +12
ATD Arta Tunnel 136.54 260⇓ *e*P PKPdf 09 34 02.4 -13
KONS Konsvik 137.30 352 *e*PKPdf **PKPdf** **09 34 09.1 -6.3**
KONS *e*SKPdf **SKPdf** **09 37 01.3 +0.8**
MOR8 Moi Rana 137.42 351 *e* PKPdf 09 34 07.3 -8.3
MOR8 *e*PKPdf sPdif 09 34 14.8 +0.6
MOR8 *e*SKPdf **SKPbc** **09 36 58.2 -1.7**
MOR8 *e*SKSac **SKSdf** **09 40 36.2 -0.1**
MOR8 *e*SS **SS** **09 54 34.9 +1.1**
STOK Stokkvaagen 137.47 352 *e* PKPdf 09 34 07.3 -8.3
STOK *e*PKPdf sPdif 09 34 14.1 -0.2
GROC Groznyy 137.68 308 *e*PKHKP PKPpre 09 34 06.2
GROC *e* 09 34 14.6
GROC *e* 09 37 09.8
GROC *e* 09 37 12.2
GROC pmax pmax
comp=Z,801nm,1.2s
RAYN Ar Rayn 137.74 278 PKHKP PKPpre 09 34 07.8
RAYN Ar Rayn 137.74 278 PKPpre 09 34 07.8
BORG Borgarnes 137.86 13 PKhKP PKPpre 09 34 09.6
comp=Z,29nm,0.8s,baz=180,slow=2.0,SNR=2.3
BORG PP sPKPdf 09 37 02.8 -6.3
comp=Z,75nm,1.1s,baz=358,slow=5.2,SNR=3.8
BORG Borgarnes 137.86 13 PKIKP **PKPdf** **09 34 12.3 -4.1**
BORG Borgarnes 137.86 13 **PKPdf** **09 34 12.3 -4.1**
VRH Novokhopyorsk 138.07 320 *e*PKHKP PKPpre 09 34 06.6
VRH pmax pmax
comp=Z,350nm,0.9s
MOS Moscow 138.17 328 *i* PKHKP PKPpre 09 34 07.9
MOS pmax pmax
comp=Z,384nm,1.2s
ANKE Ethiopia-Afar 138.49 256 *e*P **PKPdf** **09 34 15.7 -3.9**
ANKE *e*S **SKiKP** **09 37 08.7 +0.4**
TBLG Delisi 138.70 306 *e*P PKPdf 09 34 09.9 -8.8
PUL Pulkovo 138.77 337⇑ *e*PKIKP **PKPdf** **09 34 18.1 -0.1**
FINES FINESS Array B 138.95 341 PKhKP PKPpre 09 34 08.2
comp=Z,29nm,0.3s,baz=64,slow=4.4,SNR=74
FINES PP sPKPdf 09 37 05.0 -5.9
comp=Z,112nm,0.7s,baz=57,slow=5.2,SNR=11
OBN Obninsk 139.01 328⇑ P **PKPdf** **09 34 11.1 -7.7**
OBN Obninsk 139.01 328⇑ *i*PKIKP **PKPdf** **09 34 17.6 -1.2**
OBN *e* 09 37 15.5
OBN *e*PPP PPP 09 40 35.6
OBN pmax pmax
comp=Z,506nm,1.1s
OBN Obninsk 139.01 328 PKPpre 09 34 09.8
LPSR Galich'ya Gora 139.05 323 *e*PKHKP PKPpre 09 34 09.8
LPSR pmax pmax
comp=Z,560nm,1.1s
AAE Adis Abeba 139.09 255 *e*S **SKPdf** **09 36 59.4 -6.5**
AAE Adis Abeba 139.09 255 *e*S **SKPdf** **09 36 59.4 -6.5**
AAE Adis Abeba 139.09 255⇓ *e*P **PKPdf** **09 34 13.3 -7.3**
AAE Adis Abeba 139.09 255⇓ *e*P **PKPdf** **09 34 13.3 -7.3**
FURI Furi 139.10 254⇑ *e*P PKPdf 09 34 08.8 -12
FURI *e*S **SKPdf** **09 37 00.3 -5.6**
FURI Furi 139.10 254 *e*S **SKPdf** **09 37 00.3 -5.6**
FURI Furi 139.10 254⇑ *e*P PKPdf 09 34 08.8 -12
ZEI Tsey 139.12 307 *i* PKHKP PKPpre 09 34 10.0
ZEI pmax pmax
comp=Z,292nm,1.1s
NCK Nalchik 139.19 309 *d i*PKIKP **PKPdf** **09 34 20.0 +0.4**
GOF Gofitskoye 139.21 311⇑ *e*PKHKP PKPpre 09 34 12.2
GOF pmax pmax
comp=Z,478nm,1.3s
DESE Dese 139.24 258 *e*P **PKPdf** **09 34 16.2 -4.7**
DESE *e*S **SKPab** **09 37 22.1 +3.8**
VORR Voronezh 139.31 322 *e*PKIKP **PKPdf** **09 34 18.0 -1.5**
VORR pmax pmax
comp=Z,2μm,2.0s
NSS Namsos 139.32 351 *e* **PKPdf** **09 34 12.4 -6.7**
NSS *e*PKPdf **PKiKP** **09 34 19.9 -1.6**
NSS *e*SKPdf **SKPbc** **09 37 06.3 +1.2**
ONI Oni 139.49 307 *e*P PKPdf 09 34 10.5 -10
VSR Storozhevoye 139.53 321 *e*PKHKP PKPpre 09 34 13.2
VSR pmax pmax
comp=Z,350nm,1.4s
VORD Divnogorie 139.57 321 *e*PKHKP PKPpre 09 34 12.2
VORD pmax pmax
comp=Z,370nm,1.2s
BGD Bogdanovka 139.63 305 *e*P PKPdf 09 34 09.4 -11
KBZ Khabaz 139.64 309 PKhKP PKPpre 09 34 13.9
comp=Z,62nm,1.0s,baz=153,slow=3.3,SNR=41
KBZ SKPbc **SKiKP** **09 37 09.8 +0.6**
comp=Z,31nm,1.0s,baz=135,slow=2.9,SNR=2.2
KBZ PP **PP** **09 37 22.5 -0.3**
comp=Z,52nm,1.0s,baz=109,slow=6.8,SNR=3.6
AKH Akhalkalaki 139.68 306 ⇓P **PKPdf** **09 34 13.9 -6.8**
AKH Akhalkalaki 139.68 306 *e*P PKPdf 09 34 12.8 -7.9
KVAR Kislovodsk Arr 139.72 310 PKP **PKPdf** **09 34 18.8 -1.9**
comp=Z,71nm,1.1s,baz=269,slow=22,SNR=2.8
KIV Kislovodsk 139.73 310⇑P **PKPdf** **09 34 13.5 -7.2**
KIV Kislovodsk 139.73 310 *e*P PKPdf 09 34 09.4 -11
KIV Kislovodsk 139.73 310 *i* PKIKP **PKPdf** **09 34 18.5 -2.1**
KIV *e**PP **pPKPdf** **09 36 19.0 -3.6**
KIV *e* 09 37 18.9
KIV *e*PPP PPP 09 40 28.8
KIV *e*SS SS 09 54 55.5 -7.3
KIV *e*SSS SSS 10 00 20.6
KIV pmax pmax
comp=Z,973nm,1.1s
KIV Kislovodsk 139.73 310 PKPpre 09 34 13.7
KIV PKPdf **PKPdf** **09 34 20.5 -0.1**
NEY Neytrino 139.87 308 *e i*PKIKP **PKPdf** **09 34 17.8 -3.2**
CUKT Cukurca 140.15 299 *e*P **PKPdf** **09 34 13.9 -7.8**
VANB Van 140.18 301 *e*P PKPdf 09 34 13.2 -8.4
MBAR Mbarara 140.29 235 PKHKP PKPpre 09 34 16.3
MBAR Mbarara 140.29 235 PKPpre 09 34 16.3
AGRB Hanur-Agry 140.35 303 *e*P **PKPdf** **09 34 14.3 -7.7**
AKDM Akdamar-Van 140.53 301 *e*P **PKPdf** **09 34 14.6 -7.8**
SENK Senkaya-Erzuru 140.68 304 *e*P **PKPdf** **09 34 15.2 -7.4**
MLAZ Malazgirt-MUS 140.76 302 *e*P **PKPdf** **09 34 16.1 -6.6**
TBLU Trondheim 140.77 352 *e*PKPdf **PKPdf** **09 34 16.1 -5.7**
TBLU *e*PKSdf **PKSdf** **09 37 57.2 0.0**
TBLU *e*SS SS 09 55 12.5 -0.1
BATM Batumi 140.97 306⇑P **PKPdf** **09 34 18.3 -4.5**
BATM Batumi 140.97 306 *e*P **PKPdf** **09 34 15.9 -6.9**
BATM Batumi 140.97 306⇑PKHKP **PKPdf** **09 34 18.3 -4.5**
VSU Vasula 141.00 337 *e*P **PKPdf** **09 34 15.6 -6.7**
VSU Vasula 141.00 337 *d i*PKIKP **PKPdf** **09 34 21.1 -1.2**
SIRT Sirnak 141.05 300 *e*P **PKPdf** **09 34 16.3 -6.9**
BCA Borcka 141.05 306⇑P **PKPdf** **09 34 17.6 -5.4**
KOPR Koprukoy-ERZUR 141.15 304 *e*P **PKPdf** **09 34 17.0 -6.4**
VRTB Varto-Mus 141.59 302 *e*P **PKPdf** **09 34 19.4 -4.8**
MOL Molde 141.75 354 *e*PKPdf **PKPdf** **09 34 20.2 -3.3**
MOL *e*SS SS 09 55 25.6 +2.0
CHOM Cayeli-Rize 141.76 306 *e*P **PKPdf** **09 34 19.0 -5.3**
KARO Karliova-Bingo 141.88 303 *e*P **PKPdf** **09 34 20.9 -3.9**
SOC Sochi 141.91 310 *d i*PKHKP **PKPdf** **09 34 19.1 -5.3**
SOC *i* 09 34 26.9
SOC *e*PPP PPP 09 40 49.0
SOC *e*SSS SSS 10 00 54.7
SOC pmax pmax
comp=Z,202nm,0.8s
SOC pmax pmax
comp=Z,156nm,0.8s
SVAN Silvan-Diyarba 141.94 301 *e*P **PKPdf** **09 34 20.2 -4.5**
DOMB Dombas 142.09 352 *e*PKPdf **PKPdf** **09 34 19.6 -4.6**
DOMB *e*SS SS 09 55 27.4 -0.4
AKN Aaknes 142.18 354 *e*PKPdf **PKPdf** **09 34 20.9 -3.5**
BNGB Bingl 142.22 302 *e*P **PKPdf** **09 34 20.9 -4.4**
YEDI Yedisu-Bingol 142.24 303 *e*P **PKPdf** **09 34 21.7 -3.7**
BAYT Aydıntepe-Bayb 142.37 305 *e*P **PKPdf** **09 34 22.1 -3.5**
KTUT Trabzon 142.52 306⇑P **PKPdf** **09 34 23.1 -2.5**
KTUT Trabzon 142.52 306 *e*P **PKPdf** **09 34 21.2 -4.4**
MAZI Mazidag 142.63 300 *e*P **PKPdf** **09 34 21.9 -4.2**
NB2 NORSAR Subarra 142.76 350 PKP **PKPdf** **09 34 22.1 -3.3**
comp=Z,885nm,1.2s,baz=16,slow=3.2
NB2 NORSAR Subarra 142.76 350 PKP **PKPdf** **09 34 22.1 -3.3**
baz=16,slow=3.2
NOA NORSAR Array B 142.76 350 PKhKP **PKPdf** **09 34 21.8 -3.6**
comp=Z,415nm,0.8s,baz=16,slow=5.0,SNR=1266
NOA SKPbc **SKiKP** **09 37 15.1 -0.1**
comp=Z,76nm,0.9s,baz=15,slow=4.2,SNR=6.5
DYBB Diyarbakir 142.80 301 *e*P **PKPdf** **09 34 23.3 -3.0**
FOO Floro 142.92 355 *e*PKPdf **PKPdf** **09 34 22.9 -2.7**
FOO IVmB_BB 09 34 23.9
comp=Z,10μm,1.7s
FOO *e*pPKPdf **pPKPdf** **09 36 32.4 +4.7**
FOO *e*SKSac **SKSac** **09 40 49.5 -3.0**
FOO *e*SS **SS** **09 55 39.0 +1.9**
NC602 NORSAR Array S 143.00 350 *e*PKPdf **PKPdf** **09 34 22.9 -2.9**
NC602 *e*SS SS 09 55 40.6 +2.5
NORES NORESS Array B 143.00 350 PKIKP **PKPdf** **09 34 26.3 +0.5**
NORES pmax pmax
comp=Z,158nm,0.4s
ANN Anapa 143.09 313 *d i*PKIKP PKPab 09 34 24.1 +0.1
ANN *e* 09 37 40.6
ANN *e*SS SS 09 55 36.9 -4.1
ANN pmax pmax
comp=Z,3μm,1.2s
SLIT Slitere, Latvi 143.15 339 *e*P PKPab 09 34 23.4 -0.4
IZAR Zarasai 143.17 334 *e*P PKPbc 09 34 24.8 +0.3
HFS Hagfors 143.18 348 PKhKP PKPpre 09 34 23.3
comp=Z,851nm,0.5s,baz=66,slow=3.6,SNR=2508
HFS SKPbc **SKiKP** **09 37 16.4 +0.4**
comp=Z,156nm,1.0s,baz=101,slow=1.5,SNR=5.4
PTK Pertek 143.22 302 *e*P PKPab 09 34 24.6 -0.4
HYA Hoyanger 143.26 354 *e*PKPab PKPab 09 34 24.1 -0.1
ESPY Espiye-Giresun 143.30 306 *e*P PKPab 09 34 23.1 -1.9
ISAL Salakas 143.35 334 *e*P PKPbc 09 34 25.5 +0.5
MICGM Minsk 143.38 332⇓ *i*PKP PKPbc 09 34 25.0 -0.1
MICGM PKPM 09 34 26.0
comp=Z,30nm,2.0s
MICGM PKPM 09 34 27.0
comp=Z,9.4nm,1.2s
MICGM PKPM 09 34 27.0
comp=N,6.7nm,1.0s
MICGM PKPM 09 34 28.0
comp=E,6.1nm,1.6s
MICGM *e*pPKP pPKPdf 09 36 08.0 -21
MICGM *e*SKP 09 37 19.0
MICGM *e*PP sPKPdf 09 37 30.0 +11
MICGM *e*PKS **PP** **09 37 38.0 -6.5**
MICGM *e*SKS **SKSdf** **09 40 38.0 -8.3**
MICGM *e*PPP PPP 09 41 00.0
MICGM *e*SS **SS** **09 55 40.0 -3.0**
MNK Minsk 143.38 332⇓ *i*PKIKP PKPbc 09 34 25.0 -0.1
MNK *e* 09 37 19.0
MNK *e* 09 40 38.0
MNK *e* 09 41 00.0
MNK *e* 09 55 40.0
MNK pmax pmax

Code	Station	Dist	Az	Phase	ID	Time	Res
	comp=Z,31µm,2.0s						
MNK				pmax	pmax		
	comp=Z,9µm,1.2s						
MNK				pmax	pmax		
	comp=N,7µm,1.0s						
MNK				pmax	pmax		
	comp=E,6µm,1.6s						
SVRC	Sivrice-ELAZID	143.38	302	eP	PKPbc	09 34 26.2	+0.3
IIGN	Ignalina	143.47	334	eP	PKPbc	09 34 25.8	+0.4
SUE	Sulen	143.48	355	ePKPab	PKPab	09 34 25.0	+0.1
SUE				IVmB_BB		09 34 26.1	
	comp=Z,19µm,1.3s						
SUE				eSS	SS	09 55 45.8	+2.4
SKAR	Skarslia	143.51	352	ePKPdf	PKPbc	09 34 25.3	-0.1
SKAR				epPKPdf	pPKPdf	09 36 32.1	+3.2
SKAR				eSS	SS	09 55 45.9	+2.0
NACGM	Naroch	143.56	333	ePKP	PKPab	09 34 25.0	-0.5
NACGM				ePKP	PKPab	09 34 25.0	-0.5
NACGM				epPKP	pPKPdf	09 36 28.0	-1.0
NACGM				ePP	sPKPdf	09 37 18.0	-1.4
NACGM				esPKP		09 38 06.0	
NACGM				eSKS	SKSdf	09 40 14.0	-33
NACGM				eSS	SS	09 55 42.0	-3.1
NACGM				eSSS	SSS	10 00 14.0	
OSL	Oslo	143.89	350	ePKPdf	PKPab	09 34 26.9	+0.4
URFA	Urfa	143.91	300	eP	PKPdf	09 34 28.2	-0.1
H10S2	ASCENSION HYDR	143.95	157	PKP	PKPab	09 34 27.8	+0.1
H10S3	ASCENSION HYDR	143.95	157	PKP	PKPab	09 34 27.9	+0.1
ARPR	Arapgir-MALATY	143.99	303	eP	PKPdf	09 34 29.0	+0.6
ASK	Askoy	144.02	355	ePKPdf	PKPbc	09 34 26.8	-0.1
ASK				ePKPdf	PKPab	09 34 26.9	-0.1
ASK				epPKPdf	pPKPdf	09 36 33.3	+3.6
MALT	Malatya	144.07	302	eP	PKPdf	09 34 28.9	+0.4
BER	Bergen	144.10	355	ePKPdf	PKPbc	09 34 27.0	-0.2
BER				epPKPdf	pPKPdf	09 36 32.0	+2.1
BER				eSS	SS	09 55 52.5	+2.1
YEL1	Yell	144.20	0	eP	PKPbc	09 34 26.4	-1.1
PABE	Paberze	144.23	336	eP	PKPab	09 34 28.0	0.0
KONO	Kongsberg	144.33	351	PKIKP	PKPbc	09 34 27.4	-0.5
KONO	Kongsberg	144.33	351		PKPbc	09 34 27.4	-0.5
KONO	Kongsberg	144.33	351	ePKPab	PKPbc	09 34 27.6	-0.3
KONO				IVmB_BB		09 34 28.8	
	comp=Z,22µm,1.7s						
KONO				epPKPdf	pPKPdf	09 36 30.8	+0.4
KONO				ePP	PP	09 37 49.1	-0.7
KONO				eSS	SS	09 55 56.1	+3.0
ODD1	Odda	144.45	353	ePKPab	PKPab	09 34 28.7	-0.1
ODD1				IVmB_BB		09 34 30.1	
	comp=Z,18µm,2.1s						
RSDY	Resadiye-TOKAT	144.46	306	eP	PKPab	09 34 29.5	0.0
PBUR	Paburge	144.55	338	eP	PKPbc	09 34 28.6	0.0
LRW	Lerwick	144.62	0	eP	PKPdf	09 34 26.4	-2.2
DARE	Darende-Malaty	144.75	302	eP	PKPab	09 34 30.4	-0.3
SVSK	Karacayir	144.82	305	eP	PKPbc	09 34 30.1	+0.1
BLS5	Blasjo	144.94	353	ePKPab	PKPbc	09 34 29.6	-0.2
BLS5				IVmB_BB		09 34 32.1	
	comp=Z,15µm,2.0s						
BLS5				epPKPdf	pPKPdf	09 36 30.8	-0.7
BLS5				eSS	SS	09 56 01.0	+0.9
ASCN	Ascension	145.00	156		PKPab	09 34 32.2	+0.2
H10N3	ASCENSION HYDR	145.03	156	PKPbc	PKPab	09 34 33.0	+1.2
	baz=249,slow=1.2,SNR=9.0						
H10N1	ASCENSION HYDR	145.04	156	PKPbc	PKPab	09 34 33.0	+1.1
	baz=249,slow=1.2,SNR=21						
H10N2	ASCENSION HYDR	145.05	156	PKPbc	PKiKP	09 34 33.2	-1.3
	baz=249,slow=1.2,SNR=8.9						
TOKT	Tokat	145.06	306	eP	PKPdf	09 34 29.7	-0.4
AKASG	Malin Array Be	145.18	326	PKPbc	PKPdf	09 34 30.0	+0.2
	comp=Z,1µm,1.0s,baz=45,slow=4.1,SNR=882						
AKASG				pPKPbc	pPKPdf	09 36 32.9	+1.0
	comp=Z,36nm,0.8s,baz=44,slow=3.9,SNR=1.6						
AKASG				SKPbc	SKiKP	09 37 21.4	+1.0
	comp=Z,16nm,0.7s,baz=45,slow=2.8,SNR=4.1						
AKASG				SKKPbc	SKKPab	09 45 19.4	-0.4
	comp=Z,22nm,0.7s,baz=245,slow=4.8,SNR=4.7						
KVT	Kavak	145.22	307	eP	PKPdf	09 34 30.4	+0.1
GAZ	Gaziantep	145.22	300	eP	PKPdf	09 34 29.7	-0.8
SIM	Simferopol'	145.23	314d	iPKIKP	PKPdf	09 34 29.8	-0.3
SIM				pmax	pmax		
	comp=Z,2µm,0.9s						
SIM				pmax	pmax		
	comp=Z,440nm,9.8s						
KMY	Karmoy	145.27	354	ePKPbc	PKPbc	09 34 30.6	-0.2
KMY				epPKPdf	pPKPdf	09 36 35.6	+3.6
KMRS	Kahramanmaras	145.41	301	eP	PKPdf	09 34 31.1	+0.3
SARI	SarD1z-Kayseri	145.60	302	eP	PKPdf	09 34 31.4	+0.2
DIKM	Dikmen	145.62	308	⇑P	PKPdf	09 34 31.4	+0.5
DIKM	Dikmen	145.62	308	eP	PKPdf	09 34 31.1	+0.2
SUW	Suwalki	145.65	335	ePKP	PKPdf	09 34 31.0	+0.4
HOMB	Homborsund	145.82	351	ePKPdf	PKPdf	09 34 30.5	-0.2
HOMB				epPKPdf	pPKPbc	09 36 32.4	+0.1
SNART	Snartemo	145.92	352	ePKPbc	PKPbc	09 34 32.4	-0.2
BNN	Bunyan	145.94	303	eP	PKPdf	09 34 31.9	+0.2
YOZ	Yozgat	146.14	305	eP	PKPdf	09 34 31.1	-1.0
TAHT	Tahtakopru-Hat	146.17	299	eP	PKPdf	09 34 32.2	+0.2
KLNR	Kaliningrad	146.28	338d	iPKIKP	PKPdf	09 34 31.7	+0.1
CEYT	Ceyhan	146.40	300	eP	PKPdf	09 34 32.5	+0.1
BZK	Bozkurt	146.41	309	⇑P	PKPdf	09 34 33.3	+1.1
BZK	Bozkurt	146.41	309	eP	PKPdf	09 34 32.2	0.0
MLA1	Latheron	146.41	2	⇑eP	PKPdf	09 34 31.2	-0.5
YURE	YUREGIR	146.53	300	eP	PKPdf	09 34 32.9	+0.2
KRTS	Karatas	146.78	299	eP	PKPdf	09 34 32.8	-0.2
RCY	Rachaya	146.83	294	eP	PKPdf	09 34 33.5	+0.1
CMRD	Camardi-Nigde	146.86	302	eP	PKPdf	09 34 33.7	+0.4
KARA	Karaisali	146.90	301	eP	PKPdf	09 34 32.9	-0.3
GOET	G??ttrup	146.90	350	i P	PKPdf	09 34 33.7	+1.2
	comp=Z,3µm,1.1s						
SHBL	Chebaa	146.92	294	eP	PKPdf	09 34 34.0	+0.5
BHL	Bhannes	146.94	295	eP	PKPdf	09 34 33.6	+0.1
DQRL	Deir Qamar	147.03	294	eP	PKPdf	09 34 34.7	+1.1
KAC	Achnashellach	147.11	4	eP	PKPdf	09 34 32.8	-0.1
CANT	Cankiri	147.12	307	eP	PKPdf	09 34 33.1	-0.5
MCD	Coleburn Disti	147.14	2	eP	PKPdf	09 34 32.3	-0.7
SORM	Soroca	147.15	323	⇑P	PKPdf	09 34 32.8	-0.4
SORM	Soroca	147.15	323	⇑PKIKP	PKPdf	09 34 32.8	-0.4
MMAI	Mount Meron Ar	147.23	293	PKPbc	PKiKP	09 34 38.9	0.0
	comp=Z,2µm,0.9s,baz=48,slow=2.5,SNR=203						
MMAI				pPKPbc	pPKPab	09 36 38.8	+1.2
	comp=Z,100nm,0.9s,baz=166,slow=0.3,SNR=4.1						
KPL	Plockton	147.25	5	eP	PKPdf	09 34 32.8	-0.3
MMLI	Mount Malkishu	147.26	292	eP	PKPdf	09 34 34.6	+0.6
KURC	Kurucasile-Bar	147.33	310	eP	PKPdf	09 34 32.8	-1.0
BR131	Keskin Array S	147.37	306	P	PKPdf	09 34 33.6	-0.6
	SNR=553						
BRTR	Keskin Array B	147.37	306	PKPbc	PKPbc	09 34 37.2	-0.2
	comp=Z,395nm,1.0s,baz=126,slow=1.7,SNR=144						
BRTR				pPKPbc	pPKPab	09 36 38.1	+0.1
	comp=Z,36nm,0.9s,baz=119,slow=1.8,SNR=2.1						
BRTR	Keskin Array B	147.37	306	eP	PKPdf	09 34 33.5	-0.6
MERS	Mersin	147.39	300	eP	PKPdf	09 34 33.5	-0.6
YAYX	Yaylak	147.46	304	eP	PKPdf	09 34 33.3	-0.9
MUD	Monsted U'grnd	147.46	350	ePKIKP	PKPdf	09 34 33.9	+0.4
MUD				i		09 36 36.8	
MUD				pmax	pmax		
	comp=Z,760nm,1.1s						
MUD	Monsted U'grnd	147.46	350	i P	PKPdf	09 34 33.9	+0.4
	comp=Z,756nm,1.1s						
MUD				i		09 36 36.8	
BSD	Bornholm Skovb	147.47	343	⇓iPKIKP	PKPdf	09 34 33.5	0.0
BSD				i		09 36 35.8	
BSD				pmax	pmax		
	comp=Z,2µm,1.4s						
BSD	Bornholm Skovb	147.47	343	⇓iP	PKPdf	09 34 33.5	0.0
	comp=Z,2µm,1.4s						
BSD				i		09 36 35.8	
KIS	Kishinev	147.52	321	ePKP	PKPdf	09 34 26.0	-7.9
	comp=Z,3µm,13.0s						
KIS				i pPKP	pPKPab	09 36 40.0	+1.7
KIS	Kishinev	147.52	321	ePP	PP	09 37 32.0	-37
KIS	Kishinev	147.52	321	i PKS	PKSdf	09 38 10.0	+1.1
KIS	Kishinev	147.52	321	i PPP	SKSdf	09 40 54.0	+1.3
KIS				eSKKS	SKKSac	09 44 06.0	-1.8
KIS				eSKSP		09 47 16.0	
KIS	Kishinev	147.52	321	⇑P	PKPbc	09 34 37.6	+0.2
KIS	Kishinev	147.52	321	ePKHKP	PKPpre	09 34 26.0	
KIS				i		09 38 10.0	
KIS				i PPP	PPP	09 40 54.0	
KIS				i PPS	PPS	09 51 04.0	
MILM	Milestii Mici	147.56	321	⇑P	PKPdf	09 34 33.5	-0.5
SERE	Sereflikochisa	147.64	304	eP	PKPdf	09 34 33.8	-0.8
HRFI	Mount Harif	147.69	288	eP	PKPdf	09 34 34.5	-0.3
KIZK	Mersin	147.77	300	eP	PKPdf	09 34 33.6	-1.1

Code	Station	Dist	Az	Phase	ID	Time	Res
EIL	Elat	147.77	287	eP	PKPdf	09 34 35.1	+0.2
DRUM	Mains of Drumt	147.83	2	eP	PKPdf	09 34 31.2	-2.9
DRUM				e		09 36 36.0	
EREN	Erenkoy	147.92	298	eP	PKPdf	09 34 34.7	-0.2
ANTO	Ankara	147.95	306	⇑P	PKPdf	09 34 35.4	+0.5
ANTO	Ankara	147.95	306	eP	PKPdf	09 34 33.8	-1.2
ANTO	Ankara	147.95	306	⇑PKHKP	PKPpre	09 34 35.4	
ANTO	Ankara	147.95	306		PKPdf	09 34 34.1	-0.9
ANTO				PKPbc	PKPbc	09 34 39.1	+0.3
LOD	Lodumlu	147.96	306	eP	PKPdf	09 34 34.2	-0.8
SILI	Silifke-Mersin	147.96	300	eP	PKPdf	09 34 34.7	-0.3
KULU	Kulu	148.03	305	eP	PKPdf	09 34 34.8	-0.4
KEBE	Keben-Mersin	148.12	300	eP	PKPdf	09 34 33.8	-1.5
LEOM	Leova	148.13	320	⇓P	PKPdf	09 34 35.3	+0.4
LEOM	Leova	148.13	320	eP	PKPdf	09 34 34.6	-0.3
LEOM	Leova	148.13	320	⇓PKHKP	PKPpre	09 34 35.3	
IKL	Isikli	148.18	299	eP	PKPdf	09 34 34.5	-0.8
EDU	Dundee	148.18	2	eP	PKPdf	09 34 34.2	-0.5
KZIT	Kziot	148.22	289	eP	PKPdf	09 34 35.3	-0.3
ELO	Logie Almond	148.23	3	eP	PKPdf	09 34 33.5	-1.3
BEL	Belsk	148.25	334	ePKPdf	PKPdf	09 34 35.0	+0.1
BEL				ePKPbc	PKiKP	09 34 39.7	-0.5
INVG	Invergeldie, C	148.26	3	eP	PKPdf	09 34 32.0	-2.8
INVG				e		09 36 39.4	
AKKU	Akkuyu-Mersin	148.30	299	eP	PKPdf	09 34 34.2	-1.3
VASR	Vaslui	148.30	321	⇑P	PKPdf	09 34 36.1	+0.8
LVV	L'vov	148.31	329	i PKHKP	PKPdf	09 34 36.7	+1.6
LVV				e		09 38 14.6	
LVV				pmax	pmax		
	comp=Z,4µm,1.4s						
TEVE	Tevekalti-Mers	148.33	300	eP	PKPdf	09 34 35.2	-0.5
LAWE	Loch Awe, Argy	148.34	5	eP	PKPdf	09 34 33.3	-1.7
GKP	Gorka Klasztor	148.38	339	ePKPdf	PKPdf	09 34 35.1	0.0
GKP				ePKPbc	PKPbc	09 34 39.7	+0.4
RGN	Rugen	148.38	344	eP	PKPbc	09 34 39.8	+0.5
RGN	Rugen	148.38	344	ePKPbc	PKPbc	09 34 39.7	+0.5
	baz=22,slow=2.2						
RGN				epPKPbc	pPKPab	09 36 46.9	+5.6
	baz=22,slow=2.4						
KDZE	Karadeniz Ereo	148.43	310	⇑P	PKPbc	09 34 39.5	-0.4
TLCR		148.47	318	⇑P	PKPdf	09 34 36.0	+0.5
TLCR		148.47	318	⇑PKHKP	PKPdf	09 34 36.0	+0.5
EAB	Aberfoyle	148.48	4	eP	PKPdf	09 34 34.2	-1.0
BERE	Bereket-Mersin	148.52	300	eP	PKPdf	09 34 34.9	-1.2
YUVA	Yuva-Kibriscik	148.58	308	eP	PKPdf	09 34 36.3	+0.3
BIR	Birlad	148.61	320	⇓P	PKiKP	09 34 41.1	-0.1
BIR	Birlad	148.61	320	⇓PKP2	PKiKP	09 34 41.1	-0.1
JURR	Jurilovca	148.64	317	⇑P	PKPbc	09 34 40.3	0.0
TEKE	Tekeli-Mersin	148.65	299	eP	PKPdf	09 34 34.9	-1.2
VARL	Varlezi	148.68	320	⇓P	PKPdf	09 34 36.6	+0.8
GIUM	Giurgiulesti	148.68	319	⇓P	PKiKP	09 34 41.1	-0.3
CSS	Mathiatis	148.69	297	P	PKPdf	09 34 33.9	-2.4
CSS	Mathiatis	148.69	297	eP	PKPdf	09 34 35.9	-0.4
LADK	Ladik-KONYA	148.75	303	eP	PKPdf	09 34 35.1	-1.3
GISR	Galati	148.80	319	⇑P	PKPbc	09 34 39.3	-1.3
KONT	Konya--Tatoy	148.82	303	eP	PKPdf	09 34 35.2	-1.2
ESY	Stoneypath	148.82	2	⇑eP	PKPdf	09 34 33.3	-2.4
GHRR		148.85	320	⇓P	PKPdf	09 34 38.3	+2.3
PGBU	Glenifferbraes	148.85	4	eP	PKPdf	09 34 34.7	-1.1
PGBU				e		09 36 40.4	
CFR	Carcaliu	148.89	318	⇑P	PKPdf	09 34 36.0	-0.2
CFR	Carcaliu	148.89	318	⇑PKHKP	PKPdf	09 34 36.0	-0.2
TOPG	Topolog	148.89	318	⇓P	PKiKP	09 34 41.7	-0.2
SCHL	Schela	148.90	319	⇓P	PKiKP	09 34 41.7	-0.2
KIZT	Kizilcal	148.92	305	eP	PKPdf	09 34 35.8	-0.8
TUDR		148.95	319	⇑P	PKPbc	09 34 41.4	+0.4
EBL	Broad Law	148.96	2	eP	PKPdf	09 34 35.7	-0.3
AUSIV	SIVRIHISAR	149.00	306	eP	PKPdf	09 34 35.7	-1.0
LEF	Lefka	149.02	297	⇑P	PKPbc	09 34 41.6	+0.1
LEF	Lefka	149.02	297	eP	PKPdf	09 34 35.7	-1.0
TESR	Tescani	149.03	322	⇑P	PKPdf	09 34 36.2	-0.2
KWP	Kalwaria Pacla	149.06	329	ePKPdf	PKPdf	09 34 36.1	-0.3
KWP				ePKPbc	PKiKP	09 34 41.8	-0.3
SKMB	Sankelmark Bun	149.07	348	ePKPdf	PKPdf	09 34 36.7	+0.6
	baz=26,slow=1.4						
SKMB				ePKPbc	PKiKP	09 34 41.9	0.0
	baz=22,slow=2.2						
SKMB				epPKPbc	pPKPab	09 36 49.3	+5.2
	baz=22,slow=2.4						
TSCT	Constanta Port	149.07	316	⇓P	PKiKP	09 34 41.8	-0.4
TIRR	Tirgusor	149.08	317	⇑P	PKPdf	09 34 37.2	+0.7
TIRR	Tirgusor	149.08	317	⇑P	PKPdf	09 34 37.2	+0.7
TIRR	Tirgusor	149.08	317	eP	PKPdf	09 34 36.9	+0.4
TIRR	Tirgusor	149.08	317		PKPdf	09 34 36.1	-0.4
TIRR				PKPbc	PKPbc	09 34 41.2	-0.1
BIZ	Bicaz	149.08	323	⇓P	PKPdf	09 34 37.4	+0.9
EFOR	EFORIE	149.13	316	⇓P	PKiKP	09 34 42.5	+0.2
PETR	Petresti	149.13	320	⇓P	PKPdf	09 34 38.2	+1.6
BURAR	Bucovina Array	149.15	324	⇑P	PKPdf	09 34 38.0	+1.3
MFTR	Murfatlar	149.21	316	⇓P	PKPdf	09 34 37.3	+0.5
ODBI	Odobesti	149.22	320	⇓P	PKiKP	09 34 43.1	+0.6
GAZI	Gazipasa	149.26	300	eP	PKPdf	09 34 36.1	-1.0
HARR	Harsova	149.26	318	⇑P	PKPdf	09 34 37.8	+1.0
HARR	Harsova	149.26	318	⇑PKHKP	PKPdf	09 34 37.8	+1.0
TLBR	Topalu	149.26	317	⇑P	PKiKP	09 34 42.8	+0.2
MANR	Mangalia	149.28	316	⇑P	PKPdf	09 34 38.2	+1.4
TSMN	Mangalia Port-	149.29	316	⇑P	PKiKP	09 34 42.8	+0.1
VRI	Vrincioaia	149.35	320	⇑P	PKPdf	09 34 37.3	+0.4
VRI	Vrincioaia	149.35	320	eP	PKPdf	09 34 36.3	-0.6
VRI	Vrincioaia	149.35	320	⇑PKHKP	PKPdf	09 34 37.3	+0.4
CIFT	Cifteler, Eski	149.38	306	eP	PKPdf	09 34 36.5	-0.8
CVDA	Cernavoda	149.38	317	⇓P	PKiKP	09 34 43.1	+0.3
EKA	Eskdalemuir Ar	149.39	2	PKP	PKPdf	09 34 37.0	+0.3
	comp=Z,75nm,0.6s,baz=1.5,slow=0.7,SNR=30						
EKA				PKPbc	PKPbc	09 34 41.6	-0.1
	comp=Z,57nm,0.4s,baz=338,slow=2.4,SNR=52						
EKA				pPKPbc	pPKPbc	09 36 43.5	+0.7
	comp=Z,35nm,0.9s,baz=343,slow=2.2,SNR=3.3						
EKA	Eskdalemuir Ar	149.39	2	PKHKP	PKPdf	09 34 37.0	+0.3
PLOR	Plostina	149.40	320	⇑P	PKPdf	09 34 37.1	0.0
PLOR	Plostina	149.40	320	⇑PKHKP	PKPdf	09 34 37.1	0.0
ESK	Eskdalemuir	149.41	3	PKIKP	PKPdf	09 34 34.6	-2.1
ESK						09 34 41.2	
ESK	Eskdalemuir	149.41	3		PKPdf	09 34 34.6	-2.1
ESK				PKPbc	PKPbc	09 34 41.2	-0.6
SAUV	Serdivan-Sakar	149.43	309	eP	PKPdf	09 34 36.5	-0.7
SPNC	Sapanca-Adapaz	149.46	309	eP	PKPdf	09 34 35.7	-1.5
SRCK	Saricakaya, Es	149.46	308	eP	PKPdf	09 34 35.7	-1.6
GRER		149.47	319	⇓P	PKiKP	09 34 43.9	+0.8
BISRR	Bisoca	149.54	320	⇑P	PKPdf	09 34 37.8	+0.5
NEWG	New Galloway	149.56	4	⇑eP	PKPdf	09 34 35.4	-1.5
PSN	Preselentsi	149.60	316	eP	PKPdf	09 34 37.4	0.0
ICOR	Ion Corvin	149.63	317	⇓P	PKPdf	09 34 38.8	+1.5
BSEG	Bad Segeberg	149.64	347	ePKPdf	PKPdf	09 34 37.3	+0.2
	baz=26,slow=1.4						
BSEG				ePKPbc	PKiKP	09 34 43.0	-0.1
	baz=22,slow=2.2						
BSEG				ePKPab	PKPab	09 34 50.3	+0.6
	baz=20,slow=4.2						
BSEG				epPKPbc	pPKPab	09 36 50.4	+4.1
	baz=22,slow=2.4						
BORA	Eskisehir	149.64	307	eP	PKPdf	09 34 36.7	-1.0
AMRR	Amara	149.67	318	⇓P	PKiKP	09 34 43.9	+0.5
AMRR	Amara	149.67	318	⇓PKP2	PKiKP	09 34 43.9	+0.5
PGOR	Pogoanele	149.72	319	⇑P	PKPdf	09 34 38.7	+1.3
SILT	Sile	149.75	310	eP	PKPdf	09 34 37.1	-0.6
KOLS	Kolonicke sedl	149.75	329	ePKHKP	PKPdf	09 34 38.1	+0.6
KOLS	Kolonicke sedl	149.75	329	ePKP	PKPdf	09 34 38.0	+0.6
KOLS				e		09 34 44.1	
OZUR		149.76	322	⇑P	PKPbc	09 34 43.2	+0.2
GAL1	Galloway	149.77	4	eP	PKPdf	09 34 35.8	-1.4
GAL1				e		09 36 42.1	
HLG	Helgoland	149.85	350	ePKPbc	PKiKP	09 34 43.6	+0.1
	baz=22,slow=2.2						
ISR	Istrita	149.87	319	⇓P	PKiKP	09 34 43.8	-0.2
OJC	Ojcow	149.89	333	ePKPdf	PKPdf	09 34 38.1	+0.5
OJC				ePKPbc	PKiKP	09 34 43.6	-0.1
OJC				ePKPab	PKPab	09 34 52.3	+1.3
EDMD	Edmundbyers	149.93	1	eP	PKPdf	09 34 35.5	-2.0
ARCR	ARCALIA	149.94	324	⇑P	PKPdf	09 34 38.3	+0.5
UZH	Uzhgorod	149.95	328	ePKIKP	PKPdf	09 34 37.0	-0.7
UZH				e		09 34 42.8	
UZH				e		09 34 52.6	
UZH				e		09 38 20.8	
UZH				e		09 56 51.2	
ADVT	Abdulvahap	149.96	309	eP	PKPdf	09 34 35.3	-2.7
CAVI	Cavuskoy	149.97	308	eP	PKPdf	09 34 36.5	-1.6
RASA	Rasa	149.99	317	⇑P	PKiKP	09 34 44.5	+0.4
BMR	Baia Mare	150.01	326	⇓P	PKPdf	09 34 38.5	+0.6
BMR	Baia Mare	150.01	326	⇓PKHKP	PKPdf	09 34 38.5	+0.6
SHUT	Suhut-Afyon	150.01	305	eP	PKPdf	09 34 38.1	-0.2

Code	Station	Dist	Az	Phase	ID	Time	Res
MLR	Muntele Rosu	150.01	320	PKP	PKPdf	09 34 37.5	-0.6
	comp=Z,66nm,1.1s,baz=340,slow=2.1,SNR=47						
MLR				PKPbc	PKiKP	09 34 44.0	-0.3
	comp=Z,646nm,1.0s,baz=8.4,slow=3.6,SNR=117						
MLR				pPKPbc	pPKPbc	09 36 45.4	+0.7
	comp=Z,108nm,1.1s,baz=334,slow=4.7,SNR=1.9						
MLR	Muntele Rosu	150.01	320	⇓P	PKPdf	09 34 37.5	-0.6
LEHL	Lehliu	150.05	318	⇓P	PKiKP	09 34 44.6	+0.4
DOPR	Dopca	150.06	322	⇑P	PKPdf	09 34 38.4	+0.4
RUE	Ruedersdorf	150.12	342	eP	PKPdf	09 34 38.7	+0.9
RUE	Ruedersdorf	150.12	342	ePKPdf	PKPdf	09 34 38.0	+0.2
	baz=26,slow=1.4						
RUE				ePKPbc	PKiKP	09 34 44.1	0.0
	baz=22,slow=2.2						
RUE				epPKPbc	pPKPab	09 36 51.7	+3.4
	baz=22,slow=2.4						
KLYT	Kilyos	150.12	311	eP	PKPdf	09 34 37.0	-1.2
YLV	Yalova	150.16	309	eP	PKPdf	09 34 37.2	-1.3
TRPA	Tarpa	150.18	328	⇑P	PKPdf	09 34 38.0	-0.1
ISK	Istanbul-Kandi	150.19	310	eP	PKPdf	09 34 37.1	-1.3
KAVV	Kandilli-Istan	150.19	310	eP	PKPdf	09 34 37.3	-1.1
SECR		150.20	320	⇑P	PKPdf	09 34 38.5	+0.3
ISP	Isparta	150.25	304	eP	PKPdf	09 34 35.9	-2.8
SULR		150.28	319	⇓P	PKiKP	09 34 44.4	-0.3
NIE	Niedzica	150.29	331	ePKPdf	PKPdf	09 34 38.6	+0.3
NIE				ePKPbc	PKiKP	09 34 45.1	+0.4
PLAR	PLOIESTI	150.29	319	⇑P	PKiKP	09 34 45.0	+0.3
GMM	Mts of Mourne	150.30	6	eP	PKPdf	09 34 37.6	-0.4
BGKT	Bogazkoy	150.34	311	eP	PKPdf	09 34 35.5	-3.1
GEMT	Gemlik	150.34	309	eP	PKPdf	09 34 37.6	-1.0
INCR	INCERC-Sediu C	150.47	319	⇑P	PKPbc	09 34 43.8	-0.8
WIM	Isle of Man	150.49	4	⇑eP	PKPdf	09 34 38.1	-0.3
CTKS	Kestanelik-??a	150.50	311	eP	PKPdf	09 34 37.9	-0.9
TVSB	Tavsanli	150.51	307	eP	PKPdf	09 34 37.2	-1.9
MDB	Medias	150.51	323	⇑P	PKiKP	09 34 45.8	+0.6
MDB	Medias	150.51	323	⇑PKIKP	PKiKP	09 34 45.8	+0.6
CEI	Carei	150.52	327	⇓P	PKiKP	09 34 45.2	+0.1
CEI	Carei	150.52	327	⇓PKIKP	PKiKP	09 34 45.2	+0.1
ARMT	Armutlu	150.52	310	eP	PKPdf	09 34 37.9	-1.0
VOIR		150.56	321	⇑P	PKPdf	09 34 40.0	+1.1
VOIR		150.56	321	⇑PKIKP	PKPdf	09 34 40.1	+1.1
CJR	Cluj-Napoca	150.58	324	⇑P	PKPdf	09 34 39.3	+0.4
CJR	Cluj-Napoca	150.58	324	⇑PKIKP	PKPdf	09 34 39.3	+0.4
MDNY	Mudanya-Bursa	150.58	309	eP	PKPdf	09 34 37.9	-1.1
BUC1	Bucharest	150.60	318	⇑P	PKPbc	09 34 45.1	+0.2
BUC1	Bucharest	150.60	318	⇑PKIKP	PKPbc	09 34 45.1	+0.2
KORT	Korkueli	150.61	302	eP	PKPdf	09 34 39.5	+0.2
H07S1	FLORES T-PHASE	150.66	53	ePKP	PKPdf	09 34 40.5	+1.3
H07S1	FLORES T-PHASE	150.66	53	PKP	PKPdf	09 34 39.6	+0.4
H07S1				PKPbc	PKiKP	09 34 45.6	-0.1
	SNR=67						
MTUR	Matau	150.68	321	⇓P	PKiKP	09 34 45.7	0.0
MTUR	Matau	150.68	321	⇓PKIKP	PKiKP	09 34 45.7	0.0
GEDZ	Gediz	150.69	306	eP	PKPdf	09 34 38.6	-0.7
SGRR	Singureni	150.70	318	⇑P	PKPbc	09 34 44.9	-0.2
SLVT	Silivri	150.70	311	eP	PKPdf	09 34 38.3	-0.8
RAZG	Razgrad	150.72	317	⇓P	PKPdf	09 34 39.2	+0.1
KSP	Ksiaz	150.73	337	ePKPdf	PKPdf	09 34 38.8	-0.1
KSP				ePKPbc	PKiKP	09 34 45.8	+0.3
KSP				ePKPab	PKPab	09 34 56.4	+2.0
HPK	Haverah Park	150.81	1	eP	PKPdf	09 34 35.5	-3.4
ARR	Arges	150.84	321	⇑P	PKPdf	09 34 38.7	-0.6
LANS	Liptovska Anna	150.85	332	ePKIKP	PKPdf	09 34 40.2	+1.0
LANS	Liptovska Anna	150.85	332	ePKP	PKPdf	09 34 40.2	+1.0
LANS				e		09 34 47.0	
OKC	Ostrava-Krasne	150.86	334	ePKIKP	PKPdf	09 34 39.3	+0.2
OKC				e		09 34 56.2	
OKC	Ostrava-Krasne	150.86	334	ePKPDF	PKPdf	09 34 39.3	+0.2
OKC				⇑ePKP	PKiKP	09 34 45.7	-0.1
OKC				ePKPAB	PKPab	09 34 56.2	+1.2
OKC				ePP	PP	09 38 20.9	-6.9
KECS	Kecovo	150.90	330	ePKIKP	PKPdf	09 34 40.3	+1.1
KECS				e		09 34 56.2	
KECS	Kecovo	150.90	330	ePKP	PKPdf	09 34 40.3	+1.1
KECS				e		09 34 45.9	
KECS				e		09 34 56.2	
GOLR		150.96	320	⇑P	PKPdf	09 34 42.4	+3.0
SIMA	Simav-Kutahya	150.99	307	eP	PKPdf	09 34 38.5	-1.3
DRGR		150.99	325	⇓P	PKPdf	09 34 39.9	+0.4
DRGR		150.99	325	⇓PKIKP	PKPdf	09 34 39.9	+0.4
PHSR	Pinarhisar	150.99	313	eP	PKPdf	09 34 38.7	-0.9
OSTC	Ostas	151.00	337	ePKPDF	PKPdf	09 34 40.3	+0.9
OSTC				⇑ePKP	PKiKP	09 34 46.6	+0.5
OSTC				ePP	PP	09 38 24.6	-3.9
ELL	Elmali	151.02	302	eP	PKPdf	09 34 39.7	-0.3
CHVC	Chvalec	151.03	337	ePKPDF	PKPdf	09 34 40.1	+0.7
CHVC				⇑ePKP	PKiKP	09 34 46.5	+0.4
CHVC				ePKPAB	PKPab	09 34 56.6	+0.9
CHVC				ePP	PP	09 38 25.4	-3.3
NRDL	Niedersach Rie	151.03	346	ePKPdf	PKPdf	09 34 39.1	0.0
	baz=26,slow=1.4						
NRDL				ePKPbc	PKiKP	09 34 46.1	+0.2
	baz=22,slow=2.2						
NRDL				epPKPbc	pPKPab	09 36 54.1	+2.1
	baz=22,slow=2.4						
NRDL				epPKPab	pPKPbc	09 36 58.7	+12
	baz=21,slow=4.2						
CRLT	Corlu	151.07	311	eP	PKPdf	09 34 39.3	-0.4
UPC	Upice	151.11	337	ePKIKP	PKPdf	09 34 40.2	+0.7
UPC	Upice	151.11	337	ePKPDF	PKPdf	09 34 40.2	+0.7
UPC				⇑ePKP	PKiKP	09 34 46.3	0.0
UPC				ePP	PP	09 38 23.8	-5.3
HUMR	Humele	151.12	320	⇓P	PKPdf	09 34 39.4	-0.3
DPC	Dobruska-Polom	151.13	337	ePKIKP	PKPdf	09 34 39.6	0.0
DPC				e		09 34 56.0	
DPC				e		09 38 24.7	
DPC	Dobruska-Polom	151.13	337	ePKPDF	PKPdf	09 34 39.6	0.0
DPC				⇑ePKP	PKiKP	09 34 46.5	+0.1
DPC				ePKPAB	PKPab	09 34 56.0	-0.2
DPC				ePP	PP	09 38 24.7	-4.6
MORC	Moravsky Berou	151.15	335	⇓iPKP	PKPdf	09 34 39.5	-0.1
MORC				ePKIKP	PKiKP	09 34 46.8	+0.4
MORC				e		09 34 56.1	
MORC				e		09 36 47.1	
MORC				ePP	PP	09 38 30.0	+0.6
MORC	Moravsky Berou	151.15	335	⇑P	PKPdf	09 34 40.0	+0.4
MORC	Moravsky Berou	151.15	335	⇑PKIKP	PKPdf	09 34 40.0	+0.4
KRLC	Kraliky	151.19	336	ePKIKP	PKPdf	09 34 39.6	-0.1
KRLC				e		09 34 57.7	
KRLC				e		09 38 26.6	
KRLC	Kraliky	151.19	336	ePKPDF	PKPdf	09 34 39.6	-0.1
KRLC				⇑ePKP	PKiKP	09 34 46.9	+0.4
KRLC				ePKPAB	PKPab	09 34 57.7	+1.2
KRLC				ePP	PP	09 38 26.6	-3.1
COPA	Copaceanca	151.20	319	⇓P	PKPdf	09 34 40.5	+0.7
JMB	Yambol	151.22	315	eP	PKPdf	09 34 39.6	-0.3
SZH	Strazhica	151.23	317	eP	PKPdf	09 34 39.4	-0.5
ASSE	Asse, Remlinge	151.24	345	ePKPdf	PKPdf	09 34 39.6	+0.1
	baz=26,slow=1.4						
ASSE				ePKPbc	PKiKP	09 34 46.6	+0.2
	baz=22,slow=2.2						
ASSE				ePKPab	PKPab	09 34 57.1	+0.7
	baz=20,slow=4.2						
ASSE				epPKPbc	pPKPab	09 36 54.6	+1.8
	baz=22,slow=2.4						
ASSE				epPKPab	pPKPbc	09 37 00.1	+13
	baz=21,slow=4.2						
WPS	Cemaes, Angles	151.25	4	eP	PKPdf	09 34 37.2	-2.4
WME	Myndd Eilian	151.26	4	⇑eP	PKPdf	09 34 39.2	-0.4
EDC	Edincik	151.31	310	eP	PKPdf	09 34 38.8	-1.3
LMK	Market Rasen	151.31	359	⇑eP	PKPdf	09 34 38.7	-0.9
LBWR	Ladybower, Pea	151.37	1	eP	PKPdf	09 34 38.8	-1.0
WLF1	Llynfaes	151.37	4	eP	PKPdf	09 34 38.2	-1.5
ZIMR		151.38	318	⇑P	PKPdf	09 34 41.3	+1.2
ZIMR		151.38	318	⇑PKIKP	PKPdf	09 34 41.3	+1.2
CLL	Collm	151.38	342	i PKPdf	PKPdf	09 34 41.5	+1.7
	comp=Z,369nm,1.7s						
CLL				i PKPbc	PKiKP	09 34 47.9	+1.1
	comp=Z,1µm,0.9s						
CLL				i PKPab	PKPab	09 34 58.6	+1.5
	comp=Z,650nm,1.0s						
CLL				i (pPKPdf)		09 36 46.9	
	comp=Z,220nm,1.5s						
CLL				i pPKPab	pPKPab	09 36 55.1	+1.6
	comp=Z,389nm,1.3s						
CLL				i		09 37 01.6	
	comp=Z,225nm,1.3s						
CLL				esPKPab	sPKPab	09 37 48.0	+2.8
CLL				ePP	PP	09 38 27.0	-3.5
	comp=N,1µm,10.8s						
CLL				ePP	PP	09 38 27.0	-3.5
CLL				ePP	PP	09 38 27.0	-3.5

CLL ePP 09 40 24.0
CLL eSPP 09 41 16.0
CLL ePPP PPP 09 41 59.0
CLL eSKKSac SKKSac 09 44 28.0 -0.7
CLL eSKSP 09 47 48.0
CLL ePSKS 09 48 42.0
CLL ePPS PPS 09 51 30.0
CLL e 09 53 48.0
CLL eSS SS 09 56 48.0 -24
CLL eSSS 10 00 12.0
CLL eSSS SSS 10 03 06.0
CLL Collm 151.38 342 ePKPdf **PKPdf 09 34 40.5 +0.7**
baz=26,slow=1.4
CLL ePKPbc **PKiKP 09 34 47.9 +1.1**
baz=22,slow=2.2
CLL ePKPab **PKPab 09 34 58.7 +1.5**
baz=20,slow=4.2
CLL epPKPbc **pPKPab 09 36 55.9 +2.4**
baz=22,slow=2.4
CLL Collm 151.38 342 *i* PKIKP **PKPdf 09 34 41.5 +1.7**
CLL *i* 09 34 58.6
CLL pmax pmax
comp=Z,369nm,1.7s
CLL pmax pmax
comp=Z,7μm,1.0s
MRMT Marmara Adasi 151.39 311 *e*P **PKPdf 09 34 38.9 -1.4**
AKAS Kas 151.39 301 *e*P **PKPdf 09 34 40.2 -0.3**
YRC Rhoscolyn 151.39 5⇑*e*P **PKPdf 09 34 39.2 -0.5**
EDRB Edirne 151.41 313 *e*P **PKPdf 09 34 38.9 -1.3**
KULA Kula-Manisa 151.42 306 *e*P **PKPdf 09 34 37.6 -2.9**
ELND Elena 151.44 316 ⇓P **PKPdf 09 34 40.9 +0.7**
DEV Deva 151.48 324 ⇑P **PKPdf 09 34 40.7 +0.5**
DEV Deva 151.48 324 ⇑PKIKP **PKPdf 09 34 40.7 +0.5**
BRG Berggiesshubel 151.48 340 *e*PKP **PKPdf 09 34 39.6 -0.3**
comp=Z,446nm,1.5s
BRG Berggiesshubel 151.48 340 *i* PKP **PKiKP 09 34 47.1 +0.1**
comp=Z,642nm,0.8s
BRG Berggiesshubel 151.48 340 *i* PKP **PKPab 09 34 56.1 -1.4**
comp=Z,1μm,1.3s
BRG *i* pPKP **pPKPab 09 36 51.6 -2.3**
comp=Z,364nm,1.4s
BRG PP **PP 09 38 30.0 -1.1**
BRG Berggiesshubel 151.48 340 SS SS 09 57 13.0 +0.1
BRG Berggiesshubel 151.48 340 *e*PKPbc **PKiKP 09 34 47.4 +0.4**
baz=22,slow=2.2
BRG *e*PKPab **PKPab 09 34 58.4 +0.8**
baz=20,slow=4.2
BRG epPKPbc **pPKPab 09 36 55.3 +1.4**
baz=22,slow=2.4
BRG Berggiesshubel 151.48 340 *e*PKIKP **PKPdf 09 34 39.7 -0.3**
BRG *i* 09 34 56.1
BRG 09 38 30.0
BRG pmax pmax
comp=Z,446nm,1.5s
BRG pmax pmax
comp=Z,1μm,1.3s
BRG Berggiesshubel 151.48 340 SKKS 09 48 44.0
BALB Balikesir 151.58 309 *e*P **PKPdf 09 34 38.8 -1.7**
CLZ Clausthal 151.58 345 *e*PKPdf **PKPdf 09 34 40.3 +0.1**
baz=26,slow=1.4
CLZ *e*PKPbc **PKiKP 09 34 47.7 +0.5**
baz=22,slow=2.2
CLZ *e*PKPab **PKPab 09 34 58.6 +0.6**
baz=20,slow=4.2
CLZ epPKPbc **pPKPab 09 36 55.6 +1.3**
baz=22,slow=2.4
PSZ Piszkesteto 151.58 330 ⇑P **PKPdf 09 34 41.1 +0.7**
PSZ Piszkesteto 151.58 330 ⇑PKIKP **PKPdf 09 34 41.1 +0.7**
PVCC Panska Ves 151.58 339 *e*PKIKP **PKPdf 09 34 40.7 +0.5**
PVCC *e* 09 34 59.8
PVCC *e* 09 38 28.0
PVCC Panska Ves 151.58 339 *e*PKPDF **PKPdf 09 34 40.7 +0.5**
PVCC ⇑*e*PKP **PKiKP 09 34 47.5 +0.3**
PVCC *e*PKPAB **PKPab 09 34 59.8 +1.8**
PVCC *e*PP **PP 09 38 28.0 -3.7**
FBE Freiberg 151.62 341 *e*PKPdf **PKPdf 09 34 40.4 +0.1**
baz=26,slow=1.4
FBE *e*PKPbc **PKiKP 09 34 47.9 +0.6**
baz=22,slow=2.2
FBE *e*PKPab **PKPab 09 34 59.2 +1.1**
baz=20,slow=4.2
FBE epPKPbc **pPKPab 09 36 55.9 +1.4**
baz=22,slow=2.4
VYHS Vyhne 151.62 332 *e*PKIKP **PKPdf 09 34 40.0 -0.3**
VYHS *e* 09 34 58.8
VYHS *e* 09 38 35.9
VYHS Vyhne 151.62 332 *e*PKP **PKPdf 09 34 40.0 -0.3**
VYHS *e* 09 34 47.7
VYHS *e* 09 34 58.8
VYHS *e*PP **PP 09 38 35.9 +3.7**
RKY Sarkoy-Tekirda 151.64 311 *e*P **PKPdf 09 34 38.9 -1.8**
STNC Stoke 151.67 2 *e*P **PKPdf 09 34 37.9 -2.3**
IBBN Ibbenburen 151.68 349 *e*PKPdf **PKPdf 09 34 40.1 -0.1**
baz=26,slow=1.4
IBBN *e*PKPbc **PKiKP 09 34 47.6 +0.2**
baz=22,slow=2.2
IBBN *e*PKPab **PKPab 09 34 58.8 +0.4**
baz=20,slow=4.2
IBBN epPKPbc **pPKPab 09 36 55.4 +0.8**
baz=22,slow=2.4
KRBG Karabiga-Canak 151.68 310 *e*P **PKPdf 09 34 39.7 -0.9**
VLAD Vladila 151.76 319 ⇓P **PKPdf 09 34 42.4 +1.8**
NEUB Neuenburg 151.81 343 *e*PKPdf **PKPdf 09 34 40.4 -0.1**
baz=26,slow=1.4
NEUB *e*PKPbc **PKiKP 09 34 47.9 +0.3**
baz=22,slow=2.2
NEUB *e*PKPab **PKPab 09 34 59.6 +0.7**
baz=20,slow=4.2
NEUB epPKPbc **pPKPab 09 36 56.0 +0.8**
baz=22,slow=2.4
NEUB epPKPab pPKPbc 09 37 02.6 +14
baz=21,slow=4.2
JAVC Velka Javorina 151.82 333⇓*i* PKP **PKPdf 09 34 41.2 +0.5**
JAVC *e*PKIKP **PKiKP 09 34 49.4 +1.5**
JAVC *e* 09 36 50.7
JAVC *e*PP **PP 09 38 35.7 +2.4**
FOEL Foel Wylfa 151.83 3 *e*P **PKPdf 09 34 37.5 -3.0**
LLW Llanuwchllyn 151.85 3 *e*P **PKPdf 09 34 37.6 -2.9**
GZR Gura Zlata 151.86 323 ⇑P **PKPdf 09 34 39.8 -1.1**
GZR Gura Zlata 151.86 323 ⇑PKIKP **PKPdf 09 34 39.8 -1.1**
SIRR Siria 151.88 326 ⇓P **PKPdf 09 34 41.3 +0.5**
VRAC Vranov 151.89 335 PKP **PKPdf 09 34 40.8 +0.1**
comp=Z,38nm,1.1s,baz=29,slow=1.0,SNR=77
VRAC PKPbc **PKiKP 09 34 48.6 +0.7**
comp=Z,166nm,1.1s,baz=39,slow=1.9,SNR=42
VRAC PKPab **PKPab 09 35 00.3 +0.9**
comp=Z,148nm,0.8s,baz=33,slow=4.9,SNR=13
VRAC pPKPbc **pPKPbc 09 36 49.6 +0.6**
comp=Z,37nm,0.9s,baz=350,slow=4.8,SNR=2.4
VRAC Vranov 151.89 335⇓*i* PKP **PKPdf 09 34 40.2 -0.5**
VRAC *e*PKIKP **PKiKP 09 34 48.2 +0.3**
VRAC *e* 09 34 59.4
VRAC *e* 09 36 49.4
VRAC *e*PP **PP 09 38 33.8 +0.2**
VRAC Vranov 151.89 335 ⇑P **PKPdf 09 34 40.2 -0.5**
VRAC Vranov 151.89 335 ⇑PKIKP **PKPdf 09 34 40.2 -0.5**
GTTG Gottingen 151.95 345 *e*PKPdf **PKPdf 09 34 40.7 0.0**
baz=26,slow=1.4
GTTG *e*PKPbc **PKiKP 09 34 48.3 +0.3**
baz=22,slow=2.2
GTTG *e*PKPab **PKPab 09 35 00.2 +0.7**
baz=20,slow=4.2
GTTG epPKPbc **pPKPab 09 36 56.4 +0.6**
baz=22,slow=2.4
PLVB Pleven 151.98 318 ⇑P **PKPdf 09 34 42.3 +1.4**
TURN Turunc 151.99 303 *e*P **PKPdf 09 34 41.3 +0.1**
PRA Prague 152.02 339 *e*PKIKP **PKPdf 09 34 41.4 +0.6**
PRA *e* 09 38 32.0
PRA Prague 152.02 339 *e*PKPDF **PKPdf 09 34 41.4 +0.6**
PRA ⇑*e*PKP **PKiKP 09 34 48.4 +0.3**
PRA *e*PP **PP 09 38 32.0 -2.2**
WACR West Acre 152.02 358⇑*e*P **PKPdf 09 34 40.3 -0.5**
GOPC GO Pecny, Ondr 152.04 338 *e*PKIKP **PKPdf 09 34 40.8 -0.1**
GOPC *e* 09 34 48.3
GOPC *e* 09 35 01.2
GOPC GO Pecny, Ondr 152.04 338 *e*PKPDF **PKPdf 09 34 40.8 -0.1**
GOPC ⇑*e*PKP **PKiKP 09 34 48.3 +0.1**
GOPC *e*PKPAB **PKPab 09 35 01.2 +1.2**
GOPC *e*PP **PP 09 38 28.1 -6.2**
PRU Pruhonice 152.06 338 *e*PKIKP **PKPdf 09 34 40.8 -0.1**
PRU *e* 09 34 48.4
PRU *e* 09 35 01.1
PRU *e* 09 38 29.5
PRU Pruhonice 152.06 338 *e*PKPDF **PKPdf 09 34 40.8 -0.1**
PRU ⇑*e*PKP **PKiKP 09 34 48.4 +0.2**
PRU *e*PKPAB **PKPab 09 35 01.1 +1.1**
PRU *e*PP **PP 09 38 29.5 -4.9**
LPK Lapseki 152.06 311 *e*P **PKPdf 09 34 40.3 -0.9**
SRE Strehaia 152.07 321 ⇑P **PKPdf 09 34 42.9 +1.8**
SRE Strehaia 152.07 321 ⇑PKIKP **PKPdf 09 34 42.9 +1.8**
ERIK Erikli-Kesan 152.10 311 *e*P **PKPdf 09 34 39.6 -1.6**
KRUC Moravsky 152.16 335⇓*i* PKP **PKPdf 09 34 40.5 -0.6**
KRUC *e*PKIKP **PKiKP 09 34 48.8 +0.3**
KRUC *e* 09 35 00.5
KRUC *e* 09 36 50.3
KRUC *e*PP **PP 09 38 35.5 +0.4**
KRUC Moravsky 152.16 335 PKIKP **PKPdf 09 34 40.7 -0.4**
AYDB Zeytinkoy-Aydi 152.19 305 *e*P **PKPdf 09 34 40.4 -1.3**
SMOL Smolenice 152.20 333 *e*PKP **PKPab 09 35 01.9 +1.2**
HLM1 Long Mynd 152.22 3 *e*P **PKPdf 09 34 38.1 -3.0**
TREC Trest 152.31 336 *e*PKIKP **PKPdf 09 34 40.9 -0.4**
TREC *e* 09 34 48.7
TREC *e* 09 35 02.4
TREC *e* 09 38 33.1
TREC Trest 152.31 336 *e*PKPDF **PKPdf 09 34 40.9 -0.4**
TREC ⇑*e*PKP **PKPbc 09 34 48.7 0.0**
TREC *e*PKPAB **PKPab 09 35 02.4 +1.2**
TREC *e*PP **PP 09 38 33.1 -2.8**
ALN Alexandroupoli 152.32 312 P **PKPdf 09 34 39.9 -1.7**
ENEZ Enez 152.32 312 *e*P **PKPdf 09 34 40.3 -1.3**
TANN Tannenbergstha 152.33 341 *e*PKPdf **PKPdf 09 34 41.0 -0.3**
baz=26,slow=1.4
TANN *e*PKPbc **PKiKP 09 34 49.0 +0.1**
baz=22,slow=2.2
TANN *e*PKPab **PKPab 09 35 02.1 +0.8**
baz=20,slow=4.2
BZS Buzias 152.34 325 ⇑P **PKPdf 09 34 41.4 -0.1**
BZS Buzias 152.34 325 ⇑PKIKP **PKPdf 09 34 41.4 -0.1**
PLN Plauen 152.36 342 *e*PKPdf **PKPdf 09 34 41.1 -0.3**
baz=26,slow=1.4
PLN *e*PKPbc **PKiKP 09 34 49.1 +0.2**
baz=22,slow=2.2
PLN *e*PKPab **PKPab 09 35 02.1 +0.8**
baz=20,slow=4.2
MOX Moxa 152.36 343 *e*PKPdf **PKPdf 09 34 41.0 -0.3**
baz=26,slow=1.4
MOX *e*PKPbc **PKiKP 09 34 49.0 +0.2**
baz=22,slow=2.2
MOX *e*PKPab **PKPab 09 35 02.0 +0.6**
baz=20,slow=4.2
MOX epPKPbc **pPKPab 09 36 57.2 -0.4**
baz=22,slow=2.4
MOX Moxa 152.36 343 PKIKP **PKPdf 09 34 40.9 -0.5**
MODS Modra-Piesok 152.37 333 *e*PKIKP **PKPdf 09 34 41.1 -0.4**
MODS *e* 09 34 48.8
MODS Modra-Piesok 152.37 333 *e*PKP **PKPdf 09 34 41.1 -0.4**
MODS *e* 09 34 48.8
SRO2 Moca 152.37 331 *e*PKIKP **PKPbc 09 34 48.2 -0.6**
SRO2 *e* 09 35 01.7
SRO2 Moca 152.37 331 *e*PKP **PKPbc 09 34 48.2 -0.6**
SRO2 *e* 09 35 01.7
BAIL Bailesti 152.38 320 ⇓P **PKiKP 09 34 49.7 +0.7**
KDZ Kurdzhali 152.38 314 *e*P **PKPdf 09 34 40.3 -1.4**
HERR Herculane 152.38 323 ⇑P **PKPdf 09 34 42.2 +0.7**
GUNZ Gunzen 152.42 341 *e*PKPdf **PKPdf 09 34 41.3 -0.2**
baz=26,slow=1.4
GUNZ *e*PKPbc **PKiKP 09 34 49.5 +0.4**
baz=22,slow=2.2
GUNZ *e*PKPab **PKPab 09 35 02.6 +1.0**
baz=20,slow=4.2
GUNZ epPKPbc **pPKPab 09 36 57.7 -0.2**
baz=22,slow=2.4
PUNG Punghina 152.46 321 ⇑P **PKPbc 09 34 48.2 -0.9**
TIM Timisoara 152.47 325 ⇓P **PKiKP 09 34 50.5 +1.3**
TIM Timisoara 152.47 325 ⇓PKIKP **PKiKP 09 34 50.5 +1.3**
WERN Wernitzgruen 152.47 341 *e*PKPdf **PKPdf 09 34 41.5 -0.1**
baz=26,slow=1.4
WERN *e*PKPbc **PKiKP 09 34 49.6 +0.4**
baz=22,slow=2.2
WERN *e*PKPab **PKPab 09 35 03.0 +1.1**
baz=20,slow=4.2
WERN epPKPbc **pPKPab 09 36 57.9 -0.2**
baz=22,slow=2.4
DKL Dikili 152.49 308 *e*P **PKPdf 09 34 40.5 -1.4**
PBCC Pribram 152.50 339 *e*PKPDF **PKPdf 09 34 41.5 -0.1**
PBCC ⇑*e*PKP **PKiKP 09 34 49.1 -0.1**
PBCC *e*PKPAB **PKPab 09 35 02.3 +0.4**
PBCC *e*PP PP 09 38 22.0 -15
NKC Novy Kostel 152.50 341 *e*PKIKP **PKPdf 09 34 41.6 0.0**
NKC *e* 09 34 49.1
NKC *e* 09 35 02.4
NKC *e* 09 38 31.5
NKC Novy Kostel 152.50 341 *e*PKPDF **PKPdf 09 34 41.6 0.0**
NKC ⇑*e*PKP **PKiKP 09 34 49.1 -0.1**
NKC *e*PKPAB **PKPab 09 35 02.4 +0.5**
NKC *e*PP **PP 09 38 31.5 -5.4**
RDO Rodhopi 152.54 313 P **PKPdf 09 34 41.0 -0.9**
RDO Rodhopi 152.54 313 *e*P **PKPdf 09 34 40.6 -1.3**
ZST Bratislava 152.58 333 *e*PKIKP **PKPdf 09 34 41.7 0.0**
ZST *e* 09 34 49.1
ZST *e* 09 35 02.7
ZST *e* 09 38 39.2
ZST Bratislava 152.58 333 *e*PKP **PKPdf 09 34 41.7 0.0**
ZST *e* 09 34 49.1
ZST *e* 09 35 02.7
ZST *e*PP **PP 09 38 39.2 +1.7**
BUG Bochum--Univer 152.60 349 *e*PKPbc **PKPbc 09 34 49.1 0.0**
baz=22,slow=2.2
BUG *e*PKPab **PKPab 09 35 02.1 -0.1**
baz=20,slow=4.2
EZN Ezine 152.60 310 *e*P **PKPdf 09 34 40.3 -1.7**
PLD Plovdiv 152.61 316 *e*P **PKPdf 09 34 41.3 -0.7**
PLD Plovdiv 152.61 316 *e*P **PKPdf 09 34 40.7 -1.3**
UBBA Unterbreizbach 152.62 345 *e*PKPdf **PKPdf 09 34 41.3 -0.2**
baz=26,slow=1.4
UBBA *e*PKPbc **PKiKP 09 34 49.3 0.0**
baz=22,slow=2.2
UBBA *e*PKPab **PKPab 09 35 02.7 +0.4**
baz=20,slow=4.2
RSBS Rosebush, Pemb 152.67 5 *e*P **PKPdf 09 34 39.1 -2.6**
PGB Panagyurishte 152.71 317 *e*P **PKPdf 09 34 41.6 -0.6**
GADA Gvkgeada 152.74 311 *e*P **PKPdf 09 34 40.5 -1.7**
BANR Banloc 152.75 325 ⇑P **PKiKP 09 34 50.9 +1.1**
PCED Cedros 152.75 53 *e*PKP **PKPdf 09 34 44.0 +1.7**
GCAM G?zelcaml? 152.76 305 *e*P **PKPdf 09 34 41.5 -0.8**
BOZC Bozcaada 152.78 310 *e*P **PKPdf 09 34 40.8 -1.5**
RZN Rozhen 152.81 315 *e*P **PKPdf 09 34 41.1 -1.4**
MDVR Moldovita 152.83 323 ⇓P **PKPdf 09 34 42.4 +0.1**
HOR Horta 152.84 53 *e*PKP **PKPdf 09 34 44.3 +1.9**
PRK Paraskevi 152.88 309 P **PKPdf 09 34 42.2 -0.2**
BODT Bodrum 152.91 304 *e*P **PKPdf 09 34 41.5 -1.1**
PCAN Candelaria 152.97 53 *e*PKP **PKPdf 09 34 44.7 +2.1**
ROTZ Rotzenmuhle 152.99 341 *e*PKPdf **PKPdf 09 34 41.7 -0.6**
baz=26,slow=1.4
ROTZ *e*PKPbc **PKiKP 09 34 50.3 +0.1**
baz=22,slow=2.2
ROTZ *e*PKPab **PKPab 09 35 05.1 +1.1**
baz=20,slow=4.2
ROTZ epPKPab **pPKPab 09 37 08.2 +8.0**
baz=21,slow=4.2
URLA Izmir 152.99 307 *e*P **PKPdf 09 34 41.4 -1.3**
PICO Pico 153.00 53 *e*PKP **PKPdf 09 34 44.1 +1.4**
ROSA Rosais 153.05 52 *e*PKP **PKPdf 09 34 45.3 +2.6**
SRBC Serra Branca 153.07 52 *e*PKP **PKPdf 09 34 45.4 +2.7**
OLDB Oldbury-Upon-S 153.09 2P **PKPdf 09 34 40.1 -2.2**
KHC Kasperske Hory 153.11 339 *e*PKIKP **PKPdf 09 34 41.7 -0.8**
KHC *e* 09 34 50.6
KHC *e* 09 35 05.1
KHC *e* 09 38 42.4
KHC Kasperske Hory 153.11 339 *e*PKPDF **PKPdf 09 34 41.7 -0.8**
KHC ⇑*e*PKP **PKiKP 09 34 50.6 +0.1**
KHC *e*PKPAB **PKPab 09 35 05.1 +0.5**
KHC *e*PP **PP 09 38 42.4 +2.0**
PGRA Graciosa 153.11 51 *e*PKP **PKPdf 09 34 43.0 +0.2**
SIGR SIGRI 153.19 309 P **PKPdf 09 34 41.1 -1.8**
SIGR SIGRI 153.19 309 *e*P **PKPdf 09 34 41.5 -1.4**
PMAN Manadas 153.19 52 *e*PKP **PKPdf 09 34 44.9 +2.0**
VTS Vitosha 153.25 318 P **PKPdf 09 34 41.6 -1.5**
VTS Vitosha 153.25 318 ⇓P **PKPdf 09 34 43.8 +0.7**
VTS Vitosha 153.25 318 *e*P **PKPdf 09 34 42.7 -0.4**
VTS Vitosha 153.25 318 ⇓PKIKP **PKPdf 09 34 43.8 +0.7**
SWN1 Swindon 153.25 1⇑*e*P **PKPdf 09 34 41.1 -1.5**
KAVA Kavala 153.29 314 P **PKPdf 09 34 42.2 -0.8**
CONA Conrad Observa 153.29 334 *e*PKPdf **PKPdf 09 34 42.1 -0.8**
comp=Z,128nm,1.3s,SNR=50
CONA *e*PKPab **PKPab 09 35 06.1 +0.6**
comp=Z,180nm,0.7s
CONA *e*PKPab **pPKPab 09 37 09.6 +8.1**
comp=Z,144nm,1.1s
GEC2 GERESS Array S 153.32 338 *e*PKPdf **PKPdf 09 34 42.4 -0.5**
baz=26,slow=1.4
GEC2 *e*PKPbc **PKiKP 09 34 51.1 +0.1**
baz=22,slow=2.2
GEC2 *e*PKPab **PKPab 09 35 06.2 +0.6**
baz=20,slow=4.2
GEC2 epPKPbc **pPKPab 09 36 59.0 -2.6**
baz=22,slow=2.4
GEC2 epPKPab pPKPbc 09 37 09.3 +17
baz=21,slow=4.2
GERES GERESS Array B 153.32 338 PKP **PKPdf 09 34 42.2 -0.7**
comp=Z,23nm,0.8s,baz=48,slow=2.0,SNR=114
GERES PKPbc **PKiKP 09 34 51.7 +0.7**
comp=Z,123nm,1.0s,baz=45,slow=1.8,SNR=36
GERES PKPab **PKPab 09 35 06.0 +0.5**
comp=Z,55nm,0.6s,baz=48,slow=4.0,SNR=16
WET Wettzell 153.33 340 *e*PKPdf **PKPdf 09 34 42.6 -0.3**
baz=26,slow=1.4
WET *e*PKPbc **PKiKP 09 34 51.1 +0.2**
baz=22,slow=2.2
WET *e*PKPab **PKPab 09 35 06.7 +1.1**
baz=20,slow=4.2
WET epPKPbc **pPKPab 09 36 59.5 -2.2**
baz=22,slow=2.4
WET epPKPab **pPKPab 09 37 09.7 +8.1**
baz=21,slow=4.2
WET Wettzell 153.33 340 PKIKP **PKPdf 09 34 42.3 -0.5**
GRF Grafenberg Arr 153.34 342 *e*PKPdf **PKPdf 09 34 42.5 -0.3**
baz=26,slow=1.4
GRF *e*PKPbc **PKiKP 09 34 51.2 +0.3**
baz=22,slow=2.2
GRF *e*PKPab **PKPab 09 35 06.6 +1.1**
baz=20,slow=4.2
GRF epPKPab **pPKPab 09 37 09.5 +7.9**
baz=21,slow=4.2
GRF *e*PP **PP 09 38 39.5 -2.0**
baz=39,slow=5.1
GRF *e*PPP PPP 09 42 12.0
baz=28,slow=6.9
LIA Limnos Island 153.36 311 P **PKPdf 09 34 41.4 -1.7**
CHOS Chios island 153.37 307 P **PKPdf 09 34 42.9 -0.4**
CHOS Chios island 153.37 307 *e*P **PKPdf 09 34 41.5 -1.8**
MORH Mrgy, Hungar 153.41 329⇓*i*P **PKPdf 09 34 42.0 -1.0**
WOL Wolverton 153.46 0 *e*P **PKPdf 09 34 40.8 -2.1**
AHRW Bad Neuenahr-A 153.50 348 *e*PKPdf **PKPdf 09 34 42.8 -0.2**
baz=26,slow=1.4
AHRW *e*PKPbc **PKiKP 09 34 51.3 +0.1**
baz=22,slow=2.2
AHRW *e*PKPab **PKPab 09 35 06.2 +0.1**
baz=20,slow=4.2
AHRW epPKPbc **pPKPab 09 36 59.4 -2.9**
baz=22,slow=2.4
MMB Musomiste 153.50 315 *e*P **PKPdf 09 34 41.9 -1.4**
TNS Taunus Mts 153.53 346 *e*PKPdf **PKPdf 09 34 43.0 -0.1**
baz=26,slow=1.4
TNS *e*PKPbc **PKiKP 09 34 51.6 +0.3**
baz=22,slow=2.2
TNS *e*PKPab **PKPab 09 35 06.7 +0.4**
baz=20,slow=4.2
TNS epPKPab **pPKPab 09 37 09.5 +7.0**
baz=21,slow=4.2
NVR Nevrokopi 153.54 315 P **PKPdf 09 34 42.6 -0.8**
ELSH Elham, Standar 153.58 357 *e*P **PKPdf 09 34 41.4 -1.7**
FRGS Fruska Gora 153.59 326⇓*i*P **PKPdf 09 34 42.3 -1.0**
HTL Hartlnd 153.64 5 *e*P **PKPdf 09 34 40.1 -3.0**
KKB Krupnik 153.76 317 *e*P **PKPdf 09 34 42.7 -0.9**
ADH Angra Heroismo 153.80 52 *e*PKP **PKPdf 09 34 45.5 +1.7**
PSCM Serra do Cume 153.86 52 *e*PKP **PKPdf 09 34 44.8 +0.9**
HMNX Herstmonceux 153.89 358 *e*P **PKPdf 09 34 42.1 -1.3**
MOA Molln 153.97 336 *e*PKPdf **PKPdf 09 34 42.8 -0.9**
comp=Z,83nm,1.4s,SNR=47
MOA *e*PKPab **PKPab 09 35 09.2 +1.0**
comp=Z,260nm,1.2s
OUR Ouranopolis 153.97 313 *e*P **PKPdf 09 34 41.9 -2.0**
ARSA Arzberg 153.98 334 *i* PKPdf **PKPdf 09 34 42.5 -1.3**
comp=Z,76nm,1.3s,SNR=31
ARSA *e*PKPab **PKPab 09 35 09.0 +0.7**
comp=Z,62nm,0.7s
TEKS Tekeris 154.15 325⇓*i*P **PKPdf 09 34 44.2 +0.1**
DIVS Divibare 154.21 324⇓*i*P **PKPdf 09 34 43.6 -0.7**
APE Apeiranthos 154.25 305 ⇓P **PKPdf 09 34 42.5 -2.0**
APE Apeiranthos 154.25 305 *e*P **PKPdf 09 34 42.3 -2.2**
APE Apeiranthos 154.25 305 ⇓PKIKP **PKPdf 09 34 42.5 -2.0**
KNT Kendrikon 154.25 315 P **PKPdf 09 34 43.4 -1.0**
GIVF Givet 154.28 351 *e*PKIKP **PKPdf 09 34 44.0 -0.1**
GIVF pmax pmax
comp=Z,453nm,1.8s
KOGS Kog 154.31 332 *i* PKPdf **PKPdf 09 34 43.3 -0.9**
KOGS *e* 09 34 53.0
PAIG Paliouri 154.37 312 P **PKPdf 09 34 41.5 -3.0**
BAIF Baives 154.40 352 *e*PKIKP **PKPdf 09 34 44.1 -0.1**
BAIF pmax pmax
comp=Z,312nm,1.8s
HORT Hortiatis 154.42 314 P **PKPdf 09 34 43.4 -1.3**
HORT Hortiatis 154.42 314 *e*P **PKPdf 09 34 42.3 -2.4**
WLF Walferdange 154.50 349 *e*PKPdf **PKPdf 09 34 44.8 +0.5**
baz=26,slow=1.4
WLF *e*PKPbc **PKPbc 09 34 54.0 +0.7**
baz=22,slow=2.2
WLF *e*PKPab **PKPab 09 35 11.0 +0.6**
baz=20,slow=4.2
SANT Santorini 154.55 303 ⇓P **PKPdf 09 34 44.6 -0.3**
IOSP Ios island 154.55 304 P **PKPdf 09 34 44.9 0.0**
RJOB Jochberg 154.58 338 *e*PKPdf **PKPdf 09 34 43.8 -0.9**
baz=26,slow=1.4
RJOB *e*PKPab **PKPab 09 35 12.2 +1.3**
baz=20,slow=4.2
RJOB epPKPab **pPKPab 09 37 15.0 +8.1**
baz=21,slow=4.2
SOKA Soboth 154.64 334 *e*PKPdf **PKPdf 09 34 43.7 -1.1**
comp=Z,162nm,1.2s,SNR=54
SOKA *e*PKPab **PKPab 09 35 11.6 +0.3**
comp=Z,379nm,1.2s
SOKA epPKPab **pPKPab 09 37 14.6 +7.4**
comp=Z,81nm,1.1s
BBLS Lazići 154.68 324⇓*i*P **PKPdf 09 34 44.3 -0.6**
GRG Griva 154.68 315 P **PKPdf 09 34 43.1 -1.9**
KARY Karystos 154.68 308 P **PKPdf 09 34 40.8 -4.2**
FUR Furstenfeldbru 154.69 341 *e*PKPdf **PKPdf 09 34 44.4 -0.4**
baz=26,slow=1.4
FUR *e*PKPbc **PKPbc 09 34 53.8 0.0**
baz=22,slow=2.2
FUR *e*PKPab **PKPab 09 35 12.5 +1.1**
baz=20,slow=4.2
FUR epPKPab **pPKPab 09 37 15.3 +7.9**
baz=21,slow=4.2
FUR Furstenfeldbru 154.69 341 PKIKP **PKPdf 09 34 44.6 -0.1**
SKO Skopje 154.71 318 *i* P **PKPdf 09 34 45.3 +0.3**
SKO Skopje 154.71 318 *i* P **PKPdf 09 34 45.3 +0.3**
STU Stuttgart 154.71 344 *e*PKPdf **PKPdf 09 34 44.6 -0.1**
baz=26,slow=1.4
STU *e*PKPbc **PKPbc 09 34 54.2 +0.4**
baz=22,slow=2.2
STU *e*PKPab **PKPab 09 35 12.0 +0.6**
baz=20,slow=4.2
STU epPKPab **pPKPab 09 37 14.7 +7.3**
baz=21,slow=4.2
MOSL Moslavina 154.74 330 *i* P **PKPdf 09 34 44.9 0.0**
HAPS Han Pijesak,BI 154.77 325 *e*P **PKPdf 09 34 48.2 +3.1**
PTJ Puntijarka 154.86 331 P **PKPdf 09 34 44.5 -0.7**
SKIA Skiathos 154.87 311 P **PKPdf 09 34 43.5 -1.8**
ZAG Zagreb 154.91 331⇓*i*P **PKPdf 09 34 45.2 +0.1**
ZAG Zagreb 154.91 331 P **PKPdf 09 34 44.8 -0.3**
KBA Koelnbreinsper 154.95 336 *e*PKPdf **PKPdf 09 34 43.9 -1.4**
comp=Z,86nm,1.2s,SNR=32
KBA *e*PKPab **PKPab 09 35 13.7 +1.0**
comp=Z,102nm,0.8s
KBA Koelnbreinsper 154.95 336 PKIKP **PKPdf 09 34 45.4 +0.1**
OBKA Obir 154.97 334 *e*PKPdf **PKPdf 09 34 44.3 -0.9**
comp=Z,57nm,1.3s,SNR=11
OBKA *e*PKPab **PKPab 09 35 11.9 -0.9**
comp=Z,106nm,0.9s
NEO Neokhori 154.97 311 P **PKPdf 09 34 43.5 -1.9**
MRKA Markates 155.00 310 P **PKPdf 09 34 44.5 -1.0**
PLE Pljevlja 155.04 323⇑*i*PKP **PKPdf 09 34 45.2 -0.3**
IVA Berane 155.06 322⇓*i*PKP **PKPdf 09 34 45.0 -0.5**
LIT Litokhoron 155.07 314 P **PKPdf 09 34 43.3 -2.2**
PTL Penteli 155.09 308 P **PKPdf 09 34 43.3 -2.3**
CRES Cresnjev 155.15 332⇓*i*P **PKPdf 09 34 44.7 -0.7**
ATHU Athens Univers 155.18 308 P **PKPdf 09 34 43.5 -2.2**
BLY Banja Luka 155.19 328 ⇑P **PKPdf 09 34 46.0 +0.5**
BLY Banja Luka 155.19 328⇓*i*P **PKPdf 09 34 44.9 -0.6**

PVY	**Plav**	**155.20**	**321**	⇓iPKP	**PKPdf**	**09 34 45.2**	**-0.6**
MYKA	**Terra Mystica**	**155.22**	**336**	i PKPdf	**PKPdf**	**09 34 44.5**	**-1.1**
	comp=Z,104nm,1.5s,SNR=27						
MYKA				ePKPab	**PKPab**	**09 35 13.7**	**-0.1**
	comp=Z,199nm,0.9s						
MYKA				epPKPab	**pPKPab**	**09 37 16.4**	**+6.7**
	comp=Z,123nm,1.2s						
VLY	**Voula,Athens**	**155.22**	**308**	P	**PKPdf**	**09 34 42.2**	**-3.6**
PSET	**Sete Cidades**	**155.23**	**52**	ePKP	**PKPdf**	**09 34 47.6**	**+1.8**
KOME	**Kolasin**	**155.29**	**322**	⇓iPKP	**PKPdf**	**09 34 44.6**	**-1.2**
PDA	**Ponta Delgada**	**155.30**	**52**	ePKP	**PKPdf**	**09 34 47.8**	**+2.0**
BFO	**Black Forest**	**155.33**	**345**	ePKPdf	**PKPdf**	**09 34 45.0**	**-0.6**
	baz=26,slow=1.4						
BFO				ePKPbc	PKPbc	09 34 55.0	
	baz=22,slow=2.2						
BFO				ePKPab	**PKPab**	**09 35 14.3**	**+0.2**
	baz=20,slow=4.2						
BFO				epPKPab	**pPKPab**	**09 37 17.2**	**+7.0**
	baz=21,slow=4.2						
BFO	**Black Forest**	**155.33**	**345**	PKP2	**PKPab**	**09 35 14.1**	**0.0**
BFO						10 34 44.3	
BFO	**Black Forest**	**155.33**	**345**		**PKPdf**	**09 34 44.3**	**-1.3**
BFO				PKPab	**PKPab**	**09 35 14.1**	**0.0**
IDI	**Anoyia**	**155.34**	**301**	P	**PKPdf**	**09 34 46.0**	**-0.1**
IDI	**Anoyia**	**155.34**	**301**	PKP	**PKPdf**	**09 34 46.4**	**+0.3**
	comp=Z,102nm,0.9s,baz=68,slow=3.7,SNR=22						
IDI	**Anoyia**	**155.34**	**301**	⇑P	**PKPdf**	**09 34 46.3**	**+0.2**
IDI	**Anoyia**	**155.34**	**301**	eP	**PKPdf**	**09 34 43.5**	**-2.6**
WATA	**Walderalm**	**155.34**	**339**	i PKPdf	**PKPdf**	**09 34 44.6**	**-1.2**
	comp=Z,134nm,1.3s,SNR=65						
WATA				ePKPab	**PKPab**	**09 35 15.0**	**+0.7**
	comp=Z,345nm,1.3s						
LJU	**Ljubljana**	**155.36**	**334**	i PKPdf	**PKPdf**	**09 34 45.2**	**-0.5**
LJU				i PKPab	**PKPab**	**09 35 13.6**	**-0.7**
LJU	**Ljubljana**	**155.36**	**334**	⇓iP	**PKPdf**	**09 34 45.1**	**-0.6**
WTTA	**Wattenberg**	**155.38**	**339**	i PKPdf	**PKPdf**	**09 34 45.1**	**-0.8**
	comp=Z,191nm,1.3s,SNR=70						
WTTA				i PKPab	**PKPab**	**09 35 15.4**	**+0.8**
	comp=Z,251nm,0.8s						
WTTA	**Wattenberg**	**155.38**	**339**	PKIKP	**PKPdf**	**09 34 45.2**	**-0.7**
GRON	**Grota Negra**	**155.38**	**52**	ePKP	**PKPdf**	**09 34 47.6**	**+1.6**
CMLA	**Cha da Macela**	**155.39**	**52**	ePKP	**PKPdf**	**09 34 47.6**	**+1.6**
CMLA	**Cha da Macela**	**155.39**	**52**	PKIKP	**PKPdf**	**09 34 47.1**	**+1.1**
CMLA						09 35 15.6	
CMLA	**Cha da Macela**	**155.39**	**52**		**PKPdf**	**09 34 47.1**	**+1.1**
CMLA				PKPab	**PKPab**	**09 35 15.6**	**+0.8**
UPM	**Unac-Piva**	**155.39**	**323**	⇓iPKP	**PKPdf**	**09 34 45.3**	**-0.8**
PCALD	**Caldeiras da R**	**155.41**	**52**	ePKP	**PKPdf**	**09 34 48.4**	**+2.4**
VISS	**Visnje**	**155.42**	**333**	i PKPdf	**PKPdf**	**09 34 45.3**	**-0.5**
VISS				e		09 34 55.8	
VISS				ePKPab	**PKPab**	**09 35 13.5**	**-1.1**
FNA	**Florina**	**155.43**	**316**	P	**PKPdf**	**09 34 44.4**	**-1.6**
FNA	**Florina**	**155.43**	**316**	eP	**PKPdf**	**09 34 44.1**	**-1.9**
VILL	**Villia**	**155.43**	**309**	P	**PKPdf**	**09 34 44.6**	**-1.5**
LKR	**Lokris**	**155.43**	**310**	P	**PKPdf**	**09 34 44.1**	**-1.9**
RETA	**Reutte**	**155.45**	**341**	i PKPdf	**PKPdf**	**09 34 45.0**	**-0.9**
	comp=Z,148nm,2.2s,SNR=25						
RETA				i PKPab	**PKPab**	**09 35 15.6**	**+0.9**
	comp=Z,312nm,0.9s						
RETA				epPKPab	**pPKPab**	**09 37 18.0**	**+7.3**
	comp=Z,100nm,1.2s						
UBR	**Ueberruh**	**155.47**	**342**	ePKPdf	**PKPdf**	**09 34 45.2**	**-0.6**
	baz=26,slow=1.4						
UBR				ePKPbc	PKPbc	09 34 55.5	
	baz=22,slow=2.2						
UBR				ePKPab	**PKPab**	**09 35 15.2**	**+0.4**
	baz=20,slow=4.2						
MOTA	**Moosalm**	**155.48**	**340**	ePKPdf	**PKPdf**	**09 34 45.0**	**-1.0**
	comp=Z,160nm,1.2s,SNR=58						
MOTA				ePKPab	**PKPab**	**09 35 15.6**	**+0.7**
	comp=Z,629nm,1.3s						
MOTA				epPKPab	**pPKPab**	**09 37 17.9**	**+7.0**
	comp=Z,139nm,1.8s						
MGRS	**Mrkonjic Grad**	**155.48**	**328**	eP	**PKPdf**	**09 34 46.6**	**+0.7**
PHP	**Peshkopia**	**155.48**	**319**	P	**PKPdf**	**09 34 44.9**	**-1.2**
CDF	**Champ du Feu**	**155.49**	**347**	ePKIKP	**PKPdf**	**09 34 46.3**	**+0.4**
CDF				pmax	pmax		
	comp=Z,176nm,1.4s						
CADS	**Cadrg**	**155.52**	**335**	ePKPdf	**PKPdf**	**09 34 44.6**	**-1.4**
ABTA	**Abfaltersbach**	**155.53**	**337**	ePKPdf	**PKPdf**	**09 34 44.8**	**-1.2**
	comp=Z,193nm,1.1s,SNR=55						
ABTA				ePKPab	**PKPab**	**09 35 14.8**	**-0.3**
	comp=Z,159nm,0.9s						
ABTA				epPKPab	**pPKPab**	**09 37 17.9**	**+6.8**
	comp=Z,80nm,1.2s						
SQTA	**Sankt Quirin**	**155.55**	**340**	ePKPdf	**PKPdf**	**09 34 45.2**	**-0.9**
	comp=Z,160nm,1.1s,SNR=49						
SQTA				ePKPab	**PKPab**	**09 35 15.4**	**+0.2**
	comp=Z,270nm,0.9s						
OHR	**Ohrid**	**155.60**	**317**	i P	**PKPdf**	**09 34 46.2**	**0.0**
OHR	**Ohrid**	**155.60**	**317**	i P	**PKPdf**	**09 34 46.2**	**0.0**
NKY	**Niksic**	**155.60**	**323**	⇓iPKP	**PKPdf**	**09 34 45.2**	**-1.0**
AXAR	**Agios Charalam**	**155.62**	**311**	P	**PKPdf**	**09 34 46.0**	**-0.3**
BART	**Pico Bartolome**	**155.64**	**52**	ePKP	**PKPdf**	**09 34 48.4**	**+2.0**
CEY	**Cerknica**	**155.65**	**333**	⇓iP	**PKPdf**	**09 34 45.3**	**-0.8**
NKME	**Niksic**	**155.66**	**323**	⇓iPKP	**PKPdf**	**09 34 45.8**	**-0.4**
THL	**Klokotos Trika**	**155.66**	**313**	P	**PKPdf**	**09 34 44.5**	**-1.8**
PDG	**Podgorica**	**155.71**	**322**	⇓P	**PKPdf**	**09 34 46.1**	**-0.1**
PDG	**Podgorica**	**155.71**	**322**	⇓iP	**PKPdf**	**09 34 44.8**	**-1.4**
TTG	**Podgorica**	**155.71**	**322**	⇓iPKP	**PKPdf**	**09 34 45.2**	**-1.0**
AGG	**Agios Georgios**	**155.72**	**312**	P	**PKPdf**	**09 34 45.4**	**-1.0**
AGG	**Agios Georgios**	**155.72**	**312**	eP	**PKPdf**	**09 34 44.6**	**-1.8**
DID	**Didima**	**155.77**	**307**	P	**PKPdf**	**09 34 43.8**	**-2.7**
BRY	**Bratogost**	**155.79**	**323**	eP	**PKPdf**	**09 34 45.9**	**-0.6**
BRY	**Bratogost**	**155.79**	**323**	⇓iPKP	**PKPdf**	**09 34 45.8**	**-0.7**
CEME	**Cevo**	**155.82**	**322**	⇓iPKP	**PKPdf**	**09 34 45.6**	**-0.9**
MAKR	**Makrakomi, Fth**	**155.86**	**312**	P	**PKPdf**	**09 34 47.0**	**+0.4**
FETA	**Feichten**	**155.88**	**340**	ePKPdf	**PKPdf**	**09 34 45.8**	**-0.7**
	comp=Z,252nm,1.2s,SNR=104						
KPRO	**Kipourio**	**155.89**	**314**	P	**PKPdf**	**09 34 46.2**	**-0.5**
DAVA	**Damuels**	**155.89**	**342**	i PKPdf	**PKPdf**	**09 34 45.9**	**-0.7**
	comp=Z,99nm,1.1s,SNR=39						
DAVA				ePKPab	**PKPab**	**09 35 17.0**	**+0.3**
	comp=Z,410nm,1.1s						
DAVA				epPKPab	**pPKPab**	**09 37 20.1**	**+7.4**
	comp=Z,118nm,1.0s						
DRME	**Dracevica, Mon**	**155.90**	**321**	⇓iP	**PKPdf**	**09 34 45.4**	**-1.1**
DRME	**Dracevica, Mon**	**155.90**	**321**	⇓iPKP	**PKPdf**	**09 34 45.8**	**-0.7**
TRI	**Trieste**	**155.94**	**334**	PKIKP	**PKPdf**	**09 34 46.5**	**+0.1**
RIY	**Rijeka**	**155.96**	**333**	⇓iP	**PKPdf**	**09 34 45.5**	**-1.0**
BUM	**Brajici-Budva**	**156.00**	**322**	⇓iPKP	**PKPdf**	**09 34 47.0**	**+0.3**
PSMA	**Santa Maria**	**156.00**	**54**	ePKP	**PKPdf**	**09 34 47.8**	**+1.0**
ULC	**Ulcinj**	**156.01**	**321**	⇓iPKP	**PKPdf**	**09 34 46.5**	**-0.2**
FLN	**La Foliniere**	**156.01**	**359**	ePKIKP	**PKPdf**	**09 34 46.0**	**-0.4**
FLN				pmax	pmax		
	comp=Z,209nm,1.1s						
UDBI	**Udbina**	**156.02**	**330**	i P	**PKPdf**	**09 34 45.9**	**-0.8**
TREB	**Trebinje**	**156.02**	**323**	eP	**PKPdf**	**09 34 45.7**	**-1.0**
TIR	**Tirane**	**156.03**	**319**	⇑P	**PKPdf**	**09 34 48.5**	**+1.8**
TIR	**Tirane**	**156.03**	**319**	⇑PKIKP	**PKPdf**	**09 34 48.5**	**+1.8**
PSMN	**Pico do Norte,**	**156.04**	**54**	ePKP	**PKPdf**	**09 34 47.8**	**+0.9**
HAU	**Haudompre**	**156.06**	**348**	ePKIKP	**PKPdf**	**09 34 46.2**	**-0.4**
HAU				pmax	pmax		
	comp=Z,277nm,1.4s						
KIJV	**Kijevo**	**156.11**	**328**	i P	**PKPdf**	**09 34 46.8**	**0.0**
HCY	**Herceg Novi**	**156.12**	**322**	⇓iPKP	**PKPdf**	**09 34 46.2**	**-0.6**
HINF	**Hinteralfeld**	**156.14**	**347**	ePKIKP	**PKPdf**	**09 34 46.2**	**-0.5**
HINF				pmax	pmax		
	comp=Z,254nm,1.5s						
KALE	**Kalithea**	**156.15**	**310**	P	**PKPdf**	**09 34 46.3**	**-0.7**
DBRK	**Dubrovnik**	**156.16**	**323**	i P	**PKPdf**	**09 34 45.6**	**-1.2**
LDF	**La Druitiere**	**156.18**	**359**	ePKIKP	**PKPdf**	**09 34 46.1**	**-0.6**
LDF				pmax	pmax		
	comp=Z,158nm,1.1s						
SERG	**Sergoula**	**156.20**	**310**	P	**PKPdf**	**09 34 47.4**	**+0.3**
ANX	**Ano Chora**	**156.21**	**311**	P	**PKPdf**	**09 34 47.2**	**0.0**
STON	**Ston**	**156.27**	**324**	⇓iP	**PKPdf**	**09 34 45.8**	**-1.1**
EFP	**Efpalio**	**156.29**	**311**	P	**PKPdf**	**09 34 47.8**	**+0.7**
KLV	**Kalavryta, Ach**	**156.30**	**310**	P	**PKPdf**	**09 34 47.1**	**-0.2**
MAKA	**Makarska**	**156.33**	**326**	i P	**PKPdf**	**09 34 46.5**	**-0.5**
LAKA	**Lakka**	**156.33**	**310**	P	**PKPdf**	**09 34 46.4**	**-0.8**
DAVOX	**Davos/Dischmat**	**156.35**	**341**	PKP	**PKPdf**	**09 34 46.7**	**-0.5**
	comp=Z,78nm,1.0s,baz=64,slow=1.9,SNR=69						
DAVOX				PKPab	**PKPab**	**09 35 19.7**	**+0.9**
	comp=Z,278nm,0.8s,baz=319,slow=4.1,SNR=27						
ROSF	**Rostrenen**	**156.37**	**4**	ePKIKP	**PKPdf**	**09 34 47.1**	**+0.2**
ROSF				pmax	pmax		
	comp=Z,90nm,1.2s						
GRR	**Gorron**	**156.39**	**360**	ePKIKP	**PKPdf**	**09 34 46.5**	**-0.4**
GRR				pmax	pmax		
	comp=Z,303nm,1.5s						
NVLJ	**Novalja**	**156.40**	**331**	i P	**PKPdf**	**09 34 44.5**	**-2.5**
SGMF	**Saint Gilles**	**156.49**	**3**	ePKIKP	**PKPdf**	**09 34 46.3**	**-0.8**
SGMF				pmax	pmax		
	comp=Z,213nm,1.5s						
ZIRJ	**Zirje**	**156.74**	**328**	i P	**PKPdf**	**09 34 47.5**	**0.0**
DUGI	**Dugi Otok**	**156.76**	**330**	i P	**PKPdf**	**09 34 46.9**	**-0.6**
QUIF	**Quistinic**	**156.80**	**4**	ePKIKP	**PKPdf**	**09 34 46.8**	**-0.6**
QUIF				pmax	pmax		
	comp=Z,173nm,1.6s						
ITM	**Ithomi**	**156.85**	**308**	eP	**PKPdf**	**09 34 46.3**	**-1.6**
LOR	**Lormes**	**157.19**	**352**	ePKIKP	**PKPdf**	**09 34 47.7**	**-0.3**
LOR				pmax	pmax		
	comp=Z,413nm,1.8s						
AVF	**Avril sur Loir**	**157.72**	**352**	ePKIKP	**PKPdf**	**09 34 48.5**	**-0.1**
AVF				pmax	pmax		
	comp=Z,187nm,1.6s						
BAI	**Bari**	**157.92**	**322**	⇑iP	**PKPab**	**09 35 25.8**	**+0.3**
TAR1	**Taranto**	**158.07**	**320**	⇑iP	**PKPab**	**09 35 27.7**	**+1.5**
SG1	**Sgolgore (BA)**	**158.21**	**322**	⇑iP	**PKPab**	**09 35 27.3**	**+0.4**
MATE	**Matera**	**158.32**	**321**	⇓P	**PKPab**	**09 35 27.7**	**+0.5**
TCF	**Toulx Ste Croi**	**158.34**	**354**	ePKIKP	**PKPdf**	**09 34 49.2**	**-0.3**
TCF				pmax	pmax		
	comp=Z,292nm,1.4s						
LPL	**La Plagne**	**158.35**	**345**	ePKIKP	**PKPdf**	**09 34 51.3**	**+1.5**
LPL				pmax	pmax		
	comp=Z,79nm,1.2s						
LPG	**La Plagne**	**158.37**	**345**	ePKIKP	**PKPdf**	**09 34 51.4**	**+1.5**
LPG				pmax	pmax		
	comp=Z,121nm,1.4s						
AQU	**L'Aquila**	**158.79**	**329**	⇓iP	**PKPdf**	**09 34 49.1**	**-1.1**
MBDF	**Montbardon**	**159.09**	**344**	ePKIKP	**PKPdf**	**09 34 51.7**	**+1.2**
MBDF				pmax	pmax		
	comp=Z,282nm,1.6s						
ORIF	**Oris-en-Rattie**	**159.11**	**346**	ePKIKP	**PKPdf**	**09 34 51.6**	**+1.1**
ORIF				pmax	pmax		
	comp=Z,82nm,1.1s						
TIP	**Timpagrande**	**159.24**	**318**	⇓P	**PKPdf**	**09 34 50.5**	**-0.3**
RJF	**Les Rejaudoux**	**159.38**	**355**	ePKIKP	**PKPdf**	**09 34 50.5**	**-0.2**
RJF				pmax	pmax		
	comp=Z,313nm,1.4s						
VIVF	**Saint-Julien-l**	**159.41**	**349**	ePKIKP	**PKPdf**	**09 34 50.7**	**-0.1**
VIVF				pmax	pmax		
	comp=Z,180nm,1.5s						
CAF	**Calviac**	**159.71**	**354**	ePKIKP	**PKPdf**	**09 34 52.2**	**+1.1**
CAF				pmax	pmax		
	comp=Z,184nm,1.4s						
SBF	**Sospel**	**159.72**	**342**	ePKIKP	**PKPdf**	**09 34 51.6**	**+0.4**
SBF				pmax	pmax		
	comp=Z,180nm,1.2s						
LFF	**La Frestale**	**159.79**	**357**	ePKIKP	**PKPdf**	**09 34 50.9**	**-0.2**
LFF				pmax	pmax		
	comp=Z,90nm,1.2s						
FRF	**La Foret Royal**	**160.21**	**343**	ePKIKP	**PKPdf**	**09 34 52.2**	**+0.6**
FRF				pmax	pmax		
	comp=Z,112nm,1.1s						
PGF	**Pioggiola**	**160.42**	**338**	ePKIKP	**PKPdf**	**09 34 51.2**	**-0.8**
PGF				pmax	pmax		
	comp=Z,352nm,1.7s						
LIC	**Lamto**	**161.19**	**167**	ePKIKP	**PKPdf**	**09 34 53.0**	**-0.6**
	comp=Z,1µm,1.6s						
MTLF	**Montolieu**	**161.26**	**353**	ePKIKP	**PKPdf**	**09 34 52.6**	**-0.2**
MTLF				pmax	pmax		
	comp=Z,200nm,1.6s						
KIC	**Kosan Boka**	**161.37**	**168**	ePKIKP	**PKPdf**	**09 34 53.2**	**-0.6**
	comp=Z,601nm,1.3s						
TIC	**Toumodi**	**161.60**	**167**	ePKIKP	**PKPdf**	**09 34 53.4**	**-0.6**
DBIC	**Dimbokro**	**161.65**	**168**	PKP	**PKPdf**	**09 34 53.8**	**-0.3**
	comp=Z,118nm,1.0s,baz=150,slow=2.2						
DBIC				PKPab	**PKPab**	**09 35 42.9**	**+0.5**
	baz=158,slow=5.2						
SJPF	**Ste Jean**	**161.66**	**1**	ePKIKP	**PKPdf**	**09 34 53.5**	**+0.3**
SJPF				pmax	pmax		
	comp=Z,298nm,1.7s						
EPF	**Esparros**	**161.72**	**357**	ePKIKP	**PKPdf**	**09 34 53.3**	**0.0**
EPF				pmax	pmax		
	comp=Z,186nm,1.2s						
VAE	**Valguarnera**	**161.74**	**318**	PKP	**PKPdf**	**09 34 55.1**	**+1.6**
	comp=Z,6.1nm,0.5s,baz=328,slow=6.8,SNR=6.7						
VAE				PKPab	**PKPab**	**09 35 44.9**	**+2.4**
	comp=Z,230nm,1.1s,baz=114,slow=11,SNR=4.5						
PGAV	**Gavieira, Arco**	**161.78**	**18**	ePKPdf	**PKPdf**	**09 34 53.6**	**+0.1**
PGAV	**Gavieira, Arco**	**161.78**	**18**	ePKPab	**PKPab**	**09 35 42.6**	**+0.2**
PGAV	**Gavieira, Arco**	**161.78**	**18**	ePP	PP	09 39 26.4	-0.8
ETSF	**Etsaut**	**161.88**	**359**	ePKIKP	**PKPdf**	**09 34 53.7**	**+0.2**
ETSF				pmax	pmax		
	comp=Z,73nm,0.8s						
PCAB	**Cabril**	**162.08**	**17**	ePKPdf	**PKPdf**	**09 34 53.8**	**+0.1**
PCAB	**Cabril**	**162.08**	**17**	ePKPab	**PKPab**	**09 35 43.5**	**-0.2**
PBRG	**Braganca**	**162.31**	**14**	ePKPdf	**PKPdf**	**09 34 53.5**	**-0.4**
PBRG	**Braganca**	**162.31**	**14**	ePKPab	**PKPab**	**09 35 44.9**	**+0.2**
PBRG	**Braganca**	**162.31**	**14**	ePP	PP	09 39 29.8	-0.1
MVO	**Moncorvo**	**162.85**	**16**	ePKPdf	**PKPdf**	**09 34 54.8**	**+0.3**
MVO	**Moncorvo**	**162.85**	**16**	ePKPab	**PKPab**	**09 35 47.2**	**+0.1**
MVO	**Moncorvo**	**162.85**	**16**	ePP	PP	09 39 31.9	-0.9
VSL	**Villasalto**	**162.89**	**332**		**PKPdf**	**09 34 53.9**	**-0.6**
VSL					**PKPab**	**09 35 47.3**	**-0.1**
PVIS	**Viseu**	**163.04**	**18**	ePKPdf	**PKPdf**	**09 34 54.9**	**+0.2**
PVIS	**Viseu**	**163.04**	**18**	ePKPab	**PKPab**	**09 35 48.7**	**+0.7**
PVIS	**Viseu**	**163.04**	**18**	ePP	PP	09 39 34.2	+0.4
PCAS	**Casmilo, Conde**	**163.46**	**21**	ePKPdf	**PKPdf**	**09 34 55.9**	**+0.9**
PCAS	**Casmilo, Conde**	**163.46**	**21**	ePKPab	**PKPab**	**09 35 49.9**	**+0.1**
PCAS	**Casmilo, Conde**	**163.46**	**21**	ePP	PP	09 39 35.2	-0.8
PMOZ	**Porto Moniz, M**	**163.65**	**57**	P	**PKPdf**	**09 34 57.4**	**+1.9**
	SNR=5.9						
PMOZ	**Porto Moniz, M**	**163.65**	**57**	ePKPdf	**PKPdf**	**09 34 56.7**	**+1.1**
PMOZ	**Porto Moniz, M**	**163.65**	**57**	ePKPab	**PKPab**	**09 35 51.3**	**+0.1**
PMOZ	**Porto Moniz, M**	**163.65**	**57**	ePP	PP	09 39 39.6	+1.2
PSBE	**So Bento**	**163.85**	**22**	ePKPdf	**PKPdf**	**09 34 55.8**	**+0.4**
PSBE	**So Bento**	**163.85**	**22**	ePKPab	**PKPab**	**09 35 50.7**	**-0.8**
PSBE	**So Bento**	**163.85**	**22**	ePP	PP	09 39 37.7	-0.4
PMAR	**Madeira**	**163.91**	**57**	ePKPdf	**PKPdf**	**09 34 57.1**	**+1.2**
PMAR	**Madeira**	**163.91**	**57**	ePKPab	**PKPab**	**09 35 53.1**	**+0.7**
PMAR	**Madeira**	**163.91**	**57**	ePP	PP	09 39 40.6	+0.8
FUL	**Funchal**	**163.96**	**57**	ePKPdf	**PKPdf**	**09 34 56.8**	**+1.1**
PCBR	**Castelo Branco**	**163.97**	**18**	ePKPdf	**PKPdf**	**09 34 55.6**	**+0.1**
PCBR	**Castelo Branco**	**163.97**	**18**	ePKPab	**PKPab**	**09 35 52.3**	**+0.3**
PCBR	**Castelo Branco**	**163.97**	**18**	ePP	PP	09 39 38.9	+0.4
PMAFR	**Mafra**	**164.17**	**24**	ePKPdf	**PKPdf**	**09 34 55.8**	**+0.1**
PMAFR	**Mafra**	**164.17**	**24**	ePKPab	**PKPab**	**09 35 52.8**	**-0.1**
PMAFR	**Mafra**	**164.17**	**24**	ePP	PP	09 39 39.0	-0.7
PMPST	**Porto Santo, M**	**164.19**	**55**	ePKPdf	**PKPdf**	**09 34 56.7**	**+0.8**
PMPST	**Porto Santo, M**	**164.19**	**55**	ePKPab	**PKPab**	**09 35 54.3**	**+0.9**
PMPST	**Porto Santo, M**	**164.19**	**55**	ePP	PP	09 39 42.0	+1.1
PMPS	**Porto Santo**	**164.20**	**55**	ePKPdf	**PKPdf**	**09 34 56.6**	**+0.7**
PMPS	**Porto Santo**	**164.20**	**55**	ePKPab	**PKPab**	**09 35 54.0**	**+0.6**
PMRV	**Marv??o**	**164.38**	**19**	ePKPdf	**PKPdf**	**09 34 55.8**	**-0.1**
PMRV	**Marv??o**	**164.38**	**19**	ePKPab	**PKPab**	**09 35 53.6**	**-0.2**
PMRV	**Marv??o**	**164.38**	**19**	ePP	PP	09 39 39.3	-1.4
LIS	**Lisbon**	**164.43**	**25**	ePKPdf	**PKPdf**	**09 34 55.6**	**-0.3**
LIS	**Lisbon**	**164.43**	**25**	ePKPdf	**PKPdf**	**09 34 57.6**	**+1.7**
LIS	**Lisbon**	**164.43**	**25**	ePKPab	**PKPab**	**09 35 54.9**	**+0.8**
LIS	**Lisbon**	**164.43**	**25**	ePP	PP	09 39 40.6	-0.4
PMTG	**Montargil**	**164.44**	**22**	ePKPdf	**PKPdf**	**09 34 57.0**	**+1.1**
PMTG	**Montargil**	**164.44**	**22**	ePKPab	**PKPab**	**09 35 55.0**	**+0.9**
PMTG	**Montargil**	**164.44**	**22**	ePP	PP	09 39 40.7	-0.4
PESTR	**Estremoz**	**164.83**	**20**	P	**PKPdf**	**09 34 58.1**	**+1.8**
	SNR=13						
ESDC	**Sonseca Array**	**164.89**	**9**	PKP	**PKPdf**	**09 34 56.4**	**0.0**
	comp=Z,8.9nm,0.8s,baz=350,slow=2.7,SNR=54						
ESDC				PKPab	**PKPab**	**09 35 56.2**	**+0.1**
	comp=Z,93nm,0.8s,baz=345,slow=4.1,SNR=47						
ESDC				SKPbc		09 37 55.9	
	comp=Z,34nm,1.1s,baz=346,slow=4.5,SNR=7.1						
ESDC				PP	**PP**	**09 39 43.4**	**+0.2**
	comp=Z,6.6nm,0.9s,baz=344,slow=5.8,SNR=3.0						
PAB	**San Pablo**	**164.96**	**10**	PKP2	**PKPab**	**09 35 56.3**	**-0.2**
PAB						10 34 57.6	
PAB	**San Pablo**	**164.96**	**10**		**PKPdf**	**09 34 57.6**	**+1.1**
PAB				PKPab	**PKPab**	**09 35 56.3**	**-0.2**
EVO	**Evora**	**165.00**	**22**	PKP1	**PKPdf**	**09 34 54.7**	**-1.7**
EVO	**Evora**	**165.00**	**22**	PKP2	**PKPab**	**09 35 56.0**	**-0.6**
EVO	**Evora**	**165.00**	**22**	ePKPdf	**PKPdf**	**09 34 56.5**	**+0.1**
EVO	**Evora**	**165.00**	**22**	ePKPab	**PKPab**	**09 35 55.7**	**-0.9**
EVO	**Evora**	**165.00**	**22**	ePP	PP	09 39 43.2	-0.7
PNCL	**Nicolau / Gran**	**165.19**	**24**	ePKPdf	**PKPdf**	**09 34 57.1**	**+0.5**
PNCL	**Nicolau / Gran**	**165.19**	**24**	ePKPab	**PKPab**	**09 35 57.6**	**+0.2**
PNCL	**Nicolau / Gran**	**165.19**	**24**	ePP	PP	09 39 43.8	-1.2
PBEJ	**Beja**	**165.50**	**22**	ePKPdf	**PKPdf**	**09 34 57.5**	**+0.6**
PBEJ	**Beja**	**165.50**	**22**	ePKPab	**PKPab**	**09 35 57.8**	**-1.0**
PBEJ	**Beja**	**165.50**	**22**	ePP	PP	09 39 45.5	-1.0
MESJ	**Messejana**	**165.54**	**24**	ePKPdf	**PKPdf**	**09 34 56.6**	**-0.2**
MESJ	**Messejana**	**165.54**	**24**	ePKPdf	**PKPdf**	**09 34 57.7**	**+0.8**
MESJ	**Messejana**	**165.54**	**24**	ePKPab	**PKPab**	**09 35 57.8**	**-1.2**
MESJ	**Messejana**	**165.54**	**24**	ePP	PP	09 39 45.5	-1.3
PTEO	**Sao Teotonio**	**165.61**	**26**	ePKPdf	**PKPdf**	**09 34 57.7**	**+0.8**
PTEO	**Sao Teotonio**	**165.61**	**26**	ePKPab	**PKPab**	**09 35 59.5**	**+0.2**
PTEO	**Sao Teotonio**	**165.61**	**26**	ePP	PP	09 39 47.2	0.0
PCVE	**Castro Verde**	**165.79**	**23**	ePKPdf	**PKPdf**	**09 34 58.0**	**+0.9**
PCVE	**Castro Verde**	**165.79**	**23**	ePKPab	**PKPab**	**09 36 00.2**	**+0.1**
PCVE	**Castro Verde**	**165.79**	**23**	ePP	PP	09 39 47.5	-0.6
MORF	**Marmelete**	**165.85**	**26**	ePKPdf	**PKPdf**	**09 34 56.8**	**-0.4**
MORF	**Marmelete**	**165.85**	**26**	ePKPdf	**PKPdf**	**09 34 58.1**	**+0.9**
MORF	**Marmelete**	**165.85**	**26**	ePKPab	**PKPab**	**09 35 59.6**	**-0.9**
MORF	**Marmelete**	**165.85**	**26**	ePP	PP	09 39 47.8	-0.7
KEST	**Kesra**	**165.89**	**323**	PKP	**PKPdf**	**09 34 57.6**	**+0.3**
	comp=Z,39nm,1.0s,baz=298,slow=2.7,SNR=16						
KEST				PKPab	**PKPab**	**09 36 01.8**	**+1.0**
	comp=Z,139nm,0.9s,baz=321,slow=3.3,SNR=19						
KEST				PP	**PP**	**09 39 50.9**	**+1.8**
	comp=Z,23nm,1.0s,baz=142,slow=3.3,SNR=3.5						
PFVI	**Vila Bisbo**	**165.93**	**27**	P	**PKPdf**	**09 34 58.8**	**+1.6**
	SNR=11						
PFVI	**Vila Bisbo**	**165.93**	**27**	ePKPdf	**PKPdf**	**09 34 58.3**	**+1.1**
PFVI	**Vila Bisbo**	**165.93**	**27**	ePKPab	**PKPab**	**09 36 00.3**	**-0.4**
PFVI	**Vila Bisbo**	**165.93**	**27**	ePP	PP	09 39 48.5	-0.3
PVAQ	**Vaqueiros**	**166.11**	**23**	P	**PKPdf**	**09 34 58.8**	**+1.5**
	SNR=17						
PVAQ	**Vaqueiros**	**166.11**	**23**	ePKPdf	**PKPdf**	**09 34 58.2**	**+0.8**
PVAQ	**Vaqueiros**	**166.11**	**23**	ePKPab	**PKPab**	**09 36 01.9**	**+0.4**
PVAQ	**Vaqueiros**	**166.11**	**23**	ePP	PP	09 39 49.4	-0.3
CMAH	**Djebel Manchou**	**166.14**	**331**	P	**PKPdf**	**09 34 57.7**	**+0.2**
PBDV	**Barranco-do-Ve**	**166.18**	**24**	ePKPdf	**PKPdf**	**09 34 58.3**	**+0.8**
PBDV	**Barranco-do-Ve**	**166.18**	**24**	ePKPab	**PKPab**	**09 36 01.4**	**-0.5**
PBDV	**Barranco-do-Ve**	**166.18**	**24**	ePP	PP	09 39 50.0	-0.1
CAEH	**'Ain El Ouahch**	**166.25**	**333**	P	**PKPdf**	**09 34 57.8**	**+0.3**
HORN	**Hornachuelos**	**166.42**	**15**	P	**PKPdf**	**09 34 59.4**	**+1.8**
	SNR=30						
SESP	**Santiago Espad**	**166.59**	**5**	P	**PKPdf**	**09 34 58.7**	**+0.8**
	SNR=14						
CKFL	**Kef-Lekhel**	**166.63**	**332**	P	**PKPdf**	**09 34 58.6**	**+0.6**
DFRA	**Djebel Bou Aff**	**166.84**	**335**	P	**PKPdf**	**09 34 59.5**	**+1.4**
CASM	**Ain Smara**	**166.85**	**333**	P	**PKPdf**	**09 34 58.4**	**+0.4**
CTEI	**Djebel Teioual**	**167.05**	**332**	P	**PKPdf**	**09 34 58.8**	**+0.5**
CART	**Cartagena**	**167.19**	**0**	PKP1	**PKPdf**	**09 34 56.5**	**-1.6**
CART	**Cartagena**	**167.19**	**0**	PKP2	**PKPab**	**09 36 04.0**	**-2.3**
SET	**Setif**	**167.33**	**336**	P	**PKPdf**	**09 35 00.0**	**+1.6**
SFS	**San Fernando**	**167.47**	**20**	PKP1	**PKPdf**	**09 34 59.2**	**+0.9**
SFS	**San Fernando**	**167.47**	**20**	PKP2	**PKPab**	**09 36 07.7**	**+0.2**
ALJ	**Aljibe**	**167.57**	**18**	PKP1	**PKPdf**	**09 35 00.0**	**+1.5**
CNIL	**Conil**	**167.60**	**20**	PKP1	**PKPdf**	**09 35 00.0**	**+1.5**
EMAL	**Malaga-Limoner**	**167.65**	**13**	PKP1	**PKPdf**	**09 34 55.8**	**-2.7**
EMAL	**Malaga-Limoner**	**167.65**	**13**	PKP2	**PKPab**	**09 36 07.2**	**-1.1**
REAL	**Reales**	**167.73**	**16**	PKP1	**PKPdf**	**09 35 00.0**	**+1.2**
TOA0	**Torodi Ar. Sit**	**168.21**	**193**	P	**PKPdf**	**09 34 59.0**	**-0.5**
	SNR=79						
TOA0	**Torodi Ar. Sit**	**168.21**	**193**		**PKPdf**	**09 34 58.1**	**-1.4**
TOA0				PKPab	**PKPab**	**09 36 11.1**	**-0.1**
TORD	**Torodi Ar. Bea**	**168.21**	**193**	PKP	**PKPdf**	**09 34 58.6**	**-0.9**
	comp=Z,83nm,0.9s,baz=329,slow=0.6,SNR=216						
TORD				PKPab	**PKPab**	**09 36 11.6**	**+0.4**
	comp=Z,314nm,0.8s,baz=170,slow=4.1,SNR=14						
TORD				SKPbc		09 38 04.3	
	comp=Z,15nm,0.9s,baz=29,slow=3.3,SNR=1.6						
TORD				PP	**PP**	**09 40 00.6**	**+0.7**
	comp=Z,62nm,1.1s,baz=139,slow=5.8,SNR=6.5						
CEU	**Ceuta**	**168.24**	**18**	PKP1	**PKPdf**	**09 34 56.8**	**-2.1**
CEU	**Ceuta**	**168.24**	**18**	PKP2	**PKPab**	**09 36 09.8**	**-1.2**
ECHA	**Ech Chlef**	**168.45**	**351**	P	**PKPdf**	**09 34 59.9**	**+0.9**
EANR	**'Ain N'Sour**	**168.68**	**351**	P	**PKPdf**	**09 34 59.1**	**-0.2**
RSA	**Sarsar**	**169.04**	**22**	P	**PKPdf**	**09 35 01.0**	**+1.5**
	SNR=86						
ETRT	**Tiaret**	**169.20**	**350**	P	**PKPdf**	**09 35 00.6**	**+0.9**
PVLZ	**Peæn de**	**169.20**	**15**	PKP1	**PKPdf**	**09 34 56.6**	**-2.9**
PVLZ	**Peæn de**	**169.20**	**15**	PKP2	**PKPab**	**09 36 08.7**	**-6.5**
PALE	**Palemas**	**169.24**	**13**	P	**PKPdf**	**09 34 60.0**	**+0.3**
	SNR=24						
GOG	**Mont Gurugu**	**169.40**	**9**	P	**PKPdf**	**09 35 01.0**	**+1.2**
	SNR=9.2						
RTC	**Rabat Centre**	**169.44**	**28**	P	**PKPdf**	**09 35 02.0**	**+2.2**
	SNR=16						
EAH	**EAH**	**169.74**	**46**	P	**PKPdf**	**09 35 02.1**	**+2.1**
	SNR=7.2						
AVE	**Averroes**	**169.77**	**32**	P	**PKPdf**	**09 35 00.9**	**+0.9**
	SNR=16						
AVE	**Averroes**	**169.77**	**32**	PKP1	**PKPdf**	**09 34 58.0**	**-1.9**
AVE	**Averroes**	**169.77**	**32**	PKP2	**PKPab**	**09 36 15.4**	**-2.5**
TAF	**Taforalt**	**169.88**	**7**	P	**PKPdf**	**09 35 02.0**	**+1.9**
	SNR=63						
SICH	**Sidi Chahed**	**169.92**	**21**	P	**PKPdf**	**09 35 02.0**	**+1.9**
	SNR=27						
AKLM	**AKL**	**169.94**	**14**	P	**PKPdf**	**09 35 01.0**	**+0.8**
	SNR=18						
ZHG	**ZHG**	**170.00**	**28**	P	**PKPdf**	**09 35 02.0**	**+1.8**
	SNR=27						
SRHM	**Skhour des Reh**	**170.18**	**37**	P	**PKPdf**	**09 35 02.0**	**+1.7**
	SNR=21						
IFR	**Ifrane**	**170.52**	**22**	PKP1	**PKPdf**	**09 34 60.0**	**-0.7**
IFR	**Ifrane**	**170.52**	**22**	PKP2	**PKPab**	**09 36 20.0**	**-1.4**
CZD	**Col de Zad**	**170.99**	**22**	P	**PKPdf**	**09 35 03.0**	**+2.0**
	SNR=58						
OUK	**Oukaimeden**	**171.12**	**42**	P	**PKPdf**	**09 35 02.0**	**+0.8**
	SNR=67						
TTIG	**Tnine Tigouga,**	**171.20**	**47**	P	**PKPdf**	**09 35 02.0**	**+1.0**
	SNR=27						
MDT	**Midelt**	**171.34**	**21**	PKP	**PKPdf**	**09 35 01.9**	**+1.0**
	comp=Z,135nm,1.0s,baz=15,slow=0.6,SNR=120						
MDT	**Midelt**	**171.34**	**21**	P	**PKPdf**	**09 35 02.0**	**+1.0**
	SNR=174						
TDRA	**Tendrara**	**171.67**	**6**	P	**PKPdf**	**09 35 03.0**	**+1.7**
	SNR=33						
OUZM	**OUZ**	**171.99**	**39**	P	**PKPdf**	**09 35 02.2**	**+0.8**
	SNR=68						
GOLM	**Goulmima**	**172.22**	**26**	P	**PKPdf**	**09 35 03.0**	**+1.6**
	SNR=52						
TZRR	**Tazzarine**	**172.72**	**33**	P	**PKPdf**	**09 35 03.0**	**+1.3**
	SNR=56						
ARF	**Arif**	**172.73**	**23**	P	**PKPdf**	**09 35 03.0**	**+1.4**
	SNR=44						
ZGR	**Zagora**	**173.22**	**37**	P	**PKPdf**	**09 35 03.0**	**+1.1**
	SNR=72						

*BJI **04** 09:25:13.0±0.0, 25°.79S×178°.21E, h610km, mB6.0/56, mb5.8/68*

*MOS **04** 09:25:13.8±0.5, 25°.74S×178°.27E, h632km, mb6.1/38, Error ellipse: s-maj=14.6km s-min=10.6km az=169.6*

*IDC **04** 09:25:14.8±0.4, 25°.91S×178°.18E, h620km±4km, mb5.3/46, mb1 5.3/49, mb1mx5.3/50, mbtmp6.2/49, Error ellipse: s-maj=7.1km s-min=5.8km az=21.0*

*NEIC **04** 09:25:16.0±2.3, 25°.81S±0°.08×178°.24E±0°.09, h634km±5km, mb5.9/369, Mww6.3, Mwc6.4(GCMT), Error ellipse: s-maj=11.9km s-min=11.9km az=75.0*

*NEIC **04** 09:25:17, 25°.87S×178°.31E, h651km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-2.46; $M_{\theta\theta}$4.36; $M_{\phi\phi}$-1.90; $M_{r\theta}$-1.06; $M_{\theta\phi}$0.46; $M_{\phi r}$-1.19; Fault plane solution: $M_0$4.13000×10^{18} NP1:ϕ_s57.00000°, δ63.00000°, λ-130.00000°. NP2:ϕ_s299.00000°, δ47.00000°, λ-38.00000°. Principal axes: T 4.5835, Plg9.0000°, Azm174.0000°; N -1.1403, Plg35.0000°, Azm77.0000°; P -3.4432, Plg53.0000°, Azm277.0000°;*

*GCMT **04** 09:25:19.0±0.2, 25°.80S±0°.01×178°.25E±0°.02, h654km±1km, MW6.4/120, Moment Tensor Solution. s120,c224; s113,c150; Duration: 3^{s}8 Moment tensor: Scale 10^{18} Nm; M_{rr}-2.72±.07; $M_{\theta\theta}$4.50±.08; $M_{\phi\phi}$-1.78±.10; $M_{r\theta}$-1.52±.09; $M_{\theta\phi}$0.31±.09; $M_{\phi r}$-1.99±.10; Best double couple: $M_0$4.64800×10^{18} NP1:ϕ_s299.00000°, δ44.00000°, λ-36.00000°. NP2:ϕ_s57.00000°, δ66.00000°, λ-128.00000°. Principal axes: T 4.8850, Plg13.0000°, Azm173.0000°; N -0.4730, Plg34.0000°, Azm75.0000°; P -4.4120, Plg53.0000°, Azm281.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

*NEIC **04** 09:25:20, 25°.80S×178°.21E, h611km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-2.09; $M_{\theta\theta}$3.59; $M_{\phi\phi}$-1.50; $M_{r\theta}$-1.30; $M_{\theta\phi}$-0.06; $M_{\phi r}$-1.32; Fault plane solution: $M_0$3.63000×10^{18} NP1:ϕ_s61.00000°, δ66.00000°, λ-128.00000°. NP2:ϕ_s303.00000°, δ44.00000°, λ-35.00000°. Principal axes: T 3.8864, Plg13.0000°, Azm177.0000°; N -0.5757, Plg34.0000°, Azm78.0000°; P -3.3107, Plg53.0000°, Azm285.0000°;*

*BGR **04** 09:25:21.4±0.0, 23°.98S×179°.63W, h654km±30km*

ISC 04 09:25:15.3±0.2**, 25°.91S**±0°.03×**178°.22E**±0°.03**, h627**km±2km**, h628**km**:pP-P, n1726,** σ1^{s}**80**/1985**, mb6.0**/305**, 130C-91D,**

South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	4.77	135	P	P	09 26 48.9	+0.8
RIZ				S	S	09 28 05.4	+1.5
RAO	Raoul Island	4.78	135	P	P	09 26 47.8	-0.3
	2µm,0.3s,baz=140,slow=3.6,SNR=67						
RAO				S	S	09 28 03.4	-0.7
	745nm,0.3s,baz=287,slow=19,SNR=1.0						
RAO	Raoul Island	4.78	135	P	P	09 26 47.0	-1.2
RAO				S	S	09 28 04.3	+0.2
GLKZ	Green Lake	4.78	135	P	P	09 26 49.1	+0.9
GLKZ				S	S	09 28 09.9	+5.8
MSVF	Nonsavu	8.14	359	*de*P	P	09 27 14.3	-2.8
MSVF	Nonsavu	8.14	359	P	P	09 27 15.1	-2.0
NFK	Norfolk Island	9.65	249	P	P	09 27 32.7	+1.5
	baz=9.9,SNR=60						
OUZ	Omahuta	10.10	202	P	P	09 27 36.8	+1.4
OUZ	Omahuta	10.10	202	P	P	09 27 37.1	+1.6
WCZ	Waipu Caves	10.54	197	P	P	09 27 44.9	+5.2
GRZ	Great Barrier	10.58	192	P	P	09 27 41.9	+1.8
KUZ	Kuaotunu	11.01	191	P	P	09 27 43.7	-0.7
ABAZ	Army Bay	11.05	194	P	P	09 27 48.5	+3.8
ABAZ				S	S	09 29 54.4	+7.2
WIAZ	Waiheke Island	11.17	193	P	P	09 27 46.8	+0.9
WIAZ				S	S	09 29 52.0	+2.6
MBAZ	Motutapu North	11.19	194	P	P	09 27 47.3	+1.2
MBAZ				S	S	09 29 56.9	+7.2
RVAZ	Riverhead Bore	11.27	195	P	P	09 27 48.8	+2.0
HBAZ	Herne Bay Bore	11.31	194	P	P	09 27 48.3	+1.1
EPAZ	Eden Park BICE	11.33	194	P	P	09 27 48.5	+1.1
ETAZ	East Tamaki Re	11.37	194	P	P	09 27 48.9	+1.1
ETAZ				S	S	09 29 59.6	+6.8
DZM	Mont Dzumac	11.42	287	*e*P	P	09 27 47.7	-1.0
	3µm,1.1s						
DZM	Mont Dzumac	11.42	287	P	P	09 27 49.6	+0.9
	298nm,0.3s,baz=127,slow=8.3,SNR=509						
DZM				S	S	09 29 57.3	+3.0
	3.1nm,0.3s,baz=336,slow=20,SNR=7.8						
DZM				ScP	ScP	09 35 20.1	+4.4
	4.2nm,0.3s,baz=136,slow=4.7,SNR=9.4						
DZM				ScS	ScS	09 39 00.3	+8.5
	0.1nm,0.3s,baz=330,slow=22,SNR=8.0						
DZM	Mont Dzumac	11.42	287	P	P	09 27 49.2	+0.5
WTAZ	Waiatarua	11.42	195	P	P	09 27 49.4	+1.1
MKAZ	Moumakai	11.46	192	P	P	09 27 47.8	-0.8
KBAZ	Karaka Road Bo	11.51	193	P	P	09 27 50.0	+0.8
AWAZ	Awhitu Peninsu	11.53	194	P	P	09 27 51.7	+2.4
WIZ	White Island	11.62	184	P	P	09 27 49.5	-0.7
MXZ	Matakaoa Point	11.62	180	P	P	09 27 49.8	-0.4
MXZ				S	S	09 29 49.4	-7.8
HAZ	Te Kaha	11.82	182	P	P	09 27 49.8	-2.2
HAZ				S	S	09 29 59.2	-1.4
WMGZ	Waiomatatini S	11.88	179	P	P	09 27 49.2	-3.4
WMGZ				S	S	09 29 59.3	-2.3
TGRZ	Tauranga	11.90	188	P	P	09 27 55.8	+2.9
TGRZ				S	S	09 30 09.1	+7.0
PKGZ	Pakihiroa	11.95	181	P	P	09 27 49.6	-3.8
PKGZ				S	S	09 29 56.7	-6.2
WHRZ	Whale Island	11.96	185	P	P	09 27 54.0	+0.5
OPRZ	Ohinepanea	11.98	186	P	P	09 27 55.0	+1.3
RUGZ	Raukumara Rang	12.03	182	P	P	09 27 53.7	-0.6
PUZ	Puketiti	12.13	180	P	P	09 27 56.1	+1.1
URZ	Urewera	12.35	184	P	P	09 27 54.8	-2.3
	111nm,0.3s,baz=266,slow=4.2,SNR=136						
URZ				S	S	09 30 07.0	-2.8
	76nm,0.3s,baz=48,slow=23,SNR=11						
URZ				ScP	ScP	09 35 16.9	+0.2
	7.5nm,0.3s,baz=7.6,slow=3.1,SNR=8.1						
URZ				ScS	ScS	09 38 48.9	-4.2
	1.7nm,0.3s,baz=33,slow=23,SNR=16						
URZ	Urewera	12.35	184	P	P	09 27 54.5	-2.7
HIZ	Hauiti	12.89	192	P	P	09 28 03.2	+0.9
BFZ	Birch Farm	14.83	186	P	P	09 28 18.2	-2.4
AFI	Afiamalu	15.18	40	P	P	09 28 21.2	-3.1
AFI				pmax	pmax		
	comp=Z,2µm,1.0s						
AFI	Afiamalu	15.18	40	P	P	09 28 21.2	-3.1
QRZ	Quartz Range	15.61	196	P	P	09 28 29.1	+1.4
SNZO	South Karori	15.64	190	P	P	09 28 26.9	-1.0
MSWZ	Moikau Station	15.66	188	P	P	09 28 26.1	-2.1
BHW	Baring Head	15.71	189	P	P	09 28 27.4	-1.1
PLWZ	Palliser	15.81	188	P	P	09 28 27.9	-1.6
CMWZ	Cape Campbell	16.14	191	P	P	09 28 33.4	+0.8
KHZ	Kahutara	16.91	192	P	P	09 28 39.1	-0.4
FUNA	Funafuti	17.31	3	P	P	09 28 41.9	-1.7
LTZ	Lake Taylor	17.53	195	P	P	09 28 44.1	-1.1
LHI	Lord Howe Isla	17.70	247	P	P	09 28 50.4	+3.4
	baz=18,SNR=51						
LHI	Lord Howe Isla	17.70	247	P	P	09 28 49.7	+2.8
MQZ	McQueen's Vall	18.33	193	IAmb	IAmb	09 28 53.6	
	comp=Z,857nm,1.0s						
RPZ	Rata Peaks	18.70	196	P	P	09 28 55.6	-0.2
	comp=Z,41nm,0.3s,baz=158,slow=1.4,SNR=46						
RPZ				S	S	09 31 52.2	-2.1
	comp=Z,4.3nm,0.3s,baz=60,slow=20,SNR=3.1						
RPZ				ScP	ScP	09 35 29.1	+0.3
	comp=Z,15nm,0.3s,baz=308,slow=1.6,SNR=12						
RPZ				ScS	ScS	09 39 09.7	-1.0
	baz=130,slow=22,SNR=6.5						
ODZ	Otahua Downs	20.05	196	P	P	09 29 06.6	-1.3
ODZ				IAmb	IAmb	09 29 17.2	
	comp=Z,423nm,1.0s						
WKZ	Wanaka	20.29	199	P	P	09 29 09.9	-0.3
RAR	Rarotonga	20.70	82	P	P	09 29 13.2	-0.9
	comp=Z,364nm,1.0s,baz=227,slow=5.1,SNR=20						
RAR	Rarotonga	20.70	82	P	P	09 29 13.8	-0.3
RAR				pmax	pmax		
	comp=Z,802nm,1.2s						
RAR	Rarotonga	20.70	82	P	P	09 29 13.8	-0.3
RAR				IAmb	IAmb	09 29 16.1	
	comp=Z,802nm,1.2s						
MLZ	Mavora Lakes	21.05	200	P	P	09 29 17.5	+0.6
WHZ	Wether Hill Ro	21.57	200	P	P	09 29 22.1	+0.5
PYZ	Puysegur Point	22.22	202	P	P	09 29 27.3	-0.1
PYZ				IAmb	IAmb	09 29 32.9	
	comp=Z,316nm,0.7s						
ARMA	Armidale	23.85	253	P	P	09 29 43.6	+1.5
	baz=24,SNR=171						
ARMA	Armidale	23.85	253	P	P	09 29 43.2	+1.0
HNR	Honiara	23.86	310	P	P	09 29 41.3	-1.0
	comp=Z,1µm,0.7s,baz=157,slow=1.1,SNR=46						
HNR				S	S	09 33 16.5	+0.2
	comp=Z,338nm,1.0s,baz=172,slow=18,SNR=3.6						
HNR	Honiara	23.86	310	P	P	09 29 40.8	-1.4
EIDS	Eidsvold	24.46	265	P	P	09 29 47.8	+0.3
	baz=25,SNR=339						
MGCD	Mangrove Creek	24.64	246	P	P	09 29 50.7	+1.8
	baz=25,SNR=332						
RIV	Riverview	24.71	245	P	P	09 29 51.7	+2.1
	baz=25,SNR=35						
RIV	Riverview	24.71	245	P	P	09 29 51.9	+2.3
RIV				pmax	pmax		
	comp=Z,1µm,1.0s						
KNTN	Kanton	24.95	24	P	P	09 29 49.9	-2.0
RMQ	Roma	26.42	262	P	P	09 30 06.1	+1.4
	baz=27,SNR=389						
CNB	Canberra Magne	26.47	242	P	P	09 30 06.6	+1.6
	baz=27,SNR=200						
CAN	Canberra	26.76	242	P	P	09 30 08.7	+1.1
CAN				pmax	pmax		
	comp=Z,421nm,0.6s						
CAN	Canberra	26.76	242	P	P	09 30 08.7	+1.1
YNG	Young	27.05	245	P	P	09 30 11.7	+1.6
	baz=27,SNR=41						
MILA	Mila	27.06	239	P	P	09 30 11.8	+1.6
	baz=27,SNR=35						
TARA	Tarawa	27.58	348	P	P	09 30 13.1	-1.9
CMSA	Cobar Meteorol	29.01	251	P	P	09 30 28.7	+1.6
	baz=29,SNR=19						
TBI	Tubuai	29.45	92	*e*P	P	09 30 30.9	0.0
	comp=Z,2µm,0.8s						
TBI				*e*ScP	ScP	09 36 00.0	+0.8
	comp=Z,398nm,1.1s						
CTA	Charters Tower	29.94	274	P	P	09 30 35.6	+0.4
	comp=Z,3µm,0.4s,baz=97,slow=10,SNR=556						
CTA				S	S	09 34 50.8	0.0
	comp=Z,49nm,0.8s,baz=194,slow=19,SNR=2.2						
CTA				ScP	ScP	09 36 03.5	+2.6
	comp=Z,72nm,0.9s,baz=146,slow=2.5,SNR=4.5						
CTA				P3KP		10 03 18.7	
	comp=Z,2.5nm,0.9s,baz=306,slow=8.7,SNR=4.2						
CTAO	Charters Tower	29.94	274	P	P	09 30 36.1	+0.8
TOO	Toolangi	30.02	239	P	P	09 30 36.5	+0.9
	baz=30,SNR=107						
TOO	Toolangi	30.02	239	P	P	09 30 36.6	+0.9
TOO				pmax	pmax		
	comp=Z,508nm,0.8s						
TOO	Toolangi	30.02	239	P	P	09 30 36.6	+0.9
MOO	Moorlands	30.30	229	P	P	09 30 39.6	+1.7
	baz=30,SNR=19						
TAU	Tasmania Unive	30.39	228	P	P	09 30 39.6	+0.8
TAU				pmax	pmax		
	comp=Z,262nm,0.7s						
TAU	Tasmania Unive	30.39	228	P	P	09 30 39.5	+0.8
TAU				IAmb	IAmb	09 30 42.2	
	comp=Z,262nm,0.7s						
QLP	Quilpie	30.44	261	P	P	09 30 39.5	+0.1
	baz=31,SNR=658						
PAE	Paea	30.94	81	*e*P	P	09 30 43.0	-0.7
	comp=Z,183nm,1.1s						
PAE				*e*ScP	ScP	09 36 05.8	+1.6
	comp=Z,38nm,1.1s						
PPT2	Papeete2	30.97	81	*e*P	P	09 30 43.6	-0.5
	comp=Z,1µm,1.2s						
PPT2				*e*ScP	ScP	09 36 06.5	+2.1
	comp=Z,357nm,1.3s						
PPT	Papeete	30.98	81	P	P	09 30 43.6	-0.5
	comp=Z,885nm,1.0s,baz=279,slow=2.3,SNR=46						
PPT				ScP	ScP	09 36 06.1	+1.7
	comp=Z,215nm,1.0s,baz=277,slow=2.3,SNR=8.6						
PPTF	Pamatai, Papee	30.98	81	P	P	09 30 43.3	-0.9
TIAR	Tiarei	31.19	81	*e*P	P	09 30 45.4	-0.5
	comp=Z,580nm,1.1s						
TIAR				*e*ScP	ScP	09 36 07.0	+1.9
	comp=Z,64nm,1.1s						
TVO	Taravao	31.19	82	*e*P	P	09 30 45.2	-0.7
	comp=Z,220nm,0.8s						
TVO				*e*ScP	ScP	09 36 07.0	+1.9
	comp=Z,42nm,1.2s						
MCQ	Macquarie Isla	31.91	201	P	P	09 30 53.1	+1.7
	baz=32,SNR=10						
MEH	Mehetia	32.22	83	*e*P	P	09 30 53.8	-0.8
	comp=Z,403nm,1.2s						
MEH				*e*ScP	ScP	09 36 09.0	+0.4
	comp=Z,116nm,1.2s						
MTSU	Mount Surprise	32.30	277	P	P	09 30 56.0	+0.7
	baz=32,SNR=678						
STKA	Stephens Creek	32.51	251	P	P	09 30 58.6	+1.7
	baz=33,SNR=30						
STKA	Stephens Creek	32.51	251	P	P	09 30 57.6	+0.7
	comp=Z,417nm,0.5s,baz=98,slow=12,SNR=138						
STKA				S	S	09 35 30.1	+0.5
	comp=Z,38nm,1.0s,baz=227,slow=19,SNR=2.2						
STKA				ScS	ScS	09 40 10.9	0.0
	comp=Z,32nm,1.0s,baz=210,slow=23,SNR=8.8						
ARPS	Mount Arapiles	32.73	242	P	P	09 30 59.2	+0.6
	baz=33,SNR=81						
KRVT	Keravat (AS076	33.04	306	P	P	09 31 00.3	-1.2
	comp=Z,2µm,0.6s,baz=216,slow=1.6,SNR=126						
KRVT				S	S	09 35 35.4	-2.6
	comp=Z,301nm,0.9s,baz=176,slow=19,SNR=4.6						
PMOR	Pomariorio Ree	33.46	78	*e*P	P	09 31 04.4	-0.5
	comp=Z,1µm,1.1s						
PMOR				*e*ScP	ScP	09 36 15.3	+2.3
	comp=Z,777nm,1.2s						
VAH	Vaihoa	33.60	78	*e*P	P	09 31 05.3	-0.8
	comp=Z,2µm,1.2s						
VAH				*e*ScP	ScP	09 36 15.8	+2.3
	comp=Z,758nm,1.2s						
PMG	Port Moresby	33.71	293	*d i*P	P	09 31 07.1	0.0
COEN	Coen	34.91	283	P	P	09 31 17.6	+0.5
	baz=35,SNR=308						
QIS	Mount Isa	35.79	270	P	P	09 31 24.0	-0.3
	baz=36,SNR=164						
KWAJ	Kwajalein Atol	36.01	342	P	P	09 31 25.1	-1.0
KWAJ				pmax	pmax		
	comp=Z,2µm,1.2s						
KWAJ	Kwajalein Atol	36.01	342	P	P	09 31 25.1	-1.0
XMAS	Kiritimati	36.42	44	P	P	09 31 28.5	-1.0
BBOO	Buckleboo	37.20	249	P	P	09 31 34.9	-0.7
	baz=37,SNR=226						
PATS	Pohnpei	37.86	327	P	P	09 31 40.1	-1.0
	baz=38,SNR=22						
PATS	Pohnpei	37.86	327	P	P	09 31 40.4	-0.7
PATS				IAmb	IAmb	09 31 43.8	
	comp=Z,351nm,0.9s						
MMPI	Merauke	39.90	289	P	P	09 31 57.2	-0.3
	comp=Z,28µmcomp=Z,2µm,0.8s						
ASAR	Alice Springs	40.16	263	P	P	09 31 59.4	-0.1
	comp=Z,1µm,0.5s,baz=92,slow=7.1,SNR=341						
ASAR				ScP	ScP	09 36 38.8	+0.5
	comp=Z,41nm,0.9s,baz=105,slow=4.0,SNR=4.3						
ASAR				S	S	09 37 24.2	+1.2
	comp=Z,51nm,0.7s,baz=98,slow=17,SNR=7.2						
ASAR				ScS	ScS	09 40 52.0	-2.8
	comp=Z,21nm,1.1s,baz=97,slow=6.8,SNR=4.8						
ASAR				P3KPbc		10 01 33.2	
	comp=Z,4.5nm,1.0s,baz=277,slow=3.7,SNR=13						
ASAR				P3KP		10 03 01.2	
	comp=Z,1.0nm,0.9s,baz=238,slow=0.4,SNR=4.5						
ASAR				P4KPbc		10 09 57.4	
	comp=Z,0.5nm,0.4s,baz=103,slow=4.3,SNR=19						
WRAB	Tennant Creek	40.70	269	*ce*P	P	09 32 03.5	-0.3
WRA	Warramunga Arr	40.71	269	P	P	09 32 03.2	-0.7
	comp=Z,898nm,0.5s,baz=103,slow=7.6,SNR=422						
WRA				PcP	pP	09 33 48.9	+0.2
	comp=Z,94nm,0.8s,baz=103,slow=3.3,SNR=6.4						
WRA				ScP	ScP	09 36 41.0	+0.6
	comp=Z,77nm,1.1s,baz=105,slow=4.4,SNR=4.6						
WRA				S	S	09 37 30.3	-0.7
	comp=Z,48nm,0.8s,baz=104,slow=13,SNR=4.7						
WRA				ScS	SS	09 40 55.8	-1.6
	comp=Z,4.4nm,0.5s,baz=63,slow=0.4,SNR=4.7						
WRA				P3KPbc		10 01 31.7	
	comp=Z,1.3nm,0.7s,baz=294,slow=2.8,SNR=8.5						
WRA				P4KPbc		10 10 00.2	
	comp=Z,5.3nm,0.8s,baz=101,slow=4.1,SNR=29						
JAY	Jayapura	42.89	297	P	P	09 32 20.7	-0.3
	comp=Z,577nm,0.9s,baz=135,slow=2.8,SNR=118						
JAY				S	S	09 38 02.8	+0.4
	comp=Z,33nm,0.9s,baz=240,slow=22,SNR=12						
JAY	Jayapura	42.89	297	P	P	09 32 20.9	-0.1
	comp=Z,5µmcomp=Z,378nm,0.9s						
TAOE	Nuku Hiva Isla	42.97	74	*e*P	P	09 32 21.3	-0.4
	comp=Z,3µm,1.0s						
TAOE	Nuku Hiva Isla	42.97	74	P	P	09 32 21.4	-0.4
GENI	Genyem	43.28	296	P	P	09 32 23.7	-0.3
	comp=Z,20µmcomp=Z,2µm,0.9s						
JOHN	Johnston Islan	44.03	17	P	P	09 32 29.1	-0.4
JOHN				IAmb	IAmb	09 32 31.1	
	comp=Z,347nm,0.8s						
FORT	Forrest	44.12	252	P	P	09 32 29.5	-0.8
	baz=44,SNR=102						
SMPI	Sarmi	44.81	296	P	P	09 32 36.1	+0.4
	comp=Z,206nm,0.6s						
KDU	Kakadu	44.91	278	P	P	09 32 35.4	-1.1
	baz=45,SNR=260						
H11S2	WAKE ISLAND Hy	45.53	345	P	P	09 32 40.1	-0.7
	baz=206,slow=6.8,SNR=10						
H11S3	WAKE ISLAND Hy	45.54	345	P	P	09 32 39.8	-1.1
	baz=206,slow=6.8,SNR=5.9						
H11S1	WAKE ISLAND Hy	45.55	345	P	P	09 32 40.5	-0.4
	baz=206,slow=6.8,SNR=7.2						
MTN	Manton Dam	46.05	277	P	P	09 32 44.2	-0.9
	baz=46,SNR=57						
WAKE	Wake Island	46.31	345	P	P	09 32 45.8	-1.0
WAKE				IAmb	IAmb	09 32 48.6	
	comp=Z,859nm,1.1s						
PTCN	Pitcairn Islan	46.41	101	P	P	09 32 49.5	+1.8
H11N1	WAKE ISLAND Hy	46.66	345	P	P	09 32 50.0	+0.7
H11N3	WAKE ISLAND Hy	46.66	345	P	P	09 32 50.0	+0.7
H11N2	WAKE ISLAND Hy	46.68	345	P	P	09 32 50.1	+0.7
SRPI	Serui, Papua	46.90	294	P	P	09 32 51.8	+0.3
	comp=Z,150nmcomp=Z,9.2nm,0.6s						
BAKI	Biak	47.40	294	P	P	09 32 55.9	+0.7
SAUI	Saumlaki	47.99	283	P	P	09 33 01.0	+1.4
	comp=Z,3µm,0.9s						
SAUI	Saumlaki	47.99	283	P	P	09 32 59.9	+0.3
RKPI	Ransiki, Papua	48.81	293	P	P	09 33 06.0	+0.3
	comp=Z,10µmcomp=Z,734nm,0.8s						
FITZ	Fitzroy Crossi	49.10	268	P	P	09 33 07.1	-0.6
	comp=Z,2µm,0.9s,baz=126,slow=6.8,SNR=118						
FITZ				S	S	09 39 29.7	+1.4
	comp=Z,15nm,0.8s,baz=262,slow=16,SNR=5.6						
FAKI	Fak Fak	49.67	290	P	P	09 33 11.6	-0.4
	comp=Z,14µmcomp=Z,905nm,0.8s						
FAKI	Fak Fak	49.67	290	P	P	09 33 11.6	-0.4
FAKI				IAmb	IAmb	09 33 14.7	
	comp=Z,697nm,0.9s						
GUMO	Guam	50.95	316	P	P	09 33 20.8	-0.3
GUMO				pmax	pmax		
	comp=Z,911nm,0.7s						
GUMO	Guam	50.95	316	P	P	09 33 20.8	-0.3
SIJI	Sorong	51.59	291	P	P	09 33 25.4	-0.4
	comp=Z,3µm,0.7s,baz=101,slow=3.7,SNR=345						
SIJI				S	S	09 40 02.1	+0.3
	comp=Z,16nm,0.9s,baz=194,slow=23,SNR=9.7						
KHLU	Kahalu`u	51.75	32	IAmb	IAmb	09 33 29.1	
	comp=Z,564nm,1.0s						
HLP	Hilina Pali	51.77	32	IAmb	IAmb	09 33 29.5	
	comp=Z,548nm,0.8s						
MLOA	Mauna Loa Obse	51.85	32	P	P	09 33 26.6	-1.4
RIM	Rim	51.88	32	IAmb	IAmb	09 33 30.0	
	comp=Z,748nm,0.8s						
KKO	Keanakako`i	51.88	32	IAmb	IAmb	09 33 30.1	
	comp=Z,747nm,0.8s						
NPH	North Pit	51.89	32	P	P	09 33 26.9	-1.0
UWE	Uwekahuna	51.89	32	IAmb	IAmb	09 33 30.1	
	comp=Z,607nm,0.8s						
OBL	Observatory Le	51.89	32	IAmb	IAmb	09 33 30.0	
	comp=Z,516nm,0.8s						
BYL	Byron's Ledge	51.90	32	IAmb	IAmb	09 33 30.1	
	comp=Z,538nm,0.7s						
UWB	Uwekahuna B	51.90	32	IAmb	IAmb	09 33 30.0	
	comp=Z,426nm,0.8s						
HATHI	Halema‘uma‘u T	51.91	32	IAmb	IAmb	09 33 30.1	
	comp=Z,536nm,0.8s						
MLH	Mauna Loa	51.91	32	IAmb	IAmb	09 33 30.9	
	comp=Z,792nm,0.8s						
SBLHI	Steaming Bluff	51.91	32	IAmb	IAmb	09 33 30.1	
	comp=Z,368nm,0.8s						
POHA	Pohakuloa	52.06	32	P	P	09 33 27.7	-1.6
POHA				IAmb	IAmb	09 33 31.5	
	comp=Z,406nm,0.8s						
VNDA	Vanda	52.26	184	P	P	09 33 31.1	+1.5
	comp=Z,134nm,0.8s,baz=4.4,slow=9.9,SNR=43						
VNDA				ScP	ScP	09 37 27.9	0.0
	comp=Z,71nm,1.1s,baz=0.9,slow=5.5,SNR=10						
VNDA				S	S	09 40 10.7	+1.9
	comp=Z,6.2nm,1.2s,baz=236,slow=20,SNR=8.2						
VNDA	Vanda	52.26	184	P	P	09 33 30.6	+1.0
VNDA					PcP	09 34 31.6	+1.7
MSAI	Masohi	52.30	287	P	P	09 33 30.9	0.0
	comp=Z,266nm,0.9s						
HON	Honolulu	52.31	28	P	P	09 33 29.6	-1.1
HON				pmax	pmax		
	comp=Z,421nm,0.7s						
HON	Honolulu	52.31	28	P	P	09 33 29.6	-1.1
HON				IAmb	IAmb	09 33 33.3	
	comp=Z,421nm,0.7s						
KHLH	Kahului Airpor	52.63	30	IAmb	IAmb	09 33 35.5	
	comp=Z,853nm,1.5s						
KLBR	Kellerberrin	52.74	249	P	P	09 33 32.4	-1.4
	baz=53,SNR=165						
AAI	Ambon	52.76	286	P	P	09 33 33.7	-0.4
	comp=Z,856nm,1.2s						
AAI	Ambon	52.76	286	P	P	09 33 34.1	0.0
AAI				pmax	pmax		
	comp=Z,854nm,1.2s						
RKGY	Rocky Gully	52.91	245	P	P	09 33 34.6	-0.3
	baz=53,SNR=49						
NWAO	Narrogin (SRO)	52.95	247	P	P	09 33 35.1	-0.2
	baz=53,SNR=59						
NWAO	Narrogin (SRO)	52.95	247	P	P	09 33 35.0	-0.2
	comp=Z,146nm,0.5s,baz=101,slow=7.1,SNR=52						
NWAO	Narrogin (SRO)	52.95	247	P	P	09 33 35.1	-0.2
NWAO	Narrogin (SRO)	52.95	247	P	P	09 33 34.6	-0.7
NWAO				IAmb	IAmb	09 33 37.2	
	comp=Z,596nm,1.3s						
MEEK	Meekatharra	53.02	255	P	P	09 33 36.0	+0.2
	baz=53,SNR=18						
PSA00	Pilbara Seismi	53.24	262	IAmb	IAmb	09 33 38.4	
	comp=Z,344nm,0.6s						
SOEI	Soe	53.45	277	P	P	09 33 41.0	+1.8
MBWA	Marble Bar	53.47	262	P	P	09 33 38.2	-0.8
MBWA	Marble Bar	53.47	262	P	P	09 33 38.8	-0.3
MBWA				IAmb	IAmb	09 33 40.8	
	comp=Z,704nm,0.9s						
BATI	Baumata	53.80	276	P	P	09 33 43.0	+1.4
	comp=Z,972nm,0.5s,baz=146,slow=2.2,SNR=82						
BATI	Baumata	53.80	276	P	P	09 33 42.3	+0.8
	comp=Z,14µmcomp=Z,1µm,0.8s						
BLDU	Ballidu	53.80	250	P	P	09 33 40.0	-1.3
	baz=54,SNR=298						
NLAI	Namlea	53.93	286	P	P	09 33 42.4	0.0
	comp=Z,15µmcomp=Z,1µm,0.9s						
MUN	Mundaring	53.97	248	P	P	09 33 41.7	-0.8
	baz=54,SNR=70						
MORW	Morawa	54.69	252	P	P	09 33 46.4	-1.1
	baz=55,SNR=193						
LBMI	Labuha	54.90	289	P	P	09 33 49.2	0.0
	comp=Z,12µmcomp=Z,772nm,1.0s						
H01W1	Cape Leeuwin H	55.16	244	P	P	09 33 52.1	+1.7
	baz=108,slow=7.0,SNR=10						
H01W2	Cape Leeuwin H	55.18	244	P	P	09 33 52.1	+1.6
	baz=108,slow=7.0,SNR=9.4						
H01W3	Cape Leeuwin H	55.18	244	P	P	09 33 52.1	+1.6
	baz=108,slow=7.0,SNR=10						
SANI	Sanana	55.48	286	P	P	09 33 51.7	-1.5
	comp=Z,20µmcomp=Z,2µm,0.8s						
MMRI	Maumere	55.73	277	P	P	09 33 54.7	-0.2
	comp=Z,20µmcomp=Z,2µm,1.1s						
TNTI	Ternate	55.76	290	P	P	09 33 54.8	-0.3
	comp=Z,12µmcomp=Z,1µm,0.9s						
TNTI	Ternate	55.76	290	P	P	09 33 54.6	-0.5
TNTI				IAmb	IAmb	09 33 56.7	
	comp=Z,778nm,0.8s						
EDFI	Ende, Flores	56.17	277	P	P	09 33 57.7	-0.4
	comp=Z,10µmcomp=Z,1µm,1.1s						
BASI	Baing, Sumba	56.56	275	P	P	09 34 01.3	+0.7
	comp=Z,26µmcomp=Z,2µm,0.9s						
BBSI	Bau Bau	56.83	281	P	P	09 34 03.3	+0.9
	comp=Z,178nm,0.9s						
WBSI	Waikabubak, Su	57.86	275	P	P	09 34 09.5	+0.1
	comp=Z,12µmcomp=Z,694nm,0.7s						
GIRL	Giralia	57.91	259	P	P	09 34 10.2	+0.6
	baz=58,SNR=60						
KMSI	Cibinong	58.54	288	P	P	09 34 14.1	+0.2
	comp=Z,19µmcomp=Z,2µm,0.7s						
LUWI	Luwuk	58.77	286	P	P	09 34 15.5	+0.1
	comp=Z,20µmcomp=Z,2µm,1.0s						
BKSI	Bulukumba	59.07	280	P	P	09 34 16.7	-0.8
	comp=Z,20µmcomp=Z,2µm,0.8s						
BNSI	Bone	59.51	281	P	P	09 34 20.5	+0.2
	comp=Z,10µmcomp=Z,1µm,1.1s						
KAPI	Kappang	59.54	280	P	P	09 34 20.5	-0.1
	comp=Z,268nm,0.7s,baz=123,slow=3.2,SNR=28						
KAPI				S	S	09 41 45.0	+0.9
	comp=Z,9.6nm,0.4s,baz=167,slow=11,SNR=6.1						
KAPI				PKP2bc		10 03 47.4	
	comp=Z,26nm,1.2s,baz=275,slow=4.2,SNR=5.5						
KAPI	Kappang	59.54	280	P	P	09 34 20.8	+0.2
KAPI	Kappang	59.54	280	*ce*P	P	09 34 21.8	+1.2
KAPI				pmax	pmax		
	comp=Z,927nm,1.7s						
KAPI	Kappang	59.54	280	P	P	09 34 21.1	+0.5
KAPI				IAmb	IAmb	09 34 23.0	
	comp=Z,2µm,1.8s						
PLAI	Plampang	59.65	275	P	P	09 34 20.8	-0.5
	comp=Z,31µmcomp=Z,3µm,0.9s						
APSI	Ampana	59.80	285	P	P	09 34 22.4	+0.1
	comp=Z,10µmcomp=Z,984nm,1.0s						
SPSI	Sidrap Palu	60.00	281	P	P	09 34 21.7	-1.9
	comp=Z,8µmcomp=Z,903nm,0.8s						
MRSI	Marisa	60.24	287	P	P	09 34 23.4	-1.8
	comp=Z,8µmcomp=Z,529nm,0.8s						
TTSI	Tana Toraja	60.39	282	P	P	09 34 25.9	-0.3
	comp=Z,5µmcomp=Z,454nm,0.9s						
DAV	Davao City (W)	60.71	295	P	P	09 34 27.9	-0.4
DMPH	Davao City--Mi	60.77	295	⇑*e*P	P	09 34 27.4	-1.2
KCP	Kidapawan	61.07	295	⇓*i*P	P	09 34 31.0	+0.3
MPSI	Mapaga	61.94	285	P	P	09 34 35.4	-0.9
	comp=Z,8µmcomp=Z,563nm,0.9s						
CGP	Cagayan de Oro	62.22	296	⇓*e*P	P	09 34 39.2	+1.2
SRBI	Singaraja	62.26	274	P	P	09 34 38.3	0.0
	comp=Z,20µmcomp=Z,2µm,0.9s						
MSLP	Maasin	63.05	298	*e*P	P	09 34 42.6	-0.7
JAGI	Jajag, Banyuwa	63.05	274	P	P	09 34 42.4	-1.0
	comp=Z,23µmcomp=Z,2µm,0.9s						
JCJ	Chichijima	63.10	324	P	P	09 34 42.5	-0.9
	comp=Z,265nm,1.0s,baz=227,slow=11,SNR=13						
JCJ				S	S	09 42 23.9	-3.4
	comp=Z,42nm,1.0s,baz=284,slow=19,SNR=1.8						
TBP	Tagbilaran	63.59	297	*i* P	P	09 34 50.2	+3.4
BKB	Balikpapan	63.80	282	P	P	09 34 50.5	+2.4
BKB	Balikpapan	63.80	282	IAmb	IAmb	09 34 51.3	
	comp=Z,438nm,0.8s						

KMMI Kalianget 63.81 275 P **P** 09 34 49.2 +0.9
comp=Z,20μmcomp=Z,1μm,0.9s
SMKI Samarinda 63.91 283 P **P** 09 34 50.8 +1.9
RPN Rapa Nui 63.95 109 P **P** 09 34 50.2 +1.3
comp=Z,305nm,0.8s,baz=291,slow=3.8,SNR=16
RPN Rapa Nui 63.95 109 P **P** 09 34 51.0 +2.1
RPN pmax pmax
comp=Z,725nm,1.2s
RPN Rapa Nui 63.95 109 P **P** 09 34 51.0 +2.1
RPN IAmb IAmb 09 34 52.7
comp=Z,725nm,1.2s
QSPA South Pole Qui 64.18 180 P **P** 09 34 50.4 +0.5
comp=Z,2μm,0.9s,baz=183,slow=0.4,SNR=79
QSPA S **S** 09 42 39.9 +0.5
comp=Z,12nm,1.0s,baz=258,slow=23,SNR=7.1
QSPA South Pole Qui 64.18 180 P **P** 09 34 50.2 +0.3
GRJI Gresik 65.21 274 P **P** 09 34 57.4 +0.4
comp=Z,30μmcomp=Z,4μm,0.8s
PWJI Pagerwojo 65.35 273 P **P** 09 34 58.2 +0.3
comp=Z,1μm,0.8s
RCP Roxas 65.56 298⇑ *eP* **P** 09 34 58.8 -0.3
PCJI Pacitan 65.84 273 P **P** 09 35 01.3 +0.4
comp=Z,28μmcomp=Z,3μm,0.9s
WOJI Wonogiri, Jawa 66.22 273 P **P** 09 35 03.6 +0.3
comp=Z,12μmcomp=Z,1μm,1.0s
UGM Wanagama 66.55 273 P **P** 09 35 04.8 -0.5
comp=Z,992nm,1.0s
YOGI Yogyakarta 66.79 273 P **P** 09 35 07.4 +0.6
comp=Z,849nm,0.8s
UWJI Ujung Watu 66.79 274 P **P** 09 35 07.3 +0.5
comp=Z,5μmcomp=Z,563nm,0.9s
SMRI Semarang 66.98 273 P **P** 09 35 08.7 +0.7
comp=Z,787nm,0.9s
SMRI Semarang 66.98 273 P **P** 09 35 06.6 -1.4
SMRI IAmb IAmb 09 35 29.0
comp=Z,861nm,1.2s
GQP Guinayangan 67.16 299⇑ *iP* **P** 09 35 08.3 -0.6
SJMP San Jose 67.38 297 *eP* **P** 09 35 09.1 -1.2
PBKI Pangkalan Bun 67.77 278 P **P** 09 35 13.6 +0.8
comp=Z,28μmcomp=Z,3μm,1.0s
KKM Kota Kinabalu 67.98 289 IAmb IAmb 09 35 15.6
comp=Z,460nm,0.9s
PALP Palanan 69.05 302 *eP* **P** 09 35 17.1 -3.2
CISI Cisompet, Garu 69.13 272 P **P** 09 35 20.3 -0.7
comp=Z,15μmcomp=Z,1μm,1.0s
JHJ Hachijo jima 2 69.16 326 P **P** 09 35 21.2 +0.5
comp=Z,168nm,0.6s,baz=96,slow=23,SNR=6.6
LEM Lembang 69.62 272 P **P** 09 35 24.8 +0.8
comp=Z,2μm,0.8s,baz=69,slow=4.3,SNR=66
LEM S **S** 09 43 45.0 +0.4
comp=Z,11nm,0.4s,baz=315,slow=19,SNR=1.7
SBUM Sibu 69.66 283 P **P** 09 35 25.0 +0.9
CNJI Cibinong 69.85 272 P **P** 09 35 24.7 -0.5
comp=Z,21μmcomp=Z,2μm,0.9s
XMIS Christmas Isla 69.89 268 P **P** 09 35 25.7 +0.2
SKJI Sukabumi 70.50 272 P **P** 09 35 28.9 -0.1
comp=Z,2μm,0.9s
BOLP Bolinao 70.59 300 *eP* **P** 09 35 27.5 -1.9
ABRA Dolores 70.71 302 *eP* **P** 09 35 29.6 -0.4
KSM Kuching 70.89 281 P **P** 09 35 30.6 -0.7
KSM Kuching 70.89 281 P **P** 09 35 32.0 +0.7
JOW Kunigami 71.17 314 P **P** 09 35 33.4 +0.7
comp=Z,24nm,0.8s,baz=135,slow=9.1,SNR=52
INU Inuyama 72.32 326 P **P** 09 35 38.6 -0.5
BLSI Bandar Lampung 72.37 273 P **P** 09 35 38.8 -1.1
comp=Z,11μmcomp=Z,865nm,0.7s
MJAR Matsushiro Arr 72.67 327 P **P** 09 35 40.6 -0.5
comp=Z,54nm,0.5s,baz=135,slow=5.7,SNR=117
MJAR S **S** 09 44 18.4 +1.0
comp=Z,1.1nm,0.4s,baz=243,slow=19,SNR=6.0
MAJO Matsushiro 72.67 327 *ceP* **P** 09 35 40.7 -0.4
MAJO pmax pmax
comp=Z,187nm,1.0s
MAJO Matsushiro 72.67 327 P **P** 09 35 40.5 -0.6
MAT Matsushiro 72.67 327 P **P** 09 35 40.3 -0.8
MAT S **S** 09 44 16.3 -1.1
PPBI Pangkal Pinang 72.95 276 P **P** 09 35 42.7 -0.5
comp=Z,848nm,0.9s
KASI Kota Agung 72.97 272 P **P** 09 35 42.5 -0.8
comp=Z,15μmcomp=Z,1μm,1.0s
LWLI Liwa 73.58 272 P **P** 09 35 46.5 -0.4
comp=Z,16μmcomp=Z,2μm,0.8s
PMBI Palembang 73.84 275 P **P** 09 35 50.7 +2.4
JNU Nakatsue 73.99 320 P **P** 09 35 47.8 -0.8
comp=Z,160nm,0.8s,baz=209,slow=1.8,SNR=77
JNU S **S** 09 44 32.8 +0.7
comp=Z,12nm,1.0s,baz=90,slow=20,SNR=3.0
NACB Ninganchiao 74.01 307 IAmb IAmb 09 35 49.7
comp=Z,559nm,1.5s
TPUB Ta-pu 74.16 306 IAmb IAmb 09 35 49.9
comp=Z,370nm,1.0s
TATO Taipei 74.58 308 P **P** 09 35 51.2 -0.9
TATO Taipei 74.58 308 P P 09 35 51.0 -1.0
TATO IAmb IAmb 09 35 52.5
comp=Z,346nm,1.1s
MNAI Manna 74.86 273 P **P** 09 35 54.3 +0.3
comp=Z,903nm,0.8s
ERM Erimo 74.95 334 *di P* **P** 09 35 55.0 +1.2
ERM pmax pmax
comp=Z,240nm,1.3s
ERM Erimo 74.95 334 P **P** 09 35 55.2 +1.5
MAW Mawson 75.31 201 P **P** 09 35 55.3 -0.1
baz=75,SNR=142
MAW Mawson 75.31 201 P **P** 09 35 55.0 -0.4
comp=Z,279nm,0.8s,baz=130,slow=4.4,SNR=97
MAW S **S** 09 44 45.8 +0.7
comp=Z,17nm,1.0s,baz=260,slow=19,SNR=6.9
KSI Kapahiang 75.49 273 P **P** 09 35 57.1 -0.4
comp=Z,22μmcomp=Z,3μm,0.8s
YUK Yuzh-Kuril'sk 75.66 337 *deP* **P** 09 35 58.8 +1.2
TPRI Tanjung Pinang 75.77 278 P P 09 35 53.1 -5.9
KUR Kuril'sk 76.02 338 *di P* **P** 09 36 01.0 +1.5
KUR *e* 09 36 10.0
KUR *i S* **S** 09 44 57.3 +4.2
KUR *e* 09 45 19.3
KUR pmax pmax
comp=Z,522nm,1.2s
KUR MLR MLR
comp=Z,966nm,17.0s
KUR MLR MLR
comp=N,1μm,16.0s
QZH Quanzhou 76.64 306⇓ *iP* **P** 09 36 04.2 +0.8
QZH S **S** 09 44 57.7 -2.9
QZH pmax pmax
comp=N,190nm,1.1s
QZH pmax pmax
comp=N,3μm,3.9s
MYKOM Kota Tinggi 76.76 279 IAmb IAmb 09 36 06.1
comp=Z,581nm,0.9s
MYKOM Kota Tinggi 76.76 279 P **P** 09 36 05.0 +0.6
COCO West Island 77.11 263 P **P** 09 36 07.4 +1.1
COCO pmax pmax
comp=Z,690nm,1.2s
COCO West Island 77.11 263 P **P** 09 36 07.3 +1.1
COCO IAmb IAmb 09 36 09.6
comp=Z,690nm,1.2s
RGRI Rengat 77.16 276 P **P** 09 36 07.8 +1.2
comp=Z,997nmcomp=Z,51μmcomp=Z,2μm,0.9s
KRJI Kerinci 77.18 274 P **P** 09 36 05.9 -0.9
comp=Z,26μmcomp=Z,20μmcomp=Z,1μm,1.0s
DLV T Lat 77.53 290 IAmb IAmb 09 36 11.1
comp=Z,456nm,1.0s
ADK Adak 77.58 3 P **P** 09 36 06.9 -1.0
ADK pmax pmax
comp=Z,564nm,0.9s
ADK Adak 77.58 3 P **P** 09 36 06.9 -1.0
ADK IAmb IAmb 09 36 09.6
comp=Z,564nm,0.9s
PMSA Palmer Station 77.70 157 P **P** 09 36 08.6 +0.1
comp=Z,294nm,0.7s,baz=224,slow=3.5,SNR=40
PMSA S **S** 09 45 14.3 +3.9
comp=Z,52nm,1.1s,baz=119,slow=22,SNR=9.0
PMSA Palmer Station 77.70 157 P **P** 09 36 09.0 +0.5
PMSA IAmb IAmb 09 36 11.4
comp=Z,282nm,0.8s
PMSA Palmer Station 77.70 157 *eP* **P** 09 36 09.8 +1.3
SDSI Sungai Dareh 77.72 275 P **P** 09 36 08.2 -1.4
comp=Z,4μmcomp=Z,273nm,1.0s
ATKA Atka Island 78.06 5 P **P** 09 36 10.0 -0.4
ATKA IAmb IAmb 09 36 11.9
comp=Z,679nm,1.1s
PPSI Pulau Pagai 78.19 273 P **P** 09 36 13.7 +1.6
comp=Z,28μmcomp=Z,15μmcomp=Z,1μm,1.2s
TJN Taejon 78.33 320 *di P* **P** 09 36 13.0 +0.7
SMY Shemya 78.38 357 IAmb IAmb 09 36 13.9
comp=Z,615nm,1.1s

PDSI Padang 78.59 275 P **P** 09 36 12.9 -1.4
comp=Z,14μmcomp=Z,4μmcomp=Z,274nm,1.0s
BKNI Bangkinang 78.62 276 P **P** 09 36 13.7 -0.7
comp=Z,28μmcomp=Z,10μmcomp=Z,803nm,1.0s
SSE Sheshan 78.63 313 P **P** 09 36 14.1 +0.1
SSE pmax pmax
comp=Z,100nm,0.9s
SSE pmax pmax
comp=Z,650nm,5.9s
SKR Severo-Kuril's 78.72 346 *di P* **P** 09 36 14.5 +0.5
KSRS Korea Array 78.77 321 P **P** 09 36 15.1 +0.5
comp=Z,69nm,0.8s,baz=137,slow=5.6,SNR=90
YSS Yuzh-Sakhalins 79.28 336⇑ *eP* **P** 09 36 18.9 +1.9
YSS *e**PP **pP** 09 38 28.4 +2.7
YSS *eS* **S** 09 45 31.4 +4.2
YSS pmax pmax
comp=Z,2μm,3.4s
YSS smax smax
comp=N,2μm,8.7s
YSS smax smax
comp=E,5μm,10.8s
YSS Yuzh-Sakhalins 79.28 336 P **P** 09 36 18.6 +1.5
YSS IAmb IAmb 09 36 20.4
comp=Z,518nm,0.9s
INCN Inchon 79.52 321 P **P** 09 36 19.3 +0.7
INCN pmax pmax
comp=Z,156nm,1.2s
INCN Inchon 79.52 321 P **P** 09 36 19.3 +0.7
SISI Saibi 79.64 274 P **P** 09 36 20.7 +0.9
comp=Z,6μmcomp=Z,192nm,0.8s
QIZ Qiongzhong 80.03 297 P **P** 09 36 22.4 +0.8
QIZ S **S** 09 45 37.9 +1.9
QIZ pmax pmax
comp=Z,140nm,0.9s
QIZ pmax pmax
comp=Z,2μm,5.4s
MNSI Mandailing Nat 80.13 276 P **P** 09 36 21.0 -1.3
comp=Z,23μmcomp=Z,6μmcomp=Z,450nm,0.8s
TEY Ternei 80.16 331⇑ *eP* **P** 09 36 21.4 -0.2
TEY pmax pmax
comp=Z,60nm,1.4s
TEY pmax pmax
comp=N,20nm,1.3s
PET Petropavlovsk 80.43 348⇓ *iP* **P** 09 36 23.5 +0.7
PET *eS* **S** 09 45 35.6 -2.9
PET pmax pmax
comp=Z,196nm,1.1s
PET MLR MLR
comp=Z,2μm,20.0s
PET Petropavlovsk 80.43 348 P **P** 09 36 22.8 0.0
PET IAmb IAmb 09 36 25.1
comp=Z,542nm,1.6s
IPM Ipoh 80.49 280 IAmb IAmb 09 36 25.5
comp=Z,473nm,0.9s
IPM Ipoh 80.49 280 P **P** 09 36 24.0 -0.1
PEA0B Petropavlovsk- 80.69 348 *ci P* **P** 09 36 24.9 +0.7
PEA0B Petropavlovsk- 80.69 348 IAmb IAmb 09 36 26.7
comp=Z,875nm,1.4s
PETK Petropavlovsk- 80.69 348 P **P** 09 36 25.1 +0.9
comp=Z,177nm,0.8s,baz=132,slow=7.0,SNR=102
PETK pP **pP** 09 38 34.7 +1.1
comp=Z,9.0nm,0.9s,baz=134,slow=4.2,SNR=1.0
PETK PKiKP **PKiKP** 09 41 44.3 -0.9
comp=Z,2.5nm,0.4s,baz=124,slow=3.8,SNR=29
PETK S **S** 09 45 42.1 +0.9
comp=Z,4.7nm,1.0s,baz=163,slow=12,SNR=2.9
PETK PKKPbc **PKKPbc** 09 54 59.4 -0.9
comp=Z,2.6nm,0.5s,baz=146,slow=1.9,SNR=12
SYO Syowa Base 80.69 194⇑ *iP* **P** 09 36 21.4 -2.7
NJ2 Nanjing 80.78 312 *eP* **P** 09 36 26.0 +0.8
NJ2 PP **sP** 09 39 38.6 +1.6
NJ2 S **S** 09 45 44.4 +1.3
NJ2 pmax pmax
comp=Z,180nm,0.9s
NJ2 pmax pmax
comp=Z,2μm,3.5s
MSHR Mys Shultsa 80.78 327 *di P* **P** 09 36 26.4 +1.5
VLA Vladivostok 80.83 328 *di P* **P** 09 36 26.4 +1.3
VLA pmax pmax
comp=Z,221nm,1.1s
AKUT Akutan 80.90 9 P **P** 09 36 25.1 -0.1
AKUT IAmb IAmb 09 36 26.8
comp=Z,1μm,1.7s
PBSI Pulau Batu 80.93 274 P **P** 09 36 27.1 +0.7
comp=Z,11μmcomp=Z,524nm,1.0s
GO10 Punta Arenas 81.09 145 P **P** 09 36 28.5 +2.0
GO10 IAmb IAmb 09 36 31.2
comp=Z,493nm,0.9s
KULM Kulim 81.19 280 P **P** 09 36 28.0 +0.3
USHA Ushuaia 81.49 148 P **P** 09 36 30.5 +2.0
comp=Z,81nm,1.0s,baz=346,slow=2.7,SNR=8.7
RPSI Rantau Prapat 81.56 277 IAmb IAmb 09 36 30.2
comp=Z,299nm,0.9s
PAF Port-aux-Franc 81.57 219 P **P** 09 36 30.9 +1.9
PAF pmax pmax
comp=Z,1μm,1.5s
PAF Port-aux-Franc 81.57 219 P **P** 09 36 30.9 +1.9
USA0B Ussuriysk Arra 81.59 328 IAmb IAmb 09 36 31.8
comp=Z,1μm,1.8s
USRK Ussuriysk Ar. 81.59 328 P **P** 09 36 29.7 +0.7
comp=Z,150nm,0.8s,baz=147,slow=3.3,SNR=142
USRK PKKPbc **PKKPbc** 09 54 56.8 -0.9
comp=Z,1.8nm,0.4s,baz=337,slow=4.0,SNR=9.7
PSI Prapat 81.61 277 P **P** 09 36 28.7 -1.3
comp=Z,223nm,0.8s,baz=180,slow=4.3,SNR=76
PSI PP **PP** 09 39 47.0 -1.9
comp=Z,38nm,0.9s,baz=180,slow=1.8,SNR=4.4
PSI PKKPbc **PKKPbc** 09 54 58.0 +1.8
comp=Z,7.1nm,0.8s,baz=358,slow=4.7,SNR=4.1
PSI PKPPKP **P'P'df** 10 02 55.2 -7.4
comp=Z,1.9nm,0.4s,baz=158,slow=0.9,SNR=3.7
H06S1 SOCORRO T 81.86 65 P **P** 09 36 32.0 +1.1
H06N1 SOCORRO T-PHAS 81.90 65 P **P** 09 36 32.1 +1.0
H06E1 SOCORRO T-PHAS 81.91 65 P **P** 09 36 32.2 +1.0
GSI Gunungsitoli 82.15 275 P **P** 09 36 33.4 +0.8
comp=Z,59μmcomp=Z,3μm,0.9s
CNBA Chernabura Isl 82.63 13 IAmb IAmb 09 36 36.0
comp=Z,457nm,1.2s
TYV Tymovskoe 82.64 338 *eP* **P** 09 36 35.8 +1.7
TYV pmax pmax
comp=Z,2μm,2.2s
TYV pmax pmax
comp=Z,304nm,1.4s
SNAA Sanae 82.69 180 P **P** 09 36 33.1 -1.2
SNAA Sanae 82.69 180 PKiKP **PKKPbc** 09 54 52.2 -3.5
SNAA Sanae 82.69 180 P **P** 09 36 33.1 -1.2
comp=Z,309nm,0.7s,baz=210,slow=8.1,SNR=125
SNAA PKKPbc **PKKPbc** 09 54 52.4 -3.3
comp=Z,8.6nm,0.9s,baz=206,slow=1.9,SNR=6.7
SNAA Sanae 82.69 180 *deP* **P** 09 36 33.3 -1.0
SNAA Sanae 82.69 180 IAmb IAmb 09 36 36.1
comp=Z,315nm,0.7s
KCSI Kotacane, Aceh 82.96 277 P **P** 09 36 36.1 -0.6
comp=Z,29μmcomp=Z,5μmcomp=Z,212nm,1.6s
VNA3 Neumayer Olymp 82.96 177 P **P** 09 36 34.6 -1.0
WHN Wuhan 82.97 309 P **P** 09 36 36.5 +0.2
WHN S **S** 09 46 06.9 +2.1
MDJ Mudanjiang 83.05 327 P **P** 09 36 38.0 +1.6
MDJ pP pP 09 38 40.8 -5.9
MDJ sP sP 09 39 45.6 -3.4
MDJ PP **PP** 09 40 00.9 +1.0
MDJ S **S** 09 46 08.4 +3.3
MDJ SS **SS** 09 51 51.0 +1.7
MDJ pmax pmax
comp=Z,350nm,1.0s
MDJ pmax pmax
comp=Z,4μm,3.9s
MDJ Mudanjiang 83.05 327 IAmb IAmb 09 36 39.3
comp=Z,575nm,1.3s
NVL N'lazarevskaya 83.11 185⇓ *iP* **P** 09 36 34.2 -2.1
NVL *eS* **S** 09 45 56.6 -8.4
NVL pmax pmax
comp=Z,359nm,1.6s
VNA2 Neumayer--Watz 83.36 178 P **P** 09 36 36.8 -0.8
baz=178,slow=3.8
TPTI 83.37 277 P **P** 09 36 38.5 -0.2
comp=Z,2μmcomp=Z,136nm,1.3s
DL2 Dalian 83.39 319 P **P** 09 36 38.4 +0.2
DL2 S **S** 09 46 10.3 +1.7
DL2 pmax pmax
comp=Z,210nm,1.1s
DL2 pmax pmax
comp=Z,2μm,5.9s
SNCC San Nicolas Is 83.44 48 P **P** 09 36 39.9 +1.4
baz=233
VNA1 Neumayer--Stat 83.60 178 P **P** 09 36 37.5 -1.3

SNSI Sinabang, Aceh 83.76 276 P **P** 09 36 41.7 +1.1
comp=Z,12μmcomp=Z,1μm,1.3s
SCZ2 Santa Cruz Isl 83.81 48 P **P** 09 36 42.0 +1.6
baz=233,SNR=14
SCI2 San Clemente I 83.94 49 P **P** 09 36 42.4 +1.3
baz=234,SNR=12
SBC Santa Barbara 84.03 47 P **P** 09 36 42.9 +1.5
baz=233
PKM Mcpherson Peak 84.23 47 P **P** 09 36 44.3 +1.6
baz=233,SNR=46
CHGN Chignik 84.26 13 IAmb IAmb 09 36 44.0
comp=Z,479nm,1.1s
CIS Catalina Islan 84.28 49 P **P** 09 36 43.7 +1.0
baz=234
MCCM Marconi Confer 84.29 43 IAmb IAmb 09 36 45.6
comp=Z,518nm,1.1s
SAO San Andreas Ge 84.32 45 IAmb IAmb 09 36 45.9
comp=Z,321nm,1.1s
SMMC Simmler 84.36 46 P **P** 09 36 44.9 +1.8
baz=233,SNR=33
PMPB Monarch Peak 84.39 45 P **P** 09 36 44.9 +1.6
PMPB IAmb IAmb 09 36 46.6
comp=Z,428nm,1.2s
LHMI Lhok Sumawe 84.45 279 P **P** 09 36 44.8 +0.8
comp=Z,14μmcomp=Z,1μm,0.9s
PAGB Antelope Grade 84.45 46 IAmb IAmb 09 36 46.9
comp=Z,895nm,1.7s
TIA Tai'an 84.47 315 P **P** 09 36 43.5 0.0
MLSI Meulaboh, Aceh 84.51 277 P **P** 09 36 44.1 -0.2
comp=Z,13μmcomp=Z,1μm,1.0s
FMP Fort Macarthur 84.54 49 P **P** 09 36 45.1 +1.1
baz=234,SNR=7.4
CN2 Changchun 84.56 325 *eP* **P** 09 36 44.2 +0.4
CN2 *ep*P pP 09 38 51.3 -3.5
CN2 *eS* **S** 09 46 22.3 +2.6
CN2 pmax pmax
comp=Z,520nm,1.2s
HOPS Hopland Field 84.71 42 IAmb IAmb 09 36 47.9
comp=Z,466nm,1.1s
GDXM Geysers 84.76 42 IAmb IAmb 09 36 48.6
comp=Z,301nm,1.1s
OSI Osito Audit: C 84.78 48 P **P** 09 36 46.3 +1.1
baz=234,SNR=31
OSI S **S** 09 46 29.0 +6.6
baz=234
OSI Osito Audit: C 84.78 48 P **P** 09 36 46.5 +1.3
OSI IAmb IAmb 09 36 48.3
comp=Z,366nm,1.2s
GRNR Gornyy 84.80 335⇑ *iP* **P** 09 36 46.7 +1.9
GRNR pmax pmax
comp=Z,330nm,1.2s
GRNR MLR MLR
comp=Z,640nm,16.0s
DECC Green Verdugo 84.83 48 P **P** 09 36 46.5 +1.1
baz=234,SNR=24
DECC S **S** 09 46 29.9 +7.0
baz=234
KCPM Cahto Peak 84.84 41 IAmb IAmb 09 36 48.9
comp=Z,334nm,1.0s
109C Camp Elliot, M 84.88 50 P **P** 09 36 46.6 +1.0
baz=235,SNR=58
109C S **S** 09 46 30.8 +7.6
baz=235
109C Camp Elliot, M 84.88 50 IAmb IAmb 09 36 48.5
comp=Z,337nm,1.1s
ARVC Arvin 85.02 47 P **P** 09 36 47.3 +1.0
baz=234,SNR=54
BAR Barrett 85.05 50 IAmb IAmb 09 36 49.6
comp=Z,579nm,1.6s
MURC Murrieta 85.22 49 P **P** 09 36 48.4 +1.1
baz=235,SNR=55
VES Vestal, Richgr 85.27 46 P **P** 09 36 48.5 +1.1
baz=233,SNR=61
BFSC Mount Baldy Ra 85.28 48 P **P** 09 36 48.2 +0.5
baz=234,SNR=72
BFSC S **S** 09 46 34.3 +6.9
baz=234
MONP2 Monument Peak 85.35 50 P **P** 09 36 49.6 +1.5
baz=235,SNR=96
MONP2 S **S** 09 46 36.8 +8.6
baz=235
VOG Valley Oaks Go 85.37 46 P **P** 09 36 48.7 +0.9
baz=233,SNR=10
IKP In-Ko-Pah, Jac 85.43 50 P **P** 09 36 50.3 +2.0
baz=235,SNR=76
IKP S **S** 09 46 37.2 +8.5
baz=235
EDW2 Edwards Air Fo 85.43 48 P **P** 09 36 49.4 +1.2
baz=234,SNR=64
EDW2 S **S** 09 46 35.1 +6.5
baz=234
KLR Kul'dur 85.50 332 PKiKP **PKiKP** 09 41 53.1 0.0
comp=Z,7.8nm,0.9s,baz=182,slow=8.6,SNR=4.6
KLR PKKPbc **PKKPbc** 09 54 48.4 -0.5
comp=Z,4.0nm,0.7s,baz=297,slow=0.7,SNR=6.9
KLR Kul'dur 85.50 332 *di P* **P** 09 36 49.1 +0.9
KLR pmax pmax
comp=Z,659nm,1.8s
KHMM Horse Mountain 85.52 40 IAmb IAmb 09 36 52.4
comp=Z,516nm,1.3s
ISA Isabella, Lake 85.57 47 P **P** 09 36 50.5 +1.5
baz=234,SNR=131
ISA S **S** 09 46 37.6 +7.6
baz=234
ISA Isabella, Lake 85.57 47 IAmb IAmb 09 36 51.9
comp=Z,328nm,1.0s
O02D Mt. Diablo Mer 85.63 41 P **P** 09 36 51.1 +2.0
baz=231,SNR=133
PFO Pinyon Flats O 85.73 49 P **P** 09 36 51.1 +1.2
comp=Z,88nm,1.0s,baz=246,slow=3.6,SNR=64
PFO Pinyon Flats O 85.73 49 P **P** 09 36 51.1 +1.2
baz=235,SNR=51
PFO S **S** 09 46 39.6 +7.9
baz=235
PFO Pinyon Flats O 85.73 49 P **P** 09 36 50.6 +0.8
PFO IAmb IAmb 09 36 52.9
comp=Z,330nm,1.4s
XPFO Pion Flat 85.73 50 P **P** 09 36 50.5 +0.7
XPFO IAmb IAmb 09 36 52.9
comp=Z,331nm,1.4s
H03S2 Juan Fernandez 85.75 126 P **P** 09 36 52.3 +2.7
CMB Columbia Colle 85.76 44 IAmb IAmb 09 36 52.5
comp=Z,203nm,1.0s
H03S1 Juan Fernandez 85.76 126 P **P** 09 36 52.4 +2.8
H03S3 Juan Fernandez 85.77 126 P **P** 09 36 52.3 +2.7
BBRC Big Bear Solar 85.79 49 P **P** 09 36 51.6 +1.4
baz=235,SNR=35
SWSC Sam W. Stewart 85.81 50 P **P** 09 36 51.7 +1.6
baz=236,SNR=60
H03N3 Juan Fernandez 85.93 125 P **P** 09 36 52.9 +2.4
H03N2 Juan Fernandez 85.93 125 P **P** 09 36 51.2 +0.7
H03N1 Juan Fernandez 85.95 125 P **P** 09 36 51.3 +0.8
AFDM Forest Hills D 85.96 43 IAmb IAmb 09 36 53.4
comp=Z,275nm,1.1s
LRMC Laurel Mtn Rad 85.98 47 P **P** 09 36 52.3 +1.3
baz=234,SNR=22
SLVN Son La 86.00 296 IAmb IAmb 09 36 54.9
comp=Z,601nm,1.9s
ORV Oroville 86.01 42 P **P** 09 36 51.9 +1.1
ORV pmax pmax
comp=Z,564nm,1.6s
ORV Oroville 86.01 42 P **P** 09 36 51.9 +1.1
ORV IAmb IAmb 09 36 53.8
comp=Z,564nm,1.6s
WDC Whiskeytown Da 86.03 41 P **P** 09 36 51.6 +0.7
WDC pmax pmax
comp=Z,660nm,1.4s
WDC Whiskeytown Da 86.03 41 P **P** 09 36 51.6 +0.7
RRX Edison Barstow 86.09 48 P **P** 09 36 52.6 +1.2
baz=235,SNR=5.5
RRX S **S** 09 46 41.7 +6.9
baz=235
PBKT Sadao Pong 86.13 290 IAmb IAmb 09 36 54.9
comp=Z,350nm,1.0s
N02D Trinity Center 86.18 41 P **P** 09 36 53.3 +1.6
baz=231,SNR=141
OHAK Old Harbor 86.22 15 IAmb IAmb 09 36 53.7
comp=Z,430nm,1.2s
BELC Belle Mtn. Jos 86.27 49 P **P** 09 36 53.9 +1.6
baz=235,SNR=86
BELC S **S** 09 46 45.0 +8.2
baz=235
CWC Cottonwood Cre 86.28 46 P **P** 09 36 53.6 +1.2
baz=234
O03E Paynes Creek 86.29 42 P **P** 09 36 53.4 +1.2
baz=231,SNR=122
O03E S **S** 09 46 42.6 +6.1

baz=231
MDPB Devils Postpil 86.34 45 lAmb lAmb 09 36 55.7
comp=Z,290nm,1.3s
M02C Callahan 86.36 40 P **P** **09 36 54.6 +2.1**
baz=231,SNR=90
OMMB Old Mammoth Mi 86.38 45 lAmb lAmb 09 36 56.1
comp=Z,390nm,1.6s
GYA Guiyang 86.40 302 *i*P **P** **09 36 54.1 +1.0**
GYA pP pP 09 39 05.8 +0.9
GYA sP sP 09 40 06.0 -0.9
GYA PP **PP** **09 40 28.3 +1.3**
GYA SKS **SKSac** **09 46 18.1 -2.9**
GYA S **ScS** **09 46 43.1 -0.3**
GYA SS **SS** **09 52 38.7 +0.1**
GYA pmax pmax
comp=Z,110nm,0.9s
GYA pmax pmax
comp=Z,2μm,3.5s
BC3 Big Chuckawall 86.45 50 P **P** **09 36 54.9 +1.7**
baz=236,SNR=53
BC3 S **S** **09 46 46.8 +8.5**
baz=236
MPMC Manual Prospec 86.45 47 P **P** **09 36 54.1 +0.9**
baz=234,SNR=39
MPMC S **S** **09 46 45.5 +7.0**
baz=234
GSC Goldstone, Bar 86.47 48 P **P** **09 36 54.7 +1.5**
baz=235,SNR=64
GSC S **S** **09 46 45.1 +6.6**
baz=235
GSC Goldstone, Bar 86.47 48 lAmb lAmb 09 36 56.1
comp=Z,333nm,1.2s
MLAC Mammoth, Mammo 86.50 45 P **P** **09 36 55.0 +1.5**
baz=233,SNR=24
HEC Hector,Ludlow 86.51 49 P **P** **09 36 54.5 +1.1**
baz=235,SNR=72
HEC S **S** **09 46 45.6 +6.8**
baz=235
RUBR Rubicon Trail 86.52 43 lAmb lAmb 09 36 56.5
comp=Z,347nm,1.0s
GLA Glamis 86.55 51 P **P** **09 36 55.5 +1.9**
baz=236,SNR=91
GLA S S 09 46 49.1 +10
baz=236
GLA Glamis 86.55 51 lAmb lAmb 09 36 57.2
comp=Z,373nm,1.0s
TIN Tinemaha, Big 86.55 46 P **P** **09 36 55.0 +1.4**
baz=234,SNR=32
TIN S **S** **09 46 47.1 +7.9**
baz=234
YBH Yreka Blue Hor 86.66 40 P **P** **09 36 55.0 +1.0**
comp=Z,162nm,1.0s,baz=164,slow=2.4,SNR=91
YBH PKKPbc **PKKPbc** **09 54 45.4 -0.4**
comp=Z,3.8nm,1.1s,baz=90,slow=7.1,SNR=1.9
YBH Yreka Blue Hor 86.66 40 P **P** **09 36 55.0 +1.0**
YBH Yreka Blue Hor 86.66 40 lAmb lAmb 09 36 57.4
comp=Z,350nm,1.1s
K02D Willamette Mer 86.72 39 P **P** **09 36 56.0 +1.7**
baz=230,SNR=17
J01E Myrtle Point 86.87 38 P **P** **09 36 56.6 +1.8**
baz=230,SNR=14
KDAK Kodiak Island 86.89 15 P **P** **09 36 55.3 +0.8**
comp=Z,145nm,1.2s,baz=194,slow=2.7,SNR=41
KDAK PKKPbc **PKKPbc** **09 54 45.4 -0.4**
comp=Z,4.1nm,0.5s,baz=329,slow=2.7,SNR=9.9
KDAK PKPPKP **P'P'df** **10 02 48.8 +0.2**
comp=Z,7.0nm,1.1s,baz=124,slow=0.8,SNR=3.6
KDAK Kodiak Island 86.89 15 P **P** **09 36 55.0 +0.5**
KDAK lAmb lAmb 09 36 56.9
comp=Z,527nm,1.6s
BEKR Beckworth 86.89 43 lAmb lAmb 09 36 58.0
comp=Z,440nm,1.3s
IRM Iron Mountain 86.94 50 P **P** **09 36 57.0 +1.6**
baz=236,SNR=93
IRM S **S** **09 46 51.0 +8.2**
baz=236
GMRC Granite Mounta 86.94 49 P **P** **09 36 56.7 +1.1**
baz=236,SNR=60
VCNR Virginia City 86.98 43 lAmb lAmb 09 36 58.7
comp=Z,309nm,1.2s
YERR Yerington 87.05 44 lAmb lAmb 09 36 58.8
comp=Z,472nm,1.3s
HUMO Hull Mountain 87.07 39 P **P** **09 36 57.0 +1.3**
GRAC Grapevine Rang 87.07 46 P **P** **09 36 57.4 +1.4**
baz=234,SNR=94
GRAC S **S** **09 46 51.0 +7.0**
baz=234
FURC Furnace Creek, 87.10 47 P **P** **09 36 56.9 +1.0**
baz=235,SNR=23
FURC S **S** **09 46 51.1 +7.2**
baz=235
TUQ Turquoise Moun 87.13 48 P **P** **09 36 57.8 +1.4**
baz=235,SNR=40
TUQ S **S** **09 46 52.5 +7.8**
baz=235
Y12C Blythe 87.14 50 P **P** **09 36 57.8 +1.5**
baz=236,SNR=34
Y12C S S 09 46 54.1 +10
baz=236
Y12C Blythe 87.14 50 lAmb lAmb 09 36 59.7
comp=Z,321nm,1.3s
SHOC Shoshone, Teco 87.16 48 P **P** **09 36 57.5 +1.1**
baz=235,SNR=60
SHOC S **S** **09 46 52.1 +7.4**
baz=235
M04C Macdoel 87.19 40 P **P** **09 36 57.5 +0.9**
baz=231,SNR=65
M04C S **S** **09 46 52.1 +7.0**
baz=231
L04D Klamath Falls 87.20 40 P **P** **09 36 57.8 +1.3**
baz=231,SNR=64
RYN Ryan 87.29 44 lAmb lAmb 09 36 59.9
comp=Z,453nm,1.5s
NVAR Mina Array Bea 87.31 45 P **P** **09 36 57.3 +0.1**
comp=Z,176nm,1.1s,baz=224,slow=6.7,SNR=99
NVAR pP **pwP** **09 39 14.2 +1.0**
comp=Z,27nm,1.2s,baz=228,slow=7.6,SNR=3.9
NVAR PKKPbc **PKKPbc** **09 54 44.8 +0.5**
comp=Z,0.8nm,0.5s,baz=186,slow=2.8,SNR=3.7
NVAR PKPPKP **P'P'df** **10 02 49.7 -0.2**
comp=Z,3.4nm,0.9s,baz=83,slow=3.2,SNR=11
214A Organ Pipe Nat 87.37 53 P **P** **09 36 59.3 +1.8**
baz=237,SNR=102
214A S **S** **09 46 55.4 +8.5**
baz=237
214A Organ Pipe Nat 87.37 53 lAmb lAmb 09 37 01.1
comp=Z,392nm,1.1s
BJI Beijing 87.38 317 P **P** **09 36 58.2 +1.0**
BJI sP **sP** **09 40 08.6 -2.6**
BJI S **S** **09 46 48.4 +1.9**
BJI pmax pmax
comp=Z,85nm,0.9s
PAHR Pah Rah Range 87.39 43 lAmb lAmb 09 37 00.4
comp=Z,477nm,1.2s
NV11 Mina Array Sit 87.41 45 lAmb lAmb 09 37 00.4
comp=Z,362nm,1.2s
I02D Swisshome 87.53 38 P **P** **09 36 59.7 +1.9**
baz=230,SNR=5.7
I03D Drain, OR 87.54 38 P **P** **09 36 59.4 +1.4**
baz=230,SNR=27
NEE2 Needles Airpor 87.64 49 P **P** **09 37 00.3 +1.6**
baz=236,SNR=40
PDMCI Parker Dam,Lak 87.71 50 P **P** **09 37 00.8 +1.9**
baz=236
PDMCI S **S** **09 46 57.5 +7.6**
baz=236
K04D Chiloquin, OR 87.77 40 P **P** **09 37 00.4 +1.2**
baz=231,SNR=19
K04D S **S** **09 46 57.8 +7.5**
baz=231
TPNV Topopah Spring 87.78 47 P **P** **09 37 00.7 +1.3**
baz=235,SNR=56
TPNV S **S** **09 46 58.1 +7.4**
baz=235
TPNV Topopah Spring 87.78 47 lAmb lAmb 09 37 02.4
comp=Z,316nm,1.2s
J04D Umpqua Nationa 87.95 39 P **P** **09 37 01.6 +1.5**
baz=231,SNR=79
J04D S **S** **09 46 58.9 +6.8**
baz=231
PLCA Paso Flores 88.01 135 P **P** **09 37 01.1 +0.6**
comp=Z,42nm,0.7s,baz=244,slow=5.1,SNR=51
PLCA pP **pwP** **09 39 18.9 +2.8**
comp=Z,13nm,1.0s,baz=167,slow=3.3,SNR=3.7
PLCA PKKPbc **PKKPbc** **09 54 42.9 +0.6**
comp=Z,5.2nm,0.6s,baz=81,slow=2.3,SNR=18
PLCA PKPPKP **P'P'df** **10 02 44.0 -6.6**
comp=Z,4.9nm,1.0s,baz=90,slow=12,SNR=3.3

PLCA Paso Flores 88.01 135 lAmb lAmb 09 37 04.8
comp=Z,398nm,1.6s
PLCA Paso Flores 88.01 135 *e*P **P** **09 37 01.2 +0.6**
PLCA Paso Flores 88.01 135 *e*P **P** **09 37 01.1 +0.6**
MA2 Magadan 88.13 346 P **P** **09 37 00.8 +0.5**
comp=Z,135nm,0.8s,baz=145,slow=4.8,SNR=109
MA2 PKKPbc **PKKPbc** **09 54 43.3 +0.3**
comp=Z,3.5nm,0.6s,baz=247,slow=3.0,SNR=4.1
MA2 PKPPKP **P'P'df** **10 02 47.2 +0.9**
comp=Z,1.4nm,0.3s,baz=175,slow=19,SNR=2.2
MA2 Magadan 88.13 346 *d i*P **P** **09 37 00.6 +0.4**
MA2 pmax pmax
comp=Z,220nm,1.0s
MA2 Magadan 88.13 346 P **P** **09 37 00.2 0.0**
MA2 lAmb lAmb 09 37 02.1
comp=Z,220nm,0.9s
I04A Tendick Farm, 88.13 39 P **P** **09 37 02.1 +1.3**
baz=231,SNR=34
I04A S **S** **09 46 58.9 +5.5**
baz=231
COR Corvallis 88.14 38 P **P** **09 37 02.7 +2.1**
COR pmax pmax
comp=Z,267nm,1.0s
COR Corvallis 88.14 38 P **P** **09 37 02.7 +2.1**
COR lAmb lAmb 09 37 04.1
comp=Z,267nm,1.0s
SHPR Sheep Range 88.25 48 lAmb lAmb 09 37 04.9
comp=Z,379nm,1.4s
W13A Hualapai Mount 88.33 49 lAmb lAmb 09 37 05.3
comp=Z,250nm,1.2s
EFI East Falkland 88.35 149 *de*P **P** **09 37 02.8 +1.1**
EFI pmax pmax
comp=Z,380nm,0.8s
EFI East Falkland 88.35 149 P **P** **09 37 02.5 +0.8**
TIY Taiyuan 88.38 314 *e*P **P** **09 37 03.8 +1.7**
TIY pP **pP** **09 39 09.7 -4.9**
TIY sP **sP** **09 40 16.4 +0.1**
TIY S **S** **09 46 54.9 -1.1**
TIY pmax pmax
comp=Z,110nm,0.8s
H04D Lebanon 88.41 38 P **P** **09 37 03.3 +1.3**
baz=230,SNR=32
J05D Fort Rock, OR 88.48 40 P **P** **09 37 03.9 +1.4**
baz=232,SNR=98
J05D S **S** **09 47 04.2 +7.4**
baz=232
G03D McMinnville, O 88.56 37 P **P** **09 37 04.4 +1.8**
baz=230,SNR=14
CMAR Chiang Mai Arr 88.72 291 P **P** **09 37 04.9 +0.9**
comp=Z,81nm,1.0s,baz=141,slow=2.5,SNR=5.5
CMAR pP **pP** **09 39 19.1 +2.6**
comp=Z,0.9nm,0.4s,baz=207,slow=43,SNR=1.3
CMAR PP **PP** **09 40 45.0 -0.3**
comp=Z,11nm,0.9s,baz=122,slow=6.1,SNR=4.7
CMAR PKKPbc **PKKPbc** **09 54 40.1 +0.3**
comp=Z,11nm,0.8s,baz=290,slow=4.5,SNR=18
CMAR PKPPKP **P'P'df** **10 02 47.9 -0.8**
comp=Z,3.1nm,0.8s,baz=285,slow=4.2,SNR=11
XAN Xi'an 88.73 309 P **P** **09 37 04.4 +0.7**
XAN pP pwP 09 39 19.9 -2.5
XAN sP sP 09 40 20.1 +2.1
XAN PP **PP** **09 40 49.9 +4.8**
XAN SKS **SKSac** **09 46 34.6 +0.4**
XAN S **ScS** **09 47 00.8 -1.4**
XAN sS sS 09 50 46.7 -11
XAN SS **SS** **09 53 09.7 -2.0**
XAN pmax pmax
comp=Z,110nm,1.2s
XAN pmax pmax
comp=Z,2μm,3.7s
XAN Xi'an 88.73 309 lAmb lAmb 09 37 06.5
comp=Z,340nm,1.1s
KMI Kunming 88.79 299 P **P** **09 37 06.4 +1.9**
KMI pmax pmax
comp=Z,2μm,3.8s
KMI Kunming 88.79 299 lAmb lAmb 09 37 07.1
comp=Z,235nm,0.9s
CHTO Chiang Mai 88.89 291 P **P** **09 37 05.9 +1.1**
CHTO Chiang Mai 88.89 291 P **P** **09 37 05.7 +0.9**
CHTO pmax pmax
comp=Z,346nm,1.1s
CHTO Chiang Mai 88.89 291 P **P** **09 37 05.7 +0.9**
CHTO lAmb lAmb 09 37 08.2
comp=Z,346nm,1.1s
R11A Troy Canyon, C 89.00 46 P **P** **09 37 06.2 +1.0**
baz=235
TUC Tucson 89.01 53 P **P** **09 37 07.2 +2.0**
TUC pmax pmax
comp=Z,283nm,1.1s
TUC Tucson 89.01 53 P **P** **09 37 07.5 +2.3**
baz=238
TUC S S 09 47 12.4 +10
baz=238
TUC Tucson 89.01 53 P **P** **09 37 07.2 +2.0**
TUC lAmb lAmb 09 37 09.0
comp=Z,283nm,1.1s
I05D Terrebonne, OR 89.07 39 P **P** **09 37 06.5 +1.4**
baz=232,SNR=39
F04D Rainier, OR 89.25 37 P **P** **09 37 07.3 +1.5**
baz=230,SNR=20
NLWA Neilton Lookou 89.64 35 lAmb lAmb 09 37 10.9
comp=Z,232nm,1.1s
DIB Dawson Inlet, 89.65 27 lAmb lAmb 09 37 10.2
comp=Z,186nm,1.0s
H02S1 DAWSON INLET T 89.65 27 P **P** **09 37 08.5 +1.1**
G05D Wamic, OR 89.65 38 P **P** **09 37 08.9 +1.1**
baz=232,SNR=11
X16A Lo Mia Camp, P 89.65 51 lAmb lAmb 09 37 11.6
comp=Z,216nm,1.0s
SEW Seward 89.70 16 lAmb lAmb 09 37 09.2
comp=Z,196nm,1.1s
GAMB Gambell 89.73 4 P **P** **09 37 07.8 +0.2**
GAMB lAmb lAmb 09 37 10.4
comp=Z,300nm,1.2s
E04D Cinebar 89.79 36 P **P** **09 37 10.0 +1.7**
baz=231,SNR=27
MOBC Moresby Island 89.81 27 lAmb lAmb 09 37 11.2
comp=Z,479nm,1.9s
F05D White Salmon 89.97 37 P **P** **09 37 10.6 +1.4**
baz=231,SNR=12
G06A Carlson Farm, 90.02 38 lAmb lAmb 09 37 11.5
comp=Z,146nm,1.2s
D04E Lakebay 90.08 36 P **P** **09 37 11.5 +2.0**
baz=230,SNR=8.3
D03D Eldon 90.14 35 P **P** **09 37 11.5 +1.6**
baz=230,SNR=16
D03D S **S** **09 47 18.6 +7.4**
baz=230
HPIG 90.16 60 P **P** **09 37 11.1 +0.4**
HPIG lAmb lAmb 09 37 13.4
comp=Z,179nm,1.1s
GO05 Huala 90.16 129 P **P** **09 37 11.7 +1.1**
GO05 lAmb lAmb 09 37 13.8
comp=Z,199nm,1.1s
WUAZ Wupatki 90.28 50 P **P** **09 37 12.7 +1.6**
baz=238
WUAZ S S 09 47 24.4 +11
baz=238
WUAZ Wupatki 90.28 50 lAmb lAmb 09 37 14.1
comp=Z,215nm,1.1s
LON Longmire 90.32 37 lAmb lAmb 09 37 13.2
comp=Z,278nm,1.8s
MOIG Morelia 90.38 68 lAmb lAmb 09 37 14.6
comp=Z,194nm,1.0s
ELK Elko 90.58 44 lAmb lAmb 09 37 15.0
comp=Z,136nm,0.9s
PKCU Pink Cliffs 90.67 48 P **P** **09 37 15.0 +2.0**
HIN Hinchinbrook I 90.69 17 lAmb lAmb 09 37 14.0
comp=Z,160nm,1.1s
HHC Hu-ho-hao-te 90.71 316 P **P** **09 37 14.4 +1.6**
HHC pP pP 09 39 24.5 -1.4
HHC sP sP 09 40 22.1 -5.3
HHC S **S** **09 47 20.5 +3.7**
HHC pmax pmax
comp=Z,78nm,1.3s
HHC pmax pmax
comp=Z,870nm,6.2s
ZEA Zeya 90.72 333 *e*P **P** **09 37 13.9 +1.5**
ZEA *e*S **SKSac** **09 46 45.0 +0.5**
ZEA *e* 09 47 21.0
ZEA pmax pmax
comp=N,150nm,1.0s
ZEA pmax pmax
comp=Z,220nm,1.0s
ZEA smax smax
comp=N,900nm,7.0s

X18A Snowflake 90.76 52 lAmb lAmb 09 37 16.4
comp=Z,120nm,0.9s
BBB Bella Bella 90.79 30 P **P** **09 37 14.3 +1.5**
comp=Z,50nm,0.9s,baz=220,slow=5.9,SNR=9.6
BBB Bella Bella 90.79 30 lAmb lAmb 09 37 15.0
comp=Z,130nm,1.2s
CD2 Chengdu 90.85 304 P **P** **09 37 15.0 +1.4**
CD2 pmax pmax
comp=Z,430nm,0.8s
SEY Seymchan 90.89 348 P **P** **09 37 13.3 +0.3**
comp=Z,116nm,0.9s,baz=154,slow=5.1,SNR=83
SEY pP **pwP** **09 39 32.5 +0.6**
comp=Z,19nm,0.8s,baz=148,slow=7.6,SNR=4.3
SEY PKKPbc **PKKPbc** **09 54 35.4 -0.7**
comp=Z,8.4nm,0.8s,baz=359,slow=2.6,SNR=9.6
SEY SKKP **SKKPdf** **09 57 13.6 +4.0**
comp=Z,1.7nm,0.6s,baz=348,slow=4.6,SNR=2.7
SEY PKPPKP **P'P'df** **10 02 43.4 +2.3**
comp=Z,1.5nm,0.8s,baz=152,slow=1.2,SNR=6.0
SEY Seymchan 90.89 348 *d i*P **P** **09 37 13.8 +0.8**
G08A Pilot Rock 91.00 39 P **P** **09 37 14.2 +0.2**
FID Port Fidalgo 91.00 16 lAmb lAmb 09 37 15.1
comp=Z,208nm,1.1s
EYAK Cordova Ski Ar 91.02 17 lAmb lAmb 09 37 15.5
comp=Z,124nm,0.9s
MTPU Mount Pierson 91.07 48 P **P** **09 37 15.8 +0.9**
KNK Knik Glacier 91.09 15 lAmb lAmb 09 37 15.7
comp=Z,150nm,0.9s
A04D Lummi Island 91.09 35 P **P** **09 37 15.6 +1.4**
baz=231,SNR=7.2
B05A Bryant 91.12 35 P **P** **09 37 15.7 +1.4**
baz=231
B05A S **S** **09 47 24.9 +5.1**
baz=231
HIA Hailar 91.14 326 *d i*P **P** **09 37 14.7 +0.2**
HIA pmax pmax
comp=Z,124nm,1.2s
RAGM Ragged Mountai 91.17 17 lAmb lAmb 09 37 16.6
comp=Z,206nm,1.2s
W18A Petrified Fore 91.22 51 P **P** **09 37 16.8 +1.4**
baz=239
W18A Petrified Fore 91.22 51 P **P** **09 37 15.6 +0.1**
W18A lAmb lAmb 09 37 18.3
comp=Z,228nm,1.2s
LTY Liberty 91.25 37 lAmb lAmb 09 37 17.6
comp=Z,356nm,1.8s
E07A Sunnyside 91.26 38 lAmb lAmb 09 37 18.1
comp=Z,347nm,1.5s
121A Cookes Peak, D 91.31 54 P **P** **09 37 17.8 +1.9**
baz=240
121A S S 09 47 33.5 +11
baz=240
121A Cookes Peak, D 91.31 54 lAmb lAmb 09 37 19.3
comp=Z,122nm,1.2s
HAWA Hanford 91.34 38 lAmb lAmb 09 37 18.4
comp=Z,312nm,1.6s
C06D Leavenworth 91.54 36 P **P** **09 37 17.3 +1.0**
baz=232
TLIG Tlapa 91.65 71 lAmb lAmb 09 37 21.1
comp=Z,129nm,1.2s
E08A Dider Farm, El 91.66 38 P **P** **09 37 17.7 +0.8**
E08A lAmb lAmb 09 37 19.8
comp=Z,332nm,2.0s
SCM Sheep Creek Mo 91.72 16 lAmb lAmb 09 37 18.8
comp=Z,212nm,0.9s
DUG Dugway, Tooele 91.82 46 P **P** **09 37 19.1 +1.1**
baz=237
CRQM Cirque 91.90 18 lAmb lAmb 09 37 20.0
comp=Z,132nm,1.1s
TGL Tana Glacier 91.98 18 lAmb lAmb 09 37 20.3
comp=Z,140nm,1.1s
PEL Peldehue 92.03 128 lAmb lAmb 09 37 22.4
comp=Z,139nm,0.8s
WRAK Wrangell Islan 92.05 25 P **P** **09 37 19.6 +1.2**
VRDI Verde Repeater 92.20 17 lAmb lAmb 09 37 21.3
comp=Z,132nm,1.1s
GLB Gilahina Butte 92.29 17 P **P** **09 37 19.6 +0.1**
GLB lAmb lAmb 09 37 21.4
comp=Z,109nm,1.0s
BALM Baldy 92.35 18 lAmb lAmb 09 37 21.9
comp=Z,114nm,1.0s
MCARA McCarthy VSAT 92.45 18 lAmb lAmb 09 37 23.0
comp=Z,193nm,1.1s
BARN Barnard Glacie 92.56 18 lAmb lAmb 09 37 23.1
comp=Z,128nm,1.0s
CTGM Chitina Glacie 92.58 18 lAmb lAmb 09 37 23.0
comp=Z,91nm,0.9s
SPUT South Promonto 92.65 45 P **P** **09 37 22.8 +1.0**
MNTX Cornudas Mount 92.67 56 P **P** **09 37 23.1 +1.1**
baz=241
MNTX Cornudas Mount 92.67 56 pwP 09 39 41.4 +2.8
Y22D IRIS PASSCAL I 92.70 53 P **P** **09 37 23.8 +1.6**
baz=240
Y22D IRIS PASSCAL I 92.70 53 lAmb lAmb 09 37 25.4
comp=Z,140nm,1.1s
LLLB Lilooet 92.70 33 lAmb lAmb 09 37 24.0
comp=Z,151nm,1.6s
TXAR Lajitas Array 92.85 59 P **P** **09 37 23.2 +0.2**
comp=Z,60nm,0.9s,baz=215,slow=4.8,SNR=58
TXAR pP **pP** **09 39 38.0 +0.8**
comp=Z,6.9nm,1.1s,baz=235,slow=3.2,SNR=1.8
TXAR PKKPbc **PKKPbc** **09 54 31.3 +1.4**
comp=Z,2.8nm,0.5s,baz=114,slow=2.9,SNR=18
TXAR SKKPbc SKKPbc 09 57 12.4 +0.7
comp=Z,1.8nm,1.0s,baz=90,slow=3.6,SNR=3.6
TXAR PKPPKP **P'P'df** **10 02 40.4 -0.1**
comp=Z,0.8nm,0.9s,baz=83,slow=5.2,SNR=4.3
JLU Jordanelle 92.92 46 P **P** **09 37 23.8 +0.6**
MCK McKinley 93.01 14 lAmb lAmb 09 37 25.4
comp=Z,94nm,1.1s
MVCO Mesa Verde 93.14 50 P **P** **09 37 24.8 +0.6**
baz=240
PV05 Paradox Valley 93.17 49 lAmb lAmb 09 37 27.1
comp=Z,117nm,1.2s
BWN Browne 93.28 14 lAmb lAmb 09 37 25.0
comp=Z,138nm,1.0s
LZH Lanzhou 93.35 309 *e*P **P** **09 37 26.8 +1.7**
LZH pP pP 09 39 41.6 +3.2
LZH sP sP 09 40 40.9 +1.1
LZH pmax pmax
comp=Z,34nm,1.1s
PV10 Paradox Valley 93.36 49 lAmb lAmb 09 37 27.2
comp=Z,116nm,1.4s
PV19 Morning Glory 93.36 49 P **P** **09 37 25.8 +0.5**
PV19 lAmb lAmb 09 37 27.5
comp=Z,94nm,1.3s
PV17 East Wray Mesa 93.36 49 lAmb lAmb 09 37 27.5
comp=Z,101nm,1.3s
PV14 Lion Creek, Pa 93.37 49 lAmb lAmb 09 37 27.5
comp=Z,91nm,1.1s
PV13 Radium Mtn., P 93.40 49 lAmb lAmb 09 37 27.6
comp=Z,111nm,1.3s
PV16 Nyswonger Mesa 93.41 49 lAmb lAmb 09 37 27.8
comp=Z,101nm,1.4s
PV23 Carpenter Ridg 93.42 49 lAmb lAmb 09 37 27.9
comp=Z,74nm,1.0s
PV11 David Mesa, Pa 93.43 49 lAmb lAmb 09 37 27.9
comp=Z,135nm,1.3s
ANMO Albuquerque 93.46 53 *d i*P **P** **09 37 26.5 +0.8**
ANMO pmax pmax
comp=Z,77nm,1.1s
ANMO Albuquerque 93.46 53 P **P** **09 37 26.6 +0.8**
baz=241
ANMO Albuquerque 93.46 53 P **P** **09 37 26.2 +0.5**
PV12 Saucer Basin, 93.49 49 lAmb lAmb 09 37 28.2
comp=Z,157nm,1.3s
PV21 Cone Mtn., Par 93.50 49 lAmb lAmb 09 37 28.3
comp=Z,87nm,1.1s
PV22 Blue Mesa, Par 93.61 49 lAmb lAmb 09 37 28.7
comp=Z,87nm,1.1s
PV07 Paradox Valley 93.66 49 P **P** **09 37 27.1 +0.6**
PV07 lAmb lAmb 09 37 28.8
comp=Z,97nm,1.3s
NEW Newport 93.77 37 P **P** **09 37 26.9 +0.3**
comp=Z,10nm,1.0s,baz=228,slow=5.8,SNR=7.6
NEW pP **pwP** **09 39 43.4 -0.5**
comp=Z,1.8nm,0.7s,baz=216,slow=14,SNR=1.5
NEW Newport 93.77 37 P **P** **09 37 26.9 +0.3**
baz=235
WRH Wood River Hil 93.84 14 lAmb lAmb 09 37 27.6
comp=Z,121nm,1.0s
RIDG Independent Ri 93.95 16 lAmb lAmb 09 37 28.7
comp=Z,114nm,1.1s
HDA Harding Lake 94.03 14 P **P** **09 37 27.2 -0.1**
baz=211
HDA S **S** **09 47 43.5 -1.0**
baz=211

HDA S **S** 09 47 43.5 -1.0
baz=211
BILL Bilibino 94.08 356 *d* iP **P** 09 37 27.9 +0.4
BILL *e**PP **pP** 09 39 43.1 +2.0
BILL *e* 09 41 30.4
BILL *e*PPP PPP 09 43 41.9
BILL pmax pmax
comp=Z,148nm,1.7s
BILL Bilibino 94.08 356 P **P** 09 37 27.8 +0.4
BILL IAmb IAmb 09 37 29.8
comp=Z,292nm,1.8s
MDM Murphy Dome 94.23 14 IAmb IAmb 09 37 29.1
comp=Z,109nm,1.1s
TCOL CIGO, UAF Yank 94.23 14 P **P** 09 37 27.9 -0.3
baz=210
TCOL S **S** 09 47 45.2 -0.9
baz=210
COLA College 94.24 14 *d* iP **P** 09 37 27.1 -1.1
COLA pmax pmax
comp=Z,134nm,1.1s
COLA College 94.24 14 P **P** 09 37 27.8 -0.4
COLA IAmb IAmb 09 37 29.2
comp=Z,118nm,1.0s
AHID Auburn Hatcher 94.27 44 IAmb IAmb 09 37 31.9
comp=Z,158nm,1.6s
IL31 94.36 14 IAmb IAmb 09 37 29.9
comp=Z,87nm,1.2s
ILAR Eielson Array 94.36 14 P **P** 09 37 28.4 -0.4
comp=Z,42nm,1.0s,baz=230,slow=5.4,SNR=26
ILAR pP **pP** 09 39 42.6 0.0
comp=Z,8.1nm,1.1s,baz=224,slow=6.0,SNR=2.6
ILAR PKiKP **PKiKP** 09 42 07.8 +0.2
comp=Z,2.8nm,0.5s,baz=277,slow=2.9,SNR=7.8
ILAR ScS **S** 09 47 46.8 -0.5
comp=Z,3.1nm,1.1s,baz=244,slow=8.2,SNR=4.7
ILAR PKKPbc **PKKPdf** 09 54 25.8 -0.9
comp=Z,4.2nm,0.9s,baz=14,slow=1.7,SNR=5.3
ILAR SKKPbc **SKKPbc** 09 57 06.1 -5.0
comp=Z,1.7nm,1.0s,baz=345,slow=2.5,SNR=4.0
ILAR SKKS **SKKSdf** 10 00 31.1 -9.4
comp=Z,3.1nm,1.0s,baz=8.4,slow=3.4,SNR=10.0
ILAR PKPPKP **P'P'df** 10 02 34.6 0.0
comp=Z,2.0nm,1.1s,baz=359,slow=2.6,SNR=6.1
DLBC Dease Lake 94.38 24 P **P** 09 37 30.0 +0.9
comp=Z,10nm,1.0s,baz=222,slow=9.2,SNR=5.0
POKR Poker Plat Res 94.54 14 P **P** 09 37 29.0 -0.6
baz=211
POKR S **S** 09 47 47.5 -1.3
baz=211
S22A 4UR Ranch, Cre 94.56 50 P **P** 09 37 32.0 +1.2
baz=241
HOPE Hope Point 94.71 160 P **P** 09 37 31.5 +0.7
HOPE pmax pmax
comp=Z,62nm,0.8s
HOPE Hope Point 94.71 160 P **P** 09 37 31.5 +0.7
HOPE IAmb IAmb 09 37 33.6
comp=Z,62nm,0.8s
MSO Missoula 94.74 40 P **P** 09 37 31.2 +0.1
baz=237
O20A White River Ci 94.78 48 P **P** 09 37 31.9 +0.3
baz=240
O20A White River Ci 94.78 48 IAmb IAmb 09 37 33.9
comp=Z,108nm,1.4s
BW06 Boulder Array 95.25 45 P **P** 09 37 34.0 +0.3
baz=239
BW06 S **S** 09 48 02.6 +6.2
baz=239
BW06 Boulder Array 95.25 45 P **P** 09 37 33.4 -0.3
PDAR Pinedale Array 95.25 45 P **P** 09 37 33.9 +0.2
comp=Z,13nm,0.7s,baz=222,slow=3.4,SNR=20
PDAR pP **pwP** 09 39 50.8 -0.1
comp=Z,13nm,1.1s,baz=198,slow=4.2,SNR=4.6
PDAR PP **PP** 09 41 34.6 -0.8
comp=Z,8.2nm,1.1s,baz=256,slow=4.3,SNR=4.2
PDAR PKKPbc **PKKPbc** 09 54 24.3 -0.1
comp=Z,1.0nm,0.6s,baz=111,slow=4.6,SNR=6.5
PDAR PKPPKP **P'P'df** 10 02 30.8 -4.3
comp=Z,1.4nm,1.0s,baz=101,slow=3.0,SNR=3.6
H17A Grant Village 95.45 43 P **P** 09 37 36.4 +1.8
baz=239
SDCO Great Sand Dun 95.48 51 P **P** 09 37 35.4 +0.5
baz=242
SDCO Great Sand Dun 95.48 51 IAmb IAmb 09 37 37.2
comp=Z,65nm,1.1s
MSTX Muleshoe 95.68 55 P **P** 09 37 36.6 +0.9
baz=243
MSTX S **S** 09 48 07.3 +7.1
baz=243
EGAK Eagle 95.72 16 IAmb IAmb 09 37 36.8
comp=Z,62nm,0.9s
833A Chaparral WMA, 95.73 61 P **P** 09 37 36.4 +0.5
baz=244
YAK Yakutsk 95.86 339 P **P** 09 37 35.7 +0.2
comp=Z,14nm,0.4s,baz=304,slow=0.7,SNR=4.4
YAK Yakutsk 95.86 339 *d* iP **P** 09 37 35.5 -0.1
YAK *e**PP **pP** 09 39 48.0 -1.3
YAK *e*S **SKSac** 09 47 07.4 -4.3
YAK *e* 09 48 00.8
YAK pmax pmax
comp=Z,96nm,1.0s
YAK pmax pmax
comp=N,17nm,1.1s
YAK pmax pmax
comp=E,20nm,1.5s
YAK smax smax
comp=N,971nm,2.8s
YAK smax smax
comp=E,310nm,2.4s
YAK Yakutsk 95.86 339 P **P** 09 37 34.8 -0.8
YAK IAmb IAmb 09 37 38.3
comp=Z,98nm,1.0s
T25A Trinidad 95.96 52 P **P** 09 37 37.3 +0.3
baz=242
RWWY Rawlins 96.22 47 IAmb IAmb 09 37 40.2
comp=Z,99nm,1.4s
JCT Junction City 96.36 59 Pdiff **P** 09 37 38.9 +0.2
baz=244
JCT Junction City 96.36 59 IAmb IAmb 09 37 40.6
comp=Z,96nm,1.4s
ISCO Idaho Springs 96.38 49 P **P** 09 37 40.0 +1.1
ISCO pmax pmax
comp=Z,20nm,1.0s
ISCO Idaho Springs 96.38 49 Pdiff **P** 09 37 40.0 +1.1
baz=242
ISCO Idaho Springs 96.38 49 P **P** 09 37 40.0 +1.1
RLMT Red Lodge 96.62 43 Pdiff **P** 09 37 41.0 +1.2
baz=240
RLMT Red Lodge 96.62 43 IAmb IAmb 09 39 02.8
comp=Z,178nm,1.9s
N23A Red Feather La 96.68 48 Pdiff **P** 09 37 41.1 +0.9
baz=242
PB14 IPOC Station P 96.82 121 IAmb IAmb 09 37 44.4
comp=Z,98nm,1.5s
AMTX Amarillo 96.90 55 Pdiff **P** 09 37 41.6 +0.5
baz=243
K22A Casper 97.14 46 Pdiff **P** 09 37 42.3 +0.3
baz=241
GO02 Mina Guanaco 97.15 122 IAmb IAmb 09 38 34.0
comp=Z,104nm,1.6s
GO02 pP 09 40 03.1 +5.6
TOLK Toolik Lake Re 97.19 11 Pdiff **P** 09 37 42.6 +1.1
baz=209
ULN Ulaanbaatar 97.21 320 *d* iP **P** 09 37 42.6 +0.4
ULN pmax pmax
comp=Z,85nm,2.0s
ULN Ulaanbaatar 97.21 320 P **P** 09 37 42.3 +0.1
ABTX Abilene, Hawle 97.42 57 Pdiff **P** 09 37 43.6 +0.2
baz=244
SONM Songino Array 97.58 320 P Pdif 09 37 43.7 -0.1
comp=Z,7.3nm,0.5s,baz=120,slow=3.4,SNR=15
SONM PP **PP** 09 41 49.7 -3.1
comp=Z,6.2nm,0.8s,baz=131,slow=5.0,SNR=3.8
SONM PKiKP **PKiKP** 09 42 15.1 +1.1
comp=Z,4.9nm,0.8s,baz=54,slow=0.4,SNR=4.3
SONM PKKPbc **PKKPbc** 09 54 19.2 +1.1
comp=Z,13nm,0.8s,baz=276,slow=2.8,SNR=18
SONM SKKP **SKKPdf** 09 56 58.2 +1.1
comp=Z,3.7nm,1.0s,baz=275,slow=2.8,SNR=4.7
SONM PKPPKP **P'P'df** 10 02 28.4 -1.8
comp=Z,1.2nm,0.9s,baz=306,slow=3.5,SNR=4.4
GTA Gaotai 97.73 310 ||P **P** 09 37 46.0 +1.2
GTA pmax pmax
comp=Z,70nm,1.4s
SHL Shillong 97.73 295 P Pdif 09 37 45.0 -0.1
EGMT Eagleton 97.79 40 Pdiff **P** 09 37 45.4 +0.7
baz=240
NNA Nana 97.90 107 PKKPbc PKKPbc 09 54 18.3 +2.0
comp=Z,8.1nm,0.9s,baz=100,slow=3.7,SNR=3.5
KSCO Kaye Shedlock' 98.07 51 Pdiff **P** 09 37 46.8 +0.5
baz=243
EPYK Eagle Plains 98.12 17 Pdiff **P** 09 37 45.9 +0.2
baz=220
435B Jarrell 98.21 60 Pdiff **P** 09 37 47.2 +0.3
baz=245
ATAH Atahualpa 98.82 102 PKKPbc PKKPbc 09 54 14.9 +0.7
comp=Z,11nm,0.9s,baz=79,slow=5.7,SNR=5.6
WHTX Lake Whitney, 98.82 59 Pdiff **P** 09 37 49.7 +0.1
baz=245
WMOK Wichita Mounta 98.98 56 Pdiff Pdif 09 37 50.2 -0.1
baz=245
LVC Limon Verde 99.05 120 P **Pdif** 09 37 52.7 +1.3
comp=Z,9.8nm,0.9s,baz=196,slow=4.9,SNR=6.4
LVC PKKPbc **PKKPdf** 09 54 15.3 -0.3
comp=Z,8.7nm,0.8s,baz=39,slow=3.5,SNR=6.3
LVC PKPPKP **P'P'df** 10 02 26.7 -4.1
comp=Z,2.5nm,0.8s,baz=121,slow=10,SNR=3.6
LVC Limon Verde 99.05 120 P **Pdif** 09 37 53.8 +2.4
LVC pmax pmax
comp=Z,34nm,1.3s
LVC Limon Verde 99.05 120 **Pdif** 09 37 53.8 +2.4
LAO LASA Array 99.24 42 Pdiff **Pdif** 09 37 52.3 +1.2
baz=242
HKT Hockley 99.24 61 *e*P **Pdif** 09 37 51.9 +0.5
HKT pmax pmax
comp=Z,31nm,1.4s
OGNE Ogallala 99.34 49 Pdiff **Pdif** 09 37 52.3 +0.5
baz=244
RSSD Black Hills 99.42 46 Pdiff **Pdif** 09 37 52.7 +0.4
baz=243
CBKS Cedar Bluff 100.01 52 Pdiff **Pdif** 09 37 55.5 +0.7
baz=245
INK Inuvik 100.39 16 P **Pdif** 09 37 56.1 +0.4
comp=Z,27nm,1.1s,baz=212,slow=5.9,SNR=8.9
INK PKiKP **PKiKP** 09 42 16.0 -2.2
comp=Z,14nm,0.9s,baz=254,slow=4.2,SNR=5.9
INK PKKPbc **PKKPbc** 09 54 08.8 -2.0
comp=Z,1.6nm,0.5s,baz=59,slow=3.9,SNR=4.1
JTS Las Juntas de 100.51 84 *e*P **Pdif** 09 37 57.0 -0.5
comp=Z,10.0nm,1.0s,baz=297,slow=3.7,SNR=4.9
JTS Las Juntas de 100.51 84 || *e*P **Pdif** 09 37 57.3 -0.2
JTS Las Juntas de 100.51 84 **Pdif** 09 38 00.1 +2.5
NATX Nacogdoches 100.90 60 Pdiff **Pdif** 09 37 59.7 +0.9
baz=246
TLY Talaya 101.01 322 P **Pdif** 09 37 58.2 -0.6
comp=Z,3.1nm,0.6s,baz=206,slow=4.4,SNR=3.8
TLY PKiKP **PKiKP** 09 42 20.3 +0.4
comp=Z,2.4nm,0.5s,baz=83,slow=3.3,SNR=3.2
TLY PKKPbc **PKKPbc** 09 54 08.6 0.0
comp=Z,3.7nm,0.7s,baz=289,slow=5.1,SNR=6.7
TLY SKKP 09 56 51.7
comp=Z,2.7nm,0.4s,baz=140,slow=7.9,SNR=3.9
TLY Talaya 101.01 322 *d* e**P** **Pdif** 09 37 58.9 0.0
DGMT Dagmar 101.27 42 Pdiff **Pdif** 09 38 01.0 +0.9
baz=244
TUL1 Leonard 101.69 56 Pdiff **Pdif** 09 38 03.2 +1.0
baz=246
TAPN Taplejung 101.87 295 *e*P **PKKPbc** 09 54 07.2 +1.5
ODAN Odare 101.94 294 *e*P **PKKPbc** 09 54 06.9 +1.5
BGNE Belgrade 102.19 50 Pdiff **Pdif** 09 38 05.3 +0.9
baz=246
KSU1 Kansas State U 102.35 53 Pdiff **Pdif** 09 38 05.9 +0.7
baz=247
MIAR Mount Ida 102.82 58 Pdiff **Pdif** 09 38 07.9 +0.6
baz=247
SUSD Miller 102.86 47 Pdiff **Pdif** 09 38 07.9 +0.6
baz=246
YKA Yellowknife Ar 102.86 26 P **Pdif** 09 38 06.7 -0.1
comp=Z,4.2nm,0.9s,baz=232,slow=4.1,SNR=5.0
YKA PKiKP **PKiKP** 09 42 21.9 -0.9
comp=Z,4.6nm,0.7s,baz=181,slow=2.3,SNR=14
YKA PKKPbc **PKKPbc** 09 54 01.1 -2.3
comp=Z,3.8nm,0.5s,baz=52,slow=2.5,SNR=25
YKA SKKPbc SKKPbc 09 56 42.0 -6.7
comp=Z,2.3nm,1.0s,baz=66,slow=6.1,SNR=5.0
YKA PKPPKP **P'P'df** 10 02 13.9 -5.1
comp=Z,0.7nm,0.9s,baz=67,slow=2.1,SNR=3.9
W39A Magazine 102.92 57 Pdiff **Pdif** 09 38 08.3 +0.6
baz=247
Z41A Richland Creek 102.93 59 Pdiff **Pdif** 09 38 08.8 +1.0
baz=248
LPAZ La Paz 103.05 115 PKiKP **PKiKP** 09 42 25.2 -0.2
comp=Z,2.6nm,0.7s,baz=208,slow=8.0,SNR=1.9
LPAZ PKKPbc **PKKPbc** 09 54 02.7 -0.1
comp=Z,3.1nm,0.6s,baz=67,slow=7.0,SNR=8.1
LPAZ PKPPKP **P'P'df** 10 02 16.0 -7.6
comp=Z,1.5nm,1.1s,baz=66,slow=12,SNR=2.3
PVM Polavaram 103.12 283 *e*PKiKP **PKiKP** 09 42 25.6 +1.0
SKHT Srikalahasti 103.42 279 *e*PKiKP **PKiKP** 09 42 23.4 -1.8
C36M Paulatuk 103.62 18 Pdiff **Pdif** 09 38 10.4 +0.4
baz=232
MYLAV Mylavaram 103.79 282 *e*PKiKP **PKiKP** 09 42 24.2 -1.6
ADKI Addanki 104.03 281 *e*PKiKP **PKiKP** 09 42 25.8 -0.5
W41B Gary Mavity, V 104.07 58 Pdiff **Pdif** 09 38 12.7 -0.2
baz=248
ECSD EROS Data Cent 104.14 48 Pdiff **Pdif** 09 38 13.1 +0.1
baz=248
VBMS Vicksburg 104.32 61 Pdiff **Pdif** 09 38 14.0 0.0
baz=248
X43A Marvell 104.88 59 Pdiff **Pdif** 09 38 16.6 +0.1
baz=249
SRLM Srisailam 105.08 281 *e*PKiKP **PKiKP** 09 42 27.0 -1.4
CPUP Villa Florida 105.40 130 PKiKP **PKiKP** 09 42 28.2 -0.5
comp=Z,3.5nm,0.9s,baz=274,slow=3.6,SNR=3.5
CPUP PKKPbc **PKKPbc** 09 53 54.8 -0.6
comp=Z,6.7nm,0.9s,baz=44,slow=2.3,SNR=5.7
CPUP SKKP **SKKPbc** 09 56 39.3 +3.2
comp=Z,1.4nm,0.7s,baz=75,slow=3.0,SNR=4.5
CPUP PKPPKP **P'P'df** 10 02 11.2 -6.7
comp=Z,3.0nm,1.0s,baz=86,slow=8.6,SNR=2.8
RPR Rampur 105.78 284 *e*PKiKP **PKiKP** 09 42 29.4 -0.2
HYBB Hyderabad (bro 105.89 282 *e*PKiKP **PKiKP** 09 42 29.7 -0.1
SRSP Sriramsagar 106.64 283 *e*PKiKP **PKiKP** 09 42 30.8 -0.3
ULM Lac du Bonnet 106.97 42 PKiKP **PKiKP** 09 42 29.9 -0.9
comp=Z,6.6nm,0.7s,baz=279,slow=2.8,SNR=7.2
ULM PKKPbc **PKKPbc** 09 53 48.5 -2.4
comp=Z,3.2nm,0.5s,baz=92,slow=3.6,SNR=6.4
ROSC El Rosal 107.80 93 PKKPbc PKKPbc 09 53 47.3 -0.7
comp=Z,10.0nm,0.6s,baz=155,slow=11,SNR=4.5
KLRI Killari 107.85 282 *e*PKiKP **PKiKP** 09 42 32.0 -1.4
SIV San Ignacio 108.87 119 PKiKP **PKiKP** 09 42 35.6 +0.1
comp=Z,4.7nm,0.9s,baz=216,slow=7.9,SNR=5.6
SIV PKKPbc **PKKPbc** 09 53 44.7 +0.1
comp=Z,2.9nm,0.5s,baz=318,slow=3.3,SNR=8.5
SIV PKKP **PKKPdf** 09 53 58.9 +1.5
comp=Z,7.1nm,0.9s,baz=76,slow=5.5,SNR=6.8
BHPL Bhopal 109.01 287 *ex* **PKiKP** 09 42 38.7 +3.2
TIGA Tifton 109.58 64 PKiKP **PKiKP** 09 42 33.5 -2.8
baz=251
WCI Wyandotte Cave 109.61 56 PKiKP **PKiKP** 09 42 34.7 -1.5
baz=252
L44A Lake County Fo 109.62 52 PKiKP **PKiKP** 09 42 34.7 -1.3
baz=253
SFIN Lafayette 109.67 54 PKiKP **PKiKP** 09 42 34.8 -1.4
baz=252
Y52A Lilburn 109.98 61 PKiKP **PKiKP** 09 42 34.8 -2.2
baz=252
DWPF Disney Wildern 110.28 68 PKiKP **PKiKP** 09 42 35.5 -2.2
baz=251
GOGA Godfrey 110.31 62 PKiKP **PKiKP** 09 42 36.6 -1.0
baz=252
L46A Eue Claire 110.72 52 PKiKP **PKiKP** 09 42 37.7 -0.5
baz=254
TKL Tuckaleechee C 110.75 60 PKKPbc PKKPbc 09 53 38.5 -0.1
comp=Z,2.2nm,0.7s,baz=33,slow=2.5,SNR=4.7
TKL PKKP **PKKPab** 09 53 51.9 +1.8
comp=Z,7.0nm,0.8s,baz=107,slow=4.8,SNR=6.4
N47A Urbana 110.83 54 PKiKP **PKiKP** 09 42 37.7 -0.7
baz=253
DDI Dehra Dun 110.84 294 *i* x **PP** 09 43 24.4 -5.2
M47A Cromwell 111.02 53 PKiKP **PKiKP** 09 42 38.2 -0.5
baz=254
O48A Farmland 111.05 55 PKiKP **PKiKP** 09 42 38.0 -0.8
baz=254
J45A Montague 111.06 51 PKiKP **PKiKP** 09 42 38.2 -0.6
baz=254
P49A Miami Univ. Ec 111.17 55 PKiKP **PKiKP** 09 42 35.4 -3.7
baz=253
K46A Dorr 111.28 52 PKiKP **PKiKP** 09 42 38.7 -0.5
baz=254
N48A Decatur 111.31 54 PKiKP **PKiKP** 09 42 38.9 -0.4
baz=254
I45A Fountain 111.33 50 PKiKP **PKiKP** 09 42 39.0 -0.3
baz=254
X54A Belton 111.52 61 PKiKP **PKiKP** 09 42 39.7 -0.2
baz=253
H45A Beulah 111.62 50 PKiKP **PKiKP** 09 42 39.2 -0.5
baz=255
O49A Covington 111.63 55 PKiKP **PKiKP** 09 42 39.3 -0.7
baz=254
M48A Edgerton 111.71 53 PKiKP **PKiKP** 09 42 35.3 -4.7
baz=254
Y55A Saluda 111.75 62 PKiKP **PKiKP** 09 42 39.9 -0.5
baz=253
W54A Cherokee Point 111.82 61 PKiKP **PKiKP** 09 42 40.3 -0.2
baz=253
K47A Vermontville 111.83 52 PKiKP **PKiKP** 09 42 39.8 -0.5
baz=254
I46A Reed City 111.85 51 PKiKP **PKiKP** 09 42 39.5 -0.7
baz=255
P50A Jamestown 111.87 56 PKiKP **PKiKP** 09 42 39.4 -1.0
baz=254
N49A Columbus Grove 111.95 54 PKiKP **PKiKP** 09 42 39.7 -0.8
baz=254
Z56A Williston 111.95 63 PKiKP **PKiKP** 09 42 40.3 -0.5
baz=253
G45A Suttons Bay 112.00 49 PKiKP **PKiKP** 09 42 39.9 -0.5
baz=255
L48A N Adams 112.04 53 PKiKP **PKiKP** 09 42 40.2 -0.5
baz=254
Q51A Peebles 112.05 56 PKiKP **PKiKP** 09 42 40.5 -0.3
baz=254
157A Early Branch 112.06 63 PKiKP **PKiKP** 09 42 40.6 -0.3
baz=253
X55A Gracelyn & Ava 112.08 61 PKiKP **PKiKP** 09 42 40.9 0.0
baz=253
T53A Wise 112.09 59 PKiKP **PKiKP** 09 42 40.5 -0.5
baz=254
J47A Sumner 112.11 52 PKiKP **PKiKP** 09 42 40.6 -0.2
baz=255
Y56A Pelion 112.14 62 PKiKP **PKiKP** 09 42 41.0 -0.1
baz=253
O50A Cable 112.15 55 PKiKP **PKiKP** 09 42 40.1 -0.9
baz=254
H46A Fife Lake 112.18 50 PKiKP **PKiKP** 09 42 40.1 -0.7
baz=255
V54A Nebo 112.21 60 PKiKP **PKiKP** 09 42 40.6 -0.6
baz=254
E44A Grand Marais A 112.22 48 PKiKP **PKiKP** 09 42 40.6 -0.2
baz=255
M49A Liberty Center 112.25 54 PKiKP **PKiKP** 09 42 40.4 -0.6
baz=255
F45A CMU Biological 112.26 49 PKiKP **PKiKP** 09 42 40.6 -0.4
baz=255
MK31 Makanchi Array 112.31 312 *i* PKIKP **PKiKP** 09 42 40.1 -1.0
MKAR Makanchi Array 112.31 312 PKiKP **PKiKP** 09 42 40.3 -0.8
comp=Z,11nm,0.5s,baz=210,slow=1.0,SNR=40
MKAR PP **PP** 09 43 41.1 +1.5
comp=Z,19nm,0.9s,baz=110,slow=7.1,SNR=3.9
MKAR PKKPbc **PKKPbc** 09 53 33.0 -0.8
comp=Z,12nm,0.7s,baz=272,slow=2.8,SNR=19
MKAR SKKPbc SKKPbc 09 56 16.6 -4.1
comp=Z,7.0nm,0.8s,baz=288,slow=2.7,SNR=9.9
MKAR PKPPKP **P'P'df** 10 02 03.6 +1.1
comp=Z,2.2nm,1.0s,baz=333,slow=1.6,SNR=7.5
P51A Williamsport 112.39 56 PKiKP **PKiKP** 09 42 40.7 -0.7
baz=254
ZALV Zalesovo Beam 112.46 320 PKiKP **PKiKP** 09 42 40.3 -0.8
comp=Z,17nm,0.6s,baz=131,slow=1.4,SNR=20
ZALV SKP **SKPdf** 09 45 19.4 +1.4
comp=Z,8.9nm,0.6s,baz=168,slow=0.7,SNR=4.1
ZALV PKKPbc **PKKPbc** 09 53 32.0 -1.4
comp=Z,3.5nm,0.6s,baz=269,slow=4.1,SNR=4.8
Z57A Bowman 112.48 63 PKiKP **PKiKP** 09 42 41.5 -0.2
baz=253
K48A Perry 112.49 52 PKiKP **PKiKP** 09 42 41.0 -0.5
baz=255
U54A Nelsons Funny 112.52 59 PKiKP **PKiKP** 09 42 40.9 -0.9
baz=254
MAKZ Makanchi 112.53 312 PKIKP **PKiKP** 09 42 40.3 -1.2
I47A Gladwin 112.53 51 PKiKP **PKiKP** 09 42 41.0 -0.6
baz=255
X56A White Oak 112.56 61 PKiKP **PKiKP** 09 42 41.6 -0.3
baz=253
S53A Williamson 112.60 58 PKiKP **PKiKP** 09 42 41.2 -0.7
baz=254
G46A Petoskey 112.61 49 PKiKP **PKiKP** 09 42 40.8 -0.8
baz=256
ACSO Alum Creek Sta 112.64 55 PKiKP **PKiKP** 09 42 41.0 -0.8
baz=255
N50A Nevada 112.66 54 PKiKP **PKiKP** 09 42 41.5 -0.4
baz=255
AAM Ann Arbor 112.69 53 PKiKP **PKiKP** 09 42 41.5 -0.3
baz=255
V55A Taylorsville 112.80 60 PKiKP **PKiKP** 09 42 42.0 -0.3
baz=254
SDV Santo Domingo 112.81 91 PKKPbc PKKPbc 09 53 33.7 +1.9
comp=Z,8.7nm,0.7s,baz=189,slow=7.6,SNR=3.1
Q52A Bidwell 112.84 57 PKiKP **PKiKP** 09 42 41.4 -0.9
baz=255
NHSC New Hope 112.84 63 PKiKP **PKiKP** 09 42 42.0 -0.5
baz=253
T54A Tazewell 112.85 59 PKiKP **PKiKP** 09 42 42.0 -0.5
baz=254
J48A Bridge Port 112.85 52 PKiKP **PKiKP** 09 42 41.9 -0.3
baz=256
DHRM DHARAMSHALA 112.86 296 *ex* **PKiKP** 09 42 44.9 +2.1
H47A Mio 112.88 50 PKiKP **PKiKP** 09 42 41.6 -0.6
baz=256
O51A Pataskala 112.90 55 PKiKP **PKiKP** 09 42 41.4 -1.0
baz=255
M50A Fremont 112.91 54 PKiKP **PKiKP** 09 42 41.4 -0.9
baz=255
R53A Hurricane 112.91 57 PKiKP **PKiKP** 09 42 41.7 -0.8
baz=254
Y57A Sumter 112.93 62 PKiKP **PKiKP** 09 42 42.1 -0.4
baz=254
K49A Clarkson 112.96 52 PKiKP **PKiKP** 09 42 41.6 -0.8
baz=255
VOI Vohitsoka 113.09 229 P **PKiKP** 09 42 43.7 +0.2
W56A Indian Trail 113.10 61 PKiKP **PKiKP** 09 42 42.2 -0.7
baz=254
U55A TA2, Sparta 113.11 59 PKiKP **PKiKP** 09 42 42.5 -0.5
baz=254
P52A Corning 113.12 56 PKiKP **PKiKP** 09 42 41.8 -1.0
baz=255
I48A Sherman Twp 113.13 51 PKiKP **PKiKP** 09 42 42.2 -0.4
baz=256
L50A Kingsville 113.24 53 PKiKP **PKiKP** 09 42 42.4 -0.5
baz=256
S54A Dingess, Beckl 113.25 58 PKiKP **PKiKP** 09 42 42.6 -0.6
baz=255
G47A Hillman 113.27 50 PKiKP **PKiKP** 09 42 42.4 -0.5
baz=256
N51A Ashland 113.27 54 PKiKP **PKiKP** 09 42 42.4 -0.7
baz=255
X57A Johnson Farm, 113.30 62 PKiKP **PKiKP** 09 42 43.0 -0.3
baz=254
J49A Marlette 113.33 52 PKiKP **PKiKP** 09 42 42.2 -0.9
baz=256
V56A Mocksville 113.35 60 PKiKP **PKiKP** 09 42 42.9 -0.4
baz=254
Q53A Leroy 113.37 57 PKiKP **PKiKP** 09 42 42.7 -0.6
baz=255
PDGK Podgornoye 113.38 308 PKIKP **PKiKP** 09 42 42.8 -0.6
O52A Adamsville 113.46 55 PKiKP **PKiKP** 09 42 42.2 -1.3
baz=255
T55A Pulaski 113.48 59 PKiKP **PKiKP** 09 42 42.8 -0.9
baz=255
Y58A Scranton 113.48 62 PKiKP **PKiKP** 09 42 42.8 -0.9
baz=254
M51A Elyria 113.51 54 PKiKP **PKiKP** 09 42 42.8 -0.7
baz=256
H48A Harrisville 113.52 50 PKiKP **PKiKP** 09 42 42.8 -0.5
baz=256
D46A Sault St. Mari 113.54 48 PKiKP **PKiKP** 09 42 42.9 -0.5
baz=257
K50A Casco 113.55 52 PKiKP **PKiKP** 09 42 42.6 -0.9
baz=256
W57A Gilead 113.57 61 PKiKP **PKiKP** 09 42 43.2 -0.6
baz=254
U56A King 113.58 60 PKiKP **PKiKP** 09 42 43.5 -0.3
baz=254
R54A Victor 113.60 58 PKiKP **PKiKP** 09 42 42.7 -1.1
baz=255
Z59A Georgetown, SC 113.61 63 PKiKP **PKiKP** 09 42 42.9 -1.0
baz=254
P53A Whipple 113.63 56 PKiKP **PKiKP** 09 42 43.5 -0.3
baz=255
I49A Point Hope 113.69 51 PKiKP **PKiKP** 09 42 43.4 -0.3
baz=256
N52A McGinn's Farm, 113.75 55 PKiKP **PKiKP** 09 42 43.4 -0.6
baz=256

BLA	Blacksburg	113.78	59	PKiKP	PKiKP	09 42 43.8	-0.4
	baz=255						
S55A	Lewisburg	113.87	58	PKiKP	PKiKP	09 42 43.8	-0.6
	baz=255						
SPB	Sao Paulo	113.87	134	eP	PP	09 43 59.8	+10
X58A	Rowland	113.92	62	PKiKP	PKiKP	09 42 44.0	-0.4
	baz=254						
Q54A	Coxs Mills	113.92	57	PKiKP	PKiKP	09 42 43.8	-0.6
	baz=255						
V57A	Coltrane Farms	113.93	60	PKiKP	PKiKP	09 42 43.9	-0.6
	baz=255						
RES	Resolute Bay	113.95	17	PKiKP	PKiKP	09 42 42.8	-0.5
	comp=Z,44nm,0.9s,baz=95,slow=1.1,SNR=55						
RES				SKP	SKPdf	09 45 20.6	+0.3
	comp=Z,11nm,0.7s,baz=201,slow=3.8,SNR=7.9						
RES				PKKPbc	PKKPbc	09 53 29.5	+0.6
	comp=Z,2.8nm,0.8s,baz=60,slow=3.9,SNR=6.3						
E47A	Iron Bridge	113.95	48	PKiKP	PKiKP	09 42 43.8	-0.4
	baz=257						
O53A	New Philadelph	113.96	55	PKiKP	PKiKP	09 42 44.0	-0.4
	baz=256						
T56A	Rocky Mt	114.04	59	PKiKP	PKPdf	09 42 44.3	-0.4
	baz=255						
SATY	Saty	114.09	308	ePKP	PKPdf	09 42 44.5	-0.3
SATY				ePP	PP	09 43 47.1	-5.1
SATY	Saty	114.09	308	ePKIKP	PKPdf	09 42 44.4	-0.3
W58A	Raeford	114.13	61	PKiKP	PKPdf	09 42 44.3	-0.6
	baz=254						
Y59A	Loris	114.14	63	PKiKP	PKPdf	09 42 44.3	-0.6
	baz=254						
M52A	Chesterland	114.17	54	PKiKP	PKPdf	09 42 44.2	-0.5
	baz=256						
D47A	Chapleau	114.20	48	PKiKP	PKPdf	09 42 44.2	-0.5
	baz=258						
NRIK	Noril'sk	114.20	337	PKP	PKiKP	09 42 44.2	+0.2
	comp=Z,48nm,0.9s,baz=107,slow=2.5,SNR=24						
NRIK				SKP	SKPdf	09 45 22.1	+1.2
	comp=Z,6.8nm,0.6s,baz=123,slow=6.0,SNR=4.2						
NRIK				PKKPbc	PKKPbc	09 53 27.5	-0.6
	comp=Z,0.8nm,0.3s,baz=242,slow=3.5,SNR=1.8						
NRIK				PKKPab	PKKPab	09 53 36.1	+2.2
	comp=Z,4.1nm,0.6s,baz=16,slow=0.5,SNR=5.3						
NRIK	Noril'sk	114.20	337	i PKIKP	PKPdf	09 42 43.8	-0.2
F48A	Evansville	114.26	49	PKiKP	PKPdf	09 42 44.0	-0.8
	baz=257						
R55A	Marlinton	114.29	58	PKiKP	PKPdf	09 42 44.5	-0.7
	baz=255						
K51A	Iona Station	114.33	53	PKiKP	PKPdf	09 42 44.5	-0.5
	baz=257						
P54A	Burton	114.34	56	PKiKP	PKPdf	09 42 44.6	-0.6
	baz=256						
N53A	Lisbon	114.37	55	PKiKP	PKPdf	09 42 44.8	-0.4
	baz=256						
U57A	Blanch	114.42	60	PKiKP	PKPdf	09 42 44.8	-0.5
	baz=255						
V58A	Windy Hill, Pi	114.43	61	PKiKP	PKPdf	09 42 45.0	-0.4
	baz=255						
Q55A	Buckhannon	114.50	57	PKiKP	PKPdf	09 42 44.9	-0.7
	baz=256						
X59A	McDuffie Farm,	114.51	62	PKiKP	PKPdf	09 42 44.9	-0.7
	baz=255						
S56A	Natural Bridge	114.56	58	PKiKP	PKPdf	09 42 44.6	-1.1
	baz=255						
O54A	Avella	114.56	56	PKiKP	PKPdf	09 42 45.1	-0.4
	baz=256						
ITRB	Iturama	114.56	129	eP	PP	09 43 58.2	+3.4
T57A	Hurt	114.63	59	PKiKP	PKPdf	09 42 45.0	-0.8
	baz=255						
M53A	WI Miller and	114.64	54	PKiKP	PKPdf	09 42 44.7	-1.0
	baz=256						
F49A	Sandfield	114.64	49	PKiKP	PKPdf	09 42 44.6	-0.9
	baz=258						
Y60A	Bolivia	114.67	63	PKiKP	PKPdf	09 42 44.8	-1.2
	baz=254						
E48A	Lockeyer	114.71	49	PKiKP	PKPdf	09 42 44.8	-0.8
	baz=258						
W59A	Clinton	114.79	61	PKiKP	PKPdf	09 42 45.8	-0.3
	baz=255						
P55A	Reedsville	114.81	56	PKiKP	PKPdf	09 42 45.2	-0.9
	baz=256						
MCWV	Mont Chateau	114.83	56	PKiKP	PKPdf	09 42 45.6	-0.5
	baz=256						
K52A	Tillsonburg	114.92	53	PKiKP	PKPdf	09 42 45.7	-0.5
	baz=257						
I51A	Listowel	114.92	52	PKiKP	PKPdf	09 42 45.8	-0.3
	baz=257						
X60A	Albert Glenn T	115.01	62	PKiKP	PKPdf	09 42 46.4	-0.2
	baz=255						
U58A	Oxford	115.02	60	PKiKP	PKPdf	09 42 45.9	-0.7
	baz=255						
N54A	Moraine State	115.03	55	PKiKP	PKPdf	09 42 46.0	-0.4
	baz=257						
KSH	Kashi	115.04	303	PKP	PKiKP	09 42 47.9	+1.2
KSH				PP	PP	09 44 01.4	+2.6
KSH				SKKS	SKKSac	09 49 58.5	+3.5
KSH				SS	SS	09 59 18.5	+8.9
KSH				AMB	AMB		
	comp=Z,2μm,5.4s						
OPO	Ambohidratompo	115.04	232	PKiKP	PKPdf	09 42 47.2	-0.2
	comp=Z,17nm,0.6s,baz=121,slow=1.1,SNR=12						
OPO				SKP	SKPdf	09 45 25.4	+1.0
	comp=Z,22nm,0.8s,baz=222,slow=1.9,SNR=7.7						
OPO				PKKPbc	PKKPbc	09 53 25.5	+0.5
	comp=Z,2.6nm,0.3s,baz=319,slow=8.7,SNR=3.5						
S57A	Dark Hollow, R	115.05	59	PKiKP	PKPdf	09 42 46.1	-0.5
	baz=256						
L53A	Girard	115.06	54	PKiKP	PKPdf	09 42 45.7	-0.8
	baz=257						
ALLY	Alegheny Colle	115.08	54		PKPdf	09 42 45.6	-0.9
D48A	Paudash Townsh	115.09	48	PKiKP	PKPdf	09 42 45.9	-0.5
	baz=258						
V59A	Middlesex	115.11	61	PKiKP	PKPdf	09 42 46.3	-0.4
	baz=255						
T58A	Grand View Acr	115.17	60	PKiKP	PKPdf	09 42 46.4	-0.4
	baz=256						
Q56A	Snyder Ridge,	115.18	57	PKiKP	PKPdf	09 42 46.2	-0.6
	baz=256						
J52A	Paris	115.19	52	PKiKP	PKPdf	09 42 45.9	-0.8
	baz=257						
CNNC	Cliffs of the	115.25	61	PKiKP	PKPdf	09 42 46.7	-0.3
	baz=255						
ERPA	Erie	115.29	54	PKiKP	PKPdf	09 42 46.4	-0.5
	baz=257						
W60A	Pink Hill	115.34	62	PKiKP	PKPdf	09 42 46.3	-0.9
	baz=255						
O55A	Ligonier	115.37	56	PKiKP	PKPdf	09 42 46.9	-0.2
	baz=257						
M54A	Oil Creek Stat	115.39	54	PKiKP	PKPdf	09 42 46.7	-0.4
	baz=257						
D49A	Beulah Townshi	115.42	48	PKiKP	PKPdf	09 42 46.5	-0.5
	baz=259						
ULHL	Ulahol	115.46	306	P	PKiKP	09 42 47.9	+0.3
	SNR=15						
R57A	Stanardsville	115.51	58	PKiKP	PKPdf	09 42 46.9	-0.5
	baz=256						
KURK	Kurchatov	115.53	316	P	PKPdf	09 42 46.9	-0.2
KURK	Kurchatov	115.53	316	d i PKIKP	PKPdf	09 42 46.6	-0.4
KURK	Kurchatov	115.53	316		PKPdf	09 42 45.6	-1.4
P56A	Dayton Farm, R	115.55	57	PKiKP	PKPdf	09 42 46.7	-0.7
	baz=257						
KURBB	Kurchatov Arra	115.57	316	PKiKP	PKPdf	09 42 46.0	-1.1
	comp=Z,32nm,0.6s,baz=107,slow=2.0,SNR=13						
KURBB				SKP	SKPdf	09 45 25.1	+1.0
	comp=Z,27nm,0.8s,baz=106,slow=1.9,SNR=12						
KURBB				PKKPbc	PKKPbc	09 53 24.0	+1.0
	comp=Z,10.0nm,0.7s,baz=278,slow=3.9,SNR=21						
KURBB				SKKPbc	SKKPbc	09 56 07.5	-3.6
	comp=Z,5.0nm,0.9s,baz=282,slow=3.8,SNR=7.1						
KURBB				PKPPKP	P'P'df	10 01 56.9	+1.0
	comp=Z,0.9nm,0.9s,baz=311,slow=3.1,SNR=4.2						
KURBB	Kurchatov Arra	115.57	316	PKIKP	PKPdf	09 42 45.9	-1.2
I52A	Shelburne	115.58	52	PKiKP	PKPdf	09 42 46.6	-0.8
	baz=258						
U59A	Littleton	115.61	60	PKiKP	PKPdf	09 42 46.8	-0.8
	baz=256						
NIL	Nilore	115.70	297	PKIKP	PKPdf	09 42 47.3	-0.7
NIL	Nilore	115.70	297		PKPdf	09 42 47.3	-0.7
N55A	Marion Center	115.73	55	PKiKP	PKPdf	09 42 47.2	-0.6
	baz=257						
KUU	Kurty	115.74	308	ePKP	PKPdf	09 42 47.0	-0.7
KUU				ePP	PP	09 44 01.1	-2.3
KUU	Kurty	115.74	308	ePKIKP	PKPdf	09 42 47.0	-0.7
KUU				e		09 44 01.1	
Q57A	Strasburg	115.77	57	PKiKP	PKPdf	09 42 47.6	-0.4
	baz=257						
L54A	Sinclairville	115.81	54	PKiKP	PKPdf	09 42 47.1	-0.8
	baz=258						
V60A	Jim Taylor Roa	115.88	61	PKiKP	PKPdf	09 42 47.6	-0.6
	baz=256						
H52A	Wyevale	115.90	51	PKiKP	PKPdf	09 42 47.5	-0.4
	baz=258						
R58A	Rapidan	115.91	58	PKiKP	PKPdf	09 42 46.9	-1.3
	baz=257						
R58B	Mineral	115.93	59	PKiKP	PKPdf	09 42 47.6	-0.6
	baz=256						
O56A	Blue Knob Stat	115.93	56	PKiKP	PKPdf	09 42 47.9	-0.4
	baz=257						
I53A	Kortright Cn E	115.94	52	PKiKP	PKPdf	09 42 47.3	-0.7
	baz=258						
T59A	Double "B" Far	115.94	60	PKiKP	PKPdf	09 42 47.9	-0.4
	baz=256						
W61A	Ground Anchor	115.95	62	PKiKP	PKPdf	09 42 47.9	-0.4
	baz=256						
CLDB	Colider	116.00	118	eP	PP	09 43 59.3	-5.8
M55A	Ridgway	116.05	55	PKiKP	PKPdf	09 42 48.0	-0.5
	baz=258						
TKM2	Tokmak 2	116.07	307	P	PKPdf	09 42 48.4	-0.3
	SNR=21						
TKM2	Tokmak 2	116.07	307	PKIKP	PKPdf	09 42 48.0	-0.7
U60A	Pendleton	116.13	60	PKiKP	PKPdf	09 42 47.3	-1.4
	baz=256						
F51A	Arnstein	116.13	50	PKiKP	PKPdf	09 42 47.4	-1.0
	baz=259						
KZA	Kyzart	116.14	306	P	PKiKP	09 42 50.0	+0.9
	SNR=8.7						
P57A	Homestead Farm	116.17	57	PKiKP	PKPdf	09 42 48.1	-0.6
	baz=257						
N56A	West Decatur	116.27	55	PKiKP	PKPdf	09 42 48.2	-0.6
	baz=258						
Q58A	Fox Den Farm,	116.30	58	PKiKP	PKPdf	09 42 48.3	-0.6
	baz=257						
S59A	Mechanicsville	116.33	59	PKiKP	PKPdf	09 42 48.4	-0.6
	baz=257						
K54A	Basiliko Farm,	116.34	53	PKiKP	PKPdf	09 42 48.2	-0.7
	baz=258						
CBN	Corbin Frederi	116.37	58	PKiKP	PKPdf	09 42 48.3	-0.8
	baz=257						
D50A	G1974 Best Tow	116.41	48	PKiKP	PKPdf	09 42 48.1	-0.8
	baz=260						
V61A	Roper	116.42	61	PKiKP	PKPdf	09 42 48.5	-0.7
	baz=256						
L55A	Hinsdale	116.44	54	PKiKP	PKPdf	09 42 48.4	-0.7
	baz=258						
M56A	Emporium	116.48	55	PKiKP	PKPdf	09 42 48.5	-0.7
	baz=258						
KBK	Karagaybulak	116.48	307	P	PKiKP	09 42 49.9	+0.4
	SNR=9.7						
J54A	Appleton	116.51	53	PKiKP	PKPdf	09 42 48.4	-0.8
	baz=259						
F52A	Sundridge	116.51	50	PKiKP	PKPdf	09 42 48.4	-0.7
	baz=259						
SSPA	Standing Stone	116.52	56	PKiKP	PKPdf	09 42 48.4	-0.9
	baz=258						
SSPA	Standing Stone	116.52	56		PKPdf	09 42 48.5	-0.9
E51A	G1948 Merrick	116.53	49	PKiKP	PKPdf	09 42 48.7	-0.4
	baz=260						
R59A	King George, V	116.56	58	PKiKP	PKPdf	09 42 48.8	-0.6
	baz=257						
MAN01	Angra dos Reis	116.59	136	eP	PP	09 44 06.3	-2.2
O57A	Amberson	116.61	56	PKiKP	PKPdf	09 42 49.0	-0.5
	baz=258						
T60A	Surry	116.62	60	PKiKP	PKPdf	09 42 49.2	-0.4
	baz=257						
U61A	Possum Corner	116.66	61	PKiKP	PKPdf	09 42 49.0	-0.7
	baz=256						
CHMS	Chumysh	116.69	307	P	PKiKP	09 42 49.9	+0.2
	SNR=20						
D51A	Lot 18 Range I	116.71	48	PKiKP	PKPdf	09 42 48.8	-0.7
	baz=260						
P58A	Pank, Wackersv	116.71	57	PKiKP	PKPdf	09 42 48.9	-0.7
	baz=258						
UCH	Uchtor	116.71	306	P	PKiKP	09 42 51.1	+0.9
	SNR=24						
N57A	Milroy	116.79	56	PKiKP	PKPdf	09 42 49.1	-0.7
	baz=258						
H53A	Bobcaygeon	116.80	51	PKiKP	PKPdf	09 42 49.1	-0.6
	baz=259						
AAK	Ala-Archa	116.81	307	PKP	PKPdf	09 42 49.8	-0.2
	comp=Z,20nm,0.6s,baz=139,slow=3.9,SNR=17						
AAK				SKP	SKPdf	09 45 28.7	+1.7
	comp=Z,8.7nm,0.8s,baz=118,slow=5.5,SNR=2.4						
AAK				PKKPbc	PKKPbc	09 53 18.2	-0.6
	comp=Z,23nm,0.7s,baz=228,slow=3.1,SNR=24						
AAK				SKKPbc	SKKPbc	09 56 04.9	-2.1
	comp=Z,11nm,1.0s,baz=336,slow=7.7,SNR=7.0						
AAK	Ala-Archa	116.81	307	P	PKPdf	09 42 49.9	-0.2
	SNR=13						
AAK	Ala-Archa	116.81	307	P	PKiKP	09 42 50.2	+0.2
AAK	Ala-Archa	116.81	307	d i PKIKP	PKiKP	09 42 50.1	0.0
AAK	Ala-Archa	116.81	307		PKPdf	09 42 49.7	-0.3
S60A	Water View	116.81	59	PKiKP	PKPdf	09 42 49.3	-0.7
	baz=257						
K55A	Perry	116.81	53	PKiKP	PKPdf	09 42 49.0	-0.8
	baz=259						
V62A	Hyde County Ai	116.86	62	PKiKP	PKPdf	09 42 50.1	0.0
	baz=256						
SGDS	Sogindy	116.87	307	⇓ i PKP	PKPdf	09 42 49.8	-0.2
G53A	Haliburton	116.87	51	PKiKP	PKPdf	09 42 49.4	-0.5
	baz=260						
USP	Ospenovka	116.93	307	P	PKiKP	09 42 50.3	+0.2
	SNR=20						
R60A	Leonardtown, M	116.99	58	PKiKP	PKPdf	09 42 49.8	-0.5
	baz=257						
E52A	Mattawa	117.06	49	PKiKP	PKPdf	09 42 49.6	-0.6
	baz=260						
L56A	Greenwood	117.06	54	PKiKP	PKPdf	09 42 49.8	-0.6
	baz=259						
Q59A	Harwood	117.06	58	PKiKP	PKPdf	09 42 49.6	-0.8
	baz=258						
J55A	Hilton	117.10	53	PKiKP	PKPdf	09 42 49.7	-0.6
	baz=259						
O58A	Lewisberry	117.13	56	PKiKP	PKPdf	09 42 49.7	-0.8
	baz=258						
M57A	Sunshine Farm,	117.22	55	PKiKP	PKPdf	09 42 50.5	-0.2
	baz=258						
AML	Almayashu	117.29	306	P	PKiKP	09 42 51.7	+0.4
	SNR=31						
G54A	Lake Saint Pet	117.29	50	PKiKP	PKPdf	09 42 49.9	-0.8
	baz=260						
EKS2	Erkin-Say	117.33	306	P	PKiKP	09 42 51.6	+0.6
	SNR=12						
K56A	Middlesex	117.34	53	PKiKP	PKPdf	09 42 50.4	-0.5
	baz=259						
I55A	Frankford	117.37	52	PKiKP	PKPdf	09 42 49.8	-1.0
	baz=260						
P59A	Jarrettsville	117.39	57	PKiKP	PKPdf	09 42 49.8	-1.2
	baz=258						
ALGO	Algonquin Park	117.42	50	PKiKP	PKPdf	09 42 50.1	-0.7
	baz=260						
N58A	Sunbury	117.43	56	PKiKP	PKPdf	09 42 50.5	-0.6
	baz=258						
L57A	Andrews Acres	117.56	54	PKiKP	PKPdf	09 42 50.7	-0.6
	baz=259						
BTLS	Baital	117.57	309	⇓ i PKP	PKPdf	09 42 50.8	-0.4
BTLS				ePP	PP	09 44 13.3	-2.6
BTLS	Baital	117.57	309	d i PKIKP	PKPdf	09 42 50.8	-0.4
BTLS				e		09 44 13.2	
Q60A	Greensboro	117.71	58	PKiKP	PKPdf	09 42 51.3	-0.3
	baz=258						
O59A	Robesonia	117.72	56	PKiKP	PKPdf	09 42 51.1	-0.5
	baz=259						
M58A	Price's Panora	117.72	55	PKiKP	PKPdf	09 42 51.3	-0.4
	baz=259						
E53A	Dumoine, Ponti	117.75	49	PKiKP	PKPdf	09 42 50.9	-0.6
	baz=261						
H55A	Tweed	117.78	51	PKiKP	PKPdf	09 42 50.7	-0.9
	baz=260						
J56A	Wolcott	117.79	53	PKiKP	PKPdf	09 42 50.7	-0.9
	baz=260						
D53A	Lac Vacive, Po	117.84	49	PKiKP	PKPdf	09 42 51.1	-0.6
	baz=261						
K57A	Scipio Center	117.94	54	PKiKP	PKPdf	09 42 51.4	-0.6
	baz=260						
PTGA	Pitinga	117.98	106	PKKPbc	PKKPbc	09 53 15.8	+1.6
	comp=Z,11nm,0.7s,baz=34,slow=4.7,SNR=13						
PTGA	Pitinga	117.98	106		PKPdf	09 42 52.9	-0.1
P60A	Greenville	118.03	57	PKiKP	PKPdf	09 42 51.3	-0.9
	baz=259						
Q61A	Milford	118.08	58	PKiKP	PKPdf	09 42 51.8	-0.5
	baz=258						
E54A	Lac Daplat, Po	118.08	49	PKiKP	PKPdf	09 42 51.3	-0.8
	baz=261						
N59A	State Game Lan	118.15	56	PKiKP	PKPdf	09 42 51.8	-0.7
	baz=259						
SUR	Sutherland	118.17	202	PKP	PKPdf	09 42 51.5	-1.6
	comp=Z,56nm,0.7s,baz=197,slow=1.7,SNR=43						
SUR				SKP	SKPdf	09 45 29.8	-0.3
	comp=Z,55nm,1.0s,baz=232,slow=1.4,SNR=4.4						
SUR				PKKPbc	PKKPbc	09 53 13.3	-1.6
	comp=Z,21nm,0.9s,baz=352,slow=1.9,SNR=5.9						
SUR	Sutherland	118.17	202	P	PKiKP	09 42 53.8	+0.6
SUR	Sutherland	118.17	202		PKiKP	09 42 53.8	+0.6
G55A	Calabogie	118.22	51	PKiKP	PKPdf	09 42 51.7	-0.7
	baz=261						
BINY	Binghamton	118.22	54	PKiKP	PKPdf	09 42 52.0	-0.6
	baz=260						
MATQ	Matagami	118.26	46	PKiKP	PKPdf	09 42 51.5	-0.9
	baz=263						
L58A	Harry Jones Me	118.30	54	PKiKP	PKPdf	09 42 52.4	-0.3
	baz=260						
O60A	Telford	118.31	56	PKiKP	PKPdf	09 42 52.3	-0.5
	baz=259						
J57A	Williamstown	118.43	53	PKiKP	PKPdf	09 42 52.2	-0.7
	baz=260						
H56A	Elgin	118.44	52	PKiKP	PKPdf	09 42 52.2	-0.6
	baz=261						
M59A	Waymart	118.51	55	PKiKP	PKPdf	09 42 52.8	-0.4
	baz=260						
D54A	Lac Fusel, La	118.55	49	PKiKP	PKPdf	09 42 52.0	-1.0
	baz=262						
F55A	Otter Lake	118.57	50	PKiKP	PKPdf	09 42 52.1	-1.0
	baz=261						
K58A	Earlville	118.57	54	PKiKP	PKPdf	09 42 52.9	-0.3
	baz=260						
N60A	Cedar Hill Far	118.64	56	PKiKP	PKPdf	09 42 52.5	-0.9
	baz=260						
P61A	Hammonton	118.64	57	PKiKP	PKPdf	09 42 52.8	-0.6
	baz=259						
PCRV	Puerto La Cruz	118.74	92	PKKPbc	PKKPbc	09 53 11.8	+0.2
	comp=Z,8.4nm,0.8s,baz=344,slow=7.4,SNR=1.8						
I57A	Carthage	118.76	52	PKiKP	PKPdf	09 42 53.0	-0.5
	baz=261						
PLCV	Puerto La Cruz	118.77	92		PKKPbc	09 53 11.8	+0.4
E55A	Montcerf-Lytto	118.86	49	PKiKP	PKPdf	09 42 52.9	-0.7
	baz=262						
O61A	Allentown	118.91	57	PKiKP	PKPdf	09 42 53.1	-0.7
	baz=259						
L59A	Walton	118.91	54	PKiKP	PKPdf	09 42 53.7	-0.2
	baz=260						
BDFB	Brasilia	118.93	127	PKP	PKPdf	09 42 53.5	-1.4
	comp=Z,22nm,0.5s,baz=300,slow=1.6,SNR=26						
BDFB				SKP	SKPdf	09 45 31.4	-0.5
	comp=Z,15nm,0.8s,baz=130,slow=3.0,SNR=4.2						
BDFB				PKKPbc	PKKPbc	09 53 12.7	+1.2
	comp=Z,21nm,0.8s,baz=62,slow=2.3,SNR=11						
BDFB				SKKPbc	SKKPbc	09 56 02.9	+5.9
	comp=Z,12nm,1.0s,baz=63,slow=1.6,SNR=6.5						
BDFB	Brasilia	118.93	127	PKIKP	PKPdf	09 42 54.6	-0.2
BDFB	Brasilia	118.93	127		PKPdf	09 42 54.6	-0.2
J58A	Remsen	118.93	53	PKiKP	PKPdf	09 42 53.6	-0.3
	baz=261						
M60A	Port Jervis	119.07	55	PKiKP	PKPdf	09 42 53.6	-0.6
	baz=260						
ORIO	Orleans, Innes	119.09	51	PKiKP	PKPdf	09 42 53.5	-0.6
	baz=262						
DZA	Taraz	119.14	306	ePKP	PKPdf	09 42 54.0	-0.4
DZA	Taraz	119.14	306	ePKIKP	PKPdf	09 42 53.9	-0.4
K59A	Cooperstown	119.15	54	PKiKP	PKPdf	09 42 54.0	-0.3
	baz=261						
BRZS	Berezniki	119.19	315	ePKP	PKPdf	09 42 53.2	-1.0
BRZS	Berezniki	119.19	315	ePKIKP	PKPdf	09 42 53.2	-1.0
OTUK	Ortayu	119.21	313	PKIKP	PKPdf	09 42 53.9	-0.4
I58A	Old Forge	119.21	53	PKiKP	PKPdf	09 42 53.8	-0.6
	baz=261						
N61A	South Mountain	119.22	56	PKiKP	PKPdf	09 42 54.1	-0.3
	baz=260						
KBL	Kabul	119.31	297	P	PKiKP	09 42 55.3	0.0
KBL	Kabul	119.31	297	PKIKP	PKPdf	09 42 54.2	-0.9
KBL	Kabul	119.31	297		PKPdf	09 42 54.2	-0.9
D55A	Sainte-Anne-du	119.33	49	PKiKP	PKPdf	09 42 54.1	-0.4
	baz=263						
G57A	Newington	119.41	51	PKiKP	PKPdf	09 42 54.2	-0.5
	baz=262						
CRPR	Cabo Rojo, PR	119.42	83		PKPdf	09 42 53.8	-1.7
L60A	Shokan	119.48	55	PKiKP	PKPdf	09 42 54.9	-0.1
	baz=261						
J59A	Piesco	119.51	53	PKiKP	PKPdf	09 42 54.7	-0.3
	baz=261						
PAL	Palisades	119.55	56	PKiKP	PKPdf	09 42 54.8	-0.3
	baz=260						
E56A	St. Veronique	119.57	49	PKiKP	PKPdf	09 42 54.1	-0.9
	baz=263						
LONY	Lake Ozonia	119.62	52	PKiKP	PKPdf	09 42 54.6	-0.5
	baz=262						
JBG	Jabagly	119.64	306	ePKIKP	PKPdf	09 42 54.5	-1.0
M61A	Granite Spring	119.71	56	PKiKP	PKPdf	09 42 55.1	-0.3
	baz=260						
F57A	Harrington	119.71	50	PKiKP	PKPdf	09 42 54.4	-0.9
	baz=262						
KK31	Karatay Array	119.77	307	i PKIKP	PKPdf	09 42 54.7	-0.8
KK31	Karatay Array	119.77	307		PKPdf	09 42 54.5	-1.0
D56A	ZEC Mazanza, M	119.83	49	PKiKP	PKPdf	09 42 55.2	-0.3
	baz=263						
K60A	Five Rivers En	119.83	54	PKiKP	PKPdf	09 42 54.9	-0.7
	baz=261						
N62A	Caumsett State	119.87	56	PKiKP	PKPdf	09 42 55.4	-0.3
	baz=260						
H58A	Gabriels	119.88	52	PKiKP	PKPdf	09 42 55.1	-0.6
	baz=262						
BOSA	Boshof	119.89	207	⇑ i P	PKPdf	09 42 55.8	-0.6
BOSA	Boshof	119.89	207	PKP	PKPdf	09 42 55.8	-0.6
	comp=Z,33nm,0.8s,baz=150,slow=1.8,SNR=27						
BOSA				SKP	SKPdf	09 45 33.9	+0.4
	comp=Z,25nm,0.9s,baz=137,slow=3.1,SNR=3.7						
BOSA				PKKPbc	PKKPbc	09 53 07.1	-1.5
	comp=Z,24nm,0.8s,baz=334,slow=5.2,SNR=19						
BOSA				SKKPbc	SKKPbc	09 55 54.3	+0.5
	comp=Z,2.8nm,0.6s,baz=304,slow=4.1,SNR=4.5						
BOSA	Boshof	119.89	207	⇑ i P	PKPdf	09 42 55.8	-0.6
IUG	Iuzhnay	119.97	305	⇓ i PKP	PKPdf	09 42 55.9	-0.2
IUG				ePP	PP	09 44 29.7	-2.7
IUG	Iuzhnay	119.97	305	d i PKIKP	PKPdf	09 42 55.8	-0.2
IUG				e		09 44 29.7	
L61A	Hillsdale 1, H	120.01	55	PKiKP	PKPdf	09 42 55.5	-0.5
	baz=261						
I59A	Olmsteadville	120.01	53	PKiKP	PKPdf	09 42 55.0	-1.0
	baz=262						
G58A	Ormstown	120.07	51	PKiKP	PKPdf	09 42 55.5	-0.5
	baz=262						
E57A	Chemin Saint G	120.16	50	PKiKP	PKPdf	09 42 55.7	-0.5
	baz=263						
J60A	Lant Hill Farm	120.26	53	PKiKP	PKPdf	09 42 56.1	-0.3
	baz=262						
H59A	Cadyville	120.26	52	PKiKP	PKPdf	09 42 56.0	-0.4
	baz=262						
K61A	Williamstown	120.29	54	PKiKP	PKPdf	09 42 56.2	-0.3
	baz=262						
SJG	San Juan	120.32	83	SKP	SKPdf	09 45 32.4	-1.7
	comp=Z,24nm,1.0s,baz=207,slow=5.0,SNR=3.5						
SJG				PKKPbc	PKKPbc	09 53 05.7	-0.1
	comp=Z,12nm,0.8s,baz=7.1,slow=8.1,SNR=5.2						
SJG	San Juan	120.32	83	PKIKP	PKPdf	09 42 56.3	-0.9
SJG	San Juan	120.32	83		PKPdf	09 42 56.3	-0.9
F58A	St-Lin Laurent	120.33	50	PKiKP	PKPdf	09 42 55.8	-0.6
	baz=263						
CHGQ	Chibougamau	120.38	46	PKiKP	PKPdf	09 42 55.4	-1.1
	baz=265						
M62A	Hamden	120.38	56	PKiKP	PKPdf	09 42 55.7	-1.0
	baz=261						
D57A	Chemin Vers le	120.41	49	PKiKP	PKPdf	09 42 56.0	-0.6
	baz=264						
I60A	Shoreham	120.44	53	PKiKP	PKPdf	09 42 56.2	-0.5
	baz=262						
L62A	Suffield	120.64	55	PKiKP	PKPdf	09 42 56.6	-0.6
	baz=262						
L61B	Northampton	120.69	54	PKiKP	PKPdf	09 42 56.7	-0.6
	baz=262						
E58A	La Victoria	120.76	50	PKiKP	PKPdf	09 42 56.8	-0.5
	baz=264						
BVAR	Borovoye Array	120.86	318	PKP	PKPdf	09 42 56.1	-1.2
	comp=Z,62nm,0.4s,baz=131,slow=2.0,SNR=156						
BVAR				SKP	SKPdf	09 45 35.9	+1.7
	comp=Z,27nm,0.8s,baz=101,slow=1.5,SNR=7.4						
BVAR				PKKPbc	PKKPbc	09 53 03.4	-1.0
	comp=Z,3.8nm,0.6s,baz=283,slow=4.0,SNR=7.8						
BVAR				SKKPbc	SKKPbc	09 55 52.0	-2.6
	comp=Z,3.7nm,0.9s,baz=292,slow=4.7,SNR=3.7						
J61A	Chester	120.90	53	PKiKP	PKPdf	09 42 57.6	0.0
	baz=262						
BRVK	Borovoye	120.92	318	P	PKPdf	09 42 57.2	-0.2
BRVK	Borovoye	120.92	318	d i PKIKP	PKPdf	09 42 56.7	-0.7
BRVK	Borovoye	120.92	318		PKPdf	09 42 56.4	-1.0

Sta	Name	Dist	Az	Phase	ID	Time	Res
H60A	Morristown	120.95	52	PKiKP	PKPdf	09 42 57.0	-0.7
	baz=263						
M63A	Gales Ferry	121.00	56	PKiKP	PKPdf	09 42 56.8	-1.0
	baz=262						
K62A	Royalston	121.04	54	PKiKP	PKiKP	09 42 58.0	-0.1
	baz=262						
F59A	Saint Guilaume	121.04	50	PKiKP	PKPdf	09 42 57.5	-0.3
	baz=264						
GUIV	Guiria	121.10	93	e	PP	09 44 46.0	+5.8
D58A	Chemin du LacG	121.10	49	PKiKP	PKPdf	09 42 57.2	-0.8
	baz=264						
I61A	Oroboro, Fairl	121.22	53	PKiKP	PKiKP	09 42 58.4	0.0
	baz=263						
G60A	Masonville	121.27	51	PKiKP	PKPdf	09 42 57.9	-0.4
	baz=264						
E59A	St. Maurice	121.30	50	PKiKP	PKPdf	09 42 56.4	-1.9
	baz=264						
L63A	North Scituate	121.39	55	PKiKP	PKPdf	09 42 57.8	-0.9
	baz=262						
J62A	Henniker	121.42	54	PKiKP	PKPdf	09 42 58.7	0.0
	baz=263						
LBNH	Lisbon	121.46	52	PKiKP	PKiKP	09 42 59.1	+0.2
	baz=263						
H61A	Lyndonville	121.50	52	PKiKP	PKiKP	09 42 59.4	+0.4
	baz=264						
HRV	Adam Dziewonsk	121.52	54	PKIKP	PKPdf	09 42 58.4	-0.4
HRV	Adam Dziewonsk	121.52	54	PKiKP	PKPdf	09 42 57.7	-1.1
	baz=262						
HRV	Adam Dziewonsk	121.52	54		PKPdf	09 42 58.4	-0.4
BSFB	Barra de Sao F	121.53	136	eP	PKPdf	09 42 58.1	-1.5
BSFB	Barra de Sao F	121.53	136	eP	PKPdf	09 42 59.4	-0.2
K63A	Dunstable	121.56	54	PKiKP	PKPdf	09 42 59.0	+0.1
	baz=263						
F60A	Warwick	121.63	50	PKiKP	PKPdf	09 42 58.5	-0.5
	baz=264						
M64A	Tiverton	121.64	56	PKiKP	PKPdf	09 42 58.5	-0.6
	baz=262						
D59A	Saint-Raymond	121.81	49	PKiKP	PKPdf	09 42 59.1	-0.1
	baz=265						
I62A	Tamworth	121.84	53	PKiKP	PKPdf	09 42 59.5	+0.1
	baz=264						
G61A	St-Isidore-de-	121.86	51	PKiKP	PKPdf	09 42 59.2	-0.2
	baz=264						
JANB	Januaria	121.94	130	eP	PKPdf	09 42 59.3	-1.3
JANB	Januaria	121.94	130	eP	PKPdf	09 43 00.4	-0.2
J63A	Strafford	121.96	54	PKiKP	PKPdf	09 42 59.7	+0.1
	baz=263						
L64A	Middleborough	121.97	55	PKiKP	PKPdf	09 42 59.4	-0.3
	baz=263						
E60A	Ste Agathe de	122.02	50	PKiKP	PKPdf	09 42 58.6	-1.0
	baz=265						
H62A	Milan	122.05	52	PKiKP	PKPdf	09 42 59.9	+0.1
	baz=264						
M65A	Busby, Falmout	122.06	56	PKiKP	PKPdf	09 42 59.0	-0.9
	baz=262						
GRGR	Grenville	122.19	92	e	PP	09 44 37.8	-10
F61A	St Evariste	122.30	50	PKiKP	PKPdf	09 43 00.4	+0.1
	baz=265						
I63A	Otisfield	122.41	53	PKiKP	PKPdf	09 43 00.6	+0.1
	baz=264						
D60A	Saint Jean D'O	122.42	49	PKiKP	PKPdf	09 42 59.4	-1.0
	baz=266						
GCMP	Grenada, Carri	122.54	91	e	PP	09 44 42.4	-7.4
G62A	West of Eustis	122.55	51	PKiKP	PKPdf	09 42 60.0	-0.8
	baz=265						
E61A	Lac Etchemin	122.69	50	PKiKP	PKiKP	09 43 01.4	+0.1
	baz=266						
H63A	New Sharon	122.85	52	PKiKP	PKPdf	09 43 01.4	+0.1
	baz=265						
LBTB	Lobatse	122.88	210	⇓iP	PKPdf	09 43 01.7	-0.5
LBTB	Lobatse	122.88	210	PKP	PKPdf	09 43 01.2	-1.0
	comp=Z,30nm,0.6s,baz=178,slow=2.5,SNR=36						
LBTB				SKP	SKPdf	09 45 40.7	+1.5
	comp=Z,18nm,0.8s,baz=107,slow=4.4,SNR=4.2						
LBTB				PKKPbc	PKKPbc	09 52 56.4	-1.2
	comp=Z,12nm,0.9s,baz=298,slow=4.6,SNR=8.1						
LBTB	Lobatse	122.88	210	⇓iP	PKPdf	09 43 01.7	-0.5
LBTB	Lobatse	122.88	210	PKIKP	PKPdf	09 43 01.6	-0.7
LBTB	Lobatse	122.88	210		PKPdf	09 43 01.6	-0.7
D61A	St Aubert, Com	122.95	49	PKiKP	PKPdf	09 43 01.0	-0.4
	baz=266						
I64A	Boothbay	123.07	53	PKiKP	PKPdf	09 43 01.2	-0.5
	baz=265						
FRB	Frobisher Bay	123.17	29	PKP	PKPdf	09 43 00.2	-1.1
	comp=Z,97nm,0.9s,baz=285,slow=3.1,SNR=59						
FRB				SKP	SKPdf	09 45 39.1	+0.9
	comp=Z,11nm,0.9s,baz=300,slow=1.5,SNR=3.7						
G63A	Kingsbury	123.19	52	PKiKP	PKPdf	09 43 01.8	-0.2
	baz=265						
CHIPN	CHIPINGE	123.25	219	i P	PKPdf	09 42 52.6	-10
CHIPN	CHIPINGE	123.25	219	i P	PKPdf	09 42 52.6	-10
PKME	Peaks-Kenny Pk	123.43	51	PKiKP	PKPdf	09 43 02.5	+0.1
	baz=266						
H64A	Troy	123.43	52	PKiKP	PKPdf	09 43 01.9	-0.5
	baz=265						
SLBI	Saint Lucia, B	123.52	90	e	PP	09 45 01.2	+4.9
F63A	Nahmakanta, Br	123.59	51	PKiKP	PKPdf	09 43 02.5	-0.2
	baz=266						
BIM	Bigot	123.62	89	e		09 44 13.4	
SMTB	Santa Maria do	123.63	122	eP	PKPdf	09 43 02.8	-1.0
CBE	Ff, Capester	123.69	87	e	PP	09 45 01.2	+3.7
D62A	Allapoint, All	123.71	49	PKiKP	PKPdf	09 43 02.7	-0.2
	baz=267						
KULLO	Kullorsuaq	123.74	15	i PKIKP	PKPdf	09 43 02.1	-0.1
KULLO				pmax	pmax		
	comp=Z,360nm,1.1s						
KULLO	Kullorsuaq	123.74	15	i P	PKPdf	09 43 02.1	-0.1
	comp=Z,359nm,1.1s						
DWS	Wesley	123.78	88	e	PP	09 44 49.0	-9.0
G64A	Maxfield	123.81	51	PKiKP	PKPdf	09 43 02.9	-0.2
	baz=266						
NOR	Nord	123.90	3	i PKIKP	PKPdf	09 43 02.3	-0.1
NOR				pmax	pmax		
	comp=Z,350nm,1.9s						
NOR	Nord	123.90	3	i P	PKPdf	09 43 02.3	-0.1
	comp=Z,347nm,1.9s						
MAGL	Barre de l'ile	123.94	88	e	PP	09 44 56.4	-2.7
E63A	Oxbow	124.11	50	PKiKP	PKPdf	09 43 03.2	-0.5
	baz=267						
H65A	Eastbrook	124.13	52	PKiKP	PKPdf	09 43 03.8	+0.1
	baz=266						
F64A	Sherman	124.13	51	PKiKP	PKPdf	09 43 03.2	-0.5
	baz=267						
H05N1	Guadeloupe/Mar	124.27	87	PKP	PKPdf	09 43 04.9	0.0
D63A	Stockholm	124.36	49	PKiKP	PKPdf	09 43 03.7	-0.5
	baz=268						
BBGH	Gun Hill	124.47	92	e	Pdif	09 40 09.6	+26
E64A	Bridgewater	124.52	50	PKiKP	PKPdf	09 43 04.3	-0.2
	baz=268						
G65A	Princeton	124.64	52	PKiKP	PKPdf	09 43 04.2	-0.5
	baz=267						
H66A	Whiting	124.80	52	PKiKP	PKPdf	09 43 04.7	-0.3
	baz=267						
WBK	Wadi Bani Khal	124.94	280	P	PKiKP	09 43 07.5	+1.0
	SNR=6.0						
SCHQ	Schefferville	125.04	40	PKP	PKPdf	09 43 05.0	-0.2
	comp=Z,115nm,1.0s,baz=298,slow=2.0,SNR=43						
SCHQ				PP	PP	09 45 03.9	-1.5
	comp=Z,21nm,1.1s,baz=289,slow=6.3,SNR=7.1						
SCHQ				PKKPbc	PKKPbc	09 52 48.8	+0.1
	comp=Z,3.3nm,0.5s,baz=84,slow=2.5,SNR=8.6						
BBSR	BB Station	125.35	67		PKPdf	09 43 06.5	0.0
MATP	Matopo	125.36	215	PKhKP	PKPpre	09 43 03.5	
	comp=Z,44nm,0.7s,baz=198,slow=1.6,SNR=22						
MATP				SKP	SKPdf	09 45 43.2	-0.9
	comp=Z,37nm,1.0s,baz=128,slow=1.5,SNR=3.9						
MATP				PKKPbc	PKKPbc	09 52 44.0	-3.9
	comp=Z,10nm,0.6s,baz=328,slow=4.1,SNR=16						
MHTO	MHTO	125.36	278	P	PKiKP	09 43 07.6	+0.3
	SNR=18						
WSAR	Wadi Sarin	125.42	281	PKP	PKiKP	09 43 07.7	+0.3
	comp=Z,52nm,1.0s,baz=204,slow=1.1,SNR=14						
WSAR				SKKPbc	SKKPbc	09 55 37.7	+0.3
	comp=Z,15nm,0.9s,baz=211,slow=0.6,SNR=6.4						
WSAR	Wadi Sarin	125.42	281	P	PKiKP	09 43 07.9	+0.6
	SNR=9.0						
JMDO	Jabal Madar	125.64	280	P	PKiKP	09 43 08.0	+0.1
	SNR=7.5						
SMDO	Samad	125.89	281	P	PKiKP	09 43 09.0	+0.6
	SNR=13						
SOCY	Socotra	125.91	266	P	PKiKP	09 43 09.3	+0.6
	SNR=11						
BIDO	Bidbid	125.94	281	P	PKiKP	09 43 09.0	+0.6
	SNR=12						
SVE	Sverdlovsk	126.32	323c	iPKIKP	PKPdf	09 43 07.7	+0.1
SVE				pmax	pmax		
	comp=Z,317nm,1.3s						
KBS	Kingsbay	126.55	357d	iPKIKP	PKPdf	09 43 07.7	+0.2
KBS	Kingsbay	126.55	357	ePKPdf	PKPdf	09 43 07.7	+0.2
KBS				ePS	PS	09 55 24.5	-4.1
BSY	Bisya	126.55	280	P	PKiKP	09 43 09.9	+0.2
	SNR=9.2						
HOQ	Hoqain	126.68	281	P	PKiKP	09 43 10.1	+0.2
	SNR=9.0						
SPA0	Spitsbergen Ar	126.99	355	ePKPdf	PKPdf	09 43 08.6	+0.2
SPA0				IVmB_BB		09 43 09.8	
	comp=Z,5μm,1.3s						
SPA0				eSKSac	SKSac	09 49 16.4	+0.2
SPITS	Spitsbergen Ar	126.99	355	PKP	PKPdf	09 43 07.2	-1.2
	comp=Z,140nm,0.7s,baz=87,slow=4.4,SNR=27						
SPITS				pPKP	pPKPdf	09 45 31.2	+0.3
	comp=Z,37nm,0.8s,baz=90,slow=5.8,SNR=7.4						
SPITS				PKKPbc	PKKPbc	09 52 40.2	-1.1
	comp=Z,2.6nm,0.5s,baz=165,slow=6.9,SNR=20						
DMTO	DMTO	127.04	273	P	PKiKP	09 43 10.9	+0.1
ARQ	Araqi	127.31	280	P	PKiKP	09 43 11.5	+0.3
	SNR=6.6						
AB31	Akbulak array	127.43	313	i PKIKP	PKPdf	09 43 09.6	-0.4
SOHO	SOHO	127.51	281	P	PKiKP	09 43 11.6	0.0
	SNR=13						
ARU	Arti	127.51	323	pPKP	pPKPdf	09 45 31.9	-0.5
	comp=Z,13nm,0.7s,baz=80,slow=1.9,SNR=5.2						
ARU				SKKPbc	SKKPbc	09 55 29.6	-2.9
	comp=Z,5.6nm,0.8s,baz=309,slow=0.6,SNR=7.9						
ARU	Arti	127.51	323	i PKIKP	PKPdf	09 43 10.0	+0.1
ARU						09 45 19.9	
ARU				PPP	PPP	09 48 13.3	
ARU						09 49 23.5	
ARU	Arti	127.51	323		PKPdf	09 43 09.3	-0.6
RBK	Rabkut	127.64	273	P	PKiKP	09 43 13.0	+1.0
	SNR=20						
HOPEN	Hopen	127.67	352	ePKPdf	PKPdf	09 43 09.9	+0.2
HOPEN				IVmB_BB		09 43 10.3	
	comp=Z,2μm,1.5s						
HOPEN				ePP	PP	09 45 19.7	-2.0
HOPEN				eSS	SS	10 01 46.3	+0.8
KRI	Karoi	127.68	219	i P	PKPdf	09 43 04.6	-7.0
KRI	Karoi	127.68	219	i P	PKPdf	09 43 04.6	-7.0
ILULI	Ilulissat	127.99	20	i PKIKP	PKPdf	09 43 10.3	-0.1
ILULI				pmax	pmax		
	comp=Z,210nm,0.9s						
ILULI	Ilulissat	127.99	20	i P	PKPdf	09 43 10.3	-0.1
	comp=Z,206nm,0.9s						
UOSS	Minazif	128.00	282	P	PKiKP	09 43 12.5	0.0
UOSS	Minazif	128.00	282		PKPdf	09 43 11.3	-0.5
MDH	Madha	128.01	283	P	PKiKP	09 43 12.3	-0.2
HATD	Hatta, Dubai	128.04	282	P	PKiKP	09 43 13.1	+0.5
	SNR=7.9						
ASHO	Ashiyiah	128.07	282	P	PKiKP	09 43 12.9	+0.2
	SNR=8.7						
HSPB	Hornsund (broa	128.16	355	ePKPdf	PKPdf	09 43 10.8	+0.2
ABTO	Aybut	128.41	272	P	PKiKP	09 43 13.8	+0.2
	SNR=10						
DAG	Danmarks Havn	128.41	5	⇓iPKIKP	PKPdf	09 43 10.3	-0.8
DAG				i		09 45 32.7	
DAG	Danmarks Havn	128.41	5	⇓iP	PKPdf	09 43 10.3	-0.8
DAG				i		09 45 32.7	
NAZ	Nazwa, Dubai	128.49	282	P	PKiKP	09 43 14.0	+0.5
	SNR=8.5						
GEYT	Alibeck	128.55	299	PKhKP	PKPpre	09 42 59.1	
	comp=Z,4.2nm,0.8s,baz=193,slow=2.3,SNR=4.7						
GEYT				PKP	PKiKP	09 43 13.2	-0.1
	comp=Z,69nm,0.9s,baz=225,slow=0.8,SNR=38						
GEYT				pPKP	pPKPdf	09 45 37.9	+2.9
	comp=Z,74nm,1.0s,baz=186,slow=1.5,SNR=16						
GEYT				SKKPbc	SKKPbc	09 55 27.1	-0.6
	comp=Z,5.1nm,0.7s,baz=284,slow=6.0,SNR=6.1						
AKTO	Aktyubinsk	128.60	315	PKP	PKPdf	09 43 12.0	-0.1
	comp=Z,38nm,0.5s,baz=103,slow=5.1,SNR=50						
AKTO				pPKP	pPKPdf	09 45 35.5	+0.9
	comp=Z,15nm,0.6s,baz=98,slow=11,SNR=5.3						
AKTO				SKP	SKPdf	09 45 49.6	+0.6
	comp=Z,9.9nm,0.7s,baz=155,slow=6.7,SNR=4.2						
AKTO				SKKPbc	SKKPbc	09 55 25.9	-2.5
	comp=Z,9.8nm,0.8s,baz=247,slow=3.4,SNR=12						
SUMG	Summit	129.20	13	⇓iPKIKP	PKiKP	09 43 13.7	-0.3
SUMG				i		09 45 38.1	
SUMG				pmax	pmax		
	comp=Z,1μm,1.5s						
SUMG	Summit	129.20	13		PKPdf	09 43 13.5	+0.3
SUMG	Summit	129.20	13	⇓iP	PKiKP	09 43 13.7	-0.3
	comp=Z,1μm,1.5s						
SUMG				i		09 45 38.1	
SFJD	Kangerlussuaq	129.24	22	PKP	PKPdf	09 43 12.2	-0.6
	comp=Z,48nm,0.5s,baz=206,slow=0.5,SNR=56						
SFJD				pPKP	pPKPdf	09 45 36.6	+1.1
	comp=Z,65nm,0.7s,baz=255,slow=1.4,SNR=13						
SFJD	Kangerlussuaq	129.24	22	i PKIKP	PKPdf	09 43 13.0	+0.2
SFJD				i		09 45 36.7	
SFJD	Kangerlussuaq	129.24	22		PKPdf	09 43 11.9	-1.0
SFJD	Kangerlussuaq	129.24	22	i P	PKPdf	09 43 13.0	+0.2
SFJD				i		09 45 36.7	
LSZ	Lusaka	129.74	219	PKP	PKPdf	09 43 14.4	-1.1
	comp=Z,30nm,0.5s,baz=357,slow=1.3,SNR=5.7						
LSZ				SKPbc	SKPab	09 45 41.4	+0.8
	comp=Z,288nm,1.1s,baz=163,slow=3.3,SNR=52						
LSZ				PKKP	PKKPdf	09 53 18.2	+0.2
	comp=Z,0.7nm,0.4s,baz=202,slow=10,SNR=3.1						
LSZ	Lusaka	129.74	219		PKPdf	09 43 14.1	-1.4
BJO1	Bjornoya	130.16	353	ePKPdf	PKPdf	09 43 14.4	0.0
BJO1				epPKPdf	pPKPdf	09 45 36.5	-0.5
TSUM	Tsumeb	131.37	205	PKP	PKPdf	09 43 18.2	-0.4
	comp=Z,24nm,0.7s,baz=155,slow=4.0,SNR=12						
TSUM				SKPab	SKPab	09 45 47.4	-0.1
	comp=Z,154nm,0.8s,baz=147,slow=4.7,SNR=43						
TSUM				PKKP	PKKPdf	09 53 14.1	-0.8
	comp=Z,6.4nm,1.0s,baz=192,slow=1.5,SNR=4.1						
KIRV	Kirov	131.74	327	PKP	PKPdf	09 43 18.0	+0.2
	comp=Z,130nm,0.5s,baz=72,slow=1.3,SNR=39						
KIRV				SKPab	SKPab	09 45 47.4	-0.2
	comp=Z,99nm,0.5s,baz=64,slow=1.4,SNR=23						
PRGR	Permogore	132.29	332	ePKIKP	PKPdf	09 43 18.1	-0.7
PRGR				pmax	pmax		
	comp=Z,149nm,0.9s						
KIBK	Kibwezi	132.34	240	P	PKiKP	09 43 22.0	+0.3
	SNR=8.5						
LVZ	Lovozero	132.57	342d	iPKIKP	PKPdf	09 43 18.5	-0.7
LVZ	Lovozero	132.57	342		PKPdf	09 43 18.4	-0.7
HAMF	Hammerfest	132.91	349	ePKPdf	PKPdf	09 43 19.4	-0.2
KEV	Kevo	133.01	347	PKIKP	PKPdf	09 43 19.2	-0.7
KEV	Kevo	133.01	347		PKPpre	09 43 10.2	
KEV				PKPdf	PKPdf	09 43 19.2	-0.7
APA	Apatity	133.14	342	⇓iPKIKP	PKPdf	09 43 19.5	-0.7
APA				pmax	pmax		
	comp=Z,98nm,1.0s						
ARCES	ARCESS Array B	133.50	347	PKhKP	PKPpre	09 43 09.4	
	comp=Z,6.6nm,0.5s,baz=74,slow=1.8,SNR=9.2						
ARCES				PKP	PKPdf	09 43 20.7	-0.1
	comp=Z,98nm,0.7s,baz=62,slow=1.4,SNR=36						
ARCES				SKPbc	SKPbc	09 45 53.0	+1.2
	comp=Z,84nm,0.7s,baz=42,slow=3.8,SNR=17						
ARCES				PKKP	PKKPdf	09 53 09.9	-2.3
	comp=Z,1.9nm,0.5s,baz=182,slow=2.1,SNR=9.4						
ARCES				SKKPbc	SKKPbc	09 55 08.3	-3.6
	comp=Z,21nm,1.0s,baz=204,slow=2.7,SNR=12						
ARCES				PKPPKP	PKPPKPdf	10 01 30.2	
	comp=Z,6.4nm,0.9s,baz=350,slow=2.8,SNR=4.0						
ARE0	ARCESS Array S	133.50	347	ePKPdf	PKPdf	09 43 20.7	-0.2
KMBO	Kilima Mbogo	133.71	241	PKP	PKiKP	09 43 24.0	-0.7
	comp=Z,40nm,1.1s,baz=9.9,slow=0.6,SNR=14						
KMBO				SKPab	SKPab	09 45 58.1	0.0
	comp=Z,64nm,0.9s,baz=82,slow=3.0,SNR=18						
KMBO	Kilima Mbogo	133.71	241		PKPdf	09 43 23.3	0.0
SCO	Scoresbysund	133.90	9	⇓iPKIKP	PKPdf	09 43 22.2	+0.7
SCO				pmax	pmax		
	comp=Z,110nm,1.1s						
SCO	Scoresbysund	133.90	9		PKPdf	09 43 21.4	-0.1
SCO	Scoresbysund	133.90	9	⇓iP	PKPdf	09 43 22.2	+0.7
	comp=Z,109nm,1.1s						
SCO				i		09 45 55.1	
TMCR	Tamitsa	133.93	337	ePKIKP	PKiKP	09 43 22.5	-0.7
TMCR				pmax	pmax		
	comp=Z,160nm,1.3s						
NRS	Narsarsuaq	134.11	28	i PKIKP	PKPdf	09 43 21.8	-0.4
NRS				pmax	pmax		
	comp=Z,260nm,1.0s						
NRS	Narsarsuaq	134.11	28	i P	PKPdf	09 43 21.8	-0.4
	comp=Z,256nm,1.0s						
RCBR	Riachuelo	134.26	129	PKP	PKPdf	09 43 24.0	-0.1
	comp=Z,41nm,0.8s,baz=215,slow=1.7,SNR=12						
RCBR				SKPbc	SKPbc	09 45 55.4	-0.6
	comp=Z,222nm,0.8s,baz=191,slow=3.4,SNR=55						
RCBR	Riachuelo	134.26	129	PKIKP	PKPdf	09 43 24.0	-0.1
KTK1	Kautokeino	134.38	348	ePKPdf	PKPdf	09 43 22.7	+0.2
TRO	Tromso	134.59	350	ePKPdf	PKPdf	09 43 22.7	-0.1
TRO				IVmBBB		09 43 24.8	
	comp=Z,2μm,1.1s						
TRO				eSP	SP	09 55 17.1	-7.8
TRO				eSS	SS	10 03 03.0	-5.4
JMIC	Jan Mayen	134.72	3	PKP	PKiKP	09 43 24.3	-0.4
	comp=Z,101nm,0.8s,baz=112,slow=6.5,SNR=11						
JMIC				SKPbc	SKPbc	09 45 56.8	+1.2
	comp=Z,58nm,1.0s,baz=113,slow=11,SNR=4.4						
JMIC	Jan Mayen	134.72	3	ePKPdf	PKPdf	09 43 23.5	+0.4
KLMR	Klimovskoe	135.25	333	ePKIKP	PKPdf	09 43 19.6	-4.7
KLMR				pmax	pmax		
	comp=Z,364nm,1.2s						
KLMR	Klimovskoe	135.25	333	ePKPdf	PKPdf	09 43 19.6	-4.7
KLMR				AMP		09 43 26.9	
	comp=Z,364nm,1.2s						
KLMR				ePP	PP	09 45 56.9	-13
KLMR				eSKKPbc	SKKPbc	09 55 01.2	-3.8
DAMY	Dhamar	135.44	265	P	PKiKP	09 43 29.3	+1.2
	SNR=8.6						
ATD	Arta Tunnel	135.61	260	PKP	PKPdf	09 43 27.1	+0.6
	comp=Z,38nm,1.0s,baz=20,slow=1.6,SNR=9.9						
ATD				SKPbc	SKPbc	09 46 02.8	+2.6
	comp=Z,32nm,0.9s,baz=78,slow=3.2,SNR=10						
ATD	Arta Tunnel	135.61	260	P	PKiKP	09 43 29.4	+1.2
	SNR=7.8						
ATD	Arta Tunnel	135.61	260		PKiKP	09 43 27.9	-0.3
AKT	Akhty	136.57	304	ePKHKP	PKPpre	09 43 13.1	
AKT				e		09 43 28.9	
AKT				e		09 46 20.4	
AKT				pmax	pmax		
	comp=Z,165nm,1.1s						
MAK	Makhachkala	136.58	306d	eP	Pdif	09 40 40.4	+3.2
MAK				i		09 43 29.2	
MAK				e		09 46 17.6	
MAK				e		09 49 43.8	
MAK				eSSS	SSS	10 45 48.5	
MAK				pmax	pmax		
	comp=Z,211nm,0.9s						
MAK				pmax	pmax		
	comp=Z,44nm,1.2s						
MAK				pmax	pmax		
	comp=Z,350nm,1.9s						
STEI	Steigen	136.70	351	ePKPdf	PKPdf	09 43 26.8	-0.1
STEI				eSKSac	SKSac	09 49 43.7	+1.5
RAYN	Ar Rayn	137.16	277	PKHKP	PKPpre	09 43 20.7	
RAYN	Ar Rayn	137.16	277		PKPpre	09 43 20.7	
GROC	Groznyy	137.79	307	eP	Pdif	09 40 42.5	-0.1
GROC				e		09 43 28.5	
GROC				e		09 45 49.1	
GROC				e		09 46 28.1	
GROC				pmax	pmax		
	comp=Z,271nm,1.5s						
MOR8	Moi Rana	138.45	350	ePKPdf	PKPdf	09 43 29.4	-0.8
MOR8				IVmB_BB		09 43 32.3	
	comp=Z,946nm,1.3s						
MOR8				eSKSdf	SKSdf	09 49 34.7	-7.1
VRH	Novokhopyorsk	138.49	319	ePKHKP	PKPpre	09 43 24.0	
VRH				pmax	pmax		
	comp=Z,360nm,1.2s						
MOS	Moscow	138.76	327	i PKHKP	PKPpre	09 43 22.0	
MOS				e		09 49 38.6	
MOS				pmax	pmax		
	comp=Z,387nm,1.5s						
BORG	Borgarnes	139.17	13	PKhKP	PKPpre	09 43 27.5	
	comp=Z,22nm,0.9s,baz=106,slow=3.1,SNR=4.0						
BORG				SKPbc	SKiKP	09 46 11.4	0.0
	comp=Z,53nm,0.8s,baz=315,slow=2.7,SNR=7.1						
ZEI	Tsey	139.23	306	i PKHKP	PKPpre	09 43 25.4	
ZEI				pmax	pmax		
	comp=Z,100nm,1.0s						
NCK	Nalchik	139.33	307	⇑iPKIKP	PKPdf	09 43 33.1	+0.7
LPSR	Galich'ya Gora	139.53	322	ePKHKP	PKPpre	09 43 25.1	
LPSR				pmax	pmax		
	comp=Z,280nm,1.2s						
PUL	Pulkovo	139.54	336d	ePKIKP	PKPdf	09 43 32.7	+0.5
OBN	Obninsk	139.60	327	SKKPbc	SKKPbc	09 54 48.1	-0.1
	comp=Z,4.0nm,0.4s,baz=108,slow=22,SNR=3.7						
OBN	Obninsk	139.60	327	⇑iPKIKP	PKPdf	09 43 32.7	+0.2
OBN				e		09 45 55.1	
OBN				e		09 46 40.7	
OBN				ePPP	PPP	09 49 40.4	
OBN				pmax	pmax		
	comp=Z,430nm,1.6s						
OBN	Obninsk	139.60	327		PKPpre	09 43 25.0	
AKH	Akhalkalaki	139.74	304	⇓P	PKPdf	09 43 27.2	-6.2
VORR	Voronezh	139.76	321	ePKIKP	PKPdf	09 43 32.0	-0.9
VORR				pmax	pmax		
	comp=Z,750nm,2.0s						
KBZ	Khabaz	139.78	308	PKhKP	PKPpre	09 43 26.4	
	comp=Z,7.9nm,0.8s,baz=51,slow=4.6,SNR=4.0						
KBZ				PKP	PKPdf	09 43 32.2	-1.0
	comp=Z,33nm,0.9s,baz=174,slow=4.8,SNR=9.7						
KBZ				SKPbc	SKiKP	09 46 13.6	+0.2
	comp=Z,25nm,0.7s,baz=111,slow=3.5,SNR=8.5						
KBZ				SKKPbc	SKKPbc	09 54 46.5	-0.3
	comp=Z,16nm,1.0s,baz=276,slow=2.8,SNR=10						
FINES	FINESS Array B	139.79	340	PKhKP	PKPpre	09 43 25.2	
	comp=Z,28nm,0.4s,baz=57,slow=4.4,SNR=78						
FINES				SKPbc	SKiKP	09 46 12.4	-0.5
	comp=Z,77nm,0.7s,baz=64,slow=4.4,SNR=12						
FINES				SKPab	SKPab	09 46 22.2	-0.8
	comp=Z,43nm,0.9s,baz=90,slow=4.2,SNR=3.8						
FINES				SKKPbc	SKKPbc	09 54 42.5	-5.3
	comp=Z,10nm,0.7s,baz=229,slow=2.2,SNR=14						
KVAR	Kislovodsk Arr	139.88	308	PKP	PKPdf	09 43 33.2	-0.3
	comp=Z,40nm,1.1s,baz=90,slow=20,SNR=4.1						
KIV	Kislovodsk	139.89	308	⇓P	PKPdf	09 43 28.0	-5.5
KIV	Kislovodsk	139.89	308	i PKIKP	PKPdf	09 43 33.8	+0.2
KIV				e		09 46 36.4	
KIV				eSS	SS	10 04 10.9	-1.7
KIV				pmax	pmax		
	comp=Z,406nm,1.1s						
KIV	Kislovodsk	139.89	308		PKPpre	09 43 26.3	
KIV				PKPdf	PKPdf	09 43 33.8	+0.2
VSR	Storozhevoye	139.97	320	ePKHKP	PKPpre	09 43 26.2	
VSR				pmax	pmax		
	comp=Z,200nm,1.2s						
VORD	Divnogorie	140.00	320	ePKHKP	PKPpre	09 43 25.7	
VORD				pmax	pmax		
	comp=Z,160nm,1.4s						
NEY	Neytrino	140.00	307	⇑iPKIKP	PKPdf	09 43 32.5	-1.4
NSS	Namsos	140.36	351	ePKPdf	PKPdf	09 43 27.1	-6.5
BATM	Batumi	141.04	305	⇑P	PKPdf	09 43 31.3	-4.3
BATM	Batumi	141.04	305	⇑PKHKP	PKPdf	09 43 31.3	-4.3
BCA	Borcka	141.12	305	⇑P	PKPdf	09 43 31.8	-3.9
VSU	Vasula	141.78	336	eP	PKPdf	09 43 31.1	-5.2
VSU	Vasula	141.78	336d	iPKIKP	PKPdf	09 43 36.5	+0.2
TBLU	Trondheim	141.82	351	IVmB_BB		09 43 32.2	
	comp=Z,2μm,2.3s						
TBLU				ePKPdf	PKPdf	09 43 32.3	-3.9
TBLU				eSKSdf	SKSdf	09 49 46.7	-0.7
SOC	Sochi	142.07	308	ePKHKP	PKPpre	09 43 32.9	
SOC				i		09 43 40.3	
SOC				pmax	pmax		
	comp=Z,100nm,0.8s						
SOC				pmax	pmax		
	comp=Z,68nm,0.9s						
KTUT	Trabzon	142.58	304	⇓P	PKPdf	09 43 35.8	-2.5
MOL	Molde	142.82	353	ePKPdf	PKPdf	09 43 36.4	-1.6
MOL				IVmB_BB		09 43 36.7	
	comp=Z,8μm,1.3s						
MOL				eSKSdf	SKSdf	09 49 46.7	-2.2
MOL				eSS	SS	10 04 42.6	-1.1
DOMB	Dombas	143.14	352	ePKPab	PKPab	09 43 36.9	0.0
DOMB				IVmB_BB		09 43 37.7	
	comp=Z,11μm,1.2s						
H10S2	ASCENSION HYDR	143.15	158	PKP	PKPdf	09 43 40.2	+0.4
H10S3	ASCENSION HYDR	143.15	158	PKP	PKPdf	09 43 39.5	-0.3
AKN	Aaknes	143.26	353	ePKPdf	PKPbc	09 43 38.2	+0.6
ANN	Anapa	143.32	311d	iPKIKP	PKPbc	09 43 38.4	+0.2
ANN				pmax	pmax		
	comp=Z,1μm,0.9s						
NB2	NORSAR Subarra	143.78	349	PKP	PKPbc	09 43 38.3	-0.9
	comp=Z,2μm,1.2s,baz=16,slow=3.2						
NB2	NORSAR Subarra	143.78	349	PKPab	PKPbc	09 43 38.3	-0.9
	baz=16,slow=3.2						
NOA	NORSAR Array B	143.78	349	PKP	PKPbc	09 43 39.1	-0.1
	comp=Z,795nm,0.9s,baz=22,slow=2.6,SNR=486						
NOA				SKPbc	SKiKP	09 46 21.3	+0.1
	comp=Z,30nm,0.8s,baz=15,slow=4.2,SNR=7.3						
NOA				SKKPbc	SKKPab	09 54 29.9	-0.3

comp=Z,38nm,1.0s,baz=199,slow=4.4,SNR=43
IZAR Zarasai 143.90 333 eP PKPdf 09 43 40.3 +0.2
SLIT Slitere, Latvi 143.97 338 eP PKPbc 09 43 39.5 -0.2
NC602 NORSAR Array S 144.01 349 ePKPab PKPbc 09 43 39.8 -0.1
NC602 eSS SS 10 04 52.3 -5.0
FOO Floro 144.02 354 ePKPdf PKPdf 09 43 40.0 -0.1
FOO IVmB_BB 09 43 40.8
comp=Z,16μm,1.3s
FOO eSS SS 10 04 55.6 -1.7
MICGM Minsk 144.04 331⥣ePKP PKPbc 09 43 39.0 -1.1
MICGM PKPM 09 43 41.0
comp=Z,28nm,2.0s
MICGM PKPM 09 43 42.0
comp=Z,8.2nm,1.4s
MICGM PKPM 09 43 43.0
comp=N,3.1nm,1.0s
MICGM PKPM 09 43 43.0
comp=E,5.5nm,1.0s
MICGM epPKP pPKPdf 09 45 27.0 -36
MICGM ePP sPKPdf 09 46 24.0 -38
MICGM ePKS PKSdf 09 47 20.0 +4.3
MICGM eSKS SKSdf 09 49 46.0 -5.1
MNK Minsk 144.04 331⥣ePKIKP PKPbc 09 43 39.0 -1.1
MNK e 09 49 46.0
MNK pmax pmax
comp=Z,28μm,2.0s
MNK pmax pmax
comp=Z,8μm,1.4s
MNK pmax pmax
comp=N,3μm,1.0s
MNK pmax pmax
comp=E,6μm,1.4s
ISAL Salakas 144.07 333 eP PKPab 09 43 40.5 -0.1
HFS Hagfors 144.16 347 PKP PKPbc 09 43 39.8 -0.5
comp=E,330nm,0.3s,baz=72,slow=2.5,SNR=334
HFS SKPbc SKiKP 09 46 22.1 +0.2
comp=E,44nm,0.7s,baz=129,slow=2.1,SNR=4.9
HFS SKKPbc SKKPab 09 54 27.3 -1.2
comp=E,30nm,0.9s,baz=187,slow=2.4,SNR=19
IIGN Ignalina 144.18 333 eP PKPdf 09 43 40.8 +0.2
ASCN Ascension 144.21 158 PKPab 09 43 43.6 +1.3
H10N3 ASCENSION HYDR144.25 158 PKP PKPab 09 43 42.7 +0.7
baz=225,slow=1.3,SNR=5.9
H10N1 ASCENSION HYDR144.25 158 PKP PKiKP 09 43 43.9 -1.7
baz=225,slow=1.3,SNR=4.5
NACGM Naroch 144.25 332 ePKP PKPdf 09 43 38.0 -2.7
NACGM ePKP PKPdf 09 43 38.0 -2.7
NACGM epPKP pPKPdf 09 46 02.0 -1.5
NACGM ePP SKPbc 09 46 22.0 +0.4
NACGM ePPP PPP 09 49 22.0
NACGM eSKS SKSdf 09 49 42.0 -9.4
H10N2 ASCENSION HYDR144.26 158 PKP PKiKP 09 43 44.0 -1.5
baz=225,slow=1.3,SNR=4.2
HYA Hoyanger 144.34 353 ePKPab PKPbc 09 43 41.0 +0.2
SKAR Skarslia 144.56 351 ePKPab PKPbc 09 43 41.9 +0.2
SKAR IVmBBB 09 43 42.8
comp=Z,9μm,1.6s
SUE Sulen 144.58 355 ePKPbc PKPbc 09 43 41.4 -0.1
SUE IVmB_BB 09 43 42.5
comp=Z,11μm,2.4s
SUE eSS SS 10 05 01.6 -1.9
OSL Oslo 144.90 349 ePKPab PKPbc 09 43 43.0 +0.5
OSL eSS SS 10 05 10.0 +2.8
PABE Paberze 144.97 334 eP PKPbc 09 43 42.4 -0.5
ASK Askoy 145.11 354 ePKPbc PKPbc 09 43 43.2 +0.1
BER Bergen 145.19 354 ePKPab PKPbc 09 43 43.9 +0.5
PBUR Paburge 145.34 337 eP PKPdf 09 43 43.1 +0.6
KONO Kongsberg 145.36 350 PKIKP PKPdf 09 43 42.8 +0.3
KONO Kongsberg 145.36 350 PKPdf 09 43 42.8 +0.3
KONO Kongsberg 145.36 350 ePKPbc PKPdf 09 43 43.1 +0.6
KONO IVmB_BB 09 43 44.7
comp=Z,9μm,1.2s
KONO eSKSdf SKSdf 09 49 53.3 +0.5
KONO eSS SS 10 05 15.3 +2.9
SIM Simferopol' 145.49 313d iPKIKP PKPdf 09 43 43.4 +0.2
SIM pmax pmax
comp=Z,359nm,1.0s
ODD1 Odda 145.51 353 ePKPbc PKPbc 09 43 44.0 -0.4
AKASG Malin Array Be 145.72 324 PKPbc PKPdf 09 43 43.2 -0.1
comp=Z,390nm,0.9s,baz=41,slow=3.7,SNR=122
AKASG SKPbc SKiKP 09 46 27.2 +1.8
comp=Z,82nm,0.8s,baz=48,slow=2.8,SNR=14
AKASG SKKPbc SKKPab 09 54 21.5 -0.1
comp=Z,5.5nm,0.7s,baz=247,slow=4.1,SNR=14
DIKM Dikmen 145.74 307 ⥣P PKPbc 09 43 45.9 +0.3
ASF Jabal al Asfar 145.75 290 PKPbc PKPdf 09 43 45.0 +0.8
comp=Z,267nm,0.9s,baz=65,slow=1.9,SNR=119
ASF SKKPbc SKKPbc 09 54 21.7 -0.6
comp=Z,27nm,1.0s,baz=215,slow=2.5,SNR=19
BLS5 Blasjo 146.01 352 ePKPdf PKPdf 09 43 43.6 0.0
BLS5 IVmB_BB 09 43 49.7
comp=Z,5μm,2.8s
BLS5 eSS SS 10 05 21.9 +2.1
KMY Karmoy 146.35 353 ePKPdf PKPdf 09 43 44.4 +0.2
KMY IVmBBB 09 43 48.3
comp=Z,9μm,1.0s
SUW Suwalki 146.38 333 ePKPdf PKPdf 09 43 44.4 +0.1
SUW ePKPbc PKPbc 09 43 47.4 +0.5
HWQ Hawqa 146.46 294 eP PKPdf 09 43 45.4 0.0
BZK Bozkurt 146.56 308 ⥣P PKPdf 09 43 45.9 +0.8
RCY Rachaya 146.60 292 eP PKPdf 09 43 46.1 +0.4
SHBL Chebaa 146.69 292 eP PKPdf 09 43 46.6 +0.9
BHL Bhannes 146.73 293 eP PKPdf 09 43 46.1 +0.3
DQRL Deir Qamar 146.81 293 eP PKPdf 09 43 46.6 +0.7
HOMB Homborsund 146.85 350 eP PKPdf 09 43 44.9 -0.1
SNART Snartemo 146.97 351 ePKPdf PKPdf 09 43 45.6 +0.4
MMAI Mount Meron Ar 146.99 291 PKPbc PKPbc 09 43 48.2 -1.1
comp=Z,310nm,0.5s,baz=72,slow=5.4,SNR=125
MMAI pPKPbc pPKPab 09 46 13.3 +3.8
comp=Z,22nm,0.6s,baz=45,slow=8.4,SNR=4.3
MMAI SKKPbc SKKPbc 09 54 17.3 +0.2
comp=Z,11nm,0.6s,baz=234,slow=6.9,SNR=12
EIL Elat 147.38 285 PKPbc PKPdf 09 43 48.3 +1.5
comp=Z,420nm,0.9s,baz=336,slow=1.7,SNR=83
EIL pPKPbc pPKPab 09 46 18.1 +7.1
comp=Z,174nm,1.3s,baz=324,slow=2.8,SNR=3.9
EIL SKKPbc 09 54 14.8
comp=Z,18nm,1.0s,baz=336,slow=4.8,SNR=8.3
BR131 Keskin Array S 147.43 304 P PKPdf 09 43 47.4 +0.6
SNR=44
BRTR Keskin Array B 147.43 304 PKPbc PKPdf 09 43 47.6 +0.8
comp=Z,202nm,0.9s,baz=144,slow=6.7,SNR=98
BRTR pPKP pPKPdf 09 46 07.0 -2.7
comp=Z,9.3nm,0.8s,baz=43,slow=6.5,SNR=3.0
BRTR SKKPbc 09 54 14.2
comp=Z,9.4nm,1.2s,baz=224,slow=4.5,SNR=5.7
SORM Soroca 147.61 321 ⥣P PKPdf 09 43 46.7 +0.1
SORM Soroca 147.61 321 ⥣PKIKP PKPdf 09 43 46.7 +0.1
GOET G??ttrup 147.91 349⥥iP PKiKP 09 43 51.6 -0.5
comp=Z,1μm,1.0s
KIS Kishinev 147.94 319 i PKP PKPbc 09 43 50.0 -1.2
comp=Z,2μm,16.0s
KIS Kishinev 147.94 319 ⥣P PKPbc 09 43 50.4 -0.8
KIS Kishinev 147.94 319 pmax pmax
comp=N,2μm,16.0s
MILM Milestii Mici 147.98 319 ⥣P PKPdf 09 43 48.2 +1.0
ANTO Ankara 148.02 304 ⥥P PKPdf 09 43 48.4 +0.7
ANTO Ankara 148.02 304 ⥥PKHKP PKPdf 09 43 48.4 +0.7
ANTO Ankara 148.02 304 PKPdf 09 43 47.8 +0.1
ANTO PKPbc PKPbc 09 43 51.9 +0.1
BSD Bornholm Skovb 148.35 342⥥iPKIKP PKPdf 09 43 47.6 0.0
BSD pmax pmax
comp=Z,1μm,1.2s
BSD Bornholm Skovb 148.35 342⥥iP PKPdf 09 43 47.6 0.0
comp=Z,1μm,1.2s
MUD Monsted U'grnd 148.47 348 i PKHKP PKPdf 09 43 48.7 +1.0
MUD pmax pmax
comp=Z,920nm,1.2s
MUD Monsted U'grnd 148.47 348 i P PKPdf 09 43 48.7 +1.0
comp=Z,917nm,1.2s
LEOM Leova 148.54 319 ⥣P PKPbc 09 43 52.8 +0.1
LEOM Leova 148.54 319 ⥣PKHKP PKPbc 09 43 52.8 +0.1
CSS Mathiatis 148.54 295 P PKPdf 09 43 48.8 +0.2
KDZE Karadeniz Ereo 148.58 308 ⥥P PKPdf 09 43 48.5 0.0
VASR Vaslui 148.72 319 ⥣P PKiKP 09 43 53.9 -0.2
TLCR 148.81 316 ⥣P PKPbc 09 43 53.5 +0.1
LEF Lefka 148.88 296 ⥣P PKPbc 09 43 53.1 -0.8
LVV L'vov 148.90 327 ePKIKP PKPdf 09 43 48.8 +0.1
BEL Belsk 148.96 332 ePKPdf PKPdf 09 43 49.3 +0.6
BEL ePKPbc PKiKP 09 43 54.9 +0.5
JURR Jurilovca 148.97 315 ⥣P PKPbc 09 43 51.4 -2.4
BIR Birlad 149.01 319 ⥥P PKiKP 09 43 55.3 +0.6
BIR Birlad 149.01 319 ⥥PKP2 PKiKP 09 43 55.3 +0.6
GIUM Giurgiulesti 149.05 317 ⥣P PKPbc 09 43 53.6 -0.4
VARL Varlezi 149.07 318 ⥣P PKiKP 09 43 54.5 -0.3
GISR Galati 149.17 317 ⥣P PKiKP 09 43 55.5 +0.5
GKP Gorka Klasztor 149.19 338 ePKPdf PKPdf 09 43 49.6 +0.6
GKP ePKPbc PKiKP 09 43 55.2 +0.3
TOPG Topolog 149.23 316 ⥣P PKiKP 09 43 55.1 -0.1
CFR Carcaliu 149.24 316 ⥣P PKPdf 09 43 50.7 +1.4
CFR Carcaliu 149.24 316 ⥣PKHKP PKPdf 09 43 50.7 +1.4
GHRR 149.25 318 ⥣P PKPbc 09 43 54.6 +0.1
SCHL Schela 149.28 317 ⥣P PKPdf 09 43 51.2 +1.9
RGN Rugen 149.29 343 eP PKPdf 09 43 49.9 +0.8
RGN Rugen 149.29 343 ePKPdf PKPdf 09 43 50.2 +1.1
baz=28,slow=1.3
RGN ePKPbc PKiKP 09 43 55.5 +0.5
baz=26,slow=2.1
TUDR 149.33 317 ⥣P PKiKP 09 43 56.3 +0.9
TSCT Constanta Port 149.38 314 ⥣P PKPbc 09 43 54.9 +0.1
TIRR Tirgusor 149.41 315 ⥥P PKPbc 09 43 54.2 -0.7
TIRR Tirgusor 149.41 315 ⥥PKHKP PKPbc 09 43 54.2 -0.7
EFOR EFORIE 149.43 314 ⥣P PKiKP 09 43 55.5 -0.1
TESR Tescani 149.46 320 ⥣P PKiKP 09 43 55.5 -0.2
MFTR Murfatlar 149.53 314 ⥣P PKiKP 09 43 55.5 -0.3
PETR Petresti 149.53 318 ⥣P PKiKP 09 43 55.9 +0.1
BIZ Bicaz 149.54 321 ⥥P PKPdf 09 43 51.7 +1.9
MANR Mangalia 149.58 314 ⥣P PKPbc 09 43 55.0 -0.3
TLBR Topalu 149.60 315 ⥣P PKiKP 09 43 55.7 -0.3
HARR Harsova 149.60 316 ⥥P PKPbc 09 43 53.2 -2.1
HARR Harsova 149.60 316 ⥥PKHKP PKPbc 09 43 53.2 -2.1
ODBI Odobesti 149.61 318 ⥣P PKiKP 09 43 56.1 +0.2
BURAR Bucovina Array 149.65 323 ⥥P PKPbc 09 43 53.1 -2.4
BURAR Bucovina Array 149.65 323 ⥥PKHKP PKPbc 09 43 53.1 -2.4
KWP Kalwaria Pacla 149.67 328 ePKPdf PKPdf 09 43 50.1 +0.2
KWP ePKPbc PKiKP 09 43 56.7 +0.7
CVDA Cernavoda 149.70 315 ⥣P PKiKP 09 43 56.0 -0.2
VRI Vrincioaia 149.76 319 ⥣P PKPbc 09 43 55.7 0.0
PLOR Plostina 149.81 319 ⥥ PKPbc 09 43 56.0 +0.1
GRER 149.86 318 ⥣P PKiKP 09 43 57.6 +1.1
PSN Preselentsi 149.90 314 eP PKPdf 09 43 50.7 +0.3
BISRR Bisoca 149.93 318 ⥣P PKiKP 09 43 57.2 +0.4
ICOR Ion Corvin 149.95 315 ⥣P PKPdf 09 43 52.4 +1.9
AMRR Amara 150.01 316 ⥣P PKPbc 09 43 56.1 -0.2
AMRR Amara 150.01 316 ⥣PKHKP PKPbc 09 43 56.1 -0.2
SKMB Sankelmark Bun 150.05 347 ePKPdf PKPdf 09 43 51.4 +1.1
baz=28,slow=1.3
SKMB ePKPbc PKiKP 09 43 57.7 +1.1
baz=26,slow=2.1
SKMB epPKPbc pPKPab 09 46 25.4 +4.8
baz=22,slow=2.2
PGOR Pogoanele 150.09 317 ⥣P PKPbc 09 43 56.2 -0.2
ISR Istrita 150.25 317 ⥣P PKiKP 09 43 57.2 -0.2
ISR Istrita 150.25 317 ⥣PKIKP PKiKP 09 43 57.2 -0.2
RASA Rasa 150.32 315 ⥣P PKiKP 09 43 57.9 +0.5
KOLS Kolonicke sedl 150.35 327 ePKIKP PKPdf 09 43 52.2 +1.2
KOLS Kolonicke sedl 150.35 327 ePKP PKPdf 09 43 52.2 +1.2
KOLS e 09 43 58.6
LEHL Lehliu 150.40 316 ⥣P PKiKP 09 43 58.3 +0.6
MLR Muntele Rosu 150.42 318 PKP PKPdf 09 43 51.5 +0.2
comp=Z,26nm,0.9s,baz=14,slow=2.2,SNR=6.9
MLR PKPbc PKPbc 09 43 56.6 -0.8
comp=Z,282nm,0.9s,baz=334,slow=6.0,SNR=54
MLR SKP SKPdf 09 46 26.5 +0.1
comp=Z,63nm,1.1s,baz=265,slow=4.5,SNR=3.2
MLR SKKPbc SKKPbc 09 54 02.4
comp=Z,40nm,1.3s,baz=278,slow=3.0,SNR=7.4
MLR Muntele Rosu 150.42 318 ⥣P PKPdf 09 43 52.5 +1.1
ARCR ARCALIA 150.44 322 ⥣P PKiKP 09 43 57.7 0.0
DOPR Dopca 150.49 320 ⥣P PKPdf 09 43 53.2 +1.9
UZH Uzhgorod 150.54 327 ePKIKP PKPdf 09 43 48.4 -2.8
UZH i 09 43 55.8
UZH e 09 44 06.8
BMR Baia Mare 150.54 324 ⥣P PKPbc 09 43 54.5 -2.9
BMR Baia Mare 150.54 324 ⥣PKIKP PKPbc 09 43 54.5 -2.9
OJC Ojcow 150.58 331 ePKPdf PKPdf 09 43 51.4 +0.1
OJC ePKPbc PKiKP 09 43 58.5 +0.7
OJC Ojcow 150.58 331 PKIKP PKPdf 09 43 52.1 +0.8
SECR 150.58 318 ⥥P PKPdf 09 43 53.2 +1.8
EKA Eskdalemuir Ar 150.59 2 PKP PKPdf 09 43 51.0 -0.1
comp=Z,4.2nm,0.4s,baz=329,slow=2.2,SNR=21
EKA PKPbc PKPbc 09 43 57.0 -0.3
comp=Z,64nm,0.4s,baz=340,slow=2.6,SNR=108
EKA SKKPbc 09 53 58.6
comp=Z,4.5nm,0.8s,baz=140,slow=5.3,SNR=4.9
EKA Eskdalemuir Ar 150.59 2 PKIKP PKPbc 09 43 57.0 -0.3
BSEG Bad Segeberg 150.59 345 ePKPdf PKPdf 09 43 51.8 +0.7
baz=28,slow=1.3
BSEG ePKPbc PKiKP 09 43 58.7 +1.0
baz=26,slow=2.1
BSEG ePKPab PKPab 09 44 08.1 +1.1
baz=23,slow=4.3
BSEG epPKPbc pPKPab 09 46 26.5 +3.8
baz=22,slow=2.2
ESK Eskdalemuir 150.60 2 PKIKP PKPbc 09 43 57.0 -0.3
ESK Eskdalemuir 150.60 2 PKPdf 09 43 50.8 -0.3
ESK PKPbc PKPbc 09 43 57.0 -0.3
PRD Provadia 150.63 313 eP PKPdf 09 43 51.6 +0.1
SULR 150.65 317 ⥣P PKiKP 09 43 58.2 +0.1
PLAR PLOIESTI 150.67 317 ⥣P PKPbc 09 43 57.6 -0.2
HLG Helgoland 150.86 348 ePKPbc PKiKP 09 43 59.4 +1.1
baz=26,slow=2.1
HLG ePKPab PKPab 09 44 08.7 +0.5
baz=23,slow=4.3
NIE Niedzica 150.94 330 ePKPdf PKPdf 09 43 52.7 +0.9
NIE ePKPbc PKiKP 09 44 00.0 +1.3
MDB Medias 150.97 321 ⥣P PKiKP 09 43 58.8 0.0
MDB Medias 150.97 321 ⥣PKIKP PKiKP 09 43 58.8 0.0
RUE Ruedersdorf 150.98 340 eP PKPdf 09 43 52.2 +0.5
RUE Ruedersdorf 150.98 340 ePKPdf PKPdf 09 43 52.5 +0.8
baz=28,slow=1.3
RUE ePKPbc PKiKP 09 43 59.6 +1.0
baz=26,slow=2.1
RUE ePKPab PKPab 09 44 09.6 +0.8
baz=23,slow=4.3
VOIR 150.98 319 ⥥P PKiKP 09 43 59.0 +0.1
VOIR 150.98 319 ⥥PKIKP PKiKP 09 43 59.0 +0.1
RAZG Razgrad 151.04 315 ⥥P PKPdf 09 43 52.9 +0.7
SGRR Singureni 151.05 316 ⥣P PKPbc 09 43 57.2 -1.5
CJR Cluj-Napoca 151.07 322 ⥥P PKiKP 09 43 59.1 0.0
CJR Cluj-Napoca 151.07 322 ⥥PKIKP PKiKP 09 43 59.1 0.0
CEI Carei 151.07 325 ⥥P PKiKP 09 43 59.0 +0.1
CEI Carei 151.07 325 ⥥PKIKP PKiKP 09 43 59.0 +0.1
ARR Arges 151.26 319 ⥣P PKPdf 09 43 54.6 +2.0
GOLR 151.35 318 ⥥P PKPbc 09 43 58.6 -0.7
DRGR 151.51 323 ⥣P PKPdf 09 43 52.3 -0.6
DRGR 151.51 323 eP PKPdf 09 43 52.5 -0.4
DRGR 151.51 323 ⥣PKIKP PKPdf 09 43 52.3 -0.6
KSP Ksiaz 151.51 336 ePKPdf PKPdf 09 43 53.2 +0.5
KSP ePKPbc PKiKP 09 44 00.9 +1.2
KSP Ksiaz 151.51 336 PKIKP PKPdf 09 43 53.5 +0.9
HUMR Humele 151.51 318 ⥣P PKPdf 09 43 53.7 +0.9
LANS Liptovska Anna 151.51 330 ePKIKP PKPdf 09 43 54.7 +1.9
LANS Liptovska Anna 151.51 330 ePKP PKPdf 09 43 54.7 +1.9
LANS e 09 44 01.6
KECS Kecovo 151.52 328 ePKIKP PKiKP 09 44 00.1 +0.3
KECS e 09 44 12.5
KECS Kecovo 151.52 328 ePKP PKiKP 09 44 00.1 +0.3
KECS e 09 44 12.5
SZH Strazhica 151.55 315 eP PKPdf 09 43 52.5 -0.4
COPA Copaceanca 151.57 317 ⥥P PKPdf 09 43 55.4 +2.5
OKC Ostrava-Krasne 151.57 332 ePKIKP PKPdf 09 43 53.7 +0.9
OKC e 09 44 12.2
OKC Ostrava-Krasne 151.57 332 ePKPDF PKPdf 09 43 53.7 +0.9
OKC ⥣ePKP PKiKP 09 44 00.1 +0.2
OKC ePKPAB PKPab 09 44 12.2 +0.8
ZIMR 151.72 316 ⥣P PKiKP 09 44 01.1 +0.7
ZIMR 151.72 316 ⥣PKIKP PKiKP 09 44 01.1 +0.7
ELND Elena 151.74 314 ⥣P PKPdf 09 43 53.9 +0.6
OSTC Ostas 151.77 335 ePKPDF PKPdf 09 43 54.0 +0.9
OSTC ⥣ePKP PKiKP 09 44 00.7 +0.4
OSTC ePKPAB PKPab 09 44 14.0 +1.7
CHVC Chvalec 151.81 336 ePKPDF PKPdf 09 43 54.1 +1.0
CHVC ⥣ePKP PKiKP 09 44 01.0 +0.6
MORC Moravsky Berou 151.87 333 ePKP PKPdf 09 43 53.5 +0.2
MORC ePKIKP PKiKP 09 44 01.9 +1.3
MORC e 09 44 13.7
MORC e 09 46 21.2
MORC e 09 53 36.6
MORC Moravsky Berou 151.87 333 ⥥P PKPdf 09 43 54.7 +1.4
MORC Moravsky Berou 151.87 333 ⥥PKIKP PKPdf 09 43 54.7 +1.4
UPC Upice 151.89 336 ePKIKP PKPdf 09 43 53.6 +0.4
UPC e 09 44 13.5
UPC Upice 151.89 336 ePKPDF PKPdf 09 43 53.6 +0.4
UPC ⥣ePKP PKiKP 09 44 01.2 +0.7
UPC ePKPAB PKPab 09 44 13.5 +0.8
DPC Dobruska-Polom 151.90 335 ePKIKP PKPdf 09 43 54.3 +1.0
DPC Dobruska-Polom 151.90 335 ePKPDF PKPdf 09 43 54.3 +1.0
DPC ⥣ePKP PKiKP 09 44 01.3 +0.7
DPC ePKPAB PKPab 09 44 14.4 +1.6
KRLC Kraliky 151.94 334 ePKIKP PKPdf 09 43 53.1 -0.3
KRLC e 09 44 14.2
KRLC Kraliky 151.94 334 ePKPDF PKPdf 09 43 53.1 -0.3
KRLC ⥣ePKP PKPbc 09 44 00.6 +0.1
KRLC ePKPAB PKPab 09 44 14.2 +1.2
H07S1 FLORES T-PHASE151.95 54 ePKP PKPdf 09 43 55.5 +1.8
H07S1 FLORES T-PHASE151.95 54 PKP PKPdf 09 43 55.5 +1.8
H07S1 PKPbc PKiKP 09 44 01.1 0.0
DEV Deva 151.96 322 ⥣P PKPbc 09 44 00.3 -0.4
DEV Deva 151.96 322 ⥣PKIKP PKPbc 09 44 00.3 -0.4
NRDL Niedersach Rie 151.97 344 ePKPdf PKPdf 09 43 53.7 +0.6
baz=28,slow=1.3
NRDL ePKPbc PKiKP 09 44 01.6 +1.1
baz=26,slow=2.1
NRDL ePKPab PKPab 09 44 13.4 +0.5
baz=23,slow=4.3
NRDL epPKPbc pPKPab 09 46 29.9 +1.6
baz=22,slow=2.2
VLAD Vladila 152.14 317 ⥣P PKiKP 09 44 01.3 0.0
ASSE Asse, Remlinge 152.16 343 ePKPdf PKPdf 09 43 53.9 +0.5
baz=28,slow=1.3
ASSE ePKPbc PKiKP 09 44 02.1 +1.2
baz=26,slow=2.1
ASSE ePKPab PKPab 09 44 14.6 +0.9
baz=23,slow=4.3
ASSE epPKPbc pPKPab 09 46 30.3 +1.2
baz=22,slow=2.2
PSZ Piszkesteto 152.20 328 ⥣P PKPbc 09 44 01.1 -0.1
PSZ Piszkesteto 152.20 328 ⥣PKIKP PKPbc 09 44 01.1 -0.1
CLL Collm 152.24 340 i PKPdf PKPdf 09 43 55.0 +1.3
comp=Z,263nm,1.6s
CLL i PKPbc PKiKP 09 44 02.7 +1.5
comp=Z,716nm,1.0s
CLL i PKPab PKPab 09 44 16.1 +1.9
comp=Z,356nm,1.2s
CLL epPKPdf pPKPbc 09 46 22.0 -0.9
CLL i pPKPbc pPKPab 09 46 24.8 -4.7
comp=Z,122nm,1.2s
CLL i SKPdf SKPdf 09 46 31.2 +2.6
comp=Z,212nm,1.4s
CLL Collm 152.24 340 ePKPdf PKPdf 09 43 55.1 +1.4
baz=28,slow=1.3
CLL ePKPbc PKiKP 09 44 03.3 +2.0
baz=26,slow=2.1
CLL ePKPab PKPab 09 44 15.9 +1.7
baz=23,slow=4.3
CLL epPKPbc pPKPab 09 46 31.5 +2.0
baz=22,slow=2.2
CLL Collm 152.24 340 i PKIKP PKPdf 09 43 55.0 +1.3
CLL pmax pmax
comp=Z,263nm,1.6s
VYHS Vyhne 152.28 330 ePKIKP PKPdf 09 43 54.4 +0.5
VYHS e 09 44 15.6
VYHS Vyhne 152.28 330 ePKP PKPdf 09 43 54.4 +0.5
VYHS e 09 44 01.9
VYHS e 09 44 15.6
BRG Berggiesshubel 152.31 338⥣iPKP PKPdf 09 43 54.3 +0.5
comp=Z,572nm,1.9s
BRG Berggiesshubel 152.31 338 i PKP PKPbc 09 44 02.0 +0.7
comp=Z,590nm,1.3s
BRG Berggiesshubel 152.31 338 ePKPdf PKPdf 09 43 54.3 +0.5
baz=28,slow=1.3
BRG ePKPbc PKiKP 09 44 02.5 +1.2
baz=26,slow=2.1
BRG ePKPab PKPab 09 44 15.5 +1.0
baz=23,slow=4.3
BRG epPKPbc pPKPab 09 46 30.8 +1.0
baz=22,slow=2.2
BRG Berggiesshubel 152.31 338⥣iPKIKP PKPdf 09 43 54.3 +0.5
BRG i 09 44 15.6
BRG pmax pmax
comp=Z,572nm,2.0s
BRG pmax pmax
comp=Z,246nm,1.2s
BRG Berggiesshubel 152.31 338 i PKP PKPab 09 44 15.6 +1.1
comp=Z,246nm,1.2s
BRG Berggiesshubel 152.31 338 i pPKP pPKPdf 09 46 22.5 +5.5
comp=Z,210nm,1.6s
GZR Gura Zlata 152.32 321 ⥣P PKPdf 09 43 55.3 +1.2
GZR Gura Zlata 152.32 321 ⥣PKIKP PKPdf 09 43 55.3 +1.2
PLVB Pleven 152.32 316 ⥥P PKPdf 09 43 55.1 +1.0
PVCC Panska Ves 152.39 337 ePKIKP PKPdf 09 43 54.9 +1.0
PVCC e 09 44 16.1
PVCC Panska Ves 152.39 337 ePKPDF PKPdf 09 43 54.9 +1.0
PVCC ⥣ePKP PKiKP 09 44 02.7 +1.1
PVCC ePKPAB PKPab 09 44 16.1 +1.2
SIRR Siria 152.40 323 ⥣P PKPbc 09 43 59.6 -2.1
FBE Freiberg 152.46 339 ePKPdf PKPdf 09 43 54.8 +0.8
baz=28,slow=1.3
FBE ePKPbc PKiKP 09 44 03.1 +1.4
baz=26,slow=2.1
FBE ePKPab PKPab 09 44 16.4 +1.2
baz=23,slow=4.3
FBE epPKPbc pPKPab 09 46 31.3 +0.9
baz=22,slow=2.2
SRE Strehaia 152.50 319 ⥣P PKPbc 09 44 01.9 0.0
SRE Strehaia 152.50 319 ⥣PKIKP PKPbc 09 44 01.9 0.0
CLZ Clausthal 152.50 344 ePKPdf PKPdf 09 43 54.8 +0.7
baz=28,slow=1.3
CLZ ePKPbc PKiKP 09 44 03.1 +1.3
baz=26,slow=2.1
CLZ ePKPab PKPab 09 44 16.5 +1.1
baz=23,slow=4.3
CLZ epPKPbc pPKPab 09 46 31.3 +0.6
baz=22,slow=2.2
JAVC Velka Javorina 152.52 332 ePKP PKPdf 09 43 55.7 +1.4
JAVC ePKIKP PKiKP 09 44 04.4 +2.4
JAVC e 09 44 17.8
JAVC e 09 46 24.4
JAVC e 09 53 40.6
ALN Alexandroupoli 152.53 310 P PKPbc 09 44 01.9 -0.1
ALN Alexandroupoli 152.53 310 PKIKP PKPbc 09 44 01.2 -0.8
ALN 09 44 15.7
ALN Alexandroupoli 152.53 310 PKPdf 09 43 52.8 -1.6
ALN PKPbc 09 44 01.2 -0.8
ALN PKPab PKPab 09 44 15.7 -0.1
VRAC Vranov 152.62 333 PKP PKPdf 09 43 54.0 -0.4
comp=Z,19nm,0.8s,baz=349,slow=1.3,SNR=14
VRAC PKPbc PKiKP 09 44 02.7 +0.6
comp=Z,94nm,1.0s,baz=14,slow=1.0,SNR=18
VRAC SKP SKPdf 09 46 28.8 -0.4
comp=Z,25nm,1.0s,baz=67,slow=3.7,SNR=4.4
VRAC Vranov 152.62 333 ePKP PKPdf 09 43 54.6 +0.3
VRAC ePKIKP PKiKP 09 44 03.2 +1.1
VRAC e 09 44 17.1
VRAC e 09 46 21.8
VRAC e 09 53 39.3
VRAC Vranov 152.62 333 ⥣P PKiKP 09 44 02.4 +0.2
VRAC Vranov 152.62 333 PKIKP PKPdf 09 43 54.0 -0.4
KDZ Kurdzhali 152.63 312 eP PKPdf 09 43 53.8 -0.8
IBBN Ibbenburen 152.67 347 ePKPdf PKPdf 09 43 54.6 +0.4
baz=28,slow=1.3
IBBN ePKPbc PKiKP 09 44 03.0 +1.0
baz=26,slow=2.1
IBBN ePKPab PKPab 09 44 16.8 +0.9
baz=23,slow=4.3
IBBN epPKPbc pPKPab 09 46 31.2 0.0
baz=22,slow=2.2
NEUB Neuenburg 152.69 341 ePKPdf PKPdf 09 43 54.8 +0.5
baz=28,slow=1.3
NEUB ePKPbc PKiKP 09 44 03.2 +1.1
baz=26,slow=2.1
NEUB ePKPab PKPab 09 44 17.0 +0.9
baz=23,slow=4.3
NEUB epPKPbc pPKPab 09 46 31.5 +0.1
baz=22,slow=2.2
RDO Rodhopi 152.77 311 P PKPdf 09 43 54.3 -0.5
PRA Prague 152.82 337 ePKIKP PKPdf 09 43 55.3 +0.7
PRA e 09 44 17.8
PRA Prague 152.82 337 ePKPDF PKPdf 09 43 55.3 +0.7
PRA ⥣ePKP PKiKP 09 44 03.1 +0.6
PRA ePKPAB PKPab 09 44 17.8 +1.1
GOPC GO Pecny, Ondr 152.82 336 ePKIKP PKPdf 09 43 54.8 +0.2
GOPC e 09 44 17.9
GOPC GO Pecny, Ondr 152.82 336 ePKPDF PKPdf 09 43 54.8 +0.2
GOPC ⥣ePKP PKiKP 09 44 02.9 +0.4
GOPC ePKPAB PKPab 09 44 17.9 +1.1
HERR Herculane 152.83 320 ⥣P PKPdf 09 43 56.2 +1.5
BZS Buzias 152.84 322 ⥣P PKPdf 09 43 56.3 +1.5

BZS	Buzias	152.84	322	⇑PKIKP	PKPdf	09 43 56.3	+1.5
PRU	Pruhonice	152.85	337	ePKIKP	PKPdf	09 43 54.6	0.0
PRU				e		09 44 17.9	
PRU	Pruhonice	152.85	337	ePKPDF	PKPdf	09 43 54.6	0.0
PRU				⇑ePKP	PKiKP	09 44 02.9	+0.4
PRU				ePKPAB	PKPab	09 44 17.9	+1.1
GTTG	Gottingen	152.88	344	ePKPdf	PKPdf	09 43 55.2	+0.6
	baz=28,slow=1.3						
GTTG				ePKPbc	PKiKP	09 44 03.7	+1.1
	baz=26,slow=2.1						
GTTG				ePKPab	PKPab	09 44 18.0	+1.1
	baz=23,slow=4.3						
GTTG				epPKPbc	pPKPab	09 46 32.0	-0.2
	baz=22,slow=2.2						
KRUC	Moravsky	152.89	333	ePKP	PKPdf	09 43 55.0	+0.3
KRUC				ePKIKP	PKiKP	09 44 03.9	+1.2
KRUC				e		09 44 18.1	
KRUC				e		09 46 23.5	
KRUC				e		09 53 38.6	
KRUC	Moravsky	152.89	333	PKIKP	PKPdf	09 43 55.2	+0.5
PLD	Plovdiv	152.90	313	eP	PKPdf	09 43 54.2	-0.7
TIM	Timisoara	152.98	323	⇑P	PKiKP	09 44 04.6	+1.7
TIM	Timisoara	152.98	323	⇑PKIKP	PKiKP	09 44 04.6	+1.7
SRO2	Moca	153.01	329	ePKIKP	PKPbc	09 44 02.5	-0.4
SRO2	Moca	153.01	329	ePKP	PKPbc	09 44 02.5	-0.4
PGB	Panagyurishte	153.03	315	eP	PKPdf	09 43 54.6	-0.6
MODS	Modra-Piesok	153.06	331	ePKIKP	PKPdf	09 43 54.8	-0.2
MODS				e		09 44 18.5	
MODS	Modra-Piesok	153.06	331	ePKP	PKPdf	09 43 54.8	-0.2
MODS				e		09 44 03.7	
MODS				e		09 44 18.5	
TREC	Trest	153.07	335	ePKIKP	PKPdf	09 43 55.8	+0.8
TREC				e		09 44 02.6	
TREC				e		09 44 18.4	
TREC	Trest	153.07	335	ePKPDF	PKPdf	09 43 55.8	+0.8
TREC				⇑ePKP	PKPbc	09 44 02.6	-0.4
TREC				ePKPAB	PKPab	09 44 18.4	+0.6
RZN	Rozhen	153.08	312	eP	PKPdf	09 43 54.5	-1.0
TANN	Tannenbergstha	153.19	340	ePKPdf	PKPdf	09 43 55.6	+0.4
	baz=28,slow=1.3						
TANN				ePKPbc	PKiKP	09 44 04.4	+1.1
	baz=26,slow=2.1						
TANN				ePKPab	PKPab	09 44 19.3	+1.0
	baz=23,slow=4.3						
TANN				epPKPbc	pPKPab	09 46 32.9	-0.7
	baz=22,slow=2.2						
PLN	Plauen	153.22	340	ePKPdf	PKPdf	09 43 55.7	+0.5
	baz=28,slow=1.3						
PLN				ePKPbc	PKiKP	09 44 04.4	+1.1
	baz=26,slow=2.1						
PLN				ePKPab	PKPab	09 44 19.4	+1.0
	baz=23,slow=4.3						
PLN				epPKPbc	pPKPab	09 46 32.9	-0.7
	baz=22,slow=2.2						
MOX	Moxa	153.24	341	ePKPdf	PKPdf	09 43 55.3	+0.1
	baz=28,slow=1.3						
MOX				ePKPbc	PKiKP	09 44 04.2	+0.9
	baz=26,slow=2.1						
MOX				ePKPab	PKPab	09 44 19.4	+0.9
	baz=23,slow=4.3						
MOX				epPKPbc	pPKPab	09 46 32.7	-1.0
	baz=22,slow=2.2						
MOX	Moxa	153.24	341	PKIKP	PKPdf	09 43 55.9	+0.7
BANR	Banloc	153.25	322	⇑P	PKiKP	09 44 04.0	+0.5
ZST	Bratislava	153.27	331	ePKIKP	PKPdf	09 43 55.2	-0.1
ZST				e		09 44 19.8	
ZST	Bratislava	153.27	331	ePKP	PKPdf	09 43 55.2	-0.1
ZST				e		09 44 19.8	
GUNZ	Gunzen	153.27	340	ePKPdf	PKPdf	09 43 55.7	+0.5
	baz=28,slow=1.3						
GUNZ				ePKPbc	PKiKP	09 44 04.7	+1.2
	baz=26,slow=2.1						
GUNZ				ePKPab	PKPab	09 44 20.0	+1.3
	baz=23,slow=4.3						
GUNZ				epPKPbc	pPKPab	09 46 33.2	-0.8
	baz=22,slow=2.2						
MDVR	Moldovita	153.29	321	⇑P	PKPdf	09 43 56.7	+1.2
PBCC	Pribram	153.30	337	ePKPDF	PKPdf	09 43 55.9	+0.6
PBCC				⇑ePKP	PKiKP	09 44 03.8	+0.3
PBCC				ePKPAB	PKPab	09 44 19.6	+0.8
WERN	Wernitzgruen	153.32	340	ePKPdf	PKPdf	09 43 55.9	+0.5
	baz=28,slow=1.3						
WERN				ePKPbc	PKiKP	09 44 04.9	+1.3
	baz=26,slow=2.1						
WERN				ePKPab	PKPab	09 44 20.2	+1.3
	baz=23,slow=4.3						
WERN				epPKPbc	pPKPab	09 46 33.3	-0.8
	baz=22,slow=2.2						
NKC	Novy Kostel	153.35	339	ePKIKP	PKPdf	09 43 56.1	+0.7
NKC				e		09 44 20.0	
NKC	Novy Kostel	153.35	339	ePKPDF	PKPdf	09 43 56.1	+0.7
NKC				⇑ePKP	PKiKP	09 44 04.2	+0.6
NKC				ePKPAB	PKPab	09 44 20.0	+1.0
KAVA	Kavala	153.53	311	P	PKPdf	09 43 55.2	-0.7
UBBA	Unterbreizbach	153.53	343	ePKPdf	PKPdf	09 43 55.7	+0.3
	baz=28,slow=1.3						
UBBA				ePKPbc	PKiKP	09 44 04.6	+0.9
	baz=26,slow=2.1						
UBBA				ePKPab	PKPab	09 44 20.2	+0.6
	baz=23,slow=4.3						
UBBA				epPKPbc	pPKPab	09 46 33.2	-1.5
	baz=22,slow=2.2						
THAS	Thassos island	153.56	310	P	PKPdf	09 43 55.4	-0.5
BUG	Bochum--Univer	153.59	347	ePKPdf	PKPdf	09 43 56.1	+0.5
	baz=28,slow=1.3						
BUG				ePKPbc	PKiKP	09 44 04.9	+0.9
	baz=26,slow=2.1						
BUG				ePKPab	PKPab	09 44 19.8	-0.1
	baz=23,slow=4.3						
VTS	Vitosha	153.59	315	P	PKPdf	09 44 00.3	+4.2
VTS	Vitosha	153.59	315	⇑P	PKiKP	09 44 04.9	+0.4
VTS	Vitosha	153.59	315	eP	PKPdf	09 43 55.5	-0.6
VTS	Vitosha	153.59	315	⇑PKIKP	PKiKP	09 44 04.9	+0.4
MMB	Musomiste	153.78	313	eP	PKPdf	09 43 55.4	-0.9
NVR	Nevrokopi	153.81	312	P	PKPdf	09 43 59.8	+3.5
ROTZ	Rotzenmuhle	153.83	339	ePKPdf	PKPdf	09 43 56.2	+0.2
	baz=28,slow=1.3						
ROTZ				ePKPbc	PKiKP	09 44 05.4	+0.8
	baz=26,slow=2.1						
ROTZ				ePKPab	PKPab	09 44 22.4	+1.4
	baz=23,slow=4.3						
KHC	Kasperske Hory	153.91	337	ePKIKP	PKPdf	09 43 56.8	+0.6
KHC				e		09 44 22.6	
KHC	Kasperske Hory	153.91	337	ePKPDF	PKPdf	09 43 56.8	+0.6
KHC				⇑ePKP	PKiKP	09 44 05.6	+0.8
KHC				ePKPAB	PKPab	09 44 22.6	+1.1
KHC				eSKKS	SKKSac	09 53 44.0	-3.2
CONA	Conrad Observa	154.00	332	i PKPdf	PKPdf	09 43 55.9	-0.6
	comp=Z,58nm,1.2s,SNR=7.4						
CONA				i PKPab	PKPab	09 44 23.1	+1.1
	comp=Z,172nm,1.2s						
CONA				epPKPab	pPKPab	09 46 35.2	-1.9
	comp=Z,89nm,1.4s						
KKB	Krupnik	154.07	314	eP	PKPdf	09 43 55.7	-0.9
GEC2	GERESS Array S	154.11	336	ePKPdf	PKPdf	09 43 56.6	0.0
	baz=28,slow=1.3						
GEC2				ePKPbc	PKiKP	09 44 06.1	+0.8
	baz=26,slow=2.1						
GEC2				ePKPab	PKPab	09 44 23.2	+0.8
	baz=23,slow=4.3						
GEC2				epPKPbc	pPKPab	09 46 34.9	-2.5
	baz=22,slow=2.2						
GERES	GERESS Array B	154.11	336	PKP	PKPdf	09 43 57.0	+0.4
	comp=Z,31nm,1.0s,baz=85,slow=1.5,SNR=20						
GERES				PKPbc	PKiKP	09 44 05.9	+0.6
	comp=Z,47nm,0.9s,baz=45,slow=2.1,SNR=20						
GERES				PKPab	PKPab	09 44 22.9	+0.5
	comp=Z,46nm,0.8s,baz=34,slow=5.1,SNR=18						
WET	Wettzell	154.15	338	ePKPdf	PKPdf	09 43 56.8	+0.3
	baz=28,slow=1.3						
WET				ePKPbc	PKiKP	09 44 06.4	+1.1
	baz=26,slow=2.1						
WET				ePKPab	PKPab	09 44 23.7	+1.2
	baz=23,slow=4.3						
WET	Wettzell	154.15	338	PKIKP	PKPdf	09 43 57.3	+0.8
GRF	Grafenberg Arr	154.20	340	ePKPdf	PKPdf	09 43 57.0	+0.5
	baz=28,slow=1.3						
GRF				ePKPbc	PKPbc	09 44 06.4	+1.0
	baz=26,slow=2.1						
GRF				ePKPab	PKPab	09 44 24.0	+1.4
	baz=23,slow=4.3						
PCAN	Candelaria	154.26	54	ePKP	PKPdf	09 43 59.4	+2.4
PICO	Pico	154.29	54	ePKP	PKPdf	09 43 59.8	+2.7
ROSA	Rosais	154.34	54	ePKP	PKPdf	09 43 59.0	+1.9
PGRA	Graciosa	154.41	53	ePKP	PKPdf	09 43 57.5	+0.3

TNS	Taunus Mts	154.47	345	ePKPdf	PKPdf	09 43 57.5	+0.5
	baz=28,slow=1.3						
TNS				ePKPbc	PKPbc	09 44 07.0	+1.0
	baz=26,slow=2.1						
TNS				ePKPab	PKPab	09 44 24.4	+0.6
	baz=23,slow=4.3						
TNS				epPKPbc	pPKPab	09 46 35.4	-3.5
	baz=22,slow=2.2						
AHRW	Bad Neuenahr-A	154.48	347	ePKPdf	PKPdf	09 43 57.5	+0.7
	baz=28,slow=1.3						
AHRW				ePKPbc	PKPbc	09 44 06.8	+1.0
	baz=26,slow=2.1						
AHRW				ePKPab	PKPab	09 44 24.2	+0.4
	baz=23,slow=4.3						
BEBN	Eben Emael	154.50	349	PKPdf	PKPdf	09 43 56.9	0.0
BEBN				PKPab	PKPab	09 44 22.7	-1.1
KNT	Kendrikon	154.53	313	P	PKPdf	09 43 58.5	+1.2
SANT	Santorini	154.54	301	⇑P	PKPdf	09 43 56.5	-1.0
IOSP	Ios island	154.57	302	P	PKPdf	09 43 57.0	-0.5
PAIG	Paliouri	154.57	310	P	PKPdf	09 44 01.2	+3.9
MEM	Membach	154.62	348	PKPdf	PKPdf	09 43 57.4	+0.4
MEM				PKPab	PKPab	09 44 24.9	+0.5
HORT	Hortiatis	154.67	312	P	PKiKP	09 44 05.0	-1.7
ARSA	Arzberg	154.68	332	ePKPdf	PKPdf	09 43 56.7	-0.6
	comp=Z,53nm,1.2s,SNR=7.8						
ARSA				epPKiKP	pPKPab	09 46 36.2	-3.6
	comp=Z,31nm,1.6s						
UCC	Uccle	154.70	351	PKPdf	PKPdf	09 43 57.3	+0.2
UCC				PKPab	PKPab	09 44 24.4	-0.3
NPS	Neapolis	154.71	298	P	PKiKP	09 44 05.8	-1.1
MOA	Molln	154.72	334	ePKPdf	PKPdf	09 43 57.0	-0.4
	comp=Z,53nm,1.2s,SNR=7.9						
MOA				ePKPab	PKPab	09 44 25.8	+0.9
	comp=Z,94nm,1.1s,SNR=5.4						
BSTI	Sart Tilman	154.72	349	PKPdf	PKPdf	09 43 57.1	-0.1
BSTI				PKPab	PKPab	09 44 25.2	+0.5
BHOU	Houvegnez	154.87	348	PKPdf	PKPdf	09 43 58.0	+0.6
BHOU				PKPab	PKPab	09 44 25.9	+0.5
BCLA	Clavier	154.93	349	PKPdf	PKPdf	09 43 57.1	-0.4
BCLA				PKPab	PKPab	09 44 24.9	-0.8
GRG	Griva	154.96	313	P	PKiKP	09 44 04.9	-2.4
KOGS	Kog	154.97	330	ePKPdf	PKPdf	09 43 57.1	-0.6
KOGS				e		09 44 06.4	
KOGS				ePKPab	PKPab	09 44 26.4	+0.3
BGES	Gesves	155.00	350	PKPdf	PKPdf	09 43 57.5	-0.1
BGES				PKPab	PKPab	09 44 25.4	-0.6
SNF	Seneffe	155.00	351	PKPdf	PKPdf	09 43 57.8	+0.3
SNF				PKPab	PKPab	09 44 26.4	+0.4
BMRD	Maredsous	155.12	350	PKPdf	PKPdf	09 43 57.8	0.0
BMRD				PKPab	PKPab	09 44 26.4	-0.1
MRKA	Markates	155.14	307	P	PKPdf	09 43 57.0	-1.2
PSCM	Serra do Cume	155.16	53	ePKP	PKPdf	09 44 00.3	+2.1
IDI	Anoyia	155.28	299	PKP	PKPdf	09 43 58.9	+0.4
	comp=Z,52nm,0.8s,baz=190,slow=4.4,SNR=8.8						
IDI				PKPab	PKPab	09 44 28.3	+0.3
	comp=Z,96nm,0.8s,baz=91,slow=6.7,SNR=11						
IDI				SKKPbc		09 53 40.2	
	comp=Z,30nm,0.9s,baz=205,slow=8.0,SNR=6.6						
IDI	Anoyia	155.28	299	⇑P	PKPdf	09 43 59.4	+0.8
IDI	Anoyia	155.28	299		PKPdf	09 43 59.0	+0.5
IDI				PKPab	PKPab	09 44 27.4	-0.5
SOKA	Soboth	155.34	331	ePKPdf	PKPdf	09 43 57.4	-0.9
	comp=Z,62nm,1.2s,SNR=12						
SOKA				ePKPab	PKPab	09 44 28.0	+0.3
	comp=Z,110nm,1.1s						
DOU	Dourbes	155.35	350	PKPdf	PKPdf	09 43 57.7	-0.4
DOU				PKPab	PKPab	09 44 26.6	-0.9
RJOB	Jochberg	155.37	336	ePKPdf	PKPdf	09 43 57.5	-0.8
	baz=28,slow=1.3						
RJOB				ePKPbc	PKPab	09 44 08.3	-20
	baz=26,slow=2.1						
RJOB				ePKPab	PKPab	09 44 29.1	+1.3
	baz=23,slow=4.3						
IVA	Berane	155.49	319	⇑iPKP	PKPdf	09 43 57.6	-1.0
WLF	Walferdange	155.50	348	PKPdf	PKPdf	09 43 58.4	+0.1
WLF				PKPab	PKPab	09 44 28.7	+0.5
WLF	Walferdange	155.50	348	ePKPdf	PKPdf	09 43 59.3	+1.1
	baz=28,slow=1.3						
WLF				ePKPbc	PKPbc	09 44 09.6	
	baz=26,slow=2.1						
WLF				ePKPab	PKPab	09 44 29.0	+0.9
	baz=23,slow=4.3						
PLE	Pljevlja	155.50	321	⇑iPKP	PKPdf	09 43 57.9	-0.8
FUR	Furstenfeldbru	155.53	339	ePKPdf	PKPdf	09 43 58.7	+0.3
	baz=28,slow=1.3						
FUR				ePKPbc	PKPbc	09 44 08.8	
	baz=26,slow=2.1						
FUR				ePKPab	PKPab	09 44 29.7	+1.2
	baz=23,slow=4.3						
FUR				epPKPbc	pPKPab	09 46 37.5	-5.9
	baz=22,slow=2.2						
FUR	Furstenfeldbru	155.53	339	PKIKP	PKPdf	09 43 59.0	+0.6
PVY	Plav	155.62	319	⇓iPKP	PKPdf	09 43 57.5	-1.3
STU	Stuttgart	155.62	342	ePKPdf	PKPdf	09 43 58.8	+0.3
	baz=28,slow=1.3						
STU				ePKPbc	PKPbc	09 44 09.5	
	baz=26,slow=2.1						
STU				ePKPab	PKPab	09 44 29.6	+0.8
	baz=23,slow=4.3						
OBKA	Obir	155.67	332	i PKPdf	PKPdf	09 43 58.3	-0.4
	comp=Z,29nm,1.2s						
OBKA				ePKPab	PKPab	09 44 29.4	+0.2
	comp=Z,74nm,1.0s						
KBA	Koelnbreinsper	155.71	334	ePKPdf	PKPdf	09 43 57.8	-1.0
	comp=Z,47nm,1.5s,SNR=5.4						
KBA	Koelnbreinsper	155.71	334	PKIKP	PKPdf	09 43 58.6	-0.3
FNA	Florina	155.72	313	P	PKPdf	09 43 58.1	-0.8
KOME	Kolasin	155.72	319	⇑iPKP	PKPdf	09 43 57.8	-1.1
BLY	Banja Luka	155.76	326	⇑P	PKPdf	09 44 09.8	+11
UPM	Unac-Piva	155.86	321	⇓iPKP	PKPdf	09 43 57.8	-1.4
MYKA	Terra Mystica	155.95	333	ePKPdf	PKPdf	09 43 58.7	-0.3
	comp=Z,45nm,1.4s						
MYKA				ePKPab	PKPab	09 44 30.3	-0.1
	comp=Z,173nm,1.2s,SNR=6.8						
LJU	Ljubljana	156.05	331	ePKPdf	PKPdf	09 43 59.1	-0.1
LJU				e		09 44 10.0	
LJU				ePKPab	PKPab	09 44 30.9	+0.1
NKY	Niksic	156.05	320	⇑iPKP	PKPdf	09 43 58.6	-0.8
VISS	Visnje	156.10	330	ePKPdf	PKPdf	09 43 59.0	-0.2
VISS				ePKPab	PKPab	09 44 31.0	+0.1
NKME	Niksic	156.10	320	⇓iPKP	PKPdf	09 43 58.7	-0.7
PDG	Podgorica	156.13	319	⇓P	PKPab	09 44 32.3	+1.1
TTG	Podgorica	156.13	319	⇑iPKP	PKPdf	09 43 58.2	-1.1
WATA	Walderalm	156.15	337	ePKPdf	PKPdf	09 43 59.0	-0.4
	comp=Z,126nm,1.5s,SNR=9.3						
WATA				ePKPab	PKPab	09 44 31.7	+0.4
	comp=Z,56nm,0.6s						
WTTA	Wattenberg	156.19	337	ePKPdf	PKPdf	09 43 59.4	-0.1
	comp=Z,192nm,1.6s,SNR=10						
WTTA				ePKPab	PKPab	09 44 32.2	+0.7
	comp=Z,204nm,1.2s						
BFO	Black Forest	156.25	343	ePKPdf	PKPdf	09 43 59.2	-0.2
	baz=28,slow=1.3						
BFO				ePKPbc	PKPbc	09 44 10.6	
	baz=26,slow=2.1						
BFO				ePKPab	PKPab	09 44 32.2	+0.7
	baz=23,slow=4.3						
BFO				epPKPbc	pPKPab	09 46 39.3	-7.2
	baz=22,slow=2.2						
BFO	Black Forest	156.25	343	PKIKP	PKPdf	09 43 59.1	-0.2
BFO						09 44 31.6	
BFO	Black Forest	156.25	343		PKPdf	09 43 59.1	-0.3
BFO					PKPab	09 44 31.6	+0.1
BRY	Bratogost	156.26	321	⇓iPKP	PKPdf	09 43 58.6	-1.1
CEME	Cevo	156.26	320	⇑iPKP	PKPdf	09 43 58.2	-1.4
RETA	Reutte	156.29	339	ePKPdf	PKPdf	09 43 59.2	-0.3
	comp=Z,60nm,2.0s						
RETA				ePKPab	PKPab	09 44 32.7	+0.9
	comp=Z,152nm,1.2s,SNR=7.0						
MOTA	Moosalm	156.30	338	ePKPdf	PKPdf	09 43 59.3	-0.3
	comp=Z,85nm,1.5s,SNR=9.4						
MOTA				ePKPab	PKPab	09 44 32.7	+0.7
	comp=Z,108nm,1.0s,SNR=5.7						
ABTA	Abfaltersbach	156.30	335	ePKPdf	PKPdf	09 43 58.8	-0.7
	comp=Z,156nm,1.6s,SNR=9.6						
ABTA				ePKPab	PKPab	09 44 31.6	-0.3
	comp=Z,81nm,0.8s,SNR=7.1						
DRME	Dracevica, Mon	156.32	319	⇑iPKP	PKPdf	09 43 59.0	-0.6
UBR	Ueberruh	156.33	340	ePKPdf	PKPdf	09 43 59.5	0.0
	baz=28,slow=1.3						
UBR				ePKPbc	PKPbc	09 44 10.7	
	baz=26,slow=2.1						
SQTA	Sankt Quirin	156.37	338	ePKPdf	PKPdf	09 43 59.4	-0.2
	comp=Z,65nm,1.2s,SNR=7.9						
SQTA				ePKPab	PKPab	09 44 33.1	+0.9

	comp=Z,68nm,0.8s,SNR=5.0						
ANX	Ano Chora	156.38	308	P	PKPdf	09 43 59.7	-0.2
ULC	Ulcinj	156.42	318	⇓iPKP	PKPdf	09 43 58.9	-0.9
BUM	Brajici-Budva	156.42	319	⇑iPKP	PKPdf	09 43 58.7	-1.1
PSET	Sete Cidades	156.52	54	ePKP	PKPdf	09 44 02.5	+2.5
HCY	Herceg Novi	156.57	320	⇑iPKP	PKPdf	09 43 59.0	-0.9
TRI	Trieste	156.64	332	PKIKP	PKPdf	09 44 00.2	+0.3
CMLA	Cha da Macela	156.69	54	ePKP	PKPdf	09 44 03.0	+2.8
FETA	Feichten	156.71	338	ePKPdf	PKPdf	09 44 00.3	+0.1
	comp=Z,86nm,1.3s,SNR=8.2						
FETA				ePKPab	PKPab	09 44 34.5	+0.7
	comp=Z,68nm,0.8s,SNR=5.2						
DAVA	Damuels	156.75	340	ePKPdf	PKPdf	09 44 00.0	-0.2
	comp=Z,55nm,1.6s						
DAVA				ePKPab	PKPab	09 44 34.9	+1.0
	comp=Z,168nm,1.1s,SNR=7.9						
BART	Pico Bartolome	156.94	53	ePKP	PKPdf	09 44 03.1	+2.5
DAVOX	Davos/Dischmat	157.20	339	PKP	PKPdf	09 44 00.8	0.0
	comp=Z,12nm,0.6s,baz=219,slow=0.6,SNR=11						
DAVOX				PKPab	PKPab	09 44 36.9	+1.0
	comp=Z,68nm,0.8s,baz=274,slow=1.6,SNR=9.8						
PSMN	Pico do Norte,	157.32	55	ePKP	PKPdf	09 44 03.3	+2.3
CLF	Chambon-Foret	157.69	353		PKPdf	09 44 02.1	+1.0
CLF				PKPab	PKPab	09 44 38.3	+0.6
MATE	Matera	158.73	318	⇓P	PKPab	09 44 40.8	-1.7
NRCA	Norcia	159.17	328		PKPdf	09 44 02.5	-0.6
NRCA					PKPab	09 44 44.4	-0.1
TIP	Timpagrande	159.57	315	P	PKPdf	09 44 03.2	-0.5
TIP	Timpagrande	159.57	315	⇑P	PKPdf	09 44 04.2	+0.5
LIC	Lamto	160.18	170	ePKIKP	PKPdf	09 44 05.1	+0.1
	comp=Z,662nm,1.5s						
CASP	Castiglione de	160.22	332		PKPdf	09 44 03.4	-0.8
CASP				PKPab	PKPab	09 44 48.6	-0.4
KIC	Kosan Boka	160.36	171	ePKIKP	PKPdf	09 44 04.9	-0.3
	comp=Z,910nm,1.6s						
TIC	Toumodi	160.60	170	ePKIKP	PKPdf	09 44 05.3	-0.2
DBIC	Dimbokro	160.65	171	PKP	PKPdf	09 44 06.5	+1.0
	comp=Z,111nm,1.1s,baz=144,slow=1.8						
DBIC				PKPab	PKPab	09 44 51.6	+0.2
	baz=173,slow=6.3						
VAE	Valguarnera	162.06	314	PKP	PKPdf	09 44 06.7	+0.3
	comp=Z,16nm,0.8s,baz=59,slow=5.0,SNR=4.3						
PGAV	Gavieira, Arco	163.11	17	ePKPdf	PKPdf	09 44 08.1	+0.8
PGAV	Gavieira, Arco	163.11	17	ePKPab	PKPab	09 45 02.5	+0.7
PCAB	Cabril	163.41	17	ePKPdf	PKPdf	09 44 08.6	+1.1
PCAB	Cabril	163.41	17	ePKPab	PKPab	09 45 03.9	+0.9
PBRG	Braganca	163.62	13	ePKPdf	PKPdf	09 44 08.3	+0.6
PBRG	Braganca	163.62	13	ePKPab	PKPab	09 45 04.6	+0.6
MVO	Moncorvo	164.17	15	ePKPdf	PKPdf	09 44 08.9	+0.7
MVO	Moncorvo	164.17	15	ePKPab	PKPab	09 45 07.1	+0.7
PVIS	Viseu	164.38	18	ePKPdf	PKPdf	09 44 09.0	+0.6
PVIS	Viseu	164.38	18	ePKPab	PKPab	09 45 08.4	+1.0
PCAS	Casmilo, Conde	164.82	20	ePKPdf	PKPdf	09 44 10.1	+1.4
PCAS	Casmilo, Conde	164.82	20	ePKPab	PKPab	09 45 10.0	+0.7
PMOZ	Porto Moniz, M	164.90	59	ePKPdf	PKPdf	09 44 10.8	+1.6
PMOZ	Porto Moniz, M	164.90	59	ePKPab	PKPab	09 45 10.4	+0.2
PMAR	Madeira	165.16	59	ePKPdf	PKPdf	09 44 11.0	+1.5
PMAR	Madeira	165.16	59	ePKPab	PKPab	09 45 11.7	+0.3
PSBE	So Bento	165.21	22	ePKPdf	PKPdf	09 44 09.8	+0.7
PSBE	So Bento	165.21	22	ePKPab	PKPab	09 45 11.8	+0.8
PCBR	Castelo Branco	165.31	18	ePKPdf	PKPdf	09 44 10.1	+1.0
PCBR	Castelo Branco	165.31	18	ePKPab	PKPab	09 45 11.9	+0.5
PMPST	Porto Santo, M	165.46	57	ePKPdf	PKPdf	09 44 10.2	+0.7
PMPST	Porto Santo, M	165.46	57	ePKPab	PKPab	09 45 12.8	+0.3
PMPS	Porto Santo	165.47	57	ePKPdf	PKPdf	09 44 11.4	+2.0
PMAFR	Mafra	165.54	24	ePKPdf	PKPdf	09 44 10.0	+0.6
PMAFR	Mafra	165.54	24	ePKPab	PKPab	09 45 13.0	+0.5
PMRV	Marv??o	165.72	18	ePKPdf	PKPdf	09 44 10.1	+0.6
PMRV	Marv??o	165.72	18	ePKPab	PKPab	09 45 13.9	+0.6
LIS	Lisbon	165.80	24	ePKPdf	PKPdf	09 44 10.4	+0.9
LIS	Lisbon	165.80	24	ePKPdf	PKPdf	09 44 10.8	+1.3
LIS	Lisbon	165.80	24	ePKPab	PKPab	09 45 14.1	+0.5
PMTG	Montargil	165.80	21	ePKPdf	PKPdf	09 44 11.8	+2.3
PMTG	Montargil	165.80	21	ePKPab	PKPab	09 45 15.2	+1.6
ESDC	Sonseca Array	166.15	7	PKP	PKPdf	09 44 10.7	+0.8
	comp=Z,13nm,0.9s,baz=356,slow=2.3,SNR=9.4						
ESDC				PKPab	PKPab	09 45 15.7	+0.5
	comp=Z,28nm,1.0s,baz=349,slow=4.6,SNR=14						
ESDC				pPKPab	sPKPdf	09 47 36.0	+3.0
	comp=Z,14nm,1.2s,baz=2.6,slow=4.1,SNR=3.6						
ESDC				PP	PP	09 49 03.9	+0.3
	comp=Z,10nm,1.2s,baz=341,slow=3.8,SNR=3.2						
PESTR	Estremoz	166.18	19	P	PKPdf	09 44 11.6	+1.7
	SNR=7.0						
KEST	Kesra	166.33	318	PKP	PKPdf	09 44 08.8	-1.3
	comp=Z,23nm,0.9s,baz=279,slow=4.1,SNR=5.3						
KEST				PKPab	PKPab	09 45 16.3	0.0
	comp=Z,68nm,1.0s,baz=338,slow=2.9,SNR=8.8						
EVO	Evora	166.36	21	PKP	PKPdf	09 44 08.6	-1.4
EVO	Evora	166.36	21	ePKPdf	PKPdf	09 44 10.7	+0.7
EVO	Evora	166.36	21	ePKPab	PKPab	09 45 16.5	+0.4
PNCL	Nicolau / Gran	166.56	24	ePKPdf	PKPdf	09 44 11.5	+1.4
PNCL	Nicolau / Gran	166.56	24	ePKPab	PKPab	09 45 17.5	+0.5
MACI	Morro de la Ar	166.67	77		PKPdf	09 44 12.2	+1.4
MACI					PKPab	09 45 19.4	+1.1
PBEJ	Beja	166.86	22	ePKPdf	PKPdf	09 44 11.4	+1.0
PBEJ	Beja	166.86	22	ePKPab	PKPab	09 45 19.0	+0.6
TOA0	Torodi Ar. Sit	166.89	195	P	PKPdf	09 44 11.0	0.0
	SNR=8.0						
TOA0	Torodi Ar. Sit	166.89	195	PKPdf	PKPdf	09 44 10.9	-0.2
TOA0					PKPab	09 45 18.6	-0.3
TORD	Torodi Ar. Bea	166.89	195	PKP	PKPdf	09 44 11.1	0.0
	comp=Z,98nm,1.1s,baz=335,slow=0.6,SNR=17						
TORD				PKPab	PKPab	09 45 18.2	-0.7
	comp=Z,101nm,0.8s,baz=162,slow=4.2,SNR=40						
TORD				pPKPab	sPKPdf	09 47 34.3	+0.3
	comp=Z,15nm,1.1s,baz=113,slow=3.4,SNR=2.8						
TORD				PP	PP	09 49 07.5	+0.4
	comp=Z,16nm,0.9s,baz=176,slow=5.7,SNR=4.1						
TORD				SKKP		09 54 52.8	
	comp=Z,5.1nm,1.0s,baz=232,slow=4.9,SNR=3.8						
MESJ	Messejana	166.91	23	ePKPdf	PKPdf	09 44 11.2	+0.8
MESJ	Messejana	166.91	23	ePKPdf	PKPdf	09 44 11.4	+1.0
MESJ	Messejana	166.91	23	ePKPab	PKPab	09 45 19.1	+0.5
PTEO	Sao Teotonio	166.98	25	ePKPdf	PKPdf	09 44 11.5	+1.0
PTEO	Sao Teotonio	166.98	25	ePKPab	PKPab	09 45 19.5	+0.6
PCVE	Castro Verde	167.16	23	ePKPdf	PKPdf	09 44 11.7	+1.1
PCVE	Castro Verde	167.16	23	ePKPab	PKPab	09 45 20.1	+0.4
MORF	Marmelete	167.22	26	ePKPdf	PKPdf	09 44 11.5	+0.7
MORF	Marmelete	167.22	26	ePKPdf	PKPdf	09 44 11.9	+1.2
MORF	Marmelete	167.22	26	ePKPab	PKPab	09 45 20.3	+0.3
PFVI	Vila Bisbo	167.30	26	P	PKPdf	09 44 12.8	+2.1
	SNR=6.2						
PFVI	Vila Bisbo	167.30	26	ePKPdf	PKPdf	09 44 12.0	+1.3
PFVI	Vila Bisbo	167.30	26	ePKPab	PKPab	09 45 20.8	+0.5
PVAQ	Vaqueiros	167.48	22	P	PKPdf	09 44 13.0	+2.1
	SNR=7.1						
PVAQ	Vaqueiros	167.48	22	ePKPdf	PKPdf	09 44 11.3	+0.5
PVAQ	Vaqueiros	167.48	22	ePKPab	PKPab	09 45 21.9	+0.8
PBDV	Barranco-do-Ve	167.55	23	ePKPdf	PKPdf	09 44 12.8	+1.9
PBDV	Barranco-do-Ve	167.55	23	ePKPab	PKPab	09 45 21.8	+0.4
HORN	Hornachuelos	167.74	13	P	PKPdf	09 44 12.6	+1.6
	SNR=8.2						
SESP	Santiago Espad	167.81	3	P	PKPdf	09 44 12.4	+1.2
	SNR=8.2						
CART	Cartagena	168.34	357	PKP	PKPdf	09 44 09.4	-1.9
CART	Cartagena	168.34	357	PP	PKPab	09 45 22.4	-2.4
SFS	San Fernando	168.81	19	PKIKP	PKPdf	09 44 13.6	+1.9
SFS	San Fernando	168.81	19	PKP	PKPdf	09 44 10.7	-1.0
SFS	San Fernando	168.81	19	PKS		09 47 10.3	
SFS	San Fernando	168.81	19		PKPdf	09 44 13.6	+1.9
EMAL	Malaga-Limoner	168.94	11	PKP	PKPdf	09 44 10.4	-1.4
EMAL	Malaga-Limoner	168.94	11	PP	PKPab	09 45 27.0	-0.5
EBNR	Beni Rached	169.27	345	P	PKPdf	09 44 12.4	+0.3
CEU	Ceuta	169.57	16	PKP	PKPdf	09 44 12.0	-0.2
CEU	Ceuta	169.57	16	PP	PKPab	09 45 29.8	-0.5
EANR	'Ain N'Sour	169.69	347	P	PKPdf	09 44 11.6	-0.8
ETRT	Tiaret	170.18	345	P	PKPdf	09 44 14.1	+1.3
RSA	Sarsar	170.40	20	P	PKPdf	09 44 16.0	+3.2
	SNR=21						
PVLZ	Peæn de	170.51	13	PKP	PKPdf	09 44 12.3	-0.4
PVLZ	Peæn de	170.51	13	PKS		09 47 38.0	
PALE	Palemas	170.54	11	P	PKPdf	09 44 14.0	+1.1
	SNR=6.3						
MELI	Melilla	170.59	6	PKP	PKPdf	09 44 10.4	-2.4
MELI	Melilla	170.59	6	PKS		09 47 41.6	
TAF	Taforalt	171.10	3	P	PKPdf	09 44 16.0	+2.8
	SNR=20						
AVE	Averroes	171.15	32	P	PKPdf	09 44 15.0	+1.8
	SNR=5.1						
AVE	Averroes	171.15	32	PKP	PKPdf	09 44 09.1	-4.1
AVE	Averroes	171.15	32	PP	PKPab	09 45 36.9	-0.7
AKLM	AKL	171.24	11	P	PKPdf	09 44 15.0	+1.7

	SNR=8.6						
SICH	Sidi Chahed	171.28	20	P	PKPdf	09 44 17.0	+3.7
	SNR=6.2						
ZHG	ZHG	171.38	28	P	PKPdf	09 44 16.0	+2.6
	SNR=6.4						
SRHM	Skhour des Reh	171.55	38	P	PKPdf	09 44 16.0	+2.5
	SNR=5.1						
IFR	Ifrane	171.88	20	PKP	PKPdf	09 44 11.9	-1.9
IFR	Ifrane	171.88	20	PP	PKPab	09 45 40.0	-1.0
CZD	Col de Zad	172.35	21	P	PKPdf	09 44 17.0	+2.9
	SNR=8.5						
OUK	Oukaimeden	172.48	44	P	PKPdf	09 44 17.0	+2.7
	SNR=16						
TTIG	Tnine Tigouga,	172.52	50	P	PKPdf	09 44 16.0	+1.9
	SNR=12						
MDT	Midelt	172.69	19	PKP	PKPdf	09 44 15.3	+1.3
	comp=Z,78nm,1.1s,baz=133,slow=0.4,SNR=20						
MDT				PKPab	PKPab	09 45 46.0	+1.6
	comp=Z,101nm,1.0s,baz=354,slow=4.9,SNR=22						
MDT	Midelt	172.69	19	P	PKPdf	09 44 16.4	+2.4
	SNR=15						
OUZM	OUZ	173.36	40	P	PKPdf	09 44 17.0	+2.6
	SNR=14						
GOLM	Goulmima	173.59	25	P	PKPdf	09 44 17.0	+2.6
	SNR=9.3						
ARF	Arif	174.09	21	P	PKPdf	09 44 17.0	+2.4
	SNR=12						
TZRR	Tazzarine	174.10	34	P	PKPdf	09 44 17.0	+2.4
	SNR=11						
ZGR	Zagora	174.60	38	P	PKPdf	09 44 18.0	+3.2
	SNR=5.7						

*BJI **04** 09:38:22.2±0.0, 25°.42S×178°.48E, h614km, mB5.5/17, mb5.1/41*

*MOS **04** 09:38:22.2±0.9, 25°.83S×178°.21E, h618km, mb5.2/14, Error ellipse: s-maj=11.9km s-min=9.6km az=21.8*

*IDC **04** 09:38:23.2±0.5, 25°.84S×178°.23E, h615km±4km, mb4.5/38, mb1 4.5/39, mb1mx4.4/48, mbtmp5.4/39, Error ellipse: s-maj=7.9km s-min=6.7km az=7.0*

*NEIC **04** 09:38:24.0±2.0, 25°.85S±0°.08×178°.25E±0°.09, h629km±4km, mb5.2/210, Error ellipse: s-maj=13.1km s-min=10.1km az=121.0*

ISC 04 09:38:23.9±0.3**, 25°.87S**±0°.05×**178°.27E**±0°.04**, h628**km±3km**,**
h629km:pP-P, n758, σ1s.19/759**, mb5.2**/181**, 62C-43D,**
South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.77	136	P	P	09 39 56.7	0.0
	2µm,0.3s,baz=108,slow=2.2,SNR=121						
RAO				S	S	09 41 14.5	+1.8
	baz=90,slow=20,SNR=1.0						
RAO	Raoul Island	4.77	136	P	P	09 39 56.4	-0.4
RAO	Raoul Island	4.77	136	P	P	09 39 56.4	-0.4
MSVF	Nonsavu	8.10	358	deP	P	09 40 23.1	-2.4
MSVF	Nonsavu	8.10	358	P	P	09 40 23.5	-2.0
OUZ	Omahuta	10.15	202	P	P	09 40 46.5	+1.9
DZM	Mont Dzumac	11.46	287	eP	P	09 40 58.0	+0.3
	298nm,0.8s						
DZM	Mont Dzumac	11.46	287	P	P	09 40 58.3	+0.6
	22nm,0.3s,baz=130,slow=7.6,SNR=246						
DZM				S	S	09 43 06.2	+2.5
	baz=336,slow=23,SNR=3.0						
DZM	Mont Dzumac	11.46	287	P	P	09 40 58.0	+0.3
MXZ	Matakaoa Point	11.65	180	P	P	09 40 56.0	-3.2
URZ	Urewera	12.39	184	P	P	09 41 03.6	-2.6
	13nm,0.3s,baz=276,slow=3.8,SNR=45						
URZ				S	S	09 43 13.1	-6.1
	9.0nm,0.3s,baz=94,slow=23,SNR=11						
URZ	Urewera	12.39	184	P	P	09 41 03.4	-2.8
NIUE	Niue	12.83	61	P	P	09 41 10.3	-0.5
HIZ	Hauiti	12.93	192	P	P	09 41 12.2	+0.9
BKZ	Black Stump Fm	13.34	186	P	P	09 41 12.4	-2.9
BFZ	Birch Farm	14.86	186	P	P	09 41 27.9	-1.6
AFI	Afiamalu	15.13	40	P	P	09 41 30.1	-2.3
AFI				pmax	pmax		
	comp=Z,283nm,0.9s						
AFI	Afiamalu	15.13	40	P	P	09 41 30.1	-2.3
QRZ	Quartz Range	15.66	196	P	P	09 41 38.0	+1.3
SNZO	South Karori	15.68	190	P	P	09 41 36.4	-0.5
MSWZ	Moikau Station	15.70	188	P	P	09 41 35.4	-1.8
BHW	Baring Head	15.75	189	P	P	09 41 36.4	-1.1
NNZ	Nelson	15.83	194	P	P	09 41 38.2	-0.1
PLWZ	Palliser	15.85	188	P	P	09 41 37.5	-1.1
TUWZ	Tuamarina	15.92	192	P	P	09 41 38.5	-0.6
CMWZ	Cape Campbell	16.19	191	P	P	09 41 42.2	+0.7
THZ	Tophouse	16.46	194	IAmb	IAmb	09 41 46.8	
	comp=Z,157nm,0.7s						
KHZ	Kahutara	16.95	192	IAmb	IAmb	09 41 49.9	
	comp=Z,136nm,0.9s						
FUNA	Funafuti	17.28	3	P	P	09 41 50.2	-1.7
FUNA				IAmb	IAmb	09 41 53.5	
	comp=Z,147nm,1.2s						
LHI	Lord Howe Isla	17.76	247	P	P	09 41 58.3	+2.2
RPZ	Rata Peaks	18.75	196	P	P	09 42 05.5	+0.6
	comp=Z,11nm,0.3s,baz=355,slow=2.5,SNR=23						
RPZ				S	S	09 45 01.2	-2.5
	comp=Z,1.4nm,0.3s,baz=342,slow=18,SNR=1.8						
RPZ	Rata Peaks	18.75	196	P	P	09 42 04.7	-0.2
RPZ				IAmb	IAmb	09 42 11.0	
	comp=Z,52nm,0.6s						
FOZ	Fox Glacier	18.92	199	P	P	09 42 06.1	-0.3
ODZ	Otahua Downs	20.09	196	P	P	09 42 16.4	-0.6
WKZ	Wanaka	20.34	199	P	P	09 42 18.7	-0.5
WKZ				IAmb	IAmb	09 42 23.2	
	comp=Z,151nm,1.4s						
RAR	Rarotonga	20.65	82	P	P	09 42 22.3	0.0
	comp=Z,54nm,1.0s,baz=248,slow=5.2,SNR=4.4						
RAR	Rarotonga	20.65	82	P	P	09 42 21.4	-0.9
RAR				IAmb	IAmb	09 42 23.4	
	comp=Z,95nm,1.1s						
MLZ	Mavora Lakes	21.10	200	P	P	09 42 26.5	+0.5
MLZ				IAmb	IAmb	09 42 28.8	
	comp=Z,74nm,0.9s						
WHZ	Wether Hill Ro	21.62	200	P	P	09 42 30.8	+0.1
HNR	Honiara	23.87	310	P	P	09 42 49.6	-1.4
	comp=Z,297nm,0.8s,baz=169,slow=3.3,SNR=24						
HNR	Honiara	23.87	310	P	P	09 42 49.2	-1.8
ARMA	Armidale	23.90	253	P	P	09 42 52.3	+1.1
KNTN	Kanton	24.90	24	P	P	09 42 58.9	-1.2
TARA	Tarawa	27.56	348	P	P	09 43 22.0	-1.3
TBI	Tubuai	29.41	92	eP	P	09 43 40.0	+0.8
	comp=Z,161nm,0.8s						
CTA	Charters Tower	29.99	274	P	P	09 43 44.8	+0.5
	comp=Z,202nm,0.4s,baz=98,slow=10,SNR=619						
CTA				ScP	ScP	09 49 12.7	+3.1
	comp=Z,23nm,0.9s,baz=93,slow=3.4,SNR=11						
CTAO	Charters Tower	29.99	274	P	P	09 43 44.8	+0.5
CTAO				pmax	pmax		
	comp=Z,498nm,1.2s						
CTAO	Charters Tower	29.99	274	P	P	09 43 44.8	+0.5
TOO	Toolangi	30.08	239	P	P	09 43 46.1	+1.3
TOO				pmax	pmax		
	comp=Z,97nm,1.2s						
TOO	Toolangi	30.08	239	P	P	09 43 46.0	+1.3
TOO				IAmb	IAmb	09 43 47.2	
	comp=Z,97nm,1.2s						
PAE	Paea	30.89	81	eP	P	09 43 52.0	+0.1
	comp=Z,16nm,1.1s						
PPT2	Papeete2	30.92	81	eP	P	09 43 52.8	+0.5
	comp=Z,86nm,1.1s						
PPT	Papeete	30.93	81	P	P	09 43 53.1	+0.8
	comp=Z,79nm,0.8s,baz=26,slow=7.1,SNR=8.0						
PPTF	Pamatai, Papee	30.93	81	P	P	09 43 52.9	+0.5
PPTF				IAmb	IAmb	09 43 54.0	
	comp=Z,122nm,1.1s						
TIAR	Tiarei	31.14	81	eP	P	09 43 54.5	+0.4
	comp=Z,62nm,1.1s						
TVO	Taravao	31.14	82	eP	P	09 43 54.4	+0.3
	comp=Z,21nm,0.8s						
STKA	Stephens Creek	32.56	251	P	P	09 44 06.8	+0.8
	comp=Z,52nm,1.0s,baz=109,slow=5.3,SNR=60						
STKA				PcP	PcP	09 46 33.6	+0.9
	comp=Z,6.2nm,0.6s,baz=99,slow=2.6,SNR=3.2						
STKA				ScP	ScP	09 49 19.7	+1.6
	comp=Z,6.4nm,0.9s,baz=252,slow=23,SNR=3.3						
STKA	Stephens Creek	32.56	251	P	P	09 44 06.2	+0.3
RABL	Rabaul	33.03	306	P	P	09 44 09.1	-1.0
KRVT	Keravat (AS076	33.05	306	P	P	09 44 09.2	-1.1
	comp=Z,177nm,0.4s,baz=217,slow=2.4,SNR=28						
PMOR	Pomariorio Ree	33.40	78	eP	P	09 44 13.4	+0.3
	comp=Z,159nm,1.1s						
VAH	Vaihoa	33.54	78	eP	P	09 44 14.4	+0.1
	comp=Z,139nm,1.1s						
PMG	Port Moresby	33.74	293	d iP	P	09 44 15.8	-0.2
PMG				pmax	pmax		
	comp=Z,877nm,1.0s						
PMG	Port Moresby	33.74	293	P	P	09 44 15.6	-0.3
COEN	Coen	34.95	283	P	P	09 44 26.0	0.0
XMAS	Kiritimati	36.36	44	P	P	09 44 38.0	+0.4
PATS	Pohnpei	37.86	326	P	P	09 44 48.9	-0.8
AS31	Alice Springs	40.20	263	P	P	09 45 08.8	+0.2
AS31				IAmb	IAmb	09 45 10.2	
	comp=Z,97nm,1.1s						
ASAR	Alice Springs	40.21	263	P	P	09 45 08.3	-0.2
	comp=Z,89nm,0.4s,baz=92,slow=7.3,SNR=438						
ASAR				PcP	pP	09 46 53.3	+0.5
	comp=Z,5.9nm,0.7s,baz=100,slow=5.1,SNR=3.3						
ASAR				ScP	ScP	09 49 48.6	+1.7
	comp=Z,5.7nm,0.8s,baz=110,slow=4.1,SNR=6.4						
ASAR				S	S	09 50 32.2	-0.1
	comp=Z,5.1nm,0.7s,baz=104,slow=17,SNR=9.1						
WR0	Warramunga Arr	40.57	269	IAmb	IAmb	09 45 12.0	
	comp=Z,148nm,1.0s						
WRAB	Tennant Creek	40.75	269	d iP	P	09 45 12.0	-0.8
WRAB				pmax	pmax		
	comp=Z,249nm,1.1s						
WRAB	Tennant Creek	40.75	269	P	P	09 45 11.2	-1.6
WRA	Warramunga Arr	40.76	269	P	P	09 45 11.9	-0.9
	comp=Z,115nm,0.8s,baz=101,slow=7.0,SNR=215						
WRA				PcP	PcP	09 46 58.8	+0.5
	comp=Z,9.2nm,0.9s,baz=98,slow=7.3,SNR=5.0						
WRA				ScP	ScP	09 49 51.4	+2.2
	comp=Z,15nm,0.9s,baz=106,slow=4.2,SNR=13						
WRA				S	S	09 50 37.6	-2.7
	comp=Z,8.0nm,1.0s,baz=103,slow=14,SNR=7.0						
TAOE	Nuku Hiva Isla	42.92	74	eP	P	09 45 30.7	+0.8
	comp=Z,360nm,0.9s						
TAOE	Nuku Hiva Isla	42.92	74	P	P	09 45 30.6	+0.8
JAY	Jayapura	42.92	297	P	P	09 45 29.2	-0.6
	comp=Z,108nm,1.0s,baz=200,slow=6.5,SNR=24						
JAY	Jayapura	42.92	297	P	P	09 45 29.5	-0.3
	comp=Z,66nm,0.9s						
GENI	Genyem	43.31	296	P	P	09 45 32.6	-0.2
	comp=Z,6µmcomp=Z,323nm,1.1s						
FORT	Forrest	44.18	252	P	P	09 45 38.6	-0.6
SMPI	Sarmi	44.84	295	P	P	09 45 44.7	+0.2
	comp=Z,64nm,1.4s						
WAKE	Wake Island	46.28	345	P	P	09 45 54.9	-0.4
H11N1	WAKE ISLAND Hy	46.65	345	P	P	09 45 58.3	+0.6
H11N3	WAKE ISLAND Hy	46.65	345	P	P	09 45 58.3	+0.6
SRPI	Serui, Papua	46.93	294	P	P	09 46 00.8	+0.5
	comp=Z,1.0nm,0.6s						
KNRA	Kununurra	47.15	272	P	P	09 46 01.4	-0.5
FITZ	Fitzroy Crossi	49.15	268	P	P	09 46 16.7	0.0
	comp=Z,144nm,0.9s,baz=124,slow=6.5,SNR=124						
FITZ				S	S	09 52 38.0	+0.6
	comp=Z,5.5nm,1.0s,baz=246,slow=20,SNR=2.7						
FITZ	Fitzroy Crossi	49.15	268	P	P	09 46 16.4	-0.2
FAKI	Fak Fak	49.71	290	P	P	09 46 20.1	-0.7
	comp=Z,134nm,1.2s						
FAKI	Fak Fak	49.71	290	P	P	09 46 19.7	-1.2
FAKI				IAmb	IAmb	09 46 21.3	
	comp=Z,167nm,1.2s						
GUMO	Guam	50.95	316	P	P	09 46 28.4	-1.4
GUMO				pmax	pmax		
	comp=Z,338nm,0.9s						
GUMO	Guam	50.95	316	P	P	09 46 28.4	-1.4
SIJI	Sorong	51.62	291	P	P	09 46 34.4	-0.3
	comp=Z,361nm,0.8s,baz=74,slow=5.9,SNR=119						
MWH	Moku'aweowe	51.74	32	IAmb	IAmb	09 46 36.9	
	comp=Z,111nm,0.9s						
NPH	North Pit	51.83	32	IAmb	IAmb	09 46 37.2	
	comp=Z,80nm,0.7s						
UWE	Uwekahuna	51.84	32	IAmb	IAmb	09 46 37.3	
	comp=Z,146nm,0.7s						
UWB	Uwekahuna B	51.85	32	IAmb	IAmb	09 46 37.3	
	comp=Z,100nm,0.8s						
HMH	Humu'ula Sheep	51.90	32	P	P	09 46 37.2	+0.4
POHA	Pohakuloa	52.01	32	P	P	09 46 37.8	+0.2
POHA				IAmb	IAmb	09 46 38.7	
	comp=Z,108nm,0.8s						
KEKH	Kekaha	52.14	26	P	P	09 46 38.1	0.0
KEKH				IAmb	IAmb	09 46 39.3	
	comp=Z,101nm,0.8s						
HPAH	Hawaii Prepara	52.17	31	P	P	09 46 38.4	0.0
VNDA	Vanda	52.29	184	P	P	09 46 38.5	+0.1
	comp=Z,3.5nm,0.8s,baz=4.6,slow=10,SNR=9.8						
VNDA				PcP	PcP	09 47 39.7	+1.0
	comp=Z,1.7nm,0.8s,baz=336,slow=5.8,SNR=4.2						
VNDA				ScP	ScP	09 50 37.7	+1.1
	comp=Z,2.5nm,0.7s,baz=337,slow=4.1,SNR=5.1						
AAI	Ambon	52.79	286	P	P	09 46 42.7	-0.3
	comp=Z,2µmcomp=Z,125nm,1.4s						
AAI	Ambon	52.79	286	P	P	09 46 42.1	-0.9
AAI				pmax	pmax		
	comp=Z,123nm,1.4s						
NWAO	Narrogin (SRO)	53.01	247	P	P	09 46 43.8	-0.5
	comp=Z,29nm,1.0s,baz=116,slow=7.0,SNR=9.3						
NWAO	Narrogin (SRO)	53.01	247	P	P	09 46 43.8	-0.5
NWAO				IAmb	IAmb	09 46 45.0	
	comp=Z,106nm,1.4s						
SOEI	Soe	53.49	277	P	P	09 46 49.3	+1.3
	comp=Z,292nm,1.0s						
MBWA	Marble Bar	53.52	262	P	P	09 46 47.6	-0.4
MBWA				IAmb	IAmb	09 46 49.1	
	comp=Z,85nm,0.8s						
BATI	Baumata	53.84	276	P	P	09 46 51.4	+1.0
	comp=Z,106nm,0.8s,baz=147,slow=1.3,SNR=16						
BATI	Baumata	53.84	276	P	P	09 46 51.8	+1.4
	comp=Z,95nm,0.7s						
NLAI	Namlea	53.96	286	P	P	09 46 50.8	-0.4
	comp=Z,168nm,1.1s						
SANI	Sanana	55.52	286	P	P	09 47 01.1	-0.9
	comp=Z,158nm,0.9s						
MMRI	Maumere	55.78	277	P	P	09 47 04.1	+0.3
	comp=Z,238nm,1.3s						
MMRI	Maumere	55.78	277	IAmb	IAmb	09 47 04.5	
	comp=Z,204nm,1.0s						
EDFI	Ende, Flores	56.22	277	P	P	09 47 06.3	-0.6
	comp=Z,100nm,1.3s						
BASI	Baing, Sumba	56.60	275	P	P	09 47 10.2	+0.8
	comp=Z,3µmcomp=Z,222nm,1.4s						
CASY	Casey	57.66	206	P	P	09 47 15.0	-0.7
WBSI	Waikabubak, Su	57.91	275	P	P	09 47 18.3	0.0
	comp=Z,144nm,1.3s						
LUWI	Luwuk	58.80	286	P	P	09 47 24.5	+0.2
	comp=Z,258nm,1.1s						
LUWI	Luwuk	58.80	286	P	P	09 47 24.2	-0.1
LUWI				IAmb	IAmb	09 47 25.2	
	comp=Z,214nm,0.9s						
BKSI	Bulukumba	59.11	280	P	P	09 47 25.5	-0.8
	comp=Z,2µmcomp=Z,197nm,0.8s						
BNSI	Bone	59.54	281	P	P	09 47 29.1	-0.1
	comp=Z,3µmcomp=Z,159nm,1.1s						
KAPI	Kappang	59.58	280	P	P	09 47 29.3	-0.1
	comp=Z,74nm,1.2s,baz=112,slow=2.3,SNR=13						
KAPI	Kappang	59.58	280	P	P	09 47 29.1	-0.4
KAPI				IAmb	IAmb	09 47 30.5	
	comp=Z,136nm,1.3s						
PLAI	Plampang	59.69	275	P	P	09 47 29.7	-0.5
	comp=Z,3µmcomp=Z,335nm,1.0s						
APSI	Ampana	59.84	285	P	P	09 47 31.6	+0.4
	comp=Z,115nm,1.1s						
SPSI	Sidrap Palu	60.04	281	P	P	09 47 31.1	-1.4
	comp=Z,90nm,0.9s						
MRSI	Marisa	60.27	287	P	P	09 47 32.7	-1.3
	comp=Z,56nm,1.1s						
TTSI	Tana Toraja	60.42	282	P	P	09 47 34.6	-0.4
	comp=Z,49nm,0.9s						
KCP	Kidapawan	61.10	295	⇑iP	P	09 47 39.1	-0.4
MPSI	Mapaga	61.98	285	P	P	09 47 44.0	-1.1
	comp=Z,72nm,0.9s						
SRBI	Singaraja	62.30	274	P	P	09 47 47.1	-0.1
	comp=Z,189nm,1.1s						
JAGI	Jajag, Banyuwa	63.09	274	P	P	09 47 51.3	-1.0
	comp=Z,204nm,1.0s						
JAGI	Jajag, Banyuwa	63.09	274	P	P	09 47 50.9	-1.4
JAGI				IAmb	IAmb	09 47 52.1	
	comp=Z,176nm,0.9s						
JCJ	Chichijima	63.10	324	P	P	09 47 50.6	-1.4
	comp=Z,92nm,0.8s,baz=221,slow=6.6,SNR=5.7						
KMMI	Kalianget	63.86	275	P	P	09 47 58.1	+1.0
	comp=Z,188nm,1.2s						
QSPA	South Pole Qui	64.22	180	P	P	09 47 59.5	+0.8
	comp=Z,52nm,1.1s,baz=206,slow=1.8,SNR=32						
QSPA	South Pole Qui	64.22	180	P	P	09 47 59.3	+0.6
GRJI	Gresik	65.25	274	P	P	09 48 06.6	+0.7
	comp=Z,3µmcomp=Z,358nm,0.8s						
PWJI	Pagerwojo	65.39	273	P	P	09 48 06.5	-0.2
	comp=Z,123nm,1.1s						
PCJI	Pacitan	65.89	272	P	P	09 48 10.1	+0.3
	comp=Z,282nm,1.3s						
WOJI	Wonogiri, Jawa	66.26	273	P	P	09 48 12.3	+0.2
	comp=Z,123nm,1.1s						
PBKI	Pangkalan Bun	67.81	278	P	P	09 48 22.7	+1.1
	comp=Z,329nm,1.1s						
KKM	Kota Kinabalu	68.01	289	P	P	09 48 22.5	-0.4
KKM				IAmb	IAmb	09 48 23.8	
	comp=Z,126nm,1.2s						
CISI	Cisompet, Garu	69.18	272	P	P	09 48 29.2	-0.7
	comp=Z,4µmcomp=Z,157nm,1.1s						
CISI	Cisompet, Garu	69.18	272	P	P	09 48 28.6	-1.3
CISI				IAmb	IAmb	09 48 29.9	
	comp=Z,137nm,1.0s						
LEM	Lembang	69.66	272	P	P	09 48 33.1	+0.2
	comp=Z,125nm,0.8s,baz=325,slow=1.9,SNR=21						
SBUM	Sibu	69.70	283	P	P	09 48 33.0	+0.1
CNJI	Cibinong	69.90	272	P	P	09 48 33.7	-0.4
	comp=Z,186nm,1.0s						
XMIS	Christmas Isla	69.93	268	P	P	09 48 33.8	-0.5
XMIS				IAmb	IAmb	09 48 35.2	
	comp=Z,81nm,0.8s						
DBJI	Dramaga	70.56	272	P	P	09 48 38.0	0.0
	comp=Z,205nm,1.1s						
KSM	Kuching	70.92	281	P	P	09 48 39.6	-0.6
KSM				IAmb	IAmb	09 48 41.1	
	comp=Z,121nm,0.9s						
KSM	Kuching	70.92	281	P	P	09 48 40.0	-0.1
JOW	Kunigami	71.18	314	P	P	09 48 41.2	-0.1
	comp=Z,4.9nm,0.8s,baz=137,slow=9.4,SNR=12						
MJAR	Matsushiro Arr	72.66	327	P	P	09 48 48.9	-0.7
	comp=Z,17nm,0.8s,baz=152,slow=6.3,SNR=50						
MJAR				pP	pP	09 50 54.6	-0.8
	comp=Z,2.0nm,0.9s,baz=146,slow=4.6,SNR=3.2						
MAJO	Matsushiro	72.67	327	deP	P	09 48 48.7	-1.0
MAJO				pmax	pmax		
	comp=Z,31nm,0.9s						
MAJO	Matsushiro	72.67	327	P	P	09 48 48.4	-1.2
MAT	Matsushiro	72.67	327	P	P	09 48 48.4	-1.3
PPBI	Pangkal Pinang	73.00	276	P	P	09 48 52.2	+0.1
	comp=Z,112nm,1.2s						
KASI	Kota Agung	73.02	272	P	P	09 48 51.7	-0.5
	comp=Z,148nm,1.0s						
TWG	Pinlang	73.57	306	P	P	09 48 52.8	-2.3
TWG				IAmb	IAmb	09 48 53.7	
	comp=Z,84nm,0.8s						
MDSI	Maura Dua	73.75	273	P	P	09 48 54.8	-1.5
	comp=Z,137nm,0.9s						
JNU	Nakatsue	73.99	320	P	P	09 48 56.8	-0.5
	comp=Z,29nm,0.8s,baz=122,slow=5.0,SNR=13						
TPUB	Ta-pu	74.18	306	IAmb	IAmb	09 48 57.6	
	comp=Z,52nm,0.9s						
MAW	Mawson	75.36	201	P	P	09 49 04.6	+0.3
	comp=Z,7.1nm,0.6s,baz=134,slow=6.3,SNR=19						
MAW	Mawson	75.36	201	P	P	09 49 04.0	-0.2
KSI	Kapahiang	75.53	273	P	P	09 49 05.5	-0.8
	comp=Z,212nm,0.8s						
KSI	Kapahiang	75.53	273	P	P	09 49 05.8	-0.5
KSI				pmax	pmax		
	comp=Z,212nm,0.8s						
TPRI	Tanjung Pinang	75.81	278	P	P	09 49 08.2	+0.4
MASI	Maura Aman, Be	76.07	273	P	P	09 49 09.1	-0.2
	comp=Z,7µmcomp=Z,514nm,0.9s						
MYKOM	Kota Tinggi	76.80	279	IAmb	IAmb	09 49 14.4	
	comp=Z,72nm,0.9s						
MYKOM	Kota Tinggi	76.80	279	P	P	09 49 14.0	+0.8
ASAJ	Asahikawa	76.94	334	P	P	09 49 14.9	+1.7
	comp=Z,19nm,0.9s,baz=243,slow=5.6,SNR=10.0						
ADK	Adak	77.55	3	P	P	09 49 16.3	0.0
ADK				pmax	pmax		
	comp=Z,42nm,0.8s						
ADK	Adak	77.55	3	P	P	09 49 16.3	0.0
ADK				IAmb	IAmb	09 49 17.9	
	comp=Z,42nm,0.8s						
DLV	T Lat	77.56	290	IAmb	IAmb	09 49 19.4	
	comp=Z,120nm,1.3s						
PMSA	Palmer Station	77.71	157	P	P	09 49 17.9	+0.8
	comp=Z,52nm,0.9s,baz=306,slow=16,SNR=3.8						
PMSA	Palmer Station	77.71	157	P	P	09 49 17.1	0.0
PMSA				IAmb	IAmb	09 52 16.9	
	comp=Z,233nm,1.6s						
TJN	Taejon	78.34	320	c iP	P	09 49 21.1	+0.2
PDSI	Padang	78.64	275	P	P	09 49 22.3	-0.8
	comp=Z,30nm,1.2s						
KSRS	Korea Array	78.78	321	P	P	09 49 23.7	+0.5
	comp=Z,13nm,0.8s,baz=139,slow=5.6,SNR=34						
YSS	Yuzh-Sakhalins	79.27	336	⇓eP	P	09 49 26.6	+1.0
YSS				pmax	pmax		
	comp=Z,90nm,0.8s						
YSS	Yuzh-Sakhalins	79.27	336	P	P	09 49 27.0	+1.4
YSS				IAmb	IAmb	09 49 28.3	
	comp=Z,72nm,0.8s						
MNSI	Mandailing Nat	80.17	276	P	P	09 49 29.9	-1.2
PET	Petropavlovsk	80.40	348	⇑eP	P	09 49 32.6	+1.3
PET				pmax	pmax		
	comp=Z,50nm,1.6s						
IPM	Ipoh	80.53	280	P	P	09 49 33.0	+0.1
PEA0B	Petropavlovsk-	80.66	348	⇑eP	P	09 49 33.2	+0.5
PEA0B	Petropavlovsk-	80.66	348	P	P	09 49 32.6	-0.1
PETK	Petropavlovsk-	80.66	348	P	P	09 49 33.4	+0.7
	comp=Z,22nm,0.8s,baz=138,slow=7.6,SNR=34						
SYO	Syowa Base	80.73	194	⇓eP	P	09 49 31.0	-1.9
SYO	Syowa Base	80.73	194	⇑ePcP	PcP	09 49 39.6	+2.2
MSHR	Mys Shultsa	80.78	327	⇑eP	P	09 49 34.3	+0.8
NJ2	Nanjing	80.79	312	eP	P	09 49 34.4	+0.6
NJ2				pmax	pmax		
	comp=Z,22nm,0.5s						
KULM	Kulim	81.22	280	P	P	09 49 36.4	-0.1
KULM	Kulim	81.22	280	P	P	09 49 37.0	+0.5
USRK	Ussuriysk Ar.	81.59	328	P	P	09 49 38.1	+0.5
	comp=Z,26nm,0.8s,baz=136,slow=3.6,SNR=53						
PSI	Prapat	81.65	277	P	P	09 49 37.7	-1.1
	comp=Z,31nm,0.9s,baz=180,slow=4.5,SNR=16						
H06S1	SOCORRO T	81.80	65	P	P	09 49 40.4	+1.1
H06N1	SOCORRO T-PHAS	81.84	65	P	P	09 49 40.4	+1.0
H06E1	SOCORRO T-PHAS	81.85	65	P	P	09 49 40.5	+1.0
GSI	Gunungsitoli	82.20	275	P	P	09 49 42.2	+0.8
	comp=Z,432nm,1.2s						
CNBA	Chernabura Isl	82.59	13	IAmb	IAmb	09 49 43.3	
	comp=Z,108nm,1.9s						
SNAA	Sanae	82.72	180	P	P	09 49 42.4	-0.7
SNAA	Sanae	82.72	180	P	P	09 49 42.8	-0.3
	comp=Z,18nm,0.8s,baz=207,slow=8.5,SNR=30						
SNAA	Sanae	82.72	180	P	P	09 49 42.4	-0.7
WHN	Wuhan	82.98	309	⇑P	P	09 49 45.0	+0.1
VNA3	Neumayer Olymp	82.99	177	P	P	09 49 43.5	-0.8
VNA3	Neumayer Olymp	82.99	177	PKiKP	PKiKP	09 54 52.0	-5.2
MDJ	Mudanjiang	83.05	327	P	P	09 49 46.1	+1.2
MDJ				pmax	pmax		
	comp=Z,50nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,2µm,12.0s						
SNCC	San Nicolas Is	83.38	48	P	P	09 49 48.3	+1.4
	baz=233						
VNA2	Neumayer--Watz	83.39	178	P	P	09 49 46.1	-0.2
	baz=175,slow=4.1						
VNA2	Neumayer--Watz	83.39	178	PKiKP	PKiKP	09 54 50.6	-7.3
TPTI		83.41	277	P	P	09 49 47.2	-0.3
	comp=Z,16nm,1.2s						
VNA1	Neumayer--Stat	83.64	178	P	P	09 49 47.5	0.0
VNA1	Neumayer--Stat	83.64	178	PKiKP	PKiKP	09 54 50.7	-7.5
SCZ2	Santa Cruz Isl	83.76	48	P	P	09 49 50.0	+1.3
	baz=233						
SCI2	San Clemente I	83.89	49	P	P	09 49 50.5	+1.1
	baz=234						
SBC	Santa Barbara	83.97	47	P	P	09 49 50.6	+0.9
	baz=233						
PKM	Mcpherson Peak	84.17	47	P	P	09 49 52.2	+1.3
	baz=233						
CIS	Catalina Islan	84.22	49	P	P	09 49 51.5	+0.5
	baz=234						
SMMC	Simmler	84.31	46	P	P	09 49 52.7	+1.2
	baz=233						
PAGB	Antelope Grade	84.39	46	IAmb	IAmb	09 49 54.2	
	comp=Z,147nm,2.0s						
TIA	Tai'an	84.47	315	P	P	09 49 52.8	+0.6
TIA				pmax	pmax		
	comp=Z,37nm,0.6s						
FMP	Fort Macarthur	84.49	49	P	P	09 49 53.2	+1.0
	baz=234						
CN2	Changchun	84.56	325	eP	P	09 49 52.4	0.0
CN2				pmax	pmax		
	comp=Z,70nm,1.0s						
OSI	Osito Audit: C	84.73	48	P	P	09 49 54.5	+1.0
	baz=234						

OSI **Osito Audit: C** 84.73 48 P P 09 49 54.2 +0.7
DECC **Green Verdugo** 84.78 48 P P 09 49 54.3 +0.6
baz=234
KCPM **Cahto Peak** 84.79 41 IAmb IAmb 09 49 56.2
comp=Z,39nm,0.8s
109C **Camp Elliot, M** 84.82 50 P P 09 49 54.8 +0.9
baz=235,SNR=7.3
ARVC **Arvin** 84.96 47 P P 09 49 55.4 +0.8
baz=234,SNR=6.5
BAR **Barrett** 85.00 50 IAmb IAmb 09 49 57.0
comp=Z,77nm,1.8s
KMRM **Mail Ridge** 85.06 41 IAmb IAmb 09 49 57.8
comp=Z,120nm,1.6s
MURC **Murrieta** 85.17 49 P P 09 49 56.4 +0.7
baz=235,SNR=7.1
VES **Vestal, Richgr** 85.22 46 P P 09 49 56.2 +0.4
baz=233,SNR=13
BFSC **Mount Baldy Ra** 85.22 48 P P 09 49 56.5 +0.5
baz=234,SNR=8.5
SRIG **Santa Rosalia** 85.25 57 IAmb IAmb 09 49 58.5
comp=Z,62nm,1.1s
MONP2 **Monument Peak** 85.29 50 P P 09 49 57.6 +1.2
baz=235,SNR=26
VOG **Valley Oaks Go** 85.31 46 P P 09 49 56.7 +0.6
baz=233
IKP **In-Ko-Pah, Jac** 85.37 50 P P 09 49 58.1 +1.4
baz=235,SNR=12
EDW2 **Edwards Air Fo** 85.37 48 P P 09 49 57.4 +0.8
baz=234,SNR=13
KLR **Kul'dur** 85.49 332 P P 09 49 57.2 +0.5
comp=Z,15nm,0.8s,baz=108,slow=2.2,SNR=30
ISA **Isabella, Lake** 85.51 47 P P 09 49 58.3 +1.0
baz=234,SNR=18
ISA **Isabella, Lake** 85.51 47 IAmb IAmb 09 49 59.3
comp=Z,34nm,0.8s
O02D **Mt. Diablo Mer** 85.57 41 P P 09 49 59.1 +1.7
baz=231,SNR=19
PFO **Pinyon Flats O** 85.68 49 P P 09 49 59.3 +1.1
comp=Z,8.0nm,0.8s,baz=281,slow=4.8,SNR=13
PFO **Pinyon Flats O** 85.68 49⇓*e*P P 09 49 58.7 +0.5
PFO pmax pmax
comp=Z,50nm,1.8s
PFO **Pinyon Flats O** 85.68 49 P P 09 49 59.1 +0.9
baz=235,SNR=7.3
PFO **Pinyon Flats O** 85.68 49 P P 09 49 58.7 +0.5
PFO IAmb IAmb 09 50 00.3
comp=Z,82nm,1.9s
XPFO **Pion Flat** 85.68 49 P P 09 49 59.0 +0.8
XPFO IAmb IAmb 09 50 00.3
comp=Z,88nm,2.0s
BBRC **Big Bear Solar** 85.73 49 P P 09 49 59.4 +0.9
baz=235
SWSC **Sam W. Stewart** 85.75 50 P P 09 49 59.6 +1.3
baz=236,SNR=6.5
KRMB **Red Mountain** 85.78 40 IAmb IAmb 09 50 00.8
comp=Z,95nm,1.3s
LRMC **Laurel Mtn Rad** 85.93 47 P P 09 50 00.2 +0.9
baz=234,SNR=5.6
WDC **Whiskeytown Da** 85.97 41 IAmb IAmb 09 50 01.7
comp=Z,42nm,1.2s
N02D **Trinity Center** 86.12 41 P P 09 50 01.5 +1.5
baz=231,SNR=11
OHAK **Old Harbor** 86.17 15 P P 09 49 60.0 +0.3
OHAK IAmb IAmb 09 50 01.1
comp=Z,100nm,2.0s
BELC **Belle Mtn. Jos** 86.21 49 P P 09 50 01.9 +1.2
baz=235,SNR=13
CWC **Cottonwood Cre** 86.23 46 P P 09 50 01.2 +0.5
baz=234
O03E **Paynes Creek** 86.23 42 P P 09 50 01.3 +0.8
baz=231,SNR=13
M02C **Callahan** 86.30 40 P P 09 50 02.5 +1.6
baz=230,SNR=15
ENH **Enshi** 86.31 306 IAmb IAmb 09 50 02.4
comp=Z,71nm,1.1s
BC3 **Big Chuckawall** 86.39 50 P P 09 50 02.7 +1.2
baz=236,SNR=13
MPMC **Manual Prospec** 86.39 47 P P 09 50 02.2 +0.6
baz=234,SNR=6.8
GSC **Goldstone, Bar** 86.41 48 P P 09 50 02.3 +0.8
baz=235,SNR=7.1
GYA **Guiyang** 86.42 302⇓*i*P P 09 50 01.7 -0.1
GYA pP pP 09 52 12.9 -0.8
GYA SKS **SKSac** 09 59 29.8 +0.2
GYA S **S** 09 59 47.8 +0.8
GYA SS **SS** 10 05 44.0 -3.5
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,710nm,8.1s
MLAC **Mammoth, Mammo** 86.44 45 P P 09 50 02.7 +0.8
baz=233
HEC **Hector,Ludlow** 86.45 49 P P 09 50 02.4 +0.7
baz=235,SNR=6.0
GLA **Glamis** 86.49 51 P P 09 50 03.4 +1.5
baz=236,SNR=13
GLA **Glamis** 86.49 51 IAmb IAmb 09 50 04.6
comp=Z,36nm,0.8s
TIN **Tinemaha, Big** 86.49 46 P P 09 50 02.8 +0.9
baz=234
WAKR **Walker** 86.58 44 IAmb IAmb 09 50 04.7
comp=Z,118nm,1.8s
YBH **Yreka Blue Hor** 86.60 40 P P 09 50 03.5 +1.2
comp=Z,17nm,0.9s,baz=217,slow=1.5,SNR=26
K02D **Willamette Mer** 86.67 39 P P 09 50 03.9 +1.4
baz=230
J01E **Myrtle Point** 86.82 38 P P 09 50 04.6 +1.5
baz=230
PNTR **Pine Nut** 86.83 44 IAmb IAmb 09 50 05.7
comp=Z,41nm,0.9s
BEKR **Beckworth** 86.84 43 IAmb IAmb 09 50 05.5
comp=Z,47nm,1.4s
KDAK **Kodiak Island** 86.85 15 P P 09 50 03.0 +0.2
comp=Z,4.8nm,0.7s,baz=236,slow=3.7,SNR=6.2
KDAK **Kodiak Island** 86.85 15 P P 09 50 02.8 -0.1
IRM **Iron Mountain** 86.89 50 P P 09 50 05.0 +1.2
baz=236,SNR=12
GMRC **Granite Mounta** 86.89 49 P P 09 50 04.7 +0.8
baz=236,SNR=11
HUMO **Hull Mountain** 87.01 39 P P 09 50 05.4 +1.3
HUMO IAmb IAmb 09 50 06.9
comp=Z,82nm,1.5s
GRAC **Grapevine Rang** 87.02 46 P P 09 50 05.3 +1.1
baz=234,SNR=11
FURC **Furnace Creek,** 87.04 47 P P 09 50 05.0 +0.7
baz=235,SNR=5.2
TUQ **Turquoise Moun** 87.08 48 P P 09 50 05.5 +0.7
baz=235,SNR=6.8
Y12C **Blythe** 87.09 50 P P 09 50 05.7 +1.1
baz=236
Y12C **Blythe** 87.09 50 IAmb IAmb 09 50 07.1
comp=Z,70nm,1.9s
SHOC **Shoshone, Teco** 87.11 48 P P 09 50 05.5 +0.8
baz=235
HSIG 87.12 56 IAmb IAmb 09 50 07.3
comp=Z,58nm,1.0s
M04C **Macdoel** 87.14 40 P P 09 50 05.9 +1.0
baz=231,SNR=7.8
L04D **Klamath Falls** 87.14 40 P P 09 50 06.0 +1.1
baz=231,SNR=9.4
RYN **Ryan** 87.23 44 IAmb IAmb 09 50 07.3
comp=Z,66nm,1.8s
NVAR **Mina Array Bea** 87.25 45 P P 09 50 06.7 +1.1
comp=Z,11nm,0.8s,baz=224,slow=8.5,SNR=32
NVAR pP pP 09 52 19.1 +0.5
comp=Z,1.3nm,0.8s,baz=223,slow=6.1,SNR=2.7
214A **Organ Pipe Nat** 87.31 53 P P 09 50 07.3 +1.6
baz=237
PAHR **Pah Rah Range** 87.34 43 IAmb IAmb 09 50 07.8
comp=Z,36nm,1.1s
BJT **Baijiatuau** 87.38 317 P P 09 50 06.2 +0.4
BJT pmax pmax
comp=Z,21nm,1.0s
BJT **Baijiatuau** 87.38 317 P P 09 50 06.2 +0.4
BJI **Beijing** 87.39 317 P P 09 50 06.7 +0.8
BJI pmax pmax
comp=Z,21nm,0.9s
I02D **Swisshome** 87.48 38 P P 09 50 07.3 +1.2
baz=230
I03D **Drain, OR** 87.49 38 P P 09 50 07.7 +1.5
baz=230
PDMCI **Parker Dam,Lak** 87.66 50 P P 09 50 08.6 +1.3
baz=236,SNR=7.8
K04D **Chiloquin, OR** 87.72 40 P P 09 50 08.5 +1.0
baz=231,SNR=5.3
TPNV **Topopah Spring** 87.72 47 P P 09 50 08.5 +0.8
baz=235,SNR=11
J04D **Umpqua Nationa** 87.90 39 P P 09 50 09.6 +1.2
baz=231,SNR=11
PLCA **Paso Flores** 88.00 135 P P 09 50 10.6 +1.5
comp=Z,8.1nm,0.9s,baz=233,slow=5.8,SNR=12
PLCA **Paso Flores** 88.00 135 P P 09 50 09.7 +0.7
PLCA IAmb IAmb 09 53 37.7
comp=Z,60nm,1.3s
I04A **Tendick Farm,** 88.08 39 P P 09 50 10.1 +1.0
baz=231
MA2 **Magadan** 88.11 346⇑*i*P P 09 50 09.1 +0.4
MA2 pmax pmax
comp=Z,13nm,0.8s
MA2 **Magadan** 88.11 346 P P 09 50 08.4 -0.3
MOD **Modoc Plateau** 88.11 41 IAmb IAmb 09 50 11.4
comp=Z,45nm,0.8s
SHPR **Sheep Range** 88.19 48 IAmb IAmb 09 53 46.3
comp=Z,42nm,1.3s
K05A **Summer Lake** 88.28 40 IAmb IAmb 09 50 12.6
comp=Z,53nm,0.9s
H04D **Lebanon** 88.36 38 P P 09 50 11.6 +1.3
baz=230
J05D **Fort Rock, OR** 88.42 39 P P 09 50 12.2 +1.3
baz=232,SNR=14
G03D **McMinnville, O** 88.51 37 P P 09 50 12.2 +1.3
baz=230
XAN **Xi'an** 88.74 309 P P 09 50 13.1 +0.7
XAN pmax pmax
comp=Z,39nm,1.3s
XAN pmax pmax
comp=Z,600nm,4.3s
XAN **Xi'an** 88.74 309 IAmb IAmb 09 50 14.1
comp=Z,34nm,0.9s
CMAR **Chiang Mai Arr** 88.75 291 P P 09 50 14.4 +1.7
comp=Z,22nm,1.2s,baz=139,slow=3.3,SNR=26
CMAR pP pP 09 52 26.9 +1.5
comp=Z,0.7nm,0.4s,baz=145,slow=3.3,SNR=1.1
CMAR PKKPbc PKKPbc 10 07 49.1 +0.8
comp=Z,2.3nm,0.8s,baz=285,slow=4.6,SNR=8.2
CMAR **Chiang Mai Arr** 88.75 291 *i*P P 09 50 14.3 +1.6
CMAR pmax pmax
comp=Z,22nm,1.2s
H04A **Detroit Lake** 88.76 38 IAmb IAmb 09 53 42.5
comp=Z,70nm,1.3s
KMI **Kunming** 88.81 299 P P 09 50 14.1 +0.9
KMI pmax pmax
comp=Z,31nm,1.1s
PINE **Pine Mountain** 88.91 39 P P 09 50 14.1 +0.9
PINE IAmb IAmb 09 50 15.6
comp=Z,47nm,0.8s
CHTO **Chiang Mai** 88.92 291 P P 09 50 14.8 +1.3
CHTO pmax pmax
comp=Z,36nm,1.1s
CHTO **Chiang Mai** 88.92 291 P P 09 50 14.8 +1.3
CHTO IAmb IAmb 09 50 15.8
comp=Z,36nm,1.1s
R11A **Troy Canyon, C** 88.95 46 P P 09 50 13.9 +0.4
baz=235,SNR=5.3
TUC **Tucson** 88.96 53 P P 09 50 14.3 +0.8
TUC **Tucson** 88.96 53 P P 09 50 15.1 +1.6
baz=238
TUC **Tucson** 88.96 53 P P 09 50 14.3 +0.8
TUC IAmb IAmb 09 53 41.9
comp=Z,54nm,1.2s
I05D **Terrebonne, OR** 89.02 39 P P 09 50 14.5 +1.0
baz=232
F04D **Rainier, OR** 89.20 37 P P 09 50 15.7 +1.5
baz=230
F04A **Amboy** 89.42 37 IAmb IAmb 09 50 17.0
comp=Z,44nm,0.8s
WVOR **Wild Horse Val** 89.42 41 IAmb IAmb 09 50 17.5
comp=Z,30nm,1.1s
H02S1 **DAWSON INLET T** 89.60 27 P P 09 50 16.4 +0.6
X16A **Lo Mia Camp, P** 89.60 51 IAmb IAmb 09 50 19.0
comp=Z,25nm,0.8s
E04D **Cinebar** 89.74 36 P P 09 50 17.9 +1.3
baz=231
I07A **Izee** 89.90 40 IAmb IAmb 09 50 20.8
comp=Z,77nm,2.0s
G06A **Carlson Farm,** 89.97 38 P P 09 50 18.6 +0.8
J08A **Circle Bar Ran** 90.07 41 IAmb IAmb 09 53 38.6
comp=Z,35nm,1.3s
D03D **Eldon** 90.08 35 P P 09 50 19.8 +1.6
baz=230
HPIG 90.11 60 IAmb IAmb 09 50 20.9
comp=Z,18nm,0.8s
GO05 **Huala** 90.15 129 P P 09 50 19.4 +0.3
GO05 IAmb IAmb 09 53 31.8
comp=Z,88nm,1.6s
WUAZ **Wupatki** 90.22 50 P P 09 50 20.7 +1.3
baz=238
WUAZ **Wupatki** 90.22 50 IAmb IAmb 09 53 41.6
comp=Z,51nm,1.4s
RC01 **Rabbit Creek A** 90.46 15 IAmb IAmb 09 53 43.9
comp=Z,22nm,1.0s
PKCU **Pink Cliffs** 90.61 48 P P 09 50 23.4 +2.1
X18A **Snowflake** 90.70 52 IAmb IAmb 09 53 38.8
comp=Z,33nm,1.1s
ZEA **Zeya** 90.72 332 *e*P P 09 50 21.0 0.0
HHC **Hu-ho-hao-te** 90.72 316 *e*P P 09 50 22.2 +0.7
HHC pmax pmax
comp=Z,12nm,1.2s
HHC pmax pmax
comp=Z,390nm,5.5s
CD2 **Chengdu** 90.87 304 P P 09 50 23.5 +1.2
CD2 pmax pmax
comp=Z,60nm,0.7s
SEY **Seymchan** 90.87 348⇑*i*P P 09 50 21.9 +0.5
GLI **Glacier Island** 90.91 16 IAmb IAmb 09 50 23.4
comp=Z,21nm,0.7s
G08A **Pilot Rock** 90.94 39 P P 09 50 23.3 +0.9
G08A IAmb IAmb 09 53 39.0
comp=Z,43nm,1.1s
FID **Port Fidalgo** 90.96 16 IAmb IAmb 09 51 39.5
comp=Z,17nm,0.6s
EYAK **Cordova Ski Ar** 90.98 17 IAmb IAmb 09 51 50.1
comp=Z,34nm,1.2s
B05A **Bryant** 91.06 35 P P 09 50 23.7 +1.0
baz=231
W18A **Petrified Fore** 91.16 51 P P 09 50 24.7 +1.0
baz=239
W18A **Petrified Fore** 91.16 51 IAmb IAmb 09 50 25.8
comp=Z,20nm,1.1s
121A **Cookes Peak, D** 91.25 54 P P 09 50 25.6 +1.4
baz=240
GHO **Glory Hole Cre** 91.25 15 IAmb IAmb 09 51 50.3
comp=Z,27nm,0.8s
BMO **Blue Mountains** 91.63 40 P P 09 50 25.4 -0.1
BMO **Blue Mountains** 91.63 40 P P 09 50 25.4 -0.1
BMO IAmb IAmb 09 53 37.9
comp=Z,33nm,1.1s
DUG **Dugway, Tooele** 91.76 46 P P 09 50 27.0 +0.7
baz=237
WRAK **Wrangell Islan** 92.00 25 IAmb IAmb 09 53 37.5
comp=Z,53nm,1.6s
PEL **Peldehue** 92.02 128 P P 09 50 28.3 +0.6
PEL pmax pmax
comp=Z,22nm,0.8s
PEL **Peldehue** 92.02 128 P P 09 50 28.3 +0.6
PEL IAmb IAmb 09 50 29.5
comp=Z,22nm,0.8s
D08A **Wollman Farm,** 92.02 37 IAmb IAmb 09 53 36.5
comp=Z,28nm,1.0s
GLB **Gilahina Butte** 92.24 17 IAmb IAmb 09 51 44.3
comp=Z,29nm,1.3s
BALM **Baldy** 92.30 18 IAmb IAmb 09 51 44.2
comp=Z,40nm,1.1s
F10A **Beach Ranch, E** 92.33 39 IAmb IAmb 09 53 35.9
comp=Z,26nm,1.4s
TRF **Thorofare Moun** 92.42 14 IAmb IAmb 09 50 29.8
comp=Z,17nm,0.8s
MPU **Maple Canyon** 92.43 46 P P 09 50 30.4 +0.9
MNTX **Cornudas Mount** 92.62 56 P P 09 50 31.0 +0.7
baz=241
MNTX **Cornudas Mount** 92.62 56 IAmb IAmb 09 53 34.1
comp=Z,23nm,1.0s
P17A **Butcher Ranch,** 92.73 47 P P 09 50 31.7 +0.8
TXAR **Lajitas Array** 92.80 59 P P 09 50 32.1 +0.9
comp=Z,7.8nm,0.9s,baz=215,slow=6.7,SNR=25
TXAR pP pP 09 52 43.1 -2.5
comp=Z,1.0nm,1.0s,baz=197,slow=5.3,SNR=1.9
TXAR PKKPbc PKKPbc 10 07 39.7 +1.0
comp=Z,0.4nm,0.8s,baz=99,slow=3.6,SNR=4.0
PV05 **Paradox Valley** 93.11 49 IAmb IAmb 09 53 35.0
comp=Z,44nm,1.2s
HWUT **Hardware Ranch** 93.32 45 IAmb IAmb 09 53 37.1
comp=Z,15nm,1.1s
LZH **Lanzhou** 93.36 309 pmax pmax
comp=Z,26nm,1.0s
LZH **Lanzhou** 93.36 309 *e*P P 09 50 35.2 +1.4
LZH pP pP 09 52 48.3 +1.1
LZH sP sP 09 53 45.9 -2.8
LZH pmax pmax
comp=Z,27nm,1.0s
ANMO **Albuquerque** 93.40 53⇑*e*P P 09 50 34.3 +0.3
ANMO pmax pmax
comp=Z,9.0nm,1.0s
ANMO **Albuquerque** 93.40 53 P P 09 50 34.7 +0.7
baz=241
ANMO **Albuquerque** 93.40 53 P P 09 50 34.2 +0.2
BILL **Bilibino** 94.05 356⇓*e*P P 09 50 37.0 +1.1
BILL *e**PP pP 09 52 50.1 +0.4
BILL *e* 09 54 32.9
BILL pmax pmax
comp=Z,25nm,4.0s
COLA **College** 94.19 14⇓*e*P P 09 50 35.4 -1.2
COLA pmax pmax
comp=Z,15nm,2.0s
ILAR **Eielson Array** 94.32 14 P P 09 50 36.1 -1.1
comp=Z,2.0nm,0.8s,baz=219,slow=5.5,SNR=9.2
S22A **4UR Ranch, Cre** 94.50 50 P P 09 50 39.9 +0.8
baz=241
SNOW **Snow King Moun** 94.80 44 IAmb IAmb 09 50 43.1
comp=Z,8.7nm,0.8s
PDAR **Pinedale Array** 95.19 45 P P 09 50 42.1 +0.1
comp=Z,2.6nm,0.7s,baz=195,slow=2.5,SNR=9.8
PDAR pP pP 09 52 55.4 -1.1
comp=Z,2.0nm,1.0s,baz=58,slow=3.7,SNR=3.1
SDCO **Great Sand Dun** 95.42 51 P P 09 50 43.6 +0.3
baz=241
MSTX **Muleshoe** 95.62 55 P P 09 50 44.7 +0.7
baz=243
T25A **Trinidad** 95.90 52 P P 09 50 45.8 +0.4
baz=242
ISCO **Idaho Springs** 96.32 49 P P 09 50 48.0 +0.7
baz=242
RLMT **Red Lodge** 96.56 43 P P 09 50 49.6 +1.5
baz=240
TOLK **Toolik Lake Re** 97.15 11 P P 09 50 52.1 +2.1
baz=209
SONM **Songino Array** 97.58 320 P P 09 50 52.5 +0.1
comp=Z,1.2nm,0.7s,baz=102,slow=6.3,SNR=2.6
EGMT **Eagleton** 97.73 40 P P 09 50 54.4 +1.4
baz=240
KSCO **Kaye Shedlock'** 98.01 51 P P 09 50 55.2 +0.6
baz=243
INK **Inuvik** 100.35 16 P Pdif 09 51 07.5 +3.5
comp=Z,38nm,1.1s,baz=40,slow=7.9,SNR=21
YKA **Yellowknife Ar** 102.81 26 PKKPbc PKKPbc 10 07 09.2 -3.0
comp=Z,0.4nm,0.6s,baz=57,slow=2.9,SNR=4.0
MKAR **Makanchi Array** 112.33 312 PKiKP **PKiKP** 09 55 48.7 -1.0
comp=Z,1.4nm,0.6s,baz=94,slow=2.3,SNR=7.7
MKAR SKP **SKPdf** 09 58 27.8 +1.2
comp=Z,4.0nm,0.9s,baz=184,slow=0.8,SNR=5.6
MKAR PKKPbc **PKKPbc** 10 06 42.4 -0.1
comp=Z,2.3nm,0.8s,baz=288,slow=3.8,SNR=13
ZALV **Zalesovo Beam** 112.47 320 PKiKP **PKiKP** 09 55 48.9 -0.8
comp=Z,2.2nm,0.5s,baz=168,slow=2.0,SNR=4.6
ZALV SKP **SKPdf** 09 58 27.9 +1.4
comp=Z,1.7nm,0.6s,baz=197,slow=1.9,SNR=3.5
NRIK **Noril'sk** 114.19 337 PKiKP PKPdf 09 55 52.2 -0.3
comp=Z,3.4nm,0.6s,baz=68,slow=5.0,SNR=4.5
F48A **Evansville** 114.21 49 P **PKiKP** 09 55 53.2 0.0
baz=257
R55A **Marlinton** 114.23 58 P PKPdf 09 55 53.3 -0.4
baz=255
O54A **Avella** 114.50 56 P **PKiKP** 09 55 54.1 +0.1
baz=256
N54A **Moraine State** 114.98 55 P PKPdf 09 55 54.3 -0.6
baz=257
L53A **Girard** 115.00 54 P **PKPdf** 09 55 54.6 -0.4
baz=257
KSH **Kashi** 115.06 303 PKP **PKiKP** 09 55 58.0 +2.7
OPO **Ambohidratompo** 115.10 232 PKP **PKiKP** 09 55 56.9 +0.8
comp=Z,6.5nm,0.8s,baz=254,slow=6.8,SNR=3.9
CNNC **Cliffs of the** 115.19 61 P **PKPdf** 09 55 55.1 -0.4
baz=255
KURK **Kurchatov** 115.53 316⇑*i*PKiKP **PKPdf** 09 55 54.9 -0.7
KURK **Kurchatov** 115.53 316 **PKPdf** 09 55 53.9 -1.7
KURBB **Kurchatov Arra** 115.58 316 PKP **PKPdf** 09 55 54.5 -1.2
comp=Z,1.8nm,0.5s,baz=99,slow=1.9,SNR=9.6
KURBB SKP **SKPdf** 09 58 34.0 +1.4
comp=Z,6.6nm,0.7s,baz=104,slow=2.0,SNR=18
KURBB PKKPbc **PKKPbc** 10 06 31.7 +0.2
comp=Z,1.7nm,0.7s,baz=280,slow=4.0,SNR=13
O56A **Blue Knob Stat** 115.87 56 P **PKPdf** 09 55 55.9 -0.8
baz=257
T59A **Double "B" Far** 115.89 60 P **PKPdf** 09 55 55.8 -0.9
baz=256
M55A **Ridgway** 115.99 55 P **PKPdf** 09 55 56.3 -0.5
baz=258
N56A **West Decatur** 116.22 55 P **PKPdf** 09 55 56.9 -0.5
baz=258
Q58A **Fox Den Farm,** 116.24 58 P **PKPdf** 09 55 57.3 -0.1
baz=257
K54A **Basiliko Farm,** 116.28 53 P **PKPdf** 09 55 56.9 -0.5
baz=258
D50A **G1974 Best Tow** 116.35 48 P **PKPdf** 09 55 56.1 -1.2
baz=260
L55A **Hinsdale** 116.38 54 P **PKPdf** 09 55 56.9 -0.7
baz=258
R59A **King George, V** 116.51 58 P **PKPdf** 09 55 57.5 -0.4
baz=257
O57A **Amberson** 116.56 56 P **PKPdf** 09 55 57.7 -0.3
baz=258
T60A **Surry** 116.56 60 P **PKPdf** 09 55 56.9 -1.1
baz=257
D51A **Lot 18 Range I** 116.65 48 P **PKPdf** 09 55 57.0 -0.9
baz=260
N57A **Milroy** 116.73 56 P **PKPdf** 09 55 57.2 -1.2
baz=258
H53A **Bobcaygeon** 116.74 51 P **PKPdf** 09 55 57.3 -0.9
baz=259
G53A **Haliburton** 116.82 51 P **PKPdf** 09 55 57.5 -0.8
baz=260
AAK **Ala-Archa** 116.82 307 SKP **SKPdf** 09 58 35.6 +0.1
comp=Z,1.9nm,0.9s,baz=181,slow=4.9,SNR=3.7
AAK PKKPbc PKKPbc 10 06 27.2 -0.2
comp=Z,2.7nm,0.4s,baz=231,slow=2.2,SNR=7.7
AAK **Ala-Archa** 116.82 307⇓*i*PKiKP **PKPdf** 09 55 58.5 -0.1
E52A **Mattawa** 117.00 49 P **PKPdf** 09 55 57.8 -0.9
baz=260
O58A **Lewisberry** 117.07 56 P **PKPdf** 09 55 58.6 -0.4
baz=259
M57A **Sunshine Farm,** 117.17 55 P **PKPdf** 09 55 58.3 -0.8
baz=258
G54A **Lake Saint Pet** 117.24 50 P **PKPdf** 09 55 58.5 -0.6
baz=260
ALGO **Algonquin Park** 117.36 50 P **PKPdf** 09 55 58.1 -1.2
baz=260
N58A **Sunbury** 117.37 56 P **PKPdf** 09 55 58.9 -0.6
baz=258
L57A **Andrews Acres** 117.50 54 P **PKPdf** 09 55 59.6 -0.1
baz=259
O59A **Robesonia** 117.66 56 P **PKPdf** 09 55 59.4 -0.7
baz=258
M58A **Price's Panora** 117.67 55 P **PKPdf** 09 55 59.6 -0.5
baz=259
D53A **Lac Vacive, Po** 117.78 49 P **PKPdf** 09 55 59.2 -1.0
baz=261
PTGA **Pitinga** 117.95 106 PKP **PKPdf** 09 56 01.4 -0.1
comp=Z,9.5nm,0.8s,baz=272,slow=1.4,SNR=11
PTGA **Pitinga** 117.95 106 **PKPdf** 09 56 01.1 -0.4
E54A **Lac Daplat, Po** 118.03 49 P **PKPdf** 09 55 59.3 -1.3
baz=261
MATQ **Matagami** 118.20 46 P **PKPdf** 09 55 59.5 -1.4
baz=263
SUR **Sutherland** 118.21 202 PKP **PKiKP** 09 56 02.0 +0.2
comp=Z,12nm,0.9s,baz=164,slow=4.3,SNR=9.9
SUR **Sutherland** 118.21 202 **PKPdf** 09 56 01.7 -0.1
L58A **Harry Jones Me** 118.24 54 P **PKPdf** 09 55 59.9 -1.3
baz=260
M59A **Waymart** 118.46 55 P **PKPdf** 09 56 01.2 -0.5
baz=260
D54A **Lac Fusel, La** 118.50 49 P **PKPdf** 09 56 00.4 -1.1
baz=262
F55A **Otter Lake** 118.51 50 P **PKPdf** 09 56 00.6 -0.9
baz=261
N60A **Cedar Hill Far** 118.58 56 P **PKPdf** 09 56 01.2 -0.7
baz=259
I57A **Carthage** 118.70 52 P **PKPdf** 09 56 01.3 -0.7
baz=261
E55A **Montcerf-Lytto** 118.80 49 P **PKPdf** 09 56 01.3 -0.8
baz=262
L59A **Walton** 118.86 54 P **PKPdf** 09 56 01.5 -0.9
baz=260
J58A **Remsen** 118.88 53 P **PKPdf** 09 56 01.9 -0.5

	baz=261						
BDFB	Brasilia	118.92	127	PKKPbc	PKKPbc	10 06 21.7	+1.6
	comp=Z,2.7nm,0.7s,baz=330,slow=16,SNR=3.3						
M60A	Port Jervis	119.02	55	P	PKPdf	09 56 02.1	-0.6
	baz=260						
ORIO	Orleans, Innes	119.04	51	P	PKPdf	09 56 02.0	-0.6
	baz=262						
ORIO	Orleans, Innes	119.04	51		PKPdf	09 56 00.8	-1.7
I58A	Old Forge	119.15	53	P	PKPdf	09 56 02.3	-0.6
	baz=261						
D55A	Sainte-Anne-du	119.28	49	P	PKPdf	09 56 02.2	-0.8
	baz=263						
KBL	Kabul	119.33	297	PKIKP	PKPdf	09 56 03.4	-0.4
KBL	Kabul	119.33	297		PKPdf	09 56 03.4	-0.4
G57A	Newington	119.36	51	P	PKPdf	09 56 02.7	-0.5
	baz=262						
L60A	Shokan	119.43	55	P	PKPdf	09 56 03.2	-0.3
	baz=261						
PAL	Palisades	119.49	56	P	PKPdf	09 56 03.4	-0.1
	baz=260						
M61A	Granite Spring	119.65	56	P	PKPdf	09 56 03.4	-0.5
	baz=260						
D56A	ZEC Mazanza, M	119.77	49	P	PKPdf	09 56 03.0	-0.9
	baz=263						
KK31	Karatay Array	119.79	307	PKIKP	PKPdf	09 56 02.8	-1.4
KK31	Karatay Array	119.79	307		PKPdf	09 56 02.8	-1.4
H58A	Gabriels	119.83	52	P	PKPdf	09 56 03.6	-0.6
	baz=262						
BOSA	Boshof	119.94	207	PKP	PKPdf	09 56 05.1	-0.1
	comp=Z,2.7nm,0.7s,baz=188,slow=1.8,SNR=6.7						
BOSA				PKKPbc	PKKPbc	10 06 16.4	-0.6
	comp=Z,3.4nm,0.7s,baz=320,slow=6.4,SNR=5.3						
L61A	Hillsdale 1, H	119.95	55	P	PKPdf	09 56 03.9	-0.5
	baz=261						
E57A	Chemin Saint G	120.11	50	P	PKPdf	09 56 03.8	-0.9
	baz=263						
J60A	Lant Hill Farm	120.20	53	P	PKPdf	09 56 04.1	-0.8
	baz=262						
SJG	San Juan	120.27	83	PKP	PKPdf	09 56 04.3	-1.4
	comp=Z,30nm,0.8s,baz=313,slow=3.9,SNR=9.6						
SJG				SKP	SKPdf	09 58 42.9	+0.3
	comp=Z,2.4nm,0.5s,baz=348,slow=3.8,SNR=3.2						
SJG	San Juan	120.27	83		PKPdf	09 56 04.0	-1.7
CHGQ	Chibougamau	120.32	46	P	PKPdf	09 56 03.3	-1.6
	baz=265						
M62A	Hamden	120.32	56	P	PKPdf	09 56 04.1	-1.0
	baz=261						
PDPR	Patillas Dam,	120.35	83		PKPdf	09 56 04.3	-1.5
D57A	Chemin Vers le	120.36	49	P	PKPdf	09 56 04.3	-0.8
	baz=264						
I60A	Shoreham	120.38	53	P	PKPdf	09 56 04.4	-0.8
	baz=262						
L61B	Northampton	120.63	54	P	PKPdf	09 56 05.1	-0.6
	baz=262						
E58A	La Victoria	120.70	50	P	PKPdf	09 56 05.0	-0.7
	baz=264						
MTP	Monte Pirata	120.80	84		PKPdf	09 56 05.2	-1.6
J61A	Chester	120.84	53	P	PKPdf	09 56 05.6	-0.5
	baz=262						
BVAR	Borovoye Array	120.86	318	PKP	PKPdf	09 56 05.4	-0.4
	comp=Z,4.3nm,0.3s,baz=117,slow=1.9,SNR=29						
BVAR				SKP	SKPdf	09 58 44.4	+1.7
	comp=Z,6.9nm,0.8s,baz=100,slow=3.5,SNR=10						
BRVK	Borovoye	120.93	318	⇑iPKIKP	PKPdf	09 56 05.7	-0.3
D58A	Chemin du LacG	121.05	49	P	PKPdf	09 56 05.5	-0.9
	baz=264						
I61A	Oroboro, Fairl	121.17	53	P	PKPdf	09 56 06.5	-0.2
	baz=263						
J62A	Henniker	121.37	54	P	PKPdf	09 56 07.1	0.0
	baz=263						
LBNH	Lisbon	121.41	52	P	PKPdf	09 56 06.9	-0.3
	baz=263						
H61A	Lyndonville	121.44	52	P	PKPdf	09 56 06.8	-0.4
	baz=264						
K63A	Dunstable	121.50	54	P	PKPdf	09 56 06.8	-0.6
	baz=263						
F60A	Warwick	121.58	50	P	PKPdf	09 56 07.0	-0.4
	baz=264						
G61A	St-Isidore-de-	121.80	51	P	PKPdf	09 56 07.3	-0.6
	baz=264						
E60A	Ste Agathe de	121.96	50	P	PKPdf	09 56 07.7	-0.4
	baz=265						
H62A	Milan	121.99	52	P	PKPdf	09 56 08.2	-0.1
	baz=264						
H62A	Milan	121.99	52		PKPdf	09 56 07.3	-1.0
F61A	St Evariste	122.24	50	P	PKPdf	09 56 08.2	-0.6
	baz=265						
I63A	Otisfield	122.35	53	P	PKPdf	09 56 08.8	-0.2
	baz=264						
G62A	West of Eustis	122.50	51	P	PKPdf	09 56 08.6	-0.6
	baz=265						
E61A	Lac Etchemin	122.63	50	P	PKPdf	09 56 09.4	-0.1
	baz=266						
LBTB	Lobatse	122.93	210	PKP	PKPdf	09 56 10.4	-0.6
	comp=Z,3.4nm,0.6s,baz=170,slow=3.8,SNR=4.7						
I64A	Boothbay	123.02	53	P	PKPdf	09 56 09.7	-0.5
	baz=265						
G63A	Kingsbury	123.13	52	P	PKPdf	09 56 09.9	-0.5
	baz=265						
PKME	Peaks-Kenny Pk	123.37	51	P	PKPdf	09 56 10.4	-0.5
	baz=266						
PKME	Peaks-Kenny Pk	123.37	51		PKPdf	09 56 09.9	-0.9
H64A	Troy	123.38	52	P	PKPdf	09 56 10.4	-0.5
	baz=265						
F63A	Nahmakanta, Br	123.54	51	P	PKPdf	09 56 10.7	-0.5
	baz=266						
D62A	Allapoint, All	123.66	49	P	PKPdf	09 56 11.1	-0.2
	baz=267						
G64A	Maxfield	123.75	51	P	PKPdf	09 56 11.2	-0.4
	baz=266						
E63A	Oxbow	124.06	50	P	PKPdf	09 56 11.3	-0.9
	baz=267						
H65A	Eastbrook	124.07	52	P	PKPdf	09 56 11.6	-0.6
	baz=266						
F64A	Sherman	124.07	51	P	PKPdf	09 56 11.7	-0.5
	baz=267						
D63A	Stockholm	124.30	49	P	PKPdf	09 56 11.9	-0.8
	baz=268						
PQI	Presque Isle	124.35	50		PKPdf	09 56 11.5	-1.2
E64A	Bridgewater	124.47	50	P	PKPdf	09 56 12.5	-0.5
	baz=268						
G65A	Princeton	124.59	52	P	PKPdf	09 56 12.9	-0.3
	baz=267						
H66A	Whiting	124.74	52	P	PKPdf	09 56 12.9	-0.6
	baz=267						
SCHQ	Schefferville	124.99	40	PKP	PKPdf	09 56 13.2	-0.5
	comp=Z,5.4nm,0.8s,baz=305,slow=1.6,SNR=6.0						
MATP	Matopo	125.41	215	PKhKP	PKPdf	09 56 12.1	-3.8
	comp=Z,7.1nm,0.9s,baz=185,slow=3.3,SNR=8.2						
SPITS	Spitsbergen Ar	126.96	355	PKP	PKPdf	09 56 17.2	+0.3
	comp=Z,8.5nm,0.7s,baz=80,slow=4.6,SNR=10						
MDP	Montagnes des	127.17	104	PKP	PKiKP	09 56 19.4	-0.3
	comp=Z,11nm,0.5s,baz=274,slow=5.1,SNR=14						
ARU	Arti	127.51	323	PKP	PKPdf	09 56 18.6	+0.2
	comp=Z,3.0nm,0.4s,baz=161,slow=2.5,SNR=7.2						
ARU	Arti	127.51	323	i PKIKP	PKiKP	09 56 19.2	+0.1
ARU						09 58 27.2	
ARU						10 02 33.7	
ARU	Arti	127.51	323		PKPdf	09 56 17.8	-0.6
DAG	Danmarks Havn	128.38	5	i P	PKPdf	09 56 07.5	-12
GEYT	Alibeck	128.57	299	PKP	PKPdf	09 56 21.1	0.0
	comp=Z,6.6nm,0.8s,baz=186,slow=2.8,SNR=6.0						
GEYT				pPKP	pPKPdf	09 58 43.3	-0.4
	comp=Z,7.0nm,0.7s,baz=153,slow=1.7,SNR=7.7						
AKTO	Aktyubinsk	128.61	315	PKP	PKPdf	09 56 20.8	0.0
	comp=Z,5.4nm,0.8s,baz=101,slow=6.1,SNR=6.4						
AKTO				SKPbc	SKPbc	09 58 45.2	
	comp=Z,5.3nm,0.7s,baz=95,slow=4.6,SNR=8.2						
SFJD	Kangerlussuaq	129.19	22	PKP	PKPdf	09 56 21.5	+0.2
	comp=Z,4.9nm,0.4s,baz=309,slow=4.5,SNR=9.0						
SFJD				SKPbc	SKPbc	09 58 46.2	+0.9
	comp=Z,4.8nm,0.5s,baz=209,slow=1.0,SNR=6.2						
SFJD	Kangerlussuaq	129.19	22		PKPdf	09 56 21.2	-0.1
LSZ	Lusaka	129.79	219	PKP	PKPdf	09 56 24.6	+0.4
	comp=Z,4.3nm,0.7s,baz=15,slow=3.1,SNR=5.3						
LSZ				SKPbc	SKPab	09 58 49.8	+0.4
	baz=166,slow=2.6,SNR=5.5						
LSZ	Lusaka	129.79	219		PKPdf	09 56 24.0	-0.2
TSUM	Tsumeb	131.42	205	SKPbc	SKPab	09 58 55.8	-0.4
	comp=Z,8.1nm,0.9s,baz=131,slow=7.6,SNR=8.8						
KIRV	Kirov	131.74	327	PKP	PKPdf	09 56 26.9	+0.5
	comp=Z,7.7nm,0.3s,baz=111,slow=23,SNR=6.9						
KIRV				SKPbc	SKPab	09 58 56.1	-0.1
	comp=Z,28nm,0.7s,baz=54,slow=3.6,SNR=11						
ARCES	ARCESS Array B	133.47	347	PKhKP	PKPpre	09 56 20.5	
	comp=Z,5.4nm,0.8s,baz=113,slow=1.2,SNR=9.7						
ARCES				PKP	PKiKP	09 56 30.2	-0.5
	comp=Z,7.1nm,0.6s,baz=71,slow=2.7,SNR=20						
ARCES				SKPbc	SKPbc	09 59 01.6	+1.4
	comp=Z,16nm,0.9s,baz=34,slow=3.3,SNR=17						
KMBO	Kilima Mbogo	133.77	241	PKP	PKiKP	09 56 35.0	+1.7
	comp=Z,3.0nm,0.8s,baz=61,slow=7.4,SNR=3.9						
KMBO				SKPbc	SKPab	09 59 06.9	+0.1
	comp=Z,13nm,0.9s,baz=70,slow=1.7,SNR=20						
KMBO	Kilima Mbogo	133.77	241	PKIKP	PKiKP	09 56 34.7	+1.3
KMBO	Kilima Mbogo	133.77	241		PKiKP	09 56 34.7	+1.3
RCBR	Riachuelo	134.25	129	PKP	PKPdf	09 56 33.3	+0.7
	comp=Z,7.2nm,0.8s,baz=190,slow=8.6,SNR=4.1						
RCBR				SKPbc	SKPbc	09 59 04.1	-0.5
	comp=Z,19nm,0.7s,baz=231,slow=4.0,SNR=13						
VRH	Novokhopyorsk	138.49	319	ePKIKP	PKPdf	09 56 39.3	+0.1
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LPSR	Galich'ya Gora	139.53	322	ePKIKP	PKPdf	09 56 40.0	-1.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
OBN	Obninsk	139.59	327	SKPbc	SKiKP	09 59 20.9	-0.3
	comp=Z,4.1nm,0.4s,baz=292,slow=2.7,SNR=6.4						
FINES	FINESS Array B	139.78	340	PKhKP	PKPpre	09 56 34.8	
	comp=Z,10nm,0.8s,baz=41,slow=2.6,SNR=16						
FINES				PKP	PKPdf	09 56 41.0	-0.2
	comp=Z,4.6nm,0.4s,baz=87,slow=1.8,SNR=12						
FINES				SKPbc	SKiKP	09 59 20.5	-0.8
	comp=Z,13nm,0.7s,baz=41,slow=3.5,SNR=12						
FINES	FINESS Array B	139.78	340	PKIKP	PKPdf	09 56 41.0	-0.2
KBZ	Khabaz	139.80	308	SKPbc	SKPbc	09 59 19.9	+0.4
	comp=Z,4.7nm,0.7s,baz=65,slow=6.4,SNR=6.9						
KIV	Kislovodsk	139.90	308	ePKIKP	PKiKP	09 56 44.1	-0.7
KIV				pmax	pmax		
	comp=Z,23nm,1.1s						
VSR	Storozhevoye	139.97	320	ePKHKP	PKPpre	09 56 33.4	
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VORD	Divnogorie	140.00	320	ePKHKP	PKPpre	09 56 34.4	
VORD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NEY	Neytrino	140.02	307	⇓ePKIKP	PKPdf	09 56 43.7	+1.2
BATM	Batumi	141.06	305	⇓P	PKPdf	09 56 39.3	-4.9
BCA	Borcka	141.14	305	⇓P	PKPdf	09 56 40.7	-3.7
VSU	Vasula	141.77	336	eP	PKPdf	09 56 40.9	-4.0
VSU	Vasula	141.77	336	⇓iPKIKP	PKPdf	09 56 46.2	+1.4
KTUT	Trabzon	142.60	304	⇑P	PKPdf	09 56 45.0	-1.9
NC405	NORSAR Array S	143.60	349		PKPbc	09 56 45.9	-1.3
NB2	NORSAR Subarra	143.75	349	PKP	PKPbc	09 56 46.6	-1.1
	comp=Z,8.4nm,0.6s,baz=16,slow=3.2						
NOA	NORSAR Array B	143.75	349	PKP	PKPbc	09 56 47.1	-0.6
	comp=Z,36nm,0.7s,baz=22,slow=2.6,SNR=167						
NOA				SKPbc	SKiKP	09 59 30.3	+0.7
	comp=Z,0.8nm,0.8s,baz=21,slow=3.8,SNR=4.1						
IZAR	Zarasai	143.89	333	eP	PKPdf	09 56 48.6	0.0
SLIT	Slitere, Latvi	143.96	338	eP	PKPbc	09 56 48.0	-0.3
ISAL	Salakas	144.06	333	eP	PKPab	09 56 49.1	0.0
HFS	Hagfors	144.14	347	PKP	PKPbc	09 56 48.1	-0.8
	comp=Z,26nm,0.3s,baz=67,slow=3.5,SNR=452						
HFS				SKPbc	SKPbc	09 59 29.9	+0.2
	comp=Z,3.4nm,0.7s,baz=33,slow=3.5,SNR=3.8						
IIGN	Ignalina	144.17	333	eP	PKPdf	09 56 49.2	0.0
PABE	Paberze	144.96	335	eP	PKPbc	09 56 51.4	0.0
PBUR	Paburge	145.33	337	eP	PKPbc	09 56 52.3	-0.2
KONO	Kongsberg	145.33	350	PKIKP	PKPdf	09 56 51.5	+0.5
KONO	Kongsberg	145.33	350		PKPdf	09 56 51.5	+0.5
SIM	Simferopol'	145.50	313	d iPKP2	PKPbc	09 56 53.6	+0.2
SIM				pmax	pmax		
	comp=Z,35nm,0.9s						
AKASG	Malin Array Be	145.72	325	PKPbc	PKPdf	09 56 51.5	-0.4
	comp=Z,10nm,0.5s,baz=42,slow=3.7,SNR=15						
AKASG				SKPbc	SKiKP	09 59 35.1	+1.2
	comp=Z,18nm,0.9s,baz=46,slow=2.8,SNR=17						
AKBB	Malin Array Si	145.72	325	PKIKP	PKPdf	09 56 51.7	-0.3
AKBB	Malin Array Si	145.72	325		PKPdf	09 56 51.6	-0.3
DIKM	Dikmen	145.76	307	⇑P	PKPbc	09 56 54.8	+0.6
ASF	Jabal al Asfar	145.78	290	PKPbc	PKPbc	09 56 55.4	+0.7
	comp=Z,20nm,0.8s,baz=81,slow=2.3,SNR=24						
ASF				SKPbc	SKiKP	09 59 36.7	+1.9
	comp=Z,4.7nm,0.8s,baz=131,slow=2.2,SNR=4.7						
BZK	Bozkurt	146.57	308	⇑P	PKiKP	09 56 57.5	-0.9
MMAI	Mount Meron Ar	147.02	291	PKPbc	PKPbc	09 56 58.9	+0.8
	comp=Z,30nm,0.6s,baz=56,slow=6.2,SNR=20						
BIGH	Upper Bighouse	147.37	2	eP	PKPbc	09 56 57.7	-0.2
EIL	Elat	147.41	285	PKPbc	PKiKP	09 56 59.8	-0.7
	comp=Z,32nm,0.9s,baz=337,slow=2.6,SNR=23						
EIL				SKPbc	SKiKP	09 59 39.9	+1.7
	comp=Z,6.8nm,0.9s,baz=259,slow=1.9,SNR=3.6						
BR131	Keskin Array S	147.44	304	PKIKP	PKPdf	09 56 55.3	-0.1
BR131						09 56 58.7	
BR131	Keskin Array S	147.44	304		PKPdf	09 56 55.3	-0.1
BR131				PKPbc	PKPbc	09 56 58.6	-0.3
BRTR	Keskin Array B	147.44	304	PKPbc	PKPbc	09 56 58.5	-0.5
	comp=Z,14nm,0.9s,baz=121,slow=3.4,SNR=24						
BRTR				SKPbc	SKiKP	09 59 38.7	+0.6
	comp=Z,3.3nm,1.0s,baz=116,slow=2.9,SNR=4.5						
LEWI	Lewis, Hebride	147.54	5	eP	PKPbc	09 56 58.0	-0.4
MLA1	Latheron	147.57	2	eP	PKPbc	09 56 58.6	+0.1
SORM	Soroca	147.62	321	⇓P	PKPbc	09 56 58.5	-0.4
SORM	Soroca	147.62	321	⇓PKP2	PKPbc	09 56 58.5	-0.4
KIS	Kishinev	147.94	319	ePKP	PKPdf	09 56 40.0	-16
MILM	Milestii Mici	147.98	319	⇓P	PKPbc	09 56 59.8	-0.1
ANTO	Ankara	148.04	305	⇓P	PKPbc	09 57 00.8	+0.4
ANTO	Ankara	148.04	305	PKP2	PKPbc	09 57 00.3	-0.1
ANTO	Ankara	148.04	305		PKPbc	09 57 00.3	-0.1
BR231	Keskin MP Arra	148.06	304		PKPbc	09 56 59.3	-1.2
KAC	Achnashellach	148.29	4	eP	PKPbc	09 57 00.1	-0.2
MCD	Coleburn Disti	148.30	2	eP	PKPbc	09 56 59.8	-0.6
BSD	Bornholm Skovb	148.34	342	i P	PKPbc	09 57 00.4	-0.1
MDO	Dochfour	148.40	3	eP	PKPbc	09 57 00.5	-0.1
KPL	Plockton	148.43	4	eP	PKPbc	09 57 00.5	-0.2
MUD	Monsted U'grnd	148.44	348	i P	PKPbc	09 57 00.5	-0.2
LEOM	Leova	148.54	319	⇑P	PKPbc	09 57 01.5	+0.2
LEOM	Leova	148.54	319	⇑PKP2	PKPbc	09 57 01.5	+0.2
VASR	Vaslui	148.73	319	⇑P	PKiKP	09 57 02.5	-0.2
TLCR		148.82	316	⇑P	PKPbc	09 57 02.3	+0.3
LEF	Lefka	148.91	296	⇓P	PKiKP	09 57 03.1	-0.3
JURR	Jurilovca	148.98	315	⇓P	PKPab	09 57 09.4	+0.1
DRUM	Mains of Drumt	148.98	1	eP	PKPbc	09 57 01.7	-0.4
BIR	Birlad	149.02	319	⇑P	PKiKP	09 57 03.9	+0.6
BIR	Birlad	149.02	319	⇑PKP2	PKiKP	09 57 03.9	+0.6
VARL	Varlezi	149.07	318	⇓P	PKiKP	09 57 03.5	0.0
CFR	Carcaliu	149.25	316	⇑P	PKPbc	09 57 02.0	-1.0
GHRR		149.25	318	⇓P	PKiKP	09 57 04.1	+0.3
EDU	Dundee	149.34	1	eP	PKPbc	09 57 02.4	-0.5
TIRR	Tirgusor	149.41	315	⇓P	PKiKP	09 57 04.5	+0.3
TIRR	Tirgusor	149.41	315	⇓PKP2	PKiKP	09 57 04.5	+0.3
INVG	Invergeldie, C	149.43	3	eP	PKPbc	09 57 02.6	-0.5
TESR	Tescani	149.47	320	⇑P	PKPbc	09 57 03.5	-0.1
LAWE	Loch Awe, Argy	149.52	4	eP	PKPbc	09 57 03.0	-0.3
BIZ	Bicaz	149.54	321	⇓P	PKiKP	09 57 04.2	-0.2
TLBR	Topalu	149.61	315	⇑P	PKiKP	09 57 04.3	-0.3
HARR	Harsova	149.61	316	⇓P	PKPbc	09 57 03.0	-0.9
HARR	Harsova	149.61	316	⇓PKHKP	PKPbc	09 57 03.0	-0.9
ODBI	Odobesti	149.62	318	⇑P	PKiKP	09 57 05.0	+0.5
BURAR	Bucovina Array	149.65	323	⇓P	PKiKP	09 57 05.7	+1.0
BURAR	Bucovina Array	149.65	323	⇓PKP2	PKiKP	09 57 05.7	+1.0
EAB	Aberfoyle	149.65	3	eP	PKPbc	09 57 03.4	-0.3
VRI	Vrincioaia	149.76	319	⇓P	PKPbc	09 57 04.4	+0.2
PLOR	Plostina	149.82	319	⇑P	PKPbc	09 57 03.9	-0.6
EDI	Edinburgh	149.96	2	eP	PKPbc	09 57 03.9	-0.5
ICOR	Ion Corvin	149.96	315	⇑P	PKiKP	09 57 06.7	+1.4
ESY	Stoneypath	149.98	1	eP	PKPbc	09 57 04.1	-0.4
PGBU	Glenifferbraes	150.02	3	eP	PKPbc	09 57 04.2	-0.4
EBL	Broad Law	150.11	1	eP	PKPbc	09 57 04.3	-0.4
KOLS	Kolonicke sedl	150.34	327	ePKIKP	PKiKP	09 57 06.9	+0.9
KOLS	Kolonicke sedl	150.34	327	ePKP	PKiKP	09 57 06.9	+0.9
LEHL	Lehliu	150.41	316	⇑P	PKPdf	09 56 40.7	-19
MLR	Muntele Rosu	150.43	319	PKPbc	PKPbc	09 57 06.1	+0.1
	comp=Z,10nm,0.7s,baz=331,slow=4.6,SNR=7.9						
MLR	Muntele Rosu	150.43	319	⇑P	PKiKP	09 57 06.3	-0.1
MLR	Muntele Rosu	150.43	319	PKIKP	PKPbc	09 57 05.6	-0.4
MLR	Muntele Rosu	150.43	319		PKPbc	09 57 05.6	-0.4
ARCR	ARCALIA	150.44	322	⇓P	PKiKP	09 57 06.5	+0.3
DOPR	Dopca	150.50	320	⇑P	PKiKP	09 57 06.6	+0.2
UZH	Uzhgorod	150.54	327	ePKIKP	PKPbc	09 57 05.6	-0.3
UZH				e		09 57 11.8	
UZH				e		09 59 26.4	
BMR	Baia Mare	150.54	324	⇑P	PKiKP	09 57 06.7	+0.3
BMR	Baia Mare	150.54	324	⇑PKIKP	PKiKP	09 57 06.7	+0.3
EKA	Eskdalemuir Ar	150.55	2	PKP	PKPdf	09 56 59.1	-0.5
	comp=Z,1.0nm,0.7s,baz=208,slow=23,SNR=3.8						
EKA				PKPbc	PKPbc	09 57 05.2	-0.5
	comp=Z,3.8nm,0.3s,baz=344,slow=3.0,SNR=38						
ESK	Eskdalemuir	150.57	2	eP	PKPbc	09 57 05.3	-0.5
BSEG	Bad Segeberg	150.57	345	ePKPbc	PKiKP	09 57 06.2	0.0
	baz=24,slow=2.4						
BSEG				ePKPab	PKPab	09 57 16.3	+0.7
	baz=25,slow=4.2						
SECR		150.59	318	⇓P	PKiKP	09 57 06.7	+0.1
PRD	Provadia	150.64	313	eP	PKiKP	09 57 06.8	+0.1
CLGH	Cloghs, Cushen	150.64	5	eP	PKPbc	09 57 05.4	-0.6
SULR		150.66	317	⇑P	PKPbc	09 57 06.0	-0.4
NEF	NEVSHA	150.69	314	eP	PKiKP	09 57 07.0	+0.1
NEWG	New Galloway	150.73	3	eP	PKPbc	09 57 05.5	-0.7
GAL1	Galloway	150.96	4	eP	PKPbc	09 57 06.1	-0.5
RUE	Ruedersdorf	150.97	340	eP	PKiKP	09 57 07.5	+0.4
RUE	Ruedersdorf	150.97	340	ePKPbc	PKiKP	09 57 07.2	+0.1
	baz=24,slow=2.4						
VOIR		150.99	319	⇑P	PKPbc	09 57 07.2	0.0
VOIR		150.99	319	⇑PKIKP	PKPbc	09 57 07.2	0.0
EDMD	Edmundbyers	151.07	0	eP	PKPbc	09 57 06.4	-0.6
CJR	Cluj-Napoca	151.08	323	⇑P	PKiKP	09 57 08.2	+0.6
CJR	Cluj-Napoca	151.08	323	⇑PKIKP	PKiKP	09 57 08.2	+0.6
ARR	Arges	151.27	319	⇑P	PKiKP	09 57 10.0	+1.9
DRGR		151.51	323	⇑P	PKPbc	09 57 08.2	-0.1
DRGR		151.51	323	⇑PKIKP	PKPbc	09 57 08.2	-0.1
HUMR	Humele	151.52	318	⇑P	PKPbc	09 57 06.3	-2.0
OKC	Ostrava-Krasne	151.56	332	ePKIKP	PKiKP	09 57 08.5	0.0
OKC				e		09 57 19.8	
OKC	Ostrava-Krasne	151.56	332	⇑ePKP	PKiKP	09 57 08.5	0.0
OKC				ePKPAB	PKPab	09 57 19.8	-0.2
IOMK	Kirk Michael	151.57	3	eP	PKPbc	09 57 07.6	-0.5
WIM	Isle of Man	151.67	4	eP	PKPbc	09 57 07.9	-0.5
ZIMR		151.73	316	⇓P	PKiKP	09 57 09.6	+0.7
ZIMR		151.73	316	⇓PKIKP	PKiKP	09 57 09.6	+0.7
OSTC	Ostas	151.76	335	⇑ePKP	PKiKP	09 57 09.1	+0.2
CHVC	Chvalec	151.79	336	⇑ePKP	PKiKP	09 57 09.0	0.0
MORC	Moravsky Berou	151.86	333	⇑P	PKiKP	09 57 09.9	+0.8
MORC	Moravsky Berou	151.86	333	⇑PKIKP	PKiKP	09 57 09.9	+0.8
UPC	Upice	151.88	336	ePKIKP	PKiKP	09 57 09.5	+0.4
UPC				e		09 57 22.3	
UPC	Upice	151.88	336	⇑ePKP	PKiKP	09 57 09.5	+0.4
UPC				ePKPAB	PKPab	09 57 22.3	+1.0
DPC	Dobruska-Polom	151.88	335	ePKIKP	PKPdf	09 57 02.4	+0.5
DPC				e		09 57 09.2	
DPC				e		09 57 22.2	
DPC	Dobruska-Polom	151.88	335	ePKPDF	PKPdf	09 57 02.4	+0.5
DPC				⇑ePKP	PKiKP	09 57 09.2	0.0
DPC				ePKPAB	PKPab	09 57 22.2	+0.8
KRLC	Kraliky	151.93	334	ePKIKP	PKiKP	09 57 09.3	0.0
KRLC				e		09 57 21.7	
KRLC	Kraliky	151.93	334	⇑ePKP	PKiKP	09 57 09.3	0.0
KRLC				ePKPAB	PKPab	09 57 21.7	+0.1
DEV	Deva	151.96	322	⇑P	PKiKP	09 57 09.3	-0.1
DEV	Deva	151.96	322	⇑PKIKP	PKiKP	09 57 09.3	-0.1
ASSE	Asse, Remlinge	152.15	344	ePKPab	PKPab	09 57 22.7	+0.5
	baz=25,slow=4.2						
VLAD	Vladila	152.15	317	⇑P	PKiKP	09 57 11.5	+1.7
PSZ	Piszkesteto	152.19	328	⇑P	PKiKP	09 57 10.3	+0.4
PSZ	Piszkesteto	152.19	328	PKIKP	PKiKP	09 57 10.1	+0.2
PSZ	Piszkesteto	152.19	328		PKiKP	09 57 10.1	+0.2
CLL	Collm	152.22	340	i PKPbc	PKiKP	09 57 11.4	+1.6
	comp=Z,38nm,0.8s						
CLL				i pPKPbc	pPKPbc	09 59 32.4	+0.9
CLL	Collm	152.22	340	ePKPbc	PKiKP	09 57 10.9	+1.1
	baz=24,slow=2.4						
CLL				ePKPab	PKPab	09 57 24.0	+1.3
	baz=25,slow=4.2						
CLL	Collm	152.22	340	PKIKP	PKiKP	09 57 10.5	+0.7
CLL	Collm	152.22	340		PKiKP	09 57 10.7	+0.9
CLL					PKPab	09 57 23.7	+1.0
VYHS	Vyhne	152.27	330	ePKIKP	PKPbc	09 57 09.9	0.0
VYHS				e		09 57 23.7	
VYHS	Vyhne	152.27	330	ePKP	PKPbc	09 57 09.9	0.0
VYHS				e		09 57 23.7	
BRG	Berggiesshubel	152.30	338	ePKP	PKPdf	09 56 54.6	-7.8
	comp=Z,7.5nm,1.3s						
BRG	Berggiesshubel	152.30	338	i PKP	PKPbc	09 57 09.8	0.0
	comp=Z,18nm,1.0s						
BRG	Berggiesshubel	152.30	338	ePKPbc	PKiKP	09 57 10.2	+0.2
	baz=24,slow=2.4						
BRG				ePKPab	PKPab	09 57 23.5	+0.4
	baz=25,slow=4.2						
BRG	Berggiesshubel	152.30	338	ePKIKP	PKPdf	09 56 54.6	-7.8
BRG				i		09 57 09.8	
BRG				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BRG				pmax	pmax		
	comp=Z,19nm,1.0s						
GZR	Gura Zlata	152.32	321	⇓P	PKPbc	09 57 09.8	-0.4
GZR	Gura Zlata	152.32	321	⇓PKIKP	PKPbc	09 57 09.8	-0.4
PLVB	Pleven	152.33	316	⇓P	PKPbc	09 57 10.0	-0.1
PVCC	Panska Ves	152.38	337	PKIKP	PKiKP	09 57 10.6	+0.4
PVCC	Panska Ves	152.38	337	⇑ePKP	PKiKP	09 57 10.5	+0.4
FBE	Freiberg	152.45	339	ePKPbc	PKiKP	09 57 10.8	+0.5
	baz=24,slow=2.4						
FBE				ePKPab	PKPab	09 57 24.4	+0.8
	baz=25,slow=4.2						
CLZ	Clausthal	152.49	344	ePKPbc	PKiKP	09 57 10.7	+0.3
	baz=24,slow=2.4						
CLZ				ePKPab	PKPab	09 57 24.6	+0.8
	baz=25,slow=4.2						
SRE	Strehaia	152.50	319	⇓P	PKPab	09 57 26.1	+1.9
SRE	Strehaia	152.50	319	⇓PKP2	PKPab	09 57 26.1	+1.9
IBBN	Ibbenburen	152.64	347	ePKPab	PKPab	09 57 25.0	+0.6
	baz=25,slow=4.2						
NEUB	Neuenburg	152.68	341	ePKPab	PKPab	09 57 25.2	+0.6
	baz=25,slow=4.2						
GOPC	GO Pecny, Ondr	152.81	336	ePKIKP	PKiKP	09 57 11.4	+0.3
GOPC				e		09 57 25.3	
GOPC	GO Pecny, Ondr	152.81	336	⇑ePKP	PKiKP	09 57 11.4	+0.3
GOPC				ePKPAB	PKPab	09 57 25.3	0.0
HERR	Herculane	152.83	320	⇑P	PKiKP	09 57 11.3	0.0
BZS	Buzias	152.84	322	⇓P	PKPdf	09 57 03.7	+0.4
BZS	Buzias	152.84	322	⇓PKIKP	PKPdf	09 57 03.7	+0.4
PRU	Pruhonice	152.84	337	ePKIKP	PKPdf	09 57 03.1	-0.1
PRU				e		09 57 10.8	
PRU				e		09 57 25.3	
PRU	Pruhonice	152.84	337	ePKPDF	PKPdf	09 57 03.1	-0.1
PRU				⇑ePKP	PKPbc	09 57 10.8	-0.2
PRU				ePKPAB	PKPab	09 57 25.3	-0.1
KRUC	Moravsky	152.88	333	PKIKP	PKiKP	09 57 12.0	+0.8
PGB	Panagyurishte	153.04	315	eP	PKPab	09 57 27.0	+0.4
MODS	Modra-Piesok	153.05	331	ePKIKP	PKPbc	09 57 11.3	-0.3
MODS				e		09 57 25.9	
MODS	Modra-Piesok	153.05	331	ePKP	PKPbc	09 57 11.2	-0.3
MODS				e		09 57 25.9	
RZN	Rozhen	153.09	313	eP	PKPab	09 57 33.8	+6.8
GUNZ	Gunzen	153.26	340	ePKPab	PKPab	09 57 28.0	+0.8
	baz=25,slow=4.2						
WERN	Wernitzgruen	153.31	340	ePKPab	PKPab	09 57 28.3	+0.8
	baz=25,slow=4.2						
NKC	Novy Kostel	153.33	339	ePKIKP	PKiKP	09 57 12.9	+0.7
NKC				e		09 57 27.5	
NKC	Novy Kostel	153.33	339	⇑ePKP	PKiKP	09 57 12.9	+0.7
NKC				ePKPAB	PKPab	09 57 27.5	0.0
VTS	Vitosha	153.60	316	⇑P	PKPab	09 57 30.4	+1.3
VTS	Vitosha	153.60	316	eP	PKPab	09 57 29.8	+0.7
VTS	Vitosha	153.60	316	⇑PKP2	PKPab	09 57 30.4	+1.3
MMB	Musomiste	153.79	313	eP	PKPab	09 57 29.9	+0.1
KHC	Kasperske Hory	153.90	337	ePKIKP	PKPdf	09 57 05.0	+0.2
KHC				e		09 57 13.4	
KHC				e		09 57 30.3	
KHC	Kasperske Hory	153.90	337	ePKPDF	PKPdf	09 57 05.0	+0.2
KHC				⇑ePKP	PKiKP	09 57 13.4	0.0
KHC				ePKPAB	PKPab	09 57 30.3	+0.3
CONA	Conrad Observa	154.00	332	ePKPab	PKPab	09 57 30.8	+0.3
	comp=Z,9.1nm,1.0s						
GEC2	GERESS Array S	154.10	336	ePKPab	PKPab	09 57 31.2	+0.3
	baz=25,slow=4.2						
GERES	GERESS Array B	154.10	336	PKP	PKPdf	09 57 05.3	+0.2
	comp=Z,1.6nm,0.8s,baz=22,slow=1.4,SNR=5.1						
GERES				PKPbc	PKiKP	09 57 14.2	+0.4
	comp=Z,2.5nm,0.7s,baz=38,slow=2.4,SNR=8.1						
GERES				PKPab	PKPab	09 57 31.0	+0.1
	comp=Z,3.7nm,0.8s,baz=36,slow=5.9,SNR=5.6						
TNS	Taunus Mts	154.45	345	ePKPab	PKPab	09 57 32.6	+0.3
	baz=25,slow=4.2						
MEM	Membach	154.60	348	PKPab	PKPab	09 57 33.4	+0.6
MOA	Molln	154.71	334	epPKPab	pPKPab	09 59 47.0	-1.6
	comp=Z,10nm,1.1s						
BCLA	Clavier	154.90	349	PKPab	PKPab	09 57 33.7	-0.5
SNF	Seneffe	154.97	351	PKPab	PKPab	09 57 33.9	-0.5
IDI	Anoyia	155.30	299	PKPab	PKPab	09 57 36.9	+0.3
	comp=Z,11nm,0.8s,baz=63,slow=4.5,SNR=3.3						
IDI	Anoyia	155.30	299	⇑P	PKPab	09 57 37.2	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
IDI	Anoyia	155.30	299		PKPab	09 57 37.0	+0.4
RJOB	Jochberg	155.35	336	ePKPab	PKPab	09 57 37.1	+0.8
	baz=25,slow=4.2						
WLF	Walferdange	155.47	348	ePKPab	PKPab	09 57 37.1	+0.5
	baz=25,slow=4.2						
OBKA	Obir	155.67	332	ePKPab	PKPab	09 57 37.9	+0.1
	comp=Z,6.9nm,0.7s						
KBA	Koelnbreinsper	155.70	334	epPKPbc	pPKPbc	09 59 39.7	+0.1
	comp=Z,11nm,1.3s						
MYKA	Terra Mystica	155.94	333	ePKPab	PKPab	09 57 38.4	-0.6
	comp=Z,1.8nm,0.3s						
WATA	Walderalm	156.13	337	ePKPab	PKPab	09 57 40.5	+0.7
	comp=Z,4.4nm,0.5s						
WATA				pPKPdf	pPKPdf	09 59 34.2	+2.7
	comp=Z,20nm,1.4s						
PDG	Podgorica	156.14	319		PKPab	09 57 39.9	+0.1
WTTA	Wattenberg	156.17	337	epPKPdf	pPKPdf	09 59 35.5	+4.0
	comp=Z,23nm,1.1s						
BFO	Black Forest	156.24	343	ePKPab	PKPab	09 57 40.3	+0.3
	baz=25,slow=4.2						
RETA	Reutte	156.28	339	epPKPbc	pPKPdf	09 59 38.4	+6.8
	comp=Z,14nm,1.3s						
MOTA	Moosalm	156.29	338	ePKPab	PKPab	09 57 40.8	+0.3
	comp=Z,4.0nm,0.6s						
MOTA				epPKPdf	pPKPdf	09 59 35.8	+4.1
	comp=Z,13nm,1.6s						
ABTA	Abfaltersbach	156.29	335	ePKPab	PKPab	09 57 40.3	-0.1
	comp=Z,3.0nm,0.5s						
ABTA				epPKPdf	pPKPdf	09 59 36.8	+5.1
	comp=Z,13nm,1.1s						
SQTA	Sankt Quirin	156.36	338	ePKPab	PKPab	09 57 41.2	+0.5
	comp=Z,6.3nm,0.6s						
SQTA				pPKPdf	pPKPdf	09 59 35.0	+3.3
	comp=Z,14nm,1.1s						
FETA	Feichten	156.69	338	i PKPab	PKPab	09 57 43.2	+1.0
	comp=Z,4.0nm,0.7s						
FETA				epPKPdf	pPKPdf	09 59 33.6	+1.3
	comp=Z,7.7nm,1.1s						
DAVA	Damuels	156.74	340	ePKPab	PKPab	09 57 43.1	+0.6
	comp=Z,4.3nm,0.5s						
DAVA				epPKPdf	pPKPdf	09 59 30.9	-1.4
	comp=Z,17nm,1.9s						
DAVOX	Davos/Dischmat	157.19	339	PKP	PKPdf	09 57 08.9	-0.5
	comp=Z,3.2nm,0.8s,baz=179,slow=4.1,SNR=3.6						
DAVOX				PKPab	PKPab	09 57 45.3	+0.9
	comp=Z,4.7nm,0.6s,baz=288,slow=4.6,SNR=6.0						
ESDC	Sonseca Array	166.11	7	PKP	PKPdf	09 57 18.4	0.0
	comp=Z,1.3nm,0.8s,baz=356,slow=2.4,SNR=1.7						
ESDC				PKPab	PKPab	09 58 23.9	+0.2
	comp=Z,1.1nm,0.6s,baz=338,slow=4.2,SNR=8.1						
TORD	Torodi Ar. Bea	166.94	195	PKP	PKPdf	09 57 18.9	-0.7
	comp=Z,5.0nm,0.8s,baz=262,slow=0.6,SNR=4.8						
TORD				PKPab	PKPab	09 58 26.9	-0.8
	comp=Z,3.5nm,0.6s,baz=162,slow=3.9,SNR=15						
TORD				PP	PP	10 02 15.3	-0.7
	comp=Z,1.2nm,0.9s,baz=177,slow=5.7,SNR=2.9						
MDT	Midelt	172.64	19	PKP	PKPdf	09 57 22.1	-0.5
	comp=Z,3.3nm,0.8s,baz=200,slow=4.6,SNR=4.7						
MDT				PKPab	PKPab	09 58 53.6	+0.8
	comp=Z,5.7nm,0.8s,baz=353,slow=6.0,SNR=8.1						

*THE **04** 09:41:44.3, 37°.92N×22°.57E, h12km±1km, ML2.2/14, Error ellipse: s-maj=1.5km s-min=0.4km az=186.0*
*ATH **04** 09:41:44.1, 37°.93N×22°.58E, h18km±5km, ML2.2/14, Error ellipse: s-maj=5.3km s-min=0.8km az=341.0*
ISC 04 09:41:44.2±0.9**, 37°.93N**±0°.02×**22°.58E**±0°.02**, h16**km±8km**, n39,** σ**0s.41**/67**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOUT	Loutraki	0.32	79	P	Pg	09 41 50.3	-0.6
LOUT				S	Sb	09 41 56.4	-0.2
	252nm,0.2s						
LOUT	Loutraki	0.32	79	P	Pg	09 41 50.9	0.0
KLV	Kalavryta, Ach	0.36	290	P	Pg	09 41 51.4	-0.2
KLV				S	Sg	09 41 56.4	-0.2
	208nm,0.2s						
KLV	Kalavryta, Ach	0.36	290	P	Pg	09 41 51.5	-0.2
KLV				S	Sg	09 41 57.1	+0.5
KLV				AML	AML	09 41 57.6	
	comp=E,477µm,0.1s						
KLV				AML	AML	09 41 59.6	
	comp=N,342µm,0.3s						
PROD	Prodromos	0.42	37	P	Pg	09 41 52.8	+0.1
PROD				S	Sb	09 41 59.2	-0.3
PROD	Prodromos	0.42	37	P	Pg	09 41 52.8	+0.1
PROD				S	Sg	09 41 58.8	+0.3
PROD				AML	AML	09 41 59.5	
	comp=E,1352µm,0.2s						
PROD				AML	AML	09 41 59.7	
	comp=N,1014µm,0.2s						
TRIP	Tripoli	0.47	212	P	Pg	09 41 53.5	0.0
TRIP				S	Sg	09 42 00.0	+0.2
	comp=N,368nm,0.3s						
TRIP	Tripoli	0.47	212	P	Pg	09 41 53.5	0.0
TRIP				AML	AML	09 42 02.8	
	comp=E,908µm,0.3s						
TRIP				AML	AML	09 42 03.1	
	comp=N,548µm,0.2s						
ALIK	Aliki, Aigiali	0.50	312	P	Pg	09 41 54.2	+0.1
DLFA	Delphi	0.56	353	P	Pg	09 41 54.7	-0.6
LAKA	Lakka	0.57	304	P	Pg	09 41 55.0	-0.4
LAKA				S	Sb	09 42 03.7	0.0
LAKA	Lakka	0.57	304	P	Pg	09 41 55.3	-0.2
LAKA				AML	AML	09 42 04.1	
	comp=E,257µm,0.2s						
LAKA				AML	AML	09 42 05.4	
	comp=N,330µm,0.3s						
VLX	Vlachokerasia	0.58	196	P	Pg	09 41 55.4	-0.2
VLX				S	Sb	09 42 03.7	-0.3
	comp=N,390nm,0.5s						
VLX	Vlachokerasia	0.58	196	P	Pg	09 41 55.3	-0.2
VLX				S	Sg	09 42 03.3	0.0
VLX				AML	AML	09 42 05.9	
	comp=N,503µm,0.3s						
VLX				AML	AML	09 42 08.3	
	comp=E,669µm,0.4s						
KALE	Kalithea	0.58	324	P	Pg	09 41 54.9	-0.8
KALE				S	Sg	09 42 03.7	+0.3
	comp=E,305nm,0.2s						
KALE	Kalithea	0.58	324	P	Pg	09 41 55.2	-0.4
KALE				S	Sg	09 42 03.5	+0.1
KALE				AML	AML	09 42 04.3	
	comp=N,494µm,0.2s						
KALE				AML	AML	09 42 05.5	
	comp=E,717µm,0.2s						
TRIZ	Trizonia	0.59	318	P	Pg	09 41 56.0	+0.1
TRIZ				S	Sb	09 42 04.6	+0.2
	comp=E,265nm,0.3s						
TRIZ	Trizonia	0.59	318	P	Pg	09 41 55.9	+0.1
VIL2	Platees	0.62	62	P	Pb	09 41 56.8	+0.1
VIL2				S	Sb	09 42 05.6	+0.5
VIL2				AML	AML	09 42 10.2	
	comp=E,274µm,0.2s						
VIL2				AML	AML	09 42 10.4	
	comp=N,252µm,0.3s						
VILL	Villia	0.63	67	P	Pb	09 41 56.8	-0.1
VILL				S	Sb	09 42 06.3	+0.8
	comp=N,148nm,0.2s						
SERG	Sergoula	0.64	320	P	Pg	09 41 56.3	-0.4
SERG				S	Sg	09 42 05.4	+0.2
	comp=N,215nm,0.2s						
SERG	Sergoula	0.64	320	P	Pg	09 41 56.7	0.0
SERG				S	Sg	09 42 05.0	-0.2
SERG				AML	AML	09 42 06.3	
	comp=E,407µm,0.2s						
SERG				AML	AML	09 42 06.4	
	comp=N,440µm,0.2s						
DID	Didima	0.67	128	P	Pg	09 41 56.6	-0.7
DID				S	Sg	09 42 06.2	0.0
	comp=N,492nm,0.3s						
DID	Didima	0.67	128	P	Pg	09 41 56.7	-0.7
DID				S	Sg	09 42 06.3	+0.1
DID				AML	AML	09 42 07.7	
	comp=E,910µm,0.4s						
DID				AML	AML	09 42 08.4	
	comp=N,1009µm,0.4s						
DRO	Drossia	0.69	273	P	Pb	09 41 57.8	-0.1
DRO				S	Sb	09 42 07.3	+0.2
	comp=N,212nm,0.2s						
DRO	Drossia	0.69	273	P	Pb	09 41 57.7	-0.1
DRO				S	Sb	09 42 08.0	+0.9
DRO				AML	AML	09 42 14.2	
	comp=E,527µm,0.3s						
DRO				AML	AML	09 42 14.9	
	comp=N,442µm,0.4s						
KRND	KRANIDI	0.71	140	P	Pg	09 41 57.6	-0.4
KRND				S	Sb	09 42 08.4	+0.8
	comp=N,338nm,0.5s						
EFP	Efpalio	0.73	314	P	Pg	09 41 57.9	-0.5
EFP				S	Sb	09 42 09.1	+0.8
EFP	Efpalio	0.73	314	P	Pg	09 41 58.4	0.0
EFP				AML	AML	09 42 11.8	
	comp=N,239µm,0.2s						
EFP				AML	AML	09 42 14.8	
	comp=E,244µm,0.3s						
AMT	Artemida-Makis	0.79	241	P	Pg	09 41 58.9	-0.7
AMT				S	Sb	09 42 10.2	0.0
	comp=E,110nm,0.5s						
AMT	Artemida-Makis	0.79	241	P	Pg	09 41 59.3	-0.3
LKR	Lokris	0.80	25	P	Pg	09 41 58.7	-1.0
LKR				S	Sg	09 42 10.3	0.0
	comp=E,338nm,0.2s						
LKR	Lokris	0.80	25	P	Pg	09 41 59.0	-0.7
LKR				S	Sb	09 42 10.6	+0.3
LKR				AML	AML	09 42 13.7	
	comp=N,720µm,0.2s						
LKR				AML	AML	09 42 15.0	
	comp=E,617µm,0.2s						
ANX	Ano Chora	0.84	322	P	Pb	09 42 00.2	-0.4
ANX				S	Sb	09 42 12.3	+0.6
	comp=E,315nm,0.4s						
ANX	Ano Chora	0.84	322	P	Pb	09 42 00.1	-0.5
ANX				S	Sg	09 42 11.5	-0.3
ANX				AML	AML	09 42 17.3	
	comp=N,834µm,0.4s						
ANX				AML	AML	09 42 17.6	
	comp=E,411µm,0.4s						
VLY	Voula,Athens	0.97	94	P	Pg	09 42 03.0	+0.1
VLY				AML	AML	09 42 17.3	
	comp=E,184µm,0.2s						
VLY				AML	AML	09 42 18.7	
	comp=N,161µm,0.4s						
AGG	Agios Georgios	1.11	350	P	Pn	09 42 05.3	+0.1
AGG				S	Sn	09 42 20.5	+0.2
AGG	Agios Georgios	1.11	350	P	Pb	09 42 05.0	-0.1
EVR	Evrytania	1.16	329	P	Pn	09 42 06.0	+0.1

*NEIC **04** 09:48:07.5±1.4, 26°.0S±0°.1×178°.4E±0°.1, h638km±8km, mb4.4/27, Error ellipse: s-maj=19.4km s-min=16.1km az=92.0*
*IDC **04** 09:48:09.5±2.4, 25°.98S×178°.22E, h657km±27km, mb3.5/9, mb1 3.6/11, mb1mx3.3/46, mbtmp4.6/11, Error ellipse: s-maj=22.8km s-min=21.2km az=8.0*
ISC 04 09:48:06.2±0.6**, 26°.10S**±0°.07×**178°.57E**±0°.10**, h631**km**, n88,** σ**1s.77**/93**, mb4.3**/21**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.42	136	P	P	09 49 34.0	-2.7
RAO				S	S	09 51 02.2	+12
GLKZ	Green Lake	4.43	136	P	P	09 49 39.9	+3.2
MSVF	Nonsavu	8.34	357	P	P	09 50 08.9	-1.2
OUZ	Omahuta	10.04	204	P	P	09 50 28.8	+3.0
OUZ	Omahuta	10.04	204	P	P	09 50 29.5	+3.7
ETAZ	East Tamaki Re	11.25	195	P	P	09 50 40.5	+2.9
KBAZ	Karaka Road Bo	11.39	195	P	P	09 50 41.9	+2.9
AWAZ	Awhitu Peninsu	11.43	196	P	P	09 50 41.6	+2.4
MXZ	Matakaoa Point	11.43	181	P	P	09 50 39.6	+0.4
MXZ	Matakaoa Point	11.43	181	P	P	09 50 35.6	-3.6
DZM	Mont Dzumac	11.78	287	P	P	09 50 43.0	+0.1
	1.0nm,0.3s,baz=123,slow=12,SNR=16						
TOZ	Tahuroa Road	11.88	192	P	P	09 50 46.1	+2.5
URZ	Urewera	12.18	185	P	P	09 50 45.9	-0.4
	1.3nm,0.3s,baz=273,slow=4.5,SNR=9.0						
URZ	Urewera	12.18	185	P	P	09 50 46.0	-0.4
URZ				S	S	09 52 53.0	-4.6
MWZ	Matawai	12.23	184	P	P	09 50 45.8	-1.1
MUGZ	Murupara	12.43	187	P	P	09 50 46.7	-2.0
TLZ	Tolley Road	12.46	191	P	P	09 50 52.9	+3.8
RTZ	Ruatahuna	12.55	186	P	P	09 50 50.2	+0.2
RTZ				S	S	09 52 59.9	-4.2
RIGZ	Rimuhau	12.58	183	P	P	09 50 49.6	-0.6
RIGZ				S	S	09 53 02.0	-2.8
SNGZ	Shannon Statio	12.68	184	P	P	09 50 50.8	-0.4
SNGZ				S	S	09 53 05.7	-0.7
HIZ	Hauiti	12.76	193	P	P	09 50 54.7	+2.8
HIZ	Hauiti	12.76	193	P	P	09 50 54.8	+2.8
MTHZ	Maungataniwha	12.79	186	P	P	09 50 52.5	+0.2
RAHZ	Arahi	12.84	185	P	P	09 50 52.4	-0.3
NMHZ	Naumai	13.04	186	P	P	09 50 54.7	0.0
BKZ	Black Stump Fm	13.14	187	P	P	09 50 57.7	+2.1
BKZ	Black Stump Fm	13.14	187	P	P	09 50 54.4	-1.2
FWVZ	Far West T-bar	13.36	190	P	P	09 50 59.3	+1.4
MCHZ	McNeill Hill	13.39	186	P	P	09 50 58.5	+0.6
KWHZ	Kaweka Forest	13.40	187	P	P	09 50 57.2	-0.9
BHHZ	Black Hill Sta	13.51	188	P	P	09 50 58.6	-0.6
KRHZ	Kereru	13.63	187	P	P	09 51 00.4	+0.2
KAHZ	Kahuranaki	13.72	185	P	P	09 51 01.9	+0.8
LREZ	Lake Rotokare	13.77	194	P	P	09 51 04.8	+3.2
WAZ	Wanganui	13.94	192	P	P	09 51 05.3	+2.2
TSZ	Takapari Road	14.09	188	P	P	09 51 04.9	+0.3
MRZ	Mangatainoka R	14.73	189	P	P	09 51 09.6	-0.8
SNZO	South Karori	15.50	191	P	P	09 51 18.7	+1.3
SNZO				IAmb	IAmb	09 51 19.9	
	comp=Z,33nm,0.7s						
QRZ	Quartz Range	15.52	197	P	P	09 51 20.3	+2.7
NNZ	Nelson	15.67	195	P	P	09 51 21.6	+2.6
NNZ	Nelson	15.67	195	P	P	09 51 20.9	+1.9
TUWZ	Tuamarina	15.76	193	P	P	09 51 21.1	+1.4
DSZ	Denniston Nort	16.57	198	P	P	09 51 27.8	+0.6
OXZ	Oxford	17.99	196	P	P	09 51 43.0	+2.9
MQZ	McQueen's Vall	18.21	194	P	P	09 51 44.4	+2.3
RPZ	Rata Peaks	18.60	197	P	P	09 51 48.7	+3.0
	comp=Z,2.5nm,0.3s,baz=347,slow=6.9,SNR=11						
RPZ	Rata Peaks	18.60	197	P	P	09 51 48.3	+2.6
RPZ				IAmb	IAmb	09 52 02.4	
	comp=Z,46nm,1.4s						
EIDS	Eidsvold	24.76	266	P	P	09 52 40.9	+0.1
EIDS				IAmb	IAmb	09 52 41.6	
	comp=Z,9.9nm,0.7s						
KNTN	Kanton	25.00	23	P	P	09 52 43.9	+0.8
CTA	Charters Tower	30.27	275	P	P	09 53 28.8	+0.1
	comp=Z,13nm,0.4s,baz=95,slow=10,SNR=33						
CTAO	Charters Tower	30.27	275	P	P	09 53 28.6	-0.1
STKA	Stephens Creek	32.74	251	P	P	09 53 49.7	+0.2
	comp=Z,3.8nm,0.5s,baz=100,slow=12,SNR=9.6						
STKA	Stephens Creek	32.74	251	P	P	09 53 49.6	+0.2
STKA				PcP	PcP	09 56 16.2	+1.1
COEN	Coen	35.26	283	P	P	09 54 10.7	0.0
COEN				IAmb	IAmb	09 54 11.3	
	comp=Z,5.0nm,0.7s						
BBOO	Buckleboo	37.42	249	P	P	09 54 27.4	-0.7
BBOO				IAmb	IAmb	09 54 31.0	
	comp=Z,6.9nm,0.8s						
AS31	Alice Springs	40.44	263	P	P	09 54 52.0	-0.5
AS31				IAmb	IAmb	09 54 52.8	
	comp=Z,5.2nm,0.4s						
ASAR	Alice Springs	40.44	263	P	P	09 54 52.0	-0.5
	comp=Z,9.8nm,0.5s,baz=92,slow=7.2,SNR=157						
ASAR				S	S	10 00 14.9	-2.8
	comp=Z,0.2nm,0.7s,baz=94,slow=13,SNR=5.7						
WR0	Warramunga Arr	40.83	269	P	P	09 54 54.4	-1.1
WB2	Warramunga Arr	41.01	269	P	P	09 54 55.7	-1.2
WB2				IAmb	IAmb	09 54 56.3	
	comp=Z,9.9nm,0.4s						
WRAB	Tennant Creek	41.01	269	P	P	09 54 55.9	-1.0
WRAB				IAmb	IAmb	09 54 57.0	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	41.02	269	P	P	09 54 55.8	-1.2
	comp=Z,5.3nm,0.3s,baz=104,slow=7.1,SNR=57						
WB0	Warramunga Arr	41.02	269	P	P	09 54 55.8	-1.2
WB0				IAmb	IAmb	09 54 56.3	
	comp=Z,9.6nm,0.7s						
FORT	Forrest	44.36	252	P	P	09 55 21.7	-1.0
FORT				IAmb	IAmb	09 55 22.2	
	comp=Z,17nm,0.8s						
KNRA	Kununurra	47.43	272	P	P	09 55 45.7	-0.3
KNRA				IAmb	IAmb	09 55 46.4	
	comp=Z,16nm,0.9s						
FITZ	Fitzroy Crossi	49.41	268	P	P	09 56 00.4	-0.3
	comp=Z,4.6nm,0.5s,baz=97,slow=6.5,SNR=20						
FITZ	Fitzroy Crossi	49.41	268	P	P	09 56 00.3	-0.3
FITZ				IAmb	IAmb	09 56 01.2	
	comp=Z,6.5nm,0.6s						
FAKI	Fak Fak	50.03	290	P	P	09 56 04.2	-1.0
FAKI				IAmb	IAmb	09 56 06.5	
	comp=Z,12nm,1.1s						
SIJI	Sorong	51.95	291	P	P	09 56 18.4	-0.7
	comp=Z,20nm,0.7s,baz=49,slow=6.2,SNR=9.6						
PSA00	Pilbara Seismi	53.52	262	P	P	09 56 28.7	-1.3
MORW	Morawa	54.92	252	P	P	09 56 39.1	-0.7
MORW				IAmb	IAmb	09 56 55.4	
	comp=Z,20nm,1.3s						
CASY	Casey	57.57	206	P	P	09 56 57.9	+0.8
QSPA	South Pole Qui	63.99	180	P	P	09 57 41.7	+2.5
QSPA				IAmb	IAmb	09 57 56.2	
	comp=Z,22nm,1.4s						
MJAR	Matsushiro Arr	73.00	327	P	P	09 58 33.1	-0.4
	comp=Z,0.9nm,0.7s,baz=130,slow=6.0,SNR=4.7						
MAW	Mawson	75.24	201	P	P	09 58 47.0	+1.3
	comp=Z,1.7nm,0.5s,baz=144,slow=7.2,SNR=2.1						
MAW	Mawson	75.24	201	P	P	09 58 46.9	+1.3
SNAA	Sanae	82.49	180	P	P	09 59 24.9	+1.1
SNAA	Sanae	82.49	180	P	P	09 59 25.0	+1.1
VNA3	Neumayer Olymp	82.75	177	P	P	09 59 26.2	+1.1
VNA2	Neumayer--Watz	83.15	178	P	P	09 59 28.3	+1.2
	baz=176,slow=4.2						
KLR	Kul'dur	85.82	331	P	P	09 59 40.2	0.0
	comp=Z,1.3nm,0.7s,baz=150,slow=7.9,SNR=3.9						
DAWY	Dawson	95.70	17	P	P	10 00 26.0	+0.4
BVAR	Borovoye Array	121.21	318	PKP	PKiKP	10 05 48.5	-0.2
	comp=Z,0.7nm,0.3s,baz=141,slow=0.9,SNR=4.1						
ARCES	ARCESS Array B	133.76	347	PKP	PKiKP	10 06 12.9	-0.4
	comp=Z,2.5nm,0.9s,baz=46,slow=5.2,SNR=5.2						
FINES	FINESS Array B	140.09	340	PKhKP	PKPpre	10 06 15.9	
	comp=Z,2.5nm,0.8s,baz=53,slow=3.8,SNR=9.3						
NB2	NORSAR Subarra	144.03	350	PKP	PKPdf	10 06 30.7	-0.1
	comp=Z,3.0nm,0.8s,baz=20,slow=4.1						
NOA	NORSAR Array B	144.03	350	PKP	PKPdf	10 06 30.6	-0.2
	comp=Z,1.4nm,0.6s,baz=23,slow=4.2,SNR=9.8						
AKASG	Malin Array Be	146.06	324	PKPbc	PKPbc	10 06 36.3	-0.3
	comp=Z,1.8nm,0.7s,baz=43,slow=3.7,SNR=8.0						
BRTR	Keskin Array B	147.79	304	PKPbc	PKPbc	10 06 41.8	-0.1
	comp=Z,0.8nm,0.6s,baz=138,slow=4.0,SNR=4.1						

*IDC **04** 09:57:26.9±1.9, 10°.76S×162°.97E, h0km, mb4.2/5, mb1 4.2/7, mb1mx3.8/49, mbtmp4.1/7, ML4.0/2, Error ellipse: s-maj=34.2km s-min=31.5km az=141.0*
*NEIC **04** 09:57:28.3±1.7, 10°.8S±0°.1×163°.0E±0°.1, h10km±1km, mb4.4/10, Error ellipse: s-maj=25.5km s-min=14.9km az=155.0*
ISC 04 09:57:31.7±0.9**, 10°.80S**±0°.09×**162°.97E**±0°.10**, h34**km**, n19,** σ**0s.99**/20**, mb4.3**/9**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	3.28	294	Pn	Pn	09 58 20.9	+0.2
	8.5nm,0.3s,baz=151,slow=5.8,SNR=4.4						
HNR				Sn	Sn	09 59 00.4	+1.9
	42nm,0.3s,baz=185,slow=18,SNR=7.6						
HNR	Honiara	3.28	294		Pn	09 58 20.1	-0.6
DZM	Mont Dzumac	11.69	164	Pn	Pn	10 00 24.3	+8.0
	0.2nm,0.3s,baz=33,slow=9.4,SNR=17						
DZM				Sn	Sn	10 02 25.9	+0.2
	0.1nm,0.3s,baz=86,slow=9.8,SNR=1.4						
EIDS	Eidsvold	18.35	216		Pn	10 01 44.0	+0.3
CTA	Charters Tower	18.56	238	P	P	10 01 45.2	-0.6
	0.4nm,0.3s,baz=70,slow=12,SNR=9.5						
CTAO	Charters Tower	18.56	238	P	Pn	10 01 45.7	-0.6
CTAO				IAmb	IAmb	10 02 02.6	
	comp=Z,16nm,1.4s						
COEN	Coen	19.59	259	P	Pn	10 01 57.8	-0.9
JAY	Jayapura	23.58	289	P	P	10 02 38.4	-1.3
	comp=Z,5.5nm,0.2s,baz=337,slow=7.6,SNR=19						
STKA	Stephens Creek	28.81	220	P	P	10 03 28.4	+1.6
	comp=Z,3.9nm,1.0s,baz=54,slow=8.7,SNR=3.8						
STKA	Stephens Creek	28.81	220	P	P	10 03 27.8	+1.0
STKA				IAmb	IAmb	10 03 32.3	
	comp=Z,4.5nm,1.4s						
WB0	Warramunga Arr	28.93	249	P	P	10 03 27.7	-0.4
WB0				IAmb	IAmb	10 03 28.9	
	comp=Z,8.4nm,1.2s						
WRA	Warramunga Arr	29.02	248	P	P	10 03 30.2	+1.3
	comp=Z,1.7nm,1.1s,baz=76,slow=10,SNR=3.7						
ASAR	Alice Springs	30.49	241	P	P	10 03 40.8	-1.1
	comp=Z,0.9nm,0.7s,baz=72,slow=9.5,SNR=8.0						
BBOO	Buckleboo	33.05	224	P	P	10 04 05.5	+1.3
KNRA	Kununurra	33.62	258	P	P	10 04 08.3	-1.0
KNRA				IAmb	IAmb	10 04 19.6	
	comp=Z,8.9nm,1.1s						
FORT	Forrest	37.98	233	P	P	10 04 46.6	0.0
FORT				IAmb	IAmb	10 04 48.0	
	comp=Z,13nm,0.9s						
NEA	Nenana	83.33	19	P	P	10 09 55.2	+0.3
NEA				IAmb	IAmb	10 09 58.3	
	comp=Z,3.2nm,0.9s						
HOPS	Hopland Field	84.55	49	P	P	10 10 01.5	-0.2
YKA	Yellowknife Ar	96.01	28	P	P	10 10 55.5	+0.3
	comp=Z,0.3nm,0.5s,baz=268,slow=4.3,SNR=6.1						

*JMA **04** 10:01:08.2, 32°.23N×132°.13E, h21km±2km, M4.1*
Broadband fault plane solution: P waves. NP1: φs206.00000°, δ25.00000°, λ58.00000°. NP2: φs60.00000°, δ69.00000°, λ104.00000°. Principal axes: T Plg63.0000°, Azm352.0000°; N Plg13.0000°, Azm236.0000°; P Plg23.0000°, Azm140.0000°;
JMA Felt II J1.
*IDC **04** 10:01:09.1±2.1, 32°.10N×131°.89E, h33km±14km, mb3.7/21, mb1 3.9/25, mb1mx3.7/69, mbtmp3.9/25, ML2.7/3, MS4.0/1, Ms1 4.0/1, ms1mx3.5/53 Error ellipse: s-maj=16.1km s-min=12.9km az=70.0*
*NEIC **04** 10:01:09.6±2.5, 32°.08N±0°.08×132°.04E±0°.08, h41km±7km, mb4.5/15, Error ellipse: s-maj=11.4km s-min=9.5km az=208.0*
ISC 04 10:01:08.0±1.2**, 32°.18N**±0°.04×**132°.13E**±0°.04**, h26**km±8km**, n63,** σ**1s.44**/74**, mb4.2**/28**, 1C-8D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHC	Hyugahichiya	0.50	302	⇓P	Pb	10 01 17.6	-0.6
JHHC				eS	Sb	10 01 24.4	-0.7
JTSN	Tsuno	0.54	277	⇓P	Pb	10 01 18.5	-0.4
JTSN				eS	Sb	10 01 26.2	-0.1
JSKE	Saikikamae	0.65	342	⇓P	Pn	10 01 20.1	-1.5
JSKE				eS	Sn	10 01 28.8	-2.2
JKIT	Kitakata	0.73	308	⇓P	Pn	10 01 21.6	-1.1
JKIT				eS	Sn	10 01 31.4	-1.6
JTO	Tosashimizu	0.88	40	⇓P	Pn	10 01 23.7	-1.1
JTO				eS	Sn	10 01 35.2	-1.6
JTZ	Takazaki	0.93	253	⇓P	Pb	10 01 25.8	+0.3
JTZ				eS	Sb	10 01 38.6	+1.1
JUS	Usuki	0.94	340	⇓P	Pn	10 01 25.0	-0.6
JUS				eS	Sn	10 01 37.5	-0.7
JNAR	Kushima--Naru	0.98	229	P	Pb	10 01 27.5	+1.1
JNAR				eS	Sb	10 01 42.1	+3.2
UWA2	Uwa jima 2	1.11	22	⇑P	Pn	10 01 27.5	-0.5
UWA2				eS	Sn	10 01 41.8	-0.7
JIU3	Izumi3	1.18	289	⇓P	Pn	10 01 29.4	+0.5
JKU	Kubokawa	1.37	35	P	Pn	10 01 31.4	-0.2
JKU				eS	Sn	10 01 48.4	-0.5
JNA	Nagahama	1.40	12	P	Pn	10 01 32.1	+0.1
JNA				eS	Sn	10 01 49.9	+0.2
JNU	Nakatsue	1.42	312	Pg	Pn	10 01 33.5	+1.3
	207nm,0.3s,baz=71,slow=4.2,SNR=2004						
JNU				LR	LR	10 01 44.2	
	comp=Z,892nm,21.9s,baz=154,slow=26						
JNU				Lg	Lg	10 01 53.8	
	127nm,0.3s,baz=265,slow=24,SNR=13						
JNU	Nakatsue	1.42	312		Pn	10 01 33.6	+1.4
JNU				Sn	Sb	10 01 53.2	+1.7
INU	Inuyama	5.15	51	Pn	Pn	10 02 25.2	+1.7
KSRS	Korea Array	6.30	328	Pn	Pn	10 02 39.9	+0.7
	0.9nm,0.3s,baz=145,slow=14,SNR=11						
KSRS				Sn	Sn	10 03 54.8	+4.5
	baz=163,slow=15,SNR=2.2						
KSRS				Lg	Lg	10 04 29.7	
	0.5nm,0.3s,baz=157,slow=31,SNR=4.5						
KS19	Wonju Array Si	6.36	328		Pn	10 02 41.1	+1.0
MAJO	Matsushiro	6.64	47		Pn	10 02 46.0	+1.9
MJAR	Matsushiro Arr	6.64	47	Pn	Pn	10 02 46.2	+2.1
	0.1nm,0.3s,baz=238,slow=13,SNR=11						
MJAR				Lg	Lg	10 04 46.9	
	baz=237,slow=24,SNR=4.6						
MJB9	Matsu-Tunnel	6.64	47		Pn	10 02 46.2	+2.2
JCJ	Chichijima	10.10	118	Pn	Pn	10 03 29.3	-2.2
	3.4nm,0.3s,baz=289,slow=21,SNR=5.3						

JCJ				LR	LR	10 07 07.7	
	comp=Z,731nm,19.6s,baz=224,slow=35						
USRK	**Ussuriysk Ar.**	**12.00**	**360**	Pn	**Pn**	**10 03 59.5**	**+2.2**
	baz=172,slow=13,SNR=1.4						
YULB	**Yu-li**	**12.98**	**230**	Pn	**Pn**	**10 04 08.3**	**-2.6**
BJT	**Baijiatuau**	**15.08**	**306**	P	**P**	**10 04 45.0**	**+0.6**
BJT				IAmb	IAmb	10 04 55.2	
	comp=Z,13nm,0.7s						
KLR	**Kul'dur**	**17.04**	**359**	P	**P**	**10 05 07.2**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=169,slow=8.1,SNR=37						
ULN	**Ulaanbaatar**	**24.63**	**317**	P	**P**	**10 06 25.9**	**-0.6**
ULN				IAmb	IAmb	10 06 35.6	
	comp=Z,9.2nm,0.9s						
SONM	**Songino Array**	**25.00**	**316**	P	**P**	**10 06 29.8**	**0.0**
	comp=Z,3.8nm,0.8s,baz=129,slow=9.9,SNR=13						
SEY	**Seymchan**	**33.36**	**17**	P	**P**	**10 07 43.1**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=142,slow=19,SNR=5.0						
H11N2	**WAKE ISLAND Hy**	**33.48**	**103**	T	T	10 43 12.0	
	baz=298,slow=74,SNR=8.1						
H11N1	**WAKE ISLAND Hy**	**33.48**	**103**	T	T	10 43 10.3	
	baz=298,slow=74,SNR=8.1						
H11N3	**WAKE ISLAND Hy**	**33.49**	**103**	T	T	10 43 15.6	
	baz=298,slow=74,SNR=9.0						
MK31	**Makanchi Array**	**40.46**	**306**	P	**P**	**10 08 44.8**	**+0.3**
MKAR	**Makanchi Array**	**40.46**	**306**	P	**P**	**10 08 42.6**	**-1.9**
	comp=Z,0.9nm,0.8s,baz=92,slow=10,SNR=4.2						
KURK	**Kurchatov**	**43.14**	**312**	P	**P**	**10 09 05.1**	**-1.1**
KURBB	**Kurchatov Arra**	**43.19**	**311**	P	**P**	**10 09 05.4**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=97,slow=9.0,SNR=5.3						
KURBB				PcP	**PcP**	**10 10 55.2**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=98,slow=3.3,SNR=5.3						
GSI	**Gunungsitoli**	**44.75**	**234**	P	**P**	**10 09 19.4**	**-0.2**
GSI				IAmb	IAmb	10 09 32.9	
	comp=Z,7.9nm,0.8s						
NRIK	**Noril'sk**	**44.77**	**339**	P	**P**	**10 09 18.2**	**-0.8**
	comp=Z,2.0nm,0.6s,baz=91,slow=11,SNR=3.7						
SPIA	**Saint Paul Isl**	**46.22**	**40**	P	**P**	**10 09 32.9**	**+2.2**
BVAR	**Borovoye Array**	**48.33**	**315**	P	**P**	**10 09 46.2**	**-1.0**
	comp=Z,2.2nm,0.6s,baz=109,slow=11,SNR=5.4						
BRVK	**Borovoye**	**48.39**	**315**	P	**P**	**10 09 47.0**	**-0.7**
BRVK				IAmb	IAmb	10 09 55.7	
	comp=Z,4.3nm,0.6s						
KK31	**Karatay Array**	**49.00**	**301**	P	**P**	**10 09 53.8**	**+1.3**
KK31				IAmb	IAmb	10 10 01.6	
	comp=Z,5.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**50.38**	**188**	P	**P**	**10 10 01.4**	**-1.7**
	comp=Z,1.4nm,0.6s,baz=18,slow=6.8,SNR=5.9						
WRA	**Warramunga Arr**	**51.87**	**177**	P	**P**	**10 10 13.7**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=352,slow=8.3,SNR=6.6						
CTA	**Charters Tower**	**53.70**	**163**	P	**P**	**10 10 28.2**	**+0.3**
	comp=Z,3.5nm,0.8s,baz=113,slow=19,SNR=5.1						
ASAR	**Alice Springs**	**55.56**	**178**	P	**P**	**10 10 41.6**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=11,slow=12,SNR=13						
AKTO	**Aktyubinsk**	**56.23**	**312**	P	**P**	**10 10 46.0**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=74,slow=14,SNR=6.9						
ILAR	**Eielson Array**	**57.60**	**30**	P	**P**	**10 10 57.8**	**+2.4**
	comp=Z,0.3nm,0.7s,baz=289,slow=8.1,SNR=4.2						
INK	**Inuvik**	**62.09**	**25**	P	**P**	**10 11 28.1**	**+2.0**
	comp=Z,1.2nm,0.5s,baz=308,slow=6.5,SNR=10						
INK	**Inuvik**	**62.09**	**25**	P	**P**	**10 11 27.4**	**+1.3**
INK				IAmb	IAmb	10 11 28.6	
	comp=Z,3.8nm,1.3s						
C36M	**Paulatuk**	**64.93**	**22**	P	**P**	**10 11 46.6**	**+1.7**
MSVF	**Nonsavu**	**66.31**	**132**	P	**P**	**10 11 52.3**	**-2.3**
KBZ	**Khabaz**	**68.08**	**309**	P	**P**	**10 12 04.3**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=180,slow=5.1,SNR=2.8						
FINES	**FINESS Array B**	**69.38**	**330**	P	**P**	**10 12 12.2**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=76,slow=8.0,SNR=5.2						
YKA	**Yellowknife Ar**	**71.70**	**27**	P	**P**	**10 12 28.6**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=304,slow=5.0,SNR=7.9						
AKASG	**Malin Array Be**	**73.23**	**320**	P	**P**	**10 12 35.4**	**-1.3**
	comp=Z,1.4nm,0.5s,baz=54,slow=6.3,SNR=7.7						
AKBB	**Malin Array Si**	**73.23**	**320**	P	**P**	**10 12 35.6**	**-1.1**
AKBB				IAmb	IAmb	10 12 44.6	
	comp=Z,4.5nm,0.9s						
NC405	**NORSAR Array S**	**75.23**	**334**	P	**P**	**10 12 48.1**	**-0.2**
NC405				IAmb	IAmb	10 12 49.8	
	comp=Z,3.7nm,0.9s						
SUMG	**Summit**	**75.32**	**357**	P	**P**	**10 12 50.5**	**+1.5**
SUMG				IAmb	IAmb	10 12 59.3	
	comp=Z,9.1nm,1.1s						
NOA	**NORSAR Array B**	**75.47**	**334**	P	**P**	**10 12 48.5**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=50,slow=5.6,SNR=2.6						
BRTR	**Keskin Array B**	**76.07**	**308**	P	**P**	**10 12 52.6**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=44,slow=4.8,SNR=3.4						
BUR08	**Bucovina Ar. S**	**77.09**	**318**	P	**P**	**10 12 58.7**	**-0.5**
GERES	**GERESS Array B**	**82.46**	**324**	P	**P**	**10 13 29.3**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=119,slow=4.7,SNR=3.8						
PDAR	**Pinedale Array**	**86.42**	**41**	P	**P**	**10 13 49.8**	**+1.2**
	comp=Z,0.1nm,0.4s,baz=358,slow=5.4,SNR=2.4						

*IDC **04** 10:03:36.7±0.7, 29.°26N×128.°47E, h188km±9km, mb3.6/19, mb1 3.7/25, mb1mx3.5/73, mbtmp4.1/25, Error ellipse: s-maj=15.0km s-min=10.5km az=107.0*

*NEIC **04** 10:03:37.8±1.5, 29.°27N±0.°06×128.°4E±0.°1, h194km±6km, mb4.3/42, Error ellipse: s-maj=14.3km s-min=8.6km az=109.0*

*JMA **04** 10:03:37.6±0.2, 29.°24N×128.°55E, h196km±3km, M4.2*

ISC 04 10:03:37.5±0.6**, 29.°23N**±0.°04**×128.°54E**±0.°07**, h194**km±5km**, n101,** σ**1.s05**/129**, mb4.2**/39**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTAJ	**Takarajima**	**0.59**	**98**	P	**Pn**	**10 04 05.0**	**+0.8**
JTAJ				*e*S	**Sn**	**10 04 25.4**	**+0.5**
JAMN	**Amaminishikomi**	**1.13**	**150**	P	**Pn**	**10 04 08.2**	**+0.6**
JAMN				*e*S	**Sn**	**10 04 30.9**	**0.0**
JAM	**Amami Oshima**	**1.24**	**131**	P	**Pn**	**10 04 08.8**	**+0.3**
JAM				*e*S	**Sn**	**10 04 31.1**	**-1.3**
JNN	**Nakanoshima**	**1.31**	**62**	P	**Pn**	**10 04 09.4**	**+0.4**
JNN				*e*S	**Sn**	**10 04 33.2**	**-0.3**
JTK	**Tokunoshima**	**1.49**	**166**	P	**Pn**	**10 04 11.3**	**+0.7**
JTK				*e*S	**Sn**	**10 04 35.9**	**-0.4**
JZK	**Kikaishima**	**1.56**	**126**	P	**Pn**	**10 04 12.8**	**+1.6**
JZK				*e*S	**Sn**	**10 04 38.5**	**+1.2**
JOKE	**Okinoerabujima**	**1.86**	**179**	P	**Pn**	**10 04 14.7**	**+0.5**
JOKE				*e*S	**Sn**	**10 04 42.6**	**-0.2**
JKC	**Kuchinoerabu**	**1.89**	**49**	P	**Pn**	**10 04 14.8**	**+0.4**
JKC				*e*S	**Sn**	**10 04 43.2**	**0.0**
JYAK	**Yakushimahirau**	**1.99**	**59**	P	**Pn**	**10 04 14.6**	**-0.8**
JYAK				S	**Sn**	**10 04 42.0**	**-2.9**
JYRO	**Yoronjima**	**2.20**	**182**	P	**Pn**	**10 04 18.0**	**+0.3**
JYRO				*e*S	**Sn**	**10 04 47.7**	**-1.4**
JIH	**Iheya**	**2.25**	**193**	P	**Pn**	**10 04 18.6**	**+0.4**
JIH				*e*S	**Sn**	**10 04 49.4**	**-0.6**
JMTN	**Minamitane**	**2.36**	**60**	P	**Pn**	**10 04 18.9**	**-0.5**
JMTN				*e*S	**Sn**	**10 04 49.2**	**-2.9**
JOW	**Kunigami**	**2.40**	**186**	P	**Pn**	**10 04 20.3**	**+0.3**
	8.8nm,0.3s,baz=95,slow=18,SNR=31						
JOW				S	**Sn**	**10 04 51.8**	**-1.3**
	37nm,0.3s,baz=91,slow=18,SNR=28						
JOW	**Kunigami**	**2.40**	**186**	P	**Pn**	**10 04 20.1**	**+0.1**
JOW				*e*S	**Sn**	**10 04 51.5**	**-1.6**
JOW	**Kunigami**	**2.40**	**186**		**Pn**	**10 04 20.7**	**+0.7**
JOW				Sn	**Sn**	**10 04 51.4**	**-1.7**
JTN	**Tanegashima 3**	**2.55**	**56**	P	**Pn**	**10 04 21.2**	**-0.3**
JTN				*e*S	**Sn**	**10 04 53.1**	**-2.9**
JSJ	**Shimokoshiki**	**2.64**	**22**	P	**Pn**	**10 04 23.1**	**+0.5**
JNTH	**Nagotoyohara**	**2.74**	**190**	P	**Pn**	**10 04 24.2**	**+0.4**
JNTH				*e*S	**Sn**	**10 04 58.4**	**-1.6**
JAGN	**Aguni-jima**	**2.87**	**204**	P	**Pn**	**10 04 25.8**	**+0.5**
JAGN				*e*S	**Sn**	**10 05 02.1**	**-0.6**
JJT3	**Tamagusuku3**	**3.15**	**192**	P	**Pn**	**10 04 29.6**	**+0.9**
JJT3				*e*S	**Sn**	**10 05 08.1**	**-0.6**
JKE	**Kume jima 2**	**3.29**	**209**	P	**Pn**	**10 04 30.5**	**+0.2**
JKDJ	**Kitadaitoujima**	**4.09**	**143**	S	**Sn**	**10 05 28.0**	**-1.3**
JMZ	**Minamidaito 2**	**4.15**	**144**	P	**Pn**	**10 04 41.6**	**+0.6**
JNU	**Nakatsue**	**4.36**	**27**	P	**Pn**	**10 04 44.6**	**+0.9**
	8.7nm,0.3s,baz=204,slow=8.8,SNR=4.4						
JNU	**Nakatsue**	**4.36**	**27**		**Pn**	**10 04 44.7**	**+1.1**
JNU				Sn	**Sn**	**10 05 37.6**	**+1.9**
YOJ	**Yonaguni jima**	**6.85**	**227**	Pn	**Pn**	**10 05 16.9**	**+1.1**
NACB	**Ninganchiao**	**8.00**	**233**		**Pn**	**10 05 30.4**	**-0.3**
KSRS	**Korea Array**	**8.21**	**357**	P	**Pn**	**10 05 33.6**	**+0.2**
	0.6nm,0.3s,baz=176,slow=13,SNR=2.1						
YULB	**Yu-li**	**8.72**	**230**		**Pn**	**10 05 37.4**	**-2.8**
INU	**Inuyama**	**9.41**	**47**	Pn	**Pn**	**10 05 52.4**	**+3.3**
MJAR	**Matsushiro Arr**	**10.91**	**46**	P	**Pn**	**10 06 08.1**	**-0.5**
	0.0nm,0.3s,baz=234,slow=12,SNR=1.1						
USA0B	**Ussuriysk Arra**	**15.19**	**10**		**P**	**10 07 03.3**	**+0.7**
USA0B				IAmb	IAmb	10 07 04.4	
	comp=Z,30nm,1.4s						
USRK	**Ussuriysk Ar.**	**15.19**	**10**	P	**Pn**	**10 07 02.2**	**+0.1**
	baz=186,slow=11,SNR=9.5						
ASAJ	**Asahikawa**	**18.61**	**33**	P	**P**	**10 07 40.0**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=250,slow=10,SNR=7.5						
JKA	**Kamikawa-asahi**	**18.61**	**33**	P	**P**	**10 07 40.0**	**-0.2**
SONM	**Songino Array**	**25.25**	**323**	P	**P**	**10 08 46.4**	**+0.7**
	comp=Z,1.3nm,0.4s,baz=144,slow=11,SNR=11						
PETK	**Petropavlovsk-**	**32.03**	**34**	P	**P**	**10 09 44.5**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=85,slow=1.9,SNR=13						
PET	**Petropavlovsk**	**32.45**	**34**	P	**P**	**10 09 48.8**	**-0.3**
KULM	**Kulim**	**35.53**	**233**	P	**P**	**10 10 19.0**	**+2.9**
KULM				IAmb	IAmb	10 10 19.3	
	comp=Z,4.2nm,0.6s						
SEY	**Seymchan**	**37.08**	**18**	P	**P**	**10 10 28.1**	**-0.5**
	comp=Z,4.0nm,0.3s,baz=292,slow=1.9,SNR=27						
MKAR	**Makanchi Array**	**39.80**	**309**	P	**P**	**10 10 50.5**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=92,slow=8.5,SNR=3.6						
MKAR				PcP	**PcP**	**10 12 54.0**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=72,slow=4.7,SNR=17						
ZALV	**Zalesovo Beam**	**40.07**	**321**	P	**P**	**10 10 51.4**	**-2.2**
	comp=Z,0.6nm,0.3s,baz=132,slow=6.4,SNR=2.2						
ZALV				PcP	**PcP**	**10 12 54.0**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=129,slow=4.5,SNR=4.0						
KURK	**Kurchatov**	**42.88**	**314**	P	**P**	**10 11 16.8**	**+0.3**
KURBB	**Kurchatov Arra**	**42.92**	**314**	P	**P**	**10 11 15.6**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=102,slow=8.8,SNR=3.7						
KNRA	**Kununurra**	**44.65**	**180**	P	**P**	**10 11 31.7**	**+0.8**
KNRA				IAmb	IAmb	10 11 50.3	
	comp=Z,22nm,1.4s						
BVAR	**Borovoye Array**	**48.26**	**317**	P	**P**	**10 11 57.9**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=76,slow=12,SNR=1.9						
BVAR				PcP	**PcP**	**10 13 22.4**	**0.0**
	comp=Z,0.9nm,0.4s,baz=105,slow=3.5,SNR=3.7						
WB0	**Warramunga Arr**	**49.04**	**173**	P	**P**	**10 12 05.9**	**+0.9**
WRAB	**Tennant Creek**	**49.20**	**173**	P	**P**	**10 12 07.2**	**+1.1**
WRA	**Warramunga Arr**	**49.21**	**173**	P	**P**	**10 12 07.1**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=353,slow=8.4,SNR=5.3						
WB2	**Warramunga Arr**	**49.21**	**173**	P	**P**	**10 12 07.5**	**+1.3**
WR0	**Warramunga Arr**	**49.25**	**173**	P	**P**	**10 12 07.8**	**+1.3**
WR0				IAmb	IAmb	10 12 25.0	
	comp=Z,11nm,1.5s						
ANM	**Nome**	**53.76**	**29**	P	**P**	**10 12 39.6**	**+0.2**
CNBA	**Chernabura Isl**	**56.38**	**41**	P	**P**	**10 12 57.9**	**-0.4**
TTA	**Tatalina**	**57.83**	**32**	P	**P**	**10 13 09.0**	**+0.6**
PPLA	**Purkeypile**	**59.57**	**31**	P	**P**	**10 13 21.5**	**+1.0**
PPLA				IAmb	IAmb	10 13 21.9	
	comp=Z,5.4nm,0.6s						
OHAK	**Old Harbor**	**59.66**	**38**	P	**P**	**10 13 20.9**	**-0.1**
OHAK				IAmb	IAmb	10 13 21.2	
	comp=Z,5.7nm,0.7s						
KDAK	**Kodiak Island**	**59.96**	**37**	P	**P**	**10 13 22.8**	**-0.2**
	comp=Z,5.3nm,0.5s,baz=289,slow=4.3,SNR=29						
KDAK	**Kodiak Island**	**59.96**	**37**	P	**P**	**10 13 23.1**	**0.0**
BPAW	**Bear Paw Mtn.**	**60.00**	**30**	P	**P**	**10 13 24.6**	**+1.3**
MLY	**Manley**	**60.02**	**29**	P	**P**	**10 13 24.4**	**+1.0**
MLY				IAmb	IAmb	10 13 25.1	
	comp=Z,3.9nm,1.0s						
TOLK	**Toolik Lake Re**	**60.18**	**25**	P	**P**	**10 13 25.0**	**+0.5**
TOLK				IAmb	IAmb	10 13 25.8	
	comp=Z,3.5nm,0.8s						
TOLK					**pP**	**10 14 09.2**	**+0.5**
BRLK	**Bradley Lake**	**60.56**	**35**	P	**P**	**10 13 26.6**	**-0.6**
BRLK				IAmb	IAmb	10 13 28.7	
	comp=Z,6.5nm,0.9s						
RC01	**Rabbit Creek A**	**60.94**	**33**	P	**P**	**10 13 29.6**	**-0.1**
RC01				PcP	**PcP**	**10 14 11.2**	**+0.1**
SEW	**Seward**	**61.23**	**34**	P	**P**	**10 13 31.4**	**-0.1**
SML	**Sawmill**	**61.49**	**32**	P	**P**	**10 13 33.3**	**-0.1**
SML				IAmb	IAmb	10 13 36.3	
	comp=Z,5.1nm,0.8s						
IL31		**61.68**	**29**	P	**P**	**10 13 33.9**	**-0.6**
ILAR	**Eielson Array**	**61.68**	**29**	P	**P**	**10 13 33.5**	**-1.0**
	comp=Z,1.3nm,0.4s,baz=297,slow=8.5,SNR=23						
DHY	**Denali Highway**	**61.73**	**31**	P	**P**	**10 13 34.8**	**-0.3**
DHY				IAmb	IAmb	10 13 36.2	
	comp=Z,7.8nm,1.3s						
DHY				PcP	**PcP**	**10 14 15.4**	**+1.0**
FID	**Port Fidalgo**	**62.56**	**33**	P	**P**	**10 13 40.3**	**-0.2**
FID				IAmb	IAmb	10 13 41.9	
	comp=Z,12nm,1.4s						
RIDG	**Independent Ri**	**62.73**	**30**	P	**P**	**10 13 41.4**	**-0.3**
RIDG				IAmb	IAmb	10 13 43.4	
	comp=Z,3.9nm,0.8s						
EYAK	**Cordova Ski Ar**	**62.95**	**34**	P	**P**	**10 13 43.7**	**+0.7**
EYAK				IAmb	IAmb	10 13 50.0	
	comp=Z,3.9nm,1.0s						
EYAK				PcP	**PcP**	**10 14 20.2**	**+0.9**
SCRK	**Sand Creek**	**63.06**	**30**	P	**P**	**10 13 43.5**	**-0.3**
SCRK				IAmb	IAmb	10 13 44.5	
	comp=Z,13nm,1.4s						
RAGM	**Ragged Mountai**	**63.51**	**34**	P	**P**	**10 13 48.0**	**+1.2**
RAGM				IAmb	IAmb	10 14 00.5	
	comp=Z,10.0nm,1.1s						
VRDI	**Verde Repeater**	**63.90**	**33**	P	**P**	**10 13 50.1**	**+0.6**
BALM	**Baldy**	**64.47**	**33**	P	**P**	**10 13 53.4**	**+0.3**
BALM				IAmb	IAmb	10 13 54.0	
	comp=Z,8.5nm,1.4s						
BARN	**Barnard Glacie**	**64.79**	**33**	P	**P**	**10 13 55.7**	**+0.5**
BARN				IAmb	IAmb	10 13 56.4	
	comp=Z,4.8nm,0.7s						
DAWY	**Dawson**	**65.01**	**29**	P	**P**	**10 13 56.9**	**+0.4**
DAWY				IAmb	IAmb	10 13 57.6	
	comp=Z,2.4nm,0.7s						
SPITS	**Spitsbergen Ar**	**65.96**	**348**	P	**P**	**10 14 00.5**	**-1.8**
	comp=Z,2.0nm,0.8s,baz=90,slow=9.2,SNR=5.7						
INK	**Inuvik**	**66.03**	**24**	P	**P**	**10 14 02.2**	**-0.6**
	comp=Z,1.8nm,0.4s,baz=290,slow=6.6,SNR=22						
INK	**Inuvik**	**66.03**	**24**	P	**P**	**10 14 03.0**	**+0.2**
INK				IAmb	IAmb	10 14 03.6	
	comp=Z,2.8nm,0.6s						
WHY	**Whitehorse**	**68.07**	**32**	P	**P**	**10 14 17.0**	**+1.1**
WHY				IAmb	IAmb	10 14 17.3	
	comp=Z,2.9nm,0.6s						
C36M	**Paulatuk**	**68.80**	**21**	P	**P**	**10 14 20.3**	**+0.1**
FINES	**FINESS Array B**	**70.40**	**330**	P	**P**	**10 14 29.4**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=64,slow=6.0,SNR=5.8						
DLBC	**Dease Lake**	**71.21**	**33**	P	**P**	**10 14 36.8**	**+1.7**
DIB	**Dawson Inlet,**	**72.18**	**39**	P	**P**	**10 14 41.6**	**+0.7**
RES	**Resolute Bay**	**72.56**	**11**	P	**P**	**10 14 42.6**	**-0.2**
RES				IAmb	IAmb	10 14 43.3	
	comp=Z,4.5nm,0.6s						
YKA	**Yellowknife Ar**	**75.70**	**25**	P	**P**	**10 15 01.5**	**+0.4**
	comp=Z,2.4nm,0.7s,baz=308,slow=5.7,SNR=19						
NB2	**NORSAR Subarra**	**76.75**	**334**	P	**P**	**10 15 05.1**	**-2.0**
	comp=Z,0.4nm,0.5s,baz=52,slow=5.9						
NOA	**NORSAR Array B**	**76.75**	**334**	P	**P**	**10 15 05.7**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=51,slow=5.7,SNR=4.8						
B08A	**Colville Reser**	**81.81**	**39**	P	**P**	**10 15 35.4**	**+0.7**
NEW	**Newport**	**83.06**	**38**	P	**P**	**10 15 41.6**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=283,slow=5.5,SNR=4.0						
NEW	**Newport**	**83.06**	**38**	P	**P**	**10 15 41.4**	**+0.1**
WALA	**Waterton Lakes**	**84.26**	**36**	P	**P**	**10 15 48.2**	**+0.8**
NVAR	**Mina Array Bea**	**88.24**	**46**	P	**P**	**10 16 07.4**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=253,slow=4.2,SNR=3.8						
PDAR	**Pinedale Array**	**90.66**	**39**	P	**P**	**10 16 18.9**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=146,slow=1.8,SNR=6.4						
ULM	**Lac du Bonnet**	**91.62**	**27**	P	**P**	**10 16 22.4**	**+0.1**
	comp=Z,2.9nm,0.5s,baz=330,slow=5.3,SNR=9.7						
ULM	**Lac du Bonnet**	**91.62**	**27**	P	**P**	**10 16 22.1**	**-0.2**
QSPA	**South Pole Qui**	**119.00**	**180**	PKP	**PKPdf**	**10 22 02.4**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=218,slow=2.8,SNR=1.8						
QSPA	**South Pole Qui**	**119.00**	**180**		**PKPdf**	**10 22 02.2**	**0.0**
PTGA	**Pitinga**	**150.52**	**17**	PKPbc	**PKPbc**	**10 23 06.5**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=63,slow=23,SNR=6.7						
PTGA	**Pitinga**	**150.52**	**17**	PKPdf	**PKPdf**	**10 22 59.0**	**-2.4**
PTGA					**PKPbc**	**10 23 07.0**	**0.0**

*NEIC **04** 10:05:59.5±1.6, 25.°9S±0.°1×178.°3E±0.°1, h618km±7km, mb4.3/25, Error ellipse: s-maj=19.6km s-min=17.1km az=82.0*

*IDC **04** 10:06:01.7±2.0, 25.°92S×178.°19E, h640km±21km, mb3.3/9, mb1 3.4/11, mb1mx3.1/52, mbtmp4.3/11, Error ellipse: s-maj=19.9km s-min=14.8km az=35.0*

ISC 04 10:06:00.3±0.5**, 25.°96S**±0.°07**×178.°40E**±0.°09**, h631**km**, n89,** σ**1.s58**/98**, mb4.1**/18**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.63**	**136**	P	**P**	**10 07 33.2**	**+1.0**
GLKZ	**Green Lake**	**4.63**	**136**	P	**P**	**10 07 29.2**	**-3.1**
MSVF	**Nonsavu**	**8.19**	**358**	P	**P**	**10 07 59.7**	**-3.0**
OUZ	**Omahuta**	**10.12**	**203**	P	**P**	**10 08 22.4**	**+1.8**
OUZ	**Omahuta**	**10.12**	**203**	P	**P**	**10 08 23.3**	**+2.7**
WCZ	**Waipu Caves**	**10.54**	**198**	P	**P**	**10 08 25.9**	**+1.1**
KUZ	**Kuaotunu**	**10.99**	**191**	P	**P**	**10 08 31.1**	**+2.0**
MXZ	**Matakaoa Point**	**11.57**	**180**	P	**P**	**10 08 34.6**	**-0.1**
MXZ	**Matakaoa Point**	**11.57**	**180**	P	**P**	**10 08 32.4**	**-2.3**
DZM	**Mont Dzumac**	**11.60**	**287**	P	**P**	**10 08 35.4**	**+0.1**
	0.7nm,0.3s,baz=128,slow=11,SNR=9.6						
WMGZ	**Waiomatatini S**	**11.82**	**180**	P	**P**	**10 08 35.5**	**-1.6**
WMGZ				S	**S**	**10 10 44.6**	**-1.1**
PKGZ	**Pakihiroa**	**11.90**	**181**	P	**P**	**10 08 35.9**	**-2.0**
PKGZ				S	**S**	**10 10 48.4**	**+1.4**
RUGZ	**Raukumara Rang**	**11.99**	**183**	P	**P**	**10 08 37.9**	**-0.9**
TOZ	**Tahuroa Road**	**11.99**	**191**	P	**P**	**10 08 40.9**	**+2.2**
PUZ	**Puketiti**	**12.08**	**181**	P	**P**	**10 08 37.8**	**-1.8**
PUZ				S	S	10 10 41.8	-8.3
URZ	**Urewera**	**12.31**	**185**	P	**P**	**10 08 39.7**	**-2.0**
	2.1nm,0.3s,baz=276,slow=4.3,SNR=16						
URZ				S	**S**	**10 10 49.3**	**-4.8**
	0.4nm,0.3s,baz=213,slow=19,SNR=2.2						
URZ	**Urewera**	**12.31**	**185**	P	**P**	**10 08 39.5**	**-2.2**
URZ	**Urewera**	**12.31**	**185**	P	**P**	**10 08 39.8**	**-2.0**
URZ				S	**S**	**10 10 50.6**	**-3.5**
MWZ	**Matawai**	**12.36**	**183**	P	**P**	**10 08 40.5**	**-1.8**
MWZ				S	**S**	**10 10 51.2**	**-3.8**
TLZ	**Tolley Road**	**12.57**	**190**	P	**P**	**10 08 47.0**	**+2.8**
RIGZ	**Rimuhau**	**12.72**	**182**	P	**P**	**10 08 45.4**	**-0.3**
RIGZ				S	**S**	**10 10 56.2**	**-5.0**
HIZ	**Hauiti**	**12.87**	**193**	P	**P**	**10 08 48.9**	**+1.8**
HATZ	**Hinemaiaia**	**13.04**	**188**	P	**P**	**10 08 48.9**	**+0.2**
MRZ	**Mangatainoka R**	**14.85**	**188**	P	**P**	**10 09 06.6**	**+1.0**
MRZ				S	**S**	**10 11 35.2**	**-1.4**
QRZ	**Quartz Range**	**15.61**	**197**	P	**P**	**10 09 14.3**	**+1.8**
QRZ	**Quartz Range**	**15.61**	**197**	P	**P**	**10 09 16.0**	**+3.5**
MSWZ	**Moikau Station**	**15.64**	**189**	P	**P**	**10 09 13.4**	**+0.6**
BHW	**Baring Head**	**15.68**	**190**	P	**P**	**10 09 13.8**	**+0.6**
NNZ	**Nelson**	**15.78**	**194**	P	**P**	**10 09 14.6**	**+0.5**
NNZ	**Nelson**	**15.78**	**194**	P	**P**	**10 09 14.3**	**+0.3**
TUWZ	**Tuamarina**	**15.87**	**192**	P	**P**	**10 09 15.3**	**+0.5**
THZ	**Tophouse**	**16.40**	**195**	P	**P**	**10 09 21.5**	**+1.7**
THZ				IAmb	IAmb	10 09 23.2	
	comp=Z,25nm,0.9s						
DSZ	**Denniston Nort**	**16.66**	**197**	P	**P**	**10 09 24.5**	**+2.3**
KHZ	**Kahutara**	**16.90**	**192**	P	**P**	**10 09 25.4**	**+1.2**
OXZ	**Oxford**	**18.09**	**195**	P	**P**	**10 09 34.0**	**-1.1**
MQZ	**McQueen's Vall**	**18.32**	**193**	P	**P**	**10 09 37.2**	**+0.1**
RPZ	**Rata Peaks**	**18.70**	**197**	P	**P**	**10 09 40.6**	**-0.1**
	comp=Z,1.2nm,0.3s,baz=299,slow=10,SNR=1.8						
RPZ	**Rata Peaks**	**18.70**	**197**	P	**P**	**10 09 41.0**	**+0.4**
WHZ	**Wether Hill Ro**	**21.58**	**200**	P	**P**	**10 10 08.3**	**+1.8**
EIDS	**Eidsvold**	**24.62**	**265**	P	**P**	**10 10 33.9**	**+0.2**
CTA	**Charters Tower**	**30.11**	**274**	P	**P**	**10 11 21.8**	**+0.3**
	comp=Z,5.0nm,0.3s,baz=97,slow=11,SNR=23						
CTAO	**Charters Tower**	**30.11**	**274**	P	**P**	**10 11 21.9**	**+0.4**
CTAO				IAmb	IAmb	10 11 22.4	
	comp=Z,5.6nm,0.5s						
STKA	**Stephens Creek**	**32.65**	**251**	P	**P**	**10 11 42.0**	**-0.7**
	comp=Z,2.2nm,0.6s,baz=94,slow=9.6,SNR=9.5						
STKA	**Stephens Creek**	**32.65**	**251**	P	**P**	**10 11 42.8**	**0.0**
STKA				PcP	**PcP**	**10 14 10.0**	**+1.0**
BBOO	**Buckleboo**	**37.33**	**249**	P	**P**	**10 12 21.0**	**-0.4**
BBOO				IAmb	IAmb	10 12 21.8	
	comp=Z,29nm,1.4s						
AS31	**Alice Springs**	**40.31**	**263**	P	**P**	**10 12 45.1**	**-0.4**
ASAR	**Alice Springs**	**40.31**	**263**	P	**P**	**10 12 45.2**	**-0.2**
	comp=Z,4.3nm,0.5s,baz=93,slow=7.1,SNR=110						
ASAR				PcP	**PcP**	**10 14 32.6**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=115,slow=3.8,SNR=4.2						
ASAR				S	**S**	**10 18 07.2**	**-2.7**
	comp=Z,0.4nm,0.7s,baz=95,slow=15,SNR=4.5						
WR0	**Warramunga Arr**	**40.69**	**269**	P	**P**	**10 12 47.5**	**-0.9**
WR0				IAmb	IAmb	10 12 53.9	
	comp=Z,8.3nm,1.5s						
WB2	**Warramunga Arr**	**40.86**	**269**	P	**P**	**10 12 49.1**	**-0.7**
WB2				IAmb	IAmb	10 12 49.9	
	comp=Z,7.1nm,0.9s						
WRAB	**Tennant Creek**	**40.86**	**269**	P	**P**	**10 12 49.2**	**-0.7**
WRAB				IAmb	IAmb	10 12 49.3	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**40.87**	**269**	P	**P**	**10 12 49.1**	**-0.8**
	comp=Z,2.8nm,0.4s,baz=103,slow=7.5,SNR=52						
WB0	**Warramunga Arr**	**40.87**	**269**	P	**P**	**10 12 49.0**	**-0.9**
WB0				IAmb	IAmb	10 12 49.8	
	comp=Z,5.9nm,0.8s						
FORT	**Forrest**	**44.26**	**252**	P	**P**	**10 13 15.4**	**-0.7**
FORT				IAmb	IAmb	10 13 16.1	
	comp=Z,9.2nm,0.8s						
KNRA	**Kununurra**	**47.27**	**272**	P	**P**	**10 13 39.0**	**0.0**
KNRA				IAmb	IAmb	10 13 39.5	
	comp=Z,16nm,1.0s						
FITZ	**Fitzroy Crossi**	**49.27**	**268**	P	**P**	**10 13 53.1**	**-0.5**
	comp=Z,3.6nm,0.5s,baz=124,slow=8.0,SNR=13						
FITZ	**Fitzroy Crossi**	**49.27**	**268**	P	**P**	**10 13 53.8**	**+0.1**
FITZ				IAmb	IAmb	10 13 54.2	
	comp=Z,9.5nm,1.2s						
VNDA	**Vanda**	**52.22**	**184**	P	**P**	**10 14 15.6**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=341,slow=6.3,SNR=2.5						
VNDA	**Vanda**	**52.22**	**184**	P	**P**	**10 14 15.8**	**+1.8**
VNDA				PcP	**PcP**	**10 15 15.3**	**+0.9**
PSA00	**Pilbara Seismi**	**53.40**	**262**	P	**P**	**10 14 22.4**	**-0.8**
PSA00				IAmb	IAmb	10 14 25.3	
	comp=Z,17nm,1.4s						
MORW	**Morawa**	**54.83**	**252**	P	**P**	**10 14 32.6**	**-0.6**
MORW				IAmb	IAmb	10 14 51.2	
	comp=Z,14nm,1.2s						
CASY	**Casey**	**57.63**	**206**	P	**P**	**10 14 51.9**	**+0.2**
QSPA	**South Pole Qui**	**64.13**	**180**	P	**P**	**10 15 35.6**	**+1.4**
	comp=Z,4.7nm,0.7s,baz=229,slow=0.5,SNR=35						
QSPA	**South Pole Qui**	**64.13**	**180**	P	**P**	**10 15 36.2**	**+1.9**
QSPA				IAmb	IAmb	10 15 37.4	
	comp=Z,14nm,1.4s						
MAW	**Mawson**	**75.32**	**201**	P	**P**	**10 16 40.8**	**+0.7**
	comp=Z,2.7nm,0.8s,baz=83,slow=12,SNR=2.7						
MAW	**Mawson**	**75.32**	**201**	P	**P**	**10 16 41.3**	**+1.1**
SNAA	**Sanae**	**82.63**	**180**	P	**P**	**10 17 19.1**	**+0.4**
SNAA	**Sanae**	**82.63**	**180**	P	**P**	**10 17 19.1**	**+0.4**
VNA3	**Neumayer Olymp**	**82.90**	**177**	P	**P**	**10 17 20.2**	**+0.2**
VNA2	**Neumayer--Watz**	**83.30**	**178**	P	**P**	**10 17 22.5**	**+0.5**
	baz=182,slow=5.0						
VNA1	**Neumayer--Stat**	**83.55**	**178**	P	**P**	**10 17 23.5**	**+0.4**
TXAR	**Lajitas Array**	**92.74**	**59**	P	**P**	**10 18 08.8**	**+1.7**
	comp=Z,0.4nm,0.8s,baz=173,slow=2.0,SNR=4.9						
MKAR	**Makanchi Array**	**112.47**	**312**	PKiKP	**PKiKP**	**10 23 24.4**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=54,slow=2.2,SNR=3.1						
BVAR	**Borovoye Array**	**121.01**	**318**	PKP	**PKPdf**	**10 23 41.8**	**-0.4**
	comp=Z,1.9nm,0.5s,baz=85,slow=3.3,SNR=8.5						
ARU	**Arti**	**127.65**	**323**	PKP	**PKiKP**	**10 23 55.4**	**0.0**
	comp=Z,1.5nm,0.4s,baz=241,slow=2.4,SNR=4.1						
ARU	**Arti**	**127.65**	**323**		**PKPdf**	**10 23 55.3**	**+0.5**
AKTO	**Aktyubinsk**	**128.75**	**315**	PKP	**PKPdf**	**10 23 57.3**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=179,slow=4.7,SNR=3.8						
ARCES	**ARCESS Array B**	**133.58**	**347**	PKP	**PKiKP**	**10 24 06.7**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=64,slow=2.8,SNR=8.0						
FINES	**FINESS Array B**	**139.90**	**340**	PKP	**PKPdf**	**10 24 19.0**	**+1.5**
	comp=Z,0.8nm,0.5s,baz=85,slow=4.0,SNR=5.3						
FINES				SKPbc	**SKPbc**	**10 26 55.7**	**+0.7**
	comp=Z,2.2nm,1.0s,baz=107,slow=2.0,SNR=3.4						
NC303	**NORSAR Array S**	**143.66**	**349**		PKPbc	10 24 23.3	-0.1
NB2	**NORSAR Subarra**	**143.86**	**349**	PKP	PKPbc	10 24 23.3	-0.8
	comp=Z,4.1nm,0.8s,baz=20,slow=4.0						
NOA	**NORSAR Array B**	**143.86**	**349**	PKP	PKPbc	10 24 23.9	-0.2
	comp=Z,2.3nm,0.6s,baz=21,slow=2.5,SNR=16						
AKASG	**Malin Array Be**	**145.86**	**325**	PKPbc	**PKPdf**	**10 24 29.2**	**+1.0**
	comp=Z,2.8nm,0.7s,baz=41,slow=3.7,SNR=9.6						
MMAI	**Mount Meron Ar**	**147.16**	**291**	PKPbc	**PKPbc**	**10 24 34.3**	**-0.1**
	comp=Z,4.6nm,0.5s,baz=104,slow=3.5,SNR=3.5						
BRTR	**Keskin Array B**	**147.59**	**304**	PKPbc	**PKPbc**	**10 24 35.2**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=117,slow=3.3,SNR=6.5						
BUR08	**Bucovina Ar. S**	**149.78**	**323**		**PKiKP**	**10 24 40.9**	**-0.1**
EKA	**Eskdalemuir Ar**	**150.63**	**2**	PKPbc	**PKPbc**	**10 24 41.7**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=336,slow=2.4,SNR=9.4						
CLL	**Collm**	**152.34**	**340**	*i* PKPbc	**PKiKP**	**10 24 47.2**	**+1.2**
	comp=Z,4.0nm,0.7s						
GERES	**GERESS Array B**	**154.22**	**336**	PKPbc	**PKPbc**	**10 24 49.0**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=58,slow=3.3,SNR=3.7						
TORD	**Torodi Ar. Bea**	**166.88**	**194**	PKPab	**PKPab**	**10 26 03.5**	**0.0**
	comp=Z,1.3nm,0.7s,baz=163,slow=5.1,SNR=6.4						

*IDC **04** 10:09:29.9±1.3, 19.°99S×70.°68W, h0km, mb4.0/4, mb1 4.1/6, mb1mx3.8/48, mbtmp4.0/6, ML3.8/2, Error ellipse: s-maj=34.6km s-min=30.6km az=50.0*

*GUC **04** 10:09:33.5±0.9, 20.°18S×70.°80W, h30km±4km, ML4.0*

ISC 04 10:09:30.5±1.6**, 20.°11S**±0.°03**×70.°81W**±0.°06**, h11**km±9km**, n29,** σ**0.s97**/42**, mb4.1**/4**, 9C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	Huaiquique	0.66	104⇑	eP	Pb	10 09 44.7	+0.7
TA02				eS	Sb	10 09 53.0	-0.1
TA02				IAML		10 09 54.5	
	comp=E,26µm,0.1s						
TA01	Diego Aracena	0.74	128⇓	iP	Pg	10 09 45.5	+0.6
TA01				i S	Sg	10 09 54.4	-0.3
TA01				IAML		10 09 57.2	
	comp=E,7µm,0.3s						
PSGC	Pisagua	0.82	52⇓	iP	Pn	10 09 48.7	+0.5
PSGC				eS	Sn	10 09 59.5	-0.8
PATCX	Punta Patache	0.94	139⇓	iP	Pb	10 09 48.5	-0.3
PATCX				eS	Sb	10 10 00.6	-0.8
PATCX				IAML		10 10 05.7	
	comp=N,4µm,0.5s						
PB11	IPOC Station P	1.14	72⇓	iP	Pg	10 09 53.2	+0.7
PB11				i S	Sn	10 10 08.2	0.0
PB11				IAML		10 10 13.9	
	comp=N,6µm,0.2s						
PB02	IPOC Station P	1.48	145⇑	iP	Pn	10 09 56.9	-0.2
PB02				i S	Sn	10 10 15.6	-0.9
MNMC	Minye Minye	1.50	50⇑	iP	Pg	10 09 59.8	+0.4
MNMC				eS	Sg	10 10 20.3	+1.4
PB01	IPOC Station P	1.55	127⇓	iP	Pn	10 09 58.3	+0.2
PB01				i S	Sn	10 10 17.4	-0.8
PB01				IAML		10 10 23.6	
	comp=E,4µm,0.5s						
PB12	IPOC Station P	1.56	17⇓	eP	Pg	10 10 00.2	-0.2
PB12				i S	Sg	10 10 22.1	+1.5
PB12				IAML		10 10 27.7	
	comp=N,2µm,0.5s						
PB08	IPOC Station P	1.56	91⇓	iP	Pb	10 09 59.6	+0.1
PB08				i S	Sg	10 10 19.8	-0.9
GO01	Chusmiza	1.58	74⇑	iP	Pg	10 10 00.5	-0.5
GO01				i S	Sg	10 10 21.9	+0.4
GO01				IAML		10 10 24.0	
	comp=N,5µm,0.1s						
AP01	Chacalluta	1.79	14⇑	eP	Pb	10 10 02.9	-0.4
AP01				eS	Sb	10 10 26.4	+0.7
AP01				IAML		10 10 38.0	
	comp=E,4µm,0.4s						
PB07	IPOC Station P	1.83	152⇑	iP	Pn	10 10 01.5	-0.5
PB07				i S	Sn	10 10 25.1	-0.1
PB16	IPOC Station P	2.15	35⇑	eP	Pb	10 10 09.3	-0.5
PB16				eS	Sb	10 10 37.4	+0.6
PB09	IPOC Station P	2.23	139⇑	eP	Pn	10 10 08.6	+1.1
PB09				eS	Sn	10 10 36.2	+1.1
PB09				IAML		10 10 47.1	
	comp=E,2µm,0.5s						
PB06	IPOC Station P	2.83	156⇑	eP	Pn	10 10 14.9	-0.9
PB06				eS	Sn	10 10 49.2	-0.8
PB06				IAML		10 11 03.5	
	comp=E,576nm,0.6s						
LVC	Limon Verde	3.05	145	Pn	Pn	10 10 20.2	+1.2
	comp=E,12nm,0.3s,baz=349,slow=6.2,SNR=170						
LVC				Lg	Lg	10 11 05.2	
	comp=E,58nm,0.3s,baz=154,slow=12,SNR=14						
LPAZ	La Paz	4.58	34	Pn	Pb	10 10 47.5	-3.7
	comp=E,1.4nm,0.3s,baz=227,slow=2.5,SNR=38						
SIV	San Ignacio	10.13	68	Pn	Pn	10 11 55.2	-0.8
	comp=E,0.9nm,0.3s,baz=272,slow=9.0,SNR=18						
PTGA	Pitinga	21.99	30	P	P	10 14 23.8	-1.0
	comp=E,2.5nm,0.3s,baz=261,slow=23,SNR=9.5						
BDFB	Brasilia	22.14	82	P	P	10 14 26.4	-0.1
	comp=E,1.2nm,0.4s,baz=232,slow=8.3,SNR=3.4						
TORD	Torodi Ar. Bea	78.58	71	P	P	10 21 32.4	-0.3
	comp=E,2.1nm,0.8s,baz=249,slow=5.1,SNR=9.7						
YKA	Yellowknife Ar	89.30	341	P	P	10 22 26.8	+0.5
	comp=E,0.6nm,0.6s,baz=137,slow=5.3,SNR=10						
H11S2	WAKE ISLAND Hy	125.93	279	T	T	12 48 02.8	
	baz=102,slow=74,SNR=25						
H11S1	WAKE ISLAND Hy	125.93	279	T	T	12 48 04.9	
	baz=102,slow=74,SNR=18						
H11S3	WAKE ISLAND Hy	125.94	279	T	T	12 48 04.0	
	baz=102,slow=74,SNR=8.7						
WRA	Warramunga Arr	133.19	213	PKP	PKPdf	10 28 48.3	+1.1
	comp=E,0.3nm,0.6s,baz=151,slow=1.5,SNR=1.6						
MKAR	Makanchi Array	145.50	33	PKPbc	PKPab	10 29 10.0	+0.9
	comp=E,1.4nm,0.6s,baz=318,slow=3.4,SNR=10						
SONM	Songino Array	152.25	4	PKPbc	PKiKP	10 29 27.8	+1.1
	comp=E,0.3nm,0.3s,baz=343,slow=1.5,SNR=2.4						

JMA ***04*** *10:33:26.6±0.1, 24°.18N×121°.68E, h6km±2km, M3.2*
TAP ***04*** *10:33:26.9, 24°.21N×121°.72E, h14km, ML3.8, C*
ISC 04 10:33:27.0±0.8, **24°.22N**±0°.01×**121°.72E**±0°.01, **h12**km±5km, **n118**, σ**0s.76**/193, **1C-15D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.12	250⇓	iP	Pg	10 33 30.3	+0.1
	baz=253						
NACB				i S	Sg	10 33 32.7	+0.3
	baz=253						
TWD	Chiawan	0.18	220	⇑P	Pg	10 33 31.0	+0.1
	baz=221						
TWD				i S	Sg	10 33 33.9	+0.2
	baz=221						
ENA	Nanau	0.21	5⇓	iP	Pg	10 33 31.8	+0.3
	baz=5.0						
ENA				S	Sg	10 33 35.2	+0.5
	baz=5.0						
ETLH	Xiulin Townshi	0.22	268⇓	iP	Pg	10 33 31.9	+0.2
	baz=269						
ETLH				eS	Sg	10 33 35.2	+0.2
	baz=269						
HWA	Hwalien	0.26	204	eP	Pb	10 33 33.0	-0.5
	baz=210						
NNSB	Datong	0.37	305⇓	iP	Pg	10 33 34.9	+0.4
	baz=305						
NNSB				i S	Sg	10 33 40.1	+0.6
	baz=305						
NNSH	Datong	0.37	305⇓	iP	Pg	10 33 34.9	+0.4
	baz=304						
NNSH				eS	Sg	10 33 40.1	+0.6
	baz=304						
NNS	Nan Shan	0.39	305⇓	iP	Pg	10 33 35.1	+0.3
	baz=306						
NNS				i S	Sg	10 33 40.7	+0.7
	baz=306						
TWC	Suao	0.41	17⇓	iP	Pg	10 33 35.4	+0.3
	baz=9.0						
TWC				S	Sg	10 33 41.0	+0.4
	baz=9.0						
WHF	Hehuan Shan	0.42	261⇓	iP	Pg	10 33 35.7	+0.2
	baz=262						
WHF				eS	Sg	10 33 41.4	+0.2
	baz=262						
NDT	Datong Townshi	0.43	334⇓	iP	Pb	10 33 36.2	-0.3
	baz=333						
NDT				eS	Sb	10 33 42.2	-0.7
	baz=333						
ENTT	Nioudou	0.45	342⇓	iP	Pb	10 33 36.4	-0.4
	baz=341						
ENTT				eS	Sb	10 33 42.7	-0.8
	baz=341						
ESL	Shilin	0.48	213	eP	Pg	10 33 36.1	-0.2
	baz=221						
ESL				eS	Sb	10 33 43.9	-0.4
	baz=221						
EOS1	EOS1	0.50	48	eP	Pb	10 33 37.6	0.0
	baz=40						
EOS1				eS	Sb	10 33 45.8	+0.9
	baz=40						
TWT	Tachien	0.50	275⇓	iP	Pb	10 33 37.6	-0.1
	baz=275						
TWT				eS	Sb	10 33 44.1	-1.0
	baz=275						
TWE	Neicheng	0.51	355⇓	iP	Pb	10 33 37.5	-0.3
	baz=360						
TWE				eS	Sb	10 33 44.5	-0.6
	baz=360						
TDCB	Techi	0.51	274⇓	iP	Pb	10 33 37.7	-0.3
	baz=275						
TDCB				S	Sg	10 33 44.2	+0.3
	baz=275						
CHGB	Renai	0.52	253⇓	iP	Pb	10 33 37.6	-0.5
	baz=249						
CHGB				eS	Sb	10 33 44.8	-1.0
	baz=249						
SLBB	Yuanshan	0.54	352	eP	Pb	10 33 38.2	-0.2
	baz=350						
SLBB				eS	Sb	10 33 46.4	+0.2
	baz=350						
ILA	Ilan	0.55	3	eP	Pb	10 33 38.3	-0.2
	baz=356						
ILA				eS	Sb	10 33 46.2	-0.1
	baz=356						
YHNB	Yeheng	0.55	325	P	Pb	10 33 38.4	-0.3
	baz=325						
YHNB				eS	Sb	10 33 45.9	-0.6
	baz=325						
OWD	Renai	0.56	243⇓	iP	Pg	10 33 38.0	0.0
	baz=244						
OWD				eS	Sg	10 33 45.6	+0.1
	baz=244						
NWLT	Wulai	0.59	341	P	Pb	10 33 39.2	-0.1
	baz=345						
NWLT				eS	Sg	10 33 46.8	+0.3
	baz=345						
EGFH	Guangfu	0.61	206	eP	Pb	10 33 38.9	-0.6
	baz=222						
EGFH				eS	Sb	10 33 48.6	+0.7
	baz=222						
NTC	Toucheng	0.65	9	eP	Pg	10 33 39.8	+0.3
	baz=7.0						
NTC				eS	Sg	10 33 48.1	+0.1
	baz=7.0						
VWDT	VWDT	0.70	229	P	Pb	10 33 40.8	-0.3
	baz=231						
VWDT				eS	Sb	10 33 51.0	+0.3
	baz=231						
WHP	Taichung City	0.71	275	P	Pb	10 33 41.5	+0.2
	baz=276						
WHP				S	Sb	10 33 51.2	+0.2
	baz=276						
DPDB	Guoxing	0.75	256	eP	Pb	10 33 42.0	0.0
	baz=257						
DPDB				eS	Sb	10 33 51.7	-0.4
	baz=257						
TIPB	Shuangxi	0.76	7	eP	Pb	10 33 42.1	0.0
	baz=358						
TIPB				S	Sg	10 33 50.7	-1.0
	baz=358						
WLTB	Daxi	0.77	326	eP	Pn	10 33 42.7	-0.9
	baz=326						
WLTB				S	Sn	10 33 53.7	-1.3
	baz=326						
NHDH	Xindian Distri	0.77	347	eP	Pb	10 33 42.4	+0.2
	baz=345						
NHDH				eS	Sg	10 33 52.0	+0.1
	baz=345						
HGSD	Ruisui	0.77	201	eP	Pb	10 33 42.5	+0.2
	baz=216						
HGSD				eS	Sn	10 33 56.3	+1.2
	baz=216						
LIOB	Emei	0.77	304	eP	Pn	10 33 42.7	-1.0
	baz=304						
LIOB				eS	Sb	10 33 52.7	-0.1
	baz=304						
TWA	Mucha	0.77	351	eP	Pb	10 33 42.8	+0.5
	baz=350						
TWA				eS	Sb	10 33 52.9	+0.1
	baz=350						
TATO	Taipei	0.79	344	eP	Pg	10 33 42.3	+0.1
	baz=343						
TATO				eS	Sb	10 33 52.9	-0.3
	baz=343						
EHY	Hungye	0.79	207	eP	Pg	10 33 41.9	-0.5
	baz=220						
SMLT	Sun Moon Lake	0.82	246	eP	Pb	10 33 42.9	-0.3
	baz=240						
SMLT				eS	Sb	10 33 53.8	-0.5
	baz=240						
SSLB	Suanglung	0.82	239	P	Pg	10 33 42.7	-0.1
	baz=248						
SSLB				eS	Sg	10 33 52.8	-0.8
	baz=248						
TAP1	Taipei	0.84	348	eP	Pg	10 33 43.6	+0.4
	baz=346						
TAP1				eS	Sg	10 33 53.9	-0.3
	baz=346						
TYC	Yuchr	0.85	249	eP	Pb	10 33 43.3	-0.3
	baz=243						
TYC				eS	Sb	10 33 54.8	-0.2
	baz=243						
NWF	Wu-fen Shan	0.85	4	eP	Pn	10 33 44.3	-0.6
	baz=353						
NWF				eS	Sg	10 33 54.0	-0.7
	baz=353						
WFSB	Wu-fen Shan	0.85	4	eP	Pg	10 33 43.7	+0.2
	baz=355						
WFSB				eS	Sb	10 33 55.1	-0.1
	baz=355						
TWQ1	Liyutan	0.88	279	eP	Pn	10 33 44.8	-0.3
	baz=279						
SBCB	Hsinchu	0.88	311	eP	Pg	10 33 44.0	0.0
	baz=310						
SBCB				eS	Sn	10 33 58.4	+0.5
	baz=310						
NCUH	Zhongli	0.89	327	eP	Pn	10 33 45.3	-0.1
	baz=326						
NCUH				eS	Sn	10 33 58.2	-0.1
	baz=326						
NCU	National Centr	0.90	327	eP	Pn	10 33 45.7	+0.3
	baz=327						
NCU				eS	Sn	10 33 57.5	-0.7
	baz=327						
NSY	Sanyi	0.90	283	eP	Pn	10 33 45.6	+0.2
	baz=284						
NSY				eS	Sn	10 33 58.3	-0.1
	baz=284						
HSN	Hsinchu	0.90	311	eP	Pn	10 33 45.4	-0.1
	baz=305						
HSN				eS	Sn	10 33 58.4	0.0
	baz=305						
NMLH	Miaoli	0.91	291	eP	Pn	10 33 46.5	+0.9
	baz=291						
NMLH				eS	Sn	10 33 57.9	-0.6
	baz=291						
YULB	Yu-li	0.91	205	eP	Pb	10 33 43.5	-1.1
	baz=217						
YULB				eS	Sg	10 33 56.7	+0.4
	baz=217						
TWS1	Kuangyinshan	0.92	343	eP	Pn	10 33 45.9	+0.2
	baz=348						
TWS1				eS	Sn	10 33 58.7	-0.3
	baz=348						
YM01	YM01	0.94	352	eP	Pn	10 33 45.7	-0.3
	baz=337						
YM01				eS	Sg	10 33 58.0	+0.6
	baz=337						
TWF1	Yuli	0.94	204	eP	Pg	10 33 45.1	0.0
	baz=216						
TWF1				eS	Sg	10 33 57.5	0.0
	baz=216						
WHYT	Xinyi Township	0.95	237	eP	Pb	10 33 44.9	-0.5
	baz=245						
WHYT				eS	Sn	10 33 59.0	-0.5
	baz=245						
YM10	YM10	0.95	351	eP	Pn	10 33 45.9	-0.3
	baz=337						
YM04	YM04	0.95	350	eP	Pn	10 33 45.9	-0.3
	baz=356						
YM04				eS	Sn	10 33 59.1	-0.5
	baz=356						
PTSB	Yuanli	0.95	284	eP	Pn	10 33 46.8	+0.6
	baz=285						
PTSB				eS	Sn	10 34 00.2	+0.5
	baz=285						
TCU	Taichung	0.96	266	eP	Pn	10 33 47.5	+1.4
	baz=267						
YM05	YM05	0.96	352	eP	Pn	10 33 46.0	-0.3
	baz=337						
YM05				eS	Sb	10 33 57.8	-0.3
	baz=337						
YM11	YM11	0.96	352	eP	Pn	10 33 46.3	0.0
	baz=336						
YM03	YM03	0.97	350	eP	Pn	10 33 46.2	-0.3
	baz=356						
YM03				eS	Sn	10 33 59.8	-0.6
	baz=356						
YM08	YM08	0.98	353	eP	Pn	10 33 46.3	-0.2
	baz=2.0						
NTST	Danshui	0.98	345	eP	Pn	10 33 47.2	+0.7
	baz=344						
ANP	Anpu	0.98	349	eP	Pg	10 33 46.3	+0.3
	baz=349						
WJS	Zhushan	0.99	247	eP	Pn	10 33 47.0	+0.3
	baz=244						
WJS				eS	Sn	10 34 00.2	-0.3
	baz=244						
WDJ	Dajia District	0.99	278	eP	Pn	10 33 46.7	0.0
	baz=278						
WNT	Mingjian	1.00	251	eP	Pn	10 33 47.7	+0.8
	baz=249						
WNT				eS	Sn	10 34 02.5	+1.6
	baz=249						
TWY	Chenhua	1.06	354	eP	Pg	10 33 48.5	+1.1
	baz=353						
TWY				eS	Sn	10 34 03.0	+0.6
	baz=353						
WCHH	Zhanghua	1.07	263	eP	Pg	10 33 49.1	+1.5
	baz=264						
WCHH				eS	Sn	10 34 03.7	+1.1
	baz=264						
FULB	Fuli	1.08	201	eP	Pn	10 33 47.4	-0.6
	baz=219						
FULB				eS	Sn	10 34 03.8	+0.8
	baz=219						
ALS	Alishan	1.09	230	eP	Pg	10 33 47.9	-0.2
	baz=220						
ALS				eS	Sn	10 34 03.3	-0.2
	baz=220						
CHN5	Tsauling	1.14	237	eP	Pg	10 33 49.5	+0.6
	baz=240						
CHN5				eS	Sn	10 34 06.3	+2.0
	baz=240						
JYNG	Yonagunijimaku	1.14	78	P	Pb	10 33 48.6	0.0
JYNG				S	Sg	10 34 07.3	+3.5
CHKT	Chengkung	1.16	196	eP	Pn	10 33 48.3	-0.6
	baz=190						
CHKT				eS	Sg	10 34 04.9	+0.6
	baz=190						
WDLH	Douliu	1.20	244	eP	Pg	10 33 50.3	+0.2
	baz=247						
WDLH				eS	Sg	10 34 06.9	+1.2
	baz=247						
YOJ	Yonaguni jima	1.20	78	eP	Pn	10 33 49.3	-0.3
	baz=65						
YOJ	Yonaguni jima	1.20	78	P	Pb	10 33 49.5	-0.2
ELDTW	Lidau	1.21	212	eP	Pn	10 33 49.1	-0.7
	baz=214						
RLNB	Erlin	1.28	256	eP	Pg	10 33 51.8	+0.1
	baz=258						
RLNB				eS	Sg	10 34 10.3	+1.9
	baz=258						
CHN2	Minshiung	1.33	239	eP	Pg	10 33 53.1	+0.7
	baz=227						
CHN4	Tsaushan	1.34	230	eP	Pg	10 33 53.1	+0.3
	baz=234						
CHN4				eS	Sg	10 34 12.0	+1.7
	baz=234						
TPUB	Ta-pu	1.35	228	eP	Pg	10 33 52.6	-0.3
	baz=220						
TPUB				eS	Sg	10 34 12.1	+1.6
	baz=220						
STYT	Tauyuan	1.37	220	eP	Pb	10 33 52.4	-0.2
	baz=224						
STYT				eS	Sg	10 34 10.9	-0.2
	baz=224						
CHY	Chiayi	1.39	239	eP	Pg	10 33 53.6	+0.1
	baz=227						
WTP	Ta-pu	1.40	227	eP	Pg	10 33 53.4	-0.5
	baz=229						
PCYT	Pengchaiyu	1.44	13	eP	Pn	10 33 51.8	-1.1
	baz=9.0						
TWK	Hsinying	1.47	230	eP	Pb	10 33 54.4	+0.1
	baz=233						
SNST	Tainan City	1.50	229	eP	Pg	10 33 56.1	+0.4
	baz=231						
CHN1	Nanshi	1.50	227	eP	Pb	10 33 54.5	-0.2
	baz=230						
TWG	Pinlang	1.51	203	eP	Pn	10 33 52.2	-1.6
	baz=189						
TWGBT	Beinan	1.51	203	eP	Pn	10 33 53.0	-0.8
	baz=189						
TWH	Lutao	1.51	189	eP	Pn	10 33 51.5	-2.4
	baz=190						
SGST	Jiashian	1.54	223	eP	Pb	10 33 54.9	-0.5
	baz=226						
SLGT	Liugui	1.56	219	eP	Pn	10 33 54.7	+0.1
	baz=222						
SSD	Sandimen	1.77	215	eP	Pb	10 33 59.4	+0.1
	baz=229						
TWM1	Shoushan	1.83	221	eP	Pg	10 34 01.4	-0.7
	baz=223						
IRIF	Iriomote-Funau	1.84	86	P	Pn	10 33 58.1	-0.2
IRIF				eS	Sb	10 34 22.9	-0.6
MASBT	Mashibuluo	1.88	212	eP	Pn	10 33 59.1	+0.1
	baz=217						
HATJ	Hateruma jima	1.91	94	P	Pg	10 34 04.3	+0.7
HATJ				eS	Sg	10 34 29.9	+1.4
EAST	Anshuo	1.99	204	eP	Pn	10 33 59.6	-0.9
	baz=193						
PNG	Penghu	2.08	252	eP	Pn	10 34 01.6	-0.1
	baz=254						
PHUB	P'eng-hu	2.09	251	eP	Pn	10 34 01.9	+0.1
	baz=253						
JKRS	Kuro-shima	2.09	89	P	Pb	10 34 03.6	-1.2
JKRS				eS	Sb	10 34 30.4	-0.3
SCZT	Fangliau	2.10	209	eP	Pb	10 34 04.6	-0.3
	baz=193						
WDGT	Dungji	2.11	244	eP	Pn	10 34 03.1	+0.9
	baz=246						
VWUC	VWUC	2.21	291	eP	Pn	10 34 03.3	-0.1
	baz=278						
JIJ	Ishigaki jima	2.22	86	P	Pn	10 34 03.2	-0.3
JIJ				S	Sn	10 34 31.0	+0.2
VCHM	Qimei	2.33	245	eP	Pn	10 34 06.2	+1.1
	baz=233						
JISG	Ishigakijimahi	2.39	81	P	Pn	10 34 05.9	0.0
JISG				S	Sn	10 34 35.4	+0.2
TWK1	Hengchun	2.41	201	eP	Pb	10 34 08.0	-2.3
	baz=189						
TWKBT	Hengchun	2.41	200	eP	Pn	10 34 07.5	+1.3
	baz=189						
PTMZ	Houxiangcun	2.50	290	eP	Pn	10 34 07.3	-0.2
	baz=288						
MATB	Ma-tsu	2.51	321	eP	Pb	10 34 09.9	-2.1
	baz=319						
JTJ	Tarama	2.75	81	P	Pn	10 34 13.0	+2.1
JTJ				eS	Sb	10 34 47.0	-2.8
XPSS	Dashiqiu	3.04	333	eP	Pn	10 34 14.3	-0.5
	baz=331						
MHZQ	Yeshan	3.08	308	eP	Pn	10 34 15.7	+0.4
	baz=306						
AXDP	Jialang	3.48	282	eP	Pn	10 34 21.0	+0.1
	baz=281						
ZPLA	Ao Xicun	3.64	266	eP	Pn	10 34 23.4	+0.3
	baz=265						

IDC ***04*** *11:07:55.1±0.7, 6°.80N×72°.93W, h157km±8km, mb3.5/6, mb1 3.8/10, mb1mx3.3/37, mbtmp4.1/10, Error ellipse: s-maj=20.7km s-min=7.3km az=130.0*
NEIC ***04*** *11:07:55.6±2.0, 6°.83N±0°.04×72°.97W±0°.05, h154km±6km, Error ellipse: s-maj=8.5km s-min=5.4km az=57.0*
RSNC ***04*** *11:07:56.7±0.8, 6°.84N×73°.15W, h145km±4km, ML4.0, Mw4.1, Fault plane solution: NP1:φs38.00000°, δ58.00000°, λ-179.00000°.*
ISC 04 11:07:55.8±0.6, **6°.85N**±0°.03×**73°.10W**±0°.03, **h153**km±5km, **n100**, σ**1s.64**/137, **mb4.1**/18, **5C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	0.63	40	i P	Pn	11 08 19.2	+0.5
PAMC				eS	Sn	11 08 35.9	-0.3
PAMC				i		11 08 37.9	
	comp=Z,4µm,0.6s						
RUSC	La Rusia	0.96	179	eP	Pn	11 08 20.6	-0.6
RUSC				eS	Sn	11 08 38.9	-1.4
RUSC				i		11 08 41.0	
	comp=Z,2µm,0.3s						
RUSC	La Rusia	0.96	179		Pn	11 08 20.5	-0.6
RUSC				Sn	Sn	11 08 39.4	-0.9
TAMC	Tame, Arauca	1.37	108⇓	iP	Pn	11 08 25.0	+0.7
TAMC				eS	Sn	11 08 46.3	+0.2
TAMC				i		11 08 56.0	
	comp=Z,602nm,0.6s						
PTBC	PUERTO BERRIO,	1.38	257	eP	Pn	11 08 23.0	-1.4
PTBC				eS	Sn	11 08 44.5	-1.8
PTBC				i		11 08 46.7	
	comp=Z,1µm,0.2s						
OCAC	Ocana	1.39	351⇑	eP	Pn	11 08 24.3	-0.3
OCAC				eS	Sn	11 08 45.6	-1.2
OCAC				i		11 08 50.7	
	comp=Z,1µm,0.3s						
SPBC	San Pablo de B	1.54	219⇑	iP	Pn	11 08 25.5	-0.5
SPBC				eS	Sn	11 08 47.8	-1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SPBC				i		11 08 54.7	
	comp=Z,2µm,0.4s						
ZARC	Zaragoza, Cauc	1.85	290	eP	Pn	11 08 28.9	-0.6
ZARC				eS	Sn	11 08 54.5	-0.8
ZARC				i		11 09 00.1	
	comp=Z,960nm,0.3s						
SMLC	San Martn de	2.16	334	eP	Pn	11 08 32.6	-0.4
SMLC				eS	Sn	11 09 02.8	+1.1
SMLC				i		11 09 05.5	
	comp=Z,753nm,0.2s						
NORC	Norcasia	2.17	234	eP	Pn	11 08 32.3	-0.9
NORC				eS	Sn	11 09 00.4	-1.6
NORC				i		11 09 05.4	
	comp=Z,651nm,0.5s						
CHIC	Chingaza	2.30	196⇑	iP	Pn	11 08 34.6	-0.5
CHIC				eS	Sn	11 09 03.7	-1.6
CHIC				i		11 09 07.8	
	comp=Z,709nm,0.4s						
ROSC	El Rosal	2.34	211	P	Pn	11 08 36.5	+0.9
	comp=Z,256nm,0.3s,baz=296,slow=7.1,SNR=279						
ROSC				S	Sn	11 09 07.0	+0.9
	comp=Z,282nm,0.3s,baz=138,slow=20,SNR=8.9						
ROSC	El Rosal	2.34	211⇑	iP	Pn	11 08 36.4	+0.9
ROSC				eS	Sn	11 09 06.8	+0.7
ROSC				i		11 09 13.3	
	comp=Z,1µm,0.7s						
ROSC	El Rosal	2.34	211		Pn	11 08 36.3	+0.9
ROSC				Sn	Sn	11 09 07.4	+1.3
HELC	Santa Helena	2.50	255	eP	Pn	11 08 36.9	-0.5
HELC				eS	Sn	11 09 07.9	-1.5
HELC				i		11 09 14.1	
	comp=Z,704nm,0.9s						
CVER	Cruz Verde, Cu	2.51	203	eP	Pn	11 08 40.0	+2.3
UREC	San Jos de Ur	2.57	290	eP	Pn	11 08 36.5	-1.4
UREC				eS	Sn	11 09 07.0	-3.5
UREC				i		11 09 20.4	
	comp=Z,634nm,0.3s						
VILC	Villavicencio,	2.79	192	eP	Pn	11 08 40.0	-0.7
VILC				eS	Sn	11 09 13.9	-1.6
VILC				i		11 09 18.9	
	comp=Z,666nm,0.8s						
PTGC	Puerto Gaitan,	2.81	160	eP	Pn	11 08 39.7	-1.2
PTGC				eS	Sn	11 09 13.0	-2.8
PTGC				i		11 09 15.7	
	comp=Z,686nm,0.4s						
RREF	El Recreo	2.96	229	eP	Pn	11 08 43.4	0.0
RREF				eS	Sn	11 09 18.6	-1.5
RREF				i		11 09 28.4	
	comp=Z,716nm,0.6s						
CBOC	Ciudad Bolivar	3.06	251	eP	Pn	11 08 44.3	+0.1
CBOC				eS	Sn	11 09 19.8	-1.8
CBOC				i		11 09 32.3	
	comp=Z,235nm,0.5s						
SDV	Santo Domingo	3.17	50	P	Pn	11 08 45.1	-0.5
	comp=Z,63nm,0.3s,baz=251,slow=4.9,SNR=54						
SDV				S	Sn	11 09 21.6	-2.7
	comp=Z,145nm,0.3s,baz=48,slow=17,SNR=41						
SDV	Santo Domingo	3.17	50	eP	Pn	11 08 45.9	+0.2
SDV				eS	Sn	11 09 22.6	-1.7
SDV				i		11 09 25.9	
	comp=Z,329nm,0.4s						
SDV	Santo Domingo	3.17	50		Pn	11 08 45.6	0.0
SDV					Sn	11 09 22.3	-1.9
ARGC	Ariguani, Magd	3.19	339	eP	Pn	11 08 46.4	+0.7
ARGC				eS	Sn	11 09 24.4	0.0
ARGC				i		11 09 32.5	
	comp=Z,304nm,0.4s						
ANIL	Santa Ana	3.28	224	eP	Pn	11 08 47.4	+0.3
ANIL				eS	Sn	11 09 28.5	+1.6
ORTC	Ortega, Tolima	3.62	216	eP	Pn	11 08 50.6	-0.7
ORTC				eS	Sn	11 09 34.3	-0.1
ORTC				i		11 09 40.6	
	comp=Z,421nm,0.4s						
SJCC	San Jacinto, C	3.66	326	eP	Pn	11 08 50.6	-1.1
SJCC				eS	Sn	11 09 31.2	-4.0
SJCC				i		11 09 35.0	
	comp=Z,339nm,0.4s						
LCBC	Los crdobas,	3.80	302	eS	Sn	11 09 37.4	-1.0
GUVC	San Jose del G	4.31	174	eP	Pn	11 08 59.6	-0.6
GUVC				eS	Sn	11 09 48.0	-2.4
GUVC				i		11 09 55.0	
	comp=Z,353nm,0.2s						
YOTC	Yotoco, Valle	4.31	229	eP	Pn	11 08 59.4	-0.9
YOTC				eS	Sn	11 09 36.4	-14
SMRC	Santa Marta, M	4.42	346	eP	Pn	11 09 01.5	-0.1
SMRC				eS	Sn	11 09 49.5	-3.6
SMRC				i		11 09 49.9	
	comp=Z,80nm,0.4s						
CAPC	Capurgana	4.57	293	eP	Pn	11 09 01.5	-2.0
CAPC				eS	Sn	11 09 48.4	-8.0
CAPC				i		11 09 57.4	
	comp=Z,79nm,0.7s						
PIZC	Pizarro, Choco	4.63	246	eP	Pn	11 09 04.9	+0.5
PIZC				eS	Sn	11 09 57.0	-0.9
PIZC				i		11 10 05.5	
	comp=Z,87nm,1.0s						
PTAC	Punta Ardita,	4.68	274	eP	Pn	11 09 03.8	-1.3
PTAC				i		11 10 04.3	
	comp=Z,114nm,0.6s						
MACC	Macarena, Meta	4.74	189⇑	iP	Pn	11 09 03.6	-2.2
MACC				eS	Sn	11 09 55.6	-4.9
MACC				i		11 10 00.1	
	comp=Z,172nm,1.3s						
BETC	Betania	4.76	209	eP	Pn	11 09 04.5	-1.6
BETC				eS	Sn	11 09 57.7	-3.3
HORQ	Saladito	4.85	226	eP	Pn	11 09 07.3	-0.3
HORQ				eS	Sn	11 10 02.3	-1.2
HORQ				i		11 10 08.7	
	comp=Z,65nm,1.0s						
URIC	Uribia, Colomb	4.94	13		Pn	11 09 06.4	-2.1
MALC	Bahia Malaga	5.07	236	eP	Pn	11 09 10.4	+0.2
MALC				i		11 10 10.2	
	comp=Z,104nm,0.9s						
GARC	Garzon, Huila	5.21	207	eP	Pn	11 09 10.8	-1.5
GARC				eS	Sn	11 10 05.8	-6.3
GARC				i		11 10 12.5	
	comp=Z,104nm,0.3s						
PCON	Cinco Dias	5.57	216	eP	Pn	11 09 17.8	+0.4
PCON				i		11 10 29.2	
	comp=Z,42nm,0.6s						
SOTA	Rioblanco	5.85	217	eP	Pn	11 09 21.6	+0.6
SOTA				eS	Sn	11 10 23.7	-3.9
SOTA				i		11 10 35.3	
	comp=Z,42nm,0.8s						
CRUC	La Cruz	6.50	216	eP	Pn	11 09 30.8	+1.2
CRUC				i		11 10 47.1	
	comp=Z,36nm,0.9s						
GCUF	Volcan Galeras	7.01	217	eP	Pn	11 09 37.1	+0.6
GCUF				eS	Sn	11 10 53.7	-1.8
GCUF				i		11 11 07.6	
	comp=Z,18nm,0.6s						
BCIP	Isla Barro Col	7.05	289	Pn	Pn	11 09 34.0	-2.6
PCRV	Puerto La Cruz	9.00	68	P	Pn	11 10 01.4	-1.2
	comp=Z,1.8nm,0.3s,baz=302,slow=1.7,SNR=16						
PLCV	Puerto La Cruz	9.04	68		Pn	11 10 01.4	-1.7
MTDJ	Mount Denham	12.10	339		Pn	11 10 46.0	+2.6
SDDR	Presa de Saban	12.18	8		P	11 10 47.8	-2.8
JTS	Las Juntas de	12.21	287	P	Pn	11 10 46.8	+2.0
	comp=Z,0.3nm,0.3s,baz=117,slow=11,SNR=2.9						
MPR	Mayaguez	12.70	27	Pn	Pn	11 10 48.4	-2.6
PDPR	Patillas Dam,	13.07	31	Pn	Pn	11 10 54.5	-1.3
GTBY	Guantanamo Bay	13.14	352	P	P	11 11 00.0	-1.2
HUMP	Col San Antoni	13.26	32	Pn	Pn	11 10 56.2	-2.1
GCPR	Guaynabo City	13.28	30	Pn	Pn	11 10 57.3	-1.3
CBYP	Canovanas	13.37	31	Pn	Pn	11 10 58.2	-1.5
MTP	Monte Pirata	13.38	33	Pn	Pn	11 10 58.6	-1.2
CDVI	St. Croix	13.54	36	Pn	Pn	11 11 01.2	-0.6
MCLT	Moule a Chique	13.76	59	P	P	11 11 10.2	+2.1
STVI	Saint Thomas	13.91	34	Pn	Pn	11 11 06.1	-0.4
CBCY	The Bluff, Cay	14.35	334	P	P	11 11 15.5	+1.0
SAML	Samuel	18.55	148	P	P	11 11 60.0	-1.0
LPAZ	La Paz	23.51	168	P	P	11 12 51.0	-1.8
	comp=Z,0.8nm,0.7s,baz=342,slow=6.4,SNR=3.0						
LPAZ	La Paz	23.51	168	P	P	11 12 51.4	-1.4
LPAZ				pP	pP	11 13 25.2	+2.5
GO01	Chusmiza	26.64	172	P	P	11 13 18.7	-2.2
BIRD	Birdtown, Kers	28.48	347	P	P	11 13 37.6	+1.1
BIRD				IAmb	IAmb	11 13 44.1	
	comp=Z,5.9nm,1.1s						
HODGE	Hodges	28.53	344	P	P	11 13 38.3	+1.3
HODGE				IAmb	IAmb	11 13 53.6	
	comp=Z,3.9nm,0.9s						
PLAL	Pickwick Lake	31.20	336	P	P	11 14 02.2	+1.6
V48A	Smith Brothers	31.39	338	P	P	11 14 04.1	+1.9
WHAR	Wooly Hollow	33.35	331	P	P	11 14 20.1	+0.7
WHAR				IAmb	IAmb	11 14 35.4	
	comp=Z,3.1nm,1.0s						
FCAR	Ozark Folk Cen	33.75	332	P	P	11 14 23.0	+0.2
N59A	State Game Lan	34.00	356	P	P	11 14 26.5	+1.5
U40A	Yellville	34.48	331	P	P	11 14 29.0	-0.1
U40A				IAmb	IAmb	11 14 30.1	
	comp=Z,2.8nm,0.8s						
KSPA	Keystone Colle	34.64	356	P	P	11 14 31.9	+1.5
KSPA				IAmb	IAmb	11 14 33.0	
	comp=Z,4.2nm,0.6s						
CCM	Cathedral Cave	35.15	335	P	P	11 14 35.5	+0.7
CCM				IAmb	IAmb	11 14 36.0	
	comp=Z,3.4nm,0.6s						
TXAR	Lajitas Array	36.45	312	P	P	11 14 46.5	+0.3
	comp=Z,0.7nm,0.6s,baz=122,slow=8.8,SNR=8.5						
TX31	Lajitas Ar. Si	36.45	312	P	P	11 14 46.8	+0.6
TX31				IAmb	IAmb	11 14 57.8	
	comp=Z,5.7nm,1.3s						
TX32	Lajitas Array	36.45	312	P	P	11 14 46.3	+0.1
I63A	Otisfield	37.12	3	P	P	11 14 53.1	+1.6
EMMW	East Machias	38.03	7	P	P	11 15 00.1	+1.0
EMMW				IAmb	IAmb	11 15 00.7	
	comp=Z,4.9nm,0.7s						
PKME	Peaks-Kenny Pk	38.41	4	P	P	11 15 03.4	+1.1
PKME				IAmb	IAmb	11 15 03.5	
	comp=Z,4.5nm,0.8s						
F64A	Sherman	39.08	5	P	P	11 15 08.6	+0.8
F64A				IAmb	IAmb	11 15 10.3	
	comp=Z,4.8nm,1.2s						
E63A	Oxbow	39.63	5	P	P	11 15 13.3	+0.9
D53A	Lac Vacive, Po	40.27	355	P	P	11 15 18.7	+1.0
D53A				IAmb	IAmb	11 15 35.5	
	comp=Z,6.9nm,1.2s						
ECSD	EROS Data Cent	42.13	334	P	P	11 15 33.3	+0.4
EYMN	Ely	43.84	342	P	P	11 15 46.5	-0.2
B35A	Bob, Littlefor	44.92	341	P	P	11 15 55.1	-0.1
B35A				IAmb	IAmb	11 16 00.1	
	comp=Z,12nm,1.5s						
ULM	Lac du Bonnet	47.26	340	P	P	11 16 12.8	-0.7
	comp=Z,1.8nm,0.5s,baz=164,slow=6.9,SNR=5.4						
ULM	Lac du Bonnet	47.26	340	P	P	11 16 12.6	-0.9
ULM				IAmb	IAmb	11 16 13.0	
	comp=Z,3.2nm,1.1s						
SCHQ	Schefferville	48.11	5	P	P	11 16 20.4	+0.5
	comp=Z,5.2nm,0.6s,baz=197,slow=7.2,SNR=13						
SCHQ	Schefferville	48.11	5	P	P	11 16 20.6	+0.7
SCHQ				IAmb	IAmb	11 16 20.8	
	comp=Z,5.2nm,0.7s						
BGU	Big Grassy Mou	49.13	320	P	P	11 16 28.8	+0.6
YKA	Yellowknife Ar	63.24	340	P	P	11 18 07.3	-0.3
	comp=Z,1.0nm,0.5s,baz=133,slow=7.2,SNR=19						
SUMG	Summit	68.95	11	P	P	11 18 44.2	-0.2
INK	Inuvik	73.01	340	P	P	11 19 06.1	-2.3
	comp=Z,0.8nm,0.7s,baz=85,slow=4.6,SNR=5.8						
INK	Inuvik	73.01	340	P	P	11 19 06.5	-1.9
INK				IAmb	IAmb	11 19 20.0	
	comp=Z,2.8nm,1.4s						
DOT	Dot Lake	75.48	334	P	P	11 19 24.6	+1.7
ASAR	Alice Springs	149.15	234	PKPbc	PKPdf	11 27 25.4	+2.7
	comp=Z,1.1nm,0.7s,baz=117,slow=3.5,SNR=14						
WRA	Warramunga Arr	150.37	241	PKPbc	PKPbc	11 27 28.6	-1.4
	comp=Z,0.8nm,0.4s,baz=109,slow=2.6,SNR=26						

*IDC **04** 11:08:53.2±2.9, 13.°65N×92.°03W, h0km, mb3.8/4, mb1 4.2/8, mb1mx3.8/45, mbtmp3.9/8, ML3.6/3, Error ellipse: s-maj=53.7km s-min=25.3km az=168.0*
*UCR **04** 11:08:55.6±1.4, 13.°79N×92.°18W, h23km±10km, ML3.7, mb4.2(NEIC)*
*SNET **04** 11:08:55.3±1.4, 13.°78N×92.°19W, h22km±11km, ML3.9*
*GCG **04** 11:08:56.2±0.4, 13.°71N×92.°14W, h35km±94km, MD4.3*
*MEX **04** 11:08:57.6±0.6, 14.°02N×91.°72W, h105km±24km, MD4.0*
*NEIC **04** 11:09:01.3±3.0, 13.°93N±0.°07×91.°98W±0.°04, h41km±9km, mb4.2/32, Md4.0/13(MEX), Error ellipse: s-maj=11.5km s-min=0.9km az=212.0*
ISC 04 11:09:01.6±0.9, **13.°87N**±0.°08×**92.°06W**±0.°05, **h54**km, **n80, σ2.s19**/84, **mb4.3**/17, **1C, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.74	28	eS	Sn	11 09 23.9	-2.7
STG3	Santiaguito 3,	0.96	29	eP	Pn	11 09 16.3	-2.8
THIG		1.05	349		Pn	11 09 18.0	-2.1
THIG					Sn	11 09 32.8	-1.0
THIG		1.05	349	eP	Pn	11 09 18.0	-2.1
THIG				eS	Sn	11 09 32.8	-1.0
FUG	Fuego 3	1.31	64	eP	Pn	11 09 20.8	-3.0
HUEH	Huehuetenango	1.54	20	eP	Pn	11 09 24.6	-2.3
HUEH				eS	Sn	11 09 45.7	-0.1
IXG	Ixpaco	1.59	79	eP	Pn	11 09 23.3	-4.3
IXG	Ixpaco	1.59	79	eP	Pn	11 09 24.2	-3.4
IXG	Ixpaco	1.59	79	eP	Pn	11 09 23.3	-4.3
NBG	Las Nubes	1.80	67	eS	Sn	11 09 52.5	0.0
APG	El Apazote	1.91	54	Pn	Pn	11 09 30.0	-1.9
	18nm,0.3s,baz=215,slow=8.6,SNR=120						
APG				Sn	Sn	11 09 55.0	0.0
	30nm,0.3s,baz=286,slow=18,SNR=12						
PCIG		2.14	328		Pn	11 09 32.1	-2.8
PCIG					Sn	11 09 58.6	-1.7
PCIG		2.14	328	eP	Pn	11 09 32.1	-2.8
PCIG				i S	Sn	11 09 58.6	-1.7
RTR	El Retiro	2.34	89	eP	Pn	11 09 34.6	-3.2
RTR	El Retiro	2.34	89	eP	Pn	11 09 34.6	-3.2
CEVE	Cerro Verde	2.36	91	eS	Sn	11 10 07.0	+0.9
CEVE				IAML		11 10 19.1	
	comp=Z,589nm,0.3s						
CEVE	Cerro Verde	2.36	91	eS	Sn	11 10 07.0	+0.9
CEVE				IAML		11 10 19.1	
	comp=Z,589nm,0.3s						
CCIG	Comitan	2.40	358		Pn	11 09 39.1	+0.5
MRL	Marmol	2.59	62	eP	Pn	11 09 39.3	-2.0
MRL	Marmol	2.59	62	eP	Pn	11 09 39.3	-2.0
ESQI	Esquipulas	2.72	75	eP	Pn	11 09 39.9	-3.0
SNET	Serv Nac Est T	2.75	93	Pn	Pn	11 09 40.1	-3.2
LFRS	El Faro	2.92	94	eP	Pn	11 09 42.5	-3.2
LFRS	El Faro	2.92	94	eP	Pn	11 09 42.5	-3.2
TGIG		3.07	341		Pn	11 09 46.9	-0.8
TGIG		3.07	341	eP	Pn	11 09 46.9	-0.8
CMIG	Matias Romero	4.21	320	Pn	Pn	11 10 00.8	-2.4
	comp=Z,2.5nm,0.3s,baz=151,slow=12,SNR=21						
CMIG				Sn	Sn	11 10 49.4	-1.7
	comp=Z,15nm,0.3s,baz=100,slow=21,SNR=7.0						
CMIG	Matias Romero	4.21	320		Pn	11 10 01.4	-1.9
CMIG	Matias Romero	4.21	320⇑	eP	Pn	11 10 00.8	-2.4
CMIG				eS	Sn	11 10 49.7	-1.4
TGUH	Tegucigalpa,Un	4.65	87		Pn	11 10 11.8	+2.4
MATN	Matagalpa	6.04	98		Pn	11 10 26.3	-2.2
TOIG	Toxpalan	6.39	312	eP	Pn	11 10 35.6	+2.3
ACON	Acoyapa	6.97	105	Pn	Pn	11 10 40.1	-1.0
TLIG	Tlapa	7.26	301		Pn	11 10 45.9	+0.6
TEIG	Tepich	7.28	29	Pn	Pn	11 10 44.1	-1.3
JTS	Las Juntas de	7.80	116	Lg	Lg	11 12 52.3	
	comp=Z,0.1nm,0.3s,baz=272,slow=2.1,SNR=4.3						
JTS	Las Juntas de	7.80	116		Pn	11 10 52.8	+0.2
H06E1	SOCORRO T-PHAS	18.75	288	T	T	11 32 26.4	
	SNR=35						
TXAR	Lajitas Array	18.77	327	P	Pn	11 13 18.3	+0.8
	comp=Z,0.1nm,0.3s,baz=155,slow=12,SNR=22						
TX31	Lajitas Ar. Si	18.77	327	P	Pn	11 13 18.5	+1.0
TX32	Lajitas Array	18.77	327	P	Pn	11 13 18.1	+0.6
LRAL	Lakeview Retre	19.63	13	P	P	11 13 25.0	-0.7
URIC	Uribia, Colomb	19.68	94		Pn	11 13 26.5	-1.8
Z50A	Ashland	20.09	15	P	Pn	11 13 31.0	-2.0
Z50A				IAmb	IAmb	11 13 43.2	
	comp=Z,11nm,1.4s						
154A	Montrose	20.37	22	P	P	11 13 31.3	-2.5
Y49A	Blount Mountai	20.55	13	P	Pn	11 13 37.1	-1.2
Y49A				IAmb	IAmb	11 13 51.1	
	comp=Z,9.6nm,1.4s						
GDL2	Guadalupe Moun	21.44	330	P	P	11 13 47.0	+1.6
MNTX	Cornudas Mount	21.55	328	P	P	11 13 47.0	+0.6
W35A	Tecumseh	21.63	349	P	P	11 13 45.7	-1.6
WMOK	Wichita Mounta	21.65	345	P	P	11 13 46.9	-0.6
CPCT	Cooper Cave	22.53	16	P	P	11 13 54.0	-3.1
PARMO	Parma	22.79	5	P	P	11 14 00.6	+0.9
V51A	Loudon	22.91	16	P	P	11 13 56.6	-4.3
V51A				IAmb	IAmb	11 14 11.3	
	comp=Z,18nm,1.5s						
PCDR	Punta Cana, DR	23.19	75	P	P	11 14 08.1	+4.2
121A	Cookes Peak, D	23.48	325	P	P	11 14 09.9	+3.2
121A				IAmb	IAmb	11 14 11.1	
	comp=Z,6.5nm,1.1s						
S44A	Carbondale	23.86	5	P	P	11 14 08.0	-1.9
S44A				IAmb	IAmb	11 14 10.5	
	comp=Z,6.8nm,0.7s						
SIUC	Southern Illin	23.88	6	P	P	11 14 07.6	-2.5
SIUC				IAmb	IAmb	11 14 09.9	
	comp=Z,7.5nm,0.9s						
BNM	Barren Site	24.13	329	P	P	11 14 14.1	+1.3
Y22D	IRIS PASSCAL I	24.21	329	P	P	11 14 15.9	+2.5
Y22D				IAmb	IAmb	11 14 17.2	
	comp=Z,10nm,0.8s						
LENM	Lemitar	24.31	329	P	P	11 14 18.0	+3.7
ANMO	Albuquerque	24.69	331	P	P	11 14 18.9	+1.1
	comp=Z,1.8nm,0.7s,baz=147,slow=12,SNR=13						
ANMO	Albuquerque	24.69	331	P	P	11 14 18.3	+0.5
SFIN	Lafayette	26.76	8	P	P	11 14 40.1	+3.8
SFIN				IAmb	IAmb	11 14 40.6	
	comp=Z,5.5nm,0.7s						
KNB	Kanab	29.58	325	P	P	11 15 05.0	+3.3
REDW	Red Top Meadow	33.54	335	P	P	11 15 38.1	+1.6
REDW				IAmb	IAmb	11 15 39.0	
	comp=Z,3.8nm,1.1s						
SNOW	Snow King Moun	33.58	335	P	P	11 15 37.7	+0.9
SNOW				IAmb	IAmb	11 15 39.4	
	comp=Z,4.9nm,1.1s						
NVAR	Mina Array Bea	33.74	321	P	P	11 15 39.0	+0.7
	comp=Z,1.5nm,0.8s,baz=130,slow=8.2,SNR=9.3						
MCMT	McKenzie Canyo	35.56	334	P	P	11 15 56.0	+2.0
J08A	Circle Bar Ran	37.12	327	P	P	11 16 09.7	+2.5
J08A				IAmb	IAmb	11 16 10.7	
	comp=Z,8.0nm,1.3s						
YKA	Yellowknife Ar	51.14	347	P	P	11 17 57.4	-1.4
	comp=Z,0.5nm,0.6s,baz=150,slow=7.9,SNR=9.7						
HIN	Hinchinbrook I	60.84	332	P	P	11 19 10.4	+2.1
PMR	Palmer	62.51	333	P	P	11 19 20.9	+1.5
PMR				IAmb	IAmb	11 19 34.1	
	comp=Z,4.2nm,1.4s						
IL31		62.94	337	P	P	11 19 21.5	-0.6
IL31				IAmb	IAmb	11 19 23.8	
	comp=Z,3.1nm,1.2s						
ILAR	Eielson Array	62.94	337	P	P	11 19 21.4	-0.8
	comp=Z,1.0nm,0.8s,baz=124,slow=5.0,SNR=9.2						
RND	Reindeer	63.12	335	P	P	11 19 24.3	+0.8
ANGG	Ammassalik, Gr	63.17	22	P	P	11 19 23.2	-0.4
TRF	Thorofare Moun	63.73	335	P	P	11 19 29.7	+2.0
TRF				IAmb	IAmb	11 19 29.9	
	comp=Z,1.1nm,0.6s						
MLY	Manley	64.53	336	P	P	11 19 32.7	0.0
TOLK	Toolik Lake Re	65.62	340	P	P	11 19 40.9	+1.2
TOLK				IAmb	IAmb	11 19 41.4	
	comp=Z,2.9nm,0.8s						
CMAR	Chiang Mai Arr	146.09	341	PKPbc	PKPab	11 28 37.0	-0.2
	comp=Z,1.9nm,0.8s,baz=328,slow=3.1,SNR=11						

*UCR **04** 11:17:47.5±1.2, 13.°72N×92.°12W, h26km±17km, ML3.6*
*SNET **04** 11:17:47.5±1.1, 13.°71N×92.°10W, h26km±16km, ML3.8*
*MEX **04** 11:17:50.1±0.4, 14.°16N×91.°73W, h102km±12km, MD3.8*
*GCG **04** 11:17:53.0±0.5, 14.°00N×91.°81W, h17km±8km, MD3.7*
ISC 04 11:17:48.0±2.2, **13.°7N**±0.°1×**92.°13W**±0.°07, **h37**km, **n22, σ0.s98**/24, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	Retalhuleu	0.94	26	eP	Pn	11 18 03.9	-0.7
RTAL				eS	Sn	11 18 16.6	-0.2
STG3	Santiaguito 3,	1.16	28	eP	Pn	11 18 07.4	-0.4
THIG		1.23	354	eP	Pn	11 18 08.6	+0.1
THIG				eP		11 18 08.9	
THIG				eS	Sn	11 18 22.8	-1.1
FUG	Fuego 3	1.46	58	eP	Pn	11 18 11.9	-0.1
PCG	Pacaya	1.63	64	eP	Pn	11 18 15.8	+1.4
PCG				eS	Sn	11 18 33.2	-1.1
IXG	Ixpaco	1.71	73	eP	Pn	11 18 14.6	-0.7
IXG	Ixpaco	1.71	73	eP	Pn	11 18 15.3	0.0
IXG	Ixpaco	1.71	73	eP	Pn	11 18 14.6	-0.7
HUEH	Huehuetenango	1.73	20	eP	Pn	11 18 16.0	+0.3
NBG	Las Nubes	1.95	62	eP	Pn	11 18 20.3	+1.6
PCIG		2.27	332	eP	Pn	11 18 23.0	0.0
RTR	El Retiro	2.42	85	eP	Pn	11 18 25.7	+0.6
RTR	El Retiro	2.42	85	eP	Pn	11 18 25.7	+0.6
CEVE	Cerro Verde	2.43	86	IAML		11 18 58.2	
	comp=Z,484nm,0.2s						
CEVE				IAML		11 19 02.6	
CEVE	Cerro Verde	2.43	86	IAML		11 18 58.2	
	comp=Z,484nm,0.2s						
CEVE				IAML		11 19 02.6	
SNJE	San Jose	2.46	85	eP	Pn	11 18 26.3	+0.6
SNJE	San Jose	2.46	85	eP	Pn	11 18 26.3	+0.6
CCIG	Comitan	2.58	360	i P	Pn	11 18 30.2	+2.8
MRL	Marmol	2.74	59	eP	Pn	11 18 30.7	+1.0
MRL	Marmol	2.74	59	eP	Pn	11 18 30.7	+1.0
ESQI	Esquipulas	2.84	72	eP	Pn	11 18 31.1	+0.3
CMIG	Matias Romero	4.31	322	eP	Pn	11 18 51.2	+0.2
CMIG				i S	Sn	11 19 39.4	-0.6

*IDC **04** 11:40:36.5±5.3, 25.°73S×178.°41E, h596km±63km, mb3.2/5, mb1 3.3/6, mb1mx3.0/30, mbtmp4.2/6, Error ellipse: s-maj=47.9km s-min=37.0km az=2.0*
*NEIC **04** 11:40:36.6±2.4, 25.°7S±0.°1×178.°7E±0.°2, h615km±8km, mb4.2/19, Error ellipse: s-maj=20.9km s-min=17.6km az=87.0*
ISC 04 11:40:34.4±0.7, **25.°7S**±0.°1×**178.°7E**±0.°1, **h585**km, **n39, σ1.s27**/39, **mb4.2**/16, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.67	141	P	P	11 42 03.1	-0.5
MSVF	Nonsavu	7.90	355	P	P	11 42 40.2	+7.7
URZ	Urewera	12.64	186	P	P	11 43 20.6	+1.2
	0.8nm,0.3s,baz=273,slow=4.8,SNR=7.7						
URZ	Urewera	12.64	186	P	P	11 43 21.8	+2.4
BKZ	Black Stump Fm	13.60	187	P	P	11 43 29.2	-0.2
NNZ	Nelson	16.14	195	P	P	11 43 54.6	+1.1
BSWZ	Blackbirch Sta	16.51	193	P	P	11 43 59.5	+2.6
WHZ	Wether Hill Ro	21.96	200	P	P	11 44 47.0	+0.8
EIDS	Eidsvold	24.92	265	P	P	11 45 13.5	+0.8
EIDS				IAmb	IAmb	11 45 20.4	
	comp=Z,9.3nm,1.4s						
CTAO	Charters Tower	30.36	274	P	P	11 46 01.2	+1.0
CTAO				IAmb	IAmb	11 46 01.9	
	comp=Z,6.6nm,0.8s						
STKA	Stephens Creek	33.01	250	P	P	11 46 20.8	-1.7
	comp=Z,1.2nm,0.4s,baz=106,slow=12,SNR=7.1						
STKA	Stephens Creek	33.01	250	P	P	11 46 22.4	-0.1
COEN	Coen	35.29	282	P	P	11 46 42.7	+1.0
COEN				IAmb	IAmb	11 46 43.6	
	comp=Z,7.0nm,1.1s						
BBOO	Buckleboo	37.70	249	P	P	11 47 00.2	-1.1
AS31	Alice Springs	40.62	263	P	P	11 47 24.5	-0.4
ASAR	Alice Springs	40.62	263	P	P	11 47 24.4	-0.5
	comp=Z,2.7nm,0.5s,baz=95,slow=7.0,SNR=104						
WR0	Warramunga Arr	40.97	269	P	P	11 47 26.6	-1.0
WB2	Warramunga Arr	41.14	269	P	P	11 47 28.3	-0.7
WB2				IAmb	IAmb	11 47 28.6	
	comp=Z,5.1nm,0.5s						
WRAB	Tennant Creek	41.15	269	P	P	11 47 28.4	-0.7
WRAB				IAmb	IAmb	11 47 28.5	
	comp=Z,6.8nm,0.9s						
WRA	Warramunga Arr	41.15	269	P	P	11 47 28.3	-0.8
	comp=Z,2.4nm,0.3s,baz=102,slow=8.3,SNR=69						
WB0	Warramunga Arr	41.16	269	P	P	11 47 28.4	-0.8
WB0				IAmb	IAmb	11 47 29.2	
	comp=Z,5.6nm,0.9s						
FORT	Forrest	44.62	251	P	P	11 47 54.3	-1.7
FORT				IAmb	IAmb	11 48 01.8	
	comp=Z,13nm,1.1s						
KNRA	Kununurra	47.54	272	P	P	11 48 18.0	-0.2
FITZ	Fitzroy Crossi	49.55	268	P	P	11 48 32.7	-0.4
NWAO	Narrogin (SRO)	53.46	247	P	P	11 48 59.7	-1.3
NWAO				IAmb	IAmb	11 49 05.3	
	comp=Z,22nm,1.2s						
MORW	Morawa	55.19	251	P	P	11 49 11.9	-1.2
MORW				IAmb	IAmb	11 49 22.1	
	comp=Z,17nm,1.5s						
QSPA	South Pole Qui	64.44	180	P	P	11 50 14.7	+0.8
QSPA				IAmb	IAmb	11 50 18.4	
	comp=Z,9.6nm,1.4s						
MJAR	Matsushiro Arr	72.69	327	P	P	11 51 03.9	0.0
	comp=Z,0.8nm,0.8s,baz=168,slow=8.4,SNR=5.2						
PETK	Petropavlovsk-	80.53	347	P	P	11 51 47.8	+1.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,1.0nm,0.6s,baz=114,slow=5.5,SNR=4.6						
SNAA	Sanae	82.94	180	P	P	11 51 57.8	-0.5
WAKR	Walker	86.15	44	P	P	11 52 11.4	-3.2
WAKR				IAmb	IAmb	11 52 12.4	
	comp=Z,7.9nm,0.9s						
NC303	NORSAR Array S	143.41	350		PKPdf	11 59 01.9	-0.5
NB201	NORSAR Array S	143.59	350		PKPdf	11 59 02.7	0.0
NB2	NORSAR Subarra	143.61	350	PKP	PKPdf	11 59 02.5	-0.3
	comp=Z,4.9nm,0.8s,baz=22,slow=2.6						
NOA	NORSAR Array B	143.61	350	PKP	PKPdf	11 59 02.8	0.0
	comp=Z,3.9nm,0.9s,baz=22,slow=2.6,SNR=15						
AKASG	Malin Array Be	145.76	325	PKPbc	PKPbc	11 59 08.5	0.0
	comp=Z,0.5nm,0.4s,baz=40,slow=3.6,SNR=8.4						
BRTR	Keskin Array B	147.65	304	PKPbc	PKPbc	11 59 14.2	+0.1
	comp=Z,1.3nm,0.9s,baz=130,slow=4.1,SNR=4.4						
BUR08	Bucovina Ar. S	149.70	323		PKiKP	11 59 21.3	+1.8
CLL	Collm	152.15	341	*e*PKPbc	PKiKP	11 59 26.0	+1.7
CLL				*e*(PKPab)	PKPab	11 59 39.0	+2.3

*SOME **04** 11:45:06.6, 43°.77N×69°.78E*
*NNC **04** 11:45:10.7±5.3, 43°.72N×70°.03E, h0km, mb3.5, mpv2.8, Error ellipse: s-maj=31.3km s-min=11.0km az=146.0, Suspected Mining explosion.*
ISC 04 11:45:07.4±7.0, **43°.7N**±0°.2×**69°.9E**±0°.4, **h0**km, **n9**, σ**0s68**/10, **3C-3D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	0.74	145	⇑P	Pb	11 45 23.3	+0.1
	1.3nm,0.2s,baz=324,slow=17,SNR=95						
KK31				⇓S	Sb	11 45 34.5	+0.6
	16nm,0.4s,baz=332,slow=31,SNR=85						
EKS2	Erkin-Say	3.00	109	P	Pg	11 46 05.5	+0.6
	SNR=11						
AML	Almayashu	3.18	119	P	Pg	11 46 08.3	-0.1
	SNR=5.0						
USP	Ospenovka	3.35	96	P	Pg	11 46 12.0	+0.4
	SNR=12						
AAK	Ala-Archa	3.51	106	P	Pg	11 46 14.2	-0.3
	SNR=10						
AAK	Ala-Archa	3.51	106	⇑Pg	Pg	11 46 14.1	-0.4
	3.9nm,0.5s,baz=332,slow=31						
AAK				⇓Lg	Lg	11 47 05.0	
	4.3nm,0.5s,baz=332,slow=31						
UCH	Uchtor	3.67	112	P	Pg	11 46 16.9	-0.9
	SNR=7.4						
TKM2	Tokmak 2	4.21	99	⇓Pg	Pg	11 46 27.8	-0.2
	2.0nm,0.5s,baz=332,slow=31						
TKM2				⇑Lg	Lg	11 47 25.7	
	3.6nm,0.4s,baz=332,slow=31						
KZA	Kyzart	4.24	111	P	Pg	11 46 27.4	-1.1
	SNR=5.6						

*SOME **04** 11:46:55.4, 39°.60N×75°.92E, h0km*
*NNC **04** 11:47:00.0±3.8, 39°.67N×75°.94E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=25.9km s-min=24.8km az=151.0*
*KRNET **04** 11:47:05.9±0.1, 39°.54N×75°.85E, mb3.2*
ISC 04 11:46:59.8±3.0, **39°.7N**±0°.1×**75°.85E**±0°.06, **h0**km±17km, **n24**, σ**1s24**/38, **20C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZA	Kyzart	2.45	349	⇑*i*P	Pg	11 47 48.2	+1.4
	baz=50						
KZA				⇑*i*S	Sg	11 48 19.2	+0.7
	baz=50						
KZA	Kyzart	2.45	349	P	Pg	11 47 48.6	+1.9
	SNR=7.3						
KDJ	Kajisay	2.66	22	⇑*i*P	Pg	11 47 51.4	+0.7
	baz=21						
KDJ				⇑*i*S	Sg	11 48 24.0	-1.2
	baz=21						
ARSB	Arslanbob	2.74	308	⇓*i*P	Pb	11 47 51.8	+2.1
	baz=10.0						
ARSB				⇓*i*S	Sb	11 48 24.9	+1.0
	baz=10.0						
UCH	Uchtor	2.75	339	⇑*i*P	Pg	11 47 52.7	+0.2
	baz=40						
UCH				⇑*i*S	Sg	11 48 26.9	-1.3
	baz=40						
UCH	Uchtor	2.75	339	P	Pg	11 47 53.8	+1.3
	SNR=9.3						
BOOM	Boomskoye usch	2.82	1	⇑*i*P	Pg	11 47 52.9	-0.9
	baz=1.0						
BOOM				⇑*i*S	Sb	11 48 27.4	+1.2
	baz=1.0						
AML	Almayashu	2.95	327	⇑*i*P	Pb	11 47 55.1	+1.6
	baz=28						
AML				⇑*i*S	Sb	11 48 30.1	-0.2
	baz=28						
AML	Almayashu	2.95	327	P	Pg	11 47 56.5	+0.1
	SNR=9.9						
KBK	Karagaybulak	3.06	347	⇑*i*P	Pb	11 47 56.7	+1.5
	baz=48						
KBK				⇑*i*S	Sb	11 48 33.7	+0.5
	baz=48						
KBK	Karagaybulak	3.06	347	P	Pg	11 47 60.0	+1.5
	SNR=7.5						
AAK	Ala-Archa	3.14	341	⇑*e*P	Pb	11 47 57.8	+1.3
	baz=42						
AAK				⇑*i*S	Sb	11 48 35.8	+0.4
	baz=42						
AAK	Ala-Archa	3.14	341	P	Pg	11 47 58.8	-1.2
	SNR=5.5						
AAK	Ala-Archa	3.14	341	⇓Pg	Pg	11 47 59.3	-0.6
	3.5nm,0.3s						
AAK				⇑Lg	Lg	11 48 40.2	
	12nm,0.5s						
TKM2	Tokmak 2	3.26	357	⇑*i*P	Pb	11 47 59.2	+0.7
	baz=57						
TKM2				⇑*i*S	Sb	11 48 38.1	-0.7
	baz=57						
TKM2	Tokmak 2	3.26	357	⇓Pg	Pg	11 48 00.6	-1.6
	4.3nm,0.6s						
TKM2				⇑Lg	Lg	11 48 42.7	
	10nm,0.5s						
KST	Kastek	3.37	1	*e*P	Pb	11 48 00.7	+0.2
	2.8nm,0.4s						
KST				*e*S	Sg	11 48 47.6	-0.5
	14nm,0.6s						
KST	Kastek	3.37	1	Pg	Pb	11 48 00.7	+0.2
	2.8nm,0.4s						
KST				Lg	Lg	11 48 47.6	
	14nm,0.6s						
CHMS	Chumysh	3.43	346	⇓*i*P	Pb	11 48 01.6	+0.2
	baz=47						
CHMS				⇓*i*S	Sb	11 48 42.4	-1.2
	baz=47						
MDOK	Medeo	3.61	14	*e*P	Pb	11 48 04.7	+0.2
	3.7nm,0.3s						
MDOK				*e*S	Sg	11 48 54.6	-1.1
	9.2nm,0.7s						
MDOK	Medeo	3.61	14	Pg	Pb	11 48 04.7	+0.2
	3.7nm,0.3s						
MDOK				Lg	Lg	11 48 54.6	
	9.2nm,0.7s						
ARK	Arkit	3.64	307	⇑*i*P	Pb	11 48 03.9	-1.1
	baz=9.0						
ARK				⇑*i*S	Sb	11 48 46.0	-3.7
	baz=9.0						
MRKS	Merke	3.66	328	*e*P	Pb	11 48 05.9	+0.6
	3.5nm,0.4s						
MRKS				*e*S	Sg	11 48 56.8	-0.4
	7.3nm,0.5s						
MRKS	Merke	3.66	328	Pg	Pb	11 48 05.9	+0.6
	3.5nm,0.4s						
MRKS				Lg	Lg	11 48 57.2	
	7.3nm,0.5s						

IDC 04 11:52:11.1±2.1, **9°.38S**×**119°.50E**, **h0**km, **mb3.4**/1, **mb1 3.5**/5, **mb1mx3.3**/42, **mbtmp3.4**/5, **ML3.1**/4, **MS3.7**/1, **Ms1 3.7**/1, **ms1mx2.9**/29, **Error ellipse: s-maj=74.4km s-min=20.8km az=65.0, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	4.34	3	Pn	Pn	11 53 18.0	-0.4
	1.1nm,0.3s,baz=159,slow=16,SNR=2.2						
KAPI				Sn	Sn	11 54 10.3	+0.6
	3.3nm,0.3s,baz=150,slow=19,SNR=13						
FITZ	Fitzroy Crossi	10.52	146	Pn	Pn	11 54 43.5	+0.3
	0.1nm,0.3s,baz=323,slow=14,SNR=2.4						
FITZ				Sn	Sn	11 56 41.8	-0.1
	0.1nm,0.3s,baz=197,slow=21,SNR=1.1						
WRA	Warramunga Arr	17.77	128	P	P	11 56 21.9	+0.9
	0.1nm,0.3s,baz=304,slow=12,SNR=4.6						
ASAR	Alice Springs	19.79	138	P	P	11 56 42.1	-1.0
	0.1nm,0.3s,baz=313,slow=9.9,SNR=8.6						
KLR	Kul'dur	59.34	9	LR	LR	12 29 20.8	
	comp=Z,53nm,18.6s,baz=12,slow=38						
MKAR	Makanchi Array	65.02	333	P	P	12 02 53.3	+0.2
	0.1nm,0.3s,baz=136,slow=6.0,SNR=1.1						

*IDC **04** 11:58:44.1±2.2, 52°.27N×172°.40E, h0km, mb3.4/8, mb1 3.7/10, mb1mx3.4/57, mbtmp3.4/10, ML2.7/2, Error ellipse: s-maj=54.2km s-min=20.8km az=7.0*
*NEIC **04** 11:58:50.0±1.8, 52°.4N±0°.1×172°.28E±0°.09, h35km±6km, mb4.0/23, Error ellipse: s-maj=19.8km s-min=7.4km az=174.0*
ISC 04 11:58:48.3±0.8, **52°.3N**±0°.1×**172°.28E**±0°.06, **h24**km, **n36**, σ**1s04**/38, **mb3.9**/16, **Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	1.18	70		Pn	11 59 08.3	-1.0
SMY				Sn	Sn	11 59 24.5	-0.1
PEA0B	Petropavlovsk-	8.88	281	Pn	Pn	12 00 56.2	+1.2
PETK	Petropavlovsk-	8.88	281	Pn	Pn	12 00 55.0	0.0
	0.2nm,0.3s,baz=100,slow=16,SNR=4.3						
PETK				Sn	Sn	12 02 32.6	-1.7
	0.1nm,0.3s,baz=95,slow=16,SNR=1.5						
SEY	Seymchan	14.96	323	Pn	Pn	12 02 18.5	+0.6
	0.1nm,0.3s,baz=163,slow=19,SNR=1.5						
OHAK	Old Harbor	20.30	62	P	P	12 03 21.6	-0.5
OHAK				IAmb	IAmb	12 03 34.1	
	comp=Z,6.9nm,1.1s						
KDAK	Kodiak Island	20.68	61	P	P	12 03 26.4	+0.2
	comp=Z,1.2nm,0.5s,baz=291,slow=14,SNR=4.7						
KDAK	Kodiak Island	20.68	61	P	P	12 03 26.6	+0.5
KDAK				IAmb	IAmb	12 03 40.9	
	comp=Z,9.6nm,1.2s						
BPAW	Bear Paw Mtn.	22.27	44	P	P	12 03 43.1	-0.2
RC01	Rabbit Creek A	22.31	52	P	P	12 03 43.2	-0.5
RC01				IAmb	IAmb	12 03 55.1	
	comp=Z,7.4nm,1.5s						
SEW	Seward	22.37	55	P	P	12 03 47.0	+2.7
SEW				IAmb	IAmb	12 03 49.5	
	comp=Z,12nm,1.4s						
SML	Sawmill	23.06	50	P	P	12 03 51.9	+0.2
SML				IAmb	IAmb	12 04 06.3	
	comp=Z,6.0nm,1.0s						
CCB	Clear Creek Bu	23.75	43	P	P	12 03 59.9	+1.5
ILAR	Eielson Array	24.16	43	P	P	12 04 00.1	-2.2
	comp=Z,0.3nm,0.6s,baz=239,slow=7.2,SNR=4.1						
TOLK	Toolik Lake Re	24.28	33	P	P	12 04 04.3	+0.9
TOLK				IAmb	IAmb	12 04 04.9	
	comp=Z,5.3nm,1.5s						
RAGM	Ragged Mountai	24.76	54	P	P	12 04 08.7	+1.0
RIDG	Independent Ri	24.87	46	P	P	12 04 08.6	-0.2
RIDG				IAmb	IAmb	12 04 15.4	
	comp=Z,5.4nm,1.4s						
VRDI	Verde Repeater	25.36	52	P	P	12 04 12.8	-0.5
DAWY	Dawson	27.30	46	P	P	12 04 30.5	-0.2
WHY	Whitehorse	29.57	53	P	P	12 04 52.3	+1.4
WHY				IAmb	IAmb	12 05 09.1	
	comp=Z,3.8nm,1.5s						
INK	Inuvik	29.95	37	P	P	12 04 53.7	-0.3
	comp=Z,0.8nm,1.1s,baz=282,slow=8.6,SNR=2.4						
INK	Inuvik	29.95	37	P	P	12 04 54.1	0.0
INK				IAmb	IAmb	12 04 57.6	
	comp=Z,4.0nm,1.4s						
C36M	Paulatuk	33.39	35	P	P	12 05 24.9	+0.6
C36M				IAmb	IAmb	12 05 25.0	
	comp=Z,3.6nm,1.4s						
YKA	Yellowknife Ar	38.55	45	P	P	12 06 06.8	-1.7
	comp=Z,0.8nm,0.8s,baz=289,slow=7.8,SNR=6.7						
SPA0	Spitsbergen Ar	48.91	354	P	P	12 07 31.7	+0.1
TARA	Tarawa	50.81	179	P	P	12 07 47.5	+0.9
PDAR	Pinedale Array	51.18	68	P	P	12 07 48.0	-1.5
	comp=Z,0.4nm,0.7s,baz=281,slow=5.1,SNR=2.3						
P17A	Butcher Ranch,	52.63	72	P	P	12 07 58.7	-1.6
MKAR	Makanchi Array	54.98	303	P	P	12 08 16.1	-1.2
	comp=Z,0.2nm,0.5s,baz=49,slow=5.7,SNR=2.2						
ISCO	Idaho Springs	55.37	68	P	P	12 08 21.0	+0.5
ISCO				IAmb	IAmb	12 08 38.6	
	comp=Z,2.8nm,1.4s						
TX31	Lajitas Ar. Si	63.87	75	P	P	12 09 19.0	+0.1
TX32	Lajitas Array	63.87	75	P	P	12 09 19.2	+0.2
TXAR	Lajitas Array	63.87	75	P	P	12 09 19.1	+0.2
	comp=Z,0.4nm,0.6s,baz=305,slow=6.1,SNR=9.3						
NB201	NORSAR Array S	65.94	350	P	P	12 09 33.0	+1.2
NB2	NORSAR Subarra	65.96	350	P	P	12 09 32.5	+0.6
	comp=Z,0.3nm,0.6s,baz=13,slow=6.5						
NOA	NORSAR Array B	65.96	350	P	P	12 09 32.5	+0.6
	comp=Z,0.4nm,0.6s,baz=15,slow=6.5,SNR=3.8						
SDMD	Soldier's Deli	70.74	50	P	P	12 10 02.5	+0.4
SDMD				IAmb	IAmb	12 10 02.8	
	comp=Z,2.2nm,0.7s						

*BJI **04** 11:58:53.1±0.0, 1°.56N×128°.80E, h47km, mB4.9/30, mb4.7/45, Ms4.3/9, Ms7 4.0/8*
*IDC **04** 11:58:54.9±1.8, 1°.63N×128°.60E, h40km±17km, mb4.3/28, mb1 4.4/31, mb1mx4.2/46, mbtmp4.5/31, ML4.3/3, MS3.6/6, Ms1 3.6/6, ms1mx3.1/54, Error ellipse: s-maj=13.6km s-min=9.5km az=67.0*
*DJA **04** 11:58:54.5±0.8, 2°N±2°×12°9E±°, h28km±6km, M4.7/29, mB5.2/13, mb4.9/29, MLv4.8/14, Mw(mB)4.6/13, Mwp5.8/1*
*KLM **04** 11:58:55.0, 1°.69N×128°.82E, h52km, mb4.7*
*NEIC **04** 11:58:56.6±1.6, 1°.57N±0°.06×128°.54E±0°.06, h56km±6km, mb4.7/83, Error ellipse: s-maj=9.1km s-min=8.4km az=224.0*
ISC 04 11:58:57.2±0.3, **1°.65N**±0°.04×**128°.64E**±0°.05, **h61**km, **n181**, σ**1s21**/181, **mb4.7**/76, **1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.54	236	P	Pn	11 59 20.0	-2.5
TNTI				S	Sn	11 59 42.3	+0.8
TNTI	Ternate	1.54	236		Pn	11 59 19.7	-2.8
LBMI	Labuha	2.54	207	P	Pn	11 59 36.0	-0.1
LBMI				S	Sn	12 00 08.6	+2.7
SIJI	Sorong	3.63	134	P	Pn	11 59 49.6	-1.5
	58nm,0.3s,baz=296,slow=11,SNR=88						
SIJI				S	Sn	12 00 29.9	-2.8
	46nm,0.3s,baz=128,slow=19,SNR=16						
SIJI				LR	LR	12 01 38.3	
	comp=Z,1μm,19.7s,baz=330,slow=45						
SANI	Sanana	4.53	216	P	Pn	12 00 01.7	-1.6
KMSI	Cibinong	4.78	257	P	Pn	12 00 06.1	-0.6
MSAI	Masohi	4.97	177	P	Pn	12 00 09.2	-0.2
	0.1nm310nm25nm,0.5s						
NLAI	Namlea	5.09	198	P	Pn	12 00 09.8	-1.3
	0.4nm67nm,0.5s						
FAKI	Fak Fak	5.80	141	P	Pn	12 00 19.4	-1.4
	0.5nm2μm100nm,0.6s						
FAKI	Fak Fak	5.80	141		Pn	12 00 19.3	-1.5
DAV	Davao City (W)	6.19	331	P	Pn	12 00 27.4	+1.4
	55nm,0.3s,baz=75,slow=1.6,SNR=5.0						
DAV	Davao City (W)	6.19	331	⇓*e*P	Pn	12 00 28.0	+1.9
DAV	Davao City (W)	6.19	331		Pn	12 00 27.3	+1.3
LUWI	Luwuk	6.44	246	P	Pn	12 00 30.5	+0.9
	1.0nm3μm270nm,0.8s						
LUWI	Luwuk	6.44	246		Pn	12 00 27.9	-1.7
MRSI	Marisa	6.79	260	P	Pn	12 00 34.2	-0.2
	0.5nm2μm123nm,1.0s						
APSI	Ampana	7.43	250	P	Pn	12 00 42.5	-0.6
	0.7nm2μm189nm,0.6s						
MPSI	Mapaga	8.83	262	P	Pn	12 01 01.9	-0.4
	705nm64nm,0.8s						
TTSI	Tana Toraja	9.97	242	P	Pn	12 01 17.2	-0.7
	1μm122nm,0.7s						
BNSI	Bone	10.43	235	P	Pn	12 01 23.8	-0.3
	826nm60nm,0.6s						
SPSI	Sidrap Palu	10.47	238	P	Pn	12 01 24.7	0.0
	2μm128nm,0.5s						
BKSI	Bulukumba	10.97	231	P	Pn	12 01 31.9	+0.4
	598nm59nm,0.7s						
KAPI	Kappang	11.07	233	P	Pn	12 01 30.9	-2.0
	5.1nm,0.3s,baz=18,slow=7.5,SNR=12						
KAPI	Kappang	11.07	233		Pn	12 01 32.0	-0.9
EDFI	Ende, Flores	12.44	214	P	Pn	12 01 52.1	+0.5
	7.5nm,0.8s						
JAY	Jayapura	12.76	109	LR	LR	12 06 14.5	
	comp=Z,235nm,19.6s,baz=302,slow=34						
BATI	Baumata	12.78	203	LR	LR	12 08 01.7	
	comp=Z,211nm,20.6s,baz=30,slow=43						
KKM	Kota Kinabalu	13.14	290		Pn	12 02 01.3	+0.1
PLAI	Plampang	15.02	226	P	Pn	12 02 27.0	+1.0
	49nm,1.0s						
SBUM	Sibu	16.42	273		Pn	12 02 41.2	-2.7
SBUM	Sibu	16.42	273	P	Pn	12 02 43.0	-0.9
KNRA	Kununurra	17.22	180	P	Pn	12 02 54.7	+0.9
JAGI	Jajag, Banyuwa	17.59	235	P	P	12 03 02.4	+3.7
JAGI	Jajag, Banyuwa	17.59	235	P	Pn	12 02 59.5	+1.0
JAGI				IAmb	IAmb	12 03 05.5	
	comp=Z,47nm,1.0s						
KSM	Kuching	18.32	270	P	P	12 03 05.5	-1.3
KSM				IAmb	IAmb	12 03 08.4	
	comp=Z,56nm,1.2s						
KSM	Kuching	18.32	270	P	Pn	12 03 08.0	+0.7
PWJI	Pagerwojo	19.34	240	P	Pn	12 03 19.7	+0.2
	comp=Z,33nm,0.7s						
FITZ	Fitzroy Crossi	19.84	188	P	P	12 03 21.9	-1.4
	comp=Z,0.2nm,0.3s,baz=14,slow=5.5,SNR=5.5						
FITZ	Fitzroy Crossi	19.84	188	P	P	12 03 22.9	-0.4
PCJI	Pacitan	19.97	240	P	Pn	12 03 34.4	+7.5
WOJI	Wonogiri, Jawa	20.02	242	P	Pn	12 03 29.5	+2.0
UGM	Wanagama	20.41	242	P	P	12 03 29.3	-0.2
COEN	Coen	21.17	138	P	P	12 03 39.9	+2.3
WB0	Warramunga Arr	22.02	165	P	P	12 03 46.6	-0.2
WRAB	Tennant Creek	22.17	166	P	P	12 03 48.0	-0.3
WRAB				IAmb	IAmb	12 04 06.9	
	comp=Z,17nm,0.8s						
WRA	Warramunga Arr	22.18	166	P	P	12 03 48.0	-0.5
	comp=Z,2.5nm,0.5s,baz=345,slow=11,SNR=25						
WRA				LR	LR	12 15 02.3	
	comp=Z,96nm,18.2s,baz=315,slow=44						
WB2	Warramunga Arr	22.18	166	P	P	12 03 48.1	-0.4
WB2				IAmb	IAmb	12 03 59.0	
	comp=Z,16nm,0.8s						
WR0	Warramunga Arr	22.24	165	P	P	12 03 48.6	-0.6
TWG	Pinlang	22.29	341	P	P	12 03 46.8	-2.9
DLV	T Lat	22.45	298	P	P	12 03 50.6	-1.0
DLV				IAmb	IAmb	12 04 09.8	
	comp=Z,19nm,0.8s						
LEM	Lembang	22.60	248	P	P	12 03 52.1	-1.1
	comp=Z,21nm,0.7s,baz=330,slow=23,SNR=1.6						
YULB	Yu-li	22.75	342	P	P	12 03 53.4	-1.2
TPUB	Ta-pu	22.88	341	P	P	12 03 54.0	-1.9
TPUB				IAmb	IAmb	12 04 09.6	
	comp=Z,17nm,0.7s						
SSLB	Suanglung	23.23	342	P	P	12 03 59.4	0.0
YOJ	Yonaguni jima	23.32	347	P	P	12 04 01.1	+1.0
NACB	Ninganchiao	23.41	344	P	P	12 04 00.1	-0.9
NACB				IAmb	IAmb	12 04 00.5	
	comp=Z,23nm,1.1s						
YHNB	Yeheng	23.94	344	P	P	12 04 04.4	-1.5
YHNB				IAmb	IAmb	12 04 09.9	
	comp=Z,24nm,0.9s						
KRVT	Keravat (AS076	24.11	104	P	P	12 04 08.1	+0.5
	comp=Z,46nm,0.8s,baz=336,slow=2.2,SNR=7.8						
KRVT				LR	LR	12 11 47.2	
	comp=Z,193nm,20.8s,baz=310,slow=32						
TATO	Taipei	24.20	344	P	P	12 04 09.8	+1.6
MYKOM	Kota Tinggi	24.77	271	P	P	12 04 13.3	-0.3
MYKOM				IAmb	IAmb	12 04 16.1	
	comp=Z,18nm,0.7s						
MYKOM	Kota Tinggi	24.77	271	P	P	12 04 14.0	+0.4
MDSI	Maura Dua	25.19	256	P	P	12 04 16.7	-0.6
	comp=Z,10μmcomp=Z,21nm,0.8s						
AS31	Alice Springs	25.68	169	P	P	12 04 21.3	-0.4
ASAR	Alice Springs	25.68	169	P	P	12 04 21.4	-0.3
	comp=Z,1.6nm,0.6s,baz=348,slow=8.0,SNR=30						
ASAR				ScP	ScP	12 11 25.9	+0.5
	comp=Z,1.1nm,0.8s,baz=343,slow=2.1,SNR=8.7						
CTAO	Charters Tower	27.66	142	P	P	12 04 40.5	+0.9
RPSI	Rantau Prapat	29.71	273	P	P	12 04 56.8	-1.1
RPSI				IAmb	IAmb	12 04 59.6	
	comp=Z,9.1nm,0.8s						
RPSI	Rantau Prapat	29.71	273	P	P	12 04 56.5	-1.4
PSI	Prapat	29.71	273	P	P	12 04 56.5	-1.5
	comp=Z,8.7nm,0.8s,baz=18,slow=1.1,SNR=8.6						
KCSI	Kotacane, Aceh	30.89	274	P	P	12 05 10.9	+2.6
	comp=Z,844nmcomp=Z,13nm,1.0s						
PBKT	Sadao Pong	31.01	300	P	P	12 05 11.2	+1.9
GSI	Gunungsitoli	31.05	270	P	P	12 05 09.9	+0.1
	comp=Z,124nm,0.7s						
GSI	Gunungsitoli	31.05	270	P	P	12 05 07.0	-2.8
JNU	Nakatsue	31.38	4	P	P	12 05 11.2	-1.2
	comp=Z,7.1nm,1.0s,baz=334,slow=2.6,SNR=9.1						
JNU	Nakatsue	31.38	4	P	P	12 05 11.8	-0.6
JNU				IAmb	IAmb	12 05 15.1	
	comp=Z,29nm,1.4s						
NJ2	Nanjing	31.62	344	*e*P	P	12 05 15.1	+0.7
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
FORT	Forrest	32.25	181	P	P	12 05 20.1	+0.1
GYA	Guiyang	32.47	321	*e*P	P	12 05 23.3	+1.1
GYA				pP	pP	12 05 37.9	+0.8
GYA				PP	PnPn	12 06 32.7	+1.4
GYA				S	S	12 10 35.2	+2.2
GYA				sS	sS	12 10 54.3	-4.3
GYA				SS	SnSn	12 12 32.7	+1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,70nm,4.8s						
GYA				LR	LR		
	comp=Z,110nm,4.7s						
GYA				LR	LR		
	comp=Z,90nm,3.9s						
GYA				LR	LR		
	comp=Z,70nm,5.1s						
CM31	Chiang Mai Arr	33.57	302	P	P	12 05 31.8	0.0
CM31				IAmb	IAmb	12 05 41.2	
	comp=Z,5.3nm,0.5s						
CMAR	Chiang Mai Arr	33.57	302	P	P	12 05 31.8	0.0
	comp=Z,2.5nm,0.9s,baz=124,slow=7.1,SNR=16						
KMI	Kunming	34.19	315	P	P	12 05 37.9	+0.6
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
INU	Inuyama	34.42	12	P	P	12 05 39.0	+0.1
EIDS	Eidsvold	34.55	142	P	P	12 05 41.0	+0.9
EIDS				IAmb	IAmb	12 05 52.6	
	comp=Z,11nm,1.1s						
BBOO	Buckleboo	34.98	169	P	P	12 05 43.4	-0.4
STKA	Stephens Creek	35.54	161	P	P	12 05 48.6	+0.1
	comp=Z,7.7nm,0.6s,baz=338,slow=8.0,SNR=21						
STKA	Stephens Creek	35.54	161	P	P	12 05 49.0	+0.4
KSRS	Korea Array	35.64	359	P	P	12 05 49.9	+0.6
	comp=Z,4.0nm,0.6s,baz=176,slow=9.6,SNR=23						
KS19	Wonju Array Si	35.69	359	P	P	12 05 50.1	+0.4
KS19				IAmb	IAmb	12 05 52.0	
	comp=Z,10nm,1.0s						
MAJO	Matsushiro	35.83	13	P	P	12 05 50.0	-1.1
MAT	Matsushiro	35.83	13	P	P	12 05 49.3	-1.8
MJAR	Matsushiro Arr	35.83	13	P	P	12 05 49.4	-1.6
	comp=Z,34nm,0.7s,baz=182,slow=9.2,SNR=143						
MJB9	Matsu-Tunnel	35.83	13	P	P	12 05 49.9	-1.2
XAN	Xi'an	37.12	332	P	P	12 06 02.3	+0.2
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,70nm,3.8s						
XAN	Xi'an	37.12	332	P	P	12 06 01.9	-0.2
XAN				IAmb	IAmb	12 06 05.5	
	comp=Z,8.6nm,0.5s						
CD2	Chengdu	37.44	324	*e*P	P	12 06 05.0	+0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ARMA	Armidale	38.70	147	P	P	12 06 17.0	+1.5
BJI	Beijing	39.86	345	P	P	12 06 24.4	-0.5
BJI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
H11N1	WAKE ISLAND Hy	41.49	62	T	T	12 50 58.4	
	baz=248,slow=75,SNR=30						
H11N2	WAKE ISLAND Hy	41.50	62	T	T	12 51 01.4	
	baz=248,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	41.51	62	T	T	12 51 02.0	
	baz=248,slow=75,SNR=36						
HHC	Hu-ho-hao-te	41.97	341	*e*P	P	12 06 45.4	+3.0
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,39nm,5.1s						
HHC				LR	LR		
	comp=Z,130nm,17.4s						
HHC				LR	LR		
	comp=Z,140nm,18.4s						
TOO	Toolangi	42.03	160	P	P	12 06 42.7	-0.2

TOO				IAmb	IAmb	12 06 44.5	
	comp=Z,13nm,1.1s						
USA0B	Ussuriysk Arra	42.47	4	P	P	12 06 47.1	+0.8
USA0B				IAmb	IAmb	12 06 52.9	
	comp=Z,15nm,1.2s						
USRK	Ussuriysk Ar.	42.47	4	P	P	12 06 46.4	0.0
	comp=Z,4.9nm,0.7s,baz=176,slow=8.0,SNR=14						
SHL	Shillong	42.64	307	P	P	12 06 48.1	-0.1
ASAJ	Asahikawa	44.07	14	P	P	12 06 59.3	+0.1
	comp=Z,12nm,0.6s,baz=225,slow=6.8,SNR=23						
JKA	Kamikawa-asahi	44.07	14	P	P	12 06 59.3	+0.1
GTA	Gaotai	45.85	329	eP	P	12 07 16.4	+2.8
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YSS	Yuzh-Sakhalins	46.77	13	P	P	12 07 21.5	+1.0
TAPN	Taplejung	46.78	307	eP	P	12 07 21.1	-0.2
	comp=Z,32nm,0.9s						
ODAN	Odare	46.82	306	eP	P	12 07 21.4	-0.2
KLR	Kul'dur	47.48	3	P	P	12 07 26.0	0.0
	comp=Z,2.3nm,0.5s,baz=177,slow=7.4,SNR=8.9						
RAMN	Ramite	47.50	306	eP	P	12 07 27.0	+0.1
	comp=Z,33nm,0.7s						
JIRN	Jiri	48.13	306	eP	P	12 07 31.6	-0.3
	comp=Z,57nm,0.7s						
GUN	Gumba	48.48	307	eP	P	12 07 34.3	-0.3
	comp=Z,40nm,0.6s						
PKIN	Phulchoki	48.73	306	eP	P	12 07 35.6	-0.8
KKN	Kakani	48.91	306	eP	P	12 07 37.2	-0.5
DMN	Daman	48.98	306	eP	P	12 07 38.0	-0.3
	comp=Z,34nm,1.0s						
ULN	Ulaanbaatar	49.68	341	P	P	12 07 42.9	-0.3
ULN				IAmb	IAmb	12 07 59.0	
	comp=Z,7.2nm,0.9s						
SONM	Songino Array	49.87	341	P	P	12 07 44.3	-0.3
	comp=Z,2.5nm,0.5s,baz=150,slow=9.0,SNR=12						
KOLN	Koldanda	50.27	305	eP	P	12 07 48.0	0.0
	comp=Z,30nm,0.6s						
DANN	Dangsing	50.37	306	eP	P	12 07 48.5	-0.4
	comp=Z,38nm,0.6s						
HYB	Hyderabad	51.62	291	iP	P	12 07 57.5	-0.6
HYB				epP	pP	12 08 11.0	-2.7
WMQ	Urumqi	55.51	325	eP	P	12 08 27.4	+1.2
WMQ				sP	sP	12 08 47.3	-1.5
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,81nm,3.8s						
WMQ				LR	LR		
	comp=Z,76nm,21.3s						
WMQ				LR	LR		
	comp=Z,180nm,27.7s						
WMQ				LR	LR		
	comp=Z,86nm,23.3s						
PEA0B	Petropavlovsk-	56.66	21	P	P	12 08 35.1	+0.9
PETK	Petropavlovsk-	56.66	21	P	P	12 08 35.0	+0.8
	comp=Z,12nm,0.8s,baz=187,slow=4.7,SNR=37						
PET	Petropavlovsk	56.93	21	P	P	12 08 36.7	+0.6
LBZ	Lake Benmore	58.91	146	P	P	12 08 51.0	+0.9
BKZ	Black Stump Fm	59.77	138	P	P	12 08 57.9	+1.7
BKZ				IAmb	IAmb	12 09 12.6	
	comp=Z,14nm,1.4s						
YAK	Yakutsk	60.24	1	P	P	12 08 59.0	+0.1
MA2	Magadan	60.27	13	P	P	12 08 59.3	+0.1
	comp=Z,4.4nm,0.6s,baz=193,slow=6.9,SNR=12						
MA2	Magadan	60.27	13	P	P	12 09 00.1	+0.9
MA2				IAmb	IAmb	12 09 00.9	
	comp=Z,6.0nm,0.8s						
MK31	Makanchi Array	60.34	325	P	P	12 08 58.9	-1.1
MK31				IAmb	IAmb	12 09 07.4	
	comp=Z,3.7nm,0.8s						
MKAR	Makanchi Array	60.34	325	P	P	12 08 59.5	-0.5
	comp=Z,4.9nm,0.6s,baz=114,slow=8.0,SNR=40						
MAKZ	Makanchi	60.53	325	P	P	12 09 00.5	-0.7
MAKZ				IAmb	IAmb	12 09 08.7	
	comp=Z,5.9nm,0.8s						
KSH	Kashi	60.85	315	P	P	12 09 07.6	+3.9
KSH				pP	pP	12 09 19.5	-0.2
KSH				sP	sP	12 09 24.1	-2.3
KSH				pmax	pmax		
	comp=Z,33nm,1.2s						
KSH				pmax	pmax		
	comp=Z,93nm,3.9s						
KDJ	Kajisay	61.16	318	P	P	12 09 06.9	+1.1
KDJ				IAmb	IAmb	12 09 19.4	
	comp=Z,3.5nm,0.8s						
ZAA0	Zalesovo Array	63.30	333	P	P	12 09 19.9	+0.3
ZAA0				IAmb	IAmb	12 09 30.9	
	comp=Z,8.0nm,1.4s						
ZALV	Zalesovo Beam	63.30	333	P	P	12 09 18.2	-1.4
	comp=Z,0.9nm,0.4s,baz=101,slow=7.7,SNR=5.4						
SEY	Seymchan	63.64	12	P	P	12 09 22.3	+0.6
	comp=Z,3.7nm,0.6s,baz=214,slow=4.5,SNR=24						
KK31	Karatay Array	66.04	317	P	P	12 09 36.7	-1.1
KKAR	Karatay Array	66.04	317	P	P	12 09 36.7	-1.1
TIXI	Tiksi	69.89	0	P	P	12 10 01.2	-0.2
BRVK	Borovoye	70.16	327	P	P	12 10 04.2	+0.8
BRVK				IAmb	IAmb	12 10 22.1	
	comp=Z,9.4nm,1.1s						
NRIK	Noril'sk	72.89	346	P	P	12 10 18.8	-0.7
	comp=Z,1.2nm,0.4s,baz=129,slow=6.5,SNR=1.4						
RAR	Rarotonga	73.49	113	LR	LR	12 37 26.6	
	comp=Z,53nm,20.8s,baz=348,slow=31						
GEYT	Alibeck	73.67	309	P	P	12 10 24.7	-0.1
	comp=Z,1.4nm,0.6s,baz=103,slow=6.2,SNR=2.7						
GYA0B	ALIBECK ARRAY	73.67	309	P	P	12 10 24.4	-0.4
UNV	Unalaska Valle	74.06	34	P	P	12 10 28.1	+1.5
UNV				IAmb	IAmb	12 10 33.7	
	comp=Z,18nm,1.1s						
SOCY	Socotra	74.65	282	P	P	12 10 28.4	-2.6
ARU	Arti	77.70	328	P	P	12 10 47.6	+0.2
ARU				IAmb	IAmb	12 10 50.3	
	comp=Z,4.0nm,0.7s						
SDPT	Sand Point	77.85	34	P	P	12 10 48.8	+0.6
CNBA	Chernabura Isl	78.22	34	P	P	12 10 51.8	+1.6
CNBA				IAmb	IAmb	12 10 52.5	
	comp=Z,8.1nm,0.8s						
ANM	Nome	78.38	24	P	P	12 10 52.3	+1.4
VNDA	Vanda	81.14	173	P	P	12 11 06.2	+0.6
	comp=Z,0.6nm,0.5s,baz=319,slow=6.7,SNR=12						
VNDA	Vanda	81.14	173	P	P	12 11 05.7	0.0
OHAK	Old Harbor	82.17	32	P	P	12 11 12.4	+1.0
OHAK				IAmb	IAmb	12 11 22.6	
	comp=Z,15nm,1.3s						
KDAK	Kodiak Island	82.63	32	P	P	12 11 14.7	+0.8
	comp=Z,9.0nm,0.7s,baz=269,slow=4.3,SNR=14						
KDAK	Kodiak Island	82.63	32	P	P	12 11 14.6	+0.8
KDAK				IAmb	IAmb	12 11 15.5	
	comp=Z,7.7nm,0.7s						
RSO	Redoubt South	82.95	29	P	P	12 11 16.1	+0.3
RAYN	Ar Rayn	83.05	293	P	P	12 11 15.2	-1.6
CNPM	China Poot	83.57	30	P	P	12 11 19.5	+0.8
CNPM				IAmb	IAmb	12 11 36.5	
	comp=Z,15nm,1.4s						
PPLA	Purkeypile	83.60	27	P	P	12 11 19.9	+1.0
PPLA				IAmb	IAmb	12 11 24.2	
	comp=Z,10nm,1.4s						
BRLK	Bradley Lake	83.78	30	P	P	12 11 20.2	+0.4
BRLK				IAmb	IAmb	12 11 20.7	
	comp=Z,16nm,1.4s						
KTH	Kantishna Hill	84.27	26	P	P	12 11 22.8	+0.6
KTH				IAmb	IAmb	12 11 23.5	
	comp=Z,6.1nm,1.2s						
BPAW	Bear Paw Mtn.	84.31	26	P	P	12 11 23.2	+0.8
RC01	Rabbit Creek A	84.51	29	P	P	12 11 23.6	+0.1
RC01				IAmb	IAmb	12 11 24.3	
	comp=Z,8.5nm,0.8s						
TRF	Thorofare Moun	84.53	26	P	P	12 11 23.9	+0.2
TRF				IAmb	IAmb	12 11 27.8	
	comp=Z,6.2nm,1.2s						
SEW	Seward	84.54	30	P	P	12 11 24.0	+0.5
SEW				IAmb	IAmb	12 11 24.8	
	comp=Z,5.6nm,0.7s						
MLY	Manley	84.55	25	P	P	12 11 24.2	+0.6
PMR	Palmer	84.85	28	P	P	12 11 24.9	-0.2
PMR				IAmb	IAmb	12 11 26.0	
	comp=Z,5.3nm,0.7s						
KNK	Knik Glacier	85.16	29	P	P	12 11 26.7	0.0
KNK				IAmb	IAmb	12 11 28.2	
	comp=Z,7.5nm,0.8s						
RND	Reindeer	85.17	27	P	P	12 11 26.8	0.0
RND				IAmb	IAmb	12 11 30.0	
	comp=Z,4.0nm,0.8s						
SML	Sawmill	85.25	28	P	P	12 11 27.7	+0.5
SML				IAmb	IAmb	12 11 28.5	
	comp=Z,8.2nm,0.7s						
ILAR	Eielson Array	86.16	25	P	P	12 11 31.9	+0.3
	comp=Z,0.5nm,0.5s,baz=241,slow=4.6,SNR=14						
ARCES	ARCESS Array B	93.04	340	P	P	12 12 02.4	-1.5
	comp=Z,2.9nm,0.8s,baz=72,slow=5.2,SNR=6.4						
DLBC	Dease Lake	94.53	31	P	P	12 12 09.5	-1.6
	comp=Z,1.3nm,0.8s,baz=29,slow=19,SNR=1.8						
DLBC	Dease Lake	94.53	31	P	P	12 12 09.9	-1.1
DLBC				IAmb	IAmb	12 12 14.9	
	comp=Z,5.1nm,1.2s						
FINES	FINESS Array B	94.55	332	P	P	12 12 09.8	-1.2
	comp=Z,1.2nm,0.9s,baz=50,slow=6.0,SNR=4.1						
RES	Resolute Bay	99.50	11	P	Pdif	12 12 31.5	-1.6
	comp=Z,0.7nm,0.6s,baz=320,slow=7.5,SNR=7.8						
RES	Resolute Bay	99.50	11		Pdif	12 12 32.1	-0.9
RES				IAmb	IAmb	12 12 33.4	
	comp=Z,1.1nm,0.8s						
TXAR	Lajitas Array	121.32	54	PKP	PKPdf	12 17 44.2	-0.2
	comp=Z,0.1nm,0.4s,baz=212,slow=3.2,SNR=2.2						

*IDC **04** 12:17:24.1±2.9, 52°.13N×172°.78E, h0km, mb3.3/4, mb1 3.6/6, mb1mx3.3/64, mbtmp3.4/6, ML2.7/2, Error ellipse: s-maj=65.3km s-min=25.9km az=9.0*

*NEIC **04** 12:17:26.4±2.3, 52°.0N±0°.1×172°.5E±0°.1, h24km±7km, mb3.8/17, Error ellipse: s-maj=20.3km s-min=10.1km az=162.0*

ISC 04 12:17:27.0±1.0**, 52°.1N**±0°.1×**172°.58E**±0°.08**, h26km, n27, σ1s.21**/28**, mb3.7**/11**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	1.14	54	Pn	Pb	12 17 46.7	-1.2
SMY				Sn	Sb	12 18 02.7	+0.4
PEA0B	Petropavlovsk-	9.12	282	Pn	Pn	12 19 35.8	-0.9
PETK	Petropavlovsk-	9.12	282	Pn	Pn	12 19 36.5	-0.2
	0.2nm,0.3s,baz=109,slow=19,SNR=11						
SEY	Seymchan	15.28	323	Pn	Pn	12 21 01.6	+1.0
	0.1nm,0.3s,baz=107,slow=8.7,SNR=4.1						
OHAK	Old Harbor	20.26	62	P	P	12 21 59.5	-0.6
KDAK	Kodiak Island	20.65	60	P	P	12 22 02.6	-1.7
	1.5nm,0.7s,baz=238,slow=9.5,SNR=1.3						
KDAK	Kodiak Island	20.65	60	P	P	12 22 04.0	-0.3
KDAK				IAmb	IAmb	12 22 20.5	
	comp=Z,8.9nm,1.1s						
BPAW	Bear Paw Mtn.	22.34	43	P	P	12 22 22.6	+0.2
PMR	Palmer	22.68	50	P	P	12 22 26.5	+0.5
PMR				IAmb	IAmb	12 22 27.8	
	comp=Z,2.4nm,1.2s						
GHO	Glory Hole Cre	22.80	50	P	P	12 22 27.9	+0.5
GHO				IAmb	IAmb	12 22 41.6	
	comp=Z,3.7nm,1.0s						
SML	Sawmill	23.09	50	P	P	12 22 27.3	-3.1
RND	Reindeer	23.10	46	P	P	12 22 31.0	+0.5
CCB	Clear Creek Bu	23.82	43	P	P	12 22 38.3	+1.0
ILAR	Eielson Array	24.23	43	P	P	12 22 40.4	-0.9
	comp=Z,0.3nm,0.6s,baz=254,slow=8.2,SNR=4.5						
TOLK	Toolik Lake Re	24.40	33	P	P	12 22 42.0	-0.8
TOLK				IAmb	IAmb	12 22 58.0	
	comp=Z,2.2nm,1.2s						
DOT	Dot Lake	25.26	46	P	P	12 22 51.0	+0.4
DOT				IAmb	IAmb	12 22 58.6	
	comp=Z,3.1nm,1.5s						
SCRK	Sand Creek	25.34	45	P	P	12 22 49.2	-2.2
SCRK				IAmb	IAmb	12 22 54.9	
	comp=Z,3.3nm,1.4s						
DAWY	Dawson	27.36	45	P	P	12 23 11.6	+2.1
SKAG	Skagway	29.53	55	P	P	12 23 28.1	-0.7
SKAG				IAmb	IAmb	12 23 37.7	
	comp=Z,3.6nm,1.5s						
INK	Inuvik	30.05	37	P	P	12 23 33.5	+0.2
INK				IAmb	IAmb	12 23 48.4	
	comp=Z,2.3nm,1.3s						
DLBC	Dease Lake	32.42	56	P	P	12 23 56.2	+1.7
DLBC				IAmb	IAmb	12 24 06.8	
	comp=Z,3.2nm,1.1s						
YKA	Yellowknife Ar	38.60	45	P	P	12 24 46.6	-0.7
	comp=Z,0.1nm,0.4s,baz=288,slow=7.6,SNR=4.1						
MLOA	Mauna Loa Obse	40.88	131	P	P	12 25 06.5	-0.7
PMPB	Monarch Peak	48.63	82	P	P	12 26 09.3	+0.9
SUMG	Summit	53.78	11	P	P	12 26 46.6	-0.3
TX32	Lajitas Array	63.76	75	P	P	12 27 57.7	+1.1
TXAR	Lajitas Array	63.76	75	P	P	12 27 57.9	+1.3
	comp=Z,0.2nm,0.5s,baz=313,slow=5.0,SNR=4.5						

*VAO **04** 12:19:13.9±1.3, 20°.02S×71°.49W, h10km, mb4.2*

*IDC **04** 12:19:14.8±0.9, 19°.79S×70°.77W, h0km, mb3.8/6, mb1 4.1/8, mb1mx3.9/34, mbtmp3.9/8, ML3.7/2, MS3.8/3, Ms1 3.8/3, ms1mx3.2/27, Error ellipse: s-maj=33.1km s-min=16.9km az=55.0*

*NEIC **04** 12:19:15.5, 20°.00S×70°.97W, h13km, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr-0.08; Mθθ0.33; Mφφ-0.25; Mrθ0.18; Mθφ-0.26; Mφr-0.98; Fault plane solution: M0 1.07000×10^15 NP1:φs344.00000°, δ89.37000°, λ-69.40000°. NP2:φs75.68000°, δ20.61000°, λ-178.20000°. Principal axes: T 0.9660, Plg41.0000°, Azm55.0000°; N 0.1849, Plg21.0000°, Azm164.0000°; P -1.1509, Plg42.0000°, Azm274.0000°;*

*NEIC **04** 12:19:15.4±1.3, 20°.03S±0°.04×70°.97W±0°.05, h11km±1km, mb4.2/5, Mwr4.0/48, ML4.0(GUC) Error ellipse: s-maj=6.9km s-min=4.8km az=117.0*

*GUC **04** 12:19:17.7±0.8, 19°.95S×71°.00W, h33km±2km, ML4.1*

ISC 04 12:19:13.9±1.7**, 19°.96S**±0°.03×**71°.03W**±0°.05**, h0km**±10km**, n67, σ1s.45**/81**, mb3.9**/7**, 6C-8D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	Huaiquique	0.90	110	⇓iP	Pb	12 19 32.6	+0.2
TA02				eS	Sb	12 19 44.1	-0.8
TA02				IAML		12 19 45.8	
	comp=E,6μm,0.4s						
PSGC	Pisagua	0.93	67	⇑iP	Pb	12 19 32.6	-0.3
PSGC				i S	Sb	12 19 44.7	-1.1
PSGC				IAML		12 19 46.6	
	comp=N,7μm,0.6s						
PSGCX	Pisagua	0.93	67		Pg	12 19 32.1	+0.4
PSGCX				Sg	Sb	12 19 44.7	-1.1
TA01	Diego Aracena	1.00	127	⇓iP	Pb	12 19 34.3	+0.2
TA01				i S	Sb	12 19 47.3	-0.5
PATCX	Punta Patache	1.19	136	⇓eP	Pg	12 19 37.1	+0.4
PATCX				eS	Sg	12 19 52.3	+0.1
PATCX				IAML		12 20 00.0	
	comp=E,3μm,0.3s						
PATCX	Punta Patache	1.19	136		Pg	12 19 37.0	+0.2
PB11	IPOC Station P	1.31	82	⇓iP	Pg	12 19 39.0	0.0
PB11				i S	Sb	12 19 55.6	-1.2
PB11				IAML		12 19 57.1	
	comp=N,12μm,0.2s						
PB11	IPOC Station P	1.31	82		Pg	12 19 38.8	-0.2
PB11					Sg	12 19 55.4	-0.6
PB12	IPOC Station P	1.49	26	⇓eP	Pn	12 19 41.9	-0.2
PB12				eS	Sn	12 20 01.1	-1.2
PB12				IAML		12 20 07.3	
	comp=N,2μm,0.4s						
PB12	IPOC Station P	1.49	26		Pn	12 19 41.9	-0.2
PB12				Sn	Sg	12 20 02.3	+0.3
MNMC	Minye Minye	1.58	59	⇓iP	Pn	12 19 43.6	+0.1
MNMC				i S	Sb	12 20 04.3	-0.6
MNMC	Minye Minye	1.58	59		Pn	12 19 43.8	+0.3
AP01	Chacalluta	1.71	22	⇑eP	Pn	12 19 45.1	+0.1
AP01				eS	Sn	12 20 06.3	-1.2
AP01				IAML		12 20 18.1	
	comp=E,8μm,0.8s						
PB02	IPOC Station P	1.72	142	⇓iP	Pn	12 19 44.7	-0.5
PB02				i S	Sn	12 20 07.8	-0.1
PB02				IAML		12 20 15.3	
	comp=E,5μm,0.6s						
GO01	Chusmiza	1.75	81	⇑iP	Pn	12 19 46.1	+0.2
GO01				i S	Sb	12 20 08.9	-1.1
GO01	Chusmiza	1.75	81		Pn	12 19 45.8	-0.2
PB08	IPOC Station P	1.77	96	eP	Pn	12 19 46.2	0.0
PB08				i P	Pb	12 19 46.6	-0.9
PB08				i S	Sn	12 20 08.3	-1.3
PB08				IAML		12 20 15.6	
	comp=N,4μm,0.6s						
PB08	IPOC Station P	1.77	96		Pn	12 19 45.7	-0.5
PB01	IPOC Station P	1.80	127	eP	Pn	12 19 46.2	-0.1
PB01				i S	Sn	12 20 08.5	-1.5
PB01	IPOC Station P	1.80	127		Pn	12 19 46.2	-0.1
PB07	IPOC Station P	2.06	149	⇑eP	Pn	12 19 49.8	-0.2
PB07				eS	Sn	12 20 16.1	-0.3
PB07				IAML		12 20 29.4	
	comp=E,2μm,0.9s						
PB07	IPOC Station P	2.06	149		Pn	12 19 49.3	-0.7
PB16	IPOC Station P	2.16	42	⇑iP	Pn	12 19 52.3	+0.5
PB16				i S	Sb	12 20 20.9	-1.0
PB16				IAML		12 20 28.6	
	comp=N,2μm,0.4s						
PB16	IPOC Station P	2.16	42		Pn	12 19 52.0	+0.3
PB03	IPOC Station P	2.40	150	⇑eP	Pn	12 19 54.0	-0.6
PB03				eS	Sn	12 20 23.9	-0.8
PB03				IAML		12 20 38.1	
	comp=E,654nm,0.8s						
PB09	IPOC Station P	2.48	138	eP	Pn	12 19 56.5	+0.8
PB09				eS	Sn	12 20 26.6	-0.2
PB09				IAML		12 20 40.8	
	comp=E,1μm,0.2s						
PB09	IPOC Station P	2.48	138		Pn	12 19 55.5	-0.2
PB04	IPOC Station P	2.50	161	⇓eP	Pn	12 19 55.1	-1.0
PB04				eS	Sn	12 20 21.0	-6.4
PB04				IAML		12 20 46.7	
	comp=E,4μm,1.0s						
PB04	IPOC Station P	2.50	161		Pn	12 19 55.0	-1.0
PB06	IPOC Station P	3.05	154		Pn	12 20 02.5	-1.1
LVC	Limon Verde	3.29	144	Pn	Pn	12 20 08.4	+1.2
	comp=E,3.9nm,0.3s,baz=321,slow=12,SNR=36						
LVC				Lg	Lg	12 20 59.5	
	comp=E,25nm,0.3s,baz=193,slow=11,SNR=15						
LVC				LR	LR	12 21 37.6	
	comp=E,391nm,19.2s,baz=280,slow=43						
LVC	Limon Verde	3.29	144		Pn	12 20 07.7	+0.6
LVC	Limon Verde	3.29	144	eP	Pn	12 20 08.3	+1.2
PB15	IPOC Station P	3.54	156		Pn	12 20 09.4	-1.0
PB10	IPOC Station P	3.56	173		Pn	12 20 08.9	-1.6
LPAZ	La Paz	4.58	37	Pn	Pb	12 20 31.1	-4.4
	comp=E,1.5nm,0.3s,baz=197,slow=8.3,SNR=39						
LPAZ	La Paz	4.58	37		Pb	12 20 30.6	-4.8
LPAZ	La Paz	4.58	37	eP	Pn	12 20 27.8	+2.8
GO02	Mina Guanaco	5.35	166		Pn	12 20 34.3	-1.0
SIV	San Ignacio	10.26	69	Pn	Pn	12 21 40.8	-1.8
	comp=E,1.5nm,0.3s,baz=266,slow=9.8,SNR=41						
PTLB	Pontes e Lacer	12.19	70	eP	Pn	12 22 12.0	+3.1
VILB	Vilhena	12.50	58	eP	Pn	12 22 16.5	+3.3
SALV	Santo Antonio	15.14	77	eP	Pn	12 22 51.4	+2.2
H03N1	Juan Fernandez	15.15	206	T	T	12 38 35.3	
	baz=31,slow=72,SNR=80						
H03N2	Juan Fernandez	15.16	206	T	T	12 38 39.9	
	baz=31,slow=72,SNR=34						
H03N3	Juan Fernandez	15.17	206	T	T	12 38 37.8	
	baz=31,slow=72,SNR=40						
MACA	Manacapuru-AM	19.51	32	eP	P	12 23 42.9	0.0
FRTB	Fartura	20.23	103	eP	Pn	12 23 53.8	+1.2
IPMB	Ipameri, GO	21.66	89	eP	P	12 24 09.8	+3.5
PTGA	Pitinga	21.96	31	P	P	12 24 07.2	-2.3
	comp=E,2.2nm,0.3s,baz=68,slow=24,SNR=6.2						
PTGA	Pitinga	21.96	31	P	P	12 24 08.0	-1.5
PTGA				IAmb	IAmb	12 24 16.5	
	comp=Z,5.1nm,0.8s						
BOAV	Boa Vista	24.49	26	eP	P	12 24 35.1	0.0
RUSC	La Rusia	25.77	355	P	P	12 24 46.7	-0.4
JANB	Januaria	25.93	83	eP	P	12 24 48.6	+0.5
Z50A	Ashland	54.79	345	P	P	12 28 45.7	+0.1
Z50A				IAmb	IAmb	12 29 04.1	
	comp=Z,2.8nm,0.8s						
TXAR	Lajitas Array	58.25	326	P	P	12 29 10.6	+0.2
	comp=Z,0.4nm,0.7s,baz=148,slow=7.4,SNR=5.2						
SNAA	Sanae	64.38	161	LR	LR	12 56 06.8	
	comp=Z,52nm,20.5s,baz=166,slow=34						
CCUT	Cedar City	69.71	325	P	P	12 30 28.8	+2.8
PDAR	Pinedale Array	71.80	331	P	P	12 30 39.9	+1.3
	comp=Z,0.2nm,0.6s,baz=132,slow=1.3,SNR=1.8						
NVAR	Mina Array Bea	73.07	323	P	P	12 30 47.6	+1.4
	comp=Z,0.7nm,0.9s,baz=134,slow=6.4,SNR=4.3						
TORD	Torodi Ar. Bea	78.73	72	P	P	12 31 17.1	-1.7
	comp=Z,1.2nm,0.7s,baz=257,slow=5.5,SNR=6.3						
RAR	Rarotonga	81.88	250	LR	LR	12 59 04.8	
	comp=Z,361nm,19.9s,baz=335,slow=29						
YKA	Yellowknife Ar	89.09	341	P	P	12 32 10.5	-0.1
	comp=Z,0.6nm,0.7s,baz=133,slow=5.1,SNR=9.3						
WRA	Warramunga Arr	133.20	214	PKP	PKPdf	12 38 32.8	+0.2
	comp=Z,0.4nm,0.8s,baz=152,slow=1.4,SNR=1.6						
ZALV	Zalesovo Beam	141.36	23	PKP	PKPdf	12 38 46.8	+0.3
	comp=Z,0.9nm,0.7s,baz=310,slow=3.2,SNR=2.2						
MKAR	Makanchi Array	145.49	33	PKPbc	PKPbc	12 38 54.2	+0.1
	comp=Z,0.8nm,0.7s,baz=318,slow=4.2,SNR=12						
KLR	Kul'dur	145.57	333	PKPbc	PKPab	12 38 54.8	+0.3
	comp=Z,1.4nm,0.8s,baz=305,slow=5.1,SNR=4.6						

*IDC **04** 12:20:05.1±1.9, 16°.98S×178°.19W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.7/46, mbtmp4.0/4, Error ellipse: s-maj=161.8km s-min=32.7km az=156.0*

*NEIC **04** 12:21:03.8±1.6, 17°.4S±0°.2×179°.0W±0°.1, h580km±11km, mb4.6/12, Error ellipse: s-maj=27.7km s-min=10.2km az=151.0*

ISC 04 12:21:05.1±0.9**, 17°.3S**±0°.2×**179°.1W**±0°.2**, h600km, n19, σ1s.31**/19**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.75	260	P	P	12 22 21.8	-1.2
TARA	Tarawa	20.11	336	P	P	12 25 01.2	+1.3
TARA				IAmb	IAmb	12 25 03.8	
	comp=Z,51nm,1.2s						
LHI	Lord Howe Isla	24.36	230	P	P	12 25 37.1	-0.6
CMWZ	Cape Campbell	25.06	192	P	P	12 25 44.6	+1.0
ARMA	Armidale	29.70	238	P	P	12 26 22.9	-1.5
ARMA				IAmb	IAmb	12 26 28.2	
	comp=Z,59nm,1.5s						
CTAO	Charters Tower	32.90	260	P	P	12 26 52.6	+0.9
CTAO				IAmb	IAmb	12 26 59.9	
	comp=Z,6.0nm,1.2s						
STKA	Stephens Creek	38.36	240	P	P	12 27 36.3	-0.2
	comp=Z,1.1nm,0.6s,baz=71,slow=7.4,SNR=5.1						
STKA	Stephens Creek	38.36	240	P	P	12 27 37.2	+0.7
BBOO	Buckleboo	43.14	240	P	P	12 28 14.5	+0.2
MWH	Moku'aweowe	43.22	33	P	P	12 28 13.6	-1.9
WB2	Warramunga Arr	44.09	259	P	P	12 28 22.2	+0.4
WB2				IAmb	IAmb	12 28 28.2	
	comp=Z,3.1nm,1.1s						
WRA	Warramunga Arr	44.10	259	P	P	12 28 22.7	+0.8
	comp=Z,0.8nm,0.7s,baz=96,slow=7.8,SNR=11						
AS31	Alice Springs	44.33	254	P	P	12 28 24.4	+0.8
ASAR	Alice Springs	44.33	254	P	P	12 28 23.9	+0.3
	comp=Z,4.1nm,0.4s,baz=90,slow=7.6,SNR=84						
MTN	Manton Dam	48.16	268	P	P	12 28 49.6	-2.9
MTN				IAmb	IAmb	12 28 59.7	
	comp=Z,19nm,1.2s						
AKUT	Akutan	72.03	8	P	P	12 31 30.9	+1.8
AKUT				IAmb	IAmb	12 31 49.1	
	comp=Z,88nm,1.2s						
COCO	West Island	80.88	260	P	P	12 32 19.9	+1.6
TXAR	Lajitas Array	86.22	58	P	P	12 32 44.5	-0.1
	comp=Z,0.1nm,0.3s,baz=224,slow=5.2,SNR=3.4						
CLL	Collm	144.70	347	ePKPbc	PKPab	12 39 36.0	+0.4

*IDC **04** 12:40:04.4±1.2, 19°.85N×146°.22E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.5/70, mbtmp3.7/8, ML3.9/1, Error ellipse: s-maj=46.7km s-min=23.8km az=81.0*

*NEIC **04** 12:40:07.7±0.4, 19°.88N±0°.09×146°.2E±0°.3, h20km±5km, mb4.0/4, Error ellipse: s-maj=36.4km s-min=11.0km az=80.0*

ISC 04 12:40:12.3±1.1**, 19°.9N**±0°.1×**146°.1E**±0°.3**, h57km, n13, σ1s.04**/12**, mb4.0**/9**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	7.96	334	Pn	Pn	12 42 04.0	-1.4
	1.7nm,0.3s,baz=6.7,slow=24,SNR=6.1						
MAJO	Matsushiro	17.92	339	P	Pn	12 44 17.7	+0.2
WB0	Warramunga Arr	41.08	197	P	P	12 47 51.5	+0.8
WB0				IAmb	IAmb	12 47 55.0	
	comp=Z,4.6nm,1.2s						
WB2	Warramunga Arr	41.26	197	P	P	12 47 51.5	-0.6
WRA	Warramunga Arr	41.26	197	P	P	12 47 51.8	-0.4
	comp=Z,0.2nm,0.3s,baz=18,slow=8.5,SNR=1.8						
ASAR	Alice Springs	44.93	196	P	P	12 48 20.2	-1.6
	comp=Z,0.2nm,0.8s,baz=17,slow=6.9,SNR=1.4						
ZALV	Zalesovo Beam	57.25	322	P	P	12 49 54.2	+0.4
	comp=Z,0.8nm,0.5s,baz=108,slow=8.6,SNR=4.2						
MKAR	Makanchi Array	57.86	313	P	P	12 49 59.1	+0.7
	comp=Z,0.3nm,0.7s,baz=92,slow=9.2,SNR=2.8						
KURK	Kurchatov	60.59	318	P	P	12 50 18.0	+1.0

KURK	**Kurchatov**	**60.59 318**	IAmb	IAmb	12 50 21.4	
	comp=Z,1.1nm,0.9s					
KURBB	**Kurchatov Arra**	**60.64 318**	P	**P**	**12 50 18.0**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=92,slow=7.5,SNR=10.0					
NVAR	**Mina Array Bea**	**82.11 52**	P	**P**	**12 52 27.1**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=272,slow=8.8,SNR=3.7					
FINES	**FINESS Array B**	**85.91 335**	P	**P**	**12 52 47.2**	**+1.3**
	comp=Z,2.3nm,1.0s,baz=46,slow=4.0,SNR=3.7					

NIED ***04*** *12:43:00,23.90N×121.70E,h35km,Mw4.8 Best double couple: M0 1.53000×10^16 NP1:ϕs33.00000°,δ72.00000°, λ71.00000°. NP2:ϕs260.00000°,δ26.00000°,λ135.00000°.*
IDC ***04*** *12:43:30.1±0.5,23.90N×121.70E,h0km,mb4.3/37, mb1 4.3/40,mb1mx4.2/66,mbtmp4.3/40,ML3.4/3,MS3.9/16, Ms1 3.9/16,ms1mx3.6/44,Error ellipse: s-maj=13.1km s-min=11.7km az=82.0*
JMA ***04*** *12:43:34.9±0.1,23.89N×121.66E,h33km±2km,M4.6*
BJI ***04*** *12:43:34.0±0.0,23.94N×121.74E,h20km,mB4.7/42, mb4.4/49,ML4.8/12,Ms4.3/48,Ms7 4.2/46*
NEIC ***04*** *12:43:35.5±1.7,23.89N±0.03×121.65E±0.04,h33km±4km, mb4.8/102,ML5.3(TAP),Error ellipse: s-maj=5.9km s-min=4.2km az=117.0*
ASIES ***04*** *12:43:36.1,23.92N×121.74E,h31km,MW4.3*
TAP ***04*** *12:43:36.0,23.94N×121.65E,h36km,ML5.2,B*
ISC 04 12:43:35.2±0.7,23.89N±0.01×121.70E±0.02,h33km±2km, n358,σ1s22/470,mb4.7/94,MS4.0/16,15C-44D,Taiwan

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.12 313**	⇑*i*P	**Pb**	**12 43 42.3**	**+1.1**
	baz=322					
HWA			S	**Sb**	**12 43 47.0**	**+1.8**
	baz=322					
TWD	**Chiawan**	**0.21 333**	⇑*i*P	**Pb**	**12 43 42.5**	**+0.5**
	baz=337					
TWD			*e*S	**Sb**	**12 43 47.3**	**+0.8**
	baz=337					
ESL	**Shilin**	**0.26 252**	⇓*i*P	**Pb**	**12 43 43.0**	**+0.5**
	baz=247					
ESL			*e*S	**Sb**	**12 43 47.4**	**0.0**
	baz=247					
NACB	**Ninganchiao**	**0.29 341**	⇓*i*P	**Pn**	**12 43 43.2**	**+0.1**
	baz=339					
NACB			*e*S	**Sn**	**12 43 47.9**	**-0.1**
	baz=339					
NACB	**Ninganchiao**	**0.29 341**		**Pb**	**12 43 42.4**	**-0.6**
NACB			Sg	**Sb**	**12 43 48.2**	**0.0**
EGFH	**Guangfu**	**0.34 228**	⇓*i*P	**Pn**	**12 43 44.1**	**+0.2**
	baz=228					
EGFH			*e*S	**Sb**	**12 43 49.8**	**+0.7**
	baz=228					
ETLH	**Xiulin Townshi**	**0.37 327**	⇓*i*P	**Pb**	**12 43 43.9**	**-0.1**
	baz=323					
ETLH			*e*S	**Sb**	**12 43 49.2**	**-0.9**
	baz=323					
WHF	**Hehuan Shan**	**0.47 302**	⇓*i*P	**Pb**	**12 43 45.5**	**-0.2**
	baz=294					
WHF			*e*S	**Sb**	**12 43 51.4**	**-1.5**
	baz=294					
HGSD	**Ruisui**	**0.47 212**	P	**Pn**	**12 43 46.7**	**+1.0**
	baz=218					
HGSD			S	**Sn**	**12 43 54.8**	**+1.9**
	baz=218					
OWD	**Renai**	**0.48 277**	⇓*i*P	**Pn**	**12 43 45.9**	**-0.1**
	baz=279					
OWD			*e*S	**Sb**	**12 43 51.8**	**-1.2**
	baz=279					
CHGB	**Renai**	**0.51 289**	⇓*i*P	**Pn**	**12 43 46.2**	**-0.2**
	baz=283					
CHGB			S	**Sb**	**12 43 52.2**	**-1.5**
	baz=283					
EHY	**Hungye**	**0.52 222**	*e*P	**Pb**	**12 43 46.0**	**-0.2**
	baz=222					
VWDT	**VWDT**	**0.53 255**	⇓*i*P	**Pn**	**12 43 46.9**	**+0.4**
	baz=243					
VWDT			*e*S	**Sb**	**12 43 54.0**	**+0.1**
	baz=243					
ENA	**Nanau**	**0.53 4**	⇓*i*P	**Pn**	**12 43 46.6**	**+0.1**
	baz=19					
TWT	**Tachien**	**0.60 307**	⇓*i*P	**Pb**	**12 43 47.7**	**+0.1**
	baz=311					
TWT			*e*S	**Sb**	**12 43 54.7**	**-1.3**
	baz=311					
NNSB	**Datong**	**0.61 331**	⇓*i*P	**Pn**	**12 43 47.3**	**-0.3**
	baz=334					
NNSB			*e*S	**Sb**	**12 43 54.3**	**-1.8**
	baz=334					
NNSH	**Datong**	**0.61 331**	⇓*i*P	**Pn**	**12 43 47.3**	**-0.3**
	baz=333					
NNSH			*e*S	**Sb**	**12 43 54.3**	**-1.9**
	baz=333					
TDCB	**Techi**	**0.61 306**	⇓*i*P	**Pb**	**12 43 47.7**	**0.0**
	baz=311					
TDCB			*e*S	**Sb**	**12 43 55.0**	**-1.3**
	baz=311					
NNS	**Nan Shan**	**0.62 331**	⇓*i*P	**Pn**	**12 43 47.5**	**-0.3**
	baz=334					
NNS			*e*S	**Sb**	**12 43 55.9**	**-0.6**
	baz=334					
YULB	**Yu-li**	**0.62 217**	*e*P	**Pn**	**12 43 47.4**	**-0.3**
	baz=212					
YULB			*e*S	**Sb**	**12 43 55.6**	**-0.8**
	baz=212					
YULB	**Yu-li**	**0.62 217**		**Pn**	**12 43 47.2**	**-0.5**
YULB			Sn	**Sb**	**12 43 56.0**	**-0.4**
TWF1	**Yuli**	**0.65 215**	*e*P	**Pn**	**12 43 48.0**	**-0.1**
	baz=219					
TWF1			*e*S	**Sn**	**12 43 56.7**	**-0.7**
	baz=219					
SSLB	**Suanglung**	**0.69 261**	⇓*i*P	**Pn**	**12 43 48.8**	**+0.1**
	baz=262					
SSLB			*e*S	**Sn**	**12 43 57.3**	**-1.0**
	baz=262					
SSLB	**Suanglung**	**0.69 261**		**Pn**	**12 43 48.8**	**+0.1**
SSLB			Sn	**Sn**	**12 43 57.0**	**-1.4**
DPDB	**Guoxing**	**0.72 281**	⇓*i*P	**Pb**	**12 43 49.4**	**-0.1**
	baz=276					
DPDB			*e*S	**Sn**	**12 43 58.1**	**-1.0**
	baz=276					
TWC	**Suao**	**0.72 11**	⇓*i*P	**Pb**	**12 43 49.8**	**+0.3**
	baz=22					
TWC			*e*S	**Sb**	**12 43 59.1**	**-0.1**
	baz=22					
NDT	**Datong Townshi**	**0.73 346**	P	**Pn**	**12 43 49.1**	**-0.1**
	baz=339					
NDT			*e*S	**Sn**	**12 43 58.2**	**-0.9**
	baz=339					
SMLT	**Sun Moon Lake**	**0.73 269**	⇓*i*P	**Pb**	**12 43 49.6**	**-0.1**
	baz=264					
SMLT			*e*S	**Sb**	**12 43 59.9**	**+0.3**
	baz=264					
ENTT	**Nioudou**	**0.75 351**	⇓*i*P	**Pn**	**12 43 49.5**	**-0.1**
	baz=353					
ENTT			*e*S	**Sn**	**12 43 59.2**	**-0.6**
	baz=353					
EOS1	**EOS1**	**0.76 31**	*e*P	**Pb**	**12 43 51.5**	**+1.4**
	baz=49					
EOS1			*e*S	**Sb**	**12 44 03.2**	**+3.0**
	baz=49					
TYC	**Yuchr**	**0.77 271**	⇓*i*P	**Pn**	**12 43 50.0**	**+0.2**
	baz=268					
TYC			*e*S	**Sn**	**12 43 59.7**	**-0.5**
	baz=268					
FULB	**Fuli**	**0.79 208**	*e*P	**Pb**	**12 43 50.7**	**+0.1**
	baz=216					
FULB			*e*S	**Sb**	**12 44 01.4**	**+0.4**
	baz=216					
WHP	**Taichung City**	**0.79 299**	⇓*i*P	**Pb**	**12 43 50.4**	**-0.2**
	baz=302					
WHP			*e*S	**Sn**	**12 44 00.8**	**-0.1**
	baz=302					
YUS	**Yu-Shan**	**0.80 240**	⇓*i*P	**Pb**	**12 43 51.2**	**+0.2**
	baz=227					
YUS			*e*S	**Sn**	**12 44 01.1**	**-0.5**
	baz=227					
WHYT	**Xinyi Township**	**0.80 256**	⇓*i*P	**Pb**	**12 43 51.1**	**+0.3**
	baz=253					
WHYT			*e*S	**Sb**	**12 44 01.6**	**+0.3**
	baz=253					
TWE	**Neicheng**	**0.82 358**	⇓*i*P	**Pn**	**12 43 50.6**	**+0.1**
	baz=354					
TWE			*e*S	**Sn**	**12 44 01.5**	**0.0**
	baz=354					
YHNB	**Yeheng**	**0.83 339**	⇓*i*P	**Pn**	**12 43 50.8**	**+0.1**
	baz=340					
YHNB			*e*S	**Sn**	**12 44 00.8**	**-1.0**
	baz=340					
YHNB	**Yeheng**	**0.83 339**		**Pn**	**12 43 50.8**	**+0.1**
YHNB			Sn	**Sn**	**12 44 00.7**	**-1.1**
NSK	**Sanguang**	**0.84 338**	⇓*i*P	**Pn**	**12 43 50.9**	**+0.1**
	baz=340					
NSK			*e*S	**Sn**	**12 44 01.1**	**-0.9**
	baz=340					
CHKT	**Chengkung**	**0.85 201**	*e*P	**Pb**	**12 43 51.2**	**-0.3**
	baz=187					
CHKT			*e*S	**Sb**	**12 44 04.3**	**+1.6**
	baz=187					
SLBB	**Yuanshan**	**0.86 356**	⇓*i*P	**Pn**	**12 43 51.2**	**+0.2**
	baz=358					
SLBB			*e*S	**Sn**	**12 44 02.6**	**+0.1**
	baz=358					
ILA	**Ilan**	**0.87 3**	*e*P	**Pb**	**12 43 51.6**	**-0.3**
	baz=356					
WJS	**Zhushan**	**0.89 266**	⇓*e*P	**Pb**	**12 43 52.8**	**+0.5**
	baz=266					
WJS			*e*S	**Sb**	**12 44 04.9**	**+0.9**
	baz=266					
NWLT	**Wulai**	**0.90 348**	⇓P	**Pn**	**12 43 51.7**	**+0.1**
	baz=343					
NWLT			*e*S	**Sn**	**12 44 02.9**	**-0.6**
	baz=343					
ALS	**Alishan**	**0.91 245**	P	**Pb**	**12 43 53.0**	**+0.3**
	baz=234					
ALS			S	**Sn**	**12 44 04.2**	**+0.2**
	baz=234					
WNT	**Mingjian**	**0.93 269**	⇓*i*P	**Pb**	**12 43 53.3**	**+0.4**
	baz=266					
WNT			*e*S	**Sb**	**12 44 05.7**	**+0.7**
	baz=266					
ELDTW	**Lidau**	**0.94 222**	*e*P	**Pn**	**12 43 52.3**	**0.0**
	baz=211					
TWQ1	**Liyutan**	**0.96 298**	⇓*i*P	**Pb**	**12 43 53.7**	**+0.3**
	baz=297					
TWQ1			*e*S	**Sb**	**12 44 05.9**	**0.0**
	baz=297					
NTC	**Toucheng**	**0.96 7**	*e*P	**Pb**	**12 43 53.0**	**-0.5**
	baz=357					
NTC			*e*S	**Sb**	**12 44 06.7**	**+0.7**
	baz=357					
TCU	**Taichung**	**0.97 285**	⇓P	**Pb**	**12 43 54.2**	**+0.6**
	baz=283					
TCU			*e*S	**Sb**	**12 44 06.9**	**+0.8**
	baz=283					
LIOB	**Emei**	**0.97 320**	⇓*i*P	**Pb**	**12 43 54.0**	**+0.3**
	baz=320					
LIOB			*e*S	**Sb**	**12 44 05.8**	**-0.6**
	baz=320					
CHN5	**Tsauling**	**0.98 253**	*e*P	**Pb**	**12 43 54.2**	**+0.4**
	baz=250					
CHN5			*e*S	**Sb**	**12 44 07.1**	**+0.5**
	baz=250					
NSY	**Sanyi**	**1.00 301**	P	**Pb**	**12 43 54.6**	**+0.4**
	baz=300					
NSY			*e*S	**Sb**	**12 44 08.1**	**+1.0**
	baz=300					
WLTB	**Daxi**	**1.04 337**	⇓*i*P	**Pb**	**12 43 54.9**	**+0.2**
	baz=340					
WLTB			*e*S	**Sn**	**12 44 07.1**	**+0.2**
	baz=340					
NMLH	**Miaoli**	**1.05 308**	*e*P	**Pb**	**12 43 55.0**	**+0.1**
	baz=306					
NMLH			*e*S	**Sb**	**12 44 08.7**	**+0.3**
	baz=306					
WCHH	**Zhanghua**	**1.06 280**	⇓P	**Pb**	**12 43 55.4**	**+0.3**
	baz=278					
WCHH			*e*S	**Sb**	**12 44 09.4**	**+0.6**
	baz=278					
PTSB	**Yuanli**	**1.06 301**	⇓*i*P	**Pb**	**12 43 55.0**	**-0.2**
	baz=300					
PTSB			*e*S	**Sb**	**12 44 09.2**	**+0.4**
	baz=300					
WGK	**Gukeng**	**1.06 259**	P	**Pb**	**12 43 55.5**	**+0.4**
	baz=256					
WGK			*e*S	**Sb**	**12 44 09.8**	**+1.0**
	baz=256					
WDJ	**Dajia District**	**1.07 295**	*e*P	**Pb**	**12 43 55.2**	**0.0**
	baz=294					
WDJ			*e*S	**Sb**	**12 44 09.3**	**+0.4**
	baz=294					
NHDH	**Xindian Distri**	**1.08 351**	⇓P	**Pb**	**12 43 54.8**	**-0.6**
	baz=352					
NHDH			*e*S	**Sn**	**12 44 07.5**	**-0.3**
	baz=352					
TIPB	**Shuangxi**	**1.08 6**	⇓*i*P	**Pb**	**12 43 54.9**	**-0.5**
	baz=358					
TIPB			S	**Sn**	**12 44 07.5**	**-0.4**
	baz=358					
WDLH	**Douliu**	**1.08 259**	P	**Pb**	**12 43 55.9**	**+0.3**
	baz=247					
WDLH			*e*S	**Sb**	**12 44 10.1**	**+0.7**
	baz=247					
TWA	**Mucha**	**1.09 354**	P	**Pb**	**12 43 55.0**	**-0.5**
	baz=356					
TWA			*e*S	**Sn**	**12 44 08.4**	**+0.3**
	baz=356					
TATO	**Taipei**	**1.09 350**		**Pn**	**12 43 54.5**	**+0.2**
TATO				**Sn**	**12 44 08.4**	**+0.2**
SBCB	**Hsinchu**	**1.11 324**	P	**Pb**	**12 43 55.9**	**0.0**
	baz=323					
SBCB			S	**Sb**	**12 44 10.9**	**+0.9**
	baz=323					
HSN	**Hsinchu**	**1.12 324**	⇓*i*P	**Pb**	**12 43 56.2**	**0.0**
	baz=325					
HSN			*e*S	**Sb**	**12 44 11.1**	**+0.6**
	baz=325					
STYT	**Tauyuan**	**1.13 230**	⇑*i*P	**Pb**	**12 43 56.0**	**-0.3**
	baz=224					
STYT			*e*S	**Sb**	**12 44 11.0**	**+0.2**
	baz=224					
TPUB	**Ta-pu**	**1.15 239**	⇑*i*P	**Pb**	**12 43 56.6**	**0.0**
	baz=236					
TPUB			*e*S	**Sb**	**12 44 11.7**	**+0.5**
	baz=236					
TPUB	**Ta-pu**	**1.15 239**		**Pb**	**12 43 56.5**	**-0.1**
CHN4	**Tsaushan**	**1.15 242**	*e*P	**Pb**	**12 43 57.1**	**+0.5**
	baz=234					
CHN4			*e*S	**Sb**	**12 44 12.7**	**+1.4**
	baz=234					
TAP	**Taipei**	**1.15 351**	*e*P	**Pb**	**12 43 55.9**	**-0.8**
	baz=352					
TAP			*e*S	**Sb**	**12 44 10.5**	**-0.8**
	baz=352					
NCUH	**Zhongli**	**1.17 336**	⇓P	**Pb**	**12 43 56.5**	**-0.4**
	baz=335					
NCUH			*e*S	**Sb**	**12 44 11.8**	**0.0**
	baz=335					
NCU	**National Centr**	**1.17 336**	⇓*i*P	**Pb**	**12 43 56.5**	**-0.5**
	baz=336					
NCU			*e*S	**Sb**	**12 44 11.6**	**-0.2**
	baz=336					
NWF	**Wu-fen Shan**	**1.17 4**	*e*P	**Pb**	**12 43 56.6**	**-0.5**
	baz=352					
NWF			*e*S	**Sb**	**12 44 11.3**	**-0.7**
	baz=352					
WFSB	**Wu-fen Shan**	**1.17 4**	*e*P	**Pb**	**12 43 56.4**	**-0.6**
	baz=352					
WFSB			*e*S	**Sb**	**12 44 11.7**	**-0.2**
	baz=352					
CHN2	**Minshiung**	**1.18 252**	P	**Pb**	**12 43 57.6**	**+0.5**
	baz=251					
CHN2			*e*S	**Sb**	**12 44 14.1**	**+2.0**
	baz=251					
WTP	**Ta-pu**	**1.19 237**	⇑*i*P	**Pb**	**12 43 57.3**	**+0.1**
	baz=236					
WTP			*e*S	**Sb**	**12 44 13.3**	**+0.9**
	baz=236					
TWH	**Lutao**	**1.20 190**	⇓*i*P	**Pn**	**12 43 55.9**	**+0.2**
	baz=182					
TWH			*e*S	**Sn**	**12 44 10.4**	**-0.4**
	baz=182					
TWGBT	**Beinan**	**1.21 208**	*e*P	**Pn**	**12 43 55.2**	**-0.7**
	baz=194					
TWG	**Pinlang**	**1.22 209**	*e*P	**Pn**	**12 43 55.3**	**-0.6**
	baz=196					
TWG	**Pinlang**	**1.22 209**		**Pn**	**12 43 55.3**	**-0.6**
TWG				**Sn**	**12 44 09.6**	**-1.6**
RLNB	**Erlin**	**1.23 270**	⇓*i*P	**Pb**	**12 43 57.7**	**-0.2**
	baz=279					
RLNB			*e*S	**Sb**	**12 44 14.0**	**+0.6**
	baz=279					
TWS1	**Kuangyinshan**	**1.23 348**	*e*P	**Pn**	**12 43 56.9**	**+0.8**
	baz=357					
TWS1			*e*S	**Sb**	**12 44 13.1**	**-0.4**
	baz=357					
CHY	**Chiayi**	**1.23 252**	⇑P	**Pb**	**12 43 57.9**	**-0.2**
	baz=250					
CHY			*e*S	**Sb**	**12 44 14.1**	**+0.5**
	baz=250					
TTN	**Taitung**	**1.24 204**	*e*P	**Pn**	**12 43 56.3**	**0.0**
	baz=203					
YM01	**YM01**	**1.25 355**	*e*P	**Pn**	**12 43 56.9**	**+0.4**
	baz=354					
YM01			*e*S	**Sn**	**12 44 12.7**	**+0.5**
	baz=354					
YM10	**YM10**	**1.26 354**	*e*P	**Pn**	**12 43 57.1**	**+0.5**
	baz=355					
YM04	**YM04**	**1.26 353**	⇓P	**Pn**	**12 43 57.1**	**+0.5**
	baz=354					
JYNG	**Yonaguniijimaku**	**1.27 64**	P	**Pb**	**12 43 57.8**	**-0.7**
JYNG			S	**Sb**	**12 44 14.1**	**-0.4**
YM05	**YM05**	**1.27 354**	*e*P	**Pn**	**12 43 56.9**	**+0.2**
	baz=354					
YM05			*e*S	**Sn**	**12 44 13.6**	**+0.9**
	baz=354					
YM11	**YM11**	**1.27 355**	P	**Pn**	**12 43 57.0**	**+0.2**
	baz=354					
YM11			*e*S	**Sn**	**12 44 12.6**	**-0.2**
	baz=354					
TWK	**Hsinying**	**1.28 241**	P	**Pb**	**12 43 58.6**	**-0.2**
	baz=239					
TWK			*e*S	**Sb**	**12 44 15.4**	**+0.5**
	baz=239					
NTST	**Danshui**	**1.28 350**	*e*P	**Pn**	**12 43 57.6**	**+0.7**
	baz=350					
CHN1	**Nanshi**	**1.29 237**	*e*P	**Pb**	**12 43 59.1**	**+0.1**
	baz=235					
YM03	**YM03**	**1.29 353**	*e*P	**Pn**	**12 43 57.2**	**+0.2**
	baz=354					
SNST	**Tainan City**	**1.29 239**	*e*P	**Pb**	**12 43 58.9**	**-0.1**
	baz=237					
YM08	**YM08**	**1.29 356**	*e*P	**Pn**	**12 43 56.8**	**-0.2**
	baz=356					
ANP	**Anpu**	**1.30 353**	*e*P	**Pn**	**12 43 57.2**	**0.0**
	baz=353					
WTCT	**Ta-ch'eng**	**1.30 269**	P	**Pb**	**12 43 58.7**	**-0.4**
	baz=278					
WTCT			*e*S	**Sb**	**12 44 16.3**	**+0.8**
	baz=278					
SGST	**Jiashian**	**1.31 232**	⇑P	**Pb**	**12 43 58.3**	**-0.9**
	baz=230					
SLGT	**Liugui**	**1.32 227**	*e*P	**Pb**	**12 43 59.4**	**-0.1**
	baz=227					
SLGT			*e*S	**Sb**	**12 44 16.4**	**+0.3**
	baz=227					
YOJ	**Yonaguni jima**	**1.32 64**	P	**Pb**	**12 43 58.7**	**-0.8**
YOJ			*e*S	**Sb**	**12 44 15.3**	**-0.9**
YOJ	**Yonaguni jima**	**1.32 64**		**Pb**	**12 43 58.8**	**-0.7**
YOJ			Sn	**Sb**	**12 44 15.2**	**-0.9**
WLGB	**Puzi**	**1.35 252**	*e*P	**Pb**	**12 43 59.5**	**-0.5**
	baz=239					
WLGB			*e*S	**Sb**	**12 44 17.2**	**+0.3**
	baz=239					
WMLT	**Mailiao**	**1.36 267**	*e*P	**Pb**	**12 43 59.8**	**-0.3**
	baz=277					
WMLT			*e*S	**Sb**	**12 44 17.8**	**+0.7**
	baz=277					
TWY	**Chenhua**	**1.38 356**	*e*P	**Pn**	**12 43 59.0**	**+0.8**
	baz=357					
WSF	**Szhu**	**1.38 260**	⇑*i*P	**Pb**	**12 43 59.8**	**-0.7**
	baz=258					
WSF			*e*S	**Sb**	**12 44 18.1**	**+0.4**
	baz=258					
ECL	**Taimali**	**1.46 208**	*e*P	**Pn**	**12 43 58.8**	**-0.5**
	baz=199					
CHN8	**Yiju**	**1.47 249**	*e*P	**Pb**	**12 44 01.0**	**-1.1**
	baz=248					
CHN8			*e*S	**Sb**	**12 44 20.2**	**-0.2**
	baz=248					
CHN3	**Shinhua**	**1.47 237**	*e*P	**Pb**	**12 44 01.8**	**-0.3**
	baz=237					
CHN3			*e*S	**Sb**	**12 44 22.6**	**+2.2**
	baz=237					
SSD	**Sandimen**	**1.51 221**	*e*P	**Pb**	**12 44 01.9**	**-0.7**
	baz=221					
SSD			*e*S	**Sb**	**12 44 21.2**	**-0.2**
	baz=221					
SCLT	**Jiali**	**1.56 243**	⇑P	**Pb**	**12 44 02.4**	**-1.0**
	baz=243					
SCLT			*e*S	**Sb**	**12 44 22.7**	**-0.1**
	baz=243					
TWM1	**Shoushan**	**1.59 228**	*e*P	**Pb**	**12 44 04.2**	**+0.2**
	baz=228					
TAI1	**Yung-k'ang**	**1.60 238**	*e*P	**Pb**	**12 44 03.3**	**-0.9**
	baz=237					
MASBT	**Mashibuluo**	**1.61 218**	*e*P	**Pb**	**12 44 03.9**	**-0.5**
	baz=219					
MASBT			*e*S	**Sb**	**12 44 24.2**	**-0.1**
	baz=219					
SGLT	**Jiouru**	**1.61 224**	*e*P	**Pb**	**12 44 04.8**	**+0.5**
	baz=224					
SNJT	**Kaohsiung City**	**1.69 228**	*e*P	**Pb**	**12 44 05.2**	**-0.6**
	baz=228					
EAST	**Anshuo**	**1.70 208**	*e*P	**Pn**	**12 44 02.5**	**-0.1**
	baz=201					
TAW	**Tawu**	**1.70 206**	*e*P	**Pn**	**12 44 02.7**	**+0.1**
	baz=197					
SSPT	**Xinbi**	**1.75 217**	*e*P	**Pb**	**12 44 06.3**	**-0.4**
	baz=205					
PCYT	**Pengchaiyu**	**1.76 11**	*e*P	**Pn**	**12 44 03.1**	**-0.3**
	baz=357					
SCZT	**Fangliau**	**1.81 214**	*e*P	**Pb**	**12 44 06.7**	**-1.1**
	baz=214					
LAY	**Lan-yu**	**1.85 184**	P	**Pn**	**12 44 04.4**	**-0.3**
	baz=186					
IRIF	**Iriomote-Funau**	**1.91 76**	P	**Pn**	**12 44 07.0**	**+1.6**
IRIF			S	**Sb**	**12 44 30.6**	**-2.2**
HATJ	**Hateruma jima**	**1.93 85**	P	**Pn**	**12 44 07.5**	**+1.7**
HATJ			S	**Sb**	**12 44 31.3**	**-2.3**
WLCH	**Liuqiu**	**1.96 219**	*e*P	**Pb**	**12 44 10.0**	**-0.3**
	baz=220					
TWP	**Hsiaoliuchiu**	**1.97 219**	*e*P	**Pb**	**12 44 09.4**	**-1.2**
	baz=220					
WDGT	**Dungji**	**1.98 252**	P	**Pn**	**12 44 07.3**	**+1.0**
	baz=249					
PHUB	**P'eng-hu**	**1.99 259**	⇑P	**Pn**	**12 44 07.2**	**+0.6**
	baz=257					
PNG	**Penghu**	**1.99 261**	*e*P	**Pn**	**12 44 07.2**	**+0.6**
	baz=259					
HEN	**Hengchun**	**2.08 205**	*e*P	**Pb**	**12 44 10.4**	**-2.0**
	baz=196					
TWK1	**Hengchun**	**2.11 203**	*e*P	**Pn**	**12 44 09.7**	**+1.4**
	baz=195					
TWKBT	**Hengchun**	**2.11 203**	*e*P	**Pn**	**12 44 09.5**	**+1.3**
	baz=195					
TSEB	**Hengchuen, Pin**	**2.12 201**	*e*P	**Pn**	**12 44 09.7**	**+1.4**
	baz=194					
JKRS	**Kuro-shima**	**2.14 80**	P	**Pn**	**12 44 10.6**	**+2.0**
JKRS			S	**Sb**	**12 44 37.0**	**-2.5**
VCHM	**Qimei**	**2.19 252**	*e*P	**Pn**	**12 44 10.2**	**+0.9**
	baz=240					
JIJ	**Ishigaki jima**	**2.28 78**	P	**Pn**	**12 44 11.9**	**+1.3**
JIJ			S	**Sn**	**12 44 38.3**	**+0.8**
VWUC	**VWUC**	**2.33 298**	*e*P	**Pn**	**12 44 10.8**	**-0.4**
	baz=296					
PTTC	**Pingtan**	**2.38 313**	*e*P	**Pn**	**12 44 11.4**	**-0.4**
	baz=310					
JISG	**Ishigakijimahi**	**2.48 73**	P	**Pn**	**12 44 14.6**	**+1.3**
JISG			S	**Sn**	**12 44 43.0**	**+0.5**
PTMZ	**Houxiangcun**	**2.61 296**	*e*P	**Pn**	**12 44 14.7**	**-0.4**
	baz=294					
MATB	**Ma-tsu**	**2.75 325**	*e*P	**Pn**	**12 44 16.7**	**-0.4**
	baz=322					
JTJ	**Tarama**	**2.84 74**	P	**Pn**	**12 44 19.9**	**+1.7**
JTJ			S	**Sn**	**12 44 53.0**	**+1.7**
QZH	**Quanzhou**	**3.02 291**	⇑*i*Pn	**Pn**	**12 44 20.6**	**-0.1**
QZH			Sn	**Sn**	**12 44 52.8**	**-3.0**
QZH			*s*max	*s*max		
	comp=N,1μm,0.8s					
QZH			*s*max	*s*max		
	comp=E,2μm,1.2s					
QZH			LR	LR		
	comp=Z,4μm,11.8s					
KNM	**Kinmen**	**3.03 281**	*e*P	**Pn**	**12 44 22.4**	**+1.5**
	baz=278					
KNMB	**Chin-men Tao**	**3.08 281**	⇑P	**Pn**	**12 44 21.4**	**-0.1**
	baz=279					
KNMB	**Chin-men Tao**	**3.08 281**	Pn	**Pn**	**12 44 21.6**	**0.0**
KNMB			Sn	**Sn**	**12 44 54.2**	**-3.0**
LYJJ	**Jianjiangzhen**	**3.17 327**	*e*P	**Pn**	**12 44 22.8**	**-0.1**
	baz=324					

MHZQ Yeshan 3.27 313 *e*P Pn 12 44 23.5 -0.7
baz=311
JIRB Irabujima 3.30 73 P Pn 12 44 26.2 +1.6
JIRB S Sn 12 45 04.6 +1.9
XPSS Dashiqiu 3.32 336 *e*P Pn 12 44 24.3 -0.6
baz=343
JIKM Ikemajima 3.39 72 P Pn 12 44 27.7 +1.8
JIKM S Sn 12 45 06.7 +1.7
JMJ Miyako jima 2 3.40 74 *e*P Pn 12 44 27.9 +1.9
baz=76
JMJ2 Miyako jima3 3.41 75 P Pn 12 44 28.1 +1.9
JMJ2 S Sn 12 45 08.1 +2.6
BBP Basco 3.44 176 *e*P Pn 12 44 25.9 -0.7
BBP *e*S Sn 12 45 03.2 -3.1
JOGS Gusukube 3.49 75 P Pn 12 44 29.1 +1.9
JOGS S Sn 12 45 10.3 +3.0
AXDP Jialang 3.55 287 *e*P Pn 12 44 28.3 +0.3
baz=285
ZPLA Ao Xicun 3.62 271 ⇑P Pn 12 44 29.1 +0.1
baz=268
ZZJH Jiuhuzhen 3.76 280⇑ *e*P Pn 12 44 30.9 -0.1
baz=277
APYP Conner 6.02 184 *e*P Pn 12 45 03.3 +1.3
APYP *e*S Sn 12 46 12.2 +2.4
ABRA Dolores 6.28 189 *e*P Pn 12 45 07.3 +1.7
JOW Kunigami 6.63 62 Pn Pn 12 45 10.5 +0.1
4.1nm,0.3s,baz=18,slow=13,SNR=92
JOW Kunigami 6.63 62 Pn 12 45 10.2 -0.1
PALP Palanan 6.83 174 *e*P Pn 12 45 15.3 +2.2
PALP *e*S Sn 12 46 19.9 -10
GZH Guangzhou 7.71 266 Pn Pn 12 45 21.9 -3.4
GZH Sn Sn 12 46 37.8 -14
GZH smax smax
comp=N,950nm,1.2s
GZH smax smax
comp=E,420nm,0.9s
SMPP San Manuel, Pa 7.76 187 *e*S Sn 12 46 51.8 -1.0
SMPP San Manuel, Pa 7.76 187 *e*P Pn 12 45 27.7 +1.7
NJ2 Nanjing 8.51 343 *e*P Pn 12 45 35.3 -0.8
NJ2 S Sn 12 47 09.8 -1.1
NJ2 pmax pmax
comp=Z,33nm,0.5s
NJ2 pmax pmax
comp=Z,50nm,3.5s
NJ2 smax smax
comp=N,180nm,1.0s
NJ2 smax smax
comp=E,180nm,1.0s
NJ2 LR LR
comp=N,1μm,5.9s
NJ2 LR LR
comp=E,670nm,5.5s
NJ2 LR LR
comp=Z,960nm,10.9s
WHN Wuhan 9.31 317 P Pn 12 45 46.2 -0.9
WHN S Sn 12 47 32.1 +1.5
QIZ Qiongzhong 12.05 249 P Pn 12 46 23.3 -1.5
QIZ S Sn 12 48 36.5 -1.6
QIZ LR LR
comp=N,590nm,14.4s
QIZ LR LR
comp=E,490nm,16.6s
QIZ LR LR
comp=Z,520nm,22.6s
GYA Guiyang 13.85 284⇑ *i*P Pn 12 46 51.6 +2.2
GYA S Sn 12 49 20.3 -1.9
GYA SS S 12 49 43.8 +0.2
GYA pmax pmax
comp=Z,10.0nm,0.9s
GYA pmax pmax
comp=Z,110nm,4.3s
GYA LR LR
comp=Z,470nm,5.9s
GYA LR LR
comp=Z,1μm,14.2s
GYA LR LR
comp=Z,1μm,14.9s
KSRS Korea Array 14.53 20 Pn Pn 12 46 58.0 -0.4
comp=Z,0.1nm,0.3s,baz=200,slow=12,SNR=2.8
KS19 Wonju Array Si 14.56 20 P P 12 47 05.5 +0.6
XAN Xi'an 15.06 315 P P 12 47 11.3 +0.7
XAN pP pP 12 47 18.7 -0.9
XAN S S 12 50 02.8 -5.3
XAN pmax pmax
comp=Z,11nm,0.8s
XAN LR LR
comp=Z,930nm,5.7s
XAN LR LR
comp=Z,660nm,5.7s
XAN LR LR
comp=Z,360nm,6.2s
XAN Xi'an 15.06 315 P P 12 47 09.9 -0.7
TIY Taiyuan 15.89 332 *e*P P 12 47 20.2 +0.3
TIY S S 12 50 22.7 -2.5
TIY SS SnSn 12 50 35.1 +10
TIY pmax pmax
comp=Z,130nm,7.0s
TIY LR LR
comp=Z,580nm,12.2s
TIY LR LR
comp=Z,390nm,7.4s
TIY LR LR
comp=Z,580nm,21.5s
SLVN Son La 16.63 265 P P 12 47 28.2 +0.1
BJI Beijing 16.76 345 P Pn 12 47 27.6 +0.2
BJI S Sn 12 50 32.4 -0.1
BJI pmax pmax
comp=Z,5.0nm,0.9s
BJI LR LR
comp=Z,340nm,12.0s
BJI LR LR
comp=Z,210nm,11.1s
CD2 Chengdu 17.39 298 P P 12 47 36.3 -0.2
CD2 S S 12 50 51.8 -3.9
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 LR LR
comp=Z,750nm,8.2s
CD2 LR LR
comp=Z,850nm,7.7s
CD2 LR LR
comp=Z,2μm,12.6s
JHJ Hachijo jima 2 18.34 56 LR LR 12 54 49.9
comp=Z,315nm,19.5s,baz=268,slow=37
JCJ Chichijima 18.76 76 LR LR 12 54 15.7
comp=Z,326nm,21.9s,baz=294,slow=34
HHC Hu-ho-hao-te 18.93 336 *e*P Pn 12 47 54.6 +0.4
HHC sP sP 12 48 05.0 +0.3
HHC pmax pmax
comp=Z,10.0nm,0.9s
HHC pmax pmax
comp=Z,74nm,4.5s
HHC LR LR
comp=Z,200nm,13.8s
HHC LR LR
comp=Z,170nm,11.5s
HHC LR LR
comp=Z,260nm,14.8s
MJAR Matsushiro Arr 19.00 45 P P 12 47 54.2 0.0
comp=Z,0.0nm,0.3s,baz=232,slow=8.7,SNR=8.2
MJAR LR LR 12 55 46.6
comp=Z,254nm,21.3s,baz=190,slow=39
LZH Lanzhou 19.63 312 *e*P Pn 12 48 06.8 +4.1
LZH pP sP 12 48 13.6 +0.9
LZH sP pP 12 48 17.4 +7.1
LZH S Sn 12 51 43.6 +1.3
LZH sS sS 12 51 54.0 -1.8
LZH pmax pmax
comp=Z,26nm,1.3s
LZH pmax pmax
comp=Z,180nm,4.0s
LZH LR LR
comp=Z,620nm,11.9s
LZH LR LR
comp=Z,870nm,11.4s
LZH LR LR
comp=Z,980nm,13.6s
CN2 Changchun 20.09 8 *e*P Pn 12 48 07.2 -0.8
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,400nm,17.0s
CN2 LR LR
comp=Z,500nm,17.0s
CN2 LR LR
comp=Z,300nm,16.0s

PBKT Sadao Pong 20.76 253 P Pn 12 48 15.1 -0.8
CHTO Chiang Mai 21.78 261 P P 12 48 24.9 +0.5
CM31 Chiang Mai Arr 21.89 260 P P 12 48 26.9 +1.4
CMAR Chiang Mai Arr 21.89 260 P P 12 48 25.5 -0.1
comp=Z,4.0nm,0.9s,baz=62,slow=8.3,SNR=34
CMAR PcP PcP 12 52 24.6 +0.2
comp=Z,0.3nm,0.5s,baz=23,slow=1.2,SNR=4.2
CMAR LR LR 12 57 18.4
comp=Z,348nm,21.4s,baz=75,slow=38
USRK Ussuriysk Ar. 21.94 20 P P 12 48 24.3 -1.6
comp=Z,2.9nm,0.8s,baz=218,slow=8.7,SNR=4.2
SBUM Sibu 23.21 205 P P 12 48 38.2 -1.3
SBUM Sibu 23.21 205 P P 12 48 40.0 +0.5
MRSI Marisa 23.28 179 P P 12 48 40.8 +0.7
comp=Z,562nmcomp=Z,14nm,0.9s
TNTI Ternate 23.63 166 P P 12 48 57.6 +14
GTA Gaotai 24.12 315 *e*P P 12 48 49.2 +1.0
GTA pP pP 12 48 56.4 -1.1
GTA sP sP 12 48 59.8 -0.3
GTA S S 12 53 06.7 +2.7
GTA pmax pmax
comp=Z,6.0nm,1.2s
GTA pmax pmax
comp=Z,83nm,6.2s
GTA LR LR
comp=Z,260nm,15.8s
GTA LR LR
comp=Z,530nm,15.1s
GTA LR LR
comp=Z,640nm,14.8s
APSI Ampana 24.66 180 P P 12 49 07.5 +14
LUWI Luwuk 24.81 177 P P 12 48 58.7 +4.3
comp=Z,4μmcomp=Z,83nm,1.0s
KSM Kuching 24.87 208 P P 12 48 54.7 -0.3
KSM Kuching 24.87 208 P P 12 48 56.0 +1.0
ASAJ Asahikawa 26.45 35 LR LR 13 00 55.7
comp=Z,333nm,18.1s,baz=238,slow=40
KLR Kul'dur 26.50 15 P P 12 49 09.0 -0.4
comp=Z,2.6nm,0.7s,baz=232,slow=7.1,SNR=9.3
KLR LR LR 13 00 38.2
comp=Z,163nm,21.5s,baz=204,slow=39
ULN Ulaanbaatar 26.61 338 P P 12 49 10.2 -0.5
ULN IAmb IAmb 12 49 11.9
comp=Z,21nm,0.8s
SONM Songino Array 26.82 337 P P 12 49 12.5 0.0
comp=Z,9.3nm,0.8s
SHL Shillong 27.11 280 P P 12 49 15.3 -0.2
SHL IAmb IAmb 12 49 33.1
comp=Z,25nm,1.0s
KULM Kulim 27.44 231 P P 12 49 20.0 +1.8
NLAI Namlea 27.48 168 P P 12 49 21.3 +2.8
comp=Z,19nm,0.9s
IPM Ipoh 27.75 229 P P 12 49 21.2 +0.2
IPM Ipoh 27.75 229 P P 12 49 23.0 +2.0
MYKOM Kota Tinggi 27.96 221 P P 12 49 23.8 +0.9
MYKOM Kota Tinggi 27.96 221 P P 12 49 25.0 +2.1
PSI Prapat 30.40 230 P P 12 49 45.5 +0.7
comp=Z,1.2nm,0.4s,baz=1.1,slow=8.2,SNR=3.9
PSI LR LR 13 01 49.8
comp=Z,192nm,20.2s,baz=287,slow=36
RPSI Rantau Prapat 30.48 230 P P 12 49 45.5 +0.2
RPSI Rantau Prapat 30.48 230 P P 12 49 45.5 +0.2
TLY Talaya 31.02 338 P P 12 49 49.6 -0.1
comp=Z,6.1nm,0.6s,baz=208,slow=23,SNR=2.0
TLY Talaya 31.02 338 P P 12 49 49.3 -0.4
TLY IAmb IAmb 12 49 50.5
comp=Z,8.5nm,0.7s
EDFI Ende, Flores 32.44 180 P P 12 50 02.5 -0.1
comp=Z,7.5nm,0.9s
MDSI Maura Dua 32.98 213 P P 12 50 09.9 +2.7
comp=Z,13nm,1.0s
PWJI Pagerwojo 33.16 198 P P 12 50 10.3 +1.5
comp=Z,34nm,0.9s
LEM Lembang 33.49 206 LR LR 13 05 23.4
comp=Z,65nm,18.4s,baz=266,slow=39
WMQ Urumqi 34.20 314 *e*P P 12 50 20.3 +2.6
WMQ sP sP 12 50 33.7 +4.0
WMQ pmax pmax
comp=Z,8.0nm,1.1s
WMQ pmax pmax
comp=Z,66nm,3.7s
WMQ LR LR
comp=Z,160nm,19.1s
WMQ LR LR
comp=Z,180nm,15.1s
WMQ LR LR
comp=Z,230nm,15.1s
MTN Manton Dam 37.66 165 P P 12 50 45.8 -1.7
MTN IAmb IAmb 12 50 46.7
comp=Z,11nm,0.8s
MK31 Makanchi Array 38.87 316 P P 12 50 57.5 0.0
MK31 IAmb IAmb 12 50 58.9
comp=Z,11nm,1.0s
MKAR Makanchi Array 38.87 316 P P 12 50 57.8 +0.3
comp=Z,10nm,0.9s,baz=110,slow=10,SNR=75
MKAR PcP PcP 12 53 06.5 -1.5
comp=Z,1.2nm,0.7s,baz=136,slow=4.5,SNR=3.8
MKAR LR LR 13 08 30.8
comp=Z,345nm,18.4s,baz=74,slow=39
MAKZ Makanchi 39.08 316 P P 12 50 59.0 -0.2
MAKZ IAmb IAmb 12 51 00.7
comp=Z,17nm,1.0s
PETK Petropavlovsk- 39.84 34 P P 12 51 03.5 -1.9
comp=Z,1.8nm,0.9s,baz=286,slow=10,SNR=2.1
PETK LR LR 13 07 30.6
comp=Z,237nm,19.5s,baz=236,slow=36
PRZ Przheval'sk 40.20 308 P P 12 51 11.0 +2.2
PRZ IAmb IAmb 12 51 25.9
comp=Z,7.8nm,0.6s
ZAA0 Zalesovo Array 40.74 327 P P 12 51 11.1 -1.8
ZAA0 IAmb IAmb 12 51 13.0
comp=Z,18nm,0.8s
ZALV Zalesovo Beam 40.74 327 P P 12 51 12.1 -0.8
comp=Z,17nm,0.7s,baz=114,slow=7.8,SNR=72
ZALV PcP PcP 12 53 11.3 -2.4
comp=Z,0.4nm,0.3s,baz=114,slow=6.2,SNR=1.6
ZALV LR LR 13 09 22.2
comp=Z,281nm,18.6s,baz=128,slow=38
KDJ Kajisay 41.01 307 P P 12 51 16.9 +1.5
MA2 Magadan 41.07 22 P P 12 51 15.6 0.0
comp=Z,0.8nm,0.4s,baz=331,slow=22,SNR=3.8
MA2 LR LR 13 09 22.6
comp=Z,202nm,18.4s,baz=63,slow=38
MA2 Magadan 41.07 22 P P 12 51 15.7 +0.2
PMG Port Moresby 41.41 140 P P 12 51 19.3 +0.6
PMG IAmb IAmb 12 51 37.6
comp=Z,18nm,0.9s
KSH Kashi 41.45 303 P P 12 51 23.5 +4.4
KSH pP sP 12 51 30.7 -0.5
KSH PcP PcP 12 53 16.0 -0.6
KSH S S 12 57 37.9 +5.6
KSH SS SS 13 00 35.7 -1.5
KSH pmax pmax
comp=Z,11nm,0.6s
KSH pmax pmax
comp=Z,140nm,5.1s
KSH LR LR
comp=Z,210nm,4.7s
KSH LR LR
comp=Z,190nm,5.3s
KSH LR LR
comp=Z,310nm,7.7s
ULHL Ulahol 41.71 307 P P 12 51 22.6 +1.3
SNR=7.1
H11N2 WAKE ISLAND Hy 42.03 87 T T 13 36 43.2
baz=284,slow=74,SNR=42
H11N3 WAKE ISLAND Hy 42.05 87 T T 13 36 41.4
baz=350,slow=74,SNR=72
H11S3 WAKE ISLAND Hy 42.15 88 T T 13 36 41.9
baz=284,slow=74,SNR=271
H11S1 WAKE ISLAND Hy 42.16 88 T T 13 36 39.5
baz=284,slow=74,SNR=139
H11S2 WAKE ISLAND Hy 42.17 88 T T 13 36 43.3
baz=284,slow=74,SNR=127
TKM2 Tokmak 2 42.31 308 P P 12 51 27.4 +1.2
SNR=13
KZA Kyzart 42.41 307 P P 12 51 28.9 +1.7
SNR=6.6
KURK Kurchatov 42.62 320 P P 12 51 27.1 -1.2
KURBB Kurchatov Arra 42.63 320 P P 12 51 28.2 -0.2
comp=Z,6.5nm,0.9s,baz=109,slow=8.2,SNR=32
UCH Uchtor 42.97 307 P P 12 51 33.7 +1.9
SNR=10
FRU1 Bishkek 42.99 308 P P 12 51 32.7 +1.2
AAK Ala-Archa 43.06 308 P P 12 51 32.3 +0.1
comp=Z,0.8nm,0.2s,baz=141,slow=8.9,SNR=5.9

AAK Ala-Archa 43.06 308 P P 12 51 32.8 +0.7
COEN Coen 43.08 149 P P 12 51 33.2 +0.9
AML Almayashu 43.55 307 P P 12 51 38.0 +1.5
SNR=8.6
WB0 Warramunga Arr 45.13 163 P P 12 51 48.1 -0.6
WB0 IAmb IAmb 12 52 06.3
comp=Z,16nm,1.4s
PSA00 Pilbara Seismi 45.23 182 P P 12 51 48.1 -1.4
PSA00 IAmb IAmb 12 52 04.2
comp=Z,11nm,0.9s
WRA Warramunga Arr 45.28 163 P P 12 51 49.1 -0.8
comp=Z,1.3nm,0.6s,baz=347,slow=8.6,SNR=18
WB2 Warramunga Arr 45.28 163 P P 12 51 49.4 -0.5
WB2 IAmb IAmb 12 52 07.7
comp=Z,11nm,1.1s
WR0 Warramunga Arr 45.35 163 P P 12 51 50.0 -0.5
GAR Garm 45.77 302 P P 12 51 52.2 -1.6
GAR IAmb IAmb 12 51 56.6
comp=Z,12nm,0.9s
KK31 Karatay Array 46.02 308 P P 12 51 56.1 +0.4
KKAR Karatay Array 46.02 308 P P 12 51 55.7 0.0
CHGR Chuyangaron 46.65 301 P P 12 52 00.8 0.0
CHGR IAmb IAmb 12 52 01.6
comp=Z,10.0nm,0.8s
KBL Kabul 46.71 296 P P 12 52 01.9 +0.5
TIXI Tiksi 47.96 3 LR LR 13 13 53.6
comp=Z,84nm,20.9s,baz=198,slow=38
TIXI Tiksi 47.96 3 P P 12 52 08.0 -2.2
TIXI IAmb IAmb 12 52 21.2
comp=Z,12nm,1.2s
BVAR Borovoye Array 48.20 321 P P 12 52 12.3 -0.1
comp=Z,3.3nm,0.5s,baz=110,slow=12,SNR=20
BRVK Borovoye 48.27 321 P P 12 52 12.5 -0.4
AS31 Alice Springs 48.74 165 P P 12 52 16.4 -0.5
ASAR Alice Springs 48.74 165 P P 12 52 16.6 -0.3
comp=Z,1.3nm,0.6s,baz=344,slow=6.6,SNR=25
NRIK Noril'sk 49.80 345 P P 12 52 23.3 -1.1
comp=Z,1.1nm,0.4s,baz=124,slow=8.0,SNR=3.9
CTA Charters Tower 49.84 149 P P 12 52 25.6 +0.3
comp=Z,2.3nm,0.7s,baz=15,slow=7.1,SNR=3.3
CTAO Charters Tower 49.84 149 P P 12 52 25.8 +0.5
HRA Herat 52.33 296 P P 12 52 44.7 +0.4
ABKAR Akbulak array 53.98 314 P P 12 52 54.5 -1.4
ABKAR IAmb IAmb 12 52 57.1
comp=Z,10nm,1.2s
AKTO Aktyubinsk 55.31 316 P P 12 53 06.2 +0.6
comp=Z,2.7nm,0.9s,baz=94,slow=5.7,SNR=5.8
GEYT Alibeck 55.35 301 P P 12 53 06.2 +0.1
comp=Z,3.8nm,0.9s,baz=76,slow=6.3,SNR=7.4
GEYT LR LR 13 21 16.1
comp=Z,124nm,19.6s,baz=25,slow=41
GYA0B ALIBECK ARRAY 55.35 301 P P 12 53 07.2 +1.0
ARU Arti 55.62 323 P P 12 53 07.3 -0.4
comp=Z,2.9nm,0.6s,baz=82,slow=4.2,SNR=14
ARU Arti 55.62 323 P P 12 53 06.9 -0.8
BBOO Buckleboo 58.03 166 P P 12 53 24.3 -0.6
STKA Stephens Creek 58.63 160 P P 12 53 28.4 -0.8
comp=Z,1.4nm,0.7s,baz=345,slow=7.4,SNR=5.1
STKA Stephens Creek 58.63 160 P P 12 53 29.1 0.0
KIRV Kirov 60.73 325 P P 12 53 43.0 -0.3
comp=Z,20nm,0.8s,baz=103,slow=3.6,SNR=10
CNBA Chernabura Isl 64.39 39 P P 12 54 07.2 -0.7
SOCY Socotra 64.92 273 P P 12 54 12.0 -0.1
TTA Tatalina 65.52 30 P P 12 54 16.3 +1.1
TTA IAmb IAmb 12 54 18.2
comp=Z,5.7nm,0.8s
KLMR Klimovskoe 65.66 328 *e*P P 12 54 12.9 -3.1
KLMR AMP 12 54 16.5
comp=Z,12nm,1.2s
KBZ Khabaz 66.03 309 P P 12 54 18.9 +0.2
comp=Z,3.7nm,0.9s,baz=158,slow=8.0,SNR=5.1
KBZ LR LR 13 27 29.9
comp=Z,71nm,18.0s,baz=52,slow=40
AKH Akhalkalaki 66.04 306 P P 12 54 20.9 +1.8
AKH IAmb IAmb 12 54 22.1
comp=Z,12nm,1.2s
KIV Kislovodsk 66.14 309 P P 12 54 20.6 +1.0
KIV IAmb IAmb 12 54 21.7
comp=Z,5.9nm,0.8s
PPLA Purkeypile 67.26 30 P P 12 54 28.5 +2.1
PPLA IAmb IAmb 12 54 29.4
comp=Z,8.2nm,0.8s
TOLK Toolik Lake Re 67.53 23 P P 12 54 28.2 +0.3
TOLK IAmb IAmb 12 54 29.7
comp=Z,7.0nm,0.9s
MLY Manley 67.59 27 P P 12 54 29.4 +1.1
BPAW Bear Paw Mtn. 67.62 28 P P 12 54 29.6 +1.1
BPAW IAmb IAmb 12 54 32.4
comp=Z,12nm,1.3s
KTH Kantishna Hill 67.73 29 P P 12 54 29.3 0.0
KTH IAmb IAmb 12 54 36.8
comp=Z,5.8nm,0.8s
KDAK Kodiak Island 67.87 35 P P 12 54 31.0 +0.9
comp=Z,7.1nm,0.8s,baz=274,slow=5.3,SNR=12
KDAK Kodiak Island 67.87 35 P P 12 54 31.3 +1.2
TRF Thorofare Moun 68.03 29 P P 12 54 32.0 +0.8
TRF IAmb IAmb 12 54 39.6
comp=Z,6.2nm,0.8s
MCK McKinley 68.58 29 P P 12 54 35.5 +0.9
MCK IAmb IAmb 12 54 36.1
comp=Z,6.1nm,0.7s
MDM Murphy Dome 68.65 27 P P 12 54 35.1 +0.1
RND Reindeer 68.67 29 P P 12 54 35.1 -0.1
WRH Wood River Hil 68.81 28 P P 12 54 37.0 +1.1
WRH IAmb IAmb 12 54 39.1
comp=Z,6.4nm,0.8s
RAYN Ar Rayn 68.88 287 P P 12 54 36.9 -0.3
CCB Clear Creek Bu 68.89 27 P P 12 54 36.3 -0.1
PMR Palmer 68.89 31 P P 12 54 36.2 -0.3
PMR IAmb IAmb 12 54 37.7
comp=Z,15nm,1.4s
GHO Glory Hole Cre 68.96 31 P P 12 54 37.4 +0.4
GHO IAmb IAmb 12 54 56.6
comp=Z,5.1nm,0.8s
SEW Seward 69.03 32 P P 12 54 37.2 -0.2
SML Sawmill 69.22 31 P P 12 54 39.2 +0.6
KNK Knik Glacier 69.25 31 P P 12 54 38.1 -0.6
KNK IAmb IAmb 12 54 40.9
comp=Z,9.2nm,0.9s
IL31 69.25 27 P P 12 54 38.4 -0.2
ILAR Eielson Array 69.25 27 P P 12 54 38.7 0.0
comp=Z,1.2nm,0.5s,baz=302,slow=8.0,SNR=22
HDA Harding Lake 69.30 28 P P 12 54 38.3 -0.7
HDA IAmb IAmb 12 54 39.6
comp=Z,14nm,1.4s
DHY Denali Highway 69.40 29 P P 12 54 39.3 -0.5
FYU Fort Yukon 69.54 25 P P 12 54 40.7 +0.3
FYU IAmb IAmb 12 54 43.6
comp=Z,14nm,1.3s
SCM Sheep Creek Mo 69.69 30 P P 12 54 42.2 +0.7
ARCES ARCESS Array B 69.98 338 P P 12 54 43.5 +0.4
comp=Z,3.1nm,1.0s,baz=54,slow=9.1,SNR=3.9
GLI Glacier Island 70.01 31 P P 12 54 44.0 +0.6
FID Port Fidalgo 70.33 31 P P 12 54 46.0 +0.6
RIDG Independent Ri 70.35 28 P P 12 54 45.7 +0.2
SCRK Sand Creek 70.66 28 P P 12 54 47.6 +0.1
SCRK IAmb IAmb 12 54 50.3
comp=Z,7.8nm,1.1s
DOT Dot Lake 70.72 28 P P 12 54 48.0 +0.3
DOT IAmb IAmb 12 54 49.4
comp=Z,5.6nm,0.9s
EYAK Cordova Ski Ar 70.73 32 P P 12 54 48.2 +0.4
MENT Mentasta 71.05 29 P P 12 54 51.0 +1.2
MENT IAmb IAmb 12 54 52.4
comp=Z,7.5nm,0.9s
GLB Gilahina Butte 71.41 30 P P 12 54 52.8 +0.9
GLB IAmb IAmb 12 54 53.9
comp=Z,13nm,1.2s
EGAK Eagle 71.63 27 P P 12 54 53.2 0.0
EGAK IAmb IAmb 12 54 55.1
comp=Z,6.9nm,0.8s
VRDI Verde Repeater 71.63 31 P P 12 54 54.4 +0.9
VRDI IAmb IAmb 12 54 55.8
comp=Z,10.0nm,1.2s
MCARA McCarthy VSAT 71.79 30 P P 12 54 55.3 +1.1
MCARA IAmb IAmb 12 54 56.4
comp=Z,13nm,1.2s
CRQM Cirque 71.91 31 P P 12 54 56.0 +0.8
CRQM IAmb IAmb 12 55 04.0
comp=Z,8.7nm,0.9s
FINES FINESS Array B 71.93 330 P P 12 54 53.9 -1.1
comp=Z,1.6nm,0.7s,baz=64,slow=8.7,SNR=10
TGL Tana Glacier 72.06 31 P P 12 54 56.6 +0.6
TGL IAmb IAmb 12 54 58.2
comp=Z,8.9nm,1.0s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BALM	**Baldy**	**72.20**	**31**	P	**P**	**12 54 58.0**	**+1.1**
BARN	**Barnard Glacie**	**72.52**	**30**	P	**P**	**12 55 00.3**	**+1.5**
BARN				IAmb	IAmb	12 55 01.4	
	comp=Z,6.0nm,0.7s						
DAWY	**Dawson**	**72.58**	**27**	P	**P**	**12 54 59.4**	**+0.5**
DAWY				IAmb	IAmb	12 55 01.2	
	comp=Z,8.6nm,0.8s						
CTGM	**Chitina Glacie**	**72.70**	**30**	P	**P**	**12 55 01.4**	**+1.6**
EPYK	**Eagle Plains**	**72.87**	**24**	P	**P**	**12 55 00.2**	**-0.4**
INK	**Inuvik**	**73.31**	**22**	P	**P**	**12 55 01.9**	**-1.2**
	comp=Z,4.8nm,0.8s,baz=296,slow=4.5,SNR=26						
INK	**Inuvik**	**73.31**	**22**	P	**P**	**12 55 02.7**	**-0.4**
INK				IAmb	IAmb	12 55 04.0	
	comp=Z,6.3nm,0.8s						
AKASG	**Malin Array Be**	**73.40**	**318**	P	**P**	**12 55 03.7**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=56,slow=6.7,SNR=7.0						
AKBB	**Malin Array Si**	**73.40**	**318**	P	**P**	**12 55 03.2**	**-0.8**
BRTR	**Keskin Array B**	**73.72**	**307**	P	**P**	**12 55 06.0**	**-0.2**
	comp=Z,3.3nm,1.0s,baz=116,slow=5.7,SNR=7.4						
HYT	**Haines Junctio**	**74.51**	**30**	P	**P**	**12 55 11.9**	**+1.4**
HYT				IAmb	IAmb	12 55 13.4	
	comp=Z,9.3nm,1.0s						
WHY	**Whitehorse**	**75.76**	**30**	P	**P**	**12 55 18.4**	**+0.8**
WHY				IAmb	IAmb	12 55 20.0	
	comp=Z,6.6nm,0.9s						
C36M	**Paulatuk**	**75.92**	**19**	P	**P**	**12 55 17.3**	**-0.9**
C36M				IAmb	IAmb	12 55 18.3	
	comp=Z,7.0nm,1.0s						
SKAG	**Skagway**	**76.03**	**31**	P	**P**	**12 55 20.7**	**+1.7**
SKAG				IAmb	IAmb	12 55 22.1	
	comp=Z,9.5nm,0.8s						
BESE	**Bessie Mountai**	**76.61**	**32**	P	**P**	**12 55 23.9**	**+1.5**
BESE				IAmb	IAmb	12 55 25.5	
	comp=Z,9.1nm,1.2s						
NC405	**NORSAR Array S**	**78.45**	**332**	P	**P**	**12 55 31.6**	**-1.0**
NB2	**NORSAR Subarra**	**78.70**	**332**	P	**P**	**12 55 33.3**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=59,slow=5.6						
NOA	**NORSAR Array B**	**78.70**	**332**	P	**P**	**12 55 33.3**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=59,slow=5.6,SNR=8.6						
NOA				LR	LR	13 34 15.0	
	comp=Z,160nm,18.0s,baz=70,slow=39						
DLBC	**Dease Lake**	**78.95**	**31**	P	**P**	**12 55 36.6**	**+1.2**
	comp=Z,3.4nm,0.9s,baz=312,slow=6.3,SNR=7.6						
DLBC	**Dease Lake**	**78.95**	**31**	P	**P**	**12 55 37.4**	**+1.9**
DLBC				IAmb	IAmb	12 55 43.2	
	comp=Z,13nm,1.5s						
YKA	**Yellowknife Ar**	**83.05**	**23**	P	**P**	**12 55 56.9**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=309,slow=4.5,SNR=30						
GERES	**GERESS Array B**	**83.36**	**321**	P	**P**	**12 55 59.0**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=46,slow=7.0,SNR=3.2						
OPO	**Ambohidratompo**	**84.01**	**247**	P	**P**	**12 56 03.4**	**+0.4**
	comp=Z,8.3nm,0.8s,baz=10,slow=3.0,SNR=6.4						
KMBO	**Kilima Mbogo**	**85.37**	**267**	P	**P**	**12 56 10.8**	**+0.7**
	comp=Z,2.9nm,0.7s,baz=55,slow=4.3,SNR=6.7						
KMBO	**Kilima Mbogo**	**85.37**	**267**	P	**P**	**12 56 10.2**	**0.0**
KMBO				IAmb	IAmb	12 56 12.1	
	comp=Z,5.7nm,1.0s						
FFC	**Flin Flon**	**93.20**	**24**	P	**P**	**12 56 45.2**	**-0.9**
FFC				IAmb	IAmb	12 56 59.4	
	comp=Z,3.0nm,0.9s						
BEKR	**Beckworth**	**94.18**	**43**	P	**P**	**12 56 52.0**	**+0.8**
BEKR				IAmb	IAmb	12 56 53.0	
	comp=Z,4.5nm,1.0s						
NVAR	**Mina Array Bea**	**96.32**	**43**	P	**P**	**12 57 02.8**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=274,slow=4.1,SNR=3.8						
Y45A	**Yeager Farm, C**	**115.32**	**29**	PKPdf	**PKPdf**	**13 02 14.5**	**+0.6**
R58B	**Mineral**	**115.78**	**17**	PKPdf	**PKPdf**	**13 02 15.4**	**+0.8**
SDV	**Santo Domingo**	**145.26**	**22**		**PKPbc**	**13 03 09.8**	**-0.6**
RUSC	**La Rusia**	**147.07**	**28**	PKPbc	**PKPbc**	**13 03 16.5**	**+0.3**

*SOME **04** 12:57:27.1, 40°.77N×70°.33E, h20km*
*KRNET **04** 12:57:33.5±0.1, 41°.17N×69°.69E, mb2.5*
ISC 04 12:57:38.2±1.6**, 41°.05N**±0°.06×**70°.00E**±0°.07**, h24**km±17km**,**
n12, σ1s77/23**, 11C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**1.09**	**1**	*e*P	**Pn**	**12 57 56.2**	**-2.0**
	10nm,0.1s						
IUG				*e*S	**Sb**	**12 58 17.1**	**+4.6**
	52nm,0.2s						
BTK	**Batken**	**1.17**	**148**	⇑*i*P	**Pb**	**12 57 58.8**	**-1.1**
	baz=42						
BTK				⇑*i*S	**Sb**	**12 58 17.1**	**+2.4**
	baz=42						
ARK	**Arkit**	**1.66**	**63**	⇓*i*P	**Pn**	**12 58 04.5**	**-1.4**
	baz=70						
ARK				⇓*i*S	**Sb**	**12 58 28.3**	**-0.3**
	baz=70						
BRLS	**Borolday**	**1.98**	**357**	*e*P	Pn	12 58 03.9	-6.4
	3.5nm,0.2s						
BRLS				*e*S	**Sn**	**12 58 33.0**	**-1.4**
	5.6nm,0.1s						
KK31	**Karatay Array**	**2.08**	**10**	⇑Pn	**Pn**	**12 58 11.9**	**+0.1**
	0.4nm,0.2s,baz=188,slow=15,SNR=15						
KK31				Sn	**Sb**	**12 58 41.0**	**+0.1**
	0.7nm,0.2s,baz=193,slow=28,SNR=5.5						
ARSB	**Arslanbob**	**2.27**	**82**	⇓*i*P	**Pn**	**12 58 14.0**	**-0.4**
	baz=85						
ARSB				⇓*i*S	**Sb**	**12 58 44.0**	**-2.3**
	baz=85						
MRKS	**Merke**	**2.94**	**54**	*e*P	**Pn**	**12 58 20.5**	**-3.1**
	0.6nm,0.1s						
MRKS				*e*S	**Sn**	**12 58 59.5**	**+1.3**
	5.2nm,0.3s						
AML	**Almayashu**	**2.97**	**68**	⇑*i*P	**Pn**	**12 58 24.3**	**0.0**
	baz=71						
AML				⇑*i*S	**Sn**	**12 59 00.9**	**+1.5**
	baz=71						
UCH	**Uchtor**	**3.58**	**69**	⇓*i*P	**Pn**	**12 58 32.8**	**+0.1**
	baz=72						
UCH				⇓*i*S	**Sn**	**12 59 15.5**	**+1.0**
	baz=72						
AAK	**Ala-Archa**	**3.71**	**63**	⇑*i*P	**Pn**	**12 58 34.6**	**+0.4**
	baz=66						
AAK				⇑*i*S	**Sn**	**12 59 18.6**	**+1.3**
	baz=66						
KBK	**Karagaybulak**	**4.03**	**65**	⇑*i*P	**Pn**	**12 58 38.9**	**+0.3**
	baz=68						
KBK				⇑*i*S	**Sn**	**12 59 26.2**	**+1.1**
	baz=68						
KZA	**Kyzart**	**4.07**	**74**	⇑*i*P	**Pn**	**12 58 39.4**	**0.0**
	baz=76						
KZA				⇑*i*S	**Sn**	**12 59 27.2**	**+0.7**
	baz=76						

*SOME **04** 12:57:44.2, 44°.70N×82°.15E, h20km*
*NNC **04** 12:57:46.8±1.1, 44°.71N×82°.07E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=17.2km s-min=3.1km az=117.0*
ISC 04 12:57:43.1±3.3**, 44°.55N**±0°.07×**82°.4E**±0°.1**, h14**km±27km**,**
n12, σ1s41/24**, 6C, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.89**	**264**	*e*P	**Pn**	**12 58 15.9**	**+0.8**
	12nm,0.2s						
DJR				*e*S	**Sn**	**12 58 38.5**	**-0.4**
	12nm,0.3s						
MK31	**Makanchi Array**	**2.24**	**358**	⇑Pn	**Pb**	**12 58 23.4**	**0.0**
	6.3nm,0.2s,baz=183,slow=13,SNR=510						
MK31				⇑Sn	**Sb**	**12 58 51.3**	**+0.3**
	6.4nm,0.2s,baz=184,slow=27,SNR=20						
MAKZ	**Makanchi**	**2.27**	**352**	⇑Pn	**Pb**	**12 58 23.1**	**-0.8**
	5.6nm,0.4s						
MAKZ				⇑Sn	**Sb**	**12 58 50.7**	**-1.3**
	5.5nm,0.4s						
KAPS	**Kapalarasan**	**2.29**	**290**	*e*P	**Pn**	**12 58 21.6**	**+1.0**
	6.8nm,0.2s						
KAPS				*e*S	**Sn**	**12 58 48.1**	**-0.5**
	23nm,0.3s						
PDGK	**Podgornoye**	**2.44**	**241**	⇑Pn	**Pb**	**12 58 26.0**	**-0.9**
	1.3nm,0.2s						
PDGK				⇑Sn	**Sb**	**12 58 56.8**	**-0.1**
	8.1nm,0.5s						
SHLS	**Shalkode**	**2.55**	**238**	*e*P	**Pn**	**12 58 25.4**	**+1.2**
	20nm,0.3s						
SHLS				*e*S	**Sn**	**12 58 54.6**	**-0.5**
	61nm,0.4s						
UZB	**Uzynbulak**	**2.83**	**241**	*e*P	**Pb**	**12 58 32.7**	**-0.8**
	6.1nm,0.2s						
UZB				*e*S	**Sb**	**12 59 06.8**	**-1.2**
	11nm,0.5s						
MNBS	**Baschi**	**2.92**	**262**	*e*P	**Pb**	**12 58 33.6**	**-1.4**
	8.0nm,0.2s						
MNBS				*e*S	**Sb**	**12 59 08.8**	**-1.8**
	26nm,0.2s						
ARXS	**Arharly**	**3.31**	**266**	*e*P	**Pb**	**12 58 40.5**	**-1.1**
	7.6nm,0.3s						
ARXS				*e*S	**Sb**	**12 59 20.2**	**-1.5**
	13nm,0.3s						
KOTS	**Kotyrbulak**	**4.05**	**253**	*e*P	**Pb**	**12 58 53.9**	**-0.5**
	4.3nm,0.2s						
KOTS				*e*S	**Sb**	**12 59 43.3**	**0.0**
	11nm,0.3s						
KTBS	**Karatobe**	**4.21**	**260**	*e*P	**Pb**	**12 58 56.4**	**-0.6**
	0.8nm,0.2s						
KTBS				*e*S	**Sb**	**12 59 47.2**	**-0.6**
	8.0nm,0.5s						
KRBS	**Karabastau**	**4.93**	**262**	*e*P	**Pb**	**12 59 11.0**	**+1.8**
	0.6nm,0.3s						
KRBS				*e*S	**Sb**	**13 00 12.6**	**+4.2**
	0.7nm,0.3s						

*IDC **04** 12:57:57.7±0.6, 52°.29N×172°.42E, h0km, mb4.2/35, mb1 4.3/38, mb1mx4.3/54, mbtmp4.2/38, ML3.9/3, MS3.2/1, Ms1 3.3/1, ms1mx2.5/52, Error ellipse: s-maj=15.5km s-min=9.3km az=171.0*
*KRSC **04** 12:58:01.9±2.1, 52°.09N×171°.91E, h81km±35km, ML4.4*
*NEIC **04** 12:58:02.8±1.4, 52°.3N±0°.1×172°.31E±0°.08, h34km±5km, mb4.6/148, Error ellipse: s-maj=15.5km s-min=6.5km az=171.0*
*BGR **04** 12:58:08.7±0.0, 52°.82N×172°.37E, h35km±1km, mb4.6*
ISC 04 12:58:02.9±0.6**, 52°.28N**±0°.08×**172°.26E**±0°.04**, h34**km±2km**,**
h34km:pP-P, n417, σ1s21/444**, mb4.5**/133**, MS4.0**/5**, 1C,**
Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.21**	**67**		**Pn**	**12 58 21.0**	**-2.3**
SMY				Sn	**Sn**	**12 58 36.7**	**-1.8**
BKI	**Bering**	**4.75**	**311**	P	**Pn**	**12 59 12.8**	**+0.9**
KBTR	**Krutoberegovo**	**6.79**	**309**	*e*P	**Pn**	**12 59 39.2**	**-0.7**
ADK	**Adak**	**6.83**	**89**	Pn	**Pn**	**12 59 43.0**	**+2.5**
KBG	**Krutoberegovo**	**6.87**	**309**	*e*P	**Pn**	**12 59 42.2**	**+1.2**
TUMD	**Tumrok D**	**7.62**	**297**	*e*P	**Pn**	**12 59 52.1**	**+0.8**
KZV	**Kizimen**	**7.65**	**296**	*e*P	**Pn**	**12 59 52.4**	**+0.5**
ZLN	**Zelenaya**	**7.70**	**304**	P	**Pn**	**12 59 53.7**	**+1.2**
BZGR	**Bezymyannyi-Gr**	**7.72**	**303**	*e*P	**Pn**	**12 59 52.7**	**-0.1**
BZGR				*e*S	**Sn**	**13 01 16.7**	**-2.3**
CIRR	**Tsirk**	**7.77**	**304**	P	**Pn**	**12 59 55.1**	**+1.6**
TUMR	**Tumrok**	**7.78**	**298**	*e*P	**Pn**	**12 59 55.3**	**+1.6**
LGNR	**Loginova**	**7.78**	**304**	*e*P	**Pn**	**12 59 55.8**	**+2.0**
BZWR	**Bezymyannyi-We**	**7.83**	**303**	P	**Pn**	**12 59 56.9**	**+2.5**
KMNR	**Kamenistaya**	**7.89**	**301**	*e*P	**Pn**	**12 59 56.9**	**+1.8**
KLY	**Klyuchi**	**7.90**	**305**	*e*P	**Pn**	**12 59 56.0**	**+0.8**
KII	**Karymskiy**	**7.90**	**288**	*e*P	**Pn**	**12 59 55.1**	**-0.2**
KRSR	**Krestovskiy**	**7.90**	**305**	*e*P	**Pn**	**12 59 57.2**	**+1.9**
KIRR	**Kirishev**	**7.91**	**302**	*e*P	**Pn**	**12 59 57.3**	**+1.9**
KPT	**Kopyto**	**7.98**	**302**	*e*P	**Pn**	**12 59 58.8**	**+2.5**
SDLR	**Sedlovina**	**8.18**	**282**	P	**Pn**	**12 59 58.6**	**-0.5**
KOZ	**Kozyrevsk**	**8.19**	**302**	*e*P	**Pn**	**13 00 02.1**	**+2.9**
UGLR	**Uglovaya**	**8.21**	**282**	P	**Pn**	**12 59 59.2**	**-0.3**
SMAR	**Somma**	**8.22**	**282**	*e*P	**Pn**	**12 59 57.1**	**-2.7**
DALK	**Dalny**	**8.25**	**281**	P	**Pn**	**13 00 00.0**	**0.0**
AVH	**Avacha**	**8.26**	**282**	*e*P	**Pn**	**13 00 00.0**	**-0.2**
PET	**Petropavlovsk**	**8.31**	**281**	Pn	**Pn**	**13 00 00.3**	**-0.5**
ATKA	**Atka Island**	**8.32**	**85**	Pn	**Pn**	**13 00 02.6**	**+1.7**
KRX	**Arik**	**8.32**	**283**	*e*P	**Pn**	**13 00 00.7**	**-0.4**
KOK	**Koryaka**	**8.32**	**282**	*e*P	**Pn**	**13 00 00.8**	**-0.3**
SRDR	**Sredinnyy**	**8.38**	**304**	*e*P	**Pn**	**13 00 04.1**	**+2.4**
RUS	**Russkaya**	**8.42**	**276**	P	**Pn**	**13 00 01.8**	**-0.5**
RUS				*e*S	**Sn**	**13 01 29.9**	**-6.1**
MTVR	**Mutnovka**	**8.62**	**277**	P	**Pn**	**13 00 04.9**	**-0.3**
MTVR				*e*S	**Sn**	**13 01 35.8**	**-5.3**
KRMR	**Karymshinskiy**	**8.63**	**279**	*e*P	**Pn**	**13 00 03.5**	**-1.7**
GRL	**Gorelyy**	**8.68**	**277**	*e*P	**Pn**	**13 00 06.7**	**+0.7**
OSSR	**Ossora**	**8.69**	**327**	P	**Pn**	**13 00 09.9**	**+3.9**
KDTR	**Khodutka, Kamc**	**8.76**	**273**	P	**Pn**	**13 00 05.2**	**-1.7**
KDTR				S	**Sn**	**13 01 37.4**	**-6.9**
ESO	**Esso**	**8.76**	**300**	*e*P	**Pn**	**13 00 08.5**	**+1.5**
ASAK	**Asacha**	**8.80**	**276**	P	**Pn**	**13 00 07.6**	**0.0**
ASAK				S	**Sn**	**13 01 41.3**	**-4.2**
TILK	**Tilichiki**	**8.86**	**340**	P	**Pn**	**13 00 11.5**	**+3.3**
PEA0B	**Petropavlovsk-**	**8.89**	**281**		**Pn**	**13 00 08.4**	**-0.3**
PETK	**Petropavlovsk-**	**8.89**	**281**	Pn	**Pn**	**13 00 08.7**	**0.0**
	0.8nm,0.3s,baz=97,slow=18,SNR=54						
PETK				Sn	**Sn**	**13 01 44.1**	**-3.4**
	0.7nm,0.3s,baz=79,slow=20,SNR=0.7						
APC	**Apacha**	**9.22**	**280**	*e*P	**Pn**	**13 00 13.2**	**0.0**
PALN	**Palana**	**9.72**	**319**	P	**Pn**	**13 00 22.7**	**+2.6**
SKR	**Severo-Kuril's**	**10.20**	**267**	S	**Sn**	**13 02 12.5**	**-7.2**
KMSK	**Kamenskaya**	**10.72**	**345**	P	**Pn**	**13 00 35.1**	**+1.4**
SPIA	**Saint Paul Isl**	**11.23**	**57**	Pn	**Pn**	**13 00 41.0**	**+0.4**
MA2	**Magadan**	**14.04**	**310**	Pn	**Pn**	**13 01 19.5**	**+0.4**
	0.3nm,0.3s,baz=88,slow=9.9,SNR=7.4						
MA2	**Magadan**	**14.04**	**310**		**Pn**	**13 01 20.1**	**+0.9**
MA2				P	**P**	**13 01 28.1**	**+1.6**
SEY	**Seymchan**	**15.00**	**323**	Pn	**Pn**	**13 01 32.0**	**0.0**
	0.1nm,0.3s,baz=122,slow=14,SNR=16						
BILL	**Bilibino**	**16.07**	**352**	P	**P**	**13 01 48.4**	**-0.6**
ANM	**Nome**	**16.86**	**35**	P	**P**	**13 01 57.1**	**-0.6**
CNBA	**Chernabura Isl**	**16.87**	**70**	P	**Pn**	**13 01 56.3**	**+0.2**
RDOG	**Red Dog Mine**	**19.82**	**28**	P	**P**	**13 02 29.8**	**-0.4**
TTA	**Tatalina**	**19.84**	**45**	P	**Pn**	**13 02 31.2**	**-0.9**
OHAK	**Old Harbor**	**20.34**	**62**	P	**P**	**13 02 34.4**	**-1.5**
KDAK	**Kodiak Island**	**20.72**	**61**	P	**P**	**13 02 38.7**	**-1.3**
	2.7nm,0.5s,baz=308,slow=5.3,SNR=13						
KDAK	**Kodiak Island**	**20.72**	**61**	P	**P**	**13 02 38.3**	**-1.6**
KDAK				IAmb	IAmb	13 02 54.1	
	comp=Z,15nm,0.6s						
RSO	**Redoubt South**	**20.81**	**53**	P	**P**	**13 02 40.9**	**-0.3**
JKA	**Kamikawa-asahi**	**21.27**	**259**	P	**P**	**13 02 47.4**	**+1.4**
ASAJ	**Asahikawa**	**21.27**	**259**	P	**P**	**13 02 47.4**	**+1.3**
	comp=Z,10nm,0.7s,baz=66,slow=6.5,SNR=8.4						
CNPM	**China Poot**	**21.48**	**56**	P	**P**	**13 02 48.1**	**-0.1**
CNPM				IAmb	IAmb	13 03 07.6	
	comp=Z,15nm,0.8s						
PPLA	**Purkeypile**	**21.51**	**47**	P	**P**	**13 02 48.4**	**-0.2**
PPLA				IAmb	IAmb	13 02 53.7	
	comp=Z,41nm,1.5s						
BRLK	**Bradley Lake**	**21.67**	**55**	P	**P**	**13 02 49.5**	**-0.8**
KTH	**Kantishna Hill**	**22.22**	**45**	P	**P**	**13 02 56.1**	**0.0**
BPAW	**Bear Paw Mtn.**	**22.33**	**44**	P	**P**	**13 02 57.7**	**+0.5**
RC01	**Rabbit Creek A**	**22.36**	**52**	P	**P**	**13 02 58.4**	**+0.9**
SEW	**Seward**	**22.41**	**54**	P	**P**	**13 02 56.6**	**-1.5**
TRF	**Thorofare Moun**	**22.48**	**46**	P	**P**	**13 02 59.5**	**+0.6**
MLY	**Manley**	**22.68**	**41**	P	**P**	**13 03 00.8**	**-0.2**
GHO	**Glory Hole Cre**	**22.82**	**50**	P	**P**	**13 03 02.0**	**-0.5**
BWN	**Browne**	**22.99**	**44**	P	**P**	**13 03 05.0**	**+0.8**
KNK	**Knik Glacier**	**23.00**	**51**	P	**P**	**13 03 03.5**	**-0.8**
KNK				IAmb	IAmb	13 03 17.2	
	comp=Z,9.1nm,0.6s						
RND	**Reindeer**	**23.10**	**46**	P	**P**	**13 03 04.3**	**-1.1**
SML	**Sawmill**	**23.10**	**50**	P	**P**	**13 03 03.7**	**-1.7**
SML				IAmb	IAmb	13 03 16.8	
	comp=Z,21nm,0.7s						
MCK	**McKinley**	**23.13**	**45**	P	**P**	**13 03 05.3**	**-0.3**
MCK				IAmb	IAmb	13 03 06.8	
	comp=Z,13nm,0.9s						
SCM	**Sheep Creek Mo**	**23.58**	**50**	P	**P**	**13 03 08.7**	**-1.5**
SCM				IAmb	IAmb	13 03 16.3	
	comp=Z,16nm,0.9s						
COLD	**Coldfoot**	**23.59**	**36**	P	**P**	**13 03 09.3**	**-0.8**
GLI	**Glacier Island**	**23.62**	**53**	P	**P**	**13 03 10.6**	**+0.2**
GLI				IAmb	IAmb	13 03 22.2	
	comp=Z,13nm,1.0s						
WRH	**Wood River Hil**	**23.64**	**44**	P	**P**	**13 03 10.1**	**-0.4**
WRH				IAmb	IAmb	13 03 21.3	
	comp=Z,10.0nm,0.8s						
MDM	**Murphy Dome**	**23.69**	**42**	P	**P**	**13 03 10.9**	**-0.2**
MDM				IAmb	IAmb	13 03 23.3	
	comp=Z,11nm,0.8s						
DHY	**Denali Highway**	**23.71**	**47**	P	**P**	**13 03 10.2**	**-1.2**
CCB	**Clear Creek Bu**	**23.80**	**43**	P	**P**	**13 03 11.6**	**-0.5**
TCOL	**CIGO, UAF Yank**	**23.82**	**43**	P	**P**	**13 03 11.3**	**-1.0**
	baz=257						
COLA	**College**	**23.83**	**43**	P	**P**	**13 03 11.8**	**-0.5**
POKR	**Poker Plat Res**	**24.06**	**42**	P	**P**	**13 03 13.8**	**-0.7**
	baz=257						
HDA	**Harding Lake**	**24.11**	**44**	P	**P**	**13 03 13.9**	**-1.1**
	baz=259						
HDA	**Harding Lake**	**24.11**	**44**	P	**P**	**13 03 13.6**	**-1.4**
IL31		**24.21**	**43**	P	**P**	**13 03 14.8**	**-1.0**
ILAR	**Eielson Array**	**24.21**	**43**	P	**P**	**13 03 14.6**	**-1.3**
	comp=Z,1.9nm,0.7s,baz=249,slow=9.7,SNR=25						
ILAR				LR	LR	13 13 55.4	
	comp=Z,58nm,19.4s,baz=264,slow=40						
TOLK	**Toolik Lake Re**	**24.34**	**33**	P	**P**	**13 03 16.2**	**-0.9**
	baz=247,SNR=14						
TOLK	**Toolik Lake Re**	**24.34**	**33**	P	**P**	**13 03 16.3**	**-0.8**
TOLK				IAmb	IAmb	13 03 17.9	
	comp=Z,15nm,1.1s						
YAK	**Yakutsk**	**24.62**	**310**	P	**P**	**13 03 19.9**	**+0.4**
	comp=Z,19nm,0.8s,baz=264,slow=2.5,SNR=19						
YAK	**Yakutsk**	**24.62**	**310**	P	**P**	**13 03 19.3**	**-0.3**
RIDG	**Independent Ri**	**24.92**	**46**	P	**P**	**13 03 21.3**	**-1.1**
PRP	**Porcupine Dome**	**24.93**	**42**	P	**P**	**13 03 22.7**	**+0.2**
PRP				IAmb	IAmb	13 03 33.9	
	comp=Z,9.8nm,0.8s						
GLB	**Gilahina Butte**	**25.23**	**51**	P	**P**	**13 03 24.5**	**-0.8**
GLB				IAmb	IAmb	13 03 37.2	
	comp=Z,12nm,0.7s						
DOT	**Dot Lake**	**25.26**	**46**	P	**P**	**13 03 24.8**	**-0.7**
FYU	**Fort Yukon**	**25.27**	**39**	P	**P**	**13 03 25.4**	**-0.1**
FYU				IAmb	IAmb	13 03 27.9	
	comp=Z,18nm,1.1s						
SCRK	**Sand Creek**	**25.33**	**45**	P	**P**	**13 03 24.7**	**-1.5**
MENT	**Mentasta**	**25.35**	**48**	P	**P**	**13 03 25.8**	**-0.5**
MENT				IAmb	IAmb	13 03 41.5	
	comp=Z,9.6nm,1.0s						
VRDI	**Verde Repeater**	**25.40**	**52**	P	**P**	**13 03 25.7**	**-1.3**
VRDI				IAmb	IAmb	13 03 45.2	
	comp=Z,12nm,1.0s						
CRQM	**Cirque**	**25.56**	**53**	P	**P**	**13 03 27.5**	**-0.8**
CRQM				IAmb	IAmb	13 03 46.9	
	comp=Z,12nm,0.8s						
KLR	**Kul'dur**	**25.57**	**279**	P	**P**	**13 03 28.8**	**+0.4**
	comp=Z,6.7nm,0.9s,baz=66,slow=9.0,SNR=16						
MCARA	**McCarthy VSAT**	**25.61**	**52**	P	**P**	**13 03 28.6**	**0.0**
MCARA				IAmb	IAmb	13 03 41.1	
	comp=Z,18nm,0.7s						
TGL	**Tana Glacier**	**25.71**	**53**	P	**P**	**13 03 29.6**	**-0.1**
TGL				IAmb	IAmb	13 03 43.8	
	comp=Z,10nm,1.0s						
BALM	**Baldy**	**25.94**	**52**	P	**P**	**13 03 31.6**	**-0.2**
BARN	**Barnard Glacie**	**26.27**	**52**	P	**P**	**13 03 33.8**	**-1.1**
BARN				IAmb	IAmb	13 03 49.9	
	comp=Z,11nm,0.8s						
CTGM	**Chitina Glacie**	**26.44**	**53**	P	**P**	**13 03 35.7**	**-0.6**
EGAK	**Eagle**	**26.64**	**44**	P	**P**	**13 03 36.6**	**-1.3**
EGAK				IAmb	IAmb	13 03 47.0	
	comp=Z,9.4nm,0.8s						
TIXI	**Tiksi**	**27.15**	**332**	P	**P**	**13 03 42.1**	**-0.3**
	comp=Z,6.7nm,0.9s,baz=113,slow=11,SNR=24						
TIXI	**Tiksi**	**27.15**	**332**	P	**P**	**13 03 42.5**	**+0.1**
TIXI				IAmb	IAmb	13 03 44.0	
	comp=Z,13nm,1.2s						
DAWY	**Dawson**	**27.35**	**46**	P	**P**	**13 03 45.1**	**+0.8**
HYT	**Haines Junctio**	**28.31**	**53**	P	**P**	**13 03 52.4**	**-0.6**
EPYK	**Eagle Plains**	**28.61**	**41**	P	**P**	**13 03 54.8**	**-0.8**
	baz=266						
EPYK	**Eagle Plains**	**28.61**	**41**	P	**P**	**13 03 54.8**	**-0.8**
MJAR	**Matsushiro Arr**	**28.64**	**250**	P	**P**	**13 03 56.6**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=48,slow=8.0,SNR=7.7						
MJB9	**Matsu-Tunnel**	**28.64**	**250**	P	**P**	**13 03 57.6**	**+1.6**
MJB9				IAmb	IAmb	13 03 58.5	
	comp=Z,11nm,1.0s						
MAJO	**Matsushiro**	**28.64**	**250**	P	**P**	**13 03 57.4**	**+1.4**
MAJO				IAmb	IAmb	13 03 58.5	
	comp=Z,10nm,1.0s						
MAT	**Matsushiro**	**28.64**	**250**	P	**P**	**13 03 57.3**	**+1.3**
SKAG	**Skagway**	**29.57**	**55**		**P**	**13 04 04.6**	**+0.6**
INK	**Inuvik**	**30.00**	**37**	P	**P**	**13 04 06.7**	**-1.0**
	comp=Z,2.3nm,0.6s,baz=273,slow=8.3,SNR=18						
INK	**Inuvik**	**30.00**	**37**	P	**P**	**13 04 07.4**	**-0.3**
INK				IAmb	IAmb	13 04 20.9	
	comp=Z,5.5nm,0.8s						
JIS	**Juneau Island**	**30.27**	**57**	P	**P**	**13 04 09.8**	**-0.4**
JIS				IAmb	IAmb	13 04 21.9	
	comp=Z,5.0nm,0.6s						
DLBC	**Dease Lake**	**32.47**	**56**	P	**P**	**13 04 28.6**	**-1.0**
	comp=Z,3.0nm,0.9s,baz=280,slow=10,SNR=7.7						
DLBC	**Dease Lake**	**32.47**	**56**	P	**P**	**13 04 30.9**	**+1.2**
DLBC				IAmb	IAmb	13 04 48.9	
	comp=Z,8.2nm,1.4s						
C36M	**Paulatuk**	**33.45**	**35**	P	**P**	**13 04 37.3**	**-0.7**
	baz=273,SNR=8.8						
C36M	**Paulatuk**	**33.45**	**35**	P	**P**	**13 04 37.1**	**-0.9**
C36M				IAmb	IAmb	13 04 50.3	
	comp=Z,12nm,1.1s						
KSRS	**Korea Array**	**34.16**	**262**	P	**P**	**13 04 45.2**	**+0.7**
	comp=Z,2.4nm,1.0s,baz=56,slow=14,SNR=4.2						
YKA	**Yellowknife Ar**	**38.59**	**45**	P	**P**	**13 05 22.1**	**0.0**
	comp=Z,6.6nm,0.8s,baz=287,slow=7.5,SNR=45						
NRIK	**Noril'sk**	**40.73**	**327**	P	**P**	**13 05 40.0**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=57,slow=8.3,SNR=5.0						
RES	**Resolute Bay**	**41.19**	**24**	P	**P**	**13 05 42.5**	**-0.9**
	comp=Z,2.2nm,0.9s,baz=340,slow=12,SNR=8.1						
RES	**Resolute Bay**	**41.19**	**24**	P	**P**	**13 05 42.8**	**-0.6**
SONM	**Songino Array**	**41.21**	**291**	P	**P**	**13 05 45.7**	**+1.5**
	comp=Z,3.1nm,0.8s						
HHC	**Hu-ho-hao-te**	**42.08**	**279**	*e*P	**P**	**13 05 50.8**	**-0.5**
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,55nm,5.9s						
HHC				LR	LR		
	comp=N,180nm,16.8s						
HHC				LR	LR		
	comp=E,150nm,14.1s						
HHC				LR	LR		
	comp=Z,62nm,12.9s						
NJ2	**Nanjing**	**43.31**	**264**	*e*P	**P**	**13 06 03.6**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NEW	**Newport**	**43.67**	**66**	P	**P**	**13 06 03.0**	**-1.1**
	comp=Z,3.1nm,1.0s,baz=259,slow=5.4,SNR=3.1						
NEW	**Newport**	**43.67**	**66**	P	**P**	**13 06 03.1**	**-0.9**
J05D	**Fort Rock, OR**	**44.12**	**74**	P	**P**	**13 06 07.5**	**-0.3**
	baz=306						
YBH	**Yreka Blue Hor**	**44.16**	**77**	P	**P**	**13 06 07.1**	**-1.0**
	comp=Z,1.5nm,0.6s,baz=16,slow=12,SNR=5.3						
YBH	**Yreka Blue Hor**	**44.16**	**77**	P	**P**	**13 06 07.2**	**-0.9**
YBH				IAmb	IAmb	13 06 25.5	
	comp=Z,8.8nm,1.2s						
WALA	**Waterton Lakes**	**45.02**	**63**	P	**P**	**13 06 14.6**	**-0.3**
WALA				IAmb	IAmb	13 06 15.5	
	comp=Z,8.7nm,0.9s						
MSO	**Missoula**	**46.26**	**66**	P	**P**	**13 06 23.4**	**-1.4**
	baz=305						
FFC	**Flin Flon**	**48.01**	**51**	P	**P**	**13 06 36.8**	**-1.3**
XAN	**Xi'an**	**48.05**	**274**	P	**P**	**13 06 40.8**	**+2.1**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,62nm,4.3s						
NVAR	**Mina Array Bea**	**48.86**	**78**	P	**P**	**13 06 44.0**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=297,slow=7.5,SNR=11						
SPA0	**Spitsbergen Ar**	**48.97**	**354**	P	**P**	**13 06 44.2**	**-1.0**
YHL	**Hebgen Lake**	**48.99**	**66**	P	**P**	**13 06 45.4**	**-0.7**
KULLO	**Kullorsuaq**	**49.20**	**16**	*i* P	P	13 06 41.8	-5.1
YHH	**Holmes Hill**	**49.22**	**66**	P	**P**	**13 06 46.7**	**-1.1**
ZALV	**Zalesovo Beam**	**49.26**	**309**	P	**P**	**13 06 47.3**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=48,slow=2.2,SNR=4.0						
LZH	**Lanzhou**	**49.78**	**279**	*e*P	**P**	**13 06 52.9**	**+0.8**
LZH				pP	sP	13 07 03.7	-1.1
LZH				sP	pwP	13 07 08.6	+1.4
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
RLMT	**Red Lodge**	**49.90**	**65**	P	**P**	**13 06 52.0**	**-0.9**
	baz=308						
RLMT	**Red Lodge**	**49.90**	**65**	P	**P**	**13 06 52.5**	**-0.5**
RLMT				IAmb	IAmb	13 06 53.9	
	comp=Z,9.9nm,1.2s						
GTA	**Gaotai**	**50.02**	**285**	P	**P**	**13 06 55.3**	**+1.4**
GTA				pP	pP	13 07 01.4	-1.3
GTA				sP	sP	13 07 05.0	-1.3
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GTA				LR	LR		
	comp=N,130nm,13.7s						
GTA				LR	LR		
	comp=E,130nm,14.4s						
GTA				LR	LR		
	comp=Z,120nm,15.8s						
VES	**Vestal, Richgr**	**50.08**	**81**	P	**P**	**13 06 53.4**	**-0.8**
	baz=312						
CWC	**Cottonwood Cre**	**50.30**	**79**	P	**P**	**13 06 55.4**	**-0.6**
	baz=312						
R11A	**Troy Canyon, C**	**50.54**	**76**	P	**P**	**13 06 57.3**	**-0.6**
	baz=311						
R11A	**Troy Canyon, C**	**50.54**	**76**	P	**P**	**13 06 56.9**	**-0.9**

MPMC **Manual Prospec** 50.91 79 P P 13 07 00.1 -0.6
baz=312
DUG **Dugway, Tooele** 50.98 72 P P 13 07 00.2 -0.9
baz=310
DUG **Dugway, Tooele** 50.98 72 P P 13 07 00.2 -0.9
DUG IAmb IAmb 13 07 14.1
comp=Z,6.9nm,1.1s
FURC **Furnace Creek,** 51.01 78 P P 13 07 00.9 -0.2
baz=312
DAG **Danmarks Havn** 51.03 3⇑*i*P P 13 07 00.4 -0.4
comp=Z,5.9nm,0.8s
TPNV **Topopah Spring** 51.06 78 P P 13 07 01.0 -0.7
baz=312
TPNV **Topopah Spring** 51.06 78 P P 13 07 01.1 -0.7
TPNV IAmb IAmb 13 07 13.9
comp=Z,9.7nm,0.9s
BW06 **Boulder Array** 51.21 68 P P 13 07 02.1 -0.9
baz=310,SNR=5.1
BW06 **Boulder Array** 51.21 68 P P 13 07 02.0 -0.9
BW06 IAmb IAmb 13 07 03.3
comp=Z,3.8nm,0.8s
PDAR **Pinedale Array** 51.21 68 P P 13 07 02.6 -0.3
comp=Z,2.2nm,0.7s,baz=306,slow=4.0,SNR=21
EDW2 **Edwards Air Fo** 51.39 81 P P 13 07 03.5 -0.6
baz=313
PSUT **Pine Spring** 51.45 74 P P 13 07 03.5 -1.2
DECC **Green Verdugo** 51.60 82 P P 13 07 05.5 -0.2
baz=313
SHOC **Shoshone, Teco** 51.74 79 P P 13 07 06.3 -0.4
baz=312
GSC **Goldstone, Bar** 51.82 80 P P 13 07 07.0 -0.4
baz=313
GSC **Goldstone, Bar** 51.82 80 P P 13 07 06.7 -0.8
TMUT **Trail Mountain** 52.50 72 P P 13 07 12.6 -0.1
RDMU **Red Mountain** 52.62 70 P P 13 07 13.0 -0.4
MURC **Murrieta** 52.74 81 P P 13 07 13.9 -0.3
baz=314
Q16A **Castle Valley** 52.77 72 P P 13 07 15.1 +0.6
LCMT **Little Creek M** 52.81 76 P P 13 07 14.5 -0.3
GMRC **Granite Mounta** 52.87 79 P P 13 07 14.9 -0.3
baz=313
K22A **Casper** 53.00 66 P P 13 07 15.1 -1.1
baz=311
SRU **San Rafael Swe** 53.02 72 P P 13 07 15.9 -0.5
KNB **Kanab** 53.06 75 P P 13 07 16.9 +0.2
BELC **Belle Mtn. Jos** 53.19 80 P P 13 07 17.1 -0.6
baz=313
MDND **Maddock** 53.37 57 P P 13 07 18.5 -0.1
baz=310
RSSD **Black Hills** 53.42 63 P P 13 07 18.4 -0.8
baz=311
RSSD **Black Hills** 53.42 63 P P 13 07 18.8 -0.5
RSSD IAmb IAmb 13 07 19.6
comp=Z,2.9nm,0.7s
IRM **Iron Mountain** 53.60 79 P P 13 07 20.6 +0.1
baz=314
SUMG **Summit** 53.61 11 P P 13 07 20.4 -0.2
SUMG **Summit** 53.61 11 *i* P P 13 07 20.0 -0.5
SUMG **Summit** 53.61 11 *i* P P 13 07 20.3 -0.2
comp=Z,48nm,1.1s
O20A **White River Ci** 53.67 69 P P 13 07 21.1 -0.1
baz=312
O20A **White River Ci** 53.67 69 P P 13 07 20.7 -0.4
O20A IAmb IAmb 13 07 32.6
comp=Z,5.2nm,0.7s
ULM **Lac du Bonnet** 53.69 53 P P 13 07 19.9 -1.0
comp=Z,1.7nm,0.5s,baz=298,slow=8.8,SNR=5.9
ULM **Lac du Bonnet** 53.69 53 P P 13 07 19.8 -1.0
ULM IAmb IAmb 13 07 32.1
comp=Z,7.7nm,1.1s
W13A **Hualapai Mount** 53.72 78 P P 13 07 20.7 -0.9
W13A IAmb IAmb 13 07 33.4
comp=Z,5.0nm,0.9s
BC3 **Big Chuckawall** 53.76 80 P P 13 07 21.0 -0.8
baz=314
U15A **North Rim** 53.77 75 P P 13 07 22.0 -0.1
U15A IAmb IAmb 13 07 37.5
comp=Z,3.7nm,0.8s
WMQ **Urumqi** 54.09 297 *e*P P 13 07 27.0 +3.0
WMQ pP sP 13 07 35.3 -1.2
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ pmax pmax
comp=Z,32nm,3.6s
WMQ LR LR
comp=N,130nm,18.9s
WMQ LR LR
comp=E,130nm,24.7s
WMQ LR LR
comp=Z,130nm,20.9s
PDMCI **Parker Dam,Lak** 54.11 79 P P 13 07 24.3 +0.2
baz=314
PV09 **Paradox Valley** 54.24 71 P P 13 07 25.3 -0.1
KURK **Kurchatov** 54.25 309 P P 13 07 24.8 -0.2
PV14 **Lion Creek, Pa** 54.39 71 P P 13 07 26.0 -0.5
PV14 IAmb IAmb 13 07 40.8
comp=Z,3.9nm,0.8s
PV22 **Blue Mesa, Par** 54.42 71 P P 13 07 26.5 -0.1
PV22 IAmb IAmb 13 07 38.7
comp=Z,5.3nm,0.8s
PV04 **Paradox Valley** 54.44 71 P P 13 07 26.6 -0.2
PV04 IAmb IAmb 13 07 39.5
comp=Z,6.2nm,0.9s
N23A **Red Feather La** 54.48 67 P P 13 07 26.7 -0.4
baz=312
PV17 **East Wray Mesa** 54.49 72 P P 13 07 26.4 -0.7
PV16 **Nyswonger Mesa** 54.49 71 P P 13 07 26.2 -1.0
PV11 **David Mesa, Pa** 54.53 71 P P 13 07 27.0 -0.4
PV05 **Paradox Valley** 54.54 72 P P 13 07 27.6 +0.1
PV05 IAmb IAmb 13 07 41.0
comp=Z,7.5nm,0.9s
GLA **Glamis** 54.55 80 P P 13 07 27.4 -0.1
baz=314
GLA **Glamis** 54.55 80 P P 13 07 27.6 +0.1
GLA IAmb IAmb 13 07 38.1
comp=Z,5.8nm,0.7s
PV12 **Saucer Basin,** 54.55 71 P P 13 07 27.8 +0.1
PV12 IAmb IAmb 13 07 40.5
comp=Z,6.5nm,0.8s
PV03 **Paradox Valley** 54.57 71 P P 13 07 27.3 -0.4
PV03 IAmb IAmb 13 07 41.0
comp=Z,6.1nm,0.8s
PV13 **Radium Mtn., P** 54.65 72 P P 13 07 28.2 -0.2
WUAZ **Wupatki** 54.94 76 P P 13 07 30.3 0.0
baz=313
AGMN **Agassiz Nation** 54.98 55 P P 13 07 29.5 -0.7
baz=312
AGMN **Agassiz Nation** 54.98 55 P P 13 07 29.0 -1.3
AGMN IAmb IAmb 13 07 46.9
comp=Z,5.4nm,0.8s
MK31 **Makanchi Array** 55.01 303 P P 13 07 29.7 -0.9
MKAR **Makanchi Array** 55.01 303 P P 13 07 30.3 -0.3
comp=Z,1.5nm,0.6s,baz=60,slow=7.3,SNR=19
SMCO **Snowmass** 55.04 69 P P 13 07 30.6 -0.7
MAKZ **Makanchi** 55.16 303 P P 13 07 31.0 -0.6
MAKZ IAmb IAmb 13 07 42.2
comp=Z,3.8nm,0.8s
ISCO **Idaho Springs** 55.40 68 P P 13 07 34.2 +0.4
baz=312,SNR=5.9
ISCO **Idaho Springs** 55.40 68 P P 13 07 33.7 -0.1
ISCO IAmb IAmb 13 07 35.3
comp=Z,3.9nm,0.9s
MVCO **Mesa Verde** 55.48 72 P P 13 07 34.1 -0.2
baz=313
X16A **Lo Mia Camp, P** 55.65 77 P P 13 07 35.6 0.0
X16A IAmb IAmb 13 07 48.5
comp=Z,11nm,1.4s
S22A **4UR Ranch, Cre** 56.09 71 P P 13 07 39.0 +0.2
baz=313,SNR=7.5
ARCES **ARCESS Array B** 56.09 347 P P 13 07 37.5 -0.4
comp=Z,3.1nm,0.8s,baz=32,slow=7.3,SNR=7.9
X18A **Snowflake** 56.46 75 P P 13 07 41.4 0.0
X18A IAmb IAmb 13 07 53.6
comp=Z,4.4nm,0.8s
BRVK **Borovoye** 56.49 315 P P 13 07 41.1 0.0
BRVK IAmb IAmb 13 07 52.3
comp=Z,11nm,1.2s
214A **Organ Pipe Nat** 56.54 80 P P 13 07 42.1 +0.4
baz=315
SDCO **Great Sand Dun** 56.85 70 P P 13 07 44.8 +0.6
baz=314,SNR=7.5
SDCO **Great Sand Dun** 56.85 70 P P 13 07 44.4 +0.2
SDCO IAmb IAmb 13 07 57.2
comp=Z,3.6nm,0.8s
EYMN **Ely** 57.37 53 P P 13 07 46.4 -1.0
baz=314

TUC **Tucson** 57.51 78 P P 13 07 48.9 +0.2
baz=315
TUC **Tucson** 57.51 78 P P 13 07 48.2 -0.5
TUC IAmb IAmb 13 08 00.6
comp=Z,5.5nm,0.9s
ECSD **EROS Data Cent** 57.67 59 P P 13 07 48.9 -0.6
baz=314
T25A **Trinidad** 57.90 70 P P 13 07 51.6 +0.1
baz=314
ANMO **Albuquerque** 58.24 73 P P 13 07 54.0 +0.1
baz=315
ANMO **Albuquerque** 58.24 73 P P 13 07 53.5 -0.4
ANMO IAmb IAmb 13 08 07.6
comp=Z,4.5nm,1.2s
SPMN **Marine on St.** 58.61 56 P P 13 07 56.1 0.0
baz=314
BNM **Barren Site** 58.69 74 P P 13 07 57.8 +0.7
121A **Cookes Peak, D** 59.15 76 P P 13 08 01.1 +0.8
baz=315
121A **Cookes Peak, D** 59.15 76 P P 13 08 00.5 +0.3
121A IAmb IAmb 13 08 13.7
comp=Z,4.7nm,0.8s
I37A **Lemond, Waseca** 59.15 57 P P 13 07 59.9 +0.1
SLVN **Son La** 60.22 267 P P 13 08 09.3 +1.7
SLVN IAmb IAmb 13 08 10.1
comp=Z,6.6nm,1.1s
KDJ **Kajisay** 60.87 302 P P 13 08 12.1 +0.2
KLMR **Klimovskoe** 61.06 336 *e*P P 13 08 14.1 +1.5
KLMR AMP 13 08 25.2
comp=Z,26nm,1.3s
MSTX **Muleshoe** 61.08 71 P P 13 08 13.2 -0.1
baz=316
MSTX **Muleshoe** 61.08 71 P P 13 08 13.4 0.0
MNTX **Cornudas Mount** 61.17 75 P P 13 08 14.1 +0.3
baz=316,SNR=25
MNTX **Cornudas Mount** 61.17 75 P P 13 08 14.0 +0.1
FRU1 **Bishkek** 61.69 304 P P 13 08 18.0 +0.7
AAK **Ala-Archa** 61.89 304 P P 13 08 19.2 +0.5
AAK IAmb IAmb 13 08 30.4
comp=Z,5.7nm,0.8s
MATQ **Matagami** 62.38 43 P P 13 08 20.7 -1.0
baz=320
WMOK **Wichita Mounta** 62.82 68 P P 13 08 24.8 -0.2
baz=316,SNR=8.1
WMOK **Wichita Mounta** 62.82 68 P P 13 08 23.4 -1.5
WMOK IAmb IAmb 13 08 25.8
comp=Z,4.2nm,0.8s
E48A **Lockeyer** 62.85 48 P P 13 08 24.2 -0.7
baz=318
P40A **Paris** 63.06 60 P P 13 08 25.4 -1.0
SlJl **Sorong** 63.14 227 P P 13 08 28.0 +0.8
comp=Z,7.2nm,0.7s,baz=124,slow=14,SNR=4.3
KSH **Kashi** 63.39 301 P P 13 08 31.5 +2.8
KSH sP pwP 13 08 43.5 +0.9
KSH PP PP 13 10 47.3 -0.6
KSH S S 13 16 59.5 +0.7
KSH **Kashi** 63.39 301 SS SS 13 21 08.6 +3.4
KSH pmax pmax
comp=Z,18nm,0.5s
KSH pmax pmax
comp=Z,170nm,4.6s
KSH LR LR
comp=N,98nm,11.3s
KSH LR LR
comp=E,120nm,12.4s
KSH LR LR
comp=Z,250nm,7.6s
F49A **Sandfield** 63.44 49 P P 13 08 27.8 -1.0
baz=319
FINES **FINESS Array B** 63.47 343 P P 13 08 29.1 +0.4
comp=Z,5.0nm,0.8s,baz=35,slow=7.9,SNR=16
KK31 **Karatay Array** 63.54 307 P P 13 08 29.6 +0.1
KK31 IAmb IAmb 13 08 40.8
comp=Z,4.4nm,0.8s
KKAR **Karatay Array** 63.54 307 P P 13 08 29.5 -0.1
KKAR IAmb IAmb 13 08 40.8
comp=Z,4.4nm,0.8s
W35A **Tecumseh** 63.60 66 P P 13 08 29.4 -0.7
CHGQ **Chibougamau** 63.61 41 P P 13 08 29.1 -0.8
baz=321
ABKAR **Akbulak array** 63.69 317 P P 13 08 30.9 +0.4
R40A **Maddies Statio** 63.84 61 P P 13 08 30.0 -1.6
R40A IAmb IAmb 13 08 30.9
comp=Z,4.5nm,0.8s
ABTX **Abilene, Hawle** 63.86 70 P P 13 08 32.1 +0.3
baz=317
ABTX **Abilene, Hawle** 63.86 70 P P 13 08 31.8 -0.1
TX31 **Lajitas Ar. Si** 63.90 75 P P 13 08 31.8 -0.4
TX32 **Lajitas Array** 63.90 75 P P 13 08 31.7 -0.5
TXAR **Lajitas Array** 63.90 75 P P 13 08 32.1 -0.1
comp=Z,3.8nm,0.7s,baz=303,slow=4.0,SNR=75
F51A **Arnstein** 64.29 48 P P 13 08 33.7 -0.7
baz=320
D53A **Lac Vacive, Po** 64.40 45 P P 13 08 34.0 -1.1
baz=320
U40A **Yellville** 64.95 63 P P 13 08 37.6 -1.3
baz=318
U40A **Yellville** 64.95 63 P P 13 08 37.2 -1.6
U40A IAmb IAmb 13 08 38.3
comp=Z,3.1nm,0.8s
ALGO **Algonquin Park** 65.11 46 P P 13 08 38.9 -0.8
baz=320
AAM **Ann Arbor** 65.28 52 P P 13 08 40.3 -0.6
baz=319
W39A **Magazine** 65.29 64 P P 13 08 40.8 -0.3
baz=318
JCT **Junction City** 65.33 72 P P 13 08 41.2 -0.3
baz=318
JCT **Junction City** 65.33 72 P P 13 08 41.6 +0.1
D55A **Sainte-Anne-du** 65.41 44 P P 13 08 40.7 -1.0
baz=321
CMAR **Chiang Mai Arr** 65.44 269 P P 13 08 43.4 +1.2
comp=Z,0.6nm,0.6s,baz=23,slow=7.4,SNR=7.3
G53A **Haliburton** 65.49 47 P P 13 08 41.5 -0.8
baz=320
WHTX **Lake Whitney,** 65.58 69 P P 13 08 42.9 -0.1
baz=318
I52A **Shelburne** 65.59 49 P P 13 08 42.3 -0.7
baz=320
TAPN **Taplejung** 65.64 284 *e*P P 13 08 44.6 +0.8
comp=Z,25nm,1.0s
NC204 **NORSAR Array S** 65.83 350 P P 13 08 44.5 +0.3
MIAR **Mount Ida** 65.89 64 P P 13 08 44.7 -0.3
baz=318
MIAR **Mount Ida** 65.89 64 P P 13 08 43.8 -1.2
MIAR IAmb IAmb 13 08 45.3
comp=Z,6.6nm,1.0s
NC405 **NORSAR Array S** 65.89 350 P P 13 08 44.7 +0.1
PBMO **Poplar Bluff** 65.94 61 P P 13 08 44.1 -1.2
NB201 **NORSAR Array S** 66.00 350 P P 13 08 44.9 -0.4
NB2 **NORSAR Subarra** 66.02 350 P P 13 08 45.2 -0.2
comp=Z,9.7nm,0.9s,baz=12,slow=6.5
NOA **NORSAR Array B** 66.02 350 P P 13 08 46.0 +0.5
comp=Z,5.3nm,0.8s,baz=13,slow=6.5,SNR=25
W41B **Gamlewity, V** 66.15 63 P P 13 08 45.8 -0.9
baz=318
GUN **Gumba** 66.31 285 *e*P P 13 08 49.3 +1.1
JIRN **Jiri** 66.32 285 *e*P P 13 08 49.3 +1.0
comp=Z,31nm,1.0s
X40A **Basin Creek Fa** 66.34 64 P P 13 08 47.0 -0.8
baz=318
D58A **Chemin du LacG** 66.44 43 P P 13 08 47.4 -1.0
baz=323
RAMN **Ramite** 66.60 284 *e*P P 13 08 50.5 +0.6
comp=Z,29nm,0.9s
N50A **Nevada** 66.69 53 P P 13 08 49.2 -0.8
baz=320
GAR **Garm** 66.71 304 P P 13 08 50.4 +0.1
PKI **Pulchoki** 66.85 285 *e*P P 13 08 52.3 +0.7
comp=Z,18nm,0.7s
PKIN **Phulchoki** 66.85 285 *e*P P 13 08 52.1 +0.6
M52A **Chesterland** 66.97 51 P P 13 08 51.1 -0.7
baz=320
GKN **Gorkha** 66.98 286 *e*P P 13 08 53.0 +0.8
DMN **Daman** 67.00 286 *e*P P 13 08 53.4 +0.9
WCI **Wyandotte Cave** 67.03 57 P P 13 08 51.9 -0.3
baz=319
L53A **Girard** 67.18 51 P P 13 08 52.5 -0.6
baz=321
DANN **Dangsing** 67.24 287 *e*P P 13 08 54.9 +0.9
comp=Z,19nm,0.7s
CHGR **Chuyangaron** 67.56 304 P P 13 08 56.2 +0.5
LONY **Lake Ozonia** 67.68 45 P P 13 08 55.4 -0.8
baz=322
KOLN **Koldanda** 67.77 287 *e*P P 13 08 58.0 +0.7
N53A **Lisbon** 67.79 52 P P 13 08 55.9 -1.0
baz=321
M54A **Oil Creek Stat** 67.81 50 P P 13 08 56.4 -0.7
baz=321
WVT **Waverly** 67.82 59 P P 13 08 56.5 -0.7
baz=319
WVT **Waverly** 67.82 59 P P 13 08 56.7 -0.5
WVT IAmb IAmb 13 09 08.4
comp=Z,5.5nm,0.7s
N54A **Moraine State** 68.07 51 P P 13 08 58.2 -0.6
baz=321
OXF **Oxford** 68.19 62 P P 13 08 59.1 -0.5
baz=319
M55A **Ridgway** 68.26 50 P P 13 08 59.5 -0.5
baz=321
L56A **Greenwood** 68.30 49 P P 13 08 59.4 -0.8
baz=322
J58A **Remsen** 68.37 46 P P 13 08 59.6 -1.0
baz=322
G61A **St-Isidore-de-** 68.46 43 P P 13 09 00.5 -0.6
baz=324
CLTN **Cedars of Leba** 68.63 58 P P 13 09 01.6 -0.8
N55A **Marion Center** 68.69 51 P P 13 09 01.7 -0.9
baz=322
N56A **West Decatur** 68.91 50 P P 13 09 03.7 -0.4
baz=322
K59A **Cooperstown** 69.03 47 P P 13 09 03.8 -0.9
baz=323
H62A **Milan** 69.18 43 P P 13 09 05.1 -0.6
baz=324
F64A **Sherman** 69.28 41 P P 13 09 05.1 -1.1
baz=325
O56A **Blue Knob Stat** 69.29 51 P P 13 09 05.6 -0.8
baz=322
SSPA **Standing Stone** 69.32 50 P P 13 09 05.5 -1.0
baz=322
G63A **Kingsbury** 69.38 42 P P 13 09 05.6 -1.3
baz=325
N57A **Milroy** 69.39 50 P P 13 09 06.0 -0.9
baz=322
PKME **Peaks-Kenny Pk** 69.39 42 P P 13 09 05.8 -1.1
baz=325
L59A **Walton** 69.40 47 P P 13 09 05.8 -1.2
baz=323
M58A **Price's Panora** 69.41 49 P P 13 09 06.1 -1.0
baz=322
N58A **Sunbury** 69.71 49 P P 13 09 08.3 -0.7
baz=322
O57A **Amberson** 69.78 50 P P 13 09 08.8 -0.5
baz=322
T53A **Wise** 69.90 55 P P 13 09 09.0 -1.2
baz=321
O58A **Lewisberry** 70.18 50 P P 13 09 11.5 -0.3
baz=322
T54A **Tazewell** 70.33 55 P P 13 09 11.6 -1.2
baz=321
N60A **Cedar Hill Far** 70.43 48 P P 13 09 12.1 -1.3
baz=323
LRAL **Lakeview Retre** 70.61 61 P P 13 09 13.0 -1.6
baz=320
P59A **Jarrettsville** 70.82 50 P P 13 09 15.1 -0.6
baz=323
PAL **Palisades** 70.86 47 P P 13 09 15.0 -0.9
baz=324
U55A **TA2, Sparta** 71.03 55 P P 13 09 16.2 -0.9
baz=322
R58A **Rapidan** 71.11 52 P P 13 09 16.6 -0.9
baz=322
X54A **Belton** 71.88 57 P P 13 09 21.5 -0.7
baz=322
KMSC **Kings Mountain** 71.95 56 P P 13 09 22.1 -0.5
baz=322
HODGE **Hodges** 72.19 57 P P 13 09 23.3 -0.7
HODGE IAmb IAmb 13 09 35.2
comp=Z,7.9nm,0.8s
X55A **Gracelyn & Ava** 72.32 56 P P 13 09 24.7 -0.1
baz=322
AKASG **Malin Array Be** 72.74 336 P P 13 09 26.7 -0.3
comp=Z,3.6nm,0.8s,baz=26,slow=6.0,SNR=6.6
V59A **Middlesex** 73.00 53 P P 13 09 29.3 +0.4
baz=323
GEYT **Alibeck** 73.49 311 P P 13 09 32.9 +1.1
comp=Z,2.0nm,0.7s,baz=212,slow=5.3,SNR=4.8
KBZ **Khabaz** 74.87 325 P P 13 09 40.7 +1.1
comp=Z,2.4nm,0.8s,baz=121,slow=3.1,SNR=7.8
IBBN **Ibbenburen** 74.97 350 *e*P P 13 09 41.6 +1.5
comp=Z,13nm,0.9s,baz=12,slow=5.7
CLZ **Clausthal** 75.14 348 *e*P P 13 09 42.4 +1.3
comp=Z,12nm,1.4s,baz=12,slow=5.7
KWP **Kalwaria Pacla** 75.22 340 P P 13 09 43.0 +1.4
OJC **Ojcow** 75.24 342 P P 13 09 42.4 +0.7
CLL **Collm** 75.31 347 *e*P P 13 09 43.0 +0.9
comp=Z,5.0nm,1.0s
CLL *e*pP sP 13 09 54.0 -0.7
CHVC **Chvalec** 75.55 345 *e*P P 13 09 44.3 +0.8
CHVC *e*pP pP 13 09 54.2 +1.0
NEUB **Neuenburg** 75.58 347 *e*pP pP 13 09 54.9 +1.6
baz=10,slow=5.9
BRG **Berggiesshubel** 75.60 346 *e*PKP P 13 09 44.4 +0.6
comp=Z,4.9nm,1.0s
BRG *e* 13 09 54.1
comp=Z,6.5nm,0.8s
BRG **Berggiesshubel** 75.60 346 *e*P P 13 09 44.7 +0.9
comp=Z,4.9nm,1.0s,baz=12,slow=5.7
BRG *e*pP sP 13 09 54.7 -1.7
baz=10,slow=5.9
UPC **Upice** 75.63 345 *e*P P 13 09 45.4 +1.5
UPC *e*pP pP 13 09 54.6 +0.9
FBE **Freiberg** 75.64 346 *e*pP pP 13 09 55.3 +1.7
baz=10,slow=5.9
DPC **Dobruska-Polom** 75.73 344 *e*P P 13 09 45.8 +1.2
DPC *e*pP sP 13 09 55.6 -1.7
KRLC **Kraliky** 75.92 344 *e*P P 13 09 46.6 +0.9
KRLC *e*pP pP 13 09 56.4 +1.0
MORC **Moravsky Berou** 76.08 343 *e*P P 13 09 47.3 +0.7
MORC *e*sP PcP 13 09 58.5 -0.2
MORC **Moravsky Berou** 76.08 343 P P 13 09 47.0 +0.5
MORC IAmb IAmb 13 09 59.5
comp=Z,11nm,1.3s
MOX **Moxa** 76.15 347 *e*P P 13 09 48.0 +1.1
comp=Z,4.4nm,1.1s,baz=12,slow=5.7
MOX *e*pP PcP 13 09 57.9 -1.0
baz=10,slow=5.9
TANN **Tannenbergstha** 76.26 347 *e*P P 13 09 48.8 +1.3
comp=Z,7.7nm,1.1s,baz=12,slow=5.7
TANN *e*pP PcP 13 09 58.5 -0.9
baz=10,slow=5.9
GUNZ **Gunzen** 76.33 347 *e*P P 13 09 49.2 +1.3
comp=Z,5.4nm,1.2s,baz=12,slow=5.7
GUNZ *e*pP PcP 13 09 59.3 -0.5
baz=10,slow=5.9
PRU **Pruhonice** 76.37 345 *e*P P 13 09 48.8 +0.7
PRU *e*pP pP 13 09 56.0 -1.9
WERN **Wernitzgruen** 76.40 347 *e*P P 13 09 49.8 +1.5
comp=Z,6.2nm,1.0s,baz=12,slow=5.7
WERN *e*pP PcP 13 09 59.7 -0.3
baz=10,slow=5.9
GOPC **GO Pecny, Ondr** 76.40 345 *e*P P 13 09 49.6 +1.2
GOPC *e*pP PcP 13 09 59.6 -0.4
BUR08 **Bucovina Ar. S** 76.55 338 P P 13 09 50.3 +1.0
BUR08 IAmb IAmb 13 10 01.4
comp=Z,4.5nm,1.0s
VRAC **Vranov** 76.69 344 *e*P P 13 09 51.2 +1.2
VRAC *e*sP sP 13 10 02.1 -0.6
MEM **Membach** 76.83 351 P P 13 09 51.6 +0.9
comp=Z,7.7nm,0.8s
ROTZ **Rotzenmuhle** 76.93 347 *e*P P 13 09 52.8 +1.5
comp=Z,4.4nm,1.2s,baz=12,slow=5.7
ROTZ *e*pP sP 13 10 02.8 -1.2
baz=10,slow=5.9
JAVC **Velka Javorina** 76.94 343 *e*P P 13 09 53.5 +2.0
JAVC *e*sP pwP 13 10 04.7 -0.6
KRUC **Moravsky** 76.97 344 *e*P P 13 09 52.5 +1.0
KRUC *e*sP sP 13 10 03.5 -0.7
GRF **Grafenberg Arr** 77.14 348 *e*P P 13 09 54.2 +1.7
comp=Z,9.1nm,1.1s,baz=12,slow=5.7
BMRD **Maredsous** 77.25 352 P P 13 09 53.9 +0.8
BMRD pP pP 13 10 01.3 -1.4
BMRD sP sP 13 10 04.2 -1.5
KHC **Kasperske Hory** 77.35 346 *e*P P 13 09 54.9 +1.2
KHC *e*pP sP 13 10 05.1 -1.3
KHC **Kasperske Hory** 77.35 346 P P 13 09 54.5 +0.7
KHC IAmb IAmb 13 10 06.0
comp=Z,4.4nm,1.2s
WET **Wettzell** 77.44 346 *e*P P 13 09 55.9 +1.7
comp=Z,3.4nm,1.0s,baz=12,slow=5.7
WET *e*pP sP 13 10 05.8 -1.1
baz=10,slow=5.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GEC2	GERESS Array S	77.61	346	eP	P	13 09 56.6	+1.3
	comp=Z,3.7nm,0.9s,baz=12,slow=5.7						
GEC2				epP	sP	13 10 06.6	-1.3
	baz=10,slow=5.9						
GEC2	GERESS Array S	77.61	346	P	P	13 09 55.9	+0.7
GEC2				IAmb	IAmb	13 10 06.9	
	comp=Z,6.1nm,1.1s						
GERES	GERESS Array B	77.61	346	P	P	13 09 55.0	-0.3
	comp=Z,2.4nm,0.8s,baz=32,slow=5.3,SNR=18						
WLF	Walferdange	77.75	351	eP	P	13 09 57.3	+1.4
	comp=Z,7.8nm,0.9s,baz=12,slow=5.7						
CONA	Conrad Observa	78.15	344	eP	P	13 09 59.9	+1.6
	comp=Z,4.7nm,1.0s						
RJOB	Jochberg	78.83	346	eP	P	13 10 03.5	+1.5
	comp=Z,5.1nm,0.9s,baz=12,slow=5.7						
BFO	Black Forest	78.83	349	eP	P	13 10 02.9	+0.9
	comp=Z,4.0nm,0.9s,baz=12,slow=5.7						
BFO				epP	sP	13 10 13.2	-1.4
	baz=10,slow=5.9						
ARSA	Arzberg	78.87	344	eP	P	13 10 04.3	+2.1
	comp=Z,3.7nm,1.1s						
WRAB	Tennant Creek	79.13	216	P	P	13 10 05.8	+2.1
WRA	Warramunga Arr	79.14	216	P	P	13 10 03.8	0.0
	comp=Z,0.9nm,0.7s,baz=29,slow=6.2,SNR=6.2						
UBR	Ueberruh	79.25	348	epP	pP	13 10 16.8	+2.7
	baz=10,slow=5.9						
KBA	Koelnbreinsper	79.39	346	eP	P	13 10 07.2	+2.1
	comp=Z,11nm,0.8s,SNR=8.5						
WATA	Walderalm	79.39	347	eP	P	13 10 06.2	+1.0
	comp=Z,3.3nm,0.7s						
MOTA	Moosalm	79.45	347	eP	P	13 10 06.5	+1.0
	comp=Z,10nm,1.2s						
WTTA	Wattenberg	79.46	347	eP	P	13 10 07.1	+1.5
	comp=Z,7.4nm,0.7s						
SOKA	Soboth	79.50	344	eP	P	13 10 07.4	+1.7
	comp=Z,7.3nm,1.3s						
SQTA	Sankt Quirin	79.56	347	eP	P	13 10 07.2	+1.1
	comp=Z,7.1nm,0.8s						
MYKA	Terra Mystica	79.78	345	ePcP	P	13 10 09.3	+2.1
	comp=Z,2.5nm,0.7s						
FETA	Feichten	79.82	347	eP	P	13 10 08.9	+1.4
	comp=Z,4.3nm,0.9s						
ABTA	Abfaltersbach	79.83	346	eP	P	13 10 08.6	+1.1
	comp=Z,6.3nm,1.1s						
FUORN	Ofenpass-Fuorn	80.28	348	P	P	13 10 10.8	+0.7
FUORN				IAmb	IAmb	13 10 22.5	
	comp=Z,9.5nm,1.1s						
TUE	Stuetta	80.54	348	P	P	13 10 12.0	+0.5
BRTR	Keskin Array B	81.56	329	P	P	13 10 16.9	-0.1
	comp=Z,1.5nm,0.8s,baz=22,slow=7.1,SNR=4.9						
ASAR	Alice Springs	82.72	215	P	P	13 10 22.9	+0.1
	comp=Z,0.7nm,0.9s,baz=28,slow=4.9,SNR=6.4						
ESDC	Sonseca Array	88.36	357	P	P	13 10 50.2	-0.7
	comp=Z,0.8nm,1.0s,baz=335,slow=4.8,SNR=5.2						
QSPA	South Pole Qui	142.03	180	PKhKP	PKPpre	13 17 24.7	
	comp=Z,1.3nm,0.9s,baz=281,slow=1.2,SNR=6.9						

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*KRNET **04** 13:19:27.8±0.1, 39°.68N×69°.42E, mb2.7*
*SOME **04** 13:19:28.1, 39°.88N×69°.43E, h0km*
*ISU **04** 13:19:40.0, 39°.50N×71°.10E, h5km*
ISC 04 13:19:32.6±3.2**, 39°.7N**±0°.1×**69°.5E**±0°.1**, h22**km**, n12, σ1s61**/24**, 8C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BTK	Batken	1.08	69	iP	Pb	13 19 54.7	+2.1
BTK				iS	Sb	13 20 05.4	-0.9
CHMI	Chimion	1.66	68	iP	Pn	13 19 59.7	-0.7
CHMI				iS	Sb	13 20 26.0	+3.1
IUG	Iuzhnay	2.50	9	eP	Pn	13 20 12.2	+0.2
	5.9nm,0.2s						
IUG				eS	Sn	13 20 44.5	+2.5
	47nm,0.3s						
ARK	Arkit	2.83	41	⇓iP	Pn	13 20 14.7	-1.8
	baz=42						
ARK				⇓iS	Sn	13 20 49.1	-0.8
	baz=42						
ARSB	Arslanbob	3.12	57	⇑iP	Pn	13 20 19.1	-1.5
	baz=58						
ARSB				⇑iS	Sn	13 20 56.5	-0.8
	baz=58						
ARSB	Arslanbob	3.12	57	eP	Pb	13 20 28.4	+1.0
ARSB				eS	Sb	13 21 06.1	+1.0
BRLS	Borolday	3.36	4	eP	Pn	13 20 24.1	+0.3
	7.4nm,0.2s						
BRLS				eS	Sn	13 21 04.5	+1.5
	9.8nm,0.3s						
KK31	Karatay Array	3.51	12	Pn	Pb	13 20 31.6	-2.4
	1.0nm,0.2s,baz=196,slow=17,SNR=14						
KK31				Sn	Sb	13 21 16.6	+0.5
	13nm,0.5s,baz=195,slow=30,SNR=15						
AML	Almayashu	4.01	51	⇑iP	Pn	13 20 31.4	-1.7
	baz=52						
AML				⇑iS	Sn	13 21 18.2	-1.4
	baz=52						
UCH	Uchtor	4.57	54	⇓iP	Pn	13 20 39.0	-1.8
	baz=55						
UCH				⇓iS	Sn	13 21 31.8	-1.6
	baz=55						
AAK	Ala-Archa	4.79	50	⇑Pn	Pn	13 20 43.9	+0.3
	0.9nm,0.2s						
AAK				⇑Sn	Sn	13 21 39.9	+1.5
	2.8nm,0.6s						
KZA	Kyzart	4.97	59	⇑iP	Pn	13 20 45.1	-1.2
	baz=60						
KZA				⇑iS	Sn	13 21 42.1	-1.2
	baz=60						

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*IDC **04** 13:22:56.4±2.7, 6°.45N×126°.93E, h60km±21km, mb3.6/7, mb1 3.9/9, mb1mx3.4/43, mbtmp4.0/9, ML3.9/1, Error ellipse: s-maj=39.0km s-min=11.7km az=55.0*
*NEIC **04** 13:22:58.1±1.2, 6°.42N±0°.06×126°.7E±0°.1, h76km±6km, mb4.4/11, Error ellipse: s-maj=16.5km s-min=6.7km az=67.0*
*MAN **04** 13:23:02.2, 6°.54N×126°.09E, h8km, mb4.8, ML3.7, MS3.7*
ISC 04 13:22:58.6±0.9**, 6°.30N**±0°.06×**126°.59E**±0°.08**, h73**km±8km**, n34, σ1s84**/43**, mb4.0**/10**, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATI	Mati	0.72	333	eP	Pn	13 23 10.9	-3.1
MATI				eS	Sn	13 23 23.2	-2.1
DDMP	Don Marcelino,	0.89	257	eP	Pn	13 23 14.1	-1.8
DDMP				eS	Sn	13 23 29.9	+1.1
DAV	Davao City (W)	1.26	307	P	Pn	13 23 20.4	-0.1
	373nm,0.3s,baz=102,slow=0.6,SNR=35						
DAV				S	Sn	13 23 39.3	+2.3
	146nm,0.3s,baz=257,slow=22,SNR=15						
DMPH	Davao City--Mi	1.32	306	⇑iP	Pn	13 23 21.0	-0.4
DMPH				iS	Sn	13 23 45.3	+6.8
KCP	Kidapawan	1.64	295	⇓iP	Pn	13 23 24.4	-1.2
KCP				iS	Sn	13 23 45.5	-0.6
SKMP	Bagumbayan, Su	2.04	276	eP	Pn	13 23 28.3	-2.6
SKMP				eS	Sn	13 23 50.8	-4.7
BUKP	Musuan	2.18	316	eP	Pn	13 23 32.4	-0.4
BUKP				eS	Sn	13 24 00.1	+1.2
BUTP	Butuan	2.82	340	eP	Pn	13 23 43.7	+2.3
BUTP				eS	Sn	13 24 24.4	+10
CGP	Cagayan de Oro	2.84	319	⇑eP	Pn	13 23 42.5	+0.7
CGP				eS	Sn	13 24 16.4	+1.4
TNTI	Ternate	5.55	172		Pn	13 24 19.6	+0.9
LUWI	Luwuk	8.23	208	Pn	Pn	13 24 57.5	+2.2
SIJI	Sorong	8.52	147	P	Pn	13 24 56.6	-2.7
	1.6nm,0.3s,baz=282,slow=23,SNR=3.2						
FAKI	Fak Fak	10.76	148	Pn	Pn	13 25 31.5	+1.5
KAPI	Kappang	13.15	211	P	Pn	13 26 02.7	+0.2
	baz=29,slow=11,SNR=5.5						
SBUM	Sibu	14.82	256	P	P	13 26 29.2	+0.7
MMRI	Maumere	15.46	196	Pn	Pn	13 26 33.4	+0.8
MMRI				IAmb	IAmb	13 27 07.4	
	comp=Z,24nm,1.3s						
KNRA	Kununurra	21.94	174	P	P	13 27 46.7	+0.4
KNRA				IAmb	IAmb	13 28 29.0	
	comp=Z,37nm,1.6s						
FITZ	Fitzroy Crossi	24.26	182	P	P	13 28 09.1	0.0
	comp=Z,2.1nm,0.4s,baz=16,slow=9.4,SNR=21						
FITZ	Fitzroy Crossi	24.26	182	IAmb	IAmb	13 28 31.4	
	comp=Z,19nm,1.6s						
WB0	Warramunga Arr	27.02	164	P	P	13 28 33.8	-0.3
WRA	Warramunga Arr	27.17	164	P	P	13 28 35.6	+0.1
	comp=Z,0.6nm,0.5s,baz=341,slow=11,SNR=18						
WRA				PcP	PcP	13 31 54.7	+0.2
	comp=Z,0.3nm,0.5s,baz=332,slow=2.3,SNR=2.1						
WB2	Warramunga Arr	27.18	164	P	P	13 28 34.5	-1.0
WR0	Warramunga Arr	27.25	163	P	P	13 28 35.8	-0.4
WR0				IAmb	IAmb	13 29 24.5	
	comp=Z,20nm,1.9s						
ASAR	Alice Springs	30.63	167	P	P	13 29 04.9	-1.3
	comp=Z,0.3nm,0.3s,baz=342,slow=7.3,SNR=23						
ASAR				PcP	PcP	13 32 03.1	0.0
	comp=Z,0.2nm,0.4s,baz=354,slow=2.4,SNR=6.4						
ASAR				ScP	ScP	13 35 39.8	+0.3
	comp=Z,0.1nm,0.6s,baz=340,slow=3.0,SNR=1.4						
MORW	Morawa	36.60	196	P	P	13 29 58.5	+0.6
FORT	Forrest	36.90	178	P	P	13 30 00.5	+0.1
BBOO	Buckleboo	39.92	168	P	P	13 30 26.4	+0.6
NWAO	Narrogin (SRO)	40.01	192	P	P	13 30 27.3	+0.8
MKAR	Makanchi Array	55.38	324	P	P	13 32 24.4	-1.0
	comp=Z,0.4nm,0.3s,baz=120,slow=6.8,SNR=12						
KURK	Kurchatov	59.52	327	P	P	13 32 53.4	-0.9
KURK				IAmb	IAmb	13 32 55.9	
	comp=Z,2.2nm,0.6s						
VNDA	Vanda	85.98	173	P	P	13 35 30.9	+0.4
	comp=Z,0.5nm,0.6s,baz=305,slow=7.7,SNR=2.2						
ARCES	ARCESS Array B	88.00	340	P	P	13 35 39.1	-1.3
	comp=Z,1.2nm,0.8s,baz=94,slow=6.2,SNR=4.7						
FINES	FINESS Array B	89.51	332	P	P	13 35 47.1	-0.6
	comp=Z,0.8nm,0.9s,baz=46,slow=5.5,SNR=4.0						
TORD	Torodi Ar. Bea	121.95	290	PKP	PKiKP	13 41 44.7	-1.2
	comp=Z,0.2nm,0.4s,baz=40,slow=2.0,SNR=2.3						

SJA 04 13:23:20.9±0.6**, 23°.84S**×**66°.46W, h228**km±8km**, ML3.1, MW3.5, Jujuy Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AZAP	Zapla	1.33	107	iP	Pn	13 23 56.5	+0.4
AZAP				IAML		13 24 28.9	
	comp=Z,6.3nm,3.3s						
YJA	Yavi	1.87	28	eP	Pn	13 24 01.9	+1.0
YJA				iS	S	13 24 32.3	+0.2
YJA				IAML		13 24 35.6	
	comp=Z,4.8nm,3.0s						
LVC	Limon Verde	2.56	298	eP	Pn	13 24 08.0	+0.3
LVC				eS	S	13 24 43.6	-0.7
LVC				IAML		13 24 46.1	
	comp=Z,7.0nm,0.3s						
PB15	IPOC Station P	2.83	282	eP	Pn	13 24 11.0	+0.5
PB15				eS	S	13 24 47.6	-1.6
PB15				IAML		13 24 54.1	
	comp=Z,146nm,0.2s						
PB06	IPOC Station P	3.08	291	eP	Pn	13 24 13.8	+0.7
PB06				eS	S	13 24 51.8	-2.2
PB06				IAML		13 24 56.4	
	comp=Z,20nm,0.2s						
PB09	IPOC Station P	3.27	308	eS	S	13 24 58.0	-0.1
PB09				IAML		13 25 00.6	
	comp=Z,23nm,0.3s						
PB03	IPOC Station P	3.52	300	eP	Pn	13 24 18.6	+0.4
PB03				eS	S	13 24 59.9	-3.4
PB03				IAML		13 25 04.3	
	comp=Z,55nm,0.1s						
PB01	IPOC Station P	3.95	314	eS	S	13 25 09.0	-3.4
PB01				IAML		13 25 12.7	
	comp=Z,30nm,0.2s						
ACDV	Cuesta del Vie	6.74	200	iP	Pn	13 24 59.0	+0.9
ACDV				eS	S	13 26 14.5	-1.1
AROD	Rodeo	6.85	202	eP	Pn	13 24 59.0	-0.7
AROD				eS	S	13 26 17.1	-1.4
ACCO	Cerro Coronel	7.11	198	eP	Pn	13 25 02.8	-0.2
ACCO				eS	S	13 26 21.0	-3.6
AMOG	MOGNA	7.30	194	iP	Pn	13 25 04.2	-1.0
AMOG				eS	S	13 26 23.5	-5.1
AMOG				IAML		13 26 29.3	
	comp=Z,3.6nm,1.5s						
GO04	Tololo Observa	7.40	211	iP	Pn	13 25 05.4	-1.3
GO04				eS	S	13 26 26.3	-4.9
RTCV	Cerro Valdivia	8.20	193	iP	Pn	13 25 15.9	-0.8
RTCV				IAML		13 27 37.6	
	comp=Z,27nm,4.0s						
ACAN	Cantantal	8.43	184	iP	Pn	13 25 18.6	-1.0
ACAN				eS	S	13 26 48.1	-6.8
ACAN				IAML		13 27 05.3	
	comp=Z,4.4nm,1.1s						
MRA	San Martin	8.57	176	iP	Pn	13 25 20.4	-1.1
MRA				IAML		13 27 22.3	
	comp=Z,1.1nm,3.8s						

IDC 04 13:29:12.7±1.4**, 10°.27N**×**57°.07E, h0**km**, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.4**/43**, mbtmp3.6**/5**, Error ellipse: s-maj=60.3km s-min=25.3km az=17.0, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRTR	Keskin Array B	35.99	329	P	P	13 36 15.1	-0.5
	0.4nm,0.6s,baz=145,slow=12,SNR=2.3						
CMAR	Chiang Mai Arr	41.29	74	P	P	13 37 00.8	+0.5
	0.5nm,0.4s,baz=255,slow=9.4,SNR=8.8						
TORD	Torodi Ar. Bea	54.22	279	P	P	13 38 41.8	+1.1
	0.4nm,0.8s,baz=92,slow=8.2,SNR=2.2						
ESDC	Sonseca Array	61.29	310	P	P	13 39 29.4	-0.7
	0.5nm,0.9s,baz=94,slow=5.1,SNR=3.8						
ASAR	Alice Springs	82.25	116	P	P	13 41 35.9	-0.6
	0.5nm,0.9s,baz=281,slow=4.6,SNR=6.0						

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*NEIC **04** 13:34:20.0±1.2, 23°.89S±0°.08×66°.7W±0°.1, h198km±8km, mb4.6/3, Error ellipse: s-maj=14.3km s-min=10.8km az=103.0*
*IDC **04** 13:34:20.9±1.1, 23°.81S×66°.69W, h202km±12km, mb3.5/3, mb1 3.5/9, mb1mx3.2/34, mbtmp3.9/9, Error ellipse: s-maj=17.6km s-min=14.2km az=147.0*
*GUC **04** 13:34:21.5±0.6, 23°.91S×67°.11W, h250km±8km, ML4.4*
ISC 04 13:34:20.5±0.8**, 23°.90S**±0°.05×**66°.74W**±0°.08**, h206**km±10km**, n49, σ1s05**/62**, mb3.6**/3**, 10C-2D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.37	302	P	Pn	13 35 04.9	+1.1
	30nm,0.3s,baz=152,slow=5.6,SNR=411						
LVC				S	S	13 35 37.3	+0.4
	16nm,0.3s,baz=96,slow=19,SNR=16						
LVC	Limon Verde	2.37	302	⇓eP	Pn	13 35 04.9	+1.1
LVC				eS	S	13 35 38.2	+1.3
LVC	Limon Verde	2.37	302		Pn	13 35 04.7	+1.0
PB15	IPOC Station P	2.59	285	⇑iP	Pn	13 35 07.0	+0.9
PB15				iS	S	13 35 41.4	+0.3
PB15				IAML		13 35 43.3	
	comp=E,2μm,0.1s						
PB15	IPOC Station P	2.59	285		Pn	13 35 06.9	+0.9
PB06	IPOC Station P	2.86	294	⇑iP	Pn	13 35 09.9	+0.8
PB06				iS	S	13 35 46.0	-0.3
PB06				IAML		13 35 49.0	
	comp=N,441nm,0.1s						
PB06	IPOC Station P	2.86	294		Pn	13 35 09.8	+0.8
GO02	Mina Guanaco	2.88	243	⇑eP	Pn	13 35 10.0	+0.5
GO02				eS	S	13 35 47.1	0.0
GO02				IAML		13 35 48.6	
	comp=E,653nm,0.4s						
GO02	Mina Guanaco	2.88	243		Pn	13 35 09.9	+0.5
PB09	IPOC Station P	3.11	312	⇑iP	Pn	13 35 13.2	+1.3
PB09				iS	S	13 35 52.5	+0.8
PB09	IPOC Station P	3.11	312		Pn	13 35 13.1	+1.1
PB03	IPOC Station P	3.33	303	⇑iP	Pn	13 35 15.0	+0.5
PB03				iS	S	13 35 55.5	-0.8
PB03				IAML		13 35 58.5	
	comp=E,259nm,0.1s						
PB05	IPOC Station P	3.34	287	⇑iP	Pn	13 35 14.8	+0.1
PB05				iS	S	13 35 54.8	-1.7
PB14	IPOC Station P	3.42	257		Pn	13 35 15.6	-0.1
PB04	IPOC Station P	3.50	296	⇑iP	Pn	13 35 17.0	+0.4
PB04				iS	S	13 35 58.6	-1.4
PB04				IAML		13 36 02.0	
	comp=E,242nm,0.2s						
PB04	IPOC Station P	3.50	296		Pn	13 35 16.4	-0.2
PB10	IPOC Station P	3.51	275	⇑eP	Pn	13 35 16.8	+0.2
PB10				eS	S	13 35 57.8	-2.2
PB10				IAML		13 36 00.5	
	comp=E,139nm,0.3s						
PB10	IPOC Station P	3.51	275		Pn	13 35 16.8	+0.2
PB07	IPOC Station P	3.62	306	⇑eP	Pn	13 35 18.3	+0.3
PB07				eS	S	13 36 00.6	-1.9
PB07				IAML		13 36 02.0	
	comp=N,239nm,0.3s						
PB07	IPOC Station P	3.62	306		Pn	13 35 17.8	-0.2
PB01	IPOC Station P	3.81	318	⇓eP	Pn	13 35 20.6	+0.4
PB01				eS	S	13 36 06.0	-0.7
PB01				IAML		13 36 07.2	
	comp=E,158nm,0.3s						
PB01	IPOC Station P	3.81	318		Pn	13 35 20.3	0.0
PB02	IPOC Station P	3.88	311	⇑iP	Pn	13 35 21.1	-0.1
PB02				iS	S	13 36 06.6	-1.7
PB02				IAML		13 36 12.8	
	comp=E,216nm,0.2s						
PB08	IPOC Station P	4.35	329	eP	Pn	13 35 28.4	+1.1
PB08				eS	S	13 36 20.4	+1.0
PB08				IAML		13 36 25.4	
	comp=N,97nm,0.3s						
PB08	IPOC Station P	4.35	329		Pn	13 35 27.7	+0.3
PATCX	Punta Patache	4.40	313		Pn	13 35 26.8	-0.8
GO01	Chusmiza	4.78	331		Pn	13 35 32.9	0.0
GO03	Copiap	4.85	220		Pn	13 35 31.0	-2.1
PB11	IPOC Station P	4.92	326		Pn	13 35 33.1	-1.2
PSGCX	Pisagua	5.31	323		Pn	13 35 37.3	-1.8
MNMC	Minye Minye	5.43	330		Pn	13 35 40.5	-0.5
PB16	IPOC Station P	6.10	334		Pn	13 35 49.7	-0.1
PB12	IPOC Station P	6.23	327	Pn	Pn	13 35 50.1	-0.8
GO04	Tololo Observa	7.22	209	Pn	Pn	13 36 01.6	-2.2
LPAZ	La Paz	7.68	350	P	Pn	13 36 10.9	+0.7
	comp=N,0.3nm,0.3s,baz=187,slow=7.4,SNR=10						
LPAZ				S	S	13 37 35.3	-2.2
	comp=N,0.1nm,0.3s,baz=163,slow=20,SNR=2.2						
LPAZ	La Paz	7.68	350	Pn	Pn	13 36 11.3	+1.0
CPUP	Villa Florida	8.87	108	P	Pn	13 36 23.5	-1.5
	comp=N,0.1nm,0.3s,baz=296,slow=12,SNR=4.6						
SIV	San Ignacio	9.50	35	P	Pn	13 36 32.7	-0.6
	comp=N,0.5nm,0.3s,baz=244,slow=9.5,SNR=6.3						
PLCA	Paso Flores	17.09	190	P	Pn	13 38 08.7	+1.2
	comp=N,0.1nm,0.3s,baz=14,slow=13,SNR=1.9						
PLCA	Paso Flores	17.09	190	IAmb	IAmb	13 38 09.1	
	comp=Z,79nm,2.0s						
BDFB	Brasilia	19.43	68	P	P	13 38 32.1	+0.5
	comp=Z,0.9nm,0.3s,baz=244,slow=11,SNR=14						
BDFB	Brasilia	19.43	68	P	P	13 38 30.5	-1.1
BDFB				IAmb	IAmb	13 38 32.8	
	comp=Z,7.7nm,0.6s						
QSPA	South Pole Qui	66.31	180	P	P	13 44 48.1	+1.5
	comp=Z,2.0nm,0.9s,baz=222,slow=1.7,SNR=8.8						
QSPA	South Pole Qui	66.31	180	IAmb	IAmb	13 45 06.4	
	comp=Z,20nm,1.9s						
TORD	Torodi Ar. Bea	76.31	69	P	P	13 45 46.9	-0.3
	comp=Z,0.9nm,0.6s,baz=265,slow=5.9,SNR=6.2						
YKA	Yellowknife Ar	94.11	340	P	P	13 47 15.8	+0.8
	comp=Z,0.3nm,0.7s,baz=129,slow=4.9,SNR=3.5						
ASAR	Alice Springs	128.65	204	PKP	PKPdf	13 53 04.1	+0.3
	comp=Z,0.4nm,1.1s,baz=134,slow=2.7,SNR=5.1						
WRA	Warramunga Arr	131.83	207	PKP	PKPdf	13 53 10.5	+0.6
	comp=Z,0.4nm,0.7s,baz=148,slow=2.0,SNR=4.7						
MKAR	Makanchi Array	146.29	40	PKPbc	PKPbc	13 53 36.9	+0.2
	comp=Z,0.4nm,0.4s,baz=300,slow=3.2,SNR=5.1						

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*IDC **04** 13:36:08.9±3.0, 61°.62S×155°.22E, h0km, mb4.3/3, mb1 4.5/4, mb1mx4.0/35, mbtmp4.3/4, ML3.8/1, MS3.6/10, Ms1 3.6/10, ms1mx3.4/32, Error ellipse: s-maj=214.5km s-min=22.8km az=76.0*
*NEIC **04** 13:36:10.8±1.1, 61°.53S±0°.07×155°.4E±0°.3, h12km±3km, mb4.6/19, Error ellipse: s-maj=18.2km s-min=10.4km az=93.0*
ISC 04 13:36:10.6±0.6**, 61°.56S**±0°.07×**155°.5E**±0°.1**, h10**km**, n47, σ1s16**/32**, mb4.5**/8**, MS3.5**/9**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	7.32	16	Pn	Pn	13 37 57.6	+0.3
VNDA	Vanda	16.17	175	Pn	Pn	13 39 54.8	-2.7
	0.4nm,0.3s,baz=344,slow=13,SNR=25						
VNDA				LR	LR	13 45 40.5	
	comp=Z,318nm,19.6s,baz=355,slow=36						
VNDA	Vanda	16.17	175		Pn	13 39 54.6	-2.9
PYZ	Puysegur Point	16.73	28	Pn	Pn	13 40 05.2	+0.3
CASY	Casey	19.95	237	Pn	P	13 40 43.3	+1.0
RPZ	Rata Peaks	20.12	34	LR	LR	13 47 25.9	
	comp=Z,215nm,19.7s,baz=192,slow=33						
QSPA	South Pole Qui	28.53	180	P	P	13 42 05.4	-0.6
	5.7nm,1.1s,baz=14,slow=2.9,SNR=6.8						
QSPA				LR	LR	13 52 57.3	
	comp=Z,180nm,20.2s,baz=6.5,slow=35						
QSPA	South Pole Qui	28.53	180	P	P	13 42 08.1	+2.1
QSPA				IAmb	IAmb	13 42 09.7	
	comp=Z,20nm,1.4s						
BBOO	Buckleboo	31.39	327	P	P	13 42 31.9	+0.6
FORT	Forrest	35.63	317	P	P	13 43 08.0	-0.3
MAW	Mawson	36.62	220	LR	LR	13 58 20.2	
	comp=Z,214nm,18.3s,baz=64,slow=36						
H01W1	Cape Leeuwin H	37.30	296	T	T	14 22 33.9	
	baz=148,slow=75,SNR=219						
H01W2	Cape Leeuwin H	37.30	296	T	T	14 22 34.2	
	baz=148,slow=75,SNR=220						
H01W3	Cape Leeuwin H	37.31	296	T	T	14 22 32.4	
	baz=148,slow=75,SNR=212						
NWAO	Narrogin (SRO)	37.70	302	P	P	13 43 24.9	-1.0
DZM	Mont Dzumac	40.19	16	P	P	13 43 46.4	-0.5
ASAR	Alice Springs	40.66	329	P	P	13 43 50.5	-0.3
	comp=Z,3.5nm,0.7s,baz=166,slow=7.8,SNR=24						
ASAR				PcP	PcP	13 45 52.1	-0.3
	comp=Z,0.6nm,0.8s,baz=163,slow=2.8,SNR=4.7						
AS31	Alice Springs	40.66	329	P	P	13 43 50.5	-0.3
WR0	Warramunga Arr	44.07	331	P	P	13 44 17.8	-0.7
WR0				IAmb	IAmb	13 44 20.3	
	comp=Z,16nm,1.6s						
WB2	Warramunga Arr	44.13	331	P	P	13 44 18.4	-0.6
WB2				IAmb	IAmb	13 44 21.1	
	comp=Z,4.8nm,0.7s						
WRA	Warramunga Arr	44.13	331	P	P	13 44 18.3	-0.7
	comp=Z,3.2nm,0.6s,baz=173,slow=9.3,SNR=33						
WRA				PcP	PcP	13 46 03.4	-0.6
	comp=Z,0.7nm,0.7s,baz=163,slow=3.0,SNR=4.5						
WB0	Warramunga Arr	44.29	331	P	P	13 44 19.4	-0.9
WB0				IAmb	IAmb	13 44 21.9	
	comp=Z,7.8nm,1.1s						
SNAA	Sanae	46.20	189	P	P	13 44 36.6	+1.6
SNAA	Sanae	46.20	189	P	P	13 44 36.1	+1.1
VNA3	Neumayer Olymp	47.07	187	P	P	13 44 43.3	+1.5
VNA2	Neumayer--Watz	47.25	188	P	P	13 44 44.7	+1.5
	baz=170,slow=3.0						
VNA1	Neumayer--Stat	47.58	187	P	P	13 44 47.5	+1.8
FITZ	Fitzroy Crossi	48.24	321	LR	LR	14 03 54.3	
	comp=Z,49nm,18.0s,baz=160,slow=34						
FITZ	Fitzroy Crossi	48.24	321	P	P	13 44 50.6	-0.7
FITZ				IAmb	IAmb	13 45 11.5	
	comp=Z,9.4nm,1.2s						
KNRA	Kununurra	49.63	325	P	P	13 45 01.4	-0.7
MTN	Manton Dam	51.73	329	P	P	13 45 17.6	-0.3
SOEI	Soe	56.54	322	P	P	13 45 52.9	-0.2
FAKI	Fak Fak	61.07	333	P	P	13 46 24.9	+0.5
KAPI	Kappang	62.39	319	LR	LR	14 11 09.3	
	comp=Z,49nm,20.3s,baz=140,slow=34						
LEM	Lembang	65.00	306	LR	LR	14 10 07.6	
	comp=Z,32nm,18.8s,baz=189,slow=31						
KSM	Kuching	71.64	312	P	P	13 47 32.3	+0.1
KSM				IAmb	IAmb	13 47 33.1	
	comp=Z,4.9nm,1.1s						
H03S2	Juan Fernandez	75.25	136	T	T	15 11 27.1	
	baz=201,slow=74,SNR=11						
H03S1	Juan Fernandez	75.25	136	T	T	15 11 28.8	
	baz=201,slow=74,SNR=9.9						
H03S3	Juan Fernandez	75.26	136	T	T	15 11 26.9	
	baz=201,slow=74,SNR=11						
ROC1	El Roble	78.55	142	P	P	13 48 12.4	+0.2
H08S2	Diego Garcia H	79.98	273	T	T	15 16 01.8	
	baz=151,slow=76,SNR=43						
H08S1	Diego Carcia H	79.99	272	T	T	15 16 02.5	
	baz=151,slow=76,SNR=41						
H08S3	Diego Garcia H	80.00	273	T	T	15 16 03.3	
	baz=151,slow=76,SNR=40						
BOSA	Boshof	81.58	223	LR	LR	14 24 58.9	
	comp=Z,15nm,18.1s,baz=287,slow=36						
CMAR	Chiang Mai Arr	91.47	308	LR	LR	14 28 51.5	
	comp=Z,9.6nm,19.3s,baz=190,slow=35						
NNA	Nana	96.04	129	LR	LR	14 23 46.6	
	comp=Z,42nm,20.7s,baz=80,slow=30						
AKASG	Malin Array Be	149.05	274	PKPbc	PKPbc	13 55 57.6	0.0
	comp=Z,0.2nm,0.2s,baz=111,slow=2.1,SNR=4.1						

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*NEIC **04** 13:39:23.3±0.9, 43°.16N±0°.06×126°.6W±0°.1, h10km±2km, ML3.2/40, Error ellipse: s-maj=13.6km s-min=9.0km*

az=295.0

*IDC **04** 13:39:24.0±2.0, 43.35N×126.27W, h0km, mb3.4/4, mb1 3.8/9, mb1mx3.5/46, mbtmp3.4/9, ML3.5/5, MS3.2/12, Ms1 3.2/12, ms1mx3.1/23, Error ellipse: s-maj=31.8km s-min=13.8km az=57.0*

*ANF **04** 13:39:24.5±1.4, 43.22N×126.36W, h0km, ML3.5/11, Error ellipse: s-maj=14.9km s-min=5.7km az=81.0*

ISC 04 13:39:25.3±1.5, **43.17N**±0.06×**126.5W**±0.1, **h14km, n92,** σ**1s28**/87, **MS3.1**/6, **Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
J01E	Myrtle Point	1.89	89	P	Pn	13 39 55.1	-2.1
	baz=271,SNR=206						
J01E				S	Sn	13 40 20.4	-0.4
	baz=271						
K02D	Willamette Mer	2.15	102	P	Pn	13 39 58.9	-1.9
	baz=283,SNR=191						
K02D				S	Sn	13 40 26.3	-1.0
	baz=283						
I02D	Swisshome	2.15	63	P	Pn	13 39 59.2	-1.6
	baz=245,SNR=246						
I02D				S	Sn	13 40 27.4	+0.2
	baz=245						
I03D	Drain, OR	2.37	76	P	Pn	13 40 02.2	-1.5
	baz=258,SNR=426						
I03D				S	Sn	13 40 32.3	-0.2
	baz=258						
KRMB	Red Mountain	2.54	130	Pn	Pn	13 40 03.6	-2.6
KRMB				IAML		13 41 10.7	
	comp=N,46nm,2.1s						
HUMO	Hull Mountain	2.67	101		Pn	13 40 06.5	-1.5
COR	Corvallis	2.72	58		Pn	13 40 07.8	-0.8
COR				IAML		13 40 49.4	
	comp=N,105nm,2.2s						
COR				IAML		13 40 58.4	
	comp=N,96nm,2.8s						
H04D	Lebanon	3.05	62	P	Pn	13 40 12.7	-0.5
	baz=245,SNR=98						
I04A	Tendick Farm,	3.05	77	P	Pn	13 40 12.7	-0.5
	baz=259,SNR=34						
KHMM	Horse Mountain	3.09	137	Pn	Pn	13 40 12.9	-1.0
KHMM				IAML		13 41 18.2	
	comp=E,52nm,4.7s						
KHMM				IAML		13 41 37.1	
	comp=N,58nm,4.5s						
G03D	McMinnville, O	3.10	48	P	Pn	13 40 13.1	-0.8
	baz=230,SNR=59						
G03D				S	Sn	13 40 51.2	+0.5
	baz=230						
YBH	Yreka Blue Hor	3.16	116	Pn	Pn	13 40 14.5	-0.3
	comp=N,1.4nm,0.3s,baz=310,slow=12,SNR=32						
YBH				Sn	Sn	13 40 51.7	-0.6
	comp=N,0.5nm,0.3s,baz=253,slow=19,SNR=2.4						
YBH	Yreka Blue Hor	3.16	116		Pn	13 40 14.2	-0.6
YBH	Yreka Blue Hor	3.16	116	IAML		13 40 56.4	
	comp=E,23nm,4.2s						
YBH	Yreka Blue Hor	3.16	116	IAML		13 40 55.8	
	comp=N,14nm,4.3s						
YBH				IAML		13 40 56.5	
	comp=E,22nm,4.1s						
J04D	Umpqua Nationa	3.22	87	P	Pn	13 40 16.0	+0.4
	baz=270,SNR=28						
L04D	Klamath Falls	3.25	106	P	Pn	13 40 15.7	-0.3
	baz=288,SNR=20						
L04D				S	Sn	13 40 55.4	+0.9
	baz=288						
H04A	Detroit Lake	3.47	63		Pn	13 40 18.6	-0.4
H04A				IAML		13 40 43.3	
	comp=N,55nm,0.4s						
H04A				IAML		13 40 46.4	
	comp=E,44nm,0.4s						
F03A	Seaside	3.48	36	Pn	Pn	13 40 18.0	-1.0
K04D	Chiloquin, OR	3.54	97	P	Pn	13 40 19.6	-0.4
	baz=280						
KMRM	Mail Ridge	3.62	144	Pn	Pn	13 40 21.4	+0.4
KMRM				IAML		13 41 42.8	
	comp=E,49nm,4.9s						
KMRM				IAML		13 42 15.8	
	comp=N,60nm,4.8s						
F04D	Rainier, OR	3.84	39	P	Pn	13 40 23.5	-0.5
	baz=222						
F04D				S	Sn	13 41 09.2	+0.3
	baz=222						
J05D	Fort Rock, OR	3.86	87	P	Pn	13 40 23.9	-0.6
	baz=270,SNR=11						
I05D	Terrebonne, OR	3.93	71	P	Pn	13 40 25.0	-0.2
	baz=254,SNR=20						
WDC	Whiskeytown Da	3.94	130	Pn	Pn	13 40 27.3	+2.0
WDC				IAML		13 42 39.4	
	comp=N,17nm,4.5s						
E03A	Lebam	3.98	31	Pn	Pn	13 40 24.5	-1.3
F04A	Amboy	4.03	45		Pn	13 40 26.4	-0.1
PINE	Pine Mountain	4.11	79		Pn	13 40 27.3	-0.5
PINE				IAML		13 41 10.0	
	comp=E,32nm,4.1s						
PINE				IAML		13 41 14.6	
	comp=N,26nm,4.1s						
K05A	Summer Lake	4.15	94	Pn	Pn	13 40 28.1	-0.3
K05A				IAML		13 41 49.4	
	comp=E,37nm,4.4s						
K05A				IAML		13 42 59.1	
	comp=N,38nm,4.9s						
G05D	Wamic, OR	4.27	59	P	Pn	13 40 29.7	-0.3
	baz=243,SNR=46						
E04D	Cinebar	4.40	38	P	Pn	13 40 31.0	-0.6
	baz=221,SNR=39						
E04D				S	Sn	13 41 23.6	+1.0
	baz=221						
F05D	White Salmon	4.52	51	P	Pn	13 40 33.4	+0.1
	baz=235,SNR=28						
F05D				S	Sn	13 41 27.6	+1.9
	baz=235						
NLWA	Neilton Lookou	4.62	23	Pn	Pn	13 40 33.9	-0.8
G06A	Carlson Farm,	4.71	62		Pn	13 40 35.5	-0.4
G06A				IAML		13 41 17.7	
	comp=E,23nm,4.7s						
LON	Longmire	4.89	41		Pn	13 40 38.7	+0.2
LON				IAML		13 41 38.3	
	comp=E,17nm,2.3s						
D03D	Eldon	4.99	28	S	Sn	13 41 36.2	-1.0
	baz=210						
D05A	Enumclaw	5.14	37		Pn	13 40 42.1	+0.3
I07A	Izee	5.17	77		Pn	13 40 42.2	-0.2
I07A				IAML		13 43 17.6	
	comp=N,15nm,4.9s						
I07A				IAML		13 43 58.1	
	comp=E,13nm,4.5s						
ORV	Oroville	5.22	132		Pn	13 40 45.7	+2.7
ORV				IAML		13 42 04.9	
	comp=N,5.8nm,4.6s						
ORV				IAML		13 42 06.6	
	comp=E,8.5nm,4.4s						
F07A	Phinny Hill Vi	5.44	58		Pn	13 40 45.7	-0.2
BEKR	Beckworth	5.68	123		Pn	13 40 51.6	+2.2
LTY	Liberty	5.81	43		Pn	13 40 51.4	+0.4
E07A	Sunnyside	5.82	52		Pn	13 40 51.4	+0.2
G08A	Pilot Rock	5.83	66		Pn	13 40 51.3	-0.1
WVOR	Wild Horse Val	5.84	95		Pn	13 40 50.6	-1.0
PGC	Sidney	5.88	20	Pn	Pn	13 40 51.0	-1.0
HAWA	Hanford	5.92	55		Pn	13 40 50.4	-2.2
B05A	Bryant	5.96	30	S	Sn	13 42 01.3	+0.2
	baz=213						
E08A	Dider Farm, El	6.25	55		Pn	13 40 56.8	-0.4
D08A	Wollman Farm,	6.63	52	Pn	Pn	13 41 02.5	+0.2
E09A	Wood Farm, Sta	6.82	58		Pn	13 41 02.5	-2.5
BMO	Blue Mountains	6.85	73		Pn	13 41 04.9	-0.5
F10A	Beach Ranch, E	7.20	64		Pn	13 41 09.2	-1.1
B08A	Colville Reser	7.22	42	Pn	Pn	13 41 09.7	-0.7
C09A	Chrisman Ranch	7.41	49		Pn	13 41 12.2	-0.8
NVAR	Mina Array Bea	7.82	124	Pn	Pn	13 41 19.8	+0.9
	comp=E,0.4nm,0.3s,baz=285,slow=22,SNR=3.8						
NVAR				LR	LR	13 44 18.0	
	comp=E,102nm,20.7s,baz=237,slow=37						
LLLB	Lillooet	8.09	21	Pn	Pn	13 41 23.2	+0.9
NEW	Newport	8.31	49	Pn	Pn	13 41 23.2	-2.2
	comp=E,0.2nm,0.3s,baz=221,slow=20,SNR=2.2						
NEW				LR	LR	13 44 43.2	
	comp=E,250nm,20.0s,baz=240,slow=40						
NEW	Newport	8.31	49	Pn	Pn	13 41 23.0	-2.4
ELK	Elko	8.74	102	LR	LR	13 44 47.4	
	comp=E,111nm,19.9s,baz=280,slow=38						
BBB	Bella Bella	9.08	354	LR	LR	13 44 26.1	
	comp=E,124nm,21.4s,baz=133,slow=34						
MSO	Missoula	9.63	63	Pn	Pn	13 41 42.8	-0.8
JTMT	Jette	9.73	58	Pn	Pn	13 41 45.1	+0.1
MCMT	McKenzie Canyo	9.99	76	Pn	Pn	13 41 49.3	+0.7
TPNV	Topopah Spring	10.02	125	Pn	Pn	13 41 49.8	+0.8
LRM	Limekiln Ridge	10.39	70	Pn	Pn	13 41 54.4	+0.3
WALA	Waterton Lakes	10.54	52	Pn	Pn	13 41 56.8	+0.8
YHL	Hebgen Lake	11.17	76	Pn	Pn	13 42 07.0	+2.2
FXWY	Fox Creek	11.28	82	Pn	Pn	13 42 09.0	+2.7
IMW	Indian Meadow	11.34	81	Pn	Pn	13 42 10.4	+3.3
TPAW	Teton Pass	11.35	83	Pn	Pn	13 42 09.9	+2.7
YHH	Holmes Hill	11.41	76	Pn	Pn	13 42 09.5	+1.5
REDW	Red Top Meadow	11.43	84	Pn	Pn	13 42 10.5	+2.2
SNOW	Snow King Moun	11.49	83	Pn	Pn	13 42 11.6	+2.4
PFO	Pinyon Flats O	12.37	137	LR	LR	13 47 13.1	
	comp=E,134nm,18.8s,baz=316,slow=38						
PDAR	Pinedale Array	12.43	86	Pn	Pn	13 42 24.1	+2.1
	comp=E,0.1nm,0.3s,baz=283,slow=13,SNR=13						
ANMO	Albuquerque	17.58	111	P	P	13 43 31.3	+0.2
	comp=E,0.2nm,0.3s,baz=302,slow=14,SNR=6.0						
ANMO				LR	LR	13 50 46.2	
	comp=E,82nm,20.4s,baz=304,slow=39						
YKA	Yellowknife Ar	20.58	16	P	P	13 44 02.9	-0.6
	comp=E,1.1nm,0.8s,baz=203,slow=11,SNR=9.6						
KDAK	Kodiak Island	21.92	321	LR	LR	13 50 22.2	
	comp=E,69nm,21.8s,baz=132,slow=30						
ULM	Lac du Bonnet	22.06	61	P	P	13 44 19.1	-0.5
	comp=E,4.8nm,0.9s,baz=267,slow=10,SNR=10						
ULM				LR	LR	13 53 33.4	
	comp=E,105nm,20.5s,baz=291,slow=39						
ULM	Lac du Bonnet	22.06	61	P	P	13 44 19.0	-0.5
TXAR	Lajitas Array	22.93	120	P	P	13 44 30.8	+1.7
	comp=E,0.6nm,0.9s,baz=292,slow=6.6,SNR=6.3						
LPIG	La Paz	23.24	140	LR	LR	13 54 15.3	
	comp=E,65nm,19.1s,baz=344,slow=38						
ILAR	Eielson Array	24.51	339	P	P	13 44 43.0	-0.9
	comp=E,1.1nm,0.9s,baz=154,slow=8.6,SNR=10						
ILAR				LR	LR	13 52 28.8	
	comp=E,51nm,19.7s,baz=156,slow=32						
INK	Inuvik	25.47	354	LR	LR	13 54 21.8	
	comp=E,59nm,19.6s,baz=84,slow=36						
H11N3	WAKE ISLAND Hy	59.82	269	T	T	14 53 56.9	
	baz=51,slow=74						
H11N2	WAKE ISLAND Hy	59.83	269	T	T	14 53 57.0	
	baz=51,slow=74						
H11N1	WAKE ISLAND Hy	59.84	269	T	T	14 53 58.1	
	baz=51						
H11S1	WAKE ISLAND Hy	60.74	268	T	T	14 55 08.1	
	baz=48,slow=74						
H11S2	WAKE ISLAND Hy	60.75	268	T	T	14 55 09.4	
	baz=48						
H11S3	WAKE ISLAND Hy	60.76	268	T	T	14 55 09.5	
	baz=48,slow=74						
NOA	NORSAR Array B	70.61	20	LR	LR	14 19 51.2	
	comp=E,8.9nm,19.9s,baz=240,slow=34						

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*NEIC **04** 14:07:45.1±1.2, 24.5S±0.1×175.6W±0.1, h10km±1km, mb4.7/17, Error ellipse: s-maj=20.8km s-min=19.4km az=126.0*

*IDC **04** 14:07:45.4±1.3, 24.08S×175.74W, h0km, mb4.0/8, mb1 4.2/10, mb1mx4.0/39, mbtmp4.0/10, ML3.3/2, MS3.4/5, Ms1 3.4/5, ms1mx3.0/33, Error ellipse: s-maj=54.2km s-min=21.8km az=149.0*

ISC 04 14:07:46.7±0.6, **24.50S**±0.09×**175.47W**±0.09, **h19km, n36,** σ**1s45**/32, **MS3.6**/4, **South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.22	204	Pn	Pn	14 09 03.9	+0.1
NIUE	Niue	7.45	45		Pn	14 09 28.0	-6.6
MSVF	Nonsavu	9.05	317		Pn	14 09 55.6	-0.9
AFI	Afiamalu	11.09	19		Pn	14 10 15.9	-8.6
RAR	Rarotonga	14.83	80	Pn	Pn	14 11 13.0	-2.5
	1.0nm,0.3s,baz=273,slow=3.1,SNR=3.8						
RAR				LR	LR	14 15 02.0	
	comp=Z,58nm,21.5s,baz=264,slow=29						
URZ	Urewera	15.11	203	Pn	P	14 11 22.8	-1.4
	0.2nm,0.3s,baz=102,slow=8.3,SNR=1.3						
URZ				Sn	Sn	14 14 05.4	-0.5
	0.2nm,0.3s,baz=23,slow=11,SNR=1.2						
URZ	Urewera	15.11	203	IAmb	IAmb	14 12 05.3	
	comp=Z,15nm,1.0s						
DZM	Mont Dzumac	16.80	275	Pn	Pn	14 11 40.0	-1.1
	comp=Z,0.1nm,0.3s,baz=165,slow=19,SNR=2.5						
DZM	Mont Dzumac	16.80	275	IAmb	IAmb	14 11 42.8	
	comp=Z,123nm,2.0s						
PPT	Papeete	25.10	79	LR	LR	14 21 20.4	
	comp=Z,76nm,20.0s,baz=304,slow=32						
CTAO	Charters Tower	35.61	269	P	P	14 14 42.8	-0.7
CTAO				IAmb	IAmb	14 14 44.0	
	comp=Z,7.1nm,0.9s						
STKA	Stephens Creek	38.36	249	P	P	14 15 08.8	+2.0
	comp=Z,0.9nm,0.5s,baz=104,slow=14,SNR=3.8						
STKA				LR	LR	14 29 06.7	
	comp=Z,97nm,21.4s,baz=25,slow=34						
COEN	Coen	40.30	277	P	P	14 15 22.6	-0.5
COEN				IAmb	IAmb	14 16 29.6	
	comp=Z,36nm,1.8s						
AS31	Alice Springs	46.02	260	P	P	14 16 08.4	-0.9
ASAR	Alice Springs	46.02	260	P	P	14 16 09.0	-0.4
	comp=Z,1.2nm,0.8s,baz=95,slow=7.1,SNR=19						
ASAR				PcP	PcP	14 17 47.8	+2.0
	comp=Z,0.3nm,0.5s,baz=104,slow=4.4,SNR=1.7						
ASAR				LR	LR	14 34 20.2	
	comp=Z,68nm,18.9s,baz=102,slow=35						
WR0	Warramunga Arr	46.30	265	P	P	14 16 10.1	-1.5
WR0				IAmb	IAmb	14 17 43.0	
	comp=Z,27nm,1.9s						
WB2	Warramunga Arr	46.48	265	P	P	14 16 12.0	-1.0
WB2				IAmb	IAmb	14 16 13.3	
	comp=Z,8.7nm,1.1s						
WRAB	Tennant Creek	46.48	265	P	P	14 16 11.7	-1.3
WB0	Warramunga Arr	46.49	265	P	P	14 16 12.0	-1.0
WRA	Warramunga Arr	46.49	265	P	P	14 16 11.7	-1.4
	comp=Z,0.8nm,0.3s,baz=90,slow=6.0,SNR=42						
KNRA	Kununurra	52.82	268	P	P	14 17 00.5	-0.8
FITZ	Fitzroy Crossi	54.90	264	P	P	14 17 15.7	-0.8
MORW	Morawa	60.55	249	P	P	14 17 56.9	+0.7
QSPA	South Pole Qui	65.59	180	LR	LR	14 40 55.3	
	comp=Z,36nm,21.9s,baz=28,slow=30						
PETK	Petropavlovsk-	80.73	344	P	P	14 19 57.6	-0.8
	comp=Z,1.7nm,0.8s,baz=216,slow=7.3,SNR=6.2						
NVAR	Mina Array Bea	82.37	42	P	P	14 20 08.8	+1.1
	comp=Z,0.4nm,0.7s,baz=225,slow=6.2,SNR=2.9						
TXAR	Lajitas Array	87.28	56	P	P	14 20 34.4	+1.8
	comp=Z,0.4nm,0.9s,baz=202,slow=6.3,SNR=3.9						
BARN	Barnard Glacie	89.55	16	P	P	14 20 42.3	-0.3
TRF	Thorofare Moun	89.88	11	P	P	14 20 43.6	-0.5
ILAR	Eielson Array	91.70	12	P	P	14 20 52.3	0.0
	comp=Z,0.3nm,0.6s,baz=211,slow=6.2,SNR=5.0						
FYU	Fort Yukon	93.62	12	P	P	14 21 02.2	+1.1
CMAR	Chiang Mai Arr	93.63	289	P	P	14 21 03.7	+1.3
	comp=Z,2.9nm,0.9s,baz=133,slow=3.0,SNR=21						
CHTO	Chiang Mai	93.78	289	P	P	14 21 01.5	-1.5
CHTO				IAmb	IAmb	14 21 05.6	
	comp=Z,3.2nm,0.9s						
AKASG	Malin Array Be	147.63	330	PKPbc	PKPbc	14 27 28.7	-0.9
	comp=Z,1.7nm,0.5s,baz=41,slow=3.5,SNR=9.1						
BRTR	Keskin Array B	151.21	309	PKPbc	PKiKP	14 27 39.3	-0.5
	comp=Z,1.4nm,1.0s,baz=104,slow=5.2,SNR=4.5						
CLL	Collm	152.45	348	ePKPbc	PKiKP	14 27 46.0	+4.3

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*VAO **04** 14:22:58.7±0.8, 21.83S×68.93W, h150km±9km, mb4.4*

*IDC **04** 14:22:59.8±0.7, 21.91S×68.13W, h111km±11km, mb3.7/4, mb1 3.8/6, mb1mx3.4/30, mbtmp4.1/6, Error ellipse: s-maj=35.0km s-min=17.1km az=134.0*

*NEIC **04** 14:22:59.5±1.8, 21.84S±0.06×68.54W±0.09, h131km±6km, Error ellipse: s-maj=12.4km s-min=8.7km az=89.0*

*GUC **04** 14:23:01.2±0.7, 21.81S×68.58W, h126km±4km, ML4.1*

ISC 04 14:22:59.5±0.7, **21.77S**±0.03×**68.55W**±0.06, **h135km**±6km, **n69,** σ**1s60**/92, **mb4.0**/5, **12C-7D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.65	268	⇑ iP	Pn	14 23 20.5	+0.3
PB09				iS	Sn	14 23 35.1	-0.7
PB09	IPOC Station P	0.65	268		Pn	14 23 20.3	+0.1
LVC	Limon Verde	0.90	202	P	Pn	14 23 22.4	0.0
	195nm,0.3s,baz=39,slow=7.7,SNR=934						
LVC				S	Sn	14 23 38.0	-1.8
	388nm,0.3s,baz=175,slow=18,SNR=25						
LVC	Limon Verde	0.90	202	⇓ iP	Pn	14 23 22.3	0.0
LVC				iS	Sn	14 23 38.1	-1.6
LVC	Limon Verde	0.90	202		Pn	14 23 22.2	-0.1
LVC	Limon Verde	0.90	202	eP	Pn	14 23 22.3	-0.1
PB01	IPOC Station P	1.14	310	⇑ iP	Pn	14 23 24.4	+0.1
PB01				iS	Sn	14 23 42.6	-0.5
PB01				IAML		14 23 44.3	
	comp=E,3µm,0.2s						
PB01	IPOC Station P	1.14	310		Pn	14 23 24.4	+0.1
PB03	IPOC Station P	1.15	256	⇑ iP	Pn	14 23 24.6	+0.1
PB03				iS	Sn	14 23 42.3	-1.1
PB03				IAML		14 23 43.5	
	comp=N,2µm,0.3s						
PB07	IPOC Station P	1.25	272	⇑ iP	Pn	14 23 25.5	+0.1
PB07				iS	Sn	14 23 44.2	-0.9
PB07				IAML		14 23 45.5	
	comp=E,3µm,0.1s						
PB07	IPOC Station P	1.25	272		Pn	14 23 25.3	-0.1
PB06	IPOC Station P	1.33	225	⇑ iP	Pn	14 23 26.6	+0.3
PB06				iS	Sn	14 23 45.6	-1.0
PB06				IAML		14 23 47.1	
	comp=E,4µm,0.4s						
PB06	IPOC Station P	1.33	225		Pn	14 23 26.3	0.0
PB02	IPOC Station P	1.33	290	⇑ iP	Pn	14 23 26.4	+0.1
PB02				iS	Sn	14 23 45.6	-1.0
PB02				IAML		14 23 46.7	
	comp=E,5µm,0.3s						
PB04	IPOC Station P	1.59	249	⇑ iP	Pn	14 23 29.1	0.0
PB04				iS	Sn	14 23 50.2	-1.4
PB04				IAML		14 23 53.0	
	comp=E,1µm,0.2s						
PB04	IPOC Station P	1.59	249		Pn	14 23 29.1	0.0
PB15	IPOC Station P	1.66	211	⇑ iP	Pn	14 23 30.4	+0.4
PB15				iS	Sn	14 23 53.3	-0.1
PB15	IPOC Station P	1.66	211		Pn	14 23 30.4	+0.4
PB08	IPOC Station P	1.72	341	⇓ eP	Pn	14 23 32.2	+1.3
PB08				eS	Sn	14 23 55.8	+1.1
PB08				IAML		14 23 57.1	
	comp=E,725nm,0.4s						
PB08	IPOC Station P	1.72	341		Pn	14 23 32.1	+1.2
PATCX	Punta Patache	1.77	302	⇑ eP	Pn	14 23 31.4	+0.2
PATCX				eS	Sn	14 23 54.8	-0.5
PATCX				IAML		14 23 56.4	
	comp=N,2µm,0.3s						
PATCX	Punta Patache	1.77	302		Pn	14 23 31.2	0.0
PB05	IPOC Station P	1.87	235	⇑ eP	Pn	14 23 32.4	+0.1
PB05				eS	Sn	14 23 56.4	-1.0
TA01	Diego Aracena	1.94	308	⇓ iP	Pn	14 23 32.9	-0.1
TA01				iS	Sn	14 23 57.9	-0.8
TA01				IAML		14 23 59.8	
	comp=N,1µm,0.3s						
TA02	Huaiquique	2.10	315	⇑ eP	Pn	14 23 34.8	-0.3
TA02				eS	Sn	14 24 01.3	-0.9
TA02				IAML		14 24 07.1	
	comp=N,2µm,0.1s						
GO01	Chusmiza	2.18	344	⇓ eP	Pn	14 23 37.4	+0.9
GO01				eS	Sn	14 24 06.1	+1.3
GO01				IAML		14 24 08.8	
	comp=E,2µm,0.1s						
GO01	Chusmiza	2.18	344		Pn	14 23 37.2	+0.7
PB11	IPOC Station P	2.26	332	⇓ eP	Pn	14 23 37.3	+0.2
PB11				eS	Sn	14 24 05.6	-0.3
PB11	IPOC Station P	2.26	332		Pn	14 23 37.0	0.0
PB10	IPOC Station P	2.54	227	eP	Pn	14 23 39.9	-0.5
PB10				eS	Sn	14 24 09.6	-2.2
PB10	IPOC Station P	2.54	227		Pn	14 23 39.7	-0.7
PSGC	Pisagua	2.62	325	⇑ eP	Pn	14 23 40.8	-0.8
PSGC				eS	Sn	14 24 12.5	-1.4
PSGC				IAML		14 24 14.1	
	comp=N,336nm,0.3s						
PSGCX	Pisagua	2.62	325		Pn	14 23 40.5	-1.1
MNMC	Minye Minye	2.81	339	eP	Pn	14 23 44.8	+0.6
MNMC				eS	Sn	14 24 19.3	+0.8
MNMC				IAML		14 24 22.1	
	comp=E,1µm,0.5s						
MNMC	Minye Minye	2.81	339		Pn	14 23 44.5	+0.3
PB14	IPOC Station P	3.31	211		Pn	14 23 49.6	-1.1
GO02	Mina Guanaco	3.51	196	⇓ eP	Pn	14 23 53.2	0.0
GO02				eS	Sn	14 24 33.5	-1.2
GO02	Mina Guanaco	3.51	196		Pn	14 23 52.8	-0.4
PB16	IPOC Station P	3.54	345		Pn	14 23 54.6	+0.7
PB12	IPOC Station P	3.56	332	⇓ eP	Pn	14 23 52.6	-1.2
PB12				eS	Sn	14 24 33.2	-2.5
PB12	IPOC Station P	3.56	332		Pn	14 23 52.6	-1.2
LPAZ	La Paz	5.47	4	P	Pn	14 24 22.9	+3.2
	comp=E,2.2nm,0.3s,baz=162,slow=2.0,SNR=61						
LPAZ				S	Sn	14 25 17.3	-4.7
	comp=E,0.4nm,0.3s,baz=131,slow=8.6,SNR=4.6						
LPAZ	La Paz	5.47	4		Pn	14 24 22.4	+2.7
GO03	Copiap	5.99	194		Pn	14 24 23.7	-2.4
GO04	Tololo Observa	8.61	193	Pn	Pn	14 24 57.6	-3.7
SIV	San Ignacio	9.12	52	P	Pn	14 25 05.9	-2.1
	comp=E,5.2nm,0.3s,baz=249,slow=11,SNR=84						
SIV				S	Sn	14 26 41.1	-8.0
	comp=E,0.3nm,0.3s,baz=162,slow=20,SNR=1.5						
SALV	Santo Antonio	13.49	67	eP	P	14 26 08.8	-1.4
TRCB	Terra Rica	14.77	97	eP	P	14 26 24.9	+0.6
ITAB	Concordia	15.90	113	eP	P	14 26 38.6	+1.9
PCMB	Pacaembu	16.07	93	eP	P	14 26 40.4	+1.7
CLDB	Colider	16.34	50	eP	P	14 26 42.8	+1.0
FRTB	Fartura	17.61	99	eP	Pn	14 26 57.0	+0.4
IPMB	Ipameri, GO	19.49	82	eP	P	14 27 17.1	+0.8
VAO	Valinhos	20.00	98	eP	P	14 27 22.6	+0.9
MACA	Manacapuru-AM	20.02	24	eP	P	14 27 22.3	+0.4
BDFB	Brasilia	20.37	76	P	P	14 27 24.3	-1.6
	comp=E,2.7nm,0.5s,baz=254,slow=6.4,SNR=4.4						
BDFB	Brasilia	20.37	76	P	P	14 27 25.7	-0.1
PTGA	Pitinga	22.53	23	P	P	14 27 48.7	+0.3
PTGA				IAmb	IAmb	14 27 49.9	
	comp=Z,9.0nm,1.3s						
SMTB	Santa Maria do	23.91	61	eP	P	14 28 02.6	+1.4
JANB	Januaria	23.93	78	eP	P	14 28 01.9	+0.5
BOAV	Boa Vista	25.27	19	eP	P	14 28 12.6	-0.9
WMOK	Wichita Mounta	63.12	332	P	P	14 33 10.5	-2.4
WMOK				IAmb	IAmb	14 33 11.5	
	comp=Z,2.3nm,0.8s						
DBIC	Dimbokro	68.49	73	P	P	14 33 49.0	+1.3
	comp=Z,2.3nm,0.9s,baz=223,slow=7.7,SNR=5.5						
DBIC	Dimbokro	68.49	73	IAmb	IAmb	14 34 57.0	
	comp=Z,11nm,1.3s						
TOA0	Torodi Ar. Sit	77.13	70	P	P	14 34 39.3	+0.6
TORD	Torodi Ar. Bea	77.13	70	P	P	14 34 40.0	+1.2
	comp=Z,1.0nm,0.4s,baz=258,slow=5.5,SNR=10						
YKA	Yellowknife Ar	91.56	340	P	P	14 35 53.2	+2.7
	comp=Z,0.3nm,0.7s,baz=135,slow=5.3,SNR=4.7						
KSH	Kashi	145.01	52	PKPbc	PKPbc	14 42 16.9	-3.9
KSH				pPKP	pPKPdf	14 42 58.7	+0.2
MKAR	Makanchi Array	145.66	36	PKPbc	PKPab	14 42 24.7	+1.7
	comp=Z,0.3nm,0.6s,baz=327,slow=5.9,SNR=5.0						

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*IDC **04** 14:29:23.5±1.4, 31.31N×86.74E, h0km, mb3.3/5, mb1 3.5/7, mb1mx3.3/40, mbtmp3.3/7, ML3.3/1, Error ellipse: s-maj=48.3km s-min=22.4km az=61.0*

ISC 04 14:29:24.8±1.2, **31.3N**±0.1×**86.8E**±0.2, **h10km, n9,** σ**1s10**/9, **mb3.5**/4, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	4.08	112	P	Pb	14 30 36.6	-0.5
LSA				S	Sg	14 31 53.4	+17
LSA				LR	LR		
	comp=E,1µm,7.8s						
LSA				LR	LR		
	comp=Z,2µm,8.2s						
WMQ	Urumqi	12.50	3	eP	Pn	14 32 23.1	+0.3
MKAR	Makanchi Array	15.84	349	Pn	Pn	14 33 07.2	-0.7
	comp=Z,0.1nm,0.3s,baz=165,slow=11,SNR=6.1						
CMAR	Chiang Mai Arr	16.87	137	Pn	P	14 33 22.9	-0.3
	baz=309,slow=11,SNR=1.6						
KURBB	Kurchatov Arra	20.25	345	P	P	14 33 58.2	-1.9
	comp=Z,1.3nm,0.8s,baz=162,slow=11,SNR=7.2						
SONM	Songino Array	22.26	37	P	P	14 34 23.3	+1.3
	comp=Z,1.2nm,0.8s,baz=224,slow=10,SNR=3.7						
GERES	GERESS Array B	56.45	311	P	P	14 39 07.7	+0.9
	comp=Z,0.4nm,0.6s,baz=68,slow=8.7,SNR=3.5						
WRA	Warramunga Arr	68.39	132	P	P	14 40 27.2	+0.3
	comp=Z,0.2nm,0.5s,baz=327,slow=6.5,SNR=1.7						
ASAR	Alice Springs	70.87	135	P	P	14 40 42.4	+0.2
	comp=Z,0.2nm,0.7s,baz=325,slow=6.2,SNR=6.3						

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*NEIC **04** 14:38:35.8±1.8, 21.5S±0.1×170.2E±0.1, h120km±4km, mb4.5/23, Error ellipse: s-maj=16.6km s-min=14.2km az=189.0*

IDC 04 14:38:37.1±3.6, 21°.47S×170°.12E, h123km±27km, mb3.5/8, mb1 3.7/11, mb1mx3.4/39, mbtmp4.0/11, Error ellipse: s-maj=30.2km s-min=25.4km az=92.0

ISC 04 14:38:33.5±0.6, 21°.39S±0°.09×170°.29E±0°.09, h100km, n43, σ0s.95/42, mb4.4/16, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.64	259	P	Pn	14 39 30.2	+2.2
	8.8nm,0.3s,baz=107,slow=9.8,SNR=388						
DZM				S	Sn	14 40 10.5	+0.4
	16nm,0.3s,baz=135,slow=24,SNR=6.9						
RAO	Raoul Island	13.22	129	P	P	14 41 45.1	+1.6
OUZ	Omahuta	14.08	169	P	P	14 41 53.5	+0.5
HNR	Honiara	15.51	318	P	P	14 42 09.4	+0.4
	2.6nm,0.3s,baz=215,slow=16,SNR=4.3						
HNR	Honiara	15.51	318	IAmb	IAmb	14 42 14.5	
	comp=Z,23nm,0.8s						
URZ	Urewera	17.81	162	P	Pn	14 42 35.9	+1.0
	comp=Z,0.8nm,0.3s,baz=52,slow=2.4,SNR=7.5						
BKZ	Black Stump Fm	18.50	165	P	Pn	14 42 42.9	-0.3
BKZ				IAmb	IAmb	14 43 01.8	
	comp=Z,37nm,1.6s						
BFZ	Birch Farm	19.89	167	P	P	14 42 56.2	-0.7
BHW	Baring Head	20.33	170	P	P	14 43 01.5	-0.2
MSWZ	Moikau Station	20.40	169	P	P	14 43 01.8	-0.6
CMWZ	Cape Campbell	20.57	172	P	P	14 43 04.3	+0.1
CAN	Canberra	23.25	229	P	P	14 43 33.2	+0.9
RABL	Rabaul	24.54	312	P	P	14 43 43.5	-0.6
KRVT	Keravat (AS076	24.55	311	P	P	14 43 45.4	+1.2
	comp=Z,6.9nm,0.3s,baz=165,slow=3.0,SNR=4.7						
PMG	Port Moresby	25.24	295	P	P	14 43 51.5	+1.0
PMG				IAmb	IAmb	14 44 27.7	
	comp=Z,12nm,1.1s						
STKA	Stephens Creek	27.62	242	P	P	14 44 11.7	-0.1
	comp=Z,1.2nm,0.4s,baz=344,slow=17,SNR=4.6						
STKA	Stephens Creek	27.62	242	IAmb	IAmb	14 44 13.1	
	comp=Z,10.0nm,1.9s						
BBOO	Buckleboo	32.39	242	P	P	14 44 52.8	-1.1
WR0	Warramunga Arr	33.44	266	P	P	14 45 02.5	-0.6
WR0				IAmb	IAmb	14 46 09.4	
	comp=Z,16nm,1.6s						
WB0	Warramunga Arr	33.60	266	P	P	14 45 03.0	-1.5
WB0				IAmb	IAmb	14 46 13.2	
	comp=Z,18nm,1.4s						
WB2	Warramunga Arr	33.61	266	P	P	14 45 03.6	-1.1
WB2				IAmb	IAmb	14 45 40.4	
	comp=Z,16nm,1.6s						
WRA	Warramunga Arr	33.63	266	P	P	14 45 04.2	-0.5
	comp=Z,0.4nm,0.7s,baz=94,slow=7.8,SNR=8.7						
AS31	Alice Springs	33.63	259	P	P	14 45 03.4	-1.4
ASAR	Alice Springs	33.63	259	P	P	14 45 04.8	-0.1
	comp=Z,0.3nm,0.7s,baz=85,slow=8.6,SNR=11						
MTN	Manton Dam	38.29	276	P	P	14 45 44.9	+0.3
FORT	Forrest	38.88	247	P	P	14 45 49.2	-0.2
FAKI	Fak Fak	41.29	291	P	P	14 46 08.4	-1.0
FITZ	Fitzroy Crossi	42.05	266	P	P	14 46 14.5	-1.1
FITZ				IAmb	IAmb	14 47 51.5	
	comp=Z,29nm,2.0s						
VNDA	Vanda	56.33	182	P	P	14 48 03.4	-0.1
VNDA				IAmb	IAmb	14 48 57.7	
	comp=Z,9.2nm,1.8s						
MJAR	Matsushiro Arr	65.11	332	P	P	14 49 03.9	+0.3
	comp=Z,1.1nm,1.1s,baz=150,slow=11,SNR=1.4						
SSLB	Suanglung	65.74	310	P	P	14 49 07.3	-0.7
JNU	Nakatsue	65.98	324	P	P	14 49 08.1	-1.2
QSPA	South Pole Qui	68.67	180	P	P	14 49 25.2	-0.8
QSPA				IAmb	IAmb	14 50 53.4	
	comp=Z,32nm,1.9s						
IPM	Ipoh	72.49	282	P	P	14 49 48.7	-1.3
IPM				IAmb	IAmb	14 51 53.7	
	comp=Z,9.3nm,1.2s						
PETK	Petropavlovsk-	74.99	352	P	P	14 50 04.6	+0.9
	comp=Z,1.8nm,0.9s,baz=187,slow=8.3,SNR=2.3						
MAW	Mawson	76.82	202	P	P	14 50 14.4	+0.4
CMAR	Chiang Mai Arr	80.28	294	P	P	14 50 34.8	+0.9
	comp=Z,0.7nm,0.8s,baz=151,slow=4.0,SNR=4.7						
VNA3	Neumayer Olymp	87.61	180	P	P	14 51 08.4	-1.9
VNA2	Neumayer--Watz	87.92	181	P	P	14 51 10.4	-1.3
	baz=181,slow=4.1						
SONM	Songino Array	89.52	323	P	P	14 51 20.0	+0.4
	comp=Z,0.3nm,0.5s,baz=134,slow=4.2,SNR=2.8						
BRG	Berggiesshubel	145.22	334	*e*PKP	PKPbc	14 57 59.1	0.0
	comp=Z,3.9nm,0.9s						
CLL	Collm	145.27	335	*e*PKPbc	PKPab	14 58 00.0	+0.5
GERES	GERESS Array B	146.84	331	PKPbc	PKPbc	14 58 04.3	+0.1
	comp=Z,0.9nm,0.6s,baz=27,slow=3.5,SNR=8.3						

IDC 04 14:47:38.4±5.4, 30°.71N×142°.05E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.3/47, mbtmp3.4/5, ML2.5/1, Error ellipse: s-maj=206.2km s-min=23.4km az=70.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	6.64	332	Pn	Pn	14 49 15.9	-1.4
	0.1nm,0.3s,baz=150,slow=11,SNR=17						
SONM	Songino Array	32.12	312	P	P	14 54 08.0	+0.5
	0.4nm,0.5s,baz=107,slow=8.8,SNR=4.6						
MKAR	Makanchi Array	48.15	307	P	P	14 56 20.1	-0.1
	0.3nm,0.7s,baz=98,slow=7.6,SNR=4.0						
WRA	Warramunga Arr	50.90	189	P	P	14 56 41.3	0.0
	0.4nm,0.6s,baz=5.8,slow=7.6,SNR=4.6						
ASAR	Alice Springs	54.62	189	P	P	14 57 08.6	-0.3
	0.2nm,0.5s,baz=10,slow=7.4,SNR=6.9						

NNC 04 14:56:11.8±3.6, 36°.75N×71°.11E, h161km±84km, mb2.7, mpv3.6, Error ellipse: s-maj=34.4km s-min=22.0km az=16.0

ISC 04 14:56:10.8±3.5, 36°.7N±0°.2×71°.1E±0°.1, h150km, n11, σ0s.75/14, 4C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.82	19	P	Pn	14 57 36.4	+1.1
	SNR=101						
UCH	Uchtor	6.15	24	P	Pn	14 57 40.6	+0.7
	SNR=27						
KZA	Kyzart	6.29	29	P	Pn	14 57 41.6	0.0
	SNR=5.4						
EKS2	Erkin-Say	6.34	18	P	Pn	14 57 43.4	+1.3
	SNR=6.9						
KK31	Karatay Array	6.45	356	⇑P	Pn	14 57 43.0	-0.3
	0.4nm,0.2s,baz=168,slow=12,SNR=6.5						
KK31				⇑S	Sn	14 58 55.4	-0.6
	2.4nm,0.5s,baz=175,slow=22,SNR=10						
AAK	Ala-Archa	6.52	23	P	Pn	14 57 45.4	+1.0
	SNR=9.4						
AAK	Ala-Archa	6.52	23	⇓P	Pn	14 57 44.8	+0.3
	2.4nm,0.3s						
AAK				⇑S	Sn	14 58 58.1	+0.3
	2.0nm,0.5s						
ULHL	Ulahol	6.85	34	P	Pn	14 57 48.3	-0.7
	SNR=6.3						
TKM2	Tokmak 2	7.14	28	P	Pn	14 57 52.9	0.0
	SNR=13						
TKM2	Tokmak 2	7.14	28	⇓P	Pn	14 57 52.3	-0.5
	3.7nm,0.5s						
TKM2				⇑S	Sn	14 59 12.3	-0.6
	0.8nm,0.6s						
AB31	Akbulak array	14.98	331	⇓P	Pn	14 59 34.7	-0.1
	0.2nm,0.3s,baz=138,slow=11,SNR=6.9						

NEIC 04 15:00:48.4±1.1, 56°.0S±0°.1×27°.59W±0°.09, h118km±8km, mb4.6/24, Error ellipse: s-maj=18.5km s-min=4.9km az=197.0

IDC 04 15:00:49.3±8.3, 56°.00S×27°.49W, h124km±77km, mb3.8/6, mb1 4.0/7, mb1mx3.7/24, mbtmp4.2/7, Error ellipse: s-maj=36.4km s-min=18.1km az=53.0

ISC 04 15:00:47.8±0.6, 55°.99S±0°.10×27°.6W±0°.1, h112km, n38, σ0s.50/36, mb4.6/16, 1C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.39	285	Pn	Pn	15 02 06.5	+0.7
VNA1	Neumayer--Stat	16.93	158	P	P	15 04 38.1	+0.5
VNA3	Neumayer Olymp	17.12	160	P	P	15 04 39.6	-0.1
VNA2	Neumayer--Watz	17.33	158	P	Pn	15 04 42.2	-0.1
	baz=313,slow=13						
EFI	East Falkland	18.42	271	P	P	15 04 53.6	-0.4
SNAA	Sanae	18.88	156	P	P	15 04 58.9	-0.1
SNAA	Sanae	18.88	156	P	P	15 04 58.9	-0.1
	3.6nm,0.3s,baz=305,slow=10,SNR=170						
SNAA	Sanae	18.88	156	P	P	15 04 58.7	-0.3
SNAA				IAmb	IAmb	15 05 02.3	
	comp=Z,14nm,0.7s						
SYO	Syowa Base	31.77	141	⇑*e*P	P	15 06 55.0	-5.7
QSPA	South Pole Qui	34.26	180	P	P	15 07 22.8	+0.1
QSPA				IAmb	IAmb	15 07 24.2	
	comp=Z,5.1nm,0.6s						
CPUP	Villa Florida	36.61	312	P	P	15 07 42.1	-0.9
MAW	Mawson	40.32	144	P	P	15 08 13.4	-0.2
	comp=Z,1.7nm,0.6s,baz=204,slow=10.0,SNR=2.5						
MAW	Mawson	40.32	144	IAmb	IAmb	15 08 15.5	
	comp=Z,6.1nm,2.0s						
AC05	El Transito	40.61	294	P	P	15 08 16.6	0.0
AC05				IAmb	IAmb	15 08 48.3	
	comp=Z,19nm,1.6s						
GO02	Mina Guanaco	43.27	298	P	P	15 08 38.2	-0.3
GO02				IAmb	IAmb	15 08 45.1	
	comp=Z,27nm,1.7s						
LVC	Limon Verde	45.09	300	P	P	15 08 53.2	+0.2
	comp=Z,2.6nm,0.4s,baz=121,slow=4.0,SNR=5.2						
PB04	IPOC Station P	45.92	299	P	P	15 08 58.8	-0.5
PB04				IAmb	IAmb	15 09 11.1	
	comp=Z,18nm,1.1s						
PB09	IPOC Station P	45.94	301	P	P	15 08 59.9	+0.4
PB09				IAmb	IAmb	15 10 07.6	
	comp=Z,28nm,1.5s						
PB07	IPOC Station P	46.31	300	P	P	15 09 02.3	-0.1
PB07				IAmb	IAmb	15 09 33.7	
	comp=Z,12nm,1.1s						
VNDA	Vanda	46.62	183	P	P	15 09 04.5	+0.6
	comp=Z,2.7nm,0.6s,baz=190,slow=6.3,SNR=35						
VNDA	Vanda	46.62	183	P	P	15 09 04.3	+0.3
PB01	IPOC Station P	46.70	301	P	P	15 09 05.6	+0.3
PATCX	Punta Patache	47.21	300	P	P	15 09 09.6	+0.3
PB08	IPOC Station P	47.31	302	P	P	15 09 10.9	+0.5
PB08				IAmb	IAmb	15 10 57.0	
	comp=Z,5.7nm,0.6s						
GO01	Chusmiza	47.73	302	P	P	15 09 13.5	-0.4
GO01				IAmb	IAmb	15 09 23.8	
	comp=Z,18nm,1.6s						
PB11	IPOC Station P	47.87	302	P	P	15 09 14.4	-0.1
PB11				IAmb	IAmb	15 10 53.0	
	comp=Z,16nm,0.9s						
PSGCX	Pisagua	48.24	301	P	P	15 09 16.2	-1.0
MNMC	Minye Minye	48.39	302	P	P	15 09 19.1	+0.5
MNMC				IAmb	IAmb	15 09 19.7	
	comp=Z,7.6nm,0.5s						
PB16	IPOC Station P	49.03	303	P	P	15 09 24.4	+0.5
PB16				IAmb	IAmb	15 10 35.7	
	comp=Z,18nm,1.8s						
ASCN	Ascension	49.06	17	P	P	15 09 23.9	+0.5
LBTB	Lobatse	49.20	74	P	P	15 09 24.7	+0.1
LPAZ	La Paz	50.17	306	P	P	15 09 33.0	+0.4
	comp=Z,1.1nm,0.3s,baz=164,slow=4.6,SNR=11						
LPAZ	La Paz	50.17	306	P	P	15 09 31.8	-0.7
CASY	Casey	54.04	161	P	P	15 09 59.9	+0.1
TOA0	Torodi Ar. Sit	73.11	30	P	P	15 12 05.4	-0.3
TORD	Torodi Ar. Bea	73.11	30	P	P	15 12 06.2	+0.5
	comp=Z,0.7nm,0.6s,baz=201,slow=6.8,SNR=5.9						
ASAR	Alice Springs	99.11	163	P	Pdif	15 14 15.0	-1.3
	comp=Z,0.3nm,0.6s,baz=181,slow=3.6,SNR=6.1						
SONM	Songino Array	150.94	87	PKPbc	PKPbc	15 20 25.9	-0.5
	comp=Z,1.3nm,0.4s,baz=218,slow=4.6,SNR=7.7						

IDC 04 15:06:20.0±2.0, 7°.17S×128°.52E, h0km, mb3.4/1, mb1 3.3/4, mb1mx3.1/33, mbtmp3.2/4, ML2.9/3, Error ellipse: s-maj=72.1km s-min=31.0km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.83	24	Pn	Pn	15 08 01.4	-0.2
	0.6nm,0.3s,baz=229,slow=19,SNR=1.8						
SIJI				Sn	Sn	15 09 08.2	-12
	0.4nm,0.3s,baz=210,slow=20,SNR=2.3						
WRA	Warramunga Arr	13.89	157	Pn	Pn	15 09 38.0	-0.4
	0.1nm,0.3s,baz=333,slow=14,SNR=7.6						
WRA				Sn	Sn	15 11 57.7	-16
	0.1nm,0.3s,baz=348,slow=27,SNR=6.4						
ASAR	Alice Springs	17.19	163	P	Pn	15 10 22.1	+0.3
	0.0nm,0.3s,baz=341,slow=9.4,SNR=2.0						
MKAR	Makanchi Array	67.58	328	P	P	15 17 18.5	+0.1
	0.2nm,0.6s,baz=138,slow=7.3,SNR=2.8						

MEX 04 15:13:26.1±0.6, 31°.13N×115°.97W, h15km, MD3.8

ECX 04 15:13:26.2±0.5, 31°.24N×115°.92W, h9km±5km, MD2.6, ML2.8

ISC 04 15:13:24.4±1.0, 31°.25N±0°.03×115°.92W±0°.03, h14km±9km, n18, σ0s.40/35, 5C-4D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTX	Valle De La Tr	0.18	39	⇓*e*P	Pb	15 13 30.0	+0.4
VTX				*e*S	Sb	15 13 33.1	+0.1
SVX	San Vicente	0.29	285	⇑*e*P	Pb	15 13 31.7	+0.2
SVX				*e*S	Sb	15 13 35.8	-0.4
SPIG	San Pedro Mart	0.44	117	⇑*e*P	Pb	15 13 34.0	-0.1
SPIG				*e*S	Sb	15 13 40.6	0.0
SPIG	San Pedro Mart	0.44	117	*e*P	Pb	15 13 34.3	+0.2
SPIG				*i* S	Sb	15 13 40.1	-0.5
SPX	San Pedro Mart	0.44	118	⇑*e*P	Pg	15 13 33.3	0.0
SPX				*e*S	Sg	15 13 39.6	+0.2
SPX				IAML		15 13 40.0	
	comp=N,646nm,0.1s						
SPX				*e*		15 13 40.0	
SPX				IAML		15 13 40.4	
	comp=E,407nm,0.1s						
SPX				*e*		15 13 40.4	
SPX	San Pedro Mart	0.44	118	*e*P	Pg	15 13 33.0	-0.3
SPX				*i* S	Sg	15 13 39.7	+0.2
SQX	San Quintin	0.67	177	⇓*e*P	Pb	15 13 37.8	0.0
SQX				*e*S	Sb	15 13 47.0	0.0
ESJX	Sierra Juarez	0.75	358	*e*P	Pg	15 13 38.9	-0.2
ESJX				*e*S	Sg	15 13 49.0	-0.1
ECBX	El Chinero	0.77	73	⇑*e*P	Pn	15 13 40.7	-0.1
ECBX				*e*S	Sb	15 13 51.1	+1.2
CCX	Cicese	0.89	314	⇓*e*P	Pn	15 13 42.3	-0.1
CCX				*e*S	Sb	15 13 54.3	+1.1
SFX	San Felipe	0.94	103	⇑*e*P	Pn	15 13 43.7	+0.6
SFX				*e*S	Sn	15 13 55.9	-0.4
CBX	Cerro Bola	1.24	329	*e*P	Pb	15 13 47.8	+0.2
CBX				*e*S	Sg	15 14 04.8	+0.4
CBX	Cerro Bola	1.24	329	*e*P	Pb	15 13 47.7	+0.2
CBX				*e*S	Sb	15 14 03.2	-0.2
ERMX	Rumorosa	1.30	356	*e*P	Pg	15 13 49.3	-0.3
ERMX				*e*S	Sg	15 14 06.6	+0.1
MBIG	Mexicali	1.31	28	*e*P	Pn	15 13 48.0	-0.2
MBIG				*i* P	Pb	15 13 48.4	-0.3
MBIG				*i* S	Sb	15 14 05.1	-0.2
MBIG				*e*S	Sg	15 14 06.1	-0.4
IKP	In-Ko-Pah, Jac	1.41	353	⇓*e*P	Pg	15 13 51.5	0.0
BAR	Barrett	1.56	336	*e*P	Pb	15 13 53.1	0.0
SDRC	San Diego Road	1.72	330	*e*P	Pb	15 13 55.6	-0.1

NEIC 04 15:24:24.8±2.3, 23°.4S±0°.1×175°.8W±0°.1, h5km±5km, mb4.8/10, Error ellipse: s-maj=15.5km s-min=14.6km az=110.0

IDC 04 15:24:25.5±2.3, 23°.71S×175°.99W, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.7/36, mbtmp3.8/5, MS3.1/2, Ms1 3.1/2, ms1mx2.6/34, Error ellipse: s-maj=151.4km s-min=31.4km az=160.0

ISC 04 15:24:29.5±0.7, 23°.4S±0°.1×175°.8W±0°.1, h33km, n22, σ1s.63/21, mb4.0/7, 1C, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	6.95	53	Pn	Pn	15 26 06.5	-2.5
MSVF	Nonsavu	8.10	313	Pn	Pn	15 26 25.0	+0.1
RAR	Rarotonga	14.96	85	LR	LR	15 32 55.0	
	comp=Z,69nm,21.6s,baz=282,slow=34						
TUWZ	Tuamarina	19.93	203	Pn	Pn	15 29 00.8	+0.6
MQZ	McQueen's Vall	22.38	202	P	P	15 29 24.4	-0.4
PPT	Papeete	25.19	82	LR	LR	15 38 58.1	
	comp=Z,38nm,19.5s,baz=150,slow=34						
CTAO	Charters Tower	35.37	268	P	P	15 31 22.1	-0.1
CTAO				IAmb	IAmb	15 31 32.9	
	comp=Z,15nm,1.4s						
TOO	Toolangi	35.98	238	P	P	15 31 27.0	-0.4
AS31	Alice Springs	45.94	259	P	P	15 32 48.6	-1.0
ASAR	Alice Springs	45.95	259	P	P	15 32 48.2	-1.4
	comp=Z,0.9nm,0.9s,baz=91,slow=6.4,SNR=18						
ASAR				PcP	PcP	15 34 26.0	-0.2
	comp=Z,0.5nm,1.1s,baz=93,slow=4.9,SNR=1.6						
WB2	Warramunga Arr	46.31	264	P	P	15 32 51.0	-1.5
WB0	Warramunga Arr	46.31	265	P	P	15 32 51.3	-1.2
WB0				IAmb	IAmb	15 34 11.6	
	comp=Z,20nm,1.8s						
WRA	Warramunga Arr	46.32	264	P	P	15 32 50.6	-1.9
	comp=Z,1.0nm,0.7s,baz=104,slow=8.0,SNR=12						
FITZ	Fitzroy Crossi	54.74	264	P	P	15 33 55.8	-0.4
	comp=Z,1.2nm,0.8s,baz=100,slow=6.1,SNR=1.7						
MMRI	Maumere	60.96	273	P	P	15 34 38.8	-1.2
CASY	Casey	62.24	206	P	P	15 34 48.3	+0.6
QSPA	South Pole Qui	66.67	180	P	P	15 35 17.7	+0.9
SYO	Syowa Base	84.34	192	⇑*e*P	P	15 36 55.4	-2.4
TXAR	Lajitas Array	86.90	56	P	P	15 37 14.0	+2.6
	comp=Z,0.3nm,0.8s,baz=223,slow=5.1,SNR=4.5						
CMAR	Chiang Mai Arr	93.03	289	P	P	15 37 42.6	+2.4
	comp=Z,0.7nm,0.7s,baz=144,slow=3.2,SNR=6.7						
AKASG	Malin Array Be	146.56	331	PKPbc	PKPbc	15 44 07.9	+0.6
	comp=Z,0.5nm,0.4s,baz=41,slow=3.7,SNR=5.7						
CLL	Collm	151.34	348	*e*PKPbc	PKiKP	15 44 23.0	+3.0

IDC 04 15:46:20.3±8.6, 30°.42S×178°.23W, h0km, mb3.2/2, mb1 3.4/2, mb1mx3.3/35, mbtmp3.2/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/9, Error ellipse: s-maj=358.3km s-min=64.1km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	29.17	311	LR	LR	16 02 31.5	
	comp=Z,28nm,19.2s,baz=166,slow=33						
ASAR	Alice Springs	42.91	267	P	P	15 54 20.9	-0.2
	0.2nm,0.8s,baz=109,slow=7.2,SNR=5.7						
WRA	Warramunga Arr	43.90	272	P	P	15 54 28.9	-0.1
	0.1nm,0.3s,baz=112,slow=8.0,SNR=5.6						
FINES	FINESS Array B	145.10	340	PKPbc	PKPbc	16 05 57.7	-0.8
	0.7nm,0.8s,baz=88,slow=4.4,SNR=1.1						

IDC 04 16:14:51.0±4.6, 19°.18S×171°.22E, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.5/32, mbtmp3.7/4, ML4.7/1, Error ellipse: s-maj=96.3km s-min=45.1km az=30.0

ISC 04 16:14:55.6±2.5, 19°.5S±0°.4×171°.1E±0°.2, h10km, n8, σ1s.29/8, mb3.6/4, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.00	239	Pn	Pn	16 16 11.1	+0.2
	23nm,0.3s,baz=100,slow=14,SNR=263						
DZM				Sn	Sn	16 16 50.7	-18
	17nm,0.3s,baz=58,slow=17,SNR=8.2						
CTA	Charters Tower	23.34	264	P	P	16 20 06.1	+1.7
	1.7nm,0.9s,baz=106,slow=18,SNR=1.4						
WRA	Warramunga Arr	34.53	263	P	P	16 21 43.2	-1.2
	0.5nm,0.8s,baz=93,slow=8.2,SNR=7.6						
ASAR	Alice Springs	34.73	256	P	P	16 21 45.0	-1.3
	0.5nm,0.6s,baz=80,slow=8.2,SNR=18						
VNDA	Vanda	58.19	182	P	P	16 24 49.0	-0.5
	0.5nm,0.8s,baz=355,slow=8.4,SNR=2.5						
SNAA	Sanae	88.93	182	P	P	16 27 49.9	-0.2
VNA3	Neumayer Olymp	89.45	180	P	P	16 27 53.3	+0.8
VNA2	Neumayer--Watz	89.77	181	P	P	16 27 55.1	+1.1
	baz=181,slow=4.5						

KRNET 04 16:19:04.7±0.1, 39°.47N×76°.99E, mb3.6

SOME 04 16:19:08.7, 39°.83N×76°.88E, h0km

NNC 04 16:19:09.8±0.7, 39°.83N×76°.86E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=5.0km s-min=3.3km az=163.0

ISC 04 16:19:14.6±1.8, 40°.02N±0°.08×76°.84E±0°.03, h10km, n61, σ1s.36/91, 31C-5D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	2.12	7	⇑*i*P	Pb	16 19 51.5	-1.8
	baz=3.0						
KDJ				⇑*i*S	Sg	16 20 25.0	+2.1
	baz=3.0						
ULHL	Ulahol	2.27	349	⇓*i*P	Pb	16 19 53.4	-2.4
	baz=49						
ULHL				⇓*i*S	Sg	16 20 29.4	+1.9
	baz=49						
ULHL	Ulahol	2.27	349	P	Pb	16 19 55.8	0.0
	SNR=83						
KZA	Kyzart	2.38	330	⇑*i*P	Pn	16 19 54.7	+0.6
	baz=34						
KZA				⇑*i*S	Sg	16 20 31.8	+0.7
	baz=34						
KZA	Kyzart	2.38	330	P	Pn	16 19 54.7	+0.6
	SNR=22						
BOOM	Boomskoye usch	2.56	345	⇑*i*P	Pn	16 19 57.4	+1.1
	baz=46						
BOOM				⇑*i*S	Sg	16 20 36.4	-0.4
	baz=46						
PRZ	Przheval'sk	2.73	25	⇑*i*P	Pn	16 19 58.6	-0.1
	baz=19						
PRZ				⇑*i*S	Sb	16 20 38.1	+0.9
	baz=19						
UCH	Uchtor	2.82	322	⇑*i*P	Pn	16 20 00.4	+0.2
	baz=27						
UCH				⇑*i*S	Sb	16 20 41.5	+1.5
	baz=27						
UCH	Uchtor	2.82	322	P	Pn	16 20 00.8	+0.7
	SNR=7.3						
ANVS	Anan'yevo	2.83	12	⇑*i*P	Pn	16 20 00.6	+0.5
	baz=9.0						
ANVS				⇑*i*S	Sb	16 20 41.8	+1.7
	baz=9.0						
KBK	Karagaybulak	2.99	332	⇑*i*P	Pn	16 20 03.4	+1.1
	baz=35						
KBK				⇑*i*S	Sb	16 20 46.2	+1.4
	baz=35						
KBK	Karagaybulak	2.99	332	P	Pb	16 20 08.7	+0.6
	SNR=14						
TNSS	Tian-Shan	3.01	2	*e*P	Pb	16 20 09.7	+1.0
	48nm,0.5s						
TNSS				*e*S	Sg	16 20 53.3	+1.8
	69nm,0.7s						
TKM2	Tokmak 2	3.04	343	⇑*i*P	Pn	16 20 04.4	+1.4
	baz=44						
TKM2				⇑*i*S	Sb	16 20 47.9	+1.6
	baz=44						
TKM2	Tokmak 2	3.04	343	P	Pn	16 20 05.1	+2.1
	SNR=6.4						
TKM2	Tokmak 2	3.04	343	⇑Pg	Pb	16 20 08.9	-0.1
	11nm,0.3s						
TKM2				⇓Lg	Lg	16 20 53.6	
	30nm,0.6s						
KST	Kastek	3.09	348	*e*P	Pb	16 20 10.4	+0.7
	46nm,0.4s						
KST				*e*S	Sg	16 20 55.3	+1.4
	55nm,0.8s						
KST	Kastek	3.09	348	Pg	Pb	16 20 10.4	+0.7
	46nm,0.4s						
KST				Lg	Lg	16 20 55.3	
	55nm,0.8s						
MTBS	Maitube	3.12	354	*e*P	Pb	16 20 11.6	+1.3
	6.6nm,0.2s						
MTBS				*e*S	Sg	16 20 56.5	+1.6
	37nm,0.4s						
MDOK	Medeo	3.14	3	*e*P	Pb	16 20 10.9	+0.2
	25nm,0.4s						
MDOK				*e*S	Sg	16 20 55.8	+0.2
	75nm,1.0s						
MDOK	Medeo	3.14	3	Pg	Pb	16 20 10.8	+0.2
	17nm,0.5s						
MDOK				Lg	Lg	16 20 56.0	
	68nm,0.7s						
MDOK	Medeo	3.14	3	Pg	Pb	16 20 10.9	+0.2
	25nm,0.4s						
MDOK				Lg	Lg	16 20 55.8	
	75nm,1.0s						
AAK	Ala-Archa	3.15	327	⇑*i*P	Pn	16 20 05.0	+0.5
	baz=30						
AAK				⇑*i*S	Sb	16 20 49.8	+0.4
	baz=30						
AAK	Ala-Archa	3.15	327	P	Pb	16 20 09.8	-1.1
	SNR=17						
AAK	Ala-Archa	3.15	327	Pg	Pb	16 20 09.7	-1.1
	10.0nm,0.4s						
AAK				⇓Lg	Lg	16 20 55.6	
	78nm,0.6s						
AML	Almayashu	3.18	313	⇑*i*P	Pn	16 20 04.8	-0.2
	baz=18						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML				⇑iS	Sb	16 20 49.2	-1.1
	baz=18						
AML	Almayashu	3.18	313	P	Pn	16 20 04.9	-0.1
	SNR=11						
KNDC	Almaty	3.19	2	⇑Pg	Pb	16 20 11.8	+0.3
	41nm,0.5s						
KNDC				⇑Lg	Lg	16 20 59.4	
	171nm,0.8s						
KOTS	Kotyrbulak	3.22	4	eP	Pb	16 20 12.1	+0.1
	116nm,0.5s						
KOTS				eS	Sg	16 20 57.5	-0.4
	312nm,0.5s						
KOTS	Kotyrbulak	3.22	4	Pg	Pb	16 20 12.1	+0.1
	116nm,0.5s						
KOTS				Lg	Lg	16 20 58.3	
	312nm,0.5s						
SATY	Saty	3.25	21	eP	Pb	16 20 12.8	+0.2
	18nm,0.5s						
SATY				eS	Sg	16 20 59.0	-0.2
	50nm,0.5s						
SATY	Saty	3.25	21	Pg	Pb	16 20 12.8	+0.2
	18nm,0.5s						
SATY				Lg	Lg	16 20 59.0	
	50nm,0.5s						
CHMS	Chumysh	3.36	333	⇑iP	Pn	16 20 08.1	+0.9
	baz=35						
CHMS				⇑iS	Sb	16 20 54.7	-0.6
	baz=35						
CHMS	Chumysh	3.36	333	P	Pn	16 20 08.0	+0.7
	SNR=6.2						
EKS2	Erkin-Say	3.50	320	⇑iP	Pn	16 20 09.6	+0.3
	baz=24						
EKS2				⇑iS	Sb	16 20 57.4	-2.0
	baz=24						
EKS2	Erkin-Say	3.50	320	P	Pg	16 20 19.9	-1.8
	SNR=5.4						
UZB	Uzynbulak	3.53	27	eP	Pb	16 20 17.1	-0.2
	8.5nm,0.5s						
UZB				eS	Sg	16 21 06.5	-1.4
	26nm,0.8s						
UZB	Uzynbulak	3.53	27	Pg	Pb	16 20 17.1	-0.2
	8.5nm,0.5s						
UZB				Lg	Lg	16 21 06.5	
	26nm,0.8s						
KURS	Kuram	3.60	16	eP	Pb	16 20 20.0	+1.5
	4.4nm,0.5s						
KURS				eS	Sg	16 21 11.0	+0.6
	33nm,1.1s						
USP	Ospenovka	3.69	332	⇑iP	Pn	16 20 12.8	+1.1
	baz=35						
USP				⇑iS	Sb	16 21 02.6	-2.0
	baz=35						
USP	Ospenovka	3.69	332	P	Pb	16 20 21.1	+1.2
	SNR=10						
KTBS	Karatobe	3.69	358	eP	Pb	16 20 20.2	+0.3
	28nm,0.6s						
KTBS				eS	Sg	16 21 11.9	-1.2
	50nm,0.7s						
KTBS	Karatobe	3.69	358	Pg	Pb	16 20 20.2	+0.3
	28nm,0.6s						
KTBS				Lg	Lg	16 21 12.5	
	50nm,0.7s						
SHLS	Shalkode	3.70	31	eP	Pg	16 20 23.4	-2.1
	22nm,0.3s						
SHLS				eS	Sg	16 21 17.3	+3.9
	72nm,0.5s						
SHLS	Shalkode	3.70	31	Pg	Pg	16 20 23.4	-2.1
	22nm,0.3s						
SHLS				Lg	Lg	16 21 17.3	
	72nm,0.5s						
KRBS	Karabastau	3.77	347	eP	Pb	16 20 22.5	+1.1
	36nm,0.6s						
KRBS				eS	Sg	16 21 15.8	0.0
	14nm,0.6s						
KRBS	Karabastau	3.77	347	Pg	Pb	16 20 22.5	+1.1
	36nm,0.6s						
KRBS				Lg	Lg	16 21 16.2	
	14nm,0.6s						
SGDS	Sogindy	3.81	335	Pg	Pb	16 20 22.4	+0.5
	28nm,0.5s						
SGDS				Lg	Lg	16 21 15.8	
MRKS	Merke	3.84	316	eP	Pb	16 20 22.9	+0.3
	2.6nm,0.3s						
MRKS				eS	Sg	16 21 16.2	-1.9
	23nm,0.4s						
PDGK	Podgornoye	3.86	30	Pg	Pb	16 20 23.0	+0.2
	3.5nm,0.6s						
PDGK				Lg	Lg	16 21 16.6	
	29nm,1.0s						
PDGK	Podgornoye	3.86	30	⇑Pn	Pb	16 20 24.1	+1.3
	5.2nm,0.6s						
PDGK				⇓Lg	Lg	16 21 17.5	
	70nm,0.7s						
KUU	Kurty	3.89	355	eP	Pb	16 20 24.7	+1.4
	10nm,0.4s						
KUU				eS	Sg	16 21 18.9	-0.5
	52nm,0.7s						
ARXS	Arharly	4.25	10	eP	Pb	16 20 30.8	+1.3
	6.0nm,0.4s						
ARXS				eS	Sg	16 21 29.9	-1.2
	39nm,0.6s						
ARXS	Arharly	4.25	10	Pg	Pb	16 20 30.8	+1.3
	34nm,0.5s						
ARXS				Lg	Lg	16 21 30.8	
	39nm,0.6s						
DJR	Jarkent	4.83	26	eP	Pb	16 20 40.3	+0.8
	3.1nm,0.4s						
DJR				eS	Sg	16 21 46.4	-3.4
	21nm,0.5s						
DJR	Jarkent	4.83	26	Pg	Pb	16 20 40.3	+0.8
	3.1nm,0.4s						
DJR				Lg	Lg	16 21 46.4	
	21nm,0.5s						
BTLS	Baital	5.42	339	eP	Pb	16 20 51.9	+2.4
	3.5nm,0.6s						
BTLS				eS	Sg	16 22 05.8	-2.8
	13nm,0.5s						
BTLS	Baital	5.42	339	Pg	Pb	16 20 51.9	+2.4
	3.5nm,0.6s						
BTLS				Lg	Lg	16 22 05.8	
	13nm,0.5s						
IUG	Iuzhnay	5.56	295	Pg	Pb	16 20 53.2	+1.2
	1.8nm,0.3s						
IUG				Lg	Lg	16 22 08.1	
	26nm,0.6s						
KK31	Karatay Array	5.66	305	⇑Pg	Pb	16 20 55.9	+2.5
	1.6nm,0.5s,baz=126,slow=15,SNR=12						
KK31				Lg	Lg	16 22 10.8	
	3.7nm,0.5s,baz=130,slow=26,SNR=6.2						
BRLS	Borolday	6.05	302	Pg	Pb	16 21 02.9	+2.7
	0.9nm,0.4s						
BRLS				Lg	Lg	16 22 24.8	
	6.6nm,0.6s						

*NEIC **04** 16:21:55.5±1.5, 23°5S±0°2×175°7W±0°2, h10km±2km, mb4.7/6, Error ellipse: s-maj=42.6km s-min=19.2km az=142.0*

*IDC **04** 16:21:56.2±2.9, 23°49S×175°97W, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.8/32, mbtmp4.0/5, ML3.7/1, MS2.8/3, Ms1 2.8/3, ms1mx2.5/37, Error ellipse: s-maj=73.9km s-min=49.4km az=133.0*

ISC 04 16:21:55.9±1.1**, 23°6S**±0°2×**175°6W**±0°2**, h10**km**, n14, σ1^{s}08**/12**, mb4.4**/6**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	Niue	6.94	51	Pn	Pn	16 23 37.1	-0.7
RAR	Rarotonga	14.85	84	LR	LR	16 30 46.6	
	comp=Z,11nm,20.3s,baz=294,slow=35						
URZ	Urewera	15.90	201	Pn	Pn	16 25 39.7	-0.1
	0.3nm,0.3s,baz=286,slow=6.1,SNR=1.2						
URZ				LR	LR	16 30 40.2	
	comp=Z,37nm,18.6s,baz=260,slow=33						
DZM	Mont Dzumac	16.60	272	P	Pn	16 25 48.9	-0.1
DZM				IAmb	IAmb	16 26 31.6	
	comp=Z,97nm,2.0s						
CTA	Charters Tower	35.49	268	P	P	16 28 52.9	-0.2
	comp=Z,3.1nm,0.3s,baz=94,slow=12,SNR=23						
CTAO	Charters Tower	35.49	268	P	P	16 28 53.2	+0.1
CTAO				IAmb	IAmb	16 29 60.0	
	comp=Z,29nm,1.9s						
ASAR	Alice Springs	46.04	259	P	P	16 30 19.1	-1.0
	comp=Z,0.3nm,0.4s,baz=91,slow=7.4,SNR=17						
WB2	Warramunga Arr	46.42	264		P	16 30 22.4	-0.7
WB2				IAmb	IAmb	16 30 29.4	
	comp=Z,13nm,1.4s						
WRAB	Tennant Creek	46.42	264	P	P	16 30 22.4	-0.7
WRAB				IAmb	IAmb	16 31 32.8	
	comp=Z,11nm,1.4s						
WB0	Warramunga Arr	46.42	265	P	P	16 30 21.9	-1.2
WRA	Warramunga Arr	46.43	264	P	P	16 30 22.1	-1.2
	comp=Z,1.1nm,0.6s,baz=97,slow=8.1,SNR=17						
KAPI	Kappang	64.77	276	LR	LR	16 59 06.9	
	comp=Z,17nm,20.3s,baz=298,slow=35						
CMAR	Chiang Mai Arr	93.20	289	P	P	16 35 12.2	+1.2
	comp=Z,0.6nm,0.8s,baz=134,slow=3.1,SNR=6.6						
AKASG	Malin Array Be	146.75	331	PKPbc	PKPdf	16 41 38.2	+1.9
	comp=Z,1.0nm,0.6s,baz=36,slow=3.0,SNR=4.3						

*IDC **04** 16:43:23.0±0.8, 16°55N×121°43E, h0km, mb3.6/11, mb1 3.8/11, mb1mx3.6/45, mbtmp3.6/11, MS3.5/2, Ms1 3.5/2, ms1mx2.5/40, Error ellipse: s-maj=34.0km s-min=17.9km az=69.0*

*MAN **04** 16:43:24.5, 16°39N×120°92E, h1km, mb4.8, ML3.7, MS3.7*

*NEIC **04** 16:43:30.2±0.9, 16°49N±0°10×121°3E±0°2, h54km±8km, mb4.3/7, Error ellipse: s-maj=22.3km s-min=14.2km az=83.0*

ISC 04 16:43:30.0±1.1**, 16°41N**±0°03×**121°01E**±0°06**, h48**km±12km**, n35, σ2^{s}74**/42**, mb3.8**/16**, 2C-2D, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABRA	Dolores	1.26	347	eP	Pn	16 43 48.0	-3.3
ABRA				eS	Sn	16 44 07.5	+0.4
APYP	Conner	1.46	9	eP	Pn	16 43 52.3	-1.6
APYP				eS	Sn	16 44 15.8	+3.9
SIPP	Brgy, Tapao	1.59	341	⇑iP	Pn	16 43 54.6	-1.2
SIPP				eS	Sn	16 44 37.9	+23
POLP	Polilio Island	1.90	152	eP	Pn	16 43 58.8	-1.2
POLP				eS	Sn	16 44 25.9	+3.1
SGCP	Mt. Cagua	2.07	28	eP	Pn	16 44 01.2	-1.2
SGCP				eS	Sn	16 44 30.8	+3.9
LQP	Lukban	2.34	167	eP	Pn	16 44 03.6	-2.7
LQP				i S	Pn	16 44 03.6	-2.7
LUBP	Lubang	2.76	196	eP	Pn	16 44 10.1	-1.8
LUBP				eS	Sn	16 44 35.9	-8.1
GQP	Guinayangan	2.85	151	⇓eP	Pn	16 44 13.4	+0.3
GQP				eS	Sn	16 44 48.7	+2.5
PGP	Puerto Galera	2.90	181	⇓eP	Pn	16 44 12.7	-1.0
PGP				eS	Sn	16 44 53.7	+6.4
BOAC	Boac	3.05	164	eP	Pn	16 44 16.4	+0.6
SJMP	San Jose	3.93	178	eP	Pn	16 44 29.7	+1.9
PVCP	Virac	4.13	132	eP	Pn	16 44 26.6	-4.0
PVCP				eS	Sn	16 45 19.9	+2.1
YULB	Yu-li	6.95	2	Pn	Pn	16 45 08.4	-0.8
KCP	Kidapawan	10.16	156	⇑iP	Pn	16 46 06.8	+13
PBKT	Sadao Pong	19.22	273		S	16 51 30.9	+5.5
CM31	Chiang Mai Arr	21.15	279	P	P	16 48 14.1	+2.9
CMAR	Chiang Mai Arr	21.15	279	P	P	16 48 15.4	+4.3
	1.0nm,0.8s,baz=100,slow=8.0,SNR=8.6						
KSRS	Korea Array	21.83	15	P	P	16 48 15.8	-2.5
	0.7nm,0.6s,baz=200,slow=11,SNR=2.2						
KSRS				LR	LR	16 57 49.3	
	comp=Z,29nm,18.0s,baz=183,slow=40						
SONM	Songino Array	33.57	342	P	P	16 50 04.9	-0.6
	0.3nm,0.4s,baz=159,slow=7.9,SNR=2.4						
WRA	Warramunga Arr	38.43	160	P	P	16 50 46.6	-0.6
	1.8nm,0.7s,baz=338,slow=9.1,SNR=8.2						
WB2	Warramunga Arr	38.44	160	P	P	16 50 46.5	-0.7
WB2				IAmb	IAmb	16 50 54.2	
	comp=Z,28nm,1.8s						
WR0	Warramunga Arr	38.51	159	P	P	16 50 47.0	-0.9
WR0				IAmb	IAmb	16 51 39.2	
	comp=Z,28nm,1.9s						
AS31	Alice Springs	41.78	162	P	P	16 51 14.5	-0.5
AS31				IAmb	IAmb	16 51 22.9	
	comp=Z,3.7nm,1.8s						
ASAR	Alice Springs	41.78	162	P	P	16 51 14.2	-0.8
	comp=Z,1.1nm,0.8s,baz=337,slow=7.1,SNR=15						
MKAR	Makanchi Array	44.06	322	P	P	16 51 34.1	+0.9
	comp=Z,0.3nm,0.7s,baz=108,slow=9.3,SNR=2.2						
KURK	Kurchatov	48.13	325	P	P	16 52 04.7	-0.4
KURK				IAmb	IAmb	16 52 06.5	
	comp=Z,1.6nm,0.8s						
KURBB	Kurchatov Arra	48.13	325	P	P	16 52 05.3	+0.2
	comp=Z,0.8nm,0.7s,baz=120,slow=8.3,SNR=5.6						
BBOO	Buckleboo	51.02	164	P	P	16 52 27.5	+0.2
RAO	Raoul Island	74.39	127	LR	LR	17 22 44.7	
	comp=Z,118nm,19.3s,baz=148,slow=32						
MLY	Manley	74.53	26	P	P	16 55 02.6	-0.8
MLY				IAmb	IAmb	16 55 04.9	
	comp=Z,1.7nm,0.8s						
ILAR	Eielson Array	76.20	26	P	P	16 55 11.4	-1.6
	comp=Z,0.2nm,0.7s,baz=285,slow=4.6,SNR=2.3						
FINES	FINESS Array B	78.07	331	P	P	16 55 22.9	-0.6
	comp=Z,1.2nm,0.8s,baz=54,slow=7.1,SNR=3.9						
NB2	NORSAR Subarra	85.00	333	PKP	P	16 55 59.6	-0.6
	comp=Z,0.5nm,0.8s,baz=19,slow=3.7						
NOA	NORSAR Array B	85.00	333	P	P	16 55 59.0	-1.2
	comp=Z,0.9nm,0.9s,baz=68,slow=4.8,SNR=4.1						
YKA	Yellowknife Ar	90.17	23	P	P	16 56 24.6	-0.3
	comp=Z,0.2nm,0.6s,baz=310,slow=4.4,SNR=3.6						

*IDC **04** 16:46:28.4±1.4, 31°22N×83°55E, h0km, mb3.4/7, mb1 3.6/10, mb1mx3.3/56, mbtmp3.3/10, ML3.2/3, MS2.8/7, Ms1 2.9/7, ms1mx2.6/40, Error ellipse: s-maj=46.1km s-min=20.8km az=59.0*

ISC 04 16:46:30.4±1.2**, 31°4N**±0°2×**83°8E**±0°2**, h10**km**, n16, σ2^{s}44**/11**, mb3.4**/8**, MS2.6**/5**, Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	13.39	329	LR	LR	16 54 57.4	
	comp=Z,54nm,18.9s,baz=120,slow=38						
MKAR	Makanchi Array	15.38	356	Pn	Pn	16 50 05.4	-2.0
	0.0nm,0.3s,baz=179,slow=12,SNR=6.5						
CMAR	Chiang Mai Arr	18.85	130	P	P	16 50 49.1	-1.6
	0.2nm,0.3s,baz=335,slow=38,SNR=2.2						
CMAR				LR	LR	16 58 49.6	
	comp=Z,59nm,18.1s,baz=21,slow=39						
KURBB	Kurchatov Arra	19.56	350	P	P	16 50 58.4	+0.2
	0.0nm,0.3s,baz=167,slow=10,SNR=7.4						
GEYT	Alibeck	22.02	294	LR	LR	17 01 08.5	
	comp=Z,24nm,19.5s,baz=0.0,slow=40						
ZALV	Zalesovo Beam	22.51	2	P	P	16 51 25.4	-4.7
	0.7nm,0.4s,baz=170,slow=11,SNR=3.2						
ZALV				LR	LR	17 01 08.9	
	comp=Z,30nm,18.7s,baz=262,slow=39						
BVAR	Borovoye Array	23.66	340	P	P	16 51 42.2	+0.4
	0.2nm,0.4s,baz=227,slow=42,SNR=2.2						
SONM	Songino Array	23.78	40	P	P	16 51 45.2	+1.9
	1.0nm,0.9s,baz=233,slow=9.1,SNR=7.3						
AKTO	Aktyubinsk	26.95	322	LR	LR	17 03 26.7	
	comp=Z,21nm,19.2s,baz=133,slow=38						
ARU	Arti	30.55	332	LR	LR	17 07 09.2	
	comp=Z,8.2nm,21.5s,baz=61,slow=40						
NRIK	Noril'sk	38.01	2	LR	LR	17 10 19.5	
	comp=Z,10nm,20.7s,baz=84,slow=37						
AKASG	Malin Array Be	44.28	312	P	P	16 54 39.4	-0.8
	0.1nm,0.3s,baz=83,slow=7.3,SNR=2.3						
WRA	Warramunga Arr	70.45	130	P	P	16 57 43.4	-1.9
	0.4nm,0.9s,baz=324,slow=6.2,SNR=2.8						
ASAR	Alice Springs	72.84	133	P	P	16 58 00.3	+0.7
	0.2nm,0.7s,baz=325,slow=11,SNR=1.7						
ILAR	Eielson Array	76.31	20	P	P	16 58 21.6	+2.4
	0.6nm,0.8s,baz=300,slow=4.3,SNR=5.9						
YKA	Yellowknife Ar	85.23	8	P	P	16 59 09.0	+2.1
	0.2nm,0.5s,baz=339,slow=5.0,SNR=3.4						

*IDC **04** 16:52:11.0±1.2, 7°34S×123°78E, h579km±17km, mb2.7/5, mb1 2.9/9, mb1mx2.6/43, mbtmp3.7/9, Error ellipse: s-maj=34.2km s-min=17.5km az=79.0*

*DJA **04** 16:52:12.3±0.5, 7°S±11°×12°4E±°, h551km±9km, M3.8/10, mB4.4/2, mb4.0/7, MLv3.7/10, Mw(mB)3.5/2*

ISC 04 16:52:10.2±0.7**, 7°20S**±0°10×**123°8E**±0°1**, h550**km**, n20, σ2^{s}03**/22**, mb3.1**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MMRI	Maumere	2.09	227	P	P	16 53 23.2	+2.9
EDFI	Ende, Flores	2.58	233	P	P	16 53 25.4	+2.5
SOEI	Soe	2.59	169	P	P	16 53 25.8	+2.8
BATI	Baumata	2.99	182	P	P	16 53 28.2	+3.0
	58nm,0.3s,baz=71,slow=2.1,SNR=133						
BATI				S	S	16 54 26.1	-0.2
	15nm,0.3s,baz=54,slow=1.8,SNR=6.0						
BATI	Baumata	2.99	182	P	P	16 53 28.3	+3.0
BASI	Baing, Sumba	4.36	226	P	P	16 53 37.3	+2.4
WBSI	Waikabubak, Su	4.97	240	P	P	16 53 40.6	+0.7
AAI	Ambon	5.61	52	P	P	16 53 47.9	+2.5
	0.1nm1μm26nm,0.9s						
FAKI	Fak Fak	9.44	64	P	P	16 54 24.6	+2.0
	43nm,0.7s						
SIJI	Sorong	9.76	50	P	P	16 54 27.3	+1.5
	1.2nm,0.3s,baz=55,slow=23,SNR=7.4						
FITZ	Fitzroy Crossi	10.99	171	P	P	16 54 37.3	-0.9
	0.3nm,0.3s,baz=9.7,slow=8.3,SNR=18						
CISI	Cisompet, Garu	15.84	268	P	P	16 55 29.3	+0.9
	22nm,1.2s						
WRA	Warramunga Arr	16.29	142	P	P	16 55 30.4	-2.1
	0.5nm,0.3s,baz=315,slow=9.5,SNR=30						
CNJI	Cibinong	16.52	269	P	P	16 55 35.1	+0.4
ASAR	Alice Springs	19.04	150	P	P	16 55 56.1	-1.6
	0.3nm,0.3s,baz=320,slow=8.3,SNR=31						
ASAR				PcP	PcP	16 59 52.4	-2.7
	0.1nm,0.3s,baz=350,slow=1.4,SNR=7.1						
MJAR	Matsushiro Arr	45.57	16	P	P	16 59 41.0	-0.3
	0.5nm,0.8s,baz=186,slow=8.7,SNR=5.2						
SONM	Songino Array	56.91	346	P	P	17 01 02.1	-1.1
	0.2nm,0.3s,baz=157,slow=7.8,SNR=2.1						
MKAR	Makanchi Array	65.15	330	P	P	17 01 56.3	-0.9
	0.2nm,0.5s,baz=131,slow=7.1,SNR=5.0						
PETK	Petropavlovsk-	66.60	22	P	P	17 02 06.0	-0.1
	0.5nm,0.5s,baz=210,slow=5.1,SNR=6.5						
ZALV	Zalesovo Beam	69.17	337	P	P	17 02 21.0	-0.6
	0.4nm,0.4s,baz=155,slow=41,SNR=2.4						

*IDC **04** 17:14:25.7±0.7, 49°15S×127°49E, h0km, mb4.6/10, mb1 4.8/10, mb1mx4.3/38, mbtmp4.6/10, MS3.4/9, Ms1 3.4/9, ms1mx3.2/29, Error ellipse: s-maj=39.8km s-min=14.6km az=93.0*

*NEIC **04** 17:14:27.0±2.3, 49°1S±0°1×127°4E±0°3, h10km±1km, mb4.6/21, Error ellipse: s-maj=29.5km s-min=18.1km az=91.0*

ISC 04 17:14:27.6±0.5**, 49°16S**±0°08×**127°5E**±0°1**, h13**km**, n60, σ1^{s}34**/46**, mb4.7**/23**, MS3.4**/8**, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TAU	Tasmania Unive	15.08	73	P	P	17 18 05.3	-0.2
TAU				IAmb	IAmb	17 18 21.7	
	comp=Z,22nm,1.0s						
H01W1	Cape Leeuwin H	17.34	320	T	T	17 36 10.4	
	baz=147,slow=74,SNR=401						
H01W2	Cape Leeuwin H	17.35	320	T	T	17 36 06.9	
	baz=147,slow=74,SNR=473						
H01W3	Cape Leeuwin H	17.36	320	T	T	17 36 10.6	
	baz=147,slow=74,SNR=444						
TOO	Toolangi	17.41	55	P	P	17 18 34.1	+2.8
BBOO	Buckleboo	17.54	24	P	P	17 18 33.9	+1.0
BBOO				IAmb	IAmb	17 18 36.5	
	comp=Z,34nm,1.0s						
NWAO	Narrogin (SRO)	17.96	331	LR	LR	17 23 53.9	
	comp=Z,224nm,20.3s,baz=132,slow=32						
FORT	Forrest	18.37	1	P	P	17 18 42.5	+0.6
CASY	Casey	19.29	201	P	P	17 18 50.0	-1.7
STKA	Stephens Creek	20.25	37	P	Pn	17 19 03.1	-1.4
	comp=Z,5.3nm,1.0s,baz=181,slow=11,SNR=8.6						
STKA				LR	LR	17 25 44.1	
	comp=Z,175nm,20.0s,baz=205,slow=34						
STKA	Stephens Creek	20.25	37	P	P	17 19 02.2	-0.3
CAN	Canberra	20.97	57	P	P	17 19 05.6	-4.8
CAN				IAmb	IAmb	17 19 12.7	
	comp=Z,54nm,1.5s						
MORW	Morawa	21.91	332	P	P	17 19 18.1	-2.3
ASAR	Alice Springs	25.94	13	P	P	17 19 59.5	-0.1
	comp=Z,39nm,0.9s,baz=189,slow=9.0,SNR=242						
ASAR				LR	LR	17 30 39.4	
	comp=Z,49nm,18.1s,baz=176,slow=38						
AS31	Alice Springs	25.94	13	P	P	17 19 59.6	-0.1
AS31				IAmb	IAmb	17 20 08.3	
	comp=Z,10.0nm,0.9s						
PSA00	Pilbara Seismi	28.20	345	P	P	17 20 17.6	-2.3
PSA00				IAmb	IAmb	17 20 22.1	
	comp=Z,19nm,1.2s						
WRA	Warramunga Arr	29.66	13	P	P	17 20 32.2	-0.7
	comp=Z,8.6nm,1.0s,baz=193,slow=9.0,SNR=21						
WB2	Warramunga Arr	29.66	13	P	P	17 20 32.2	-0.7
WB2				IAmb	IAmb	17 20 34.5	
	comp=Z,15nm,1.1s						
WRAB	Tennant Creek	29.67	13	P	P	17 20 30.8	-2.2
WRAB				IAmb	IAmb	17 20 35.0	
	comp=Z,11nm,0.9s						
WR0	Warramunga Arr	29.68	13	P	P	17 20 32.6	-0.4
WR0				IAmb	IAmb	17 20 41.3	
	comp=Z,14nm,1.0s						
WB0	Warramunga Arr	29.84	13	P	P	17 20 33.8	-0.7
WB0				IAmb	IAmb	17 20 35.8	
	comp=Z,6.3nm,0.9s						
RPZ	Rata Peaks	30.16	96	LR	LR	17 30 25.5	
	comp=Z,54nm,19.7s,baz=192,slow=32						
FITZ	Fitzroy Crossi	31.03	357	P	P	17 20 44.8	-0.1
	comp=Z,3.6nm,0.9s,baz=180,slow=10,SNR=3.4						
FITZ				LR	LR	17 32 40.2	
	comp=Z,68nm,18.9s,baz=172,slow=35						
FITZ	Fitzroy Crossi	31.03	357	P	P	17 20 42.9	-2.0
VNDA	Vanda	31.32	166	P	P	17 20 47.5	+0.5
	comp=Z,13nm,0.9s,baz=313,slow=8.4,SNR=67						
VNDA				LR	LR	17 32 23.9	
	comp=Z,74nm,19.3s,baz=324,slow=34						
VNDA	Vanda	31.32	166	P	P	17 20 47.6	+0.6
KNRA	Kununurra	33.41	2	P	P	17 21 05.0	-0.8
MTN	Manton Dam	36.34	6	P	P	17 21 30.9	-0.2
MAW	Mawson	36.44	216	LR	LR	17 34 23.2	
	comp=Z,36nm,18.4s,baz=61,slow=33						
QSPA	South Pole Qui	40.96	180	P	P	17 22 09.9	+0.3
	comp=Z,15nm,1.0s,baz=341,slow=4.2,SNR=19						
QSPA	South Pole Qui	40.96	180	P	P	17 22 10.1	+0.4
QSPA				IAmb	IAmb	17 22 11.7	
	comp=Z,16nm,1.0s						
LEM	Lembang	45.42	332	LR	LR	17 38 57.2	
	comp=Z,56nm,21.4s,baz=198,slow=32						
SPSI	Sidrap Palu	45.52	349	P	P	17 22 47.7	+0.9
	comp=Z,15nm,1.1s						
MDSI	Maura Dua	48.74	328	P	P	17 23 12.9	+0.9
	comp=Z,6.3nm,1.1s						
KRJI	Kerinci	51.93	326	P	P	17 23 41.1	+4.9
SNAA	Sanae	54.47	197	P	P	17 23 54.5	+0.3
SNAA	Sanae	54.47	197	P	P	17 23 54.3	+0.1
	comp=Z,18nm,0.9s,baz=145,slow=8.7,SNR=29						
SNAA	Sanae	54.47	197	P	P	17 23 54.7	+0.4
VNA2	Neumayer--Watz	55.94	196	P	P	17 24 04.9	+0.1
	baz=146,slow=7.1						
VNA3	Neumayer Olymp	56.08	195	P	P	17 24 05.4	-0.3
VNA1	Neumayer--Stat	56.33	196	P	P	17 24 08.0	+0.5
RPSI	Rantau Prapat	57.29	325	P	P	17 24 14.7	-0.3
PSI	Prapat	57.39	325	P	P	17 24 14.7	-1.1
	comp=Z,1.9nm,0.3s,baz=179,slow=9.3,SNR=4.1						
PSI				LR	LR	17 45 47.8	
	comp=Z,41nm,20.7s,baz=206,slow=33						
IPM	Ipoh	58.19	328	P	P	17 24 21.5	+0.2
IPM				IAmb	IAmb	17 24 24.9	
	comp=Z,13nm,1.3s						
KCSI	Kotacane, Aceh	58.48	324	P	P	17 24 24.4	+1.0
	comp=Z,14nm,1.1s						
H08S2	Diego Garcia H	61.80	293	T	T	18 31 39.4	
	baz=142,slow=76,SNR=17						
H08S1	Diego Carcia H	61.81	293	T	T	18 31 44.1	
	baz=142,slow=76,SNR=17						
H08S3	Diego Garcia H	61.82	293	T	T	18 31 40.2	
	baz=142,slow=76,SNR=21						
CMAR	Chiang Mai Arr	71.96	331	P	P	17 25 51.6	+1.0
	comp=Z,3.5nm,1.1s,baz=182,slow=5.4,SNR=22						
NJ2	Nanjing	81.22	353	eP	P	17 26 43.1	+0.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN	Xi'an	84.48	345	P	P	17 27 02.4	+2.7
XAN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,73nm,4.3s						
MAT	Matsushiro	85.86	9	P	P	17 27 07.5	+1.0
MJAR	Matsushiro Arr	85.86	9	P	P	17 27 07.0	+0.5
	comp=Z,3.4nm,0.9s,baz=185,slow=6.4,SNR=8.8						
HHC	Hu-ho-hao-te	90.73	348	eP	P	17 27 31.6	+1.8
HHC				pmax	pmax		
	comp=Z,19nm,1.2s						
HHC				pmax	pmax		
	comp=Z,26nm,5.8s						
GTA	Gaotai	91.54	339	eP	P	17 27 33.3	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GTA				pP	sP	17 27 38.7	+1.0
GTA				sP	pwP	17 27 42.2	+0.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WMQ	Urumqi	98.96	332	eP	Pdif	17 28 08.3	+1.0
TORD	Torodi Ar. Bea	123.02	250	PKP	PKiKP	17 33 23.5	-0.5
	comp=Z,0.6nm,0.8s,baz=70,slow=2.7,SNR=3.0						
TXAR	Lajitas Array	136.62	98	PKP	PKiKP	17 33 50.3	-0.8
	comp=Z,0.5nm,0.9s,baz=145,slow=4.6,SNR=3.8						
YKA	Yellowknife Ar	144.16	45	PKP	PKPdf	17 34 00.7	-1.0
	comp=Z,1.0nm,0.9s,baz=259,slow=2.5,SNR=11						
ESDC	Sonseca Array	144.62	273	PKP	PKPbc	17 34 01.7	-0.5
	comp=Z,1.1nm,1.0s,baz=123,slow=0.9,SNR=6.2						

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*IDC **04** 17:20:48.5±1.4, 5°.80S×146°.11E, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.7/41, mbtmp3.9/8, ML3.6/1, MS3.3/1, Ms1 3.3/1, ms1mx2.4/33, Error ellipse: s-maj=49.3km s-min=20.8km az=119.0*

ISC 04 17:20:53.5±1.5, **5°.8S**±0°.2×**146°.1E**±0°.3, **h32km, n11, σ0s.49**/10, **mb4.0**/7, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.08	218	P	P	17 25 02.8	+0.2
	0.2nm,0.3s,baz=36,slow=11,SNR=8.9						
ASAR	Alice Springs	21.25	212	P	P	17 25 37.4	+0.2
	0.9nm,0.6s,baz=43,slow=8.7,SNR=15						
FITZ	Fitzroy Crossi	23.38	237	P	P	17 25 59.2	-0.3
	1.8nm,0.5s,baz=45,slow=6.9,SNR=10						
DZM	Mont Dzumac	25.47	131	LR	LR	17 35 23.9	
	comp=Z,65nm,20.6s,baz=236,slow=34						
CMAR	Chiang Mai Arr	52.36	299	P	P	17 30 03.4	+0.5
	2.0nm,0.6s,baz=120,slow=5.9,SNR=22						
PETK	Petropavlovsk-	59.54	8	P	P	17 30 54.0	+0.4
	1.0nm,0.6s,baz=177,slow=8.8,SNR=8.1						
MKAR	Makanchi Array	76.78	321	P	P	17 32 42.0	0.0
	0.5nm,0.4s,baz=99,slow=7.6,SNR=11						
ZALV	Zalesovo Beam	78.38	328	P	P	17 32 49.7	-1.0
	0.7nm,0.4s,baz=111,slow=6.3,SNR=4.9						
ILAR	Eielson Array	85.69	23	P	P	17 33 28.9	0.0
	1.0nm,0.7s,baz=252,slow=5.8,SNR=9.0						
TORD	Torodi Ar. Bea	144.15	284	PKP	PKPab	17 40 25.0	+0.1
	0.6nm,0.5s,baz=46,slow=2.8,SNR=8.2						
DBIC	Dimbokro	151.09	273	PKPbc	PKPbc	17 40 44.1	-0.3
	2.2nm,0.7s,baz=73,slow=1.8,SNR=5.6						

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*SKHL **04** 17:31:09.6±0.7, 48°.01N×154°.97E, h62km±5km, mb4.5/7*
*MOS **04** 17:31:10.4±1.1, 48°.20N×154°.47E, h61km, mb4.3/9, Error ellipse: s-maj=13.4km s-min=6.5km az=72.9*
*NEIC **04** 17:31:12.4±1.8, 48°.17N±0°.10×154°.6E±0°.2, h64km±7km, mb4.3/12, Error ellipse: s-maj=17.7km s-min=10.5km az=131.0*
*IDC **04** 17:31:14.0±2.5, 48°.28N×154°.33E, h74km±21km, mb3.4/18, mb1 3.6/23, mb1mx3.5/48, mbtmp3.8/23, MS2.9/9, Ms1 2.9/9, ms1mx2.6/47, Error ellipse: s-maj=18.9km s-min=12.3km az=149.0*

ISC 04 17:31:10.1±0.6, **48°.10N**±0°.07×**154°.72E**±0°.07, **h42km, n107, σ1s.73**/107, **mb4.2**/38, **MS2.8**/7, **5C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.74	19	eP	Pn	17 31 51.6	0.0
SKR				AMB	AMB	17 31 55.6	
	90nm,0.4s						
SKR				eS	Sn	17 32 22.5	-1.0
SKR				A	A	17 32 28.0	
	170nm,0.4s						
SKR				A	A	17 32 28.0	
	90nm,0.4s						
SKR	Severo-Kuril's	2.74	19	ePN	Pn	17 31 52.6	+1.0
SKR				eS	Sn	17 32 24.9	+1.4
SKR				pmax	pmax		
	comp=Z,139nm,0.6s						
SKR				smax	smax		
	comp=E,233nm,1.2s						
SKR				smax	smax		
	comp=N,164nm,0.5s						
PAU	Pauzhetka	3.63	21	eP	Pn	17 32 04.5	+0.7
PAU				AMB	AMB	17 32 07.7	
	comp=N,60nm,0.6s						
PAU				iS	Sn	17 32 46.3	+0.9
PAU				A	A	17 32 52.4	
	comp=N,50nm,0.2s						
PAU				A	A	17 32 52.4	
	comp=N,40nm,0.2s						
PEA0B	Petropavlovsk-	5.36	20	cePN	Pn	17 32 29.1	+1.5
PEA0B	Petropavlovsk-	5.36	20		Pn	17 32 29.9	+2.4
PETK	Petropavlovsk-	5.36	20	P	Pn	17 32 29.6	+2.0
	comp=N,2.5nm,0.3s,baz=184,slow=13,SNR=74						
PETK				S	Sn	17 33 34.6	+6.6
	baz=146,slow=14,SNR=1.4						
PETK				LR	LR	17 34 41.9	
	comp=N,87nm,20.1s,baz=179,slow=39						
KUR	Kuril'sk	5.52	241	eP	Pn	17 32 31.5	+1.8
KUR				AMB	AMB	17 32 36.0	
	comp=N,30nm,0.4s						
KUR				eS	Sn	17 33 33.0	+1.2
KUR				A	A	17 33 56.0	
	comp=N,100nm,0.4s						
KUR				A	A	17 33 56.0	
	comp=N,60nm,0.4s						
KUR	Kuril'sk	5.52	241	ePN	Pn	17 32 32.0	+2.3
KUR				eS	Sn	17 33 34.7	+2.9
KUR				pmax	pmax		
	comp=Z,43nm,0.3s						
KUR				pmax	pmax		
	comp=N,10.0nm,0.2s						
KUR				smax	smax		
	comp=N,83nm,0.4s						
KUR				smax	smax		
	comp=E,36nm,0.4s						
PET	Petropavlovsk	5.53	25	eP	Pn	17 32 30.4	+0.6
PET				AMB	AMB	17 32 45.2	
	comp=E,20nm,0.6s						
PET				eS	Sn	17 33 31.0	-1.1
PET				A	A	17 33 47.9	
	comp=E,50nm,0.5s						
PET				A	A	17 33 47.9	
	comp=E,50nm,0.5s						
PET	Petropavlovsk	5.53	25	ePN	Pn	17 32 31.1	+1.3
PET				pmax	pmax		
	comp=Z,20nm,0.6s						
PET	Petropavlovsk	5.53	25		Pn	17 32 30.7	+0.8
YUK	Yuzh-Kuril'sk	7.38	240	eS	Sn	17 34 17.7	+0.1
YUK				A	A	17 34 25.6	
	comp=Z,150nm,0.5s						
YUK				A	A	17 34 25.6	
	comp=Z,150nm,0.5s						
GRPR	Tuman	7.46	240	eP	Pn	17 32 59.0	+2.7
GRPR				eS	Sn	17 34 21.0	+1.5
GRPR	Tuman	7.46	240	PN	Pn	17 33 00.2	+3.9
GRPR				S	Sn	17 34 23.9	+4.4
GLVR	Golovnino	7.76	239	eS	Sn	17 34 28.1	+1.3
NMR	Nemuro--Hokkai	7.87	236	eP	Pn	17 33 01.7	-0.2
NMR	Nemuro--Hokkai	7.87	236	ePN	Pn	17 33 00.4	-1.5
YSS	Yuzh-Sakhalins	8.18	266	eP	Pn	17 33 09.2	+3.0
YSS				AMB	AMB	17 33 10.3	
	comp=Z,10.0nm,0.3s						
YSS				eS	Sn	17 34 39.1	+1.8
YSS	Yuzh-Sakhalins	8.18	266	ePN	Pn	17 33 08.5	+2.3
YSS				eS	Sn	17 34 39.1	+1.8
YSS				pmax	pmax		
	comp=Z,10.0nm,0.3s						
YSS	Yuzh-Sakhalins	8.18	266		Pn	17 33 08.2	+2.0
TYV	Tymovskoe	8.33	294	eP	Pn	17 33 10.9	+2.7
TYV				AMB	AMB	17 33 12.1	
	comp=Z,20nm,0.8s						
JKA	Kamikawa-asahi	9.31	249	eP	Pn	17 33 23.9	+2.2
JKA	Kamikawa-asahi	9.31	249		Pn	17 33 23.9	+2.2
ASAJ	Asahikawa	9.31	249	P	Pn	17 33 23.9	+2.1
	comp=Z,1.3nm,0.3s,baz=85,slow=12,SNR=15						
ERM	Erimo	10.19	238	⇑ePN	Pn	17 33 34.0	+0.3
ERM	Erimo	10.19	238	Pn	Pn	17 33 34.7	+1.0
MA2	Magadan	11.73	350	P	Pn	17 33 55.3	+0.6
	comp=Z,0.3nm,0.3s,baz=148,slow=12,SNR=6.5						
MA2	Magadan	11.73	350	eP	Pn	17 33 55.0	+0.3
MA2	Magadan	11.73	350	dePN	Pn	17 33 55.0	+0.3
MA2				pmax	pmax		
	comp=Z,6.0nm,1.5s						
EKMR	Ekimchan	14.68	298	eP	Pn	17 34 34.1	-0.7
SEY	Seymchan	14.93	356	P	Pn	17 34 37.5	-0.5
	comp=Z,0.1nm,0.3s,baz=59,slow=23,SNR=3.7						
KLR	Kul'dur	15.21	283	LR	LR	17 41 03.4	
	comp=Z,38nm,18.1s,baz=100,slow=40						
MJAR	Matsushiro Arr	16.77	233	P	Pn	17 34 59.0	-2.8
	comp=Z,0.0nm,0.3s,baz=31,slow=14,SNR=4.8						
MJAR				LR	LR	17 41 10.2	
	comp=Z,19nm,18.8s,baz=235,slow=36						
BMKR	Bomnak	17.39	302	eP	Pn	17 35 08.0	-1.3
YAK	Yakutsk	19.82	324	P	P	17 35 34.3	-2.6
	comp=Z,0.0nm,0.3s,baz=283,slow=0.9,SNR=5.0						
YAK	Yakutsk	19.82	324	⇑eP	P	17 35 36.1	-0.8
YAK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
YAK	Yakutsk	19.82	324	P	P	17 35 33.3	-3.6
BILL	Bilibino	20.84	12	⇓eP	P	17 35 47.7	-0.1
BILL				e		17 36 09.6	
BILL				eS	Sn	17 39 57.9	+13
BILL				pmax	pmax		
	comp=Z,5.0nm,1.8s						
BILL				MLR	MLR		
	comp=Z,41nm,21.0s						
KSRS	Korea Array	22.25	251	P	P	17 36 03.2	-0.1
	comp=Z,2.1nm,0.7s,baz=43,slow=10,SNR=10						
KSRS				LR	LR	17 45 04.0	
	comp=Z,12nm,18.1s,baz=225,slow=38						
KSRS	Korea Array	22.25	251	eP	P	17 36 05.1	+1.8
KSRS	Korea Array	22.25	251	eP	P	17 36 05.1	+1.8
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
JNU	Nakatsue	23.35	239	LR	LR	17 45 43.0	
	comp=Z,27nm,21.2s,baz=153,slow=37						
TIXI	Tiksi	26.50	342	P	P	17 36 42.9	-0.2
	comp=Z,0.5nm,0.5s,baz=121,slow=13,SNR=3.6						
TIXI				LR	LR	17 48 14.6	
	comp=Z,22nm,18.8s,baz=112,slow=39						
TIXI	Tiksi	26.50	342	IAmb	IAmb	17 36 46.4	
	comp=Z,1.1nm,0.8s						
H11N2	WAKE ISLAND Hy	29.97	157	T	T	18 09 25.9	
	baz=50,slow=74,SNR=95						
H11N1	WAKE ISLAND Hy	29.98	157	T	T	18 08 55.6	
	baz=344,slow=74,SNR=149						
H11N3	WAKE ISLAND Hy	29.98	157	T	T	18 09 34.7	
	SNR=80						
H11S1	WAKE ISLAND Hy	31.09	158	T	T	18 10 19.4	
	baz=344,slow=76,SNR=816						
H11S3	WAKE ISLAND Hy	31.10	158	T	T	18 10 16.6	
	baz=344,slow=76,SNR=754						
H11S2	WAKE ISLAND Hy	31.11	158	T	T	18 10 21.3	
	baz=344,slow=76,SNR=716						
SONM	Songino Array	31.94	288	LR	LR	17 51 39.4	
	comp=Z,27nm,20.0s,baz=92,slow=39						
SML	Sawmill	34.24	45	P	P	17 37 51.5	-0.1
COLA	College	34.40	40	ceP	P	17 37 54.0	+1.2
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ILAR	Eielson Array	34.81	40	P	P	17 37 57.0	+0.6
	comp=Z,0.6nm,0.8s,baz=282,slow=8.7,SNR=5.5						
CRQM	Cirque	36.84	46	P	P	17 38 14.8	+0.7
BARN	Barnard Glacie	37.51	46	P	P	17 38 18.9	-0.8
BARN				IAmb	IAmb	17 38 23.3	
	comp=Z,3.1nm,0.8s						
YAH	Yahtse	37.59	47	P	P	17 38 20.0	-0.5
YAH				IAmb	IAmb	17 38 23.2	
	comp=Z,5.5nm,0.8s						
CTGM	Chitina Glacie	37.68	46	P	P	17 38 20.7	-0.4
CTGM				IAmb	IAmb	17 38 23.8	
	comp=Z,3.7nm,0.6s						
HYT	Haines Junctio	39.55	45	P	P	17 38 37.2	+0.4
HYT				IAmb	IAmb	17 38 41.0	
	comp=Z,2.8nm,0.8s						
INK	Inuvik	39.92	33	P	P	17 38 40.7	+1.1
	comp=Z,1.7nm,0.8s,baz=289,slow=6.9,SNR=8.7						
INK	Inuvik	39.92	33	P	P	17 38 40.2	+0.6
INK				IAmb	IAmb	17 38 41.5	
	comp=Z,2.3nm,0.8s						
ZALV	Zalesovo Beam	42.72	305	P	P	17 39 00.2	-2.5
	comp=Z,0.8nm,0.4s,baz=67,slow=6.0,SNR=5.8						
ZALV				PcP	PcP	17 40 52.4	-1.3
	comp=Z,1.2nm,0.9s,baz=46,slow=4.3,SNR=4.2						
ZALV				LR	LR	17 57 05.0	
	comp=Z,19nm,18.9s,baz=61,slow=37						
ZALV	Zalesovo Beam	42.72	305	eP	P	17 39 00.4	-2.3
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	47.30	297	P	P	17 39 36.3	-3.0
	comp=Z,0.2nm,0.7s,baz=46,slow=8.3,SNR=2.7						
MKAR				PcP	PcP	17 41 08.1	-1.5
	comp=Z,0.2nm,0.6s,baz=180,slow=30,SNR=2.8						
KURK	Kurchatov	47.53	303	deP	P	17 39 39.1	-1.8
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	47.53	303	P	P	17 39 36.7	-4.2
KURK				IAmb	IAmb	17 39 39.8	
	comp=Z,2.1nm,0.7s						
KURK	Kurchatov	47.53	303		PcP	17 41 09.8	-0.5
KURBB	Kurchatov Arra	47.63	303	P	P	17 39 39.5	-2.2
	comp=Z,1.9nm,0.7s,baz=66,slow=8.4,SNR=14						
KURBB				PcP	PcP	17 41 09.8	-0.9
	comp=Z,0.8nm,0.8s,baz=74,slow=3.6,SNR=6.9						
YKA	Yellowknife Ar	49.19	38	P	P	17 39 54.4	+0.9
	comp=Z,1.0nm,0.9s,baz=293,slow=6.6,SNR=8.5						
RES	Resolute Bay	49.21	19	P	P	17 39 53.1	-0.4
RES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
RES	Resolute Bay	49.21	19	P	P	17 39 53.1	-0.4
BVAR	Borovoye Array	50.85	309	PcP	PcP	17 41 21.6	-0.8
	comp=Z,0.9nm,0.6s,baz=62,slow=3.5,SNR=4.6						
BRVK	Borovoye	50.89	309	⇓eP	P	17 40 04.5	-2.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	Borovoye	50.89	309	P	P	17 40 03.7	-2.8
CMAR	Chiang Mai Arr	53.75	257	P	P	17 40 27.8	-0.4
	comp=Z,0.7nm,0.8s,baz=38,slow=7.6,SNR=6.3						
CMAR	Chiang Mai Arr	53.75	257	eP	P	17 40 28.4	+0.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KSH	Kashi	55.15	292	P	P	17 40 41.0	+2.7
KSH				pP	sP	17 40 56.4	+1.3
KSH				sP	pP	17 41 03.1	+13
KSH				pmax	pmax		
	comp=Z,15nm,1.1s						
KSH				pmax	pmax		
	comp=Z,190nm,4.7s						
NEW	Newport	55.49	54	LR	LR	18 04 34.4	
	comp=Z,23nm,18.3s,baz=132,slow=36						
NVAR	Mina Array Bea	60.85	64	P	P	17 41 19.8	+1.4
	comp=Z,0.7nm,0.6s,baz=284,slow=7.6,SNR=5.9						
PDAR	Pinedale Array	63.07	55	P	P	17 41 33.9	+0.7
	comp=Z,0.6nm,0.8s,baz=293,slow=4.5,SNR=4.6						
FINES	FINESS Array B	63.28	335	P	P	17 41 32.0	-2.0
	comp=Z,0.7nm,0.3s,baz=38,slow=8.7,SNR=12						
NOA	NORSAR Array B	67.30	342	P	P	17 41 58.9	-1.1
	comp=Z,0.3nm,0.5s,baz=26,slow=6.4,SNR=2.9						
WRA	Warramunga Arr	70.15	200	P	P	17 42 18.6	+0.4
	comp=Z,0.6nm,1.1s,baz=240,slow=7.5,SNR=2.8						
ASAR	Alice Springs	73.84	200	P	P	17 42 40.6	+0.4
	comp=Z,0.4nm,0.7s,baz=21,slow=5.6,SNR=5.2						
CLL	Collm	75.68	336	eP	P	17 42 50.0	-0.6
KRLC	Kraliky	75.71	334	eP	P	17 42 50.1	-0.8
KRLC	Kraliky	75.71	334	eP	P	17 42 50.1	-0.8
TXAR	Lajitas Array	75.89	62	P	P	17 42 53.4	+1.1
	comp=Z,0.9nm,0.6s,baz=297,slow=4.3,SNR=16						
KHC	Kasperske Hory	77.49	335	ceP	P	17 43 01.1	+0.1
KHC				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KHC	Kasperske Hory	77.49	335	eP	P	17 43 00.5	-0.5
GERES	GERESS Array B	77.71	335	P	P	17 43 01.0	-1.3
	comp=Z,0.9nm,0.6s,baz=28,slow=6.2,SNR=10						
GERES	GERESS Array B	77.71	335	eP	P	17 43 01.5	-0.8
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	78.14	318	P	P	17 43 03.6	-1.3
	comp=Z,1.6nm,0.8s,baz=75,slow=3.0,SNR=7.7						
BRTR	Keskin Array B	78.14	318	eP	P	17 43 04.2	-0.7
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SOKA	Soboth	79.27	333	eP	P	17 43 09.9	-1.0
	comp=Z,2.1nm,0.8s						
KBA	Koelnbreinsper	79.41	334	i P	P	17 43 11.6	-0.2
	comp=Z,2.8nm,0.5s						
OBKA	Obir	79.57	333	eP	P	17 43 12.2	-0.3
	comp=Z,3.3nm,0.7s						
WATA	Walderalm	79.68	336	eP	P	17 43 12.8	-0.4
	comp=Z,2.7nm,0.7s						
WTTA	Wattenberg	79.73	335	eP	P	17 43 13.1	-0.4
	comp=Z,3.5nm,0.6s						
RETA	Reutte	79.77	336	i P	P	17 43 13.2	-0.4
	comp=Z,1.6nm,0.7s						
MOTA	Moosalm	79.80	336	eP	P	17 43 13.6	-0.3
	comp=Z,1.7nm,0.6s						
SQTA	Sankt Quirin	79.89	336	eP	P	17 43 13.9	-0.4
	comp=Z,4.0nm,1.0s						
DAVA	Damuels	80.19	337	eP	P	17 43 16.0	0.0
	comp=Z,2.5nm,0.9s						
FETA	Feichten	80.20	336	eP	P	17 43 15.6	-0.5
	comp=Z,3.2nm,1.0s						
H03N2	Juan Fernandez	137.66	90	T	T	20 23 49.7	
	baz=309,slow=77,SNR=9.7						
H03N1	Juan Fernandez	137.68	90	T	T	20 23 51.1	
	baz=309,slow=77,SNR=9.3						
H03N3	Juan Fernandez	137.68	90	T	T	20 23 52.6	
	baz=309,slow=77,SNR=8.7						

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*SOME **04** 17:36:16.4, 41°.00N×74°.50E, h20km*
*KRNET **04** 17:36:16.5±0.1, 41°.08N×74°.45E, h17km, mb2.9*
*KNET **04** 17:36:17.7±0.9, 41°.17N×74°.51E, h4km±5km, ml2.2, Error ellipse: s-maj=6.3km s-min=4.0km az=7.0*
*NNC **04** 17:36:17.2±1.2, 41°.05N×74°.50E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=9.1km s-min=5.1km az=176.0*

ISC 04 17:36:15.1±1.5, **41°.01N**±0°.05×**74°.48E**±0°.02, **h5km**±15km, **n63, σ1s.55**/103, **43C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	1.17	286	⇑iP	Pg	17 36 38.2	+0.6
	baz=83						
ARSB				⇑iS	Sg	17 36 53.9	+1.0
	baz=83						
KZA	Kyzart	1.21	28	⇑iP	Pb	17 36 38.6	-0.1
	baz=31						
KZA				⇑iS	Sg	17 36 54.8	+0.6
	baz=31						
KZA	Kyzart	1.21	28	⇓P	Pb	17 36 38.7	-0.1
	13nm,0.2s,SNR=22						
KZA				⇑S	Sg	17 36 55.1	+0.9
	21nm,0.2s						
UCH	Uchtor	1.22	1	⇑iP	Pn	17 36 38.5	-0.7
	baz=2.0						
UCH				⇑iS	Sg	17 36 54.3	0.0
	baz=2.0						
UCH	Uchtor	1.22	1	⇑P	Pg	17 36 38.8	+0.3
	8.5nm,0.2s,SNR=28						
UCH				⇑S	Sg	17 36 54.6	+0.4
	27nm,0.3s						
AML	Almayashu	1.27	332	⇑iP	Pb	17 36 39.2	-0.5
	baz=32						
AML				⇑iS	Sg	17 36 55.8	-0.1
	baz=32						
AML	Almayashu	1.27	332	⇑P	Pb	17 36 39.0	-0.7
	16nm,0.3s,SNR=27						
AML				⇑S	Sg	17 36 55.8	-0.1
	28nm,0.3s						
AAK	Ala-Archa	1.63	0	⇑iP	Pg	17 36 46.0	-0.3
	baz=1.0						
AAK				⇑iS	Sg	17 37 06.9	-0.5
	baz=1.0						
AAK	Ala-Archa	1.63	0	⇑P	Pg	17 36 46.5	+0.2
	12nm,0.2s,SNR=9.5						
AAK				⇑S	Sg	17 37 07.3	-0.1
	25nm,0.3s						
AAK	Ala-Archa	1.63	0	⇓P	Pg	17 36 46.7	+0.4
	4.5nm,0.3s						
AAK				S	Sg	17 37 07.9	+0.5
	10nm,0.3s						
KBK	Karagaybulak	1.68	12	⇑iP	Pb	17 36 46.9	+0.3
	baz=13						
KBK				⇑iS	Sg	17 37 08.8	-0.4
	baz=13						
KBK	Karagaybulak	1.68	12	⇑P	Pg	17 36 47.4	+0.1
	13nm,0.2s,SNR=22						
KBK				⇑S	Sg	17 37 09.7	+0.5
	59nm,0.3s						
EKS2	Erkin-Say	1.73	343	⇓iP	Pg	17 36 47.8	-0.5
	baz=43						
EKS2				⇓iS	Sg	17 37 10.2	-0.6
	baz=43						
EKS2	Erkin-Say	1.73	343	⇑P	Pg	17 36 48.4	0.0
	5.0nm,0.4s,SNR=16						
ULHL	Ulahol	1.81	46	⇑iP	Pb	17 36 49.3	+0.5
	baz=48						
ULHL				⇑iS	Sg	17 37 13.6	+0.4
	baz=48						
ULHL	Ulahol	1.81	46	⇑P	Pb	17 36 49.0	+0.3
	8.8nm,0.3s,SNR=29						
ULHL				⇓S	Sg	17 37 12.8	-0.4
	31nm,0.2s						
BOOM	Boomskoye usch	1.84	36	⇓eP	Pg	17 36 50.2	-0.2
	baz=38						
BOOM				⇓iS	Sg	17 37 14.2	0.0
	baz=38						
MRKS	Merke	1.97	332	eP	Pg	17 36 53.1	+0.2
	25nm,0.5s						
MRKS				eS	Sg	17 37 19.5	+1.1
	53nm,0.5s						
MRKS	Merke	1.97	332	Pg	Pg	17 36 53.1	+0.2
	25nm,0.5s						
MRKS				Lg	Lg	17 37 19.5	
	53nm,0.5s						
CHMS	Chumysh	2.00	6	⇑iP	Pb	17 36 52.4	+0.5
	baz=7.0						
CHMS				⇑iS	Sg	17 37 18.5	-0.8
	baz=7.0						
CHMS	Chumysh	2.00	6	⇓P	Pg	17 36 52.6	-0.8
	4.5nm,0.3s,SNR=6.8						
ARK	Arkit	2.05	293	⇑iP	Pb	17 36 53.2	+0.3
	baz=91						
ARK				⇑iS	Sg	17 37 19.8	-1.2
	baz=91						
TKM2	Tokmak 2	2.08	23	⇑iP	Pb	17 36 53.9	+0.4
	baz=24						
TKM2				⇑iS	Sg	17 37 21.3	-0.7
	baz=24						
TKM2	Tokmak 2	2.08	23	⇑P	Pb	17 36 54.0	+0.6
	4.4nm,0.2s,SNR=14						
TKM2	Tokmak 2	2.08	23	⇑Pg	Pb	17 36 54.0	+0.6
	2.8nm,0.4s						
TKM2				⇓Lg	Lg	17 37 22.4	
	9.2nm,0.3s						
USP	Ospenovka	2.25	0	⇑iP	Pb	17 36 56.0	-0.3
	baz=1.0						
USP				⇑iS	Sg	17 37 25.0	-2.6
	baz=1.0						
KST	Kastek	2.31	28	eP	Pg	17 36 59.0	-0.4
	10nm,0.3s						
KST				eS	Sg	17 37 30.1	+0.7
	65nm,0.5s						
KST	Kastek	2.31	28	Pg	Pg	17 36 59.0	-0.4
	10nm,0.3s						
KST				Lg	Lg	17 37 30.1	
	65nm,0.5s						
KDJ	Kajisay	2.31	60	⇑eP	Pb	17 36 57.5	+0.1
	baz=62						
KDJ				⇑iS	Sb	17 37 27.9	+1.6
	baz=62						
SGDS	Sogindy	2.44	3	Pg	Pg	17 37 00.9	-1.0
	32nm,0.7s						
SGDS				Lg	Lg	17 37 33.3	
	27nm,0.8s						
MTBS	Maitube	2.57	34	eP	Pg	17 37 03.9	-0.4
	4.3nm,0.1s						
MTBS				eS	Sg	17 37 37.9	+0.3
	45nm,0.5s						
TNSS	Tian-Shan	2.73	41	eP	Pb	17 37 06.1	+1.4
	11nm,0.5s						
TNSS				eS	Sg	17 37 42.0	-0.9
	28nm,0.5s						
TNSS	Tian-Shan	2.73	41	Pg	Pb	17 37 06.1	+1.4
	11nm,0.5s						
TNSS				Lg	Lg	17 37 42.1	
	28nm,0.5s						
KRBS	Karabastau	2.83	18	eP	Pb	17 37 07.6	+1.5
	4.5nm,0.4s						
KRBS				eS	Sg	17 37 45.1	-0.8
	21nm,0.4s						
KRBS	Karabastau	2.83	18	Pg	Pb	17 37 07.6	+1.5
	4.5nm,0.4s						
KRBS				Lg	Lg	17 37 45.1	
	21nm,0.4s						
KNDC	Almaty	2.88	39	⇓Pg	Pg	17 37 12.5	+2.2
	9.0nm,0.5s						
KNDC				⇑Lg	Lg	17 37 47.9	
	30nm,0.5s						
MDOK	Medeo	2.88	41	eP	Pg	17 37 09.2	-1.1
	7.3nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MDOK				eS	Sg	17 37 47.1	-0.4
	26nm,0.8s						
MDOK	Medeo	2.88	41	Pg	Pg	17 37 09.4	-0.8
	3.7nm,0.4s						
MDOK				Lg	Lg	17 37 47.3	
	16nm,0.6s						
MDOK	Medeo	2.88	41	Pg	Pg	17 37 09.2	-1.1
	7.3nm,0.5s						
MDOK				Lg	Lg	17 37 47.1	
	26nm,0.8s						
KOTS	Kotyrbulak	2.96	41	eP	Pg	17 37 10.9	-1.0
	21nm,0.6s						
KOTS				eS	Sg	17 37 50.4	+0.1
	194nm,0.5s						
KOTS	Kotyrbulak	2.96	41	Pg	Pg	17 37 10.9	-1.0
	21nm,0.6s						
KOTS				Lg	Lg	17 37 50.4	
	194nm,0.5s						
ANVS	Anan'yevo	2.97	52	⇑iP	Pb	17 37 06.4	-2.1
	baz=54						
ANVS				⇑iS	Sb	17 37 42.9	-2.2
	baz=54						
KTBS	Karatobe	3.15	30	eP	Pb	17 37 13.6	+1.9
	4.6nm,0.4s						
KTBS				eS	Sg	17 37 55.0	-1.5
	59nm,0.5s						
KTBS	Karatobe	3.15	30	Pg	Pb	17 37 13.6	+1.9
	4.6nm,0.4s						
KTBS				Lg	Lg	17 37 55.0	
	59nm,0.5s						
KUU	Kurty	3.19	25	eP	Pg	17 37 14.9	-1.4
	2.3nm,0.4s						
KUU				eS	Sg	17 37 56.6	-1.0
	36nm,0.7s						
PRZ	Przheval'sk	3.28	62	⇑eP	Pb	17 37 11.3	-2.6
	baz=63						
PRZ				⇑iS	Sb	17 37 51.3	-2.9
	baz=63						
IUG	Iuzhnay	3.53	290	eP	Pg	17 37 21.4	-1.3
	1.9nm,0.5s						
IUG				eS	Sg	17 38 08.0	-0.4
	18nm,0.8s						
IUG	Iuzhnay	3.53	290	Pg	Pg	17 37 21.4	-1.3
	1.9nm,0.5s						
IUG				Lg	Lg	17 38 08.0	
	18nm,0.8s						
SATY	Saty	3.57	54	eP	Pg	17 37 21.8	-1.7
	2.5nm,0.2s						
SATY				eS	Sg	17 38 08.5	-1.2
	10nm,0.1s						
SATY	Saty	3.57	54	Pg	Pg	17 37 21.8	-1.7
	2.5nm,0.2s						
SATY				Lg	Lg	17 38 08.5	
	10nm,0.1s						
KK31	Karatay Array	3.62	307	⇓Pg	Pg	17 37 27.1	+2.6
	0.2nm,0.2s,baz=136,slow=18,SNR=5.4						
KK31				Lg	Lg	17 38 08.2	
	1.3nm,0.3s,baz=121,slow=27,SNR=9.9						
KURS	Kuram	3.69	47	eP	Pg	17 37 24.2	-1.6
	0.5nm,0.4s						
KURS				eS	Sg	17 38 12.7	-1.0
	5.1nm,0.7s						
UZB	Uzynbulak	4.00	56	eP	Pb	17 37 27.5	+1.5
	1.2nm,0.4s						
UZB				eS	Sb	17 38 18.5	+3.7
	4.1nm,0.1s						
UZB	Uzynbulak	4.00	56	Pg	Pb	17 37 27.5	+1.5
	2.9nm,0.3s						
UZB				Lg	Lg	17 38 18.5	
	4.1nm,0.1s						
BRLS	Borolday	4.00	302	eP	Pb	17 37 27.9	+1.7
	1.6nm,0.8s						
BRLS				eS	Sg	17 38 19.2	-4.5
	4.4nm,0.9s						
BRLS	Borolday	4.00	302	Pg	Pb	17 37 27.9	+1.7
	1.6nm,0.8s						
BRLS				Lg	Lg	17 38 19.2	
	4.4nm,0.9s						
ARXS	Arharly	4.04	37	eP	Pb	17 37 29.2	+2.4
	2.8nm,0.4s						
ARXS				eS	Sg	17 38 21.8	-3.1
	23nm,0.4s						
ARXS	Arharly	4.04	37	Pg	Pb	17 37 29.2	+2.4
	4.4nm,0.5s						
ARXS				Lg	Lg	17 38 21.8	
	23nm,0.4s						
SHLS	Shalkode	4.28	58	eP	Pg	17 37 38.4	+1.2
	2.7nm,0.2s						
SHLS				eS	Sg	17 38 37.0	+4.3
	12nm,0.6s						
PDGK	Podgornoye	4.38	56	Pg	Pb	17 37 35.0	+2.3
	0.9nm,0.4s						
PDGK				Lg	Lg	17 38 31.2	
	3.4nm,0.8s						
PDGK	Podgornoye	4.38	56	⇑Pg	Pg	17 37 39.2	+0.1
	0.8nm,0.4s						
PDGK				⇓Lg	Lg	17 38 31.6	
	5.4nm,0.6s						
DJR	Jarkent	5.13	48	eP	Pb	17 37 49.4	+4.0
	0.5nm,0.1s						
DJR				eS	Sg	17 38 56.1	-3.7
	1.1nm,0.1s						
DJR	Jarkent	5.13	48	Pg	Pb	17 37 49.4	+4.0
	1.1nm,0.2s						
DJR				Lg	Lg	17 38 56.1	
	3.4nm,0.6s						

*IDC **04** 17:47:21.2±1.4, 3.°98S×143.°52E, h0km, mb3.6/6, mb1 3.8/8, mb1mx3.6/37, mbtmp3.6/8, ML3.7/2, Error ellipse: s-maj=26.6km s-min=21.1km az=69.0*

ISC 04 17:47:22.8±1.4**, 4.°0S**±0.°2×**143.°5E**±0.°2**, h10**km**, n8,** σ1s**22**/8**, mb3.5**/6**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	3.10	297	Pn	Pn	17 48 10.7	-1.1
	0.9nm,0.3s,baz=334,slow=14,SNR=18						
JAY				Lg	Lg	17 49 01.5	
	2.1nm,0.3s,baz=153,slow=8.2,SNR=4.4						
WRA	Warramunga Arr	18.21	208	P	P	17 51 36.5	+0.4
	0.6nm,0.3s,baz=28,slow=12,SNR=29						
ASAR	Alice Springs	21.66	204	P	P	17 52 13.4	-0.2
	0.8nm,0.6s,baz=34,slow=11,SNR=21						
FITZ	Fitzroy Crossi	22.40	230	P	P	17 52 21.2	-0.5
	1.4nm,0.4s,baz=51,slow=4.2,SNR=23						
CMAR	Chiang Mai Arr	49.18	298	P	P	17 56 12.7	+1.2
	0.3nm,0.7s,baz=108,slow=5.8,SNR=4.2						
MKAR	Makanchi Array	73.69	321	P	P	17 58 58.0	+1.0
	0.3nm,0.7s,baz=116,slow=5.6,SNR=3.7						
ZALV	Zalesovo Beam	75.42	329	P	P	17 59 08.0	+1.2
	0.3nm,0.2s,baz=110,slow=6.3,SNR=1.9						
ILAR	Eielson Array	85.02	24	P	P	17 59 56.9	-1.4
	0.3nm,0.9s,baz=246,slow=6.6,SNR=2.1						

*IDC **04** 18:07:36.8±3.4, 26.°56S×174.°65W, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.8/42, mbtmp3.9/5, MS3.4/6, Ms1 3.4/6, ms1mx3.0/31, Error ellipse: s-maj=232.3km s-min=31.5km az=164.0*

ISC 04 18:07:42.0±3.2**, 27°S**±2°×**174.°7W**±0.°4**, h35**km**, n12,** σ1s**51**/7**, mb4.3**/5**, MS3.6**/4**, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	Rarotonga	14.64	72	LR	LR	18 14 43.2	
	comp=Z,50nm,21.1s,baz=294,slow=29						
DZM	Mont Dzumac	17.80	281	LR	LR	18 17 08.0	
	comp=Z,85nm,21.2s,baz=110,slow=32						
PPT	Papeete	24.89	74	LR	LR	18 21 49.5	
	comp=Z,49nm,18.6s,baz=212,slow=34						
CTA	Charters Tower	36.37	272	P	P	18 14 41.7	-1.4
	1.4nm,0.3s,baz=94,slow=12,SNR=6.8						
STKA	Stephens Creek	38.33	252	LR	LR	18 28 55.0	
	comp=Z,89nm,21.0s,baz=31,slow=33						
ASAR	Alice Springs	46.40	262	P	P	18 16 05.3	-0.1
	0.8nm,0.8s,baz=94,slow=7.7,SNR=10						
ASAR				LR	LR	18 33 58.1	
	comp=Z,66nm,20.4s,baz=112,slow=34						
WRA	Warramunga Arr	47.07	267	P	P	18 16 10.7	0.0
	2.4nm,0.7s,baz=103,slow=8.0,SNR=11						
BATI	Baumata	60.23	273	LR	LR	18 42 10.3	
	comp=Z,82nm,19.4s,baz=162,slow=34						
TXAR	Lajitas Array	87.86	56	P	P	18 20 27.2	-1.0
	0.1nm,0.5s,baz=218,slow=5.7,SNR=2.3						
CMAR	Chiang Mai Arr	94.99	288	P	P	18 21 03.0	+1.5
	1.4nm,0.8s,baz=122,slow=3.5,SNR=13						
AKASG	Malin Array Be	149.83	329	PKPbc	PKPbc	18 27 27.4	-0.6
	0.5nm,0.5s,baz=41,slow=3.6,SNR=6.4						
BRTR	Keskin Array B	153.08	306	PKPbc	PKiKP	18 27 38.2	+1.9
	0.3nm,0.5s,baz=282,slow=29,SNR=2.2						

IDC 04 18:07:44.4±5.6**, 19.°39S**×**166.°71E, h0**km**, mb3.9**/3**, mb1 4.2**/3**, mb1mx3.6**/40**, mbtmp3.9**/3**, Error ellipse: s-maj=246.7km s-min=37.8km az=149.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.46	263	P	P	18 13 59.3	+0.1
	0.6nm,0.5s,baz=91,slow=6.8,SNR=20						
ASAR	Alice Springs	30.77	256	P	P	18 14 01.6	-0.2
	2.6nm,0.5s,baz=88,slow=7.7,SNR=141						
ILAR	Eielson Array	91.10	18	P	P	18 20 50.5	+0.1
	0.6nm,1.0s,baz=238,slow=5.0,SNR=4.2						

*SOME **04** 18:09:35.2, 41.°73N×72.°08E, h15km*

*NNC **04** 18:09:36.1±1.1, 41.°85N×72.°05E, h0km, mb2.8, mpv2.6, Error ellipse: s-maj=12.1km s-min=3.5km az=172.0*

*KRNET **04** 18:09:36.2±0.1, 41.°72N×72.°14E, h20km, mb2.2*

ISC 04 18:09:35.7±0.9**, 41.°74N**±0.°04×**72.°09E**±0.°02**, h14**km±6km**, n28,** σ1s**41**/49**, 15C-5D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	Arkit	0.11	303	⇑iP	Pg	18 09 39.2	0.0
	baz=97						
ARK				⇑iS	Sg	18 09 41.9	+0.4
	baz=97						
ARSB	Arslanbob	0.79	121	⇓iP	Pg	18 09 50.7	-0.3
	baz=22						
ARSB				⇓iS	Sg	18 10 01.0	-0.4
	baz=22						
AML	Almayashu	1.26	71	⇑iP	Pn	18 09 58.9	-0.3
	baz=70						
AML				⇑iS	Sb	18 10 15.4	-0.3
	baz=70						
MRKS	Merke	1.31	40	eP	Pn	18 09 59.9	+0.3
	3.0nm,0.2s						
MRKS				eS	Sn	18 10 17.5	+0.5
	12nm,0.5s						
MRKS	Merke	1.31	40	P	Pn	18 09 59.9	+0.3
	6.3nm,0.2s						
MRKS				S	Sn	18 10 17.5	+0.5
	12nm,0.5s						
EKS2	Erkin-Say	1.56	53	⇑iP	Pb	18 10 04.2	-0.1
	baz=52						
EKS2				⇑iS	Sb	18 10 25.0	+1.1
	baz=52						
IUG	Iuzhnay	1.59	286	eP	Pn	18 10 04.3	+0.9
	1.2nm,0.2s						
IUG				eS	Sb	18 10 24.9	+0.1
	14nm,0.3s						
IUG	Iuzhnay	1.59	286	P	Pn	18 10 04.3	+0.9
IUG				S	Sb	18 10 24.9	+0.1
	14nm,0.3s						
KK31	Karatay Array	1.80	320	P	Pn	18 10 06.8	+0.5
	0.7nm,0.3s,baz=133,slow=15,SNR=24						
KK31				S	Sn	18 10 29.9	+1.1
	2.2nm,0.3s,baz=140,slow=30,SNR=13						
UCH	Uchtor	1.87	74	⇑iP	Pb	18 10 09.8	-0.1
	baz=73						
UCH				⇑iS	Sb	18 10 34.5	+1.2
	baz=73						
BTK	Batken	1.93	210	⇓iP	Pb	18 10 11.3	+0.6
	baz=11						
BTK				⇓iS	Sg	18 10 36.6	-1.3
	baz=11						
AAK	Ala-Archa	2.00	62	⇑iP	Pb	18 10 11.7	-0.2
	baz=62						
AAK				⇑iS	Sb	18 10 38.0	+1.3
	baz=62						
AAK	Ala-Archa	2.00	62	⇓P	Pb	18 10 11.5	-0.4
	1.0nm,0.4s						
AAK				⇑S	Sb	18 10 38.9	+2.1
	2.3nm,0.6s						
BRLS	Borolday	2.11	309	eP	Pb	18 10 12.6	-1.0
	1.7nm,0.4s						
BRLS				eS	Sb	18 10 39.0	-0.7
	9.1nm,0.4s						
BRLS	Borolday	2.11	309	Pg	Pb	18 10 12.6	-1.0
	1.7nm,0.4s						
BRLS				Lg	Lg	18 10 39.0	
	9.1nm,0.4s						
KBK	Karagaybulak	2.31	66	⇑iP	Pb	18 10 16.6	-0.7
	baz=65						
KBK				⇑iS	Sb	18 10 46.0	+0.2
	baz=65						
KZA	Kyzart	2.38	81	⇑iP	Pb	18 10 17.1	-1.5
	baz=80						
KZA				⇑iS	Sb	18 10 47.2	-0.8
	baz=80						
SGDS	Sogindy	2.54	47	Pg	Pb	18 10 21.8	+0.8
	1.5nm,0.4s						
SGDS				Lg	Lg	18 10 54.7	
	4.7nm,0.3s						
KST	Kastek	3.15	64	eP	Pb	18 10 32.7	+1.2
	0.8nm,0.1s						
KST				eS	Sb	18 11 13.8	+4.0
	2.3nm,0.4s						
KST	Kastek	3.15	64	Pg	Pb	18 10 32.7	+1.2
	0.8nm,0.5s						
KST				Lg	Lg	18 11 13.8	
	5.3nm,0.6s						
KRBS	Karabastau	3.29	52	eP	Pb	18 10 33.1	-0.7
	0.9nm,0.4s						
KRBS				eS	Sb	18 11 14.1	+0.4
	1.5nm,0.5s						
KRBS	Karabastau	3.29	52	Pg	Pb	18 10 33.1	-0.7
	0.9nm,0.4s						
KRBS				Lg	Lg	18 11 14.1	
	1.5nm,0.5s						
BTLS	Baital	3.60	23	eP	Pb	18 10 41.1	+2.1
	0.4nm,0.2s						
BTLS				eS	Sg	18 11 27.7	-3.5
	1.1nm,0.3s						
BTLS	Baital	3.60	23	Pg	Pb	18 10 41.1	+2.1
	1.2nm,0.5s						
BTLS				Lg	Lg	18 11 27.2	
	1.4nm,0.4s						
KTBS	Karatobe	3.92	58	eP	Pb	18 10 45.4	+0.9
	1.5nm,1.2s						
KTBS				eS	Sb	18 11 35.4	+3.6
	5.2nm,0.4s						
KTBS	Karatobe	3.92	58	Pg	Pb	18 10 45.4	+0.9
	1.5nm,1.2s						
KTBS				Lg	Lg	18 11 36.0	
	5.2nm,0.4s						
MNBS	Baschi	5.19	61	eP	Pg	18 11 12.6	-2.5
	0.1nm,0.1s						
MNBS				eS	Sg	18 12 22.0	-0.3
	0.9nm,0.4s						
MNBS	Baschi	5.19	61	Pg	Pg	18 11 12.6	-2.5
	0.3nm,0.4s						
MNBS				Lg	Lg	18 12 22.0	
	1.3nm,0.3s						

*NEIC **04** 18:16:34.8±2.8, 4.°17S±0.°08×102.°53E±0.°08, h99km±2km, mb4.4/28, Error ellipse: s-maj=13.3km s-min=9.6km az=50.0*

*DJA **04** 18:16:34.6±0.3, 4°S±4°×10°2E±°, h93km±2km, M4.8/25, mb4.7/25, mB5.4/11, MLv4.8/25, Mw(mB)4.9/11*

*KLM **04** 18:16:35.0, 4.°24S×102.°20E, h107km, mb4.4*

*IDC **04** 18:16:38.4±2.2, 3.°97S×102.°81E, h115km±17km, mb4.0/23, mb1 4.0/24, mb1mx3.8/53, mbtmp4.3/24, MS3.2/2, Ms1 3.2/2, ms1mx2.5/30, Error ellipse: s-maj=25.2km s-min=9.1km az=51.0*

ISC 04 18:16:35.2±0.5**, 4.°19S**±0.°06×**102.°55E**±0.°06**, h100**km**, n140,** σ1s**65**/131**, mb4.3**/40**, 6C-5D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	0.44	113	P	Pn	18 16 50.6	+0.1
MNAI				S	Sn	18 17 02.0	0.0
MNAI	Manna	0.44	113		Pn	18 16 50.8	+0.2
KSI	Kapahiang	0.53	4	P	Pn	18 16 50.4	-0.9
MASI	Maura Aman, Be	1.08	343	P	Pn	18 16 56.6	0.0
MDSI	Maura Dua	1.65	100	P	Pn	18 17 04.0	+0.8
LWLI	Liwa	1.71	119	P	Pn	18 17 05.3	+1.1
KRJI	Kerinci	2.35	332	P	Pn	18 17 13.6	+1.2
PMBI	Palembang	2.54	61	P	Pn	18 17 14.6	-0.3
PMBI	Palembang	2.54	61		Pn	18 17 15.2	+0.3
PPSI	Pulau Pagai	2.91	299	P	Pn	18 17 19.7	0.0
BLSI	Bandar Lampung	2.93	114	P	Pn	18 17 21.1	+1.1
SDSI	Sungai Dareh	3.42	341	P	Pn	18 17 26.0	-0.6
RGRI	Rengat	3.82	357	P	Pn	18 17 34.6	+2.7
PDSI	Padang	3.87	327	P	Pn	18 17 32.0	-0.6
SISI	Saibi	4.48	309	P	Pn	18 17 40.3	-0.5
BKNI	Bangkinang	4.73	341	P	Pn	18 17 44.6	+0.3
BKNI	Bangkinang	4.73	341		Pn	18 17 43.5	-0.7
DBJI	Dramaga	4.79	120	P	Pn	18 17 46.8	+1.7
SKJI	Sukabumi	4.87	125	P	Pn	18 17 48.5	+2.4
TPRI	Tanjung Pinang	5.44	21	P	Pn	18 17 54.6	+0.7
	0.2nm986nm32nm,0.7s						
CNJI	Cibinong	5.51	124	P	Pn	18 17 54.6	-0.2
	1.3nm8µm171nm,0.5s						
LEM	Lembang	5.68	118	P	Pn	18 17 58.8	+1.4
	12nm,0.3s,baz=23,slow=15,SNR=15						
MNSI	Mandailing Nat	5.77	329	P	Pn	18 17 57.1	-1.3
	0.8nm3µm156nm,0.5s						
PBSI	Pulau Batu	5.92	314	P	Pn	18 17 59.7	-0.7
	1.1nm5µm215nm,0.8s						
MYKOM	Kota Tinggi	6.08	12		Pn	18 18 00.6	-1.9
MYKOM	Kota Tinggi	6.08	12	P	Pn	18 18 05.0	+2.5
CISI	Cisompet, Garu	6.21	123	P	Pn	18 18 04.2	-0.2
CISI	Cisompet, Garu	6.21	123		Pn	18 18 04.0	-0.5
XMIS	Christmas Isla	6.97	154		Pn	18 18 09.2	-5.5
GSI	Gunungsitoli	7.38	318	P	Pn	18 18 18.6	-1.7
	2.8nm756nm,0.5s						
GSI	Gunungsitoli	7.38	318		Pn	18 18 18.3	-2.0
RPSI	Rantau Prapat	7.74	332		Pn	18 18 22.9	-2.2
RPSI	Rantau Prapat	7.74	332		Pn	18 18 23.5	-1.7
PSI	Prapat	7.83	332	P	Pn	18 18 23.5	-3.1
	4.6nm,0.3s,baz=181,slow=8.6,SNR=11						
PSI				LR	LR	18 21 22.1	
	comp=Z,73nm,19.1s,baz=190,slow=37						
SMRI	Semarang	8.35	110	P	Pn	18 18 35.0	+1.5
	91nm,0.7s						
IPM	Ipoh	8.74	350	P	Pn	18 18 39.0	+0.2
UGM	Wanagama	8.75	115		Pn	18 18 39.7	+0.8
KCSI	Kotacane, Aceh	9.03	328	P	Pn	18 18 39.7	-3.0
	840nm28nm,0.6s						
SNSI	Sinabang, Aceh	9.04	316	P	Pn	18 18 42.1	-0.7
	0.6nm186nm,1.0s						
KSM	Kuching	9.57	54		Pn	18 18 47.6	-2.5
KSM	Kuching	9.57	54	P	Pn	18 18 54.0	+3.9
KULM	Kulim	9.60	349		Pn	18 18 49.6	-0.9
KULM	Kulim	9.60	349	P	Pn	18 18 50.0	-0.5
COCO	West Island	9.76	215		Pn	18 18 51.0	-1.6
MLSI	Meulaboh, Aceh	10.40	324	P	Pn	18 18 58.5	-3.0
	3µm166nm,0.9s						
SBUM	Sibu	11.70	56	P	Pn	18 19 23.0	+4.1
JAGI	Jajag, Banyuwa	12.29	111	P	Pn	18 19 27.3	+0.5
	3µm113nm,0.8s						
JAGI	Jajag, Banyuwa	12.29	111		Pn	18 19 25.7	-1.1
PLAI	Plampang	15.81	108	P	Pn	18 20 09.9	-2.3
	39nm,0.8s						
SPMM	Sapulut	16.47	58	P	P	18 20 24.0	+2.6
BNSI	Bone	17.51	91	P	P	18 20 32.3	-0.5
	19nm,1.2s						
MPSI	Mapaga	17.90	76	P	Pn	18 20 39.5	+1.6
	16nm,0.8s						
APSI	Ampana	19.35	81	P	Pn	18 20 54.6	-0.5
	16nm,0.9s						
MRSI	Marisa	19.92	77	P	Pn	18 21 01.0	-0.7
	312nm38nm,0.6s						
BATI	Baumata	21.77	107	P	P	18 21 19.0	-0.1
	3.5nm,0.3s,baz=79,slow=15,SNR=1.8						
BATI				S	S	18 25 06.3	-8.0
	11nm,0.6s,baz=305,slow=19,SNR=3.5						
CM31	Chiang Mai Arr	22.78	351	P	P	18 21 28.7	-0.7
CM31				IAmb	IAmb	18 21 30.7	
	comp=Z,18nm,0.8s						
CMAR	Chiang Mai Arr	22.78	351	P	P	18 21 28.9	-0.6
	comp=Z,10nm,0.7s,baz=184,slow=8.7,SNR=68						
CHTO	Chiang Mai	23.13	351	P	P	18 21 31.6	-1.3
CHTO				IAmb	IAmb	18 21 33.7	
	comp=Z,20nm,1.4s						
LBMI	Labuha	25.17	83	P	P	18 21 53.0	+1.5
	comp=Z,21nm,0.8s						
FITZ	Fitzroy Crossi	26.48	123	P	P	18 22 04.6	+1.3
	comp=Z,4.7nm,0.8s,baz=272,slow=1.9,SNR=8.6						
FITZ	Fitzroy Crossi	26.48	123	P	P	18 22 04.1	+0.8
FITZ				IAmb	IAmb	18 22 05.3	
	comp=Z,6.0nm,0.9s						
H08S2	Diego Garcia H	30.09	262	T	T	18 52 54.3	
	baz=84,slow=75,SNR=58						
H08S3	Diego Garcia H	30.10	262	T	T	18 52 58.7	
	baz=84,slow=75,SNR=8.8						
H08S1	Diego Carcia H	30.11	262	T	T	18 52 55.4	
	baz=84,slow=75,SNR=73						
H01W3	Cape Leeuwin H	32.38	162	T	T	18 57 05.8	
	baz=338,slow=76,SNR=16						
H01W2	Cape Leeuwin H	32.39	162	T	T	18 56 42.7	
	baz=338,slow=76,SNR=18						
H01W1	Cape Leeuwin H	32.39	162	T	T	18 56 57.1	
	baz=338,slow=76,SNR=20						
ODAN	Odare	34.17	335	eP	P	18 23 10.0	-1.3
TAPN	Taplejung	34.47	336	eP	P	18 23 14.3	+0.4
RAMN	Ramite	34.58	334	eP	P	18 23 13.7	-1.1
WB0	Warramunga Arr	34.68	119	P	P	18 23 15.1	-0.4
WB0				IAmb	IAmb	18 23 24.1	
	comp=Z,11nm,1.3s						
WRA	Warramunga Arr	34.70	119	P	P	18 23 16.8	+1.0
	comp=Z,1.4nm,0.5s,baz=302,slow=9.0,SNR=18						
WRAB	Tennant Creek	34.70	119	P	P	18 23 16.2	+0.4
WB2	Warramunga Arr	34.71	119	P	P	18 23 15.7	-0.1
WB2				IAmb	IAmb	18 23 24.2	
	comp=Z,4.0nm,0.7s						
WR0	Warramunga Arr	34.88	119	P	P	18 23 17.9	+0.6
WR0				IAmb	IAmb	18 23 35.3	
	comp=Z,4.0nm,1.2s						
JIRN	Jiri	35.38	334	eP	P	18 23 21.9	+0.1
PKIN	Phulchoki	35.66	333	eP	P	18 23 24.1	0.0
GUN	Gumba	35.73	334	eP	P	18 23 25.4	+0.6
	comp=Z,8.3nm,0.4s						
DMN	Daman	35.81	333	eP	P	18 23 25.2	-0.2
KKN	Kakani	35.89	333	eP	P	18 23 26.4	+0.4
	comp=Z,6.5nm,0.5s						
AS31	Alice Springs	35.91	126	P	P	18 23 27.2	+1.1
ASAR	Alice Springs	35.91	126	P	P	18 23 27.4	+1.2
	comp=Z,0.7nm,0.3s,baz=300,slow=8.2,SNR=23						
ASAR				S	S	18 28 56.2	-1.0
	comp=Z,4.1nm,1.1s,baz=291,slow=15,SNR=14						
ASAR				ScP	ScP	18 29 29.8	+1.2
	comp=Z,0.5nm,0.9s,baz=293,slow=4.0,SNR=4.2						
GKN	Gorkha	36.37	333	eP	P	18 23 30.7	+0.7
	comp=Z,14nm,0.2s						
KOLN	Koldanda	36.66	331	eP	P	18 23 33.1	+0.6
DANN	Dangsing	37.07	332	eP	P	18 23 36.7	+0.6
	comp=Z,41nm,0.4s						
XAN	Xi'an	38.49	9	P	P	18 23 47.5	-0.2
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,90nm,3.8s						
GTA	Gaotai	43.45	357	⇓P	P	18 24 29.2	+0.7
GTA				pP	pP	18 24 54.9	+2.8
GTA				sP	sP	18 25 05.6	+2.1
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC	Hu-ho-hao-te	45.57	10	eP	P	18 24 45.8	+0.5
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,31nm,4.9s						
STKA	Stephens Creek	45.80	132	P	P	18 24 48.5	+1.4
	comp=Z,1.7nm,0.6s,baz=303,slow=8.7,SNR=7.2						
STKA	Stephens Creek	45.80	132	P	P	18 24 48.5	+1.4
NIL	Nilore	46.72	326	P	P	18 24 56.9	+2.6
NIL				IAmb	IAmb	18 24 57.5	
	comp=Z,8.7nm,0.9s						
KSRS	Korea Array	47.68	27	P	P	18 25 01.3	-0.3
	comp=Z,1.3nm,0.8s,baz=203,slow=8.0,SNR=2.9						
WMQ	Urumqi	49.63	346	eP	P	18 25 17.5	+0.9
KDJ	Kajisay	51.55	336	P	P	18 25 31.6	+0.4
SONM	Songino Array	51.91	3	P	P	18 25 34.7	+1.0
	comp=Z,12nm,0.6s,baz=183,slow=9.4,SNR=93						
ULN	Ulaanbaatar	51.98	4	P	P	18 25 35.2	+0.9
GAR	Garm	52.27	328	P	P	18 25 35.3	-1.2
GAR				IAmb	IAmb	18 25 44.3	
	comp=Z,2.9nm,0.6s						
MAJO	Matsushiro	52.44	36	P	P	18 25 36.1	-1.5
MAJO				IAmb	IAmb	18 25 50.7	
	comp=Z,11nm,1.4s						
MAT	Matsushiro	52.44	36	P	P	18 25 36.1	-1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MJB9	Matsu-Tunnel	52.44	36	P	P	18 25 36.0	-1.6
MJAR	Matsushiro Arr	52.44	36	P	P	18 25 36.3	-1.3
	comp=Z,2.7nm,0.6s,baz=204,slow=5.7,SNR=11						
ARSB	Arslanbob	52.73	332	P	P	18 25 38.0	-1.9
ARSB				IAmb	IAmb	18 25 42.1	
	comp=Z,3.5nm,0.5s						
AAK	Ala-Archa	53.09	334	P	P	18 25 41.7	-0.9
AAK				IAmb	IAmb	18 25 48.9	
	comp=Z,2.5nm,1.2s						
MK31	Makanchi Array	53.83	343	P	P	18 25 47.5	-0.2
MKAR	Makanchi Array	53.83	343	P	P	18 25 47.8	+0.1
	comp=Z,1.9nm,0.4s,baz=152,slow=9.0,SNR=51						
MAKZ	Makanchi	53.94	343	P	P	18 25 49.4	+0.9
USA0B	Ussuriysk Arra	54.95	26	P	P	18 25 55.5	-0.3
USRK	Ussuriysk Ar.	54.95	26	P	P	18 25 55.8	0.0
	comp=Z,5.9nm,0.7s,baz=208,slow=5.1,SNR=12						
KK31	Karatay Array	55.26	332	P	P	18 25 57.1	-1.0
KKAR	Karatay Array	55.26	332	P	P	18 25 57.1	-1.0
TLY	Talaya	55.66	1	P	P	18 26 02.4	+1.6
	comp=Z,4.3nm,0.7s,baz=208,slow=4.0,SNR=7.8						
KURK	Kurchatov	58.43	342	P	P	18 26 19.1	-1.2
KURK				IAmb	IAmb	18 26 22.0	
	comp=Z,3.5nm,1.1s						
ZAA0	Zalesovo Array	59.80	348	P	P	18 26 28.4	-1.2
ZALV	Zalesovo Beam	59.80	348	P	P	18 26 29.3	-0.4
	comp=Z,4.0nm,0.4s,baz=171,slow=5.1,SNR=28						
ASAJ	Asahikawa	60.02	32	P	P	18 26 31.6	+0.1
	comp=Z,5.6nm,0.5s,baz=239,slow=9.2,SNR=12						
YSS	Yuzh-Sakhalins	62.03	30	P	P	18 26 44.8	-0.1
BRVK	Borovoye	63.18	339	P	P	18 26 51.6	-0.9
BRVK				IAmb	IAmb	18 26 53.1	
	comp=Z,2.8nm,0.9s						
DZM	Mont Dzumac	64.26	112	LR	LR	18 58 07.5	
	comp=Z,42nm,18.4s,baz=218,slow=39						
ABKAR	Akbulak array	64.78	331	P	P	18 27 00.6	-2.5
ABKAR				IAmb	IAmb	18 27 04.7	
	comp=Z,4.9nm,0.6s						
KBZ	Khabaz	71.62	319	P	P	18 27 48.2	+2.3
	comp=Z,2.7nm,0.8s,baz=118,slow=6.9,SNR=8.1						
MA2	Magadan	73.99	23	P	P	18 27 59.4	-0.2
	comp=Z,3.7nm,0.7s,baz=201,slow=5.6,SNR=6.2						
NRIK	Noril'sk	74.09	355	P	P	18 27 59.2	-0.8
	comp=Z,1.7nm,0.3s,baz=146,slow=6.3,SNR=5.0						
BRTR	Keskin Array B	76.67	312	P	P	18 28 17.6	+2.0
	comp=Z,0.8nm,0.7s,baz=134,slow=8.8,SNR=4.7						
SEY	Seymchan	76.71	21	P	P	18 28 14.7	-0.4
	comp=Z,2.0nm,0.7s,baz=229,slow=3.3,SNR=12						
TIXI	Tiksi	77.62	8	P	P	18 28 18.4	-1.6
	comp=Z,1.2nm,0.3s,baz=215,slow=2.1,SNR=11						
TIXI	Tiksi	77.62	8	P	P	18 28 18.6	-1.4
MFTR	Murfatlar	81.61	316	⇑P	P	18 28 45.5	+3.3
TLBR	Topalu	81.96	316	⇑P	P	18 28 47.6	+3.6
ICOR	Ion Corvin	82.03	315	⇑P	P	18 28 40.3	-4.1
HARR	Harsova	82.08	316	⇓P	P	18 28 50.3	+5.7
AMRR	Amara	82.47	316	⇑P	P	18 28 48.0	+1.3
RASA	Rasa	82.51	315	⇓P	P	18 28 42.3	-4.6
AKASG	Malin Array Be	82.76	322	P	P	18 28 50.6	+2.5
	comp=Z,0.1nm,0.3s,baz=110,slow=25,SNR=1.7						
LEHL	Lehliu	82.80	316	⇓P	P	18 28 43.1	-5.3
RAZG	Razgrad	82.82	315	⇑P	P	18 28 42.9	-5.6
ELND	Elena	83.13	314	⇑P	P	18 28 53.2	+3.0
PLVB	Pleven	84.12	314	⇓P	P	18 29 03.7	+8.5
FINES	FINESS Array B	87.22	332	P	P	18 29 10.8	+0.7
	comp=Z,1.0nm,0.6s,baz=114,slow=3.6,SNR=12						
ARCES	ARCESS Array B	89.39	340	P	P	18 29 20.5	+0.3
	comp=Z,1.7nm,0.9s,baz=100,slow=6.3,SNR=6.5						
TXAR	Lajitas Array	144.75	42	PKP	PKPdf	18 36 00.9	-0.2
	comp=Z,2.2nm,0.6s,baz=289,slow=1.1,SNR=39						

*NIED **04** 18:21:00, 30°.00N×130°.80E, h35km, Mw4.1 Best double couple: $M_0$1.54000×10^15 NP1:ϕ_s33.00000°, δ75.00000°, λ92.00000°. NP2:ϕ_s203.00000°, δ15.00000°, λ81.00000°.*

*JMA **04** 18:21:59.1±0.1, 30°.00N×130°.84E, h30km±1km, M3.8*

*IDC **04** 18:22:12.7±2.5, 31°.08N×130°.78E, h118km±20km, mb3.4/9, mb1 3.4/11, mb1mx3.3/38, mbtmp3.7/11, MS2.8/7, Ms1 2.8/7, ms1mx2.6/31, Error ellipse: s-maj=31.8km s-min=22.5km az=57.0*

ISC 04 18:21:59.3±1.1**, 30°.06N**±0°.04×**130°.85E**±0°.07**, h36**km±1km**, n31, σ2**s**21**/37**, mb3.7**/9**, 4D, Kyushu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JMTN	Minamitane	0.34	7	⇓P	Pn	18 22 07.7	0.0
JMTN				S	Sn	18 22 14.0	-0.4
JYAK	Yakushimahirau	0.34	301	⇓P	Pn	18 22 07.2	-0.5
JYAK				S	Sn	18 22 13.4	-0.9
JTN	Tanegashima 3	0.60	11	⇓P	Pn	18 22 11.9	+0.4
JTN				S	Sn	18 22 21.1	+1.1
JKC	Kuchinoerabu	0.69	305	⇓P	Pn	18 22 12.9	+0.3
JKC				S	Sn	18 22 22.7	+0.6
JNN	Nakanoshima	0.87	256	P	Pn	18 22 15.1	0.0
JNN				S	Sn	18 22 27.8	+1.2
JTSR	Tashiro 2	1.10	3	P	Pn	18 22 20.0	+1.7
JTSR				eS	Sn	18 22 35.3	+3.0
JSU	Suzuyama	1.48	347	P	Pn	18 22 24.6	+1.2
JSU				S	Sn	18 22 43.7	+2.1
JNAR	Kushima--Naru	1.51	14	P	Pn	18 22 26.1	+2.3
JNAR				S	Sn	18 22 47.0	+4.9
JTAJ	Takarajima	1.69	238	P	Pn	18 22 27.7	+1.4
JTAJ				eS	Sn	18 22 49.3	+2.5
JAM	Amami Oshima	1.97	214	P	Pn	18 22 31.3	+1.2
JAMN	Amaminishikomi	2.33	219	P	Pn	18 22 36.2	+1.1
JTK	Tokunoshima	2.81	217	P	Pn	18 22 42.9	+1.2
JTK				eS	Sn	18 23 16.3	+1.9
JNU	Nakatsue	3.05	0	P	Pn	18 22 47.4	+2.3
	3.0nm,0.3s,baz=240,slow=3.4,SNR=28						
JNU				S	Sn	18 23 12.6	-7.8
	5.1nm,0.3s,baz=178,slow=9.3,SNR=5.8						
JOKE	Okinoerabujima	3.35	217	P	Pn	18 22 51.0	+1.8
JOKE				eS	Sn	18 23 28.5	+0.8
JYRO	Yoronjima	3.69	215	eS	Sn	18 23 35.2	-0.8
KSRS	Korea Array	7.77	343	P	Pn	18 23 52.1	+2.4
	0.2nm,0.3s,baz=161,slow=14,SNR=4.9						
KSRS				LR	LR	18 26 24.7	
	comp=Z,30nm,21.6s,baz=154,slow=37						
MJAR	Matsushiro Arr	8.93	42	P	Pn	18 24 08.7	+3.0
	0.0nm,0.3s,baz=239,slow=16,SNR=1.6						
JCJ	Chichijima	10.39	104	LR	LR	18 27 58.3	
	comp=Z,50nm,20.9s,baz=75,slow=32						
USRK	Ussuriysk Ar.	14.14	3	LR	LR	18 30 20.9	
	comp=Z,28nm,19.1s,baz=131,slow=37						
ASAJ	Asahikawa	16.85	30	LR	LR	18 32 37.5	
	comp=Z,39nm,20.6s,baz=180,slow=39						
KLR	Kul'dur	19.16	2	LR	LR	18 34 19.7	
	comp=Z,31nm,18.1s,baz=174,slow=40						
SONM	Songino Array	25.84	320	P	P	18 27 26.6	-0.8
	1.8nm,0.9s,baz=136,slow=9.2,SNR=5.3						
SONM				LR	LR	18 39 01.2	
	comp=Z,62nm,18.6s,baz=149,slow=40						
CMAR	Chiang Mai Arr	31.19	256	LR	LR	18 42 02.2	
	comp=Z,19nm,19.3s,baz=295,slow=38						
MKAR	Makanchi Array	40.86	308	P	P	18 29 37.9	+0.3
	1.7nm,0.5s,baz=93,slow=11,SNR=21						
ASAR	Alice Springs	53.50	177	P	P	18 31 28.3	+12
	0.3nm,0.7s,baz=9.1,slow=13,SNR=4.1						
ILAR	Eielson Array	59.98	29	P	P	18 32 01.4	-0.4
	0.3nm,0.8s,baz=305,slow=5.0,SNR=4.2						
KBZ	Khabaz	68.55	309	P	P	18 32 58.6	+0.4
	0.6nm,0.5s,baz=126,slow=5.2,SNR=3.8						
FINES	FINESS Array B	70.68	331	P	P	18 33 09.6	-1.4
	0.8nm,0.5s,baz=76,slow=8.0,SNR=6.7						
AKASG	Malin Array Be	74.12	320	P	P	18 33 30.0	-1.8
	0.3nm,0.4s,baz=59,slow=6.1,SNR=2.6						
BRTR	Keskin Array B	76.51	308	P	P	18 33 44.9	-1.1
	0.3nm,0.7s,baz=67,slow=6.9,SNR=4.3						
NOA	NORSAR Array B	76.89	334	P	P	18 33 46.1	-1.4
	0.6nm,0.8s,baz=49,slow=5.6,SNR=3.6						

TAP 04 18:28:13.5, 24°.20N×121°.70E, h15km, ML1.8, C, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.10	256	P	Pb	18 28 17.4	+0.3
	baz=255						
NACB				S	Sb	18 28 19.8	+0.2
	baz=255						
TWD	Chiawan	0.15	220	P	Pb	18 28 18.2	+0.2
	baz=217						
TWD				eS	Sb	18 28 21.0	-0.1
	baz=217						
ETLH	Xiulin Townshi	0.20	272	P	Pb	18 28 19.1	+0.1
	baz=272						
ETLH				S	Sb	18 28 22.4	-0.1
	baz=272						
ENA	Nanau	0.23	9	P	Pb	18 28 19.1	-0.3
	baz=10.0						
ENA				eS	Sb	18 28 24.0	+0.7
	baz=10.0						
HWA	Hwalien	0.24	202	eP	Pb	18 28 20.5	+1.0
	baz=200						
HWA				eS	Sb	18 28 23.8	+0.3
	baz=200						
NNSB	Datong	0.37	308	eP	Pb	18 28 22.5	+0.7
	baz=308						
NNSB				eS	Sb	18 28 27.5	+0.1
	baz=308						
NNSH	Datong	0.37	308	eP	Pb	18 28 22.2	+0.3
	baz=308						
NNSH				eS	Sb	18 28 27.3	-0.2
	baz=308						
NNS	Nan Shan	0.39	309	eP	Pb	18 28 22.3	+0.2
	baz=308						
NNS				eS	Sb	18 28 28.1	+0.2
	baz=308						
WHF	Hehuan Shan	0.40	262	eP	Pb	18 28 23.4	+0.8
	baz=262						
WHF				eS	Sb	18 28 28.4	-0.3
	baz=262						
TWC	Suao	0.43	18	eS	Sb	18 28 29.3	+0.2
	baz=19						
NDT	Datong Townshi	0.44	337	eP	Pb	18 28 23.6	+0.7
	baz=336						
NDT				eS	Sb	18 28 30.1	+0.8
	baz=336						
ENTT	Nioudou	0.46	344	eP	Pb	18 28 23.6	+0.4
	baz=344						
ENTT				eS	Sb	18 28 29.8	0.0
	baz=344						
ESL	Shilin	0.46	213	eP	Pb	18 28 23.5	+0.3
	baz=211						
ESL				eS	Sb	18 28 30.3	+0.5
	baz=211						
TDCB	Techi	0.50	276	eP	Pb	18 28 24.2	+0.2
	baz=276						
TDCB				eS	Sb	18 28 31.6	+0.4
	baz=276						
CHGB	Renai	0.50	254	eP	Pb	18 28 24.3	+0.1
	baz=254						
CHGB				eS	Sb	18 28 31.7	+0.3
	baz=254						
EOS1	EOS1	0.52	48	eS	Sb	18 28 31.6	-0.1
	baz=47						
OWD	Renai	0.54	243	eP	Pb	18 28 24.9	+0.2
	baz=243						
OWD				eS	Sb	18 28 33.2	+0.8
	baz=243						
YHNB	Yeheng	0.56	328	eP	Pg	18 28 24.2	-0.3
	baz=327						
YHNB				eS	Sg	18 28 31.6	-0.4
	baz=327						
ILA	Ilan	0.57	4	eP	Pb	18 28 25.2	+0.1
	baz=4.0						
NSK	Sanguang	0.57	327	eP	Pb	18 28 25.7	+0.5
	baz=326						
NSK				eS	Sb	18 28 33.8	+0.7
	baz=326						
EGFH	Guangfu	0.58	206	eP	Pb	18 28 26.2	+0.8
	baz=205						
EGFH				eS	Sb	18 28 34.0	+0.5
	baz=205						
NWLT	Wulai	0.60	342	eP	Pb	18 28 26.3	+0.6
	baz=342						
NWLT				eS	Sb	18 28 33.9	-0.2
	baz=342						
WHP	Taichung City	0.70	277	eP	Pn	18 28 28.1	-0.7
	baz=276						
HGSD	Ruisui	0.75	200	eP	Pn	18 28 30.5	+1.0
	baz=199						
HGSD				eS	Sb	18 28 39.3	+1.1
	baz=199						
LIOB	Emei	0.77	305	eP	Pg	18 28 27.7	-0.8
	baz=305						
LIOB				eS	Sg	18 28 38.2	-0.5
	baz=305						
WLTB	Daxi	0.77	328	eP	Pb	18 28 29.1	+0.5
	baz=327						
WLTB				eS	Sb	18 28 39.7	+0.9
	baz=327						
EHY	Hungye	0.77	207	eP	Pg	18 28 28.1	-0.5
	baz=206						
NHDH	Xindian Distri	0.78	348	eP	Pb	18 28 29.0	+0.3
	baz=347						
NHDH				eS	Sb	18 28 40.0	+0.9
	baz=347						
TIPB	Shuangxi	0.78	8	eS	Sb	18 28 39.1	0.0
	baz=8.0						
YULB	Yu-li	0.89	205	eP	Pb	18 28 29.8	-0.7
	baz=204						
YULB				eS	Sb	18 28 42.1	-0.1
	baz=204						
TWF1	Yuli	0.92	204	eP	Pg	18 28 31.4	+0.1
	baz=203						
TWF1				eS	Sg	18 28 43.8	+0.3
	baz=203						
FULB	Fuli	1.06	201	eP	Pg	18 28 34.4	+0.3
	baz=200						
FULB				eS	Sg	18 28 47.8	-0.2
	baz=200						

TAP 04 18:28:18.5, 24°.45N×121°.93E, h12km, ML2.0, B, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWC	Suao	0.17	335	i P	Pb	18 28 23.1	-0.5
	baz=337						
TWC				i S	Sg	18 28 26.2	+1.1
	baz=337						
TWC	Suao	0.17	335	eP	Pg	18 28 22.9	+0.5
	baz=19						
ENA	Nanau	0.17	262	P	Pb	18 28 23.4	-0.2
	baz=260						
ENA				S	Sg	18 28 26.0	+0.9
	baz=260						
EOS1	EOS1	0.21	62	P	Pg	18 28 23.5	+0.5
	baz=62						
EOS1				S	Sg	18 28 27.1	+1.2
	baz=62						
EOS1	EOS1	0.21	62	P	Pg	18 28 23.4	+0.5
	baz=47						
ILA	Ilan	0.35	332	eP	Pg	18 28 26.0	+0.4
	baz=333						
ILA				eS	Sb	18 28 33.1	+0.9
	baz=333						
ILA	Ilan	0.35	332	eS	Sb	18 28 33.6	+1.4
	baz=4.0						
TWE	Neicheng	0.36	318	eP	Pb	18 28 26.5	-0.3
	baz=357						
TWE				eS	Sb	18 28 32.1	-0.2
	baz=357						
TWE	Neicheng	0.36	318	P	Pb	18 28 26.7	-0.1
	baz=319						
TWE				S	Sb	18 28 31.9	-0.5
	baz=319						
ENTT	Nioudou	0.38	300	P	Pb	18 28 27.2	+0.1
	baz=299						
ENTT				S	Sb	18 28 32.6	-0.5
	baz=299						
SLBB	Yuanshan	0.40	318	eS	Sb	18 28 33.6	-0.1
	baz=353						
SLBB	Yuanshan	0.40	318	eP	Pb	18 28 27.8	+0.3
	baz=318						
SLBB				eS	Sb	18 28 33.6	-0.1
	baz=318						
NDT	Datong Townshi	0.41	292	P	Pb	18 28 27.8	+0.2
	baz=291						
NDT				eS	Sb	18 28 33.4	-0.4
	baz=291						
NTC	Toucheng	0.41	347	eP	Pb	18 28 27.4	-0.3
	baz=347						
NTC				eS	Sb	18 28 34.0	+0.1
	baz=347						
NACB	Ninganchiao	0.41	228	eP	Pg	18 28 27.1	+0.4
	baz=227						
NACB				eS	Sb	18 28 33.4	-0.5
	baz=227						
ETLH	Xiulin Townshi	0.47	239	eP	Pb	18 28 28.7	-0.2
	baz=238						
ETLH				eS	Sb	18 28 35.5	-0.3
	baz=238						
TWD	Chiawan	0.48	219	eP	Pb	18 28 28.7	-0.2
	baz=218						
TWD				eS	Sb	18 28 35.6	-0.3
	baz=218						
NNSH	Datong	0.50	267	eP	Pb	18 28 29.1	-0.2
	baz=267						
NNSH				eS	Sb	18 28 36.1	-0.4
	baz=267						
NNSB	Datong	0.50	267	eP	Pb	18 28 29.2	0.0
	baz=267						
NNSB				eS	Sb	18 28 36.1	-0.5
	baz=267						
NWLT	Wulai	0.50	310	eP	Pb	18 28 29.7	+0.4
	baz=309						
NWLT				eS	Sb	18 28 36.5	-0.2
	baz=309						
NNS	Nan Shan	0.51	269	eP	Pb	18 28 29.7	+0.3
	baz=268						
NNS				eS	Sb	18 28 36.2	-0.6
	baz=268						
TIPB	Shuangxi	0.53	350	P	Pb	18 28 29.5	-0.2
	baz=349						
TIPB				S	Sb	18 28 36.9	-0.4
	baz=349						
TIPB	Shuangxi	0.53	350	eP	Pb	18 28 29.5	-0.2
	baz=8.0						
YHNB	Yeheng	0.55	293	P	Pb	18 28 30.7	+0.6
	baz=293						
YHNB				eS	Sg	18 28 36.9	+0.4
	baz=293						
HWA	Hwalien	0.56	212	eP	Pn	18 28 31.3	-0.9
	baz=211						
HWA				eS	Sb	18 28 38.8	+0.7
	baz=211						
NSK	Sanguang	0.56	293	P	Pb	18 28 30.9	+0.5
	baz=293						
NSK				S	Sb	18 28 38.3	-0.1
	baz=293						
TWA	Mucha	0.61	329	eP	Pb	18 28 32.1	+0.9
	baz=329						
TWA				eS	Sb	18 28 40.6	+0.8
	baz=329						
NHDH	Xindian Distri	0.63	324	eP	Pn	18 28 32.3	-0.9
	baz=324						
NHDH				eS	Sb	18 28 40.7	+0.6
	baz=324						
NWF	Wu-fen Shan	0.63	348	eP	Pg	18 28 30.8	0.0
	baz=347						
NWF				eS	Sb	18 28 40.6	+0.3
	baz=347						
WFSB	Wu-fen Shan	0.63	348	eP	Pg	18 28 30.8	0.0
	baz=347						
WFSB				eS	Sb	18 28 40.6	+0.3
	baz=347						
TATO	Taipei	0.66	323	eP	Pb	18 28 31.9	0.0
	baz=322						
TATO				eS	Sb	18 28 41.3	+0.3
	baz=322						
WHF	Hehuan Shan	0.68	243	eP	Pg	18 28 31.5	-0.3
	baz=242						
WHF				eS	Sb	18 28 42.3	+0.2
	baz=242						
TAP1	Taipei	0.69	328	eP	Pb	18 28 32.4	0.0
	baz=327						
TAP1				eS	Sb	18 28 42.5	+0.6
	baz=327						
TDCB	Techi	0.73	254	eP	Pn	18 28 34.2	-0.6
	baz=254						
TDCB				eS	Sb	18 28 43.2	0.0
	baz=254						
WLTB	Daxi	0.73	303	eP	Pn	18 28 34.3	-0.4
	baz=302						
WLTB				eS	Sb	18 28 43.9	+0.7
	baz=302						
YM10	YM10	0.78	335	eP	Pn	18 28 35.0	-0.4
	baz=334						
YM10				eS	Sn	18 28 45.8	-1.1
	baz=334						
YM04	YM04	0.78	333	eP	Pb	18 28 34.3	+0.2
	baz=332						
YM04				eS	Sn	18 28 46.5	-0.6
	baz=332						
CHGB	Renai	0.79	241	eP	Pn	18 28 35.1	-0.6
	baz=240						
TWS1	Kuangyinshan	0.79	324	eP	Pb	18 28 34.7	+0.4
	baz=324						
TWS1				eS	Sn	18 28 48.0	+0.7
	baz=324						
NTST	Danshui	0.83	329	eP	Pb	18 28 34.8	0.0
	baz=328						
NTST				eS	Sn	18 28 47.2	-1.1
	baz=328						
OWD	Renai	0.85	234	eP	Pg	18 28 34.0	-0.9
	baz=234						
NCU	National Centr	0.85	308	eS	Sb	18 28 46.6	0.0
	baz=307						
LIOB	Emei	0.85	283	eP	Pn	18 28 37.4	+1.0
	baz=283						
LIOB				eS	Sn	18 28 48.0	-0.8
	baz=283						
TWY	Chenhua	0.87	340	eS	Sb	18 28 47.3	+0.1
	baz=340						
EGFH	Guangfu	0.91	210	eP	Pb	18 28 36.1	-0.1
	baz=210						
EGFH				eS	Sb	18 28 48.5	+0.4
	baz=210						
WHP	Taichung City	0.91	259	eP	Pn	18 28 38.0	+0.8
	baz=258						
WHP				eS	Sb	18 28 49.3	+0.8
	baz=258						
WHP	Taichung City	0.91	259	eS	Pn	18 28 37.8	+0.5
	baz=276						
YOJ	Yonaguni jima	0.99	89	eP	Pg	18 28 37.5	-0.1
	baz=89						
YOJ				eS	Sb	18 28 50.6	+0.1
	baz=89						
VWDT	VWDT	1.00	226	eP	Pg	18 28 37.9	+0.1
	baz=225						
DPDB	Guoxing	1.00	246	eP	Pn	18 28 38.9	+0.4
	baz=245						
DPDB				eS	Sb	18 28 51.7	+0.6
	baz=245						
HGSD	Ruisui	1.06	206	eP	Pb	18 28 36.6	-2.2
	baz=205						
HGSD				eS	Sn	18 28 53.4	-0.6
	baz=205						
EHY	Hungye	1.09	211	eP	Pb	18 28 39.4	0.0
	baz=210						
EHY				eS	Sn	18 28 54.5	-0.2
	baz=210						
EHY	Hungye	1.09	211	eS	Pb	18 28 39.7	+0.3
	baz=206						
SSLB	Suanglung	1.11	234	eS	Sn	18 28 54.9	-0.3
	baz=233						
YULB	Yu-li	1.20	209	eP	Pb	18 28 41.3	0.0
	baz=208						
YULB				eS	Sn	18 28 57.6	+0.2
	baz=208						
TWF1	Yuli	1.24	208	eP	Pn	18 28 41.5	-0.2
	baz=207						
TWF1				eS	Sb	18 28 57.2	-0.6
	baz=207						

TAP 04 18:28:30.9, 23°.54N×120°.54E, h13km, ML1.1, B, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHN2	Minshiung	0.06	265	eP	Pg	18 28 33.2	-0.2
	baz=265						
CHN2				eS	Sg	18 28 35.5	+0.2
	baz=265						
CHY	Chiayi	0.11	249	P	Pb	18 28 34.8	-0.2
	baz=247						
CHY				eS	Sb	18 28 37.6	0.0
	baz=247						
CHN5	Tsauling	0.14	65	eP	Pg	18 28 35.1	+0.5
	baz=65						
CHN5				eS	Sb	18 28 38.0	-0.6
	baz=65						
CHN4	Tsaushan	0.19	164	i P	Pb	18 28 36.1	-0.3
	baz=164						
CHN4				S	Sb	18 28 39.6	-0.4
	baz=164						
WLGB	Puzi	0.23	255	eP	Pb	18 28 37.3	+0.3
	baz=254						
WLGB				eS	Sb	18 28 40.0	-0.9
	baz=254						
ALS	Alishan	0.25	96	P	Pb	18 28 37.5	-0.1
	baz=96						
ALS				S	Sb	18 28 41.9	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=96						
TPUB	Ta-pu	0.25	160	P	Pb	18 28 36.9	-0.5
	baz=160						
TPUB				S	Sb	18 28 41.2	-0.5
	baz=160						
TWK	Hsinying	0.27	190	eP	Pb	18 28 37.5	-0.3
	baz=187						
TWK				eS	Sb	18 28 42.5	+0.2
	baz=187						
WTP	Ta-pu	0.30	166	eP	Pb	18 28 38.0	-0.3
	baz=164						
WTP				eS	Sb	18 28 43.0	-0.1
	baz=164						
WSF	Szhu	0.31	289	eS	Sb	18 28 42.9	-0.3
	baz=289						
SNST	Tainan City	0.32	187	eP	Pg	18 28 37.1	-0.4
	baz=186						
SNST				eS	Sb	18 28 43.4	-0.3
	baz=186						
CHN1	Nanshi	0.35	181	eP	Pg	18 28 38.1	+0.1
	baz=181						
CHN1				eS	Sb	18 28 45.1	+0.5
	baz=181						
STYT	Tauyuan	0.42	151	eP	Pb	18 28 40.0	-0.4
	baz=150						
STYT				eS	Sb	18 28 47.2	+0.5
	baz=150						
SGST	Jiashian	0.46	175	eP	Pb	18 28 40.7	-0.2
	baz=173						
SGST				eS	Sb	18 28 48.0	+0.4
	baz=173						
SSLB	Suanglung	0.46	57	eS	Pn	18 28 40.5	-2.9
	baz=239						
SSLB	Suanglung	0.46	57	eP	Pb	18 28 40.5	-0.4
	baz=56						
SSLB				eS	Sb	18 28 47.9	+0.2
	baz=56						
SSLB	Suanglung	0.46	57	eP	Pg	18 28 40.4	+0.4
	baz=233						
TYC	Yuchr	0.47	39	eP	Pb	18 28 41.0	-0.1
	baz=39						
TYC				eS	Sb	18 28 48.9	+1.0
	baz=39						
SMLT	Sun Moon Lake	0.48	44	eP	Pg	18 28 40.5	+0.1
	baz=44						
SMLT				eS	Sb	18 28 48.2	-0.2
	baz=44						
ELDTW	Lidau	0.56	128	eP	Pb	18 28 42.4	-0.4
	baz=127						
ELDTW				eS	Sb	18 28 51.0	+0.3
	baz=127						
VWDT	VWDT	0.59	69	eP	Pb	18 28 44.1	+0.9
	baz=68						
VWDT				eS	Sb	18 28 51.8	+0.2
	baz=68						
VWDT	VWDT	0.59	69	eS	Sb	18 28 51.8	+0.2
	baz=225						
DPDB	Guoxing	0.61	36	eS	Sb	18 28 52.8	+0.7
	baz=35						
YULB	Yu-li	0.71	101	eS	Sb	18 28 55.2	+0.2
	baz=101						
OWD	Renai	0.72	55	eP	Pn	18 28 47.0	0.0
	baz=54						
OWD				eS	Sb	18 28 55.9	+0.5
	baz=54						
OWD	Renai	0.72	55	eS	Pn	18 28 47.0	0.0
	baz=234						
FULB	Fuli	0.77	116	eP	Pb	18 28 46.2	-0.1
	baz=115						
FULB				eS	Sb	18 28 57.4	+0.6
	baz=115						
CHGB	Renai	0.78	48	eP	Pb	18 28 46.5	-0.1
	baz=48						
CHGB				eS	Sb	18 28 58.2	+1.0
	baz=48						
CHGB	Renai	0.78	48	eS	Pb	18 28 46.2	-0.4
	baz=240						
WHP	Taichung City	0.83	27	eP	Pb	18 28 47.4	+0.1
	baz=26						
WHP				eS	Sb	18 28 58.9	+0.5
	baz=26						

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*SJA **04** 18:33:51.8±0.7, 19.°81S×71.°42W, h10km, ML4.3, MW4.1*
*IDC **04** 18:33:58.8±0.8, 19.°87S×70.°70W, h0km, mb4.0/10, mb1 4.2/12, mb1mx4.0/29, mbtmp4.1/12, ML4.1/2, MS3.3/5, Ms1 3.3/5, ms1mx3.0/30, Error ellipse: s-maj=22.7km s-min=18.9km az=42.0*
*NEIC **04** 18:34:00.5±2.1, 20.°06S±0.°02×70.°90W±0.°05, h13km±3km, mb4.6/8, Mwr4.2/52, Error ellipse: s-maj=7.4km s-min=1.8km az=107.0*
*NEIC **04** 18:34:00.3, 20.°07S×70.°90W, h18km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.98; $M_{\theta\theta}$-0.25; $M_{\phi\phi}$-1.73; $M_{r\theta}$0.09; $M_{\theta\phi}$0.89; $M_{\phi r}$-0.78; Fault plane solution: $M_0$2.21000×10^{15} NP1:ϕ_s327.44000°, δ35.57000°, λ78.21000°. NP2:ϕ_s161.83000°, δ55.29000°, λ98.31000°. Principal axes: T 2.1429, Plg78.0000°, Azm101.0000°; N 0.1341, Plg7.0000°, Azm337.0000°; P -2.2770, Plg10.0000°, Azm246.0000°;*
*GUC **04** 18:34:01.9±0.8, 20.°01S×70.°98W, h34km±2km, ML4.3*
*VAO **04** 18:34:16.6±2.5, 19.°57S×70.°19W, h119km±13km, mb4.3*
ISC 04 18:34:02.0±2.1, **20.°00S**±0.°03×**70.°97W**±0.°06, **h31**km±14km, **n113**, σ**1.s35**/127, **mb4.3**/11, **MS3.5**/3, **12C-8D**, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TA02	Huaiquique	0.83	109	⇑iP	Pn	18 34 16.1	-1.6
TA02				iS	Sn	18 34 27.6	-1.2
PSGC	Pisagua	0.89	63	⇓iP	Pn	18 34 16.8	-1.8
PSGC				iS	Sn	18 34 29.0	-1.5
PSGCX	Pisagua	0.89	63		Pn	18 34 16.1	-2.4
PSGCX	Pisagua	0.89	63	iP	Pn	18 34 16.8	-1.7
PSGCX				⇓eS	Sn	18 34 28.7	-1.8
PSGCX				IAML		18 34 30.2	
	comp=Z,3μm,0.5s						
TA01	Diego Aracena	0.93	127	⇑iP	Pn	18 34 17.9	-1.0
TA01				iS	Sn	18 34 30.0	-1.2
PATCX	Punta Patache	1.12	137	⇓iP	Pn	18 34 21.0	-0.7
PATCX				iS	Sn	18 34 35.0	-1.0
PATCX				IAML		18 34 41.9	
	comp=N,13μm,0.5s						
PATCX	Punta Patache	1.12	137		Pn	18 34 21.0	-0.7
PATCX					Sn	18 34 35.2	-0.8
PATCX	Punta Patache	1.12	137	iP	Pn	18 34 21.1	-0.6
PATCX				eS	Sn	18 34 36.4	+0.3
PATCX				IAML		18 34 46.4	
	comp=Z,4μm,0.4s						
PB11	IPOC Station P	1.26	79	⇓iP	Pn	18 34 23.0	-0.6
PB11				iS	Sn	18 34 39.6	-0.1
PB11	IPOC Station P	1.26	79		Pn	18 34 22.5	-1.2
PB11					Sn	18 34 39.5	-0.1
PB11	IPOC Station P	1.26	79	iP	Pn	18 34 23.1	-0.6
PB11				eS	Sn	18 34 39.2	-0.4
PB11				IAML		18 34 40.4	
	comp=Z,6μm,0.4s						
PB12	IPOC Station P	1.51	24	⇑iP	Pn	18 34 26.9	-0.1
PB12				iS	Sn	18 34 46.0	+0.3
PB12				IAML		18 34 52.4	
	comp=E,8μm,0.8s						
PB12	IPOC Station P	1.51	24		Pn	18 34 27.0	-0.1
MNMC	Minye Minye	1.56	56	⇑iP	Pn	18 34 28.1	+0.2
MNMC				iS	Sn	18 34 48.7	+1.5
MNMC	Minye Minye	1.56	56		Pn	18 34 27.9	0.0
MNMCX	Minye Minye	1.56	56	iP	Pn	18 34 28.2	+0.3
MNMCX				IAML		18 34 56.0	
	comp=Z,6μm,1.2s						
PB02	IPOC Station P	1.65	143	⇑iP	Pn	18 34 28.8	-0.3
PB02				iS	Sn	18 34 49.8	+0.4
PB02	IPOC Station P	1.65	143	iP	Pn	18 34 29.0	-0.1
GO01	Chusmiza	1.70	79	⇑iP	Pn	18 34 30.1	0.0
GO01				iS	Sn	18 34 52.8	+1.7
GO01	Chusmiza	1.70	79		Pn	18 34 30.0	0.0
PB08	IPOC Station P	1.71	95	eP	Pn	18 34 30.1	0.0
PB08				eS	Sn	18 34 52.6	+1.5
PB08				IAML		18 34 58.1	
	comp=N,5μm,0.6s						
PB08	IPOC Station P	1.71	95		Pn	18 34 30.0	-0.1
PB08	IPOC Station P	1.71	95	iP	Pn	18 34 30.1	0.0
PB08				eS	Sn	18 34 52.7	+1.6
PB08				IAML		18 34 57.3	
	comp=Z,4μm,0.7s						
AP01	Chacalluta	1.73	20	⇑iP	Pn	18 34 30.2	+0.3
AP01				eS	Sb	18 34 52.1	-2.3
PB01	IPOC Station P	1.73	127	⇓iP	Pn	18 34 30.3	+0.1
PB01				iS	Sn	18 34 52.2	+1.0
PB01				IAML		18 34 57.3	
	comp=E,4μm,0.5s						
PB01	IPOC Station P	1.73	127		Pn	18 34 30.0	-0.2
PB01	IPOC Station P	1.73	127	iP	Pn	18 34 30.2	+0.1
PB01				IAML		18 35 03.0	
	comp=Z,1μm,0.6s						
PB07	IPOC Station P	1.99	150	⇓iP	Pn	18 34 33.6	-0.2
PB07				IAML		18 35 09.4	
	comp=E,4μm,0.5s						
PB07	IPOC Station P	1.99	150		Pn	18 34 33.9	0.0
PB16	IPOC Station P	2.16	40	eP	Pn	18 34 36.8	+0.4
PB16				eS	Sn	18 35 04.8	+2.4
PB16				IAML		18 35 13.1	
	comp=E,3μm,0.4s						
PB16	IPOC Station P	2.16	40		Pn	18 34 37.6	+1.1
PB03	IPOC Station P	2.33	151	⇓iP	Pn	18 34 38.4	-0.1
PB03				IAML		18 35 23.6	
	comp=E,1μm,0.4s						
PB03	IPOC Station P	2.33	151	iP	Pn	18 34 38.4	-0.1
PB03				IAML		18 35 22.0	
	comp=Z,1μm,0.3s						
PB09	IPOC Station P	2.41	138	eP	Pn	18 34 40.3	+0.8
PB09				eS	Sn	18 35 09.3	+1.3
PB09				IAML		18 35 26.6	
	comp=E,3μm,0.5s						
PB09	IPOC Station P	2.41	138		Pn	18 34 40.4	+0.9
PB09	IPOC Station P	2.41	138	iP	Pn	18 34 40.5	+0.9
PB09				eS	Sb	18 35 16.4	+2.2
PB04	IPOC Station P	2.44	162	⇑iP	Pn	18 34 39.3	-0.8
PB04				IAML		18 35 25.7	
	comp=E,2μm,0.3s						
PB04	IPOC Station P	2.44	162		Pn	18 34 39.2	-0.8
PB04	IPOC Station P	2.44	162	iP	Pn	18 34 39.3	-0.8
PB04				IAML		18 35 30.6	
	comp=Z,1μm,0.8s						
PB05	IPOC Station P	2.93	166	⇑iP	Pn	18 34 45.5	-1.1
PB05				IAML		18 35 42.6	
	comp=N,800nm,0.5s						
PB05	IPOC Station P	2.93	166	iP	Pn	18 34 45.5	-1.1
PB05				IAML		18 35 44.8	
	comp=Z,727nm,0.8s						
PB06	IPOC Station P	2.99	154	⇑iP	Pn	18 34 46.8	-0.7
PB06				IAML		18 35 37.8	
	comp=E,1μm,0.7s						
PB06	IPOC Station P	2.99	154	Pn	Pn	18 34 46.9	-0.6
PB06	IPOC Station P	2.99	154	iP	Pn	18 34 46.8	-0.7
PB06				IAML		18 35 42.6	
	comp=Z,1μm,0.6s						
LVC	Limon Verde	3.23	144	Pn	Pn	18 34 52.0	+1.1
	comp=Z,12nm,0.3s,baz=325,slow=9.4,SNR=84						
LVC				Sn	Sn	18 35 29.3	+0.7
	comp=Z,51nm,0.3s,baz=66,slow=7.0,SNR=6.1						
LVC				LR	LR	18 35 33.8	
	comp=Z,82nm,21.5s,baz=324,slow=30						
LVC	Limon Verde	3.23	144	⇑iP	Pn	18 34 52.0	+1.1
LVC	Limon Verde	3.23	144		Pn	18 34 52.0	+1.1
LVC	Limon Verde	3.23	144	iP	Pn	18 34 52.1	+1.1
LVC				IAML		18 35 49.5	
	comp=Z,332nm,0.7s						
PB15	IPOC Station P	3.48	157	⇑iP	Pn	18 34 53.5	-0.8
PB15	IPOC Station P	3.48	157		Pn	18 34 53.5	-0.8
PB15	IPOC Station P	3.48	157	iP	Pn	18 34 53.5	-0.8
PB15				IAML		18 35 59.1	
	comp=Z,1μm,0.6s						
PB10	IPOC Station P	3.52	174		Pn	18 34 52.7	-1.9
PB10	IPOC Station P	3.52	174	iP	Pn	18 34 53.2	-1.4
PB10				IAML		18 36 09.9	
	comp=Z,167nm,0.9s						
LPAZ	La Paz	4.57	37	Pn	Pb	18 35 15.6	-6.4
	comp=Z,2.9nm,0.3s,baz=177,slow=4.0,SNR=26						
LPAZ	La Paz	4.57	37		Pn	18 35 12.9	+3.2
LPAZ	La Paz	4.57	37	eP	Pn	18 35 13.1	+3.4
PB14	IPOC Station P	4.63	174		Pn	18 35 08.5	-1.8
PB14	IPOC Station P	4.63	174	⇓iP	Pn	18 35 08.9	-1.3
PB14				IAML		18 36 40.8	
	comp=Z,186nm,0.9s						
GO02	Mina Guanaco	5.29	166		Pn	18 35 18.5	-0.8
YJA	Yavi	5.53	114	iP	Pn	18 35 25.6	+2.9
AZAP	Zapla	6.90	129	iP	Pn	18 35 42.8	+1.4
SIV	San Ignacio	10.22	69	Pn	Pn	18 36 24.1	-2.7
	comp=Z,3.0nm,0.3s,baz=271,slow=10,SNR=26						
PTLB	Pontes e Lacer	12.15	70	eP	Pn	18 36 53.9	+0.9
VILB	Vilhena	12.48	57	eP	Pn	18 36 58.6	+1.0
SAML	Samuel	13.32	36	eP	P	18 37 12.7	-5.7
CPUP	Villa Florida	14.03	119	Pn	Pn	18 37 20.0	+1.2
	comp=Z,0.3nm,0.3s,baz=310,slow=11,SNR=3.4						
CPUP				LR	LR	18 44 00.7	
	comp=Z,108nm,20.7s,baz=312,slow=43						
SALV	Santo Antonio	15.09	77	eP	Pn	18 37 33.5	+0.3
H03N1	Juan Fernandez	15.14	206	T	T	18 53 10.3	
	baz=32,slow=72,SNR=231						
H03N2	Juan Fernandez	15.15	206	T	T	18 53 11.7	
	baz=32,slow=72,SNR=169						
H03N3	Juan Fernandez	15.16	206	T	T	18 53 10.7	
	baz=32,slow=72,SNR=172						
C2SB	Chapadao do Su	17.15	89	eP	P	18 38 01.8	+0.9
CLDB	Colider	17.20	60	eP	Pn	18 37 57.9	-2.3
PTGB	Pitanga	18.10	108	eP	P	18 38 14.0	+2.5
ARAG	Araguaiana, MT	18.72	80	eP	P	18 38 18.2	-0.2
ITRB	Iturama	19.39	93	eP	Pn	18 38 26.8	-0.1
MACA	Manacapuru-AM	19.52	32	eP	P	18 38 26.1	-0.9
FRTB	Fartura	20.16	103	eP	P	18 38 34.5	+0.4
PLCA	Paso Flores	20.67	179	P	Pn	18 38 41.5	-0.3
	comp=Z,2.5nm,0.8s,baz=6.5,slow=10,SNR=4.0						
PLCA	Paso Flores	20.67	179	IAmb	IAmb	18 38 50.7	
	comp=Z,28nm,1.5s						
BB19B	Bebedouro	21.04	97	eP	P	18 38 42.7	-0.9
IPMB	Ipameri, GO	21.61	88	eP	P	18 38 48.6	-1.1
PTGA	Pitinga	21.97	31	P	P	18 38 51.0	-2.5
	comp=Z,6.2nm,0.5s,baz=60,slow=23,SNR=9.7						
PTGA				LR	LR	18 47 56.5	
	comp=Z,117nm,18.8s,baz=229,slow=38						
PTGA	Pitinga	21.97	31	P	P	18 38 51.1	-2.5
PTGA	Pitinga	21.97	31	eP	P	18 38 52.6	-1.0
SPB	Sao Paulo	22.14	104	eP	P	18 38 55.8	+0.5
BDFB	Brasilia	22.27	82	P	P	18 38 55.5	-1.5
	comp=Z,2.0nm,0.4s,baz=261,slow=12,SNR=4.0						
BDFB				LR	LR	18 49 11.1	
	comp=Z,191nm,19.6s,baz=253,slow=42						
BDFB	Brasilia	22.27	82	P	P	18 38 55.2	-1.7
BDFB				IAmb	IAmb	18 39 07.3	
	comp=Z,22nm,1.5s						
BOAV	Boa Vista	24.50	26	eP	P	18 39 19.5	+0.6
BSCB	Bom Sucesso	24.55	97	eP	P	18 39 19.7	+0.3
RUSC	La Rusia	25.82	355	P	P	18 39 32.3	+1.0
JANB	Januaria	25.87	83	eP	P	18 39 29.7	-1.7
RCBR	Riachuelo	36.86	72	P	P	18 41 07.0	-1.0
	comp=Z,5.4nm,0.6s,baz=258,slow=7.2,SNR=5.0						
WLAR	White Oak Lake	57.41	338	P	P	18 43 48.6	+0.8
TXAR	Lajitas Array	58.31	326	P	P	18 43 55.9	+1.6
	comp=Z,0.6nm,0.8s,baz=150,slow=8.0,SNR=7.0						
X37A	Clayton	59.04	337	P	P	18 43 59.6	+0.5
X37A				IAmb	IAmb	18 44 03.9	
	comp=Z,5.1nm,0.7s						
DBIC	Dimbokro	70.18	75	P	P	18 45 11.8	-0.6
	comp=Z,2.6nm,0.8s,baz=175,slow=7.2,SNR=3.1						
DBIC	Dimbokro	70.18	75	IAmb	IAmb	18 45 14.3	
	comp=Z,10nm,1.2s						
NVAR	Mina Array Bea	73.14	323	P	P	18 45 32.3	+2.3
	comp=Z,0.3nm,0.3s,baz=148,slow=6.8,SNR=4.0						
TOA0	Torodi Ar. Sit	78.69	71	P	P	18 46 01.4	-0.4
TOA0				IAmb	IAmb	18 46 01.9	
	comp=Z,5.8nm,0.7s						
TORD	Torodi Ar. Bea	78.69	71	P	P	18 46 01.4	-0.4
	comp=Z,5.5nm,0.7s,baz=249,slow=5.3,SNR=32						
ESDC	Sonseca Array	86.14	45	P	P	18 46 40.8	+0.5
	comp=Z,0.3nm,0.5s,baz=244,slow=9.7,SNR=4.2						
YKA	Yellowknife Ar	89.15	341	P	P	18 46 55.5	+1.4
	comp=Z,0.8nm,0.7s,baz=135,slow=5.2,SNR=24						
KEST	Kesra	93.95	54	LR	LR	19 29 46.9	
	comp=Z,26nm,19.7s,baz=270,slow=36						
ASAR	Alice Springs	130.28	210	PKP	PKiKP	18 53 11.1	+0.1
	comp=Z,0.5nm,0.8s,baz=126,slow=1.7,SNR=5.7						
WRA	Warramunga Arr	133.20	213	PKP	PKiKP	18 53 17.2	+0.3
	comp=Z,0.4nm,0.9s,baz=248,slow=2.5,SNR=2.2						
ZALV	Zalesovo Beam	141.37	23	PKP	PKiKP	18 53 31.6	-0.7
	comp=Z,1.3nm,0.5s,baz=278,slow=3.2,SNR=7.0						
KDJ	Kajisay	145.23	44		PKiKP	18 53 39.3	-1.7
MAKZ	Makanchi	145.32	33		PKiKP	18 53 38.2	-2.5
MK31	Makanchi Array	145.50	33		PKiKP	18 53 38.8	-2.3
MKAR	Makanchi Array	145.50	33	PKPbc	PKiKP	18 53 38.6	-2.5
	comp=Z,4.5nm,0.8s,baz=325,slow=4.2,SNR=51						
KSH	Kashi	145.60	48	PKPbc	PKiKP	18 53 39.8	-1.9
KSH				PP	PP	18 57 07.5	+9.0
KSH				PKS	PKSdf	18 57 14.1	+0.9
MJAR	Matsushiro Arr	149.64	309	PKPbc	PKPab	18 53 50.5	-3.7
	comp=Z,1.2nm,0.7s,baz=157,slow=1.0,SNR=6.3						
SONM	Songino Array	152.15	4	PKPbc	PKiKP	18 53 56.5	+1.6
	comp=Z,2.1nm,0.7s,baz=303,slow=1.6,SNR=16						

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*IDC **04** 18:35:56.0±2.0, 19.°84S×70.°85W, h0km, mb4.0/2, mb1 4.1/4, mb1mx3.7/29, mbtmp4.0/4, ML3.8/1, Error ellipse: s-maj=59.2km s-min=39.6km az=52.0*
*GUC **04** 18:35:58.9±0.6, 19.°99S×70.°96W, h34km±2km, ML3.9*
ISC 04 18:35:56.4±1.9, **19.°98S**±0.°03×**70.°97W**±0.°08, **h9**km±10km, **n20**, σ**0.s93**/34, **8C-3D**, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TA02	Huaiquique	0.83	110	⇑iP	Pb	18 36 13.0	-0.1
TA02				iS	Sg	18 36 23.8	+0.3
TA02				IAML		18 36 25.5	
	comp=E,11μm,0.3s						
PSGC	Pisagua	0.88	64	⇓iP	Pg	18 36 13.6	+0.2
PSGC				iS	Sg	18 36 25.6	+0.6
TA01	Diego Aracena	0.94	128	⇓iP	Pg	18 36 14.5	0.0
TA01				iS	Sb	18 36 27.0	-0.4
TA01				IAML		18 36 28.6	
	comp=E,5μm,0.6s						
PATCX	Punta Patache	1.13	138	⇑iP	Pb	18 36 17.6	-0.6
PATCX				iS	Sg	18 36 32.0	-0.8
PATCX				IAML		18 36 33.8	
	comp=N,4μm,0.2s						
PB11	IPOC Station P	1.25	80	⇓iP	Pn	18 36 20.0	-0.2
PB11				iS	Sb	18 36 36.4	-0.2
PB11				IAML		18 36 37.7	
	comp=E,3μm,0.3s						
PB12	IPOC Station P	1.49	24	eP	Pn	18 36 24.0	+0.6
PB12				iS	Sn	18 36 42.7	-0.4
PB12				IAML		18 36 49.7	
	comp=N,1μm,0.6s						
MNMC	Minye Minye	1.55	57	⇑iP	Pn	18 36 24.9	+0.5
MNMC				iS	Sn	18 36 45.0	+0.3
PB02	IPOC Station P	1.67	143	⇑iP	Pn	18 36 25.6	-0.3
PB02				iS	Sn	18 36 46.5	-1.0
GO01	Chusmiza	1.70	80	⇑iP	Pn	18 36 27.2	+0.5
GO01				iS	Sn	18 36 48.8	0.0
GO01				IAML		18 36 51.9	
	comp=N,5μm,0.3s						
AP01	Chacalluta	1.71	20	eP	Pn	18 36 26.5	+0.1
AP01				iS	Sn	18 36 48.2	-0.2
AP01				IAML		18 36 58.6	
	comp=E,3μm,0.8s						
PB08	IPOC Station P	1.71	96	⇑iP	Pn	18 36 26.9	+0.1
PB08				iS	Sn	18 36 48.9	0.0
PB08				IAML		18 36 55.6	
	comp=N,2μm,0.5s						
PB01	IPOC Station P	1.74	127	⇑iP	Pn	18 36 26.6	-0.3
PB01				iS	Sn	18 36 48.8	-0.5
PB01				IAML		18 36 54.8	
	comp=N,2μm,0.3s						
PB07	IPOC Station P	2.01	150	eP	Pn	18 36 30.8	+0.2
PB07				iS	Sn	18 36 55.2	-0.8
PB07				IAML		18 37 04.3	
	comp=E,1μm,0.3s						
PB16	IPOC Station P	2.14	40	eP	Pn	18 36 33.1	+0.2
PB16				iS	Sb	18 37 01.6	-1.0
PB16				IAML		18 37 16.6	
	comp=E,546nm,0.4s						
PB09	IPOC Station P	2.42	138	⇑eP	Sn	18 37 09.6	+3.5
PB09				IAML		18 37 53.9	
	comp=E,750nm,0.8s						
LVC	Limon Verde	3.24	144	Pn	Pn	18 36 50.0	+2.2
	baz=278,slow=15,SNR=0.5						
SIV	San Ignacio	10.22	69	Pn	Pn	18 38 24.1	+0.7
	comp=E,0.9nm,0.3s,baz=223,slow=20,SNR=2.6						
TORD	Torodi Ar. Bea	78.68	71	P	P	18 47 58.3	-1.2
	comp=E,2.2nm,0.8s,baz=259,slow=5.3,SNR=4.8						
YKA	Yellowknife Ar	89.13	341	P	P	18 48 52.6	+0.8
	comp=E,0.3nm,0.6s,baz=134,slow=5.3,SNR=2.5						
MKAR	Makanchi Array	145.48	33	PKPbc	PKPab	18 55 35.7	+0.4
	comp=E,1.5nm,0.7s,baz=318,slow=3.9,SNR=8.5						

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*IDC **04** 18:36:32.3±2.9, 20.°26S×70.°86W, h0km, mb3.9/3, mb1 4.2/4, mb1mx3.8/28, mbtmp4.0/4, ML3.7/1, Error ellipse: s-maj=113.8km s-min=37.0km az=13.0*
ISC 04 18:36:38.2±2.3, **20.°1S**±0.°6×**70.°8W**±0.°2, **h35**km, **n7**, σ**0.s70**/7, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIV	San Ignacio	10.14	68	Pn	Pn	18 39 01.7	+0.2
	0.7nm,0.3s,baz=282,slow=11,SNR=2.9						
TXAR	Lajitas Array	58.47	326	P	P	18 46 30.8	-0.3
	0.3nm,0.7s,baz=123,slow=4.6,SNR=3.5						
TORD	Torodi Ar. Bea	78.60	71	P	P	18 48 36.0	-0.9
	3.4nm,0.8s,baz=252,slow=5.3,SNR=7.8						
YKA	Yellowknife Ar	89.29	341	P	P	18 49 30.4	+0.1
	0.6nm,0.7s,baz=136,slow=5.1,SNR=5.4						
ZALV	Zalesovo Beam	141.42	23	PKP	PKPdf	18 56 06.2	+1.0
	0.8nm,0.5s,baz=299,slow=3.1,SNR=3.5						
MKAR	Makanchi Array	145.51	33	PKPbc	PKPab	18 56 13.2	+0.2
	1.9nm,0.7s,baz=322,slow=3.7,SNR=8.9						
SONM	Songino Array	152.25	4	PKPbc	PKiKP	18 56 30.9	+0.2
	0.7nm,0.7s,baz=315,slow=1.3,SNR=5.9						

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*IDC **04** 19:19:52.8±0.9, 85.°92N×76.°76E, h0km, mb3.5/9, mb1 3.6/11, mb1mx3.4/47, mbtmp3.5/11, ML3.5/2, MS2.9/9, Ms1 2.9/9, ms1mx2.6/47, Error ellipse: s-maj=26.2km s-min=17.5km az=107.0*
*IEPN **04** 19:19:57.0, 85.°68N×76.°14E, h20km*
ISC 04 19:19:54.3±0.8, **85.°89N**±0.°09×**72.°27E**±0.°07, **h10**km, **n26**, σ**2.s35**/30, **mb3.4**/9, **MS2.9**/7, **North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZFI2	Zemlya Franca-	5.75	222	eP	Pn	19 21 21.2	+1.7
ZFI2				eS	Sn	19 22 24.2	-1.2
	8.1nm,0.3s						
KBS	Kingsbay	9.78	262	eP	Pn	19 22 16.8	+2.2
KBS				eS	Sn	19 24 02.3	-1.9
KBS	Kingsbay	9.78	262	eP	Pn	19 22 17.1	+2.5
KBS				eS	Sn	19 24 02.2	-2.0
SPA0	Spitsbergen Ar	10.17	255	eP	Pn	19 22 21.8	+1.9
SPA0				eS	Sn	19 24 11.1	-2.6
SPA0	Spitsbergen Ar	10.17	255	eP	Pn	19 22 22.1	+2.1
SPA0				eS	Sn	19 24 11.2	-2.6
SPITS	Spitsbergen Ar	10.17	255	Pn	Pn	19 22 22.4	+2.4
	baz=41,slow=14,SNR=55						
SPITS				Sn	Sn	19 24 11.3	-2.5
	baz=47,slow=10,SNR=1.4						
BRBA	Barentsburg A	10.43	257	eP	Pn	19 22 25.0	+1.5
BRBA				eS	Sn	19 24 17.0	-3.2
HOPEN	Hopen	11.18	243	eP	Pn	19 22 34.3	+0.5
HOPEN				eS	Sn	19 24 33.0	-5.6
HOPEN	Hopen	11.18	243	eP	Pn	19 22 34.8	+0.9
HSPB	Hornsund (broa	11.34	254	eP	Pn	19 22 38.8	+2.8
HSPB				eS	Sn	19 24 40.4	-2.1
HSPB	Hornsund (broa	11.34	254	eP	Pn	19 22 38.0	+1.9
TIXI	Tiksi	16.54	112	LR	LR	19 29 14.0	
	comp=Z,25nm,18.6s,baz=249,slow=34						
ARCES	ARCESS Array B	18.00	236	P	P	19 24 07.3	+2.7
	0.1nm,0.3s,baz=17,slow=10,SNR=5.9						
RES	Resolute Bay	19.47	350	LR	LR	19 32 11.7	
	comp=Z,22nm,19.9s,baz=262,slow=38						
INK	Inuvik	25.61	22	P	P	19 25 21.9	-1.2
	2.5nm,1.1s,baz=3.4,slow=9.5,SNR=5.9						
INK				LR	LR	19 36 25.4	
	comp=Z,13nm,18.3s,baz=15,slow=39						
FINES	FINESS Array B	26.01	232	P	P	19 25 31.1	+4.3
	1.9nm,0.9s,baz=180,slow=22,SNR=2.8						
FINES				LR	LR	19 36 24.6	
	comp=Z,36nm,18.2s,baz=358,slow=38						
NOA	NORSAR Array B	27.34	248	LR	LR	19 37 40.9	
	comp=Z,10nm,18.4s,baz=255,slow=39						
ARU	Arti	29.74	195	LR	LR	19 38 58.5	
	comp=Z,26nm,19.3s,baz=46,slow=38						
YKA	Yellowknife Ar	31.77	6	P	P	19 26 17.0	-1.0
	0.5nm,0.8s,baz=358,slow=8.5,SNR=7.4						
ZALV	Zalesovo Beam	32.21	166	P	P	19 26 21.9	0.0
	0.2nm,0.4s,baz=1.3,slow=6.3,SNR=1.3						
ZALV				LR	LR	19 39 56.3	
	comp=Z,16nm,20.6s,baz=14,slow=37						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SONM	Songino Array	38.99	143	P	P	19 27 19.2	-1.1
	0.2nm,0.5s,baz=1.4,slow=5.8,SNR=1.8						
MKAR	Makanchi Array	39.33	169	P	P	19 27 22.5	-0.6
	0.4nm,0.7s,baz=9.8,slow=7.9,SNR=5.0						
MKAR				LR	LR	19 44 03.9	
	comp=Z,19nm,19.4s,baz=232,slow=37						
BRTR	Keskin Array B	47.28	221	P	P	19 28 28.6	+1.2
	0.6nm,0.8s,baz=352,slow=7.5,SNR=3.6						
TXAR	Lajitas Array	64.96	356	P	P	19 30 33.9	+0.1
	0.1nm,0.4s,baz=2.3,slow=4.5,SNR=2.6						
CMAR	Chiang Mai Arr	67.97	153	P	P	19 30 52.2	-0.9
	0.1nm,0.5s,baz=3.6,slow=7.2,SNR=1.5						
TEIG	Tepich	73.80	341	LR	LR	20 04 59.9	
	comp=Z,17nm,18.4s,baz=81,slow=37						

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*IDC **04** 19:21:28.8±0.8, 19.°93S×70.°77W, h0^{km}, mb4.2/9, mb1 4.3/13, mb1mx4.1/43, mbtmp4.2/13, ML3.9/4, MS3.4/5, Ms1 3.4/5, ms1mx3.0/30, Error ellipse: s-maj=22.6km s-min=18.1km az=46.0*

*NEIC **04** 19:21:30.4±1.8, 20.°07S±0.°03×70.°92W±0.°03, h13^{km}±3^{km}, mb4.5/7, Mwr4.3/42, Error ellipse: s-maj=4.5km s-min=3.4km az=190.0*

*NEIC **04** 19:21:31.9, 20.°09S×70.°82W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.29; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$-1.86; $M_{r\theta}$0.00; $M_{\theta\phi}$1.83; $M_{\phi r}$-1.75; Fault plane solution: $M_0$3.30000×10^{15} NP1:ϕ_s166.56000°, δ62.93000°, λ114.40000°. NP2:ϕ_s301.66000°, δ35.81000°, λ51.06000°. Principal axes: T 3.0654, Plg64.0000°, Azm118.0000°; N 0.4225, Plg22.0000°, Azm335.0000°; P -3.4880, Plg15.0000°, Azm239.0000°;*

*GUC **04** 19:21:31.1±0.9, 20.°04S×70.°92W, h42^{km}±1^{km}, ML4.5*

*VAO **04** 19:21:35.4±0.5, 19.°91S×70.°65W, h41^{km}, mb4.4*

ISC 04 19:21:28.5±0.8, **19.°97S**±0.°02×**70.°93W**±0.°04, **h2**^{km}±4^{km}, **n109**, σ**1.s32**/127, **mb4.3**/9, **12C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TA02	Huaiquique	0.81	112	⇑iP	Pb	19 21 45.7	+0.3
TA02				eS	Sb	19 21 56.7	-0.2
PSGC	Pisagua	0.85	64	eP	Pn	19 21 47.0	-0.7
PSGC				eS	Sn	19 21 59.6	-1.2
PSGCX	Pisagua	0.85	64	Pg	Pb	19 21 46.5	+0.4
PSGCX				Sg	Sb	19 21 58.2	+0.2
TA01	Diego Aracena	0.92	130	⇓eP	Pb	19 21 47.7	+0.4
TA01				iS	Sb	19 21 59.3	-0.8
TA01				IAML		19 22 02.1	
	comp=N,14μm,0.5s						
TA01	Diego Aracena	0.92	130	Pg	Pb	19 21 48.0	+0.7
PATCX	Punta Patache	1.12	139	⇑iP	Pb	19 21 51.1	+0.3
PATCX				iS	Sg	19 22 04.7	+0.2
PATCX				iS	Sg	19 22 04.8	+0.2
PATCX	Punta Patache	1.12	139		Pb	19 21 51.1	+0.3
PATCX				Sg	Sg	19 22 04.3	-0.3
PB11	IPOC Station P	1.22	80	⇓iP	Pn	19 21 53.1	+0.3
PB11				iS	Sn	19 22 09.0	-1.1
PB11				IAML		19 22 10.6	
	comp=E,13μm,0.6s						
PB11	IPOC Station P	1.22	80		Pn	19 21 53.1	+0.3
PB11				Sg	Sn	19 22 09.0	-1.1
PB12	IPOC Station P	1.47	23	⇑iP	Pg	19 21 57.2	+0.6
PB12				iS	Sg	19 22 16.7	+1.0
PB12	IPOC Station P	1.47	23		Pg	19 21 57.2	+0.6
MNMC	Minye Minye	1.51	57	⇓iP	Pg	19 21 58.2	+0.6
MNMC				iS	Sg	19 22 18.3	+1.1
MNMC				IAML		19 22 25.6	
	comp=N,18μm,0.3s						
MNMC	Minye Minye	1.51	57		Pg	19 21 58.3	+0.7
PB02	IPOC Station P	1.66	144	⇑eP	Pn	19 21 58.4	-0.5
PB02				eS	Sn	19 22 19.0	-1.8
PB02				IAML		19 22 28.7	
	comp=N,16μm,0.5s						
GO01	Chusmiza	1.67	80	⇑iP	Pb	19 22 00.2	-0.1
GO01				iS	Sg	19 22 22.4	+0.3
GO01				IAML		19 22 25.2	
	comp=N,12μm,0.2s						
GO01	Chusmiza	1.67	80		Pb	19 22 00.3	0.0
PB08	IPOC Station P	1.68	96	⇑iP	Pb	19 22 00.0	-0.5
PB08				iS	Sb	19 22 21.9	-0.4
PB08				IAML		19 22 28.6	
	comp=N,7μm,0.6s						
PB08	IPOC Station P	1.68	96		Pb	19 22 00.1	-0.5
AP01	Chacalluta	1.69	19	⇑eP	Pb	19 22 00.1	-0.3
AP01				eS	Sg	19 22 22.6	-0.2
AP01				IAML		19 22 26.9	
	comp=N,17μm,0.3s						
AP01	Chacalluta	1.69	19	Pn	Pb	19 22 00.4	+0.1
PB01	IPOC Station P	1.73	128	⇑eP	Pn	19 21 59.8	+0.1
PB01				eS	Sn	19 22 21.1	-1.3
PB01				IAML		19 22 28.2	
	comp=N,6μm,0.7s						
PB01	IPOC Station P	1.73	128		Pn	19 22 00.2	+0.4
PB07	IPOC Station P	2.00	151	⇑eP	Pn	19 22 03.4	-0.2
PB07				eS	Sn	19 22 27.5	-1.9
PB07				IAML		19 22 38.1	
	comp=E,5μm,0.5s						
PB07	IPOC Station P	2.00	151		Pn	19 22 03.5	-0.2
PB16	IPOC Station P	2.11	40	iP	Pb	19 22 07.0	-1.0
PB16				iS	Sb	19 22 34.1	-0.8
PB16	IPOC Station P	2.11	40		Pb	19 22 07.2	-0.8
PB03	IPOC Station P	2.34	152	⇑iP	Pn	19 22 08.1	-0.2
PB03				iS	Sn	19 22 35.6	-2.1
PB03				IAML		19 22 50.3	
	comp=E,2μm,0.7s						
PB09	IPOC Station P	2.41	139	⇑eP	Pn	19 22 10.4	+1.3
PB09				iS	Sn	19 22 40.2	+0.8
PB09	IPOC Station P	2.41	139		Pn	19 22 10.5	+1.3
PB04	IPOC Station P	2.46	163	⇑eP	Pn	19 22 09.3	-0.7
PB04				eS	Sn	19 22 36.5	-4.3
PB04				IAML		19 22 54.7	
	comp=N,3μm,0.4s						
PB04	IPOC Station P	2.46	163		Pn	19 22 09.1	-0.8
PB06	IPOC Station P	3.00	155		Pn	19 22 16.8	-0.6
LVC	Limon Verde	3.23	145	Pn	Pn	19 22 22.1	+1.4
	comp=N,14nm,0.3s,baz=319,slow=10.0,SNR=84						
LVC				Sn	Sn	19 22 59.0	-1.1
	comp=N,37nm,0.3s,baz=242,slow=23,SNR=6.4						
LVC	Limon Verde	3.23	145	eP	Pn	19 22 22.2	+1.4
LVC				eS	Sn	19 22 59.1	-0.9
PB15	IPOC Station P	3.50	157		Pn	19 22 23.5	-0.7
PB10	IPOC Station P	3.54	174		Pn	19 22 23.2	-1.5
LPAZ	La Paz	4.53	36	Pn	Pb	19 22 46.0	-3.2
	comp=N,2.8nm,0.3s,baz=202,slow=3.8,SNR=77						
LPAZ	La Paz	4.53	36		Pb	19 22 47.4	-1.8
LPAZ	La Paz	4.53	36	eP	Pn	19 22 39.3	+0.5
PB14	IPOC Station P	4.66	174		Pn	19 22 38.6	-1.7
GO02	Mina Guanaco	5.32	167		Pn	19 22 48.8	-0.5
NNA	Nana	9.76	324	Pn	Pn	19 23 52.3	+2.2
	comp=N,1.0nm,0.3s,baz=72,slow=19,SNR=1.1						
NNA				Sn	Sn	19 25 36.4	-4.0
	comp=N,2.0nm,0.3s,baz=235,slow=8.4,SNR=2.4						
NNA				LR	LR	19 27 58.0	
	comp=N,123nm,18.1s,baz=146,slow=40						
SIV	San Ignacio	10.18	69	Pn	Pn	19 23 55.2	-0.8
	comp=N,2.7nm,0.3s,baz=257,slow=12,SNR=30						
SIV				LR	LR	19 27 20.3	
	comp=N,60nm,21.4s,baz=276,slow=35						
PTLB	Pontes e Lacer	12.11	70	eP	Pn	19 24 22.0	-0.2
VILB	Vilhena	12.43	57	eP	Pn	19 24 26.0	-0.8
SAML	Samuel	13.28	35	eP	Pn	19 24 38.2	0.0
CPUP	Villa Florida	14.02	119	Pn	Pn	19 24 47.6	-0.7
	comp=N,0.1nm,0.3s,baz=158,slow=5.6,SNR=2.7						
CPUP				LR	LR	19 31 22.5	
	comp=N,159nm,19.7s,baz=304,slow=43						
CPUP	Villa Florida	14.02	119	eP	Pn	19 24 48.7	+0.4
AQDB	Aquidauana	14.31	95	eP	Pn	19 24 51.2	-1.1
SALV	Santo Antonio	15.05	77	eP	Pn	19 25 01.9	-0.6
ITQB	Itaqui	16.17	129	eP	Pn	19 25 18.0	+1.0
C2SB	Chapadao do Su	17.12	89	eP	Pn	19 25 28.1	-1.0
CLDB	Colider	17.16	60	eP	Pn	19 25 28.4	-1.2
PTGB	Pitanga	18.08	109	eP	Pn	19 25 41.0	-0.2
ITAB	Concordia	18.68	116	eP	P	19 25 47.5	-0.6
ARAG	Araguaiana, MT	18.69	80	eP	P	19 25 47.4	-0.9
CPSB	Cacapava Do Su	18.91	127	eP	P	19 25 50.3	-0.4
MACA	Manacapuru-AM	19.47	32	eP	P	19 25 56.4	-0.5
PLTB	Pedras Altas	19.49	130	eP	Pn	19 25 57.7	-0.5
FRTB	Fartura	20.14	103	eP	P	19 26 03.9	-0.3
PLCA	Paso Flores	20.70	179	P	P	19 26 11.5	+1.3
	comp=N,3.7nm,0.8s,baz=357,slow=11,SNR=4.4						
PLCA	Paso Flores	20.70	179	eP	Pn	19 26 12.4	0.0
BB19B	Bebedouro	21.01	97	eP	P	19 26 13.0	-0.7
IPMB	Ipameri, GO	21.58	89	eP	P	19 26 18.8	-1.0
PTGA	Pitinga	21.93	31	P	P	19 26 22.6	-0.9
	comp=N,4.7nm,0.3s,baz=206,slow=11,SNR=12						
PTGA	Pitinga	21.93	31	P	P	19 26 22.3	-1.2
PTGA					pP	19 26 22.9	-0.2
PTGA				IAmb	IAmb	19 26 25.6	
	comp=Z,9.1nm,0.8s						
PTGA	Pitinga	21.93	31	eP	P	19 26 22.8	-0.8
BDFB	Brasilia	22.24	83	P	P	19 26 26.2	-0.8
	comp=Z,5.5nm,0.6s,baz=260,slow=14,SNR=5.7						
BDFB				LR	LR	19 36 41.9	
	comp=Z,282nm,18.3s,baz=290,slow=41						
BDFB	Brasilia	22.24	83	P	P	19 26 25.2	-1.8
BDFB					pP	19 26 26.6	0.0
BDFB				IAmb	IAmb	19 26 39.5	
	comp=Z,13nm,1.1s						
SOTA	Rioblanco	22.66	345	eP	P	19 26 35.7	+3.8
PCON	Cinco Dias	22.80	346	eP	P	19 26 30.8	-2.6
HORQ	Saladito	23.97	346	eP	P	19 26 45.4	+0.5
ORTC	Ortega, Tolima	24.11	349	eP	P	19 26 47.5	+1.6
ORTC				eP	pwP	19 26 48.8	-0.9
BOAV	Boa Vista	24.46	26	eP	P	19 26 49.9	+0.7
ROSC	El Rosal	24.88	352	LR	LR	19 36 26.5	
	comp=Z,136nm,18.2s,baz=210,slow=36						
RREF	El Recreo	25.09	350	eP	P	19 26 58.6	+3.1
GUY2C	Guyana, Caldas	25.41	350	eP	P	19 26 59.3	+1.0
RUSC	La Rusia	25.79	355	eP	P	19 27 02.0	+0.4
RUSC	La Rusia	25.79	355	P	P	19 27 02.9	+1.2
JANB	Januaria	25.84	83	eP	P	19 27 00.3	-1.4
PTBC	PUERTO BERRIO,	26.57	352	eP	P	19 27 04.6	-3.7
SDV	Santo Domingo	28.68	1	eP	P	19 27 27.9	+0.6
SMLC	San Martn de	28.76	354	eP	P	19 27 25.8	-2.0
CAPC	Capurgana	29.12	347	eP	P	19 27 47.2	+16
RCBR	Riachuelo	36.82	72	P	P	19 28 37.9	-0.6
	comp=Z,9.4nm,0.8s,baz=245,slow=11,SNR=5.4						
TXAR	Lajitas Array	58.30	326	P	P	19 31 26.4	+1.2
	comp=Z,0.3nm,0.7s,baz=142,slow=6.3,SNR=4.1						
DBIC	Dimbokro	70.14	75	P	P	19 32 42.0	-1.1
	comp=Z,4.9nm,0.8s,baz=230,slow=7.1,SNR=4.5						
DBIC	Dimbokro	70.14	75	IAmb	IAmb	19 32 42.8	
	comp=Z,6.4nm,0.9s						
WAKR	Walker	73.83	322	P	P	19 33 08.4	+3.3
TOA0	Torodi Ar. Sit	78.65	71	P	P	19 33 31.4	-1.3
TOA0				IAmb	IAmb	19 33 32.5	
	comp=Z,12nm,0.9s						
TORD	Torodi Ar. Bea	78.65	71	P	P	19 33 31.2	-1.5
	comp=Z,8.8nm,0.8s,baz=252,slow=5.2,SNR=34						
ESDC	Sonseca Array	86.09	45	P	P	19 34 10.9	-0.3
	comp=Z,0.6nm,0.8s,baz=269,slow=6.1,SNR=5.9						
YKA	Yellowknife Ar	89.13	341	P	P	19 34 25.5	+0.3
	comp=Z,1.0nm,0.7s,baz=136,slow=5.2,SNR=20						
H11S2	WAKE ISLAND Hy	125.79	279	T	T	21 59 23.2	
	SNR=35						
H11S1	WAKE ISLAND Hy	125.80	279	T	T	21 59 56.0	
	baz=101,slow=74,SNR=32						
H11S3	WAKE ISLAND Hy	125.81	279	T	T	21 59 55.1	
	baz=345,slow=74,SNR=12						
H11N3	WAKE ISLAND Hy	125.84	280	T	T	21 59 59.3	
	baz=101,slow=74,SNR=14						
H11N2	WAKE ISLAND Hy	125.85	280	T	T	22 00 01.9	
	baz=101,slow=74,SNR=13						
H11N1	WAKE ISLAND Hy	125.85	280	T	T	21 59 58.5	
	baz=101,slow=74,SNR=12						
ASAR	Alice Springs	130.32	210	PKP	PKPdf	19 40 40.5	-1.0
	comp=Z,0.3nm,0.6s,baz=133,slow=1.5,SNR=5.9						
WRA	Warramunga Arr	133.24	213	PKP	PKPdf	19 40 47.4	+0.4
	comp=Z,0.4nm,0.6s,baz=152,slow=1.8,SNR=5.3						
ZALV	Zalesovo Beam	141.33	23	PKhKP	PKPpre	19 40 56.9	
	comp=Z,1.5nm,0.7s,baz=329,slow=1.7,SNR=5.4						
MAKZ	Makanchi	145.28	33		PKPdf	19 41 08.6	+0.5
MK31	Makanchi Array	145.45	33		PKPab	19 41 09.1	+0.5
MKAR	Makanchi Array	145.45	33	PKPbc	PKPab	19 41 08.8	+0.3
	comp=Z,5.6nm,0.8s,baz=325,slow=3.8,SNR=64						
KSH	Kashi	145.56	48	PKPbc	PKPab	19 41 10.4	+1.1
KSH				PP	PP	19 44 33.5	+4.2
KSH				PKS	PKSdf	19 44 46.3	+1.8
MJAR	Matsushiro Arr	149.64	309	PKPbc	PKPbc	19 41 20.1	-0.1
	comp=Z,1.8nm,0.7s,baz=134,slow=1.2,SNR=7.4						
MAT	Matsushiro	149.64	309	PKP	PKiKP	19 41 21.0	-0.3
SONM	Songino Array	152.12	4	PKPbc	PKiKP	19 41 26.8	+0.6
	comp=Z,2.2nm,0.7s,baz=322,slow=1.3,SNR=19						

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*NIED **04** 20:02:00, 36.°20N×139.°90E, h53^{km}, Mw4.3 Best double couple: $M_0$3.62000×10^{15} NP1:ϕ_s35.00000°, δ66.00000°, λ72.00000°. NP2:ϕ_s254.00000°, δ30.00000°, λ126.00000°.*

*NEIC **04** 20:02:15.4±1.3, 36.°09N±0.°05×139.°90E±0.°07, h51^{km}±6^{km}, mb4.5/45, Error ellipse: s-maj=8.2km s-min=7.3km az=81.0*

*IDC **04** 20:02:15.9±1.1, 36.°09N×139.°87E, h55^{km}±10^{km}, mb4.0/27, mb1 4.1/32, mb1mx4.0/43, mbtmp4.2/32, MS3.2/4, Ms1 3.2/4, ms1mx3.0/51, Error ellipse: s-maj=10.8km s-min=7.2km az=73.0*

*JMA **04** 20:02:16.6±0.1, 36.°12N×139.°85E, h49^{km}±1^{km}, M4.2 Broadband fault plane solution: P waves. NP1: ϕ_s233.00000°, δ17.00000°, λ91.00000°. NP2:ϕ_s52.00000°, δ73.00000°, λ90.00000°. Principal axes: T Plg62.0000°, Azm321.0000°; N Plg0.0000°, Azm52.0000°; P Plg28.0000°, Azm142.0000°;*

JMA Felt III J1.

ISC 04 20:02:15.7±0.7, **36.°08N**±0.°04×**139.°88E**±0.°04, **h54**^{km}±6^{km}, **n158**, σ**1.s09**/163, **mb4.4**/61, **1C-5D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.29	60	⇑P	Pn	20 02 25.6	+0.5
JYT				S	Sn	20 02 32.3	+0.4
JAG	Ashikaga	0.49	315	⇓P	Pn	20 02 27.2	+0.1
JAG				S	Sn	20 02 34.7	-0.6
JRY	Ryogami san	0.80	266	⇓P	Pn	20 02 31.2	+0.3
JRY				S	Sn	20 02 41.6	-0.4
JKT	Katashina	0.85	324	⇓P	Pn	20 02 31.5	-0.2
JKT				S	Sn	20 02 42.7	-0.7
JOD2	Odawara 2	1.04	219	P	Pn	20 02 35.4	+1.3
JOD2				S	Sn	20 02 49.9	+2.3
JYN	Shimob	1.23	242	P	Pn	20 02 38.5	+1.8
JFNN	Fujinakano	1.31	228	P	Pn	20 02 39.6	+1.9
JFY	Yanaizu	1.33	354	⇓P	Pn	20 02 38.5	+0.5
JFY				S	Sn	20 02 55.5	+0.8
JHK	Hiroka	1.36	329	⇓P	Pn	20 02 38.6	+0.3
BSO3	Boso 3	1.38	158	P	Pn	20 02 39.6	+1.3
JIM2	Oshima 3	1.41	195	P	Pn	20 02 39.7	+0.7
MJAR	Matsushiro Arr	1.43	289	P	Pn	20 02 39.8	+0.6
	62nm,0.3s,baz=86,slow=10.0,SNR=5170						
MJAR				S	Sn	20 02 56.0	-1.0
	26nm,0.3s,baz=320,slow=18,SNR=4.4						
MJAR				LR	LR	20 03 25.3	
	comp=Z,646nm,19.5s,baz=125,slow=50						
MAJO	Matsushiro	1.43	289		Pn	20 02 39.1	-0.2
MAT	Matsushiro	1.43	289	P	Pn	20 02 39.1	-0.2
MAT				eS	Sn	20 02 57.1	+0.1
MAT	Matsushiro	1.43	289	P	Pn	20 02 39.3	0.0
MJB9	Matsu-Tunnel	1.43	289		Pn	20 02 39.2	-0.2
INU	Inuyama	2.44	253		Pn	20 02 54.9	+1.8
JHJ	Hachijo jima 2	2.96	182	P	Pn	20 03 01.4	+1.3
	298nm,0.3s,baz=333,slow=15,SNR=134						
JHJ				S	Sn	20 03 34.6	+0.2
	233nm,0.3s,baz=49,slow=23,SNR=8.8						
JHJ2	Mitsune	2.96	181		Pn	20 03 01.2	+1.0
ERM	Erimo	6.45	22		Pn	20 03 48.2	+0.2
JNU	Nakatsue	7.99	251	P	Pn	20 04 10.9	+1.8
	0.5nm,0.3s,baz=93,slow=5.3,SNR=6.0						
JNU				LR	LR	20 07 36.1	
	comp=Z,210nm,19.2s,baz=40,slow=40						
ASAJ	Asahikawa	8.29	14	P	Pn	20 04 13.5	+0.3
	2.3nm,0.3s,baz=235,slow=13,SNR=19						
ASAJ				S	Sn	20 05 44.8	-0.6
	0.6nm,0.3s,baz=333,slow=26,SNR=1.7						
JKA	Kamikawa-asahi	8.29	14		Pn	20 04 13.5	+0.3
JKA					Sn	20 05 44.8	-0.6
JCJ	Chichijima	9.17	167	P	Pn	20 04 22.0	-3.3
	27nm,0.3s,baz=287,slow=21,SNR=34						
JCJ				S	Sn	20 05 57.0	-10
	3.3nm,0.3s,baz=293,slow=20,SNR=1.5						
JCJ				LR	LR	20 08 03.9	
	comp=Z,95nm,20.7s,baz=309,slow=38						
KSRS	Korea Array	9.69	282	P	Pn	20 04 35.6	+3.3
	1.2nm,0.3s,baz=94,slow=14,SNR=28						
KSRS				LR	LR	20 08 11.2	
	comp=Z,184nm,20.4s,baz=70,slow=37						
USRK	Ussuriysk Ar.	10.11	326	P	Pn	20 04 40.1	+2.0
	baz=143,slow=12,SNR=12						
USRK				LR	LR	20 08 35.3	
	comp=Z,99nm,19.9s,baz=141,slow=38						
MDJ	Mudanjiang	11.58	321	P	Pn	20 05 03.4	+5.2
MDJ				pmax	pmax		
	comp=Z,17nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,150nm,3.8s						
CN2	Changchun	13.48	309	eP	P	20 05 29.5	-2.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLR	Kul'dur	14.43	338	P	Pn	20 05 36.5	-0.2
	comp=Z,0.1nm,0.3s,baz=130,slow=11,SNR=4.4						
NJ2	Nanjing	17.87	263	eP	Pn	20 06 19.4	-1.0
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BJI	Beijing	19.07	289	P	P	20 06 29.8	-3.7
BJI				pmax	pmax		
	comp=Z,4.0nm,1.4s						
PETK	Petropavlovsk-	21.13	31	P	P	20 06 55.9	+0.1
	comp=Z,1.8nm,0.8s,baz=200,slow=11,SNR=2.9						
WHN	Wuhan	22.01	263	P	P	20 07 01.6	-3.8
HHC	Hu-ho-hao-te	22.63	291	eP	P	20 07 09.0	-3.1
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,43nm,5.0s						
MA2	Magadan	24.55	13	P	P	20 07 29.1	-1.0
	comp=Z,12nm,0.6s,baz=199,slow=11,SNR=8.8						
MA2	Magadan	24.55	13	P	P	20 07 30.4	+0.3
MA2				IAmb	IAmb	20 07 32.2	
	comp=Z,13nm,0.7s						
SONM	Songino Array	27.32	306	P	P	20 07 54.8	-0.6
	comp=Z,1.5nm,0.6s,baz=110,slow=9.0,SNR=12						
SEY	Seymchan	27.97	12	P	P	20 08 00.6	-0.3
	comp=Z,2.6nm,0.7s,baz=206,slow=7.0,SNR=6.4						
H11N2	WAKE ISLAND Hy	28.77	117	T	T	20 38 18.2	
	baz=312,slow=75,SNR=8.4						
H11N1	WAKE ISLAND Hy	28.77	117	T	T	20 38 20.0	
	baz=312,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	28.78	117	T	T	20 38 20.7	
	baz=312,slow=75,SNR=8.2						
LZH	Lanzhou	29.02	281	eP	P	20 08 12.0	+1.3
LZH				pP	pP	20 08 26.2	+1.8
LZH				sP	sP	20 08 31.6	+0.8
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
H11S1	WAKE ISLAND Hy	29.42	119	T	T	20 39 09.3	
	baz=314,slow=76,SNR=30						
H11S3	WAKE ISLAND Hy	29.42	119	T	T	20 39 09.3	
	baz=314,slow=76,SNR=15						
H11S2	WAKE ISLAND Hy	29.44	119	T	T	20 39 11.2	
	baz=314,slow=76,SNR=14						
GYA	Guiyang	29.85	261	eP	P	20 08 17.3	-0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA	Gaotai	31.68	288	eP	P	20 08 37.0	+2.9
GTA				pP	sP	20 08 51.2	-3.0
GTA				sP	pP	20 08 58.7	+11
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TIXI	Tiksi	36.10	354	P	P	20 09 11.2	-0.7
	comp=Z,3.0nm,0.6s,baz=144,slow=6.7,SNR=22						
TIXI	Tiksi	36.10	354	P	P	20 09 11.4	-0.5
TIXI				IAmb	IAmb	20 09 12.0	
	comp=Z,3.6nm,0.8s						
CMAR	Chiang Mai Arr	40.06	255	P	P	20 09 47.5	+1.7
	comp=Z,0.3nm,0.5s,baz=53,slow=5.4,SNR=4.7						
WMQ	Urumqi	40.18	298	eP	P	20 09 47.3	+0.7
LSA	Lhasa	41.07	275	P	P	20 09 55.8	+1.2
LSA				IAmb	IAmb	20 09 56.6	
	comp=Z,5.6nm,0.8s						
ZAA0	Zalesovo Array	41.66	313	P	P	20 09 57.8	-0.8
ZAA0				IAmb	IAmb	20 09 59.5	
	comp=Z,10nm,0.7s						
ZALV	Zalesovo Beam	41.66	313	P	P	20 09 58.3	-0.2
	comp=Z,10nm,0.6s,baz=93,slow=6.2,SNR=44						
ZALV				PcP	PcP	20 11 54.2	-0.3
	comp=Z,2.7nm,0.4s,baz=107,slow=2.5,SNR=8.2						
MK31	Makanchi Array	43.59	303	P	P	20 10 14.1	-0.3
MKAR	Makanchi Array	43.59	303	P	P	20 10 14.2	-0.2
	comp=Z,3.6nm,0.6s,baz=87,slow=9.3,SNR=50						
MKAR				PcP	PcP	20 12 00.3	-0.8
	comp=Z,0.5nm,0.7s,baz=61,slow=4.1,SNR=2.7						
NRIK	Noril'sk	43.62	336	P	P	20 10 13.7	-0.7
	comp=Z,2.2nm,0.4s,baz=116,slow=10,SNR=6.4						
MAKZ	Makanchi	43.80	303	P	P	20 10 15.7	-0.3
KSM	Kuching	44.00	225	P	P	20 10 17.0	-1.0
KSM				IAmb	IAmb	20 10 19.7	
	comp=Z,5.1nm,0.7s						
TAPN	Taplejung	44.78	274	eP	P	20 10 24.1	-0.4
	comp=Z,8.1nm,0.4s						
ODAN	Odare	45.24	274	eP	P	20 10 27.6	-0.5
KURK	Kurchatov	45.55	309	P	P	20 10 29.8	-0.2
RAMN	Ramite	45.84	274	eP	P	20 10 32.8	0.0
	comp=Z,37nm,0.7s						
JIRN	Jiri	45.87	275	eP	P	20 10 33.6	+0.4
	comp=Z,52nm,0.8s						
GUN	Gumba	46.02	276	eP	P	20 10 34.4	0.0
	comp=Z,17nm,0.7s						
PKI	Pulchoki	46.54	276	eP	P	20 10 37.9	-0.5
	comp=Z,20nm,0.8s						
PKIN	Phulchoki	46.55	276	eP	P	20 10 37.8	-0.6
	comp=Z,11nm,0.5s						
KKN	Kakani	46.55	276	eP	P	20 10 38.5	+0.1
	comp=Z,26nm,0.8s						
DMN	Daman	46.77	276	eP	P	20 10 40.0	-0.1
GKN	Gorkha	46.98	277	eP	P	20 10 41.6	-0.1
	comp=Z,70nm,0.7s						
DANN	Dangsing	47.55	277	eP	P	20 10 46.7	+0.5
	comp=Z,123nm,0.7s						
KOLN	Koldanda	47.91	277	eP	P	20 10 49.2	+0.2
	comp=Z,14nm,0.6s						
KDJ	Kajisay	48.07	297	P	P	20 10 50.3	+0.3
KDJ				IAmb	IAmb	20 10 51.2	
	comp=Z,3.9nm,0.7s						
OHAK	Old Harbor	48.29	42	P	P	20 10 51.8	+0.6
KDAK	Kodiak Island	48.63	41	P	P	20 10 54.4	+0.6
	comp=Z,7.0nm,0.6s,baz=285,slow=6.9,SNR=9.7						
KDAK	Kodiak Island	48.63	41	IAmb	IAmb	20 10 55.8	
	comp=Z,7.8nm,0.7s						
PPLA	Purkeypile	48.65	34	P	P	20 10 54.8	+0.7
PPLA				IAmb	IAmb	20 11 10.8	
	comp=Z,9.5nm,1.4s						
TKM2	Tokmak 2	49.00	299	P	P	20 10 58.1	+0.9
	SNR=27						
BPAW	Bear Paw Mtn.	49.20	33	P	P	20 10 58.8	+0.7
MLY	Manley	49.31	32	P	P	20 11 00.8	+1.8
KZA	Kyzart	49.47	298	P	P	20 11 02.4	+1.4
	SNR=11						
KBK	Karagaybulak	49.53	299	P	P	20 11 01.8	+0.7
	SNR=15						
KSH	Kashi	49.67	294	P	P	20 11 06.3	+4.1
KSH				pP	sP	20 11 19.8	-3.0
KSH				PP	PP	20 12 58.9	+2.0
KSH				S	S	20 18 10.8	+3.7
KSH				ScS	ScS	20 20 49.0	-0.1
KSH	Kashi	49.67	294	SS	SS	20 21 37.4	-2.2
KSH				pmax	pmax		
	comp=Z,13nm,0.8s						
KSH				LR	LR		
	comp=N,620nm,6.8s						
KSH				LR	LR		
	comp=E,680nm,5.6s						
USP	Ospenovka	49.69	299	P	P	20 11 02.6	+0.4
	SNR=8.0						
AAK	Ala-Archa	49.86	299	P	P	20 11 04.0	+0.3
	SNR=6.3						
AAK	Ala-Archa	49.86	299	P	P	20 11 03.9	+0.3
AAK				IAmb	IAmb	20 11 04.8	
	comp=Z,5.2nm,0.8s						
UCH	Uchtor	49.96	298	P	P	20 11 05.9	+1.2
	SNR=6.8						
RND	Reindeer	50.16	34	P	P	20 11 06.7	+1.2
RND				IAmb	IAmb	20 11 10.5	
	comp=Z,3.8nm,0.8s						
EKS2	Erkin-Say	50.36	299	P	P	20 11 07.7	+0.3
	SNR=8.2						
BRVK	Borovoye	50.36	313	P	P	20 11 06.8	-0.3
BRVK				IAmb	IAmb	20 11 07.9	
	comp=Z,2.6nm,0.7s						
AML	Almayashu	50.57	298	P	P	20 11 10.2	+1.0
	SNR=41						
CCB	Clear Creek Bu	50.57	32	P	P	20 11 08.5	0.0
IL31		50.96	32	P	P	20 11 10.7	-0.7
IL31				IAmb	IAmb	20 11 16.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,3.7nm,0.9s						
ILAR	Eielson Array	50.96	32	P	P	20 11 12.1	+0.7
	comp=Z,2.3nm,0.7s,baz=271,slow=5.9,SNR=55						
ARSB	Arslanbob	51.31	297	P	P	20 11 14.9	+0.3
SCRK	Sand Creek	52.28	33	P	P	20 11 22.1	+0.7
DOT	Dot Lake	52.28	33	P	P	20 11 21.7	+0.4
DOT				IAmb	IAmb	20 11 23.9	
	comp=Z,2.2nm,0.6s						
BARN	Barnard Glacie	53.76	36	P	P	20 11 32.4	-0.1
EPYK	Eagle Plains	54.96	29	P	P	20 11 42.4	+1.5
FITZ	Fitzroy Crossi	55.54	196	P	P	20 11 45.8	+0.3
FITZ				IAmb	IAmb	20 11 47.8	
	comp=Z,7.7nm,1.2s						
WB0	Warramunga Arr	55.78	186	P	P	20 11 47.4	+0.2
WB0				IAmb	IAmb	20 12 03.4	
	comp=Z,6.7nm,0.8s						
INK	Inuvik	55.79	27	P	P	20 11 47.1	+0.3
	comp=Z,2.7nm,0.7s,baz=317,slow=6.0,SNR=13						
INK	Inuvik	55.79	27	P	P	20 11 46.9	+0.1
INK				IAmb	IAmb	20 11 52.0	
	comp=Z,3.7nm,0.8s						
WR0	Warramunga Arr	55.96	186	P	P	20 11 48.0	-0.5
WRA	Warramunga Arr	55.96	186	P	P	20 11 48.5	-0.1
	comp=Z,2.9nm,0.5s,baz=0.5,slow=7.6,SNR=47						
ARU	Arti	56.26	319	P	P	20 11 50.1	-0.2
KBL	Kabul	56.60	291	P	P	20 11 53.1	-0.3
KBL				IAmb	IAmb	20 11 53.6	
	comp=Z,5.5nm,0.7s						
ABKAR	Akbulak array	57.61	310	P	P	20 11 59.6	-0.3
AS31	Alice Springs	59.69	186	P	P	20 12 14.7	+0.1
ASAR	Alice Springs	59.69	186	P	P	20 12 15.1	+0.4
	comp=Z,0.6nm,0.3s,baz=0.4,slow=6.2,SNR=24						
HRA	Herat	61.77	294	P	P	20 12 28.1	-1.0
HRA				IAmb	IAmb	20 12 30.3	
	comp=Z,3.5nm,0.7s						
NOR	Nord	61.92	356	*i* P	P	20 12 29.0	-0.1
	comp=Z,1.7nm,0.8s						
GEYT	Alibeck	63.21	299	P	P	20 12 38.8	+0.4
	comp=Z,3.8nm,0.8s,baz=39,slow=3.1,SNR=12						
RES	Resolute Bay	63.83	14	P	P	20 12 42.5	+0.7
RES				IAmb	IAmb	20 12 43.2	
	comp=Z,2.5nm,0.7s						
ARCES	ARCESS Array B	64.45	339	P	P	20 12 46.1	+0.1
	comp=Z,1.6nm,0.5s,baz=54,slow=7.9,SNR=15						
YKA	Yellowknife Ar	65.25	30	P	P	20 12 50.7	-0.5
	comp=Z,0.7nm,0.7s,baz=302,slow=6.2,SNR=9.8						
DAG	Danmarks Havn	66.61	355	*i* P	P	20 12 59.9	+0.1
	comp=Z,5.5nm,0.9s						
STKA	Stephens Creek	67.62	178	P	P	20 13 06.5	-0.2
	comp=Z,1.3nm,0.5s,baz=352,slow=7.1,SNR=6.1						
STKA	Stephens Creek	67.62	178	IAmb	IAmb	20 13 06.6	
	comp=Z,1.8nm,1.4s						
FINES	FINESS Array B	69.08	332	P	P	20 13 15.4	-0.1
	comp=Z,6.1nm,0.8s,baz=87,slow=9.7,SNR=18						
KBZ	Khabaz	70.58	310	P	P	20 13 25.4	+0.3
	comp=Z,6.4nm,0.8s,baz=40,slow=2.0,SNR=18						
SUMG	Summit	71.63	359	P	P	20 13 31.7	+0.2
SUMG				IAmb	IAmb	20 13 33.5	
	comp=Z,9.5nm,0.8s						
SUMG	Summit	71.63	359	*i* P	P	20 13 32.1	+0.6
	comp=Z,25nm,0.8s						
AKASG	Malin Array Be	74.29	322	P	P	20 13 46.6	-0.5
	comp=Z,5.0nm,0.6s,baz=48,slow=6.2,SNR=28						
AKBB	Malin Array Si	74.29	322	P	P	20 13 46.0	-1.0
AKBB				IAmb	IAmb	20 13 47.8	
	comp=Z,6.4nm,0.7s						
NC405	NORSAR Array S	74.36	337	P	P	20 13 47.1	-0.2
NC204	NORSAR Array S	74.55	337	P	P	20 13 47.8	-0.6
NB2	NORSAR Subarra	74.58	337	P	P	20 13 48.1	-0.5
	comp=Z,3.4nm,0.6s,baz=41,slow=5.9						
NOA	NORSAR Array B	74.58	337	P	P	20 13 48.5	-0.1
	comp=Z,3.3nm,0.7s,baz=40,slow=5.9,SNR=25						
NVAR	Mina Array Bea	76.55	52	P	P	20 14 01.8	+1.3
	comp=Z,1.1nm,0.7s,baz=288,slow=5.3,SNR=7.2						
ELK	Elko	77.11	49	P	P	20 14 03.3	-0.3
	comp=Z,0.9nm,0.7s,baz=14,slow=11,SNR=4.5						
ELK	Elko	77.11	49	IAmb	IAmb	20 14 06.5	
	comp=Z,2.3nm,1.2s						
BUR08	Bucovina Ar. S	78.27	321	P	P	20 14 09.9	0.0
BRTR	Keskin Array B	78.55	311	P	P	20 14 11.4	-0.2
	comp=Z,0.9nm,0.6s,baz=121,slow=3.7,SNR=5.4						
KOLS	Kolonicke sedl	78.86	323	*e*P	P	20 14 13.1	+0.2
RAYN	Ar Rayn	79.87	292	P	P	20 14 19.0	+0.1
RAYN				IAmb	IAmb	20 14 19.8	
	comp=Z,4.1nm,0.7s						
CHVC	Chvalec	80.54	328	*e*P	P	20 14 22.2	+0.2
CHVC				*e*x	x	20 14 31.2	
KRLC	Kraliky	80.60	327	*e*P	P	20 14 22.6	+0.2
DPC	Dobruska-Polom	80.60	327	*e*P	P	20 14 23.0	+0.6
VYHS	Vyhne	80.80	325	*e*P	P	20 14 23.9	+0.5
BRG	Berggiesshubel	81.23	329	*e*PKP	P	20 14 25.7	0.0
	comp=Z,3.8nm,0.8s						
CLL	Collm	81.30	329	*i* P	P	20 14 26.8	+0.8
	comp=Z,6.0nm,1.0s						
GOPC	GO Pecny, Ondr	81.59	328	*e*P	P	20 14 27.4	-0.2
PRU	Pruhonice	81.64	328	*e*P	P	20 14 28.1	+0.3
CONA	Conrad Observa	82.58	326	*e*P	P	20 14 33.7	+0.7
	comp=Z,0.3nm,0.3s						
KHC	Kasperske Hory	82.70	328	*e*P	P	20 14 33.4	-0.1
GERES	GERESS Array B	82.86	327	P	P	20 14 34.2	-0.2
	comp=Z,0.8nm,0.6s,baz=41,slow=5.3,SNR=9.4						
SOKA	Soboth	83.89	325	*e*P	P	20 14 40.0	+0.3
	comp=Z,2.4nm,0.5s						
KBA	Koelnbreinsper	84.35	327	*e*PcP	P	20 14 42.6	+0.5
	comp=Z,0.4nm,0.3s						
MYKA	Terra Mystica	84.56	326	*e*P	P	20 14 42.5	-0.5
	comp=Z,1.0nm,0.4s						
RETA	Reutte	85.17	328	*i* P	P	20 14 46.0	-0.1
	comp=Z,0.2nm,0.2s						
FETA	Feichten	85.54	328	*i* P	P	20 14 47.9	-0.3
	comp=Z,0.2nm,0.3s						
DAVA	Damuels	85.70	328	*i* PcP	P	20 14 48.9	0.0
	comp=Z,0.5nm,0.2s						
SCHQ	Schefferville	86.58	15	P	P	20 14 53.8	+0.8
	comp=Z,2.0nm,0.7s,baz=318,slow=2.6,SNR=4.5						
SCHQ	Schefferville	86.58	15	IAmb	IAmb	20 15 10.7	
	comp=Z,7.1nm,1.3s						
TORD	Torodi Ar. Bea	117.10	313	PKP	PKPdf	20 20 54.6	-0.6
	comp=Z,0.5nm,0.7s,baz=63,slow=1.6,SNR=4.6						
LPAZ	La Paz	148.24	59	PKPbc	PKPbc	20 21 56.7	-0.3
	comp=Z,1.5nm,0.6s,baz=349,slow=4.1,SNR=8.4						

*SJA **04** 20:08:13.9±0.7, 20°.50S×69°.24W, h127km±5km, ML3.2, MW3.5*
*GUC **04** 20:08:15.8±0.8, 20°.54S×69°.22W, h110km±3km, ML3.7*
ISC 04 20:08:15.4±1.5**, 20°.54S**±0°.03×**69°.26W**±0°.06**,**
h121km±10km**, n32,** σ**0s.59**/53**, 10C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.40	14	⇓*i*P	Pn	20 08 33.3	-0.1
PB08				*i* S	Sn	20 08 46.1	-0.9
PB08				IAML		20 08 47.5	
	comp=E,5µm,0.2s						
PB01	IPOC Station P	0.55	203	⇑*i*P	Pn	20 08 33.8	-0.1
PB01				*i* S	Sn	20 08 47.0	-0.9
PB01				IAML		20 08 48.6	
	comp=E,4µm,0.2s						
PB11	IPOC Station P	0.86	334	⇑*i*P	Pn	20 08 36.7	+0.4
PB11				*i* S	Sn	20 08 52.1	-0.1
PB11	IPOC Station P	0.86	334	*i* P	Pn	20 08 36.0	-0.3
PB11				*i* Sg	Sn	20 08 51.7	-0.5
TA02	Huaiquique	0.86	288	*i* P	Pn	20 08 36.7	+0.5
TA02				*i* S	Sn	20 08 51.9	0.0
TA02				IAML		20 08 55.4	
	comp=N,4µm,0.1s						
GO01	Chusmiza	0.86	4	⇓*i*P	Pn	20 08 36.9	0.0
GO01				*i* S	Sn	20 08 52.6	-0.3
TA01	Diego Aracena	0.87	268	⇑*i*P	Pn	20 08 36.6	+0.4
TA01				*i* S	Sn	20 08 51.8	-0.2
PATCX	Punta Patache	0.89	251	⇑*e*P	Pn	20 08 37.2	+0.7
PATCX				*e*S	Sn	20 08 52.9	+0.3
PATCX				IAML		20 08 54.4	
	comp=E,1µm,0.2s						
PATCX	Punta Patache	0.89	251	*i* P	Pn	20 08 36.6	0.0
PATCX				*i* Sg	Sn	20 08 53.1	+0.5
PATCX				IAML		20 08 55.2	
	comp=Z,684nm,0.2s						
PB02	IPOC Station P	0.98	217	⇑*i*P	Pn	20 08 38.1	+0.7
PB02				*i* S	Sn	20 08 54.3	0.0
PB02				IAML		20 08 55.2	
	comp=N,5µm,0.4s						
PB02	IPOC Station P	0.98	217	*i* P	Pn	20 08 37.6	+0.1
PSGC	Pisagua	1.24	319	⇑*i*P	Pn	20 08 40.4	+0.3
PSGC				*i* S	Sn	20 08 58.8	0.0
PSGCX	Pisagua	1.24	319	*i* P	Pn	20 08 39.6	-0.5
PSGCX				IAML		20 09 01.3	
	comp=Z,467nm,0.3s						
PB09	IPOC Station P	1.25	179	⇑*i*P	Pn	20 08 40.8	+0.4
PB09				*i* S	Sn	20 08 59.7	+0.5
PB09	IPOC Station P	1.25	179	*i* P	Pn	20 08 40.5	+0.1
PB09				*i* Sg	Sn	20 08 59.8	+0.5
PB09				IAML		20 09 00.9	
	comp=Z,766nm,0.3s						
PB07	IPOC Station P	1.32	206	*e*P	Pn	20 08 41.5	+0.4
PB07				*e*S	Sn	20 09 00.7	+0.1
PB07				IAML		20 09 02.0	
	comp=N,850nm,0.4s						
MNMC	Minye Minye	1.43	347	⇑*i*P	Pn	20 08 43.1	+0.7
MNMC				*e*S	Sn	20 09 03.8	+0.9
MNMC				IAML		20 09 07.8	
	comp=E,2µm,0.2s						
PB03	IPOC Station P	1.58	197	⇑*i*P	Pn	20 08 44.3	+0.4
PB03				*i* S	Sn	20 09 05.0	-0.7
PB03				IAML		20 09 07.0	
	comp=E,962nm,0.8s						
PB04	IPOC Station P	1.97	205	*e*P	Pn	20 08 49.5	+0.7
PB04				*e*S	Sn	20 09 13.7	-0.6
PB04				IAML		20 09 14.7	
	comp=N,599nm,0.3s						
PB04	IPOC Station P	1.97	205	*i* P	Pn	20 08 48.9	+0.1
PB04				IAML		20 09 16.8	
	comp=Z,321nm,0.4s						
LVC	Limon Verde	2.09	171	*e*P	Pn	20 08 51.2	+0.8
LVC				*e*S	Sn	20 09 18.3	+1.1
LVC	Limon Verde	2.09	171	*i* P	Pn	20 08 50.8	+0.4
LVC				IAML		20 09 23.5	
	comp=Z,48nm,0.5s						
PB12	IPOC Station P	2.16	332	⇑*e*P	Pn	20 08 51.1	+0.1
PB12				*e*S	Sn	20 09 18.0	-0.3
PB12				IAML		20 09 20.3	
	comp=N,489nm,0.4s						
PB06	IPOC Station P	2.18	188	⇓*e*P	Pn	20 08 51.7	+0.4
PB06				*e*S	Sn	20 09 18.0	-0.8
PB06				IAML		20 09 18.3	
	comp=N,232nm,0.3s						
PB06	IPOC Station P	2.18	188	*i* P	Pn	20 08 51.8	+0.5
PB06				IAML		20 09 23.4	
	comp=Z,167nm,0.4s						
PB05	IPOC Station P	2.47	201	*e*P	Pn	20 08 55.0	+0.1
PB05				*e*S	Sn	20 09 23.4	-2.0
PB05				IAML		20 09 24.5	
	comp=E,287nm,0.2s						
PB05	IPOC Station P	2.47	201	*i* P	Pn	20 08 55.0	+0.1
PB05				IAML		20 09 28.1	
	comp=Z,128nm,0.5s						
PB10	IPOC Station P	3.20	202	*i* P	Pn	20 09 04.3	-0.1
PB10				IAML		20 09 45.0	
	comp=Z,29nm,0.4s						
YJA	Yavi	3.85	116	*i* P	Pn	20 09 14.4	+1.1
PB14	IPOC Station P	4.21	194	*i* P	Pn	20 09 18.0	0.0
PB14				IAML		20 10 11.3	
	comp=Z,21nm,0.2s						
AZAP	Zapla	5.34	134	*i* P	Pn	20 09 32.9	-0.2
AZAP				IAML		20 10 44.8	
	comp=Z,5.5nm,2.2s						
ASTB	Santa Barbara	5.60	128	*i* P	Pn	20 09 35.8	-0.7
ASTB				IAML		20 11 06.7	
	comp=Z,4.1nm,3.8s						

*ISN **04** 20:12:13.6±0.8, 35°.43N×45°.08E, h2km±4km, ML2.7*
*TEH **04** 20:12:17.4, 35°.62N×45°.66E, h10km, ML2.8*
*DDA **04** 20:12:22.7, 36°.08N×44°.73E, h7km±5km, ML2.4*
ISC 04 20:12:15.2±1.2**, 35°.56N**±0°.04×**45°.07E**±0°.05**, h32**km±13km**,**
n12, σ**1s.00**/19**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IKRK	Kirkuk	0.61	256	*e*Pg	Pb	20 12 27.4	-0.2
IKRK				*e*Sg	Sb	20 12 36.0	-0.1
IKRK				AML	AML	20 12 37.5	
	comp=N,276nm,0.4s						
IKRK				AML	AML	20 12 47.6	
	comp=E,298nm,0.6s						
MAHB	Mahabad	1.31	23	*e*Pn	Pb	20 12 39.0	-0.4
MAHB				*e*		20 13 06.4	
IDHR	Dehrash	1.38	128	*e*Pg	Pn	20 12 38.0	-0.4
IDHR				*e*Sg	Sn	20 12 55.1	-0.5
IDHR				*e*		20 13 00.8	
IGHG	Ghaleghazi	1.74	134	*e*Pn	Pb	20 12 45.7	-1.0
IGHG				*e*		20 13 13.3	
MSL	Mosul	1.80	299	*e*Pn	Pb	20 12 47.0	-0.5
MSL				*e*Sn	Sb	20 13 11.5	+1.8
MSL				AML	AML	20 13 14.5	
	comp=N,84nm,0.4s						
MSL				AML	AML	20 13 19.1	
	comp=E,87nm,0.5s						
CUKT	Cukurca	2.06	326	*i* P	Pn	20 12 48.3	+0.6
CUKT				*i* S	Sn	20 13 11.5	-0.8
CUKT				IAML		20 13 32.0	
	comp=N,63nm,0.5s						
CUKT				IAML		20 13 37.0	
	comp=E,95nm,0.6s						
YOVA	Hakkari_Yksek	2.12	343	*i* P	Pb	20 12 52.2	-1.0
YOVA				*i* S	Sn	20 13 12.5	-1.5
YOVA				IAML		20 13 36.0	
	comp=N,24nm,0.8s						
IAZR	Azarshahr	2.24	19	*e*Pn	Pb	20 12 54.9	-0.3
IAZR				*e*		20 13 30.1	
HAKT	HAKKARI	2.28	332	*i* P	Pb	20 12 54.2	-1.6
HAKT				*i* S	Sn	20 13 18.6	+0.6
IKOM	Komasi	2.44	124	*e*Pn	Pn	20 12 54.0	+1.1
IKOM				*e*		20 13 42.9	
IBDR	Badra	2.54	163	*e*Pn	Pn	20 12 55.0	+0.8
IBDR				*e*Sn	Sn	20 13 24.0	-0.1
IBDR				AML	AML	20 13 28.4	
	comp=E,66nm,0.6s						
IHRS	Heris	3.18	29	*e*Pn	Pb	20 13 11.8	+0.6
IHRS				*e*		20 14 06.5	

*AEIC **04** 20:17:44.9±1.2, 67°.66N±0°.05×162°.6W±0°.2, h13km±5km, ML3.6, Error ellipse: s-maj=8.9km s-min=6.6km az=80.0*
*NEIC **04** 20:17:44.9±1.0, 67°.72N±0°.04×162°.7W±0°.2, h10km±2km, Error ellipse: s-maj=11.8km s-min=7.4km az=261.0*
*IDC **04** 20:17:47.2±1.1, 68°.07N×161°.77W, h0km, mb3.9/5, mb1 4.1/9, mb1mx3.7/62, mbtmp3.9/9, ML3.6/4, MS2.6/1, Ms1 2.7/1, ms1mx2.5/57, Error ellipse: s-maj=32.3km s-min=19.0km az=24.0*
ISC 04 20:17:46.6±0.7**, 67°.72N**±0°.06×**162°.38W**±0°.06**, h10**km**, n59,**
σ**1s.49**/68**, mb3.9**/5**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.39	330		Pg	20 17 53.0	-1.3
RDOG				Sg	Sg	20 17 56.4	-3.0
ANM	Nome	3.39	202		Pn	20 18 36.7	-2.8
IM03		3.83	113		Pn	20 18 44.5	-0.9
IM03					Sn	20 19 31.2	+0.8
COLD	Coldfoot	4.71	90		Pn	20 18 58.8	+1.2
TOLK	Toolik Lake Re	4.87	73	P	Pn	20 19 01.1	+1.4
	baz=265						
TOLK				S	Sn	20 19 55.8	-0.3
	baz=265						
TOLK	Toolik Lake Re	4.87	73		Pn	20 19 00.1	+0.3
TOLK	Toolik Lake Re	4.87	73		Sn	20 19 57.3	+1.1
PS06	TAPS Pump Stn6	5.34	105		Pn	20 19 05.9	-0.3
MLY	Manley	5.40	114		Pn	20 19 05.8	-1.3
TTA	Tatalina	5.50	148		Pn	20 19 07.2	-1.2
GAMB	Gambell	5.51	229		Pn	20 19 06.0	-2.5
TT01	Tatalina	5.52	148		Pn	20 19 07.5	-1.1
PS01	TAPS Pump Stn	5.57	56		Pn	20 19 09.1	-0.1
PS01					Sn	20 20 15.1	+1.9
CHUM	Lake Minchumin	5.65	128		Pn	20 19 10.0	-0.4
BPAW	Bear Paw Mtn.	5.91	123		Pn	20 19 13.4	-0.7
PS07	TAPS Pump Stn7	6.13	107		Pn	20 19 17.0	0.0
NEA	Nenana	6.25	114		Pn	20 19 18.1	-0.5
KTH	Kantishna Hill	6.32	126		Pn	20 19 19.1	-0.5
MDM	Murphy Dome	6.33	109		Pn	20 19 19.6	-0.2
PPLA	Purkeypile	6.45	134		Pn	20 19 21.5	-0.1
TCOL	CIGO, UAF Yank	6.51	109	P	Pn	20 19 22.6	+0.3
	baz=302						
TCOL	CIGO, UAF Yank	6.51	109		Pn	20 19 22.5	+0.3
COLA	College	6.51	109		Pn	20 19 22.2	0.0
POKR	Poker Plat Res	6.54	107	P	Pn	20 19 22.8	+0.2
	baz=300						
POKR				S	Sn	20 20 38.0	+0.8
	baz=300						
POKR	Poker Plat Res	6.54	107		Pn	20 19 22.6	0.0
TRF	Thorofare Moun	6.59	125		Pn	20 19 23.4	-0.1
CCB	Clear Creek Bu	6.65	111		Pn	20 19 24.0	-0.2
BM03	Burnt Mountain	6.81	84		Pn	20 19 26.6	+0.2
MCK	McKinley	6.83	119		Pn	20 19 26.1	-0.6
IL31		6.92	108		Pn	20 19 27.3	-0.5
ILAR	Eielson Array	6.92	108	Pn	Pn	20 19 27.8	0.0
	6.1nm,0.3s,baz=302,slow=14,SNR=523						
ILAR				Sn	Sn	20 20 44.0	-2.5
	baz=311,slow=27,SNR=2.7						
ILAR				LR	LR	20 22 04.4	
	comp=Z,45nm,19.9s,baz=316,slow=38						
PS08	TAPS Pump Stn8	7.07	109		Pn	20 19 29.6	-0.3
RND	Reindeer	7.08	121		Pn	20 19 29.6	-0.5
HDA	Harding Lake	7.09	111	P	Pn	20 19 29.3	-1.0
	baz=304						
HDA				S	Sn	20 20 50.2	-0.7
	baz=304						
HDA				S	Sn	20 20 50.2	-0.7
	baz=304						
HDA	Harding Lake	7.09	111		Pn	20 19 29.4	-0.9
WAT2	Susitna Watana	7.48	123		Pn	20 19 35.5	-0.1
STLK	Strandline Lak	7.70	139		Pn	20 19 38.2	-0.5
SPWE	Spurr West	7.72	142		Pn	20 19 38.9	-0.1
DHY	Denali Highway	7.79	120		Pn	20 19 40.0	0.0
RIDG	Independent Ri	8.24	111		Pn	20 19 46.1	+0.1
GHO	Glory Hole Cre	8.27	130		Pn	20 19 47.5	+1.0
RSO	Redoubt South	8.40	145		Pn	20 19 47.7	-0.7
SCRK	Sand Creek	8.41	108		Pn	20 19 48.2	-0.2
DOT	Dot Lake	8.57	110		Pn	20 19 49.9	-0.7
DAWY	Dawson	10.06	100		Pn	20 20 11.4	+0.5
EPYK	Eagle Plains	10.08	86	P	Pn	20 20 11.5	+0.2
	baz=289						
EPYK	Eagle Plains	10.08	86		Pn	20 20 11.0	-0.2
INK	Inuvik	10.78	74	Pn	Pn	20 20 18.5	-2.2
	1.0nm,0.3s,baz=282,slow=11,SNR=23						
INK				Sn	Sn	20 22 14.9	-6.4
	0.2nm,0.3s,baz=290,slow=27,SNR=2.0						
INK	Inuvik	10.78	74		Pn	20 20 19.3	-1.4
KDAK	Kodiak Island	10.92	151	Pn	Pn	20 20 24.3	+1.7
	0.2nm,0.3s,baz=342,slow=19,SNR=1.0						
A36M	Sachs Harbour	13.31	55	P	Pn	20 20 52.6	-2.6
	baz=270						
DLBC	Dease Lake	17.12	107	P	Pn	20 21 46.4	+0.7
	0.1nm,0.3s,baz=8.2,slow=22,SNR=2.1						
SEY	Seymchan	19.11	277	P	Pn	20 22 13.0	+3.1
	0.1nm,0.3s,baz=87,slow=8.0,SNR=4.1						
YKA	Yellowknife Ar	20.33	82	P	P	20 22 21.9	-0.4
	1.3nm,0.6s,baz=304,slow=10,SNR=23						
RES	Resolute Bay	21.57	42	P	P	20 22 39.5	+3.9
	0.3nm,0.4s,baz=236,slow=17,SNR=1.8						
PDAR	Pinedale Array	37.33	105	P	P	20 24 58.8	-0.1
	0.5nm,0.5s,baz=331,slow=7.0,SNR=5.8						
FINES	FINESS Array B	50.99	355	P	P	20 26 48.2	+0.5
	1.7nm,0.9s,baz=32,slow=7.5,SNR=4.2						
TXAR	Lajitas Array	51.43	107	P	P	20 26 51.9	+0.3
	1.1nm,0.7s,baz=335,slow=5.5,SNR=13						
CMAR	Chiang Mai Arr	76.33	285	P	P	20 29 38.5	+2.9
	6.8nm,0.9s,baz=46,slow=5.2,SNR=4.2						

*NIED **04** 20:18:00, 35°.00N×139°.40E, h160km, Mw6.0 Best double couple: $M_0$1.02000×10^18 NP1:ϕ_s208.00000°, δ75.00000°, λ-80.00000°. NP2:ϕ_s354.00000°, δ18.00000°, λ-123.00000°.*
*BJI **04** 20:18:20.1±0.0, 34°.91N×139°.67E, h160km, mB6.1/69, mb6.0/84*
*MOS **04** 20:18:22.6±0.9, 34°.85N×139°.34E, h151km, mb5.8/131, Error ellipse: s-maj=7.3km s-min=3.8km az=104.8*
*BGR **04** 20:18:23.9±0.0, 34°.90N×140°.85E, h156km±4km, mb6.1, mB_BB6.4*
*NEIC **04** 20:18:24.7±1.9, 34°.91N±0°.05×139°.42E±0°.07, h153km±1km, mb5.8/608, Mwb6.0/84, Mww6.0, Mwc6.1(GCMT), Error ellipse: s-maj=10.5km s-min=8.0km az=246.0*
*NEIC **04** 20:18:24.8, 34°.86N×139°.31E, h160km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; M_{rr}-0.26; $M_{\theta\theta}$-0.11; $M_{\phi\phi}$0.36; $M_{r\theta}$0.57; $M_{\theta\phi}$-0.10; $M_{\phi r}$0.96; Fault plane solution: $M_0$1.17000×10^18 NP1:ϕ_s208.00000°, δ84.46000°, λ-77.47000°. NP2:ϕ_s321.50000°, δ13.68000°, λ-155.89000°. Principal axes: T 1.1260, Plg38.0000°, Azm287.0000°; N 0.0855, Plg12.0000°, Azm27.0000°; P -1.2114, Plg49.0000°, Azm132.0000°;*
*IDC **04** 20:18:25.3±0.3, 34°.87N×139°.38E, h158km±2km, mb5.5/55, mb1 5.5/58, mb1mx5.5/60, mbtmp5.9/58, MS5.0/30, Ms1 5.0/30, ms1mx4.9/44 Error ellipse: s-maj=6.2km s-min=4.1km az=79.0*
*JMA **04** 20:18:25.4±0.1, 34°.95N×139°.48E, h156km±1km, M6.0 Broadband fault plane solution: P waves. NP1: ϕ_s347.00000°, δ21.00000°, λ-125.00000°. NP2: ϕ_s204.00000°, δ73.00000°, λ-78.00000°. Principal axes: T Plg27.0000°, Azm284.0000°; N Plg12.0000°, Azm20.0000°; P Plg60.0000°, Azm131.0000°;*
*GCMT **04** 20:18:26.7±0.1, 34°.89N×139°.48E, h165km, MW6.0/169, Moment Tensor Solution. s166,c373; s169,c569; Duration: 2s.5 Moment tensor: Scale 10^18Nm; M_{rr}-0.35±.01; $M_{\theta\theta}$-0.37±.01; $M_{\phi\phi}$0.72±.01; $M_{r\theta}$0.63±.01; $M_{\theta\phi}$0.21±.01; $M_{\phi r}$0.99±.01; Best double couple: $M_0$1.32900×10^18 NP1:ϕ_s333.00000°, δ21.00000°, λ-150.00000°. NP2:ϕ_s214.00000°, δ80.00000°, λ-72.00000°. Principal axes: T 1.4610, Plg32.0000°, Azm289.0000°; N -0.2640, Plg18.0000°, Azm31.0000°; P -1.1970, Plg52.0000°, Azm145.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **04** 20:18:27, 34°.89N×139°.51E, h162km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; M_{rr}-0.32; $M_{\theta\theta}$-0.38; $M_{\phi\phi}$0.69; $M_{r\theta}$0.62; $M_{\theta\phi}$0.17; $M_{\phi r}$1.03; Fault plane solution: $M_0$1.36000×10^18 NP1:ϕ_s213.00000°, δ81.00000°, λ-72.00000°. NP2:ϕ_s330.00000°, δ20.00000°, λ-152.00000°. Principal axes: T 1.4622, Plg33.0000°, Azm288.0000°; N -0.2490, Plg17.0000°, Azm30.0000°; P -1.2133, Plg51.0000°, Azm143.0000°;*
*NEIC **04** 20:18:27, 34°.90N×139°.56E, h160km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; M_{rr}-0.29; $M_{\theta\theta}$-0.36; $M_{\phi\phi}$0.65; $M_{r\theta}$0.66; $M_{\theta\phi}$0.10; $M_{\phi r}$0.82; Fault plane solution: $M_0$1.20000×10^18 NP1:ϕ_s218.00000°, δ82.00000°, λ-67.00000°. NP2:ϕ_s327.00000°, δ24.00000°, λ-159.00000°. Principal axes: T 1.2394, Plg33.0000°, Azm289.0000°; N -0.0902, Plg23.0000°, Azm34.0000°; P -1.1493, Plg48.0000°, Azm152.0000°;*
ISC 04 20:18:25.0±0.2**, 34°.88N**±0°.02×**139°.37E**±0°.02**, h161**km±1km**,**
h161km**:pP-P, n1882,** σ**1s.73**/2070**, mb5.7**/592**, 125C-124D,**
Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIM2	Oshima 3	0.17	161	⇓P	Pn	20 18 46.5	-0.2
JIM2				S	Sn	20 19 03.0	-0.2
JHTM	Izuhatsuma	0.30	285	⇓P	Pn	20 18 47.4	+0.5
JTHY	Toshimahigashi	0.36	190	P	Pn	20 18 47.8	+0.7
JOD2	Odawara 2	0.45	329	⇓P	Pn	20 18 47.3	-0.1
JOD2				S	Sn	20 19 03.8	-0.9
JFNN	Fujinakano	0.64	300	⇓P	Pn	20 18 48.9	+0.5
JFNN				S	Sn	20 19 06.8	+0.5
JSGW	Sagamiharawaka	0.73	350	⇓P	Pn	20 18 48.5	-0.4
JKUC	kamogawauchiur	0.74	67	⇑P	Pn	20 18 48.8	-0.1
BSO4	Boso 4	0.81	82	⇑P	Pn	20 18 49.7	+0.4
TOK	Tokyo	0.87	22	⇓P	Pn	20 18 50.0	+0.2
JYN	Shimob	0.91	313	⇓P	Pn	20 18 50.5	+0.2
JYN				*e*S	Sn	20 19 09.6	-0.1
SHZ3	Shizuoka 3	0.97	281	P	Pn	20 18 51.6	+0.9
JSG	Sagara	0.99	259	⇓P	Pn	20 18 52.3	+1.5
JMKN	Mikurajimanish	1.00	169	⇑P	Pn	20 18 51.4	+0.5
JRY	Ryogami san	1.20	342	⇓P	Pn	20 18 52.6	0.0
JRY				*e*S	Sn	20 19 12.2	-1.7
JNY	Yasuok	1.32	292	⇓P	Pn	20 18 54.6	+0.8
JYZW	Yoshizawa	1.35	275	P	Pn	20 18 54.6	+0.7
HMMJ	Hamamatsu 2	1.35	270	⇓P	Pn	20 18 54.9	+0.9
JNT	Takato	1.41	315	⇓P	Pn	20 18 55.3	+0.6
JIHU	Itakohorinouch	1.44	41	⇓P	Pn	20 18 54.4	-0.4
JSSY	Shinshiroyabe	1.53	272	⇓P	Pn	20 18 56.7	+1.0

JAG Ashikaga 1.54 3 ⇓P Pn 20 18 54.9 -1.0
JAG S **Sn 20 19 16.9 -2.9**
TK02 Tokai 2 1.62 236 ⇓P Pn 20 18 58.6 +2.1
JHYU Hitachinakayam 1.77 34 ⇓P Pn 20 18 56.7 -1.5
JAO Obara 1.77 283 ⇓P Pn 20 18 59.4 +1.1
JHJ Hachijo jima 2 1.79 169 P **Pn 20 18 59.4 +0.9**
12µm,0.3s,baz=330,slow=3.1,SNR=1433
JHJ S **Sn 20 19 23.9 -0.3**
6µm,0.3s,baz=123,slow=22,SNR=7.8
JHJ LR LR 20 19 41.7
comp=Z,73µm,19.7s,baz=30,slow=43
JGF Kuroka 1.79 294 ⇓P Pn 20 18 59.6 +1.0
JHJ2 Mitsune 1.80 168 ⇑P Pn 20 18 59.3 +0.7
JHJ2 S **Sn 20 19 25.3 +0.8**
JHJ2 Mitsune 1.80 168 Pn 20 18 59.4 +0.7
JAA Atsumi 1.85 263 ⇓P Pn 20 19 00.5 +1.4
JKT Katashina 1.89 357 ⇓P Pn 20 18 58.6 -1.0
MJAR Matsushiro Arr 1.91 331 P **Pn 20 18 59.1 -0.7**
610nm,0.3s,baz=146,slow=9.1
MJAR S **Sn 20 19 25.8 -0.9**
410nm,0.3s,baz=263,slow=25,SNR=7.7
MAJO Matsushiro 1.91 331 P **Pn 20 18 59.5 -0.3**
MAJO Matsushiro 1.91 331 Pn 20 18 59.5 -0.3
MAT Matsushiro 1.91 331 P **Pn 20 18 59.4 -0.4**
MAT S **Sn 20 19 24.9 -1.9**
MAT Matsushiro 1.91 331 P **Pn 20 18 59.4 -0.4**
MAT *e*S **Sn 20 19 25.4 -1.4**
MJB9 Matsu-Tunnel 1.91 331 Pn 20 18 59.6 -0.3
INU Inuyama 1.98 284 Pn 20 19 01.5 +0.9
JHO Hitachi 1.99 29 ⇓P Pn 20 18 58.9 -1.7
JICN Ichinomiyachia 2.11 282 P **Pn 20 19 03.4 +1.3**
JHK Hiroka 2.38 353 ⇓P Pn 20 19 04.5 -0.7
JTT Ttatey 2.39 317 ⇓P Pn 20 19 06.3 +1.0
JJN Nakama 2.42 337 ⇓P Pn 20 19 05.7 0.0
JFY Yanaizu 2.54 6 ⇓P Pn 20 19 06.2 -0.9
JKN2 Miekihoku 2.63 257 ⇓P Pn 20 19 09.8 +1.6
JFK Kawauchi 2.77 26 ⇓P Pn 20 19 08.4 -1.5
JMMH Miemihama 2.96 250 ⇓P Pn 20 19 13.8 +1.5
JSZ Suzu 3.03 328 ⇑P Pn 20 19 12.7 -0.5
JWY Kouya 3.18 259 ⇑P Pn 20 19 17.1 +1.9
JSD Sado 3.28 345 ⇓P Pn 20 19 15.1 -1.1
JWT Wachi 3.28 278 ⇑P Pn 20 19 18.0 +1.7
JYS Shirataka 3.38 9 ⇓P Pn 20 19 16.8 -0.8
JHG Hegura jima 3.56 327 ⇑P Pn 20 19 19.4 -0.4
JAW Awa shima 3.57 359 ⇓P Pn 20 19 18.9 -1.1
JKS Kasai 3.72 273 ⇑P Pn 20 19 23.5 +1.6
JKSM Kasumi 3.91 282 ⇑P Pn 20 19 25.7 +1.3
JOFO Osakifurukawao 3.92 18 ⇓P Pn 20 19 23.2 -1.2
JYK Kaneyama 4.11 11 ⇓P Pn 20 19 25.6 -1.3
OFUJ Ofunato 4.58 23 ⇓P Pn 20 19 30.6 -2.5
JMN Monobe 4.68 257 ⇑P Pn 20 19 36.1 +1.6
JJG Jouge 5.12 269 ⇑P Pn 20 19 42.0 +1.8
JGT2 ShimaneMisato 5.63 274 ⇑P Pn 20 19 48.3 +1.4
JHIK Hikimi 6.13 269 ⇑P Pn 20 19 55.6 +2.0
JKI Kunimi 6.58 261 ⇑P Pn 20 20 01.5 +2.1
JBEP Beppuamama 6.78 259 ⇑P Pn 20 20 04.3 +2.1
JTY Toyota 6.88 267 ⇑P Pn 20 20 05.2 +1.8
JNU Nakatsue 7.26 258 P **Pn 20 20 10.8 +2.2**
69nm,0.3s,baz=68,slow=6.3,SNR=712
JNU S **Sn 20 21 31.2 +1.1**
baz=210,slow=12,SNR=0.7
JNU LR LR 20 22 51.5
comp=Z,13µm,18.4s,baz=96,slow=37
JNU Nakatsue 7.26 258 Pn 20 20 10.6 +2.0
JYM2 Yakumo 2 7.27 6 ⇓P Pn 20 20 06.2 -2.4
JTZ Takazaki 7.53 249 ⇑P Pn 20 20 14.3 +2.1
JNB Noboribetsu 7.69 9 P **Pn 20 20 10.6 -3.5**
ERM Erimo 7.72 22 *d* i P **Pn 20 20 09.8 -4.7**
ERM pmax pmax
comp=Z,2µm,0.6s
ERM Erimo 7.72 22 Pn 20 20 09.6 -4.9
JEM Erimo 7.72 22 ⇓P Pn 20 20 09.8 -4.7
JNBK Urakawa-nobuka 7.85 19 P **Pn 20 20 11.7 -4.6**
JTHR Tokachihiroo 8.02 21 ⇓P Pn 20 20 13.8 -4.6
JCJ Chichijima 8.13 162 P **Pn 20 20 16.1 -4.0**
comp=Z,840nm,0.3s,baz=23,slow=5.5,SNR=559
JCJ S Sn 20 21 37.3 -14
comp=Z,404nm,0.3s,baz=292,slow=23,SNR=2.3
JCJ LR LR 20 23 24.0
comp=Z,6µm,21.4s,baz=347,slow=37
JCH Churui 8.33 21 ⇓P Pn 20 20 17.7 -4.9
JSK Shakotan 8.51 5 ⇓P Pn 20 20 22.0 -2.9
JOB Onbets 8.74 22 ⇓P Pn 20 20 23.1 -4.9
JKC Kuchinoerabu 8.89 243 P **Pn 20 20 32.8 +2.6**
JKHN Kushirohamanak 9.35 27 P Pn 20 20 31.3 -4.8
ASAJ Asahikawa 9.56 14 P Pn 20 20 33.9 -5.0
comp=Z,424nm,0.3s,baz=222,slow=13,SNR=735
ASAJ S Sn 20 22 14.2 -11
comp=Z,90nm,0.3s,baz=108,slow=25,SNR=2.7
JKA Kamikawa-asahi 9.56 14 Pn 20 20 33.9 -5.0
JKA Sn 20 22 14.2 -11
KSRS Korea Array 9.60 289 P **Pn 20 20 41.3 +1.8**
comp=Z,35nm,0.3s,baz=102,slow=13,SNR=251
KSRS S **Sn 20 22 28.9 +2.9**
baz=92,slow=7.1,SNR=1.6
KSRS LR LR 20 24 26.0
comp=Z,12µm,18.7s,baz=117,slow=37
KSRS PcP **PcP 20 26 40.0 +0.3**
baz=153,slow=1.1,SNR=7.5
KSRS ScP **ScP 20 29 56.0 -0.6**
comp=Z,0.1nm,0.3s,baz=169,slow=1.0,SNR=8.2
JNK Nakash 9.63 24 P Pn 20 20 34.0 -5.9
KS19 Wonju Array Si 9.66 289 Pn 20 20 41.4 +1.1
NMR Nemuro--Hokkai 9.81 28 *j* i P Pn 20 20 36.9 -5.3
NEM2 Nemuro 2 9.81 28 P Pn 20 20 36.7 -5.5
TJN Taejon 9.88 282 *c* i P **Pn 20 20 44.9 +1.6**
MSHR Mys Shultsa 10.01 323 *c* i P **Pn 20 20 43.8 -1.0**
GLVR Golovnino 10.05 26 *e*P Pn 20 20 39.9 -5.4
GLVR pmax pmax
comp=Z,4µm,0.4s
GLVR pmax pmax
comp=E,404nm,0.5s
GLVR pmax pmax
comp=N,885nm,0.1s
VLA Vladivostok 10.08 327 *ce*P **Pn 20 20 44.7 -1.0**
GRPR Tuman 10.36 27 *e*P Pn 20 20 44.0 -5.4
GRPR pmax pmax
comp=N,2µm,0.3s
GRPR pmax pmax
comp=Z,3µm,0.3s
GRPR pmax pmax
comp=E,2µm,0.4s
TEY Ternei 10.36 349 ⇑ *i* P **Pn 20 20 47.1 -2.4**
TEY *e*S **Sn 20 22 38.0 -6.2**
TEY pmax pmax
comp=Z,120nm,1.5s
TEY pmax pmax
comp=N,90nm,1.0s
TEY pmax pmax
comp=E,50nm,1.4s
TEY pmax pmax
comp=N,6µm,6.4s
TEY pmax pmax
comp=Z,6µm,6.4s
TEY pmax pmax
comp=E,3µm,6.4s
TEY smax smax
comp=E,12µm,8.9s
TEY smax smax
comp=N,6µm,6.6s
LAGR Lagunnoye 10.42 26 *e*P **Pn 20 20 45.7 -4.5**
LAGR *e*S Sn 20 22 34.4 -11
LAGR pmax pmax
comp=E,2µm,0.5s
LAGR pmax pmax
comp=Z,3µm,0.5s
LAGR pmax pmax
comp=N,735nm,0.2s
YUK Yuzh-Kuril'sk 10.43 27 *e*P **Pn 20 20 45.6 -4.7**
YUK pmax pmax
comp=Z,5µm,0.4s
YUK pmax pmax
comp=N,1µm,0.3s
YUK pmax pmax
comp=E,691nm,0.3s
INCN Inchon 10.62 288 P **Pn 20 20 54.1 +1.2**
INCN Inchon 10.62 288 Pn 20 20 54.1 +1.2
USA0B Ussuriysk Arra 10.91 331 P **Pn 20 20 55.5 -1.1**
USA0B Ussuriysk Arra 10.91 331 Pn 20 20 55.5 -1.1
USRK Ussuriysk Ar. 10.91 331 P **Pn 20 20 55.6 -1.0**
baz=144,slow=11,SNR=214
USRK S **Sn 20 22 57.2 -0.2**
baz=106,slow=6.2,SNR=0.9
USRK LR LR 20 24 55.1

comp=E,14µm,19.6s,baz=146,slow=36
KUR Kuril'sk 12.21 30 *d* i P **Pn 20 21 10.4 -3.1**
KUR *e*S Sn 20 23 17.2 -11
KUR pmax pmax
comp=Z,2µm,0.5s
KUR pmax pmax
comp=N,406nm,0.4s
KUR pmax pmax
comp=E,223nm,0.4s
KUR smax smax
comp=E,2µm,0.6s
KUR smax smax
comp=N,1µm,0.4s
KUR smax smax
comp=E,5µm,2.9s
KUR smax smax
comp=N,6µm,3.3s
KUR MLR MLR
comp=Z,3µm,15.0s
MDJ Mudanjiang 12.28 325 P **Pn 20 21 13.5 -1.0**
MDJ sP P 20 21 49.1 +29
MDJ S **Sn 20 23 29.9 -0.5**
MDJ PcP **PcP 20 26 39.6 -2.8**
MDJ ScP **ScP 20 29 59.3 -0.9**
MDJ ScS **ScS 20 33 36.2 +0.1**
MDJ pmax pmax
comp=Z,170nm,1.0s
MDJ pmax pmax
comp=Z,3µm,3.8s
MDJ LR LR
comp=Z,16µm,16.5s
MDJ LR LR
comp=Z,14µm,15.7s
MDJ LR LR
comp=Z,32µm,14.7s
MDJ Mudanjiang 12.28 325 Pn 20 21 13.4 -1.1
YSS Yuzh-Sakhalins 12.33 11 κ *i* P **Pn 20 21 10.8 -4.2**
YSS *i* S Sn 20 23 21.4 -10
YSS pmax pmax
comp=Z,4µm,3.6s
YSS pmax pmax
comp=N,3µm,3.7s
YSS pmax pmax
comp=E,800nm,2.8s
YSS pmax pmax
comp=Z,1µm,0.4s
YSS MLR MLR
comp=N,7µm,13.0s
YSS MLR MLR
comp=Z,6µm,13.0s
YSS MLR MLR
comp=E,3µm,12.0s
YSS Yuzh-Sakhalins 12.33 11 Pn 20 21 10.9 -4.1
JOW Kunigami 12.45 233 P **Pn 20 21 15.6 -1.1**
comp=E,0.2nm,0.3s,baz=78,slow=18,SNR=11
JOW Kunigami 12.45 233 Pn 20 21 17.4 +0.6
CN2 Changchun 13.96 314 *e*P **Pn 20 21 34.5 -1.4**
CN2 *e*S **Sn 20 24 06.6 -4.2**
CN2 pmax pmax
comp=E,520nm,0.9s
CN2 pmax pmax
comp=E,4µm,6.0s
CN2 LR LR
comp=E,7µm,14.0s
CN2 LR LR
comp=E,15µm,14.0s
CN2 LR LR
comp=E,14µm,16.0s
SNY Shenyang 14.19 304 ⇑P **Pn 20 21 38.5 -0.2**
SNY S **Sn 20 24 14.7 -1.5**
SNY ScS **ScS 20 33 37.7 -2.9**
SNY pmax pmax
comp=E,620nm,1.2s
SNY pmax pmax
comp=E,8µm,8.8s
SNY LR LR
comp=E,11µm,10.2s
SNY LR LR
comp=E,10µm,11.8s
SNY LR LR
comp=E,14µm,12.6s
UGL Uglegorsk 14.33 7 *e*P **Pn 20 21 38.1 -2.3**
UGL *e*S Sn 20 24 06.3 -13
UGL pmax pmax
comp=Z,3µm,1.8s
UGL pmax pmax
comp=E,593nm,1.0s
UGL pmax pmax
comp=Z,750nm,1.1s
UGL smax smax
comp=N,283nm,1.3s
UGL smax smax
comp=E,190nm,1.1s
UGL smax smax
comp=E,14µm,8.8s
UGL smax smax
comp=N,11µm,5.7s
UGL MLR MLR
comp=E,6µm,13.0s
UGL MLR MLR
comp=Z,4µm,13.0s
UGL MLR MLR
comp=N,3µm,15.0s
DL2 Dalian 14.75 291 P **P 20 21 46.8 -0.8**
DL2 S **Sn 20 24 30.7 +1.0**
DL2 ScS **ScS 20 33 40.7 -1.4**
DL2 pmax pmax
comp=N,410nm,0.8s
DL2 pmax pmax
comp=N,10µm,3.8s
KLR Kul'dur 15.40 341 P **Pn 20 21 52.0 -1.6**
comp=N,80nm,0.3s,baz=149,slow=11,SNR=1051
KLR S **Sn 20 24 37.4 -7.7**
baz=75,slow=1.7,SNR=1.5
KLR LR LR 20 27 18.6
comp=N,3µm,21.9s,baz=145,slow=35
KLR ScP **ScP 20 30 05.7 +0.4**
comp=N,0.1nm,0.3s,baz=289,slow=0.8,SNR=4.0
KLR ScS **ScS 20 33 44.3 +0.8**
comp=N,0.1nm,0.3s,baz=332,slow=21,SNR=8.9
KLR Kul'dur 15.40 341 *c* i P **Pn 20 21 50.1 -3.6**
SSE Sheshan 15.71 261 P **P 20 21 59.8 +1.5**
SSE S **Sn 20 24 52.2 -0.7**
SSE pmax pmax
comp=N,130nm,1.0s
SSE pmax pmax
comp=N,4µm,7.7s
SSE LR LR
comp=N,1µm,12.0s
SSE LR LR
comp=N,4µm,14.5s
SSE Sheshan 15.71 261 P P 20 22 00.1 +1.8
JIKM Ikemajima 15.74 235 P **P 20 22 00.0 +1.4**
JIKM *e*S **S 20 24 56.7 +2.8**
JOGS Gusukube 15.74 234 P **P 20 22 00.3 +1.6**
JOGS *e*S **S 20 24 58.8 +4.8**
JMJ2 Miyako jima3 15.81 234 P **P 20 22 01.5 +2.1**
JMJ2 *e*S **Sn 20 24 58.8 +3.5**
JIRB Irabujima 15.86 235 P **P 20 22 00.7 +0.8**
JIRB *e*S **Sn 20 24 58.0 +1.6**
GRNR Gornyy 16.03 353 *j* i P **Pn 20 21 58.2 -3.1**
GRNR *e*S S 20 24 47.9 -11
GRNR pmax pmax
comp=Z,170nm,0.6s
GRNR smax smax
comp=E,40nm,1.1s
TYV Tymovskoe 16.15 8 *e*P **Pn 20 22 01.0 -1.8**
TYV *e*S **S 20 24 52.4 -9.4**
TYV pmax pmax
comp=Z,2µm,2.5s
TYV pmax pmax
comp=Z,349nm,0.8s
TYV smax smax
comp=E,84nm,1.6s
JTJ Tarama 16.30 235 P **Pn 20 22 05.8 +1.0**
JTJ *e*S **Sn 20 25 06.9 0.0**
JIJ Ishigaki jima 16.86 236 P **P 20 22 11.1 +0.1**
JIJ *e*S **S 20 25 16.0 -2.4**
NJ2 Nanjing 17.34 266 *e*P **P 20 22 16.0 -0.3**
NJ2 S **Sn 20 25 32.4 +0.6**
NJ2 pmax pmax
comp=E,230nm,1.6s
NJ2 pmax pmax
comp=E,4µm,8.5s
NJ2 LR LR
comp=E,8µm,11.8s

NJ2 LR LR
comp=E,6µm,12.8s
NJ2 LR LR
comp=E,9µm,12.8s
YOJ Yonaguni jima 17.58 238 P **P 20 22 17.7 -1.1**
YOJ pmax pmax
comp=Z,677nm,1.0s
TIA Tai'an 18.15 281 P **P 20 22 24.0 -1.0**
TIA pmax pmax
comp=Z,1µm,2.6s
TIA LR LR
comp=Z,7µm,15.0s
TIA LR LR
comp=Z,10µm,12.8s
TIA LR LR
comp=Z,14µm,12.8s
NKL Nikolayevsk 18.29 3 *e*P **P 20 22 26.9 +0.6**
NKL *e*S **S 20 25 44.7 -2.1**
NKL pmax pmax
comp=Z,209nm,1.5s
NKL pmax pmax
comp=N,6.0nm,0.8s
NKL pmax pmax
comp=E,6.0nm,1.2s
NKL smax smax
comp=E,19nm,4.9s
NKL smax smax
comp=N,8.0nm,2.2s
TATO Taipei 18.35 242 P **P 20 22 24.4 -2.8**
YHNB Yeheng 18.61 242 P **P 20 22 30.2 0.0**
NACB Ninganchiao 18.76 240 P **P 20 22 29.8 -2.0**
BJI Beijing 19.10 292 P **P 20 22 33.1 -2.2**
BJI pP **pP 20 23 05.6 +2.5**
BJI S **S 20 25 58.3 -4.9**
BJI LR LR
comp=N,3µm,11.8s
BJI LR LR
comp=N,7µm,14.9s
BJI LR LR
comp=N,11µm,24.2s
BJT Baijiatuau 19.10 292 P **P 20 22 34.3 -1.0**
BJT pmax pmax
comp=Z,634nm,1.5s
BJT Baijiatuau 19.10 292 P **P 20 22 34.3 -1.0**
BJT IAmb IAmb 20 22 39.2
comp=Z,634nm,1.5s
SSLB Suanglung 19.46 240 P **P 20 22 38.4 -0.9**
SSLB IAmb IAmb 20 22 40.3
comp=Z,830nm,1.6s
YULB Yu-li 19.46 239 P **P 20 22 37.4 -2.0**
SKR Severo-Kuril's 19.94 33 *e*P **P 20 22 38.1 -6.1**
SKR *e*S **S 20 26 20.8 +1.2**
SKR pmax pmax
comp=Z,700nm,1.6s
SKR pmax pmax
comp=Z,382nm,0.9s
TWG Pinlang 19.99 238 P **P 20 22 43.3 -1.8**
TPUB Ta-pu 19.99 240 P **P 20 22 43.6 -1.5**
TPUB IAmb IAmb 20 22 50.3
comp=Z,330nm,0.9s
HIA Hailar 20.38 321 P **P 20 22 47.6 -1.4**
HIA pmax pmax
comp=Z,371nm,0.8s
HIA Hailar 20.38 321 P **P 20 22 47.6 -1.4**
HIA IAmb IAmb 20 22 48.0
comp=Z,371nm,0.8s
QZH Quanzhou 20.52 247 ⇑ *i* P **P 20 22 49.1 -1.5**
QZH pP **pwP 20 23 24.3 +4.0**
QZH sP **sP 20 23 41.3 +2.9**
QZH S **S 20 26 24.9 -6.5**
QZH pmax pmax
comp=Z,210nm,0.8s
QZH LR LR
comp=Z,5µm,17.1s
QZH LR LR
comp=Z,3µm,9.0s
QZH LR LR
comp=Z,3µm,10.4s
ZEA Zeya 20.70 339 *ce*P **P 20 22 50.6 -1.7**
ZEA *e*S **S 20 26 26.0 -8.4**
ZEA pmax pmax
comp=N,1µm,0.8s
ZEA pmax pmax
comp=E,520nm,1.0s
ZEA pmax pmax
comp=Z,2µm,1.0s
ZEA pmax pmax
comp=N,2µm,4.0s
ZEA pmax pmax
comp=E,2µm,4.0s
ZEA pmax pmax
comp=Z,5µm,4.0s
ZEA smax smax
comp=N,6µm,7.0s
ZEA smax smax
comp=E,12µm,7.0s
ZEA MLR MLR
comp=N,5µm,12.0s
ZEA MLR MLR
comp=Z,6µm,12.0s
ZEA MLR MLR
comp=E,3µm,11.0s
KNMB Chin-men Tao 20.94 246 P **P 20 22 52.5 -2.6**
WHN Wuhan 21.47 265 ⇓P **P 20 23 00.7 -0.1**
WHN PP **pP 20 23 33.7 +4.6**
WHN sP **sP 20 23 51.6 +2.2**
WHN S **S 20 26 44.8 -4.0**
WHN SS **SnSn 20 27 40.5 +11**
WHN pmax pmax
comp=E,310nm,0.6s
WHN pmax pmax
comp=E,8µm,3.1s
WHN LR LR
comp=E,15µm,9.7s
WHN LR LR
comp=E,6µm,10.6s
WHN LR LR
comp=E,15µm,13.0s
GUMO Guam 21.77 165 P **P 20 23 03.2 -0.9**
GUMO pmax pmax
comp=Z,4µm,1.5s
GUMO Guam 21.77 165 P **P 20 23 03.1 -0.9**
TIY Taiyuan 21.86 285 *e*P **P 20 23 01.8 -3.2**
TIY S **S 20 26 53.3 -2.2**
TIY SS **SnSn 20 27 46.2 +6.8**
TIY pmax pmax
comp=Z,3µm,6.1s
TIY LR LR
comp=Z,4µm,10.0s
TIY LR LR
comp=Z,6µm,13.4s
TIY LR LR
comp=Z,8µm,14.5s
PEA0B Petropavlovsk- 22.38 30 P **P 20 23 09.8 +0.1**
PEA0B pmax pmax
comp=Z,200nm,1.0s
PEA0B Petropavlovsk- 22.38 30 P P 20 23 09.8 +0.1
PETK Petropavlovsk- 22.38 30 P **P 20 23 09.8 0.0**
comp=Z,51nm,0.8s,baz=216,slow=7.3,SNR=74
PETK PcP **PcP 20 26 58.7 +0.1**
comp=Z,15nm,0.9s,baz=151,slow=3.3,SNR=3.3
PETK S **S 20 27 04.7 +1.3**
comp=Z,4.7nm,0.7s,baz=174,slow=2.8,SNR=1.3
PETK ScP **ScP 20 30 21.8 +0.9**
comp=Z,3.8nm,0.8s,baz=181,slow=3.5,SNR=2.9
PETK LR LR 20 31 32.9
comp=Z,2µm,22.0s,baz=201,slow=35
HHC Hu-ho-hao-te 22.69 293 P **P 20 23 10.0 -2.9**
HHC pP pP 20 23 45.2 +2.6
HHC sP sP 20 24 00.6 -2.2
HHC S **S 20 27 06.0 -3.0**
HHC pmax pmax
comp=Z,2µm,5.8s
PET Petropavlovsk 22.72 31 *e*P **P 20 23 12.6 -0.3**
PET *e**PP **pP 20 23 43.5 +1.0**
PET *e**SP **sP 20 24 01.5 -1.1**
PET *e*S **S 20 27 05.6 -3.3**
PET pmax pmax
comp=Z,194nm,1.2s
PET pmax pmax
comp=Z,2µm,5.9s
PET pmax pmax
comp=Z,1µm,6.1s
PET MLR MLR
comp=Z,2µm,16.0s
BTO Baotou 23.84 293 *e*P **P 20 23 21.8 -1.6**

XAN	Xi'an	25.07	277	P	P	20 23 34.0	-0.6
XAN				pP	pP	20 24 06.7	-1.3
XAN				sP	sP	20 24 25.7	-1.1
XAN				S	S	20 27 44.1	-3.0
XAN				sS	sS	20 28 41.1	-4.3
XAN				SS	SnSn	20 29 00.6	+3.7
XAN				pmax	pmax		
	comp=Z,520nm,1.2s						
XAN				pmax	pmax		
	comp=Z,4µm,4.5s						
XAN				LR	LR		
	comp=Z,4µm,11.9s						
XAN				LR	LR		
	comp=Z,5µm,12.5s						
XAN				LR	LR		
	comp=Z,6µm,14.1s						
XAN	Xi'an	25.07	277	P	P	20 23 34.7	+0.1
XAN				pmax	pmax		
	comp=Z,879nm,1.3s						
XAN	Xi'an	25.07	277	P	P	20 23 34.7	+0.1
CIT	Chita	25.19	321	*e*P	P	20 23 35.4	0.0
CIT				pmax	pmax		
	comp=Z,1µm,1.7s						
HKPS	Hong Kong Po S	25.38	247	P	P	20 23 35.6	-1.8
GZH	Guangzhou	25.54	250⇑	*i*P	P	20 23 34.1	-4.7
GZH				pP	pP	20 24 06.3	-5.7
GZH				S	S	20 27 44.3	-10
GZH				pmax	pmax		
	comp=Z,380nm,0.9s						
ENH	Enshi	25.55	268	P	P	20 23 38.5	-0.3
MA2	Magadan	25.82	13	P	P	20 23 41.4	+0.5
	baz=198,slow=8.7,SNR=85						
MA2				S	S	20 27 58.6	+0.4
	comp=Z,13nm,0.9s,baz=231,slow=8.6,SNR=1.5						
MA2	Magadan	25.82	13*d*	*i*P	P	20 23 41.5	+0.5
MA2				pmax	pmax		
	comp=Z,186nm,0.7s						
MA2	Magadan	25.82	13	IAmb	IAmb	20 24 33.8	
	comp=Z,341nm,1.1s						
LQP	Lukban	26.20	222	*e*P	P	20 23 42.4	-2.6
PGP	Puerto Galera	27.02	223⇓	*e*P	P	20 23 49.8	-2.4
ULN	Ulaanbaatar	27.29	308*c*	*i*P	P	20 23 54.8	+0.4
ULN				pmax	pmax		
	comp=Z,1µm,1.3s						
ULN	Ulaanbaatar	27.29	308	P	P	20 23 55.5	+1.1
SONM	Songino Array	27.70	308	P	P	20 23 59.3	+1.2
	comp=Z,352nm,0.6s,baz=113,slow=7.6,SNR=349						
SONM				PcP	PcP	20 27 11.6	+0.8
	comp=Z,26nm,0.7s,baz=122,slow=3.4,SNR=4.7						
SONM				ScP	ScP	20 30 36.4	+0.2
	comp=Z,26nm,0.9s,baz=147,slow=3.4,SNR=6.4						
SONM				P3KPbc		20 56 25.4	
	comp=Z,1.0nm,0.7s,baz=265,slow=5.5,SNR=10.0						
SONM				PKP2ab		21 00 21.2	
	comp=Z,0.2nm,0.3s,baz=289,slow=4.5,SNR=3.6						
YAK	Yakutsk	27.86	350	P	P	20 23 59.6	+0.5
	comp=Z,95nm,0.5s,baz=342,slow=4.3,SNR=66						
YAK				PcP	PcP	20 27 11.7	+1.1
	comp=Z,47nm,0.8s,baz=217,slow=5.1,SNR=2.7						
YAK				S	S	20 28 28.2	-2.0
	comp=Z,9.0nm,0.5s,baz=220,slow=7.1,SNR=1.7						
YAK				ScS	ScS	20 34 21.3	-7.0
	comp=Z,3.3nm,0.4s,baz=132,slow=0.7,SNR=1.7						
YAK				LR	LR	20 34 48.9	
	comp=Z,3µm,19.6s,baz=157,slow=35						
YAK	Yakutsk	27.86	350*c*	*i*P	P	20 23 59.1	0.0
YAK				*e*		20 25 01.8	
YAK				*e*		20 27 10.2	
YAK				*e*S	S	20 28 35.1	+4.9
YAK				*e**SS	sS	20 29 31.8	+2.7
YAK				pmax	pmax		
	comp=Z,491nm,1.5s						
YAK				pmax	pmax		
	comp=N,213nm,1.4s						
YAK				pmax	pmax		
	comp=E,91nm,1.4s						
YAK				pmax	pmax		
	comp=Z,591nm,2.0s						
YAK				pmax	pmax		
	comp=N,591nm,1.8s						
YAK				pmax	pmax		
	comp=E,316nm,1.9s						
YAK				smax	smax		
	comp=N,12µm,4.2s						
YAK				smax	smax		
	comp=E,4µm,2.9s						
YAK	Yakutsk	27.86	350	P	P	20 23 59.4	+0.2
BOD	Bodaibo	28.54	331	*e*P	P	20 24 05.4	+0.1
BOD				pmax	pmax		
	comp=Z,526nm,1.2s						
H11N2	WAKE ISLAND Hy	28.62	115	P	P	20 24 06.9	+0.8
	baz=281,slow=9.2,SNR=13						
H11N2				T	T	20 53 36.1	
	baz=309,slow=75,SNR=306						
H11N1	WAKE ISLAND Hy	28.62	115	P	P	20 24 06.7	+0.5
	baz=281,slow=9.2,SNR=11						
H11N1				T	T	20 53 37.2	
	baz=309,slow=75,SNR=131						
H11N3	WAKE ISLAND Hy	28.64	115	P	P	20 24 07.1	+0.8
	baz=281,slow=9.2,SNR=15						
H11N3				T	T	20 53 38.0	
	baz=309,slow=75,SNR=76						
WAKE	Wake Island	28.71	116	P	P	20 24 07.5	+0.3
LZH	Lanzhou	28.86	283	*e*P	P	20 24 08.3	-0.2
LZH				pP	pP	20 24 42.3	-0.2
LZH				sP	sP	20 25 00.7	-0.6
LZH				S	S	20 28 45.9	-0.9
LZH				sS	sS	20 29 47.1	+1.3
LZH				pmax	pmax		
	comp=Z,450nm,1.0s						
LZH				pmax	pmax		
	comp=Z,3µm,5.8s						
LZH				LR	LR		
	comp=Z,7µm,12.5s						
LZH				LR	LR		
	comp=Z,8µm,13.2s						
LZH				LR	LR		
	comp=Z,8µm,13.7s						
H11S3	WAKE ISLAND Hy	29.23	117	P	P	20 24 12.3	+0.8
	baz=273,slow=7.3,SNR=8.6						
H11S3				T	T	20 54 27.6	
	baz=311,slow=76,SNR=276						
H11S1	WAKE ISLAND Hy	29.23	117	P	P	20 24 12.3	+0.8
	baz=273,slow=7.3,SNR=18						
H11S1				T	T	20 54 28.5	
	baz=311,slow=76,SNR=212						
SEY	Seymchan	29.23	12	P	P	20 24 12.2	+1.0
	comp=Z,22nm,0.7s,baz=203,slow=6.5,SNR=76						
SEY				P3KPbc		20 56 14.3	
	comp=Z,0.5nm,0.3s,baz=346,slow=23,SNR=2.1						
SEY	Seymchan	29.23	12⇓	*e*P	P	20 24 12.0	+0.7
H11S2	WAKE ISLAND Hy	29.25	117	P	P	20 24 12.4	+0.8
	baz=273,slow=7.3,SNR=15						
H11S2				T	T	20 54 28.2	
	baz=311,slow=76,SNR=306						
GYA	Guiyang	29.25	262⇑	*i*P	P	20 24 10.9	-1.2
GYA				pP	pP	20 24 50.5	+4.7
GYA				sP	sP	20 25 00.7	-3.7
GYA				PP	PnPn	20 25 16.1	+2.5
GYA				PcP	PcP	20 27 15.2	+0.2
GYA				S	S	20 28 47.0	-6.1
GYA				sS	sS	20 29 52.2	+0.1
GYA				SS	ScP	20 30 40.7	-0.8
GYA				ScP	ScP	20 30 43.4	+1.9
GYA				ScS	ScS	20 34 35.2	-1.1
GYA				pmax	pmax		
	comp=Z,440nm,1.0s						
GYA				pmax	pmax		
	comp=Z,1µm,3.5s						
CGP	Cagayan de Oro	29.54	211	*e*P	P	20 24 12.7	-1.9
CD2	Chengdu	30.06	273	P	P	20 24 18.3	-0.8
CD2				pP	pP	20 24 53.1	0.0
CD2				sP	sP	20 25 11.2	-0.5
CD2				S	S	20 29 00.1	-5.5
CD2				sS	sS	20 30 05.8	+1.2
CD2				pmax	pmax		
	comp=Z,2µm,0.7s						
CD2				pmax	pmax		
	comp=Z,2µm,4.5s						
CD2				LR	LR		
	comp=Z,11µm,13.5s						
CD2				LR	LR		
	comp=Z,13µm,15.5s						
CD2				LR	LR		
	comp=Z,15µm,14.9s						
SMY	Shemya	30.37	43	P	P	20 24 22.6	+1.2
SMY				pmax	pmax		
	comp=Z,90nm,0.8s						
SMY	Shemya	30.37	43	P	P	20 24 22.6	+1.2
ZAK	Zakamensk	30.38	312	*e*P	P	20 24 22.0	+0.2
ZAK				pmax	pmax		
	comp=Z,221nm,1.7s						
IRK	Irkutsk	30.40	316	*e*P	P	20 24 22.3	+0.6
IRK				*e*S	S	20 29 16.0	+5.7
IRK				pmax	pmax		
	comp=Z,663nm,2.4s						
DAV	Davao City (W)	30.45	208	P	P	20 24 20.9	-1.6
	comp=Z,134nm,0.4s,baz=56,slow=3.3,SNR=5.4						
DAV				S	S	20 29 08.2	-3.5
	comp=Z,118nm,0.4s,baz=148,slow=5.1,SNR=1.7						
QIZ	Qiongzhong	30.54	247	P	P	20 24 23.4	+0.1
QIZ				pP	pP	20 24 54.4	-2.6
QIZ				sP	sP	20 25 12.7	-2.8
QIZ				S	S	20 29 12.9	-0.2
QIZ				sS	sS	20 30 10.5	-1.7
QIZ				pmax	pmax		
	comp=Z,53nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,550nm,5.5s						
QIZ				LR	LR		
	comp=Z,3µm,22.6s						
QIZ				LR	LR		
	comp=Z,3µm,21.6s						
QIZ				LR	LR		
	comp=Z,2µm,25.5s						
TLY	Talaya	30.57	314	P	P	20 24 24.4	+1.1
	comp=Z,176nm,0.7s,baz=123,slow=6.9,SNR=142						
TLY				PcP	PcP	20 27 18.9	+1.1
	comp=Z,22nm,0.7s,baz=330,slow=5.2,SNR=3.3						
TLY				ScP	ScP	20 30 45.8	+0.7
	comp=Z,7.6nm,0.7s,baz=225,slow=2.9,SNR=2.7						
TLY	Talaya	30.57	314*c*	*i*P	P	20 24 23.9	+0.6
TLY				*e*		20 25 16.6	
TLY				*e*PPP	PPP	20 25 24.8	
TLY				*e*		20 27 17.7	
TLY				*e*S	S	20 29 15.7	+2.7
TLY				*e*SSS	SSS	20 31 01.8	
TLY				pmax	pmax		
	comp=Z,2µm,1.6s						
TLY				MLR	MLR		
	comp=Z,18µm,14.0s						
TLY	Talaya	30.57	314	IAmb	IAmb	20 24 27.4	
	comp=Z,845nm,1.5s						
KCP	Kidapawan	30.69	209⇓	*i*P	P	20 24 23.1	-1.6
GTA	Gaotai	31.67	290 ⇑	P	P	20 24 33.6	+0.3
GTA				pP	pP	20 25 09.1	+1.4
GTA				sP	sP	20 25 26.1	-0.3
GTA				PcP	PcP	20 27 22.7	+1.5
GTA				S	S	20 29 29.1	-1.6
GTA				ScP	ScP	20 30 48.9	-0.3
GTA				pmax	pmax		
	comp=Z,280nm,1.0s						
GTA				pmax	pmax		
	comp=Z,3µm,7.8s						
GTA				LR	LR		
	comp=Z,3µm,18.2s						
GTA				LR	LR		
	comp=Z,5µm,16.8s						
GTA				LR	LR		
	comp=Z,5µm,16.8s						
MOY	Mondy	32.13	313	*e*P	P	20 24 37.1	0.0
MOY				pmax	pmax		
	comp=Z,599nm,1.8s						
PATS	Pohnpei	32.91	144	P	P	20 24 45.9	+1.8
KMI	Kunming	33.02	263	P	P	20 24 44.7	-0.6
KMI				pP	pP	20 25 17.7	-1.6
KMI				sP	sP	20 25 36.7	-1.1
KMI				PP	PnPn	20 26 00.3	-0.7
KMI				S	S	20 29 46.9	-5.2
KMI				pmax	pmax		
	comp=Z,290nm,1.1s						
KMI				pmax	pmax		
	comp=Z,960nm,3.1s						
KMI				LR	LR		
	comp=Z,2µm,14.3s						
KMI				LR	LR		
	comp=Z,4µm,13.9s						
KMI				LR	LR		
	comp=Z,4µm,13.9s						
KMI	Kunming	33.02	263	IAmb	IAmb	20 24 46.5	
	comp=Z,235nm,0.9s						
ADK	Adak	35.55	48	P	P	20 25 06.3	-0.1
ADK				pmax	pmax		
	comp=Z,75nm,0.9s						
ADK	Adak	35.55	48	P	P	20 25 06.3	-0.1
TNTI	Ternate	35.73	201	P	P	20 25 06.8	-1.5
	comp=Z,1µmcomp=Z,2µmcomp=Z,170nm,1.3s						
TNTI	Ternate	35.73	201	P	P	20 25 07.6	-0.8
TNTI				IAmb	IAmb	20 25 09.2	
	comp=Z,113nm,0.8s						
KKM	Kota Kinabalu	35.77	222	P	P	20 25 08.5	-0.3
MNI	Manado	35.92	205	P	P	20 25 08.0	-1.9
MNI				pmax	pmax		
	comp=Z,197nm,0.8s						
BAKI	Biak	36.01	186	P	P	20 25 11.2	+0.5
	comp=Z,290nm,0.8s						
DLV	T Lat	36.14	238	P	P	20 25 12.0	0.0
SIJI	Sorong	36.36	194	P	P	20 25 12.6	-1.1
	comp=Z,66nm,0.4s,baz=24,slow=8.2,SNR=28						
SIJI				S	S	20 30 37.0	-5.9
	comp=Z,9.7nm,0.9s,baz=302,slow=20,SNR=1.2						
SIJI				ScP	ScP	20 31 06.5	+0.5
	comp=Z,19nm,0.7s,baz=36,slow=5.9,SNR=7.4						
BILL	Bilibino	36.56	17*d*	*i*P	P	20 25 14.4	-0.4
BILL				*i* *PP	pP	20 25 49.9	+0.6
BILL				*i* S	S	20 30 39.2	-5.7
BILL				pmax	pmax		
	comp=Z,26nm,0.7s						
BILL	Bilibino	36.56	17	P	P	20 25 15.2	+0.4
SMPI	Sarmi	36.68	181	P	P	20 25 17.5	+1.2
	comp=Z,4µmcomp=Z,10µmcomp=Z,673nm,1.4s						
KMSI	Cibinong	37.03	206	P	P	20 25 18.1	-1.2
	comp=Z,4µmcomp=Z,560nm,0.7s						
LBMI	Labuha	37.04	200	P	P	20 25 17.9	-1.5
	comp=Z,2µmcomp=Z,169nm,0.8s						
ATKA	Atka Island	37.12	48	P	P	20 25 20.0	+0.3
JAY	Jayapura	37.22	178	P	P	20 25 21.6	+0.7
	comp=Z,385nm,0.7s,baz=325,slow=4.5,SNR=141						
JAY				PcP	PcP	20 27 38.4	+1.0
	comp=Z,41nm,0.9s,baz=193,slow=2.8,SNR=2.5						
JAY				S	S	20 30 52.4	-3.6
	comp=Z,4.7nm,0.7s,baz=15,slow=23,SNR=1.2						
JAY				LR	LR	20 38 51.5	
	comp=Z,1µm,20.7s,baz=360,slow=33						
JAY	Jayapura	37.22	178	P	P	20 25 21.6	+0.7
	comp=Z,3µmcomp=Z,5µmcomp=Z,367nm,1.0s						
TIXI	Tiksi	37.25	355	P	P	20 25 20.8	+0.2
	comp=Z,72nm,0.5s,baz=148,slow=6.6,SNR=294						
TIXI				PcP	PcP	20 27 37.9	+1.4
	comp=Z,33nm,0.8s,baz=106,slow=0.8,SNR=2.6						
TIXI				S	S	20 30 52.6	-2.6
	comp=Z,8.4nm,0.9s,baz=282,slow=19,SNR=2.2						
TIXI				P3KPbc		20 55 39.8	
	comp=Z,2.4nm,0.7s,baz=350,slow=1.5,SNR=16						
TIXI	Tiksi	37.25	355*c*	*i*P	P	20 25 20.3	-0.2
TIXI				pmax	pmax		
	comp=Z,58nm,0.6s						
TIXI	Tiksi	37.25	355	P	P	20 25 20.9	+0.3
TIXI				IAmb	IAmb	20 25 22.7	
	comp=Z,78nm,0.5s						
GENI	Genyem	37.28	179	P	P	20 25 22.4	+1.0
	comp=Z,22µmcomp=Z,2µm,1.3s						
MRSI	Marisa	37.90	209	P	P	20 25 25.3	-1.3
	comp=Z,3µmcomp=Z,3µmcomp=Z,158nm,0.9s						
FAKI	Fak Fak	38.19	192	P	P	20 25 27.5	-1.6
	comp=Z,3µmcomp=Z,5µmcomp=Z,304nm,0.6s						
FAKI	Fak Fak	38.19	192	P	P	20 25 29.2	+0.2
WAMI	Wamena	38.56	181	P	P	20 25 35.5	+3.4
	comp=Z,13µmcomp=Z,1µm,0.6s						
MPSI	Mapaga	38.88	212	P	P	20 25 33.5	-1.3
	comp=Z,2µmcomp=Z,1µmcomp=Z,64nm,0.6s						
LUWI	Luwuk	38.97	207	P	P	20 25 33.7	-1.8
	comp=Z,6µmcomp=Z,143nm,0.6s						
LUWI	Luwuk	38.97	207	P	P	20 25 33.3	-2.3
LUWI				IAmb	IAmb	20 25 42.7	
	comp=Z,114nm,0.7s						
CHTO	Chiang Mai	39.16	257	P	P	20 25 37.0	-0.2
CHTO				pmax	pmax		
	comp=Z,201nm,0.9s						
CHTO	Chiang Mai	39.16	257	P	P	20 25 37.0	-0.2
CHTO				IAmb	IAmb	20 25 39.7	
	comp=Z,201nm,0.8s						
MSAI	Masohi	39.27	197	P	P	20 25 38.1	+0.1
	comp=Z,1µmcomp=Z,64nm,1.0s						
APSI	Ampana	39.28	209	P	P	20 25 36.8	-1.3
	comp=Z,2µmcomp=Z,145nm,0.6s						
CM31	Chiang Mai Arr	39.35	256	P	P	20 25 39.0	+0.2
	SNR=104						
CM31	Chiang Mai Arr	39.35	256	P	P	20 25 39.0	+0.2
CM31				IAmb	IAmb	20 25 41.0	
	comp=Z,130nm,0.8s						
CMAR	Chiang Mai Arr	39.35	256	P	P	20 25 38.8	-0.1
	comp=Z,93nm,0.8s,baz=47,slow=7.3,SNR=488						
CMAR				PcP	PcP	20 27 45.5	+1.4
	comp=Z,41nm,1.0s,baz=24,slow=2.1,SNR=10						
CMAR				ScP	ScP	20 31 18.6	+1.3
	comp=Z,9.3nm,1.1s,baz=29,slow=3.3,SNR=4.6						
CMAR				LR	LR	20 43 55.0	
	comp=Z,2µm,18.6s,baz=60,slow=39						
CMAR				P3KPbc		20 55 32.0	
	comp=Z,0.5nm,0.3s,baz=247,slow=4.4,SNR=9.0						
NLAI	Namlea	39.63	199	P	P	20 25 41.2	+0.2
	comp=Z,1µmcomp=Z,91nm,0.7s						
AAI	Ambon	39.77	198	P	P	20 25 41.7	-0.5
	comp=Z,5µmcomp=Z,520nm,0.6s						
AAI	Ambon	39.77	198	P	P	20 25 42.2	0.0
AAI				pmax	pmax		
	comp=Z,515nm,0.6s						
BNDI	Bandanaira	40.19	195	P	P	20 25 44.0	-1.6
	comp=Z,5µmcomp=Z,699nm,0.8s						
SPIA	Saint Paul Isl	40.28	40	P	P	20 25 46.9	+1.0
DGZ	Jazzator, Alta	40.35	308*c*	*i*P	P	20 25 48.7	+1.8
DGZ				pmax	pmax		
	comp=Z,2µm,1.2s						
WMQ	Urumqi	40.37	299	P	P	20 25 48.7	+1.7
WMQ				pP	pP	20 26 21.7	-0.9
WMQ				sP	sP	20 26 42.1	+1.0
WMQ				ScP	ScP	20 31 19.4	-1.6
WMQ				S	S	20 31 42.8	-0.1
WMQ				sS	sS	20 32 44.6	+1.0
WMQ				ScS	ScS	20 35 30.9	-4.6
WMQ				pmax	pmax		
	comp=Z,520nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,6µm,3.9s						
WMQ				LR	LR		
	comp=Z,2µm,13.7s						
WMQ				LR	LR		
	comp=Z,2µm,11.1s						
NIKH	Nikolski High	40.45	47	P	P	20 25 47.5	+0.1
NIKH				IAmb	IAmb	20 25 49.3	
	comp=Z,229nm,0.8s						
KRVT	Keravat (AS076	40.76	160	P	P	20 25 49.8	-0.5
	comp=Z,113nm,0.6s,baz=16,slow=22,SNR=27						
KRVT				LR	LR	20 40 37.5	
	comp=Z,538nm,21.9s,baz=4.6,slow=33						
LSA	Lhasa	40.78	277	P	P	20 25 52.4	+1.4
LSA				S	S	20 31 49.5	-0.5
LSA				pmax	pmax		
	comp=Z,340nm,0.9s						
LSA				LR	LR		
	comp=Z,3µm,12.1s						
LSA				LR	LR		
	comp=Z,8µm,15.0s						
LSA				LR	LR		
	comp=Z,11µm,13.5s						
LSA	Lhasa	40.78	277	P	P	20 25 52.4	+1.4
LSA	Lhasa	40.78	277	P	P	20 25 52.4	+1.4
SMKI	Samarinda	40.80	215	P	P	20 25 51.1	+0.4
	comp=Z,4µmcomp=Z,7µmcomp=Z,306nm,1.2s						
SBUM	Sibu	40.97	224	P	P	20 25 51.8	-0.2
SBUM	Sibu	40.97	224	P	P	20 25 52.0	0.0
GAMB	Gambell	41.41	30	P	P	20 25 56.4	+1.3
BKB	Balikpapan	41.66	215	P	P	20 25 57.9	+0.2
	comp=Z,3µmcomp=Z,4µmcomp=Z,307nm,0.8s						
SHL	Shillong	41.74	270	P	P	20 25 58.1	-0.4
	SNR=24						
SHL	Shillong	41.74	270	P	P	20 25 58.0	-0.6
SHL				pmax	pmax		
	comp=Z,79nm,0.8s						
SHL	Shillong	41.74	270	P	P	20 25 58.0	-0.6
TTSI	Tana Toraja	41.95	210	P	P	20 25 57.3	-2.8
	comp=Z,836nmcomp=Z,41nm,0.8s						
ZSN	Zaisan	42.09	304	*e*P	P	20 26 02.7	+1.7
	comp=Z,690nm,1.4s						
ZSN	Zaisan	42.09	304	*e*P	P	20 26 02.6	+1.7
ZSN				pmax	pmax		
	comp=Z,690nm,1.4s						
ZAA0	Zalesovo Array	42.18	314	P	P	20 26 02.5	+1.0
ZALV	Zalesovo Beam	42.18	314	P	P	20 26 01.9	+0.4
	comp=Z,192nm,0.4s,baz=105,slow=6.4,SNR=336						
ZALV				PcP	PcP	20 27 52.6	0.0
	comp=Z,75nm,0.6s,baz=105,slow=3.1,SNR=4.5						
ZALV				LR	LR	20 43 35.4	
	comp=Z,2µm,19.9s,baz=105,slow=36						
SPSI	Sidrap Palu	42.81	209	P	P	20 26 04.5	-2.5
	comp=Z,2µmcomp=Z,1µmcomp=Z,91nm,0.9s						
KSM	Kuching	42.86	226	P	P	20 26 08.1	+0.6
KSM	Kuching	42.86	226	P	P	20 26 08.0	+0.6
BNSI	Bone	43.07	209	P	P	20 26 08.0	-1.1
	comp=Z,2µmcomp=Z,131nm,0.6s						
BBSI	Bau Bau	43.16	205	P	P	20 26 08.7	-1.1
	comp=Z,736nmcomp=Z,17nm,0.9s						
BRDH	Bariadhala	43.19	267	P	P	20 26 11.0	+0.9
	comp=Z,214nm,0.5s,baz=86,slow=9.7,SNR=16						
KAPI	Kappang	43.77	209	S	S	20 32 29.9	-3.1
	comp=Z,6.4nm,0.4s,baz=200,slow=22,SNR=16						
KAPI				ScS	SS	20 35 55.0	-0.5
	comp=Z,1.6nm,0.3s,baz=222,slow=23,SNR=0.8						
KAPI	Kappang	43.77	209	P	P	20 26 14.4	-0.3
KAPI				IAmb	IAmb	20 26 16.5	
	comp=Z,214nm,1.1s						
MKAR	Makanchi Array	43.89	304	P	P	20 26 17.5	+2.1
	comp=Z,167nm,0.5s,baz=86,slow=9.1,SNR=20						
MKAR				ScP	ScP	20 31 35.3	+0.3
	comp=Z,24nm,0.8s,baz=72,slow=4.7,SNR=3.5						
MKAR				LR	LR	20 44 52.3	
	comp=Z,3µm,18.5s,baz=94,slow=36						
MKAR				P3KPbc		20 55 13.5	
	comp=Z,0.4nm,0.6s,baz=275,slow=4.4,SNR=4.4						
MKAR				P4KPbc		21 04 07.8	
	comp=Z,0.6nm,0.7s,baz=79,slow=5.3,SNR=7.7						
BKSI	Bulukumba	43.91	208	P	P	20 26 13.7	-2.0
	comp=Z,1µmcomp=Z,92nm,1.1s						
ANM	Nome	44.30	31	P	P	20 26 20.4	+2.1
ANM				pmax	pmax		
	comp=Z,142nm,1.1s						
ANM	Nome	44.30	31	P	P	20 26 20.4	+2.1
TAPN	Taplejung	44.45	275	*e*P	P	20 26 20.4	-0.1
	comp=Z,119nm,0.4s						
NRIK	Noril'sk	44.55	337	P	P	20 26 20.6	+0.3
	comp=Z,127nm,0.5s,baz=117,slow=7.2,SNR=116						
NRIK				ScP	ScP	20 31 36.9	-0.4
	comp=Z,32nm,1.2s,baz=176,slow=3.3,SNR=3.8						
NRIK				LR	LR	20 46 06.0	
	comp=Z,4µm,18.7s,baz=118,slow=37						
NRIK	Noril'sk	44.55	337⇑	*e*P	P	20 26 20.6	+0.3
NRIK				pmax	pmax		
	comp=Z,138nm,0.6s						
PMG	Port Moresby	44.66	169*d*	*i*P	P	20 26 21.8	+0.1
PMG				pmax	pmax		
	comp=Z,613nm,0.8s						
PMG	Port Moresby	44.66	169	P	P	20 26 22.6	+1.0
PMG				IAmb	IAmb	20 26 23.9	
	comp=Z,129nm,0.8s						
ODAN	Odare	44.91	275	*e*P	P	20 26 23.2	-0.8
	comp=Z,110nm,0.4s						
SEM	Semipalatinsk	44.97	309	*e*P	P	20 26 24.0	-0.1
	comp=Z,407nm,1.6s						
SEM				*e*S	S	20 32 49.5	-0.7
SEM	Semipalatinsk	44.97	309	*e*P	P	20 26 24.0	-0.1
SEM				*e*S	S	20 32 49.5	-0.7
SEM				pmax	pmax		
	comp=Z,407nm,1.6s						
SDPT	Sand Point	45.50	44	P	P	20 26 27.0	-0.9
SDPT				IAmb	IAmb	20 26 28.8	
	comp=Z,188nm,0.8s						
RAMN	Ramite	45.52	275	*e*P	P	20 26 28.7	-0.1
	comp=Z,807nm,0.6s						
JIRN	Jiri	45.58	276	*e*P	P	20 26 29.8	+0.4
	comp=Z,886nm,0.5s						
GUN	Gumba	45.73	277	*e*P	P	20 26 30.8	+0.2
	comp=Z,1µm,0.8s						
KURK	Kurchatov	45.99	310*c*	*i*P	P	20 26 32.2	+0.4
KURK				pmax	pmax		
	comp=Z,642nm,0.7s						
KURK	Kurchatov	45.99	310	P	P	20 26 33.4	+1.6
CNBA	Chernabura Isl	46.01	45	IAmb	IAmb	20 26 32.8	

comp=Z,188nm,0.9s
KURBB **Kurchatov Arra** **46.05 309** P **P** **20 26 33.8 +1.4**
comp=Z,572nm,0.7s,baz=84,slow=7.6,SNR=72
KURBB PKPPKP **P'P'df** **20 57 57.8 -2.3**
comp=Z,0.9nm,1.0s,baz=256,slow=2.3,SNR=4.1
MMRI **Maumere** **46.21 204** P **P** **20 26 33.4 -0.5**
comp=Z,3µmcomp=Z,3µmcomp=Z,183nm,0.8s
MMRI **Maumere** **46.21 204** P **P** **20 26 33.2 -0.7**
MMRI IAmb IAmb 20 26 36.5
comp=Z,118nm,0.7s
PKI **Pulchoki** **46.25 276** *e*P **P** **20 26 34.3 -0.3**
comp=Z,892nm,1.1s
PKIN **Phulchoki** **46.26 276** *e*P **P** **20 26 34.3 -0.3**
comp=Z,236nm,0.5s
KKN **Kakani** **46.27 277** *e*P **P** **20 26 34.8 +0.2**
KULM **Kulim** **46.30 239** IAmb IAmb 20 26 36.8
comp=Z,569nm,1.8s
KULM **Kulim** **46.30 239** P **P** **20 26 35.0 +0.3**
SHLS **Shalkode** **46.40 299** *e*S **S** **20 33 07.0 -3.7**
DMN **Daman** **46.48 277** *e*P **P** **20 26 36.5 +0.2**
EDFI **Ende, Flores** **46.50 204** P **P** **20 26 34.6 -1.7**
comp=Z,1µmcomp=Z,49nm,0.8s
IPM **Ipoh** **46.60 238** IAmb IAmb 20 26 39.0
comp=Z,204nm,0.8s
IPM **Ipoh** **46.60 238** P **P** **20 26 37.0 -0.1**
SOEI **Soe** **46.64 201** P **P** **20 26 36.3 -1.1**
comp=Z,4µmcomp=Z,237nm,0.7s
SOEI **Soe** **46.64 201** IAmb IAmb 20 27 05.6
comp=Z,157nm,0.7s
MYKOM **Kota Tinggi** **46.64 233** P **P** **20 26 38.0 +0.6**
GKN **Gorkha** **46.71 277** *e*P **P** **20 26 38.2 +0.2**
UZB **Uzynbulak** **46.72 299** *e*S **S** **20 33 16.0 +0.8**
TDK **Taldyqorghan** **46.82 302** *e*S **S** **20 33 16.9 +0.5**
TPRI **Tanjung Pinang** **46.86 232** P **P** **20 26 39.1 +0.1**
comp=Z,2µmcomp=Z,168nm,1.4s
SATY **Saty** **47.17 299** *e*S **S** **20 33 22.4 +0.6**
BATI **Baumata** **47.24 201** LR LR 20 44 39.0
comp=Z,969nm,21.8s,baz=40,slow=33
BATI **Baumata** **47.24 201** P **P** **20 26 40.8 -1.2**
comp=Z,2µmcomp=Z,2µmcomp=Z,215nm,0.6s
DANN **Dangsing** **47.29 278** *e*P **P** **20 26 43.7 +1.0**
KOLN **Koldanda** **47.65 278** *e*P **P** **20 26 46.3 +1.0**
PYUN **Piuthan** **48.02 278** *e*P **P** **20 26 48.9 +0.8**
PLAI **Plampang** **48.03 209** P **P** **20 26 46.2 -1.8**
comp=Z,2µmcomp=Z,1µmcomp=Z,114nm,0.7s
MTN **Manton Dam** **48.10 191** P **P** **20 26 48.4 0.0**
KMMI **Kalianget** **48.11 215** P **P** **20 26 50.1 +1.5**
comp=Z,80nm,1.1s
MDOK **Medeo** **48.13 300** *e*S **S** **20 33 36.2 +1.0**
PBA **Port Blair** **48.13 253** P P 20 26 49.9 +1.1
PBA IAmb IAmb 20 26 50.8
comp=Z,136nm,0.7s
WBSI **Waikabubak, Su** **48.15 207** P **P** **20 26 45.9 -3.1**
comp=Z,1µmcomp=Z,88nm,0.7s
HNR **Honiara** **48.18 152** P **P** **20 26 48.9 -0.2**
comp=Z,178nm,0.7s,baz=174,slow=17,SNR=27
BASI **Baing, Sumba** **48.25 205** P **P** **20 26 47.8 -1.9**
comp=Z,1µmcomp=Z,136nm,0.9s
KUU **Kurty** **48.48 301** *e*S **S** **20 33 39.6 -0.3**
COEN **Coen** **48.70 175** P **P** **20 26 54.6 +1.5**
GRJI **Gresik** **48.70 217** P **P** **20 26 53.3 +0.1**
comp=Z,2µmcomp=Z,263nm,0.7s
JOHN **Johnston Islan** **48.89 98** P **P** **20 26 53.2 -1.4**
JOHN IAmb IAmb 20 26 56.3
comp=Z,211nm,0.8s
DNP **Denpasar** **48.98 212** P **P** **20 26 56.1 +0.9**
comp=Z,14µmcomp=Z,271nm,1.1s
DNP **Denpasar** **48.98 212** P **P** **20 26 54.3 -0.9**
DNP pmax pmax
comp=Z,288nm,0.9s
LHMI **Lhok Sumawe** **49.01 243** P **P** **20 26 56.7 +1.2**
comp=Z,3µmcomp=Z,6µmcomp=Z,575nm,0.8s
LHMI **Lhok Sumawe** **49.01 243** P **P** **20 26 56.8 +1.2**
BWNR **Bhubaneshwar** **49.10 267** *ex* **P** **20 26 57.4 +1.2**
BWNR IAmb IAmb 20 27 36.8
comp=Z,22nm,0.6s
BWNR *i* x x 20 28 18.2
PSI **Prapat** **49.26 239** P **P** **20 26 57.4 -0.3**
comp=Z,123nm,0.8s,baz=1.0,slow=5.1,SNR=139
PSI PcP **PcP** **20 28 19.0 +0.9**
comp=Z,48nm,0.9s,baz=360,slow=2.7,SNR=4.2
PSI ScP **ScP** **20 31 59.4 +1.3**
comp=Z,26nm,1.0s,baz=1.3,slow=2.7,SNR=5.9
JAGI **Jajag, Banyuwa** **49.27 214** P **P** **20 26 55.0 -2.5**
comp=Z,2µmcomp=Z,1µmcomp=Z,83nm,1.2s
RPSI **Rantau Prapat** **49.34 239** IAmb IAmb 20 26 59.8
comp=Z,159nm,0.9s
OHAK **Old Harbor** **49.47 41** IAmb IAmb 20 26 59.8
comp=Z,115nm,0.8s
KCSI **Kotacane, Aceh** **49.58 241** P **P** **20 26 57.8 -2.1**
comp=Z,2µmcomp=Z,836nmcomp=Z,117nm,0.9s
BKNI **Bangkinang** **49.59 235** P **P** **20 27 00.4 +0.4**
comp=Z,2µmcomp=Z,8µmcomp=Z,1µm,1.1s
PMBI **Palembang** **49.68 228** P **P** **20 27 02.0 +1.4**
comp=Z,2µmcomp=Z,7µmcomp=Z,564nm,1.3s
SGDS **Sogindy** **49.79 300** *e*S **S** **20 34 00.7 +2.5**
KSH **Kashi** **49.79 295** P **P** **20 26 59.2 -2.2**
KSH pmax pmax
comp=Z,570nm,1.2s
KSH **Kashi** **49.79 295** P **P** **20 27 05.9 +4.5**
KSH sP sP 20 27 57.5 +1.1
KSH PP **PP** **20 29 04.0 +6.6**
KSH S **S** **20 34 03.0 +4.5**
KSH SS **SS** **20 37 35.4 +2.6**
KSH pmax pmax
comp=Z,400nm,1.2s
KSH pmax pmax
comp=Z,3µm,4.3s
KSH LR LR
comp=Z,2µm,9.6s
KSH LR LR
comp=Z,2µm,8.7s
KSH LR LR
comp=Z,3µm,9.4s
KDAK **Kodiak Island** **49.81 41** P **P** **20 27 01.5 +0.4**
comp=Z,234nm,0.7s,baz=276,slow=4.2,SNR=365
KDAK pP **pP** **20 27 37.5 +0.1**
comp=Z,71nm,0.6s,baz=267,slow=4.9,SNR=3.4
KDAK **Kodiak Island** **49.81 41** P **P** **20 27 01.6 +0.5**
KDAK pmax pmax
comp=Z,335nm,1.0s
KDAK **Kodiak Island** **49.81 41** P **P** **20 27 01.6 +0.5**
BTLS **Baital** **49.85 303** *e*S **S** **20 33 59.8 +1.0**
SMRI **Semarang** **49.85 219** P **P** **20 27 01.9 0.0**
comp=Z,196nm,0.9s
BRZS **Berezniki** **49.85 309** *e*P **P** **20 27 01.9 +0.4**
comp=Z,170nm,0.5s
BRZS **Berezniki** **49.85 309** *e*P **P** **20 27 01.9 +0.4**
BRZS pmax pmax
comp=Z,170nm,0.5s
PPLA **Purkeypile** **49.88 34** IAmb IAmb 20 27 04.8
comp=Z,217nm,1.0s
MLSI **Meulaboh, Aceh** **50.05 242** P **P** **20 27 01.9 -1.6**
comp=Z,3µmcomp=Z,5µmcomp=Z,351nm,0.9s
MNSI **Mandailing Nat** **50.24 236** P **P** **20 27 03.8 -1.1**
comp=Z,2µmcomp=Z,198nm,0.7s
WOJI **Wonogiri, Jawa** **50.27 218** P **P** **20 27 04.5 -0.5**
comp=Z,76nm,0.9s
SDSI **Sungai Dareh** **50.27 233** P **P** **20 27 05.1 0.0**
comp=Z,4µmcomp=Z,389nm,1.3s
CNPM **China Poot** **50.42 38** IAmb IAmb 20 27 08.9
comp=Z,126nm,0.7s
BPAW **Bear Paw Mtn.** **50.43 32** P **P** **20 27 07.2 +1.5**
PCJI **Pacitan** **50.45 217** P **P** **20 27 05.1 -1.3**
comp=Z,93nm,0.6s
KTH **Kantishna Hill** **50.46 33** IAmb IAmb 20 27 08.7
comp=Z,217nm,1.0s
UGM **Wanagama** **50.54 218** P **P** **20 27 06.1 -1.0**
comp=Z,4µmcomp=Z,584nm,1.2s
MLY **Manley** **50.55 31** IAmb IAmb 20 27 09.5
comp=Z,218nm,1.0s
YOGI **Yogyakarta** **50.57 219** P **P** **20 27 06.5 -0.8**
comp=Z,285nm,1.1s
BRLK **Bradley Lake** **50.58 38** P **P** **20 27 06.7 -0.2**
BVAR **Borovoye Array** **50.82 313** P **P** **20 27 10.1 +1.3**
comp=Z,102nm,0.6s,baz=106,slow=9.2,SNR=40
BVAR PcP **PcP** **20 28 23.7 +0.6**
comp=Z,53nm,0.7s,baz=69,slow=4.9,SNR=4.2
BRVK **Borovoye** **50.87 313***c i*P **P** **20 27 09.9 +0.7**
BRVK pmax pmax
comp=Z,322nm,1.0s
PDSI **Padang** **50.90 234** P **P** **20 27 08.4 -1.4**
comp=Z,1µmcomp=Z,586nmcomp=Z,38nm,0.7s
RC01 **Rabbit Creek A** **51.08 36** IAmb IAmb 20 27 12.7
comp=Z,238nm,1.0s
KRJI **Kerinci** **51.12 232** P **P** **20 27 11.8 +0.2**
comp=Z,6µmcomp=Z,449nm,0.9s
TOLK **Toolik Lake Re** **51.14 26** P **P** **20 27 12.4 +1.5**
baz=267
LEM **Lembang** **51.17 222** S **S** **20 34 13.2 -4.7**
comp=Z,5.6nm,0.5s,baz=138,slow=23,SNR=1.2
LEM **Lembang** **51.17 222** P **P** **20 27 11.4 -0.6**
LEM pmax pmax
comp=Z,490nm,1.0s
GSI **Gunungsitoli** **51.27 239** P **P** **20 27 11.9 -0.7**
comp=Z,48µmcomp=Z,5µm,1.0s
GSI **Gunungsitoli** **51.27 239** P **P** **20 27 12.4 -0.1**
MDSI **Maura Dua** **51.27 227** P **P** **20 27 11.4 -1.1**
comp=Z,4µmcomp=Z,398nm,1.2s
BLSI **Bandar Lampung** **51.33 226** P **P** **20 27 12.1 -0.9**
comp=Z,394nm,1.0s
MCK **McKinley** **51.34 33** IAmb IAmb 20 27 16.8
comp=Z,147nm,0.8s
PMR **Palmer** **51.34 36** IAmb IAmb 20 27 14.5
comp=Z,178nm,0.8s
SNSI **Sinabang, Aceh** **51.38 241** P **P** **20 27 13.7 +0.3**
comp=Z,5µmcomp=Z,496nm,1.0s
MASI **Maura Aman, Be** **51.42 230** P **P** **20 27 14.0 +0.2**
comp=Z,7µmcomp=Z,855nm,1.1s
DBJI **Dramaga** **51.43 223** P **P** **20 27 12.9 -0.8**
comp=Z,4µmcomp=Z,61nm,1.4s
KSI **Kapahiang** **51.59 230** P **P** **20 27 14.0 -1.1**
comp=Z,2µmcomp=Z,108nm,0.8s
KSI **Kapahiang** **51.59 230** P **P** **20 27 13.9 -1.1**
KSI pmax pmax
comp=Z,108nm,0.8s
CISI **Cisompet, Garu** **51.66 221** P **P** **20 27 11.9 -3.6**
comp=Z,1µmcomp=Z,72nm,1.0s
WRH **Wood River Hil** **51.69 32** IAmb IAmb 20 28 28.3
comp=Z,163nm,0.8s
LWLI **Liwa** **51.76 227** P **P** **20 27 14.4 -1.9**
comp=Z,3µmcomp=Z,300nm,0.6s
TCOL **CIGO, UAF Yank** **51.78 31** P **P** **20 27 16.8 +1.2**
baz=272,SNR=23
TCOL S **S** **20 34 26.9 +2.1**
baz=272
COLA **College** **51.78 31***d i*P **P** **20 27 16.7 +1.0**
COLA pmax pmax
comp=Z,126nm,0.9s
CNJI **Cibinong** **51.84 222** P **P** **20 27 12.7 -4.0**
comp=Z,1µmcomp=Z,111nm,0.9s
SKJI **Sukabumi** **51.91 223** P **P** **20 27 16.4 -0.9**
comp=Z,140nm,0.6s
POKR **Poker Flat Res** **51.95 31** P **P** **20 27 18.5 +1.5**
baz=272,SNR=322
POKR S **S** **20 34 30.5 +3.2**
baz=272
SISI **Saibi** **52.12 235** P **P** **20 27 17.9 -1.0**
comp=Z,2µmcomp=Z,160nm,0.8s
HDA **Harding Lake** **52.19 32** P **P** **20 27 19.0 +0.2**
baz=273,SNR=243
HDA S **S** **20 34 30.2 -0.3**
baz=273
HDA S **S** **20 34 30.2 -0.3**
baz=273
HDA **Harding Lake** **52.19 32** IAmb IAmb 20 27 20.1
comp=Z,208nm,1.0s
IL31 **52.20 31** IAmb IAmb 20 28 00.9
comp=Z,138nm,0.9s
ILAR **Eielson Array** **52.20 31** P **P** **20 27 18.9 +0.1**
comp=Z,81nm,0.8s,baz=273,slow=5.9,SNR=647
ILAR pP **pP** **20 27 54.5 -1.0**
comp=Z,79nm,0.9s,baz=285,slow=5.5,SNR=7.4
ILAR S **S** **20 34 28.4 -2.2**
comp=Z,0.3nm,0.6s,baz=138,slow=25,SNR=1.4
ILAR ScS **ScS** **20 36 48.8 -3.0**
comp=Z,0.9nm,0.7s,baz=327,slow=5.0,SNR=1.4
ILAR LR LR 20 50 04.1
comp=Z,451nm,20.0s,baz=280,slow=36
ILAR P4KPbc 21 04 42.0
comp=Z,0.3nm,0.8s,baz=247,slow=4.6,SNR=4.5
GLI **Glacier Island** **52.38 36** IAmb IAmb 20 27 22.0
comp=Z,170nm,0.8s
PPSI **Pulau Pagai** **52.58 233** P **P** **20 27 21.9 -0.3**
comp=Z,6µmcomp=Z,733nm,1.0s
FID **Port Fidalgo** **52.69 36** IAmb IAmb 20 27 24.3
comp=Z,213nm,1.0s
EYAK **Cordova Ski Ar** **53.07 37** IAmb IAmb 20 27 27.7
comp=Z,198nm,1.0s
RIDG **Independent Ri** **53.16 33** IAmb IAmb 20 28 34.1
comp=Z,124nm,1.0s
DOT **Dot Lake** **53.51 33** IAmb IAmb 20 27 30.1
comp=Z,108nm,0.7s
SCRK **Sand Creek** **53.51 32** IAmb IAmb 20 27 30.3
comp=Z,167nm,0.8s
RAGM **Ragged Mountai** **53.62 37** IAmb IAmb 20 28 12.7
comp=Z,151nm,1.0s
GLB **Gilahina Butte** **53.90 35** IAmb IAmb 20 27 34.0
comp=Z,157nm,1.3s
PVM **Polavaram** **54.05 267** *e*P **P** **20 27 33.6 +0.6**
PVM IVmB_BB 20 27 34.9
comp=Z,1µm,1.6s
PVM IAmb IAmb 20 27 36.0
comp=Z,91nm,1.2s
PVM *e*S **S** **20 34 56.8 0.0**
PVM IVMs_BB IVMs_BB 20 38 35.1
comp=Z,715nm,12.6s
VRDI **Verde Repeater** **54.09 36** IAmb IAmb 20 27 35.4
comp=Z,121nm,0.9s
NGP **Nagpur** **54.25 272** *ex* **P** **20 27 34.5 0.0**
NGP IAmb IAmb 20 27 38.9
comp=Z,94nm,0.7s
NGP *i* x x 20 28 13.0
NGP *ex* x 20 34 51.1
FITZ **Fitzroy Crossi** **54.27 196** P **P** **20 27 35.0 +0.5**
comp=Z,202nm,0.8s,baz=16,slow=8.8,SNR=277
FITZ S **S** **20 34 57.4 -2.2**
comp=Z,10nm,1.0s,baz=268,slow=22,SNR=3.3
KEKH **Kekaha** **54.36 87** IAmb IAmb 20 27 37.3
comp=Z,102nm,0.9s
TGL **Tana Glacier** **54.47 36** IAmb IAmb 20 27 38.0
comp=Z,188nm,1.0s
EGAK **Eagle** **54.64 31** IAmb IAmb 20 27 38.9
comp=Z,91nm,0.8s
BALM **Baldy** **54.66 36** IAmb IAmb 20 27 39.1
comp=Z,144nm,0.9s
WRAB **Tennant Creek** **54.72 186***d i*P **P** **20 27 37.8 +0.2**
WRAB pmax pmax
comp=Z,1µm,1.8s
WRAB **Tennant Creek** **54.72 186** P **P** **20 27 38.1 +0.5**
WRA **Warramunga Arr** **54.73 186** P **P** **20 27 38.0 +0.3**
comp=Z,110nm,0.3s,baz=0.1,slow=7.6,SNR=728
WRA PcP **PcP** **20 28 40.2 +1.9**
comp=Z,88nm,0.8s,baz=3.0,slow=4.2,SNR=6.3
WRA S **S** **20 35 03.6 -2.0**
comp=Z,25nm,1.1s,baz=357,slow=12,SNR=18
WRA PKP2bc 20 57 56.7
comp=Z,2.4nm,0.8s,baz=189,slow=1.9,SNR=6.9
WRA P4KPbc 21 04 56.3
comp=Z,1.9nm,0.9s,baz=360,slow=4.6,SNR=7.9
BARN **Barnard Glacie** **54.98 36** IAmb IAmb 20 27 41.7
comp=Z,124nm,0.8s
CTA **Charters Tower** **55.05 172** P **P** **20 27 40.4 +0.3**
comp=Z,53nm,0.9s,baz=352,slow=8.1,SNR=54
CTA pP **pP** **20 28 17.0 -0.1**
comp=Z,16nm,0.6s,baz=332,slow=14,SNR=1.9
CTA S **S** **20 35 10.9 +1.0**
comp=Z,1.0nm,0.4s,baz=159,slow=23,SNR=1.1
CTAO **Charters Tower** **55.05 172** P **P** **20 27 40.7 +0.6**
CTAO pmax pmax
comp=Z,147nm,1.1s
CTAO **Charters Tower** **55.05 172** P **P** **20 27 40.7 +0.6**
CTAO IAmb IAmb 20 27 41.2
comp=Z,147nm,1.1s
YAH **Yahtse** **55.06 37** IAmb IAmb 20 27 42.5
comp=Z,138nm,0.8s
MYLAV **Mylavaram** **55.12 267** *e*P **P** **20 27 41.6 +0.9**
MYLAV IVmB_BB 20 27 42.6
comp=Z,1µm,2.4s
MYLAV IAmb IAmb 20 27 44.2
comp=Z,168nm,1.5s
MYLAV *e*S **S** **20 35 11.8 +0.7**
MYLAV IVMs_BB IVMs_BB 20 38 41.8
comp=Z,433nm,11.8s
CTGM **Chitina Glacie** **55.15 36** IAmb IAmb 20 27 42.9
comp=Z,148nm,0.9s
RPR **Rampur** **55.16 270** *e*P **P** **20 27 41.7 +0.8**
RPR IVmB_BB 20 27 42.6
comp=Z,1µm,1.9s
RPR IAmb IAmb 20 27 43.8
comp=Z,220nm,1.5s
RPR *e*S **S** **20 35 10.9 -0.8**
XMIS **Christmas Isla** **55.27 222** IAmb IAmb 20 27 40.6
comp=Z,182nm,1.1s
SVE **Sverdlovsk** **55.68 319***de*P **P** **20 27 45.2 +1.1**
SVE *e*S **S** **20 35 15.9 -1.6**
SVE pmax pmax
comp=Z,373nm,1.3s
SRSP **Sriramsagar** **55.90 270** *e*P **P** **20 27 46.5 +0.1**
SRSP IVmB_BB 20 27 47.5
comp=Z,2µm,2.5s
SRSP IAmb IAmb 20 27 49.0
comp=Z,340nm,1.5s
SRSP *e*S **S** **20 35 20.1 -1.5**
SRSP IVMs_BB IVMs_BB 20 37 08.7
comp=Z,491nm,14.4s
KIP **Kipapa** **56.01 86** P **P** **20 27 48.0 +1.0**
KIP pmax pmax
comp=Z,179nm,1.0s
KIP **Kipapa** **56.01 86** P **P** **20 27 48.0 +1.0**
ADKI **Addanki** **56.13 266** *e*P **P** **20 27 48.6 +0.7**
ADKI IVmB_BB 20 27 50.0
comp=Z,829nm,2.2s
ADKI IAmb IAmb 20 27 51.3
comp=Z,105nm,1.6s
ADKI *e*S **S** **20 35 25.2 +0.7**
ADKI IVMs_BB IVMs_BB 20 39 13.6
comp=Z,936nm,12.7s
EPYK **Eagle Plains** **56.22 29** P **P** **20 27 49.6 +1.7**
baz=280
EPYK S **S** **20 35 28.2 +3.7**
baz=280
NJS **Nagarjunasagar** **56.31 267** *e*P **P** **20 27 49.8 +0.6**
NJS IVmB_BB 20 27 50.4
comp=Z,889nm,2.6s
NJS IAmb IAmb 20 27 51.9
comp=Z,108nm,1.4s
NJS *e*S **S** **20 35 26.2 -0.7**
NJS IVMs_BB IVMs_BB 20 38 41.2
comp=Z,673nm,13.0s
HYB **Hyderabad** **56.49 269** *i* P **P** **20 27 50.5 0.0**
comp=Z,115nm,0.8s
HYB *e*pP **pP** **20 28 29.0 +1.2**
HYB *e*sP **PcP** **20 28 45.0 -0.4**
HYB *e*PcP **sP** **20 28 46.5 +1.0**
HYB *e*PP PP 20 30 08.0 +10
HYB *e*S **S** **20 35 30.0 +0.7**
HYBB **Hyderabad (bro** **56.49 269** *e*P **P** **20 27 50.9 +0.4**
HYBB IVmB_BB 20 27 51.5
comp=Z,1µm,2.6s
HYBB IAmb IAmb 20 27 53.1
comp=Z,181nm,1.4s
HYBB *e*S **S** **20 35 27.9 -1.4**
HYBB IVMs_BB IVMs_BB 20 38 04.9
comp=Z,554nm,11.3s
SRLM **Srisailam** **56.88 267** *e*P **P** **20 27 53.6 +0.3**
SRLM IVmB_BB 20 27 54.4
comp=Z,958nm,2.2s
SRLM IAmb IAmb 20 27 55.8
comp=Z,147nm,1.6s
SRLM *e*S **S** **20 35 33.6 -0.9**
SRLM IVMs_BB IVMs_BB 20 38 52.5
comp=Z,606nm,15.9s
ARU **Arti** **56.89 319** P **P** **20 27 54.0 +1.3**
comp=Z,94nm,0.5s,baz=80,slow=4.0,SNR=429
ARU pP **pP** **20 28 29.9 -0.4**
comp=Z,54nm,0.9s,baz=94,slow=5.8,SNR=2.1
ARU **Arti** **56.89 319***c i*P **P** **20 27 53.0 +0.3**
ARU pmax pmax
comp=Z,260nm,0.6s
ARU **Arti** **56.89 319** P **P** **20 27 53.4 +0.7**
INK **Inuvik** **57.05 26** P **P** **20 27 54.6 +1.0**
comp=Z,143nm,0.8s,baz=289,slow=6.4,SNR=382
INK pP **pP** **20 28 31.2 +0.2**
comp=Z,89nm,0.9s,baz=301,slow=1.4,SNR=5.6
INK LR LR 20 54 57.9
comp=Z,664nm,20.2s,baz=286,slow=38
INK P4KPbc 21 05 04.9
comp=Z,1.4nm,0.8s,baz=329,slow=7.4,SNR=5.1
INK **Inuvik** **57.05 26** IAmb IAmb 20 27 55.7
comp=Z,151nm,0.9s
SKHT **Srikalahasti** **57.45 264** *e*P **P** **20 27 58.2 +0.9**
SKHT IVmB_BB 20 27 59.1
comp=Z,1µm,1.8s
SKHT IAmb IAmb 20 28 00.4
comp=Z,60nm,0.8s
SKHT *e*S **S** **20 35 42.7 +0.8**
SKHT IVMs_BB IVMs_BB 20 40 25.4
comp=Z,678nm,12.3s
KLRI **Killari** **57.77 270** *e*P **P** **20 27 59.3 -0.2**
KLRI IVmB_BB 20 28 00.7
comp=Z,2µm,1.7s
KLRI IAmb IAmb 20 28 01.0
comp=Z,99nm,0.7s
KLRI *e*S **S** **20 35 43.5 -2.6**
KLRI IVMs_BB IVMs_BB 20 37 46.7
comp=Z,1µm,13.1s
SKAG **Skagway** **58.41 37** IAmb IAmb 20 28 06.5
comp=Z,170nm,1.0s
AS31 **Alice Springs** **58.45 186** IAmb IAmb 20 28 07.8
comp=Z,73nm,0.5s
ASAR **Alice Springs** **58.45 186** P **P** **20 28 04.5 +0.6**
comp=Z,48nm,0.5s,baz=0.2,slow=6.5,SNR=692
ASAR PcP **PcP** **20 28 53.6 +0.8**
comp=Z,41nm,0.8s,baz=10,slow=5.0,SNR=6.4
ASAR ScP **ScP** **20 32 38.4 +0.7**
comp=Z,2.1nm,0.6s,baz=8.9,slow=6.6,SNR=3.5
ASAR LR LR 20 52 34.7
comp=Z,550nm,20.7s,baz=360,slow=35
ASAR PKP2bc 20 57 52.0
comp=Z,13nm,0.9s,baz=173,slow=2.3,SNR=18
ASAR P4KPbc 21 05 13.6
comp=Z,1.6nm,0.8s,baz=6.0,slow=5.5,SNR=15
HUH **Hualalai** **58.63 87** IAmb IAmb 20 28 08.0
comp=Z,187nm,1.1s
MBWA **Marble Bar** **58.77 202** P **P** **20 28 06.6 +0.4**
URV **Uravakonda** **58.82 267** *e*P **P** **20 28 07.3 +0.5**
URV IVmB_BB 20 28 08.3
comp=Z,2µm,1.7s
URV IAmb IAmb 20 28 09.4
comp=Z,237nm,1.4s
URV *e*S **S** **20 35 58.1 -1.7**
URV IVMs_BB IVMs_BB 20 39 33.0
comp=Z,1µm,10.5s
A36M **Sachs Harbour** **58.87 21** P **P** **20 28 07.8 +1.5**
baz=287
A36M S **S** **20 36 02.2 +3.4**
baz=287
AKTO **Aktyubinsk** **58.89 312** P **P** **20 28 07.1 +0.3**
comp=Z,131nm,0.7s,baz=84,slow=10.0,SNR=27
BESE **Bessie Mountai** **58.90 38** IAmb IAmb 20 28 09.7
comp=Z,120nm,0.9s
SIT **Sitka** **59.10 39** IAmb IAmb 20 28 11.2
comp=Z,94nm,1.0s
KNTN **Kanton** **59.18 119** P **P** **20 28 10.2 +1.0**
POO **Poona** **59.80 272**⇑ *ix* **P** **20 28 13.2 -0.3**
comp=Z,260nm,0.5s
POO *ex* x 20 32 37.2
C36M **Paulatuk** **60.07 24** P **P** **20 28 15.5 +1.0**
baz=290
C36M S **S** **20 36 15.8 +1.5**
baz=290
C36M **Paulatuk** **60.07 24** P **P** **20 28 15.7 +1.2**
CRAG **Craig** **60.77 41** P **P** **20 28 21.5 +2.0**
CRAG IAmb IAmb 20 28 22.4
comp=Z,110nm,0.9s
EIDS **Eidsvold** **60.94 168** IAmb IAmb 20 28 24.3
comp=Z,149nm,0.9s
KIRV **Kirov** **60.97 323** P **P** **20 28 22.1 +1.4**
comp=Z,549nm,0.6s,baz=68,slow=2.2,SNR=201
KIRV pP **pP** **20 28 58.4 -0.4**
comp=Z,129nm,0.7s,baz=54,slow=9.0,SNR=2.3
KIRV **Kirov** **60.97 323**⇑ *e*P **P** **20 28 21.6 +0.9**
DLBC **Dease Lake** **61.34 37** P **P** **20 28 25.2 +1.8**
comp=Z,58nm,0.8s,baz=292,slow=7.5,SNR=127
DLBC pP **pP** **20 29 01.5 +0.3**
comp=Z,29nm,0.9s,baz=299,slow=5.4,SNR=2.4
DLBC **Dease Lake** **61.34 37** IAmb IAmb 20 28 26.7
comp=Z,85nm,0.9s
PRGR **Permogore** **61.67 327**⇑ *i*P **P** **20 28 25.9 +0.5**
PRGR *e**PP **pP** **20 29 01.3 -2.2**
PRGR *e*S **S** **20 36 36.0 +1.3**
PRGR pmax pmax
comp=Z,170nm,0.6s
HOPEN **Hopen** **61.72 346** *e*P **P** **20 28 27.0 +1.5**
HOPEN IVmB_BB 20 28 27.4
comp=Z,3µm,2.5s
HOPEN IVMs_BB IVMs_BB 20 58 29.4
comp=Z,576nm,16.0s
H02N1 **VAN INLET T-PH** **61.87 43** P **P** **20 28 28.1 +1.1**

SNR=11
DIB Dawson Inlet, 61.92 43 lAmb lAmb 20 28 29.2
comp=Z,112nm,1.0s
H02S1 DAWSON INLET T 61.92 43 P **P** **20 28 28.3 +1.1**
SNR=60
DZM Mont Dzumac 62.20 151 *e*P **P** **20 28 31.2 +1.7**
comp=Z,645nm,1.6s
DZM *e*S **S** **20 36 42.5 +0.1**
comp=Z,1µm,25.9s
DZM Mont Dzumac 62.20 151 *e*LR LR 20 47 10.7
comp=Z,2µm,33.1s
DZM Mont Dzumac 62.20 151 P **P** **20 28 31.1 +1.6**
comp=Z,75nm,0.6s,baz=324,slow=1.3,SNR=154
DZM PcP **PcP** **20 29 10.0 +2.0**
comp=Z,72nm,1.1s,baz=9.1,slow=5.7,SNR=5.5
SPA0 Spitsbergen Ar 62.31 349 P **P** **20 28 30.6 +1.1**
SPA0 lAmb lAmb 20 28 32.4
comp=Z,146nm,1.3s
SPA0 Spitsbergen Ar 62.31 349 *e*P **P** **20 28 30.4 +0.9**
SPA0 lVmB_BB 20 28 31.0
comp=Z,2µm,2.8s
SPA0 *e*S **S** **20 36 43.5 +1.0**
SPA0 lVMs_BB lVMs_BB 20 54 21.0
comp=Z,458nm,31.1s
SPITS Spitsbergen Ar 62.31 349 P **P** **20 28 30.2 +0.7**
SPITS pmax pmax
comp=Z,43nm,0.5s
KBS Kingsbay 62.49 350 *de*P **P** **20 28 31.7 +1.1**
KBS pmax pmax
comp=Z,108nm,0.8s
KBS Kingsbay 62.49 350 P **P** **20 28 32.3 +1.7**
KBS lAmb lAmb 20 28 32.8
comp=Z,95nm,0.8s
KBS Kingsbay 62.49 350 *e*P **P** **20 28 32.0 +1.4**
KBS lVmB_BB 20 28 32.6
comp=Z,2µm,2.5s
KBS *e*pP **PcP** **20 29 07.4 -1.0**
KBS *e*S **S** **20 36 46.7 +2.1**
KBS lVMs_BB lVMs_BB 20 54 21.9
comp=Z,477nm,18.1s
NOR Nord 63.09 356 *i* P **P** **20 28 34.9 +0.3**
NOR Nord 63.09 356 *i* P **P** **20 28 34.9 +0.3**
HSPB Hornsund (broa 63.20 348 *e*P **P** **20 28 36.6 +1.2**
HSPB lVmB_BB 20 28 37.1
comp=Z,3µm,2.4s
HSPB *e*pP **PcP** **20 29 11.9 +0.7**
HSPB *e*S **S** **20 36 54.6 +1.2**
HSPB *e*SKSac **SKSac** **20 38 11.5 -0.5**
HSPB *e*SS **SS** **20 41 04.4 +2.7**
HSPB lVMs_BB lVMs_BB 20 55 28.4
comp=Z,733nm,21.3s
LVZ Lovozero 63.39 336 *c i*P **P** **20 28 36.8 0.0**
LVZ pmax pmax
comp=Z,80nm,0.9s
LVZ Lovozero 63.39 336 P **P** **20 28 37.3 +0.5**
LVZ lAmb lAmb 20 28 39.8
comp=Z,64nm,0.8s
GEYT Alibeck 63.42 299 P **P** **20 28 39.3 +1.8**
comp=Z,70nm,0.8s,baz=29,slow=3.4,SNR=9.4
GEYT PKP2bc 20 57 39.2
comp=Z,1.2nm,0.7s,baz=196,slow=10,SNR=3.9
GEYT LR LR 20 57 50.9
comp=Z,2µm,19.8s,baz=80,slow=37
TMCR Tamitsa 63.84 331 *e*P **P** **20 28 38.3 -1.4**
TMCR *e*S **S** **20 37 02.8 +1.2**
TMCR pmax pmax
comp=Z,109nm,0.8s
APA Apatity 63.97 336 ⇓*i*P **P** **20 28 39.5 -1.0**
APA *i* *PP **PcP** **20 29 16.0 +1.5**
APA pmax pmax
comp=Z,92nm,0.7s
BJO1 Bjornoya 64.12 345 *e*P **P** **20 28 41.7 +0.4**
BJO1 lVmB_BB 20 28 43.1
comp=Z,534nm,1.1s
BJO1 *e*S **S** **20 37 05.9 +1.1**
BJO1 *e*SS **SS** **20 41 18.2 +2.3**
BJO1 lVMs_BB lVMs_BB 20 55 52.3
comp=Z,575nm,14.5s
KLMR Klimovskoe 64.69 328 *c i*P **P** **20 28 45.4 +0.2**
KLMR *e**PP **pP** **20 29 23.6 -0.1**
KLMR 20 31 07.6
KLMR S **S** **20 37 08.8 -3.4**
KLMR 20 38 19.2
KLMR pmax pmax
comp=Z,2µm,2.7s
KLMR pmax pmax
comp=Z,368nm,1.5s
KLMR MLR MLR
comp=Z,2µm,15.0s
KLMR Klimovskoe 64.69 328 ⇑*i*P **P** **20 28 45.5 +0.2**
KLMR ⇓*i*P **P** **20 28 45.5 +0.2**
KLMR ⇓*i*P **P** **20 28 45.5 +0.2**
KLMR AMP 20 28 47.2
comp=Z,2µm,2.7s
KLMR AMP 20 28 47.7
comp=Z,368nm,1.5s
KLMR *e*pP **pP** **20 29 23.7 0.0**
KLMR PP **PP** **20 31 07.7 -1.4**
KLMR S **S** **20 37 08.9 -3.3**
KLMR S **S** **20 37 08.9 -3.3**
KLMR ScS **SKSac** **20 38 19.2 -4.6**
KLMR ScS **SKSac** **20 38 19.2 -4.6**
KLMR LQ LQ 20 51 30.6
KLMR LQ LQ 20 51 30.6
KLMR LR LR 20 52 01.7
KLMR AMP 20 58 52.4
comp=Z,2µm,15.2s
BBB Bella Bella 64.77 43 P **P** **20 28 46.5 +0.6**
comp=Z,56nm,0.9s,baz=282,slow=6.0,SNR=12
KEV Kevo 64.86 339 P **P** **20 28 46.8 +0.5**
KEV pmax pmax
comp=Z,80nm,0.8s
KEV Kevo 64.86 339 P **P** **20 28 46.8 +0.5**
KEV lAmb lAmb 20 28 47.8
comp=Z,80nm,0.8s
RES Resolute Bay 65.09 14 P **P** **20 28 48.3 +0.6**
comp=Z,189nm,0.7s,baz=310,slow=6.5,SNR=533
RES pP **pP** **20 29 26.1 +0.2**
comp=Z,43nm,0.9s,baz=328,slow=7.2,SNR=3.0
RES PKPPKP **P'P'df** **20 57 27.2 -3.9**
comp=Z,3.2nm,0.9s,baz=160,slow=7.8,SNR=7.8
HAMF Hammerfest 65.30 341 *e*P **P** **20 28 49.5 +0.4**
HAMF lVmB_BB 20 28 49.8
comp=Z,851nm,1.5s
HAMF *e*pP **pP** **20 29 25.7 -1.9**
HAMF *e*PP **PP** **20 31 11.3 -3.0**
HAMF *i* S **S** **20 37 19.8 +0.4**
HAMF *e*SKSac **SKSac** **20 38 27.2 -0.9**
HAMF *e*SS **SS** **20 41 32.9 -1.5**
HAMF lVMs_BB lVMs_BB 21 03 17.3
comp=Z,876nm,12.8s
ARCES ARCESS Array B 65.42 339 P **P** **20 28 50.6 +0.7**
comp=Z,65nm,0.6s,baz=48,slow=9.4,SNR=305
ARCES pP **pP** **20 29 27.4 -1.0**
comp=Z,46nm,1.0s,baz=56,slow=7.4,SNR=2.1
ARCES S **S** **20 37 22.7 +1.7**
comp=Z,3.6nm,0.9s,baz=28,slow=21,SNR=4.1
ARCES PKPPKP **P'P'df** **20 57 28.2 -2.5**
comp=Z,2.6nm,0.8s,baz=222,slow=1.6,SNR=3.7
ARCES LR LR 21 01 48.0
comp=Z,3µm,18.4s,baz=68,slow=40
ARE0 ARCESS Array S 65.42 339 *e*P **P** **20 28 50.5 +0.6**
ARE0 *e*pP **pP** **20 29 26.9 -1.5**
ARE0 *e*S **S** **20 37 21.9 +0.9**
ARE0 *e*SKSac **SKSac** **20 38 28.9 -0.2**
ARE0 *e*SS **SS** **20 41 34.0 -2.5**
ARE0 lVMs_BB lVMs_BB 21 01 35.8
comp=Z,1µm,21.1s
ARMA Armidale 65.97 168 P **P** **20 28 55.0 +1.1**
ARMA lAmb lAmb 20 28 55.7
comp=Z,104nm,1.0s
FORT Forrest 66.17 191 P **P** **20 28 56.2 +1.2**
SGF Sodankyl 66.29 337 P **P** **20 28 56.4 +0.9**
SGF pmax pmax
comp=Z,264nm,0.7s
KTK1 Kautokeino 66.39 339 *e*P **P** **20 28 56.9 +0.8**
KTK1 *e*S **S** **20 37 34.0 +1.4**
STKA Stephens Creek 66.44 178 P **P** **20 28 57.3 +0.5**
comp=Z,85nm,0.8s,baz=346,slow=7.3,SNR=170
STKA pP **pP** **20 29 35.2 +0.1**
comp=Z,41nm,0.8s,baz=31,slow=4.8,SNR=2.3
STKA LR LR 20 56 31.4
comp=Z,437nm,21.9s,baz=352,slow=34
STKA PKPPKP **P'P'df** **20 57 29.0 +3.9**
comp=Z,3.2nm,0.9s,baz=160,slow=4.6,SNR=4.4

YKA Yellowknife Ar 66.50 29 P **P** **20 28 57.2 +0.3**
comp=Z,89nm,0.8s,baz=296,slow=5.9,SNR=704
YKA PcP **PcP** **20 29 26.4 +1.3**
comp=Z,23nm,0.8s,baz=298,slow=3.9,SNR=6.4
YKA pP **pP** **20 29 35.5 +0.2**
comp=Z,26nm,0.9s,baz=304,slow=6.6,SNR=2.6
YKA PKPPKP **P'P'df** **20 57 24.4 -4.7**
comp=Z,3.1nm,0.9s,baz=123,slow=3.3,SNR=14
YKA P4KPbc 21 05 46.5
comp=Z,0.7nm,0.8s,baz=299,slow=4.4,SNR=9.0
JOF Joensuu 67.08 332 P **P** **20 29 01.2 +0.7**
JOF pmax pmax
comp=Z,73nm,1.1s
AFI Afiamalu 67.09 127 P **P** **20 29 02.8 +1.5**
AFI pmax pmax
comp=Z,217nm,1.1s
TRO Tromso 67.21 341 *e*P **P** **20 29 01.5 +0.3**
TRO lVmB_BB 20 29 02.1
comp=Z,1µm,3.1s
TRO *e*S **S** **20 37 43.5 +1.1**
TRO lVMs_BB lVMs_BB 21 03 54.8
comp=Z,1µm,15.2s
MORW Morawa 67.31 202 P **P** **20 29 02.9 +0.5**
TULEG Thule 67.44 7 lAmb lAmb 20 29 03.7
comp=Z,93nm,0.7s
DAG Danmarks Havn 67.77 355 ⇓*i*P **P** **20 29 05.2 +0.6**
DAG *i* 20 29 41.7
DAG pmax pmax
comp=Z,130nm,0.8s
DAG Danmarks Havn 67.77 355 ⇓*i*P **P** **20 29 05.2 +0.6**
comp=Z,134nm,0.8s
DAG *i* 20 29 41.7
OUL Oulu 67.86 335 P **P** **20 29 06.1 +0.8**
OUL pmax pmax
comp=Z,137nm,1.0s
MOS Moscow 67.98 323 *e*P **P** **20 29 01.8 -4.5**
MOS *e**PP **pP** **20 29 41.5 -3.7**
MOS *e* 20 31 36.4
MOS *e*S **S** **20 37 50.5 -1.6**
MOS *e* 20 38 10.7
MOS pmax pmax
comp=Z,444nm,1.2s
MOS MLR MLR
comp=Z,5µm,16.0s
VRH Novokhopyorsk 68.06 318 *e*P **P** **20 29 07.1 +0.2**
VRH *e**PP **pP** **20 29 42.3 -3.5**
VRH *e* 20 31 39.0
VRH *e*S **S** **20 37 48.4 -4.7**
VRH pmax pmax
comp=Z,190nm,0.6s
VRH pmax pmax
comp=Z,220nm,0.6s
VRH smax smax
comp=E,2µm,11.9s
VRH MLR MLR
comp=Z,3µm,16.0s
OBN Obninsk 68.82 323 *c i*P **P** **20 29 12.0 +0.5**
OBN *i* *PP **pP** **20 29 48.4 -2.1**
OBN *e* 20 31 44.4
OBN *e*PPP PPP 20 33 23.6
OBN *i* S **S** **20 37 58.0 -4.0**
OBN *i* SS **SS** **20 42 27.5 -1.9**
OBN pmax pmax
comp=Z,443nm,1.5s
OBN Obninsk 68.82 323 P **P** **20 29 11.0 -0.5**
LPSR Galich'ya Gora 68.88 320 *e*P **P** **20 29 12.6 +0.6**
LPSR *e**PP **pP** **20 29 47.8 -3.1**
LPSR *e* 20 31 43.3
LPSR *e*S **S** **20 37 56.0 -6.8**
LPSR pmax pmax
comp=Z,490nm,1.6s
LPSR pmax pmax
comp=Z,180nm,0.9s
LPSR smax smax
comp=E,1µm,11.9s
LLLB Lillooet 68.96 42 lAmb lAmb 20 29 14.7
comp=Z,116nm,0.8s
AKT Akhty 69.02 306 *e*P **P** **20 29 14.0 +0.8**
AKT *e* 20 29 35.1
AKT *e**PP **pP** **20 29 51.6 -0.4**
AKT *e**SP **sP** **20 30 10.1 +0.6**
AKT *e* 20 31 52.6
AKT pmax pmax
comp=Z,173nm,0.6s
PGC Sidney 69.03 45 lAmb lAmb 20 29 15.3
comp=Z,131nm,0.9s
SUF Sumiainen 69.15 333 P **P** **20 29 14.0 +0.6**
SUF pmax pmax
comp=Z,206nm,0.7s
PUL Pulkovo 69.19 329 *c i*P **P** **20 29 14.6 +0.9**
PUL pmax pmax
comp=Z,159nm,0.7s
VORR Voronezh 69.20 319 *e*P **P** **20 29 13.0 -0.9**
VORR pmax pmax
comp=Z,500nm,1.6s
STEI Steigen 69.34 340 *e*P **P** **20 29 15.0 +0.5**
STEI lVmB_BB 20 29 15.6
comp=Z,2µm,2.5s
STEI *e*pP **pP** **20 29 51.9 -1.6**
STEI *e*S **S** **20 38 09.6 +1.8**
STEI *e*SKSac **ScS** **20 38 59.5 -0.4**
STEI *e*SS **SS** **20 42 38.2 +1.4**
STEI lVMs_BB lVMs_BB 21 04 59.7
comp=Z,705nm,17.0s
A04D Lummi Island 69.42 44 P **P** **20 29 17.1 +1.7**
baz=300,SNR=5.5
VSR Storozhevoye 69.45 319 *e*P **P** **20 29 15.9 +0.4**
VSR *e**PP **pP** **20 29 51.6 -3.1**
VSR *e* 20 31 48.0
VSR *e*S **S** **20 38 03.6 -6.0**
VSR pmax pmax
comp=Z,200nm,0.8s
VSR pmax pmax
comp=Z,710nm,1.9s
VSR smax smax
comp=E,1µm,11.9s
VSR MLR MLR
comp=Z,2µm,15.0s
SEKA Sheki 69.50 306 P **P** **20 29 17.5 +1.4**
VORD Divnogorie 69.51 318 *e*P **P** **20 29 16.2 +0.4**
VORD *e**PP **pP** **20 29 51.9 -3.1**
VORD *e* 20 31 48.7
VORD *e*S **S** **20 38 05.5 -4.7**
VORD pmax pmax
comp=Z,180nm,1.2s
VORD pmax pmax
comp=Z,350nm,1.5s
VORD smax smax
comp=E,130nm,4.6s
VORD MLR MLR
comp=Z,3µm,15.0s
LKRN Lenkeran, Azer 69.64 303 P **P** **20 29 18.0 +1.1**
A05A Maple Falls 69.64 44 P **P** **20 29 16.1 -0.6**
LOF Lofoten 69.67 341 *e*P **P** **20 29 16.5 0.0**
LOF *e*S **S** **20 38 11.4 0.0**
LOF lVMs_BB lVMs_BB 21 04 41.9
comp=Z,848nm,17.7s
D03D Eldon 69.79 46 P **P** **20 29 19.8 +2.2**
baz=300,SNR=54
D03D S **S** **20 38 17.8 +4.1**
baz=300
MNGR Mingechevir, A 69.79 306 P **P** **20 29 19.4 +1.6**
WSAR Wadi Sarin 69.81 285 P **P** **20 29 19.9 +1.7**
comp=Z,91nm,0.9s,baz=101,slow=5.4,SNR=4.3
WSAR Wadi Sarin 69.81 285 P **P** **20 29 20.1 +1.9**
SNR=6.5
WBK Wadi Bani Khal 69.86 284 P **P** **20 29 21.0 +2.4**
SNR=11
FIA1 FINESS Array S 69.94 332 lAmb lAmb 20 29 21.5
comp=Z,198nm,1.0s
FINES FINESS Array B 69.94 332 P **P** **20 29 18.6 +0.4**
comp=Z,97nm,0.7s,baz=74,slow=5.6,SNR=288
FINES pP **pP** **20 29 56.3 -0.9**
comp=Z,66nm,0.8s,baz=69,slow=10,SNR=2.6
FINES S **S** **20 38 13.4 -1.5**
comp=Z,11nm,1.1s,baz=83,slow=16,SNR=5.3
FINES LR LR 21 02 11.5
comp=Z,2µm,18.8s,baz=51,slow=38
E03A Lebam 70.00 47 lAmb lAmb 20 29 21.9
comp=Z,123nm,0.8s
B05A Bryant 70.00 45 P **P** **20 29 20.5 +1.6**
baz=300,SNR=43
B05A S **S** **20 38 19.0 +2.9**
baz=300
BIDO Bidbid 70.07 285 P **P** **20 29 22.0 +2.2**
SNR=33
D04E Lakebay 70.15 46 P **P** **20 29 22.2 +2.3**
baz=300
VAF Ylistaro 70.22 334 P **P** **20 29 21.0 +1.0**
VAF pmax pmax
comp=Z,180nm,0.9s
KULLO Kullorsuaq 70.26 5 ⇓*i*P **P** **20 29 20.5 +0.4**
KULLO pmax pmax
comp=Z,150nm,0.9s
KULLO Kullorsuaq 70.26 5 ⇓*i*P **P** **20 29 20.5 +0.4**
comp=Z,148nm,0.9s
BANOM Banah 70.31 288 *i* P **P** **20 29 23.0 +1.7**
SNR=9.5
BANOM Banah 70.31 288 *i* P **P** **20 29 23.0 +1.7**
SNR=9.5
BANOM Banah 70.31 288 P **P** **20 29 24.0 +2.7**
SNR=7.5
GANJ Ganja 70.36 306 P **P** **20 29 22.6 +1.3**
SMDO Samad 70.37 285 P **P** **20 29 24.0 +2.3**
SNR=22
SHME Shamm 70.37 288 *i* P **P** **20 29 22.9 +1.3**
SNR=9.6
SHME Shamm 70.37 288 *i* P **P** **20 29 22.9 +1.3**
SNR=9.6
CAN Canberra 70.42 172 P **P** **20 29 22.8 +1.3**
CAN pmax pmax
comp=Z,105nm,1.7s
CAN Canberra 70.42 172 lAmb lAmb 20 29 24.0
comp=Z,236nm,1.5s
F04D Rainier, OR 70.56 47 P **P** **20 29 24.1 +1.8**
baz=300
NWAO Narrogin (SRO) 70.58 200 P **P** **20 29 22.9 +0.5**
comp=Z,480nm,0.8s,baz=28,slow=6.4,SNR=213
NWAO S **S** **20 38 21.6 -1.3**
comp=Z,17nm,1.1s,baz=136,slow=23,SNR=7.9
NWAO Narrogin (SRO) 70.58 200 P **P** **20 29 23.3 +0.9**
NWAO pmax pmax
comp=Z,528nm,0.8s
NWAO Narrogin (SRO) 70.58 200 P **P** **20 29 23.3 +0.9**
NWAO Narrogin (SRO) 70.58 200 lAmb lAmb 20 29 24.1
comp=Z,422nm,0.8s
E04D Cinebar 70.59 46 P **P** **20 29 24.4 +1.9**
baz=300,SNR=16
D05A Enumclaw 70.61 46 lAmb lAmb 20 29 25.8
comp=Z,156nm,0.8s
MDH Madha 70.62 288 P **P** **20 29 23.0 -0.1**
MDH Madha 70.62 288 P **P** **20 29 23.0 -0.1**
JMDO Jabal Madar 70.67 284 P **P** **20 29 26.0 +2.5**
SNR=12
HOQ Hoqain 70.69 286 P **P** **20 29 25.1 +1.6**
SNR=24
MSFE Esma-Masafi 70.70 288 *i* P **P** **20 29 25.1 +1.5**
SNR=9.3
MSFE Esma-Masafi 70.70 288 *i* P **P** **20 29 25.1 +1.5**
SNR=9.3
NCK Nalchik 70.72 310 *ce*P **P** **20 29 24.5 +1.1**
NCK pmax pmax
comp=Z,222nm,1.6s
MOR8 Moi Rana 70.80 339 *e*P **P** **20 29 22.7 -0.7**
MOR8 lVmB_BB 20 29 23.2
comp=Z,2µm,0.6s
MOR8 *e*S **S** **20 38 23.1 -1.7**
MOR8 lVMs_BB lVMs_BB 21 06 59.5
comp=Z,733nm,17.9s
G03D McMinnville, O 70.85 48 P **P** **20 29 25.8 +1.7**
baz=300
C06D Leavenworth 70.87 45 P **P** **20 29 25.6 +1.4**
baz=301,SNR=9.4
ZEI Tsey 70.87 309 *e*P **P** **20 29 23.8 -0.8**
ZEI pmax pmax
comp=Z,84nm,1.1s
UOSS Minazif 70.88 287 *i* P **P** **20 29 25.5 +0.8**
SNR=7.5
UOSS Minazif 70.88 287 *i* P **P** **20 29 25.5 +0.8**
SNR=7.5
UOSS Minazif 70.88 287 P **P** **20 29 25.7 +1.0**
UOSS lAmb lAmb 20 29 26.3
comp=Z,93nm,0.8s
KONS Konsvik 70.94 340 *e*P **P** **20 29 24.6 +0.4**
F04A Amboy 70.99 47 lAmb lAmb 20 29 27.5
comp=Z,181nm,0.9s
HATD Hatta, Dubai 70.99 287 *i* P **P** **20 29 26.8 +1.4**
SNR=15
HATD Hatta, Dubai 70.99 287 *i* P **P** **20 29 26.8 +1.4**
SNR=15
HATD Hatta, Dubai 70.99 287 P **P** **20 29 27.2 +1.9**
SNR=9.2
UMQ Umm Al-Quwin 71.01 288 P **P** **20 29 27.4 +2.0**
UMQ Umm Al-Quwin 71.01 288 P **P** **20 29 27.4 +2.0**
SOHO SOHO 71.02 287 P **P** **20 29 27.0 +1.5**
SNR=9.2
KBZ Khabaz 71.04 310 P **P** **20 29 26.7 +1.5**
comp=Z,213nm,0.9s,baz=77,slow=2.3,SNR=125
KBZ pP **pP** **20 30 04.5 +0.2**
comp=Z,71nm,0.9s,baz=6.9,slow=20,SNR=2.5
KBZ S **S** **20 38 28.2 0.0**
comp=Z,7.2nm,1.1s,baz=247,slow=14,SNR=1.4
KBZ LR LR 21 04 06.8
comp=Z,2µm,18.1s,baz=47,slow=39
KBZ Khabaz 71.04 310 *c i*P **P** **20 29 26.6 +1.4**
KBZ pmax pmax
comp=Z,347nm,1.0s
I02D Swisshome 71.05 49 P **P** **20 29 27.0 +1.6**
baz=300
KVAR Kislovodsk Arr 71.05 311 P **P** **20 29 27.7 +2.2**
comp=Z,111nm,0.8s,baz=73,slow=20,SNR=38
KIV Kislovodsk 71.05 311 ⇑P **P** **20 29 27.1 +1.6**
KIV Kislovodsk 71.05 311 *i* P **P** **20 29 27.0 +1.5**
SNR=54
KIV Kislovodsk 71.05 311 *i* P **P** **20 29 27.0 +1.5**
SNR=54
KIV Kislovodsk 71.05 311 *e*P **P** **20 29 26.7 +1.2**
KIV *e**PP **pP** **20 30 05.5 +0.9**
KIV *e**SP **sP** **20 30 22.1 +0.1**
KIV *e* 20 32 06.3
KIV *e*PPP PPP 20 33 49.6
KIV *e*S **S** **20 38 30.6 +1.9**
KIV pmax pmax
comp=Z,870nm,3.7s
KIV pmax pmax
comp=Z,913nm,1.0s
KIV MLR MLR
comp=Z,3µm,18.0s
STOK Stokkvaagen 71.09 340 *e*P **P** **20 29 25.7 +0.5**
STOK *e*S **S** **20 38 31.0 +2.9**
ASHO Ashiyiah 71.12 287 *i* P **P** **20 29 27.3 +1.1**
SNR=8.8
ASHO Ashiyiah 71.12 287 *i* P **P** **20 29 27.3 +1.1**
SNR=8.8
ASHO Ashiyiah 71.12 287 P **P** **20 29 29.0 +2.8**
SNR=8.3
COR Corvallis 71.14 48 P **P** **20 29 27.9 +2.0**
COR pmax pmax
comp=Z,181nm,1.0s
COR Corvallis 71.14 48 P **P** **20 29 27.9 +2.0**
COR lAmb lAmb 20 29 29.3
comp=Z,181nm,0.9s
BSY Bisya 71.20 285 P **P** **20 29 28.0 +1.3**
SNR=37
NAZ Nazwa, Dubai 71.28 288 *i* P **P** **20 29 28.0 +1.0**
SNR=9.0
NAZ Nazwa, Dubai 71.28 288 *i* P **P** **20 29 28.0 +1.0**
SNR=9.0
NAZ Nazwa, Dubai 71.28 288 P **P** **20 29 30.0 +2.9**
SNR=6.7
LTY Liberty 71.34 45 lAmb lAmb 20 29 29.3
comp=Z,109nm,1.0s
NEY Neytrino 71.39 310 *ce*P **P** **20 29 29.1 +1.4**
NEY pmax pmax
comp=Z,23nm,0.9s
FAQ Al Faqa, Dubai 71.46 288 *i* P **P** **20 29 28.7 +0.6**
SNR=5.6
FAQ Al Faqa, Dubai 71.46 288 *i* P **P** **20 29 28.7 +0.6**
SNR=5.6
VSU Vasula 71.46 329 *e*P **P** **20 29 28.1 +0.6**
VSU Vasula 71.46 329 *de*P **P** **20 29 28.2 +0.7**
VSU pmax pmax
comp=Z,557nm,0.8s
J01E Myrtle Point 71.47 50 P **P** **20 29 29.8 +1.9**
baz=301,SNR=6.2
H04D Lebanon 71.52 48 P **P** **20 29 30.1 +1.9**
baz=301,SNR=6.4
B08A Colville Reser 71.54 44 lAmb lAmb 20 29 30.4
comp=Z,161nm,0.8s
I03D Drain, OR 71.56 49 P **P** **20 29 30.5 +2.1**
baz=301,SNR=16
F05D White Salmon 71.59 47 P **P** **20 29 30.2 +1.6**

baz=301,SNR=10
NAX Nakhchivan 71.64 305 P P 20 29 30.4 +1.3
ALNE Al Ain 71.68 287 *i* P P 20 29 30.6 +1.1
SNR=17
ALNE Al Ain 71.68 287 *i* P P 20 29 30.6 +1.1
SNR=17
H04A Detroit Lake 71.77 48 IAmb IAmb 20 29 32.3
comp=Z,178nm,1.0s
AKH Akhalkalaki 71.83 308 ⇓P P 20 29 32.5 +2.1
AKH Akhalkalaki 71.83 308 P P 20 29 32.4 +2.1
K02D Willamette Mer 71.88 50 P P 20 29 32.1 +1.7
baz=301,SNR=20
JMIC Jan Mayen 71.96 349 *e*P P 20 29 32.3 +2.0
JMIC *e*S S 20 38 43.0 +5.0
G05D Wamic, OR 72.01 47 P P 20 29 32.8 +1.7
baz=302,SNR=12
AJN Ajban 72.02 288 *i* P P 20 29 32.4 +0.9
SNR=8.8
AJN Ajban 72.02 288 *i* P P 20 29 32.4 +0.9
SNR=8.8
AJN Ajban 72.02 288 P P 20 29 34.1 +2.7
SNR=8.5
I04A Tendick Farm, 72.10 49 P P 20 29 33.1 +1.4
baz=301,SNR=57
E07A Sunnyside 72.19 45 IAmb IAmb 20 29 34.8
comp=Z,151nm,1.0s
C09A Chrisman Ranch 72.44 44 IAmb IAmb 20 29 35.8
comp=Z,223nm,0.9s
D08A Wollman Farm, 72.47 45 IAmb IAmb 20 29 36.0
comp=Z,181nm,0.9s
I05D Terrebonne, OR 72.47 48 P P 20 29 35.4 +1.5
baz=302,SNR=30
F07A Phinny Hill Vi 72.50 46 IAmb IAmb 20 29 36.6
comp=Z,171nm,0.9s
J04D Umpqua Nationa 72.57 49 P P 20 29 36.5 +1.8
baz=302,SNR=50
JCC Jacoby Creek, 72.61 52 IAmb IAmb 20 29 38.0
comp=Z,175nm,0.9s
E08A Dider Farm, El 72.69 45 IAmb IAmb 20 29 37.4
comp=Z,133nm,0.8s
NSS Namsos 72.70 339 *e*P P 20 29 35.0 +0.3
NSS *e*S S 20 38 44.9 -1.6
NSS *e*SS SS 20 43 31.9 +3.7
KHMM Horse Mountain 72.77 52 IAmb IAmb 20 29 39.2
comp=Z,190nm,0.9s
SUMG Summit 72.83 359 ⇓*i*P P 20 29 37.4 +1.5
SUMG pmax pmax
comp=Z,670nm,0.8s
SUMG Summit 72.83 359 ⇓*i*P P 20 29 37.4 +1.5
comp=Z,665nm,0.8s
NEW Newport 72.83 43 P P 20 29 36.9 +1.0
comp=Z,111nm,0.8s,baz=303,slow=5.2,SNR=131
NEW pP pP 20 30 15.7 +0.7
comp=Z,72nm,1.0s,baz=307,slow=4.1,SNR=4.3
NEW Newport 72.83 43 P P 20 29 36.9 +1.0
baz=303,SNR=101
NEW S S 20 38 49.5 +0.8
baz=303
NEW Newport 72.83 43 IAmb IAmb 20 29 38.1
comp=Z,137nm,0.9s
YBH Yreka Blue Hor 72.98 51 IAmb IAmb 20 29 40.1
comp=Z,150nm,0.9s
L04D Klamath Falls 72.98 50 P P 20 29 38.8 +1.7
baz=302,SNR=63
BCA Borcka 73.02 309 ⇓P P 20 29 38.5 +1.4
M02C Callahan 73.07 51 P P 20 29 39.7 +2.2
baz=302,SNR=48
SOC Sochi 73.09 312 *c* *i*P P 20 29 38.2 +0.7
SOC *e**PP pP 20 30 15.2 -1.5
SOC *e**SP sP 20 30 32.6 -1.6
SOC *e* 20 32 23.8
SOC *e*PPP PPP 20 34 07.5
SOC *i*S S 20 38 50.4 -1.2
SOC pmax pmax
comp=Z,127nm,0.7s
J05D Fort Rock, OR 73.09 49 P P 20 29 39.8 +2.0
baz=302,SNR=81
K04D Chiloquin, OR 73.12 50 P P 20 29 39.7 +1.9
baz=302,SNR=23
KMRM Mail Ridge 73.13 53 IAmb IAmb 20 29 41.1
comp=Z,149nm,0.9s
E09A Wood Farm, Sta 73.21 45 IAmb IAmb 20 29 40.6
comp=Z,205nm,0.9s
H01W3 Cape Leeuwin H 73.30 201 P P 20 29 40.0 +1.7
baz=26,slow=4.7,SNR=17
H01W1 Cape Leeuwin H 73.30 201 P P 20 29 40.1 +1.8
baz=26,slow=4.7,SNR=16
H01W2 Cape Leeuwin H 73.31 201 P P 20 29 40.2 +1.8
baz=26,slow=4.7,SNR=16
IZAR Zarasai 73.32 327 *e*P P 20 29 39.4 +0.8
MICGM Minsk 73.33 325 ⇑*i*P P 20 29 40.0 +1.3
MICGM PM 20 29 41.0
comp=Z,1.4nm,1.0s
MICGM PM 20 29 42.0
comp=E,0.9nm,1.8s
MICGM PM 20 29 43.0
comp=N,0.7nm,1.8s
MICGM *e*PcP PcP 20 29 51.0 -3.2
MICGM *e*pP pP 20 30 18.0 -0.1
MICGM *e*PP PP 20 32 23.0 -0.7
MICGM *e*PPP PPP 20 33 56.0
MICGM *e*S S 20 38 54.0 0.0
MICGM SM 20 38 56.0
comp=E,3.6nm,4.0s
MICGM *e*sS sS 20 40 26.0 +24
MICGM *e*SS SS 20 43 20.0 -18
MICGM *e*SSS SSS 20 46 34.0
MICGM *e*LR LR 20 56 34.0
MICGM LRM MLR 21 04 48.0
comp=E,6.2nm,14.0s
MICGM LRM MLR 21 04 52.0
comp=Z,11nm,14.0s
MNK Minsk 73.33 325 ⇑*i*P P 20 29 40.0 +1.3
MNK *e* 20 29 51.0
MNK *e* 20 30 18.0
MNK *e* 20 32 23.0
MNK *e*S S 20 38 54.0 0.0
MNK pmax pmax
comp=Z,1μm,1.0s
MNK pmax pmax
comp=N,670nm,1.8s
MNK smax smax
comp=E,4μm,4.0s
MNK MLR MLR
comp=Z,11μm,14.0s
N02D Trinity Center 73.38 52 P P 20 29 41.4 +2.0
baz=302,SNR=66
ISAL Salakas 73.48 327 *e*P P 20 29 40.6 +1.1
KCPM Cahto Peak 73.49 53 IAmb IAmb 20 29 43.0
comp=Z,215nm,0.8s
M04C Macdoel 73.51 50 P P 20 29 42.0 +1.8
baz=302,SNR=148
IIGN Ignalina 73.58 327 *e*P P 20 29 41.2 +1.1
NACGM Naroch 73.60 326 *e*P P 20 29 40.0 -0.2
NACGM *e*P P 20 29 40.0 -0.2
NACGM PM 20 29 42.0
comp=Z,0.8nm,1.0s
NACGM *e*pP pP 20 30 16.0 -3.7
NACGM *e*PP PP 20 32 26.0 +0.1
NACGM *e*PPP PPP 20 34 15.0
NACGM *e*S SKiKP 20 38 54.0 +0.5
NACGM *e*SS SS 20 42 56.0 -46
NACGM *e*SSS SSS 20 45 42.0
WDC Whiskeytown Da 73.70 52 IAmb IAmb 20 29 43.8
comp=Z,151nm,0.9s
O02D Mt. Diablo Mer 73.75 52 P P 20 29 43.6 +2.0
baz=302,SNR=82
ANN Anapa 73.82 314 *e*P P 20 29 39.7 -2.0
ANN *e**PP pP 20 30 18.1 -3.1
ANN *e* 20 32 24.7
ANN *e*S S 20 38 57.9 -1.8
ANN *e*SS SS 20 43 48.7 +2.5
ANN pmax pmax
comp=Z,538nm,1.4s
SLIT Slitere, Latvi 73.83 330 *e*P P 20 29 41.6 +0.1
SCO Scoresbysund 74.08 354 *i*P P 20 29 43.5 +0.8
SCO Scoresbysund 74.08 354 IAmb IAmb 20 29 45.4
comp=Z,255nm,1.5s
SCO Scoresbysund 74.08 354 *i*P P 20 29 43.5 +0.8
WALA Waterton Lakes 74.15 41 IAmb IAmb 20 29 46.0
comp=Z,116nm,0.9s
TBLU Trondheim 74.16 339 *e*P P 20 29 43.1 -0.2
TBLU IVmB_BB 20 29 43.5
comp=Z,2μm,2.5s
TBLU *e*S S 20 39 01.6 -1.3

O03E Paynes Creek 74.33 52 P P 20 29 45.8 +0.9
baz=303,SNR=88
MOD Modoc Plateau 74.41 50 IAmb IAmb 20 29 48.0
comp=Z,167nm,0.8s
KTUT Trabzon 74.45 309 ⇓P P 20 29 46.5 +1.1
PABE Paberze 74.48 328 *e*P P 20 29 46.1 +0.8
BMO Blue Mountains 74.61 46 IAmb IAmb 20 29 48.9
comp=Z,134nm,0.9s
JTMT Jette 74.70 42 IAmb IAmb 20 29 49.4
comp=Z,219nm,0.9s
MCCM Marconi Confer 74.77 54 IAmb IAmb 20 29 49.5
comp=Z,186nm,0.8s
SHAO Shalim 74.91 282 *i* P P 20 29 49.5 +1.0
SNR=5.3
SHAO Shalim 74.91 282 *i* P P 20 29 49.5 +1.0
SNR=5.3
ORV Oroville 74.92 52 IAmb IAmb 20 29 50.1
comp=Z,132nm,0.9s
AKASG Malin Array Be 74.97 322 P P 20 29 48.4 +0.1
comp=Z,101nm,0.7s,baz=48,slow=6.2,SNR=409
AKASG PP PP 20 32 36.6 -1.0
comp=Z,24nm,0.9s,baz=48,slow=8.7,SNR=6.0
AKASG S S 20 39 10.7 -1.8
comp=Z,13nm,1.2s,baz=48,slow=10,SNR=16
AKASG LR LR 21 05 18.7
comp=Z,4μm,18.3s,baz=40,slow=38
AKBB Malin Array Si 74.97 322 IAmb IAmb 20 29 49.4
comp=Z,146nm,0.7s
PBUR Paburge 75.03 329 *e*P P 20 29 49.1 +0.6
WVOR Wild Horse Val 75.16 49 P P 20 29 51.3 +1.6
WVOR pmax pmax
comp=Z,287nm,0.9s
WVOR Wild Horse Val 75.16 49 IAmb IAmb 20 29 52.3
comp=Z,168nm,0.8s
NC303 NORSAR Array S 75.33 337 IAmb IAmb 20 29 51.8
comp=Z,206nm,1.0s
MSO Missoula 75.42 43 P P 20 29 51.7 +0.6
baz=306,SNR=62
MSO S S 20 39 17.9 +0.1
baz=306
DOMB Dombas 75.44 338 *e*P P 20 29 51.5 +0.8
DOMB IVmB_BB 20 29 52.0
comp=Z,2μm,2.6s
DOMB *e*S S 20 39 18.1 +0.8
DOMB IVMs_BB IVMs_BB 21 05 42.4
comp=Z,889nm,19.1s
MOL Molde 75.48 339 *e*P P 20 29 51.9 +0.9
MOL IVmB_BB 20 29 52.3
comp=Z,2μm,3.4s
MOL *e*S S 20 39 19.0 +1.4
MOL IVMs_BB IVMs_BB 21 08 25.9
comp=Z,817nm,18.8s
NB2 NORSAR Subarra 75.52 337 P P 20 29 51.6 +0.4
comp=Z,124nm,0.8s,baz=42,slow=5.9
NB2 NORSAR Subarra 75.52 337 P P 20 29 51.6 +0.4
baz=42,slow=5.9
NOA NORSAR Array B 75.52 337 P P 20 29 51.6 +0.4
comp=Z,97nm,0.8s,baz=41,slow=5.8,SNR=595
NOA pP pP 20 30 29.9 -0.9
comp=Z,53nm,0.9s,baz=40,slow=5.8,SNR=4.8
NOA PP PP 20 32 44.0 +2.0
comp=Z,6.0nm,0.6s,baz=47,slow=8.4,SNR=4.0
NOA LR LR 21 05 45.7
comp=Z,1μm,19.9s,baz=45,slow=38
DMTO DMTO 75.62 282 P P 20 29 55.0 +2.5
SNR=7.1
NC602 NORSAR Array S 75.64 336 *e*P P 20 29 51.9 0.0
NC602 *e*S S 20 39 18.7 -0.7
NORES NORESS Array B 75.64 336 P P 20 29 54.5 +2.6
NORES pmax pmax
comp=Z,20nm,0.5s
NBO00 NORSAR Array S 75.67 337 IAmb IAmb 20 29 53.5
comp=Z,190nm,0.8s
SIM Simferopol' 75.69 315 *c* *i*P P 20 29 53.3 +0.8
SIM *i**PP pP 20 30 32.0 -0.3
SIM *i* 20 32 47.0
SIM *e*PPP PPP 20 34 32.0
SIM *i*S S 20 39 20.4 -0.1
SIM *e*SS SS 20 44 25.0 +10
SIM pmax pmax
comp=Z,214nm,1.5s
SIM pmax pmax
comp=Z,220nm,10.1s
NAO01 NORSAR Array S 75.77 337 IAmb IAmb 20 29 53.9
comp=Z,157nm,0.9s
SUW Suwalki 75.79 327 *e*P P 20 29 53.5 +0.7
SUW *e*S S 20 39 20.7 -0.6
SUW Suwalki 75.79 327 P P 20 29 53.7 +0.8
SUW pmax pmax
comp=Z,266nm,0.9s
SUW Suwalki 75.79 327 IAmb IAmb 20 29 54.2
comp=Z,189nm,1.0s
ILULI Ilulissat 75.93 4 ⇓*i*P P 20 29 54.2 +0.8
ILULI pmax pmax
comp=Z,150nm,1.0s
ILULI Ilulissat 75.93 4 IAmb IAmb 20 29 55.3
comp=Z,148nm,1.0s
ILULI Ilulissat 75.93 4 ⇓*i*P P 20 29 54.2 +0.8
comp=Z,148nm,1.0s
AKN Aaknes 75.95 339 *e*P P 20 29 54.5 +0.9
AKN IVmB_BB 20 29 55.4
comp=Z,2μm,2.9s
AKN *e*S S 20 39 23.4 +0.5
PAHR Pah Rah Range 76.20 51 IAmb IAmb 20 29 58.1
comp=Z,175nm,0.8s
VCNR Virginia City 76.26 52 IAmb IAmb 20 29 58.7
comp=Z,117nm,0.8s
MFID Camas Ranch 76.31 46 IAmb IAmb 20 29 58.7
comp=Z,156nm,0.9s
RBK Rabkut 76.33 282 P P 20 29 58.0 +1.4
SNR=13
PNTR Pine Nut 76.41 52 IAmb IAmb 20 29 59.6
comp=Z,177nm,0.8s
FFC Flin Flon 76.41 32 P P 20 29 57.0 +0.6
FFC pmax pmax
comp=Z,166nm,0.9s
FFC Flin Flon 76.41 32 P P 20 29 57.0 +0.6
FFC IAmb IAmb 20 29 57.9
comp=Z,166nm,0.8s
WHFO Wadi Hawf 76.46 282 P P 20 29 58.0 +0.7
SNR=14
CMB Columbia Colle 76.48 53 IAmb IAmb 20 29 59.6
comp=Z,148nm,1.0s
OSL Oslo 76.51 336 *e*P P 20 29 57.6 +0.8
OSL *e*S S 20 39 29.4 +0.5
OSL IVMs_BB IVMs_BB 21 09 29.5
comp=Z,801nm,16.1s
KLNR Kaliningrad 76.71 329 *c* *i*P P 20 29 58.5 +0.5
KLNR pmax pmax
comp=Z,256nm,1.5s
OUZ Omahuta 76.72 152 P P 20 30 00.8 +2.6
SKAR Skarslia 76.72 338 *e*P P 20 29 59.3 +1.2
SKAR IVmB_BB 20 29 59.7
comp=Z,2μm,2.7s
SKAR *e*S S 20 39 33.5 +2.1
SKAR IVMs_BB IVMs_BB 21 06 02.8
comp=Z,625nm,19.6s
KVT Kavak 76.74 311 P P 20 30 00.2 +1.7
WAKR Walker 76.84 52 IAmb IAmb 20 30 02.1
comp=Z,120nm,0.8s
DIKM Dikmen 76.90 312 ⇓P P 20 30 01.1 +1.8
FOO Floro 76.98 339 *e*P P 20 30 00.4 +1.0
FOO *e*S S 20 39 35.8 +1.8
FOO IVMs_BB IVMs_BB 21 05 32.0
comp=Z,670nm,3.5s
EGMT Eagleton 76.98 40 P P 20 30 00.9 +1.0
baz=308,SNR=220
EGMT S S 20 39 34.6 -0.2
baz=308
HYA Hoyanger 76.99 339 *e*P P 20 30 00.3 +0.9
HYA IVmBBB 20 30 01.1
comp=Z,1μm,1.4s
HYA *e*S S 20 39 36.8 +2.8
SORM Soroca 76.99 320 ⇑P P 20 30 00.1 +0.4
SORM Soroca 76.99 320 P P 20 30 00.1 +0.4
DLMT Dillon 77.04 43 IAmb IAmb 20 30 02.6
comp=Z,201nm,0.9s
KONO Kongsberg 77.10 336 P P 20 30 00.4 +0.3
KONO pmax pmax
comp=Z,53nm,0.9s
KONO Kongsberg 77.10 336 P P 20 30 00.4 +0.3
KONO Kongsberg 77.10 336 *e*P P 20 30 00.7 +0.6
KONO IVmB_BB 20 30 01.0
comp=Z,1μm,2.9s
KONO *e*S S 20 39 35.5 +0.1
KONO IVMs_BB IVMs_BB 21 08 48.3

comp=Z,879nm,15.2s
ABTO Aybut 77.14 282 P P 20 30 02.0 +0.8
SNR=23
RYN Ryan 77.36 52 IAmb IAmb 20 30 04.8
comp=Z,134nm,0.9s
KIS Kishinev 77.44 319 ⇑*i*P P 20 30 03.0 +0.7
comp=Z,500nm,2.0s
KIS *i*pP pP 20 30 42.0 -0.1
KIS Kishinev 77.44 319 *i*PP PP 20 33 04.0 +5.6
comp=Z,700nm,8.0s
KIS *i*S S 20 39 38.0 -1.5
comp=Z,500nm,8.0s
KIS Kishinev 77.44 319 ⇓P P 20 30 02.1 -0.2
KIS Kishinev 77.44 319 ⇑*i*P P 20 30 03.0 +0.7
KIS *i**PP pP 20 30 42.0 -0.1
KIS *i* 20 33 04.0
KIS *i*S S 20 39 38.0 -1.5
KIS *i*PS SKSac 20 40 08.0 +7.9
KIS pmax pmax
comp=Z,500nm,2.0s
KIS pmax pmax
comp=Z,700nm,8.0s
KIS pmax pmax
comp=Z,700nm,8.0s
KIS smax smax
comp=N,500nm,8.0s
BZK Bozkurt 77.48 313 ⇓P P 20 30 03.5 +0.9
MILM Milestii Mici 77.49 319 ⇓P P 20 30 02.7 +0.2
SUE Sulen 77.50 339 *e*P P 20 30 03.2 +0.9
SUE IVmB_BB 20 30 03.9
comp=Z,2μm,2.6s
SUE *e*S S 20 39 41.6 +2.1
NVAR Mina Array Bea 77.62 52 P P 20 30 05.2 +1.4
comp=Z,123nm,0.8s,baz=281,slow=5.8,SNR=384
NVAR pP pP 20 30 43.6 +0.4
comp=Z,27nm,0.7s,baz=285,slow=4.7,SNR=3.5
NVAR PKKPbc PKKPbc 20 49 06.3 +1.8
comp=Z,1.6nm,0.7s,baz=140,slow=2.2,SNR=6.6
NVAR PKPPKP P'P'df 20 57 09.9 -0.6
comp=Z,0.4nm,0.4s,baz=138,slow=2.5,SNR=3.6
MLAC Mammoth, Mammo 77.72 53 P P 20 30 06.1 +1.8
baz=305,SNR=8.2
TAU Tasmania Unive 77.76 174 P P 20 30 04.3 +0.5
TAU pmax pmax
comp=Z,66nm,1.0s
TAU Tasmania Unive 77.76 174 P P 20 30 04.3 +0.5
ASK Askoy 77.83 339 *e*P P 20 30 05.2 +1.1
ASK *e*S S 20 39 46.1 +3.0
ODD1 Odda 77.84 338 *e*P P 20 30 05.8 +1.4
ODD1 IVmB_BB 20 30 06.5
comp=Z,2μm,2.7s
ODD1 *e*S S 20 39 46.0 +2.5
PAGB Antelope Grade 77.86 55 IAmb IAmb 20 30 07.5
comp=Z,136nm,0.8s
BER Bergen 77.86 339 *e*P P 20 30 05.5 +1.1
BER IVmB_BB 20 30 05.8
comp=Z,2μm,2.7s
BER *e*S S 20 39 45.2 +1.7
BER IVMs_BB IVMs_BB 21 10 05.7
comp=Z,880nm,19.6s
LEOM Leova 78.07 319 ⇑P P 20 30 06.7 +0.9
LEOM Leova 78.07 319 P P 20 30 06.6 +0.9
VOG Valley Oaks Go 78.10 54 P P 20 30 06.8 +0.7
baz=305
LVV L'vov 78.12 323 *d* *i*P P 20 30 06.9 +0.9
LVV *e**PP pP 20 30 43.6 -2.3
LVV *e* 20 33 01.3
LVV *e*PPP PPP 20 34 49.5
LVV *e*S S 20 39 43.2 -3.5
LVV *e*SS SS 20 44 47.7 -3.2
LVV *e*SSS SSS 20 48 19.2
LVV pmax pmax
comp=Z,700nm,2.0s
SFJD Kangerlussuaq 78.16 4 *i*P P 20 30 06.9 +1.1
SFJD Kangerlussuaq 78.16 4 P P 20 30 07.0 +1.1
SFJD IAmb IAmb 20 30 07.7
comp=Z,174nm,0.8s
SFJD Kangerlussuaq 78.16 4 *i*P P 20 30 06.9 +1.1
VASR Vaslui 78.21 319 ⇑P P 20 30 07.6 +1.1
SMMC Simmler 78.26 55 P P 20 30 08.5 +1.4
baz=304,SNR=12
BLS5 Blasjo 78.28 338 *e*P P 20 30 08.0 +1.2
BLS5 IVmB_BB 20 30 08.4
comp=Z,2μm,2.7s
BLS5 *e*S S 20 39 50.6 +2.4
BLS5 IVMs_BB IVMs_BB 21 09 25.4
comp=Z,700nm,11.0s
BEL Belsk 78.32 326 *e*P P 20 30 08.4 +1.4
BEL *e*S S 20 39 50.6 +1.8
BEL Belsk 78.32 326 P P 20 30 08.5 +1.4
BEL pmax pmax
comp=Z,791nm,0.8s
TIN Tinemaha, Big 78.45 53 P P 20 30 09.6 +1.4
baz=305
HOMB Homborsund 78.52 336 *e*P P 20 30 08.5 +0.5
HOMB IVmB_BB 20 30 09.1
comp=Z,2μm,2.6s
HOMB *e*pP pP 20 30 45.9 -1.9
HOMB *e*S S 20 39 51.0 +0.4
HOMB IVMs_BB IVMs_BB 21 11 26.5
comp=Z,634nm,10.7s
BIR Birlad 78.54 319 ⇑P P 20 30 09.8 +1.5
BIR Birlad 78.54 319 P P 20 30 09.8 +1.5
BSD Bornholm Skovb 78.54 331 *i*P P 20 30 08.4 +0.3
BSD *i* 20 30 46.0
BSD pmax pmax
comp=Z,140nm,0.8s
BSD Bornholm Skovb 78.54 331 *i*P P 20 30 08.4 +0.3
comp=Z,139nm,0.8s
BSD *i* 20 30 46.0
TLCR 78.56 317 ⇑P P 20 30 09.3 +0.9
TLCR 78.56 317 P P 20 30 09.3 +0.9
VES Vestal, Richgr 78.57 54 P P 20 30 09.1 +0.4
baz=305,SNR=52
PKM Mcpherson Peak 78.62 55 P P 20 30 10.8 +1.5
baz=305,SNR=20
VARL Varlezi 78.65 318 ⇑P P 20 30 10.2 +1.3
GIUM Giurgiulesti 78.71 318 ⇓P P 20 30 10.7 +1.4
LKWY Lake 78.77 43 IAmb IAmb 20 30 14.1
comp=Z,145nm,0.9s
H17A Grant Village 78.77 43 P P 20 30 13.2 +3.1
baz=308,SNR=97
GHRR 78.78 319 ⇑P P 20 30 11.4 +1.7
JURR Jurilovca 78.78 317 ⇑P P 20 30 10.9 +1.2
KMY Karmoy 78.83 338 *e*P P 20 30 10.6 +0.9
KMY IVmBBB 20 30 11.4
comp=Z,1μm,2.2s
KMY *e*S S 20 39 56.2 +2.3
IMW Indian Meadow 78.87 44 IAmb IAmb 20 30 13.7
comp=Z,124nm,0.9s
FLWY Flagg Ranch 78.89 44 IAmb IAmb 20 30 14.2
comp=Z,155nm,1.1s
KWP Kalwaria Pacla 78.89 324 *e*P P 20 30 11.9 +1.6
KWP *e*S S 20 39 56.1 +1.1
KWP Kalwaria Pacla 78.89 324 P P 20 30 11.7 +1.4
KWP pmax pmax
comp=Z,318nm,2.0s
SNART Snartemo 78.90 337 *e*P P 20 30 10.7 +0.7
SNART IVmB_BB 20 30 11.3
comp=Z,845nm,2.9s
SNART *e*S S 20 39 55.9 +1.3
CWC Cottonwood Cre 78.90 53 P P 20 30 11.7 +0.9
baz=305
GKP Gorka Klasztor 78.90 329 *e*P P 20 30 11.0 +0.8
GKP *e*S S 20 39 54.8 0.0
TESR Tescani 78.91 320 ⇑P P 20 30 11.4 +1.0
BIZ Bicaz 78.92 320 ⇓P P 20 30 11.9 +1.4
CFR Carcaliu 78.94 318 ⇑P P 20 30 11.3 +0.8
CFR Carcaliu 78.94 318 ⇑P PKKPbc 20 49 01.8 +0.4
CFR Carcaliu 78.94 318 P P 20 30 10.2 -0.3
CFR pmax pmax
comp=Z,49nm,1.4s
SBC Santa Barbara 78.94 56 P P 20 30 12.2 +1.4
baz=305
BURAR Bucovina Array 78.95 321 ⇓P P 20 30 11.9 +1.2
BURAR Bucovina Array 78.95 321 P P 20 30 11.9 +1.2
TOPG Topolog 78.99 317 ⇑P P 20 30 12.1 +1.3
BRTR Keskin Array B 79.02 311 PP PP 20 33 12.9 +0.9
comp=Z,9.5nm,0.6s,baz=61,slow=7.1,SNR=4.9
BRTR S S 20 39 57.0 0.0
comp=Z,0.3nm,0.7s,baz=315,slow=42,SNR=1.6
BRTR PKKPbc PKKPbc 20 49 02.3 +0.9
comp=Z,1.0nm,0.6s,baz=199,slow=4.0,SNR=7.0
BRTR LR LR 21 09 03.7
comp=Z,490nm,18.3s,baz=48,slow=38

GRAC Grapevine Rang 79.05 53 P P 20 30 12.8 +1.4
baz=306,SNR=15
RLMT Red Lodge 79.05 42 P P 20 30 12.9 +1.4
baz=309,SNR=116
RLMT Red Lodge 79.05 42 IAmb IAmb 20 30 14.0
comp=Z,190nm,1.4s
ISA Isabella, Lake 79.08 54 P P 20 30 11.7 +0.1
baz=305,SNR=23
PETR Petresti 79.09 319 ⇑P P 20 30 13.5 +2.1
ARVC Arvin 79.15 55 P P 20 30 12.7 +0.8
baz=305,SNR=14
ARVC S S 20 39 59.7 +1.5
baz=305
ODBI Odobesti 79.16 319 ⇑P P 20 30 13.5 +1.7
GOET G??ttrup 79.23 335 *i* P P 20 30 13.1 +1.2
comp=Z,341nm,0.8s
TIRR Tirgusor 79.23 317 ⇑P P 20 30 13.2 +1.0
TIRR Tirgusor 79.23 317 ⇑P P 20 30 13.2 +1.0
TIRR Tirgusor 79.23 317 P P 20 30 13.1 +1.0
FRB Frobisher Bay 79.24 12 P P 20 30 12.5 +0.7
FRB pmax pmax
comp=Z,200nm,1.0s
SCZ2 Santa Cruz Isl 79.25 56 P P 20 30 13.5 +0.9
baz=305
VRI Vrincioaia 79.28 319 ⇑P P 20 30 13.7 +1.3
VRI Vrincioaia 79.28 319 P P 20 30 13.9 +1.5
VRI pmax pmax
comp=Z,144nm,1.9s
TSCT Constanta Port 79.28 317 ⇓P P 20 30 13.8 +1.3
PLOR Plostina 79.33 319 ⇑P P 20 30 14.0 +1.3
PLOR Plostina 79.33 319 P P 20 30 14.0 +1.3
HARR Harsova 79.36 318 ⇓P P 20 30 13.6 +0.8
HARR Harsova 79.36 318 P P 20 30 13.6 +0.8
TLBR Topalu 79.39 317 ⇑P P 20 30 14.2 +1.2
SOCY Socotra 79.39 277 P P 20 30 13.2 -0.4
SNR=11
SOCY Socotra 79.39 277 P P 20 30 12.7 -0.9
SOCY IAmb IAmb 20 30 13.5
comp=Z,154nm,0.8s
MFTR Murfatlar 79.40 317 ⇑P P 20 30 14.4 +1.3
R11A Troy Canyon, C 79.40 51 P P 20 30 14.7 +1.2
baz=306,SNR=256
R11A Troy Canyon, C 79.40 51 IAmb IAmb 20 30 16.0
comp=Z,143nm,1.0s
BR231 Keskin MP Arra 79.48 311 P P 20 30 14.9 +1.1
BISRR Bisoca 79.49 319 ⇓P P 20 30 14.6 +0.9
MPMC Manual Prospec 79.51 53 P P 20 30 15.1 +1.0
baz=306,SNR=90
OSI Osito Audit: C 79.52 55 P P 20 30 15.2 +1.2
baz=305,SNR=13
CVDA Cernavoda 79.52 317 ⇑P P 20 30 15.2 +1.5
MANR Mangalia 79.54 317 ⇑P P 20 30 15.0 +1.2
BORG Borgarnes 79.55 352 P P 20 30 15.1 +1.6
BORG pmax pmax
comp=Z,103nm,1.0s
BORG Borgarnes 79.55 352 P P 20 30 15.1 +1.6
DGMT Dagmar 79.56 37 P P 20 30 14.3 +0.4
baz=312,SNR=39
DGMT Dagmar 79.56 37 IAmb IAmb 20 30 15.6
comp=Z,196nm,1.1s
KOLS Kolonicke sedl 79.57 323 *e*P P 20 30 14.9 +1.0
KOLS pmax pmax
comp=Z,57nm,1.3s
KOLS Kolonicke sedl 79.57 323 *e*P P 20 30 14.9 +1.0
RGN Rugen 79.58 331 *e*P P 20 30 15.0 +1.2
RGN Rugen 79.58 331 *e*P P 20 30 14.8 +1.0
comp=Z,169nm,0.8s,baz=39,slow=5.0
RGN Rugen 79.58 331 IAmb IAmb 20 30 15.7
comp=Z,153nm,0.8s
OZUR 79.63 320 ⇑P P 20 30 16.2 +1.9
FURC Furnace Creek, 79.68 53 P P 20 30 16.0 +1.3
baz=306,SNR=107
LAO LASA Array 79.69 40 P P 20 30 15.8 +1.1
baz=311,SNR=111
LAO LASA Array 79.69 40 IAmb IAmb 20 30 17.0
comp=Z,190nm,1.0s
MUD Monsted U'grnd 79.69 334 *i* P P 20 30 14.8 +0.4
MUD pmax pmax
comp=Z,130nm,1.1s
MUD Monsted U'grnd 79.69 334 *i* P P 20 30 14.8 +0.4
comp=Z,125nm,1.1s
LRMC Laurel Mtn Rad 79.72 54 P P 20 30 15.9 +0.8
baz=306
PGOR Pogoanele 79.74 318 ⇑P P 20 30 16.9 +2.0
ARCR ARCALIA 79.74 321 ⇓P P 20 30 16.9 +2.0
ARCR ARCALIA 79.74 321 ⇓P PKKPbc 20 49 00.5 +0.7
SNCC San Nicolas Is 79.75 57 P P 20 30 16.1 +0.9
baz=305
SNCC San Nicolas Is 79.75 57 IAmb IAmb 20 30 17.4
comp=Z,116nm,0.8s
UZH Uzhgorod 79.76 323*c* *i*P P 20 30 14.0 -0.9
UZH *e**PP pP 20 30 53.4 -1.4
UZH *i* S S 20 40 01.0 -3.1
ICOR Ion Corvin 79.79 317 ⇑P P 20 30 16.9 +1.7
BMR Baia Mare 79.80 322 ⇓P P 20 30 16.8 +1.7
TPNV Topopah Spring 79.80 52 P P 20 30 16.8 +1.1
baz=306,SNR=128
TPNV Topopah Spring 79.80 52 IAmb IAmb 20 30 17.9
comp=Z,166nm,0.8s
PSN Preselentsi 79.85 317 P P 20 30 18.2 +2.7
ISR Istrita 79.85 318 ⇑P P 20 30 17.2 +1.6
ISR Istrita 79.85 318 P P 20 30 17.2 +1.6
EDW2 Edwards Air Fo 79.85 55 P P 20 30 16.9 +1.1
baz=306,SNR=59
OJC Ojcow 79.88 325 *e*P P 20 30 16.7 +1.1
OJC *e*S S 20 40 05.1 -0.3
OJC Ojcow 79.88 325 P P 20 30 16.7 +1.1
OJC pmax pmax
comp=Z,165nm,1.1s
OJC Ojcow 79.88 325 IAmb IAmb 20 30 19.4
comp=Z,143nm,1.0s
HWUT Hardware Ranch 79.91 46 IAmb IAmb 20 30 18.9
comp=Z,219nm,1.1s
RAYN Ar Rayn 79.92 292 P P 20 30 17.1 +0.8
RAYN pmax pmax
comp=Z,229nm,0.8s
RAYN Ar Rayn 79.92 292 P P 20 30 17.1 +0.8
DOPR Dopca 79.93 320 ⇓P P 20 30 17.8 +1.9
MLR Muntele Rosu 79.94 319 ⇑P P 20 30 17.2 +1.1
MLR Muntele Rosu 79.94 319 ⇓P PKKPbc 20 48 58.8 -0.8
MLR Muntele Rosu 79.94 319 P P 20 30 17.0 +0.9
MLR pmax pmax
comp=Z,174nm,1.6s
MLR Muntele Rosu 79.94 319 P P 20 30 17.0 +0.9
TRPA Tarpa 79.98 323 ⇑P P 20 30 17.7 +1.6
TRPA Tarpa 79.98 323 ⇓P PKKPbc 20 48 59.6 +0.3
DECC Green Verdugo 79.99 55 P P 20 30 17.3 +0.8
baz=306,SNR=14
DUG Dugway, Tooele 80.03 48 P P 20 30 18.3 +1.5
DUG pmax pmax
comp=Z,248nm,1.2s
DUG Dugway, Tooele 80.03 48 P P 20 30 18.2 +1.5
baz=308,SNR=198
DUG Dugway, Tooele 80.03 48 IAmb IAmb 20 30 19.4
comp=Z,160nm,0.9s
RASA Rasa 80.09 317 ⇑P P 20 30 18.1 +1.4
LEHL Lehliu 80.11 318 ⇑P P 20 30 18.2 +1.3
SECR 80.16 319 ⇓P P 20 30 18.4 +1.2
NIE Niedzica 80.20 325 *e*P P 20 30 18.9 +1.6
NIE *e*S S 20 40 10.4 +1.7
NIE Niedzica 80.20 325 P P 20 30 18.9 +1.6
NIE pmax pmax
comp=Z,39nm,1.3s
PLAR PLOIESTI 80.26 319 ⇑P P 20 30 19.3 +1.6
SULR 80.29 318 ⇓P P 20 30 19.4 +1.6
FMP Fort Macarthur 80.33 56 P P 20 30 19.0 +0.7
baz=306
BW06 Boulder Array 80.36 44 P P 20 30 19.1 +0.5
baz=309,SNR=38
PDAR Pinedale Array 80.36 44 P P 20 30 19.1 +0.5
comp=Z,51nm,1.0s,baz=298,slow=3.2,SNR=243
PDAR pP pP 20 30 57.6 -0.8
comp=Z,8.3nm,0.7s,baz=340,slow=1.4,SNR=1.9
PDAR PKKPbc PKKPbc 20 48 58.9 +0.2
comp=Z,2.0nm,0.6s,baz=113,slow=3.9,SNR=19
CJR Cluj-Napoca 80.38 321 ⇓P P 20 30 20.1 +1.7
CJR Cluj-Napoca 80.38 321 P P 20 30 20.1 +1.7
SHOC Shoshone, Teco 80.40 53 P P 20 30 19.6 +1.0
baz=306,SNR=9.5
GSC Goldstone, Bar 80.40 54 P P 20 30 19.6 +0.9
baz=306,SNR=22
CIS Catalina Islan 80.42 56 P P 20 30 19.4 +0.6
baz=306,SNR=12
BFSC Mount Baldy Ra 80.45 55 P P 20 30 19.7 +0.6
baz=306,SNR=21

VOIR 80.45 319 ⇑P P 20 30 20.2 +1.3
VOIR 80.45 319 P P 20 30 20.1 +1.3
VOIR pmax pmax
comp=Z,37nm,1.2s
RRX Edison Barstow 80.52 54 P P 20 30 20.4 +1.1
baz=306,SNR=6.3
SCI2 San Clemente I 80.58 56 P P 20 30 20.3 +0.6
baz=306
PRD Provadia 80.60 317 P P 20 30 20.5 +1.0
NEF NEVSHA 80.63 317 P P 20 30 20.5 +0.8
ARR Arges 80.72 320 ⇓P P 20 30 22.2 +2.0
ARR Arges 80.72 320 ⇑P PKKPbc 20 48 58.1 +0.4
SGRR Singureni 80.74 318 ⇓P P 20 30 20.9 +0.6
KECS Kecovo 80.75 324 *e*P P 20 30 21.5 +1.3
KECS pmax pmax
comp=Z,31nm,1.5s
KECS Kecovo 80.75 324 *e*P P 20 30 21.5 +1.3
URZ Urewera 80.75 151 P P 20 30 19.2 -0.9
comp=Z,80nm,0.8s,baz=332,slow=4.1,SNR=33
URZ PP PP 20 33 27.1 +0.2
comp=Z,7.3nm,0.7s,baz=276,slow=4.7,SNR=4.1
URZ Urewera 80.75 151 IAmb IAmb 20 30 21.0
comp=Z,113nm,0.9s
LANS Liptovska Anna 80.78 325 *e*P P 20 30 22.2 +1.8
LANS pmax pmax
comp=Z,35nm,0.8s
LANS Liptovska Anna 80.78 325 *e*P P 20 30 22.2 +1.8
DRGR 80.78 322 ⇑P P 20 30 21.8 +1.2
DRGR 80.78 322 ⇓P PKKPbc 20 48 57.8 +0.2
DRGR 80.78 322 P P 20 30 21.6 +1.1
DRGR pmax pmax
comp=Z,125nm,2.0s
RAZG Razgrad 80.86 317 ⇑P P 20 30 22.1 +1.1
TUQ Turquoise Moun 80.90 53 P P 20 30 22.5 +1.0
baz=306,SNR=15
OKC Ostrava-Krasne 80.92 326 *e*P P 20 30 21.9 +0.8
OKC *e* 20 31 01.6
OKC *e* 20 33 26.7
OKC *e*S S 20 40 15.4 -0.7
OKC Ostrava-Krasne 80.92 326 *e*P P 20 30 21.9 +0.8
OKC *e*pP pP 20 31 01.6 +0.5
OKC *e*PP PP 20 33 26.7 -0.4
OKC *e*S S 20 40 15.4 -0.7
RUE Ruedersdorf 80.92 330 *e*P P 20 30 21.5 +0.4
RUE Ruedersdorf 80.92 330 *e*P P 20 30 22.0 +1.0
comp=Z,230nm,1.4s,baz=39,slow=5.0
RUE *e*pP pP 20 31 00.4 -0.6
baz=38,slow=5.1
BBRC Big Bear Solar 80.93 55 P P 20 30 22.3 +0.5
baz=306
SKMB Sankelmark Bun 80.94 333 *e*P P 20 30 22.4 +1.3
comp=Z,208nm,1.1s,baz=39,slow=5.0
HEC Hector,Ludlow 80.99 54 P P 20 30 22.9 +1.0
baz=306,SNR=68
KSP Ksiaz 81.04 327 *e*P P 20 30 22.9 +1.2
KSP *e*S S 20 40 17.8 +0.4
KSP Ksiaz 81.04 327 P P 20 30 22.9 +1.2
KSP pmax pmax
comp=Z,112nm,1.3s
HUMR Humele 81.08 319 ⇓P P 20 30 23.3 +1.2
MURC Murrieta 81.14 55 P P 20 30 23.3 +0.7
baz=306,SNR=23
BHL Bhannes 81.14 305 *e*P P 20 30 23.4 +0.7
BSEG Bad Segeberg 81.21 332 *e*P P 20 30 23.2 +0.7
comp=Z,123nm,1.1s,baz=39,slow=5.0
BSEG *e*pP pP 20 31 01.8 -0.6
baz=38,slow=5.1
COPA Copaceanca 81.21 318 ⇑P P 20 30 23.4 +0.7
MORC Moravsky Berou 81.24 326 ⇓*i*P P 20 30 23.7 +0.8
MORC *e*pP pP 20 31 01.8 -1.1
MORC *e*S S 20 40 20.5 +0.9
MORC Moravsky Berou 81.24 326 ⇓P P 20 30 24.0 +1.2
MORC Moravsky Berou 81.24 326 ⇓P PKKPbc 20 48 57.7 +1.0
MORC Moravsky Berou 81.24 326 P P 20 30 23.9 +1.0
MORC pmax pmax
comp=Z,84nm,1.4s
RCY Rachaya 81.26 305 *e*P P 20 30 24.4 +1.0
OSTC Ostas 81.28 327 *e*P P 20 30 24.0 +1.0
OSTC *e*pP pP 20 31 03.6 +0.5
OSTC *e*PP PP 20 33 20.5 -10
OSTC *e*S S 20 40 19.1 -0.8
QRZ Quartz Range 81.28 155 IAmb IAmb 20 30 24.3
comp=Z,137nm,1.0s
BKZ Black Stump Fm 81.28 152 IAmb IAmb 20 30 25.4
comp=Z,204nm,1.1s
DEV Deva 81.29 321 ⇑P P 20 30 24.6 +1.4
DEV Deva 81.29 321 P P 20 30 24.4 +1.3
DEV pmax pmax
comp=Z,59nm,1.2s
CHVC Chvalec 81.33 327 *e*P P 20 30 24.2 +0.9
CHVC *e*PP PP 20 33 24.5 -6.0
CHVC *e*S S 20 40 17.6 -2.8
KRLC Kraliky 81.37 327 *e*P P 20 30 24.3 +0.7
KRLC *e* 20 31 01.7
KRLC *e* 20 33 30.5
KRLC *e*S S 20 40 19.8 -1.1
KRLC Kraliky 81.37 327 *e*P P 20 30 24.3 +0.7
KRLC *e*pP pP 20 31 01.7 -1.9
KRLC *e*PP PP 20 33 30.5 -0.4
KRLC *e*S S 20 40 19.8 -1.1
SZH Strazhica 81.38 317 P P 20 30 24.7 +1.0
DPC Dobruska-Polom 81.38 327 *e*P P 20 30 24.8 +1.2
DPC *e* 20 31 02.3
DPC *e*S S 20 40 16.3 -4.7
DPC Dobruska-Polom 81.38 327 *e*P P 20 30 24.8 +1.2
DPC *e*pP pP 20 31 02.3 -1.4
DPC *e*PP PP 20 33 23.9 -7.1
DPC *e*S S 20 40 16.3 -4.7
UPC Upice 81.40 327 *e*P P 20 30 24.8 +1.1
UPC *e* 20 31 04.4
UPC *e*S S 20 40 20.1 -1.1
UPC Upice 81.40 327 *e*P P 20 30 24.8 +1.1
UPC *e*pP pP 20 31 04.4 +0.6
UPC *e*PP PP 20 33 22.9 -8.2
UPC *e*S S 20 40 20.1 -1.1
SHBL Chebaa 81.41 305 *e*P P 20 30 25.3 +1.1
PSZ Piszkesteto 81.42 324 ⇑P P 20 30 25.5 +1.5
PSZ Piszkesteto 81.42 324 P P 20 30 25.2 +1.3
PSZ pmax pmax
comp=Z,150nm,2.2s
ZIMR 81.44 318 ⇑P P 20 30 25.0 +1.0
GMRC Granite Mounta 81.46 54 P P 20 30 25.4 +0.9
baz=307,SNR=153
JMB Yambol 81.53 316 P P 20 30 25.7 +1.3
VYHS Vyhne 81.53 325 *e*P P 20 30 25.7 +1.3
VYHS pmax pmax
comp=Z,113nm,1.2s
VYHS Vyhne 81.53 325 *e*P P 20 30 25.7 +1.3
109C Camp Elliot, M 81.61 56 P P 20 30 25.9 +0.8
baz=306,SNR=17
PFO Pinyon Flats O 81.63 55*d* *i*P P 20 30 25.7 +0.4
PFO pmax pmax
comp=Z,214nm,0.9s
PFO Pinyon Flats O 81.63 55 P P 20 30 26.0 +0.7
baz=306,SNR=67
PFO Pinyon Flats O 81.63 55 P P 20 30 26.4 +1.0
PFO IAmb IAmb 20 30 27.2
comp=Z,126nm,0.8s
ELND Elena 81.63 317 ⇑P P 20 30 26.4 +1.4
XPFO Pion Flat 81.63 55 P P 20 30 26.2 +0.9
XPFO IAmb IAmb 20 30 27.2
comp=Z,126nm,0.8s
GZR Gura Zlata 81.68 320 ⇑P P 20 30 26.0 +0.6
BELC Belle Mtn. Jos 81.70 54 P P 20 30 26.2 +0.4
baz=307,SNR=88
VLAD Vladila 81.74 319 ⇑P P 20 30 26.5 +0.9
PVL Pavlikeni 81.74 318 P P 20 30 27.5 +2.0
JAVC Velka Javorina 81.83 325 ⇓*i*P P 20 30 28.0 +2.0
JAVC *e*pP pP 20 31 06.3 +0.2
JAVC *e*S S 20 40 28.9 +3.2
SRE Strehaia 81.95 320 ⇑P P 20 30 28.5 +1.9
SRE Strehaia 81.95 320 P P 20 30 28.5 +1.9
VRAC Vranov 82.00 326 ⇓*i*P P 20 30 27.8 +1.0
VRAC *e*pP pP 20 31 06.1 -0.9
VRAC *e*S S 20 40 28.5 +1.1
VRAC Vranov 82.00 326 ⇑P P 20 30 28.4 +1.5
VRAC Vranov 82.00 326 P P 20 30 28.1 +1.3
VRAC pmax pmax
comp=Z,109nm,1.6s
PVCC Panska Ves 82.02 328 *e*P P 20 30 27.9 +1.0
PVCC *e* 20 31 06.1
PVCC *e*S S 20 40 27.0 -0.5
PVCC Panska Ves 82.02 328 *e*P P 20 30 27.9 +1.0

PVCC *e*pP pP 20 31 06.1 -0.9
PVCC *e*PP PP 20 33 28.9 -7.3
PVCC *e*S S 20 40 27.0 -0.5
PLVB Pleven 82.03 318 ⇑P P 20 30 28.2 +1.2
BRG Berggiesshubel 82.04 329 *i* P P 20 30 27.9 +0.9
comp=Z,46nm,0.8s
BRG *i* pP pP 20 31 05.8 -1.3
comp=Z,60nm,1.1s
BRG sP sP 20 31 23.0 -1.3
BRG *i* PP PP 20 33 36.9 +0.6
comp=Z,48nm,1.3s
BRG S S 20 40 29.0 +1.4
BRG SS SS 20 45 49.0 -0.1
BRG *e*PKPPKP P'P'df 20 56 53.2 -8.6
comp=Z,9.5nm,1.8s
comp=N,1µm,13.4s
comp=E,2µm,18.3s
comp=Z,2µm,16.4s
BRG Berggiesshubel 82.04 329 *e*P P 20 30 27.6 +0.6
comp=Z,157nm,1.4s,baz=39,slow=5.0
BRG *e*pP pP 20 31 06.3 -0.8
baz=38,slow=5.1
BRG Berggiesshubel 82.04 329 *i* P P 20 30 27.9 +0.9
BRG *i* *PP pP 20 31 05.8 -1.3
BRG *SP sP 20 31 23.0 -1.3
BRG *i* 20 33 36.9
BRG S S 20 40 29.0 +1.4
BRG SS SS 20 45 49.0 -0.1
BRG pmax pmax
comp=Z,46nm,0.8s
BRG pmax pmax
comp=Z,60nm,1.1s
BRG MLR MLR
comp=N,1µm,13.4s
BRG MLR MLR
comp=E,2µm,18.3s
BRG MLR MLR
comp=Z,2µm,16.4s
CSS Mathiatis 82.06 307 P P 20 30 27.9 +0.5
CSS IAmb IAmb 20 30 30.6
comp=Z,136nm,0.7s
MONP2 Monument Peak 82.08 55 P P 20 30 28.4 +0.7
baz=307,SNR=56
ISP Isparta 82.11 311 P P 20 30 28.4 +0.7
ISP pmax pmax
comp=Z,57nm,1.0s
ISP Isparta 82.11 311 IAmb IAmb 20 30 28.9
comp=Z,245nm,1.8s
CLL Collm 82.12 329 *i* P P 20 30 28.7 +1.3
comp=Z,116nm,0.9s
CLL *i* pP pP 20 31 06.8 -0.6
comp=Z,140nm,1.0s
CLL *e*sP sP 20 31 23.0 -1.5
CLL *e*PP PP 20 33 44.0 +7.1
comp=Z,67nm,1.4s
CLL *e*pPP 20 34 12.0
CLL *e*S S 20 40 28.0 -0.4
comp=N,800nm,14.9s
CLL *e*S S 20 40 28.0 -0.4
comp=E,2µm,17.3s
CLL *e*SS SS 20 45 54.0 +3.8
CLL L L 21 09 00.0
comp=Z,2µm,18.6s
CLL Collm 82.12 329 *e*P P 20 30 28.8 +1.5
comp=Z,116nm,0.9s,baz=39,slow=5.0
CLL *e*pP pP 20 31 07.5 +0.1
baz=38,slow=5.1
CLL Collm 82.12 329 *i* P P 20 30 28.7 +1.3
CLL *i* *PP pP 20 31 06.8 -0.6
CLL *e*S S 20 40 28.0 -0.4
CLL pmax pmax
comp=Z,116nm,0.9s
CLL Collm 82.12 329 IAmb IAmb 20 31 11.8
comp=Z,133nm,1.0s
BZS Buzias 82.14 321 ⇑P P 20 30 28.1 +0.5
BZS Buzias 82.14 321 ⇑P PKKPbc 20 48 54.8 +0.3
BZS Buzias 82.14 321 P P 20 30 28.3 +0.7
BZS pmax pmax
comp=Z,121nm,2.2s
BUD Budapest 82.15 324 P P 20 30 29.1 +1.5
BUD pmax pmax
comp=Z,77nm,1.9s
K22A Casper 82.15 43 P P 20 30 28.4 +0.4
baz=311,SNR=14
NEE2 Needles Airpor 82.16 53 P P 20 30 28.8 +0.8
baz=307,SNR=11
IRM Iron Mountain 82.18 54 P P 20 30 29.1 +1.1
baz=307,SNR=59
SMOL Smolenice 82.19 325 *e*P P 20 30 29.6 +1.8
SMOL pmax pmax
comp=Z,50nm,0.8s
SMOL Smolenice 82.19 325 *e*P P 20 30 29.6 +1.8
ULM Lac du Bonnet 82.21 32 P P 20 30 27.7 -0.2
comp=Z,110nm,0.9s,baz=315,slow=6.1,SNR=183
ULM PKKPbc PKKPbc 20 48 53.6 -0.9
comp=Z,4.1nm,0.8s,baz=92,slow=2.4,SNR=7.9
ULM PKPPKP P'P'df 20 56 54.1 -7.4
comp=Z,2.3nm,0.8s,baz=175,slow=6.8,SNR=3.2
ULM Lac du Bonnet 82.21 32 IAmb IAmb 20 30 28.9
comp=Z,121nm,0.8s
HERR Herculane 82.22 320 ⇑P P 20 30 28.8 +0.8
HERR Herculane 82.22 320 ⇓P PKKPbc 20 48 54.2 -0.1
MDND Maddock 82.23 36 P P 20 30 28.8 +0.7
baz=315,SNR=12
LEF Lefka 82.25 308 ⇑P P 20 30 29.5 +1.1
FBE Freiberg 82.26 329 *e*P P 20 30 29.1 +1.0
comp=Z,475nm,1.8s,baz=39,slow=5.0
FBE *e*pP pP 20 31 07.8 -0.5
baz=38,slow=5.1
SRO2 Moca 82.26 324 *e*P P 20 30 28.4 +0.3
SRO2 pmax pmax
comp=Z,52nm,0.8s
SRO2 Moca 82.26 324 *e*P P 20 30 28.4 +0.3
KRUC Moravsky 82.27 326 ⇓*i*P P 20 30 29.1 +0.9
KRUC *e*pP pP 20 31 07.2 -1.2
KRUC *e*PP PP 20 33 36.4 -1.9
KRUC *e*S S 20 40 31.4 +1.3
KRUC Moravsky 82.27 326 P P 20 30 29.3 +1.1
KRUC pmax pmax
comp=Z,111nm,2.0s
BC3 Big Chuckawall 82.27 54 P P 20 30 29.5 +0.8
baz=307,SNR=40
BAIL Bailesti 82.30 319 ⇑P P 20 30 30.3 +1.9
PUNG Punghina 82.35 320 ⇑P P 20 30 29.8 +1.2
MODS Modra-Piesok 82.36 325 *e*P P 20 30 29.3 +0.6
MODS pmax pmax
comp=Z,302nm,1.5s
MODS Modra-Piesok 82.36 325 *e*P P 20 30 29.3 +0.6
GOPC GO Pecny, Ondr 82.38 328 *e*P P 20 30 29.6 +0.8
GOPC *e* 20 31 08.3
GOPC *e* 20 33 37.0
GOPC *e*S S 20 40 26.0 -5.2
GOPC GO Pecny, Ondr 82.38 328 *e*P P 20 30 29.6 +0.8
GOPC *e*pP pP 20 31 08.3 -0.7
GOPC *e*PP PP 20 33 37.0 -2.1
GOPC *e*S S 20 40 26.0 -5.2
DIM Dimitrovgrad 82.39 317 P P 20 30 30.6 +1.6
RWWY Rawlins 82.39 44 IAmb IAmb 20 30 31.2
comp=Z,136nm,0.8s
NRDL Niedersach Rie 82.39 331 *e*P P 20 30 29.2 +0.6
comp=Z,418nm,2.5s,baz=39,slow=5.0
NRDL *e*pP pP 20 31 07.8 -0.9
baz=38,slow=5.1
PRA Prague 82.42 328 *e*P P 20 30 30.1 +1.2
PRA *e* 20 31 07.9
PRA *e* 20 33 38.0
PRA *e*S S 20 40 26.4 -5.1
PRA Prague 82.42 328 *e*P P 20 30 30.1 +1.2
PRA *e*pP pP 20 31 07.9 -1.2
PRA *e*PP PP 20 33 38.0 -1.4
PRA *e*S S 20 40 26.4 -5.1
PRU Pruhonice 82.43 328 *e*P P 20 30 29.6 +0.6
PRU *e* 20 31 08.5
PRU *e* 20 33 36.1
PRU *e*S S 20 40 30.7 -1.0
PRU Pruhonice 82.43 328 *e*P P 20 30 29.6 +0.6
PRU *e*pP pP 20 31 08.5 -0.7
PRU *e*PP PP 20 33 36.1 -3.4
PRU *e*S S 20 40 30.7 -1.0
IKP In-Ko-Pah, Jac 82.43 55 P P 20 30 30.4 +0.9
baz=307,SNR=26
W13A Hualapai Mount 82.44 52 IAmb IAmb 20 30 32.1
comp=Z,218nm,1.9s
ASSE Asse, Remlinge 82.45 331 *e*P P 20 30 29.5 +0.5
comp=Z,520nm,2.5s,baz=39,slow=5.0

ASSE ePP **pP** **20 31 08.2 -0.9**
baz=38,slow=5.1
SWSC **Sam W. Stewart** **82.47 55** P **P** **20 30 30.1 +0.5**
baz=307,SNR=18
RETH **Rethem/Aller,** **82.50 332** eP **P** **20 30 29.8 +0.5**
comp=Z,112nm,1.2s,baz=39,slow=5.0
RETH ePP **pP** **20 31 08.5 -0.9**
baz=38,slow=5.1
BFZ **Birch Farm** **82.50 153** IAmb IAmb 20 30 30.6
comp=Z,176nm,0.7s
TREC **Trest** **82.52 327** eP **P** **20 30 30.2 +0.7**
TREC e 20 31 09.3
TREC eS **S** **20 40 27.9 -4.7**
TREC **Trest** **82.52 327** eP **P** **20 30 30.2 +0.7**
TREC ePP **pP** **20 31 09.3 -0.4**
TREC ePP PP 20 33 31.4 -8.9
TREC eS **S** **20 40 27.9 -4.7**
MPEP **Malo Peshtene** **82.53 318** P **P** **20 30 30.9 +1.2**
RSSD **Black Hills** **82.54 41** P **P** **20 30 30.5 +0.5**
RSSD pmax pmax
comp=Z,288nm,2.0s
RSSD **Black Hills** **82.54 41** P **P** **20 30 30.3 +0.2**
baz=312
RSSD **Black Hills** **82.54 41** P **P** **20 30 30.5 +0.5**
RSSD IAmb IAmb 20 30 31.5
comp=Z,288nm,2.0s
BANR **Banloc** **82.54 321** ⇑P **P** **20 30 31.3 +1.6**
ZST **Bratislava** **82.56 325** eP **P** **20 30 30.4 +0.7**
ZST pmax pmax
comp=Z,373nm,1.7s
ZST **Bratislava** **82.56 325** eP **P** **20 30 30.4 +0.7**
E28A **Huff** **82.59 37** IAmb IAmb 20 30 31.5
comp=Z,137nm,0.8s
MDVR **Moldovita** **82.65 321** ⇓P **P** **20 30 30.7 +0.4**
NEUB **Neuenburg** **82.70 330** eP **P** **20 30 31.0 +0.6**
comp=Z,165nm,1.2s,baz=39,slow=5.0
NEUB ePP **pP** **20 31 09.7 -0.8**
baz=38,slow=5.1
KDZ **Kurdzhali** **82.72 316** P **P** **20 30 32.1 +1.4**
PDMCI **Parker Dam,Lak** **82.75 53** P **P** **20 30 31.9 +0.9**
baz=308,SNR=36
CLZ **Clausthal** **82.79 331** eP **P** **20 30 31.7 +0.8**
comp=Z,839nm,2.5s,baz=39,slow=5.0
CLZ ePP **pP** **20 31 10.5 -0.6**
baz=38,slow=5.1
O20A **White River Ci** **82.80 46** P **P** **20 30 32.1 +0.7**
baz=310,SNR=35
O20A **White River Ci** **82.80 46** IAmb IAmb 20 30 33.4
comp=Z,126nm,0.9s
PLD **Plovdiv** **82.82 317** P **P** **20 30 32.7 +1.5**
PLD **Plovdiv** **82.82 317** P **P** **20 30 32.4 +1.2**
PLD pmax pmax
comp=Z,395nm,1.9s
PGB **Panagyurishte** **82.83 318** P **P** **20 30 32.7 +1.4**
Y12C **Blythe** **82.84 54** P **P** **20 30 32.5 +1.0**
baz=307,SNR=23
Y12C **Blythe** **82.84 54** IAmb IAmb 20 30 33.7
comp=Z,116nm,1.1s
ALN **Alexandroupoli** **82.85 315** P **P** **20 30 31.9 +0.6**
PBCC **Pribram** **82.89 328** eP **P** **20 30 32.2 +0.8**
PBCC ex x 20 31 10.2
RDO **Rodhopi** **82.98 316** P **P** **20 30 32.7 +0.7**
TANN **Tannenbergstha** **83.01 329** eP **P** **20 30 32.7 +0.6**
comp=Z,748nm,2.3s,baz=39,slow=5.0
TANN ePP **pP** **20 31 11.5 -0.8**
baz=38,slow=5.1
KHZ **Kahutara** **83.04 155** P **P** **20 30 31.6 -0.3**
KHZ IAmb IAmb 20 30 31.9
comp=Z,106nm,1.0s
GLA **Glamis** **83.06 54** P **P** **20 30 33.7 +1.0**
baz=307,SNR=26
PLN **Plauen** **83.09 329** eP **P** **20 30 33.1 +0.7**
comp=Z,184nm,1.7s,baz=39,slow=5.0
RZN **Rozhen** **83.09 317** P **P** **20 30 34.2 +1.4**
GUNZ **Gunzen** **83.11 329** eP **P** **20 30 33.3 +0.7**
comp=Z,115nm,1.3s,baz=39,slow=5.0
WERN **Wernitzgruen** **83.14 329** eP **P** **20 30 33.6 +0.9**
comp=Z,448nm,2.2s,baz=39,slow=5.0
WERN ePP **pP** **20 31 12.3 -0.6**
baz=38,slow=5.1
NKC **Novy Kostel** **83.15 329** eP **P** **20 30 33.4 +0.6**
NKC e 20 31 12.5
NKC eS **S** **20 40 35.4 -3.6**
NKC **Novy Kostel** **83.15 329** eP **P** **20 30 33.4 +0.6**
NKC ePP **pP** **20 31 12.5 -0.4**
NKC ePP **PP** **20 33 38.0 -7.5**
NKC eS **S** **20 40 35.4 -3.6**
ELL **Elmali** **83.16 310** P **P** **20 30 33.7 +0.5**
GTTG **Gottingen** **83.18 331** eP **P** **20 30 33.5 +0.6**
comp=Z,186nm,1.5s,baz=39,slow=5.0
GTTG ePP **pP** **20 31 12.3 -0.8**
baz=38,slow=5.1
SOP **Sopron** **83.19 325** P **P** **20 30 34.5 +1.5**
SOP pmax pmax
comp=Z,161nm,1.1s
MOX **Moxa** **83.19 330** eP **P** **20 30 33.5 +0.6**
comp=Z,210nm,1.7s,baz=39,slow=5.0
MOX **Moxa** **83.19 330** P **P** **20 30 33.6 +0.6**
MOX pmax pmax
comp=Z,71nm,2.0s
MORH **Mrgy, Hungar** **83.22 323** eP **P** **20 30 33.3 +0.1**
BEO **Beograd** **83.28 321** P **P** **20 30 33.1 -0.4**
BEO pmax pmax
comp=Z,42nm,1.2s
VTS **Vitosha** **83.30 318** P **P** **20 30 35.0 +1.2**
VTS **Vitosha** **83.30 318** ⇑P **P** **20 30 35.6 +1.8**
VTS **Vitosha** **83.30 318** ⇓P **PKKPbc** **20 48 52.4 +0.4**
VTS **Vitosha** **83.30 318** P **P** **20 30 35.3 +1.5**
VTS **Vitosha** **83.30 318** IAmb IAmb 20 30 36.3
comp=Z,150nm,0.9s
CONA **Conrad Observa** **83.33 326** *i* PcP **P** **20 30 35.2 +1.3**
comp=Z,33nm,0.7s,SNR=109
CONA ePP **pP** **20 31 19.0 +4.9**
comp=Z,108nm,1.5s
CONA PP PP 20 33 37.6 -10
comp=Z,27nm,1.0s
RPZ **Rata Peaks** **83.38 157** P **P** **20 30 33.8 +0.1**
comp=Z,66nm,0.8s
RPZ **Rata Peaks** **83.38 157** IAmb IAmb 20 30 38.4
comp=Z,102nm,0.9s
SMTH **Samothraki Isl** **83.42 315** P **P** **20 30 34.5 +0.2**
IBBN **Ibbenburen** **83.45 332** eP **P** **20 30 34.5 +0.3**
comp=Z,236nm,1.5s,baz=39,slow=5.0
IBBN ePP **pP** **20 31 13.3 -1.1**
baz=38,slow=5.1
KHC **Kasperske Hory** **83.49 328** eP **P** **20 30 35.0 +0.5**
KHC e 20 31 13.7
KHC eS **S** **20 40 38.7 -3.8**
KHC **Kasperske Hory** **83.49 328** eP **P** **20 30 35.0 +0.5**
KHC ePP **pP** **20 31 13.7 -1.1**
KHC ePP **PP** **20 33 42.0 -6.2**
KHC eS **S** **20 40 38.7 -3.8**
PV22 **Blue Mesa, Par** **83.50 47** IAmb IAmb 20 30 37.4
comp=Z,167nm,1.0s
ROTZ **Rotzenmuhle** **83.61 329** eP **P** **20 30 36.1 +1.0**
comp=Z,674nm,2.1s,baz=39,slow=5.0
PV12 **Saucer Basin,** **83.63 47** IAmb IAmb 20 30 39.0
comp=Z,168nm,0.8s
N23A **Red Feather La** **83.63 44** P **P** **20 30 37.1 +1.3**
baz=311,SNR=68
GEC2 **GERESS Array S** **83.64 327** eP **P** **20 30 35.8 +0.4**
comp=Z,72nm,0.9s,baz=39,slow=5.0
GEC2 ePP **pP** **20 31 15.6 -0.2**
baz=38,slow=5.1
GEC2 **GERESS Array S** **83.64 327** P **P** **20 30 35.9 +0.5**
GEC2 pmax pmax
comp=Z,75nm,1.2s
GERES **GERESS Array B** **83.64 327** P **P** **20 30 35.8 +0.4**
comp=Z,34nm,0.7s,baz=36,slow=5.2,SNR=312
GERES pP **pP** **20 31 15.1 -0.6**
comp=Z,15nm,0.8s,baz=37,slow=5.7,SNR=2.8
GERES PP **PP** **20 33 51.5 +1.9**
comp=Z,4.6nm,0.7s,baz=44,slow=5.9,SNR=3.6
GERES PKKP **PKKPdf** **20 48 41.8 +0.6**
comp=Z,0.3nm,0.5s,baz=242,slow=2.9,SNR=3.8
GERES PKKPbc **PKKPbc** **20 48 50.9 -0.4**
comp=Z,1.7nm,0.7s,baz=219,slow=1.7,SNR=15
GERES PKPPKP **P'P'df** **20 56 54.3 -4.7**
comp=Z,0.5nm,0.8s,baz=171,slow=7.0,SNR=3.5
GERES LR LR 21 10 45.3
comp=Z,1µm,18.7s,baz=48,slow=38
AGMN **Agassiz Nation** **83.65 33** P **P** **20 30 35.0 -0.3**
baz=317,SNR=52
KAVA **Kavala** **83.66 316** P **P** **20 30 36.2 +0.7**
MMB **Musomiste** **83.71 317** P **P** **20 30 37.1 +1.3**

LBZ **Lake Benmore** **83.72 158** IAmb IAmb 20 30 36.6
comp=Z,122nm,0.9s
UBBA **Unterbreizbach** **83.73 330** eP **P** **20 30 35.9 +0.4**
comp=Z,322nm,2.0s,baz=39,slow=5.0
UBBA ePP **pP** **20 31 15.8 +0.1**
baz=38,slow=5.1
KSL **Kastellorizon** **83.74 310** P **P** **20 30 36.0 0.0**
PV02 **Paradox Valley** **83.74 47** IAmb IAmb 20 30 38.7
comp=Z,164nm,1.0s
WKZ **Wanaka** **83.77 159** IAmb IAmb 20 30 38.7
comp=Z,249nm,1.6s
PRK **Paraskevi** **83.78 314** P **P** **20 30 37.5 +1.3**
WET **Wettzell** **83.78 328** eP **P** **20 30 36.8 +0.7**
comp=Z,219nm,1.8s,baz=39,slow=5.0
WET **Wettzell** **83.78 328** P **P** **20 30 36.9 +0.9**
WET pmax pmax
comp=Z,63nm,1.2s
NVR **Nevrokopi** **83.79 317** P **P** **20 30 36.8 +0.6**
THAS **Thassos island** **83.80 316** P **P** **20 30 33.4 -2.8**
WUAZ **Wupatki** **83.80 51** P **P** **20 30 37.8 +1.2**
baz=309,SNR=86
WUAZ **Wupatki** **83.80 51** IAmb IAmb 20 30 39.0
comp=Z,178nm,0.9s
PV15 **Paradox Valley** **83.81 47** IAmb IAmb 20 30 38.4
comp=Z,95nm,0.9s
KKB **Krupnik** **83.88 318** P **P** **20 30 37.8 +1.1**
PV01 **Paradox Valley** **83.89 47** IAmb IAmb 20 30 39.4
comp=Z,194nm,0.9s
MQZ **McQueen's Vall** **83.89 156** IAmb IAmb 20 30 39.2
comp=Z,155nm,1.4s
TEKS **Tekeris** **83.94 321** eP **P** **20 30 37.7 +0.8**
ARSA **Arzberg** **83.98 325** eP **P** **20 30 38.0 +0.9**
comp=Z,24nm,0.7s,SNR=43
ARSA ePP **pP** **20 31 20.7 +3.3**
comp=Z,56nm,1.4s
LIA **Limnos Island** **84.00 315** P **P** **20 30 37.7 +0.5**
DIVS **Divibare** **84.02 321** ⇓*i*P **P** **20 30 37.8 +0.4**
SIGR **SIGRI** **84.05 314** P **P** **20 30 38.1 +0.6**
IVI **Ivigtut** **84.06 4** IAmb IAmb 20 30 38.7
comp=Z,121nm,0.8s
GRA1 **Grafenberg Arr** **84.08 329** IAmb IAmb 20 30 39.6
comp=Z,178nm,0.9s
GRF **Grafenberg Arr** **84.08 329** eP **P** **20 30 38.6 +1.0**
comp=Z,234nm,1.0s,baz=39,slow=5.0
GRF ePP **pP** **20 31 17.4 -0.3**
baz=38,slow=5.1
GRF ePP **PP** **20 33 53.6 +0.6**
GRF ePPP PPP 20 35 48.1
GRF **Grafenberg Arr** **84.08 329** P **P** **20 30 38.7 +1.2**
GRF pmax pmax
comp=Z,233nm,1.1s
SRS **Serrai** **84.10 317** P **P** **20 30 38.1 +0.3**
MOA **Molln** **84.13 326** eP **P** **20 30 38.5 +0.7**
comp=Z,33nm,0.7s,SNR=47
MOA ePP **pP** **20 31 22.5 +4.4**
comp=Z,100nm,1.2s
MOA PP **PP** **20 33 45.7 -7.8**
comp=Z,55nm,1.4s
BUG **Bochum--Univer** **84.32 332** eP **P** **20 30 38.7 +0.1**
comp=Z,532nm,2.1s,baz=39,slow=5.0
BUG **Bochum--Univer** **84.32 332** P **P** **20 30 39.1 +0.5**
BUG pmax pmax
comp=Z,122nm,1.1s
PYZ **Puysegur Point** **84.35 161** IAmb IAmb 20 30 40.3
comp=Z,114nm,0.8s
OUR **Ouranopolis** **84.40 316** P **P** **20 30 39.5 +0.3**
X16A **Lo Mia Camp, P** **84.44 52** IAmb IAmb 20 30 42.4
comp=Z,106nm,0.9s
KNT **Kendrikon** **84.46 317** P **P** **20 30 40.0 +0.4**
BBLS **Lazići** **84.48 321** ⇓*i*P **P** **20 30 40.4 +0.7**
STIP **Stip** **84.49 318** *i*P **P** **20 30 39.5 -0.2**
STIP **Stip** **84.49 318** *i*P **P** **20 30 39.5 -0.2**
MVCO **Mesa Verde** **84.52 48** P **P** **20 30 41.3 +1.1**
baz=310
ISCO **Idaho Springs** **84.55 45** P **P** **20 30 41.6 +1.2**
ISCO pmax pmax
comp=Z,103nm,0.9s
ISCO **Idaho Springs** **84.55 45** P **P** **20 30 41.6 +1.2**
baz=312,SNR=107
B35A **Bob, Littlefor** **84.56 32** IAmb IAmb 20 30 41.1
comp=Z,98nm,0.9s
HAPS **Han Pijesak,Bl** **84.56 321** eP **P** **20 30 44.7 +4.5**
GROS **Grobnik** **84.57 325** *i*P **P** **20 30 40.4 +0.3**
MOSL **Moslavina** **84.58 324** *i*P **P** **20 30 40.4 +0.3**
EKA **Eskdalemuir Ar** **84.59 340** P **P** **20 30 40.0 +0.1**
EKA pmax pmax
comp=Z,4.0nm,0.6s
ESK **Eskdalemuir** **84.61 340** P **P** **20 30 40.7 +0.6**
ESK pmax pmax
comp=Z,40nm,0.8s
ESK **Eskdalemuir** **84.61 340** P **P** **20 30 40.6 +0.6**
PERS **Pernice** **84.62 325** *i*P **P** **20 30 40.9 +0.5**
PERS epP **pP** **20 31 18.8 -2.0**
SOKA **Soboth** **84.63 325** eP **P** **20 30 41.1 +0.6**
comp=Z,135nm,0.8s,SNR=126
SOKA ePP **pP** **20 31 20.4 -0.4**
comp=Z,157nm,1.3s
SOKA ePP PP 20 33 48.4 -9.3
comp=Z,51nm,1.3s
RUDO **Rudo** **84.68 321** eP **P** **20 30 40.8 +0.2**
PLG **Polygyros** **84.68 316** P **P** **20 30 40.6 -0.1**
SKO **Skopje** **84.71 319** *i*P **P** **20 30 41.8 +1.0**
SKO **Skopje** **84.71 319** *i*P **P** **20 30 41.8 +1.0**
HORT **Hortiatis** **84.72 317** P **P** **20 30 41.0 0.0**
PTJ **Puntijarka** **84.75 324** P **P** **20 30 41.2 +0.2**
ZAG **Zagreb** **84.80 324** eP **P** **20 30 42.0 +0.9**
ZAG **Zagreb** **84.80 324** P **P** **20 30 41.9 +0.7**
TNS **Taunus Mts** **84.81 331** eP **P** **20 30 41.8 +0.5**
comp=Z,123nm,1.4s,baz=39,slow=5.0
PAIG **Paliouri** **84.84 316** P **P** **20 30 41.8 +0.3**
PLE **Pljevlja** **84.87 321** ⇑*i*P **P** **20 30 40.3 -1.4**
RJOB **Jochberg** **84.87 327** eP **P** **20 30 42.5 +0.9**
comp=Z,144nm,1.2s,baz=39,slow=5.0
PMOR **Pomariorio Ree** **84.88 112** eP **P** **20 30 42.9 +1.0**
comp=Z,130nm,0.9s
PMOR **Pomariorio Ree** **84.88 112** eT T 22 03 28.2
comp=Z,51nm,0.2s
IVA **Berane** **84.92 320** ⇑*i*P **P** **20 30 41.0 -1.0**
GCIS **Gornji Cirnik** **84.94 324** *i*P **P** **20 30 42.2 +0.4**
GCIS ePP **PP** **20 34 01.6 +1.5**
SUSD **Miller** **84.95 38** P **P** **20 30 42.2 +0.2**
baz=316,SNR=11
SUSD **Miller** **84.95 38** IAmb IAmb 20 30 43.3
comp=Z,132nm,0.8s
OBKA **Obir** **84.98 325** *i*P **P** **20 30 42.2 0.0**
comp=Z,29nm,0.7s,SNR=17
OBKA PP PP 20 33 52.6 -7.9
comp=Z,68nm,1.3s
BLY **Banja Luka** **84.99 323** ⇑P **P** **20 30 43.0 +0.9**
BLY **Banja Luka** **84.99 323** eP **P** **20 30 42.6 +0.5**
214A **Organ Pipe Nat** **85.07 54** P **P** **20 30 43.8 +0.9**
baz=308
214A **Organ Pipe Nat** **85.07 54** IAmb IAmb 20 30 44.9
comp=Z,89nm,0.8s
PVY **Plav** **85.08 320** ⇑*i*P **P** **20 30 41.8 -1.0**
W18A **Petrified Fore** **85.09 50** P **P** **20 30 44.1 +1.1**
baz=310,SNR=15
AHRW **Bad Neuenahr-A** **85.11 332** eP **P** **20 30 42.8 +0.3**
comp=Z,125nm,1.1s,baz=39,slow=5.0
KBA **Koelnbreinsper** **85.12 326** *i*P **P** **20 30 43.0 0.0**
comp=Z,44nm,0.7s,SNR=45
KBA PP PP 20 33 51.9 -10
comp=Z,64nm,1.4s
KBA **Koelnbreinsper** **85.12 326** P **P** **20 30 43.3 +0.3**
KBA pmax pmax
comp=Z,121nm,1.3s
KOME **Kolasin** **85.14 320** ⇓*i*P **P** **20 30 41.9 -1.1**
TOD **Tromm** **85.15 330** P **P** **20 30 43.5 +0.6**
S22A **4UR Ranch, Cre** **85.18 47** P **P** **20 30 45.2 +1.5**
baz=311
S22A S **S** **20 41 03.5 +3.2**
baz=311
PPT **Papeete** **85.19 115** P **P** **20 30 45.6 +2.1**
comp=Z,36nm,0.8s,baz=28,slow=13,SNR=2.9
PPT LR LR 21 01 35.7
comp=Z,997nm,21.9s,baz=296,slow=30
OZLJ **Ozalj** **85.20 324** *i*P **P** **20 30 43.5 +0.3**
PPT2 **Papeete2** **85.20 115** eS **S** **20 40 58.9 -1.4**
comp=Z,2µm,28.8s
PPT2 **Papeete2** **85.20 115** eLR LR 20 57 43.7
comp=Z,2µm,22.0s
PPT2 **Papeete2** **85.20 115** eT T 22 04 12.7
comp=Z,17nm,0.3s
UPM **Unac-Piva** **85.21 321** eP **P** **20 30 48.1 +4.6**
UPM **Unac-Piva** **85.21 321** ⇑*i*P **P** **20 30 41.8 -1.7**

FUR **Furstenfeldbru** **85.22 328** eP **P** **20 30 44.1 +0.8**
comp=Z,184nm,0.8s,baz=39,slow=5.0
FUR **Furstenfeldbru** **85.22 328** P **P** **20 30 44.5 +1.2**
FUR pmax pmax
comp=Z,225nm,0.8s
VAH **Vaihoa** **85.22 112** eP **P** **20 30 44.5 +0.9**
comp=Z,54nm,1.0s
PAE **Paea** **85.25 115** eT T 22 04 08.6
comp=Z,2.8nm,0.3s
F33A **5 Mile Ranch,** **85.25 35** IAmb IAmb 20 30 44.8
comp=Z,162nm,0.9s
MGRS **Mrkonjic Grad** **85.28 323** ⇑*i*P **P** **20 30 44.7 +1.1**
MYKA **Terra Mystica** **85.32 326** *i*P **P** **20 30 43.6 -0.2**
comp=Z,49nm,0.7s,SNR=30
MYKA ePP **pP** **20 31 23.0 -1.4**
comp=Z,22nm,0.6s
MYKA PP PP 20 33 52.2 -11
comp=Z,47nm,1.5s
LJU **Ljubljana** **85.34 325** eP **P** **20 30 44.0 +0.1**
LJU ePP **pP** **20 31 21.4 -2.8**
LJU eSP **sP** **20 31 41.1 -0.2**
LJU ePP **PP** **20 34 03.4 +0.1**
LJU ePPP 20 34 39.5
LJU ePPP 20 34 59.9
LJU eSKSac **SKSac** **20 40 49.1 -4.6**
LJU eS **SKKSac** **20 41 00.3 -0.3**
LJU eSS **SS** **20 46 43.7 +5.8**
LJU **Ljubljana** **85.34 325** ⇓*i*P **P** **20 30 43.3 -0.5**
TIAR **Tiarei** **85.36 115** eP **P** **20 30 45.3 +1.0**
comp=Z,16nm,0.8s
TIAR **Tiarei** **85.36 115** eT T 22 04 16.7
comp=Z,6.4nm,0.3s
LIT **Litokhoron** **85.40 317** P **P** **20 30 44.1 -0.2**
NKY **Niksic** **85.44 320** ⇑*i*P **P** **20 30 43.2 -1.3**
BEBN **Eben Emael** **85.44 333** P **P** **20 30 44.0 -0.2**
BEBN PcP **PcP** **20 30 46.5 -0.5**
BEBN x x 20 30 54.0
BEBN pP **pP** **20 31 22.8 -1.8**
PHP **Peshkopia** **85.45 319** P **P** **20 30 44.7 +0.1**
MEM **Membach** **85.46 332** P **P** **20 30 44.5 +0.1**
comp=Z,71nm,0.9s
MEM PcP **PcP** **20 30 46.1 -1.0**
MEM pP **pP** **20 31 22.9 -1.8**
MEM **Membach** **85.46 332** P **P** **20 30 44.9 +0.5**
NKME **Niksic** **85.49 320** ⇑*i*P **P** **20 30 43.5 -1.2**
PDG **Podgorica** **85.57 320** ⇓P **P** **20 30 45.0 0.0**
PDG **Podgorica** **85.57 320** ⇓*i*P **P** **20 30 45.2 +0.2**
PDG **Podgorica** **85.57 320** IAmb IAmb 20 31 28.9
comp=Z,116nm,0.9s
TTG **Podgorica** **85.57 320** ⇓*i*P **P** **20 30 45.2 +0.2**
CEY **Cerknica** **85.61 325** ⇓*i*P **P** **20 30 44.5 -0.7**
BRY **Bratogost** **85.61 321** eP **P** **20 30 45.3 -0.1**
BRY **Bratogost** **85.61 321** ⇑*i*P **P** **20 30 43.9 -1.5**
STU **Stuttgart** **85.64 330** eP **P** **20 30 45.9 +0.6**
comp=Z,147nm,1.1s,baz=39,slow=5.0
STU epP **pP** **20 31 24.7 -1.0**
baz=38,slow=5.1
STU **Stuttgart** **85.64 330** P **P** **20 30 46.2 +0.9**
STU pmax pmax
comp=Z,126nm,1.1s
APE **Apeiranthos** **85.65 313** ⇓P **P** **20 30 45.1 -0.5**
APE **Apeiranthos** **85.65 313** P **P** **20 30 45.1 -0.5**
APE pmax pmax
comp=Z,107nm,0.9s
VOJS **Vojsko** **85.65 325** *i*P **P** **20 30 44.9 -0.6**
OHR **Ohrid** **85.65 318** P **P** **20 30 45.7 +0.1**
OHR pmax pmax
comp=Z,86nm,0.9s
CEME **Cevo** **85.66 320** ⇓*i*P **P** **20 30 44.5 -1.1**
BHOU **Houvegnez** **85.67 332** P **P** **20 30 45.7 +0.3**
BHOU pP **pP** **20 31 24.0 -1.8**
KTD **Kalmit** **85.67 330** P **P** **20 30 46.1 +0.6**
WATA **Walderalm** **85.72 327** eP **P** **20 30 45.8 -0.1**
comp=Z,60nm,1.5s,SNR=20
WATA PP PP 20 33 57.1 -9.4
comp=Z,27nm,1.4s
ABTA **Abfaltersbach** **85.75 327** eP **P** **20 30 45.2 -0.8**
comp=Z,41nm,0.9s,SNR=36
ABTA epP **pP** **20 31 24.8 -1.7**
comp=Z,40nm,0.9s
WTTA **Wattenberg** **85.75 327** eP **P** **20 30 46.1 0.0**
comp=Z,27nm,0.9s,SNR=21
WTTA ePP PP 20 33 56.6 -10
comp=Z,53nm,1.5s
DRME **Dracevica, Mon** **85.78 320** ⇓*i*P **P** **20 30 45.4 -0.7**
DRME **Dracevica, Mon** **85.78 320** ⇓*i*P **P** **20 30 45.2 -0.9**
OGNE **Ogallala** **85.79 42** P **P** **20 30 46.6 +0.3**
baz=314,SNR=24
DAMY **Dhamar** **85.80 285** P **P** **20 30 48.9 +1.9**
SNR=51
DAMY **Dhamar** **85.80 285** IAmb IAmb 20 31 32.7
comp=Z,126nm,1.2s
TREB **Trebinje** **85.84 321** eP **P** **20 30 45.9 -0.5**
EYMN **Ely** **85.84 32** P **P** **20 30 46.4 +0.1**
baz=320,SNR=29
BUM **Brajici-Budva** **85.85 320** ⇓*i*P **P** **20 30 45.4 -1.1**
UDBI **Udbina** **85.85 323** *i*P **P** **20 30 46.6 +0.1**
BCLA **Clavier** **85.88 333** P **P** **20 30 46.2 -0.3**
BCLA PcP **PcP** **20 30 48.3 -0.7**
BCLA x x 20 30 58.6
BCLA pP **pP** **20 31 24.8 -2.1**
RIY **Rijeka** **85.89 325** eP **P** **20 30 46.5 0.0**
RIY **Rijeka** **85.89 325** P **P** **20 30 46.1 -0.4**
ULC **Ulcinj** **85.90 320** ⇓*i*P **P** **20 30 45.8 -0.9**
KIJV **Kijevo** **85.91 323** *i*P **P** **20 30 47.8 +1.1**
MOTA **Moosalm** **85.92 328** eP **P** **20 30 46.9 0.0**
comp=Z,70nm,1.6s,SNR=22
MOTA epP **pP** **20 31 27.4 +0.1**
comp=Z,30nm,1.0s
UCC **Uccle** **85.93 333** P **P** **20 30 46.6 0.0**
comp=Z,75nm,1.9s
TRI **Trieste** **85.94 325** P **P** **20 30 46.7 -0.1**
TRI pmax pmax
comp=Z,97nm,1.7s
SKDS **Skadanscina** **85.94 325** eP **P** **20 30 46.3 -0.6**
SKDS eSKSac **SKSac** **20 40 53.3 -4.2**
SKDS eSS **SS** **20 46 50.5 +3.6**
HCY **Herceg Novi** **85.95 320** eP **P** **20 30 46.8 -0.2**
HCY **Herceg Novi** **85.95 320** ⇓*i*P **P** **20 30 45.9 -1.1**
RETA **Reutte** **85.96 328** eP **P** **20 30 47.2 +0.2**
comp=Z,60nm,1.1s,SNR=46
RETA epP **pP** **20 31 26.9 -0.5**
comp=Z,48nm,1.0s
SQTA **Sankt Quirin** **85.97 327** eP **P** **20 30 47.2 +0.1**
comp=Z,29nm,1.0s,SNR=19
SDCO **Great Sand Dun** **85.97 46** P **P** **20 30 48.8 +1.2**
baz=312
SDCO S **S** **20 41 10.0 +2.0**
baz=312
DBRK **Dubrovnik** **85.98 321** *i*P **P** **20 30 46.9 -0.2**
BGES **Gesves** **85.99 333** P **P** **20 30 46.9 -0.1**
comp=Z,64nm,0.9s
BGES PcP **PcP** **20 30 48.8 -0.6**
BGES pP **pP** **20 31 25.5 -2.0**
NEST **Nestorio** **86.00 318** P **P** **20 30 46.9 -0.4**
TIR **Tirane** **86.00 319** ⇑P **P** **20 30 47.2 0.0**
TIR **Tirane** **86.00 319** P **P** **20 30 47.8 +0.6**
TIR pmax pmax
comp=Z,80nm,1.0s
LANF **Langenberg** **86.05 330** P **P** **20 30 48.2 +0.9**
STON **Ston** **86.07 321** eP **P** **20 30 47.0 -0.5**
STON **Ston** **86.07 321** *i*P **P** **20 30 46.7 -0.8**
UBR **Ueberruh** **86.10 328** eP **P** **20 30 47.6 0.0**
comp=Z,191nm,2.3s,baz=39,slow=5.0
WLF **Walferdange** **86.16 332** P **P** **20 30 48.5 +0.7**
comp=Z,108nm,2.0s
WLF pP **pP** **20 31 26.1 -2.2**
WLF **Walferdange** **86.16 332** eP **P** **20 30 48.6 +0.7**
comp=Z,579nm,2.1s,baz=39,slow=5.0
WLF **Walferdange** **86.16 332** IAmb IAmb 20 30 49.6
comp=Z,150nm,1.3s
BMRD **Maredsous** **86.18 333** P **P** **20 30 48.0 +0.1**
BMRD PcP **PcP** **20 30 49.8 -0.4**
BMRD pP **pP** **20 31 26.8 -1.6**
TUC **Tucson** **86.19 53** P **P** **20 30 49.6 +1.1**
TUC pmax pmax
comp=Z,40nm,1.0s
TUC **Tucson** **86.19 53** P **P** **20 30 49.2 +0.8**
baz=309
TUC **Tucson** **86.19 53** P **P** **20 30 49.5 +1.1**
SNF **Seneffe** **86.19 333** P **P** **20 30 48.1 +0.2**
SNF pP **pP** **20 31 26.5 -1.9**
AGG **Agios Georgios** **86.22 316** P **P** **20 30 48.2 -0.2**
NVLJ **Novalja** **86.26 324** *i*P **P** **20 30 47.5 -0.9**

GIVF Givet 86.32 333 *e*P **P 20 30 47.7 -0.9**
GIVF pmax pmax
comp=Z,35nm,0.8s
FETA Feichten 86.33 328 *e*PcP **P 20 30 49.0 +0.1**
comp=Z,36nm,1.0s,SNR=24
FETA *e*pP **pP 20 31 28.7 -0.7**
comp=Z,33nm,0.9s
MAKR Makrakomi, Fth 86.34 316 P **P 20 30 47.8 -1.2**
BFO Black Forest 86.34 330 *e*P **P 20 30 49.0 +0.2**
comp=Z,83nm,1.0s,baz=39,slow=5.0
BFO *e*pP **pP 20 31 28.1 -1.2**
baz=38,slow=5.1
BFO Black Forest 86.34 330 P **P 20 30 49.0 +0.2**
BFO pmax pmax
comp=Z,116nm,1.3s
BFO Black Forest 86.34 330 P **P 20 30 49.0 +0.2**
MORI Morici 86.36 323 *i* P **P 20 30 48.6 -0.2**
DOU Dourbes 86.41 333 P **P 20 30 49.1 +0.1**
DOU pP **pP 20 31 29.0 -0.5**
DAVA Damuels 86.50 328 *e*PcP **P 20 30 49.9 +0.1**
comp=Z,77nm,1.1s,SNR=38
DAVA *e*pP **pP 20 31 29.3 -0.9**
comp=Z,31nm,0.9s
MEH Mehetia 86.51 114 *e*T T 22 05 43.6
comp=Z,74nm,0.2s
ZIRJ Zirje 86.54 323 *i* P **P 20 30 49.5 -0.3**
DUGI Dugi Otok 86.59 323 *i* P **P 20 30 49.5 -0.6**
BAIF Baives 86.59 333 *e*P **P 20 30 49.1 -0.8**
BAIF pmax pmax
comp=Z,49nm,1.0s
ECSD EROS Data Cent 86.63 37 P **P 20 30 50.3 0.0**
baz=317,SNR=60
ECSD S **S 20 41 11.6 -2.0**
baz=317
CTI Castel Tesino 86.66 327 IAmb IAmb 20 30 50.7
comp=Z,129nm,1.4s
CDF Champ du Feu 86.71 330 *e*P **P 20 30 49.9 -0.8**
CDF pmax pmax
comp=Z,127nm,1.4s
SLE Schleitheim 86.72 329 P **P 20 30 50.8 +0.1**
SLE pmax pmax
comp=Z,50nm,2.0s
ANX Ano Chora 86.75 316 P **P 20 30 50.2 -0.9**
KSCO Kaye Shedlock' 86.78 44 P **P 20 30 51.6 +0.4**
baz=314,SNR=11
KSCO Kaye Shedlock' 86.78 44 IAmb IAmb 20 30 52.9
comp=Z,132nm,1.2s
FUORN Ofenpass-Fuorn 86.85 328 IAmb IAmb 20 30 53.1
comp=Z,185nm,1.2s
ECH Echery 86.92 330 P **P 20 30 51.7 +0.1**
ECH pmax pmax
comp=Z,32nm,1.2s
SRN Sarande 86.94 318 P **P 20 30 51.6 -0.2**
T25A Trinidad 87.03 46 P **P 20 30 53.4 +0.8**
baz=312
T25A S **S 20 41 19.6 +1.6**
baz=312
IDI Anoyia 87.21 312 ⇓P **P 20 30 53.1 -0.2**
MOF Molkenrain 87.22 330 P **P 20 30 53.1 0.0**
ANMO Albuquerque 87.25 49 P **P 20 30 54.3 +0.6**
ANMO pmax pmax
comp=Z,29nm,1.1s
ANMO Albuquerque 87.25 49 P **P 20 30 54.6 +1.0**
baz=312
ANMO S **S 20 41 21.3 +1.1**
baz=312
ANMO Albuquerque 87.25 49 P **P 20 30 54.3 +0.6**
TAOE Nuku Hiva Isla 87.29 103 *e*P **P 20 30 54.6 +0.7**
comp=Z,101nm,1.0s
TAOE Nuku Hiva Isla 87.29 103 *e*S **S 20 41 18.6 -2.2**
comp=Z,797nm,25.9s
TAOE Nuku Hiva Isla 87.29 103 *e*LR LR 20 58 10.5
comp=Z,3µm,37.5s
DSB Dublin 87.33 340 IAmb IAmb 20 30 54.8
comp=Z,71nm,0.8s
SPMN Marine on St. 87.34 34 P **P 20 30 53.8 +0.1**
baz=320,SNR=16
SPMN Marine on St. 87.34 34 IAmb IAmb 20 30 54.9
comp=Z,83nm,0.9s
HINF Hinteralfeld 87.36 330 *e*P **P 20 30 52.5 -1.2**
HINF pmax pmax
comp=Z,164nm,1.9s
TUE Stuetta 87.36 328 IAmb IAmb 20 30 56.3
comp=Z,254nm,1.9s
HAU Haudompre 87.41 331 *e*P **P 20 30 53.5 -0.5**
HAU pmax pmax
comp=Z,24nm,0.6s
Y22D IRIS PASSCAL I 87.53 50 P **P 20 30 55.8 +0.8**
baz=311
BGNE Belgrade 87.54 39 P **P 20 30 54.6 -0.1**
baz=316,SNR=12
BGNE S **S 20 41 20.4 -1.9**
baz=316
ITM Ithomi 87.71 315 P **P 20 30 54.3 -1.3**
ITM Ithomi 87.71 315 IAmb IAmb 20 30 55.5
comp=Z,83nm,0.7s
LOMF Lomont 87.74 330 P **P 20 30 55.9 +0.3**
D41A Chassel 87.78 31 IAmb IAmb 20 30 57.4
comp=Z,68nm,0.8s
SCHQ Schefferville 87.85 15 P **P 20 30 56.6 +0.8**
comp=Z,115nm,0.9s,baz=349,slow=5.2,SNR=122
SCHQ PKKPbc **PKKPbc 20 48 40.2 -1.4**
comp=Z,8.1nm,0.7s,baz=95,slow=2.3,SNR=12
SCHQ PKPPKP **P'P'df 20 56 50.4 -0.4**
comp=Z,4.2nm,0.8s,baz=142,slow=5.0,SNR=5.9
SGRT San Giovanni R 87.88 321 IAmb IAmb 20 30 57.1
comp=Z,104nm,0.8s
121A Cookes Peak, D 88.00 51 P **P 20 30 58.0 +0.8**
baz=311,SNR=17
121A S **S 20 41 28.4 +1.1**
baz=311
MATE Matera 88.18 320 ⇑P **P 20 30 53.8 -3.9**
ZCCA Zocca 88.27 326 IAmb IAmb 20 31 05.5
comp=Z,91nm,0.9s
NRCA Norcia 88.40 324 IAmb IAmb 20 31 00.3
comp=Z,89nm,0.8s
ACER Acerenza 88.48 321 IAmb IAmb 20 31 00.4
comp=Z,71nm,0.8s
CBKS Cedar Bluff 88.54 42 P **P 20 30 59.2 -0.3**
baz=315,SNR=12
AQU L'Aquila 88.61 323 *e*P **P 20 31 00.7 +0.9**
AQU L'Aquila 88.61 323 P **P 20 31 01.0 +1.2**
AQU pmax pmax
comp=Z,166nm,1.0s
AQU L'Aquila 88.61 323 IAmb IAmb 20 31 01.4
comp=Z,91nm,0.8s
INTR Introdacqua 88.62 323 IAmb IAmb 20 31 01.8
comp=Z,55nm,0.7s
CABF La Chapelle 88.64 330 *e*P **P 20 30 58.9 -0.9**
CABF pmax pmax
comp=Z,155nm,1.9s
ATD Arta Tunnel 88.76 283 P **P 20 31 02.7 +1.8**
SNR=12
ATD Arta Tunnel 88.76 283 IAmb IAmb 20 31 04.2
comp=Z,142nm,1.7s
TBI Tubuai 88.88 120 *e*S **S 20 41 33.9 -1.3**
comp=Z,1µm,31.5s
TBI Tubuai 88.88 120 *e*LR LR 20 59 26.8
comp=Z,2µm,22.2s
TBI Tubuai 88.88 120 *e*T T 22 08 48.3
comp=Z,44nm,0.3s
E43A Lone Tree Farm 88.97 30 IAmb IAmb 20 31 02.9
comp=Z,106nm,0.8s
CLF Chambon-Foret 88.99 333 IAmb IAmb 20 31 03.2
comp=Z,59nm,0.9s
LOR Lormes 89.00 331 *e*P **P 20 31 01.6 +0.1**
LOR pmax pmax
comp=Z,45nm,1.9s
TIP Timpagrande 89.21 319 ⇓P **P 20 31 03.0 +0.3**
E44A Grand Marais A 89.21 29 P **P 20 31 03.3 +0.9**
baz=324,SNR=19
LPL La Plagne 89.24 329 *e*P **P 20 31 02.2 -0.7**
LPL pmax pmax
comp=Z,39nm,0.9s
LPG La Plagne 89.25 329 *e*P **P 20 31 02.3 -0.7**
LPG pmax pmax
comp=Z,30nm,0.6s
I40A Norwalk 89.37 34 IAmb IAmb 20 31 04.6
comp=Z,69nm,0.8s
FLN La Foliniere 89.37 335 *e*P **P 20 31 02.2 -0.9**
FLN pmax pmax
comp=Z,77nm,1.3s
MATQ Matagami 89.57 23 P **P 20 31 04.4 +0.4**
baz=330
MATQ S **S 20 41 37.9 -3.1**
baz=330
AVF Avril sur Loir 89.59 331 *e*P **P 20 31 03.4 -0.8**
AVF pmax pmax
comp=Z,124nm,1.3s
BNI Bardonecchia 89.63 329 P **P 20 31 04.9 +0.3**
BNI pmax pmax
comp=Z,34nm,1.0s
SCIA State Center 89.66 36 P **P 20 31 05.5 +0.8**
baz=319,SNR=6.3
SCIA State Center 89.66 36 IAmb IAmb 20 31 06.6
comp=Z,126nm,1.0s
D46A Sault St. Mari 89.74 28 P **P 20 31 05.2 +0.3**
baz=326,SNR=30
D46A S **S 20 41 38.6 -4.0**
baz=326
GRR Gorron 89.82 335 *e*P **P 20 31 04.7 -0.5**
GRR pmax pmax
comp=Z,82nm,0.8s
MBDF Montbardon 89.85 328 *e*P **P 20 31 04.4 -1.2**
MBDF pmax pmax
comp=Z,36nm,0.7s
D47A Chapleau 89.96 27 P **P 20 31 06.3 +0.4**
baz=326,SNR=52
D47A S **S 20 41 40.2 -4.6**
baz=326
BGF Bois d'Agland 89.98 332 *e*P **P 20 31 04.5 -1.5**
BGF pmax pmax
comp=Z,187nm,2.0s
KSU1 Kansas State U 90.02 40 P **P 20 31 06.5 +0.1**
baz=317,SNR=32
KSU1 S **S 20 41 42.7 -2.9**
baz=317
E46A Sault Ste Mari 90.06 29 IAmb IAmb 20 31 08.1
comp=Z,115nm,1.0s
MNTX Cornudas Mount 90.08 50 P **P 20 31 07.4 +0.6**
baz=312
ORIF Oris-en-Rattie 90.08 329 *e*P **P 20 31 04.5 -2.1**
ORIF pmax pmax
comp=Z,40nm,1.6s
SAOF Saorge 90.10 327 P **P 20 31 06.6 -0.1**
SAOF pmax pmax
comp=Z,57nm,1.9s
I42A Draeger Farm, 90.13 33 IAmb IAmb 20 31 08.3
comp=Z,77nm,0.8s
F45A CMU Biological 90.14 30 P **P 20 31 07.4 +0.7**
baz=325,SNR=13
F45A S **S 20 41 44.2 -2.2**
baz=325
MSTX Muleshoe 90.16 47 P **P 20 31 07.3 +0.1**
baz=314
ISO Isola 90.16 328 P **P 20 31 07.2 +0.2**
ISO pmax pmax
comp=Z,43nm,1.1s
H43A Windswept, Lux 90.17 32 IAmb IAmb 20 31 08.8
comp=Z,109nm,0.9s
AMTX Amarillo 90.18 46 P **P 20 31 08.3 +1.0**
baz=314
AMTX Amarillo 90.18 46 IAmb IAmb 20 31 09.3
comp=Z,100nm,0.8s
JFWS Jewell Farm 90.30 34 P **P 20 31 07.5 0.0**
baz=321,SNR=17
JFWS S **S 20 41 45.3 -2.7**
baz=321
JFWS Jewell Farm 90.30 34 IAmb IAmb 20 31 08.6
comp=Z,62nm,0.8s
CEL Celeste 90.34 319 IAmb IAmb 20 31 09.3
comp=Z,68nm,0.8s
D48A Paudash Townsh 90.34 27 P **P 20 31 07.7 0.0**
baz=327,SNR=18
D48A S **S 20 41 43.8 -4.5**
baz=327
E47A Iron Bridge 90.39 28 P **P 20 31 08.3 +0.4**
baz=326,SNR=21
D49A Beulah Townshi 90.43 26 P **P 20 31 08.3 +0.2**
baz=328,SNR=15
CHGQ Chibougamau 90.44 21 P **P 20 31 08.5 +0.4**
baz=333
TCF Toulx Ste Croi 90.45 332 *e*P **P 20 31 07.7 -0.6**
TCF pmax pmax
comp=Z,49nm,1.1s
N38A Joes South For 90.50 37 IAmb IAmb 20 31 10.1
comp=Z,97nm,0.9s
L40A Anamosa 90.50 35 IAmb IAmb 20 31 09.8
comp=Z,106nm,0.9s
SGMF Saint Gilles 90.52 336 *e*P **P 20 31 08.1 -0.4**
SGMF pmax pmax
comp=Z,56nm,0.8s
G45A Suttons Bay 90.61 30 P **P 20 31 09.7 +0.8**
baz=325,SNR=24
G45A S **S 20 41 48.6 -2.1**
baz=325
VIVF Saint-Julien-l 90.64 330 *e*P **P 20 31 08.5 -0.6**
VIVF pmax pmax
comp=Z,59nm,0.9s
U32A Winter Ranch, 90.68 43 IAmb IAmb 20 31 11.4
comp=Z,64nm,0.9s
G46A Petoskey 90.70 29 P **P 20 31 10.1 +0.7**
baz=325,SNR=8.4
H45A Beulah 90.78 31 P **P 20 31 10.7 +0.9**
baz=324,SNR=9.6
E48A Lockeyer 90.79 27 P **P 20 31 10.1 +0.3**
baz=327,SNR=11
E48A S **S 20 41 47.6 -4.8**
baz=327
QUIF Quistinic 91.02 336 *e*P **P 20 31 10.2 -0.6**
QUIF pmax pmax
comp=Z,39nm,0.8s
D50A G1974 Best Tow 91.06 26 P **P 20 31 11.0 0.0**
baz=329,SNR=27
VLDQ Val d'Or 91.06 24 IAmb IAmb 20 31 11.8
comp=Z,70nm,0.9s
F48A Evansville 91.17 28 P **P 20 31 12.0 +0.5**
baz=327,SNR=10
F48A S **S 20 41 52.9 -2.9**
baz=327
I45A Fountain 91.18 31 P **P 20 31 12.3 +0.7**
baz=324
I45A S **S 20 41 55.7 -0.2**
baz=324
H46A Fife Lake 91.20 30 P **P 20 31 12.6 +0.9**
baz=325,SNR=9.6
GLMI Grayling 91.21 30 P **P 20 31 12.8 +1.0**
baz=325,SNR=16
G47A Hillman 91.23 29 P **P 20 31 12.6 +0.8**
baz=326,SNR=13
G47A S **S 20 41 54.1 -2.2**
baz=326
P38A Dawn 91.23 38 IAmb IAmb 20 31 13.5
comp=Z,61nm,0.9s
L42A Oliver, Polo 91.27 34 IAmb IAmb 20 31 13.1
comp=Z,82nm,0.8s
D51A Lot 18 Range I 91.29 25 P **P 20 31 12.0 0.0**
baz=329,SNR=17
K43A Burlington 91.33 33 IAmb IAmb 20 31 13.4
comp=Z,51nm,0.8s
F49A Sandfield 91.44 28 P **P 20 31 13.2 +0.4**
baz=327,SNR=7.1
RJF Les Rejaudoux 91.54 332 *e*P **P 20 31 13.1 -0.2**
RJF pmax pmax
comp=Z,66nm,1.0s
H47A Mio 91.56 30 P **P 20 31 14.3 +1.0**
baz=326,SNR=5.3
I46A Reed City 91.59 31 P **P 20 31 14.1 +0.6**
baz=325,SNR=6.9
I46A S **S 20 42 00.2 +0.6**
baz=325
J45A Montague 91.60 31 P **P 20 31 13.6 0.0**
baz=324
T35A Sooner Cattle 91.67 42 IAmb IAmb 20 31 15.7
comp=Z,81nm,0.9s
N41A Harden Midland 91.72 36 IAmb IAmb 20 31 15.6
comp=Z,103nm,1.0s
E51A G1948 Merrick 91.73 26 P **P 20 31 14.2 +0.1**
baz=329,SNR=16
H48A Harrisville 91.83 29 P **P 20 31 15.4 +0.8**
baz=326
H48A Harrisville 91.83 29 IAmb IAmb 20 31 16.6
comp=Z,73nm,0.9s
D53A Lac Vacive, Po 91.88 24 P **P 20 31 15.1 +0.3**
baz=330,SNR=23
D53A Lac Vacive, Po 91.88 24 IAmb IAmb 20 31 16.2
comp=Z,54nm,0.9s
I47A Gladwin 91.91 30 P **P 20 31 15.9 +0.9**
baz=325,SNR=8.3
I47A Gladwin 91.91 30 IAmb IAmb 20 31 18.7
comp=Z,100nm,1.1s
L44A Lake County Fo 91.94 33 P **P 20 31 15.5 +0.3**
baz=323,SNR=7.1
L44A Lake County Fo 91.94 33 IAmb IAmb 20 31 16.4
comp=Z,80nm,0.8s
WMOK Wichita Mounta 91.97 44 P **P 20 31 15.9 +0.4**
baz=316,SNR=25
WMOK Wichita Mounta 91.97 44 IAmb IAmb 20 31 17.1
comp=Z,45nm,0.8s
P40A Paris 92.05 37 IAmb IAmb 20 31 17.3
comp=Z,90nm,0.9s
F51A Arnstein 92.09 26 P **P 20 31 16.0 +0.2**
baz=329,SNR=12
I48A Sherman Twp 92.10 29 P **P 20 31 16.9 +1.1**
baz=326,SNR=9.8
D54A Lac Fusel, La 92.17 24 P **P 20 31 16.2 0.0**
baz=331,SNR=18
E52A Mattawa 92.24 25 P **P 20 31 16.3 -0.1**
baz=330,SNR=8.4
OKCFA Oklahoma City 92.24 43 IAmb IAmb 20 31 18.5
comp=Z,87nm,1.1s
F52A Sundridge 92.42 26 P **P 20 31 17.8 +0.4**
baz=329,SNR=9.3
J47A Sunmer 92.42 31 P **P 20 31 18.2 +0.8**
baz=325,SNR=6.8
J47A Sunmer 92.42 31 IAmb IAmb 20 31 19.4
comp=Z,90nm,1.1s
K46A Dorr 92.47 32 P **P 20 31 17.9 +0.3**
baz=324,SNR=7.9
E53A Dumoine, Ponti 92.50 25 P **P 20 31 17.6 -0.1**
baz=330
M44A Midewin, Midew 92.51 34 IAmb IAmb 20 31 19.2
comp=Z,82nm,0.9s
HDIL Hopedale 92.58 35 P **P 20 31 18.4 +0.3**
baz=322,SNR=16
E54A Lac Daplat, Po 92.62 24 P **P 20 31 18.1 -0.1**
baz=331,SNR=10
I49A Point Hope 92.66 29 P **P 20 31 19.3 +0.9**
baz=327
I49A Point Hope 92.66 29 IAmb IAmb 20 31 20.5
comp=Z,71nm,0.8s
D55A Sainte-Anne-du 92.67 23 P **P 20 31 18.8 +0.3**
baz=332,SNR=15
ALGO Algonquin Park 92.73 25 P **P 20 31 18.9 +0.1**
baz=330,SNR=9.6
TX32 Lajitas Array 92.76 51 IAmb IAmb 20 31 21.4
comp=Z,95nm,1.1s
TXAR Lajitas Array 92.76 51 P **P 20 31 20.1 +0.8**
comp=Z,58nm,0.9s,baz=287,slow=3.2,SNR=461
TXAR PKKPbc **PKKPbc 20 48 29.0 +0.2**
comp=Z,0.7nm,0.5s,baz=142,slow=6.5,SNR=10
TXAR PKPPKP **P'P'df 20 56 34.9 -7.6**
comp=Z,0.9nm,1.0s,baz=176,slow=3.6,SNR=4.7
TXAR LR LR 21 10 19.8
comp=Z,309nm,19.7s,baz=0.0,slow=34
L46A Eue Claire 92.79 32 P **P 20 31 19.2 +0.1**
baz=324
J48A Bridge Port 92.80 30 P **P 20 31 19.8 +0.7**
baz=326,SNR=19
J48A S **S 20 42 11.7 +1.2**
baz=326
TUL1 Leonard 92.80 42 P **P 20 31 19.7 +0.4**
baz=318,SNR=14
TUL1 S **S 20 42 10.6 -0.2**
baz=318
TUL1 Leonard 92.80 42 IAmb IAmb 20 31 20.8
comp=Z,50nm,0.9s
K47A Vermontville 92.81 31 P **P 20 31 19.6 +0.4**
baz=325,SNR=7.8
D56A ZEC Mazanza, M 92.87 23 P **P 20 31 20.0 +0.7**
baz=333,SNR=35
D56A S **S 20 42 11.0 0.0**
baz=333
R40A Maddies Statio 92.88 38 IAmb IAmb 20 31 20.6
comp=Z,45nm,0.9s
ABTX Abilene, Hawle 92.97 46 P **P 20 31 20.7 +0.5**
baz=315,SNR=19
ABTX Abilene, Hawle 92.97 46 IAmb IAmb 20 31 22.0
comp=Z,85nm,1.1s
E55A Montcerf-Lytto 92.98 24 P **P 20 31 20.1 +0.2**
baz=332
J49A Marlette 93.02 30 P **P 20 31 21.0 +0.9**
baz=326,SNR=18
K48A Perry 93.07 30 P **P 20 31 21.0 +0.6**
baz=326,SNR=7.4
D57A Chemin Vers le 93.17 22 P **P 20 31 21.3 +0.6**
baz=333,SNR=46
D57A S **S 20 42 09.8 -3.8**
baz=333
U38A Gravette 93.17 41 IAmb IAmb 20 31 22.1
comp=Z,48nm,0.9s
P43A Skaggs, Pawnee 93.19 36 IAmb IAmb 20 31 22.3
comp=Z,64nm,0.9s
H52A Wyevale 93.20 27 P **P 20 31 21.3 +0.4**
baz=329,SNR=7.7
G54A Lake Saint Pet 93.20 25 P **P 20 31 21.1 +0.1**
baz=330,SNR=14
E56A St. Veronique 93.23 23 P **P 20 31 21.3 +0.2**
baz=332,SNR=18
G53A Haliburton 93.25 26 P **P 20 31 21.3 +0.2**
baz=330,SNR=8.4
K49A Clarkson 93.36 30 P **P 20 31 22.3 +0.6**
baz=326
D58A Chemin du LacG 93.41 21 P **P 20 31 22.2 +0.3**
baz=334,SNR=16
F55A Otter Lake 93.42 24 P **P 20 31 21.7 -0.2**
baz=331
I51A Listowel 93.48 28 P **P 20 31 23.1 +0.8**
baz=328,SNR=8.1
CCM Cathedral Cave 93.58 38 P **P 20 31 22.9 +0.1**
CCM pmax pmax
comp=Z,50nm,0.9s
CCM Cathedral Cave 93.58 38 P **P 20 31 22.8 +0.1**
baz=321
CCM S **S 20 42 16.7 -0.8**
baz=321
CCM Cathedral Cave 93.58 38 P **P 20 31 22.9 +0.1**
CCM IAmb IAmb 20 31 24.0
comp=Z,50nm,0.9s
I52A Shelburne 93.58 27 P **P 20 31 23.3 +0.6**
baz=328,SNR=9.3
M47A Cromwell 93.61 32 P **P 20 31 23.3 +0.4**
baz=324
E57A Chemin Saint G 93.63 23 P **P 20 31 23.5 +0.6**
baz=333,SNR=21
E57A S **S 20 42 14.3 -3.4**
baz=333
SLM Saint Louis 93.63 37 IAmb IAmb 20 31 24.2
comp=Z,61nm,0.8s
L48A N Adams 93.65 31 P **P 20 31 23.5 +0.4**
baz=325,SNR=8.1
AAM Ann Arbor 93.68 30 P **P 20 31 23.5 +0.4**
baz=326
K50A Casco 93.71 30 P **P 20 31 23.7 +0.4**
baz=327
H53A Bobcaygeon 93.74 26 P **P 20 31 23.7 +0.3**
baz=330,SNR=9.1
SFIN Lafayette 93.74 34 P **P 20 31 23.8 +0.3**
baz=324,SNR=8.0
SFIN Lafayette 93.74 34 IAmb IAmb 20 31 24.9
comp=Z,35nm,0.8s
D59A Saint-Raymond 93.80 21 P **P 20 31 24.0 +0.4**
baz=335,SNR=5.4
G55A Calabogie 93.81 25 P **P 20 31 23.8 +0.1**
baz=331,SNR=11
PLVO Plevna 93.87 25 IAmb IAmb 20 31 25.2
comp=Z,40nm,0.8s
EPF Esparros 93.91 331 *e*P **P 20 31 23.4 -0.9**
EPF pmax pmax
comp=Z,19nm,1.0s
E58A La Victoria 93.94 22 P **P 20 31 24.7 +0.4**
baz=334,SNR=13
N47A Urbana 93.97 33 P **P 20 31 24.5 -0.1**
baz=324,SNR=16
N47A S **S 20 42 19.6 -1.2**
baz=324
N47A Urbana 93.97 33 IAmb IAmb 20 31 25.6
comp=Z,64nm,0.8s
I53A Kortright Cn E 94.01 27 P **P 20 31 25.2 +0.5**
baz=329
Q44A Meyer Farm, Va 94.02 36 IAmb IAmb 20 31 26.1
comp=Z,58nm,0.9s
ORIO Orleans, Innes 94.04 24 P **P 20 31 24.7 -0.1**
baz=332,SNR=17
U40A Yellville 94.05 40 P **P 20 31 24.9 -0.2**
baz=320,SNR=51
E59A St. Maurice 94.07 21 P **P 20 31 25.2 +0.3**
baz=334
D61A St Aubert, Com 94.09 20 P **P 20 31 25.6 +0.7**
baz=336,SNR=5.2
DELO Deloro Mine 94.13 26 IAmb IAmb 20 31 26.5
comp=Z,41nm,0.8s
D60A Saint Jean D'O 94.14 20 P **P 20 31 25.7 +0.5**

baz=336,SNR=11
J52A **Paris** 94.17 28 P P 20 31 26.1 +0.7
baz=328,SNR=8.4
K51A **Iona Station** 94.20 29 P P 20 31 26.3 +0.8
baz=328,SNR=5.1
F58A **St-Lin Laurent** 94.22 23 P P 20 31 26.0 +0.5
baz=333
M49A **Liberty Center** 94.23 31 P P 20 31 26.0 +0.3
baz=326,SNR=6.0
L50A **Kingsville** 94.25 30 P P 20 31 25.9 +0.1
baz=326
H55A **Tweed** 94.26 25 P P 20 31 26.1 +0.3
baz=331,SNR=12
N48A **Decatur** 94.28 32 P P 20 31 26.1 +0.2
baz=325,SNR=12
P46A **Rosedale** 94.30 34 IAmb IAmb 20 31 27.4
comp=Z,49nm,0.8s
I55A **Frankford** 94.37 26 P P 20 31 26.4 +0.1
baz=330
JCT **Junction City** 94.39 48 P P 20 31 26.8 0.0
baz=315
JCT **Junction City** 94.39 48 IAmb IAmb 20 31 28.0
comp=Z,43nm,0.8s
W39A **Magazine** 94.43 41 P P 20 31 26.6 -0.2
baz=319,SNR=7.7
K52A **Tillsonburg** 94.47 28 P P 20 31 27.2 +0.4
baz=325
E60A **Ste Agathe de** 94.49 21 P P 20 31 27.1 +0.3
baz=335,SNR=9.6
D62A **Allapoint, All** 94.51 19 P P 20 31 27.6 +0.7
baz=337,SNR=13
D62A **Allapoint, All** 94.51 19 IAmb IAmb 20 31 29.2
comp=Z,46nm,0.9s
G57A **Newington** 94.52 24 P P 20 31 27.1 +0.2
baz=332,SNR=9.4
H56A **Elgin** 94.54 25 P P 20 31 27.4 +0.3
baz=331,SNR=7.1
F59A **Saint Guilaume** 94.55 22 P P 20 31 27.8 +0.7
baz=334,SNR=9.2
N49A **Columbus Grove** 94.59 32 P P 20 31 27.7 +0.3
baz=326,SNR=12
N49A **Columbus Grove** 94.59 32 IAmb IAmb 20 31 28.8
comp=Z,40nm,0.8s
H06E1 **SOCORRO T-PHAS** 94.62 63 P P 20 31 29.3 +1.4
H06S1 **SOCORRO T** 94.62 64 P P 20 31 29.9 +2.0
M50A **Fremont** 94.68 31 P P 20 31 27.5 -0.3
baz=326
F60A **Warwick** 94.70 21 P P 20 31 28.0 +0.2
baz=335,SNR=5.2
E61A **Lac Etchemin** 94.71 20 P P 20 31 28.5 +0.6
baz=336,SNR=8.6
O48A **Farmland** 94.71 33 P P 20 31 28.0 0.0
baz=325,SNR=17
WHTX **Lake Whitney,** 94.71 46 P P 20 31 28.6 +0.5
baz=316,SNR=7.2
WHTX **Lake Whitney,** 94.71 46 IAmb IAmb 20 31 29.8
comp=Z,44nm,0.9s
G58A **Ormstown** 94.78 23 P P 20 31 28.3 +0.2
baz=333,SNR=12
D63A **Stockholm** 94.80 18 P P 20 31 28.8 +0.6
baz=338,SNR=13
J54A **Appleton** 94.84 27 P P 20 31 28.4 -0.1
baz=330
S44A **Carbondale** 94.85 37 IAmb IAmb 20 31 29.9
comp=Z,53nm,0.8s
SIUC **Southern Illin** 94.85 37 IAmb IAmb 20 31 29.9
comp=Z,64nm,0.9s
PECO **Prince Edward** 94.86 25 IAmb IAmb 20 31 29.8
comp=Z,37nm,0.9s
DRLN **Deer Lake** 94.90 11 IAmb IAmb 20 32 43.8
comp=Z,68nm,1.8s
PBMO **Poplar Bluff** 94.98 38 IAmb IAmb 20 31 30.5
comp=Z,49nm,0.9s
F61A **St Evariste** 94.98 21 P P 20 31 30.2 +1.2
baz=336,SNR=23
MIAR **Mount Ida** 95.03 41 P P 20 31 29.7 +0.2
baz=319,SNR=26
MIAR **Mount Ida** 95.03 41 IAmb IAmb 20 31 30.9
comp=Z,28nm,0.8s
LONY **Lake Ozonia** 95.08 24 P P 20 31 29.7 +0.1
baz=333,SNR=6.2
O49A **Covington** 95.13 32 P P 20 31 30.1 +0.2
baz=325,SNR=11
O49A **Covington** 95.13 32 IAmb IAmb 20 31 31.1
comp=Z,32nm,0.8s
J55A **Hilton** 95.15 26 P P 20 31 30.0 +0.1
baz=330
J55A **Hilton** 95.15 26 IAmb IAmb 20 31 31.1
comp=Z,45nm,0.8s
WHAR **Wooly Hollow** 95.16 40 IAmb IAmb 20 31 31.0
comp=Z,34nm,1.0s
N50A **Nevada** 95.16 31 P P 20 31 30.2 +0.2
baz=326,SNR=6.4
PQI **Presque Isle** 95.16 19 IAmb IAmb 20 31 31.4
comp=Z,49nm,1.0s
M52A **Chesterland** 95.26 29 P P 20 31 30.5 0.0
baz=328
W41B **Gary Mavity, V** 95.27 40 P P 20 31 30.4 -0.2
baz=320,SNR=7.2
E63A **Oxbow** 95.28 19 P P 20 31 30.7 +0.2
baz=338,SNR=12
E63A **Oxbow** 95.28 19 IAmb IAmb 20 31 32.5
comp=Z,71nm,1.1s
ERPA **Erie** 95.31 28 P P 20 31 31.0 +0.3
baz=329
ERPA **Erie** 95.31 28 IAmb IAmb 20 31 32.3
comp=Z,40nm,0.9s
I57A **Carthage** 95.32 25 P P 20 31 30.7 0.0
baz=332,SNR=5.2
L53A **Girard** 95.35 29 P P 20 31 31.3 +0.5
baz=328,SNR=9.3
H59A **Cadyville** 95.35 23 P P 20 31 30.9 +0.1
baz=333,SNR=7.6
N51A **Ashland** 95.36 30 P P 20 31 31.0 +0.1
baz=327
G60A **Masonville** 95.37 22 P P 20 31 31.1 +0.2
baz=334
K54A **Basiliko Farm,** 95.39 27 P P 20 31 31.5 +0.5
baz=330,SNR=13
H58A **Gabriels** 95.39 23 P P 20 31 31.4 +0.3
baz=333,SNR=13
USIN **University of** 95.41 36 IAmb IAmb 20 31 32.4
comp=Z,37nm,1.0s
E64A **Bridgewater** 95.44 19 P P 20 31 31.6 +0.5
baz=338,SNR=6.4
G61A **St-Isidore-de-** 95.45 21 P P 20 31 32.3 +1.1
baz=335,SNR=15
X40A **Basin Creek Fa** 95.47 41 P P 20 31 31.7 +0.2
baz=319,SNR=10
L54A **Sinclairville** 95.47 28 P P 20 31 31.9 +0.5
baz=329,SNR=5.2
O50A **Cable** 95.48 32 P P 20 31 31.7 +0.3
baz=326,SNR=9.7
J56A **Wolcott** 95.48 26 P P 20 31 31.4 0.0
baz=331
P49A **Miami Univ. Ec** 95.50 33 P P 20 31 31.5 0.0
baz=325
435B **Jarrell** 95.51 46 P P 20 31 31.8 0.0
baz=316
K55A **Perry** 95.52 27 P P 20 31 31.8 +0.2
baz=330,SNR=5.1
MMNY **Mt. Morris Dam** 95.58 27 IAmb IAmb 20 31 33.1
comp=Z,36nm,0.8s
WVNY **West Valley, N** 95.60 27 IAmb IAmb 20 31 33.5
comp=Z,48nm,0.9s
M53A **Wt Miller and** 95.62 29 P P 20 31 32.3 +0.3
baz=328
ALLY **Alegheny Colle** 95.65 29 IAmb IAmb 20 31 33.7
comp=Z,41nm,0.9s
J57A **Williamstown** 95.67 25 P P 20 31 32.6 +0.3
baz=332,SNR=6.2
J57A **Williamstown** 95.67 25 IAmb IAmb 20 31 33.6
comp=Z,50nm,0.8s
ACSO **Alum Creek Sta** 95.68 31 P P 20 31 32.7 +0.3
baz=326,SNR=9.9
ACSO **Alum Creek Sta** 95.68 31 IAmb IAmb 20 31 33.6
comp=Z,47nm,0.8s
KEST **Kesra** 95.69 321 P P 20 31 32.7 +0.1
comp=Z,13nm,0.9s,baz=277,slow=2.4,SNR=9.6
KEST PP PP 20 35 24.0 -1.4
comp=Z,9.0nm,0.9s,baz=234,slow=8.4,SNR=3.8
KEST PKKPbc PKKPbc 20 48 22.0 +0.6
comp=Z,3.9nm,0.9s,baz=230,slow=3.1,SNR=3.5
KEST LR LR 21 19 12.4
comp=Z,1µm,18.1s,baz=336,slow=38
N52A **McGinn's Farm,** 95.74 30 P P 20 31 32.4 -0.2
baz=327
H60A **Morristown** 95.74 22 P P 20 31 33.2 +0.6
baz=334,SNR=6.6
F63A **Nahmakanta, Br** 95.76 20 P P 20 31 33.2 +0.6
baz=337,SNR=5.4
F63A **Nahmakanta, Br** 95.76 20 IAmb IAmb 20 31 34.6
comp=Z,42nm,1.2s
I58A **Old Forge** 95.78 24 P P 20 31 32.3 -0.5
baz=332
G62A **West of Eustis** 95.80 21 P P 20 31 33.7 +0.9
baz=336,SNR=6.9
G62A **West of Eustis** 95.80 21 IAmb IAmb 20 31 35.1
comp=Z,46nm,1.1s
F64A **Sherman** 95.82 19 P P 20 31 33.3 +0.4
baz=338
F64A **Sherman** 95.82 19 IAmb IAmb 20 31 34.6
comp=Z,31nm,1.1s
K56A **Middlesex** 95.82 26 P P 20 31 33.3 +0.3
baz=330,SNR=5.5
WCI **Wyandotte Cave** 95.84 34 P P 20 31 33.5 +0.4
WCI pmax pmax
comp=Z,50nm,0.8s
WCI **Wyandotte Cave** 95.84 34 P P 20 31 33.3 +0.2
baz=324
WCI **Wyandotte Cave** 95.84 34 P P 20 31 33.5 +0.4
P50A **Jamestown** 95.84 32 P P 20 31 33.2 +0.1
baz=326,SNR=7.3
L55A **Hinsdale** 95.85 27 P P 20 31 33.5 +0.3
baz=330
O51A **Pataskala** 95.91 31 P P 20 31 33.3 -0.1
baz=327
J58A **Remsen** 95.96 25 P P 20 31 34.1 +0.5
baz=332,SNR=7.3
J58A **Remsen** 95.96 25 IAmb IAmb 20 31 34.9
comp=Z,22nm,0.8s
M54A **Oil Creek Stat** 95.96 28 P P 20 31 34.0 +0.4
baz=329,SNR=8.0
M54A **Oil Creek Stat** 95.96 28 IAmb IAmb 20 31 35.0
comp=Z,66nm,0.8s
H61A **Lyndonville** 96.00 22 P P 20 31 34.6 +0.8
baz=335,SNR=10
I59A **Olmsteadville** 96.05 24 P P 20 31 34.3 +0.3
baz=333,SNR=7.8
K57A **Scipio Center** 96.08 26 P P 20 31 33.7 -0.5
baz=331
N53A **Lisbon** 96.09 30 P P 20 31 34.4 +0.2
baz=328,SNR=7.5
N53A **Lisbon** 96.09 30 IAmb IAmb 20 31 35.6
comp=Z,33nm,0.9s
PKME **Peaks-Kenny Pk** 96.11 20 P P 20 31 35.0 +0.8
baz=337,SNR=6.7
PKME **Peaks-Kenny Pk** 96.11 20 IAmb IAmb 20 31 36.3
comp=Z,41nm,1.1s
J59A **Piesco** 96.13 24 P P 20 31 34.5 +0.1
baz=333,SNR=10
J59A **Piesco** 96.13 24 IAmb IAmb 20 31 35.7
comp=Z,28nm,0.8s
833A **Chaparral WMA,** 96.16 49 P P 20 31 35.3 +0.5
baz=315
G63A **Kingsbury** 96.16 20 P P 20 31 35.4 +1.0
baz=336,SNR=7.5
I60A **Shoreham** 96.19 23 P P 20 31 35.2 +0.6
baz=334,SNR=7.4
H62A **Milan** 96.20 21 P P 20 31 35.7 +1.0
baz=335,SNR=15
ABSA **Djebel Ababsia** 96.22 323 P PP 20 35 32.4 +3.0
L56A **Greenwood** 96.22 27 P P 20 31 35.0 +0.2
baz=330,SNR=12
L56A **Greenwood** 96.22 27 IAmb IAmb 20 31 36.2
comp=Z,32nm,0.8s
O52A **Adamsville** 96.26 31 P P 20 31 35.0 0.0
baz=327,SNR=7.9
O52A **Adamsville** 96.26 31 IAmb IAmb 20 31 36.2
comp=Z,31nm,0.9s
P51A **Williamsport** 96.27 32 P P 20 31 34.7 -0.4
baz=326
P51A **Williamsport** 96.27 32 IAmb IAmb 20 31 35.9
comp=Z,28nm,0.8s
LBNH **Lisbon** 96.27 22 P P 20 31 35.7 +0.7
baz=335
G64A **Maxfield** 96.27 20 P P 20 31 35.8 +0.9
baz=337,SNR=6.5
N54A **Moraine State** 96.30 29 P P 20 31 35.4 +0.2
baz=328,SNR=12
N54A **Moraine State** 96.30 29 IAmb IAmb 20 31 36.6
comp=Z,38nm,0.9s
M55A **Ridgway** 96.34 28 P P 20 31 35.9 +0.5
baz=329,SNR=7.8
K58A **Earlville** 96.36 25 P P 20 31 35.8 +0.4
baz=332,SNR=9.4
K58A **Earlville** 96.36 25 IAmb IAmb 20 31 37.0
comp=Z,36nm,0.9s
O53A **New Philadelph** 96.41 30 P P 20 31 35.7 +0.1
baz=328,SNR=14
Z41A **Richland Creek** 96.42 42 P P 20 31 36.0 +0.1
baz=319
H63A **New Sharon** 96.45 21 P P 20 31 36.5 +0.7
baz=336,SNR=5.8
I61A **Oroboro, Fairl** 96.46 22 P P 20 31 35.8 -0.1
baz=334
ACCN **Adirondack Com** 96.48 24 IAmb IAmb 20 31 37.4
comp=Z,26nm,0.9s
X43A **Marell** 96.49 40 P P 20 31 36.1 0.0
baz=321
CKFL **Kef-Lekhel** 96.49 323 P PP 20 35 34.6 +3.1
NATX **Nacogdoches** 96.50 44 P P 20 31 36.3 +0.1
baz=318
Q51A **Peebles** 96.52 32 P P 20 31 36.4 +0.2
baz=326,SNR=14
P52A **Corning** 96.54 31 P P 20 31 36.0 -0.3
baz=327,SNR=7.8
M56A **Emporium** 96.55 27 P P 20 31 36.6 +0.3
baz=330,SNR=8.4
M56A **Emporium** 96.55 27 IAmb IAmb 20 31 37.8
comp=Z,28nm,0.9s
L57A **Andrews Acres** 96.60 26 P P 20 31 36.8 +0.3
baz=331,SNR=6.7
K59A **Cooperstown** 96.63 25 P P 20 31 37.1 +0.4
baz=332,SNR=9.4
G65A **Princeton** 96.64 19 P P 20 31 36.3 -0.3
baz=338
J60A **Last Hill Farm** 96.69 23 P P 20 31 37.3 +0.5
baz=334
R50A **Paris** 96.70 33 IAmb IAmb 20 31 38.3
comp=Z,32nm,0.9s
H64A **Troy** 96.70 20 P P 20 31 37.6 +0.7
baz=337
BINY **Binghamton** 96.74 26 P P 20 31 37.5 +0.3
baz=332,SNR=5.3
BINY **Binghamton** 96.74 26 IAmb IAmb 20 34 55.8
comp=Z,22nm,0.5s
I62A **Tamworth** 96.78 22 P P 20 31 37.6 +0.3
baz=335
WVT **Waverly** 96.78 37 P P 20 31 36.8 -0.7
WVT pmax pmax
comp=Z,16nm,0.8s
WVT **Waverly** 96.78 37 P P 20 31 37.4 0.0
baz=323
WVT **Waverly** 96.78 37 P P 20 31 36.8 -0.7
DFRA **Djebel Bou Aff** 96.79 324 P PP 20 35 36.7 +2.9
O54A **Avella** 96.80 30 P P 20 31 37.9 +0.4
baz=328,SNR=10
O54A **Avella** 96.80 30 IAmb IAmb 20 31 39.0
comp=Z,33nm,0.8s
N55A **Marion Center** 96.85 28 P P 20 31 37.9 +0.2
baz=329,SNR=8.1
I63A **Otisfield** 96.85 21 P P 20 31 38.9 +1.3
baz=336,SNR=7.1
I63A **Otisfield** 96.85 21 IAmb IAmb 20 31 40.1
comp=Z,44nm,1.0s
W45A **Hickory Valley** 96.87 38 IAmb IAmb 20 31 39.5
comp=Z,27nm,0.8s
J61A **Chester** 96.88 23 P P 20 31 38.5 +0.8
baz=334,SNR=5.7
L58A **Harry Jones Me** 96.92 26 P P 20 31 38.4 +0.4
baz=332,SNR=11
H65A **Eastbrook** 96.92 19 P P 20 31 38.3 +0.5
baz=338
P53A **Whipple** 96.97 31 P P 20 31 38.4 +0.2
baz=327
P53A **Whipple** 96.97 31 IAmb IAmb 20 31 39.6
comp=Z,30nm,1.1s
N56A **West Decatur** 97.00 28 P P 20 31 38.8 +0.4
baz=330,SNR=6.5
Q52A **Bidwell** 97.04 31 P P 20 31 38.4 -0.2
baz=327
TRY **Troy** 97.06 24 IAmb IAmb 20 31 40.2
comp=Z,26nm,0.9s
M57A **Sunshine Farm,** 97.08 27 P Pdif 20 31 39.2 +0.5
baz=331,SNR=14
M57A **Sunshine Farm,** 97.08 27 IAmb IAmb 20 31 40.3
comp=Z,45nm,0.9s
L59A **Walton** 97.08 25 P Pdif 20 31 39.0 +0.2
baz=332,SNR=13
K60A **Five Rivers En** 97.09 24 P Pdif 20 31 38.8 +0.1
baz=333
H66A **Whiting** 97.09 19 P Pdif 20 31 39.1 +0.4
baz=338
HKT **Hockley** 97.15 46 *i* P Pdif 20 31 39.5 +0.3
HKT pmax pmax
comp=Z,20nm,2.1s
O55A **Ligonier** 97.21 29 P Pdif 20 31 39.5 +0.1
baz=329,SNR=6.7
J62A **Henniker** 97.22 22 P P 20 31 38.2 -1.0
baz=335
K61A **Williamstown** 97.25 24 P Pdif 20 31 40.2 +0.7
baz=334,SNR=6.4
P54A **Burton** 97.25 30 P Pdif 20 31 40.0 +0.4
baz=328,SNR=11
OXF **Oxford** 97.26 39 P P 20 31 39.4 -0.2
baz=322
OXF **Oxford** 97.26 39 IAmb IAmb 20 32 24.7
comp=Z,57nm,1.2s
M58A **Price's Panora** 97.29 26 P Pdif 20 31 40.2 +0.4
baz=331,SNR=11
SET **Setif** 97.29 324 P PP 20 35 45.0 +7.4
KSPA **Keystone Colle** 97.38 26 IAmb IAmb 20 31 41.3
comp=Z,21nm,0.9s
SSPA **Standing Stone** 97.40 28 P Pdif 20 31 40.3 +0.1
baz=330
SSPA **Standing Stone** 97.40 28 P P 20 31 39.2 -1.0
J63A **Strafford** 97.40 22 P Pdif 20 31 40.6 +0.5
baz=335
N57A **Milroy** 97.42 27 P Pdif 20 31 40.4 +0.1
baz=330,SNR=11
Q53A **Leroy** 97.44 31 P Pdif 20 31 40.6 +0.2
baz=327,SNR=7.7
O56A **Blue Knob Stat** 97.45 28 P Pdif 20 31 40.7 +0.3
baz=330,SNR=8.0
O56A **Blue Knob Stat** 97.45 28 IAmb IAmb 20 31 41.8
comp=Z,20nm,0.8s
MCWV **Mont Chateau** 97.47 29 P Pdif 20 31 41.0 +0.5
baz=328,SNR=6.1
U49A **Red Boiling Sp** 97.47 35 IAmb IAmb 20 31 41.7
comp=Z,32nm,0.9s
T50A **Nancy** 97.50 34 IAmb IAmb 20 31 41.8
comp=Z,36nm,0.8s
M59A **Waymart** 97.51 26 P Pdif 20 31 40.7 0.0
baz=332
L60A **Shokan** 97.54 25 P P 20 31 40.6 -0.1
baz=333
CLTN **Cedars of Leba** 97.54 36 IAmb IAmb 20 31 42.1
comp=Z,21nm,0.9s
S51A **Beattyville** 97.56 33 IAmb IAmb 20 31 41.8
comp=Z,22nm,0.8s
L61A **Hillsdale 1, H** 97.58 24 P P 20 31 40.7 -0.2
baz=333
K62A **Royalston** 97.59 23 P P 20 31 40.8 -0.2
baz=334
PBRG **Braganca** 97.60 335 *e*P P 20 31 40.9 -0.2
P55A **Reedsville** 97.60 30 P Pdif 20 31 41.3 +0.1
baz=328,SNR=7.0
Q54A **Coxs Mills** 97.63 31 P Pdif 20 31 41.8 +0.5
baz=328,SNR=8.1
L61B **Northampton** 97.64 23 P Pdif 20 31 41.2 0.0
baz=334
N58A **Sunbury** 97.66 27 P Pdif 20 31 41.5 +0.1
baz=331
R53A **Hurricane** 97.70 32 P Pdif 20 31 41.8 +0.2
baz=327
K63A **Dunstable** 97.80 22 P Pdif 20 31 42.1 +0.2
baz=335
O57A **Amberson** 97.86 28 P P 20 31 42.2 -0.1
baz=330
Q55A **Buckhannon** 97.93 30 P Pdif 20 31 42.9 +0.2
baz=328
N59A **State Game Lan** 97.94 26 P Pdif 20 31 43.0 +0.3
baz=332,SNR=9.3
N59A **State Game Lan** 97.94 26 IAmb IAmb 20 31 44.2
comp=Z,19nm,0.8s
HRV **Adam Dziewonsk** 97.95 23 P Pdif 20 31 43.1 +0.5
baz=335
PGAV **Gavieira, Arco** 97.97 336 *e*P Pdif 20 31 43.1 +0.3
PGAV **Gavieira, Arco** 97.97 336 *e*SKSac SKSac 20 42 08.1 +2.8
PGAV *e*SS SS 20 49 46.7 +7.7
PGAV **Gavieira, Arco** 97.97 336 *e*LR LR 21 11 13.6
comp=Z,812nm,18.0s
M60A **Port Jervis** 97.99 25 P Pdif 20 31 42.9 +0.1
baz=332
P56A **Dayton Farm, R** 98.00 29 P Pdif 20 31 43.3 +0.4
baz=329,SNR=7.5
PCAB **Cabril** 98.12 336 *e*P Pdif 20 31 43.9 +0.5
S53A **Williamson** 98.17 32 P P 20 31 43.6 -0.1
baz=327
O58A **Lewisberry** 98.21 27 P P 20 31 43.6 -0.2
baz=331
ODNJ **Ogdensburg** 98.21 25 IAmb IAmb 20 35 33.7
comp=Z,57nm,1.8s
N60A **Cedar Hill Far** 98.22 26 P P 20 31 43.7 -0.1
baz=332
R54A **Victor** 98.24 31 P Pdif 20 31 44.1 0.0
baz=328,SNR=5.3
Q56A **Snyder Ridge,** 98.26 29 Pdiff P 20 31 44.0 -0.1
baz=329
MVO **Moncorvo** 98.26 335 *e*P Pdif 20 31 44.3 +0.2
MVO **Moncorvo** 98.26 335 *e*SKSac SKSac 20 42 09.9 +3.2
MVO *e*SS SS 20 49 50.0 +6.9
MVO **Moncorvo** 98.26 335 *e*LR LR 21 14 11.7
comp=Z,906nm,18.0s
M61A **Granite Spring** 98.30 25 Pdiff Pdif 20 31 44.3 +0.2
baz=333
O59A **Robesonia** 98.32 27 Pdiff P 20 31 44.1 -0.2
baz=331
P57A **Homestead Farm** 98.34 28 Pdiff Pdif 20 31 44.5 +0.1
baz=330
S54A **Dingess, Beckl** 98.42 31 Pdiff P 20 31 44.8 0.0
baz=327
SWET **Sewanee** 98.44 36 IAmb IAmb 20 31 45.6
comp=Z,20nm,0.9s
ESDC **Sonseca Array** 98.45 332 P P 20 31 44.9 0.0
comp=Z,1.9nm,0.8s,baz=25,slow=3.5,SNR=13
ESDC PP PP 20 35 45.1 -1.2
comp=Z,6.7nm,1.0s,baz=26,slow=7.1,SNR=5.4
ESDC PKKPbc PKKPbc 20 48 13.7 -0.4
comp=Z,0.7nm,0.7s,baz=235,slow=2.2,SNR=4.7
ESDC LR LR 21 19 04.5
comp=Z,678nm,20.9s,baz=35,slow=37
VBMS **Vicksburg** 98.45 41 Pdiff Pdif 20 31 45.2 +0.2
baz=321
M62A **Hamden** 98.47 24 Pdiff P 20 31 44.8 0.0
baz=334
L63A **North Scituate** 98.52 23 Pdiff P 20 31 45.0 -0.1
baz=335
PAL **Palisades** 98.52 25 Pdiff Pdif 20 31 45.3 +0.2
baz=333
R55A **Marlinton** 98.52 30 Pdiff Pdif 20 31 45.4 +0.1
baz=328
R55A **Marlinton** 98.52 30 IAmb IAmb 20 31 46.7
comp=Z,26nm,0.9s
T53A **Wise** 98.57 33 Pdiff Pdif 20 31 45.6 0.0
baz=326
Q57A **Strasburg** 98.57 29 Pdiff P 20 31 44.9 -0.5
baz=330
O60A **Telford** 98.60 26 Pdiff P 20 31 45.4 0.0
baz=332
N61A **South Mountain** 98.61 25 Pdiff P 20 31 45.5 -0.1
baz=333
P58A **Pank, Wackersv** 98.61 28 Pdiff Pdif 20 31 45.6 0.0
baz=330
N62A **Caumsett State** 98.74 25 Pdiff P 20 31 45.8 -0.3
baz=333
M63A **Gales Ferry** 98.79 23 Pdiff Pdif 20 31 46.3 0.0
baz=334
S55A **Lewisburg** 98.79 31 Pdiff P 20 31 46.4 0.0
baz=328
P59A **Jarrettsville** 98.84 27 Pdiff P 20 31 46.2 -0.3
baz=331
M64A **Tiverton** 98.92 23 Pdiff Pdif 20 31 46.9 0.0
baz=335
T54A **Tazewell** 98.93 32 Pdiff Pdif 20 31 47.2 +0.1
baz=327
Q58A **Fox Den Farm,** 98.94 28 Pdiff Pdif 20 31 47.1 0.0
baz=330
P60A **Greenville** 98.96 27 Pdiff P 20 31 47.0 -0.1
baz=332
PVIS **Viseu** 98.96 335 *e*P P 20 31 46.9 -0.3
EBNR **Beni Rached** 99.03 327 P PP 20 35 54.7 +3.9
CART **Cartagena** 99.05 329 *e*PP PP 20 35 47.1 -3.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CART				eS	SKSac	20 42 07.8	-2.8
TKL	**Tuckaleechee C**	**99.10**	**34**	IAmb	IAmb	20 31 49.0	
	comp=Z,21nm,0.9s						
R57A	**Stanardsville**	**99.16**	**29**	Pdiff	**Pdif**	**20 31 48.3**	**+0.2**
	baz=329						
ECHA	**Ech Chlef**	**99.22**	**327**	P	**PP**	**20 35 55.6**	**+3.5**
T55A	**Pulaski**	**99.22**	**31**	Pdiff	**Pdif**	**20 31 48.6**	**+0.1**
	baz=328						
S56A	**Natural Bridge**	**99.26**	**30**	Pdiff	**Pdif**	**20 31 48.3**	**-0.3**
	baz=329						
U54A	**Nelsons Funny**	**99.27**	**33**	Pdiff	**Pdif**	**20 31 48.6**	**-0.1**
	baz=327						
BLA	**Blacksburg**	**99.30**	**31**	Pdiff	**Pdif**	**20 31 48.6**	**-0.2**
	baz=328						
R58A	**Rapidan**	**99.37**	**29**	Pdiff	**Pdif**	**20 31 48.8**	**-0.2**
	baz=330						
S57A	**Dark Hollow, R**	**99.45**	**30**	Pdiff	**Pdif**	**20 31 49.2**	**-0.1**
	baz=329						
LODK	**Lodwar**	**99.49**	**281**	P	**Pdif**	**20 31 51.1**	**+1.1**
	SNR=7.3						
EANR	**'Ain N'Sour**	**99.50**	**327**	P	**PP**	**20 35 58.3**	**+3.9**
M66A	**Nantucket**	**99.53**	**22**	Pdiff	**Pdif**	**20 31 48.5**	**-1.1**
	baz=336						
Q60A	**Greensboro**	**99.59**	**27**	Pdiff	**Pdif**	**20 31 49.1**	**-0.8**
	baz=331						
T56A	**Rocky Mt**	**99.62**	**31**	Pdiff	**Pdif**	**20 31 50.2**	**0.0**
	baz=328						
U55A	**TA2, Sparta**	**99.63**	**32**	Pdiff	**Pdif**	**20 31 49.8**	**-0.4**
	baz=327						
R58B	**Mineral**	**99.71**	**29**	Pdiff	**Pdif**	**20 31 49.9**	**-0.5**
	baz=330						
V54A	**Nebo**	**99.83**	**33**	Pdiff	**Pdif**	**20 31 50.8**	**-0.4**
	baz=327						
PMRV	**Marv??o**	**99.93**	**334**	*e*P	**Pdif**	**20 31 51.7**	**+0.2**
PMRV	**Marv??o**	**99.93**	**334**	*e*PP	**PP**	**20 36 00.0**	**+2.6**
PMRV				*e*SKSac	**SKSac**	**20 42 17.1**	**+2.1**
PMRV	**Marv??o**	**99.93**	**334**	*e*LR	LR	21 16 01.9	
	comp=Z,1μm,18.0s						
S58A	**Poland Farm, P**	**99.94**	**29**	Pdiff	**Pdif**	**20 31 51.2**	**-0.3**
	baz=330						
R60A	**Leonardtown, M**	**99.95**	**28**	Pdiff	**Pdif**	**20 31 51.3**	**-0.3**
	baz=331						
T57A	**Hurt**	**99.97**	**30**	Pdiff	**Pdif**	**20 31 51.5**	**-0.2**
	baz=329						
Z50A	**Ashland**	**100.02**	**37**	Pdiff	**Pdif**	**20 31 52.0**	**0.0**
	baz=324						
U56A	**King**	**100.05**	**32**	Pdiff	**Pdif**	**20 31 51.8**	**-0.3**
	baz=328						
V55A	**Taylorsville**	**100.10**	**32**	Pdiff	**Pdif**	**20 31 52.1**	**-0.2**
	baz=327						
S59A	**Mechanicsville**	**100.11**	**29**	Pdiff	**Pdif**	**20 31 52.5**	**+0.3**
	baz=330						
W54A	**Cherokee Point**	**100.30**	**34**	Pdiff	**Pdif**	**20 31 53.1**	**-0.1**
	baz=326						
T58A	**Grand View Acr**	**100.32**	**30**	Pdiff	**Pdif**	**20 31 53.1**	**-0.2**
	baz=329						
U57A	**Blanch**	**100.42**	**31**	Pdiff	**Pdif**	**20 31 53.5**	**-0.1**
	baz=329						
Y52A	**Lilburn**	**100.43**	**36**	Pdiff	**Pdif**	**20 31 53.6**	**-0.3**
	baz=325						
V56A	**Mocksville**	**100.45**	**32**	Pdiff	**Pdif**	**20 31 53.9**	**+0.1**
	baz=328						
KMBO	**Kilima Mbogo**	**100.58**	**276**	PP	**PP**	**20 36 05.2**	**+1.0**
	comp=Z,3.8nm,0.8s,baz=48,slow=7.0,SNR=4.9						
KMSC	**Kings Mountain**	**100.64**	**33**	Pdiff	**Pdif**	**20 31 54.8**	**+0.1**
	baz=327						
X54A	**Belton**	**100.66**	**34**	Pdiff	**Pdif**	**20 31 54.9**	**+0.1**
	baz=326						
T59A	**Double "B" Far**	**100.69**	**29**	Pdiff	**Pdif**	**20 31 54.8**	**-0.1**
	baz=330						
V57A	**Coltrane Farms**	**100.69**	**31**	Pdiff	**Pdif**	**20 31 54.8**	**-0.1**
	baz=328						
U58A	**Oxford**	**100.78**	**30**	Pdiff	**Pdif**	**20 31 55.5**	**+0.2**
	baz=329						
T60A	**Surry**	**100.87**	**29**	Pdiff	**Pdif**	**20 31 55.6**	**0.0**
	baz=331						
EVO	**Evora**	**100.95**	**334**	*e*P	**Pdif**	**20 31 56.0**	**0.0**
EVO	**Evora**	**100.95**	**334**	*e*PP	**PP**	**20 36 07.8**	**+2.7**
W56A	**Indian Trail**	**100.98**	**32**	Pdiff	**Pdif**	**20 31 56.1**	**-0.1**
	baz=328						
V58A	**Windy Hill, Pi**	**101.06**	**31**	Pdiff	**Pdif**	**20 31 56.6**	**0.0**
	baz=329						
X55A	**Gracelyn & Ava**	**101.07**	**34**	Pdiff	**Pdif**	**20 31 56.3**	**-0.3**
	baz=327						
GOGA	**Godfrey**	**101.09**	**35**	Pdiff	**Pdif**	**20 31 56.7**	**0.0**
	baz=325						
BRAL	**Brewton**	**101.11**	**39**	Pdiff	**Pdif**	**20 31 56.7**	**-0.2**
	baz=323						
EMAL	**Malaga-Limoner**	**101.16**	**331**	*e*PP	**PP**	**20 36 05.2**	**-1.5**
EMAL				*e*S	**SKSac**	**20 42 15.6**	**-5.3**
LIS	**Lisbon**	**101.18**	**335**	*e*PP	**PP**	**20 36 07.5**	**+0.8**
LIS				AMS	AMS	21 22 36.1	
	comp=Z,975nm,18.7s						
W57A	**Gilead**	**101.22**	**32**	Pdiff	**Pdif**	**20 31 57.0**	**-0.3**
	baz=328						
X56A	**White Oak**	**101.32**	**33**	Pdiff	**Pdif**	**20 31 57.6**	**-0.1**
	baz=327						
Y55A	**Saluda**	**101.41**	**34**	Pdiff	**Pdif**	**20 31 57.8**	**-0.3**
	baz=327						
V59A	**Middlesex**	**101.45**	**30**	Pdiff	**Pdif**	**20 31 58.0**	**-0.2**
	baz=329						
MESJ	**Messejana**	**101.64**	**334**	*e*Pdif	**Pdif**	**20 31 58.6**	**-0.5**
MESJ				*e*PP	**PP**	**20 36 11.0**	**+0.8**
MESJ				*e*SKSac	**SKSac**	**20 42 23.5**	**+0.3**
MESJ				AMS	AMS	21 23 10.2	
	comp=Z,944nm,22.4s						
MESJ	**Messejana**	**101.64**	**334**	*e*P	**Pdif**	**20 31 58.6**	**-0.5**
MESJ				*e*		20 36 11.0	
MESJ				*e*		20 42 23.5	
W58A	**Raeford**	**101.66**	**32**	Pdiff	**Pdif**	**20 31 58.9**	**-0.4**
	baz=329						
MELI	**Melilla**	**101.81**	**329**	*e*PP	**PP**	**20 36 10.6**	**-1.1**
MELI				*e*S	**SKSac**	**20 42 21.1**	**-3.0**
PVAQ	**Vaqueiros**	**101.85**	**334**	*e*SKSac	**SKSac**	**20 42 27.3**	**+3.1**
PVAQ				*e*SS	**SS**	**20 50 42.2**	**+9.4**
PVAQ	**Vaqueiros**	**101.85**	**334**	*e*LR	LR	21 13 48.7	
	comp=Z,1μm,18.0s						
X58A	**Rowland**	**102.01**	**32**	Pdiff	**Pdif**	**20 32 00.5**	**-0.3**
	baz=328						
MORF	**Marmelete**	**102.27**	**334**	*e*PP	**PP**	**20 36 15.8**	**+0.7**
MORF				*e*SKSac	**SKSac**	**20 42 26.3**	**0.0**
MORF				AMS	AMS	21 24 15.3	
	comp=Z,712nm,17.2s						
CEU	**Ceuta**	**102.28**	**331**	*e*PP	**PP**	**20 36 15.9**	**+0.8**
CEU				*e*S	**SKSac**	**20 42 22.1**	**-4.1**
PVLZ	**Peæn de**	**102.48**	**330**	*e*PP	**PP**	**20 36 17.5**	**+0.8**
PVLZ				*e*S	**SKSac**	**20 42 23.9**	**-3.3**
MDT	**Midelt**	**104.65**	**329**	PKKPbc	PKKPbc	20 47 55.9	-0.3
	comp=Z,0.9nm,0.7s,baz=163,slow=16,SNR=3.6						
MDT				PKKPab	**PKKPab**	**20 48 17.4**	**-1.2**
	comp=Z,1.8nm,0.8s,baz=150,slow=4.9,SNR=4.2						
AVE	**Averroes**	**105.37**	**332**	*e*PP	**PP**	**20 36 37.6**	**-0.4**
AVE				*e*S	**SKSac**	**20 42 38.7**	**-1.9**
CMIG	**Matias Romero**	**107.05**	**54**	PKKPbc	PKKPbc	20 47 50.1	+1.8
	comp=Z,1.3nm,0.4s,baz=77,slow=4.8,SNR=3.6						
PMPST	**Porto Santo, M**	**108.66**	**339**	*e*PP	**PP**	**20 37 04.5**	**+2.5**
TEIG	**Tepich**	**108.94**	**47**	PKKPbc	PKKPbc	20 47 43.5	+0.9
	comp=Z,22nm,0.6s,baz=44,slow=0.0,SNR=7.7						
VNDA	**Vanda**	**112.98**	**175**	PKiKP	**PKiKP**	**20 36 41.9**	**+0.3**
	comp=Z,7.9nm,0.7s,baz=319,slow=4.3,SNR=39						
VNDA				PP	**PP**	**20 37 33.3**	**-0.2**
	comp=Z,4.1nm,0.8s,baz=304,slow=9.2,SNR=4.8						
VNDA				PKKPbc	**PKKPbc**	**20 47 28.2**	**-2.7**
	comp=Z,0.8nm,0.9s,baz=149,slow=3.0,SNR=5.8						
LSZ	**Lusaka**	**115.83**	**269**	PKIKP	**PKiKP**	**20 36 49.6**	**+0.6**
LSZ	**Lusaka**	**115.83**	**269**		**PKiKP**	**20 36 49.6**	**+0.6**
MAW	**Mawson**	**116.89**	**205**	PKP	**PKiKP**	**20 36 50.5**	**+1.2**
	comp=Z,21nm,0.7s,baz=58,slow=1.7,SNR=38						
MAW				PP	**PP**	**20 38 01.5**	**+0.3**
	comp=Z,15nm,1.0s,baz=72,slow=9.7,SNR=5.7						
MAW				PKKPbc	**PKKPab**	**20 47 17.8**	**+0.3**
	comp=Z,3.2nm,0.8s,baz=275,slow=12,SNR=4.0						
TORD	**Torodi Ar. Bea**	**117.61**	**312**	PKP	**PKPdf**	**20 36 52.0**	**-0.4**
	comp=Z,28nm,0.7s,baz=46,slow=1.2,SNR=34						
TORD				PP	**PP**	**20 38 07.7**	**+1.4**
	comp=Z,14nm,1.0s,baz=34,slow=7.5,SNR=6.4						
TORD				PKKPbc	**PKKPbc**	**20 47 09.2**	**-4.3**
	comp=Z,2.1nm,0.8s,baz=220,slow=3.1,SNR=7.4						
TORD				PKKPab	**PKKPab**	**20 47 19.7**	**-0.5**
	comp=Z,6.9nm,0.8s,baz=221,slow=2.8,SNR=18						
JTS	**Las Juntas de**	**118.55**	**52**	PKP	**PKPdf**	**20 36 53.3**	**-0.9**
	comp=Z,5.5nm,0.6s,baz=348,slow=3.2,SNR=4.2						
SJG	**San Juan**	**121.99**	**29**	PKP	**PKPdf**	**20 37 00.4**	**-0.3**
	comp=Z,15nm,0.7s,baz=311,slow=11						
LBTB	**Lobatse**	**122.69**	**261**	PKKPbc	PKKPbc	20 46 56.3	+1.4
	comp=Z,4.7nm,0.7s,baz=247,slow=5.1,SNR=9.1						
AZU	**Azuero**	**123.41**	**49**	*e*P	**PKPdf**	**20 37 01.3**	**-2.3**
BOSA	**Boshof**	**124.51**	**257**	PKP	**PKiKP**	**20 37 05.5**	**-0.1**
	comp=Z,26nm,0.8s,baz=79,slow=1.8,SNR=30						
BOSA				PKKPbc	**PKKPbc**	**20 46 47.7**	**-0.2**
	comp=Z,2.2nm,0.4s,baz=261,slow=4.7,SNR=8.5						
QSPA	**South Pole Qui**	**124.63**	**180**	PKP	**PKPdf**	**20 37 04.3**	**0.0**
	comp=Z,94nm,0.8s,baz=312,slow=1.0,SNR=154						
QSPA				PP	**PP**	**20 38 55.4**	**+1.5**
	comp=Z,29nm,0.9s,baz=360,slow=3.0,SNR=5.0						
QSPA				PKKPab	**PKKPab**	**20 46 44.9**	**+0.8**
	comp=Z,3.1nm,0.8s,baz=227,slow=2.5,SNR=5.2						
QSPA				PKKP	**PKKPdf**	**20 47 28.8**	**-0.9**
	comp=Z,3.8nm,1.0s,baz=205,slow=10,SNR=2.2						
QSPA	**South Pole Qui**	**124.63**	**180**		**PKiKP**	**20 37 04.6**	**0.0**
SJCC	**San Jacinto, C**	**124.75**	**43**	*e*P	**PKPdf**	**20 37 05.9**	**-0.3**
SYO	**Syowa Base**	**125.54**	**206**	⇑*i*Pdiff	**Pdif**	**20 33 46.2**	**+1.8**
SYO	**Syowa Base**	**125.54**	**206**	⇑*e*pPdiff	pPdif	20 34 26.0	+1.0
SMLC	**San Martn de**	**126.27**	**42**	*e*P	**PKPdf**	**20 37 08.6**	**-0.5**
UREC	**San Jos de Ur**	**126.30**	**45**	*e*P	**PKPdf**	**20 37 07.9**	**-1.2**
TSUM	**Tsumeb**	**126.54**	**271**		**PKiKP**	**20 37 10.2**	**+0.2**
DBIC	**Dimbokro**	**126.65**	**314**	PKP	**PKPdf**	**20 37 09.7**	**0.0**
	comp=Z,44nm,0.7s,baz=10,slow=1.6,SNR=36						
DBIC				PP	**PP**	**20 39 07.0**	**-0.4**
	comp=Z,24nm,1.0s,baz=14,slow=6.2,SNR=5.1						
TIC	**Toumodi**	**126.76**	**314**	*e*PKIKP	**PKPdf**	**20 37 09.7**	**-0.3**
	comp=Z,140nm,0.9s						
KIC	**Kosan Boka**	**126.82**	**313**	*e*PKIKP	**PKPdf**	**20 37 09.8**	**-0.3**
	comp=Z,294nm,1.2s						
ZARC	**Zaragoza, Cauc**	**126.89**	**44**	*e*P	**PKPdf**	**20 37 09.2**	**-1.0**
LIC	**Lamto**	**127.10**	**313**	*e*P	**PKPdf**	**20 37 10.3**	**-0.3**
	comp=Z,313nm,1.4s						
CBOC	**Ciudad Bolivar**	**127.53**	**47**	*e*P	**PKPdf**	**20 37 11.9**	**+0.2**
HELC	**Santa Helena**	**127.55**	**46**	*e*P	**PKiKP**	**20 37 12.6**	**0.0**
BRRC	**Barranca, Sant**	**127.86**	**43**	*e*P	**PKiKP**	**20 37 12.6**	**-0.1**
PTBC	**PUERTO BERRIO,**	**127.90**	**44**	*e*P	**PKPdf**	**20 37 10.6**	**-1.6**
SDV	**Santo Domingo**	**128.04**	**39**	PKP	**PKPdf**	**20 37 12.7**	**+0.1**
	comp=Z,78nm,1.0s,baz=83,slow=0.7,SNR=50						
SDV				pPKP	**pPKPdf**	**20 37 55.2**	**+0.3**
	comp=Z,59nm,0.9s,baz=312,slow=4.1,SNR=5.3						
SDV	**Santo Domingo**	**128.04**	**39**	*e*P	**PKPdf**	**20 37 12.6**	**-0.1**
SDV	**Santo Domingo**	**128.04**	**39**	*e*P	**PKiKP**	**20 37 13.4**	**+0.2**
MALC	**Bahia Malaga**	**128.17**	**49**	*e*P	**PKiKP**	**20 37 13.2**	**-0.1**
PAMC	**Pamplona, Colo**	**128.23**	**42**	*e*P	**PKPdf**	**20 37 13.2**	**-0.2**
GUY2C	**Guyana, Caldas**	**128.42**	**46**	*e*P	**PKPdf**	**20 37 13.2**	**-0.5**
SOCV	**Socops**	**128.44**	**39**	*e*P	**PKPdf**	**20 37 12.6**	**-0.6**
NORC	**Norcasia**	**128.44**	**46**	*e*P	**PKPdf**	**20 37 11.9**	**-1.4**
YOTC	**Yotoco, Valle**	**128.81**	**48**	*e*P	**PKPdf**	**20 37 13.2**	**-0.8**
SPBC	**San Pablo de B**	**128.84**	**45**	*e*P	**PKiKP**	**20 37 14.6**	**-0.2**
HORQ	**Saladito**	**129.03**	**49**	*e*P	**PKiKP**	**20 37 15.2**	**-0.2**
RUSC	**La Rusia**	**129.21**	**44**	*e*P	**PKPdf**	**20 37 15.2**	**0.0**
RUSC	**La Rusia**	**129.21**	**44**		**PKiKP**	**20 37 16.1**	**+0.1**
CTAB	**Cerro Tablazo,**	**129.28**	**45**	*e*P	**PKPdf**	**20 37 15.2**	**-0.1**
ROSC	**El Rosal**	**129.35**	**46**	PKP	**PKiKP**	**20 37 15.8**	**-0.3**
	comp=Z,33nm,0.9s,baz=162,slow=0.8,SNR=16						
ROSC				pPKP	**pPKPdf**	**20 37 58.0**	**+0.4**
	comp=Z,53nm,1.0s,baz=140,slow=3.1,SNR=2.4						
ROSC	**El Rosal**	**129.35**	**46**	*e*P	**PKPdf**	**20 37 14.6**	**-0.9**
ORTC	**Ortega, Tolima**	**129.53**	**47**	*e*P	**PKPdf**	**20 37 13.9**	**-1.4**
CHIC	**Chingaza**	**129.86**	**45**	*e*P	**PKPdf**	**20 37 15.2**	**-1.2**
SOTA	**Rioblanco**	**130.08**	**50**	*e*P	**PKiKP**	**20 37 17.9**	**+0.1**
ELOV	**Elorza**	**130.23**	**39**	*e*P	**PKiKP**	**20 37 17.2**	**-0.2**
VILC	**Villavicencio,**	**130.30**	**46**	*e*P	**PKPdf**	**20 37 15.9**	**-1.0**
BETC	**Betania**	**130.38**	**48**	*e*P	**PKiKP**	**20 37 17.9**	**+0.1**
GARC	**Garzon, Huila**	**130.74**	**49**	*e*P	**PKPdf**	**20 37 17.2**	**-0.7**
MACC	**Macarena, Meta**	**131.78**	**47**	⇑*e*P	**PKPdf**	**20 37 19.2**	**-0.4**
NVL	**N'lazarevskaya**	**134.67**	**202**	*e*PKIKP	**PKPdf**	**20 37 23.5**	**+0.3**
NVL				*e**PP	**sPKPdf**	**20 38 16.1**	**-5.9**
NVL				*e*		20 39 57.0	
NVL				*e*SS	SS	20 57 35.9	-1.4
NVL				pmax	pmax		
	comp=Z,45nm,0.9s						
ATAH	**Atahualpa**	**135.66**	**60**	PKhKP	PKPpre	20 37 11.1	
	comp=Z,2.1nm,0.7s,baz=36,slow=12,SNR=1.8						
SNAA	**Sanae**	**138.21**	**197**	PKPdf	**PKPdf**	**20 37 30.7**	**+0.8**
SNAA	**Sanae**	**138.21**	**197**	PKhKP	PKPpre	20 37 16.0	
	comp=Z,10.0nm,0.5s,baz=198,slow=4.9,SNR=25						
SNAA				PKP	**PKPdf**	**20 37 30.3**	**+0.4**
	comp=Z,21nm,0.7s,baz=192,slow=1.5,SNR=16						
SNAA				PP	**PP**	**20 40 20.1**	**-0.8**
	comp=Z,31nm,0.9s,baz=139,slow=7.4,SNR=11						
SNAA				SKP		20 40 48.9	
	comp=Z,12nm,0.8s,baz=95,slow=5.3,SNR=4.5						
BOAV	**Boa Vista**	**138.49**	**31**	*e*P	**PKPdf**	**20 37 33.0**	**+0.9**
MDP	**Montagnes des**	**138.66**	**18**	PKP	**PKPdf**	**20 37 32.0**	**-0.4**
	comp=Z,26nm,0.9s,baz=329,slow=3.1,SNR=5.6						
VNA2	**Neumayer--Watz**	**139.79**	**196**	PKPdf	**PKiKP**	**20 37 34.0**	**-1.1**
	baz=101,slow=2.6						
NNA	**Nana**	**140.05**	**64**	PKhKP	PKPpre	20 37 26.6	
	comp=Z,26nm,0.7s,baz=299,slow=4.3,SNR=11						
VNA3	**Neumayer Olymp**	**140.06**	**195**	PKPdf	**PKPdf**	**20 37 34.0**	**+0.9**
VNA1	**Neumayer--Stat**	**140.19**	**196**	PKPdf	**PKiKP**	**20 37 35.2**	**-0.6**
PTGA	**Pitinga**	**141.53**	**32**	PKhKP	PKPpre	20 37 31.5	
	comp=Z,33nm,0.7s,baz=337,slow=3.6,SNR=60						
MACA	**Manacapuru-AM**	**143.36**	**35**	*e*P	**PKPdf**	**20 37 41.1**	**+0.3**
PMSA	**Palmer Station**	**146.89**	**162**	PKPbc	**PKPdf**	**20 37 46.2**	**+1.0**
	baz=240,slow=2.2						
PMSA	**Palmer Station**	**146.89**	**162**	*e*P	**PKPbc**	**20 37 46.8**	**-0.6**
SAML	**Samuel**	**146.95**	**44**	PKP2	**PKPbc**	**20 37 49.5**	**+0.4**
SAML	**Samuel**	**146.95**	**44**		**PKPbc**	**20 37 49.5**	**+0.4**
SAML	**Samuel**	**146.95**	**44**	*e*P	**PKPbc**	**20 37 48.5**	**-0.6**
H03N2	**Juan Fernandez**	**148.40**	**98**	PKPbc	**PKiKP**	**20 37 53.5**	**-0.1**
	baz=164,slow=15,SNR=23						
H03N3	**Juan Fernandez**	**148.41**	**99**	PKPbc	**PKiKP**	**20 37 53.5**	**-0.2**
	baz=164,slow=15,SNR=14						
H03N1	**Juan Fernandez**	**148.42**	**98**	PKPbc	**PKiKP**	**20 37 53.1**	**-0.5**
	baz=164,slow=15,SNR=18						
H03S2	**Juan Fernandez**	**148.50**	**99**	PKPbc	**PKPbc**	**20 37 51.6**	**-0.7**
H03S3	**Juan Fernandez**	**148.51**	**99**	PKPbc	**PKPbc**	**20 37 51.6**	**-0.8**
H03S1	**Juan Fernandez**	**148.51**	**99**	PKPbc	**PKPbc**	**20 37 51.6**	**-0.7**
PB12	**IPOC Station P**	**149.08**	**66**		**PKiKP**	**20 37 55.6**	**-0.2**
LPAZ	**La Paz**	**149.21**	**60**	PKP	**PKPdf**	**20 37 52.1**	**+0.8**
	comp=Z,111nm,0.9s,baz=8.8,slow=3.0,SNR=55						
LPAZ				PKPbc	**PKiKP**	**20 37 56.4**	**-0.4**
	comp=Z,109nm,0.8s,baz=333,slow=3.0,SNR=102						
LPAZ				pPKPbc	**pPKPbc**	**20 38 38.8**	**+1.0**
	comp=Z,31nm,0.7s,baz=351,slow=6.5,SNR=2.1						
LPAZ	**La Paz**	**149.21**	**60**		**PKiKP**	**20 37 56.7**	**-0.2**
LPAZ	**La Paz**	**149.21**	**60**	*e*P	**PKPbc**	**20 37 53.8**	**-1.9**
PB16	**IPOC Station P**	**149.53**	**65**		**PKiKP**	**20 37 57.6**	**+0.2**
PSGCX	**Pisagua**	**149.83**	**67**		**PKPbc**	**20 37 56.8**	**+0.3**
MNMC	**Minye Minye**	**149.95**	**66**		**PKiKP**	**20 37 58.1**	**+0.2**
PB11	**IPOC Station P**	**150.28**	**67**		**PKiKP**	**20 37 58.2**	**-0.2**
PATCX	**Punta Patache**	**150.51**	**69**		**PKiKP**	**20 37 58.4**	**-0.3**
GO01	**Chusmiza**	**150.57**	**66**		**PKiKP**	**20 37 59.4**	**0.0**
RCBR	**Riachuelo**	**150.76**	**350**	PKP	**PKPdf**	**20 37 53.7**	**+0.5**
	comp=Z,26nm,1.0s,baz=140,slow=0.6,SNR=2.1						
RCBR				PKPbc	**PKiKP**	**20 37 59.1**	**-0.3**
	comp=Z,128nm,0.9s,baz=350,slow=2.2,SNR=12						
RCBR	**Riachuelo**	**150.76**	**350**	*e*P	**PKPdf**	**20 37 54.9**	**+1.8**
PB07	**IPOC Station P**	**151.22**	**71**		**PKiKP**	**20 38 00.8**	**+0.5**
VILB	**Vilhena**	**151.89**	**44**	*e*P	**PKPdf**	**20 37 56.5**	**+1.7**
USHA	**Ushuaia**	**152.26**	**145**	PKPbc	**PKiKP**	**20 38 02.3**	**+1.1**
	comp=Z,116nm,0.8s,baz=134,slow=0.5,SNR=15						
CLDB	**Colider**	**152.40**	**34**	*e*P	**PKPdf**	**20 37 57.3**	**+1.8**
LVC	**Limon Verde**	**152.46**	**71**	PKP	**PKPdf**	**20 37 57.0**	**+1.1**
	comp=Z,10nm,0.8s,baz=251,slow=4.1,SNR=7.5						
LVC				PKPbc	**PKiKP**	**20 38 03.9**	**+0.9**
	comp=Z,46nm,0.7s,baz=276,slow=3.6,SNR=34						
LVC				PKPab	**PKPab**	**20 38 13.9**	**+0.1**
	comp=Z,65nm,0.8s,baz=306,slow=3.4,SNR=12						
LVC	**Limon Verde**	**152.46**	**71**	*e*P	**PKPdf**	**20 37 57.4**	**+1.6**
SIV	**San Ignacio**	**153.74**	**49**	PKP	**PKPdf**	**20 37 57.9**	**+0.4**
	comp=Z,22nm,0.8s,baz=94,slow=23,SNR=58						
SIV				PKPbc	**PKiKP**	**20 38 05.6**	**+0.1**
	comp=Z,54nm,0.9s,baz=26,slow=1.0,SNR=36						
SIV				PKPab	**PKPab**	**20 38 19.2**	**+0.4**
	comp=Z,40nm,0.8s,baz=281,slow=2.5,SNR=11						
PTLB	**Pontes e Lacer**	**154.49**	**45**	*e*P	**PKPdf**	**20 38 00.3**	**+1.9**
PLCA	**Paso Flores**	**155.72**	**113**	PKP	**PKPdf**	**20 38 00.0**	**+0.5**
	comp=Z,7.2nm,1.1s,baz=333,slow=9.4,SNR=3.9						
PLCA				PKPbc	PKPbc	20 38 09.8	
	comp=Z,14nm,0.9s,baz=241,slow=4.5,SNR=9.6						
PLCA				PKPab	**PKPab**	**20 38 27.9**	**+1.0**
	comp=Z,22nm,0.9s,baz=232,slow=3.6,SNR=7.3						
SALV	**Santo Antonio**	**156.77**	**39**	*e*P	**PKPdf**	**20 38 03.6**	**+2.2**
ARAG	**Araguaiana, MT**	**158.43**	**31**	*e*P	**PKPdf**	**20 38 05.3**	**+1.8**
BDFB	**Brasilia**	**159.73**	**21**	PKP	**PKPdf**	**20 38 05.5**	**+0.3**
	comp=Z,8.1nm,0.8s,baz=330,slow=2.5,SNR=10						
BDFB				PKPab	**PKPab**	**20 38 45.8**	**+1.2**
	comp=Z,46nm,0.9s,baz=342,slow=4.0,SNR=27						
AQDB	**Aquidauana**	**160.44**	**47**	*e*P	**PKPdf**	**20 38 08.2**	**+2.5**
IPMB	**Ipameri, GO**	**161.87**	**24**	*e*P	**PKPdf**	**20 38 08.3**	**+0.9**
CPUP	**Villa Florida**	**163.31**	**64**	PKP	**PKPdf**	**20 38 08.7**	**+0.2**
	comp=Z,11nm,1.1s,baz=2.5,slow=1.2,SNR=7.5						
CPUP				pPKP	**pPKPdf**	**20 38 50.9**	**+0.1**
	comp=Z,5.5nm,1.0s,baz=78,slow=2.1,SNR=2.6						
CPUP				PKPab	**PKPab**	**20 38 59.9**	**-0.1**
	comp=Z,5.4nm,0.9s,baz=316,slow=5.3,SNR=3.2						
CPUP				pPKPab	**pPKPab**	**20 39 42.1**	**+1.2**
	comp=Z,9.6nm,1.0s,baz=320,slow=4.7,SNR=3.3						
PTGB	**Pitanga**	**165.83**	**47**	*e*P	**PKPdf**	**20 38 14.4**	**+3.5**
FRTB	**Fartura**	**166.12**	**36**	*e*P	**PKPdf**	**20 38 12.7**	**+1.6**
RCLB	**Rio Claro- Sao**	**166.19**	**28**	*e*P	**PKPdf**	**20 38 13.9**	**+2.7**
VAO	**Valinhos**	**166.94**	**27**	*e*P	**PKPdf**	**20 38 13.1**	**+1.3**
VAS01	**Vassouras-RJ**	**167.21**	**12**	*e*P	**PKPdf**	**20 38 14.8**	**+2.9**
SPB	**Sao Paulo**	**167.29**	**30**	*e*P	**PKPdf**	**20 38 14.8**	**+2.9**
ITAB	**Concordia**	**167.55**	**55**	*e*P	**PKPdf**	**20 38 14.8**	**+2.8**
MAN01	**Angra dos Reis**	**167.68**	**15**	*e*P	**PKPdf**	**20 38 15.1**	**+2.8**
PARB	**Paraibuna**	**167.71**	**22**	*e*P	**PKPdf**	**20 38 14.5**	**+2.2**
ESAR	**Angra dos Reis**	**167.73**	**17**	*e*P	**PKPdf**	**20 38 12.9**	**+0.8**
OGAUY	**Aigu**	**168.38**	**91**	*e*P	**PKPdf**	**20 38 15.0**	**+2.6**
PLTB	**Pedras Altas**	**168.71**	**78**	*e*P	**PKPdf**	**20 38 15.6**	**+2.9**

*IDC **04** 20:23:29.6±0.4, 40°.54N×77°.71E, h0km, mb4.9/30, mb1 5.0/34, mb1mx4.8/58, mbtmp4.9/34, ML4.3/4, MS4.6/7, Ms1 4.6/7, ms1mx3.9/57, Error ellipse: s-maj=10.2km s-min=9.2km az=31.0*

*KRNET **04** 20:23:30.4±0.1, 40°.63N×77°.70E, h7km, mb5.8*

*BJI **04** 20:23:30.5±0.0, 40°.62N×77°.64E, h7km, mB5.1/11, mb4.9/24, ML5.0/9, Ms4.8/15, Ms7 4.8/15*

*MOS **04** 20:23:30.7±1.1, 40°.52N×77°.77E, h16km, mb5.5/27, Error ellipse: s-maj=5.8km s-min=4.8km az=106.2*

MOS Felt (II-III) at Almaty.

*NEIC **04** 20:23:31.4±2.6, 40°.61N±0°.06×77°.66E±0°.07, h10km±1km, mb5.4/72, Error ellipse: s-maj=9.8km s-min=8.5km az=144.0*

*NEIC **04** 20:23:32±3.0, 40°.63N±0°.05×77°.89E±0°.08, h10km±1km, Error ellipse: s-maj=10.1km s-min=8.6km az=115.0*

*SOME **04** 20:23:32.6, 40°.60N×77°.63E, h20km, MS4.9*

*NNC **04** 20:23:34.3±1.0, 40°.76N×77°.58E, h0km, mb6.0, mpv5.7, Error ellipse: s-maj=7.1km s-min=5.1km az=163.0*

ISC 04 20:23:32.9±1.0, **40°.69N**±0°.02×**77°.76E**±0°.02, **h17**km±6km, **n333**, σ**2s.01**/347, **mb5.3**/102, **MS4.7**/13, **41C-38D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.50**	**343**	⇓*i*P	**Pn**	**20 24 00.1**	**+0.8**
	baz=46						
KDJ				⇓*i*S	**Sn**	**20 24 20.2**	**+1.5**
	baz=46						
KDJ	**Kajisay**	**1.50**	**343**	PN	**Pn**	**20 23 59.9**	**+0.6**
KDJ				S	**Sn**	**20 24 19.2**	**+0.6**
KDJ	**Kajisay**	**1.50**	**343**		**Pn**	**20 23 59.9**	**+0.6**
KDJ				Sn	**Sn**	**20 24 19.2**	**+0.6**
KSH	**Kashi**	**1.81**	**230**	Pn	**Pg**	**20 24 09.3**	**+1.7**
KSH				Sn	**Sg**	**20 24 38.5**	**+7.4**
KSH				smax	smax		
	comp=N,21μm,0.6s						
KSH				smax	smax		
	comp=E,40μm,0.6s						
KSH	**Kashi**	**1.81**	**230**	⇑*i*P	**Pb**	**20 24 05.9**	**+0.3**
	baz=32						
KSH				⇑*i*S	**Sg**	**20 24 30.2**	**-0.9**
	baz=32						
PRZ	**Przheval'sk**	**1.85**	**15**	⇓*i*P	**Pb**	**20 24 07.4**	**+0.9**
	baz=16						
PRZ				⇓*i*S	**Sg**	**20 24 33.3**	**+0.6**
	baz=16						
PRZ	**Przheval'sk**	**1.85**	**15**	PN	**Pb**	**20 24 07.2**	**+0.7**
PRZ	**Przheval'sk**	**1.85**	**15**		**Pb**	**20 24 07.2**	**+0.7**
ULHL	**Ulahol**	**1.93**	**324**	⇓*i*P	**Pn**	**20 24 07.0**	**+1.8**
	baz=26						
ULHL				⇓*i*S	**Sn**	**20 24 32.3**	**+3.1**
	baz=26						
ULHL	**Ulahol**	**1.93**	**324**	P	**Pn**	**20 24 06.6**	**+1.4**
ANVS	**Anan'yevo**	**2.09**	**358**	⇑*i*P	**Pb**	**20 24 11.0**	**+0.4**
	baz=59						
ANVS				⇑*i*S	**Sb**	**20 24 39.1**	**+2.8**
	baz=59						
BOOM	**Boomskoye usch**	**2.26**	**323**	⇑*i*P	**Pn**	**20 24 12.8**	**+3.1**
	baz=25						
BOOM				⇑*i*S	**Sn**	**20 24 41.2**	**+3.9**
	baz=25						
KZA	**Kyzart**	**2.34**	**307**	⇓*i*P	**Pn**	**20 24 13.2**	**+2.1**
	baz=9.0						
KZA				⇓*i*S	**Sn**	**20 24 42.7**	**+3.0**
	baz=9.0						
KZA	**Kyzart**	**2.34**	**307**	P	**Pn**	**20 24 12.7**	**+1.6**
	SNR=3554						
SATY	**Saty**	**2.41**	**11**	*e*P	**Pg**	**20 24 17.8**	**-1.4**
	7μm,0.8s						
SATY				*e*S	**Sg**	**20 24 49.8**	**-0.8**
	11μm,0.7s						
SATY	**Saty**	**2.41**	**11**	Pg	**Pg**	**20 24 17.8**	**-1.4**
	7μm,0.8s						
SATY				Lg	Lg	20 24 49.8	
	11μm,0.7s						
SATY	**Saty**	**2.41**	**11**	*e*PN	**Pg**	**20 24 17.8**	**-1.4**
SATY				*e*S	**Sg**	**20 24 49.8**	**-0.8**
TNSS	**Tian-Shan**	**2.42**	**346**	⇑*i*P	**Pb**	**20 24 17.6**	**+1.3**
	26μm,0.6s						
TNSS				*e*S	**Sb**	**20 24 49.8**	**+3.7**
	21μm,0.6s						
TNSS	**Tian-Shan**	**2.42**	**346**	Pg	**Pb**	**20 24 17.6**	**+1.3**
	26μm,0.6s						
TNSS				Lg	Lg	20 24 49.8	
	21μm,0.6s						
TNSS	**Tian-Shan**	**2.42**	**346**	*i* PN	**Pb**	**20 24 17.6**	**+1.3**
TNSS				*e*S	**Sb**	**20 24 49.8**	**+3.7**
MDOK	**Medeo**	**2.53**	**348**	⇑*i*P	**Pb**	**20 24 19.1**	**+1.2**
	15μm,0.7s						
MDOK				⇓*i*S	**Sb**	**20 24 52.0**	**+3.2**
	27μm,0.8s						
MDOK	**Medeo**	**2.53**	**348**	⇓Pn	**Pb**	**20 24 16.8**	**-1.1**
MDOK				⇓Lg	Lg	20 24 52.9	
MDOK	**Medeo**	**2.53**	**348**	Pg	**Pb**	**20 24 19.1**	**+1.2**
	15μm,0.7s						
MDOK				Lg	Lg	20 24 52.0	
	27μm,0.8s						
MDOK	**Medeo**	**2.53**	**348**	*i* PN	**Pb**	**20 24 19.2**	**+1.2**
MDOK				*i* S	**Sb**	**20 24 52.0**	**+3.2**
KOTS	**Kotyrbulak**	**2.59**	**349**	*e*P	**Pb**	**20 24 20.2**	**+1.2**
	15μm,0.6s						
KOTS				*e*S	**Sb**	**20 24 54.0**	**+3.4**
	50μm,0.5s						
KOTS	**Kotyrbulak**	**2.59**	**349**	Pg	**Pb**	**20 24 20.2**	**+1.2**
	15μm,0.6s						
KOTS				Lg	Lg	20 24 54.0	
	50μm,0.5s						
KOTS	**Kotyrbulak**	**2.59**	**349**	*e*PN	**Pb**	**20 24 20.2**	**+1.2**
KOTS				*e*S	**Sb**	**20 24 54.0**	**+3.4**
KNDC	**Almaty**	**2.59**	**347**	⇑Pn	**Pb**	**20 24 18.1**	**-0.9**
KNDC				⇑Lg	Lg	20 24 56.1	
KNDC	**Almaty**	**2.59**	**347**	PN	**Pb**	**20 24 18.1**	**-0.9**
AAA	**Alma-Ata**	**2.59**	**346**	*e*P	**Pb**	**20 24 20.6**	**+1.5**
	17μm,0.5s						
AAA				*e*S	**Sb**	**20 24 54.7**	**+4.0**
	31μm,0.6s						
AAA	**Alma-Ata**	**2.59**	**346**	Pg	**Pb**	**20 24 20.6**	**+1.5**
	17μm,0.5s						
AAA				Lg	Lg	20 24 54.7	
	31μm,0.6s						
AAA	**Alma-Ata**	**2.59**	**346**	*e*PN	**Pb**	**20 24 20.4**	**+1.4**
AAA				*e*S	**Sg**	**20 24 56.2**	**-0.1**
AAA				pmax	pmax		
	comp=Z,17μm,0.6s						
AAA				smax	smax		
	comp=E,31μm,0.5s						
UZB	**Uzynbulak**	**2.63**	**21**	*e*P	**Pg**	**20 24 22.0**	**-1.3**
	comp=E,4μm,0.7s						
UZB				*e*S	**Sg**	**20 24 57.1**	**-0.3**
	comp=E,13μm,0.8s						
UZB	**Uzynbulak**	**2.63**	**21**	Pg	**Pg**	**20 24 22.0**	**-1.3**
	comp=E,4μm,0.7s						
UZB				Lg	Lg	20 24 57.1	
	comp=E,13μm,0.8s						
UZB	**Uzynbulak**	**2.63**	**21**	*e*PN	**Pg**	**20 24 22.0**	**-1.3**
UZB				*e*S	**Sg**	**20 24 57.1**	**-0.3**
MTBS	**Maitube**	**2.63**	**338**	⇓*i*P	**Pb**	**20 24 20.6**	**+0.9**
	comp=E,5μm,0.4s						
MTBS				*e*S	**Sb**	**20 24 54.7**	**+2.9**
	comp=E,10μm,0.4s						
MTBS	**Maitube**	**2.63**	**338**	Pg	**Pb**	**20 24 20.6**	**+0.9**
	comp=E,5μm,0.4s						
MTBS				Lg	Lg	20 24 54.7	
	comp=E,10μm,0.4s						

MTBS Maitube 2.63 338 *i* PN **Pb 20 24 20.6 +0.9**
MTBS eS **Sb 20 24 54.7 +2.9**
KST Kastek 2.71 331 *e*P **Pb 20 24 21.4 +0.5**
comp=E,7µm,0.7s
KST eS **Sb 20 24 56.1 +2.1**
comp=E,16µm,0.9s
KST Kastek 2.71 331 Pg **Pb 20 24 21.4 +0.5**
comp=E,7µm,0.7s
KST Lg Lg 20 24 56.1
comp=E,16µm,0.9s
KST Kastek 2.71 331 *e*PN **Pb 20 24 21.5 +0.5**
KST eS **Sb 20 24 56.1 +2.1**
TKM2 Tokmak 2 2.75 325 ⇑*i*P **Pn 20 24 19.1 +2.5**
baz=26
TKM2 ⇑*i*S **Sn 20 24 52.9 +3.3**
baz=26
TKM2 Tokmak 2 2.75 325 P **Pn 20 24 19.2 +2.7**
SNR=2300
SHLS Shalkode 2.77 27 *e*P **Pg 20 24 26.9 +0.9**
comp=E,4µm,0.6s
SHLS eS **Sg 20 25 05.4 +3.4**
comp=E,21µm,0.8s
SHLS Shalkode 2.77 27 Pg **Pg 20 24 27.0 +0.9**
comp=E,4µm,0.6s
SHLS Lg Lg 20 25 05.4
comp=E,21µm,0.8s
SHLS Shalkode 2.77 27 *e*PN **Pg 20 24 27.0 +0.9**
SHLS eS **Sg 20 25 05.4 +3.4**
KURS Kuram 2.81 6 *e*P **Pg 20 24 25.6 -1.2**
comp=E,4µm,1.0s
KURS eS **Sg 20 25 03.4 +0.2**
comp=E,11µm,1.3s
KURS Kuram 2.81 6 *e*PN **Pg 20 24 25.6 -1.2**
KURS eS **Sg 20 25 03.4 +0.2**
KBK Karagaybulak 2.88 314 ⇑*i*P **Pn 20 24 20.6 +2.3**
baz=15
KBK ⇑*i*S **Sn 20 24 55.8 +3.2**
baz=15
KBK Karagaybulak 2.88 314 P **Pn 20 24 20.9 +2.7**
SNR=2698
UCH Uchtor 2.88 303 ⇑*i*P **Pn 20 24 20.5 +1.9**
baz=5.0
UCH ⇑*i*S **Sn 20 24 55.5 +2.4**
baz=5.0
UCH Uchtor 2.88 303 P **Pn 20 24 19.9 +1.3**
SNR=742
PDGK Podgornoye 2.93 25 Pg **Pg 20 24 26.9 -2.2**
comp=E,1µm,0.6s
PDGK Lg Lg 20 25 05.3
comp=E,13µm,0.8s
PDGK Podgornoye 2.93 25 ⇓Pn **Pb 20 24 22.0 -2.9**
PDGK ⇓Lg Lg 20 25 06.7
comp=E,42µm,0.9s
PDGK Podgornoye 2.93 25 *i* PN **Pb 20 24 22.0 -2.9**
KTBS Karatobe 3.12 345 *e*P **Pb 20 24 29.4 +1.4**
comp=E,3µm,0.6s
KTBS eS **Sb 20 25 09.7 +3.8**
comp=E,19µm,0.7s
KTBS Karatobe 3.12 345 Pg **Pb 20 24 29.5 +1.4**
comp=E,3µm,0.6s
KTBS Lg Lg 20 25 09.7
comp=E,19µm,0.7s
KTBS Karatobe 3.12 345 *e*PN **Pb 20 24 29.5 +1.4**
KTBS eS **Sb 20 25 09.7 +3.8**
AAK Ala-Archa 3.13 310 Pn **Pn 20 24 24.1 +2.5**
comp=E,25nm,0.3s,baz=132,slow=9.8,SNR=258
AAK Pg **Pb 20 24 28.5 +0.3**
comp=E,560nm,0.3s,baz=140,slow=12,SNR=299
AAK Lg Lg 20 25 08.5
comp=E,628nm,0.3s,baz=282,slow=17,SNR=32
AAK Ala-Archa 3.13 310 ⇑*i*P **Pn 20 24 23.9 +2.3**
baz=11
AAK ⇑*i*S **Sn 20 25 01.1 +2.4**
baz=11
AAK Ala-Archa 3.13 310 P **Pn 20 24 24.1 +2.5**
SNR=161
AAK Ala-Archa 3.13 310 ⇑Pg **Pb 20 24 28.5 +0.3**
AAK ⇓Lg Lg 20 25 08.2
FRU1 Bishkek 3.16 313 ⇑*i*P **Pn 20 24 24.3 +2.3**
baz=15
FRU1 ⇑*i*S **Sn 20 25 02.0 +2.7**
baz=15
FRU1 Bishkek 3.16 313 PN **Pn 20 24 25.3 +3.3**
FRU1 Bishkek 3.16 313 **Pn 20 24 25.3 +3.3**
CHMS Chumysh 3.22 317 ⇑*i*P **Pn 20 24 25.4 +2.6**
baz=18
CHMS ⇑*i*S **Sn 20 25 03.9 +3.1**
baz=18
CHMS Chumysh 3.22 317 P **Pn 20 24 25.1 +2.3**
SNR=184
KUU Kurty 3.37 342 *e*P **Pb 20 24 33.6 +1.4**
comp=E,2µm,0.7s
KUU eS **Sb 20 25 16.8 +3.9**
comp=E,14µm,0.9s
KUU Kurty 3.37 342 Pg **Pb 20 24 33.6 +1.4**
comp=E,2µm,0.7s
KUU Lg Lg 20 25 17.6
comp=E,14µm,0.9s
KUU Kurty 3.37 342 *e*PN **Pb 20 24 33.6 +1.4**
KUU eS **Sb 20 25 16.8 +3.9**
KRBS Karabastau 3.38 333 *e*P **Pb 20 24 33.7 +1.3**
comp=E,3µm,0.4s
KRBS eS **Sb 20 25 17.0 +3.7**
comp=E,11µm,1.0s
KRBS Karabastau 3.38 333 Pg **Pb 20 24 33.7 +1.3**
comp=E,3µm,0.4s
KRBS Lg Lg 20 25 17.0
comp=E,11µm,1.0s
KRBS Karabastau 3.38 333 *e*PN **Pb 20 24 33.7 +1.3**
KRBS eS **Sb 20 25 17.0 +3.7**
AML Almayashu 3.38 297 ⇓*i*P **Pn 20 24 27.5 +2.2**
baz=98
AML ⇓*i*S **Sn 20 25 07.4 +2.1**
baz=98
AML Almayashu 3.38 297 P **Pn 20 24 26.8 +1.5**
SNR=333
MNBS Baschi 3.42 8 *e*P **Pb 20 24 35.6 +2.5**
comp=E,2µm,0.6s
MNBS eS **Sg 20 25 20.6 -2.1**
comp=E,6µm,0.5s
MNBS Baschi 3.42 8 Pg **Pb 20 24 35.6 +2.5**
comp=E,2µm,0.6s
MNBS Lg Lg 20 25 20.6
comp=E,6µm,0.5s
MNBS Baschi 3.42 8 *e*PN **Pb 20 24 35.6 +2.5**
MNBS eS **Sg 20 25 20.6 -2.1**
USP Ospenovka 3.54 318 ⇓*i*P **Pn 20 24 29.9 +2.7**
baz=19
USP ⇓*i*S **Sn 20 25 11.7 +3.0**
baz=19
USP Ospenovka 3.54 318 P **Pn 20 24 29.2 +2.0**
SNR=88
EKS2 Erkin-Say 3.58 305 ⇑*i*P **Pn 20 24 30.2 +2.4**
baz=6.0
EKS2 ⇑*i*S **Sn 20 25 12.3 +2.6**
baz=6.0
EKS2 Erkin-Say 3.58 305 P **Pn 20 24 29.8 +2.0**
SNR=329
SGDS Sogindy 3.61 321 Pg **Pb 20 24 37.0 +0.6**
comp=E,3µm,0.7s
SGDS Lg Lg 20 25 22.5
comp=E,5µm,0.8s
ARSB Arslanbob 3.67 281 ⇓*e*P **Pn 20 24 31.3 +2.2**
baz=83
ARSB ⇓*i*S **Sn 20 25 13.8 +1.7**
baz=83
ARSB Arslanbob 3.67 281 PN **Pn 20 24 31.0 +1.9**
ARSB Arslanbob 3.67 281 **Pn 20 24 31.0 +1.9**
MRKS Merke 3.97 303 *e*P **Pb 20 24 42.6 +0.2**
comp=E,2µm,0.5s
MRKS eS **Sb 20 25 32.4 +2.2**
comp=E,3µm,0.6s
MRKS Merke 3.97 303 Pg **Pb 20 24 42.7 +0.2**
comp=E,2µm,0.5s
MRKS Lg Lg 20 25 33.1
comp=E,3µm,0.6s
MRKS Merke 3.97 303 *e*PN **Pb 20 24 42.7 +0.2**
MRKS eS **Sb 20 25 32.4 +2.2**
TDK Taldyqorghan 4.33 6 *e*P **Pg 20 24 52.6 -3.3**
comp=E,8µm,0.9s
TDK eS **Sg 20 25 49.8 -2.2**
comp=E,11µm,1.2s
TDK Taldyqorghan 4.33 6 Pg **Pg 20 24 52.6 -3.3**
comp=E,8µm,0.9s
TDK Lg Lg 20 25 49.8
comp=E,11µm,1.2s
TDK Taldyqorghan 4.33 6 *e*PN **Pg 20 24 52.6 -3.3**
TDK eS **Sg 20 25 49.8 -2.2**
ARK Arkit 4.51 286 ⇑*i*P **Pn 20 24 42.5 +1.9**
baz=87
ARK ⇑*i*S **Sn 20 25 34.0 +1.3**
baz=87
KAPS Kapalarasan 4.74 14 *e*P **Pg 20 25 00.2 -3.5**
comp=E,777nm,0.8s
KAPS eS **Sg 20 26 02.0 -3.0**
comp=E,3µm,1.1s
KAPS Kapalarasan 4.74 14 Pg **Pg 20 25 00.2 -3.5**
comp=E,777nm,0.8s
KAPS Lg Lg 20 26 02.8
comp=E,2µm,0.9s
KAPS Kapalarasan 4.74 14 *e*PN **Pg 20 25 00.2 -3.5**
KAPS eS **Sg 20 26 02.0 -3.0**
BTLS Baital 5.13 329 *e*P **Pb 20 25 04.8 +2.6**
comp=E,988nm,1.0s
BTLS eS **Sb 20 26 10.7 +7.1**
comp=E,2µm,1.1s
BTLS Baital 5.13 329 Pg **Pb 20 25 04.8 +2.6**
comp=E,988nm,1.0s
BTLS Lg Lg 20 26 10.7
comp=E,2µm,1.1s
BTLS Baital 5.13 329 *e*PN **Pb 20 25 04.8 +2.6**
BTLS eS **Sb 20 26 10.7 +7.1**
DZA Taraz 5.29 297 *e*P **Pg 20 25 11.1 -3.1**
comp=E,1µm,1.0s
DZA eS **Sg 20 26 20.9 -1.6**
comp=E,4µm,0.9s
DZA Taraz 5.29 297 Pg **Pg 20 25 11.1 -3.1**
comp=E,1µm,1.0s
DZA Lg Lg 20 26 21.9
comp=E,4µm,0.9s
KK31 Karatay Array 5.92 296 Pn **Pn 20 25 00.3 +0.4**
comp=E,6.3nm,0.5s,baz=118,slow=12,SNR=373
KK31 Pg **Pb 20 25 18.6 +2.9**
comp=E,245nm,0.6s,baz=114,slow=14,SNR=66
KK31 ⇑Lg Lg 20 26 35.2
comp=E,808nm,0.8s,baz=109,slow=24,SNR=8.7
KK31 Karatay Array 5.92 296 *i* PN **Pn 20 25 00.3 +0.4**
KK31 pmax pmax
comp=E,6.0nm,0.5s
GAR Garm 5.97 256 Pn **Pn 20 25 00.3 -0.5**
IUG Iuzhnay 5.99 287 Pg Pg 20 25 23.7 -3.9
comp=E,460nm,0.7s
IUG Lg Lg 20 26 42.8
comp=E,4µm,1.1s
BRLS Borolday 6.36 294 Pg Pb 20 25 30.1 +6.9
comp=E,161nm,0.8s
BRLS Lg Lg 20 26 53.8
comp=E,668nm,1.2s
TAS Tashkent 6.44 278 PN **Pn 20 25 07.2 +0.2**
TAS Tashkent 6.44 278 Pn **Pn 20 25 07.2 +0.2**
MAKZ Makanchi 6.83 25 PN **Pn 20 25 14.3 +1.9**
MAKZ Makanchi 6.83 25 Pn **Pn 20 25 14.3 +1.9**
MK31 Makanchi Array 6.92 27 Pn **Pn 20 25 15.5 +1.9**
comp=E,14nm,0.4s,baz=204,slow=12,SNR=405
MK31 ⇓Pg **Pb 20 25 35.7 +3.0**
comp=E,308nm,1.0s,baz=206,slow=17,SNR=6.9
MK31 ⇓Lg Lg 20 27 09.1
comp=E,409nm,0.8s,baz=219,slow=25,SNR=4.8
MK31 Makanchi Array 6.92 27 *e*PN **Pn 20 25 15.5 +1.9**
MK31 Makanchi Array 6.92 27 Pn **Pn 20 25 15.5 +1.9**
MKAR Makanchi Array 6.92 27 Pn **Pn 20 25 15.7 +2.0**
comp=E,11nm,0.3s,baz=203,slow=15,SNR=369
MKAR Sn **Sn 20 26 35.4 +3.3**
comp=E,14nm,0.3s,baz=208,slow=18,SNR=5.4
MKAR Lg Lg 20 27 12.6
comp=E,24nm,0.3s,baz=214,slow=22,SNR=3.2
MKAR Makanchi Array 6.92 27 *i* PN **Pn 20 25 15.6 +1.9**
MKAR pmax pmax
comp=E,17nm,0.3s
CHGR Chuyangaron 6.94 256 Pn **Pn 20 25 12.7 -1.3**
CHCP Chirah Chowk 7.88 208 P **Pn 20 25 26.8 -0.1**
CHCP S **Sn 20 26 51.0 -4.7**
NIL Nilore 7.89 209 P **Pn 20 25 26.5 -0.5**
NIL Nilore 7.89 209 **Pn 20 25 26.5 -0.5**
WMQ Urumqi 8.00 64 *e*P **Pn 20 25 31.7 +3.2**
WMQ pP Pb 20 25 37.4 -14
WMQ S **Sn 20 27 01.0 +2.3**
WMQ sS Sb 20 27 15.2 -11
WMQ pmax pmax
comp=Z,58nm,0.7s
WMQ pmax pmax
comp=Z,240nm,3.7s
WMQ smax smax
comp=Z,270nm,1.5s
WMQ smax smax
comp=Z,300nm,1.5s
WMQ LR LR
comp=Z,3µm,6.5s
WMQ LR LR
comp=Z,5µm,10.3s
WMQ Urumqi 8.00 64 P **Pn 20 25 31.9 +3.4**
WMQ Urumqi 8.00 64 **Pn 20 25 31.9 +3.4**
THN Thein Dam 8.40 192 *ex* Pn 20 25 23.0 -11
THN *ex* x 20 27 04.0
ZSN Zaisan 8.47 35 Pg 20 26 09.1
comp=Z,459nm,1.1s
ZSN Lg Lg 20 28 00.6
comp=Z,573nm,2.0s
OTUK Ortayu 8.49 335 ⇑Pn **Pn 20 25 37.0 +1.9**
comp=Z,36nm,0.7s
OTUK ⇓Pg 20 26 05.3
comp=Z,164nm,0.9s
OTUK ⇑Lg Lg 20 27 55.1
comp=Z,3µm,0.9s
OTUK Ortayu 8.49 335 *i* P **Pn 20 25 37.0 +1.9**
OTUK pmax pmax
comp=Z,36nm,0.6s
THW Thamme Wali 9.24 213 P **Pn 20 25 42.7 -2.8**
KBL Kabul 9.24 231 P **Pn 20 25 43.1 -2.6**
KBL Kabul 9.24 231 Pn **Pn 20 25 43.1 -2.6**
BHK Bhakra 9.32 187 *ex* **Pn 20 25 46.4 -0.1**
BHK *ex* Sn 20 27 20.8 -10
SARP Sargodha 9.66 207 P **Pn 20 25 48.3 -3.0**
SEM Semipalatinsk 9.87 9 Pg Pn 20 26 38.1 +44
comp=Z,89nm,0.6s
KURBB Kurchatov Arra 9.95 3 Pn **Pn 20 25 54.5 -0.6**
comp=Z,1.1nm,0.3s,baz=195,slow=12,SNR=136
KURBB Lg Lg 20 28 46.3
comp=Z,2.7nm,0.3s,baz=193,slow=30,SNR=13
KURBB Kurchatov Arra 9.95 3 ⇑Pn **Pn 20 25 55.6 +0.6**
comp=Z,94nm,1.1s
KURBB ⇑Pg 20 26 30.2
comp=Z,511nm,0.6s
KURBB ⇓Lg Lg 20 28 44.9
comp=Z,3µm,1.5s
KURK Kurchatov 10.04 3 *ce*P **Pn 20 25 56.8 +0.5**
NDI New Delhi 11.99 182 *e*P Pn 20 26 17.0 -6.1
NDI *ex* x 20 28 24.0
BVAR Borovoye Array 13.32 340 Pn **Pn 20 26 40.3 -0.9**
comp=Z,1.5nm,0.3s,baz=151,slow=13,SNR=70
BVAR Lg Lg 20 30 28.5
comp=Z,5.5nm,0.3s,baz=147,slow=25,SNR=7.4
BRVK Borovoye 13.38 340 *de*P **Pn 20 26 41.3 -0.6**
HRA Herat 13.82 248 Pn Pn 20 26 42.7 -5.6
ZALV Zalesovo Beam 14.09 17 Lg Lg 20 30 57.1
baz=220,slow=23,SNR=5.3
AJM Ajmer 14.41 191 ⇓*i*x Pn 20 26 50.0 -6.2
AJM *i* x Sn 20 29 22.0 -14
GEYT Alibeck 15.46 266 Pn **Pn 20 27 04.9 -5.3**
comp=Z,1.9nm,0.3s,baz=87,slow=8.2,SNR=23
GEYT Sn Sn 20 29 50.8 -10
comp=Z,1.4nm,0.3s,baz=118,slow=25,SNR=2.8
GYA0B ALIBECK ARRAY 15.46 266 Pn Pn 20 27 03.7 -6.5
AKTO Aktyubinsk 16.87 312 Pn **Pn 20 27 28.2 0.0**
comp=Z,1.2nm,0.3s,baz=103,slow=14,SNR=19
AKTO Lg Lg 20 32 19.3
comp=Z,0.1nm,0.3s,baz=166,slow=20,SNR=2.7
AKTO LR LR 20 35 09.2
comp=Z,141nm,19.9s,baz=137,slow=41
GTA Gaotai 16.93 87 *e*P **P 20 27 29.0 -2.1**
GTA pP pP 20 27 32.8 -3.8
GTA sP sP 20 27 35.3 -3.9
GTA pmax pmax
comp=Z,31nm,1.0s
LZH Lanzhou 20.92 94 *e*P Pn 20 28 16.5 -0.9
LZH pP sP 20 28 19.9 -3.2
LZH sP pP 20 28 23.0 +2.5
LZH pmax pmax
comp=Z,35nm,1.4s
LZH LR LR
comp=Z,3µm,12.5s
LZH LR LR
comp=Z,4µm,11.4s
LZH LR LR
comp=Z,4µm,13.1s
BRDH Bariadhala 21.45 143 LR LR 20 38 15.5
comp=Z,6µm,18.1s,baz=210,slow=42
SONM Songino Array 21.63 61 P **P 20 28 24.1 +1.8**
comp=Z,35nm,0.8s,baz=261,slow=11,SNR=7.6
ULN Ulaanbaatar 22.07 61 *ce*P **P 20 28 30.0 +2.9**
ULN pmax pmax
comp=Z,66nm,0.8s
LKRN Lenkeran, Azer 22.35 274 P **P 20 28 29.9 0.0**
AKT Akhty 22.60 282 *e*P **P 20 28 32.0 -0.8**
AKT *e* 20 28 56.5
AKT pmax pmax
comp=Z,59nm,0.8s
SEKA Sheki 23.04 281 P **P 20 28 37.0 -0.3**
CD2 Chengdu 23.16 107 P **P 20 28 39.0 +0.4**
MNGR Mingechevir, A 23.19 280 P **P 20 28 39.4 +0.6**
WSAR Wadi Sarin 23.71 229 P **P 20 28 42.1 -1.9**
comp=Z,14nm,0.9s,baz=77,slow=8.6,SNR=6.4
WSAR LR LR 20 39 08.8
comp=Z,289nm,18.7s,baz=342,slow=40
GANJ Ganja 23.79 280 P **P 20 28 45.4 +0.7**
GROC Groznyy 23.83 287 *e*P **P 20 28 45.6 +0.5**
GROC *e* 20 29 16.0
GROC *e*S **S 20 33 04.4 +4.3**
GROC pmax pmax
comp=Z,120nm,1.0s
NAX Nakhchivan 24.72 277 P **P 20 28 53.9 +0.5**
GUDG Gudauri 24.88 285 P **P 20 28 56.4 +1.5**
KZRT Kazreti 25.09 283 P **P 20 28 58.4 +1.7**
ZEI Tsey 25.26 286 *e*P **P 20 28 56.7 -1.7**
ZEI pmax pmax
comp=Z,6.0nm,0.6s
HHC Hu-ho-hao-te 25.51 78 *e*P **P 20 29 02.0 +1.4**
HHC sP sP 20 29 09.8 +0.7
HHC S **S 20 33 26.9 -0.4**
HHC pmax pmax
comp=Z,26nm,0.9s
HHC LR LR
comp=Z,890nm,10.0s
HHC LR LR
comp=Z,560nm,11.7s
XAN Xi'an 25.55 95 P **P 20 29 06.5 +5.6**
XAN pmax pmax
comp=Z,27nm,0.8s
XAN LR LR
comp=Z,2µm,10.0s
XAN LR LR
comp=Z,3µm,10.6s
XAN LR LR
comp=Z,3µm,12.7s
ONI Oni 25.61 286 P **P 20 29 03.3 +1.9**
GOF Gofitskoye 25.69 291 ⇑*e*P **P 20 29 02.4 +0.4**
GOF pmax pmax
comp=Z,280nm,0.6s
BGD Bogdanovka 25.71 283 P **P 20 29 05.2 +2.7**
AKH Akhalkalaki 25.76 283 P **P 20 29 04.1 +1.2**
KBZ Khabaz 25.89 288 P **P 20 29 02.8 -1.0**
comp=Z,3.7nm,0.8s,baz=87,slow=9.1,SNR=10
KBZ Khabaz 25.89 288 *ce*P **P 20 29 02.7 -1.0**
KBZ pmax pmax
comp=Z,6.0nm,1.1s
KVAR Kislovodsk Arr 26.01 289 P **P 20 29 04.9 -0.2**
comp=Z,3.3nm,0.6s,baz=247,slow=22,SNR=4.5
KVAR LR LR 20 39 42.3
comp=Z,2µm,20.3s,baz=230,slow=37
KIV Kislovodsk 26.02 289 *e*P **P 20 29 04.1 -1.0**
KIV pmax pmax
comp=Z,67nm,1.0s
KIV MLR MLR
comp=Z,1µm,15.0s
NEY Neytrino 26.06 287 ⇓*e*P **P 20 29 06.2 +0.5**
KARS Kars 26.21 281 P **P 20 29 09.4 +2.4**
GYA Guiyang 27.80 112 ⇓*i*P **P 20 29 23.6 +2.2**
GYA PP **PnPn 20 30 08.9 +1.3**
GYA S **S 20 34 07.4 +3.7**
GYA SS **SnSn 20 35 20.4 +3.8**
GYA pmax pmax
comp=Z,30nm,0.9s
GYA pmax pmax
comp=Z,250nm,4.2s
GYA LR LR
comp=Z,970nm,10.2s
GYA LR LR
comp=Z,2µm,11.9s
CMAR Chiang Mai Arr 28.67 134 P **P 20 29 29.2 +0.2**
comp=Z,7.2nm,1.0s,baz=320,slow=8.2,SNR=3.7
CMAR S **S 20 34 17.8 +0.6**
comp=Z,0.5nm,0.4s,baz=283,slow=13,SNR=1.3
NRIK Noril'sk 29.18 7 *e*P **P 20 29 33.2 +0.2**
NRIK pmax pmax
comp=Z,78nm,1.1s
MALT Malatya 30.27 278 P **P 20 29 44.2 +1.0**
RAYN Ar Rayn 32.01 248 P **P 20 29 57.5 -1.0**
RAYN pmax pmax
comp=Z,11nm,0.9s
RAYN Ar Rayn 32.01 248 P **P 20 29 57.5 -1.0**
ILGA Ilgaz 33.04 285 P **P 20 30 08.6 +0.9**
BR131 Keskin Array S 33.45 283 P **P 20 30 11.2 +0.1**
SNR=77
BR131 Keskin Array S 33.45 283 P **P 20 30 11.2 +0.1**
BR131 Keskin Array S 33.45 283 P **P 20 30 11.2 +0.1**
BRTR Keskin Array B 33.45 283 P **P 20 30 10.8 -0.3**
comp=Z,49nm,0.8s,baz=93,slow=8.4,SNR=127
BRTR Keskin Array B 33.45 283 *i* P **P 20 30 10.8 -0.3**
BRTR pmax pmax
comp=Z,52nm,0.8s
NJ2 Nanjing 33.94 91 *e*P **P 20 30 16.1 +0.8**
NJ2 pmax pmax
comp=Z,18nm,0.7s
ANTO Ankara 34.03 284 ⇓P **P 20 30 15.1 -1.0**
ANTO Ankara 34.03 284 P **P 20 30 15.1 -1.0**
ANTO pmax pmax
comp=Z,116nm,0.7s
ANTO Ankara 34.03 284 IAmb IAmb 20 30 15.8
comp=Z,116nm,0.7s
ANTO Ankara 34.03 284 P **P 20 30 15.1 -1.0**
PUL Pulkovo 34.87 319 ⇓*e*P **P 20 30 24.2 +1.2**
PUL pmax pmax
comp=Z,81nm,0.7s
LVZ Lovozero 35.78 334 *ce*P **P 20 30 31.1 +0.3**
LVZ pmax pmax
comp=Z,73nm,1.0s
APA Apatity 36.06 333 ⇓*i*P **P 20 30 33.3 +0.1**
APA pmax pmax
comp=Z,16nm,0.7s
VSU Vasula 36.50 317 *de*P **P 20 30 37.6 +0.6**
VSU pmax pmax
comp=Z,329nm,1.0s
KMPD K-Podol'skiy 36.75 300 P **P 20 30 39.0 -0.3**
FINES FINESS Array B 37.24 321 P **P 20 30 44.0 +0.7**
comp=Z,97nm,0.6s,baz=98,slow=9.0,SNR=2.5
YAK Yakutsk 37.45 38 *e*P **P 20 30 45.3 +0.3**
YAK pmax pmax
comp=Z,36nm,0.9s
INCN Inchon 37.68 79 P **P 20 30 46.2 -1.2**
INCN pmax pmax
comp=Z,43nm,0.9s
KLR Kul'dur 38.41 59 P **P 20 30 54.2 +0.8**
comp=Z,19nm,0.7s,baz=284,slow=7.5,SNR=12
KLR Kul'dur 38.41 59 ⇑*e*P **P 20 30 54.2 +0.8**
KLR pmax pmax
comp=Z,23nm,0.8s
KSRS Korea Array 38.65 78 P **P 20 30 55.9 +0.4**
comp=Z,4.5nm,0.8s,baz=276,slow=8.5,SNR=8.1
KSRS LR LR 20 48 33.9
comp=Z,369nm,18.7s,baz=310,slow=39
VAF Ylistaro 39.07 324 P **P 20 31 00.0 +1.4**
VAF pmax pmax
comp=Z,165nm,0.9s
ARCES ARCESS Array B 39.50 334 P **P 20 31 02.9 +0.7**
comp=Z,31nm,0.7s,baz=102,slow=8.8,SNR=7.2
USRK Ussuriysk Ar. 39.56 66 P **P 20 31 02.9 -0.2**
comp=Z,5.5nm,0.8s,baz=304,slow=6.5,SNR=4.8
TIXI Tiksi 39.89 23 P **P 20 31 05.1 -0.3**
comp=Z,14nm,0.6s,baz=226,slow=8.1,SNR=5.3
TIXI Tiksi 39.89 23 ⇓*e*P **P 20 31 06.3 +0.9**
TIXI pmax pmax
comp=Z,18nm,0.7s
TIXI Tiksi 39.89 23 IAmb IAmb 20 31 14.6
comp=Z,22nm,0.8s
NORES NORESS Array B 44.25 320 P **P 20 31 41.2 +0.1**
NORES pmax pmax
comp=Z,49nm,0.6s
NB2 NORSAR Subarra 44.39 320 P **P 20 31 42.2 0.0**

comp=Z,48nm,0.8s,baz=88,slow=7.9
NB2 NORSAR Subarra 44.39 320 P **P** **20 31 42.2 0.0**
baz=88,slow=7.9
NOA NORSAR Array B 44.39 320 P **P** **20 31 42.3 0.0**
comp=Z,30nm,0.7s,baz=88,slow=7.9,SNR=10
GERES GERESS Array B 44.98 303 P **P** **20 31 47.5 +0.2**
comp=Z,5.0nm,0.5s,baz=69,slow=7.3,SNR=1.3
YSS Yuzh-Sakhalins 46.10 59 *eP* **P** **20 31 56.6 +0.6**
YSS *e* 20 33 36.9
YSS pmax pmax
comp=Z,20nm,1.4s
MAJO Matsushiro 46.60 75 *eP* **P** **20 31 59.6 -0.5**
MAJO pmax pmax
comp=Z,39nm,1.9s
MAT Matsushiro 46.60 75 P **P** **20 31 59.6 -0.5**
MJAR Matsushiro Arr 46.60 75 P **P** **20 32 00.1 0.0**
comp=Z,6.2nm,0.9s,baz=292,slow=8.2,SNR=10
MA2 Magadan 47.77 41 P **P** **20 32 08.9 +0.1**
comp=Z,7.7nm,0.5s,baz=262,slow=11,SNR=3.5
MA2 LR LR 20 53 03.0
comp=Z,688nm,18.6s,baz=240,slow=37
MA2 Magadan 47.77 41⇓ *eP* **P** **20 32 09.4 +0.6**
MA2 pmax pmax
comp=Z,21nm,1.1s
MA2 Magadan 47.77 41 IAmb IAmb 20 32 10.3
comp=Z,19nm,1.0s
SEY Seymchan 47.95 36 P **P** **20 32 10.8 +0.6**
comp=Z,4.6nm,0.6s,baz=294,slow=5.8,SNR=5.5
SEY Seymchan 47.95 36⇓ *eP* **P** **20 32 11.3 +1.1**
KSI Kapahiang 49.64 147 P **P** **20 32 26.0 +2.2**
KSI pmax pmax
comp=Z,24nm,0.9s
BILL Bilibino 52.47 28 *ce*P **P** **20 32 45.3 +0.9**
BILL *e* 20 33 55.1
BILL *e* 20 34 45.7
BILL *i* S S 20 40 21.3 +12
BILL pmax pmax
comp=Z,34nm,0.9s
BILL MLR MLR
comp=Z,729nm,16.0s
EKA Eskdalemuir Ar 53.02 315 P **P** **20 32 48.4 -0.2**
EKA pmax pmax
comp=Z,2.0nm,0.8s
ESK Eskdalemuir 53.05 315 P **P** **20 32 48.3 -0.5**
ESK pmax pmax
comp=Z,24nm,1.0s
KMBO Kilima Mbogo 55.58 232 P **P** **20 33 08.1 +0.1**
comp=Z,4.3nm,0.8s,baz=43,slow=9.9,SNR=5.8
ESDC Sonseca Array 60.17 298 P **P** **20 33 38.6 -1.2**
comp=Z,2.0nm,0.7s,baz=53,slow=6.5,SNR=7.7
PAB San Pablo 60.49 298 P **P** **20 33 42.9 +0.9**
PAB pmax pmax
comp=Z,12nm,3.0s
SFS San Fernando 63.34 296 *e*PP PP 20 36 16.8 -3.3
SFS *e*S **S** **20 42 28.1 -4.6**
IFR Ifrane 64.18 293 *e*PP PP 20 36 28.6 +0.7
IFR *e*S S 20 42 36.2 -7.4
TOLK Toolik Lake Re 65.45 17 P **P** **20 34 14.7 +0.3**
baz=322
TOLK Toolik Lake Re 65.45 17 P **P** **20 34 14.8 +0.3**
COLD Coldfoot 66.42 18 IAmb IAmb 20 34 22.6
comp=Z,31nm,0.9s
A36M Sachs Harbour 66.45 8 P **P** **20 34 21.0 +0.2**
baz=341
MLY Manley 68.03 20 IAmb IAmb 20 34 32.3
comp=Z,28nm,1.0s
BPAW Bear Paw Mtn. 68.70 21 IAmb IAmb 20 34 36.1
comp=Z,32nm,0.8s
POKR Poker Flat Res 68.79 19 P **P** **20 34 36.3 +0.6**
baz=325
INK Inuvik 68.82 12 P **P** **20 34 36.3 +0.5**
INK pmax pmax
comp=Z,76nm,1.1s
TCOL CIGO, UAF Yank 68.89 19 P **P** **20 34 36.5 +0.2**
baz=324
COLA College 68.89 19 *ce*P **P** **20 34 36.3 +0.1**
COLA pmax pmax
comp=Z,47nm,0.9s
COLA College 68.89 19 P **P** **20 34 36.4 +0.2**
C36M Paulatuk 69.10 8 P **P** **20 34 37.0 -0.5**
baz=342
ILAR Eielson Array 69.21 19 P **P** **20 34 38.0 -0.3**
comp=Z,19nm,0.8s,baz=318,slow=5.1,SNR=46
ILAR LR LR 21 09 17.8
comp=Z,668nm,18.7s,baz=288,slow=40
ILAR Eielson Array 69.21 19 P **P** **20 34 38.0 -0.3**
TRF Thorofare Moun 69.40 21 IAmb IAmb 20 34 41.3
comp=Z,18nm,0.8s
HDA Harding Lake 69.49 19 P **P** **20 34 39.2 -0.9**
baz=325
EPYK Eagle Plains 70.02 14 P **P** **20 34 42.9 -0.4**
baz=333
EPYK Eagle Plains 70.02 14 IAmb IAmb 20 34 44.0
comp=Z,45nm,1.1s
DHY Denali Highway 70.48 20 IAmb IAmb 20 34 47.1
comp=Z,28nm,0.7s
EGAK Eagle 70.53 17 IAmb IAmb 20 34 47.4
comp=Z,33nm,1.2s
TOA0 Torodi Ar. Sit 71.03 271 P **P** **20 34 48.1 -2.1**
TORD Torodi Ar. Bea 71.03 271 P **P** **20 34 48.1 -2.1**
comp=Z,39nm,0.6s,baz=46,slow=5.5,SNR=221
BRLK Bradley Lake 72.19 24 IAmb IAmb 20 34 56.7
comp=Z,26nm,0.8s
LSZ Lusaka 72.19 231 P **P** **20 34 56.2 -1.0**
LSZ pmax pmax
comp=Z,11nm,0.9s
LSZ Lusaka 72.19 231 P **P** **20 34 56.2 -1.0**
GLI Glacier Island 72.37 21 IAmb IAmb 20 34 58.4
comp=Z,39nm,0.8s
GLB Gilahina Butte 72.77 20 IAmb IAmb 20 35 01.4
comp=Z,24nm,1.1s
HIN Hinchinbrook I 72.94 21 IAmb IAmb 20 35 02.4
comp=Z,62nm,1.4s
CNBA Chernabura Isl 73.01 31 IAmb IAmb 20 35 01.7
comp=Z,32nm,0.8s
EYAK Cordova Ski Ar 73.02 21 IAmb IAmb 20 35 02.9
comp=Z,39nm,0.9s
MCARA McCarthy VSAT 73.02 19 IAmb IAmb 20 35 02.8
comp=Z,37nm,0.9s
VRDI Verde Repeater 73.04 19 IAmb IAmb 20 35 03.0
comp=Z,41nm,0.8s
KDAK Kodiak Island 73.23 26 P **P** **20 35 03.1 +0.4**
KDAK pmax pmax
comp=Z,61nm,0.7s
KDAK Kodiak Island 73.23 26 P **P** **20 35 03.1 +0.4**
RAGM Ragged Mountai 73.44 20 IAmb IAmb 20 35 12.0
comp=Z,56nm,1.2s
OHAK Old Harbor 73.44 26 IAmb IAmb 20 35 05.6
comp=Z,42nm,0.8s
BALM Baldy 73.49 19 IAmb IAmb 20 35 05.8
comp=Z,32nm,0.8s
CRQM Cirque 73.53 20 IAmb IAmb 20 35 06.0
comp=Z,34nm,0.8s
TGL Tana Glacier 73.61 19 IAmb IAmb 20 35 06.3
comp=Z,36nm,0.9s
BARN Barnard Glacie 73.63 19 P **P** **20 35 05.8 +0.4**
BARN IAmb IAmb 20 35 07.4
comp=Z,25nm,1.0s
CTGM Chitina Glacie 73.80 19 IAmb IAmb 20 35 07.6
comp=Z,27nm,0.8s
YAH Yahtse 74.22 19 IAmb IAmb 20 35 10.2
comp=Z,28nm,0.8s
DHAK Deception Hill 76.20 18 IAmb IAmb 20 35 21.7
comp=Z,29nm,0.9s
SKAG Skagway 76.52 17 IAmb IAmb 20 35 23.5
comp=Z,37nm,0.8s
YKA Yellowknife Ar 76.68 6 P **P** **20 35 22.1 -0.4**
comp=Z,45nm,0.7s,baz=347,slow=5.7,SNR=123
BESE Bessie Mountai 77.43 17 IAmb IAmb 20 35 28.7
comp=Z,25nm,1.0s
JIS Juneau Island 77.81 17 IAmb IAmb 20 35 30.8
comp=Z,26nm,1.1s
DLBC Dease Lake 78.55 14 IAmb IAmb 20 35 34.5
comp=Z,23nm,0.9s
SIT Sitka 78.70 18 IAmb IAmb 20 35 35.9
comp=Z,32nm,0.8s
WRAK Wrangell Islan 79.95 16 IAmb IAmb 20 35 42.5
comp=Z,29nm,0.8s
WRA Warramunga Arr 79.99 127 P **P** **20 35 40.7 -0.7**
comp=Z,18nm,0.8s,baz=327,slow=5.0,SNR=11
DBIC Dimbokro 80.10 270 P **P** **20 35 38.9 -3.3**
comp=Z,9.6nm,0.9s,baz=20,slow=6.8,SNR=5.8
DBIC Dimbokro 80.10 270 P **P** **20 35 38.9 -3.3**
DBIC pmax pmax
comp=Z,13nm,1.0s
DBIC Dimbokro 80.10 270 IAmb IAmb 20 35 45.1
comp=Z,13nm,0.9s
KIC Kosan Boka 80.21 270 *eP* **P** **20 35 40.6 -2.2**
comp=Z,18nm,0.9s
TIC Toumodi 80.24 270 *eP* **P** **20 35 40.7 -2.3**
LIC Lamto 80.51 270 *eP* **P** **20 35 42.1 -2.4**
comp=Z,39nm,0.9s
LBTB Lobatse 81.37 226 P **P** **20 35 47.4 -1.4**
LBTB pmax pmax
comp=Z,18nm,1.2s
LBTB Lobatse 81.37 226 P **P** **20 35 47.4 -1.4**
NWAO Narrogin (SRO) 81.82 147 P **P** **20 35 49.0 -1.9**
comp=Z,6.0nm,0.6s,baz=0.0,slow=1.0,SNR=2.1
NWAO Narrogin (SRO) 81.82 147 IAmb IAmb 20 35 56.0
comp=Z,12nm,0.9s
ASAR Alice Springs 82.58 130 P **P** **20 35 53.7 -1.5**
comp=Z,18nm,0.7s,baz=327,slow=5.4,SNR=21
BOSA Boshof 84.40 225 P **P** **20 36 02.8 -1.7**
comp=Z,10nm,1.0s,baz=34,slow=6.2,SNR=6.4
BOSA Boshof 84.40 225 IAmb IAmb 20 36 07.2
comp=Z,17nm,1.2s
FFC Flin Flon 84.95 360 P **P** **20 36 06.3 -0.6**
FFC pmax pmax
comp=Z,33nm,0.9s
FFC Flin Flon 84.95 360 P **P** **20 36 06.3 -0.6**
CHGQ Chibougamau 86.51 342 P **P** **20 36 14.3 -0.4**
baz=21
MATQ Matagami 87.36 344 P **P** **20 36 18.8 -0.1**
baz=18
LLLB Lillooet 87.46 12 IAmb IAmb 20 36 26.8
comp=Z,26nm,1.4s
CTA Charters Tower 87.69 119 P **P** **20 36 19.6 -1.2**
comp=Z,9.8nm,0.9s,baz=270,slow=5.1,SNR=4.9
CTA LR LR 21 19 14.2
comp=Z,229nm,21.7s,baz=208,slow=38
CTAO Charters Tower 87.69 119 P **P** **20 36 20.0 -0.8**
CTAO pmax pmax
comp=Z,20nm,1.1s
D57A Chemin Vers le 89.10 341 P **P** **20 36 27.2 0.0**
baz=21
ULM Lac du Bonnet 89.27 356 P **P** **20 36 26.6 -1.3**
comp=Z,5.6nm,0.7s,baz=1.2,slow=6.0,SNR=4.8
ULM Lac du Bonnet 89.27 356 IAmb IAmb 20 36 27.8
comp=Z,8.7nm,0.8s
D55A Sainte-Anne-du 89.48 342 P **P** **20 36 29.4 +0.4**
baz=20
WALA Waterton Lakes 90.04 8 IAmb IAmb 20 36 32.0
comp=Z,20nm,1.0s
B08A Colville Reser 90.05 11 IAmb IAmb 20 36 32.4
comp=Z,22nm,1.1s
D50A G1974 Best Tow 90.28 345 P **P** **20 36 32.2 -0.5**
baz=17
E54A Lac Daplat, Po 90.42 343 P **P** **20 36 33.1 -0.3**
baz=19
NEW Newport 90.45 10 P **P** **20 36 33.4 -0.1**
comp=Z,12nm,0.9s,baz=329,slow=4.8,SNR=8.0
NEW Newport 90.45 10 P **P** **20 36 33.4 -0.1**
baz=349
D49A Beiah Townshi 90.47 346 P **P** **20 36 33.7 +0.1**
baz=16
C09A Chrisman Ranch 90.75 11 IAmb IAmb 20 36 35.9
comp=Z,21nm,0.9s
E51A G1948 Merrick 90.82 345 P **P** **20 36 35.2 -0.1**
baz=17
D47A Chapleau 90.99 347 P **P** **20 36 36.2 +0.1**
baz=14
DGMT Dagmar 91.20 1 P **P** **20 36 37.5 +0.5**
baz=359
DGMT Dagmar 91.20 1 IAmb IAmb 20 36 38.4
comp=Z,30nm,1.1s
AGMN Agassiz Nation 91.21 356 P **P** **20 36 37.0 0.0**
baz=4.9
D46A Sault St. Mari 91.30 348 P **P** **20 36 37.6 +0.1**
baz=14
E48A Lockeyer 91.38 346 P **P** **20 36 37.9 +0.1**
baz=15
EGMT Eagleton 91.42 5 P **P** **20 36 38.1 0.0**
baz=354
E47A Iron Bridge 91.60 347 P **P** **20 36 39.2 +0.4**
baz=14
F10A Beach Ranch, E 92.68 10 IAmb IAmb 20 36 44.8
comp=Z,8.4nm,0.8s
H17A Grant Village 94.97 6 P **P** **20 36 56.5 +1.8**
baz=354
RSSD Black Hills 95.55 1 P **P** **20 36 57.7 +0.3**
RSSD pmax pmax
comp=Z,13nm,1.2s
RSSD Black Hills 95.55 1 P **P** **20 36 57.1 -0.3**
baz=359
ECSD EROS Data Cent 95.81 356 P **P** **20 36 58.5 +0.2**
baz=4.4
PDAR Pinedale Array 96.66 5 P **P** **20 37 02.0 -0.5**
comp=Z,1.7nm,0.6s,baz=53,slow=3.0,SNR=7.0
SYO Syowa Base 112.98 194⇓ *i*Pdiff **Pdif** **20 38 14.0 +0.2**
SYO Syowa Base 112.98 194⇓ *ep*Pdiff pPdif 20 38 16.6 -3.8
SYO Syowa Base 112.98 194⇓ *i*sPdiff **Pdif** **20 38 19.4 +5.6**
PB11 IPG Station P 145.26 297 **PKPbc** **20 43 08.7 -1.2**
LVC Limon Verde 146.65 293 PKPbc **PKPdf** **20 43 13.5 +0.8**
comp=Z,9.0nm,0.7s,baz=40,slow=2.8,SNR=7.1

*IDC **04** 20:32:03.7±0.7,7.7°48S×156.°29E,h0km,mb4.3/14,*
mb1 4.3/16,mb1mx4.1/39,mbtmp4.2/16,ML3.6/2,MS3.7/1,
Ms1 3.7/1,ms1mx3.2/34,Error ellipse: s-maj=25.5km
s-min=18.0km az=73.0
*NEIC **04** 20:32:09.1±1.4,7.4°S±0.°1×156.°3E±0.°1,h35km±1km,*
mb4.6/6,Error ellipse: s-maj=24.1km s-min=12.3km
az=218.0
ISC 04 20:32:10.1±0.5,7.°5S±0.°1×156.°32E±0.°09,h45km,n31,
σ1s52/27,mb4.1/15,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.10**	**119**	Pn	**Pn**	**20 33 08.5**	**-1.8**
	8.8nm,0.3s,baz=211,slow=15,SNR=1.8						
HNR				Sn	**Sn**	**20 33 60.0**	**+3.0**
	20nm,0.3s,baz=272,slow=19,SNR=3.8						
HNR				LR	LR	20 34 50.8	
	comp=Z,999nm,19.1s,baz=188,slow=41						
RABL	**Rabaul**	**5.25**	**308**		**Pn**	**20 33 22.9**	**-3.2**
KRVT	**Keravat (AS076**	**5.29**	**306**	Pn	Pn	20 33 32.4	+5.7
	5.0nm,0.3s,baz=206,slow=22,SNR=1.9						
KRVT				Sn	**Sn**	**20 34 28.9**	**+2.6**
	6.9nm,0.3s,baz=192,slow=16,SNR=1.6						
DZM	**Mont Dzumac**	**17.52**	**147**	P	**Pn**	**20 36 09.2**	**-2.0**
	0.1nm,0.3s,baz=286,slow=13,SNR=1.9						
DZM	**Mont Dzumac**	**17.52**	**147**	IAmb	IAmb	20 36 18.1	
	comp=Z,22nm,1.5s						
WRA	**Warramunga Arr**	**24.66**	**238**	P	**P**	**20 37 26.3**	**-0.6**
	comp=Z,3.2nm,1.1s,baz=63,slow=9.4,SNR=1.9						
ASAR	**Alice Springs**	**26.88**	**231**	P	**P**	**20 37 51.0**	**+4.1**
	comp=Z,2.3nm,0.9s,baz=57,slow=8.9,SNR=2.7						
FITZ	**Fitzroy Crossi**	**31.68**	**248**	P	**P**	**20 38 29.3**	**-0.3**
	comp=Z,4.2nm,1.0s,baz=86,slow=9.8,SNR=1.7						
FITZ	**Fitzroy Crossi**	**31.68**	**248**	IAmb	IAmb	20 38 29.5	
	comp=Z,24nm,1.4s						
MJAR	**Matsushiro Arr**	**46.94**	**340**	P	**P**	**20 40 36.6**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=152,slow=6.8,SNR=1.6						
MJAR				PcP	**PcP**	**20 42 08.5**	**0.0**
	comp=Z,1.1nm,0.7s,baz=126,slow=4.8,SNR=4.3						
JNU	**Nakatsue**	**47.04**	**330**	P	**P**	**20 40 36.8**	**-0.6**
	comp=Z,2.5nm,0.8s,baz=184,slow=3.6,SNR=4.3						
JNU	**Nakatsue**	**47.04**	**330**	IAmb	IAmb	20 40 37.6	
	comp=Z,10nm,0.9s						
KSRS	**Korea Array**	**51.95**	**331**	P	**P**	**20 41 15.0**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=139,slow=7.8,SNR=6.0						
PETK	**Petropavlovsk-**	**60.33**	**1**	P	**P**	**20 42 15.4**	**+1.2**
	comp=Z,1.3nm,0.9s,baz=142,slow=17,SNR=2.7						
CMAR	**Chiang Mai Arr**	**62.16**	**295**	P	**P**	**20 42 27.4**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=124,slow=5.1,SNR=7.1						
SONM	**Songino Array**	**70.43**	**327**	P	**P**	**20 43 20.5**	**+0.7**
	comp=Z,2.9nm,0.8s,baz=137,slow=6.7,SNR=16						
QSPA	**South Pole Qui**	**82.53**	**180**	P	**P**	**20 44 28.6**	**+0.5**
	comp=Z,5.5nm,0.9s,baz=39,slow=5.0,SNR=6.8						
QSPA	**South Pole Qui**	**82.53**	**180**	IAmb	IAmb	20 44 33.6	
	comp=Z,12nm,1.4s						
ILAR	**Eielson Array**	**83.32**	**21**	P	**P**	**20 44 32.0**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=238,slow=5.2,SNR=2.3						
MAW	**Mawson**	**84.48**	**203**	P	**P**	**20 44 37.8**	**0.0**
	comp=Z,1.1nm,0.5s,baz=104,slow=12,SNR=6.7						
MAW	**Mawson**	**84.48**	**203**	IAmb	IAmb	20 44 38.5	
	comp=Z,0.5nm,0.7s						
MK31	**Makanchi Array**	**84.61**	**318**	P	**P**	**20 44 39.2**	**+0.2**
MKAR	**Makanchi Array**	**84.61**	**318**	P	**P**	**20 44 39.1**	**+0.1**
	comp=Z,14nm,0.7s,baz=102,slow=6.0,SNR=112						
MAKZ	**Makanchi**	**84.82**	**318**	P	**P**	**20 44 40.1**	**+0.2**
ZAA0	**Zalesovo Array**	**85.29**	**326**	P	**P**	**20 44 41.1**	**-1.0**
ZALV	**Zalesovo Beam**	**85.29**	**326**	P	**P**	**20 44 41.5**	**-0.7**
	comp=Z,7.5nm,0.6s,baz=116,slow=5.3,SNR=27						
YKA	**Yellowknife Ar**	**96.12**	**28**	P	**P**	**20 45 33.0**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=262,slow=4.6,SNR=6.0						
ESDC	**Sonseca Array**	**143.35**	**334**	PKhKP	PKPpre	20 51 36.8	
	comp=Z,0.8nm,0.9s,baz=5.6,slow=3.4,SNR=5.1						
BDFB	**Brasilia**	**146.73**	**134**	PKPbc	**PKPbc**	**20 51 47.7**	**-0.6**
	comp=Z,2.5nm,0.6s,baz=342,slow=4.9,SNR=4.7						
MDT	**Midelt**	**149.17**	**328**	PKPbc	**PKPbc**	**20 51 55.0**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=40,slow=8.0,SNR=5.3						
TORD	**Torodi Ar. Bea**	**154.41**	**285**	PKPbc	**PKPbc**	**20 52 06.2**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=46,slow=3.9,SNR=2.7						

*SOME **04** 20:34:07.6,40.°57N×77.°55E,h15km*
*NNC **04** 20:34:09.4±2.2,40.°68N×77.°57E,h0km,mb3.5,mpv3.1,*
Error ellipse: s-maj=15.1km s-min=12.4km az=13.0
*KRNET **04** 20:34:15.1±0.1,40.°97N×78.°41E,h35km,mb3.5*
ISC 04 20:34:19.2±1.9,41.°06N±0.°06×78.°17E±0.°09,h31km±16km,
n12,σ1s32/19,9C-5D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.30**	**326**⇑ *iP*		**Pn**	**20 34 41.1**	**-0.3**
	baz=22						
KDJ				⇑ *iS*	**Sb**	**20 34 59.9**	**+0.2**
	baz=22						
PRZ	**Przheval'sk**	**1.44**	**7**⇑ *eP*		**Pn**	**20 34 41.3**	**-2.0**
	baz=0.0						
PRZ				⇑ *eS*	**Sn**	**20 35 00.9**	**-0.3**
	baz=0.0						
ANVS	**Anan'yevo**	**1.77**	**348**⇑ *iP*		**Pn**	**20 34 46.7**	**-1.1**
	baz=43						
ANVS				⇑ *iS*	**Sn**	**20 35 10.1**	**+0.8**
	baz=43						
ULHL	**Ulahol**	**1.87**	**310**⇑ *iP*		**Pn**	**20 34 49.5**	**+0.3**
	baz=9.0						
ULHL				⇑ *iS*	**Sb**	**20 35 13.8**	**-2.1**
	baz=9.0						
TNSS	**Tian-Shan**	**2.18**	**336** *eP*		**Pn**	**20 34 53.7**	**+0.1**
	17nm,0.6s						
TNSS				*eS*	**Sb**	**20 35 27.0**	**+2.0**
	19nm,0.8s						
TNSS	**Tian-Shan**	**2.18**	**336** Pg		**Pn**	**20 34 53.7**	**+0.1**
	18nm,0.7s						
TNSS				Lg	Lg	20 35 27.0	
	19nm,0.8s						
UZB	**Uzynbulak**	**2.19**	**17** *eP*		**Pb**	**20 34 58.7**	**+0.5**
	11nm,1.0s						
UZB				*eS*	Sb	20 35 35.5	+11
	16nm,1.5s						
UZB	**Uzynbulak**	**2.19**	**17** Pg		**Pb**	**20 34 58.7**	**+0.5**
	5.2nm,0.9s						
UZB				Lg	Lg	20 35 35.5	
	7.6nm,0.8s						
BOOM	**Boomskoye usch**	**2.20**	**311**⇓ *eP*		**Pn**	**20 34 54.2**	**+0.5**
	baz=10.0						
BOOM				⇓ *eS*	**Sb**	**20 35 22.2**	**-3.0**
	baz=10.0						
MDOK	**Medeo**	**2.27**	**339**⇑ Pg		**Pn**	**20 34 54.9**	**+0.3**
	10nm,0.7s						
MDOK				⇓ Lg	Lg	20 35 28.2	
	54nm,1.2s						
KSH	**Kashi**	**2.27**	**228**⇓ *iP*		**Pn**	**20 34 54.3**	**-0.4**
	baz=34						
KSH				⇓ *iS*	**Sn**	**20 35 22.3**	**+0.6**
	baz=34						
PDGK	**Podgornoye**	**2.48**	**23** Pg		**Pb**	**20 35 04.1**	**+1.0**
	3.5nm,0.8s						
PDGK				Lg	Lg	20 35 44.6	
	4.8nm,0.7s						

*SOME **04** 20:36:01.4,40.°57N×77.°57E,h5km*
*NNC **04** 20:36:02.9±1.2,40.°61N×77.°58E,h0km,mb3.8,mpv3.4,*
Error ellipse: s-maj=7.8km s-min=6.5km az=16.0
*KRNET **04** 20:36:04.9±0.1,40.°70N×77.°74E,h35km,mb3.2*
ISC 04 20:36:04.7±1.7,40.°73N±0.°05×77.°73E±0.°07,h1km±13km,
n29,σ1s01/47,22C-6D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.46**	**344**⇑ *iP*		**Pn**	**20 36 31.8**	**-0.6**
	baz=44						
KDJ				⇑ *iS*	**Sg**	**20 36 51.4**	**-0.3**
	baz=44						
KSH	**Kashi**	**1.81**	**229**⇑ *iP*		**Pn**	**20 36 37.3**	**+0.2**
	baz=30						
KSH				⇑ *iS*	**Sn**	**20 37 01.0**	**+0.2**
	baz=30						
PRZ	**Przheval'sk**	**1.83**	**16**⇓ *eP*		**Pb**	**20 36 37.6**	**-1.4**
	baz=16						
PRZ				⇓ *iS*	**Sg**	**20 37 01.7**	**-1.7**
	baz=16						
ULHL	**Ulahol**	**1.88**	**324**⇑ *iP*		**Pn**	**20 36 38.4**	**+0.1**
	baz=24						
ULHL				⇑ *iS*	**Sn**	**20 37 02.6**	**-0.2**
	baz=24						
ANVS	**Anan'yevo**	**2.06**	**359**⇑ *iP*		**Pn**	**20 36 41.2**	**+0.6**
	baz=59						
ANVS				⇑ *iS*	**Sn**	**20 37 07.4**	**+0.4**
	baz=59						
BOOM	**Boomskoye usch**	**2.21**	**323**⇑ *eP*		**Pn**	**20 36 42.6**	**-0.2**
	baz=24						
BOOM				⇑ *eS*	**Sn**	**20 37 10.6**	**-0.3**
	baz=24						
KZA	**Kyzart**	**2.30**	**307**⇑ *iP*		**Pn**	**20 36 44.6**	**+0.4**
	baz=7.0						
KZA				⇑ *iS*	**Sn**	**20 37 13.2**	**-0.2**
	baz=7.0						
TNSS	**Tian-Shan**	**2.38**	**346** *eP*		**Pb**	**20 36 48.5**	**-0.1**
	25nm,0.5s						
TNSS				*eS*	**Sg**	**20 37 22.5**	**+1.3**
	24nm,0.5s						
TNSS	**Tian-Shan**	**2.38**	**346** Pg		**Pb**	**20 36 48.5**	**-0.1**
	25nm,0.5s						
TNSS				Lg	Lg	20 37 22.5	
	24nm,0.5s						
SATY	**Saty**	**2.38**	**12** *eP*		**Pg**	**20 36 49.7**	**-0.8**
	5.4nm,0.3s						
SATY				*eS*	**Sg**	**20 37 24.4**	**+3.1**
	20nm,0.3s						
SATY	**Saty**	**2.38**	**12** Pg		**Pg**	**20 36 49.7**	**-0.8**
	5.4nm,0.3s						
SATY				Lg	Lg	20 37 24.4	
	20nm,0.3s						
MDOK	**Medeo**	**2.49**	**348** *eP*		**Pb**	**20 36 50.2**	**-0.1**
	17nm,0.5s						
MDOK				*eS*	**Sg**	**20 37 25.2**	**+0.6**
	27nm,0.7s						
MDOK	**Medeo**	**2.49**	**348** ⇓ Pg		**Pb**	**20 36 48.8**	**-1.5**
	18nm,0.6s						
MDOK				⇑ Lg	Lg	20 37 24.1	
	30nm,0.7s						
MDOK	**Medeo**	**2.49**	**348** Pg		**Pb**	**20 36 50.2**	**-0.1**
	17nm,0.5s						
MDOK				Lg	Lg	20 37 25.2	
	27nm,0.7s						
KOTS	**Kotyrbulak**	**2.55**	**350** *eP*		**Pb**	**20 36 51.5**	**+0.2**
	21nm,0.4s						
KOTS				*eS*	**Sg**	**20 37 27.6**	**+1.0**
	67nm,0.3s						
KOTS	**Kotyrbulak**	**2.55**	**350** Pg		**Pb**	**20 36 51.5**	**+0.2**
	21nm,0.4s						
KOTS				Lg	Lg	20 37 27.6	
	67nm,0.3s						
UZB	**Uzynbulak**	**2.60**	**21** *eP*		**Pg**	**20 36 53.3**	**-1.3**
	5.7nm,0.6s						
UZB				*eS*	**Sg**	**20 37 30.4**	**+2.1**
	15nm,0.3s						
UZB	**Uzynbulak**	**2.60**	**21** Pg		**Pg**	**20 36 53.3**	**-1.3**
	5.7nm,0.6s						
UZB				Lg	Lg	20 37 30.4	
	15nm,0.3s						
SHLS	**Shalkode**	**2.75**	**27** *eP*		**Pg**	**20 36 59.0**	**+1.5**
	16nm,0.8s						
SHLS				*eS*	Sg	20 37 40.5	+7.4
	40nm,0.6s						
SHLS	**Shalkode**	**2.75**	**27** Pg		**Pg**	**20 36 58.9**	**+1.5**
	9.0nm,0.6s						
SHLS				Lg	Lg	20 37 40.5	
	27nm,0.6s						
KBK	**Karagaybulak**	**2.84**	**314**⇑ *iP*		**Pn**	**20 36 52.2**	**+0.9**
	baz=14						
KBK				⇑ *iS*	**Sn**	**20 37 26.3**	**+0.1**
	baz=14						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
UCH	Uchtor	2.84	303	⇑iP	Pn	20 36 51.9	+0.2
	baz=3.0						
UCH				⇑iS	Sn	20 37 26.1	-0.7
	baz=3.0						
PDGK	Podgornoye	2.91	26	Pg	Pg	20 36 59.1	-1.5
	6.5nm,1.0s						
PDGK				Lg	Lg	20 37 40.5	
	14nm,0.8s						
PDGK	Podgornoye	2.91	26	⇓Pg	Pg	20 36 58.8	-1.8
	17nm,1.1s						
PDGK				⇑Lg	Lg	20 37 38.6	
	38nm,0.9s						
KTBS	Karatobe	3.08	346	eP	Pb	20 37 00.7	+0.4
	2.3nm,0.3s						
KTBS				eS	Sg	20 37 43.4	-0.3
	12nm,0.7s						
KTBS	Karatobe	3.08	346	Pg	Pb	20 37 00.7	+0.4
	3.7nm,0.6s						
KTBS				Lg	Lg	20 37 43.4	
	15nm,0.5s						
AAK	Ala-Archa	3.08	309	⇓iP	Pn	20 36 55.2	+0.5
	baz=10.0						
AAK				⇓iS	Sn	20 37 31.7	-0.6
	baz=10.0						
CHMS	Chumysh	3.18	317	⇑iP	Pn	20 36 56.8	+0.9
	baz=17						
CHMS				⇑iS	Sn	20 37 34.2	-0.2
	baz=17						
USP	Ospenovka	3.50	318	⇑iP	Pn	20 37 01.1	+0.8
	baz=18						
USP				⇑iS	Sn	20 37 42.1	-0.2
	baz=18						

*IDC **04** 20:47:39.2±1.5, 24°.19N×91°.67E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.1/59, mbtmp3.3/3, Error ellipse: s-maj=60.5km s-min=13.9km az=91.0*

ISC 04 20:47:42.6±1.0**, 24°.0N**±0°.1×**91°.4E**±0°.1**, h30km, n15, σ0s.83**/17**, mb3.0**/3**, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRDH	Bariadhala	1.36	169	Pg	Pb	20 48 08.0	+0.6
	86nm,0.3s,baz=86,slow=17,SNR=2.8						
BRDH				Lg	Lg	20 48 26.5	
	288nm,0.3s,baz=137,slow=19,SNR=17						
ODAN	Odare	4.57	309	ePn	Pn	20 48 51.0	+1.1
ODAN				eSn	Sb	20 49 56.8	-0.1
	197nm,0.5s						
TAPN	Taplejung	4.67	316	ePn	Pn	20 48 52.2	+0.8
TAPN				eSn	Sb	20 50 01.4	+1.4
	862nm,1.3s						
RAMN	Ramite	5.19	305	ePn	Pn	20 48 58.7	+0.1
JIRN	Jiri	5.90	309	ePn	Pn	20 49 08.7	+0.3
GUN	Gumba	6.27	309	ePn	Pn	20 49 13.6	+0.2
PKI	Pulchoki	6.42	305	ePn	Pn	20 49 15.5	0.0
PKIN	Phulchoki	6.43	305	ePn	Pn	20 49 15.4	-0.2
KKN	Kakani	6.63	306	ePn	Pn	20 49 18.4	+0.1
GKN	Gorkha	7.23	305	ePn	Pn	20 49 25.7	-0.7
KOLN	Koldanda	7.92	300	ePn	Pn	20 49 34.6	-1.3
DANN	Dangsing	8.07	304	ePn	Pn	20 49 36.7	-1.4
MKAR	Makanchi Array	23.87	344	P	P	20 52 52.8	-0.6
	0.2nm,0.5s,baz=167,slow=8.0,SNR=4.9						
SONM	Songino Array	26.62	23	P	P	20 53 17.8	-0.8
	0.2nm,0.6s,baz=200,slow=11,SNR=2.3						
WRA	Warramunga Arr	60.52	133	P	P	20 57 50.4	+0.1
	0.7nm,0.9s,baz=321,slow=7.3,SNR=6.3						

*IDC **04** 21:10:49.1±7.6, 13°.06N×144°.12E, h81km±68km, mb3.5/16, mb1 3.6/16, mb1mx3.5/38, mbtmp3.8/16, Error ellipse: s-maj=31.5km s-min=14.1km az=88.0*

*NEIC **04** 21:10:52.3±1.8, 13°.04N±0°.09×144°.1E±0°.1, h116km±3km, mb4.3/11, Error ellipse: s-maj=15.7km s-min=12.7km az=115.0*

ISC 04 21:10:51.1±0.5**, 13°.01N**±0°.09×**143°.99E**±0°.09**, h100km, n34, σ1s.20**/36**, mb3.9**/22**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.03	56		Pn	21 11 13.7	+1.8
GUMO				Sn	Sn	21 11 29.0	+1.5
PATS	Pohnpei	15.38	112	Pn	Pn	21 14 22.5	-0.2
PATS				IAmb	IAmb	21 14 32.2	
	comp=Z,30nm,0.9s						
JNU	Nakatsue	23.32	331	P	P	21 15 51.9	+1.4
	comp=Z,5.8nm,0.6s,baz=155,slow=0.2,SNR=6.1						
JNU	Nakatsue	23.32	331	P	P	21 15 50.3	-0.2
JNU				IAmb	IAmb	21 15 52.3	
	comp=Z,8.1nm,0.8s						
TWG	Pinlang	23.85	297	P	P	21 15 56.1	+0.7
MJAR	Matsushiro Arr	24.00	349	P	P	21 15 55.1	-1.4
	comp=Z,0.4nm,0.4s,baz=158,slow=8.7,SNR=1.9						
KSRS	Korea Array	28.26	332	P	P	21 16 33.8	-1.0
	comp=Z,0.8nm,0.6s,baz=139,slow=9.2,SNR=2.0						
BATI	Baumata	30.65	222	P	P	21 16 55.2	-1.1
	comp=Z,9.0nm,0.4s,baz=50,slow=7.9,SNR=2.7						
WB0	Warramunga Arr	33.92	196	P	P	21 17 24.2	-0.5
WB0				IAmb	IAmb	21 17 34.0	
	comp=Z,3.0nm,1.0s						
WR0	Warramunga Arr	34.06	196	P	P	21 17 24.3	-1.7
WR0				IAmb	IAmb	21 17 32.9	
	comp=Z,3.7nm,1.0s						
WB2	Warramunga Arr	34.09	196	P	P	21 17 26.2	-0.1
WB2				IAmb	IAmb	21 17 29.6	
	comp=Z,1.6nm,0.8s						
WRA	Warramunga Arr	34.10	196	P	P	21 17 27.1	+0.7
	comp=Z,0.3nm,0.6s,baz=16,slow=9.1,SNR=6.2						
FITZ	Fitzroy Crossi	35.82	211	P	P	21 17 42.3	+1.1
	comp=Z,0.3nm,0.4s,baz=36,slow=8.7,SNR=1.0						
FITZ	Fitzroy Crossi	35.82	211	P	P	21 17 41.5	+0.3
AS31	Alice Springs	37.76	195	P	P	21 17 59.5	+1.9
ASAR	Alice Springs	37.77	195	P	P	21 17 58.3	+0.7
	comp=Z,0.7nm,0.5s,baz=19,slow=13,SNR=14						
ASAR				PcP	PcP	21 20 12.4	-0.3
	comp=Z,0.2nm,0.6s,baz=35,slow=3.4,SNR=1.8						
PEA0B	Petropavlovsk-	41.46	12	P	P	21 18 25.6	-2.4
PEA0B				IAmb	IAmb	21 18 30.5	
	comp=Z,12nm,1.1s						
CMAR	Chiang Mai Arr	43.61	283	P	P	21 18 47.5	+1.6
	comp=Z,0.6nm,0.5s,baz=84,slow=7.0,SNR=6.2						
MNAI	Manna	44.26	250	P	P	21 18 50.1	-1.0
STKA	Stephens Creek	44.69	183	P	P	21 18 54.6	+0.5
SONM	Songino Array	46.71	326	P	P	21 19 12.0	+1.9
	comp=Z,0.4nm,0.5s,baz=140,slow=9.9,SNR=2.6						
GSI	Gunungsitoli	47.40	260	P	P	21 19 15.9	+0.1
GSI				IAmb	IAmb	21 19 35.3	
	comp=Z,12nm,0.9s						
MKAR	Makanchi Array	61.31	316	P	P	21 20 57.4	+1.2
	comp=Z,0.3nm,0.4s,baz=84,slow=9.3,SNR=8.7						
ZALV	Zalesovo Beam	61.59	325	P	P	21 20 58.7	+0.8
	comp=Z,0.5nm,0.4s,baz=112,slow=8.2,SNR=2.5						
ZALV				PcP	PcP	21 21 38.0	-0.6
	comp=Z,0.7nm,0.4s,baz=133,slow=2.7,SNR=4.3						
NRIK	Noril'sk	66.39	341	P	P	21 21 28.2	-0.8
	comp=Z,1.8nm,0.6s,baz=143,slow=5.1,SNR=2.3						
ILAR	Eielson Array	69.45	25	P	P	21 21 47.2	-1.1
	comp=Z,0.1nm,0.4s,baz=254,slow=5.8,SNR=4.1						
YKA	Yellowknife Ar	83.76	27	P	P	21 23 08.7	-0.3
	comp=Z,0.1nm,0.5s,baz=286,slow=4.5,SNR=4.6						
ARCES	ARCESS Array B	87.36	342	P	P	21 23 26.2	-0.5
	comp=Z,2.3nm,1.0s,baz=66,slow=9.7,SNR=2.4						
NVAR	Mina Array Bea	87.95	51	P	P	21 23 31.7	+1.3
	comp=Z,0.4nm,0.4s,baz=262,slow=10,SNR=3.6						
FINES	FINESS Array B	91.32	335	P	P	21 23 44.1	-1.2
	comp=Z,1.2nm,0.8s,baz=64,slow=4.9,SNR=6.4						
TORD	Torodi Ar. Bea	134.47	303	PKP	PKPdf	21 29 57.4	-1.2
	comp=Z,0.2nm,0.5s,baz=38,slow=2.8,SNR=1.7						
DBIC	Dimbokro	143.38	300	PKhKP	PKPpre	21 30 10.9	
	comp=Z,2.7nm,0.9s,baz=79,slow=3.3,SNR=4.5						
LPAZ	La Paz	148.78	100	PKPbc	PKiKP	21 30 29.7	-0.4
	comp=Z,0.5nm,0.4s,baz=225,slow=4.3,SNR=2.3						
LPAZ	La Paz	148.78	100		PKPbc	21 30 26.7	-1.9

*SOME **04** 21:14:13.3, 40°.65N×77°.62E, h10km*

*KRNET **04** 21:14:14.0±0.1, 40°.70N×77°.53E, h19km, mb2.9*

*NNC **04** 21:14:15.0±1.6, 40°.71N×77°.65E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=10.9km s-min=7.7km az=171.0*

ISC 04 21:14:14.1±1.4**, 40°.72N**±0°.04×**77°.49E**±0°.04**, h18km**±5km**, n55, σ1s.60**/83**, 28C-11D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	1.43	351	⇓iP	Pg	21 14 41.5	-0.2
	baz=50						
KDJ				⇓iS	Sg	21 15 02.0	+1.6
	baz=50						
KSH	Kashi	1.67	225	⇑iP	Pg	21 14 46.5	+0.1
	baz=27						
KSH				⇑iS	Sg	21 15 09.6	+1.4
	baz=27						
ULHL	Ulahol	1.79	329	⇑iP	Pg	21 14 48.3	-0.3
	baz=28						
ULHL				⇑iS	Sg	21 15 13.3	+1.4
	baz=28						
ULHL	Ulahol	1.79	329	P	Pg	21 14 48.8	+0.2
	SNR=15						
PRZ	Przheval'sk	1.89	21	⇑iP	Pg	21 14 49.5	-1.0
	baz=20						
PRZ				⇑iS	Sg	21 15 15.7	+0.7
	baz=20						
ANVS	Anan'yevo	2.06	4	⇑iP	Pb	21 14 52.6	+1.4
	baz=3.0						
ANVS				⇑iS	Sg	21 15 20.7	0.0
	baz=3.0						
BOOM	Boomskoye usch	2.12	327	⇓iP	Pb	21 14 53.4	+1.3
	baz=27						
BOOM				⇓iS	Sg	21 15 22.0	-0.3
	baz=27						
KZA	Kyzart	2.16	310	⇑iP	Pb	21 14 54.3	+1.3
	baz=9.0						
KZA				⇑iS	Sg	21 15 23.8	-0.1
	baz=9.0						
KZA	Kyzart	2.16	310	P	Pg	21 14 55.8	0.0
	SNR=16						
TNSS	Tian-Shan	2.35	350	eP	Pg	21 14 58.5	-0.8
	36nm,0.4s						
TNSS				eS	Sg	21 15 31.5	+1.7
	40nm,0.4s						
TNSS	Tian-Shan	2.35	350	Pg	Pg	21 14 58.5	-0.8
	36nm,0.4s						
TNSS				Lg	Lg	21 15 32.1	
	40nm,0.4s						
SATY	Saty	2.43	16	eP	Pb	21 14 58.9	+1.4
	8.8nm,0.7s						
SATY				eS	Sg	21 15 32.6	+0.1
	21nm,0.5s						
SATY	Saty	2.43	16	Pg	Pb	21 14 58.9	+1.4
	8.8nm,0.7s						
SATY				Lg	Lg	21 15 32.6	
	21nm,0.5s						
MDOK	Medeo	2.46	352	eP	Pb	21 14 60.0	+2.0
	19nm,0.6s						
MDOK				eS	Sg	21 15 33.9	+0.5
	30nm,0.4s						
MDOK	Medeo	2.46	352	Pg	Pg	21 15 00.2	-1.2
	9.0nm,0.5s						
MDOK				Lg	Lg	21 15 35.8	
	17nm,0.4s						
MDOK	Medeo	2.46	352	Pg	Pb	21 14 60.0	+2.0
	19nm,0.6s						
AAA	Alma-Ata	2.52	350	eP	Pg	21 15 01.7	-0.9
	9.6nm,0.2s						
AAA				eS	Sg	21 15 36.9	+1.6
	36nm,0.5s						
AAA	Alma-Ata	2.52	350	Pg	Pg	21 15 01.7	-0.9
	41nm,0.3s						
AAA				Lg	Lg	21 15 36.9	
	26nm,0.6s						
KNDC	Almaty	2.52	351	⇓Pg	Pg	21 15 05.7	+3.1
	9.5nm,0.5s						
KNDC				⇑Lg	Lg	21 15 38.0	
	29nm,0.5s						
KOTS	Kotyrbulak	2.53	354	eP	Pg	21 15 01.5	-1.1
	32nm,0.4s						
KOTS				eS	Sg	21 15 36.5	+1.1
	83nm,0.4s						
KST	Kastek	2.59	334	eP	Pg	21 15 03.1	-0.7
	9.4nm,0.5s						
KST				eS	Sg	21 15 39.4	+2.0
	20nm,0.3s						
KST	Kastek	2.59	334	Pg	Pg	21 15 03.1	-0.7
	9.4nm,0.5s						
KST				Lg	Lg	21 15 39.4	
	20nm,0.3s						
TKM2	Tokmak 2	2.62	328	⇑iP	Pb	21 15 00.2	-0.4
	baz=28						
TKM2				⇑iS	Sb	21 15 34.4	+1.9
	baz=28						
TKM2	Tokmak 2	2.62	328	⇓Pg	Pg	21 15 06.7	+2.4
	3.0nm,0.5s						
TKM2				⇑Lg	Lg	21 15 40.2	
	5.9nm,0.5s						
UZB	Uzynbulak	2.68	25	eP	Pb	21 15 02.0	+0.3
	4.6nm,0.7s						
UZB				eS	Sg	21 15 38.0	-2.4
	23nm,0.7s						
UZB	Uzynbulak	2.68	25	Pg	Pb	21 15 02.0	+0.3
	4.6nm,0.7s						
UZB				Lg	Lg	21 15 38.6	
	23nm,0.7s						
UCH	Uchtor	2.70	305	⇑iP	Pb	21 15 01.3	-0.8
	baz=5.0						
UCH				⇑iS	Sb	21 15 36.6	+1.5
	baz=5.0						
UCH	Uchtor	2.70	305	P	Pg	21 15 08.1	+2.2
	SNR=6.0						
KBK	Karagaybulak	2.71	316	⇑iP	Pb	21 15 01.8	-0.5
	baz=16						
KBK				⇑iS	Sb	21 15 36.5	+1.2
	baz=16						
KBK	Karagaybulak	2.71	316	P	Pg	21 15 05.5	-0.7
	SNR=7.7						
AAK	Ala-Archa	2.95	311	⇓iP	Pb	21 15 04.6	-1.7
	baz=11						
AAK				⇓iS	Sb	21 15 42.2	+0.1
	baz=11						
AAK	Ala-Archa	2.95	311	P	Pg	21 15 10.0	-0.7
	SNR=8.5						
AAK	Ala-Archa	2.95	311	⇓Pg	Pg	21 15 10.9	+0.2
	2.0nm,0.3s						
AAK				⇑Lg	Lg	21 15 50.3	
	14nm,0.8s						
PDGK	Podgornoye	3.00	29	Pg	Pb	21 15 08.4	+1.3
	3.5nm,0.4s						
PDGK				Lg	Lg	21 15 48.9	
	14nm,0.6s						
PDGK	Podgornoye	3.00	29	⇑Pg	Pb	21 15 08.5	+1.4
	3.6nm,0.4s						
PDGK				⇑Lg	Lg	21 15 48.8	
	28nm,0.8s						
KTBS	Karatobe	3.05	349	eP	Pb	21 15 10.1	+2.2
	3.8nm,0.5s						
KTBS				eS	Sg	21 15 51.5	-0.6
	36nm,0.5s						
KTBS	Karatobe	3.05	349	Pg	Pb	21 15 10.1	+2.2
	4.7nm,0.3s						
KTBS				Lg	Lg	21 15 51.5	
	30nm,0.5s						
CHMS	Chumysh	3.06	319	⇑iP	Pb	21 15 06.1	-2.0
	baz=19						
CHMS				⇑iS	Sb	21 15 44.6	-0.5
	baz=19						
AML	Almayashu	3.18	298	⇑iP	Pb	21 15 08.3	-2.1
	baz=98						
AML				⇑iS	Sb	21 15 48.0	-1.0
	baz=98						
AML	Almayashu	3.18	298	P	Pg	21 15 16.3	+1.1
	SNR=5.8						
KRBS	Karabastau	3.27	336	eP	Pg	21 15 14.8	-2.0
	3.8nm,0.4s						
KRBS				eS	Sg	21 15 59.5	+0.4
	7.9nm,0.6s						
KRBS	Karabastau	3.27	336	Pg	Pg	21 15 14.8	-2.0
	3.8nm,0.4s						
KRBS				Lg	Lg	21 15 59.5	
	7.9nm,0.6s						
KUU	Kurty	3.28	345	eP	Pb	21 15 14.6	+2.7
	0.9nm,0.1s						
KUU				eS	Sg	21 15 59.3	-0.3
	11nm,0.4s						
KUU	Kurty	3.28	345	Pg	Pb	21 15 14.6	+2.7
	1.7nm,0.6s						
KUU				Lg	Lg	21 15 59.3	
	10.0nm,0.3s						
USP	Ospenovka	3.38	320	⇓iP	Pb	21 15 10.8	-2.8
	baz=20						
USP				⇓iS	Sb	21 15 52.4	-2.0
	baz=20						
USP	Ospenovka	3.38	320	P	Pg	21 15 17.5	-1.5
	SNR=7.7						
EKS2	Erkin-Say	3.39	306	⇑iP	Pb	21 15 10.9	-2.9
	baz=6.0						
EKS2				⇑iS	Sb	21 15 52.7	-2.0
	baz=6.0						
MNBS	Baschi	3.42	11	eP	Pb	21 15 16.6	+2.3
	3.4nm,0.4s						
MNBS				eS	Sg	21 16 02.9	-1.2
	17nm,0.3s						
MNBS	Baschi	3.42	11	Pg	Pb	21 15 16.6	+2.3
	3.4nm,0.4s						
MNBS				Lg	Lg	21 16 02.9	
	17nm,0.3s						
SGDS	Sogindy	3.46	323	Pg	Pg	21 15 18.3	-2.2
	2.7nm,0.5s						
SGDS				Lg	Lg	21 16 06.0	
	3.6nm,0.5s						
ARXS	Arharly	3.50	4	eP	Pb	21 15 18.2	+2.6
	3.5nm,0.5s						
ARXS				eS	Sg	21 16 05.2	-1.3
	21nm,0.4s						
ARXS	Arharly	3.50	4	Pg	Pb	21 15 18.2	+2.6
	7.6nm,0.5s						
ARXS				Lg	Lg	21 16 05.2	
	21nm,0.4s						
KAPS	Kapalarasan	4.76	16	eP	Pg	21 15 42.5	-2.8
	0.9nm,0.5s						
KAPS				eS	Sg	21 16 47.0	0.0
	1.0nm,0.2s						
KAPS	Kapalarasan	4.76	16	Pg	Pg	21 15 42.5	-2.8
	1.2nm,0.4s						
KK31	Karatay Array	5.73	297	Pg	Pg	21 16 03.7	0.0
	0.2nm,0.3s,baz=110,slow=16,SNR=4.4						
KK31				⇑Lg	Lg	21 17 16.9	
	0.3nm,0.3s,baz=111,slow=28,SNR=4.5						

*BJI **04** 21:24:17.4±0.0, 20°.78S×178°.29W, h600km, mB5.0/17, mb4.7/37*

*NEIC **04** 21:24:18.0±1.8, 20°.7S±0°.1×178°.3W±0°.2, h612km±10km, mb4.9/35, Error ellipse: s-maj=21.4km s-min=15.7km az=116.0*

*IDC **04** 21:24:23.6±1.3, 20°.77S×178°.77W, h639km±14km, mb4.0/28, mb1 4.1/29, mb1mx3.9/47, mbtmp4.9/29, Error ellipse: s-maj=14.1km s-min=9.4km az=146.0*

ISC 04 21:24:19.3±0.4**, 20°.79S**±0°.07×**178°.59W**±0°.07**, h600km, n227, σ1s.26**/252**, mb4.7**/65**, 25C-15D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.40	313	P	P	21 25 50.4	+2.6
AFI	Afiamalu	9.44	45	P	P	21 26 29.2	-3.5
FUNA	Funafuti	12.38	350	P	P	21 27 00.2	-1.8
DZM	Mont Dzumac	14.00	262	P	P	21 27 18.6	+0.4
	1.4nm,0.3s,baz=88,slow=20,SNR=17						
DZM	Mont Dzumac	14.00	262	P	P	21 27 18.8	+0.5
OUZ	Omahuta	15.93	204	P	P	21 27 37.6	+1.8
MXZ	Matakaoa Point	16.93	188	P	P	21 27 44.0	-0.9
MXZ				IAmb	IAmb	21 27 49.9	
	comp=Z,45nm,1.0s						
URZ	Urewera	17.80	191	P	P	21 27 51.9	-1.0
	comp=Z,3.3nm,0.3s,baz=358,slow=5.6,SNR=19						
URZ				S	S	21 30 38.7	-7.6
	comp=Z,0.5nm,0.3s,baz=25,slow=20,SNR=2.0						
URZ	Urewera	17.80	191	P	P	21 27 52.2	-0.6
URZ				IAmb	IAmb	21 27 53.5	
	comp=Z,39nm,0.7s						
HIZ	Hauiti	18.55	196	P	P	21 28 01.0	+1.4
HIZ				IAmb	IAmb	21 28 09.6	
	comp=Z,60nm,1.1s						
BKZ	Black Stump Fm	18.80	192	P	P	21 28 00.8	-1.2
BFZ	Birch Farm	20.31	191	P	P	21 28 14.6	-1.0
BFZ				IAmb	IAmb	21 28 16.6	
	comp=Z,21nm,0.7s						
MSWZ	Moikau Station	21.21	193	P	P	21 28 21.7	-2.0
SNZO	South Karori	21.23	194	P	P	21 28 23.8	0.0
SNZO				IAmb	IAmb	21 28 27.1	
	comp=Z,43nm,0.9s						
THZ	Tophouse	22.11	197	P	P	21 28 32.1	+0.4
THZ				IAmb	IAmb	21 28 43.3	
	comp=Z,35nm,1.1s						
KHZ	Kahutara	22.56	195	P	P	21 28 34.7	-0.9
KHZ				IAmb	IAmb	21 28 45.1	
	comp=Z,49nm,1.2s						
RPZ	Rata Peaks	24.44	198	P	P	21 28 50.2	-2.2
	comp=Z,6.2nm,0.4s,baz=348,slow=6.3,SNR=1.7						
WHZ	Wether Hill Ro	27.37	201	P	P	21 29 19.7	+1.7
EIDS	Eidsvold	28.24	255	P	P	21 29 26.1	+0.2
EIDS				IAmb	IAmb	21 29 27.4	
	comp=Z,11nm,0.6s						
ARMA	Armidale	28.44	244	P	P	21 29 29.1	+1.4
CTA	Charters Tower	32.91	265	P	P	21 30 06.8	+0.9
	comp=Z,26nm,0.4s,baz=93,slow=11,SNR=55						
CTAO	Charters Tower	32.91	265	P	P	21 30 06.2	+0.3
PMG	Port Moresby	34.87	284	P	P	21 30 22.5	+0.2
TOO	Toolangi	35.28	234	P	P	21 30 25.7	+0.3
COEN	Coen	37.05	274	P	P	21 30 40.8	+0.6
COEN				IAmb	IAmb	21 30 42.2	
	comp=Z,30nm,1.0s						
STKA	Stephens Creek	37.16	244	P	P	21 30 42.1	+1.2
	comp=Z,11nm,0.6s,baz=90,slow=10,SNR=25						
STKA	Stephens Creek	37.16	244	P	P	21 30 41.5	+0.6
BBOO	Buckleboo	41.92	244	P	P	21 31 19.5	+0.6
BBOO				IAmb	IAmb	21 31 20.3	
	comp=Z,28nm,0.8s						
JAY	Jayapura	43.61	289	P	P	21 31 33.1	+0.8
	comp=Z,68nm,0.5s,baz=147,slow=4.5,SNR=46						
JAY	Jayapura	43.61	289	P	P	21 31 33.0	+0.6
	comp=Z,568nmcomp=Z,66nm,0.8s						
WR0	Warramunga Arr	43.82	262	IAmb	IAmb	21 31 35.4	
	comp=Z,43nm,1.1s						
AS31	Alice Springs	43.91	257	P	P	21 31 34.5	-0.1
ASAR	Alice Springs	43.91	257	P	P	21 31 35.1	+0.5
	comp=Z,63nm,0.8s,baz=96,slow=7.7,SNR=792						
ASAR				PcP	PcP	21 33 07.7	+0.6
	comp=Z,3.0nm,0.6s,baz=116,slow=3.0,SNR=5.2						
ASAR				S	S	21 37 21.2	-2.6
	comp=Z,11nm,0.8s,baz=94,slow=15,SNR=38						
WRAB	Tennant Creek	44.01	262	P	P	21 31 35.2	-0.1
WRAB				IAmb	IAmb	21 31 36.0	
	comp=Z,64nm,1.1s						
WRA	Warramunga Arr	44.01	262	P	P	21 31 34.9	-0.5
	comp=Z,31nm,0.5s,baz=98,slow=7.9,SNR=460						
WRA				PcP	PcP	21 33 08.4	+1.0
	comp=Z,0.4nm,0.3s,baz=76,slow=3.4,SNR=2.9						
WRA				S	S	21 37 18.8	-6.5
	comp=Z,4.7nm,1.0s,baz=97,slow=13,SNR=4.6						
GENI	Genyem	44.05	289	P	P	21 31 36.9	+1.2
	comp=Z,96nm,1.0s						
SMPI	Sarmi	45.62	289	P	P	21 31 48.7	+1.0
	comp=Z,1μmcomp=Z,27nm,1.1s						
HPAH	Hawaii Prepara	46.35	30	P	P	21 31 46.5	-6.6
HPAH				IAmb	IAmb	21 31 49.3	
	comp=Z,33nm,0.6s						
MTN	Manton Dam	48.61	271	P	P	21 32 09.8	-0.3
FORT	Forrest	48.67	247	IAmb	IAmb	21 32 11.1	
	comp=Z,44nm,0.8s						
KNRA	Kununurra	50.09	267	IAmb	IAmb	21 32 21.5	
	comp=Z,31nm,0.7s						
SIJI	Sorong	52.78	285	P	P	21 32 40.8	+0.5
	comp=Z,116nm,0.8s,baz=92,slow=6.0,SNR=43						
AAI	Ambon	54.43	281	P	P	21 32 53.4	+1.5
	comp=Z,60nm,1.1s						
NLAI	Namlea	55.61	281	P	P	21 33 00.4	+0.3
	comp=Z,124μmcomp=Z,45nm,0.7s						
SOEI	Soe	55.96	272	P	P	21 33 02.0	-0.6
	comp=Z,1μmcomp=Z,150nm,0.8s						
LBMI	Labuha	56.29	284	P	P	21 33 05.8	+1.1
	comp=Z,49nm,0.9s						
BATI	Baumata	56.38	271	P	P	21 33 07.0	+1.6
	comp=Z,43nm,0.7s,baz=258,slow=2.7,SNR=11						
BATI	Baumata	56.38	271	P	P	21 33 06.4	+1.0
	comp=Z,34nm,0.8s						
TNTI	Ternate	57.00	285	P	P	21 33 10.6	+1.0
	comp=Z,57nm,0.9s						
TNTI	Ternate	57.00	285	P	P	21 33 09.9	+0.3
TNTI				IAmb	IAmb	21 33 11.0	
	comp=Z,68nm,1.1s						
VNDA	Vanda	57.57	185	P	P	21 33 14.4	+2.0
	comp=Z,2.7nm,0.8s,baz=0.5,slow=6.0,SNR=20						
VNDA	Vanda	57.57	185	P	P	21 33 15.0	+2.6
MMRI	Maumere	58.21	273	P	P	21 33 17.5	-0.3
	comp=Z,56nm,0.9s						
MMRI	Maumere	58.21	273	IAmb	IAmb	21 33 18.6	
	comp=Z,64nm,1.1s						
EDFI	Ende, Flores	58.69	272	P	P	21 33 20.4	-0.7
	comp=Z,28nm,0.9s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LUWI	Luwuk	60.45	281	P	P	21 33 34.3	+1.7
	comp=Z,1µmcomp=Z,68nm,1.0s						
LUWI	Luwuk	60.45	281	P	P	21 33 33.6	+0.9
LUWI				IAmb	IAmb	21 33 34.5	
	comp=Z,74nm,1.1s						
APSI	Ampana	61.53	281	P	P	21 33 40.7	+1.0
	comp=Z,38nm,0.9s						
MRSI	Marisa	61.81	282	P	P	21 33 42.4	+0.8
	comp=Z,3µmcomp=Z,20nm,0.9s						
KCP	Kidapawan	61.82	290	⇓iP	P	21 33 42.0	+0.4
SPSI	Sidrap Palu	62.12	277	P	P	21 33 43.4	-0.2
	comp=Z,18nm,0.8s						
PLAI	Plampang	62.32	271	P	P	21 33 45.0	+0.1
	comp=Z,71nm,1.0s						
MPSI	Mapaga	63.63	281	P	P	21 33 53.4	+0.2
	comp=Z,324nmcomp=Z,38nm,0.9s						
JAGI	Jajag, Banyuwa	65.83	270	P	P	21 34 06.2	-0.9
JAGI				IAmb	IAmb	21 34 07.1	
	comp=Z,26nm,0.9s						
SPMM	Sapulut	68.52	284	P	P	21 34 25.0	+1.5
MJAR	Matsushiro Arr	70.12	324	P	P	21 34 32.7	+0.2
	comp=Z,6.5nm,0.6s,baz=140,slow=6.2,SNR=36						
MAJO	Matsushiro	70.12	324	P	P	21 34 33.2	+0.7
MAT	Matsushiro	70.12	324	P	P	21 34 32.7	+0.1
SBUM	Sibu	71.51	280	P	P	21 34 40.0	-1.2
JNU	Nakatsue	72.11	317	P	P	21 34 44.0	-0.2
	comp=Z,7.9nm,0.8s,baz=238,slow=3.6,SNR=4.8						
KIWB	Kanaga Island	72.34	1	P	P	21 34 43.2	-1.8
LEM	Lembang	72.48	269	P	P	21 34 47.5	+0.5
	comp=Z,46nm,0.8s,baz=63,slow=6.9,SNR=9.8						
ASAJ	Asahikawa	73.72	332	P	P	21 34 55.3	+2.1
	comp=Z,4.8nm,0.7s,baz=224,slow=7.6,SNR=9.5						
PETK	Petropavlovsk-	76.41	346	P	P	21 35 08.4	+0.5
	comp=Z,8.5nm,0.6s,baz=142,slow=6.6,SNR=28						
KSRS	Korea Array	76.74	319	P	P	21 35 11.1	+1.1
	comp=Z,3.2nm,0.7s,baz=120,slow=5.8,SNR=8.4						
USRK	Ussuriysk Ar.	78.90	326	P	P	21 35 23.3	+1.9
	comp=Z,11nm,0.9s,baz=115,slow=3.7,SNR=25						
MYKOM	Kota Tinggi	79.02	276	P	P	21 35 24.0	+1.2
NJ2	Nanjing	79.64	310	eP	P	21 35 24.8	-0.9
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
YBH	Yreka Blue Hor	80.86	39	P	P	21 35 34.3	+2.4
	comp=Z,5.9nm,0.7s,baz=226,slow=1.5,SNR=14						
KDAK	Kodiak Island	81.23	14	P	P	21 35 33.7	+0.5
	comp=Z,3.0nm,0.7s,baz=144,slow=21,SNR=5.1						
NVAR	Mina Array Bea	81.62	44	P	P	21 35 37.9	+1.9
	comp=Z,2.7nm,0.6s,baz=220,slow=8.5,SNR=14						
CN2	Changchun	82.19	323	eP	P	21 35 39.3	+0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
IPM	Ipoh	82.62	278	P	P	21 35 43.0	+1.6
MNSI	Mandailing Nat	82.64	274	P	P	21 35 41.3	-0.2
	comp=Z,19nm,0.8s						
MA2	Magadan	83.92	345	P	P	21 35 46.3	-0.4
	comp=Z,4.9nm,0.5s,baz=145,slow=6.6,SNR=7.0						
PSI	Prapat	83.97	275	P	P	21 35 47.5	-0.7
	comp=Z,6.0nm,0.4s,baz=179,slow=5.4,SNR=10						
BJI	Beijing	85.71	316	P	P	21 35 56.9	+1.1
BJI				S	S	21 45 33.9	-5.3
BJI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GYA	Guiyang	86.31	300	eP	P	21 36 00.4	+1.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SEY	Seymchan	86.53	347	P	P	21 35 59.9	+0.7
	comp=Z,6.1nm,0.6s,baz=153,slow=5.6,SNR=32						
TXAR	Lajitas Array	87.68	58	P	P	21 36 07.5	+2.0
	comp=Z,1.4nm,0.8s,baz=220,slow=6.3,SNR=21						
XAN	Xi'an	87.87	308	P	P	21 36 07.6	+1.4
XAN				pmax	pmax		
	comp=Z,16nm,0.8s						
XAN				pmax	pmax		
	comp=Z,33nm,4.9s						
VNA3	Neumayer Olymp	87.89	176	P	P	21 36 05.9	+0.2
VNA2	Neumayer--Watz	88.32	177	P	P	21 36 08.3	+0.7
	baz=190,slow=4.0						
DLBC	Dease Lake	88.53	23	P	P	21 36 10.2	+1.4
	comp=Z,2.2nm,0.8s,baz=241,slow=3.9,SNR=4.8						
ILAR	Eielson Array	88.72	13	P	P	21 36 09.3	0.0
	comp=Z,3.5nm,0.8s,baz=224,slow=5.6,SNR=31						
HHC	Hu-ho-hao-te	89.16	315	eP	P	21 36 11.4	-0.8
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,65nm,5.8s						
PDAR	Pinedale Array	89.55	43	P	P	21 36 15.6	+1.5
	comp=Z,2.2nm,0.7s,baz=217,slow=3.8,SNR=27						
CMAR	Chiang Mai Arr	89.69	290	P	P	21 36 16.9	+2.0
	comp=Z,8.4nm,0.9s,baz=124,slow=3.0,SNR=57						
CD2	Chengdu	90.48	303	eP	P	21 36 18.0	-0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	Lanzhou	92.51	308	eP	P	21 36 29.2	+1.4
LZH				pP	pwP	21 38 40.9	+0.6
LZH				sP	sP	21 39 38.4	+2.3
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
INK	Inuvik	94.70	15	P	P	21 36 36.6	-0.1
	comp=Z,1.5nm,0.8s,baz=184,slow=1.4,SNR=5.5						
YKA	Yellowknife Ar	97.01	25	P	P	21 36 47.6	+0.4
	comp=Z,0.4nm,0.6s,baz=239,slow=4.4,SNR=11						
ZALV	Zalesovo Beam	110.37	321	PKiKP	PKiKP	21 41 42.9	-0.9
	comp=Z,1.1nm,0.5s,baz=167,slow=1.5,SNR=8.0						
MKAR	Makanchi Array	111.00	313	PKiKP	PKiKP	21 41 44.7	-0.7
	comp=Z,0.6nm,0.4s,baz=168,slow=1.0,SNR=13						
KURBB	Kurchatov Arra	113.89	317	PKiKP	PKiKP	21 41 49.8	-0.9
	comp=Z,1.4nm,0.7s,baz=94,slow=1.5,SNR=14						
KSH	Kashi	114.60	305	PKP	PKiKP	21 41 52.2	-0.4
KSH				sPKP		21 45 08.0	
BVAR	Borovoye Array	118.95	320	PKP	PKiKP	21 41 60.0	-0.4
	comp=Z,3.6nm,0.5s,baz=126,slow=2.0,SNR=29						
GEYT	Alibeck	128.47	302	PKP	PKiKP	21 42 19.8	-0.1
	comp=Z,1.4nm,0.7s,baz=237,slow=5.1,SNR=4.9						
ARCES	ARCESS Array B	129.11	349	PKP	PKiKP	21 42 19.2	-0.9
	comp=Z,2.7nm,0.5s,baz=28,slow=1.2,SNR=29						
KLMR	Klimovskoe	131.92	336	ePKPdf	PKiKP	21 42 24.0	-2.0
KLMR				AMP		21 42 26.4	
	comp=Z,4.0nm,0.8s						
KLMR				ePP	PP	21 44 54.8	-0.3
FINES	FINESS Array B	135.89	343	PKhKP	PKPpre	21 42 21.7	
	comp=Z,1.0nm,0.6s,baz=11,slow=3.9,SNR=4.9						
FINES				PKP	PKiKP	21 42 32.6	-1.5
	comp=Z,1.2nm,0.4s,baz=52,slow=2.2,SNR=11						
FINES				SKP	SKPbc	21 45 07.1	-1.4
	comp=Z,3.2nm,0.7s,baz=57,slow=5.1,SNR=8.9						
NB2	NORSAR Subarra	139.20	353	PKP	PKPdf	21 42 30.5	-8.0
	comp=Z,0.5nm,0.6s,baz=10,slow=3.2						
NOA	NORSAR Array B	139.20	353	PKhKP	PKPpre	21 42 30.2	
	comp=Z,1.1nm,0.7s,baz=12,slow=2.3,SNR=10						
NOA				PKP	PKiKP	21 42 40.4	-0.6
	comp=Z,1.1nm,0.7s,baz=13,slow=4.1,SNR=6.9						
NOA				SKPbc	SKPbc	21 45 17.3	-0.7
	comp=Z,0.9nm,0.8s,baz=15,slow=4.4,SNR=4.2						
AKASG	Malin Array Be	143.00	330	PKP	PKPdf	21 42 43.0	-2.5
	comp=Z,19nm,0.5s,baz=42,slow=4.3,SNR=105						
AKASG				SKPbc	SKPbc	21 45 26.4	-1.5
	comp=Z,0.2nm,0.4s,baz=44,slow=2.2,SNR=5.1						
SORM	Soroca	145.16	328	⇑P	PKPab	21 42 50.1	-1.5
GKP	Gorka Klasztor	145.37	343	ePKP	PKPab	21 42 51.1	-1.2
BZK	Bozkurt	145.39	315	⇑P	PKiKP	21 42 54.2	+0.1
BEL	Belsk	145.53	339	ePKP	PKiKP	21 42 52.5	-1.6
BSEG	Bad Segeberg	146.22	351	ePKPbc	PKiKP	21 42 53.9	-1.5
	baz=17,slow=2.3						
LEOM	Leova	146.31	326	⇓P	PKiKP	21 42 54.1	-1.8
KWP	Kalwaria Pacla	146.61	335	ePKP	PKiKP	21 42 54.8	-1.6
BRTR	Keskin Array B	146.62	312	PKPbc	PKiKP	21 42 54.9	-2.1
	comp=Z,5.6nm,0.6s,baz=136,slow=4.7,SNR=38						
TLCR		146.82	324	⇑P	PKiKP	21 42 55.7	-1.3
RUE	Ruedersdorf	146.95	346	ePKPbc	PKiKP	21 42 55.8	-1.2
	baz=17,slow=2.3						
GHRR		147.02	326	⇑P	PKPab	21 42 57.1	-2.0
BURAR	Bucovina Array	147.04	330	⇑P	PKPab	21 42 56.9	-2.4
BIZ	Bicaz	147.09	328	⇑P	PKPab	21 42 57.2	-2.3
ANTO	Ankara	147.15	312	⇑P	PKiKP	21 42 57.2	-0.8
CFR	Carcaliu	147.20	324	⇑P	PKiKP	21 42 56.7	-1.1
OJC	Ojcow	147.23	338	ePKP	PKiKP	21 42 56.4	-1.3
KOLS	Kolonicke sedl	147.34	334	ePKP	PKiKP	21 42 57.5	-0.5
KOLS				e		21 43 01.4	
VRI	Vrincioaia	147.51	326	⇓P	PKiKP	21 42 57.4	-1.0
RETH	Rethem/Aller,	147.52	351	ePKPbc	PKiKP	21 42 57.4	-0.8
	baz=17,slow=2.3						
HARR	Harsova	147.62	324	⇓P	PKiKP	21 42 58.4	-0.3
NRDL	Niedersach Rie	147.65	350	ePKPbc	PKiKP	21 42 57.6	-0.7
	baz=17,slow=2.3						
TLBR	Topalu	147.65	323	⇑P	PKiKP	21 42 58.2	-0.5
MFTR	Murfatlar	147.66	322	⇓P	PKiKP	21 42 58.1	-0.6
NIE	Niedzica	147.71	337	ePKP	PKiKP	21 42 58.5	-0.3
MANR	Mangalia	147.78	322	⇑P	PKPbc	21 42 55.3	-2.3
KSP	Ksiaz	147.80	342	ePKP	PKiKP	21 42 58.6	-0.2
TRPA	Tarpa	147.85	333	⇑P	PKiKP	21 42 58.4	-0.6
ASSE	Asse, Remlinge	147.90	349	ePKPbc	PKiKP	21 42 58.2	-0.7
	baz=17,slow=2.3						
ASSE				ePKPab	PKPab	21 43 03.0	+0.6
	baz=16,slow=4.2						
OSTC	Ostas	148.08	342	ePKP	PKiKP	21 42 58.9	-0.6
OSTC				ex	x	21 43 04.3	
CHVC	Chvalec	148.10	342	ePKP	PKiKP	21 42 58.9	-0.6
CHVC				ex	x	21 43 03.6	
DOPR	Dopca	148.12	328	⇑P	PKPab	21 43 02.2	-1.5
IBBN	Ibbenburen	148.16	353	ePKPbc	PKiKP	21 42 59.0	-0.5
	baz=17,slow=2.3						
MLR	Muntele Rosu	148.16	326	⇑P	PKiKP	21 42 59.0	-0.9
UPC	Upice	148.18	342	ePKP	PKiKP	21 42 59.5	-0.2
UPC				ex	x	21 43 04.7	
CLL	Collm	148.22	346	i PKPbc	PKiKP	21 43 00.1	+0.5
	comp=Z,17nm,0.9s						
CLL				i PKPab	PKPab	21 43 05.2	+1.4
	comp=Z,11nm,0.7s						
CLL	Collm	148.22	346	ePKPbc	PKiKP	21 43 00.1	+0.5
	baz=17,slow=2.3						
CLL				ePKPab	PKPab	21 43 05.4	+1.5
	baz=16,slow=4.2						
CLZ	Clausthal	148.23	349	ePKPbc	PKiKP	21 42 59.5	-0.3
	baz=17,slow=2.3						
CLZ				ePKPab	PKPab	21 43 04.6	+0.7
	baz=16,slow=4.2						
DPC	Dobruska-Polom	148.23	342	ePKP	PKiKP	21 42 59.7	-0.1
DPC				ex	x	21 43 04.7	
LANS	Liptovska Anna	148.24	337	ePKP	PKPab	21 43 00.6	-3.5
LANS				e		21 43 06.0	
KRLC	Kraliky	148.34	341	ePKP	PKiKP	21 42 59.6	-0.5
KRLC				ex	x	21 43 05.2	
MORC	Moravsky Berou	148.36	340	ePKP	PKiKP	21 42 59.8	-0.3
MORC				e		21 43 05.4	
BRG	Berggiesshubel	148.40	345	i PKP	PKiKP	21 42 59.6	-0.5
	comp=Z,12nm,1.1s						
BRG	Berggiesshubel	148.40	345	ePKPbc	PKiKP	21 42 59.7	-0.4
	baz=17,slow=2.3						
BRG				ePKPab	PKPab	21 43 05.4	+0.8
	baz=16,slow=4.2						
SECR		148.41	326	⇓P	PKiKP	21 42 59.8	-0.5
CJR	Cluj-Napoca	148.45	330	⇑P	PKiKP	21 43 00.3	-0.1
FBE	Freiberg	148.50	345	ePKPbc	PKiKP	21 43 00.3	0.0
	baz=17,slow=2.3						
FBE				ePKPab	PKPab	21 43 06.0	+1.0
	baz=16,slow=4.2						
MDB	Medias	148.50	329	⇓P	PKiKP	21 43 00.6	+0.1
PVCC	Panska Ves	148.56	344	ePKP	PKiKP	21 43 00.3	-0.1
NEUB	Neuenburg	148.57	347	ePKPbc	PKiKP	21 43 00.1	-0.3
	baz=17,slow=2.3						
NEUB				ePKPab	PKPab	21 43 06.0	+0.7
	baz=16,slow=4.2						
GTTG	Gottingen	148.59	350	ePKPab	PKPab	21 43 06.1	+0.7
	baz=16,slow=4.2						
VOIR		148.66	327	⇓P	PKiKP	21 43 00.6	-0.3
DRGR		148.80	331	⇑P	PKiKP	21 43 00.7	-0.4
LEF	Lefka	148.90	304	⇓P	PKiKP	21 43 01.1	-0.5
ARR	Arges	148.92	327	⇑P	PKiKP	21 43 01.9	+0.5
PRA	Prague	149.01	344	ePKP	PKiKP	21 43 01.5	+0.1
VYHS	Vyhne	149.02	337	ePKP	PKiKP	21 43 01.2	-0.3
VYHS				e		21 43 08.5	
PRU	Pruhonice	149.06	343	ePKP	PKiKP	21 43 00.7	-0.8
PRU				ex	x	21 43 07.1	
GOPC	GO Pecny, Ondr	149.06	343	ePKP	PKiKP	21 43 01.0	-0.5
GOPC				ex	x	21 43 10.5	
BUG	Bochum--Univer	149.07	353	ePKPbc	PKiKP	21 43 01.0	-0.4
	baz=17,slow=2.3						
VRAC	Vranov	149.07	341	ePKP	PKiKP	21 43 01.6	+0.1
VRAC				e		21 43 08.5	
VRAC	Vranov	149.07	341	⇓P	PKiKP	21 43 01.6	+0.1
JAVC	Velka Javorina	149.12	339	ePKP	PKiKP	21 43 02.9	+1.2
RAZG	Razgrad	149.12	323	⇑P	PKPbc	21 42 59.4	-1.5
MOX	Moxa	149.14	347	ePKPbc	PKiKP	21 43 01.3	-0.3
	baz=17,slow=2.3						
MOX				ePKPab	PKPab	21 43 08.2	+0.5
	baz=16,slow=4.2						
TANN	Tannenbergstha	149.17	346	ePKPbc	PKiKP	21 43 01.7	-0.1
	baz=17,slow=2.3						
TANN				ePKPab	PKPab	21 43 08.6	+0.7
	baz=16,slow=4.2						
PLN	Plauen	149.18	347	ePKPbc	PKiKP	21 43 01.6	-0.1
	baz=17,slow=2.3						
PLN				ePKPab	PKPab	21 43 08.6	+0.7
	baz=16,slow=4.2						
GUNZ	Gunzen	149.25	346	ePKPbc	PKiKP	21 43 02.0	+0.1
	baz=17,slow=2.3						
GUNZ				ePKPab	PKPab	21 43 09.1	+0.9
	baz=16,slow=4.2						
UBBA	Unterbreizbach	149.28	349	ePKPbc	PKiKP	21 43 01.5	-0.3
	baz=17,slow=2.3						
WERN	Wernitzgruen	149.31	346	ePKPbc	PKiKP	21 43 02.2	+0.1
	baz=17,slow=2.3						
WERN				ePKPab	PKPab	21 43 09.4	+1.0
	baz=16,slow=4.2						
HUMR	Humele	149.32	326	⇑P	PKiKP	21 43 01.4	-0.8
NKC	Novy Kostel	149.35	346	ePKP	PKiKP	21 43 02.2	+0.1
NKC				ex	x	21 43 09.4	
KRUC	Moravsky	149.35	341	ePKP	PKiKP	21 43 02.0	-0.1
KRUC				e		21 43 09.5	
DEV	Deva	149.39	330	⇑P	PKiKP	21 43 02.3	0.0
TREC	Trest	149.42	342	ePKP	PKiKP	21 43 02.1	-0.2
COPA	Copaceanca	149.46	325	⇑P	PKiKP	21 43 02.0	-0.5
PBCC	Pribram	149.48	344	ePKP	PKiKP	21 43 01.3	-1.1
PBCC				ex	x	21 43 10.1	
MODS	Modra-Piesok	149.67	339	ePKP	PKiKP	21 43 02.5	-0.3
MODS				e		21 43 10.5	
GZR	Gura Zlata	149.81	329	⇓P	PKiKP	21 43 02.8	-0.5
ROTZ	Rotzenmuhle	149.84	346	ePKPbc	PKiKP	21 43 03.1	0.0
	baz=17,slow=2.3						
ROTZ				ePKPab	PKPab	21 43 11.5	+0.8
	baz=16,slow=4.2						
ELND	Elena	149.88	323	⇑P	PKPab	21 43 12.3	+1.2
AHRW	Bad Neuenahr-A	149.98	353	ePKPab	PKPab	21 43 11.6	+0.5
	baz=16,slow=4.2						
KHC	Kasperske Hory	150.10	344	ePKP	PKiKP	21 43 03.7	0.0
KHC				ex	x	21 43 12.4	
TNS	Taunus Mts	150.11	351	ePKPbc	PKiKP	21 43 03.8	+0.1
	baz=17,slow=2.3						
TNS				ePKPab	PKPab	21 43 12.3	+0.5
	baz=16,slow=4.2						
GRF	Grafenberg Arr	150.12	347	ePKPbc	PKiKP	21 43 03.8	+0.1
	baz=17,slow=2.3						
GRF				ePKPab	PKPab	21 43 12.9	+1.1
	baz=16,slow=4.2						
SRE	Strehaia	150.13	328	⇑P	PKiKP	21 43 04.4	+0.5
BZS	Buzias	150.19	331	⇓P	PKiKP	21 43 03.5	-0.4
WET	Wettzell	150.26	345	ePKPab	PKPab	21 43 13.5	+1.0
	baz=16,slow=4.2						
PLVB	Pleven	150.28	325	⇑P	PKiKP	21 43 04.4	+0.2
GEC2	GERESS Array S	150.33	343	ePKPbc	PKiKP	21 43 04.2	-0.1
	baz=17,slow=2.3						
GEC2				ePKPab	PKPab	21 43 13.6	+0.7
	baz=16,slow=4.2						
GERES	GERESS Array B	150.33	343	PKPbc	PKiKP	21 43 04.1	-0.1
	comp=Z,3.5nm,0.6s,baz=28,slow=2.4,SNR=40						
HERR	Herculane	150.36	329	⇓P	PKiKP	21 43 03.9	-0.4
CONA	Conrad Observa	150.52	340	ePKiKP	PKiKP	21 43 04.8	+0.1
	comp=Z,6.5nm,0.6s						
BANR	Banloc	150.59	331	⇑P	PKiKP	21 43 05.6	+0.8
MDVR	Moldovita	150.77	330	⇓P	PKiKP	21 43 05.2	-0.1
WLF	Walferdange	150.94	354	ePKPbc	PKiKP	21 43 06.1	+0.7
	baz=17,slow=2.3						
WLF				ePKPab	PKPab	21 43 16.2	+0.9
	baz=16,slow=4.2						
MOA	Molln	151.08	342	ePKiKP	PKiKP	21 43 05.5	-0.3
	comp=Z,1.9nm,0.5s,SNR=4.2						
STU	Stuttgart	151.39	349	ePKPbc	PKiKP	21 43 06.8	+0.5
	baz=17,slow=2.3						
VTS	Vitosha	151.55	325	⇑P	PKiKP	21 43 07.4	+0.4
FUR	Furstenfeldbru	151.56	346	ePKPbc	PKiKP	21 43 06.7	0.0
	baz=17,slow=2.3						
FUR				ePKPab	PKPab	21 43 18.9	+1.0
	baz=16,slow=4.2						
RJOB	Jochberg	151.59	344	ePKPbc	PKiKP	21 43 06.6	-0.2
	baz=17,slow=2.3						
RJOB				ePKPab	PKPab	21 43 19.4	+1.3
	baz=16,slow=4.2						
SOKA	Soboth	151.89	340	ePKiKP	PKiKP	21 43 06.9	-0.6
	comp=Z,2.7nm,0.6s						
BFO	Black Forest	151.97	350	ePKPbc	PKiKP	21 43 07.7	+0.1
	baz=17,slow=2.3						
BFO				ePKPab	PKPab	21 43 20.0	+0.4
	baz=16,slow=4.2						
KBA	Koelnbreinsper	152.04	342	ePKiKP	PKiKP	21 43 06.9	-1.1
	comp=Z,7.8nm,1.1s,SNR=4.6						
WATA	Walderalm	152.26	345	i PKiKP	PKiKP	21 43 08.1	-0.3
	comp=Z,1.7nm,0.5s						
UBR	Ueberruh	152.27	347	ePKPbc	PKiKP	21 43 08.4	+0.1
	baz=17,slow=2.3						
WTTA	Wattenberg	152.32	345	i PKiKP	PKiKP	21 43 08.4	-0.1
	comp=Z,4.9nm,0.5s,SNR=8.4						
MOTA	Moosalm	152.37	346	ePKiKP	PKiKP	21 43 08.1	-0.5
	comp=Z,4.7nm,0.8s,SNR=5.3						
SQTA	Sankt Quirin	152.46	345	ePKiKP	PKiKP	21 43 08.6	-0.1
	comp=Z,3.5nm,0.6s,SNR=4.2						
ABTA	Abfaltersbach	152.57	343	ePKiKP	PKiKP	21 43 08.3	-0.6
	comp=Z,8.6nm,0.6s,SNR=6.3						
FETA	Feichten	152.76	346	i PKiKP	PKiKP	21 43 09.6	+0.1
	comp=Z,5.6nm,0.9s						
PDG	Podgorica	153.72	329	⇓P	PKiKP	21 43 11.7	+0.4
ESDC	Sonseca Array	160.62	13	PKPab	PKPab	21 43 57.0	-0.3
	comp=Z,3.0nm,1.1s,baz=347,slow=4.5,SNR=7.2						
TORD	Torodi Ar. Bea	172.39	182	PKP	PKPdf	21 43 20.3	-0.8
	comp=Z,1.1nm,1.0s,baz=25,slow=0.6,SNR=4.2						
TORD				PKPab	PKPab	21 44 50.2	+0.4
	comp=Z,0.6nm,0.9s,baz=136,slow=3.4,SNR=2.4						

MAN 04 21:26:53.8, 4°.85N×124°.73E, h12km, mb4.8, ML3.7, MS3.7, Celebes Sea

UPA 04 21:43:23.5±2.5, 9°.27N×83°.79W, h10km±15km, MW3.8, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HDC	Heredia	0.79	336	i P	Pb	21 43 39.3	-0.2
HDC				eS	Sb	21 43 51.0	+0.7
PIRO	Carate, Puerto	0.97	152	eP	Pn	21 43 42.9	-0.4
PIRO				eS	Sn	21 43 57.9	+0.8
BRU2	Volcan	1.19	113	eP	Pb	21 43 44.2	-2.1
BRU2				eS	Sb	21 44 00.4	-1.3
RGM0	Gandoca	1.21	75	eP	Pg	21 43 48.1	+1.3
RGM0				eS	Sn	21 44 03.0	0.0
JTS	Las Juntas de	1.53	312	eP	Pb	21 43 51.7	-0.2
JTS				eS	Sg	21 44 12.3	-0.4
CHGR2	Aguacate	1.66	101	eP	Pn	21 43 51.0	-1.8
CHGR2				eS	Sn	21 44 11.4	-2.8

IDC 04 21:51:41.1±4.6, 19°.28S×177°.91W, h0km, mb4.2/2, mb1 4.5/2, mb1mx3.6/38, mbtmp4.2/2, Error ellipse: s-maj=288.7km s-min=56.3km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.86	261	P	P	21 59 57.2	-0.4
	1.2nm,0.4s,baz=98,slow=8.4,SNR=5.3						
ASAR	Alice Springs	44.89	256	P	P	21 59 57.9	0.0
	3.4nm,0.7s,baz=89,slow=8.5,SNR=35						
ARCES	ARCESS Array B	127.74	350	PKP	PKPdf	22 10 47.6	-0.3
	1.5nm,0.9s,baz=4.1,slow=1.3,SNR=1.9						

IDC 04 21:52:00.9±5.9, 13°.08S×167°.58E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.5/40, mbtmp3.7/3, Error ellipse: s-maj=294.8km s-min=32.1km az=141.0
NEIC 04 21:52:21.5±0.4, 12°.7S±0°.3×166°.9E±0°.3, h159km±14km, mb4.1/6, Error ellipse: s-maj=48.8km s-min=18.9km az=137.0
ISC 04 21:52:22.6±1.8, 13°.0S±0°.2×167°.1E±0°.3, h180km, n9, σ0s.99/9, mb3.9/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHI	Lord Howe Isla	19.84	201	P	Pn	21 56 42.9	-0.5
WR0	Warramunga Arr	31.92	253	P	P	21 58 31.4	0.0
WR0				IAmb	IAmb	21 58 33.3	
	comp=Z,4.1nm,1.1s						
WB0	Warramunga Arr	32.03	254	P	P	21 58 33.4	+1.0
WB0				IAmb	IAmb	21 58 49.3	
	comp=Z,2.4nm,0.9s						
WB2	Warramunga Arr	32.09	253	P	P	21 58 33.0	0.0
WB2				IAmb	IAmb	21 58 41.6	
	comp=Z,2.5nm,1.1s						
WRA	Warramunga Arr	32.11	253	P	P	21 58 33.2	+0.1
	comp=Z,7.3nm,0.3s,baz=86,slow=8.5,SNR=50						
ASAR	Alice Springs	33.15	247	P	P	21 58 43.9	+1.7
	comp=Z,0.5nm,0.6s,baz=76,slow=9.0,SNR=15						
MTN	Manton Dam	35.02	266	P	P	21 58 57.4	-0.9
MTN				IAmb	IAmb	21 59 13.7	
	comp=Z,20nm,1.1s						
FITZ	Fitzroy Crossi	40.18	257	P	P	21 59 40.6	-1.0
ILAR	Eielson Array	84.97	18	P	P	22 04 37.2	+0.1
	comp=Z,0.7nm,0.6s,baz=239,slow=4.9,SNR=7.7						

KRNET 04 21:56:48.6±0.1, 40°.54N×77°.71E, mb2.4, 10C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	Kajisay	1.64	346	⇑iP	Pn	21 57 19.3	+0.4
	baz=46						
KDJ				⇑iS	Sg	21 57 41.9	+0.7
	baz=46						
PRZ	Przheval'sk	2.01	15	⇑iP	Pb	21 57 26.2	+0.1
	baz=15						
PRZ				⇑iS	Sg	21 57 53.4	+0.2
	baz=15						
ULHL	Ulahol	2.03	327	⇑eP	Pb	21 57 26.2	-0.3
	baz=27						
ULHL				⇑iS	Sg	21 57 53.6	-0.3
	baz=27						
ANVS	Anan'yevo	2.24	359	⇑iP	Pb	21 57 29.2	-0.9
	baz=59						
ANVS				⇑iS	Sb	21 57 59.0	+0.6
	baz=59						
BOOM	Boomskoye usch	2.36	326	⇓eP	Pb	21 57 30.9	-1.2
	baz=26						
BOOM				⇓eS	Sb	21 58 01.7	-0.1
	baz=26						
KZA	Kyzart	2.41	310	⇑eP	Pb	21 57 31.6	-1.5
	baz=10.0						
KZA				⇑iS	Sb	21 58 03.2	-0.3
	baz=10.0						
KBK	Karagaybulak	2.96	316	⇓iP	Pn	21 57 39.3	+2.3
	baz=16						
KBK				⇓iS	Sn	21 58 16.1	+2.7
	baz=16						

SOME 04 21:56:49.9, 41°.65N×78°.27E, h15km, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UZB	Uzynbulak	1.60	20	eP	Pb	21 57 19.2	0.0
	0.9nm,0.3s						
UZB				eS	Sb	21 57 40.2	+1.0
	0.7nm,0.1s						
TNSS	Tian-Shan	1.70	325	eP	Pb	21 57 21.0	-0.1
	0.6nm,0.1s						
TNSS				eS	Sb	21 57 43.3	+0.9
	3.0nm,0.5s						
SHLS	Shalkode	1.75	30	eP	Pg	21 57 25.7	+2.2
	2.2nm,0.3s						
SHLS				eS	Sg	21 57 51.3	+5.2
	5.3nm,0.4s						
KST	Kastek	2.20	310	eP	Pb	21 57 30.5	+1.0
	1.2nm,0.1s						
KST				eS	Sg	21 57 59.7	-1.1
	5.0nm,0.6s						

GII 04 22:14:33.6±0.7, 33°.60N×34°.97E, h13km±1km, MD1.0/3
GRAL 04 22:14:34.4±0.3, 33°.75N×35°.06E, h51km±10km, MD2.7
ISC 04 22:14:29.9±2.6, 33°.71N±0°.09×34°.94E±0°.09, h6km±15km, n15, σ0s.56/28, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DQRL	Deir Qamar	0.53	90	eP	Pn	22 14 44.5	+0.5
DQRL				eS	Sn	22 14 51.8	-1.5

BHL	Bhannes	0.63	72	eP	Pn	22 14 45.4	0.0
HNTI	Hanita	0.65	162	Pg	Pb	22 14 44.1	+0.4
HNTI				Sg	Sb	22 14 52.7	-0.3
SHBL	Chebaa	0.76	118	eP	Pn	22 14 47.6	+0.3
SHBL				eS	Sb	22 14 57.5	+1.2
RCY	Rachaya	0.78	105	eP	Pn	22 14 47.7	+0.2
GEM	Giv'at Ha'Em	0.78	129	Pg	Pn	22 14 47.3	-0.1
GEM				Sg	Sb	22 14 56.9	+0.2
KSDI	Kefar Szold	0.79	130	Pg	Pn	22 14 47.5	0.0
KSDI				Sg	Sb	22 14 57.6	+0.6
MMA0B	Mount Meron ar	0.79	150	Pg	Pn	22 14 47.0	-0.6
MMA0B				Sg	Sb	22 14 56.9	-0.2
NATI	Neve Ativ	0.80	123	Pg	Pn	22 14 47.7	0.0
NATI				Sg	Sb	22 14 57.8	+0.6
BLGI	Bet Lehem HaGe	0.99	168	Pg	Pn	22 14 50.9	+0.6
BLGI				Sg	Sb	22 15 03.3	+0.5
OFRI	`Ofer	1.08	178	Pg	Pn	22 14 51.6	0.0
OFRI				Sg	Sb	22 15 05.3	-0.1
SHMJ	Saham	1.20	144	Pg	Pn	22 14 53.6	+0.4
SHMJ				Sg	Sn	22 15 09.1	-0.6
MMLI	Mount Malkishu	1.33	162	Pg	Pn	22 14 55.5	+0.5
MMLI				Sg	Sb	22 15 12.2	-0.3
SLTI	Sal'it	1.47	177	Pn	Pn	22 14 57.1	+0.3
SLTI				Sn	Sn	22 15 16.6	+0.3
HMDT	Nahal Hemdat	1.53	161	Pn	Pg	22 14 58.8	-0.4
HMDT				Sn	Sn	22 15 17.6	-0.3

KRSC 04 22:14:37.9±1.6, 48°.08N×156°.61E, h16km±26km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALID	Alaid	2.87	347	eP	Pb	22 15 26.3	-2.6
ASAK	Asacha	4.39	10	eP	Pn	22 15 48.0	+4.1
MTVR	Mutnovka	4.52	12	eP	Pn	22 15 49.5	+3.7
MTVR				eS	Sn	22 16 44.6	+6.5
RUS	Russkaya	4.53	15	eP	Pn	22 15 49.1	+3.4
RUS				eS	Sn	22 16 43.6	+5.6
GRL	Gorelyy	4.57	11	eP	Pn	22 15 50.6	+4.1
KRMR	Karymshinskiy	4.85	11	eP	Pn	22 15 55.0	+4.8
APC	Apacha	4.86	4	eP	Pn	22 15 54.3	+4.0
AVH	Avacha	5.36	14	eP	Pn	22 16 02.2	+4.9
SMAR	Somma	5.37	14	eP	Pn	22 16 02.1	+4.5
KOK	Koryaka	5.37	13	eP	Pn	22 16 02.8	+5.3
SDLR	Sedlovina	5.40	15	eP	Pn	22 16 01.7	+3.8
KRX	Arik	5.44	13	eP	Pn	22 16 03.7	+5.3
SPN	Mys Shipunski	5.47	22	eP	Pn	22 16 03.6	+4.9

INMG 04 22:14:48.7±0.9, 36°.38N×9°.68W, h31km, ML1.6, Error ellipse: s-maj=5.2km s-min=3.7km az=91.0
IGIL 04 22:14:48.5, 36°.38N×9°.68W, h32km, ML1.5
MDD 04 22:14:48.2±1.7, 36°.37N×9°.64W, h54km±40km, mb3.6/1, Error ellipse: s-maj=15.9km s-min=14.6km az=12.0, PRXIMO
ISC 04 22:14:46.2±3.6, 36°.4N±0°.2×9°.7W±0°.1, h33km±8km, n35, σ1s.14/54, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.02	40	P	Pb	22 15 05.7	+0.3
	1.0nm,0.1s,SNR=7.9						
PFVI				S	Sn	22 15 17.6	+0.1
	4.1nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	1.02	40	eP	Pb	22 15 05.6	+0.2
PFVI				eS	Sn	22 15 18.0	+0.6
PFVI				A	A	22 15 18.1	
	4.5nm,0.1s						
MORF	Marmelete	1.24	40	eP	Pb	22 15 08.6	-0.6
MORF				eS	Sn	22 15 22.7	-0.3
MORF				AML	AML	22 15 26.1	
	comp=E,11nm,0.2s						
MORF	Marmelete	1.24	40	P	Pb	22 15 08.6	-0.6
MORF				S	Sn	22 15 23.4	+0.4
	comp=E,5.1nm,0.2s						
MORF	Marmelete	1.24	40	eP	Pb	22 15 08.6	-0.6
MORF				eS	Sn	22 15 23.4	+0.4
MORF				A	A	22 15 24.9	
	comp=E,5.1nm,0.2s						
PTEO	Sao Teotonio	1.40	32	S	Sn	22 15 27.1	+0.3
PTEO	Sao Teotonio	1.40	32	eS	Sn	22 15 27.1	+0.3
PBDV	Barranco-do-Ve	1.64	57	S	Sn	22 15 33.0	+0.2
PBDV	Barranco-do-Ve	1.64	57	eS	Sn	22 15 33.0	+0.2
PCVE	Castro Verde	1.81	45	S	Sn	22 15 37.6	+0.6
	comp=E,2.1nm,0.3s						
PCVE	Castro Verde	1.81	45	eSn	Sn	22 15 37.6	+0.6
PCVE				A	A	22 15 39.0	
	comp=E,2.1nm,0.3s						
MESJ	Messejana	1.87	37	eP	Pn	22 15 17.1	+1.2
MESJ				eS	Sn	22 15 37.8	-0.6
MESJ				AML	AML	22 15 40.5	
	comp=N,2.4nm,0.2s						
MESJ	Messejana	1.87	37	P	Pn	22 15 17.3	+1.3
MESJ				S	Sn	22 15 38.3	-0.2
	comp=N,1.8nm,0.3s						
MESJ	Messejana	1.87	37	ePn	Pn	22 15 17.3	+1.3
MESJ				eSn	Sn	22 15 38.3	-0.2
MESJ				A	A	22 15 40.4	
	comp=N,1.8nm,0.3s						
PVAQ	Vaqueiros	1.87	55	P	Pn	22 15 17.4	+1.4
PVAQ				S	Sn	22 15 38.5	0.0
	comp=N,2.3nm,0.1s						
PVAQ	Vaqueiros	1.87	55	ePn	Pn	22 15 17.4	+1.4
PVAQ				eSn	Sn	22 15 38.5	0.0
PVAQ				A	A	22 15 39.9	
	comp=N,2.3nm,0.1s						
PNCL	Nicolau / Gran	1.97	27	P	Pn	22 15 18.2	+0.9
PNCL				S	Sn	22 15 40.1	-0.7
	comp=N,2.4nm,0.3s						
PNCL	Nicolau / Gran	1.97	27	ePn	Pn	22 15 18.2	+0.9
PNCL				eSn	Sn	22 15 40.1	-0.7
PNCL				A	A	22 15 41.3	
	comp=N,2.4nm,0.3s						
EGRO	El Granado	2.10	55	P	Pn	22 15 19.9	+0.8
	comp=N,0.1nm,0.1s,SNR=7.9						
EGRO				S	Sn	22 15 42.4	-1.7
	comp=N,0.2nm,0.2s,SNR=7.9						
PBEJ	Beja	2.19	40	S	Sn	22 15 46.0	-0.4
PBEJ	Beja	2.19	40	eSn	Sn	22 15 46.0	-0.4
EVO	Evora	2.53	31	S	Sn	22 15 53.5	-1.3
	comp=N,3.5nm,0.2s						
EVO	Evora	2.53	31	eSn	Sn	22 15 53.5	-1.3
EVO				A	A	22 15 55.6	
	comp=N,3.5nm,0.2s						
PMAFR	Mafra	2.61	6	P	Pn	22 15 25.8	-0.3
	comp=N,1.5nm,0.1s,SNR=7.9						
PMAFR				S	Sn	22 15 55.4	-1.3
	comp=N,3.6nm,0.2s,SNR=7.9						
PMAFR	Mafra	2.61	6	ePn	Pn	22 15 26.4	+0.3
PMAFR				eSn	Sn	22 15 55.7	-1.0
PMAFR				A	A	22 15 56.6	
	comp=N,7.3nm,0.7s						
EMIN	Mina Concepcio	2.77	59	P	Pn	22 15 28.4	+0.1
	comp=N,0.1nm,0.2s,SNR=7.9						
EMIN				S	Sn	22 16 00.5	-0.1
	comp=N,0.1nm,0.2s,SNR=7.9						
PMTG	Montargil	2.94	22	P	Pn	22 15 33.0	+2.4
PMTG				S	Sn	22 16 04.6	-0.1
	comp=N,0.9nm,0.7s						
PMTG	Montargil	2.94	22	ePn	Pn	22 15 33.0	+2.4
PMTG				eSn	Sn	22 16 04.6	-0.1
PMTG				A	A	22 16 07.7	
	comp=N,0.9nm,0.7s						
PESTR	Estremoz	2.99	33	eSn	Sn	22 16 04.7	-1.5
EBAD	Badajoz	3.18	40	S	Sn	22 16 09.6	-1.3
	comp=N,0.3nm,0.1s,SNR=7.9						
PSBE	So Bento	3.22	12	ePn	Pn	22 15 35.2	+0.6
PMRV	Marv??o	3.55	30	S	Sn	22 16 17.9	-2.0
PMRV	Marv??o	3.55	30	eSn	Sn	22 16 17.9	-2.0
ECAB	El Cabril	3.79	62	P	Pn	22 15 42.8	+0.4
	SNR=7.9						
ECAB				S	Sn	22 16 22.7	-3.1
	comp=N,0.0nm,0.3s,SNR=7.9						
EADA	Adamuz	4.43	64	S	Sn	22 16 39.4	-2.4
	comp=N,0.2nm,0.2s,SNR=7.9						

IDC 04 22:32:41.7±1.6, 25°.05N×109°.56W, h0km, mb1 3.6/3, mb1mx3.4/40, mbtmp3.1/3, ML3.5/3, Error ellipse: s-maj=38.8km s-min=10.9km az=126.0
MEX 04 22:32:44.7±0.6, 24°.78N×109°.11W, h10km, MD3.6
ISC 04 22:32:44.0±1.2, 24°.9N±0°.1×109°.5W±0°.2, h17km, n7, σ0s.64/9, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSIG	Topolobambo	0.75	30	i P	Pb	22 32 58.7	+0.1
TSIG				eS	Sb	22 33 08.3	-0.3
LPIG	La Paz	1.14	223	Pg	Pn	22 33 04.8	-0.5
	16nm,0.3s,baz=52,slow=19,SNR=7.9						
LPIG				Lg	Lg	22 33 19.2	
	27nm,0.3s,baz=273,slow=11,SNR=8.2						
LPIG	La Paz	1.14	223	eP	Pn	22 33 04.5	-0.7
LPIG				eS	Sb	22 33 20.9	+1.0
SSIG	Sanalona	2.11	93	eP	Pn	22 33 11.5	-7.0
TXAR	Lajitas Array	6.76	48	Pn	Pn	22 34 23.0	+0.5
	0.1nm,0.3s,baz=229,slow=14,SNR=3.2						
TXAR				Sn	Sn	22 35 38.8	-0.4
	0.6nm,0.3s,baz=240,slow=23,SNR=14						
TXAR				Lg	Lg	22 36 14.3	
	0.3nm,0.3s,baz=29,slow=46,SNR=2.5						
NVAR	Mina Array Bea	15.40	333	Pn	Pn	22 36 21.2	+0.5
	0.1nm,0.3s,baz=150,slow=9.4,SNR=2.3						
PDAR	Pinedale Array	17.78	360	P	Pn	22 36 50.7	-0.2
	0.1nm,0.3s,baz=182,slow=13,SNR=7.6						

MEX 04 22:33:06.2±0.5, 14°.85N×93°.64W, h56km±69km, MD3.9
GCG 04 22:33:08.2±0.6, 15°.57N×93°.28W, h30km, MD4.0
ISC 04 22:33:08.7±4.8, 15°.1N±0°.2×93°.5W±0°.3, h57km, n5, σ1s.60/8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.67	23	eP	Pn	22 33 21.6	-0.9
PCIG				i S	Sn	22 33 34.0	+1.6
THIG		1.19	98	i P	Pn	22 33 27.1	-2.1
THIG				i S	Sn	22 33 43.3	-1.1
STG3	Santiaguito 3,	1.89	101	eP	Pn	22 33 38.4	-0.4
FUG	Fuego 3	2.63	104	eP	Pn	22 33 48.9	-0.1
IXG	Ixpaco	3.08	107	eP	Pn	22 33 56.1	+1.0
IXG				eS	Sn	22 34 32.6	+1.7

IDC 04 22:35:21.2±1.9, 24°.86N×109°.37W, h0km, mb1 3.7/4, mb1mx3.4/40, mbtmp3.3/4, ML3.7/3, Error ellipse: s-maj=44.4km s-min=10.5km az=133.0
MEX 04 22:35:24.9±0.4, 25°.16N×109°.75W, h10km, MD3.7
ISC 04 22:35:23.1±1.0, 24°.92N±0°.07×109°.48W±0°.08, h17km, n8, σ0s.78/11, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSIG	Topolobambo	0.78	31	i P	Pb	22 35 38.0	-0.3
TSIG				i S	Sb	22 35 47.8	-0.8
LPIG	La Paz	1.11	223	Pg	Pb	22 35 43.7	-0.3
	13nm,0.3s,baz=214,slow=2.0,SNR=5.4						
LPIG				Lg	Lg	22 35 58.3	
	46nm,0.3s,baz=179,slow=12,SNR=11						
LPIG	La Paz	1.11	223	eP	Pb	22 35 43.9	0.0
LPIG				eS	Sb	22 35 57.5	-0.6
SSIG	Sanalona	2.13	92	eP	Pb	22 36 01.7	+0.4
TXAR	Lajitas Array	6.79	48	Pn	Pn	22 37 02.1	0.0
	baz=221,slow=13,SNR=1.0						
TXAR				Sn	Sn	22 38 18.5	-0.6
	0.6nm,0.3s,baz=230,slow=18,SNR=3.2						
TXAR				Lg	Lg	22 38 54.8	
	0.4nm,0.3s,baz=184,slow=34,SNR=4.6						
ANMO	Albuquerque	10.32	14	Pn	Pn	22 37 52.3	+1.6
	0.1nm,0.3s,baz=200,slow=6.8,SNR=5.7						
NVAR	Mina Array Bea	15.40	333	Pn	P	22 39 05.2	+0.8
	0.2nm,0.3s,baz=163,slow=9.4,SNR=4.0						
PDAR	Pinedale Array	17.80	360	P	Pn	22 39 30.0	-0.2
	0.1nm,0.3s,baz=162,slow=11,SNR=9.5						

IDC 04 22:37:49.5±1.6, 23°.20S×128°.57E, h0km, mb3.6/2, mb1 4.0/7, mb1mx3.7/31, mbtmp3.9/7, ML3.5/5, Error ellipse: s-maj=32.3km s-min=22.5km az=15.0
NEIC 04 22:37:50.8±3.4, 23°.04S±0°.06×128°.55E±0°.06, h15km±6km, Error ellipse: s-maj=8.3km s-min=7.8km az=198.0
AUST 04 22:37:54.5±0.0, 23°.01S×128°.59E, h10km, Error ellipse: s-maj=0.5km s-min=0.1km az=10.0
ISC 04 22:37:50.1±0.6, 23°.06S±0°.04×128°.54E±0°.04, h10km, n48, σ2s.04/65, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRKA	Warakurna	1.98	186	P	Pg	22 38 28.2	0.0
	baz=2.0,SNR=201						
WRKA				S	Sg	22 38 55.0	+1.0
	baz=2.0						
WRKA	Warakurna	1.98	186		Pg	22 38 28.1	0.0
WRKA					Sg	22 38 55.1	+1.2
ASAR	Alice Springs	4.97	98	Pn	Pn	22 39 06.7	+1.8
	1.3nm,0.3s,baz=280,slow=12,SNR=226						
ASAR				Sn	Sn	22 40 02.2	-0.2
	9.6nm,0.3s,baz=277,slow=22,SNR=5.3						
ASAR				Lg	Lg	22 40 22.0	
	11nm,0.3s,baz=277,slow=26,SNR=13						
AS31	Alice Springs	4.97	98		Pn	22 39 06.8	+1.9
AS31				Sn	Sn	22 40 01.8	-0.6
AS01	Alice Springs	5.01	98	P	Pn	22 39 06.9	+1.4
	baz=5.0						
FITZ	Fitzroy Crossi	5.63	331	P	Pn	22 39 16.1	+2.1
	baz=5.6,SNR=3.9						
FITZ				S	Sn	22 40 16.3	-2.4
	baz=5.6						
FITZ	Fitzroy Crossi	5.63	331	Pn	Pn	22 39 16.1	+2.1
	0.6nm,0.3s,baz=163,slow=11,SNR=11						
FITZ				Sn	Sn	22 40 16.6	-2.2
	3.0nm,0.3s,baz=38,slow=15,SNR=7.7						
FITZ				Lg	Lg	22 40 49.8	
	3.1nm,0.3s,baz=263,slow=23,SNR=4.0						
FITZ	Fitzroy Crossi	5.63	331		Pn	22 39 15.6	+1.6
FITZ					Sn	22 40 17.2	-1.6
WRA	Warramunga Arr	6.23	61	Pn	Pn	22 39 22.2	+0.1
	1.8nm,0.3s,baz=236,slow=12,SNR=58						
WRA				Pg	Pb	22 39 43.1	+4.4
	1.4nm,0.3s,baz=229,slow=16,SNR=7.4						
WRA				Sn	Sn	22 40 32.8	-0.7
	5.0nm,0.3s,baz=238,slow=25,SNR=4.8						
WRA				Lg	Lg	22 40 59.6	
	8.2nm,0.3s,baz=233,slow=28,SNR=12						
WB2	Warramunga Arr	6.24	61		Pn	22 39 22.4	+0.1
WB2				Sn	Sn	22 40 30.7	-3.0
WRAB	Tennant Creek	6.24	61	Pn	Pn	22 39 21.5	-0.8
WRAB				Sn	Sn	22 40 30.6	-3.2
WB0	Warramunga Arr	6.36	60		Pn	22 39 23.9	-0.1
WB0				Sn	Sn	22 40 34.0	-2.7
WR0	Warramunga Arr	6.38	62		Pn	22 39 24.4	+0.1
WR0				Sn	Sn	22 40 34.9	-2.4
KNRA	Kununurra	7.35	2	P	Pn	22 39 38.9	+1.3
	baz=7.3,SNR=12						
KNRA				S	Sn	22 40 56.6	-4.4
	baz=7.3						
KNRA	Kununurra	7.35	2		Pn	22 39 38.7	+1.1
FORT	Forrest	7.70	183	P	Pn	22 39 44.8	+2.4
	baz=7.8,SNR=40						
FORT				S	Sn	22 41 09.9	+0.1
	baz=7.8						
FORT	Forrest	7.70	183	Pn	Pn	22 39 44.4	+2.1
OOD	Oodnadatta	8.00	128	P	Pn	22 39 47.3	+0.8
	baz=8.0,SNR=10.0						
OOD				S	Sn	22 41 15.3	-1.7
	baz=8.0						
PSAB2	Pilbara Seismi	8.17	279	Pn	Pn	22 39 49.8	+0.9
PSAA3	Pilbara Seismi	8.18	279	Pn	Pn	22 39 49.7	+0.7
PSA00	Pilbara Seismi	8.18	279	Pn	Pn	22 39 49.8	+0.8
MULG	Mulgathing	8.72	147	P	Pn	22 39 58.3	+1.9
	baz=8.8,SNR=5.5						
MULG				S	Sn	22 41 33.7	-1.1
	baz=8.8						
MEEK	Meekatharra	9.69	246	P	Pn	22 40 10.9	+1.1
	baz=9.8,SNR=6.4						
MEEK				S	Sn	22 41 54.7	-4.1
	baz=9.8						
MTN	Manton Dam	10.45	14	P	Pn	22 40 19.3	-0.9
	baz=10,SNR=4.6						
MTN	Manton Dam	10.45	14	Pn	Pn	22 40 19.3	-0.9
QIS	Mount Isa	10.58	78	P	Pn	22 40 21.6	-0.3
	baz=10,SNR=6.8						
QIS				S	Sn	22 42 14.9	-5.5
	baz=10						
KDU	Kakadu	10.97	21	P	Pn	22 40 26.5	-0.8
	baz=11,SNR=5.5						
KDU				S	Sn	22 42 20.5	-10
	baz=11						
BBOO	Buckleboo	11.77	147	P	Pn	22 40 37.5	-0.6
	baz=12,SNR=6.4						
BBOO	Buckleboo	11.77	147	Pn	Pn	22 40 36.4	-1.7
MORW	Morawa	12.72	239	P	Pn	22 40 50.1	-1.1
	baz=13						
MORW	Morawa	12.72	239	Pn	Pn	22 40 49.1	-2.1
KLBR	Kellerberrin	12.80	226	P	Pn	22 40 51.0	-1.3
	baz=13,SNR=11						
BLDU	Ballidu	12.96	232	P	Pn	22 40 53.5	-1.0
	baz=13						
GIRL	Giralia	13.20	269	P	Pn	22 40 59.1	+1.4
	baz=13						
NWAO	Narrogin (SRO)	14.00	223	P	Pn	22 41 06.4	-2.3
	baz=14,SNR=12						
NWAO	Narrogin (SRO)	14.00	223	Pn	Pn	22 41 06.1	-2.6
	1.3nm,0.3s,baz=50,slow=11,SNR=13						
NWAO				Sn	Sn	22 43 31.6	-13
	1.9nm,0.3s,baz=156,slow=7.6,SNR=6.8						
NWAO				Lg	Lg	22 45 03.6	
	0.5nm,0.3s,baz=321,slow=21,SNR=2.6						
NWAO	Narrogin (SRO)	14.00	223	Pn	Pn	22 41 06.2	-2.5
STKA	Stephens Creek	14.53	130	P	Pn	22 41 15.6	-0.3
	baz=14,SNR=13						
STKA	Stephens Creek	14.53	130	Pn	Pn	22 41 13.9	-1.9
	0.4nm,0.3s,baz=308,slow=10,SNR=7.9						
STKA				Sn	Sn	22 43 46.3	-11
	0.7nm,0.3s,baz=216,slow=16,SNR=6.2						
RKGY	Rocky Gully	15.32	219	P	Pn	22 41 24.3	-2.2
	baz=15						
MMRI	Maumere	15.56	336	Pn	P	22 41 32.7	-1.4
COEN	Coen	16.56	59	Pn	P	22 41 44.2	-1.0
COEN				IAmb	IAmb	22 41 46.9	
	comp=Z,9.6nm,0.8s						
CTA	Charters Tower	16.74	83	Lg	Lg	22 46 30.8	
	comp=Z,0.2nm,0.3s,baz=135,slow=16,SNR=2.8						
CMSA	Cobar Meteorol	17.41	123	P	Pn	22 41 49.0	-4.2
	baz=17						
FAKI	Fak Fak	20.34	11	P	Pn	22 42 27.9	-0.9
FAKI				IAmb	IAmb	22 42 28.9	
	comp=Z,20nm,1.0s						
ARMA	Armidale	21.86	115	P	P	22 42 45.0	+1.8
SONM	Songino Array	73.32	345	P	P	22 49 24.5	+2.6
	comp=Z,0.6nm,0.6s,baz=166,slow=4.9,SNR=3.8						
MKAR	Makanchi Array	81.10	330	P	P	22 50 07.4	+1.9
	comp=Z,0.2nm,0.7s,baz=151,slow=7.0,SNR=2.8						

IDC 04 22:59:36.8±3.3, 13°.73N×92°.28W, h0km, mb3.3/1, mb1 3.7/5, mb1mx3.4/37, mbtmp3.4/5, ML3.2/4, MS3.3/2, Ms1 3.3/2, ms1mx2.5/24, Error ellipse: s-maj=61.2km s-min=27.9km az=170.0
GCG 04 22:59:42.5±0.3, 14°.03N×92°.05W, h92km±9km, MD3.9
ISC 04 22:59:42.0±1.9, 13°.8N±0°.2×92°.34W±0°.07, h46km, n11, σ1s.87/13, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERG	Entre ros, C	0.97	50	eP	Pn	22 59 58.4	-0.8
ERG				eS	Sn	23 00 10.9	-1.0
STG3	Santiaguito 3,	1.16	40	eP	Pn	23 00 01.1	-0.9
FUG	Fuego 3	1.58	67	eP	Pn	23 00 05.7	-2.0
IXG	Ixpaco	1.88	79	eP	Pn	23 00 10.0	-1.8
APG	El Apazote	2.17	57	Pn	Pn	23 00 14.6	-1.3
	10nm,0.3s,baz=247,slow=13,SNR=23						
APG				Sn	Sn	23 00 43.0	+1.4
	23nm,0.3s,baz=292,slow=15,SNR=17						
CMIG	Matias Romero	4.07	323	Pn	Pn	23 00 41.7	-0.1
	0.2nm,0.3s,baz=135,slow=11,SNR=2.6						
CMIG				Sn	Sn	23 01 24.1	-4.1
	1.7nm,0.3s,baz=99,slow=20,SNR=4.4						
TEIG	Tepich	7.46	31	Pn	Pn	23 01 28.5	+0.2
	2.9nm,0.3s,baz=76,slow=0.0,SNR=7.6						
TEIG				LR	LR	23 04 44.5	
	comp=Z,70nm,20.9s,baz=78,slow=41						
TXAR	Lajitas Array	18.67	328	P	Pn	23 03 58.8	+1.7
	0.0nm,0.3s,baz=145,slow=9.9,SNR=5.0						
YKA	Yellowknife Ar	51.12	347	P	P	23 08 40.8	+0.9
	0.3nm,0.6s,baz=146,slow=7.6,SNR=5.8						
KDAK	Kodiak Island	62.70	328	LR	LR	23 35 58.8	
	comp=Z,65nm,18.9s,baz=114,slow=35						
CMAR	Chiang Mai Arr	146.05	341	PKPbc	PKPab	23 19 19.4	+1.1
	0.6nm,0.4s,baz=350,slow=3.7,SNR=5.7						

IDC 04 23:29:50.6±0.7, 43°.20N×18°.45E, h0km, mb3.8/8, mb1 3.8/19, mb1mx3.7/50, mbtmp3.6/19, ML3.4/11, MS2.9/5, Ms1 2.9/5, ms1mx2.4/49, Error ellipse: s-maj=11.6km s-min=10.6km az=49.0
ROM 04 23:29:51.7±0.0, 43°.17N×18°.51E, h2km, ML3.8
PDG 04 23:29:51.8±0.5, 43°.16N×18°.50E, h10km±1km, MD3.9/13, ML3.8/13, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0
LDG 04 23:29:51.6±0.5, 43°.15N×18°.34E, h5km, Ml4.2/19, Error ellipse: s-maj=16.6km s-min=10.8km az=18.0
BEO 04 23:29:52.6±0.2, 43°.14N×18°.50E, h0km, ML3.7/22
RHSSO 04 23:29:52.7±0.2, 43°.14N×18°.50E, h4km±2km, ML3.9/13
MOS 04 23:29:52.1±0.9, 43°.13N×18°.37E, h25km, mb4.3/5, Error ellipse: s-maj=4.8km s-min=3.0km az=110.9
NEIC 04 23:29:54.0±1.8, 43°.14N±0°.04×18°.48E±0°.06, h19km±5km, ML4.0(VIE), ML4.0/2(BUC), Error ellipse: s-maj=6.2km s-min=5.6km az=51.0
PRU 04 23:29:55.4±0.0, 43°.42N×18°.44E, h0km
ISC 04 23:29:52.1±0.9, 43°.15N±0°.01×18°.48E±0°.01, h10km±6km, n457, σ1s.73/592, mb4.1/13, 44C-43D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRY	Bratogost	0.26	170	⇑ iPg	Pg	23 29 57.4	+0.1
BRY				eSg	Sg	23 30 01.7	+0.9
BRY	Bratogost	0.26	170	eP	Pg	23 29 57.0	-0.3
BRY	Bratogost	0.26	170	⇑ iPg	Pg	23 29 56.8	-0.5
BRY				i Sg	Sg	23 30 00.9	+0.1
UPM	Unac-Piva	0.32	81	⇓ iPg	Pg	23 29 58.5	0.0
UPM				eSg	Sg	23 30 03.6	+0.9
UPM	Unac-Piva	0.32	81	⇓ iPg	Pg	23 29 57.0	-1.5
UPM				i Sg	Sg	23 30 01.8	-0.9
TREB	Trebinje	0.45	192	ePg	Pg	23 30 00.9	+0.1
TREB				eSg	Sg	23 30 06.5	-0.2
TREB	Trebinje	0.45	192	⇑ iPg	Pg	23 30 00.5	-0.3
TREB				eSg	Sg	23 30 07.6	+0.9
NKY	Niksic	0.51	132	P	Pg	23 30 01.4	-0.6
NKY				S	Sg	23 30 09.0	+0.2
NKY	Niksic	0.51	132	⇑ iPg	Pg	23 30 01.0	-1.0
NKY				i Sg	Sg	23 30 08.9	+0.2
NKME	Niksic	0.52	138	⇓ iPg	Pg	23 30 01.3	-0.9
NKME				i Sg	Sg	23 30 09.7	+0.6
DBRK	Dubrovnik	0.54	207	i Pg	Pg	23 30 02.4	-0.2
DBRK				Sg	Sb	23 30 11.2	-0.3
STON	Ston	0.64	244	ePg	Pg	23 30 03.8	-0.5
STON				eSg	Sb	23 30 13.9	-0.3
STON	Ston	0.64	244	⇓ iPg	Pg	23 30 03.5	-0.9
STON				eSg	Sb	23 30 13.6	-0.6
STON	Ston	0.64	244	i Pg	Pg	23 30 03.9	-0.5
STON				Sg	Sb	23 30 13.7	-0.5
CEME	Cevo	0.69	152	⇓ iPg	Pg	23 30 04.5	-0.9
CEME				i Sg	Sb	23 30 15.2	-0.6
PLE	Pljevlja	0.69	75	P	Pg	23 30 05.2	-0.2
PLE	Pljevlja	0.69	75	⇓ iPg	Pg	23 30 04.8	-0.6
PLE				i Sg	Sb	23 30 15.2	-0.7
HCY	Herceg Novi	0.71	179	⇓ iPg	Pg	23 30 05.5	-0.2
HCY				eSg	Sb	23 30 15.8	-0.5
HCY	Herceg Novi	0.71	179	eP	Pg	23 30 05.0	-0.7
HCY				eSG	Sg	23 30 15.0	+0.1
HCY	Herceg Novi	0.71	179	⇓ iPg	Pg	23 30 05.0	-0.7
HCY				i Sg	Sb	23 30 15.9	-0.4
RUDO	Rudo	0.80	54	ePg	Pg	23 30 06.3	-1.2
KOME	Kolasin	0.82	111	⇑ iPg	Pg	23 30 07.0	-0.9
KOME				i Sg	Sb	23 30 19.8	+0.2
BUM	Brajici-Budva	0.91	160	⇑ iPg	Pg	23 30 08.6	-0.9
BUM				i Sg	Sb	23 30 22.4	+0.3
PDG	Podgorica	0.92	141	ePg	Pg	23 30 08.5	-1.3
PDG				eSg	Sg	23 30 20.9	-0.9
PDG	Podgorica	0.92	141	⇑ P	Pg	23 30 08.9	-1.0
PDG				⇑ S	Sn	23 30 23.9	-0.5
PDG	Podgorica	0.92	141	⇑ iPg	Pg	23 30 08.2	-1.6
PDG				eSg	Sg	23 30 21.8	0.0
PDG	Podgorica	0.92	141		Pg	23 30 08.8	-1.0
PDG					Sn	23 30 23.9	-0.5
TTG	Podgorica	0.92	141	P	Pg	23 30 08.2	-1.6

TTG S Sg 23 30 22.0 +0.2
TTG Podgorica 0.92 141 *e*Pg Pg 23 30 08.2 -1.6
TTG Podgorica 0.92 141 ⇓*i*Pg Pg 23 30 08.5 -1.3
TTG *i* Sg Sb 23 30 22.9 +0.4
BBLS Lazići 0.98 43 *e*Pg Pg 23 30 10.6 -0.3
BBLS *e*Sg Sg 23 30 21.8 -1.9
BBLS Lazići 0.98 43 ⇓*i*Pg Pg 23 30 10.6 -0.3
BBLS *e*Sg Sb 23 30 24.2 -0.1
HAPS Han Pijesak,BI 0.99 20 *e*Pg Pg 23 30 10.2 -1.0
HAPS *e*Sg Sb 23 30 24.9 +0.2
MAKA Makarska 1.07 278 *e*Pg Pg 23 30 11.2 -1.5
MAKA Sg Sn 23 30 28.0 -0.2
IVA Berane 1.08 105 ⇑*i*Pg Pg 23 30 11.7 -1.0
IVA Berane 1.08 105 *e*Pg Pg 23 30 11.7 -1.0
IVA *i* Sg Sn 23 30 28.8 +0.4
DRME Dracevica, Mon 1.10 151 ⇑*i*Pg Pg 23 30 12.1 -1.1
DRME *e*Sg Sg 23 30 27.3 -0.1
DRME Dracevica, Mon 1.10 151 ⇑*i*Pg Pg 23 30 11.8 -1.4
DRME *i* Sg Sn 23 30 29.3 +0.5
SJES Sjenica 1.10 84 *e*Pg Pg 23 30 13.1 -0.1
SJES *e*Sg Sb 23 30 27.9 +0.2
PVY Plav 1.22 117 ⇓*i*Pg Pb 23 30 14.5 -0.9
PVY *i* Sg Sn 23 30 33.3 +1.2
IVAS Ivanjica 1.29 70 *e*Pg Pn 23 30 15.7 -0.6
IVAS *e*Sg Sb 23 30 33.1 -0.1
ULC Ulcinj 1.32 154 P Pn 23 30 16.0 -0.6
ULC S Sg 23 30 36.0 +1.5
ULC Ulcinj 1.32 154 ⇑*i*Pg Pn 23 30 16.0 -0.6
ULC *i* Sg Sg 23 30 36.7 +2.2
DIVS Divibare 1.45 49 *e*Pn Pn 23 30 18.7 +0.2
DIVS *e*Sn Sg 23 30 40.5 +1.8
DIVS Divibare 1.45 49 ⇓*i*Pg Pn 23 30 18.3 -0.2
DIVS *e*Sg Sb 23 30 38.4 +0.3
HVAR Hvar 1.48 272 *e*Pn Pn 23 30 19.1 +0.3
HVAR Sn Sg 23 30 40.4 +0.6
TEKS Tekeris 1.59 28 *e*Pn Pb 23 30 21.3 -0.3
TEKS *e*Sn Sg 23 30 44.2 +1.1
TEKS Tekeris 1.59 28 *e*Sg Sg 23 30 43.6 +0.5
DOB Doboj 1.60 350 *e*Pn Pn 23 30 21.0 +0.5
DOB *e*Sn Sg 23 30 43.1 -0.5
MGRS Mrkonjic Grad 1.62 322 ⇑*i*Pn Pb 23 30 21.7 -0.3
MGRS *e*Sn Sg 23 30 44.3 +0.3
KIJV Kijevo 1.73 300 *e*Pn Pb 23 30 24.0 +0.1
KIJV Sn Sg 23 30 50.3 +2.6
TRUS Trudelj 1.76 52 *e*Pn Pn 23 30 22.7 0.0
TRUS *e*Sn Sb 23 30 47.4 +0.7
GRUS Gruza 1.79 65 *e*Pn Pn 23 30 23.6 +0.6
GRUS *e*Sn Sb 23 30 47.7 +0.3
BLY Banja Luka 1.85 330 *e*Pn Pn 23 30 24.7 +0.8
BLY *e*Sn Sg 23 30 52.1 +0.7
BLY Banja Luka 1.85 330 ⇓P Pn 23 30 24.6 +0.7
BLY ⇑S Sn 23 30 48.1 +0.8
BLY Banja Luka 1.85 330 ⇑*i*Pn Pn 23 30 24.5 +0.7
BLY *e*Sn Sb 23 30 50.2 +1.1
BLY Banja Luka 1.85 330 Pn 23 30 24.6 +0.7
SELS Selova 1.93 87 *e*Pn Pn 23 30 25.1 0.0
SELS *e*Sn Sb 23 30 51.7 +0.1
PHP Peshkopia 2.07 135 P Pb 23 30 29.0 -0.7
TIR Tirane 2.08 150 *e*Pn Pb 23 30 29.2 -0.7
TIR *e*Sn Sb 23 30 54.8 -1.0
TIR Tirane 2.08 150 P Pn 23 30 28.0 +1.0
TIR Tirane 2.08 150 ⇓P Pb 23 30 29.2 -0.7
TIR ⇑S Sb 23 30 55.8 0.0
TIR Tirane 2.08 150 P Pb 23 30 29.2 -0.7
TIR 23 30 55.8
TIR Tirane 2.08 150 Pb 23 30 29.2 -0.7
ZIRJ Zirje 2.12 285 *i* Pn Pb 23 30 29.5 -1.2
ZIRJ Sn Sb 23 30 57.7 +0.6
BEO Beograd 2.19 40 *e*Pn Pn 23 30 32.2 +1.6
BEO Beograd 2.19 40 P Pb 23 30 32.2 +0.4
SVIS Svilajnac 2.27 60 *e*Pn Pb 23 30 31.9 -1.3
BAI Bari 2.37 211 ⇑*i*Pn Pn 23 30 30.7 -0.3
BAI Sn Sb 23 31 02.9 -1.1
UDBI Udbina 2.40 306 *e*Pn Pb 23 30 34.9 -0.4
SGRT San Giovanni R 2.46 236 Pn 23 30 33.1 +0.8
BARS Barje 2.47 97 *e*Pn Pn 23 30 33.2 +0.7
BARS Barje 2.47 97 *e*Pn Pb 23 30 37.6 +1.0
BARS *e*Sn Sb 23 31 05.2 -1.9
SKO Skopje 2.49 117 *i* Pn Pn 23 30 34.3 +1.6
SKO Skopje 2.49 117 *i* Pn Pn 23 30 34.3 +1.6
SKO Skopje 2.49 117 P Pb 23 30 35.8 -1.1
DUGI Dugi Otok 2.62 290 *i* Pn Pn 23 30 36.3 +1.8
KUBS Kucevo 2.63 60 *e*Pn Pb 23 30 38.0 -1.4
SG1 Sgolgore (BA) 2.67 211 ⇑*i*Pn Pn 23 30 35.0 -0.2
SG1 Sn Sn 23 30 47.3 -0.4
OHR Ohrid 2.67 139 *i* Pn Pn 23 30 38.4 -1.7
OHR Ohrid 2.67 139 *i* Pn Pb 23 30 38.4 -1.7
MOSL Moslavina 2.75 334 *i* Pn Pn 23 30 36.3 0.0
ZAGS Zajecar 2.81 75 *e*Pn Pn 23 30 37.2 +0.1
ZAGS *e*Sn Sn 23 31 13.3 +2.2
MATE Matera 2.83 208 ⇑P Pn 23 30 37.4 0.0
MATE ⇓S Sn 23 31 11.1 -0.4
MATE Matera 2.83 208 Pn 23 30 37.4 0.0
MATE Sn 23 31 11.1 -0.4
MDVR Moldovita 2.85 54 ⇑P Pn 23 30 37.5 -0.1
MDVR Moldovita 2.85 54 Pn 23 30 37.5 -0.1
BANR Banloc 2.93 40 ⇓P Pn 23 30 39.4 +0.6
BANR Banloc 2.93 40 Pn 23 30 39.4 +0.6
NVLJ Novalja 2.96 300 *e*Pn Pn 23 30 41.3 +2.1
BOSS Bosilegrad 3.02 101 *e*Pn Pn 23 30 40.9 +0.9
BOSS *e*Sn Sn 23 31 17.6 +1.4
ACER Acerenza 3.03 219 Pn 23 30 41.7 +0.5
ZAPS Zavoj 3.04 86 *e*Pn Pn 23 30 41.6 +1.3
ZAPS *e*Sn Sn 23 31 19.1 +2.3
SCTE Santa Cesarea 3.08 180 Pn 23 30 42.0 +1.2
TPE Tepelena 3.08 158 P Pn 23 30 42.1 +1.3
BLKB Belogradchik 3.10 80 ⇓S Sn 23 31 21.0 +2.9
BLKB Belogradchik 3.10 80 Sn 23 31 21.0 +2.9
STIP Stip 3.11 117 *i* Pn Pn 23 30 44.1 +2.9
STIP Stip 3.11 117 *i* Pn Pn 23 30 44.1 +2.9
FNA Florina 3.21 137 P Pn 23 30 45.1 +2.5
FNA Florina 3.21 137 P Pn 23 30 45.2 +2.6
FNA Florina 3.21 137 Pn 23 30 45.2 +2.6
ZAG Zagreb 3.21 327 *e*Pn Pn 23 30 44.1 +1.5
ZAG Zagreb 3.21 327 *e*P Pn 23 30 44.0 +1.5
ZAG Zagreb 3.21 327 *e*Pn Pn 23 30 43.2 +0.6
OZLJ Ozalj 3.27 320 *e*Pn Pn 23 30 45.0 +1.5
PTJ Puntijarka 3.29 328 *e*Pn Pn 23 30 44.0 +0.3
BOJS Bojanci 3.30 317 *i* Pn Pn 23 30 44.7 +0.9
BOJS *i* Sn Sb 23 31 28.1 -2.7
HERR Herculane 3.32 57 ⇑P Pn 23 30 44.7 +0.6
HERR ⇑S Sn 23 31 25.5 +1.8
HERR Herculane 3.32 57 Pn 23 30 44.8 +0.6
HERR Sn 23 31 25.6 +1.8
BZS Buzias 3.33 41 ⇓P Pn 23 30 45.0 +0.7
BZS Buzias 3.33 41 P Pn 23 30 45.0 +0.7
BZS Buzias 3.33 41 Pn 23 30 45.0 +0.7
NEST Nestorio 3.34 144 P Pn 23 30 47.0 +2.5
PUNG Punghina 3.42 69 ⇓P Pn 23 30 47.4 +1.9
PUNG ⇑S Sg 23 31 44.3 +2.4
PUNG Punghina 3.42 69 Pn 23 30 47.4 +1.9
SRN Sarande 3.47 160 P Pn 23 30 46.5 +0.4
VTS Vitosha 3.54 97 P Pn 23 30 47.6 +0.4
VTS Vitosha 3.54 97 ⇑P Pn 23 30 48.6 +1.4
VTS Vitosha 3.54 97 P Pn 23 30 48.4 +1.2
VTS Vitosha 3.54 97 P Pn 23 30 48.6 +1.4
VTS Vitosha 3.54 97 Pn 23 30 48.6 +1.4
INTR Introdacqua 3.56 253 Pn 23 30 48.1 +0.6
KEK Kerkira 3.58 163 P Pn 23 30 47.3 -0.4
RIY Rijeka 3.60 308 ⇑*i*Pn Pn 23 30 50.0 +2.1
RIY *e*Sn Sn 23 31 32.4 +1.9
RIY Rijeka 3.60 308 *e*Pn Pn 23 30 50.8 +2.9
PAOL Paolisi 3.60 235 Pn 23 30 49.4 +1.4
KKB Krupnik 3.64 109 P Pn 23 30 52.3 +3.8
BAIL Bailesti 3.64 75 ⇓S Sg 23 31 51.1 +2.1
KOGS Kog 3.66 335 *i* Pn Pn 23 30 49.0 +0.3
VISS Visnje 3.71 317 *i* Pn Pn 23 30 50.9 +1.4
SRE Strehaia 3.73 65 ⇑P Pn 23 30 51.3 +1.5
SRE Strehaia 3.73 65 P Pn 23 30 51.3 +1.5
SRE Strehaia 3.73 65 Pn 23 30 51.3 +1.5
KZN Kozani 3.76 138 P Pn 23 30 51.7 +1.4
GZR Gura Zlata 3.81 53 ⇓P Pn 23 30 51.1 +0.2
GZR ⇓S Sn 23 31 37.2 +1.3
GZR Gura Zlata 3.81 53 P Pn 23 30 51.2 +0.2
GZR Gura Zlata 3.81 53 Pn 23 30 51.1 +0.2
GZR Sn 23 31 37.2 +1.3
AQU L'Aquila 3.82 260 *e*Pn Pn 23 30 51.7 +0.6
AQU *e*Sn Sn 23 31 36.6 +0.5
AQU L'Aquila 3.82 260 P Pn 23 30 52.0 +0.9
AQU L'Aquila 3.82 260 Pn 23 30 52.0 +0.9
PDKS Podkum 3.82 321 *i* Pn Pn 23 30 51.9 +0.8
KNT Kendrikon 3.84 120 P Pn 23 30 52.9 +1.6
MPEP Malo Peshtene 3.85 85 P Pn 23 30 52.9 +1.5
SIRR Siria 3.85 35 ⇑P Pn 23 30 51.2 -0.2
SIRR ⇓S Sn 23 31 34.8 -2.0
SIRR Siria 3.85 35 Pn 23 30 51.2 -0.2
KPRO Kipourio 3.86 145 P Pn 23 30 53.8 +2.2
KTI Kastanea 3.88 134 P Pn 23 30 53.8 +1.9
IGT Igoumenitsa 3.88 158 P Pn 23 30 52.2 +0.4
CEY Cerknica 3.88 313 *e*Pn Pn 23 30 53.7 +1.8
CEY *e*Sn Sn 23 31 38.8 +1.2
JAN Janina 3.92 152 P Pn 23 30 54.0 +1.6
GROS Grobnik 3.93 328 *i* Pn Pn 23 30 52.7 +0.2
NRCA Norcia 3.95 267 Pn 23 30 53.9 +1.1
LJU Ljubljana 4.04 317 *e*Pn Pn 23 30 55.0 +1.0
LJU *e*Sn Sn 23 31 42.9 +1.6
TIP Timpagrande 4.18 199 ⇓P Pn 23 30 55.9 0.0
TIP ⇓S Sn 23 31 46.3 +1.4
TIP Timpagrande 4.18 199 Pn 23 30 55.9 0.0
DEV Deva 4.18 48 ⇑P Pn 23 30 56.0 +0.1
DEV ⇑S Sn 23 31 43.3 -1.4
DEV Deva 4.18 48 P Pn 23 30 56.0 +0.1
DEV Deva 4.18 48 Pn 23 30 56.0 +0.1
THE Thessaloniki 4.19 125 P Pn 23 30 57.3 +1.2
MMB Musomiste 4.19 110 P Pn 23 30 59.1 +3.0
MMB Musomiste 4.19 110 P Pn 23 30 59.3 +3.2
TRI Trieste 4.23 309 P Pn 23 30 58.5 +1.9
TRI Trieste 4.23 309 Pn 23 30 58.5 +1.9
LIT Litokhoron 4.28 134 P Pn 23 30 58.2 +0.8
LIT Litokhoron 4.28 134 P Pn 23 30 59.4 +2.0
LIT Litokhoron 4.28 134 Pn 23 30 59.4 +2.0
SOKA Soboth 4.29 326 *i* Pn Pn 23 30 57.8 +0.3
10nm,0.6s,SNR=18
SOKA Soboth 4.29 326 Pn 23 30 57.8 +0.3
HORT Hortiatis 4.29 125 P Pn 23 30 59.8 +2.2
SRS Serrai 4.31 116 P Pn 23 30 59.8 +2.0
BUD Budapest 4.35 5 *e*Pn Pn 23 30 58.3 0.0
BUD Budapest 4.35 5 P Pn 23 30 58.2 0.0
MURB Monte Urbino 4.35 273 Pn 23 30 60.0 +1.6
OBKA Obir 4.37 322 *e*Pn Pn 23 31 00.2 +1.6
OBKA *e*Pg Pg 23 31 13.5 -2.1
OBKA Obir 4.37 322 *e*Pn Pn 23 30 59.4 +0.9
6.0nm,0.2s
OBKA Pg Pg 23 31 15.2 -0.5
126nm,0.8s
OBKA *e*Sn Sg 23 32 09.7 -2.5
83nm,0.5s
OBKA Obir 4.37 322 Pn 23 30 59.4 +0.9
OBKA Pg 23 31 15.2 -0.5
OBKA LR 23 32 09.7
NVR Nevrokopi 4.38 112 P Pn 23 31 00.5 +1.7
VLAD Vladila 4.39 77 ⇓P Pb 23 31 05.4 -3.8
THL Klokotos Trika 4.47 142 P Pn 23 31 01.2 +1.4
PLVB Pleven 4.49 85 ⇑P Pn 23 31 01.7 +1.5
PLVB Pleven 4.49 85 Pn 23 31 01.7 +1.5
ARSA Arzberg 4.60 334 *e*Pn Pn 23 31 02.3 +0.6
ARSA Arzberg 4.60 334 *e*Pn Pn 23 31 02.1 +0.5
41nm,0.5s,SNR=27
ARSA Arzberg 4.60 334 Pn 23 31 02.1 +0.5
SRO2 Moca 4.61 359 *e*P Pn 23 31 01.5 -0.3
SRO2 *e* 23 31 52.1
SRO2 smax smax
comp=N,149nm,0.6s
SRO2 Moca 4.61 359 *e*PN Pn 23 31 01.5 -0.3
SRO2 *e*SN Sn 23 31 52.1 -3.3
SRO2 eLG Lg 23 32 06.7
TSLK Tsoukalades, L 4.63 158 P Pn 23 31 01.9 -0.2
LKD2 Lefkada island 4.66 159 P Pn 23 31 02.2 -0.4
PLD Plovdiv 4.71 101 P Pn 23 31 06.8 +3.6
DRGR 4.72 38 ⇓P Pn 23 31 04.0 +0.6
DRGR ⇓S Sn 23 31 56.2 -2.0
DRGR 4.72 38 P Pn 23 31 04.0 +0.6
DRGR 4.72 38 Pn 23 31 04.0 +0.6
SOP Sopron 4.73 344 *e*Pn Pn 23 31 04.1 +0.7
SOP Sopron 4.73 344 P Pn 23 31 04.3 +0.9
EVGI Lefkada island 4.82 159 P Pn 23 31 04.2 -0.5
RZN Rozhen 4.84 105 P Pn 23 31 08.5 +3.3
PSZ Piszkesteto 4.87 11 ⇓P Pn 23 31 05.2 -0.2
PSZ Piszkesteto 4.87 11 *e*Pn Pn 23 31 05.3 -0.2
PSZ Piszkesteto 4.87 11 P Pn 23 31 05.3 -0.2
PSZ Piszkesteto 4.87 11 Pn 23 31 05.2 -0.2
PSZ Piszkesteto 4.87 11 Pn 23 31 05.2 -0.2
MYKA Terra Mystica 4.89 317 *e*Pn Pn 23 31 08.4 +2.8
comp=N,6.0nm,0.3s
MYKA Terra Mystica 4.89 317 Pn 23 31 08.4 +2.8
HUMR Humele 4.90 72 ⇓P Pn 23 31 06.2 +0.4
HUMR Humele 4.90 72 Pn 23 31 06.2 +0.4
EVR Evrytania 4.93 148 P Pn 23 31 08.0 +1.7
ARR Arges 4.94 61 ⇓P Pn 23 31 07.9 +1.4
ARR ⇓S Sn 23 32 07.3 +3.6
ARR Arges 4.94 61 Pn 23 31 07.9 +1.4
ARR Sn 23 32 07.3 +3.6
MAKR Makrakomi, Fth 4.97 145 P Pn 23 31 08.5 +1.6
COPA Copaceanca 4.99 76 ⇓P Pn 23 31 08.4 +1.4
COPA ⇑S Sg 23 32 27.4 -4.8
COPA Copaceanca 4.99 76 Pn 23 31 08.3 +1.4
OUR Ouranopolis 4.99 123 P Pn 23 31 09.2 +2.2
AGG Agios Georgios 5.05 144 P Pn 23 31 09.1 +1.2
PAIG Paliouri 5.06 128 P Pn 23 31 09.1 +1.1
CJR Cluj-Napoca 5.09 44 ⇑P Pn 23 31 09.2 +0.8
CJR Cluj-Napoca 5.09 44 P Pn 23 31 09.2 +0.8
CJR Cluj-Napoca 5.09 44 Pn 23 31 09.2 +0.8
CONA Conrad Observa 5.12 340 *e*Pn Pn 23 31 09.2 +0.3
comp=N,4.2nm,0.3s,SNR=10
CONA *e*Sn Sn 23 32 06.9 -1.1
comp=N,43nm,0.5s
CONA Conrad Observa 5.12 340 Pn 23 31 09.2 +0.3
CONA Sn 23 32 06.9 -1.1
ZST Bratislava 5.13 350 *e*P Pn 23 31 08.6 -0.4
ZST *e* 23 32 04.5
ZST smax smax
comp=N,34nm,0.8s
ZST Bratislava 5.13 350 *e*PN Pn 23 31 08.6 -0.4
ZST *e*SN Sn 23 32 04.5 -3.8
ZST eLG Lg 23 32 14.6
VOIR 5.24 62 ⇓P Pn 23 31 12.4 +1.8
VOIR ⇓S Sn 23 32 14.5 +3.4
VOIR 5.24 62 P Pn 23 31 12.3 +1.8
VOIR S Sn 23 32 14.4 +3.4
VOIR 5.24 62 Pn 23 31 12.4 +1.8
VOIR Sn 23 32 14.5 +3.4
ANX Ano Chora 5.25 149 P Pn 23 31 12.6 +1.9
CEL Celeste 5.27 203 Pn Pn 23 31 12.2 +1.2
MODS Modra-Piesok 5.29 351 *e*P Pn 23 31 10.7 -0.4
MODS *e* 23 32 08.9
MODS smax smax
comp=N,43nm,0.8s
MODS Modra-Piesok 5.29 351 *e*PN Pn 23 31 10.7 -0.4
MODS *e*SN Sn 23 32 08.9 -3.2
MODS eLG Lg 23 32 18.2
OSSC Osservatorio P 5.29 276 Pn 23 31 13.3 +2.2
THAS Thassos island 5.31 117 P Pn 23 31 12.4 +1.0
KFL Anninata 5.34 160 P Pn 23 31 11.1 -0.7
KBA Koelnbreinsper 5.35 319 *e*Pn Pn 23 31 13.4 +1.3
KBA Koelnbreinsper 5.35 319 *i* Pn Pn 23 31 13.1 +1.0
comp=N,2.0nm,0.2s,SNR=8.9
KBA Koelnbreinsper 5.35 319 P Pn 23 31 13.1 +1.0
KBA Koelnbreinsper 5.35 319 Pn 23 31 13.1 +1.0
VYHS Vyhne 5.35 3 *e*P Pn 23 31 12.1 +0.2
VYHS *e* 23 32 11.9
VYHS Vyhne 5.35 3 *e*PN Pn 23 31 12.1 +0.2
VYHS *e*PG Pg 23 31 33.6 -0.8
VYHS *e*SN Sn 23 32 11.9 -1.7
KDZ Kurdzhali 5.35 104 P Pn 23 31 14.9 +2.8
EFP Efpalio 5.39 150 P Pn 23 31 13.8 +1.2
AXAR Agios Charalam 5.41 143 P Pn 23 31 14.4 +1.6
ELND Elena 5.43 90 ⇑P Pn 23 31 14.4 +1.3
ELND ⇓S Sg 23 32 54.7 +8.5
ELND Elena 5.43 90 Pn 23 31 14.4 +1.3
SZH Strazhica 5.45 86 P Pn 23 31 15.5 +2.1
KECS Kecovo 5.51 14 *e*P Pn 23 31 15.2 +1.0
KECS *e* 23 32 14.8
KECS smax smax
comp=N,10.0nm,0.6s
KECS Kecovo 5.51 14 *e*PN Pn 23 31 15.2 +1.0
KECS *e*SN Sn 23 32 14.8 -2.8
KECS eLG Lg 23 32 25.6
MOA Molln 5.55 329 *e*Pn Pn 23 31 16.7 +2.0
MOA Molln 5.55 329 *i* Pn Pn 23 31 16.0 +1.3
comp=N,11nm,0.3s,SNR=12
MOA *e*Sn Sn 23 32 21.8 +3.2
comp=N,24nm,0.6s
MOA Molln 5.55 329 Pn 23 31 16.0 +1.3
MOA Sn 23 32 21.8 +3.2
ABTA Abfaltersbach 5.55 312 *i* Pn Pn 23 31 16.6 +1.7
comp=N,10nm,0.4s,SNR=12
ABTA Pg Pg 23 31 37.5 -0.8
comp=N,34nm,0.7s
ABTA *e*Sn Sn 23 32 23.0 +4.3
comp=N,22nm,0.5s
ABTA Abfaltersbach 5.55 312 Pn 23 31 16.6 +1.7
ABTA Pg 23 31 37.5 -0.8
ABTA Sn 23 32 23.1 +4.3
ZCCA Zocca 5.56 285 Pn 23 31 16.0 +1.1
CASP Castiglione de 5.60 269 Pn Pn 23 31 16.2 +0.8
ALIK Aliki, Aigiali 5.61 149 P Pn 23 31 18.0 +2.4
RDO Rodhopi 5.62 109 P Pn 23 31 17.0 +1.3
LKR Lokris 5.65 141 P Pn 23 31 16.6 +0.4
DOPR Dopca 5.68 58 ⇓P Pn 23 31 18.2 +1.6
DOPR Dopca 5.68 58 Pn 23 31 18.2 +1.6
JAVC Velka Javorina 5.73 355 *e*PN Pn 23 31 18.7 +1.4
JAVC *e*SN Sn 23 32 24.2 +1.0
JAVC Velka Javorina 5.73 355 *e*Pn Pn 23 31 18.9 +1.6
TRPA Tarpa 5.73 28 ⇓P Pn 23 31 17.5 +0.3
TRPA ⇑S Sn 23 32 20.5 -2.4
TRPA Tarpa 5.73 28 Pn 23 31 17.5 +0.3
MLR Muntele Rosu 5.84 64 Pn Pn 23 31 20.3 +1.5
comp=N,0.1nm,0.3s,baz=304,slow=12,SNR=2.4
MLR Sn Sn 23 32 27.5 +1.5
comp=N,0.6nm,0.3s,baz=263,slow=10,SNR=3.5
MLR LR LR 23 34 07.0
comp=N,140nm,18.0s,baz=299,slow=44
MLR Muntele Rosu 5.84 64 ⇑P Pn 23 31 20.4 +1.5
MRKA Markates 5.89 137 P Pn 23 31 19.8 +0.3
JMB Yambol 6.00 94 P Pn 23 31 22.4 +1.5
ALN Alexandroupoli 6.07 109 P Pn 23 31 23.9 +2.0
ALN Alexandroupoli 6.07 109 Pn 23 31 23.9 +2.0
RJOB Jochberg 6.08 321 *e*Pn Pn 23 31 24.3 +2.2
KRUC Moravsky 6.08 347 *e*PN Pn 23 31 21.9 -0.1
KRUC *e*SN Sn 23 32 32.9 +1.2
KRUC Moravsky 6.08 347 *e*Pn Pn 23 31 24.3 +1.3
KRUC Moravsky 6.08 347 P Pn 23 31 22.7 +0.7
KRUC pmax pmax
comp=Z,12nm,0.7s
UZH Uzhgorod 6.09 25 *e*P Pn 23 31 21.9 -0.2
UZH *e*S Sn 23 32 30.9 -0.9
UZH MLR MLR
comp=N,40nm,1.1s
UZH MLR MLR
comp=E,50nm,1.1s
UZH MLR MLR
comp=Z,20nm,1.1s
PRMA PARMA 6.11 288 Pn 23 31 23.2 +0.8
VRAC Vranov 6.29 349 Pn Pn 23 31 24.1 -0.8
comp=Z,0.4nm,0.3s,baz=189,slow=13,SNR=4.4
VRAC Sn Sn 23 32 34.6 -2.3
comp=Z,1.1nm,0.3s,baz=236,slow=12,SNR=4.6
VRAC Vranov 6.29 349 *e*PN Pn 23 31 24.8 -0.1
VRAC *e*SN Sn 23 32 37.9 +1.0
VRAC Vranov 6.29 349 ⇑P Pn 23 31 25.9 +1.0
VRAC Vranov 6.29 349 P Pn 23 31 25.9 +1.0
VRAC Vranov 6.29 349 Pn 23 31 25.9 +1.0
WTTA Wattenberg 6.34 313 *e*Pn Pn 23 31 29.0 +3.3
WTTA Wattenberg 6.34 313 *e*Pn Pn 23 31 27.9 +2.2
comp=Z,7.2nm,0.4s,SNR=24
WTTA *e*Sn Sn 23 32 42.6 +4.3
comp=Z,51nm,0.7s
WTTA Wattenberg 6.34 313 P Pn 23 31 27.9 +2.2
WTTA 23 32 42.7
WTTA Wattenberg 6.34 313 Pn 23 31 27.9 +2.2
WTTA Sn 23 32 42.6 +4.3
KOLS Kolonicke sedl 6.35 23 *e*P Pn 23 31 27.4 +1.6
KOLS Kolonicke sedl 6.35 23 *e*PN Pn 23 31 27.4 +1.6
NIE Niedzica 6.39 11 P Pn 23 31 27.7 +1.4
NIE pmax pmax
comp=Z,5.0nm,0.7s
WATA Walderalm 6.42 313 *i* Pn Pn 23 31 29.1 +2.3
comp=Z,9.9nm,0.3s,SNR=34
WATA Sn Sn 23 32 42.6 +2.4
comp=Z,43nm,0.5s
WATA Walderalm 6.42 313 Pn 23 31 29.1 +2.3
WATA Sn 23 32 42.6 +2.4
VAE Valguarnera 6.46 210 Pn Pn 23 31 29.4 +2.0
comp=Z,0.5nm,0.3s,baz=25,slow=18,SNR=1.4
TREC Trest 6.48 342 *e*P Pn 23 31 28.4 +0.9
TREC Trest 6.48 342 *e*PN Pn 23 31 28.4 +0.9
VRI Vrincioaia 6.49 62 ⇑P Pn 23 31 29.3 +1.6
VRI Vrincioaia 6.49 62 P Pn 23 31 29.3 +1.6
VRI Vrincioaia 6.49 62 Pn 23 31 29.3 +1.6
BURAR Bucovina Array 6.51 44 ⇑P Pn 23 31 29.7 +1.7
BURAR Bucovina Array 6.51 44 P Pn 23 31 29.7 +1.7
BURAR Bucovina Array 6.51 44 Pn 23 31 29.7 +1.7
BUR08 Bucovina Ar. S 6.52 44 Pn 23 31 29.5 +1.3
ITM Ithomi 6.53 155 Pn Pn 23 31 28.7 +0.6
PTL Penteli 6.54 139 P Pn 23 31 28.3 -0.1
SQTA Sankt Quirin 6.55 311 *e*Pn Pn 23 31 31.1 +2.5
comp=Z,2.0nm,0.2s,SNR=18
SQTA *e*Sn Sn 23 32 48.3 +4.9
comp=Z,30nm,0.4s
SQTA Sankt Quirin 6.55 311 P Pn 23 31 31.1 +2.5
SQTA 23 32 48.3
SQTA Sankt Quirin 6.55 311 Pn 23 31 31.1 +2.5
SQTA Sn 23 32 48.3 +4.9
GEC2 GERESS Array S 6.59 331 *e*Pn Pn 23 31 30.5 +1.5
GEC2 GERESS Array S 6.59 331 P Pn 23 31 30.6 +1.5
GEC2 pmax pmax
comp=Z,15nm,0.6s
GEC2 GERESS Array S 6.59 331 Pn 23 31 29.1 0.0
GERES GERESS Array B 6.59 331 Pn Pn 23 31 30.4 +1.2
comp=Z,1.2nm,0.3s,baz=154,slow=14,SNR=24
GERES Sn Sn 23 32 37.9 -6.5
baz=159,slow=15,SNR=2.4
GERES LR LR 23 34 40.9
comp=Z,59nm,20.1s,baz=191,slow=44
MSSA Maissana 6.59 283 Pn 23 31 30.0 +0.9
MORC Moravsky Berou 6.66 355 *e*PN Pn 23 31 29.0 -1.0
MORC *e*SN Sn 23 32 49.9 +4.0
MORC Moravsky Berou 6.66 355 ⇑P Pn 23 31 30.4 +0.4
MORC ⇑S Sn 23 32 47.0 +1.1
MORC Moravsky Berou 6.66 355 P Pn 23 31 30.4 +0.4
MORC 23 32 47.0
MORC Moravsky Berou 6.66 355 Pn 23 31 31.3 +1.3
MORC Moravsky Berou 6.66 355 Pn 23 31 30.4 +0.4
MORC Sn 23 32 47.0 +1.1
VLY Voula,Athens 6.67 141 P Pn 23 31 30.6 +0.5
MOTA Moosalm 6.68 311 *e*Pn Pn 23 31 32.9 +2.5
comp=Z,32nm,0.6s,SNR=30
MOTA *e*Sn Sn 23 32 49.5 +2.9
comp=Z,40nm,0.6s
MOTA Moosalm 6.68 311 P Pn 23 31 32.9 +2.5
MOTA 23 32 49.5
MOTA Moosalm 6.68 311 Pn 23 31 32.9 +2.5
MOTA Sn 23 32 49.5 +2.9
OKC Ostrava-Krasne 6.69 358 P Pn 23 31 31.5 +1.1
OKC pmax pmax
comp=Z,5.0nm,0.9s
OKC Ostrava-Krasne 6.69 358 *e*PN Pn 23 31 29.8 -0.6
OKC *e*SN Sn 23 32 40.5 -6.1
FETA Feichten 6.71 308 *e*Pn Pn 23 31 33.1 +2.3
comp=Z,3.9nm,0.3s,SNR=15
FETA Sn Sn 23 32 50.0 +2.6
comp=Z,9.0nm,0.5s
FETA Feichten 6.71 308 Pn 23 31 33.1 +2.3
FETA Sn 23 32 50.0 +2.6
FUORN Ofenpass-Fuorn 6.79 304 Pn 23 31 33.3 +1.4
CLTB Caltabellotta 6.87 218 Pn Pn 23 31 34.0 +1.1
KHC Kasperske Hory 6.88 332 ⇓*e*P Pn 23 31 34.5 +1.5
KHC Kasperske Hory 6.88 332 *e*PN Pn 23 31 34.8 +1.8
KHC *e*SN Sn 23 32 49.3 -2.0
KHC Kasperske Hory 6.88 332 Pn 23 31 33.8 +0.9
RETA Reutte 6.95 311 *e*Pn Pn 23 31 36.2 +2.2
comp=Z,4.3nm,0.4s,SNR=6.6
RETA *e*Sn Sn 23 32 55.8 +2.5
comp=Z,17nm,0.5s
RETA Reutte 6.95 311 Pn 23 31 36.2 +2.2
RETA Sn 23 32 55.8 +2.5
PGF Pioggiola 6.99 268 *e*Pn Pn 23 31 35.2 +0.6
KRLC Kraliky 7.02 351 *e*P Pn 23 31 36.5 +1.5
KRLC *e* 23 32 49.3
KRLC Kraliky 7.02 351 *e*PN Pn 23 31 36.5 +1.5
KRLC *e*SN Sn 23 32 49.3 -5.6
DAVOX Davos/Dischmat 7.09 304 Pn Pn 23 31 38.2 +2.1
comp=Z,5.0nm,0.3s,baz=123,slow=11,SNR=47

DAVOX				Sn	Sn	23 32 56.3	-0.6
	comp=Z,2.1nm,0.3s,baz=122,slow=18,SNR=1.5						
DAVOX				LR	LR	23 34 51.5	
	comp=Z,90nm,19.3s,baz=108,slow=43						
KWP	Kalwaria Pacla	7.11	23	P	Pn	23 31 37.1	+1.0
KWP	Kalwaria Pacla	7.11	23	Pn	Pn	23 31 37.1	+1.0
FUR	Furstenfeldbru	7.11	317	P	Pn	23 31 38.5	+2.3
FUR				pmax	pmax		
	comp=Z,30nm,0.8s						
OJC	Ojcow	7.13	7	P	Pn	23 31 37.5	+1.2
OJC	Ojcow	7.13	7	Pn	Pn	23 31 37.5	+1.2
WET	Wettzell	7.14	329	ePg	Pg	23 32 07.9	-0.8
PBCC	Pribram	7.23	336	ePN	Pn	23 31 38.9	+1.1
CFR	Carcaliu	7.23	70	⇓P	Pn	23 31 38.9	+1.1
CFR	Carcaliu	7.23	70	P	Pn	23 31 38.9	+1.1
CFR	Carcaliu	7.23	70		Pn	23 31 38.9	+1.1
TUE	Stuetta	7.29	300		Pn	23 31 40.0	+1.1
TIRR	Tirgusor	7.31	76	P	Pn	23 31 40.8	+2.0
TIRR	Tirgusor	7.31	76	Pn	Pn	23 31 40.8	+2.0
DAVA	Damuels	7.34	307	ePn	Pn	23 31 41.4	+1.9
	comp=Z,11nm,0.5s,SNR=8.5						
DAVA				eSn	Sn	23 33 05.6	+2.7
	comp=Z,14nm,0.6s						
DAVA	Damuels	7.34	307		Pn	23 31 41.4	+1.9
DAVA					Sn	23 33 05.6	+2.7
DPC	Dobruska-Polom	7.35	349	eP	Pn	23 31 41.1	+1.6
DPC	Dobruska-Polom	7.35	349	ePN	Pn	23 31 41.1	+1.6
PRU	Pruhonice	7.35	340	eP	Pn	23 31 41.3	+1.8
PRU				e		23 32 58.4	
PRU	Pruhonice	7.35	340	ePN	Pn	23 31 41.3	+1.8
PRU				eSN	Sn	23 32 58.4	-4.5
OSTC	Ostas	7.56	349	ePN	Pn	23 31 43.5	+1.1
CHVC	Chvalec	7.62	348	ePN	Pn	23 31 44.2	+1.1
VSL	Villasalto	7.76	245	Pn	Pn	23 31 45.1	0.0
WDD	Wied Dalam	7.92	204	Pn	Pn	23 31 49.1	+1.9
SBF	Sospel	8.06	279	ePn	Pn	23 31 49.4	+0.2
SBF				eSg	Sn	23 33 08.5	-12
	comp=Z,35nm,0.6s						
SBF	Sospel	8.06	279	P	Pn	23 31 49.8	+0.6
APE	Apeiranthos	8.13	136	ceP	Pn	23 31 50.8	+0.6
NKC	Novy Kostel	8.20	332	eP	Pn	23 31 52.5	+1.4
NKC	Novy Kostel	8.20	332	ePN	Pn	23 31 52.5	+1.4
GRA1	Grafenberg Arr	8.23	325		Pn	23 31 52.3	+0.7
GRF	Grafenberg Arr	8.23	325	ePg	Pg	23 32 28.0	-1.6
GRF	Grafenberg Arr	8.23	325	P	Pn	23 31 52.3	+0.7
BRG	Berggiesshubel	8.32	340	PN	Pn	23 31 50.5	-2.2
BRG				e		23 32 17.4	
BRG				i		23 33 41.2	
	comp=Z,9.9nm,0.7s						
	comp=N,173nm,11.6s						
	comp=E,162nm,13.6s						
	comp=Z,125nm,10.4s						
BRG	Berggiesshubel	8.32	340	P	Pn	23 31 50.5	-2.2
BRG				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BRG				MLR	MLR		
	comp=N,173nm,11.6s						
BRG				MLR	MLR		
	comp=E,162nm,13.6s						
BRG				MLR	MLR		
	comp=Z,125nm,10.4s						
SLE	Schleitheim	8.39	307	P	Pn	23 31 55.0	+1.2
SLE				pmax	pmax		
	comp=Z,13nm,0.6s						
MBDF	Montbardon	8.59	285	ePn	Pn	23 31 55.8	-0.8
MBDF	Montbardon	8.59	285	ePg	Pn	23 32 13.2	+17
MBDF				eSg	Sn	23 33 23.2	-10
	comp=Z,21nm,0.5s						
MBDF	Montbardon	8.59	285	eP	Pn	23 31 56.7	+0.1
FRF	La Foret Royal	8.63	277	ePn	Pn	23 31 57.3	+0.2
FRF				eSg	Sn	23 33 27.5	-6.9
	comp=Z,17nm,0.7s						
FRF	La Foret Royal	8.63	277	P	Pn	23 31 57.2	+0.2
BNI	Bardonecchia	8.70	287	P	Pn	23 31 57.4	-0.7
BNI	Bardonecchia	8.70	287		Pn	23 31 57.4	-0.7
LPG	La Plagne	8.73	290	ePn	Pn	23 31 57.5	-1.1
LPG				eSg	Sn	23 33 26.3	-11
	comp=Z,45nm,0.7s						
LPG	La Plagne	8.73	290	P	Pn	23 31 56.7	-1.9
LMR	La Mourre	8.74	275	ePn	Pn	23 31 58.8	+0.3
LMR				eSg	Sn	23 33 31.9	-5.2
	comp=Z,3.1nm,0.3s						
LPL	La Plagne	8.74	290	ePn	Pn	23 31 58.2	-0.6
LPL				eSg	Sn	23 33 27.2	-10
	comp=Z,25nm,0.4s						
LPL	La Plagne	8.74	290	P	Pn	23 31 57.7	-1.1
BFO	Black Forest	8.78	310	eP	Pn	23 32 00.6	+1.5
BFO	Black Forest	8.78	310		Pn	23 32 00.4	+1.3
MOX	Moxa	8.84	330	P	Pn	23 32 01.3	+1.4
MOX				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MANT	Manisa	8.95	118		Pn	23 32 03.0	+1.5
CLL	Collm	8.96	337	i Pn	Pn	23 32 11.1	+10
CLL				i Sn	Sn	23 33 31.0	-12
CLL				eSg	Sg	23 34 15.0	-25
CLL	Collm	8.96	337	P	Pn	23 32 02.8	+1.3
CLL	Collm	8.96	337	Pn	Pn	23 32 02.8	+1.3
ORIF	Oris-en-Rattie	9.24	285	ePn	Pn	23 32 05.7	+0.2
ORIF				eSg	Sn	23 33 43.2	-6.4
	comp=Z,26nm,0.6s						
ORIF	Oris-en-Rattie	9.24	285	P	Pn	23 32 05.4	-0.1
ORIF				pmax	pmax		
	comp=Z,8.0nm,0.6s						
IDI	Anoyia	9.29	146	Pn	Pn	23 32 03.3	-2.9
	comp=Z,1.3nm,0.3s,baz=338,slow=9.5,SNR=17						
IDI				Sn	Sn	23 33 43.8	-7.1
	comp=Z,1.6nm,0.3s,baz=115,slow=6.1,SNR=3.0						
IDI	Anoyia	9.29	146	⇓P	Pn	23 32 06.7	+0.5
IDI				⇑S	Sn	23 33 44.9	-5.9
IDI	Anoyia	9.29	146		Pn	23 32 03.9	-2.3
ECH	Echery	9.40	306	P	Pn	23 32 08.5	+1.0
ECH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HINF	Hinteralfeld	9.40	304	ePn	Pn	23 32 08.2	+0.6
SMRF	Simiane la Rot	9.40	279	ePn	Pn	23 32 07.9	+0.2
CDF	Champ du Feu	9.42	308	ePn	Pn	23 32 08.4	+0.4
CDF	Champ du Feu	9.42	308	P	Pn	23 32 08.2	+0.2
CABF	La Chapelle	9.45	296	ePn	Pn	23 32 08.5	+0.1
CABF	La Chapelle	9.45	296	P	Pn	23 32 08.4	+0.1
HAU	Haudompre	9.79	304	ePn	Pn	23 32 13.7	+0.8
TNS	Taunus Mts	9.87	319	P	Pn	23 32 16.7	+2.7
TNS				pmax	pmax		
	comp=Z,12nm,0.6s						
VIVF	Saint-Julien-l	10.09	284	ePn	Pn	23 32 16.1	-1.0
VIVF				eSg	Sn	23 34 07.8	-2.5
VIVF	Saint-Julien-l	10.09	284	P	Pn	23 32 15.2	-1.9
KARP	Karpathos	10.14	136	Pn	Pn	23 32 18.6	+0.8
SSB	Saint Sauveur	10.23	287	P	Pn	23 32 18.1	-0.8
SSB	Saint Sauveur	10.23	287		Pn	23 32 18.1	-0.8
KEST	Kesra	10.23	227	Pn	Pn	23 32 18.4	-0.7
	comp=Z,0.1nm,0.3s,baz=264,slow=17,SNR=1.6						
KEST	Kesra	10.23	227	Pn	Pn	23 32 18.7	-0.3
PAGF	Fort de Pagny	10.40	306	ePn	Pn	23 32 23.1	+1.8
LASF	Ste Croix	10.64	280	ePn	Pn	23 32 23.8	-0.8
SFTF	Sexfontaines	10.67	303	ePn	Pn	23 32 26.0	+1.1
	baz=126						
WLF	Walferdange	10.71	312	P	Pn	23 32 25.8	+0.4
WLF	Walferdange	10.71	312	Pn	Pn	23 32 25.8	+0.4
SMF	Signal de Mont	10.95	294	ePn	Pn	23 32 27.7	-1.1
SMF	Signal de Mont	10.95	294	P	Pn	23 32 28.4	-0.4
LOR	Lormes	11.10	297	ePn	Pn	23 32 30.8	0.0
	baz=118						
LOR	Lormes	11.10	297	P	Pn	23 32 30.9	+0.1
SSF	Saint Saulge	11.28	295	ePn	Pn	23 32 31.7	-1.5
SSF	Saint Saulge	11.28	295	P	Pn	23 32 31.7	-1.5
AVF	Avril sur Loir	11.31	294	ePn	Pn	23 32 33.2	-0.5
AVF	Avril sur Loir	11.31	294	P	Pn	23 32 33.4	-0.3
BGF	Bois d'Agland	11.60	292	ePn	Pn	23 32 37.0	-0.7
BGF	Bois d'Agland	11.60	292	P	Pn	23 32 38.2	+0.5
MTLF	Montolieu	11.86	276	ePn	Pn	23 32 42.3	+1.0
BRTR	Keskin Array B	11.88	102	Pn	Pn	23 32 43.6	+1.9
	comp=Z,0.0nm,0.3s,baz=229,slow=26,SNR=1.7						
BRTR				LR	LR	23 37 41.0	
	comp=Z,52nm,20.3s,baz=276,slow=40						
HYF	Humbligny	11.90	296	ePn	Pn	23 32 41.2	-0.6
CAF	Calviac	11.95	284	ePn	Pn	23 32 41.6	-0.8
CAF	Calviac	11.95	284	P	Pn	23 32 42.2	-0.2
BAIF	Baives	11.99	310	ePn	Pn	23 32 46.5	+3.6
TCF	Toulx Ste Croi	11.99	291	ePn	Pn	23 32 43.0	0.0
TCF	Toulx Ste Croi	11.99	291	P	Pn	23 32 43.0	0.0
CLF	Chambon-Foret	12.36	299	Pn	Pn	23 32 49.2	+1.3
LDF	La Druitiere	14.04	299	ePn	Pn	23 33 11.1	+0.1
CSS	Mathiatis	14.13	120	Pn	Pn	23 33 13.8	+1.5
SGMF	Saint Gilles	15.54	296	ePn	Pn	23 33 30.9	-0.2
MMAI	Mount Meron Ar	16.70	122	Pn	Pn	23 33 44.8	-1.5
	comp=Z,0.5nm,0.3s,baz=320,slow=24,SNR=3.0						
ESDC	Sonseca Array	17.18	266	P	P	23 33 53.5	-0.4
	comp=Z,0.0nm,0.3s,baz=68,slow=13,SNR=2.1						
HFS	Hagfors	17.25	352	P	P	23 33 55.6	+1.2
	comp=Z,0.1nm,0.3s,baz=182,slow=40,SNR=1.5						
NB2	NORSAR Subarra	18.44	349	P	P	23 34 06.9	-0.7
	comp=Z,3.2nm,1.2s,baz=163,slow=11						
NOA	NORSAR Array B	18.44	349	P	Pn	23 34 08.9	+1.4
	comp=Z,0.0nm,0.3s,baz=40,slow=25,SNR=2.7						
EKA	Eskdalemuir Ar	18.56	319	P	Pn	23 34 09.4	+0.4
	baz=115,slow=8.8,SNR=6.2						
EIL	Elat	18.84	130	P	Pn	23 34 13.3	+0.6
	comp=Z,0.2nm,0.3s,baz=338,slow=17,SNR=3.7						
FINES	FINESS Array B	18.87	11	P	Pn	23 34 13.0	+0.2
	comp=Z,0.2nm,0.3s,baz=193,slow=9.1,SNR=6.5						
FINES				LR	LR	23 41 58.7	
	comp=Z,35nm,18.5s,baz=192,slow=39						
FINES	FINESS Array B	18.87	11	eP	Pn	23 34 16.0	+3.2
KLMR	Klimovskoe	21.78	28	eP	P	23 34 41.7	-2.0
KLMR				pmax	pmax		
	comp=Z,12nm,1.4s						
KLMR	Klimovskoe	21.78	28	eP	P	23 34 41.8	-2.0
KLMR				AMP		23 34 51.4	
	comp=Z,12nm,1.4s						
ARU	Arti	28.63	48	⇓eP	P	23 35 50.5	+2.0
ARU				pmax	pmax		
	comp=Z,7.0nm,2.0s						
TORD	Torodi Ar. Bea	33.22	211	P	P	23 36 29.6	+0.3
	comp=Z,1.4nm,0.6s,baz=15,slow=9.2,SNR=14						
BRVK	Borovoye	35.27	55	⇓eP	P	23 36 50.6	+3.9
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	Kurchatov	40.74	58	⇑eP	P	23 37 36.3	+3.4
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DBIC	Dimbokro	41.75	216	P	P	23 37 41.4	-0.1
	comp=Z,3.1nm,0.5s,baz=21,slow=6.9,SNR=5.5						
KSH	Kashi	42.60	75	P	P	23 37 48.6	+0.1
KSH				pP	sP	23 37 54.2	+1.1
KSH				sP	pP	23 37 55.1	+3.3
KSH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZALV	Zalesovo Beam	43.67	52	P	P	23 37 55.8	-0.9
	comp=Z,0.4nm,0.2s,baz=287,slow=9.9,SNR=1.7						
MKAR	Makanchi Array	44.19	62	P	P	23 37 59.6	-1.4
	comp=Z,0.1nm,0.5s,baz=285,slow=6.4,SNR=2.1						
YKA	Yellowknife Ar	68.19	339	P	P	23 40 50.2	-1.9
	comp=Z,0.2nm,0.4s,baz=44,slow=5.6,SNR=7.2						
CMAR	Chiang Mai Arr	70.76	83	P	P	23 41 08.6	-0.2
	comp=Z,0.6nm,0.3s,baz=293,slow=4.8,SNR=5.0						
CMAR	Chiang Mai Arr	70.76	83	i P	P	23 41 11.1	+2.3
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PDAR	Pinedale Array	82.58	324	P	P	23 42 15.3	-0.3
	comp=Z,0.4nm,0.8s,baz=79,slow=1.9,SNR=3.8						
TXAR	Lajitas Array	90.45	312	P	P	23 42 54.6	+0.4
	comp=Z,0.8nm,0.9s,baz=64,slow=3.3,SNR=7.6						

*SOME **04** 23:37:26.7, 40.°67N×77.°63E, h5km*
*NNC **04** 23:37:28.2±0.9, 40.°68N×77.°62E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=6.0km s-min=4.3km az=168.0*
*KRNET **04** 23:37:30.3±0.1, 40.°84N×77.°51E, h16km, mb2.8*
ISC 04 23:37:31.1±1.5**, 40.°80N**±0.°07×**77.°48E**±0.°04**, h10km, n50, σ1.s81/81, 13C-21D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	1.35	350	⇑eP	Pn	23 37 55.0	-1.2
	baz=50						
KDJ				⇑iS	Sb	23 38 12.9	-1.1
	baz=50						
ULHL	Ulahol	1.72	328	⇑eP	Pb	23 38 01.8	-1.2
	baz=26						
ULHL				⇑iS	Sb	23 38 24.7	0.0
	baz=26						
PRZ	Przheval'sk	1.82	22	⇓iP	Pb	23 38 02.9	-1.7
	baz=22						
PRZ				⇓iS	Sb	23 38 27.3	-0.2
	baz=22						
ANVS	Anan'yevo	1.99	4	⇓iP	Pb	23 38 06.6	-0.9
	baz=3.0						
ANVS				⇓iS	Sb	23 38 32.8	+0.4
	baz=3.0						
BOOM	Boomskoye usch	2.05	326	⇓eP	Pb	23 38 07.8	-0.7
	baz=25						
BOOM				⇓iS	Sb	23 38 34.2	+0.1
	baz=25						
KZA	Kyzart	2.11	308	⇑eP	Pb	23 38 08.7	-1.0
	baz=7.0						
KZA				⇑iS	Sb	23 38 36.3	+0.1
	baz=7.0						
TNSS	Tian-Shan	2.27	350	eP	Pb	23 38 12.7	+0.2
	40nm,0.6s						
TNSS				eS	Sg	23 38 46.3	+2.1
	25nm,0.5s						
TNSS	Tian-Shan	2.27	350	Pg	Pb	23 38 12.7	+0.2
	40nm,0.6s						
TNSS				Lg	Lg	23 38 46.3	
	25nm,0.5s						
SATY	Saty	2.36	17	eP	Pb	23 38 13.2	-0.6
	6.8nm,0.7s						
SATY				eS	Sg	23 38 47.0	0.0
	24nm,0.8s						
SATY	Saty	2.36	17	Pg	Pb	23 38 13.2	-0.6
	6.8nm,0.7s						
SATY				Lg	Lg	23 38 47.0	
	24nm,0.8s						
MDOK	Medeo	2.38	352	eP	Pb	23 38 14.3	0.0
	17nm,0.2s						
MDOK				eS	Sg	23 38 48.8	+1.0
	19nm,0.6s						
MDOK	Medeo	2.38	352	Pg	Pb	23 38 14.3	0.0
	14nm,0.5s						
MDOK				Lg	Lg	23 38 49.6	
	16nm,0.6s						
MDOK	Medeo	2.38	352	Pg	Pb	23 38 14.3	0.0
	17nm,0.2s						
MDOK				Lg	Lg	23 38 48.8	
	19nm,0.6s						
KOTS	Kotyrbulak	2.45	354	eP	Pb	23 38 15.5	+0.1
	33nm,0.3s						
KOTS				eS	Sg	23 38 50.4	+0.6
	54nm,0.6s						
KOTS	Kotyrbulak	2.45	354	Pg	Pb	23 38 15.5	+0.1
	33nm,0.3s						
KOTS				Lg	Lg	23 38 50.4	
	54nm,0.6s						
KST	Kastek	2.51	334	eP	Pb	23 38 16.7	+0.3
	9.5nm,0.4s						
KST				eS	Sg	23 38 52.7	+0.8
	15nm,0.4s						
KST	Kastek	2.51	334	Pg	Pb	23 38 16.7	+0.3
	9.5nm,0.4s						
KST				Lg	Lg	23 38 52.7	
	15nm,0.4s						
TKM2	Tokmak 2	2.55	327	⇑iP	Pb	23 38 14.4	-2.6
	baz=26						
TKM2				⇑eS	Sb	23 38 46.6	-1.9
	baz=26						
TKM2	Tokmak 2	2.55	327	⇑Pg	Pg	23 38 18.0	-1.9
	1.8nm,0.4s						
TKM2				⇓Lg	Lg	23 38 54.7	
	5.9nm,0.6s						
UCH	Uchtor	2.65	304	⇓iP	Pb	23 38 16.2	-2.7
	baz=3.0						
UCH				⇓iS	Sb	23 38 49.7	-2.0
	baz=3.0						
KBK	Karagaybulak	2.66	315	⇑iP	Pb	23 38 16.1	-2.8
	baz=14						
KBK				⇑eS	Sb	23 38 49.4	-2.2
	baz=14						
SHLS	Shalkode	2.78	31	eP	Pg	23 38 22.8	-1.6
	2.7nm,0.2s						
SHLS				eS	Sg	23 39 03.6	+3.2
	30nm,0.6s						
SHLS	Shalkode	2.78	31	Pg	Pg	23 38 22.8	-1.6
	6.4nm,0.5s						
SHLS				Lg	Lg	23 39 03.6	
	25nm,0.6s						
AAK	Ala-Archa	2.90	310	⇓iP	Pn	23 38 19.6	+2.2
	baz=9.0						
AAK				⇓iS	Sb	23 38 55.2	-3.3
	baz=9.0						
FRU1	Bishkek	2.93	314	⇓iP	Pn	23 38 19.6	+1.8
	baz=13						
FRU1				⇓iS	Sn	23 38 55.8	+2.7
	baz=13						
PDGK	Podgornoye	2.94	30	Pg	Pb	23 38 21.9	-1.8
	1.7nm,0.5s						
PDGK				Lg	Lg	23 39 02.1	
	13nm,0.6s						
KTBS	Karatobe	2.97	349	eP	Pb	23 38 24.5	+0.3
	5.2nm,0.5s						
KTBS				eS	Sg	23 39 05.7	-0.8
	20nm,0.3s						
KTBS	Karatobe	2.97	349	Pg	Pb	23 38 24.5	+0.3
	5.2nm,0.5s						
KTBS				Lg	Lg	23 39 05.7	
	20nm,0.3s						
CHMS	Chumysh	3.00	318	⇓iP	Pn	23 38 20.8	+2.1
	baz=17						
CHMS				⇓iS	Sn	23 38 57.3	+2.5
	baz=17						
AML	Almayashu	3.14	296	⇑iP	Pn	23 38 23.3	+2.2
	baz=95						
AML				⇑iS	Sn	23 39 01.7	+2.8
	baz=95						
KRBS	Karabastau	3.19	336	eP	Pb	23 38 28.3	+0.3
	5.1nm,0.5s						
KRBS				eS	Sg	23 39 12.6	-1.1
	8.2nm,0.8s						
KRBS	Karabastau	3.19	336	Pg	Pb	23 38 28.3	+0.3
	5.1nm,0.5s						
KRBS				Lg	Lg	23 39 12.6	
	8.2nm,0.8s						
KUU	Kurty	3.21	345	eP	Pb	23 38 28.4	+0.2
	2.8nm,0.5s						
KUU				eS	Sg	23 39 12.9	-1.1
	8.7nm,0.5s						
KUU	Kurty	3.21	345	Pg	Pb	23 38 28.4	+0.2
	2.8nm,0.5s						
KUU				Lg	Lg	23 39 12.9	
	8.7nm,0.5s						
USP	Ospenovka	3.32	319	⇓iP	Pn	23 38 25.2	+2.0
	baz=18						
USP				⇓iS	Sn	23 39 04.8	+2.1
	baz=18						
EKS2	Erkin-Say	3.34	305	⇓iP	Pn	23 38 25.6	+2.1
	baz=4.0						
EKS2				⇓iS	Sn	23 39 05.8	+2.5
	baz=4.0						
MNBS	Baschi	3.35	11	eP	Pb	23 38 31.0	+0.3
	1.7nm,0.4s						
MNBS				eS	Sg	23 39 17.3	-1.3
	16nm,0.3s						
MNBS	Baschi	3.35	11	Pg	Pb	23 38 31.0	+0.3
	1.7nm,0.4s						
MNBS				Lg	Lg	23 39 17.3	
	16nm,0.3s						
SGDS	Sogindy	3.40	322	Pg	Pb	23 38 32.8	+1.4
	4.0nm,0.5s						
SGDS				Lg	Lg	23 39 20.1	
	6.8nm,0.3s						
ARXS	Arharly	3.42	4	eP	Pb	23 38 32.3	+0.4
	4.4nm,0.4s						
ARXS				eS	Sg	23 39 19.3	-1.7
	16nm,0.5s						
ARXS	Arharly	3.42	4	Pg	Pb	23 38 32.3	+0.4
	4.4nm,0.4s						
ARXS				Lg	Lg	23 39 19.3	
	16nm,0.5s						
ARSB	Arslanbob	3.44	280	⇓iP	Pn	23 38 27.4	+2.4
	baz=79						
ARSB				⇓iS	Sn	23 39 08.9	+3.0
	baz=79						
MRKS	Merke	3.73	303	eP	Pb	23 38 39.0	+1.8
	1.5nm,0.1s						
MRKS				eS	Sg	23 39 31.0	+0.1
	5.1nm,0.7s						
MRKS	Merke	3.73	303	Pg	Pb	23 38 39.0	+1.8
	1.7nm,0.3s						
MRKS				Lg	Lg	23 39 31.0	
	3.8nm,0.4s						
KAPS	Kapalarasan	4.69	16	eP	Pb	23 38 54.6	+1.2
	0.2nm,0.1s						
KAPS				eS	Sg	23 39 57.6	-4.1
	2.1nm,0.2s						
KAPS	Kapalarasan	4.69	16	Pg	Pb	23 38 54.6	+1.2
	0.8nm,0.8s						
KAPS				Lg	Lg	23 39 57.6	
	2.2nm,0.6s						
BTLS	Baital	4.93	330	eP	Pb	23 39 00.8	+3.2
	0.9nm,0.5s						
BTLS				eS	Sg	23 40 08.1	-1.4
	1.8nm,0.5s						
BTLS	Baital	4.93	330	Pg	Pb	23 39 00.8	+3.2
	1.0nm,0.5s						
BTLS				Lg	Lg	23 40 08.1	
	1.9nm,0.6s						
IUG	Iuzhnay	5.76	286	eP	Pg	23 39 17.0	-4.4
	0.5nm,0.2s						
IUG				eS	Sg	23 40 36.8	+0.8
	6.4nm,0.7s						
IUG	Iuzhnay	5.76	286	Pg	Pg	23 39 17.0	-4.4
	1.1nm,0.3s						
IUG				Lg	Lg	23 40 36.8	
	2.8nm,0.5s						

*GII **04** 23:58:28.4±0.2, 33.°19N×35.°70E, h10km, MD1.7/4, Mm1.9/5*
*GRAL **04** 23:58:28.6±0.3, 33.°12N×35.°74E, h1km±4km, MD2.8*
ISC 04 23:58:28.8±1.0**, 33.°18N**±0.°03×**35.°70E**±0.°04**, h11**km±5km**, n19, σ0.s46/31, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSDI	Kefar Szold	0.03	285	Pg	Pg	23 58 30.7	-0.1
KSDI				Sg	Sg	23 58 31.9	-0.3
GEM	Giv'at Ha'Em	0.04	314	Pg	Pg	23 58 30.8	-0.1
GEM				Sg	Sg	23 58 32.1	-0.3
NATI	Neve Ativ	0.09	23	Pg	Pg	23 58 31.0	-0.3
NATI				Sg	Sg	23 58 33.4	+0.3
SHBL	Chebaa	0.17	13	eP	Pg	23 58 32.7	0.0
SHBL				eS	Sg	23 58 35.7	+0.3
KSHT	Keshet	0.22	154	Pg	Pg	23 58 33.9	+0.4
MMA0B	Mount Meron ar	0.30	236	Pg	Pg	23 58 34.9	0.0
MMA0B				Sg	Sg	23 58 39.6	+0.7
RCY	Rachaya	0.33	20	eP	Pg	23 58 35.4	-0.2
RCY				eS	Sg	23 58 40.5	+0.4
HNTI	Hanita	0.45	257	Pg	Pg	23 58 37.6	0.0
HNTI				Sg	Sg	23 58 44.1	+0.5
SHMJ	Saham	0.46	173	Pg	Pg	23 58 37.9	+0.1
DQRL	Deir Qamar	0.53	349	eP	Pg	23 58 39.2	0.0
BLGI	Bet Lehem HaGe	0.62	224	Pg	Pg	23 58 40.9	+0.1
BLGI				Sg	Sg	23 58 49.6	+0.7
BHL	Bhannes	0.72	357	eP	Pg	23 58 42.7	-0.1
MMLI	Mount Malkishu	0.78	197	Pg	Pg	23 58 43.3	-0.5
MMLI				Sg	Sb	23 58 54.7	-0.3
OFRI	`Ofer	0.82	227	Pg	Pg	23 58 44.1	-0.5
OFRI				Sg	Sg	23 58 55.7	+0.4
HMDT	Nahal Hemdat	0.94	189	Pg	Pg	23 58 46.0	-0.9
HMDT				Sg	Sb	23 58 59.5	0.0
SLTI	Sal'it	1.09	211	Pg	Pg	23 58 48.7	-1.1
SLTI				Sg	Sg	23 59 04.2	+0.2
HWQ	Hawqa	1.11	11	eP	Pg	23 58 49.5	-0.7
DSI	Dead Sea	1.63	190	Pn	Pn	23 58 57.1	-0.3
YTIR	Yattir	1.88	195	Pn	Pn	23 59 01.6	+0.6

*IDC **05** 00:02:20.0±3.8, 36.°35N×71.°07E, h136km±32km, mb3.0/5, mb1 3.1/9, mb1mx2.9/51, mbtmp3.5/9, Error ellipse: s-maj=37.1km s-min=23.4km az=159.0*
*NNC **05** 00:02:26.7±4.0, 37.°05N×70.°91E, h220km±65km, mb2.4, mpv3.5, Error ellipse: s-maj=40.1km s-min=25.4km az=26.0*
ISC 05 00:02:24.7±1.4**, 36.°9N**±0.°1×**70.°71E**±0.°08**, h150km, n18, σ1.s16/23, mb3.1/4, 6C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.71	23	P	Pn	00 03 48.0	+0.2
	SNR=88						
UCH	Uchtor	6.08	28	P	Pn	00 03 52.7	0.0
	SNR=14						
KK31	Karatay Array	6.20	359	⇓P	Pn	00 03 55.4	+1.5
	2.4nm,0.5s,baz=186,slow=13,SNR=31						
KK31				⇓S	Sn	00 05 05.3	+1.5
	6.1nm,0.7s,baz=190,slow=24,SNR=14						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EKS2	Erkin-Say	6.22	21	P	Pn	00 03 55.2	+0.9
	SNR=9.4						
KZA	Kyzart	6.25	33	P	Pn	00 03 55.8	+0.8
	SNR=11						
AAK	Ala-Archa	6.43	26	P	Pn	00 03 57.2	+0.1
	1.3nm,0.3s,baz=175,slow=6.8,SNR=14						
AAK				S	Sn	00 05 09.6	0.0
	0.9nm,0.3s,baz=346,slow=22,SNR=16						
AAK	Ala-Archa	6.43	26	⇑P	Pn	00 03 57.1	-0.1
	1.5nm,0.3s						
AAK				⇑S	Sn	00 05 09.6	0.0
	7.0nm,0.6s						
USP	Ospenovka	6.99	23	P	Pn	00 04 04.9	+0.4
	SNR=9.3						
TKM2	Tokmak 2	7.09	30	⇑P	Pn	00 04 04.5	-1.5
	1.3nm,0.6s						
TKM2				⇑S	Sn	00 05 25.3	-0.2
	2.5nm,1.1s						
GEYT	Alibeck	10.07	280	P	Pn	00 04 47.1	+1.5
	0.3nm,0.3s,baz=96,slow=8.9,SNR=6.1						
GEYT				S	Sn	00 06 36.3	-0.8
	0.5nm,0.3s,baz=98,slow=10,SNR=2.3						
MKAR	Makanchi Array	13.11	37	P	Pn	00 05 24.2	-0.9
	0.1nm,0.3s,baz=210,slow=8.6,SNR=1.7						
AB31	Akbulak array	14.62	331	⇑P	Pn	00 05 44.2	0.0
	0.4nm,0.5s,baz=163,slow=12,SNR=7.9						
AB31				⇑S	Sn	00 08 23.2	-3.1
	0.2nm,0.4s,baz=157,slow=22,SNR=5.9						
KURBB	Kurchatov Arra	14.82	20	P	P	00 05 49.3	+0.7
	0.1nm,0.3s,baz=208,slow=11,SNR=4.3						
ZALV	Zalesovo Beam	19.65	25	P	P	00 06 41.5	0.0
	1.2nm,0.3s,baz=219,slow=12,SNR=8.1						
NOA	NORSAR Array B	43.92	323	P	P	00 10 17.4	+1.2
	0.2nm,0.5s,baz=97,slow=7.8,SNR=2.3						
TORD	Torodi Ar. Bea	65.50	268	P	P	00 12 50.2	-1.9
	0.3nm,0.6s,baz=52,slow=6.3,SNR=1.6						
YKA	Yellowknife Ar	80.86	2	P	P	00 14 21.6	+0.2
	0.2nm,0.5s,baz=350,slow=5.2,SNR=6.1						
ASAR	Alice Springs	84.67	125	P	P	00 14 35.9	-5.8
	0.2nm,0.7s,baz=309,slow=4.7,SNR=4.3						

IDC 05 00:06:42.3±8.2**, 7°.15S**×**153°.81E, h0^{km}, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.4**/35**, mbtmp3.4**/3**, Error ellipse: s-maj=252.7km s-min=43.2km az=112.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.77	234	P	P	00 11 46.7	+0.2
	0.8nm,0.8s,baz=57,slow=9.9,SNR=3.1						
ASAR	Alice Springs	25.20	227	P	P	00 12 09.5	-0.4
	0.7nm,0.9s,baz=54,slow=9.7,SNR=5.3						
MKAR	Makanchi Array	82.74	319	P	P	00 19 08.4	+0.2
	0.4nm,0.8s,baz=124,slow=4.4,SNR=3.6						

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*IDC **05** 00:11:24.3±1.2, 53°.11N×166°.79W, h0^{km}, mb3.6/10, mb1 3.8/11, mb1mx3.6/47, mbtmp3.5/11, ML2.9/1, Error ellipse: s-maj=36.3km s-min=18.1km az=177.0*

*AEIC **05** 00:11:26.3±1.2, 52°.93N±0°.08×166°.84W±0°.07, h26^{km}±8^{km}, ML3.3/20, mb3.6/20(NEIC), Error ellipse: s-maj=11.0km s-min=6.3km az=182.0*

*NEIC **05** 00:11:26.6±1.1, 52°.97N±0°.09×166°.82W±0°.09, h26^{km}±13^{km}, Error ellipse: s-maj=14.9km s-min=4.4km az=154.0*

ISC 05 00:11:29.0±0.8**, 53°.03N**±0°.08×**166°.82W**±0°.06**, h37^{km}, n75, σ1^{s}16**/70**, mb3.6**/11**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	Magazine Ridge	0.76	301		Pn	00 11 41.7	-1.4
OKFG					Sn	00 11 52.9	-0.5
UNV	Unalaska Valle	0.84	13		Pn	00 11 42.7	-1.5
UNV					Sn	00 11 55.7	+0.3
MNAT	Makushin Natee	0.86	5		Pn	00 11 43.6	-0.9
MNAT					Sn	00 11 56.1	+0.2
MSW	Makushin Switc	0.89	1		Pn	00 11 44.1	-0.8
MSW					Sn	00 11 57.5	+0.9
OKSP	Okmok Steeple	0.92	285		Pn	00 11 43.1	-2.2
AKMO	Akutan Morgan	1.17	24		Pn	00 11 47.9	-0.8
AKRB	Akutan Reef Bi	1.19	22		Pn	00 11 48.6	-0.4
NIKH	Nikolski High	1.23	268		Pn	00 11 46.9	-2.7
AKLV	Akutan Long Va	1.25	24		Pn	00 11 48.8	-1.0
AKUT	Akutan	1.27	29		Pn	00 11 49.2	-0.9
WESP	Westdahl Peak	1.92	39		Pn	00 11 58.9	-0.3
FALS	False Pass	2.72	46		Pn	00 12 08.6	-1.4
SDPT	Sand Point	4.39	55		Pn	00 12 33.8	+0.9
ATKA	Atka Island	4.57	263	Pn	Pn	00 12 34.6	-0.9
SPIA	Saint Paul Isl	4.60	336	Pn	Pn	00 12 35.4	-0.4
CNBA	Chernabura Isl	4.63	64		Pn	00 12 36.0	-0.2
CHGN	Chignik	5.87	53	Pn	Pn	00 12 52.6	-0.7
ADK	Adak	6.14	263		Pn	00 12 56.3	-0.7
ADK	Adak	6.14	263		Pn	00 12 56.4	-0.6
KDAK	Kodiak Island	9.38	54	Pn	Pn	00 13 39.6	-1.9
	0.4nm,0.3s,baz=210,slow=8.9,SNR=6.4						
KDAK	Kodiak Island	9.38	54	Pn	Pn	00 13 40.5	-0.9
SVW2	Sparrevohn	10.12	33	Pn	Pn	00 13 47.9	-3.6
CNPM	China Poot	10.81	47	Pn	Pn	00 14 01.0	-0.1
GAMB	Gambell	11.07	349	Pn	Pn	00 14 04.1	-0.4
BRLK	Bradley Lake	11.09	46	Pn	Pn	00 14 04.2	-0.5
SEW	Seward	11.89	47	Pn	Pn	00 14 13.7	-1.9
RC01	Rabbit Creek A	12.28	42	Pn	Pn	00 14 19.6	-1.4
PPLA	Purkeypile	12.54	32	Pn	Pn	00 14 24.2	-0.4
GHO	Glory Hole Cre	12.98	41	Pn	Pn	00 14 29.5	-1.2
HIN	Hinchinbrook I	13.33	48	Pn	Pn	00 14 33.6	-1.8
TRF	Thorofare Moun	13.54	33	Pn	Pn	00 14 36.4	-2.0
BPAW	Bear Paw Mtn.	13.78	30	Pn	Pn	00 14 41.4	-0.1
RAGM	Ragged Mountai	14.16	50	Pn	Pn	00 14 46.4	-0.3
BWN	Browne	14.30	32	Pn	Pn	00 14 49.8	+1.2
DHY	Denali Highway	14.33	38	Pn	Pn	00 14 48.2	-0.9
GLB	Gilahina Butte	14.96	47	Pn	Pn	00 14 57.6	+0.1
GLB				IAmb	IAmb	00 15 14.4	
	comp=Z,2.5nm,0.8s						
VRDI	Verde Repeater	15.04	48	P	Pn	00 14 57.1	-1.5
VRDI				IAmb	IAmb	00 15 11.4	
	comp=Z,3.2nm,0.9s						
TGL	Tana Glacier	15.15	50	Pn	Pn	00 14 59.2	-0.8
CCB	Clear Creek Bu	15.16	32	Pn	Pn	00 14 59.4	-0.6
MCARA	McCarthy VSAT	15.29	47	Pn	Pn	00 15 01.4	-0.3
BALM	Baldy	15.46	49	Pn	Pn	00 15 03.0	-1.2
BALM				IAmb	IAmb	00 15 16.5	
	comp=Z,2.4nm,0.5s						
IL31		15.54	33	Pn	Pn	00 15 04.7	-0.2
ILAR	Eielson Array	15.54	33	Pn	Pn	00 15 02.6	-2.4
	comp=Z,0.1nm,0.3s,baz=230,slow=14,SNR=2.3						
RIDG	Independent Ri	15.64	38	Pn	Pn	00 15 05.8	-0.6
RIDG				IAmb	IAmb	00 15 20.1	
	comp=Z,2.8nm,1.0s						
BARN	Barnard Glacie	15.79	49	Pn	Pn	00 15 07.5	-0.9
BARN				IAmb	IAmb	00 15 20.9	
	comp=Z,3.2nm,0.7s						
DOT	Dot Lake	15.89	39	Pn	Pn	00 15 07.8	-1.7
CTGM	Chitina Glacie	15.91	50	Pn	Pn	00 15 09.0	-0.8
CTGM				IAmb	IAmb	00 15 18.7	
	comp=Z,3.9nm,0.7s						
SCRK	Sand Creek	16.09	38	Pn	Pn	00 15 10.9	-1.3
HYT	Haines Junctio	17.67	52	P	P	00 15 31.9	-0.7
HYT				IAmb	IAmb	00 15 37.3	
	comp=Z,5.6nm,1.0s						
DAWY	Dawson	17.91	41		P	00 15 34.3	-0.8
BESE	Bessie Mountai	18.68	60	P	Pn	00 15 43.3	-0.9
WHY	Whitehorse	18.90	54	P	P	00 15 45.4	-0.7
WHY				IAmb	IAmb	00 15 53.4	
	comp=Z,3.9nm,0.9s						
JIS	Juneau Island	18.91	61		Pn	00 15 45.7	-1.2
EPYK	Eagle Plains	19.95	36	P	P	00 15 57.1	-0.3
PEA0B	Petropavlovsk-	21.19	285	P	P	00 16 10.7	-0.3
PEA0B				IAmb	IAmb	00 16 29.3	
	comp=Z,2.3nm,0.8s						
PETK	Petropavlovsk-	21.19	285	P	P	00 16 11.2	+0.2
	comp=Z,1.5nm,0.5s,baz=89,slow=12,SNR=18						
INK	Inuvik	21.94	33	P	P	00 16 17.2	-1.6
	comp=Z,0.6nm,0.4s,baz=312,slow=28,SNR=2.4						
INK	Inuvik	21.94	33	P	P	00 16 18.2	-0.6
INK				IAmb	IAmb	00 16 27.7	
	comp=Z,2.4nm,1.1s						
YKA	Yellowknife Ar	28.63	50	P	P	00 17 21.4	0.0
	comp=Z,0.2nm,0.5s,baz=271,slow=7.6,SNR=9.7						
NVAR	Mina Array Bea	36.14	94	P	P	00 18 28.1	+0.5
	comp=Z,0.9nm,0.7s,baz=301,slow=10,SNR=4.2						
PDAR	Pinedale Array	38.76	82	P	P	00 18 50.3	+0.5
	comp=Z,0.2nm,0.5s,baz=338,slow=6.8,SNR=2.5						
H11N2	WAKE ISLAND Hy	38.96	222	T	T	01 00 16.9	
	baz=25,slow=76,SNR=553						
H11N3	WAKE ISLAND Hy	38.97	222	T	T	01 00 20.1	
	baz=25,slow=76,SNR=54						
H11N1	WAKE ISLAND Hy	38.98	222	T	T	01 00 24.2	
	baz=25,slow=76,SNR=391						
H11S1	WAKE ISLAND Hy	40.14	221	T	T	01 01 46.4	
	baz=24,slow=76,SNR=214						
H11S2	WAKE ISLAND Hy	40.16	221	T	T	01 01 47.6	
	baz=24,slow=76,SNR=210						
H11S3	WAKE ISLAND Hy	40.16	221	T	T	01 01 46.7	
	baz=24,slow=76,SNR=155						
TXAR	Lajitas Array	51.20	91	P	P	00 20 29.1	+0.5
	comp=Z,0.5nm,0.7s,baz=309,slow=5.7,SNR=3.7						
SONM	Songino Array	52.28	302	P	P	00 20 37.0	+0.5
	comp=Z,0.2nm,0.5s,baz=72,slow=4.7,SNR=2.8						
CMAR	Chiang Mai Arr	77.97	285	P	P	00 23 24.2	+0.9
	comp=Z,0.6nm,0.3s,baz=27,slow=5.8,SNR=6.6						
BRTR	Keskin Array B	85.93	344	P	P	00 24 06.5	+1.4
	comp=Z,0.5nm,0.6s,baz=34,slow=2.6,SNR=4.5						
ESDC	Sonseca Array	86.48	13	P	P	00 24 08.2	+0.5
	comp=Z,0.2nm,0.7s,baz=347,slow=4.2,SNR=5.4						
H03N2	Juan Fernandez	114.74	113	T	T	02 35 24.8	
	baz=322,slow=78,SNR=14						
H03N1	Juan Fernandez	114.75	113	T	T	02 35 25.2	
	baz=322,slow=78,SNR=14						
H03N3	Juan Fernandez	114.75	113	T	T	02 35 18.7	
	baz=322,slow=78,SNR=17						

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*UPA **05** 00:12:04.3±0.8, 8°.44N×82°.85W, h30^{km}±4^{km}, MW4.4*

*UCR **05** 00:12:04.4±2.0, 8°.39N×82°.85W, h21^{km}±3^{km}, MD4.4, Fault plane solution: NP1:φs327.90000°, δ35.31000°, λ81.33000°.*

ISC 05 00:12:04.5±0.9**, 8°.41N**±0°.04×**82°.85W**±0°.02**, h31^{km}**±5^{km}**, n51, σ1^{s}14**/71**, 13C-11D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LESP3	La Esperanza,	0.06	91	⇑iP	Pb	00 12 09.3	-0.4
SBAR3	San Bartolo, C	0.09	200	⇑iP	Pn	00 12 09.8	-0.1
DVD	David	0.40	86	⇑iP	Pb	00 12 12.8	-0.6
DVD				eS	Sb	00 12 19.6	+0.2
BRU2	Volcan	0.41	22	⇓iP	Pb	00 12 13.5	-0.3
BRU2				eS	Sb	00 12 20.1	-0.1
BRU2	Volcan	0.41	22	⇓iP	Pb	00 12 13.5	-0.3
BRU2				eS	Sn	00 12 21.2	-0.1
EDSV	San Vito	0.43	344	⇑iP	Pb	00 12 13.8	-0.2
EDSV				eS	Sn	00 12 21.9	+0.4
LOCO3	Loma Colorada,	0.43	90	⇓iP	Pb	00 12 13.2	-0.6
BCO2	Palmira	0.44	46	⇓iP	Pb	00 12 13.9	-0.4
BCO2				eS	Sb	00 12 20.8	-0.1
LOMA3	Las Lomas, Chi	0.46	87	⇓iP	Pb	00 12 13.5	-0.8
PTJ1	Puerto Jimnez	0.46	286	⇓iP	Pb	00 12 13.5	-0.9
PTJ1				eS	Sb	00 12 21.2	0.0
PTJ1	Puerto Jimnez	0.46	286	⇓iP	Pb	00 12 13.5	-0.9
PTJ1				eS	Sb	00 12 21.6	+0.5
PIRO	Carate, Puerto	0.48	270	eP	Pb	00 12 13.4	-1.3
PIRO				eS	Sb	00 12 22.0	+0.4
PIRO	Carate, Puerto	0.48	270	eP	Pb	00 12 13.4	-1.3
CHIR3	Chiriqui UPA,	0.52	91	⇓iP	Pb	00 12 14.3	-0.9
CHIR3				eS	Sb	00 12 22.9	+0.3
EDPN	Palmar Norte	0.81	313	⇑iP	Pb	00 12 18.7	-1.5
EDPN				eS	Sb	00 12 30.1	-0.8
EDBA	Buenos Aires	0.86	331	⇑iP	Pb	00 12 19.9	-1.0
EDBA				eS	Sn	00 12 32.8	+0.7
CHGR2	Aguacate	0.88	53	⇓iP	Pb	00 12 19.6	-1.6
CHGR2				eS	Sb	00 12 31.7	-1.0
EDLM	Las Mercedes	1.13	320	⇑eP	Pn	00 12 23.5	-0.8
EDLM				eS	Sb	00 12 39.9	-0.1
RGM0	Gandoca	1.20	12	eP	Pb	00 12 26.6	0.0
EDDO	Dominical	1.31	310	eP	Pn	00 12 26.6	0.0
EDDO				eS	Sb	00 12 45.2	+0.4
GMAL	Guarumal, Vera	1.73	112	eP	Pn	00 12 31.1	-1.3
GMAL				eS	Sn	00 12 53.4	0.0
GMAL	Guarumal, Vera	1.73	112	eP	Pn	00 12 31.0	-1.4
LCR2	La Lucha 2	1.75	319	⇑eP	Pn	00 12 32.3	-0.6
CVTR	Volcan Turrial	1.84	331	⇑iP	Pn	00 12 34.9	+0.5
SJS	Escuela Geolog	1.93	322	eP	Pn	00 12 35.7	+0.3
HDC	Heredia	2.02	322	⇑iP	Pn	00 12 36.9	+0.4
HDC				eS	Sb	00 13 04.9	-0.4
HDC	Heredia	2.02	322	⇑eP	Pn	00 12 36.9	+0.4
CACAO	El Cacao, Vera	2.24	118	eP	Pn	00 12 39.5	0.0
CACAO				eS	Sn	00 13 05.9	-0.1
SRA1	San Ramn	2.32	316	eP	Pn	00 12 43.0	+2.3
AZU	Azuero	2.62	103	eP	Pn	00 12 45.7	+1.0
AZU				eS	Sn	00 13 18.0	+2.4
AZU	Azuero	2.62	103	⇑eP	Pn	00 12 45.8	+1.0
FORC	Fortuna	2.72	319	iP	Pn	00 12 47.8	+1.6
CEDE	Laguna Cedeo	2.76	319	eP	Pn	00 12 47.7	+1.0
JTS	Las Juntas de	2.79	312	eP	Pn	00 12 47.6	+0.5
BCIP	Isla Barro Col	3.07	76	eP	Pn	00 12 51.4	+0.5
BCIP				eS	Sb	00 13 36.0	+0.5
BCIP	Isla Barro Col	3.07	76	⇓eP	Pn	00 12 50.8	-0.2
ACAL	Aguas Claras	3.09	316	iP	Pn	00 12 52.7	+1.5
PTEN	Parque Tenorio	3.11	318	iP	Pn	00 12 53.4	+1.8
PLVR	Palo Verde	3.13	308	⇓eP	Pn	00 12 53.3	+1.4
CUI	Cuipilapa	3.19	315	iP	Pn	00 12 54.1	+1.4
GUAI	GUAI	3.21	305	iP	Pn	00 12 53.9	+1.0
HORNC	Hornillas	3.24	315	iP	Pn	00 12 54.8	+1.4
LIM1	Limonal	3.28	314	iP	Pn	00 12 56.2	+2.3
NY14	Universidad de	3.46	310	iP	Pn	00 12 58.5	+2.3
BUAI	Buenos Aires	3.46	315	iP	Pn	00 12 59.0	+2.6
GB1A	Borinquen Arri	3.47	314	eP	Pn	00 12 59.3	+2.8
GBS3	Finca Las Img	3.49	313	iP	Pn	00 12 58.8	+2.1
ESPN	Las Esperanzas	4.03	339	⇑iP	Pn	00 13 04.7	+0.6
ACON	Acoyapa	4.21	327	eP	Pn	00 13 07.8	+1.2
PRVC	Isla de Provid	5.15	16	eP	Pn	00 13 18.5	-1.0
PRVC				eS	Sn	00 14 16.6	-1.3
SJCC	San Jacinto, C	7.72	78	eP	Pn	00 13 56.5	+1.6

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*IDC **05** 00:13:00.5±0.5, 23°.65S×175°.55W, h0^{km}, mb4.5/19, mb1 4.7/21, mb1mx4.6/31, mbtmp4.5/21, ML4.7/2, MS4.1/26, Ms1 4.1/26, ms1mx4.0/36, Error ellipse: s-maj=19.0km s-min=14.8km az=113.0*

*GCMT **05** 00:13:04.0±0.4, 23°.79S±0°.04×174°.93W±0°.03, h20^{km}±1^{km}, MW4.9/90, Moment Tensor Solution. s26,c28; s90,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.91±.19; $M_{\theta\theta}$-0.83±.13; $M_{\phi\phi}$-2.08±.12; $M_{r\theta}$0.71±.29; $M_{\theta\phi}$-0.67±.07; $M_{\phi r}$0.60±.21; Best double couple: $M_0$2.79000×10^{16} NP1:φs198.00000°, δ37.00000°, λ80.00000°. NP2: φs31.00000°, δ54.00000°, λ97.00000°. Principal axes: T 3.0830, Plg79.0000°, Azm330.0000°; N -0.5840, Plg6.0000°, Azm206.0000°; P -2.4980, Plg9.0000°, Azm115.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

*BGR **05** 00:13:08.2±0.0, 23°.10S×172°.69W, h44^{km}*

*NEIC **05** 00:13:49.6±2.1, 20°.7S±0°.1×177°.7W±0°.1, h400^{km}±9^{km}, mb4.3/68, Error ellipse: s-maj=20.4km s-min=16.1km az=144.0*

ISC 05 00:13:03.8±0.6**, 23°.70S**±0°.06×**175°.49W**±0°.09**, h20^{km}**±6^{km}**, h21^{km}:pP-P, n228, σ2^{s}04**/217**, mb4.7**/51**, MS4.2**/29**, 30C-4D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	5.94	201	Pn	Pn	00 14 30.4	-0.2
	67nm,0.3s,baz=71,slow=22,SNR=2.3						
RAO				Sn	Sn	00 15 36.9	-1.2
	55nm,0.3s,baz=82,slow=23,SNR=3.4						
MSVF	Nonsavu	8.47	313		Pn	00 15 08.0	+2.5
RAR	Rarotonga	14.74	83	Pn	Pn	00 16 21.9	-9.2
	7.7nm,0.3s,baz=265,slow=7.7,SNR=20						
RAR				Sn	Sn	00 18 48.7	-25
	1.5nm,0.3s,baz=28,slow=23,SNR=1.0						
URZ	Urewera	15.83	202	Pn	Pn	00 16 45.6	+0.1
	0.7nm,0.3s,baz=149,slow=12,SNR=1.5						
URZ				Sn	Sn	00 19 23.9	-16
	0.7nm,0.3s,baz=339,slow=23,SNR=2.0						
DZM	Mont Dzumac	16.73	272	eP	P	00 17 02.5	+3.2
	109nm,1.4s						
DZM				eLR	LR	00 20 48.9	
	comp=Z,924nm,25.4s						
DZM	Mont Dzumac	16.73	272	Pn	P	00 17 01.2	+1.9
	0.9nm,0.3s,baz=84,slow=18,SNR=19						
DZM				LR	LR	00 20 59.5	
	comp=Z,298nm,18.6s,baz=74,slow=29						
DZM	Mont Dzumac	16.73	272	P	Pn	00 16 56.6	-0.6
KNTN	Kanton	21.12	10	P	P	00 17 42.0	-5.3
RPZ	Rata Peaks	22.83	206	P	P	00 18 05.2	-0.3
	12nm,0.7s,baz=63,slow=6.8,SNR=1.9						
TBI	Tubuai	23.86	94	eLR	LR	00 23 47.8	
	comp=Z,753nm,22.2s						
PAE	Paea	24.95	81	eT	T	00 43 38.7	
	3.6nm,0.4s						
PPT2	Papeete2	24.98	81	eLR	LR	00 24 12.8	
	comp=Z,720nm,21.5s						
PPT2	Papeete2	24.98	81	eT	T	00 43 43.7	
	4.0nm,0.4s						
PPT	Papeete	24.98	81	LR	LR	00 26 05.6	
	comp=Z,651nm,19.9s,baz=256,slow=31						
CTA	Charters Tower	35.61	268	P	P	00 19 59.0	-1.3
	5.3nm,0.4s,baz=84,slow=9.8,SNR=13						
STKA	Stephens Creek	38.63	248	P	P	00 20 24.9	-1.0
	1.1nm,0.4s,baz=95,slow=14,SNR=5.6						
STKA				LR	LR	00 34 48.1	
	comp=Z,478nm,19.8s,baz=58,slow=34						
BBOO	Buckleboo	43.32	247	P	P	00 21 04.8	+0.2
BBOO				IAmb	IAmb	00 21 18.5	
	comp=Z,11nm,0.9s						
AS31	Alice Springs	46.14	259	P	P	00 21 26.4	-0.7
ASAR	Alice Springs	46.14	259	P	P	00 21 26.1	-1.1
	comp=Z,4.0nm,0.7s,baz=94,slow=7.3,SNR=40						
ASAR				PcP	PcP	00 23 03.9	+0.8
	comp=Z,1.2nm,0.7s,baz=106,slow=3.6,SNR=1.4						
ASAR				LR	LR	00 41 00.7	
	comp=Z,541nm,18.0s,baz=123,slow=36						
WR0	Warramunga Arr	46.35	265	P	P	00 21 24.9	-3.9
WB2	Warramunga Arr	46.53	264	P	P	00 21 27.3	-3.0
WB2				IAmb	IAmb	00 21 44.2	
	comp=Z,7.7nm,0.8s						
WB0	Warramunga Arr	46.54	265	P	P	00 21 28.9	-1.4
WB0				IAmb	IAmb	00 21 44.1	
	comp=Z,14nm,0.9s						
WRA	Warramunga Arr	46.54	264	P	P	00 21 29.1	-1.2
	comp=Z,6.1nm,0.5s,baz=105,slow=8.2,SNR=38						
WRA				LR	LR	00 41 09.8	
	comp=Z,478nm,18.4s,baz=110,slow=36						
VNDA	Vanda	54.96	186	P	P	00 22 33.1	+0.2
	comp=Z,2.9nm,1.1s,baz=20,slow=9.3,SNR=5.2						
FITZ	Fitzroy Crossi	54.96	264	LR	LR	00 46 18.7	
	comp=Z,265nm,18.6s,baz=129,slow=36						
SIJI	Sorong	56.33	286	LR	LR	00 44 46.6	
	comp=Z,169nm,22.0s,baz=48,slow=34						
SOEI	Soe	58.95	273	P	P	00 23 00.3	-2.0
	comp=Z,71nm,1.2s						
NWAO	Narrogin (SRO)	59.07	245	LR	LR	00 48 16.2	
	comp=Z,211nm,18.2s,baz=120,slow=36						
BATI	Baumata	59.34	272	LR	LR	00 49 43.9	
	comp=Z,402nm,18.2s,baz=129,slow=37						
EDFI	Ende, Flores	61.69	273	P	P	00 23 20.1	-0.9
	comp=Z,11nm,1.0s						
KAPI	Kappang	64.91	276	LR	LR	00 52 23.0	
	comp=Z,74nm,20.1s,baz=4.0,slow=36						
JCJ	Chichijima	64.97	319	LR	LR	00 48 19.0	
	comp=Z,144nm,20.9s,baz=120,slow=33						
DAV	Davao City (W)	65.13	290	LR	LR	00 50 50.9	
	comp=Z,42nm,19.9s,baz=129,slow=35						
KCP	Kidapawan	65.52	290	⇓eP	P	00 23 43.3	-2.9
QSPA	South Pole Qui	66.39	180	P	P	00 23 51.8	+0.7
	comp=Z,6.7nm,1.0s,baz=41,slow=3.7,SNR=9.5						
PAGZ	Pagadian	67.40	290	eP	P	00 24 01.1	+2.9
MJAR	Matsushiro Arr	74.16	323	P	P	00 24 38.5	-0.4
	comp=Z,3.7nm,0.6s,baz=140,slow=6.2,SNR=16						
MJAR				LR	LR	00 57 27.6	
	comp=Z,45nm,18.1s,baz=115,slow=36						
LEM	Lembang	75.31	269	LR	LR	00 59 06.8	
	comp=Z,113nm,18.5s,baz=120,slow=37						
JNU	Nakatsue	76.19	316	LR	LR	00 52 44.5	
	comp=Z,87nm,21.9s,baz=86,slow=31						
MAW	Mawson	79.34	199	P	P	00 25 08.6	+0.9
	comp=Z,4.7nm,1.0s,baz=141,slow=13,SNR=3.7						
MAW				LR	LR	01 00 05.2	
	comp=Z,306nm,18.7s,baz=72,slow=36						
MAW	Mawson	79.34	199	P	P	00 25 22.1	+14
PETK	Petropavlovsk-	79.96	344	P	P	00 25 10.4	-0.7
	comp=Z,5.3nm,0.7s,baz=161,slow=6.8,SNR=14						
PETK				LR	LR	00 54 54.5	
	comp=Z,136nm,21.1s,baz=225,slow=32						
KSRS	Korea Array	80.81	318	P	P	00 25 16.5	+0.5
	comp=Z,2.3nm,0.7s,baz=127,slow=5.2,SNR=6.7						
KSRS				LR	LR	00 55 19.3	
	comp=Z,111nm,22.0s,baz=137,slow=31						
WAKR	Walker	81.15	41	P	P	00 25 18.9	+0.8
WAKR				IAmb	IAmb	00 25 32.3	
	comp=Z,7.5nm,1.0s						
HSIG		81.24	53	P	P	00 25 19.2	+0.6
PNTR	Pine Nut	81.43	41	P	P	00 25 17.8	-1.8
PNTR				IAmb	IAmb	00 25 34.0	
	comp=Z,6.6nm,0.8s						
RYN	Ryan	81.78	42	P	P	00 25 21.5	+0.1
RYN				IAmb	IAmb	00 25 23.7	
	comp=Z,5.9nm,1.1s						
NVAR	Mina Array Bea	81.79	42	P	P	00 25 22.0	+0.5
	comp=Z,1.9nm,0.8s,baz=221,slow=8.7,SNR=12						
NV11	Mina Array Sit	81.88	42	P	P	00 25 20.6	-1.3
NV11				IAmb	IAmb	00 25 35.8	
	comp=Z,5.9nm,1.0s						
PAHR	Pah Rah Range	81.95	40	P	P	00 25 20.0	-2.2
KVN	Kaiserville	82.31	41	P	P	00 25 23.7	-0.5
SHPR	Sheep Range	82.59	45	P	P	00 25 26.4	+0.6
W13A	Hualapai Mount	82.61	47	P	P	00 25 24.0	-1.9
MOD	Modoc Plateau	82.83	38	P	P	00 25 26.1	-0.8
MOD				IAmb	IAmb	00 25 43.8	
	comp=Z,7.7nm,1.1s						
USRK	Ussuriysk Ar.	82.91	325	P	P	00 25 28.0	+1.1
	comp=Z,13nm,0.8s,baz=125,slow=3.5,SNR=15						
USRK				LR	LR	00 56 41.9	
	comp=Z,121nm,21.3s,baz=138,slow=32						
TUC	Tucson	83.16	50	P	P	00 25 29.7	+1.1
R11A	Troy Canyon, C	83.43	43	P	P	00 25 29.7	-0.3
X16A	Lo Mia Camp, P	83.87	48	IAmb	IAmb	00 25 35.1	
	comp=Z,5.0nm,1.1s						
LCMT	Little Creek M	84.14	45	P	P	00 25 34.0	+0.4
CCUT	Cedar City	84.37	45	P	P	00 25 36.1	+1.2
KNB	Kanab	84.42	46	P	P	00 25 36.5	+1.4
U15A	North Rim	84.43	46	P	P	00 25 36.5	+1.1
U15A				IAmb	IAmb	00 25 50.0	
	comp=Z,9.3nm,0.9s						
WUAZ	Wupatki	84.53	48	P	P	00 25 35.6	-0.1
WUAZ				IAmb	IAmb	00 25 36.0	
	comp=Z,7.4nm,1.0s						
SZCU	Shurtz Canyon	84.58	45	P	P	00 25 37.3	+1.4
PSUT	Pine Spring	84.63	44	P	P	00 25 36.5	+0.3
I07A	Izee	84.69	37	P	P	00 25 35.2	-1.1
I07A				IAmb	IAmb	00 25 50.7	
	comp=Z,3.9nm,0.9s						
SNAA	Sanae	84.75	178	P	P	00 25 37.1	+0.9
VNA3	Neumayer Olymp	84.80	175	P	P	00 25 37.1	+0.8
J08A	Circle Bar Ran	84.80	38	P	P	00 25 36.2	-0.6
J08A				IAmb	IAmb	00 25 51.2	
	comp=Z,6.0nm,1.0s						
X18A	Snowflake	84.96	49	P	P	00 25 38.8	+0.9
X18A				IAmb	IAmb	00 25 55.5	
	comp=Z,5.3nm,1.1s						
ELK	Elko	85.08	41	P	P	00 25 38.6	+0.1
ELK				IAmb	IAmb	00 25 40.2	
	comp=Z,4.7nm,1.1s						
VNA2	Neumayer--Watz	85.26	176	P	P	00 25 39.9	+1.2
	baz=183,slow=4.2						
PLCA	Paso Flores	85.40	133	P	P	00 25 40.4	+0.3
	comp=Z,4.8nm,1.1s,baz=225,slow=8.6,SNR=3.8						
PLCA				LR	LR	00 54 51.7	
	comp=Z,90nm,21.4s,baz=223,slow=29						
MTPU	Mount Pierson	85.42	45	P	P	00 25 41.2	+0.8
W18A	Petrified Fore	85.43	49	P	P	00 25 41.9	+1.6
VNA1	Neumayer--Stat	85.48	176	P	P	00 25 41.0	+1.3
MSU	Marysvale	85.69	45	P	P	00 25 42.1	+0.6
G08A	Pilot Rock	85.77	36	P	P	00 25 39.9	-1.7
G08A				IAmb	IAmb	00 25 44.2	
	comp=Z,9.7nm,1.2s						
WHN	Wuhan	86.20	306	P	P	00 25 45.7	+1.8
CN2	Changchun	86.24	322	eP	P	00 25 43.3	-0.5
MNTX	Cornudas Mount	86.74	53	P	P	00 25 46.1	-0.5
MNTX				IAmb	IAmb	00 26 00.7	
	comp=Z,7.5nm,1.1s						
TMUT	Trail Mountain	86.76	44	P	P	00 25 47.8	+1.0
TX32	Lajitas Array	86.85	56	IAmb	IAmb	00 26 02.5	
	comp=Z,3.5nm,1.1s						
TXAR	Lajitas Array	86.85	56	P	P	00 25 47.1	-0.2
	comp=Z,4.2nm,1.1s,baz=216,slow=5.6,SNR=19						
TXAR				LR	LR	00 58 37.0	
	comp=Z,131nm,19.3s,baz=0.0,slow=32						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**87.08**	**274**	LR	LR	01 05 29.9	
	comp=Z,87nm,20.2s,baz=267,slow=36						
SRU	**San Rafael Swe**	**87.09**	**45**	P	**P**	**00 25 48.5**	**+0.1**
TIA	**Tai'an**	**87.14**	**312**	P	P	00 26 02.3	+14
TIA				pmax	pmax		
	comp=Z,25nm,1.1s						
P17A	**Butcher Ranch,**	**87.16**	**44**	P	**P**	**00 25 48.6**	**0.0**
TCUT	**Toone Canyon**	**87.66**	**43**	P	**P**	**00 25 49.7**	**-1.4**
PV18	**Skein Mesa, Pa**	**87.68**	**46**	P	**P**	**00 25 51.3**	**+0.1**
PV18				IAmb	IAmb	00 26 08.4	
	comp=Z,5.2nm,1.1s						
PV20	**West Nyswonger**	**87.69**	**46**	P	**P**	**00 25 50.9**	**-0.3**
PV20				IAmb	IAmb	00 25 54.1	
	comp=Z,6.3nm,1.1s						
GSI	**Gunungsitoli**	**87.71**	**272**	P	**P**	**00 25 48.7**	**-3.0**
	comp=Z,297nm,1.1s						
VRDI	**Verde Repeater**	**88.50**	**15**	P	P	00 25 47.3	-7.2
BARN	**Barnard Glacie**	**88.79**	**16**	P	P	00 25 47.9	-8.0
BARN				IAmb	IAmb	00 25 58.9	
	comp=Z,5.8nm,1.0s						
KTH	**Kantishna Hill**	**89.09**	**11**	P	P	00 25 49.5	-7.6
TRF	**Thorofare Moun**	**89.10**	**11**	P	P	00 25 48.0	-9.3
TRF				IAmb	IAmb	00 25 57.9	
	comp=Z,6.0nm,0.9s						
TPAW	**Teton Pass**	**89.27**	**41**	P	**P**	**00 25 58.0**	**-0.7**
FXWY	**Fox Creek**	**89.31**	**41**	P	**P**	**00 25 58.1**	**-0.7**
SNOW	**Snow King Moun**	**89.37**	**41**	P	**P**	**00 25 59.0**	**-0.2**
SNOW				IAmb	IAmb	00 26 15.3	
	comp=Z,2.1nm,0.7s						
PDAR	**Pinedale Array**	**89.72**	**42**	P	**P**	**00 26 00.7**	**0.0**
	comp=Z,0.2nm,0.4s,baz=236,slow=4.5,SNR=5.3						
FLWY	**Flagg Ranch**	**89.75**	**41**	P	**P**	**00 25 59.8**	**-1.0**
FLWY				IAmb	IAmb	00 26 01.6	
	comp=Z,4.1nm,1.1s						
YHL	**Hebgen Lake**	**89.90**	**40**	P	**P**	**00 26 00.9**	**-0.7**
YHH	**Holmes Hill**	**90.06**	**40**	P	**P**	**00 26 01.3**	**-1.1**
JCT	**Junction City**	**90.35**	**57**	P	**P**	**00 26 04.5**	**+0.7**
JCT				IAmb	IAmb	00 26 18.3	
	comp=Z,2.7nm,0.8s						
NEA	**Nenana**	**90.35**	**11**	P	P	00 25 54.1	-8.8
RWWY	**Rawlins**	**90.61**	**44**	P	**P**	**00 26 05.3**	**+0.3**
YNE	**Yellowstone No**	**90.68**	**40**	P	**P**	**00 26 04.2**	**-1.0**
ILAR	**Eielson Array**	**90.93**	**12**	P	**P**	**00 26 05.1**	**-0.5**
	comp=Z,4.2nm,1.3s,baz=220,slow=5.4,SNR=12						
RLMT	**Red Lodge**	**91.18**	**40**	P	**P**	**00 26 06.0**	**-1.5**
RLMT				IAmb	IAmb	00 26 22.8	
	comp=Z,3.2nm,1.1s						
ABTX	**Abilene, Hawle**	**91.45**	**55**	P	**P**	**00 26 08.7**	**-0.1**
XAN	**Xi'an**	**91.91**	**306**	P	**P**	**00 26 12.6**	**+1.7**
XAN				pP	pwP	00 26 24.7	+2.8
XAN				pmax	pmax		
	comp=Z,19nm,1.0s						
XAN				pmax	pmax		
	comp=Z,130nm,5.2s						
KSCO	**Kaye Shedlock'**	**92.30**	**48**	P	**P**	**00 26 12.1**	**-0.6**
HKT	**Hockley**	**93.19**	**59**	P	**P**	**00 26 18.7**	**+1.9**
HKT				IAmb	IAmb	00 26 20.8	
	comp=Z,3.8nm,0.9s						
HHC	**Hu-ho-hao-te**	**93.24**	**313**	P	**P**	**00 26 14.9**	**-2.1**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,44nm,6.0s						
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,40nm,5.3s						
CMAR	**Chiang Mai Arr**	**93.36**	**289**	P	**P**	**00 26 18.5**	**+0.6**
	comp=Z,5.4nm,0.8s,baz=135,slow=3.1,SNR=39						
CMAR				LR	LR	01 09 22.8	
	comp=Z,17nm,19.3s,baz=169,slow=36						
U32A	**Winter Ranch,**	**93.62**	**52**	P	**P**	**00 26 19.3**	**+0.5**
X34A	**Smith Ranch, M**	**93.68**	**54**	P	**P**	**00 26 20.0**	**+0.9**
RSSD	**Black Hills**	**93.86**	**43**	P	**P**	**00 26 19.4**	**-0.5**
FNO	**Franklin**	**94.29**	**53**	P	**P**	**00 26 22.2**	**+0.4**
YKA	**Yellowknife Ar**	**98.45**	**24**	LR	LR	01 05 11.3	
	comp=Z,75nm,21.1s,baz=0.0,slow=32						
LPAZ	**La Paz**	**98.70**	**112**	LR	LR	01 02 34.9	
	comp=Z,68nm,19.6s,baz=220,slow=30						
SONM	**Songino Array**	**99.68**	**318**	P	**Pdif**	**00 26 46.1**	**0.0**
	comp=Z,0.3nm,0.4s,baz=114,slow=4.5,SNR=2.4						
SONM				LR	LR	01 07 51.1	
	comp=Z,36nm,20.0s,baz=100,slow=33						
GTA	**Gaotai**	**100.78**	**308**	*e*P	**Pdif**	**00 27 07.2**	**+16**
GTA				pP	pwP	00 27 10.5	+8.2
GTA				sP	sP	00 27 13.2	+15
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ZALV	**Zalesovo Beam**	**114.43**	**320**	PKP	PKPdf	00 31 41.0	-0.8
	comp=Z,0.2nm,0.2s,baz=89,slow=1.8,SNR=1.7						
MKAR	**Makanchi Array**	**115.07**	**312**	PKP	**PKPdf**	**00 31 42.5**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=79,slow=1.6,SNR=4.7						
GEYT	**Alibeck**	**132.44**	**300**	PKP	**PKPdf**	**00 32 17.1**	**+0.2**
	comp=Z,1.0nm,0.9s,baz=72,slow=0.5,SNR=2.0						
ARCES	**ARCESS Array B**	**132.47**	**350**	PKP	**PKPdf**	**00 32 15.9**	**0.0**
	comp=Z,2.9nm,1.1s,baz=5.0,slow=2.8,SNR=4.8						
KLMR	**Klimovskoe**	**135.73**	**336**	*e*PKPdf	**PKiKP**	**00 32 27.1**	**+3.2**
KLMR				AMP		00 32 37.0	
	comp=Z,12nm,1.3s						
FINES	**FINESS Array B**	**139.48**	**344**	PKhKP	PKPpre	00 32 22.2	
	comp=Z,4.1nm,1.1s,baz=193,slow=7.8,SNR=3.5						
NB2	**NORSAR Subarra**	**142.39**	**355**	PKP	**PKPdf**	**00 32 30.6**	**-3.9**
	comp=Z,1.7nm,1.2s,baz=16,slow=3.2						
BCA	**Borcka**	**144.40**	**309**	⇑P	**PKPdf**	**00 32 38.0**	**-0.7**
NACGM	**Naroch**	**144.71**	**338**	*e*	**PKPab**	**00 32 37.0**	**-0.4**
AKASG	**Malin Array Be**	**146.93**	**331**	PKPbc	**PKPbc**	**00 32 43.8**	**-0.7**
	comp=Z,6.1nm,0.7s,baz=40,slow=4.0,SNR=22						
MUD	**Monsted U'grnd**	**147.10**	**355**	*i* P	**PKPab**	**00 32 45.7**	**-0.7**
BSD	**Bornholm Skovb**	**147.69**	**349**	*i* P	**PKPbc**	**00 32 47.1**	**+0.6**
SKMB	**Sankelmark Bun**	**148.80**	**354**	*e*PKPbc	**PKiKP**	**00 32 50.3**	**-0.6**
SKMB				*e*pPKPbc	**sPKPab**	**00 33 03.5**	**+3.2**
	baz=10,slow=2.2						
GKP	**Gorka Klasztor**	**148.94**	**345**	*e*PKP	**PKiKP**	**00 32 51.3**	**+0.1**
SORM	**Soroca**	**149.14**	**328**	⇑P	**PKPbc**	**00 32 50.0**	**-0.5**
BEL	**Belsk**	**149.25**	**340**	*e*PKP	**PKiKP**	**00 32 51.7**	**-0.2**
BSEG	**Bad Segeberg**	**149.49**	**353**	*e*PKPbc	**PKPbc**	**00 32 51.6**	**+0.4**
BSEG				*e*pPKPbc	**sPKPab**	**00 33 04.9**	**+1.7**
	baz=10,slow=2.2						
KIS	**Kishinev**	**149.68**	**326**	*e*P	**PKiKP**	**00 32 54.0**	**+1.1**
MILM	**Milestii Mici**	**149.73**	**326**	⇑P	**PKPbc**	**00 32 51.7**	**-0.3**
RUE	**Ruedersdorf**	**150.40**	**348**	*e*pPKPbc	**PKPab**	**00 33 07.1**	**+7.3**
	baz=10,slow=2.2						
KWP	**Kalwaria Pacla**	**150.44**	**336**	*e*PKP	**PKiKP**	**00 32 54.4**	**0.0**
BRTR	**Keskin Array B**	**150.69**	**310**	PKPbc	**PKPbc**	**00 32 54.6**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=134,slow=4.0,SNR=12						
RETH	**Rethem/Aller,**	**150.77**	**354**	*e*PKPbc	**PKPbc**	**00 32 54.6**	**+0.3**
RETH				*e*pPKPbc	**sPKPab**	**00 33 07.9**	**-0.5**
	baz=10,slow=2.2						
NRDL	**Niedersach Rie**	**150.93**	**353**	*e*PKPbc	**PKPbc**	**00 32 54.7**	**+0.1**
NRDL				*e*pPKPbc	**sPKPab**	**00 33 08.3**	**-0.8**
	baz=10,slow=2.2						
OJC	**Ojcow**	**150.97**	**340**	*e*PKP	**PKiKP**	**00 32 55.6**	**+0.1**
BURAR	**Bucovina Array**	**150.98**	**330**	⇑P	**PKiKP**	**00 32 56.2**	**+0.4**
BIZ	**Bicaz**	**151.06**	**329**	⇑P	**PKiKP**	**00 32 56.0**	**+0.2**
KOLS	**Kolonicke sedl**	**151.18**	**335**	*e*PKP	**PKiKP**	**00 32 56.9**	**+0.9**
ANTO	**Ankara**	**151.22**	**311**	⇑P	**PKiKP**	**00 32 56.4**	**-0.1**
ASSE	**Asse, Remlinge**	**151.22**	**352**	*e*PKPbc	**PKPbc**	**00 32 55.5**	**+0.1**
ASSE				*e*pPKPbc	**pPKPab**	**00 33 09.0**	**+0.5**
	baz=10,slow=2.2						
CFR	**Carcaliu**	**151.23**	**324**	⇑P	**PKPbc**	**00 32 55.9**	**+0.2**
TOPG	**Topolog**	**151.29**	**323**	⇑P	**PKiKP**	**00 32 57.1**	**+0.8**
IBBN	**Ibbenburen**	**151.33**	**356**	*e*pPKPbc	**PKPab**	**00 33 09.4**	**+5.7**
	baz=10,slow=2.2						
KSP	**Ksiaz**	**151.40**	**344**	*e*PKP	**PKiKP**	**00 32 56.7**	**+0.3**
NIE	**Niedzica**	**151.49**	**338**	*e*PKP	**PKiKP**	**00 32 57.2**	**+0.5**
VRI	**Vrincioaia**	**151.51**	**326**	⇑P	**PKPdf**	**00 32 49.9**	**-0.3**
CLZ	**Clausthal**	**151.54**	**352**	*e*PKPbc	**PKiKP**	**00 32 56.7**	**0.0**
CLZ				*e*pPKPbc	**pPKPab**	**00 33 10.0**	**0.0**
	baz=10,slow=2.2						
PLOR	**Plostina**	**151.56**	**326**	⇑P	**PKPdf**	**00 32 53.1**	**+2.8**
CLL	**Collm**	**151.67**	**349**	*i* PKPbc	**PKiKP**	**00 32 57.4**	**+0.5**
	comp=Z,16nm,1.1s						
CLL				*i*		00 33 05.7	
CLL	**Collm**	**151.67**	**349**	*i* PKPbc	**PKPab**	**00 33 10.7**	**+5.6**
	comp=Z,27nm,1.0s						
CLL				*i*		00 33 21.4	
	comp=Z,22nm,1.1s						
CLL				LmV		01 42 00.0	
	comp=Z,100nm,19.3s						
CLL	**Collm**	**151.67**	**349**	*e*PKPbc	**PKiKP**	**00 32 57.7**	**+0.8**
CLL				*e*pPKPbc	**pPKPab**	**00 33 11.0**	**+0.5**
	baz=10,slow=2.2						
OSTC	**Ostas**	**151.69**	**344**⇑	*e*PKP	**PKiKP**	**00 32 57.3**	**+0.3**
OSTC				*e*x	x	00 33 10.8	
CHVC	**Chvalec**	**151.70**	**344**⇑	*e*PKP	**PKiKP**	**00 32 57.0**	**0.0**
CHVC				*e*x	x	00 33 10.2	
TRPA	**Tarpa**	**151.72**	**334**	⇑P	**PKiKP**	**00 32 57.3**	**+0.2**
OKC	**Ostrava-Krasne**	**151.81**	**341**⇑	*e*PKP	**PKiKP**	**00 32 59.4**	**+2.2**
OKC				*e*pPKP	**pPKPab**	**00 33 10.9**	**-0.5**
DPC	**Dobruska-Polom**	**151.85**	**344**⇑	*e*PKP	**PKiKP**	**00 32 57.7**	**+0.3**
DPC				*e*x	x	00 33 10.5	
BRG	**Berggiesshubel**	**151.90**	**347**	*e*PKP	**PKPdf**	**00 32 52.1**	**+1.6**
	comp=Z,5.4nm,1.3s						
BRG	**Berggiesshubel**	**151.90**	**347**	*i* PKP	**PKiKP**	**00 32 57.3**	**-0.1**
	comp=Z,7.5nm,0.8s						
BRG				*i*		00 33 10.4	
	comp=Z,22nm,1.1s						
BRG	**Berggiesshubel**	**151.90**	**347**	*e*PKPbc	**PKiKP**	**00 32 57.4**	**0.0**
BRG				*e*pPKPbc	**pPKPab**	**00 33 10.8**	**-0.7**
	baz=10,slow=2.2						
NEUB	**Neuenburg**	**151.97**	**350**	*e*pPKPbc	**PKPab**	**00 33 10.8**	**+4.4**
	baz=10,slow=2.2						
FBE	**Freiberg**	**151.97**	**348**	*e*PKPbc	**PKiKP**	**00 32 57.8**	**+0.3**
FBE				*e*pPKPbc	**pPKPab**	**00 33 11.1**	**-0.6**
	baz=10,slow=2.2						
KRLC	**Kraliky**	**151.98**	**343**⇑	*e*PKP	**PKiKP**	**00 32 57.9**	**+0.2**
KRLC				*e*pPKP	**pPKPab**	**00 33 11.0**	**-0.9**
KRLC				AMS	AMS	01 43 00.0	
	comp=Z,100nm,19.5s						
MORC	**Moravsky Berou**	**152.04**	**342**	*e*	**PKPab**	**00 33 10.4**	**+3.6**
MORC	**Moravsky Berou**	**152.04**	**342**	⇑P	**PKPbc**	**00 32 56.0**	**-1.4**
MORC	**Moravsky Berou**	**152.04**	**342**	*e*PKP	**PKPbc**	**00 32 56.8**	**-0.7**
PVCC	**Panska Ves**	**152.10**	**346**⇑	*e*PKP	**PKiKP**	**00 32 58.2**	**+0.4**
PVCC				*e*pPKP	**pPKPab**	**00 33 09.9**	**-2.4**
DOPR	**Dopca**	**152.10**	**328**	⇓P	**PKiKP**	**00 32 58.6**	**+0.6**
MLR	**Muntele Rosu**	**152.16**	**327**	⇓P	**PKPbc**	**00 32 56.0**	**-1.9**
BUG	**Bochum--Univer**	**152.22**	**356**	*e*pPKPbc	**PKPab**	**00 33 11.0**	**+3.5**
	baz=10,slow=2.2						
CJR	**Cluj-Napoca**	**152.38**	**331**	⇑P	**PKiKP**	**00 33 01.1**	**+2.5**
MOX	**Moxa**	**152.54**	**350**	*e*pPKPbc	**PKPab**	**00 33 11.8**	**+3.0**
	baz=10,slow=2.2						
PLN	**Plauen**	**152.61**	**349**	*e*pPKPbc	**PKPab**	**00 33 12.1**	**+3.0**
	baz=10,slow=2.2						
PRU	**Pruhonice**	**152.61**	**346**⇑	*e*PKP	**PKiKP**	**00 32 59.3**	**+0.4**
PRU				*e*pPKP	**pPKPab**	**00 33 12.0**	**-2.5**
PRU				AMS	AMS	01 48 40.0	
	comp=Z,100nm,19.3s						
TANN	**Tannenbergstha**	**152.62**	**349**	*e*pPKPbc	**PKPab**	**00 33 12.2**	**+2.9**
	baz=10,slow=2.2						
GOPC	**GO Pecny, Ondr**	**152.62**	**345**⇑	*e*PKP	**PKiKP**	**00 32 59.0**	**0.0**
GOPC				*e*PKPAB	**PKPab**	**00 33 11.5**	**+2.2**
VOIR		**152.65**	**327**	⇑P	**PKPab**	**00 33 09.1**	**-0.5**
GUNZ	**Gunzen**	**152.69**	**349**	*e*pPKPbc	**PKPab**	**00 33 12.5**	**+3.0**
	baz=10,slow=2.2						
DRGR		**152.71**	**332**	⇑P	**PKPbc**	**00 32 58.3**	**-0.8**
VRAC	**Vranov**	**152.73**	**343**	*e*	**PKPab**	**00 33 10.7**	**+1.0**
VRAC	**Vranov**	**152.73**	**343**	⇑P	**PKPab**	**00 33 10.8**	**+1.1**
VRAC	**Vranov**	**152.73**	**343**	*e*PKP	**PKPbc**	**00 32 58.2**	**-0.8**
VYHS	**Vyhne**	**152.78**	**339**	*e*PKP	**PKiKP**	**00 32 59.4**	**+0.1**
NKC	**Novy Kostel**	**152.80**	**349**	*e*PKPAB	**PKPab**	**00 33 10.4**	**+0.4**
JAVC	**Velka Javorina**	**152.82**	**341**	*e*	**PKPab**	**00 33 12.8**	**+2.6**
JAVC	**Velka Javorina**	**152.82**	**341**	*e*PKP	**PKiKP**	**00 33 00.4**	**+0.9**
ARR	**Arges**	**152.90**	**328**	⇓P	**PKiKP**	**00 33 00.7**	**+1.0**
PSZ	**Piszkesteto**	**152.91**	**337**	⇑P	**PKPab**	**00 33 08.3**	**-2.3**
KRUC	**Moravsky**	**153.01**	**343**	*e*	**PKPab**	**00 33 11.9**	**+1.0**
KRUC	**Moravsky**	**153.01**	**343**	*e*PKP	**PKPbc**	**00 32 59.3**	**-0.3**
AHRW	**Bad Neuenahr-A**	**153.13**	**356**	*e*pPKPbc	**PKPab**	**00 33 13.0**	**+1.7**
	baz=10,slow=2.2						
HUMR	**Humele**	**153.33**	**326**	⇑P	**PKPab**	**00 33 13.0**	**+0.7**
TNS	**Taunus Mts**	**153.35**	**354**	*e*pPKPbc	**PKPab**	**00 33 13.8**	**+1.5**
	baz=10,slow=2.2						
MODS	**Modra-Piesok**	**153.37**	**341**	*e*PKP	**PKPab**	**00 33 14.1**	**+1.6**
GRF	**Grafenberg Arr**	**153.53**	**350**	*e*pPKPab	pPKPab	00 33 26.0	+7.6
KHC	**Kasperske Hory**	**153.63**	**347**⇑	*e*PKP	**PKiKP**	**00 33 01.2**	**+0.1**
KHC				*e*PKPAB	**PKPab**	**00 33 14.1**	**+0.6**
KHC				*e*x	x	00 33 24.5	
GEC2	**GERESS Array S**	**153.87**	**346**	*e*pPKPbc	**PKPab**	**00 33 14.9**	**+0.2**
	baz=10,slow=2.2						
GERES	**GERESS Array B**	**153.87**	**346**	PKPbc	**PKPbc**	**00 33 00.2**	**-1.4**
	comp=Z,1.2nm,1.0s,baz=64,slow=3.1,SNR=5.7						
GERES				PKPab	**PKPab**	**00 33 13.6**	**-1.1**
	comp=Z,2.4nm,0.9s,baz=29,slow=2.2,SNR=11						
ELND	**Elena**	**153.93**	**323**	⇑P	**PKiKP**	**00 33 07.9**	**+6.0**
BZS	**Buzias**	**154.11**	**332**	⇑P	**PKiKP**	**00 33 04.2**	**+2.1**
CONA	**Conrad Observa**	**154.19**	**342**	*i* PKPab	**PKPab**	**00 33 14.8**	**-1.2**
	comp=Z,7.0nm,0.9s						
HERR	**Herculane**	**154.32**	**330**	⇑P	**PKPab**	**00 33 11.5**	**-5.1**
MOA	**Molln**	**154.68**	**345**	*i* PKPab	**PKPab**	**00 33 19.4**	**+1.4**
	comp=Z,6.1nm,1.2s						
STU	**Stuttgart**	**154.70**	**353**	*e*pPKPbc	**PKPab**	**00 33 17.0**	**-1.1**
	baz=10,slow=2.2						
ARSA	**Arzberg**	**154.90**	**342**	*i* PKPab	**PKPab**	**00 33 19.9**	**+1.0**
	comp=Z,5.7nm,1.1s						
SOKA	**Soboth**	**155.56**	**342**	*i* PKPab	**PKPab**	**00 33 21.4**	**-0.5**
	comp=Z,6.2nm,1.1s						
KBA	**Koelnbreinsper**	**155.62**	**345**	*i* PKPdf	**PKPdf**	**00 32 56.8**	**+0.5**
	comp=Z,7.4nm,1.0s						
RETA	**Reutte**	**155.74**	**350**	*i* PKPab	**PKPab**	**00 33 18.8**	**-3.8**
	comp=Z,3.1nm,1.3s						
WATA	**Walderalm**	**155.75**	**348**	*i* PKPab	**PKPab**	**00 33 21.0**	**-1.7**
WTTA	**Wattenberg**	**155.80**	**348**	*i* PKPab	**PKPab**	**00 33 23.0**	**-0.1**
	comp=Z,11nm,1.6s						
MOTA	**Moosalm**	**155.82**	**349**	*i* PKPab	**PKPab**	**00 33 21.4**	**-1.7**
	comp=Z,9.7nm,1.2s						
SQTA	**Sankt Quirin**	**155.92**	**349**	*i* PKPab	**PKPab**	**00 33 19.7**	**-3.7**
	comp=Z,4.1nm,1.1s						
MYKA	**Terra Mystica**	**155.97**	**344**	*i* PKPab	**PKPab**	**00 33 22.9**	**-0.7**
	comp=Z,11nm,1.5s						
DAVA	**Damuels**	**156.07**	**351**	*i* PKPab	**PKPab**	**00 33 19.9**	**-4.2**
	comp=Z,5.6nm,1.5s						
FETA	**Feichten**	**156.20**	**349**	*i* PKPdf	**PKPdf**	**00 32 54.7**	**-2.3**
	comp=Z,3.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**169.17**	**165**	PKP	**PKPdf**	**00 33 09.7**	**-0.7**
	comp=Z,1.4nm,1.1s,baz=243,slow=4.8,SNR=5.0						
TORD				PKPab	**PKPab**	**00 34 21.4**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=199,slow=4.1,SNR=2.7						

*MDD **05** 00:27:24.2±1.8, 39°.22N×13°.67W, h0km, mb3.6/10, Error ellipse: s-maj=16.3km s-min=11.2km az=81.0, PRXIMO*
*IGIL **05** 00:27:24.3, 39°.31N×13°.63W, h0km, ML1.9*
*INMG **05** 00:27:25.6±2.0, 39°.08N×14°.17W, h10km, ML2.1, Error ellipse: s-maj=10.7km s-min=7.8km az=52.0*
ISC 05 00:27:20.3±3.1**, 39°.22N**±0°.05×**13°.9W**±0°.2**, h10km, n47, σ2s.41**/87**, 1D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**3.56**	**93**	P	**Pn**	**00 28 18.2**	**+2.5**
	0.9nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**00 28 57.4**	**-0.5**
	0.3nm,0.4s,SNR=7.9						
PMAFR	**Mafra**	**3.56**	**93**	*e*Pn	**Pn**	**00 28 18.6**	**+2.9**
PMAFR				*e*Sn	**Sn**	**00 28 58.0**	**+0.2**
PMAFR				A	A	00 29 00.7	
	8.3nm,0.7s						
PSBE	**So Bento**	**3.93**	**84**	*e*Pn	**Pn**	**00 28 24.1**	**+3.4**
PSBE				*e*Sn	**Sn**	**00 29 07.2**	**+0.3**
PSBE				A	A	00 29 10.6	
	2.5nm,0.7s						
PCAS	**Casmilo, Conde**	**4.21**	**77**	P	**Pn**	**00 28 27.8**	**+3.2**
PCAS				S	**Sn**	**00 29 13.3**	**-0.6**
	1.7nm,0.1s						
PCAS	**Casmilo, Conde**	**4.21**	**77**	*e*Pn	**Pn**	**00 28 27.8**	**+3.2**
PCAS				*e*Sn	**Sn**	**00 29 13.3**	**-0.6**
PCAS				A	A	00 29 16.0	
	1.7nm,0.1s						
PNCL	**Nicolau / Gran**	**4.31**	**103**	P	**Pn**	**00 28 27.5**	**+1.6**
PNCL				S	**Sn**	**00 29 15.0**	**-1.2**
	1.4nm,0.5s						
PNCL	**Nicolau / Gran**	**4.31**	**103**	*e*Pn	**Pn**	**00 28 27.5**	**+1.6**
PNCL				*e*Sn	**Sn**	**00 29 15.0**	**-1.2**
PNCL				A	A	00 29 18.7	
	1.4nm,0.5s						
PTEO	**Sao Teotonio**	**4.36**	**111**	P	**Pn**	**00 28 28.3**	**+1.7**
PTEO				S	**Sn**	**00 29 15.0**	**-2.4**
	1.7nm,0.8s						
PTEO	**Sao Teotonio**	**4.36**	**111**	*e*Pn	**Pn**	**00 28 28.3**	**+1.7**
PTEO				*e*Sn	**Sn**	**00 29 15.0**	**-2.4**
PTEO				A	A	00 29 18.6	
	3.3nm,0.8s						
PMTG	**Montargil**	**4.37**	**90**	P	**Pn**	**00 28 30.8**	**+4.0**
PMTG				S	**Sn**	**00 29 17.9**	**+0.1**
	1.5nm,0.6s						
PMTG	**Montargil**	**4.37**	**90**	*e*Pn	**Pn**	**00 28 30.8**	**+4.0**
PMTG				*e*Sn	**Sn**	**00 29 17.9**	**+0.1**
PMTG				A	A	00 29 23.6	
	1.5nm,0.6s						
PFVI	**Vila Bisbo**	**4.47**	**116**	P	**Pn**	**00 28 29.3**	**+1.1**
	4.0nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**4.47**	**116**	*e*Pn	**Pn**	**00 28 29.3**	**+1.1**
PFVI				*e*Sn	**Sn**	**00 29 17.9**	**-2.3**
PFVI				A	A	00 29 21.9	
	4.8nm,0.9s						
MORF	**Marmelete**	**4.51**	**113**	*e*P	**Pn**	**00 28 30.2**	**+1.4**
MORF				*e*S	**Sn**	**00 29 18.6**	**-2.8**
MORF				AML	AML	00 29 21.1	
	comp=E,3.9nm,0.2s						
MORF	**Marmelete**	**4.51**	**113**	P	**Pn**	**00 28 30.2**	**+1.4**
MORF				S	**Sn**	**00 29 18.8**	**-2.6**
	comp=E,2.7nm,0.2s						
MORF	**Marmelete**	**4.51**	**113**⇓	*e*Pn	**Pn**	**00 28 30.2**	**+1.4**
MORF				*e*Sn	**Sn**	**00 29 18.8**	**-2.6**
MORF				A	A	00 29 21.5	
	comp=E,2.7nm,0.2s						
MESJ	**Messejana**	**4.62**	**106**	*e*P	**Pn**	**00 28 31.4**	**+1.2**
MESJ				*e*S	**Sn**	**00 29 20.9**	**-3.1**
MESJ				AML	AML	00 29 26.5	
	comp=N,1.4nm,0.2s						
MESJ	**Messejana**	**4.62**	**106**	P	**Pn**	**00 28 32.0**	**+1.8**
MESJ				S	**Sn**	**00 29 21.9**	**-2.1**
	comp=N,1.4nm,0.7s						
MESJ	**Messejana**	**4.62**	**106**	*e*Pn	**Pn**	**00 28 32.0**	**+1.8**
MESJ				*e*Sn	**Sn**	**00 29 21.9**	**-2.1**
MESJ				A	A	00 29 30.4	
	comp=N,1.4nm,0.7s						
PVIS	**Viseu**	**4.81**	**70**	P	**Pn**	**00 28 36.2**	**+3.3**
PVIS				S	**Sn**	**00 29 26.8**	**-2.0**
PVIS	**Viseu**	**4.81**	**70**	*e*Pn	**Pn**	**00 28 36.2**	**+3.3**
PVIS				*e*Sn	**Sn**	**00 29 26.8**	**-2.0**
PCVE	**Castro Verde**	**4.83**	**107**	P	**Pn**	**00 28 35.2**	**+2.1**
PCVE				S	**Sn**	**00 29 27.4**	**-1.6**
	comp=N,1.2nm,0.3s						
PCVE	**Castro Verde**	**4.83**	**107**	*e*Pn	**Pn**	**00 28 35.2**	**+2.1**
PCVE				*e*Sn	**Sn**	**00 29 27.4**	**-1.6**
PCVE				A	A	00 29 32.9	
	comp=N,1.2nm,0.3s						
PESTR	**Estremoz**	**4.88**	**92**	*e*Sn	**Sn**	**00 29 29.6**	**-0.9**
PMRV	**Marv??o**	**5.01**	**86**	P	**Pn**	**00 28 38.0**	**+2.4**
PMRV				S	**Sn**	**00 29 32.5**	**-1.1**
	comp=N,1.3nm,0.8s						
PMRV	**Marv??o**	**5.01**	**86**	*e*Pn	**Pn**	**00 28 38.0**	**+2.4**
PMRV				*e*Sn	**Sn**	**00 29 32.5**	**-1.1**
PMRV				A	A	00 29 36.7	
	comp=N,1.3nm,0.8s						
PGAV	**Gavieira, Arco**	**5.06**	**55**	P	**Pn**	**00 28 39.3**	**+3.0**
PGAV				S	**Sn**	**00 29 32.5**	**-2.3**
	comp=N,2.9nm,0.4s						
PGAV	**Gavieira, Arco**	**5.06**	**55**	*e*Pn	**Pn**	**00 28 39.3**	**+3.0**
PGAV				*e*Sn	**Sn**	**00 29 32.5**	**-2.3**
PGAV				A	A	00 29 35.5	
	comp=N,2.9nm,0.4s						
PBDV	**Barranco-do-Ve**	**5.06**	**111**	P	**Pn**	**00 28 38.3**	**+2.0**
PBDV				S	**Sn**	**00 29 32.2**	**-2.6**
	comp=N,1.8nm,0.9s						
PBDV	**Barranco-do-Ve**	**5.06**	**111**	*e*Pn	**Pn**	**00 28 38.3**	**+2.0**
PBDV				*e*Sn	**Sn**	**00 29 32.2**	**-2.6**
PBDV				A	A	00 29 38.0	
	comp=N,1.8nm,0.9s						
PCAB	**Cabril**	**5.09**	**59**	S	**Sn**	**00 29 33.6**	**-2.0**
	comp=N,1.2nm,0.3s						
PCAB	**Cabril**	**5.09**	**59**	*e*Sn	**Sn**	**00 29 33.6**	**-2.0**
PCAB				A	A	00 29 36.0	
	comp=N,2.4nm,0.3s						
ELOB	**Lobios**	**5.14**	**57**	P	**Pn**	**00 28 40.0**	**+2.6**
	comp=N,0.3nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**00 29 34.5**	**-2.4**
	comp=N,0.5nm,0.2s,SNR=7.9						
PVAQ	**Vaqueiros**	**5.15**	**109**	P	**Pn**	**00 28 40.0**	**+2.5**
PVAQ				S	**Sn**	**00 29 34.6**	**-2.4**
	comp=N,1.0nm,0.1s						
PVAQ	**Vaqueiros**	**5.15**	**109**	*e*Pn	**Pn**	**00 28 40.0**	**+2.5**
PVAQ				*e*Sn	**Sn**	**00 29 34.6**	**-2.4**
PVAQ				A	A	00 29 37.3	
	comp=N,1.0nm,0.1s						
EMAZ	**Mazaricos**	**5.24**	**43**	P	**Pn**	**00 28 40.6**	**+1.9**
	comp=N,0.4nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**00 29 36.2**	**-2.9**
	comp=N,1.9nm,0.4s,SNR=7.9						
EGRO	**El Granado**	**5.28**	**107**	P	**Pn**	**00 28 41.2**	**+2.0**
	comp=N,0.4nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**00 29 37.1**	**-3.0**
	comp=N,0.6nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**5.34**	**93**	P	**Pn**	**00 28 41.6**	**+1.4**
	comp=N,0.2nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**00 29 38.8**	**-2.9**
	comp=N,0.5nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**5.57**	**67**	P	**Pn**	**00 28 45.5**	**+2.1**
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**00 29 43.6**	**-3.9**
	comp=N,1.0nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.57**	**67**	*e*Sn	**Sn**	**00 29 44.9**	**-2.6**
MVO				A	A	00 29 51.6	
	comp=N,2.1nm,0.6s						
EAGO	**Agolada(Pontev**	**5.64**	**49**	P	**Pn**	**00 28 45.7**	**+1.4**
	comp=N,0.3nm,0.0s,SNR=7.9						
EAGO				S	**Sn**	**00 29 45.1**	**-4.0**
	comp=N,0.6nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.81**	**102**	P	**Pn**	**00 28 48.3**	**+1.7**
	comp=N,0.1nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**00 29 49.2**	**-4.1**
	comp=N,0.3nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**6.05**	**80**	P	**Pn**	**00 28 52.3**	**+2.3**
	comp=N,0.5nm,0.2s,SNR=7.9						
EPLA				S	**Sn**	**00 29 57.4**	**-1.9**
	comp=N,0.7nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.06**	**61**	S	**Sn**	**00 29 55.6**	**-3.9**
	comp=N,1.0nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**6.50**	**49**	S	**Sn**	**00 30 05.2**	**-5.1**
	comp=N,0.0nm,0.4s,SNR=7.9						
ECAB	**El Cabril**	**6.70**	**97**	P	**Pn**	**00 29 00.3**	**+1.5**
	comp=N,0.1nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**00 30 12.6**	**-2.5**
	comp=N,0.2nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**7.33**	**95**	P	**Pn**	**00 29 10.0**	**+2.6**
	comp=N,0.2nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**00 30 27.8**	**-2.9**
	comp=N,0.0nm,0.3s,SNR=7.9						

*IDC **05** 00:39:56.2±1.8, 7°.35S×155°.38E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.6/34, mbtmp3.7/5, ML3.8/1, Error ellipse: s-maj=52.6km s-min=32.1km az=119.0*
ISC 05 00:39:59.5±1.3**, 6°.9S**±0°.2×**154°.8E**±0°.2**, h10km, n6, σ0s.84**/7**, mb3.5**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.81**	**313**	Pn	**Pb**	**00 41 07.2**	**+0.3**
	4.6nm,0.3s,baz=69,slow=5.5,SNR=7.9						
KRVT				Sn	**Sb**	**00 41 52.6**	**-0.6**
	7.9nm,0.3s,baz=88,slow=18,SNR=1.8						
WRA	**Warramunga Arr**	**23.72**	**235**	P	**P**	**00 45 11.5**	**-0.5**
	1.4nm,0.8s,baz=56,slow=9.4,SNR=2.6						
ASAR	**Alice Springs**	**26.09**	**228**	P	**P**	**00 45 33.5**	**-0.2**
	0.7nm,0.9s,baz=61,slow=9.6,SNR=4.7						
MKAR	**Makanchi Array**	**83.24**	**319**	P	**P**	**00 52 27.6**	**+1.2**
	0.4nm,0.6s,baz=98,slow=5.5,SNR=7.5						
YKA	**Yellowknife Ar**	**96.36**	**28**	P	**P**	**00 53 27.5**	**-0.8**
	0.1nm,0.7s,baz=257,slow=5.6,SNR=1.8						
TORD	**Torodi Ar. Bea**	**152.85**	**285**	PKPbc	**PKPbc**	**00 59 58.1**	**0.0**
	0.6nm,0.7s,baz=72,slow=1.4,SNR=5.5						

*IDC **05** 01:06:44.7±1.7, 19°.54S×70°.56W, h0km, mb3.5/3, mb1 3.8/5, mb1mx3.6/33, mbtmp3.7/5, ML3.8/2, Error ellipse: s-maj=41.7km s-min=31.5km az=60.0*
*NEIC **05** 01:06:51.2±2.1, 19°.81S±0°.03×70°.40W±0°.03, h44km±7km, mb3.5/1, ML3.6(GUC), Error ellipse: s-maj=5.2km s-min=2.5km az=54.0*
*GUC **05** 01:06:52.3±0.9, 19°.86S×70°.21W, h44km±1km, ML3.5*
ISC 05 01:06:51.5±0.9**, 19°.85S**±0°.03×**70°.30W**±0°.06**, h44km**±8km**, n55, σ1s.69**/71**, mb3.5**/3**, 2C-7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.30**	**34**	*i* P	**Pn**	**01 07 01.1**	**+0.8**
PSGC				*e*S	**Sn**	**01 07 06.9**	**+0.5**
PSGC				IAML		01 07 07.6	
	comp=E,5μm,0.5s						
PSGCX	**Pisagua**	**0.30**	**34**		**Pn**	**01 07 00.7**	**+0.5**
PSGCX					**Sn**	**01 07 06.8**	**+0.5**
TA02	**Huaiquique**	**0.45**	**159**	*e*P	**Pn**	**01 07 02.7**	**+0.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TA02				eS	Sn	01 07 09.6	+0.4
PB11	IPOC Station P	0.61	82	⇓iP	Pn	01 07 04.9	+0.9
PB11				eS	Sn	01 07 13.8	+0.7
PB11				IAML		01 07 14.3	
	comp=E,8μm,0.2s						
PB11	IPOC Station P	0.61	82		Pn	01 07 04.9	+0.9
PB11					Sn	01 07 13.7	+0.7
TA01	Diego Aracena	0.73	171	eP	Pn	01 07 06.2	+0.8
TA01				eS	Sn	01 07 16.0	+0.6
TA01				IAML		01 07 19.0	
	comp=E,3μm,0.3s						
TA01	Diego Aracena	0.73	171	Pn	Pn	01 07 06.4	+1.0
TA01				Sn	Sn	01 07 16.1	+0.6
MNMC	Minye Minye	0.97	43	⇓iP	Pn	01 07 10.3	+1.3
MNMC				eS	Sn	01 07 23.3	+1.5
MNMC				IAML		01 07 24.0	
	comp=N,4μm,0.2s						
MNMC	Minye Minye	0.97	43		Pn	01 07 09.9	+0.9
MNMC					Sn	01 07 23.4	+1.5
PATCX	Punta Patache	0.98	172	eP	Pn	01 07 09.9	+1.0
PATCX				eS	Sn	01 07 23.2	+1.5
PATCX	Punta Patache	0.98	172		Pn	01 07 10.2	+1.3
GO01	Chusmiza	1.06	81	eP	Pn	01 07 11.3	+1.0
GO01				eS	Sn	01 07 25.2	+1.0
GO01				IAML		01 07 26.9	
	comp=N,5μm,0.1s						
GO01	Chusmiza	1.06	81		Pn	01 07 11.6	+1.2
GO01					Sn	01 07 25.8	+1.6
PB08	IPOC Station P	1.12	105	⇓iP	Pn	01 07 12.2	+1.1
PB08				i S	Sn	01 07 26.1	+0.6
PB08	IPOC Station P	1.12	105		Pn	01 07 12.2	+1.1
PB12	IPOC Station P	1.23	359	⇓iP	Pn	01 07 13.9	+1.7
PB12				eS	Sn	01 07 30.4	+2.7
PB12	IPOC Station P	1.23	359		Pn	01 07 14.0	+1.7
PB01	IPOC Station P	1.42	147	eP	Pn	01 07 15.9	+1.0
PB01				eS	Sn	01 07 32.8	+0.4
PB01				IAML		01 07 35.6	
	comp=N,2μm,0.2s						
PB01	IPOC Station P	1.42	147		Pn	01 07 15.6	+0.7
PB01				Sn	Sn	01 07 33.2	+0.8
AP01	Chacalluta	1.47	359	⇑eP	Pn	01 07 18.0	+2.5
AP01				eS	Sn	01 07 37.1	+3.6
AP01				IAML		01 07 42.0	
	comp=N,2μm,0.3s						
AP01	Chacalluta	1.47	359	Pn	Pn	01 07 14.2	-1.2
PB02	IPOC Station P	1.52	166	eP	Pn	01 07 17.9	+1.7
PB02				eS	Sn	01 07 37.1	+2.2
PB02				IAML		01 07 44.7	
	comp=E,1μm,0.3s						
PB16	IPOC Station P	1.68	27	⇓eP	Pn	01 07 20.9	+2.0
PB16				eS	Sn	01 07 42.1	+2.6
PB16				IAML		01 07 45.0	
	comp=N,426nm,0.5s						
PB16	IPOC Station P	1.68	27		Pn	01 07 20.9	+2.0
PB07	IPOC Station P	1.91	168	eP	Pn	01 07 23.7	+2.0
PB07				eS	Sn	01 07 47.8	+3.1
PB07				IAML		01 07 56.0	
	comp=E,445nm,0.4s						
PB07	IPOC Station P	1.91	168		Pn	01 07 23.8	+2.0
PB07					Sn	01 07 44.4	-0.3
PB09	IPOC Station P	2.18	153	eP	Pn	01 07 28.2	+2.8
PB09				eS	Sn	01 07 53.9	+2.5
PB09				IAML		01 08 04.0	
	comp=E,549nm,0.5s						
PB09	IPOC Station P	2.18	153		Pn	01 07 27.5	+2.1
PB03	IPOC Station P	2.25	167	⇓eP	Pn	01 07 28.3	+1.9
PB03				eS	Sn	01 07 55.1	+2.0
PB03				IAML		01 08 03.6	
	comp=E,300nm,0.5s						
PB04	IPOC Station P	2.48	177	⇑eP	Pn	01 07 31.5	+1.9
PB04				⇓eS	Sn	01 08 00.8	+2.1
PB04				IAML		01 08 11.5	
	comp=E,246nm,0.4s						
PB04	IPOC Station P	2.48	177		Pn	01 07 31.6	+2.0
PB06	IPOC Station P	2.93	167		Pn	01 07 36.5	+0.9
PB06				Sn	Sn	01 08 12.3	+2.6
LVC	Limon Verde	3.04	155	Pn	Pn	01 07 40.5	+3.0
	comp=E,5.8nm,0.3s,baz=16,slow=5.7,SNR=58						
LVC				Sn	Sn	01 08 16.5	+3.6
	comp=E,6.5nm,0.3s,baz=330,slow=0.3,SNR=7.2						
PB15	IPOC Station P	3.44	167		Pn	01 07 44.2	+1.5
PB10	IPOC Station P	3.66	184	Pn	Pn	01 07 45.4	-0.2
LPAZ	La Paz	4.10	31	Pn	Pn	01 07 57.9	+5.7
	comp=E,2.1nm,0.3s,baz=185,slow=4.3,SNR=43						
PB14	IPOC Station P	4.76	181	Pn	Pn	01 08 00.9	-0.1
GO02	Mina Guanaco	5.33	173	Pn	Pn	01 08 10.0	+1.2
AC02	Maricunga	7.04	171	Pn	Pn	01 08 32.7	+0.3
AC05	El Transito	8.95	180	Pn	Pn	01 08 57.3	-1.0
SIV	San Ignacio	9.58	68	Pn	Pn	01 09 07.0	+0.1
	comp=E,1.5nm,0.3s,baz=274,slow=8.5,SNR=25						
H03N1	Juan Fernandez	15.56	208	T	T	01 26 41.7	
	baz=33,slow=73,SNR=150						
H03N2	Juan Fernandez	15.57	208	T	T	01 26 37.2	
	baz=33,slow=73,SNR=103						
H03N3	Juan Fernandez	15.58	208	T	T	01 26 29.1	
	baz=33,slow=73,SNR=156						
PTGA	Pitinga	21.52	29	P	P	01 11 34.7	-2.2
	comp=E,0.8nm,0.3s,baz=18,slow=23,SNR=1.7						
PTGA	Pitinga	21.52	29	P	P	01 11 35.9	-1.0
PTGA				IAmb	IAmb	01 11 38.6	
	comp=Z,1.4nm,0.7s						
TXAR	Lajitas Array	58.53	326	P	P	01 16 40.7	-2.9
	comp=Z,0.1nm,0.5s,baz=156,slow=6.9,SNR=2.6						
TORD	Torodi Ar. Bea	78.05	71	P	P	01 18 45.8	-0.2
	comp=Z,0.5nm,0.5s,baz=246,slow=5.6,SNR=12						
H11S2	WAKE ISLAND Hy	126.36	279	T	T	03 45 08.8	
	baz=102,slow=75,SNR=107						
H11S1	WAKE ISLAND Hy	126.37	279	T	T	03 45 08.4	
	baz=102,slow=75,SNR=81						
H11S3	WAKE ISLAND Hy	126.38	279	T	T	03 45 10.4	
	baz=102,slow=75,SNR=92						
H11N3	WAKE ISLAND Hy	126.40	280	T	T	03 45 12.0	
	baz=94,slow=74						
H11N2	WAKE ISLAND Hy	126.42	280	T	T	03 45 10.3	
	baz=94,slow=74						
H11N1	WAKE ISLAND Hy	126.42	280	T	T	03 45 14.7	
	baz=94,slow=74						
MKAR	Makanchi Array	145.02	33	PKP	PKPdf	01 26 23.9	-0.1
	comp=Z,0.2nm,0.4s,baz=336,slow=1.6,SNR=5.6						

*IDC **05** 01:13:32.7±1.6, 67°.92N×162°.49W, h0^{km}, mb3.4/6, mb1 3.8/8, mb1mx3.5/52, mbtmp3.6/8, ML3.8/2, Error ellipse: s-maj=54.7km s-min=17.4km az=23.0*
*AEIC **05** 01:13:34.0±1.6, 67°.72N±0°.07×162°.4W±0°.2, h28^{km}±5^{km}, ML3.4/27, Error ellipse: s-maj=11.1km s-min=8.5km az=142.0*
*NEIC **05** 01:13:34.2±1.5, 67°.69N±0°.05×162°.3W±0°.2, h19^{km}±5^{km}, Error ellipse: s-maj=8.6km s-min=7.5km az=72.0*
ISC 05 01:13:33.1±0.8**, 67°.73N**±0°.06×**162°.25W**±0°.05**, h10**^{km}**, n39,** σ**1^{s}60**/45**, mb3.6**/5**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.41	323		Pb	01 13 42.4	-0.1
RDOG					Sb	01 13 49.0	+0.1
ANM	Nome	3.42	203		Pn	01 14 25.9	-0.5
ANM					Sn	01 15 04.1	-2.8
IM03		3.79	114		Pn	01 14 31.5	+0.1
IM05	Indian Mountai	3.80	114		Pn	01 14 31.7	+0.1
IM05					Sn	01 15 15.5	-0.7
COLD	Coldfoot	4.66	91		Pn	01 14 45.0	+1.5
COLD					Sn	01 15 37.5	-0.1
TOLK	Toolik Lake Re	4.82	73		Pn	01 14 47.2	+1.6
TOLK	Toolik Lake Re	4.82	73	Sn	Sn	01 15 36.1	-5.4
MLY	Manley	5.36	115		Pn	01 14 52.2	-0.9
TTA	Tatalina	5.48	149		Pn	01 14 54.6	-0.1
TT01	Tatalina	5.50	149		Pn	01 14 54.8	-0.1
BPAW	Bear Paw Mtn.	5.87	123		Pn	01 15 00.6	+0.5
NEA	Nenana	6.20	114		Pn	01 15 05.1	+0.5
KTH	Kantishna Hill	6.28	126		Pn	01 15 05.8	+0.1
MDM	Murphy Dome	6.29	110		Pn	01 15 06.8	+1.1
BWN	Browne	6.32	118		Pn	01 15 07.7	+1.4
PPLA	Purkeypile	6.42	134		Pn	01 15 08.2	+0.5
COLA	College	6.47	109	Pn	Pn	01 15 08.9	+0.8
POKR	Poker Plat Res	6.49	107		Pn	01 15 09.3	+0.8
TRF	Thorofare Moun	6.55	125		Pn	01 15 10.0	+0.5
CCB	Clear Creek Bu	6.61	111		Pn	01 15 10.7	+0.6
BM03	Burnt Mountain	6.75	84		Pn	01 15 13.0	+0.8
MCK	McKinley	6.79	120		Pn	01 15 11.3	-1.3
IL31		6.87	108		Pn	01 15 13.9	+0.2
IL31		6.87	108	Sn	Sn	01 16 29.6	-2.2
ILAR	Eielson Array	6.87	108	Pn	Pn	01 15 13.9	+0.1
	4.3nm,0.3s,baz=303,slow=14,SNR=179						
ILAR				Sn	Sn	01 16 29.5	-2.4
	1.3nm,0.3s,baz=215,slow=14,SNR=13						
PRP	Porcupine Dome	7.01	101		Pn	01 15 16.5	+0.7
HDA	Harding Lake	7.05	111		Pn	01 15 16.4	+0.1
WAT2	Susitna Watana	7.44	123		Pn	01 15 22.8	+1.1
SCRK	Sand Creek	8.36	108		Pn	01 15 35.6	+1.3
EPYK	Eagle Plains	10.03	86		Pn	01 15 57.1	+0.1
INK	Inuvik	10.73	74	Pn	Pn	01 16 06.7	+0.1
	0.2nm,0.3s,baz=272,slow=8.2,SNR=15						
INK				Sn	Sn	01 18 01.9	-4.7
	0.2nm,0.3s,baz=161,slow=16,SNR=4.5						
INK	Inuvik	10.73	74		Sn	01 18 03.1	-3.5
KDAK	Kodiak Island	10.90	152		Pn	01 16 09.2	+0.3
YKA	Yellowknife Ar	20.27	82	P	P	01 18 09.2	+0.9
	0.7nm,0.6s,baz=302,slow=9.2,SNR=12						
PDAR	Pinedale Array	37.29	105	P	P	01 20 47.2	+2.1
	0.2nm,0.6s,baz=339,slow=9.7,SNR=2.0						
ZALV	Zalesovo Beam	48.86	314	P	P	01 22 17.7	-0.5
	0.7nm,0.5s,baz=26,slow=7.1,SNR=4.2						
TXAR	Lajitas Array	51.38	108	P	P	01 22 38.8	+1.1
	0.5nm,0.8s,baz=338,slow=7.5,SNR=7.1						
MKAR	Makanchi Array	56.01	312	P	P	01 23 11.0	-0.3
	0.2nm,0.3s,baz=32,slow=5.6,SNR=4.0						
ESDC	Sonseca Array	71.67	18	P	P	01 24 55.5	+0.8
	0.4nm,0.8s,baz=340,slow=9.5,SNR=2.5						

*IDC **05** 01:22:30.1±0.6, 15°.32S×173°.80W, h0^{km}, mb4.2/11, mb1 4.4/13, mb1mx4.2/27, mbtmp4.2/13, ML3.4/2, MS3.3/2, Ms1 3.3/2, ms1mx2.6/39, Error ellipse: s-maj=31.5km s-min=15.7km az=139.0*
*NEIC **05** 01:22:39.0±2.8, 15°.54S±0°.08×173°.6W±0°.1, h79^{km}±6^{km}, mb4.4/14, Error ellipse: s-maj=16.3km s-min=10.8km az=98.0*
ISC 05 01:22:41.2±0.5**, 15°.55S**±0°.07×**173°.47W**±0°.08**, h100**^{km}**, n33,** σ**1^{s}80**/30**, mb4.1**/15**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.31	45		Pn	01 23 16.1	-1.7
AFI				Sn	Sn	01 23 44.9	-1.1
NIUE	Niue	4.88	137		Pn	01 23 52.3	+0.1
NIUE					Sn	01 24 44.2	-3.2
RAR	Rarotonga	14.17	115	Pn	Pn	01 25 56.7	-0.6
	0.9nm,0.3s,baz=109,slow=11,SNR=1.3						
DZM	Mont Dzumac	20.08	248	P	P	01 27 04.2	-2.7
	0.2nm,0.3s,baz=271,slow=20,SNR=1.9						
DZM	Mont Dzumac	20.08	248	IAmb	IAmb	01 27 13.5	
	comp=Z,19nm,1.0s						
PPT	Papeete	22.99	98	LR	LR	01 35 12.3	
	comp=Z,38nm,18.5s,baz=226,slow=33						
URZ	Urewera	24.10	198	P	P	01 27 48.8	+1.4
	comp=Z,5.6nm,0.3s,baz=333,slow=4.1,SNR=3.7						
URZ	Urewera	24.10	198	IAmb	IAmb	01 27 49.7	
	comp=Z,15nm,0.9s						
BKZ	Black Stump Fm	25.12	199	P	P	01 27 57.7	+0.9
THZ	Tophouse	28.65	202	P	P	01 28 27.0	-1.4
LTZ	Lake Taylor	29.77	201	P	P	01 28 37.8	-0.5
STKA	Stephens Creek	43.90	240	P	P	01 30 36.7	-1.4
	comp=Z,2.4nm,0.4s,baz=93,slow=11,SNR=11						
STKA	Stephens Creek	43.90	240	IAmb	IAmb	01 30 39.2	
	comp=Z,0.7nm,1.0s						
WRA	Warramunga Arr	49.74	257	P	P	01 31 22.8	-1.1
	comp=Z,2.6nm,0.5s,baz=95,slow=6.7,SNR=29						
AS31	Alice Springs	50.00	252	P	P	01 31 25.1	-0.6
ASAR	Alice Springs	50.00	252	P	P	01 31 24.9	-0.8
	comp=Z,13nm,0.6s,baz=86,slow=8.1,SNR=212						
VNDA	Vanda	63.22	186	P	P	01 33 00.9	+2.5
	comp=Z,0.3nm,0.6s,baz=12,slow=4.8,SNR=1.9						
BEKR	Beckworth	74.02	40	P	P	01 34 08.2	+1.9
BEKR				IAmb	IAmb	01 34 15.0	
	comp=Z,3.5nm,0.7s						
NVAR	Mina Array Bea	74.48	42	P	P	01 34 12.3	+3.2
	comp=Z,1.9nm,0.8s,baz=226,slow=9.6,SNR=10						
ELK	Elko	77.74	41	LR	LR	02 02 34.6	
	comp=Z,31nm,20.8s,baz=286,slow=31						
TX31	Lajitas Ar. Si	80.75	56	P	P	01 34 42.5	-1.5
TX31				IAmb	IAmb	01 34 48.0	
	comp=Z,4.2nm,0.8s						
TX32	Lajitas Array	80.75	56	P	P	01 34 42.0	-2.0
TXAR	Lajitas Array	80.75	56	P	P	01 34 47.0	+3.0
	comp=Z,0.8nm,0.7s,baz=220,slow=7.8,SNR=12						
DOT	Dot Lake	82.16	13	P	P	01 34 49.9	-0.7
DOT				IAmb	IAmb	01 34 54.2	
	comp=Z,3.5nm,1.2s						
PDAR	Pinedale Array	82.42	42	P	P	01 34 53.6	+1.0
	comp=Z,1.0nm,0.7s,baz=204,slow=3.3,SNR=10.0						
ILAR	Eielson Array	82.60	11	P	P	01 34 54.1	+1.3
	comp=Z,0.6nm,0.6s,baz=230,slow=6.1,SNR=9.2						
PRP	Porcupine Dome	83.53	11	IAmb	IAmb	01 35 01.1	
	comp=Z,4.0nm,0.8s						
MAW	Mawson	87.63	199	P	P	01 35 21.3	+3.3
	comp=Z,0.8nm,0.4s,baz=135,slow=1.4,SNR=1.6						
YKA	Yellowknife Ar	90.26	23	P	P	01 35 32.0	+1.7
	comp=Z,0.8nm,1.0s,baz=229,slow=4.4,SNR=9.6						
ARCES	ARCESS Array B	124.75	352	PKP	PKiKP	01 41 28.4	-0.5
	comp=Z,7.8nm,1.3s,baz=259,slow=1.2,SNR=6.2						
BRTR	Keskin Array B	146.23	321	PKPbc	PKPab	01 42 11.1	-0.3
	comp=Z,1.1nm,0.9s,baz=150,slow=2.7,SNR=3.8						
GERES	GERESS Array B	146.28	351	PKPbc	PKiKP	01 42 11.9	-1.5
	comp=Z,0.2nm,0.5s,baz=46,slow=3.9,SNR=3.5						
FUORN	Ofenpass-Fuorn	148.86	355		PKPbc	01 42 17.5	-0.1
FUORN				PKPab	PKPab	01 42 20.4	-1.3

*IDC **05** 01:27:03.9±3.5, 21°.27S×70°.44W, h0^{km}, mb3.6/1, mb1 3.5/2, mb1mx3.3/18, mbtmp3.4/2, ML3.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/24, Error ellipse: s-maj=135.9km s-min=32.0km az=107.0*
*GUC **05** 01:27:05.1±0.9, 20°.60S×71°.00W, h38^{km}±2^{km}, ML3.0*
ISC 05 01:27:06.4±1.8**, 20°.64S**±0°.03×**70°.82W**±0°.08**, h20**^{km}±4^{km}**, n23,** σ**1^{s}07**/34**, 9C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.60	83	⇓iP	Pn	01 27 19.0	-0.8
TA01				i S	Sn	01 27 29.6	+0.6
PATCX	Punta Patache	0.65	107	⇓iP	Pn	01 27 20.3	-0.3
PATCX				i S	Sn	01 27 31.4	+1.1
PATCX				IAML		01 27 33.8	
	comp=E,1μm,0.3s						
TA02	Huaiquique	0.74	61	⇓iP	Pg	01 27 21.1	+0.1
TA02				i S	Sn	01 27 33.1	+0.7
TA02				IAML		01 27 36.2	
	comp=E,2μm,0.1s						
PB02	IPOC Station P	1.10	128	⇓iP	Pg	01 27 27.7	0.0
PB02				i S	Sg	01 27 44.5	+2.3
PB02				IAML		01 27 49.5	
	comp=E,1μm,0.4s						
PSGC	Pisagua	1.22	32	⇑iP	Pn	01 27 27.7	-0.8
PSGC				eS	Sb	01 27 43.8	-0.6
PB01	IPOC Station P	1.31	108	⇓iP	Pg	01 27 31.2	-0.5
PB01				i S	Sg	01 27 50.4	+1.5
PB01				IAML		01 27 52.4	
	comp=N,960nm,0.3s						
PB07	IPOC Station P	1.39	141	⇑iP	Pb	01 27 32.1	+0.2
PB07				i S	Sg	01 27 52.7	+1.1
PB07				IAML		01 28 02.8	
	comp=E,208nm,0.8s						
PB11	IPOC Station P	1.40	52	⇑iP	Pn	01 27 31.3	+0.4
PB11				i S	Sg	01 27 51.5	-0.2
PB11				IAML		01 27 56.9	
	comp=E,436nm,0.5s						
PB08	IPOC Station P	1.64	73	⇑eP	Pb	01 27 35.7	-0.5
PB08				eS	Sg	01 27 59.2	-0.2
PB08				IAML		01 28 03.7	
	comp=E,236nm,0.3s						
PB03	IPOC Station P	1.72	145	⇑eP	Pb	01 27 36.5	-0.9
PB03				eS	Sg	01 28 00.0	-2.0
PB03				IAML		01 28 15.1	
	comp=E,86nm,0.4s						
PB04	IPOC Station P	1.80	160	⇑eP	Pn	01 27 36.7	+0.2
PB04				eS	Sb	01 28 00.9	-0.2
PB04				IAML		01 28 01.4	
	comp=E,172nm,0.3s						
GO01	Chusmiza	1.81	58	⇑eP	Pn	01 27 37.9	+1.0
GO01				eS	Sg	01 28 02.5	-2.3
GO01				IAML		01 28 08.3	
	comp=N,422nm,0.1s						
PB09	IPOC Station P	1.87	128	⇑eP	Pb	01 27 40.3	+0.3
PB09				eS	Sg	01 28 04.6	-2.2
PB09				IAML		01 28 22.4	
	comp=E,146nm,0.4s						
MNMC	Minye Minye	1.89	38	⇑eP	Pn	01 27 38.6	+0.8
MNMC				eS	Sb	01 28 04.0	+0.3
MNMC				IAML		01 28 13.6	
	comp=N,403nm,0.2s						
PB05	IPOC Station P	2.28	166	⇓eP	Pn	01 27 43.0	-0.1
PB05				eS	Sn	01 28 10.6	0.0
PB05				IAML		01 28 28.2	
	comp=E,50nm,0.5s						
PB06	IPOC Station P	2.36	151	eP	Pn	01 27 45.1	+0.9
PB06				eS	Sb	01 28 15.6	-1.6
PB06				IAML		01 28 30.5	
	comp=E,78nm,0.6s						
LPAZ	La Paz	5.02	31	Pn	Pn	01 28 26.9	+5.7
	comp=E,0.5nm,0.3s,baz=210,slow=8.1,SNR=12						
LPAZ				Lg	Lg	01 29 56.1	
	comp=E,0.5nm,0.3s,baz=283,slow=10.0,SNR=6.7						
H03N1	Juan Fernandez	14.64	208	T	T	01 45 46.9	
	baz=33,slow=72,SNR=7.9						
H03N2	Juan Fernandez	14.65	208	T	T	01 45 37.2	
	baz=33,slow=72,SNR=6.0						
H03N3	Juan Fernandez	14.66	208	T	T	01 45 46.3	
	baz=33,slow=72,SNR=7.6						
SJG	San Juan	38.78	7	LR	LR	01 53 38.5	
	comp=E,17nm,18.1s,baz=108,slow=40						
TORD	Torodi Ar. Bea	78.76	71	P	P	01 39 08.2	+0.1
	comp=E,0.4nm,0.8s,baz=247,slow=5.7,SNR=6.8						
MKAR	Makanchi Array	145.95	34	PKPbc	PKPbc	01 46 45.5	+0.8
	comp=E,0.2nm,0.4s,baz=316,slow=4.0,SNR=2.9						

*RSNC **05** 01:44:24.9±1.1, 5°.62N×78°.37W, h32^{km}±19^{km}, ML2.7*
*UPA **05** 01:44:24.4±0.5, 5°.74N×78°.36W, h16^{km}±5^{km}, MW3.7*
ISC 05 01:44:20.6±1.6**, 5°.79N**±0°.05×**78°.12W**±0°.05**, h15**^{km}±12^{km}**, n16,** σ**1^{s}64**/27**, 2C, South of Panama**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PIZC	Pizarro, Choco	1.12	137	⇑eP	Pn	01 44 44.5	+2.8
PIZC				eS	Sn	01 44 58.8	+1.9
PIZC				i		01 45 01.2	
	comp=Z,241nm,0.3s						
PTAC	Punta Ardita,	1.38	13	eP	Pg	01 44 49.7	+2.5
PTAC				eS	Sg	01 45 05.6	+0.5
MALC	Bahia Malaga	1.93	156	eP	Pb	01 44 55.6	0.0
MALC				i		01 45 19.5	
	comp=Z,56nm,1.2s						
CBOC	Ciudad Bolivar	2.10	88	eP	Pg	01 45 00.5	-0.4
CBOC				eS	Sb	01 45 25.7	+1.2
CBOC				i		01 45 27.1	
	comp=Z,25nm,0.4s						
DBBC	Dabeiba	2.25	57	eP	Pg	01 45 04.5	+0.7
DBBC				i		01 45 39.3	
	comp=Z,32nm,0.7s						
YOTC	Yotoco, Valle	2.52	135	eP	Pb	01 45 04.3	-1.3
YOTC				eS	Sn	01 45 33.2	+1.4
HELC	Santa Helena	2.61	81	eP	Pg	01 45 09.0	-1.7
HELC				eS	Sn	01 45 35.5	+1.3
HELC	Santa Helena	2.61	81	eP	Pg	01 45 09.2	-1.4
HELC				eS	Sg	01 45 43.2	-1.3
HORQ	Saladito	2.74	147	eP	Pn	01 45 06.6	+2.3
HORQ				eS	Sn	01 45 35.2	-2.1
UPD2	Meteti	2.74	2	eS	Sb	01 45 41.5	-1.2
AZU	Azuero	2.92	313	eP	Pn	01 45 07.9	+1.3
AZU				eS	Sn	01 45 40.7	-0.7
AZU				i		01 45 47.9	
	comp=Z,25nm,0.5s						
AZU	Azuero	2.92	313	⇑eP	Pn	01 45 07.9	+1.3
AZU				eS	Sn	01 45 41.2	-0.2
CAP2	Capurgana	2.94	15	eS	Sb	01 45 47.1	-1.4
CACAO	El Cacao, Vera	3.13	300	eP	Pn	01 45 10.0	+0.6
CACAO				eS	Sn	01 45 44.8	-1.9
NORC	Norcasia	3.24	94	eP	Pb	01 45 16.3	-1.7
ORTC	Ortega, Tolima	3.42	123	eP	Pb	01 45 19.9	-1.1
ORTC				eS	Sb	01 46 00.2	-2.3
ORTC				i		01 46 10.8	
	comp=Z,23nm,0.7s						

*SOME **05** 01:57:51.0, 40°.70N×77°.63E, h0^{km}*
*KRNET **05** 01:57:52.9±0.1, 40°.75N×77°.56E, h14^{km}, mb2.8*
*NNC **05** 01:57:52.1±1.1, 40°.67N×77°.61E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=7.0km s-min=5.5km az=176.0*
ISC 05 01:57:48.0±3.0**, 40°.6N**±0°.1×**77°.57E**±0°.04**, h1**^{km}±19^{km}**, n43,** σ**1^{s}13**/67**, 9C-15D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KDJ	Kajisay	1.60	350	⇓eP	Pg	01 58 19.4	+0.7
	baz=49						
KDJ				⇓iS	Sg	01 58 39.2	-0.3
	baz=49						
ULHL	Ulahol	1.96	330	⇓iP	Pg	01 58 26.5	+0.9
	baz=27						
ULHL				⇓iS	Sg	01 58 51.3	+0.2
	baz=27						
PRZ	Przheval'sk	2.03	18	⇑iP	Pg	01 58 27.6	+0.8
	baz=20						
PRZ				⇑iS	Sg	01 58 52.8	-0.3
	baz=20						
ANVS	Anan'yevo	2.23	2	⇑iP	Pg	01 58 30.7	0.0
	baz=2.0						
ANVS				⇑iS	Sg	01 58 58.4	-1.2
	baz=2.0						
BOOM	Boomskoye usch	2.29	328	⇓iP	Pb	01 58 31.9	+1.8
	baz=26						
BOOM				⇓iS	Sg	01 59 00.2	-1.3
	baz=26						
KZA	Kyzart	2.32	312	⇑iP	Pb	01 58 32.7	+1.9
	baz=8.0						
KZA				⇑iS	Sb	01 59 02.0	+2.0
	baz=8.0						
TNSS	Tian-Shan	2.52	350	eP	Pg	01 58 36.6	+0.2
	12nm,0.3s						
TNSS				eS	Sg	01 59 09.5	+0.4
	20nm,0.6s						
TNSS	Tian-Shan	2.52	350	Pg	Pg	01 58 36.6	+0.2
	20nm,0.6s						
TNSS				Lg	Lg	01 59 09.4	
	20nm,0.6s						
IZV	Izvestkoviy	2.58	344	eP	Pg	01 58 38.1	+0.7
	2.7nm,0.1s						
IZV				eS	Sg	01 59 12.1	+1.1
	29nm,0.2s						
IZV	Izvestkoviy	2.58	344	Pg	Pg	01 58 37.5	0.0
	7.7nm,0.3s						
IZV				Lg	Lg	01 59 10.7	
	33nm,0.5s						
SATY	Saty	2.58	14	eP	Pg	01 58 37.2	-0.3
	1.6nm,0.1s						
SATY				eS	Sg	01 59 10.5	-0.4
	15nm,0.4s						
SATY	Saty	2.58	14	Pg	Pg	01 58 37.8	+0.4
	5.1nm,0.5s						
SATY				Lg	Lg	01 59 10.8	
	15nm,0.4s						
MDOK	Medeo	2.64	352	eP	Pg	01 58 39.0	+0.5
	5.6nm,0.1s						
MDOK				eS	Sg	01 59 13.5	+0.8
	19nm,0.6s						
MDOK	Medeo	2.64	352	Pg	Pb	01 58 37.0	+0.9
	7.9nm,0.6s						
MDOK				Lg	Lg	01 59 13.1	
	14nm,0.6s						
MDOK	Medeo	2.64	352	Pg	Pg	01 58 38.3	-0.2
	11nm,0.5s						
MDOK				Lg	Lg	01 59 11.9	
	19nm,0.6s						
AAA	Alma-Ata	2.70	350	eP	Pg	01 58 41.2	+1.5
	21nm,0.0s						
AAA				eS	Sg	01 59 17.3	+2.6
	32nm,0.1s						
AAA	Alma-Ata	2.70	350	Pg	Pg	01 58 41.2	+1.5
	35nm,0.1s						
AAA				Lg	Lg	01 59 17.3	
	32nm,0.1s						
KOTS	Kotyrbulak	2.70	353	eP	Pg	01 58 39.8	+0.1
	5.8nm,0.1s						
KOTS				eS	Sg	01 59 15.0	+0.3
	32nm,0.4s						
KOTS	Kotyrbulak	2.70	353	Pg	Pg	01 58 40.0	+0.3
	23nm,0.3s						
KOTS				Lg	Lg	01 59 15.0	
	15nm,0.3s						
MTBS	Maitube	2.71	342	eP	Pg	01 58 40.1	+0.2
	4.0nm,0.1s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MTBS				eS	Sg	01 59 15.6	+0.5
	9.9nm,0.3s						
MTBS	Maitube	2.71	342	Pg	Pg	01 58 40.6	+0.6
	3.5nm,0.2s						
MTBS				Lg	Lg	01 59 15.6	
	9.9nm,0.3s						
KST	Kastek	2.76	335	eP	Pg	01 58 41.2	+0.3
	2.9nm,0.2s						
KST				eS	Sg	01 59 17.3	+0.6
	6.1nm,0.6s						
KST	Kastek	2.76	335	Pg	Pg	01 58 41.2	+0.3
	4.6nm,0.4s						
KST				Lg	Lg	01 59 17.0	
	4.5nm,0.3s						
TKM2	Tokmak 2	2.79	329	⇑Pg	Pg	01 58 41.6	+0.2
	2.1nm,0.5s						
TKM2				⇓Lg	Lg	01 59 19.2	
	2.9nm,0.5s						
UZB	Uzynbulak	2.81	22	eP	Pg	01 58 41.6	-0.3
	1.3nm,0.1s						
UZB				eS	Sg	01 59 18.0	-0.3
	5.7nm,0.3s						
UZB	Uzynbulak	2.81	22	Pg	Pg	01 58 41.7	-0.1
	2.4nm,0.5s						
UZB				Lg	Lg	01 59 17.5	
	6.1nm,0.8s						
UCH	Uchtor	2.84	307	⇓iP	Pb	01 58 40.2	+0.5
	baz=4.0						
UCH				⇓iS	Sb	01 59 14.7	-0.5
	baz=4.0						
KBK	Karagaybulak	2.88	318	⇑eP	Pb	01 58 40.4	+0.2
	baz=15						
KBK				⇑iS	Sb	01 59 15.1	-0.8
	baz=15						
KURS	Kuram	2.97	9	eP	Pg	01 58 44.1	-0.8
	2.0nm,0.2s						
KURS				eS	Sg	01 59 22.5	-0.8
	4.7nm,0.4s						
KURS	Kuram	2.97	9	Pg	Pg	01 58 44.0	-0.8
	3.2nm,0.5s						
KURS				Lg	Lg	01 59 21.5	
	3.9nm,0.5s						
AAK	Ala-Archa	3.11	313	⇓iP	Pb	01 58 43.8	-0.3
	baz=10.0						
AAK				⇓iS	Sb	01 59 20.4	-2.1
	baz=10.0						
AAK	Ala-Archa	3.11	313	Pg	Pb	01 58 47.0	+2.9
	2.8nm,0.6s						
AAK				Lg	Lg	01 59 27.6	
	9.2nm,1.1s						
PDGK	Podgornoye	3.12	27	Pg	Pg	01 58 47.1	-0.7
	1.8nm,0.4s						
PDGK				Lg	Lg	01 59 26.8	
	5.9nm,0.7s						
PDGK	Podgornoye	3.12	27	⇓Pg	Pb	01 58 45.8	+1.5
	2.0nm,0.5s						
PDGK				⇓Lg	Lg	01 59 26.8	
	19nm,0.8s						
KTBS	Karatobe	3.23	349	eP	Pg	01 58 49.0	-0.8
	1.9nm,0.3s						
KTBS				eS	Sg	01 59 30.6	-1.0
	16nm,0.3s						
KTBS	Karatobe	3.23	349	Pg	Pg	01 58 49.2	-0.6
	4.1nm,0.4s						
KTBS				Lg	Lg	01 59 30.4	
	19nm,0.5s						
AML	Almayashu	3.31	300	⇓iP	Pb	01 58 47.2	-0.6
	baz=97						
AML				⇓iS	Sb	01 59 27.0	-1.7
	baz=97						
KRBS	Karabastau	3.44	336	eP	Pg	01 58 52.8	-1.1
	2.1nm,0.3s						
KRBS				eS	Sg	01 59 37.2	-1.3
	3.8nm,0.3s						
KRBS	Karabastau	3.44	336	Pg	Pg	01 58 52.8	-1.1
	2.1nm,0.3s						
KRBS				Lg	Lg	01 59 36.9	
	6.0nm,0.7s						
KUU	Kurty	3.46	345	eP	Pg	01 58 52.7	-1.6
	1.2nm,0.1s						
KUU				eS	Sg	01 59 36.9	-2.2
	7.2nm,0.3s						
KUU	Kurty	3.46	345	Pg	Pg	01 58 52.8	-1.6
	0.7nm,0.2s						
KUU				Lg	Lg	01 59 36.6	
	8.5nm,0.8s						
ARXS	Arharly	3.66	3	eP	Pg	01 58 56.6	-1.5
	3.5nm,0.4s						
ARXS				eS	Sg	01 59 43.6	-2.0
	7.5nm,0.3s						
ARXS	Arharly	3.66	3	Pg	Pg	01 58 56.7	-1.5
	3.5nm,0.4s						
ARXS				Lg	Lg	01 59 43.6	
	7.5nm,0.3s						

*NEIC **05** 02:01:38.9±1.6, 20°.16S±0°.02×70°.45W±0°.04, h31km±4km, mb4.4/28, Mwr4.2/49, ML4.5(GUC), Error ellipse: s-maj=5.5km s-min=3.4km az=106.0*

*NEIC **05** 02:01:38.3, 20°.15S×70°.47W, h32km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.80; $M_{\theta\theta}$-0.34; $M_{\phi\phi}$-1.47; $M_{r\theta}$0.69; $M_{\theta\phi}$0.92; $M_{\phi r}$-1.12; Fault plane solution: $M_0$2.31000×10^{15} NP1:ϕ_s332.39000°, δ27.66000°, λ92.80000°. NP2:ϕ_s149.22000°, δ62.37000°, λ88.53000°. Principal axes: T 2.2161, Plg73.0000°, Azm56.0000°; N 0.1767, Plg1.0000°, Azm150.0000°; P -2.3928, Plg17.0000°, Azm240.0000°;*

*SJA **05** 02:01:38.2±1.2, 20°.17S×70°.38W, h33km±2km, ML4.4, MW4.2*

*GUC **05** 02:01:39.4±0.9, 20°.18S×70°.35W, h42km±2km, ML4.5*

*IDC **05** 02:01:42.0±2.3, 20°.00S×70°.14W, h51km±22km, mb3.9/13, mb1 4.1/16, mb1mx4.0/30, mbtmp4.2/16, ML4.3/3, MS3.5/8, Ms1 3.5/8, ms1mx3.3/25, Error ellipse: s-maj=21.1km s-min=14.2km az=83.0*

*VAO **05** 02:01:42.8±0.9, 20°.27S×70°.48W, h104km, mb4.4*

ISC 05 02:01:37.6±0.9**, 20°.16S**±0°.02×**70°.46W**±0°.04**, h25**km±6km**, n138, σ1^{s}18**/160**, mb4.4**/19**, MS3.4**/4**, 4C-9D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	Huaiquique	0.33	110	⇓iP	Pn	02 01 47.2	+0.4
TA02				iS	Sn	02 01 52.5	-0.1
TA01	Diego Aracena	0.48	147	⇓iP	Pn	02 01 49.3	+0.4
TA01				iS	Sn	02 01 56.2	-0.3
TA01	Diego Aracena	0.48	147		Pn	02 01 49.3	+0.4
PSGC	Pisagua	0.64	29	⇓eP	Pn	02 01 51.5	+0.3
PSGC				eS	Sn	02 02 00.2	-0.4
PSGCX	Pisagua	0.64	29		Pn	02 01 51.2	0.0
PSGCX				Sn	Sn	02 02 00.1	-0.5
PSGCX	Pisagua	0.64	29	iP	Pn	02 01 51.5	+0.3
PSGCX				iS	Sn	02 02 00.1	-0.5
PSGCX				IAML		02 02 01.6	
	comp=Z,9μm,0.4s						
PATCX	Punta Patache	0.72	157	eP	Pn	02 01 52.8	+0.6
PATCX				iS	Sn	02 02 02.6	+0.1
PATCX	Punta Patache	0.72	157		Pn	02 01 52.9	+0.7
PATCX				Sn	Sn	02 02 02.5	0.0
PATCX	Punta Patache	0.72	157	iP	Pn	02 01 52.8	+0.6
PATCX				iS	Sn	02 02 02.3	-0.2
PATCX				IAML		02 02 06.2	
	comp=Z,8μm,0.5s						
PB11	IPOC Station P	0.85	62	iP	Pn	02 01 54.7	+0.6
PB11				eS	Sn	02 02 05.2	-0.7
PB11				IAML		02 02 08.7	
	comp=N,46μm,0.3s						
PB11	IPOC Station P	0.85	62		Pn	02 01 54.0	-0.1
PB11				Sn	Sn	02 02 05.8	-0.1
PB11	IPOC Station P	0.85	62	iP	Pn	02 01 54.8	+0.6
PB11				iS	Sn	02 02 06.0	+0.1
PB11				IAML		02 02 08.4	
	comp=Z,11μm,0.2s						
PB08	IPOC Station P	1.22	89	⇓iP	Pb	02 02 00.6	+0.3
PB08				iS	Sn	02 02 16.3	+0.8
PB08	IPOC Station P	1.22	89		Pb	02 02 00.6	+0.3
PB08				Sn	Sn	02 02 16.2	+0.8
PB08	IPOC Station P	1.22	89	iP	Pb	02 02 00.8	+0.4
PB08				iS	Sn	02 02 15.9	+0.5
PB08				IAML		02 02 19.3	
	comp=Z,3μm,0.3s						
PB01	IPOC Station P	1.26	134	⇑iP	Pb	02 02 00.5	-0.3
PB01				eS	Sb	02 02 16.5	-0.2
PB01				IAML		02 02 20.1	
	comp=E,16μm,0.7s						
PB01	IPOC Station P	1.26	134	Pn	Pb	02 02 00.8	0.0
PB01	IPOC Station P	1.26	134	iP	Pb	02 02 01.0	+0.2
PB01				iS	Sb	02 02 17.7	+1.0
PB01				IAML		02 02 19.3	
	comp=Z,9μm,0.5s						
PB02	IPOC Station P	1.27	156	⇓iP	Pb	02 02 01.2	+0.3
PB02				iS	Sb	02 02 17.9	+1.0
PB02				IAML		02 02 20.0	
	comp=E,22μm,0.5s						
PB02	IPOC Station P	1.27	156	eP	Pb	02 02 01.2	+0.3
PB02				iS	Sb	02 02 17.8	+1.0
PB02				IAML		02 02 21.0	
	comp=Z,16μm,0.4s						
GO01	Chusmiza	1.28	68	eP	Pb	02 02 01.5	+0.1
GO01				eS	Sn	02 02 17.7	+0.7
GO01				IAML		02 02 19.1	
	comp=N,24μm,0.3s						
GO01	Chusmiza	1.28	68		Pb	02 02 01.0	-0.4
MNMC	Minye Minye	1.30	39	⇓iP	Pb	02 02 02.0	+0.3
MNMC				iS	Sb	02 02 19.2	+1.1
MNMC				IAML		02 02 22.6	
	comp=N,23μm,0.4s						
MNMC	Minye Minye	1.30	39		Pb	02 02 01.1	-0.6
MNMCX	Minye Minye	1.30	39	iP	Pb	02 02 02.0	+0.4
MNMCX				iS	Sb	02 02 19.1	+1.0
MNMCX				IAML		02 02 24.6	
	comp=Z,10μm,0.3s						
PB12	IPOC Station P	1.54	5	⇑iP	Pb	02 02 05.2	-0.3
PB12				eS	Sb	02 02 25.3	+0.6
PB12				IAML		02 02 27.7	
	comp=E,14μm,0.7s						
PB12	IPOC Station P	1.54	5		Pn	02 02 04.5	+0.9
PB12	IPOC Station P	1.54	5	eP	Pb	02 02 05.3	-0.3
PB12				iS	Sb	02 02 25.2	+0.6
PB12				IAML		02 02 27.1	
	comp=Z,6μm,0.4s						
PB07	IPOC Station P	1.65	161	⇓iP	Pb	02 02 07.0	-0.4
PB07				eS	Sb	02 02 28.0	+0.2
PB07				IAML		02 02 31.7	
	comp=E,6μm,0.6s						
PB07	IPOC Station P	1.65	161		Pn	02 02 05.8	+0.6
PB07	IPOC Station P	1.65	161	iP	Pb	02 02 07.0	-0.4
PB07				iS	Sb	02 02 27.6	-0.3
PB07				IAML		02 02 31.2	
	comp=Z,6μm,0.4s						
AP01	Chacalluta	1.78	3	eP	Pb	02 02 09.5	-0.1
AP01				eS	Sb	02 02 32.1	+0.5
AP01				IAML		02 02 37.8	
	comp=N,19μm,0.3s						
AP01	Chacalluta	1.78	3	Pn	Pb	02 02 08.9	-0.7
PB09	IPOC Station P	1.98	145	⇑iP	Pb	02 02 12.9	-0.3
PB09				eS	Sb	02 02 39.2	+1.6
PB09				IAML		02 02 43.6	
	comp=E,5μm,0.3s						
PB09	IPOC Station P	1.98	145		Pb	02 02 12.7	-0.5
PB09	IPOC Station P	1.98	145	iP	Pb	02 02 13.0	-0.1
PB09				iS	Sb	02 02 39.4	+1.8
PB09				IAML		02 02 42.2	
	comp=Z,5μm,1.1s						
PB03	IPOC Station P	1.99	161	⇓iP	Pb	02 02 11.7	-1.5
PB03				iS	Sb	02 02 36.7	-1.0
PB03				IAML		02 02 44.8	
	comp=E,3μm,0.6s						
PB03	IPOC Station P	1.99	161	iP	Pb	02 02 11.8	-1.5
PB03				iS	Sb	02 02 36.5	-1.3
PB03				IAML		02 02 44.6	
	comp=Z,3μm,0.6s						
PB16	IPOC Station P	2.02	26	⇓eP	Pb	02 02 12.9	-1.1
PB16				eS	Sb	02 02 39.2	+0.1
PB16				IAML		02 02 51.4	
	comp=N,3μm,0.5s						
PB16	IPOC Station P	2.02	26		Pb	02 02 13.0	-1.1
PB16	IPOC Station P	2.02	26	iP	Pb	02 02 13.0	-1.1
PB16				iS	Sb	02 02 37.6	-1.4
PB16				IAML		02 02 45.2	
	comp=Z,3μm,0.4s						
PB04	IPOC Station P	2.18	173	⇑eP	Pn	02 02 13.6	+1.1
PB04				eS	Sn	02 02 38.0	-0.8
PB04				IAML		02 02 49.7	
	comp=N,4μm,0.7s						
PB04	IPOC Station P	2.18	173		Pn	02 02 13.0	+0.5
PB04	IPOC Station P	2.18	173	iP	Pn	02 02 13.4	+0.9
PB04				iS	Sn	02 02 39.4	+0.6
PB04				IAML		02 02 54.4	
	comp=Z,3μm,0.6s						
PB06	IPOC Station P	2.67	162		Pn	02 02 19.8	+0.7
PB06	IPOC Station P	2.67	162	iP	Pn	02 02 20.4	+1.3
PB06				iS	Sn	02 02 52.1	+1.5
PB06				IAML		02 03 05.2	
	comp=Z,2μm,0.7s						
PB05	IPOC Station P	2.69	175	iP	Pn	02 02 19.9	+0.5
PB05				iS	Sn	02 02 50.4	-0.9
PB05				IAML		02 03 09.1	
	comp=Z,1μm,0.5s						
LVC	Limon Verde	2.83	150	P	Pb	02 02 24.9	-2.8
	comp=Z,66nm,0.3s,baz=329,slow=9.8,SNR=194						
LVC				S	Sb	02 02 59.1	-3.0
	comp=Z,72nm,0.3s,baz=280,slow=22,SNR=8.5						
LVC				LR	LR	02 03 41.6	
	comp=Z,685nm,20.7s,baz=326,slow=42						
LVC	Limon Verde	2.83	150	iP	Pb	02 02 24.9	-2.8
LVC				iS	Sb	02 03 01.3	-0.8
LVC				IAML		02 03 16.1	
	comp=Z,511nm,0.4s						
LVC	Limon Verde	2.83	150	eP	Pb	02 02 24.8	-2.8
LVC				eS	Sb	02 02 59.0	-3.2
PB15	IPOC Station P	3.17	163		Pn	02 02 27.3	+1.2
PB15	IPOC Station P	3.17	163	iP	Pn	02 02 27.3	+1.2
PB10	IPOC Station P	3.34	182		Pn	02 02 28.6	+0.3
PB10	IPOC Station P	3.34	182	iP	Pn	02 02 28.2	0.0
PB10				iS	Sn	02 03 06.2	-0.9
PB10				IAML		02 03 40.2	
	comp=Z,307nm,0.7s						
LPAZ	La Paz	4.44	30	P	Pb	02 02 50.5	-4.7
	comp=Z,10nm,0.3s,baz=205,slow=2.2,SNR=205						
LPAZ				LR	LR	02 04 56.3	
	comp=Z,617nm,19.0s,baz=237,slow=47						
LPAZ	La Paz	4.44	30	Pn	Pn	02 02 49.2	+5.2
LPAZ	La Paz	4.44	30	eP	Pb	02 02 50.6	-4.7
PB14	IPOC Station P	4.45	179		Pn	02 02 43.2	-0.6
PB14	IPOC Station P	4.45	179	iP	Pn	02 02 43.4	-0.4
PB14				IAML		02 04 03.8	
	comp=Z,273nm,0.6s						
YJA	Yavi	5.03	114	iP	Pn	02 02 56.8	+4.9
AZAP	Zapla	6.43	130	iP	Pn	02 03 15.8	+4.9
AC02	Maricunga	6.76	170	Pn	Pn	02 03 16.8	+1.2
AC02				Sn	Sn	02 04 32.9	+0.9
GO03	Copiap	7.40	178	Pn	Pn	02 03 25.1	+0.9
GO03				Sn	Sn	02 04 45.2	-2.2
AC05	El Transito	8.64	179	Pn	Pn	02 03 40.8	-0.4
SIV	San Ignacio	9.84	67	P	Pn	02 03 57.6	0.0
	comp=Z,12nm,0.3s,baz=272,slow=9.2,SNR=144						
SIV				S	Sn	02 05 46.0	-1.3
	baz=313,slow=22,SNR=1.2						
SIV				LR	LR	02 08 23.4	
	comp=Z,352nm,18.0s,baz=187,slow=42						
SAML	Samuel	13.18	33		Pn	02 04 45.1	+1.8
CPUP	Villa Florida	13.54	119	P	Pn	02 04 48.5	+0.5
	comp=Z,0.1nm,0.3s,baz=249,slow=19,SNR=1.6						
CPUP				LR	LR	02 10 32.2	
	comp=Z,195nm,20.7s,baz=226,slow=40						
CPUP	Villa Florida	13.54	119		Pn	02 04 49.4	+1.4
H03N1	Juan Fernandez	15.22	208	T	T	02 20 47.5	
	baz=33,slow=72,SNR=535						
H03N2	Juan Fernandez	15.23	208	T	T	02 20 47.1	
	baz=33,slow=72,SNR=626						
H03N3	Juan Fernandez	15.24	208	T	T	02 20 46.1	
	baz=33,slow=72,SNR=579						
TRCB	Terra Rica	16.80	102	eP	Pn	02 05 31.5	+0.3
CLDB	Colider	16.86	59	eP	Pn	02 05 32.2	+0.1
PTGB	Pitanga	17.59	108	eP	Pn	02 05 40.6	-0.7
PCMB	Pacaembu	18.00	98	eP	Pn	02 05 45.5	-0.6
ARAG	Araguaiana, MT	18.28	79	eP	Pn	02 05 48.6	-1.1
PLCA	Paso Flores	20.51	180	P	Pn	02 06 17.6	+1.4
	comp=Z,1.7nm,0.6s,baz=355,slow=12,SNR=6.8						
PLCA	Paso Flores	20.51	180	P	P	02 06 14.3	+0.4
IPMB	Ipameri, GO	21.13	88	eP	P	02 06 20.5	-0.3
BDFB	Brasilia	21.82	82	P	P	02 06 26.5	-1.8
	comp=Z,2.9nm,0.4s,baz=234,slow=7.7,SNR=10						
BDFB				LR	LR	02 16 42.5	
	comp=Z,166nm,20.7s,baz=267,slow=42						
BDFB	Brasilia	21.82	82	P	P	02 06 27.7	-0.6
PTGA	Pitinga	21.87	29	P	P	02 06 26.9	-1.7
	comp=Z,11nm,0.5s,baz=210,slow=16,SNR=22						
PTGA	Pitinga	21.87	29	P	P	02 06 27.5	-1.2
PTGA				IAmb	IAmb	02 06 42.7	
	comp=Z,9.6nm,0.8s						
PTGA	Pitinga	21.87	29	eP	P	02 06 27.7	-0.9
ORTC	Ortega, Tolima	24.38	348	eP	P	02 06 54.9	+0.9
ROSC	El Rosal	25.13	351	P	P	02 07 02.4	+1.2
	comp=Z,14nm,0.5s,baz=80,slow=14,SNR=7.9						
ROSC				LR	LR	02 17 32.1	
	comp=Z,166nm,18.6s,baz=202,slow=38						
ROSC	El Rosal	25.13	351	P	P	02 06 59.7	-1.5
JANB	Januaria	25.42	83	eP	P	02 07 01.8	-1.6
GUY2C	Guyana, Caldas	25.68	349	eP	P	02 07 08.1	+1.8
RUSC	La Rusia	26.02	354	eP	P	02 07 10.0	+0.6
CBOC	Ciudad Bolivar	26.43	348	eP	P	02 07 14.1	+1.3
HELC	Santa Helena	26.66	349	eP	P	02 07 15.5	+0.5
SDV	Santo Domingo	28.86	360	LR	LR	02 20 26.7	
	comp=Z,88nm,18.4s,baz=239,slow=39						
SDV	Santo Domingo	28.86	360	eP	P	02 07 32.6	-2.0
ROSB	Rosrio	30.89	60	eP	P	02 07 51.4	-1.0
TEIG	Tepich	43.77	335	P	P	02 09 42.4	+1.2
	comp=Z,3.0nm,0.4s,baz=56,slow=0.0,SNR=1.8						
TEIG	Tepich	43.77	335	IAmb	IAmb	02 10 00.7	
	comp=Z,16nm,1.1s						
TKL	Tuckaleechee C	56.93	347	LR	LR	02 36 42.7	
	comp=Z,26nm,18.3s,baz=108,slow=37						
WLAR	White Oak Lake	57.74	338	P	P	02 11 26.7	+0.3
TXAR	Lajitas Array	58.71	326	P	P	02 11 34.5	+1.0
	comp=Z,0.2nm,0.6s,baz=143,slow=9.0,SNR=3.7						
ABTX	Abilene, Hawle	59.45	331	P	P	02 11 37.5	-0.9
ABTX				IAmb	IAmb	02 11 40.6	
	comp=Z,5.7nm,0.8s						
VNA2	Neumayer--Watz	62.39	161	P	P	02 11 59.6	+1.7
	baz=286,slow=6.4						
SNAA	Sanae	64.01	161	P	P	02 12 10.2	+1.5
DBIC	Dimbokro	69.76	75	P	P	02 12 44.3	-1.8
	comp=Z,3.0nm,0.7s,baz=165,slow=7.3,SNR=3.8						
DBIC	Dimbokro	69.76	75	IAmb	IAmb	02 12 51.6	
	comp=Z,11nm,1.1s						
DUG	Dugway, Tooele	71.85	327	IAmb	IAmb	02 13 01.8	
	comp=Z,3.9nm,1.1s						
PDAR	Pinedale Array	72.24	331	P	P	02 13 01.0	+0.2
	comp=Z,0.2nm,0.3s,baz=120,slow=8.8,SNR=4.6						
HWUT	Hardware Ranch	72.29	329	IAmb	IAmb	02 13 05.4	
	comp=Z,3.3nm,0.9s						
OMMB	Old Mammoth Mi	73.40	322	IAmb	IAmb	02 13 11.3	
	comp=Z,2.8nm,0.8s						
NVAR	Mina Array Bea	73.55	323	P	P	02 13 10.9	+2.2
	comp=Z,1.7nm,0.8s,baz=160,slow=7.0,SNR=10						
FLWY	Flagg Ranch	73.78	331	IAmb	IAmb	02 13 13.0	
	comp=Z,6.8nm,1.1s						
KVN	Kaiserville	73.86	323	IAmb	IAmb	02 13 13.5	
	comp=Z,3.3nm,0.9s						
YNE	Yellowstone No	74.19	332	P	P	02 13 12.0	-0.3
SCHQ	Schefferville	74.75	2	P	P	02 13 14.6	-0.5
	comp=Z,2.9nm,0.8s,baz=77,slow=17,SNR=4.2						
SCHQ	Schefferville	74.75	2	IAmb	IAmb	02 13 16.6	
	comp=Z,5.8nm,1.1s						
BMO	Blue Mountains	77.51	328	P	P	02 13 31.5	+0.3
BMO				IAmb	IAmb	02 13 33.9	
	comp=Z,2.2nm,0.8s						
TORD	Torodi Ar. Bea	78.28	71	P	P	02 13 35.2	-0.8
	comp=Z,2.8nm,0.4s,baz=250,slow=5.4,SNR=74						
ESDC	Sonseca Array	85.91	45	P	P	02 14 15.9	+0.4
	comp=Z,0.7nm,0.9s,baz=251,slow=6.2,SNR=5.3						
YKA	Yellowknife Ar	89.45	341	P	P	02 14 32.8	+0.9
	comp=Z,3.1nm,0.8s,baz=137,slow=5.2,SNR=48						
KBZ	Khabaz	120.39	50	PKP	PKiKP	02 20 27.4	+0.6
	comp=Z,1.4nm,0.8s,baz=143,slow=8.6,SNR=3.6						
H11S2	WAKE ISLAND Hy	126.26	279	T	T	04 39 54.0	
	baz=102,slow=74,SNR=1109						
H11S1	WAKE ISLAND Hy	126.27	279	T	T	04 39 55.1	
	baz=102,slow=74,SNR=406						
H11S3	WAKE ISLAND Hy	126.28	279	T	T	04 39 56.4	
	baz=102,slow=74,SNR=403						
H11N3	WAKE ISLAND Hy	126.31	280	T	T	04 39 57.7	
	baz=102,slow=74,SNR=246						
H11N2	WAKE ISLAND Hy	126.33	280	T	T	04 40 04.8	
	baz=102,slow=74,SNR=199						
H11N1	WAKE ISLAND Hy	126.33	280	T	T	04 39 59.0	
	baz=102,slow=74,SNR=218						
ASAR	Alice Springs	130.39	210	PKP	PKPdf	02 20 47.2	+0.5
	comp=Z,0.6nm,0.6s,baz=125,slow=1.5,SNR=5.6						
WRA	Warramunga Arr	133.33	213	PKP	PKPdf	02 20 52.8	+0.5
	comp=Z,0.4nm,0.4s,baz=150,slow=1.8,SNR=1.5						
ZALV	Zalesovo Beam	141.33	23	PKP	PKPdf	02 21 05.5	-0.4
	comp=Z,1.4nm,0.5s,baz=308,slow=4.3,SNR=6.3						
KDJ	Kajisay	145.01	44		PKPdf	02 21 14.3	+1.2
NIL	Nilore	145.15	60		PKPdf	02 21 13.6	+0.3
MAKZ	Makanchi	145.19	34		PKPdf	02 21 13.3	+0.3
MAKZ					sPKPdf	02 21 24.1	+0.2
KSH	Kashi	145.35	49	PKPbc	PKPdf	02 21 14.8	+1.1
KSH				pPKP	sPKPab	02 21 22.8	-1.6
KSH				PP	PP	02 24 34.5	+1.1
MK31	Makanchi Array	145.36	34		PKPbc	02 21 13.4	+0.3
MKAR	Makanchi Array	145.36	34	PKPbc	PKPbc	02 21 13.5	+0.3
	comp=Z,7.1nm,0.8s,baz=317,slow=3.9,SNR=56						
MJAR	Matsushiro Arr	150.11	309	PKPbc	PKiKP	02 21 27.8	+0.4
	comp=Z,2.2nm,0.7s,baz=84,slow=1.0,SNR=8.6						
SONM	Songino Array	152.27	5	PKPbc	PKiKP	02 21 32.1	+0.5
	comp=Z,1.5nm,0.5s,baz=314,slow=1.4,SNR=13						
LZH	Lanzhou	163.36	16	ePKP	PKPdf	02 21 35.2	-3.4
LZH				pPKP	pPKPdf	02 21 46.2	-0.5
LZH				sPKP		02 21 50.5	

IDC 05 02:02:50.2±3.8**, 6°.72S**×**154°.44E, h0**km**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/30**, mbtmp3.6**/4**, MS3.1**/1**, Ms1 3.0**/1**, ms1mx2.4**/30**, Error ellipse: s-maj=124.8km s-min=31.8km az=112.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.53	234	P	P	02 08 01.8	-0.4
	1.5nm,0.9s,baz=59,slow=9.8,SNR=5.4						
ASAR	Alice Springs	25.95	227	P	P	02 08 24.8	+0.2
	0.8nm,0.8s,baz=57,slow=10.0,SNR=6.5						
STKA	Stephens Creek	27.75	204	LR	LR	02 18 04.4	
	comp=Z,34nm,18.5s,baz=26,slow=33						
SONM	Songino Array	68.81	327	P	P	02 13 56.0	-0.5
	0.4nm,0.7s,baz=144,slow=5.4,SNR=2.2						
MKAR	Makanchi Array	82.84	319	P	P	02 15 17.4	+0.8
	0.5nm,0.5s,baz=104,slow=5.5,SNR=7.2						
TORD	Torodi Ar. Bea	152.43	286	PKPbc	PKPbc	02 22 48.9	-0.5
	0.4nm,0.7s,baz=96,slow=2.9,SNR=5.4						

*UPA **05** 02:05:22.7±1.5, 12°.06N×81°.26W, h36km±35km, MW4.1*

ISC 05 02:05:19.0±1.2**, 12°.08N**±0°.05×**81°.20W**±0°.07**, h10**km**, n13, σ1^{s}23**/21**, Caribbean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRVC	Isla de Provid	1.30	353	eP	Pn	02 05 43.7	+0.5
PRVC				eS	Sb	02 06 00.2	-0.1
PINA	Piqa, Costa Ab	3.02	158	eP	Pn	02 06 07.4	+0.4
BCIP	Isla Barro Col	3.19	155	eP	Pn	02 06 09.3	0.0
BCIP	Isla Barro Col	3.19	155	eP	Pn	02 06 09.9	+0.7
BCIP				eS	Sn	02 06 46.8	-0.7
CHGR2	Aguacate	3.26	197	eP	Pn	02 06 11.0	+0.8
CHGR2				eS	Sn	02 06 47.2	-1.9
ZANG	Zanguenga, Cho	3.37	157	eP	Pn	02 06 12.3	+0.6
ZANG				eS	Sn	02 06 51.4	-0.4
UPA	Univ. de Panam	3.49	152	eS	Sn	02 06 53.9	-0.8
BRU2	Volcan	3.58	204	eS	Sn	02 06 55.7	-1.5
BCO2	Palmira	3.59	201	eP	Pn	02 06 15.8	+0.9
BCO2				eS	Sn	02 06 55.9	-1.5
DVD	David	3.82	199	eP	Pn	02 06 20.0	+2.0
DVD				eS	Sn	02 07 02.7	-0.4
GMAL	Guarumal, Vera	4.29	180	eP	Pn	02 06 25.7	+1.3
GMAL				eS	Sn	02 07 12.5	-2.1
AZU	Azuero	4.36	168	eP	Pn	02 06 27.4	+2.1
AZU				eS	Sn	02 07 15.5	-0.7
SJCC	San Jacinto, C	6.30	110	eS	Sn	02 08 03.4	-0.8

ROM 05 02:09:02.8±0.3**, 38°.49N**±0°.05×**14°.77E**±0°.03**, h195**km±3km**, ML2.5**/1**, Error ellipse: s-maj=6.1km s-min=2.0km az=160.0, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VPL	Vulcano Piano	0.20	124	P	Pn	02 09 28.7	+0.1
IACL	Alicudi	0.33	278	P	Pn	02 09 29.3	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MCPD	Capo d'Orlando	0.37	185	P	Pn	02 09 28.7	-0.2
MILZ	Milazzo	0.42	121	P	Pn	02 09 29.6	+0.6
MILZ				S	Sn	02 09 47.6	-1.6
MSFR	San Fratello	0.48	197	P	Pn	02 09 29.3	0.0
NOV	Novara	0.55	148	P	Pn	02 09 30.0	+0.4
NOV				S	Sn	02 09 50.6	+0.3
NOV				AML	AML		
	comp=E,122μm,1.3s						
NOV				AML	AML		
	comp=N,95μm,0.4s						
NOV				AML	AML		
	comp=N,94μm,0.4s						
MCSR	Castroreale	0.57	138	P	Pn	02 09 30.1	+0.4
MCSR				S	Sn	02 09 50.5	0.0
MCSR				AML	AML		
	comp=E,126μm,0.3s						
MCSR				AML	AML		
	comp=N,232μm,0.3s						
MCSR				AML	AML		
	comp=E,136μm,0.4s						
MPNC	Port Mandanici	0.57	127	P	Pn	02 09 30.0	+0.4
MPNC				S	Sn	02 09 50.2	-0.1
MSRU	Castanea	0.62	111	P	Pn	02 09 29.9	0.0
MSRU				S	Sn	02 09 49.0	-1.7
MSRU				AML	AML		
	comp=E,96μm,1.6s						
MSRU				AML	AML		
	comp=N,85μm,0.5s						
AIO	Antillo	0.63	145	P	Pn	02 09 30.1	+0.1
AIO				S	Sn	02 09 50.3	-0.7
EPZF	Pizzo Felice	0.67	174	P	Pn	02 09 30.8	+0.6
PETRA	Petralia Sopra	0.83	218	P	Pn	02 09 31.2	+0.1
PETRA				S	Sn	02 09 51.7	-1.4
MSCL	Scilla	0.84	108	P	Pn	02 09 31.3	+0.2
MSCL				S	Sn	02 09 51.7	-1.2
MTTG	Motta San Giov	0.88	124	P	Pn	02 09 32.1	+0.8
MTTG				S	Sn	02 09 52.8	-0.4
JOPP	Joppolo	0.88	82	P	Pn	02 09 31.8	+0.6
JOPP				S	Sn	02 09 52.9	-0.4
JOPP				AML	AML		
	comp=N,40μm,3.0s						
JOPP				AML	AML		
	comp=E,44μm,1.5s						
ALJA	Alia	1.09	228	P	Pn	02 09 33.6	+0.8
ALJA				S	Sn	02 09 55.5	-0.4
HLNI	Lentini	1.14	176	P	Pn	02 09 32.5	-0.6
PLAC	Placanica	1.31	91	AML	AML		
	comp=E,84μm,1.6s						
PLAC				AML	AML		
	comp=N,85μm,1.3s						
MMGO	Monte Magaggia	1.64	240	P	Pn	02 09 38.0	+0.7
PAOL	Paolisi	2.54	357	P	Pn	02 09 53.4	+6.6

*SOME **05** 02:13:43.3, 40.65°N×77.57°E, h5km*

*NNC **05** 02:13:44.1±0.8, 40.63°N×77.62°E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=5.7km s-min=4.1km az=174.0*

*KRNET **05** 02:13:46.3±0.1, 40.76°N×77.43E, h17km, mb2.9*

ISC 05 02:13:37.8±2.5, **40.44N**±0.10×**77.61E**±0.04, **h8**km±17km, **n46**, σ1s**21**/72, **14C-7D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KDJ	Kajisay	1.72	349	⇓iP	Pg	02 14 12.5	+1.6
	baz=53						
KDJ				⇓iS	Sb	02 14 31.8	+0.1
	baz=53						
ULHL	Ulahol	2.08	331	⇓iP	Pg	02 14 18.7	+1.0
	baz=29						
ULHL				⇓iS	Sb	02 14 42.6	+0.6
	baz=29						
PRZ	Przheval'sk	2.13	16	⇑iP	Pg	02 14 21.4	+2.7
	baz=23						
PRZ				⇑iS	Sg	02 14 47.2	+0.9
	baz=23						
ANVS	Anan'yevo	2.34	1	⇑iP	Pg	02 14 24.2	+1.4
	baz=5.0						
ANVS				⇑iS	Sg	02 14 51.6	-1.6
	baz=5.0						
BOOM	Boomskoye usch	2.41	329	⇑iP	Pg	02 14 24.1	+0.2
	baz=28						
BOOM				⇑iS	Sb	02 14 52.0	+0.7
	baz=28						
KZA	Kyzart	2.42	313	⇓eP	Pg	02 14 25.2	+1.0
	baz=10.0						
KZA				⇓iS	Sb	02 14 53.7	+1.8
	baz=10.0						
TNSS	Tian-Shan	2.65	349	eP	Pg	02 14 29.8	+1.2
	31nm,0.5s						
TNSS				eS	Sg	02 15 03.3	+0.5
	35nm,0.6s						
TNSS	Tian-Shan	2.65	349	Pg	Pg	02 14 29.8	+1.2
	31nm,0.5s						
TNSS				Lg	Lg	02 15 03.6	
	35nm,0.6s						
SATY	Saty	2.69	13	eP	Pg	02 14 29.8	+0.5
	1.1nm,0.1s						
SATY				eS	Sg	02 15 03.1	-1.1
	18nm,0.3s						
SATY	Saty	2.69	13	Pg	Pg	02 14 29.8	+0.5
	7.1nm,0.4s						
SATY				Lg	Lg	02 15 03.1	
	16nm,0.4s						
IZV	Izvestkoviy	2.70	344	eP	Pg	02 14 30.7	+1.0
	9.8nm,0.1s						
IZV				eS	Sg	02 15 04.8	+0.2
	41nm,0.6s						
IZV	Izvestkoviy	2.70	344	Pg	Pg	02 14 30.5	+0.9
	11nm,0.4s						
IZV				Lg	Lg	02 15 04.6	
	41nm,0.6s						
MDOK	Medeo	2.76	351	eP	Pg	02 14 31.4	+0.8
	15nm,0.2s						
MDOK				eS	Sg	02 15 06.3	-0.1
	36nm,0.7s						
MDOK	Medeo	2.76	351	Pg	Pg	02 14 30.3	-0.4
	15nm,0.6s						
MDOK				Lg	Lg	02 15 06.3	
	19nm,0.6s						
MDOK	Medeo	2.76	351	Pg	Pg	02 14 31.3	+0.6
	19nm,0.5s						
MDOK				Lg	Lg	02 15 06.5	
	36nm,0.7s						
KOTS	Kotyrbulak	2.82	353	eP	Pg	02 14 32.8	+0.9
	20nm,0.2s						
KOTS				eS	Sg	02 15 08.5	+0.1
	66nm,0.3s						
KOTS	Kotyrbulak	2.82	353	Pg	Pg	02 14 32.8	+0.9
	24nm,0.3s						
KOTS				Lg	Lg	02 15 08.5	
	27nm,0.3s						
MTBS	Maitube	2.83	342	eP	Pg	02 14 33.0	+0.9
	5.1nm,0.1s						
MTBS				eS	Sg	02 15 08.8	0.0
	14nm,0.2s						
MTBS	Maitube	2.83	342	Pg	Pg	02 14 32.9	+0.9
	4.9nm,0.2s						
MTBS				Lg	Lg	02 15 08.8	
	14nm,0.2s						
KST	Kastek	2.88	335	eP	Pg	02 14 34.1	+1.1
	6.6nm,0.5s						
KST				eS	Sg	02 15 10.4	0.0
	15nm,0.5s						
KST	Kastek	2.88	335	Pg	Pg	02 14 33.9	+0.8
	6.6nm,0.5s						
KST				Lg	Lg	02 15 10.1	
	15nm,0.5s						
TKM2	Tokmak 2	2.90	329	⇑iP	Pb	02 14 31.4	+1.4
	baz=28						
TKM2				⇑iS	Sb	02 15 04.3	-1.4
	baz=28						
TKM2	Tokmak 2	2.90	329	⇓Pg	Pg	02 14 33.4	-0.1
	3.8nm,0.6s						
TKM2				⇑Lg	Lg	02 15 12.4	
	4.7nm,0.4s						
UZB	Uzynbulak	2.91	21	eP	Pg	02 14 34.7	+1.2
	1.4nm,0.1s						
UZB				eS	Sg	02 15 11.5	+0.2
	13nm,0.3s						
UZB	Uzynbulak	2.91	21	Pg	Pg	02 14 34.4	+0.9
	5.4nm,0.5s						
UZB				Lg	Lg	02 15 11.0	
	16nm,0.7s						
UCH	Uchtor	2.94	309	⇑iP	Pb	02 14 32.4	+1.7
	baz=5.0						
UCH				⇑iS	Sb	02 15 06.6	-0.3
	baz=5.0						
KURS	Kuram	3.08	8	eP	Pg	02 14 37.0	+0.2
	4.3nm,0.3s						
KURS				eS	Sg	02 15 15.5	-1.2
	8.1nm,0.3s						
KURS	Kuram	3.08	8	Pg	Pg	02 14 36.9	+0.1
	5.0nm,0.6s						
KURS				Lg	Lg	02 15 15.2	
	5.1nm,0.4s						
AAK	Ala-Archa	3.21	314	⇑iP	Pb	02 14 36.0	+0.9
	baz=11						
AAK				⇑iS	Sb	02 15 11.9	-2.5
	baz=11						
AAK	Ala-Archa	3.21	314	⇑Pg	Pg	02 14 39.8	+0.5
	2.7nm,0.3s						
AAK				Lg	Lg	02 15 20.8	
	16nm,0.8s						
PDGK	Podgornoye	3.21	25	Pg	Pg	02 14 39.7	+0.3
	2.2nm,0.4s						
PDGK				Lg	Lg	02 15 20.2	
	17nm,0.8s						
PDGK	Podgornoye	3.21	25	Pg	Pg	02 14 39.0	-0.4
	1.8nm,0.5s						
PDGK				Lg	Lg	02 15 19.4	
	36nm,0.7s						
KTBS	Karatobe	3.34	348	eP	Pg	02 14 42.0	+0.1
	2.3nm,0.2s						
KTBS				eS	Sg	02 15 23.8	-1.5
	29nm,0.3s						
KUU	Kurty	3.58	345	eP	Pg	02 14 45.5	-0.9
	1.2nm,0.1s						
KUU				eS	Sg	02 15 30.2	-2.6
	4.3nm,0.2s						
KUU	Kurty	3.58	345	Pg	Pg	02 14 45.3	-1.1
	1.3nm,0.2s						
KUU				Lg	Lg	02 15 29.7	
	12nm,0.6s						
KTMS	Ketmen	3.64	33	eP	Pg	02 14 47.3	-0.2
	1.2nm,0.1s						
KTMS				eS	Sg	02 15 33.0	-1.6
	13nm,0.5s						
KTMS	Ketmen	3.64	33	Pg	Pg	02 14 47.3	-0.2
	0.9nm,0.1s						
KTMS				Lg	Lg	02 15 33.0	
	13nm,0.5s						
MNBS	Baschi	3.69	9	eP	Pg	02 14 47.9	-0.5
	1.0nm,0.2s						
MNBS				eS	Sg	02 15 34.3	-1.9
	13nm,0.2s						
MNBS	Baschi	3.69	9	Pg	Pg	02 14 47.9	-0.5
	2.2nm,0.5s						
MNBS				Lg	Lg	02 15 34.1	
	13nm,0.2s						
ARXS	Arharly	3.78	2	eP	Pg	02 14 49.5	-0.7
	4.9nm,0.2s						
ARXS				eS	Sg	02 15 36.6	-2.5
	13nm,0.4s						
ARXS	Arharly	3.78	2	Pg	Pg	02 14 49.0	-1.2
	5.8nm,0.5s						
ARXS				Lg	Lg	02 15 36.4	
	13nm,0.4s						
MRKS	Merke	4.01	306	eP	Pg	02 14 53.6	-1.2
	0.7nm,0.1s						
MRKS				eS	Sg	02 15 43.6	-3.2
	1.2nm,0.1s						
DJR	Jarkent	4.21	22	eP	Pg	02 14 57.7	-0.9
	0.7nm,0.1s						
DJR				eS	Sg	02 15 51.0	-2.2
	5.1nm,0.2s						
DJR	Jarkent	4.21	22	Pg	Pg	02 14 57.7	-0.9
	2.4nm,0.3s						
DJR				Lg	Lg	02 15 50.8	
	7.3nm,0.4s						
KAPS	Kapalarasan	5.01	14	eP	Pg	02 15 13.3	-0.5
	0.7nm,0.1s						
KAPS				eS	Sg	02 16 17.5	-1.3
	4.4nm,0.5s						
KAPS	Kapalarasan	5.01	14	Pg	Pg	02 15 12.9	-0.9
	0.9nm,0.5s						
KAPS				Lg	Lg	02 16 17.1	
	4.4nm,0.5s						

*MOS **05** 02:24:51.6±1.0, 9.73°S×159.83°E, h35km, mb5.5/37, MS4.8/13, Error ellipse: s-maj=7.9km s-min=6.5km az=89.5*

*BJI **05** 02:24:52.4±0.0, 9.44°S×159.81°E, h32km, mB5.3/45, mb5.2/65, Ms4.9/47, Ms7 4.6/49*

*NEIC **05** 02:24:52.6±2.2, 9.75°S±0.06°×159.84°E±0.07°, h35km±5km, mb5.3/152, Ms_20 5.1/380, Error ellipse: s-maj=11.0km s-min=8.0km az=105.0*

*IDC **05** 02:24:52.6±0.9, 9.78°S×159.86°E, h32km±6km, mb4.8/28, mb1 4.9/30, mb1mx4.8/39, mbtmp5.0/30, ML4.5/2, MS4.6/31, Ms1 4.6/31, ms1mx4.5/38, Error ellipse: s-maj=14.3km s-min=11.0km az=116.0*

*GCMT **05** 02:24:54.6±0.1, 9.79°S±0.01°×159.86°E±0.01°, h25km, MW5.3/126, Moment Tensor Solution. s89,c126; s126,c205; Duration: 1s1 Moment tensor: Scale 10^{17} Nm; Mrr-0.04±.01; Mθθ0.02±.01; Mϕϕ0.01±.01; Mrθ1.24±.04; Mθϕ0.12±.01; Mϕr-0.12±.02; Best double couple: Mo1.25200×10^{17} NP1:ϕs9.00000°, δ6.00000°, λ-176.00000°. NP2:ϕs275.00000°, δ90.00000°, λ-84.00000°. Principal axes: T 1.2340, Plg44.0000°, Azm360.0000°; N 0.0370, Plg6.0000°, Azm95.0000°; P -1.2710, Plg45.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 02:24:53.3±0.4, **9.87S**±0.04×**159.86E**±0.04, **h37**km±1km, **h37**km**:pP-P, n581,** σ1s**58**/396, **mb5.3**/156, **MS5.0**/250, **23C-5D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	0.45	12	Pg	Pn	02 25 01.3	-1.8
	27μm,0.3s,baz=199,slow=6.3,SNR=1793						
HNR				Lg	Lg	02 25 07.3	
	50μm,0.3s,baz=214,slow=9.0,SNR=23						
RABL	Rabaul	9.49	306		Pn	02 27 13.6	+6.0
KRVT	Keravat (AS076	9.53	305	Pn	Pn	02 27 11.9	+3.8
	6.6nm,0.3s,baz=39,slow=22,SNR=2.1						
KRVT				Sn	Sn	02 29 01.2	+7.2
	13nm,0.3s,baz=175,slow=22,SNR=1.4						
KRVT				LR	LR	02 30 45.4	
	comp=Z,2μm,20.1s,baz=132,slow=37						
PMG	Port Moresby	12.53	271	P	Pn	02 27 50.8	+1.7
PMG	Port Moresby	12.53	271	Pn	Pn	02 27 50.8	+1.7
DZM	Mont Dzumac	13.68	153	ePn	Pn	02 28 07.0	+2.1
	120nm,1.4s						
DZM				eLR	LR	02 31 17.2	
	comp=Z,6μm,25.8s						
DZM	Mont Dzumac	13.68	153	Pn	Pn	02 28 06.7	+1.8
	1.1nm,0.3s,baz=313,slow=18,SNR=18						
DZM				Sn	Sn	02 30 30.7	-5.0
	0.3nm,0.3s,baz=67,slow=20,SNR=1.0						
DZM				LR	LR	02 33 00.4	
	comp=Z,4μm,19.8s,baz=318,slow=36						
DZM	Mont Dzumac	13.68	153		Pn	02 28 08.7	+3.8
DZM					Sn	02 30 34.7	-1.0
CTA	Charters Tower	16.59	231	Pn	Pn	02 28 43.6	+0.3
	1.9nm,0.3s,baz=44,slow=12,SNR=22						
CTA				Sn	Sn	02 31 40.8	-5.7
	0.3nm,0.3s,baz=352,slow=22,SNR=1.2						
CTA				LR	LR	02 34 56.3	
	comp=Z,3μm,18.2s,baz=55,slow=36						
CTAO	Charters Tower	16.59	231	P	P	02 28 44.4	-1.0
CTAO				pmax	pmax		
	comp=Z,347nm,1.3s						
CTAO	Charters Tower	16.59	231	P	P	02 28 44.4	-1.0
CTAO				IAmb	IAmb	02 28 51.4	
	comp=Z,347nm,1.3s						
PATS	Pohnpei	16.67	355	P	Pn	02 28 42.6	-1.5
	baz=17,SNR=5.4						
PATS	Pohnpei	16.67	355		Pn	02 28 42.7	-1.5
PATS				IAmb	IAmb	02 28 57.7	
	comp=Z,363nm,1.2s						
PATS				Sn	Sn	02 31 40.9	-7.4
COEN	Coen	16.82	254	P	P	02 28 48.0	+0.1
	baz=17,SNR=13						
COEN	Coen	16.82	254	P	Pn	02 28 46.5	+0.4
COEN				Sn	Sn	02 31 45.1	-6.9
TARA	Tarawa	17.14	50	P	Pn	02 28 49.2	-0.9
MTSU	Mount Surprise	17.16	240	P	P	02 28 52.4	+0.8
	baz=17,SNR=37						
EIDS	Eidsvold	17.52	207	P	P	02 28 57.5	+1.9
	baz=18,SNR=14						
EIDS	Eidsvold	17.52	207	P	P	02 28 55.3	-0.3
MSVF	Nonsavu	19.31	116	P	P	02 29 15.5	+0.1
MSVF				pmax	pmax		
	comp=Z,71nm,1.4s						
MSVF	Nonsavu	19.31	116	P	P	02 29 15.5	+0.1
RMQ	Roma	19.58	211	P	Pn	02 29 20.3	+0.5
	baz=20,SNR=139						
KWAJ	Kwajalein Atol	20.09	23	P	P	02 29 23.0	-0.9
KWAJ				pmax	pmax		
	comp=Z,171nm,0.8s						
KWAJ	Kwajalein Atol	20.09	23	P	P	02 29 23.0	-0.9
KWAJ				IAmb	IAmb	02 29 41.5	
	comp=Z,171nm,0.8s						
JAY	Jayapura	20.38	290	P	P	02 29 27.4	+0.3
	comp=Z,261nm,1.1s,baz=111,slow=5.1,SNR=21						
JAY	Jayapura	20.38	290	P	P	02 29 27.2	+0.1
	comp=Z,1μmcomp=Z,156nm,1.2s						
GENI	Genyem	20.85	289	P	Pn	02 29 33.6	-1.2
ARMA	Armidale	21.84	199	P	P	02 29 44.8	+2.1
	baz=22,SNR=17						
ARMA	Armidale	21.84	199	P	P	02 29 43.3	+0.7
ARMA				IAmb	IAmb	02 29 48.0	
	comp=Z,163nm,1.5s						
QIS	Mount Isa	22.21	239	P	P	02 29 48.6	+1.8
	baz=22,SNR=23						
QLP	Quilpie	22.24	220	P	P	02 29 48.3	+1.4
	baz=22,SNR=36						
MGCD	Mangrove Creek	24.58	198	P	P	02 30 12.5	+2.5
	baz=25,SNR=5.5						
CMSA	Cobar Meteorol	25.25	209	P	P	02 30 17.1	+1.1
	baz=26,SNR=20						
WR0	Warramunga Arr	26.40	245	P	P	02 30 25.6	-0.9
WB0	Warramunga Arr	26.47	245	P	P	02 30 27.4	+0.1
WB0				IAmb	IAmb	02 30 29.1	
	comp=Z,69nm,1.1s						
YNG	Young	26.48	202	P	P	02 30 29.3	+2.1
	baz=27,SNR=5.6						
WRAB	Tennant Creek	26.56	245	d iP	P	02 30 28.5	+0.5
WRAB				pmax	pmax		
	comp=Z,99nm,1.7s						
WRAB	Tennant Creek	26.56	245	P	P	02 30 27.3	-0.7
WRAB				IAmb	IAmb	02 30 40.2	
	comp=Z,58nm,1.0s						
WB2	Warramunga Arr	26.56	245	P	P	02 30 27.6	-0.4
WB2				IAmb	IAmb	02 30 40.3	
	comp=Z,137nm,1.4s						
WRA	Warramunga Arr	26.57	245	P	P	02 30 28.3	+0.1
	comp=Z,36nm,0.9s,baz=70,slow=9.2,SNR=44						
WRA				PcP	PcP	02 33 53.1	+1.0
	comp=Z,4.9nm,1.2s,baz=71,slow=2.6,SNR=1.7						
WRA				LR	LR	02 40 24.8	
	comp=Z,2μm,21.4s,baz=70,slow=35						
WRA	Warramunga Arr	26.57	245	iP	P	02 30 27.2	-1.0
WRA				pmax	pmax		
	comp=Z,35nm,0.9s						
KDU	Kakadu	26.99	261	P	P	02 30 31.0	-0.9
	baz=27,SNR=5.3						
CNB	Canberra Magne	27.07	199	P	P	02 30 35.1	+2.6
	baz=27,SNR=8.7						
CAN	Canberra	27.20	200	P	P	02 30 35.2	+1.5
CAN				pmax	pmax		
	comp=Z,196nm,1.7s						
CAN				MLR	MLR		
	comp=Z,2μm,20.0s						
CAN	Canberra	27.20	200	P	P	02 30 35.2	+1.5
CAN				IAmb	IAmb	02 30 37.1	
	comp=Z,196nm,1.7s						
STKA	Stephens Creek	27.67	215	P	P	02 30 38.7	+0.9
	baz=28,SNR=22						
STKA	Stephens Creek	27.67	215	P	P	02 30 38.6	+0.8
	comp=Z,10nm,0.7s,baz=51,slow=12,SNR=14						
STKA				LR	LR	02 41 34.3	
	comp=Z,2μm,18.9s,baz=39,slow=36						
STKA	Stephens Creek	27.67	215	P	P	02 30 38.0	+0.1
OUZ	Omahuta	28.18	156	IAMs_20	IAMs_20	02 39 50.4	
	comp=Z,4μm,20.0s						
MTN	Manton Dam	28.31	261	P	P	02 30 42.9	-0.8
	baz=28,SNR=4.4						
MTN	Manton Dam	28.31	261	P	P	02 30 44.4	+0.7
AS31	Alice Springs	28.31	238	P	P	02 30 43.6	-0.1
ASAR	Alice Springs	28.31	238	P	P	02 30 43.6	-0.1
	comp=Z,8.9nm,0.8s,baz=67,slow=9.6,SNR=75						
ASAR				PcP	PcP	02 33 55.2	-1.1
	comp=Z,1.5nm,0.9s,baz=72,slow=3.0,SNR=2.2						
ASAR				ScP	ScP	02 37 36.9	+2.3
	comp=Z,0.7nm,0.8s,baz=67,slow=3.1,SNR=3.6						
ASAR				LR	LR	02 41 39.3	
	comp=Z,1μm,18.1s,baz=68,slow=36						
RAO	Raoul Island	28.37	136	LR	LR	02 41 08.7	
	comp=Z,842nm,18.9s,baz=322,slow=34						
H11S2	WAKE ISLAND Hy	28.98	14	T	T	02 59 32.2	
	baz=194,slow=75,SNR=1327						
H11S3	WAKE ISLAND Hy	28.98	13	T	T	02 59 32.0	
	baz=194,slow=75,SNR=266						
H11S1	WAKE ISLAND Hy	29.00	13	T	T	02 59 40.6	
	baz=194,slow=75,SNR=264						
SIJI	Sorong	29.81	286	P	P	02 30 56.9	-0.2
	comp=Z,14nm,0.6s,baz=70,slow=8.1,SNR=11						
H11N1	WAKE ISLAND Hy	30.20	13	T	T	03 01 05.0	
	baz=193,slow=76,SNR=393						
H11N3	WAKE ISLAND Hy	30.21	13	T	T	03 01 04.4	
	baz=193,slow=76,SNR=188						
H11N2	WAKE ISLAND Hy	30.22	13	T	T	03 01 05.2	
	baz=193,slow=76,SNR=436						
HTT	Hallett	30.34	216	P	P	02 31 02.7	+1.1
	baz=31,SNR=9.0						
TOO	Toolangi	30.47	203	P	P	02 31 04.8	+2.1
	baz=31,SNR=6.6						
TOO	Toolangi	30.47	203	P	P	02 31 04.1	+1.4
TOO				pmax	pmax		
	comp=Z,71nm,1.5s						
TOO	Toolangi	30.47	203	P	P	02 31 04.1	+1.4
TOO				IAmb	IAmb	02 31 06.2	
	comp=Z,71nm,1.5s						
KNRA	Kununurra	30.84	256	P	P	02 31 06.7	+0.6
	baz=31,SNR=12						
KNRA	Kununurra	30.84	256	P	P	02 31 06.2	0.0
KNRA				PP	PP	02 32 13.2	-3.0
ARPS	Mount Arapiles	31.36	209	P	P	02 31 12.2	+1.7
	baz=32,SNR=6.0						
MSAI	Masohi	31.38	280	P	P	02 31 23.4	+12
BBOO	Buckleboo	31.66	220	P	P	02 31 13.8	+0.6
	baz=32,SNR=6.4						
BBOO	Buckleboo	31.66	220	P	P	02 31 14.2	+0.9
BBOO				IAmb	IAmb	02 31 35.9	
	comp=Z,37nm,1.1s						
BBOO				IAMs_20	IAMs_20	02 44 19.5	
	comp=Z,3μm,18.0s						
URZ	Urewera	32.24	154	LR	LR	02 43 00.7	
	comp=Z,740nm,19.4s,baz=334,slow=34						
BKZ	Black Stump Fm	32.74	156	P	P	02 31 24.0	+1.3
BKZ				IAmb	IAmb	02 31 25.2	
	comp=Z,36nm,1.1s						
BKZ				IAMs_20	IAMs_20	02 42 23.3	
	comp=Z,4μm,21.0s						
WRKA	Warakurna	33.55	239	P	P	02 31 29.8	-0.1
	baz=34,SNR=28						
FITZ	Fitzroy Crossi	34.14	252	P	P	02 31 34.9	-0.2
	baz=34,SNR=17						
FITZ	Fitzroy Crossi	34.14	252	P	P	02 31 35.3	+0.2
FITZ				PP	PnPn	02 32 47.3	-2.3
RPZ	Rata Peaks	35.09	166	P	P	02 31 43.8	+0.8
	comp=Z,20nm,0.8s,baz=144,slow=18,SNR=4.3						
RPZ	Rata Peaks	35.09	166	P	P	02 31 42.8	-0.2
RPZ				IAmb	IAmb	02 32 03.1	
	comp=Z,40nm,1.0s						
LBZ	Lake Benmore	35.53	167	IAMs_20	IAMs_20	02 47 44.1	
	comp=Z,3μm,18.0s						
BATI	Baumata	35.63	266	P	P	02 31 47.9	-0.1
	comp=Z,22nm,0.5s,baz=135,slow=7.6,SNR=8.3						
BATI				LR	LR	02 49 21.0	
	comp=Z,486nm,18.0s,baz=116,slow=41						
BATI	Baumata	35.63	266	P	P	02 31 48.8	+0.8
	comp=Z,34nm,1.1s						
FORT	Forrest	36.14	230	P	P	02 31 52.9	+0.7
	baz=36,SNR=9.0						
FORT	Forrest	36.14	230	P	P	02 31 52.7	+0.5
FORT				IAMs_20	IAMs_20	02 46 43.7	
	comp=Z,3μm,20.0s						
ODZ	Otahua Downs	36.26	167	IAMs_20	IAMs_20	02 47 50.4	
	comp=Z,3μm,19.0s						
BBSI	Bau Bau	37.19	274	P	P	02 32 02.2	+0.9
	comp=Z,591nmcomp=Z,11nm,1.7s						
EDFI	Ende, Flores	37.66	268	P	P	02 32 05.5	+0.1
	comp=Z,302nmcomp=Z,16nm,0.8s						

LUWI Luwuk 37.90 281 P **P** **02 32 07.7 +0.4**
comp=Z,9μmcomp=Z,134nm,1.2s
LUWI Luwuk 37.90 281 P **P** **02 32 06.4 -1.0**
KCP Kidapawan 38.48 295⇑ *i*P **P** **02 32 13.8 +1.5**
MRSI Marisa 39.11 283 P **P** **02 32 16.9 -0.5**
comp=Z,42nm,1.1s
BKSI Bulukumba 39.62 274 P **P** **02 32 21.4 -0.3**
comp=Z,487nmcomp=Z,24nm,1.4s
BNSI Bone 39.79 275 P **P** **02 32 23.3 +0.2**
comp=Z,697nmcomp=Z,59nm,0.9s
KAPI Kappang 40.03 274 P **P** **02 32 25.4 +0.2**
comp=Z,10nm,0.4s,baz=54,slow=4.5,SNR=12
KAPI LR LR 02 51 15.3
comp=Z,211nm,19.6s,baz=298,slow=40
KAPI Kappang 40.03 274 P **P** **02 32 25.3 +0.2**
KAPI IAmb IAmb 02 32 27.6
comp=Z,87nm,1.4s
PSA00 Pilbara Seismi 40.11 248 P **P** **02 32 25.6 -0.2**
SPSI Sidrap Palu 40.20 276 P **P** **02 32 26.1 -0.4**
comp=Z,46nm,1.0s
TTSI Tana Toraja 40.33 277 P **P** **02 32 28.7 +1.1**
comp=Z,1μmcomp=Z,36nm,1.1s
JCJ Chichijima 40.55 335 LR LR 02 48 12.8
comp=Z,1μm,21.3s,baz=142,slow=35
MPSI Mapaga 41.03 282 P **P** **02 32 32.6 -0.8**
comp=Z,41nm,0.9s
PLAI Plampang 41.51 268 P **P** **02 32 35.7 -1.7**
comp=Z,917nmcomp=Z,98nm,0.9s
MEEK Meekatharra 42.34 241 P **P** **02 32 45.0 +1.0**
baz=43,SNR=13
SMKI Samarinda 43.44 280 P **P** **02 32 53.5 +0.4**
comp=Z,6μmcomp=Z,476nm,0.5s
BKB Balikpapan 43.56 279 P **P** **02 32 54.7 +0.7**
comp=Z,207nm,1.1s
JAGI Jajag, Banyuwa 45.12 268 P **P** **02 33 04.3 -2.2**
comp=Z,118nm,0.9s
JAGI Jajag, Banyuwa 45.12 268 P **P** **02 33 04.9 -1.6**
KKM Kota Kinabalu 46.26 288 P **P** **02 33 15.2 -0.5**
JHJ Hachijo jima 2 46.84 337 LR LR 02 51 23.7
comp=Z,828nm,21.9s,baz=105,slow=34
PCJI Pacitan 48.07 268 P **P** **02 33 29.7 +0.1**
comp=Z,122nm,1.1s
WOJI Wonogiri, Jawa 48.36 268 P **P** **02 33 30.7 -1.2**
comp=Z,4μmcomp=Z,28nm,1.2s
SBUM Sibu 48.99 282 P **P** **02 33 35.9 -0.9**
SBUM Sibu 48.99 282 P **P** **02 33 38.0 +1.3**
PPT Papeete 49.60 105 LR LR 02 50 38.9
comp=Z,180nm,20.2s,baz=292,slow=31
PPT2 Papeete2 49.60 105 *e*S **S** **02 40 52.6 +5.1**
comp=Z,125nm,25.2s
PPT2 *e*LQ LQ 02 45 41.8
comp=Z,606nm,27.0s
PPT2 *e*LR LR 02 47 46.7
comp=Z,316nm,22.8s
INU Inuyama 49.89 335 P **P** **02 33 40.7 -2.5**
INU IAMs_20 IAMs_20 02 52 27.1
comp=Z,1μm,22.0s
TBI Tubuai 50.14 112 *e*S **S** **02 40 59.8 +5.0**
comp=Z,406nm,30.2s
TBI *e*LQ LQ 02 45 55.8
comp=Z,1μm,30.2s
TBI *e*LR LR 02 48 02.3
comp=Z,737nm,32.8s,baz=286
MJAR Matsushiro Arr 50.46 337 P **P** **02 33 46.1 -1.4**
comp=Z,26nm,1.1s,baz=162,slow=8.5,SNR=30
MJAR LR LR 02 53 47.8
comp=Z,720nm,21.7s,baz=155,slow=34
MAJO Matsushiro 50.46 337⇑ *e*P **P** **02 33 46.5 -1.0**
MAJO pmax pmax
comp=Z,35nm,0.9s
MAJO Matsushiro 50.46 337 P **P** **02 33 46.2 -1.3**
MAJO IAmb IAmb 02 33 47.7
comp=Z,28nm,0.9s
MAJO PcP **PcP** **02 35 01.2 -4.2**
MAT Matsushiro 50.46 337 P **P** **02 33 46.3 -1.2**
MAT S S 02 40 48.2 -11
MJB9 Matsu-Tunnel 50.47 337 IAmb IAmb 02 33 47.7
comp=Z,28nm,0.9s
KSM Kuching 50.60 280 P **P** **02 33 48.6 -0.3**
KSM IAmb IAmb 02 33 53.7
comp=Z,42nm,1.1s
KSM Kuching 50.60 280 P **P** **02 33 49.0 0.0**
SSLB Suanglung 50.64 312 IAmb IAmb 02 33 50.4
comp=Z,28nm,0.8s
JNU Nakatsue 50.89 328 P **P** **02 33 50.0 -0.8**
comp=Z,40nm,1.2s,baz=62,slow=3.5,SNR=5.7
JNU LR LR 02 52 26.7
comp=Z,231nm,22.0s,baz=106,slow=32
CISI Cisompet, Garu 51.45 268 P **P** **02 33 54.5 -1.0**
comp=Z,4μmcomp=Z,103nm,1.0s
CISI Cisompet, Garu 51.45 268 P **P** **02 33 53.8 -1.6**
LEM Lembang 51.73 269 P **P** **02 33 57.2 -0.5**
comp=Z,48nm,0.8s,baz=90,slow=5.8,SNR=9.6
LEM LR LR 02 58 31.2
comp=Z,218nm,18.7s,baz=52,slow=39
OPA Opana 51.90 52 P **P** **02 33 57.9 -0.7**
OPA pmax pmax
comp=Z,95nm,0.8s
OPA Opana 51.90 52 P **P** **02 33 57.9 -0.7**
ERM Erimo 53.86 345⇑ *e*P **P** **02 34 12.9 +0.3**
ERM pmax pmax
comp=Z,33nm,1.2s
YUK Yuzh-Kuril'sk 55.14 348 P **P** **02 34 20.3 -1.5**
TJN Taejon 55.24 328⇑ *e*P **P** **02 34 23.3 +0.5**
DLV T Lat 55.46 292 P **P** **02 34 23.0 -2.0**
DLV IAmb IAmb 02 34 26.7
comp=Z,48nm,1.1s
KSRS Korea Array 55.78 329 P **P** **02 34 26.0 -0.6**
comp=Z,15nm,1.1s,baz=146,slow=7.0,SNR=25
KSRS LR LR 02 55 46.4
comp=Z,419nm,21.6s,baz=120,slow=33
ASAJ Asahikawa 55.97 345 P **P** **02 34 28.3 +0.4**
comp=Z,24nm,1.0s,baz=222,slow=8.6,SNR=8.5
INCN Inchon 56.46 328 P **P** **02 34 30.9 -0.6**
INCN pmax pmax
comp=Z,155nm,1.5s
INCN MLR MLR
comp=Z,500nm,21.0s
INCN Inchon 56.46 328 P **P** **02 34 30.9 -0.6**
QIZ Qiongzhong 57.05 300 P **P** **02 34 35.6 -0.5**
QIZ S **S** **02 42 30.1 +1.5**
QIZ pmax pmax
comp=Z,26nm,1.4s
QIZ LR LR
comp=Z,190nm,19.6s
QIZ LR LR
comp=Z,320nm,20.6s
QIZ LR LR
comp=Z,380nm,27.0s
NJ2 Nanjing 57.21 318 *e*P **P** **02 34 37.8 +0.9**
NJ2 pmax pmax
comp=Z,26nm,1.2s
YSS Yuzh-Sakhalins 58.59 346⇑ *e*P **P** **02 34 46.7 +0.4**
YSS *e**SP **sP** **02 34 59.8 -1.7**
YSS *e* 02 36 50.6
YSS *e*S **S** **02 42 49.1 +1.3**
YSS *e*SS **SS** **02 46 43.1 +1.8**
YSS pmax pmax
comp=Z,40nm,0.8s
YSS MLR MLR
comp=N,700nm,16.0s
YSS MLR MLR
comp=Z,1μm,16.0s
YSS Yuzh-Sakhalins 58.59 346 P **P** **02 34 43.5 -2.8**
YSS IAMs_20 IAMs_20 02 59 50.6
comp=Z,1μm,20.0s
SDSI Sungai Dareh 58.76 275 P **P** **02 34 46.2 -2.0**
comp=Z,51nm,1.1s
WHN Wuhan 59.36 314 P **P** **02 34 52.3 +0.3**
WHN S **S** **02 43 01.8 +3.5**
WHN LR LR
comp=Z,1μm,20.7s
BKNI Bangkinang 59.38 276 P **P** **02 34 52.3 -0.2**
comp=Z,3μmcomp=Z,70nm,1.2s
USRK Ussuriysk Ar. 59.45 337 P **P** **02 34 52.5 +0.1**
comp=Z,34nm,1.1s,baz=143,slow=6.7,SNR=16
USRK LR LR 02 58 40.3
comp=Z,685nm,20.8s,baz=137,slow=34
IPM Ipoh 60.31 281 IAmb IAmb 02 35 00.6
comp=Z,48nm,1.4s
IPM Ipoh 60.31 281 P **P** **02 34 59.0 +0.1**
MDJ Mudanjiang 60.75 336 P **P** **02 35 01.6 +0.3**
MDJ pmax pmax
comp=Z,480nm,4.2s
MDJ Mudanjiang 60.75 336 IAMs_20 IAMs_20 02 58 08.7
comp=Z,1μm,22.0s

KULM Kulim 60.87 282 IAmb IAmb 02 35 04.1
comp=Z,23nm,1.1s
KULM Kulim 60.87 282 P **P** **02 35 02.0 -0.7**
MNSI Mandailing Nat 60.91 276 P **P** **02 35 01.9 -1.1**
comp=Z,74nm,1.1s
CN2 Changchun 61.89 332 *e*P **P** **02 35 08.2 -0.8**
CN2 *e*pP pP 02 35 18.4 -2.0
CN2 *e*S **S** **02 43 28.6 -1.6**
CN2 *e*SS **SS** **02 47 32.9 -0.2**
CN2 pmax pmax
comp=Z,40nm,1.3s
CN2 pmax pmax
comp=Z,330nm,3.0s
CN2 LR LR
comp=Z,360nm,17.0s
CN2 LR LR
comp=Z,320nm,17.0s
CN2 LR LR
comp=Z,800nm,18.0s
RPSI Rantau Prapat 61.95 278 P **P** **02 35 08.5 -1.5**
RPSI IAmb IAmb 02 35 13.4
comp=Z,27nm,1.1s
RPSI Rantau Prapat 61.95 278 P **P** **02 35 09.4 -0.5**
PSI Prapat 61.97 279 P **P** **02 35 09.4 -0.9**
comp=Z,12nm,0.9s,baz=177,slow=1.6,SNR=14
TYV Tymovskoe 62.30 348 *e*P **P** **02 35 12.1 +0.5**
TYV *e* 02 43 37.2
TYV pmax pmax
comp=Z,43nm,1.0s
PET Petropavlovsk 62.66 359 *e*P **P** **02 35 13.7 -0.2**
PET *e*S **S** **02 43 38.3 -1.1**
PET pmax pmax
comp=Z,50nm,1.5s
PET pmax pmax
comp=Z,100nm,15.5s
PET Petropavlovsk 62.66 359 P **P** **02 35 12.4 -1.4**
PET IAMs_20 IAMs_20 02 58 24.9
comp=Z,904nm,21.0s
PEA0B Petropavlovsk- 62.76 359⇑ *i*P **P** **02 35 13.2 -1.4**
PEA0B Petropavlovsk- 62.76 359 IAMs_20 IAMs_20 02 58 21.6
comp=Z,1μm,21.0s
PETK Petropavlovsk- 62.76 359 P **P** **02 35 14.3 -0.3**
comp=Z,54nm,1.1s,baz=151,slow=7.3,SNR=33
PETK LR LR 02 58 22.4
comp=Z,1μm,21.7s,baz=169,slow=32
GSI Gunungsitoli 62.97 277 P **P** **02 35 14.9 -2.0**
comp=Z,481nm,1.0s
GSI Gunungsitoli 62.97 277 P **P** **02 35 15.8 -1.1**
GYA Guiyang 63.01 306⇓ *i*P **P** **02 35 18.0 +1.0**
GYA pP pP 02 35 28.7 +1.0
GYA PP **PP** **02 37 37.1 +1.0**
GYA S **S** **02 43 41.7 -3.6**
GYA sS sS 02 44 03.2 0.0
GYA pmax pmax
comp=Z,30nm,1.2s
GYA pmax pmax
comp=Z,60nm,3.5s
GYA LR LR
comp=Z,200nm,3.9s
GYA LR LR
comp=Z,130nm,4.4s
GYA LR LR
comp=Z,90nm,4.3s
SLVN Son La 63.08 300 IAmb IAmb 02 35 19.7
comp=Z,36nm,1.2s
KCSI Kotacane, Aceh 63.25 279 P **P** **02 35 16.6 -2.1**
comp=Z,696nmcomp=Z,45nm,0.8s
GRNR Gornyy 63.73 344⇑ *i*P **P** **02 35 21.5 +0.4**
GRNR pmax pmax
comp=Z,20nm,1.3s
KLR Kul'dur 63.82 340 *c i*P **P** **02 35 21.5 -0.2**
KLR pmax pmax
comp=Z,68nm,1.5s
BJI Beijing 64.03 324 P **P** **02 35 22.7 -0.5**
BJI S **S** **02 43 54.1 -3.0**
BJI pmax pmax
comp=Z,9.0nm,1.5s
BJI LR LR
comp=Z,270nm,19.1s
BJI LR LR
comp=Z,170nm,21.7s
BJI LR LR
comp=Z,530nm,29.9s
MLSI Meulaboh, Aceh 64.75 279 P **P** **02 35 27.6 -0.9**
comp=Z,132nm,0.9s
XAN Xi'an 65.12 315 P **P** **02 35 30.2 -0.4**
XAN pP pP 02 35 40.5 -1.1
XAN sP sP 02 35 44.6 -1.1
XAN PP **PP** **02 37 54.9 +0.6**
XAN S **S** **02 44 09.0 -1.9**
XAN sS pS 02 44 25.7 +1.9
XAN pmax pmax
comp=Z,18nm,1.3s
XAN pmax pmax
comp=Z,170nm,4.7s
XAN LR LR
comp=Z,210nm,20.1s
XAN LR LR
comp=Z,250nm,20.3s
XAN LR LR
comp=Z,450nm,21.7s
XAN Xi'an 65.12 315 IAmb IAmb 02 35 31.5
comp=Z,18nm,1.0s
CASY Casey 65.44 200 P **P** **02 35 31.8 -0.3**
KMI Kunming 65.60 303 P **P** **02 35 35.4 +1.3**
KMI S **S** **02 44 16.7 -0.8**
KMI SS **SS** **02 48 34.0 +1.8**
KMI pmax pmax
comp=Z,54nm,1.3s
KMI pmax pmax
comp=Z,170nm,3.1s
KMI LR LR
comp=Z,200nm,10.4s
KMI LR LR
comp=Z,210nm,18.7s
KMI LR LR
comp=Z,330nm,20.3s
ATKA Atka Island 65.73 17 IAMs_20 IAMs_20 02 58 38.7
comp=Z,1μm,22.0s
CMAR Chiang Mai Arr 66.35 295 P **P** **02 35 39.3 +0.5**
comp=Z,6.1nm,0.6s,baz=115,slow=4.5,SNR=38
CMAR LR LR 03 06 51.2
comp=Z,79nm,18.3s,baz=116,slow=38
CMAR Chiang Mai Arr 66.35 295 *i* P **P** **02 35 40.5 +1.7**
CMAR pmax pmax
comp=Z,8.0nm,0.7s
CHTO Chiang Mai 66.47 295 P **P** **02 35 40.1 +0.5**
CHTO pmax pmax
comp=Z,44nm,1.3s
CHTO Chiang Mai 66.47 295 P **P** **02 35 40.1 +0.5**
CHTO IAmb IAmb 02 35 41.7
comp=Z,44nm,1.3s
HHC Hu-ho-hao-te 67.27 322 P **P** **02 35 45.2 +0.9**
HHC sP sP 02 35 59.8 -0.2
HHC S **S** **02 44 38.3 +1.3**
HHC pmax pmax
comp=Z,13nm,0.9s
HHC pmax pmax
comp=Z,84nm,8.7s
HHC LR LR
comp=Z,180nm,18.2s
HHC LR LR
comp=Z,180nm,18.2s
HHC LR LR
comp=Z,160nm,17.3s
CD2 Chengdu 67.33 309 P **P** **02 35 45.1 +0.2**
CD2 S **S** **02 44 38.5 +0.5**
CD2 pmax pmax
comp=Z,70nm,1.1s
CD2 LR LR
comp=Z,410nm,20.8s
VNDA Vanda 67.64 180 P **P** **02 35 47.2 +1.3**
comp=Z,5.7nm,0.7s,baz=342,slow=6.8,SNR=40
VNDA LR LR 03 00 26.3
comp=Z,1μm,20.2s,baz=356,slow=32
VNDA Vanda 67.64 180 P **P** **02 35 46.2 +0.2**
BTO Baotou 68.07 321 *e*P **P** **02 35 50.5 +1.1**
ZEA Zeya 69.14 340 *e*P **P** **02 35 56.0 +0.4**
ZEA pmax pmax
comp=N,72nm,1.2s
ZEA pmax pmax
comp=Z,78nm,1.2s
MA2 Magadan 69.60 355 *c i*P **P** **02 35 57.5 -0.8**
MA2 pmax pmax
comp=Z,76nm,1.3s
MA2 Magadan 69.60 355 P **P** **02 35 57.8 -0.6**

MA2 Magadan 69.60 355 IAMs_20 IAMs_20 03 02 35.5
comp=Z,737nm,22.0s
LZH Lanzhou 69.74 314⇑ P **P** **02 36 01.1 +1.2**
LZH pP pP 02 36 11.6 +0.5
LZH sP sP 02 36 15.1 0.0
LZH PP **PP** **02 38 33.2 -1.4**
LZH S **S** **02 45 07.6 +1.0**
LZH sS sS 02 45 25.1 +0.3
LZH pmax pmax
comp=Z,33nm,1.3s
LZH pmax pmax
comp=Z,170nm,5.4s
LZH LR LR
comp=Z,600nm,18.4s
LZH LR LR
comp=Z,450nm,17.9s
LZH LR LR
comp=Z,630nm,18.5s
SEY Seymchan 72.81 356⇑ *e*P **P** **02 36 17.6 -0.1**
CNBA Chernabura Isl 72.88 23 IAMs_20 IAMs_20 03 04 24.4
comp=Z,774nm,19.0s
KOHI KOHIMA 73.05 301 *ex* P **02 36 19.3 -0.8**
KOHI IAmb IAmb 02 36 30.9
comp=Z,44nm,1.2s
ULN Ulaanbaatar 74.03 326 *c i*P **P** **02 36 26.1 +0.7**
ULN pmax pmax
comp=Z,73nm,1.7s
ULN Ulaanbaatar 74.03 326 P **P** **02 36 25.8 +0.4**
ULN IAmb IAmb 02 36 27.6
comp=Z,61nm,1.3s
GTA Gaotai 74.13 316⇑ P **P** **02 36 27.0 +0.8**
GTA pP pP 02 36 34.1 -3.3
GTA sP PcP 02 36 38.2 -2.9
GTA pmax pmax
comp=Z,24nm,1.2s
GTA pmax pmax
comp=Z,250nm,5.8s
GTA LR LR
comp=Z,170nm,22.5s
GTA LR LR
comp=Z,210nm,21.3s
GTA LR LR
comp=Z,230nm,22.8s
SONM Songino Array 74.37 326 P **P** **02 36 27.8 +0.4**
comp=Z,18nm,1.1s,baz=137,slow=5.2,SNR=76
SONM LR LR 03 10 52.5
comp=Z,289nm,18.0s,baz=102,slow=37
TEZP TEZPUR 74.46 301 *ex* P **02 36 27.8 -0.3**
TEZP IAmb IAmb 02 36 32.6
comp=Z,20nm,0.9s
SHL Shillong 74.89 300 *ex* P 02 36 25.8 -5.1
SHL IAmb IAmb 02 36 32.4
comp=Z,16nm,0.4s
YAK Yakutsk 75.44 346 *e*P **P** **02 36 32.2 -0.8**
YAK *e**PP **pP** **02 36 40.7 -3.4**
YAK *e* 02 36 43.6
YAK *e* 02 39 17.8
YAK *e*S **S** **02 46 10.0 -0.3**
YAK *e*SS **SS** **02 51 05.9 +4.3**
YAK pmax pmax
comp=Z,61nm,1.1s
YAK pmax pmax
comp=N,26nm,1.2s
YAK pmax pmax
comp=E,25nm,1.4s
YAK pmax pmax
comp=Z,9.0nm,0.4s
YAK smax smax
comp=E,25nm,1.4s
YAK smax smax
comp=N,61nm,2.2s
YAK MLR MLR
comp=Z,549nm,19.0s
YAK MLR MLR
comp=N,381nm,17.0s
YAK MLR MLR
comp=E,172nm,20.0s
YAK Yakutsk 75.44 346 P **P** **02 36 32.5 -0.5**
GAMB Gambell 76.56 13 IAMs_20 IAMs_20 03 04 20.1
comp=Z,747nm,22.0s
OHAK Old Harbor 77.08 24 IAmb IAmb 02 36 43.8
comp=Z,47nm,1.3s
OHAK IAMs_20 IAMs_20 03 06 56.3
comp=Z,597nm,20.0s
BOD Bodaibo 77.09 337 *e*P **P** **02 36 41.9 -0.6**
BOD pmax pmax
comp=Z,13nm,1.4s
ZAK Zakamensk 77.49 327 *e*P **P** **02 36 44.7 -0.4**
ZAK pmax pmax
comp=Z,17nm,1.4s
KDAK Kodiak Island 77.74 24 P **P** **02 36 46.0 -0.1**
comp=Z,12nm,1.0s,baz=87,slow=9.1,SNR=4.1
KDAK Kodiak Island 77.74 24 P **P** **02 36 46.0 -0.1**
KDAK Kodiak Island 77.74 24 IAmb IAmb 02 36 47.4
comp=Z,48nm,1.4s
BILL Bilibino 77.85 2 *c i*P **P** **02 36 46.5 0.0**
BILL *e* 02 36 56.0
BILL *e* 02 39 38.7
BILL *e*S **S** **02 46 38.8 +2.3**
BILL pmax pmax
comp=Z,93nm,1.7s
BILL Bilibino 77.85 2 P **P** **02 36 46.6 0.0**
BILL IAMs_20 IAMs_20 03 05 38.6
comp=Z,1μm,22.0s
IRK Irkutsk 77.99 329 *e*P **P** **02 36 47.0 -0.7**
IRK pmax pmax
comp=Z,56nm,1.8s
TLY Talaya 78.00 328 *e*P **P** **02 36 47.9 +0.1**
TLY *e* 02 36 57.3
TLY *e*S **S** **02 46 46.3 +7.5**
TLY *e* 02 47 15.0
TLY pmax pmax
comp=Z,68nm,1.8s
TLY MLR MLR
comp=Z,385nm,19.0s
TAPN Taplejung 79.00 300 *e*P **P** **02 36 54.5 +0.3**
comp=Z,75nm,1.2s
ODAN Odare 79.12 300 *e*P **P** **02 36 55.3 +0.5**
comp=Z,118nm,1.1s
HOM Homer 79.36 23 IAMs_20 IAMs_20 03 06 53.3
comp=Z,734nm,20.0s
MOY Mondy 79.39 327 *e*P **P** **02 36 56.1 +0.5**
CNPM China Poot 79.42 23 IAMs_20 IAMs_20 03 07 14.2
comp=Z,954nm,21.0s
BOK Bokaro 79.58 296 *ex* P **02 36 58.3 +1.3**
BOK IAmb IAmb 02 37 12.3
comp=Z,23nm,1.3s
RAMN Ramite 79.83 300 *e*P **P** **02 36 58.6 -0.1**
QSPA South Pole Qui 80.12 180 P **P** **02 36 58.9 -0.5**
QSPA South Pole Qui 80.12 180 IAMs_20 IAMs_20 03 09 08.6
comp=Z,955nm,20.0s
JIRN Jiri 80.38 300 *e*P **P** **02 37 02.3 +0.5**
SEW Seward 80.49 23 IAMs_20 IAMs_20 03 06 22.3
comp=Z,842nm,22.0s
GUN Gumba 80.71 300 *e*P **P** **02 37 04.0 +0.5**
comp=Z,120nm,1.4s
RC01 Rabbit Creek A 81.01 22 IAmb IAmb 02 37 05.0
comp=Z,46nm,1.3s
RC01 IAMs_20 IAMs_20 03 08 17.0
comp=Z,817nm,21.0s
PKI Pulchoki 81.02 300 *e*P **P** **02 37 05.3 +0.1**
comp=Z,113nm,1.4s
PKIN Phulchoki 81.03 300 *e*P **P** **02 37 05.3 +0.2**
KKN Kakani 81.19 300 *e*P **P** **02 37 06.1 +0.2**
DMN Daman 81.29 300 *e*P **P** **02 37 06.9 +0.4**
comp=Z,139nm,1.1s
PPLA Purkeypile 81.32 20 IAMs_20 IAMs_20 03 06 58.3
comp=Z,568nm,21.0s
PMR Palmer 81.56 22 IAmb IAmb 02 37 07.8
comp=Z,38nm,1.2s
KNK Knik Glacier 81.69 22 IAmb IAmb 02 37 09.0
comp=Z,29nm,1.2s
KNK IAMs_20 IAMs_20 03 07 00.1
comp=Z,741nm,21.0s
GHO Glory Hole Cre 81.75 22 IAmb IAmb 02 37 09.0
comp=Z,48nm,1.3s
GKN Gorkha 81.79 300 *e*P **P** **02 37 09.2 +0.2**
HIN Hinchinbrook I 81.83 24 IAMs_20 IAMs_20 03 07 41.8
comp=Z,880nm,20.0s
SML Sawmill 81.99 22 IAMs_20 IAMs_20 03 08 59.8
comp=Z,785nm,20.0s
FID Port Fidalgo 82.05 24 IAMs_20 IAMs_20 03 09 07.0
comp=Z,704nm,20.0s
RDOG Red Dog Mine 82.12 13 IAmb IAmb 02 37 11.4
comp=Z,42nm,1.3s
RDOG IAMs_20 IAMs_20 03 07 56.0

comp=Z,727nm,22.0s
KTH Kantishna Hill 82.19 20 IAmb IAmb 02 37 10.3
comp=Z,51nm,1.3s
EYAK Cordova Ski Ar 82.22 24 IAMs_20 IAMs_20 03 08 02.1
comp=Z,802nm,20.0s
TRF Thorofare Moun 82.34 20 IAmb IAmb 02 37 11.3
comp=Z,42nm,1.4s
SCM Sheep Creek Mo 82.38 22 IAmb IAmb 02 37 12.8
comp=Z,31nm,1.2s
SCM IAMs_20 IAMs_20 03 07 46.2
comp=Z,699nm,22.0s
BPAW Bear Paw Mtn. 82.53 20 IAmb IAmb 02 37 12.8
comp=Z,27nm,1.3s
DANN Dangsing 82.63 300 *eP* **P 02 37 13.2 -0.4**
comp=Z,51nm,1.0s
MCK McKinley 82.98 20 IAMs_20 IAMs_20 03 07 58.2
comp=Z,798nm,22.0s
DHY Denali Highway 83.12 21 IAMs_20 IAMs_20 03 12 50.9
comp=Z,662nm,19.0s
PYUN Piuthan 83.22 300 *eP* **P 02 37 16.2 -0.4**
comp=Z,144nm,1.1s
MLY Manley 83.23 19 P **P 02 37 15.6 +0.1**
MLY IAmb IAmb 02 37 17.2
comp=Z,26nm,1.0s
MLY IAMs_20 IAMs_20 03 18 38.5
comp=Z,457nm,18.0s
CRQM Cirque 83.39 24 IAmb IAmb 02 37 19.8
comp=Z,24nm,1.1s
CRQM IAMs_20 IAMs_20 03 17 59.6
comp=Z,535nm,19.0s
NEA Nenana 83.47 20 IAMs_20 IAMs_20 03 15 13.4
comp=Z,492nm,18.0s
GLB Gilahina Butte 83.51 24 IAMs_20 IAMs_20 03 08 24.2
comp=Z,699nm,22.0s
TGL Tana Glacier 83.52 25 IAMs_20 IAMs_20 03 18 02.5
comp=Z,492nm,19.0s
VRDI Verde Repeater 83.53 24 IAMs_20 IAMs_20 03 07 58.8
comp=Z,634nm,22.0s
MAW Mawson 83.60 203 P **P 02 37 17.8 +0.3**
comp=Z,5.4nm,1.0s,baz=104,slow=8.0,SNR=5.0
MAW LR LR 03 09 54.0
comp=Z,305nm,21.9s,baz=62,slow=32
MAW Mawson 83.60 203 P **P 02 37 15.9 -1.6**
YAH Yahtse 83.75 25 IAMs_20 IAMs_20 03 08 29.7
comp=Z,613nm,20.0s
PAX Paxson 83.75 22 IAMs_20 IAMs_20 03 11 21.6
comp=Z,443nm,18.0s
MCARA McCarthy VSAT 83.79 24 IAmb IAmb 02 37 21.7
comp=Z,23nm,1.2s
TIXI Tiksi 83.92 351 *c i* P **P 02 37 18.2 -0.6**
TIXI pmax pmax
comp=Z,30nm,1.7s
TIXI Tiksi 83.92 351 P **P 02 37 17.5 -1.4**
TIXI IAmb IAmb 02 37 29.5
comp=Z,46nm,1.6s
TIXI IAMs_20 IAMs_20 03 14 37.6
comp=Z,537nm,20.0s
CCB Clear Creek Bu 83.95 20 IAmb IAmb 02 37 28.5
comp=Z,15nm,0.8s
CCB IAMs_20 IAMs_20 03 08 39.5
comp=Z,573nm,22.0s
TCOL CIGO, UAF Yank 84.07 20 P **P 02 37 18.9 -0.8**
baz=232
COLA College 84.07 20 *de* P **P 02 37 17.7 -2.1**
COLA pmax pmax
comp=Z,35nm,0.9s
COLA College 84.07 20 P **P 02 37 18.7 -1.0**
HDA Harding Lake 84.09 20 P **P 02 37 19.2 -0.7**
baz=233
BARN Barnard Glacie 84.16 25 IAmb IAmb 02 37 22.4
comp=Z,24nm,1.4s
WMQ Urumqi 84.20 316 *e* P **P 02 37 21.7 +0.6**
WMQ pP pP 02 37 31.5 -1.1
WMQ S **S 02 47 40.1 -3.6**
WMQ sS sS 02 48 00.5 -2.5
WMQ pmax pmax
comp=Z,17nm,0.7s
WMQ pmax pmax
comp=Z,39nm,4.5s
WMQ LR LR
comp=Z,170nm,18.9s
WMQ LR LR
comp=Z,170nm,21.1s
WMQ LR LR
comp=Z,360nm,27.3s
PCA Pinnacle 84.24 26 IAmb IAmb 02 37 22.8
comp=Z,31nm,1.1s
PCA IAMs_20 IAMs_20 03 11 24.9
comp=Z,493nm,20.0s
CTGM Chitina Glacie 84.25 25 IAmb IAmb 02 37 33.7
comp=Z,16nm,1.0s
IL31 84.33 20 IAmb IAmb 02 37 21.4
comp=Z,41nm,1.4s
ILAR Eielson Array 84.33 20 P **P 02 37 19.9 -1.2**
comp=Z,7.3nm,0.4s,baz=246,slow=5.0,SNR=143
ILAR LR LR 03 09 45.2
comp=Z,371nm,21.8s,baz=242,slow=32
ILAR Eielson Array 84.33 20 P **P 02 37 20.0 -1.2**
POKR Poker Plat Res 84.36 20 P **P 02 37 20.1 -1.2**
baz=232
RIDG Independent Ri 84.43 22 IAmb IAmb 02 37 32.8
comp=Z,24nm,1.0s
RIDG IAMs_20 IAMs_20 03 12 51.6
comp=Z,823nm,20.0s
DHAK Deception Hill 84.64 27 IAMs_20 IAMs_20 03 07 59.3
comp=Z,858nm,21.0s
DOT Dot Lake 84.67 22 IAmb IAmb 02 37 33.3
comp=Z,20nm,0.9s
DOT IAMs_20 IAMs_20 03 10 01.7
comp=Z,628nm,21.0s
HYB Hyderabad 84.75 289 *i* P **P 02 37 24.0 -0.3**
SCRK Sand Creek 84.88 22 IAmb IAmb 02 37 25.6
comp=Z,38nm,1.5s
SCRK IAMs_20 IAMs_20 03 13 14.4
comp=Z,648nm,20.0s
DIB Dawson Inlet, 84.88 34 IAMs_20 IAMs_20 03 08 20.5
comp=Z,875nm,19.0s
SIT Sitka 85.04 30 IAMs_20 IAMs_20 03 17 01.3
comp=Z,601nm,18.0s
NGP Nagpur 85.07 292 *ex* **P 02 37 25.4 -0.5**
NGP IAmb IAmb 02 37 30.2
comp=Z,16nm,0.6s
MOBC Moresby Island 85.14 34 IAMs_20 IAMs_20 03 07 57.3
comp=Z,877nm,20.0s
CRAG Craig 85.47 32 IAMs_20 IAMs_20 03 08 10.7
comp=Z,681nm,20.0s
TOLK Toolik Lake Re 85.94 16 P **P 02 37 29.6 +0.4**
baz=230
BESE Bessie Mountai 85.95 28 IAMs_20 IAMs_20 03 08 06.0
comp=Z,790nm,21.0s
JIS Juneau Island 86.04 29 IAMs_20 IAMs_20 03 08 29.5
comp=Z,631nm,21.0s
WRAK Wrangell Islan 86.26 31 IAMs_20 IAMs_20 03 09 26.5
comp=Z,498nm,20.0s
RPN Rapa Nui 86.28 117 LR LR 03 09 51.7
comp=Z,276nm,20.6s,baz=22,slow=31
DGZ Jazzator, Alta 86.35 322 *ce* P **P 02 37 31.2 -0.6**
DGZ pmax pmax
comp=Z,17nm,1.2s
EGAK Eagle 86.35 22 IAMs_20 IAMs_20 03 09 17.3
comp=Z,729nm,22.0s
DAWY Dawson 86.63 23 IAmb IAmb 02 37 34.9
comp=Z,41nm,1.4s
DAWY IAMs_20 IAMs_20 03 11 17.8
comp=Z,499nm,20.0s
O02D Mt. Diablo Mer 86.80 48 P **P 02 37 35.9 +1.8**
baz=254
WHY Whitehorse 86.86 27 IAMs_20 IAMs_20 03 08 51.0
comp=Z,663nm,21.0s
BBB Bella Bella 86.97 36 IAMs_20 IAMs_20 03 09 47.7
comp=Z,622nm,20.0s
BHPL Bhopal 86.99 294 *ex* **P 02 37 34.3 -1.0**
BHPL IAmb IAmb 02 37 45.1
comp=Z,13nm,1.2s
N02D Trinity Center 87.08 48 P **P 02 37 37.6 +2.1**
baz=254
WDC Whiskeytown Da 87.09 48 P **P 02 37 32.9 -2.5**
WDC pmax pmax
comp=Z,19nm,1.3s
WDC Whiskeytown Da 87.09 48 P **P 02 37 32.9 -2.5**
WDC IAmb IAmb 02 37 37.8
comp=Z,19nm,1.3s
ORV Oroville 87.59 49 P **P 02 37 38.9 +1.0**
ORV pmax pmax
comp=Z,11nm,1.2s
AFDM Forest Hills D 87.84 50 P **P 02 37 35.9 -3.2**
CMB Columbia Colle 88.06 51 IAMs_20 IAMs_20 03 11 54.3
comp=Z,689nm,20.0s
DLBC Dease Lake 88.20 30 IAMs_20 IAMs_20 03 16 06.8
comp=Z,574nm,21.0s
RUBR Rubicon Trail 88.48 50 IAMs_20 IAMs_20 03 10 03.3
comp=Z,521nm,20.0s
BEKR Beckworth 88.53 49 IAMs_20 IAMs_20 03 12 57.3
comp=Z,557nm,18.0s
J05D Fort Rock, OR 88.74 46 P **P 02 37 44.7 +1.3**
baz=255
MK31 Makanchi Array 88.74 318 IAmb IAmb 02 37 44.0
comp=Z,14nm,1.1s
MKAR Makanchi Array 88.74 318 P **P 02 37 42.8 -0.4**
comp=Z,9.5nm,0.7s,baz=102,slow=5.5,SNR=84
MKAR PP **PP 02 41 11.4 -1.1**
comp=Z,1.9nm,1.1s,baz=96,slow=10,SNR=3.6
MKAR LR LR 03 18 18.4
comp=Z,181nm,20.5s,baz=66,slow=36
EPYK Eagle Plains 88.75 21 P **P 02 37 43.3 +0.5**
baz=242
EPYK Eagle Plains 88.75 21 IAmb IAmb 02 37 53.7
comp=Z,20nm,1.0s
EPYK IAMs_20 IAMs_20 03 11 49.6
comp=Z,521nm,20.0s
WAKR Walker 88.90 51 IAMs_20 IAMs_20 03 09 24.4
comp=Z,604nm,20.0s
PASC Pasadena Art C 88.91 55 IAMs_20 IAMs_20 03 11 02.1
comp=Z,879nm,20.0s
PNTR Pine Nut 88.91 50 IAMs_20 IAMs_20 03 10 07.7
comp=Z,518nm,21.0s
I05D Terrebonne, OR 88.93 45 P **P 02 37 45.3 +1.1**
baz=255
MAKZ Makanchi 88.95 318 P **P 02 37 43.7 -0.4**
MAKZ pmax pmax
comp=Z,17nm,1.1s
MAKZ MLR MLR
comp=Z,300nm,20.0s
MAKZ Makanchi 88.95 318 P **P 02 37 43.7 -0.4**
MAKZ IAmb IAmb 02 37 45.0
comp=Z,17nm,1.1s
MDPB Devils Postpil 88.97 52 IAMs_20 IAMs_20 03 13 03.4
comp=Z,732nm,20.0s
ISA Isabella, Lake 89.00 54 P **P 02 37 45.9 +1.2**
baz=257
MOD Modoc Plateau 89.06 47 IAmb IAmb 02 37 47.2
comp=Z,26nm,1.5s
EDW2 Edwards Air Fo 89.22 55 P **P 02 37 47.3 +1.6**
baz=258
LON Longmire 89.24 42 IAMs_20 IAMs_20 03 09 56.5
comp=Z,834nm,22.0s
ZALV Zalesovo Beam 89.25 325 P **P 02 37 44.3 -1.1**
comp=Z,7.9nm,1.0s,baz=120,slow=5.3,SNR=18
ZALV LR LR 03 18 42.5
comp=Z,114nm,19.3s,baz=92,slow=36
RYN Ryan 89.62 51 IAmb IAmb 02 37 50.0
comp=Z,15nm,1.3s
RYN IAMs_20 IAMs_20 03 11 28.6
comp=Z,626nm,19.0s
NVAR Mina Array Bea 89.75 51 P **P 02 37 48.6 +0.3**
comp=Z,8.2nm,1.2s,baz=235,slow=6.4,SNR=26
NVAR LR LR 03 13 25.5
comp=Z,565nm,18.9s,baz=269,slow=32
NV11 Mina Array Sit 89.86 51 IAmb IAmb 02 37 51.1
comp=Z,24nm,1.4s
MPMC Manual Prospec 89.87 53 P **P 02 37 50.3 +1.4**
baz=258
B06A Marblemount 89.91 41 IAMs_20 IAMs_20 03 10 35.1
comp=Z,597nm,20.0s
KVN Kaiserville 90.04 50 IAmb IAmb 02 37 51.9
comp=Z,19nm,1.3s
MONP2 Monument Peak 90.08 57 P **P 02 37 51.3 +1.3**
baz=258
I07A Izee 90.15 45 IAmb IAmb 02 37 52.3
comp=Z,28nm,1.7s
PFO Pinyon Flats O 90.19 56 LR LR 03 13 52.7
comp=Z,719nm,18.1s,baz=281,slow=33
PFO Pinyon Flats O 90.19 56 ‖ *e* P **P 02 37 50.4 0.0**
PFO pmax pmax
comp=Z,12nm,1.4s
LLLB Lillooet 90.20 39 IAMs_20 IAMs_20 03 10 31.7
comp=Z,684nm,20.0s
GSC Goldstone, Bar 90.26 54 P **P 02 37 52.3 +1.6**
baz=258
E07A Sunnyside 90.49 43 IAMs_20 IAMs_20 03 09 50.7
comp=Z,670nm,21.0s
HEC Hector,Ludlow 90.54 55 P **P 02 37 53.7 +1.8**
baz=259
BELC Belle Mtn. Jos 90.65 56 P **P 02 37 54.3 +1.8**
baz=259
INK Inuvik 90.73 20 IAMs_20 IAMs_20 03 13 04.9
comp=Z,734nm,22.0s
G08A Pilot Rock 90.81 44 IAmb IAmb 02 37 54.9
comp=Z,13nm,1.3s
TPNV Topopah Spring 91.03 53 P **P 02 37 55.2 +0.9**
baz=259
TPNV Topopah Spring 91.03 53 IAmb IAmb 02 37 56.5
comp=Z,13nm,1.1s
GMRC Granite Mounta 91.08 55 P **P 02 37 55.6 +1.1**
baz=259
SYO Syowa Base 91.15 198 ‖ *eP* **P 02 37 54.2 +0.3**
SYO Syowa Base 91.15 198 ‖ *ep* P 02 38 02.8 -1.8
KDJ Kajisay 91.17 312 IAmb IAmb 02 37 56.7
comp=Z,18nm,0.8s
GLA Glamis 91.43 57 IAMs_20 IAMs_20 03 15 05.0
comp=Z,644nm,19.0s
KSH Kashi 91.53 310 P **P 02 37 58.6 +2.1**
KSH sP sP 02 38 14.5 +2.8
KSH PP **PP 02 41 39.9 +4.9**
KSH SKS **SKSac 02 48 26.2 -0.3**
KSH S **S 02 48 52.1 -1.8**
KSH SS **SS 02 55 02.3 +1.3**
KSH pmax pmax
comp=Z,21nm,0.7s
KSH pmax pmax
comp=Z,98nm,5.5s
KSH LR LR
comp=Z,130nm,4.7s
KSH LR LR
comp=Z,230nm,6.2s
KSH LR LR
comp=Z,360nm,13.8s
E09A Wood Farm, Sta 91.63 43 IAMs_20 IAMs_20 03 10 24.9
comp=Z,696nm,20.0s
SHPR Sheep Range 91.80 53 IAmb IAmb 02 38 00.5
comp=Z,13nm,1.2s
R11A Troy Canyon, C 91.82 52 P **P 02 37 59.3 +1.4**
baz=259
R11A Troy Canyon, C 91.82 52 IAmb IAmb 02 38 00.2
comp=Z,14nm,1.4s
R11A IAMs_20 IAMs_20 03 14 17.9
comp=Z,817nm,20.0s
C09A Chrisman Ranch 91.83 42 IAMs_20 IAMs_20 03 13 08.9
comp=Z,658nm,20.0s
BMO Blue Mountains 91.85 45 IAmb IAmb 02 37 59.7
comp=Z,22nm,1.5s
BMO IAMs_20 IAMs_20 03 13 60.0
comp=Z,557nm,20.0s
ULHL Ulahol 91.87 312 P **P 02 37 57.9 -0.2**
SNR=7.7
KURK Kurchatov 92.06 321 *ce* P **P 02 37 57.4 -1.1**
KURK pmax pmax
comp=Z,20nm,1.3s
KURK Kurchatov 92.06 321 P **P 02 37 56.4 -2.1**
KURK IAmb IAmb 02 37 58.7
comp=Z,22nm,1.2s
F10A Beach Ranch, E 92.14 44 IAmb IAmb 02 38 11.1
comp=Z,14nm,0.8s
F10A IAMs_20 IAMs_20 03 10 31.4
comp=Z,658nm,22.0s
TKM2 Tokmak 2 92.47 313 P **P 02 38 01.0 +0.1**
SNR=6.5
ELK Elko 92.54 49 P **P 02 38 02.7 +1.4**
ELK pmax pmax
comp=Z,18nm,1.4s
ELK Elko 92.54 49 IAmb IAmb 02 38 03.6
comp=Z,18nm,1.4s
KZA Kyzart 92.56 312 P **P 02 38 02.5 +0.9**
SNR=7.7
MFID Camas Ranch 92.61 47 IAmb IAmb 02 38 03.7
comp=Z,11nm,1.2s
NEW Newport 92.68 42 IAMs_20 IAMs_20 03 12 48.4
comp=Z,567nm,19.0s
NRIK Noril'sk 93.03 340 P **P 02 38 00.7 -1.9**
comp=Z,1.4nm,0.4s,baz=142,slow=4.1,SNR=8.4
NRIK PP **PP 02 41 45.9 +0.1**
comp=Z,1.2nm,0.4s,baz=93,slow=4.6,SNR=3.9
NRIK LR LR 03 20 54.2
comp=Z,483nm,20.2s,baz=90,slow=36
NRIK Noril'sk 93.03 340 ‖ *eP* **P 02 38 00.5 -2.1**
NRIK pmax pmax
comp=Z,12nm,1.6s
UCH Uchtor 93.13 312 P **P 02 38 04.9 +0.7**
SNR=6.8
AAK Ala-Archa 93.22 313 *i* P **P 02 38 03.9 -0.4**
AAK pmax pmax
comp=Z,6.0nm,1.2s
AAK Ala-Archa 93.22 313 P **P 02 38 01.8 -2.4**
AML Almayashu 93.71 312 P **P 02 38 07.0 +0.1**
SNR=7.9
ARSB Arslanbob 94.10 311 IAmb IAmb 02 38 09.6
comp=Z,28nm,1.6s
C36M Paulatuk 94.31 20 P **P 02 38 08.4 0.0**
baz=254
C36M Paulatuk 94.31 20 IAmb IAmb 02 38 18.4
comp=Z,11nm,1.0s
C36M IAMs_20 IAMs_20 03 13 58.4
comp=Z,471nm,21.0s
X16A Lo Mia Camp, P 94.44 56 IAMs_20 IAMs_20 03 12 33.7
comp=Z,755nm,22.0s
JTMT Jette 94.46 42 IAMs_20 IAMs_20 03 13 08.6
comp=Z,680nm,20.0s
WUAZ Wupatki 94.66 55 IAMs_20 IAMs_20 03 14 44.4
comp=Z,772nm,20.0s
TUC Tucson 94.66 58 IAMs_20 IAMs_20 03 12 20.8
comp=Z,514nm,22.0s
X18A Snowflake 95.67 56 IAMs_20 IAMs_20 03 12 46.4
comp=Z,647nm,19.0s
GAR Garm 95.77 308 IAmb IAmb 02 38 16.7
comp=Z,19nm,1.3s
AHID Auburn Hatcher 95.92 48 IAMs_20 IAMs_20 03 16 04.9
comp=Z,534nm,20.0s
W18A Petrified Fore 95.93 56 IAMs_20 IAMs_20 03 17 51.1
comp=Z,663nm,19.0s
FXWY Fox Creek 96.09 47 IAMs_20 IAMs_20 03 13 50.3
comp=Z,488nm,22.0s
TPAW Teton Pass 96.13 47 IAmb IAmb 02 38 40.7
comp=Z,13nm,1.6s
REDW Red Top Meadow 96.18 47 IAmb IAmb 02 39 55.0
comp=Z,5.0nm,0.4s
YKA Yellowknife Ar 96.62 28 P **P 02 38 18.2 -0.8**
comp=Z,2.7nm,0.8s,baz=254,slow=4.4,SNR=25
YKA LR LR 03 14 50.9
comp=Z,474nm,21.5s,baz=0.0,slow=31
LKWY Lake 96.66 46 IAMs_20 IAMs_20 03 17 27.3
comp=Z,713nm,20.0s
PV18 Skein Mesa, Pa 96.99 52 IAMs_20 IAMs_20 03 13 52.8
comp=Z,654nm,20.0s
PDAR Pinedale Array 97.05 48 P **P 02 38 20.9 -0.9**
comp=Z,2.0nm,1.0s,baz=262,slow=3.0,SNR=14
PV13 Radium Mtn., P 97.05 53 IAMs_20 IAMs_20 03 21 20.4
comp=Z,711nm,20.0s
MVCO Mesa Verde 97.19 54 IAMs_20 IAMs_20 03 13 31.2
comp=Z,582nm,22.0s
121A Cookes Peak, D 97.21 58 IAMs_20 IAMs_20 03 13 50.2
comp=Z,495nm,20.0s
BRVK Borovoye 97.55 322 *ce* P **P 02 38 21.4 -2.1**
BRVK pmax pmax
comp=Z,12nm,1.7s
BRVK Borovoye 97.55 322 P **P 02 38 22.2 -1.4**
BRVK IAmb IAmb 02 38 23.3
comp=Z,16nm,1.4s
SNAA Sanae 97.82 185 P Pdif 02 38 26.4 +1.7
SNAA Sanae 97.82 185 ‖ *eP* Pdif 02 38 26.0 +1.4
Y22D IRIS PASSCAL I 98.11 57 IAMs_20 IAMs_20 03 15 29.8
comp=Z,616nm,20.0s
EPT El Paso 98.19 59 IAMs_20 IAMs_20 03 18 44.4
comp=Z,572nm,18.0s
HPIG 98.36 64 IAMs_20 IAMs_20 03 13 40.5
comp=Z,626nm,20.0s
ANMO Albuquerque 98.58 56 IAMs_20 IAMs_20 03 14 33.3
comp=Z,467nm,20.0s
RWWY Rawlins 98.67 49 IAMs_20 IAMs_20 03 19 30.7
comp=Z,398nm,20.0s
VNA2 Neumayer--Watz 98.92 184 P **P 02 38 26.8 -2.7**
baz=181,slow=3.4
MNTX Cornudas Mount 99.14 59 IAMs_20 IAMs_20 03 19 21.4
comp=Z,615nm,20.0s
SDCO Great Sand Dun 99.62 53 IAMs_20 IAMs_20 03 15 15.4
comp=Z,638nm,21.0s
ISCO Idaho Springs 99.70 51 IAMs_20 IAMs_20 03 20 42.5
comp=Z,591nm,19.0s
LAO LASA Array 99.78 44 IAMs_20 IAMs_20 03 15 13.7
comp=Z,620nm,20.0s
TXAR Lajitas Array 100.38 62 P **Pdif 02 38 35.9 -1.0**
comp=Z,0.0nm,0.3s,baz=233,slow=5.5,SNR=1.3
RSSD Black Hills 101.17 47 IAMs_20 IAMs_20 03 18 04.7
comp=Z,377nm,20.0s
MSTX Muleshoe 101.53 57 IAMs_20 IAMs_20 03 23 45.4
comp=Z,521nm,19.0s
KSCO Kaye Shedlock' 101.96 52 IAMs_20 IAMs_20 03 20 24.3
comp=Z,557nm,20.0s
AMTX Amarillo 102.49 56 IAMs_20 IAMs_20 03 21 47.8
comp=Z,481nm,19.0s
FFC Flin Flon 102.71 36 IAMs_20 IAMs_20 03 18 01.0
comp=Z,403nm,20.0s
E28A Huff 103.59 44 IAMs_20 IAMs_20 03 18 06.4
comp=Z,746nm,22.0s
JCT Junction City 103.81 61 IAMs_20 IAMs_20 03 18 38.3
comp=Z,594nm,19.0s
CBKS Cedar Bluff 104.20 52 IAMs_20 IAMs_20 03 19 39.8
comp=Z,654nm,21.0s
SUSD Miller 104.82 47 IAMs_20 IAMs_20 03 21 22.3
comp=Z,630nm,20.0s
K31A O'Neill 104.98 49 IAMs_20 IAMs_20 03 20 21.9
comp=Z,564nm,20.0s
WHTX Lake Whitney, 105.89 60 IAMs_20 IAMs_20 03 23 16.2
comp=Z,414nm,20.0s
OKCFA Oklahoma City 105.97 56 IAMs_20 IAMs_20 03 24 40.9
comp=Z,645nm,20.0s
N33A J Bar K, Exete 105.98 50 IAMs_20 IAMs_20 03 24 04.4
comp=Z,499nm,19.0s
Z35A Perchaven, San 106.09 58 IAMs_20 IAMs_20 03 18 50.5
comp=Z,427nm,19.0s
TUL1 Leonard 107.32 55 IAMs_20 IAMs_20 03 25 04.7
comp=Z,601nm,19.0s
NATX Nacogdoches 108.26 60 IAMs_20 IAMs_20 03 23 39.0
comp=Z,505nm,21.0s
MIAR Mount Ida 109.15 57 IAMs_20 IAMs_20 03 22 06.3
comp=Z,567nm,20.0s
KBS Kingsbay 109.18 354 IAMs_20 IAMs_20 03 25 17.6
comp=Z,452nm,21.0s
X40A Basin Creek Fa 109.77 57 IAMs_20 IAMs_20 03 22 24.6
comp=Z,528nm,20.0s
WHAR Wooly Hollow 110.19 56 IAMs_20 IAMs_20 03 23 04.7
comp=Z,581nm,19.0s
342A Flagon Creek P 110.25 60 IAMs_20 IAMs_20 03 24 21.9
comp=Z,566nm,20.0s
I40A Norwalk 110.84 47 IAMs_20 IAMs_20 03 23 12.7
comp=Z,492nm,22.0s
143A Socs Landing, 111.01 59 IAMs_20 IAMs_20 03 28 46.7
comp=Z,478nm,19.0s
T42A Van Buren 111.07 54 IAMs_20 IAMs_20 03 23 06.8
comp=Z,339nm,21.0s
LCAR Lake Charles 111.08 55 IAMs_20 IAMs_20 03 28 39.1
comp=Z,394nm,18.0s
LPAR Lepanto 111.80 56 IAMs_20 IAMs_20 03 26 38.2
comp=Z,519nm,20.0s
LVZ Lovozero 111.88 341 IAMs_20 IAMs_20 03 30 44.1
comp=Z,609nm,22.0s
PARMO Parma 112.17 54 IAMs_20 IAMs_20 03 22 53.9
comp=Z,569nm,22.0s
W45A Hickory Valley 112.73 56 IAMs_20 IAMs_20 03 30 15.0
comp=Z,432nm,19.0s
146A Union 112.99 59 IAMs_20 IAMs_20 03 28 22.2
comp=Z,588nm,20.0s
KEV Kevo 113.14 344 IAMs_20 IAMs_20 03 30 52.2
comp=Z,480nm,22.0s
PLAL Pickwick Lake 113.66 56 IAMs_20 IAMs_20 03 23 36.4
comp=Z,437nm,20.0s
ARCES ARCESS Array B 113.69 344 PKiKP **PKiKP 02 43 26.6 -0.7**
comp=Z,1.6nm,0.9s,baz=64,slow=2.8,SNR=7.6
WVT Waverly 113.76 55 IAMs_20 IAMs_20 03 26 43.7
comp=Z,510nm,20.0s
GROC Groznyy 114.20 313 *i* PKIKP PKPdf 02 43 25.9 -3.1
GROC *e* 02 44 23.7
GROC pmax pmax
comp=Z,11nm,1.4s
T47A Sharon Grove 114.26 54 IAMs_20 IAMs_20 03 25 04.0
comp=Z,502nm,20.0s
X48A Hartselle 114.54 57 IAMs_20 IAMs_20 03 30 18.0
comp=Z,353nm,20.0s
LRAL Lakeview Retre 114.70 58 IAMs_20 IAMs_20 03 25 27.2
comp=Z,463nm,20.0s
CLTN Cedars of Leba 114.97 55 IAMs_20 IAMs_20 03 28 44.0
comp=Z,524nm,19.0s
Y49A Blount Mountai 115.12 57 IAMs_20 IAMs_20 03 30 26.3
comp=Z,327nm,18.0s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
U49A	**Red Boiling Sp**	**115.37**	**54**	IAMs_20	IAMs_20	03 26 09.5	
	comp=Z,579nm,21.0s						
SWET	**Sewanee**	**115.39**	**56**	IAMs_20	IAMs_20	03 26 11.1	
	comp=Z,466nm,20.0s						
AKH	**Akhalkalaki**	**116.19**	**311**	IAMs_20	IAMs_20	03 36 49.2	
	comp=Z,332nm,21.0s						
Z51A	**Franklin**	**116.19**	**58**	IAMs_20	IAMs_20	03 26 12.9	
	comp=Z,394nm,20.0s						
KIV	**Kislovodsk**	**116.28**	**314**	*i* PKIKP	**PKPdf**	**02 43 30.7**	**-2.4**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,592nm,22.0s						
NEY	**Neytrino**	**116.40**	**313⇓**	*i*PKIKP	**PKiKP**	**02 43 34.8**	**+1.3**
OBN	**Obninsk**	**116.75**	**327**	*e*PKIKP	**PKPdf**	**02 43 33.3**	**-0.2**
OBN				*e*		02 44 42.8	
OBN				*e*PPP	PPP	02 47 16.7	
OBN				*e*		02 50 37.2	
OBN				*e*SS	SS	03 00 47.1	+1.6
OBN				*e*SSS	SSS	03 05 06.9	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,351nm,24.0s						
ACSO	**Alum Creek Sta**	**117.00**	**50**	IAMs_20	IAMs_20	03 26 24.0	
	comp=Z,504nm,22.0s						
V53A	**Saluda**	**117.86**	**55**	IAMs_20	IAMs_20	03 32 48.5	
	comp=Z,502nm,19.0s						
ATD	**Arta Tunnel**	**118.19**	**278**	IAMs_20	IAMs_20	03 39 05.9	
	comp=Z,314nm,18.0s						
FINES	**FINESS Array B**	**118.49**	**337**	PKP	**PKPdf**	**02 43 36.4**	**-0.3**
	comp=Z,2.1nm,1.0s,baz=108,slow=4.5,SNR=4.2						
255A	**Hazlehurst**	**118.60**	**59**	IAMs_20	IAMs_20	03 32 32.8	
	comp=Z,454nm,20.0s						
656A	**Willston**	**118.80**	**62**	IAMs_20	IAMs_20	03 31 17.4	
	comp=Z,419nm,20.0s						
V55A	**Taylorsville**	**119.11**	**54**	IAMs_20	IAMs_20	03 29 32.7	
	comp=Z,489nm,19.0s						
KMSC	**Kings Mountain**	**119.13**	**55**	IAMs_20	IAMs_20	03 32 26.2	
	comp=Z,490nm,19.0s						
Z56A	**Williston**	**119.36**	**57**	IAMs_20	IAMs_20	03 30 58.6	
	comp=Z,505nm,20.0s						
VSU	**Vasula**	**119.93**	**334⇑**	*i*PKIKP	**PKiKP**	**02 43 40.3**	**+0.7**
Y57A	**Sumter**	**120.07**	**56**	IAMs_20	IAMs_20	03 28 44.3	
	comp=Z,434nm,20.0s						
Q56A	**Snyder Ridge,**	**120.11**	**51**	IAMs_20	IAMs_20	03 33 56.4	
	comp=Z,449nm,19.0s						
W57A	**Gilead**	**120.21**	**55**	IAMs_20	IAMs_20	03 34 12.9	
	comp=Z,468nm,18.0s						
U59A	**Littleton**	**121.75**	**53**	IAMs_20	IAMs_20	03 30 28.3	
	comp=Z,510nm,20.0s						
BOSA	**Boshof**	**121.81**	**227**	PKP	**PKPdf**	**02 43 44.0**	**-0.3**
	comp=Z,3.1nm,0.9s,baz=90,slow=22,SNR=1.9						
Y60A	**Bolivia**	**121.85**	**56**	IAMs_20	IAMs_20	03 32 37.5	
	comp=Z,530nm,21.0s						
V60A	**Jim Taylor Roa**	**122.29**	**54**	IAMs_20	IAMs_20	03 31 31.7	
	comp=Z,447nm,20.0s						
AKASG	**Malin Array Be**	**122.65**	**325**	PKP	**PKPdf**	**02 43 44.4**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=59,slow=1.9,SNR=7.3						
AKASG				PP	**PP**	**02 45 21.4**	**-1.0**
	comp=Z,0.1nm,0.2s,baz=58,slow=5.2,SNR=5.2						
AKBB	**Malin Array Si**	**122.65**	**325**	IAMs_20	IAMs_20	03 42 21.4	
	comp=Z,463nm,20.0s						
V61A	**Roper**	**122.83**	**54**	IAMs_20	IAMs_20	03 31 46.9	
	comp=Z,464nm,20.0s						
BRTR	**Keskin Array B**	**123.88**	**311**	PKP	**PKPdf**	**02 43 47.5**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=139,slow=3.4,SNR=5.9						
NB2	**NORSAR Subarra**	**123.94**	**342**	PKPdf	**PKPdf**	**02 43 47.0**	**-0.3**
	comp=Z,4.9nm,1.4s,baz=39,slow=1.9						
NOA	**NORSAR Array B**	**123.94**	**342**	PKP	**PKPdf**	**02 43 46.8**	**-0.5**
	comp=Z,1.7nm,0.9s,baz=40,slow=1.9,SNR=6.6						
SUW	**Suwalki**	**124.10**	**331**	IAMs_20	IAMs_20	03 40 31.0	
	comp=Z,437nm,20.0s						
LPAZ	**La Paz**	**125.87**	**118**	PKP	**PKPdf**	**02 43 53.0**	**0.0**
	comp=Z,1.1nm,0.8s,baz=111,slow=3.4,SNR=4.6						
LPAZ	**La Paz**	**125.87**	**118**	PKIKP	**PKPdf**	**02 43 53.0**	**0.0**
MLR	**Muntele Rosu**	**127.00**	**321**	IAMs_20	IAMs_20	03 49 06.9	
	comp=Z,367nm,21.0s						
RGN	**Rugen**	**128.12**	**336**	IAMs_20	IAMs_20	03 40 58.0	
	comp=Z,433nm,20.0s						
OKC	**Ostrava-Krasne**	**129.09**	**329**	AMS	AMS	03 44 00.0	
	comp=Z,300nm,18.8s						
PSZ	**Piszkesteto**	**129.31**	**326**	IAMs_20	IAMs_20	03 45 40.4	
	comp=Z,260nm,20.0s						
MORC	**Moravsky Berou**	**129.44**	**329**	*e*PKP	**PKPdf**	**02 43 58.4**	**+0.3**
MORC				*e*		02 44 08.5	
MORC	**Moravsky Berou**	**129.44**	**329**	IAMs_20	IAMs_20	03 42 35.4	
	comp=Z,338nm,21.0s						
OSTC	**Ostas**	**129.59**	**331**	AMS	AMS	03 38 20.0	
	comp=Z,500nm,28.0s						
KRLC	**Kraliky**	**129.63**	**330**	*e*PKIKP	**PKPdf**	**02 43 57.5**	**-1.0**
KRLC				*e*		02 44 09.5	
KRLC				MLR	MLR		
	comp=Z,300nm,19.8s						
KRLC	**Kraliky**	**129.63**	**330**	*e*PKPDF	**PKPdf**	**02 43 57.5**	**-1.0**
KRLC				*e*pPKP	**pPKPdf**	**02 44 09.5**	**-0.3**
KRLC				AMS	AMS	03 42 50.0	
	comp=Z,300nm,19.8s						
CHVC	**Chvalec**	**129.65**	**331**	AMS	AMS	03 38 20.0	
	comp=Z,400nm,22.0s						
DPC	**Dobruska-Polom**	**129.68**	**330**	AMS	AMS	03 43 50.0	
	comp=Z,400nm,19.0s						
UPC	**Upice**	**129.72**	**331**	AMS	AMS	03 39 10.0	
	comp=Z,400nm,21.8s						
JAVC	**Velka Javorina**	**129.94**	**328**	*e*PKP	**PKiKP**	**02 44 01.1**	**+1.2**
JAVC				*e*		02 44 10.6	
VTS	**Vitosha**	**130.06**	**319**	IAMs_20	IAMs_20	03 47 53.3	
	comp=Z,352nm,21.0s						
VRAC	**Vranov**	**130.21**	**329**	*e*PKP	**PKiKP**	**02 44 00.6**	**+0.2**
PVCC	**Panska Ves**	**130.40**	**331**	AMS	AMS	03 41 40.0	
	comp=Z,700nm,23.5s						
BRG	**Berggiesshubel**	**130.45**	**332**	*e*PKP	**PKiKP**	**02 44 01.0**	**+0.2**
	comp=Z,6.4nm,1.4s						
BRG				*e*		02 44 10.0	
	comp=Z,20nm,1.8s						
	comp=N,430nm,20.2s						
	comp=E,212nm,18.8s						
	comp=Z,409nm,19.3s						
BRG	**Berggiesshubel**	**130.45**	**332**	*e*pPKPdf	**pPKPdf**	**02 44 10.8**	**-0.5**
	baz=41,slow=1.7						
BRG				*e*SKPab	**SKPbc**	**02 47 22.7**	**+2.1**
	baz=42,slow=4.0						
BRG	**Berggiesshubel**	**130.45**	**332**	*e*PKIKP	**PKiKP**	**02 44 01.0**	**+0.2**
BRG				*e*		02 44 10.0	
BRG				pmax	pmax		
	comp=Z,6.0nm,1.4s						
BRG				pmax	pmax		
	comp=Z,20nm,1.8s						
BRG				MLR	MLR		
	comp=N,430nm,20.2s						
BRG				MLR	MLR		
	comp=E,212nm,18.8s						
BRG				MLR	MLR		
	comp=Z,409nm,19.3s						
KRUC	**Moravsky**	**130.47**	**329**	*e*PKP	**PKiKP**	**02 44 00.5**	**-0.4**
KRUC				*e*		02 44 10.1	
CLL	**Collm**	**130.58**	**333**	*e*PKPdf	**PKiKP**	**02 44 01.0**	**0.0**
CLL				*e*pPKPdf	**pPKPdf**	**02 44 10.0**	**-1.5**
CLL				*e*PS	**PS**	**02 56 32.0**	**+4.4**
CLL				*e*PPS	PPS	02 58 18.0	
CLL				*e*SS	SS	03 03 48.0	+8.0
CLL				*e*SSS	SSS	03 08 42.0	
CLL				LmV		03 48 00.0	
	comp=Z,300nm,19.4s						
CLL	**Collm**	**130.58**	**333**	*e*pPKPdf	**pPKPdf**	**02 44 11.6**	**+0.1**
	baz=41,slow=1.7						
CLL				*e*SKPab	**SKPbc**	**02 47 24.0**	**+2.9**
	baz=42,slow=4.0						
CLL	**Collm**	**130.58**	**333**	*e*PKIKP	**PKiKP**	**02 44 01.0**	**0.0**
CLL				MLR	MLR		
	comp=Z,300nm,21.5s						
CLL	**Collm**	**130.58**	**333**	IAMs_20	IAMs_20	03 40 07.1	
	comp=Z,436nm,22.0s						
FBE	**Freiberg**	**130.69**	**333**	*e*SKPab	**SKPab**	**02 47 23.6**	**+2.0**
	baz=42,slow=4.0						
GOPC	**GO Pecny, Ondr**	**130.71**	**331**	AMS	AMS	03 42 40.0	
	comp=Z,500nm,20.4s						
PRA	**Prague**	**130.77**	**331**	AMS	AMS	03 43 00.0	
	comp=Z,300nm,20.0s						
TREC	**Trest**	**130.78**	**330**	AMS	AMS	03 38 50.0	
	comp=Z,600nm,22.4s						
PRU	**Pruhonice**	**130.78**	**331**	AMS	AMS	03 42 30.0	
NRDL	**Niedersach Rie**	**130.94**	**336**	*e*SKPab	**SKPab**	**02 47 24.3**	**+1.9**
	baz=42,slow=4.0						
ASSE	**Asse, Remlinge**	**130.98**	**335**	*e*pSKPab		02 47 42.1	
	baz=43,slow=3.8						
RETH	**Rethem/Aller,**	**131.05**	**337**	*e*pPKPdf	**pPKPdf**	**02 44 11.8**	**-0.5**
	baz=41,slow=1.7						
RETH				*e*pSKPab		02 47 41.8	
	baz=43,slow=3.8						
CLZ	**Clausthal**	**131.32**	**335**	*e*pPKPdf	**pPKPdf**	**02 44 12.4**	**-0.6**
	baz=41,slow=1.7						
CLZ				*e*SKPab	**SKPab**	**02 47 26.1**	**+1.9**
	baz=42,slow=4.0						
CLZ				*e*pSKPab		02 47 43.4	
	baz=43,slow=3.8						
TANN	**Tannenbergstha**	**131.45**	**333**	*e*pPKPdf	**pPKPdf**	**02 44 12.4**	**-0.8**
	baz=41,slow=1.7						
TANN				*e*SKPab	**SKPab**	**02 47 27.0**	**+2.1**
	baz=42,slow=4.0						
TANN				*e*pSKPab		02 47 43.5	
	baz=43,slow=3.8						
CONA	**Conrad Observa**	**131.46**	**328**	*i* PKiKP	**PKiKP**	**02 44 04.1**	**+1.0**
	comp=Z,7.4nm,1.8s						
PLN	**Plauen**	**131.54**	**333**	*e*pPKPdf	**pPKPdf**	**02 44 12.7**	**-0.6**
	baz=41,slow=1.7						
PLN				*e*SKPab	**SKPab**	**02 47 26.9**	**+1.8**
	baz=42,slow=4.0						
PLN				*e*pSKPab		02 47 43.8	
	baz=43,slow=3.8						
GUNZ	**Gunzen**	**131.54**	**333**	*e*pPKPdf	**pPKPdf**	**02 44 13.0**	**-0.5**
	baz=41,slow=1.7						
GUNZ				*e*SKPab	**SKPab**	**02 47 27.3**	**+2.0**
	baz=42,slow=4.0						
GUNZ				*e*pSKPab		02 47 44.2	
	baz=43,slow=3.8						
WERN	**Wernitzgruen**	**131.58**	**333**	*e*pPKPdf	**pPKPdf**	**02 44 13.0**	**-0.5**
	baz=41,slow=1.7						
WERN				*e*SKPab	**SKPab**	**02 47 27.4**	**+2.0**
	baz=42,slow=4.0						
WERN				*e*pSKPab		02 47 44.1	
	baz=43,slow=3.8						
NKC	**Novy Kostel**	**131.59**	**332**	AMS	AMS	03 41 10.0	
	comp=Z,400nm,23.7s						
MOX	**Moxa**	**131.66**	**333**	*e*pPKPdf	**pPKPdf**	**02 44 12.7**	**-0.9**
	baz=41,slow=1.7						
MOX				*e*SKPab	**SKPab**	**02 47 27.5**	**+1.8**
	baz=42,slow=4.0						
MOX				*e*pSKPab		02 47 44.7	
	baz=43,slow=3.8						
MOX				*e*L	L	03 39 44.9	
	comp=Z,272nm,22.0s						
GTTG	**Gottingen**	**131.71**	**335**	*e*pPKPdf	**pPKPdf**	**02 44 12.9**	**-0.8**
	baz=41,slow=1.7						
GTTG				*e*SKPab	**SKPab**	**02 47 28.0**	**+2.2**
	baz=42,slow=4.0						
KHC	**Kasperske Hory**	**131.82**	**331**	*e*PKIKP	**PKiKP**	**02 44 04.0**	**+0.3**
KHC				*e*		02 44 12.9	
KHC				MLR	MLR		
	comp=Z,600nm,20.8s						
KHC	**Kasperske Hory**	**131.82**	**331**	*e*PKPDF	**PKiKP**	**02 44 04.0**	**+0.3**
KHC				*e*pPKP	**pPKPdf**	**02 44 12.9**	**-1.1**
KHC				AMS	AMS	03 44 30.0	
	comp=Z,600nm,20.8s						
GEC2	**GERESS Array S**	**131.95**	**330**	*e*pPKPdf	pPKPdf	02 44 13.6	-0.8
	baz=41,slow=1.7						
GERES	**GERESS Array B**	**131.95**	**330**	PKP	**PKPdf**	**02 44 01.9**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=83,slow=3.1,SNR=6.3						
IBBN	**Ibbenburen**	**132.00**	**337**	*e*SKPab	**SKPab**	**02 47 28.8**	**+1.8**
	baz=42,slow=4.0						
ROTZ	**Rotzenmuhle**	**132.02**	**332**	*e*SKPab	**SKPab**	**02 47 29.3**	**+2.0**
	baz=42,slow=4.0						
ROTZ				*e*pSKPab		02 47 45.9	
	baz=43,slow=3.8						
WET	**Wettzell**	**132.14**	**331**	*e*pPKPdf	**pPKPdf**	**02 44 14.2**	**-0.4**
	baz=41,slow=1.7						
WET				*e*SKPab	**SKPab**	**02 47 29.6**	**+1.7**
	baz=42,slow=4.0						
UBBA	**Unterbreizbach**	**132.24**	**335**	*e*SKPab	**SKPab**	**02 47 29.9**	**+1.9**
	baz=42,slow=4.0						
GRF	**Grafenberg Arr**	**132.53**	**333**	*e*PKPdf	**PKiKP**	**02 44 05.9**	**+0.8**
	baz=41,slow=1.7						
GRF				*e*pPKPdf	**pPKPdf**	**02 44 14.7**	**-0.6**
	baz=41,slow=1.7						
GRF				*e*SKPab	**SKPab**	**02 47 31.0**	**+1.6**
	baz=42,slow=4.0						
GRF				*e*pSKPab		02 47 47.7	
	baz=43,slow=3.8						
GRF				*e*L	L	03 47 23.6	
	comp=Z,284nm,20.1s						
BLY	**Banja Luka**	**132.68**	**324**	IAMs_20	IAMs_20	03 46 08.7	
	comp=Z,290nm,20.0s						
PDG	**Podgorica**	**132.71**	**320**	IAMs_20	IAMs_20	03 48 09.0	
	comp=Z,312nm,22.0s						
ABTA	**Abfaltersbach**	**133.96**	**329**	*i* PKiKP	**PKPdf**	**02 44 07.2**	**+0.3**
	comp=Z,5.5nm,1.7s						
TRI	**Trieste**	**133.99**	**327**	IAMs_20	IAMs_20	03 49 49.2	
	comp=Z,376nm,20.0s						
WTTA	**Wattenberg**	**134.04**	**330**	*i* PKiKP	**PKiKP**	**02 44 08.9**	**+0.4**
	comp=Z,3.9nm,0.8s						
STU	**Stuttgart**	**134.11**	**333**	IAMs_20	IAMs_20	03 45 35.5	
	comp=Z,342nm,20.0s						
MOTA	**Moosalm**	**134.25**	**330**	*i* PKiKP	**PKiKP**	**02 44 08.3**	**-0.5**
	comp=Z,5.1nm,1.3s						
SQTA	**Sankt Quirin**	**134.28**	**330**	*i* PKiKP	**PKPdf**	**02 44 07.9**	**+0.4**
	comp=Z,3.1nm,1.0s						
FETA	**Feichten**	**134.66**	**330**	*i* PKPdf	**PKPdf**	**02 44 06.2**	**-2.1**
	comp=Z,3.5nm,1.3s						
DAVA	**Damuels**	**134.88**	**331**	*i* PKiKP	**PKPdf**	**02 44 08.7**	**0.0**
	comp=Z,4.1nm,1.2s						
FUORN	**Ofenpass-Fuorn**	**135.17**	**330**	IAMs_20	IAMs_20	03 47 02.9	
	comp=Z,339nm,20.0s						
TUE	**Stuetta**	**135.72**	**331**	IAMs_20	IAMs_20	03 45 06.4	
	comp=Z,363nm,20.0s						
SKI	**Saint Kitts**	**138.01**	**75**	IAMs_20	IAMs_20	03 40 50.2	
	comp=Z,289nm,18.0s						
PBRG	**Braganca**	**146.07**	**342**	*e*PKP	**PKPab**	**02 44 31.3**	**+1.0**
PGAV	**Gavieira, Arco**	**146.37**	**344**	*e*LR	LR	03 38 50.8	
	comp=Z,176nm,20.0s						
MVO	**Moncorvo**	**146.75**	**342**	*e*PKP	**PKPab**	**02 44 32.4**	**-0.5**
MVO	**Moncorvo**	**146.75**	**342**	*e*LR	LR	03 38 28.5	
	comp=Z,344nm,20.0s						
ESDC	**Sonseca Array**	**147.00**	**337**	PKPbc	**PKPdf**	**02 44 30.6**	**+0.1**
	comp=Z,5.1nm,1.3s,baz=23,slow=3.1,SNR=11						
ESDC				PP	**PP**	**02 48 00.6**	**+4.4**
	comp=Z,1.0nm,0.9s,baz=14,slow=7.3,SNR=4.2						
PAB	**San Pablo**	**147.26**	**337**	PKP2	**PKPbc**	**02 44 33.3**	**0.0**
PAB	**San Pablo**	**147.26**	**337**		**PKPbc**	**02 44 33.3**	**0.0**
PVIS	**Viseu**	**147.42**	**343**	*e*PKP	**PKPbc**	**02 44 34.3**	**+0.7**
CART	**Cartagena**	**147.46**	**331**	IAMs_20	IAMs_20	03 48 37.0	
	comp=Z,344nm,22.0s						
PCBR	**Castelo Branco**	**148.09**	**341**	*e*PKP	**PKPbc**	**02 44 35.3**	**-0.1**
PCAS	**Casmilo, Conde**	**148.21**	**343**	*e*PKP	**PKPbc**	**02 44 35.5**	**-0.2**
PMRV	**Marv??o**	**148.44**	**341**	*e*PKP	**PKPbc**	**02 44 36.8**	**+0.5**
PMRV	**Marv??o**	**148.44**	**341**	*e*LR	LR	03 39 05.1	
	comp=Z,275nm,22.0s						
PSBE	**So Bento**	**148.79**	**343**	*e*PKP	**PKiKP**	**02 44 38.0**	**-0.7**
PMTG	**Montargil**	**149.03**	**342**	*e*PKP	**PKiKP**	**02 44 39.7**	**+0.6**
EVO	**Evora**	**149.46**	**341**	*e*PKP	**PKiKP**	**02 44 39.7**	**-0.3**
PBEJ	**Beja**	**149.87**	**340**	*e*PKP	**PKiKP**	**02 44 40.9**	**0.0**
PNCL	**Nicolau / Gran**	**150.00**	**341**	*e*PKP	**PKiKP**	**02 44 41.2**	**0.0**
MESJ	**Messejana**	**150.15**	**341**	*e*PKPdf	**PKPdf**	**02 44 35.5**	**0.0**
MESJ				AMS	AMS	03 54 46.5	
	comp=Z,284nm,18.6s						
MESJ	**Messejana**	**150.15**	**341**	*e*PKIKP	**PKPdf**	**02 44 35.5**	**0.0**
MESJ	**Messejana**	**150.15**	**341**	*e*PKP	**PKiKP**	**02 44 41.7**	**+0.2**
PCVE	**Castro Verde**	**150.28**	**340**	*e*PKP	**PKiKP**	**02 44 42.0**	**+0.2**
PVAQ	**Vaqueiros**	**150.38**	**340**	*e*PKP	**PKiKP**	**02 44 42.2**	**+0.2**
PVAQ	**Vaqueiros**	**150.38**	**340**	*e*LR	LR	03 38 16.5	
	comp=Z,496nm,20.0s						
PTEO	**Sao Teotonio**	**150.58**	**341**	*e*PKP	**PKPbc**	**02 44 41.5**	**-0.2**
PBDV	**Barranco-do-Ve**	**150.60**	**340**	*e*PKP	**PKiKP**	**02 44 43.1**	**+0.6**
MORF	**Marmelete**	**150.78**	**341**	*e*PKPdf	**PKPdf**	**02 44 36.3**	**-0.3**
MORF				AMS	AMS	03 53 27.8	
	comp=Z,343nm,21.8s						
MORF	**Marmelete**	**150.78**	**341**	*e*PKIKP	**PKPdf**	**02 44 36.3**	**-0.3**
MORF	**Marmelete**	**150.78**	**341**	*e*PKP	**PKiKP**	**02 44 42.8**	**-0.1**
PMOZ	**Porto Moniz, M**	**157.00**	**354**	*e*LR	LR	03 39 50.0	
	comp=Z,115nm,18.0s						
TOC2	**Torodi Ar. Sit**	**158.33**	**281**	IAMs_20	IAMs_20	04 12 44.3	
	comp=Z,294nm,20.0s						
TOC3	**Torodi Ar. Sit**	**158.33**	**281**	IAMs_20	IAMs_20	04 12 44.4	
	comp=Z,324nm,21.0s						
TOB3	**Torodi Ar. Sit**	**158.35**	**281**	IAMs_20	IAMs_20	04 12 44.8	
	comp=Z,324nm,21.0s						
TOC4	**Torodi Ar. Sit**	**158.35**	**281**	IAMs_20	IAMs_20	04 12 44.0	
	comp=Z,340nm,21.0s						
TOA0	**Torodi Ar. Sit**	**158.36**	**281**	IAMs_20	IAMs_20	04 12 45.0	
	comp=Z,303nm,20.0s						
TOB1	**Torodi Ar. Sit**	**158.36**	**281**	IAMs_20	IAMs_20	04 12 45.0	
	comp=Z,303nm,19.0s						
TORD	**Torodi Ar. Bea**	**158.36**	**281**	PKP	**PKPdf**	**02 44 46.9**	**-0.8**
	comp=Z,1.7nm,1.1s,baz=146,slow=0.6,SNR=4.8						
TORD				PKPab	**PKPab**	**02 45 21.3**	**-0.8**
	comp=Z,2.7nm,0.9s,baz=78,slow=3.8,SNR=6.7						
TOA3	**Torodi Ar. Sit**	**158.36**	**281**	IAMs_20	IAMs_20	04 12 34.1	
	comp=Z,285nm,20.0s						
TOB4	**Torodi Ar. Sit**	**158.37**	**281**	IAMs_20	IAMs_20	04 12 44.3	
	comp=Z,307nm,20.0s						
TOB5	**Torodi Ar. Sit**	**158.37**	**281**	IAMs_20	IAMs_20	04 07 41.4	
	comp=Z,286nm,20.0s						
TOC7	**Torodi Ar. Sit**	**158.37**	**281**	IAMs_20	IAMs_20	04 12 43.4	
	comp=Z,303nm,20.0s						

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*IDC **05** 02:25:59.5±3.3, 8°.12N×75°.04W, h55km±38km, mb3.0/3, mb1 3.4/5, mb1mx3.2/30, mbtmp3.4/5, ML2.5/2, MS3.0/2, Ms1 3.0/2, ms1mx2.6/13, Error ellipse: s-maj=28.3km s-min=13.5km az=125.0*

*RSNC **05** 02:25:59.8±1.2, 7°.94N×75°.00W, h21km±4km, ML3.2, Mw3.4*

ISC 05 02:25:58.9±1.0, **7°.95N**±0°.03×**75°.01W**±0°.04, **h42**km±12km, **n19**, σ**2.17**/29, **mb3.2**/3, **4C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZARC	**Zaragoza, Cauc**	**0.48**	**162⇓**	*i*Pg	**Pn**	**02 26 08.8**	**-0.8**
ZARC				*e*Sg	**Sn**	**02 26 16.1**	**-1.0**
UREC	**San Jos de Ur**	**0.56**	**249⇑**	*i*Pg	**Pn**	**02 26 10.0**	**-0.6**
UREC				*e*Sg	**Sn**	**02 26 18.4**	**-0.5**
UREC				*i*		02 26 18.8	
	comp=Z,2μm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.51**	**159⇓**	*e*P	**Pn**	**02 26 23.8**	**+0.2**
PTBC				*e*S	**Sn**	**02 26 43.1**	**+1.1**
PTBC				*i*		02 26 47.2	
	comp=Z,366nm,0.2s						
DBBC	**Dabeiba**	**1.51**	**232**	*e*P	**Pn**	**02 26 25.2**	**+1.5**
BRRC	**Barranca, Sant**	**1.53**	**123⇑**	*i*P	**Pn**	**02 26 24.9**	**+1.1**
BRRC				*e*S	**Sn**	**02 26 45.2**	**+2.5**
BRRC				*i*		02 26 49.7	
	comp=Z,284nm,0.2s						
LCBC	**Los crdobas,**	**1.62**	**304**	*e*P	**Pn**	**02 26 27.4**	**+2.3**
LCBC				*e*S	**Sn**	**02 26 49.7**	**+5.0**
LCBC				*i*		02 26 59.1	
	comp=Z,260nm,0.3s						
HELC	**Santa Helena**	**1.83**	**197**	*e*P	**Pn**	**02 26 28.8**	**+0.6**
HELC				*e*S	**Sn**	**02 26 53.1**	**+2.7**
HELC				*i*		02 26 56.9	
	comp=Z,135nm,0.3s						
SJCC	**San Jacinto, C**	**1.94**	**355**	*e*P	**Pn**	**02 26 30.0**	**+0.5**
SJCC				*e*S	**Sn**	**02 26 55.0**	**+2.3**
ARGC	**Ariguani, Magd**	**2.04**	**22**	*e*P	Pn	02 26 36.3	+5.5
ARGC				*e*S	**Sn**	**02 26 54.9**	**-0.1**
CBOC	**Ciudad Bolivar**	**2.30**	**206**	*e*P	**Pn**	**02 26 35.8**	**+1.2**
CBOC				*e*S	**Sn**	**02 27 04.0**	**+2.2**
PAMC	**Pamplona, Colo**	**2.37**	**105⇑**	*e*P	**Pn**	**02 26 37.4**	**+1.6**
PAMC				*e*S	**Sn**	**02 27 06.2**	**+2.4**
PAMC				*i*		02 27 17.7	
	comp=Z,128nm,0.3s						
NORC	**Norcasia**	**2.38**	**177⇑**	*e*P	**Pn**	**02 26 36.1**	**+0.6**
NORC				*e*S	**Sn**	**02 27 04.4**	**+0.8**
NORC				*i*		02 27 12.7	
	comp=Z,137nm,0.2s						
ROSC	**El Rosal**	**3.17**	**168**	P	**Pn**	**02 26 48.6**	**+1.9**
	comp=Z,8.7nm,0.3s,baz=343,slow=20,SNR=9.3						
ROSC				S	**Sn**	**02 27 28.8**	**+5.4**
	comp=Z,13nm,0.3s,baz=217,slow=23,SNR=12						
SDV	**Santo Domingo**	**4.42**	**78**	P	**Pn**	**02 27 05.3**	**+1.6**
	comp=Z,3.7nm,0.3s,baz=283,slow=18,SNR=19						
SDV				S	**Sn**	**02 27 54.9**	**+0.7**
	comp=Z,10nm,0.3s,baz=264,slow=19,SNR=12						
ATAH	**Atahualpa**	**15.37**	**193**	LR	LR	02 37 09.8	
	comp=Z,48nm,20.5s,baz=180,slow=43						
APG	**El Apazote**	**16.68**	**296**	LR	LR	02 37 51.6	
	comp=Z,71nm,18.6s,baz=102,slow=43						
TXAR	**Lajitas Array**	**34.32**	**312**	P	**P**	**02 32 39.5**	**-2.2**
	comp=Z,0.3nm,0.9s,baz=129,slow=7.1,SNR=2.3						
YKA	**Yellowknife Ar**	**61.57**	**340**	P	**P**	**02 36 09.9**	**-1.7**
	comp=Z,0.3nm,0.6s,baz=132,slow=7.3,SNR=6.7						
TORD	**Torodi Ar. Bea**	**75.34**	**78**	P	**P**	**02 37 37.7**	**-1.0**
	comp=Z,0.3nm,1.0s,baz=273,slow=5.4,SNR=1.2						

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*IDC **05** 02:52:02.9±0.7, 19°.85S×70°.75W, h0km, mb4.1/11, mb1 4.2/15, mb1mx4.1/31, mbtmp4.1/15, ML3.6/4, MS3.8/9, Ms1 3.8/9, ms1mx3.6/30, Error ellipse: s-maj=23.3km s-min=14.7km az=53.0*

*SJA **05** 02:52:03.5±0.8, 19°.96S×70°.88W, h10km, ML4.5, MW4.3*

*NEIC **05** 02:52:03.0±2.4, 19°.94S±0°.03×71°.01W±0°.04, h11km±3km, mb4.8/27, Mwr4.5/45, ML4.7(GUC), Error ellipse: s-maj=5.4km s-min=4.4km az=110.0*

*NEIC **05** 02:52:05, 19°.99S×70°.89W, h19km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}5.12; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-5.05; $M_{r\theta}$1.03; $M_{\theta\phi}$1.90; $M_{\phi r}$-4.30; Fault plane solution: $M_0$7.00000×10^{15} NP1:ϕ_s337.15000°, δ25.53000°, λ83.07000°. NP2:ϕ_s164.82000°, δ64.67000°, λ93.30000°. Principal axes: T 6.7143, Plg70.0000°, Azm82.0000°; N 0.5476, Plg3.0000°, Azm343.0000°; P -7.2619, Plg20.0000°, Azm252.0000°;*

*GUC **05** 02:52:06.1±1.0, 19°.93S×70°.83W, h43km±2km, ML4.6*

*VAO **05** 02:52:07.8±1.2, 19°.81S×70°.76W, h32km±9km, mb4.5*

ISC 05 02:52:03.6±0.9, **19°.95S**±0°.02×**70°.96W**±0°.04, **h15**km±5km, **n164**, σ**1.28**/189, **mb4.6**/22, **MS4.0**/5, **9C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.84**	**113⇓**	*i*P	**Pg**	**02 52 20.4**	**+0.5**
TA02				*i* S	**Sb**	**02 52 31.2**	**+0.1**
TA02				IAML		02 52 33.4	
	comp=N,55μm,0.3s						
PSGC	**Pisagua**	**0.86**	**66⇓**	*i*P	**Pb**	**02 52 20.2**	**-0.1**
PSGC				*i* S	**Sb**	**02 52 30.8**	**-0.8**
PSGCX	**Pisagua**	**0.86**	**66**	Pg	**Pb**	**02 52 20.2**	**0.0**
PSGCX				Sg	**Sb**	**02 52 31.7**	**0.0**
PSGCX	**Pisagua**	**0.86**	**66**	*i* P	**Pb**	**02 52 20.3**	**0.0**
PSGCX				*i* S	**Sb**	**02 52 30.9**	**-0.8**
PSGCX				IAML		02 52 38.3	
	comp=Z,4μm,1.3s						
TA01	**Diego Aracena**	**0.95**	**130⇓**	*i*P	**Pn**	**02 52 22.6**	**+0.1**
TA01				*i* S	**Sg**	**02 52 35.3**	**+0.7**
TA01	**Diego Aracena**	**0.95**	**130**	Pg	**Pg**	**02 52 22.2**	**+0.1**
TA01				Sg	**Sg**	**02 52 35.0**	**+0.4**
PATCX	**Punta Patache**	**1.15**	**139⇑**	*i*P	**Pg**	**02 52 25.9**	**0.0**
PATCX				*e*S	**Sn**	**02 52 40.7**	**-0.2**
PATCX	**Punta Patache**	**1.15**	**139**		**Pg**	**02 52 25.7**	**-0.1**
PATCX				Sg	**Sg**	**02 52 41.3**	**+0.3**
PATCX	**Punta Patache**	**1.15**	**139**	*i* P	**Pg**	**02 52 26.0**	**+0.2**
PATCX				*i* S	**Sg**	**02 52 41.5**	**+0.6**
PATCX				IAML		02 52 44.7	
	comp=Z,7μm,0.9s						
PB11	**IPOC Station P**	**1.24**	**82**	*e*P	**Pn**	**02 52 26.2**	**-0.3**
PB11				*i* S	**Sb**	**02 52 41.5**	**-1.1**
PB11				IAML		02 52 43.7	
	comp=N,20μm,0.3s						
PB11	**IPOC Station P**	**1.24**	**82**		**Pn**	**02 52 26.5**	**0.0**
PB11				Sg	**Sb**	**02 52 43.0**	**+0.3**
PB11	**IPOC Station P**	**1.24**	**82**	*i* P	**Pn**	**02 52 26.8**	**+0.2**
PB11				*i* S	**Sb**	**02 52 42.5**	**-0.2**
PB11				IAML		02 52 43.6	
	comp=Z,15μm,1.2s						
PB12	**IPOC Station P**	**1.45**	**24⇑**	*i*P	**Pb**	**02 52 30.2**	**-0.3**
PB12				*i* S	**Sn**	**02 52 48.5**	**+0.2**
PB12	**IPOC Station P**	**1.45**	**24**		**Pb**	**02 52 30.1**	**-0.3**
PB12	**IPOC Station P**	**1.45**	**24**	*i* P	**Pb**	**02 52 30.5**	**0.0**
PB12				*e*S	**Sb**	**02 52 48.8**	**0.0**
PB12				IAML		02 52 53.3	
	comp=Z,4μm,0.4s						
MNMC	**Minye Minye**	**1.52**	**58⇓**	*i*P	**Pb**	**02 52 31.4**	**-0.3**
MNMC				*i* S	**Sn**	**02 52 49.5**	**-0.7**
MNMC				IAML		02 52 55.7	
	comp=N,21μm,0.5s						
MNMC	**Minye Minye**	**1.52**	**58**		**Pb**	**02 52 31.4**	**-0.3**
MNMCX	**Minye Minye**	**1.52**	**58**	*e*P	**Pb**	**02 52 31.6**	**-0.1**
MNMCX				*i* S	**Sb**	**02 52 51.3**	**+0.5**
MNMCX				IAML		02 52 57.5	
	comp=Z,10μm,0.3s						
AP01	**Chacalluta**	**1.67**	**20**	*e*P	**Pb**	**02 52 33.5**	**-0.6**
AP01				*i* S	**Sn**	**02 52 54.2**	**+0.6**
AP01				IAML		02 53 02.2	
	comp=E,29μm,0.8s						
AP01	**Chacalluta**	**1.67**	**20**	Pn	**Pb**	**02 52 33.8**	**-0.3**
GO01	**Chusmiza**	**1.68**	**81⇑**	*i*P	**Pb**	**02 52 34.0**	**-0.6**
GO01				*i* S	**Sn**	**02 52 54.8**	**+0.2**
GO01				IAML		02 52 57.0	

comp=N,14µm,0.3s
GO01 Chusmiza 1.68 81 Pb 02 52 34.0 -0.6
PB02 IPOC Station P 1.69 144⇑iP Pn 02 52 33.6 +0.8
PB02 i S Sn 02 52 54.6 +0.3
PB02 IAML 02 53 04.5
comp=N,18µm,0.5s
PB02 IPOC Station P 1.69 144 i P Pb 02 52 33.8 -0.7
PB02 i S Sb 02 52 56.9 +1.2
PB08 IPOC Station P 1.71 97⇑iP Pn 02 52 34.1 +0.9
PB08 i S Sn 02 52 55.0 0.0
PB08 IAML 02 52 57.7
comp=N,10µm,0.5s
PB08 IPOC Station P 1.71 97 Pn Pn 02 52 34.1 +0.9
PB08 IPOC Station P 1.71 97 i P Pb 02 52 34.6 -0.4
PB08 i S Sb 02 52 56.6 +0.2
PB08 IAML 02 52 58.4
comp=Z,8µm,0.6s
PB01 IPOC Station P 1.76 129⇑iP Pn 02 52 34.7 +1.1
PB01 i S Sn 02 52 56.0 +0.1
PB01 IPOC Station P 1.76 129 Pn 02 52 34.8 +1.1
PB01 IPOC Station P 1.76 129 i P Pb 02 52 35.0 -0.7
PB01 i S Sb 02 52 58.5 +0.9
PB01 IAML 02 53 01.9
comp=Z,7µm,0.8s
PB07 IPOC Station P 2.04 151⇑iP Pn 02 52 38.2 +0.6
PB07 eS Sn 02 53 03.6 +0.8
PB07 IPOC Station P 2.04 151 Pn 02 52 38.2 +0.6
PB07 IPOC Station P 2.04 151 i P Pn 02 52 38.5 +0.9
PB07 i S Sg 02 53 08.9 -0.3
PB07 IAML 02 53 14.2
comp=Z,4µm,0.4s
PB16 IPOC Station P 2.11 41⇑eP Pn 02 52 40.2 +1.3
PB16 eS Sn 02 53 05.5 +0.3
PB16 IAML 02 53 11.0
comp=N,3µm,0.5s
PB16 IPOC Station P 2.11 41 Pn 02 52 40.2 +1.3
PB16 IPOC Station P 2.11 41 eP Pn 02 52 40.6 +1.7
PB16 i S Sb 02 53 08.2 +0.1
PB16 IAML 02 53 13.7
comp=Z,5µm,1.2s
PB03 IPOC Station P 2.38 152⇑iP Pn 02 52 43.1 +0.9
PB03 eS Sn 02 53 11.9 +0.6
PB03 IAML 02 53 27.6
comp=E,3µm,0.4s
PB03 IPOC Station P 2.38 152 i P Pn 02 52 43.1 +0.9
PB03 i S Sg 02 53 18.3 -1.7
PB03 IAML 02 53 22.8
comp=Z,3µm,0.7s
PB09 IPOC Station P 2.44 139 Pn 02 52 44.8 +1.6
PB09 IPOC Station P 2.44 139 i P Pb 02 52 45.4 -2.0
PB09 eS Sb 02 53 17.4 +0.1
PB09 IAML 02 53 28.1
comp=Z,5µm,0.5s
PB04 IPOC Station P 2.49 163 Pn 02 52 44.0 +0.1
PB04 Sn Sn 02 53 11.7 -2.5
PB04 IPOC Station P 2.49 163 eP Pn 02 52 44.2 +0.4
PB04 i S Sg 02 53 21.5 -2.3
PB04 IAML 02 53 41.0
comp=Z,3µm,0.8s
PB05 IPOC Station P 2.98 166 i P Pn 02 52 50.6 +0.1
PB05 IAML 02 53 49.5
comp=Z,842nm,0.7s
PB06 IPOC Station P 3.03 155 eP Pn 02 52 51.8 +0.5
PB06 i S Sb 02 53 37.4 +2.9
PB06 IAML 02 53 46.0
comp=Z,3µm,0.7s
LVC Limon Verde 3.27 145 Pn Pn 02 52 56.8 +2.1
comp=Z,11nm,0.3s,baz=313,slow=12,SNR=77
LVC Pg Pb 02 53 02.7 +1.1
comp=Z,56nm,0.3s,baz=328,slow=10,SNR=39
LVC LR LR 02 53 31.1
comp=Z,218nm,21.9s,baz=320,slow=27
LVC Sn Sn 02 53 37.0 +3.4
comp=Z,75nm,0.3s,baz=296,slow=18,SNR=6.0
LVC Lg Lg 02 53 42.7
comp=Z,135nm,0.3s,baz=93,slow=14,SNR=14
LVC Limon Verde 3.27 145 Pn 02 52 57.0 +2.3
LVC Limon Verde 3.27 145 i P Pn 02 52 57.0 +2.3
LVC eS Sb 02 53 43.5 +2.1
LVC IAML 02 53 51.3
comp=Z,472nm,0.5s
PB15 IPOC Station P 3.53 157 Pn 02 52 58.7 +0.5
PB15 IPOC Station P 3.53 157 i P Pn 02 52 58.9 +0.7
PB15 IAML 02 54 04.0
comp=Z,2µm,0.4s
PB10 IPOC Station P 3.57 174 Pn 02 52 58.5 -0.1
PB10 Sn Sn 02 53 38.0 -2.6
PB10 IPOC Station P 3.57 174 i P Pn 02 52 58.2 -0.3
PB10 IAML 02 54 17.7
comp=Z,368nm,0.7s
LPAZ La Paz 4.52 37 Pn Pb 02 53 18.7 -4.5
comp=Z,3.8nm,0.3s,baz=232,slow=8.5,SNR=39
LPAZ Lg Lg 02 54 29.0
comp=Z,3.1nm,0.3s,baz=125,slow=20,SNR=1.1
LPAZ LR LR 02 55 07.0
comp=Z,820nm,21.1s,baz=246,slow=42
LPAZ La Paz 4.52 37 Pn 02 53 13.7 +1.5
LPAZ La Paz 4.52 37 Pn Pn 02 53 12.9 +0.7
LPAZ La Paz 4.52 37 eP Pn 02 53 11.2 -1.0
PB14 IPOC Station P 4.69 174 Pn 02 53 13.7 -0.4
PB14 Sn 02 54 05.8 -2.7
PB14 IPOC Station P 4.69 174 i P Pn 02 53 13.9 -0.3
PB14 IAML 02 54 46.1
comp=Z,332nm,0.5s
GO02 Mina Guanaco 5.34 167 Pn 02 53 23.8 +0.6
GO02 Sn Sn 02 54 21.9 -2.8
YJA Yavi 5.54 115 eP Pn 02 53 30.3 +4.2
AZAP Zapla 6.92 129 i P Pn 02 53 51.4 +6.6
AC02 Maricunga 7.06 167 Pn Pn 02 53 48.7 +1.8
AC05 El Transito 8.87 176 Pn Pn 02 54 11.3 -0.3
NNA Nana 9.73 324 Pn Pn 02 54 26.7 +3.5
comp=Z,0.6nm,0.3s,baz=43,slow=20,SNR=1.2
NNA Sn Sn 02 56 13.9 +1.5
comp=Z,0.9nm,0.3s,baz=250,slow=19,SNR=1.2
NNA LR LR 02 58 31.8
comp=Z,290nm,18.1s,baz=106,slow=40
NNA Nana 9.73 324 Pn 02 54 21.6 -1.6
GO04 Tololo Observa 10.18 179 Pn Pn 02 54 30.6 +1.0
SIV San Ignacio 10.19 69 Pn Pn 02 54 28.3 -1.2
comp=Z,0.9nm,0.3s,baz=267,slow=11,SNR=20
SIV Sn Sn 02 56 14.0 -10
baz=253,slow=23,SNR=0.8
CO03 El Pedregal 10.85 179 Pn Pn 02 54 38.6 +0.1
CO02 Combarbal 11.21 180 Pn Pn 02 54 43.6 +0.1
PTLB Pontes e Lacer 12.12 70 eP Pn 02 54 55.2 -0.7
VILB Vilhena 12.44 58 eP Pn 02 55 00.7 +0.4
VILB eS Sn 02 57 16.0 -2.8
ROC1 El Roble 12.98 180 Pn Pn 02 55 06.2 -1.6
SAML Samuel 13.27 36 Pn 02 55 10.1 -1.5
SAML Samuel 13.27 36 eP Pn 02 55 10.7 -0.9
CPUP Villa Florida 14.05 119 Pn Pn 02 55 21.8 -0.5
comp=Z,0.0nm,0.3s,baz=40,slow=6.7,SNR=2.3
CPUP LR LR 03 02 05.7
comp=Z,328nm,20.0s,baz=298,slow=43
CPUP Villa Florida 14.05 119 eP Pn 02 55 23.8 +1.6
AQDB Aquidauana 14.33 95 eP Pn 02 55 26.4 +0.3
BO02 Sierra Bellavi 14.79 179 Pn Pn 02 55 31.4 -1.1
SALV Santo Antonio 15.07 77 eP Pn 02 55 36.0 -0.2
H03N1 Juan Fernandez 15.20 206 T T 03 11 24.1
baz=32,slow=72,SNR=196
H03N2 Juan Fernandez 15.20 206 T T 03 11 27.0
baz=32,slow=72,SNR=104
H03N3 Juan Fernandez 15.21 206 T T 03 11 25.5
baz=32,slow=72,SNR=147
ITQB Itaqui 16.20 129 eP P 02 55 52.7 -1.3
C2SB Chapadao do Su 17.14 89 eP Pn 02 56 03.0 +0.2
CLDB Colider 17.16 61 eP Pn 02 56 02.0 -1.1
TRCB Terra Rica 17.30 103 eP Pn 02 56 05.5 +0.7
PTGB Pitanga 18.11 109 eP P 02 56 15.7 +0.5
PCMB Pacaembu 18.49 99 eP Pn 02 56 19.9 +0.4
ARAG Araguaiana, MT 18.70 80 eP P 02 56 21.6 -0.1
ITAB Concordia 18.70 116 eP Pn 02 56 22.0 0.0
CPSB Cacapava Do Su 18.94 127 eP P 02 56 24.5 +0.2
ITRB Iturama 19.38 93 eP P 02 56 28.8 -0.4
MACA Manacapuru-AM 19.46 32 eP P 02 56 29.6 -0.4
PLTB Pedras Altas 19.52 131 eP Pn 02 56 31.7 -0.2
FRTB Fartura 20.17 103 eP P 02 56 38.5 +0.7
OGAUY Aigu 20.31 138 eP P 02 56 40.2 +1.0
CNLB Canela 20.49 121 eP Pn 02 56 44.9 +1.5
PLCA Paso Flores 20.72 179 P P 02 56 44.1 +0.4
comp=Z,3.0nm,1.0s,baz=330,slow=20,SNR=2.4
PLCA Paso Flores 20.72 179 P P 02 56 40.8 -2.8
PLCA Paso Flores 20.72 179 eP Pn 02 56 46.7 +0.7

BB19B Bebedouro 21.04 97 eP P 02 56 45.2 -2.0
IPMB Ipameri, GO 21.60 89 eP P 02 56 52.7 -0.5
PTGA Pitinga 21.92 31 P P 02 56 55.9 -0.7
comp=Z,4.5nm,0.4s,baz=210,slow=14,SNR=13
PTGA LR LR 03 05 37.7
comp=Z,589nm,22.0s,baz=306,slow=38
PTGA Pitinga 21.92 31 P P 02 56 56.2 -0.4
PTGA Pitinga 21.92 31 eP P 02 56 56.3 -0.4
RCLB Rio Claro- Sao 21.98 101 eP P 02 56 56.2 -1.1
SPB Sao Paulo 22.14 104 eP P 02 57 00.6 +1.6
BDFB Brasilia 22.25 83 P P 02 57 00.1 -0.3
comp=Z,9.0nm,0.9s,baz=263,slow=14,SNR=3.4
BDFB LR LR 03 06 33.7
comp=Z,416nm,20.0s,baz=284,slow=40
BDFB Brasilia 22.25 83 P P 02 56 59.8 -0.6
BSCB Bom Sucesso 24.54 97 eP P 02 57 23.9 +0.8
ROSC El Rosal 24.85 352 LR LR 03 08 43.3
comp=Z,292nm,20.3s,baz=194,slow=40
SMTB Santa Maria do 25.13 67 eP P 02 57 28.5 +0.1
RUSC La Rusia 25.76 355 P P 02 57 34.3 -0.2
JANB Januaria 25.86 83 eP P 02 57 34.0 -1.0
SJMB Sao Joao De Ma 28.11 93 eP P 02 57 54.9 -0.3
BSFB Barra de Sao F 28.41 93 eP P 02 57 58.2 +0.3
SDV Santo Domingo 28.65 1 P P 02 57 59.8 -0.4
comp=Z,2.3nm,0.8s,baz=210,slow=20,SNR=2.4
SDV Santo Domingo 28.65 1 eP P 02 58 00.1 -0.1
MDP Montagnes des 30.72 38 LR LR 03 11 19.8
comp=Z,454nm,18.6s,baz=208,slow=38
BIRD Birdtown, Kers 55.04 350 IAmb IAmb 03 01 38.6
comp=Z,16nm,1.2s
X48A Hartselle 56.22 344 IAmb IAmb 03 01 45.2
comp=Z,10nm,1.4s
TKL Tuckaleechee C 56.62 348 IAmb IAmb 03 01 48.0
comp=Z,9.2nm,1.1s
V52A Sevierville 56.76 348 P P 03 01 45.2 -1.9
V52A IAmb IAmb 03 01 54.7
comp=Z,15nm,1.2s
T59A Double "B" Far 56.95 354 P P 03 01 47.0 -1.3
T59A IAmb IAmb 03 01 51.1
comp=Z,10nm,0.9s
CLTN Cedars of Leba 57.60 345 IAmb IAmb 03 02 04.5
comp=Z,7.0nm,1.1s
TXAR Lajitas Array 58.27 326 P P 03 01 59.3 +1.3
comp=Z,0.8nm,0.9s,baz=146,slow=9.1,SNR=7.5
MIAR Mount Ida 58.31 338 P P 03 01 57.9 -0.1
MIAR IAmb IAmb 03 02 06.9
comp=Z,15nm,1.5s
R40A Maddies Statio 61.29 341 P P 03 02 18.6 +0.1
R40A IAmb IAmb 03 02 21.1
comp=Z,5.2nm,1.1s
MSTX Muleshoe 61.59 330 IAmb IAmb 03 02 33.6
comp=Z,10nm,1.4s
WVNY West Valley, N 62.44 354 P P 03 02 25.8 -0.4
SNAA Sanae 64.37 161 P P 03 02 38.1 -0.6
SNAA IAmb IAmb 03 02 42.7
comp=Z,8.9nm,1.3s
SDCO Great Sand Dun 65.95 331 P P 03 02 49.4 -0.3
ECSD EROS Data Cent 67.60 340 P P 03 02 58.8 -0.9
ECSD IAmb IAmb 03 03 02.2
comp=Z,10nm,1.4s
U15A North Rim 68.33 325 P P 03 03 04.8 0.0
DBIC Dimbokro 70.16 75 P P 03 03 16.0 -0.2
comp=Z,10.0nm,1.1s,baz=293,slow=3.6,SNR=3.3
PDAR Pinedale Array 71.82 331 P P 03 03 27.9 +1.9
comp=Z,0.2nm,0.3s,baz=116,slow=8.1,SNR=4.1
SPUT South Promonto 72.07 328 P P 03 03 27.3 -0.2
NVAR Mina Array Bea 73.10 323 P P 03 03 36.5 +2.8
comp=Z,0.3nm,0.5s,baz=130,slow=8.4,SNR=4.2
KVN Kaiserville 73.42 323 P P 03 03 34.1 -1.4
KVN IAmb IAmb 03 03 50.2
comp=Z,6.7nm,1.3s
YHH Holmes Hill 73.99 332 P P 03 03 37.4 -1.6
TOA0 Torodi Ar. Sit 78.66 71 P P 03 04 03.6 -2.1
TORD Torodi Ar. Bea 78.66 71 P P 03 04 05.5 -0.2
comp=Z,15nm,1.1s,baz=254,slow=5.0,SNR=31
RAR Rarotonga 81.95 250 LR LR 03 33 12.4
comp=Z,118nm,18.7s,baz=68,slow=30
ESDC Sonseca Array 86.09 45 P P 03 04 45.2 +1.0
comp=Z,1.8nm,1.1s,baz=238,slow=6.2,SNR=6.6
YKA Yellowknife Ar 89.10 341 P P 03 04 59.5 +1.6
comp=Z,1.0nm,0.8s,baz=138,slow=5.0,SNR=16
H11S2 WAKE ISLAND Hy125.77 279 T T 05 30 31.0
baz=101,slow=74,SNR=77
H11S1 WAKE ISLAND Hy125.77 279 T T 05 30 28.3
baz=101,slow=74,SNR=59
H11S3 WAKE ISLAND Hy125.78 279 T T 05 30 31.0
baz=101,slow=74,SNR=61
H11N3 WAKE ISLAND Hy125.81 280 T T 05 30 35.5
baz=102,slow=74,SNR=25
H11N2 WAKE ISLAND Hy125.83 280 T T 05 30 36.5
baz=102,slow=74,SNR=20
H11N1 WAKE ISLAND Hy125.83 280 T T 05 30 36.8
baz=102,slow=74,SNR=20
ASAR Alice Springs 130.34 210 PKP PKiKP 03 11 15.5 +0.3
comp=Z,0.3nm,0.7s,baz=112,slow=1.8,SNR=2.1
WRAB Tennant Creek 133.25 214 PKPdf 03 11 20.2 +0.3
ZAA0 Zalesovo Array 141.32 23 PKPdf 03 11 31.2 -2.4
ZALV Zalesovo Beam 141.32 23 PKP PKPdf 03 11 34.5 +0.8
comp=Z,1.9nm,0.7s,baz=296,slow=2.8,SNR=6.5
MAKZ Makanchi 145.27 33 PKPdf 03 11 42.1 +1.2
MK31 Makanchi Array 145.44 33 PKPab 03 11 42.9 +1.5
MKAR Makanchi Array 145.44 33 PKPbc PKPab 03 11 42.4 +1.0
comp=Z,4.4nm,0.8s,baz=325,slow=4.6,SNR=33
KSH Kashi 145.56 48 PKPbc PKPab 03 11 43.9 +1.7
KSH sPKP 03 11 50.4
KSH PP PP 03 15 01.4 -0.8
MJAR Matsushiro Arr 149.61 309 PKP PKPdf 03 11 49.6 +1.2
comp=Z,0.4nm,0.4s,baz=66,slow=3.1,SNR=1.6
MJAR PKPbc sPKPdf 03 11 54.3 +0.5
comp=Z,3.1nm,0.9s,baz=137,slow=1.0,SNR=7.0
SONM Songino Array 152.10 4 PKP PKPdf 03 11 53.4 +1.3
comp=Z,0.4nm,0.9s,baz=148,slow=8.7,SNR=3.7
SONM PKPbc PKiKP 03 12 00.5 +1.5
comp=Z,1.7nm,0.7s,baz=305,slow=1.5,SNR=11
LZH Lanzhou 163.28 15 ePKP PKPdf 03 12 02.6 -3.7
LZH pPKP sPKPdf 03 12 12.1 +0.4
LZH sPKP 03 12 17.9
NJ2 Nanjing 165.07 326 eP PKPdf 03 12 08.0 +0.2
NJ2 Nanjing 165.07 326 pmax pmax
comp=Z,11nm,0.5s
GYA Guiyang 173.16 18 ePKP PKPdf 03 12 12.8 -0.4
GYA PP PP 03 17 35.1 +4.2

IDC 05 03:00:32.9±20.0, 15°98S×175°94W, h250km±198km, mb3.1/4, mb1 3.4/4, mb1mx3.1/49, mbtmp3.7/4, Error ellipse: s-maj=115.1km s-min=40.7km az=156.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	47.33	257	P	P	03 08 41.9	-0.3
	0.4nm,0.8s,baz=95,slow=7.6,SNR=4.7						
ASAR	Alice Springs	47.61	252	P	P	03 08 44.2	0.0
	1.2nm,0.5s,baz=86,slow=8.0,SNR=25						
TXAR	Lajitas Array	82.97	57	P	P	03 12 30.6	+0.1
	0.1nm,0.4s,baz=219,slow=6.7,SNR=2.7						
ILAR	Eielson Array	83.50	12	P	P	03 12 32.2	-0.1
	0.4nm,0.5s,baz=217,slow=5.3,SNR=16						
BRTR	Keskin Array B	145.02	318	PKPbc	PKPbc	03 19 39.9	-0.9
	1.3nm,1.0s,baz=48,slow=2.1,SNR=5.1						

SJA 05 03:06:27.5±1.0, 19°95S×71°00W, h10km, ML4.1, MW3.9
IDC 05 03:06:28.9±1.3, 19°75S×70°60W, h0km, mb3.8/5, mb1 3.9/7, mb1mx3.7/39, mbtmp3.8/7, ML3.4/2, MS3.0/5, Ms1 3.0/5, ms1mx3.0/22, Error ellipse: s-maj=33.9km s-min=16.2km az=65.0
NEIC 05 03:06:29.6±2.1, 19°96S±0°03×70°94W±0°03, h15km±4km, mb3.9/3, Mwr4.0/50, Error ellipse: s-maj=4.6km s-min=4.0km az=206.0
NEIC 05 03:06:30.6, 19°96S×70°90W, h19km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.09; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-1.02; $M_{r\theta}$0.21; $M_{\theta\phi}$0.20; $M_{\phi r}$-0.53; Fault plane solution: $M_0$1.22000×10^{15} NP1:ϕ_s352.96000°, δ31.52000°, λ97.84000°. NP2:ϕ_s163.79000°, δ58.81000°, λ85.22000°. Principal axes: T 1.2373, Plg76.0000°, Azm60.0000°; N -0.0358, Plg4.0000°, Azm166.0000°; P -1.2015, Plg14.0000°, Azm257.0000°;
GUC 05 03:06:31.0±0.6, 19°94S×70°88W, h41km±1km, ML4.1
ISC 05 03:06:29.0±1.4, 19°95S±0°02×70°90W±0°05, h13km±9km, n78, σ1°33/99, mb3.8/5, 7C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	Huaiquique	0.79	114⇓	iP	Pn	03 06 45.7	-0.3
TA02				eS	Sn	03 06 56.7	-1.1
TA02				IAML		03 06 58.5	
	comp=N,11µm,0.2s						
PSGC	Pisagua	0.81	65⇓	iP	Pb	03 06 45.7	+0.6
PSGC				i S	Sn	03 06 57.2	-1.1
PSGCX	Pisagua	0.81	65	Pg	Pb	03 06 45.5	+0.4
PSGCX					Sb	03 06 56.8	+0.8
PSGCX	Pisagua	0.81	65	i P	Pb	03 06 45.7	+0.6
PSGCX				i S	Sn	03 06 57.2	-1.1
PSGCX				IAML		03 06 59.5	
	comp=Z,3µm,0.3s						
TA01	Diego Aracena	0.92	133	eP	Pn	03 06 47.8	+0.1
TA01				i S	Sn	03 07 00.4	-0.4
TA01				IAML		03 07 01.5	
	comp=E,6µm,0.4s						
TA01	Diego Aracena	0.92	133	Pg	Pn	03 06 48.0	+0.4
TA01				Sg	Sn	03 07 00.4	-0.4
PATCX	Punta Patache	1.12	141⇑	iP	Pn	03 06 51.0	+0.4
PATCX				i S	Sn	03 07 06.5	+0.5
PATCX	Punta Patache	1.12	141		Pn	03 06 51.0	+0.4
PATCX					Sn	03 07 06.4	+0.5
PATCX	Punta Patache	1.12	141	i P	Pn	03 06 51.0	+0.4
PATCX				i S	Sn	03 07 06.5	+0.5
PATCX				IAML		03 07 08.6	
	comp=Z,2µm,0.4s						
PB11	IPOC Station P	1.19	81⇓	iP	Pg	03 06 52.2	+0.3
PB11				i S	Sg	03 07 07.7	+0.3
PB11				IAML		03 07 09.3	
	comp=N,14µm,0.3s						
PB11	IPOC Station P	1.19	81	Pn	Pg	03 06 52.2	+0.3
PB11	IPOC Station P	1.19	81	i P	Pg	03 06 52.2	+0.3
PB11				i S	Sg	03 07 07.9	+0.5
PB11				IAML		03 07 09.2	
	comp=Z,8µm,0.3s						
PB12	IPOC Station P	1.43	22⇑	iP	Pb	03 06 55.7	+0.1
PB12				i S	Sb	03 07 14.2	+0.3
PB12				IAML		03 07 22.2	
	comp=E,4µm,0.7s						
PB12	IPOC Station P	1.43	22	Pn	Pb	03 06 55.9	+0.2
PB12	IPOC Station P	1.43	22	i P	Pb	03 06 55.8	+0.1
PB12				i S	Sg	03 07 15.3	+0.2
PB12				IAML		03 07 21.2	
	comp=Z,2µm,0.3s						
MNMC	Minye Minye	1.47	57⇓	iP	Pb	03 06 56.9	+0.3
MNMC				eS	Sg	03 07 16.4	-0.2
MNMC				IAML		03 07 25.6	
	comp=N,7µm,0.4s						
MNMC	Minye Minye	1.47	57		Pb	03 06 57.0	+0.5
MNMCX	Minye Minye	1.47	57	eP	Pb	03 06 56.9	+0.4
MNMCX				eS	Sg	03 07 16.2	-0.3
MNMCX				IAML		03 07 23.3	
	comp=Z,4µm,0.4s						
GO01	Chusmiza	1.63	81⇑	iP	Pb	03 06 59.3	0.0
GO01				eS	Sg	03 07 21.2	-0.4
GO01	Chusmiza	1.63	81	Pn	Pb	03 06 59.5	+0.2
AP01	Chacalluta	1.65	19	eP	Pb	03 06 58.8	-0.6
AP01				eS	Sb	03 07 19.6	-0.5
AP01	Chacalluta	1.65	19	Pn	Pn	03 06 58.4	+0.6
PB08	IPOC Station P	1.66	97⇑	iP	Pb	03 06 59.4	-0.3
PB08				eS	Sb	03 07 20.8	+0.2
PB08				IAML		03 07 22.8	
	comp=N,4µm,0.2s						
PB08	IPOC Station P	1.66	97	Pn	Pb	03 06 59.8	+0.2
PB08	IPOC Station P	1.66	97	i P	Pb	03 06 59.7	0.0
PB08				i S	Sg	03 07 21.7	-0.7
PB08				IAML		03 07 22.5	
	comp=Z,3µm,0.3s						
PB02	IPOC Station P	1.66	146⇑	iP	Pn	03 06 58.8	+0.8
PB02				i S	Sb	03 07 20.1	-0.4
PB02				IAML		03 07 26.5	
	comp=N,4µm,0.4s						
PB02	IPOC Station P	1.66	146	i P	Pn	03 06 58.9	+0.8
PB02				eS	Sb	03 07 20.1	-0.4
PB02				IAML		03 07 28.7	
	comp=Z,3µm,0.4s						
PB01	IPOC Station P	1.72	130⇑	iP	Pb	03 06 59.9	-0.7
PB01				i S	Sb	03 07 21.8	-0.4
PB01				IAML		03 07 29.1	
	comp=N,3µm,0.3s						
PB01	IPOC Station P	1.72	130	Pn	Pb	03 06 59.9	-0.7
PB01	IPOC Station P	1.72	130	eP	Pb	03 06 60.0	-0.7
PB01				eS	Sb	03 07 21.6	-0.6
PB01				IAML		03 07 27.2	
	comp=Z,2µm,0.7s						
PB07	IPOC Station P	2.01	152	eP	Pn	03 07 03.3	+0.4
PB07				eS	Sb	03 07 30.8	+0.1
PB07				IAML		03 07 38.9	
	comp=E,1µm,0.3s						
PB07	IPOC Station P	2.01	152	Pn	Pn	03 07 03.3	+0.4
PB07	IPOC Station P	2.01	152	i P	Pn	03 07 03.4	+0.4
PB07				i S	Sg	03 07 33.8	0.0
PB07				IAML		03 07 37.3	
	comp=Z,1µm,0.6s						
PB16	IPOC Station P	2.07	40	eP	Pb	03 07 05.6	-1.3
PB16				eS	Sb	03 07 32.7	-0.1
PB16	IPOC Station P	2.07	40	Pn	Pb	03 07 05.9	-1.0
PB16	IPOC Station P	2.07	40	eP	Pb	03 07 05.9	-1.0
PB16				eS	Sg	03 07 34.7	-1.2
PB16				IAML		03 07 39.0	
	comp=Z,1µm,0.4s						
PB03	IPOC Station P	2.35	153	IAML		03 07 52.8	
	comp=E,980nm,0.7s						
PB03	IPOC Station P	2.35	153	i P	Pn	03 07 08.3	+0.7
PB03				i S	Sg	03 07 45.0	+0.3
PB03				IAML		03 07 51.3	
	comp=Z,785nm,0.5s						
PB09	IPOC Station P	2.41	140⇑	eP	Pn	03 07 09.7	+1.3
PB09				eS	Sn	03 07 39.7	+1.8
PB09				IAML		03 07 54.8	
	comp=N,1µm,0.7s						
PB09	IPOC Station P	2.41	140	Pn	Pn	03 07 10.2	+1.8
PB09	IPOC Station P	2.41	140	i P	Pn	03 07 10.4	+2.0
PB09				i S	Sg	03 07 45.3	-1.2
PB09				IAML		03 07 54.0	
	comp=Z,1µm,0.8s						
PB04	IPOC Station P	2.48	164	IAML		03 07 57.0	
	comp=N,1µm,0.4s						
PB04	IPOC Station P	2.48	164		Pn	03 07 09.5	+0.1
PB04	IPOC Station P	2.48	164	i P	Pn	03 07 09.3	0.0
PB04				i S	Sg	03 07 49.9	+1.1
PB04				IAML		03 07 57.7	
	comp=Z,611nm,0.5s						
PB05	IPOC Station P	2.97	167	i P	Pn	03 07 15.6	-0.4
PB05				IAML		03 08 31.6	
	comp=Z,292nm,0.9s						
PB06	IPOC Station P	3.01	156		Pn	03 07 16.9	+0.1
PB06				Sn	Sn	03 07 48.4	-4.5
PB06	IPOC Station P	3.01	156	i P	Pn	03 07 16.9	+0.1
PB06				eS	Sb	03 08 02.6	+3.0
PB06				IAML		03 08 11.1	
	comp=Z,558nm,0.5s						
LVC	Limon Verde	3.24	145	Pn	Pn	03 07 22.3	+2.3
	comp=Z,9.0nm,0.3s,baz=315,slow=8.0,SNR=19						
LVC				Pg	Pb	03 07 27.9	+1.2
	comp=Z,42nm,0.3s,baz=335,slow=9.9,SNR=19						
LVC				Sn	Sn	03 07 59.1	+0.5
	comp=Z,47nm,0.3s,baz=14,slow=8.9,SNR=5.8						
LVC				Lg	Lg	03 08 13.1	
	comp=Z,77nm,0.3s,baz=195,slow=18,SNR=4.6						
LVC				LR	LR	03 08 33.2	
	comp=Z,115nm,20.4s,baz=322,slow=38						
LVC	Limon Verde	3.24	145		Pn	03 07 22.1	+2.1
LVC					Sn	03 07 55.2	-3.4
LVC	Limon Verde	3.24	145	i P	Pn	03 07 22.0	+2.1
LVC				IAML		03 08 21.1	
	comp=Z,250nm,0.5s						
PB10	IPOC Station P	3.57	175	Pn	Pn	03 07 23.7	-0.5
LPAZ	La Paz	4.49	36	Pn	Pn	03 07 41.6	+4.1
	comp=Z,2.3nm,0.3s,baz=216,slow=4.7,SNR=35						
LPAZ				Lg	Lg	03 08 52.4	
	baz=308,slow=11,SNR=1.2						
LPAZ				LR	LR	03 09 23.8	
	comp=Z,85nm,18.7s,baz=248,slow=42						
LPAZ	La Paz	4.49	36		Pn	03 07 42.1	+4.6
LPAZ	La Paz	4.49	36	eP	Pn	03 07 42.0	+4.6
YJA	Yavi	5.50	115	i P	Pn	03 07 57.6	+6.5
AZAP	Zapla	6.88	129	i P	Pn	03 08 18.4	+8.4
AC02	Maricunga	7.05	167	Pn	Pn	03 08 11.7	-0.8
AC05	El Transito	8.87	176	Pn	Pn	03 08 36.5	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NNA	Nana	9.76	323	LR	LR	03 12 29.2	
	comp=Z,82nm,18.5s,baz=136,slow=37						
SIV	San Ignacio	10.14	69	Pn	Pn	03 08 52.8	-1.8
	comp=Z,0.1nm,0.3s,baz=128,slow=19,SNR=5.6						
SIV				LR	LR	03 13 33.3	
	comp=Z,160nm,20.1s,baz=278,slow=43						
H03N1	Juan Fernandez	15.22	206	T	T	03 25 48.8	
	baz=32,slow=72,SNR=24						
H03N2	Juan Fernandez	15.23	206	T	T	03 25 46.2	
	baz=32,slow=72,SNR=16						
H03N3	Juan Fernandez	15.24	206	T	T	03 25 45.6	
	baz=32,slow=72,SNR=22						
PTGA	Pitinga	21.89	31	P	P	03 11 20.8	-1.2
	comp=Z,3.1nm,0.3s,baz=219,slow=13,SNR=7.8						
PTGA	Pitinga	21.89	31	IAmb	IAmb	03 11 25.6	
	comp=Z,4.9nm,0.9s						
BDFB	Brasilia	22.20	83	P	P	03 11 23.4	-2.1
	comp=Z,1.3nm,0.6s,baz=262,slow=7.1,SNR=1.8						
BDFB				LR	LR	03 20 46.6	
	comp=Z,138nm,21.5s,baz=136,slow=39						
BDFB	Brasilia	22.20	83	P	P	03 11 25.5	-0.1
BDFB				IAmb	IAmb	03 11 32.2	
	comp=Z,4.2nm,0.9s						
RUSC	La Rusia	25.77	355	P	P	03 12 00.7	+0.4
TXAR	Lajitas Array	58.30	326	P	P	03 16 25.6	+1.7
	comp=Z,0.1nm,0.4s,baz=141,slow=10,SNR=2.0						
TORD	Torodi Ar. Bea	78.61	71	P	P	03 18 30.7	-0.5
	comp=Z,3.0nm,0.8s,baz=250,slow=5.1,SNR=19						
YKA	Yellowknife Ar	89.12	341	P	P	03 19 24.8	+1.1
	comp=Z,0.4nm,0.7s,baz=137,slow=4.6,SNR=5.2						
H11S2	WAKE ISLAND Hy	125.82	279	T	T	05 44 54.1	
	baz=101,slow=74,SNR=56						
H11S1	WAKE ISLAND Hy	125.83	279	T	T	05 44 59.3	
	baz=101,slow=74,SNR=43						
H11S3	WAKE ISLAND Hy	125.83	279	T	T	05 44 58.7	
	baz=101,slow=74,SNR=22						
H11N3	WAKE ISLAND Hy	125.86	280	T	T	05 44 56.2	
	baz=101,slow=74,SNR=9.1						
H11N2	WAKE ISLAND Hy	125.88	280	T	T	05 45 00.8	
	baz=101,slow=74,SNR=13						
H11N1	WAKE ISLAND Hy	125.88	280	T	T	05 45 00.8	
	baz=101,slow=74,SNR=5.1						
MKAR	Makanchi Array	145.41	33	PKPbc	PKPab	03 26 08.3	+1.2
	comp=Z,1.7nm,0.8s,baz=322,slow=4.9,SNR=12						

IDC ***05*** *03:10:19.1±1.2, 2°.73N×126°.22E, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.5/50, mbtmp3.8/6, ML4.3/1, Error ellipse: s-maj=65.1km s-min=19.8km az=66.0*

ISC 05 03:10:26.4±1.0**, 2°.9N**±0°.1×**126°.6E**±0°.2**, h63km, n9, σ1s.15**/11**, mb3.8**/4**, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	3.31	345	eP	Pn	03 11 17.0	+1.0
DDMP				eS	Sn	03 11 52.2	-1.9
SKMP	Bagumbayan, Su	4.14	331	eP	Pn	03 11 27.8	+0.6
SKMP				eS	Sn	03 12 14.3	0.0
KCP	Kidapawan	4.36	340	⇑eP	Sn	03 12 18.7	-1.1
JAY	Jayapura	15.12	111	Pn	Pn	03 13 56.7	+0.1
	1.2nm,0.3s,baz=315,slow=11,SNR=13						
FITZ	Fitzroy Crossi	20.86	182	P	P	03 15 01.9	-1.4
	2.0nm,0.7s,baz=353,slow=8.1,SNR=2.4						
WRA	Warramunga Arr	23.93	162	P	P	03 15 33.8	-1.1
	1.3nm,0.4s,baz=337,slow=10,SNR=12						
ASAR	Alice Springs	27.34	165	P	P	03 16 06.4	+0.7
	0.3nm,0.3s,baz=338,slow=9.0,SNR=6.7						
MKAR	Makanchi Array	58.16	326	P	P	03 20 14.3	+0.4
	0.3nm,0.4s,baz=124,slow=8.7,SNR=4.3						
KURBB	Kurchatov Arra	62.36	328	P	P	03 20 43.0	+0.5
	0.3nm,0.4s,baz=123,slow=7.0,SNR=7.3						

IDC ***05*** *03:11:24.4±1.2, 17°.63S×171°.72W, h0km, mb4.0/4, mb1 4.3/5, mb1mx3.8/49, mbtmp4.1/5, ML3.4/1, MS3.5/1, Ms1 3.5/1, ms1mx2.6/35, Error ellipse: s-maj=62.1km s-min=25.5km az=159.0*

ISC 05 03:11:29.3±1.0**, 17°.8S**±0°.3×**171°.6W**±0°.1**, h35km, n8, σ0s.64**/8**, mb3.9**/4**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	Rarotonga	11.69	109	Pn	Pn	03 14 14.3	+0.6
	2.2nm,0.3s,baz=261,slow=10.0,SNR=1.9						
RAR				Sn	Sn	03 16 22.2	-0.7
	0.3nm,0.3s,baz=311,slow=20,SNR=1.5						
DZM	Mont Dzumac	21.03	255	LR	LR	03 22 42.3	
	comp=Z,134nm,19.4s,baz=41,slow=32						
WRA	Warramunga Arr	50.98	258	P	P	03 20 27.3	-0.7
	2.3nm,0.9s,baz=92,slow=6.2,SNR=8.1						
ASAR	Alice Springs	51.01	254	P	P	03 20 28.8	+0.6
	4.1nm,0.8s,baz=89,slow=8.1,SNR=33						
NVAR	Mina Array Bea	75.01	41	P	P	03 23 07.5	0.0
	0.5nm,0.7s,baz=227,slow=8.7,SNR=4.4						
YKA	Yellowknife Ar	91.64	23	P	P	03 24 32.5	+0.2
	0.3nm,0.9s,baz=240,slow=4.8,SNR=3.8						
GERES	GERESS Array B	148.74	353	PKPbc	PKPbc	03 31 13.1	+0.1
	0.4nm,0.6s,baz=48,slow=2.0,SNR=4.2						
BRTR	Keskin Array B	149.08	320	PKPbc	PKPbc	03 31 13.7	-0.5
	0.3nm,0.8s,baz=42,slow=2.3,SNR=3.1						

NEIC ***05*** *03:18:29.7±0.7, 13°.7S±0°.2×170°.5E±0°.2, h617km±11km, mb4.4/9, Error ellipse: s-maj=38.9km s-min=10.1km az=144.0*

IDC ***05*** *03:18:29.6±2.3, 13°.65S×170°.44E, h612km±28km, mb3.0/8, mb1 3.3/9, mb1mx3.0/46, mbtmp4.0/9, Error ellipse: s-maj=49.8km s-min=19.1km az=152.0*

ISC 05 03:18:30.6±0.7**, 13°.9S**±0°.2×**170°.5E**±0°.1**, h628km, n21, σ0s.58**/22**, mb4.0**/12**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.20	119	P	P	03 20 32.7	-0.1
DZM	Mont Dzumac	9.04	205	P	P	03 20 40.8	+0.1
	1.2nm,0.3s,baz=213,slow=10,SNR=14						
DZM	Mont Dzumac	9.04	205	P	P	03 20 40.5	-0.2
KNTN	Kanton	20.71	59	P	P	03 22 29.1	-0.5
KNTN				IAmb	IAmb	03 22 43.4	
	comp=Z,16nm,1.1s						
CTA	Charters Tower	24.01	252	P	P	03 22 58.8	0.0
	comp=Z,1.4nm,0.6s,baz=82,slow=14,SNR=4.0						
COEN	Coen	26.55	266	P	P	03 23 21.6	+0.5
COEN				IAmb	IAmb	03 23 28.4	
	comp=Z,13nm,1.3s						
STKA	Stephens Creek	31.97	231	P	P	03 24 08.0	+0.4
	comp=Z,1.8nm,0.5s,baz=53,slow=8.1,SNR=7.9						
WB0	Warramunga Arr	35.04	255	P	P	03 24 33.0	-0.3
WB2	Warramunga Arr	35.09	255	P	P	03 24 33.2	-0.6
WB2				IAmb	IAmb	03 24 33.5	
	comp=Z,11nm,1.3s						
WRA	Warramunga Arr	35.10	255	P	P	03 24 33.2	-0.7
	comp=Z,4.2nm,0.5s,baz=86,slow=8.7,SNR=28						
AS31	Alice Springs	35.93	249	P	P	03 24 40.4	-0.3
ASAR	Alice Springs	35.93	249	P	P	03 24 40.2	-0.4
	comp=Z,6.3nm,0.7s,baz=75,slow=9.1,SNR=76						
ASAR				ScP	ScP	03 29 38.9	+1.5
	comp=Z,0.5nm,0.6s,baz=95,slow=3.1,SNR=8.0						
BBOO	Buckleboo	36.61	233	P	P	03 24 46.1	0.0
BBOO				IAmb	IAmb	03 24 46.6	
	comp=Z,4.8nm,0.8s						
KNRA	Kununurra	40.38	262	P	P	03 25 16.6	0.0
FITZ	Fitzroy Crossi	43.28	258	P	P	03 25 39.9	+0.6
	comp=Z,1.0nm,0.3s,baz=90,slow=6.0,SNR=7.8						
FITZ	Fitzroy Crossi	43.28	258	P	P	03 25 39.2	0.0
NWAO	Narrogin (SRO)	51.90	239	P	P	03 26 42.6	-0.4
NWAO				IAmb	IAmb	03 26 48.3	
	comp=Z,28nm,1.4s						
NVAR	Mina Array Bea	84.33	48	P	P	03 29 59.5	+1.0
	comp=Z,2.2nm,1.2s,baz=216,slow=7.5,SNR=4.6						
ILAR	Eielson Array	84.76	17	P	P	03 29 59.0	-0.7
	comp=Z,0.5nm,0.6s,baz=234,slow=5.0,SNR=12						
TXAR	Lajitas Array	93.10	61	P	P	03 30 39.5	+0.1
	comp=Z,0.1nm,0.4s,baz=212,slow=4.3,SNR=1.3						
ARCES	ARCESS Array B	120.19	347	PKP	PKPdf	03 36 10.7	-0.2
	comp=Z,1.0nm,0.8s,baz=62,slow=3.4,SNR=6.2						

IDC ***05*** *03:52:18.1±2.8, 37°.28N×72°.22E, h180km±23km, mb3.4/9, mb1 3.5/16, mb1mx3.3/44, mbtmp4.0/16, Error ellipse: s-maj=26.6km s-min=16.9km az=147.0*

NEIC ***05*** *03:52:20.3±1.7, 37°.54N±0°.07×72°.28E±0°.09, h189km±8km, mb4.0/4, Error ellipse: s-maj=11.2km s-min=9.1km az=118.0*

NNC ***05*** *03:52:26.6±4.5, 38°.06N×72°.26E, h227km±38km, mb3.0, mpv4.0, Error ellipse: s-maj=42.5km s-min=23.5km az=10.0*

ISC 05 03:52:19.5±0.5**, 37°.51N**±0°.05×**72°.29E**±0°.06**, h200km, n64, σ2s.01**/73**, mb3.6**/10**, 10C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.15	314		Pn	03 52 59.5	-0.3
CHGR	Chuyangaron	2.72	296		Pn	03 53 05.7	-0.3
CHCP	Chirah Chowk	3.92	168	P	Pn	03 53 21.4	+0.9
NIL	Nilore	3.93	168		Pn	03 53 21.8	+1.2
KBL	Kabul	3.96	223		Pn	03 53 21.9	+0.9
THW	Thamme Wali	4.72	186	P	Pn	03 53 30.3	-0.2
AML	Almayashu	4.74	13	P	Pn	03 53 31.3	+0.3
	SNR=160						
UCH	Uchtor	5.01	19	P	Pn	03 53 35.0	+0.5
	SNR=39						
KZA	Kyzart	5.10	26	P	Pn	03 53 35.6	0.0
	SNR=17						
EKS2	Erkin-Say	5.27	12	P	Pn	03 53 38.9	+1.4
	SNR=11						
AAK	Ala-Archa	5.40	18	P	Pn	03 53 40.0	+1.0
	11nm,0.3s,baz=164,slow=5.9,SNR=72						
AAK				S	Sn	03 54 40.6	-1.3
	5.9nm,0.3s,baz=308,slow=24,SNR=18						
AAK	Ala-Archa	5.40	18	P	Pn	03 53 40.1	+1.0
	SNR=40						
AAK	Ala-Archa	5.40	18	⇑P	Pn	03 53 39.8	+0.7
	19nm,0.4s						
AAK				⇑S	Sn	03 54 40.0	-2.0
	35nm,0.7s						
ULHL	Ulahol	5.62	32	P	Pn	03 53 42.4	+0.3
	SNR=7.0						
KK31	Karatay Array	5.75	347	⇑P	Pn	03 53 43.7	+0.2
	3.9nm,0.3s,baz=160,slow=12,SNR=44						
KK31				⇑S	Sn	03 54 45.6	-4.4
	29nm,0.3s,baz=159,slow=21,SNR=32						
KK31	Karatay Array	5.75	347		Pn	03 53 43.9	+0.4
KKAR	Karatay Array	5.75	347		Pn	03 53 43.9	+0.4
THN	Thein Dam	5.79	150	eP	Pn	03 53 45.5	+1.4
THN				eS	Sn	03 54 48.0	-3.0
CHMS	Chumysh	5.80	18	P	Pn	03 53 44.8	+0.7
	SNR=5.8						
KDJ	Kajisay	5.96	38		Pn	03 53 46.6	+0.3
TKM2	Tokmak 2	5.97	24	P	Pn	03 53 47.2	+0.7
	SNR=7.1						
TKM2	Tokmak 2	5.97	24	⇓P	Pn	03 53 46.7	+0.2
	5.6nm,0.5s						
TKM2				⇑S	Sn	03 54 53.5	-1.9
	14nm,0.8s						
USP	Ospenovka	6.00	16	P	Pn	03 53 47.8	+1.1
	SNR=6.8						
DHRM	DHARAMSHALA	6.20	147	eP	Pn	03 53 49.6	0.0
DHRM				eS	Sn	03 54 56.8	-4.0
DHRM				IAML		03 54 59.5	
	comp=E,235nm,0.1s						
DHRM				IAML		03 54 59.7	
	comp=N,247nm,0.3s						
SMLA	Simla	7.53	146	eP	Pn	03 54 06.4	-0.3
SMLA				eS	Sn	03 55 25.1	-6.8
SMLA				IAML		03 55 26.9	
	comp=N,73nm,0.8s						
SMLA				IAML		03 55 30.1	
	comp=E,171nm,0.3s						
MAKZ	Makanchi	11.74	35	⇑P	Pn	03 54 59.7	-1.3
	comp=E,1.2nm,0.7s						
MAKZ	Makanchi	11.74	35		Pn	03 55 00.8	-0.2
MK31	Makanchi Array	11.87	35	⇓P	P	03 55 05.8	-1.8
	comp=E,1.0nm,0.5s,baz=201,slow=9.9,SNR=19						
MK31	Makanchi Array	11.87	35	P	P	03 55 06.5	-1.1
MKAR	Makanchi Array	11.87	35	P	Pn	03 55 04.1	+1.5
	comp=E,0.1nm,0.3s,baz=203,slow=11,SNR=4.4						
PYUN	Piuthan	12.99	133	eP	Pn	03 55 16.1	-1.1
DANN	Dangsing	13.27	130	eP	Pn	03 55 20.9	+0.2
	comp=E,11nm,0.3s						
KURBB	Kurchatov Arra	13.85	17	P	P	03 55 30.5	+1.1
	comp=E,0.3nm,0.3s,baz=205,slow=11,SNR=37						
KURBB	Kurchatov Arra	13.85	17	⇑P	P	03 55 29.6	+0.1
	comp=E,5.6nm,0.5s						
KURK	Kurchatov	13.96	17	P	P	03 55 30.9	+0.2
GKN	Gorkha	14.05	129	eP	P	03 55 31.2	-0.9
	comp=E,63nm,0.5s						
DMN	Daman	14.62	129	eP	P	03 55 38.5	-0.1
	comp=E,13nm,0.5s						
AB31	Akbulak array	14.76	327	⇓P	P	03 55 38.2	-1.3
	comp=E,1.5nm,0.3s,baz=142,slow=12,SNR=66						
AB31				⇑S	S	03 58 14.1	-8.3
	comp=E,4.8nm,0.7s,baz=150,slow=23,SNR=12						
PKIN	Phulchoki	14.83	128	eP	P	03 55 41.4	+0.6
	comp=E,10nm,0.4s						
PKI	Pulchoki	14.84	128	eP	P	03 55 41.6	+0.6
GUN	Gumba	14.90	126	eP	P	03 55 42.3	+0.6
	comp=E,9.5nm,0.4s						
JIRN	Jiri	15.27	126	eP	P	03 55 47.1	+1.2
BVAR	Borovoye Array	15.57	356	P	P	03 55 49.9	+1.4
	comp=E,0.9nm,0.3s,baz=161,slow=9.4,SNR=9.6						
BRVK	Borovoye	15.61	356	⇑P	P	03 55 47.9	-1.0
	comp=E,2.6nm,0.6s						
BRVK	Borovoye	15.61	356		Pn	03 55 49.0	0.0
BRVK				IAmb	IAmb	03 55 51.3	
	comp=Z,5.0nm,1.0s						
RAMN	Ramite	16.03	127	eP	Pn	03 55 55.3	+0.8
	comp=Z,17nm,0.5s						
AKTO	Aktyubinsk	16.47	326	P	Pn	03 56 00.3	+1.0
	comp=Z,1.8nm,0.3s,baz=122,slow=9.6,SNR=18						
AKTO				S	S	03 58 57.0	-3.4
	comp=Z,0.4nm,0.3s,baz=338,slow=23,SNR=6.5						
AKTO	Aktyubinsk	16.47	326	⇓P	Pn	03 56 00.1	+0.8
	comp=Z,4.5nm,0.5s						
AKTO				⇑S	S	03 58 56.6	-3.8
	comp=Z,2.4nm,0.6s						
TAPN	Taplejung	16.48	123	eP	Pn	03 56 01.6	+1.7
WSAR	Wadi Sarin	18.44	223	P	P	03 56 17.6	-2.5
	comp=Z,0.3nm,0.3s,baz=289,slow=17,SNR=1.3						
ZALV	Zalesovo Beam	18.58	24	P	Pn	03 56 23.1	-0.9
	comp=Z,3.4nm,0.3s,baz=221,slow=10,SNR=57						
ARU	Arti	21.05	338	P	P	03 56 49.9	+2.2
	comp=Z,2.0nm,0.2s,baz=169,slow=8.2,SNR=4.8						
ARU	Arti	21.05	338	IAmb	IAmb	03 56 50.3	
	comp=Z,5.8nm,0.9s						
SONM	Songino Array	26.92	57	P	P	03 57 45.2	+3.0
	comp=Z,0.6nm,0.7s,baz=278,slow=9.9,SNR=4.0						
ASF	Jabal al Asfar	29.42	270	P	P	03 58 07.2	+2.8
	comp=Z,1.3nm,0.6s,baz=70,slow=14,SNR=1.6						
FINES	FINESS Array B	37.24	325	P	P	03 59 13.4	+1.9
	comp=Z,0.5nm,0.3s,baz=123,slow=8.5,SNR=7.8						
ARCES	ARCESS Array B	40.62	337	P	P	03 59 41.4	+2.0
	comp=Z,1.2nm,0.4s,baz=114,slow=8.5,SNR=24						
NB2	NORSAR Subarra	44.20	322	P	P	04 00 09.9	+1.4
	comp=Z,1.1nm,0.5s,baz=92,slow=7.9						
NOA	NORSAR Array B	44.20	322	P	P	04 00 10.0	+1.6
	comp=Z,0.7nm,0.4s,baz=94,slow=7.6,SNR=7.4						
TORD	Torodi Ar. Bea	66.77	269	P	P	04 02 50.0	+0.3
	comp=Z,1.3nm,0.5s,baz=46,slow=5.7,SNR=37						
INK	Inuvik	72.74	10	P	P	04 03 27.0	+1.7
	comp=Z,1.1nm,0.7s,baz=352,slow=7.2,SNR=6.9						
INK	Inuvik	72.74	10	P	P	04 03 26.5	+1.3
ILAR	Eielson Array	73.53	16	P	P	04 03 31.8	+1.8
	comp=Z,0.6nm,0.9s,baz=287,slow=5.0,SNR=5.1						
YKA	Yellowknife Ar	80.19	3	P	P	04 04 08.9	+1.8
	comp=Z,0.5nm,0.4s,baz=352,slow=5.3,SNR=12						

NNC ***05*** *03:53:53.4±1.3, 40°.71N×77°.66E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=8.8km s-min=7.1km az=12.0*

SOME ***05*** *03:53:53.1, 40°.78N×77°.65E, h0km*

ISC 05 03:53:55.0±2.6**, 40°.7N**±0°.1×**77°.53E**±0°.05**, h10km, n35, σ1s.60**/51**, 2C-1D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	Tian-Shan	2.41	350	eP	Pb	03 54 37.1	-1.5
	23nm,0.3s						
TNSS				eS	Sb	03 55 09.0	+0.5
	41nm,0.6s						
TNSS	Tian-Shan	2.41	350	Pg	Pb	03 54 36.9	-1.8
	37nm,0.6s						
TNSS				Lg	Lg	03 55 09.0	
	41nm,0.6s						
IZV	Izvestkoviy	2.46	344	Pg	Pb	03 54 38.2	-1.3
	11nm,0.3s						
IZV				Lg	Lg	03 55 10.9	
	77nm,0.6s						
SATY	Saty	2.48	15	eP	Pb	03 54 38.9	-0.8
	13nm,0.6s						
SATY				eS	Sb	03 55 11.6	+1.4
	34nm,0.5s						
SATY	Saty	2.48	15	Pg	Pb	03 54 38.2	-1.4
	13nm,0.6s						
SATY				Lg	Lg	03 55 11.6	
	34nm,0.5s						
MDOK	Medeo	2.52	352	eP	Pb	03 54 40.2	-0.2
	23nm,0.4s						
MDOK				eS	Sg	03 55 14.1	-1.8
	43nm,0.6s						
MDOK	Medeo	2.52	352	⇑Pg	Pn	03 54 37.1	+1.0
	16nm,0.5s						
MDOK				Lg	Lg	03 55 13.2	
	35nm,0.8s						
MDOK	Medeo	2.52	352	Pg	Pb	03 54 39.8	-0.5
	23nm,0.4s						
MDOK				Lg	Lg	03 55 13.6	
	43nm,0.6s						
KOTS	Kotyrbulak	2.58	353	eP	Pb	03 54 41.1	-0.4
	42nm,0.4s						
KOTS				eS	Sg	03 55 15.9	-2.0
	100nm,0.3s						
KOTS	Kotyrbulak	2.58	353	Pg	Pb	03 54 40.3	-1.2
	42nm,0.4s						
KOTS				Lg	Lg	03 55 15.2	
	116nm,0.6s						
MTBS	Maitube	2.59	342	eP	Pb	03 54 41.5	-0.1
	6.5nm,0.2s						
MTBS				eS	Sg	03 55 16.5	-1.8
	24nm,0.3s						
MTBS	Maitube	2.59	342	Pg	Pb	03 54 41.3	-0.3
	6.5nm,0.2s						
MTBS				Lg	Lg	03 55 16.1	
	24nm,0.3s						
KST	Kastek	2.65	334	eP	Pb	03 54 42.4	-0.1
	4.2nm,0.2s						
KST				eS	Sg	03 55 18.1	-1.9
	22nm,0.5s						
KST	Kastek	2.65	334	Pg	Pb	03 54 42.2	-0.4
	7.2nm,0.6s						
KST				Lg	Lg	03 55 17.6	
	22nm,0.5s						
UZB	Uzynbulak	2.71	24	eP	Pb	03 54 42.7	-1.0
	2.2nm,0.2s						
UZB				eS	Sb	03 55 18.4	+1.2
	12nm,0.3s						
UZB	Uzynbulak	2.71	24	Pg	Pb	03 54 42.4	-1.3
	5.7nm,0.6s						
UZB				Lg	Lg	03 55 17.9	
	14nm,0.5s						
KURS	Kuram	2.86	9	eP	Pb	03 54 45.4	-0.7
	6.5nm,0.5s						
KURS				eS	Sb	03 55 22.8	+1.7
	9.5nm,0.4s						
KURS	Kuram	2.86	9	Pg	Pb	03 54 44.9	-1.1
	6.5nm,0.5s						
KURS				Lg	Lg	03 55 22.3	
	9.5nm,0.4s						
SHLS	Shalkode	2.87	29	eP	Pg	03 54 48.4	-1.7
	8.1nm,0.1s						
SHLS				eS	Sg	03 55 27.9	+0.7
	33nm,0.3s						
PDGK	Podgornoye	3.03	28	Pg	Pb	03 54 47.8	-1.3
	4.4nm,0.4s						
PDGK				Lg	Lg	03 55 27.3	
	18nm,0.8s						
PDGK	Podgornoye	3.03	28	⇓Pg	Pn	03 54 44.7	+1.6
	4.8nm,0.4s						
PDGK				⇑Lg	Lg	03 55 26.2	
	45nm,0.8s						
KTBS	Karatobe	3.11	349	eP	Pb	03 54 50.0	-0.4
	7.8nm,0.4s						
KTBS				eS	Sb	03 55 31.1	+2.9
	52nm,0.4s						
KTBS	Karatobe	3.11	349	Pg	Pb	03 54 50.0	-0.4
	7.8nm,0.4s						
KTBS				Lg	Lg	03 55 31.1	
	52nm,0.4s						
KUU	Kurty	3.34	345	eP	Pb	03 54 53.7	-0.6
	1.6nm,0.2s						
KUU				eS	Sb	03 55 37.5	+2.4
	24nm,0.6s						
KUU	Kurty	3.34	345	Pg	Pb	03 54 53.7	-0.6
	3.4nm,0.4s						
KUU				Lg	Lg	03 55 37.5	
	24nm,0.6s						
MNBS	Baschi	3.47	10	eP	Pb	03 54 56.5	-0.1
	1.3nm,0.2s						
MNBS				eS	Sb	03 55 42.1	+3.4
	28nm,0.5s						
MNBS	Baschi	3.47	10	Pg	Pb	03 54 56.5	-0.1
	2.4nm,0.3s						
MNBS				Lg	Lg	03 55 42.1	
	28nm,0.5s						
KTMS	Ketmen	3.48	36	eP	Pb	03 54 55.5	-1.3
	0.6nm,0.1s						
KTMS				eS	Sb	03 55 40.1	+1.0
	14nm,0.4s						
KTMS	Ketmen	3.48	36	Pg	Pb	03 54 55.4	-1.3
	1.7nm,0.1s						
KTMS				Lg	Lg	03 55 40.5	
	14nm,0.4s						
ARXS	Arharly	3.55	3	eP	Pb	03 54 57.5	-0.4
	4.9nm,0.2s						
ARXS				eS	Sb	03 55 43.8	+2.8
	17nm,0.4s						
ARXS	Arharly	3.55	3	Pg	Pb	03 54 57.4	-0.5
	6.5nm,0.6s						
ARXS				Lg	Lg	03 55 43.8	
	17nm,0.4s						
DJR	Jarkent	4.02	24	eP	Pb	03 55 05.7	-0.3
	1.3nm,0.2s						
DJR				eS	Sb	03 55 58.0	+3.3
	4.0nm,0.2s						
DJR	Jarkent	4.02	24	Pg	Pb	03 55 05.4	-0.6
	2.3nm,0.4s						
DJR				Lg	Lg	03 55 57.5	
	5.6nm,0.4s						
KAPS	Kapalarasan	4.80	16	eP	Pb	03 55 21.7	+2.4
	1.5nm,0.5s						
KAPS				eS	Sg	03 56 25.3	-3.9
	2.4nm,0.3s						
KAPS	Kapalarasan	4.80	16	Pg	Pb	03 55 21.7	+2.4
	1.5nm,0.5s						
KAPS				Lg	Lg	03 56 25.2	
	3.8nm,0.6s						

NEIC ***05*** *04:02:45.8±1.9, 18°.2N±0°.2×68°.77W±0°.08, h129km±12km, Error ellipse: s-maj=32.5km s-min=7.6km az=195.0*

RSPR ***05*** *04:02:46.3, 18°.18N×68°.76W, h132km±1km, MD3.4/7*

ISC 05 04:02:46.4±1.6**, 18°.0N**±0°.1×**68°.79W**±0°.06**, h110km, n36, σ1s.32**/42**, 8C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.67	35	eS	Sn	04 03 20.2	+2.0
PCDR	Punta Cana, DR	0.67	35	⇑eP	Pn	04 03 04.8	+0.3
PCDR	Punta Cana, DR	0.67	35		Pn	04 03 04.8	+0.3
PCDR					Sn	04 03 20.2	+2.0
DR12	Loma Pena Alta	1.00	326	Pn	Pn	04 03 06.7	-0.9
DR12					Sn	04 03 23.4	-0.2
BANI	BANI	1.55	286	Pn	Pn	04 03 12.5	-1.4
MPR	Mayaguez	1.59	81	Pn	Pn	04 03 14.0	-0.2
CRPR	Cabo Rojo, PR	1.60	88	⇑eP	Pn	04 03 15.0	+0.6
CRPR	Cabo Rojo, PR	1.60	88	eS	Sn	04 03 37.9	+2.2
CRPR	Cabo Rojo, PR	1.60	88		Pn	04 03 15.0	+0.6
CRPR	Cabo Rojo, PR	1.60	88		Sn	04 03 37.6	+1.9
LSP	Las Mesas	1.64	82	⇑eP	Pn	04 03 15.7	+0.8
LSP	Las Mesas	1.64	82	eS	Sn	04 03 37.9	+1.4
LSP	Las Mesas	1.64	82		Pn	04 03 15.7	+0.8
LSP					Sn	04 03 37.9	+1.4
MLPR	Magueyes Islan	1.66	89	⇑eP	Pn	04 03 15.7	+0.6
MLPR	Magueyes Islan	1.66	89	eS	Sn	04 03 39.3	+2.2
MLPR	Magueyes Islan	1.66	89		Pn	04 03 15.7	+0.6
MLPR					Sn	04 03 39.3	+2.2
AGPR	Aguadilla, PR	1.67	72	⇑eP	Pn	04 03 15.7	+0.4
AGPR	Aguadilla, PR	1.67	72	eS	Sn	04 03 37.7	+0.4
AGPR	Aguadilla, PR	1.67	72		Pn	04 03 14.4	-0.9
AGPR	Aguadilla, PR	1.67	72		Sn	04 03 37.7	+0.4
AOPR	Arecibo Observ	1.98	78	⇑eP	Pn	04 03 19.4	+0.4
AOPR	Arecibo Observ	1.98	78	eS	Sn	04 03 43.3	-0.7
AOPR	Arecibo Observ	1.98	78		Sn	04 03 43.3	-0.7
AOPR	Arecibo Observ	1.98	78		Pn	04 03 18.1	-0.9
OBIP	Obispado Ponce	2.08	87	Pn	Pn	04 03 20.0	-0.4
SJG	San Juan	2.52	86	Pn	Pn	04 03 26.3	+0.2
SJG				Sn	Sn	04 03 55.1	-1.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
IGPR	**InterUniversit**	**2.56**	**89**	Pn	**Pn**	**04 03 26.5**	**0.0**
SDDR	**Presa de Saban**	**2.58**	**294**	Pn	**Pn**	**04 03 27.9**	**+1.0**
HUMP	**Col San Antoni**	**2.80**	**86**	Pn	**Pn**	**04 03 30.6**	**+0.8**
CBYP	**Canovanas**	**2.81**	**83**	⇑eP	**Pn**	**04 03 29.3**	**-0.6**
CBYP	**Canovanas**	**2.81**	**83**	eS	**Sn**	**04 04 01.2**	**-2.2**
CBYP	**Canovanas**	**2.81**	**83**		**Pn**	**04 03 29.3**	**-0.6**
CBYP					**Sn**	**04 04 01.2**	**-2.2**
MTP	**Monte Pirata**	**3.08**	**87**	⇑eP	**Pn**	**04 03 33.4**	**-0.1**
MTP	**Monte Pirata**	**3.08**	**87**	eS	**Sn**	**04 04 07.2**	**-2.6**
MTP	**Monte Pirata**	**3.08**	**87**		**Pn**	**04 03 33.0**	**-0.5**
MTP	**Monte Pirata**	**3.08**	**87**		**Sn**	**04 04 07.2**	**-2.6**

SNET ***05*** *04:03:34.1±1.0, 12°.49N×90°.17W, h30km, ML4.1*
UCR ***05*** *04:03:34.3±1.0, 12°.48N×90°.15W, h30km, ML4.0, mb4.5(NEIC)*
GCG ***05*** *04:03:35.7±0.7, 12°.48N×90°.37W, h14km±33km, MD4.0*
INET ***05*** *04:03:36.8, 12°.53N×90°.10W, h45km, ML4.3*
NEIC ***05*** *04:03:38.7±2.5, 12°.67N±0°.08×89°.95W±0°.07, h47km±4km, mb4.5/192, Md4.1(SNET), Error ellipse: s-maj=13.3km s-min=7.4km az=220.0*
IDC ***05*** *04:03:46.1±2.3, 13°.47N×89°.38W, h72km±18km, mb4.0/16, mb1 4.1/19, mb1mx4.0/35, mbtmp4.3/19, MS3.7/8, Ms1 3.7/8, ms1mx3.4/30, Error ellipse: s-maj=26.9km s-min=13.0km az=42.0*
ISC 05 04:03:37.9±1.5**, 12°.74N**±0°.05×**90°.01W**±0°.05**, h29**km±10km**, n414, σ1°.38**/364**, mb4.5**/91**, MS3.7**/6**, 17C-3D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**1.01**	**42**	⇑iP	**Pb**	**04 03 55.8**	**-1.0**
LALI				eS	**Sn**	**04 04 12.3**	**+3.0**
LALI	**Alcalda de L**	**1.01**	**42**	⇑iP	**Pb**	**04 03 55.8**	**-1.0**
LALI				eS	**Sn**	**04 04 12.3**	**+3.0**
CEVE	**Cerro Verde**	**1.15**	**19**	⇑iP	**Pb**	**04 03 58.6**	**-0.7**
CEVE	**Cerro Verde**	**1.15**	**19**	⇑iP	**Pb**	**04 03 58.6**	**-0.7**
SBLS	**San Blas**	**1.16**	**19**	⇑iP	**Pb**	**04 03 58.7**	**-0.8**
SBLS	**San Blas**	**1.16**	**19**	⇑iP	**Pb**	**04 03 58.7**	**-0.8**
SNJE	**San Jose**	**1.19**	**19**	⇑eP	**Pb**	**04 03 59.1**	**-0.9**
SNJE	**San Jose**	**1.19**	**19**	⇑eP	**Pb**	**04 03 59.1**	**-0.9**
RTR	**El Retiro**	**1.21**	**17**	⇑iP	**Pb**	**04 03 59.5**	**-0.8**
RTR	**El Retiro**	**1.21**	**17**	⇑iP	**Pb**	**04 03 59.5**	**-0.8**
SNET	**Serv Nac Est T**	**1.21**	**39**	eP	**Pn**	**04 03 58.6**	**-0.3**
SNET				eS	**Sn**	**04 04 19.6**	**+5.1**
SNET				IAML		04 04 26.0	
	comp=Z,3μm,0.4s						
SNET	**Serv Nac Est T**	**1.21**	**39**		**Pn**	**04 03 58.8**	**-0.2**
SNET	**Serv Nac Est T**	**1.21**	**39**	eP	**Pn**	**04 03 58.6**	**-0.3**
SNET				eS	**Sn**	**04 04 19.6**	**+5.1**
SNET				IAML		04 04 26.0	
	comp=Z,3μm,0.4s						
BOQS	**Boqueron**	**1.22**	**36**	eP	**Pn**	**04 03 59.3**	**+0.1**
BOQS	**Boqueron**	**1.22**	**36**	eP	**Pn**	**04 03 59.3**	**+0.1**
UEES	**Universidad Ev**	**1.23**	**38**	eP	**Pn**	**04 03 59.2**	**0.0**
UEES	**Universidad Ev**	**1.23**	**38**	eP	**Pn**	**04 03 59.2**	**0.0**
LFRS	**El Faro**	**1.28**	**46**	⇑eP	**Pn**	**04 03 59.9**	**0.0**
LFRS	**El Faro**	**1.28**	**46**	⇑eP	**Pn**	**04 03 59.9**	**0.0**
UDBS	**Universidad Do**	**1.28**	**40**	eP	**Pn**	**04 04 00.0**	**+0.1**
UDBS				IAML		04 04 24.7	
	comp=Z,6μm,0.6s						
UDBS	**Universidad Do**	**1.28**	**40**	eP	**Pn**	**04 04 00.0**	**+0.1**
UDBS				IAML		04 04 24.7	
	comp=Z,6μm,0.6s						
AEIL	**Aeropuerto Ilo**	**1.29**	**42**	eP	**Pb**	**04 04 00.5**	**-1.2**
AEIL	**Aeropuerto Ilo**	**1.29**	**42**	eP	**Pb**	**04 04 00.5**	**-1.2**
UNIC	**Universidad Ca**	**1.32**	**20**	eP	**Pb**	**04 04 00.8**	**-1.2**
UNIC				IAML		04 04 32.8	
	comp=Z,1μm,0.5s						
UNIC	**Universidad Ca**	**1.32**	**20**	eP	**Pb**	**04 04 00.8**	**-1.2**
UNIC				IAML		04 04 32.8	
	comp=Z,1μm,0.5s						
LBRS	**Las Brisas**	**1.37**	**43**	⇑eP	**Pn**	**04 04 01.6**	**+0.4**
LBRS	**Las Brisas**	**1.37**	**43**	⇑eP	**Pn**	**04 04 01.6**	**+0.4**
IXG	**Ixpaco**	**1.49**	**344**	⇓iP	**Pn**	**04 04 02.6**	**-0.2**
IXG	**Ixpaco**	**1.49**	**344**	⇓eP	**Pb**	**04 04 03.6**	**-1.4**
IXG	**Ixpaco**	**1.49**	**344**	⇓iP	**Pn**	**04 04 02.6**	**-0.2**
TECA	**Tecapa**	**1.65**	**63**	eP	**Pn**	**04 04 05.2**	**+0.1**
TECA	**Tecapa**	**1.65**	**63**	eP	**Pn**	**04 04 05.2**	**+0.1**
PCG	**Pacaya**	**1.75**	**341**	eP	**Pb**	**04 04 08.8**	**-0.6**
MTO3	**Montecristo**	**1.77**	**21**	⇑eP	**Pn**	**04 04 07.6**	**+0.9**
MTO3	**Montecristo**	**1.77**	**21**	⇑eP	**Pn**	**04 04 07.6**	**+0.9**
NBG	**Las Nubes**	**1.87**	**350**	eP	**Pb**	**04 04 10.7**	**-0.9**
NBG				eS	**Sb**	**04 04 38.5**	**+3.8**
FUG	**Fuego 3**	**1.88**	**335**	eP	**Pb**	**04 04 09.2**	**-2.5**
FUG				eS	**Sb**	**04 04 35.8**	**+0.8**
ESQI	**Esquipulas**	**1.93**	**20**	⇑eP	**Pb**	**04 04 10.0**	**-2.4**
FAGO	**Alcalda de S**	**2.09**	**63**	eP	**Pn**	**04 04 10.5**	**-0.5**
FAGO	**Alcalda de S**	**2.09**	**63**	eP	**Pn**	**04 04 10.5**	**-0.5**
LCND	**La Caada**	**2.14**	**74**	i P	**Pn**	**04 04 11.6**	**-0.1**
LCND				IAML		04 04 46.7	
	comp=Z,867nm,0.6s						
LCND	**La Caada**	**2.14**	**74**	i P	**Pn**	**04 04 11.6**	**-0.1**
LCND				IAML		04 04 46.7	
	comp=Z,867nm,0.6s						
APG	**El Apazote**	**2.30**	**349**	P	**Pb**	**04 04 15.6**	**-3.2**
	comp=Z,56nm,0.3s,baz=139,slow=6.4,SNR=192						
APG				S	**Sb**	**04 04 46.8**	**-0.1**
	comp=Z,34nm,0.3s,baz=338,slow=20,SNR=4.0						
MRL	**Marmol**	**2.35**	**8**	eP	**Pb**	**04 04 19.0**	**-0.8**
CSGN	**Cosiguina Volc**	**2.40**	**84**		**Pn**	**04 04 16.5**	**+1.1**
CSGN				Sn	Sn	04 04 35.9	-8.0
STG3	**Santiaguito 3,**	**2.48**	**323**	eP	**Pn**	**04 04 17.8**	**+1.3**
CRIN	**San Cristobal**	**2.89**	**90**	Pn	**Pn**	**04 04 23.3**	**+1.2**
TGUH	**Tegucigalpa,Un**	**2.97**	**63**		**Pn**	**04 04 23.5**	**+0.3**
MATN	**Matagalpa**	**3.99**	**87**		**Pn**	**04 04 36.7**	**-0.5**
CCIG	**Comitan**	**4.08**	**330**		**Pn**	**04 04 40.6**	**+2.0**
ACON	**Acoyapa**	**4.79**	**99**		**Pn**	**04 04 47.4**	**-0.7**
JTS	**Las Juntas de**	**5.52**	**116**	P	**Pn**	**04 04 59.5**	**+1.3**
	comp=Z,5.5nm,0.3s,baz=22,slow=12,SNR=28						
JTS				S	**Sn**	**04 06 04.0**	**+3.2**
	comp=Z,1.7nm,0.3s,baz=196,slow=23,SNR=1.8						
JTS				LR	LR	04 07 29.2	
	comp=Z,509nm,19.4s,baz=11,slow=42						
JTS	**Las Juntas de**	**5.52**	**116**		**Pn**	**04 04 58.6**	**+0.4**
JTS					**Sn**	**04 05 59.6**	**-1.2**
ESPN	**Las Esperanzas**	**5.60**	**95**	Pn	**Pn**	**04 04 58.9**	**-0.4**
HDC	**Heredia**	**6.39**	**115**	Pn	**Pn**	**04 05 08.3**	**-1.9**
CMIG	**Matias Romero**	**6.40**	**313**	P	**Pn**	**04 05 12.1**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=146,slow=10,SNR=10						
CMIG				S	Sb	04 06 33.8	-11
	comp=Z,0.4nm,0.3s,baz=122,slow=22,SNR=2.0						
TEIG	**Tepich**	**7.63**	**12**	P	Pn	04 05 22.3	-4.9
TEIG				LR	LR	04 08 44.8	
	comp=Z,631nm,20.1s,baz=257,slow=44						
TEIG	**Tepich**	**7.63**	**12**		**Pn**	**04 05 28.8**	**+1.6**
TLIG	**Tlapa**	**9.55**	**301**		**Pn**	**04 05 54.7**	**+1.0**
SJCC	**San Jacinto, C**	**14.81**	**99**	eP	**P**	**04 07 11.0**	**-0.1**
CBOC	**Ciudad Bolivar**	**15.40**	**115**	eP	**P**	**04 07 21.1**	**+3.2**
ZAIG	**Zacatecas**	**15.56**	**312**	Pn	**Pn**	**04 07 15.7**	**0.0**
GUY2C	**Guyana, Caldas**	**16.27**	**116**	eP	**P**	**04 07 28.1**	**+0.3**
PTBC	**PUERTO BERRIO,**	**16.52**	**110**	eP	**P**	**04 07 31.8**	**+1.8**
SOTA	**Rioblanco**	**16.94**	**127**	eP	**P**	**04 07 36.5**	**+1.3**
ORTC	**Ortega, Tolima**	**17.03**	**120**	eP	**P**	**04 07 38.3**	**+2.6**
ROSC	**El Rosal**	**17.37**	**115**	P	**P**	**04 07 41.8**	**+1.9**
	comp=Z,0.5nm,0.3s,baz=310,slow=22,SNR=8.0						
HKT	**Hockley**	**17.96**	**343**		**Pn**	**04 07 44.5**	**-1.0**
CHIC	**Chingaza**	**17.98**	**115**	eP	**P**	**04 07 49.5**	**+2.8**
344A	**Westbrook Farm**	**18.64**	**358**	P	**Pn**	**04 07 55.4**	**+1.6**
344A				IAmb	IAmb	04 08 02.5	
	comp=Z,32nm,0.7s						
435B	**Jarrell**	**19.27**	**340**	P	**Pn**	**04 08 01.2**	**-0.3**
	baz=157						
VBMS	**Vicksburg**	**19.40**	**359**	P	**Pn**	**04 08 03.2**	**+0.3**
	baz=178,SNR=5.6						
VBMS	**Vicksburg**	**19.40**	**359**	P	**P**	**04 08 01.3**	**-0.3**
VBMS				IAmb	IAmb	04 08 04.7	
	comp=Z,32nm,0.7s						
NATX	**Nacogdoches**	**19.41**	**348**	P	**Pn**	**04 08 02.6**	**-0.5**
	baz=166						
NATX	**Nacogdoches**	**19.41**	**348**	P	**P**	**04 08 01.6**	**-0.2**
NATX				IAmb	IAmb	04 08 04.8	
	comp=Z,21nm,0.7s						
SDV	**Santo Domingo**	**19.41**	**99**	P	**P**	**04 08 01.7**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=303,slow=6.4,SNR=4.6						
SDV	**Santo Domingo**	**19.41**	**99**	P	**P**	**04 08 01.5**	**-0.7**
SDV				IAmb	IAmb	04 08 17.9	
	comp=Z,9.7nm,0.8s						
TIGA	**Tifton**	**19.53**	**17**	P	**P**	**04 08 03.7**	**+0.6**
	baz=199						
TIGA	**Tifton**	**19.53**	**17**	P	**P**	**04 08 02.9**	**-0.2**
TIGA				IAmb	IAmb	04 08 05.1	
	comp=Z,12nm,0.7s						
146A	**Union**	**19.83**	**2**	P	**Pn**	**04 08 07.4**	**-0.7**
146A				IAmb	IAmb	04 08 13.3	
	comp=Z,26nm,0.8s						
JCT	**Junction City**	**19.84**	**334**	P	**Pn**	**04 08 07.3**	**-1.0**
	baz=151						
JCT	**Junction City**	**19.84**	**334**	P	**P**	**04 08 06.7**	**+0.1**
237A	**Washetta, Mont**	**19.90**	**345**	P	**P**	**04 08 07.6**	**+0.4**
237A				IAmb	IAmb	04 08 18.8	
	comp=Z,18nm,0.8s						
143A	**Socs Landing,**	**19.92**	**357**	P	**P**	**04 08 07.2**	**-0.1**
143A				IAmb	IAmb	04 08 13.3	
	comp=Z,13nm,0.5s						
WHTX	**Lake Whitney,**	**20.35**	**342**	P	**P**	**04 08 12.5**	**+0.5**
	baz=159						
WHTX	**Lake Whitney,**	**20.35**	**342**	P	**P**	**04 08 10.2**	**-1.9**
WHTX				IAmb	IAmb	04 08 13.3	
	comp=Z,12nm,0.6s						
HPIG		**20.37**	**316**	P	**P**	**04 08 12.3**	**-0.3**
LRAL	**Lakeview Retre**	**20.39**	**7**	P	Pn	04 08 13.6	-1.1
	baz=188						
LRAL	**Lakeview Retre**	**20.39**	**7**	P	**P**	**04 08 13.0**	**+0.5**
152A	**Waverly Hall**	**20.43**	**13**	P	**P**	**04 08 11.7**	**-1.1**
Z47A	**Carrollton**	**20.45**	**5**	P	**P**	**04 08 12.9**	**-0.1**
Z47A				IAmb	IAmb	04 08 18.9	
	comp=Z,19nm,0.8s						
Z41A	**Richland Creek**	**20.59**	**353**	P	Pn	04 08 17.2	+0.3
	baz=172						
Z50A	**Ashland**	**20.76**	**10**	P	**P**	**04 08 16.9**	**+0.4**
	baz=191						
154A	**Montrose**	**20.77**	**17**	IAmb	IAmb	04 08 17.8	
	comp=Z,26nm,1.1s						
TX32	**Lajitas Array**	**20.83**	**325**	IAmb	IAmb	04 08 21.2	
	comp=Z,16nm,0.8s						
TXAR	**Lajitas Array**	**20.83**	**325**	P	Pn	04 08 20.3	+0.4
	comp=Z,14nm,0.8s,baz=148,slow=11,SNR=202						
TXAR				PcP	**PcP**	**04 12 28.4**	**+2.8**
	comp=Z,0.3nm,0.5s,baz=140,slow=3.7,SNR=5.9						
Y45A	**Yeager Farm, C**	**21.04**	**1**	IAmb	IAmb	04 08 24.4	
	comp=Z,34nm,0.7s						
CCAR	**Cane Creek**	**21.15**	**356**	IAmb	IAmb	04 08 25.3	
	comp=Z,31nm,0.6s						
GOGA	**Godfrey**	**21.43**	**15**	P	**P**	**04 08 23.5**	**-0.2**
	baz=197						
157A	**Early Branch**	**21.50**	**21**	P	**P**	**04 08 24.6**	**+0.2**
	baz=204						
Z35A	**Perchaven, San**	**21.54**	**343**	P	**P**	**04 08 23.7**	**-1.2**
Z35A				IAmb	IAmb	04 08 25.5	
	comp=Z,22nm,0.9s						
ABTX	**Abilene, Hawle**	**21.68**	**338**	P	**P**	**04 08 26.7**	**+0.4**
	baz=154						
ABTX	**Abilene, Hawle**	**21.68**	**338**	P	**P**	**04 08 24.4**	**-2.0**
OXF	**Oxford**	**21.69**	**1**	P	**P**	**04 08 27.2**	**+0.9**
	baz=181,SNR=6.3						
Y52A	**Lilburn**	**21.72**	**13**	P	**P**	**04 08 26.9**	**+0.1**
	baz=196						
X40A	**Basin Creek Fa**	**21.81**	**354**	P	**P**	**04 08 29.4**	**+1.7**
	baz=172						
MIAR	**Mount Ida**	**21.95**	**352**	P	**P**	**04 08 30.7**	**+1.5**
	baz=171,SNR=13						
MIAR	**Mount Ida**	**21.95**	**352**	IAmb	IAmb	04 08 32.7	
	comp=Z,12nm,0.6s						
Z56A	**Williston**	**21.96**	**20**	P	**P**	**04 08 30.6**	**+1.2**
	baz=203						
Z56A	**Williston**	**21.96**	**20**	IAmb	IAmb	04 08 31.7	
	comp=Z,29nm,0.7s						
FPAL	**Fort Paine**	**22.07**	**10**	P	**P**	**04 08 30.8**	**+0.2**
FPAL				IAmb	IAmb	04 08 46.8	
	comp=Z,17nm,1.1s						
Z57A	**Bowman**	**22.16**	**21**	P	**P**	**04 08 31.9**	**+0.4**
	baz=204						
NHSC	**New Hope**	**22.18**	**22**	P	**P**	**04 08 31.8**	**+0.1**
	baz=206						
X37A	**Clayton**	**22.29**	**348**	IAmb	IAmb	04 08 35.5	
	comp=Z,10nm,0.8s						
Y55A	**Saluda**	**22.38**	**18**	P	**P**	**04 08 33.2**	**-0.6**
	baz=201						
Y56A	**Pelion**	**22.41**	**19**	P	**P**	**04 08 34.4**	**+0.2**
	baz=202						
W41B	**Gary Mavity, V**	**22.43**	**355**	P	**P**	**04 08 35.6**	**+1.2**
	baz=174,SNR=11						
Z58A	**St. Stephen**	**22.52**	**23**	P	**P**	**04 08 35.6**	**+0.3**
	baz=206						
WHAR	**Wooly Hollow**	**22.55**	**355**	IAmb	IAmb	04 08 37.8	
	comp=Z,12nm,0.8s						
W39A	**Magazine**	**22.62**	**352**	P	**P**	**04 08 37.7**	**+1.3**
	baz=170,SNR=7.0						
W39A	**Magazine**	**22.62**	**352**	IAmb	IAmb	04 08 39.0	
	comp=Z,25nm,1.4s						
HBAR	**Harrisburg**	**22.73**	**359**	P	**P**	**04 08 36.2**	**-1.3**
W50A	**Signal Mountai**	**22.77**	**10**	P	**P**	**04 08 35.6**	**-2.5**
LPAR	**Lepanto**	**22.77**	**359**	P	**P**	**04 08 36.2**	**-1.8**
X54A	**Belton**	**22.80**	**16**	P	**P**	**04 08 37.7**	**-0.6**
	baz=199						
X34A	**Smith Ranch, M**	**22.90**	**343**	IAmb	IAmb	04 08 40.9	
	comp=Z,29nm,1.1s						
Y57A	**Sumter**	**22.92**	**21**	P	**P**	**04 08 39.2**	**-0.4**
	baz=204,SNR=8.0						
X55A	**Gracelyn & Ava**	**22.94**	**18**	P	**P**	**04 08 39.2**	**-0.6**
	baz=201						
HALT	**Halls**	**23.08**	**1**	P	**P**	**04 08 39.9**	**-1.3**
V48A	**Smith Brothers**	**23.09**	**7**	IAmb	IAmb	04 08 43.1	
	comp=Z,12nm,0.8s						
Y58A	**Scranton**	**23.09**	**22**	P	**P**	**04 08 40.6**	**-0.6**
	baz=206						
GNAR	**Gosnell**	**23.13**	**360**	P	**P**	**04 08 41.6**	**-0.1**
X56A	**White Oak**	**23.14**	**19**	P	**P**	**04 08 41.0**	**-0.9**
	baz=202,SNR=6.5						
CPCT	**Cooper Cave**	**23.15**	**11**	IAmb	IAmb	04 08 42.4	
	comp=Z,17nm,1.3s						
CLNB	**Carlsbad**	**23.23**	**329**	P	**P**	**04 08 42.4**	**-0.5**
WMOK	**Wichita Mounta**	**23.30**	**341**	P	**P**	**04 08 42.3**	**-1.2**
	baz=158,SNR=7.6						
W54A	**Cherokee Point**	**23.35**	**16**	P	**P**	**04 08 43.2**	**-0.7**
	baz=199						
WVT	**Waverly**	**23.38**	**4**	P	**P**	**04 08 43.2**	**-0.9**
	baz=185						
WVT	**Waverly**	**23.38**	**4**	P	**P**	**04 08 42.7**	**-1.4**
WVT				IAmb	IAmb	04 08 44.7	
	comp=Z,32nm,1.4s						
GDL2	**Guadalupe Moun**	**23.43**	**328**	P	**P**	**04 08 45.3**	**+0.4**
Y59A	**Loris**	**23.46**	**24**	P	**P**	**04 08 44.4**	**-0.6**
	baz=208						
BIRD	**Birdtown, Kers**	**23.47**	**20**	IAmb	IAmb	04 08 45.8	
	comp=Z,8.2nm,0.7s						
CLTN	**Cedars of Leba**	**23.49**	**7**	IAmb	IAmb	04 08 45.9	
	comp=Z,10.0nm,0.7s						
TKL	**Tuckaleechee C**	**23.51**	**13**	P	**P**	**04 08 43.2**	**-2.3**
	comp=Z,6.3nm,0.6s,baz=180,slow=12,SNR=23						
OKCSW	**OKLAHOMA CITY**	**23.55**	**345**	P	**P**	**04 08 45.2**	**-0.6**
OKCFA	**Oklahoma City**	**23.56**	**345**	P	**P**	**04 08 44.2**	**-1.8**
MNTX	**Cornudas Mount**	**23.58**	**326**	P	**P**	**04 08 46.2**	**-0.1**
	baz=140,SNR=19						
MNTX	**Cornudas Mount**	**23.58**	**326**	IAmb	IAmb	04 08 48.3	
	comp=Z,9.7nm,0.8s						
KMSC	**Kings Mountain**	**23.65**	**18**	P	**P**	**04 08 45.8**	**-1.0**
	baz=201						
TUL1	**Leonard**	**23.66**	**348**	P	**P**	**04 08 46.2**	**-0.7**
	baz=166						
TUL1	**Leonard**	**23.66**	**348**	P	**P**	**04 08 45.0**	**-1.9**
U40A	**Yellville**	**23.66**	**354**	P	**P**	**04 08 46.3**	**-0.6**
	baz=173,SNR=6.4						
V53A	**Saluda**	**23.74**	**15**	P	**P**	**04 08 45.7**	**-2.1**
X58A	**Rowland**	**23.79**	**22**	P	**P**	**04 08 47.2**	**-0.8**
	baz=206						
PARMO	**Parma**	**23.83**	**1**	P	**P**	**04 08 47.8**	**-0.7**
W56A	**Indian Trail**	**23.88**	**19**	P	**P**	**04 08 48.1**	**-0.9**
	baz=203,SNR=5.5						
U49A	**Red Boiling Sp**	**23.98**	**8**	IAmb	IAmb	04 08 50.8	
	comp=Z,26nm,1.1s						
V54A	**Nebo**	**24.07**	**16**	P	**P**	**04 08 50.3**	**-0.5**
	baz=199						
W57A	**Gilead**	**24.09**	**20**	P	**P**	**04 08 49.7**	**-1.3**
	baz=204,SNR=5.1						
W57A	**Gilead**	**24.09**	**20**	IAmb	IAmb	04 08 50.9	
	comp=Z,26nm,1.4s						
MSTX	**Muleshoe**	**24.12**	**333**	P	**P**	**04 08 50.8**	**-0.6**
	baz=148,SNR=6.5						
W58A	**Raeford**	**24.24**	**22**	P	**P**	**04 08 51.2**	**-1.1**
	baz=206,SNR=8.7						
X60A	**Albert Glenn T**	**24.34**	**25**	P	**P**	**04 08 52.1**	**-1.1**
	baz=209						
V55A	**Taylorsville**	**24.35**	**18**	P	**P**	**04 08 52.6**	**-0.7**
	baz=201						
V55A	**Taylorsville**	**24.35**	**18**	IAmb	IAmb	04 08 54.5	
	comp=Z,9.9nm,0.7s						
AMTX	**Amarillo**	**24.46**	**336**	P	**P**	**04 08 54.3**	**-0.2**
	baz=152						
AMTX	**Amarillo**	**24.46**	**336**	P	**P**	**04 08 52.5**	**-2.0**
AMTX				IAmb	IAmb	04 08 56.2	
	comp=Z,15nm,0.8s						
V56A	**Mocksville**	**24.53**	**19**	P	**P**	**04 08 53.6**	**-1.3**
	baz=203,SNR=6.4						
U54A	**Nelsons Funny**	**24.80**	**16**	P	**P**	**04 08 57.4**	**-0.2**
	baz=199						
U54A	**Nelsons Funny**	**24.80**	**16**	IAmb	IAmb	04 08 59.1	
	comp=Z,12nm,0.8s						
V57A	**Coltrane Farms**	**24.83**	**20**	P	**P**	**04 08 56.6**	**-1.1**
	baz=204						
W60A	**Pink Hill**	**24.86**	**25**	P	**P**	**04 08 57.2**	**-0.7**
	baz=209						
V58A	**Windy Hill, Pi**	**24.98**	**21**	P	**P**	**04 08 58.1**	**-0.9**
	baz=206,SNR=5.3						
V58A	**Windy Hill, Pi**	**24.98**	**21**	IAmb	IAmb	04 09 00.1	
	comp=Z,10nm,0.7s						
U55A	**TA2, Sparta**	**25.00**	**17**	P	**P**	**04 08 59.0**	**-0.3**
	baz=201						
U56A	**King**	**25.06**	**19**	P	**P**	**04 08 59.2**	**-0.6**
	baz=202						
U56A	**King**	**25.06**	**19**	IAmb	IAmb	04 09 01.5	
	comp=Z,10.0nm,0.8s						
T53A	**Wise**	**25.06**	**14**	P	**P**	**04 08 59.3**	**-0.6**
	baz=197						
CCM	**Cathedral Cave**	**25.24**	**358**	P	**P**	**04 09 00.4**	**-0.9**
	baz=177						
CCM	**Cathedral Cave**	**25.24**	**358**	P	**P**	**04 09 00.7**	**-0.7**
CCM				IAmb	IAmb	04 09 01.6	
	comp=Z,16nm,0.8s						
W61A	**Ground Anchor**	**25.26**	**26**	P	**P**	**04 09 00.7**	**-0.9**
	baz=211						
V59A	**Middlesex**	**25.27**	**23**	P	**P**	**04 09 00.4**	**-1.2**
	baz=208						
S51A	**Beattyville**	**25.45**	**12**	P	**P**	**04 09 00.2**	**-3.2**
R40A	**Maddies Statio**	**25.53**	**356**	IAmb	IAmb	04 09 05.6	
	comp=Z,7.7nm,0.7s						
121A	**Cookes Peak, D**	**25.57**	**323**	P	**P**	**04 09 06.8**	**+2.2**
	baz=136,SNR=10						
121A	**Cookes Peak, D**	**25.57**	**323**	IAmb	IAmb	04 09 08.4	
	comp=Z,14nm,0.8s						
WCI	**Wyandotte Cave**	**25.60**	**7**	P	**P**	**04 09 04.0**	**-0.6**
	baz=188						
WCI	**Wyandotte Cave**	**25.60**	**7**	P	**P**	**04 09 02.5**	**-2.2**
WCI				IAmb	IAmb	04 09 05.7	
	comp=Z,13nm,0.7s						
T55A	**Pulaski**	**25.65**	**17**	P	**P**	**04 09 04.6**	**-0.6**
	baz=201						
V60A	**Jim Taylor Roa**	**25.65**	**24**	P	**P**	**04 09 04.3**	**-0.8**
	baz=210						
U58A	**Oxford**	**25.72**	**22**	P	**P**	**04 09 04.8**	**-0.9**
	baz=206						
T56A	**Rocky Mt**	**25.79**	**19**	P	**P**	**04 09 05.4**	**-1.1**
	baz=203						
S53A	**Williamson**	**25.82**	**14**	P	**P**	**04 09 06.0**	**-0.7**
	baz=198						
BLA	**Blacksburg**	**25.84**	**18**	P	**P**	**04 09 06.2**	**-0.7**
	baz=202						
OLIL	**Olney**	**25.95**	**3**	IAmb	IAmb	04 09 10.4	
	comp=Z,17nm,0.8s						
U59A	**Littleton**	**25.96**	**23**	P	**P**	**04 09 06.4**	**-1.5**
	baz=208						
T57A	**Hurt**	**26.02**	**20**	P	**P**	**04 09 07.7**	**-0.7**
	baz=204						
Q44A	**Meyer Farm, Va**	**26.08**	**2**	IAmb	IAmb	04 09 12.0	
	comp=Z,18nm,0.8s						
S54A	**Dingess, Beckl**	**26.14**	**16**	P	**P**	**04 09 08.5**	**-1.1**
	baz=199						
T58A	**Grand View Acr**	**26.21**	**21**	P	**P**	**04 09 09.0**	**-1.2**
	baz=206						
T59A	**Double "B" Far**	**26.59**	**23**	P	**P**	**04 09 12.6**	**-1.0**
	baz=208						
T59A	**Double "B" Far**	**26.59**	**23**	P	**P**	**04 09 12.2**	**-1.4**
T59A				IAmb	IAmb	04 09 13.1	
	comp=Z,7.5nm,0.8s						
ANMO	**Albuquerque**	**26.66**	**329**	P	**P**	**04 09 16.9**	**+2.4**
	comp=Z,1.3nm,0.6s,baz=138,slow=12,SNR=9.9						
ANMO				PcP	**PcP**	**04 12 40.6**	**+2.6**
	comp=Z,0.9nm,0.8s,baz=118,slow=4.2,SNR=3.9						
ANMO	**Albuquerque**	**26.66**	**329**	P	**P**	**04 09 15.4**	**+0.8**
	baz=142						
R32A	**Long Quarter,**	**26.73**	**345**	IAmb	IAmb	04 09 26.2	
	comp=Z,9.3nm,0.8s						
P40A	**Paris**	**26.75**	**356**	IAmb	IAmb	04 09 15.6	
	comp=Z,12nm,0.7s						
P43A	**Skaggs, Pawnee**	**26.80**	**1**	IAmb	IAmb	04 09 18.9	
	comp=Z,14nm,0.6s						
Q51A	**Peebles**	**26.84**	**12**	P	**P**	**04 09 14.5**	**-1.4**
	baz=194						
Q51A	**Peebles**	**26.84**	**12**	IAmb	IAmb	04 09 15.4	
	comp=Z,8.5nm,0.7s						
KSU1	**Kansas State U**	**26.90**	**349**	P	**P**	**04 09 16.5**	**0.0**
	baz=166						
KSU1	**Kansas State U**	**26.90**	**349**	IAmb	IAmb	04 09 17.8	
	comp=Z,11nm,0.7s						
R55A	**Marlinton**	**26.93**	**17**	P	**P**	**04 09 16.2**	**-0.5**
	baz=202						
R55A	**Marlinton**	**26.93**	**17**	P	**P**	**04 09 16.5**	**-0.2**
R55A				IAmb	IAmb	04 09 24.0	
	comp=Z,14nm,1.4s						
P38A	**Dawn**	**26.96**	**354**	IAmb	IAmb	04 09 16.8	
	comp=Z,14nm,1.1s						
P49A	**Miami Univ. Ec**	**27.10**	**9**	P	**P**	**04 09 16.6**	**-1.6**
	baz=191						
TUC	**Tucson**	**27.25**	**319**	P	**P**	**04 09 20.0**	**+0.3**
P50A	**Jamestown**	**27.32**	**10**	P	**P**	**04 09 19.5**	**-0.7**
	baz=193						
P51A	**Williamsport**	**27.34**	**12**	P	**P**	**04 09 19.5**	**-0.9**
	baz=195						
O44A	**Mansfield**	**27.34**	**3**	IAmb	IAmb	04 09 20.5	
	comp=Z,14nm,0.8s						
R58B	**Mineral**	**27.36**	**21**	P	**P**	**04 09 19.2**	**-1.3**
	baz=206						
CBKS	**Cedar Bluff**	**27.37**	**343**	P	**P**	**04 09 20.2**	**-0.5**
	baz=159						
Q54A	**Coxs Mills**	**27.38**	**16**	P	**P**	**04 09 20.0**	**-0.7**
	baz=200						
R57A	**Stanardsville**	**27.44**	**20**	P	**P**	**04 09 20.7**	**-0.5**
	baz=205						
Q55A	**Buckhannon**	**27.60**	**17**	P	**P**	**04 09 21.6**	**-1.2**
	baz=201						
SFIN	**Lafayette**	**27.66**	**5**	P	**P**	**04 09 22.3**	**-0.8**
	baz=186						
P52A	**Corning**	**27.68**	**13**	P	**P**	**04 09 22.2**	**-1.2**
	baz=196						
O48A	**Farmland**	**27.75**	**8**	P	**P**	**04 09 23.3**	**-0.7**
	baz=190						
O49A	**Covington**	**27.80**	**9**	P	**P**	**04 09 23.9**	**-0.6**
	baz=192						
R59A	**King George, V**	**27.84**	**22**	P	**P**	**04 09 23.7**	**-1.1**
	baz=208						
O50A	**Cable**	**27.88**	**11**	P	**P**	**04 09 23.9**	**-1.3**
	baz=193,SNR=7.1						
P54A	**Burton**	**28.05**	**16**	P	**P**	**04 09 25.7**	**-1.1**
	baz=200						
O51A	**Pataskala**	**28.07**	**12**	P	**P**	**04 09 25.5**	**-1.5**
	baz=195						
ACSO	**Alum Creek Sta**	**28.08**	**11**	P	**P**	**04 09 25.9**	**-1.1**
	baz=194						
Q57A	**Strasburg**	**28.14**	**19**	P	**P**	**04 09 26.5**	**-1.1**
	baz=204						
P55A	**Reedsville**	**28.15**	**17**	P	**P**	**04 09 26.5**	**-1.1**
	baz=201						
MCWV	**Mont Chateau**	**28.28**	**17**	P	**P**	**04 09 27.8**	**-1.0**
	baz=201						
N47A	**Urbana**	**28.29**	**7**	P	**P**	**04 09 28.1**	**-0.8**
	baz=189						
Q58A	**Fox Den Farm,**	**28.30**	**21**	P	**P**	**04 09 27.8**	**-1.1**
	baz=206						
N48A	**Decatur**	**28.36**	**8**	P	**P**	**04 09 29.0**	**-0.4**
	baz=190						
P56A	**Dayton Farm, R**	**28.43**	**18**	P	**P**	**04 09 29.4**	**-0.7**
	baz=203						
KSCO	**Kaye Shedlock'**	**28.46**	**339**	P	**P**	**04 09 30.1**	**-0.4**
	baz=153						
KSCO	**Kaye Shedlock'**	**28.46**	**339**	IAmb	IAmb	04 09 32.1	
	comp=Z,14nm,1.1s						
O53A	**New Philadelph**	**28.48**	**14**	P	**P**	**04 09 29.8**	**-0.7**
	baz=198						
N49A	**Columbus Grove**	**28.54**	**9**	P	**P**	**04 09 30.5**	**-0.6**
	baz=192						
N50A	**Nevada**	**28.57**	**11**	P	**P**	**04 09 30.9**	**-0.4**
	baz=194						
P57A	**Homestead Farm**	**28.68**	**20**	P	**P**	**04 09 31.8**	**-0.5**
	baz=205						
M47A	**Cromwell**	**28.77**	**7**	P	**P**	**04 09 32.3**	**-0.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=189						
S22A	4UR Ranch, Cre	29.08	332	P	P	04 09 37.0	+0.7
	baz=144,SNR=5.3						
N53A	Lisbon	29.10	14	P	P	04 09 34.6	-1.4
	baz=198						
M49A	Liberty Center	29.11	9	P	P	04 09 34.6	-1.5
	baz=192						
M50A	Fremont	29.20	11	P	P	04 09 35.3	-1.6
	baz=194						
O56A	Blue Knob Stat	29.22	18	P	P	04 09 35.7	-1.4
	baz=203						
L40A	Anamosa	29.24	358	IAmb	IAmb	04 09 37.2	
	comp=Z,14nm,0.8s						
P59A	Jarrettsville	29.34	22	P	P	04 09 37.0	-1.1
	baz=208						
L44A	Lake County Fo	29.39	3	P	P	04 09 37.7	-0.9
	baz=184						
BGNE	Belgrade	29.44	347	P	P	04 09 38.9	-0.1
BGNE				IAmb	IAmb	04 09 44.3	
	comp=Z,13nm,0.7s						
O57A	Amberson	29.46	19	P	P	04 09 38.4	-0.8
	baz=205						
N54A	Moraine State	29.46	16	P	P	04 09 38.3	-1.0
	baz=200						
L48A	N Adams	29.50	8	P	P	04 09 38.8	-0.8
	baz=191						
N55A	Marion Center	29.57	17	P	P	04 09 39.2	-1.0
	baz=202						
SSPA	Standing Stone	29.76	19	P	P	04 09 41.7	-0.2
	baz=204						
WUAZ	Wupatki	29.78	323	P	P	04 09 41.3	-1.0
	baz=134,SNR=6.6						
WUAZ	Wupatki	29.78	323	IAmb	IAmb	04 09 46.4	
	comp=Z,7.5nm,0.9s						
L50A	Kingsville	29.86	11	P	P	04 09 41.5	-1.3
	baz=194						
K43A	Burlington	29.89	2	IAmb	IAmb	04 09 43.3	
	comp=Z,18nm,1.0s						
N56A	West Decatur	29.89	18	P	P	04 09 41.8	-1.4
	baz=203,SNR=6.8						
N57A	Milroy	29.98	19	P	P	04 09 43.0	-0.8
	baz=205						
O59A	Robesonia	30.04	21	P	P	04 09 44.0	-0.4
	baz=208						
K46A	Dorr	30.07	6	P	P	04 09 42.9	-1.7
	baz=188						
JFWS	Jewell Farm	30.07	360	P	P	04 09 43.5	-1.1
	baz=179						
JFWS	Jewell Farm	30.07	360	IAmb	IAmb	04 09 46.0	
	comp=Z,8.7nm,0.6s						
K47A	Vermontville	30.14	7	P	P	04 09 43.2	-2.0
	baz=190						
M55A	Ridgway	30.27	17	P	P	04 09 44.8	-1.6
	baz=202						
K48A	Perry	30.39	9	P	P	04 09 45.6	-1.8
	baz=191						
PV03	Paradox Valley	30.45	330	IAmb	IAmb	04 09 50.7	
	comp=Z,4.2nm,0.6s						
M56A	Emporium	30.45	18	P	P	04 09 46.5	-1.5
	baz=203,SNR=5.1						
O61A	Allentown	30.46	24	P	P	04 09 46.5	-1.6
	baz=211						
PV11	David Mesa, Pa	30.50	330	IAmb	IAmb	04 09 51.1	
	comp=Z,7.7nm,0.6s						
PV17	East Wray Mesa	30.52	330	IAmb	IAmb	04 09 51.3	
	comp=Z,8.8nm,0.7s						
PV16	Nyswonger Mesa	30.53	330	IAmb	IAmb	04 09 51.3	
	comp=Z,5.5nm,0.6s						
PV20	West Nyswonger	30.57	330	IAmb	IAmb	04 09 51.6	
	comp=Z,5.8nm,0.7s						
PV04	Paradox Valley	30.59	330	IAmb	IAmb	04 09 51.9	
	comp=Z,8.4nm,0.7s						
M57A	Sunshine Farm,	30.64	19	P	P	04 09 48.6	-1.1
	baz=205						
N59A	State Game Lan	30.73	21	P	P	04 09 49.0	-1.5
	baz=208						
M58A	Price's Panora	30.89	20	P	P	04 09 50.7	-1.2
	baz=206						
J48A	Bridge Port	30.93	9	P	P	04 09 51.1	-1.0
	baz=192						
U15A	North Rim	30.94	324	IAmb	IAmb	04 09 57.0	
	comp=Z,10nm,1.5s						
L55A	Hinsdale	31.02	17	P	P	04 09 51.7	-1.4
	baz=202						
W13A	Hualapai Mount	31.02	320	P	P	04 09 55.0	+1.7
I42A	Draeger Farm,	31.06	2	IAmb	IAmb	04 09 53.3	
	comp=Z,19nm,1.2s						
J49A	Marlette	31.09	10	P	P	04 09 51.7	-1.8
	baz=193						
L56A	Greenwood	31.23	18	P	P	04 09 54.0	-1.0
	baz=204						
L57A	Andrews Acres	31.33	19	P	P	04 09 54.8	-1.0
	baz=205						
N23A	Red Feather La	31.34	336	P	P	04 09 57.1	+1.0
	baz=149						
I46A	Reed City	31.34	6	P	P	04 09 54.3	-1.6
	baz=188						
I45A	Fountain	31.36	5	P	P	04 09 54.7	-1.2
	baz=187,SNR=7.3						
M59A	Waymart	31.40	21	P	P	04 09 55.2	-1.2
	baz=208						
ECSD	EROS Data Cent	31.41	351	P	P	04 09 54.8	-1.6
	baz=168,SNR=19						
ECSD	EROS Data Cent	31.41	351	IAmb	IAmb	04 09 56.7	
	comp=Z,13nm,0.8s						
M60A	Port Jervis	31.50	22	P	P	04 09 55.6	-1.6
	baz=209						
O20A	White River Ci	31.66	333	P	P	04 09 59.8	+0.9
	baz=144						
L58A	Harry Jones Me	31.70	20	P	P	04 09 57.6	-1.4
	baz=207						
BINY	Binghamton	31.79	20	P	P	04 09 58.8	-1.0
	baz=206						
K56A	Middlesex	31.82	18	P	P	04 09 58.5	-1.5
	baz=204						
H45A	Beulah	31.96	5	P	P	04 10 00.1	-1.1
	baz=187						
K57A	Scipio Center	32.09	19	P	P	04 10 01.2	-1.3
	baz=205						
L59A	Walton	32.10	21	P	P	04 10 01.2	-1.4
	baz=208						
L60A	Shokan	32.23	22	P	P	04 10 02.7	-1.0
	baz=210						
M62A	Hamden	32.27	24	P	P	04 10 03.5	-0.5
	baz=212						
K58A	Earlville	32.41	20	P	P	04 10 04.2	-1.0
	baz=207						
G45A	Suttons Bay	32.41	6	P	P	04 10 03.5	-1.7
	baz=188,SNR=11						
SPMN	Marine on St.	32.47	356	P	P	04 10 04.5	-1.2
	baz=175,SNR=15						
J56A	Wolcott	32.48	18	P	P	04 10 04.8	-1.0
	baz=204						
RWWY	Rawlins	32.52	336	IAmb	IAmb	04 10 08.4	
	comp=Z,6.4nm,0.8s						
SUSD	Miller	32.52	348	P	P	04 10 05.8	-0.4
	baz=164						
L61A	Hillsdale 1, H	32.65	23	P	P	04 10 07.0	-0.4
	baz=211						
G47A	Hillman	32.75	8	P	P	04 10 09.2	+1.0
	baz=191						
J57A	Williamstown	32.87	19	P	P	04 10 07.7	-1.5
	baz=206						
H52A	Wyevale	32.96	13	P	P	04 10 08.5	-1.5
	baz=198						
J58A	Remsen	33.06	20	P	P	04 10 10.0	-0.9
	baz=207						
F45A	CMU Biological	33.06	6	P	P	04 10 10.1	-0.8
	baz=188						
I55A	Frankford	33.11	16	P	P	04 10 09.8	-1.5
	baz=202						
F36A	Milaca	33.15	356	IAmb	IAmb	04 10 13.4	
	comp=Z,4.9nm,0.9s						
H53A	Bobcaygeon	33.20	15	P	P	04 10 10.6	-1.6
	baz=200						
I58A	Old Forge	33.45	20	P	P	04 10 12.9	-1.5
	baz=207						
RSSD	Black Hills	33.52	342	P	P	04 10 15.8	+0.7
	baz=155						
RSSD	Black Hills	33.52	342	P	P	04 10 14.6	-0.5
RSSD				IAmb	IAmb	04 10 16.4	
	comp=Z,6.4nm,0.7s						
E43A	Lone Tree Farm	33.63	4	P	P	04 10 14.2	-1.6
G53A	Haliburton	33.71	15	P	P	04 10 14.5	-2.0
	baz=200,SNR=5.1						
H56A	Elgin	33.86	18	P	P	04 10 17.4	-0.5
	baz=204						
K63A	Dunstable	33.87	25	P	P	04 10 17.3	-0.7
	baz=214						
MPMC	Manual Prospec	33.92	318	P	P	04 10 17.7	-1.1
	baz=126,SNR=5.6						
G54A	Lake Saint Pet	34.10	15	P	P	04 10 18.3	-1.6
	baz=201						
R11A	Troy Canyon, C	34.17	323	P	P	04 10 19.3	-1.6
	baz=132,SNR=6.5						
F52A	Sundridge	34.18	13	P	P	04 10 18.6	-2.0
	baz=199						
SAML	Samuel	34.27	128	P	P	04 10 20.2	-1.5
SAML				IAmb	IAmb	04 10 27.7	
	comp=Z,3.8nm,0.9s						
G55A	Calabogie	34.33	17	P	P	04 10 20.3	-1.6
	baz=203						
H58A	Gabriels	34.37	20	P	P	04 10 20.5	-1.8
	baz=208						
BW06	Boulder Array	34.38	334	P	P	04 10 22.2	-0.5
	baz=145						
PDAR	Pinedale Array	34.38	334	P	P	04 10 22.0	-0.7
	comp=Z,0.9nm,0.7s,baz=116,slow=10,SNR=9.2						
PDAR				PcP	PcP	04 12 59.7	+1.5
	comp=Z,0.3nm,0.4s,baz=151,slow=3.9,SNR=2.2						
LONY	Lake Ozonia	34.41	20	P	P	04 10 21.4	-1.3
	baz=207						
D46A	Sault St. Mari	34.42	7	P	P	04 10 22.1	-0.5
	baz=190						
ALGO	Algonquin Park	34.63	15	P	P	04 10 22.5	-2.0
	baz=201,SNR=6.7						
D47A	Chapleau	34.70	8	P	P	04 10 23.1	-2.0
	baz=192						
E52A	Mattawa	34.79	14	P	P	04 10 25.4	-0.5
	baz=200						
E51A	G1948 Merrick	34.84	13	P	P	04 10 24.9	-1.4
	baz=198						
D48A	Paudash Townsh	35.02	10	P	P	04 10 25.8	-2.1
	baz=194						
E53A	Dumoine, Ponti	35.12	15	P	P	04 10 27.1	-1.6
	baz=201						
EYMN	Ely	35.12	358	P	P	04 10 26.8	-2.0
	baz=177,SNR=10						
E54A	Lac Daplat, Po	35.29	15	P	P	04 10 28.7	-1.5
	baz=202						
D50A	G1974 Best Tow	35.37	12	P	P	04 10 29.2	-1.7
	baz=197						
REDW	Red Top Meadow	35.42	333	IAmb	IAmb	04 10 33.5	
	comp=Z,9.6nm,0.8s						
TPAW	Teton Pass	35.57	333	IAmb	IAmb	04 10 35.5	
	comp=Z,3.5nm,0.7s						
D53A	Lac Vacive, Po	35.77	14	P	P	04 10 33.4	-0.9
	baz=201						
NV11	Mina Array Sit	35.78	321	IAmb	IAmb	04 10 44.0	
	comp=Z,4.8nm,0.8s						
AGMN	Agassiz Nation	35.79	353	P	P	04 10 33.1	-1.4
	baz=170,SNR=22						
NVAR	Mina Array Bea	35.87	321	P	P	04 10 38.4	+2.9
	comp=Z,5.4nm,1.0s,baz=137,slow=8.4,SNR=26						
NVAR				PcP	PcP	04 13 05.0	+2.5
	comp=Z,2.4nm,0.7s,baz=136,slow=2.9,SNR=11						
NVAR				LR	LR	04 26 35.4	
	comp=Z,128nm,18.8s,baz=12,slow=38						
IMW	Indian Meadow	35.89	334	IAmb	IAmb	04 10 38.2	
	comp=Z,2.9nm,0.7s						
MDND	Maddock	35.91	349	P	P	04 10 35.7	+0.1
	baz=164						
E56A	St. Veronique	35.99	18	P	P	04 10 35.3	-0.9
	baz=205						
D54A	Lac Fusel, La	36.10	16	P	P	04 10 35.6	-1.5
	baz=202						
KVN	Kaiserville	36.13	322	IAmb	IAmb	04 10 41.4	
	comp=Z,4.6nm,1.0s						
RLMT	Red Lodge	36.21	337	P	P	04 10 38.3	-0.1
	baz=147						
D55A	Sainte-Anne-du	36.30	17	P	P	04 10 37.1	-1.7
	baz=204						
G62A	West of Eustis	36.38	23	P	P	04 10 37.9	-1.7
	baz=213						
F60A	Warwick	36.49	21	P	P	04 10 39.5	-1.0
	baz=210						
LAO	LASA Array	36.50	341	IAmb	IAmb	04 10 41.8	
	comp=Z,7.3nm,1.1s						
D56A	ZEC Mazanza, M	36.53	18	P	P	04 10 40.0	-0.8
	baz=205						
D57A	Chemin Vers le	36.77	19	P	P	04 10 41.4	-1.4
	baz=207						
YERR	Yerington	36.79	321	IAmb	IAmb	04 10 46.8	
	comp=Z,5.1nm,1.0s						
D58A	Chemin du LacG	37.15	19	P	P	04 10 44.3	-1.8
	baz=208						
DGMT	Dagmar	37.53	344	P	P	04 10 49.2	-0.2
	baz=157,SNR=11						
ULM	Lac du Bonnet	37.72	354	P	P	04 10 49.0	-1.9
	comp=Z,11nm,0.8s,baz=174,slow=8.9,SNR=26						
ULM				LR	LR	04 28 55.4	
	comp=Z,94nm,18.4s,baz=135,slow=41						
MATQ	Matagami	38.30	13	P	P	04 10 54.1	-1.6
	baz=200,SNR=8.5						
D62A	Allapoint, All	38.50	23	P	P	04 10 56.2	-1.3
	baz=214						
EGMT	Eagleton	38.84	339	P	P	04 11 01.0	+0.5
	baz=148						
EGMT	Eagleton	38.84	339	IAmb	IAmb	04 11 02.7	
	comp=Z,11nm,1.4s						
O03E	Paynes Creek	39.16	320	P	P	04 11 04.7	+1.4
	baz=126						
CHGQ	Chibougamau	39.23	16	P	P	04 11 01.6	-2.0
	baz=204						
MSO	Missoula	39.50	334	P	P	04 11 06.1	+0.1
	baz=142						
M04C	Macdoel	40.06	322	P	P	04 11 11.7	+0.9
	baz=127						
F10A	Beach Ranch, E	40.35	330	P	P	04 11 13.8	+0.7
F10A				IAmb	IAmb	04 11 14.7	
	comp=Z,5.2nm,0.7s						
L04D	Klamath Falls	40.59	322	P	P	04 11 16.3	+1.0
	baz=127						
C09A	Chrisman Ranch	42.17	332	IAmb	IAmb	04 11 29.8	
	comp=Z,5.0nm,0.6s						
FFC	Flin Flon	42.94	350	P	P	04 11 32.6	-1.3
SCHQ	Schefferville	45.76	19	P	P	04 11 54.5	-2.2
	comp=Z,19nm,0.6s,baz=217,slow=6.4,SNR=81						
SCHQ				PcP	PcP	04 13 34.1	+0.1
	comp=Z,0.6nm,0.4s,baz=239,slow=6.7,SNR=3.7						
SCHQ				LR	LR	04 30 45.1	
	comp=Z,114nm,18.7s,baz=90,slow=36						
SCHQ	Schefferville	45.76	19	P	P	04 11 54.5	-2.2
CPUP	Villa Florida	50.18	141	P	P	04 12 35.8	+4.7
	comp=Z,1.1nm,0.6s,baz=202,slow=20,SNR=3.0						
BDFB	Brasilia	50.21	123	P	P	04 12 35.1	+3.4
	comp=Z,1.8nm,0.5s,baz=301,slow=9.5,SNR=5.4						
BDFB				LR	LR	04 34 05.0	
	comp=Z,84nm,19.8s,baz=306,slow=36						
YKA	Yellowknife Ar	52.70	346	P	P	04 12 48.7	-0.8
	comp=Z,5.1nm,0.8s,baz=143,slow=8.2,SNR=88						
YKA				PcP	PcP	04 13 59.2	+0.2
	comp=Z,0.7nm,0.6s,baz=145,slow=4.3,SNR=6.0						
DLBC	Dease Lake	54.59	335	P	P	04 13 05.2	+1.6
DLBC				IAmb	IAmb	04 13 05.8	
	comp=Z,3.9nm,0.8s						
RES	Resolute Bay	62.00	359	IAmb	IAmb	04 13 54.2	
	comp=Z,4.8nm,0.8s						
GLB	Gilahina Butte	62.03	334	IAmb	IAmb	04 13 57.3	
	comp=Z,6.0nm,1.0s						
INK	Inuvik	62.20	343	P	P	04 13 56.2	-0.1
INK				IAmb	IAmb	04 13 56.4	
	comp=Z,3.1nm,0.8s						
HDA	Harding Lake	64.63	336	P	P	04 14 12.1	-0.4
	baz=115						
ILAR	Eielson Array	64.76	337	P	P	04 14 13.2	-0.2
	comp=Z,2.5nm,1.0s,baz=127,slow=4.5,SNR=15						
ILAR				PcP	PcP	04 14 45.5	-1.3
	comp=Z,0.7nm,0.4s,baz=126,slow=4.6,SNR=6.8						
RND	Reindeer	64.99	335	IAmb	IAmb	04 14 16.3	
	comp=Z,4.9nm,0.8s						
MLY	Manley	66.37	336	P	P	04 14 23.9	+0.1
MLY				IAmb	IAmb	04 14 24.9	
	comp=Z,4.1nm,0.8s						
SUMG	Summit	66.94	15	*i* P	P	04 14 26.0	-1.8
TOLK	Toolik Lake Re	67.36	340	P	P	04 14 29.7	-0.4
	baz=114						
DAG	Danmarks Havn	73.44	13	*i* P	P	04 15 04.9	-2.1
	comp=Z,3.0nm,0.6s						
ESDC	Sonseca Array	78.98	52	P	P	04 15 36.7	-2.6
	comp=Z,0.7nm,0.6s,baz=284,slow=5.5,SNR=6.3						
ESDC				LR	LR	04 45 09.4	
	comp=Z,35nm,20.3s,baz=280,slow=32						
TIC	Toumodi	83.70	85	*e*P	P	04 16 10.2	+5.5
LIC	Lamto	83.78	85	*e*P	P	04 16 05.2	+0.1
	comp=Z,28nm,1.1s						
DBIC	Dimbokro	83.85	85	P	P	04 16 05.4	-0.1
	comp=Z,2.5nm,0.7s,baz=276,slow=4.9,SNR=6.4						
KIC	Kosan Boka	84.03	85	*e*P	P	04 16 06.5	+0.1
	comp=Z,9.6nm,0.7s						
NB2	NORSAR Subarra	84.32	29	P	P	04 16 05.5	-1.6
	comp=Z,0.9nm,0.7s,baz=289,slow=5.1						
NOA	NORSAR Array B	84.32	29	P	P	04 16 05.8	-1.2
	comp=Z,0.8nm,0.7s,baz=288,slow=5.1,SNR=6.3						
NOA				LR	LR	04 54 06.7	
	comp=Z,24nm,18.0s,baz=300,slow=36						
ARCES	ARCESS Array B	86.72	19	P	P	04 16 16.9	-1.9
	comp=Z,1.9nm,0.9s,baz=291,slow=3.8,SNR=12						
TORD	Torodi Ar. Bea	88.78	77	P	P	04 16 27.9	-1.8
	comp=Z,0.7nm,0.6s,baz=290,slow=5.7,SNR=12						
LZH	Lanzhou	129.71	345	*e*PKP	PKiKP	04 22 45.8	0.0
LZH				pPKP	sPKPdf	04 22 54.1	-3.0
LZH				sPKP		04 22 57.6	
WRA	Warramunga Arr	136.94	254	PKP	PKiKP	04 23 06.7	+6.1
	comp=Z,0.6nm,0.6s,baz=90,slow=3.0,SNR=2.8						
ASAR	Alice Springs	137.04	249	PKP	PKiKP	04 23 05.1	+4.3
	comp=Z,0.2nm,0.4s,baz=102,slow=2.3,SNR=1.9						
CMAR	Chiang Mai Arr	147.77	344	PKPbc	PKiKP	04 23 22.2	-0.6
	comp=Z,6.1nm,0.7s,baz=337,slow=3.5,SNR=30						

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*JMA **05** 04:31:49.8±0.1, 43°01N×145°28E, h88km±1km, M2.9*
*SKHL **05** 04:31:49.7±0.4, 42°91N×145°27E, h85km±2km, mb4.6/2, msh5.2/4*
ISC 05 04:31:50.1±2.2**, 43°00N**±0°08×**145°28E**±0°06**, h86**km±12km**,**
n16, σ**0s36**/30**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKHN	Kushirohamanak	0.12	313	P	Pn	04 32 02.6	+0.4
JKHN				*e*S	Sn	04 32 11.9	+0.6
JAK	Akkeshi	0.42	269	P	Pn	04 32 03.7	0.0
JAK				*e*S	Sn	04 32 14.1	+0.2
NMR	Nemuro--Hokkai	0.49	42	*i* P	Pn	04 32 04.1	-0.2
NMR				*i* S	Sn	04 32 14.5	-0.3
NEM2	Nemuro 2	0.50	43	P	Pn	04 32 04.1	-0.2
NEM2				*e*S	Sn	04 32 14.3	-0.6
JNK	Nakash	0.71	325	P	Pn	04 32 05.8	-0.5
JNK				*e*S	Sn	04 32 17.8	-0.6
GLVR	Golovnino	0.76	13	*i* P	Pn	04 32 06.7	0.0
GLVR				AMB	AMB	04 32 07.0	
	260nm,0.3s						
GLVR				*i* S	Sn	04 32 19.7	+0.6
GLVR				A	A	04 32 20.1	
	1μm,0.5s						
GLVR				A	A	04 32 20.1	
	2μm,0.5s						
JRA	Rausu	0.94	353	P	Pn	04 32 08.8	+0.1
JRA				*e*S	Sn	04 32 23.1	+0.4
GRPR	Tuman	1.05	20	*e*P	Pn	04 32 09.9	-0.2
GRPR				AMB	AMB	04 32 11.0	
	130nm,0.4s						
GRPR				*i* S	Sn	04 32 24.5	-0.5
GRPR				A	A	04 32 30.0	
	600nm,0.4s						
GRPR				A	A	04 32 30.0	
	290nm,0.4s						
JOB	Onbets	1.06	265	P	Pn	04 32 10.2	+0.1
JOB				*e*S	Sn	04 32 25.4	+0.2
LAGR	Lagunnoye	1.12	19	*e*S	Sn	04 32 26.6	+0.3
YUK	Yuzh-Kuril'sk	1.12	22	*e*P	Pn	04 32 10.6	-0.2
YUK				*e*S	Sn	04 32 26.3	0.0
YUK				A	A	04 32 27.0	
	810nm,0.5s						
YUK				A	A	04 32 27.0	
	650nm,0.5s						
JAR	Ashorobuto	1.14	285	P	Pn	04 32 11.2	+0.1
JAR				*e*S	Sn	04 32 26.8	-0.1
JTKR	Abashiri--Toko	1.39	315	P	Pn	04 32 14.3	+0.2
JTKR				S	Sn	04 32 32.4	+0.1
JCH	Churui	1.46	255	P	Pn	04 32 15.0	-0.1
JCH				*e*S	Sn	04 32 33.4	-0.6
JMP	Maruseppu	1.72	306	P	Pn	04 32 18.6	+0.2
JMP				*e*S	Sn	04 32 39.8	-0.2
KUR	Kuril'sk	2.91	39	*e*S	Sn	04 33 08.8	+0.6
KUR				A	A	04 33 09.9	
	50nm,0.4s						
KUR				A	A	04 33 09.9	
	40nm,0.4s						

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*AEIC **05** 04:39:17.9±1.8, 67°73N±0°09×162°4W±0°1, h35km±7km, ML3.0/29, Error ellipse: s-maj=12.9km s-min=6.8km az=165.0*
*IDC **05** 04:39:17.9±1.7, 67°91N×162°25W, h0km, mb3.1/4, mb1 3.6/6, mb1mx3.3/49, mbtmp3.3/6, ML3.7/2, MS3.5/1, Ms1 3.5/1, ms1mx2.5/24, Error ellipse: s-maj=57.3km s-min=19.1km az=21.0*
*NEIC **05** 04:39:17.7±3.0, 67°65N±0°05×162°4W±0°1, h11km±4km, Error ellipse: s-maj=7.1km s-min=6.4km az=209.0*
ISC 05 04:39:17.8±2.0**, 67°71N**±0°09×**162°2W**±0°1**, h10**km**, n41,**
σ**1s56**/40**, mb3.3**/3**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.45	321		Pg	04 39 26.5	-0.1
RDOG					Sg	04 39 32.5	0.0
ANM	Nome	3.42	204		Pn	04 40 09.5	-1.6
ANM					Sn	04 40 48.1	-3.5
IM03		3.74	114		Pn	04 40 15.4	-0.1
IM05	Indian Mountai	3.76	114		Pn	04 40 15.6	-0.1
IM05					Sn	04 41 00.0	+0.1
COLD	Coldfoot	4.62	90		Pn	04 40 29.7	+2.1
COLD	Coldfoot	4.62	90		LR	04 41 21.8	
COLD	Coldfoot	4.62	90	Sn	Sn	04 41 18.8	-2.4
TOLK	Toolik Lake Re	4.79	73		Pn	04 40 32.8	+2.9
TOLK	Toolik Lake Re	4.79	73		Sn	04 41 24.6	-0.7
MLY	Manley	5.32	115		Pn	04 40 36.7	-0.5
TT01	Tatalina	5.46	149		Pn	04 40 38.9	-0.2
BPAW	Bear Paw Mtn.	5.83	123		Pn	04 40 45.0	+0.8
BPAW	Bear Paw Mtn.	5.83	123	Sn	Sn	04 41 50.6	-0.4
KTH	Kantishna Hill	6.24	127		Pn	04 40 50.3	+0.5
MDM	Murphy Dome	6.24	110	Pn	Pn	04 40 51.3	+1.5
PPLA	Purkeypile	6.38	134		Pn	04 40 52.5	+0.7
COLA	College	6.43	110	Pn	Pn	04 40 53.2	+0.9
TRF	Thorofare Moun	6.51	125		Pn	04 40 54.1	+0.5
TRF	Thorofare Moun	6.51	125	Sn	Sn	04 42 07.0	-0.9
CCB	Clear Creek Bu	6.57	111		Pn	04 40 54.9	+0.6
CCB	Clear Creek Bu	6.57	111	Sn	Sn	04 42 06.9	-2.2
WRH	Wood River Hil	6.57	113		Pn	04 40 55.1	+0.8
BM03	Burnt Mountain	6.72	84		Pn	04 40 57.8	+1.4
IL31		6.83	108		Pn	04 40 58.3	+0.5
IL31					Sn	04 42 14.2	-1.2
ILAR	Eielson Array	6.83	108	Pn	Pn	04 40 57.6	-0.2
	2.5nm,0.3s,baz=303,slow=14,SNR=90						
ILAR				Sn	Sn	04 42 12.3	-3.2
	0.3nm,0.3s,baz=309,slow=24,SNR=4.5						
RND	Reindeer	7.00	122		Pn	04 41 01.1	+0.9
WAT2	Susitna Watana	7.40	124		Pn	04 41 06.9	+1.1
STLK	Strandline Lak	7.64	140		Pn	04 41 09.9	+0.9
SPWE	Spurr West	7.66	143		Pn	04 41 10.2	+0.8
DHY	Denali Highway	7.71	120		Pn	04 41 11.0	+0.9
DHY	Denali Highway	7.71	120	Sn	Sn	04 42 38.9	+1.5
GHO	Glory Hole Cre	8.20	130	Pn	Pn	04 41 18.2	+1.5
SCRK	Sand Creek	8.32	108		Pn	04 41 20.8	+2.4
SCRK					Sn	04 42 51.9	-0.5
SML	Sawmill	8.35	129	Pn	Pn	04 41 19.2	+0.5
DOT	Dot Lake	8.49	110	Pn	Pn	04 41 21.2	+0.7
INK	Inuvik	10.70	74	Pn	Pn	04 41 50.5	-0.3
	0.2nm,0.3s,baz=275,slow=11,SNR=13						
INK				Sn	Sn	04 43 45.8	-4.7
	0.1nm,0.3s,baz=331,slow=22,SNR=3.3						
YKA	Yellowknife Ar	20.24	82	P	Pn	04 43 53.9	-0.7
	0.2nm,0.6s,baz=300,slow=9.0,SNR=2.4						
NRIK	Noril'sk	35.19	325	LR	LR	05 03 25.3	
	comp=Z,76nm,19.0s,baz=20,slow=41						
TXAR	Lajitas Array	51.34	108	P	P	04 48 23.4	+1.3
	0.4nm,0.9s,baz=332,slow=4.5,SNR=4.4						
KURBB	Kurchatov Arra	53.59	316	P	P	04 48 38.8	+0.4
	0.2nm,0.4s,baz=30,slow=7.5,SNR=1.8						
MKAR	Makanchi Array	56.04	312	P	P	04 48 56.9	+0.6
	0.1nm,0.4s,baz=47,slow=6.3,SNR=1.5						

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*KRNET **05** 04:42:09.2±0.1, 40°75N×77°68E, h18km, mb2.4*
*NNC **05** 04:42:10.7±1.6, 40°69N×77°58E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=10.6km s-min=8.8km az=168.0*

*SOME **05** 04:42:10.3, 40.°72N×77.°52E, h10km*

ISC 05 04:42:11.5±2.5**, 40.°78N**±0.°10×**77.°49E**±0.°03**, h7**km±15km**,**
n34, σ1.°53/56**, 12C-9D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	Kajisay	1.37	350	⇓eP	Pn	04 42 36.2	-1.0
	baz=45						
KDJ				⇓iS	Sb	04 42 56.1	+0.9
	baz=45						
ULHL	Ulahol	1.74	328	⇑eP	Pb	04 42 43.5	-0.3
	baz=25						
ULHL				⇑iS	Sg	04 43 09.0	+1.7
	baz=25						
PRZ	Przheval'sk	1.83	22	⇓iP	Pn	04 42 43.5	-0.1
	baz=17						
PRZ				⇓iS	Sb	04 43 08.0	-0.6
	baz=17						
ANVS	Anan'yevo	2.00	4	⇑iP	Pb	04 42 47.1	-1.3
	baz=60						
ANVS				⇑iS	Sb	04 43 14.8	+1.2
	baz=60						
BOOM	Boomskoye usch	2.06	326	⇑iP	Pb	04 42 49.1	-0.3
	baz=24						
BOOM				⇑iS	Sg	04 43 18.8	+1.0
	baz=24						
KZA	Kyzart	2.12	308	⇑eP	Pb	04 42 50.0	-0.5
	baz=7.0						
KZA				⇑iS	Sg	04 43 21.0	+1.3
	baz=7.0						
TNSS	Tian-Shan	2.29	350	eP	Pb	04 42 53.9	+0.6
	6.2nm,0.5s						
TNSS				eS	Sg	04 43 25.4	+0.4
	9.6nm,0.6s						
TNSS	Tian-Shan	2.29	350	Pg	Pb	04 42 53.9	+0.6
	6.2nm,0.5s						
TNSS				Lg	Lg	04 43 25.4	
	9.6nm,0.6s						
IZV	Izvestkoviy	2.34	344	eP	Pg	04 42 56.2	-0.2
	1.2nm,0.1s						
IZV				eS	Sg	04 43 29.3	+2.5
	15nm,0.5s						
IZV	Izvestkoviy	2.34	344	Pg	Pg	04 42 56.2	-0.2
	1.2nm,0.1s						
IZV				Lg	Lg	04 43 29.3	
	15nm,0.5s						
SATY	Saty	2.38	16	eP	Pg	04 42 55.8	-1.2
	0.8nm,0.2s						
SATY				eS	Sg	04 43 28.4	+0.7
	7.3nm,0.5s						
SATY	Saty	2.38	16	Pg	Pg	04 42 55.8	-1.2
	0.8nm,0.2s						
SATY				Lg	Lg	04 43 28.4	
	7.3nm,0.5s						
MDOK	Medeo	2.40	352	eP	Pg	04 42 56.9	-0.6
	3.6nm,0.5s						
MDOK				eS	Sg	04 43 30.4	+1.7
	8.7nm,0.9s						
MDOK	Medeo	2.40	352	Pg	Pb	04 42 55.1	0.0
	2.9nm,0.6s						
MDOK				Lg	Lg	04 43 29.6	
	6.5nm,0.5s						
MDOK	Medeo	2.40	352	Pg	Pg	04 42 56.9	-0.6
	3.6nm,0.5s						
MDOK				Lg	Lg	04 43 30.4	
	8.7nm,0.9s						
KOTS	Kotyrbulak	2.47	354	eP	Pg	04 42 58.3	-0.4
	4.2nm,0.3s						
KOTS				eS	Sg	04 43 32.6	+1.9
	32nm,0.6s						
KOTS	Kotyrbulak	2.47	354	Pg	Pg	04 42 58.3	-0.4
	4.2nm,0.3s						
KOTS				Lg	Lg	04 43 32.6	
	32nm,0.6s						
KST	Kastek	2.53	334	eP	Pb	04 42 58.8	+1.5
	1.3nm,0.1s						
KST				eS	Sg	04 43 33.6	+0.9
	3.1nm,0.3s						
KST	Kastek	2.53	334	Pg	Pg	04 43 00.2	+0.3
	2.4nm,0.5s						
KST				Lg	Lg	04 43 36.2	
	2.1nm,0.5s						
TKM2	Tokmak 2	2.56	327	⇓iP	Pb	04 42 55.8	-2.1
	baz=25						
TKM2				⇓iS	Sb	04 43 29.7	0.0
	baz=25						
TKM2	Tokmak 2	2.56	327	⇓Pg	Pg	04 42 59.7	-0.9
	1.0nm,0.6s						
TKM2				⇓Lg	Lg	04 43 37.7	
	1.8nm,0.6s						
UZB	Uzynbulak	2.62	25	eP	Pg	04 43 00.3	-1.5
	0.9nm,0.1s						
UZB				eS	Sg	04 43 36.1	+0.3
	3.7nm,0.3s						
UCH	Uchtor	2.66	304	⇑iS	Sb	04 43 34.9	+2.2
	baz=3.0						
KBK	Karagaybulak	2.67	315	⇑iP	Pb	04 42 57.5	-2.2
	baz=14						
KBK				⇑iS	Sb	04 43 33.3	+0.6
	baz=14						
KURS	Kuram	2.75	10	eP	Pb	04 43 01.5	+0.5
	0.4nm,0.1s						
KURS				eS	Sg	04 43 38.1	-1.7
	3.5nm,0.5s						
SHLS	Shalkode	2.79	31	eP	Pg	04 43 06.8	+1.8
	1.0nm,0.1s						
SHLS				eS	Sg	04 43 47.1	+5.9
	10nm,0.5s						
AAK	Ala-Archa	2.91	311	⇑Pg	Pb	04 43 04.8	+1.0
	1.4nm,0.6s						
AAK				⇓Lg	Lg	04 43 44.5	
	4.4nm,0.8s						
PDGK	Podgornoye	2.95	30	Pg	Pb	04 43 05.2	+0.8
	1.2nm,0.3s						
PDGK				Lg	Lg	04 43 44.6	
	6.2nm,0.9s						
KTBS	Karatobe	2.99	349	eP	Pg	04 43 07.3	-1.4
	0.9nm,0.4s						
KTBS				eS	Sg	04 43 48.1	+0.7
	10.0nm,0.6s						
KTBS	Karatobe	2.99	349	Pg	Pg	04 43 07.3	-1.4
	0.9nm,0.4s						
KTBS				Lg	Lg	04 43 48.1	
	10.0nm,0.6s						
KRBS	Karabastau	3.21	336	eP	Pg	04 43 11.2	-1.7
	0.7nm,0.2s						
KRBS				eS	Sg	04 43 54.8	+0.3
	1.8nm,0.3s						
MNBS	Baschi	3.36	11	eP	Pg	04 43 13.7	-2.2
MNBS				eS	Sg	04 43 58.9	-0.6
	0.1nm,0.2s						
KTMS	Ketmen	3.41	38	eP	Pb	04 43 13.2	+0.9
	0.3nm,0.1s						
KTMS				eS	Sg	04 43 58.0	-2.9
	1.4nm,0.1s						
ARXS	Arharly	3.44	4	eP	Pg	04 43 14.9	-2.4
	0.9nm,0.2s						
ARXS				eS	Sg	04 44 01.2	-0.7
	7.2nm,0.4s						

KRNET 05 04:42:46.8±0.1**, 42.°04N×73.°83E, h35**km**, mb1.2, 9C, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	0.13	311	⇑iP	Pn	04 42 54.9	+1.3
	baz=11						
AML				⇑iS	Sn	04 43 00.8	+2.5
	baz=11						
UCH	Uchtor	0.54	70	⇑eP	Pn	04 42 59.0	+0.5
	baz=70						
UCH				⇑iS	Sn	04 43 07.9	+1.3
	baz=70						
UCH	Uchtor	0.54	70	⇑eP	Pn	04 42 58.5	0.0
	baz=3.0						
EKS2	Erkin-Say	0.62	356	⇑iP	Pn	04 43 00.0	+0.7
	baz=56						
EKS2				⇑iS	Sn	04 43 09.8	+1.8
	baz=56						
AAK	Ala-Archa	0.77	39	⇑iP	Pn	04 43 02.4	+1.0
	baz=39						
AAK				⇑iS	Sn	04 43 13.6	+1.8
	baz=39						

WEL 05 04:57:47.2±0.5**, 34.°S**±6.°×**18.°0E**±1.°3**, h171**km±13km**,**
M4.1/13**, mB4.4**/2**, MLv4.1**/13**, Mw(mB)3.5**/2**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.66	196	P	Pn	04 58 44.6	+0.9
MXZ				S	Sn	04 59 27.4	-0.5
WMGZ	Waiomatatini S	3.89	194	P	Pn	04 58 48.0	+1.4
WMGZ				S	Sn	04 59 35.4	+2.5
HAZ	Te Kaha	3.98	201	P	Pn	04 58 50.0	+2.2
HAZ				S	Sn	04 59 37.1	+1.9
KUZ	Kuaotunu	4.15	228	P	Pn	04 58 52.2	+2.2
PUZ	Puketiti	4.16	195	P	Pn	04 58 50.9	+0.8
PUZ				S	Sn	04 59 39.3	-0.1
RUGZ	Raukumara Rang	4.21	201	P	Pn	04 58 52.8	+2.0
RUGZ				S	Sn	04 59 39.0	-1.6
TWGZ	Tauwhareparae	4.33	197	P	Pn	04 58 52.6	+0.4
TWGZ				S	Sn	04 59 45.6	+2.4
MWZ	Matawai	4.59	201	P	Pn	04 58 56.2	+0.5
MWZ				S	Sn	04 59 49.1	-0.2
URZ	Urewera	4.66	205	P	Pn	04 58 56.7	+0.2
URZ				S	Sn	04 59 50.5	-0.3
MUGZ	Murupara	4.98	206	P	Pn	04 59 01.8	+1.1
SNGZ	Shannon Statio	5.06	200	P	Pn	04 59 01.2	-0.6
SNGZ				S	Sn	04 59 59.3	-1.0
GLKZ	Green Lake	5.22	25	S	Sn	05 00 02.5	-1.4
RAHZ	Arahi	5.26	202	P	Pn	04 59 03.8	-0.6
RAHZ				S	Sn	05 00 04.0	-1.0
NMHZ	Naumai	5.52	203	P	Pn	04 59 07.2	-0.6
NMHZ				S	Sn	05 00 12.1	+1.0
ARHZ	Aropaoanui	5.61	201	P	Pn	04 59 08.3	-0.6
ARHZ				S	Sn	05 00 11.0	-2.1
KWHZ	Kaweka Forest	5.94	204	P	Pn	04 59 11.7	-1.7
KWHZ				S	Sn	05 00 18.6	-2.4

*BJI **05** 04:59:40.0±0.0, 60.°70N×149.°60W, h35km, mB5.0/25, mb4.9/42, Ms4.7/8, Ms7 4.3/7*

*NEIC **05** 04:59:43.7±2.6, 60.°63N±0.°03×149.°50W±0.°07, h46km±4km, Error ellipse: s-maj=5.1km s-min=3.6km az=115.0*

*AEIC **05** 04:59:44±2.7, 60.°65N±0.°03×149.°56W±0.°04, h38km±4km, ML4.6/107, mb4.7/211(NEIC), Mwr4.5/75(NEIC), Error ellipse: s-maj=4.3km s-min=3.2km az=182.0*

*IDC **05** 04:59:44.2±0.4, 60.°83N×149.°81W, h48km±2km, mb4.3/38, mb1 4.4/43, mb1mx4.3/69, mbtmp4.5/43, MS3.5/32, Ms1 3.5/32, ms1mx3.4/53, Error ellipse: s-maj=11.7km s-min=6.9km az=31.0*

*NEIC **05** 04:59:44, 60.°66N×149.°55W, h48km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-5.76; $M_{\theta\theta}$2.26; $M_{\phi\phi}$3.51; $M_{r\theta}$-3.81; $M_{\theta\phi}$4.26; $M_{\phi r}$0.66; Fault plane solution: $M_0$7.64000×10^{15} NP1:ϕ_s66.11000°, δ59.51000°, λ-58.81000°. NP2:ϕ_s196.08000°, δ42.51000°, λ-131.33000°. Principal axes: T 7.5184, Plg9.0000°, Azm134.0000°; N 0.2438, Plg27.0000°, Azm229.0000°; P -7.7621, Plg62.0000°, Azm27.0000°;*

*BGR **05** 04:59:48.2±0.0, 61.°31N×148.°40W, h33km, mb5.3*

ISC 05 04:59:43.8±0.3**, 60.°61N**±0.°03×**149.°57W**±0.°03**, h48**km±2km**, h48**km**:pP-P, n741,** σ1.°34/710**, mb4.8**/178**, MS3.5**/33**, 14D, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLKM	Skilak Lake	0.34	252		Pn	04 59 52.3	-0.8
SLKM					Sn	04 59 58.6	-1.2
RC01	Rabbit Creek A	0.49	351		Pn	04 59 53.2	-1.5
RC01	Rabbit Creek A	0.49	351		Sn	05 00 00.4	-2.2
SEW	Seward	0.51	173		Pn	04 59 54.8	-0.2
SEW	Seward	0.51	173		Sn	05 00 03.6	+0.6
FIS	Fire Island	0.62	330		Pn	04 59 55.7	-0.7
FIS					Sn	05 00 05.8	+0.4
PWL	Port Wells	0.66	67		Pn	04 59 56.5	-0.4
PWL					Sn	05 00 06.1	-0.2
CAPN	Captain Cook N	0.79	282		Pn	04 59 59.0	+0.4
KNK	Knik Glacier	0.97	34	Pn	Pn	05 00 00.4	-0.7
KNK	Knik Glacier	0.97	34		Sn	05 00 12.8	-1.0
PMR	Palmer	1.01	12		Pn	05 00 00.4	-1.1
PMR					Sn	05 00 12.6	-2.0
BRSE	Bradley Lake S	1.05	214		Pn	05 00 02.5	+0.4
BRLK	Bradley Lake	1.07	218		Pn	05 00 02.7	+0.3
GHO	Glory Hole Cre	1.21	15	Pn	Pn	05 00 03.6	-0.7
GHO	Glory Hole Cre	1.21	15		Sn	05 00 19.3	-0.2
GLI	Glacier Island	1.25	76		Pn	05 00 04.2	-0.6
SML	Sawmill	1.34	26		Pn	05 00 05.6	-0.6
CNPM	China Poot	1.37	218		Pn	05 00 06.9	+0.4
HOM	Homer	1.41	228		Pn	05 00 08.0	+1.0
STLK	Strandline Lak	1.42	310		Pn	05 00 06.5	-0.6
JPK	Jack Peak	1.52	72		Pn	05 00 08.3	-0.3
FID	Port Fidalgo	1.53	83		Pn	05 00 07.6	-1.0
HIN	Hinchinbrook I	1.54	97		Pn	05 00 08.3	-0.4
HIN					Sn	05 00 24.6	-2.9
RSO	Redoubt South	1.58	266		Pn	05 00 09.1	-0.3
SPWE	Spurr West	1.60	296		Pn	05 00 09.3	-0.4
SCM	Sheep Creek Mo	1.64	41	Pn	Pn	05 00 09.9	-0.3
VMT	TAPS Tl Valdez	1.64	72		Pn	05 00 09.9	-0.2
EYAK	Cordova Ski Ar	1.89	90		Pn	05 00 13.0	-0.5
MID	Middleton Isla	2.01	125		Pn	05 00 14.8	-0.4
GOAT	Goat Mountain	2.39	89		Pn	05 00 20.0	-0.5
WAT2	Susitna Watana	2.41	11		Pn	05 00 19.9	-0.8
RAGM	Ragged Mountai	2.43	93	Pn	Pn	05 00 20.1	-0.9
PS11	TAPS Pump St11	2.46	52		Pn	05 00 21.6	+0.2
PPLA	Purkeypile	2.61	333		Pn	05 00 22.4	-1.1
DHY	Denali Highway	2.68	22		Pn	05 00 24.3	-0.2
RND	Reindeer	2.83	7	Pn	Pn	05 00 25.7	-0.7
TRF	Thorofare Moun	2.87	354		Pn	05 00 26.1	-1.0
GLB	Gilahina Butte	2.93	71		Pn	05 00 27.6	-0.2
KTH	Kantishna Hill	3.02	348		Pn	05 00 28.3	-0.8
MCK	McKinley	3.15	5		Pn	05 00 30.7	-0.1
CRQM	Cirque	3.17	85		Pn	05 00 30.6	-0.6
KDAK	Kodiak Island	3.23	210	P	Pn	05 00 32.2	+0.3
	18nm,0.3s,baz=60,slow=8.5,SNR=291						
KDAK				S	Sn	05 01 06.6	-2.5
	183nm,0.3s,baz=146,slow=23,SNR=19						
KDAK	Kodiak Island	3.23	210		Pn	05 00 31.2	-0.7
MCARA	McCarthy VSAT	3.28	74		Pn	05 00 32.5	-0.1
KAHG	Katmai Hook Gl	3.30	232		Pn	05 00 33.6	+0.6
TGL	Tana Glacier	3.32	85		Pn	05 00 32.4	-0.9
PS10	TAPS Pump St10	3.34	31		Pn	05 00 34.5	+1.0
KAHC	Katmai Hardscr	3.39	237		Pn	05 00 34.0	-0.2
PTPK	Patty Peak	3.52	77		Pn	05 00 36.2	+0.1
BPAW	Bear Paw Mtn.	3.56	350		Pn	05 00 35.3	-1.2
BWN	Browne	3.58	1		Pn	05 00 37.2	+0.6
MENT	Mentasta	3.63	47		Pn	05 00 37.4	-0.1
KABU	Katmai Buttres	3.74	234		Pn	05 00 39.7	+0.7
TT01	Tatalina	3.83	310		Pn	05 00 39.1	-1.0
RIDG	Independent Ri	3.84	33		Pn	05 00 40.4	+0.1
TTA	Tatalina	3.84	310		Pn	05 00 39.5	-0.9
GRNC	Granite Creek	3.85	85		Pn	05 00 40.0	-0.7
YAH	Yahtse	3.88	90		Pn	05 00 40.1	-0.9
CAHL	Cahill	3.90	231		Pn	05 00 41.8	+0.7
OHAK	Old Harbor	3.91	211		Pn	05 00 40.4	-0.8
WRH	Wood River Hil	3.94	9		Pn	05 00 41.6	0.0
NEA	Nenana	3.99	3		Pn	05 00 42.6	+0.3
DOT	Dot Lake	4.00	38		Pn	05 00 42.6	+0.1
HDA	Harding Lake	4.00	17	P	Pn	05 00 42.7	+0.2
	baz=199,SNR=306						
HDA	Harding Lake	4.00	17		Pn	05 00 43.3	+0.8
CTGM	Chitina Glacie	4.05	81		Pn	05 00 43.1	-0.2
PS08	TAPS Pump Stn8	4.15	17		Pn	05 00 45.7	+1.3
CHX	Chaix Hills	4.24	94		Pn	05 00 45.1	-0.8
SCRK	Sand Creek	4.27	35		Pn	05 00 45.2	-1.0
TCOL	CIGO, UAF Yank	4.35	10	P	Pn	05 00 47.4	+0.2
	baz=191,SNR=195						
TCOL	CIGO, UAF Yank	4.35	10		Pn	05 00 47.2	0.0
COLA	College	4.35	10		Pn	05 00 47.0	-0.3
COLA	College	4.35	10		Pn	05 00 47.9	+0.6
I53US	FAIRBANKS INFR	4.35	10	P	Pn	05 00 47.1	-0.1
	baz=200,slow=32,SNR=1.4						
IL31		4.36	15		Pn	05 00 47.0	-0.3
ILAR	Eielson Array	4.36	15	P	Pn	05 00 46.4	-0.9
	23nm,0.3s,baz=194,slow=13,SNR=917						
ILAR				S	Sn	05 01 41.7	+5.0
	58nm,0.3s,baz=202,slow=20,SNR=6.8						
YUK2	White River	4.39	71		Pn	05 00 48.1	+0.3
MDM	Murphy Dome	4.41	7		Pn	05 00 48.8	+0.8
BC03		4.44	53		Pn	05 00 48.7	+0.3
MLY	Manley	4.47	354		Pn	05 00 48.2	-0.7
BVCY	Beaver Creek	4.55	63		Pn	05 00 50.7	+0.7
YUK3	Moose Creek	4.56	71		Pn	05 00 50.6	+0.2
PLK1	Peulik 1	4.58	235		Pn	05 00 47.6	-2.9
YUK1	Sand Pete Hill	4.62	67		Pn	05 00 51.9	+0.8
POKR	Poker Plat Res	4.63	11	P	Pn	05 00 51.3	+0.2
	baz=193,SNR=65						
POKR	Poker Plat Res	4.63	11		Pn	05 00 51.4	+0.4
PS07	TAPS Pump Stn7	4.75	7		Pn	05 00 53.2	+0.4
PNL	Peninsula	5.17	96		Pn	05 00 57.0	-1.6
PRP	Porcupine Dome	5.26	19	Pn	Pn	05 01 00.1	+0.3
PS06	TAPS Pump Stn6	5.26	359		Pn	05 00 59.8	0.0
YUK4	Talbot Arm	5.37	77		Pn	05 01 02.2	+0.7
YUK6	Outpost Mounta	5.50	82		Pn	05 01 03.3	0.0
YUK7	Dusty Glacier	5.64	86		Pn	05 01 04.4	-0.8
EGAK	Eagle	5.70	39		Pn	05 01 05.3	-0.4
IM03		5.71	343		Pn	05 01 04.5	-1.3
YUK5	Granite Creek	5.75	80		Pn	05 01 06.6	0.0
DAWY	Dawson	5.87	49		Pn	05 01 08.2	+0.1
DHAK	Deception Hill	5.92	100		Pn	05 01 07.5	-1.4
DHAK	Deception Hill	5.92	100		Sn	05 02 10.9	-4.4
HYT	Haines Junctio	5.93	83		Pn	05 01 08.9	-0.1
PS05	TAPS Pump Stn5	6.24	356		Pn	05 01 13.3	+0.1
CHGN	Chignik	6.34	231		Pn	05 01 14.8	+0.4
COLD	Coldfoot	6.65	358		Pn	05 01 19.3	+0.5
BM03	Burnt Mountain	7.17	16		Pn	05 01 25.7	-0.3
WHY	Whitehorse	7.23	83		Pn	05 01 26.1	-0.6
WHY	Whitehorse	7.23	83	Sn	Sn	05 02 44.3	-3.2
SKAG	Skagway	7.23	93		Pn	05 01 26.1	-0.6
BESE	Bessie Mountai	7.74	99		Pn	05 01 32.9	-0.9
SDPT	Sand Point	7.83	232	Pn	Pn	05 01 35.3	+0.3
CNBA	Chernabura Isl	7.90	227		Pn	05 01 35.0	-0.8
TOLK	Toolik Lake Re	8.06	0	P	Pn	05 01 38.7	+0.6
	baz=180,SNR=22						
JIS	Juneau Island	8.09	100		Pn	05 01 37.2	-1.2
JIS	Juneau Island	8.09	100		Sn	05 03 04.7	-3.6
EPYK	Eagle Plains	8.14	39	P	Pn	05 01 38.4	-0.8
	baz=231,SNR=19						
EPYK	Eagle Plains	8.14	39		Pn	05 01 38.8	-0.4
SIT	Sitka	8.20	109		Pn	05 01 38.1	-1.9
ANM	Nome	8.29	305		Pn	05 01 42.0	+0.9
CRAG	Craig	10.12	113		Pn	05 02 05.0	-1.2
DLBC	Dease Lake	10.16	94	P	Pn	05 02 07.0	+0.1
	0.6nm,0.3s,baz=240,slow=6.9,SNR=11						
INK	Inuvik	10.34	35	P	Pn	05 02 08.4	-0.7
	0.7nm,0.3s,baz=226,slow=17,SNR=48						
INK				S	Sn	05 04 11.1	+7.8
	1.6nm,0.3s,baz=204,slow=12,SNR=2.1						
INK				LR	LR	05 06 45.8	
	comp=Z,99nm,19.9s,baz=244,slow=41						
INK	Inuvik	10.34	35		Pn	05 02 08.6	-0.5
GAMB	Gambell	10.79	297		Pn	05 02 16.9	+1.6
UNV	Unalaska Valle	11.38	241	Pn	Pn	05 02 23.1	-0.4
DIB	Dawson Inlet,	11.90	121		Pn	05 02 28.7	-1.9
MOBC	Moresby Island	12.16	120		Pn	05 02 33.3	-0.9
NIKH	Nikolski High	13.01	243	Pn	Pn	05 02 46.5	+0.9
C36M	Paulatuk	13.77	40	P	Pn	05 02 52.8	-3.1
	baz=243,SNR=11						
C36M	Paulatuk	13.77	40		Pn	05 02 53.0	-2.9
BBB	Bella Bella	14.51	116	P	Pn	05 03 07.1	+1.1
	0.2nm,0.3s,baz=319,slow=10,SNR=5.7						
BBB				LR	LR	05 07 57.2	
	comp=Z,248nm,20.7s,baz=348,slow=34						
A36M	Sachs Harbour	14.86	30	P	Pn	05 03 08.1	-2.3
	baz=232,SNR=6.8						
YKA	Yellowknife Ar	16.64	68	P	Pn	05 03 32.3	-1.0
	0.7nm,0.3s,baz=274,slow=12,SNR=137						
YKA				PcP	PcP	05 08 20.4	+0.1
	0.6nm,0.3s,baz=266,slow=0.9,SNR=12						
YKA				LR	LR	05 10 35.1	
	comp=Z,148nm,18.2s,baz=0.0,slow=39						
ADK	Adak	17.30	252	Pn	Pn	05 03 41.6	+0.1
ADK				IAmb	IAmb	05 04 00.8	
	comp=Z,46nm,0.8s						
PGC	Sidney	19.13	117		Pn	05 04 05.0	+1.2
PGC				IAmb	IAmb	05 04 08.1	
	comp=Z,66nm,1.4s						
NLWA	Neilton Lookou	19.91	120	P	P	05 04 11.6	+0.5
NLWA				IAmb	IAmb	05 04 18.0	
	comp=Z,42nm,1.2s						
B05A	Bryant	20.02	116	P	P	05 04 13.1	+0.9
	baz=318						
BILL	Bilibino	20.10	310	P	P	05 04 11.1	-1.8
B06A	Marblemount	20.10	114	P	P	05 04 12.5	-0.6
D03D	Eldon	20.13	119	P	P	05 04 14.5	+1.0
	baz=320						
D05A	Enumclaw	20.88	118	P	Pn	05 04 25.1	+0.5
D05A				IAmb	IAmb	05 04 43.8	
	comp=Z,51nm,1.3s						
E04D	Cinebar	21.12	120	P	P	05 04 24.5	+0.3
	baz=322						
B08A	Colville Reser	21.20	112	P	P	05 04 26.1	+1.1
LON	Longmire	21.30	118	P	P	05 04 26.8	+0.7
LTY	Liberty	21.41	116	P	P	05 04 25.7	-1.6
F04A	Amboy	21.67	120	P	P	05 04 30.9	+0.8
F04A				IAmb	IAmb	05 04 34.0	
	comp=Z,25nm,1.1s						
G03D	McMinnville, O	21.90	123	P	P	05 04 33.8	+1.3
	baz=324						
C09A	Chrisman Ranch	22.09	111	P	P	05 04 36.1	+1.6
NEW	Newport	22.29	109	P	P	05 04 39.1	+2.4
	comp=Z,3.9nm,0.8s,baz=327,slow=11,SNR=5.6						
NEW				LR	LR	05 13 27.8	
	comp=Z,235nm,18.2s,baz=336,slow=37						
NEW	Newport	22.29	109	P	P	05 04 36.4	-0.3
E07A	Sunnyside	22.30	116	P	P	05 04 36.6	-0.3
E07A				IAmb	IAmb	05 04 54.2	
	comp=Z,29nm,1.3s						
D08A	Wollman Farm,	22.34	114	P	P	05 04 38.0	+0.7
HAWA	Hanford	22.57	115	P	P	05 04 39.7	0.0
E08A	Dider Farm, El	22.71	115	P	P	05 04 40.5	-0.7
H04A	Detroit Lake	22.77	122	P	P	05 04 41.2	-0.7
H04A				IAmb	IAmb	05 04 58.9	
	comp=Z,27nm,1.4s						
F07A	Phinny Hill Vi	22.78	117	P	P	05 04 42.9	+0.9
F07A				IAmb	IAmb	05 04 59.9	
	comp=Z,35nm,1.2s						
E09A	Wood Farm, Sta	23.10	113	P	P	05 04 44.4	-0.8
I03D	Drain, OR	23.11	125	P	P	05 04 46.9	+1.7
	baz=326						
WALA	Waterton Lakes	23.25	104	P	P	05 04 47.4	+0.7
I04A	Tendick Farm,	23.41	124	P	P	05 04 50.2	+2.0
	baz=326						
I05D	Terrebonne, OR	23.41	121	P	P	05 04 50.4	+2.2
	baz=324						
G08A	Pilot Rock	23.68	116	P	P	05 04 52.3	+1.4
K02D	Willamette Mer	23.82	127	P	P	05 04 54.4	+2.2
	baz=328						
RES	Resolute Bay	23.88	32	P	P	05 04 51.4	-0.9
	comp=Z,6.5nm,0.7s,baz=261,slow=11,SNR=50						
RES				LR	LR	05 14 31.4	
	comp=Z,63nm,20.8s,baz=218,slow=37						
RES	Resolute Bay	23.88	32	IAmb	IAmb	05 05 01.9	
	comp=Z,11nm,0.7s						
J04D	Umpqua Nationa	23.99	124	P	P	05 04 55.6	+1.8
	baz=326						
JTMT	Jette	23.99	106	P	P	05 04 53.7	0.0
J05D	Fort Rock, OR	24.31	123	P	P	05 04 58.8	+2.1
	baz=326						
I07A	Izee	24.40	119	P	P	05 04 57.0	-0.4
K04D	Chiloquin, OR	24.64	124	P	P	05 05 01.8	+2.1
	baz=327						
L04D	Klamath Falls	24.76	126	P	P	05 05 03.2	+2.4
	baz=328						
MSO	Missoula	24.81	108	P	P	05 05 02.1	+0.9
	baz=317						
MSO	Missoula	24.81	108	IAmb	IAmb	05 05 22.5	
	comp=Z,12nm,0.8s						
K05A	Summer Lake	24.91	123	P	P	05 05 02.9	+0.7
K05A				IAmb	IAmb	05 05 20.2	
	comp=Z,21nm,1.1s						
YBH	Yreka Blue Hor	25.01	127	P	P	05 05 06.4	+3.4
	comp=Z,5.4nm,0.8s,baz=326,slow=3.3,SNR=12						
YBH				LR	LR	05 13 05.2	
	comp=Z,149nm,22.0s,baz=344,slow=32						
M02C	Callahan	25.25	128	P	P	05 05 06.2	+1.1
	baz=329						
FFC	Flin Flon	25.64	82	P	P	05 05 09.4	+0.9
N02D	Trinity Center	25.66	128	P	P	05 05 11.8	+3.0
	baz=329						
MOD	Modoc Plateau	25.84	123	P	P	05 05 13.2	+2.6
HRY	Holter Researc	25.90	105	P	P	05 05 09.6	-1.4
KMRM	Mail Ridge	25.93	130	IAmb	IAmb	05 05 15.7	
	comp=Z,28nm,0.7s						
EGMT	Eagleton	25.96	101	P	P	05 05 12.3	+0.7
	baz=314,SNR=9.7						
EGMT	Eagleton	25.96	101	IAmb	IAmb	05 05 31.9	
	comp=Z,21nm,0.8s						
WDC	Whiskeytown Da	26.06	128	P	P	05 05 14.3	+1.9

WVOR **Wild Horse Val** 26.10 120 P **P** 05 05 15.1 +2.1
DLMT **Dillon** 26.53 108 P **P** 05 05 20.2 +3.4
O03E **Paynes Creek** 26.60 127 P **P** 05 05 19.8 +2.5
baz=329
FCC **Fort Churchill** 27.37 69 P **P** 05 05 24.9 +0.9
FCC IAmb IAmb 05 05 25.6
comp=Z,22nm,0.8s
QLMT **Earthquake Lak** 27.47 108 P **P** 05 05 27.1 +1.8
GCMT **Greycliff** 27.60 104 P **P** 05 05 27.1 +0.7
YNR **Norris Junctio** 27.91 107 P **P** 05 05 31.0 +1.7
LKWY **Lake** 28.16 107 P **P** 05 05 34.2 +2.7
YPP **Pitchstone Pla** 28.19 108 P **P** 05 05 34.0 +2.2
H17A **Grant Village** 28.20 107 P **P** 05 05 34.3 +2.5
RLMT **Red Lodge** 28.28 105 P **P** 05 05 35.0 +2.5
baz=318,SNR=13
RLMT **Red Lodge** 28.28 105 IAmb IAmb 05 05 53.9
comp=Z,15nm,0.8s
FLWY **Flagg Ranch** 28.38 108 P **P** 05 05 35.0 +1.6
IMW **Indian Meadow** 28.41 108 IAmb IAmb 05 05 55.3
comp=Z,22nm,0.8s
LAO **LASA Array** 28.61 99 P **P** 05 05 37.7 +2.4
baz=315
LAO **LASA Array** 28.61 99 P **P** 05 05 35.2 -0.1
LAO IAmb IAmb 05 05 50.0
comp=Z,18nm,1.2s
TPAW **Teton Pass** 28.71 109 IAmb IAmb 05 05 57.8
comp=Z,17nm,0.8s
SNOW **Snow King Moun** 28.83 109 IAmb IAmb 05 05 58.9
comp=Z,13nm,0.8s
REDW **Red Top Meadow** 28.86 109 IAmb IAmb 05 05 58.9
comp=Z,9.1nm,0.8s
MA2 **Magadan** 28.88 295 P **P** 05 05 36.4 -1.1
comp=Z,3.6nm,0.4s,baz=159,slow=20,SNR=2.5
MA2 LR LR 05 18 56.7
comp=Z,74nm,18.6s,baz=53,slow=40
MA2 **Magadan** 28.88 295 IAmb IAmb 05 05 37.5
comp=Z,9.2nm,0.9s
ELK **Elko** 28.95 118 P **P** 05 05 41.6 +3.0
comp=Z,3.7nm,0.8s,baz=320,slow=9.0,SNR=17
ELK LR LR 05 16 20.2
comp=Z,110nm,19.4s,baz=330,slow=34
PETK **Petropavlovsk-** 29.06 279 P **P** 05 05 37.3 -1.8
comp=Z,7.6nm,0.8s,baz=84,slow=10,SNR=11
PETK LR LR 05 17 10.2
comp=Z,89nm,21.1s,baz=56,slow=36
KVN **Kaiserville** 29.15 123 P **P** 05 05 40.5 +0.3
HVU **Hansel Valley** 29.21 113 P **P** 05 05 41.9 +1.1
NVAR **Mina Array Bea** 29.59 124 P **P** 05 05 47.3 +3.1
comp=Z,2.0nm,0.8s,baz=314,slow=8.4,SNR=13
NVAR pP **pP** 05 05 58.4 +1.4
comp=Z,2.3nm,0.7s,baz=315,slow=9.0,SNR=10
NVAR sP **sP** 05 06 06.0 +3.1
comp=Z,2.5nm,0.7s,baz=322,slow=9.4,SNR=6.7
NVAR PcP **PcP** 05 08 49.0 +1.1
comp=Z,1.7nm,0.6s,baz=282,slow=3.1,SNR=9.1
NVAR LR LR 05 16 28.8
comp=Z,93nm,19.3s,baz=336,slow=34
NV11 **Mina Array Sit** 29.65 124 P **P** 05 05 47.0 +2.4
BW06 **Boulder Array** 29.92 108 P **P** 05 05 48.8 +1.7
baz=321
BW06 **Boulder Array** 29.92 108 P **P** 05 05 48.2 +1.0
PDAR **Pinedale Array** 29.92 108 P **P** 05 05 49.0 +1.9
comp=Z,0.6nm,0.4s,baz=329,slow=5.5,SNR=9.5
PDAR pP **pP** 05 06 01.2 +1.3
comp=Z,1.5nm,0.6s,baz=321,slow=5.8,SNR=10.0
PDAR sP **sP** 05 06 06.3 +0.6
comp=Z,2.6nm,0.8s,baz=324,slow=7.3,SNR=8.1
PDAR PcP **PcP** 05 08 48.5 -0.2
comp=Z,0.7nm,0.6s,baz=146,slow=1.1,SNR=4.1
TCUT **Toone Canyon** 30.36 113 P **P** 05 05 53.7 +2.7
DUG **Dugway, Tooele** 30.47 115 P **P** 05 05 54.5 +2.6
baz=325
R11A **Troy Canyon, C** 30.79 121 P **P** 05 05 57.0 +2.2
baz=328,SNR=8.6
ULM **Lac du Bonnet** 31.30 85 P **P** 05 06 00.1 +1.1
comp=Z,7.6nm,0.6s,baz=307,slow=8.1,SNR=24
ULM PcP **PcP** 05 08 51.6 -0.2
comp=Z,4.1nm,0.7s,baz=314,slow=4.2,SNR=5.2
ULM LR LR 05 19 50.2
comp=Z,178nm,18.7s,baz=322,slow=38
ULM **Lac du Bonnet** 31.30 85 P **P** 05 06 00.3 +1.4
ULM IAmb IAmb 05 06 00.9
comp=Z,8.8nm,0.8s
ULM PcP **PcP** 05 08 51.6 -0.2
PSUT **Pine Spring** 31.38 118 P **P** 05 06 01.5 +1.5
K22A **Casper** 31.44 105 P **P** 05 06 03.1 +2.6
baz=320
RSSD **Black Hills** 31.54 101 P **P** 05 06 03.3 +2.0
baz=318
RSSD **Black Hills** 31.54 101 P **P** 05 06 03.4 +2.0
RSSD IAmb IAmb 05 06 22.9
comp=Z,8.6nm,0.8s
TPNV **Topopah Spring** 31.70 123 P **P** 05 06 06.0 +3.2
baz=329
RWWY **Rawlins** 31.86 107 IAmb IAmb 05 06 24.5
comp=Z,7.6nm,0.8s
ISA **Isabella, Lake** 31.91 127 P **P** 05 06 08.0 +3.4
baz=331
MPMC **Manual Prospec** 31.96 126 P **P** 05 06 08.6 +3.5
baz=330
TIXI **Tiksi** 32.00 324 P **P** 05 06 02.8 -2.0
comp=Z,1.6nm,0.5s,baz=64,slow=7.2,SNR=5.5
TIXI PcP **PcP** 05 08 52.3 -1.1
comp=Z,1.7nm,0.3s,baz=38,slow=3.5,SNR=4.8
TIXI **Tiksi** 32.00 324 P **P** 05 06 03.2 -1.7
AGMN **Agassiz Nation** 32.60 88 P **P** 05 06 11.2 +0.9
baz=313,SNR=9.8
AGMN **Agassiz Nation** 32.60 88 P **P** 05 06 11.3 +0.9
AGMN IAmb IAmb 05 06 12.2
comp=Z,8.0nm,0.7s
AGMN PcP **PcP** 05 08 53.9 -1.5
O20A **White River Ci** 32.60 110 P **P** 05 06 13.1 +2.4
baz=323
GSC **Goldstone, Bar** 32.89 125 P **P** 05 06 16.3 +3.1
baz=331
N23A **Red Feather La** 33.08 107 P **P** 05 06 16.5 +1.6
baz=322
PV22 **Blue Mesa, Par** 33.63 112 IAmb IAmb 05 06 41.0
comp=Z,13nm,1.1s
PV17 **East Wray Mesa** 33.76 113 IAmb IAmb 05 06 41.7
comp=Z,8.6nm,0.8s
GMRC **Granite Mounta** 33.80 124 P **P** 05 06 24.6 +3.5
baz=330
U15A **North Rim** 33.82 119 IAmb IAmb 05 06 43.1
comp=Z,8.3nm,1.2s
PV03 **Paradox Valley** 33.83 113 IAmb IAmb 05 06 42.7
comp=Z,6.5nm,0.9s
PV13 **Radium Mtn., P** 33.92 113 IAmb IAmb 05 06 43.2
comp=Z,13nm,0.9s
PV01 **Paradox Valley** 34.06 113 IAmb IAmb 05 06 44.3
comp=Z,9.7nm,0.9s
ISCO **Idaho Springs** 34.09 107 P **P** 05 06 26.2 +2.5
baz=322
MURC **Murrieta** 34.23 127 P **P** 05 06 28.8 +4.2
baz=332
BELC **Belle Mtn. Jos** 34.35 125 P **P** 05 06 29.2 +3.3
baz=331
PFO **Pinyon Flats O** 34.51 126 P **P** 05 06 31.4 +4.2
comp=Z,0.8nm,0.3s,baz=331,slow=10,SNR=2.0
PFO pP **pP** 05 06 41.5 +1.4
comp=Z,3.2nm,0.8s,baz=190,slow=19,SNR=3.0
PFO **Pinyon Flats O** 34.51 126 P **P** 05 06 27.1 -0.1
PFO IAmb IAmb 05 06 43.7
comp=Z,7.5nm,1.2s
PDMCI **Parker Dam,Lak** 34.84 123 P **P** 05 06 32.7 +2.8
baz=330
BC3 **Big Chuckawall** 34.87 125 P **P** 05 06 33.0 +2.7
baz=331
WUAZ **Wupatki** 34.98 118 P **P** 05 06 33.8 +2.5
baz=328,SNR=8.7
WUAZ **Wupatki** 34.98 118 IAmb IAmb 05 06 53.6
comp=Z,15nm,0.9s
EYMN **Ely** 34.98 84 P **P** 05 06 32.0 +0.9
baz=313,SNR=16
MONP2 **Monument Peak** 35.15 127 P **P** 05 06 36.2 +3.3
baz=332
Y12C **Blythe** 35.17 124 P **P** 05 06 35.7 +3.0
baz=331
S22A **4UR Ranch, Cre** 35.17 111 P **P** 05 06 35.2 +2.1
baz=325
F36A **Milaca** 35.44 89 IAmb IAmb 05 06 55.0
comp=Z,11nm,1.1s
ECSD **EROS Data Cent** 35.45 94 P **P** 05 06 35.8 +0.7
baz=317
ECSD **EROS Data Cent** 35.45 94 IAmb IAmb 05 06 54.6
comp=Z,9.3nm,1.1s
GLA **Glamis** 35.65 125 P **P** 05 06 39.5 +2.5
baz=331
SDCO **Great Sand Dun** 35.79 109 P **P** 05 06 41.1 +2.7
baz=324
KSCO **Kaye Shedlock'** 36.13 105 P **P** 05 06 42.5 +1.4
baz=322,SNR=5.1
SPMN **Marine on St.** 36.25 89 P **P** 05 06 42.7 +0.8
baz=316
SPMN **Marine on St.** 36.25 89 IAmb IAmb 05 07 02.2
comp=Z,16nm,1.1s
BGNE **Belgrade** 36.43 98 P **P** 05 06 45.0 +1.4
baz=320
X18A **Snowflake** 36.44 118 IAmb IAmb 05 07 05.7
comp=Z,8.5nm,0.9s
T25A **Trinidad** 36.79 109 P **P** 05 06 48.7 +1.9
baz=324
D41A **Chassel** 37.03 83 IAmb IAmb 05 07 09.7
comp=Z,7.7nm,0.9s
214A **Organ Pipe Nat** 37.43 123 P **P** 05 06 54.2 +2.0
baz=331
ANMO **Albuquerque** 37.65 113 P **P** 05 06 56.4 +2.3
baz=327
CBKS **Cedar Bluff** 37.67 102 P **P** 05 06 55.6 +1.5
baz=322
CBKS **Cedar Bluff** 37.67 102 IAmb IAmb 05 07 14.6
comp=Z,9.0nm,0.7s
TUC **Tucson** 37.98 120 P **P** 05 06 59.0 +2.3
Y22D **IRIS PASSCAL I** 38.16 114 P **P** 05 07 00.1 +1.7
baz=327
E43A **Lone Tree Farm** 38.28 83 IAmb IAmb 05 07 19.4
comp=Z,19nm,0.8s
I40A **Norwalk** 38.29 88 IAmb IAmb 05 07 19.5
comp=Z,15nm,1.1s
E44A **Grand Marais A** 38.64 82 P **P** 05 07 03.6 +1.6
baz=315
E44A **Grand Marais A** 38.64 82 IAmb IAmb 05 07 22.8
comp=Z,14nm,0.7s
KSU1 **Kansas State U** 38.96 99 P **P** 05 07 05.5 +0.6
baz=321,SNR=5.2
KSU1 **Kansas State U** 38.96 99 IAmb IAmb 05 07 24.6
comp=Z,11nm,0.8s
121A **Cookes Peak, D** 39.08 117 P **P** 05 07 08.8 +2.6
baz=329
SUMG **Summit** 39.11 26 P **P** 05 07 05.9 -0.3
SUMG IAmb IAmb 05 07 07.1
comp=Z,16nm,0.7s
SUMG **Summit** 39.11 26 ⇓*i* P **P** 05 07 06.7 +0.5
comp=Z,46nm,0.8s
I42A **Draeger Farm,** 39.13 87 IAmb IAmb 05 07 25.9
comp=Z,9.8nm,0.9s
JFWS **Jewell Farm** 39.19 89 P **P** 05 07 07.1 +0.3
baz=318,SNR=7.1
H43A **Windswept, Lux** 39.27 85 IAmb IAmb 05 07 22.0
comp=Z,19nm,1.1s
D46A **Sault St. Mari** 39.36 80 P **P** 05 07 08.5 +0.4
baz=315
DAG **Danmarks Havn** 39.46 16 ⇓*i* P **P** 05 07 08.0 -0.6
comp=Z,26nm,0.6s
F45A **CMU Biological** 39.50 82 P **P** 05 07 10.0 +0.7
baz=316
SFJD **Kangerlussuaq** 39.67 37 *i* P **P** 05 07 09.7 -0.7
D47A **Chapleau** 39.70 79 P **P** 05 07 11.1 +0.1
baz=315,SNR=7.0
G45A **Suttons Bay** 39.89 83 P **P** 05 07 13.7 +1.2
baz=316
G45A **Suttons Bay** 39.89 83 IAmb IAmb 05 07 26.7
comp=Z,9.0nm,0.7s
AMTX **Amarillo** 39.90 108 P **P** 05 07 14.9 +2.1
baz=325
AMTX **Amarillo** 39.90 108 IAmb IAmb 05 07 34.0
comp=Z,11nm,0.8s
H45A **Beulah** 40.01 84 P **P** 05 07 15.1 +1.6
baz=317
E47A **Iron Bridge** 40.04 80 P **P** 05 07 14.2 +0.4
baz=316
P38A **Dawn** 40.06 96 IAmb IAmb 05 07 33.4
comp=Z,10nm,0.8s
G46A **Petoskey** 40.08 82 P **P** 05 07 15.0 +0.9
baz=316
MSTX **Muleshoe** 40.15 110 P **P** 05 07 16.5 +1.6
baz=326,SNR=5.3
MSTX **Muleshoe** 40.15 110 IAmb IAmb 05 07 35.8
comp=Z,24nm,0.9s
D48A **Paudash Townsh** 40.24 78 P **P** 05 07 16.0 +0.6
baz=315,SNR=6.8
K43A **Burlington** 40.29 88 IAmb IAmb 05 07 17.2
comp=Z,14nm,0.6s
MATQ **Matagami** 40.42 72 P **P** 05 07 16.7 -0.2
baz=314
H46A **Fife Lake** 40.48 83 P **P** 05 07 18.6 +1.1
baz=317
E48A **Lockeyer** 40.56 79 P **P** 05 07 18.0 -0.1
baz=316
GLMI **Grayling** 40.56 83 P **P** 05 07 19.0 +0.9
baz=317
HSIG 40.77 123 P **P** 05 07 21.9 +1.9
I46A **Reed City** 40.80 84 P **P** 05 07 21.2 +1.2
baz=317
F48A **Evansville** 40.81 80 P **P** 05 07 21.9 +1.8
baz=316
MNTX **Cornudas Mount** 40.86 115 P **P** 05 07 23.3 +2.6
baz=328,SNR=5.5
MNTX **Cormudas Mount** 40.86 115 P **P** 05 07 22.2 +1.5
L44A **Lake County Fo** 40.89 88 P **P** 05 07 21.6 +0.8
baz=319
D50A **G1974 Best Tow** 41.19 76 P **P** 05 07 23.8 +0.6
baz=316
I47A **Gladwin** 41.20 83 P **P** 05 07 24.5 +1.2
baz=317
H48A **Harrisville** 41.28 82 P **P** 05 07 24.9 +0.9
baz=317
WMOK **Wichita Mounta** 41.39 105 P **P** 05 07 26.0 +1.0
baz=325,SNR=6.6
WMOK **Wichita Mounta** 41.39 105 IAmb IAmb 05 07 45.4
comp=Z,13nm,0.8s
HDIL **Hopedale** 41.43 91 P **P** 05 07 25.7 +0.4
baz=320
HDIL **Hopedale** 41.43 91 IAmb IAmb 05 07 26.7
comp=Z,20nm,0.7s
D51A **Lot 18 Range I** 41.47 76 P **P** 05 07 26.1 +0.6
baz=316
I48A **Sherman Twp** 41.47 82 P **P** 05 07 26.0 +0.5
baz=317
K46A **Dorr** 41.56 86 P **P** 05 07 26.4 +0.1
baz=318
J47A **Sunmer** 41.62 84 P **P** 05 07 27.8 +1.0
baz=318
VLDQ **Val d'Or** 41.66 74 IAmb IAmb 05 07 26.3
comp=Z,7.9nm,0.7s
SCHQ **Schefferville** 41.79 59 P **P** 05 07 28.2 +0.1
comp=Z,2.9nm,0.3s,baz=343,slow=6.8,SNR=28
SCHQ PcP **PcP** 05 09 23.2 -0.1
comp=Z,1.9nm,0.6s,baz=312,slow=5.9,SNR=2.1
SCHQ LR LR 05 24 27.7
comp=Z,108nm,20.3s,baz=326,slow=36
E51A **G1948 Merrick** 41.81 77 P **P** 05 07 28.2 -0.1
baz=316
L46A **Eue Claire** 41.81 87 P **P** 05 07 29.2 +0.8
baz=319
CHGQ **Chibougamau** 41.83 70 P **P** 05 07 28.0 -0.5
baz=314,SNR=6.3
TUL1 **Leonard** 41.88 101 P **P** 05 07 29.2 +0.2
baz=324
K47A **Vermontville** 41.96 85 P **P** 05 07 29.8 +0.3
baz=318
J48A **Bridge Port** 42.09 83 P **P** 05 07 31.5 +0.9
baz=318
U38A **Grette** 42.14 99 IAmb IAmb 05 07 50.0
comp=Z,17nm,0.7s
D53A **Lac Vacive, Po** 42.28 75 P **P** 05 07 32.7 +0.5
baz=316
K48A **Perry** 42.29 84 P **P** 05 07 33.5 +1.2
baz=318
J49A **Marlette** 42.36 83 P **P** 05 07 33.5 +0.7
baz=318
E52A **Mattawa** 42.39 76 P **P** 05 07 32.7 -0.3
baz=316
F52A **Sundridge** 42.43 77 P **P** 05 07 33.2 -0.1
baz=317
JKA **Kamikawa-asahi** 42.48 279 P **P** 05 07 32.7 -1.1
ASAJ **Asahikawa** 42.48 279 P **P** 05 07 32.7 -1.1
comp=Z,2.6nm,0.6s,baz=154,slow=26,SNR=1.3
ASAJ LR LR 05 27 05.7
comp=Z,39nm,18.0s,baz=182,slow=39
K49A **Clarkson** 42.63 84 P **P** 05 07 36.0 +0.9
baz=318
SFIN **Lafayette** 42.65 89 P **P** 05 07 35.6 +0.4
baz=320
SFIN **Lafayette** 42.65 89 IAmb IAmb 05 07 36.5
comp=Z,9.4nm,0.6s
D54A **Lac Fusel, La** 42.72 74 P **P** 05 07 36.2 +0.5
baz=316
L48A **N Adams** 42.78 85 P **P** 05 07 36.8 +0.5
baz=319,SNR=6.4
E53A **Dumoine, Ponti** 42.80 76 P **P** 05 07 37.6 +1.2
baz=316
AAM **Ann Arbor** 42.89 84 P **P** 05 07 37.7 +0.5
baz=319
ALGO **Algonquin Park** 42.92 76 P **P** 05 07 37.9 +0.6
baz=317
N47A **Urbana** 42.96 87 P **P** 05 07 37.4 -0.3
baz=320,SNR=6.1
N47A **Urbana** 42.96 87 IAmb IAmb 05 07 38.5
comp=Z,18nm,0.7s
E54A **Lac Daplat, Po** 42.99 75 P **P** 05 07 38.2 +0.3
baz=317
H52A **Wyevale** 42.99 79 P **P** 05 07 38.1 +0.2
baz=317
I51A **Listowel** 43.06 81 P **P** 05 07 39.2 +0.6
baz=318
G53A **Haliburton** 43.25 78 P **P** 05 07 40.6 +0.6
baz=317
T42A **Van Buren** 43.28 96 P **P** 05 07 39.9 -0.4
N48A **Decatur** 43.31 87 P **P** 05 07 40.3 -0.2
baz=320,SNR=5.8
G54A **Lake Saint Pet** 43.31 77 P **P** 05 07 39.7 -0.8
baz=317
M49A **Liberty Center** 43.36 85 P **P** 05 07 41.5 +0.5
baz=319
D55A **Sainte-Anne-du** 43.38 73 P **P** 05 07 41.1 0.0
baz=316,SNR=7.1
OLIL **Olney** 43.42 91 IAmb IAmb 05 07 55.0
comp=Z,14nm,0.8s
L50A **Kingsville** 43.50 84 P **P** 05 07 43.0 +1.0
baz=319
TX31 **Lajitas Ar. Si** 43.64 115 IAmb IAmb 05 07 58.8
comp=Z,11nm,0.9s
TXAR **Lajitas Array** 43.64 115 P **P** 05 07 45.5 +2.1
comp=Z,1.2nm,0.7s,baz=333,slow=6.5,SNR=21
TXAR pP **pP** 05 07 57.0 +0.4
comp=Z,2.9nm,0.9s,baz=330,slow=7.2,SNR=14
TXAR sP **sP** 05 08 04.1 +1.8
comp=Z,2.8nm,0.8s,baz=338,slow=6.8,SNR=11
TXAR PcP **PcP** 05 09 30.4 +0.5
comp=Z,0.6nm,0.6s,baz=36,slow=1.9,SNR=4.9
TXAR LR LR 05 28 09.8
comp=Z,49nm,18.2s,baz=0.0,slow=39
N49A **Columbus Grove** 43.67 86 P **P** 05 07 43.6 +0.1
baz=320
H53A **Bobcaygeon** 43.68 78 P **P** 05 07 43.4 -0.1
baz=318
D56A **ZEC Mazanza, M** 43.69 73 P **P** 05 07 43.7 +0.1
baz=317,SNR=11
O48A **Farmland** 43.70 88 P **P** 05 07 43.3 -0.4
baz=320,SNR=13
BLO **Bloomington** 43.86 90 IAmb IAmb 05 07 45.9
comp=Z,10nm,0.7s
KLR **Kul'dur** 43.91 292 P **P** 05 07 43.6 -1.7
comp=Z,1.8nm,0.5s,baz=54,slow=6.6,SNR=8.5
KLR LR LR 05 25 49.6
comp=Z,53nm,20.3s,baz=67,slow=36
E56A **St. Veronique** 43.93 74 P **P** 05 07 45.3 -0.2
baz=317
MIAR **Mount Ida** 44.05 100 P **P** 05 07 47.0 +0.4
baz=324
MIAR **Mount Ida** 44.05 100 P **P** 05 07 47.0 +0.4
MIAR IAmb IAmb 05 08 06.1
comp=Z,6.3nm,0.8s
G55A **Calabogie** 44.07 76 P **P** 05 07 46.3 -0.3
baz=318
NRIK **Noril'sk** 44.09 335 P **P** 05 07 44.6 -1.8
comp=Z,11nm,0.6s,baz=56,slow=6.2,SNR=18
NRIK LR LR 05 28 47.9
comp=Z,118nm,20.4s,baz=46,slow=40
SCO **Scoresbysund** 44.10 22 *i* P **P** 05 07 46.8 +0.3
comp=Z,9.5nm,0.8s
D57A **Chemin Vers le** 44.12 72 P **P** 05 07 47.1 +0.1
baz=317,SNR=5.4
O49A **Covington** 44.16 87 P **P** 05 07 47.3 -0.1
baz=320
O49A **Covington** 44.16 87 IAmb IAmb 05 07 48.0
comp=Z,6.5nm,0.7s
N50A **Nevada** 44.30 85 P **P** 05 07 49.0 +0.5
baz=320
M51A **Elyria** 44.35 84 P **P** 05 07 49.6 +0.7
baz=320
H55A **Tweed** 44.37 77 P **P** 05 07 50.0 +1.1
baz=318
I55A **Frankford** 44.38 78 P **P** 05 07 49.4 +0.4
baz=318
TRQ **Mont Tremblant** 44.39 73 P **P** 05 07 49.3 +0.1
JCT **Junction City** 44.44 110 P **P** 05 07 51.0 +1.3
baz=328,SNR=6.2
JCT **Junction City** 44.44 110 IAmb IAmb 05 08 09.9
comp=Z,12nm,0.8s
E57A **Chemin Saint G** 44.44 73 P **P** 05 07 49.4 -0.3
baz=317,SNR=5.5
P49A **Miami Univ. Ec** 44.47 88 P **P** 05 07 50.0 +0.1
baz=321
ORIO **Orleans, Innes** 44.50 75 P **P** 05 07 49.9 -0.1
baz=318
D58A **Chemin du LacG** 44.54 71 P **P** 05 07 50.3 -0.1
baz=317,SNR=6.2
O50A **Cable** 44.54 86 P **P** 05 07 50.5 0.0
baz=320,SNR=18
N51A **Ashland** 44.57 85 P **P** 05 07 51.8 +1.2
baz=320
M52A **Chesterland** 44.59 83 P **P** 05 07 52.0 +1.2
baz=319
J54A **Appleton** 44.62 79 P **P** 05 07 51.6 +0.7
baz=319
WCI **Wyandotte Cave** 44.71 90 P **P** 05 07 52.6 +0.9
baz=321
H56A **Elgin** 44.78 76 P **P** 05 07 52.4 +0.1
baz=318
ACSO **Alum Creek Sta** 44.79 86 P **P** 05 07 53.0 +0.5
baz=320
ACSO **Alum Creek Sta** 44.79 86 IAmb IAmb 05 07 53.5
comp=Z,8.8nm,0.8s
L53A **Girard** 44.82 82 P **P** 05 07 53.3 +0.7
baz=319
ERPA **Erie** 44.83 82 P **P** 05 07 53.6 +0.9
baz=319
P50A **Jamestown** 44.87 87 P **P** 05 07 52.7 -0.3
baz=321,SNR=6.8
E58A **La Victoria** 44.88 72 P **P** 05 07 53.4 +0.3
baz=317
M53A **WI Miller and** 45.00 83 P **P** 05 07 54.1 0.0
baz=320,SNR=6.2
G57A **Newington** 45.01 75 P **P** 05 07 54.0 -0.1
baz=318
O51A **Pataskala** 45.04 85 P **P** 05 07 54.0 -0.4
baz=320
L54A **Sinclairville** 45.07 81 P **P** 05 07 54.8 +0.2
baz=319
K54A **Basiliko Farm,** 45.09 80 P **P** 05 07 55.2 +0.4
baz=319
R49A **Shelbyville** 45.21 89 IAmb IAmb 05 07 56.4
comp=Z,5.5nm,0.6s
WVNY **West Valley, N** 45.28 80 IAmb IAmb 05 07 57.7
comp=Z,12nm,0.7s
K55A **Perry** 45.30 79 P **P** 05 07 56.8 +0.4
baz=319
P51A **Williamsport** 45.33 86 P **P** 05 07 57.0 +0.3
baz=321
N53A **Lisbon** 45.41 83 P **P** 05 07 57.4 +0.1
baz=320,SNR=5.5
G58A **Ormstown** 45.42 74 P **P** 05 07 57.6 +0.3
baz=318
O52A **Adamsville** 45.44 85 P **P** 05 07 57.7 +0.1
baz=320
M54A **Oil Creek Stat** 45.45 82 P **P** 05 07 58.3 +0.7
baz=320
M54A **Oil Creek Stat** 45.45 82 IAmb IAmb 05 07 59.0
comp=Z,13nm,0.9s
F59A **Saint Guilaume** 45.50 73 P **P** 05 07 58.0 +0.1
baz=318
L55A **Hinsdale** 45.53 80 P **P** 05 07 58.9 +0.6
baz=319
Q51A **Peebles** 45.54 87 P **P** 05 07 58.3 -0.1
baz=321,SNR=7.8
I57A **Carthage** 45.55 76 P **P** 05 07 58.1 -0.3
baz=319
D60A **Saint Jean D'O** 45.58 70 P **P** 05 07 58.6 +0.1
baz=318
WVT **Waverly** 45.60 94 P **P** 05 07 59.4 +0.5
baz=323

R50A Paris 45.63 89 IAmb IAmb 05 08 12.9
comp=Z,6.5nm,0.9s
O53A New Philadelph 45.65 84 P **P** **05 07 59.5 +0.3**
baz=320
P52A Corning 45.67 86 P **P** **05 07 59.7 +0.3**
baz=321
K56A Middlesex 45.68 79 P **P** **05 07 59.9 +0.4**
baz=319
N54A Moraine State 45.70 83 P **P** **05 07 59.8 +0.1**
baz=320,SNR=5.2
N54A Moraine State 45.70 83 IAmb IAmb 05 08 00.9
comp=Z,15nm,0.9s
D61A St Aubert, Com 45.71 69 P **P** **05 08 00.3 +0.7**
baz=318
F60A Warwick 45.80 72 P **P** **05 07 59.9 -0.4**
baz=318
H58A Gabriels 45.90 75 P **P** **05 08 00.8 -0.4**
baz=318
M55A Ridgway 45.91 81 P **P** **05 08 01.4 +0.1**
baz=320,SNR=6.0
M55A Ridgway 45.91 81 P **P** **05 08 02.0 +0.7**
H59A Cadyville 45.97 74 P **P** **05 08 01.3 -0.4**
baz=318
L56A Greenwood 45.99 80 P **P** **05 08 02.6 +0.6**
baz=319
L56A Greenwood 45.99 80 P **P** **05 08 02.9 +0.9**
K57A Scipio Center 46.05 78 P **P** **05 08 02.3 -0.1**
baz=319
I58A Old Forge 46.07 76 P **P** **05 08 02.6 +0.1**
baz=319
O54A Avella 46.11 84 P **P** **05 08 02.9 +0.1**
baz=320,SNR=5.8
Q52A Bidwell 46.12 86 P **P** **05 08 03.1 +0.1**
baz=321
E61A Lac Etchemin 46.14 70 P **P** **05 08 03.0 0.0**
baz=318
P53A Whipple 46.15 85 P **P** **05 08 02.9 -0.2**
baz=321,SNR=7.0
P53A Whipple 46.15 85 P **P** **05 08 03.3 +0.1**
P53A PcP **PcP** **05 09 38.7 +0.3**
M56A Emporium 46.19 81 P **P** **05 08 03.9 +0.4**
baz=320
M56A Emporium 46.19 81 IAmb IAmb 05 08 04.8
comp=Z,11nm,0.7s
F61A St Evariste 46.25 71 P **P** **05 08 04.3 +0.5**
baz=318
G60A Masonville 46.27 73 P **P** **05 08 03.9 -0.2**
baz=318
D62A Allapoint, All 46.33 69 P **P** **05 08 04.7 +0.3**
baz=318
D62A Allapoint, All 46.33 69 P **P** **05 08 04.8 +0.3**
D62A IAmb IAmb 05 08 05.8
comp=Z,20nm,1.1s
N55A Marion Center 46.33 82 P **P** **05 08 05.0 +0.4**
baz=320,SNR=9.7
T50A Nancy 46.37 90 IAmb IAmb 05 08 06.4
comp=Z,11nm,0.7s
PLAL Pickwick Lake 46.39 95 IAmb IAmb 05 08 24.7
comp=Z,14nm,0.8s
L57A Andrews Acres 46.44 79 P **P** **05 08 05.8 +0.4**
baz=320
K58A Earlville 46.44 78 P **P** **05 08 05.8 +0.3**
baz=319
H60A Morristown 46.50 74 P **P** **05 08 05.2 -0.6**
baz=319
P54A Burton 46.51 84 P **P** **05 08 06.0 0.0**
baz=321,SNR=6.5
G61A St-Isidore-de- 46.51 72 P **P** **05 08 05.5 -0.4**
baz=318
I59A Olmsteadville 46.52 75 P **P** **05 08 05.6 -0.4**
baz=319
N56A West Decatur 46.56 81 P **P** **05 08 07.3 +0.9**
baz=320
Q53A Leroy 46.57 86 P **P** **05 08 06.6 +0.1**
baz=321
O55A Ligonier 46.62 83 P **P** **05 08 07.1 +0.2**
baz=320
BINY Binghamton 46.71 78 P **P** **05 08 08.1 +0.6**
baz=320
R53A Hurricane 46.77 87 P **P** **05 08 08.1 +0.1**
baz=321,SNR=5.1
MCWV Mont Chateau 46.77 84 P **P** **05 08 08.1 +0.1**
baz=321
MCWV Mont Chateau 46.77 84 IAmb IAmb 05 08 09.1
comp=Z,6.6nm,0.7s
D63A Stockholm 46.79 68 P **P** **05 08 08.3 +0.2**
baz=318
Q54A Coxs Mills 46.81 85 P **P** **05 08 08.7 +0.3**
baz=321
Q54A Coxs Mills 46.81 85 IAmb IAmb 05 08 09.2
comp=Z,12nm,0.7s
M57A Sunshine Farm, 46.81 80 P **P** **05 08 08.5 +0.2**
baz=320
H61A Lyndonville 46.88 73 P **P** **05 08 09.4 +0.5**
baz=319
L58A Harry Jones Me 46.89 78 P **P** **05 08 09.6 +0.6**
baz=320
P55A Reedsville 46.90 84 P **P** **05 08 09.6 +0.5**
baz=321
O56A Blue Knob Stat 46.93 82 P **P** **05 08 10.0 +0.7**
baz=320
SSPA Standing Stone 46.98 81 P **P** **05 08 09.9 +0.2**
baz=320
G62A West of Eustis 47.03 72 P **P** **05 08 09.5 -0.4**
baz=319
N57A Milroy 47.05 81 P **P** **05 08 10.9 +0.7**
baz=320
E63A Oxbow 47.10 69 P **P** **05 08 10.3 -0.2**
baz=318
M58A Price's Panora 47.11 79 P **P** **05 08 11.1 +0.4**
baz=320
J60A Lant Hill Farm 47.15 75 P **P** **05 08 10.4 -0.6**
baz=319
L59A Walton 47.17 78 P **P** **05 08 11.3 +0.1**
baz=320
Q55A Buckhannon 47.17 84 P **P** **05 08 11.7 +0.5**
baz=321
S53A Williamson 47.19 87 P **P** **05 08 11.5 +0.1**
baz=322
I61A Oroboro, Fairl 47.20 74 P **P** **05 08 11.5 +0.1**
baz=319
H62A Milan 47.22 73 P **P** **05 08 11.8 +0.3**
baz=319
X48A Hartselle 47.32 94 IAmb IAmb 05 08 31.8
comp=Z,6.9nm,0.8s
F63A Nahmakanta, Br 47.33 70 P **P** **05 08 12.6 +0.2**
baz=319
R54A Victor 47.36 86 P **P** **05 08 12.9 +0.3**
baz=322
E64A Bridgewater 47.38 68 P **P** **05 08 12.2 -0.4**
baz=319
P56A Dayton Farm, R 47.38 83 P **P** **05 08 13.1 +0.3**
baz=321
O57A Amberson 47.43 81 P **P** **05 08 13.6 +0.5**
baz=321,SNR=10.0
M59A Waymart 47.48 78 P **P** **05 08 14.6 +1.1**
baz=320
S54A Dingess, Beckl 47.50 86 P **P** **05 08 14.3 +0.5**
baz=322
USRK Ussuriysk Ar. 47.51 287 P **P** **05 08 12.2 -1.5**
comp=Z,1.9nm,0.8s,baz=29,slow=8.7,SNR=2.4
USRK PcP **PcP** **05 09 42.5 -0.6**
comp=Z,1.1nm,0.4s,baz=36,slow=4.5,SNR=6.0
USRK LR LR 05 31 07.2
comp=Z,38nm,19.8s,baz=42,slow=40
T53A Wise 47.53 88 P **P** **05 08 14.5 +0.4**
baz=322,SNR=7.1
F64A Sherman 47.56 69 P **P** **05 08 14.8 +0.7**
baz=319
Q56A Snyder Ridge, 47.57 84 P **P** **05 08 15.0 +0.7**
baz=321
R55A Marlinton 47.71 85 P **P** **05 08 16.1 +0.7**
baz=322
L60A Shokan 47.72 77 P **P** **05 08 15.5 +0.1**
baz=320
N59A State Game Lan 47.79 79 P **P** **05 08 16.4 +0.4**
baz=320
P57A Homestead Farm 47.81 82 P **P** **05 08 16.5 +0.5**
baz=321,SNR=6.4
G64A Maxfield 47.83 70 P **P** **05 08 17.1 +1.0**
baz=319
O58A Lewisberry 47.84 81 P **P** **05 08 17.1 +0.7**
baz=321
V52A Sevierville 47.91 90 IAmb IAmb 05 08 34.5
comp=Z,7.7nm,1.1s
S55A Lewisburg 47.92 86 P **P** **05 08 17.5 +0.5**
baz=322
T54A Tazewell 47.95 87 P **P** **05 08 17.8 +0.5**
baz=322
FPAL Fort Paine 47.96 93 IAmb IAmb 05 08 31.4
comp=Z,11nm,0.8s
Q57A Strasburg 47.96 83 P **P** **05 08 17.6 +0.3**
baz=321
TKL Tuckaleechee C 47.97 90 IAmb IAmb 05 08 18.6
comp=Z,6.1nm,0.7s
M60A Port Jervis 48.03 78 P **P** **05 08 18.0 +0.2**
baz=320
O59A Robesonia 48.06 80 P **P** **05 08 18.2 +0.2**
baz=321
N60A Cedar Hill Far 48.15 79 P **P** **05 08 19.4 +0.7**
baz=320
K62A Royalston 48.15 75 P **P** **05 08 18.9 +0.1**
baz=320
T55A Pulaski 48.29 87 P **P** **05 08 20.5 +0.6**
baz=322
Q58A Fox Den Farm, 48.39 82 P **P** **05 08 20.6 0.0**
baz=321,SNR=5.7
BLA Blacksburg 48.40 86 P **P** **05 08 21.0 +0.3**
baz=322,SNR=5.7
V53A Saluda 48.44 89 IAmb IAmb 05 08 22.6
comp=Z,6.9nm,0.7s
S56A Natural Bridge 48.45 85 P **P** **05 08 21.4 +0.3**
baz=322
P59A Jarrettsville 48.48 81 P **P** **05 08 21.5 +0.3**
baz=321
R57A Stanardsville 48.48 84 P **P** **05 08 21.6 +0.3**
baz=322
LRAL Lakeview Retre 48.48 95 P **P** **05 08 21.3 -0.1**
baz=324
LRAL Lakeview Retre 48.48 95 IAmb IAmb 05 08 40.6
comp=Z,3.9nm,0.8s
H65A Eastbrook 48.49 70 P **P** **05 08 21.3 +0.1**
baz=320
PAL Palisades 48.62 78 P **P** **05 08 22.6 +0.2**
baz=321
N61A South Mountain 48.63 78 P **P** **05 08 23.3 +0.9**
baz=321
U55A TA2, Sparta 48.65 87 P **P** **05 08 22.5 -0.2**
baz=322,SNR=11
S57A Dark Hollow, R 48.69 84 P **P** **05 08 23.7 +0.8**
baz=322
P60A Greenville 48.71 80 P **P** **05 08 23.3 +0.3**
baz=321
R58A Rapidan 48.73 83 P **P** **05 08 23.8 +0.6**
baz=322
T56A Rocky Mt 48.73 86 P **P** **05 08 23.9 +0.6**
baz=322
V54A Nebo 48.78 89 P **P** **05 08 24.3 +0.6**
baz=323
Z50A Ashland 48.84 94 P **P** **05 08 24.2 +0.1**
baz=324,SNR=5.7
Z50A Ashland 48.84 94 IAmb IAmb 05 08 43.9
comp=Z,14nm,0.9s
R58B Mineral 49.05 83 P **P** **05 08 26.9 +1.3**
baz=322
V55A Taylorsville 49.08 88 P **P** **05 08 26.6 +0.7**
baz=323
U56A King 49.10 87 P **P** **05 08 26.2 +0.2**
baz=323
U56A King 49.10 87 IAmb IAmb 05 08 27.4
comp=Z,14nm,0.8s
CBN Corbin Frederi 49.11 83 P **P** **05 08 26.7 +0.6**
baz=322
T57A Hurt 49.14 85 P **P** **05 08 27.2 +0.8**
baz=322
W54A Cherokee Point 49.21 89 P **P** **05 08 27.2 +0.2**
baz=323
R59A King George, V 49.24 83 P **P** **05 08 27.7 +0.6**
baz=322
S58A Poland Farm, P 49.25 84 P **P** **05 08 27.3 +0.1**
baz=322
Y52A Lilburn 49.26 92 P **P** **05 08 28.3 +1.0**
baz=324
Y52A Lilburn 49.26 92 IAmb IAmb 05 08 41.9
comp=Z,11nm,0.8s
V56A Mocksville 49.47 87 P **P** **05 08 29.2 +0.3**
baz=323,SNR=5.5
M64A Tiverton 49.50 75 P **P** **05 08 30.8 +1.8**
baz=321
S59A Mechanicsville 49.50 83 P **P** **05 08 29.4 +0.4**
baz=322
T58A Grand View Acr 49.53 85 P **P** **05 08 29.7 +0.4**
baz=322
U57A Blanch 49.55 86 P **P** **05 08 29.9 +0.4**
baz=323
X54A Belton 49.55 90 P **P** **05 08 30.0 +0.5**
baz=324
KMSC Kinge Mountain 49.59 89 P **P** **05 08 30.0 +0.2**
baz=323
V57A Coltrane Farms 49.76 87 P **P** **05 08 31.1 0.0**
baz=323
TRO Tromso 49.79 5 *e*P **P** **05 08 30.3 -0.6**
HODGE Hodges 49.86 90 IAmb IAmb 05 08 47.4
comp=Z,6.6nm,0.7s
W56A Indian Trail 49.96 88 P **P** **05 08 33.1 +0.5**
baz=323
U58A Oxford 49.96 85 P **P** **05 08 32.8 +0.2**
baz=323
X55A Gracelyn & Ava 49.97 89 P **P** **05 08 33.2 +0.5**
baz=324
T59A Double "B" Far 49.99 84 P **P** **05 08 33.2 +0.4**
baz=322
ARCES ARCESS Array B 50.10 2 P **P** **05 08 31.7 -1.6**
comp=Z,9.5nm,0.4s,baz=1.7,slow=7.6,SNR=137
ARCES sP **pP** **05 08 49.8 +3.3**
comp=Z,4.4nm,0.5s,baz=2.5,slow=8.6,SNR=4.1
ARCES PcP **PcP** **05 09 51.5 -0.6**
comp=Z,5.1nm,0.7s,baz=347,slow=5.0,SNR=7.1
ARCES LR LR 05 31 40.4
comp=Z,21nm,19.1s,baz=336,slow=38
V58A Windy Hill, Pi 50.16 86 P **P** **05 08 34.8 +0.7**
baz=323
W57A Gilead 50.24 87 P **P** **05 08 34.5 -0.2**
baz=323
Y55A Saluda 50.29 90 P **P** **05 08 35.9 +0.8**
baz=324
U59A Littleton 50.37 85 P **P** **05 08 36.5 +0.9**
baz=323
MAT Matsushiro 50.43 276 P **P** **05 08 34.9 -1.3**
MJAR Matsushiro Arr 50.43 276 P **P** **05 08 35.7 -0.5**
comp=Z,1.6nm,0.7s,baz=19,slow=6.3,SNR=5.1
MJAR pP **pP** **05 08 49.7 +0.2**
comp=Z,6.5nm,1.0s,baz=5.7,slow=5.9,SNR=10
KTK1 Kautokeino 50.57 3 *e*P **P** **05 08 35.5 -1.2**
U60A Pendleton 50.58 84 P **P** **05 08 38.6 +1.3**
baz=323
V59A Middlesex 50.61 86 P **P** **05 08 38.0 +0.4**
baz=323
W58A Raeford 50.72 87 P **P** **05 08 39.5 +1.2**
baz=323
X57A Johnson Farm, 50.74 88 P **P** **05 08 38.9 +0.4**
baz=324,SNR=5.7
CN2 Changchun 50.86 292 *e*P **P** **05 08 37.2 -2.1**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
Y57A Sumter 50.95 89 P **P** **05 08 40.6 +0.5**
baz=324
X58A Rowland 51.04 87 P **P** **05 08 41.7 +1.0**
baz=324
V60A Jim Taylor Roa 51.09 85 P **P** **05 08 42.0 +0.9**
baz=323
CNNC Cliffs of the 51.20 86 P **P** **05 08 42.9 +0.9**
baz=323
STEI Steigen 51.28 7 *e*P **P** **05 08 41.2 -0.9**
X59A McDuffie Farm, 51.39 87 P **P** **05 08 44.3 +0.9**
baz=324
Y58A Scranton 51.40 88 P **P** **05 08 44.2 +0.8**
baz=324
W60A Pink Hill 51.44 86 P **P** **05 08 44.6 +0.9**
baz=323
X60A Albert Glenn T 51.69 86 P **P** **05 08 46.3 +0.7**
baz=324
Y59A Loris 51.72 87 P **P** **05 08 46.3 +0.5**
baz=324
LVZ Lovozero 51.75 358 P **P** **05 08 44.8 -1.0**
MOR8 Moi Rana 52.97 8 *e*P **P** **05 08 52.4 -2.3**
TLY Talaya 53.70 312 LR LR 05 34 13.7
comp=Z,66nm,19.5s,baz=42,slow=39
KSRS Korea Array 54.69 285 P **P** **05 09 07.6 0.0**
comp=Z,4.8nm,1.0s,baz=38,slow=6.7,SNR=9.7
KSRS sP **sP** **05 09 26.3 -0.4**
comp=Z,23nm,1.0s,baz=33,slow=7.0,SNR=15
KSRS LR LR 05 32 31.6
comp=Z,18nm,20.6s,baz=75,slow=36
ULN Ulaanbaatar 55.51 307 P **P** **05 09 13.0 -0.6**
ULN IAmb IAmb 05 09 13.8
comp=Z,9.2nm,0.7s
ULN PcP **PcP** **05 10 12.7 -0.3**
SONM Songino Array 55.79 308 P **P** **05 09 15.4 -0.2**
comp=Z,14nm,0.8s,baz=36,slow=7.4,SNR=88
SONM pP **pP** **05 09 28.6 -0.6**
comp=Z,6.8nm,0.7s,baz=52,slow=5.6,SNR=10
SONM sP **sP** **05 09 33.8 -1.0**
comp=Z,10.0nm,0.7s,baz=56,slow=6.4,SNR=10.0
AKN Aaknes 56.23 13 *e*P **P** **05 09 18.2 -0.2**
DOMB Dombas 56.58 12 *e*P **P** **05 09 20.0 -0.9**
NC204 NORSAR Array S 57.50 11 P **P** **05 09 26.1 -1.4**
NC405 NORSAR Array S 57.75 11 P **P** **05 09 27.7 -1.5**
NB201 NORSAR Array S 57.77 11 P **P** **05 09 28.1 -1.2**
NB2 NORSAR Subarra 57.78 11 P **P** **05 09 27.7 -1.7**
comp=Z,12nm,0.9s,baz=350,slow=6.9
NB2 NORSAR Subarra 57.78 11 P **P** **05 09 27.7 -1.7**
baz=350,slow=6.9
NOA NORSAR Array B 57.78 11 P **P** **05 09 28.0 -1.3**
comp=Z,7.0nm,0.8s,baz=350,slow=6.9,SNR=28
NOA sP **sP** **05 09 46.8 -1.7**
comp=Z,4.9nm,0.8s,baz=350,slow=7.1,SNR=7.1
NOA LR LR 05 35 13.8
comp=Z,8.2nm,19.7s,baz=315,slow=37
ZAA0 Zalesovo Array 57.87 325 P **P** **05 09 27.8 -2.2**
ZAA0 IAmb IAmb 05 09 47.5
comp=Z,19nm,1.4s
ZALV Zalesovo Beam 57.87 325 P **P** **05 09 28.3 -1.7**
comp=Z,4.6nm,0.5s,baz=31,slow=6.2,SNR=18
ZALV LR LR 05 37 46.4
comp=Z,66nm,19.8s,baz=66,slow=40
NC602 NORSAR Array S 58.11 11 *e*P **P** **05 09 30.6 -1.0**
FINES FINESS Array B 58.23 2 P **P** **05 09 31.3 -1.1**
comp=Z,22nm,0.5s,baz=1.4,slow=8.4,SNR=152
FINES sP **sP** **05 09 50.3 -1.3**
comp=Z,11nm,0.5s,baz=0.5,slow=8.3,SNR=6.4
KLMR Klimovskoe 58.66 355 *e*P **P** **05 09 31.8 -3.6**
KLMR AMP 05 09 34.9
comp=Z,10.0nm,0.6s
KLMR *e*pP **pP** **05 09 47.1 -2.0**
HHC Hu-ho-hao-te 59.39 299 P **P** **05 09 44.3 +3.3**
HHC pmax pmax
comp=Z,6.0nm,0.8s
HHC pmax pmax
comp=Z,52nm,5.4s
KIRV Kirov 60.22 349 P **P** **05 09 44.6 -1.6**
comp=Z,11nm,0.6s,baz=61,slow=5.1,SNR=4.2
KIRV LR LR 05 38 00.3
comp=Z,38nm,20.0s,baz=44,slow=38
HOMB Homborsund 60.22 13 *e*P **P** **05 09 45.6 -0.6**
ARU Arti 61.21 343 P **P** **05 09 51.3 -1.6**
comp=Z,4.7nm,0.5s,baz=1.4,slow=5.2,SNR=15
ARU LR LR 05 37 29.5
comp=Z,64nm,21.5s,baz=52,slow=37
ARU Arti 61.21 343 P **P** **05 09 51.2 -1.8**
ESK Eskdalemuir 61.38 21 P **P** **05 09 53.9 -0.3**
BRVK Borovoye 62.29 334 P **P** **05 09 58.9 -1.4**
KURK Kurchatov 62.45 328 P **P** **05 09 59.8 -1.6**
KURK PcP **PcP** **05 10 39.4 -1.0**
NJ2 Nanjing 63.39 288 *e*P **P** **05 10 08.4 +0.5**
NJ2 pmax pmax
comp=Z,14nm,0.5s
BSEG Bad Segeberg 64.68 13 *e*P **P** **05 10 16.0 -0.1**
comp=Z,16nm,1.2s,baz=350,slow=6.3
MKAR Makanchi Array 64.99 323 P **P** **05 10 16.0 -2.2**
comp=Z,2.4nm,0.7s,baz=46,slow=6.7,SNR=22
MKAR LR LR 05 42 11.7
comp=Z,58nm,19.1s,baz=16,slow=39
MAKZ Makanchi 65.07 324 P **P** **05 10 16.7 -2.0**
MAKZ IAmb IAmb 05 10 17.8
comp=Z,13nm,1.4s
GTA Gaotai 65.45 307 ⇓P **P** **05 10 20.4 -1.1**
GTA pP pP 05 10 31.3 -4.0
GTA sP sP 05 10 34.6 -6.3
GTA pmax pmax
comp=Z,14nm,0.8s
GTA pmax pmax
comp=Z,64nm,4.9s
GTA LR LR
comp=Z,110nm,20.0s
GTA LR LR
comp=Z,340nm,20.3s
GTA LR LR
comp=Z,140nm,19.7s
RETH Rethem/Aller, 65.75 14 *e*P **P** **05 10 22.8 -0.2**
comp=Z,9.2nm,0.7s,baz=350,slow=6.3
IBBN Ibbenburen 65.97 15 *e*P **P** **05 10 24.5 +0.1**
comp=Z,16nm,0.7s,baz=350,slow=6.3
WMQ Urumqi 65.97 318 *e*P **P** **05 10 28.7 +4.0**
WMQ pP pP 05 10 39.6 +1.0
WMQ pmax pmax
comp=Z,17nm,0.7s
WMQ LR LR
comp=Z,260nm,17.9s
WMQ LR LR
comp=Z,140nm,17.9s
WMQ LR LR
comp=Z,90nm,25.3s
MATN Matagalpa 65.99 107 P **P** **05 10 24.7 -0.4**
NRDL Niedersach Rie 66.07 13 *e*P **P** **05 10 24.8 -0.2**
comp=Z,24nm,1.1s,baz=350,slow=6.3
ASSE Asse, Remlinge 66.50 13 *e*P **P** **05 10 27.0 -0.7**
comp=Z,16nm,1.1s,baz=350,slow=6.3
LZH Lanzhou 66.67 302 *e*P **P** **05 10 32.3 +2.9**
LZH pP pP 05 10 42.0 -1.2
LZH sP sP 05 10 46.1 -2.7
LZH PP **PP** **05 12 54.6 -1.5**
LZH pmax pmax
comp=Z,13nm,1.0s
LZH pmax pmax
comp=Z,77nm,5.0s
LZH LR LR
comp=Z,160nm,16.3s
LZH LR LR
comp=Z,170nm,16.1s
LZH LR LR
comp=Z,280nm,17.6s
WHN Wuhan 66.75 291 P **P** **05 10 33.5 +3.8**
CLZ Clausthal 66.75 13 *e*P **P** **05 10 29.6 +0.2**
comp=Z,31nm,0.7s,baz=350,slow=6.3
BUG Bochum-Univer 66.76 16 *e*P **P** **05 10 29.0 -0.4**
comp=Z,31nm,0.6s,baz=350,slow=6.3
GTTG Gottingen 66.99 14 *e*P **P** **05 10 31.1 +0.1**
comp=Z,42nm,1.0s,baz=350,slow=6.3
AKTO Aktyubinsk 67.09 341 P **P** **05 10 30.3 -1.3**
comp=Z,6.0nm,0.5s,baz=18,slow=6.8,SNR=23
AKTO LR LR 05 42 48.2
comp=Z,27nm,18.8s,baz=3.7,slow=39
BSTI Sart Tilman 67.36 17 P **P** **05 10 33.1 -0.2**
comp=Z,5.4nm,0.8s
MEM Membach 67.40 17 P **P** **05 10 32.9 -0.6**
BCLA Clavier 67.48 17 P **P** **05 10 33.6 -0.5**
BGES Gesves 67.49 17 P **P** **05 10 33.3 -0.9**
BMRD Maredsous 67.52 17 P **P** **05 10 34.0 -0.4**
comp=Z,14nm,0.9s
NEUB Neuenburg 67.53 13 *e*P **P** **05 10 34.2 -0.1**
comp=Z,27nm,0.6s,baz=350,slow=6.3
CLL Collm 67.56 12 *i* P **P** **05 10 34.7 +0.2**
comp=Z,14nm,0.7s
CLL *i* sP **pP** **05 10 50.9 +2.6**
CLL Collm 67.56 12 *e*P **P** **05 10 34.8 +0.2**
comp=Z,14nm,0.7s,baz=350,slow=6.3
AHRW Bad Neuenahr-A 67.61 16 *e*P **P** **05 10 34.2 -0.8**
comp=Z,14nm,1.1s,baz=350,slow=6.3
DOU Dourbes 67.69 18 P **P** **05 10 33.6 -1.8**
UBBA Unterbreizbach 67.71 14 *e*P **P** **05 10 35.1 -0.3**
comp=Z,7.3nm,0.8s,baz=350,slow=6.3
FBE Freiberg 67.97 12 *e*P **P** **05 10 37.0 -0.2**
comp=Z,18nm,0.9s,baz=350,slow=6.3
MOX Moxa 68.06 13 *e*P **P** **05 10 37.6 -0.2**
comp=Z,34nm,0.6s,baz=350,slow=6.3
BRG Berggiesshubel 68.08 11 *e*P **P** **05 10 37.4 -0.4**
comp=Z,14nm,0.8s,baz=350,slow=6.3
TNS Taunus Mts 68.11 15 *e*P **P** **05 10 37.8 -0.3**
comp=Z,13nm,0.7s,baz=350,slow=6.3
PLN Plauen 68.28 12 *e*P **P** **05 10 38.8 -0.4**
comp=Z,16nm,0.7s,baz=350,slow=6.3
TANN Tannenbergstha 68.38 12 *e*P **P** **05 10 39.6 -0.3**
comp=Z,31nm,1.2s,baz=350,slow=6.3
PVCC Panska Ves 68.48 11⇓*e*P **P** **05 10 40.2 -0.2**
WERN Wernitzgruen 68.50 12 *e*P **P** **05 10 40.5 -0.1**
comp=Z,16nm,0.6s,baz=350,slow=6.3
CHVC Chvalec 68.55 10 *e*P **P** **05 10 40.9 +0.1**
NKC Novy Kostel 68.56 12⇓*e*P **P** **05 10 40.7 -0.2**
OSTC Ostas 68.59 10⇓*e*P **P** **05 10 40.8 -0.3**
UPC Upice 68.63 10⇓*e*P **P** **05 10 41.0 -0.3**
DPC Dobruska-Polom 68.81 10⇓*i*P **P** **05 10 42.5 0.0**

GRF Grafenberg Arr 68.96 13 eP P 05 10 43.3 -0.1
comp=Z,19nm,0.7s,baz=350,slow=6.3
ROTZ Rotzenmuhle 69.00 13 eP P 05 10 43.5 -0.1
comp=Z,13nm,0.8s,baz=350,slow=6.3
PRU Pruhonice 69.01 11⇓eP P 05 10 43.6 -0.1
AKASG Malin Array Be 69.04 1 P P 05 10 42.4 -1.4
comp=Z,3.6nm,0.3s,baz=2.6,slow=6.4,SNR=17
AKASG pP pP 05 10 58.1 +0.4
comp=Z,1.9nm,0.4s,baz=4.3,slow=6.4,SNR=4.6
GOPC GO Pecny, Ondr 69.11 11⇓eP P 05 10 43.9 -0.4
KRLC Kraliky 69.12 9⇓iP P 05 10 44.3 -0.1
OJC Ojcow 69.19 7 IAmb IAmb 05 10 44.6
comp=Z,7.8nm,0.7s
PBCC Pribram 69.26 11⇓eP P 05 10 45.2 0.0
MORC Moravsky Berou 69.47 9 eP P 05 10 45.7 -0.9
WET Wettzell 69.68 12 eP P 05 10 47.8 0.0
comp=Z,9.6nm,0.8s,baz=350,slow=6.3
KHC Kasperske Hory 69.77 12⇓eP P 05 10 48.6 +0.2
KHC epP pP 05 11 05.0 +2.6
KHC Kasperske Hory 69.77 12 P P 05 10 48.4 0.0
KHC IAmb IAmb 05 10 49.4
comp=Z,5.8nm,0.8s
TREC Trest 69.78 10⇓eP P 05 10 48.2 -0.3
VRAC Vranov 69.86 10 eP P 05 10 48.4 -0.6
ECH Echery 69.90 16 IAmb IAmb 05 10 49.7
comp=Z,12nm,0.8s
KWP Kalwaria Pacla 69.94 5 eP P 05 10 49.0 -0.4
NIE Niedzica 70.02 7 eP P 05 10 50.3 +0.3
GEC2 GERESS Array S 70.06 12 eP P 05 10 49.9 -0.4
comp=Z,7.7nm,0.8s,baz=350,slow=6.3
GERES GERESS Array B 70.06 12 P P 05 10 49.9 -0.4
comp=Z,5.9nm,0.6s,baz=355,slow=4.6,SNR=22
GERES LR LR 05 43 49.9
comp=Z,13nm,18.4s,baz=328,slow=38
KRUC Moravsky 70.09 10 eP P 05 10 49.8 -0.6
LANS Liptovska Anna 70.23 8 eP P 05 10 51.6 +0.3
JAVC Velka Javorina 70.40 9 eP P 05 10 52.9 +0.6
FUR Furstenfeldbru 70.47 13 eP P 05 10 52.6 -0.2
comp=Z,46nm,0.8s,baz=350,slow=6.3
KOLS Kolonicke sedl 70.61 6 eP P 05 10 53.4 -0.1
SMOL Smolenice 70.72 9 eP P 05 10 54.4 +0.2
KDJ Kajisay 70.73 325 IAmb IAmb 05 11 12.6
comp=Z,6.1nm,0.6s
UBR Ueberruh 70.81 14 eP P 05 10 54.5 -0.3
comp=Z,18nm,0.9s,baz=350,slow=6.3
VYHS Vyhne 70.84 8 eP P 05 10 54.7 -0.3
MODS Modra-Piesok 70.85 9 eP P 05 10 54.0 -1.0
KECS Kecovo 70.96 7 eP P 05 10 55.3 -0.4
AAK Ala-Archa 71.00 327 P P 05 10 54.9 -1.3
comp=Z,2.5nm,0.5s,baz=62,slow=3.2,SNR=7.5
AAK pP pP 05 11 09.4 -0.7
comp=Z,10.0nm,0.9s,baz=22,slow=0.6,SNR=3.9
AAK LR LR 05 45 59.9
comp=Z,37nm,20.0s,baz=1.5,slow=39
AAK Ala-Archa 71.00 327 P P 05 10 55.5 -0.7
AAK IAmb IAmb 05 11 14.8
comp=Z,14nm,1.0s
ZST Bratislava 71.01 9 eP P 05 10 54.8 -1.2
RJOB Jochberg 71.06 12 eP P 05 10 56.1 -0.3
comp=Z,14nm,0.8s,baz=350,slow=6.3
MOA Molln 71.10 11 iP P 05 10 56.0 -0.6
comp=Z,5.2nm,0.8s
CONA Conrad Observa 71.17 10 iP P 05 10 56.9 -0.1
comp=Z,12nm,0.8s,SNR=7.1
MOTA Moosalm 71.26 14 iP P 05 10 57.3 -0.4
comp=Z,11nm,1.0s
WATA Walderalm 71.33 13 iP P 05 10 58.0 -0.1
comp=Z,16nm,0.8s
SQTA Sankt Quirin 71.40 14 iP P 05 10 58.5 0.0
comp=Z,20nm,0.8s,SNR=6.2
WTTA Wattenberg 71.40 13 iP P 05 10 58.6 0.0
comp=Z,23nm,0.8s,SNR=6.1
FETA Feichten 71.54 14 iP P 05 10 58.8 -0.5
comp=Z,11nm,0.7s
KK31 Karatay Array 71.58 330 IAmb IAmb 05 10 59.0
comp=Z,5.3nm,0.9s
KKAR Karatay Array 71.58 330 IAmb IAmb 05 10 59.0
comp=Z,5.3nm,0.9s
KBA Koelnbreinsper 71.77 12 iP P 05 11 00.7 -0.1
comp=Z,8.7nm,0.6s,SNR=13
ARSA Arzberg 71.81 11 iP P 05 11 00.6 -0.2
comp=Z,6.9nm,0.8s
FUORN Ofenpass-Fuorn 71.87 14 P P 05 11 02.1 +0.5
ABTA Abfaltersbach 72.01 13 iP P 05 11 02.4 +0.3
comp=Z,3.0nm,0.5s
MYKA Terra Mystica 72.25 12 iP P 05 11 02.9 -0.6
comp=Z,5.5nm,0.6s
SOKA Soboth 72.34 11 iP P 05 11 04.1 0.0
comp=Z,3.8nm,0.5s
PERS Pernice 72.39 11 iP P 05 11 04.3 0.0
OBKA Obir 72.46 11 iP P 05 11 04.6 -0.2
comp=Z,32nm,0.6s,SNR=8.4
KOGS Kog 72.68 10 iP P 05 11 05.5 -0.5
PGAV Gavieira, Arco 73.00 29 eP P 05 11 08.6 +0.5
KSH Kashi 73.50 325 P P 05 11 18.0 +6.9
KSH sP PcP 05 11 28.5 +1.5
KSH PcP sP 05 11 32.0 +1.3
KSH PP PP 05 14 01.4 +6.8
KSH S S 05 20 44.6 +7.7
KSH SS SS 05 25 29.1 +10
KSH pmax pmax
comp=Z,10.0nm,0.7s
KSH pmax pmax
comp=Z,230nm,4.4s
KSH LR LR
comp=Z,89nm,3.9s
KSH LR LR
comp=Z,83nm,10.4s
KSH LR LR
comp=Z,96nm,10.6s
PBRG Braganca 73.51 28 eP P 05 11 11.3 +0.2
comp=Z,18nm,2.0s
MVO Moncorvo 74.05 29 eP P 05 11 14.4 +0.1
comp=Z,23nm,1.6s
PVIS Viseu 74.27 29 eP P 05 11 15.4 -0.1
PCAS Casmilo, Conde 74.75 30 eP P 05 11 18.6 +0.4
PSBE So Bento 75.19 30 eP P 05 11 20.9 +0.1
PCBR Castelo Branco 75.20 29 eP P 05 11 20.8 0.0
KBZ Khabaz 75.52 351 P P 05 11 22.4 -0.2
comp=Z,8.1nm,0.9s,baz=309,slow=4.0,SNR=8.4
KBZ LR LR 05 47 21.6
comp=Z,24nm,21.0s,baz=31,slow=38
PMAFR Mafra 75.59 31 eP P 05 11 23.2 +0.1
PMTG Montargil 75.75 30 eP P 05 11 24.9 +0.9
comp=Z,15nm,1.7s
ESDC Sonseca Array 76.17 27 P P 05 11 26.9 +0.4
comp=Z,8.6nm,0.8s,baz=343,slow=6.0,SNR=39
PNCL Nicolau / Gran 76.58 31 eP P 05 11 28.7 0.0
SDV Santo Domingo 76.88 95 P P 05 11 30.9 0.0
SDV IAmb IAmb 05 11 41.9
comp=Z,4.7nm,0.7s
PTBC PUERTO BERRIO, 77.04 100 eP P 05 11 29.7 -1.9
PAMC Pamplona, Colo 77.20 98 eP P 05 11 32.8 -0.2
MORF Marmelete 77.31 31 eP P 05 11 33.0 +0.1
PVAQ Vaqueiros 77.45 30 eP P 05 11 33.8 +0.2
PBDV Barranco-do-Ve 77.55 30 eP P 05 11 35.1 +0.9
RUSC La Rusia 78.27 99 eP P 05 11 38.2 -0.8
GEYT Alibeck 79.22 338 P P 05 11 42.9 -0.5
comp=Z,6.9nm,0.9s,baz=348,slow=6.2,SNR=6.1
GEYT LR LR 05 52 22.6
comp=Z,53nm,19.4s,baz=30,slow=40
SOTA Rioblanco 79.83 104 eP P 05 11 46.9 -0.7
ANTO Ankara 79.86 358 P P 05 11 47.2 +0.3
BR131 Keskin Array S 79.98 357 IAmb IAmb 05 11 47.9
comp=Z,5.4nm,0.8s
BRTR Keskin Array B 79.98 357 P P 05 11 47.0 -0.7
comp=Z,3.8nm,0.8s,baz=16,slow=3.5,SNR=10.0
BRTR LR LR 05 50 30.6
comp=Z,7.8nm,19.5s,baz=343,slow=38
TAPN Taplejung 80.77 311 eP P 05 11 51.7 -0.6
comp=Z,42nm,0.6s
GUN Gumba 80.94 312 eP P 05 11 52.4 -0.8
JIRN Jiri 81.05 312 eP P 05 11 53.4 -0.5
comp=Z,94nm,0.9s
KKN Kakani 81.26 313 eP P 05 11 54.0 -0.8
comp=Z,1.2nm,0.4s
DANN Dangsing 81.30 314 eP P 05 11 54.5 -0.6
comp=Z,78nm,0.6s
GKN Gorkha 81.30 313 eP P 05 11 54.1 -0.8
ODAN Odare 81.33 311 eP P 05 11 54.6 -0.6
PKIN Phulchoki 81.42 313 eP P 05 11 54.7 -1.0
comp=Z,9.3nm,0.6s
PKI Pulchoki 81.42 313 eP P 05 11 54.7 -1.1
comp=Z,19nm,0.9s
DMN Daman 81.49 313 eP P 05 11 55.2 -0.9
comp=Z,12nm,0.4s
RAMN Ramite 81.54 311 eP P 05 11 55.4 -0.9
comp=Z,36nm,0.8s
PYUN Piuthan 81.80 315 eP P 05 11 56.6 -1.0
comp=Z,39nm,0.8s
KEST Kesra 82.45 17 P P 05 12 00.3 -0.5
comp=Z,8.5nm,0.6s,baz=132,slow=7.4,SNR=8.2
CMAR Chiang Mai Arr 84.13 297 P P 05 12 08.4 -1.2
comp=Z,3.9nm,0.8s,baz=5.8,slow=6.1,SNR=21
CMAR pP pP 05 12 21.8 -2.0
comp=Z,6.4nm,1.0s,baz=5.3,slow=5.7,SNR=3.5
CMAR LR LR 05 51 36.4
comp=Z,45nm,18.6s,baz=51,slow=37
PTGA Pitinga 90.44 91 P P 05 12 40.0 0.0
WSAR Wadi Sarin 93.36 334 P P 05 12 52.8 -0.7
comp=Z,2.3nm,0.4s,baz=68,slow=5.4,SNR=2.7
RAYN Ar Rayn 95.27 346 P P 05 13 01.1 -1.2
RAYN IAmb IAmb 05 13 02.8
comp=Z,5.6nm,1.1s
HOPE Hope Point 144.89 110 PKPbc 05 19 13.4 +0.2
CASY Casey 146.08 226 PKPbc 05 19 16.4 -0.3
BOSA Boshof 147.82 9 PKPbc PKPbc 05 19 22.4 -0.5
comp=Z,4.4nm,0.6s,baz=8.3,slow=1.4,SNR=10
QSPA South Pole Qui 150.42 180 PKPbc 05 19 28.3 +0.2

BGR **05** *05:05:07.8±0.0, 34.22N×33.51E, h33km, mb4.4*
ISK **05** *05:05:40.6, 36.08N×31.06E, h88km, ML4.4/52*
NIC **05** *05:05:41.6±0.0, 36.32N×31.40E, h62km±6km, Ml4.6/5*
MED_RC **05** *05:05:41.0±0.4, 36.04N×31.06E, h88km±6km, MW4.3/18, Moment Tensor Solution.Mantle waves: s18,c24; Duration: 1s0 Moment tensor: Scale 10^15 Nm; Mrr2.40±.17; Mθθ-1.98±.21; Mφφ-0.42±.20; Mrθ0.62±.14; Mθφ2.48±.18; Mφr0.91±.10; Best double couple: Mo3.45000×10^15 NP1:φs98.00000°, δ53.00000°, λ48.00000°. NP2:φs335.00000°, δ54.00000°, λ132.00000°. Principal axes: T 3.1000, Plg57.0000°, Azm306.0000°; N 0.7000, Plg33.0000°, Azm127.0000°; P -3.8000, Plg0.0000°, Azm36.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
IDC **05** *05:05:41.2±1.3, 36.16N×31.09E, h88km±12km, mb4.0/28, mb1 4.1/37, mb1mx4.1/59, mbtmp4.4/37, MS3.0/5, Ms1 3.0/5, ms1mx2.6/47 Error ellipse: s-maj=10.7km s-min=9.3km az=168.0*
NEIC **05** *05:05:41.1±1.7, 36.04N±0.05×31.09E±0.05, h91km±5km, Error ellipse: s-maj=7.5km s-min=5.9km az=212.0*
MOS **05** *05:05:41.1±1.2, 36.10N×31.05E, h102km, mb4.4/28, Error ellipse: s-maj=5.5km s-min=3.3km az=98.6*
DDA **05** *05:05:41.1, 36.05N×31.08E, h50km±6km, MW4.3*
HLW **05** *05:05:42.2, 35.89N×30.95E, h27km±16km, Md4.5*
GII **05** *05:05:44.4±0.3, 35.80N×31.22E, h40km, mb4.3/9, MD4.1/9, Mm4.1/6*
THE **05** *05:05:54.6, 36.28N×30.01E, h32km±3km, ML4.0/5, Error ellipse: s-maj=5.0km s-min=1.5km az=179.0*
ISC 05 05:05:40.8±0.6, **36.01N**±0.03×**31.04E**±0.02, **h89**km±5km, **n537**, σ**1s46**/648, **mb4.4**/90, **29C-27D, Turkey**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AKUM Antalya-Kumluc 0.64 300⇑iP Pn 05 05 56.7 0.0
AKUM iS Sn 05 06 08.6 +0.1
AKUM IAML 05 06 15.0
comp=E,6μm,0.4s
AKUM IAML 05 06 15.0
comp=N,5μm,0.5s
DEMR Demre-Antalya 0.94 284 PG Pn 05 06 00.5 +0.7
KEPZ Antalya-Kepez 1.00 27⇓iP Pn 05 06 00.0 -0.5
KEPZ iS Sn 05 06 13.3 -2.0
KEPZ IAML 05 06 14.0
comp=N,8μm,0.4s
KEPZ IAML 05 06 14.0
comp=E,9μm,0.5s
GAZI Gazipasa 1.06 77 PG Pn 05 06 00.8 -0.4
GAZI Gazipasa 1.06 77⇑iP Pn 05 06 00.7 -0.4
GAZI iS Sn 05 06 14.4 -2.1
GAZI IAML 05 06 15.0
comp=E,6μm,0.7s
GAZI IAML 05 06 16.0
comp=N,8μm,0.4s
KORT Korkueli 1.14 331 PN Pn 05 06 02.0 -0.2
KORT SN Sn 05 06 17.5 -0.7
KORT Korkueli 1.14 331⇓iP Pn 05 06 03.8 +1.6
KORT IAML 05 06 21.0
comp=N,3μm,0.9s
KORT iS Sn 05 06 21.1 +2.9
KORT IAML 05 06 22.0
comp=E,4μm,0.6s
ELL Elmali 1.17 309 PN Pn 05 06 03.4 +0.8
ELL Elmali 1.17 309 P Pn 05 06 03.8 +1.2
ELL 05 06 20.5
ELL Elmali 1.17 309 Pn Pn 05 06 03.8 +1.2
ELL Sn Sn 05 06 20.5 +1.5
ELL Elmali 1.17 309 P Pn 05 06 03.5 +0.8
ELL S Sn 05 06 20.1 +1.1
AKAS Kas 1.18 281 PN Pn 05 06 02.8 +0.1
AKAS Kas 1.18 281⇓iP Pn 05 06 02.9 +0.2
AKAS iS Sn 05 06 19.4 +0.2
AKAS IAML 05 06 23.0
comp=E,1μm,0.5s
AKAS IAML 05 06 35.0
comp=N,2μm,0.6s
KSL Kastellorizon 1.19 277 P Pn 05 06 03.0 +0.4
KSL S Sn 05 06 08.9 -10
comp=N,4μm,0.5s
AKMS Akamas 1.45 133 P Pn 05 06 06.7 +0.8
AKMS S Sn 05 06 25.4 +0.6
AKMS AML AML 05 06 26.7
comp=N,31nm,0.3s
AKMS AML AML 05 06 26.7
comp=N,31nm,0.3s
ALFC Alefka 1.53 123 P Pn 05 06 06.8 -0.1
ALFC S Sn 05 06 26.2 -0.5
ALFC AML AML 05 06 27.2
comp=N,41nm,0.3s
ALFC AML AML 05 06 27.2
comp=N,41nm,0.3s
ALFC AML AML 05 06 29.1
comp=N,50nm,0.4s
ALFC AML AML 05 06 29.1
comp=N,50nm,0.4s
SEYD Seydisehir-KON 1.54 25 PN Pn 05 06 07.4 +0.3
SEYD SN Sn 05 06 25.8 -1.2
BOZY Bozyazi-Mersin 1.57 86 PN Pn 05 06 07.5 +0.1
ERMK Ermenek 1.64 67⇑iP Pn 05 06 09.8 +1.3
ERMK iS Sn 05 06 30.8 +1.2
TEKE Tekeli-Mersin 1.69 85 PN Pn 05 06 09.4 +0.5
TEKE SN Sn 05 06 30.6 +0.3
FETY Fethiye 1.70 292 PN Pn 05 06 09.9 +0.8
FETY SN Sn 05 06 30.8 +0.3
FETY Fethiye 1.70 292⇑iP Pn 05 06 10.0 +1.0
FETY iS Sn 05 06 30.7 +0.2
FETY IAML 05 06 32.0
comp=N,680nm,0.7s
FETY IAML 05 06 34.0
comp=E,604nm,0.3s
GOLH Golhisar 1.71 316⇑iP Pn 05 06 11.0 +1.7
GOLH iS Sn 05 06 32.4 +1.5
GOLH IAML 05 06 49.0
comp=N,1μm,1.0s
AKDN Akdeniz- Kıbrı 1.72 114 PN Pn 05 06 10.1 +0.7
LEF Lefka 1.75 120 ⇑P Pn 05 06 09.3 -0.5
LEF ⇑S Sn 05 06 26.9 -4.8
LEF Lefka 1.75 120 PN Pn 05 06 09.3 -0.5
LEF Lefka 1.75 120⇑iP Pn 05 06 09.2 -0.5
LEF iS Sn 05 06 29.8 -1.9
LEF IAML 05 06 31.0
comp=N,2μm,0.3s
LEF IAML 05 06 40.0
comp=E,2μm,0.5s
NATA Nata 1.75 134 P Pn 05 06 11.0 +1.2
NATA S Sn 05 06 32.6 +0.9
BERE Bereket-Mersin 1.80 78 PN Pn 05 06 10.9 +0.4
BRDR BURDUR-Merkez 1.86 335⇓iP Pn 05 06 12.1 +0.8
BRDR iS Sn 05 06 34.1 -0.3
BRDR IAML 05 06 37.0
comp=E,1μm,0.5s
BRDR IAML 05 06 37.0
comp=N,654nm,0.4s
ISP Isparta 1.86 347 PN Pn 05 06 11.7 +0.4
ISP Isparta 1.86 347 P Pn 05 06 11.2 -0.1
ISP S Sn 05 06 33.5 -0.9
ISP Isparta 1.86 347 Pn 05 06 11.8 +0.6
ISP Sn Sn 05 06 35.0 +0.6
YORU Yoruktepe-Mers 1.93 85 PN Pn 05 06 13.2 +1.2
YORU SN Sn 05 06 35.9 +0.1
OREN Orenkoy-Mersin 1.97 83 PN Pn 05 06 13.1 +0.5
OREN SN Sn 05 06 37.2 +0.4
BAGO Egridir - ISPA 1.99 354⇓iP Pn 05 06 12.9 0.0
BAGO iS Sn 05 06 36.8 -0.6
BAGO IAML 05 06 41.0
comp=N,361nm,0.4s
BAGO IAML 05 06 45.0
comp=E,368nm,0.8s
TEVE Tevekalti-Mers 1.99 77 PN Pn 05 06 14.1 +1.1
AKK1 Akkuyu-Mersin 2.03 85 PN Pn 05 06 14.8 +1.4
AKK1 SN Sn 05 06 38.3 +0.1
GULN MERSIN_Gulnar 2.04 84 iP Pn 05 06 13.9 +0.4
GULN iS Sn 05 06 38.6 +0.2
GULN IAML 05 06 40.0
comp=E,1μm,0.6s
GULN IAML 05 06 41.0
comp=N,2μm,0.6s
AKK2 Akkuyu-Mersin 2.04 86 PN Pn 05 06 14.6 +1.1
AKK2 SN Sn 05 06 38.6 +0.2
AKKU Akkuyu-Mersin 2.04 85 PN Pn 05 06 14.9 +1.4
AKKU SN Sn 05 06 38.9 +0.4
TEPK Tepekoy-MERSIN 2.04 83 PN Pn 05 06 14.5 +0.9
TEPK SN Sn 05 06 38.9 +0.3
KMER Konya-Meram 2.06 31⇓iP Pn 05 06 14.2 +0.3
KMER iS Sn 05 06 39.4 +0.4
KMER IAML 05 06 44.0
comp=N,1μm,0.4s
KMER IAML 05 06 49.0
comp=E,1μm,0.4s
BASM Basmaki-Afyon 2.07 338 PN Pn 05 06 14.4 +0.5
DALY Dalyan (Mula) 2.08 294 PN Pn 05 06 14.9 +0.8
DALY Dalyan (Mula) 2.08 294⇑iP Pn 05 06 14.9 +0.8
DALY iS Sn 05 06 38.8 -0.7
DALY IAML 05 06 41.0
comp=E,1μm,0.5s
DALY IAML 05 06 43.0
comp=N,2μm,0.5s
YESI Yesilovacik-Me 2.12 84 PN Pn 05 06 15.5 +1.0
KRMN Karaman 2.14 56 PN Pn 05 06 15.8 +0.9
KRMN SN Sn 05 06 40.0 -0.9
CSS Mathiatis 2.14 118 PN Pn 05 06 14.6 -0.3
CSS Mathiatis 2.14 118 Pn Pn 05 06 14.4 -0.5
CSS Mathiatis 2.14 118 Pn 05 06 14.7 -0.3
CSS Sn Sn 05 06 39.0 -1.9
CSS Mathiatis 2.14 118 P Pn 05 06 14.4 -0.5
TURN Turunc 2.14 295 PN Pn 05 06 19.2 +4.4
TURN Turunc 2.14 295⇑iP Pn 05 06 19.0 +4.2
TURN iS Sn 05 06 46.0 +5.2
TURN IAML 05 06 48.0
comp=E,1μm,0.4s
TURN IAML 05 06 50.0
comp=N,1μm,0.3s
TISA Tisan-Mersin 2.15 85 PN Pn 05 06 15.6 +0.7
DOGA KONYA_Doganhis 2.16 13⇓iP Pn 05 06 15.5 +0.3
DOGA iS Sn 05 06 40.9 -0.5
DOGA IAML 05 06 43.0
comp=N,1μm,0.4s
DOGA IAML 05 06 45.0
comp=E,1μm,0.9s
IKL Isikli 2.16 83 PN Pn 05 06 15.7 +0.7
KARG Kargicak-Mersi 2.17 84 PN Pn 05 06 16.3 +1.0
KONT Konya--Tatoy 2.21 28 PN Pn 05 06 16.1 +0.3
KONT Konya--Tatoy 2.21 28⇓iP Pn 05 06 16.0 +0.3
KONT iS Sn 05 06 41.1 -1.4
KONT IAML 05 06 47.0
comp=N,624nm,0.6s
KONT IAML 05 06 55.0
comp=E,559nm,0.8s
KEBE Keben-Mersin 2.21 78 PN Pn 05 06 16.9 +1.1
TAVA DENIZLI_Tavas 2.24 311⇑iP Pn 05 06 17.2 +0.9
TAVA iS Sn 05 06 42.6 -0.8
TAVA IAML 05 06 45.0
comp=N,584nm,0.3s
TAVA IAML 05 06 47.0
comp=E,518nm,0.4s
MVOU Mavrovouni 2.34 114 P Pn 05 06 16.7 -0.7
MVOU S Sn 05 06 43.1 -2.4
MVOU AML AML 05 06 51.1
comp=E,4.6nm,0.6s
MVOU AML AML 05 06 51.1
comp=E,4.6nm,0.6s
KZIL AFYON_Kizioren 2.36 343⇓iP Pn 05 06 18.0 +0.1
KZIL IAML 05 06 46.0
comp=E,964nm,0.8s
KZIL iS Sn 05 06 46.2 0.0
KZIL IAML 05 06 47.0
comp=N,871nm,0.8s
SILI Silifke-Mersin 2.36 80 PN Pn 05 06 18.9 +1.1
SILI SN Sn 05 06 46.4 +0.3
ARG Arkhangelos 2.37 276 P Pn 05 06 18.5 +0.7
ARG S Sn 05 06 37.8 -8.3
comp=N,3μm,0.3s
ARG Arkhangelos 2.37 276 PN Pn 05 06 18.8 +1.0
ARG SN Sn 05 06 46.8 +0.7
ARG Arkhangelos 2.37 276 P Pn 05 06 18.9 +1.1
DENT Denizli 2.37 318 PN Pn 05 06 18.4 +0.5
MRSB Marmaris-Mugla 2.40 288 PN Pn 05 06 19.6 +1.3
LADK Ladik-KONYA 2.43 25 PN Pn 05 06 18.6 -0.2
YER Yerkesik 2.49 298 PN Pn 05 06 20.7 +1.2
YER Yerkesik 2.49 298 P Pn 05 06 20.7 +1.2
KIZK Mersin 2.56 78 PN Pn 05 06 21.5 +1.2
KIZK Mersin 2.56 78⇓iP Pn 05 06 20.9 +0.6
KIZK iS Sn 05 06 50.0 -0.7
KIZK IAML 05 07 02.0
comp=E,909nm,0.5s
KIZK IAML 05 07 06.0
comp=N,842nm,0.6s
SHUT Suhut-Afyon 2.57 351 PN Pn 05 06 21.1 +0.4
EREN Erenkoy 2.59 100 PN Pn 05 06 22.4 +1.6
EREN Erenkoy 2.59 100 iP Pn 05 06 21.0 +0.2
EREN iS Sn 05 06 51.2 -0.4
EREN IAML 05 06 54.0
comp=E,2μm,0.4s
EREN IAML 05 06 56.0
comp=N,2μm,0.4s
KHL Karahalli 2.61 333 PN Pn 05 06 21.4 +0.2
KDHN Kadinhani 2.65 19⇓iP Pn 05 06 21.2 -0.6
KDHN iS Sn 05 06 49.8 -3.4
KDHN IAML 05 06 52.0
comp=N,339nm,0.5s
KDHN IAML 05 07 07.0
comp=E,257nm,0.7s
KHAL Karahalli 2.66 333⇓iP Pn 05 06 21.9 0.0
KHAL iS Sn 05 06 51.7 -1.7
KHAL IAML 05 06 53.0
comp=E,1μm,0.7s
KHAL IAML 05 06 54.0
comp=N,1μm,0.7s
BOLV Bolvadin 2.71 359⇓iP Pn 05 06 22.6 +0.1
BOLV iS Sn 05 06 53.2 -1.3
BOLV IAML 05 06 54.0
comp=N,645nm,0.5s
BOLV IAML 05 06 54.0
comp=E,914nm,0.4s
AFYO Afyonkarahisar 2.84 348⇓iP Pn 05 06 24.8 +0.5
AFYO iS Sn 05 06 56.4 -1.2
AFYO IAML 05 06 58.0
comp=E,1μm,1.1s
AFYO IAML 05 07 01.0
comp=N,2μm,1.0s
KERG Konya-Eregli 2.85 60⇓iP Pn 05 06 24.6 +0.1
KERG iS Sn 05 06 56.3 -1.7
KERG IAML 05 06 59.0
comp=E,1μm,0.4s
KERG IAML 05 07 11.0
comp=N,848nm,0.3s
DAT Datca 2.88 286 PN Pn 05 06 26.4 +1.6
DAT Datca 2.88 286 iP Pn 05 06 25.9 +1.0
DAT iS Sn 05 06 56.8 -1.9
DAT IAML 05 07 02.0
comp=N,396nm,0.2s
DAT IAML 05 07 02.0
comp=E,474nm,0.3s
MERS Mersin 2.94 72 PN Pn 05 06 26.5 +0.9
KIZT Kizilcal 2.95 13 PN Pn 05 06 25.6 -0.1
CHBY Cihanbeyli 2.97 29 PN Pn 05 06 25.8 -0.1
BDRM Kayabasi 3.08 291⇑iP Pn 05 06 28.4 +1.0
BDRM iS Sn 05 07 00.1 -3.2
BDRM IAML 05 07 05.0

comp=N,1µm,0.5s
BDRM IAML 05 07 05.0

comp=E,857nm,0.5s
KULA Kula-Manisa 3.14 324 PN Pn 05 06 28.1 -0.2
USAK Uak-Merkez 3.15 330 *i* P **Pn 05 06 28.5 +0.2**
USAK *i* S **Sn 05 07 02.8 -2.2**
USAK IAML 05 07 04.0

comp=E,954nm,0.4s
USAK IAML 05 07 04.0

comp=N,527nm,0.4s
MANT Manisa 3.17 322 *i* P **Pn 05 06 28.4 -0.4**
MANT *i* S **Sn 05 07 02.7 -3.1**
MANT IAML 05 07 04.0

comp=N,462nm,0.7s
MANT IAML 05 07 07.0

comp=E,615nm,0.9s
MANT Manisa 3.17 322 Pn 05 06 28.4 -0.4
MANT Sn **Sn 05 07 03.4 -2.4**
AYDB Zeytinkoy-Aydi 3.18 308 PN **Pn 05 06 28.8 0.0**
DED Mersin 3.18 71 *i* P **Pn 05 06 29.8 +1.0**
DED *i* S **Sn 05 07 05.5 -0.2**
DED IAML 05 07 17.0

comp=N,432nm,0.6s
DED IAML 05 07 23.0

comp=E,392nm,1.0s
BODT Bodrum 3.18 290 PN **Pn 05 06 30.3 +1.6**
KARP Karpathos 3.18 263 P **Pn 05 06 30.4 +1.6**
KARP S **Sn 05 06 59.7 -6.2**

comp=E,5µm,0.5s
KARP Karpathos 3.18 263 PN **Pn 05 06 30.5 +1.6**
KARP Karpathos 3.18 263 Pn 05 06 29.7 +0.9
KARP Sn **Sn 05 07 05.7 -0.2**
NISR Nisiros 3.21 282 P **Pn 05 06 29.9 +0.7**
NISR S Sn 05 06 57.2 -9.3

comp=E,1µm,0.3s
YKAV Yalıkavak-Bodr 3.22 291 PN **Pn 05 06 30.1 +0.8**
GULE Gulek 3.27 66 *i* P **Pn 05 06 31.5 +1.4**
GULE *i* S **Sn 05 07 08.0 0.0**
GULE IAML 05 07 11.0

comp=N,1µm,0.4s
GULE IAML 05 07 24.0

comp=E,1µm,0.6s
AUKIR Kırka- Seyitga 3.29 353 *i* P **Pn 05 06 30.5 +0.2**
AUKIR *i* S **Sn 05 07 06.7 -1.8**
AUKIR IAML 05 07 08.0

comp=N,395nm,0.5s
AUKIR IAML 05 07 08.0

comp=E,374nm,0.3s
GEDZ Gediz 3.30 337 PN **Pn 05 06 30.8 +0.4**
GDZ Gediz 3.32 339 *i* P **Pn 05 06 30.9 +0.2**
GDZ *i* S **Sn 05 07 07.1 -2.0**
GDZ IAML 05 07 09.0

comp=N,266nm,1.1s
GDZ IAML 05 07 11.0

comp=E,209nm,0.5s
SHAP Saphane-Kutahy 3.34 335 PN **Pn 05 06 31.3 +0.3**
CIFT Cifteler, Eski 3.35 0 PN **Pn 05 06 30.8 -0.3**
KULU Kulu 3.41 27 PN **Pn 05 06 31.9 0.0**
AKSY AKSARAY - Alti 3.42 39 *i* P **Pn 05 06 32.0 0.0**
AKSY IAML 05 07 36.0

comp=E,90nm,0.7s
AUSIV SIVRIHISAR 3.45 6 PN **Pn 05 06 31.9 -0.6**
AUSIV SIVRIHISAR 3.45 6 *i* P **Pn 05 06 31.9 -0.6**
AUSIV *i* S **Sn 05 07 09.4 -3.0**
AUSIV IAML 05 07 10.0

comp=E,152nm,0.5s
AUSIV IAML 05 07 10.0

comp=N,111nm,0.2s
SIMA Simav-Kutahya 3.48 333 PN **Pn 05 06 32.9 +0.1**
GCAM G?zelcaml? 3.49 300 PN **Pn 05 06 33.2 +0.4**
GCAM G?zelcaml? 3.49 300 *i* P **Pn 05 06 33.1 +0.3**
GCAM *i* S **Sn 05 07 10.0 -3.1**
GCAM IAML 05 07 13.0

comp=N,711nm,0.5s
GCAM IAML 05 07 13.0

comp=E,363nm,0.2s
SMAA Simav-Kutahya 3.49 333 PN **Pn 05 06 33.4 +0.4**
DEMI Demirci 3.55 329 *i* P **Pn 05 06 33.5 -0.2**
DEMI *i* S **Sn 05 07 12.3 -2.4**
DEMI IAML 05 07 14.0

comp=E,312nm,0.4s
DEMI IAML 05 07 16.0

comp=N,222nm,0.3s
TVSB Tavsanli 3.66 341 PN **Pn 05 06 35.0 -0.3**
SMG Samos 3.77 298 P **Pn 05 06 36.7 0.0**
SMG S **Sn 05 07 12.4 -7.6**

comp=N,1µm,0.4s
YURE YUREGİR 3.80 76 *i* P **Pn 05 06 36.9 -0.2**
YURE *i* S **Sn 05 07 20.6 0.0**
AKO Adana 3.83 66 *i* P **Pn 05 06 38.7 +1.2**
AKO *i* S **Sn 05 07 20.4 -1.0**
AKO IAML 05 07 23.0

comp=N,341nm,1.1s
AKO IAML 05 07 24.0

comp=E,191nm,0.4s
AKHS Akhisar 3.85 319 *i* P **Pn 05 06 37.0 -0.7**
AKHS *i* S **Sn 05 07 18.1 -3.7**
AKHS IAML 05 07 26.0

comp=E,92nm,0.9s
KIRS Kırehir-Merke 3.87 35 *i* P **Pn 05 06 38.0 -0.1**
KIRS *i* S **Sn 05 07 19.5 -3.0**
BORA Eskisehir 3.90 353 PN **Pn 05 06 38.2 -0.3**
BORA Eskisehir 3.90 353 *i* P **Pn 05 06 38.1 -0.3**
BORA *i* S **Sn 05 07 20.1 -3.0**
BBAL Bala 3.90 24 *i* P **Pn 05 06 38.3 -0.3**
BBAL IAML 05 07 27.0

comp=N,91nm,0.5s
BBAL IAML 05 07 57.0

comp=E,109nm,0.9s
DGB zmir 3.90 303 *i* P **Pn 05 06 38.3 -0.1**
DGB *i* S **Sn 05 07 18.9 -4.2**
DGB IAML 05 07 22.0

comp=E,175nm,0.2s
DGB IAML 05 07 23.0

comp=N,197nm,0.3s
ZKR Zakros 4.03 259 P **Pn 05 06 41.6 +1.4**
ZKR Zakros 4.03 259 PN **Pn 05 06 41.9 +1.7**
YAHY KAYSERI_Yahyal 4.04 58 *i* P **Pn 05 06 40.5 0.0**
YAHY *i* S **Sn 05 06 26.3 -0.4**
YAHY IAML 05 07 49.0

comp=E,130nm,0.7s
YAHY IAML 05 07 51.0

comp=N,124nm,1.1s
SRCK Saricakaya, Es 4.04 356 PN **Pn 05 06 40.4 0.0**
BR231 Keskin MP Arra 4.07 19 Pn 05 06 40.4 -0.4
BR231 Sn **Sn 05 07 26.6 -0.8**
DST Dursunbey 4.07 333 PN **Pn 05 06 41.5 +0.7**
DST Dursunbey 4.07 333 P **Pn 05 06 41.7 +0.9**
ANTO Ankara 4.10 19 ⇑P **Pn 05 06 41.0 -0.2**
ANTO Ankara 4.10 19 P **Pn 05 06 40.0 -1.2**
ANTO Ankara 4.10 19 Pn 05 06 40.0 -1.2
STIA Sitia Lasithi 4.11 260 P **Pn 05 06 43.0 +1.7**
DURS Dursunbey 4.12 331 *i* P **Pn 05 06 41.7 +0.1**
DURS *i* S **Sn 05 07 26.1 -2.6**
DURS IAML 05 07 29.0

comp=E,257nm,0.3s
DURS IAML 05 07 30.0

comp=N,202nm,0.4s
AVNS Nevsehir-Avano 4.12 46 *i* P **Pn 05 06 42.1 +0.5**
AVNS IAML 05 08 16.0

comp=E,191nm,0.8s
AVNS IAML 05 08 17.0

comp=N,171nm,0.8s
BRTR Keskin Array B 4.25 28 P **Pn 05 06 42.6 -0.6**
comp=N,29nm,0.3s,baz=194,slow=14,SNR=769
BRTR LR LR 05 08 44.4
comp=N,122nm,21.9s,baz=220,slow=45
BR131 Keskin Array S 4.25 28 P **Pn 05 06 43.1 -0.2**
BR131 Keskin Array S 4.25 28 Pn 05 06 43.1 -0.2
URLA Izmir 4.25 305 PN **Pn 05 06 43.8 +0.5**
URLA Izmir 4.25 305 *i* P **Pn 05 06 43.1 -0.2**
URLA *i* S **Sn 05 07 28.8 -3.0**
URLA IAML 05 07 32.0

comp=E,95nm,0.6s
URLA IAML 05 08 11.0

comp=N,51nm,1.0s
STEP BALIKESIR_Sava 4.27 323 *i* P **Pn 05 06 43.5 0.0**
STEP *i* S **Sn 05 07 27.5 -4.7**
STEP IAML 05 07 37.0

comp=E,305nm,0.5s
STEP IAML 05 07 46.0

comp=N,226nm,0.7s
ANAF Anafi Island 4.27 276 P **Pn 05 06 44.4 +0.9**
CAVI Cavuskoy 4.29 348 PN **Pn 05 06 44.5 +0.7**

ZEDA zmir-Bergama 4.32 314 *i* P **Pn 05 06 44.0 -0.1**
ZEDA *i* S **Sn 05 07 28.9 -4.4**
ZEDA IAML 05 07 31.0

comp=N,163nm,0.5s
ZEDA IAML 05 07 33.0

comp=E,155nm,0.5s
BHL Bhannes 4.33 118 *e*P **Pn 05 06 44.0 -0.4**
ORLT Orhaneli 4.37 338 PN **Pn 05 06 44.9 0.0**
HWQ Hawqa 4.38 112 *e*P **Pn 05 06 45.5 +0.4**
DQRL Deir Qamar 4.38 120 *e*P **Pn 05 06 44.9 -0.2**
ULDT Uludag 4.39 341 *i* P **Pn 05 06 45.5 +0.2**
ULDT *e*S **Sn 05 07 32.1 -3.2**
ULDT IAML 05 07 36.0

comp=E,317nm,0.7s
ULDT IAML 05 07 36.0

comp=N,225nm,0.7s
BALB Balikesir 4.41 326 PN **Pn 05 06 45.5 +0.2**
KRBN Karaburun 4.41 307 PN **Pn 05 06 46.1 +0.8**
KIBS BOLU 4.45 8 *i* P **Pn 05 06 45.8 -0.3**
KIBS *i* S **Sn 05 07 33.9 -2.8**
KIBS IAML 05 07 42.0

comp=E,62nm,0.6s
KIBS IAML 05 08 31.0

comp=N,62nm,1.1s
CDAG Cicekdag 4.47 35 *i* P **Pn 05 06 46.5 +0.2**
CDAG IAML 05 07 37.0

comp=E,87nm,0.6s
CDAG IAML 05 08 27.0

comp=N,61nm,1.1s
DKL Dikili 4.49 314 PN **Pn 05 06 46.5 +0.1**
HNTI Hanita 4.49 129 Pn **Pn 05 06 46.9 +0.4**
HNTI Sn **Sn 05 07 35.9 -1.6**
IGD Bursa 4.49 342 *i* P **Pn 05 06 46.6 +0.1**
IGD *i* S **Sn 05 07 35.1 -2.3**
IGD IAML 05 07 38.0

comp=N,161nm,0.6s
IGD IAML 05 07 51.0

comp=E,91nm,0.8s
SAIM ADANA 4.49 63 *i* P **Pn 05 06 46.7 +0.1**
SAIM IAML 05 07 37.0

comp=E,276nm,0.4s
SAIM IAML 05 07 42.0

comp=N,248nm,0.6s
GEYV SAKARYA_Geyve 4.51 353 *i* P **Pn 05 06 46.5 -0.2**
GEYV *i* S **Sn 05 07 35.8 -2.1**
GEYV IAML 05 07 37.0

comp=N,100nm,0.4s
GEYV IAML 05 08 00.0

comp=E,64nm,0.9s
SANT Santorini 4.53 276 ⇑P **Pn 05 06 47.7 +0.7**
SANT ⇑S **Sn 05 07 31.7 -6.7**
SANT Santorini 4.53 276 PN **Pn 05 06 47.7 +0.7**
SANT Santorini 4.53 276 Pn 05 06 47.9 +0.9
ANDN Andirin 4.54 68 *i* P **Pn 05 06 46.6 -0.6**
ANDN IAML 05 07 38.0

comp=E,211nm,0.7s
ANDN IAML 05 08 09.0

comp=N,185nm,1.5s
BTAS Taskesti 4.56 360 *i* P **Pn 05 06 47.5 0.0**
BTAS IAML 05 07 39.0

comp=E,85nm,0.5s
BTAS IAML 05 07 41.0

comp=N,76nm,0.4s
APE Apeiranthos 4.56 285 ⇓P **Pn 05 06 48.1 +0.6**
APE Apeiranthos 4.56 285 PN **Pn 05 06 48.7 +1.3**
APE Apeiranthos 4.56 285 P **Pn 05 06 48.0 +0.6**
THT2 Imerovigli 4.56 277 PN **Pn 05 06 48.6 +1.2**
DELI KIRIKKALE 4.59 29 *i* P **Pn 05 06 47.4 -0.5**
DELI IAML 05 07 50.0

comp=E,40nm,0.7s
BALY Balya 4.60 325 *i* P **Pn 05 06 47.9 -0.1**
BALY *i* S **Sn 05 07 38.5 -1.8**
BALY IAML 05 07 40.0

comp=N,119nm,0.5s
BALY IAML 05 07 44.0

comp=E,78nm,0.7s
CMDR Camlidere-ANKA 4.62 14 *i* P **Pn 05 06 48.0 -0.4**
CMDR IAML 05 07 40.0

comp=N,112nm,0.6s
CMDR IAML 05 07 40.0

comp=E,123nm,0.6s
CHOS Chios island 4.63 302 PN **Pn 05 06 48.7 +0.2**
SIRC Yozgat 4.66 43 *i* P **Pn 05 06 49.5 +0.7**
RCY Rachaya 4.68 121 *e*P **Pn 05 06 49.4 +0.3**
MMA0B Mount Meron ar 4.68 128 Pn **Pn 05 06 49.7 +0.6**
MMAI Mount Meron Ar 4.68 128 P **Pn 05 06 49.8 +0.6**
comp=E,164nm,0.3s,baz=312,slow=12,SNR=213
MMAI S **Sn 05 07 39.9 -2.4**
comp=E,291nm,0.3s,baz=300,slow=25,SNR=9.3
KAMA Osmaniye 4.68 74 *i* P **Pn 05 06 48.5 -0.7**
KAMA IAML 05 07 42.0

comp=E,96nm,0.4s
KAMA IAML 05 07 43.0

comp=N,120nm,0.6s
SHBL Chebaa 4.70 123 *e*P **Pn 05 06 49.8 +0.3**
OFRI `Ofer 4.70 135 Pn **Pn 05 06 49.4 0.0**
OFRI Sn **Sn 05 07 40.4 -2.3**
GEM Giv'at Ha'Em 4.73 125 Pn **Pn 05 06 50.2 +0.5**
GEM Sn **Sn 05 07 40.9 -2.4**
KSDI Kefar Szold 4.73 125 Pn **Pn 05 06 50.5 +0.7**
KSDI Sn **Sn 05 07 41.4 -2.1**
BLGI Bet Lehem HaGe 4.74 132 Pn **Pn 05 06 51.1 +1.2**
BLGI Sn **Sn 05 07 42.6 -1.0**
NATI Neve Ativ 4.74 124 Pn **Pn 05 06 50.4 +0.5**
NATI Sn **Sn 05 07 42.1 -1.6**
SAHE Sakarya_HENDEK 4.84 358 *i* P **Pn 05 06 51.1 -0.1**
AYKD Aykdinkavak 4.84 71 *i* P **Pn 05 06 51.3 0.0**
AYKD IAML 05 07 46.0

comp=N,230nm,0.4s
AYKD IAML 05 07 48.0

comp=E,219nm,0.6s
BCAM Yenicaga 4.87 9 *i* P **Pn 05 06 51.3 -0.5**
BCAM IAML 05 07 49.0

comp=N,43nm,1.6s
BCAM IAML 05 08 00.0

comp=E,34nm,1.0s
HRKL Herakleio 4.88 264 PN **Pn 05 06 53.1 +1.3**
HCB Kahramanmara 4.91 72 *i* P **Pn 05 06 50.6 -1.5**
KUZU Kuzuini 4.93 79 *i* P **Pn 05 06 52.5 -0.1**
KUZU IAML 05 07 48.0

comp=E,436nm,0.5s
YIGI Dzce 4.96 4 *i* P **Pn 05 06 52.8 -0.1**
YIGI IAML 05 07 50.0

comp=N,32nm,1.1s
EDC Edincik 5.00 331 P **Pn 05 06 54.3 +0.9**
SLTI Sal'it 5.01 137 Pn **Pn 05 06 53.9 +0.3**
SLTI Sn **Sn 05 07 48.4 -1.9**
IDI Anoyia 5.06 264 P **Pn 05 06 54.6 +0.4**
comp=N,54nm,0.3s,baz=64,slow=12,SNR=237
IDI S **Sn 05 07 47.8 -3.6**
comp=N,52nm,0.3s,baz=143,slow=20,SNR=8.5
IDI Anoyia 5.06 264 ⇓P **Pn 05 06 55.0 +0.7**
IDI Anoyia 5.06 264 PN **Pn 05 06 55.9 +1.7**
IDI Anoyia 5.06 264 Pn 05 06 54.9 +0.7
BUY Buyukada 5.07 343 *i* P **Pn 05 06 54.2 -0.1**
BUY IAML 05 07 54.0

comp=N,80nm,0.5s
BUY IAML 05 08 11.0

comp=E,95nm,0.7s
KNL Balıkesir 5.08 328 *i* P **Pn 05 06 54.3 -0.1**
KNL IAML 05 07 52.0

comp=N,162nm,0.7s
KNL IAML 05 07 53.0

comp=E,139nm,0.8s
MMLI Mount Malkishu 5.08 133 Pn **Pn 05 06 55.6 +1.0**
MMLI Sn **Sn 05 07 50.1 -2.0**
SHMJ Saham 5.10 129 Pn **Pn 05 06 56.1 +1.3**
GAZ Gaziantep 5.10 75 Pn 05 06 54.3 -0.6
KAND Kocaeli-Kandir 5.12 353 *i* P **Pn 05 06 54.9 -0.1**
KAND IAML 05 07 52.0

comp=E,49nm,1.0s
KAND IAML 05 07 54.0

comp=N,52nm,0.4s
BAYC CANAKKALE_Bayr 5.15 318 *i* P **Pn 05 06 55.5 +0.1**
BAYC IAML 05 07 53.0

comp=E,154nm,0.4s
BAYC IAML 05 07 54.0

comp=N,127nm,0.4s
QRNJ Al-Qirein 5.25 133 Pn **Pn 05 06 58.2 +1.4**
COAL Corum-Alaca 5.26 35 *i* P **Pn 05 06 57.8 +0.7**
COAL IAML 05 08 39.0

comp=E,36nm,1.6s
COAL IAML 05 08 46.0

comp=N,38nm,0.9s

HMDT Nahal Hemdat 5.28 134 Pn **Pn 05 06 58.3 +1.1**
HMDT Sn **Sn 05 07 55.6 -1.2**
CUSAR Sarkisla-SIVAS 5.35 49 *i* P **Pn 05 07 00.2 +1.9**
CUSAR IAML 05 08 58.0

comp=E,35nm,1.9s
GZT Gaziantep 5.42 74 *i* P **Pn 05 06 58.5 -0.7**
GZT IAML 05 08 11.0

comp=E,102nm,0.4s
GZT IAML 05 08 22.0

comp=N,98nm,0.7s
ILGA Ilgaz 5.46 22 Pn **Pn 05 06 58.5 -1.3**
AMAZ Amatzia 5.51 143 Pn **Pn 05 07 01.2 +0.8**
AMAZ Sn **Sn 05 08 00.6 -1.8**
HBRG Burj al `Arab 5.51 191 P **Pn 05 07 02.2 +1.8**
baz=191
HBRG S **Sn 05 07 57.1 -5.3**
baz=191
RSH 5.51 155 P **Pn 05 07 01.3 +0.9**
baz=153
PELI Kastamonı-Ara 5.58 18 *i* P **Pn 05 07 00.6 -0.7**
MATC Matruh 5.63 215 P **Pn 05 07 02.9 +0.9**
baz=216
DSI Dead Sea 5.71 140 Pn **Pn 05 07 04.2 +1.0**
DSI Sn **Sn 05 08 06.4 -1.0**
YTIR Yattir 5.75 143 Pn **Pn 05 07 04.3 +0.6**
YTIR Sn **Sn 05 08 07.4 -0.9**
KAGI orum-Kargı 5.79 27 *i* P **Pn 05 07 03.8 -0.3**
KZIT Kziot 5.81 150 Pn **Pn 05 07 05.4 +0.9**
KZIT Sn **Sn 05 08 08.2 -1.5**
KESN Edirne-Kesan 5.90 326 *i* P **Pn 05 07 06.0 0.0**
KESN IAML 05 08 13.0

comp=E,58nm,0.8s
KESN IAML 05 08 18.0

comp=N,55nm,0.9s
GHAJ Ghor Haditha 6.02 140 Pn **Pn 05 07 08.8 +1.5**
DAMI2 DAM2 6.06 141 Pn **Pn 05 07 09.2 +1.4**
KOT Kottamia 6.10 174 P **Pn 05 07 09.4 +0.9**
baz=172
KOT S **Sn 05 08 12.5 -4.3**
baz=172
ASF Jabal al Asfar 6.18 127 P **Pn 05 07 10.1 +0.4**
comp=N,6.0nm,0.3s,baz=279,slow=5.4,SNR=32
ASF S **Sn 05 08 18.7 -0.3**
comp=N,11nm,0.3s,baz=345,slow=23,SNR=2.9
HMYD Mayadein 6.20 182 P **Pn 05 07 11.2 +1.4**
baz=182
KARJ KARJ 6.21 140 Pn Pn 05 07 01.1 -8.8
ALN Alexandroupoli 6.26 323 P **Pn 05 07 10.8 +0.3**
ALN Alexandroupoli 6.26 323 Pn 05 07 10.8 +0.3
SUZ Suez 6.33 166 P **Pn 05 07 12.7 +1.1**
baz=164
HNAT Natroun 6.37 183 P **Pn 05 07 13.8 +1.7**
baz=183
BZK Bozkurt 6.38 20 ⇑P **Pn 05 07 12.5 +0.4**
HSAF As Saff 6.38 176 P **Pn 05 07 13.2 +0.9**
baz=175
GLL Jalalah 6.44 175 P **Pn 05 07 13.9 +0.9**
baz=174
ZFRI Zfri 6.45 146 Pn **Pn 05 07 13.4 +0.3**
ZFRI Sn **Sn 05 08 23.4 -1.9**
DIKM Dikmen 6.53 29 ⇓P **Pn 05 07 15.0 +0.8**
PRNI Paran 6.55 148 Pn **Pn 05 07 14.9 +0.4**
SLUM Salum 6.62 229 P **Pn 05 07 15.8 +0.4**
baz=230
SLUM S **Sn 05 08 21.2 -8.2**
baz=230
KRMI Paran Flat 6.64 151 Pn **Pn 05 07 16.1 +0.3**
ZNM Zenema 6.79 166 P **Pn 05 07 18.9 +1.0**
baz=165
ZNM S **Sn 05 08 30.2 -3.4**
baz=165
ZAF Zafarana 6.83 169 P **Pn 05 07 18.9 +0.6**
baz=168
HRFI Mount Harif 6.83 149 Pn **Pn 05 07 18.9 +0.4**
HRFI Sn **Sn 05 08 33.4 -1.4**
MBRI Mt Berech 7.00 151 Pn **Pn 05 07 21.2 +0.4**
EIL Elat 7.12 151 P **Pn 05 07 22.9 +0.6**
comp=N,26nm,0.3s,baz=317,slow=3.0,SNR=196
EIL S **Sn 05 08 37.5 -4.3**
comp=N,30nm,0.3s,baz=291,slow=17,SNR=7.4
EIL LR LR 05 10 22.2
comp=N,54nm,19.9s,baz=330,slow=39
EIL Elat 7.12 151 Pn **Pn 05 07 23.0 +0.6**
EIL Sn **Sn 05 08 39.9 -1.9**
NBNS Bani Suef 7.37 178 P **Pn 05 07 26.7 +1.0**
baz=177
NBNS S **Sn 05 08 41.1 -6.6**
baz=177
ITM Ithomi 7.42 282 Pn **Pn 05 07 26.9 +0.5**
HBST Basata 7.45 154 P **Pn 05 07 26.9 +0.1**
baz=153
HRDS Abu Rudays 7.52 165 P **Pn 05 07 28.1 +0.4**
baz=163
AGG Agios Georgios 7.54 296 P **Pn 05 07 28.5 +0.4**
AGG Agios Georgios 7.54 296 Pn **Pn 05 07 28.5 +0.4**
GRB Gharib 7.85 169 P **Pn 05 07 32.4 0.0**
baz=167
HDHB Dhahab 7.87 156 P **Pn 05 07 33.1 +0.6**
baz=155
ELND Elena 7.98 332 ⇑P **Pn 05 07 34.6 +0.6**
SWA2 8.22 216 P **Pn 05 07 37.8 +0.4**
baz=217
SWA2 S **Sn 05 09 03.8 -4.7**
baz=217
TAMRE El Minia 8.30 181 P **Pn 05 07 38.9 +0.5**
baz=181
TR1 Tor 1 8.35 162 P **Pn 05 07 39.9 +0.8**
baz=161
KTUT Trabzon 8.46 51 ⇓P **Pn 05 07 39.3 -1.1**
TIRR Tirgusor 8.68 347 P **Pn 05 07 41.5 -1.9**
TIRR Tirgusor 8.68 347 Pn **Pn 05 07 41.5 -1.9**
SEV Sevastopol' 8.76 12 *e*P **Pn 05 07 44.0 -0.6**
SEV *e*S **Sn 05 09 21.5 -0.1**
YAL Yalta 8.80 15 *e*P **Pn 05 07 44.4 -0.7**
PLVB Pleven 8.87 328 ⇑P **Pn 05 07 46.6 +0.5**
VTS Vitosha 8.95 320 ⇓P **Pn 05 07 49.1 +1.8**
VTS Vitosha 8.95 320 P **Pn 05 07 48.2 +0.9**
VTS Vitosha 8.95 320 Pn 05 07 48.2 +0.9
FNA Florina 8.96 305 P **Pn 05 07 49.0 +1.6**
FNA Florina 8.96 305 Pn **Pn 05 07 49.0 +1.6**
HHRG Al Ghardaqah 9.02 165 P **Pn 05 07 50.9 +2.6**
baz=164
ALU Alushta 9.04 15 *e*P **Pn 05 07 48.1 -0.2**
HFRF Wahat Farafira 9.13 195 P **Pn 05 07 50.3 +0.5**
baz=196
SIM Simferopol' 9.23 14 *e*P **Pn 05 07 52.3 +1.3**
SIM pmax pmax
comp=Z,32nm,0.9s
SUDU Sudak 9.37 18 *e*P **Pn 05 07 53.1 +0.2**
SUDU *e*S **Sn 05 09 35.4 -1.0**
CFR Carcaliu 9.42 347 ⇓P **Pn 05 07 53.3 -0.3**
CFR Carcaliu 9.42 347 P **Pn 05 07 53.2 -0.3**
FEO Feodosiya 9.59 19 *e*P **Pn 05 07 56.2 +0.3**
MLR Muntele Rosu 10.23 339 P **Pn 05 08 05.1 +0.4**
comp=Z,0.8nm,0.3s,baz=117,slow=9.0,SNR=4.6
MLR Muntele Rosu 10.23 339 ⇓P **Pn 05 08 05.3 +0.6**
MLR Muntele Rosu 10.23 339 P **Pn 05 08 05.5 +0.8**
MLR Muntele Rosu 10.23 339 Pn 05 08 05.5 +0.8
VRI Vrincioaia 10.37 343 ⇑P **Pn 05 08 08.0 +1.5**
VRI Vrincioaia 10.37 343 P **Pn 05 08 08.1 +1.5**
VRI pmax pmax
comp=Z,16nm,1.0s
PLOR Plostina 10.38 343 ⇑P **Pn 05 08 08.2 +1.6**
PLOR Plostina 10.38 343 P **Pn 05 08 08.2 +1.6**
VOIR 10.46 336 P **Pn 05 08 09.8 +2.1**
VOIR pmax pmax
comp=Z,7.0nm,1.4s
HDK1 Dakhla 10.52 188 P **Pn 05 08 09.3 +0.6**
baz=188
DOPR Dopca 10.82 339 ⇑P **Pn 05 08 14.3 +1.6**
OZUR 10.83 340 ⇑P **Pn 05 08 14.5 +1.8**
BIZ Bicaz 11.53 343 ⇓P **Pn 05 08 23.6 +1.4**
NEY Neytrino 11.55 48 ⇑*i*P **Pn 05 08 26.1 +3.4**
NEY pmax pmax
comp=Z,6.0nm,1.0s
TIP Timpagrande 11.76 290 Pn **Pn 05 08 23.9 -1.6**
KBZ Khabaz 11.93 46 P **Pn 05 08 29.4 +1.8**
comp=Z,0.2nm,0.3s,baz=235,slow=9.8,SNR=19
KBZ Khabaz 11.93 46 ⇑*i*P **Pn 05 08 30.0 +2.4**
KIV Kislovodsk 11.94 45 *e*P **Pn 05 08 30.2 +2.3**
KIV pmax pmax
comp=Z,72nm,1.0s
KIV MLR MLR
comp=Z,35nm,11.0s

KIV Kislovodsk 11.94 45 Pn **Pn** 05 08 28.5 +0.6
KVAR Kislovodsk Arr 11.95 45 P **Pn** 05 08 29.5 +1.5
baz=265,slow=22,SNR=2.5
ZEI Tsey 12.03 52 *e*P **Pn** 05 08 31.9 +2.7
ZEI pmax pmax
comp=Z,7.0nm,0.9s
TBLG Delisi 12.11 58 P **Pn** 05 08 30.3 +0.2
TBLG Delisi 12.11 58 Pn **Pn** 05 08 30.3 +0.2
BURAR Bucovina Array 12.38 341 ⇑P **Pn** 05 08 35.9 +2.1
BURAR Bucovina Array 12.38 341 P **Pn** 05 08 35.9 +2.1
BUR08 Bucovina Ar. S 12.41 341 **Pn** 05 08 33.7 -0.5
AKT Akhty 14.12 62 ⇑*i*P **Pn** 05 08 56.1 -0.7
AKT pmax pmax
comp=Z,3.0nm,1.1s
KOLS Kolonicke sedl 14.43 336 P **P** 05 09 06.9 +2.0
KOLS pmax pmax
comp=Z,9.0nm,0.8s
AKASG Malin Array Be 14.75 355 P **Pn** 05 09 02.2 -2.4
comp=Z,2.4nm,0.3s,baz=174,slow=9.7,SNR=6.1
AKBB Malin Array Si 14.75 355 P **P** 05 09 06.6 -1.7
AKBB Malin Array Si 14.75 355 **P** 05 09 06.5 -1.7
KWP Kalwaria Pacla 14.91 339 P **Pn** 05 09 07.1 +0.4
KWP Kalwaria Pacla 14.91 339 Pn **Pn** 05 09 07.1 +0.4
AQU L'Aquila 15.06 300 P **Pn** 05 09 08.9 +0.1
AQU pmax pmax
comp=Z,47nm,1.1s
AQU L'Aquila 15.06 300 Pn **Pn** 05 09 08.9 +0.1
AQU IAmb IAmb 05 09 14.2
comp=Z,47nm,1.1s
VYHS Vyhne 15.38 328 *e*P **P** 05 09 16.8 +1.4
VYHS Vyhne 15.38 328 *e*P **P** 05 09 16.8 +1.4
NIE Niedzica 15.53 333 P **P** 05 09 19.2 +2.1
NIE pmax pmax
comp=Z,3.0nm,2.0s
LANS Liptovska Anna 15.63 331 *e*P **P** 05 09 20.6 +2.4
LANS Liptovska Anna 15.63 331 *e*P **P** 05 09 20.6 +2.4
MURB Monte Urbino 15.98 303 **P** 05 09 22.1 -0.1
MURB IAmb IAmb 05 09 24.4
comp=Z,43nm,1.1s
SOKA Soboth 16.03 317 *i* P **P** 05 09 23.4 +0.6
comp=Z,4.7nm,0.7s
ARSA Arzberg 16.11 319 *i* P **P** 05 09 24.9 +1.3
comp=Z,7.5nm,1.1s
OBKA Obir 16.21 315 *i* P **P** 05 09 26.2 +1.5
comp=Z,1.6nm,0.3s
VSR Storozhevoye 16.29 18 ⇑*i*P **P** 05 09 26.3 +0.9
VSR pmax pmax
comp=Z,19nm,0.4s
MYKA Terra Mystica 16.80 315 *i* P **P** 05 09 32.7 +1.5
comp=Z,3.5nm,0.5s
VRH Novokhopyorsk 17.02 23 *e*P **Pn** 05 09 32.9 -0.1
VRH pmax pmax
comp=Z,20nm,0.9s
STAL STALIGIAL 17.15 312 P **P** 05 09 36.5 +1.5
KBA Koelnbreinsper 17.21 315 *i* P **P** 05 09 37.4 +1.5
comp=Z,10nm,0.7s
KBA Koelnbreinsper 17.21 315 P **P** 05 09 38.9 +3.0
KBA pmax pmax
comp=Z,15nm,1.2s
ZCCA Zocca 17.42 305 P **P** 05 09 38.4 +0.4
ZCCA IAmb IAmb 05 09 45.9
comp=Z,34nm,1.5s
VSL Villasalto 17.47 288 P **Pn** 05 09 37.8 -0.9
VSL IAmb IAmb 05 09 43.2
comp=Z,26nm,0.9s
LPSR Galich'ya Gora 17.51 16 *e*P **Pn** 05 09 37.7 -1.3
LPSR pmax pmax
comp=Z,10.0nm,0.8s
KEST Kesra 17.58 275 P **Pn** 05 09 41.8 +1.6
comp=Z,0.3nm,0.3s,baz=43,slow=2.7,SNR=6.3
KEST Kesra 17.58 275 P **P** 05 09 39.2 -0.7
CTI Castel Tesino 17.70 310 P **P** 05 09 39.7 -1.4
CTI pmax pmax
comp=Z,9.0nm,0.9s
CTI Castel Tesino 17.70 310 P **P** 05 09 39.7 -1.4
GEC2 GERESS Array S 18.07 321 *e*P **Pn** 05 09 46.2 +0.3
comp=Z,9.4nm,1.1s,baz=125,slow=10
GEC2 GERESS Array S 18.01 321 P **P** 05 09 44.8 -0.4
GERES GERESS Array B 18.07 321 P **Pn** 05 09 45.5 -0.4
comp=Z,1.1nm,0.3s,baz=128,slow=10,SNR=22
WTTA Wattenberg 18.30 314 *i* Pn **Pn** 05 09 49.8 +1.1
comp=Z,14nm,1.0s
WTTA Wattenberg 18.30 314 P **Pn** 05 09 51.5 +2.7
WTTA pmax pmax
comp=Z,8.0nm,1.2s
KHC Kasperske Hory 18.31 321 *e*P **Pn** 05 09 48.9 +0.2
KHC Kasperske Hory 18.31 321 P **Pn** 05 09 48.4 -0.3
WATA Walderalm 18.37 314 *i* Pn **Pn** 05 09 50.2 +0.6
comp=Z,13nm,1.0s
SQTA Sankt Quirin 18.53 313 *i* Pn **Pn** 05 09 52.0 +0.6
comp=Z,9.9nm,1.0s
MOTA Moosalm 18.65 314 *i* Pn **Pn** 05 09 52.6 -0.4
comp=Z,12nm,1.1s
WET Wettzell 18.68 320 *e*P **Pn** 05 09 52.9 -0.2
comp=Z,20nm,0.8s,baz=125,slow=10
WET Wettzell 18.68 320 P **Pn** 05 09 53.5 +0.4
WET pmax pmax
comp=Z,28nm,0.6s
FETA Feichten 18.71 312 *i* Pn **Pn** 05 09 53.9 +0.2
comp=Z,8.5nm,0.7s,SNR=6.4
RETA Reutte 18.92 314 *i* P **Pn** 05 09 55.3 -0.8
comp=Z,8.6nm,0.5s,SNR=5.5
DAVOX Davos/Dischmat 19.12 311 P **Pn** 05 09 57.9 -0.6
baz=180,slow=9.1
BRG Berggiesshubel 19.29 326 *i* P **P** 05 09 58.8 +0.4
BRG *i* 05 10 36.4
comp=Z,6.3nm,0.9s
comp=Z,14nm,0.8s
BRG Berggiesshubel 19.29 326 *e*P **P** 05 09 58.9 +0.5
comp=Z,6.3nm,0.9s,baz=125,slow=10
BRG Berggiesshubel 19.29 326 *i* P **P** 05 09 58.8 +0.4
BRG pmax pmax
comp=Z,6.0nm,0.9s
DAVA Damuels 19.35 312 *i* P **P** 05 09 59.9 +0.6
comp=Z,21nm,0.7s,SNR=12
UBR Ueberruh 19.40 313 *e*P **P** 05 10 00.3 +0.6
comp=Z,12nm,0.7s,baz=125,slow=10
ROTZ Rotzenmuhle 19.41 321 *e*P **P** 05 10 00.2 +0.5
comp=Z,18nm,1.2s,baz=125,slow=10
OBN Obninsk 19.49 10 ⇓*i*P **Pn** 05 10 03.2 +0.7
OBN pmax pmax
comp=Z,12nm,0.4s
WERN Wernitzgruen 19.65 322 *e*P **P** 05 10 03.1 +0.8
comp=Z,7.0nm,0.7s,baz=125,slow=10
TANN Tannenbergstha 19.69 323 *e*P **P** 05 10 03.3 +0.5
comp=Z,24nm,0.9s,baz=125,slow=10
GUNZ Gunzen 19.72 322 *e*P **P** 05 10 04.0 +0.9
comp=Z,16nm,0.7s,baz=125,slow=10
GRA1 Grafenberg Arr 19.87 320 P **P** 05 10 04.0 -0.8
GRF Grafenberg Arr 19.87 320 *e*P **P** 05 10 05.0 +0.3
comp=Z,15nm,1.1s,baz=125,slow=10
GRF Grafenberg Arr 19.87 320 P **P** 05 10 04.0 -0.8
GRF pmax pmax
comp=Z,11nm,0.8s
PLN Plauen 19.88 323 *e*P **P** 05 10 05.5 +0.7
comp=Z,8.2nm,0.9s,baz=125,slow=10
CLL Collm 20.02 325 *i* P **P** 05 10 07.5 +1.2
comp=Z,5.0nm,0.8s
CLL Collm 20.02 325 *i* P **P** 05 10 07.5 +1.2
CLL pmax pmax
comp=Z,5.0nm,0.8s
ISO Isola 20.04 301 P Pn 05 10 11.0 +1.8
ISO pmax pmax
comp=Z,8.0nm,1.6s
KLNR Kaliningrad 20.05 341 *d* *i*P Pn 05 10 16.5 +7.4
KLNR pmax pmax
comp=Z,72nm,0.7s
MOS Moscow 20.24 11 *e*P **P** 05 10 06.3 -2.4
MOS *e* 05 10 28.6
MOX Moxa 20.25 322 *e*P **P** 05 10 09.7 +0.9
comp=Z,17nm,1.0s,baz=125,slow=10
MOX Moxa 20.25 322 P Pn 05 10 10.2 -1.3
MOX pmax pmax
comp=Z,54nm,0.8s
SLE Schleitheim 20.41 312 P Pn 05 10 12.8 -0.6
SLE pmax pmax
comp=Z,29nm,0.6s
STU Stuttgart 20.48 315 P **P** 05 10 10.8 -0.5
STU pmax pmax
comp=Z,27nm,0.9s
BNI Bardonecchia 20.54 304 P **P** 05 10 09.7 -2.5
BNI pmax pmax
comp=Z,10.0nm,1.0s
BNI Bardonecchia 20.54 304 P **P** 05 10 09.7 -2.5
BFO Black Forest 20.76 313 *e*P **P** 05 10 14.9 +0.5
comp=Z,32nm,1.7s,baz=125,slow=10
BFO Black Forest 20.76 313 P **P** 05 10 13.8 -0.6
BFO pmax pmax
comp=Z,19nm,0.6s
BFO Black Forest 20.76 313 P **P** 05 10 13.8 -0.6
BFO IAmb IAmb 05 10 18.2
comp=Z,19nm,0.6s
RSL Roselend 20.78 305 P Pn 05 10 16.8 -1.1
RSL pmax pmax
comp=Z,32nm,0.8s
ECH Echery 21.41 312 P **P** 05 10 21.2 -0.1
ECH pmax pmax
comp=Z,26nm,1.5s
ECH Echery 21.41 312 P **P** 05 10 21.2 -0.1
ECH IAmb IAmb 05 10 23.2
comp=Z,26nm,1.5s
CLZ Clausthal 21.61 324 *e*P **P** 05 10 23.0 -0.4
comp=Z,7.3nm,0.9s,baz=125,slow=10
GTTG Gottingen 21.62 322 *e*P **P** 05 10 23.6 +0.1
comp=Z,16nm,0.8s,baz=125,slow=10
TNS Taunus Mts 21.65 318 P **P** 05 10 26.4 +2.5
TNS pmax pmax
comp=Z,24nm,0.9s
GEYT Alibeck 21.70 77 P **P** 05 10 25.3 +0.8
comp=Z,3.7nm,0.5s,baz=304,slow=11,SNR=8.5
SSB Saint Sauveur 22.05 303 P **P** 05 10 29.1 +0.9
SSB pmax pmax
comp=Z,3.0nm,0.8s
SSB Saint Sauveur 22.05 303 P **P** 05 10 29.1 +0.9
VSU Vasula 22.65 354 ⇑*i*P **P** 05 10 35.9 +1.7
VSU pmax pmax
comp=Z,104nm,1.4s
WLF Walferdange 22.66 315 P **P** 05 10 34.5 0.0
WLF Walferdange 22.66 315 P **P** 05 10 33.2 -1.3
WLF pmax pmax
comp=Z,15nm,0.9s
WLF Walferdange 22.66 315 P **P** 05 10 33.1 -1.3
WLF IAmb IAmb 05 10 36.0
comp=Z,15nm,0.9s
DOU Dourbes 23.75 315 P **P** 05 10 44.8 0.0
AKTO Aktyubinsk 24.21 45 P **P** 05 10 48.9 0.0
comp=Z,12nm,0.9s,baz=270,slow=3.9,SNR=11
UOSS Minazif 24.26 110 P **P** 05 10 51.1 +1.5
UOSS IAmb IAmb 05 10 54.6
comp=Z,25nm,1.2s
ABKAR Akbulak array 24.88 49 P **P** 05 10 51.7 -3.3
ABKAR IAmb IAmb 05 10 55.2
comp=Z,12nm,0.9s
KLMR Klimovskoe 25.45 10 *e*P **P** 05 10 57.2 -2.9
KLMR *e**PP **pP** 05 11 20.8 +0.9
KLMR pmax pmax
comp=Z,6.0nm,0.7s
KLMR Klimovskoe 25.45 10 *e*P **P** 05 10 57.2 -2.9
KLMR AMP 05 11 02.2
comp=Z,6.0nm,0.7s
KLMR *e*pP **pP** 05 11 20.8 +0.9
KIRV Kirov 25.63 22 P **P** 05 11 00.3 -1.4
comp=Z,9.9nm,0.4s,baz=199,slow=5.3,SNR=2.1
FINES FINESS Array B 25.65 354 P **P** 05 11 00.7 -1.1
comp=Z,2.0nm,0.4s,baz=161,slow=11,SNR=11
FINES PcP **PcP** 05 14 30.6 +0.6
comp=Z,1.2nm,0.4s,baz=108,slow=4.2,SNR=4.4
FINES LR LR 05 22 19.9
comp=Z,44nm,18.8s,baz=57,slow=39
FINES FINESS Array B 25.65 354 *i* P **P** 05 11 00.9 -1.0
FINES pmax pmax
comp=Z,2.0nm,0.4s
HFS Hagfors 26.61 341 P **P** 05 11 10.6 +0.1
comp=Z,1.7nm,0.5s,baz=133,slow=10.0,SNR=2.8
ARU Arti 27.61 34 P **P** 05 11 19.7 +0.2
ARU pmax pmax
comp=Z,5.0nm,0.6s
ARU Arti 27.61 34 P **P** 05 11 19.7 +0.2
NC602 NORSAR Array S 27.71 339 P **P** 05 11 22.4 +2.1
NC602 IAmb IAmb 05 11 27.5
comp=Z,18nm,1.3s
NORES NORESS Array B 27.71 339 P **P** 05 11 23.2 +2.8
NORES pmax pmax
comp=Z,1.0nm,0.3s
ESDC Sonseca Array 27.77 288 P **P** 05 11 22.4 +1.1
comp=Z,3.1nm,0.5s,baz=79,slow=9.1,SNR=26
ESDC PcP **PcP** 05 14 35.6 +0.1
comp=Z,0.7nm,0.7s,baz=63,slow=2.9,SNR=3.1
GUD Guadarrama 27.87 290 P **P** 05 11 20.8 -1.5
GUD pmax pmax
comp=Z,18nm,1.0s
NAO01 NORSAR Array S 27.99 339 P **P** 05 11 22.3 -0.6
NAO01 IAmb IAmb 05 11 26.5
comp=Z,11nm,0.7s
NB2 NORSAR Subarra 28.05 339 P **P** 05 11 22.1 -1.4
comp=Z,1.4nm,0.6s,baz=143,slow=9.3
NOA NORSAR Array B 28.05 339 P **P** 05 11 21.2 -2.3
comp=Z,1.1nm,0.5s,baz=138,slow=9.3,SNR=6.6
NOA PcP **PcP** 05 14 36.5 +0.7
comp=Z,0.2nm,0.5s,baz=124,slow=4.9,SNR=1.7
PAB San Pablo 28.08 288 P **P** 05 11 25.0 +1.0
PAB pmax pmax
comp=Z,6.0nm,0.9s
PAB San Pablo 28.08 288 P **P** 05 11 25.0 +1.0
NBO00 NORSAR Array S 28.17 339 P **P** 05 11 24.1 -0.4
NBO00 IAmb IAmb 05 11 29.0
comp=Z,20nm,1.2s
MDT Midelt 29.48 274 P **P** 05 11 37.0 +0.5
comp=Z,3.1nm,0.9s,baz=71,slow=11,SNR=5.7
MVO Moncorvo 30.03 292 *e*P **P** 05 11 43.0 +1.7
EKA Eskdalemuir Ar 30.28 320 P **P** 05 11 42.2 -1.1
PMRV Marv??o 30.44 288 *e*P **P** 05 11 45.7 +0.9
PESTR Estremoz 30.65 287 P **P** 05 11 46.7 0.0
PESTR IAmb IAmb 05 11 48.9
comp=Z,14nm,1.5s
PGAV Gavieira, Arco 30.93 293 *e*P **P** 05 11 50.9 +1.7
PVAQ Vaqueiros 30.96 284 *e*P **P** 05 11 50.5 +1.1
PVAQ Vaqueiros 30.96 284 P **P** 05 11 50.5 +1.1
PVAQ IAmb IAmb 05 11 52.2
comp=Z,12nm,1.1s
KK31 Karatay Array 31.03 65 P **P** 05 11 51.0 +1.0
KK31 pmax pmax
comp=Z,2.0nm,0.7s
KK31 Karatay Array 31.03 65 P **P** 05 11 51.0 +1.0
KKAR Karatay Array 31.03 65 P **P** 05 11 51.1 +1.1
KKAR pmax pmax
comp=Z,2.0nm,0.7s
KKAR Karatay Array 31.03 65 P **P** 05 11 51.1 +1.1
GAR Garm 31.14 73 P **P** 05 11 53.3 +2.2
SOCY Socotra 31.48 133 P **P** 05 11 54.1 -0.2
PFVI Vila Bisbo 31.88 284 P **P** 05 11 58.9 +1.4
ARSB Arslanbob 32.94 68 P **P** 05 12 08.3 +1.4
ARSB pmax pmax
comp=Z,11nm,1.1s
ARSB Arslanbob 32.94 68 P **P** 05 12 08.3 +1.4
ARSB IAmb IAmb 05 12 09.9
comp=Z,11nm,1.1s
ARCES ARCESS Array B 33.72 356 P **P** 05 12 12.2 -1.0
comp=Z,2.1nm,0.5s,baz=165,slow=8.7,SNR=21
ARCES PcP **PcP** 05 14 51.1 +0.4
comp=Z,0.6nm,0.4s,baz=176,slow=3.3,SNR=5.5
ARE0 ARCESS Array S 33.72 356 P **P** 05 12 12.6 -0.7
AAK Ala-Archa 33.97 65 P **P** 05 12 16.0 +0.1
comp=Z,3.2nm,0.4s,baz=256,slow=0.7,SNR=5.7
AAK Ala-Archa 33.97 65 P **P** 05 12 17.1 +1.2
AAK pmax pmax
comp=Z,4.0nm,0.5s
AAK Ala-Archa 33.97 65 P **P** 05 12 17.1 +1.2
AAK IAmb IAmb 05 12 18.2
comp=Z,4.2nm,0.5s
TORD Torodi Ar. Bea 34.84 237 P **P** 05 12 24.4 +1.0
comp=Z,2.8nm,0.8s,baz=32,slow=8.9,SNR=15
TORD PcP **PcP** 05 14 56.2 +1.4
comp=Z,0.9nm,0.5s,baz=40,slow=2.2,SNR=8.9
KSH Kashi 35.42 71 P **P** 05 12 26.5 -1.9
KSH pP pP 05 12 47.8 -0.4
KSH sP sP 05 13 00.5 +2.3
KSH pmax pmax
comp=Z,52nm,1.7s
KSH pmax pmax
comp=Z,190nm,4.8s
KDJ Kajisay 36.00 66 P **P** 05 12 32.8 -0.6
KDJ pmax pmax
comp=Z,5.0nm,1.2s
KDJ Kajisay 36.00 66 P **P** 05 12 32.8 -0.6
KDJ IAmb IAmb 05 12 37.8
comp=Z,4.9nm,1.1s
KURK Kurchatov 36.92 51 P **P** 05 12 40.0 -0.8
KURK pmax pmax
comp=Z,3.0nm,0.7s
KURK Kurchatov 36.92 51 P **P** 05 12 40.0 -0.8
KURK IAmb IAmb 05 12 43.5
comp=Z,3.0nm,0.7s
MAKZ Makanchi 39.08 58 P **P** 05 12 59.7 +0.6
MAKZ pmax pmax
comp=Z,2.0nm,0.9s
MAKZ Makanchi 39.08 58 P **P** 05 12 59.6 +0.6
MK31 Makanchi Array 39.29 58 P **P** 05 13 01.2 +0.3
MK31 pmax pmax
comp=Z,2.0nm,0.6s
MK31 Makanchi Array 39.29 58 P **P** 05 13 01.2 +0.3
MKAR Makanchi Array 39.29 58 P **P** 05 13 00.8 0.0
comp=Z,1.9nm,0.5s,baz=266,slow=8.9,SNR=9.4
MKAR PcP **PcP** 05 15 08.5 +0.6
comp=Z,1.1nm,0.8s,baz=284,slow=4.9,SNR=3.7
MKAR ScP **ScP** 05 18 47.4 -0.9
comp=Z,0.5nm,0.7s,baz=272,slow=3.4,SNR=5.0
ZAA0 Zalesovo Array 40.95 47 P **P** 05 13 12.2 -2.2
ZAA0 IAmb IAmb 05 13 15.4
comp=Z,3.7nm,0.3s
ZALV Zalesovo Beam 40.95 47 P **P** 05 13 13.8 -0.6
comp=Z,3.5nm,0.3s,baz=265,slow=9.2,SNR=9.6
SPA0 Spitsbergen Ar 42.74 356 P **P** 05 13 28.4 -0.3
WMQ Urumqi 43.41 62 *e*P **P** 05 13 37.0 +2.3
WMQ pP pwP 05 13 57.6 -0.6
WMQ LR LR
comp=N,200nm,13.3s
WMQ LR LR
comp=E,160nm,17.5s
WMQ LR LR
comp=Z,130nm,29.1s
DBIC Dimbokro 43.95 237 P **P** 05 13 40.0 +0.9
comp=Z,4.6nm,0.5s,baz=27,slow=8.5,SNR=15
DBIC Dimbokro 43.95 237 P **P** 05 13 41.1 +2.0
TIC Toumodi 44.07 237 *e*P **P** 05 13 41.8 +1.6
KIC Kosan Boka 44.09 237 *e*P **P** 05 13 42.0 +1.7
comp=Z,14nm,0.5s
LIC Lamto 44.38 237 *e*P **P** 05 13 44.3 +1.7
comp=Z,14nm,0.5s
NRIK Noril'sk 45.09 25 P **P** 05 13 47.2 -0.4
comp=Z,3.1nm,0.3s,baz=234,slow=3.4,SNR=5.5
SUMG Summit 49.93 338 P **P** 05 14 26.3 +0.8
SUMG pmax pmax
comp=Z,2.0nm,0.6s
SUMG Summit 49.93 338 P **P** 05 14 26.3 +0.8
SUMG IAmb IAmb 05 14 27.2
comp=Z,2.4nm,0.6s
LSA Lhasa 50.21 79 P **P** 05 14 27.8 -0.5
LSA pmax pmax
comp=Z,5.0nm,0.4s
LSA Lhasa 50.21 79 P **P** 05 14 27.8 -0.5
SFJD Kangerlussuaq 54.24 331 P **P** 05 14 56.8 -0.2
SFJD pmax pmax
comp=Z,36nm,1.4s
SFJD Kangerlussuaq 54.24 331 P **P** 05 14 56.8 -0.2
SONM Songino Array 55.21 53 P **P** 05 15 04.0 -0.5
comp=Z,0.8nm,0.5s,baz=286,slow=8.0,SNR=7.2
SONM Songino Array 55.21 53 P **P** 05 15 04.0 -0.5
LZH Lanzhou 57.50 67 *e*P **P** 05 15 19.3 -1.7
LZH pP pP 05 15 42.0 -0.3
LZH sP sP 05 15 54.3 +2.4
LZH PP **PP** 05 17 32.2 +3.0
LZH pmax pmax
comp=Z,17nm,1.1s
LZH pmax pmax
comp=Z,60nm,4.3s
LZH LR LR
comp=N,150nm,15.8s
LZH LR LR
comp=E,160nm,16.4s
LZH LR LR
comp=Z,180nm,17.1s
TIXI Tiksi 58.66 22 LR LR 05 46 32.6
comp=Z,8.1nm,18.2s,baz=271,slow=42
HHC Hu-ho-hao-te 61.15 59 P **P** 05 15 46.6 +0.6
HHC pmax pmax
comp=Z,6.0nm,0.9s
HHC pmax pmax
comp=Z,72nm,5.9s
CMAR Chiang Mai Arr 61.73 87 P **P** 05 15 50.2 +0.1
comp=Z,2.0nm,0.7s,baz=299,slow=8.4,SNR=11
XAN Xi'an 62.13 67 P **P** 05 15 53.1 +0.5
XAN pmax pmax
comp=Z,7.0nm,1.0s
XAN pmax pmax
comp=Z,71nm,4.3s
DRLN Deer Lake 62.89 313 P **P** 05 15 57.3 0.0
RES Resolute Bay 64.04 346 P **P** 05 16 03.4 -1.0
comp=Z,1.9nm,0.8s,baz=35,slow=9.2,SNR=6.2
RES Resolute Bay 64.04 346 P **P** 05 16 04.7 +0.2
RES pmax pmax
comp=Z,2.0nm,0.7s
RES Resolute Bay 64.04 346 P **P** 05 16 04.7 +0.2
BOSA Boshof 64.51 186 P **P** 05 16 10.7 +2.5
comp=Z,3.4nm,0.6s,baz=1.2,slow=7.7,SNR=8.4
BOSA Boshof 64.51 186 P **P** 05 16 08.2 0.0
BOSA IAmb IAmb 05 16 19.1
comp=Z,9.4nm,1.1s
SCHQ Schefferville 65.60 321 P **P** 05 16 14.0 -1.0
comp=Z,6.1nm,0.6s,baz=44,slow=3.0,SNR=15
SCHQ Schefferville 65.60 321 P **P** 05 16 13.8 -1.1
SCHQ IAmb IAmb 05 16 15.0
comp=Z,4.8nm,0.8s
HAL Halifax 68.71 310 P **P** 05 16 35.3 +0.5
HAL pmax pmax
comp=Z,44nm,1.4s
HAL Halifax 68.71 310 P **P** 05 16 35.3 +0.5
BATG Bathurst New B 68.87 314 P **P** 05 16 36.1 +0.3
BATG IAmb IAmb 05 16 36.8
comp=Z,7.2nm,1.2s
NJ2 Nanjing 70.41 64 *e*P **P** 05 16 44.8 -0.6
NJ2 pmax pmax
comp=Z,11nm,0.7s
PSI Prapat 70.53 101 P **P** 05 16 46.5 -0.1
comp=Z,3.6nm,0.6s,baz=344,slow=0.3,SNR=5.1
RPSI Rantau Prapat 70.60 101 P **P** 05 16 46.9 +0.1
RPSI IAmb IAmb 05 16 49.2
comp=Z,4.2nm,0.8s
RPSI Rantau Prapat 70.60 101 P **P** 05 16 46.5 -0.3
E63A Oxbow 70.70 314 P **P** 05 16 47.0 0.0
D62A Allapoint, All 70.72 315 P **P** 05 16 45.5 -1.6
D62A IAmb IAmb 05 16 48.8
comp=Z,7.6nm,0.8s
SEY Seymchan 70.88 24 ⇓*i*P **P** 05 16 46.4 -1.4
BILL Bilibino 70.99 16 ⇑*i*P **P** 05 16 48.5 +0.1
BILL pmax pmax
comp=Z,1.0nm,1.0s
EMMW East Machias 71.04 312 P **P** 05 16 49.1 +0.1
F63A Nahmakanta, Br 71.49 313 P **P** 05 16 52.7 +0.9
MA2 Magadan 72.59 28 LR LR 05 52 00.7
comp=Z,24nm,18.4s,baz=326,slow=38
USRK Ussuriysk Ar. 72.79 48 P **P** 05 16 58.5 -1.1
comp=Z,0.9nm,0.6s,baz=287,slow=6.8,SNR=2.4
C36M Paulatuk 73.36 351 P **P** 05 17 02.5 0.0
KSRS Korea Array 73.92 55 P **P** 05 17 04.8 -1.4
comp=Z,1.1nm,0.7s,baz=328,slow=2.7,SNR=2.7
INK Inuvik 75.36 354 P **P** 05 17 13.4 -0.6
INK pmax pmax
comp=Z,5.0nm,1.2s
INK Inuvik 75.36 354 P **P** 05 17 13.4 -0.6
D53A Lac Vacive, Po 75.57 318 P **P** 05 17 16.2 +0.5
D53A IAmb IAmb 05 17 16.8
comp=Z,9.8nm,1.4s
TOLK Toolik Lake Re 75.67 0 P **P** 05 17 17.3 +1.4
L59A Walton 77.01 313 P **P** 05 17 24.1 +0.1
COLD Coldfoot 77.08 0 P **P** 05 17 24.6 +0.7
DELO Deloro Mine 77.09 316 P **P** 05 17 23.4 -0.9
DELO IAmb IAmb 05 17 25.8
comp=Z,8.2nm,0.9s
YKA Yellowknife Ar 78.02 344 P **P** 05 17 28.2 -0.9
comp=Z,2.1nm,0.7s,baz=32,slow=5.3,SNR=24
MLY Manley 79.28 1 P **P** 05 17 36.9 +0.7
MLY IAmb IAmb 05 17 37.8
comp=Z,4.3nm,0.9s
COLA College 79.45 360 ⇓*i*P **P** 05 17 37.5 +0.6
COLA pmax pmax
comp=Z,7.0nm,1.2s
IL31 79.54 359 P **P** 05 17 38.0 +0.6
ILAR Eielson Array 79.54 359 P **P** 05 17 37.5 0.0
comp=Z,1.1nm,0.7s,baz=347,slow=4.0,SNR=12
CCB Clear Creek Bu 79.67 359 P **P** 05 17 38.1 0.0
CCB IAmb IAmb 05 17 39.2
comp=Z,5.7nm,0.9s
WRH Wood River Hil 79.85 360 P **P** 05 17 39.2 +0.1
WRH IAmb IAmb 05 17 40.1
comp=Z,7.2nm,0.8s

HDA	**Harding Lake**	**79.91**	**359**	P	**P**	**05 17 39.1**	**-0.3**
HDA				IAmb	IAmb	05 17 40.3	
	comp=Z,6.0nm,0.8s						
PETK	**Petropavlovsk-**	**79.92**	**29**	P	**P**	**05 17 39.5**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=339,slow=37,SNR=1.6						
DAWY	**Dawson**	**79.97**	**356**	P	**P**	**05 17 40.2**	**+0.3**
DAWY				IAmb	IAmb	05 17 41.2	
	comp=Z,2.8nm,0.7s						
BPAW	**Bear Paw Mtn.**	**80.22**	**1**	P	**P**	**05 17 41.1**	**-0.1**
BPAW				IAmb	IAmb	05 17 42.0	
	comp=Z,5.5nm,0.8s						
SCRK	**Sand Creek**	**80.27**	**358**	P	**P**	**05 17 42.2**	**+0.6**
SCRK				IAmb	IAmb	05 17 43.4	
	comp=Z,5.9nm,0.8s						
RIDG	**Independent Ri**	**80.54**	**358**	P	**P**	**05 17 43.0**	**+0.1**
KTH	**Kantishna Hill**	**80.77**	**1**	P	**P**	**05 17 45.1**	**+0.9**
KTH				IAmb	IAmb	05 17 45.7	
	comp=Z,4.5nm,0.7s						
FFC	**Flin Flon**	**81.03**	**335**	P	**P**	**05 17 45.2**	**-0.4**
FFC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
FFC	**Flin Flon**	**81.03**	**335**	P	**P**	**05 17 45.2**	**-0.4**
DHY	**Denali Highway**	**81.25**	**359**	P	**P**	**05 17 47.0**	**+0.2**
DHY				IAmb	IAmb	05 17 49.0	
	comp=Z,4.5nm,0.8s						
MENT	**Mentasta**	**81.31**	**358**	P	**P**	**05 17 47.7**	**+0.7**
MENT				IAmb	IAmb	05 17 48.8	
	comp=Z,7.0nm,0.7s						
SCM	**Sheep Creek Mo**	**82.50**	**359**	P	**P**	**05 17 53.9**	**+0.6**
SCM				pmax	pmax		
	comp=Z,13nm,0.8s						
SCM	**Sheep Creek Mo**	**82.50**	**359**	P	**P**	**05 17 53.9**	**+0.6**
GHO	**Glory Hole Cre**	**82.56**	**360**	P	**P**	**05 17 53.5**	**-0.2**
PMR	**Palmer**	**82.75**	**0**	P	**P**	**05 17 54.7**	**+0.2**
PMR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PMR	**Palmer**	**82.75**	**0**	P	**P**	**05 17 54.7**	**+0.2**
PMR				IAmb	IAmb	05 17 55.7	
	comp=Z,4.2nm,0.7s						
KNK	**Knik Glacier**	**82.92**	**360**	P	**P**	**05 17 56.0**	**+0.6**
M48A	**Edgerton**	**83.02**	**317**	P	**P**	**05 17 55.8**	**-0.5**
HYT	**Haines Junctio**	**83.06**	**354**	P	**P**	**05 17 57.0**	**+0.7**
HYT				IAmb	IAmb	05 17 58.1	
	comp=Z,5.6nm,0.9s						
BALM	**Baldy**	**83.15**	**357**	P	**P**	**05 17 57.2**	**+0.5**
BALM				IAmb	IAmb	05 17 58.4	
	comp=Z,6.6nm,0.8s						
CTGM	**Chitina Glacie**	**83.17**	**356**	P	**P**	**05 17 54.7**	**-2.2**
CTGM				IAmb	IAmb	05 17 58.6	
	comp=Z,3.7nm,0.9s						
RC01	**Rabbit Creek A**	**83.25**	**0**	P	**P**	**05 17 57.7**	**+0.6**
FID	**Port Fidalgo**	**83.57**	**359**	P	**P**	**05 18 00.2**	**+1.4**
EYAK	**Cordova Ski Ar**	**83.76**	**358**	P	**P**	**05 17 58.2**	**-1.5**
T50A	**Nancy**	**86.12**	**314**	P	**P**	**05 18 12.1**	**+0.1**
T50A				IAmb	IAmb	05 18 13.3	
	comp=Z,6.5nm,0.9s						
BDFB	**Brasilia**	**90.48**	**251**	P	**P**	**05 18 35.6**	**+2.5**
	comp=Z,3.6nm,0.8s,baz=106,slow=7.4,SNR=6.6						
PDAR	**Pinedale Array**	**93.75**	**332**	P	**P**	**05 18 46.1**	**-1.9**
	comp=Z,0.2nm,0.7s,baz=30,slow=7.5,SNR=2.1						
WRA	**Warramunga Arr**	**111.96**	**99**	PKiKP	**PKiKP**	**05 24 05.8**	**-0.2**
	comp=Z,1.1nm,1.0s,baz=322,slow=1.4,SNR=5.1						
ASAR	**Alice Springs**	**113.53**	**103**	PKiKP	**PKiKP**	**05 24 09.0**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=307,slow=1.3,SNR=11						

*SJA **05** 05:14:06.7±0.3, 26°.87S×71°.94W, h26km±7km, ML4.4, MW4.3*
*IDC **05** 05:14:10.8±0.7, 26°.80S×70°.81W, h0km, mb4.2/8, mb1 4.2/13, mb1mx4.0/29, mbtmp4.1/13, ML3.8/5, MS3.6/6, Ms1 3.6/6, ms1mx3.3/18, Error ellipse: s-maj=24.1km s-min=15.7km az=111.0*
*NEIC **05** 05:14:11.3±2.6, 26°.88S±0°.04×71°.1W±0°.1, h10km±1km, mb4.6/25, ML4.2(GUC), Error ellipse: s-maj=15.6km s-min=6.0km az=276.0*
*GUC **05** 05:14:13.4±0.7, 26°.90S×71°.06W, h125km±28km, ML4.3*
*VAO **05** 05:14:13.4±6.0, 27°.17S×71°.26W, h53km±38km, mb4.4*
ISC 05 05:14:09.6±3.5, **26°.85S**±0°.03×**71°.36W**±0°.05, **h3**km±21km, **n134**, σ**1s.75**/144, **mb4.6**/18, **MS3.8**/3, **4C-3D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC02	**Maricunga**	**2.00**	**90**	⇓*i*P	**Pn**	**05 14 44.6**	**-0.1**
AC02				*e*S	**Sn**	**05 15 07.3**	**-3.1**
AC02				IAML		05 15 14.6	
	comp=E,3μm,0.3s						
AC02	**Maricunga**	**2.00**	**90**	Pn	**Pn**	**05 14 44.6**	**-0.1**
AC05	**El Transito**	**2.20**	**154**	⇑*i*P	**Pn**	**05 14 48.1**	**+1.0**
AC05				*e*S	**Sn**	**05 15 14.1**	**-0.8**
AC05				IAML		05 15 28.1	
	comp=N,3μm,0.6s						
AC05	**El Transito**	**2.20**	**154**	Pn	**Pn**	**05 14 46.7**	**-0.4**
LCO	**Las Campanas**	**2.23**	**165**	Pn	**Pn**	**05 14 46.8**	**-0.8**
LCO				Sn	**Sn**	**05 15 09.2**	**-6.7**
GO02	**Mina Guanaco**	**2.32**	**44**	⇑*i*P	**Pn**	**05 14 49.6**	**+0.7**
GO02				*i* S	**Sn**	**05 15 18.2**	**0.0**
GO02				IAML		05 15 27.4	
	comp=N,4μm,0.5s						
GO02	**Mina Guanaco**	**2.32**	**44**		**Pn**	**05 14 49.7**	**+0.7**
GO02				Sn	**Sn**	**05 15 15.8**	**-2.4**
PB14	**IPOC Station P**	**2.38**	**22**	⇑*e*P	**Pn**	**05 14 50.0**	**+0.2**
PB14				*e*S	**Sn**	**05 15 19.2**	**-0.5**
PB14				IAML		05 15 28.7	
	comp=E,1μm,0.6s						
PB14	**IPOC Station P**	**2.38**	**22**		**Pn**	**05 14 49.2**	**-0.6**
PB14				Sn	**Sn**	**05 15 18.1**	**-1.6**
PB14	**IPOC Station P**	**2.38**	**22**	*i* P	**Pn**	**05 14 50.2**	**+0.3**
PB14				*i* S	**Sb**	**05 15 22.5**	**-0.8**
PB14				IAML		05 15 31.8	
	comp=Z,1μm,0.5s						
GO04	**Tololo Observa**	**3.34**	**172**	*e*P	**Pn**	**05 15 04.2**	**+1.2**
GO04				*e*S	**Sn**	**05 15 43.0**	**-0.4**
GO04	**Tololo Observa**	**3.34**	**172**		**Pn**	**05 15 03.9**	**+0.9**
GO04				Sn	**Sn**	**05 15 42.4**	**-1.0**
GO04	**Tololo Observa**	**3.34**	**172**	*e*P	**Pn**	**05 15 04.4**	**+1.4**
GO04				*i* S	**Sn**	**05 15 42.6**	**-0.7**
VCA	**Vinchina**	**3.37**	**125**	*i* P	**Pn**	**05 15 06.8**	**+3.5**
VCA				*i* S	**Sb**	**05 15 51.4**	**-0.1**
VCA				IAML		05 15 59.0	
	comp=Z,786nm,0.5s						
PB10	**IPOC Station P**	**3.41**	**13**	*e*P	**Pn**	**05 15 03.4**	**-0.3**
PB10				*e*S	**Sn**	**05 15 44.7**	**+0.1**
PB10				IAML		05 16 15.0	
	comp=E,299nm,0.5s						
PB10	**IPOC Station P**	**3.41**	**13**		**Pn**	**05 15 03.4**	**-0.3**
PB10				Sn	**Sn**	**05 15 45.2**	**+0.6**
PB10	**IPOC Station P**	**3.41**	**13**	*i* P	**Pn**	**05 15 03.5**	**-0.1**
PB10				IAML		05 16 06.1	
	comp=Z,320nm,0.6s						
CO03	**El Pedregal**	**4.01**	**172**	⇓*e*P	**Pn**	**05 15 13.2**	**+1.1**
CO03				*e*S	**Sn**	**05 15 56.3**	**-3.4**
CO03	**El Pedregal**	**4.01**	**172**	Pn	**Pn**	**05 15 13.4**	**+1.3**
PB15	**IPOC Station P**	**4.01**	**26**		**Pn**	**05 15 13.0**	**+0.8**
PB15				Sn	**Sn**	**05 15 55.2**	**-4.7**
CO02	**Combarbal**	**4.35**	**176**	Pn	**Pn**	**05 15 17.8**	**+1.1**
PB06	**IPOC Station P**	**4.44**	**22**		**Pn**	**05 15 18.1**	**+0.1**
PB04	**IPOC Station P**	**4.63**	**14**		**Pn**	**05 15 19.5**	**-1.2**
LVC	**Limon Verde**	**4.78**	**28**	Pn	**Pn**	**05 15 21.4**	**-1.4**
	comp=Z,3.8nm,0.3s,baz=182,slow=7.0,SNR=31						
LVC				Pg	Pg	05 15 31.7	-9.5
	comp=Z,17nm,0.3s,baz=211,slow=9.1,SNR=20						
LVC				Lg	Lg	05 16 32.8	
	comp=Z,51nm,0.3s,baz=359,slow=21,SNR=7.7						
LVC				LR	LR	05 17 27.2	
	comp=Z,538nm,21.1s,baz=236,slow=44						
LVC	**Limon Verde**	**4.78**	**28**		**Pn**	**05 15 24.1**	**+1.2**
LVC	**Limon Verde**	**4.78**	**28**	*i* P	**Pn**	**05 15 23.6**	**+0.8**
LVC				IAML		05 16 49.1	
	comp=Z,332nm,0.6s						
AMOG	**MOGNA**	**4.79**	**149**	*i* P	**Pn**	**05 15 24.7**	**+2.1**
AMOG				IAML		05 17 02.6	
	comp=Z,251nm,0.6s						
RTLL	**Cerro Villicun**	**5.12**	**151**	*i* P	**Pn**	**05 15 29.8**	**+2.4**
RTLL				IAML		05 17 00.1	
	comp=Z,210nm,0.7s						
CYA	**Choya**	**5.18**	**109**	*i* P	**Pn**	**05 15 28.7**	**+0.7**
CYA				*i* S	**Sn**	**05 16 30.9**	**+2.5**
CYA				IAML		05 16 35.0	
	comp=Z,163nm,0.9s						
CO04	**Los Peladeros**	**5.18**	**176**	Pn	**Pn**	**05 15 29.3**	**+1.0**
RTLS	**Leoncito**	**5.25**	**160**	*i* P	**Pn**	**05 15 32.2**	**+3.0**
RTLS				*i* S	**Sn**	**05 16 31.4**	**+0.9**
RTLS				IAML		05 16 53.8	
	comp=Z,113nm,0.6s						
PB07	**IPOC Station P**	**5.28**	**15**		**Pn**	**05 15 28.6**	**-1.0**
PB09	**IPOC Station P**	**5.39**	**21**		**Pn**	**05 15 31.1**	**0.0**
RTCV	**Cerro Valdivia**	**5.56**	**154**	*i* P	**Pn**	**05 15 35.5**	**+2.1**
RTCV				IAML		05 17 13.1	
	comp=Z,129nm,2.0s						
VA03	**San Esteban**	**5.93**	**173**	Pn	**Pn**	**05 15 40.1**	**+1.6**
PB01	**IPOC Station P**	**6.03**	**17**		**Pn**	**05 15 39.3**	**-0.6**
PATCX	**Punta Patache**	**6.11**	**11**		**Pn**	**05 15 40.0**	**-0.9**
ROC1	**El Roble**	**6.11**	**177**		**Pn**	**05 15 40.8**	**-0.3**
ROC1	**El Roble**	**6.11**	**177**	*i* P	**Pn**	**05 15 42.5**	**+1.5**
ASAL	**Salagasta**	**6.12**	**160**	*i* P	**Pn**	**05 15 43.7**	**+2.6**
ASAL				IAML		05 17 29.4	
	comp=Z,183nm,0.7s						
AZAP	**Zapla**	**6.26**	**67**	*i* P	Pn	05 15 47.7	+4.6
PEL	**Peldehue**	**6.30**	**175**		**Pn**	**05 15 43.9**	**+0.4**
ARCO	**CERRO ARCO**	**6.33**	**161**	*i* P	**Pn**	**05 15 47.1**	**+3.1**
ARCO				IAML		05 17 37.1	
	comp=Z,222nm,0.8s						
TA01	**Diego Aracena**	**6.35**	**10**	Pn	**Pn**	**05 15 43.0**	**-1.2**
MT02	**Curacav**	**6.39**	**178**	Pn	**Pn**	**05 15 45.2**	**+0.6**
ACAN	**Cantantal**	**6.51**	**147**	*i* P	**Pn**	**05 15 48.2**	**+1.8**
ACAN				IAML		05 17 52.1	
	comp=Z,42nm,0.7s						
MT05	**Renca**	**6.54**	**175**	Pn	**Pn**	**05 15 47.1**	**+0.4**
PB08	**IPOC Station P**	**6.98**	**17**		**Pn**	**05 15 51.9**	**-1.2**
MT01	**Popeta**	**6.99**	**179**	Pn	**Pn**	**05 15 51.7**	**-1.2**
PB11	**IPOC Station P**	**7.23**	**13**		**Pn**	**05 15 55.0**	**-1.4**
PSGCX	**Pisagua**	**7.31**	**9**		**Pn**	**05 15 55.9**	**-1.6**
MRA	**San Martin**	**7.41**	**140**	*i* P	**Pn**	**05 15 59.5**	**+0.8**
MRA				*i* S	**Sn**	**05 17 25.5**	**+2.1**
MRA				IAML		05 18 04.1	
	comp=Z,35nm,0.8s						
GO01	**Chusmiza**	**7.42**	**16**		**Pn**	**05 15 58.8**	**-0.6**
MNMC	**Minye Minye**	**7.86**	**12**		**Pn**	**05 16 04.1**	**-0.9**
BO02	**Sierra Bellavi**	**7.93**	**177**	Pn	**Pn**	**05 16 05.7**	**-0.2**
GO05	**Huala**	**8.14**	**183**	Pn	**Pn**	**05 16 06.8**	**-2.0**
PB12	**IPOC Station P**	**8.26**	**7**		**Pn**	**05 16 09.4**	**-1.0**
PB16	**IPOC Station P**	**8.65**	**12**		**Pn**	**05 16 15.2**	**-1.1**
H03N1	**Juan Fernandez**	**9.26**	**223**	T	T	05 26 13.3	
	baz=51,slow=71,SNR=5394						
H03N2	**Juan Fernandez**	**9.27**	**223**	T	T	05 26 15.6	
	baz=51,slow=71,SNR=2758						
H03N3	**Juan Fernandez**	**9.28**	**223**	T	T	05 26 13.2	
	baz=51,slow=71,SNR=4721						
BI02	**San Fabin de**	**9.78**	**180**	Pn	**Pn**	**05 16 31.2**	**-0.1**
LPAZ	**La Paz**	**10.94**	**17**	Pn	**Pn**	**05 16 46.8**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=198,slow=6.6,SNR=30						
LPAZ				LR	LR	05 21 26.3	
	comp=Z,207nm,19.4s,baz=180,slow=40						
LPAZ	**La Paz**	**10.94**	**17**		**Pn**	**05 16 47.3**	**-0.3**
CPUP	**Villa Florida**	**12.57**	**91**	Pn	Pn	05 17 04.5	-4.9
	comp=Z,0.1nm,0.3s,baz=173,slow=8.9,SNR=2.0						
PLCA	**Paso Flores**	**13.86**	**177**	Pn	**Pn**	**05 17 30.8**	**+3.8**
	comp=Z,0.1nm,0.3s,baz=54,slow=16,SNR=1.4						
PLCA	**Paso Flores**	**13.86**	**177**		**Pn**	**05 17 24.2**	**-2.8**
SIV	**San Ignacio**	**14.44**	**44**	Pn	Pn	05 17 30.7	-4.3
	comp=Z,0.9nm,0.3s,baz=254,slow=8.8,SNR=18						
SIV				Sn	**Sn**	**05 20 12.1**	**-3.6**
	baz=237,slow=8.2,SNR=3.1						
NNA	**Nana**	**15.66**	**340**	LR	LR	05 22 32.1	
	comp=Z,71nm,19.4s,baz=176,slow=32						
PTLB	**Pontes e Lacer**	**16.07**	**48**	*e*P	**Pn**	**05 17 58.0**	**+1.3**
VILB	**Vilhena**	**17.34**	**39**	*e*P	**Pn**	**05 18 14.0**	**+1.1**
SALV	**Santo Antonio**	**18.19**	**56**	*e*P	**Pn**	**05 18 23.6**	**+0.3**
PCMB	**Pacaembu**	**19.06**	**78**	*e*P	**P**	**05 18 31.7**	**-1.4**
SAML	**Samuel**	**19.42**	**25**	P	**P**	**05 18 34.0**	**-3.1**
ARAG	**Araguaiana, MT**	**21.30**	**63**	*e*P	**P**	**05 18 55.6**	**-2.0**
VAO	**Valinhos**	**22.44**	**86**	*e*P	**P**	**05 19 07.6**	**-2.4**
IPMB	**Ipameri, GO**	**23.12**	**72**	*e*P	**P**	**05 19 13.7**	**-3.3**
PARB	**Paraibuna**	**23.56**	**87**	*e*P	**P**	**05 19 18.3**	**-3.2**
BDFB	**Brasilia**	**24.41**	**68**	P	**P**	**05 19 26.2**	**-3.4**
	comp=Z,3.7nm,0.5s,baz=240,slow=9.0,SNR=9.7						
BDFB				LR	LR	05 30 27.0	
	comp=Z,282nm,19.3s,baz=215,slow=41						
BDFB	**Brasilia**	**24.41**	**68**	P	**P**	**05 19 26.4**	**-3.2**
MACA	**Manacapuru-AM**	**25.68**	**25**	*e*P	**P**	**05 19 40.6**	**-0.4**
JANB	**Januaria**	**27.79**	**70**	*e*P	**P**	**05 19 58.2**	**-1.9**
PTGA	**Pitinga**	**28.19**	**25**	P	**P**	**05 20 03.0**	**-0.6**
	comp=Z,6.7nm,0.8s,baz=191,slow=11,SNR=10						
PTGA	**Pitinga**	**28.19**	**25**	P	**P**	**05 20 03.0**	**-0.6**
PTGA				IAmb	IAmb	05 20 05.2	
	comp=Z,6.4nm,0.8s						
PTGA	**Pitinga**	**28.19**	**25**	*e*P	**P**	**05 20 03.7**	**+0.1**
RUSC	**La Rusia**	**32.59**	**357**	P	**P**	**05 20 44.8**	**+1.8**
ANWB	**Willy Bob**	**45.22**	**13**	P	**P**	**05 22 29.3**	**+1.1**
VNA3	**Neumayer Olymp**	**55.79**	**160**	P	**P**	**05 23 48.3**	**+0.7**
VNA2	**Neumayer--Watz**	**56.41**	**159**	P	**P**	**05 23 52.6**	**+0.6**
	baz=290,slow=8.4						
SNAA	**Sanae**	**58.02**	**160**	P	**P**	**05 24 03.9**	**+0.5**
SNAA	**Sanae**	**58.02**	**160**	P	**P**	**05 24 03.8**	**+0.3**
SNAA				IAmb	IAmb	05 24 04.2	
	comp=Z,3.2nm,0.6s						
JCT	**Junction City**	**63.17**	**333**	P	**P**	**05 24 40.0**	**+1.0**
JCT				IAmb	IAmb	05 24 49.7	
	comp=Z,4.5nm,0.7s						
QSPA	**South Pole Qui**	**63.36**	**180**	P	**P**	**05 24 41.8**	**+1.8**
TX31	**Lajitas Ar. Si**	**63.87**	**329**	P	**P**	**05 24 46.8**	**+3.0**
TX31				IAmb	IAmb	05 25 01.9	
	comp=Z,10nm,1.5s						
TX32	**Lajitas Array**	**63.87**	**329**	P	**P**	**05 24 45.5**	**+1.8**
TXAR	**Lajitas Array**	**63.87**	**329**	P	**P**	**05 24 47.5**	**+3.8**
	comp=Z,0.5nm,0.7s,baz=156,slow=8.1,SNR=8.8						
LCAR	**Lake Charles**	**65.31**	**342**	P	**P**	**05 24 51.7**	**-1.2**
LCAR				IAmb	IAmb	05 25 07.2	
	comp=Z,5.2nm,1.3s						
PBMO	**Poplar Bluff**	**65.79**	**343**	P	**P**	**05 24 57.0**	**+1.1**
PBMO				IAmb	IAmb	05 24 58.1	
	comp=Z,5.5nm,1.1s						
U40A	**Yellville**	**66.06**	**341**	P	**P**	**05 24 59.0**	**+1.3**
U40A				IAmb	IAmb	05 25 00.7	
	comp=Z,3.7nm,0.9s						
MNTX	**Cornudas Mount**	**66.66**	**329**	P	**P**	**05 25 01.8**	**+0.1**
R40A	**Maddies Statio**	**67.70**	**342**	P	**P**	**05 25 10.4**	**+2.3**
R40A				IAmb	IAmb	05 25 11.5	
	comp=Z,6.2nm,0.8s						
SYO	**Syowa Base**	**72.30**	**159**	⇓×*e*P	**P**	**05 25 32.7**	**-3.4**
SYO	**Syowa Base**	**72.30**	**159**	⇑*e*pP	**P**	**05 25 35.2**	**-0.9**
F64A	**Sherman**	**72.42**	**2**	P	**P**	**05 25 36.8**	**-0.1**
DBIC	**Dimbokro**	**72.43**	**73**	P	**P**	**05 25 36.9**	**-0.8**
	comp=Z,3.9nm,0.9s,baz=194,slow=8.3,SNR=1.8						
DBIC				LR	LR	05 55 43.8	
	comp=Z,49nm,19.4s,baz=215,slow=35						
ECSD	**EROS Data Cent**	**73.97**	**341**	P	**P**	**05 25 47.4**	**+1.2**
ECSD				IAmb	IAmb	05 25 49.3	
	comp=Z,3.3nm,0.9s						
D41A	**Chassel**	**75.19**	**348**	P	**P**	**05 25 55.7**	**+2.5**
D41A				IAmb	IAmb	05 26 02.5	
	comp=Z,5.7nm,0.9s						
PSUT	**Pine Spring**	**76.24**	**327**	P	**P**	**05 25 59.6**	**0.0**
PDAR	**Pinedale Array**	**77.70**	**332**	P	**P**	**05 26 10.2**	**+2.4**
	comp=Z,0.1nm,0.4s,baz=314,slow=56,SNR=2.8						
MAW	**Mawson**	**79.85**	**164**	P	**P**	**05 26 19.3**	**+0.2**
	comp=Z,4.3nm,0.8s,baz=255,slow=6.9,SNR=4.6						
MAW	**Mawson**	**79.85**	**164**	P	**P**	**05 26 19.1**	**0.0**
YHH	**Holmes Hill**	**79.89**	**333**	P	**P**	**05 26 19.8**	**-0.1**
TOA0	**Torodi Ar. Sit**	**81.25**	**71**	P	**P**	**05 26 26.9**	**-0.6**
TOA0				IAmb	IAmb	05 26 27.7	
	comp=Z,6.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**81.25**	**71**	P	**P**	**05 26 26.5**	**-1.0**
	comp=Z,5.6nm,0.7s,baz=269,slow=4.9,SNR=36						
TORD				LR	LR	06 02 28.0	
	comp=Z,58nm,18.3s,baz=220,slow=36						
LBTB	**Lobatse**	**84.80**	**115**	P	**P**	**05 26 45.8**	**-0.2**
YKA	**Yellowknife Ar**	**95.50**	**341**	P	**P**	**05 27 36.6**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=134,slow=4.4,SNR=5.3						
ASAR	**Alice Springs**	**124.15**	**208**	PKP	**PKPdf**	**05 33 10.8**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=124,slow=1.6,SNR=5.0						
H11S2	**WAKE ISLAND Hy**	**126.16**	**274**	T	T	07 52 38.8	
	baz=107,slow=74,SNR=22						
H11S1	**WAKE ISLAND Hy**	**126.17**	**274**	T	T	07 52 40.9	
	baz=107,slow=74,SNR=16						
H11S3	**WAKE ISLAND Hy**	**126.18**	**274**	T	T	07 52 40.2	
	baz=107,slow=74,SNR=18						
WRA	**Warramunga Arr**	**127.23**	**211**	PKP	**PKiKP**	**05 33 17.5**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=155,slow=2.0,SNR=1.8						
GAR	**Garm**	**145.87**	**59**		**PKPbc**	**05 33 51.0**	**+0.3**
LEM	**Lembang**	**146.50**	**178**	PKPbc	**PKPab**	**05 33 55.6**	**+1.4**
	comp=Z,14nm,0.5s,baz=306,slow=22,SNR=4.6						
KURK	**Kurchatov**	**146.99**	**36**	PKPbc	**PKPbc**	**05 33 54.0**	**+0.6**
KURBB	**Kurchatov Arra**	**147.00**	**36**	PKPbc	**PKPbc**	**05 33 53.7**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=302,slow=3.3,SNR=6.3						
ZAA0	**Zalesovo Array**	**147.73**	**27**		**PKPbc**	**05 33 56.6**	**+1.3**
ZALV	**Zalesovo Beam**	**147.73**	**27**	PKPbc	**PKPbc**	**05 33 56.5**	**+1.2**
	comp=Z,10nm,0.8s,baz=298,slow=3.2,SNR=19						
AAK	**Ala-Archa**	**148.09**	**52**	PKPbc	**PKiKP**	**05 33 58.4**	**-0.4**
	comp=Z,3.6nm,0.7s,baz=321,slow=1.3,SNR=8.3						
KDJ	**Kajisay**	**150.13**	**51**	PKPbc	**PKPbc**	**05 34 01.9**	**-0.2**
MAKZ	**Makanchi**	**151.04**	**40**		**PKPbc**	**05 34 04.5**	**+0.6**
MK31	**Makanchi Array**	**151.22**	**39**	PKPbc	**PKiKP**	**05 34 05.3**	**+0.4**
MKAR	**Makanchi Array**	**151.22**	**39**	PKPbc	**PKiKP**	**05 34 05.2**	**+0.4**
	comp=Z,5.7nm,0.7s,baz=325,slow=2.0,SNR=30						
KLR	**Kul'dur**	**151.39**	**327**	PKPbc	**PKiKP**	**05 34 05.8**	**+0.7**
	comp=Z,1.9nm,0.6s,baz=82,slow=1.8,SNR=6.3						
LZH	**Lanzhou**	**169.93**	**23**	*e*PKP	**PKPdf**	**05 34 13.7**	**-5.5**
LZH				pPKP	sPKPdf	05 34 23.6	+5.5
LZH				sPKP		05 34 27.8	

*IDC **05** 05:16:00.7±1.0, 26°.24N×129°.48E, h0km, mb3.7/7, mb1 3.7/8, mb1mx3.6/40, mbtmp3.7/8, ML3.4/1, MS3.1/3, Ms1 3.1/3, ms1mx2.5/48, Error ellipse: s-maj=29.1km s-min=18.7km az=54.0*
*NIED **05** 05:16:00, 26°.20N×129°.60E, h5km, Mw3.9 Best double couple: $M_0$7.17000×10^{14} NP1:ϕ_s37.00000°, δ66.00000°, λ-91.00000°. NP2:ϕ_s218.00000°, δ24.00000°, λ-89.00000°.*
*JMA **05** 05:16:02.4±0.1, 26°.19N×129°.60E, h43km, M3.5*
ISC 05 05:16:00.0±1.7, **26°.23N**±0°.04×**129°.59E**±0°.03, **h3**km±11km, **n26**, σ**1s.92**/38, **mb3.8**/7, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYRO	**Yoronjima**	**1.29**	**308**	P	**Pg**	**05 16 24.9**	**+0.2**
JYRO				S	**Sb**	**05 16 40.0**	**-1.9**
JOW	**Kunigami**	**1.32**	**297**	Pn	**Pg**	**05 16 25.8**	**+0.5**
	16nm,0.3s,baz=78,slow=16,SNR=116						
JOW				Sn	**Sb**	**05 16 41.6**	**-1.2**
	47nm,0.3s,baz=84,slow=18,SNR=22						
JOW	**Kunigami**	**1.32**	**297**	P	**Pg**	**05 16 25.4**	**+0.1**
JOW				S	**Sb**	**05 16 40.6**	**-2.2**
JNTH	**Nagotoyohara**	**1.43**	**282**	P	**Pb**	**05 16 26.7**	**-0.6**
JNTH				S	**Sn**	**05 16 43.5**	**-2.7**
JOKE	**Okinoerabujima**	**1.45**	**321**	P	**Pg**	**05 16 27.8**	**0.0**
JOKE				S	**Sn**	**05 16 44.9**	**-1.8**
JMZ	**Minamidaito 2**	**1.53**	**105**	P	**Pb**	**05 16 27.4**	**-1.6**
JMZ				S	**Sn**	**05 16 44.9**	**-3.7**
JKDJ	**Kitadaitoujima**	**1.56**	**100**	P	**Pb**	**05 16 28.1**	**-1.5**
JKDJ				S	**Sn**	**05 16 46.8**	**-2.7**
JJT3	**Tamagusuku3**	**1.62**	**267**	P	**Pb**	**05 16 29.8**	**-0.8**
JJT3				S	**Sn**	**05 16 49.5**	**-1.4**
JTK	**Tokunoshima**	**1.65**	**340**	P	**Pb**	**05 16 30.8**	**-0.3**
JTK				S	**Sn**	**05 16 49.5**	**-2.2**
JIH	**Iheya**	**1.66**	**299**	P	**Pb**	**05 16 30.6**	**-0.6**
JIH				S	**Sn**	**05 16 49.7**	**-2.1**
JAMN	**Amaminishikomi**	**2.04**	**350**	P	**Pb**	**05 16 35.9**	**-1.8**
JAMN				S	**Sn**	**05 16 59.2**	**-2.1**
JZK	**Kikaishima**	**2.11**	**9**	P	**Pb**	**05 16 37.5**	**-1.4**
JZK				S	**Sn**	**05 17 02.7**	**-0.2**
JAGN	**Aguni-jima**	**2.13**	**280**	P	**Pb**	**05 16 37.0**	**-2.3**
JAGN				S	**Sn**	**05 17 01.6**	**-1.9**
JAM	**Amami Oshima**	**2.18**	**0**	P	**Pn**	**05 16 37.6**	**+0.5**
JAM				S	**Sn**	**05 17 01.6**	**-3.0**
JKE	**Kume jima 2**	**2.52**	**273**	S	**Sn**	**05 17 09.4**	**-3.6**
JTAJ	**Takarajima**	**2.93**	**353**	S	**Sn**	**05 17 20.2**	**-3.1**
JNU	**Nakatsue**	**6.96**	**9**	Pn	**Pn**	**05 17 46.0**	**+3.0**
	0.6nm,0.3s,baz=202,slow=8.3,SNR=5.2						
KSRS	**Korea Array**	**11.28**	**353**	LR	LR	05 23 18.6	
	comp=Z,24nm,21.2s,baz=30,slow=39						
PETK	**Petropavlovsk-**	**34.07**	**30**	P	**P**	**05 22 45.7**	**+0.1**
	1.5nm,0.8s,baz=208,slow=12,SNR=2.7						
PETK				LR	LR	05 37 35.2	
	comp=Z,32nm,18.4s,baz=223,slow=38						
MKAR	**Makanchi Array**	**42.44**	**312**	P	**P**	**05 23 57.2**	**+1.1**
	0.4nm,0.7s,baz=96,slow=9.7,SNR=4.1						
HNR	**Honiara**	**46.12**	**136**	LR	LR	05 42 29.5	
	comp=Z,55nm,18.3s,baz=50,slow=34						
WRA	**Warramunga Arr**	**46.13**	**174**	P	**P**	**05 24 26.5**	**+0.7**
	0.5nm,0.5s,baz=351,slow=8.4,SNR=2.4						
ASAR	**Alice Springs**	**49.78**	**175**	P	**P**	**05 24 55.9**	**+1.8**
	0.3nm,0.8s,baz=5.3,slow=14,SNR=5.3						
FINES	**FINESS Array B**	**73.46**	**331**	P	**P**	**05 27 34.7**	**+1.2**
	1.0nm,0.5s,baz=64,slow=4.4,SNR=6.0						
AKASG	**Malin Array Be**	**76.32**	**320**	P	**P**	**05 27 51.6**	**+1.3**
	0.4nm,0.5s,baz=56,slow=5.9,SNR=1.3						
BRTR	**Keskin Array B**	**77.99**	**308**	P	**P**	**05 27 59.7**	**-0.4**
	0.6nm,0.7s,baz=78,slow=2.1,SNR=3.7						

*IDC **05** 05:31:33.3±0.7, 3°.17N×127°.26E, h0km, mb4.0/15, mb1 4.1/15, mb1mx3.8/55, mbtmp4.0/15, MS3.0/2, Ms1 3.0/2, ms1mx2.4/42, Error ellipse: s-maj=37.8km s-min=14.1km az=73.0*
*NEIC **05** 05:31:38.8±1.3, 3°.14N±0°.09×127°.2E±0°.1, h40km±9km, mb4.3/15, Error ellipse: s-maj=16.9km s-min=13.6km az=88.0*
ISC 05 05:31:39.2±0.6, **3°.15N**±0°.07×**127°.2E**±0°.1, **h44**km, **n35**, σ**0s.75**/34, **mb4.1**/22, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.37**	**177**	Pn	**Pn**	**05 32 15.7**	**+0.2**
LUWI	**Luwuk**	**6.10**	**227**	Pn	**Pn**	**05 33 06.7**	**-0.2**
JAY	**Jayapura**	**14.59**	**113**	LR	LR	05 39 26.7	
	comp=Z,36nm,21.5s,baz=64,slow=32						
YULB	**Yu-li**	**20.93**	**345**	P	**P**	**05 36 17.3**	**-1.0**
YULB				IAmb	IAmb	05 36 30.4	
	comp=Z,46nm,1.4s						
FITZ	**Fitzroy Crossi**	**21.17**	**184**	P	**P**	**05 36 20.5**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=332,slow=8.2,SNR=1.1						
FITZ	**Fitzroy Crossi**	**21.17**	**184**	P	**P**	**05 36 20.4**	**-0.4**
WB0	**Warramunga Arr**	**23.84**	**163**	P	**P**	**05 36 48.0**	**-0.4**
WRAB	**Tennant Creek**	**23.98**	**163**	P	**P**	**05 36 49.1**	**-0.7**
WRAB				IAmb	IAmb	05 36 52.3	
	comp=Z,6.1nm,0.9s						
WRA	**Warramunga Arr**	**23.99**	**163**	P	**P**	**05 36 49.4**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=344,slow=9.7,SNR=7.2						
WB2	**Warramunga Arr**	**23.99**	**163**	P	**P**	**05 36 49.8**	**-0.1**
WB2				IAmb	IAmb	05 36 52.3	
	comp=Z,6.2nm,1.0s						
WR0	**Warramunga Arr**	**24.06**	**163**	P	**P**	**05 36 48.8**	**-1.8**
WR0				IAmb	IAmb	05 37 00.9	
	comp=Z,16nm,1.4s						
ASAR	**Alice Springs**	**27.43**	**167**	P	**P**	**05 37 21.1**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=350,slow=7.2,SNR=6.4						
ASAR				PcP	**PcP**	**05 40 40.6**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=346,slow=2.3,SNR=4.2						
JNU	**Nakatsue**	**30.01**	**6**	P	**P**	**05 37 42.8**	**-1.1**
	comp=Z,1.6nm,0.3s,baz=103,slow=14,SNR=1.7						
JNU	**Nakatsue**	**30.01**	**6**	P	**P**	**05 37 42.8**	**-1.1**
CMAR	**Chiang Mai Arr**	**31.60**	**301**	P	**P**	**05 37 57.6**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=117,slow=6.1,SNR=5.4						
FORT	**Forrest**	**33.75**	**179**	P	**P**	**05 38 16.0**	**-0.7**
BBOO	**Buckleboo**	**36.73**	**168**	P	**P**	**05 38 42.8**	**+0.4**
BBOO				IAmb	IAmb	05 38 54.0	
	comp=Z,10nm,1.5s						
STKA	**Stephens Creek**	**37.41**	**160**	P	**P**	**05 38 48.3**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=335,slow=12,SNR=5.1						
STKA	**Stephens Creek**	**37.41**	**160**	P	**P**	**05 38 47.4**	**-0.8**
USRK	**Ussuriysk Ar.**	**41.09**	**5**	P	**P**	**05 39 18.5**	**-0.2**
	comp=Z,3.3nm,0.8s,baz=153,slow=38,SNR=2.1						
SONM	**Songino Array**	**48.01**	**341**	P	**P**	**05 40 14.6**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=168,slow=7.4,SNR=3.0						
PETK	**Petropavlovsk-**	**55.77**	**22**	P	**P**	**05 41 11.9**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=235,slow=12,SNR=1.3						
MK31	**Makanchi Array**	**58.32**	**325**	P	**P**	**05 41 30.1**	**+0.3**
MK31				IAmb	IAmb	05 41 30.9	
	comp=Z,1.4nm,0.9s						
MKAR	**Makanchi Array**	**58.32**	**325**	P	**P**	**05 41 30.2**	**+0.5**
	comp=Z,1.5nm,0.4s,baz=117,slow=7.5,SNR=35						
MAKZ	**Makanchi**	**58.50**	**325**	P	**P**	**05 41 31.9**	**+0.8**
MAKZ				IAmb	IAmb	05 41 32.5	
	comp=Z,1.5nm,0.8s						
KDJ	**Kajisay**	**59.11**	**318**	P	**P**	**05 41 35.6**	**0.0**
KDJ				IAmb	IAmb	05 41 37.3	
	comp=Z,1.6nm,0.5s						
KURBB	**Kurchatov Arra**	**62.50**	**327**	P	**P**	**05 41 58.5**	**+0.4**
	comp=Z,2.3nm,0.5s,baz=130,slow=6.3,SNR=20						
KURK	**Kurchatov**	**62.50**	**327**	P	**P**	**05 41 58.9**	**+0.7**
BVAR	**Borovoye Array**	**68.08**	**327**	P	**P**	**05 42 35.9**	**+1.6**
	comp=Z,0.6nm,0.4s,baz=162,slow=37,SNR=3.2						
NRIK	**Noril'sk**	**71.11**	**346**	LR	LR	06 15 46.1	
	comp=Z,18nm,18.6s,baz=82,slow=37						
AKTO	**Aktyubinsk**	**74.42**	**322**	P	**P**	**05 43 13.1**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=94,slow=7.7,SNR=10						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARU	**Arti**	**75.69**	**328**	P	**P**	**05 43 20.5**	**+0.6**
	comp=Z,1.1nm,0.4s,baz=113,slow=2.0,SNR=5.5						
ARU	**Arti**	**75.69**	**328**	P	**P**	**05 43 19.9**	**+0.1**
ARU				IAmb	IAmb	05 43 21.2	
	comp=Z,3.7nm,0.6s						
ARCES	**ARCESS Array B**	**91.16**	**340**	P	**P**	**05 44 39.4**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=79,slow=4.7,SNR=1.7						
TORD	**Torodi Ar. Bea**	**123.58**	**288**	PKP	**PKiKP**	**05 50 34.0**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=45,slow=2.6,SNR=2.5						

*IDC **05** 05:32:35.6±4.5, 7.°78N×72.°69W, h0km, mb3.3/2, mb1 3.7/3, mb1mx3.3/32, mbtmp3.4/3, ML2.6/1, Error ellipse: s-maj=125.6km s-min=34.7km az=101.0*

*RSNC **05** 05:32:49.8±1.1, 6.°80N×73.°13W, h144km±5km, ML3.1, Mw3.4*

ISC 05 05:32:48.5±1.0**, 6.°81N**±0.°03×**73.°11W**±0.°04**, h154**km±7km**, n28, σ1s18**/50**, 5C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**0.66**	**38**	⇓iP	**Pn**	**05 33 12.5**	**+0.7**
PAMC				eS	**Sn**	**05 33 29.1**	**-0.4**
PAMC				i		05 33 30.4	
	comp=Z,216nm,0.2s						
RUSC	**La Rusia**	**0.91**	**178**	⇑iP	**Pn**	**05 33 13.5**	**-0.1**
RUSC				eS	**Sn**	**05 33 31.4**	**-1.2**
TAMC	**Tame, Arauca**	**1.36**	**106**	eP	**Pn**	**05 33 17.9**	**+0.9**
TAMC				i		05 33 38.6	
	comp=Z,111nm,0.3s						
TAMC				eS	**Sn**	**05 33 39.0**	**+0.2**
TAMC				i		05 33 45.0	
	comp=Z,73nm,0.7s						
PTBC	**PUERTO BERRIO,**	**1.36**	**259**	eP	**Pn**	**05 33 16.2**	**-0.8**
PTBC				eS	**Sn**	**05 33 37.4**	**-1.4**
PTBC				i		05 33 39.6	
	comp=Z,242nm,0.3s						
SPBC	**San Pablo de B**	**1.50**	**220**	⇑eP	**Pn**	**05 33 18.5**	**+0.1**
SPBC				eS	**Sn**	**05 33 40.5**	**-1.0**
SPBC				i		05 33 49.1	
	comp=Z,137nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.86**	**291**	eP	**Pn**	**05 33 22.5**	**+0.2**
ZARC				eS	**Sn**	**05 33 48.4**	**+0.1**
ZARC				i		05 33 54.7	
	comp=Z,151nm,0.3s						
ZARC				i		05 33 56.8	
	comp=Z,137nm,0.6s						
NORC	**Norcasia**	**2.15**	**235**	eP	**Pn**	**05 33 25.6**	**0.0**
NORC				eS	**Sn**	**05 33 54.0**	**-0.1**
NORC				i		05 33 60.0	
	comp=Z,101nm,0.2s						
SMLC	**San Martn de**	**2.19**	**334**	eP	**Pn**	**05 33 25.9**	**-0.3**
SMLC				eS	**Sn**	**05 33 54.4**	**-0.9**
SMLC				i		05 34 02.6	
	comp=Z,109nm,0.1s						
CHIC	**Chingaza**	**2.25**	**196**	⇑eP	**Pn**	**05 33 27.7**	**+0.4**
CHIC				eS	**Sn**	**05 33 56.8**	**-0.3**
CHIC				i		05 34 03.5	
	comp=Z,37nm,0.4s						
ROSC	**El Rosal**	**2.30**	**212**	Pn	**Pn**	**05 33 29.4**	**+1.6**
	comp=Z,14nm,0.3s,baz=311,slow=20,SNR=78						
ROSC				Sn	**Sn**	**05 33 57.9**	**-0.1**
	comp=Z,37nm,0.3s,baz=359,slow=23,SNR=24						
ROSC	**El Rosal**	**2.30**	**212**	⇑iP	**Pn**	**05 33 29.4**	**+1.6**
ROSC				eS	**Sn**	**05 33 59.0**	**+0.9**
ROSC				i		05 34 04.3	
	comp=Z,116nm,0.3s						
HELC	**Santa Helena**	**2.48**	**256**	eP	**Pn**	**05 33 30.0**	**0.0**
HELC				eS	**Sn**	**05 34 01.3**	**-0.5**
HELC				i		05 34 08.2	
	comp=Z,97nm,0.2s						
UREC	**San Jos de Ur**	**2.58**	**291**	eP	**Pn**	**05 33 30.0**	**-0.8**
UREC				eS	**Sn**	**05 34 01.2**	**-2.3**
UREC				i		05 34 03.4	
	comp=Z,108nm,0.1s						
GUY2C	**Guyana, Caldas**	**2.74**	**235**	eP	**Pn**	**05 33 34.2**	**+1.0**
GUY2C				eS	**Sn**	**05 34 08.6**	**+0.8**
GUY2C				i		05 34 14.6	
	comp=Z,72nm,0.5s						
VILC	**Villavicencio,**	**2.74**	**192**	eP	**Pn**	**05 33 32.5**	**-0.5**
VILC				eS	**Sn**	**05 34 07.0**	**-0.4**
VILC				i		05 34 11.8	
	comp=Z,56nm,0.5s						
PTGC	**Puerto Gaitan,**	**2.77**	**159**	⇑eP	**Pn**	**05 33 32.7**	**-0.5**
PTGC				eS	**Sn**	**05 34 05.6**	**-2.2**
PTGC				i		05 34 11.9	
	comp=Z,39nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.04**	**252**	eP	**Pn**	**05 33 37.7**	**+1.1**
CBOC				eS	**Sn**	**05 34 13.7**	**-0.2**
CBOC				i		05 34 17.2	
	comp=Z,29nm,0.2s						
DBBC	**Dabeiba**	**3.08**	**274**	eP	**Pn**	**05 33 37.6**	**+0.4**
TOLC	**Tolima**	**3.12**	**225**	eP	**Pn**	**05 33 39.1**	**+1.2**
TOLC				i		05 34 22.3	
	comp=Z,21nm,0.3s						
SDV	**Santo Domingo**	**3.20**	**50**	⇓iP	**Pn**	**05 33 39.4**	**+0.6**
ARGC	**Ariguani, Magd**	**3.23**	**340**	eP	**Pn**	**05 33 40.0**	**+1.1**
ARGC				eS	**Sn**	**05 34 17.8**	**-0.3**
ARGC				i		05 34 24.1	
	comp=Z,21nm,0.4s						
ORTC	**Ortega, Tolima**	**3.58**	**217**	eP	**Pn**	**05 33 44.5**	**+1.0**
ORTC				eS	**Sn**	**05 34 26.0**	**-0.3**
ORTC				i		05 34 32.6	
	comp=Z,34nm,0.4s						
ELOV	**Elorza**	**3.60**	**87**	eP	**Pn**	**05 33 43.9**	**+0.1**
SJCC	**San Jacinto, C**	**3.69**	**326**	eP	**Pn**	**05 33 44.0**	**-0.9**
SJCC				eS	**Sn**	**05 34 25.1**	**-3.5**
SJCC				i		05 34 29.4	
	comp=Z,27nm,0.5s						
GUVC	**San Jose del G**	**4.27**	**174**	eP	**Pn**	**05 33 52.0**	**-0.4**
GUVC				eS	**Sn**	**05 34 41.0**	**-1.1**
GUVC				i		05 34 45.4	
	comp=Z,31nm,0.3s						
MACC	**Macarena, Meta**	**4.69**	**189**	eP	**Pn**	**05 33 56.7**	**-1.3**
MACC				eS	**Sn**	**05 34 48.5**	**-3.7**
MACC				i		05 34 53.6	
	comp=Z,12nm,0.9s						
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**	**05 39 40.2**	**+1.1**
	comp=Z,0.1nm,0.5s,baz=138,slow=12,SNR=1.8						
YKA	**Yellowknife Ar**	**63.28**	**340**	P	**P**	**05 43 00.8**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=133,slow=7.0,SNR=8.0						

*IDC **05** 05:34:38.6±1.4, 28.°44N×140.°07E, h238km±12km, mb3.2/12, mb1 3.4/15, mb1mx3.2/55, mbtmp3.8/15, Error ellipse: s-maj=22.2km s-min=16.5km az=49.0*

*JMA **05** 05:34:38.9±0.1, 28.°63N×140.°96E, h272km, M3.9*

ISC 05 05:34:39.6±0.7**, 28.°50N**±0.°08×**140.°3E**±0.°1**, h250**km**, n30, σ1s32**/37**, mb3.4**/12**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.16**	**130**	P	**Pn**	**05 35 22.4**	**-1.1**
CBIJ				S	**S**	**05 35 55.9**	**-2.2**
JCJ	**Chichijima**	**2.16**	**130**	P	**Pn**	**05 35 22.5**	**-1.0**
	73nm,0.3s,baz=11,slow=18,SNR=94						
JCJ				S	**S**	**05 35 55.9**	**-2.3**
	67nm,0.3s,baz=281,slow=22,SNR=17						
JHH2	**Haha-jima-NKT2**	**2.48**	**138**	P	**Pn**	**05 35 25.7**	**-0.9**
JHH2				S	**S**	**05 36 01.9**	**-1.9**
JHJ2	**Mitsune**	**4.62**	**355**	P	**Pn**	**05 35 51.4**	**+0.8**
JHJ2				eS	**S**	**05 36 47.3**	**0.0**
JHJ	**Hachijo jima 2**	**4.63**	**354**	P	**Pn**	**05 35 51.1**	**+0.4**
	29nm,0.3s,baz=251,slow=19,SNR=27						
JHJ				S	**S**	**05 36 44.5**	**-3.0**
	7.6nm,0.3s,baz=107,slow=19,SNR=2.1						
JMKN	**Mikurajimanish**	**5.41**	**353**	P	**Pn**	**05 36 00.5**	**+0.2**
BSO1	**Boso 1**	**6.16**	**5**	P	**Pn**	**05 36 08.9**	**-0.2**
BSO3	**Boso 3**	**6.29**	**1**	P	**Pn**	**05 36 10.4**	**-0.5**
BSO4	**Boso 4**	**6.47**	**0**	P	**Pn**	**05 36 13.4**	**0.0**
JOD2	**Odawara 2**	**6.83**	**351**	P	**Pn**	**05 36 17.9**	**-0.1**
JOD2				S	**S**	**05 37 33.6**	**-3.4**
JNY	**Yasuok**	**7.15**	**344**	P	**Pn**	**05 36 23.3**	**+1.2**
JHU	**Hanno**	**7.38**	**353**	P	**Pn**	**05 36 23.9**	**-1.1**
JRY	**Ryogami san**	**7.59**	**351**	P	**Pn**	**05 36 27.3**	**-0.3**
MJAR	**Matsushiro Arr**	**8.22**	**348**	P	**Pn**	**05 36 33.9**	**-1.7**
	0.0nm,0.3s,baz=145,slow=10,SNR=1.8						
JHK	**Hiroka**	**8.79**	**353**	P	**Pn**	**05 36 41.1**	**-1.7**
MKAR	**Makanchi Array**	**48.32**	**309**	P	**P**	**05 42 55.1**	**-0.9**
	0.2nm,0.3s,baz=85,slow=10,SNR=7.1						
MKAR				PcP	**PcP**	**05 44 18.7**	**+0.2**
	0.1nm,0.4s,baz=99,slow=6.3,SNR=1.9						
WRA	**Warramunga Arr**	**48.50**	**188**	P	**P**	**05 42 57.3**	**-0.3**
	0.3nm,0.4s,baz=5.9,slow=7.9,SNR=1.6						
KURBB	**Kurchatov Arra**	**50.89**	**314**	P	**P**	**05 43 14.1**	**-1.0**
	0.7nm,0.5s,baz=89,slow=7.1,SNR=6.3						
BVAR	**Borovoye Array**	**55.90**	**317**	P	**P**	**05 43 51.0**	**-0.5**
	0.4nm,0.4s,baz=98,slow=6.7,SNR=2.7						
INK	**Inuvik**	**62.44**	**25**	P	**P**	**05 44 37.0**	**+1.1**
	0.6nm,0.3s,baz=295,slow=6.0,SNR=7.2						
ARCES	**ARCESS Array B**	**71.68**	**340**	P	**P**	**05 45 34.2**	**+0.5**
	0.6nm,0.5s,baz=64,slow=5.5,SNR=5.5						
YKA	**Yellowknife Ar**	**71.69**	**28**	P	**P**	**05 45 34.8**	**+0.9**
	0.6nm,0.6s,baz=294,slow=5.6,SNR=5.6						
FINES	**FINESS Array B**	**75.96**	**333**	P	**P**	**05 45 58.3**	**-0.4**
	0.9nm,0.8s,baz=46,slow=5.5,SNR=5.7						
NVAR	**Mina Array Bea**	**80.93**	**51**	P	**P**	**05 46 28.5**	**+1.9**
	0.8nm,0.6s,baz=304,slow=6.3,SNR=8.2						
NOA	**NORSAR Array B**	**81.70**	**338**	P	**P**	**05 46 29.6**	**-0.3**
	0.4nm,0.5s,baz=56,slow=6.3,SNR=2.6						
PDAR	**Pinedale Array**	**84.36**	**44**	P	**P**	**05 46 45.9**	**+1.8**
	0.3nm,0.7s,baz=252,slow=5.4,SNR=3.2						
TXAR	**Lajitas Array**	**96.06**	**52**	P	**P**	**05 47 40.0**	**+0.9**
	0.1nm,0.4s,baz=338,slow=4.8,SNR=2.4						
TORD	**Torodi Ar. Bea**	**122.43**	**310**	PKP	**PKiKP**	**05 53 05.8**	**-0.2**
	0.8nm,1.1s,baz=99,slow=1.6,SNR=2.3						
PTGA	**Pitinga**	**146.25**	**39**	PKPbc	**PKPab**	**05 53 52.2**	**-0.4**
	0.9nm,0.4s,baz=135,slow=8.3,SNR=1.5						
LPAZ	**La Paz**	**151.10**	**71**	PKPbc	**PKiKP**	**05 54 05.5**	**+0.7**
	0.5nm,0.5s,baz=326,slow=3.6,SNR=2.9						

*IDC **05** 05:54:24.4±0.7, 19.°71S×70.°72W, h0km, mb4.3/15, mb1 4.4/19, mb1mx4.3/36, mbtmp4.3/19, ML4.0/4, MS3.8/16, Ms1 3.8/16, ms1mx3.6/33, Error ellipse: s-maj=19.7km s-min=11.8km az=58.0*

*SJA **05** 05:54:25.6±0.8, 19.°83S×70.°93W, h21km±2km, ML4.6, MW4.6*

*NEIC **05** 05:54:26.5±1.9, 19.°87S±0.°03×70.°96W±0.°05, h20km±1km, mb4.7/80, Mwr4.5/50, Error ellipse: s-maj=8.8km s-min=5.5km az=278.0*

*NEIC **05** 05:54:26.2, 19.°88S×70.°96W, h20km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}4.85; $M_{\theta\theta}$-0.47; $M_{\phi\phi}$-4.39; $M_{r\theta}$1.26; $M_{\theta\phi}$1.88; $M_{\phi r}$-4.53; Fault plane solution: $M_0$6.87000×10^{15} NP1:ϕ_s333.16000°, δ23.62000°, λ81.39000°. NP2:ϕ_s162.54000°, δ66.66000°, λ93.75000°. Principal axes: T 6.7343, Plg68.0000°, Azm80.0000°; N 0.2591, Plg3.0000°, Azm341.0000°; P -6.9935, Plg22.0000°, Azm250.0000°;*

*GUC **05** 05:54:27.1±0.7, 19.°82S×70.°93W, h39km±1km, ML4.6*

*VAO **05** 05:54:34.0±0.9, 19.°82S×70.°47W, h66km±7km, mb4.5*

ISC 05 05:54:26.3±0.4**, 19.°85S**±0.°02×**70.°95W**±0.°05**, h21**km±3km**, n222, σ1s30**/245**, mb4.7**/46**, MS3.9**/11**, 13C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.82**	**72**	⇓eP	**Pb**	**05 54 41.9**	**-0.1**
PSGC				eS	**Sb**	**05 54 52.9**	**+0.3**
PSGCX	**Pisagua**	**0.82**	**72**		**Pb**	**05 54 41.5**	**-0.5**
PSGCX				Sg	**Sn**	**05 54 53.2**	**-1.2**
PSGCX	**Pisagua**	**0.82**	**72**	iP	**Pb**	**05 54 42.0**	**0.0**
PSGCX				iS	**Sb**	**05 54 52.9**	**+0.3**
PSGCX				IAML		05 54 55.4	
	comp=Z,7µm,0.4s						
TA02	**Huaiquique**	**0.88**	**118**	⇓iP	**Pn**	**05 54 43.3**	**-0.2**
TA02				iS	**Sn**	**05 54 55.3**	**-0.4**
TA02				IAML		05 54 58.3	
	comp=N,58µm,0.5s						
TA01	**Diego Aracena**	**1.01**	**135**	⇓iP	**Pn**	**05 54 45.7**	**+0.3**
TA01				iS	**Sn**	**05 54 58.9**	**-0.2**
TA01				IAML		05 55 02.8	
	comp=E,35µm,0.6s						
PATCX	**Punta Patache**	**1.22**	**142**	⇑iP	**Pn**	**05 54 48.8**	**+0.5**
PATCX				iS	**Sn**	**05 55 04.4**	**+0.1**
PATCX				IAML		05 55 10.3	
	comp=E,13µm,0.5s						
PATCX	**Punta Patache**	**1.22**	**142**		**Pb**	**05 54 49.1**	**+0.3**
PATCX					**Sn**	**05 55 04.2**	**0.0**
PATCX	**Punta Patache**	**1.22**	**142**	iP	**Pb**	**05 54 48.9**	**+0.1**
PATCX				iS	**Sn**	**05 55 04.3**	**0.0**
PATCX				IAML		05 55 10.2	
	comp=Z,14µm,0.6s						
PB11	**IPOC Station P**	**1.22**	**86**	⇓iP	**Pn**	**05 54 48.6**	**+0.2**
PB11				iS	**Sn**	**05 55 04.8**	**+0.4**
PB11				IAML		05 55 08.4	
	comp=E,16µm,0.5s						
PB11	**IPOC Station P**	**1.22**	**86**		**Pb**	**05 54 48.9**	**+0.1**
PB11					**Sn**	**05 55 04.8**	**+0.4**
PB11	**IPOC Station P**	**1.22**	**86**	eP	**Pb**	**05 54 48.8**	**0.0**
PB11				iS	**Sn**	**05 55 05.0**	**+0.6**
PB11				IAML		05 55 10.7	
	comp=Z,12µm,0.9s						
PB12	**IPOC Station P**	**1.36**	**26**	⇑iP	**Pn**	**05 54 50.6**	**+0.3**
PB12				iS	**Sb**	**05 55 08.0**	**-0.3**
PB12	**IPOC Station P**	**1.36**	**26**		**Pb**	**05 54 51.0**	**-0.2**
PB12				Sg	**Sb**	**05 55 09.4**	**+1.1**
PB12	**IPOC Station P**	**1.36**	**26**	iP	**Pb**	**05 54 50.8**	**-0.5**
PB12				iS	**Sb**	**05 55 09.3**	**+1.1**
PB12				IAML		05 55 15.4	
	comp=Z,7µm,0.5s						
MNMC	**Minye Minye**	**1.47**	**61**	⇑iP	**Pb**	**05 54 52.8**	**-0.3**
MNMC				iS	**Sb**	**05 55 12.0**	**+0.6**
MNMC	**Minye Minye**	**1.47**	**61**		**Pb**	**05 54 53.2**	**+0.1**
MNMC				Sn	**Sb**	**05 55 11.4**	**0.0**
MNMCX	**Minye Minye**	**1.47**	**61**	eP	**Pb**	**05 54 53.0**	**-0.1**
MNMCX				iS	**Sb**	**05 55 13.1**	**+1.7**
MNMCX				IAML		05 55 19.0	
	comp=Z,22µm,0.4s						
AP01	**Chacalluta**	**1.58**	**21**	⇑iP	**Pn**	**05 54 53.7**	**+0.5**
AP01				iS	**Sb**	**05 55 13.6**	**-0.8**
AP01				IAML		05 55 16.6	
	comp=N,26µm,0.3s						
AP01	**Chacalluta**	**1.58**	**21**	Pn	**Pn**	**05 54 53.9**	**+0.7**
GO01	**Chusmiza**	**1.67**	**84**	⇑iP	**Pb**	**05 54 55.9**	**-0.7**
GO01				iS	**Sb**	**05 55 17.9**	**+0.6**
GO01				IAML		05 55 19.9	
	comp=N,17µm,0.3s						
GO01	**Chusmiza**	**1.67**	**84**		**Pb**	**05 54 56.1**	**-0.5**
PB08	**IPOC Station P**	**1.71**	**100**	⇑iP	**Pn**	**05 54 56.4**	**+1.0**
PB08				iS	**Sb**	**05 55 19.1**	**+0.5**
PB08				IAML		05 55 21.1	
	comp=N,6µm,0.4s						
PB08	**IPOC Station P**	**1.71**	**100**		**Pb**	**05 54 56.7**	**-0.7**
PB08	**IPOC Station P**	**1.71**	**100**	iP	**Pb**	**05 54 56.6**	**-0.7**
PB08				iS	**Sb**	**05 55 19.2**	**+0.5**
PB08				IAML		05 55 26.6	
	comp=Z,7µm,0.9s						
PB02	**IPOC Station P**	**1.76**	**146**	⇑iP	**Pn**	**05 54 56.5**	**+0.7**
PB02				iS	**Sn**	**05 55 18.2**	**+0.5**
PB02				IAML		05 55 29.0	
	comp=E,18µm,0.6s						
PB02	**IPOC Station P**	**1.76**	**146**	iP	**Pn**	**05 54 56.7**	**+0.9**
PB02				iS	**Sb**	**05 55 21.3**	**+1.5**
PB02				IAML		05 55 28.2	
	comp=Z,16µm,0.6s						
PB01	**IPOC Station P**	**1.81**	**131**	⇑iP	**Pn**	**05 54 57.5**	**+1.1**
PB01				iS	**Sn**	**05 55 19.9**	**+1.0**
PB01				IAML		05 55 27.9	
	comp=E,8µm,0.6s						
PB01	**IPOC Station P**	**1.81**	**131**		**Pn**	**05 54 57.8**	**+1.3**
PB01	**IPOC Station P**	**1.81**	**131**	iP	**Pn**	**05 54 57.8**	**+1.3**
PB01				iS	**Sb**	**05 55 20.4**	**-0.9**
PB01				IAML		05 55 26.4	
	comp=Z,5µm,0.9s						
PB16	**IPOC Station P**	**2.04**	**42**	⇑eP	**Pn**	**05 55 01.1**	**+1.1**
PB16				eS	**Sb**	**05 55 27.3**	**-0.8**
PB16				IAML		05 55 31.2	
	comp=N,7µm,0.3s						
PB16	**IPOC Station P**	**2.04**	**42**		**Pb**	**05 55 01.5**	**-1.4**
PB16	**IPOC Station P**	**2.04**	**42**	eP	**Pn**	**05 55 01.3**	**+1.3**
PB16				iS	**Sb**	**05 55 29.1**	**+1.1**
PB16				IAML		05 55 35.0	
	comp=Z,8µm,0.5s						
PB07	**IPOC Station P**	**2.11**	**152**	⇑eP	**Pn**	**05 55 01.2**	**+0.5**
PB07				eS	**Sb**	**05 55 28.9**	**-1.1**
PB07				IAML		05 55 40.9	
	comp=E,7µm,0.3s						
PB07	**IPOC Station P**	**2.11**	**152**		**Pn**	**05 55 01.7**	**+1.0**
PB07	**IPOC Station P**	**2.11**	**152**	iP	**Pn**	**05 55 01.3**	**+0.6**
PB07				IAML		05 55 42.6	
	comp=Z,7µm,0.7s						
PB03	**IPOC Station P**	**2.46**	**153**	⇑eP	**Pn**	**05 55 05.8**	**+0.5**
PB03				⇓eS	**Sn**	**05 55 37.0**	**+2.2**
PB03				IAML		05 56 00.5	
	comp=E,2µm,0.5s						
PB03	**IPOC Station P**	**2.46**	**153**	iP	**Pn**	**05 55 06.1**	**+0.7**
PB03				iS	**Sb**	**05 55 44.8**	**+5.0**
PB03				IAML		05 55 48.6	
	comp=Z,3µm,0.8s						
PB09	**IPOC Station P**	**2.51**	**141**	⇑eP	**Pn**	**05 55 08.0**	**+1.9**
PB09				eS	**Sb**	**05 55 39.4**	**-2.0**
PB09				IAML		05 55 51.4	
	comp=E,6µm,0.5s						
PB09	**IPOC Station P**	**2.51**	**141**		**Pn**	**05 55 08.4**	**+2.2**
PB09	**IPOC Station P**	**2.51**	**141**	iP	**Pn**	**05 55 08.2**	**+2.0**
PB09				iS	**Sb**	**05 55 39.3**	**-2.1**
PB09				IAML		05 55 54.6	
	comp=Z,6µm,0.6s						
PB04	**IPOC Station P**	**2.58**	**163**	⇑eP	**Pn**	**05 55 07.1**	**0.0**
PB04				eS	**Sn**	**05 55 36.1**	**-1.9**
PB04	**IPOC Station P**	**2.58**	**163**		**Pn**	**05 55 07.4**	**+0.3**
PB04	**IPOC Station P**	**2.58**	**163**	iP	**Pn**	**05 55 07.2**	**+0.1**
PB04				iS	**Sn**	**05 55 36.1**	**-1.9**
PB04				IAML		05 55 59.7	
	comp=Z,3µm,1.4s						
PB05	**IPOC Station P**	**3.07**	**167**	IAML		05 56 19.6	
	comp=N,1µm,0.7s						
PB05	**IPOC Station P**	**3.07**	**167**	iP	**Pn**	**05 55 13.4**	**-0.4**
PB05				IAML		05 56 22.8	
	comp=Z,1µm,0.6s						
PB06	**IPOC Station P**	**3.12**	**156**	IAML		05 56 10.7	
	comp=N,2µm,0.7s						
PB06	**IPOC Station P**	**3.12**	**156**		**Pn**	**05 55 14.8**	**+0.4**
PB06	**IPOC Station P**	**3.12**	**156**	iP	**Pn**	**05 55 14.7**	**+0.2**
PB06				iS	**Sb**	**05 55 55.5**	**-3.4**
PB06				IAML		05 56 10.2	
	comp=Z,3µm,0.8s						
LVC	**Limon Verde**	**3.34**	**146**	Pn	**Pn**	**05 55 19.4**	**+1.6**
	comp=Z,31nm,0.3s,baz=330,slow=9.2,SNR=160						
LVC				Pg	**Pb**	**05 55 26.8**	**+1.7**
	comp=Z,122nm,0.3s,baz=298,slow=8.4,SNR=40						
LVC				Sn	**Sn**	**05 55 58.3**	**+1.3**
	comp=Z,54nm,0.3s,baz=314,slow=22,SNR=7.6						
LVC				Lg	Lg	05 56 11.0	
	comp=Z,117nm,0.3s,baz=171,slow=23,SNR=8.8						
LVC	**Limon Verde**	**3.34**	**146**		**Pn**	**05 55 19.7**	**+2.0**
LVC	**Limon Verde**	**3.34**	**146**	iP	**Pn**	**05 55 19.8**	**+2.0**
LVC				iS	**Sn**	**05 55 58.6**	**+1.6**
LVC				IAML		05 56 23.3	
	comp=Z,858nm,0.6s						
LVC	**Limon Verde**	**3.34**	**146**	eP	**Pn**	**05 55 19.8**	**+2.0**
PB15	**IPOC Station P**	**3.61**	**158**		**Pn**	**05 55 21.9**	**+0.5**
PB15	**IPOC Station P**	**3.61**	**158**	iP	**Pn**	**05 55 21.7**	**+0.3**
PB15				IAML		05 56 35.6	
	comp=Z,2µm,0.7s						
PB10	**IPOC Station P**	**3.66**	**174**		**Pn**	**05 55 21.2**	**-0.6**
PB10	**IPOC Station P**	**3.66**	**174**	iP	**Pn**	**05 55 21.1**	**-0.7**
PB10				IAML		05 56 42.9	
	comp=Z,555nm,0.7s						
LPAZ	**La Paz**	**4.45**	**38**	Pn	**Pn**	**05 55 37.1**	**+3.9**
	comp=Z,2.7nm,0.3s,baz=237,slow=7.0,SNR=39						
LPAZ				Pg	Pb	05 55 51.0	+6.9
	comp=Z,15nm,0.3s,baz=213,slow=13,SNR=22						
LPAZ				Lg	Lg	05 56 45.0	
	comp=Z,3.3nm,0.3s,baz=184,slow=16,SNR=1.4						
LPAZ				LR	LR	05 57 26.6	
	comp=Z,1µm,18.1s,baz=239,slow=43						
LPAZ	**La Paz**	**4.45**	**38**		**Pn**	**05 55 34.0**	**+0.8**
LPAZ	**La Paz**	**4.45**	**38**	eP	**Pn**	**05 55 37.0**	**+3.9**
PB14	**IPOC Station P**	**4.78**	**174**		**Pn**	**05 55 36.7**	**-0.7**
PB14	**IPOC Station P**	**4.78**	**174**	iP	**Pn**	**05 55 36.5**	**-0.9**
PB14				IAML		05 57 08.7	
	comp=Z,341nm,0.9s						
GO02	**Mina Guanaco**	**5.43**	**167**		**Pn**	**05 55 46.6**	**+0.1**
YJA	**Yavi**	**5.58**	**115**	eP	**Pn**	**05 55 52.0**	**+3.4**
YJA				IAML		05 57 35.6	
	comp=Z,21nm,2.3s						
AZAP	**Zapla**	**6.98**	**130**	iP	**Pn**	**05 56 11.5**	**+3.8**
AC02	**Maricunga**	**7.15**	**167**	Pn	**Pn**	**05 56 10.9**	**+0.7**
AC05	**El Transito**	**8.97**	**176**	Pn	**Pn**	**05 56 34.1**	**-0.7**
NNA	**Nana**	**9.65**	**323**	Pn	**Pn**	**05 56 47.0**	**+2.8**
	comp=Z,1.0nm,0.3s,baz=158,slow=11,SNR=2.5						
NNA				LR	LR	06 00 10.4	
	comp=Z,139nm,20.8s,baz=154,slow=36						
SIV	**San Ignacio**	**10.16**	**69**	Pn	**Pn**	**05 56 50.1**	**-1.0**
	comp=Z,5.7nm,0.3s,baz=273,slow=10,SNR=103						
SIV				LR	LR	06 01 12.3	
	comp=Z,687nm,19.8s,baz=275,slow=41						
GO04	**Tololo Observa**	**10.28**	**179**	Pn	**Pn**	**05 56 52.1**	**-0.8**
CO03	**El Pedregal**	**10.94**	**179**	Pn	**Pn**	**05 57 01.4**	**-0.5**
CO02	**Combarbal**	**11.30**	**180**	Pn	**Pn**	**05 57 07.1**	**+0.3**
PTLB	**Pontes e Lacer**	**12.08**	**71**	eP	**Pn**	**05 57 17.1**	**-0.3**
CO04	**Los Peladeros**	**12.14**	**180**	Pn	**Pn**	**05 57 18.8**	**+0.4**
VILB	**Vilhena**	**12.38**	**58**	eP	**Pn**	**05 57 21.4**	**-0.2**
VA03	**San Esteban**	**12.86**	**178**	Pn	**Pn**	**05 57 27.9**	**-0.2**
SAML	**Samuel**	**13.19**	**36**		**Pn**	**05 57 32.1**	**-0.5**
MT02	**Curacav**	**13.35**	**181**	Pn	**Pn**	**05 57 34.3**	**-0.5**
MT01	**Popeta**	**13.96**	**181**	Pn	**Pn**	**05 57 41.9**	**-1.1**
CPUP	**Villa Florida**	**14.09**	**120**	Pn	**Pn**	**05 57 44.8**	**0.0**
	comp=Z,0.1nm,0.3s,baz=347,slow=14,SNR=2.3						
CPUP				LR	LR	06 04 21.4	
	comp=Z,282nm,21.7s,baz=300,slow=43						
CPUP	**Villa Florida**	**14.09**	**120**	Pn	**Pn**	**05 57 42.9**	**-2.0**
ATAH	**Atahualpa**	**14.56**	**329**	LR	LR	06 03 50.4	
	comp=Z,172nm,19.2s,baz=70,slow=39						
BO02	**Sierra Bellavi**	**14.88**	**179**	Pn	**Pn**	**05 57 52.7**	**-3.0**
H03N1	**Juan Fernandez**	**15.28**	**206**	T	T	06 13 49.5	
	baz=32,slow=72,SNR=134						
H03N2	**Juan Fernandez**	**15.29**	**206**	T	T	06 13 44.3	
	baz=32,slow=72,SNR=51						
H03N3	**Juan Fernandez**	**15.30**	**206**	T	T	06 13 48.1	
	baz=32,slow=72,SNR=88						
CLDB	**Colider**	**17.11**	**61**	eP	**Pn**	**05 58 23.1**	**-1.4**
C2SB	**Chapadao do Su**	**17.13**	**89**	eP	**Pn**	**05 58 23.8**	**-0.9**
TRCB	**Terra Rica**	**17.32**	**103**	eP	**Pn**	**05 58 26.1**	**-0.9**
PTGB	**Pitanga**	**18.13**	**109**	eP	**P**	**05 58 37.3**	**-0.1**
PCMB	**Pacaembu**	**18.50**	**99**	eP	**P**	**05 58 38.5**	**-2.8**
ARAG	**Araguaiana, MT**	**18.68**	**80**	eP	**P**	**05 58 42.1**	**-1.3**
ITAB	**Concordia**	**18.74**	**117**	eP	**P**	**05 58 43.7**	**-0.2**
PLTB	**Pedras Altas**	**19.58**	**131**	eP	**Pn**	**05 58 54.0**	**-0.5**
CNLB	**Canela**	**20.54**	**121**	eP	**P**	**05 59 02.5**	**-1.1**
PLCA	**Paso Flores**	**20.82**	**179**	P	Pn	05 59 09.2	+0.2
	comp=Z,9.0nm,1.0s,baz=2.5,slow=11,SNR=8.2						
PLCA	**Paso Flores**	**20.82**	**179**	P	**P**	**05 59 06.6**	**0.0**
PLCA	**Paso Flores**	**20.82**	**179**	eP	Pn	05 59 10.7	+1.7
IPMB	**Ipameri, GO**	**21.59**	**89**	eP	**P**	**05 59 13.2**	**-1.9**
PTGA	**Pitinga**	**21.84**	**31**	P	**P**	**05 59 15.9**	**-1.7**
	comp=Z,25nm,0.3s,baz=211,slow=16,SNR=42						
PTGA				LR	LR	06 08 28.1	
	comp=Z,329nm,19.6s,baz=209,slow=39						
PTGA	**Pitinga**	**21.84**	**31**	P	**P**	**05 59 16.2**	**-1.4**
PTGA				IAmb	IAmb	05 59 20.6	
	comp=Z,24nm,0.5s						
PTGA	**Pitinga**	**21.84**	**31**	eP	**P**	**05 59 16.3**	**-1.3**
SPB	**Sao Paulo**	**22.16**	**104**	eP	**P**	**05 59 19.9**	**-1.2**
BDFB	**Brasilia**	**22.24**	**83**	P	**P**	**05 59 19.6**	**-2.5**
	comp=Z,6.7nm,0.6s,baz=252,slow=11,SNR=15						
BDFB				LR	LR	06 09 38.9	
	comp=Z,476nm,20.0s,baz=290,slow=42						
BDFB	**Brasilia**	**22.24**	**83**	P	**P**	**05 59 19.3**	**-2.8**
VAO	**Valinhos**	**22.54**	**102**	eP	**P**	**05 59 24.1**	**-1.2**
PARB	**Paraibuna**	**23.80**	**103**	eP	**P**	**05 59 37.6**	**-0.4**
BSCB	**Bom Sucesso**	**24.55**	**97**	eP	**P**	**05 59 43.7**	**-1.3**
ROSC	**El Rosal**	**24.76**	**352**	P	**P**	**05 59 49.1**	**+1.9**
	comp=Z,3.4nm,0.5s,baz=162,slow=19,SNR=4.2						
ROSC				LR	LR	06 09 51.7	
	comp=Z,249nm,19.1s,baz=202,slow=38						
ROSC	**El Rosal**	**24.76**	**352**	P	**P**	**05 59 44.5**	**-2.7**
SMTB	**Santa Maria do**	**25.09**	**68**	eP	**P**	**05 59 49.4**	**-0.5**
RUSC	**La Rusia**	**25.67**	**355**	P	**P**	**05 59 56.5**	**+0.9**
JANB	**Januaria**	**25.84**	**84**	eP	**P**	**05 59 55.0**	**-1.7**
SDV	**Santo Domingo**	**28.56**	**1**	P	**P**	**06 00 19.8**	**-1.4**
	comp=Z,1.8nm,0.5s,baz=162,slow=20,SNR=2.0						
SDV				LR	LR	06 10 47.0	
	comp=Z,150nm,21.5s,baz=236,slow=35						
MDP	**Montagnes des**	**30.65**	**38**	P	**P**	**06 00 38.3**	**-1.2**
	comp=Z,15nm,1.1s,baz=204,slow=7.5,SNR=5.3						
MDP				LR	LR	06 13 40.5	
	comp=Z,396nm,19.5s,baz=214,slow=38						
RCBR	**Riachuelo**	**36.80**	**73**	P	**P**	**06 01 33.0**	**-0.1**
	comp=Z,19nm,0.9s,baz=244,slow=9.3,SNR=7.4						
MLPR	**Magueyes Islan**	**37.78**	**6**	P	**P**	**06 01 40.9**	**-0.4**
MTP	**Monte Pirata**	**38.08**	**8**	P	**P**	**06 01 42.9**	**-0.9**
MTP				IAmb	IAmb	06 01 50.7	
	comp=Z,19nm,1.1s						
HUMP	**Col San Antoni**	**38.09**	**8**	P	**P**	**06 01 44.2**	**+0.4**
HUMP				IAmb	IAmb	06 01 55.6	
	comp=Z,8.2nm,0.9s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CBYP	**Canovanas**	**38.22**	**8**	P	**P**	**06 01 43.5**	**-1.4**
CBYP				IAmb	IAmb	06 01 55.8	
	comp=Z,14nm,0.7s						
CUPR	**Culebra, Puert**	**38.33**	**9**	P	**P**	**06 01 45.7**	**-0.2**
CUPR				IAmb	IAmb	06 01 55.7	
	comp=Z,14nm,0.8s						
656A	**Willston**	**50.19**	**347**	P	**P**	**06 03 19.9**	**-0.8**
656A				IAmb	IAmb	06 03 33.0	
	comp=Z,16nm,0.9s						
V52A	**Sevierville**	**56.67**	**348**	P	**P**	**06 04 08.6**	**+0.4**
V52A				IAmb	IAmb	06 04 10.8	
	comp=Z,8.9nm,1.1s						
PLAL	**Pickwick Lake**	**56.91**	**343**	P	**P**	**06 04 09.6**	**-0.3**
PLAL				IAmb	IAmb	06 04 20.4	
	comp=Z,4.9nm,1.0s						
CCAR	**Cane Creek**	**57.03**	**339**	P	**P**	**06 04 11.3**	**+0.5**
CCAR				IAmb	IAmb	06 04 12.9	
	comp=Z,14nm,1.2s						
WLAR	**White Oak Lake**	**57.28**	**338**	P	**P**	**06 04 14.3**	**+1.7**
WVT	**Waverly**	**57.92**	**344**	P	**P**	**06 04 16.8**	**-0.2**
WVT				IAmb	IAmb	06 04 27.0	
	comp=Z,4.6nm,0.7s						
TXAR	**Lajitas Array**	**58.20**	**326**	P	**P**	**06 04 19.6**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=148,slow=6.6,SNR=7.2						
TXAR				LR	LR	06 28 22.4	
	comp=Z,35nm,18.2s,baz=0.0,slow=35						
TX31	**Lajitas Ar. Si**	**58.20**	**326**	P	**P**	**06 04 18.3**	**-1.0**
TX31				IAmb	IAmb	06 04 30.3	
	comp=Z,6.6nm,1.1s						
TX32	**Lajitas Array**	**58.20**	**326**	P	**P**	**06 04 18.0**	**-1.3**
MIAR	**Mount Ida**	**58.22**	**338**	P	**P**	**06 04 20.4**	**+1.2**
MIAR				IAmb	IAmb	06 04 32.3	
	comp=Z,20nm,1.5s						
T47A	**Sharon Grove**	**58.55**	**345**	P	**P**	**06 04 20.4**	**-1.0**
T47A				IAmb	IAmb	06 04 33.0	
	comp=Z,9.6nm,1.1s						
LCAR	**Lake Charles**	**58.81**	**341**	P	**P**	**06 04 22.8**	**-0.5**
LCAR				IAmb	IAmb	06 04 34.8	
	comp=Z,4.9nm,1.0s						
S44A	**Carbondale**	**59.78**	**343**	P	**P**	**06 04 30.4**	**+0.5**
S44A				IAmb	IAmb	06 04 49.5	
	comp=Z,7.2nm,0.7s						
MCWV	**Mont Chateau**	**59.78**	**352**	P	**P**	**06 04 28.6**	**-1.3**
MCWV				IAmb	IAmb	06 04 40.8	
	comp=Z,3.2nm,0.7s						
SIUC	**Southern Illin**	**59.79**	**343**	P	**P**	**06 04 29.4**	**-0.6**
TUL1	**Leonard**	**60.24**	**337**	P	**P**	**06 04 33.3**	**+0.2**
TUL1				IAmb	IAmb	06 04 46.1	
	comp=Z,15nm,1.2s						
CCM	**Cathedral Cave**	**60.68**	**342**	P	**P**	**06 04 36.1**	**+0.1**
CCM				IAmb	IAmb	06 04 48.3	
	comp=Z,9.9nm,1.3s						
MNTX	**Cornudas Mount**	**60.97**	**327**	P	**P**	**06 04 37.6**	**-0.6**
M56A	**Emporium**	**61.39**	**354**	P	**P**	**06 04 41.3**	**+0.5**
M56A				IAmb	IAmb	06 04 43.2	
	comp=Z,15nm,1.2s						
M55A	**Ridgway**	**61.44**	**353**	P	**P**	**06 04 40.6**	**-0.6**
M55A				IAmb	IAmb	06 04 44.6	
	comp=Z,11nm,1.0s						
MSTX	**Muleshoe**	**61.51**	**330**	P	**P**	**06 04 42.1**	**+0.1**
MSTX				IAmb	IAmb	06 04 55.6	
	comp=Z,9.6nm,1.1s						
M54A	**Oil Creek Stat**	**61.58**	**353**	P	**P**	**06 04 41.4**	**-0.7**
L56A	**Greenwood**	**61.98**	**354**	P	**P**	**06 04 45.0**	**+0.1**
ERPA	**Erie**	**62.22**	**352**	P	**P**	**06 04 46.4**	**-0.1**
VNA3	**Neumayer Olymp**	**62.24**	**161**	P	**P**	**06 04 48.9**	**+2.6**
WVNY	**West Valley, N**	**62.35**	**354**	P	**P**	**06 04 48.2**	**+0.9**
VNA2	**Neumayer--Watz**	**62.83**	**161**	P	**P**	**06 04 51.3**	**+1.1**
	baz=303,slow=6.7						
K43A	**Burlington**	**64.28**	**346**	P	**P**	**06 04 59.9**	**-0.2**
L40A	**Anamosa**	**64.39**	**343**	P	**P**	**06 05 01.5**	**+0.7**
L40A				IAmb	IAmb	06 05 02.1	
	comp=Z,16nm,1.4s						
SNAA	**Sanae**	**64.45**	**161**	P	**P**	**06 05 02.7**	**+1.7**
SNAA	**Sanae**	**64.45**	**161**	LR	LR	06 29 31.9	
	comp=Z,31nm,19.5s,baz=358,slow=33						
SNAA	**Sanae**	**64.45**	**161**	P	**P**	**06 05 03.0**	**+2.0**
SNAA				IAmb	IAmb	06 05 17.2	
	comp=Z,12nm,1.4s						
SADO	**Sadowa**	**64.74**	**354**	P	**P**	**06 05 03.5**	**+0.5**
G62A	**West of Eustis**	**64.76**	**0**	P	**P**	**06 05 05.2**	**+2.1**
PKME	**Peaks-Kenny Pk**	**64.82**	**1**	P	**P**	**06 05 04.9**	**+1.4**
F64A	**Sherman**	**65.44**	**2**	P	**P**	**06 05 09.3**	**+1.8**
TRQ	**Mont Tremblant**	**65.84**	**357**	P	**P**	**06 05 10.6**	**+0.4**
L34A	**Svendsen Farm,**	**65.85**	**339**	P	**P**	**06 05 10.8**	**+0.4**
SDCO	**Great Sand Dun**	**65.87**	**330**	P	**P**	**06 05 11.3**	**+0.4**
SDCO				IAmb	IAmb	06 05 25.2	
	comp=Z,4.8nm,1.1s						
BGNE	**Belgrade**	**65.96**	**338**	P	**P**	**06 05 11.1**	**0.0**
ECSD	**EROS Data Cent**	**67.51**	**340**	P	**P**	**06 05 21.6**	**+0.7**
ECSD				IAmb	IAmb	06 05 23.5	
	comp=Z,10nm,1.4s						
PV01	**Paradox Valley**	**67.64**	**329**	P	**P**	**06 05 22.9**	**+0.7**
KNB	**Kanab**	**68.98**	**325**	P	**P**	**06 05 31.0**	**+0.5**
LCMT	**Little Creek M**	**69.21**	**325**	P	**P**	**06 05 30.6**	**-1.2**
Q16A	**Castle Valley**	**69.54**	**327**	P	**P**	**06 05 33.8**	**-0.2**
CCUT	**Cedar City**	**69.67**	**325**	P	**P**	**06 05 33.7**	**-1.1**
P17A	**Butcher Ranch,**	**69.75**	**328**	P	**P**	**06 05 35.6**	**+0.4**
DBIC	**Dimbokro**	**70.13**	**75**	P	**P**	**06 05 37.4**	**-0.4**
	comp=Z,7.9nm,1.0s,baz=181,slow=13,SNR=2.6						
DBIC				LR	LR	06 34 59.2	
	comp=Z,97nm,19.9s,baz=226,slow=35						
DBIC	**Dimbokro**	**70.13**	**75**	P	**P**	**06 05 36.9**	**-0.9**
RSSD	**Black Hills**	**70.50**	**335**	P	**P**	**06 05 40.7**	**+1.0**
MPU	**Maple Canyon**	**70.61**	**328**	P	**P**	**06 05 38.3**	**-2.2**
DUG	**Dugway, Tooele**	**71.34**	**327**	P	**P**	**06 05 45.0**	**+0.1**
E28A	**Huff**	**71.37**	**339**	P	**P**	**06 05 46.2**	**+1.4**
AGMN	**Agassiz Nation**	**71.41**	**343**	P	**P**	**06 05 44.8**	**-0.1**
PDAR	**Pinedale Array**	**71.74**	**331**	P	**P**	**06 05 49.5**	**+2.1**
	comp=Z,0.2nm,0.4s,baz=115,slow=30,SNR=4.5						
HWUT	**Hardware Ranch**	**71.79**	**329**	P	**P**	**06 05 47.7**	**+0.2**
SPUT	**South Promonto**	**71.99**	**328**	P	**P**	**06 05 50.2**	**+1.4**
MDND	**Maddock**	**72.13**	**340**	P	**P**	**06 05 49.9**	**+0.7**
MDND				IAmb	IAmb	06 05 53.0	
	comp=Z,10nm,0.9s						
AHID	**Auburn Hatcher**	**72.45**	**330**	P	**P**	**06 05 51.7**	**+0.2**
AHID				IAmb	IAmb	06 06 03.4	
	comp=Z,3.8nm,0.8s						
REDW	**Red Top Meadow**	**72.80**	**331**	P	**P**	**06 05 55.0**	**+1.4**
TPAW	**Teton Pass**	**72.94**	**331**	P	**P**	**06 05 54.5**	**0.0**
NVAR	**Mina Array Bea**	**73.03**	**323**	P	**P**	**06 05 57.3**	**+2.2**
	comp=Z,0.9nm,0.9s,baz=126,slow=7.5,SNR=5.7						
FXWY	**Fox Creek**	**73.09**	**331**	P	**P**	**06 05 55.8**	**+0.4**
ULM	**Lac du Bonnet**	**73.19**	**344**	P	**P**	**06 05 55.5**	**0.0**
	comp=Z,0.9nm,0.4s,baz=174,slow=4.4,SNR=3.3						
ULM	**Lac du Bonnet**	**73.19**	**344**	P	**P**	**06 05 54.7**	**-0.7**
ULM				IAmb	IAmb	06 05 57.4	
	comp=Z,6.5nm,1.3s						
IMW	**Indian Meadow**	**73.25**	**331**	P	**P**	**06 05 56.4**	**+0.1**
IMW				IAmb	IAmb	06 06 00.5	
	comp=Z,6.3nm,1.4s						
FLWY	**Flagg Ranch**	**73.29**	**331**	P	**P**	**06 05 56.6**	**+0.1**
FLWY				IAmb	IAmb	06 06 09.6	
	comp=Z,4.6nm,0.8s						
KVN	**Kaiserville**	**73.34**	**323**	P	**P**	**06 05 58.9**	**+2.1**
RLMT	**Red Lodge**	**73.47**	**333**	P	**P**	**06 05 57.5**	**0.0**
LAO	**LASA Array**	**73.49**	**336**	P	**P**	**06 05 56.7**	**-0.7**
LAO				IAmb	IAmb	06 06 01.4	
	comp=Z,7.2nm,1.2s						
YNE	**Yellowstone No**	**73.70**	**332**	P	**P**	**06 05 59.2**	**+0.3**
YMR	**Madison River**	**73.86**	**331**	P	**P**	**06 05 58.6**	**-1.2**
YHH	**Holmes Hill**	**73.91**	**332**	P	**P**	**06 06 00.1**	**-0.1**
PAHR	**Pah Rah Range**	**74.52**	**323**	P	**P**	**06 06 04.2**	**+0.5**
PAHR				IAmb	IAmb	06 06 16.9	
	comp=Z,4.3nm,0.7s						
MCMT	**McKenzie Canyo**	**74.85**	**331**	P	**P**	**06 06 05.3**	**-0.3**
ORV	**Oroville**	**75.62**	**322**	P	**P**	**06 06 09.8**	**-0.1**
ORV				IAmb	IAmb	06 06 23.4	
	comp=Z,5.0nm,1.1s						
BMO	**Blue Mountains**	**77.01**	**328**	P	**P**	**06 06 16.7**	**-1.0**
TOA0	**Torodi Ar. Sit**	**78.63**	**72**	P	**P**	**06 06 26.8**	**-0.5**
TOA0				IAmb	IAmb	06 06 27.3	
	comp=Z,8.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.63**	**72**	P	**P**	**06 06 26.7**	**-0.6**
	comp=Z,7.1nm,0.7s,baz=258,slow=4.7,SNR=32						
TORD				LR	LR	06 39 13.7	
	comp=Z,96nm,21.7s,baz=240,slow=34						
FRB	**Frobisher Bay**	**83.34**	**1**	LR	LR	06 43 19.1	
	comp=Z,51nm,20.4s,baz=198,slow=35						
ESDC	**Sonseca Array**	**86.02**	**45**	P	**P**	**06 07 05.9**	**+0.4**
	comp=Z,1.6nm,1.0s,baz=246,slow=5.0,SNR=7.6						
YKA	**Yellowknife Ar**	**89.01**	**341**	P	**P**	**06 07 20.2**	**+0.9**
	comp=Z,4.5nm,1.1s,baz=139,slow=5.4,SNR=26						
YKA				LR	LR	06 50 43.4	
	comp=Z,51nm,19.6s,baz=0.0,slow=38						
H11S2	**WAKE ISLAND Hy**	**125.76**	**279**	T	T	08 32 52.6	
	baz=101,slow=74,SNR=54						
H11S1	**WAKE ISLAND Hy**	**125.76**	**279**	T	T	08 32 50.6	
	baz=101,slow=74,SNR=37						
H11S3	**WAKE ISLAND Hy**	**125.77**	**279**	T	T	08 32 48.3	
	baz=101,slow=74,SNR=38						
ASAR	**Alice Springs**	**130.42**	**210**	PKP	**PKiKP**	**06 13 37.7**	**+0.7**
	comp=Z,0.6nm,1.0s,baz=133,slow=2.0,SNR=3.4						
WRA	**Warramunga Arr**	**133.33**	**214**	PKP	**PKPdf**	**06 13 41.3**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=147,slow=1.8,SNR=1.8						
ZALV	**Zalesovo Beam**	**141.23**	**23**	PKP	**PKPdf**	**06 13 56.4**	**+1.2**
	comp=Z,1.6nm,0.7s,baz=336,slow=3.3,SNR=4.3						
KDJ	**Kajisay**	**145.11**	**43**		**PKPdf**	**06 14 03.0**	**+0.3**
MAKZ	**Makanchi**	**145.19**	**33**		**PKPdf**	**06 14 02.5**	**0.0**
MK31	**Makanchi Array**	**145.36**	**33**		**PKPdf**	**06 14 03.9**	**+1.1**
MKAR	**Makanchi Array**	**145.36**	**33**	PKPbc	**PKPdf**	**06 14 03.2**	**+0.5**
	comp=Z,3.3nm,0.9s,baz=318,slow=3.8,SNR=26						
KSH	**Kashi**	**145.50**	**48**	PKPbc	**PKPab**	**06 14 05.4**	**+1.7**
KSH				sPKP		06 14 19.8	
KSH				PP	**PP**	**06 17 29.1**	**+5.5**
MJAR	**Matsushiro Arr**	**149.55**	**309**	PKPbc	**PKiKP**	**06 14 16.0**	**+0.3**
	comp=Z,2.7nm,1.0s,baz=62,slow=3.0,SNR=5.9						
SONM	**Songino Array**	**152.00**	**4**	PKPbc	**PKiKP**	**06 14 21.4**	**+0.8**
	comp=Z,1.8nm,0.9s,baz=346,slow=2.2,SNR=9.4						
SONM				PKPab	**PKPab**	**06 14 30.9**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=336,slow=3.2,SNR=4.2						
LZH	**Lanzhou**	**163.19**	**15**	*e*PKP	**PKPdf**	**06 14 24.7**	**-3.2**
LZH				pPKP	pPKPdf	06 14 34.1	+0.2
LZH				sPKP		06 14 39.3	
GYA	**Guiyang**	**173.07**	**18**	*e*PKP	**PKPdf**	**06 14 33.0**	**-1.9**
GYA				PP	**PP**	**06 19 50.9**	**-1.3**
GYA	**Guiyang**	**173.07**	**18**	SS	SS	06 41 01.3	-3.5
GYA	**Guiyang**	**173.07**	**18**	LR	LR		
	comp=Z,140nm,5.7s						
GYA	**Guiyang**	**173.07**	**18**	LR	LR		
	comp=E,190nm,4.8s						
GYA	**Guiyang**	**173.07**	**18**	LR	LR		
	comp=N,280nm,5.6s						
GYA	**Guiyang**	**173.07**	**18**	AMB	AMB		
	comp=Z,50nm,7.4s						

IDC 05 06:15:00.1±2.5**,30°.27S**×**138°.41E,h0**km**,mb1 3.6**/4**, mb1mx3.4**/50**,mbtmp3.3**/4**,ML3.3**/4**,Error ellipse: s-maj=63.6km s-min=14.3km az=42.0,South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.17**	**121**	Pn	Pn	06 15 49.8	-1.4
	1.0nm,0.3s,baz=300,slow=12,SNR=14						
STKA				Pg	Pb	06 15 58.4	+1.1
	3.8nm,0.3s,baz=296,slow=14,SNR=17						
STKA				Sn	Sn	06 16 29.3	-0.4
	4.3nm,0.3s,baz=335,slow=14,SNR=7.8						
STKA				Lg	Lg	06 16 41.8	
	5.4nm,0.3s,baz=278,slow=7.1,SNR=6.9						
ASAR	**Alice Springs**	**7.71**	**327**	Pn	Pn	06 16 54.0	+0.3
	0.3nm,0.3s,baz=147,slow=13,SNR=18						
ASAR				Sn	Sn	06 18 21.9	+0.1
	0.2nm,0.3s,baz=152,slow=22,SNR=5.2						
WRA	**Warramunga Arr**	**10.92**	**339**	Pn	Pn	06 17 38.0	+0.3
	0.3nm,0.3s,baz=164,slow=12,SNR=2.1						
WRA				Sn	Sn	06 19 39.4	-1.3
	0.1nm,0.3s,baz=160,slow=24,SNR=2.5						
FITZ	**Fitzroy Crossi**	**16.79**	**313**	Pn	P	06 18 58.2	-0.8
	0.2nm,0.3s,baz=164,slow=12,SNR=3.3						

*SJA **05** 06:22:31.6±1.1, 19°.32S×70°.96W, h28km±3km, ML3.5, MW3.8*
*GUC **05** 06:22:33.7±0.6, 19°.28S×71°.01W, h37km±3km, ML3.4*
ISC 05 06:22:29.4±1.9**,19°.31S**±0°.03×**71°.13W**±0°.07**,h16**km±13km**,n40,**σ**1s.19**/64**,14C,Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**1.00**	**107**	⇑*i*P	**Pn**	**06 22 48.8**	**0.0**
PSGC				*i* S	**Sb**	**06 23 00.5**	**-0.8**
PSGC				IAML		06 23 02.6	
	comp=N,2µm,0.2s						
PSGCX	**Pisagua**	**1.00**	**107**	*i* P	**Pn**	**06 22 48.9**	**0.0**
PSGCX				*i* S	**Sb**	**06 23 00.5**	**-0.8**
PSGCX				IAML		06 23 02.1	
	comp=Z,2µm,0.3s						
PB12	**IPOC Station P**	**1.03**	**48**	⇑*i*P	**Pn**	**06 22 49.7**	**+0.4**
PB12				*i* S	**Sb**	**06 23 02.0**	**-0.3**
PB12				IAML		06 23 03.5	
	comp=N,1µm,0.7s						
PB12	**IPOC Station P**	**1.03**	**48**	*e*P	**Pn**	**06 22 49.8**	**+0.5**
PB12				*i* S	**Sb**	**06 23 02.2**	**0.0**
PB12				IAML		06 23 03.2	
	comp=Z,841nm,0.6s						
AP01	**Chacalluta**	**1.20**	**39**	*e*P	**Pb**	**06 22 52.5**	**+0.8**
AP01				*e*S	**Sb**	**06 23 05.5**	**-1.5**
AP01				IAML		06 23 10.6	
	comp=N,1µm,0.4s						
TA02	**Huaiquique**	**1.34**	**135**	*e*P	**Pg**	**06 22 55.3**	**0.0**
TA02				*i* S	**Sb**	**06 23 11.7**	**+0.5**
TA02				IAML		06 23 14.6	
	comp=N,1µm,0.6s						
MNMC	**Minye Minye**	**1.47**	**83**	⇑*i*P	**Pb**	**06 22 56.6**	**+0.1**
MNMC				*i* S	**Sn**	**06 23 14.0**	**-0.5**
MNMC				IAML		06 23 17.9	
	comp=N,2µm,0.3s						
MNMCX	**Minye Minye**	**1.47**	**83**	*i* P	**Pb**	**06 22 56.7**	**+0.2**
MNMCX				*i* S	**Sn**	**06 23 14.0**	**-0.5**
MNMCX				IAML		06 23 19.0	
	comp=Z,984nm,0.3s						
PB11	**IPOC Station P**	**1.47**	**108**	⇑*i*P	**Pb**	**06 22 56.5**	**+0.1**
PB11				*e*S	**Sn**	**06 23 14.1**	**-0.3**
PB11	**IPOC Station P**	**1.47**	**108**	*i* P	**Pb**	**06 22 56.5**	**+0.1**
PB11				*i* S	**Sn**	**06 23 14.0**	**-0.3**
PB11				IAML		06 23 15.5	
	comp=Z,2µm,0.7s						
TA01	**Diego Aracena**	**1.54**	**144**	⇑*i*P	**Pb**	**06 22 57.8**	**+0.2**
TA01				*e*S	**Sn**	**06 23 15.5**	**-0.4**
TA01				IAML		06 23 21.7	
	comp=E,528nm,0.7s						
PATCX	**Punta Patache**	**1.76**	**149**	⇑*i*P	**Pb**	**06 23 01.0**	**-0.4**
PATCX				*i* S	**Sn**	**06 23 21.4**	**-0.2**
PATCX				IAML		06 23 38.0	
	comp=E,570nm,0.6s						
PATCX	**Punta Patache**	**1.76**	**149**	*i* P	**Pb**	**06 23 01.1**	**-0.4**
PATCX				IAML		06 23 35.9	
	comp=Z,349nm,0.6s						
PB16	**IPOC Station P**	**1.82**	**58**	*e*P	**Pb**	**06 23 02.3**	**-0.4**
PB16				*e*S	**Sb**	**06 23 24.6**	**-0.9**
PB16				IAML		06 23 29.4	
	comp=N,467nm,0.4s						
PB16	**IPOC Station P**	**1.82**	**58**	*i* P	**Pb**	**06 23 02.6**	**-0.1**
PB16				*e*S	**Sb**	**06 23 24.6**	**-0.9**
PB16				IAML		06 23 29.9	
	comp=Z,443nm,0.4s						
GO01	**Chusmiza**	**1.86**	**101**	*e*P	**Pb**	**06 23 02.6**	**-0.8**
GO01				*e*S	**Sb**	**06 23 25.5**	**-1.2**
GO01				IAML		06 23 28.2	
	comp=N,1µm,0.2s						
PB08	**IPOC Station P**	**2.04**	**114**	*e*P	**Pb**	**06 23 05.2**	**-1.1**
PB08				*i* S	**Sn**	**06 23 29.7**	**+0.8**
PB08				IAML		06 23 33.6	
	comp=N,432nm,0.3s						
PB08	**IPOC Station P**	**2.04**	**114**	*i* P	**Pb**	**06 23 05.3**	**-1.1**
PB08				*i* S	**Sn**	**06 23 29.7**	**+0.8**
PB08				IAML		06 23 32.8	
	comp=Z,322nm,0.8s						
PB02	**IPOC Station P**	**2.31**	**150**	⇑*i*P	**Pb**	**06 23 08.9**	**-1.9**
PB02				*e*S	**Sn**	**06 23 34.5**	**-0.7**
PB02	**IPOC Station P**	**2.31**	**150**	*i* P	**Pb**	**06 23 09.0**	**-1.9**
PB02				*i* S	**Sn**	**06 23 34.5**	**-0.7**
PB02				IAML		06 23 48.4	
	comp=Z,564nm,0.5s						
PB01	**IPOC Station P**	**2.32**	**138**	⇑*i*P	**Pn**	**06 23 08.6**	**+1.6**
PB01				*e*S	**Sn**	**06 23 35.1**	**-0.2**
PB01				IAML		06 23 37.2	
	comp=N,470nm,0.5s						
PB01	**IPOC Station P**	**2.32**	**138**	*i* P	**Pn**	**06 23 08.6**	**+1.6**
PB01				*i* S	**Sn**	**06 23 35.5**	**+0.2**
PB01				IAML		06 23 48.8	
	comp=Z,231nm,0.8s						
PB07	**IPOC Station P**	**2.67**	**154**	⇑*e*P	**Pn**	**06 23 13.7**	**+1.7**
PB07				IAML		06 23 45.8	
	comp=E,236nm,0.5s						
PB07	**IPOC Station P**	**2.67**	**154**	*i* P	**Pn**	**06 23 13.8**	**+1.7**
PB07				IAML		06 24 04.7	
	comp=Z,239nm,0.6s						
PB03	**IPOC Station P**	**3.02**	**155**	*e*P	**Pn**	**06 23 18.4**	**+1.8**
PB03				IAML		06 23 56.1	
	comp=N,145nm,0.5s						
PB03	**IPOC Station P**	**3.02**	**155**	*i* P	**Pn**	**06 23 18.5**	**+1.8**
PB03				IAML		06 24 21.5	
	comp=Z,174nm,0.7s						
PB09	**IPOC Station P**	**3.04**	**145**	⇑*i*P	**Pn**	**06 23 19.8**	**+2.7**
PB09				IAML		06 24 15.5	
	comp=N,268nm,0.5s						
PB09	**IPOC Station P**	**3.04**	**145**	*i* P	**Pn**	**06 23 19.8**	**+2.7**
PB09				IAML		06 24 14.9	
	comp=Z,247nm,1.3s						
PB04	**IPOC Station P**	**3.15**	**163**	⇑*i*P	**Pn**	**06 23 19.8**	**+1.2**
PB04	**IPOC Station P**	**3.15**	**163**	*i* P	**Pn**	**06 23 20.0**	**+1.5**
PB04				IAML		06 24 27.9	
	comp=Z,122nm,0.6s						
PB05	**IPOC Station P**	**3.63**	**166**	⇑*i*P	**Pn**	**06 23 26.2**	**+1.1**
PB05	**IPOC Station P**	**3.63**	**166**	*i* P	**Pn**	**06 23 26.2**	**+1.1**
PB05				IAML		06 24 55.5	
	comp=Z,54nm,0.8s						
PB06	**IPOC Station P**	**3.68**	**157**	⇑*i*P	**Pn**	**06 23 27.1**	**+1.3**
PB06	**IPOC Station P**	**3.68**	**157**	*i* P	**Pn**	**06 23 27.2**	**+1.3**
PB06				IAML		06 24 36.8	
	comp=Z,69nm,0.5s						
LVC	**Limon Verde**	**3.89**	**148**	*i* P	**Pn**	**06 23 31.7**	**+2.8**
LVC				*i* S	**Sn**	**06 24 15.2**	**+0.8**
LVC				IAML		06 24 45.7	
	comp=Z,49nm,0.7s						
PB15	**IPOC Station P**	**4.18**	**158**	*e*P	**Pn**	**06 23 34.0**	**+1.3**
PB15	**IPOC Station P**	**4.18**	**158**	*i* P	**Pn**	**06 23 34.2**	**+1.5**
PB15				*e*S	**Sn**	**06 24 22.3**	**+0.9**
PB15				IAML		06 24 26.1	
	comp=Z,223nm,0.3s						
PB10	**IPOC Station P**	**4.22**	**173**	⇑*i*P	**Pn**	**06 23 34.0**	**+0.9**
PB10	**IPOC Station P**	**4.22**	**173**	*i* P	**Pn**	**06 23 34.0**	**+0.9**
PB10				*i* S	**Sn**	**06 24 19.4**	**-2.7**
PB10				IAML		06 24 25.4	
	comp=Z,38nm,0.5s						
PB14	**IPOC Station P**	**5.33**	**173**	*i* P	**Pn**	**06 23 49.2**	**+0.5**
PB14				IAML		06 26 02.1	
	comp=Z,14nm,2.1s						

*IDC **05** 06:27:03.4±2.1, 36°.30N×141°.93E, h0km, mb3.6/3, mb1 3.8/6, mb1mx3.4/58, mbtmp3.8/6, ML3.4/3, MS2.7/4, Ms1 2.7/4, ms1mx2.4/35, Error ellipse: s-maj=39.4km s-min=23.5km az=61.0*
*NEIC **05** 06:27:07.5±3.0, 36°.33N±0°.07×142°.0E±0°.1, h39km±4km, mb4.1/3, Error ellipse: s-maj=13.5km s-min=9.5km az=94.0*
*JMA **05** 06:27:08.2±0.2, 36°.45N×141°.74E, h52km, M3.0*
ISC 05 06:27:04.8±0.9**,36°.35N**±0°.05×**142°.02E**±0°.08**,h19**km**,n29,**σ**1s.04**/32**,mb3.8**/6**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.14**	**236**	P	**Pg**	**06 27 26.8**	**0.0**
JHYU	**Hitachinakayam**	**1.15**	**270**	P	**Pn**	**06 27 25.4**	**-0.5**
JHO	**Hitachi**	**1.20**	**283**	P	**Pn**	**06 27 25.4**	**-1.1**
ONAJ	**Iwakimizuishiy**	**1.23**	**308**	P	**Pn**	**06 27 26.1**	**-1.0**
JIHU	**Itakohorinouch**	**1.26**	**253**	P	**Pn**	**06 27 27.7**	**+0.3**
JFK	**Kawauchi**	**1.37**	**318**	P	**Pn**	**06 27 28.5**	**-0.5**
JFT	**Otama**	**1.78**	**312**	P	**Pn**	**06 27 34.8**	**+0.2**
JMM	**Marumori**	**1.80**	**328**	P	**Pn**	**06 27 34.3**	**-0.6**
BSO1	**Boso 1**	**1.89**	**207**	P	**Pb**	**06 27 37.5**	**-0.9**
BSO3	**Boso 3**	**1.97**	**219**	P	**Pb**	**06 27 38.6**	**-1.3**
JAG	**Ashikaga**	**2.07**	**273**	P	**Pn**	**06 27 38.2**	**-0.3**
MJAR	**Matsushiro Arr**	**3.08**	**275**	Pn	**Pn**	**06 27 53.5**	**+1.1**
	0.8nm,0.3s,baz=96,slow=9.0,SNR=56						
MJAR				Sn	**Sn**	**06 28 29.5**	**+0.8**
	0.4nm,0.3s,baz=94,slow=32,SNR=7.8						
MJAR				LR	LR	06 29 06.4	
	comp=Z,72nm,19.7s,baz=95,slow=41						
MAJO	**Matsushiro**	**3.08**	**275**		**Pn**	**06 27 53.1**	**+0.7**
MAT	**Matsushiro**	**3.08**	**275**	P	**Pn**	**06 27 53.5**	**+1.1**
MAT				*e*S	**Sn**	**06 28 30.0**	**+1.3**
MJB9	**Matsu-Tunnel**	**3.08**	**275**		**Pn**	**06 27 52.9**	**+0.5**
JHJ2	**Mitsune**	**3.70**	**210**	Pn	**Pn**	**06 28 02.3**	**+1.3**
JHJ2				Sn	**Sn**	**06 28 42.6**	**-1.4**
JHJ	**Hachijo jima 2**	**3.71**	**210**	Pn	**Pn**	**06 27 59.9**	**-1.2**
	8.9nm,0.3s,baz=342,slow=20,SNR=20						
JHJ				Sn	**Sn**	**06 28 43.9**	**-0.3**
	18nm,0.3s,baz=287,slow=19,SNR=4.6						
INU	**Inuyama**	**4.18**	**258**	Pn	**Pn**	**06 28 06.9**	**-0.7**
INU				Sn	**Sn**	**06 28 57.0**	**+1.1**
ERM	**Erimo**	**5.73**	**9**	Pn	**Pn**	**06 28 28.6**	**-0.3**
ERM				Sn	**Sn**	**06 29 34.9**	**+0.8**
JCJ	**Chichijima**	**9.22**	**179**	Pn	**Pn**	**06 29 18.5**	**+1.6**
	1.8nm,0.3s,baz=348,slow=20,SNR=1.2						
JNU	**Nakatsue**	**9.71**	**254**	LR	LR	06 33 19.8	
	comp=Z,34nm,18.1s,baz=98,slow=39						
KSRS	**Korea Array**	**11.34**	**280**	LR	LR	06 33 34.5	
	comp=Z,28nm,18.2s,baz=80,slow=35						
MA2	**Magadan**	**23.93**	**11**	LR	LR	06 43 24.9	
	comp=Z,26nm,18.0s,baz=87,slow=41						
SONM	**Songino Array**	**28.57**	**305**	P	**P**	**06 32 60.0**	**+0.3**
	0.3nm,0.5s,baz=98,slow=8.9,SNR=1.7						
MK31	**Makanchi Array**	**44.90**	**303**	P	**P**	**06 35 16.8**	**-1.3**
MK31				IAmb	IAmb	06 35 22.0	
	comp=Z,1.9nm,1.2s						
MAKZ	**Makanchi**	**45.10**	**303**	P	**P**	**06 35 18.0**	**-1.8**
MAKZ				IAmb	IAmb	06 35 18.8	
	comp=Z,1.8nm,0.8s						
WB0	**Warramunga Arr**	**56.27**	**189**	P	**P**	**06 36 45.7**	**+1.6**
WB0				IAmb	IAmb	06 37 01.9	
	comp=Z,5.9nm,1.2s						
WRA	**Warramunga Arr**	**56.45**	**189**	P	**P**	**06 36 46.1**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=3.1,slow=7.0,SNR=4.2						
ASAR	**Alice Springs**	**60.18**	**189**	P	**P**	**06 37 12.8**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=14,slow=8.7,SNR=5.9						

*VAO **05** 06:27:42.3±0.6, 19°.09S×71°.31W, h0km, mb4.2*
*SJA **05** 06:27:46.7±1.2, 19°.31S×70°.96W, h28km±3km, ML4.5, MW4.6*
*NEIC **05** 06:27:47.8, 19°.28S×71°.00W, h28km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-6.78; $M_{\theta\theta}$5.92; $M_{\phi\phi}$0.87; $M_{r\theta}$-0.36; $M_{\theta\phi}$4.09; $M_{\phi r}$-4.02; Fault plane solution: $M_0$8.60000×10^{15} NP1:ϕ_s37.91000°, δ58.28000°, λ-118.37000°. NP2:ϕ_s263.68000°, δ41.54000°, λ-52.45000°. Principal axes: T 8.5601, Plg9.0000°, Azm148.0000°; N 0.0736, Plg24.0000°, Azm54.0000°; P -8.6336, Plg64.0000°, Azm257.0000°;*
*NEIC **05** 06:27:47.5±1.9, 19°.31S±0°.04×71°.02W±0°.04, h28km±1km, mb4.7/120, Mwr4.6/51 Error ellipse: s-maj=6.6km s-min=5.7km az=243.0*
*GUC **05** 06:27:48.9±0.6, 19°.29S×71°.00W, h42km±3km, ML4.5*
*IDC **05** 06:27:49.3±3.4, 19°.21S×70°.78W, h33km±26km, mb4.0/18, mb1 4.1/22, mb1mx4.0/41, mbtmp4.2/22, ML3.9/4, MS3.9/20, Ms1 3.9/20, ms1mx3.8/29, Error ellipse: s-maj=20.6km s-min=13.1km az=70.0*
ISC 05 06:27:46.8±1.0**,19°.31S**±0°.03×**71°.10W**±0°.04**,h23**km±7km**,n293,**σ**1s.40**/302**,mb4.7**/63**,MS3.9**/17**,6C,Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.96**	**108**	*e*P	**Pn**	**06 28 03.8**	**-1.2**
PSGC				*i* S	**Sb**	**06 28 15.6**	**-1.7**
PSGCX	**Pisagua**	**0.96**	**108**		**Pn**	**06 28 03.8**	**-1.3**
PSGCX				Sg	**Sb**	**06 28 15.5**	**-1.8**
PSGCX	**Pisagua**	**0.96**	**108**	*i* P	**Pn**	**06 28 03.9**	**-1.1**
PSGCX				*i* S	**Sb**	**06 28 15.5**	**-1.8**
PSGCX				IAML		06 28 17.8	
	comp=Z,17µm,0.4s						
PB12	**IPOC Station P**	**1.00**	**47**	*e*P	**Pn**	**06 28 05.0**	**-0.6**
PB12				*i* S	**Sb**	**06 28 17.4**	**-1.0**
PB12				IAML		06 28 18.7	
	comp=N,18µm,0.5s						
PB12	**IPOC Station P**	**1.00**	**47**		**Pn**	**06 28 05.0**	**-0.6**
PB12	**IPOC Station P**	**1.00**	**47**	*e*P	**Pn**	**06 28 05.2**	**-0.4**
PB12				*i* S	**Sb**	**06 28 17.2**	**-1.0**
PB12				IAML		06 28 18.3	
	comp=Z,17µm,0.4s						
AP01	**Chacalluta**	**1.17**	**38**	*e*P	**Pn**	**06 28 07.6**	**-0.3**
AP01				*i* S	**Sn**	**06 28 22.5**	**-0.7**
AP01	**Chacalluta**	**1.17**	**38**	Pn	**Pn**	**06 28 07.7**	**-0.2**
TA02	**Huaiquique**	**1.32**	**137**	*e*P	**Pn**	**06 28 10.3**	**+0.4**
TA02				*i* S	**Sn**	**06 28 26.4**	**-0.4**

TA02 IAML 06 28 28.5
comp=N,11µm,0.4s
MNMC Minye Minye 1.43 83 *e*P **Pn 06 28 11.6 0.0**
MNMC *i* S **Sn 06 28 29.1 -0.7**
MNMC IAML 06 28 32.0
comp=E,17µm,0.3s
MNMC Minye Minye 1.43 83 Pn **Pn 06 28 11.1 -0.5**
MNMC Sn **Sn 06 28 27.8 -2.0**
MNMCX Minye Minye 1.43 83 *i* P **Pn 06 28 11.7 +0.1**
MNMCX *i* S **Sn 06 28 29.2 -0.7**
MNMCX IAML 06 28 31.4
comp=Z,11µm,0.5s
PB11 IPOC Station P 1.43 109 *e*P **Pn 06 28 11.4 -0.1**
PB11 *i* S **Sn 06 28 29.1 -0.7**
PB11 IAML 06 28 31.6
comp=E,35µm,0.5s
PB11 IPOC Station P 1.43 109 **Pn 06 28 11.3 -0.2**
PB11 Sn **Sn 06 28 28.1 -1.6**
PB11 IPOC Station P 1.43 109 *i* P **Pn 06 28 11.7 +0.1**
PB11 *i* S **Sn 06 28 29.1 -0.7**
PB11 IAML 06 28 30.8
comp=Z,20µm,0.5s
TA01 Diego Aracena 1.52 146 *e*P **Pn 06 28 12.8 +0.1**
TA01 *i* S **Sn 06 28 31.4 -0.3**
TA01 Diego Aracena 1.52 146 Pn **Pn 06 28 12.8 +0.1**
PATCX Punta Patache 1.75 150 *e*P **Pn 06 28 16.0 +0.1**
PATCX *i* S **Sn 06 28 37.4 -0.1**
PATCX Punta Patache 1.75 150 **Pn 06 28 16.1 +0.2**
PATCX Punta Patache 1.75 150 *i* P **Pn 06 28 16.1 +0.2**
PATCX IAML 06 28 51.1
comp=Z,2µm,1.2s
PB16 IPOC Station P 1.79 58 *e*P **Pn 06 28 17.2 +0.4**
PB16 *i* S **Sn 06 28 39.4 +0.3**
PB16 IPOC Station P 1.79 58 **Pn 06 28 17.3 +0.4**
PB16 Sn **Sn 06 28 37.4 -1.8**
PB16 IPOC Station P 1.79 58 *i* P **Pn 06 28 17.4 +0.6**
PB16 *i* S **Sn 06 28 39.2 +0.1**
PB16 IAML 06 28 44.8
comp=Z,7µm,0.5s
GO01 Chusmiza 1.83 102 *e*P **Pn 06 28 17.7 +0.4**
GO01 *i* S **Sn 06 28 39.5 -0.6**
GO01 Chusmiza 1.83 102 **Pn 06 28 17.7 +0.4**
PB08 IPOC Station P 2.01 115 *e*P **Pn 06 28 20.0 +0.4**
PB08 *i* S **Sn 06 28 44.3 -0.1**
PB08 IAML 06 28 48.2
comp=N,5µm,0.3s
PB08 IPOC Station P 2.01 115 **Pn 06 28 20.1 +0.4**
PB08 IPOC Station P 2.01 115 *e*P **Pn 06 28 20.4 +0.6**
PB08 *i* S **Sn 06 28 44.9 +0.5**
PB08 IAML 06 28 48.7
comp=Z,4µm,0.3s
PB01 IPOC Station P 2.30 139 *e*P **Pn 06 28 23.6 +0.2**
PB01 *i* S **Sn 06 28 50.5 -0.5**
PB01 IPOC Station P 2.30 139 **Pn 06 28 23.6 +0.2**
PB01 IPOC Station P 2.30 139 *e*P **Pn 06 28 23.7 +0.3**
PB01 *e*S **Sn 06 28 50.3 -0.7**
PB01 IAML 06 28 54.3
comp=Z,1µm,0.6s
PB02 IPOC Station P 2.30 151 *e*P **Pn 06 28 23.9 +0.5**
PB02 *i* S **Sn 06 28 49.7 -1.4**
PB02 IPOC Station P 2.30 151 *i* P **Pn 06 28 24.0 +0.6**
PB02 *e*S **Sn 06 28 50.5 -0.6**
PB02 IAML 06 29 06.1
comp=Z,3µm,1.1s
PB07 IPOC Station P 2.66 155 *e*P **Pn 06 28 28.7 +0.3**
PB07 IPOC Station P 2.66 155 **Pn 06 28 28.8 +0.3**
PB07 IPOC Station P 2.66 155 *e*P **Pn 06 28 28.8 +0.3**
PB07 IAML 06 29 18.6
comp=Z,1µm,1.5s
PB03 IPOC Station P 3.00 155⇑ *i*P **Pn 06 28 33.3 +0.1**
PB03 IAML 06 29 27.6
comp=E,924nm,0.3s
PB03 IPOC Station P 3.00 155 *i* P **Pn 06 28 33.6 +0.4**
PB03 *i* S **Sn 06 29 08.3 -0.3**
PB03 IAML 06 29 37.1
comp=Z,1µm,0.9s
PB09 IPOC Station P 3.03 145⇑ *i*P **Pn 06 28 34.7 +1.2**
PB09 IAML 06 29 30.3
comp=N,1µm,0.5s
PB09 IPOC Station P 3.03 145 **Pn 06 28 34.5 +1.0**
PB09 IPOC Station P 3.03 145 *e*P **Pn 06 28 35.0 +1.5**
PB09 *i* S **Sn 06 29 10.9 +1.7**
PB09 IAML 06 29 28.6
comp=Z,1µm,0.5s
PB04 IPOC Station P 3.14 164⇑ *i*P **Pn 06 28 34.9 -0.2**
PB04 IAML 06 29 13.0
comp=E,2µm,0.4s
PB04 IPOC Station P 3.14 164 **Pn 06 28 35.3 +0.2**
PB04 IPOC Station P 3.14 164 *e*P **Pn 06 28 34.9 -0.2**
PB04 IAML 06 29 40.5
comp=Z,984nm,0.9s
PB05 IPOC Station P 3.63 167⇑ *i*P **Pn 06 28 41.1 -0.7**
PB05 IPOC Station P 3.63 167 *i* P **Pn 06 28 41.2 -0.5**
PB05 IAML 06 29 59.0
comp=Z,430nm,0.8s
PB06 IPOC Station P 3.67 157⇑ *i*P **Pn 06 28 42.1 -0.2**
PB06 IPOC Station P 3.67 157 **Pn 06 28 41.7 -0.6**
PB06 IPOC Station P 3.67 157 *i* P **Pn 06 28 42.1 -0.2**
PB06 IAML 06 29 45.1
comp=Z,785nm,1.3s
LVC Limon Verde 3.87 149 Pn **Pn 06 28 46.4 +1.1**
comp=Z,16nm,0.3s,baz=18,slow=9.7,SNR=119
LVC Sn **Sn 06 29 30.9 +0.6**
comp=Z,57nm,0.3s,baz=198,slow=21,SNR=10
LVC Lg Lg 06 29 48.7
comp=Z,80nm,0.3s,baz=193,slow=14,SNR=7.7
LVC LR LR 06 30 31.3
comp=Z,3µm,19.1s,baz=283,slow=42
LVC Limon Verde 3.87 149 **Pn 06 28 46.5 +1.3**
LVC Limon Verde 3.87 149 *i* P **Pn 06 28 46.8 +1.5**
LVC *i* S **Sn 06 29 31.7 +1.4**
LVC IAML 06 30 01.6
comp=Z,357nm,1.0s
LVC Limon Verde 3.87 149 *e*P **Pn 06 28 46.5 +1.1**
LPAZ La Paz 4.12 44 Pn **Pn 06 28 51.9 +2.9**
comp=Z,0.4nm,0.3s,baz=217,slow=7.8,SNR=8.5
LPAZ Lg Lg 06 29 50.1
comp=Z,0.3nm,0.3s,baz=219,slow=23,SNR=1.4
LPAZ LR LR 06 30 29.2
comp=Z,792nm,18.8s,baz=220,slow=42
LPAZ La Paz 4.12 44 Pn **Pn 06 28 51.1 +2.1**
PB15 IPOC Station P 4.17 159 **Pn 06 28 49.0 -0.3**
PB15 IPOC Station P 4.17 159 *i* P **Pn 06 28 49.2 0.0**
PB15 *e*S **Sn 06 29 36.5 -0.9**
PB15 IAML 06 29 40.8
comp=Z,1µm,0.2s
PB10 IPOC Station P 4.22 173⇑ *i*P **Pn 06 28 48.9 -0.8**
PB10 IPOC Station P 4.22 173 **Pn 06 28 49.0 -0.8**
PB10 IPOC Station P 4.22 173 *i* P **Pn 06 28 49.0 -0.8**
PB10 *e*S **Sn 06 29 33.7 -4.6**
PB10 IAML 06 29 38.2
comp=Z,329nm,0.4s
PB14 IPOC Station P 5.33 173 **Pn 06 29 04.4 -1.0**
PB14 IPOC Station P 5.33 173 *i* P **Pn 06 29 04.2 -1.2**
PB14 *i* S **Sn 06 30 00.8 -5.4**
PB14 IAML 06 30 04.7
comp=Z,319nm,0.4s
GO02 Mina Guanaco 5.99 167 **Pn 06 29 14.1 -0.4**
AZAP Zapla 7.44 132 *i* P **Pn 06 29 37.1 +2.9**
AC02 Maricunga 7.71 167 Pn **Pn 06 29 38.4 +0.2**
NNA Nana 9.14 322 Pn **Pn 06 30 01.3 +3.8**
comp=Z,1.6nm,0.3s,baz=148,slow=7.3,SNR=2.8
NNA Sn **Sn 06 31 39.6 -0.1**
comp=Z,3.8nm,0.3s,baz=231,slow=3.0,SNR=4.9
NNA LR LR 06 33 49.5
comp=Z,692nm,18.8s,baz=164,slow=39
NNA Nana 9.14 322 **Pn 06 29 56.9 -0.6**
AC05 El Transito 9.52 176 Pn **Pn 06 30 00.7 -1.9**
SIV San Ignacio 10.11 73 Pn **Pn 06 30 10.0 -0.7**
comp=Z,1.3nm,0.3s,baz=268,slow=11,SNR=19
SIV LR LR 06 34 51.8
comp=Z,1µm,19.8s,baz=250,slow=43
GO04 Tololo Observa 10.82 179 Pn **Pn 06 30 19.2 -1.4**
CO03 El Pedregal 11.49 178 Pn **Pn 06 30 27.9 -1.7**
PTLB Pontes e Lacer 12.04 73 *e*P **Pn 06 30 36.8 -0.4**
VILB Vilhena 12.22 60 *e*P **Pn 06 30 39.4 -0.3**
SAML Samuel 12.84 38 Pn **Pn 06 30 44.7 -3.3**
SAML Samuel 12.84 38 *e*P **Pn 06 30 45.0 -3.0**
VA03 San Esteban 13.41 178 Pn **Pn 06 30 56.1 +0.2**
ATAH Atahualpa 14.02 329 Pn **P 06 31 12.1 -0.3**
comp=Z,0.4nm,0.3s,baz=76,slow=15,SNR=1.8
ATAH LR LR 06 37 18.4
comp=Z,711nm,19.4s,baz=145,slow=40

CPUP Villa Florida 14.48 121 Pn **Pn 06 31 10.5 0.0**
comp=Z,0.1nm,0.3s,baz=317,slow=11,SNR=4.6
CPUP LR LR 06 37 37.5
comp=Z,424nm,18.9s,baz=302,slow=41
CPUP Villa Florida 14.48 121 *e*P **Pn 06 31 12.9 +2.4**
SALV Santo Antonio 15.07 79 *e*P **Pn 06 31 18.4 -0.1**
H03N1 Juan Fernandez 15.71 205 T T 06 47 58.7
baz=31,slow=73,SNR=69
H03N2 Juan Fernandez 15.72 205 T T 06 47 51.7
baz=31,slow=73,SNR=57
H03N3 Juan Fernandez 15.73 205 T T 06 47 52.6
baz=31,slow=73,SNR=47
CLDB Colider 16.98 63 *e*P **Pn 06 31 41.0 -1.9**
BI02 San Fabin de 17.29 180 P **Pn 06 31 47.8 +0.9**
TRCB Terra Rica 17.58 105 *e*P **P 06 31 53.0 +1.5**
PTGB Pitanga 18.44 110 *e*P **Pn 06 32 03.0 +1.8**
PCMB Pacaembu 18.73 100 *e*P **Pn 06 32 06.3 +1.8**
ARAG Araguaiana, MT 18.74 82 *e*P **P 06 32 04.9 +0.8**
MACA Manacapuru-AM 19.00 34 *e*P **P 06 32 05.8 -1.3**
CPSB Cacapava Do Su 19.44 128 *e*P **Pn 06 32 13.5 +0.5**
LC01 Cunco 19.54 182 P **P 06 32 13.2 +0.4**
FRTB Fartura 20.45 105 *e*P **P 06 32 22.3 -0.7**
CUSE Cuicocha Este 20.77 339 *e*P **Pn 06 32 42.1 +13**
PAC1 Pacto, Paraso 20.86 338 *e*P **Pn 06 32 37.5 +7.4**
OGAUY Aigu 20.88 139 *e*P **P 06 32 27.5 +0.1**
CNLB Canela 20.94 122 *e*P **P 06 32 30.2 +2.0**
BB19B Bebedouro 21.25 99 *e*P **P 06 32 32.2 +0.6**
PLCA Paso Flores 21.36 179 P **P 06 32 34.5 +1.9**
comp=Z,7.4nm,0.9s,baz=348,slow=12,SNR=8.8
PLCA Paso Flores 21.36 179 P **P 06 32 33.8 +1.1**
PLCA IAmb IAmb 06 32 49.2
comp=Z,47nm,1.4s
PLCA Paso Flores 21.36 179 *e*P **P 06 32 34.1 +1.5**
PTGA Pitinga 21.44 32 P **P 06 32 31.9 -1.7**
comp=Z,9.4nm,0.3s,baz=66,slow=23,SNR=31
PTGA LR LR 06 42 04.1
comp=Z,154nm,20.5s,baz=210,slow=40
PTGA Pitinga 21.44 32 P **P 06 32 32.1 -1.5**
PTGA Pitinga 21.44 32 *e*P **P 06 32 31.4 -2.2**
CRUC La Cruz 21.53 344 *e*P **P 06 32 40.8 +5.9**
IPMB Ipameri, GO 21.72 90 *e*P **P 06 32 37.1 +0.4**
GARC Garzon, Huila 21.79 348 *e*P **P 06 32 46.1 +8.5**
SOTA Rioblanco 21.98 345 *e*P **P 06 32 44.8 +4.8**
PCON Cinco Dias 22.12 346 *e*P **P 06 32 53.4 +12**
BETC Betania 22.26 348 *e*P **P 06 32 48.1 +5.6**
BDFB Brasilia 22.31 84 P **P 06 32 41.1 -2.0**
comp=Z,0.4nm,0.3s,baz=313,slow=23,SNR=2.2
BDFB LR LR 06 43 15.4
comp=Z,252nm,19.9s,baz=263,slow=42
BDFB Brasilia 22.31 84 P **P 06 32 39.5 -3.6**
PET01 Itanhaem-SP 22.66 107 *e*P **P 06 32 48.0 +1.4**
PTGC Puerto Gaitan, 23.38 357 *e*P **P 06 33 00.7 +6.7**
VILC Villavicencio, 23.41 353 *e*P **P 06 33 02.7 +8.2**
ORTC Ortega, Tolima 23.43 350 *e*P **P 06 32 55.3 +0.7**
YOTC Yotoco, Valle 23.71 347 *e*P **P 06 33 07.4 +10**
CHIC Chingaza 23.93 354 *e*P **P 06 33 09.4 +10**
ROSC El Rosal 24.20 352 P **P 06 33 04.7 +2.4**
comp=Z,3.1nm,0.8s,baz=206,slow=10,SNR=3.6
ROSC El Rosal 24.20 352 *e*P **P 06 33 04.0 +1.7**
ROSC El Rosal 24.20 352 P **P 06 33 01.8 -0.5**
CTAB Cerro Tablazo, 24.36 352 *e*P **P 06 33 13.4 +10**
GUY2C Guyana, Caldas 24.73 350 *e*P **P 06 33 08.5 +1.3**
SMTB Santa Maria do 25.02 69 *e*P **P 06 33 09.3 -0.1**
RUSC La Rusia 25.12 355 *e*P **P 06 33 12.7 +2.0**
RUSC La Rusia 25.12 355 P **P 06 33 10.6 -0.1**
CBOC Ciudad Bolivar 25.48 349 *e*P **P 06 33 15.3 +1.7**
TAMC Tame, Arauca 25.59 358 *e*P **P 06 33 22.0 +7.5**
HELC Santa Helena 25.71 350 *e*P **P 06 33 15.3 -0.6**
JANB Januaria 25.92 85 *e*P **P 06 33 17.7 +0.1**
PAMC Pamplona, Colo 26.52 356 *e*P **P 06 33 32.6 +9.2**
DBBC Dabeiba 26.64 349 *e*P **P 06 33 31.3 +7.3**
ZARC Zaragoza, Cauc 26.89 352 *e*P **P 06 33 25.8 -0.4**
SDV Santo Domingo 28.02 1 P **P 06 33 36.5 0.0**
comp=Z,2.2nm,0.7s,baz=263,slow=17,SNR=2.5
SDV LR LR 06 46 21.1
comp=Z,290nm,18.0s,baz=234,slow=40
SDV Santo Domingo 28.02 1 *e*P **P 06 33 32.9 -3.6**
SMLC San Martin de 28.08 354 *e*P **P 06 33 36.6 -0.3**
BSFB Barra de Sao F 28.58 94 *e*P **P 06 33 43.2 +1.8**
SJCC San Jacinto, C 29.30 352 *e*P **P 06 33 48.6 +0.8**
MDP Montagnes des 30.30 39 LR LR 06 46 40.8
comp=Z,221nm,19.2s,baz=204,slow=38
JTS Las Juntas de 32.43 334 LR LR 06 47 21.2
comp=Z,255nm,19.6s,baz=202,slow=36
ESPN Las Esperanzas 33.90 336 P **P 06 34 28.2 +0.1**
CBYP Canovanas 37.70 8 P **P 06 34 59.7 -1.1**
CBYP IAmb IAmb 06 35 10.7
comp=Z,16nm,1.1s
257A Skidaway Islan 51.87 349 P **P 06 36 53.7 +0.2**
ZAIG Zacatecas 51.90 322 P **P 06 36 53.4 -0.8**
ZAIG IAmb IAmb 06 36 58.6
comp=Z,7.3nm,1.0s
154A Montrose 52.89 347 P **P 06 37 01.7 +0.7**
Z56A Williston 53.25 349 P **P 06 37 02.5 -1.1**
Z56A IAmb IAmb 06 37 14.0
comp=Z,13nm,0.8s
X48A Hartselle 55.57 344 P **P 06 37 20.2 -0.4**
X48A IAmb IAmb 06 37 21.9
comp=Z,13nm,1.4s
NATX Nacogdoches 55.58 336 P **P 06 37 20.0 -0.6**
W50A Signal Mountai 55.86 346 P **P 06 37 22.6 -0.1**
W50A IAmb IAmb 06 37 36.2
comp=Z,5.6nm,0.8s
TKL Tuckaleechee C 55.97 348 P **P 06 37 23.6 +0.1**
comp=Z,3.4nm,0.9s,baz=128,slow=5.6,SNR=3.4
TKL Tuckaleechee C 55.97 348 P **P 06 37 23.5 +0.1**
TKL IAmb IAmb 06 37 37.0
comp=Z,13nm,1.3s
V52A Sevierville 56.11 348 P **P 06 37 25.1 +0.7**
T59A Double "B" Far 56.30 354 P **P 06 37 27.0 +1.3**
T59A IAmb IAmb 06 37 42.5
comp=Z,14nm,1.1s
T57A Hurt 56.53 352 P **P 06 37 26.6 -0.8**
T57A IAmb IAmb 06 37 43.0
comp=Z,12nm,1.0s
WLAR White Oak Lake 56.73 338 P **P 06 37 29.5 +0.7**
V48A Smith Brothers 56.74 345 P **P 06 37 28.2 -0.7**
V48A IAmb IAmb 06 37 42.4
comp=Z,11nm,1.2s
WHTX Lake Whitney, 56.92 333 P **P 06 37 30.4 +0.2**
MIAR Mount Ida 57.67 338 P **P 06 37 36.0 +0.6**
MIAR IAmb IAmb 06 37 50.4
comp=Z,6.8nm,0.8s
TX31 Lajitas Ar. Si 57.67 326 P **P 06 37 36.7 +1.0**
TX31 IAmb IAmb 06 37 38.5
comp=Z,9.1nm,1.1s
TX32 Lajitas Array 57.67 326 P **P 06 37 36.7 +1.0**
TXAR Lajitas Array 57.67 326 P **P 06 37 36.8 +1.1**
comp=Z,1.9nm,0.9s,baz=142,slow=8.9,SNR=16
TXAR LR LR 07 00 42.4
comp=Z,83nm,18.7s,baz=0.0,slow=34
Z35A Perchaven, San 57.99 334 P **P 06 37 37.0 -0.8**
W39A Magazine 58.33 338 P **P 06 37 41.7 +1.7**
W39A IAmb IAmb 06 37 55.1
comp=Z,7.1nm,0.9s
X37A Clayton 58.36 337 P **P 06 37 40.2 -0.1**
ABTX Abilene, Hawle 58.41 332 P **P 06 37 39.9 -0.8**
ABTX IAmb IAmb 06 37 43.3
comp=Z,8.5nm,0.9s
WCI Wyandotte Cave 58.98 346 P **P 06 37 44.2 -0.4**
WCI IAmb IAmb 06 37 57.5
comp=Z,6.9nm,0.9s
SIUC Southern Illin 59.23 343 P **P 06 37 46.2 -0.1**
X34A Smith Ranch, M 59.34 334 P **P 06 37 47.0 -0.1**
HHAR Hobbs 59.36 339 P **P 06 37 47.4 +0.1**
HHAR IAmb IAmb 06 38 01.5
comp=Z,9.6nm,1.2s
U38A Gravette 59.66 338 P **P 06 37 48.4 -0.9**
U38A IAmb IAmb 06 37 50.5
comp=Z,5.8nm,1.2s
TUL1 Leonard 59.69 337 P **P 06 37 50.1 +0.6**
MNTX Cornudas Mount 60.44 326 P **P 06 37 55.2 +0.4**
MNTX IAmb IAmb 06 37 56.9
comp=Z,5.7nm,1.0s
T35A Sooner Cattle 60.85 337 P **P 06 37 56.9 -0.5**
MSTX Muleshoe 60.98 330 P **P 06 37 59.2 +0.7**
VNA3 Neumayer Olymp 62.80 161 P **P 06 38 12.2 +2.0**
BNM Barren Site 63.01 327 P **P 06 38 11.9 -0.4**
VNA1 Neumayer--Stat 63.03 161 P **P 06 38 14.3 +2.6**
VNA2 Neumayer--Watz 63.39 161 P **P 06 38 16.3 +2.2**
baz=297,slow=7.1
ANMO Albuquerque 63.55 328 P **P 06 38 17.2 +1.3**
comp=Z,1.1nm,0.8s,baz=163,slow=11,SNR=7.3

ANMO Albuquerque 63.55 328 P **P 06 38 17.7 +1.8**
K43A Burlington 63.72 346 P **P 06 38 16.3 -0.2**
N35A Tabor 64.06 339 P **P 06 38 17.4 -1.4**
SADO Sadowa 64.19 354 P **P 06 38 19.4 -0.1**
comp=Z,2.0nm,0.6s,baz=222,slow=3.6,SNR=4.4
SADO Sadowa 64.19 354 P **P 06 38 19.1 -0.5**
SADO IAmb IAmb 06 38 34.6
comp=Z,7.8nm,0.9s
SNAA Sanae 65.01 161 P **P 06 38 26.5 +1.8**
SNAA Sanae 65.01 161 P **P 06 38 25.1 +0.4**
SNAA IAmb IAmb 06 38 27.4
comp=Z,12nm,1.1s
X18A Snowflake 65.05 325 P **P 06 38 26.5 +0.8**
X18A IAmb IAmb 06 38 29.7
comp=Z,7.9nm,1.4s
KSCO Kaye Shedlock' 65.09 333 P **P 06 38 25.0 -0.8**
KSCO IAmb IAmb 06 38 28.6
comp=Z,13nm,1.1s
H43A Windswept, Lux 65.27 347 P **P 06 38 26.8 +0.1**
H43A IAmb IAmb 06 38 40.9
comp=Z,8.3nm,0.8s
L34A Svendsen Farm, 65.30 339 P **P 06 38 26.8 -0.1**
SDCO Great Sand Dun 65.33 330 P **P 06 38 27.9 +0.3**
SDCO IAmb IAmb 06 38 30.9
comp=Z,7.0nm,1.0s
I40A Norwalk 65.39 345 P **P 06 38 27.7 +0.2**
I40A IAmb IAmb 06 38 41.3
comp=Z,14nm,1.4s
X16A Lo Mia Camp, P 65.78 324 P **P 06 38 30.1 -0.4**
X16A IAmb IAmb 06 38 46.4
comp=Z,5.4nm,1.1s
MVCO Mesa Verde 66.35 328 P **P 06 38 35.5 +1.4**
MVCO IAmb IAmb 06 38 37.5
comp=Z,6.5nm,1.2s
K31A O'Neill 66.69 338 P **P 06 38 35.1 -0.8**
E43A Lone Tree Farm 66.94 348 P **P 06 38 35.5 -1.8**
E43A IAmb IAmb 06 38 51.5
comp=Z,5.5nm,0.9s
ECSD EROS Data Cent 66.96 340 P **P 06 38 37.0 -0.5**
ECSD IAmb IAmb 06 38 52.0
comp=Z,14nm,1.2s
ISCO Idaho Springs 67.05 332 P **P 06 38 39.6 +1.0**
PV01 Paradox Valley 67.11 329 P **P 06 38 40.7 +1.8**
PV01 IAmb IAmb 06 38 42.5
comp=Z,5.1nm,1.1s
SPMN Marine on St. 67.19 344 P **P 06 38 39.3 +0.4**
SPMN IAmb IAmb 06 38 53.5
comp=Z,9.3nm,0.9s
PV15 Paradox Valley 67.23 329 P **P 06 38 39.5 -0.1**
PV15 IAmb IAmb 06 38 43.4
comp=Z,7.4nm,1.0s
D41A Chassel 67.91 347 P **P 06 38 44.4 +0.9**
F36A Milaca 67.98 343 P **P 06 38 43.0 -0.9**
F36A IAmb IAmb 06 38 58.6
comp=Z,8.9nm,1.1s
PHWY Pilot Hill 68.20 333 P **P 06 38 46.8 +1.0**
KNB Kanab 68.46 325 P **P 06 38 48.3 +0.9**
LCMT Little Creek M 68.68 325 P **P 06 38 49.0 +0.3**
F33A 5 Mile Ranch, 68.75 341 P **P 06 38 48.6 -0.1**
F33A IAmb IAmb 06 38 50.3
comp=Z,5.2nm,1.1s
SRU San Rafael Swe 68.83 328 P **P 06 38 48.7 -1.0**
Q16A Castle Valley 69.01 327 P **P 06 38 48.8 -2.0**
SZCU Shurtz Canyon 69.03 325 P **P 06 38 49.3 -1.7**
CCUT Cedar City 69.14 325 P **P 06 38 49.8 -1.8**
P17A Butcher Ranch, 69.22 328 P **P 06 38 50.1 -2.0**
SHPR Sheep Range 69.38 323 P **P 06 38 53.0 -0.2**
EYMN Ely 69.40 346 P **P 06 38 52.4 -0.4**
RDMU Red Mountain 69.49 330 P **P 06 38 54.2 +0.4**
PASC Pasadena Art C 69.55 320 P **P 06 38 54.0 0.0**
RSSD Black Hills 69.95 335 P **P 06 38 56.2 -0.2**
RSSD IAmb IAmb 06 38 59.3
comp=Z,3.9nm,0.8s
MPU Maple Canyon 70.08 328 P **P 06 38 58.3 +0.9**
DBIC Dimbokro 70.12 75 LR LR 07 08 18.5
comp=Z,76nm,20.0s,baz=220,slow=35
PSUT Pine Spring 70.13 326 P **P 06 38 59.0 +1.3**
NLU North Lily Min 70.25 328 P **P 06 38 56.1 -2.3**
DUG Dugway, Tooele 70.81 327 P **P 06 39 01.8 0.0**
DUG IAmb IAmb 06 39 05.7
comp=Z,7.3nm,1.1s
E28A Huff 70.82 339 P **P 06 39 01.2 -0.3**
QSPA South Pole Qui 70.87 180 P **P 06 39 04.1 +2.3**
R11A Troy Canyon, C 70.93 324 P **P 06 39 03.5 +0.9**
PDAR Pinedale Array 71.20 331 P **P 06 39 05.8 +1.6**
comp=Z,0.7nm,0.8s,baz=131,slow=8.1,SNR=6.4
HWUT Hardware Ranch 71.25 329 P **P 06 39 05.0 +0.6**
SPUT South Promonto 71.46 328 P **P 06 39 07.2 +1.4**
BGU Big Grassy Mou 71.46 328 P **P 06 39 06.9 +1.2**
MDND Maddock 71.57 340 P **P 06 39 06.7 +0.6**
TBI Tubuai 72.27 251 *e*LR LR 07 01 18.3
comp=Z,166nm,31.8s
SNOW Snow King Moun 72.29 331 P **P 06 39 11.9 +1.1**
TPAW Teton Pass 72.40 331 P **P 06 39 11.8 +0.3**
ELK Elko 72.47 326 P **P 06 39 12.6 +0.7**
comp=Z,0.3nm,0.3s,baz=165,slow=2.0,SNR=4.6
ELK Elko 72.47 326 P **P 06 39 11.8 0.0**
NVAR Mina Array Bea 72.51 323 P **P 06 39 14.5 +2.4**
comp=Z,1.6nm,0.9s,baz=147,slow=7.7,SNR=9.5
NVAR LR LR 07 08 36.4
comp=Z,42nm,18.7s,baz=252,slow=34
FXWY Fox Creek 72.55 331 P **P 06 39 13.8 +1.5**
ULM Lac du Bonnet 72.63 344 P **P 06 39 12.6 +0.3**
comp=Z,1.3nm,0.7s,baz=135,slow=5.5,SNR=3.4
ULM LR LR 07 13 49.4
comp=Z,55nm,20.0s,baz=186,slow=38
ULM Lac du Bonnet 72.63 344 P **P 06 39 12.2 -0.1**
IMW Indian Meadow 72.71 331 P **P 06 39 14.5 +1.2**
IMW IAmb IAmb 06 39 16.7
comp=Z,9.3nm,1.4s
FLWY Flagg Ranch 72.75 331 P **P 06 39 12.0 -1.5**
FLWY IAmb IAmb 06 39 17.1
comp=Z,10nm,1.0s
KVN Kaiserville 72.83 323 P **P 06 39 14.1 +0.1**
RLMT Red Lodge 72.93 333 P **P 06 39 15.7 +1.2**
LAO LASA Array 72.94 336 P **P 06 39 15.4 +1.1**
LAO IAmb IAmb 06 39 17.2
comp=Z,8.1nm,1.1s
LKWY Lake 72.99 332 P **P 06 39 16.3 +1.4**
LKWY IAmb IAmb 06 39 19.3
comp=Z,6.1nm,0.9s
YNE Yellowstone No 73.16 332 P **P 06 39 17.1 +1.2**
YMR Madison River 73.32 331 P **P 06 39 19.1 +2.2**
YHH Holmes Hill 73.36 332 P **P 06 39 18.8 +1.6**
YHB Horse Butte 73.49 331 P **P 06 39 18.5 +0.7**
YHL Hebgen Lake 73.56 331 P **P 06 39 18.0 -0.3**
GCMT Greycliff 73.63 333 P **P 06 39 17.4 -1.1**
PPT2 Papeete2 73.82 257 *e*LR LR 07 02 04.5
comp=Z,77nm,25.2s
SCHQ Schefferville 73.93 3 P **P 06 39 19.9 0.0**
comp=Z,1.9nm,0.8s,baz=240,slow=8.1,SNR=3.3
SCHQ Schefferville 73.93 3 P **P 06 39 19.9 0.0**
SCHQ IAmb IAmb 06 39 34.5
comp=Z,8.6nm,1.2s
PAHR Pah Rah Range 74.00 323 P **P 06 39 22.6 +1.8**
PAHR IAmb IAmb 06 39 25.1
comp=Z,7.8nm,1.0s
MCMT McKenzie Canyo 74.31 331 P **P 06 39 23.6 +0.9**
DLMT Dillon 74.60 331 P **P 06 39 23.5 -0.7**
BEKR Beckworth 74.66 323 P **P 06 39 25.1 +0.4**
MFID Camas Ranch 74.70 328 P **P 06 39 24.5 -0.3**
MFID IAmb IAmb 06 39 28.9
comp=Z,8.9nm,1.1s
ORV Oroville 75.11 322 P **P 06 39 27.5 +0.4**
ORV IAmb IAmb 06 39 31.3
comp=Z,9.9nm,1.0s
EGMT Eagleton 75.43 334 P **P 06 39 28.2 -0.7**
EGMT IAmb IAmb 06 39 31.6
comp=Z,7.3nm,0.9s
MOD Modoc Plateau 76.00 324 P **P 06 39 31.5 -0.9**
BMO Blue Mountains 76.47 328 P **P 06 39 34.6 -0.3**
WALA Waterton Lakes 77.98 333 P **P 06 39 42.4 -0.9**
WALA IAmb IAmb 06 39 46.4
comp=Z,4.8nm,0.8s
TOA0 Torodi Ar. Sit 78.58 72 P **P 06 39 45.8 -1.4**
TOA0 IAmb IAmb 06 39 47.4
comp=Z,6.8nm,1.1s
TORD Torodi Ar. Bea 78.58 72 P **P 06 39 45.8 -1.4**
comp=Z,4.5nm,0.9s,baz=258,slow=5.0,SNR=16
TORD LR LR 07 13 56.5
comp=Z,100nm,19.3s,baz=265,slow=35
VNDA Vanda 78.64 190 P **P 06 39 49.2 +2.7**
comp=Z,1.8nm,0.9s,baz=130,slow=5.2,SNR=7.1
LTY Liberty 79.83 328 P **P 06 39 55.0 +1.5**

LTY				IAmb	IAmb	06 40 05.6	
	comp=Z,12nm,1.5s						
LLLB	Lillooet	82.69	330	P	P	06 40 08.9	+0.4
LLLB				IAmb	IAmb	06 40 11.3	
	comp=Z,14nm,1.2s						
ESDC	Sonseca Array	85.74	45	P	P	06 40 23.8	-0.5
	comp=Z,0.8nm,0.8s,baz=253,slow=3.9,SNR=4.5						
ESDC				LR	LR	07 16 22.9	
	comp=Z,30nm,20.1s,baz=245,slow=34						
BOSA	Boshof	86.29	119	LR	LR	07 15 45.4	
	comp=Z,107nm,18.8s,baz=216,slow=33						
MAW	Mawson	87.00	164	LR	LR	07 19 51.8	
	comp=Z,50nm,18.2s,baz=238,slow=36						
YKA	Yellowknife Ar	88.45	341	P	P	06 40 37.8	+1.0
	comp=Z,7.1nm,0.8s,baz=138,slow=5.4,SNR=83						
YKA				LR	LR	07 24 14.2	
	comp=Z,50nm,19.1s,baz=0.0,slow=38						
DLBC	Dease Lake	91.33	333	P	P	06 40 50.7	+0.3
DZM	Mont Dzumac	110.33	237	eLR	LR	07 19 07.5	
	comp=Z,77nm,20.9s						
H11S2	WAKE ISLAND Hy	125.53	279	T	T	09 05 59.6	
	baz=101,slow=74,SNR=45						
H11S1	WAKE ISLAND Hy	125.54	279	T	T	09 06 01.6	
	baz=101,slow=74,SNR=42						
H11S3	WAKE ISLAND Hy	125.55	279	T	T	09 05 57.6	
	baz=101,slow=74,SNR=38						
PETK	Petropavlovsk-	129.59	324	PKP	PKiKP	06 46 54.9	+0.4
	comp=Z,3.6nm,1.0s,baz=204,slow=2.6,SNR=4.5						
ASAR	Alice Springs	130.82	211	PKP	PKPdf	06 46 56.9	-0.2
	comp=Z,1.3nm,1.0s,baz=115,slow=2.5,SNR=8.1						
ZALV	Zalesovo Beam	140.78	22	PKP	PKPdf	06 47 14.3	-0.3
	comp=Z,2.1nm,0.8s,baz=302,slow=2.8,SNR=4.7						
KDJ	Kajisay	144.81	43		PKPab	06 47 21.6	+0.3
MAKZ	Makanchi	144.81	33		PKPbc	06 47 21.7	+0.7
MK31	Makanchi Array	144.98	32		PKPbc	06 47 22.1	+0.6
MKAR	Makanchi Array	144.98	32	PKP	PKPbc	06 47 21.4	-0.2
	comp=Z,4.4nm,0.9s,baz=318,slow=3.3,SNR=39						
KSH	Kashi	145.23	48	PKPbc	PKPdf	06 47 23.8	+0.7
KSH				sPKP		06 47 32.4	
KSH				PP	PP	06 50 41.3	-0.9
USRK	Ussuriysk Ar.	148.56	327	PKP	PKPdf	06 47 25.6	-2.7
	comp=Z,1.5nm,0.7s,baz=80,slow=16,SNR=2.1						
USRK				PKPbc	PKiKP	06 47 33.2	-0.2
	comp=Z,5.4nm,0.8s,baz=3.2,slow=2.5,SNR=6.5						
MJAR	Matsushiro Arr	149.10	310	PKPbc	PKPbc	06 47 33.9	+0.3
	comp=Z,7.4nm,1.0s,baz=96,slow=2.3,SNR=13						
MAT	Matsushiro	149.10	310	PKP	PKPbc	06 47 32.6	-1.0
SONM	Songino Array	151.47	4	PKPbc	PKiKP	06 47 40.3	+0.7
	comp=Z,2.9nm,0.8s,baz=306,slow=1.4,SNR=16						
SONM				PKPab	sPKPbc	06 47 48.7	+0.4
	comp=Z,2.1nm,0.9s,baz=322,slow=2.8,SNR=7.5						
ULN	Ulaanbaatar	151.47	3		PKPbc	06 47 38.0	-1.1
LZH	Lanzhou	162.70	14	ePKP	PKPdf	06 47 44.3	-3.3
LZH				pPKP	pPKPdf	06 47 54.2	-0.3
LZH				sPKP		06 47 59.6	
CMAR	Chiang Mai Arr	170.53	93	PKPab	PKPab	06 49 10.9	-0.2
	comp=Z,0.9nm,0.3s,baz=246,slow=5.1,SNR=4.9						

*IDC **05** 06:32:03.9±0.8, 19°21S×70°84W, h0km, mb3.9/9, mb1 4.1/12, mb1mx3.9/42, mbtmp3.9/12, ML3.7/3, Error ellipse: s-maj=29.4km s-min=14.3km az=63.0*
*SJA **05** 06:32:05.7±1.2, 19°32S×70°98W, h29km±3km, ML4.0, MW3.9*
*NEIC **05** 06:32:07.0±1.9, 19°31S±0°03×70°99W±0°02, h23km±4km, mb4.4/8, Mwr4.2/40, Error ellipse: s-maj=4.5km s-min=2.5km az=151.0*
*NEIC **05** 06:32:07, 19°31S×71°00W, h25km, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr-1.92; Mθθ1.66; Mφφ0.26; Mrθ0.10; Mθφ1.31; Mφr-1.38; Fault plane solution: M0 2.63000×10^15 NP1:φs32.20000°, δ59.88000°, λ-123.51000°. NP2:φs265.04000°, δ43.85000°, λ-46.43000°. Principal axes: T 2.5503, Plg9.0000°, Azm145.0000°; N 0.1464, Plg29.0000°, Azm51.0000°; P -2.6968, Plg60.0000°, Azm251.0000°;*
*GUC **05** 06:32:08.3±0.5, 19°28S×70°99W, h39km±2km, ML3.9*
ISC 05 06:32:05.3±1.4, **19°30S**±0°02×**71°02W**±0°05, **h13**km±8km, **n89**, σ1s**21**/123, **mb4.1**/11, **12C-1D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.90	109	⇑iP	Pg	06 32 23.2	+0.5
PSGC				iS	Sg	06 32 35.0	+0.4
PSGC				IAML		06 32 36.9	
	comp=N,5µm,0.2s						
PSGCX	Pisagua	0.90	109	Pn	Pg	06 32 23.0	+0.3
PSGCX				Sn	Sg	06 32 34.9	+0.3
PSGCX	Pisagua	0.90	109	iP	Pg	06 32 23.3	+0.5
PSGCX				iS	Sg	06 32 35.0	+0.5
PSGCX				IAML		06 32 36.8	
	comp=Z,5µm,0.2s						
PB12	IPOC Station P	0.95	44	⇑iP	Pn	06 32 24.2	-0.1
PB12				eS	Sn	06 32 36.7	-1.2
PB12				IAML		06 32 38.3	
	comp=N,4µm,0.4s						
PB12	IPOC Station P	0.95	44	Pn	Pn	06 32 24.2	-0.1
PB12				Sn	Sn	06 32 36.7	-1.2
PB12	IPOC Station P	0.95	44	eP	Pn	06 32 24.3	-0.1
PB12				iS	Sn	06 32 36.6	-1.2
PB12				IAML		06 32 37.9	
	comp=Z,5µm,0.9s						
AP01	Chacalluta	1.13	35	⇑iP	Pg	06 32 27.1	0.0
AP01				eS	Sg	06 32 41.5	-0.1
AP01	Chacalluta	1.13	35	Pn	Pg	06 32 27.0	0.0
AP01				Sn	Sg	06 32 41.6	-0.1
TA02	Huaiquique	1.28	139	eP	Pb	06 32 29.4	+0.1
TA02				eS	Sn	06 32 46.1	+0.1
TA02				IAML		06 32 47.9	
	comp=E,4µm,0.2s						
MNMC	Minye Minye	1.36	83	⇑iP	Pg	06 32 31.0	-0.5
MNMC				iS	Sg	06 32 48.4	-0.8
MNMC				IAML		06 32 51.8	
	comp=N,6µm,0.2s						
MNMC	Minye Minye	1.36	83	Pn	Pg	06 32 31.0	-0.5
MNMC				Sn	Sg	06 32 48.5	-0.8
MNMCX	Minye Minye	1.36	83	iP	Pg	06 32 31.1	-0.4
MNMCX				iS	Sg	06 32 48.5	-0.7
MNMCX				IAML		06 32 52.2	
	comp=Z,2µm,0.2s						
PB11	IPOC Station P	1.37	110	⇑iP	Pb	06 32 30.9	+0.1
PB11				eS	Sb	06 32 48.4	0.0
PB11				IAML		06 32 50.9	
	comp=E,7µm,0.4s						
PB11	IPOC Station P	1.37	110	Pn	Pb	06 32 31.0	+0.1
PB11				Sn	Sb	06 32 48.3	0.0
PB11	IPOC Station P	1.37	110	iP	Pb	06 32 31.1	+0.2
PB11				iS	Sg	06 32 48.8	-0.8
PB11				IAML		06 32 50.1	
	comp=Z,4µm,0.5s						
TA01	Diego Aracena	1.49	148	⇑iP	Pn	06 32 32.2	+0.4
TA01				iS	Sn	06 32 50.4	-0.7
TA01				IAML		06 32 51.0	
	comp=E,2µm,0.2s						
TA01	Diego Aracena	1.49	148	Pn	Pn	06 32 32.2	+0.4
TA01				Sn	Sn	06 32 50.5	-0.7
PATCX	Punta Patache	1.72	152	⇑iP	Pn	06 32 35.4	+0.4
PATCX				IAML		06 33 03.3	
	comp=E,1µm,0.4s						
PATCX	Punta Patache	1.72	152	Pn	Pn	06 32 35.4	+0.4
PATCX	Punta Patache	1.72	152	iP	Pn	06 32 35.5	+0.4
PATCX				iS	Sn	06 32 56.7	-0.3
PATCX				IAML		06 33 10.3	
	comp=Z,1µm,0.6s						
PB16	IPOC Station P	1.73	57	⇓iP	Pb	06 32 36.7	-0.5
PB16				eS	Sb	06 32 58.8	-0.2
PB16	IPOC Station P	1.73	57	Pn	Pb	06 32 36.9	-0.3
PB16				Sn	Sb	06 32 58.0	-1.0
PB16	IPOC Station P	1.73	57	iP	Pb	06 32 36.7	-0.5
PB16				eS	Sb	06 32 58.7	-0.2
PB16				IAML		06 33 03.9	
	comp=Z,1µm,0.4s						
GO01	Chusmiza	1.77	102	iP	Pb	06 32 37.2	-0.6
GO01				eS	Sb	06 32 59.3	-0.8
GO01	Chusmiza	1.77	102	Pn	Pb	06 32 37.2	-0.6
PB08	IPOC Station P	1.95	116	eP	Pn	06 32 39.5	+1.1
PB08				eS	Sb	06 33 03.8	-1.5
PB08				IAML		06 33 08.0	
	comp=N,1µm,0.3s						
PB08	IPOC Station P	1.95	116	Pn	Pb	06 32 39.7	-1.2
PB08	IPOC Station P	1.95	116	iP	Pb	06 32 39.8	-1.2
PB08				iS	Sb	06 33 03.7	-1.7
PB08				IAML		06 33 07.2	
	comp=Z,984nm,0.3s						
PB01	IPOC Station P	2.26	141	eP	Pn	06 32 43.0	+0.6
PB01				eS	Sn	06 33 09.4	-0.8
PB01				IAML		06 33 11.5	
	comp=N,1µm,0.3s						
PB01	IPOC Station P	2.26	141	Pn	Pn	06 32 43.1	+0.6
PB01	IPOC Station P	2.26	141	eP	Pn	06 32 43.1	+0.6
PB01				iS	Sn	06 33 09.6	-0.6
PB01				IAML		06 33 26.2	
	comp=Z,653nm,1.2s						
PB02	IPOC Station P	2.27	152	⇑iP	Pn	06 32 43.3	+0.7
PB02				iS	Sn	06 33 08.7	-1.9
PB02	IPOC Station P	2.27	152	iP	Pn	06 32 43.4	+0.7
PB02				iS	Sn	06 33 08.9	-1.7
PB02				IAML		06 33 25.7	
	comp=Z,2µm,1.0s						
PB07	IPOC Station P	2.64	156	⇑iP	Pn	06 32 48.1	+0.3
PB07				IAML		06 33 30.0	
	comp=E,767nm,0.7s						
PB07	IPOC Station P	2.64	156	Pn	Pn	06 32 48.1	+0.3
PB07	IPOC Station P	2.64	156	eP	Pn	06 32 48.2	+0.3
PB07				iS	Sn	06 33 17.9	-1.9
PB07				IAML		06 33 37.1	
	comp=Z,690nm,0.6s						
PB03	IPOC Station P	2.98	157	eP	Pn	06 32 52.8	+0.3
PB03				IAML		06 33 33.3	
	comp=E,447nm,0.5s						
PB03	IPOC Station P	2.98	157	iP	Pn	06 32 53.0	+0.5
PB03				iS	Sn	06 33 25.4	-2.9
PB03				IAML		06 33 49.0	
	comp=Z,564nm,0.7s						
PB09	IPOC Station P	3.00	146	eP	Pn	06 32 54.1	+1.6
PB09				IAML		06 33 51.4	
	comp=E,831nm,0.6s						
PB09	IPOC Station P	3.00	146	Pn	Pn	06 32 54.5	+1.8
PB09	IPOC Station P	3.00	146	iP	Pn	06 32 54.2	+1.6
PB09				iS	Sn	06 33 29.8	+1.3
PB09				IAML		06 33 58.2	
	comp=Z,763nm,1.0s						
PB04	IPOC Station P	3.13	165	⇑iP	Pn	06 32 54.2	-0.3
PB04	IPOC Station P	3.13	165	Pn	Pn	06 32 54.2	-0.3
PB04	IPOC Station P	3.13	165	iP	Pn	06 32 54.4	-0.1
PB04				iS	Sn	06 33 28.6	-3.3
PB04				IAML		06 33 34.4	
	comp=Z,443nm,0.4s						
PB05	IPOC Station P	3.62	168	⇑iP	Pn	06 33 00.5	-0.6
PB05	IPOC Station P	3.62	168	iP	Pn	06 33 00.6	-0.6
PB05				eS	Sn	06 33 38.7	-5.2
PB05				IAML		06 34 20.1	
	comp=Z,167nm,1.4s						
PB06	IPOC Station P	3.65	158	⇑iP	Pn	06 33 01.4	-0.2
PB06	IPOC Station P	3.65	158	Pn	Pn	06 33 01.3	-0.4
PB06	IPOC Station P	3.65	158	iP	Pn	06 33 01.6	-0.1
PB06				iS	Sn	06 33 42.8	-2.0
PB06				IAML		06 34 11.5	
	comp=Z,345nm,1.4s						
LVC	Limon Verde	3.84	149	Pn	Pn	06 33 05.8	+1.3
	comp=Z,8.4nm,0.3s,baz=340,slow=9.7,SNR=14						
LVC				Pg	Pb	06 33 13.6	+0.4
	comp=Z,23nm,0.3s,baz=10,slow=8.3,SNR=6.6						
LVC				Sn	Sn	06 33 49.0	-0.7
	comp=Z,51nm,0.3s,baz=92,slow=20,SNR=8.1						
LVC				Lg	Lg	06 34 07.6	
	comp=Z,31nm,0.3s,baz=105,slow=20,SNR=8.8						
LVC	Limon Verde	3.84	149		Pn	06 33 05.6	+1.1
LVC	Limon Verde	3.84	149	iP	Pn	06 33 06.0	+1.5
LVC				iS	Sn	06 33 49.7	0.0
LVC				IAML		06 34 09.1	
	comp=Z,159nm,0.7s						
LPAZ	La Paz	4.07	43	Pn	Pb	06 33 14.6	-2.6
	comp=Z,0.7nm,0.3s,baz=235,slow=12,SNR=1.5						
LPAZ				Lg	Lg	06 34 12.6	
	comp=Z,1.1nm,0.3s,baz=297,slow=5.2,SNR=1.7						
LPAZ	La Paz	4.07	43		Pn	06 33 09.9	+2.1
PB15	IPOC Station P	4.15	160	Pn	Pn	06 33 09.0	+0.4
PB15	IPOC Station P	4.15	160	iP	Pn	06 33 08.5	-0.1
PB15				IAML		06 34 26.9	
	comp=Z,298nm,0.4s						
PB10	IPOC Station P	4.22	174	Pn	Pn	06 33 08.5	-0.8
PB10	IPOC Station P	4.22	174	iP	Pn	06 33 08.4	-0.9
PB10				iS	Sn	06 33 53.4	-5.1
PB10				IAML		06 33 57.9	
	comp=Z,205nm,0.4s						
PB14	IPOC Station P	5.33	174	Pn	Pn	06 33 24.0	-0.9
PB14	IPOC Station P	5.33	174	iP	Pn	06 33 23.7	-1.2
PB14				IAML		06 35 31.8	
	comp=Z,62nm,1.7s						
GO02	Mina Guanaco	5.99	167	Pn	Pn	06 33 33.6	-0.3
AC02	Maricunga	7.70	167	Pn	Pn	06 33 57.9	+0.2
NNA	Nana	9.18	322	Pn	Pn	06 34 19.4	+2.0
	comp=Z,0.8nm,0.3s,baz=95,slow=11,SNR=1.0						
NNA				Sn	Sn	06 35 59.1	-1.6
	comp=Z,2.0nm,0.3s,baz=266,slow=19,SNR=2.7						
NNA	Nana	9.18	322		Pn	06 34 18.8	+1.3
SIV	San Ignacio	10.04	72	Pn	Pn	06 34 28.9	-0.5
	comp=Z,0.8nm,0.3s,baz=278,slow=9.1,SNR=2.4						
H03N1	Juan Fernandez	15.75	205	T	T	06 52 09.7	
	baz=31,slow=72,SNR=13						
H03N2	Juan Fernandez	15.76	205	T	T	06 52 11.2	
	baz=31,slow=72,SNR=11						
H03N3	Juan Fernandez	15.77	205	T	T	06 52 10.2	
	baz=31,slow=72,SNR=9.0						
PLCA	Paso Flores	21.37	179	P	P	06 36 52.6	+0.1
	comp=Z,3.5nm,0.9s,baz=341,slow=15,SNR=3.6						
PLCA	Paso Flores	21.37	179	P	P	06 36 53.0	+0.4
PLCA				IAmb	IAmb	06 36 58.5	
	comp=Z,17nm,1.3s						
PTGA	Pitinga	21.40	32	P	P	06 36 51.6	-1.4
	comp=Z,5.4nm,0.2s,baz=210,slow=20,SNR=13						
PTGA	Pitinga	21.40	32	P	P	06 36 51.5	-1.4
PTGA				IAmb	IAmb	06 37 01.6	
	comp=Z,11nm,1.0s						
RUSC	La Rusia	25.11	355	P	P	06 37 30.9	+0.4
TXAR	Lajitas Array	57.70	326	P	P	06 41 56.3	+0.4
	comp=Z,0.7nm,0.9s,baz=150,slow=8.8,SNR=5.9						
MSTX	Muleshoe	61.00	330	P	P	06 42 18.9	+0.3
ANMO	Albuquerque	63.58	328	P	P	06 42 37.4	+1.3
	comp=Z,0.6nm,0.8s,baz=143,slow=14,SNR=2.4						
SADO	Sadowa	64.19	354	P	P	06 42 39.5	0.0
	comp=Z,2.1nm,0.6s,baz=198,slow=3.2,SNR=3.2						
SDCO	Great Sand Dun	65.36	330	P	P	06 42 48.3	+0.6
SDCO				IAmb	IAmb	06 42 50.2	
	comp=Z,2.9nm,0.9s						
QSPA	South Pole Qui	70.88	180	P	P	06 43 23.8	+1.9
QSPA				IAmb	IAmb	06 43 24.6	
	comp=Z,9.0nm,1.4s						
PDAR	Pinedale Array	71.23	331	P	P	06 43 25.2	+0.9
	comp=Z,0.1nm,0.5s,baz=126,slow=10,SNR=1.7						
NVAR	Mina Array Bea	72.55	323	P	P	06 43 34.3	+2.0
	comp=Z,0.4nm,0.8s,baz=142,slow=15,SNR=2.5						
TOA0	Torodi Ar. Sit	78.52	72	P	P	06 44 05.3	-1.6
TORD	Torodi Ar. Bea	78.52	72	P	P	06 44 05.5	-1.4
	comp=Z,1.9nm,0.9s,baz=236,slow=4.8,SNR=4.8						
YKA	Yellowknife Ar	88.47	341	P	P	06 44 57.4	+0.5
	comp=Z,2.5nm,0.8s,baz=136,slow=5.3,SNR=23						
ILAR	Eielson Array	101.42	335	P	Pdif	06 45 57.7	+1.7
	comp=Z,0.7nm,1.1s,baz=128,slow=4.0,SNR=4.5						
ASAR	Alice Springs	130.86	211	PKhKP	PKPpre	06 51 14.5	
	comp=Z,0.6nm,0.9s,baz=142,slow=4.7,SNR=3.1						
MKAR	Makanchi Array	144.94	32	PKP	PKPbc	06 51 41.8	+0.3
	comp=Z,1.2nm,0.8s,baz=308,slow=4.0,SNR=12						
MJAR	Matsushiro Arr	149.15	310	PKPbc	PKPbc	06 51 54.4	+0.6
	comp=Z,3.1nm,1.0s,baz=88,slow=2.5,SNR=6.2						
SONM	Songino Array	151.46	4	PKPbc	PKPbc	06 51 59.3	+0.2
	comp=Z,0.2nm,0.5s,baz=11,slow=1.5,SNR=6.5						

*NNC **05** 06:32:11.4±6.1, 36°70N×70°52E, h131km±105km, mb3.2, mpv3.8, Error ellipse: s-maj=48.1km s-min=34.9km az=21.0*
ISC 05 06:32:11.1±3.3, **36°7N**±0°2×**70°5E**±0°1, **h100**km, **n12**, σ1s**65**/17, **3C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.98	23	P	Pn	06 33 37.8	+0.4
	SNR=98						
UCH	Uchtor	6.35	28	P	Pn	06 33 42.7	+0.2
	SNR=17						
KK31	Karatay Array	6.42	0	⇓P	Pn	06 33 44.0	+1.0
	2.5nm,0.3s,baz=178,slow=12,SNR=28						
KK31				⇑S	Sn	06 34 57.5	+2.8
	5.2nm,0.3s,baz=186,slow=23,SNR=31						
EKS2	Erkin-Say	6.49	22	P	Pn	06 33 46.9	+2.9
	SNR=10						
KZA	Kyzart	6.53	33	P	Pn	06 33 45.3	+0.4
	SNR=8.1						
AAK	Ala-Archa	6.70	26	P	Pn	06 33 48.4	+1.4
	SNR=8.3						
AAK	Ala-Archa	6.70	26	P	Pn	06 33 46.5	-0.5
	2.5nm,0.4s						
AAK				S	Sn	06 35 02.6	+0.7
	6.6nm,0.6s						
CHMS	Chumysh	7.11	26	P	Pn	06 33 54.3	+1.9
	SNR=5.5						
TKM2	Tokmak 2	7.37	31	P	Pn	06 33 56.0	-0.1
	SNR=11						
TKM2	Tokmak 2	7.37	31	⇓P	Pn	06 33 55.8	-0.3
	4.9nm,0.7s						
TKM2				⇑S	Sn	06 35 16.0	-2.2
	3.5nm,1.1s						
AB31	Akbulak array	14.73	332	⇑P	Pn	06 35 34.0	-0.2
	1.1nm,0.3s,baz=150,slow=12,SNR=66						
AB31				S	Sn	06 38 14.2	-2.4
	1.2nm,0.5s,baz=149,slow=22,SNR=7.3						
AKTO	Aktyubinsk	16.43	331	⇓P	Pn	06 35 55.6	+0.2
	1.7nm,0.7s						
AKTO				⇓S	Sn	06 38 55.4	-2.0
	1.3nm,0.6s						

IDC 05 06:42:30.0±2.3, **1°52N**×**126°61E, h0**km, **mb3.4**/3, **mb1 3.7**/3, **mb1mx3.4**/31, **mbtmp3.4**/3, **Error ellipse: s-maj=180.5km s-min=28.6km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.63	161	P	P	06 47 33.3	+0.5
	0.8nm,0.4s,baz=340,slow=11,SNR=1.2						
ASAR	Alice Springs	26.02	165	P	P	06 48 04.7	-0.3
	0.4nm,0.6s,baz=344,slow=7.7,SNR=10.0						
MKAR	Makanchi Array	59.30	326	P	P	06 52 33.7	0.0
	0.2nm,0.5s,baz=110,slow=6.7,SNR=1.3						

*IDC **05** 06:45:57.6±1.2, 19°24S×70°91W, h0km, mb3.7/4, mb1 3.9/6, mb1mx3.7/25, mbtmp3.7/6, ML3.7/2, MS2.9/3, Ms1 2.9/3, ms1mx2.7/21, Error ellipse: s-maj=37.9km s-min=16.4km az=64.0*
*NEIC **05** 06:45:59.9±2.0, 19°29S±0°03×71°05W±0°04, h23km±4km, mb4.2/6, Mwr3.9/45, Error ellipse: s-maj=5.3km s-min=4.3km az=77.0*
*SJA **05** 06:45:59.8±1.4, 19°33S×70°99W, h29km±4km, ML3.7, MW3.8*
*NEIC **05** 06:45:59.7, 19°29S×71°05W, h26km, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr-6.36; Mθθ7.05; Mφφ-0.70; Mrθ-1.74; Mθφ2.99; Mφr-5.07; Fault plane solution: M0 9.11000×10^14 NP1:φs276.76000°, δ39.14000°, λ-44.67000°. NP2:φs44.24000°, δ63.66000°, λ-120.06000°. Principal axes: T 8.8730, Plg14.0000°, Azm156.0000°; N 0.4611, Plg27.0000°, Azm59.0000°; P -9.3341, Plg60.0000°, Azm270.0000°;*
*GUC **05** 06:46:02.0±0.7, 19°27S×71°03W, h38km±3km, ML3.8*
ISC 05 06:45:56.7±2.8, **19°29S**±0°03×**71°14W**±0°05, **h5**km±18km, **n84**, σ1s**44**/119, **mb4.0**/6, **5C, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	1.00	108	eP	Pb	06 46 17.4	+0.7
PSGC				iS	Sb	06 46 29.6	-0.6
PSGC				IAML		06 46 31.8	
	comp=N,3µm,0.7s						
PSGCX	Pisagua	1.00	108		Pb	06 46 17.2	+0.5
PSGCX				Sg	Sb	06 46 29.1	-1.1
PSGCX	Pisagua	1.00	108	iP	Pb	06 46 17.4	+0.7
PSGCX				iS	Sb	06 46 29.4	-0.8
PSGCX				IAML		06 46 30.9	
	comp=Z,3µm,0.7s						
PB12	IPOC Station P	1.01	49	eP	Pn	06 46 18.3	+0.6
PB12				iS	Sb	06 46 30.9	+0.4
PB12				IAML		06 46 32.4	
	comp=N,3µm,0.3s						
PB12	IPOC Station P	1.01	49		Pn	06 46 18.4	+0.6
PB12				Sn	Sb	06 46 30.3	-0.2
PB12	IPOC Station P	1.01	49	eP	Pn	06 46 18.4	+0.6
PB12				iS	Sb	06 46 31.0	+0.4
PB12				IAML		06 46 31.9	
	comp=Z,2µm,0.7s						
AP01	Chacalluta	1.18	40	eP	Pb	06 46 20.9	+1.3
AP01				eS	Sb	06 46 35.5	+0.3
AP01				IAML		06 46 45.6	
	comp=N,3µm,0.3s						
AP01	Chacalluta	1.18	40	Pn	Pn	06 46 20.7	+0.8
AP01				Sn	Sb	06 46 34.0	-1.3
TA02	Huaiquique	1.36	136	eP	Pb	06 46 23.7	+1.0
TA02				iS	Sn	06 46 40.4	-0.4
TA02				IAML		06 46 41.3	
	comp=N,4µm,0.4s						
MNMC	Minye Minye	1.46	84	eP	Pn	06 46 25.1	+1.0
MNMC				iS	Sn	06 46 42.9	-0.8
MNMC				IAML		06 46 47.4	
	comp=E,5µm,0.7s						
MNMC	Minye Minye	1.46	84	Pn	Pn	06 46 25.1	+1.0
MNMC				Sn	Sn	06 46 40.7	-3.1
MNMCX	Minye Minye	1.46	84	iP	Pn	06 46 25.1	+1.1
MNMCX				eS	Sn	06 46 43.1	-0.7
MNMCX				IAML		06 46 47.9	
	comp=Z,2µm,0.5s						
PB11	IPOC Station P	1.47	109	eP	Pn	06 46 25.0	+1.0
PB11				iS	Sn	06 46 42.8	-1.0
PB11				IAML		06 46 45.5	
	comp=E,4µm,0.5s						
PB11	IPOC Station P	1.47	109		Pn	06 46 25.0	+1.0
PB11				Sn	Sn	06 46 41.3	-2.6
PB11	IPOC Station P	1.47	109	iP	Pn	06 46 25.1	+1.0
PB11				iS	Sn	06 46 42.8	-1.0
PB11				IAML		06 46 44.9	
	comp=Z,3µm,0.3s						
TA01	Diego Aracena	1.56	145	eP	Pn	06 46 26.2	+1.1
TA01				iS	Sn	06 46 44.4	-1.3
TA01				IAML		06 46 45.4	
	comp=E,1µm,0.2s						
TA01	Diego Aracena	1.56	145	Pn	Pn	06 46 26.2	+1.1
TA01				Sn	Sn	06 46 44.2	-1.5
PATCX	Punta Patache	1.78	149	eP	Pn	06 46 29.4	+1.2
PATCX				iS	Sn	06 46 50.3	-1.1
PATCX				IAML		06 46 58.4	
	comp=E,1µm,0.6s						
PATCX	Punta Patache	1.78	149		Pn	06 46 29.1	+0.8
PATCX				Sn	Sn	06 46 50.3	-1.1
PATCX	Punta Patache	1.78	149	iP	Pn	06 46 29.6	+1.2
PATCX				iS	Sn	06 46 50.3	-1.1
PATCX				IAML		06 47 08.7	
	comp=Z,651nm,0.5s						
PB16	IPOC Station P	1.81	59	eP	Pn	06 46 30.5	+1.5
PB16				iS	Sn	06 46 52.9	+0.2
PB16				IAML		06 46 58.6	
	comp=N,710nm,0.5s						
PB16	IPOC Station P	1.81	59	Pn	Pn	06 46 30.7	+1.6
PB16				Sn	Sn	06 46 52.5	-0.2
PB16	IPOC Station P	1.81	59	eP	Pb	06 46 30.8	+0.1
PB16				iS	Sn	06 46 52.8	+0.1
PB16				IAML		06 46 57.4	
	comp=Z,930nm,0.5s						
GO01	Chusmiza	1.87	102	eP	Pn	06 46 31.1	+1.3
GO01				iS	Sn	06 46 54.6	+0.5
GO01				IAML		06 46 57.9	
	comp=N,2µm,0.2s						
GO01	Chusmiza	1.87	102		Pn	06 46 31.2	+1.3
GO01				Sn	Sn	06 46 51.6	-2.4
PB08	IPOC Station P	2.05	115	eP	Pn	06 46 33.6	+1.3
PB08				iS	Sn	06 46 58.7	+0.3
PB08				IAML		06 47 01.5	
	comp=N,1µm,0.3s						
PB08	IPOC Station P	2.05	115		Pn	06 46 33.5	+1.3
PB08	IPOC Station P	2.05	115	eP	Pn	06 46 33.8	+1.6
PB08				eS	Sn	06 46 59.6	+1.2
PB08				IAML		06 47 08.3	
	comp=Z,519nm,0.7s						
PB02	IPOC Station P	2.33	150	eP	Pn	06 46 37.4	+1.5
PB02	IPOC Station P	2.33	150	iP	Pn	06 46 37.4	+1.5
PB02				eS	Sn	06 47 03.1	-1.9
PB02				IAML		06 47 11.2	
	comp=Z,933nm,0.3s						
PB01	IPOC Station P	2.33	139	eP	Pn	06 46 37.1	+1.2

PB01				i S	Sn	06 47 03.6	-1.4
PB01				IAML		06 47 06.1	
	comp=N,1μm,0.5s						
PB01	IPOC Station P	2.33	139		Pn	06 46 36.9	+1.1
PB01	IPOC Station P	2.33	139	i P	Pn	06 46 37.1	+1.2
PB01				eS	Sn	06 47 03.6	-1.4
PB01				IAML		06 47 18.7	
	comp=Z,361nm,0.6s						
PB07	IPOC Station P	2.69	154	⇑iP	Pn	06 46 42.1	+1.2
PB07	IPOC Station P	2.69	154		Pn	06 46 41.9	+1.0
PB07	IPOC Station P	2.69	154	eP	Pn	06 46 42.2	+1.3
PB07				IAML		06 47 31.9	
	comp=Z,373nm,0.4s						
PB03	IPOC Station P	3.04	155	eP	Pn	06 46 46.8	+1.2
PB03	IPOC Station P	3.04	155	eP	Pn	06 46 46.9	+1.3
PB03				i S	Sn	06 47 20.0	-2.4
PB03				IAML		06 47 31.7	
	comp=Z,229nm,0.5s						
PB09	IPOC Station P	3.06	145	⇑iP	Pn	06 46 48.1	+2.2
PB09	IPOC Station P	3.06	145		Pn	06 46 47.5	+1.5
PB09	IPOC Station P	3.06	145	i P	Pn	06 46 48.2	+2.2
PB09				i S	Sn	06 47 24.1	+0.9
PB09				IAML		06 47 39.3	
	comp=Z,334nm,1.2s						
PB04	IPOC Station P	3.17	163	⇑iP	Pn	06 46 48.2	+0.8
PB04	IPOC Station P	3.17	163		Pn	06 46 48.1	+0.8
PB04	IPOC Station P	3.17	163	eP	Pn	06 46 48.3	+0.8
PB04				i S	Sn	06 47 22.6	-3.2
PB04				IAML		06 47 27.2	
	comp=Z,292nm,0.5s						
PB05	IPOC Station P	3.65	166	⇑iP	Pn	06 46 54.5	+0.4
PB05	IPOC Station P	3.65	166	i P	Pn	06 46 54.6	+0.6
PB05				i S	Sn	06 47 34.7	-2.9
PB05				IAML		06 48 13.1	
	comp=Z,124nm,0.6s						
PB06	IPOC Station P	3.70	157	⇑iP	Pn	06 46 55.5	+0.7
PB06	IPOC Station P	3.70	157		Pn	06 46 55.1	+0.4
PB06	IPOC Station P	3.70	157	i P	Pn	06 46 55.5	+0.7
PB06				IAML		06 48 15.6	
	comp=Z,155nm,0.5s						
LVC	Limon Verde	3.91	148	Pn	Pn	06 46 59.7	+1.9
	comp=Z,14nm,0.3s,baz=329,slow=7.1,SNR=67						
LVC				Pg	Pb	06 47 09.0	+2.7
	comp=Z,22nm,0.3s,baz=356,slow=7.2,SNR=15						
LVC				Sn	Sn	06 47 43.6	-0.6
	comp=Z,22nm,0.3s,baz=293,slow=22,SNR=8.6						
LVC				Lg	Lg	06 47 58.0	
	comp=Z,20nm,0.3s,baz=289,slow=14,SNR=3.1						
LVC	Limon Verde	3.91	148		Pn	06 47 00.0	+2.3
LVC	Limon Verde	3.91	148	i P	Pn	06 47 00.0	+2.3
LVC				i S	Sn	06 47 43.9	-0.3
LVC				IAML		06 48 04.1	
	comp=Z,102nm,0.6s						
LPAZ	La Paz	4.13	44	Pn	Pb	06 47 08.8	-1.5
	comp=Z,0.7nm,0.3s,baz=269,slow=3.6,SNR=21						
LPAZ				Lg	Lg	06 48 08.2	
	comp=Z,0.2nm,0.3s,baz=201,slow=19,SNR=1.0						
LPAZ				LR	LR	06 48 34.6	
	comp=Z,52nm,20.1s,baz=182,slow=40						
PB15	IPOC Station P	4.20	159		Pn	06 47 02.3	+0.7
PB15	IPOC Station P	4.20	159	i P	Pn	06 47 02.5	+0.8
PB15				IAML		06 48 21.3	
	comp=Z,222nm,0.5s						
PB10	IPOC Station P	4.24	173		Pn	06 47 02.3	+0.3
PB10	IPOC Station P	4.24	173	i P	Pn	06 47 02.3	+0.3
PB10				i S	Sn	06 47 47.4	-4.6
PB10				IAML		06 47 51.3	
	comp=Z,90nm,0.4s						
PB14	IPOC Station P	5.36	173		Pn	06 47 17.6	0.0
PB14	IPOC Station P	5.36	173	i P	Pn	06 47 17.7	+0.1
PB14				IAML		06 49 21.5	
	comp=Z,19nm,0.5s						
YJA	Yavi	6.00	120	i P	Pb	06 47 36.6	-5.4
YJA				IAML		06 50 03.3	
	comp=Z,4.5nm,2.9s						
GO02	Mina Guanaco	6.02	167		Pn	06 47 27.6	+0.8
AC02	Maricunga	7.74	167	Pn	Pn	06 47 51.7	+1.2
NNA	Nana	9.10	322	LR	LR	06 52 03.6	
	comp=Z,91nm,18.2s,baz=118,slow=40						
AC05	El Transito	9.54	175	Pn	Pn	06 48 15.2	+0.3
SIV	San Ignacio	10.14	73	Pn	Pn	06 48 23.5	+0.4
	comp=Z,0.2nm,0.3s,baz=269,slow=11,SNR=5.7						
GO04	Tololo Observa	10.84	178	Pn	Pn	06 48 31.2	-1.7
CO03	El Pedregal	11.51	178	Pn	Pn	06 48 40.6	-1.3
CO02	Combarbal	11.87	179	Pn	Pn	06 48 46.8	0.0
SAML	Samuel	12.84	38	Pn	Pn	06 48 57.6	-2.5
VA03	San Esteban	13.43	178	Pn	Pn	06 49 07.1	-1.0
CPUP	Villa Florida	14.53	121	LR	LR	06 56 00.7	
	comp=Z,87nm,20.8s,baz=260,slow=42						
PLCA	Paso Flores	21.38	179	P	P	06 50 45.2	0.0
PLCA				IAmb	IAmb	06 50 53.3	
	comp=Z,7.4nm,1.4s						
PTGA	Pitinga	21.45	32	P	P	06 50 45.6	-0.4
	comp=Z,1.8nm,0.2s,baz=250,slow=23,SNR=7.1						
PTGA	Pitinga	21.45	32	P	P	06 50 46.1	+0.1
PTGA				IAmb	IAmb	06 50 57.1	
	comp=Z,4.5nm,0.3s						
BDFB	Brasilia	22.35	84	P	P	06 50 51.6	-4.2
RUSC	La Rusia	25.09	355	P	P	06 51 21.0	-2.0
TXAR	Lajitas Array	57.63	326	P	P	06 55 50.5	+2.3
	comp=Z,0.2nm,0.5s,baz=156,slow=7.7,SNR=3.9						
SNAA	Sanae	65.04	161	P	P	06 56 37.7	0.0
SNAA				IAmb	IAmb	06 56 41.7	
	comp=Z,3.5nm,1.2s						
QSPA	South Pole Qui	70.89	180	P	P	06 57 17.6	+2.9
TORD	Torodi Ar. Bea	78.61	72	P	P	06 57 59.8	-0.4
	comp=Z,0.4nm,0.7s,baz=249,slow=4.7,SNR=2.0						
YKA	Yellowknife Ar	88.42	341	P	P	06 58 51.2	+1.8
	comp=Z,0.7nm,0.7s,baz=136,slow=5.1,SNR=10						
MKAR	Makanchi Array	144.98	32	PKP	PKPdf	07 05 35.5	+0.3
	comp=Z,0.3nm,0.7s,baz=337,slow=3.3,SNR=3.0						
KSH	Kashi	145.25	47	PKPbc	PKiKP	07 05 38.9	-1.0
SONM	Songino Array	151.45	3	PKPbc	PKiKP	07 05 53.8	+1.3
	comp=Z,0.4nm,0.5s,baz=337,slow=1.5,SNR=3.0						

IDC 05 07:25:53.2±3.6**,6°.20S**×**154°.36E,h0km,mb3.4**/2**, mb1 3.8**/3**,mb1mx3.5**/42**,mbtmp3.6**/3**,ML3.5**/1**,MS3.0**/3**, Ms1 3.1**/3**,ms1mx2.7**/24**,Error ellipse: s-maj=146.5km s-min=49.2km az=122.0,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.81	245	LR	LR	07 31 17.3	
	comp=Z,69nm,18.2s,baz=281,slow=41						
CTA	Charters Tower	15.89	209	Pn	Pn	07 29 39.9	+1.4
	0.1nm,0.3s,baz=22,slow=10,SNR=3.9						
WRA	Warramunga Arr	23.77	233	P	P	07 31 07.7	0.0
	1.3nm,0.7s,baz=58,slow=9.6,SNR=5.8						
ASAR	Alice Springs	26.24	226	P	P	07 31 29.7	-0.6
	0.3nm,0.7s,baz=60,slow=9.1,SNR=8.2						
STKA	Stephens Creek	28.20	203	LR	LR	07 43 20.1	
	comp=Z,40nm,18.3s,baz=24,slow=37						
CMAR	Chiang Mai Arr	59.88	295	LR	LR	08 01 26.1	
	comp=Z,15nm,21.9s,baz=320,slow=36						
TORD	Torodi Ar. Bea	152.20	286	PKPbc	PKiKP	07 45 52.2	-0.1
	0.5nm,0.7s,baz=85,slow=2.4,SNR=2.3						

*JMA **05** 07:31:02.8±0.1, 23°.74N×122°.17E, h22km, M2.9*
*TAP **05** 07:31:03.2, 23°.76N×122°.14E, h21km, ML3.5, D*
ISC 05 07:31:02.9±1.2**,23°.72N**±0°.02×**122°.20E**±0°.02**,h24km**±12km**, n93,σ0s.67**/142**,9D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.60	295	i P	Pb	07 31 14.8	+0.1
	baz=294						
HWA				eS	Sb	07 31 22.3	-0.5
	baz=294						
TWD	Chiawan	0.66	303	⇓iP	Pb	07 31 15.3	-0.4
	baz=303						
TWD				i S	Sb	07 31 24.0	-0.5
	baz=303						
ESL	Shilin	0.70	278	⇓iP	Pb	07 31 16.1	-0.5
	baz=274						
ESL				eS	Sb	07 31 25.5	-0.3
	baz=274						
EGFH	Guangfu	0.71	266	i P	Pb	07 31 16.7	+0.1
	baz=262						
EGFH				eS	Sb	07 31 26.8	+0.9
	baz=262						
NACB	Ninganchiao	0.71	310	⇓iP	Pb	07 31 16.0	-0.6
	baz=309						
NACB				S	Sb	07 31 25.5	-0.6
	baz=309						
HGSD	Ruisui	0.74	252	i P	Pb	07 31 17.2	0.0
	baz=247						
HGSD				eS	Sb	07 31 27.3	+0.4
	baz=247						
ETLH	Xiulin Townshi	0.81	307	⇓iP	Pb	07 31 17.7	-0.7
	baz=306						
ETLH				eS	Sb	07 31 29.1	0.0
	baz=306						
ENA	Nanau	0.82	330	i P	Pb	07 31 18.2	-0.3
	baz=332						
ENA				S	Sb	07 31 29.1	0.0
	baz=332						
EOS1	EOS1	0.83	356	i P	Pn	07 31 18.5	-0.5
	baz=359						
EOS1				S	Sb	07 31 30.1	+0.8
	baz=359						
EHY	Hungye	0.83	255	P	Pb	07 31 18.8	+0.1
	baz=251						
EHY				i S	Sb	07 31 30.0	+0.6
	baz=251						
YULB	Yu-li	0.89	249	i P	Pn	07 31 19.7	-0.2
	baz=244						
YULB				eS	Sb	07 31 31.7	+0.6
	baz=244						
TWF1	Yuli	0.90	246	i P	Pn	07 31 20.0	-0.1
	baz=241						
TWF1				i S	Sb	07 31 32.2	+0.7
	baz=241						
TWC	Suao	0.94	340	i P	Pn	07 31 20.4	-0.2
	baz=343						
WHF	Hehuan Shan	0.95	297	⇓iP	Pn	07 31 20.2	-1.0
	baz=295						
WHF				eS	Sb	07 31 32.8	-0.6
	baz=295						
OWD	Renai	0.96	284	i P	Pn	07 31 20.4	-0.6
	baz=282						
OWD				S	Sb	07 31 33.0	-0.4
	baz=282						
VWDT	VWDT	0.97	272	⇓iP	Pn	07 31 20.9	-0.1
	baz=269						
VWDT				i S	Sb	07 31 33.6	+0.2
	baz=269						
CHKT	Chengkung	0.98	231	eP	Pn	07 31 20.4	-0.7
	baz=226						
CHKT				eS	Sn	07 31 32.4	-1.9
	baz=226						
CHGB	Renai	0.99	290	⇓iP	Pn	07 31 21.0	-0.5
	baz=288						
CHGB				eS	Sn	07 31 34.0	-0.9
	baz=288						
NNSB	Datong	1.02	314	i P	Pn	07 31 21.5	-0.4
	baz=314						
NNSB				i S	Sn	07 31 34.7	-0.8
	baz=314						
NNSH	Datong	1.02	314	⇓iP	Pn	07 31 21.4	-0.5
	baz=314						
NNSH				i S	Sn	07 31 34.7	-0.8
	baz=314						
NNS	Nan Shan	1.04	314	i P	Pn	07 31 21.5	-0.6
	baz=314						
NNS				eS	Sn	07 31 35.0	-0.9
	baz=314						
YOJ	Yonaguni jima	1.05	45	i P	Pn	07 31 22.4	+0.3
	baz=48						
YOJ	Yonaguni jima	1.05	45	P	Pn	07 31 22.2	+0.1
YOJ				eS	Sn	07 31 35.8	-0.1
TWT	Tachien	1.07	300	P	Pn	07 31 22.6	+0.1
	baz=298						
TWT				eS	Sn	07 31 36.3	-0.5
	baz=298						
NDT	Datong Townshi	1.08	325	i P	Pn	07 31 22.3	-0.2
	baz=325						
NDT				eS	Sn	07 31 36.1	-0.6
	baz=325						
ENTT	Nioudou	1.08	328	i P	Pn	07 31 22.4	-0.2
	baz=329						
ENTT				eS	Sn	07 31 36.2	-0.5
	baz=329						
TDCB	Techi	1.09	299	P	Pn	07 31 22.7	-0.1
	baz=298						
TDCB				eS	Sn	07 31 36.3	-0.8
	baz=298						
TWE	Neicheng	1.11	334	i P	Pn	07 31 23.0	+0.1
	baz=336						
TWE				eS	Sn	07 31 36.7	-0.7
	baz=336						
SSLB	Suanglung	1.14	274	i P	Pn	07 31 23.3	0.0
	baz=271						
SSLB				eS	Sn	07 31 37.8	-0.4
	baz=271						
SLBB	Yuanshan	1.15	334	eP	Pn	07 31 23.8	+0.3
	baz=335						
NTC	Toucheng	1.18	344	eP	Pn	07 31 24.3	+0.4
	baz=345						
NTC				eS	Sn	07 31 39.0	-0.1
	baz=345						
SMLT	Sun Moon Lake	1.20	278	⇓P	Pn	07 31 24.5	+0.2
	baz=276						
SMLT				eS	Sn	07 31 39.8	0.0
	baz=276						
TWH	Lutao	1.20	213	i P	Pn	07 31 24.0	-0.2
	baz=209						
DPDB	Guoxing	1.20	285	eP	Pn	07 31 24.6	+0.3
	baz=283						
ELDTW	Lidau	1.20	244	P	Pn	07 31 24.2	-0.2
	baz=240						
ELDTW				eS	Sn	07 31 38.7	-1.3
	baz=240						
YHNB	Yeheng	1.21	322	P	Pn	07 31 24.3	0.0
	baz=322						
YHNB				eS	Sn	07 31 39.4	-0.6
	baz=322						
NSK	Sanguang	1.22	321	P	Pn	07 31 24.5	0.0
	baz=322						
NSK				eS	Sn	07 31 39.6	-0.7
	baz=322						
NWLT	Wulai	1.23	329	eP	Pn	07 31 25.1	+0.5
	baz=330						
NWLT				eS	Sn	07 31 40.0	-0.4
	baz=330						
WHYT	Xinyi Township	1.23	269	eP	Pn	07 31 25.4	+0.7
	baz=266						
TYC	Yuchr	1.24	279	i P	Pn	07 31 24.9	+0.2
	baz=277						
TYC				eS	Sn	07 31 40.7	0.0
	baz=277						
WHP	Taichung City	1.27	296	eP	Pn	07 31 26.2	+1.0
	baz=295						
ALS	Alishan	1.29	261	eP	Pn	07 31 26.5	+0.8
	baz=258						
ALS				eS	Sn	07 31 43.1	+0.8
	baz=258						
TIPB	Shuangxi	1.29	345	P	Pn	07 31 26.2	+0.7
	baz=346						
TIPB				i S	Sn	07 31 41.9	-0.1
	baz=346						
TWGBT	Beinan	1.36	229	eP	Pn	07 31 26.1	-0.3
	baz=226						
TWG	Pinlang	1.37	229	P	Pn	07 31 26.2	-0.3
	baz=226						
TWG				eS	Sn	07 31 43.3	-0.5
	baz=226						
TWA	Mucha	1.37	336	eP	Pn	07 31 27.6	+1.1
	baz=337						
TWA				eS	Sn	07 31 44.9	+0.9
	baz=337						
WNT	Mingjian	1.39	277	eP	Pb	07 31 28.5	+0.3
	baz=275						
CHN5	Tsauling	1.40	265	eP	Pb	07 31 28.5	+0.2
	baz=263						
NWF	Wu-fen Shan	1.40	344	eP	Pn	07 31 27.7	+0.8
	baz=346						
NWF				eS	Sn	07 31 44.6	-0.1
	baz=346						
WFSB	Wu-fen Shan	1.40	344	eP	Pn	07 31 27.7	+0.9
	baz=346						
WFSB				S	Sn	07 31 44.5	0.0
	baz=346						
LIOB	Emei	1.42	311	eP	Pb	07 31 28.6	-0.1
	baz=310						
STYT	Tauyuan	1.43	248	eP	Pn	07 31 28.3	+0.9
	baz=244						
STYT				eS	Sn	07 31 46.2	+0.7
	baz=244						
TCU	Taichung	1.45	287	eP	Pb	07 31 29.7	+0.4
	baz=286						
NSY	Sanyi	1.48	298	eP	Pb	07 31 29.8	0.0
	baz=297						
TPUB	Ta-pu	1.50	254	eP	Pb	07 31 30.1	0.0
	baz=251						
HATJ	Hateruma jima	1.51	77	P	Pn	07 31 28.7	+0.3
HATJ				S	Sn	07 31 46.9	-0.4
NMLH	Miaoli	1.52	303	eP	Pn	07 31 30.0	+1.4
	baz=302						
WDLH	Douliu	1.52	269	eP	Pb	07 31 30.3	-0.1
	baz=267						
WTP	Ta-pu	1.53	252	eP	Pb	07 31 30.6	+0.1
	baz=249						
YM01	YM01	1.53	338	eP	Pn	07 31 29.8	+1.0
	baz=339						
YM10	YM10	1.54	338	eP	Pn	07 31 29.7	+0.7
	baz=339						
YM11	YM11	1.55	339	eP	Pn	07 31 29.6	+0.6
	baz=339						
YM04	YM04	1.55	337	eP	Pn	07 31 29.6	+0.6
	baz=338						
YM05	YM05	1.55	338	eP	Pn	07 31 29.6	+0.6
	baz=339						
YM08	YM08	1.56	339	eP	Pn	07 31 29.6	+0.4
	baz=340						
YM03	YM03	1.57	338	eP	Pn	07 31 29.8	+0.4
	baz=338						
ANP	Anpu	1.58	337	eP	Pn	07 31 29.6	+0.1
	baz=338						
ECL	Taimali	1.60	226	eP	Pn	07 31 29.3	-0.4
	baz=223						
SGST	Jiashian	1.61	247	eP	Pn	07 31 31.0	+1.2
	baz=244						
CHN1	Nanshi	1.62	251	eP	Pb	07 31 32.4	+0.2
	baz=248						
TWK	Hsinying	1.63	254	eP	Pb	07 31 32.3	-0.1
	baz=251						
CHY	Chiayi	1.64	263	eP	Pn	07 31 30.8	+0.6
	baz=260						
RLNB	Erlin	1.69	276	eP	Pb	07 31 33.4	+0.1
	baz=274						
SSD	Sandimen	1.73	236	eP	Pn	07 31 32.7	+1.2
	baz=233						
JKRS	Kuro-shima	1.74	72	eS	Sn	07 31 53.5	+0.6
LAY	Lan-yu	1.77	200	eP	Pn	07 31 31.2	-0.9
	baz=197						
MASBT	Mashibuluo	1.81	233	i P	Pn	07 31 33.5	+1.0
	baz=230						
EAST	Anshuo	1.82	223	eP	Pn	07 31 33.0	+0.3
	baz=220						
JIJ	Ishigaki jima	1.89	70	P	Pn	07 31 34.0	+0.3
JIJ				eS	Sn	07 31 56.4	-0.4
SCZT	Fangliau	1.98	228	eP	Pb	07 31 38.4	+0.2
	baz=225						
JISG	Ishigakijimahi	2.12	65	P	Pn	07 31 37.0	+0.3
JISG				eS	Sn	07 32 00.8	-1.5
TSEB	Hengchuen, Pin	2.17	214	eS	Sb	07 32 06.1	-1.8
	baz=212						
TWKBT	Hengchun	2.18	216	eP	Pn	07 31 38.8	+1.1
	baz=213						
JTJ	Tarama	2.47	68	P	Pn	07 31 42.4	+0.8
VWUC	VWUC	2.81	297	eP	Pn	07 31 46.5	+0.3
	baz=296						
VWUC				eS	Sn	07 32 18.9	-0.5
	baz=296						
PTTC	Pingtan	2.83	309	eP	Pn	07 31 47.0	+0.4
	baz=308						
PTTC				eS	Sn	07 32 18.9	-1.0
	baz=308						
PTMZ	Houxiangcun	3.10	296	eP	Pn	07 31 50.7	+0.4
	baz=294						
PTMZ				eS	Sn	07 32 25.9	-0.6
	baz=294						
MATB	Ma-tsu	3.17	320	eP	Pn	07 31 51.2	0.0
	baz=319						
KNM	Kinmen	3.51	282	eP	Pn	07 31 58.1	+2.3
	baz=280						
KNM				eS	Sn	07 32 38.9	+2.3
	baz=280						
KNMB	Chin-men Tao	3.56	283	eP	Pn	07 31 57.1	+0.5
	baz=281						
XPSS	Dashiqiu	3.68	331	eP	Pn	07 31 58.4	+0.2
	baz=330						
MHZQ	Yeshan	3.73	310	eP	Pn	07 31 59.2	+0.3
	baz=309						
AXDP	Jialang	4.03	288	eP	Pn	07 32 03.7	+0.6
	baz=286						
AXDP				eS	Sn	07 32 48.5	-1.0
	baz=286						

*OSPL **05** 07:50:09.0±0.6, 19°.75N×73°.65W, h144km±13km, ML2.3*
*SSNC **05** 07:50:09.7±1.5, 20°.18N×73°.34W, h28km±28km, MD3.5, ML2.3, MW3.5*
ISC 05 07:50:10.2±2.4**,20°.0N**±0°.1×**73°.50W**±0°.07**,h26km**±21km**,n7, σ0s.58**/11**,2C,Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASC	Masc	0.71	284	⇑iP	Pn	07 50 23.7	-0.8
MASC				eS	Sb	07 50 33.6	+0.2
MASC				IAML		07 50 35.2	
	comp=N,152nm,0.1s						
MASC				IAML		07 50 36.8	
	comp=E,135nm,0.1s						
GTBY	Guantanamo Bay	1.52	268	i P	Pn	07 50 35.4	-0.3
GTBY				eS	Sn	07 50 55.5	+0.9
GTBY				IAML		07 51 00.7	
	comp=Z,14nm,0.3s						
MOAC	Moa	1.52	296	⇑iP	Pn	07 50 35.3	-0.4
MOAC				eS	Sn	07 50 55.3	+0.6
MOAC				IAML		07 50 58.2	
	comp=N,44nm,0.3s						
MOAC				IAML		07 51 02.1	
	comp=E,32nm,0.2s						
LGNH	Logne	1.70	150	eS	Sn	07 50 58.9	-0.2
RCC	Rio Carpintero	2.07	270	eP	Pn	07 50 43.0	-0.2
RCC				eS	Sn	07 51 08.2	+0.1
RCC				IAML		07 51 12.7	
	comp=E,14nm,0.2s						
RCC				IAML		07 51 13.5	
	comp=N,15nm,0.2s						
SDDR	Presa de Saban	2.32	115	i P	Pn	07 50 46.9	+0.2
SDDR				eS	Sn	07 51 14.3	-0.1
SDDR				IAML		07 51 25.5	
	comp=Z,23nm,0.2s						
CCCC	Cccc	4.17	287	eP	Pn	07 51 06.2	-6.0
CCCC				eS	Sn	07 51 48.2	-12
CCCC				IAML		07 51 51.9	
	comp=N,1.4nm,0.2s						
CCCC				IAML		07 51 57.0	
	comp=E,1.4nm,0.2s						

*IDC **05** 08:26:30.7±1.0, 19°.11S×70°.82W, h0km, mb3.7/6, mb1 4.0/7, mb1mx3.8/31, mbtmp3.8/7, ML3.9/1, MS3.1/5, Ms1 3.1/5, ms1mx2.9/22, Error ellipse: s-maj=40.4km s-min=23.9km az=73.0*
*NEIC **05** 08:26:33.2, 19°.28S×71°.05W, h25km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.82; $M_{\theta\theta}$0.87; $M_{\phi\phi}$-0.05; $M_{r\theta}$-0.13; $M_{\theta\phi}$0.54; $M_{\phi r}$-0.81; Fault plane solution: $M_0$1.29000×10^{15} NP1:ϕ_s272.96000°, δ40.19000°, λ-39.41000°. NP2:ϕ_s35.08000°, δ65.81000°, λ-123.13000°. Principal axes: T 1.2383, Plg15.0000°, Azm149.0000°; N 0.1062, Plg30.0000°, Azm50.0000°; P -1.3445, Plg56.0000°, Azm261.0000°;*
*NEIC **05** 08:26:33.1±1.7, 19°.28S±0°.02×71°.05W±0°.06, h20km±3km, mb4.1/6, Mwr4.0/49 Error ellipse: s-maj=8.2km s-min=2.2km az=95.0*
*GUC **05** 08:26:35.0±0.5, 19°.30S×71°.03W, h37km±3km, ML3.7*
ISC 05 08:26:31.3±3.1**,19°.28S**±0°.03×**71°.06W**±0°.06**,h8km**±19km**, n59,σ1s.13**/72**,mb3.8**/7**,2C,Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.94	110	eP	Pb	08 26 50.3	+0.3
PSGC				i S	Sb	08 27 02.1	-0.5
PSGCX	Pisagua	0.94	110		Pb	08 26 50.4	+0.4
PSGCX				Sg	Sn	08 27 03.1	-1.6
PB12	IPOC Station P	0.96	46	eP	Pn	08 26 51.3	0.0
PB12				i S	Sn	08 27 04.0	-1.2
PB12				IAML		08 27 05.8	
	comp=E,2μm,0.6s						
PB12	IPOC Station P	0.96	46		Pn	08 26 51.5	+0.2
PB12				Sg	Sb	08 27 03.3	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AP01	**Chacalluta**	**1.13**	**37**	*e*P	**Pb**	**08 26 54.1**	**+0.8**
AP01				*i* S	**Sn**	**08 27 08.9**	**-0.5**
AP01	**Chacalluta**	**1.13**	**37**	Pn	**Pn**	**08 26 52.9**	**-0.7**
AP01				Sn	**Sn**	**08 27 08.6**	**-0.8**
TA02	**Huaiquique**	**1.32**	**138**	*e*P	**Pn**	**08 26 56.3**	**+0.2**
TA02				*e*S	**Sn**	**08 27 12.4**	**-1.5**
TA02				IAML		08 27 14.5	
	comp=N,5μm,0.1s						
MNMC	**Minye Minye**	**1.39**	**84**	*e*P	**Pb**	**08 26 58.1**	**+0.3**
MNMC				*i* S	**Sb**	**08 27 16.0**	**+0.1**
MNMC	**Minye Minye**	**1.39**	**84**		**Pn**	**08 26 57.6**	**+0.3**
MNMC				Sn	**Sb**	**08 27 15.2**	**-0.7**
PB11	**IPOC Station P**	**1.41**	**110**	*e*P	**Pb**	**08 26 58.0**	**0.0**
PB11				*i* S	**Sb**	**08 27 15.8**	**-0.4**
PB11	**IPOC Station P**	**1.41**	**110**		**Pn**	**08 26 57.6**	**+0.1**
PB11				Sn	**Sb**	**08 27 16.1**	**-0.1**
TA01	**Diego Aracena**	**1.52**	**147**	*e*P	**Pn**	**08 26 59.0**	**+0.1**
TA01				*i* S	**Sn**	**08 27 17.6**	**-1.4**
TA01	**Diego Aracena**	**1.52**	**147**	Pn	**Pn**	**08 26 59.2**	**+0.3**
TA01				Sn	**Sn**	**08 27 17.9**	**-1.0**
PB16	**IPOC Station P**	**1.75**	**58**		**Pb**	**08 27 03.8**	**-0.3**
PATCX	**Punta Patache**	**1.75**	**151**	*e*P	**Pn**	**08 27 02.4**	**+0.3**
PATCX				*i* S	**Sn**	**08 27 23.6**	**-1.2**
PATCX	**Punta Patache**	**1.75**	**151**		**Pn**	**08 27 02.0**	**-0.1**
GO01	**Chusmiza**	**1.80**	**103**	*e*P	**Pb**	**08 27 04.2**	**-0.7**
GO01				*i* S	**Sb**	**08 27 27.1**	**-0.8**
GO01	**Chusmiza**	**1.80**	**103**		**Pb**	**08 27 04.2**	**-0.7**
PB08	**IPOC Station P**	**1.99**	**116**	*e*P	**Pn**	**08 27 06.5**	**+0.9**
PB08				*i* S	**Sn**	**08 27 31.0**	**0.0**
PB08				IAML		08 27 34.3	
	comp=N,876nm,0.5s						
PB08	**IPOC Station P**	**1.99**	**116**		**Pn**	**08 27 06.6**	**+0.9**
PB01	**IPOC Station P**	**2.29**	**140**	*e*P	**Pn**	**08 27 10.0**	**+0.4**
PB01				*i* S	**Sn**	**08 27 37.0**	**-1.1**
PB01	**IPOC Station P**	**2.29**	**140**		**Pn**	**08 27 10.0**	**+0.4**
PB02	**IPOC Station P**	**2.30**	**152**	*e*P	**Pn**	**08 27 10.3**	**+0.5**
PB07	**IPOC Station P**	**2.67**	**156**	⇑*i*P	**Pn**	**08 27 15.0**	**+0.1**
PB07	**IPOC Station P**	**2.67**	**156**		**Pn**	**08 27 15.1**	**+0.2**
PB09	**IPOC Station P**	**3.03**	**146**		**Pn**	**08 27 20.3**	**+0.5**
PB04	**IPOC Station P**	**3.15**	**164**	⇑*i*P	**Pn**	**08 27 21.3**	**-0.3**
PB04	**IPOC Station P**	**3.15**	**164**		**Pn**	**08 27 20.9**	**-0.6**
PB06	**IPOC Station P**	**3.68**	**158**		**Pn**	**08 27 28.4**	**-0.3**
LVC	**Limon Verde**	**3.87**	**149**	Pn	**Pn**	**08 27 33.1**	**+1.5**
	comp=N,8.0nm,0.3s,baz=358,slow=6.1,SNR=73						
LVC				Sn	**Sn**	**08 28 17.5**	**0.0**
	comp=N,32nm,0.3s,baz=69,slow=21,SNR=12						
LVC				LR	LR	08 29 16.9	
	comp=N,438nm,18.6s,baz=293,slow=42						
LPAZ	**La Paz**	**4.08**	**44**	Pn	**Pb**	**08 27 40.7**	**-3.2**
	comp=N,0.8nm,0.3s,baz=219,slow=12,SNR=21						
LPAZ				LR	LR	08 29 16.0	
	comp=N,150nm,18.8s,baz=195,slow=43						
LPAZ	**La Paz**	**4.08**	**44**		**Pn**	**08 27 38.1**	**+3.4**
PB15	**IPOC Station P**	**4.18**	**159**		**Pn**	**08 27 35.5**	**-0.2**
PB10	**IPOC Station P**	**4.24**	**174**		**Pn**	**08 27 35.2**	**-1.1**
PB14	**IPOC Station P**	**5.35**	**174**		**Pn**	**08 27 50.5**	**-1.4**
GO02	**Mina Guanaco**	**6.01**	**167**		**Pn**	**08 28 00.5**	**-0.4**
AC02	**Maricunga**	**7.72**	**167**	Pn	**Pn**	**08 28 24.8**	**+0.1**
NNA	**Nana**	**9.14**	**322**	LR	LR	08 32 36.2	
	comp=N,109nm,19.5s,baz=160,slow=40						
AC05	**El Transito**	**9.54**	**176**	Pn	**Pn**	**08 28 47.8**	**-1.4**
SIV	**San Ignacio**	**10.07**	**73**	Pn	**Pn**	**08 29 00.5**	**+4.1**
	comp=N,0.6nm,0.3s,baz=258,slow=11,SNR=16						
SIV				LR	LR	08 32 34.3	
	comp=N,54nm,20.0s,baz=276,slow=37						
CO03	**El Pedregal**	**11.51**	**178**	Pn	**Pn**	**08 29 14.7**	**-1.5**
CPUP	**Villa Florida**	**14.47**	**122**	LR	LR	08 36 49.6	
	comp=N,80nm,20.4s,baz=268,slow=43						
H03N1	**Juan Fernandez**	**15.75**	**205**	T	T	08 46 26.7	
	baz=30,slow=72,SNR=37						
H03N2	**Juan Fernandez**	**15.76**	**205**	T	T	08 46 28.7	
	baz=30,slow=72,SNR=23						
H03N3	**Juan Fernandez**	**15.77**	**205**	T	T	08 46 27.7	
	baz=30,slow=72,SNR=26						
PLCA	**Paso Flores**	**21.38**	**179**	P	**P**	**08 31 21.6**	**+2.1**
	comp=N,2.4nm,1.0s,baz=0.0,slow=11,SNR=2.4						
PLCA	**Paso Flores**	**21.38**	**179**	P	**P**	**08 31 19.7**	**+0.2**
PLCA				IAmb	IAmb	08 31 29.3	
	comp=Z,8.1nm,1.2s						
PTGA	**Pitinga**	**21.41**	**32**	P	**P**	**08 31 18.1**	**-1.7**
	comp=Z,1.9nm,0.3s,baz=229,slow=20,SNR=4.2						
PTGA	**Pitinga**	**21.41**	**32**	P	**P**	**08 31 18.4**	**-1.4**
PTGA				IAmb	IAmb	08 31 31.9	
	comp=Z,8.2nm,1.1s						
RUSC	**La Rusia**	**25.10**	**355**	P	**P**	**08 31 57.5**	**+0.2**
TXAR	**Lajitas Array**	**57.67**	**326**	P	**P**	**08 36 23.3**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=139,slow=12,SNR=4.1						
QSPA	**South Pole Qui**	**70.89**	**180**	P	**P**	**08 37 50.8**	**+1.9**
QSPA				IAmb	IAmb	08 38 01.9	
	comp=Z,6.0nm,1.3s						
PDAR	**Pinedale Array**	**71.20**	**331**	P	**P**	**08 37 51.3**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=119,slow=7.3,SNR=1.6						
YNE	**Yellowstone No**	**73.16**	**332**	P	**P**	**08 38 04.4**	**+1.6**
TORD	**Torodi Ar. Bea**	**78.55**	**72**	P	**P**	**08 38 32.7**	**-1.3**
	comp=Z,0.7nm,0.8s,baz=244,slow=4.5,SNR=3.5						
YKA	**Yellowknife Ar**	**88.44**	**341**	P	**P**	**08 39 23.9**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=137,slow=5.4,SNR=23						
MKAR	**Makanchi Array**	**144.94**	**32**	PKP	**PKPdf**	**08 46 08.9**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=318,slow=1.9,SNR=8.1						
MJAR	**Matsushiro Arr**	**149.11**	**310**	PKPbc	**PKiKP**	**08 46 21.3**	**-0.7**
	comp=Z,1.5nm,0.9s,baz=233,slow=1.5,SNR=4.9						
SONM	**Songino Array**	**151.44**	**4**	PKPbc	**PKiKP**	**08 46 26.2**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=323,slow=3.3,SNR=2.7						

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*IDC **05** 08:27:59.5±0.6, 24.11N×122.45E, h0km, mb4.3/20, mb1 4.4/20, mb1mx4.2/51, mbtmp4.3/20, ML2.6/1, MS3.6/29, Ms1 3.6/29, ms1mx3.5/56, Error ellipse: s-maj=21.1km s-min=14.2km az=63.0*

*NIED **05** 08:28:00, 23.90N×122.40E, h35km, Mw4.5 Best double couple: $M_0$6.10000×10^{15} NP1:ϕ_s61.00000°, δ86.00000°, λ62.00000°. NP2:ϕ_s324.00000°, δ28.00000°, λ172.00000°.*

*NEIC **05** 08:28:01.1±1.9, 24.00N±0.02×122.42E±0.01, h10km±1km, mb4.7/34, ML4.9(TAP), Error ellipse: s-maj=3.9km s-min=2.9km az=195.0*

*BJI **05** 08:28:01.5±0.0, 24.04N×122.44E, h13km, mB4.6/33, mb4.5/45, ML4.1/6, Ms4.2/35, Ms7 4.1/34*

*JMA **05** 08:28:02.5±0.1, 23.94N×122.42E, h18km, M4.5*

*TAP **05** 08:28:03.4, 24.00N×122.43E, h28km, ML4.7, D*

ISC 05 08:28:01.7±0.9**, 23.97N**±0.02×**122.43E**±0.01**, h13**km±6km**, n242,** σ1.**26**/352**, mb4.5**/39**, MS3.7**/29**, 13C-6D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.64**	**335**	⇓*i*P	**Pn**	**08 28 15.7**	**-0.7**
	baz=326						
EOS1				S	**Sn**	**08 28 24.5**	**-2.0**
	baz=326						
JYNG	**Yonagunijimaku**	**0.68**	**44**	P	**Pn**	**08 28 16.1**	**-0.9**
JYNG				S	**Sb**	**08 28 24.7**	**0.0**
YOJ	**Yonaguni jima**	**0.73**	**47**	⇓*i*P	**Pn**	**08 28 17.1**	**-0.6**
	baz=54						
YOJ				S	**Sb**	**08 28 26.3**	**+0.2**
	baz=54						
YOJ	**Yonaguni jima**	**0.73**	**47**	P	**Pn**	**08 28 16.7**	**-1.0**
YOJ				*e*S	**Sb**	**08 28 25.5**	**-0.6**
YOJ	**Yonaguni jima**	**0.73**	**47**		**Pn**	**08 28 17.1**	**-0.6**
YOJ				Sg	**Sb**	**08 28 25.8**	**-0.3**
HWA	**Hwalien**	**0.75**	**271**	*e*P	**Pn**	**08 28 18.1**	**0.0**
	baz=256						
TWD	**Chiawan**	**0.77**	**279**	*i* P	**Pn**	**08 28 17.4**	**-0.9**
	baz=276						
TWD				S	**Sb**	**08 28 28.0**	**+0.7**
	baz=276						
ENA	**Nanau**	**0.78**	**306**	*i* P	**Pn**	**08 28 17.7**	**-0.7**
	baz=312						
ENA				*e*S	**Sb**	**08 28 27.9**	**+0.3**
	baz=312						
NACB	**Ninganchiao**	**0.79**	**285**	P	**Pn**	**08 28 17.9**	**-0.7**
	baz=269						
NACB				S	**Sg**	**08 28 26.6**	**-0.8**
	baz=269						
NACB	**Ninganchiao**	**0.79**	**285**		**Pn**	**08 28 17.8**	**-0.7**
NACB				Sg	**Sb**	**08 28 27.6**	**-0.3**
TWC	**Suao**	**0.83**	**321**	⇓*i*P	**Pn**	**08 28 18.2**	**-0.9**
	baz=319						
TWC				*e*S	**Sb**	**08 28 27.9**	**-1.2**
	baz=319						
ETLH	**Xiulin Townshi**	**0.90**	**286**	*e*P	**Pn**	**08 28 19.6**	**-0.5**
	baz=271						
ETLH				*e*S	**Sb**	**08 28 30.9**	**-0.2**
	baz=271						
ESL	**Shilin**	**0.92**	**261**	*e*P	**Pg**	**08 28 19.1**	**-0.5**
	baz=250						
ESL				*e*S	**Sg**	**08 28 31.5**	**-0.1**
	baz=250						
EGFH	**Guangfu**	**0.96**	**252**	P	**Pn**	**08 28 20.7**	**-0.2**
	baz=250						
EGFH				*e*S	**Sb**	**08 28 31.6**	**-1.3**
	baz=250						
ILA	**Ilan**	**1.01**	**322**	*i* P	**Pn**	**08 28 21.9**	**+0.4**
	baz=321						
ILA				S	**Sn**	**08 28 35.0**	**-0.7**
	baz=321						
TWE	**Neicheng**	**1.02**	**317**	⇓*i*P	**Pn**	**08 28 22.0**	**+0.2**
	baz=316						
TWE				*e*S	**Sn**	**08 28 35.0**	**-1.0**
	baz=316						
ENTT	**Nioudou**	**1.03**	**311**	P	**Pn**	**08 28 22.2**	**+0.3**
	baz=295						
ENTT				*e*S	**Sn**	**08 28 35.7**	**-0.5**
	baz=295						
HGSD	**Ruisui**	**1.03**	**243**	P	**Pb**	**08 28 21.7**	**+0.2**
	baz=241						
HGSD				S	**Sb**	**08 28 33.8**	**-1.2**
	baz=241						
NTC	**Toucheng**	**1.04**	**329**	P	**Pn**	**08 28 22.3**	**+0.3**
	baz=327						
NTC				*e*S	**Sn**	**08 28 35.9**	**-0.5**
	baz=327						
NDT	**Datong Townshi**	**1.05**	**307**	P	**Pn**	**08 28 22.5**	**+0.4**
	baz=305						
NDT				*e*S	**Sn**	**08 28 36.1**	**-0.5**
	baz=305						
NNSB	**Datong**	**1.06**	**296**	⇑*i*P	**Pn**	**08 28 22.5**	**+0.1**
	baz=294						
NNSB				*e*S	**Sg**	**08 28 35.9**	**-0.1**
	baz=294						
NNSH	**Datong**	**1.06**	**296**	⇑*i*P	**Pn**	**08 28 22.5**	**+0.1**
	baz=293						
NNSH				*e*S	**Sn**	**08 28 36.3**	**-0.8**
	baz=293						
SLBB	**Yuanshan**	**1.06**	**318**	*e*P	**Pn**	**08 28 23.2**	**+0.8**
	baz=316						
SLBB				*e*S	**Sn**	**08 28 37.1**	**-0.1**
	baz=316						
NNS	**Nan Shan**	**1.07**	**296**	⇑*i*P	**Pn**	**08 28 22.6**	**0.0**
	baz=294						
NNS				*e*S	**Sg**	**08 28 36.3**	**-0.1**
	baz=294						
WHF	**Hehuan Shan**	**1.08**	**280**	⇑*i*P	**Pg**	**08 28 22.5**	**-0.1**
	baz=277						
WHF				*e*S	**Sg**	**08 28 36.5**	**-0.2**
	baz=277						
EHY	**Hungye**	**1.11**	**246**	*e*P	**Pb**	**08 28 22.4**	**-0.4**
	baz=259						
EHY				S	**Sb**	**08 28 36.8**	**-0.4**
	baz=259						
TIPB	**Shuangxi**	**1.14**	**331**	⇑*i*P	**Pg**	**08 28 23.7**	**0.0**
	baz=330						
TIPB				*e*S	**Sn**	**08 28 39.3**	**+0.3**
	baz=330						
OWD	**Renai**	**1.14**	**270**	*e*P	**Pb**	**08 28 23.3**	**-0.1**
	baz=267						
OWD				*e*S	**Sb**	**08 28 36.7**	**-1.6**
	baz=267						
CHGB	**Renai**	**1.15**	**275**	⇑*i*P	**Pn**	**08 28 23.6**	**-0.1**
	baz=272						
CHGB				S	**Sb**	**08 28 36.7**	**-1.8**
	baz=272						
NWLT	**Wulai**	**1.17**	**314**	⇑*i*P	**Pg**	**08 28 24.5**	**+0.3**
	baz=312						
NWLT				*e*S	**Sn**	**08 28 39.9**	**+0.3**
	baz=312						
TWT	**Tachien**	**1.18**	**284**	P	**Pg**	**08 28 24.9**	**+0.4**
	baz=270						
TWT				*e*S	**Sn**	**08 28 40.4**	**+0.3**
	baz=270						
YULB	**Yu-li**	**1.18**	**241**	⇓*i*P	**Pn**	**08 28 23.8**	**-0.2**
	baz=239						
YULB				S	**Sb**	**08 28 38.6**	**-0.6**
	baz=239						
YULB	**Yu-li**	**1.18**	**241**		**Pn**	**08 28 23.8**	**-0.2**
YULB				Sg	**Sb**	**08 28 38.7**	**-0.6**
YHNB	**Yeheng**	**1.19**	**306**	⇑*i*P	**Pg**	**08 28 24.5**	**-0.1**
	baz=292						
YHNB				*e*S	**Sn**	**08 28 40.7**	**+0.5**
	baz=292						
YHNB	**Yeheng**	**1.19**	**306**		**Pg**	**08 28 24.1**	**-0.5**
YHNB				Sg	**Sb**	**08 28 38.1**	**-1.4**
TDCB	**Techi**	**1.19**	**284**	P	**Pg**	**08 28 24.6**	**-0.2**
	baz=270						
TDCB				*e*S	**Sb**	**08 28 38.1**	**-1.6**
	baz=270						
VWDT	**VWDT**	**1.20**	**260**	⇑P	**Pb**	**08 28 24.1**	**-0.1**
	baz=258						
VWDT				*e*S	**Sb**	**08 28 37.8**	**-1.9**
	baz=258						
TWF1	**Yuli**	**1.20**	**240**	P	**Pn**	**08 28 23.9**	**-0.3**
	baz=238						
TWF1				S	**Sb**	**08 28 38.6**	**-1.2**
	baz=238						
NSK	**Sanguang**	**1.20**	**306**	⇑*i*P	**Pg**	**08 28 24.6**	**-0.3**
	baz=292						
NSK				*e*S	**Sn**	**08 28 40.6**	**0.0**
	baz=292						
NWF	**Wu-fen Shan**	**1.25**	**332**	*e*P	**Pg**	**08 28 25.3**	**-0.4**
	baz=331						
NWF				*e*S	**Sg**	**08 28 42.4**	**+0.4**
	baz=331						
WFSB	**Wu-fen Shan**	**1.25**	**332**	⇑*i*P	**Pg**	**08 28 25.2**	**-0.5**
	baz=331						
WFSB				*e*S	**Sg**	**08 28 42.2**	**+0.3**
	baz=331						
HATJ	**Hateruma jima**	**1.26**	**86**	P	**Pg**	**08 28 26.0**	**-0.1**
HATJ				*e*S	**Sg**	**08 28 43.2**	**+0.7**
TWA	**Mucha**	**1.27**	**323**	*e*P	**Pg**	**08 28 26.3**	**+0.1**
	baz=322						
TWA				*e*S	**Sg**	**08 28 42.3**	**-0.4**
	baz=322						
NHDH	**Xindian Distri**	**1.29**	**321**	⇑*i*P	**Pg**	**08 28 27.0**	**+0.5**
	baz=319						
NHDH				*e*S	**Sg**	**08 28 43.2**	**-0.1**
	baz=319						
CHKT	**Chengkung**	**1.30**	**229**	*e*P	**Pn**	**08 28 24.9**	**-0.7**
	baz=227						
CHKT				*e*S	**Sb**	**08 28 39.6**	**-3.1**
	baz=227						
TATO	**Taipei**	**1.32**	**320**	*e*P	**Pg**	**08 28 26.8**	**-0.4**
	baz=302						
TATO				*e*S	**Sn**	**08 28 42.5**	**-0.8**
	baz=302						
TATO	**Taipei**	**1.32**	**320**		**Pg**	**08 28 26.7**	**-0.4**
TATO				Sg	**Sb**	**08 28 40.9**	**-2.3**
TAP1	**Taipei**	**1.35**	**323**	P	**Pg**	**08 28 27.0**	**-0.7**
	baz=321						
TAP1				*e*S	**Sg**	**08 28 46.3**	**+1.1**
	baz=321						
TAP	**Taipei**	**1.36**	**322**	*e*P	**Pg**	**08 28 28.2**	**+0.3**
	baz=321						
TAP				*e*S	**Sg**	**08 28 46.3**	**+0.7**
	baz=321						
SSLB	**Suanglung**	**1.36**	**263**	*e*P	**Pb**	**08 28 26.7**	**-0.3**
	baz=261						
SSLB				*e*S	**Sn**	**08 28 42.7**	**-1.7**
	baz=261						
SSLB	**Suanglung**	**1.36**	**263**	Pn	**Pb**	**08 28 27.2**	**+0.1**
SSLB				Sg	**Sn**	**08 28 43.5**	**-0.9**
DPDB	**Guoxing**	**1.37**	**273**	P	**Pb**	**08 28 27.1**	**-0.3**
	baz=262						
DPDB				*e*S	**Sg**	**08 28 46.1**	**+0.1**
	baz=262						
WLTB	**Daxi**	**1.39**	**310**	P	**Pg**	**08 28 28.3**	**-0.1**
	baz=295						
WLTB				*e*S	**Sg**	**08 28 46.1**	**-0.3**
	baz=295						
WHP	**Taichung City**	**1.39**	**283**	*e*P	**Pg**	**08 28 28.0**	**-0.5**
	baz=270						
WHP				*e*S	**Sg**	**08 28 46.0**	**-0.5**
	baz=270						
SMLT	**Sun Moon Lake**	**1.40**	**267**	P	**Pb**	**08 28 27.5**	**-0.3**
	baz=265						
SMLT				*e*S	**Sn**	**08 28 45.0**	**-0.5**
	baz=265						
YM01	**YM01**	**1.41**	**327**	*e*P	**Pb**	**08 28 27.6**	**-0.4**
	baz=341						
YM01				*e*S	**Sg**	**08 28 47.3**	**+0.1**
	baz=341						
YM10	**YM10**	**1.42**	**327**	*e*P	**Pb**	**08 28 27.9**	**-0.3**
	baz=325						
YM10				*e*S	**Sg**	**08 28 46.2**	**-1.4**
	baz=325						
YM11	**YM11**	**1.42**	**327**	*e*P	**Pg**	**08 28 28.1**	**-1.0**
	baz=326						
YM11				*e*S	**Sg**	**08 28 47.7**	**0.0**
	baz=326						
YM05	**YM05**	**1.43**	**327**	P	**Pg**	**08 28 28.8**	**-0.4**
	baz=325						
YUS	**Yu-Shan**	**1.43**	**251**	P	**Pb**	**08 28 28.2**	**-0.3**
	baz=249						
YUS				*e*S	**Sn**	**08 28 46.1**	**-0.7**
	baz=249						
YM04	**YM04**	**1.43**	**326**	P	**Pb**	**08 28 27.4**	**-0.9**
	baz=340						
YM04				*e*S	**Sg**	**08 28 46.3**	**-1.6**
	baz=340						
YM08	**YM08**	**1.44**	**328**	*e*P	**Pg**	**08 28 28.9**	**-0.5**
	baz=327						
YM08				*e*S	**Sg**	**08 28 46.5**	**-1.5**
	baz=327						
TYC	**Yuchr**	**1.44**	**268**	*e*P	**Pb**	**08 28 28.0**	**-0.3**
	baz=266						
TYC				*e*S	**Sb**	**08 28 46.5**	**-0.1**
	baz=266						
YM03	**YM03**	**1.45**	**326**	*e*P	**Pg**	**08 28 28.9**	**-0.8**
	baz=325						
LIOB	**Emei**	**1.45**	**298**	*i* P	**Pg**	**08 28 29.6**	**-0.1**
	baz=296						
LIOB				*e*S	**Sg**	**08 28 47.4**	**-1.2**
	baz=296						
TWS1	**Kuangyinshan**	**1.46**	**321**	*e*P	**Pg**	**08 28 29.2**	**-0.5**
	baz=337						
TWS1				*e*S	**Sg**	**08 28 50.2**	**+1.5**
	baz=337						
WHYT	**Xinyi Township**	**1.47**	**260**	*e*P	**Pb**	**08 28 29.1**	**+0.2**
	baz=258						
ANP	**Anpu**	**1.47**	**326**	*e*P	**Pg**	**08 28 29.3**	**-0.7**
	baz=324						
JKRS	**Kuro-shima**	**1.47**	**79**	P	**Pb**	**08 28 29.0**	**+0.1**
JKRS				*e*S	**Sg**	**08 28 49.6**	**+0.4**
NTST	**Danshui**	**1.49**	**323**	P	**Pg**	**08 28 29.9**	**-0.4**
	baz=338						
TWY	**Chenhua**	**1.50**	**330**	*e*P	**Pg**	**08 28 30.6**	**-0.1**
	baz=329						
TWY				*e*S	**Sg**	**08 28 48.9**	**-1.3**
	baz=329						
ELDTW	**Lidau**	**1.51**	**239**	P	**Pn**	**08 28 28.1**	**-0.4**
	baz=238						
ELDTW				*e*S	**Sn**	**08 28 46.1**	**-2.0**
	baz=238						
NCU	**National Centr**	**1.51**	**312**	*e*P	**Pg**	**08 28 29.9**	**-0.8**
	baz=310						
NCU				*e*S	**Sn**	**08 28 47.4**	**-0.6**
	baz=310						
NCUH	**Zhongli**	**1.51**	**312**	*e*P	**Pg**	**08 28 30.0**	**-0.7**
	baz=310						
NCUH				*e*S	**Sg**	**08 28 49.4**	**-0.9**
	baz=310						
TWH	**Lutao**	**1.52**	**215**	P	**Pn**	**08 28 28.2**	**-0.5**
	baz=213						
TWH				*e*S	**Sn**	**08 28 45.8**	**-2.6**
	baz=213						
SBCB	**Hsinchu**	**1.55**	**302**	*e*P	**Pg**	**08 28 30.7**	**-0.8**
	baz=300						
SBCB				*e*S	**Sg**	**08 28 51.6**	**-0.1**
	baz=300						
ALS	**Alishan**	**1.55**	**253**	*e*P	**Pb**	**08 28 30.1**	**-0.4**
	baz=251						
ALS				*e*S	**Sn**	**08 28 49.6**	**0.0**
	baz=251						
TWQ1	**Liyutan**	**1.56**	**284**	*e*P	**Pg**	**08 28 31.0**	**-0.7**
	baz=282						
TWQ1				*e*S	**Sn**	**08 28 49.2**	**-0.1**
	baz=282						
WJS	**Zhushan**	**1.56**	**265**	*e*P	**Pg**	**08 28 31.4**	**-0.4**
	baz=263						
WJS				*e*S	**Sb**	**08 28 50.5**	**+0.3**
	baz=263						
HSN	**Hsinchu**	**1.57**	**302**	*e*P	**Pb**	**08 28 30.6**	**0.0**
	baz=302						
HSN				*e*S	**Sg**	**08 28 51.7**	**-0.5**
	baz=302						
NSY	**Sanyi**	**1.58**	**287**	*e*P	**Pg**	**08 28 31.7**	**-0.5**
	baz=284						
NSY				*e*S	**Sb**	**08 28 50.8**	**0.0**
	baz=284						
NMLH	**Miaoli**	**1.60**	**291**	*e*P	**Pg**	**08 28 31.5**	**-0.9**
	baz=288						
NMLH				*e*S	**Sb**	**08 28 50.6**	**-0.6**
	baz=288						
WNT	**Mingjian**	**1.60**	**267**	*e*P	**Pg**	**08 28 31.9**	**-0.5**
	baz=265						
WNT				*e*S	**Sg**	**08 28 52.3**	**-0.9**
	baz=265						
TCU	**Taichung**	**1.61**	**277**	*e*P	**Pg**	**08 28 31.9**	**-0.8**
	baz=274						
TCU				*e*S	**Sg**	**08 28 54.1**	**+0.5**
	baz=274						
JIJ	**Ishigaki jima**	**1.62**	**76**	P	**Pb**	**08 28 30.7**	**-0.7**
JIJ				S	**Sb**	**08 28 50.9**	**-0.9**
CHN5	**Tsauling**	**1.64**	**257**	*e*P	**Pb**	**08 28 31.7**	**-0.2**
	baz=246						
CHN5				*e*S	**Sn**	**08 28 51.1**	**-0.4**
	baz=246						
PTSB	**Yuanli**	**1.64**	**287**	*e*P	**Pb**	**08 28 32.2**	**+0.3**
	baz=285						
PTSB				*e*S	**Sg**	**08 28 54.0**	**-0.7**
	baz=285						
WDJ	**Dajia District**	**1.68**	**283**	*e*P	**Pb**	**08 28 32.7**	**+0.3**
	baz=281						
WDJ				*e*S	**Sg**	**08 28 54.6**	**-1.1**
	baz=281						
TTN	**Taitung**	**1.69**	**225**	*e*P	**Pn**	**08 28 31.9**	**+1.1**
	baz=223						
TWGBT	**Beinan**	**1.69**	**228**	*e*P	**Pn**	**08 28 30.4**	**-0.5**
	baz=239						
TWGBT				*e*S	**Sn**	**08 28 50.0**	**-2.3**
	baz=239						
PCYT	**Pengchaiyu**	**1.69**	**349**	*e*P	**Pn**	**08 28 30.1**	**-0.8**
	baz=349						
PCYT				*e*S	**Sb**	**08 28 52.4**	**-1.4**
	baz=349						
TWG	**Pinlang**	**1.69**	**228**	*e*P	**Pn**	**08 28 30.6**	**-0.3**
	baz=239						
TWG				*e*S	**Sn**	**08 28 50.8**	**-1.6**
	baz=239						
TWG	**Pinlang**	**1.69**	**228**	Pn	**Pn**	**08 28 30.8**	**-0.2**
TWG				Sn	**Sn**	**08 28 51.0**	**-1.5**
WCHH	**Zhanghua**	**1.71**	**274**	*e*P	**Pb**	**08 28 33.4**	**+0.4**
	baz=271						
WCHH				*e*S	**Sg**	**08 28 56.1**	**-0.7**
	baz=271						
STYT	**Tauyuan**	**1.73**	**243**	*e*P	**Pb**	**08 28 32.8**	**-0.5**
	baz=232						
STYT				*e*S	**Sn**	**08 28 54.4**	**+0.9**
	baz=232						
WGK	**Gukeng**	**1.73**	**261**	P	**Pb**	**08 28 33.3**	**-0.1**
	baz=259						
WGK				*e*S	**Sb**	**08 28 55.7**	**+0.7**
	baz=259						
WDLH	**Douliu**	**1.75**	**261**	P	**Pb**	**08 28 33.6**	**-0.1**
	baz=259						
WDLH				*e*S	**Sb**	**08 28 55.8**	**+0.2**
	baz=259						
TPUB	**Ta-pu**	**1.78**	**248**	P	**Pb**	**08 28 34.2**	**0.0**
	baz=247						
TPUB				*e*S	**Sn**	**08 28 54.0**	**-0.6**
	baz=247						
TPUB	**Ta-pu**	**1.78**	**248**	Pn	**Pb**	**08 28 34.2**	**0.0**
TPUB				Sn	**Sb**	**08 28 55.8**	**-0.5**
CHN4	**Tsaushan**	**1.79**	**250**	*e*P	**Pb**	**08 28 34.6**	**+0.2**
	baz=248						
CHN4				*e*S	**Sb**	**08 28 57.2**	**+0.5**
	baz=248						
WTP	**Ta-pu**	**1.81**	**247**	*e*P	**Pb**	**08 28 34.2**	**-0.6**
	baz=235						
WTP				*e*S	**Sb**	**08 28 57.6**	**+0.2**
	baz=235						
JISG	**Ishigakijimahi**	**1.83**	**70**	P	**Pn**	**08 28 33.2**	**+0.4**
JISG				S	**Sn**	**08 28 55.3**	**-0.5**
CHN2	**Minshiung**	**1.84**	**257**	*e*P	**Pb**	**08 28 34.2**	**-1.0**
	baz=255						
CHN2				*e*S	**Sg**	**08 28 59.7**	**-1.2**
	baz=255						
CHY	**Chiayi**	**1.89**	**256**	*e*P	**Pb**	**08 28 36.1**	**0.0**
	baz=254						
CHY				*e*S	**Sb**	**08 28 59.7**	**0.0**
	baz=254						

RLNB Erlin 1.89 268 *e*P **Pb 08 28 36.1 -0.1**
baz=279
RLNB *e*S **Sb 08 29 00.8 +1.1**
baz=279
SLGT Liugui 1.90 240 *e*P **Pb 08 28 35.3 -1.0**
baz=230
SLGT *e*S **Sn 08 28 58.6 +0.9**
baz=230
SGST Jiashian 1.91 243 *e*P **Pb 08 28 35.5 -0.9**
baz=233
SGST *e*S **Sn 08 28 58.1 +0.2**
baz=233
CHN1 Nanshi 1.91 246 *e*P **Pb 08 28 36.1 -0.3**
baz=244
CHN1 *e*S **Sb 08 29 01.0 +0.8**
baz=244
TWK Hsinying 1.91 249 P **Pb 08 28 35.9 -0.6**
baz=247
TWK S **Sb 08 29 00.4 +0.2**
baz=247
SNST Tainan City 1.92 248 *e*P **Pb 08 28 36.5 -0.1**
baz=246
SNST *e*S **Sb 08 29 00.7 +0.2**
baz=246
ECL Taimali 1.92 225 P **Pn 08 28 33.4 -0.7**
baz=224
ECL *e*S **Sn 08 28 55.5 -2.7**
baz=224
WTCT Ta-ch'eng 1.97 267 *e*P **Pn 08 28 35.5 +0.7**
baz=278
WTCT *e*S **Sb 08 29 02.1 +0.3**
baz=278
WSF Szhu 2.04 261 *e*P **Pb 08 28 37.8 -1.0**
baz=260
SSD Sandimen 2.05 234 P **Pn 08 28 37.1 +1.2**
baz=225
LAY Lan-yu 2.08 203 *e*P **Pn 08 28 35.9 -0.5**
baz=203
LAY *e*S **Sn 08 28 59.4 -2.8**
baz=203
CHN3 Shinhua 2.09 245 *e*S **Sg 08 29 07.5 -1.4**
baz=243
CHN8 Yiju 2.12 254 *e*P **Pb 08 28 38.6 -1.5**
baz=253
MASBT Mashibuluo 2.13 231 P **Pn 08 28 38.2 +1.2**
baz=223
TAW Tawu 2.13 222 *e*P **Pn 08 28 37.1 +0.1**
baz=230
EAST Anshuo 2.14 223 *e*P **Pn 08 28 37.4 +0.1**
baz=222
TWM1 Shoushan 2.16 239 *e*P **Pb 08 28 39.3 -1.5**
baz=237
JTJ Tarama 2.18 72 P **Pn 08 28 38.9 +1.2**
JTJ *e*S **Sb 08 29 07.5 -0.5**
SNJT Kaohsiung City 2.27 238 *e*P **Pb 08 28 42.4 -0.2**
baz=237
SCZT Fangliau 2.30 227 *e*P **Pn 08 28 41.2 +1.9**
baz=219
WLCH Liuqiu 2.48 230 *e*P **Pb 08 28 46.2 +0.1**
baz=243
WLCH *e*S **Sb 08 29 19.3 +2.8**
baz=243
TSEB Hengchuen, Pin 2.49 215 *e*P **Pn 08 28 43.9 +2.0**
baz=223
TSEB *e*S **Sn 08 29 13.9 +1.7**
baz=223
HEN Hengchun 2.50 219 *e*P **Pn 08 28 43.6 +1.5**
baz=218
TWKBT Hengchun 2.51 217 *e*P **Pn 08 28 42.8 +0.7**
baz=216
TWKBT *e*S **Sn 08 29 11.9 -0.7**
baz=216
TWK1 Hengchun 2.51 217 *e*P **Pn 08 28 43.1 +0.9**
baz=216
WDGT Dungji 2.63 255 *e*P **Pn 08 28 44.0 +0.1**
baz=253
WDGT *e*S **Sn 08 29 15.7 0.0**
baz=253
JIRB Irabujima 2.65 71 P **Pn 08 28 45.7 +1.6**
JIRB S **Sn 08 29 16.7 +0.6**
PHUB P'eng-hu 2.65 261 *e*P **Pn 08 28 45.3 +1.1**
baz=258
PHUB *e*S **Sn 08 29 16.6 +0.4**
baz=258
PNG Penghu 2.66 262 *e*P **Pn 08 28 45.2 +1.0**
baz=259
PNG *e*S **Sn 08 29 16.6 +0.2**
baz=259
JIKM Ikemajima 2.74 69 P **Pn 08 28 47.2 +1.8**
JIKM S **Sn 08 29 20.0 +1.6**
JMJ Miyako jima 2 2.75 72 *e*P **Pn 08 28 47.2 +1.8**
baz=73
JMJ2 Miyako jima3 2.76 73 P **Pn 08 28 47.1 +1.5**
JOGS Gusukube 2.83 73 P **Pn 08 28 48.6 +2.0**
JOGS *e*S **Sb 08 29 23.5 -3.2**
PTTC Pingtan 2.86 303 *e*P **Pn 08 28 47.2 +0.2**
baz=300
VWUC VWUC 2.90 291 *e*P **Pn 08 28 47.8 +0.2**
baz=290
MATB Ma-tsu 3.13 315 *e*P **Pn 08 28 50.4 -0.3**
baz=311
PTMZ Houxiangcun 3.20 290 *e*P **Pn 08 28 51.4 -0.3**
baz=289
LYJJ Jianjiangzhen 3.53 317 *e*P **Pn 08 28 56.2 0.0**
baz=314
XPSS Dashiqiu 3.58 326 *e*P **Pn 08 28 57.2 +0.3**
baz=334
QZH Quanzhou 3.63 286 ⇑ *i*Pn **Pn 08 28 57.5 -0.1**
QZH Sn **Sn 08 29 37.9 -2.4**
QZH smax smax
comp=N,280nm,1.1s
QZH smax smax
comp=E,130nm,0.7s
QZH LR LR
comp=Z,1μm,8.9s
KNM Kinmen 3.67 278 *e*P **Pn 08 29 00.4 +2.1**
baz=277
KNMB Chin-men Tao 3.72 278 *e*P **Pn 08 28 59.1 +0.2**
baz=278
KNMB Chin-men Tao 3.72 278 Pn 08 28 58.9 0.0
KNMB Sn **Sn 08 29 39.4 -3.2**
MHZQ Yeshan 3.74 305 *e*P **Pn 08 28 58.5 -0.7**
baz=302
AXDP Jialang 4.17 284 *e*P **Pn 08 29 05.3 +0.3**
baz=283
ZPLA Ao Xicun 4.28 270 *e*P **Pn 08 29 07.0 +0.4**
baz=270
ZZJH Jiuhuzhen 4.41 278 *e*P **Pn 08 29 09.1 +0.7**
baz=277
JOW Kunigami 6.01 60 Pn **Pn 08 29 30.6 +0.2**
0.4nm,0.3s,baz=211,slow=16,SNR=1.8
JOW Sn **Sn 08 30 38.5 -0.6**
0.3nm,0.3s,baz=92,slow=17,SNR=1.8
JOW Kunigami 6.01 60 Pn **Pn 08 29 30.1 -0.2**
SZP Santa 6.64 196 Pn **Pn 08 29 41.5 +2.5**
SSE Sheshan 7.19 351 Pn 08 29 47.1 +0.6
NJ2 Nanjing 8.65 339 *e*P **Pn 08 30 08.1 +1.5**
NJ2 S Sn 08 31 53.6 +10
NJ2 pmax pmax
comp=Z,23nm,0.7s
NJ2 pmax pmax
comp=Z,390nm,4.3s
NJ2 smax smax
comp=N,80nm,0.7s
NJ2 smax smax
comp=E,61nm,1.0s
NJ2 LR LR
comp=N,930nm,8.5s
NJ2 LR LR
comp=E,580nm,9.5s
NJ2 LR LR
comp=Z,1μm,13.7s
WHN Wuhan 9.72 314 P Pn 08 30 27.6 +6.3
WHN S **Sn 08 32 18.3 +8.0**
WHN LR LR
comp=N,1μm,8.8s
WHN LR LR
comp=E,900nm,5.6s
WHN LR LR
comp=Z,2μm,14.8s
JNU Nakatsue 11.76 37 LR LR 08 35 41.0
comp=Z,246nm,18.4s,baz=206,slow=40
QIZ Qiongzhong 12.70 250 P **Pn 08 31 02.2 +0.1**
QIZ S **Sn 08 33 24.5 +1.0**
QIZ LR LR
comp=N,250nm,11.3s
QIZ LR LR
comp=E,190nm,14.7s
QIZ LR LR
comp=Z,270nm,12.3s
KSRS Korea Array 14.25 18 Pn **Pn 08 31 25.8 +2.6**
0.8nm,0.3s,baz=199,slow=12,SNR=29
KSRS LR LR 08 37 43.8
comp=Z,268nm,18.2s,baz=195,slow=42
GYA Guiyang 14.48 283 *e*P **Pn 08 31 29.6 +3.0**
GYA PP **PnPn 08 31 39.8 +5.3**
GYA S **Sn 08 34 11.9 +4.8**
GYA pmax pmax
comp=Z,10.0nm,0.7s
GYA pmax pmax
comp=Z,90nm,4.0s
GYA LR LR
comp=N,310nm,10.8s
GYA LR LR
comp=E,450nm,15.2s
GYA LR LR
comp=Z,520nm,16.2s
XAN Xi'an 15.49 313 P **P 08 31 45.8 +1.4**
XAN pmax pmax
comp=Z,11nm,0.9s
XAN pmax pmax
comp=Z,120nm,5.4s
XAN LR LR
comp=N,290nm,11.4s
XAN LR LR
comp=E,360nm,14.4s
XAN LR LR
comp=Z,430nm,12.7s
DAV Davao City (W) 17.07 169 LR LR 08 38 25.2
comp=Z,182nm,20.8s,baz=320,slow=36
CD2 Chengdu 17.95 297 P **P 08 32 11.5 -0.1**
CD2 S **S 08 35 35.4 -2.1**
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 LR LR
comp=N,550nm,10.8s
CD2 LR LR
comp=E,590nm,15.1s
CD2 LR LR
comp=Z,710nm,15.1s
MJAR Matsushiro Arr 18.49 44 LR LR 08 41 01.3
comp=Z,44nm,18.0s,baz=240,slow=42
HHC Hu-ho-hao-te 19.14 334 P **Pn 08 32 27.6 +1.9**
HHC pmax pmax
comp=Z,13nm,0.8s
HHC pmax pmax
comp=Z,56nm,5.0s
LZH Lanzhou 20.08 311 *e*P Pn 08 32 36.9 0.0
LZH pP pwP 08 32 43.1 +1.0
LZH sP sP 08 32 47.0 +7.9
LZH PP **PnPn 08 32 55.7 +4.4**
LZH pmax pmax
comp=Z,17nm,1.1s
LZH pmax pmax
comp=Z,120nm,4.3s
LZH LR LR
comp=N,270nm,14.1s
LZH LR LR
comp=E,400nm,15.2s
LZH LR LR
comp=Z,450nm,15.3s
USRK Ussuriysk Ar. 21.65 19 P **P 08 32 49.9 -1.9**
2.9nm,0.8s,baz=188,slow=5.8,SNR=3.5
CMAR Chiang Mai Arr 22.55 260 P **P 08 33 01.9 +0.1**
1.4nm,0.3s,baz=56,slow=8.8,SNR=2.3
CMAR LR LR 08 43 27.3
comp=Z,74nm,18.5s,baz=73,slow=41
GTA Gaotai 24.55 314 ⇓ P **P 08 33 22.0 +0.7**
GTA pP sP 08 33 25.8 +0.4
GTA sP pwP 08 33 29.0 +0.5
GTA pmax pmax
comp=Z,13nm,1.3s
GTA pmax pmax
comp=Z,42nm,4.8s
GTA LR LR
comp=N,93nm,11.1s
GTA LR LR
comp=E,200nm,15.2s
GTA LR LR
comp=Z,290nm,15.6s
KSM Kuching 25.25 209 P **P 08 33 29.1 +1.4**
KSM IAmb IAmb 08 33 48.0
comp=Z,14nm,1.2s
ASAJ Asahikawa 26.01 34 LR LR 08 43 49.1
comp=Z,123nm,21.7s,baz=195,slow=37
SIJI Sorong 26.14 160 LR LR 08 42 51.7
comp=Z,58nm,19.9s,baz=73,slow=34
KLR Kul'dur 26.26 14 LR LR 08 45 01.4
comp=Z,233nm,18.5s,baz=194,slow=39
ULN Ulaanbaatar 26.80 337 P **P 08 33 39.6 -2.0**
SONM Songino Array 27.02 336 P **P 08 33 42.5 -1.1**
comp=Z,9.6nm,0.9s,baz=151,slow=8.8,SNR=40
SONM LR LR 08 45 36.5
comp=Z,364nm,18.3s,baz=109,slow=39
BBKI Banjar Baru 28.25 196 P P 08 34 10.5 +16
KAPI Kappang 28.92 186 LR LR 08 45 15.3
comp=Z,65nm,22.0s,baz=328,slow=36
TLY Talaya 31.21 337 LR LR 08 49 15.4
comp=Z,31nm,18.1s,baz=135,slow=41
JAY Jayapura 31.77 143 LR LR 08 44 55.6
comp=Z,100nm,20.2s,baz=316,slow=32
PMBI Palembang 31.78 215 P **P 08 34 29.3 +3.4**
WMQ Urumqi 34.63 313 *e*P **P 08 34 52.0 +1.3**
WMQ pP pwP 08 34 59.4 +1.5
WMQ pmax pmax
comp=Z,26nm,0.7s
WMQ LR LR
comp=Z,110nm,14.9s
WMQ LR LR
comp=Z,120nm,18.5s
WMQ LR LR
comp=Z,220nm,13.7s
MTN Manton Dam 37.56 166 P **P 08 35 15.6 -0.4**
MTN IAmb IAmb 08 35 27.2
comp=Z,30nm,1.4s
YAK Yakutsk 38.37 6 LR LR 08 52 51.2
comp=Z,82nm,18.7s,baz=191,slow=39
MK31 Makanchi Array 39.28 316 P **P 08 35 29.9 -0.4**
MKAR Makanchi Array 39.28 316 P **P 08 35 29.7 -0.6**
comp=Z,6.5nm,0.7s,baz=106,slow=11,SNR=72
MKAR PcP **PcP 08 37 38.3 -0.6**
comp=Z,0.4nm,0.6s,baz=95,slow=4.8,SNR=2.5
MKAR LR LR 08 53 05.8
comp=Z,130nm,18.6s,baz=82,slow=38
PETK Petropavlovsk- 39.42 33 LR LR 08 52 46.5
comp=Z,68nm,18.9s,baz=239,slow=38
MAKZ Makanchi 39.49 316 P **P 08 35 31.8 -0.2**
MAKZ IAmb IAmb 08 35 32.5
comp=Z,14nm,1.0s
KNRA Kununurra 39.88 170 P **P 08 35 35.7 +0.3**
KNRA IAmb IAmb 08 35 36.0
comp=Z,29nm,1.2s
MA2 Magadan 40.76 22 LR LR 08 53 35.3
comp=Z,128nm,18.9s,baz=222,slow=38
ZALV Zalesovo Beam 41.05 327 P **P 08 35 43.3 -1.4**
comp=Z,9.2nm,0.6s,baz=115,slow=7.4,SNR=30
ZALV LR LR 08 55 12.4
comp=Z,40nm,19.5s,baz=94,slow=40
KDJ Kajisay 41.49 307 P **P 08 35 50.2 +1.4**
KSH Kashi 41.97 303 P **P 08 35 56.7 +4.0**
KSH pP pwP 08 36 04.2 +3.9
KSH PcP **PcP 08 37 53.9 +6.0**
KSH S **S 08 42 15.0 +3.8**
KSH SS **SS 08 45 18.4 +0.5**
KSH ScS **ScS 08 45 55.9 +0.4**
KSH pmax pmax
comp=Z,31nm,1.2s
KSH pmax pmax
comp=Z,310nm,5.4s
KSH LR LR
comp=Z,330nm,9.5s
KSH LR LR
comp=Z,82nm,11.1s
KSH LR LR
comp=Z,140nm,7.5s
COEN Coen 42.80 150 P **P 08 36 00.9 +1.4**
COEN IAmb IAmb 08 36 18.5
comp=Z,24nm,1.4s
KURK Kurchatov 42.99 320 P **P 08 36 00.1 -0.5**
KURK IAmb IAmb 08 36 01.0
comp=Z,10nm,1.1s
KURBB Kurchatov Arra 43.01 320 P **P 08 35 59.7 -1.1**
comp=Z,3.4nm,0.6s,baz=110,slow=8.0,SNR=29
AAK Ala-Archa 43.54 307 LR LR 08 57 04.0
comp=Z,138nm,18.2s,baz=88,slow=40
SEY Seymchan 43.80 19 PcP **PcP 08 37 53.1 -0.2**
comp=Z,1.6nm,0.9s,baz=200,slow=4.9,SNR=5.5
WB0 Warramunga Arr 45.01 164 P **P 08 36 17.4 +0.3**
WB0 IAmb IAmb 08 36 18.2
comp=Z,12nm,1.1s
WRAB Tennant Creek 45.16 164 P **P 08 36 18.3 0.0**
WRAB IAmb IAmb 08 36 19.4
comp=Z,7.7nm,0.9s
WRA Warramunga Arr 45.16 164 P **P 08 36 18.7 +0.4**
comp=Z,5.0nm,0.8s,baz=345,slow=8.9,SNR=21
WB2 Warramunga Arr 45.16 164 P **P 08 36 18.7 +0.3**
WB2 IAmb IAmb 08 36 19.5
comp=Z,7.5nm,0.8s
WR0 Warramunga Arr 45.23 164 P **P 08 36 18.2 -0.7**
WR0 IAmb IAmb 08 36 20.8
comp=Z,8.1nm,0.8s
GAR Garm 46.30 302 P **P 08 36 27.8 +0.5**
KK31 Karatay Array 46.50 307 P **P 08 36 28.4 -0.4**
KK31 IAmb IAmb 08 36 30.0
comp=Z,3.7nm,0.7s
KKAR Karatay Array 46.50 307 P **P 08 36 28.4 -0.5**
KKAR IAmb IAmb 08 36 30.0
comp=Z,3.7nm,0.7s
CHGR Chuyangaron 47.19 301 P **P 08 36 32.8 -1.5**
KBL Kabul 47.28 296 P **P 08 36 35.1 -0.1**
KBL IAmb IAmb 08 36 36.8
comp=Z,5.2nm,0.8s
TIXI Tiksi 47.85 3 LR LR 08 59 23.1
comp=Z,258nm,18.3s,baz=200,slow=40
TIXI Tiksi 47.85 3 P **P 08 36 35.9 -3.0**
BRVK Borovoye 48.63 321 P **P 08 36 44.1 -1.0**
BRVK IAmb IAmb 08 36 45.6
comp=Z,6.0nm,0.8s
AS31 Alice Springs 48.64 166 P **P 08 36 46.5 +1.0**
ASAR Alice Springs 48.64 166 P **P 08 36 46.5 +1.0**
comp=Z,2.7nm,0.9s,baz=343,slow=6.4,SNR=20
HNR Honiara 49.45 128 LR LR 08 56 06.2
comp=Z,31nm,19.6s,baz=252,slow=34
NRIK Noril'sk 49.91 345 P **P 08 36 53.8 -0.8**
comp=Z,0.8nm,0.3s,baz=126,slow=8.6,SNR=3.8
NRIK LR LR 09 00 00.1
comp=Z,118nm,21.2s,baz=150,slow=39
ABKAR Akbulak array 54.40 314 P **P 08 37 27.9 -0.5**
AKTO Aktyubinsk 55.72 316 LR LR 09 03 28.1
comp=Z,46nm,19.5s,baz=95,slow=38
GEYT Alibeck 55.88 301 P **P 08 37 39.3 -0.1**
comp=Z,5.6nm,0.7s,baz=90,slow=5.8,SNR=11
GEYT LR LR 09 06 09.5
comp=Z,62nm,20.2s,baz=35,slow=41
GYAOB ALIBECK ARRAY 55.88 301 P **P 08 37 39.4 0.0**
ARU Arti 55.96 323 P **P 08 37 38.1 -1.5**
ARU IAmb IAmb 08 37 38.6
comp=Z,4.9nm,0.6s
STKA Stephens Creek 58.48 161 P **P 08 37 58.4 +0.9**
comp=Z,1.7nm,0.8s,baz=351,slow=5.9,SNR=4.3
STKA Stephens Creek 58.48 161 P **P 08 37 59.1 +1.6**
DZM Mont Dzumac 62.66 133 LR LR 09 01 33.7
comp=Z,52nm,19.2s,baz=276,slow=32
KLMR Klimovskoe 65.95 328 *e*P **P 08 38 45.4 -1.9**
KLMR AMP 08 38 48.8
comp=Z,12nm,1.8s
KLMR *e*PcP **PcP 08 39 15.3 -2.7**
KBZ Khabaz 66.50 309 P **P 08 38 51.4 +0.2**
comp=Z,5.7nm,0.8s,baz=111,slow=4.5,SNR=11
AKH Akhalkalaki 66.53 306 P **P 08 38 52.6 +0.9**
KIV Kislovodsk 66.61 309 P **P 08 38 52.2 +0.2**
ILAR Eielson Array 68.88 27 LR LR 09 11 19.7
comp=Z,18nm,18.3s,baz=287,slow=38
ARCES ARCESS Array B 70.16 338 P **P 08 39 12.6 -1.1**
comp=Z,1.6nm,0.9s,baz=57,slow=7.4,SNR=4.2
ARCES LR LR 09 15 11.4
comp=Z,41nm,18.7s,baz=133,slow=40
FINES FINESS Array B 72.20 330 P **P 08 39 25.4 -0.7**
comp=Z,1.1nm,0.5s,baz=69,slow=6.3,SNR=8.0
FINES LR LR 09 14 26.2
comp=Z,152nm,18.7s,baz=46,slow=39
DAWY Dawson 72.21 27 P **P 08 39 24.6 -1.7**
AKASG Malin Array Be 73.78 319 P **P 08 39 34.4 -1.4**
comp=Z,0.4nm,0.4s,baz=60,slow=5.3,SNR=2.7
BR131 Keskin Array S 74.21 307 P **P 08 39 37.2 -1.5**
BR131 IAmb IAmb 08 39 39.1
comp=Z,7.2nm,0.8s
BRTR Keskin Array B 74.21 307 P **P 08 39 38.5 -0.2**
comp=Z,6.3nm,0.9s,baz=109,slow=5.3,SNR=26
NB2 NORSAR Subarra 78.94 332 P **P 08 40 02.9 -2.0**
comp=Z,0.6nm,0.6s,baz=57,slow=5.6
NOA NORSAR Array B 78.94 332 P **P 08 40 03.0 -1.9**
comp=Z,1.3nm,0.9s,baz=55,slow=5.7,SNR=5.3
NOA LR LR 09 18 30.8
comp=Z,96nm,19.1s,baz=70,slow=38
YKA Yellowknife Ar 82.73 23 P **P 08 40 23.6 -1.4**
comp=Z,0.5nm,0.6s,baz=310,slow=4.5,SNR=7.2
ITM Ithomi 83.69 308 P **P 08 40 29.0 -1.6**
GERES GERESS Array B 83.73 321 P **P 08 40 30.3 -0.3**
comp=Z,0.9nm,0.6s,baz=75,slow=5.7,SNR=7.1
GERES LR LR 09 21 34.6
comp=Z,50nm,19.3s,baz=78,slow=38
NEW Newport 90.53 35 P **P 08 41 03.4 -0.2**
comp=Z,2.1nm,0.7s,baz=316,slow=7.7,SNR=4.1
NEW Newport 90.53 35 P **P 08 41 02.9 -0.7**
NEW IAmb IAmb 08 41 04.7
comp=Z,5.4nm,1.1s
FFC Flin Flon 92.87 24 P **P 08 41 13.7 -0.5**
FFC IAmb IAmb 08 41 14.1
comp=Z,3.0nm,0.9s

IDC 05 08:31:16.8±11.0**, 24.02S**×179.85E**, h608**km±134**km, mb3.0/2, mb1 3.3/3, mb1mx2.8/48, mbtmp4.2/3, Error ellipse: s-maj=100.9km s-min=45.8km az=31.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.38**	**189**	P	P	08 34 19.2	+0.4
	1.6nm,0.3s,baz=0.0,slow=9.1,SNR=9.5						
URZ				S	S	08 36 48.8	+1.4
	0.3nm,0.3s,baz=40,slow=9.5,SNR=1.9						
ASAR	**Alice Springs**	**41.88**	**261**	P	P	08 38 16.1	+0.2
	0.8nm,0.5s,baz=96,slow=7.4,SNR=13						
WRA	**Warramunga Arr**	**42.26**	**266**	P	P	08 38 18.4	-0.4
	0.8nm,0.3s,baz=103,slow=8.4,SNR=60						
AKASG	**Malin Array Be**	**145.00**	**327**	PKPbc	PKPdf	08 49 45.5	0.0
	0.6nm,0.5s,baz=38,slow=3.7,SNR=1.7						

*ISK **05** 08:43:26.8, 35.05N×27.30E, h20km, ML2.8/6*
*ATH **05** 08:43:27.4, 35.09N×27.28E, h25km±1km, ML2.6/4, Error ellipse: s-maj=5.4km s-min=1.7km az=322.0*
*THE **05** 08:43:28.7, 35.13N×27.19E, h1km±1km, ML2.6/4, Error ellipse: s-maj=2.3km s-min=0.8km az=146.0*

ISC 05 08:43:27.7±1.7**, 35.04N**±0.08×**27.29E**±0.06**, h22**km±6**km, n23, σ0=0.94/33, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.51**	**348**	P	**Pb**	**08 43 37.1**	**-1.0**
KARP				S	**Sb**	**08 43 44.4**	**-0.7**
	1μm,0.3s						
KARP	**Karpathos**	**0.51**	**348**	P	**Pb**	**08 43 37.0**	**-1.0**
KARP				S	**Sb**	**08 43 44.7**	**-0.3**
KARP				AML	AML	08 43 46.7	
	comp=N,2366μm,0.2s						
KARP				AML	AML	08 43 47.6	
	comp=E,2055μm,0.4s						
KARP	**Karpathos**	**0.51**	**348**	PG	**Pb**	**08 43 36.8**	**-1.2**
KARP				SG	**Sb**	**08 43 45.3**	**+0.2**
ZKR	**Zakros**	**0.88**	**275**	P	**Pn**	**08 43 44.5**	**-0.3**
ZKR				S	**Sn**	**08 43 57.4**	**+0.4**
	comp=E,300nm,0.6s						
ZKR	**Zakros**	**0.88**	**275**	P	**Pb**	**08 43 44.4**	**+0.1**
ZKR				S	**Sn**	**08 43 56.6**	**-0.4**
ZKR				AML	AML	08 44 02.5	
	comp=N,390μm,0.8s						
ZKR				AML	AML	08 44 03.8	
	comp=E,833μm,0.5s						
ZKR	**Zakros**	**0.88**	**275**	PG	**Pb**	**08 43 44.2**	**-0.1**
ZKR				SG	**Sn**	**08 43 57.4**	**+0.4**
STIA	**Sitia Lasithi**	**0.99**	**279**	P	**Pn**	**08 43 46.3**	**0.0**
STIA				S	**Sn**	**08 43 59.9**	**+0.2**
FRMA	**Ierapetra Chan**	**1.28**	**269**	P	**Pn**	**08 43 49.2**	**-1.0**
ARG	**Arkhangelos**	**1.35**	**30**	P	**Pb**	**08 43 52.8**	**+0.5**
ARG				S	**Sb**	**08 44 11.4**	**+2.2**
	comp=E,178nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ARG	Arkhangelos	1.35	30	P	Pb	08 43 52.3	0.0
ARG				AML	AML	08 44 13.0	
	comp=N,258μm,0.4s						
ARG				AML	AML	08 44 14.7	
	comp=E,405μm,0.5s						
ARG	Arkhangelos	1.35	30	PN	Pn	08 43 50.9	-0.4
NPS	Neapolis	1.39	279	P	Pb	08 43 53.2	+0.2
NPS				AML	AML	08 44 18.1	
	comp=E,457μm,0.4s						
NPS				AML	AML	08 44 19.7	
	comp=N,468μm,0.6s						
LAST	Lasithi	1.49	275	P	Pb	08 43 55.0	+0.3
DAT	Datca	1.70	8	PN	Pn	08 43 56.1	0.0
DAT				SN	Sn	08 44 17.7	+0.5
ANAF	Anafi Island	1.80	317	P	Pn	08 43 58.3	+0.9
ANAF				S	Sn	08 44 19.6	0.0
	comp=N,375nm,0.4s						
ANAF	Anafi Island	1.80	317	P	Pb	08 43 58.8	-1.2
IDI	Anoyia	1.98	278	P	Pb	08 44 01.7	-1.3
AMGA	Amorgos Island	2.11	328	P	Pn	08 44 02.2	+0.5
TURN	Turunc	2.11	30	PN	Pn	08 43 59.2	-2.5
YER	Yerkesik	2.24	21	PN	Pn	08 44 04.4	+0.9
IOSP	Ios island	2.33	316	P	Pn	08 44 05.5	+0.8
APE	Apeiranthos	2.47	325	P	Pn	08 44 07.9	+1.2
APE	Apeiranthos	2.47	325	PN	Pn	08 44 07.6	+0.9

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*KRAR **05** 08:46:44.0±0.3, 53°.55N×87°.61E, M2.1, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC 05 08:46:46.1±1.6, 53°.54N×87°.89E, h8km±11km, mb3.6, mpv3.3, 9C-3D, Error ellipse: s-maj=14.2km s-min=5.7km az=61.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.87	284	⇑P	Pn	08 47 18.1	-0.4
	1.1nm,0.4s						
ZAA0				⇑S	Sn	08 47 43.1	+0.8
	7.3nm,0.8s						
KURK	Kurchatov	6.37	247	⇓Pn	Pn	08 48 19.8	-0.5
	4.2nm,0.6s						
KURK				⇑Lg	Lg	08 50 09.7	
	11nm,1.1s						
KURBB	Kurchatov Arra	6.47	247	⇓Pn	Pn	08 48 21.5	-0.1
	4.4nm,0.6s						
KURBB				⇑Lg	Lg	08 50 11.8	
	11nm,0.7s						
MK31	Makanchi Array	7.65	210	⇑Pn	Pn	08 48 39.4	+1.5
	0.6nm,0.5s,baz=28,slow=13,SNR=17						
MK31				⇑Sn	Sn	08 50 05.5	+0.8
	1.4nm,0.9s,baz=31,slow=29,SNR=4.6						
MK31				⇑Lg	Lg	08 50 48.3	
	2.9nm,0.8s,baz=26,slow=30,SNR=4.0						
MAKZ	Makanchi	7.73	212	⇑Pn	Pn	08 48 40.3	+1.2
	1.8nm,0.9s						
MAKZ				⇓Sn	Sn	08 50 07.1	+0.3
	1.1nm,0.7s						
MAKZ				⇑Lg	Lg	08 50 50.5	
	1.7nm,0.8s						

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*IDC **05** 08:47:58.6±2.8, 5°.01S×133°.73E, h0km, mb3.5/2, mb1 3.9/6, mb1mx3.6/41, mbtmp3.8/6, ML3.8/4, MS3.1/2, Ms1 3.1/2, ms1mx2.4/29, Error ellipse: s-maj=117.1km s-min=25.0km az=80.0*

ISC 05 08:48:01.6±1.5, 5°.16S±0°.07×133°.4E±0°.3, h25km, n7, σ2s.65/10, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	4.75	334	Pn	Pn	08 49 12.4	+0.7
	2.4nm,0.3s,baz=239,slow=19,SNR=2.3						
SIJI				Sn	Sn	08 50 02.5	-3.6
	3.5nm,0.3s,baz=113,slow=14,SNR=3.5						
JAY	Jayapura	7.78	71	LR	LR	08 53 34.0	
	comp=Z,111nm,19.3s,baz=268,slow=45						
WRA	Warramunga Arr	14.72	176	Pn	Pn	08 51 29.4	+0.9
	0.3nm,0.3s,baz=355,slow=13,SNR=23						
WRA				Sn	Sn	08 54 07.2	-3.8
	0.5nm,0.3s,baz=360,slow=23,SNR=7.5						
FITZ	Fitzroy Crossi	14.91	210	Pn	P	08 51 35.0	-1.4
	0.4nm,0.3s,baz=36,slow=10,SNR=24						
FITZ				Sn	Sn	08 54 18.1	+2.6
	0.9nm,0.3s,baz=202,slow=16,SNR=6.2						
ASAR	Alice Springs	18.41	178	P	Pn	08 52 17.3	+2.0
	0.5nm,0.3s,baz=2.7,slow=11,SNR=30						
ASAR				S	Sn	08 55 38.3	-2.1
	0.2nm,0.3s,baz=356,slow=29,SNR=6.1						
ASAR				LR	LR	08 59 10.3	
	comp=Z,56nm,19.0s,baz=346,slow=36						
MKAR	Makanchi Array	68.59	325	P	P	08 59 04.0	+1.5
	0.4nm,0.5s,baz=108,slow=9.0,SNR=4.4						
KURBB	Kurchatov Arra	72.75	327	P	P	08 59 29.0	+1.3
	0.1nm,0.4s,baz=127,slow=5.0,SNR=1.2						

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*ISK **05** 08:49:29.3, 35°.09N×27°.23E, h19km, ML3.0/11*
*THE **05** 08:49:29.8, 35°.11N×27°.22E, h0km±1km, ML2.6/3, Error ellipse: s-maj=2.9km s-min=1.0km az=145.0*
*ATH **05** 08:49:29.0, 35°.10N×27°.29E, h28km±2km, ML2.6/2, Error ellipse: s-maj=6.9km s-min=2.0km az=321.0*

ISC 05 08:49:29.2±1.6, 35°.08N±0°.07×27°.23E±0°.04, h14km±11km, n25, σ0s.73/33, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.47	353	P	Pb	08 49 38.7	-0.6
KARP				S	Sb	08 49 46.6	+0.4
	1μm,0.2s						
KARP	Karpathos	0.47	353	P	Pb	08 49 38.7	-0.6
KARP				S	Sb	08 49 46.2	0.0
KARP				AML	AML	08 49 48.1	
	comp=N,2669μm,0.1s						
KARP				AML	AML	08 49 48.5	
	comp=E,2431μm,0.3s						
KARP	Karpathos	0.47	353	PG	Pb	08 49 38.9	-0.4
KARP				SG	Sb	08 49 46.1	-0.1
ZKR	Zakros	0.83	273	P	Pg	08 49 45.7	+0.4
ZKR				S	Sn	08 49 59.3	+0.7
	comp=E,335nm,0.4s						
ZKR	Zakros	0.83	273	P	Pn	08 49 45.8	-0.6
ZKR				S	Sn	08 49 59.2	+0.7
ZKR				AML	AML	08 50 02.6	
	comp=N,544μm,0.4s						
ZKR				AML	AML	08 50 06.5	
	comp=E,798μm,0.4s						
ZKR	Zakros	0.83	273	PG	Pn	08 49 45.9	-0.6
ZKR				SG	Sn	08 49 57.9	-0.7
STIA	Sitia Lasithi	0.94	278	P	Pg	08 49 48.4	+1.1
STIA				S	Sn	08 50 02.4	+1.1
NPS	Neapolis	1.34	278	P	Pg	08 49 55.3	+0.5
ARG	Arkhangelos	1.35	33	P	Pg	08 49 54.8	-0.4
ARG				S	Sg	08 50 12.6	-0.1
	comp=E,205nm,0.5s						
ARG	Arkhangelos	1.35	33	P	Pb	08 49 54.2	-0.1
ARG	Arkhangelos	1.35	33	PN	Pb	08 49 53.9	-0.4
LAST	Lasithi	1.44	274	P	Pb	08 49 55.1	-0.7
DAT	Datca	1.67	10	PN	Pn	08 49 57.9	-0.3
ANAF	Anafi Island	1.74	318	P	Pb	08 50 00.6	-0.4
IDI	Anoyia	1.93	277	P	Pb	08 50 03.0	-1.1
AMGA	Amorgos Island	2.06	329	P	Pn	08 50 03.1	-0.3
DALY	Dalyan (Mula)	2.08	33	PN	Pn	08 50 04.3	+0.6
TURN	Turunc	2.11	32	PN	Pn	08 50 01.8	-2.3
FETY	Fethiye	2.16	44	PN	Pn	08 50 04.9	0.0
YER	Yerkesik	2.22	22	PN	Pn	08 50 06.1	+0.4
AKAS	Kas	2.25	59	PN	Pn	08 50 06.4	+0.2
IOSP	Ios island	2.27	317	P	Pn	08 50 06.4	0.0
APE	Apeiranthos	2.42	326	P	Pn	08 50 08.9	+0.5
APE	Apeiranthos	2.42	326	PN	Pn	08 50 08.3	-0.1
KORT	Korkueli	3.17	52	PN	Pn	08 50 19.8	+0.9

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*IDC **05** 09:02:52.5±0.4, 19°.16S×70°.79W, h0km, mb4.4/15, mb1 4.6/18, mb1mx4.5/27, mbtmp4.4/18, ML4.3/3, MS4.1/23, Ms1 4.1/23, ms1mx4.0/31, Error ellipse: s-maj=21.9km s-min=11.1km az=68.0*
*NEIC **05** 09:02:55.8±1.9, 19°.34S±0°.04×70°.95W±0°.06, h24km±3km, mb4.7/75, Mwr4.8/48, ML4.7(GUC), Error ellipse: s-maj=8.8km s-min=5.9km az=89.0*
*NEIC **05** 09:02:55.9, 19°.36S×70°.95W, h28km, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr-1.55; Mθθ1.06; Mφφ0.49; Mrθ0.55; Mθφ1.00; Mφr-0.50; Fault plane solution: M0 1.85000×10^16 NP1:φs30.67000°, δ47.45000°, λ-123.71000°. NP2:φs255.28000°, δ52.20000°, λ-58.84000°. Principal axes: T 1.8194, Plg3.0000°, Azm324.0000°; N 0.0618, Plg24.0000°, Azm55.0000°; P -1.8812, Plg66.0000°, Azm228.0000°;*
*BJI **05** 09:02:55.0±0.0, 19°.30S×71°.00W, h15km, mB5.6/4, Ms5.2/3, Ms7 5.0/3*
*VAO **05** 09:02:56.7±0.5, 19°.11S×71°.06W, h34km, mb4.5*
*GUC **05** 09:02:56.1±0.5, 19°.28S×71°.03W, h38km±3km, ML4.7*
*GCMT **05** 09:02:59.8±0.3, 19°.28S±0°.02×71°.19W±0°.03, h30km, MW4.9/83, Moment Tensor Solution. s39,c48; s83,c120; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.93±.16; Mθθ2.68±.10; Mφφ-0.75±.13; Mrθ1.07±.14; Mθφ1.38±.07; Mφr-0.99±.19; Best double couple: M0 3.11500×10^16 NP1:φs39.00000°, δ48.00000°, λ-141.00000°. NP2: φs281.00000°, δ62.00000°, λ-49.00000°. Principal axes: T 3.2620, Plg8.0000°, Azm343.0000°; N -0.2940, Plg36.0000°, Azm79.0000°; P -2.9680, Plg53.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 09:02:55.5±0.4, 19°.28S±0°.03×70°.99W±0°.06, h21km±3km, n216, σ1s.50/188, mb4.7/45, MS4.2/23, 17C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.88	111	⇑iP	Pb	09 03 11.5	-0.7
PSGC				iS	Sb	09 03 23.6	+0.1
PSGCX	Pisagua	0.88	111		Pb	09 03 11.6	-0.5
PB12	IPOC Station P	0.92	43	⇑iP	Pb	09 03 12.6	-0.2
PB12				iS	Sb	09 03 24.9	+0.3
PB12				IAML		09 03 26.6	
	comp=N,32μm,0.7s						
PB12	IPOC Station P	0.92	43	Pn	Pn	09 03 13.2	-0.1
AP01	Chacalluta	1.10	34	⇑iP	Pn	09 03 14.8	-0.9
AP01				iS	Sb	09 03 28.6	-1.1
AP01				IAML		09 03 33.5	
	comp=N,27μm,0.5s						
AP01	Chacalluta	1.10	34	Pn	Pb	09 03 15.8	0.0
TA02	Huaiquique	1.27	141	⇑iP	Pn	09 03 17.6	-0.6
TA02				iS	Sn	09 03 34.0	-0.6
TA02				IAML		09 03 37.0	
	comp=N,34μm,0.1s						
MNMC	Minye Minye	1.33	84	⇑iP	Pn	09 03 19.3	+0.1
MNMC				iS	Sb	09 03 36.8	+0.2
MNMC				IAML		09 03 42.3	
	comp=E,29μm,0.2s						
MNMC	Minye Minye	1.33	84		Pn	09 03 19.3	+0.1
PB11	IPOC Station P	1.35	111	⇑iP	Pn	09 03 19.2	-0.1
PB11				iS	Sn	09 03 36.9	+0.3
PB11				IAML		09 03 39.9	
	comp=N,33μm,0.3s						
PB11	IPOC Station P	1.35	111		Pn	09 03 19.2	-0.1
TA01	Diego Aracena	1.49	149	⇑iP	Pn	09 03 20.4	-0.7
TA01				iS	Sn	09 03 38.7	-1.2
TA01	Diego Aracena	1.49	149	Pn	Pn	09 03 20.6	-0.5
PB16	IPOC Station P	1.69	56	⇓iP	Pn	09 03 24.9	+0.5
PB16				iS	Sb	09 03 46.6	-0.8
PB16	IPOC Station P	1.69	56		Pn	09 03 25.3	+0.9
PATCX	Punta Patache	1.72	153	⇑iP	Pn	09 03 23.6	-0.8
PATCX				iS	Sn	09 03 43.9	-1.9
PATCX	Punta Patache	1.72	153		Pn	09 03 23.6	-0.8
GO01	Chusmiza	1.74	103	⇑iP	Pn	09 03 25.4	+0.4
GO01				iS	Sb	09 03 48.0	-0.6
GO01				IAML		09 03 51.0	
	comp=N,15μm,0.2s						
GO01	Chusmiza	1.74	103		Pn	09 03 25.5	+0.4
PB08	IPOC Station P	1.93	117	⇑iP	Pn	09 03 27.7	+0.1
PB08				iS	Sn	09 03 52.6	+1.2
PB08				IAML		09 03 56.2	
	comp=N,9μm,0.3s						
PB08	IPOC Station P	1.93	117		Pn	09 03 27.6	+0.1
PB01	IPOC Station P	2.25	141	⇑iP	Pn	09 03 31.2	-0.5
PB01				eS	Sn	09 03 57.2	-1.7
PB01				IAML		09 03 59.2	
	comp=E,4μm,0.4s						
PB01	IPOC Station P	2.25	141		Pn	09 03 31.7	+0.1
PB02	IPOC Station P	2.27	153	⇑iP	Pn	09 03 31.4	-0.6
PB02				IAML		09 03 59.9	
	comp=N,9μm,0.6s						
PB07	IPOC Station P	2.64	157	⇑iP	Pn	09 03 36.2	-0.9
PB07				IAML		09 04 29.4	
	comp=E,3μm,0.6s						
PB07	IPOC Station P	2.64	157		Pn	09 03 36.3	-0.9
PB09	IPOC Station P	2.99	147	⇑iP	Pn	09 03 42.3	+0.4
PB09				IAML		09 04 39.3	
	comp=N,2μm,0.7s						
PB09	IPOC Station P	2.99	147		Pn	09 03 42.6	+0.7
PB06	IPOC Station P	3.66	159	⇑iP	Pn	09 03 49.6	-1.4
PB06	IPOC Station P	3.66	159		Pn	09 03 49.8	-1.3
LVC	Limon Verde	3.84	150	Pn	Pn	09 03 54.7	+1.0
	comp=N,91nm,0.3s,baz=338,slow=6.6,SNR=245						
LVC				Pg	Pb	09 04 04.3	+1.5
	comp=N,118nm,0.3s,baz=332,slow=18,SNR=13						
LVC				Sn	Sn	09 04 39.3	+0.8
	comp=N,111nm,0.3s,baz=96,slow=22,SNR=13						
LVC				Lg	Lg	09 04 56.6	
	comp=N,110nm,0.3s,baz=172,slow=11,SNR=11						
LVC				LR	LR	09 05 38.4	
	comp=N,6μm,18.2s,baz=300,slow=43						
LVC	Limon Verde	3.84	150		Pn	09 03 54.3	+0.5
LVC	Limon Verde	3.84	150	eP	Pn	09 03 54.2	+0.5
LPAZ	La Paz	4.04	43	Pn	Pb	09 04 01.6	-4.8
	comp=N,0.7nm,0.3s,baz=239,slow=9.9,SNR=13						
LPAZ				Lg	Lg	09 05 01.8	
	comp=N,3.4nm,0.3s,baz=308,slow=12,SNR=1.6						
LPAZ				LR	LR	09 05 37.6	
	comp=N,2μm,18.3s,baz=222,slow=43						
LPAZ	La Paz	4.04	43		Pn	09 04 00.7	+4.0
LPAZ	La Paz	4.04	43	eP	Pn	09 03 55.4	-1.4
PB15	IPOC Station P	4.16	160	⇑iP	Pn	09 03 56.5	-1.5
PB15	IPOC Station P	4.16	160		Pn	09 03 56.6	-1.4
PB10	IPOC Station P	4.23	175	⇑iP	Pn	09 03 56.4	-2.4
PB10	IPOC Station P	4.23	175		Pn	09 03 56.5	-2.3
GO02	Mina Guanaco	5.99	168		Pn	09 04 22.2	-1.1
AC02	Maricunga	7.71	167	Pn	Pn	09 04 46.2	-0.9
NNA	Nana	9.18	321	Pn	Pn	09 05 08.2	+1.3
	comp=N,4.3nm,0.3s,baz=150,slow=7.5,SNR=7.6						
NNA				Sn	Sn	09 06 47.9	-1.9
	comp=N,5.1nm,0.3s,baz=221,slow=4.4,SNR=4.1						
NNA				LR	LR	09 08 57.6	
	comp=N,2μm,18.9s,baz=139,slow=40						
NNA	Nana	9.18	321	Pn	Pn	09 05 08.7	+1.8
AC05	El Transito	9.53	176	Pn	Pn	09 05 09.1	-2.6
SIV	San Ignacio	10.01	72	Pn	Pn	09 05 19.3	+1.0
	comp=N,5.1nm,0.3s,baz=262,slow=11,SNR=32						
SIV				LR	LR	09 09 36.9	
	comp=N,1μm,21.7s,baz=272,slow=41						
GO04	Tololo Observa	10.84	179	Pn	Pn	09 05 27.4	-2.4
CO03	El Pedregal	11.51	179	Pn	Pn	09 05 35.1	-3.7
CO02	Combarbal	11.87	180	Pn	Pn	09 05 40.1	-3.6
PTLB	Pontes e Lacer	11.94	73	eP	Pn	09 05 44.8	+0.1
VILB	Vilhena	12.13	60	eP	Pn	09 05 47.2	-0.1
CO04	Los Peladeros	12.71	180	Pn	Pn	09 05 53.4	-2.0
SAML	Samuel	12.76	37		Pn	09 05 56.1	+0.2
SAML	Samuel	12.76	37	eP	Pn	09 05 54.4	-1.4
VA03	San Esteban	13.43	178	Pn	Pn	09 06 02.4	-2.6
ATAH	Atahualpa	14.06	328	Pn	Pn	09 06 15.0	+1.0
	comp=N,0.3nm,0.3s,baz=311,slow=11,SNR=2.2						
CPUP	Villa Florida	14.41	122	Pn	Pn	09 06 20.8	+2.4
	comp=N,0.1nm,0.3s,baz=302,slow=14,SNR=6.4						
CPUP	Villa Florida	14.41	122		Pn	09 06 21.2	+2.8
CPUP	Villa Florida	14.41	122	eP	Pn	09 06 21.2	+2.8
SALV	Santo Antonio	14.97	79	eP	Pn	09 06 26.4	+0.4
BO02	Sierra Bellavi	15.45	179	Pn	Pn	09 06 33.3	+1.0
BO02				IAmb	IAmb	09 06 44.6	
	comp=Z,42nm,1.2s						
H03N1	Juan Fernandez	15.78	205	T	T	09 22 51.2	
	baz=30,slow=72,SNR=160						
H03N2	Juan Fernandez	15.78	205	T	T	09 22 49.4	
	baz=30,slow=72,SNR=119						
H03N3	Juan Fernandez	15.79	205	T	T	09 22 52.9	
	baz=30,slow=72,SNR=147						
CLDB	Colider	16.88	62	eP	Pn	09 06 47.8	-2.9
BI02	San Fabin de	17.32	181	P	Pn	09 06 56.2	+0.1
TRCB	Terra Rica	17.49	105	eP	P	09 06 60.0	+0.6
PTGB	Pitanga	18.36	111	eP	Pn	09 07 10.6	+1.5
PCMB	Pacaembu	18.64	101	eP	Pn	09 07 13.3	+0.9
ARAG	Araguaiana, MT	18.64	82	eP	P	09 07 12.2	+0.2
MACA	Manacapuru-AM	18.93	33	eP	P	09 07 13.7	-1.6
ITAB	Concordia	19.04	118	eP	Pn	09 07 17.1	-0.1
CPSB	Cacapava Do Su	19.37	128	eP	Pn	09 07 21.0	-0.2
LC01	Cunco	19.56	182	P	P	09 07 20.6	-1.4
GCUF	Volcan Galeras	21.32	342	eP	P	09 07 48.1	+6.4
PTGA	Pitinga	21.37	32	P	P	09 07 40.1	-1.7
	comp=Z,12nm,0.3s,baz=293,slow=22,SNR=29						
PTGA				LR	LR	09 16 28.1	
	comp=Z,518nm,18.1s,baz=210,slow=38						
PTGA	Pitinga	21.37	32	P	P	09 07 40.5	-1.4
PTGA				IAmb	IAmb	09 07 50.6	
	comp=Z,30nm,0.9s						
PTGA	Pitinga	21.37	32	eP	P	09 07 40.1	-1.7
PLCA	Paso Flores	21.38	179	P	P	09 07 42.5	+0.7
	comp=Z,10nm,0.8s,baz=355,slow=13,SNR=18						
PLCA	Paso Flores	21.38	179	P	P	09 07 43.4	+1.5
PLCA	Paso Flores	21.38	179	eP	P	09 07 43.3	+1.5
CRUC	La Cruz	21.53	344	eP	P	09 07 49.7	+5.8
IPMB	Ipameri, GO	21.62	90	eP	P	09 07 45.2	+0.6
GARC	Garzon, Huila	21.79	348	eP	P	09 07 47.8	+1.2
SOTA	Rioblanco	21.99	345	eP	P	09 07 54.4	+5.4
PCON	Cinco Dias	22.12	346	eP	P	09 08 06.7	+16
BDFB	Brasilia	22.21	84	P	P	09 07 59.0	+8.0
	comp=Z,2.2nm,0.5s,baz=102,slow=11,SNR=3.2						
BDFB				LR	LR	09 17 34.7	
	comp=Z,378nm,18.7s,baz=284,slow=40						
BETC	Betania	22.26	348	eP	P	09 07 53.6	+2.2
PTGC	Puerto Gaitan,	23.36	357	eP	P	09 08 03.0	+0.2
ORTC	Ortega, Tolima	23.42	349	eP	P	09 08 05.4	+1.9
YOTC	Yotoco, Valle	23.71	347	eP	P	09 08 07.3	+0.9
CHIC	Chingaza	23.91	353	eP	P	09 08 08.3	-0.3
MALC	Bahia Malaga	23.98	344	eP	P	09 08 18.6	+10
ROSC	El Rosal	24.20	352	P	P	09 08 13.6	+2.4
	comp=Z,4.2nm,0.4s,baz=146,slow=20,SNR=4.1						
RREF	El Recreo	24.41	349	eP	P	09 08 14.3	+0.9
GUY2C	Guyana, Caldas	24.73	350	eP	P	09 08 17.7	+1.5
SMTB	Santa Maria do	24.92	69	eP	P	09 08 17.2	-0.3
RUSC	La Rusia	25.10	355	eP	P	09 08 20.8	+1.2
RUSC	La Rusia	25.10	355	P	P	09 08 18.9	-0.6
CBOC	Ciudad Bolivar	25.47	348	eP	P	09 08 23.5	+0.9
TAMC	Tame, Arauca	25.57	358	eP	P	09 08 22.7	-0.6
HELC	Santa Helena	25.70	350	eP	P	09 08 25.4	+0.6
JANB	Januaria	25.82	85	eP	P	09 08 26.7	+1.0
DBBC	Dabeiba	26.64	348	eP	P	09 08 33.2	+0.2
ZARC	Zaragoza, Cauc	26.88	351	eP	P	09 08 34.1	-1.0
UREC	San Jos de Ur	27.23	350	eP	P	09 08 37.5	-0.8
SDV	Santo Domingo	27.99	1	P	P	09 08 47.0	+1.7
	comp=Z,2.6nm,0.6s,baz=340,slow=22,SNR=2.9						
SDV	Santo Domingo	27.99	1	eP	P	09 08 42.3	-3.1
SMLC	San Martn de	28.07	354	eP	P	09 08 43.6	-2.2
ARGC	Ariguani, Magd	29.13	353	eP	P	09 08 56.5	+1.3
SJCC	San Jacinto, C	29.29	352	eP	P	09 08 55.2	-1.4
MDP	Montagnes des	30.23	39	LR	LR	09 22 36.8	
	comp=Z,184nm,18.2s,baz=222,slow=40						
MTP	Monte Pirata	37.53	9	P	P	09 10 07.9	-0.3
MTP				IAmb	IAmb	09 10 24.0	
	comp=Z,18nm,1.1s						
CBYP	Canovanas	37.66	8	P	P	09 10 07.7	-1.7
TEIG	Tepich	42.76	336	P	P	09 10 53.0	+1.3
TEIG				IAmb	IAmb	09 11 05.0	
	comp=Z,20nm,1.1s						
Z50A	Ashland	54.15	345	IAmb	IAmb	09 12 31.9	
	comp=Z,8.9nm,0.8s						
TKL	Tuckaleechee C	55.97	347	LR	LR	09 38 58.4	
	comp=Z,172nm,18.9s,baz=160,slow=39						
SWET	Sewanee	56.02	345	P	P	09 12 31.2	-1.6
SWET				IAmb	IAmb	09 12 45.1	
	comp=Z,8.6nm,0.8s						
U49A	Red Boiling Sp	57.23	346	P	P	09 12 40.7	-0.6
U49A				IAmb	IAmb	09 12 53.1	
	comp=Z,5.8nm,0.8s						
WVT	Waverly	57.37	344	P	P	09 12 40.9	-1.4
WVT				IAmb	IAmb	09 12 54.3	
	comp=Z,8.2nm,0.8s						
S54A	Dingess, Beckl	57.60	350	P	P	09 12 44.0	0.0
TXAR	Lajitas Array	57.70	326	P	P	09 12 45.0	0.0
	comp=Z,2.1nm,0.8s,baz=147,slow=8.5,SNR=26						
TXAR				LR	LR	09 36 00.2	
	comp=Z,148nm,19.4s,baz=0.0,slow=34						
TX31	Lajitas Ar. Si	57.71	326	IAmb	IAmb	09 12 45.6	
	comp=Z,9.4nm,0.9s						
S44A	Carbondale	59.22	343	P	P	09 12 54.1	-1.1
MNTX	Cornudas Mount	60.48	326	IAmb	IAmb	09 13 04.5	
	comp=Z,5.3nm,0.9s						
VNA3	Neumayer Olymp	62.79	161	P	P	09 13 20.0	+0.8
VNA1	Neumayer--Stat	63.02	161	P	P	09 13 22.3	+1.7
VNA2	Neumayer--Watz	63.38	161	P	P	09 13 23.9	+0.9
	baz=287,slow=5.5						
ANMO	Albuquerque	63.59	328	P	P	09 13 25.8	+0.7
SADO	Sadowa	64.17	354	LR	LR	09 42 52.8	
	comp=Z,134nm,21.1s,baz=176,slow=38						
JFWS	Jewell Farm	64.38	344	IAmb	IAmb	09 13 32.7	
	comp=Z,7.6nm,0.8s						
SNAA	Sanae	65.00	161	P	P	09 13 34.3	+0.5
SNAA	Sanae	65.00	161	P	P	09 13 34.2	+0.5
	comp=Z,6.1nm,0.9s,baz=296,slow=6.2,SNR=18						
SNAA	Sanae	65.00	161	P	P	09 13 33.3	-0.4
SDCO	Great Sand Dun	65.36	330	IAmb	IAmb	09 13 38.5	
	comp=Z,9.0nm,1.0s						
E43A	Lone Tree Farm	66.94	348	P	P	09 13 45.0	-1.3
E43A				IAmb	IAmb	09 13 59.2	
	comp=Z,4.9nm,0.8s						
ECSD	EROS Data Cent	66.97	340	IAmb	IAmb	09 14 00.3	
	comp=Z,10.0nm,1.1s						
ISCO	Idaho Springs	67.07	332	IAmb	IAmb	09 13 49.3	
	comp=Z,4.0nm,0.9s						
SMCO	Snowmass	67.20	330	P	P	09 13 49.2	+0.5
SMCO				IAmb	IAmb	09 13 53.1	
	comp=Z,7.4nm,1.2s						
W13A	Hualapai Mount	67.69	323	P	P	09 13 52.0	+0.4
U15A	North Rim	67.78	325	P	P	09 13 52.0	-0.2
U15A				IAmb	IAmb	09 13 54.8	
	comp=Z,4.0nm,0.9s						
F36A	Milaca	67.98	343	IAmb	IAmb	09 14 06.7	
	comp=Z,8.1nm,0.9s						
Q16A	Castle Valley	69.05	327	P	P	09 13 56.9	-3.2
CCUT	Cedar City	69.18	325	P	P	09 14 02.6	+1.6
SHPR	Sheep Range	69.42	323	IAmb	IAmb	09 14 05.0	
	comp=Z,3.8nm,0.9s						
K22A	Casper	69.79	333	IAmb	IAmb	09 14 05.9	
	comp=Z,4.1nm,0.8s						
DBIC	Dimbokro	70.02	75	P	P	09 14 04.8	-1.5
	comp=Z,2.0nm,0.6s,baz=189,slow=3.6,SNR=4.2						
DBIC				LR	LR	09 43 36.3	
	comp=Z,107nm,19.6s,baz=222,slow=35						
DBIC	Dimbokro	70.02	75	P	P	09 14 04.8	-1.5
TCUT	Toone Canyon	70.83	329	P	P	09 14 11.9	+0.9
QSPA	South Pole Qui	70.89	180	P	P	09 14 11.6	+0.6
PDAR	Pinedale Array	71.23	331	P	P	09 14 13.6	+0.2
	comp=Z,0.7nm,0.7s,baz=125,slow=6.0,SNR=8.2						
TBI	Tubuai	72.37	251	eLR	LR	09 36 30.1	
	comp=Z,268nm,27.0s						
OMMB	Old Mammoth Mi	72.40	322	IAmb	IAmb	09 14 24.2	
	comp=Z,7.3nm,1.0s						
NVAR	Mina Array Bea	72.55	323	P	P	09 14 22.3	+0.9
	comp=Z,2.0nm,0.8s,baz=155,slow=6.4,SNR=15						
NVAR				LR	LR	09 45 34.5	
	comp=Z,75nm,19.8s,baz=160,slow=35						
ULM	Lac du Bonnet	72.64	344	P	P	09 14 20.4	-0.9
	comp=Z,1.9nm,0.6s,baz=169,slow=5.4,SNR=4.5						
ULM				LR	LR	09 48 58.1	
	comp=Z,116nm,19.2s,baz=126,slow=38						
RLMT	Red Lodge	72.95	333	P	P	09 14 23.9	+0.3
RLMT				IAmb	IAmb	09 14 25.3	
	comp=Z,5.4nm,0.8s						
LAO	LASA Array	72.96	335	IAmb	IAmb	09 14 24.3	
	comp=Z,13nm,1.2s						
LKWY	Lake	73.02	332	IAmb	IAmb	09 14 26.9	
	comp=Z,7.1nm,0.9s						
YHH	Holmes Hill	73.39	332	P	P	09 14 27.3	+1.0
DGMT	Dagmar	73.68	338	P	P	09 14 28.2	+0.6
SCHQ	Schefferville	73.90	3	P	P	09 14 28.3	-0.4
	comp=Z,3.9nm,0.8s,baz=209,slow=2.5,SNR=6.1						
SCHQ				LR	LR	09 47 03.5	
	comp=Z,88nm,21.9s,baz=350,slow=36						
SCHQ	Schefferville	73.90	3	IAmb	IAmb	09 14 28.8	
	comp=Z,7.4nm,1.0s						
PPT2	Papeete2	73.92	257	eLR	LR	09 37 11.3	
	comp=Z,159nm,25.2s						
PAHR	Pah Rah Range	74.04	323	IAmb	IAmb	09 14 32.8	
	comp=Z,9.0nm,1.0s						
AFDM	Forest Hills D	74.45	322	P	P	09 14 33.4	+1.1
ORV	Oroville	75.15	322	P	P	09 14 37.5	+1.2
ORV				IAmb	IAmb	09 14 39.0	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,11nm,1.1s						
EGMT	Eagleton	75.46	334	IAmb	IAmb	09 14 39.3	
	comp=Z,8.3nm,0.8s						
WALA	Waterton Lakes	78.01	333	P	P	09 14 52.2	-0.2
WALA				IAmb	IAmb	09 14 54.1	
	comp=Z,9.4nm,1.0s						
TOA0	Torodi Ar. Sit	78.48	72	P	P	09 14 54.0	-1.7
TOA0				IAmb	IAmb	09 14 54.6	
	comp=Z,7.9nm,0.8s						
TORD	Torodi Ar. Bea	78.48	72	P	P	09 14 53.9	-1.8
	comp=Z,4.9nm,0.8s,baz=256,slow=4.9,SNR=22						
TORD				LR	LR	09 48 54.9	
	comp=Z,204nm,19.9s,baz=240,slow=35						
VNDA	Vanda	78.68	190	P	P	09 14 57.2	+1.5
	comp=Z,2.1nm,0.9s,baz=148,slow=5.5,SNR=8.6						
VNDA	Vanda	78.68	190	P	P	09 14 57.2	+1.5
RAR	Rarotonga	82.13	250	LR	LR	09 43 01.0	
	comp=Z,199nm,18.5s,baz=116,slow=29						
TSUM	Tsumeb	82.56	108	P	P	09 15 17.8	+0.1
	comp=Z,6.0nm,0.8s,baz=245,slow=6.6,SNR=5.2						
TSUM	Tsumeb	82.56	108	IAmb	IAmb	09 15 18.8	
	comp=Z,7.6nm,0.9s						
ESDC	Sonseca Array	85.66	45	P	P	09 15 32.9	0.0
	comp=Z,0.6nm,0.8s,baz=247,slow=5.8,SNR=4.0						
ESDC				LR	LR	09 53 02.7	
	comp=Z,43nm,18.1s,baz=275,slow=35						
BOSA	Boshof	86.22	119	LR	LR	09 51 42.9	
	comp=Z,206nm,18.2s,baz=210,slow=34						
MAW	Mawson	87.00	164	P	P	09 15 39.6	+0.7
	comp=Z,3.9nm,0.8s,baz=239,slow=6.9,SNR=4.4						
MAW				LR	LR	09 54 59.1	
	comp=Z,99nm,18.4s,baz=238,slow=36						
YKA	Yellowknife Ar	88.47	341	P	P	09 15 45.8	-0.1
	comp=Z,8.7nm,0.8s,baz=137,slow=5.4,SNR=115						
YKA				LR	LR	09 58 42.9	
	comp=Z,95nm,20.3s,baz=0.0,slow=38						
KEST	Kesra	93.55	53	LR	LR	09 58 31.2	
	comp=Z,174nm,20.1s,baz=206,slow=36						
DAVOX	Davos/Dischmat	97.79	43	LR	LR	10 01 23.2	
	comp=Z,76nm,18.2s,baz=349,slow=36						
VAE	Valguarnera	97.97	53	LR	LR	09 59 44.1	
	comp=Z,85nm,18.1s,baz=286,slow=35						
CLL	Collm	101.16	40	LmV		09 21 00.0	
	comp=Z,100nm,19.9s						
DZM	Mont Dzumac	110.42	237	*e*LR	LR	09 54 14.4	
	comp=Z,128nm,22.3s						
KBZ	Khabaz	120.23	50	PKP	PKiKP	09 21 45.4	+0.2
	comp=Z,2.5nm,0.9s,baz=157,slow=1.7,SNR=3.6						
H11S2	WAKE ISLAND Hy	125.63	279	T	T	11 41 09.7	
	baz=100,slow=74,SNR=199						
H11S1	WAKE ISLAND Hy	125.64	279	T	T	11 41 10.2	
	baz=100,slow=74,SNR=147						
H11S3	WAKE ISLAND Hy	125.64	279	T	T	11 41 10.9	
	baz=100,slow=74,SNR=120						
H11N3	WAKE ISLAND Hy	125.66	281	T	T	11 41 14.2	
	baz=100,slow=74,SNR=73						
H11N2	WAKE ISLAND Hy	125.67	281	T	T	11 41 13.1	
	baz=100,slow=74,SNR=79						
H11N1	WAKE ISLAND Hy	125.67	281	T	T	11 41 04.9	
	baz=100,slow=74,SNR=33						
TIXI	Tiksi	126.35	352	PKP	PKPdf	09 21 55.5	-0.5
	comp=Z,1.1nm,0.3s,baz=315,slow=0.5,SNR=5.0						
PETK	Petropavlovsk-	129.63	324	PKP	PKPdf	09 22 02.8	-0.1
	comp=Z,2.1nm,0.9s,baz=86,slow=4.6,SNR=4.3						
ASAR	Alice Springs	130.89	211	PKP	PKPdf	09 22 05.9	-0.3
	comp=Z,1.8nm,0.9s,baz=156,slow=2.7,SNR=12						
WRA	Warramunga Arr	133.78	214	PKP	PKPdf	09 22 11.7	-0.1
	comp=Z,0.7nm,0.5s,baz=145,slow=1.9,SNR=6.3						
BVAR	Borovoye Array	135.03	32	PKP	PKPdf	09 22 13.7	+0.7
	comp=Z,0.4nm,0.4s,baz=3.8,slow=2.2,SNR=2.4						
KDJ	Kajisay	144.72	43		PKPdf	09 22 31.1	-0.1
MAKZ	Makanchi	144.74	33		PKPab	09 22 29.3	-0.4
MKAR	Makanchi Array	144.91	32	PKP	PKPbc	09 22 30.4	+0.1
	comp=Z,5.5nm,0.8s,baz=338,slow=2.9,SNR=37						
KLR	Kul'dur	144.98	334	PKP	PKPbc	09 22 30.5	+0.1
	comp=Z,4.5nm,1.0s,baz=312,slow=4.7,SNR=8.9						
KSH	Kashi	145.15	48	PKPbc	PKPdf	09 22 32.1	+0.1
KSH				pPKP	pPKPab	09 22 37.7	-0.3
KSH				PKS	PKSdf	09 26 05.7	-1.9
KSH				SKKS		09 32 37.7	
KSH				AMB	AMB		
	comp=Z,230nm,4.9s						
KSH				LR	LR		
	comp=Z,83nm,10.3s						
KSH				LR	LR		
	comp=Z,50nm,7.8s						
KSH				LR	LR		
	comp=Z,88nm,10.2s						
FAKI	Fak Fak	148.23	228		PKPbc	09 22 41.6	+0.5
USRK	Ussuriysk Ar.	148.60	327	PKPbc	PKPbc	09 22 41.6	+0.6
	comp=Z,7.1nm,0.8s,baz=14,slow=1.4,SNR=18						
MJAR	Matsushiro Arr	149.16	310	PKPbc	PKPbc	09 22 43.0	+0.2
	comp=Z,7.6nm,0.9s,baz=97,slow=1.3,SNR=20						
MAT	Matsushiro	149.16	310	PKP	PKPbc	09 22 42.0	-0.8
WMQ	Urumqi	149.71	31	*e*PKPbc	PKPdf	09 22 39.2	-0.1
SIJI	Sorong	150.36	230	PKPbc	PKPbc	09 22 46.6	+0.2
	comp=Z,13nm,0.8s,baz=338,slow=8.8,SNR=4.7						
HYB	Hyderabad	151.05	89	*i* PKP	PKPbc	09 22 47.5	-0.4
SONM	Songino Array	151.44	4	PKPbc	PKPbc	09 22 48.3	+0.3
	comp=Z,3.9nm,0.8s,baz=327,slow=1.5,SNR=20						
SONM				PKPab	sPKPbc	09 22 56.9	0.0
	comp=Z,4.2nm,0.8s,baz=329,slow=2.1,SNR=3.6						
KAPI	Kappang	153.64	205	PKPab	PKPab	09 23 07.1	+0.9
	comp=Z,10nm,0.8s,baz=111,slow=6.4,SNR=4.0						
KSRS	Korea Array	155.49	322	PKPbc	PKPdf	09 22 57.0	+9.1
	comp=Z,1.5nm,0.8s,baz=48,slow=1.9,SNR=4.5						
HHC	Hu-ho-hao-te	158.39	355	*e*PKP	PKPdf	09 22 54.0	+2.3
LZH	Lanzhou	162.65	14	*e*PKP	PKPdf	09 22 53.6	-3.0
LZH				pPKP	pPKPdf	09 23 02.9	-0.4
LZH				sPKP		09 23 07.7	
NJ2	Nanjing	164.51	327	*e*PKP	PKPdf	09 22 56.9	-1.3
WHN	Wuhan	167.79	338	PKP	PKPdf	09 23 03.7	+2.9
CMAR	Chiang Mai Arr	170.44	93	PKPab	PKPab	09 24 19.4	-0.4
	comp=Z,1.5nm,0.5s,baz=258,slow=6.1,SNR=6.7						

THE 05 09:10:04.6, 38°.04N×20°.18E, h20^{km}±2^{km}, ML2.1/5, Error ellipse: s-maj=3.0km s-min=1.8km az=34.0, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.22	48	P	Pb	09 10 10.6	+0.2
CHV1				S	Sb	09 10 13.8	-0.6
	2μm,0.3s						
AGT1	Agia Thekli	0.27	38	P	Pb	09 10 10.4	-0.5
AGT1				S	Sb	09 10 15.4	+0.2
	1μm,0.2s						
VLS	Valsamata	0.35	67	P	Pb	09 10 11.5	-0.6
VLS				S	Sb	09 10 17.5	+0.3
	145nm,0.1s						
KFL	Anninata	0.49	81	P	Pb	09 10 13.9	-0.5
KFL				S	Sb	09 10 22.1	+1.0
	210nm,0.3s						
EVGI	Lefkada island	0.69	33	P	Pb	09 10 17.8	-0.2
EVGI				S	Sb	09 10 27.8	+0.6
	32nm,0.4s						

ATH 05 09:10:58.2, 37°.24N×20°.42E, h17^{km}±1^{km}, ML2.4/2, Error ellipse: s-maj=4.3km s-min=1.2km az=55.0, Ionian Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VTN	Vitineika	0.91	42	P	Pb	09 11 15.6	+0.1
KFL	Anninata	0.92	18	P	Pg	09 11 15.9	-0.2
KFL				S	Sn	09 11 29.0	-0.1
KFL				AML	AML	09 11 34.0	
	comp=N,700μm,0.3s						
KFL				AML	AML	09 11 36.9	
	comp=E,753μm,0.4s						
VLS	Valsamata	0.95	8	P	Pb	09 11 16.0	-0.1
VLS				S	Sg	09 11 29.0	0.0
VLS				AML	AML	09 11 37.5	
	comp=N,310μm,0.4s						
VLS				AML	AML	09 11 39.3	
	comp=E,299μm,0.3s						
KEF1	Kardakata, Kep	1.04	2	P	Pn	09 11 18.1	+0.1
AMT	Artemida-Makis	1.06	74	P	Pg	09 11 18.8	0.0
PYL	PYLOS	1.11	108	P	Pn	09 11 19.2	+0.3
PYL				S	Sg	09 11 34.7	+0.5
RLS	Riolos of Patr	1.17	45	P	Pb	09 11 19.9	0.0
ITM	Ithomi	1.20	92	P	Pg	09 11 21.3	-0.1
DRO	Drossia	1.25	55	P	Pb	09 11 21.4	+0.1
EVGI	Lefkada island	1.39	8	P	Pb	09 11 24.1	+0.4
PDO	Prodromos	1.49	24	P	Pg	09 11 26.2	-0.6
TRIP	Tripoli	1.50	78	P	Pb	09 11 25.7	+0.1
LKD2	Lefkada island	1.56	7	P	Pg	09 11 27.8	-0.4
LAKA	Lakka	1.59	50	P	Pb	09 11 27.6	+0.5
KLV	Kalavryta, Ach	1.59	59	P	Pb	09 11 26.9	-0.3
EFP	Efpalio	1.67	44	P	Pb	09 11 28.9	+0.5
TRIZ	Trizonia	1.73	49	P	Pb	09 11 29.5	+0.1
SERG	Sergoula	1.75	47	P	Pb	09 11 30.0	+0.2
KALE	Kalithea	1.78	49	P	Pb	09 11 30.8	+0.4
ANX	Ano Chora	1.80	41	P	Pb	09 11 31.0	+0.2
MAKR	Makrakomi, Fth	2.23	37	P	Pb	09 11 37.1	-0.9
DID	Didima	2.26	82	P	Pn	09 11 36.1	+1.4

*KRAR **05** 09:20:24.6±0.1, 53°.58N×87°.69E, M2.4, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
NNC 05 09:20:27.6±2.8, 53°.53N×87°.91E, h0^{km}, mb3.7, mpv3.4, 8C-4D, Error ellipse: s-maj=23.2km s-min=13.5km az=52.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.88	284	⇑Pn	Pn	09 21 00.7	-0.4
	1.2nm,0.7s						
ZAA0				⇑Sn	Sb	09 21 26.5	-0.3
	6.0nm,0.8s						
KURK	Kurchatov	6.38	248	⇑Pn	Pn	09 22 00.9	-1.8
	1.4nm,0.6s						
KURK				⇑Sn	Sn	09 23 19.3	+3.2
	2.1nm,1.0s						
KURK				⇓Lg	Lg	09 23 47.1	
	8.3nm,0.9s						
KURBB	Kurchatov Arra	6.47	247	⇓Pn	Pn	09 22 04.3	+0.3
	3.0nm,0.6s						
KURBB				⇓Sn	Sn	09 23 17.1	-1.3
	4.2nm,0.6s						
KURBB				⇓Lg	Lg	09 23 52.9	
	7.0nm,0.8s						
MK31	Makanchi Array	7.64	210	⇑Pn	Pn	09 22 21.8	+1.6
	9.0nm,1.1s,baz=24,slow=14,SNR=39						
MK31				⇑Lg	Lg	09 24 29.9	
	6.7nm,1.2s,baz=29,slow=29						
MAKZ	Makanchi	7.73	212	⇑Pn	Pn	09 22 22.9	+1.6
	8.1nm,1.1s						
MAKZ				⇑Lg	Lg	09 24 32.5	
	4.9nm,1.1s						

*SKO **05** 09:20:44.0, 41°.80N×22°.87E, h1^{km}*
*BEO **05** 09:20:44.9±1.9, 41°.88N×22°.83E, h33^{km}±3^{km}, ML1.3/3*
ISC 05 09:20:41.3±2.5, 41°.7N±0°.1×22°.80E±0°.08, h8^{km}±13^{km}, n7, σ1^{s}75/12, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STIP	Stip	0.46	267	*i* Pg	Pg	09 20 49.6	-0.6
STIP				*i* Sg	Sg	09 20 54.4	-1.9
STIP				*e*Lg	Lg	09 20 54.6	
	comp=N,79nm,0.2s						
STIP				*e*Lg	Lg	09 20 54.8	
	comp=E,44nm,0.2s						
STIP	Stip	0.46	267	*i* Pg	Pg	09 20 49.6	-0.6
STIP				*i* Sg	Sg	09 20 54.4	-1.9
STIP				*e*Lg	Lg	09 20 54.6	
	comp=N,79nm,0.2s						
STIP				*e*Lg	Lg	09 20 54.8	
	comp=E,44nm,0.2s						
BOSS	Bosilegrad	0.81	343	*e*Pg	Pg	09 20 57.9	+1.0
BOSS				*e*Sg	Sn	09 21 10.1	-1.1
VTS	Vitosha	0.95	20	*e*Pg	Pb	09 21 00.6	+0.5
VTS				*e*Sg	Sb	09 21 09.9	-3.0
BARS	Barje	1.31	327	*e*Pg	Pn	09 21 07.2	+1.2
BARS				*e*Sg	Sb	09 21 22.7	-0.6
ZAPS	Zavoj	1.56	356	*e*Pg	Pb	09 21 11.5	+1.1
ZAPS				*e*Sg	Sg	09 21 30.3	-1.0
SELS	Selova	1.94	321	*e*Pg	Pb	09 21 18.1	+1.1
SELS				*e*Sg	Sg	09 21 43.4	-0.4

*BUT **05** 09:27:45±1.6, 44°.58N±0°.04×114°.32W±0°.04, h6^{km}±5^{km}, ML3.7, ML3.6(UUSS), Error ellipse: s-maj=5.8km s-min=3.9km az=159.0*
*UUSS **05** 09:27:45±1.9, 44°.56N±0°.04×114°.26W±0°.05, h2^{km}±5^{km}, Error ellipse: s-maj=6.5km s-min=4.2km az=143.0*
*NEIC **05** 09:27:46.3±1.9, 44°.61N±0°.03×114°.29W±0°.04, h5^{km}±1^{km}, Error ellipse: s-maj=5.3km s-min=4.7km az=133.0*
*IDC **05** 09:27:46.9±0.7, 44°.77N×114°.11W, h0^{km}, mb1 3.5/6, mb1mx3.3/58, mbtmp3.2/6, ML3.3/6, Error ellipse: s-maj=11.2km s-min=7.2km az=62.0*
ISC 05 09:27:46.8±0.9, 44°.69N±0°.04×114°.30W±0°.03, h5^{km}, n44, σ1^{s}49/49, Western Idaho

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MCMT	McKenzie Canyo	1.04	82	Pg	Pg	09 28 05.6	-1.2
DLMT	Dillon	1.38	60		Pn	09 28 12.3	-0.6
DLMT				Sn	Sb	09 28 31.1	-0.1
MFID	Camas Ranch	1.69	221		Pn	09 28 14.9	-2.2
MFID				Sn	Sn	09 28 36.5	-2.7
LRM	Limekiln Ridge	1.73	49		Pn	09 28 16.9	-0.8
QLMT	Earthquake Lak	2.05	85		Pn	09 28 21.5	-0.7
BMO	Blue Mountains	2.15	275	Pn	Pn	09 28 22.1	-1.3
MSO	Missoula	2.15	7		Pn	09 28 23.4	0.0
YHB	Horse Butte	2.21	87		Pn	09 28 24.1	-0.3
YHL	Hebgen Lake	2.23	85		Pn	09 28 24.3	-0.3
YMR	Madison River	2.38	89		Pn	09 28 26.9	+0.2
F10A	Beach Ranch, E	2.43	303		Pn	09 28 27.8	+0.5
YHH	Holmes Hill	2.46	87		Pn	09 28 27.4	-0.5
YPP	Pitchstone Pla	2.54	98		Pn	09 28 28.5	-0.4
IMW	Indian Meadow	2.54	107		Pn	09 28 28.4	-0.6
YNR	Norris Junctio	2.58	88		Pn	09 28 30.9	+1.4
TPAW	Teton Pass	2.70	115	Pn	Pn	09 28 30.2	-0.8
REDW	Red Top Meadow	2.82	117	Pn	Pn	09 28 31.8	-1.0
AHID	Auburn Hatcher	3.02	129		Pn	09 28 35.6	+0.2
JTMT	Jette	3.05	0		Pn	09 28 36.4	+0.5
E09A	Wood Farm, Sta	3.26	305		Pn	09 28 38.7	+0.2
J08A	Circle Bar Ran	3.29	248	Pn	Pn	09 28 37.9	-1.3
G08A	Pilot Rock	3.36	282		Pn	09 28 39.9	-0.2
GCMT	Greycliff	3.45	70		Pn	09 28 41.8	+0.4
RLMT	Red Lodge	3.60	81	Pn	Pn	09 28 43.8	+0.4
HWUT	Hardware Ranch	3.68	146		Pn	09 28 44.9	+0.4
I07A	Izee	3.78	263	Pn	Pn	09 28 45.2	-0.7
WVOR	Wild Horse Val	3.88	236		Pn	09 28 46.2	-1.0
BGU	Big Grassy Mou	3.88	166		Pn	09 28 46.4	-0.8
PDAR	Pinedale Array	3.94	118	Pn	Pn	09 28 50.3	+2.2
	0.9nm,0.3s,baz=300,slow=12,SNR=40						
PDAR				Pg	Pb	09 28 56.2	-0.7
	2.6nm,0.3s,baz=306,slow=15,SNR=37						
ELK	Elko	4.01	190	Pn	Pn	09 28 52.3	+3.2
	3.0nm,0.3s,baz=6.3,slow=16,SNR=45						
ELK				Sn	Sn	09 29 41.9	+5.3
	9.5nm,0.3s,baz=142,slow=14,SNR=12						
ELK	Elko	4.01	190		Pn	09 28 48.6	-0.5
NEW	Newport	4.07	332	Pn	Pn	09 28 51.5	+1.8
	0.8nm,0.3s,baz=153,slow=14,SNR=8.2						
NEW				Sn	Sn	09 29 39.1	+1.3
	1.8nm,0.3s,baz=61,slow=19,SNR=2.4						
NEW				Lg	Lg	09 29 55.4	
	14nm,0.3s,baz=245,slow=22,SNR=16						
NEW	Newport	4.07	332		Pn	09 28 50.7	+1.0
WALA	Waterton Lakes	4.37	3	Pn	Pn	09 28 54.8	+0.8
CTU	Camp Tracy	4.42	154	Pn	Pn	09 28 53.8	-0.9
EGMT	Eagleton	4.58	42		Pn	09 28 56.8	0.0
DUG	Dugway, Tooele	4.63	166		Pn	09 28 55.6	-2.0
B08A	Colville Reser	5.05	318	Pn	Pn	09 29 03.2	0.0
LTY	Liberty	5.13	302		Pn	09 29 03.7	-0.6
MOD	Modoc Plateau	5.19	240		Pn	09 29 04.2	-1.1
LAO	LASA Array	6.00	68	Pn	Pn	09 29 16.1	-0.1
NVAR	Mina Array Bea	6.94	207	Pn	Pn	09 29 33.7	+4.4
	0.1nm,0.3s,baz=27,slow=13,SNR=4.8						
NVAR				Lg	Lg	09 31 27.4	
	0.7nm,0.3s,baz=193,slow=12,SNR=5.1						
TXAR	Lajitas Array	17.50	148	P	Pn	09 31 52.2	+0.6
	0.0nm,0.3s,baz=346,slow=10,SNR=3.0						
YKA	Yellowknife Ar	17.83	360	P	Pn	09 31 55.4	-0.1
	0.0nm,0.3s,baz=184,slow=13,SNR=4.1						

*IDC **05** 09:32:02.7±4.1, 20°.96S×70°.40W, h0^{km}, mb3.8/1, mb1 3.7/2, mb1mx3.4/25, mbtmp3.6/2, ML3.2/1, Error ellipse: s-maj=147.3km s-min=64.6km az=102.0*
*GUC **05** 09:32:07.2±0.6, 19°.98S×70°.96W, h35^{km}±3^{km}, ML3.6*
ISC 05 09:32:01.4±2.2, 20°.14S±0°.06×71°.01W±0°.08, h3^{km}±12^{km}, n24, σ1^{s}13/21, 7C-4D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TA02	Huaiquique	0.84	99	⇓*i*P	Pn	09 32 21.3	+1.1
TA02				*i* S	Sn	09 32 32.8	-0.3
TA02				IAML		09 32 35.4	
	comp=N,6μm,0.1s						
TA01	Diego Aracena	0.89	119	⇑*i*P	Pn	09 32 23.2	+2.4
TA01				*i* S	Sn	09 32 35.5	+1.2
TA01				IAML		09 32 37.3	
	comp=N,3μm,0.2s						
PSGC	Pisagua	0.99	57	⇓*i*P	Pb	09 32 21.7	+0.3
PSGC				*i* S	Sb	09 32 33.8	-1.2
PATCX	Punta Patache	1.05	130	⇑*i*P	Pn	09 32 26.2	+3.0
PATCX				*i* S	Sn	09 32 41.0	+2.5
PB11	IPOC Station P	1.33	74	⇓*i*P	Pg	09 32 28.2	+1.3
PB11				*i* S	Sg	09 32 44.2	0.0
PB11				IAML		09 32 46.6	
	comp=E,3μm,0.4s						
PB02	IPOC Station P	1.57	139	⇑*i*P	Pg	09 32 33.9	+2.4
PB02				*i* S	Sg	09 32 55.2	+3.2
PB02				IAML		09 33 04.6	
	comp=E,2μm,0.5s						
PB12	IPOC Station P	1.65	23	⇑*i*P	Pn	09 32 31.6	+0.2
PB12				*i* S	Sn	09 32 50.9	-2.3
PB12				IAML		09 33 06.8	
	comp=E,854nm,0.2s						
MNMC	Minye Minye	1.67	53	⇑*i*P	Pn	09 32 33.0	+1.1
MNMC				*i* S	Sn	09 32 52.5	-1.4
MNMC				IAML		09 32 59.0	
	comp=E,2μm,0.5s						
PB01	IPOC Station P	1.69	122	*e*P	Pg	09 32 35.4	+1.6
PB01				*i* S	Sg	09 32 57.1	+1.4
PB01				IAML		09 33 04.4	
	comp=N,742nm,0.6s						
PB08	IPOC Station P	1.75	90	⇑*i*P	Pg	09 32 35.2	+0.3
PB08				*i* S	Sg	09 32 57.3	-0.3
PB08				IAML		09 33 04.5	
	comp=N,628nm,0.5s						
GO01	Chusmiza	1.77	75	⇑*i*P	Pg	09 32 35.2	-0.3
GO01				*i* S	Sg	09 32 57.3	-1.1
AP01	Chacalluta	1.87	20	⇓*i*P	Pn	09 32 35.0	+0.6
AP01				*i* S	Sn	09 32 55.9	-2.7
AP01				IAML		09 33 02.2	
	comp=E,2μm,0.5s						
PB07	IPOC Station P	1.90	147	*e*P	Pg	09 32 38.6	+0.8
PB07				IAML		09 33 28.7	
	comp=E,406nm,0.5s						
PB03	IPOC Station P	2.23	148	*e*P	Pg	09 32 43.4	-0.9
PB03				IAML		09 33 26.6	
	comp=E,221nm,0.5s						
PB16	IPOC Station P	2.29	39	*e*P	Pn	09 32 41.6	+0.9
PB16				*e*S	Sn	09 33 08.4	-1.3
PB16				IAML		09 33 21.7	
	comp=N,531nm,0.6s						
PB09	IPOC Station P	2.33	135	*e*P	Pg	09 32 45.6	-0.6
PB09				IAML		09 33 27.1	
	comp=E,576nm,0.6s						
PB05	IPOC Station P	2.80	165	IAML		09 33 46.5	
	comp=N,159nm,0.7s						
PB06	IPOC Station P	2.88	153	IAML		09 33 47.5	
	comp=E,170nm,0.6s						
LPAZ	La Paz	4.71	36	Pn	Pn	09 33 21.2	+7.2
	comp=E,0.5nm,0.3s,baz=244,slow=7.3,SNR=15						
LPAZ				Lg	Lg	09 34 32.4	
	comp=E,0.6nm,0.3s,baz=355,slow=12,SNR=1.5						
H03N1	Juan Fernandez	15.00	206	T	T	09 51 43.6	
	baz=33,slow=72,SNR=11						
H03N2	Juan Fernandez	15.01	206	T	T	09 51 35.6	
	baz=33,slow=72,SNR=7.6						
H03N3	Juan Fernandez	15.02	206	T	T	09 52 02.0	
	baz=33,slow=72,SNR=5.8						
TORD	Torodi Ar. Bea	78.77	71	P	P	09 44 06.2	+0.1
	comp=E,0.8nm,0.8s,baz=246,slow=5.5,SNR=3.4						
MKAR	Makanchi Array	145.63	33	PKPbc	PKPab	09 51 43.6	+1.6
	comp=E,0.6nm,0.9s,baz=336,slow=3.2,SNR=4.5						

*IDC **05** 09:39:33.2±7.0, 17°.49S×178°.87W, h552^{km}±87^{km}, mb3.2/9, mb1 3.5/10, mb1mx3.2/44, mbtmp4.2/10, Error ellipse: s-maj=54.1km s-min=27.9km az=159.0*
ISC 05 09:39:32.1±1.3, 17°.5S±0°.4×178°.8W±0°.2, h539^{km}, n10, σ0^{s}57/10, mb3.4/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.60	249	P	P	09 42 38.0	+0.3
	0.4nm,0.3s,baz=83,slow=19,SNR=5.8						
STKA	Stephens Creek	38.49	241	P	P	09 46 08.4	0.0
	3.8nm,0.6s,baz=93,slow=10,SNR=19						
WRA	Warramunga Arr	44.32	259	P	P	09 46 53.7	-0.9
	2.0nm,0.5s,baz=93,slow=6.8,SNR=52						
ASAR	Alice Springs	44.53	254	P	P	09 46 55.8	-0.4
	19nm,0.6s,baz=88,slow=8.1,SNR=451						
SIJI	Sorong	51.75	283	P	P	09 47 50.8	+0.7
	7.3nm,0.6s,baz=146,slow=14,SNR=3.9						
NVAR	Mina Array Bea	79.39	44	P	P	09 50 42.8	+0.1
	0.7nm,0.7s,baz=216,slow=8.8,SNR=4.5						
SEY	Seymchan	83.26	347	P	P	09 51 01.7	0.0
	0.6nm,0.6s,baz=225,slow=2.9,SNR=1.7						
ILAR	Eielson Array	85.55	13	P	P	09 51 12.4	-0.5
	0.2nm,0.5s,baz=209,slow=5.2,SNR=4.1						
TXAR	Lajitas Array	86.10	58	P	P	09 51 16.9	+0.5
	0.7nm,0.8s,baz=214,slow=5.3,SNR=10.0						
PDAR	Pinedale Array	87.31	44	P	P	09 51 21.6	-0.4
	0.3nm,0.6s,baz=220,slow=2.7,SNR=4.8						

*OSPL **05** 09:39:59.9±0.6, 19°.05N×66°.65W, h6^{km}±8^{km}, ML2.6*
*RSPR **05** 09:40:01.6, 19°.13N×66°.79W, h33^{km}±7^{km}, MD3.2/13*
*NEIC **05** 09:40:01.7±1.7, 19°.05N±0°.06×66°.74W±0°.04, h35^{km}±56^{km}, Error ellipse: s-maj=9.1km s-min=4.9km az=179.0*
ISC 05 09:40:01.2±1.4, 19°.06N±0°.06×66°.76W±0°.03, h31^{km}±12^{km}, n64, σ0^{s}71/84, 19C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.62	159	⇑*e*P	Pb	09 40 14.0	+0.4
EMPR	Esperanza - Ma	0.62	159	*e*S	Sn	09 40 23.3	+0.6
EMPR	Esperanza - Ma	0.62	159		Pb	09 40 14.0	+0.4
EMPR					Sn	09 40 23.3	+0.6
AGPR	Aguadilla, PR	0.67	209	⇑*e*P	Pn	09 40 13.9	-0.7
AGPR	Aguadilla, PR	0.67	209	*e*S	Sn	09 40 23.9	-0.1
AGPR	Aguadilla, PR	0.67	209		Pn	09 40 13.9	-0.7
AGPR					Sn	09 40 23.9	-0.1
AGPR	Aguadilla, PR	0.67	209	*i* P	Pn	09 40 13.2	-1.4
AGPR				*e*S	Sn	09 40 22.4	-1.6
AGPR				IAML		09 40 26.3	
	comp=Z,252nm,0.2s						
AOPR	Arecibo Observ	0.71	179	⇑*e*P	Pn	09 40 14.6	-0.5
AOPR	Arecibo Observ	0.71	179	*e*S	Sb	09 40 25.1	+0.5
AOPR	Arecibo Observ	0.71	179		Pn	09 40 14.6	-0.5
AOPR					Sb	09 40 25.1	+0.5
MPR	Mayaguez	0.92	203		Pn	09 40 17.0	-0.9
MPR	Mayaguez	0.92	203	*i* P	Pn	09 40 17.0	-0.9
MPR				IAML		09 40 36.0	
	comp=Z,91nm,0.4s						
LSP	Las Mesas	0.93	199	⇑*e*P	Pn	09 40 17.6	-0.6
LSP	Las Mesas	0.93	199	*e*S	Sn	09 40 30.9	+0.4
LSP	Las Mesas	0.93	199		Pn	09 40 17.6	-0.6
LSP					Sn	09 40 30.9	+0.4
OBIP	Obispado Ponce	1.02	172	⇑*e*P	Pn	09 40 19.5	+0.2
OBIP	Obispado Ponce	1.02	172	*e*S	Sn	09 40 32.7	0.0
OBIP	Obispado Ponce	1.02	172		Pn	09 40 19.5	+0.2
OBIP					Sn	09 40 32.7	0.0
GBPR	Guanica, Bosqu	1.08	186	⇑*e*P	Pn	09 40 20.5	+0.3
GBPR	Guanica, Bosqu	1.08	186	*e*S	Sn	09 40 34.8	+0.7
GBPR	Guanica, Bosqu	1.08	186		Pn	09 40 20.5	+0.3
GBPR					Sn	09 40 34.8	+0.7
CRPR	Cabo Rojo, PR	1.10	197	⇑*e*P	Pn	09 40 20.0	-0.4
CRPR	Cabo Rojo, PR	1.10	197	*e*S	Sn	09 40 34.3	-0.2
CRPR	Cabo Rojo, PR	1.10	197		Pn	09 40 20.0	-0.4
CRPR					Sn	09 40 34.3	-0.2
SJG	San Juan	1.11	148		Pb	09 40 22.6	+0.8
MLPR	Magueyes Islan	1.12	194	⇑*e*P	Pn	09 40 20.3	-0.3
MLPR	Magueyes Islan	1.12	194	*e*S	Sn	09 40 35.0	+0.1
MLPR	Magueyes Islan	1.12	194		Pn	09 40 20.3	-0.3
MLPR					Sn	09 40 35.0	+0.1
CBYP	Canovanas	1.16	132	⇑*e*P	Pn	09 40 21.2	-0.1
CBYP	Canovanas	1.16	132	⇑*e*P	Pn	09 40 21.3	-0.1
CBYP				*e*S	Sb	09 40 36.6	-0.9
CBYP	Canovanas	1.16	132		Pn	09 40 21.3	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBYP					Sb	09 40 36.6	-0.9
CBYP	Canovanas	1.16	132	Pn	Pn	09 40 21.2	-0.1
ICMP	Isla Caja de M	1.19	169	Pn	Pn	09 40 22.2	+0.5
ICMP					Sb	09 40 37.8	-0.4
PDPR	Patillas Dam,	1.25	146	⇑eP	Pn	09 40 22.9	+0.3
PDPR	Patillas Dam,	1.25	146		Pn	09 40 22.9	+0.3
IGPR	InterUniversit	1.25	150	⇑eP	Pn	09 40 22.8	+0.2
IGPR				eS	Sn	09 40 38.7	+0.3
IGPR	InterUniversit	1.25	150	⇑eP	Pn	09 40 22.6	0.0
IGPR	InterUniversit	1.25	150		Pn	09 40 22.8	+0.2
IGPR	InterUniversit	1.25	150		Sn	09 40 38.4	0.0
IGPR	InterUniversit	1.25	150		Pb	09 40 23.5	-0.8
HUMP	Col San Antoni	1.26	136	⇑eP	Pn	09 40 22.6	-0.1
HUMP	Col San Antoni	1.26	136	eS	Sn	09 40 38.9	+0.4
HUMP	Col San Antoni	1.26	136	⇑eP	Pn	09 40 22.9	+0.3
HUMP				eS	Sb	09 40 39.2	-0.9
HUMP	Col San Antoni	1.26	136		Pn	09 40 22.9	+0.3
HUMP					Sb	09 40 39.2	-0.9
HUMP	Col San Antoni	1.26	136	Pn	Pn	09 40 22.8	+0.2
MTP	Monte Pirata	1.50	130	⇑eP	Pn	09 40 25.7	-0.2
MTP	Monte Pirata	1.50	130	eS	Sn	09 40 44.9	+0.6
MTP	Monte Pirata	1.50	130		Pn	09 40 25.7	-0.2
MTP					Sn	09 40 44.9	+0.6
CUPR	Culebra, Puert	1.59	118	⇑eP	Pn	09 40 26.4	-0.8
CUPR	Culebra, Puert	1.59	118	eS	Sn	09 40 46.2	-0.5
CUPR	Culebra, Puert	1.59	118		Pn	09 40 26.4	-0.8
CUPR					Sn	09 40 46.2	-0.5
PCDR	Punta Cana, DR	1.62	251	⇑eP	Pn	09 40 28.2	+0.5
PCDR	Punta Cana, DR	1.62	251	eS	Sn	09 40 46.2	-1.3
PCDR	Punta Cana, DR	1.62	251		Pn	09 40 28.2	+0.5
PCDR					Sn	09 40 46.2	-1.3
PCDR	Punta Cana, DR	1.62	251	iP	Pn	09 40 28.2	+0.5
PCDR				eS	Sn	09 40 50.0	+2.4
PCDR				IAML		09 41 00.3	
	comp=Z,131nm,0.7s						
STVI	Saint Thomas	1.85	112	⇑eP	Pn	09 40 30.9	+0.1
STVI	Saint Thomas	1.85	112	eS	Sn	09 40 52.7	-0.5
STVI	Saint Thomas	1.85	112		Pn	09 40 30.9	+0.1
STVI					Sn	09 40 52.7	-0.5
CDVI	St. Croix	2.30	124	Pn	Pn	09 40 39.2	+2.2
DR12	Loma Pena Alta	2.49	264		Pn	09 40 39.1	-0.5
BANI	BANI	3.47	260	Pn	Pn	09 40 54.3	+1.1
SC01	Santiago de lo	3.76	276	Pn	Pn	09 40 56.4	-0.7
SDDR	Presa de Saban	4.28	270		Pn	09 41 04.7	+0.4
SDDR	Presa de Saban	4.28	270	iP	Pn	09 41 05.4	+1.1

*OSPL **05** 09:50:57.8±0.9, 19°.07N×66°.69W, h2km±26km, ML3.2*
*RSPR **05** 09:50:59.1, 19°.14N×66°.80W, h45km±4km, MD3.4/15*
*NEIC **05** 09:50:59.4±2.0, 19°.075N±0°.010×66°.76W±0°.04, h35km±54km, Error ellipse: s-maj=5.3km s-min=1.4km az=92.0*
ISC 05 09:50:58.4±1.1**, 19°.10N**±0°.05×**66°.78W**±0°.03**, h29km, n62,** σ**0s63**/78**, 6C-10D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.66	159	⇑eP	Pn	09 51 11.9	+0.1
EMPR	Esperanza - Ma	0.66	159	eS	Sn	09 51 21.9	+0.7
EMPR	Esperanza - Ma	0.66	159		Pn	09 51 11.9	+0.1
EMPR					Sn	09 51 21.9	+0.7
AGPR	Aguadilla, PR	0.70	207	⇓eP	Pb	09 51 11.5	-0.7
AGPR	Aguadilla, PR	0.70	207	eS	Sn	09 51 22.4	+0.1
AGPR	Aguadilla, PR	0.70	207		Pb	09 51 11.5	-0.7
AGPR					Sn	09 51 22.4	+0.1
AGPR	Aguadilla, PR	0.70	207	iP	Pb	09 51 11.3	-0.9
AGPR				eS	Sb	09 51 20.2	-1.4
AGPR				IAML		09 51 26.2	
	comp=Z,1µm,0.2s						
AOPR	Arecibo Observ	0.75	178	⇑eP	Pb	09 51 12.9	0.0
AOPR	Arecibo Observ	0.75	178	eS	Sn	09 51 24.0	+0.5
AOPR	Arecibo Observ	0.75	178		Pb	09 51 12.9	0.0
AOPR					Sn	09 51 24.0	+0.5
MPR	Mayaguez	0.95	201		Pn	09 51 15.0	-0.8
MPR	Mayaguez	0.95	201	iP	Pn	09 51 15.0	-0.8
MPR				IAML		09 51 32.2	
	comp=Z,342nm,0.3s						
LSP	Las Mesas	0.96	198	⇓eP	Pn	09 51 15.5	-0.6
LSP	Las Mesas	0.96	198	eS	Sn	09 51 28.4	-0.4
LSP	Las Mesas	0.96	198		Pn	09 51 15.5	-0.6
LSP					Sn	09 51 28.4	-0.4
OBIP	Obispado Ponce	1.06	171	⇓eP	Pn	09 51 17.4	0.0
OBIP	Obispado Ponce	1.06	171	eS	Sb	09 51 31.5	-0.2
OBIP	Obispado Ponce	1.06	171		Pn	09 51 17.4	0.0
OBIP					Sb	09 51 31.5	-0.2
GBPR	Guanica, Bosqu	1.12	185	⇓eP	Pn	09 51 18.4	+0.2
GBPR	Guanica, Bosqu	1.12	185	eS	Sn	09 51 32.6	0.0
GBPR	Guanica, Bosqu	1.12	185		Pn	09 51 18.4	+0.2
GBPR					Sn	09 51 32.6	0.0
CRPR	Cabo Rojo, PR	1.13	196	⇓eP	Pn	09 51 17.9	-0.4
CRPR	Cabo Rojo, PR	1.13	196	eS	Sn	09 51 33.0	+0.1
CRPR	Cabo Rojo, PR	1.13	196		Pn	09 51 17.9	-0.4
CRPR					Sn	09 51 33.0	+0.1
SJG	San Juan	1.15	149		Pb	09 51 19.6	0.0
MLPR	Magueyes Islan	1.15	193	⇑eP	Pn	09 51 18.3	-0.3
MLPR	Magueyes Islan	1.15	193	eS	Sn	09 51 33.2	-0.1
MLPR	Magueyes Islan	1.15	193		Pn	09 51 18.3	-0.3
MLPR					Sn	09 51 33.2	-0.1
CBYP	Canovanas	1.20	133	⇓eP	Pn	09 51 19.2	0.0
CBYP	Canovanas	1.20	133	⇑eP	Pn	09 51 19.3	0.0
CBYP				eS	Sn	09 51 34.8	+0.2
CBYP	Canovanas	1.20	133		Sn	09 51 34.4	-0.3
CBYP	Canovanas	1.20	133	Pn	Pn	09 51 19.2	0.0
ICMP	Isla Caja de M	1.23	169	⇑eP	Pn	09 51 19.7	0.0
ICMP	Isla Caja de M	1.23	169	eS	Sn	09 51 34.9	-0.4
ICMP	Isla Caja de M	1.23	169		Pn	09 51 19.7	0.0
ICMP					Sn	09 51 34.9	-0.4
PDPR	Patillas Dam,	1.29	146		Pn	09 51 19.6	-0.8
IGPR	InterUniversit	1.29	151	⇓eP	Pn	09 51 20.7	+0.2
IGPR	InterUniversit	1.29	151	eS	Sn	09 51 37.2	+0.3
IGPR	InterUniversit	1.29	151		Pb	09 51 21.7	-0.5
HUMP	Col San Antoni	1.29	137	⇓eP	Pn	09 51 19.9	-0.6
HUMP	Col San Antoni	1.29	137	eS	Sn	09 51 37.3	+0.4
HUMP	Col San Antoni	1.29	137		Pn	09 51 19.9	-0.6
HUMP					Sn	09 51 37.3	+0.4
MTP	Monte Pirata	1.53	130	⇓eP	Pn	09 51 23.8	0.0
MTP	Monte Pirata	1.53	130	eS	Sn	09 51 42.4	-0.3
MTP	Monte Pirata	1.53	130		Pn	09 51 23.8	0.0
MTP					Sn	09 51 42.4	-0.3
CUPR	Culebra, Puert	1.62	119	⇓eP	Pn	09 51 24.4	-0.6
CUPR	Culebra, Puert	1.62	119	eS	Sn	09 51 45.3	+0.4
CUPR	Culebra, Puert	1.62	119		Pn	09 51 24.4	-0.6
CUPR					Sn	09 51 45.3	+0.4
PCDR	Punta Cana, DR	1.63	249		Pn	09 51 26.2	+1.1
PCDR	Punta Cana, DR	1.63	249	iP	Pn	09 51 26.0	+0.9
PCDR				eS	Sb	09 51 48.1	+0.1
PCDR				IAML		09 51 58.1	
	comp=Z,433nm,0.5s						
STVI	Saint Thomas	1.88	113	⇑eP	Pn	09 51 28.8	+0.2
STVI	Saint Thomas	1.88	113	eS	Sn	09 51 50.6	-0.7
STVI	Saint Thomas	1.88	113		Pn	09 51 28.8	+0.2
STVI					Sn	09 51 50.6	-0.7
CDVI	St. Croix	2.33	125	Pn	Pn	09 51 36.7	+1.9
DR12	Loma Pena Alta	2.48	263		Pn	09 51 37.3	+0.3
SDD	Santo Domingo	3.04	258	Pn	Pn	09 51 43.8	-0.8
BANI	BANI	3.47	259		Pn	09 51 51.6	+1.0
SC01	Santiago de lo	3.75	276		Pn	09 51 55.3	+0.9
SDDR	Presa de Saban	4.27	269		Pn	09 52 02.6	+1.1
SDDR	Presa de Saban	4.27	269	iP	Pn	09 52 03.1	+1.6
SDDR				IAML		09 53 15.2	
	comp=Z,36nm,0.6s						
GRTK	Grand Turk	4.74	301	Pn	Pn	09 52 05.8	-2.2
RUSC	La Rusia	14.49	206	Pn	Pn	09 54 23.0	+0.8

*OSPL **05** 09:54:34.9±0.4, 19°.00N×66°.57W, h19km±7km, ML2.3*
*NEIC **05** 09:54:34.1±2.6, 19°.10N±0°.03×66°.79W±0°.03, h21km±11km, Error ellipse: s-maj=4.8km s-min=4.2km az=192.0*
*RSPR **05** 09:54:36.9, 19°.07N×66°.81W, h40km±4km, MD2.9/8*
ISC 05 09:54:35.9±1.4**, 19°.04N**±0°.07×**66°.79W**±0°.03**, h29km, n53,** σ**0s63**/67**, 17C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.61	156	⇑eP	Pb	09 54 48.5	+0.3
EMPR	Esperanza - Ma	0.61	156	eS	Sn	09 54 57.9	+0.3
EMPR	Esperanza - Ma	0.61	156		Pb	09 54 48.5	+0.3
EMPR					Sn	09 54 57.9	+0.3
AGPR	Aguadilla, PR	0.65	208	⇑eP	Pb	09 54 47.9	-0.9
AGPR	Aguadilla, PR	0.65	208		Pb	09 54 47.9	-0.9
AGPR					Sb	09 54 57.9	+0.4
AGPR	Aguadilla, PR	0.65	208	iP	Pb	09 54 48.0	-0.8
AGPR				eS	Sb	09 54 57.8	+0.3
AGPR				IAML		09 55 00.8	
	comp=Z,137nm,0.2s						
AOPR	Arecibo Observ	0.69	177	⇑eP	Pb	09 54 49.1	-0.4
AOPR	Arecibo Observ	0.69	177	eS	Sn	09 54 59.9	+0.3
AOPR	Arecibo Observ	0.69	177		Pb	09 54 49.1	-0.4
AOPR					Sn	09 54 59.9	+0.3
MPR	Mayaguez	0.89	202		Pb	09 54 54.1	+1.3
MPR	Mayaguez	0.89	202	iP	Pn	09 54 51.6	-0.9
MPR				IAML		09 55 04.9	
	comp=Z,41nm,0.5s						
LSP	Las Mesas	0.91	198	⇑eP	Pn	09 54 52.1	-0.7
LSP	Las Mesas	0.91	198	eS	Sn	09 55 04.6	-0.3
LSP	Las Mesas	0.91	198		Pn	09 54 52.1	-0.7
LSP					Sn	09 55 04.6	-0.3
OBIP	Obispado Ponce	1.01	170	⇑eP	Pn	09 54 54.1	-0.1
OBIP	Obispado Ponce	1.01	170	eS	Sn	09 55 07.4	+0.1
OBIP	Obispado Ponce	1.01	170		Pn	09 54 54.1	-0.1
OBIP					Sn	09 55 07.4	+0.1
GBPR	Guanica, Bosqu	1.06	185	⇑eP	Pn	09 54 55.1	+0.2
GBPR	Guanica, Bosqu	1.06	185	eS	Sn	09 55 08.4	-0.3
GBPR	Guanica, Bosqu	1.06	185		Pn	09 54 55.1	+0.2
GBPR					Sn	09 55 08.4	-0.3
CRPR	Cabo Rojo, PR	1.07	197	⇑eP	Pn	09 54 54.5	-0.6
CRPR	Cabo Rojo, PR	1.07	197	eS	Sn	09 55 08.6	-0.3
CRPR	Cabo Rojo, PR	1.07	197		Pn	09 54 54.5	-0.6
CRPR					Sn	09 55 08.6	-0.3
MLPR	Magueyes Islan	1.09	193	⇑eP	Pn	09 54 54.8	-0.5
MLPR	Magueyes Islan	1.09	193	eS	Sn	09 55 08.8	-0.6
MLPR	Magueyes Islan	1.09	193		Pn	09 54 54.8	-0.5
MLPR					Sn	09 55 08.8	-0.6
SJG	San Juan	1.10	147	Pn	Pb	09 54 57.2	+0.8
CBYP	Canovanas	1.17	131	⇑eP	Pn	09 54 55.9	-0.5
CBYP				eS	Sn	09 55 11.0	-0.4
CBYP	Canovanas	1.17	131	⇑eP	Pn	09 54 55.9	-0.5
CBYP	Canovanas	1.17	131		Pn	09 54 55.9	-0.5
CBYP					Sn	09 55 11.2	-0.3
ICMP	Isla Caja de M	1.18	168	Pn	Pb	09 54 58.2	+0.5
IGPR	InterUniversit	1.25	149	⇑eP	Pn	09 54 57.5	+0.1
IGPR	InterUniversit	1.25	149	eS	Sn	09 55 12.9	-0.4
IGPR	InterUniversit	1.25	149		Sn	09 55 13.3	0.0
PDPR	Patillas Dam,	1.25	144	⇑eP	Pn	09 54 58.3	+0.8
PDPR	Patillas Dam,	1.25	144	eS	Sn	09 55 12.9	-0.5
PDPR	Patillas Dam,	1.25	144		Pn	09 54 58.3	+0.8
PDPR					Sn	09 55 12.9	-0.5
HUMP	Col San Antoni	1.26	135	⇑eP	Pn	09 54 57.8	+0.2
HUMP	Col San Antoni	1.26	135		Sb	09 55 15.3	+0.3
HUMP	Col San Antoni	1.26	135		Pn	09 54 57.8	+0.2
MTP	Monte Pirata	1.50	129	⇑eP	Pn	09 55 00.5	-0.4
MTP	Monte Pirata	1.50	129	eS	Sn	09 55 19.6	0.0
MTP	Monte Pirata	1.50	129		Pn	09 55 00.5	-0.4
MTP					Sn	09 55 19.6	0.0
PCDR	Punta Cana, DR	1.60	251	⇑eP	Pn	09 55 01.9	-0.3
PCDR	Punta Cana, DR	1.60	251		Pn	09 55 01.9	-0.3
PCDR	Punta Cana, DR	1.60	251	iP	Pn	09 55 02.9	+0.6
PCDR				IAML		09 55 31.2	
	comp=Z,57nm,1.2s						
CUPR	Culebra, Puert	1.60	117	⇑eP	Pn	09 55 01.8	-0.5
CUPR	Culebra, Puert	1.60	117	eS	Sn	09 55 19.9	-2.1
CUPR	Culebra, Puert	1.60	117		Pn	09 55 01.8	-0.5
CUPR					Sn	09 55 19.9	-2.1
STVI	Saint Thomas	1.87	111	⇑eP	Pn	09 55 06.3	+0.3
STVI	Saint Thomas	1.87	111		Pn	09 55 06.3	+0.3
DR12	Loma Pena Alta	2.47	265	Pn	Pn	09 55 14.2	-0.1
SDDR	Presa de Saban	4.26	270	iP	Pn	09 55 40.1	+1.2

*SJA **05** 10:13:59.9±0.9, 34°.36S×68°.17W, h16km±3km, ML3.8, MW4.0*
*IDC **05** 10:14:03.9±9.1, 34°.33S×68°.16W, h35km±61km, mb3.6/1, mb1 3.6/3, mb1mx3.4/22, mbtmp3.6/3, ML3.4/2, Error ellipse: s-maj=175.1km s-min=26.1km az=128.0*
ISC 05 10:14:02.9±1.2**, 34°.36S**±0°.03×**68°.26W**±0°.05**, h29km**±12km**, n24,** σ**1s38**/40**, Mendoza Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AVIZ	Vizcacheras	0.91	347	eP	Pb	10 14 18.4	-1.7
LAMA	Las Malvinas	0.97	233	eP	Pn	10 14 20.1	-0.6
LAMA				eS	Sb	10 14 33.0	-0.7
MORA	Malargue	1.12	213	eP	Pn	10 14 22.6	-0.1
MORA				eS	Sb	10 14 38.2	+0.4
AAGR	Agrelo	1.35	339	eP	Pn	10 14 25.9	0.0
AAGR				eS	Sb	10 14 45.1	+0.5
AAGR				IAML		10 14 48.5	
	comp=Z,745nm,0.6s						
PUMA	Malargue	1.50	220	eP	Pn	10 14 28.0	+0.1
PUMA				eS	Sb	10 14 50.2	+1.5
UTNM	Universidad Te	1.54	341	eP	Pb	10 14 29.2	-1.5
UTNM				eS	Sb	10 14 51.0	+1.2
UTNM				IAML		10 14 52.4	
	comp=Z,958nm,0.2s						
ARCO	CERRO ARCO	1.61	340	eP	Pn	10 14 29.2	-0.3
ARCO				eS	Sb	10 14 53.4	+1.3
ARCO				IAML		10 14 55.4	
	comp=Z,2µm,0.4s						
ASAL	Salagasta	1.82	345	eP	Pn	10 14 32.3	-0.1
ASAL				eS	Sn	10 14 55.9	+1.3
ASAL				IAML		10 15 00.0	
	comp=Z,810nm,0.5s						
ACAN	Cantantal	2.26	24	eP	Pn	10 14 38.3	-0.2
ACAN				eS	Sb	10 15 13.1	+2.4
ACAN				IAML		10 15 23.7	
	comp=Z,219nm,0.4s						
PEL	Peldehue	2.35	300	eP	Pn	10 14 40.5	+0.9
PEL				eS	Sb	10 15 14.1	+0.9
RTCV	Cerro Valdivia	2.50	355	eP	Pn	10 14 40.9	-0.7
RTCV				eS	Sb	10 15 17.7	+0.3
RTCV				IAML		10 15 25.4	
	comp=Z,387nm,1.8s						
ROC1	El Roble	2.68	300	eP	Pn	10 14 45.2	+0.9
ROC1				eS	Sb	10 15 24.7	+1.9
RTLS	Leoncito	2.69	341	eP	Pn	10 14 44.5	-0.1
RTLS				eS	Sb	10 15 21.9	-1.4
RTLS				IAML		10 15 32.3	
	comp=Z,120nm,1.0s						
MRA	San Martin	2.88	49	eP	Pn	10 14 47.0	+0.1
MRA				eS	Sb	10 15 31.6	+3.2
MRA				IAML		10 15 42.4	
	comp=Z,148nm,0.4s						
RTLL	Cerro Villicun	3.02	357	eP	Pn	10 14 48.6	-0.3
RTLL				eS	Sb	10 15 34.8	+2.3
RTLL				IAML		10 15 46.1	
	comp=Z,241nm,0.4s						
GO05	Huala	3.09	257	eP	Pb	10 14 56.5	-0.7
GO05				eS	Sb	10 15 38.2	+3.8
AMOG	MOGNA	3.41	357	eP	Pn	10 14 54.2	0.0
AMOG				eS	Sb	10 15 45.4	+1.6
AMOG				IAML		10 15 52.7	
	comp=Z,436nm,0.5s						
VCA	Vinchina	5.60	1	eP	Pn	10 15 24.7	+0.3
VCA				IAML		10 17 09.0	
	comp=Z,162nm,0.4s						
CYA	Choya	6.26	20	eP	Pn	10 15 32.3	-1.1
CYA				IAML		10 17 43.7	
	comp=Z,46nm,0.7s						
PLCA	Paso Flores	6.62	195	Pn	Pn	10 15 40.2	+1.9
	comp=Z,0.1nm,0.3s,baz=29,slow=13,SNR=2.8						
PLCA				Pg	Pb	10 16 04.9	+7.6
	comp=Z,0.3nm,0.3s,baz=359,slow=12,SNR=5.7						
PLCA				Lg	Lg	10 17 29.8	
	comp=Z,3.6nm,0.3s,baz=216,slow=7.4,SNR=7.5						
CPUP	Villa Florida	12.37	53	Pn	Pn	10 16 57.8	+0.8
	comp=Z,0.2nm,0.3s,baz=205,slow=12,SNR=3.2						
CPUP				Lg	Lg	10 20 34.3	
	comp=Z,0.3nm,0.3s,baz=299,slow=19,SNR=2.1						
TORD	Torodi Ar. Bea	81.42	68	P	P	10 26 16.6	-0.9
	comp=Z,0.7nm,0.7s,baz=251,slow=5.4,SNR=4.8						
KURBB	Kurchatov Arra	150.92	46	PKPbc	PKiKP	10 33 52.1	-0.8
	comp=Z,1.1nm,0.6s,baz=281,slow=2.9,SNR=12						
ZALV	Zalesovo Beam	152.77	36	PKPbc	PKiKP	10 33 56.0	-0.6
	comp=Z,1.5nm,0.4s,baz=346,slow=4.3,SNR=2.5						

*JMA **05** 10:14:03.9±0.3, 36°.38N×142°.16E, h57km, M2.9*
*IDC **05** 10:14:06.8±2.1, 36°.23N×141°.41E, h0km, mb3.5/5, mb1 3.5/7, mb1mx3.4/52, mbtmp3.5/7, ML2.7/2, MS3.2/1, Ms1 3.2/1, ms1mx2.4/42, Error ellipse: s-maj=50.5km s-min=21.4km az=70.0*
ISC 05 10:14:06.5±1.3**, 36°.33N**±0°.05×**141°.9E**±0°.1**, h19km, n17,** σ**1s80**/19**, mb3.6**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.05	234	P	Pb	10 14 25.6	-0.5
JHYU	Hitachinakayam	1.06	271	P	Pb	10 14 26.0	-0.3
JHO	Hitachi	1.11	285	P	Pb	10 14 26.1	-1.1
ONAJ	Iwakimizuishiy	1.18	311	P	Pn	10 14 26.3	-1.8
JFK	Kawauchi	1.33	322	P	Pn	10 14 27.9	-2.2
JFT	Otama	1.73	314	P	Pn	10 14 34.9	-0.7
JMM	Marumori	1.77	330	P	Pn	10 14 33.5	-2.7
BSO1	Boso 1	1.83	205	P	Pn	10 14 34.9	-1.6
JAG	Ashikaga	1.98	274	P	Pn	10 14 38.5	-0.5
MJAR	Matsushiro Arr	2.99	275	Pn	Pn	10 14 51.3	-1.6
	0.3nm,0.3s,baz=94,slow=8.6,SNR=20						
MAT	Matsushiro	2.99	275	P	Pn	10 14 53.7	+0.8
MAT				eS	Sn	10 15 28.5	+0.3
JHJ	Hachijo jima 2	3.65	209	Pn	Pn	10 14 59.7	-2.2
	9.2nm,0.3s,baz=331,slow=21,SNR=15						
JHJ				Sn	Sn	10 15 41.7	-2.7
	17nm,0.3s,baz=78,slow=23,SNR=7.1						
SONM	Songino Array	28.51	305	P	P	10 20 00.1	-0.6
	0.5nm,0.4s,baz=112,slow=9.7,SNR=4.5						
SONM				LR	LR	10 32 08.6	
	comp=Z,44nm,19.6s,baz=66,slow=38						
MKAR	Makanchi Array	44.83	303	P	P	10 22 20.3	+1.0
	0.4nm,0.5s,baz=88,slow=10,SNR=3.8						
KURBB	Kurchatov Arra	46.75	309	P	P	10 22 35.8	+1.5
	0.3nm,0.4s,baz=83,slow=7.7,SNR=2.1						
WRA	Warramunga Arr	56.42	189	P	P	10 23 48.7	+1.9
	0.4nm,0.8s,baz=1.9,slow=7.4,SNR=5.9						
ASAR	Alice Springs	60.15	188	P	P	10 24 16.0	+3.2
	0.2nm,0.6s,baz=20,slow=12,SNR=1.9						

*IDC **05** 10:23:39.3±1.7, 6°.06S×129°.85E, h0km, mb3.8/1, mb1 4.3/4, mb1mx3.7/35, mbtmp4.1/4, ML4.2/3, Error ellipse: s-maj=77.4km s-min=27.6km az=80.0*
*DJA **05** 10:23:49.3±0.4, 6°S±2°×13°1E±°, h136km±8km, M4.3/11, mB5.1/4, mb4.1/5, MLv4.3/11, Mw(mB)4.4/4*
ISC 05 10:23:47.9±1.0**, 5°.78S**±0°.05×**130°.84E**±0°.08**, h150km, n11,** σ**1s75**/15**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.56	323	P	Pn	10 24 18.9	+0.7
BNDI				S	Sn	10 24 41.1	-0.2
SAUI	Saumlaki	2.23	168	P	Pn	10 24 26.6	+0.8
SAUI				S	Sn	10 24 55.8	+0.7
MSAI	Masohi	3.08	322	P	Pn	10 24 37.4	+1.0
FAKI	Fak Fak	3.17	26	P	Pn	10 24 38.7	+1.1
SIJI	Sorong	4.90	5	Pn	Pn	10 25 01.2	+1.1
	36nm,0.3s,baz=229,slow=23,SNR=150						
SIJI				Sn	Sn	10 25 52.9	-3.5
	6.5nm,0.3s,baz=258,slow=23,SNR=2.1						
RKPI	Ransiki, Papua	5.40	38	P	Pn	10 25 07.9	+1.2
	1.1nm7µm171nm,0.8s						
RKPI				S	Sn	10 26 09.2	+1.1
	1.1nm7µm171nm,0.8s						
SANI	Sanana	6.10	307	P	Pn	10 25 17.5	+1.5
	0.1nm11nm,0.9s						
LBMI	Labuha	6.10	327	P	Pn	10 25 17.1	+1.0
	0.1nm23nm,0.8s						
WRA	Warramunga Arr	14.48	167	Pn	Pn	10 27 04.2	-1.8
	0.6nm,0.3s,baz=348,slow=15,SNR=26						
WRA				Sn	Sn	10 29 33.9	-13
	0.7nm,0.3s,baz=279,slow=24,SNR=3.0						
ASAR	Alice Springs	18.02	171	P	Pn	10 27 51.4	+2.2
	0.9nm,0.3s,baz=347,slow=12,SNR=38						
ASAR				S	S	10 31 04.4	-2.2
	0.3nm,0.3s,baz=357,slow=29,SNR=3.6						
MKAR	Makanchi Array	67.68	326	P	P	10 34 36.2	+7.2
	0.5nm,0.5s,baz=117,slow=10,SNR=6.3						

IDC 05 10:29:11.6±4.1**, 6°.77S**×**154°.61E, h0km, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.3**/33**, mbtmp3.2**/3**, Error ellipse: s-maj=148.3km s-min=42.0km az=117.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.63	234	P	P	10 34 24.8	+0.1
	0.4nm,0.5s,baz=58,slow=9.9,SNR=2.8						
ASAR	Alice Springs	26.04	228	P	P	10 34 46.9	+0.1
	0.2nm,0.6s,baz=59,slow=9.8,SNR=1.7						
MKAR	Makanchi Array	82.99	319	P	P	10 41 39.5	+0.7
	0.1nm,0.5s,baz=119,slow=5.6,SNR=2.0						
TORD	Torodi Ar. Bea	152.60	285	PKPbc	PKPbc	10 49 10.4	-0.9
	0.7nm,0.8s,baz=61,slow=2.4,SNR=3.5						

*IDC **05** 10:38:42.6±1.2, 19°.15S×70°.78W, h0km, mb3.6/5, mb1 3.8/7, mb1mx3.7/25, mbtmp3.6/7, ML3.2/2, MS3.3/10, Ms1 3.3/10, ms1mx3.2/30, Error ellipse: s-maj=35.1km s-min=16.6km az=73.0*
*NEIC **05** 10:38:45.3±2.6, 19°.32S±0°.04×70°.99W±0°.07, h24km±5km, mb4.1/2, ML3.9(GUC), Error ellipse: s-maj=9.9km s-min=5.4km az=80.0*
*GUC **05** 10:38:46.0±0.6, 19°.30S×71°.00W, h39km±3km, ML3.9*
ISC 05 10:38:42.3±1.8**, 19°.27S**±0°.03×**71°.01W**±0°.06**, h5km**±11km**, n62,** σ**1s29**/59**, mb3.8**/5**, MS3.3**/6**, 5C-3D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSGC	Pisagua	0.90	112	⇑iP	Pb	10 39 00.8	+0.3
PSGC				iS	Sb	10 39 12.9	0.0
PSGC				IAML		10 39 16.2	
	comp=N,6µm,0.3s						
PSGCX	Pisagua	0.90	112		Pn	10 39 01.0	-0.8
PB12	IPOC Station P	0.92	45	⇓iP	Pn	10 39 02.0	0.0
PB12				iS	Sn	10 39 15.1	-0.5
PB12	IPOC Station P	0.92	45		Pn	10 39 02.1	+0.1
AP01	Chacalluta	1.09	36	⇑iP	Pn	10 39 05.0	+0.7
AP01				iS	Sn	10 39 20.2	+0.4
AP01				IAML		10 39 23.0	
	comp=N,5µm,0.6s						
AP01	Chacalluta	1.09	36	Pn	Pn	10 39 05.4	+1.0
TA02	Huaiquique	1.30	140	⇓iP	Pg	10 39 07.4	+0.2
TA02				iS	Sn	10 39 24.5	-0.4
TA02				IAML		10 39 25.9	
	comp=N,6µm,0.3s						
MNMC	Minye Minye	1.34	84	⇑iP	Pg	10 39 08.6	+0.5
MNMC				iS	Sn	10 39 26.2	-0.2
MNMC				IAML		10 39 31.6	
	comp=E,4µm,0.2s						
MNMC	Minye Minye	1.34	84		Pg	10 39 08.7	+0.5
PB11	IPOC Station P	1.37	111	⇑iP	Pg	10 39 08.5	-0.1
PB11				iS	Sb	10 39 25.7	-0.8
PB11				IAML		10 39 29.9	
	comp=E,6µm,0.7s						
PB11	IPOC Station P	1.37	111		Pg	10 39 08.7	0.0
TA01	Diego Aracena	1.51	149	⇓iP	Pn	10 39 09.8	-0.3
TA01				iS	Sn	10 39 27.8	-2.4
TA01				IAML		10 39 33.9	
	comp=N,3µm,0.3s						
TA01	Diego Aracena	1.51	149	Pn	Pn	10 39 09.4	-0.7
PB16	IPOC Station P	1.70	57	eP	Pb	10 39 14.6	+0.2
PB16				iS	Sg	10 39 37.1	+0.1
PB16				IAML		10 39 45.1	
	comp=N,1µm,0.8s						
PB16	IPOC Station P	1.70	57		Pg	10 39 15.1	+0.2
PATCX	Punta Patache	1.74	153	⇑iP	Pn	10 39 13.0	-0.4
PATCX				iS	Sn	10 39 34.1	-2.0
PATCX				IAML		10 39 42.7	
	comp=E,2µm,0.8s						
PATCX	Punta Patache	1.74	153		Pn	10 39 13.6	+0.2
GO01	Chusmiza	1.76	103	eP	Pb	10 39 14.9	-0.5
GO01				iS	Sb	10 39 37.8	-0.2
GO01				IAML		10 39 42.1	
	comp=N,3µm,0.2s						
GO01	Chusmiza	1.76	103		Pb	10 39 15.0	-0.5
PB08	IPOC Station P	1.96	117	eP	Pn	10 39 17.3	+0.7
PB08				iS	Sn	10 39 41.4	-0.2
PB08	IPOC Station P	1.96	117		Pn	10 39 17.2	+0.7
PB01	IPOC Station P	2.27	141	eP	Pn	10 39 20.7	0.0
PB01				IAML		10 39 56.1	
	comp=E,817nm,0.3s						
PB01	IPOC Station P	2.27	141		Pn	10 39 21.7	+1.0
PB02	IPOC Station P	2.29	153	eP	Pn	10 39 21.0	0.0
PB02				IAML		10 40 02.1	
	comp=N,1µm,0.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PB07	IPOC Station P	2.67	157	IAML		10 40 11.3	
	comp=E,432nm,0.6s						
PB07	IPOC Station P	2.67	157		Pn	10 39 27.1	+1.0
PB09	IPOC Station P	3.01	147	IAML		10 40 28.2	
	comp=E,405nm,0.7s						
PB09	IPOC Station P	3.01	147		Pn	10 39 33.0	+2.1
PB06	IPOC Station P	3.68	159		Pn	10 39 39.9	-0.1
LVC	Limon Verde	3.86	150	Pn	Pn	10 39 44.7	+2.0
	comp=E,6.0nm,0.3s,baz=350,slow=8.1,SNR=14						
LVC				Pg	Pb	10 39 52.7	+1.5
	comp=E,9.9nm,0.3s,baz=320,slow=10,SNR=13						
LVC				Lg	Lg	10 40 46.0	
	comp=E,18nm,0.3s,baz=157,slow=17,SNR=3.3						
LVC				LR	LR	10 41 14.5	
	comp=E,393nm,20.6s,baz=302,slow=39						
LVC	Limon Verde	3.86	150		Pn	10 39 44.6	+1.8
LPAZ	La Paz	4.04	43	Pn	Pn	10 39 49.8	+4.4
	comp=E,0.3nm,0.3s,baz=181,slow=3.5,SNR=7.4						
LPAZ				LR	LR	10 41 25.3	
	comp=E,137nm,19.5s,baz=189,slow=43						
LPAZ	La Paz	4.04	43		Pb	10 39 50.5	-3.9
PB15	IPOC Station P	4.18	160		Pn	10 39 46.8	-0.2
PB10	IPOC Station P	4.25	174		Pn	10 39 46.0	-1.7
PB14	IPOC Station P	5.36	174		Pn	10 40 01.4	-2.0
GO02	Mina Guanaco	6.01	168		Pn	10 40 11.7	-0.6
AC02	Maricunga	7.73	167	Pn	Pn	10 40 35.8	-0.2
NNA	Nana	9.16	321	LR	LR	10 44 42.8	
	comp=E,76nm,19.9s,baz=171,slow=39						
AC05	El Transito	9.55	176	Pn	Pn	10 40 59.5	-1.2
SIV	San Ignacio	10.02	73	Pn	Pn	10 41 05.4	-1.7
	comp=E,0.1nm,0.3s,baz=294,slow=15,SNR=1.2						
CPUP	Villa Florida	14.44	122	LR	LR	10 48 29.2	
	comp=E,127nm,22.0s,baz=242,slow=41						
H03N1	Juan Fernandez	15.78	205	T	T	10 58 50.9	
	baz=31,slow=72,SNR=14						
H03N2	Juan Fernandez	15.79	205	T	T	10 58 45.1	
	baz=31,slow=72,SNR=14						
H03N3	Juan Fernandez	15.80	205	T	T	10 58 42.1	
	baz=31,slow=72,SNR=13						
PTGA	Pitinga	21.37	32	P	P	10 43 29.3	-1.5
	comp=E,1.6nm,0.3s,baz=208,slow=9.7,SNR=4.1						
PTGA				LR	LR	10 52 18.0	
	comp=E,55nm,18.2s,baz=206,slow=39						
PTGA	Pitinga	21.37	32	P	P	10 43 29.7	-1.1
PTGA				IAmb	IAmb	10 43 41.1	
	comp=Z,6.0nm,1.1s						
PLCA	Paso Flores	21.40	179	P	P	10 43 33.0	+1.9
	comp=Z,3.3nm,0.8s,baz=356,slow=12,SNR=8.3						
PLCA	Paso Flores	21.40	179	P	P	10 43 32.2	+1.2
PLCA				IAmb	IAmb	10 43 39.9	
	comp=Z,20nm,1.4s						
ROSC	El Rosal	24.18	352	LR	LR	10 54 04.1	
	comp=Z,92nm,21.0s,baz=148,slow=38						
JTS	Las Juntas de	32.43	334	LR	LR	10 58 23.7	
	comp=Z,47nm,18.3s,baz=230,slow=36						
RPN	Rapa Nui	35.97	250	LR	LR	10 56 34.4	
	comp=Z,62nm,21.4s,baz=342,slow=30						
RCBR	Riachuelo	36.69	73	LR	LR	11 02 21.6	
	comp=Z,66nm,18.8s,baz=227,slow=39						
PMSA	Palmer Station	45.72	176	LR	LR	11 03 35.6	
	comp=Z,375nm,21.4s,baz=18,slow=33						
TXAR	Lajitas Array	57.68	326	P	P	10 48 35.0	+0.8
	comp=Z,0.1nm,0.5s,baz=156,slow=6.8,SNR=1.8						
QSPA	South Pole Qui	70.91	180	P	P	10 50 00.7	+0.3
TORD	Torodi Ar. Bea	78.50	72	P	P	10 50 44.3	-0.8
	comp=Z,0.3nm,0.6s,baz=267,slow=6.3,SNR=2.2						
YKA	Yellowknife Ar	88.44	341	P	P	10 51 37.1	+1.9
	comp=Z,0.4nm,0.8s,baz=134,slow=5.0,SNR=5.8						
H11S2	WAKE ISLAND Hy	125.61	279	T	T	13 16 58.2	
	baz=100,slow=74,SNR=9.1						
H11S1	WAKE ISLAND Hy	125.62	279	T	T	13 16 57.3	
	baz=100,slow=74,SNR=5.7						
H11S3	WAKE ISLAND Hy	125.62	279	T	T	13 16 58.3	
	baz=100,slow=74,SNR=3.5						
MKAR	Makanchi Array	144.90	32	PKP	PKPdf	10 58 20.2	-0.5
	comp=Z,0.3nm,0.7s,baz=339,slow=3.6,SNR=2.2						

*IDC **05** 10:47:30.9±6.2, 25°.33S×179°.83E, h524km±66km, mb3.3/6, mb1 3.6/7, mb1mx3.1/45, mbtmp4.2/7, Error ellipse: s-maj=65.8km s-min=29.0km az=147.0*

ISC 05 10:47:28.7±1.5**, 25°.4S**±0°.4×**180°.0E**±0°.2**, h500**km**, n9, σ0s.42**/9**, mb3.8**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.81	282	P	P	10 50 16.4	+0.4
	0.2nm,0.3s,baz=106,slow=15,SNR=5.6						
STKA	Stephens Creek	34.14	250	P	P	10 53 31.4	0.0
	3.1nm,0.4s,baz=97,slow=11,SNR=26						
ASAR	Alice Springs	41.76	262	P	P	10 54 33.5	-0.4
	2.5nm,0.4s,baz=89,slow=7.0,SNR=114						
WRA	Warramunga Arr	42.28	268	P	P	10 54 37.8	-0.2
	3.6nm,0.4s,baz=104,slow=7.8,SNR=78						
PETK	Petropavlovsk-	80.56	347	P	P	10 58 47.8	-0.3
	1.2nm,0.7s,baz=142,slow=7.5,SNR=3.8						
NVAR	Mina Array Bea	85.87	44	P	P	10 59 14.9	-0.4
	0.4nm,0.5s,baz=227,slow=7.9,SNR=3.6						
TXAR	Lajitas Array	91.27	58	P	P	10 59 41.3	+0.7
	0.4nm,0.8s,baz=224,slow=5.2,SNR=5.4						
NB2	NORSAR Subarra	143.57	351	PKP	PKPab	11 06 04.0	0.0
	comp=Z,0.9nm,0.6s,baz=17,slow=3.4						
NOA	NORSAR Array B	143.57	351	PKP	PKPab	11 06 04.0	0.0
	comp=Z,0.2nm,0.5s,baz=15,slow=5.0,SNR=6.5						

*SJA **05** 10:52:25.5±0.9, 33°.53S×67°.69W, h216km±6km, ML3.8, MW4.1*

*VAO **05** 10:52:25.5±0.7, 33°.63S×67°.59W, h190km±12km, mb4.3*

*NEIC **05** 10:52:26.0±2.1, 33°.58S±0°.07×67°.56W±0°.07, h200km±5km, mb4.6/127, Error ellipse: s-maj=11.0km s-min=6.1km az=214.0*

*IDC **05** 10:52:26.6±0.6, 33°.55S×67°.57W, h204km±4km, mb4.1/18, mb1 4.2/22, mb1mx4.1/29, mbtmp4.6/22, Error ellipse: s-maj=17.2km s-min=7.7km az=84.0*

ISC 05 10:52:26.4±0.5**, 33°.54S**±0°.05×**67°.62W**±0°.06**, h202**km±4km**, h202**km**:pP-P, n442, σ0s.80**/414**, mb4.6**/72**, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAGR	Agrelo	1.11	294	i P	Pn	10 52 58.0	+0.6
AAGR				IAML		10 53 32.2	
	comp=Z,283nm,0.7s						
ARCO	CERRO ARCO	1.30	302	i P	Pn	10 52 59.2	+0.3
ARCO				eS	S	10 53 24.2	+0.6
ARCO				IAML		10 53 28.5	
	comp=Z,686nm,0.6s						
ACAN	Cantantal	1.32	16	i P	Pn	10 52 59.5	+0.6
ACAN				IAML		10 53 28.2	
	comp=Z,228nm,0.4s						
ASAL	Salagasta	1.39	313	i P	Pn	10 53 00.2	+0.7
ASAL				eS	S	10 53 25.6	+0.8
ASAL				IAML		10 53 27.1	
	comp=Z,948nm,1.0s						
RTCV	Cerro Valdivia	1.85	335	i P	Pn	10 53 03.6	0.0
RTCV				eS	S	10 53 31.8	-0.3
RTCV				IAML		10 53 33.1	
	comp=Z,788nm,1.1s						
LAMA	Las Malvinas	1.92	223	i P	Pn	10 53 04.5	+0.2
MRA	San Martin	1.95	55	i P	Pn	10 53 05.4	+0.6
MRA				IAML		10 53 40.1	
	comp=Z,123nm,1.2s						
MORA	Malargue	2.09	213	i P	Pn	10 53 06.2	+0.2
RTLS	Leoncito	2.24	320	i P	Pn	10 53 08.4	+0.4
RTLS				eS	S	10 53 39.9	+0.3
RTLS				IAML		10 53 41.4	
	comp=Z,604nm,0.3s						
RTLL	Cerro Villicun	2.32	342	i P	Pn	10 53 08.5	-0.1
RTLL				eS	S	10 53 40.6	-0.2
RTLL				eS	S	10 53 40.8	0.0
PUMA	Malargue	2.47	217	i P	Pn	10 53 10.5	+0.5
PEL	Peldehue	2.60	278		Pn	10 53 10.7	-0.8
PEL	Peldehue	2.60	278	i P	Pn	10 53 11.1	-0.4
EDS3	Malargue	2.66	213	i P	Pn	10 53 12.8	+0.5
AMOG	MOGNA	2.70	344	i P	Pn	10 53 13.5	+0.7
ROC1	El Roble	2.90	280		Pn	10 53 14.4	-0.9
ROC1	El Roble	2.90	280	i P	Pn	10 53 14.2	-1.0
GO05	Huala	3.86	247		Pn	10 53 24.3	-2.2
GO04	Tololo Observa	4.31	320		Pn	10 53 32.2	-0.3
VCA	Vinchina	4.82	354	i P	Pn	10 53 39.1	+0.3
VCA				eS	S	10 54 33.0	-2.2
CYA	Choya	5.32	18	i P	Pn	10 53 43.5	-1.5
GO03	Copiap	6.34	338		Pn	10 53 58.4	+0.1
PLCA	Paso Flores	7.55	197	P	Pn	10 54 12.2	-1.6
	comp=Z,4.2nm,0.3s,baz=13,slow=11,SNR=135						
PLCA	Paso Flores	7.55	197		Pn	10 54 11.7	-2.0
PLCA	Paso Flores	7.55	197	eP	Pn	10 54 12.2	-1.6
GO02	Mina Guanaco	8.53	348		Pn	10 54 26.6	-0.3
PB14	IPOC Station P	9.21	344		Pn	10 54 34.8	-1.0
PB10	IPOC Station P	10.32	345		Pn	10 54 48.7	-1.1
PB15	IPOC Station P	10.42	351		Pn	10 54 51.1	-0.3
PB06	IPOC Station P	10.93	350		Pn	10 54 56.6	-1.3
LVC	Limon Verde	10.95	354	P	Pn	10 54 57.8	-0.5
	comp=Z,3.5nm,0.3s,baz=181,slow=9.0,SNR=31						
LVC	Limon Verde	10.95	354	eP	Pn	10 54 57.8	-0.5
CPUP	Villa Florida	11.45	54	P	Pn	10 55 00.5	-3.8
	comp=Z,0.5nm,0.3s,baz=229,slow=13,SNR=9.2						
PB09	IPOC Station P	11.79	353		Pn	10 55 08.8	0.0
PB07	IPOC Station P	11.94	350		Pn	10 55 09.8	-0.9
PLTB	Pedras Altas	11.95	85	eP	Pn	10 55 09.0	-1.6
PB01	IPOC Station P	12.56	352		Pn	10 55 17.8	-0.7
PATCX	Punta Patache	12.87	349		Pn	10 55 22.6	+0.3
PB08	IPOC Station P	13.42	354	P	Pn	10 55 30.7	+1.2
PTGB	Pitanga	16.17	61	eP	P	10 56 02.4	+0.2
AQDB	Aquidauana	16.78	42	eP	Pn	10 56 09.6	-0.4
AQDB				eS	S	10 59 16.0	+2.2
LPAZ	La Paz	17.19	358	P	Pn	10 56 15.9	+0.4
	comp=Z,1.8nm,0.3s,baz=156,slow=5.8,SNR=44						
LPAZ				pP	pP	10 56 47.3	+0.5
	comp=Z,1.4nm,0.3s,baz=192,slow=9.8,SNR=3.0						
LPAZ	La Paz	17.19	358	IAmb	IAmb	10 56 30.2	
	comp=Z,15nm,0.7s						
LPAZ	La Paz	17.19	358	eP	Pn	10 56 14.8	-0.7
SIV	San Ignacio	18.45	20	P	P	10 56 27.6	+0.5
	comp=Z,2.5nm,0.3s,baz=216,slow=11,SNR=37						
PCMB	Pacaembu	18.72	55	eP	P	10 56 30.2	+0.2
EFI	East Falkland	19.41	162	P	P	10 56 35.4	-1.6
PTLB	Pontes e Lacer	19.58	25	eP	P	10 56 40.2	+0.9
GO10	Punta Arenas	19.76	186	P	P	10 56 41.0	+0.1
USHA	Ushuaia	21.29	181	P	P	10 56 57.0	-0.1
	comp=Z,28nm,0.6s,baz=177,slow=1.3,SNR=12						
VILB	Vilhena	21.58	20	eP	P	10 57 01.5	+1.0
ARAG	Araguaiana, MT	22.79	43	eP	P	10 57 11.6	-0.2
NNA	Nana	23.05	336	P	P	10 57 14.1	-0.1
	comp=Z,21nm,0.7s,baz=181,slow=12,SNR=7.8						
NNA	Nana	23.05	336	P	P	10 57 14.8	+0.5
SAML	Samuel	24.82	10	P	P	10 57 30.6	+0.4
SAML	Samuel	24.82	10	eP	P	10 57 30.3	+0.2
CLDB	Colider	25.04	28	eP	P	10 57 32.7	+0.6
BDFB	Brasilia	25.13	50	P	P	10 57 32.1	-1.0
	comp=Z,2.8nm,0.6s,baz=200,slow=16,SNR=2.3						
BDFB				pP	pP	10 58 11.3	-1.8
	comp=Z,9.2nm,0.7s,baz=200,slow=9.6,SNR=5.2						
BDFB	Brasilia	25.13	50	IAmb	IAmb	10 57 37.0	
	comp=Z,3.6nm,0.7s						
PMSA	Palmer Station	31.34	177	P	P	10 58 27.3	-0.2
	comp=Z,21nm,0.7s,baz=338,slow=3.6,SNR=4.2						
PTGA	Pitinga	33.42	14	P	P	10 58 45.6	-0.6
GCUF	Volcan Galeras	35.78	343	eP	P	10 59 09.2	+2.2
GARC	Garzon, Huila	36.31	347	eP	P	10 59 12.1	+1.0
BOAV	Boa Vista	36.37	12	eP	P	10 59 11.1	-0.3
SOTA	Rioblanco	36.49	345	eP	P	10 59 14.6	+1.6
ORTC	Ortega, Tolima	37.94	348	eP	P	10 59 25.5	+0.9
YOTC	Yotoco, Valle	38.22	346	eP	P	10 59 26.1	-1.0
CHIC	Chingaza	38.40	350	eP	P	10 59 29.0	+0.1
ROSC	El Rosal	38.70	349	P	P	10 59 34.7	+3.4
	comp=Z,9.6nm,0.4s,baz=288,slow=20,SNR=2.3						
ROSC	El Rosal	38.70	349	IAmb	IAmb	10 59 36.1	
	comp=Z,11nm,0.6s						
GUY2C	Guyana, Caldas	39.25	348	eP	P	10 59 36.8	+0.8
RUSC	La Rusia	39.56	351	eP	P	10 59 38.9	+0.3
RUSC	La Rusia	39.56	351	P	P	10 59 38.9	+0.3
RUSC					pP	11 00 20.5	-0.9
CBOC	Ciudad Bolivar	39.99	347	eP	P	10 59 42.0	+0.2
HELC	Santa Helena	40.22	348	eP	P	10 59 43.6	-0.3
PTBC	PUERTO BERRIO,	40.39	349	eP	P	10 59 43.0	-1.9
ZARC	Zaragoza, Cauc	41.38	349	eP	P	10 59 51.8	-1.2
UREC	San Jos de Ur	41.75	348	eP	P	10 59 54.1	-1.8
SDV	Santo Domingo	42.29	356	P	P	10 59 59.3	-1.2
	comp=Z,3.6nm,0.3s,baz=270,slow=8.0,SNR=4.5						
SMLC	San Martn de	42.55	351	eP	P	10 59 59.9	-2.5
PCRV	Puerto La Cruz	43.57	4	P	P	11 00 09.9	-0.6
	comp=Z,7.4nm,0.6s,baz=145,slow=4.5,SNR=5.0						
SJCC	San Jacinto, C	43.79	349	eP	P	11 00 11.4	-1.0
URIC	Uribia, Colomb	45.18	354	P	P	11 00 20.5	-2.8
JTS	Las Juntas de	46.61	336	P	P	11 00 35.1	+0.6
	comp=Z,5.9nm,0.8s,baz=202,slow=3.5,SNR=4.1						
JTS	Las Juntas de	46.61	336	IAmb	IAmb	11 00 37.1	
	comp=Z,11nm,1.2s						
VNA3	Neumayer Olymp	48.41	158	P	P	11 00 48.0	+0.3
VNA1	Neumayer--Stat	48.67	158	P	P	11 00 50.6	+1.0
VNA2	Neumayer--Watz	49.02	158	P	P	11 00 52.5	+0.2
	baz=287,slow=8.9						
SNAA	Sanae	50.63	158	P	P	11 01 04.5	0.0
SNAA	Sanae	50.63	158	P	P	11 01 04.5	0.0
	comp=Z,5.9nm,0.3s,baz=276,slow=7.0,SNR=194						
SNAA	Sanae	50.63	158	P	P	11 01 04.6	0.0
SNAA				IAmb	IAmb	11 01 05.6	
	comp=Z,26nm,1.4s						
ICMP	Isla Caja de M	51.15	1	P	P	11 01 08.3	-0.5
MLPR	Magueyes Islan	51.23	1	P	P	11 01 08.5	-0.8
MLPR				IAmb	IAmb	11 01 09.3	
	comp=Z,19nm,0.7s						
CRPR	Cabo Rojo, PR	51.26	1	P	P	11 01 08.8	-0.8
PDPR	Patillas Dam,	51.29	2	P	P	11 01 08.9	-1.0
PDPR				IAmb	IAmb	11 01 12.8	
	comp=Z,18nm,1.1s						
OBIP	Obispado Ponce	51.30	1	P	P	11 01 09.6	-0.4
OBIP					pP	11 01 53.9	-1.0
MTP	Monte Pirata	51.39	3	P	P	11 01 09.1	-1.5
MTP				IAmb	IAmb	11 01 09.9	
	comp=Z,10nm,0.9s						
CBYP	Canovanas	51.55	2	P	P	11 01 10.7	-1.2
CBYP				IAmb	IAmb	11 01 11.3	
	comp=Z,12nm,0.7s						
CUPR	Culebra, Puert	51.61	3	P	P	11 01 10.8	-1.4
CUPR				IAmb	IAmb	11 01 18.4	
	comp=Z,15nm,1.1s						
GTBY	Guantanamo Bay	53.65	351	P	P	11 01 26.3	-0.8
GTBY				IAmb	IAmb	11 01 42.2	
	comp=Z,20nm,0.9s						
QSPA	South Pole Qui	56.70	180	P	P	11 01 48.9	+0.3
	comp=Z,13nm,0.5s,baz=158,slow=4.8,SNR=142						
QSPA	South Pole Qui	56.70	180	P	P	11 01 49.0	+0.3
TEIG	Tepich	56.98	337	P	P	11 01 51.0	+0.1
VNDA	Vanda	65.24	190	P	P	11 02 46.6	+0.9
	comp=Z,1.4nm,0.6s,baz=145,slow=5.8,SNR=7.7						
TIGA	Tifton	66.37	345	P	P	11 02 53.1	-0.3
	baz=165						
Z57A	Bowman	67.62	348	P	P	11 03 01.3	+0.1
	baz=168						
GOGA	Godfrey	68.25	346	P	P	11 03 04.6	-0.6
	baz=166						
GOGA	Godfrey	68.25	346	P	P	11 03 04.8	-0.3
GOGA				IAmb	IAmb	11 03 05.5	
	comp=Z,8.0nm,0.9s						
Y55A	Saluda	68.44	347	P	P	11 03 06.4	0.0
	baz=167						
X60A	Albert Glenn T	68.46	351	P	P	11 03 07.0	+0.6
	baz=171						
833A	Chaparral WMA,	68.51	330	P	P	11 03 07.4	+0.5
	baz=152						
X59A	McDuffie Farm,	68.54	350	P	P	11 03 07.1	+0.2
	baz=170						
X58A	Rowland	68.63	350	P	P	11 03 07.7	+0.2
	baz=169						
Z50A	Ashland	68.64	344	P	P	11 03 07.2	-0.4
	baz=164,SNR=8.8						
Z50A	Ashland	68.64	344		P	11 03 07.5	-0.1
Z50A				IAmb	IAmb	11 03 08.1	
	comp=Z,13nm,0.7s						
LRAL	Lakeview Retre	68.69	343	P	P	11 03 07.6	-0.3
	baz=163						
Y52A	Lilburn	68.81	345	P	P	11 03 08.3	-0.3
	baz=165,SNR=5.4						
Y52A	Lilburn	68.81	345	IAmb	IAmb	11 03 08.8	
	comp=Z,12nm,0.6s						
X56A	White Oak	68.84	348	P	P	11 03 08.8	0.0
	baz=168						
VBMS	Vicksburg	68.88	339	P	P	11 03 09.8	+0.7
	baz=160						
X55A	Gracelyn & Ava	68.92	348	P	P	11 03 09.7	+0.4
	baz=167						
W58A	Raeford	69.07	350	P	P	11 03 10.9	+0.7
	baz=170						
X54A	Belton	69.13	347	P	P	11 03 10.6	0.0
	baz=167						
W57A	Gilead	69.31	349	P	P	11 03 11.7	0.0
	baz=169						
Y49A	Blount Mountai	69.33	343	P	P	11 03 11.2	-0.6
Y49A				IAmb	IAmb	11 03 12.4	
	comp=Z,8.1nm,0.9s						
W56A	Indian Trail	69.39	349	P	P	11 03 12.2	0.0
	baz=168						
KMSC	Kings Mountain	69.53	348	P	P	11 03 13.2	+0.2
	baz=168						
W54A	Cherokee Point	69.62	347	P	P	11 03 13.9	+0.2
	baz=167						
V59A	Middlesex	69.66	351	P	P	11 03 14.2	+0.4
	baz=170						
BG3	Lake Jocassee	69.67	347	IAmb	IAmb	11 03 14.8	
	comp=Z,6.1nm,0.7s						
NATX	Nacogdoches	69.78	336	P	P	11 03 15.2	+0.5
	baz=156						
FPAL	Fort Paine	69.80	344	IAmb	IAmb	11 03 15.2	
	comp=Z,10nm,0.7s						
V58A	Windy Hill, Pi	69.81	350	P	P	11 03 14.9	+0.2
	baz=170						
V57A	Coltrane Farms	70.00	350	P	P	11 03 15.9	0.0
	baz=169						
V56A	Mocksville	70.04	349	P	P	11 03 16.3	+0.1
	baz=168						
X48A	Hartselle	70.05	343	IAmb	IAmb	11 03 17.7	
	comp=Z,10nm,0.7s						
V55A	Taylorsville	70.20	348	P	P	11 03 17.2	+0.1
	baz=168,SNR=5.2						
V55A	Taylorsville	70.20	348	P	P	11 03 17.4	+0.3
V55A				IAmb	IAmb	11 03 18.0	
	comp=Z,13nm,0.7s						
V54A	Nebo	70.25	348	P	P	11 03 17.3	-0.1
	baz=167,SNR=6.6						
V53A	Saluda	70.31	347	IAmb	IAmb	11 03 18.3	
	comp=Z,9.7nm,0.6s						
U58A	Oxford	70.32	351	P	P	11 03 18.2	+0.4
	baz=170						
W50A	Signal Mountai	70.36	345	IAmb	IAmb	11 03 18.9	
	comp=Z,15nm,0.7s						
CPCT	Cooper Cave	70.44	345	IAmb	IAmb	11 03 19.1	
	comp=Z,10nm,0.8s						
U57A	Blanch	70.47	350	P	P	11 03 18.9	+0.1
	baz=170						
TKL	Tuckaleechee C	70.48	346	P	P	11 03 18.2	-0.6
TKL				IAmb	IAmb	11 03 19.1	
	comp=Z,7.4nm,0.7s						
SWET	Sewanee	70.52	344	IAmb	IAmb	11 03 19.7	
	comp=Z,18nm,0.9s						
U56A	King	70.55	349	P	P	11 03 19.7	+0.5
	baz=169						
JCT	Junction City	70.57	331	P	P	11 03 19.9	+0.3
	baz=152,SNR=5.7						
JCT	Junction City	70.57	331	IAmb	IAmb	11 03 20.7	
	comp=Z,15nm,1.1s						
V52A	Sevierville	70.62	346	IAmb	IAmb	11 03 19.9	
	comp=Z,9.7nm,0.8s						
OXF	Oxford	70.72	341	P	P	11 03 19.8	-0.5
	baz=161,SNR=5.1						
U55A	TA2, Sparta	70.80	349	P	P	11 03 20.7	-0.1
	baz=168						
PLAL	Pickwick Lake	70.81	342	IAmb	IAmb	11 03 21.2	
	comp=Z,7.8nm,0.8s						
T60A	Surry	70.83	352	P	P	11 03 20.9	0.0
	baz=172						
T58A	Grand View Acr	70.86	351	P	P	11 03 21.1	0.0
	baz=170						
U54A	Nelsons Funny	70.95	348	P	P	11 03 21.7	0.0
	baz=167						
WHTX	Lake Whitney,	71.00	333	P	P	11 03 22.0	0.0
	baz=154						
T57A	Hurt	71.01	350	P	P	11 03 22.1	+0.1
	baz=170						
T56A	Rocky Mt	71.16	350	P	P	11 03 23.4	+0.5
	baz=169						
V48A	Smith Brothers	71.23	344	IAmb	IAmb	11 03 23.9	
	comp=Z,12nm,0.8s						
TXAR	Lajitas Array	71.24	327	P	P	11 03 24.0	+0.3
	comp=Z,1.3nm,0.7s,baz=145,slow=6.9,SNR=20						
TXAR				pP	pP	11 04 13.5	+1.9
	comp=Z,0.5nm,0.8s,baz=156,slow=9.6,SNR=2.4						
T55A	Pulaski	71.36	349	P	P	11 03 24.4	+0.3
	baz=168						
S60A	Water View	71.38	352	P	P	11 03 24.1	0.0
	baz=172						
BLA	Blacksburg	71.40	349	P	P	11 03 24.4	0.0
	baz=169						
T54A	Tazewell	71.44	348	P	P	11 03 24.6	0.0
	baz=168						
CLTN	Cedars of Leba	71.45	344	IAmb	IAmb	11 03 25.1	
	comp=Z,6.6nm,0.7s						
S58A	Poland Farm, P	71.46	351	P	P	11 03 24.9	+0.3
	baz=171						
T53A	Wise	71.53	347	P	P	11 03 24.8	-0.3
	baz=167						
S57A	Dark Hollow, R	71.72	351	P	P	11 03 26.1	-0.1
	baz=170						
S56A	Natural Bridge	71.72	350	P	P	11 03 26.4	+0.1
	baz=169						
R58B	Mineral	71.78	351	P	P	11 03 27.1	+0.6
	baz=171						
WVT	Waverly	71.84	343	P	P	11 03 26.9	0.0
	baz=162						
WVT	Waverly	71.84	343	P	P	11 03 26.6	-0.3
S55A	Lewisburg	71.96	349	P	P	11 03 27.8	+0.1
	baz=169						
MIAR	Mount Ida	71.98	338	P	P	11 03 27.7	-0.1
	baz=157						
S54A	Dingess, Beckl	72.11	349	P	P	11 03 28.5	-0.1
	baz=168						
R58A	Rapidan	72.13	351	P	P	11 03 29.0	+0.4
	baz=171						
W41B	Gary Mavity, V	72.15	339	P	P	11 03 29.1	+0.3
	baz=158						
R57A	Stanardsville	72.19	351	P	P	11 03 29.7	+0.7
	baz=170						
ABTX	Abilene, Hawle	72.40	332	P	P	11 03 30.9	+0.6
	baz=152						
R55A	Marlinton	72.40	350	P	P	11 03 31.2	+0.9
	baz=169						
R55A	Marlinton	72.40	350	IAmb	IAmb	11 03 32.3	
	comp=Z,12nm,0.9s						
R54A	Victor	72.44	349	P	P	11 03 30.6	+0.1
	baz=168						
MAW	Mawson	72.53	162	P	P	11 03 30.9	+0.1
	comp=Z,3.9nm,0.4s,baz=199,slow=7.6,SNR=9.7						
MAW	Mawson	72.53	162	IAmb	IAmb	11 03 31.5	
	comp=Z,2.2nm,1.0s						
W39A	Magazine	72.64	338	P	P	11 03 32.1	+0.4
	baz=157,SNR=7.4						
W39A	Magazine	72.64	338	IAmb	IAmb	11 03 33.1	
	comp=Z,13nm,0.8s						
LCAR	Lake Charles	72.66	340	IAmb	IAmb	11 03 32.5	
	comp=Z,13nm,0.7s						
LCAR					pP	11 04 20.6	+0.7
Q58A	Fox Den Farm,	72.72	352	P	P	11 03 32.8	+0.7
	baz=171						
Q57A	Strasburg	72.90	351	P	P	11 03 34.3	+1.1
	baz=170						
Q56A	Snyder Ridge,	73.01	351	P	P	11 03 34.7	+0.9
	baz=170						
Q55A	Buckhannon	73.09	350	P	P	11 03 35.1	+0.8
	baz=169						
PBMO	Poplar Bluff	73.13	341	IAmb	IAmb	11 03 35.1	
	comp=Z,12nm,0.7s						
Q53A	Leroy	73.18	349	P	P	11 03 35.6	+0.8
	baz=168						
Q54A	Coxs Mills	73.19	349	P	P	11 03 34.9	0.0
	baz=168						
P58A	Pank, Wackersv	73.22	352	P	P	11 03 35.8	+0.9
	baz=171						
P59A	Jarrettsville	73.24	353	P	P	11 03 36.1	+1.0
	baz=172						
P57A	Homestead Farm	73.30	352	P	P	11 03 36.3	+0.9
	baz=171						
U40A	Yellville	73.43	339	P	P	11 03 36.2	-0.1
	baz=158,SNR=13						
U40A	Yellville	73.43	339	IAmb	IAmb	11 03 37.0	
	comp=Z,11nm,0.7s						
X34A	Smith Ranch, M	73.47	334	IAmb	IAmb	11 03 37.6	
	comp=Z,10nm,0.6s						
WCI	Wyandotte Cave	73.49	345	P	P	11 03 36.4	-0.2
	baz=164						
HHAR	Hobbs	73.69	338	IAmb	IAmb	11 03 38.5	
	comp=Z,8.6nm,1.0s						
P54A	Burton	73.75	350	P	P	11 03 38.4	+0.2
	baz=169						
O58A	Lewisberry	73.80	353	P	P	11 03 39.3	+0.9
	baz=172						

O60A Telford 73.84 354 P P 11 03 39.6 +1.0
baz=173
O59A Robesonia 73.91 353 P P 11 03 39.9 +0.8
baz=172
WMOK Wichita Mounta 73.94 334 P P 11 03 39.5 +0.1
baz=153
TUL1 Leonard 73.95 336 P P 11 03 39.4 0.0
baz=156
O57A Amberson 73.97 352 P P 11 03 39.6 +0.2
baz=171
MNTX Cornudas Mount 74.03 327 P P 11 03 39.2 -0.8
baz=148,SNR=10
MNTX Cornudas Mount 74.03 327 pP 11 04 29.8 +1.5
P51A Williamsport 74.05 348 P P 11 03 39.7 -0.2
baz=166
O56A Blue Knob Stat 74.14 351 P P 11 03 40.7 +0.3
baz=170
O55A Ligonier 74.17 351 P P 11 03 40.7 +0.1
baz=170
P50A Jamestown 74.31 347 P P 11 03 41.1 -0.2
baz=166
N60A Cedar Hill Far 74.37 354 P P 11 03 42.0 +0.4
baz=173
PAL Palisades 74.41 355 P P 11 03 42.0 +0.2
baz=174
P49A Miami Univ. Ec 74.42 346 P P 11 03 41.5 -0.5
baz=165
SSPA Standing Stone 74.42 352 P P 11 03 42.1 +0.2
baz=171
N59A State Game Lan 74.47 354 P P 11 03 42.9 +0.6
baz=173
N58A Sunbury 74.49 353 P P 11 03 42.9 +0.5
baz=172
N57A Milroy 74.50 352 P P 11 03 42.7 +0.3
baz=171
CCM Cathedral Cave 74.55 341 P P 11 03 42.9 +0.2
baz=160
CCM Cathedral Cave 74.55 341 P P 11 03 42.7 0.0
CCM IAmb IAmb 11 03 43.5
comp=Z,23nm,1.2s
O51A Pataskala 74.62 348 P P 11 03 42.8 -0.4
baz=167
N55A Marion Center 74.70 351 P P 11 03 44.0 +0.4
baz=170
ACSO Alum Creek Sta 74.77 348 P P 11 03 43.8 -0.2
baz=167
M60A Port Jervis 74.78 355 P P 11 03 44.8 +0.8
baz=174
O50A Cable 74.80 347 P P 11 03 43.8 -0.4
baz=166
MSTX Muleshoe 74.83 330 P P 11 03 44.6 0.0
baz=150
MSTX Muleshoe 74.83 330 IAmb IAmb 11 03 45.5
comp=Z,10.0nm,0.9s
O49A Covington 74.97 347 P P 11 03 44.9 -0.2
baz=166
M58A Price's Panora 74.99 353 P P 11 03 45.5 +0.2
baz=172
N54A Moraine State 75.01 350 P P 11 03 45.4 0.0
baz=169
R40A Maddies Statio 75.05 340 P P 11 03 44.9 -0.7
M59A Waymart 75.06 354 P P 11 03 46.3 +0.6
baz=173
AMTX Amarillo 75.19 332 P P 11 03 46.3 -0.4
baz=151
O48A Farmland 75.20 346 P P 11 03 45.7 -0.7
baz=165
M56A Emporium 75.29 352 P P 11 03 46.8 -0.1
baz=171
M56A Emporium 75.29 352 P P 11 03 47.4 +0.4
M56A IAmb IAmb 11 03 53.7
comp=Z,29nm,1.4s
N50A Nevada 75.32 348 P P 11 03 46.8 -0.3
baz=166
N51A Ashland 75.33 348 P P 11 03 46.8 -0.4
baz=167
M55A Ridgway 75.34 351 P P 11 03 47.7 +0.4
baz=170
M55A Ridgway 75.34 351 P P 11 03 47.2 0.0
M55A IAmb IAmb 11 03 48.4
comp=Z,8.7nm,0.7s
L60A Shokan 75.41 355 P P 11 03 48.4 +0.8
baz=174
M54A Oil Creek Stat 75.50 351 P P 11 03 48.3 +0.1
baz=170
M53A WI Miller and 75.58 350 P P 11 03 49.0 +0.4
baz=169
L58A Harry Jones Me 75.60 354 P P 11 03 49.1 +0.4
baz=173
L57A Andrews Acres 75.65 353 P P 11 03 49.5 +0.5
baz=172
N49A Columbus Grove 75.66 347 P P 11 03 48.8 -0.2
baz=166
N49A Columbus Grove 75.66 347 P P 11 03 48.8 -0.2
L59A Walton 75.67 354 P P 11 03 50.3 +1.1
baz=173
N48A Decatur 75.76 346 P P 11 03 48.7 -0.9
baz=165
BINY Binghamton 75.76 354 P P 11 03 49.9 +0.2
baz=173
HRV Adam Dziewonsk 75.77 357 P P 11 03 50.1 +0.5
baz=176
L61B Northampton 75.77 356 P P 11 03 50.2 +0.6
baz=176
M52A Chesterland 75.78 349 P P 11 03 49.1 -0.6
baz=168
121A Cookes Peak, D 75.83 326 P P 11 03 51.4 +1.0
baz=146,SNR=5.7
121A Cookes Peak, D 75.83 326 IAmb IAmb 11 03 52.6
comp=Z,7.6nm,0.8s
L56A Greenwood 75.86 352 P P 11 03 50.3 +0.1
baz=171
N47A Urbana 75.91 346 P P 11 03 49.5 -1.0
baz=164
M50A Fremont 75.92 348 P P 11 03 49.8 -0.7
baz=167
L55A Hinsdale 76.01 352 P P 11 03 51.8 +0.8
baz=171
K61A Williamstown 76.02 356 P P 11 03 51.8 +0.8
baz=175
L53A Girard 76.02 350 P P 11 03 51.4 +0.3
baz=169
ERPA Erie 76.14 351 P P 11 03 51.8 0.0
baz=169
M49A Liberty Center 76.15 347 P P 11 03 51.9 +0.1
baz=166
L54A Sinclairville 76.17 351 P P 11 03 52.4 +0.5
baz=170
K59A Cooperstown 76.24 355 P P 11 03 52.5 +0.2
baz=174
K58A Earlville 76.29 354 P P 11 03 53.5 +0.9
baz=173
K56A Middlesex 76.39 353 P P 11 03 53.3 +0.1
baz=172
K54A Basiliko Farm, 76.46 352 P P 11 03 54.2 +0.7
baz=170
L50A Kingsville 76.50 348 P P 11 03 52.9 -0.8
baz=167
K55A Perry 76.50 352 P P 11 03 54.0 +0.3
baz=171
P38A Dawn 76.65 340 IAmb IAmb 11 03 56.5
comp=Z,5.6nm,0.6s
L48A N Adams 76.69 347 P P 11 03 54.5 -0.4
baz=166
J59A Piesco 76.90 355 P P 11 03 56.6 +0.6
baz=174
J56A Wolcott 76.92 353 P P 11 03 56.1 +0.1
baz=172
N41A Harden Midland 76.93 342 P P 11 03 55.5 -0.7
BOSA Boshof 76.99 116 P P 11 03 57.1 0.0
comp=Z,4.3nm,0.5s,baz=228,slow=3.5,SNR=12
BOSA Boshof 76.99 116 IAmb IAmb 11 04 08.8
comp=Z,13nm,1.1s
TUC Tucson 77.10 324 P P 11 03 57.1 -0.4
baz=144
KSU1 Kansas State U 77.12 337 P P 11 03 56.7 -0.5
baz=155
I58A Old Forge 77.16 355 P P 11 03 57.9 +0.5
baz=174
I59A Olmsteadville 77.18 355 P P 11 03 57.8 +0.2
baz=174
K50A Casco 77.18 349 P P 11 03 57.3 -0.2
baz=167
I60A Shoreham 77.19 356 P P 11 03 57.8 +0.3
baz=175
I61A Oroboro, Fairl 77.22 357 P P 11 03 58.7 +1.0
baz=176
ANMO Albuquerque 77.24 328 P P 11 03 59.3 +1.0
baz=148
ANMO Albuquerque 77.24 328 P P 11 03 59.2 +0.8
I63A Otisfield 77.27 358 P P 11 03 59.5 +1.5
baz=177
J52A Paris 77.31 350 P P 11 03 58.4 +0.2
baz=169
K48A Perry 77.47 348 P P 11 03 58.8 -0.3
baz=166
LBNH Lisbon 77.51 357 P P 11 04 00.5 +1.1
baz=176
H61A Lyndonville 77.81 357 P P 11 04 02.4 +1.4
baz=176
J49A Marlette 77.84 348 P P 11 04 00.2 -1.0
baz=167
214A Organ Pipe Nat 77.84 322 P P 11 04 02.7 +1.2
baz=143
CBKS Cedar Bluff 77.92 335 P P 11 04 02.6 +0.8
baz=153
I55A Frankford 77.93 353 P P 11 04 02.2 +0.6
baz=171
I51A Listowel 77.94 350 P P 11 04 01.8 +0.1
baz=168,SNR=5.5
H59A Cadyville 78.01 356 P P 11 04 02.7 +0.6
baz=175
J47A Sunmer 78.02 347 P P 11 04 02.1 -0.1
baz=165
LONY Lake Ozonia 78.05 355 P P 11 04 02.4 +0.1
baz=174
H56A Elgin 78.16 354 P P 11 04 03.1 +0.2
baz=172
H55A Tweed 78.21 353 P P 11 04 03.6 +0.4
baz=172
T25A Trinidad 78.24 331 P P 11 04 04.9 +1.1
baz=149,SNR=13
G63A Kingsbury 78.31 359 P P 11 04 05.0 +1.2
baz=178
H53A Bobcaygeon 78.39 352 P P 11 04 04.5 +0.4
baz=170
G62A West of Eustis 78.44 358 P P 11 04 05.4 +1.0
baz=177
G61A St-Isidore-de- 78.54 357 P P 11 04 06.1 +1.1
baz=176
H52A Wyevale 78.61 351 P P 11 04 05.7 +0.3
baz=169
PLVO Plevna 78.68 353 IAmb IAmb 11 04 07.1
comp=Z,15nm,1.0s
I47A Gladwin 78.72 348 P P 11 04 06.0 0.0
baz=166
I48A Sherman Twp 78.74 348 P P 11 04 06.1 +0.1
baz=166
JFWS Jewell Farm 78.86 343 P P 11 04 07.6 +0.8
baz=161
G53A Haliburton 78.93 352 P P 11 04 07.9 +0.8
baz=170
F64A Shenan 79.04 359 P P 11 04 08.6 +1.0
baz=179
X16A Lo Mia Camp, P 79.12 324 P P 11 04 09.6 +1.0
X16A IAmb IAmb 11 04 10.8
comp=Z,7.5nm,0.9s
G54A Lake Saint Pet 79.14 353 P P 11 04 08.8 +0.5
baz=171
KSCO Kaye Shedlock' 79.15 333 P P 11 04 09.9 +1.3
baz=151
SDCO Great Sand Dun 79.20 330 P P 11 04 10.0 +0.8
baz=148,SNR=8.6
F60A Warwick 79.24 357 P P 11 04 09.5 +0.8
baz=176
E60A Ste Agathe de 79.62 357 P P 11 04 11.0 +0.2
baz=177
F52A Sundridge 79.68 352 P P 11 04 11.1 0.0
baz=170
ALGO Algonquin Park 79.69 353 P P 11 04 11.3 +0.1
baz=171
BGNE Belgrade 79.70 337 P P 11 04 11.9 +0.4
baz=154
G47A Hillman 79.72 348 P P 11 04 11.9 +0.6
baz=166
GLA Glamis 79.75 321 P P 11 04 12.6 +0.8
baz=142
S22A 4UR Ranch, Cre 79.76 329 P P 11 04 13.0 +0.8
baz=148,SNR=5.4
F51A Arnstein 79.88 351 P P 11 04 12.5 +0.3
baz=169
G45A Suttons Bay 79.91 347 P P 11 04 12.7 +0.3
baz=165
WUAZ Wupatki 79.98 325 P P 11 04 14.0 +0.8
baz=144
E56A St. Veronique 80.00 355 P P 11 04 13.1 +0.2
baz=174
F49A Sandfield 80.01 350 P P 11 04 12.8 -0.1
baz=168
MVCO Mesa Verde 80.04 328 P P 11 04 14.3 +0.7
baz=146
E54A Lac Daplat, Po 80.08 353 P P 11 04 13.5 +0.3
baz=172
IKP In-Ko-Pah, Jac 80.12 320 P P 11 04 14.7 +0.8
baz=141
F48A Evansville 80.16 349 P P 11 04 13.7 0.0
baz=167
SWSC Sam W. Stewart 80.18 321 P P 11 04 15.3 +1.2
baz=141
D63A Stockholm 80.21 360 P P 11 04 14.9 +1.0
baz=179
D62A Allapoint, All 80.27 359 P P 11 04 15.2 +1.0
baz=179
D57A Chemin Vers le 80.39 356 P P 11 04 15.5 +0.6
baz=174
D58A Chemin du LacG 80.41 356 P P 11 04 15.9 +0.9
baz=175
E51A G1948 Merrick 80.42 352 P P 11 04 15.5 +0.4
baz=170
BAR Barrett 80.44 320 P P 11 04 17.1 +1.5
BAR IAmb IAmb 11 04 17.5
comp=Z,11nm,0.9s
MONP2 Monument Peak 80.47 320 P P 11 04 15.7 -0.3
baz=140
E50A Wahnapitae 80.47 351 P P 11 04 16.7 +1.3
baz=169
D56A ZEC Mazanza, M 80.48 355 P P 11 04 15.7 +0.4
baz=174
D55A Sainte-Anne-du 80.50 355 P P 11 04 15.9 +0.4
baz=173
F45A CMU Biological 80.51 347 P P 11 04 15.6 0.0
baz=165
BC3 Big Chuckawall 80.55 321 P P 11 04 16.7 +0.5
baz=141
TORD Torodi Ar. Bea 80.61 67 P P 11 04 17.4 +0.5
comp=Z,0.4nm,0.3s,baz=268,slow=6.7,SNR=11
TORD pP pP 11 05 06.2 +0.3
comp=Z,1.1nm,0.7s,baz=278,slow=5.2,SNR=3.3
I37A Lemond, Waseca 80.69 341 P P 11 04 16.6 0.0
E48A Lockeyer 80.73 350 P P 11 04 16.6 -0.1
baz=168
D54A Lac Fusel, La 80.74 354 P P 11 04 16.2 -0.5
baz=172
D53A Lac Vacive, Po 80.77 353 P P 11 04 16.8 -0.1
baz=171
D53A Lac Vacive, Po 80.77 353 P P 11 04 17.0 +0.1
IRM Iron Mountain 80.78 322 P P 11 04 18.0 +0.6
baz=141
E47A Iron Bridge 80.87 349 P P 11 04 17.5 0.0
baz=167
E46A Sault Ste Mari 80.96 348 IAmb IAmb 11 04 18.7
comp=Z,14nm,1.1s
D51A Lot 18 Range I 80.96 352 P P 11 04 17.8 -0.1
baz=170
ISCO Idaho Springs 81.00 331 P P 11 04 19.6 +0.9
baz=148,SNR=7.7
SMCO Snowmass 81.03 330 IAmb IAmb 11 04 21.3
comp=Z,6.2nm,0.8s
XPFO Pion Flat 81.04 321 P P 11 04 19.5 +0.7
PFO Pinyon Flats O 81.04 321 P P 11 04 20.3 +1.4
baz=140
PFO Pinyon Flats O 81.04 321 P P 11 04 19.8 +0.9
D50A G1974 Best Tow 81.09 352 P P 11 04 18.7 +0.1
baz=170
BELC Belle Mtn. Jos 81.10 321 P P 11 04 20.2 +1.0
baz=141
ECSD EROS Data Cent 81.33 339 P P 11 04 19.8 -0.2
baz=156,SNR=15
ECSD EROS Data Cent 81.33 339 IAmb IAmb 11 04 20.8
comp=Z,14nm,0.8s
D48A Paudash Townsh 81.36 350 P P 11 04 20.0 0.0
baz=168
D47A Chapleau 81.43 349 P P 11 04 20.0 -0.4
baz=167
E43A Lone Tree Farm 81.45 347 IAmb IAmb 11 04 21.7
comp=Z,15nm,0.9s
E44A Grand Marais A 81.48 347 P P 11 04 21.1 +0.4
baz=164
GMRC Granite Mounta 81.53 322 P P 11 04 22.1 +0.7
baz=141,SNR=5.2
HEC Hector,Ludlow 81.92 321 P P 11 04 24.7 +1.3
baz=141
N23A Red Feather La 82.07 332 P P 11 04 25.3 +1.0
baz=148
BFSC Mount Baldy Ra 82.16 320 P P 11 04 25.8 +1.1
baz=140
PHWY Pilot Hill 82.22 332 P P 11 04 25.5 +0.4
PHWY IAmb IAmb 11 04 26.6
comp=Z,9.2nm,0.9s
O20A White River Ci 82.36 330 P P 11 04 26.9 +1.2
baz=147
F36A Milaca 82.44 342 IAmb IAmb 11 04 26.1
comp=Z,8.1nm,0.9s
SRU San Rafael Swe 82.51 328 P P 11 04 27.0 +0.5
SUSD Miller 82.69 338 P P 11 04 27.6 +0.5
baz=154
EDW2 Edwards Air Fo 82.83 320 P P 11 04 28.5 +0.4
baz=140
DRLN Deer Lake 82.92 7 P P 11 04 28.5 +0.4
DRLN IAmb IAmb 11 04 30.9
comp=Z,20nm,1.3s
CHGQ Chibougamau 83.30 356 P P 11 04 29.8 -0.2
baz=174
MATQ Matagami 83.41 353 P P 11 04 30.7 +0.1
baz=171
FURC Furnace Creek, 83.45 322 P P 11 04 32.3 +1.2
baz=140
MPMC Manual Prospec 83.46 321 P P 11 04 32.3 +0.9
baz=140
TPNV Topopah Spring 83.51 323 P P 11 04 32.7 +1.1
baz=141
ISA Isabella, Lake 83.68 321 P P 11 04 33.7 +1.3
baz=139
K22A Casper 83.79 332 P P 11 04 34.2 +1.3
baz=148
PKM Mcpherson Peak 83.82 319 P P 11 04 34.2 +1.0
baz=138
EYMN Ely 83.90 344 P P 11 04 33.3 +0.2
baz=160
CWC Cottonwood Cre 84.06 321 P P 11 04 35.1 +0.7
baz=140
GRAC Grapevine Rang 84.11 322 P P 11 04 35.8 +1.2
baz=140
RSSD Black Hills 84.12 335 P P 11 04 35.3 +0.7
baz=150
RSSD Black Hills 84.12 335 P P 11 04 35.0 +0.4
VES Vestal, Richgr 84.14 320 P P 11 04 35.5 +0.9
baz=139,SNR=5.7
SMMC Simmler 84.23 319 P P 11 04 36.5 +1.3
baz=138
R11A Troy Canyon, C 84.27 324 P P 11 04 36.4 +0.9
baz=141,SNR=9.5
R11A Troy Canyon, C 84.27 324 P P 11 04 36.2 +0.7
DUG Dugway, Tooele 84.42 327 P P 11 04 37.2 +1.1
baz=143
TIN Tinemaha, Big 84.61 322 P P 11 04 38.1 +1.0
baz=140
VOG Valley Oaks Go 84.66 320 P P 11 04 38.2 +1.0
baz=139
HWUT Hardware Ranch 85.00 329 IAmb IAmb 11 04 41.0
comp=Z,8.8nm,0.7s
BW06 Boulder Array 85.10 330 P P 11 04 39.6 0.0
baz=146,SNR=6.9
PDAR Pinedale Array 85.10 330 P P 11 04 39.5 0.0
comp=Z,2.8nm,0.9s,baz=140,slow=5.6,SNR=23
AGMN Agassiz Nation 85.30 342 P P 11 04 40.1 0.0
baz=156,SNR=6.6
AGMN Agassiz Nation 85.30 342 IAmb IAmb 11 04 40.9
comp=Z,7.1nm,0.7s
MLAC Mammoth, Mammo 85.36 322 P P 11 04 42.2 +1.2
baz=139
MDPB Devils Postpil 85.48 321 pP 11 05 33.3 +2.1
NVAR Mina Array Bea 85.69 322 P P 11 04 43.7 +1.1
comp=Z,2.3nm,0.7s,baz=145,slow=6.1,SNR=14
MDND Maddock 85.95 339 P P 11 04 43.7 +0.4
baz=154
ELK Elko 85.98 326 IAmb IAmb 11 04 45.4
comp=Z,5.1nm,0.8s
REDW Red Top Meadow 86.13 330 P P 11 04 44.5 -0.1
IMW Indian Meadow 86.60 330 P P 11 04 47.2 +0.2
IMW IAmb IAmb 11 04 48.4
comp=Z,7.2nm,0.7s
FLWY Flagg Ranch 86.66 330 IAmb IAmb 11 04 48.5
comp=Z,8.6nm,0.7s
H17A Grant Village 86.86 331 P P 11 04 49.4 +1.2
baz=145
RLMT Red Lodge 86.94 332 P P 11 04 48.9 +0.4
baz=146,SNR=20
ULM Lac du Bonnet 87.10 342 P P 11 04 49.0 +0.2
comp=Z,2.2nm,0.4s,baz=154,slow=3.6,SNR=11
ULM Lac du Bonnet 87.10 342 IAmb IAmb 11 04 49.6
comp=Z,4.8nm,0.8s
LAO LASA Array 87.11 335 P P 11 04 48.1 -1.0
baz=148,SNR=7.2
LAO LASA Array 87.11 335 P P 11 04 47.1 -1.9
LAO IAmb IAmb 11 04 50.3
comp=Z,18nm,1.2s
DGMT Dagmar 87.94 337 P P 11 04 53.7 +0.7
baz=150,SNR=10
SCHQ Schefferville 88.02 0 P P 11 04 52.5 -0.5
comp=Z,1.1nm,0.6s,baz=173,slow=9.3,SNR=3.6
SCHQ Schefferville 88.02 0 IAmb IAmb 11 04 53.6
comp=Z,8.4nm,1.2s
MCMT McKenzie Canyo 88.16 330 P P 11 04 55.2 +0.9
EGMT Eagleton 89.53 333 P P 11 05 00.6 +0.1
baz=146
MSO Missoula 90.22 330 P P 11 05 04.0 +0.3
baz=143
J05D Fort Rock, OR 90.80 324 P P 11 05 08.1 +1.5
baz=138
YKA Yellowknife Ar 102.86 340 P Pdif 11 06 00.3 -0.1
comp=Z,0.2nm,0.4s,baz=134,slow=4.8,SNR=6.2
TOLK Toolik Lake Re 117.96 336 P PKiKP 11 10 48.6 +0.6
baz=110
ASAR Alice Springs 119.53 203 PKP PKPdf 11 10 51.2 -1.3
comp=Z,0.1nm,0.4s,baz=119,slow=1.5,SNR=4.1
ASAR SKP SKPdf 11 14 06.5 -2.2
comp=Z,0.3nm,0.8s,baz=137,slow=1.7,SNR=4.4
WRA Warramunga Arr 122.84 205 PKP PKPdf 11 10 57.7 -1.2
comp=Z,0.7nm,0.4s,baz=168,slow=1.6,SNR=22
WRA SKP SKPdf 11 14 13.5 -1.6
comp=Z,0.2nm,0.5s,baz=171,slow=1.7,SNR=1.4
TIXI Tiksi 140.83 352 PKhKP PKPpre 11 11 26.2
comp=Z,2.7nm,0.5s,baz=66,slow=2.8,SNR=4.9
PETK Petropavlovsk- 142.45 315 PKhKP PKPpre 11 11 30.4
comp=Z,2.3nm,0.8s,baz=99,slow=8.9,SNR=4.5
YAK Yakutsk 149.42 344 PKPbc PKPdf 11 11 47.7 +1.7
comp=Z,18nm,0.4s,baz=216,slow=3.7,SNR=4.8
ZALV Zalesovo Beam 151.79 35 PKPbc PKiKP 11 11 56.9 +0.1
comp=Z,2.8nm,0.5s,baz=300,slow=3.7,SNR=6.1
ZALV pPKPbc pPKPbc 11 12 47.6 -1.1
comp=Z,2.8nm,0.6s,baz=298,slow=3.4,SNR=3.8
MKAR Makanchi Array 153.65 51 PKPbc PKiKP 11 12 01.1 +0.2
comp=Z,0.2nm,0.5s,baz=307,slow=4.2,SNR=2.9
MKAR pPKPbc pPKPbc 11 12 53.7 +0.5
comp=Z,0.5nm,0.6s,baz=293,slow=2.4,SNR=3.5
SONM Songino Array 165.03 16 PKPab PKPab 11 13 04.6 +0.7
comp=Z,0.3nm,0.3s,baz=8.7,slow=1.9,SNR=2.1

NEIC ***05*** *10:53:08.2±1.3, 22.31°N±0.09°×143.6°E±0.2, h108km±7km, mb4.2/10, Error ellipse: s-maj=25.3km s-min=12.8km az=78.0*

IDC ***05*** *10:53:09.8±3.0, 22.32°N×143.59E, h123km±27km, mb3.6/14, mb1 3.7/16, mb1mx3.5/54, mbtmp4.0/16, Error ellipse: s-maj=22.1km s-min=14.1km az=87.0*

ISC 05 10:53:09.2±0.7, 22.36°N±0.09°×143.5°E±0.2, h118km, n28, σ0.5°74/27, mb4.1/19, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	4.86	346	P	P	Pn	10 54 20.6	+0.3
	8.1nm,0.3s,baz=334,slow=20,SNR=14							
JCJ				S	S	Sn	10 55 14.1	-1.5
	24nm,0.3s,baz=242,slow=23,SNR=9.8							
MJAR	Matsushiro Arr	14.86	343	P	P		10 56 35.6	-0.4
	0.1nm,0.3s,baz=155,slow=9.5,SNR=6.7							
KSRS	Korea Array	20.17	322	P	Pn		10 57 37.4	+0.1
	2.6nm,0.6s,baz=147,slow=8.8,SNR=22							
KLR	Kul'dur	28.39	344	P	P		10 58 53.5	+1.3
	5.6nm,0.6s,baz=158,slow=8.1,SNR=15							
SONM	Songino Array	39.02	320	P	P		11 00 25.0	+0.6
	0.4nm,0.6s,baz=132,slow=8.3,SNR=2.4							

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WB0	**Warramunga Arr**	**42.81**	**193**	P	**P**	**11 00 54.4**	**-1.1**
WB0				IAmb	IAmb	11 01 13.5	
	comp=Z,4.2nm,1.1s						
WR0	**Warramunga Arr**	**42.97**	**192**	P	**P**	**11 00 56.6**	**-0.1**
WR0				IAmb	IAmb	11 01 10.8	
	comp=Z,6.3nm,1.4s						
WRAB	**Tennant Creek**	**42.98**	**193**	P	**P**	**11 00 56.0**	**-0.8**
WRAB				IAmb	IAmb	11 01 08.3	
	comp=Z,9.2nm,1.5s						
WB2	**Warramunga Arr**	**42.99**	**193**	P	**P**	**11 00 56.5**	**-0.4**
WB2				IAmb	IAmb	11 01 06.0	
	comp=Z,4.3nm,1.2s						
WRA	**Warramunga Arr**	**42.99**	**193**	P	**P**	**11 00 56.5**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=11,slow=8.3,SNR=20						
ASAR	**Alice Springs**	**46.70**	**192**	P	**P**	**11 01 26.1**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=10,slow=7.8,SNR=8.6						
CHGN	**Chignik**	**54.06**	**36**	P	**P**	**11 02 20.4**	**-0.9**
MKAR	**Makanchi Array**	**54.47**	**312**	P	**P**	**11 02 25.5**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=85,slow=10,SNR=5.7						
KURK	**Kurchatov**	**57.20**	**317**	P	**P**	**11 02 44.4**	**+0.6**
KURK				IAmb	IAmb	11 02 45.2	
	comp=Z,5.3nm,1.2s						
KURBB	**Kurchatov Arra**	**57.25**	**317**	P	**P**	**11 02 44.9**	**+0.7**
	comp=Z,2.6nm,0.5s,baz=95,slow=7.8,SNR=15						
CNPM	**China Poot**	**58.47**	**33**	P	**P**	**11 02 52.6**	**0.0**
TRF	**Thorofare Moun**	**59.62**	**28**	P	**P**	**11 03 00.5**	**-0.2**
TRF				IAmb	IAmb	11 03 01.1	
	comp=Z,1.9nm,0.8s						
ILAR	**Eielson Array**	**61.31**	**27**	P	**P**	**11 03 11.2**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=255,slow=5.8,SNR=8.7						
BVAR	**Borovoye Array**	**62.37**	**319**	P	**P**	**11 03 19.9**	**+0.7**
	comp=Z,2.4nm,0.4s,baz=90,slow=7.4,SNR=12						
SCRK	**Sand Creek**	**62.47**	**28**	P	**P**	**11 03 20.0**	**+0.2**
INK	**Inuvik**	**66.84**	**24**	P	**P**	**11 03 48.2**	**+0.3**
	comp=Z,1.4nm,1.0s,baz=272,slow=6.0,SNR=4.6						
INK	**Inuvik**	**66.84**	**24**	IAmb	IAmb	11 03 48.6	
	comp=Z,1.4nm,0.9s						
YKA	**Yellowknife Ar**	**75.73**	**28**	P	**P**	**11 04 41.9**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=292,slow=5.5,SNR=8.4						
NVAR	**Mina Array Bea**	**82.50**	**52**	P	**P**	**11 05 19.6**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=287,slow=6.0,SNR=5.2						
FINES	**FINESS Array B**	**82.71**	**335**	P	**P**	**11 05 18.8**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=68,slow=4.5,SNR=17						
AKASG	**Malin Array Be**	**87.14**	**325**	P	**P**	**11 05 40.6**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=50,slow=5.7,SNR=2.0						
PLCA	**Paso Flores**	**145.96**	**131**	PKPbc	**PKPbc**	**11 12 35.4**	**0.0**
	comp=Z,0.6nm,0.5s,baz=226,slow=7.5,SNR=3.6						
LPAZ	**La Paz**	**149.58**	**84**	PKPbc	**PKPbc**	**11 12 46.8**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=198,slow=3.2,SNR=3.5						

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*DDA **05** 11:01:45.5, 38°.72N×43°.53E, h0km±1km, ML2.7*
*ISK **05** 11:01:45.0, 38°.76N×43°.45E, h5km, ML2.9/7*
*ATA **05** 11:01:46.2±2.2, 38°.74N×43°.41E, h20km±14km, ML2.3, MW3.0*
ISC 05 11:01:46.8±0.9**, 38°.76N**±0°.02×**43°.44E**±0°.03**, h15**km±7km**, n24,** σ1s.**35**/42**, 3D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	**Van**	**0.17**	**194**	PG	**Pg**	**11 01 51.3**	**+0.2**
VANB				SG	**Sb**	**11 01 55.9**	**+0.9**
TVAN	**Van**	**0.23**	**187**	*e*P	**Pg**	**11 01 51.2**	**-0.9**
TVAN				*e*S	**Sb**	**11 01 58.0**	**+1.0**
TVAN				IAML		11 02 01.8	
	comp=Z,1μm,0.8s						
TVAN	**Van**	**0.23**	**187⇓**	*i*P	**Pg**	**11 01 51.3**	**-0.9**
TVAN				*i* S	**Sb**	**11 01 56.6**	**-0.3**
TVAN				IAML		11 01 57.0	
	comp=N,2μm,0.4s						
VMUR	**Van-Muradiye**	**0.25**	**24⇓**	*i*P	**Pg**	**11 01 51.2**	**-1.3**
VMUR				*i* S	**Sg**	**11 01 56.4**	**+0.2**
VMUR				IAML		11 01 58.0	
	comp=N,3μm,0.3s						
CLDR	**Caldiran**	**0.53**	**44**	PG	**Pg**	**11 01 56.1**	**-1.3**
CLDR				SG	**Sg**	**11 02 04.8**	**+0.2**
CLDR	**Caldiran**	**0.53**	**44**	*i* P	**Pg**	**11 01 56.0**	**-1.5**
CLDR				*i* S	**Sg**	**11 02 04.6**	**0.0**
CLDR				IAML		11 02 06.0	
	comp=E,462nm,0.6s						
GEVA	**Gevas**	**0.54**	**214**	*e*P	**Pg**	**11 01 56.7**	**-0.9**
GEVA	**Gevas**	**0.54**	**214⇓**	*i*P	**Pg**	**11 01 56.5**	**-1.0**
GEVA				*i* S	**Sb**	**11 02 06.5**	**+0.7**
AKDM	**Akdamar-Van**	**0.56**	**220**	PG	**Pg**	**11 01 57.3**	**-0.7**
ADCV	**BITLIS_Adilcev**	**0.56**	**275**	*i* P	**Pb**	**11 01 58.3**	**-0.3**
ADCV				*i* S	**Sn**	**11 02 08.8**	**-0.9**
MLAZ	**Malazgirt-MUS**	**0.79**	**299**	PG	**Pg**	**11 02 01.9**	**-0.4**
DYDN	**Diyadin**	**0.81**	**14**	*e*P	**Pb**	**11 02 01.8**	**-0.9**
DYDN				*e*S	**Sb**	**11 02 14.5**	**+1.0**
DYDN				IAML		11 02 24.7	
	comp=Z,53nm,0.7s						
DYDN	**Diyadin**	**0.81**	**14**	*i* P	**Pb**	**11 02 01.8**	**-0.9**
DYDN				*i* S	**Sb**	**11 02 14.6**	**+1.0**
AGRB	**Hanur-Agry**	**0.89**	**337**	PG	**Pb**	**11 02 03.2**	**-0.9**
BLIS	**Bitlis-Merkez**	**1.10**	**252**	*e*P	**Pb**	**11 02 06.8**	**-0.7**
BLIS				*e*S	**Sn**	**11 02 22.7**	**0.0**
BLIS				IAML		11 02 28.0	
	comp=Z,64nm,0.7s						
BLIS	**Bitlis-Merkez**	**1.10**	**252**	*i* P	**Pb**	**11 02 07.0**	**-0.6**
BLIS				*i* S	**Sn**	**11 02 22.7**	**0.0**
GURO	**Guroymak-BITLI**	**1.12**	**260**	PN	**Pb**	**11 02 07.6**	**-0.4**
GURO				SN	**Sn**	**11 02 24.5**	**+1.1**
IGDI	**IGDIR**	**1.21**	**24**	*e*P	**Pn**	**11 02 09.7**	**+0.4**
IGDI				*e*S	**Sg**	**11 02 29.8**	**+3.8**
IGDI				IAML		11 02 31.0	
	comp=N,15nm,0.6s						
HAKT	**HAKKARI**	**1.22**	**170**	*i* P	**Pn**	**11 02 07.5**	**-2.0**
HAKT				*i* S	**Sg**	**11 02 30.4**	**+4.1**
EATA	**Eleskirt**	**1.33**	**326**	*e*P	**Pg**	**11 02 12.6**	**+0.2**
EATA				*e*S	**Sg**	**11 02 32.5**	**+2.8**
EATA				IAML		11 02 34.9	
	comp=N,17nm,0.4s						
MUSM	**Mu-Merkez**	**1.51**	**269**	*e*P	**Pg**	**11 02 15.3**	**-0.5**
MUSM				*e*S	**Sg**	**11 02 35.0**	**-0.5**
MUSM				IAML		11 02 38.7	
	comp=Z,8.7nm,1.1s						
CUKT	**Cukurca**	**1.52**	**175**	PN	**Pb**	**11 02 14.9**	**+0.2**
DIGO	**Kars**	**1.65**	**358**	*e*P	**Pb**	**11 02 17.9**	**+0.7**
KRIK	**Erzurum-spir**	**2.50**	**310**	*e*P	**Pb**	**11 02 32.7**	**+1.1**
KRIK				*e*S	**Sg**	**11 03 05.5**	**-1.9**

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*IDC **05** 11:04:12.7±1.7, 19°.51S×71°.39W, h0km, mb3.6/3, mb1 3.8/6, mb1mx3.6/31, mbtmp3.6/6, ML3.3/3, MS2.9/1, Ms1 2.9/1, ms1mx2.5/21, Error ellipse: s-maj=36.7km s-min=21.3km az=74.0*
*NEIC **05** 11:04:12.5±1.9, 19°.33S±0°.03×71°.04W±0°.02, h11km±6km, mb4.2/4, Error ellipse: s-maj=5.2km s-min=2.1km az=155.0*
*GUC **05** 11:04:15.1±0.5, 19°.29S×71°.01W, h38km±2km, ML3.7*
ISC 05 11:04:11.0±1.8**, 19°.29S**±0°.03×**71°.04W**±0°.06**, h5**km±11km**, n49,** σ1s.**04**/59**, mb3.8**/5**, 3C-5D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.92**	**109⇑**	*i*P	**Pn**	**11 04 30.1**	**-0.6**
PSGC				*i* S	**Sb**	**11 04 42.0**	**0.0**
PSGC				IAML		11 04 42.5	
	comp=N,3μm,0.6s						
PSGCX	**Pisagua**	**0.92**	**109**	Pg	**Pn**	**11 04 30.1**	**-0.6**
PSGCX				Sg	**Sb**	**11 04 41.7**	**-0.3**
PB12	**IPOC Station P**	**0.95**	**45⇓**	*i*P	**Pn**	**11 04 31.2**	**+0.1**
PB12				*i* S	**Sn**	**11 04 43.8**	**-1.4**
PB12				IAML		11 04 45.0	
	comp=E,3μm,0.6s						
PB12	**IPOC Station P**	**0.95**	**45**	Pg	**Pn**	**11 04 31.2**	**+0.1**
PB12				Sg	**Sn**	**11 04 43.6**	**-1.6**
AP01	**Chacalluta**	**1.13**	**36**	*e*P	**Pn**	**11 04 34.2**	**+0.7**
AP01				*i* S	**Sn**	**11 04 48.8**	**-0.6**
AP01				IAML		11 04 51.9	
	comp=N,3μm,0.6s						
TA02	**Huaiquique**	**1.30**	**139**	*e*P	**Pg**	**11 04 36.4**	**+0.5**
TA02				*e*S	**Sn**	**11 04 53.0**	**-0.5**
TA02				IAML		11 04 54.2	
	comp=N,3μm,0.3s						
MNMC	**Minye Minye**	**1.38**	**84⇑**	*i*P	**Pg**	**11 04 37.9**	**+0.5**
MNMC				*i* S	**Sg**	**11 04 55.7**	**+0.4**
MNMC				IAML		11 04 59.5	
	comp=E,3μm,0.2s						
MNMC	**Minye Minye**	**1.38**	**84**		**Pg**	**11 04 37.9**	**+0.5**
PB11	**IPOC Station P**	**1.39**	**110⇑**	*i*P	**Pb**	**11 04 37.8**	**+0.3**
PB11				*i* S	**Sg**	**11 04 55.4**	**-0.2**
PB11				IAML		11 04 57.9	
	comp=E,4μm,0.8s						
PB11	**IPOC Station P**	**1.39**	**110**	Pn	**Pb**	**11 04 37.8**	**+0.3**
TA01	**Diego Aracena**	**1.50**	**148⇓**	*i*P	**Pn**	**11 04 39.0**	**+0.4**
TA01				*e*S	**Sn**	**11 04 57.1**	**-1.5**
TA01				IAML		11 05 00.9	
	comp=N,865nm,0.2s						
PATCX	**Punta Patache**	**1.73**	**151⇓**	*i*P	**Pn**	**11 04 42.2**	**+0.4**
PATCX				IAML		11 05 11.2	
	comp=E,853nm,0.5s						
PATCX	**Punta Patache**	**1.73**	**151**		**Pn**	**11 04 42.3**	**+0.4**
PB16	**IPOC Station P**	**1.74**	**57**	*e*P	**Pb**	**11 04 43.7**	**-0.1**
PB16				*e*S	**Sg**	**11 05 06.2**	**-0.7**
PB16				IAML		11 05 09.1	
	comp=N,624nm,0.4s						
PB16	**IPOC Station P**	**1.74**	**57**	Pn	**Pb**	**11 04 43.6**	**-0.1**
GO01	**Chusmiza**	**1.78**	**102⇓**	*i*P	**Pb**	**11 04 44.1**	**-0.4**
GO01				*i* S	**Sb**	**11 05 06.5**	**-0.8**
GO01				IAML		11 05 10.6	
	comp=N,2μm,0.2s						
GO01	**Chusmiza**	**1.78**	**102**		**Pb**	**11 04 44.2**	**-0.3**
PB08	**IPOC Station P**	**1.97**	**116**	*e*P	**Pn**	**11 04 46.5**	**+1.1**
PB08				*i* S	**Sb**	**11 05 11.8**	**-0.8**
PB08				IAML		11 05 15.1	
	comp=N,949nm,0.2s						
PB08	**IPOC Station P**	**1.97**	**116**		**Pb**	**11 04 46.6**	**-1.0**
PB01	**IPOC Station P**	**2.27**	**140**	*e*P	**Pn**	**11 04 49.9**	**+0.6**
PB01				*i* S	**Sn**	**11 05 16.4**	**-1.4**
PB01				IAML		11 05 24.2	
	comp=E,522nm,0.3s						
PB01	**IPOC Station P**	**2.27**	**140**		**Pn**	**11 04 49.7**	**+0.4**
PB02	**IPOC Station P**	**2.29**	**152⇓**	*i*P	**Pn**	**11 04 50.2**	**+0.7**
PB02				*i* S	**Sn**	**11 05 15.7**	**-2.4**
PB02				IAML		11 05 26.4	
	comp=E,869nm,0.3s						
PB07	**IPOC Station P**	**2.65**	**156**	*e*P	**Pn**	**11 04 54.9**	**+0.3**
PB07				IAML		11 05 53.4	
	comp=E,354nm,0.6s						
PB07	**IPOC Station P**	**2.65**	**156**		**Pn**	**11 04 54.8**	**+0.3**
PB09	**IPOC Station P**	**3.01**	**146**	*e*P	**Pn**	**11 05 01.0**	**+1.5**
PB09				IAML		11 05 47.0	
	comp=E,343nm,0.5s						
PB09	**IPOC Station P**	**3.01**	**146**		**Pn**	**11 05 00.7**	**+1.2**
PB06	**IPOC Station P**	**3.66**	**158**	*e*P	**Pn**	**11 05 08.2**	**-0.3**
PB06				IAML		11 06 25.3	
	comp=E,148nm,0.6s						
PB06	**IPOC Station P**	**3.66**	**158**		**Pn**	**11 05 08.2**	**-0.3**
LVC	**Limon Verde**	**3.85**	**149**	Pn	**Pn**	**11 05 13.1**	**+1.8**
	comp=E,3.8nm,0.3s,baz=2.9,slow=10,SNR=11						
LVC				Sn	**Sn**	**11 05 57.8**	**+0.6**
	comp=E,10.0nm,0.3s,baz=129,slow=11,SNR=6.8						
LVC				Lg	Lg	11 06 13.6	
	comp=E,18nm,0.3s,baz=144,slow=12,SNR=3.7						
LVC				LR	LR	11 06 43.3	
	comp=E,145nm,19.9s,baz=238,slow=39						
LVC	**Limon Verde**	**3.85**	**149**		**Pn**	**11 05 12.9**	**+1.6**
LPAZ	**La Paz**	**4.08**	**43**	Pn	**Pb**	**11 05 23.4**	**-0.3**
	comp=E,0.6nm,0.3s,baz=250,slow=5.1,SNR=14						
LPAZ	**La Paz**	**4.08**	**43**		**Pb**	**11 05 20.4**	**-3.3**
PB15	**IPOC Station P**	**4.16**	**160**		**Pn**	**11 05 15.0**	**-0.4**
PB10	**IPOC Station P**	**4.22**	**174**		**Pn**	**11 05 15.1**	**-0.9**
PB14	**IPOC Station P**	**5.34**	**174**		**Pn**	**11 05 30.2**	**-1.5**
GO02	**Mina Guanaco**	**5.99**	**167**		**Pn**	**11 05 40.4**	**-0.3**
AC02	**Maricunga**	**7.71**	**167**	Pn	**Pn**	**11 06 04.7**	**+0.2**
AC05	**El Transito**	**9.53**	**176**	Pn	**Pn**	**11 06 27.7**	**-1.3**
SIV	**San Ignacio**	**10.05**	**72**	Pn	Pn	11 06 42.0	+5.8
	comp=E,0.3nm,0.3s,baz=259,slow=10,SNR=3.5						
H03N1	**Juan Fernandez**	**15.75**	**205**	T	T	11 24 50.2	
	baz=31,slow=73,SNR=26						
H03N2	**Juan Fernandez**	**15.75**	**205**	T	T	11 24 44.2	
	baz=31,slow=73,SNR=16						
H03N3	**Juan Fernandez**	**15.77**	**205**	T	T	11 24 53.2	
	baz=31,slow=73,SNR=18						
PLCA	**Paso Flores**	**21.37**	**179**	P	**P**	**11 09 00.9**	**+1.5**
	comp=E,2.0nm,0.8s,baz=346,slow=14,SNR=3.9						
PLCA	**Paso Flores**	**21.37**	**179**	P	**P**	**11 08 58.4**	**-1.0**
PLCA				IAmb	IAmb	11 09 03.1	
	comp=Z,13nm,1.4s						
PTGA	**Pitinga**	**21.40**	**32**	P	**P**	**11 08 58.3**	**-1.5**
PTGA				IAmb	IAmb	11 09 08.6	
	comp=Z,9.8nm,1.4s						
RUSC	**La Rusia**	**25.11**	**355**	P	**P**	**11 09 37.7**	**+0.2**
QSPA	**South Pole Qui**	**70.89**	**180**	P	**P**	**11 15 30.5**	**+1.5**
QSPA				IAmb	IAmb	11 15 45.7	
	comp=Z,6.6nm,1.4s						
TORD	**Torodi Ar. Bea**	**78.53**	**72**	P	P	11 16 19.8	+5.9
	comp=Z,0.3nm,0.6s,baz=254,slow=6.8,SNR=1.7						
YKA	**Yellowknife Ar**	**88.46**	**341**	P	**P**	**11 17 05.5**	**+1.6**
	comp=Z,0.2nm,0.6s,baz=141,slow=5.3,SNR=4.1						

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*MOS **05** 11:08:42.9±1.2, 19°.74N×99°.76E, h10km, mb5.9/138, MS6.2/70, Error ellipse: s-maj=5.3km s-min=2.9km az=119.2*
*BJI **05** 11:08:42.4±0.0, 19°.56N×99°.61E, h20km, mB6.2/66, mb6.1/46, ML6.3/4, Ms6.7/97, Ms7 6.5/90*
*IDC **05** 11:08:42.9±0.3, 19°.78N×99°.75E, h0km, mb5.2/47, mb1 5.2/49, mb1mx5.2/56, mbtmp5.2/49, ML4.8/2, MS6.1/69, Ms1 6.1/69, ms1mx6.0/74, Error ellipse: s-maj=10.0km s-min=8.4km az=61.0*
*NEIC **05** 11:08:43.9, 19°.70N×99°.68E, h6km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.13; $M_{\theta\theta}$-1.14; $M_{\phi\phi}$1.27; $M_{r\theta}$-0.00; $M_{\theta\phi}$1.30; $M_{\phi r}$-0.17; Fault plane solution: $M_0$1.78000×10^{18} NP1:ϕ_s248.67000°, δ84.95000°, λ1.52000°. NP2:ϕ_s158.53000°, δ88.49000°, λ174.94000°. Principal axes: T 1.8464, Plg5.0000°, Azm114.0000°; N -0.1352, Plg85.0000°, Azm322.0000°; P -1.7112, Plg2.0000°, Azm204.0000°;*
*NEIC **05** 11:08:43.4±1.1, 19°.66N±0°.05×99°.67E±0°.05, h6km±1km, mb5.8/247, Ms_20 6.3/819, Mwb6.1/61, Mww6.1, Mwc6.2(GCMT) Error ellipse: s-maj=9.5km s-min=6.3km az=128.0*
*GCMT **05** 11:08:46.4±0.1, 19°.72N×99°.68E, h12km, MW6.2/165, Moment Tensor Solution. s165,c369; s163,c611; Duration: 3s.0 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.03±.01; $M_{\theta\theta}$-1.61±.01; $M_{\phi\phi}$1.64±.01; $M_{r\theta}$-0.13±.03; $M_{\theta\phi}$1.60±.01; $M_{\phi r}$0.34±.03; Best double couple: $M_0$2.30900×10^{18} NP1:ϕ_s67.00000°, δ81.00000°, λ0.00000°. NP2:ϕ_s337.00000°, δ90.00000°, λ171.00000°. Principal axes: T 2.3250, Plg6.0000°, Azm292.0000°; N -0.0280, Plg81.0000°, Azm157.0000°; P -2.2930, Plg6.0000°, Azm23.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **05** 11:08:47, 19°.71N×99°.70E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.03; $M_{\theta\theta}$-1.67; $M_{\phi\phi}$1.69; $M_{r\theta}$0.14; $M_{\theta\phi}$1.73; $M_{\phi r}$0.16; Fault plane solution: $M_0$2.42000×10^{18} NP1:ϕ_s68.00000°, δ88.00000°, λ5.00000°. NP2:ϕ_s338.00000°, δ85.00000°, λ178.00000°. Principal axes: T 2.4411, Plg5.0000°, Azm293.0000°; N -0.0402, Plg85.0000°, Azm93.0000°; P -2.4009, Plg2.0000°, Azm203.0000°;*
*BGR **05** 11:08:48.1±0.0, 18°.66N×99°.00E, h33km, mb5.9, mB_BB6.1, Ms6.2*
*NEIC **05** 11:08:54, 19°.56N×99°.56E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.07; $M_{\theta\theta}$-0.97; $M_{\phi\phi}$1.04; $M_{r\theta}$-0.57; $M_{\theta\phi}$0.95; $M_{\phi r}$0.01; Fault plane solution: $M_0$1.50000×10^{18} NP1:ϕ_s65.00000°, δ82.00000°, λ-20.00000°. NP2:ϕ_s158.00000°, δ70.00000°, λ-171.00000°. Principal axes: T 1.4473, Plg8.0000°, Azm113.0000°; N 0.1013, Plg68.0000°, Azm224.0000°; P -1.5485, Plg20.0000°, Azm20.0000°;*
*KLM **05** 11:08:54.0, 19°.60N×99°.88E, h70km, mb5.7*
ISC 05 11:08:45.7±0.4**, 19°.62N**±0°.02×**99°.70E**±0°.02**, h15**km±2km**, h15**km**:pP-P, n1506,** σ2s.**02**/1359**, mb5.7**/374**, MS6.3**/531**, 95C-33D, Thailand**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAYA	**Payao**	**0.30**	**148**	P	**Pg**	**11 08 50.2**	**-1.8**
PAYA				S	**Sb**	**11 08 58.9**	**+1.4**
CMMT	**Chiang Mai**	**1.07**	**222**	P	**Pb**	**11 09 03.7**	**-2.2**
CMMT				S	**Sn**	**11 09 20.6**	**-0.2**
CHTO	**Chiang Mai**	**1.07**	**222**	P	**Pb**	**11 09 03.7**	**-2.3**
CHTO						11 09 20.7	
CHTO	**Chiang Mai**	**1.07**	**222**		**Pb**	**11 09 03.7**	**-2.3**
CHTO					**Sn**	**11 09 20.7**	**-0.1**
LAMP	**Lampang**	**1.09**	**184**	P	**Pb**	**11 09 04.1**	**-2.1**
LAMP				S	**Sn**	**11 09 22.2**	**+1.0**
NANT	**Nan**	**1.24**	**131**	P	**Pn**	**11 09 05.7**	**-2.8**
CM31	**Chiang Mai Arr**	**1.36**	**212**		**Pn**	**11 09 08.3**	**-1.8**
CMAR	**Chiang Mai Arr**	**1.36**	**212**	Pg	**Pn**	**11 09 08.9**	**-1.2**
	3μm,0.3s,baz=18,slow=15,SNR=1993						
CMAR				LR	LR	11 09 50.5	
	comp=Z,1883μm,20.1s,baz=310,slow=44						
UTTA	**Uttaradit**	**2.03**	**156**	P	**Pn**	**11 09 18.0**	**-1.3**
UTTA				S	**Sb**	**11 09 48.0**	**+0.7**
MHMT	**Maesarieng**	**2.21**	**230**	P	**Pn**	**11 09 23.4**	**+1.7**
PHIT	**Phitsanulok**	**2.51**	**164**	P	**Pn**	**11 09 24.8**	**-1.1**
PHIT				S	**Sb**	**11 10 01.7**	**+0.6**
PBKT	**Sadao Pong**	**3.26**	**158**	P	**Pn**	**11 09 35.2**	**-1.0**
PBKT	**Sadao Pong**	**3.26**	**158**		**Pn**	**11 09 35.2**	**-1.0**
UMPA	**Umpang Tak**	**3.48**	**193**	P	**Pn**	**11 09 42.2**	**+2.8**
NONG	**Nongkai**	**3.61**	**115**	P	**Pn**	**11 09 39.1**	**-2.0**
CHAI	**Chaiyaphum**	**4.29**	**149**	P	**Pn**	**11 09 50.2**	**-0.1**
SLVN	**Son La**	**4.29**	**66**	Pn	**Pn**	**11 09 48.2**	**-2.3**
SRDT	**SRDT**	**5.27**	**186**	P	**Pn**	**11 10 03.5**	**-0.3**
SRAK	**Srakaew**	**6.00**	**158**	P	Pn	11 10 19.2	+5.2
KMI	**Kunming**	**6.16**	**27**	Pn	**Pn**	**11 10 17.4**	**+1.1**
KMI				Sg	**Sg**	**11 12 06.3**	**+2.8**
KMI				LR	LR		
	comp=N,73μm,8.3s						
KMI				LR	LR		
	comp=E,79μm,8.8s						
KMI				LR	LR		
	comp=Z,50μm,8.7s						
KMI	**Kunming**	**6.16**	**27**	P	**Pn**	**11 10 14.4**	**-2.0**
KMI	**Kunming**	**6.16**	**27**		**Pn**	**11 10 14.3**	**-2.0**
PHET	**Kaeng Krachan**	**6.67**	**181**	P	**Pn**	**11 10 22.6**	**-0.5**
KOHI	**KOHIMA**	**7.97**	**321**	*e*x	**Pn**	**11 10 42.0**	**+0.9**
BRDH	**Bariadhala**	**8.12**	**293**	Pn	**Pn**	**11 10 43.0**	**0.0**
	37nm,0.3s,baz=87,slow=9.8,SNR=20						
BRDH				Lg	Lg	11 12 48.0	
	31nm,0.3s,baz=141,slow=17,SNR=4.2						
BRDH				LR	LR	11 15 00.5	
	comp=Z,313μm,19.0s,baz=148,slow=47						
LKP	**Lekhapani**	**8.46**	**336**	*e*x	**Pn**	**11 10 50.5**	**+2.9**
SHL	**Shillong**	**9.34**	**311**	*e*P	**Pn**	**11 10 57.0**	**-3.0**
SHL				IAmb	IAmb	11 11 01.9	
	comp=Z,2μm,1.7s						
SHL	**Shillong**	**9.34**	**311**	P	**Pn**	**11 10 57.3**	**-2.6**
SHL	**Shillong**	**9.34**	**311**		**Pn**	**11 10 57.3**	**-2.6**
GYA	**Guiyang**	**9.35**	**42⇑**	*i*P	**Pn**	**11 10 59.0**	**-1.0**
GYA				S	**Sn**	**11 12 50.1**	**+5.1**
GYA				pmax	pmax		
	comp=Z,100nm,1.3s						
GYA				pmax	pmax		
	comp=Z,4μm,11.0s						
GYA				LR	LR		
	comp=Z,143μm,13.3s						
GYA				LR	LR		
	comp=Z,117μm,11.2s						
GYA				LR	LR		
	comp=Z,211μm,11.7s						
TEZP	**TEZPUR**	**9.43**	**319**	*e*P	Pn	11 10 53.8	-7.2
QIZ	**Qiongzhong**	**9.59**	**92**	P	**Pn**	**11 11 01.2**	**-2.1**
QIZ				pP		11 11 06.1	
QIZ				S	**Sn**	**11 12 52.8**	**+2.0**
QIZ				pmax	pmax		
	comp=Z,5μm,12.3s						
QIZ				LR	LR		
	comp=Z,527μm,13.1s						
QIZ				LR	LR		
	comp=Z,253μm,13.5s						
QIZ				LR	LR		
	comp=Z,176μm,20.1s						
QIZ	**Qiongzhong**	**9.59**	**92**		**Pn**	**11 11 03.1**	**-0.2**
GUWA	**GUWAHATI**	**9.87**	**313**	*e*P	**Pn**	**11 11 02.6**	**-4.4**
GUWA				IAmb	IAmb	11 11 09.3	
	comp=Z,70nm,0.8s						
PBA	**Port Blair**	**10.37**	**221**	*e*P	Pn	11 11 13.8	-0.1
SURT	**Suratani**	**10.63**	**185**	P	**Pn**	**11 11 21.9**	**+4.4**
SRIT	**Nakonsritamara**	**10.96**	**181**	P	**Pn**	**11 11 24.9**	**+3.0**
DHUB	**DHUBRI**	**10.99**	**307**	*e*P	**Pn**	**11 11 18.9**	**-3.4**
KRAB	**Krabi**	**11.34**	**183**	P	Pn	11 11 37.8	+11
DLV	**T Lat**	**11.38**	**131**		**Pn**	**11 11 27.1**	**-0.8**
TRTT	**Trang**	**11.71**	**180**	P	**Pn**	**11 11 35.2**	**+2.9**
CD2	**Chengdu**	**11.83**	**17**	P	**Pn**	**11 11 31.4**	**-2.5**
CD2				S	**Sn**	**11 13 38.6**	**-7.1**
CD2				pmax	pmax		
	comp=Z,600nm,1.9s						
CD2				LR	LR		
	comp=Z,252μm,8.6s						
CD2				LR	LR		
	comp=Z,409μm,14.4s						
SKLT	**Songkhla**	**12.40**	**176**	P	Pn	11 11 47.0	+5.2
LSA	**Lhasa**	**12.69**	**324**	P	**Pn**	**11 11 46.0**	**-0.1**
LSA				S	**Sn**	**11 14 04.5**	**-3.0**
LSA				pmax	pmax		
	comp=Z,620nm,2.3s						
LSA				LR	LR		
	comp=Z,446μm,14.2s						
LSA				LR	LR		
	comp=Z,786μm,22.1s						
LSA	**Lhasa**	**12.69**	**324**	P	**Pn**	**11 11 46.3**	**+0.2**
LSA	**Lhasa**	**12.69**	**324**	Pn	**Pn**	**11 11 46.3**	**+0.2**
LSA	**Lhasa**	**12.69**	**324**	P	**Pn**	**11 11 47.0**	**+0.8**
LSA				P	**Pn**	**11 11 47.0**	**+0.8**
LSA	**Lhasa**	**12.69**	**324**	P	**Pn**	**11 11 44.7**	**-1.4**
LSA	**Lhasa**	**12.69**	**324**		**Pn**	**11 11 44.7**	**-1.4**
GTK	**Tadong**	**12.74**	**309**	*e*P	Pn	11 11 40.7	-5.9
BWNR	**Bhubaneshwar**	**13.09**	**275**	*e*P	**Pn**	**11 11 49.4**	**-1.7**
BWNR				IAmb	IAmb	11 11 56.4	
	comp=Z,103nm,1.0s						
BWNR				*i* x	x	11 15 55.0	
GZH	**Guangzhou**	**13.17**	**72**	P	**P**	**11 11 57.5**	**-4.7**
GZH				PP	**PnPn**	**11 12 08.3**	**+8.2**
GZH				S	Sn	11 14 30.5	+12
GZH				LR	LR		
	comp=Z,99μm,8.4s						
GZH				LR	LR		
	comp=Z,150μm,10.1s						
ODAN	**Odare**	**13.41**	**305**	*e*P	**Pn**	**11 11 53.0**	**-2.8**
	comp=Z,676nm,0.8s						
TAPN	**Taplejung**	**13.42**	**307**	*e*P	**Pn**	**11 11 52.9**	**-3.1**
	comp=Z,406nm,0.7s						
BOK	**Bokaro**	**13.50**	**290**	*e*P	**Pn**	**11 11 52.7**	**-4.0**
HKPS	**Hong Kong Po S**	**13.75**	**76**	Pn	**Pn**	**11 11 59.4**	**-0.7**
ENH	**Enshi**	**13.82**	**38**		**Pn**	**11 11 59.9**	**-1.3**
RAMN	**Ramite**	**14.07**	**304**	*e*P	**Pn**	**11 12 02.1**	**-2.7**
	comp=Z,511nm,0.8s						
KULM	**Kulim**	**14.27**	**176**	P	**P**	**11 12 11.9**	**-2.6**
KULM	**Kulim**	**14.27**	**176**	P	**P**	**11 12 13.0**	**-1.5**
LHMI	**Lhok Sumawe**	**14.55**	**191**		**Pn**	**11 12 12.1**	**+1.0**
JIRN	**Jiri**	**14.74**	**305**	*e*P	**Pn**	**11 12 10.4**	**-3.6**
IPM	**Ipoh**	**15.10**	**175**		**Pn**	**11 12 19.4**	**+0.8**
IPM				IAmb	IAmb	11 12 46.0	
	comp=Z,453nm,1.5s						
IPM	**Ipoh**	**15.10**	**175**	P	**P**	**11 12 22.0**	**-1.8**
GUN	**Gumba**	**15.10**	**306**	*e*P	**Pn**	**11 12 15.0**	**-3.9**
PKI	**Pulchoki**	**15.30**	**304**	*e*P	**Pn**	**11 12 17.6**	**-3.9**
	comp=Z,206nm,0.7s						
PKIN	**Phulchoki**	**15.31**	**304**	*e*P	**Pn**	**11 12 17.7**	**-3.9**
	comp=Z,441nm,0.8s						
KKN	**Kakani**	**15.51**	**304**	*e*P	**Pn**	**11 12 21.1**	**-3.0**
	comp=Z,732nm,1.1s						
DMN	**Daman**	**15.56**	**303**	*e*P	**Pn**	**11 12 20.8**	**-4.0**
	comp=Z,813nm,1.2s						
MLSI	**Meulaboh, Aceh**	**15.59**	**192**	P	**P**	**11 12 29.2**	**0.0**
	comp=Z,69μmcomp=Z,31μmcomp=Z,1μm,1.2s						
KCSI	**Kotacane, Aceh**	**16.11**	**187**	P	**P**	**11 12 35.5**	**+0.6**
	comp=Z,57μmcomp=Z,23μmcomp=Z,504nm,1.2s						
GKN	**Gorkha**	**16.11**	**304**	*e*P	**Pn**	**11 12 28.0**	**-3.8**
	comp=Z,3μm,1.3s						
TPTI		**16.44**	**189**	P	**P**	**11 12 39.2**	**+0.6**
	comp=Z,22μmcomp=Z,6μmcomp=Z,76nm,1.1s						
XAN	**Xi'an**	**16.54**	**28**	P	**Pn**	**11 12 32.4**	**-4.8**
XAN				PP	**sP**	**11 12 45.8**	**-0.4**
XAN				S	**Sn**	**11 15 44.8**	**+4.2**
XAN				sS	S	11 15 51.3	-1.0
XAN				pmax	pmax		
	comp=Z,6μm,6.5s						
XAN				LR	LR		
	comp=Z,206μm,11.9s						
XAN				LR	LR		
	comp=Z,203μm,16.0s						
XAN	**Xi'an**	**16.54**	**28**	P	**Pn**	**11 12 32.6**	**-4.6**
XAN				pmax	pmax		
	comp=Z,2μm,1.9s						
XAN	**Xi'an**	**16.54**	**28**		**Pn**	**11 12 32.6**	**-4.6**
XAN				IAmb	IAmb	11 12 53.3	

comp=Z,2µm,1.9s
PSI Prapat 16.73 183 Pn **P** **11 12 44.4 +2.4**
comp=Z,1.2nm,0.3s,baz=0.1,slow=15,SNR=48
PSI Lg Lg 11 17 31.6
comp=Z,0.2nm,0.3s,baz=0.2,slow=9.8,SNR=3.5
PSI LR LR 11 19 04.0
comp=Z,87µm,19.2s,baz=271,slow=36
PSI Prapat 16.73 183 P **P** **11 12 43.0 +1.0**
PSI pmax pmax
comp=Z,663nm,1.3s
LZH Lanzhou 16.81 12 ⇓P **Pn** **11 12 39.2 -1.5**
LZH sP pP 11 12 47.6 +0.4
LZH PP **PnPn** **11 12 52.7 +2.4**
LZH S **Sn** **11 15 45.3 -2.0**
LZH sS S 11 15 51.8 -6.1
LZH SS **SnSn** **11 16 04.3 +3.5**
LZH pmax pmax
comp=Z,11µm,5.0s
LZH LR LR
comp=Z,70µm,13.6s
LZH LR LR
comp=Z,96µm,13.0s
LZH LR LR
comp=Z,92µm,12.5s
KOLN Koldanda 16.82 302 *e*P **Pn** **11 12 37.2 -3.8**
comp=Z,1µm,1.1s
RPSI Rantau Prapat 16.83 183 P **P** **11 12 43.0 0.0**
RPSI IAmb IAmb 11 12 54.4
comp=Z,663nm,1.3s
DANN Dangsing 16.95 304 *e*P **Pn** **11 12 38.4 -4.3**
comp=Z,2µm,1.3s
WHN Wuhan 17.14 48 ⇑P **P** **11 12 46.9 +0.6**
WHN sP **sP** **11 12 53.2 +0.4**
WHN PP **PnPn** **11 13 00.1 +5.5**
WHN pmax pmax
comp=Z,6µm,4.0s
WHN LR LR
comp=Z,567µm,10.3s
WHN LR LR
comp=Z,231µm,10.9s
PVM Polavaram 17.32 265 *e*P **Pn** **11 12 46.5 -0.5**
PVM IVmB_BB 11 12 51.4
comp=Z,5µm,2.7s
PVM *e*S **Sn** **11 16 00.0 +0.5**
PVM IVMs_BB IVMs_BB 11 22 21.8
comp=Z,12µm,16.3s
SNSI Sinabang, Aceh 17.42 191 P **Pn** **11 12 48.4 +0.2**
comp=Z,12µmcomp=Z,460nm,1.0s
PYUN Piuthan 17.45 302 *e*P **Pn** **11 12 45.4 -3.4**
comp=Z,3µm,1.0s
SBSI Sibolga 17.97 183 P **P** **11 12 59.4 +3.8**
comp=Z,32µmcomp=Z,14µmcomp=Z,399nm,2.3s
KNMB Chin-men Tao 17.98 71 P **Pn** **11 12 54.3 -0.9**
MYKOM Kota Tinggi 18.17 167 P **P** **11 12 58.8 +1.0**
MYKOM Kota Tinggi 18.17 167 P **P** **11 13 01.0 +3.2**
QZH Quanzhou 18.26 70 ⇑*i*P **P** **11 13 00.4 +1.7**
QZH S **Sn** **11 16 22.9 +0.6**
QZH LR LR
comp=Z,139µm,8.5s
QZH LR LR
comp=Z,117µm,14.2s
GSI Gunungsitoli 18.32 187 P **P** **11 12 59.5 +0.1**
comp=Z,194µmcomp=Z,47µmcomp=Z,552nm,1.3s
GSI Gunungsitoli 18.32 187 P **Pn** **11 12 59.2 -0.1**
MYLAV Mylavaram 18.34 264 *e*P **Pn** **11 12 59.1 -0.6**
MYLAV IVmB_BB 11 13 06.5
comp=Z,7µm,4.6s
MYLAV *e*S **Sn** **11 16 24.3 -0.1**
MYLAV IVMs_BB IVMs_BB 11 22 54.9
comp=Z,12µm,16.3s
JBP Jabalpur 18.70 284 ⇑*e*P **Pn** **11 13 04.3 +0.4**
JBP *e*S **Sn** **11 16 30.9 -2.0**
MNSI Mandailing Nat 18.70 180 P **Pn** **11 13 04.5 +0.5**
comp=Z,35µmcomp=Z,11µmcomp=Z,255nm,2.5s
ADKI Addanki 19.17 262 *e*P **Pn** **11 13 09.4 -0.3**
ADKI IVmB_BB 11 13 14.2
comp=Z,7µm,4.7s
ADKI *e*S **Sn** **11 16 43.7 -0.6**
ADKI IVMs_BB IVMs_BB 11 25 06.0
comp=Z,8µm,14.4s
TPRI Tanjung Pinang 19.17 165 P **Pn** **11 13 12.3 +2.6**
comp=Z,330nm,1.0s
BKNI Bangkinang 19.21 176 P **Pn** **11 13 12.0 +1.8**
comp=Z,40µmcomp=Z,20µmcomp=Z,368nm,1.7s
BKNI Bangkinang 19.21 176 P **Pn** **11 13 10.8 +0.6**
BKNI IAmb IAmb 11 14 05.1
comp=Z,927nm,1.2s
RPR Rampur 19.29 271 *e*P **P** **11 13 09.7 -0.4**
RPR IVmB_BB 11 13 14.2
comp=Z,6µm,4.6s
RPR *e*S **Sn** **11 16 46.9 -0.3**
NGP Nagpur 19.42 278 *e*P **P** **11 13 10.7 -0.8**
PBSI Pulau Batu 19.60 184 P **P** **11 13 14.0 +0.6**
comp=Z,38µmcomp=Z,7µmcomp=Z,225nm,1.8s
NJS Nagarjunasagar 19.63 264 *e*P **P** **11 13 13.3 -0.5**
NJS IVmB_BB 11 13 21.3
comp=Z,5µm,4.7s
NJS *e*S **S** **11 16 51.7 -3.3**
NJS IVMs_BB IVMs_BB 11 26 25.8
comp=Z,10µm,12.9s
GTA Gaotai 19.73 0 ⇓P **P** **11 13 14.0 -0.9**
GTA pP pP 11 13 18.5 -0.8
GTA sP sP 11 13 21.1 -0.3
GTA S **S** **11 16 53.8 -3.1**
GTA sS sS 11 17 01.7 -2.3
GTA pmax pmax
comp=Z,9µm,7.9s
GTA LR LR
comp=Z,73µm,15.2s
GTA LR LR
comp=Z,120µm,17.8s
SZP Santa 19.78 93 P **P** **11 13 16.1 +0.7**
SZP IAmb IAmb 11 13 25.1
comp=Z,695nm,1.1s
TPUB Ta-pu 19.82 76 P **P** **11 13 16.5 +0.7**
TPUB IAmb IAmb 11 13 28.1
comp=Z,1µm,1.9s
RGRI Rengat 20.01 172 P Pn 11 13 20.8 +1.1
SKHT Srikalahasti 20.02 256 *e*P **P** **11 13 18.0 -0.1**
SKHT IVmB_BB 11 13 27.6
comp=Z,7µm,4.6s
SKHT *e*S **S** **11 17 01.6 -1.2**
SKHT IVMs_BB IVMs_BB 11 23 51.4
comp=Z,8µm,13.3s
SRLM Srisailam 20.11 263 *e*P **P** **11 13 19.3 +0.1**
SRLM IVmBBB 11 13 27.3
comp=Z,4µm,4.1s
SRLM *e*S **S** **11 17 05.1 +0.2**
SRLM IVMsBB 11 25 52.8
comp=Z,10µm,7.2s
SSLB Suanglung 20.17 74 P **P** **11 13 19.9 +0.1**
TWG Pinlang 20.17 77 P Pn 11 13 20.7 -0.9
TWG IAmb IAmb 11 13 57.3
comp=Z,955nm,1.2s
HYB Hyderabad 20.18 267 *i* P **P** **11 13 20.0 +0.2**
comp=Z,2µm,1.6s
HYB *e*S **S** **11 17 06.0 0.0**
HYB *e*LR LR
comp=Z,24nm,16.0s
HYB Hyderabad 20.18 267 *e*P **P** **11 13 20.0 +0.2**
HYB *i* x x 11 17 04.9
HYBB Hyderabad (bro 20.18 267 *e*P **P** **11 13 20.1 +0.3**
HYBB IVmB_BB 11 13 28.9
comp=Z,6µm,2.3s
HYBB *e*S **S** **11 17 06.2 +0.1**
HYBB IVMs_BB IVMs_BB 11 24 18.2
comp=Z,11µm,13.2s
SRSP Sriramsagar 20.18 272 *e*P **P** **11 13 18.9 -0.9**
SRSP IVmB_BB 11 13 27.0
comp=Z,6µm,3.0s
SRSP *e*S **S** **11 17 05.5 -0.5**
SRSP IVMs_BB IVMs_BB 11 26 28.4
comp=Z,10µm,9.6s
PDSI Padang 20.41 178 P Pn 11 13 25.6 +1.1
comp=Z,15µmcomp=Z,3µmcomp=Z,117nm,1.1s
SDSI Sungai Dareh 20.49 175 P Pn 11 13 26.5 +1.2
comp=Z,9µmcomp=Z,402nm,1.2s
YHNB Yeheng 20.69 72 P **P** **11 13 24.2 -1.2**
YHNB IAMs_20 IAMs_20 11 21 59.8
comp=Z,127µm,20.0s
PCPH Palayan 20.78 98 ⇑*e*P Pn 11 13 27.9 -0.9
KSM Kuching 20.80 149 P **P** **11 13 26.4 -0.2**
KSM Kuching 20.80 149 P Pn 11 13 28.0 -1.0
NACB Ninganchiao 20.81 73 P **P** **11 13 25.9 -0.7**
NACB IAMs_20 IAMs_20 11 20 33.1
comp=Z,111µm,20.0s
SISI Saibi 20.82 182 P **P** **11 13 26.4 -0.3**
comp=Z,17µmcomp=Z,6µmcomp=Z,157nm,1.4s
KKM Kota Kinabalu 20.97 128 P **P** **11 13 28.6 +0.1**
KKM IAmb IAmb 11 13 34.5
comp=Z,443nm,1.1s
KKM IAMs_20 IAMs_20 11 21 57.5
comp=Z,104µm,19.0s
SBUM Sibu 21.00 143 P **P** **11 13 28.9 +0.2**
SBUM Sibu 21.00 143 P Pn 11 13 30.0 -1.3
BHPL Bhopal 21.05 284 *e*P **P** **11 13 29.0 -0.2**
BHPL IAmb IAmb 11 13 35.0
comp=Z,925nm,1.4s
BHPL *i* x x 11 14 08.9
BHPL *e*x x 11 17 16.3
TIY Taiyuan 21.17 29 *e*P **P** **11 13 28.8 -1.7**
TIY PP **PnPn** **11 13 56.4 +6.4**
TIY S **S** **11 17 20.3 -5.3**
TIY sS **pS** **11 17 37.3 +2.3**
TIY LR LR
comp=Z,111µm,13.1s
TIY LR LR
comp=Z,42µm,9.6s
TIY LR LR
comp=Z,118µm,14.4s
NJ2 Nanjing 21.18 50 *e*P **P** **11 13 33.4 +2.8**
NJ2 pP **sP** **11 13 37.1 0.0**
NJ2 sP **pP** **11 13 41.5 +6.5**
NJ2 S **S** **11 17 26.6 +0.9**
NJ2 sS **pS** **11 17 34.7 -0.4**
NJ2 pmax pmax
comp=Z,4µm,3.5s
NJ2 LR LR
comp=Z,376µm,11.8s
NJ2 LR LR
comp=Z,96µm,9.0s
PGP Puerto Galera 21.25 103 ⇑*e*P **P** **11 13 31.6 +0.2**
LQP Lukban 21.59 101 *e*P **P** **11 13 36.2 +0.9**
KRJI Kerinci 21.64 175 P **P** **11 13 36.4 +0.7**
comp=Z,18µmcomp=Z,20µmcomp=Z,528nm,1.2s
KLRI Killari 21.92 270 *e*P **P** **11 13 38.3 -0.4**
KLRI IVmB_BB 11 13 49.7
comp=Z,6µm,2.1s
KLRI *e*S **S** **11 17 40.2 -0.4**
KLRI IVMsBB 11 26 48.1
comp=Z,11µm,12.0s
URV Uravakonda 21.92 261 *e*P **P** **11 13 37.0 -1.6**
URV IVmBBB 11 13 52.2
comp=Z,5µm,3.0s
URV *e*S **S** **11 17 39.8 -0.7**
URV IVMs_BB IVMs_BB 11 27 00.8
comp=Z,18µm,8.7s
SPMM Sapulut 22.05 130 P **P** **11 13 42.0 +1.9**
YOJ Yonaguni jima 22.13 73 IAMs_20 IAMs_20 11 22 55.2
comp=Z,77µm,18.0s
PPSI Pulau Pagai 22.24 179 P **P** **11 13 41.9 -0.1**
comp=Z,17µmcomp=Z,6µmcomp=Z,224nm,0.9s
DDI Dehra Dun 22.30 303 *e*P **P** **11 13 42.8 +0.1**
NDI New Delhi 22.39 298 *e*P **P** **11 13 42.0 -1.6**
SSE Sheshan 22.48 55 P **P** **11 13 45.2 +0.6**
SSE S **S** **11 17 51.4 +0.5**
SSE pmax pmax
comp=Z,190nm,1.4s
SSE pmax pmax
comp=Z,3µm,4.5s
SSE LR LR
comp=Z,7µm,12.9s
SSE LR LR
comp=Z,10µm,12.8s
SSE Sheshan 22.48 55 P **P** **11 13 44.5 0.0**
TIA Tai'an 22.53 39 P **P** **11 13 43.2 -1.8**
TIA S **S** **11 17 49.5 -2.2**
TIA pmax pmax
comp=Z,190nm,2.0s
TIA pmax pmax
comp=Z,4µm,7.3s
TIA LR LR
comp=Z,65µm,11.6s
TIA LR LR
comp=Z,37µm,13.0s
TIA LR LR
comp=Z,73µm,15.7s
BTO Baotou 22.71 21 *e*P **P** **11 13 46.1 -0.9**
PMBI Palembang 22.95 167 P **P** **11 13 49.0 -0.6**
JAP San Jose, Anti 23.18 109 ⇓*e*P **P** **11 13 47.4 -4.6**
KSI Kapahiang 23.30 173 P **P** **11 13 56.4 +3.3**
KSI Kapahiang 23.30 173 P **P** **11 13 54.4 +1.3**
KSI pmax pmax
comp=Z,369nm,0.9s
SMLA Simla 23.32 304 *ex* **P** **11 13 48.0 -5.2**
HHC Hu-ho-hao-te 23.47 23 P **Pn** **11 13 53.0 -1.8**
HHC PP **PnPn** **11 14 19.2 -2.2**
HHC S **S** **11 18 05.6 -2.3**
HHC pmax pmax
comp=Z,5µm,5.5s
HHC LR LR
comp=Z,61µm,13.7s
HHC LR LR
comp=Z,49µm,10.3s
HHC LR LR
comp=Z,68µm,15.7s
RCP Roxas 23.57 106 ⇑*e*P **P** **11 13 56.7 +0.8**
BHK Bhakra 24.02 304 *e*P **P** **11 14 03.0 +2.9**
BHK *ex* x 11 16 08.0
AJM Ajmer 24.03 291 ⇑*i*P **P** **11 13 59.0 -1.2**
MNAI Manna 24.04 172 P **P** **11 14 01.4 +1.1**
comp=Z,13µmcomp=Z,11µmcomp=Z,304nm,0.9s
MNAI Manna 24.04 172 P **P** **11 13 59.8 -0.5**
MNAI IAmb IAmb 11 14 35.0
comp=Z,292nm,0.9s
MDSI Maura Dua 24.35 169 P **P** **11 14 02.8 -0.4**
comp=Z,11µmcomp=Z,4µmcomp=Z,256nm,0.9s
POO Poona 24.45 272 *e*P **P** **11 14 04.0 -0.2**
POO ⇓*i*P **pP** **11 14 05.0 -4.0**
comp=Z,420nm,1.0s
POO *ex* x 11 14 40.7
POO *ex* x 11 14 51.3
POO *e*PCP **PcP** **11 17 44.7 +1.7**
POO *i* S **S** **11 18 24.0 0.0**
POO *i* x x 11 18 26.1
POO *ex* x 11 19 18.6
POO *ex* x 11 19 34.6
DHRM DHARAMSHALA 24.46 306 *e*P **P** **11 14 01.9 -2.5**
DHRM *i* x x 11 18 21.9
TRD Trivandrum 24.64 247 *e*P **P** **11 14 07.1 +1.2**
TRD IAmb IAmb 11 14 15.0
comp=Z,507nm,1.9s
BJT Baijiatuan 24.77 31 P **P** **11 14 05.1 -1.7**
BJT pmax pmax
comp=Z,445nm,1.3s
BJT MLR MLR
comp=Z,97µm,18.0s
BJT Baijiatuan 24.77 31 P **P** **11 14 05.0 -1.7**
BJT IAmb IAmb 11 14 13.6
comp=Z,445nm,1.3s
BJT Baijiatuan 24.77 31 IAMs_20 IAMs_20 11 24 43.5
comp=Z,97µm,18.0s
BJI Beijing 24.79 31 P **P** **11 14 07.1 +0.1**
BJI S **S** **11 18 31.8 +2.9**
BJI pmax pmax
comp=Z,79nm,0.7s
BJI LR LR
comp=Z,71µm,20.7s
BJI LR LR
comp=Z,105µm,19.1s
BJI LR LR
comp=Z,60µm,18.4s
LWLI Liwa 24.85 170 P **P** **11 14 06.5 -1.3**
comp=Z,258nm,0.8s
GOA Goa 25.00 265 *e*P **P** **11 14 09.8 +0.7**
BOM Bombay 25.39 273 *i* x P 11 14 02.4 -10
BLSI Bandar Lampung 25.42 167 P **P** **11 14 14.8 +2.0**
comp=Z,8µmcomp=Z,6µmcomp=Z,564nm,0.8s
KASI Kota Agung 25.42 169 P **P** **11 14 14.0 +1.1**
comp=Z,3µmcomp=Z,102nm,0.8s
WMQ Urumqi 26.15 340 P **P** **11 14 19.3 -0.1**
WMQ pP pP 11 14 22.8 -1.3
WMQ sP sP 11 14 26.1 0.0
WMQ PP **PnPn** **11 15 03.0 +5.1**
WMQ sS sS 11 19 03.5 +4.9
WMQ SS **SnSn** **11 19 51.4 +2.0**
WMQ pmax pmax
comp=Z,180nm,0.9s
WMQ pmax pmax
comp=Z,640nm,3.6s
WMQ LR LR
comp=Z,46µm,13.5s
WMQ LR LR
comp=Z,64µm,12.5s
WMQ LR LR
comp=Z,33µm,14.5s
WMQ Urumqi 26.15 340 P **P** **11 14 18.5 -0.9**
WMQ pmax pmax
comp=Z,456nm,1.3s
WMQ MLR MLR
comp=Z,52µm,21.0s
WMQ Urumqi 26.15 340 P **P** **11 14 18.5 -0.9**
CGP Cagayan de Oro 26.62 111 *e*P **P** **11 14 30.1 +6.3**
BKB Balikpapan 26.74 139 P **P** **11 14 23.9 -1.0**
BKB IAmb IAmb 11 15 19.2
comp=Z,202nm,1.1s
DBJI Dramaga 26.91 164 P **P** **11 14 26.1 -0.3**
comp=Z,13µmcomp=Z,90nm,1.1s
DL2 Dalian 27.00 40 P **P** **11 14 26.5 -0.4**
DL2 S **S** **11 19 03.3 -0.6**
DL2 pmax pmax
comp=Z,1µm,7.7s
DL2 LR LR
comp=Z,100µm,17.5s
DL2 LR LR
comp=Z,154µm,17.3s
DL2 LR LR
comp=Z,70µm,14.1s
JOW Kunigami 27.18 69 P **P** **11 14 28.2 -0.6**
comp=Z,2.8nm,0.6s,baz=85,slow=23,SNR=3.7
JOW LR LR 11 24 52.2
comp=Z,5µm,18.4s,baz=246,slow=36
JOW Kunigami 27.18 69 P **P** **11 14 28.4 -0.3**
JOW IAmb IAmb 11 14 34.9
comp=Z,248nm,1.8s
NIL Nilore 27.37 306 P **P** **11 14 31.7 +1.3**
NIL Nilore 27.37 306 P **P** **11 14 28.7 -1.7**
NIL pmax pmax
comp=Z,380nm,1.0s
NIL Nilore 27.37 306 P **P** **11 14 28.7 -1.7**
LEM Lembang 27.41 163 P **P** **11 14 32.4 +1.4**
comp=Z,45nm,1.0s,baz=328,slow=4.0,SNR=16
LEM LR LR 11 26 13.6
comp=Z,95µm,18.3s,baz=332,slow=38
MPSI Mapaga 27.54 132 P **P** **11 14 30.9 -1.2**
comp=Z,12µmcomp=Z,1µmcomp=Z,29nm,1.6s
CNJI Cibinong 27.74 164 P **P** **11 14 32.3 -1.4**
comp=Z,6µmcomp=Z,2µmcomp=Z,116nm,1.1s
KBKI Kotabaru 27.94 143 P **P** **11 14 36.9 +1.3**
comp=Z,372nmcomp=Z,24nm,0.7s
DAV Davao City (W) 28.04 113 LR LR 11 25 25.3
comp=Z,34µm,20.4s,baz=317,slow=36
DAV Davao City (W) 28.04 113 ⇑*i*P **P** **11 14 36.6 +0.1**
DAV Davao City (W) 28.04 113 P **P** **11 14 36.7 +0.1**
CISI Cisompet, Garu 28.16 163 P **P** **11 14 39.3 +1.7**
comp=Z,6µmcomp=Z,3µmcomp=Z,76nm,0.8s
CISI Cisompet, Garu 28.16 163 P **P** **11 14 37.0 -0.6**
CISI IAmb IAmb 11 15 16.3
comp=Z,266nm,1.4s
CISI IAMs_20 IAMs_20 11 26 45.1
comp=Z,101µm,20.0s
KSH Kashi 28.48 319 P **P** **11 14 40.5 +0.1**
KSH PP **PnPn** **11 15 33.2 +3.4**
KSH PcP **PcP** **11 17 54.4 +2.2**
KSH S **S** **11 19 26.6 -0.9**
KSH SS **SnSn** **11 20 49.8 +3.5**
KSH pmax pmax
comp=Z,45nm,0.9s
KSH pmax pmax
comp=Z,4µm,4.7s
KSH LR LR
comp=Z,9µm,7.2s
KSH LR LR
comp=Z,2µm,9.4s
KSH LR LR
comp=Z,38µm,11.4s
SMRI Semarang 28.53 157 P **P** **11 14 43.5 +2.6**
comp=Z,7µmcomp=Z,5µmcomp=Z,191nm,1.0s
SMRI Semarang 28.53 157 P **P** **11 14 41.8 +1.0**
SMRI IAmb IAmb 11 15 26.9
comp=Z,318nm,1.2s
SMRI IAMs_20 IAMs_20 11 26 34.0
comp=Z,87µm,20.0s
SONM Songino Array 28.67 9 P **P** **11 14 41.1 -0.9**
comp=Z,75nm,1.0s,baz=193,slow=10.0,SNR=117
SONM LR LR 11 26 57.5
comp=Z,24µm,19.9s,baz=177,slow=38
ULN Ulaanbaatar 28.81 10 ⇑*i*P **P** **11 14 42.5 -0.7**
ULN pmax pmax
comp=Z,138nm,1.1s
ULN Ulaanbaatar 28.81 10 P **P** **11 14 41.7 -1.6**
ULN IAmb IAmb 11 14 50.5
comp=Z,271nm,1.4s
MRSI Marisa 28.92 129 P **P** **11 14 44.6 +0.2**
comp=Z,10µmcomp=Z,2µmcomp=Z,62nm,1.1s
PRZ Przheval'sk 29.05 326 P **P** **11 14 44.7 -0.8**
PRZ pmax pmax
comp=Z,2µm,2.0s
PRZ MLR MLR
comp=Z,61µm,20.0s
PRZ Przheval'sk 29.05 326 P **P** **11 14 44.7 -0.8**
PRZ IAMs_20 IAMs_20 11 27 51.2
comp=Z,61µm,20.0s
YOGI Yogyakarta 29.19 158 P **P** **11 14 49.5 +2.8**
comp=Z,73nm,1.2s
UZB Uzynbulak 29.21 328 *e*P **P** **11 14 46.4 -0.4**
comp=Z,195nm,2.5s
UZB *e*S **S** **11 19 44.1 +5.1**
UZB *e*SS **SnSn** **11 21 11.6 +7.5**
UZB *e*LR LR 11 27 22.7
UZB Uzynbulak 29.21 328 *e*P **P** **11 14 46.4 -0.4**
UZB *e*S **S** **11 19 44.1 +5.1**
UZB *e*SS **SnSn** **11 21 11.5 +7.5**
UZB pmax pmax
comp=Z,195nm,2.5s
GRJI Gresik 29.21 153 P **P** **11 14 44.3 -2.6**
comp=Z,1µmcomp=Z,105nm,1.0s
UGM Wanagama 29.36 158 P **P** **11 14 50.5 +2.3**
comp=Z,4µmcomp=Z,173nm,1.9s
UGM Wanagama 29.36 158 P **P** **11 14 48.2 0.0**
WOJI Wonogiri, Jawa 29.43 157 P **P** **11 14 45.8 -3.1**
comp=Z,1µmcomp=Z,59nm,1.7s
TJN Taejon 29.44 50 *d*/*i*P **P** **11 14 47.7 -1.1**
INCN Inchon 29.45 47 IAMs_20 IAMs_20 11 27 29.0
comp=Z,64µm,18.0s
SATY Saty 29.45 327 *e*P **P** **11 14 48.5 -0.5**
comp=Z,449nm,2.1s
SATY *e*S **S** **11 19 46.7 +3.9**
SATY *e*LR LR 11 27 25.5
SATY Saty 29.45 327 *e*P **P** **11 14 48.5 -0.5**
SATY *e*S **S** **11 19 46.7 +3.9**
SATY pmax pmax
comp=Z,449nm,2.1s
PWJI Pagerwojo 29.94 155 P **P** **11 14 57.7 +4.4**
comp=Z,57nm,1.4s
TTSI Tana Toraja 29.96 137 P **P** **11 14 53.8 +0.2**
comp=Z,7µmcomp=Z,2µmcomp=Z,190nm,1.5s
KMMI Kalianget 29.99 151 P **P** **11 14 53.9 +0.1**
comp=Z,81nm,1.3s
ULHL Ulahol 30.05 324 P **P** **11 14 54.0 -0.3**
SNR=46
TNSS Tian-Shan 30.20 326 *e*P **P** **11 14 55.6 -0.3**
TNSS Tian-Shan 30.20 326 *e*P **P** **11 14 55.6 -0.3**
MDOK Medeo 30.23 326 *e*P **P** **11 14 55.2 -0.7**
MDOK *e*S **S** **11 19 57.1 +2.0**
MDOK *e*SS **ScP** **11 21 49.0 +10**
MDOK *e*LR LR 11 27 33.6
comp=Z,26µm,21.9s
MDOK Medeo 30.23 326 *e*P **P** **11 14 55.2 -0.7**
MDOK *e*S **S** **11 19 57.9 +2.8**
MDOK *e*SS **ScP** **11 21 49.0 +10**
MDOK MLR MLR
comp=Z,26µm,22.0s
ZSN Zaisan 30.28 340 *e*P **P** **11 14 56.0 -0.2**
comp=Z,297nm,3.1s
ZSN *e*S **S** **11 20 00.6 +5.1**
ZSN *e*SS **ScP** **11 21 44.0 +5.5**
ZSN *e*LR LR 11 27 14.8
ZSN Zaisan 30.28 340 *e*P **P** **11 14 56.0 -0.2**
ZSN *e*S **S** **11 20 00.6 +5.1**
ZSN pmax pmax
comp=Z,297nm,3.1s
KS19 Wonju Array Si 30.32 48 P **P** **11 14 55.3 -1.3**
KSRS Korea Array 30.33 48 P **P** **11 14 54.0 -2.7**
comp=Z,9.4nm,0.9s,baz=242,slow=8.7,SNR=23
KSRS LR LR 11 27 58.0

comp=Z,37µm,18.8s,baz=238,slow=38
KSRS Korea Array 30.33 48 P **P** **11 14 54.0 -2.7**
AAA Alma-Ata 30.33 326 *e*P **P** **11 14 56.1 -0.7**
comp=Z,2µm,2.6s
AAA *e*S **S** **11 19 53.7 -2.9**
AAA *e*LR LR 11 27 35.2
comp=Z,20µm,16.4s
AAA Alma-Ata 30.33 326 *e*P **P** **11 14 56.0 -0.7**
AAA *e*S **S** **11 19 53.6 -2.9**
AAA pmax pmax
comp=Z,2µm,2.6s
AAA MLR MLR
comp=Z,20µm,16.0s
KMSI Cibinong 30.39 126 P **P** **11 14 57.5 +0.1**
comp=Z,3µmcomp=Z,300nm,0.9s
XMIS Christmas Isla 30.48 168 P **P** **11 14 57.3 -0.8**
XMIS IAmb IAmb 11 15 18.4
comp=Z,174nm,1.4s
KZA Kyzart 30.50 323 P **P** **11 14 58.0 -0.6**
SNR=48
MNI Manado 30.52 123 P **P** **11 15 00.1 +1.6**
MNI pmax pmax
comp=Z,321nm,1.5s
LUWI Luwuk 30.56 130 P **P** **11 14 59.5 +0.6**
comp=Z,12µmcomp=Z,5µmcomp=Z,414nm,1.5s
LUWI Luwuk 30.56 130 P **P** **11 14 58.8 0.0**
MK31 Makanchi Array 30.63 336 *i* P **P** **11 14 58.4 -0.9**
MK31 Makanchi Array 30.63 336 P **P** **11 14 57.5 -1.8**
MK31 IAmb IAmb 11 15 04.5
comp=Z,141nm,1.1s
MKAR Makanchi Array 30.63 336 P **P** **11 14 58.2 -1.0**
comp=Z,51nm,0.8s,baz=139,slow=9.4,SNR=89
SPSI Sidrap Palu 30.63 138 P **P** **11 15 00.6 +1.1**
comp=Z,7µmcomp=Z,3µmcomp=Z,114nm,2.5s
MAKZ Makanchi 30.76 336 P **P** **11 14 57.5 -2.9**
ZAK Zakamensk 30.83 4 *e*P **P** **11 14 59.6 -1.5**
ZAK pmax pmax
comp=Z,76nm,1.4s
TKM2 Tokmak 2 30.85 324 P **P** **11 15 01.3 -0.2**
SNR=127
JNU Nakatsue 30.87 58 P **P** **11 15 02.0 +0.4**
comp=Z,14nm,1.0s,baz=260,slow=4.5,SNR=6.3
JNU LR LR 11 29 08.0
comp=Z,43µm,18.1s,baz=250,slow=40
TDK Taldyqorghan 30.88 330 *e*P **P** **11 15 00.1 -1.4**
TDK *e*S **S** **11 20 02.2 -2.6**
TDK *e*LR LR 11 26 56.2
comp=Z,31µm,16.7s
TDK Taldyqorghan 30.88 330 *e*P **P** **11 15 00.0 -1.4**
TDK *e*S **S** **11 20 02.2 -2.6**
TDK MLR MLR
comp=Z,31µm,17.0s
KBL Kabul 30.94 305 P **P** **11 15 04.1 +1.8**
KBL P **P** **11 15 04.1 +1.8**
KBL Kabul 30.94 305 P **P** **11 15 00.4 -1.9**
KBL pmax pmax
comp=Z,812nm,2.0s
KBL MLR MLR
comp=Z,35µm,19.0s
KBL Kabul 30.94 305 P **P** **11 15 00.4 -1.9**
UCH Uchtor 31.02 322 P **P** **11 15 04.2 +0.9**
SNR=67
KBK Karagaybulak 31.04 323 P **P** **11 15 03.7 +0.6**
SNR=54
KUU Kurty 31.11 326 *e*P **P** **11 15 01.1 -2.4**
comp=Z,806nm,2.1s
KUU *e*S **S** **11 20 08.7 +0.2**
KUU *e*SS **SnSn** **11 21 50.7 +0.5**
KUU *e*LR LR 11 29 05.7
KUU Kurty 31.11 326 *e*P **P** **11 15 01.1 -2.4**
KUU *e*S **S** **11 20 08.7 +0.2**
KUU *e*SS **SnSn** **11 21 50.7 +0.5**
KUU pmax pmax
comp=Z,806nm,2.1s
BNSI Bone 31.18 138 P **P** **11 15 02.6 -1.8**
comp=Z,2µmcomp=Z,46nm,1.2s
AAK Ala-Archa 31.29 323 LR LR 11 29 06.4
comp=Z,37µm,18.6s,baz=322,slow=39
AAK Ala-Archa 31.29 323 P **P** **11 15 04.7 -0.6**
SNR=52
AAK Ala-Archa 31.29 323 *i* P **P** **11 15 06.2 +0.9**
SNR=334
AAK Ala-Archa 31.29 323 *i* P **P** **11 15 06.2 +0.9**
SNR=334
AAK Ala-Archa 31.29 323 P **P** **11 15 07.3 +2.0**
AAK Ala-Archa 31.29 323 P **P** **11 15 04.5 -0.8**
AAK Ala-Archa 31.29 323 P **P** **11 15 04.2 -1.1**
JAGI Jajag, Banyuwa 31.33 152 P **P** **11 15 07.0 +1.4**
comp=Z,3µmcomp=Z,1µmcomp=Z,55nm,1.4s
CHMS Chumysh 31.37 324 P **P** **11 15 05.0 -0.9**
SNR=52
ARSB Arslanbob 31.38 319 P **P** **11 15 05.4 -0.7**
ARSB pmax pmax
comp=Z,928nm,2.0s
ARSB MLR MLR
comp=Z,68µm,18.0s
ARSB Arslanbob 31.38 319 P **P** **11 15 05.4 -0.7**
ARSB IAMs_20 IAMs_20 11 29 18.1
comp=Z,68µm,18.0s
KAPI Kappang 31.43 139 P **P** **11 15 07.4 +0.8**
comp=Z,14nm,1.0s,baz=8.8,slow=3.0,SNR=9.1
KAPI LR LR 11 29 00.5
comp=Z,43µm,19.0s,baz=117,slow=39
KAPI Kappang 31.43 139 P **P** **11 15 07.1 +0.5**
KAPI IAmb IAmb 11 15 56.2
comp=Z,139nm,1.2s
AML Almayashu 31.44 321 P **P** **11 15 06.3 -0.6**
SNR=57
DGZ Jazzator, Alta 31.58 345⇑ *i*P **P** **11 15 07.0 -0.8**
DGZ pmax pmax
comp=Z,62nm,1.4s
USP Ospenovka 31.69 324 P **P** **11 15 07.8 -0.9**
SNR=46
EKS2 Erkin-Say 31.71 322 P **P** **11 15 08.8 -0.2**
SNR=37
COCO West Island 31.73 185 P **P** **11 15 08.2 -0.9**
COCO pmax pmax
comp=Z,666nm,1.9s
COCO MLR MLR
comp=Z,61µm,20.0s
COCO West Island 31.73 185 P **P** **11 15 08.2 -0.9**
COCO IAMs_20 IAMs_20 11 27 48.3
comp=Z,61µm,20.0s
SGDS Sogindy 31.73 324 *e*P **P** **11 15 08.2 -0.9**
comp=Z,715nm,1.6s
SGDS *e*S **S** **11 20 17.0 -1.4**
SGDS *e*SS **SnSn** **11 22 14.1 +8.6**
SGDS *e*LR LR 11 29 33.8
GAR Garm 31.88 314 P **P** **11 15 08.6 -1.9**
GAR IAMs_20 IAMs_20 11 28 46.4
comp=Z,87µm,18.0s
BKSI Bulukumba 31.90 139 P **P** **11 15 12.0 +1.3**
comp=Z,1µmcomp=Z,42nm,1.2s
DNP Denpasar 32.00 150 P **P** **11 15 11.3 -0.2**
MOY Mondy 32.00 2 *e*P **P** **11 15 11.0 -0.4**
MOY pmax pmax
comp=Z,291nm,1.9s
TLY Talaya 32.15 5 LR LR 11 29 20.5
comp=Z,65µm,18.2s,baz=178,slow=39
TLY Talaya 32.15 5 P **P** **11 15 13.2 +0.7**
TLY P **P** **11 15 13.2 +0.7**
TLY P **P** **11 15 13.2 +0.7**
TLY Talaya 32.15 5*d* *i*P **P** **11 15 11.8 -0.8**
TLY *e* 11 16 20.8
TLY *e*S **S** **11 20 23.3 -1.3**
TLY *e*SS **SnSn** **11 22 16.5 +1.2**
TLY *e*SSS SSS 11 22 30.8
TLY pmax pmax
comp=Z,448nm,1.8s
TLY MLR MLR
comp=Z,142µm,14.0s
TLY Talaya 32.15 5 P **P** **11 15 11.4 -1.1**
TLY IAMs_20 IAMs_20 11 29 17.1
comp=Z,77µm,20.0s
CN2 Changchun 32.33 36 *e*P **P** **11 15 11.5 -2.7**
CN2 *e*PP **PnPn** **11 16 18.7 -2.1**
CN2 pmax pmax
comp=Z,30nm,0.7s
CN2 pmax pmax
comp=Z,1µm,4.0s
CN2 LR LR
comp=Z,87µm,20.0s
CN2 LR LR
comp=Z,78µm,20.0s
CN2 LR LR
comp=Z,47µm,22.0s

CHGR Chuyangaron 32.52 312 P **P** **11 15 14.5 -1.5**
CHGR IAMs_20 IAMs_20 11 30 41.3
comp=Z,82µm,22.0s
IRK Irkutsk 32.76 5 *e*P **P** **11 15 17.0 -0.9**
IRK *e* 11 16 26.6
IRK pmax pmax
comp=Z,485nm,2.0s
TNTI Ternate 32.93 121 P **P** **11 15 19.1 -0.7**
comp=Z,5µmcomp=Z,1µmcomp=Z,82nm,1.1s
TNTI Ternate 32.93 121 P **P** **11 15 18.4 -1.4**
TNTI IAmb IAmb 11 15 22.9
comp=Z,101nm,1.1s
BTLS Baital 33.09 326 *e*P **P** **11 15 19.4 -1.6**
comp=Z,214nm,1.8s
BTLS *e*S **S** **11 20 39.3 -0.1**
BTLS *e*SS **SnSn** **11 22 40.0 +1.7**
BTLS *e*LR LR 11 29 09.9
BTLS Baital 33.09 326 *e*P **P** **11 15 19.3 -1.6**
BTLS *e*S **S** **11 20 39.3 -0.1**
BTLS *e*SS **SnSn** **11 22 40.0 +1.7**
BTLS pmax pmax
comp=Z,214nm,1.8s
DZA Taraz 33.29 320 *e*P **P** **11 15 22.8 +0.1**
DZA Taraz 33.29 320 *e*P **P** **11 15 22.8 +0.1**
PLAI Plampang 33.40 146 P **P** **11 15 22.7 -1.2**
comp=Z,5µmcomp=Z,2µmcomp=Z,86nm,1.0s
JBG Jabagly 33.51 319 *e*P **P** **11 15 23.8 -0.9**
JBG *e*S **S** **11 20 45.8 -0.4**
JBG pmax pmax
comp=Z,477nm,2.4s
SANI Sanana 33.61 127 P **P** **11 15 22.3 -3.4**
comp=Z,7µmcomp=Z,903nmcomp=Z,26nm,1.1s
HIA Hailar 33.67 24 P **P** **11 15 24.8 -1.1**
HIA pmax pmax
comp=Z,360nm,1.4s
HIA MLR MLR
comp=Z,83µm,21.0s
HIA Hailar 33.67 24 P **P** **11 15 24.8 -1.1**
HIA Hailar 33.67 24 IAMs_20 IAMs_20 11 30 04.5
comp=Z,83µm,21.0s
IUG luzhnay 33.67 318 *e*P **P** **11 15 25.7 -0.5**
IUG *e*S **S** **11 20 50.9 +2.1**
IUG *e*SS **SS** **11 23 08.1 -6.1**
IUG *e*LR LR 11 29 54.1
IUG luzhnay 33.67 318 *e*P **P** **11 15 25.6 -0.5**
IUG *e*S **S** **11 20 50.8 +2.1**
TAS Tashkent 33.71 317 P **P** **11 15 25.4 -1.0**
TAS pmax pmax
comp=Z,920nm,1.4s
TAS Tashkent 33.71 317 P **P** **11 15 25.4 -1.0**
LBMI Labuha 33.88 123 P **P** **11 15 28.5 +0.4**
comp=Z,2µmcomp=Z,62nm,1.9s
KK31 Karatay Array 33.91 320 P **P** **11 15 26.3 -1.7**
KK31 pmax pmax
comp=Z,198nm,1.3s
KK31 Karatay Array 33.91 320 P **P** **11 15 26.3 -1.7**
KK31 IAmb IAmb 11 15 31.7
comp=Z,198nm,1.3s
KKAR Karatay Array 33.91 320 IAmb IAmb 11 15 31.7
comp=Z,198nm,1.3s
CHM Chimkent 34.03 318 *e*P **P** **11 15 29.6 +0.4**
CHM *e*LR LR 11 30 25.3
comp=Z,4µm,16.0s
CHM Chimkent 34.03 318 *e*P **P** **11 15 29.6 +0.4**
CHM MLR MLR
comp=Z,4µm,16.0s
CIT Chita 34.11 15 *e*P P 11 15 23.7 -6.0
CIT *e* 11 16 54.7
CIT pmax pmax
comp=Z,234nm,1.7s
BRLS Borolday 34.28 320 *e*S **S** **11 20 56.1 -1.8**
BRLS *e*SS **SnSn** **11 23 02.5 -4.6**
SEM Semipalatinsk 34.39 338 *e*P **P** **11 15 29.1 -3.3**
SEM *e*S **S** **11 21 02.3 +2.5**
SEM *e*SS **SnSn** **11 23 06.4 -3.6**
SEM *e*LR LR 11 29 30.7
comp=Z,11µm,12.6s
SEM Semipalatinsk 34.39 338 *e*P **P** **11 15 29.1 -3.3**
SEM *e*S **S** **11 21 02.3 +2.5**
SEM *e*SS **SnSn** **11 23 06.4 -3.6**
SEM MLR MLR
comp=Z,11µm,13.0s
WBSI Waikabubak, Su 34.95 145 P **P** **11 15 37.2 -0.1**
comp=Z,2µmcomp=Z,185nm,1.3s
MDJ Mudanjiang 35.19 38 P **P** **11 15 38.8 -0.3**
KURBB Kurchatov Arra 35.20 336 P **P** **11 15 37.1 -2.0**
NLAI Namlea 35.22 127 P **P** **11 15 39.0 -0.7**
comp=Z,1µmcomp=Z,51nm,1.5s
KURK Kurchatov 35.24 337 P **P** **11 15 39.5 +0.1**
KURK P **P** **11 15 39.5 +0.1**
KURK Kurchatov 35.24 337⇓ *i*P **P** **11 15 38.7 -0.7**
KURK pmax pmax
comp=Z,210nm,1.9s
KURK Kurchatov 35.24 337 IAMs_20 IAMs_20 11 29 39.3
comp=Z,63µm,19.0s
EDFI Ende, Flores 35.55 140 P **P** **11 15 42.7 +0.1**
comp=Z,3µmcomp=Z,911nmcomp=Z,41nm,1.2s
MMRI Maumere 35.79 140 P **P** **11 15 45.2 +0.7**
comp=Z,5µmcomp=Z,3µmcomp=Z,84nm,1.0s
MMRI Maumere 35.79 140 IAMs_20 IAMs_20 11 31 10.3
comp=Z,44µm,19.0s
BASI Baing, Sumba 36.08 143 P **P** **11 15 47.9 +0.9**
comp=Z,2µmcomp=Z,2µmcomp=Z,82nm,1.2s
OTUK Ortayu 36.12 329 P **P** **11 15 44.6 -2.5**
ZAA0 Zalesovo Array 36.13 345 P **P** **11 15 45.2 -1.9**
ZAA0 IAmb IAmb 11 15 51.2
comp=Z,153nm,1.1s
ZALV Zalesovo Beam 36.13 345 P **P** **11 15 45.2 -1.8**
comp=Z,95nm,0.9s,baz=148,slow=8.7,SNR=53
ZALV LR LR 11 33 01.9
comp=Z,18µm,19.4s,baz=161,slow=40
HRA Herat 36.25 302 P **P** **11 15 47.6 -1.0**
AAI Ambon 36.34 127 P **P** **11 15 48.8 -0.5**
comp=Z,3µmcomp=Z,8µmcomp=Z,118nm,1.0s
AAI Ambon 36.34 127 P **P** **11 15 50.1 +0.8**
AAI pmax pmax
comp=Z,118nm,0.9s
INU Inuyama 36.38 57 P **P** **11 15 48.8 -0.6**
INU IAmb IAmb 11 15 56.9
comp=Z,454nm,1.8s
INU IAMs_20 IAMs_20 11 28 59.4
comp=Z,51µm,22.0s
USA0B Ussuriysk Arra 36.39 40 P **P** **11 15 49.1 -0.2**
USA0B pmax pmax
comp=Z,150nm,1.3s
USA0B MLR MLR
comp=Z,38µm,18.0s
USA0B Ussuriysk Arra 36.39 40 P **P** **11 15 49.1 -0.2**
USA0B IAmb IAmb 11 15 54.5
comp=Z,150nm,1.2s
USA0B IAMs_20 IAMs_20 11 31 57.5
comp=Z,38µm,18.0s
USRK Ussuriysk Ar. 36.39 40 P **P** **11 15 48.2 -1.1**
comp=Z,14nm,0.7s,baz=242,slow=8.0,SNR=20
USRK LR LR 11 32 08.6
comp=Z,32µm,19.1s,baz=219,slow=39
MSAI Masohi 36.68 125 P **P** **11 15 52.7 +0.5**
comp=Z,3µmcomp=Z,45nm,1.1s
SIJI Sorong 37.05 120 P **P** **11 15 55.2 -0.2**
comp=Z,63nm,1.0s,baz=321,slow=9.8,SNR=27
SIJI LR LR 11 32 57.6
comp=Z,5µm,20.0s,baz=312,slow=39
BRZS Berezniki 37.16 331 *e*P **P** **11 15 54.7 -1.2**
comp=Z,273nm,1.2s
BRZS *e*S **S** **11 21 44.0 +2.1**
BRZS *e*LR LR 11 32 28.0
BRZS Berezniki 37.16 331 *e*P **P** **11 15 54.7 -1.2**
BRZS *e*S **S** **11 21 44.0 +2.1**
BRZS pmax pmax
comp=Z,273nm,1.2s
MAJO Matsushiro 37.63 55*c* *i*P **P** **11 16 00.4 +0.3**
MAJO pmax pmax
comp=Z,203nm,1.6s
MAJO Matsushiro 37.63 55 P **P** **11 15 59.3 -0.8**
MAJO Matsushiro 37.63 55 IAMs_20 IAMs_20 11 31 43.2
comp=Z,36µm,18.0s
MAT Matsushiro 37.63 55 P **P** **11 15 58.1 -2.0**
MAT S **S** **11 21 49.8 +0.4**
MJAR Matsushiro Arr 37.63 55 P **P** **11 15 59.1 -1.0**
comp=Z,14nm,1.1s,baz=267,slow=9.7,SNR=29
MJAR PcP **PcP** **11 18 17.1 -0.5**
comp=Z,8.2nm,1.1s,baz=243,slow=2.5,SNR=1.7
MJAR LR LR 11 31 45.3
comp=Z,25µm,18.9s,baz=255,slow=37
BATI Baumata 37.88 139 P **P** **11 16 01.8 -0.6**
comp=Z,61nm,0.9s,baz=129,slow=2.9,SNR=6.7
BATI LR LR 11 33 36.0
comp=Z,53µm,19.4s,baz=359,slow=39
BATI Baumata 37.88 139 P **P** **11 16 02.2 -0.2**
comp=Z,2µmcomp=Z,1µmcomp=Z,53nm,0.9s
SOEI Soe 37.91 138 P **P** **11 16 02.3 -0.4**
comp=Z,8µmcomp=Z,310nm,0.9s
SOEI Soe 37.91 138 P **P** **11 16 01.9 -0.8**
SOEI IAMs_20 IAMs_20 11 32 44.9
comp=Z,62µm,21.0s
DGAR Diego Garcia 37.97 228 P **P** **11 16 01.7 -1.4**
DGAR pmax pmax
comp=Z,461nm,1.4s
DGAR MLR MLR
comp=Z,11µm,18.0s
DGAR Diego Garcia 37.97 228 P **P** **11 16 01.7 -1.4**
WBK Wadi Bani Khal 38.04 282 P **P** **11 16 06.5 +2.8**
WBK P **P** **11 16 06.5 +2.8**
WBK P **P** **11 16 06.5 +2.8**
WBK P **P** **11 16 06.6 +2.9**
SNR=7.4
WBK P **P** **11 16 06.6 +2.9**
SNR=7.4
WBK P **P** **11 16 06.6 +2.9**
SNR=7.4
JHJ Hachijo jima 2 38.11 61 LR LR 11 33 19.4
comp=Z,24µm,18.0s,baz=274,slow=39
BNDI Bandanaira 38.18 126 P **P** **11 16 04.5 -0.4**
comp=Z,7µmcomp=Z,8µmcomp=Z,492nm,1.3s
WSAR Wadi Sarin 38.32 283 LR LR 11 33 13.9
comp=Z,1µm,21.6s,baz=136,slow=38
BIDO Bidbid 38.77 283 P **P** **11 16 12.5 +2.7**
SNR=16
BIDO P **P** **11 16 12.5 +2.7**
SNR=16
BIDO P **P** **11 16 12.5 +2.7**
SNR=16
JMDO Jabal Madar 38.85 282 P **P** **11 16 13.2 +2.7**
SNR=9.7
JMDO P **P** **11 16 13.2 +2.7**
SNR=9.7
JMDO P **P** **11 16 13.2 +2.7**
SNR=9.7
SMDO Samad 38.86 283 P **P** **11 16 13.1 +2.4**
SNR=14
SMDO P **P** **11 16 13.1 +2.4**
SNR=14
SMDO P **P** **11 16 13.1 +2.4**
SNR=14
FAKI Fak Fak 39.04 121 P **P** **11 16 10.1 -2.0**
comp=Z,6µmcomp=Z,3µmcomp=Z,143nm,0.8s
FAKI Fak Fak 39.04 121 P **P** **11 16 11.4 -0.7**
FAKI IAmb IAmb 11 16 15.5
comp=Z,232nm,1.2s
MHTO MHTO 39.09 279 P **P** **11 16 16.0 +3.5**
SNR=13
MHTO P **P** **11 16 16.0 +3.5**
SNR=13
MHTO P **P** **11 16 16.0 +3.5**
SNR=13
KLR Kul'dur 39.12 33 P **P** **11 16 11.7 -0.8**
comp=Z,81nm,1.1s,baz=248,slow=7.6,SNR=54
KLR LR LR 11 34 35.0
comp=Z,43µm,19.8s,baz=228,slow=40
KLR Kul'dur 39.12 33*c* *i*P **P** **11 16 11.0 -1.4**
KLR pmax pmax
comp=Z,40nm,1.0s
KLR MLR MLR
comp=Z,20µm,16.0s
HOQ Hoqain 39.51 284 P **P** **11 16 19.6 +3.6**
SNR=24
HOQ P **P** **11 16 19.6 +3.6**
SNR=24
JCJ Chichijima 39.56 71 LR LR 11 34 14.1
comp=Z,11µm,18.3s,baz=257,slow=39
BOD Bodaibo 39.58 12 *e*P **P** **11 16 14.8 -1.3**
BOD pmax pmax
comp=Z,173nm,2.2s
BSY Bisya 39.66 282 P **P** **11 16 20.7 +3.4**
SNR=19
BSY P **P** **11 16 20.7 +3.4**
SNR=19
BSY P **P** **11 16 20.7 +3.4**
SNR=19
TEY Ternei 39.66 42⇑ *e*P **P** **11 16 17.1 +0.1**
TEY *e* 11 22 20.7
TEY pmax pmax
comp=N,40nm,3.0s
TEY pmax pmax
comp=E,1µm,3.5s
TEY pmax pmax
comp=E,40nm,2.8s
TEY pmax pmax
comp=Z,70nm,2.2s
TEY pmax pmax
comp=Z,1µm,4.5s
TEY pmax pmax
comp=N,1400µm,3.1s
TEY MLR MLR
comp=N,32µm,12.0s
TEY MLR MLR
comp=Z,41µm,15.0s
RKPI Ransiki, Papua 39.81 118 P **P** **11 16 18.4 -0.2**
comp=Z,8µmcomp=Z,130nm,0.9s
ZEA Zeya 40.10 25 *e*P **P** **11 16 19.2 -1.3**
ZEA *e* 11 17 58.5
ZEA *e*S **S** **11 22 27.0 +1.0**
ZEA pmax pmax
comp=Z,2µm,5.0s
ZEA pmax pmax
comp=E,500nm,4.0s
ZEA pmax pmax
comp=N,1µm,5.0s
ZEA pmax pmax
comp=N,240nm,1.6s
ZEA pmax pmax
comp=Z,480nm,1.6s
ZEA smax smax
comp=E,3µm,14.0s
ZEA smax smax
comp=N,4µm,13.0s
ZEA MLR MLR
comp=E,49µm,14.0s
ZEA MLR MLR
comp=N,57µm,16.0s
SOHO SOHO 40.20 284 P **P** **11 16 25.5 +3.7**
SNR=9.8
SOHO P **P** **11 16 25.5 +3.7**
SNR=9.8
ARQ Araqi 40.25 283 P **P** **11 16 26.0 +3.8**
SNR=14
ARQ P **P** **11 16 26.0 +3.8**
SNR=14
ARQ P **P** **11 16 26.0 +3.8**
SNR=14
BANOM Banah 40.37 287 P **P** **11 16 25.5 +2.3**
BANOM Banah 40.37 287 P **P** **11 16 25.5 +2.3**
BANOM Banah 40.37 287 P **P** **11 16 25.9 +2.7**
GEYT Alibeck 40.38 306 P **P** **11 16 22.6 -0.5**
comp=N,16nm,0.7s,baz=104,slow=6.3,SNR=36
GEYT LR LR 11 38 27.3
comp=N,19µm,18.2s,baz=90,slow=44
GYA0B ALIBECK ARRAY 40.38 306 P **P** **11 16 22.0 -1.0**
GYA0B IAmb IAmb 11 17 15.9
comp=Z,149nm,0.9s
MDH Madha 40.38 286 P **P** **11 16 22.7 -0.5**
MDH Madha 40.38 286 P **P** **11 16 22.7 -0.5**
BRVK Borovoye 40.39 333 P **P** **11 16 21.3 -1.6**
BRVK pmax pmax
comp=Z,154nm,1.0s
BRVK MLR MLR
comp=Z,46µm,22.0s
BRVK Borovoye 40.39 333 P **P** **11 16 21.3 -1.6**
BRVK IAmb IAmb 11 16 29.3
comp=Z,154nm,0.9s
BRVK Borovoye 40.39 333 IAMs_20 IAMs_20 11 33 56.5
comp=Z,45µm,22.0s
UOSS Minazif 40.47 286 *i* P **P** **11 16 27.7 +3.6**
SNR=7.4
UOSS Minazif 40.47 286 *i* P **P** **11 16 27.7 +3.6**
SNR=7.4
UOSS Minazif 40.47 286 P **P** **11 16 27.7 +3.6**
UOSS P **P** **11 16 27.7 +3.6**
UOSS Minazif 40.47 286 P **P** **11 16 23.3 -0.7**
MSFE Esma-Masafi 40.51 286 P **P** **11 16 24.6 +0.3**
MSFE Esma-Masafi 40.51 286 P **P** **11 16 24.6 +0.3**
SHME Shamm 40.52 287 P **P** **11 16 25.8 +1.4**

SHME	Shamm	40.52	287	P	P	11 16 25.8	+1.4
HATD	Hatta, Dubai	40.54	286	*i* P	P	11 16 27.7	+3.1
	SNR=12						
HATD	Hatta, Dubai	40.54	286	*i* P	P	11 16 27.7	+3.1
	SNR=12						
HATD	Hatta, Dubai	40.54	286	P	P	11 16 29.0	+4.4
	SNR=22						
HATD				P	P	11 16 29.0	+4.4
	SNR=22						
ASHO	Ashiyiah	40.61	285	*i* P	P	11 16 27.2	+2.0
	SNR=23						
ASHO	Ashiyiah	40.61	285	*i* P	P	11 16 27.2	+2.0
	SNR=23						
ASHO	Ashiyiah	40.61	285	P	P	11 16 29.0	+3.7
	SNR=21						
ASHO				P	P	11 16 29.0	+3.7
	SNR=21						
ALNE	Al Ain	40.92	284	*i* P	P	11 16 29.4	+1.6
	SNR=10.0						
ALNE	Al Ain	40.92	284	*i* P	P	11 16 29.4	+1.6
	SNR=10.0						
NAZ	Nazwa, Dubai	40.96	286	P	P	11 16 29.1	+1.1
NAZ	Nazwa, Dubai	40.96	286	P	P	11 16 29.1	+1.1
FAQ	Al Faqa, Dubai	41.03	285	P	P	11 16 30.7	+2.0
FAQ	Al Faqa, Dubai	41.03	285	P	P	11 16 30.7	+2.0
AJN	Ajban	41.59	285	*i* P	P	11 16 35.5	+2.3
	SNR=5.7						
AJN	Ajban	41.59	285	*i* P	P	11 16 35.5	+2.3
	SNR=5.7						
AJN	Ajban	41.59	285	P	P	11 16 38.5	+5.3
	SNR=6.8						
AJN				P	P	11 16 38.5	+5.3
	SNR=6.8						
AJN				P	P	11 16 38.5	+5.3
	SNR=6.8						
GRNR	Gornyy	42.47	34⇑	*i*P	P	11 16 41.9	+1.8
GRNR				pmax	pmax		
	comp=Z,50nm,1.3s						
GRNR				MLR	MLR		
	comp=Z,41µm,14.0s						
ERM	Erimo	42.91	49	P	P	11 16 43.2	-0.5
ERM				pmax	pmax		
	comp=Z,732nm,2.0s						
ERM				MLR	MLR		
	comp=Z,35µm,19.0s						
ERM	Erimo	42.91	49	P	P	11 16 43.2	-0.5
ERM	Erimo	42.91	49	IAMs_20	IAMs_20	11 33 44.5	
	comp=Z,35µm,19.0s						
RBK	Rabkut	43.09	275	P	P	11 16 50.0	+4.4
	SNR=6.6						
RBK				P	P	11 16 50.0	+4.4
	SNR=6.6						
ASAJ	Asahikawa	43.20	46	P	P	11 16 45.8	-0.3
	comp=Z,42nm,0.8s,baz=260,slow=8.3,SNR=9.8						
ASAJ				LR	LR	11 35 30.9	
	comp=Z,28µm,19.2s,baz=246,slow=37						
AB31	Akbulak array	43.37	322	*e*P	P	11 16 45.8	-1.6
SMPI	Sarmi	43.90	115	P	P	11 16 50.5	-1.5
	comp=Z,4µmcomp=Z,2µmcomp=Z,76nm,1.6s						
YSS	Yuzh-Sakhalins	44.36	42⇑	*e*P	P	11 16 55.4	+0.1
YSS				*e**SP	sP	11 17 02.4	+0.2
YSS				*e*		11 18 33.9	
YSS				*e*		11 18 45.5	
YSS				*e*S	S	11 23 29.5	+0.4
YSS				*e*SS	SS	11 26 50.1	+2.2
YSS				pmax	pmax		
	comp=Z,700nm,4.7s						
YSS				pmax	pmax		
	comp=E,300nm,5.0s						
YSS				pmax	pmax		
	comp=Z,50nm,1.4s						
YSS				MLR	MLR		
	comp=Z,40µm,16.0s						
YSS				MLR	MLR		
	comp=N,23µm,14.0s						
YSS				MLR	MLR		
	comp=E,33µm,15.0s						
YSS	Yuzh-Sakhalins	44.36	42	P	P	11 16 55.0	-0.3
YSS				IAMs_20	IAMs_20	11 37 52.7	
	comp=Z,47µm,18.0s						
SOCY	Socotra	44.48	268	P	P	11 16 57.7	+0.9
	SNR=8.7						
SOCY	Socotra	44.48	268	P	P	11 16 55.4	-1.4
SOCY				IAmb	IAmb	11 17 37.1	
	comp=Z,158nm,1.2s						
MTN	Manton Dam	44.70	134	P	P	11 16 57.4	-1.0
MBWA	Marble Bar	45.01	153	P	P	11 17 00.2	-0.5
MBWA				IAmb	IAmb	11 17 21.4	
	comp=Z,98nm,1.1s						
AKTO	Aktyubinsk	45.03	323	LR	LR	11 39 20.9	
	comp=Z,23µm,20.9s,baz=121,slow=41						
AKTO	Aktyubinsk	45.03	323	P	P	11 16 57.4	-3.2
KNRA	Kununurra	45.24	139	P	P	11 17 02.0	-0.6
FITZ	Fitzroy Crossi	45.31	144	P	P	11 17 02.9	-0.2
YUK	Yuzh-Kuril'sk	45.40	47*d*	*i*P	P	11 17 07.9	+4.2
YUK				*i*		11 18 54.3	
YUK				*i* PPP	PPP	11 19 37.6	
YUK				*i* S	S	11 23 46.6	+2.3
YUK				*i* SS	ScS	11 27 03.8	+3.9
YUK				*e*SSS	SSS	11 28 02.7	
YUK				pmax	pmax		
	comp=Z,482nm,1.5s						
YUK				pmax	pmax		
	comp=N,279nm,1.2s						
YUK				pmax	pmax		
	comp=E,144nm,1.3s						
YUK				MLR	MLR		
	comp=Z,19µm,15.0s						
YUK				MLR	MLR		
	comp=N,7µm,14.0s						
YUK				MLR	MLR		
	comp=E,28µm,16.0s						
PSA00	Pilbara Seismi	45.43	153	P	P	11 17 03.7	-0.4
PSA00				IAmb	IAmb	11 17 24.7	
	comp=Z,75nm,1.0s						
GENI	Genyem	45.45	115	P	P	11 17 03.4	-1.1
	comp=Z,6µmcomp=Z,4µmcomp=Z,254nm,1.4s						
JAY	Jayapura	45.88	114	P	P	11 17 07.0	-0.9
	comp=Z,18nm,0.9s,baz=274,slow=8.9,SNR=14						
JAY				LR	LR	11 36 03.2	
	comp=Z,8µm,21.6s,baz=306,slow=36						
JAY	Jayapura	45.88	114	P	P	11 17 06.7	-1.2
	comp=Z,3µmcomp=Z,800nmcomp=Z,26nm,1.0s						
JAY	Jayapura	45.88	114	P	P	11 17 07.0	-0.9
TYV	Tymovskoe	45.94	37	*e*P	P	11 17 10.1	+2.3
TYV				*e*		11 23 58.0	
TYV				pmax	pmax		
	comp=Z,77nm,1.8s						
TYV				pmax	pmax		
	comp=Z,1µm,4.1s						
TYV				MLR	MLR		
	comp=E,42µm,13.0s						
TYV				MLR	MLR		
	comp=Z,48µm,13.0s						
NKL	Nikolayevsk	45.97	33	*e*P	P	11 17 11.3	+3.3
NKL				*e*		11 19 01.2	
NKL				*e*S	S	11 23 52.4	+0.2
NKL				pmax	pmax		
	comp=Z,86nm,1.2s						
NKL				pmax	pmax		
	comp=N,6.0nm,0.7s						
NKL				pmax	pmax		
	comp=E,3.0nm,1.1s						
NKL				pmax	pmax		
	comp=Z,82nm,3.2s						
SVE	Sverdlovsk	47.07	332*d*	*e*P	P	11 17 16.2	-0.4
SVE				*e*		11 19 11.4	
SVE				*e*S	S	11 24 08.3	+0.4
SVE				pmax	pmax		
	comp=Z,472nm,1.1s						
SVE				pmax	pmax		
	comp=Z,644nm,11.1s						
SVE				MLR	MLR		
	comp=Z,18µm,16.0s						
KUR	Kuril'sk	47.12	46*d*	*i*P	P	11 17 21.2	+4.0
KUR						11 19 08.0	
KUR				*e*PPP	PPP	11 19 58.7	
KUR				*e*S	S	11 24 08.5	-0.5
KUR				pmax	pmax		
	comp=Z,423nm,1.6s						
KUR				pmax	pmax		
	comp=N,115nm,1.5s						
KUR				pmax	pmax		
	comp=E,113nm,1.6s						
KUR				pmax	pmax		
	comp=Z,2µm,2.8s						
KUR				MLR	MLR		
	comp=N,26µm,16.0s						
KUR				MLR	MLR		
	comp=Z,20µm,16.0s						
KUR				MLR	MLR		
	comp=E,8µm,15.0s						
YAK	Yakutsk	47.21	19	P	P	11 17 16.1	-1.5
	comp=E,38nm,0.5s,baz=9.9,slow=1.3,SNR=30						
YAK				LR	LR	11 39 19.5	
	comp=E,42µm,18.3s,baz=220,slow=39						
YAK	Yakutsk	47.21	19	*e*P	P	11 17 16.6	-1.0
YAK				*e*		11 18 46.7	
YAK				*e*		11 19 09.5	
YAK				*e*PPP	PPP	11 19 47.3	
YAK				*e*S	S	11 24 07.1	-2.7
YAK				*e**SS	sS	11 24 22.9	+5.0
YAK				*e*		11 27 11.4	
YAK				pmax	pmax		
	comp=Z,227nm,1.2s						
YAK				pmax	pmax		
	comp=N,121nm,1.4s						
YAK				pmax	pmax		
	comp=E,135nm,1.4s						
YAK				pmax	pmax		
	comp=Z,172nm,1.7s						
YAK				pmax	pmax		
	comp=E,88nm,1.5s						
YAK				pmax	pmax		
	comp=N,116nm,1.6s						
YAK				smax	smax		
	comp=E,403nm,2.5s						
YAK				smax	smax		
	comp=N,901nm,3.4s						
YAK				MLR	MLR		
	comp=E,17µm,10.0s						
YAK				MLR	MLR		
	comp=Z,29µm,11.0s						
YAK				MLR	MLR		
	comp=N,21µm,13.0s						
YAK	Yakutsk	47.21	19	P	P	11 17 15.9	-1.8
YAK				IAMs_20	IAMs_20	11 39 07.9	
	comp=Z,45µm,18.0s						
ARU	Arti	47.79	330	LR	LR	11 37 30.5	
	comp=Z,14µm,18.7s,baz=114,slow=36						
ARU	Arti	47.79	330*c*	*i*P	P	11 17 21.0	-1.2
ARU				*e*		11 19 14.1	
ARU				PPP	PPP	11 19 56.8	
ARU				S	S	11 24 18.4	+0.2
ARU				SS	SS	11 27 43.0	-3.5
ARU				SSS	SSS	11 29 00.9	
ARU				pmax	pmax		
	comp=Z,181nm,1.3s						
ARU				MLR	MLR		
	comp=Z,19µm,16.0s						
ARU	Arti	47.79	330	P	P	11 17 20.1	-2.1
AKT	Akhty	48.96	308⇑	*i*P	P	11 17 30.5	-1.2
AKT				pmax	pmax		
	comp=Z,28nm,0.7s						
MAK	Makhachkala	49.40	310	*e*P	P	11 17 32.5	-2.3
MAK				*e*		11 19 23.5	
MAK				*e*S	S	11 24 38.8	-2.5
MAK				*e*SS	SS	11 28 07.0	-6.0
MAK				pmax	pmax		
	comp=Z,193nm,1.2s						
MAK				MLR	MLR		
	comp=Z,22µm,15.0s						
LGD	Lagodekhi	50.12	309	P	P	11 17 39.5	-0.9
NRIK	Noril'sk	50.28	354	P	P	11 17 39.6	-1.5
	comp=Z,40nm,0.7s,baz=162,slow=6.7,SNR=30						
NRIK				LR	LR	11 40 34.8	
	comp=Z,31µm,19.9s,baz=166,slow=38						
RAYN	Ar Rayn	50.31	285	P	P	11 17 40.1	-2.1
RAYN				pmax	pmax		
	comp=Z,159nm,1.6s						
RAYN				MLR	MLR		
	comp=Z,28µm,21.0s						
RAYN	Ar Rayn	50.31	285	P	P	11 17 40.1	-2.1
RAYN				IAmb	IAmb	11 17 45.3	
	comp=Z,159nm,1.6s						
RAYN				IAMs_20	IAMs_20	11 41 50.8	
	comp=Z,28µm,21.0s						
GROC	Groznyy	50.68	310⇑	*i*P	P	11 17 45.5	+1.0
GROC				pmax	pmax		
	comp=Z,115nm,1.1s						
MORW	Morawa	50.90	162	P	P	11 17 45.6	-0.7
MORW				IAmb	IAmb	11 18 44.5	
	comp=Z,94nm,1.1s						
TBLG	Delisi	51.22	308	P	P	11 17 47.2	-1.5
TBLG				pmax	pmax		
	comp=Z,246nm,1.5s						
TBLG	Delisi	51.22	308	P	P	11 17 47.2	-1.5
TBLG				IAmb	IAmb	11 19 10.5	
	comp=Z,246nm,1.5s						
KZRT	Kazreti	51.42	308	P	P	11 17 51.2	+0.9
GUDG	Gudauri	51.52	309	P	P	11 17 52.7	+1.6
WB0	Warramunga Arr	51.84	137	IAmb	IAmb	11 17 57.2	
	comp=Z,87nm,1.1s						
WRA	Warramunga Arr	51.94	137	P	P	11 17 53.3	-0.9
	comp=Z,54nm,1.1s,baz=322,slow=7.6,SNR=68						
WRAB	Tennant Creek	51.94	137*c*	*i*P	P	11 17 54.2	0.0
WRAB				pmax	pmax		
	comp=Z,137nm,1.2s						
WRAB	Tennant Creek	51.94	137	P	P	11 17 53.5	-0.7
WRAB				IAmb	IAmb	11 17 58.1	
	comp=Z,126nm,1.2s						
WB2	Warramunga Arr	51.94	137	IAmb	IAmb	11 17 58.1	
	comp=Z,127nm,1.2s						
ZEI	Tsey	51.98	309	*e*P	P	11 17 53.3	-1.3
ZEI				*e*S	S	11 25 17.1	-0.5
ZEI				*e*SS	SS	11 28 55.5	+1.0
ZEI				pmax	pmax		
	comp=Z,129nm,1.1s						
BGD	Bogdanovka	52.01	307	P	P	11 17 54.7	-0.1
AKH	Akhalkalaki	52.10	308	⇓P	P	11 17 55.3	-0.2
AKH	Akhalkalaki	52.10	308	P	P	11 17 54.3	-1.2
AKH	Akhalkalaki	52.10	308	P	P	11 17 54.3	-1.2
AKH				IAmb	IAmb	11 18 00.9	
	comp=Z,149nm,1.1s						
ONI	Oni	52.28	309	P	P	11 17 59.6	+2.9
NCK	Nalchik	52.31	310⇑	*i*P	P	11 17 56.9	+0.1
NCK				pmax	pmax		
	comp=Z,45nm,1.1s						
KARS	Kars	52.33	307	P	P	11 17 59.7	+2.6
KBZ	Khabaz	52.84	310	P	P	11 17 58.8	-1.9
	comp=Z,18nm,1.0s,baz=99,slow=8.1,SNR=26						
KBZ				LR	LR	11 44 30.9	
	comp=Z,12µm,19.1s,baz=82,slow=41						
KBZ	Khabaz	52.84	310⇑	*i*P	P	11 18 01.5	+0.8
NEY	Neytrino	52.90	310⇑	*i*P	P	11 18 02.0	+0.6
NEY				pmax	pmax		
	comp=Z,25nm,1.2s						
DAMY	Dhamar	52.92	274	P	P	11 18 03.0	+1.0
	SNR=41						
DAMY	Dhamar	52.92	274	P	P	11 18 01.8	-0.2
DAMY				IAmb	IAmb	11 18 07.5	
	comp=Z,262nm,1.4s						
KIV	Kislovodsk	53.03	311	⇓P	P	11 18 01.8	-0.4
KIV	Kislovodsk	53.03	311	*i* P	P	11 18 01.5	-0.7
	SNR=23						
KIV	Kislovodsk	53.03	311	*i* P	P	11 18 01.5	-0.7
	SNR=23						
KIV	Kislovodsk	53.03	311	*e*P	P	11 18 01.4	-0.8
KIV				*e*		11 20 01.4	
KIV				*e*S	S	11 25 28.2	-3.4
KIV				*e*SS	SS	11 29 03.6	-7.2
KIV				*e*SSS	SSS	11 31 01.7	
KIV				pmax	pmax		
	comp=Z,523nm,1.0s						
KIV				pmax	pmax		
	comp=Z,542nm,4.7s						
KIV				MLR	MLR		
	comp=Z,28µm,17.0s						
KIV	Kislovodsk	53.03	311	P	P	11 18 00.8	-1.4
KIV				IAmb	IAmb	11 18 06.3	
	comp=Z,217nm,1.1s						
KIRV	Kirov	53.15	330	LR	LR	11 42 03.7	
	comp=Z,21µm,21.1s,baz=123,slow=38						
KIRV	Kirov	53.15	330⇑	*e*P	P	11 18 01.7	-0.9
BATM	Batumi	53.47	308	⇑P	P	11 18 05.8	+0.5
BATM	Batumi	53.47	308	P	P	11 18 05.8	+0.5
BCA	Borcka	53.51	307	⇑P	P	11 18 06.1	+0.4
SKR	Severo-Kuril's	53.90	41	*e*P	P	11 18 03.2	-5.1
SKR				*e*PPP	PPP	11 21 26.0	
SKR				*e*S	S	11 25 41.7	-1.3
SKR				*e*SS	ScS	11 27 57.5	+0.3
SKR				pmax	pmax		
	comp=Z,700nm,3.2s						
SKR				MLR	MLR		
	comp=Z,13µm,15.0s						
SKR				MLR	MLR		
	comp=Z,14µm,15.0s						
MA2	Magadan	53.93	29	P	P	11 18 07.3	-1.1
	comp=Z,45nm,0.9s,baz=241,slow=6.6,SNR=21						
MA2				LR	LR	11 44 09.8	
	comp=Z,22µm,18.4s,baz=236,slow=40						
MA2	Magadan	53.93	29*c*	*i*P	P	11 18 08.5	+0.1
MA2				pmax	pmax		
	comp=Z,124nm,1.3s						
MA2				MLR	MLR		
	comp=Z,7µm,14.0s						
MA2	Magadan	53.93	29	P	P	11 18 07.7	-0.7
MA2				IAmb	IAmb	11 18 13.6	
	comp=Z,171nm,1.0s						
MA2				IAMs_20	IAMs_20	11 43 34.8	
	comp=Z,31µm,19.0s						
COEN	Coen	54.25	125	P	P	11 18 10.8	-0.5
AS31	Alice Springs	54.43	141	P	P	11 18 11.6	-1.0
ASAR	Alice Springs	54.43	141	P	P	11 18 10.9	-1.7
	comp=Z,11nm,0.9s,baz=320,slow=5.8,SNR=67						
ASAR				LR	LR	11 45 36.1	
	comp=Z,15µm,18.9s,baz=315,slow=41						
TIXI	Tiksi	54.74	11	P	P	11 18 11.4	-2.7
	comp=Z,14nm,0.6s,baz=202,slow=4.4,SNR=39						
TIXI				LR	LR	11 44 31.7	
	comp=Z,28µm,19.3s,baz=220,slow=39						
TIXI	Tiksi	54.74	11⇑	*i*P	P	11 18 11.6	-2.5
TIXI				pmax	pmax		
	comp=Z,87nm,1.6s						
TIXI				MLR	MLR		
	comp=Z,31µm,18.0s						
TIXI	Tiksi	54.74	11	P	P	11 18 11.3	-2.8
TIXI				IAmb	IAmb	11 18 19.5	
	comp=Z,256nm,1.5s						
TIXI				IAMs_20	IAMs_20	11 44 20.7	
	comp=Z,29µm,20.0s						
NWAO	Narrogin (SRO)	54.87	162	P	P	11 18 14.7	-0.8
NWAO				pmax	pmax		
	comp=Z,32nm,0.8s						
NWAO	Narrogin (SRO)	54.87	162	P	P	11 18 15.0	-0.5
NWAO	Narrogin (SRO)	54.87	162	P	P	11 18 14.7	-0.8
NWAO				IAmb	IAmb	11 18 39.5	
	comp=Z,32nm,0.8s						
NWAO	Narrogin (SRO)	54.87	162	IAMs_20	IAMs_20	11 40 45.5	
	comp=Z,27µm,21.0s						
PMG	Port Moresby	54.92	117*c*	*i*P	P	11 18 17.0	+0.8
PMG				pmax	pmax		
	comp=Z,735nm,1.1s						
VRH	Novokhopyorsk	54.98	319	*e*P	P	11 18 16.6	+0.4
VRH				*e*S	S	11 25 54.7	-2.9
VRH				pmax	pmax		
	comp=Z,230nm,1.0s						
VRH				smax	smax		
	comp=N,940nm,3.7s						
VRH				MLR	MLR		
	comp=Z,20µm,18.0s						
SOC	Sochi	55.12	310	*e*P	P	11 18 14.6	-2.7
SOC				*e*		11 20 16.8	
SOC				*e*PPP	PPP	11 21 29.3	
SOC				*e*S	S	11 25 57.1	-2.6
SOC				pmax	pmax		
	comp=Z,129nm,1.2s						
SOC				MLR	MLR		
	comp=Z,12µm,19.0s						
ATD	Arta Tunnel	55.15	271	*i* P	P	11 18 19.3	+1.2
ATD				*i* S	S	11 26 04.3	+3.3
ATD	Arta Tunnel	55.15	271	P	P	11 18 21.0	+2.9
	SNR=10						
ATD	Arta Tunnel	55.15	271	*i* P	P	11 18 19.3	+1.2
ATD				*i* S	S	11 26 04.3	+3.3
PEA0B	Petropavlovsk-	55.43	38	P	P	11 18 18.4	-1.0
PEA0B				pmax	pmax		
	comp=Z,81nm,1.6s						
PEA0B	Petropavlovsk-	55.43	38	P	P	11 18 18.4	-1.0
PETK	Petropavlovsk-	55.43	38	P	P	11 18 17.3	-2.1
	comp=Z,2.4nm,0.7s,baz=186,slow=3.0,SNR=8.9						
PETK				LR	LR	11 43 13.1	
	comp=Z,19µm,18.5s,baz=236,slow=38						
MALT	Malatya	55.78	303	P	P	11 18 23.6	+1.3
PET	Petropavlovsk	55.97	39	*e*P	P	11 18 22.9	-0.3
PET				*e*S	S	11 26 04.0	-6.7
PET				pmax	pmax		
	comp=Z,81nm,1.1s						
PET				pmax	pmax		
	comp=Z,800nm,12.9s						
PET				pmax	pmax		
	comp=Z,500nm,10.8s						
PET	Petropavlovsk	55.97	39	P	P	11 18 22.4	-0.9
PET				IAmb	IAmb	11 18 28.4	
	comp=Z,101nm,1.2s						
PET				IAMs_20	IAMs_20	11 41 27.2	
	comp=Z,26µm,21.0s						
SEY	Seymchan	56.07	26	P	P	11 18 22.2	-1.6
	comp=Z,4.2nm,0.6s,baz=261,slow=9.2,SNR=16						
SEY				LR	LR	11 44 17.7	
	comp=Z,34µm,18.4s,baz=246,slow=38						
SEY	Seymchan	56.07	26⇓	*i*P	P	11 18 22.6	-1.2
PRGR	Permogore	56.13	332	*e*P	P	11 18 22.0	-2.2
PRGR				pmax	pmax		
	comp=Z,189nm,0.8s						
VORD	Divnogorie	56.44	319	*e*P	P	11 18 26.7	+0.1
VORD				*e*S	S	11 26 14.7	-2.3
VORD				pmax	pmax		
	comp=Z,150nm,1.6s						
VORD				smax	smax		
	comp=N,50nm,3.7s						
VSR	Storozhevoye	56.56	319	*e*P	P	11 18 27.1	-0.4
VSR				*e*S	S	11 26 17.1	-1.6
VSR				pmax	pmax		
	comp=Z,170nm,1.6s						
VSR				smax	smax		
	comp=N,560nm,4.1s						
VSR				MLR	MLR		
	comp=Z,19µm,15.0s						
VORR	Voronezh	56.62	320	*e*P	P	11 18 27.0	-0.9
VORR				pmax	pmax		
	comp=Z,500nm,1.4s						
KRVT	Keravat (AS076	56.66	109	LR	LR	11 40 19.2	
	comp=Z,8µm,20.9s,baz=281,slow=34						
RABL	Rabaul	56.73	109	P	P	11 18 29.0	-0.3
GAZ	Gaziantep	56.73	302	P	P	11 18 28.7	-0.5
GAZ				IAmb	IAmb	11 18 33.6	
	comp=Z,197nm,1.3s						
ANN	Anapa	56.87	311	*e*P	P	11 18 30.6	+0.8
ANN				*i*		11 20 34.3	
ANN				*e*S	S	11 26 24.9	+2.0
ANN				pmax	pmax		
	comp=Z,66nm,0.9s						
ANN				pmax	pmax		
	comp=Z,2µm,9.8s						
ANN				MLR	MLR		
	comp=Z,20µm,18.0s						
ANN				MLR	MLR		
	comp=N,12µm,21.0s						
ANN				MLR	MLR		
	comp=E,14µm,16.0s						
LPSR	Galich'ya Gora	56.96	321	*e*P	P	11 18 30.3	-0.1
LPSR				*e*S	S	11 26 22.3	-1.6
LPSR				pmax	pmax		
	comp=Z,180nm,1.3s						
LPSR				smax	smax		
	comp=N,540nm,3.9s						
LPSR				MLR	MLR		
	comp=Z,17µm,14.0s						
FORT	Forrest	57.04	151	P	P	11 18 30.8	-0.3
FORT				IAmb	IAmb	11 18 57.0	
	comp=Z,88nm,1.2s						
ASF	Jabal al Asfar	57.17	296	LR	LR	11 48 40.4	
	comp=Z,12µm,18.8s,baz=59,slow=42						
ASF	Jabal al Asfar	57.17	296	P	P	11 18 33.2	+0.9
ASF				pmax	pmax		
	comp=Z,101nm,1.6s						
KVT	Kavak	57.68	307	P	P	11 18 37.1	+1.4
SHBL	Chebaa	58.06	298	*e*P	P	11 18 39.5	+0.8
BHL	Bhannes	58.10	298	*e*P	P	11 18 40.0	+1.1
PATS	Pohnpei	58.19	94	P	P	11 18 39.0	-0.7
DIKM	Dikmen	58.29	307	⇑P	P	11 18 39.8	-0.1
DESE	Dese	58.29	271	*i* P	P	11 18 41.7	+1.0
DESE				*e*S	S	11 26 48.7	+5.6
MOS	Moscow	58.34	324	*e*P	P	11 18 38.9	-1.1
MOS				*e*		11 20 50.7	

MOS e 11 22 16.9
MOS eS S 11 26 43.5 +1.6
MOS pmax pmax
comp=Z,548nm,1.6s
MOS pmax pmax
comp=Z,1μm,1.8s
MOS smax smax
comp=N,3μm,7.8s
MOS MLR MLR
comp=Z,18μm,19.0s
MMAI Mount Meron Ar 58.37 297 LR LR 11 48 43.7
comp=Z,16μm,20.8s,baz=75,slow=41
ANKE Ethiopia-Afar 58.63 269 *i* P P **11 18 40.7 -2.5**
ANKE *i* S S **11 26 49.7 +2.0**
KLMR Klimovskoe 58.64 330*c i* P P **11 18 40.5 -1.5**
KLMR S S **11 26 44.8 -0.8**
KLMR pmax pmax
comp=Z,492nm,1.3s
KLMR pmax pmax
comp=Z,587nm,1.3s
KLMR MLR MLR
comp=Z,16μm,17.0s
KLMR Klimovskoe 58.64 330⇑ *i* P P **11 18 40.5 -1.5**
KLMR *e* P P **11 18 40.5 -1.5**
KLMR *e* P P **11 18 40.5 -1.5**
KLMR AMP 11 18 47.7
comp=Z,587nm,1.3s
KLMR AMP 11 18 48.0
comp=Z,492nm,1.3s
KLMR S S **11 26 44.9 -0.7**
KLMR S S **11 26 44.9 -0.7**
KLMR LQ LQ 11 36 39.9
KLMR LQ LQ 11 36 39.9
KLMR LR LR 11 40 22.4
KLMR AMP 11 44 58.3
comp=Z,16μm,16.8s
OBN Obninsk 58.81 323 P P **11 18 42.1 -1.1**
comp=Z,13nm,0.6s
OBN LR LR 11 45 59.2
comp=Z,5μm,20.5s,baz=96,slow=38
OBN Obninsk 58.81 323*c i* P P **11 18 42.6 -0.6**
OBN *e* 11 19 33.5
OBN *e* 11 20 52.4
OBN eS S **11 26 46.5 -1.5**
OBN eSS SS **11 30 42.4 +1.3**
OBN pmax pmax
comp=Z,471nm,1.4s
OBN MLR MLR
comp=Z,14μm,18.0s
OBN Obninsk 58.81 323 P P **11 18 41.7 -1.5**
OBN IAMs_20 IAMs_20 11 45 47.3
comp=Z,18μm,20.0s
RER Riviere de l'E 59.09 229 P P **11 18 45.2 -0.6**
BZK Bozkurt 59.23 308 ⇑P P **11 18 46.4 0.0**
SIM Simferopol' 59.23 311*e* P P **11 18 48.7 +2.3**
SIM ePPP PPP 11 22 27.0
SIM eS S **11 26 54.0 +0.2**
SIM pmax pmax
comp=Z,268nm,1.6s
SIM pmax pmax
comp=Z,500nm,10.3s
SIM pmax pmax
comp=Z,500nm,9.9s
BR131 Keskin Array S 59.51 305 P P **11 18 49.6 +1.0**
SNR=39
BR131 P P **11 18 49.6 +1.0**
SNR=39
BR131 P P **11 18 49.6 +1.0**
SNR=39
BR131 Keskin Array S 59.51 305*c i* P P **11 18 48.0 -0.6**
BR131 Keskin Array S 59.51 305 IAmb IAmb 11 18 52.6
comp=Z,221nm,1.8s
BRTR Keskin Array B 59.51 305 P P **11 18 46.6 -2.0**
comp=Z,13nm,1.0s,baz=111,slow=6.1,SNR=33
BRTR LR LR 11 49 11.3
comp=Z,7μm,20.0s,baz=94,slow=41
AAE Adis Abeba 59.71 269 *e* P 11 18 40.2 -10
AAE *i* P pP 11 18 55.4 -0.2
AAE *i* S S **11 27 07.0 +5.4**
AAE Adis Abeba 59.71 269 *i* S S **11 27 07.0 +5.4**
AAE Adis Abeba 59.71 269 *i* P pP 11 18 55.4 -0.2
AAE *e* P 11 18 40.2 -10
FURI Furi 59.83 269 *i* P P 11 18 57.1 +5.7
FURI *i* S S **11 27 04.6 +1.4**
FURI Furi 59.83 269 *i* P P 11 18 57.1 +5.7
FURI *i* S S **11 27 04.6 +1.4**
CSS Mathiatis 59.96 300 P P **11 18 50.9 -0.7**
ANTO Ankara 60.16 305 ⇑P P **11 18 52.8 -0.3**
ANTO Ankara 60.16 305 P P **11 18 52.7 -0.3**
ANTO pmax pmax
comp=Z,75nm,1.0s
BR231 Keskin MP Arra 60.17 305 P P **11 18 51.8 -1.3**
BR231 IAmb IAmb 11 18 56.5
comp=Z,118nm,1.1s
TMCR Tamitsa 60.27 334 *e* P P **11 18 50.2 -2.9**
TMCR eS S **11 27 03.1 -3.4**
TMCR pmax pmax
comp=Z,105nm,0.9s
CTA Charters Tower 60.30 128 P P **11 18 54.3 +0.2**
CTA pmax pmax
comp=Z,102nm,1.3s
CTAO Charters Tower 60.30 128 P P **11 18 53.4 -0.7**
CTAO pmax pmax
comp=Z,136nm,1.3s
CTAO MLR MLR
comp=Z,10μm,20.0s
CTAO Charters Tower 60.30 128 P P **11 18 53.4 -0.7**
CTAO IAmb IAmb 11 18 58.0
comp=Z,136nm,1.2s
LEF Lefka 60.31 300 ⇑P P **11 18 54.4 +0.4**
ISP Isparta 62.02 303 P P **11 19 04.8 -0.9**
ISP pmax pmax
comp=Z,173nm,1.2s
ISP MLR MLR
comp=Z,15μm,22.0s
ISP Isparta 62.02 303 P P **11 19 04.8 -0.9**
ELL Elmali 62.59 302 P P **11 19 08.8 -0.8**
ELL Elmali 62.59 302 IAMs_20 IAMs_20 11 48 42.2
comp=Z,33μm,22.0s
BBOO Buckleboo 62.65 146 P P **11 19 09.1 -0.6**
BBOO IAmb IAmb 11 19 58.6
comp=Z,51nm,1.1s
BBOO IAMs_20 IAMs_20 11 47 26.0
comp=Z,16μm,20.0s
LVZ Lovozero 62.65 337*d i* P P **11 19 09.5 +0.2**
LVZ pmax pmax
comp=Z,63nm,1.0s
AKASG Malin Array Be 62.75 318 P P **11 19 09.1 -1.1**
comp=Z,20nm,0.8s,baz=78,slow=5.8,SNR=53
AKASG LR LR 11 50 22.4
comp=Z,12μm,18.7s,baz=115,slow=40
AKBB Malin Array Si 62.75 318*d i* P P **11 19 11.6 +1.4**
AKBB Malin Array Si 62.75 318 IAmb IAmb 11 19 13.9
comp=Z,100nm,1.2s
AKBB IAMs_20 IAMs_20 11 50 11.3
comp=Z,15μm,19.0s
PUL Pulkovo 62.88 328⇑ *i* P P **11 19 12.7 +1.8**
PUL pmax pmax
comp=Z,173nm,1.0s
JOF Joensuu 62.90 331 P P **11 19 10.3 -0.6**
JOF pmax pmax
comp=Z,68nm,0.9s
ISK Istanbul-Kandi 62.96 307 P P **11 19 11.3 -0.5**
ISK pmax pmax
comp=Z,158nm,1.4s
KIS Kishinev 62.96 313⇑ *i* P P **11 19 14.0 +2.3**
comp=Z,600nm,2.0s
KIS Kishinev 62.96 313 *e* PP PP 11 21 32.0 +2.0
KIS *i* ScP ScP 11 23 04.0 -48
KIS Kishinev 62.96 313⇑ *i* P P **11 19 14.0 +2.3**
KIS *e* 11 21 32.0
KIS *i* 11 23 04.0
KIS *i* S S **11 27 40.0 -1.3**
KIS *e* 11 29 04.0
KIS pmax pmax
comp=Z,600nm,2.0s
KIS smax smax
comp=N,2μm,14.0s
KIS MLR MLR
comp=Z,15μm,20.0s
KIS MLR MLR
comp=N,19μm,15.0s
TLCR 62.99 311 ⇓P P **11 19 13.4 +1.5**
TLCR 62.99 311 P P **11 19 13.3 +1.5**
APA Apatity 63.03 337 ⇓ *i* P P **11 19 10.5 -1.2**

APA *i* 11 21 29.0
APA *i* S S **11 27 41.0 -0.4**
APA *i* PS PnS **11 28 08.0 +10**
APA pmax pmax
comp=Z,28nm,0.8s
APA MLR MLR
comp=Z,24μm,13.0s
BILL Bilibino 63.24 23⇓ *i* P P **11 19 11.5 -1.7**
BILL *e* 11 19 52.0
BILL *e* 11 21 33.2
BILL ePPP PPP 11 22 59.4
BILL eS S **11 27 44.1 -0.1**
BILL eSS SS **11 31 44.6 -5.5**
BILL eSSS SSS 11 34 33.7
BILL pmax pmax
comp=Z,60nm,2.0s
BILL MLR MLR
comp=Z,70μm,20.0s
BILL Bilibino 63.24 23 P P **11 19 11.0 -2.2**
BILL IAmb IAmb 11 19 17.9
comp=Z,172nm,1.6s
SORM Soroca 63.28 315⇓ P P **11 19 14.5 +0.8**
SORM Soroca 63.28 315 P P **11 19 14.5 +0.8**
TIRR Tirgusor 63.29 311⇑ P P **11 19 13.6 -0.3**
TIRR Tirgusor 63.29 311⇑ P P **11 19 13.6 -0.3**
TIRR Tirgusor 63.29 311 P P **11 19 13.8 -0.1**
TIRR pmax pmax
comp=Z,264nm,1.6s
TIRR Tirgusor 63.29 311 IAMs_20 IAMs_20 11 51 08.2
comp=Z,24μm,20.0s
LEOM Leova 63.36 313 P P **11 19 18.2 +3.9**
CFR Carcaliu 63.47 311⇑ P P **11 19 14.8 -0.3**
CFR Carcaliu 63.47 311 P P **11 19 14.9 -0.1**
CFR pmax pmax
comp=Z,86nm,1.4s
MANT Manisa 63.52 304 IAMs_20 IAMs_20 11 52 02.6
comp=Z,29μm,20.0s
MICGM Minsk 63.73 322⇑ *i* P P **11 19 20.0 +3.4**
MICGM PM 11 19 23.0
comp=Z,1.3nm,1.5s
MICGM PM 11 19 24.0
comp=E,1.5nm,1.5s
MICGM *e* PcP PcP **11 19 50.0 -2.6**
MICGM *e* PP PP **11 21 42.0 +5.4**
MICGM *e* PPP PPP 11 23 28.0
MICGM *e* PsP 11 25 42.0
MICGM eS S **11 27 50.0 -0.6**
MICGM ePS PnS **11 28 04.0 -3.7**
MICGM eScS ScS **11 29 12.0 +2.4**
MICGM eSS SS **11 32 00.0 +1.8**
MICGM eSSS SSS 11 35 04.0
MICGM eLQ LQ 11 42 50.0
MICGM LQM 11 44 42.0
comp=N,58nm,20.0s
MICGM LQM 11 45 36.0
comp=N,68nm,20.0s
MICGM eLR LR 11 47 24.0
MICGM LRM MLR 11 49 00.0
comp=Z,45nm,16.0s
MICGM LRM MLR 11 49 40.0
comp=Z,64nm,14.0s
MNK Minsk 63.73 322⇑ *i* P P **11 19 20.0 +3.4**
MNK *e* 11 19 50.0
MNK *e* 11 21 42.0
MNK eS S **11 27 50.0 -0.6**
MNK *e* 11 28 04.0
MNK *e* 11 29 12.0
MNK *e* 11 32 00.0
MNK pmax pmax
comp=Z,1μm,1.5s
MNK pmax pmax
comp=E,1μm,1.5s
MNK MLR MLR
comp=Z,45μm,16.0s
MNK MLR MLR
comp=Z,64μm,14.0s
ICOR Ion Corvin 63.74 310⇑ P P **11 19 18.2 +1.3**
EDC Edincik 63.91 306 P P **11 19 19.4 +1.3**
ARG Arkhangelos 64.07 301 P P **11 19 19.4 +0.2**
ARG pmax pmax
comp=Z,153nm,1.5s
ABPO Ambohimpanom 64.21 236 P P **11 19 19.8 -0.7**
ABPO pmax pmax
comp=Z,252nm,1.5s
ABPO Ambohimpanom 64.21 236 P P **11 19 19.8 -0.7**
ODBI Odobesti 64.21 312⇓ P P **11 19 21.0 +1.1**
KIBK Kibwezi 64.30 257 P P **11 19 22.8 +1.7**
SNR=8.7
NACGM Naroch 64.39 322 *e* P P **11 19 20.0 -0.9**
NACGM PM 11 19 24.0
comp=Z,0.6nm,1.0s
NACGM *e* PP PP **11 21 42.0 -0.4**
NACGM eS S **11 27 52.0 -6.7**
NACGM ePS PnS **11 28 12.0 -4.7**
NACGM eSS SS **11 32 02.0 -6.4**
NACGM eSSS SSS 11 34 34.0
NACGM eLQ LQ 11 43 18.0
NACGM LQM 11 44 49.0
comp=N,75nm,21.0s
NACGM eLR LR 11 46 32.0
NACGM LRM MLR 11 49 42.0
comp=Z,40nm,16.0s
VRI Vrincioaia 64.43 312⇑ P P **11 19 22.1 +0.6**
VRI Vrincioaia 64.43 312 P P **11 19 21.9 +0.5**
VRI pmax pmax
comp=Z,351nm,1.5s
BISRR Bisoca 64.46 312⇓ P P **11 19 23.2 +1.6**
TESR Tescani 64.46 313⇑ P P **11 19 22.5 +0.9**
PLOR Plostina 64.49 312⇑ P P **11 19 23.5 +1.6**
PLOR Plostina 64.49 312 P P **11 19 23.4 +1.6**
KMBO Kilima Mbogo 64.57 259 P P **11 19 23.4 +0.3**
comp=Z,17nm,0.9s,baz=46,slow=9.5,SNR=28
KMBO LR LR 11 44 57.5
comp=Z,12μm,21.9s,baz=71,slow=34
KMBO Kilima Mbogo 64.57 259 *i* P P **11 19 23.9 +0.8**
KMBO Kilima Mbogo 64.57 259 *i* P P **11 19 24.2 +1.1**
SNR=8.9
KMBO Kilima Mbogo 64.57 259 *i* P P **11 19 24.2 +1.1**
SNR=8.9
KMBO Kilima Mbogo 64.57 259 *i* P P **11 19 23.9 +0.8**
ISR Istrita 64.59 311⇓ P P **11 19 24.1 +1.6**
ISR Istrita 64.59 311 P P **11 19 25.4 +2.8**
ISR pmax pmax
comp=Z,222nm,1.6s
VSU Vasula 64.59 326 *e* P P **11 19 22.9 +0.7**
VSU Vasula 64.59 326*d i* P P **11 19 22.9 +0.7**
VSU pmax pmax
comp=Z,623nm,1.7s
RAZG Razgrad 64.70 310⇑ P P **11 19 24.3 +1.1**
LODK Lodwar 64.71 264 P P **11 19 26.5 +2.7**
SNR=11
IIGN Ignalina 64.72 323 *e* P P **11 19 23.5 +0.4**
IZAR Zarasai 64.72 323 *e* P P **11 19 23.8 +0.7**
ISAL Salakas 64.78 323 *e* P P **11 19 24.1 +0.6**
BIZ Bicaz 64.82 313⇓ P P **11 19 24.1 +0.1**
KARP Karpathos 64.93 301 P P **11 19 23.8 -1.1**
SMG Samos 64.94 303 P P **11 19 26.8 +1.9**
MLR Muntele Rosu 65.00 312 LR LR 11 51 42.8
comp=Z,18μm,21.6s,baz=68,slow=40
MLR Muntele Rosu 65.00 312⇑ P P **11 19 26.6 +1.3**
MLR Muntele Rosu 65.00 312 P P **11 19 24.1 -1.2**
MLR pmax pmax
comp=Z,403nm,1.2s
MLR MLR MLR
comp=Z,17μm,22.0s
MLR Muntele Rosu 65.00 312 P P **11 19 24.1 -1.2**
MLR IAMs_20 IAMs_20 11 51 31.3
comp=Z,17μm,22.0s
STKA Stephens Creek 65.06 141 P P **11 19 25.9 +0.3**
comp=Z,28nm,1.0s,baz=313,slow=7.1,SNR=20
STKA LR LR 11 54 18.4
comp=Z,13μm,18.1s,baz=306,slow=42
STKA Stephens Creek 65.06 141 P P **11 19 25.0 -0.6**
FIA1 FINESS Array S 65.14 329 P P **11 19 24.5 -1.2**
FINES FINESS Array B 65.14 329 P P **11 19 24.2 -1.5**
comp=Z,30nm,0.7s,baz=96,slow=5.9,SNR=44
FINES LR LR 11 49 40.7
comp=Z,22μm,20.3s,baz=94,slow=38
ELND Elena 65.21 309⇓ P P **11 19 26.6 +0.1**
SUF Sumiainen 65.22 331 P P **11 19 25.3 -0.9**
SUF pmax pmax
comp=Z,104nm,1.1s
SMY Shemya 65.22 40 P P **11 19 25.7 -0.7**
SMY pmax pmax
comp=Z,157nm,1.0s
SMY Shemya 65.22 40 P P **11 19 25.7 -0.7**
PRK Paraskevi 65.23 305 P P **11 19 28.5 +1.8**
ALN Alexandroupoli 65.25 307 P P **11 19 27.8 +1.0**
DOPR Dopca 65.36 312⇑ P P **11 19 28.5 +1.0**
BUR08 Bucovina Ar. S 65.41 314 IAmb IAmb 11 19 32.5
comp=Z,82nm,1.4s
SIGR SIGRI 65.55 305 P P **11 19 30.7 +1.9**
OUL Oulu 65.57 333 P P **11 19 27.0 -1.4**
OUL pmax pmax
comp=Z,69nm,1.1s
COPA Copaceanca 65.60 310⇓ P P **11 19 30.5 +1.5**
SGF Sodankyl 65.60 336 P P **11 19 27.6 -1.0**
SGF pmax pmax
comp=Z,116nm,0.9s
RDO Rodhopi 65.61 307 P P **11 19 29.4 +0.3**
VOIR 65.63 312⇑ P P **11 19 29.8 +0.5**
VOIR 65.63 312 P P **11 19 30.0 +0.7**
VOIR pmax pmax
comp=Z,26nm,1.7s
SMTH Samothraki Isl 65.68 306 P P **11 19 31.1 +1.5**
ZKR Zakros 65.75 300 P P **11 19 32.1 +1.9**
KEV Kevo 65.77 339 P P **11 19 27.7 -1.9**
KEV pmax pmax
comp=Z,80nm,0.9s
KEV MLR MLR
comp=Z,25μm,18.0s
KEV Kevo 65.77 339 P P **11 19 27.7 -1.9**
KEV IAmb IAmb 11 19 35.6
comp=Z,80nm,0.9s
KEV IAMs_20 IAMs_20 11 50 36.0
comp=Z,25μm,18.0s
ARR Arges 65.93 312⇑ P P **11 19 32.1 +0.9**
HNR Honiara 65.97 110 LR LR 11 46 00.6
comp=Z,13μm,21.9s,baz=300,slow=34
LIA Limnos Island 66.00 306 P P **11 19 34.3 +2.6**
PABE Paberze 66.01 323 *e* P P **11 19 32.6 +1.2**
APE Apeiranthos 66.05 303 P P **11 19 33.2 +1.1**
LVV L'vov 66.09 317 *e* P P **11 19 32.6 +0.5**
LVV *e* 11 21 56.0
LVV ePPP PPP 11 23 40.9
LVV *i* S S **11 28 18.3 -1.5**
LVV ePS PnS **11 28 40.7 +0.6**
LVV eSS SS **11 32 34.6 -0.5**
LVV pmax pmax
comp=Z,420nm,1.4s
LVV MLR MLR
comp=N,3μm,18.0s
LVV MLR MLR
comp=E,10μm,18.0s
LVV MLR MLR
comp=Z,12μm,19.0s
PLVB Pleven 66.09 310⇑ P P **11 19 33.3 +1.1**
PLD Plovdiv 66.14 308 P P **11 19 33.5 +0.9**
PLD pmax pmax
comp=Z,388nm,1.5s
VOI Vohitsoka 66.16 234 P P **11 19 35.5 +2.4**
SNR=10
NPS Neapolis 66.22 301 P P **11 19 35.0 +1.8**
ARCES ARCESS Array B 66.25 338 P P **11 19 31.0 -1.8**
comp=Z,22nm,0.8s,baz=81,slow=6.5,SNR=52
ARCES LR LR 11 51 11.9
comp=Z,22μm,20.3s,baz=99,slow=39
ARE0 ARCESS Array S 66.25 338 *e* P P **11 19 32.6 -0.2**
ARE0 eS S **11 28 21.7 +0.5**
ARE0 IVMs_BB IVMs_BB 11 50 48.8
comp=Z,8μm,19.2s
LAST Lasithi 66.34 301 P P **11 19 34.7 +0.6**
SUW Suwalki 66.48 321 eS S **11 28 24.3 -0.2**
SUW LMZ LR 11 53 49.2
comp=Z,20nm,21.1s
SUW Suwalki 66.48 321 P P **11 19 33.1 -1.4**
SUW pmax pmax
comp=Z,327nm,1.1s
SUW MLR MLR
comp=Z,21μm,20.0s
SUW Suwalki 66.48 321 P P **11 19 33.1 -1.4**
SUW IAMs_20 IAMs_20 11 53 45.8
comp=Z,21μm,20.0s
CJR Cluj-Napoca 66.55 313⇑ P P **11 19 37.1 +1.9**
CJR Cluj-Napoca 66.55 313 P P **11 19 37.1 +1.9**
BMR Baia Mare 66.56 314 P P **11 19 35.9 +0.8**
IDI Anoyia 66.80 301 P P **11 19 36.9 -0.1**
IDI Anoyia 66.80 301 LR LR 11 55 26.3
comp=Z,7μm,21.9s,baz=88,slow=42
IDI Anoyia 66.80 301⇓ P P **11 19 36.3 -0.7**
VAF Ylistaro 66.83 331 P P **11 19 35.5 -1.0**
VAF pmax pmax
comp=Z,116nm,2.1s
SLIT Slitere, Latvi 66.93 325 *e* P P **11 19 37.1 -0.1**
KWP Kalwaria Pacla 66.95 316 *e* P P **11 19 40.3 +2.6**
KWP eS S **11 28 30.8 +0.4**
KWP LMZ LR 11 48 57.9
comp=Z,14nm,27.3s
KWP Kalwaria Pacla 66.95 316 P P **11 19 38.1 +0.4**
KWP pmax pmax
comp=Z,304nm,1.8s
KWP Kalwaria Pacla 66.95 316 IAMs_20 IAMs_20 11 53 09.5
comp=Z,18μm,22.0s
KYMI Kymi, Euboea I 66.98 304 P P **11 19 39.7 +1.7**
KTK1 Kautokeino 67.00 338 *e* P P **11 19 36.5 -1.1**
KTK1 eS S **11 28 32.5 +2.3**
HAMF Hammerfest 67.01 339 *e* P P **11 19 36.9 -0.7**
HAMF IVmB_BB 11 19 41.5
comp=Z,1μm,2.3s
HAMF *e* PP PP **11 22 05.9 +0.9**
HAMF eS S **11 28 30.6 +0.3**
HAMF eSS SS **11 32 53.9 +5.3**
HAMF IVMs_BB IVMs_BB 11 54 25.0
comp=Z,7μm,14.4s
EIDS Eidsvold 67.04 130 P P **11 19 38.1 -0.3**
EIDS IAmb IAmb 11 19 42.2
comp=Z,82nm,1.4s
DEV Deva 67.10 312⇑ P P **11 19 40.4 +1.8**
DEV Deva 67.10 312 P P **11 19 40.1 +1.5**
DEV pmax pmax
comp=Z,151nm,1.1s
PAIG Paliouri 67.14 306 P P **11 19 40.9 +1.9**
DRGR 67.16 313⇑ P P **11 19 39.2 +0.1**
DRGR 67.16 313 P P **11 19 38.6 -0.5**
DRGR pmax pmax
comp=Z,174nm,1.4s
PBUR Paburge 67.16 323 *e* P P **11 19 40.0 +1.3**
TRPA Tarpa 67.17 315⇑ P P **11 19 40.9 +1.9**
VTS Vitosha 67.17 309 P P **11 19 39.7 +0.3**
VTS Vitosha 67.17 309⇓ P P **11 19 39.1 -0.3**
VTS Vitosha 67.17 309 P P **11 19 38.4 -1.0**
VTS pmax pmax
comp=Z,376nm,1.9s
VTS MLR MLR
comp=Z,8μm,21.0s
VTS Vitosha 67.17 309 P P **11 19 38.4 -1.0**
PUNG Punghina 67.22 311⇑ P P **11 19 39.9 +0.5**
GZR Gura Zlata 67.23 312⇑ P P **11 19 41.4 +1.8**
PLG Polygyros 67.27 306 P P **11 19 39.5 -0.4**
KOLS Kolonicke sedl 67.28 316 *e* P P **11 19 42.3 +2.5**
KOLS pmax pmax
comp=Z,32nm,1.3s
KOLS Kolonicke sedl 67.28 316 *e* P P **11 19 42.3 +2.5**
KOLS eL L 11 51 51.2
UZH Uzhgorod 67.29 315 *e* P P **11 19 38.8 -1.0**
UZH *i* 11 19 40.2
UZH *i* 11 19 43.7
UZH *e* 11 22 08.5
UZH *i* S S **11 28 28.6 -5.8**
ATHU Athens Univers 67.31 304 P P **11 19 40.2 +0.1**
VLY Voula,Athens 67.32 304 P P **11 19 40.1 -0.1**
VAM Vamos 67.34 301 P P **11 19 40.8 +0.4**
MRKA Markates 67.37 305 P P **11 19 40.7 +0.2**
HOPEN Hopen 67.49 346 *e* P P **11 19 40.7 +0.1**
HOPEN IVmB_BB 11 19 44.7
comp=Z,1μm,2.3s
HOPEN eS S **11 28 35.1 -0.9**
HOPEN IVMs_BB IVMs_BB 11 53 58.4
comp=Z,8μm,16.2s
HORT Hortiatis 67.50 307 P P **11 19 41.5 +0.1**
IMMV Iera Moni Meta 67.51 301 P P **11 19 41.9 +0.5**
HERR Herculane 67.53 311⇑ P P **11 19 42.0 +0.6**
VILL Villia 67.66 304 P P **11 19 40.8 -1.6**
DID Didima 67.81 303 P P **11 19 42.5 -0.8**
BZS Buzias 68.02 312⇑ P P **11 19 45.5 +1.1**
BEL Belsk 68.03 319 *e* P P **11 19 47.5 +3.1**
BEL eS S **11 28 41.9 -1.3**

BEL LMZ LR 11 53 56.0
comp=Z,17nm,22.1s
BEL Belsk 68.03 319 P **P** **11 19 44.6 +0.3**
LIT Litokhoron 68.03 306 P **P** **11 19 45.4 +0.8**
MDVR Moldovita 68.04 311 ⇑P **P** **11 19 45.1 +0.4**
STIP Stip 68.05 308 *i* P **P** **11 19 43.2 -1.6**
STIP Stip 68.05 308 *i* P **P** **11 19 43.2 -1.6**
STIP Stip 68.05 308 *i* P **P** **11 19 43.1 -1.6**
STIP Stip 68.05 308 *i* P **P** **11 19 43.1 -1.6**
VLI Veliai 68.16 303 P **P** **11 19 45.9 +0.4**
VLX Vlachokerasia 68.50 303 P **P** **11 19 47.3 -0.5**
KECS Kecovo 68.50 315 *e*P **P** **11 19 48.2 +0.8**
KECS pmax pmax
comp=Z,36nm,1.2s
KECS Kecovo 68.50 315 *e*P **P** **11 19 48.2 +0.8**
NIE Niedzica 68.54 316 *e*P **P** **11 19 48.6 +1.0**
NIE *e*S **S** **11 28 50.8 +1.4**
NIE *e*SSS SSS 11 36 37.8
NIE LMZ LR 11 48 36.8
comp=Z,8.9nm,26.4s
NIE Niedzica 68.54 316 P **P** **11 19 47.5 -0.2**
NIE pmax pmax
comp=Z,67nm,1.4s
KZN Kozani 68.55 307 P **P** **11 19 48.0 0.0**
TRO Tromso 68.56 338 *e*P **P** **11 19 47.3 0.0**
TRO IVmBBB 11 19 48.8
comp=Z,762nm,1.4s
TRO *e*PP **PP** **11 22 20.9 +2.4**
TRO *e*S **S** **11 28 46.7 -2.2**
TRO IVMs_BB IVMs_BB 11 52 19.6
comp=Z,9μm,19.5s
SKO Skopje 68.57 308 *i* P **P** **11 19 47.9 -0.1**
SKO Skopje 68.57 308 *i* P **P** **11 19 46.8 -1.2**
SKO Skopje 68.57 308 *i* P **P** **11 19 47.9 -0.1**
SKO Skopje 68.57 308 *i* P **P** **11 19 46.8 -1.2**
KLV Kalavryta, Ach 68.58 304 P **P** **11 19 47.7 -0.5**
DYR Agios Nikonas 68.63 303 P **P** **11 19 49.0 +0.5**
LAKA Lakka 68.68 304 P **P** **11 19 49.2 +0.4**
BJO1 Bjornoya 68.75 343 *e*P **P** **11 19 48.8 +0.3**
BJO1 IVmB_BB 11 19 53.1
comp=Z,887nm,3.7s
BJO1 *e*PP **PP** **11 22 17.1 -3.0**
BJO1 *e*S **S** **11 28 51.2 +0.1**
BJO1 IVMs_BB IVMs_BB 11 54 41.5
comp=Z,10μm,17.3s
FNA Florina 68.78 307 P **P** **11 19 48.7 -0.7**
OJC Ojcow 68.78 317 *e*P **P** **11 19 51.8 +2.7**
OJC *e*S **S** **11 28 52.8 +0.5**
OJC *e*SS **SS** **11 33 16.4 -0.5**
OJC *e*SSS SSS 11 36 41.2
OJC LMZ LR 11 48 21.1
comp=Z,19nm,26.7s
ITM Ithomi 68.89 303 P **P** **11 19 50.1 0.0**
DRO Drossia 68.94 304 P **P** **11 19 50.9 +0.5**
PSZ Piszkesteto 68.95 315 ⇑P **P** **11 19 51.4 +1.0**
PSZ Piszkesteto 68.95 315 P **P** **11 19 51.1 +0.8**
PSZ pmax pmax
comp=Z,64nm,1.7s
PSZ Piszkesteto 68.95 315 IAmb IAmb 11 19 55.1
comp=Z,152nm,1.5s
PSZ IAMs_20 IAMs_20 11 53 28.9
comp=Z,17μm,19.0s
PYL PYLOS 69.08 303 P **P** **11 19 51.2 0.0**
LANS Liptovska Anna 69.10 316 *e*P **P** **11 19 53.0 +1.8**
LANS pmax pmax
comp=Z,34nm,1.3s
LANS Liptovska Anna 69.10 316 *e*P **P** **11 19 53.0 +1.8**
RLS Riolos of Patr 69.11 304 P **P** **11 19 52.3 +0.9**
OHR Ohrid 69.17 307 *i* P **P** **11 19 54.0 +2.2**
OHR Ohrid 69.17 307 *i* P **P** **11 19 54.0 +2.2**
OHR Ohrid 69.17 307 *i* P **P** **11 19 54.0 +2.2**
OHR Ohrid 69.17 307 *i* P **P** **11 19 54.0 +2.2**
SPA0 Spitsbergen Ar 69.57 347 IAmb IAmb 11 20 11.7
comp=Z,118nm,1.1s
SPA0 Spitsbergen Ar 69.57 347 *e*P **P** **11 19 53.3 -0.3**
SPA0 IVmB_BB 11 19 57.5
comp=Z,1μm,2.2s
SPA0 *e*S **S** **11 28 59.9 -0.8**
SPA0 IVMs_BB IVMs_BB 11 55 15.1
comp=Z,9μm,16.4s
SPITS Spitsbergen Ar 69.57 347 P **P** **11 19 51.6 -2.0**
comp=Z,17nm,0.8s,baz=119,slow=8.7,SNR=4.3
SPITS LR LR 11 55 35.0
comp=Z,25μm,19.5s,baz=100,slow=40
PVY Plav 69.58 309 ⇓*i*P **P** **11 19 53.9 -0.5**
IVA Berane 69.58 309 ⇓*i*P **P** **11 19 54.0 -0.4**
BUD Budapest 69.59 314 P **P** **11 19 58.5 +4.3**
BUD pmax pmax
comp=Z,51nm,1.7s
VYHS Vyhne 69.59 316 *e*P **P** **11 19 54.1 -0.1**
VYHS pmax pmax
comp=Z,60nm,1.2s
VYHS Vyhne 69.59 316 *e*P **P** **11 19 54.1 -0.1**
VYHS *e*S **S** **11 29 04.9 +3.0**
VYHS *e*L L 11 53 50.2
HSPB Hornsund (broa 69.71 346 *e*P **P** **11 19 54.5 +0.1**
HSPB *e*S **S** **11 29 07.0 +4.6**
HSPB *e*SSS SSS 11 36 43.9
HSPB LMZ LR 11 51 10.3
comp=Z,19nm,23.7s
HSPB Hornsund (broa 69.71 346 *e*P **P** **11 19 53.4 -1.0**
HSPB IVmB_BB 11 19 58.5
comp=Z,858nm,2.3s
HSPB *e*PP **PP** **11 22 26.2 -2.0**
HSPB *e*S **S** **11 29 02.4 +0.1**
HSPB IVMs_BB IVMs_BB 11 55 23.9
comp=Z,9μm,14.5s
TIR Tirane 69.83 308 ⇑P **P** **11 19 55.8 0.0**
TIR Tirane 69.83 308 P **P** **11 19 55.3 -0.5**
TIR pmax pmax
comp=Z,166nm,1.3s
TIR Tirane 69.83 308 P **P** **11 19 55.3 -0.5**
TIR IAmb IAmb 11 19 59.2
comp=Z,166nm,1.3s
KOME Kolasin 69.86 309 ⇑*i*P **P** **11 19 55.9 -0.2**
OKC Ostrava-Krasne 69.88 317 *e*P **P** **11 19 56.6 +0.7**
OKC MLR MLR
comp=Z,10μm,15.3s
OKC Ostrava-Krasne 69.88 317 *e*P **P** **11 19 56.6 +0.7**
OKC AMS AMS 11 52 20.0
comp=Z,10μm,15.3s
PLE Pljevlja 69.89 310 ⇓*i*P **P** **11 19 56.3 +0.1**
STEI Steigen 69.92 336 *e*P **P** **11 19 55.8 0.0**
STEI IVmB_BB 11 19 57.0
comp=Z,741nm,2.3s
STEI *e*S **S** **11 29 06.2 +1.2**
STEI *e*SS **SS** **11 33 38.0 +4.5**
STEI IVMs_BB IVMs_BB 11 53 23.0
comp=Z,8μm,13.5s
GKP Gorka Klasztor 70.06 321 *e*S **S** **11 29 06.6 -0.5**
GKP LMZ LR 11 55 05.0
comp=Z,20nm,23.4s
PDG Podgorica 70.11 309 ⇓P **P** **11 19 57.4 -0.2**
TTG Podgorica 70.11 309 ⇑*i*P **P** **11 19 57.3 -0.2**
ULC Ulcinj 70.19 309 ⇑*i*P **P** **11 19 57.9 -0.2**
DRME Dracevica, Mon 70.20 309 ⇑*i*P **P** **11 19 57.7 -0.4**
UPM Unac-Piva 70.25 310 ⇑*i*P **P** **11 19 58.8 +0.2**
MORC Moravsky Berou 70.28 317 *e*P **P** **11 19 58.8 +0.3**
MORC *e*S **S** **11 29 12.2 +2.2**
MORC Moravsky Berou 70.28 317 ⇑P **P** **11 19 59.1 +0.6**
MORC Moravsky Berou 70.28 317 IAmb IAmb 11 20 03.7
comp=Z,206nm,1.7s
NKME Niksic 70.28 309 ⇑*i*P **P** **11 19 58.5 -0.1**
JAVC Velka Javorina 70.31 316 *e*P **P** **11 19 59.7 +1.0**
JAVC *e*S **S** **11 29 14.2 +3.8**
MOR8 Moi Rana 70.33 335 *e*P **P** **11 19 57.3 -1.1**
MOR8 IVmB_BB 11 20 04.1
comp=Z,615nm,1.5s
MOR8 *e*PP **PP** **11 22 34.3 +0.4**
MOR8 *e*S **S** **11 29 05.7 -4.3**
MOR8 *e*SS **SS** **11 33 41.9 +1.9**
MOR8 IVMs_BB IVMs_BB 11 54 38.7
comp=Z,7μm,15.3s
CEME Cevo 70.34 309 ⇑*i*P **P** **11 19 58.8 -0.2**
BUM Brajici-Budva 70.40 309 ⇑*i*P **P** **11 19 58.8 -0.6**
MBAR Mbarara 70.44 262*c i*P **P** **11 20 02.0 +1.8**
MBAR pmax pmax
comp=Z,98nm,1.8s
MBAR Mbarara 70.44 262 P **P** **11 19 59.9 -0.3**
MBAR IAmb IAmb 11 20 04.8
comp=Z,187nm,1.8s
KBS Kingsbay 70.46 348 *e*P **P** **11 19 59.4 +0.5**
KBS IVmB_BB 11 20 06.2
comp=Z,836nm,2.4s
KBS *e*PP **PP** **11 22 33.9 -0.8**
KBS *e*S **S** **11 29 12.0 +1.0**
KBS *e*SS **SS** **11 33 45.8 +4.4**
KBS IVMs_BB IVMs_BB 11 51 45.6
comp=Z,10μm,16.5s
ARMA Armidale 70.48 134 P **P** **11 19 59.8 -0.2**
ARMA IAmb IAmb 11 20 05.8
comp=Z,68nm,1.2s
ARMA IAMs_20 IAMs_20 11 54 56.3
comp=Z,17μm,20.0s
SMOL Smolenice 70.52 316 *e*P **P** **11 20 00.1 +0.2**
SMOL pmax pmax
comp=Z,30nm,1.3s
SMOL Smolenice 70.52 316 *e*P **P** **11 20 00.1 +0.2**
LOF Lofoten 70.55 337 *e*P **P** **11 19 58.9 -0.7**
LOF IVmB_BB 11 20 05.1
comp=Z,552nm,1.5s
LOF *e*PP **PP** **11 22 33.1 -2.5**
LOF *e*S **S** **11 29 14.0 +1.7**
LOF *e*SS **SS** **11 33 46.0 +2.8**
LOF IVMs_BB IVMs_BB 11 51 20.4
comp=Z,7μm,17.4s
BRY Bratogost 70.56 310 ⇑*i*P **P** **11 20 00.2 -0.3**
MODS Modra-Piesok 70.64 316 *e*P **P** **11 20 00.6 0.0**
MODS pmax pmax
comp=Z,91nm,1.2s
MODS Modra-Piesok 70.64 316 *e*P **P** **11 20 00.6 0.0**
MODS *e*S **S** **11 29 22.6 +8.4**
MODS *e*L L 11 52 53.4
HCY Herceg Novi 70.67 309 ⇑*i*P **P** **11 20 00.8 -0.1**
KRLC Kraliky 70.73 317 *e*P **P** **11 20 01.8 +0.6**
KRLC *e*S **S** **11 29 15.5 +0.3**
KRLC MLR MLR
comp=Z,14μm,18.6s
KRLC Kraliky 70.73 317 *e*P **P** **11 20 01.8 +0.6**
KRLC *e*S **S** **11 29 15.5 +0.3**
KRLC AMS AMS 11 52 40.0
comp=Z,14μm,18.6s
ZST Bratislava 70.78 315 *e*P **P** **11 20 01.2 -0.2**
ZST pmax pmax
comp=Z,82nm,1.2s
ZST Bratislava 70.78 315 *e*P **P** **11 20 01.2 -0.2**
KONS Konsvik 70.84 335 *e*P **P** **11 20 01.1 -0.4**
STOK Stokkvaagen 70.89 335 *e*P **P** **11 20 01.9 +0.1**
STOK *e*S **S** **11 29 20.0 +3.6**
KSP Ksiaz 70.94 318 *e*P **P** **11 20 02.8 +0.5**
KSP *e*S **S** **11 29 19.3 +1.8**
KSP LMZ LR 11 51 16.4
comp=Z,13nm,23.0s
KSP Ksiaz 70.94 318 P **P** **11 20 02.0 -0.4**
KSP pmax pmax
comp=Z,135nm,1.5s
VRAC Vranov 70.95 317 P **P** **11 20 01.8 -0.7**
comp=Z,32nm,0.9s,baz=83,slow=7.7
VRAC LR LR 11 54 22.5
comp=Z,17μm,20.5s,baz=85,slow=39
VRAC Vranov 70.95 317 *e*P **P** **11 20 03.2 +0.7**
VRAC *e*S **S** **11 29 19.7 +1.9**
VRAC Vranov 70.95 317 ⇑P **P** **11 20 04.5 +2.0**
DPC Dobruska-Polom 70.98 318 *e*P **P** **11 20 03.7 +1.0**
DPC *e*S **S** **11 29 19.7 +1.5**
DPC MLR MLR
comp=Z,16μm,16.2s
DPC Dobruska-Polom 70.98 318 *e*P **P** **11 20 03.7 +1.0**
DPC *e*S **S** **11 29 19.7 +1.5**
DPC AMS AMS 11 53 50.0
comp=Z,16μm,16.2s
OSTC Ostas 71.02 318 *e*P **P** **11 20 04.2 +1.3**
OSTC *e*S **S** **11 29 20.1 +1.5**
OSTC AMS AMS 11 53 40.0
comp=Z,17μm,16.2s
KRUC Moravsky 71.12 316 *e*P **P** **11 20 03.9 +0.4**
KRUC *e*S **S** **11 29 20.7 +1.0**
KRUC Moravsky 71.12 316 P **P** **11 20 04.2 +0.7**
KRUC pmax pmax
comp=Z,50nm,1.3s
CHVC Chvalec 71.12 318 *e*P **P** **11 20 04.7 +1.2**
CHVC AMS AMS 11 53 50.0
comp=Z,16μm,16.2s
UPC Upice 71.16 318 *e*P **P** **11 20 03.9 +0.2**
UPC MLR MLR
comp=Z,18μm,16.2s
UPC Upice 71.16 318 *e*P **P** **11 20 03.9 +0.2**
UPC AMS AMS 11 53 40.0
comp=Z,18μm,16.2s
BSD Bornholm Skovb 71.20 323 *i* P **P** **11 20 04.4 +0.6**
BSD pmax pmax
comp=Z,32nm,1.0s
BSD MLR MLR
comp=Z,26μm,15.0s
BSD Bornholm Skovb 71.20 323 *i* P **P** **11 20 04.4 +0.6**
comp=Z,32nm,1.0s
comp=Z,26μm,15.0s
SOP Sopron 71.22 315 P **P** **11 20 05.0 +0.9**
SOP pmax pmax
comp=Z,84nm,1.3s
BLY Banja Luka 71.24 312 IAmb IAmb 11 20 10.1
comp=Z,99nm,1.1s
TOO Toolangi 71.36 143 P **P** **11 20 05.6 +0.6**
TOO pmax pmax
comp=Z,45nm,1.3s
TOO MLR MLR
comp=Z,16μm,19.0s
TOO Toolangi 71.36 143 P **P** **11 20 05.6 +0.6**
TOO IAMs_20 IAMs_20 11 55 18.2
comp=Z,16μm,19.0s
NSS Namsos 71.52 333 *e*P **P** **11 20 05.5 -0.1**
NSS IVmB_BB 11 20 15.6
comp=Z,551nm,4.3s
NSS *e*PP **PP** **11 22 44.0 0.0**
NSS *e*S **S** **11 29 26.4 +2.6**
NSS *e*SS **SS** **11 33 59.2 +1.1**
NSS IVMs_BB IVMs_BB 11 51 10.2
comp=Z,7μm,21.3s
KOGS Kog 71.61 314 *i* P **P** **11 20 06.9 +0.4**
KOGS *i* 11 21 16.4
KOGS *e* 11 24 35.8
KOGS *e*S **S** **11 29 25.4 -0.1**
KOGS *e* 11 37 29.9
CONA Conrad Observa 71.64 315 *i* pP **P** **11 20 07.4 +0.6**
comp=Z,167nm,1.3s,SNR=93
TREC Trest 71.67 317 AMS AMS 11 54 10.0
comp=Z,26μm,21.5s
CAN Canberra 71.90 139 P **P** **11 20 08.4 0.0**
CAN pmax pmax
comp=Z,106nm,1.5s
CAN MLR MLR
comp=Z,15μm,20.0s
CAN Canberra 71.90 139 P **P** **11 20 08.3 0.0**
CAN IAmb IAmb 11 20 12.4
comp=Z,106nm,1.5s
CAN IAMs_20 IAMs_20 11 55 16.7
comp=Z,15μm,20.0s
ARSA Arzberg 71.98 315 *i* pP **P** **11 20 08.6 -0.2**
comp=Z,53nm,1.1s,SNR=16
GAMB Gambell 71.99 28 IAMs_20 IAMs_20 11 51 21.0
comp=Z,23μm,20.0s
GOPC GO Pecny, Ondr 72.03 317 *e*P **P** **11 20 06.9 -2.1**
GOPC *e*S **S** **11 29 31.9 +1.7**
GOPC MLR MLR
comp=Z,15μm,16.9s
GOPC GO Pecny, Ondr 72.03 317 *e*P **P** **11 20 06.9 -2.1**
GOPC *e*S **S** **11 29 31.9 +1.7**
GOPC AMS AMS 11 54 20.0
comp=Z,15μm,16.9s
PVCC Panska Ves 72.07 318 *e*P **P** **11 20 10.3 +1.1**
PVCC MLR MLR
comp=Z,12μm,16.2s
PVCC Panska Ves 72.07 318 *e*P **P** **11 20 10.3 +1.1**
PVCC AMS AMS 11 54 20.0
comp=Z,12μm,16.2s
PRU Pruhonice 72.17 317 *e*P **P** **11 20 10.5 +0.7**
PRU *e*S **S** **11 29 32.8 +1.0**
PRU MLR MLR
comp=Z,1μm,14.8s
PRU Pruhonice 72.17 317 *e*P **P** **11 20 10.5 +0.7**
PRU *e*S **S** **11 29 32.8 +1.0**
PRU AMS AMS 11 54 30.0
comp=Z,16μm,14.8s
RGN Rugen 72.19 322 *e*P **P** **11 20 12.0 +2.2**
RGN Rugen 72.19 322 *e*P **P** **11 20 11.1 +1.3**
comp=Z,256nm,1.4s
RGN Rugen 72.19 322 P **P** **11 20 09.4 -0.4**
RGN IAMs_20 IAMs_20 11 53 01.7
comp=Z,15μm,19.0s
NC602 NORSAR Array S 72.21 329 IAmb IAmb 11 20 13.3
comp=Z,137nm,1.1s
NC602 NORSAR Array S 72.21 329 *e*P **P** **11 20 10.2 +0.3**
NC602 *e*S **S** **11 29 32.7 +0.8**
NC602 IVMs_BB IVMs_BB 11 53 09.4
comp=Z,7μm,13.7s
NORES NORESS Array B 72.21 329 P **P** **11 20 13.5 +3.6**
NORES pmax pmax
comp=Z,12nm,0.2s
RUE Ruedersdorf 72.24 320 *e*P **P** **11 20 12.1 +2.0**
RUE Ruedersdorf 72.24 320 *e*P **P** **11 20 11.2 +1.1**
comp=Z,270nm,1.2s
MATE Matera 72.30 308 ⇑P **P** **11 20 12.0 +1.2**
NB2 NORSAR Subarra 72.33 329 P **P** **11 20 08.7 -1.9**
comp=Z,52nm,0.9s,baz=82,slow=6.2
NB2 NORSAR Subarra 72.33 329 P **P** **11 20 08.7 -1.9**
baz=82,slow=6.2
NOA NORSAR Array B 72.33 329 P **P** **11 20 08.5 -2.1**
comp=Z,27nm,0.8s,baz=82,slow=6.0,SNR=39
NOA PP **PP** **11 22 52.4 +1.3**
comp=Z,8.2nm,0.9s,baz=81,slow=8.9,SNR=4.2
NOA LR LR 11 56 20.8
comp=Z,15μm,20.5s,baz=95,slow=40
PERS Pernice 72.36 314 *i* P **P** **11 20 11.1 0.0**
BRG Berggiesshubel 72.40 318 *i* P **P** **11 20 11.6 +0.4**
comp=Z,18nm,0.8s
BRG *i* 11 20 14.8
comp=Z,174nm,1.5s
BRG PP **PP** **11 22 47.0 -4.9**
BRG S **S** **11 29 33.0 -1.4**
BRG SS **SS** **11 34 06.0 -6.4**
comp=N,9μm,16.7s
comp=E,12μm,16.5s
comp=Z,14μm,16.8s
BRG Berggiesshubel 72.40 318 *e*P **P** **11 20 11.6 +0.4**
comp=Z,174nm,1.5s
BRG Berggiesshubel 72.40 318 *i* P **P** **11 20 11.6 +0.4**
BRG *i* 11 20 14.8
BRG 11 22 47.0
BRG S **S** **11 29 33.0 -1.4**
BRG SS **SS** **11 34 06.0 -6.4**
BRG pmax pmax
comp=Z,18nm,0.8s
BRG pmax pmax
comp=Z,174nm,1.5s
BRG MLR MLR
comp=N,9μm,16.7s
BRG MLR MLR
comp=E,12μm,16.5s
BRG MLR MLR
comp=Z,14μm,16.8s
SOKA Soboth 72.41 314 *i* pP **P** **11 20 11.3 -0.1**
SNR=30
TBLU Trondheim 72.44 332 *e*P **P** **11 20 10.2 -1.0**
TBLU IVmB_BB 11 20 26.8
comp=Z,841nm,1.4s
TBLU *e*S **S** **11 29 33.9 -0.5**
TBLU IVMs_BB IVMs_BB 11 51 49.4
comp=Z,8μm,22.6s
NC204 NORSAR Array S 72.51 330 IAmb IAmb 11 20 36.4
comp=Z,119nm,1.0s
NAO01 NORSAR Array S 72.51 329 IAmb IAmb 11 20 19.2
comp=Z,149nm,1.3s
TIP Timpagrande 72.55 306 P **P** **11 20 12.3 -0.1**
MOA Molln 72.71 315 *i* P **P** **11 20 11.9 -1.2**
comp=Z,92nm,1.1s,SNR=33
OSL Oslo 72.74 328 *e*P **P** **11 20 12.4 -0.6**
OSL IVmB_BB 11 20 18.4
comp=Z,2μm,1.3s
OSL *e*S **S** **11 29 38.5 +0.6**
OSL *e*SS **SS** **11 34 19.6 +2.7**
OSL IVMs_BB IVMs_BB 11 54 42.8
comp=Z,11μm,13.4s
FBE Freiberg 72.76 319 *e*P **P** **11 20 13.8 +0.4**
comp=Z,271nm,1.3s
OBKA Obir 72.76 314 *i* pP **P** **11 20 13.2 -0.4**
comp=Z,70nm,1.1s,SNR=14
SGRT San Giovanni R 72.81 309 IAmb IAmb 11 20 18.6
comp=Z,152nm,1.2s
ACER Acerenza 72.85 308 IAmb IAmb 11 20 21.3
comp=Z,126nm,1.0s
LJU Ljubljana 72.86 313 *i* P **P** **11 20 14.5 +0.4**
LJU *i* 11 20 17.6
LJU *e*S **S** **11 29 39.9 0.0**
GEC2 GERESS Array S 72.91 316 *e*P **P** **11 20 14.8 +0.4**
comp=Z,197nm,1.4s
GEC2 GERESS Array S 72.91 316 IAMs_20 IAMs_20 11 55 22.1
comp=Z,20μm,22.0s
GERES GERESS Array B 72.91 316 P **P** **11 20 13.4 -1.0**
comp=Z,26nm,1.0s,baz=57,slow=4.9,SNR=54
GERES LR LR 11 55 32.4
comp=Z,18μm,21.8s,baz=84,slow=39
CLL Collm 72.91 319 *i* P **P** **11 20 16.0 +1.8**
comp=Z,135nm,1.6s
CLL *e*Plp 11 20 17.0
comp=E,300nm,13.2s
CLL *e*Plp 11 20 17.0
comp=Z,800nm,13.0s
CLL *i* 11 20 37.3
CLL *e*PP **PP** **11 22 55.0 -1.3**
CLL *e*S **S** **11 29 42.0 +1.8**
CLL *e*S **S** **11 29 42.0 +1.8**
CLL *e*S **S** **11 29 42.0 +1.8**
CLL *e*SS **SS** **11 34 19.0 -1.1**
CLL *e*SSS SSS 11 37 40.0
CLL LmV 11 57 00.0
comp=Z,13μm,19.5s
CLL Collm 72.91 319 *i* P **P** **11 20 16.0 +1.8**
CLL *e*S **S** **11 29 42.0 +1.8**
CLL pmax pmax
comp=Z,135nm,1.6s
CLL MLR MLR
comp=Z,13μm,19.5s
CLL Collm 72.91 319 IAmb IAmb 11 20 20.0
comp=Z,108nm,1.4s
CLL IAMs_20 IAMs_20 11 57 31.0
comp=Z,13μm,20.0s
KHC Kasperske Hory 72.94 317 *e*P **P** **11 20 15.0 +0.5**
KHC *e*S **S** **11 29 37.4 -3.2**
KHC MLR MLR
comp=Z,14μm,17.6s
KHC Kasperske Hory 72.94 317 *e*P **P** **11 20 15.0 +0.5**
KHC *e*S **S** **11 29 37.4 -3.2**
KHC AMS AMS 11 55 00.0
comp=Z,14μm,17.6s
DOMB Dombas 73.18 331 *e*P **P** **11 20 15.9 +0.2**
DOMB IVmB_BB 11 20 26.7
comp=Z,742nm,2.7s
DOMB *e*PP **PP** **11 22 55.4 -2.9**
DOMB *e*S **S** **11 29 43.3 +0.4**
DOMB IVMs_BB IVMs_BB 11 54 21.3
comp=Z,9μm,14.9s
KONO Kongsberg 73.35 328*d i*P **P** **11 20 17.2 +0.6**
KONO pmax pmax
comp=Z,57nm,1.1s
KONO Kongsberg 73.35 328 P **P** **11 20 16.0 -0.6**
KONO Kongsberg 73.35 328 IAMs_20 IAMs_20 11 53 14.1
comp=Z,16μm,18.0s
KONO Kongsberg 73.35 328 *e*P **P** **11 20 17.1 +0.5**
KONO IVmB_BB 11 20 29.4
comp=Z,872nm,4.7s
KONO *e*PP **PP** **11 22 59.4 -0.3**
KONO *e*S **SKiKP** **11 29 46.9 -0.6**
KONO *e*SS **SS** **11 34 26.6 +0.3**
KONO IVMs_BB IVMs_BB 11 55 09.8
comp=Z,9μm,13.1s
MYKA Terra Mystica 73.36 314 *i* pP **P** **11 20 17.1 +0.1**
comp=Z,31nm,1.3s,SNR=7.0
CADS Cadrg 73.37 314 *i* P **P** **11 20 16.2 -0.9**
CADS *i* 11 20 19.7
CADS *e*S **S** **11 29 43.0 -2.7**
WET Wettzell 73.38 317 *e*P **P** **11 20 17.7 +0.6**
comp=Z,260nm,1.7s
WET Wettzell 73.38 317 P **P** **11 20 17.8 +0.6**
WET pmax pmax
comp=Z,84nm,1.2s
TANN Tannenbergstha 73.41 318 *e*P **P** **11 20 17.6 +0.3**
comp=Z,246nm,1.4s
TRI Trieste 73.45 313 P **P** **11 20 18.0 +0.5**
TRI pmax pmax
comp=Z,150nm,1.4s
TRI Trieste 73.45 313 IAmb IAmb 11 20 22.4
comp=Z,128nm,1.0s
TRI IAMs_20 IAMs_20 11 56 45.3

comp=Z,13µm,21.0s
NKC Novy Kostel 73.45 318 *e*P **P** **11 20 18.2 +0.7**
NKC *e*S **SKiKP** **11 29 48.7 +0.7**
NKC MLR MLR
comp=Z,16µm,16.1s
NKC Novy Kostel 73.45 318 *e*P **P** **11 20 18.2 +0.7**
NKC *e*S **SKiKP** **11 29 48.7 +0.7**
NKC AMS AMS 11 54 10.0
comp=Z,16µm,16.1s
KBA Koelnbreinsper 73.47 315 *i* P **P** **11 20 16.0 -1.8**
comp=Z,61nm,1.0s,SNR=33
KBA Koelnbreinsper 73.47 315 P **P** **11 20 18.2 +0.4**
KBA pmax pmax
comp=Z,89nm,1.0s
WERN Wernitzgruen 73.49 318 *e*P **P** **11 20 18.2 +0.5**
comp=Z,110nm,1.4s
GUNZ Gunzen 73.50 318 *e*P **P** **11 20 18.3 +0.5**
comp=Z,151nm,1.4s
PLN Plauen 73.59 318 *e*P **P** **11 20 18.7 +0.5**
comp=Z,110nm,1.4s
ROTZ Rotzenmuhle 73.70 318 *e*P **P** **11 20 19.9 +1.0**
comp=Z,217nm,1.3s
RJOB Jochberg 73.71 315 *e*P **P** **11 20 19.1 +0.1**
comp=Z,210nm,1.9s
MANZ Manzenberg 73.72 318 *e*P **P** **11 20 19.8 +0.8**
comp=Z,160nm,1.5s
TARA Tarawa 73.74 94 P **P** **11 20 19.6 -0.1**
TARA IAmb IAmb 11 20 50.2
comp=Z,112nm,1.4s
SPIA Saint Paul Isl 73.77 35 IAMs_20 IAMs_20 11 53 19.9
comp=Z,12µm,18.0s
MOL Molde 73.78 331 *e*P **P** **11 20 18.7 -0.4**
MOL IVmB_BB 11 20 35.0
comp=Z,900nm,2.9s
MOL *e*PP **PP** **11 23 01.0 -2.4**
MOL *e*S **S** **11 29 52.2 +2.6**
MOL *e*SS **SS** **11 34 32.8 0.0**
MOL IVMs_BB IVMs_BB 11 55 34.6
comp=Z,9µm,17.4s
SKAR Skarslia 73.79 329 *e*P **P** **11 20 19.7 +0.4**
SKAR IVmB_BB 11 20 23.7
comp=Z,772nm,1.8s
SKAR *e*S **S** **11 29 51.7 +1.7**
SKAR *e*SS **SS** **11 34 36.0 +2.8**
SKAR IVMs_BB IVMs_BB 11 54 52.3
comp=Z,6µm,14.2s
MOX Moxa 73.90 319 *e*P **P** **11 20 20.4 +0.3**
comp=Z,112nm,1.4s
MOX *e*L L 11 58 03.5
comp=Z,10µm,20.0s
MOX Moxa 73.90 319 P **P** **11 20 21.3 +1.2**
MOX pmax pmax
comp=Z,48nm,1.1s
GOET G??ttrup 74.03 325 *i* P **P** **11 20 23.1 +2.5**
comp=Z,155nm,1.0s
BSEG Bad Segeberg 74.03 322 *e*P **P** **11 20 22.2 +1.4**
comp=Z,151nm,1.2s
BSEG Bad Segeberg 74.03 322 P **P** **11 20 22.6 +1.9**
BSEG pmax pmax
comp=Z,112nm,1.3s
ABTA Abfaltersbach 74.09 314 *i* P **P** **11 20 20.3 -1.1**
comp=Z,31nm,0.8s,SNR=21
INTR Introdacqua 74.10 309 IAmb IAmb 11 20 33.4
comp=Z,148nm,1.2s
AKN Aaknes 74.11 331 *e*P **P** **11 20 21.9 +0.8**
AKN IVmB_BB 11 20 32.9
comp=Z,1µm,2.6s
AKN *e*PP **PP** **11 23 08.1 +1.9**
AKN *e*S **S** **11 29 51.0 -2.4**
AKN *e*SS **SS** **11 34 41.3 +3.4**
AKN IVMs_BB IVMs_BB 11 53 57.2
comp=Z,8µm,20.4s
HOMB Homborsund 74.16 327 *e*P **P** **11 20 22.2 +0.8**
HOMB *e*PP **PP** **11 23 05.1 -1.6**
HOMB *e*S **S** **11 29 54.0 0.0**
HOMB IVMs_BB IVMs_BB 11 55 16.5
comp=Z,11µm,14.7s
MUD Monsted U'grnd 74.17 325 *i* P **P** **11 20 22.5 +1.0**
MUD MLR MLR
comp=Z,20µm,16.0s
MUD Monsted U'grnd 74.17 325 *i* P **P** **11 20 22.5 +1.0**
comp=Z,20µm,16.0s
ASSE Asse, Remlinge 74.18 320 *e*P **P** **11 20 22.3 +0.7**
comp=Z,130nm,1.4s
GRA1 Grafenberg Arr 74.34 318 IAMs_20 IAMs_20 11 55 15.5
comp=Z,13µm,19.0s
GRF Grafenberg Arr 74.34 318 *e*P **P** **11 20 23.5 +0.9**
comp=Z,208nm,1.4s
GRF *e*X 11 21 35.8
baz=87,slow=5.3
GRF *e*PP **PP** **11 23 11.9 +3.4**
baz=80,slow=7.2
GRF *e*PPP PPP 11 25 06.0
GRF *e*L L 11 55 15.8
comp=Z,14µm,18.4s
GRF Grafenberg Arr 74.34 318 P **P** **11 20 24.4 +1.7**
GRF pmax pmax
comp=Z,117nm,1.5s
AQU L'Aquila 74.39 310 P **P** **11 20 24.1 +0.9**
AQU pmax pmax
comp=Z,135nm,1.3s
AQU L'Aquila 74.39 310 IAmb IAmb 11 20 31.3
comp=Z,175nm,1.2s
CLZ Clausthal 74.42 320 *e*P **P** **11 20 24.1 +0.9**
comp=Z,266nm,1.6s
NOR Nord 74.43 352 *i* P **P** **11 20 21.7 -0.9**
NOR pmax pmax
comp=Z,49nm,1.1s
NOR MLR MLR
comp=Z,19µm,18.0s
NOR Nord 74.43 352 *i* P **P** **11 20 21.7 -0.9**
comp=Z,49nm,1.1s
comp=Z,19µm,18.0s
NRDL Niedersach Rie 74.45 321 *e*P **P** **11 20 23.8 +0.7**
comp=Z,271nm,1.4s
NRCA Norcia 74.50 310 IAmb IAmb 11 20 29.8
comp=Z,96nm,1.0s
ANM Nome 74.57 27 IAmb IAmb 11 20 29.8
comp=Z,115nm,1.5s
ANM IAMs_20 IAMs_20 11 52 53.9
comp=Z,14µm,20.0s
WTTA Wattenberg 74.57 315 *i* pP **P** **11 20 23.5 -0.8**
comp=Z,168nm,1.4s,SNR=40
WTTA Wattenberg 74.57 315 P **P** **11 20 23.6 -0.7**
WTTA pmax pmax
comp=Z,77nm,1.2s
WATA Walderalm 74.60 315 *i* pP **P** **11 20 23.7 -0.7**
comp=Z,126nm,1.2s,SNR=27
FUR Furstenfeldbru 74.62 316 P **P** **11 20 25.6 +1.2**
FUR pmax pmax
comp=Z,69nm,1.0s
HYA Hoyanger 74.70 330 *e*P **P** **11 20 24.1 -0.4**
HYA *e*S **S** **11 30 02.3 +2.4**
GTTG Gottingen 74.73 320 *e*P **P** **11 20 25.5 +0.6**
comp=Z,152nm,1.2s
ODD1 Odda 74.77 329 *e*P **P** **11 20 24.8 -0.2**
ODD1 *e*S **S** **11 29 56.8 -4.1**
ODD1 *e*SS **SS** **11 34 49.7 +1.7**
ODD1 IVMs_BB IVMs_BB 11 57 33.4
comp=Z,9µm,18.2s
SNART Snartemo 74.82 327 *e*P **P** **11 20 26.3 +1.1**
SNART *e*S **S** **11 30 04.0 +2.7**
CTI Castel Tesino 74.83 314 IAMs_20 IAMs_20 11 56 10.8
comp=Z,12µm,20.0s
RETH Rethem/Aller, 74.84 321 *e*P **P** **11 20 25.5 +0.1**
comp=Z,116nm,1.4s
UBBA Unterbreizbach 74.87 319 *e*P **P** **11 20 26.0 +0.5**
comp=Z,117nm,1.4s
SQTA Sankt Quirin 74.87 315 *i* P **P** **11 20 24.4 -1.6**
comp=Z,215nm,1.5s,SNR=34
MOTA Moosalm 74.91 315 *i* P **P** **11 20 24.8 -1.4**
comp=Z,177nm,1.1s,SNR=58
BLS5 Blasjo 74.96 328 *e*P **P** **11 20 26.1 0.0**
BLS5 IVmB_BB 11 20 28.4
comp=Z,559nm,2.6s
BLS5 *e*PP **PP** **11 23 12.9 -0.6**
BLS5 *e*S **S** **11 30 02.4 -0.6**
BLS5 *e*SS **SS** **11 34 51.6 +0.6**
BLS5 IVMs_BB IVMs_BB 11 56 00.5
comp=Z,8µm,13.4s
RETA Reutte 75.11 315 *i* P **P** **11 20 25.8 -1.4**
comp=Z,216nm,1.4s,SNR=36
FOO Floro 75.14 330 *e*P **P** **11 20 25.7 -1.3**
FOO *e*S **S** **11 30 08.0 +3.2**
FOO IVMs_BB IVMs_BB 11 55 38.7
comp=Z,11µm,15.7s

FETA Feichten 75.23 315 *i* P **P** **11 20 26.4 -1.6**
comp=Z,112nm,1.2s,SNR=50
BER Bergen 75.29 329 *e*P **P** **11 20 28.7 +0.8**
BER IVmB_BB 11 20 40.4
comp=Z,697nm,3.1s
BER *e*S **S** **11 30 09.1 +2.6**
BER *e*SS **SS** **11 34 53.4 -2.4**
BER IVMs_BB IVMs_BB 11 55 46.5
comp=Z,6µm,16.3s
ASK Askoy 75.33 329 *e*P **P** **11 20 28.6 +0.5**
ASK *e*S **S** **11 30 09.4 +2.4**
ASK IVMs_BB IVMs_BB 11 55 54.7
comp=Z,9µm,45.5s
SUE Sulen 75.40 330 *e*P **P** **11 20 28.2 -0.3**
SUE IVmBBB 11 20 34.2
comp=Z,1µm,3.2s
SUE *e*S **S** **11 30 03.9 -3.8**
SUE IVMs_BB IVMs_BB 11 55 28.1
comp=Z,9µm,14.4s
UBR Ueberruh 75.49 316 *e*P **P** **11 20 29.3 -0.2**
comp=Z,138nm,1.3s
CLTB Caltabellotta 75.61 305 IAmb IAmb 11 20 49.5
comp=Z,103nm,1.3s
KMY Karmoy 75.61 328 *e*P **P** **11 20 30.7 +0.9**
KMY *e*S **S** **11 30 11.5 +1.4**
FUORN Ofenpass-Fuorn 75.63 315 IAMs_20 IAMs_20 11 57 59.3
comp=Z,17µm,19.0s
ZCCA Zocca 75.67 312 IAMs_20 IAMs_20 12 00 17.5
comp=Z,16µm,20.0s
OSSC Osservatorio P 75.67 311 IAmb IAmb 11 20 35.3
comp=Z,60nm,1.0s
OSSC IAMs_20 IAMs_20 12 00 25.6
comp=Z,12µm,19.0s
DAVA Damuels 75.73 315 *i* pP **P** **11 20 29.9 -1.0**
comp=Z,140nm,1.2s,SNR=42
STU Stuttgart 75.84 317 P **P** **11 20 33.7 +2.4**
STU pmax pmax
comp=Z,146nm,1.5s
STU Stuttgart 75.84 317 IAMs_20 IAMs_20 11 58 18.6
comp=Z,12µm,20.0s
DAVOX Davos/Dischmat 75.85 315 LR LR 11 58 07.1
comp=Z,16µm,20.4s,baz=68,slow=39
IBBN Ibbenburen 75.89 321 *e*P **P** **11 20 32.4 +0.8**
comp=Z,213nm,1.5s
TNS Taunus Mts 75.97 319 *e*P **P** **11 20 32.6 +0.5**
comp=Z,109nm,1.1s
TAU Tasmania Unive 76.08 146 IAMs_20 IAMs_20 11 54 37.4
comp=Z,17µm,20.0s
TUE Stuetta 76.28 315 IAmb IAmb 11 20 39.7
comp=Z,192nm,1.5s
TUE IAMs_20 IAMs_20 11 58 10.5
comp=Z,22µm,21.0s
BUG Bochum--Univer 76.40 320 *e*P **P** **11 20 35.3 +0.9**
comp=Z,139nm,1.3s
BUG Bochum--Univer 76.40 320 P **P** **11 20 36.4 +2.0**
BUG pmax pmax
comp=Z,89nm,1.2s
BFO Black Forest 76.50 317 *e*P **P** **11 20 35.1 -0.1**
comp=Z,88nm,1.4s
BFO Black Forest 76.50 317 P **P** **11 20 34.3 -0.8**
BFO pmax pmax
comp=Z,125nm,1.6s
BFO MLR MLR
comp=Z,13µm,20.0s
BFO Black Forest 76.50 317 P **P** **11 20 34.3 -0.8**
BFO IAmb IAmb 11 20 39.8
comp=Z,125nm,1.6s
BFO IAMs_20 IAMs_20 11 58 57.2
comp=Z,13µm,20.0s
SLE Schleitheim 76.53 316 P **P** **11 20 35.9 +0.6**
SLE pmax pmax
comp=Z,100nm,1.3s
MSSA Maissana 76.69 312 IAmb IAmb 11 20 41.1
comp=Z,119nm,1.3s
AHRW Bad Neuenahr-A 76.74 319 *e*P **P** **11 20 37.4 +1.1**
comp=Z,113nm,1.2s
DAG Danmarks Havn 77.20 348 *i* P **P** **11 20 37.4 -1.1**
DAG MLR MLR
comp=Z,14µm,19.0s
DAG Danmarks Havn 77.20 348 *i* P **P** **11 20 37.4 -1.1**
comp=Z,14µm,19.0s
DZM Mont Dzumac 77.25 119 *e*P **P** **11 20 40.9 +1.1**
comp=Z,109nm,1.4s
DZM *e*S **S** **11 30 26.9 -2.6**
comp=Z,5µm,31.7s
DZM *e*SS **SS** **11 35 25.2 -2.8**
comp=Z,6µm,30.2s
DZM *e*LR LR 11 44 34.6
comp=Z,8µm,23.9s
DZM Mont Dzumac 77.25 119 P **P** **11 20 41.1 +1.3**
comp=Z,18nm,0.8s,baz=257,slow=9.3,SNR=8.0
DZM LR LR 11 55 50.9
comp=Z,3µm,21.0s,baz=287,slow=37
DZM Mont Dzumac 77.25 119 P **P** **11 20 39.6 -0.2**
DZM IAmb IAmb 11 20 44.6
comp=Z,76nm,1.4s
ECH Echery 77.29 317 IAMs_20 IAMs_20 11 59 37.6
comp=Z,12µm,19.0s
JMIC Jan Mayen 77.37 341 LR LR 11 58 42.6
comp=Z,4µm,21.7s,baz=80,slow=39
JMIC Jan Mayen 77.37 341 *e*P **P** **11 20 39.0 -0.5**
JMIC *e*S **S** **11 30 31.6 +2.6**
JMIC IVMs_BB IVMs_BB 11 57 55.7
comp=Z,4µm,19.4s
WLF Walferdange 77.54 318 *e*P **P** **11 20 42.3 +1.4**
comp=Z,305nm,1.3s
WLF Walferdange 77.54 318 IAMs_20 IAMs_20 11 59 29.3
comp=Z,13µm,18.0s
VSL Villasalto 78.04 308 IAmb IAmb 11 20 49.3
comp=Z,116nm,1.2s
FALS False Pass 78.05 36 IAMs_20 IAMs_20 11 55 09.5
comp=Z,12µm,19.0s
LPG La Plagne 78.28 314 *e*P **P** **11 20 45.7 +0.2**
LPG pmax pmax
comp=Z,121nm,1.2s
LPL La Plagne 78.29 314 *e*P **P** **11 20 44.1 -1.4**
LPL pmax pmax
comp=Z,130nm,1.2s
UCC Uccle 78.33 320 IAMs_20 IAMs_20 11 58 52.1
comp=Z,18µm,20.0s
ISO Isola 78.44 313 P **P** **11 20 46.3 +0.2**
ISO pmax pmax
comp=Z,51nm,1.5s
BNI Bardonecchia 78.46 314 P **P** **11 20 46.9 +0.6**
BNI pmax pmax
comp=Z,51nm,1.3s
BNI Bardonecchia 78.46 314 IAmb IAmb 11 20 50.8
comp=Z,134nm,1.5s
BNI IAMs_20 IAMs_20 11 59 32.7
comp=Z,14µm,21.0s
FRF La Foret Royal 78.89 312 *e*P **P** **11 20 48.3 -0.3**
FRF pmax pmax
comp=Z,84nm,1.1s
KEST Kesra 79.09 304 P **P** **11 20 50.9 +1.0**
comp=Z,79nm,1.1s,baz=1.9,slow=2.6,SNR=13
KEST LR LR 12 03 38.4
comp=Z,5µm,18.1s,baz=10.0,slow=42
KEST Kesra 79.09 304 IAmb IAmb 11 20 55.8
comp=Z,175nm,1.3s
TOLK Toolik Lake Re 79.15 20 P **P** **11 20 49.3 -0.3**
baz=296
SDPT Sand Point 79.51 35 IAmb IAmb 11 20 55.2
comp=Z,75nm,1.0s
LOR Lormes 79.69 316 P **P** **11 20 53.5 +0.7**
LOR pmax pmax
comp=Z,59nm,1.3s
SSB Saint Sauveur 79.84 314 IAmb IAmb 11 20 59.2
comp=Z,119nm,1.5s
SSB Saint Sauveur 79.84 314 IAMs_20 IAMs_20 11 59 44.3
comp=Z,10µm,20.0s
AVF Avril sur Loir 80.17 316 *e*P **P** **11 20 55.3 -0.1**
AVF pmax pmax
comp=Z,69nm,1.1s
CNBA Chernabura Isl 80.17 35 IAmb IAmb 11 20 60.0
comp=Z,130nm,1.2s
CHGN Chignik 80.28 34 IAmb IAmb 11 21 00.3
comp=Z,315nm,1.9s
MLY Manley 80.32 24 IAmb IAmb 11 21 00.9
comp=Z,160nm,1.7s
CMAH Djebel Manchou 80.33 305 P **P** **11 20 57.4 +0.8**
CLF Chambon-Foret 80.48 318 IAmb IAmb 11 21 02.9
comp=Z,168nm,1.4s
CLF IAMs_20 IAMs_20 12 00 59.2
comp=Z,11µm,18.0s
ITZ Itezhi-Tezhi 80.50 250 *e*P **P** **11 20 59.2 +1.3**
ITZ *i* 11 31 05.4
BGF Bois d'Agland 80.57 316 *e*P **P** **11 20 58.7 +1.1**

BGF pmax pmax
comp=Z,29nm,1.0s
BPAW Bear Paw Mtn. 80.62 25 IAmb IAmb 11 21 03.4
comp=Z,209nm,1.5s
BPAW IAMs_20 IAMs_20 11 59 31.6
comp=Z,13µm,20.0s
CKFL Kef-Lekhel 80.93 305 P **P** **11 21 01.0 +1.1**
EKA Eskdalemuir Ar 81.14 326 P **P** **11 21 00.0 -0.5**
EKA pmax pmax
comp=Z,3.0nm,0.9s
NEA Nenana 81.16 24 IAMs_20 IAMs_20 11 54 51.5
comp=Z,15µm,20.0s
ESK Eskdalemuir 81.17 326 P **P** **11 20 59.4 -1.2**
ESK pmax pmax
comp=Z,48nm,1.0s
ESK MLR MLR
comp=Z,16µm,20.0s
ESK Eskdalemuir 81.17 326 P **P** **11 20 59.4 -1.2**
ESK Eskdalemuir 81.17 326 IAMs_20 IAMs_20 11 59 21.0
comp=Z,16µm,20.0s
TRF Thorofare Moun 81.19 25 IAMs_20 IAMs_20 12 02 18.6
comp=Z,11µm,18.0s
BWN Browne 81.19 24 IAmb IAmb 11 21 06.5
comp=Z,130nm,1.3s
BWN IAMs_20 IAMs_20 12 00 00.3
comp=Z,16µm,19.0s
CTEI Djebel Teioual 81.28 305 P **P** **11 21 04.7 +3.0**
MDM Murphy Dome 81.30 24 IAmb IAmb 11 21 06.5
comp=Z,141nm,1.4s
TCOL CIGO, UAF Yank 81.48 24 P **P** **11 21 02.3 +0.2**
baz=298
COLA College 81.48 24*c* *i*P **P** **11 21 00.7 -1.3**
COLA pmax pmax
comp=Z,53nm,1.5s
COLA College 81.48 24 P **P** **11 21 01.6 -0.4**
COLA College 81.48 24 IAMs_20 IAMs_20 11 55 03.1
comp=Z,13µm,21.0s
POKR Poker Flat Res 81.52 23 P **P** **11 21 02.1 -0.2**
baz=299
DFRA Djebel Bou Aff 81.54 306 P **P** **11 21 04.7 +1.6**
WRH Wood River Hil 81.58 24 IAMs_20 IAMs_20 11 56 43.9
comp=Z,14µm,19.0s
FYU Fort Yukon 81.60 21 IAmb IAmb 11 21 09.9
comp=Z,195nm,2.0s
MCK McKinley 81.60 25 IAmb IAmb 11 21 07.8
comp=Z,180nm,1.6s
MCK IAMs_20 IAMs_20 11 58 03.4
comp=Z,18µm,22.0s
CCB Clear Creek Bu 81.61 24 IAMs_20 IAMs_20 11 56 45.6
comp=Z,12µm,19.0s
CAF Calviac 81.61 315 *e*P **P** **11 21 03.7 +0.5**
CAF pmax pmax
comp=Z,69nm,1.3s
RND Reindeer 81.78 25 IAmb IAmb 11 21 08.5
comp=Z,140nm,1.4s
RND IAMs_20 IAMs_20 11 59 11.2
comp=Z,15µm,21.0s
LDF La Druitiere 81.79 319 *e*P **P** **11 21 03.1 -0.9**
LDF pmax pmax
comp=Z,130nm,1.4s
RJF Les Rejaudoux 81.86 315 *e*P **P** **11 21 04.1 -0.4**
RJF pmax pmax
comp=Z,148nm,1.5s
IL31 81.89 23 P **P** **11 21 04.2 0.0**
ILAR Eielson Array 81.89 23 P **P** **11 21 01.9 -2.4**
comp=Z,2.8nm,1.0s,baz=310,slow=5.0,SNR=22
ILAR PP **PP** **11 24 15.9 +4.7**
comp=Z,12nm,1.1s,baz=292,slow=7.9,SNR=5.9
ILAR LR LR 11 59 34.3
comp=Z,12µm,20.5s,baz=305,slow=37
FLN La Foliniere 81.96 319 *e*P **P** **11 21 07.1 +2.2**
FLN pmax pmax
comp=Z,115nm,1.4s
SET Setif 82.01 305 P **P** **11 21 09.0 +3.4**
PRP Porcupine Dome 82.03 22 IAMs_20 IAMs_20 12 00 28.4
comp=Z,18µm,20.0s
MTLF Montolieu 82.03 313 P **P** **11 21 06.5 +1.1**
MTLF pmax pmax
comp=Z,49nm,1.4s
HDA Harding Lake 82.05 24 P **P** **11 21 04.9 -0.1**
baz=299
HDA Harding Lake 82.05 24 IAMs_20 IAMs_20 12 00 18.2
comp=Z,14µm,20.0s
HOM Homer 82.27 29 IAMs_20 IAMs_20 12 00 22.5
comp=Z,12µm,19.0s
GRR Gorron 82.32 319 *e*P **P** **11 21 09.2 +2.4**
GRR pmax pmax
comp=Z,106nm,1.5s
RC01 Rabbit Creek A 82.48 27 IAmb IAmb 11 21 12.2
comp=Z,107nm,1.2s
RC01 IAMs_20 IAMs_20 12 01 46.0
comp=Z,11µm,19.0s
PMR Palmer 82.51 27 IAmb IAmb 11 21 12.5
comp=Z,114nm,1.5s
PMR IAMs_20 IAMs_20 12 01 09.7
comp=Z,13µm,19.0s
GHO Glory Hole Cre 82.52 27 IAmb IAmb 11 21 13.2
comp=Z,167nm,1.7s
GHO IAMs_20 IAMs_20 12 00 58.8
comp=Z,15µm,19.0s
CNPM China Poot 82.52 29 IAmb IAmb 11 21 12.3
comp=Z,61nm,1.2s
CNPM IAMs_20 IAMs_20 12 00 30.1
comp=Z,14µm,19.0s
OHAK Old Harbor 82.53 32 IAMs_20 IAMs_20 12 01 20.6
comp=Z,12µm,20.0s
DHY Denali Highway 82.53 25 IAMs_20 IAMs_20 11 57 56.0
comp=Z,12µm,20.0s
BRLK Bradley Lake 82.57 29 IAmb IAmb 11 21 11.7
comp=Z,148nm,1.7s
BRLK IAMs_20 IAMs_20 12 00 34.4
comp=Z,9µm,19.0s
KDAK Kodiak Island 82.64 31 P **P** **11 21 06.0 -2.2**
comp=Z,6.9nm,0.7s,baz=307,slow=5.3,SNR=15
KDAK Kodiak Island 82.64 31 P **P** **11 21 06.5 -1.7**
KDAK pmax pmax
comp=Z,341nm,1.9s
KDAK Kodiak Island 82.64 31 P **P** **11 21 06.5 -1.7**
SML Sawmill 82.75 26 IAmb IAmb 11 21 14.2
comp=Z,182nm,1.5s
SML IAMs_20 IAMs_20 12 01 16.9
comp=Z,14µm,20.0s
KNK Knik Glacier 82.88 27 IAmb IAmb 11 21 14.9
comp=Z,204nm,1.8s
KNK IAMs_20 IAMs_20 12 01 22.5
comp=Z,14µm,19.0s
SEW Seward 83.06 28 IAmb IAmb 11 21 15.3
comp=Z,76nm,1.2s
SEW IAMs_20 IAMs_20 11 57 19.4
comp=Z,12µm,20.0s
SCM Sheep Creek Mo 83.15 26 IAmb IAmb 11 21 21.1
comp=Z,113nm,1.4s
SCM IAMs_20 IAMs_20 11 57 36.6
comp=Z,14µm,21.0s
RIDG Independent Ri 83.19 24 IAMs_20 IAMs_20 11 57 45.2
comp=Z,13µm,18.0s
SCRK Sand Creek 83.39 23 IAmb IAmb 11 21 18.6
comp=Z,64nm,1.5s
SCRK IAMs_20 IAMs_20 12 01 09.5
comp=Z,14µm,19.0s
SGMF Saint Gilles 83.43 319 *e*P **P** **11 21 14.2 +1.6**
SGMF pmax pmax
comp=Z,108nm,1.4s
DOT Dot Lake 83.53 24 IAMs_20 IAMs_20 11 57 55.3
comp=Z,11µm,19.0s
A36M Sachs Harbour 83.71 13 P **P** **11 21 13.6 +0.1**
baz=318
GLI Glacier Island 83.72 27 IAMs_20 IAMs_20 11 58 40.6
comp=Z,13µm,20.0s
HARP HAARP 83.75 25 IAMs_20 IAMs_20 12 01 58.4
comp=Z,13µm,19.0s
TULEG Thule 83.80 357 IAMs_20 IAMs_20 11 58 18.0
comp=Z,13µm,20.0s
SUMG Summit 83.88 348 *i* P **P** **11 21 13.8 -1.1**
SUMG pmax pmax
comp=Z,140nm,1.0s
SUMG Summit 83.88 348 IAmb IAmb 11 21 20.4
comp=Z,67nm,1.1s
SUMG Summit 83.88 348 *i* P **P** **11 21 13.8 -1.1**
comp=Z,143nm,1.0s
EGAK Eagle 83.98 22 IAMs_20 IAMs_20 12 01 06.0
comp=Z,20µm,22.0s
MENT Mentasta 84.04 24 IAmb IAmb 11 21 20.6
comp=Z,63nm,1.4s
FID Port Fidalgo 84.05 27 IAMs_20 IAMs_20 11 58 49.2
comp=Z,15µm,19.0s
HIN Hinchinbrook I 84.21 27 IAmb IAmb 11 21 22.1

HIN IAMs_20 IAMs_20 11 58 57.7
comp=Z,12µm,18.0s
INK Inuvik 84.26 17 P **P** **11 21 14.8 -1.6**
comp=Z,38nm,1.2s,baz=332,slow=5.3,SNR=24
INK LR LR 12 04 22.5
comp=Z,18µm,19.1s,baz=282,slow=40
INK Inuvik 84.26 17 IAmb IAmb 11 21 21.8
comp=Z,113nm,1.4s
EYAK Cordova Ski Ar 84.46 27 IAmb IAmb 11 21 35.6
comp=Z,42nm,1.0s
EYAK IAMs_20 IAMs_20 12 04 41.1
comp=Z,16µm,19.0s
EPYK Eagle Plains 84.53 20 P **P** **11 21 17.0 -0.9**
baz=308
EPYK Eagle Plains 84.53 20 IAmb IAmb 11 21 24.0
comp=Z,62nm,1.2s
LBTB Lobatse 84.61 241 P **P** **11 21 18.1 -1.0**
LBTB pmax pmax
comp=Z,51nm,1.1s
LBTB Lobatse 84.61 241 P **P** **11 21 18.1 -1.0**
LBTB IAmb IAmb 11 21 42.6
comp=Z,51nm,1.1s
BORG Borgarnes 84.66 338 LR LR 11 59 55.6
comp=Z,8µm,19.1s,baz=46,slow=36
BORG Borgarnes 84.66 338 IAMs_20 IAMs_20 11 59 44.8
comp=Z,10µm,18.0s
GLB Gilahina Butte 84.80 26 IAMs_20 IAMs_20 12 00 10.0
comp=Z,12µm,21.0s
KULLO Kullorsuaq 84.86 354 *i* P **P** **11 21 18.1 -1.2**
KULLO pmax pmax
comp=Z,43nm,1.0s
KULLO MLR MLR
comp=Z,28µm,19.0s
KULLO Kullorsuaq 84.86 354 *i* P **P** **11 21 18.1 -1.2**
comp=Z,43nm,1.0s
comp=Z,28µm,19.0s
DAWY Dawson 85.02 22 IAMs_20 IAMs_20 12 02 22.6
comp=Z,18µm,20.0s
VRDI Verde Repeater 85.06 26 IAMs_20 IAMs_20 12 02 02.8
comp=Z,15µm,19.0s
MCARA McCarthy VSAT 85.15 25 IAmb IAmb 11 21 27.1
MCARA IAMs_20 IAMs_20 12 02 17.3
comp=Z,13µm,18.0s
MSVF Nonsavu 85.39 111 ⇑ *i* P **P** **11 21 24.7 +1.6**
MSVF pmax pmax
comp=Z,40nm,1.4s
MSVF Nonsavu 85.39 111 P **P** **11 21 22.4 -0.7**
MSVF IAmb IAmb 11 22 12.6
comp=Z,69nm,1.3s
CRQM Cirque 85.44 26 IAMs_20 IAMs_20 11 58 59.7
comp=Z,18µm,22.0s
RES Resolute Bay 85.45 4 P **P** **11 21 20.9 -1.4**
comp=Z,14nm,0.8s,baz=344,slow=5.4,SNR=17
RES PP **PP** **11 24 43.4 +3.5**
comp=Z,8.3nm,1.0s,baz=320,slow=6.5,SNR=4.3
RES Resolute Bay 85.45 4 IAMs_20 IAMs_20 11 57 49.7
comp=Z,13µm,20.0s
TGL Tana Glacier 85.57 26 IAMs_20 IAMs_20 11 59 03.5
comp=Z,18µm,22.0s
C36M Paulatuk 85.96 14 P **P** **11 21 24.7 -0.2**
baz=319
CASY Casey 86.02 176 P **P** **11 21 24.7 -0.3**
CASY Casey 86.02 176 IAMs_20 IAMs_20 11 54 02.9
comp=Z,10µm,21.0s
CTGM Chitina Glacie 86.07 25 IAMs_20 IAMs_20 12 06 12.4
comp=Z,14µm,19.0s
YAH Yahtse 86.24 26 IAMs_20 IAMs_20 11 59 24.1
comp=Z,14µm,21.0s
CART Cartagena 86.35 309 ⇑ *i* P **P** **11 21 28.3 +0.8**
CART *i* S **S** **11 32 04.7 +1.9**
BOSA Boshof 86.38 238 P **P** **11 21 29.1 +1.3**
comp=Z,29nm,0.9s,baz=71,slow=6.1,SNR=17
BOSA LR LR 11 59 00.3
comp=Z,4µm,18.6s,baz=62,slow=35
BOSA Boshof 86.38 238 P **P** **11 21 26.6 -1.2**
BOSA pmax pmax
comp=Z,51nm,1.1s
BOSA Boshof 86.38 238 P **P** **11 21 26.6 -1.2**
BOSA IAmb IAmb 11 22 10.6
comp=Z,51nm,1.1s
PCA Pinnacle 87.00 26 IAMs_20 IAMs_20 12 03 37.1
comp=Z,11µm,19.0s
YKU2 Yakutat 87.58 26 IAMs_20 IAMs_20 12 03 19.6
comp=Z,12µm,20.0s
HYT Haines Junctio 87.67 24 IAMs_20 IAMs_20 12 03 38.7
comp=Z,14µm,18.0s
ESDC Sonseca Array 87.69 311 P **P** **11 21 34.7 +0.6**
comp=Z,38nm,1.2s,baz=52,slow=4.7,SNR=24
ESDC LR LR 12 08 12.1
comp=Z,6µm,18.3s,baz=80,slow=41
PAB San Pablo 88.02 311 P **P** **11 21 35.3 -0.3**
PAB pmax pmax
comp=Z,77nm,1.4s
PAB San Pablo 88.02 311 P **P** **11 21 35.3 -0.3**
PAB IAmb IAmb 11 21 41.7
comp=Z,77nm,1.4s
DHAK Deception Hill 88.43 26 IAMs_20 IAMs_20 12 03 54.2
comp=Z,11µm,20.0s
MELI Melilla 88.67 307 ⇑ *i* P **P** **11 21 42.0 +3.3**
MELI *e*S **S** **11 32 31.8 +6.6**
OUZ Omahuta 88.71 128 IAMs_20 IAMs_20 12 00 32.2
comp=Z,11µm,21.0s
PBRG Braganca 88.73 314 *e*P **P** **11 21 40.6 +1.6**
comp=Z,67nm,1.2s
WHY Whitehorse 88.78 24 IAmb IAmb 11 21 46.2
comp=Z,71nm,1.4s
ILULI Ilulissat 88.97 350 IAMs_20 IAMs_20 12 03 24.5
comp=Z,17µm,20.0s
ANGG Ammassalik, Gr 89.09 344 IAMs_20 IAMs_20 12 04 14.8
comp=Z,11µm,18.0s
EMAL Malaga-Limoner 89.20 309 ⇑ *i* P **P** **11 21 41.8 +0.6**
EMAL *i* S **S** **11 32 23.8 -6.3**
MVO Moncorvo 89.20 314 *e*P **P** **11 21 42.7 +1.5**
comp=Z,95nm,1.2s
MVO Moncorvo 89.20 314 *e*S S 11 32 19.3 -11
MVO Moncorvo 89.20 314 *e*LR LR 11 53 08.2
comp=Z,6µm,18.0s
TSUM Tsumeb 89.25 249 IAMs_20 IAMs_20 11 57 11.5
comp=Z,14µm,22.0s
SKAG Skagway 89.37 25 IAmb IAmb 11 21 49.4
comp=Z,102nm,1.3s
SKAG IAMs_20 IAMs_20 12 02 29.8
comp=Z,16µm,21.0s
MLZ Mavora Lakes 89.55 139 IAMs_20 IAMs_20 12 02 17.6
comp=Z,11µm,21.0s
PGAV Gavieira, Arco 89.69 315 *e*P **P** **11 21 47.7 +4.2**
PGAV Gavieira, Arco 89.69 315 *e*S **SKSac** **11 32 15.5 +1.6**
PGAV Gavieira, Arco 89.69 315 *e*LR LR 11 53 47.1
comp=Z,7µm,20.0s
WHZ Wether Hill Ro 89.70 140 IAMs_20 IAMs_20 12 03 24.0
comp=Z,14µm,21.0s
PVLZ Pæen de 89.74 307 ⇑ *i* P **P** **11 21 44.1 +0.3**
PVLZ *i* S **S** **11 32 36.0 +0.7**
FOZ Fox Glacier 89.76 137 IAMs_20 IAMs_20 12 01 17.6
comp=Z,13µm,22.0s
WKZ Wanaka 89.86 138 IAMs_20 IAMs_20 12 04 18.1
comp=Z,14µm,20.0s
MTE Manteigas 89.89 313 IAmb IAmb 11 21 56.3
comp=Z,46nm,1.1s
MTE IAMs_20 IAMs_20 12 07 18.9
comp=Z,8µm,18.0s
PVIS Viseu 89.99 314 *e*P **P** **11 21 47.0 +2.1**
comp=Z,77nm,1.3s
PCBR Castelo Branco 90.08 313 *e*P **P** **11 21 46.7 +1.5**
comp=Z,63nm,1.2s
BESE Bessie Mountai 90.12 25 IAmb IAmb 11 21 53.0
comp=Z,134nm,1.7s
BESE IAMs_20 IAMs_20 12 09 12.7
comp=Z,10µm,19.0s
PMRV Marv??o 90.20 312 *e*P **P** **11 21 47.1 +1.3**
comp=Z,69nm,1.3s
PMRV Marv??o 90.20 312 *e*S **SKSac** **11 32 16.1 -0.7**
PMRV Marv??o 90.20 312 *e*LR LR 11 53 30.8
comp=Z,5µm,18.0s
CEU Ceuta 90.25 308 *i* P **P** **11 21 43.6 -2.4**
CEU *i* S **S** **11 32 41.6 +1.7**
QRZ Quartz Range 90.35 134 IAMs_20 IAMs_20 12 03 07.4
comp=Z,11µm,21.0s
LBZ Lake Benmore 90.39 137 IAMs_20 IAMs_20 12 04 21.3
comp=Z,13µm,20.0s
JIS Juneau Island 90.51 25 IAMs_20 IAMs_20 12 05 56.9
comp=Z,11µm,20.0s
COI Coimbra 90.57 313 IAMs_20 IAMs_20 12 07 49.3
comp=Z,11µm,21.0s
SFS San Fernando 90.62 309 *e*P **P** **11 21 49.9 +2.1**
SFS *i* S **S** **11 32 48.0 +4.7**
RPZ Rata Peaks 90.64 137 LR LR 12 08 16.3
comp=Z,11µm,18.3s,baz=284,slow=39
RPZ Rata Peaks 90.64 137 IAMs_20 IAMs_20 12 01 48.0
comp=Z,17µm,22.0s
SFJD Kangerlussuaq 90.86 349 P **P** **11 21 47.4 -0.8**
comp=Z,27nm,0.8s,baz=60,slow=5.2,SNR=4.8
SFJD LR LR 12 05 34.0
comp=Z,7µm,21.8s,baz=22,slow=38
SFJD Kangerlussuaq 90.86 349 *i* P **P** **11 21 47.0 -1.3**
SFJD MLR MLR
comp=Z,1µm,25.0s
SFJD Kangerlussuaq 90.86 349 P **P** **11 21 47.0 -1.3**
SFJD IAmb IAmb 11 22 42.8
comp=Z,90nm,1.4s
SFJD Kangerlussuaq 90.86 349 IAMs_20 IAMs_20 12 07 22.4
comp=Z,10µm,19.0s
SFJD Kangerlussuaq 90.86 349 *i* P **P** **11 21 47.0 -1.3**
comp=Z,990nm,25.0s
SIT Sitka 90.90 27 IAMs_20 IAMs_20 11 59 56.5
comp=Z,9µm,22.0s
PMTG Montargil 90.94 312 *e*P **P** **11 21 52.6 +3.3**
comp=Z,48nm,1.2s
ODZ Otahua Downs 90.98 138 IAMs_20 IAMs_20 12 05 12.9
comp=Z,13µm,20.0s
THZ Tophouse 91.01 134 IAMs_20 IAMs_20 12 03 31.8
comp=Z,12µm,21.0s
LTZ Lake Taylor 91.03 135 IAMs_20 IAMs_20 12 04 39.3
comp=Z,16µm,21.0s
EVO Evora 91.03 312 ⇑ *i* P **P** **11 21 53.6 +4.0**
EVO *i* S **S** **11 32 52.1 +5.1**
EVO Evora 91.03 312 *e*P **P** **11 21 51.0 +1.3**
comp=Z,47nm,1.1s
IFR Ifrane 91.04 306 ⇑ *i* P **P** **11 21 52.1 +2.0**
IFR *i* S **S** **11 32 50.5 +2.8**
MAW Mawson 91.09 193 P **P** **11 21 51.3 +2.3**
comp=Z,14nm,1.0s,baz=20,slow=7.3,SNR=9.9
MAW LR LR 11 58 47.5
comp=Z,6µm,19.6s,baz=30,slow=33
MAW Mawson 91.09 193 P **P** **11 21 48.7 -0.4**
MAW pmax pmax
comp=Z,10.0nm,1.3s
MAW MLR MLR
comp=Z,2µm,19.0s
MAW Mawson 91.09 193 P **P** **11 21 48.7 -0.4**
NNZ Nelson 91.10 134 IAMs_20 IAMs_20 12 03 26.2
comp=Z,10µm,21.0s
PBEJ Beja 91.15 311 *e*P **P** **11 21 51.7 +1.5**
comp=Z,56nm,1.5s
PVAQ Vaqueiros 91.31 311 *e*P **P** **11 21 52.6 +1.6**
comp=Z,104nm,1.5s
PVAQ Vaqueiros 91.31 311 *e*S **SKSac** **11 32 26.0 +2.8**
PVAQ Vaqueiros 91.31 311 *e*LR LR 11 55 36.8
comp=Z,6µm,20.0s
PVAQ Vaqueiros 91.31 311 IAmb IAmb 11 22 42.1
comp=Z,48nm,1.0s
SUR Sutherland 91.39 236 LR LR 11 57 01.4
comp=Z,4µm,21.5s,baz=58,slow=32
SUR Sutherland 91.39 236 IAMs_20 IAMs_20 12 00 38.2
comp=Z,8µm,19.0s
MESJ Messejana 91.48 311 *e*P **P** **11 21 50.9 -0.9**
MESJ *e*PP **PP** **11 25 28.0 -1.3**
MESJ *e*SKSac **SKSac** **11 32 23.0 -1.1**
MESJ AMS AMS 12 01 50.2
comp=N,10µm,21.1s
MESJ Messejana 91.48 311 *e*P **P** **11 21 50.8 -0.9**
MESJ *e* 11 25 28.0
MESJ *e* 11 32 23.0
MESJ Messejana 91.48 311 *e*P **P** **11 21 53.7 +1.9**
comp=N,65nm,1.2s
PBDV Barranco-de-Ve 91.54 310 *e*P **P** **11 21 55.4 +3.3**
comp=N,129nm,1.4s
PNCL Nicolau / Gran 91.58 311 *e*P **P** **11 21 52.6 +0.4**
comp=N,57nm,1.6s
MQZ McQueen's Vall 91.68 136 IAMs_20 IAMs_20 12 02 32.5
comp=Z,13µm,22.0s
KHZ Kahutara 91.71 135 IAMs_20 IAMs_20 12 05 17.5
comp=Z,10µm,20.0s
LIS Lisbon 91.74 312 *e*P **P** **11 21 52.1 -0.8**
LIS AMS AMS 12 02 43.6
comp=N,11µm,25.0s
LIS Lisbon 91.74 312 *e*P **P** **11 21 52.1 -0.8**
MORF Marmelete 92.02 311 *e*P **P** **11 21 53.3 -1.1**
MORF AMS AMS 12 02 37.6
comp=N,10µm,18.2s
MORF Marmelete 92.02 311 *e*P **P** **11 21 53.2 -1.1**
SNZO South Karori 92.04 133 IAMs_20 IAMs_20 12 03 58.3
comp=Z,11µm,22.0s
DLBC Dease Lake 92.10 24 LR LR 12 06 30.1
comp=Z,12µm,20.0s,baz=310,slow=38
DLBC Dease Lake 92.10 24 IAmb IAmb 11 22 01.4
comp=Z,138nm,1.9s
DLBC IAMs_20 IAMs_20 12 03 23.0
comp=Z,16µm,19.0s
PFVI Vila Bisbo 92.23 311 IAMs_20 IAMs_20 12 04 29.3
comp=Z,8µm,20.0s
BKZ Black Stump Fm 92.43 131 IAMs_20 IAMs_20 12 05 40.7
comp=Z,11µm,20.0s
URZ Urewera 92.52 130 LR LR 12 08 47.5
comp=Z,6µm,18.6s,baz=292,slow=39
URZ Urewera 92.52 130 IAMs_20 IAMs_20 12 07 08.1
comp=Z,8µm,20.0s
WRAK Wrangell Islan 92.56 26 IAMs_20 IAMs_20 12 06 48.4
comp=Z,12µm,20.0s
BFZ Birch Farm 92.86 132 IAMs_20 IAMs_20 12 04 57.8
comp=Z,12µm,21.0s
AVE Averroes 92.87 307 ⇑ *i* P **P** **11 22 00.4 +2.1**
AVE *i* S **S** **11 33 05.3 +1.6**
CRAG Craig 92.87 27 IAMs_20 IAMs_20 12 08 46.5
comp=Z,8µm,19.0s
TOC2 Torodi Ar. Sit 92.98 285 IAMs_20 IAMs_20 12 07 10.7
comp=Z,10µm,20.0s
TOC3 Torodi Ar. Sit 92.99 285 IAMs_20 IAMs_20 12 07 10.9
comp=Z,10µm,21.0s
TOC1 Torodi Ar. Sit 93.00 285 IAMs_20 IAMs_20 12 07 11.0
comp=Z,12µm,20.0s
TOA2 Torodi Ar. Sit 93.00 285 IAMs_20 IAMs_20 12 07 11.3
comp=Z,11µm,21.0s
TOB3 Torodi Ar. Sit 93.01 285 IAMs_20 IAMs_20 12 07 11.3
comp=Z,10µm,21.0s
TOB1 Torodi Ar. Sit 93.01 285 IAMs_20 IAMs_20 12 07 11.3
comp=Z,11µm,21.0s
TOA0 Torodi Ar. Sit 93.01 285 P **P** **11 21 58.2 -1.0**
TOA0 IAMs_20 IAMs_20 12 07 11.4
comp=Z,10µm,20.0s
TORD Torodi Ar. Bea 93.01 285 P **P** **11 21 59.4 +0.2**
comp=Z,6.9nm,0.9s,baz=69,slow=3.6,SNR=22
TORD PP **PP** **11 25 44.1 +2.0**
comp=Z,26nm,1.4s,baz=44,slow=1.8,SNR=6.0
TORD LR LR 12 10 44.4
comp=Z,7µm,18.9s,baz=50,slow=40
TOA3 Torodi Ar. Sit 93.01 285 IAMs_20 IAMs_20 12 07 11.5
comp=Z,10µm,21.0s
TOC4 Torodi Ar. Sit 93.02 285 IAMs_20 IAMs_20 12 07 00.6
comp=Z,11µm,21.0s
TOC7 Torodi Ar. Sit 93.02 285 IAMs_20 IAMs_20 12 07 11.7
comp=Z,11µm,20.0s
TOB5 Torodi Ar. Sit 93.02 285 IAMs_20 IAMs_20 12 07 11.7
comp=Z,11µm,20.0s
TOB4 Torodi Ar. Sit 93.02 285 IAMs_20 IAMs_20 12 07 11.8
comp=Z,10µm,20.0s
TOC5 Torodi Ar. Sit 93.03 285 IAMs_20 IAMs_20 12 07 12.1
comp=Z,12µm,20.0s
RAO Raoul Island 93.04 120 LR LR 12 04 34.6
comp=Z,3µm,20.2s,baz=268,slow=36
MXZ Matakaoa Point 93.13 129 IAMs_20 IAMs_20 12 04 38.2
comp=Z,9µm,20.0s
YKA Yellowknife Ar 93.78 15 P **P** **11 21 59.8 -2.1**
comp=Z,2.6nm,0.9s,baz=328,slow=3.9,SNR=13
YKA PP **PP** **11 25 49.8 +3.4**
comp=Z,3.3nm,0.9s,baz=327,slow=7.0,SNR=4.7
YKA PKKPbc **PKKPdf** **11 39 06.1 +1.0**
comp=Z,0.9nm,0.7s,baz=154,slow=2.5,SNR=5.0
YKA LR LR 12 10 17.8
comp=Z,11µm,18.1s,baz=0.0,slow=40
NRS Narsarsuaq 94.77 344 IAMs_20 IAMs_20 12 11 43.3
comp=Z,13µm,19.0s
MOBC Moresby Island 94.92 28 IAMs_20 IAMs_20 12 06 13.0
comp=Z,8µm,20.0s
IVI Ivigtut 95.42 345 IAMs_20 IAMs_20 12 06 32.7
comp=Z,13µm,20.0s
HLK Haleakala 95.54 66 IAMs_20 IAMs_20 11 59 25.1
comp=Z,9µm,22.0s
BBB Bella Bella 97.28 27 LR LR 12 09 00.5
comp=Z,6µm,18.9s,baz=321,slow=37
BBB Bella Bella 97.28 27 IAMs_20 IAMs_20 12 08 58.3
comp=Z,7µm,18.0s
SYO Syowa Base 98.17 198 ⇓ *i* P Pdif 11 22 39.0 +18
SYO Syowa Base 98.17 198 ⇓ *e*PP **PP** **11 26 21.0 -0.1**
SYO Syowa Base 98.17 198 ⇓ *e*PKiKP **PKiKP** **11 26 54.2 +0.1**
PMOZ Porto Moniz, M 100.32 310 *e*S **SKSac** **11 33 20.5 +9.4**
PMOZ Porto Moniz, M 100.32 310 *e*LR LR 11 58 29.3
comp=Z,3µm,18.0s
NLWA Neilton Lookou 102.66 29 IAMs_20 IAMs_20 12 11 58.6
comp=Z,8µm,21.0s
B06A Marblemount 102.85 27 IAMs_20 IAMs_20 12 11 48.4
comp=Z,10µm,21.0s
CMLA Cha da Macela 103.15 318 *e*PS PS 11 36 04.8 -3.2
CMLA Cha da Macela 103.15 318 IAMs_20 IAMs_20 12 11 49.9
comp=Z,10µm,20.0s
PSET Sete Cidades 103.23 318 *e*PS PS 11 36 06.5 -2.4
PSMN Pico do Norte, 103.32 317 *e*PS PS 11 36 08.4 -1.4
D05A Enumclaw 103.65 28 IAMs_20 IAMs_20 12 11 54.8
comp=Z,7µm,20.0s
FFC Flin Flon 103.67 13 IAMs_20 IAMs_20 12 10 48.0
comp=Z,9µm,20.0s
PGRA Graciosa 103.86 321 *e*PS PS 11 36 10.0 -5.4
B08A Colville Reser 103.87 26 IAMs_20 IAMs_20 12 13 34.3
comp=Z,11µm,22.0s
LON Longmire 104.07 28 IAMs_20 IAMs_20 12 13 13.8
comp=Z,7µm,20.0s
LTY Liberty 104.17 27 IAMs_20 IAMs_20 12 16 36.5
comp=Z,7µm,19.0s
ROSA Rosais 104.22 320 *e*PS PS 11 36 16.0 -3.1
ROSA Rosais 104.22 320 IAMs_20 IAMs_20 12 10 09.1
comp=Z,10µm,20.0s
F04A Amboy 104.42 29 IAMs_20 IAMs_20 12 13 59.2
comp=Z,7µm,21.0s
C09A Chrisman Ranch 104.74 25 IAMs_20 IAMs_20 12 11 19.4
comp=Z,10µm,20.0s
NEW Newport 104.83 24 IAMs_20 IAMs_20 12 08 17.5
comp=Z,14µm,22.0s
SCHQ Schefferville 104.97 352 PP **PP** **11 27 08.8 -2.8**
comp=Z,9.4nm,0.9s,baz=25,slow=10,SNR=6.3
D08A Wollman Farm, 105.07 26 IAMs_20 IAMs_20 12 13 26.1
comp=Z,7µm,21.0s
HAWA Hanford 105.34 27 IAMs_20 IAMs_20 12 09 04.3
comp=Z,7µm,20.0s
E08A Dider Farm, El 105.46 27 IAMs_20 IAMs_20 12 16 38.6
comp=Z,8µm,19.0s
H04A Detroit Lake 105.47 30 IAMs_20 IAMs_20 12 16 26.2
comp=Z,6µm,18.0s
F07A Phinny Hill Vi 105.56 28 IAMs_20 IAMs_20 12 16 52.2
comp=Z,9µm,19.0s
G06A Carlson Farm, 105.76 28 IAMs_20 IAMs_20 12 13 09.5
comp=Z,7µm,21.0s
E09A Wood Farm, Sta 105.83 26 IAMs_20 IAMs_20 12 12 05.1
comp=Z,9µm,21.0s
JTMT Jette 106.34 23 IAMs_20 IAMs_20 12 12 55.3
comp=Z,11µm,20.0s
G08A Pilot Rock 106.45 27 IAMs_20 IAMs_20 12 18 14.9
comp=Z,7µm,20.0s
F10A Beach Ranch, E 106.64 26 IAMs_20 IAMs_20 12 15 19.8
comp=Z,10µm,21.0s
I07A Izee 107.16 28 IAMs_20 IAMs_20 12 14 02.7
comp=Z,7µm,20.0s
MSO Missoula 107.23 23 IAMs_20 IAMs_20 12 14 36.0
comp=Z,10µm,20.0s
YBH Yreka Blue Hor 107.44 32 IAMs_20 IAMs_20 12 13 48.3
comp=Z,9µm,22.0s
BMO Blue Mountains 107.51 27 IAMs_20 IAMs_20 12 16 53.8
comp=Z,8µm,20.0s
K05A Summer Lake 107.57 30 IAMs_20 IAMs_20 12 21 30.8
comp=Z,6µm,18.0s
EGMT Eagleton 107.68 20 IAMs_20 IAMs_20 12 17 56.5
comp=Z,12µm,19.0s
KMRM Mail Ridge 108.04 34 IAMs_20 IAMs_20 12 13 55.9
comp=Z,5µm,20.0s
DLMT Dillon 108.97 23 IAMs_20 IAMs_20 12 19 52.1
comp=Z,9µm,18.0s
ULM Lac du Bonnet 109.09 11 PKKPbc PKKPbc 11 38 22.9 -0.2
comp=Z,2.9nm,0.7s,baz=183,slow=3.2,SNR=4.5
ULM Lac du Bonnet 109.09 11 IAMs_20 IAMs_20 12 15 31.1
comp=Z,10µm,21.0s
HOPS Hopland Field 109.27 34 IAMs_20 IAMs_20 12 18 28.4
comp=Z,7µm,20.0s
MFID Camas Ranch 109.30 27 IAMs_20 IAMs_20 12 16 57.1
comp=Z,7µm,21.0s
GDXM Geysers 109.56 34 IAMs_20 IAMs_20 12 18 54.9
comp=Z,8µm,19.0s
FLWY Flagg Ranch 110.77 23 IAMs_20 IAMs_20 12 16 19.6
comp=Z,9µm,22.0s
VCNR Virginia City 110.80 32 IAMs_20 IAMs_20 12 16 09.6
comp=Z,6µm,21.0s
IMW Indian Meadow 110.84 23 IAMs_20 IAMs_20 12 15 40.5
comp=Z,9µm,22.0s
AGMN Agassiz Nation 110.98 11 IAMs_20 IAMs_20 12 19 25.0
comp=Z,12µm,20.0s
PNTR Pine Nut 110.98 32 IAMs_20 IAMs_20 12 21 12.4
comp=Z,6µm,19.0s
FXWY Fox Creek 111.03 23 IAMs_20 IAMs_20 12 18 56.5
comp=Z,10µm,20.0s
TPAW Teton Pass 111.18 23 IAMs_20 IAMs_20 12 18 52.4
comp=Z,11µm,19.0s
SNOW Snow King Moun 111.28 23 IAMs_20 IAMs_20 12 19 38.2
comp=Z,10µm,20.0s
REDW Red Top Meadow 111.33 23 IAMs_20 IAMs_20 12 18 57.5
comp=Z,11µm,19.0s
WAKR Walker 111.52 32 IAMs_20 IAMs_20 12 16 21.5
comp=Z,9µm,22.0s
ELK Elko 111.72 28 IAMs_20 IAMs_20 12 18 41.5
comp=Z,9µm,20.0s
AHID Auburn Hatcher 111.75 24 IAMs_20 IAMs_20 12 21 31.6
comp=Z,11µm,20.0s
D32A Dogwood Acres, 111.87 12 IAMs_20 IAMs_20 12 16 06.8
comp=Z,11µm,21.0s
EYMN Ely 112.00 8 IAMs_20 IAMs_20 12 15 37.0
comp=Z,10µm,21.0s
NVAR Mina Array Bea 112.14 31 PKiKP **PKiKP** **11 27 20.5 -0.7**
comp=Z,1.1nm,0.7s,baz=297,slow=1.8,SNR=3.6
NVAR PP **PP** **11 28 07.5 +2.9**
comp=Z,1.7nm,0.9s,baz=0.3,slow=2.7,SNR=5.7
BATG Bathurst New B 112.20 350 IAMs_20 IAMs_20 12 15 20.6
comp=Z,10µm,21.0s
BW06 Boulder Array 112.32 23 IAMs_20 IAMs_20 12 21 49.7
comp=Z,10µm,19.0s
PDAR Pinedale Array 112.32 23 PKiKP **PKiKP** **11 27 22.9 +1.3**
comp=Z,0.6nm,0.5s,baz=56,slow=3.7,SNR=7.2
PDAR PP **PP** **11 28 04.4 -1.3**
comp=Z,2.7nm,1.0s,baz=49,slow=2.7,SNR=4.8
OMMB Old Mammoth Mi 112.42 32 IAMs_20 IAMs_20 12 22 12.5
comp=Z,7µm,19.0s
HWUT Hardware Ranch 112.55 25 IAMs_20 IAMs_20 12 22 25.1
comp=Z,9µm,19.0s
PQI Presque Isle 113.10 351 IAMs_20 IAMs_20 12 19 11.4
comp=Z,10µm,20.0s
D41A Chassel 113.22 6 IAMs_20 IAMs_20 12 18 03.0
comp=Z,12µm,20.0s
DUG Dugway, Tooele 113.22 27 IAMs_20 IAMs_20 12 18 58.1
comp=Z,8µm,20.0s
E38A The Farm, Brul 113.31 8 IAMs_20 IAMs_20 12 16 25.6
comp=Z,12µm,22.0s
E63A Oxbow 113.40 351 IAMs_20 IAMs_20 12 19 42.5
comp=Z,9µm,21.0s
K22A Casper 113.49 21 IAMs_20 IAMs_20 12 17 26.4
comp=Z,8µm,20.0s
D53A Lac Vacive, Po 113.58 358 IAMs_20 IAMs_20 12 25 23.2
comp=Z,8µm,19.0s
F36A Milaca 113.74 10 IAMs_20 IAMs_20 12 15 41.0
comp=Z,9µm,20.0s
E44A Grand Marais A 113.88 4 IAMs_20 IAMs_20 12 21 45.5
comp=Z,9µm,20.0s
F64A Sherman 113.94 351 IAMs_20 IAMs_20 12 18 30.6
comp=Z,9µm,20.0s
VNA2 Neumayer--Watz 113.97 200 PKPdf **PKiKP** **11 27 25.5 +2.1**
RWWY Rawlins 114.11 22 IAMs_20 IAMs_20 12 21 48.9
comp=Z,9µm,20.0s
ISA Isabella, Lake 114.19 33 IAMs_20 IAMs_20 12 17 03.5
comp=Z,6µm,21.0s
F63A Nahmakanta, Br 114.20 351 IAMs_20 IAMs_20 12 20 07.7
comp=Z,11µm,20.0s
E46A Sault Ste Mari 114.23 3 IAMs_20 IAMs_20 12 14 09.6
comp=Z,10µm,22.0s
VNA1 Neumayer--Stat 114.30 200 PKPdf **PKiKP** **11 27 26.4 +2.4**
TPNV Topopah Spring 114.31 31 IAMs_20 IAMs_20 12 23 32.2
comp=Z,6µm,19.0s
GGN Saint George 114.42 350 IAMs_20 IAMs_20 12 19 06.4
comp=Z,9µm,20.0s
G65A Princeton 114.46 350 IAMs_20 IAMs_20 12 17 47.5
comp=Z,11µm,20.0s
SPMN Marine on St. 114.47 10 IAMs_20 IAMs_20 12 15 53.5
comp=Z,11µm,22.0s
F42A Maple Grove Fa 114.55 6 IAMs_20 IAMs_20 12 15 43.2
comp=Z,11µm,21.0s
VNA3 Neumayer Olymp 114.64 200 PKPdf PKPdf 11 27 26.5 +1.8

PPT2	**Papeete2**	**114.73**	**101**	*e*PP	**PP**	**11 28 18.8**	**-5.7**
	comp=Z,415nm,26.5s						
PPT2	**Papeete2**	**114.73**	**101**	*e*PS	PS	11 38 02.3	-1.3
	comp=Z,3µm,26.8s						
PPT2				*e*SS	SS	11 44 15.3	-3.9
	comp=Z,3µm,30.0s						
PPT2	**Papeete2**	**114.73**	**101**	*e*LQ	LQ	11 57 01.0	
	comp=Z,8µm,34.8s						
PPT2				*e*LR	LR	12 01 53.4	
	comp=Z,14µm,28.8s,baz=285						
G40A	**Rib Lake**	**114.80**	**8**	IAMs_20	IAMs_20	12 25 02.0	
	comp=Z,11µm,21.0s						
G62A	**West of Eustis**	**114.87**	**352**	IAMs_20	IAMs_20	12 16 50.3	
	comp=Z,11µm,22.0s						
EMMW	**East Machias**	**114.92**	**350**	IAMs_20	IAMs_20	12 18 00.8	
	comp=Z,9µm,19.0s						
O20A	**White River Ci**	**115.10**	**23**	IAMs_20	IAMs_20	12 23 58.3	
	comp=Z,8µm,19.0s						
SHPR	**Sheep Range**	**115.18**	**31**	IAMs_20	IAMs_20	12 20 16.5	
	comp=Z,6µm,19.0s						
ECSD	**EROS Data Cent**	**115.21**	**13**	P	**PKPdf**	**11 27 27.5**	**+0.8**
	baz=343						
GSC	**Goldstone, Bar**	**115.33**	**33**	IAMs_20	IAMs_20	12 19 30.4	
	comp=Z,6µm,21.0s						
WVL	**Waterville**	**115.40**	**352**	IAMs_20	IAMs_20	12 20 52.3	
	comp=Z,11µm,20.0s						
I37A	**Lemond, Waseca**	**115.55**	**10**	IAMs_20	IAMs_20	12 16 58.0	
	comp=Z,12µm,22.0s						
PLVO	**Plevna**	**115.59**	**357**	IAMs_20	IAMs_20	12 21 04.5	
	comp=Z,9µm,19.0s						
GLMI	**Grayling**	**115.75**	**3**	IAMs_20	IAMs_20	12 19 18.9	
	comp=Z,12µm,21.0s						
H43A	**Windswept, Lux**	**115.86**	**6**	IAMs_20	IAMs_20	12 17 23.0	
	comp=Z,11µm,19.0s						
LONY	**Lake Ozonia**	**115.87**	**355**	IAMs_20	IAMs_20	12 22 23.7	
	comp=Z,7µm,20.0s						
SADO	**Sadowa**	**115.92**	**359**	IAMs_20	IAMs_20	12 20 07.2	
	comp=Z,11µm,21.0s						
VT1	**Waterbury**	**115.99**	**354**	IAMs_20	IAMs_20	12 15 25.3	
	comp=Z,6µm,20.0s						
LBNH	**Lisbon**	**116.00**	**353**	IAMs_20	IAMs_20	12 19 47.1	
	comp=Z,12µm,22.0s						
I63A	**Otisfield**	**116.03**	**352**	IAMs_20	IAMs_20	12 21 16.9	
	comp=Z,9µm,20.0s						
TBI	**Tubuai**	**116.08**	**107**	*e*PP	PP	11 28 29.5	-4.3
	comp=Z,348nm,31.2s						
TBI	**Tubuai**	**116.08**	**107**	*e*PS	PS	11 38 13.4	-2.3
	comp=Z,2µm,31.2s						
TBI				*e*SS	SS	11 44 36.3	-0.3
	comp=Z,4µm,38.2s						
TBI	**Tubuai**	**116.08**	**107**	*e*LQ	LQ	11 57 38.6	
	comp=Z,4µm,31.5s						
TBI				*e*LR	LR	12 02 33.3	
	comp=Z,12µm,35.2s,baz=291						
I40A	**Norwalk**	**116.10**	**8**	IAMs_20	IAMs_20	12 23 58.4	
	comp=Z,11µm,22.0s						
DELO	**Deloro Mine**	**116.13**	**358**	IAMs_20	IAMs_20	12 26 31.8	
	comp=Z,10µm,18.0s						
PV22	**Blue Mesa, Par**	**116.28**	**25**	IAMs_20	IAMs_20	12 22 40.6	
	comp=Z,10µm,21.0s						
I42A	**Draeger Farm,**	**116.31**	**7**	IAMs_20	IAMs_20	12 19 09.0	
	comp=Z,9µm,20.0s						
PV10	**Paradox Valley**	**116.31**	**25**	IAMs_20	IAMs_20	12 23 57.6	
	comp=Z,10µm,18.0s						
ISCO	**Idaho Springs**	**116.34**	**22**	IAMs_20	IAMs_20	12 18 29.9	
	comp=Z,8µm,20.0s						
PV04	**Paradox Valley**	**116.35**	**25**	IAMs_20	IAMs_20	12 23 55.7	
	comp=Z,11µm,20.0s						
SMCO	**Snowmass**	**116.41**	**23**	IAMs_20	IAMs_20	12 21 26.7	
	comp=Z,9µm,19.0s						
PV07	**Paradox Valley**	**116.42**	**25**	IAMs_20	IAMs_20	12 22 55.3	
	comp=Z,10µm,22.0s						
PV16	**Nyswonger Mesa**	**116.42**	**25**	IAMs_20	IAMs_20	12 23 57.4	
	comp=Z,9µm,19.0s						
PV17	**East Wray Mesa**	**116.43**	**25**	IAMs_20	IAMs_20	12 23 57.7	
	comp=Z,10µm,19.0s						
PV11	**David Mesa, Pa**	**116.45**	**25**	IAMs_20	IAMs_20	12 23 24.1	
	comp=Z,11µm,20.0s						
PV12	**Saucer Basin,**	**116.46**	**25**	IAMs_20	IAMs_20	12 24 07.5	
	comp=Z,11µm,20.0s						
PV18	**Skein Mesa, Pa**	**116.48**	**25**	IAMs_20	IAMs_20	12 23 59.7	
	comp=Z,9µm,20.0s						
NCB	**Newcomb**	**116.48**	**355**	IAMs_20	IAMs_20	12 18 52.9	
	comp=Z,8µm,22.0s						
PV03	**Paradox Valley**	**116.50**	**25**	IAMs_20	IAMs_20	12 23 24.4	
	comp=Z,9µm,20.0s						
PV05	**Paradox Valley**	**116.55**	**25**	IAMs_20	IAMs_20	12 24 01.6	
	comp=Z,8µm,19.0s						
I47A	**Gladwin**	**116.56**	**3**	IAMs_20	IAMs_20	12 18 50.3	
	comp=Z,9µm,20.0s						
HNH	**Hanover**	**116.56**	**354**	IAMs_20	IAMs_20	12 20 03.2	
	comp=Z,12µm,22.0s						
PV15	**Paradox Valley**	**116.56**	**25**	IAMs_20	IAMs_20	12 23 11.2	
	comp=Z,11µm,21.0s						
U15A	**North Rim**	**116.58**	**29**	IAMs_20	IAMs_20	12 21 18.2	
	comp=Z,6µm,20.0s						
PV13	**Radium Mtn., P**	**116.59**	**25**	IAMs_20	IAMs_20	12 23 27.9	
	comp=Z,9µm,21.0s						
PV01	**Paradox Valley**	**116.71**	**25**	IAMs_20	IAMs_20	12 24 26.1	
	comp=Z,9µm,20.0s						
PFO	**Pinyon Flats O**	**116.82**	**33**⇑	*i*PKIKP	**PKiKP**	**11 27 30.8**	**+0.5**
W13A	**Hualapai Mount**	**116.93**	**31**	IAMs_20	IAMs_20	12 23 42.6	
	comp=Z,6µm,20.0s						
J59A	**Piesco**	**117.01**	**355**	IAMs_20	IAMs_20	12 17 58.9	
	comp=Z,10µm,22.0s						
ACCN	**Adirondack Com**	**117.02**	**355**	IAMs_20	IAMs_20	12 20 33.1	
	comp=Z,7µm,20.0s						
JFWS	**Jewell Farm**	**117.11**	**8**	IAMs_20	IAMs_20	12 24 47.1	
	comp=Z,11µm,20.0s						
J57A	**Williamstown**	**117.16**	**356**	IAMs_20	IAMs_20	12 19 01.0	
	comp=Z,9µm,21.0s						
J58A	**Remsen**	**117.17**	**356**	IAMs_20	IAMs_20	12 18 04.1	
	comp=Z,10µm,21.0s						
J47A	**Sunmer**	**117.32**	**4**	IAMs_20	IAMs_20	12 19 22.4	
	comp=Z,10µm,19.0s						
J55A	**Hilton**	**117.39**	**358**	IAMs_20	IAMs_20	12 22 01.1	
	comp=Z,11µm,20.0s						
J54A	**Appleton**	**117.41**	**359**	IAMs_20	IAMs_20	12 23 23.5	
	comp=Z,9µm,19.0s						
MEDO	**Medina**	**117.51**	**358**	IAMs_20	IAMs_20	12 16 08.2	
	comp=Z,10µm,22.0s						
MVCO	**Mesa Verde**	**117.54**	**25**	IAMs_20	IAMs_20	12 25 05.0	
	comp=Z,8µm,21.0s						
K43A	**Burlington**	**117.55**	**7**	IAMs_20	IAMs_20	12 22 28.7	
	comp=Z,9µm,21.0s						
K62A	**Royalston**	**117.59**	**353**	IAMs_20	IAMs_20	12 20 55.2	
	comp=Z,10µm,21.0s						
SCIA	**State Center**	**117.63**	**11**	IAMs_20	IAMs_20	12 20 47.1	
	comp=Z,11µm,22.0s						
TRY	**Troy**	**117.67**	**354**	IAMs_20	IAMs_20	12 27 17.3	
	comp=Z,7µm,20.0s						
HRV	**Adam Dziewonsk**	**117.67**	**353**	IAMs_20	IAMs_20	12 20 46.3	
	comp=Z,11µm,21.0s						
WUAZ	**Wupatki**	**117.75**	**28**	IAMs_20	IAMs_20	12 20 53.1	
	comp=Z,7µm,20.0s						
WES	**Weston**	**117.76**	**352**	IAMs_20	IAMs_20	12 21 54.7	
	comp=Z,11µm,20.0s						
K58A	**Earlville**	**117.79**	**356**	IAMs_20	IAMs_20	12 27 34.5	
	comp=Z,8µm,19.0s						
BCX	**Boston College**	**117.79**	**352**	IAMs_20	IAMs_20	12 22 05.5	
	comp=Z,9µm,20.0s						
QUA2	**Belchertown**	**117.98**	**353**	IAMs_20	IAMs_20	12 21 07.7	
	comp=Z,10µm,22.0s						
GLA	**Glamis**	**118.11**	**33**	IAMs_20	IAMs_20	12 19 30.0	
	comp=Z,6µm,20.0s						
SDCO	**Great Sand Dun**	**118.21**	**23**	IAMs_20	IAMs_20	12 16 51.5	
	comp=Z,9µm,22.0s						
BRYW	**Bryant College**	**118.25**	**353**	IAMs_20	IAMs_20	12 21 57.6	
	comp=Z,10µm,21.0s						
WVNY	**West Valley, N**	**118.27**	**359**	IAMs_20	IAMs_20	12 16 31.4	
	comp=Z,10µm,22.0s						
BINY	**Binghamton**	**118.37**	**356**	IAMs_20	IAMs_20	12 21 35.9	
	comp=Z,8µm,20.0s						
M65A	**Busby, Falmout**	**118.48**	**352**	IAMs_20	IAMs_20	12 19 42.8	
	comp=Z,6µm,20.0s						
ERPA	**Erie**	**118.58**	**360**	IAMs_20	IAMs_20	12 20 38.6	
	comp=Z,10µm,21.0s						
X16A	**Lo Mia Camp, P**	**118.64**	**29**	IAMs_20	IAMs_20	12 21 46.6	
	comp=Z,5µm,19.0s						
KSCT	**Kent School, K**	**118.64**	**354**	IAMs_20	IAMs_20	12 21 52.2	
	comp=Z,9µm,20.0s						
N38A	**Joes South For**	**118.71**	**11**	IAMs_20	IAMs_20	12 21 18.6	
	comp=Z,10µm,21.0s						
W18A	**Petrified Fore**	**118.81**	**27**	IAMs_20	IAMs_20	12 25 34.0	
	comp=Z,8µm,19.0s						
KSPA	**Keystone Colle**	**119.00**	**356**	IAMs_20	IAMs_20	12 21 19.5	
	comp=Z,9µm,20.0s						
M48A	**Edgerton**	**119.07**	**4**	IAMs_20	IAMs_20	12 17 59.8	
	comp=Z,9µm,20.0s						
T25A	**Trinidad**	**119.14**	**22**	P	**PKiKP**	**11 27 34.9**	**+0.1**
	baz=334						
WSPT	**Westport, CT**	**119.18**	**354**	IAMs_20	IAMs_20	12 21 41.4	
	comp=Z,7µm,21.0s						
M56A	**Emporium**	**119.18**	**358**	IAMs_20	IAMs_20	12 24 20.5	
	comp=Z,11µm,21.0s						
N41A	**Harden Midland**	**119.19**	**9**	IAMs_20	IAMs_20	12 25 28.2	
	comp=Z,9µm,19.0s						
M55A	**Ridgway**	**119.21**	**359**	IAMs_20	IAMs_20	12 20 11.3	
	comp=Z,8µm,21.0s						
X18A	**Snowflake**	**119.21**	**28**	IAMs_20	IAMs_20	12 23 18.7	
	comp=Z,7µm,21.0s						
M57A	**Sunshine Farm,**	**119.29**	**357**	IAMs_20	IAMs_20	12 21 34.3	
	comp=Z,10µm,20.0s						
ODNJ	**Ogdensburg**	**119.38**	**355**	IAMs_20	IAMs_20	12 19 31.7	
	comp=Z,9µm,21.0s						
PAL	**Palisades**	**119.40**	**354**	IAMs_20	IAMs_20	12 22 23.2	
	comp=Z,11µm,22.0s						
HDIL	**Hopedale**	**119.56**	**8**	IAMs_20	IAMs_20	12 22 47.8	
	comp=Z,10µm,20.0s						
N49A	**Columbus Grove**	**119.67**	**3**	IAMs_20	IAMs_20	12 22 25.5	
	comp=Z,10µm,19.0s						
N58A	**Sunbury**	**119.77**	**357**	IAMs_20	IAMs_20	12 28 15.9	
	comp=Z,9µm,19.0s						
BRNJ	**Basking Ridge**	**119.78**	**355**	IAMs_20	IAMs_20	12 19 43.2	
	comp=Z,9µm,20.0s						
P38A	**Dawn**	**119.78**	**12**		**PKPdf**	**11 27 35.1**	**-0.5**
SFIN	**Lafayette**	**119.98**	**6**	IAMs_20	IAMs_20	12 21 59.9	
	comp=Z,9µm,20.0s						
214A	**Organ Pipe Nat**	**120.00**	**32**	IAMs_20	IAMs_20	12 28 48.0	
	comp=Z,5µm,18.0s						
SSPA	**Standing Stone**	**120.02**	**358**	IAMs_20	IAMs_20	12 26 15.6	
	comp=Z,10µm,22.0s						
ANMO	**Albuquerque**	**120.32**	**25**	PKIKP	**PKPdf**	**11 27 36.0**	**-1.1**
ANMO	**Albuquerque**	**120.32**	**25**	P	**PKiKP**	**11 27 38.1**	**+0.9**
	baz=331						
ANMO	**Albuquerque**	**120.32**	**25**		**PKPdf**	**11 27 36.0**	**-1.1**
ANMO	**Albuquerque**	**120.32**	**25**	IAMs_20	IAMs_20	12 26 33.6	
	comp=Z,8µm,20.0s						
PAGS	**Pennsylvania G**	**120.38**	**357**	IAMs_20	IAMs_20	12 28 24.0	
	comp=Z,10µm,19.0s						
O56A	**Blue Knob Stat**	**120.41**	**358**	P	**PKiKP**	**11 27 38.1**	**+1.2**
	baz=1.9						
O56A	**Blue Knob Stat**	**120.41**	**358**	IAMs_20	IAMs_20	12 24 58.9	
	comp=Z,10µm,19.0s						
MVL	**Millersville**	**120.58**	**356**	IAMs_20	IAMs_20	12 19 59.5	
	comp=Z,11µm,22.0s						
PSUB	**Penn St. - Bra**	**120.60**	**356**	IAMs_20	IAMs_20	12 20 08.8	
	comp=Z,9µm,20.0s						
TUC	**Tucson**	**120.69**	**30**	P	**PKiKP**	**11 27 40.6**	**+2.8**
	baz=326						
TUC	**Tucson**	**120.69**	**30**	IAMs_20	IAMs_20	12 19 09.1	
	comp=Z,8µm,22.0s						
P60A	**Greenville**	**120.72**	**356**	P	**PKiKP**	**11 27 38.1**	**+0.6**
	baz=5.1						
P60A	**Greenville**	**120.72**	**356**	IAMs_20	IAMs_20	12 20 12.2	
	comp=Z,8µm,20.0s						
P61A	**Hammonton**	**120.80**	**355**	IAMs_20	IAMs_20	12 20 24.2	
	comp=Z,9µm,20.0s						
Y22D	**IRIS PASSCAL I**	**120.89**	**26**	IAMs_20	IAMs_20	12 25 59.9	
	comp=Z,8µm,20.0s						
BNM	**Barren Site**	**120.94**	**25**		**PKPdf**	**11 27 37.4**	**-0.9**
MCWV	**Mont Chateau**	**121.04**	**360**	IAMs_20	IAMs_20	12 22 23.6	
	comp=Z,6µm,22.0s						
P54A	**Burton**	**121.09**	**0**	P	**PKiKP**	**11 27 38.8**	**+0.6**
	baz=360						
P51A	**Williamsport**	**121.16**	**2**	IAMs_20	IAMs_20	12 22 48.9	
	comp=Z,9µm,20.0s						
P57A	**Homestead Farm**	**121.17**	**358**	IAMs_20	IAMs_20	12 22 42.2	
	comp=Z,8µm,19.0s						
P55A	**Reedsville**	**121.19**	**360**	P	**PKiKP**	**11 27 39.5**	**+1.0**
	baz=0.5						
SDMD	**Soldier's Deli**	**121.20**	**357**	IAMs_20	IAMs_20	12 22 54.7	
	comp=Z,5µm,20.0s						
R40A	**Maddies Statio**	**121.31**	**11**		**PKPdf**	**11 27 37.5**	**-1.1**
R40A				IAMs_20	IAMs_20	12 20 19.6	
	comp=Z,10µm,20.0s						
OLIL	**Olney**	**121.50**	**7**	IAMs_20	IAMs_20	12 20 49.2	
	comp=Z,8µm,20.0s						
Q60A	**Greensboro**	**121.54**	**356**	IAMs_20	IAMs_20	12 20 37.9	
	comp=Z,10µm,21.0s						
Q51A	**Peebles**	**121.60**	**3**	IAMs_20	IAMs_20	12 23 13.6	
	comp=Z,11µm,22.0s						
Q56A	**Snyder Ridge,**	**121.64**	**359**	IAMs_20	IAMs_20	12 25 36.7	
	comp=Z,10µm,20.0s						
S39A	**Bolivar**	**121.70**	**12**	IAMs_20	IAMs_20	12 28 53.8	
	comp=Z,11µm,21.0s						
Q55A	**Buckhannon**	**121.70**	**360**	P	**PKiKP**	**11 27 40.7**	**+1.1**
	baz=0.3						
Q54A	**Coxs Mills**	**121.71**	**0**	IAMs_20	IAMs_20	12 22 26.4	
	comp=Z,11µm,21.0s						
121A	**Cookes Peak, D**	**121.86**	**27**	IAMs_20	IAMs_20	12 25 35.6	
	comp=Z,8µm,20.0s						
R49A	**Shelbyville**	**122.22**	**5**	IAMs_20	IAMs_20	12 21 56.1	
	comp=Z,9µm,19.0s						
USIN	**University of**	**122.31**	**7**	IAMs_20	IAMs_20	12 23 32.6	
	comp=Z,9µm,20.0s						
R58A	**Rapidan**	**122.35**	**358**	P	**PKiKP**	**11 27 42.3**	**+1.5**
	baz=2.6						
SIUC	**Southern Illin**	**122.36**	**8**	IAMs_20	IAMs_20	12 20 20.2	
	comp=Z,11µm,21.0s						
R57A	**Stanardsville**	**122.37**	**358**	P	**PKiKP**	**11 27 42.1**	**+1.3**
	baz=2.0						
S44A	**Carbondale**	**122.38**	**8**	IAMs_20	IAMs_20	12 20 21.5	
	comp=Z,11µm,21.0s						
CBN	**Corbin Frederi**	**122.42**	**357**	IAMs_20	IAMs_20	12 24 30.2	
	comp=Z,8µm,20.0s						
MSTX	**Muleshoe**	**122.57**	**22**	P	**PKiKP**	**11 27 41.6**	**+0.1**
	baz=335						
MSTX	**Muleshoe**	**122.57**	**22**		**PKiKP**	**11 27 41.5**	**+0.1**
MSTX				IAMs_20	IAMs_20	12 27 22.9	
	comp=Z,9µm,19.0s						
U38A	**Gravette**	**122.68**	**13**		**PKPdf**	**11 27 40.4**	**-0.9**
R58B	**Mineral**	**122.68**	**358**	IAMs_20	IAMs_20	12 30 44.2	
	comp=Z,8µm,20.0s						
T42A	**Van Buren**	**122.75**	**10**		**PKPdf**	**11 27 40.9**	**-0.5**
T42A				IAMs_20	IAMs_20	12 26 02.4	
	comp=Z,7µm,20.0s						
S61A	**Accomac**	**122.85**	**356**	IAMs_20	IAMs_20	12 21 47.4	
	comp=Z,10µm,20.0s						
HHAR	**Hobbs**	**122.93**	**13**		**PKPdf**	**11 27 41.2**	**-0.5**
HHAR				IAMs_20	IAMs_20	12 26 38.5	
	comp=Z,10µm,20.0s						
S58A	**Poland Farm, P**	**123.04**	**358**	P	**PKiKP**	**11 27 42.6**	**+0.4**
	baz=2.5						
EPT	**El Paso**	**123.06**	**27**	IAMs_20	IAMs_20	12 23 12.4	
	comp=Z,7µm,20.0s						
U40A	**Yellville**	**123.08**	**12**	P	**PKPdf**	**11 27 41.6**	**-0.4**
	baz=346						
U40A	**Yellville**	**123.08**	**12**		**PKPdf**	**11 27 41.7**	**-0.4**
T60A	**Surry**	**123.45**	**357**	IAMs_20	IAMs_20	12 24 30.5	
	comp=Z,10µm,20.0s						
T50A	**Nancy**	**123.51**	**4**		**PKPdf**	**11 27 42.1**	**-0.7**
MNTX	**Cornudas Mount**	**123.59**	**26**	P	**PKiKP**	**11 27 44.2**	**+0.8**
	baz=332						
MNTX	**Cornudas Mount**	**123.59**	**26**		**PKPdf**	**11 27 43.3**	**+0.1**
MNTX				IAMs_20	IAMs_20	12 28 30.3	
	comp=Z,9µm,20.0s						
FCAR	**Ozark Folk Cen**	**123.67**	**12**		**PKPdf**	**11 27 42.1**	**-1.0**
LCAR	**Lake Charles**	**123.67**	**11**		**PKPdf**	**11 27 42.6**	**-0.6**
U49A	**Red Boiling Sp**	**123.94**	**5**		**PKPdf**	**11 27 43.3**	**-0.4**
W39A	**Magazine**	**124.01**	**13**	P	**PKiKP**	**11 27 44.7**	**+0.5**
	baz=345						
SRIG	**Santa Rosalia**	**124.01**	**35**	IAMs_20	IAMs_20	12 22 49.7	
	comp=Z,5µm,19.0s						
WVT	**Waverly**	**124.10**	**7**	PKIKP	**PKPdf**	**11 27 43.5**	**-0.5**
WVT	**Waverly**	**124.10**	**7**	P	**PKPdf**	**11 27 43.9**	**-0.1**
	baz=352						
WVT	**Waverly**	**124.10**	**7**		**PKPdf**	**11 27 43.5**	**-0.5**
U54A	**Nelsons Funny**	**124.15**	**1**	IAMs_20	IAMs_20	12 23 50.1	
	comp=Z,9µm,20.0s						
U55A	**TA2, Sparta**	**124.18**	**1**	P	**PKPdf**	**11 27 44.3**	**0.0**
	baz=359						
U61A	**Possum Corner**	**124.24**	**356**	IAMs_20	IAMs_20	12 25 12.3	
	comp=Z,10µm,21.0s						
HBAR	**Harrisburg**	**124.26**	**10**	IAMs_20	IAMs_20	12 24 29.5	
	comp=Z,10µm,21.0s						
U59A	**Littleton**	**124.29**	**358**	IAMs_20	IAMs_20	12 32 09.6	
	comp=Z,9µm,20.0s						
CLTN	**Cedars of Leba**	**124.30**	**6**	IAMs_20	IAMs_20	12 26 34.4	
	comp=Z,10µm,19.0s						
W41B	**Gary Mavity, V**	**124.34**	**12**	P	**PKPdf**	**11 27 44.1**	**-0.4**
	baz=346						
MIAR	**Mount Ida**	**124.68**	**13**	P	**PKiKP**	**11 27 45.6**	**+0.1**
	baz=345						
V61A	**Roper**	**124.78**	**356**	IAMs_20	IAMs_20	12 21 57.7	
	comp=Z,11µm,22.0s						
V60A	**Jim Taylor Roa**	**124.85**	**357**	IAMs_20	IAMs_20	12 26 47.4	
	comp=Z,9µm,20.0s						
ABTX	**Abilene, Hawle**	**124.86**	**20**		**PKPdf**	**11 27 45.3**	**-0.3**
ABTX				IAMs_20	IAMs_20	12 27 10.2	
	comp=Z,9µm,21.0s						
W45A	**Hickory Valley**	**124.88**	**9**	IAMs_20	IAMs_20	12 21 49.8	
	comp=Z,11µm,22.0s						
TKL	**Tuckaleechee C**	**124.93**	**3**	IAMs_20	IAMs_20	12 25 27.8	
	comp=Z,10µm,20.0s						
CPCT	**Cooper Cave**	**125.09**	**4**	IAMs_20	IAMs_20	12 24 46.1	
	comp=Z,9µm,20.0s						
CNNC	**Cliffs of the**	**125.40**	**358**	IAMs_20	IAMs_20	12 25 20.1	
	comp=Z,11µm,22.0s						
WLAR	**White Oak Lake**	**125.60**	**13**		**PKiKP**	**11 27 47.3**	**0.0**
BG3	**Lake Jocassee**	**125.64**	**3**	IAMs_20	IAMs_20	12 24 11.5	
	comp=Z,9µm,20.0s						
X48A	**Hartselle**	**125.85**	**7**		**PKPdf**	**11 27 46.9**	**-0.6**
Y45A	**Yeager Farm, C**	**126.09**	**10**	IAMs_20	IAMs_20	12 29 53.9	
	comp=Z,9µm,19.0s						
X55A	**Gracelyn & Ava**	**126.20**	**1**	P	**PKiKP**	**11 27 49.3**	**+0.8**
	baz=358						
TX31	**Lajitas Ar. Si**	**126.37**	**25**		**PKPdf**	**11 27 47.9**	**-0.8**
TX32	**Lajitas Array**	**126.37**	**25**		**PKPdf**	**11 27 47.9**	**-0.7**
TXAR	**Lajitas Array**	**126.37**	**25**	PKP	**PKPdf**	**11 27 47.2**	**-1.5**
	comp=Z,1.8nm,0.7s,baz=116,slow=0.7,SNR=19						
Y60A	**Bolivia**	**126.64**	**358**	IAMs_20	IAMs_20	12 31 54.0	
	comp=Z,9µm,19.0s						
Y52A	**Lilburn**	**126.70**	**4**	P	**PKiKP**	**11 27 49.6**	**+0.1**
	baz=356						
JCT	**Junction City**	**126.78**	**21**	PKIKP	**PKPdf**	**11 27 49.3**	**0.0**
JCT	**Junction City**	**126.78**	**21**	P	**PKiKP**	**11 27 49.7**	**-0.1**
	baz=337						
JCT	**Junction City**	**126.78**	**21**		**PKPdf**	**11 27 49.3**	**0.0**
JCT				IAMs_20	IAMs_20	12 26 46.1	
	comp=Z,8µm,19.0s						
Y58A	**Scranton**	**126.78**	**359**	IAMs_20	IAMs_20	12 22 20.5	
	comp=Z,10µm,21.0s						
Z50A	**Ashland**	**127.15**	**6**	P	**PKPdf**	**11 27 49.6**	**-0.4**
	baz=353						
Z57A	**Bowman**	**127.38**	**0**	P	**PKPdf**	**11 27 50.3**	**0.0**
	baz=360						
HPIG		**127.59**	**29**	IAMs_20	IAMs_20	12 30 10.8	
	comp=Z,7µm,19.0s						
HKT	**Hockley**	**128.50**	**17**⇑	*i*PKIKP	**PKiKP**	**11 27 53.0**	**-0.1**
456A	**Hilliard**	**129.92**	**2**	IAMs_20	IAMs_20	12 36 31.9	
	comp=Z,8µm,19.0s						
KVTX	**Kingsville**	**130.12**	**21**	IAMs_20	IAMs_20	12 23 52.5	
	comp=Z,8µm,18.0s						
ZAIG	**Zacatecas**	**132.59**	**28**	IAMs_20	IAMs_20	12 35 09.1	
	comp=Z,8µm,20.0s						
PMSA	**Palmer Station**	**133.58**	**190**	*e*P	**PKiKP**	**11 28 02.7**	**+0.5**
RCBR	**Riachuelo**	**134.73**	**282**	*e*P	**PKPdf**	**11 28 05.3**	**+0.5**
UNM	**Universidad Na**	**137.10**	**27**	IAMs_20	IAMs_20	12 35 55.2	
	comp=Z,7µm,21.0s						
GRTK	**Grand Turk**	**138.15**	**347**	IAMs_20	IAMs_20	12 32 51.9	
	comp=Z,7µm,21.0s						
SKI	**Saint Kitts**	**139.43**	**334**	IAMs_20	IAMs_20	12 35 54.5	
	comp=Z,7µm,21.0s						
TEIG	**Tepich**	**139.64**	**12**	IAMs_20	IAMs_20	12 33 05.0	
	comp=Z,9µm,22.0s						
SC01	**Santiago de lo**	**140.08**	**346**	IAMs_20	IAMs_20	12 32 00.1	
	comp=Z,6µm,21.0s						
GTBY	**Guantanamo Bay**	**140.38**	**352**	IAMs_20	IAMs_20	12 33 42.7	
	comp=Z,6µm,21.0s						
SDDR	**Presa de Saban**	**140.64**	**346**	IAMs_20	IAMs_20	12 36 25.8	
	comp=Z,7µm,21.0s						
FDF	**Fort de France**	**141.01**	**330**	PKIKP	**PKPdf**	**11 28 16.0**	**-0.3**
FDF				MLR	MLR		
	comp=Z,6µm,22.0s						
FDF	**Fort de France**	**141.01**	**330**		**PKPdf**	**11 28 16.0**	**-0.3**
FDF				IAMs_20	IAMs_20	12 27 56.6	
	comp=Z,6µm,22.0s						
BBGH	**Gun Hill**	**141.57**	**326**	*e*P	**PKiKP**	**11 28 19.1**	**-0.9**
CCIG	**Comitan**	**142.48**	**19**	IAMs_20	IAMs_20	12 40 22.9	
	comp=Z,7µm,22.0s						
APG	**El Apazote**	**144.17**	**17**	PKP	**PKPab**	**11 28 19.2**	**-0.5**
	comp=Z,22nm,0.9s,baz=332,slow=5.2,SNR=11						
TRN	**Trinidad (W)**	**144.63**	**327**	*e*P	**PKiKP**	**11 28 25.0**	**-1.4**
SNET	**Serv Nac Est T**	**145.76**	**16**	IAMs_20	IAMs_20	12 35 16.5	
	comp=Z,7µm,22.0s						
TGUH	**Tegucigalpa,Un**	**145.84**	**12**		**PKPdf**	**11 28 24.8**	**-0.2**
TGUH				IAMs_20	IAMs_20	12 39 53.4	
	comp=Z,5µm,20.0s						
ESAR	**Angra dos Reis**	**146.48**	**258**	*e*P	**PKPbc**	**11 28 26.8**	**-0.2**
SMTB	**Santa Maria do**	**146.61**	**284**	*e*P	**PKPbc**	**11 28 27.9**	**+0.2**
CSGN	**Cosiguina Volc**	**146.83**	**13**	IAMs_20	IAMs_20	12 39 53.7	
	comp=Z,5µm,22.0s						
MATN	**Matagalpa**	**147.19**	**10**		**PKPdf**	**11 28 24.4**	**-2.7**
CRIN	**San Cristobal**	**147.21**	**12**	IAMs_20	IAMs_20	12 39 34.8	
	comp=Z,5µm,22.0s						
URIC	**Uribia, Colomb**	**147.82**	**345**		**PKPbc**	**11 28 31.3**	**+0.3**
ESPN	**Las Esperanzas**	**148.15**	**7**		**PKPbc**	**11 28 31.0**	**-0.8**
ACON	**Acoyapa**	**148.25**	**9**	IAMs_20	IAMs_20	12 39 02.0	
	comp=Z,7µm,20.0s						
BDFB	**Brasilia**	**149.01**	**272**	PKPbc	**PKiKP**	**11 28 35.5**	**0.0**
	comp=Z,27nm,1.0s,baz=98,slow=5.6,SNR=3.0						
BDFB	**Brasilia**	**149.01**	**272**	PKP2	**PKPbc**	**11 28 34.0**	**-0.2**
BDFB				MLR	MLR		
	comp=Z,6µm,20.0s						
BDFB	**Brasilia**	**149.01**	**272**		**PKPbc**	**11 28 34.0**	**-0.2**
BDFB				IAMs_20	IAMs_20	12 34 59.4	
	comp=Z,6µm,20.0s						
SPB	**Sao Paulo**	**149.23**	**257**	IAMs_20	IAMs_20	12 37 52.2	
	comp=Z,4µm,18.0s						
JTS	**Las Juntas de**	**149.93**	**9**	IAMs_20	IAMs_20	12 39 28.5	
	comp=Z,6µm,20.0s						
SDV	**Santo Domingo**	**150.12**	**341**	PKPbc	**PKPbc**	**11 28 36.1**	**-0.9**
	comp=Z,44nm,0.7s,baz=275,slow=5.7,SNR=9.4						
SDV	**Santo Domingo**	**150.12**	**341**		**PKPbc**	**11 28 36.0**	**-1.1**
SDV	**Santo Domingo**	**150.12**	**341**	IAMs_20	IAMs_20	12 40 16.4	
	comp=Z,5µm,21.0s						
SDV	**Santo Domingo**	**150.12**	**341**	*e*P	**PKPdf**	**11 28 33.7**	**+1.7**
HDC	**Heredia**	**150.33**	**8**	IAMs_20	IAMs_20	12 46 29.0	
	comp=Z,5µm,19.0s						
TIJ01	**Guaruva-PR**	**150.57**	**253**	*e*P	**PKPdf**	**11 28 33.7**	**+1.4**
BOAV	**Boa Vista**	**150.75**	**316**	*e*P	**PKPdf**	**11 28 34.1**	**+1.3**
BCIP	**Isla Barro Col**	**151.40**	**359**	IAMs_20	IAMs_20	12 40 50.9	
	comp=Z,4µm,21.0s						
CNLB	**Canela**	**151.58**	**244**	*e*P	**PKPdf**	**11 28 35.8**	**+2.0**
ROSC	**El Rosal**	**155.00**	**346**	IAMs_20	IAMs_20	12 45 00.2	
	comp=Z,5µm,19.0s						
PLCA	**Paso Flores**	**157.36**	**200**	PKPab	**PKPab**	**11 29 13.5**	**+0.9**
	comp=Z,12nm,1.0s,baz=107,slow=1.9,SNR=4.2						
CPUP	**Villa Florida**	**157.84**	**248**	PKPab	**PKPab**	**11 29 16.2**	**+1.0**
	comp=Z,16nm,0.9s,baz=93,slow=4.8,SNR=4.9						
PAYG	**Puerto Ayora**	**158.78**	**29**	IAMs_20	IAMs_20	12 45 34.3	
	comp=Z,4µm,19.0s						

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*IDC **05** 11:19:35.5±0.6, 19.°74N×99.°72E, h0km, mb4.1/20, mb1 4.2/20, mb1mx4.0/70, mbtmp4.1/20, Error ellipse: s-maj=16.8km s-min=11.1km az=91.0*

*NEIC **05** 11:19:36.4±1.6, 19.°67N±0.°06×99.°67E±0.°06, h10km±1km, mb4.6/23, Error ellipse: s-maj=11.9km s-min=7.1km az=130.0*

ISC 05 11:19:36.6±0.5**, 19.°66N**±0.°06×**99.°66E**±0.°06**, h10km, n50,** σ**0.s78**/49**, mb4.3**/30**, Thailand**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHTO	**Chiang Mai**	**1.08**	**219**	Pn	**Pg**	**11 19 57.7**	**+0.3**
CHTO				Sg	**Sg**	**11 20 10.7**	**-0.7**
CM31	**Chiang Mai Arr**	**1.37**	**210**	Pn	**Pn**	**11 20 02.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**1.37**	**210**	Pg	**Pn**	**11 20 02.6**	**+0.7**
	656nm,0.3s,baz=20,slow=16,SNR=160						
CMAR				LR	LR	11 20 05.2	
	comp=Z,10µm,21.1s,baz=204,slow=20						
CMAR				Lg	Lg	11 20 22.7	
	1µm,0.3s,baz=30,slow=29,SNR=7.7						
SLVN	**Son La**	**4.32**	**67**	Pn	**Pn**	**11 20 41.4**	**-1.0**
SHL	**Shillong**	**9.28**	**311**	Pn	**Pn**	**11 21 49.9**	**-0.8**
QIZ	**Qiongzhong**	**9.64**	**92**	Pn	**Pn**	**11 21 55.2**	**-0.3**
RPSI	**Rantau Prapat**	**16.88**	**183**	Pn	**Pn**	**11 23 32.7**	**-0.4**
GSI	**Gunungsitoli**	**18.36**	**187**	P	**Pn**	**11 23 50.9**	**-0.5**
KKM	**Kota Kinabalu**	**21.04**	**128**	P	**P**	**11 24 21.7**	**+0.8**
KKM				IAmb	IAmb	11 24 24.3	
	comp=Z,41nm,1.2s						
SONM	**Songino Array**	**28.63**	**9**	P	**P**	**11 25 32.9**	**-0.5**
	comp=Z,1.9nm,0.9s,baz=187,slow=11,SNR=3.5						
KDJ	**Kajisay**	**29.39**	**325**	P	**P**	**11 25 40.4**	**+0.1**
KDJ				IAmb	IAmb	11 25 45.6	
	comp=Z,9.4nm,1.1s						
MK31	**Makanchi Array**	**30.57**	**336**	P	**P**	**11 25 50.9**	**+0.4**
MK31				IAmb	IAmb	11 25 51.9	
	comp=Z,5.3nm,1.3s						

MKAR Makanchi Array 30.57 336 P **P 11 25 51.2 +0.7**
comp=Z,2.1nm,0.7s,baz=145,slow=9.3,SNR=14
LUWI Luwuk 30.62 130 P **P 11 25 51.4 +0.2**
AAK Ala-Archa 31.22 323 P **P 11 25 58.0 +1.5**
comp=Z,3.7nm,0.8s,baz=169,slow=10,SNR=4.1
AAK Ala-Archa 31.22 323 P **P 11 25 55.7 -0.7**
AAK IAmb IAmb 11 26 05.4
comp=Z,17nm,1.3s
KK31 Karatay Array 33.84 320 P **P 11 26 19.2 0.0**
KK31 IAmb IAmb 11 26 24.4
comp=Z,3.5nm,1.1s
KURK Kurchatov 35.18 337 P **P 11 26 30.7 0.0**
KURK IAmb IAmb 11 26 34.6
comp=Z,11nm,1.4s
ZALV Zalesovo Beam 36.08 345 P **P 11 26 38.5 +0.3**
comp=Z,1.8nm,0.5s,baz=148,slow=8.6,SNR=4.5
MJAR Matsushiro Arr 37.65 55 P **P 11 26 53.4 +1.5**
comp=Z,2.1nm,0.9s,baz=258,slow=10,SNR=4.7
FAKI Fak Fak 39.10 121 P **P 11 27 03.4 -1.0**
FAKI IAmb IAmb 11 27 09.4
comp=Z,8.2nm,0.8s
KLR Kul'dur 39.11 34 P P 11 27 02.1 -1.9
comp=Z,2.8nm,0.9s,baz=162,slow=22,SNR=3.2
BVAR Borovoye Array 40.26 333 P **P 11 27 13.4 -0.2**
comp=Z,1.6nm,0.7s,baz=140,slow=9.4,SNR=4.0
ABKAR Akbulak array 43.31 322 P **P 11 27 37.8 -0.8**
AKTO Aktyubinsk 44.97 323 P **P 11 27 51.3 -0.6**
comp=Z,2.0nm,0.8s,baz=129,slow=4.7,SNR=3.5
ARU Arti 47.73 330 P **P 11 28 13.3 -0.2**
comp=Z,1.5nm,0.4s,baz=116,slow=5.9,SNR=4.3
ARU Arti 47.73 330 P **P 11 28 13.0 -0.5**
ARU IAmb IAmb 11 28 29.3
comp=Z,17nm,1.5s
WB0 Warramunga Arr 51.91 137 P **P 11 28 44.9 -0.9**
WB0 IAmb IAmb 11 28 46.4
comp=Z,10nm,1.1s
WRA Warramunga Arr 52.00 137 P **P 11 28 46.7 +0.2**
comp=Z,22nm,1.4s,baz=326,slow=7.9,SNR=17
WB2 Warramunga Arr 52.01 137 P **P 11 28 45.6 -0.9**
WB2 IAmb IAmb 11 28 47.5
comp=Z,12nm,1.2s
AS31 Alice Springs 54.49 141 P **P 11 29 04.2 -0.6**
ASAR Alice Springs 54.49 141 P **P 11 29 05.3 +0.5**
comp=Z,1.2nm,0.5s,baz=323,slow=7.1,SNR=25
CTAO Charters Tower 60.37 128 P **P 11 29 46.0 -0.3**
AKASG Malin Array Be 62.69 318 P **P 11 30 01.8 +0.3**
comp=Z,0.3nm,0.3s,baz=81,slow=6.6,SNR=2.0
MLR Muntele Rosu 64.94 312 P **P 11 30 17.4 +0.7**
comp=Z,5.2nm,0.9s,baz=79,slow=5.6,SNR=3.9
MLR Muntele Rosu 64.94 312 P **P 11 30 15.7 -1.0**
FINES FINESS Array B 65.08 329 P **P 11 30 16.8 -0.4**
comp=Z,1.1nm,0.6s,baz=92,slow=6.1,SNR=8.1
STKA Stephens Creek 65.12 141 P **P 11 30 18.3 +0.5**
comp=Z,1.9nm,0.6s,baz=344,slow=8.2,SNR=4.3
STKA Stephens Creek 65.12 141 P **P 11 30 18.0 +0.2**
KEV Kevo 65.71 339 P **P 11 30 21.6 +0.5**
ARCES ARCESS Array B 66.20 338 P **P 11 30 25.4 +1.2**
comp=Z,1.7nm,0.7s,baz=80,slow=7.5,SNR=6.9
ARE0 ARCESS Array S 66.20 338 P **P 11 30 25.8 +1.6**
EIDS Eidsvold 67.10 130 P **P 11 30 30.8 +0.1**
EIDS IAmb IAmb 11 30 31.4
comp=Z,3.2nm,0.8s
HFS Hagfors 71.17 328 P **P 11 30 54.6 -0.8**
comp=Z,1.9nm,0.8s,baz=143,slow=5.2,SNR=2.5
NB2 NORSAR Subarra 72.26 329 P P 11 31 00.2 -1.8
comp=Z,3.0nm,0.9s,baz=82,slow=6.5
NOA NORSAR Array B 72.26 329 P **P 11 31 00.6 -1.4**
comp=Z,1.0nm,0.8s,baz=82,slow=5.9,SNR=4.0
GERES GERESS Array B 72.84 316 P **P 11 31 07.4 +1.6**
comp=Z,0.3nm,0.3s,baz=82,slow=9.6,SNR=4.1
TOLK Toolik Lake Re 79.12 20 P **P 11 31 40.2 -0.9**
TOLK IAmb IAmb 11 31 52.2
comp=Z,8.4nm,1.5s
INK Inuvik 84.23 17 P **P 11 32 08.7 +0.7**
comp=Z,2.0nm,0.9s,baz=352,slow=3.8,SNR=3.5
INK Inuvik 84.23 17 P **P 11 32 07.4 -0.7**
INK IAmb IAmb 11 32 16.4
comp=Z,3.6nm,1.1s

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*NEIC **05** 11:21:16.8, 20.°25S×70.°79W, h18km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}3.69; $M_{\theta\theta}$-0.31; $M_{\phi\phi}$-3.38; $M_{r\theta}$1.43; $M_{\theta\phi}$2.53; $M_{\phi r}$-7.59; Fault plane solution: $M_0$8.86000×10^{16} NP1:ϕ_s167.72000°, δ76.39000°, λ100.90000°. NP2:ϕ_s308.43000°, δ17.37000°, λ52.02000°. Principal axes: T 8.5264, Plg57.0000°, Azm92.0000°; N 0.6395, Plg11.0000°, Azm345.0000°; P -9.1659, Plg31.0000°, Azm249.0000°;*
*NEIC **05** 11:21:17.4±1.7, 20.°21S±0.°02×70.°78W±0.°04, h13km±3km, mb5.4/309, Ms_20 5.3/265, Mwr5.2/46, Mww5.4, ML5.4(GUC) Error ellipse: s-maj=5.6km s-min=3.4km az=74.0*
*BJI **05** 11:21:18.0±0.0, 20.°20S×70.°70W, h10km, mB6.1/2, Ms5.9/9, Ms7 5.7/8*
*GUC **05** 11:21:18.1±0.5, 20.°20S×70.°74W, h41km±1km, ML5.1, MW5.6*
*IDC **05** 11:21:20.0±2.6, 20.°09S×70.°49W, h21km±16km, mb4.9/26, mb1 4.9/30, mb1mx4.9/39, mbtmp5.0/30, ML4.3/4, MS5.1/9, Ms1 5.1/9, ms1mx4.9/33, Error ellipse: s-maj=16.0km s-min=10.4km az=66.0*
*VAO **05** 11:21:21.5±0.6, 20.°14S×70.°59W, h43km±3km, mb5.1*
*NEIC **05** 11:21:22, 20.°31S×70.°89W, h26km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.88; $M_{\theta\theta}$0.00; $M_{\phi\phi}$-0.89; $M_{r\theta}$0.55; $M_{\theta\phi}$0.19; $M_{\phi r}$-0.95; Fault plane solution: $M_0$1.43000×10^{17} NP1:ϕ_s154.00000°, δ71.00000°, λ80.00000°. NP2:ϕ_s2.00000°, δ21.00000°, λ116.00000°. Principal axes: T 1.4318, Plg63.0000°, Azm49.0000°; N -0.0123, Plg9.0000°, Azm158.0000°; P -1.4195, Plg25.0000°, Azm252.0000°;*
*GCMT **05** 11:21:24.4±0.3, 20.°19S±0.°02×70.°99W±0.°02, h24km, MW5.4/95, Moment Tensor Solution. s36,c40; s95,c142; Duration: 1s2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.45±.09; $M_{\theta\theta}$0.00±.04; $M_{\phi\phi}$-1.46±.06; $M_{r\theta}$0.11±.05; $M_{\theta\phi}$0.17±.02; $M_{\phi r}$-0.83±.06; Best double couple: $M_0$1.68800×10^{17} NP1:ϕ_s354.00000°, δ30.00000°, λ91.00000°. NP2:ϕ_s173.00000°, δ60.00000°, λ89.00000°. Principal axes: T 1.6730, Plg75.0000°, Azm82.0000°; N 0.0210, Plg0.0000°, Azm173.0000°; P -1.7020, Plg15.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 11:21:19.2±0.6**, 20.°20S**±0.°02×**70.°73W**±0.°04**, h24**km±3km**, h24km:pP-P, n899, σ1s19**/680**, mb5.4**/178**, MS5.2**/133**, 10C-9D, Near coast of northern Chile**

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

TA02 Huaiquique 0.57 98⇓*i*P **Pb 11 21 29.8 -0.7**
TA02 *i* S **Sb 11 21 38.5 +0.3**
TA02 IAML 11 21 40.6
comp=E,268µm,0.6s
TA01 Diego Aracena 0.63 126⇓*i*P **Pb 11 21 30.6 -1.0**
TA01 *i* S **Sb 11 21 40.5 +0.4**
TA01 IAML 11 21 45.1
comp=N,61µm,0.3s
TA01 Diego Aracena 0.63 126 Pb 11 21 30.6 -1.0
TA01 Sg **Sb 11 21 40.1 0.0**
PATCX Punta Patache 0.82 139⇓*i*P **Pb 11 21 33.6 -1.3**
PATCX *i* S **Sb 11 21 45.7 +0.1**
PATCX IAML 11 21 52.8
comp=E,53µm,0.5s
PATCX Punta Patache 0.82 139 Pb 11 21 33.6 -1.3
PATCX Sn **Sb 11 21 46.6 +1.0**
PSGC Pisagua 0.83 44⇓*i*P **Pn 11 21 33.8 -1.6**
PSGC *i* S **Sb 11 21 45.6 -0.1**
PSGCX Pisagua 0.83 44 Pn 11 21 33.7 -1.7
PSGCX **Sb 11 21 46.8 +1.1**
PB11 IPOC Station P 1.10 67⇓*i*P **Pn 11 21 38.3 -1.0**
PB11 *i* S **Sn 11 21 53.2 -0.7**
PB11 IAML 11 21 56.1
comp=N,64µm,0.3s
PB11 IPOC Station P 1.10 67 Pn **Pn 11 21 38.3 -1.0**
PB02 IPOC Station P 1.36 145⇑*i*P **Pn 11 21 42.0 -0.9**
PB02 *i* S **Sn 11 21 59.8 -0.5**
PB02 IAML 11 22 08.5
comp=E,98µm,0.3s
PB01 IPOC Station P 1.44 126⇓*i*P **Pn 11 21 43.4 -0.4**
PB01 *i* S **Sn 11 22 02.0 -0.1**
PB01 IAML 11 22 11.1
comp=E,47µm,0.4s
PB01 IPOC Station P 1.44 126 Pn 11 21 43.2 -0.6
PB08 IPOC Station P 1.48 88⇓*i*P **Pn 11 21 44.8 0.0**
PB08 *i* S **Sn 11 22 04.6 +1.1**
PB08 IPOC Station P 1.48 88 Pn 11 21 44.7 -0.1
PB08 Sg **Sb 11 22 06.3 +1.5**
MNMC Minye Minye 1.51 45⇑*i*P **Pn 11 21 44.9 -0.1**
MNMC *i* S **Sn 11 22 05.2 +1.2**
MNMC IAML 11 22 13.5
comp=E,91µm,0.3s
MNMC Minye Minye 1.51 45 Pn 11 21 44.9 -0.1
GO01 Chusmiza 1.54 70⇑*i*P **Pn 11 21 45.6 0.0**
GO01 *i* S **Sn 11 22 06.1 +1.0**
GO01 IAML 11 22 09.2
comp=N,98µm,0.3s
GO01 Chusmiza 1.54 70 Pn 11 21 45.6 0.0
PB12 IPOC Station P 1.62 14⇑*i*P **Pn 11 21 45.4 -1.0**
PB12 *i* S **Sn 11 22 06.3 -0.3**
PB12 IAML 11 22 16.2
comp=E,43µm,0.4s
PB12 IPOC Station P 1.62 14 Pn **Pn 11 21 45.5 -0.8**
PB07 IPOC Station P 1.71 153⇑*i*P **Pn 11 21 46.6 -1.2**
PB07 *i* S **Sn 11 22 09.6 +0.6**
PB07 IAML 11 22 26.1
comp=E,18µm,0.4s
PB07 IPOC Station P 1.71 153 Pn 11 21 46.5 -1.2
AP01 Chacalluta 1.85 11 *e*P **Pn 11 21 48.8 -0.7**
AP01 *i* S **Sn 11 22 10.8 -1.4**
AP01 Chacalluta 1.85 11 Pn **Pn 11 21 49.6 +0.1**
PB03 IPOC Station P 2.06 154⇑*i*P **Pn 11 21 51.3 -1.2**
PB03 *i* S **Sn 11 22 17.9 +0.4**
PB03 IAML 11 22 34.5
comp=E,9µm,0.6s
PB09 IPOC Station P 2.11 139⇑*i*P **Pn 11 21 53.8 +0.5**
PB09 *i* S **Sn 11 22 20.7 +1.8**
PB09 IAML 11 22 36.2
comp=E,34µm,0.7s
PB09 IPOC Station P 2.11 139 Pn 11 21 53.4 +0.1
PB16 IPOC Station P 2.18 32⇑*i*P **Pn 11 21 54.5 -0.1**
PB16 *i* S **Sn 11 22 20.7 -0.4**
PB16 IAML 11 22 34.1
comp=N,35µm,0.8s
PB16 IPOC Station P 2.18 32 Pn 11 21 54.4 -0.1
PB06 IPOC Station P 2.72 157⇑*i*P **Pn 11 22 00.0 -1.6**
PB06 *i* S **Sn 11 22 32.7 -1.2**
PB06 IAML 11 22 50.4
comp=E,7µm,0.5s
PB06 IPOC Station P 2.72 157 Pn 11 22 00.6 -1.0
LVC Limon Verde 2.94 145 Pn **Pn 11 22 05.4 +0.6**
comp=E,55nm,0.3s,baz=313,slow=11,SNR=153
LVC Sn **Sb 11 22 44.1 -2.6**
comp=E,259nm,0.3s,baz=156,slow=9.0,SNR=4.3
LVC Lg Lg 11 22 50.5
comp=E,342nm,0.3s,baz=82,slow=0.8,SNR=7.4
LVC Limon Verde 2.94 145 *e*P **Pn 11 22 05.4 +0.6**
LVC Limon Verde 2.94 145 Pn 11 22 05.2 +0.4
LVC Limon Verde 2.94 145 *e*P **Pn 11 22 05.5 +0.7**
PB15 IPOC Station P 3.22 159 *e*P **Pn 11 22 06.8 -1.7**
PB15 IPOC Station P 3.22 159 Pn 11 22 07.0 -1.5
PB10 IPOC Station P 3.31 177 *e*P **Pn 11 22 06.8 -2.7**
PB10 IAML 11 23 18.3
comp=N,2µm,0.5s
PB10 IPOC Station P 3.31 177 Pn 11 22 07.0 -2.5
PB14 IPOC Station P 4.42 176 Pn 11 22 22.0 -3.1
I08BO LAS PENAS INFR 4.51 29 *i* 11 36 20.0
baz=203,slow=331,SNR=1.8
LPAZ La Paz 4.61 33 Pn **Pn 11 22 31.2 +3.3**
comp=N,3.2nm,0.3s,baz=203,slow=8.5,SNR=74
LPAZ La Paz 4.61 33 *e*P **Pn 11 22 27.9 0.0**
GO02 Mina Guanaco 5.05 168 Pn 11 22 32.1 -1.7
GO03 Copiap 7.38 177 Pn 11 23 03.6 -1.9
GO04 Tololo Observa 9.93 180 Pn **Pn 11 23 39.1 -1.7**
NNA Nana 10.05 323 Pn **Pn 11 23 44.8 +2.5**
comp=N,4.3nm,0.3s,baz=165,slow=11,SNR=7.1
NNA Sn **Sn 11 25 30.3 -4.1**
comp=N,8.5nm,0.3s,baz=196,slow=21,SNR=2.4
NNA LR LR 11 27 11.9
comp=N,3µm,21.8s,baz=152,slow=35
NNA Nana 10.05 323 Pn 11 23 41.2 -1.1
SIV San Ignacio 10.09 67 Pn **Pn 11 23 41.8 -1.0**
comp=N,3.8nm,0.3s,baz=270,slow=10,SNR=41
SIV LR LR 11 28 23.0
comp=N,15µm,18.1s,baz=264,slow=43
CO04 Los Peladeros 11.80 181 Pn **Pn 11 24 05.1 -1.3**
PTLB Pontes e Lacer 12.01 69 *e*P **Pn 11 24 07.6 -1.4**
VILB Vilhena 12.40 56 *e*P **Pn 11 24 13.1 -1.3**
SAML Samuel 13.35 34 Pn 11 24 25.9 -1.5
SAML Samuel 13.35 34 *e*P **Pn 11 24 25.7 -1.7**
CPUP Villa Florida 13.74 119 Pn **Pn 11 24 33.8 +1.2**
comp=N,0.3nm,0.3s,baz=292,slow=12,SNR=13
CPUP LR LR 11 30 44.3
comp=N,5µm,21.4s,baz=298,slow=42
CPUP Villa Florida 13.74 119 Pn **Pn 11 24 32.6 0.0**
CPUP Villa Florida 13.74 119 *e*P **Pn 11 24 33.3 +0.7**
AQDB Aquidauana 14.10 94 *e*P **Pn 11 24 36.9 -0.7**
GO05 Huala 14.79 184 Pn **Pn 11 24 45.7 -1.3**
ATAH Atahualpa 14.96 329 Pn **P 11 24 53.6 -1.5**
comp=N,0.5nm,0.3s,baz=126,slow=14,SNR=4.3
H03N1 Juan Fernandez 15.07 207 T T 11 40 32.9
baz=33,slow=72,SNR=465
H03N2 Juan Fernandez 15.08 207 T T 11 40 21.6
baz=33,slow=72,SNR=416
H03N3 Juan Fernandez 15.09 207 T T 11 40 20.6
baz=33,slow=72,SNR=367
C2SB Chapadao do Su 16.93 88 *e*P **Pn 11 25 14.3 -0.4**
PTGB Pitanga 17.83 108 *e*P **Pn 11 25 24.6 -1.3**
PCMB Pacaembu 18.25 98 *e*P **P 11 25 28.6 -2.5**
ITAB Concordia 18.40 116 *e*P **P 11 25 32.3 -0.4**
LPA La Plata 18.51 145 *e*P P 11 25 19.4 -14
LPA pPP 11 25 48.5
LPA PPP PPP 11 25 52.9
LPA S Sn 11 28 47.2 -13
LPA SSS SSS 11 29 37.4
LPA PCP **PcP 11 30 09.0 +5.8**
LPA SCS **ScS 11 37 18.7 +0.3**
LPA PKIKP PKiKP 11 38 04.7 +10
LPA SKIKS 11 44 54.0
ARAG Araguaiana, MT 18.54 79 *e*P **P 11 25 33.4 -0.9**
PLTB Pedras Altas 19.20 130 *e*P **P 11 25 38.9 -2.5**
MACA Manacapuru-AM 19.56 31 *e*P **P 11 25 45.1 -0.4**
MACA *e*pP **sP 11 25 54.5 0.0**
FRTB Fartura 19.90 103 *e*P **P 11 25 47.9 -1.3**
CNLB Canela 20.18 121 *e*P **P 11 25 51.8 -0.4**
PLCA Paso Flores 20.47 180 P Pn 11 25 56.2 -1.3
comp=N,24nm,1.0s,baz=3.2,slow=13,SNR=8.9
PLCA LR LR 11 34 15.1
comp=N,2µm,18.3s,baz=356,slow=38
PLCA Paso Flores 20.47 180 P **P 11 25 54.7 -0.6**
PLCA Paso Flores 20.47 180 *e*P Pn 11 25 56.1 -1.4
TIJ01 Guaruva-PR 20.66 108 *e*P **P 11 25 57.7 +0.2**
BB19B Bebedouro 20.80 96 *e*P **P 11 25 57.7 -1.2**
IPMB Ipameri, GO 21.39 88 *e*P **P 11 26 03.2 -2.2**
PUAC Puerto Asis, P 21.40 344 *e*P **P 11 26 06.6 +1.2**
RCLB Rio Claro- Sao 21.72 100 *e*P **P 11 26 08.3 -0.6**
SPB Sao Paulo 21.88 103 P **P 11 26 09.5 -1.0**
SPB IAmb IAmb 11 26 14.2
comp=Z,156nm,1.4s
SPB Sao Paulo 21.88 103 *e*P **P 11 26 09.4 -1.0**
PTGA Pitinga 22.03 30 P **P 11 26 10.9 -1.2**
comp=Z,45nm,0.5s,baz=210,slow=12,SNR=47
PTGA LR LR 11 35 09.3
comp=Z,4µm,18.8s,baz=208,slow=38
PTGA Pitinga 22.03 30 P **P 11 26 10.5 -1.7**
PTGA IAmb IAmb 11 26 14.6
comp=Z,138nm,1.1s
PTGA Pitinga 22.03 30 *e*P **P 11 26 10.4 -1.7**
BDFB Brasilia 22.08 82 P **P 11 26 12.9 0.0**
comp=Z,46nm,1.0s,baz=261,slow=13,SNR=12
BDFB LR LR 11 36 18.3
comp=Z,8µm,20.9s,baz=255,slow=41
BDFB Brasilia 22.08 82 P **P 11 26 11.7 -1.2**
BDFB IAMs_20 IAMs_20 11 36 07.8
comp=Z,9µm,20.0s
PET01 Itanhaem-SP 22.08 105 *e*P **P 11 26 13.6 +0.9**
GCUF Volcan Galeras 22.26 342 *e*P P 11 26 21.9 +6.8
VAO Valinhos 22.27 101 *e*P **P 11 26 13.8 -1.0**
CRUC La Cruz 22.47 344 *e*P **P 11 26 23.0 +5.7**
GARC Garzon, Huila 22.73 348 *e*P **P 11 26 20.5 +0.5**
SOTA Rioblanco 22.93 345 *e*P **P 11 26 24.1 +1.9**
PCON Cinco Dias 23.07 345 *e*P **P 11 26 26.0 +2.2**
BETC Betania 23.20 348 *e*P **P 11 26 25.9 +1.3**
TUMC Tumaco 23.25 339 P **P 11 26 25.5 +0.6**
PARB Paraibuna 23.52 102 *e*P **P 11 26 27.0 -0.7**
GR1C Gorgona, Isla 24.18 342 *e*P **P 11 26 35.3 +1.3**
PTGC Puerto Gaitan, 24.28 357 *e*P **P 11 26 32.6 -2.2**
BSCB Bom Sucesso 24.30 96 *e*P **P 11 26 34.8 -0.3**
VILC Villavicencio, 24.33 353 *e*P **P 11 26 34.4 -1.0**
ORTC Ortega, Tolima 24.36 349 *e*P **P 11 26 36.1 +0.5**
BOAV Boa Vista 24.58 25 *e*P **P 11 26 37.2 -0.4**
YOTC Yotoco, Valle 24.65 346 *e*P **P 11 26 34.8 -3.6**
CHIC Chingaza 24.85 353 *e*P **P 11 26 38.9 -1.6**
MAN01 Angra dos Reis 25.03 101 *e*P **P 11 26 41.5 -0.2**
SMTB Santa Maria do 25.04 67 *e*P **P 11 26 41.0 -0.7**
SMTB *e*pP **sP 11 26 52.3 +1.1**
ROSC El Rosal 25.13 352 P **P 11 26 44.6 +1.6**
comp=Z,12nm,0.5s,baz=51,slow=22,SNR=3.0
ROSC LR LR 11 37 53.8
comp=Z,5µm,18.1s,baz=202,slow=40
ROSC El Rosal 25.13 352 P **P 11 26 42.1 -0.9**
ROSC IAMs_20 IAMs_20 11 37 43.4
comp=Z,5µm,19.0s
GUY2C Guyana, Caldas 25.67 349 *e*P **P 11 26 48.2 +0.3**
JANB Januaria 25.68 83 *e*P **P 11 26 46.5 -1.1**
SPBC San Pablo de B 25.90 352 *e*P P 11 26 42.4 -7.2
RUSC La Rusia 26.03 355 *e*P **P 11 26 51.4 +0.2**
RUSC La Rusia 26.03 355 P **P 11 26 51.2 0.0**
CBOC Ciudad Bolivar 26.41 348 *e*P **P 11 26 54.8 +0.4**
TAMC Tame, Arauca 26.49 358 *e*P **P 11 26 54.0 -0.9**
HELC Santa Helena 26.64 349 *e*P **P 11 26 56.2 -0.5**
PTBC PUERTO BERRIO, 26.82 352 *e*P **P 11 26 55.2 -2.7**
PAMC Pamplona, Colo 27.43 356 *e*P **P 11 27 03.0 -0.9**
ZARC Zaragoza, Cauc 27.81 351 *e*P **P 11 27 04.9 -1.9**
SJMB Sao Joao De Ma 27.88 92 *e*P **P 11 27 05.7 -1.8**
UREC San Jos de Ur 28.17 350 *e*P **P 11 27 08.6 -1.4**
BSFB Barra de Sao F 28.18 92 *e*P **P 11 27 08.9 -1.2**
SDV Santo Domingo 28.90 0 P **P 11 27 15.9 -0.8**
comp=Z,7.7nm,0.4s,baz=176,slow=7.1,SNR=11
SDV Santo Domingo 28.90 0 P **P 11 27 15.4 -1.3**
SDV Santo Domingo 28.90 0 *e*P **P 11 27 15.9 -0.8**
SMLC San Martn de 29.00 353 *e*P **P 11 27 14.5 -2.8**
ORIV Oritupano 29.96 15 *e*P P 11 27 19.0 -6.9
SJCC San Jacinto, C 30.22 351 *e*P **P 11 27 27.4 -0.8**
MDP Montagnes des 30.79 37 P **P 11 27 32.3 -0.9**
comp=Z,24nm,0.7s,baz=218,slow=8.8,SNR=6.6
ROSB Rosrio 31.13 60 *e*P **P 11 27 35.4 -0.9**
URIC Uribia, Colomb 31.72 358 P **P 11 27 39.8 -1.5**
EFI East Falkland 32.95 165 P **P 11 27 52.0 +0.2**
GRGR Grenville 33.34 16 *e*P **P 11 27 57.4 +1.8**
GCMP Grenada, Carri 33.74 17 *e*P **P 11 27 57.4 -1.6**
NBMO Morrinhos-CE 34.30 65 *e*P **P 11 28 03.1 -1.0**
BBGH Gun Hill 34.91 19 IAMs_20 IAMs_20 11 42 46.7
comp=Z,5µm,22.0s
MPOM Morne Pois Mar 35.77 17 *e*P **P 11 28 17.3 +0.8**
BIM Bigot 35.78 16 *e*P **P 11 28 13.4 -3.3**
RPN Rapa Nui 35.92 251 IAMs_20 IAMs_20 11 38 33.9
comp=Z,5µm,20.0s
RCBR Riachuelo 36.71 72 P **P 11 28 23.9 -0.9**
comp=Z,92nm,1.2s,baz=243,slow=6.7,SNR=9.3
RCBR Riachuelo 36.71 72 IAMs_20 IAMs_20 11 44 26.1
comp=Z,4µm,20.0s
RCBR Riachuelo 36.71 72 *e*P **P 11 28 22.3 -2.5**
TDBA Terre de Bas, 36.92 15 *e*P **P 11 28 29.3 +2.9**
ICMP Isla Caja de M 38.07 6 P **P 11 28 35.3 -0.8**
SKI Saint Kitts 38.11 12 IAMs_20 IAMs_20 11 45 30.4
comp=Z,4µm,18.0s
CDVI St. Croix 38.16 9 *e*P **P 11 28 41.3 +4.4**
PDPR Patillas Dam, 38.26 7 IAmb IAmb 11 28 37.2
comp=Z,77nm,0.9s
MPR Mayaguez 38.33 6 IAmb IAmb 11 28 48.9
comp=Z,93nm,0.8s
SJG San Juan 38.34 7 P **P 11 28 37.0 -1.3**
comp=Z,110nm,1.1s,baz=192,slow=3.7,SNR=30
SJG San Juan 38.34 7 P **P 11 28 36.5 -1.8**
SJG IAmb IAmb 11 28 38.3
comp=Z,96nm,1.0s
AOPR Arecibo Observ 38.50 6 IAmb IAmb 11 28 50.0
comp=Z,61nm,0.9s
CBYP Canovanas 38.53 7 P **P 11 28 37.7 -2.3**
PCDR Punta Cana, DR 38.54 4 P **P 11 28 39.7 -0.4**
CUPR Culebra, Puert 38.64 8 IAmb IAmb 11 28 39.8
comp=Z,62nm,0.8s
ANWB Willy Bob 38.64 14 *e*P P 11 28 30.2 -11
EMPR Esperanza - Ma 38.65 6 IAmb IAmb 11 28 40.3
comp=Z,81nm,0.8s
STVI Saint Thomas 38.73 9 P **P 11 28 40.2 -1.4**
MTDJ Mount Denham 38.76 350 IAmb IAmb 11 28 49.3
comp=Z,76nm,1.2s
SDDR Presa de Saban 38.94 359 P **P 11 28 42.2 -1.2**
TEIG Tepich 43.69 336 P **P 11 29 23.3 +0.8**
comp=Z,20nm,0.7s,baz=116,slow=0.0
TEIG Tepich 43.69 336 P **P 11 29 22.1 -0.4**
TEIG IAmb IAmb 11 29 34.9
comp=Z,82nm,1.4s
CMIG Matias Romero 43.99 326 P **P 11 29 27.0 +2.1**
comp=Z,6.6nm,0.9s,baz=126,slow=4.4,SNR=5.1
DWPF Disney Wildern 49.13 347 P **P 11 30 05.0 0.0**
baz=167
DWPF Disney Wildern 49.13 347 P **P 11 30 04.5 -0.5**
451A Vernon 52.54 344 IAmb IAmb 11 31 29.4
comp=Z,84nm,1.1s
TIGA Tifton 52.80 346 P **P 11 30 32.8 +0.2**
baz=165
ZAIG Zacatecas 52.81 322 P **P 11 30 32.2 -1.0**
255A Hazlehurst 53.03 347 IAmb IAmb 11 30 46.6
comp=Z,57nm,1.1s
158A Hollywood 53.41 350 P **P 11 30 38.0 +0.9**
baz=169
157A Early Branch 53.48 349 P **P 11 30 38.5 +0.8**
baz=168
Z59A Georgetown, SC 53.76 351 P **P 11 30 40.6 +1.0**
baz=170
NHSC New Hope 53.77 350 P **P 11 30 40.6 +1.0**
baz=169
NHSC New Hope 53.77 350 IAMs_20 IAMs_20 11 54 28.5
comp=Z,2µm,21.0s
Z58A St. Stephen 53.93 351 P **P 11 30 41.7 +0.8**
baz=170
250A Grady 53.97 344 IAmb IAmb 11 30 53.1
comp=Z,79nm,1.3s
Z57A Bowman 54.04 350 P **P 11 30 42.2 +0.5**
baz=168,SNR=6.1
152A Waverly Hall 54.24 345 IAmb IAmb 11 31 02.5
comp=Z,30nm,1.0s
Y60A Bolivia 54.37 352 P **P 11 30 44.6 +0.6**
baz=171,SNR=5.5
Y59A Loris 54.44 352 P **P 11 30 45.2 +0.7**
baz=171
Y59A Loris 54.44 352 IAMs_20 IAMs_20 11 54 52.4
comp=Z,2µm,21.0s
Y58A Scranton 54.47 351 P **P 11 30 45.4 +0.6**
baz=170
GOGA Godfrey 54.68 347 P **P 11 30 46.2 -0.1**
baz=165
Y55A Saluda 54.87 349 P **P 11 30 47.9 +0.2**
baz=167,SNR=6.8
X60A Albert Glenn T 54.91 353 P **P 11 30 48.4 +0.5**
baz=172
X59A McDuffie Farm, 54.98 352 P **P 11 30 49.0 +0.5**
baz=171
X58A Rowland 55.06 351 P **P 11 30 49.6 +0.6**
baz=170
X58A Rowland 55.06 351 IAmb IAmb 11 31 04.3
comp=Z,63nm,1.3s
Z50A Ashland 55.09 344 P **P 11 30 49.3 -0.1**
baz=163,SNR=6.5
Z50A Ashland 55.09 344 IAmb IAmb 11 31 01.0
comp=Z,39nm,1.1s
LRAL Lakeview Retre 55.17 343 P **P 11 30 49.8 -0.1**
baz=161
Y52A Lilburn 55.24 346 P **P 11 30 50.2 -0.2**
baz=165
BIRD Birdtown, Kers 55.32 350 IAmb IAmb 11 31 03.8
comp=Z,45nm,0.9s
BIRD IAMs_20 IAMs_20 11 55 25.6
comp=Z,2µm,21.0s
W60A Pink Hill 55.34 353 P **P 11 30 51.8 +0.7**
baz=172
X55A Gracelyn & Ava 55.34 349 P **P 11 30 51.6 +0.5**
baz=168,SNR=6.4
W61A Ground Anchor 55.39 354 P **P 11 30 52.1 +0.7**
baz=173
VBMS Vicksburg 55.46 340 P **P 11 30 52.4 +0.4**
baz=157
W58A Raeford 55.50 352 P **P 11 30 53.0 +0.7**
baz=170,SNR=11
W59A Clinton 55.54 352 P **P 11 30 53.2 +0.7**
baz=171
CNNC Cliffs of the 55.55 353 P **P 11 30 53.2 +0.6**

baz=172
X54A **Belton** 55.56 348 P P 11 30 53.2 +0.5
baz=167
833A **Chaparral WMA,** 55.63 329 P P 11 30 53.1 -0.2
baz=147
V62A **Hyde County Ai** 55.67 355 P P 11 30 54.2 +0.7
baz=174
PAULI **Pauline** 55.72 349 IAmb IAmb 11 31 12.3
comp=Z,36nm,1.1s
W57A **Gilead** 55.74 351 P P 11 30 54.5 +0.6
baz=170,SNR=6.3
W57A **Gilead** 55.74 351 IAmb IAmb 11 30 55.6
comp=Z,39nm,1.1s
W56A **Indian Trail** 55.82 350 P P 11 30 55.0 +0.4
baz=169
KMSC **Kings Mountain** 55.95 350 P P 11 30 55.7 +0.2
baz=168,SNR=5.6
KMSC **Kings Mountain** 55.95 350 IAmb IAmb 11 30 57.1
comp=Z,44nm,1.2s
KMSC IAMs_20 IAMs_20 11 59 00.3
comp=Z,2µm,19.0s
V61A **Roper** 55.96 354 P P 11 30 56.0 +0.5
baz=174
V60A **Jim Taylor Roa** 56.00 354 P P 11 30 56.4 +0.6
baz=173
W54A **Cherokee Point** 56.04 349 P P 11 30 56.8 +0.6
baz=167
X51A **Calhoun** 56.09 346 IAmb IAmb 11 31 08.7
comp=Z,39nm,1.1s
V59A **Middlesex** 56.11 353 P P 11 30 57.5 +0.9
baz=172,SNR=9.2
V58A **Windy Hill, Pi** 56.25 352 P P 11 30 58.2 +0.6
baz=171,SNR=5.6
V58A **Windy Hill, Pi** 56.25 352 IAmb IAmb 11 30 59.3
comp=Z,54nm,1.2s
V57A **Coltrane Farms** 56.43 351 P P 11 30 59.5 +0.6
baz=170,SNR=5.3
V56A **Mocksville** 56.46 350 P P 11 30 59.9 +0.8
baz=169,SNR=10
U61A **Possum Corner** 56.48 354 P P 11 31 00.1 +0.9
baz=174
X48A **Hartselle** 56.52 344 IAmb IAmb 11 31 00.4
comp=Z,33nm,1.1s
NATX **Nacogdoches** 56.53 336 P P 11 30 59.9 +0.3
baz=153
NATX **Nacogdoches** 56.53 336 P P 11 31 00.5 +0.8
NATX IAmb IAmb 11 31 13.0
comp=Z,63nm,1.2s
V55A **Taylorsville** 56.62 350 P P 11 31 01.0 +0.8
baz=168,SNR=6.6
V55A **Taylorsville** 56.62 350 IAmb IAmb 11 31 47.5
comp=Z,39nm,1.1s
U59A **Littleton** 56.64 353 P P 11 31 01.1 +0.8
baz=172,SNR=6.0
V54A **Nebo** 56.67 349 P P 11 31 01.1 +0.4
baz=168,SNR=8.6
Y45A **Yeager Farm, C** 56.67 341 IAmb IAmb 11 31 13.2
comp=Z,65nm,1.1s
U60A **Pendleton** 56.69 354 P P 11 31 01.3 +0.6
baz=173
W50A **Signal Mountai** 56.80 346 IAmb IAmb 11 31 13.3
comp=Z,32nm,0.9s
CPCT **Cooper Cave** 56.87 347 IAmb IAmb 11 31 13.8
comp=Z,30nm,1.1s
U57A **Blanch** 56.91 352 P P 11 31 02.9 +0.6
baz=170,SNR=6.0
TKL **Tuckaleechee C** 56.91 347 IAmb IAmb 11 31 13.9
comp=Z,29nm,0.9s
U56A **King** 56.97 351 P P 11 31 03.5 +0.7
baz=169,SNR=5.2
U56A **King** 56.97 351 IAmb IAmb 11 31 15.6
comp=Z,71nm,1.2s
U56A IAMs_20 IAMs_20 11 59 16.4
comp=Z,2µm,21.0s
V52A **Sevierville** 57.05 348 IAmb IAmb 11 31 15.0
comp=Z,60nm,1.1s
V51A **Loudon** 57.17 347 IAmb IAmb 11 31 15.8
comp=Z,33nm,1.1s
Z41A **Richland Creek** 57.18 338 P P 11 31 05.2 +0.9
baz=155
T59A **Double "B" Far** 57.22 354 P P 11 31 05.2 +0.7
baz=172,SNR=14
T59A **Double "B" Far** 57.22 354 IAMs_20 IAMs_20 11 57 01.1
comp=Z,2µm,22.0s
U55A **TA2, Sparta** 57.23 350 P P 11 31 05.1 +0.4
baz=169
OXF **Oxford** 57.23 342 P P 11 31 04.8 +0.1
baz=159,SNR=5.7
PLAL **Pickwick Lake** 57.30 343 IAmb IAmb 11 31 16.0
comp=Z,29nm,1.1s
T60A **Surry** 57.31 354 P P 11 31 05.9 +0.8
baz=173
T58A **Grand View Acr** 57.31 353 P P 11 31 05.7 +0.6
baz=171,SNR=15
U54A **Nelsons Funny** 57.38 349 P P 11 31 05.8 +0.1
baz=168,SNR=7.1
U54A **Nelsons Funny** 57.38 349 IAmb IAmb 11 31 17.7
comp=Z,50nm,1.1s
U54A IAMs_20 IAMs_20 11 59 11.1
comp=Z,2µm,22.0s
T57A **Hurt** 57.45 352 P P 11 31 06.8 +0.7
baz=171,SNR=7.6
T57A **Hurt** 57.45 352 IAmb IAmb 11 31 08.0
comp=Z,42nm,1.1s
T56A **Rocky Mt** 57.59 351 P P 11 31 07.9 +0.8
baz=170,SNR=5.1
JCT **Junction City** 57.62 330 P P 11 31 07.6 +0.1
baz=148
X43A **Marvell** 57.69 340 P P 11 31 08.0 +0.1
baz=158
S61A **Accomac** 57.76 355 P P 11 31 09.1 +0.9
baz=175
W45A **Hickory Valley** 57.77 342 IAmb IAmb 11 32 13.5
comp=Z,56nm,1.1s
T55A **Pulaski** 57.79 351 P P 11 31 09.4 +0.8
baz=169,SNR=8.4
BLA **Blacksburg** 57.83 351 P P 11 31 09.7 +0.8
baz=169
BLA **Blacksburg** 57.83 351 P P 11 31 08.3 -0.5
BLA IAmb IAmb 11 31 22.9
comp=Z,27nm,0.9s
T54A **Tazewell** 57.86 350 P P 11 31 09.2 +0.1
baz=168,SNR=5.3
WHTX **Lake Whitney,** 57.87 333 P P 11 31 09.6 +0.5
baz=150
WHTX **Lake Whitney,** 57.87 333 IAmb IAmb 11 31 30.5
comp=Z,54nm,1.3s
CLTN **Cedars of Leba** 57.90 345 IAmb IAmb 11 31 10.1
comp=Z,35nm,1.1s
S58A **Poland Farm, P** 57.91 353 P P 11 31 09.9 +0.5
baz=172
T53A **Wise** 57.95 349 P P 11 31 09.6 -0.1
baz=167,SNR=6.2
S59A **Mechanicsville** 57.98 354 P P 11 31 10.6 +0.8
baz=173
Z38A **Mt. Pleasant** 57.98 336 P P 11 31 09.6 -0.4
Z38A IAmb IAmb 11 31 22.4
comp=Z,46nm,0.9s
S56A **Natural Bridge** 58.16 352 P P 11 31 11.8 +0.7
baz=170
S57A **Dark Hollow, R** 58.16 352 P P 11 31 11.9 +0.8
baz=171,SNR=9.3
S57A **Dark Hollow, R** 58.16 352 IAmb IAmb 11 31 13.2
comp=Z,43nm,1.0s
U49A **Red Boiling Sp** 58.17 346 IAmb IAmb 11 31 22.0
comp=Z,46nm,1.4s
R58B **Mineral** 58.24 353 P P 11 31 12.5 +0.9
baz=172,SNR=6.7
R58B **Mineral** 58.24 353 IAmb IAmb 11 31 13.8
comp=Z,46nm,1.2s
WVT **Waverly** 58.31 344 P P 11 31 11.5 -0.6
baz=161
WVT **Waverly** 58.31 344 P P 11 31 11.4 -0.8
WVT IAmb IAmb 11 31 23.2
comp=Z,40nm,1.1s
R61A **Willards** 58.38 356 P P 11 31 13.3 +0.7
baz=175
S55A **Lewisburg** 58.39 351 P P 11 31 13.4 +0.7
baz=169,SNR=7.6
R59A **King George, V** 58.40 354 P P 11 31 13.2 +0.5
baz=173
UALR **University of** 58.40 339 IAmb IAmb 11 31 24.9
comp=Z,41nm,1.2s
R60A **Leonardtown, M** 58.41 355 P P 11 31 13.0 +0.2
baz=174
S54A **Dingess, Beckl** 58.54 350 P P 11 31 14.1 +0.3
baz=168,SNR=5.2
S54A **Dingess, Beckl** 58.54 350 IAmb IAmb 11 31 31.6
comp=Z,40nm,1.0s
S53A **Williamson** 58.56 349 P P 11 31 14.3 +0.4
baz=168
R58A **Rapidan** 58.58 353 P P 11 31 14.8 +0.7
baz=172
TXAR **Lajitas Array** 58.60 326 P P 11 31 15.6 +1.1
comp=Z,1.8nm,0.8s,baz=151,slow=7.4,SNR=5.3
MIAR **Mount Ida** 58.62 338 P P 11 31 14.7 +0.4
baz=155,SNR=9.1
MIAR **Mount Ida** 58.62 338 P P 11 31 14.4 0.0
MIAR IAmb IAmb 11 31 26.6
comp=Z,43nm,1.1s
R57A **Stanardsville** 58.64 353 P P 11 31 15.4 +1.0
baz=172,SNR=9.4
W41B **Gary Mavity, V** 58.73 339 P P 11 31 15.4 +0.3
baz=156,SNR=5.6
R55A **Marlinton** 58.83 351 P P 11 31 16.6 +0.7
baz=169
R55A **Marlinton** 58.83 351 IAmb IAmb 11 32 23.0
comp=Z,41nm,1.1s
WHAR **Wooly Hollow** 58.85 339 IAmb IAmb 11 31 17.3
comp=Z,28nm,1.1s
R54A **Victor** 58.86 351 P P 11 31 16.5 +0.5
baz=169
R53A **Hurricane** 59.16 350 P P 11 31 19.0 +0.9
baz=168
Q58A **Fox Den Farm,** 59.19 354 P P 11 31 19.0 +0.8
baz=172,SNR=5.8
LCAR **Lake Charles** 59.21 341 IAmb IAmb 11 31 37.5
comp=Z,27nm,1.2s
W39A **Magazine** 59.28 338 P P 11 31 19.8 +0.9
baz=155,SNR=11
W39A **Magazine** 59.28 338 IAmb IAmb 11 31 21.0
comp=Z,40nm,1.1s
Q57A **Strasburg** 59.36 353 P P 11 31 20.8 +1.4
baz=172,SNR=15
ABTX **Abilene, Hawle** 59.36 332 P P 11 31 19.9 +0.3
baz=148
ABTX **Abilene, Hawle** 59.36 332 IAmb IAmb 11 31 40.8
comp=Z,45nm,1.1s
Q56A **Snyder Ridge,** 59.46 352 P P 11 31 21.5 +1.4
baz=171,SNR=13
Q55A **Buckhannon** 59.53 352 P P 11 31 21.8 +1.2
baz=170,SNR=6.4
R50A **Paris** 59.55 348 IAMs_20 IAMs_20 12 01 55.7
comp=Z,2µm,21.0s
Q53A **Leroy** 59.61 350 P P 11 31 21.5 +0.3
baz=168,SNR=6.0
Q54A **Coxs Mills** 59.62 351 P P 11 31 21.4 +0.2
baz=169
Q54A **Coxs Mills** 59.62 351 IAmb IAmb 11 31 39.5
comp=Z,26nm,1.1s
PBMO **Poplar Bluff** 59.64 342 IAmb IAmb 11 31 32.9
comp=Z,37nm,1.2s
P61A **Emmorton** 59.68 356 P P 11 31 22.3 +0.7
baz=176
P58A **Pank, Wackersv** 59.69 354 P P 11 31 22.6 +1.0
baz=173,SNR=5.4
P59A **Jarrettsville** 59.73 355 P P 11 31 22.9 +0.9
baz=174
P57A **Homestead Farm** 59.76 353 P P 11 31 23.4 +1.3
baz=172,SNR=9.4
P57A **Homestead Farm** 59.76 353 IAmb IAmb 11 31 24.8
comp=Z,52nm,1.2s
P56A **Dayton Farm, R** 59.87 353 P P 11 31 24.1 +1.2
baz=171,SNR=8.3
P60A **Greenville** 59.87 356 P P 11 31 23.4 +0.5
baz=175
WCI **Wyandotte Cave** 59.93 346 P P 11 31 22.9 -0.4
baz=163
WCI **Wyandotte Cave** 59.93 346 P P 11 31 22.6 -0.8
WCI IAmb IAmb 11 31 23.9
comp=Z,45nm,1.2s
P55A **Reedsville** 60.00 352 P P 11 31 24.7 +0.9
baz=170
U40A **Yellville** 60.01 339 P P 11 31 24.1 +0.1
baz=156,SNR=9.3
U40A **Yellville** 60.01 339 IAmb IAmb 11 31 35.8
comp=Z,28nm,1.1s
O61A **Allentown** 60.08 357 P P 11 31 24.9 +0.5
baz=176
Q51A **Peebles** 60.09 349 P P 11 31 24.0 -0.5
baz=166
Q51A **Peebles** 60.09 349 IAmb IAmb 11 31 37.6
comp=Z,24nm,0.9s
MVL **Millersville** 60.11 355 IAmb IAmb 11 31 26.6
comp=Z,29nm,1.0s
MCWV **Mont Chateau** 60.15 352 P P 11 31 25.5 +0.7
baz=170
P54A **Burton** 60.18 351 P P 11 31 25.7 +0.6
baz=170,SNR=12
P53A **Whipple** 60.20 351 P P 11 31 26.0 +0.8
baz=169
O58A **Lewisberry** 60.28 355 P P 11 31 26.5 +0.8
baz=173
HHAR **Hobbs** 60.31 338 IAmb IAmb 11 31 38.1
comp=Z,26nm,1.0s
O60A **Telford** 60.36 356 P P 11 31 27.0 +0.8
baz=175
O59A **Robesonia** 60.41 355 P P 11 31 27.3 +0.7
baz=174
O57A **Amberson** 60.44 354 P P 11 31 28.0 +1.2
baz=173,SNR=7.6
P52A **Corning** 60.46 350 P P 11 31 26.3 -0.7
baz=168
P51A **Williamsport** 60.48 349 P P 11 31 26.7 -0.3
baz=167
P51A **Williamsport** 60.48 349 IAmb IAmb 11 31 38.4
comp=Z,42nm,1.2s
O56A **Blue Knob Stat** 60.59 353 P P 11 31 28.9 +1.0
baz=172,SNR=16
O55A **Ligonier** 60.62 352 P P 11 31 29.1 +1.0
baz=171,SNR=9.3
TUL1 **Leonard** 60.64 337 P P 11 31 28.9 +0.6
baz=153,SNR=7.4
TUL1 **Leonard** 60.64 337 IAmb IAmb 11 31 40.5
comp=Z,48nm,1.0s
N61A **South Mountain** 60.73 357 P P 11 31 29.7 +1.0
baz=176
P50A **Jamestown** 60.73 348 P P 11 31 29.0 +0.2
baz=166
O54A **Avella** 60.73 352 P P 11 31 29.6 +0.8
baz=170
O54A **Avella** 60.73 352 IAMs_20 IAMs_20 11 58 44.0
comp=Z,2µm,22.0s
WMOK **Wichita Mounta** 60.79 334 P P 11 31 29.2 -0.2
baz=150
P49A **Miami Univ. Ec** 60.84 348 P P 11 31 29.5 -0.1
baz=165
SSPA **Standing Stone** 60.88 354 P P 11 31 30.3 +0.5
baz=172
SSPA **Standing Stone** 60.88 354 P P 11 31 29.9 +0.1
SSPA IAmb IAmb 11 31 32.1
comp=Z,51nm,1.2s
O52A **Adamsville** 60.89 350 P P 11 31 30.1 +0.2
baz=168
O52A **Adamsville** 60.89 350 IAMs_20 IAMs_20 11 57 44.0
comp=Z,1µm,19.0s
N60A **Cedar Hill Far** 60.89 356 P P 11 31 30.3 +0.5
baz=175
PAL **Palisades** 60.96 357 P P 11 31 30.6 +0.3
baz=177
N57A **Milroy** 60.97 354 P P 11 31 31.3 +0.9
baz=173,SNR=8.5
N58A **Sunbury** 60.98 355 P P 11 31 31.4 +1.0
baz=174,SNR=8.0
N58A **Sunbury** 60.98 355 IAmb IAmb 11 31 32.6
comp=Z,42nm,1.1s
N59A **State Game Lan** 60.98 356 P P 11 31 31.2 +0.7
baz=175
O51A **Pataskala** 61.04 350 P P 11 31 31.0 0.0
baz=167
CCM **Cathedral Cave** 61.07 342 P P 11 31 31.3 +0.1
baz=158
CCM **Cathedral Cave** 61.07 342 P P 11 31 30.5 -0.7
CCM IAmb IAmb 11 32 27.3
comp=Z,23nm,0.9s
N55A **Marion Center** 61.15 353 P P 11 31 32.7 +1.0
baz=171,SNR=21
ACSO **Alum Creek Sta** 61.19 349 P P 11 31 31.7 -0.2
baz=167,SNR=8.3
ACSO **Alum Creek Sta** 61.19 349 IAmb IAmb 11 31 44.0
comp=Z,42nm,0.9s
N56A **West Decatur** 61.20 353 P P 11 31 32.8 +0.8
baz=172,SNR=6.1
Q44A **Meyer Farm, Va** 61.24 344 IAmb IAmb 11 31 43.3
comp=Z,40nm,1.1s
M60A **Port Jervis** 61.31 357 P P 11 31 33.5 +0.7
baz=176
MNTX **Cornudas Mount** 61.37 326 P P 11 31 33.5 +0.2
baz=143,SNR=8.3
MNTX **Cornudas Mount** 61.37 326 P P 11 31 33.1 -0.2
O49A **Covington** 61.40 348 P P 11 31 33.3 0.0
baz=166
O49A **Covington** 61.40 348 IAmb IAmb 11 31 44.6
comp=Z,30nm,1.1s
N53A **Lisbon** 61.41 351 P P 11 31 33.6 +0.2
baz=169
N53A **Lisbon** 61.41 351 IAmb IAmb 11 32 18.3
comp=Z,28nm,1.0s
N53A IAMs_20 IAMs_20 11 57 33.0
comp=Z,1µm,22.0s
M64A **Tiverton** 61.43 360 P P 11 31 34.2 +0.7
baz=180
M65A **Busby, Falmout** 61.44 0 IAMs_20 IAMs_20 12 03 25.2
comp=Z,1µm,21.0s
N54A **Moraine State** 61.45 352 P P 11 31 34.5 +0.8
baz=170,SNR=8.0
N54A **Moraine State** 61.45 352 IAmb IAmb 11 31 46.4
comp=Z,40nm,1.0s
N54A IAMs_20 IAMs_20 11 57 33.0
comp=Z,2µm,20.0s
M58A **Price's Panora** 61.48 355 P P 11 31 34.9 +1.0
baz=174,SNR=8.6
M57A **Sunshine Farm,** 61.51 355 P P 11 31 35.0 +1.0
baz=173,SNR=6.3
M57A **Sunshine Farm,** 61.51 355 IAmb IAmb 11 31 55.5
comp=Z,36nm,1.1s
N52A **McGinn's Farm,** 61.55 351 P P 11 31 35.0 +0.7
baz=168
M59A **Waymart** 61.58 356 P P 11 31 35.4 +0.9
baz=175,SNR=7.1
R40A **Maddies Statio** 61.59 341 IAmb IAmb 11 31 45.8
comp=Z,34nm,1.1s
O48A **Farmland** 61.63 347 P P 11 31 34.8 -0.1
baz=165
N50A **Nevada** 61.74 349 P P 11 31 35.3 -0.3
baz=167,SNR=5.7
L63A **North Scituate** 61.75 359 P P 11 31 36.5 +0.9
baz=179,SNR=5.3
M56A **Emporium** 61.75 354 P P 11 31 36.4 +0.7
baz=172,SNR=14
N51A **Ashland** 61.76 350 P P 11 31 35.9 +0.2
baz=168
T35A **Sooner Cattle** 61.80 337 IAmb IAmb 11 31 38.4
comp=Z,36nm,1.1s
M55A **Ridgway** 61.80 353 P P 11 31 36.7 +0.7
baz=172,SNR=16
L64A **Middleborough** 61.82 360 P P 11 31 37.2 +1.1
baz=180
VNA3 **Neumayer Olymp** 61.85 161 P P 11 31 37.8 +1.7
MSTX **Muleshoe** 61.91 330 IAmb IAmb 11 32 05.9
comp=Z,47nm,1.1s
M54A **Oil Creek Stat** 61.95 352 P P 11 31 37.4 +0.4
baz=171,SNR=12
M54A **Oil Creek Stat** 61.95 352 IAMs_20 IAMs_20 12 00 34.1
comp=Z,1µm,20.0s
L60A **Shokan** 61.95 357 P P 11 31 37.7 +0.6
baz=176
M53A **WI Miller and** 62.01 352 P P 11 31 37.7 +0.3
baz=170,SNR=5.3
VNA1 **Neumayer--Stat** 62.08 160 P P 11 31 39.7 +2.2
N49A **Columbus Grove** 62.08 348 P P 11 31 37.6 -0.3
baz=166,SNR=12
L58A **Harry Jones Me** 62.11 356 P P 11 31 39.2 +1.1
baz=175,SNR=9.4
L61A **Hillsdale 1, H** 62.13 358 P P 11 31 38.7 +0.5
baz=177
M51A **Elyria** 62.13 350 P P 11 31 38.0 -0.2
baz=168
L57A **Andrews Acres** 62.14 355 P P 11 31 39.3 +1.0
baz=174,SNR=6.3
SFIN **Lafayette** 62.16 346 P P 11 31 37.3 -1.1
baz=163,SNR=5.3
SFIN **Lafayette** 62.16 346 IAmb IAmb 11 31 38.4
comp=Z,32nm,1.1s
N48A **Decatur** 62.18 348 P P 11 31 37.9 -0.7
baz=165,SNR=8.6
L59A **Walton** 62.20 356 P P 11 31 39.8 +1.1
baz=176,SNR=10.0
L59A **Walton** 62.20 356 IAMs_20 IAMs_20 12 03 34.9
comp=Z,1µm,22.0s
M52A **Chesterland** 62.21 351 P P 11 31 39.2 +0.5
baz=169
M52A **Chesterland** 62.21 351 IAMs_20 IAMs_20 12 00 21.0
comp=Z,1µm,20.0s
WES **Weston** 62.27 360 IAMs_20 IAMs_20 11 56 21.8
comp=Z,1µm,21.0s
BINY **Binghamton** 62.27 356 P P 11 31 40.0 +0.8
baz=174,SNR=8.2
N47A **Urbana** 62.34 347 P P 11 31 38.8 -0.8
baz=164,SNR=6.9
N47A **Urbana** 62.34 347 IAMs_20 IAMs_20 11 57 48.3
comp=Z,1µm,21.0s
L56A **Greenwood** 62.34 354 P P 11 31 39.6 -0.1
baz=173
L56A **Greenwood** 62.34 354 IAmb IAmb 11 31 41.6
comp=Z,38nm,1.1s
M50A **Fremont** 62.34 350 IAmb IAmb 11 31 51.3
comp=Z,25nm,0.9s
M50A IAMs_20 IAMs_20 12 00 53.5
comp=Z,2µm,22.0s
L61B **Northampton** 62.36 358 P P 11 31 40.2 +0.5
baz=178,SNR=5.2
HRV **Adam Dziewonsk** 62.39 359 P P 11 31 40.5 +0.6
baz=179
HRV **Adam Dziewonsk** 62.39 359 P P 11 31 39.5 -0.4
VNA2 **Neumayer--Watz** 62.44 161 P P 11 31 41.5 +1.5
baz=291,slow=5.9
HSIG 62.45 320 P P 11 31 40.2 -0.4
L53A **Girard** 62.46 352 P P 11 31 40.8 +0.3
baz=170,SNR=8.0
L55A **Hinsdale** 62.47 354 P P 11 31 41.4 +0.9
baz=172,SNR=14
K62A **Royalston** 62.56 359 P P 11 31 41.1 0.0
baz=178
K63A **Dunstable** 62.57 359 P P 11 31 41.9 +0.7
baz=179
M49A **Liberty Center** 62.58 349 P P 11 31 40.7 -0.5
baz=166,SNR=6.1
ERPA **Erie** 62.59 352 P P 11 31 41.8 +0.5
baz=170,SNR=6.7
K61A **Williamstown** 62.59 358 P P 11 31 42.0 +0.7
baz=177
L54A **Sinclairville** 62.62 353 P P 11 31 42.2 +0.7
baz=171,SNR=16
P40A **Paris** 62.67 342 IAmb IAmb 11 31 55.9
comp=Z,44nm,1.2s
WVNY **West Valley, N** 62.71 353 IAMs_20 IAMs_20 12 03 20.4
comp=Z,1µm,22.0s
M48A **Edgerton** 62.72 348 IAMs_20 IAMs_20 12 03 57.6
comp=Z,1µm,20.0s
K59A **Cooperstown** 62.77 357 P P 11 31 43.6 +1.1
baz=176,SNR=11
K58A **Earlville** 62.81 356 P P 11 31 43.6 +0.9
baz=175,SNR=8.8
K57A **Scipio Center** 62.84 355 P P 11 31 43.5 +0.6
baz=174,SNR=5.3
HDIL **Hopedale** 62.86 344 P P 11 31 42.9 -0.2
baz=160
HDIL **Hopedale** 62.86 344 IAmb IAmb 11 31 43.4
comp=Z,42nm,1.1s
K56A **Middlesex** 62.87 355 P P 11 31 43.5 +0.3
baz=173
K54A **Basiliko Farm,** 62.92 353 P P 11 31 44.3 +0.8
baz=172,SNR=13
MMNY **Mt. Morris Dam** 62.96 354 IAMs_20 IAMs_20 12 04 22.2
comp=Z,1µm,20.0s
K55A **Perry** 62.97 354 P P 11 31 44.4 +0.6
baz=172,SNR=8.3
L48A **N Adams** 63.11 349 P P 11 31 44.7 -0.1
baz=166
J62A **Henniker** 63.11 359 P P 11 31 45.0 +0.2
baz=179
J60A **Lant Hill Farm** 63.17 358 P P 11 31 46.5 +1.4
baz=177
P38A **Dawn** 63.21 340 IAmb IAmb 11 31 56.7
comp=Z,19nm,0.8s
J61A **Chester** 63.25 359 P P 11 31 46.5 +0.9
baz=178
121A **Cookes Peak, D** 63.29 325 P P 11 31 47.3 +1.0
baz=141
AAM **Ann Arbor** 63.32 349 IAMs_20 IAMs_20 12 03 18.4
comp=Z,1µm,18.0s
ACCN **Adirondack Com** 63.32 358 IAmb IAmb 11 31 48.6
comp=Z,51nm,1.2s

J58A	Remsen	63.38	356	P	P	11 31 46.7	+0.2
	baz=175						
J56A	Wolcott	63.41	355	P	P	11 31 47.1	+0.4
	baz=174						
J56A	Wolcott	63.41	355	IAMs_20	IAMs_20	12 01 08.8	
	comp=Z,1µm,22.0s						
N41A	Harden Midland	63.42	343	IAmb	IAmb	11 31 47.9	
	comp=Z,46nm,1.1s						
J59A	Piesco	63.44	357	P	P	11 31 47.8	+0.8
	baz=176,SNR=12						
J59A	Piesco	63.44	357	IAMs_20	IAMs_20	12 03 22.7	
	comp=Z,2µm,22.0s						
J57A	Williamstown	63.48	356	P	P	11 31 47.7	+0.6
	baz=174,SNR=6.3						
J57A	Williamstown	63.48	356	IAmb	IAmb	11 31 48.9	
	comp=Z,37nm,1.0s						
J55A	Hilton	63.48	354	P	P	11 31 47.5	+0.4
	baz=173,SNR=5.7						
L46A	Eue Claire	63.55	347	IAMs_20	IAMs_20	12 04 39.2	
	comp=Z,1µm,20.0s						
J54A	Appleton	63.57	354	P	P	11 31 48.1	+0.4
	baz=172						
J54A	Appleton	63.57	354	IAmb	IAmb	11 32 00.1	
	comp=Z,41nm,0.9s						
J54A				IAMs_20	IAMs_20	12 03 24.1	
	comp=Z,2µm,22.0s						
HNH	Hanover	63.60	359	IAMs_20	IAMs_20	12 01 33.3	
	comp=Z,1µm,21.0s						
K50A	Casco	63.61	350	P	P	11 31 47.9	-0.1
	baz=168						
K50A	Casco	63.61	350	IAMs_20	IAMs_20	12 04 48.8	
	comp=Z,1µm,21.0s						
I58A	Old Forge	63.69	357	P	P	11 31 49.2	+0.6
	baz=176,SNR=5.6						
I59A	Olmsteadville	63.74	357	P	P	11 31 49.9	+1.0
	baz=177,SNR=7.6						
J52A	Paris	63.76	352	P	P	11 31 49.0	0.0
	baz=170,SNR=10						
I62A	Tamworth	63.76	360	P	P	11 31 49.8	+0.8
	baz=179						
I60A	Shoreham	63.77	358	P	P	11 31 50.1	+1.1
	baz=177,SNR=6.0						
KSU1	Kansas State U	63.77	338	P	P	11 31 49.5	+0.3
	baz=153						
I61A	Oroboro, Fairl	63.83	359	P	P	11 31 50.9	+1.5
	baz=178,SNR=11						
K48A	Perry	63.89	349	P	P	11 31 49.3	-0.6
	baz=166,SNR=6.5						
K47A	Vermontville	63.92	348	P	P	11 31 49.6	-0.5
	baz=165						
I63A	Otisfield	63.93	0	P	P	11 31 50.8	+0.7
	baz=180						
I63A	Otisfield	63.93	0	IAMs_20	IAMs_20	11 58 42.5	
	comp=Z,1µm,22.0s						
NCB	Newcomb	63.93	357	IAmb	IAmb	11 32 03.6	
	comp=Z,31nm,1.4s						
NCB				IAMs_20	IAMs_20	11 59 56.8	
	comp=Z,1µm,22.0s						
BNM	Barren Site	63.95	327	P	P	11 31 51.0	+0.2
R32A	Long Quarter,	63.95	336	IAmb	IAmb	11 32 02.8	
	comp=Z,39nm,1.1s						
R32A				IAMs_20	IAMs_20	12 00 33.7	
	comp=Z,1µm,18.0s						
I57A	Carthage	63.98	356	P	P	11 31 50.7	+0.3
	baz=175						
SNAA	Sanae	64.06	161	P	P	11 31 52.6	+1.7
SNAA	Sanae	64.06	161	P	P	11 31 51.1	+0.3
SNAA				IAmb	IAmb	11 32 05.1	
	comp=Z,50nm,1.2s						
L44A	Lake County Fo	64.06	346	IAMs_20	IAMs_20	12 04 27.7	
	comp=Z,1µm,20.0s						
PECO	Prince Edward	64.07	355	IAmb	IAmb	11 31 52.8	
	comp=Z,36nm,1.1s						
PECO				IAMs_20	IAMs_20	12 03 45.2	
	comp=Z,2µm,20.0s						
LBNH	Lisbon	64.13	359	P	P	11 31 52.3	+0.9
	baz=179						
LBNH	Lisbon	64.13	359	IAmb	IAmb	11 32 04.8	
	comp=Z,41nm,1.0s						
LBNH				IAMs_20	IAMs_20	12 01 22.0	
	comp=Z,1µm,21.0s						
N38A	Joes South For	64.19	341	IAmb	IAmb	11 32 03.0	
	comp=Z,29nm,0.9s						
VT1	Waterbury	64.24	358	IAMs_20	IAMs_20	11 55 15.6	
	comp=Z,1µm,19.0s						
J49A	Marlette	64.26	350	P	P	11 31 51.4	-1.0
	baz=167						
J48A	Bridge Port	64.31	349	P	P	11 31 52.3	-0.4
	baz=166						
J48A	Bridge Port	64.31	349	IAMs_20	IAMs_20	12 03 43.4	
	comp=Z,2µm,20.0s						
H58A	Gabriels	64.38	357	P	P	11 31 53.8	+0.7
	baz=176,SNR=5.4						
I51A	Listowel	64.38	352	P	P	11 31 53.1	0.0
	baz=169,SNR=7.7						
I55A	Frankford	64.41	354	P	P	11 31 53.7	+0.4
	baz=173,SNR=9.0						
H61A	Lyndonville	64.42	359	P	P	11 31 54.6	+1.2
	baz=179,SNR=5.5						
J47A	Sunmer	64.44	349	P	P	11 31 53.4	-0.1
	baz=165						
J47A	Sunmer	64.44	349	IAMs_20	IAMs_20	11 57 51.7	
	comp=Z,1µm,21.0s						
WVL	Waterville	64.45	1	IAMs_20	IAMs_20	12 03 13.6	
	comp=Z,1µm,19.0s						
H62A	Milan	64.45	360	P	P	11 31 54.4	+0.8
	baz=180						
H60A	Morristown	64.47	358	P	P	11 31 54.4	+0.8
	baz=178						
ANMO	Albuquerque	64.49	328	P	P	11 31 55.1	+0.9
	baz=143						
ANMO	Albuquerque	64.49	328	P	P	11 31 54.5	+0.3
H64A	Troy	64.54	1	P	P	11 31 54.9	+0.8
	baz=182						
H63A	New Sharon	64.55	1	P	P	11 31 55.5	+1.4
	baz=181,SNR=5.9						
H59A	Cadyville	64.58	358	P	P	11 31 55.3	+0.9
	baz=177,SNR=7.6						
LONY	Lake Ozonia	64.60	357	P	P	11 31 55.3	+0.8
	baz=176,SNR=5.7						
K43A	Burlington	64.66	346	IAMs_20	IAMs_20	12 04 13.5	
	comp=Z,1µm,18.0s						
EMMW	East Machias	64.66	3	IAMs_20	IAMs_20	12 02 32.8	
	comp=Z,1µm,22.0s						
H56A	Elgin	64.67	356	P	P	11 31 55.7	+0.8
	baz=174,SNR=6.0						
CBKS	Cedar Bluff	64.69	335	P	P	11 31 56.1	+0.8
	baz=150,SNR=7.3						
CBKS	Cedar Bluff	64.69	335	IAmb	IAmb	11 32 08.6	
	comp=Z,50nm,1.2s						
H55A	Tweed	64.70	355	P	P	11 31 55.7	+0.5
	baz=173,SNR=5.2						
DELO	Deloro Mine	64.70	355	IAmb	IAmb	11 31 56.8	
	comp=Z,45nm,1.4s						
DELO				IAMs_20	IAMs_20	12 02 13.9	
	comp=Z,2µm,19.0s						
H66A	Whiting	64.74	3	P	P	11 31 55.4	0.0
	baz=184						
TUC	Tucson	64.77	323	P	P	11 31 56.6	+0.6
TUC	Tucson	64.77	323	IAMs_20	IAMs_20	11 58 27.2	
	comp=Z,1µm,20.0s						
I49A	Point Hope	64.78	350	P	P	11 31 55.3	-0.4
	baz=168,SNR=5.3						
I49A	Point Hope	64.78	350	IAmb	IAmb	11 31 56.1	
	comp=Z,37nm,0.9s						
I49A				IAMs_20	IAMs_20	11 56 43.7	
	comp=Z,1µm,20.0s						
L40A	Anamosa	64.78	343	IAmb	IAmb	11 31 56.5	
	comp=Z,39nm,1.1s						
H53A	Bobcaygeon	64.85	354	P	P	11 31 56.4	+0.2
	baz=172,SNR=7.9						
J45A	Montague	64.93	347	IAMs_20	IAMs_20	12 03 09.8	
	comp=Z,1µm,22.0s						
G60A	Masonville	64.99	359	P	P	11 31 58.6	+1.6
	baz=178						
G63A	Kingsbury	65.00	1	P	P	11 31 58.0	+0.9
	baz=181						
H52A	Wyevale	65.06	353	P	P	11 31 58.1	+0.6
	baz=171						
GGN	Saint George	65.09	3	IAMs_20	IAMs_20	11 55 26.4	
	comp=Z,1µm,22.0s						
G57A	Newington	65.10	357	P	P	11 31 58.4	+0.7
	baz=176,SNR=7.7						
G62A	West of Eustis	65.10	0	P	P	11 31 59.2	+1.5
	baz=180,SNR=12						
G62A	West of Eustis	65.10	0	P	P	11 31 58.1	+0.4
G62A				IAMs_20	IAMs_20	12 04 45.4	
	comp=Z,1µm,18.0s						
G58A	Ormstown	65.10	357	P	P	11 31 58.6	+0.9
	baz=177						
SADO	Sadowa	65.11	353	IAmb	IAmb	11 31 59.0	
	comp=Z,31nm,0.9s						
G65A	Princeton	65.14	2	P	P	11 31 59.0	+1.0
	baz=183						
G65A	Princeton	65.14	2	IAMs_20	IAMs_20	12 01 01.7	
	comp=Z,1µm,19.0s						
G64A	Maxfield	65.16	2	P	P	11 31 58.8	+0.7
	baz=182						
PKME	Peaks-Kenny Pk	65.16	1	P	P	11 31 59.0	+0.9
	baz=182						
PKME	Peaks-Kenny Pk	65.16	1	IAMs_20	IAMs_20	11 59 27.0	
	comp=Z,1µm,20.0s						
I48A	Sherman Twp	65.16	350	P	P	11 31 57.8	-0.3
	baz=167,SNR=8.3						
G61A	St-Isidore-de-	65.17	359	P	P	11 31 59.5	+1.2
	baz=179,SNR=6.6						
PLVO	Plevna	65.18	355	IAmb	IAmb	11 32 00.1	
	comp=Z,43nm,1.4s						
SCIA	State Center	65.20	342	P	P	11 31 59.4	+0.9
	baz=157						
SCIA	State Center	65.20	342	IAMs_20	IAMs_20	12 01 00.8	
	comp=Z,1µm,22.0s						
I46A	Reed City	65.23	348	P	P	11 31 58.0	-0.6
	baz=165						
T25A	Trinidad	65.28	331	P	P	11 31 59.7	+0.3
	baz=145						
JFWS	Jewell Farm	65.32	344	P	P	11 31 59.5	+0.3
	baz=160						
JFWS	Jewell Farm	65.32	344	IAmb	IAmb	11 32 10.0	
	comp=Z,20nm,0.8s						
JFWS	Jewell Farm	65.32	344	IAMs_20	IAMs_20	11 59 59.0	
	comp=Z,1µm,20.0s						
G55A	Calabogie	65.36	355	P	P	11 32 00.1	+0.7
	baz=174,SNR=5.8						
G53A	Haliburton	65.40	354	P	P	11 32 00.1	+0.4
	baz=172,SNR=15						
ORIO	Orleans, Innes	65.48	356	P	P	11 32 01.1	+0.9
	baz=175						
I45A	Fountain	65.48	348	IAMs_20	IAMs_20	12 05 10.2	
	comp=Z,2µm,21.0s						
H48A	Harrisville	65.60	350	P	P	11 32 01.2	+0.2
	baz=167						
F63A	Nahmakanta, Br	65.60	1	P	P	11 32 01.7	+0.7
	baz=182						
G54A	Lake Saint Pet	65.62	354	P	P	11 32 01.4	+0.3
	baz=172,SNR=5.5						
214A	Organ Pipe Nat	65.68	321	P	P	11 32 03.7	+1.9
	baz=136,SNR=8.5						
K38A	Parkersburg	65.75	342	IAmb	IAmb	11 32 15.5	
	comp=Z,42nm,1.1s						
K38A				IAMs_20	IAMs_20	12 04 05.4	
	comp=Z,1µm,22.0s						
F64A	Sherman	65.78	2	P	P	11 32 02.8	+0.6
	baz=182						
F64A	Sherman	65.78	2	P	P	11 32 01.8	-0.3
F64A				IAmb	IAmb	11 32 14.5	
	comp=Z,44nm,1.1s						
F64A				IAMs_20	IAMs_20	12 05 05.5	
	comp=Z,1µm,20.0s						
F61A	St Evariste	65.86	360	P	P	11 32 03.4	+0.8
	baz=180						
F60A	Warwick	65.86	359	P	P	11 32 03.3	+0.6
	baz=179						
F55A	Otter Lake	65.91	356	P	P	11 32 03.5	+0.5
	baz=174						
I42A	Draeger Farm,	65.92	346	IAmb	IAmb	11 32 13.9	
	comp=Z,22nm,0.9s						
I42A				IAMs_20	IAMs_20	12 02 21.8	
	comp=Z,1µm,20.0s						
GLMI	Grayling	65.94	349	P	P	11 32 03.4	+0.2
	baz=166						
GLMI	Grayling	65.94	349	IAMs_20	IAMs_20	12 06 04.4	
	comp=Z,2µm,21.0s						
KSCO	Kaye Shedlock’	66.04	333	P	P	11 32 05.0	+0.9
	baz=147,SNR=5.6						
KSCO	Kaye Shedlock’	66.04	333	IAmb	IAmb	11 32 17.2	
	comp=Z,35nm,1.1s						
F52A	Sundridge	66.14	353	P	P	11 32 04.7	+0.2
	baz=171,SNR=8.3						
G47A	Hillman	66.14	350	P	P	11 32 04.7	+0.2
	baz=167						
ALGO	Algonquin Park	66.17	354	P	P	11 32 04.2	-0.4
	baz=173						
H43A	Windswept, Lux	66.21	347	IAmb	IAmb	11 32 05.7	
	comp=Z,26nm,0.9s						
E60A	Ste Agathe de	66.25	359	P	P	11 32 05.7	+0.5
	baz=179						
SDCO	Great Sand Dun	66.27	330	P	P	11 32 07.2	+1.3
	baz=144,SNR=12						
SDCO	Great Sand Dun	66.27	330	IAmb	IAmb	11 32 19.4	
	comp=Z,25nm,1.1s						
SDCO				IAMs_20	IAMs_20	12 04 17.0	
	comp=Z,1µm,20.0s						
E58A	La Victoria	66.29	358	P	P	11 32 06.0	+0.6
	baz=177						
E61A	Lac Etchemin	66.31	0	P	P	11 32 06.7	+1.1
	baz=180						
G45A	Suttons Bay	66.33	348	P	P	11 32 05.0	-0.7
	baz=165						
G45A	Suttons Bay	66.33	348	IAmb	IAmb	11 32 18.6	
	comp=Z,20nm,0.9s						
E63A	Oxbow	66.33	2	P	P	11 32 06.6	+0.9
	baz=182						
F51A	Arnstein	66.33	353	P	P	11 32 05.7	0.0
	baz=171,SNR=5.5						
E64A	Bridgewater	66.35	2	P	P	11 32 06.3	+0.5
	baz=183						
BGNE	Belgrade	66.36	338	P	P	11 32 06.4	+0.4
	baz=152,SNR=7.0						
BGNE	Belgrade	66.36	338	P	P	11 32 06.2	+0.1
F49A	Sandfield	66.44	351	P	P	11 32 06.3	-0.1
	baz=168						
G46A	Petoskey	66.46	349	P	P	11 32 06.8	+0.3
	baz=166						
E56A	St. Veronique	66.54	357	P	P	11 32 07.4	+0.4
	baz=176,SNR=6.6						
E52A	Mattawa	66.55	354	P	P	11 32 07.0	-0.1
	baz=172,SNR=5.3						
E53A	Dumoine, Ponti	66.56	355	P	P	11 32 07.1	0.0
	baz=173						
E54A	Lac Daplat, Po	66.57	355	P	P	11 32 07.4	+0.2
	baz=174,SNR=7.3						
F48A	Evansville	66.59	351	P	P	11 32 07.3	-0.1
	baz=168						
D60A	Saint Jean D’O	66.79	360	P	P	11 32 09.7	+1.1
	baz=180						
E51A	G1948 Merrick	66.89	353	P	P	11 32 09.5	+0.3
	baz=171,SNR=6.1						
D59A	Saint-Raymond	66.89	359	P	P	11 32 10.7	+1.4
	baz=179						
S22A	4UR Ranch, Cre	66.90	329	P	P	11 32 10.6	+0.7
	baz=143						
E50A	Wahnapitae	66.92	352	P	P	11 32 10.7	+1.2
	baz=170						
F45A	CMU Biological	66.93	349	P	P	11 32 10.0	+0.5
	baz=165						
D57A	Chemin Vers le	66.96	358	P	P	11 32 10.6	+0.9
	baz=177,SNR=11						
D63A	Stockholm	66.96	2	P	P	11 32 11.0	+1.3
	baz=183						
D62A	Allapoint, All	66.98	1	P	P	11 32 11.0	+1.2
	baz=182						
D62A	Allapoint, All	66.98	1	IAmb	IAmb	11 32 22.8	
	comp=Z,38nm,1.0s						
D58A	Chemin du LacG	67.00	358	P	P	11 32 10.8	+0.8
	baz=178,SNR=10						
D56A	ZEC Mazanza, M	67.03	357	P	P	11 32 10.5	+0.4
	baz=176						
D55A	Sainte-Anne-du	67.04	356	P	P	11 32 10.4	+0.2
	baz=175,SNR=7.2						
D61A	St Aubert, Com	67.08	0	P	P	11 32 11.3	+0.8
	baz=181						
E48A	Lockeyer	67.16	351	P	P	11 32 11.3	+0.3
	baz=168						
I37A	Lemond, Waseca	67.19	342	IAmb	IAmb	11 32 40.4	
	comp=Z,29nm,0.8s						
D54A	Lac Fusel, La	67.25	356	P	P	11 32 11.3	-0.2
	baz=174,SNR=5.1						
D53A	Lac Vacive, Po	67.25	355	P	P	11 32 11.8	+0.3
	baz=173,SNR=5.4						
MVCO	Mesa Verde	67.29	328	P	P	11 32 13.1	+0.8
	baz=142						
BATG	Bathurst New B	67.29	3	P	P	11 32 11.6	-0.1
BATG				IAmb	IAmb	11 32 24.1	
	comp=Z,36nm,1.2s						
BATG				IAMs_20	IAMs_20	12 05 07.5	
	comp=Z,2µm,19.0s						
E47A	Iron Bridge	67.30	351	P	P	11 32 11.8	-0.1
	baz=167						
D51A	Lot 18 Range I	67.42	354	P	P	11 32 12.6	0.0
	baz=171						
OGNE	Ogallala	67.43	335	P	P	11 32 14.0	+1.1
	baz=148,SNR=5.6						
OGNE	Ogallala	67.43	335	IAmb	IAmb	11 32 25.8	
	comp=Z,31nm,1.0s						
WUAZ	Wupatki	67.49	325	P	P	11 32 15.9	+2.4
	baz=139,SNR=9.1						
WUAZ	Wupatki	67.49	325	IAmb	IAmb	11 32 27.8	
	comp=Z,28nm,1.1s						
F42A	Maple Grove Fa	67.52	347	IAMs_20	IAMs_20	12 00 08.2	
	comp=Z,1µm,22.0s						
D50A	G1974 Best Tow	67.55	353	P	P	11 32 13.7	+0.3
	baz=171,SNR=12						
D48A	Paudash Townsh	67.80	352	P	P	11 32 14.7	-0.3
	baz=169,SNR=5.3						
D47A	Chapleau	67.86	351	P	P	11 32 15.3	-0.1
	baz=168						
E43A	Lone Tree Farm	67.88	348	IAMs_20	IAMs_20	12 01 40.7	
	comp=Z,1µm,21.0s						
E44A	Grand Marais A	67.91	349	P	P	11 32 15.9	+0.2
	baz=165						
E44A	Grand Marais A	67.91	349	IAMs_20	IAMs_20	11 59 45.5	
	comp=Z,1µm,19.0s						
ECSD	EROS Data Cent	67.91	340	P	P	11 32 15.9	+0.1
	baz=154,SNR=11						
ECSD	EROS Data Cent	67.91	340	IAmb	IAmb	11 32 27.5	
	comp=Z,37nm,1.2s						
ISCO	Idaho Springs	67.99	332	P	P	11 32 17.9	+1.2
	baz=145,SNR=8.2						
SMCO	Snowmass	68.11	330	IAmb	IAmb	11 32 31.4	
	comp=Z,46nm,1.5s						
SPMN	Marine on St.	68.14	343	P	P	11 32 17.0	-0.1
	baz=158						
SPMN	Marine on St.	68.14	343	IAmb	IAmb	11 32 28.8	
	comp=Z,22nm,0.9s						
IKP	In-Ko-Pah, Jac	68.14	320	P	P	11 32 18.8	+1.2
	baz=134						
PDMCI	Parker Dam,Lak	68.14	322	P	P	11 32 19.3	+1.9
	baz=136						
SWSC	Sam W. Stewart	68.16	320	P	P	11 32 19.0	+1.4
	baz=134						
PV02	Paradox Valley	68.18	328	IAMs_20	IAMs_20	11 58 48.6	
	comp=Z,2µm,22.0s						
VLDQ	Val d'Or	68.26	355	IAmb	IAmb	11 32 19.7	
	comp=Z,39nm,1.4s						
PV17	East Wray Mesa	68.35	328	IAmb	IAmb	11 32 32.4	
	comp=Z,36nm,1.6s						
BC3	Big Chuckawall	68.45	321	P	P	11 32 20.2	+0.7
	baz=135,SNR=7.3						
MONP2	Monument Peak	68.50	320	P	P	11 32 20.3	+0.3
	baz=134						
BAR	Barrett	68.51	319	P	P	11 32 19.8	0.0
BAR				IAmb	IAmb	11 32 24.4	
	comp=Z,27nm,1.1s						
W13A	Hualapai Mount	68.57	323	IAmb	IAmb	11 32 33.6	
	comp=Z,36nm,1.7s						
IRM	Iron Mountain	68.62	321	P	P	11 32 22.6	+2.1
	baz=135,SNR=13						
U15A	North Rim	68.66	325	IAMs_20	IAMs_20	12 04 17.2	
	comp=Z,980nm,20.0s						
D41A	Chassel	68.85	347	IAmb	IAmb	11 32 22.9	
	comp=Z,35nm,1.1s						
F36A	Milaca	68.92	343	IAmb	IAmb	11 32 23.0	
	comp=Z,23nm,1.1s						
BELC	Belle Mtn. Jos	69.01	321	P	P	11 32 25.3	+2.2
	baz=135,SNR=5.6						
XPFO	Pion Flat	69.02	320	P	P	11 32 23.9	+0.8
XPFO				IAMs_20	IAMs_20	12 07 46.6	
	comp=Z,2µm,20.0s						
PFO	Pinyon Flats O	69.02	320	P	P	11 32 25.2	+2.1
	baz=134,SNR=5.0						
PFO	Pinyon Flats O	69.02	320	P	P	11 32 24.1	+0.9
PFO				IAMs_20	IAMs_20	12 07 46.6	
	comp=Z,2µm,20.0s						
N23A	Red Feather La	69.03	332	P	P	11 32 24.5	+1.3
	baz=145,SNR=7.8						
E38A	The Farm, Brul	69.10	345	IAmb	IAmb	11 32 36.5	
	comp=Z,49nm,1.8s						
E38A				IAMs_20	IAMs_20	12 03 50.1	
	comp=Z,2µm,20.0s						
SUSD	Miller	69.31	339	P	P	11 32 25.8	+1.2
	baz=152						
SUSD	Miller	69.31	339	IAMs_20	IAMs_20	11 55 32.5	
	comp=Z,1µm,22.0s						
GMRC	Granite Mounta	69.36	322	P	P	11 32 27.1	+1.8
	baz=135,SNR=14						
O20A	White River Ci	69.46	330	P	P	11 32 27.4	+1.6
	baz=142,SNR=5.4						
O20A	White River Ci	69.46	330	IAmb	IAmb	11 32 48.3	
	comp=Z,26nm,1.1s						
LIC	Lamto	69.68	75	*e*P	P	11 32 25.0	-2.5
	comp=Z,96nm,1.7s						
F33A	5 Mile Ranch,	69.70	341	IAMs_20	IAMs_20	12 04 38.9	
	comp=Z,1µm,20.0s						
HEC	Hector,Ludlow	69.79	321	P	P	11 32 30.3	+2.5
	baz=134,SNR=14						
TIC	Toumodi	69.86	75	*e*P	P	11 32 27.7	-0.9
CHGQ	Chibougamau	69.87	357	P	P	11 32 28.1	+0.3
	baz=176,SNR=7.9						
MATQ	Matagami	69.91	355	P	P	11 32 28.8	+0.7
	baz=173,SNR=7.5						
QSPA	South Pole Qui	69.99	180	P	P	11 32 28.9	+0.2
QSPA				IAmb	IAmb	11 32 43.0	
	comp=Z,38nm,1.1s						
KIC	Kosan Boka	70.00	75	*e*P	P	11 32 28.4	-1.0
	comp=Z,107nm,1.2s						
DBIC	Dimbokro	70.02	75	P	P	11 32 29.3	-0.2
	comp=Z,36nm,1.0s,baz=228,slow=6.3,SNR=13						
DBIC	Dimbokro	70.02	75	P	P	11 32 28.8	-0.8
DBIC				IAmb	IAmb	11 32 30.0	
	comp=Z,51nm,1.1s						
DRLN	Deer Lake	70.14	9	P	P	11 32 29.4	-0.1
RWWY	Rawlins	70.23	332	IAmb	IAmb	11 32 46.7	
	comp=Z,38nm,1.4s						
SHPR	Sheep Range	70.30	323	IAmb	IAmb	11 32 45.4	
	comp=Z,24nm,1.1s						
SHPR				IAMs_20	IAMs_20	11 59 12.5	
	comp=Z,1µm,21.0s						
EYMN	Ely	70.34	345	P	P	11 32 31.5	+0.7
	baz=159						
EYMN	Ely	70.34	345	IAMs_20	IAMs_20	12 08 17.9	
	comp=Z,3µm,22.0s						
GSC	Goldstone, Bar	70.40	321	P	P	11 32 31.9	+0.4
	baz=134,SNR=6.7						
GSC	Goldstone, Bar	70.40	321	IAMs_20	IAMs_20	12 03 42.1	
	comp=Z,1µm,21.0s						
PASC	Pasadena Art C	70.45	320	IAMs_20	IAMs_20	12 08 22.5	
	comp=Z,3µm,22.0s						
K22A	Casper	70.71	333	P	P	11 32 34.2	+0.8
	baz=145						
EDW2	Edwards Air Fo	70.81	320	P	P	11 32 34.9	+0.8
	baz=133,SNR=6.1						
RSSD	Black Hills	70.90	335	P	P	11 32 35.2	+0.7
	baz=147						
RSSD	Black Hills	70.90	335	P	P	11 32 34.0	-0.6
OSI	Osito Audit: C	71.07	320	IAMs_20	IAMs_20	12 05 11.0	
	comp=Z,2µm,22.0s						
D32A	Dogwood Acres,	71.08	341	IAMs_20	IAMs_20	12 06 22.5	
	comp=Z,1µm,20.0s						
TPNV	Topopah Spring	71.23	323	P	P	11 32 39.0	+2.4
	baz=135,SNR=7.4						
TPNV	Topopah Spring	71.23	323	IAMs_20	IAMs_20	12 07 43.2	
	comp=Z,1µm,20.0s						
FURC	Furnace Creek,	71.24	322	P	P	11 32 38.8	+2.3
	baz=134,SNR=13						
MPMC	Manual Prospec	71.32	321	P	P	11 32 39.1	+1.9
	baz=134,SNR=12						
ISA	Isabella, Lake	71.63	321	P	P	11 32 41.5	+2.5
	baz=133,SNR=12						
ISA	Isabella, Lake	71.63	321	IAMs_20	IAMs_20	12 08 01.8	
	comp=Z,3µm,22.0s						
DUG	Dugway, Tooele	71.74	327	P	P	11 32 41.8	+2.1
	baz=139,SNR=9.5						
DUG	Dugway, Tooele	71.74	327	IAMs_20	IAMs_20	11 56 13.7	
	comp=Z,1µm,20.0s						
E28A	Huff	71.77	339	IAMs_20	IAMs_20	11 53 09.6	
	comp=Z,1µm,22.0s						
AGMN	Agassiz Nation	71.80	343	P	P	11 32 39.5	-0.1
	baz=155,SNR=8.2						
AGMN	Agassiz Nation	71.80	343	IAMs_20	IAMs_20	12 00 04.5	
	comp=Z,1µm,21.0s						
R11A	Troy Canyon, C	71.85	324	P	P	11 32 42.7	+2.3
	baz=136,SNR=11						
R11A	Troy Canyon, C	71.85	324	IAMs_20	IAMs_20	11 59 14.7	

comp=Z,1μm,21.0s
PKM Mcpherson Peak 71.92 319 P **P** **11 32 42.5 +1.6**
baz=132,SNR=6.3
CWC Cottonwood Cre 71.93 321 P **P** **11 32 42.4 +1.5**
baz=134
VES Vestal, Richgr 72.12 320 P **P** **11 32 43.2 +1.4**
baz=133,SNR=8.2
PDAR Pinedale Array 72.14 331 P **P** **11 32 42.6 +0.5**
comp=Z,1.8nm,0.8s,baz=142,slow=5.6,SNR=8.8
BW06 Boulder Array 72.14 331 P **P** **11 32 42.8 +0.7**
baz=142
BW06 Boulder Array 72.14 331 IAMs_20 IAMs_20 11 53 32.4
comp=Z,1μm,19.0s
SMMC Simmler 72.32 319 P **P** **11 32 44.6 +1.5**
baz=132
TIN Tinemaha, Big 72.44 322 P **P** **11 32 45.0 +1.1**
baz=134
MDND Maddock 72.52 340 P **P** **11 32 45.0 +1.0**
baz=152,SNR=9.2
MDND Maddock 72.52 340 IAMs_20 IAMs_20 12 00 29.5
comp=Z,889nm,20.0s
AHID Auburn Hatcher 72.86 330 IAMs_20 IAMs_20 12 02 05.3
comp=Z,1μm,20.0s
HVU Hansel Valley 72.91 328 P **P** **11 32 46.7 +0.1**
MLAC Mammoth, Mammo 73.18 322 P **P** **11 32 49.7 +1.3**
baz=133
REDW Red Top Meadow 73.20 331 IAMs_20 IAMs_20 12 11 24.4
comp=Z,3μm,18.0s
SNOW Snow King Moun 73.23 331 IAMs_20 IAMs_20 12 11 21.3
comp=Z,3μm,21.0s
OMMB Old Mammoth Mi 73.27 322 IAMs_20 IAMs_20 12 10 12.2
comp=Z,3μm,22.0s
MDPB Devils Postpil 73.33 322 IAMs_20 IAMs_20 12 10 09.7
comp=Z,3μm,22.0s
NV11 Mina Array Sit 73.34 323 IAMs_20 IAMs_20 12 06 24.2
comp=Z,2μm,22.0s
TPAW Teton Pass 73.35 331 IAMs_20 IAMs_20 12 11 20.2
comp=Z,2μm,21.0s
ELK Elko 73.39 326 IAMs_20 IAMs_20 12 07 12.5
comp=Z,2μm,19.0s
PMPB Monarch Peak 73.40 320 IAMs_20 IAMs_20 12 11 20.7
comp=Z,3μm,20.0s
NVAR Mina Array Bea 73.43 323 P **P** **11 32 51.9 +2.1**
comp=Z,4.1nm,0.7s,baz=150,slow=5.5,SNR=16
PMOZ Porto Weimz, M 73.45 45 *e*LR LR 12 00 28.8
comp=Z,3μm,18.0s
FXWY Fox Creek 73.50 331 IAMs_20 IAMs_20 12 11 16.2
comp=Z,2μm,21.0s
ULM Lac du Bonnet 73.58 343 P **P** **11 32 49.8 -0.3**
comp=Z,15nm,1.1s,baz=141,slow=5.6,SNR=12
ULM Lac du Bonnet 73.58 343 IAMs_20 IAMs_20 12 10 41.5
comp=Z,2μm,20.0s
IMW Indian Meadow 73.66 331 IAMs_20 IAMs_20 12 11 40.5
comp=Z,2μm,20.0s
RYN Ryan 73.69 323 IAMs_20 IAMs_20 12 06 03.3
comp=Z,2μm,22.0s
KVN Kaiserville 73.74 323 IAMs_20 IAMs_20 12 08 19.7
comp=Z,2μm,22.0s
RLMT Red Lodge 73.87 333 P **P** **11 32 53.6 +1.4**
baz=143,SNR=15
RLMT Red Lodge 73.87 333 IAMs_20 IAMs_20 12 09 04.2
comp=Z,2μm,21.0s
H17A Grant Village 73.88 331 P **P** **11 32 54.4 +2.0**
baz=141
LAO LASA Array 73.89 335 P **P** **11 32 53.5 +1.3**
baz=146,SNR=14
LAO LASA Array 73.89 335 IAmb IAmb 11 33 05.5
comp=Z,42nm,1.2s
LAO IAMs_20 IAMs_20 12 10 04.7
comp=Z,2μm,22.0s
WAKR Walker 74.13 322 IAMs_20 IAMs_20 12 01 15.9
comp=Z,1μm,22.0s
SAO San Andreas Ge 74.16 320 IAMs_20 IAMs_20 12 11 53.6
comp=Z,5μm,22.0s
YERR Yerington 74.34 323 IAMs_20 IAMs_20 12 12 07.6
comp=Z,2μm,20.0s
CMB Columbia Colle 74.36 321 IAMs_20 IAMs_20 12 11 52.1
comp=Z,3μm,20.0s
QLMT Earthquake Lak 74.60 331 P **P** **11 32 55.4 -1.1**
DGMT Dagmar 74.62 338 P **P** **11 32 57.6 +1.3**
baz=148,SNR=11
DGMT Dagmar 74.62 338 IAmb IAmb 11 32 59.0
comp=Z,27nm,1.3s
PNTR Pine Nut 74.62 323 IAMs_20 IAMs_20 12 11 47.8
comp=Z,3μm,22.0s
VCNR Virginia City 74.78 323 IAMs_20 IAMs_20 12 11 08.3
comp=Z,3μm,22.0s
SCHQ Schefferville 74.80 2 P **P** **11 32 58.0 +0.8**
comp=Z,12nm,1.0s,baz=172,slow=4.7,SNR=9.4
RUBR Rubicon Trail 74.91 322 IAMs_20 IAMs_20 12 12 06.6
comp=Z,3μm,21.0s
PAHR Pah Rah Range 74.91 323 IAmb IAmb 11 33 12.9
comp=Z,35nm,1.0s
PAHR IAMs_20 IAMs_20 12 12 26.8
comp=Z,3μm,19.0s
AFDM Forest Hills D 75.31 322 IAMs_20 IAMs_20 12 12 01.2
comp=Z,3μm,20.0s
BEKR Beckworth 75.58 323 IAMs_20 IAMs_20 12 08 27.2
comp=Z,3μm,22.0s
MCCM Marconi Confer 75.92 320 IAMs_20 IAMs_20 12 12 17.3
comp=Z,3μm,22.0s
ORV Oroville 76.02 322 IAMs_20 IAMs_20 12 11 40.0
comp=Z,3μm,22.0s
EGMT Eagleton 76.38 334 P **P** **11 33 07.8 +1.3**
baz=143,SNR=15
EGMT Eagleton 76.38 334 IAmb IAmb 11 33 08.8
comp=Z,34nm,1.1s
WVOR Wild Horse Val 76.39 326 IAMs_20 IAMs_20 12 12 42.4
comp=Z,6μm,20.0s
HOPS Hopland Field 76.58 321 IAMs_20 IAMs_20 12 12 42.8
comp=Z,3μm,21.0s
O03E Paynes Creek 76.68 322 P **P** **11 33 09.7 +1.3**
baz=132
MOD Modoc Plateau 76.92 324 IAMs_20 IAMs_20 12 12 45.8
comp=Z,5μm,21.0s
J08A Circle Bar Ran 76.94 326 IAMs_20 IAMs_20 12 12 28.5
comp=Z,3μm,20.0s
O02D Mt. Diablo Mer 77.18 322 P **P** **11 33 12.3 +1.1**
baz=131
MSO Missoula 77.26 331 P **P** **11 33 13.4 +1.9**
baz=139,SNR=9.5
KCPM Cahto Peak 77.33 321 IAMs_20 IAMs_20 12 12 21.6
comp=Z,3μm,19.0s
N02D Trinity Center 77.65 322 P **P** **11 33 14.6 +0.8**
baz=131
M04C Macdoel 77.69 323 P **P** **11 33 15.6 +1.6**
baz=132,SNR=5.5
VNDA Vanda 77.83 190 P **P** **11 33 17.1 +2.9**
comp=Z,3.1nm,1.0s,baz=146,slow=7.3,SNR=6.3
M02C Callahan 78.01 323 P **P** **11 33 16.4 +0.6**
baz=131
YBH Yreka Blue Hor 78.15 323 LR LR 12 08 37.9
comp=Z,1μm,20.6s,baz=321,slow=36
F10A Beach Ranch, E 78.17 329 IAmb IAmb 11 33 33.7
comp=Z,81nm,1.9s
KHMM Horse Mountain 78.18 322 IAMs_20 IAMs_20 12 13 17.5
comp=Z,5μm,20.0s
L04D Klamath Falls 78.24 324 P **P** **11 33 19.0 +1.9**
baz=131
SYO Syowa Base 78.31 160 ⇑ *i*P **P** **11 33 17.2 +0.2**
SYO Syowa Base 78.31 160 ⇓ *i*pP **P** **11 33 18.8 +1.8**
SYO Syowa Base 78.31 160 ⇓ *i*sP **P** **11 33 20.0 +3.0**
JCC Jacoby Creek, 78.31 322 IAMs_20 IAMs_20 12 14 50.7
comp=Z,5μm,21.0s
J05D Fort Rock, OR 78.36 325 P **P** **11 33 19.7 +2.0**
baz=132
TOA0 Torodi Ar. Sit 78.54 71 P **P** **11 33 18.4 -0.8**
TORD Torodi Ar. Bea 78.54 71 P **P** **11 33 17.7 -1.5**
comp=Z,112nm,1.1s,baz=256,slow=2.9,SNR=132
PINE Pine Mountain 78.54 325 IAMs_20 IAMs_20 12 14 06.4
comp=Z,5μm,20.0s
KRMB Red Mountain 78.69 322 IAMs_20 IAMs_20 12 10 27.8
comp=Z,4μm,22.0s
J04D Umpqua Nationa 78.81 324 P **P** **11 33 22.2 +1.9**
baz=132
HUMO Hull Mountain 78.86 324 IAMs_20 IAMs_20 12 13 57.8
comp=Z,4μm,21.0s
WALA Waterton Lakes 78.93 333 IAmb IAmb 11 33 33.8
comp=Z,32nm,1.1s
I05D Terrebonne, OR 79.12 326 P **P** **11 33 23.8 +2.0**
baz=132,SNR=5.5
FFC Flin Flon 79.27 342 P **P** **11 33 22.1 -0.2**
K02D Willamette Mer 79.31 323 P **P** **11 33 24.2 +1.3**
baz=130
I04A Tendick Farm, 79.34 325 P **P** **11 33 24.1 +1.1**
baz=132
HAWA Hanford 79.60 328 P **P** **11 33 24.2 -0.1**
NEW Newport 79.78 331 LR LR 12 10 17.1
comp=Z,8μm,21.7s,baz=326,slow=37
NEW Newport 79.78 331 P **P** **11 33 26.4 +1.1**
baz=136
E07A Sunnyside 79.88 328 IAMs_20 IAMs_20 12 13 05.2
comp=Z,6μm,22.0s
F04A Amboy 80.76 326 IAmb IAmb 11 33 44.2
comp=Z,52nm,1.0s
E04D Cinebar 81.25 327 P **P** **11 33 34.6 +1.4**
baz=132
F03A Seaside 81.36 326 IAMs_20 IAMs_20 12 14 53.4
comp=Z,5μm,22.0s
D05A Enumclaw 81.38 327 IAmb IAmb 11 33 47.4
comp=Z,47nm,1.0s
MORF Marmelete 81.75 45 *e*P **P** **11 33 36.3 +0.2**
MORF AMb AMB 11 33 39.0
comp=Z,54nm,1.8s
MORF Marmelete 81.75 45 *e*P **P** **11 33 37.2 +1.1**
comp=Z,66nm,1.3s
E03A Lebam 81.76 326 IAMs_20 IAMs_20 12 14 35.1
comp=Z,6μm,22.0s
PTEO Sao Teotonio 81.83 45 *e*P **P** **11 33 37.6 +1.2**
comp=Z,81nm,1.3s
B06A Marblemount 82.03 329 IAmb IAmb 11 33 50.1
comp=Z,24nm,0.8s
TSUM Tsumeb 82.05 107 P **P** **11 33 38.6 +0.3**
TSUM IAmb IAmb 11 33 40.7
comp=Z,59nm,1.1s
B05A Bryant 82.16 328 P **P** **11 33 38.6 +0.7**
baz=132,SNR=6.5
PBDV Barranco-do-Ve 82.19 46 *e*P **P** **11 33 38.8 +0.4**
comp=Z,69nm,1.5s
PNCL Nicolau / Gran 82.27 45 *e*P **P** **11 33 39.9 +1.2**
comp=Z,24nm,1.3s
MESJ Messejana 82.32 45 *e*P **P** **11 33 39.1 +0.1**
MESJ AMb AMB 11 33 42.6
comp=Z,29nm,1.6s
MESJ Messejana 82.32 45 *e*P **P** **11 33 40.9 +1.9**
comp=Z,27nm,1.1s
PCVE Castro Verde 82.33 45 *e*P **P** **11 33 40.5 +1.4**
comp=Z,23nm,1.1s
PVAQ Vaqueiros 82.42 46 *e*LR LR 12 01 46.0
comp=Z,6μm,20.0s
PBEJ Beja 82.66 45 *e*P **P** **11 33 42.0 +1.2**
comp=Z,16nm,1.2s
A04D Lummi Island 82.76 328 P **P** **11 33 42.6 +1.6**
baz=132
SFS San Fernando 82.96 47 IAMs_20 IAMs_20 12 06 23.9
comp=Z,7μm,22.0s
PMTG Montargil 82.98 44 *e*P **P** **11 33 44.3 +1.9**
comp=Z,46nm,1.7s
PGC Sidney 83.08 328 IAmb IAmb 11 33 56.4
comp=Z,26nm,1.1s
IVI Ivigtut 83.13 11 P **P** **11 33 43.3 +0.7**
PCAS Casmilo, Conde 83.34 43 *e*P **P** **11 33 45.2 +0.9**
comp=Z,28nm,1.3s
COI Coimbra 83.48 43 P **P** **11 33 45.2 +0.2**
LLLB Lillooet 83.64 330 IAmb IAmb 11 33 58.6
comp=Z,23nm,1.0s
PMRV Marv??o 83.72 44 *e*P **P** **11 33 47.1 +0.8**
comp=Z,19nm,1.0s
PMRV Marv??o 83.72 44 *e*LR LR 11 59 44.5
comp=Z,5μm,18.0s
PCBR Castelo Branco 83.89 44 *e*P **P** **11 33 47.8 +0.7**
comp=Z,26nm,1.1s
PVIS Viseu 84.09 43 *e*P **P** **11 33 48.5 +0.3**
comp=Z,60nm,1.2s
MTE Manteigas 84.14 43 *e*P **P** **11 33 49.1 +0.6**
comp=Z,78nm,1.2s
PGAV Gavieira, Arco 84.53 42 *e*LR LR 11 59 23.6
comp=Z,7μm,20.0s
MVO Moncorvo 84.89 43 *e*P **P** **11 33 52.4 +0.2**
comp=Z,68nm,1.3s
MVO Moncorvo 84.89 43 *e*LR LR 12 00 21.4
comp=Z,6μm,18.0s
PBRG Bragança 85.41 42 *e*P **P** **11 33 54.8 0.0**
comp=Z,46nm,1.0s
BOSA Boshof 85.56 119 *i* P **P** **11 33 55.4 -0.7**
BOSA Boshof 85.56 119 P **P** **11 33 56.5 +0.4**
comp=Z,4.8nm,0.3s,baz=277,slow=15,SNR=19
BOSA Boshof 85.56 119 *i* P **P** **11 33 56.5 +0.4**
BOSA *i* 11 33 56.9
baz=284,slow=16
BOSA Boshof 85.56 119 *i* P **P** **11 33 55.4 -0.7**
PAB San Pablo 85.80 45 P **P** **11 33 56.8 0.0**
PAB IAmb IAmb 11 33 58.6
comp=Z,42nm,1.2s
MAW Mawson 86.06 164 P **P** **11 33 59.5 +1.9**
comp=Z,8.8nm,1.0s,baz=224,slow=6.2,SNR=8.1
MAW Mawson 86.06 164 P **P** **11 33 58.5 +0.9**
ESDC Sonseca Array 86.12 45 P **P** **11 33 58.4 +0.1**
comp=Z,15nm,1.1s,baz=245,slow=5.6,SNR=40
LBTB Lobatse 87.11 115 P **P** **11 34 03.7 0.0**
YKA Yellowknife Ar 89.41 341 P **P** **11 34 13.9 +0.4**
comp=Z,34nm,1.0s,baz=138,slow=5.3,SNR=157
DIB Dawson Inlet, 90.38 328 IAMs_20 IAMs_20 12 04 40.9
comp=Z,6μm,19.0s
DLBC Dease Lake 92.27 333 P **P** **11 34 28.4 +1.3**
comp=Z,13nm,1.1s,baz=122,slow=5.4,SNR=12
DLBC Dease Lake 92.27 333 IAmb IAmb 11 34 40.9
comp=Z,19nm,0.9s
KEST Kesra 93.89 53 P **P** **11 34 35.7 +0.6**
comp=Z,5.8nm,0.9s,baz=252,slow=4.8,SNR=3.8
KEST Kesra 93.89 53 IAmb IAmb 11 35 22.5
comp=Z,25nm,1.4s
SSB Saint Sauveur 94.27 43 IAmb IAmb 11 34 38.1
comp=Z,21nm,1.3s
EKA Eskdalemuir Ar 94.41 32 P **P** **11 34 36.1 -0.7**
comp=Z,12nm,1.1s,baz=231,slow=5.3,SNR=9.9
SUMG Summit 95.05 9 IAmb IAmb 11 34 43.3
comp=Z,20nm,1.2s
SUMG Summit 95.05 9 *i* P **P** **11 34 40.8 +0.9**
comp=Z,40nm,1.1s
BMRD Maredsous 96.46 39 P **P** **11 34 45.6 -0.7**
BMRD Maredsous 96.46 39 pP pP 11 34 50.4 -3.2
C36M Paulatuk 97.00 343 P Pdif 11 34 49.9 +1.5
baz=131
WLF Walferdange 97.03 40 P **P** **11 34 49.1 +0.1**
ECH Echery 97.08 41 IAmb IAmb 11 34 50.1
comp=Z,13nm,1.2s
INK Inuvik 99.15 340 P **Pdif** **11 34 58.0 +0.1**
comp=Z,4.7nm,1.0s,baz=87,slow=4.6,SNR=8.3
INK Inuvik 99.15 340 IAmb IAmb 11 35 10.7
comp=Z,7.7nm,1.0s
CLL Collm 101.70 40 *e*Pdif **Pdif** **11 35 11.0 +1.2**
ILAR Nelson Array 102.34 335 P **Pdif** **11 35 11.9 -0.4**
comp=Z,0.3nm,0.8s,baz=156,slow=3.8,SNR=4.3
ILAR PP **PP** **11 39 28.1 +2.9**
comp=Z,1.9nm,1.1s,baz=102,slow=6.1,SNR=7.4
MDM Murphy Dome 102.95 335 IAMs_20 IAMs_20 12 16 40.0
comp=Z,3μm,22.0s
AKASG Malin Array Be 111.60 42 PP **PP** **11 40 28.6 -4.8**
comp=Z,0.2nm,0.3s,baz=258,slow=6.5,SNR=4.3
BRTR Keskin Array B 113.47 55 PKiKP **PKiKP** **11 39 56.3 +0.6**
comp=Z,2.4nm,1.0s,baz=194,slow=4.7,SNR=9.0
BRTR PP **PP** **11 40 47.6 +0.2**
comp=Z,0.9nm,0.8s,baz=313,slow=2.9,SNR=4.0
ASF Jabal al Asfar 115.03 63 PKP **PKiKP** **11 39 59.7 +0.9**
comp=Z,4.1nm,0.9s,baz=80,slow=2.6,SNR=3.4
KBZ Khabaz 120.62 51 PKP **PKiKP** **11 40 10.1 +1.0**
comp=Z,13nm,1.0s,baz=241,slow=3.3,SNR=15
RAYN Ar Rayn 121.15 74 **PKiKP** **11 40 11.3 +0.4**
H11S2 WAKE ISLAND Hyl 26.01 279 T T 13 59 42.1
baz=101,slow=74,SNR=430
H11S1 WAKE ISLAND Hyl 26.02 279 T T 13 59 42.3
baz=101,slow=74,SNR=340
H11S3 WAKE ISLAND Hyl 26.03 279 T T 13 59 49.8
baz=101,slow=74,SNR=239
H11N3 WAKE ISLAND Hyl 26.07 280 T T 13 59 52.7
baz=96,slow=74,SNR=116
H11N2 WAKE ISLAND Hyl 26.08 280 T T 13 59 47.1
baz=96,slow=74,SNR=99
H11N1 WAKE ISLAND Hyl 26.08 280 T T 13 59 14.3
baz=96,SNR=84
TIXI Tiksi 127.29 352 PKP **PKiKP** **11 40 21.3 -0.2**
comp=Z,1.7nm,0.6s,baz=331,slow=6.2,SNR=3.3
TIXI Tiksi 127.29 352 **PKiKP** **11 40 21.1 -0.5**
ARU Arti 128.01 33 **PKiKP** **11 40 23.7 +0.3**
SEY Seymchan 128.23 337 PKP **PKiKP** **11 40 24.2 +0.5**
comp=Z,7.5nm,1.0s,baz=107,slow=2.8,SNR=17
NRIK Noril'sk 129.09 10 PKP **PKiKP** **11 40 25.3 +0.1**
comp=Z,1.0nm,0.3s,baz=102,slow=5.4,SNR=3.5
AKTO Aktyubinsk 129.78 40 PKP **PKiKP** **11 40 27.2 0.0**
comp=Z,9.6nm,1.1s,baz=293,slow=2.5,SNR=9.1
AKTO SKPbc SKPbc 11 43 47.5 +0.1
comp=Z,0.7nm,0.4s,baz=322,slow=5.5,SNR=3.5
AS31 Alice Springs 130.23 210 **PKiKP** **11 40 28.2 -0.9**
ASAR Alice Springs 130.23 210 PKP **PKiKP** **11 40 28.9 -0.1**
comp=Z,5.9nm,1.1s,baz=155,slow=2.3,SNR=20
PETK Petropavlovsk- 130.51 324 PKP **PKiKP** **11 40 29.4 +0.8**
comp=Z,5.0nm,1.0s,baz=194,slow=5.5,SNR=6.1
GEYT Alibeck 132.53 57 PKP **PKiKP** **11 40 33.4 +0.2**
comp=Z,2.8nm,0.8s,baz=262,slow=10,SNR=7.2
WR0 Warramunga Arr 133.04 213 **PKiKP** **11 40 34.3 -0.5**
WR9 Warramunga Arr 133.06 213 IAMs_20 IAMs_20 12 30 14.7
comp=Z,460nm,21.0s
WRA Warramunga Arr 133.16 213 PKP **PKiKP** **11 40 34.9 -0.1**
comp=Z,7.0nm,1.2s,baz=146,slow=1.8,SNR=12
WRA SKPbc **SKPab** **11 44 00.4 -1.8**
comp=Z,2.6nm,1.0s,baz=142,slow=2.1,SNR=9.3
WB5 Warramunga Arr 133.20 213 IAMs_20 IAMs_20 12 23 44.5
comp=Z,2μm,18.0s
WB6 Warramunga Arr 133.22 213 IAMs_20 IAMs_20 12 47 17.0
comp=Z,2μm,22.0s
BVAR Borovoye Array 135.66 33 PKP **PKiKP** **11 40 37.9 -1.1**
comp=Z,2.7nm,0.8s,baz=285,slow=2.9,SNR=12
KURK Kurchatov 141.13 31 **PKiKP** **11 40 49.1 -1.1**
KURBB Kurchatov Arra 141.15 31 PKhKP PKPpre 11 40 41.3
comp=Z,0.4nm,0.3s,baz=275,slow=24,SNR=2.6
KURBB PKP **PKiKP** **11 40 48.9 -1.4**
comp=Z,1.7nm,0.4s,baz=304,slow=2.5,SNR=8.4
ZALV Zalesovo Beam 141.47 23 PKhKP PKPpre 11 40 43.3
comp=Z,2.6nm,0.6s,baz=308,slow=4.9,SNR=9.5
ZALV SKPbc **SKiKP** **11 44 24.2 -1.4**
comp=Z,2.8nm,0.8s,baz=286,slow=5.4,SNR=3.6
GAR Garm 141.65 52 **PKiKP** **11 40 50.0 -1.8**
AAK Ala-Archa 143.22 45 PKP **PKPdf** **11 40 51.0 -0.8**
comp=Z,11nm,1.1s,baz=222,slow=2.9,SNR=9.7
AAK Ala-Archa 143.22 45 **PKPdf** **11 40 51.3 -0.4**
KDJ Kajisay 145.22 44 **PKPdf** **11 40 55.1 -0.2**
MAKZ Makanchi 145.36 34 **PKPab** **11 40 55.1 -0.1**
NIL Nilore 145.39 60 **PKPab** **11 40 55.5 -0.3**
MK31 Makanchi Array 145.53 33 **PKPab** **11 40 55.6 -0.2**
MKAR Makanchi Array 145.53 33 PKPbc **PKPab** **11 40 55.2 -0.6**
comp=Z,72nm,1.0s,baz=321,slow=1.6,SNR=248
KSH Kashi 145.57 49 PKPbc **PKPab** **11 40 57.2 +0.9**
KSH PP **PP** **11 44 18.4 +1.9**
KSH SKKS 11 51 10.3
KSH SS SS 12 03 10.2 +2.0
KSH LR LR
comp=Z,200nm,7.6s
KSH LR LR
comp=Z,170nm,9.1s
KSH LR LR
comp=Z,290nm,11.0s
FAKI Fak Fak 147.81 227 PKPdf **PKPdf** **11 40 59.0 -1.3**
TLY Talaya 148.27 7 PKPbc **PKiKP** **11 41 04.9 0.0**
comp=Z,2.9nm,0.5s,baz=34,slow=1.1,SNR=16
TLY Talaya 148.27 7 **PKPbc** **11 41 01.8 -1.4**
BHK Bhakra 148.50 63 *ex* **PKPab** **11 41 07.4 -0.5**
USRK Ussuriysk Ar. 149.50 327 PKPbc **PKiKP** **11 41 08.1 +0.5**
comp=Z,20nm,1.0s,baz=37,slow=1.6,SNR=16
HIA Hailar 149.81 346 **PKiKP** **11 41 08.1 0.0**
MJAR Matsushiro Arr 149.93 309 PKPbc **PKiKP** **11 41 08.8 0.0**
comp=Z,16nm,1.1s,baz=135,slow=1.1,SNR=24
MAJO Matsushiro 149.93 309 **PKiKP** **11 41 08.3 -0.5**
MAT Matsushiro 149.93 309 *e*PKP **PKPbc** **11 41 05.7 -2.2**
WMQ Urumqi 150.35 33 *e*PKPbc **PKPdf** **11 41 02.6 -0.9**
WMQ LR LR
WMQ comp=Z,420nm,20.5s
WMQ LR LR
comp=Z,870nm,14.7s
WMQ LR LR
comp=Z,780nm,14.7s
HYB Hyderabad 150.81 90 *i* PKP **PKPdf** **11 41 06.0 +1.1**
JAGI Jajag, Banyuwa 151.11 190 **PKPbc** **11 41 10.4 -0.9**
SONM Songino Array 152.33 4 PKP **PKPdf** **11 41 08.2 +1.7**
comp=Z,3.2nm,1.0s,baz=168,slow=0.6,SNR=16
SONM PKPbc **pPKPdf** **11 41 14.6 +0.7**
comp=Z,12nm,1.0s,baz=325,slow=1.2,SNR=36
ULN Ulaanbaatar 152.34 3 **PKPdf** **11 41 07.8 +1.2**
ULN PKPbc **pPKPdf** **11 41 14.7 +0.8**
CISI Cisompet, Garu 152.38 177 **PKiKP** **11 41 14.5 -0.1**
LEM Lembang 153.10 176 PKP **PKPdf** **11 41 10.4 +1.7**
comp=Z,6.8nm,0.5s,baz=333,slow=24,SNR=1.3
LEM PKPbc **pPKPdf** **11 41 16.8 +0.7**
comp=Z,79nm,1.2s,baz=39,slow=1.6,SNR=5.7
KSRS Korea Array 156.35 321 PKP **PKPdf** **11 41 14.1 +1.9**
comp=Z,4.6nm,1.1s,baz=11,slow=1.5,SNR=11
GTA Gaotai 159.19 21 PKP **PKPdf** **11 41 17.8 +1.9**
GTA PKPab **PKPab** **11 41 53.4 +0.6**
HHC Hu-ho-hao-te 159.32 355 *e*PKP **PKPdf** **11 41 17.0 +1.0**
KSM Kuching 161.36 183 PKPdf **PKPdf** **11 41 18.6 -0.3**
LZH Lanzhou 163.47 16 *e*PKP **PKPdf** **11 41 14.7 -5.9**
LZH pPKP pPKPdf 11 41 24.8 -3.2
LZH sPKP 11 41 27.8
LZH LR LR
comp=Z,98nm,18.0s
LZH LR LR
comp=Z,100nm,18.2s
NJ2 Nanjing 165.40 326 *e*PKP **PKPdf** **11 41 20.6 -1.5**
CD2 Chengdu 168.23 24 PKP **PKPdf** **11 41 22.4 -2.0**
WHN Wuhan 168.72 337 PKP **PKPdf** **11 41 25.5 +0.9**
GYA Guiyang 173.32 21 *i* PKP **PKPdf** **11 41 21.3 -6.0**
GYA PKPab **PKPab** **11 42 55.9 +0.6**
GYA PP **PP** **11 46 51.9 +6.0**
GYA SS SS 12 08 05.9 +6.4
GYA AMB AMB
comp=Z,3μm,17.5s
GYA LR LR
comp=Z,320nm,15.4s
GYA LR LR
comp=Z,300nm,12.9s
GYA LR LR
comp=Z,340nm,17.1s

IDC ***05*** *11:22:17.4±0.8, 19°.71N×99°.81E, h0km, mb4.1/18, mb1 4.2/18, mb1mx4.0/64, mbtmp4.1/18, Error ellipse: s-maj=21.5km s-min=11.6km az=99.0*
NEIC ***05*** *11:22:18.6±1.2, 19°.64N±0°.06×99°.70E±0°.06, h10km±1km, mb4.3/10, Error ellipse: s-maj=13.4km s-min=3.2km az=136.0*

ISC 05 11:22:18.5±0.6, 19°.63N±0°.06×99°.76E±0°.08, h10km, n34, σ0°.85/36, mb4.2/23, Thailand

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHTO	**Chiang Mai**	**1.12**	**224**	Pn	**Pb**	**11 22 39.8**	**-0.1**
CHTO					**Sg**	**11 22 53.6**	**-1.0**
CM31	**Chiang Mai Arr**	**1.40**	**214**	Pn	**Pn**	**11 22 42.6**	**-1.5**
CM31				Sn	**Sb**	**11 23 03.5**	**+0.8**
CMAR	**Chiang Mai Arr**	**1.40**	**214**	Pg	**Pn**	**11 22 45.5**	**+1.4**
CMAR	667nm,0.3s,baz=12,slow=16,SNR=18			Lg	Lg	11 23 04.5	
SHL	1μm,0.3s,baz=78,slow=11,SNR=20 **Shillong**	**9.37**	**311**	Pn	**Pn**	**11 24 33.9**	**+0.1**
HKPS	**Hong Kong Po S**	**13.70**	**76**	Pn	**Pn**	**11 25 32.3**	**-0.6**
PSI	**Prapat**	**16.75**	**183**	Pn	**Pn**	**11 26 13.4**	**0.0**
	1.0nm,0.3s,baz=360,slow=11,SNR=7.3						
RPSI	**Rantau Prapat**	**16.85**	**183**	Pn	**Pn**	**11 26 13.3**	**-1.4**
RPSI				IAmb	IAmb	11 26 29.8	
SONM	comp=Z,8.4nm,1.0s **Songino Array**	**28.65**	**9**	P	**P**	**11 28 14.5**	**-1.0**
	comp=Z,1.3nm,0.7s,baz=216,slow=7.1,SNR=3.9						
KDJ	**Kajisay**	**29.47**	**325**	P	**P**	**11 28 23.0**	**+0.1**
KDJ				IAmb	IAmb	11 28 26.7	
MK31	comp=Z,6.6nm,0.9s **Makanchi Array**	**30.64**	**336**	P	**P**	**11 28 32.8**	**-0.2**
MK31				IAmb	IAmb	11 28 38.0	
MKAR	comp=Z,4.8nm,1.4s **Makanchi Array**	**30.64**	**336**	P	**P**	**11 28 33.6**	**+0.6**
	comp=Z,2.8nm,0.8s,baz=147,slow=9.6,SNR=7.2						
AAK	**Ala-Archa**	**31.30**	**323**	P	**P**	**11 28 39.7**	**+0.7**
	comp=Z,7.0nm,1.0s,baz=178,slow=4.7,SNR=5.1						
AAK	**Ala-Archa**	**31.30**	**323**	Pn	**P**	**11 28 39.0**	**-0.1**
KURBB	**Kurchatov Arra**	**35.20**	**336**	P	**P**	**11 29 12.4**	**-0.3**
	comp=Z,1.4nm,0.4s,baz=139,slow=8.8,SNR=4.8						
KURK	**Kurchatov**	**35.24**	**337**	P	**P**	**11 29 12.3**	**-0.8**
KURK				IAmb	IAmb	11 29 15.9	
ZALV	comp=Z,5.0nm,0.8s **Zalesovo Beam**	**36.13**	**345**	P	**P**	**11 29 20.7**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=315,slow=23,SNR=2.7						
BVAR	**Borovoye Array**	**40.33**	**333**	P	**P**	**11 29 55.5**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=130,slow=10,SNR=6.6						
AKTO	**Aktyubinsk**	**45.05**	**323**	P	**P**	**11 30 34.5**	**+0.1**
	comp=Z,3.2nm,0.9s,baz=99,slow=6.9,SNR=4.6						
ARU	**Arti**	**47.80**	**330**	P	**P**	**11 30 57.2**	**+1.3**
	comp=Z,1.1nm,0.3s,baz=146,slow=12,SNR=4.6						
ARU	**Arti**	**47.80**	**330**	P	**P**	**11 30 55.7**	**-0.2**
NRIK	**Noril'sk**	**50.27**	**354**	P	**P**	**11 31 15.6**	**+0.9**
	comp=Z,2.8nm,0.4s,baz=145,slow=5.1,SNR=3.6						
WB0	**Warramunga Arr**	**51.82**	**137**	P	**P**	**11 31 27.4**	**+0.4**

WB0				IAmb	IAmb	11 31 45.2	
	comp=Z,9.1nm,1.4s						
WRA	**Warramunga Arr**	**51.91**	**137**	P	**P**	**11 31 28.1**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=324,slow=7.9,SNR=5.0						
AS31	**Alice Springs**	**54.41**	**141**	P	**P**	**11 31 47.0**	**+0.9**
ASAR	**Alice Springs**	**54.41**	**141**	P	**P**	**11 31 47.0**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=321,slow=7.4,SNR=7.1						
TIXI	**Tiksi**	**54.72**	**11**	P	**P**	**11 31 47.8**	**+0.1**
TIXI				IAmb	IAmb	11 32 00.7	
	comp=Z,6.9nm,1.5s						
BRTR	**Keskin Array B**	**59.54**	**305**	P	**P**	**11 32 22.1**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=128,slow=8.1,SNR=3.7						
MLR	**Muntele Rosu**	**65.03**	**312**	P	**P**	**11 33 00.8**	**+1.6**
	comp=Z,3.4nm,0.8s,baz=112,slow=12,SNR=3.0						
STKA	**Stephens Creek**	**65.04**	**141**	P	**P**	**11 32 59.9**	**+0.7**
FINES	**FINESS Array B**	**65.16**	**329**	P	**P**	**11 33 01.1**	**+1.7**
	comp=Z,1.1nm,0.5s,baz=65,slow=11,SNR=5.2						
ARCES	**ARCESS Array B**	**66.26**	**338**	P	**P**	**11 33 05.6**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=66,slow=2.9,SNR=4.7						
NOA	**NORSAR Array B**	**72.34**	**329**	P	**P**	**11 33 43.9**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=82,slow=5.9,SNR=3.7						
GERES	**GERESS Array B**	**72.93**	**316**	P	**P**	**11 33 47.3**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=72,slow=5.7,SNR=4.0						
DAVOX	**Davos/Dischmat**	**75.88**	**315**	P	**P**	**11 34 06.1**	**+0.6**
	comp=Z,3.5nm,0.6s,baz=114,slow=9.4,SNR=5.1						

*NEIC **05** 11:52:43.7±1.3, 14.°19S±0.°10×172.°4E±0.°1, h594^{km}±8^{km}, mb4.7/51, Error ellipse: s-maj=14.3km s-min=14.0km az=149.0*

*BJI **05** 11:52:43.0±0.0, 14.°30S×172.°40E, h609^{km}, mB5.2/3, mb4.5/8*

*IDC **05** 11:52:44.3±1.2, 14.°27S×172.°36E, h600^{km}±15^{km}, mb3.8/17, mb1 4.0/19, mb1mx3.6/52, mbtmp4.8/19, Error ellipse: s-maj=14.8km s-min=10.2km az=156.0*

ISC 05 11:52:44.2±0.4**, 14.°20S**±0.°07×**172.°38E**±0.°06**, h604**^{km}**, n115, σ0.°78**/121**, mb4.6**/42**, 1C, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.48**	**124**	P	**P**	**11 54 30.1**	**+0.3**
FUNA	**Funafuti**	**8.74**	**51**	P	**P**	**11 54 49.0**	**-1.8**
DZM	**Mont Dzumac**	**9.65**	**215**	P	**P**	**11 55 00.4**	**+0.8**
	11nm,0.3s,baz=46,slow=23,SNR=97						
DZM	**Mont Dzumac**	**9.65**	**215**	P	**P**	**11 55 00.1**	**+0.4**
HNR	**Honiara**	**13.06**	**290**	P	**P**	**11 55 32.5**	**-1.2**
	12nm,0.3s,baz=39,slow=0.7,SNR=6.2						
AFI	**Afiamalu**	**15.37**	**91**	P	**P**	**11 55 55.8**	**0.0**
TARA	**Tarawa**	**15.46**	**2**	P	**P**	**11 55 57.0**	**+0.4**
TARA				IAmb	IAmb	11 55 57.1	
	comp=Z,27nm,0.7s						
KNTN	**Kanton**	**19.37**	**56**	P	**P**	**11 56 30.9**	**-1.4**
KNTN				IAmb	IAmb	11 56 31.6	
	comp=Z,16nm,0.7s						
OUZ	**Omahuta**	**20.96**	**177**	P	**P**	**11 56 47.5**	**+1.3**
OUZ				IAmb	IAmb	11 56 56.9	
	comp=Z,38nm,1.3s						
KRVT	**Keravat (AS076**	**22.35**	**294**	P	**P**	**11 56 59.1**	**+0.1**
	comp=Z,13nm,0.6s,baz=18,slow=10.0,SNR=4.2						
EIDS	**Eidsvold**	**22.88**	**238**	P	**P**	**11 57 03.3**	**-0.3**
	baz=23,SNR=7.5						
EIDS	**Eidsvold**	**22.88**	**238**	P	**P**	**11 57 03.0**	**-0.5**
EIDS				IAmb	IAmb	11 57 03.7	
	comp=Z,8.9nm,0.7s						
ARMA	**Armidale**	**25.01**	**226**	P	**P**	**11 57 23.1**	**+0.7**
	baz=25,SNR=12						
ARMA	**Armidale**	**25.01**	**226**	P	**P**	**11 57 22.9**	**+0.4**
ARMA				IAmb	IAmb	11 57 24.3	
	comp=Z,37nm,1.4s						
PATS	**Pohnpei**	**25.14**	**325**	P	**P**	**11 57 23.8**	**+0.3**
RMQ	**Roma**	**25.25**	**237**	P	**P**	**11 57 25.2**	**+0.8**
	baz=25,SNR=26						
CTA	**Charters Tower**	**25.63**	**253**	P	**P**	**11 57 27.9**	**0.0**
	comp=Z,11nm,0.6s,baz=82,slow=11,SNR=30						
CTAO	**Charters Tower**	**25.63**	**253**	P	**P**	**11 57 28.1**	**+0.2**
CTAO				IAmb	IAmb	11 57 29.0	
	comp=Z,12nm,0.7s						
QRZ	**Quartz Range**	**26.53**	**180**	P	**P**	**11 57 35.4**	**0.0**
MGCD	**Mangrove Creek**	**27.06**	**222**	P	**P**	**11 57 41.2**	**+0.9**
	baz=27,SNR=9.4						
MTSU	**Mount Surprise**	**27.23**	**258**	P	**P**	**11 57 42.5**	**+0.6**
	baz=27,SNR=6.1						
THZ	**Tophouse**	**27.47**	**179**	P	**P**	**11 57 43.4**	**-0.3**
COEN	**Coen**	**28.33**	**267**	P	**P**	**11 57 51.5**	**-0.1**
COEN				IAmb	IAmb	11 57 52.1	
	comp=Z,17nm,1.3s						
QLP	**Quilpie**	**29.04**	**240**	P	**P**	**11 57 57.6**	**0.0**
	baz=29,SNR=37						
YNG	**Young**	**29.51**	**223**	P	**P**	**11 58 01.9**	**+0.4**
	baz=30,SNR=5.8						
CNB	**Canberra Magne**	**29.51**	**220**	P	**P**	**11 58 02.2**	**+0.7**
	baz=30,SNR=32						
CAN	**Canberra**	**29.75**	**221**	P	**P**	**11 58 03.8**	**+0.2**
CAN				IAmb	IAmb	11 58 04.7	
	comp=Z,28nm,1.0s						
CMSA	**Cobar Meteorol**	**29.92**	**230**	P	**P**	**11 58 05.1**	**0.0**
	baz=30,SNR=37						
MILA	**Mila**	**30.77**	**218**	P	**P**	**11 58 13.0**	**+0.7**
	baz=31,SNR=3.6						
QIS	**Mount Isa**	**31.88**	**254**	P	**P**	**11 58 21.8**	**-0.1**
	baz=32,SNR=11						
STKA	**Stephens Creek**	**33.18**	**233**	P	**P**	**11 58 33.2**	**+0.5**
	baz=33,SNR=64						
STKA	**Stephens Creek**	**33.18**	**233**	P	**P**	**11 58 33.2**	**+0.5**
	comp=Z,20nm,0.5s,baz=59,slow=8.5,SNR=68						
STKA				ScP	**ScP**	**12 03 46.4**	**+1.4**
	comp=Z,1.9nm,0.7s,baz=68,slow=8.8,SNR=3.9						
STKA	**Stephens Creek**	**33.18**	**233**	P	**P**	**11 58 33.1**	**+0.5**
STKA				IAmb	IAmb	11 58 33.6	
	comp=Z,4.9nm,0.6s						
STKA					**ScP**	**12 03 47.0**	**+1.9**
TOO	**Toolangi**	**33.36**	**221**	P	**P**	**11 58 34.8**	**+0.6**
	baz=33,SNR=16						
TOO	**Toolangi**	**33.36**	**221**	P	**P**	**11 58 34.6**	**+0.4**
JAY	**Jayapura**	**33.37**	**287**	P	**P**	**11 58 34.2**	**-0.4**
	comp=Z,5.0nm,1.0s,baz=118,slow=5.9,SNR=4.3						
JAY	**Jayapura**	**33.37**	**287**	P	**P**	**11 58 33.9**	**-0.7**
ARPS	**Mount Arapiles**	**35.32**	**225**	P	**P**	**11 58 51.0**	**+0.6**
	baz=35,SNR=10						
MOO	**Moorlands**	**35.56**	**213**	P	**P**	**11 58 53.2**	**+0.8**
	baz=36,SNR=4.2						
TAU	**Tasmania Unive**	**35.83**	**212**	P	**P**	**11 58 54.5**	**+0.1**
HTT	**Hallett**	**35.88**	**232**	P	**P**	**11 58 55.2**	**+0.1**
	baz=36,SNR=23						
WR0	**Warramunga Arr**	**36.57**	**256**	P	**P**	**11 59 00.3**	**-0.7**
WR0				IAmb	IAmb	11 59 01.2	
	comp=Z,11nm,0.8s						
WB0	**Warramunga Arr**	**36.70**	**256**	P	**P**	**11 59 01.5**	**-0.5**
PPT	**Papeete**	**36.70**	**100**	P	**P**	**11 59 01.6**	**-0.5**
	comp=Z,24nm,0.8s,baz=3.6,slow=3.6,SNR=5.1						
PPTF	**Pamatai, Papee**	**36.71**	**100**	P	**P**	**11 59 02.4**	**+0.2**
WB2	**Warramunga Arr**	**36.75**	**256**	P	**P**	**11 59 01.8**	**-0.6**
WB2				IAmb	IAmb	11 59 02.7	
	comp=Z,28nm,0.8s						
WRAB	**Tennant Creek**	**36.75**	**256**	P	**P**	**11 59 01.9**	**-0.6**
WRAB				IAmb	IAmb	11 59 02.6	
	comp=Z,28nm,0.9s						
WRA	**Warramunga Arr**	**36.76**	**256**	P	**P**	**11 59 01.8**	**-0.7**
	comp=Z,22nm,0.7s,baz=87,slow=8.6,SNR=144						
WRA				ScP	**ScP**	**12 03 59.9**	**+1.5**
	comp=Z,1.1nm,0.6s,baz=88,slow=3.9,SNR=6.3						
AS31	**Alice Springs**	**37.49**	**250**	P	**P**	**11 59 08.3**	**-0.2**
AS31				IAmb	IAmb	11 59 08.9	
	comp=Z,21nm,0.5s						
ASAR	**Alice Springs**	**37.49**	**250**	P	**P**	**11 59 08.2**	**-0.4**
	comp=Z,44nm,0.6s,baz=78,slow=9.0,SNR=1206						
ASAR				ScP	**ScP**	**12 04 02.5**	**+1.4**
	comp=Z,1.7nm,0.7s,baz=87,slow=4.2,SNR=7.2						
ASAR				S	**S**	**12 04 13.3**	**-2.4**
	comp=Z,2.8nm,0.8s,baz=81,slow=16,SNR=14						
BBOO	**Buckleboo**	**37.87**	**234**	P	**P**	**11 59 11.4**	**+0.1**
	baz=38,SNR=79						
BBOO	**Buckleboo**	**37.87**	**234**	P	**P**	**11 59 11.3**	**0.0**
KDU	**Kakadu**	**38.82**	**267**	P	**P**	**11 59 19.5**	**+0.3**
	baz=39,SNR=7.3						
MTN	**Manton Dam**	**40.09**	**267**	P	**P**	**11 59 29.6**	**+0.2**
	baz=40,SNR=11						
MTN	**Manton Dam**	**40.09**	**267**	P	**P**	**11 59 29.9**	**+0.4**
MTN				IAmb	IAmb	11 59 30.4	
	comp=Z,23nm,0.7s						
FAKI	**Fak Fak**	**41.16**	**282**	P	**P**	**11 59 37.8**	**-0.1**
FAKI				IAmb	IAmb	11 59 49.8	
	comp=Z,17nm,1.2s						
KNRA	**Kununurra**	**42.12**	**262**	P	**P**	**11 59 45.3**	**0.0**
	baz=42,SNR=13						
KNRA	**Kununurra**	**42.12**	**262**	P	**P**	**11 59 45.4**	**0.0**
WRKA	**Warakurna**	**42.73**	**248**	P	**P**	**11 59 50.4**	**+0.2**
	baz=43,SNR=56						
FORT	**Forrest**	**43.84**	**240**	P	**P**	**11 59 58.3**	**-0.2**
	baz=44,SNR=64						
FORT	**Forrest**	**43.84**	**240**	P	**P**	**11 59 58.4**	**-0.2**
FITZ	**Fitzroy Crossi**	**44.98**	**259**	P	**P**	**12 00 08.1**	**+0.6**
	baz=45,SNR=12						
FITZ	**Fitzroy Crossi**	**44.98**	**259**	P	**P**	**12 00 08.0**	**+0.6**
	comp=Z,8.9nm,0.5s,baz=88,slow=7.7,SNR=47						
FITZ	**Fitzroy Crossi**	**44.98**	**259**	P	**P**	**12 00 07.8**	**+0.4**
FITZ				IAmb	IAmb	12 00 09.9	
	comp=Z,19nm,1.1s						
SOEI	**Soe**	**47.21**	**270**	P	**P**	**12 00 25.5**	**+1.0**
SOEI	**Soe**	**47.21**	**270**	P	**P**	**12 00 25.9**	**+1.4**
SOEI				IAmb	IAmb	12 00 30.2	
	comp=Z,19nm,0.7s						
BATI	**Baumata**	**47.72**	**269**	P	**P**	**12 00 30.1**	**+1.9**
	comp=Z,51nm,0.5s,baz=146,slow=3.5,SNR=14						
BATI	**Baumata**	**47.72**	**269**	P	**P**	**12 00 29.4**	**+1.2**
	comp=Z,42nm,0.5s						
EDFI	**Ende, Flores**	**49.90**	**270**	P	**P**	**12 00 43.9**	**-0.4**
	comp=Z,13nm,0.9s						
PSA00	**Pilbara Seismi**	**50.34**	**254**	P	**P**	**12 00 47.5**	**+0.2**
PSA00				IAmb	IAmb	12 00 48.3	
	comp=Z,43nm,1.2s						
MEEK	**Meekatharra**	**51.56**	**247**	P	**P**	**12 00 55.9**	**-0.2**
	baz=52,SNR=11						
KLBR	**Kellerberrin**	**52.69**	**241**	P	**P**	**12 01 03.6**	**-0.5**
	baz=53,SNR=22						
NWAO	**Narrogin (SRO)**	**53.28**	**239**	P	**P**	**12 01 07.1**	**-1.1**
	baz=53,SNR=6.1						
NWAO	**Narrogin (SRO)**	**53.28**	**239**	P	**P**	**12 01 07.7**	**-0.5**
	comp=Z,31nm,0.5s,baz=100,slow=5.4,SNR=52						
NWAO	**Narrogin (SRO)**	**53.28**	**239**	P	**P**	**12 01 07.8**	**-0.5**
NWAO				IAmb	IAmb	12 01 08.1	
	comp=Z,26nm,0.6s						
BLDU	**Ballidu**	**53.49**	**242**	P	**P**	**12 01 09.6**	**-0.1**
	baz=53,SNR=8.6						
PLAI	**Plampang**	**53.68**	**269**	P	**P**	**12 01 10.9**	**-0.4**
	comp=Z,26nm,0.8s						
MORW	**Morawa**	**53.96**	**244**	P	**P**	**12 01 12.8**	**-0.2**
	baz=54,SNR=16						
MORW	**Morawa**	**53.96**	**244**	P	**P**	**12 01 12.7**	**-0.3**
MORW				IAmb	IAmb	12 01 13.7	
	comp=Z,32nm,1.2s						
MUN	**Mundaring**	**54.04**	**241**	P	**P**	**12 01 13.7**	**+0.1**
	baz=54,SNR=9.5						
GIRL	**Giralia**	**55.52**	**252**	P	**P**	**12 01 24.7**	**+0.7**
MJAR	**Matsushiro Arr**	**59.89**	**328**	P	**P**	**12 01 52.7**	**-0.5**
	comp=Z,2.9nm,0.8s,baz=154,slow=6.5,SNR=6.6						
MAJO	**Matsushiro**	**59.89**	**328**	P	**P**	**12 01 52.9**	**-0.3**
UGM	**Wanagama**	**60.89**	**269**	P	**P**	**12 02 00.2**	**-0.2**
UGM				IAmb	IAmb	12 02 04.3	
	comp=Z,72nm,1.4s						
JNU	**Nakatsue**	**61.52**	**321**	P	**P**	**12 02 04.3**	**+0.3**
JNU				IAmb	IAmb	12 02 21.1	
	comp=Z,21nm,1.3s						
VNDA	**Vanda**	**63.55**	**183**	P	**P**	**12 02 15.7**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=334,slow=9.4,SNR=8.3						
VNDA	**Vanda**	**63.55**	**183**	P	**P**	**12 02 16.0**	**-0.3**
CISI	**Cisompet, Garu**	**63.59**	**269**	P	**P**	**12 02 17.1**	**-0.6**
CISI				IAmb	IAmb	12 02 18.5	
	comp=Z,20nm,0.6s						
LEM	**Lembang**	**63.94**	**269**	P	**P**	**12 02 20.6**	**+0.6**
	comp=Z,21nm,0.5s,baz=311,slow=19,SNR=5.1						
CASY	**Casey**	**65.92**	**203**	P	**P**	**12 02 31.0**	**-0.3**
CASY				IAmb	IAmb	12 02 31.5	
	comp=Z,12nm,0.6s						
PET	**Petropavlovsk**	**67.99**	**351**	P	**P**	**12 02 44.3**	**+0.3**
PET				IAmb	IAmb	12 02 48.5	
	comp=Z,16nm,1.1s						
PEA0B	**Petropavlovsk-**	**68.22**	**351**	P	**P**	**12 02 46.1**	**+0.6**
PEA0B				IAmb	IAmb	12 02 46.9	
	comp=Z,13nm,1.0s						
PETK	**Petropavlovsk-**	**68.22**	**351**	P	**P**	**12 02 46.5**	**+1.0**
	comp=Z,4.9nm,0.8s,baz=148,slow=5.3,SNR=17						
NJ2	**Nanjing**	**68.85**	**313**	*e*P	**P**	**12 02 50.5**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
GYA	**Guiyang**	**75.55**	**302**	*e*P	**P**	**12 03 25.8**	**-2.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
QSPA	**South Pole Qui**	**75.83**	**180**	P	**P**	**12 03 28.9**	**-0.6**
HHC	**Hu-ho-hao-te**	**78.47**	**317**	P	**P**	**12 03 44.5**	**+0.4**
HHC				pmax	pmax		
	comp=Z,900nm,7.9s						
YBH	**Yreka Blue Hor**	**81.59**	**43**	P	**P**	**12 04 01.1**	**+0.7**
LZH	**Lanzhou**	**81.69**	**310**	*e*P	**P**	**12 04 02.6**	**+1.5**
LZH				pP	pwP	12 06 10.1	-0.7
LZH				sP	sP	12 07 08.6	+0.6
LZH				PP	**PP**	**12 07 21.6**	**+1.9**
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,63nm,4.3s						
BEKR	**Beckworth**	**82.36**	**46**	P	**P**	**12 04 04.3**	**-0.1**
PAHR	**Pah Rah Range**	**82.97**	**46**	P	**P**	**12 04 08.2**	**+0.8**
NVAR	**Mina Array Bea**	**83.21**	**48**	P	**P**	**12 04 09.5**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=228,slow=9.9,SNR=6.8						
K05A	**Summer Lake**	**83.24**	**43**	P	**P**	**12 04 09.5**	**+0.7**
MOD	**Modoc Plateau**	**83.28**	**44**	P	**P**	**12 04 09.2**	**+0.3**
NV11	**Mina Array Sit**	**83.32**	**48**	P	**P**	**12 04 09.9**	**+0.7**
KVN	**Kaiserville**	**83.61**	**47**	P	**P**	**12 04 11.0**	**+0.4**
PINE	**Pine Mountain**	**83.69**	**42**	P	**P**	**12 04 11.6**	**+0.7**
MAW	**Mawson**	**84.20**	**201**	P	**P**	**12 04 12.8**	**+0.1**
SYO	**Syowa Base**	**90.57**	**195**⇑	*e*P	**P**	**12 04 41.5**	**-1.2**
PDAR	**Pinedale Array**	**90.98**	**46**	P	**P**	**12 04 45.4**	**0.0**
	comp=Z,0.1nm,0.4s,baz=160,slow=4.7,SNR=3.5						
TX31	**Lajitas Ar. Si**	**91.69**	**60**	P	**P**	**12 04 49.3**	**+0.5**
TX31				IAmb	IAmb	12 04 50.1	
	comp=Z,2.4nm,0.7s						
TXAR	**Lajitas Array**	**91.69**	**60**	P	**P**	**12 04 49.7**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=220,slow=5.8,SNR=13						
WMQ	**Urumqi**	**95.92**	**314**	*e*P	**P**	**12 05 08.5**	**+0.8**
RCBR	**Riachuelo**	**145.60**	**123**	PKPbc	**PKPbc**	**12 11 17.0**	**-0.4**
	comp=Z,18nm,1.2s,baz=213,slow=7.7,SNR=4.9						
TORD	**Torodi Ar. Bea**	**170.89**	**265**	PKPab	**PKPab**	**12 13 08.0**	**-0.3**
	comp=Z,2.0nm,0.9s,baz=91,slow=3.0,SNR=7.7						

*IDC **05** 11:59:13.4±0.5, 67.°80N×162.°53W, h0^{km}, mb4.2/26, mb1 4.4/29, mb1mx4.3/64, mbtmp4.2/29, ML3.9/3, Error ellipse: s-maj=14.2km s-min=10.0km az=175.0*

*AEIC **05** 11:59:14±1.7, 67.°74N±0.°06×162.°6W±0.°1, h29^{km}±4^{km}, ML4.5/24, mb4.6/68(NEIC), Error ellipse: s-maj=8.5km s-min=7.2km az=164.0*

*NEIC **05** 11:59:14.6±1.6, 67.°69N±0.°04×162.°5W±0.°1, h19^{km}±4^{km}, Error ellipse: s-maj=7.4km s-min=6.4km az=70.0*

ISC 05 11:59:13.3±0.3**, 67.°69N**±0.°05×**162.°50W**±0.°04**, h10**^{km}**, n168, σ1.°23**/173**, mb4.6**/57**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.40**	**337**		**Pb**	**11 59 22.0**	**-0.5**
RDOG				Sg	**Sb**	**11 59 28.1**	**-0.6**
ANM	**Nome**	**3.35**	**202**		**Pn**	**12 00 05.7**	**+0.1**
ANM				Sn	**Sn**	**12 00 44.3**	**-1.0**
IM03		**3.86**	**112**		**Pn**	**12 00 12.8**	**+0.2**
IM05	**Indian Mountai**	**3.87**	**112**		**Pn**	**12 00 13.1**	**+0.3**
IM05					**Sn**	**12 00 57.3**	**-1.0**
PS05	**TAPS Pump Stn5**	**4.68**	**95**		**Pn**	**12 00 23.7**	**-0.2**
COLD	**Coldfoot**	**4.76**	**90**	Pn	**Pn**	**12 00 25.9**	**+0.9**
TOLK	**Toolik Lake Re**	**4.92**	**73**	P	**Pn**	**12 00 27.9**	**+0.6**
	baz=266						
TOLK				S	**Sn**	**12 01 24.8**	**+0.6**
	baz=266						
TOLK	**Toolik Lake Re**	**4.92**	**73**		**Pn**	**12 00 27.7**	**+0.4**
TOLK					**Sn**	**12 01 23.8**	**-0.3**
MLY	**Manley**	**5.43**	**114**		**Pn**	**12 00 34.1**	**-0.2**
GAMB	**Gambell**	**5.46**	**228**	Pn	**Pn**	**12 00 33.9**	**-0.6**
TTA	**Tatalina**	**5.50**	**147**		**Pn**	**12 00 35.8**	**+0.6**
TT01	**Tatalina**	**5.51**	**147**		**Pn**	**12 00 36.0**	**+0.6**
PS01	**TAPS Pump Stn**	**5.62**	**56**		**Pn**	**12 00 37.1**	**+0.3**
BPAW	**Bear Paw Mtn.**	**5.93**	**122**		**Pn**	**12 00 41.2**	**+0.1**
PS07	**TAPS Pump Stn7**	**6.17**	**106**		**Pn**	**12 00 44.8**	**+0.5**
NEA	**Nenana**	**6.27**	**114**		**Pn**	**12 00 46.6**	**+0.8**
KTH	**Kantishna Hill**	**6.33**	**125**		**Pn**	**12 00 47.1**	**+0.4**
MDM	**Murphy Dome**	**6.36**	**109**		**Pn**	**12 00 47.7**	**+0.7**
BWN	**Browne**	**6.39**	**117**		**Pn**	**12 00 48.7**	**+1.4**
PPLA	**Purkeypile**	**6.46**	**133**		**Pn**	**12 00 49.2**	**+0.7**
TCOL	**CIGO, UAF Yank**	**6.54**	**109**	P	**Pn**	**12 00 50.6**	**+1.2**
	baz=302						
TCOL	**CIGO, UAF Yank**	**6.54**	**109**		**Pn**	**12 00 50.3**	**+0.9**
COLA	**College**	**6.54**	**109**		**Pn**	**12 00 50.3**	**+0.8**
COLA				Sn	**Sn**	**12 02 03.9**	**-0.1**
POKR	**Poker Plat Res**	**6.57**	**106**	P	**Pn**	**12 00 50.5**	**+0.6**
	baz=300						
POKR				S	**Sn**	**12 02 05.2**	**+0.4**
	baz=300						
POKR	**Poker Plat Res**	**6.57**	**106**		**Pn**	**12 00 50.0**	**+0.1**
TRF	**Thorofare Moun**	**6.61**	**124**		**Pn**	**12 00 51.2**	**+0.7**
CCB	**Clear Creek Bu**	**6.69**	**110**		**Pn**	**12 00 51.9**	**+0.5**
FYU	**Fort Yukon**	**6.82**	**91**		**Pn**	**12 00 54.4**	**+1.1**
IL31		**6.95**	**108**		**Pn**	**12 00 55.3**	**+0.3**
ILAR	**Eielson Array**	**6.95**	**108**	Pn	**Pn**	**12 00 55.4**	**+0.3**
	21nm,0.3s,baz=303,slow=13,SNR=772						
ILAR				Sn	**Sn**	**12 02 14.7**	**+0.6**
	4.5nm,0.3s,baz=299,slow=24,SNR=7.3						
ILAR				Lg	Lg	12 02 56.7	
	baz=309,slow=31,SNR=4.2						
HDA	**Harding Lake**	**7.13**	**110**	P	**Pn**	**12 00 58.2**	**+0.7**
	baz=305						
HDA	**Harding Lake**	**7.13**	**110**		**Pn**	**12 00 57.6**	**+0.1**
GHO	**Glory Hole Cre**	**8.29**	**129**		**Pn**	**12 01 14.6**	**+1.1**
RSO	**Redoubt South**	**8.40**	**145**		**Pn**	**12 01 15.8**	**+0.6**
SML	**Sawmill**	**8.44**	**128**		**Pn**	**12 01 16.4**	**+0.9**
KNK	**Knik Glacier**	**8.71**	**130**		**Pn**	**12 01 21.0**	**+1.8**
SCM	**Sheep Creek Mo**	**8.73**	**125**		**Pn**	**12 01 20.5**	**+1.0**
EGAK	**Eagle**	**9.08**	**99**		**Pn**	**12 01 24.4**	**+0.2**
BRLK	**Bradley Lake**	**9.45**	**142**	Pn	**Pn**	**12 01 30.9**	**+1.5**
CNPM	**China Poot**	**9.59**	**143**	Pn	**Pn**	**12 01 32.2**	**+1.0**
DAWY	**Dawson**	**10.10**	**100**		**Pn**	**12 01 38.4**	**+0.2**
EPYK	**Eagle Plains**	**10.13**	**85**	P	**Pn**	**12 01 39.9**	**+1.3**
	baz=290						
EPYK	**Eagle Plains**	**10.13**	**85**		**Pn**	**12 01 39.2**	**+0.5**
GLB	**Gilahina Butte**	**10.15**	**119**		**Pn**	**12 01 39.8**	**+0.8**
EYAK	**Cordova Ski Ar**	**10.21**	**127**		**Pn**	**12 01 41.0**	**+1.4**
MCARA	**McCarthy VSAT**	**10.46**	**118**		**Pn**	**12 01 45.4**	**+2.3**
RAGM	**Ragged Mountai**	**10.67**	**125**	Pn	**Pn**	**12 01 47.5**	**+1.5**
INK	**Inuvik**	**10.84**	**73**	Pn	**Pn**	**12 01 47.0**	**-1.2**
	3.4nm,0.3s,baz=275,slow=13,SNR=104						
INK				Sn	**Sn**	**12 03 41.6**	**-7.6**
	0.8nm,0.3s,baz=25,slow=2.3,SNR=3.9						
INK	**Inuvik**	**10.84**	**73**		**Pn**	**12 01 47.1**	**-1.1**
CRQM	**Cirque**	**10.88**	**120**	Pn	**Pn**	**12 01 50.8**	**+1.8**
KDAK	**Kodiak Island**	**10.91**	**151**	Pn	**Pn**	**12 01 51.4**	**+2.1**
	1.0nm,0.3s,baz=1.7,slow=11,SNR=14						
KDAK				Lg	Lg	12 05 04.6	
	0.1nm,0.3s,baz=228,slow=16,SNR=1.6						
KDAK	**Kodiak Island**	**10.91**	**151**		**Pn**	**12 01 50.9**	**+1.6**
OHAK	**Old Harbor**	**11.32**	**154**	Pn	**Pn**	**12 01 56.4**	**+1.6**
BILL	**Bilibino**	**11.71**	**286**		**Pn**	**12 01 59.3**	**-1.0**
HYT	**Haines Junctio**	**12.77**	**111**		**Pn**	**12 02 16.8**	**+1.9**
WHY	**Whitehorse**	**13.83**	**107**		**Pn**	**12 02 30.6**	**+1.3**
C36M	**Paulatuk**	**14.02**	**66**		**Pn**	**12 02 29.2**	**-2.3**
UNV	**Unalaska Valle**	**14.02**	**190**	P	**P**	**12 02 37.1**	**-2.6**
SKAG	**Skagway**	**14.51**	**111**		**Pn**	**12 02 39.0**	**+0.6**
BESE	**Bessie Mountai**	**15.32**	**113**	P	**Pn**	**12 02 51.6**	**+2.2**
JIS	**Juneau Island**	**15.71**	**113**	P	**Pn**	**12 02 55.7**	**+1.3**
DLBC	**Dease Lake**	**17.16**	**107**	P	**P**	**12 03 15.2**	**+0.6**
	0.1nm,0.3s,baz=294,slow=9.8,SNR=5.5						
DLBC				Lg	Lg	12 08 11.9	
	0.0nm,0.3s,baz=239,slow=25,SNR=3.7						
DLBC	**Dease Lake**	**17.16**	**107**	IAmb	IAmb	12 03 21.4	
	comp=Z,12nm,1.0s						
SEY	**Seymchan**	**19.07**	**277**	P	**Pn**	**12 03 37.7**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=88,slow=7.7,SNR=34						
YKA	**Yellowknife Ar**	**20.38**	**82**	P	Pn	12 03 50.7	-1.0
	comp=Z,14nm,0.7s,baz=304,slow=11,SNR=44						
RES	**Resolute Bay**	**21.62**	**42**	P	**P**	**12 04 03.0**	**+0.1**
	comp=Z,4.4nm,0.8s,baz=292,slow=8.2,SNR=6.1						
RES				S	**S**	**12 08 03.5**	**+1.6**
	comp=Z,3.7nm,0.6s,baz=216,slow=14,SNR=5.8						
RES	**Resolute Bay**	**21.62**	**42**	P	**P**	**12 04 02.6**	**-0.3**
MA2	**Magadan**	**21.75**	**271**	P	**P**	**12 04 05.3**	**+0.8**
	comp=Z,6.6nm,0.8s,baz=44,slow=7.4,SNR=5.8						
MA2	**Magadan**	**21.75**	**271**	P	**P**	**12 04 03.0**	**-1.6**
MA2				IAmb	IAmb	12 04 12.9	
	comp=Z,18nm,1.0s						
TIXI	**Tiksi**	**22.97**	**311**	P	**P**	**12 04 18.0**	**+0.6**
	comp=Z,2.9nm,0.7s,baz=90,slow=11,SNR=11						
TIXI	**Tiksi**	**22.97**	**311**	P	**P**	**12 04 18.8**	**+1.4**
PET	**Petropavlovsk**	**23.62**	**251**	P	**P**	**12 04 22.9**	**-1.2**
PET				IAmb	IAmb	12 04 29.1	
	comp=Z,12nm,0.9s						
PEA0B	**Petropavlovsk-**	**23.90**	**252**	P	**P**	**12 04 26.2**	**-0.6**
PETK	**Petropavlovsk-**	**23.90**	**252**	P	**P**	**12 04 27.8**	**+0.9**
	comp=Z,6.2nm,0.8s,baz=69,slow=8.9,SNR=12						
WALA	**Waterton Lakes**	**30.43**	**103**	P	**P**	**12 05 24.1**	**-1.5**
WALA				IAmb	IAmb	12 05 31.8	
	comp=Z,11nm,1.1s						
EGMT	**Eagleton**	**32.84**	**100**	P	**P**	**12 05 45.5**	**-1.2**
EGMT				IAmb	IAmb	12 05 55.9	
	comp=Z,6.0nm,1.1s						
DGMT	**Dagmar**	**34.58**	**94**	P	**P**	**12 06 01.7**	**-0.1**
YHL	**Hebgen Lake**	**34.98**	**104**	P	**P**	**12 06 04.2**	**-1.4**
NRIK	**Noril'sk**	**35.13**	**325**	P	**P**	**12 06 07.3**	**+1.0**
	comp=Z,7.5nm,0.7s,baz=47,slow=8.0,SNR=20						
SUMG	**Summit**	**35.23**	**26**	P	**P**	**12 06 05.3**	**-2.3**
SUMG				IAmb	IAmb	12 06 12.6	
	comp=Z,9.8nm,1.0s						
YPP	**Pitchstone Pla**	**35.61**	**105**	P	**P**	**12 06 11.2**	**+0.1**
ULM	**Lac du Bonnet**	**36.30**	**84**	P	**P**	**12 06 18.3**	**+1.7**
	comp=Z,2.5nm,0.9s,baz=308,slow=7.8,SNR=2.7						
ULM	**Lac du Bonnet**	**36.30**	**84**	P	**P**	**12 06 16.4**	**-0.2**
PDAR	**Pinedale Array**	**37.37**	**104**	P	**P**	**12 06 28.4**	**+2.4**
	comp=Z,3.7nm,0.8s,baz=325,slow=7.4,SNR=15						
BGU	**Big Grassy Mou**	**37.71**	**110**	P	**P**	**12 06 29.4**	**+0.6**
NVAR	**Mina Array Bea**	**38.09**	**117**	P	**P**	**12 06 34.8**	**+2.7**
	comp=Z,4.9nm,0.8s,baz=318,slow=7.1,SNR=19						
TCUT	**Toone Canyon**	**38.13**	**108**	P	**P**	**12 06 31.9**	**-0.6**
NV11	**Mina Array Sit**	**38.13**	**117**	P	**P**	**12 06 32.5**	**+0.1**
DUG	**Dugway, Tooele**	**38.43**	**110**	P	**P**	**12 06 34.3**	**-0.6**
B35A	**Bob, Littlefor**	**38.66**	**84**	P	**P**	**12 06 36.5**	**-0.1**
R11A	**Troy Canyon, C**	**39.09**	**114**	P	**P**	**12 06 40.9**	**+0.4**
RWWY	**Rawlins**	**39.17**	**103**	P	**P**	**12 06 41.5**	**+0.2**
RWWY				IAmb	IAmb	12 06 45.6	
	comp=Z,19nm,1.4s						
F33A	**5 Mile Ranch,**	**39.78**	**89**	P	**P**	**12 06 46.3**	**+0.4**
F33A				IAmb	IAmb	12 06 51.0	
	comp=Z,17nm,1.1s						
EYMN	**Ely**	**39.85**	**83**	P	**P**	**12 06 46.4**	**-0.2**
EYMN				IAmb	IAmb	12 06 51.5	
	comp=Z,9.2nm,0.9s						
Q16A	**Castle Valley**	**40.15**	**109**	P	**P**	**12 06 47.3**	**-2.0**
KNB	**Kanab**	**41.25**	**112**	P	**P**	**12 06 57.6**	**-0.8**
HIA	**Hailar**	**41.29**	**284**	P	**P**	**12 06 57.7**	**-0.8**
HIA				IAmb	IAmb	12 07 11.5	
	comp=Z,13nm,1.2s						
GSC	**Goldstone, Bar**	**41.42**	**118**	P	**P**	**12 07 00.1**	**+0.4**
GSC				IAmb	IAmb	12 07 06.7	
	comp=Z,11nm,1.1s						
ECSD	**EROS Data Cent**	**41.43**	**91**	P	**P**	**12 06 59.9**	**+0.2**
D41A	**Chassel**	**41.69**	**81**	P	**P**	**12 07 01.1**	**-0.6**
D41A				IAmb	IAmb	12 07 04.0	
	comp=Z,14nm,1.4s						
KEV	**Kevo**	**42.66**	**355**	P	**P**	**12 07 08.5**	**-0.8**
KEV				IAmb	IAmb	12 07 25.5	
	comp=Z,17nm,1.2s						
ARCES	**ARCESS Array B**	**42.93**	**356**	P	**P**	**12 07 12.5**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=15,slow=11,SNR=1.4						
TLY	**Talaya**	**44.99**	**299**	P	**P**	**12 07 27.0**	**-1.3**
MAT	**Matsushiro**	**45.17**	**257**	P	**P**	**12 07 28.2**	**-1.7**
MJAR	**Matsushiro Arr**	**45.17**	**257**	P	**P**	**12 07 31.7**	**+1.8**
	comp=Z,3.3nm,0.8s,baz=25,slow=8.4,SNR=11						
ANMO	**Albuquerque**	**45.40**	**107**	P	**P**	**12 07 31.8**	**-0.1**
ANMO				IAmb	IAmb	12 07 38.6	
	comp=Z,8.2nm,1.2s						
P38A	**Dawn**	**46.14**	**91**	P	**P**	**12 07 37.1**	**-0.4**
P38A				IAmb	IAmb	12 07 42.0	
	comp=Z,9.6nm,0.9s						
ULN	**Ulaanbaatar**	**47.05**	**293**	P	**P**	**12 07 42.8**	**-2.0**
ULN				IAmb	IAmb	12 07 53.0	
	comp=Z,6.5nm,1.3s						
SONM	**Songino Array**	**47.31**	**294**	P	**P**	**12 07 48.1**	**+1.4**
	comp=Z,2.7nm,1.1s,baz=28,slow=6.8,SNR=13						
MSTX	**Muleshoe**	**47.62**	**104**	P	**P**	**12 07 49.3**	**0.0**
KSRS	**Korea Array**	**48.26**	**268**	P	**P**	**12 07 56.2**	**+2.2**
	comp=Z,3.1nm,0.7s,baz=25,slow=7.8,SNR=11						
CCM	**Cathedral Cave**	**48.38**	**90**	P	**P**	**12 07 54.5**	**-0.4**
CCM				IAmb	IAmb	12 07 59.0	
	comp=Z,9.6nm,1.0s						
WMOK	**Wichita Mounta**	**48.43**	**99**	P	**P**	**12 07 54.7**	**-0.7**
WMOK				IAmb	IAmb	12 08 00.1	
	comp=Z,5.9nm,1.1s						
MNTX	**Cornudas Mount**	**48.70**	**108**	P	**P**	**12 07 57.5**	**0.0**
MNTX				IAmb	IAmb	12 08 03.6	

	comp=Z,8.7nm,0.9s						
ZAA0	**Zalesovo Array**	**48.82**	**314**	P	**P**	**12 07 57.5**	**-0.6**
ZALV	**Zalesovo Beam**	**48.82**	**314**	P	**P**	**12 07 58.5**	**+0.4**
	comp=Z,8.6nm,0.7s,baz=30,slow=6.3,SNR=22						
T42A	**Van Buren**	**49.34**	**91**	P	**P**	**12 08 01.4**	**-0.8**
PBMO	**Poplar Bluff**	**49.81**	**90**	P	**P**	**12 08 05.3**	**-0.6**
FCAR	**Ozark Folk Cen**	**49.94**	**92**	P	**P**	**12 08 06.2**	**-0.7**
FCAR				IAmb	IAmb	12 08 10.3	
	comp=Z,5.7nm,0.8s						
BJT	**Baijiatuau**	**50.49**	**280**	P	**P**	**12 08 11.1**	**+0.1**
BJT				IAmb	IAmb	12 08 13.8	
	comp=Z,5.4nm,0.6s						
MIAR	**Mount Ida**	**50.58**	**94**	P	**P**	**12 08 12.5**	**+0.8**
MIAR				IAmb	IAmb	12 08 16.2	
	comp=Z,7.4nm,1.0s						
FINES	**FINESS Array B**	**51.02**	**355**	P	**P**	**12 08 15.2**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=12,slow=10,SNR=5.6						
TX31	**Lajitas Ar. Si**	**51.46**	**107**	P	**P**	**12 08 19.5**	**+0.9**
TXAR	**Lajitas Array**	**51.46**	**107**	P	**P**	**12 08 20.1**	**+1.5**
	comp=Z,8.6nm,0.8s,baz=333,slow=5.7,SNR=61						
HHC	**Hu-ho-hao-te**	**51.48**	**285**	P	**P**	**12 08 19.2**	**+0.6**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,280nm,6.3s						
NOA	**NORSAR Array B**	**51.49**	**4**	P	**P**	**12 08 19.5**	**+1.2**
	comp=Z,1.1nm,1.0s,baz=357,slow=6.7,SNR=2.1						
JCT	**Junction City**	**51.85**	**103**	P	**P**	**12 08 21.5**	**0.0**
OXF	**Oxford**	**52.20**	**90**	P	**P**	**12 08 23.6**	**-0.2**
ARU	**Arti**	**52.52**	**333**	P	**P**	**12 08 25.9**	**0.0**
ARU				IAmb	IAmb	12 08 34.8	
	comp=Z,7.3nm,0.9s						
BRVK	**Borovoye**	**53.31**	**323**	P	**P**	**12 08 31.3**	**-0.6**
BRVK				IAmb	IAmb	12 08 40.7	
	comp=Z,6.7nm,0.9s						
TKL	**Tuckaleechee C**	**53.33**	**85**	P	**P**	**12 08 32.7**	**+0.4**
KURK	**Kurchatov**	**53.40**	**316**	P	**P**	**12 08 31.6**	**-0.9**
BG3	**Lake Jocassee**	**54.24**	**84**	P	**P**	**12 08 38.9**	**0.0**
BG3				IAmb	IAmb	12 08 44.6	
	comp=Z,12nm,1.2s						
Z50A	**Ashland**	**54.64**	**88**	P	**P**	**12 08 41.6**	**-0.2**
NJ2	**Nanjing**	**56.50**	**273**	*e*P	**P**	**12 08 55.1**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GTA	**Gaotai**	**56.98**	**294**	*e*P	**P**	**12 09 01.6**	**+2.9**
GTA				pP	sP	12 09 07.6	+4.4
GTA				sP	pP	12 09 10.8	+8.8
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
WMQ	**Urumqi**	**57.04**	**306**	P	**P**	**12 08 58.2**	**-0.8**
ZAIG	**Zacatecas**	**57.84**	**109**	P	**P**	**12 09 04.9**	**-0.2**
XAN	**Xi'an**	**58.48**	**283**	P	P	12 09 18.2	+9.0
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LZH	**Lanzhou**	**58.52**	**289**	*e*P	**P**	**12 09 10.0**	**+0.4**
LZH				pP	sP	12 09 14.4	+0.4
LZH				sP	pP	12 09 16.8	+4.0
LZH				PP	**PP**	**12 11 20.3**	**+1.7**
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,96nm,5.3s						
LZH				LR	LR		
	comp=N,130nm,16.1s						
LZH				LR	LR		
	comp=E,120nm,15.2s						
LZH				LR	LR		
	comp=Z,150nm,16.5s						
WHN	**Wuhan**	**59.56**	**277**	P	P	12 09 25.3	+8.7
AKASG	**Malin Array Be**	**61.61**	**352**	P	**P**	**12 09 30.7**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=7.1,slow=6.7,SNR=9.4						
AKBB	**Malin Array Si**	**61.61**	**352**	P	**P**	**12 09 30.1**	**-0.2**
AKBB				IAmb	IAmb	12 09 39.0	
	comp=Z,6.3nm,0.9s						
ENH	**Enshi**	**61.64**	**281**	P	**P**	**12 09 30.1**	**-0.8**
KDJ	**Kajisay**	**61.69**	**313**	P	**P**	**12 09 30.8**	**-0.5**
KDJ				IAmb	IAmb	12 09 43.5	
	comp=Z,5.3nm,1.1s						
AAK	**Ala-Archa**	**61.95**	**315**	P	**P**	**12 09 32.5**	**-0.5**
AAK				IAmb	IAmb	12 09 41.7	
	comp=Z,6.7nm,0.9s						
KK31	**Karatay Array**	**62.55**	**319**	P	**P**	**12 09 36.6**	**-0.3**
KKAR	**Karatay Array**	**62.55**	**319**	P	**P**	**12 09 36.6**	**-0.2**
GEC2	**GERESS Array S**	**63.76**	**3**	P	**P**	**12 09 45.3**	**+0.4**
GEC2				IAmb	IAmb	12 09 59.9	
	comp=Z,6.3nm,1.2s						
GERES	**GERESS Array B**	**63.76**	**3**	P	**P**	**12 09 46.9**	**+2.0**
	comp=Z,1.5nm,0.8s,baz=20,slow=4.3,SNR=6.2						
VYHS	**Vyhne**	**64.14**	**359**	*e*P	**P**	**12 09 50.3**	**+3.0**
KSH	**Kashi**	**64.45**	**313**	SS	SS	12 22 43.5	+6.3
KSH				pmax	pmax		
	comp=Z,17nm,1.1s						
KSH				pmax	pmax		
	comp=Z,230nm,4.4s						
BUR08	**Bucovina Ar. S**	**64.85**	**354**	P	**P**	**12 09 51.0**	**-1.1**
BTK	**Batken**	**65.33**	**317**	P	**P**	**12 09 54.8**	**-0.5**
GAR	**Garm**	**66.45**	**317**	P	**P**	**12 10 02.4**	**-0.1**
CHGR	**Chuyangaron**	**67.08**	**318**	P	**P**	**12 10 05.9**	**-0.6**
KBZ	**Khabaz**	**67.26**	**340**	P	**P**	**12 10 08.9**	**+1.5**
	comp=Z,2.1nm,0.7s,baz=353,slow=1.7,SNR=4.9						
LSA	**Lhasa**	**68.77**	**296**	P	**P**	**12 10 16.4**	**-1.3**
GEYT	**Alibeck**	**70.33**	**327**	P	**P**	**12 10 27.6**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=246,slow=37,SNR=2.3						
ESDC	**Sonseca Array**	**71.73**	**17**	P	**P**	**12 10 35.5**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=348,slow=5.8,SNR=3.4						
BRTR	**Keskin Array B**	**72.22**	**347**	P	**P**	**12 10 39.5**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=19,slow=1.5,SNR=5.9						
SIJI	**Sorong**	**81.95**	**248**	P	**P**	**12 11 34.5**	**+1.5**
	comp=Z,3.8nm,0.5s,baz=4.3,slow=5.4,SNR=4.5						
SDV	**Santo Domingo**	**82.56**	**85**	P	**P**	**12 11 37.7**	**+1.3**
	comp=Z,2.6nm,0.3s,baz=6.7,slow=6.3,SNR=5.6						
SDV	**Santo Domingo**	**82.56**	**85**	P	**P**	**12 11 35.5**	**-0.9**
SDV				IAmb	IAmb	12 11 42.4	
	comp=Z,8.3nm,0.9s						
RUSC	**La Rusia**	**84.37**	**88**	P	**P**	**12 11 45.1**	**-1.0**
RAYN	**Ar Rayn**	**86.71**	**334**	P	**P**	**12 11 56.5**	**-0.7**
RAYN				IAmb	IAmb	12 12 05.7	
	comp=Z,7.3nm,1.1s						
WRA	**Warramunga Arr**	**98.69**	**238**	P	Pdif	12 12 52.8	+0.3
	comp=Z,0.3nm,0.7s,baz=27,slow=5.4,SNR=4.7						
VNDA	**Vanda**	**146.57**	**193**	PKPbc	**PKPab**	**12 18 54.0**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=337,slow=5.8,SNR=7.0						

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*IDC **05** 12:03:32.8±1.9, 20°.05S×70°.71W, h0km, mb3.9/3, mb1 4.0/5, mb1mx3.7/40, mbtmp3.9/5, ML3.8/2, MS4.2/2, Ms1 4.2/2, ms1mx3.7/29, Error ellipse: s-maj=46.9km s-min=26.8km az=70.0*
*NEIC **05** 12:03:34.3±1.5, 20°.21S±0°.03×70°.91W±0°.06, h17km±1km, mb4.3/5, Error ellipse: s-maj=8.5km s-min=3.8km az=85.0*
*GUC **05** 12:03:35.4±0.6, 20°.20S×70°.87W, h39km±1km, ML4.0*
ISC 05 12:03:34.1±1.5**, 20°.21S**±0°.03×**70°.90W**±0°.05**, h14**km±9km**, n63,** σ**0.s75**/71**, mb4.1**/5**, 8C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.73**	**95**	*e*P	**Pb**	**12 03 48.6**	**0.0**
TA02				*e*S	**Sb**	**12 03 58.3**	**-0.1**
TA02				IAML		12 03 59.2	
	comp=E,29μm,0.2s						
TA01	**Diego Aracena**	**0.76**	**118**	⇓*i*P	**Pb**	**12 03 49.3**	**+0.1**
TA01				*i* S	**Sb**	**12 03 59.7**	**+0.2**
TA01				IAML		12 04 02.1	
	comp=N,8μm,0.4s						
TA01	**Diego Aracena**	**0.76**	**118**	Pg	**Pb**	**12 03 49.5**	**+0.2**
TA01				Sg	**Sb**	**12 03 59.4**	**-0.1**
PATCX	**Punta Patache**	**0.93**	**131**	⇓*i*P	**Pg**	**12 03 52.1**	**0.0**
PATCX				*i* S	**Sg**	**12 04 04.8**	**+0.5**
PATCX				IAML		12 04 10.8	
	comp=E,4μm,0.6s						
PATCX	**Punta Patache**	**0.93**	**131**		**Pg**	**12 03 52.2**	**+0.1**
PATCX				Sg	**Sn**	**12 04 05.0**	**-1.1**
PSGC	**Pisagua**	**0.95**	**50**	⇓*i*P	**Pb**	**12 03 52.3**	**-0.2**
PSGC				*e*S	**Sg**	**12 04 05.3**	**+0.3**
PSGCX	**Pisagua**	**0.95**	**50**		**Pb**	**12 03 52.3**	**-0.2**
PSGCX				Sg	**Sg**	**12 04 05.1**	**+0.1**
PB11	**IPOC Station P**	**1.25**	**69**	⇓*i*P	**Pn**	**12 03 57.1**	**-0.3**
PB11				*i* S	**Sb**	**12 04 13.3**	**-0.4**
PB11				IAML		12 04 19.1	
	comp=N,4μm,0.4s						
PB11	**IPOC Station P**	**1.25**	**69**		**Pn**	**12 03 57.2**	**-0.3**
PB11				Sn	**Sn**	**12 04 13.9**	**-0.3**
PB02	**IPOC Station P**	**1.45**	**140**	⇑*i*P	**Pn**	**12 04 00.4**	**+0.3**
PB02				*i* S	**Sb**	**12 04 19.8**	**+0.3**
PB02				IAML		12 04 25.6	
	comp=E,5μm,0.4s						
PB01	**IPOC Station P**	**1.56**	**122**	⇑*i*P	**Pb**	**12 04 02.1**	**-0.8**
PB01				*e*S	**Sb**	**12 04 21.8**	**-0.8**
PB01				IAML		12 04 28.4	
	comp=N,5μm,0.3s						
PB01	**IPOC Station P**	**1.56**	**122**		**Pn**	**12 04 01.7**	**+0.1**
PB01				Sn	**Sn**	**12 04 21.6**	**-0.2**
MNMC	**Minye Minye**	**1.63**	**49**	⇑*i*P	**Pn**	**12 04 03.2**	**+0.5**
MNMC				*e*S	**Sb**	**12 04 24.8**	**0.0**
MNMC	**Minye Minye**	**1.63**	**49**		**Pn**	**12 04 03.2**	**+0.5**
PB08	**IPOC Station P**	**1.65**	**88**	⇑*i*P	**Pb**	**12 04 03.6**	**-0.9**
PB08				*i* S	**Sb**	**12 04 25.0**	**-0.2**
PB08	**IPOC Station P**	**1.65**	**88**		**Pn**	**12 04 03.3**	**+0.3**
PB12	**IPOC Station P**	**1.68**	**19**	⇑*e*P	**Pn**	**12 04 03.4**	**+0.2**
PB12				*e*S	**Sb**	**12 04 25.5**	**-0.4**
PB12				IAML		12 04 37.6	
	comp=E,2μm,0.5s						
PB12	**IPOC Station P**	**1.68**	**19**		**Pn**	**12 04 03.5**	**+0.4**
PB12				Sn	**Sn**	**12 04 23.8**	**-0.7**
GO01	**Chusmiza**	**1.69**	**72**	⇑*i*P	**Pn**	**12 04 04.1**	**+0.3**
GO01				*i* S	**Sb**	**12 04 26.6**	**-0.2**
GO01				IAML		12 04 29.4	
	comp=N,6μm,0.3s						
GO01	**Chusmiza**	**1.69**	**72**		**Pn**	**12 04 04.3**	**+0.5**
PB07	**IPOC Station P**	**1.78**	**148**	⇑*e*P	**Pn**	**12 04 04.9**	**+0.2**
PB07	**IPOC Station P**	**1.78**	**148**		**Pn**	**12 04 04.6**	**-0.1**
AP01	**Chacalluta**	**1.90**	**16**	*e*P	**Pb**	**12 04 08.9**	**+0.2**
AP01				*e*S	**Sb**	**12 04 32.8**	**+0.4**
AP01				IAML		12 04 43.8	
	comp=N,4μm,0.3s						
AP01	**Chacalluta**	**1.90**	**16**	Pn	**Pn**	**12 04 06.1**	**-0.1**
PB03	**IPOC Station P**	**2.12**	**150**	*e*P	**Pn**	**12 04 09.5**	**+0.2**
PB03				IAML		12 04 51.3	
	comp=E,720nm,0.6s						
PB09	**IPOC Station P**	**2.21**	**136**	⇑*i*P	**Pn**	**12 04 12.2**	**+1.5**
PB09				IAML		12 04 48.6	
	comp=E,2μm,0.5s						
PB09	**IPOC Station P**	**2.21**	**136**		**Pn**	**12 04 11.7**	**+1.1**
PB04	**IPOC Station P**	**2.23**	**162**	*e*P	**Pn**	**12 04 10.6**	**-0.2**
PB04				IAML		12 04 51.5	
	comp=E,1μm,0.6s						
PB04	**IPOC Station P**	**2.23**	**162**		**Pn**	**12 04 10.6**	**-0.2**
PB16	**IPOC Station P**	**2.28**	**35**	*e*P	**Pn**	**12 04 12.7**	**+0.7**
PB16				IAML		12 04 48.7	
	comp=E,1μm,0.5s						
PB16	**IPOC Station P**	**2.28**	**35**		**Pn**	**12 04 12.6**	**+0.6**
PB06	**IPOC Station P**	**2.78**	**154**	*e*P	**Pn**	**12 04 18.1**	**-0.2**
PB06				IAML		12 05 08.3	
	comp=N,514nm,0.5s						
PB06	**IPOC Station P**	**2.78**	**154**		**Pn**	**12 04 18.1**	**-0.2**
LVC	**Limon Verde**	**3.02**	**142**	Pn	**Pn**	**12 04 23.7**	**+1.8**
	comp=N,5.9nm,0.3s,baz=312,slow=8.1,SNR=36						
LVC				Sn	**Sn**	**12 04 59.4**	**+1.2**
	comp=N,26nm,0.3s,baz=6.2,slow=5.6,SNR=6.3						
LVC	**Limon Verde**	**3.02**	**142**	*e*P	**Pn**	**12 04 23.7**	**+1.8**
LVC	**Limon Verde**	**3.02**	**142**		**Pn**	**12 04 23.5**	**+1.5**
PB15	**IPOC Station P**	**3.27**	**156**		**Pn**	**12 04 24.4**	**-0.7**
PB10	**IPOC Station P**	**3.30**	**174**		**Pn**	**12 04 24.6**	**-0.9**
PB14	**IPOC Station P**	**4.42**	**174**		**Pn**	**12 04 39.7**	**-1.4**
LPAZ	**La Paz**	**4.71**	**34**	Pn	Pb	12 04 51.2	-5.6
	comp=N,1.5nm,0.3s,baz=263,slow=3.9,SNR=14						
GO02	**Mina Guanaco**	**5.08**	**166**		**Pn**	**12 04 50.0**	**-0.2**
AC02	**Maricunga**	**6.79**	**166**	Pn	**Pn**	**12 05 13.8**	**-0.1**
AC05	**El Transito**	**8.61**	**176**	Pn	**Pn**	**12 05 38.1**	**-0.4**
SIV	**San Ignacio**	**10.24**	**67**	Pn	**Pn**	**12 05 59.4**	**-1.5**
	comp=N,1.5nm,0.3s,baz=272,slow=9.5,SNR=22						
ATAH	**Atahualpa**	**14.89**	**330**	LR	LR	12 13 03.7	
	comp=N,1μm,21.6s,baz=218,slow=38						
H03N1	**Juan Fernandez**	**14.98**	**207**	T	T	12 22 50.6	
	baz=33,slow=72,SNR=67						
H03N2	**Juan Fernandez**	**14.99**	**207**	T	T	12 22 54.4	
	baz=33,slow=72,SNR=25						
H03N3	**Juan Fernandez**	**15.00**	**207**	T	T	12 22 45.8	
	baz=33,slow=72,SNR=36						
PTGA	**Pitinga**	**22.12**	**30**	P	**P**	**12 08 27.7**	**-1.7**
	comp=N,2.4nm,0.4s,baz=205,slow=18,SNR=7.0						
PTGA				LR	LR	12 17 50.0	
	comp=N,537nm,21.3s,baz=236,slow=39						
PTGA	**Pitinga**	**22.12**	**30**	P	**P**	**12 08 28.2**	**-1.1**
RUSC	**La Rusia**	**26.03**	**355**	P	**P**	**12 09 08.7**	**+1.1**
SNAA	**Sanae**	**64.10**	**161**	P	**P**	**12 14 08.2**	**+0.7**
SNAA				IAmb	IAmb	12 14 16.5	
	comp=Z,1.7nm,1.0s						
QSPA	**South Pole Qui**	**69.97**	**180**	P	**P**	**12 14 46.5**	**+1.4**
TOA0	**Torodi Ar. Sit**	**78.70**	**71**	P	**P**	**12 15 35.8**	**-0.8**
TOA0				IAmb	IAmb	12 15 49.0	
	comp=Z,6.6nm,1.4s						
TORD	**Torodi Ar. Bea**	**78.70**	**71**	P	**P**	**12 15 35.3**	**-1.3**
	comp=Z,1.6nm,0.8s,baz=255,slow=5.0,SNR=6.7						
YKA	**Yellowknife Ar**	**89.36**	**341**	P	**P**	**12 16 30.3**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=137,slow=4.5,SNR=5.2						
H11S2	**WAKE ISLAND Hy**	**125.86**	**279**	T	T	14 42 07.2	
	baz=101,slow=74,SNR=60						
H11S1	**WAKE ISLAND Hy**	**125.86**	**279**	T	T	14 42 07.6	
	baz=101,slow=74,SNR=40						
H11S3	**WAKE ISLAND Hy**	**125.87**	**279**	T	T	14 42 01.8	
	baz=101,slow=74,SNR=35						
H11N3	**WAKE ISLAND Hy**	**125.91**	**280**	T	T	14 42 07.5	
	baz=101,slow=74,SNR=8.9						
H11N2	**WAKE ISLAND Hy**	**125.92**	**280**	T	T	14 42 14.5	
	baz=101,slow=74,SNR=3.0						
H11N1	**WAKE ISLAND Hy**	**125.92**	**280**	T	T	14 42 10.6	
	baz=101,slow=74,SNR=9.5						
MKAR	**Makanchi Array**	**145.63**	**33**	PKPbc	**PKPab**	**12 23 12.9**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=316,slow=4.0,SNR=3.9						

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*IDC **05** 12:06:19.0±1.1, 19°.72N×99°.76E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/61, mbtmp3.6/5, Error ellipse: s-maj=16.7km s-min=13.2km az=82.0*
ISC 05 12:06:20.1±1.1**, 19°.57N**±0°.09×**99°.66E**±0°.07**, h10**km**, n16,** σ**0.s98**/16**, mb3.6**/5**, Thailand**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM34	**Chiang Mai Arr**	**0.86**	**214**	P	**Pg**	**12 06 35.8**	**-0.9**
CM35	**Chiang Mai Arr**	**1.01**	**208**	P	**Pg**	**12 06 38.4**	**-1.2**
CMMT	**Chiang Mai**	**1.01**	**222**	P	**Pn**	**12 06 41.4**	**+1.0**
LAMP	**Lampang**	**1.05**	**181**	P	**Pn**	**12 06 42.2**	**+1.3**
CM36	**Chiang Mai Arr**	**1.18**	**207**	P	**Pb**	**12 06 41.5**	**-1.1**
PHRA	**Phrae**	**1.20**	**153**	P	**Pn**	**12 06 44.4**	**+1.4**
NANT	**Nan**	**1.25**	**128**	P	**Pb**	**12 06 42.5**	**-1.4**
CM09	**Chiang Mai Arr**	**1.29**	**209**	P	**Pg**	**12 06 45.6**	**+0.7**
CMAR	**Chiang Mai Arr**	**1.30**	**211**	Pg	**Pg**	**12 06 45.4**	**+0.2**
	561nm,0.3s,baz=24,slow=19,SNR=420						
CMAR				Lg	Lg	12 07 06.7	
	536nm,0.3s,baz=29,slow=27,SNR=7.9						
CM05	**Chiang Mai Arr**	**1.35**	**210**	P	**Pg**	**12 06 46.3**	**+0.3**
MHMT	**Maesarieng**	**2.15**	**230**	P	**Pn**	**12 06 56.9**	**+0.9**
MKAR	**Makanchi Array**	**30.65**	**336**	P	**P**	**12 12 34.8**	**+0.1**
	0.5nm,0.6s,baz=140,slow=9.6,SNR=3.3						
KURBB	**Kurchatov Arra**	**35.22**	**337**	P	**P**	**12 13 13.8**	**-0.7**
	0.5nm,0.5s,baz=140,slow=8.5,SNR=3.1						
ZALV	**Zalesovo Beam**	**36.16**	**345**	P	**P**	**12 13 22.9**	**+0.4**
	0.9nm,0.5s,baz=133,slow=10.0,SNR=1.3						
WRA	**Warramunga Arr**	**51.94**	**137**	P	**P**	**12 15 29.3**	**-0.2**
	0.4nm,0.7s,baz=323,slow=8.0,SNR=2.4						
ASAR	**Alice Springs**	**54.43**	**141**	P	**P**	**12 15 48.4**	**+0.5**
	0.3nm,0.7s,baz=322,slow=6.9,SNR=6.0						

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*SOME **05** 12:07:40.8, 44°.83N×82°.10E, h0km*
*NNC **05** 12:07:41.4±9.3, 43°.52N×77°.67E, h0km, mpv3.0, Error ellipse: s-maj=67.4km s-min=49.4km az=66.0*
ISC 05 12:07:41.3±1.3**, 44°.78N**±0°.05×**82°.13E**±0°.07**, h10**km**, n10,** σ**0.s79**/17**, 3C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.73**	**256**	*e*P	**Pg**	**12 08 13.9**	**-0.6**
	2.8nm,0.1s						
DJR				*e*S	**Sg**	**12 08 37.7**	**+0.7**
	8.4nm,0.3s						
DJR	**Jarkent**	**1.73**	**256**	P	**Pg**	**12 08 13.9**	**-0.6**
	2.8nm,0.1s						
DJR				S	**Sg**	**12 08 37.7**	**+0.7**
	8.4nm,0.3s						
KTMS	**Ketmen**	**1.85**	**225**	*e*P	**Pb**	**12 08 15.7**	**+0.5**
	0.6nm,0.1s						
KTMS				*e*S	**Sg**	**12 08 40.6**	**-0.1**
	18nm,0.3s						
KTMS	**Ketmen**	**1.85**	**225**	P	**Pb**	**12 08 15.8**	**+0.5**
	0.6nm,0.1s						
KTMS				S	**Sg**	**12 08 40.6**	**-0.1**
	18nm,0.3s						
MK31	**Makanchi Array**	**2.02**	**3**	⇑Pn	**Pg**	**12 08 19.2**	**-0.9**
	9.6nm,0.5s,baz=185,slow=16,SNR=84						
MK31				⇑Sn	**Sg**	**12 08 47.1**	**+0.8**
	10nm,0.6s,baz=182,slow=27,SNR=18						
KAPS	**Kapalarasan**	**2.03**	**286**	*e*P	**Pg**	**12 08 19.1**	**-1.2**
	1.7nm,0.1s						
KAPS				*e*S	**Sg**	**12 08 46.6**	**-0.1**
	7.3nm,0.3s						
KAPS	**Kapalarasan**	**2.03**	**286**	Pg	**Pg**	**12 08 19.3**	**-1.0**
	1.7nm,0.1s						
KAPS				Lg	Lg	12 08 46.6	
	7.3nm,0.3s						
MAKZ	**Makanchi**	**2.04**	**357**	⇓Pn	**Pg**	**12 08 19.2**	**-1.1**
	4.6nm,0.5s						
MAKZ				⇑Sn	**Sg**	**12 08 47.4**	**+0.6**
	11nm,0.6s						
WMQ	**Urumqi**	**4.10**	**101**	*e*P	**Pg**	**12 09 00.5**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				LR	LR		
	comp=N,730nm,14.3s						
WMQ				LR	LR		
	comp=E,530nm,15.5s						
WMQ				LR	LR		
	comp=Z,1μm,15.5s						
KSH	**Kashi**	**6.97**	**223**	P	**Pg**	**12 09 55.3**	**+0.6**

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*IDC **05** 12:08:49.8±1.4, 24°.08S×66°.85W, h184km±13km, mb3.0/2, mb1 3.4/8, mb1mx3.3/40, mbtmp3.8/8, Error ellipse: s-maj=21.2km s-min=16.6km az=8.0*
*SJA **05** 12:08:49.3±0.6, 24°.27S×66°.99W, h184km±8km, ML3.8, MW3.8*
*NEIC **05** 12:08:49.1±1.6, 24°.17S±0°.05×66°.95W±0°.07, h182km±8km, Error ellipse: s-maj=10.8km s-min=4.8km az=51.0*
*GUC **05** 12:08:51.6±0.6, 24°.11S×67°.38W, h202km±9km, ML4.2*
ISC 05 12:08:49.5±0.7**, 24°.18S**±0°.04×**67°.02W**±0°.04**, h188**km±7km**, n68,** σ**1.s16**/95**, mb3.5**/3**, 9C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AZAP	**Zapla**	**1.78**	**92**	*i* P	**Pn**	**12 09 25.5**	**+0.4**
AZAP				*e*S	**Sn**	**12 09 51.7**	**-1.1**
LVC	**Limon Verde**	**2.34**	**312**	P	**Pn**	**12 09 32.6**	**+1.4**
	35nm,0.3s,baz=145,slow=7.8,SNR=142						
LVC				S	**Sn**	**12 10 04.5**	**+0.9**
	22nm,0.3s,baz=189,slow=2.6,SNR=6.7						
LVC	**Limon Verde**	**2.34**	**312**	⇑*i*P	**Pn**	**12 09 32.2**	**+1.0**
LVC				*i* S	**Sn**	**12 10 03.4**	**-0.2**
LVC	**Limon Verde**	**2.34**	**312**		**Pn**	**12 09 32.3**	**+1.0**
LVC				Sn	**Sn**	**12 10 04.0**	**+0.4**
LVC	**Limon Verde**	**2.34**	**312**	*i* P	**Pn**	**12 09 32.6**	**+1.4**
LVC				*e*S	**Sn**	**12 10 03.8**	**+0.2**
LVC				IAML		12 10 05.4	
	comp=Z,111nm,0.3s						
ASTB	**Santa Barbara**	**2.36**	**85**	*i* P	**Pn**	**12 09 31.4**	**+0.2**
YJA	**Yavi**	**2.43**	**35**	*i* P	**Pn**	**12 09 33.5**	**+1.2**
YJA				*e*S	**Sn**	**12 10 06.6**	**+1.0**
PB15	**IPOC Station P**	**2.45**	**293**	⇑*i*P	**Pn**	**12 09 33.6**	**+1.3**
PB15				*i* S	**Sn**	**12 10 05.0**	**-0.5**
PB15	**IPOC Station P**	**2.45**	**293**		**Pn**	**12 09 33.3**	**+1.0**
PB15				Sn	**Sn**	**12 10 05.7**	**+0.2**
PB15	**IPOC Station P**	**2.45**	**293**	*i* P	**Pn**	**12 09 33.4**	**+1.0**
GO02	**Mina Guanaco**	**2.54**	**247**	⇑*i*P	**Pn**	**12 09 34.2**	**+0.8**
GO02				*i* S	**Sn**	**12 10 08.0**	**+0.5**
GO02				IAML		12 10 09.1	
	comp=E,799nm,0.5s						
GO02	**Mina Guanaco**	**2.54**	**247**		**Pn**	**12 09 34.0**	**+0.6**
GO02				Sn	**Sn**	**12 10 07.8**	**+0.2**
PB06	**IPOC Station P**	**2.77**	**302**	⇑*i*P	**Pn**	**12 09 37.1**	**+1.1**
PB06				*i* S	**Sn**	**12 10 11.4**	**-0.7**
PB06				IAML		12 10 14.5	
	comp=E,1μm,0.3s						
PB06	**IPOC Station P**	**2.77**	**302**		**Pn**	**12 09 36.6**	**+0.7**
PB06				Sn	**Sn**	**12 10 11.3**	**-0.8**
PB06	**IPOC Station P**	**2.77**	**302**	*i* P	**Pn**	**12 09 37.0**	**+1.1**
PB06				IAML		12 10 15.9	
	comp=Z,483nm,0.3s						
PB14	**IPOC Station P**	**3.12**	**261**	*e*P	**Pn**	**12 09 40.4**	**+0.2**
PB14				*e*S	**Sn**	**12 10 17.8**	**-2.0**
PB14	**IPOC Station P**	**3.12**	**261**		**Pn**	**12 09 40.2**	**0.0**
PB14				Sn	**Sn**	**12 10 17.9**	**-1.9**
PB14	**IPOC Station P**	**3.12**	**261**	*i* P	**Pn**	**12 09 40.8**	**+0.5**
PB14				IAML		12 10 23.9	
	comp=Z,159nm,0.4s						
PB09	**IPOC Station P**	**3.13**	**319**	⇑*i*P	**Pn**	**12 09 41.7**	**+1.4**
PB09				*i* S	**Sn**	**12 10 20.2**	**+0.1**
PB09				IAML		12 10 22.2	
	comp=N,350nm,0.5s						
PB09	**IPOC Station P**	**3.13**	**319**		**Pn**	**12 09 40.8**	**+0.4**
PB09				Sn	**Sn**	**12 10 20.3**	**+0.2**
PB09	**IPOC Station P**	**3.13**	**319**	*i* P	**Pn**	**12 09 42.0**	**+1.7**
PB09				IAML		12 10 26.1	
	comp=Z,252nm,0.5s						
PB05	**IPOC Station P**	**3.21**	**294**	⇑*i*P	**Pn**	**12 09 41.6**	**+0.5**
PB05				*i* S	**Sn**	**12 10 19.8**	**-1.7**
PB05				IAML		12 10 25.1	
	comp=N,298nm,0.4s						
AC02	**Maricunga**	**3.26**	**215**	Pn	**Pn**	**12 09 43.0**	**+0.8**
PB10	**IPOC Station P**	**3.30**	**281**	⇑*i*P	**Pn**	**12 09 42.9**	**+0.7**
PB10				*i* S	**Sn**	**12 10 21.1**	**-2.3**
PB10				IAML		12 10 26.9	
	comp=E,273nm,0.3s						
PB10	**IPOC Station P**	**3.30**	**281**		**Pn**	**12 09 42.6**	**+0.4**
PB10				Sn	**Sn**	**12 10 22.0**	**-1.4**
PB10	**IPOC Station P**	**3.30**	**281**	*i* P	**Pn**	**12 09 43.0**	**+0.7**
PB10				IAML		12 10 27.3	
	comp=Z,238nm,0.4s						
PB04	**IPOC Station P**	**3.41**	**302**	⇑*i*P	**Pn**	**12 09 44.2**	**+0.4**
PB04				*i* S	**Sn**	**12 10 24.5**	**-1.7**
PB04				IAML		12 10 26.5	
	comp=N,509nm,0.2s						
PB04	**IPOC Station P**	**3.41**	**302**		**Pn**	**12 09 44.1**	**+0.4**
PB04				Sn	**Sn**	**12 10 24.4**	**-1.7**
PB04	**IPOC Station P**	**3.41**	**302**	*i* P	**Pn**	**12 09 44.6**	**+0.8**
PB04				IAML		12 10 28.5	
	comp=Z,317nm,0.3s						
PB07	**IPOC Station P**	**3.60**	**312**	⇑*i*P	**Pn**	**12 09 46.4**	**+0.4**
PB07				*i* S	**Sn**	**12 10 28.1**	**-2.2**
PB07	**IPOC Station P**	**3.60**	**312**		**Pn**	**12 09 46.6**	**+0.5**
PB07				Sn	**Sn**	**12 10 28.0**	**-2.2**
PB01	**IPOC Station P**	**3.87**	**323**	*i* P	**Pn**	**12 09 49.4**	**+0.1**
PB01				*i* S	**Sn**	**12 10 34.1**	**-2.0**
PB01	**IPOC Station P**	**3.87**	**323**		**Pn**	**12 09 49.4**	**+0.1**
PB01				Sn	**Sn**	**12 10 33.9**	**-2.2**
PB02	**IPOC Station P**	**3.89**	**316**	*e*P	**Pn**	**12 09 49.6**	**-0.1**
PATCX	**Punta Patache**	**4.42**	**318**		**Pn**	**12 09 56.0**	**-0.4**
GO03	**Copiap**	**4.47**	**220**		**Pn**	**12 09 55.6**	**-1.2**
GO03				Sn	**Sn**	**12 10 47.0**	**-2.7**
PB08	**IPOC Station P**	**4.48**	**333**		**Pn**	**12 09 58.0**	**+0.7**
TA01	**Diego Aracena**	**4.63**	**320**	Pn	**Pn**	**12 09 58.7**	**-0.3**
GO01	**Chusmiza**	**4.92**	**335**		**Pn**	**12 10 03.2**	**0.0**
PB11	**IPOC Station P**	**5.03**	**330**		**Pn**	**12 10 03.5**	**-0.8**
PSGCX	**Pisagua**	**5.39**	**327**		**Pn**	**12 10 07.3**	**-1.6**
AC05	**El Transito**	**5.48**	**211**	Pn	**Pn**	**12 10 08.9**	**-1.0**
MNMC	**Minye Minye**	**5.56**	**334**		**Pn**	**12 10 10.7**	**-0.5**
PB16	**IPOC Station P**	**6.26**	**338**		**Pn**	**12 10 20.2**	**-0.4**
PB12	**IPOC Station P**	**6.34**	**330**		**Pn**	**12 10 19.7**	**-1.4**
GO04	**Tololo Observa**	**6.85**	**209**	Pn	**Pn**	**12 10 25.5**	**-2.4**
AMOG	**MOGNA**	**6.86**	**191**	*i* P	**Pn**	**12 10 26.9**	**-1.0**
AMOG				IAML		12 11 44.8	
	comp=Z,4.4nm,1.9s						
LPAZ	**La Paz**	**7.92**	**352**	P	**Pn**	**12 10 42.5**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=155,slow=7.2,SNR=16						
LPAZ				S	**Sn**	**12 12 10.3**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=324,slow=9.4,SNR=2.1						
LPAZ	**La Paz**	**7.92**	**352**	Pn	**Pn**	**12 10 41.4**	**-0.9**
ACAN	**Cantantal**	**8.07**	**181**	*i* P	**Pn**	**12 10 41.4**	**-2.2**
ACAN				IAML		12 12 51.6	
	comp=Z,4.1nm,1.7s						
CPUP	**Villa Florida**	**9.03**	**106**	P	**Pn**	**12 10 54.5**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=288,slow=9.7,SNR=4.4						
CPUP	**Villa Florida**	**9.03**	**106**		**Pn**	**12 10 55.1**	**-1.1**
SIV	**San Ignacio**	**9.88**	**36**	P	**Pn**	**12 11 05.4**	**-2.0**
	comp=Z,1.0nm,0.3s,baz=237,slow=8.9,SNR=12						
PLCA	**Paso Flores**	**16.77**	**189**	P	**Pn**	**12 12 36.0**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=27,slow=9.3,SNR=3.1						
PLCA	**Paso Flores**	**16.77**	**189**		**P**	**12 12 32.7**	**0.0**
BDFB	**Brasilia**	**19.77**	**68**	P	**P**	**12 13 04.3**	**-1.2**
	comp=Z,0.9nm,0.3s,baz=222,slow=8.4,SNR=5.4						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BDFB	Brasilia	19.77	68	P	P	12 13 04.8	-0.6
BDFB				IAmb	IAmb	12 13 05.9	
	comp=Z,8.3nm,1.1s						
VNA3	Neumayer Olymp	56.99	161	P	P	12 18 15.7	+0.7
VNA2	Neumayer--Watz	57.56	160	P	P	12 18 19.6	+0.6
	baz=280,slow=7.1						
SNAA	Sanae	59.19	161	P	P	12 18 30.6	+0.3
SNAA	Sanae	59.19	161	P	P	12 18 30.6	+0.3
346A	Big Creek Wild	59.28	338	P	P	12 18 31.1	-0.3
TXAR	Lajitas Array	63.81	324	P	P	12 19 02.7	+0.9
	comp=Z,0.2nm,0.6s,baz=153,slow=6.2,SNR=3.7						
QSPA	South Pole Qui	66.03	180	P	P	12 19 16.6	+0.9
QSPA				IAmb	IAmb	12 19 17.1	
	comp=Z,1.5nm,0.4s						
TORD	Torodi Ar. Bea	76.65	69	P	P	12 20 19.3	-0.6
	comp=Z,0.3nm,0.3s,baz=276,slow=6.4,SNR=6.5						
ASAR	Alice Springs	128.29	205	PKP	PKPdf	12 27 34.3	+0.1
	comp=Z,0.4nm,0.5s,baz=138,slow=2.0,SNR=9.0						
WRA	Warramunga Arr	131.46	207	PKP	PKPdf	12 27 40.6	+0.4
	comp=Z,0.3nm,0.4s,baz=160,slow=1.8,SNR=12						
MKAR	Makanchi Array	146.67	40	PKPbc	PKPbc	12 28 09.6	+0.6
	comp=Z,1.2nm,0.5s,baz=336,slow=2.3,SNR=8.6						

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*IDC **05** 12:12:34.7±0.5, 67.°86N×162.°47W, h0km, mb4.3/31, mb1 4.4/34, mb1mx4.3/72, mbtmp4.3/34, ML4.4/3, Error ellipse: s-maj=14.7km s-min=10.1km az=18.0*

*AEIC **05** 12:12:35±1.9, 67.°71N±0.°06×162.°6W±0.°1, h22km±4km, ML4.5/46, mb4.5/70(NEIC), Error ellipse: s-maj=8.3km s-min=7.0km az=159.0*

*NEIC **05** 12:12:35.7±1.3, 67.°71N±0.°04×162.°5W±0.°1, h14km±4km, Error ellipse: s-maj=7.4km s-min=6.1km az=67.0*

ISC 05 12:12:35.3±0.3**, 67.°74N**±0.°05×**162.°43W**±0.°04**, h10**km**, n156, σ1s13**/164**, mb4.5**/62**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.36	330	Pg	Pb	12 12 43.3	-0.5
RDOG				Sg	Sb	12 12 48.8	-0.7
ANM	Nome	3.41	202		Pn	12 13 26.9	-1.5
ANM					Sn	12 14 06.3	-2.5
IM03		3.85	113		Pn	12 13 34.6	+0.1
IM05	Indian Mountai	3.87	113		Pn	12 13 34.6	-0.1
IM05					Sn	12 14 19.6	-0.6
PS05	TAPS Pump Stn5	4.66	96		Pn	12 13 45.6	0.0
COLD	Coldfoot	4.73	91		Pn	12 13 48.2	+1.6
COLD	Coldfoot	4.73	91		Sn	12 14 40.9	-0.5
TOLK	Toolik Lake Re	4.88	73	P	Pn	12 13 50.4	+1.8
	baz=265						
TOLK				S	Sn	12 14 45.8	+0.7
	baz=265						
TOLK	Toolik Lake Re	4.88	73		Pn	12 13 50.2	+1.6
TOLK					Sn	12 14 43.5	-1.7
MLY	Manley	5.43	115		Pn	12 13 55.9	-0.3
GAMB	Gambell	5.51	228		Pn	12 13 56.4	-0.9
TTA	Tatalina	5.53	148		Pn	12 13 57.3	-0.3
TT01	Tatalina	5.55	148		Pn	12 13 57.6	-0.2
PS01	TAPS Pump Stn	5.57	57		Pn	12 13 59.1	+1.1
BPAW	Bear Paw Mtn.	5.94	123		Pn	12 14 03.4	+0.3
PS07	TAPS Pump Stn7	6.16	107		Pn	12 14 06.3	+0.2
NEA	Nenana	6.27	114		Pn	12 14 08.1	+0.3
KTH	Kantishna Hill	6.35	126		Pn	12 14 08.9	+0.1
MDM	Murphy Dome	6.36	109		Pn	12 14 08.8	0.0
BWN	Browne	6.39	118		Pn	12 14 10.2	+0.9
PPLA	Purkeypile	6.48	134		Pn	12 14 10.7	0.0
TCOL	CIGO, UAF Yank	6.53	109	P	Pn	12 14 12.4	+1.1
	baz=302						
TCOL				S	Sn	12 15 24.8	-0.9
	baz=302						
TCOL	CIGO, UAF Yank	6.53	109		Pn	12 14 12.1	+0.8
COLA	College	6.54	109		Pn	12 14 11.5	+0.2
COLA				Sn	Sn	12 15 26.6	+0.8
POKR	Poker Plat Res	6.56	107	P	Pn	12 14 12.1	+0.4
	baz=300						
POKR				S	Sn	12 15 26.5	0.0
	baz=300						
POKR	Poker Plat Res	6.56	107		Pn	12 14 11.7	0.0
TRF	Thorofare Moun	6.62	125		Pn	12 14 12.7	+0.2
CCB	Clear Creek Bu	6.68	111		Pn	12 14 13.1	-0.1
CCB				Sn	Sn	12 15 27.7	-1.6
WRH	Wood River Hil	6.68	113		Pn	12 14 13.5	+0.2
FYU	Fort Yukon	6.80	92		Pn	12 14 15.0	+0.2
BM03	Burnt Mountain	6.82	84		Pn	12 14 16.1	+0.8
MCK	McKinley	6.86	120		Pn	12 14 15.5	-0.2
IL31		6.94	108		Pn	12 14 17.2	+0.4
ILAR	Eielson Array	6.94	108	Pn	Pn	12 14 16.9	0.0
	28nm,0.3s,baz=301,slow=14,SNR=405						
ILAR				Sn	Sn	12 15 35.2	-0.6
	3.8nm,0.3s,baz=304,slow=25,SNR=11						
PRP	Porcupine Dome	7.08	100		Pn	12 14 18.7	-0.2
PS08	TAPS Pump Stn8	7.09	110		Pn	12 14 19.2	+0.3
RND	Reindeer	7.11	121		Pn	12 14 19.2	0.0
HDA	Harding Lake	7.12	111	P	Pn	12 14 19.8	+0.5
	baz=304						
HDA	Harding Lake	7.12	111		Pn	12 14 20.0	+0.6
WAT2	Susitna Watana	7.51	123		Pn	12 14 25.8	+1.1
STLK	Strandline Lak	7.74	139		Pn	12 14 28.9	+1.1
SPWE	Spurr West	7.76	142		Pn	12 14 29.0	+0.9
DHY	Denali Highway	7.82	120		Pn	12 14 29.8	+0.7
PMR	Palmer	8.39	131		Pn	12 14 37.5	+0.9
RSO	Redoubt South	8.44	145		Pn	12 14 37.4	-0.2
RC01	Rabbit Creek A	8.63	135		Pn	12 14 40.3	+0.3
EGAK	Eagle	9.06	99		Pn	12 14 45.6	-0.3
HOM	Homer	9.40	144	Pn	Pn	12 14 50.4	-0.2
CNPM	China Poot	9.61	144		Pn	12 14 53.8	+0.2
FID	Port Fidalgo	9.84	128		Pn	12 14 57.2	+0.7
DAWY	Dawson	10.08	101		Pn	12 15 00.1	+0.1
EPYK	Eagle Plains	10.10	86	P	Pn	12 15 01.2	+1.0
	baz=289						
GLB	Gilahina Butte	10.16	120		Pn	12 15 01.7	+0.7
EYAK	Cordova Ski Ar	10.22	127		Pn	12 15 03.2	+1.5
MCARA	McCarthy VSAT	10.46	118		Pn	12 15 06.1	+1.0
INK	Inuvik	10.79	74	Pn	Pn	12 15 08.7	-0.9
	2.6nm,0.3s,baz=287,slow=14,SNR=74						
INK				Sn	Sn	12 17 04.8	-5.5
	1.9nm,0.3s,baz=102,slow=18,SNR=6.0						
INK	Inuvik	10.79	74		Pn	12 15 08.8	-0.7
KDAK	Kodiak Island	10.95	151	Pn	Pn	12 15 13.0	+1.3
	0.8nm,0.3s,baz=16,slow=9.3,SNR=14						
TGL	Tana Glacier	10.99	120		Pn	12 15 13.0	+0.6
CHGN	Chignik	11.63	169	Pn	Pn	12 15 21.0	-0.1
BILL	Bilibino	11.72	286		Pn	12 15 21.2	-1.1
CNBA	Chernabura Isl	13.04	173	Pn	Pn	12 15 39.1	-1.2
A36M	Sachs Harbour	13.31	55	P	Pn	12 15 43.9	0.0
	baz=270						
C36M	Paulatuk	13.97	66		Pn	12 15 50.4	-2.5
BESE	Bessie Mountai	15.32	113		Pn	12 16 11.2	-0.1
DLBC	Dease Lake	17.15	107	P	P	12 16 37.8	+1.4
	0.8nm,0.3s,baz=44,slow=2.3,SNR=13						
WRAK	Wrangell Islan	17.85	115	P	Pn	12 16 43.0	-0.3
SEY	Seymchan	19.09	277	P	Pn	12 16 59.1	+0.7
	0.5nm,0.3s,baz=86,slow=8.4,SNR=28						
YKA	Yellowknife Ar	20.34	82	P	P	12 17 10.7	-0.5
	7.2nm,0.6s,baz=302,slow=9.8,SNR=54						
DIB	Dawson Inlet,	20.42	121	P	P	12 17 12.9	+0.7
RES	Resolute Bay	21.56	42	P	P	12 17 23.7	-0.6
	1.1nm,0.5s,baz=302,slow=8.6,SNR=8.8						
RES				S	S	12 21 20.0	-2.7
	3.6nm,0.7s,baz=290,slow=18,SNR=3.6						
RES	Resolute Bay	21.56	42	P	P	12 17 24.2	-0.1
MA2	Magadan	21.78	271	P	P	12 17 27.2	+0.4
	8.9nm,0.9s,baz=44,slow=14,SNR=5.1						
MA2	Magadan	21.78	271	P	P	12 17 25.0	-1.8
MA2				IAmb	IAmb	12 17 41.2	
	comp=Z,21nm,1.1s						
BBB	Bella Bella	22.74	116	P	P	12 17 37.4	+0.4
	comp=Z,14nm,1.0s,baz=46,slow=6.1,SNR=3.3						
TIXI	Tiksi	22.95	311	P	P	12 17 39.2	0.0
	comp=Z,5.0nm,0.7s,baz=84,slow=9.9,SNR=13						
TIXI	Tiksi	22.95	311	P	P	12 17 38.1	-1.0
TIXI				IAmb	IAmb	12 17 55.0	
	comp=Z,13nm,1.2s						
PET	Petropavlovsk	23.67	251	P	P	12 17 44.3	-2.2
PET				IAmb	IAmb	12 18 02.5	
	comp=Z,32nm,1.3s						
PETK	Petropavlovsk-	23.94	252	P	P	12 17 50.3	+1.1
	comp=Z,4.0nm,0.8s,baz=65,slow=12,SNR=6.8						
LTY	Liberty	29.48	113	IAmb	IAmb	12 18 41.2	
	comp=Z,3.6nm,0.5s						
WALA	Waterton Lakes	30.41	103	IAmb	IAmb	12 18 52.2	
	comp=Z,18nm,1.4s						
JTMT	Jette	31.37	105	P	P	12 18 55.4	-0.5
JTMT				IAmb	IAmb	12 19 00.8	
	comp=Z,6.2nm,1.1s						
MSO	Missoula	32.27	106	P	P	12 19 03.8	0.0
I07A	Izee	32.65	115	P	P	12 19 08.0	+0.9
I07A				IAmb	IAmb	12 19 14.5	
	comp=Z,6.5nm,1.5s						
J08A	Circle Bar Ran	33.64	114	IAmb	IAmb	12 19 19.9	
	comp=Z,9.5nm,1.5s						
SPITS	Spitsbergen Ar	34.29	0	P	P	12 19 19.1	-1.9
	comp=Z,5.9nm,0.9s,baz=45,slow=2.7,SNR=1.2						
SPITS				PcP	PcP	12 21 56.7	0.0
	comp=Z,5.6nm,0.8s,baz=353,slow=4.5,SNR=6.5						
NRIK	Noril'sk	35.10	325	P	P	12 19 28.0	0.0
	comp=Z,7.8nm,0.6s,baz=50,slow=7.1,SNR=24						
SUMG	Summit	35.16	26	P	P	12 19 29.3	+0.3
SUMG				IAmb	IAmb	12 19 40.4	
	comp=Z,11nm,1.1s						
IMW	Indian Meadow	35.88	105	IAmb	IAmb	12 19 41.2	
	comp=Z,12nm,1.3s						
TPAW	Teton Pass	36.22	105	IAmb	IAmb	12 19 45.1	
	comp=Z,11nm,1.5s						
KLR	Kul'dur	36.82	274	P	P	12 19 42.9	0.0
	comp=Z,1.3nm,0.5s,baz=30,slow=5.5,SNR=5.0						
ELK	Elko	37.08	112	P	P	12 19 46.3	+0.8
BW06	Boulder Array	37.36	105	IAmb	IAmb	12 19 53.6	
	comp=Z,16nm,1.4s						
PDAR	Pinedale Array	37.36	105	P	P	12 19 49.6	+1.8
	comp=Z,2.9nm,0.5s,baz=338,slow=7.5,SNR=25						
PDAR				PcP	PcP	12 22 07.4	+0.8
	comp=Z,0.4nm,0.6s,baz=350,slow=2.2,SNR=2.0						
NVAR	Mina Array Bea	38.09	118	P	P	12 19 56.2	+2.2
	comp=Z,2.1nm,0.5s,baz=325,slow=8.0,SNR=18						
NV11	Mina Array Sit	38.13	117	P	P	12 19 54.2	-0.2
NV11				IAmb	IAmb	12 20 01.1	
	comp=Z,8.3nm,1.2s						
DUG	Dugway, Tooele	38.42	110	P	P	12 19 57.5	+0.8
DUG				IAmb	IAmb	12 20 01.3	
	comp=Z,9.4nm,1.4s						
R11A	Troy Canyon, C	39.09	115	IAmb	IAmb	12 20 07.5	
	comp=Z,9.5nm,1.4s						
PV14	Lion Creek, Pa	41.40	107	IAmb	IAmb	12 20 26.4	
	comp=Z,9.8nm,1.3s						
PV01	Paradox Valley	41.78	107	IAmb	IAmb	12 20 30.8	
	comp=Z,8.5nm,0.8s						
ARCES	ARCESS Array B	42.88	356	P	P	12 20 32.5	-0.5
	comp=Z,0.9nm,0.7s,baz=20,slow=11,SNR=6.5						
ARCES				PcP	PcP	12 22 23.9	+0.4
	comp=Z,1.5nm,0.6s,baz=356,slow=3.4,SNR=11						
WUAZ	Wupatki	43.11	112	P	P	12 20 35.6	+0.1
WUAZ				IAmb	IAmb	12 20 38.2	
	comp=Z,12nm,1.2s						
MAT	Matsushiro	45.21	257	P	P	12 20 52.8	+0.7
MJAR	Matsushiro Arr	45.21	257	P	P	12 20 53.4	+1.3
	comp=Z,1.4nm,0.6s,baz=24,slow=8.3,SNR=6.8						
ANMO	Albuquerque	45.39	107	P	P	12 20 54.2	+0.4
ANMO				IAmb	IAmb	12 20 59.6	
	comp=Z,6.1nm,1.1s						
D53A	Lac Vacive, Po	45.66	72	P	P	12 20 55.9	+0.3
D53A				IAmb	IAmb	12 21 00.2	
	comp=Z,8.2nm,1.3s						
BNM	Barren Site	46.04	108	P	P	12 20 58.8	-0.2
SONM	Songino Array	47.31	294	P	P	12 21 09.7	+1.0
	comp=Z,1.8nm,0.9s,baz=37,slow=7.1,SNR=11						
KSRS	Korea Array	48.29	268	P	P	12 21 17.2	+1.0
	comp=Z,3.3nm,0.7s,baz=19,slow=8.1,SNR=14						
MNTX	Cornudas Mount	48.69	108	P	P	12 21 19.9	+0.5
ZAA0	Zalesovo Array	48.80	314	P	P	12 21 19.2	-0.7
ZALV	Zalesovo Beam	48.80	314	P	P	12 21 19.9	0.0
	comp=Z,8.6nm,0.6s,baz=29,slow=6.9,SNR=23						
FCAR	Ozark Folk Cen	49.92	92	P	P	12 21 28.0	-0.7
FCAR				IAmb	IAmb	12 21 30.9	
	comp=Z,4.2nm,0.6s						
KLMR	Klimovskoe	50.71	346	*e*	P	12 21 33.8	-0.5
KLMR				AMP		12 21 47.1	
	comp=Z,18nm,1.7s						
FINES	FINESS Array B	50.96	355	P	P	12 21 36.9	+0.7
	comp=Z,4.6nm,0.8s,baz=46,slow=5.5,SNR=13						
NOA	NORSAR Array B	51.43	4	P	P	12 21 39.6	-0.2
	comp=Z,0.4nm,0.6s,baz=354,slow=7.8,SNR=2.8						
TX31	Lajitas Ar. Si	51.45	107	P	P	12 21 41.0	+0.6
TXAR	Lajitas Array	51.45	107	P	P	12 21 41.4	+1.0
	comp=Z,5.1nm,0.6s,baz=332,slow=5.8,SNR=63						
HHC	Hu-ho-hao-te	51.50	285	P	P	12 21 39.9	-0.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,260nm,5.3s						
PLAL	Pickwick Lake	52.26	89	IAmb	IAmb	12 21 49.7	
	comp=Z,5.5nm,0.8s						
ARU	Arti	52.48	333	P	P	12 21 48.0	+0.4
	comp=Z,2.0nm,0.5s,baz=22,slow=4.6,SNR=7.7						
BRVK	Borovoye	53.28	323	P	P	12 21 53.0	-0.6
BVAR	Borovoye Array	53.29	323	P	P	12 21 53.9	+0.3
	comp=Z,6.3nm,0.5s,baz=34,slow=8.0,SNR=38						
BVAR				PcP	PcP	12 23 01.1	0.0
	comp=Z,1.3nm,0.6s,baz=20,slow=4.6,SNR=2.0						
KURK	Kurchatov	53.38	316	P	P	12 21 54.1	-0.3
KURBB	Kurchatov Arra	53.49	316	P	P	12 21 55.0	-0.2
	comp=Z,4.7nm,0.7s,baz=27,slow=7.1,SNR=37						
KURBB				PcP	PcP	12 23 01.6	-0.3
	comp=Z,0.3nm,0.3s,baz=36,slow=4.9,SNR=4.2						
MK31	Makanchi Array	55.94	311	P	P	12 22 12.1	-1.0
MK31				IAmb	IAmb	12 22 14.2	
	comp=Z,2.6nm,0.6s						
MKAR	Makanchi Array	55.94	311	P	P	12 22 12.6	-0.5
	comp=Z,3.3nm,0.6s,baz=44,slow=6.4,SNR=41						
MAKZ	Makanchi	56.02	312	P	P	12 22 12.1	-1.4
MAKZ				IAmb	IAmb	12 22 14.4	
	comp=Z,2.5nm,0.7s						
ESK	Eskdalemuir	56.29	14	P	P	12 22 15.3	-0.1
NJ2	Nanjing	56.52	273	*e*P	P	12 22 17.0	-0.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
GTA	Gaotai	56.99	294	*e*P	P	12 22 23.7	+3.0
GTA				pP	sP	12 22 27.7	+2.6
GTA				sP	pP	12 22 30.8	+6.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WMQ	Urumqi	57.03	306	*e*P	P	12 22 22.3	+1.4
WMQ				LR	LR		
	comp=N,900nm,17.1s						
WMQ				LR	LR		
	comp=E,1μm,15.3s						
WMQ				LR	LR		
	comp=Z,1μm,15.3s						
ZAIG	Zacatecas	57.84	109	P	P	12 22 27.2	+0.1
ZAIG				IAmb	IAmb	12 22 43.1	
	comp=Z,3.7nm,0.7s						
AKTO	Aktyubinsk	58.30	331	P	P	12 22 29.5	-0.1
	comp=Z,4.0nm,0.6s,baz=26,slow=6.5,SNR=18						
LZH	Lanzhou	58.52	289	*e*P	P	12 22 31.5	-0.1
LZH				pP	sP	12 22 35.8	-0.2
LZH				sP	pP	12 22 37.8	+3.0
LZH				PP	PP	12 24 47.7	+7.1
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,4.3s						
LZH				LR	LR		
	comp=N,140nm,14.1s						
LZH				LR	LR		
	comp=E,130nm,15.4s						
LZH				LR	LR		
	comp=Z,150nm,16.3s						
AKASG	Malin Array Be	61.55	352	P	P	12 22 52.3	+0.4
	comp=Z,3.8nm,0.6s,baz=5.5,slow=6.6,SNR=17						
AKBB	Malin Array Si	61.55	352	P	P	12 22 51.9	0.0
KDJ	Kajisay	61.67	313	P	P	12 22 53.0	-0.1
AAK	Ala-Archa	61.93	316	P	P	12 22 56.0	+1.2
	comp=Z,4.1nm,0.7s,baz=209,slow=1.8,SNR=13						
AAK	Ala-Archa	61.93	316	P	P	12 22 54.9	+0.1
AAK				IAmb	IAmb	12 23 08.6	
	comp=Z,4.9nm,0.9s						
EKS2	Erkin-Say	62.09	316	P	P	12 22 56.9	+1.0
	SNR=10						
KK31	Karatay Array	62.52	319	P	P	12 22 58.1	-0.5
KK31				IAmb	IAmb	12 22 59.2	
	comp=Z,2.5nm,0.7s						
KKAR	Karatay Array	62.52	319	P	P	12 22 57.8	-0.8
KKAR				IAmb	IAmb	12 22 59.2	
	comp=Z,2.5nm,0.7s						
AML	Almayashu	62.61	316	P	P	12 23 01.0	+1.3
	SNR=5.5						
GERES	GERESS Array B	63.70	3	P	P	12 23 07.8	+1.4
	comp=Z,1.3nm,0.8s,baz=17,slow=4.9,SNR=8.8						
BUR08	Bucovina Ar. S	64.80	354	P	P	12 23 14.0	+0.4
BUR08				IAmb	IAmb	12 23 28.7	
	comp=Z,2.2nm,0.8s						
CHGR	Chuyangaron	67.05	318	P	P	12 23 27.6	-0.7
KBZ	Khabaz	67.22	340	P	P	12 23 30.5	+1.4
	comp=Z,2.2nm,0.8s,baz=310,slow=7.0,SNR=4.9						
NIL	Nilore	70.68	313	P	P	12 23 49.6	-1.2
ESDC	Sonseca Array	71.67	17	P	P	12 23 57.0	+0.3
	comp=Z,1.5nm,0.6s,baz=355,slow=6.7,SNR=5.7						
BRTR	Keskin Array B	72.17	347	P	P	12 24 00.1	+0.3
	comp=Z,1.1nm,0.7s,baz=355,slow=3.4,SNR=5.2						
SIJI	Sorong	82.00	248	P	P	12 24 55.9	+0.7
	comp=Z,5.3nm,0.7s,baz=16,slow=7.4,SNR=4.4						
RAYN	Ar Rayn	86.67	334	P	P	12 25 18.4	-0.6
RAYN				IAmb	IAmb	12 25 22.2	
	comp=Z,3.4nm,0.8s						
WRA	Warramunga Arr	98.75	238	P	P	12 26 14.1	-0.5
	comp=Z,0.6nm,0.7s,baz=25,slow=5.5,SNR=6.3						
PLCA	Paso Flores	127.63	106	PKP	PKPdf	12 31 39.8	+0.2
	comp=Z,1.3nm,0.8s,baz=262,slow=11,SNR=2.9						
VNDA	Vanda	146.63	193	PKPbc	PKPab	12 32 16.3	+0.2
	comp=Z,2.3nm,0.6s,baz=326,slow=5.4,SNR=20						

IDC 05 12:13:26.2±63.0**, 16.°44S**×**176.°19W, h0**km**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.6**/49**, mbtmp3.9**/3**, Error ellipse: s-maj=1183.0km s-min=180.0km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.19	240	P	P	12 21 13.4	+0.7
	1.0nm,0.5s,baz=97,slow=8.1,SNR=4.9						
WRA	Warramunga Arr	47.00	258	P	P	12 21 59.3	-0.3
	0.4nm,0.7s,baz=97,slow=7.5,SNR=5.2						
ASAR	Alice Springs	47.24	253	P	P	12 22 00.8	-0.6
	3.0nm,0.6s,baz=89,slow=7.9,SNR=92						

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*IDC **05** 12:15:59.1±0.7, 67.°97N×162.°35W, h0km, mb4.1/13, mb1 4.3/16, mb1mx3.9/70, mbtmp4.1/16, ML3.6/3, Error ellipse: s-maj=28.0km s-min=12.2km az=34.0*

*AEIC **05** 12:16:00±1.3, 67.°73N±0.°06×162.°62W±0.°09, h26km±5km, ML3.9/23, mb4.2/10(NEIC), Error ellipse: s-maj=9.6km s-min=1.6km az=152.0*

*NEIC **05** 12:16:01.2±1.2, 67.°74N±0.°07×162.°6W±0.°2, h25km±5km, Error ellipse: s-maj=9.7km s-min=8.4km az=179.0*

ISC 05 12:15:59.3±0.6**, 67.°75N**±0.°06×**162.°46W**±0.°05**, h10**km**, n65, σ1s09**/70**, mb4.2**/18**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.34	331		Pb	12 16 07.6	+0.1
RDOG					Sb	12 16 13.4	+0.3
ANM	Nome	3.41	202		Pn	12 16 51.9	-0.6
ANM					Sn	12 17 31.1	-1.9
IM03		3.87	113		Pn	12 16 59.3	+0.6
IM03					Sn	12 17 44.2	0.0
COLD	Coldfoot	4.74	91		Pn	12 17 12.1	+1.3
TOLK	Toolik Lake Re	4.89	74		Pn	12 17 14.1	+1.4
MLY	Manley	5.45	115		Pn	12 17 20.1	-0.4
TTA	Tatalina	5.54	148		Pn	12 17 21.5	-0.3
TT01	Tatalina	5.56	148		Pn	12 17 22.0	0.0
BPAW	Bear Paw Mtn.	5.95	123		Pn	12 17 28.2	+0.8
NEA	Nenana	6.29	114		Pn	12 17 32.2	+0.3
KTH	Kantishna Hill	6.36	126	Pn	Pn	12 17 33.7	+0.6
MDM	Murphy Dome	6.37	109		Pn	12 17 33.8	+0.7
PPLA	Purkeypile	6.50	134		Pn	12 17 35.6	+0.7
TCOL	CIGO, UAF Yank	6.55	109		Pn	12 17 36.0	+0.5
COLA	College	6.55	109	Pn	Pn	12 17 36.0	+0.4
TRF	Thorofare Moun	6.63	125	Pn	Pn	12 17 37.3	+0.4
CCB	Clear Creek Bu	6.70	111		Pn	12 17 38.0	+0.4
WRH	Wood River Hil	6.70	113		Pn	12 17 38.3	+0.8
BM03	Burnt Mountain	6.83	85		Pn	12 17 40.5	+1.1
MCK	McKinley	6.87	120	Pn	Pn	12 17 40.2	+0.2
IL31		6.96	108	Pn	Pn	12 17 42.0	+1.0
ILAR	Eielson Array	6.96	108	Pn	Pn	12 17 41.5	+0.3
	15nm,0.3s,baz=303,slow=14,SNR=27						
ILAR				Sn	Sn	12 18 58.6	-1.5
	1.4nm,0.3s,baz=297,slow=23,SNR=5.5						
PS08	TAPS Pump Stn8	7.11	110		Pn	12 17 43.6	+0.4
RND	Reindeer	7.12	121		Pn	12 17 43.7	+0.3
HDA	Harding Lake	7.14	111	Pn	Pn	12 17 43.9	+0.3
WAT2	Susitna Watana	7.52	123		Pn	12 17 50.3	+1.3
DHY	Denali Highway	7.84	120	Pn	Pn	12 17 53.9	+0.6
GHO	Glory Hole Cre	8.32	130	Pn	Pn	12 18 01.2	+1.3
SCRK	Sand Creek	8.45	108	Pn	Pn	12 18 01.9	+0.2
SML	Sawmill	8.47	128	Pn	Pn	12 18 02.7	+0.8
SCM	Sheep Creek Mo	8.75	125	Pn	Pn	12 18 06.4	+0.6
FID	Port Fidalgo	9.86	128	Pn	Pn	12 18 21.2	+0.3
EPYK	Eagle Plains	10.11	86	Pn	Pn	12 18 24.9	+0.5
INK	Inuvik	10.80	74	Pn	Pn	12 18 32.6	-1.1
	0.6nm,0.3s,baz=290,slow=12,SNR=1.5						
INK				Sn	Sn	12 20 28.4	-6.1
	0.7nm,0.3s,baz=114,slow=18,SNR=3.6						
INK	Inuvik	10.80	74		Pn	12 18 32.4	-1.3
KDAK	Kodiak Island	10.96	151	Pn	Pn	12 18 35.8	-0.1
	0.1nm,0.3s,baz=338,slow=20,SNR=3.7						
KDAK	Kodiak Island	10.96	151		Pn	12 18 35.5	-0.4
OHAK	Old Harbor	11.37	154	Pn	Pn	12 18 42.6	+1.1
BILL	Bilibino	11.71	286	Pn	Pn	12 18 45.0	-1.1
JIS	Juneau Island	15.73	113	Pn	Pn	12 19 41.5	+0.9
SEY	Seymchan	19.08	277	P	Pn	12 20 23.1	+0.8
	0.2nm,0.3s,baz=45,slow=15,SNR=3.6						
YKA	Yellowknife Ar	20.35	82	P	P	12 20 35.7	+0.3
	2.0nm,0.6s,baz=305,slow=11,SNR=9.0						
TIXI	Tiksi	22.94	311	P	P	12 21 03.5	+0.5
	1.2nm,0.4s,baz=99,slow=12,SNR=3.6						
PEA0B	Petropavlovsk-	23.94	252	P	P	12 21 11.8	-1.3
MCMT	McKenzie Canyo	34.39	106	P	P	12 22 46.7	+0.3
NRIK	Noril'sk	35.09	325	P	P	12 22 53.1	+1.2
	1.6nm,0.4s,baz=46,slow=9.6,SNR=4.5						
BW06	Boulder Array	37.37	105	P	P	12 23 13.1	+1.0
BW06				IAmb	IAmb	12 23 14.5	
	comp=Z,2.2nm,0.8s						
PDAR	Pinedale Array	37.37	105	P	P	12 23 13.1	+1.0
	comp=Z,1.6nm,0.6s,baz=333,slow=7.8,SNR=8.6						
NVAR	Mina Array Bea	38.10	118	P	P	12 23 19.9	+1.6
	comp=Z,2.9nm,0.8s,baz=314,slow=7.0,SNR=12						
NV11	Mina Array Sit	38.15	117	P	P	12 23 19.4	+0.9
NV11				IAmb	IAmb	12 23 21.4	
	comp=Z,3.5nm,0.9s						
R11A	Troy Canyon, C	39.11	115	P	P	12 23 27.0	+0.4
PV01	Paradox Valley	41.79	107	P	P	12 23 49.8	+0.9
PV01				IAmb	IAmb	12 23 51.0	
	comp=Z,7.4nm,0.8s						
MNTX	Cornudas Mount	48.71	108	P	P	12 24 43.8	+0.2
MNTX				IAmb	IAmb	12 24 46.0	
	comp=Z,2.9nm,0.8s						
ZALV	Zalesovo Beam	48.78	314	P	P	12 24 44.0	+0.2
	comp=Z,3.6nm,0.7s,baz=27,slow=7.6,SNR=5.0						
FINES	FINESS Array B	50.95	355	P	P	12 24 59.9	-0.3
	comp=Z,1.9nm,0.9s,baz=24,slow=11,SNR=1.4						
TX31	Lajitas Ar. Si	51.47	107	P	P	12 25 04.9	+0.3
TXAR	Lajitas Array	51.47	107	P	P	12 25 05.9	+1.3
	comp=Z,4.4nm,0.9s,baz=334,slow=5.7,SNR=21						
BVAR	Borovoye Array	53.27	323	P	P	12 25 18.1	+0.5
	comp=Z,2.7nm,0.6s,baz=29,slow=8.5,SNR=8.4						
KURK	Kurchatov	53.36	316	P	P	12 25 18.0	-0.2
KURK				IAmb	IAmb	12 25 19.6	
	comp=Z,3.2nm,0.7s						
KURBB	Kurchatov Arra	53.47	316	P	P	12 25 18.7	-0.3
	comp=Z,1.7nm,0.7s,baz=28,slow=7.0,SNR=8.0						
MK31	Makanchi Array	55.92	311	P	P	12 25 36.1	-0.8
MK31				IAmb	IAmb	12 25 49.1	
	comp=Z,1.9nm,1.1s						
MKAR	Makanchi Array	55.92	311	P	P	12 25 36.6	-0.3
	comp=Z,1.4nm,0.7s,baz=48,slow=6.4,SNR=7.3						
AKTO	Aktyubinsk	58.29	331	P	P	12 25 53.6	+0.1
	comp=Z,1.7nm,0.6s,baz=29,slow=6.4,SNR=4.6						
AKASG	Malin Array Be	61.54	352	P	P	12 26 16.2	+0.3
	comp=Z,1.6nm,0.6s,baz=6.0,slow=6.7,SNR=6.3						
VNDA	Vanda	146.64	193	PKPbc	PKPab	12 35 40.4	+0.2
	comp=Z,1.1nm,0.7s,baz=331,slow=4.7,SNR=4.5						

IDC 05 12:20:19.6±1.4**, 19.°69N**×**99.°53E, h0**km**, mb3.6**/3**, mb1 3.6**/3**, mb1mx3.3**/58**, mbtmp3.6**/3**, Error ellipse: s-maj=21.8km s-min=14.0km az=98.0, Thailand**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	1.35	205	Pg	Pg	12 20 44.4	-1.2
	197nm,0.3s,baz=19,slow=17,SNR=37						
CMAR				Lg	Lg	12 21 03.5	
	65nm,0.3s,baz=17,slow=15,SNR=4.2						

SONM	Songino Array	28.62	10	P	P	12 26 17.1	-0.7
	0.3nm,0.4s,baz=193,slow=5.9,SNR=1.9						
MKAR	Makanchi Array	30.50	336	P	P	12 26 34.9	+0.5
	0.6nm,0.6s,baz=133,slow=8.9,SNR=5.2						
KURBB	Kurchatov Arra	35.06	337	P	P	12 27 14.6	+0.4
	0.6nm,0.7s,baz=142,slow=9.2,SNR=2.0						

*IDC **05** 12:20:58.2±0.8, 19°.72N×99°.84E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.7/57, mbtmp3.9/10, Error ellipse: s-maj=22.5km s-min=11.7km az=104.0*
*NEIC **05** 12:20:59.6±1.1, 19°.67N±0°.05×99°.71E±0°.06, h10km±1km, mb4.1/11, Error ellipse: s-maj=11.3km s-min=7.7km az=128.0*
ISC 05 12:20:59.7±0.6**, 19°.66N**±0°.05×**99°.77E**±0°.06**, h10**km**, n38, σ1s.03**/39**, mb4.0**/15**, Thailand**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAMP	Lampang	1.14	187	P	Pb	12 21 22.0	+0.5
CMMT	Chiang Mai	1.15	223	P	Pb	12 21 20.7	-1.0
CHTO	Chiang Mai	1.15	223		Pb	12 21 20.6	-1.1
CHTO				Sg	Sb	12 21 35.7	-1.0
NANT	Nan	1.22	134	P	Pn	12 21 21.8	-1.2
PHRA	Phrae	1.23	159	P	Pn	12 21 24.3	+1.3
CM09	Chiang Mai Arr	1.42	212	P	Pn	12 21 26.0	+0.4
CM31	Chiang Mai Arr	1.43	213	P	Pn	12 21 26.1	+0.2
CM31	Chiang Mai Arr	1.43	213		Pn	12 21 26.0	+0.2
CM31				Sn	Sn	12 21 46.5	+1.8
CMAR	Chiang Mai Arr	1.43	213	Pg	Pn	12 21 25.8	0.0
	730nm,0.3s,baz=25,slow=17,SNR=59						
CMAR				Lg	Lg	12 21 46.4	
	570nm,0.3s,baz=35,slow=30,SNR=14						
CM02	Chiang Mai Arr	1.45	213	P	Pn	12 21 26.4	+0.4
CM05	Chiang Mai Arr	1.48	212	P	Pn	12 21 26.6	+0.2
MHMT	Maesarieng	2.28	230	P	Pn	12 21 41.5	+4.0
PHIT	Phitsanulok	2.53	166	P	Pn	12 21 43.2	+2.3
PBKT	Sadao Pong	3.28	159	Pn	Pn	12 21 51.8	+0.6
SLVN	Son La	4.22	66	Pn	Pn	12 22 05.2	+1.1
SHL	Shillong	9.36	310	Pn	Pn	12 23 12.3	-2.7
QIZ	Qiongzhong	9.53	92	Pn	Pn	12 23 16.8	-0.3
KSM	Kuching	20.81	149	P	P	12 25 40.8	-0.7
KSM				IAmb	IAmb	12 25 48.1	
	comp=Z,11nm,1.5s						
SBUM	Sibu	20.99	143	P	P	12 25 43.4	-0.1
SONM	Songino Array	28.62	9	P	P	12 26 56.2	-0.2
	comp=Z,0.8nm,0.7s,baz=195,slow=10,SNR=3.9						
KDJ	Kajisay	29.45	324	P	P	12 27 03.8	-0.2
KDJ				IAmb	IAmb	12 27 09.4	
	comp=Z,3.1nm,0.8s						
MK31	Makanchi Array	30.62	336	P	P	12 27 13.3	-0.7
MK31				IAmb	IAmb	12 27 22.8	
	comp=Z,1.9nm,1.1s						
MKAR	Makanchi Array	30.62	336	P	P	12 27 13.7	-0.4
	comp=Z,1.0nm,0.6s,baz=148,slow=9.9,SNR=8.0						
KURBB	Kurchatov Arra	35.18	336	P	P	12 27 53.0	-0.7
	comp=Z,1.3nm,0.6s,baz=147,slow=8.7,SNR=3.5						
KURK	Kurchatov	35.22	337	P	P	12 27 53.6	-0.5
KURK				IAmb	IAmb	12 27 57.2	
	comp=Z,7.9nm,1.5s						
ZAA0	Zalesovo Array	36.10	345	P	P	12 28 01.4	-0.2
ZAA0				IAmb	IAmb	12 28 04.6	
	comp=Z,2.9nm,0.6s						
ZALV	Zalesovo Beam	36.10	345	P	P	12 28 01.4	-0.2
	comp=Z,1.7nm,0.5s,baz=160,slow=9.1,SNR=5.2						
BVAR	Borovoye Array	40.31	333	P	P	12 28 36.2	-0.9
	comp=Z,0.8nm,0.5s,baz=133,slow=10,SNR=4.3						
BRVK	Borovoye	40.38	333	P	P	12 28 37.5	-0.2
BRVK				IAmb	IAmb	12 28 42.7	
	comp=Z,2.5nm,0.7s						
ARU	Arti	47.78	330	P	P	12 29 37.5	+0.4
WRA	Warramunga Arr	51.92	137	P	P	12 30 08.9	-0.1
	comp=Z,1.3nm,0.9s,baz=327,slow=8.1,SNR=6.2						
WR0	Warramunga Arr	52.07	137	P	P	12 30 10.2	+0.1
AS31	Alice Springs	54.42	141	P	P	12 30 27.6	+0.2
ASAR	Alice Springs	54.42	141	P	P	12 30 27.6	+0.1
	comp=Z,0.5nm,0.5s,baz=323,slow=7.2,SNR=15						
TIXI	Tiksi	54.69	11	P	P	12 30 27.6	-1.0
	comp=Z,1.2nm,0.3s,baz=206,slow=3.8,SNR=5.1						
TIXI	Tiksi	54.69	11	P	P	12 30 28.7	+0.1
TIXI				IAmb	IAmb	12 30 29.1	
	comp=Z,1.5nm,0.8s						
ARCES	ARCESS Array B	66.24	338	P	P	12 31 48.2	+0.6
	comp=Z,1.8nm,0.9s,baz=66,slow=7.0,SNR=2.2						
NOA	NORSAR Array B	72.32	329	P	P	12 32 25.6	+0.2
	comp=Z,0.7nm,0.8s,baz=81,slow=6.2,SNR=3.4						

*IDC **05** 12:21:36.4±4.4, 68°.26N×162°.90W, h0km, mb3.0/2, mb1 3.7/4, mb1mx3.3/64, mbtmp3.4/4, ML3.6/2, Error ellipse: s-maj=60.7km s-min=52.7km az=172.0*
*AEIC **05** 12:21:37.6±0.8, 67°.64N±0°.04×162°.5W±0°.1, h11km±8km, ML2.9/22, Error ellipse: s-maj=8.7km s-min=3.1km az=121.0*
*NEIC **05** 12:21:39.2±0.6, 67°.77N±0°.05×162°.8W±0°.2, h36km±9km, Error ellipse: s-maj=10.5km s-min=7.7km az=84.0*
ISC 05 12:21:37.9±1.0**, 67°.71N**±0°.06×**162°.52W**±0°.06**, h10**km**, n29, σ1s.34**/36**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.38	337		Pb	12 21 46.0	-0.6
RDOG					Sb	12 21 52.5	-0.1
ANM	Nome	3.36	202		Pn	12 22 29.5	-0.9
ANM					Sn	12 23 09.7	-0.6
IM03		3.87	112		Pn	12 22 37.6	+0.3
IM03					Sn	12 23 21.2	-1.5
COLD	Coldfoot	4.76	90		Pn	12 22 50.6	+1.0
TOLK	Toolik Lake Re	4.92	73		Pn	12 22 53.0	+1.2
TOLK				Sn	Sn	12 23 50.4	+1.7
MLY	Manley	5.44	114		Pn	12 22 59.1	+0.2
TT01	Tatalina	5.53	148		Pn	12 23 00.5	+0.3
BPAW	Bear Paw Mtn.	5.95	122		Pn	12 23 06.8	+1.0
NEA	Nenana	6.29	114		Pn	12 23 10.9	+0.4
KTH	Kantishna Hill	6.35	126		Pn	12 23 12.1	+0.7
MDM	Murphy Dome	6.37	109		Pn	12 23 12.2	+0.5
PPLA	Purkeypile	6.48	133	Pn	Pn	12 23 14.0	+0.8
PPLA				Sn	Sn	12 24 27.7	+0.5
TRF	Thorofare Moun	6.62	124	Pn	Pn	12 23 16.0	+0.7
WRH	Wood River Hil	6.70	112	Pn	Pn	12 23 16.7	+0.6
CCB	Clear Creek Bu	6.70	110		Pn	12 23 16.7	+0.6
BM03	Burnt Mountain	6.86	84		Pn	12 23 19.0	+0.6
MCK	McKinley	6.87	119	Pn	Pn	12 23 18.5	0.0
IL31		6.96	108		Pn	12 23 20.1	+0.4
ILAR	Eielson Array	6.96	108	Pn	Pn	12 23 20.4	+0.6
	1.2nm,0.3s,baz=304,slow=14,SNR=12						
ILAR				Sn	Sn	12 24 36.6	-2.3
	0.1nm,0.3s,baz=311,slow=24,SNR=0.9						
RND	Reindeer	7.12	121	Pn	Pn	12 23 22.6	+0.6
HDA	Harding Lake	7.14	110	Pn	Pn	12 23 22.7	+0.5
WAT2	Susitna Watana	7.51	123		Pn	12 23 28.6	+1.1
WAT1	Susitna Watana	7.62	123		Pn	12 23 30.2	+1.3
SCRK	Sand Creek	8.45	107	Pn	Pn	12 23 40.6	+0.3
EPYK	Eagle Plains	10.13	86	Pn	Pn	12 24 04.0	+0.8
INK	Inuvik	10.84	73	Pn	Pn	12 24 11.8	-1.0
	0.3nm,0.3s,baz=354,slow=21,SNR=1.6						
INK				Sn	Sn	12 26 08.3	-5.5
	0.3nm,0.3s,baz=63,slow=29,SNR=5.0						
INK	Inuvik	10.84	73		Pn	12 24 12.4	-0.3
YKA	Yellowknife Ar	20.38	82	P	P	12 26 16.1	+1.8
	0.3nm,0.6s,baz=306,slow=11,SNR=3.2						
TXAR	Lajitas Array	51.48	107	P	P	12 30 44.2	+1.0
	0.2nm,0.5s,baz=343,slow=3.9,SNR=3.9						

NNC 05 12:25:27.1±4.9**, 37°.97N**×**69°.51E, h0**km**, mb3.7, mpv3.3, 2C-3D, Error ellipse: s-maj=51.5km s-min=37.4km az=89.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.18	8	⇓Pg	Pb	12 27 00.0	+1.4
	1.0nm,0.5s,baz=181,slow=13,SNR=4.5						
KK31				⇓Lg	Lg	12 28 14.2	
	7.8nm,0.6s,baz=186,slow=28,SNR=7.7						
AAK	Ala-Archa	6.02	38	⇑Pn	Pn	12 26 58.6	+1.1
	1.7nm,0.5s						
AAK				Lg	Lg	12 28 38.3	
	3.8nm,0.8s						
TKM2	Tokmak 2	6.78	41	⇓Pn	Pn	12 27 07.4	-0.6
	3.8nm,0.8s						
TKM2				⇑Lg	Lg	12 29 01.0	
	1.6nm,0.6s						

*IDC **05** 12:29:19.4±1.3, 37°.51N×70°.08E, h0km, mb3.6/7, mb1 3.7/14, mb1mx3.6/65, mbtmp3.6/14, ML3.4/4, Error ellipse: s-maj=24.4km s-min=15.2km az=148.0*
*NNC **05** 12:29:30.9±6.0, 38°.20N×69°.72E, h28km±32km, mb4.1, mpv3.5, Error ellipse: s-maj=39.9km s-min=20.6km az=22.0*
ISC 05 12:29:25.0±1.0**, 37°.75N**±0°.10×**69°.82E**±0°.08**, h30**km**, n26, σ2s.16**/29**, mb3.6**/7**, 3C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.29	33	P	Pn	12 30 44.5	+2.2
	SNR=13						
KK31	Karatay Array	5.38	5	⇓Pn	Pn	12 30 44.4	+1.3
	1.1nm,0.3s,baz=194,slow=15,SNR=15						
KK31				⇓Pg	Pb	12 31 01.6	+3.5
	2.7nm,0.3s,baz=187,slow=12,SNR=6.8						
KK31				Lg	Lg	12 32 07.0	
	28nm,0.7s,baz=186,slow=29,SNR=8.0						
UCH	Uchtor	5.75	37	P	Pn	12 30 49.8	+1.1
	SNR=9.3						
KZA	Kyzart	6.01	42	P	Pn	12 30 54.7	+2.5
	SNR=5.2						
AAK	Ala-Archa	6.05	35	Pn	Pn	12 30 54.1	+1.5
	4.1nm,0.3s,baz=180,slow=5.6,SNR=25						
AAK				Lg	Lg	12 32 33.5	
	1.9nm,0.3s,baz=18,slow=16,SNR=2.7						
AAK	Ala-Archa	6.05	35	P	Pn	12 30 54.7	+2.1
	SNR=9.3						
AAK	Ala-Archa	6.05	35	Pn	Pn	12 30 54.5	+1.9
	5.4nm,0.5s						
AAK				⇓Lg	Lg	12 32 32.3	
	26nm,1.2s						
CHMS	Chumysh	6.46	34	P	Pn	12 30 59.9	+1.9
	SNR=7.5						
USP	Ospenovka	6.56	31	P	Pn	12 31 00.8	+1.3
	SNR=7.5						
TKM2	Tokmak 2	6.79	39	P	Pn	12 31 04.1	+1.3
	SNR=9.0						
TKM2	Tokmak 2	6.79	39	⇑Pn	Pn	12 31 03.4	+0.6
	2.4nm,0.3s						
TKM2				⇑Lg	Lg	12 32 56.0	
	5.3nm,0.6s						
GEYT	Alibeck	9.26	275	Pn	Pn	12 31 37.1	+0.7
	0.7nm,0.3s,baz=95,slow=11,SNR=5.4						
MKAR	Makanchi Array	12.91	42	Pn	Pn	12 32 23.6	-2.7
	baz=230,slow=15,SNR=6.2						
AB31	Akbulak array	13.54	331	Pn	Pn	12 32 33.0	-1.8
	1.6nm,0.5s,baz=154,slow=12,SNR=26						
AB31				⇑Sn	Sn	12 34 59.2	-4.9
	6.2nm,0.6s,baz=164,slow=21,SNR=2.9						
KURBB	Kurchatov Arra	14.29	23	Pn	Pn	12 32 41.6	-3.6
	0.0nm,0.3s,baz=212,slow=12,SNR=4.5						
AKTO	Aktyubinsk	15.23	330	Pn	Pn	12 32 57.5	-0.2
	0.2nm,0.3s,baz=126,slow=12,SNR=1.7						
AKTO	Aktyubinsk	15.23	330	⇓Pn	Pn	12 32 57.3	-0.5
	5.5nm,0.6s						
AKTO				⇓Sn	Sn	12 35 42.7	-2.7
	2.5nm,1.1s						
BVAR	Borovoye Array	15.28	1	Pn	Pn	12 32 56.1	-2.3
	baz=168,slow=13,SNR=1.7						
ZALV	Zalesovo Beam	19.21	28	P	P	12 33 45.1	-1.2
	baz=230,slow=11,SNR=4.4						
KBZ	Khabaz	21.21	295	P	P	12 34 10.5	+2.5
	2.1nm,0.8s,baz=124,slow=5.3,SNR=4.6						
SONM	Songino Array	28.43	57	P	P	12 35 15.8	-1.2
	0.2nm,0.5s,baz=274,slow=9.6,SNR=2.5						
ARCES	ARCESS Array B	39.63	337	P	P	12 36 55.1	+1.5
	0.9nm,0.8s,baz=79,slow=6.3,SNR=4.1						
NOA	NORSAR Array B	42.82	322	P	P	12 37 20.9	+1.1
	0.4nm,0.7s,baz=96,slow=8.1,SNR=1.6						
TIXI	Tiksi	44.98	23	P	P	12 37 36.1	-0.9
	0.7nm,0.3s,baz=296,slow=6.9,SNR=2.5						
TORD	Torodi Ar. Bea	64.82	267	P	P	12 39 59.9	-1.3
	0.3nm,0.5s,baz=45,slow=6.5,SNR=2.2						
ASAR	Alice Springs	85.74	124	P	P	12 42 00.5	-0.8
	0.2nm,0.7s,baz=326,slow=5.5,SNR=4.2						

IDC 05 12:33:31.8±61.0**, 18°.94S**×**177°.78E, h0**km**, mb3.8**/3**, mb1 3.9**/3**, mb1mx3.5**/40**, mbtmp3.8**/3**, Error ellipse: s-maj=1087.0km s-min=153.6km az=79.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	34.96	241	P	P	12 40 26.5	+0.6
	3.2nm,1.2s,baz=98,slow=8.2,SNR=3.7						
WRA	Warramunga Arr	40.89	261	P	P	12 41 15.8	-0.3
	0.3nm,0.7s,baz=96,slow=7.8,SNR=6.8						
ASAR	Alice Springs	41.03	255	P	P	12 41 16.8	-0.5
	1.6nm,0.6s,baz=91,slow=8.7,SNR=44						

*IDC **05** 12:35:14.4±6.9, 68°.23N×164°.23W, h0km, mb2.9/2, mb1 3.6/4, mb1mx3.2/62, mbtmp3.2/4, ML3.4/2, Error ellipse: s-maj=98.5km s-min=79.8km az=121.0*
*AEIC **05** 12:35:21±1.0, 67°.63N±0°.05×162°.5W±0°.2, h12km±8km, ML2.8/15, Error ellipse: s-maj=11.7km s-min=7.6km az=88.0*
*NEIC **05** 12:35:22.2±1.1, 67°.75N±0°.06×162°.8W±0°.2, h36km±9km, Error ellipse: s-maj=9.8km s-min=7.1km az=54.0*
ISC 05 12:35:21.1±1.1**, 67°.69N**±0°.07×**162°.58W**±0°.08**, h10**km**, n23, σ0s.76**/26**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.39	342		Pb	12 35 29.8	-0.3
RDOG					Sb	12 35 35.9	-0.2
ANM	Nome	3.33	201		Pn	12 36 12.9	-0.3
IM03		3.89	112		Pn	12 36 20.6	-0.1
IM03					Sn	12 37 05.4	-0.9
COLD	Coldfoot	4.79	90	Pn	Pn	12 36 34.8	+1.6
COLD				Sn	Sn	12 37 27.9	-0.7
TOLK	Toolik Lake Re	4.95	73		Pn	12 36 36.5	+1.1
MLY	Manley	5.46	114	Pn	Pn	12 36 43.6	+1.2
TT01	Tatalina	5.53	147		Pn	12 36 43.9	+0.5
BPAW	Bear Paw Mtn.	5.96	122	Pn	Pn	12 36 49.4	+0.2
KTH	Kantishna Hill	6.36	125		Pn	12 36 55.4	+0.6
MDM	Murphy Dome	6.39	109	Pn	Pn	12 36 55.7	+0.5
PPLA	Purkeypile	6.48	133	Pn	Pn	12 36 56.5	0.0
TRF	Thorofare Moun	6.63	124	Pn	Pn	12 36 58.8	+0.2
WRH	Wood River Hil	6.71	112		Pn	12 36 59.5	0.0
CCB	Clear Creek Bu	6.71	110		Pn	12 36 59.7	+0.2
BM03	Burnt Mountain	6.88	84		Pn	12 37 02.5	+0.6
IL31		6.98	107		Pn	12 37 03.1	0.0
ILAR	Eielson Array	6.98	107	Pn	Pn	12 37 03.6	+0.4
	0.8nm,0.3s,baz=301,slow=14,SNR=41						
RND	Reindeer	7.13	121	Pn	Pn	12 37 05.6	+0.3
HDA	Harding Lake	7.15	110	Pn	Pn	12 37 05.5	-0.1
INK	Inuvik	10.87	73	Pn	Pn	12 37 54.6	-1.7
	0.1nm,0.3s,baz=288,slow=9.3,SNR=7.6						
INK	Inuvik	10.87	73		Pn	12 37 55.3	-1.0
YKA	Yellowknife Ar	20.41	82	P	P	12 39 57.2	-0.5
	0.2nm,0.6s,baz=304,slow=9.2,SNR=2.4						
TXAR	Lajitas Array	51.49	107	P	P	12 44 27.4	+0.8
	0.3nm,0.9s,baz=309,slow=4.0,SNR=3.6						

*IDC **05** 12:37:59.1±2.8, 68°.64N×163°.98W, h0km, mb3.4/3, mb1 4.0/5, mb1mx3.4/60, mbtmp3.7/5, ML4.0/2, Error ellipse: s-maj=62.0km s-min=29.1km az=35.0*
*AEIC **05** 12:38:06.9±1.8, 67°.69N±0°.05×162°.5W±0°.1, h16km±7km, ML3.1/29, Error ellipse: s-maj=8.3km s-min=5.4km az=215.0*
*NEIC **05** 12:38:08.6±1.7, 67°.75N±0°.10×162°.6W±0°.2, h37km±9km, Error ellipse: s-maj=14.8km s-min=9.7km az=155.0*
ISC 05 12:38:07.3±1.0**, 67°.73N**±0°.06×**162°.23W**±0°.06**, h10**km**, n36, σ1s.24**/51**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.41	322		Pg	12 38 14.9	-0.4
RDOG					Sg	12 38 21.1	+0.3
ANM	Nome	3.43	203		Pn	12 38 59.3	-1.4
ANM					Sn	12 39 39.1	-2.2
IM03		3.78	114		Pn	12 39 06.0	+0.5
IM03					Sn	12 39 50.6	+0.7
COLD	Coldfoot	4.66	91		Pn	12 39 18.8	+1.3
COLD					Sn	12 40 12.3	+0.8
TOLK	Toolik Lake Re	4.81	73		Pn	12 39 20.8	+1.1
TOLK					Sn	12 40 16.3	+0.9
MLY	Manley	5.36	115		Pn	12 39 27.5	+0.4
MLY				Sn	Sn	12 40 29.4	+0.6
TTA	Tatalina	5.48	149		Pn	12 39 28.8	-0.1
TT01	Tatalina	5.50	149		Pn	12 39 29.4	+0.3
BPAW	Bear Paw Mtn.	5.87	123		Pn	12 39 35.2	+1.0
BPAW				Sn	Sn	12 40 41.2	-0.2
NEA	Nenana	6.20	115		Pn	12 39 37.2	-1.5
KTH	Kantishna Hill	6.28	127		Pn	12 39 40.4	+0.5
MDM	Murphy Dome	6.28	110		Pn	12 39 41.5	+1.6
MDM				Sn	Sn	12 40 51.2	-0.4
PPLA	Purkeypile	6.42	134		Pn	12 39 42.5	+0.7
TCOL	CIGO, UAF Yank	6.46	110		Pn	12 39 43.7	+1.4
COLA	College	6.46	110		Pn	12 39 43.7	+1.4
POKR	Poker Plat Res	6.49	107		Pn	12 39 43.2	+0.5
TRF	Thorofare Moun	6.55	125		Pn	12 39 44.4	+0.7
CCB	Clear Creek Bu	6.61	111		Pn	12 39 44.9	+0.7
CCB				Sn	Sn	12 40 58.4	-1.1
WRH	Wood River Hil	6.61	113		Pn	12 39 45.2	+1.0
WRH				Sn	Sn	12 40 58.7	-0.8
FYU	Fort Yukon	6.72	92	Pn	Pn	12 39 47.1	+1.3
FYU				Sn	Sn	12 41 02.4	+0.1
BM03	Burnt Mountain	6.75	84		Pn	12 39 47.9	+1.7
MCK	McKinley	6.79	120		Pn	12 39 46.2	-0.6
IL31		6.87	108		Pn	12 39 49.1	+1.3
IL31				Sn	Sn	12 41 05.7	-0.1
ILAR	Eielson Array	6.87	108	Pn	Pn	12 39 48.4	+0.6
	3.5nm,0.3s,baz=302,slow=14,SNR=72						
ILAR				Sn	Sn	12 41 05.3	-0.6
	0.6nm,0.3s,baz=295,slow=22,SNR=13						
RND	Reindeer	7.04	122		Pn	12 39 51.1	+0.9
HDA	Harding Lake	7.05	111		Pn	12 39 51.2	+0.9
HDA					Sn	12 41 09.8	-0.5
WAT2	Susitna Watana	7.44	124		Pn	12 39 56.2	+0.5
WAT1	Susitna Watana	7.54	124		Pn	12 39 58.5	+1.3
DHY	Denali Highway	7.75	120		Pn	12 40 01.2	+1.2
DHY					Sn	12 41 29.4	+1.5
SML	Sawmill	8.38	129		Pn	12 40 09.3	+0.6
EPYK	Eagle Plains	10.03	86	Pn	Pn	12 40 32.7	+1.6
INK	Inuvik	10.73	74	Pn	Pn	12 40 37.6	-3.0
	0.5nm,0.3s,baz=268,slow=12,SNR=12						
INK				Sn	Sn	12 42 36.4	-4.1
	0.4nm,0.3s,baz=79,slow=19,SNR=6.1						
INK	Inuvik	10.73	74		Pn	12 40 39.4	-1.2
YKA	Yellowknife Ar	20.27	82	P	P	12 42 41.6	-0.9
	0.7nm,0.7s,baz=306,slow=11,SNR=5.7						
FINES	FINESS Array B	50.98	355	P	P	12 46 54.0	-14
	2.1nm,0.9s,baz=24,slow=10,SNR=4.5						
TXAR	Lajitas Array	51.38	108	P	P	12 47 12.1	+0.2
	0.2nm,0.5s,baz=332,slow=5.9,SNR=5.5						

*THE **05** 12:44:13.9, 38°.30N×20°.38E, h10km±1km, ML2.8/8, Error ellipse: s-maj=1.5km s-min=0.4km az=242.0*
*ATH **05** 12:44:13.5, 38°.30N×20°.38E, h12km±1km, ML2.3/6, Error ellipse: s-maj=1.7km s-min=0.8km az=246.0*
ISC 05 12:44:12.9±1.1**, 38°.29N**±0°.02×**20°.37E**±0°.05**, h18**km±3km**, n38, σ0s.41**/59**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGT1	Agia Thekli	0.04	160	P	Pg	12 44 15.8	-0.3
AGT1				S	Sg	12 44 17.3	-1.0
	14µm,0.1s						
KEF1	Kardakata, Kep	0.08	99	P	Pg	12 44 16.0	-0.4
KEF1				S	Sg	12 44 17.5	-1.3
KEF3	Kipouria, Keph	0.09	189	P	Pg	12 44 16.5	0.0
KEF3				S	Sg	12 44 18.5	-0.3
LXRA	Lixouri, Kepha	0.11	148	P	Pg	12 44 16.7	+0.1
LXRA				S	Sg	12 44 19.1	0.0
CHV1	Chavriata, Kef	0.11	173	P	Pg	12 44 16.7	+0.1
CHV1				S	Sg	12 44 19.1	0.0
	12µm,0.1s						
ARGA	Argostoli. Kep	0.14	142	P	Pg	12 44 17.1	+0.1
ARGA				S	Sg	12 44 19.8	0.0
ARG2	Argostoli	0.15	139	P	Pg	12 44 17.2	+0.1
ARG2				S	Sg	12 44 19.9	0.0
	10µm,0.1s						
KEF2	Argostoli. Kep	0.16	143	P	Pg	12 44 17.3	+0.1
KEF2				S	Sb	12 44 19.3	+0.1
VSK1	VASILIKIADES	0.20	53	P	Pb	12 44 17.7	0.0
VSK1				S	Sb	12 44 20.3	-0.5
	3µm,0.1s						
VLS	Valsamata	0.21	123	P	Pb	12 44 18.0	0.0
VLS				S	Sb	12 44 21.3	0.0
	3µm,0.1s						
VLS	Valsamata	0.21	123	P	Pb	12 44 18.0	0.0
VLS				S	Sb	12 44 20.8	-0.4
VLS				AML	AML	12 44 21.4	
	comp=E,7405µm,0.1s						
VLS				AML	AML	12 44 21.4	
	comp=N,3980µm,0.2s						
FSK	Fiskardo	0.23	42	P	Pb	12 44 18.4	0.0
FSK				S	Sb	12 44 21.6	-0.4
	comp=N,2µm,0.2s						
FSK	Fiskardo	0.23	42	P	Pb	12 44 18.4	0.0
FSK				S	Sb	12 44 21.5	-0.4
FSK				AML	AML	12 44 22.4	
	comp=E,5481µm,0.2s						
FSK				AML	AML	12 44 23.0	
	comp=N,2284µm,0.1s						
KFL	Anninata	0.38	118	P	Pg	12 44 21.0	+0.2
KFL				S	Sb	12 44 26.9	+0.2
	comp=N,2µm,0.3s						
KFL	Anninata	0.38	118	P	Pg	12 44 21.0	+0.2
KFL				S	Sg	12 44 26.5	+0.4
KFL				AML	AML	12 44 27.6	
	comp=N,2795µm,0.3s						
KFL				AML	AML	12 44 27.8	
	comp=E,4268µm,0.3s						
EVGI	Lefkada island	0.40	34	P	Pg	12 44 21.4	+0.2
EVGI				S	Sg	12 44 27.4	+0.6
EVGI	Lefkada island	0.40	34	P	Pg	12 44 21.4	+0.2
EVGI				S	Sb	12 44 27.6	+0.2
MGNA	Meganis	0.49	42	P	Pg	12 44 23.0	+0.1
MGNA				S	Sg	12 44 29.0	-0.6
MGNA				AML	AML	12 44 31.5	
	comp=N,414µm,0.2s						
MGNA				AML	AML	12 44 32.2	
	comp=E,405µm,0.1s						
LKD2	Lefkada island	0.55	25	P	Pg	12 44 24.0	+0.1
LKD2				S	Sb	12 44 32.6	+1.1
	comp=E,88nm,0.3s						
LKD2	Lefkada island	0.55	25	P	Pg	12 44 23.7	-0.2
TSLK	Tsoukalades, L	0.58	23	P	Pg	12 44 24.9	+0.5
AST1	Astakos	0.62	66	P	Pb	12 44 25.0	-0.2
PDO	Prodromos	0.71	64	P	Pg	12 44 27.2	+0.3
PDO				S	Sn	12 44 38.2	-0.4
PDO	Prodromos	0.71	64	P	Pg	12 44 27.2	+0.3
PDO				AML	AML	12 44 40.0	
	comp=E,340µm,0.4s						
PDO				AML	AML	12 44 41.6	
	comp=N,346µm,0.3s						
RLS	Riolos of Patr	0.90	105	P	Pg	12 44 30.4	0.0
DRO	Drossia	1.11	107	P	Pb	12 44 34.1	+0.4
EFP	Efpalio	1.22	83	P	Pb	12 44 35.4	0.0
IGT	Igoumenitsa	1.24	359	P	Pb	12 44 36.0	+0.2
ANX	Ano Chora	1.26	76	P	Pb	12 44 36.6	+0.5
ANX				AML	AML	12 45 01.2	
	comp=E,116µm,0.6s						
ANX				AML	AML	12 45 01.5	
	comp=N,156µm,0.5s						
LAKA	Lakka	1.27	92	P	Pb	12 44 36.4	+0.1
LAKA				S	Sg	12 44 54.3	+0.2
AMT	Artemida-Makis	1.30	125	P	Pg	12 44 38.7	+0.6
SERG	Sergoula	1.33	84	P	Pb	12 44 37.5	+0.1
KALE	Kalithea	1.40	85	P	Pb	12 44 38.6	0.0
KLV	Kalavryta, Ach	1.43	99	P	Pb	12 44 39.3	+0.3
MAKR	Makrakomi, Fth	1.56	62	P	Pg	12 44 42.4	-0.6
TRIP	Tripoli	1.69	116	P	Pg	12 44 45.2	-0.2
AGG	Agios Georgios	1.70	64	P	Pb	12 44 44.8	+1.1
DID	Didima	2.40	108	P	Pb	12 44 55.3	-0.3

*IDC **05** 12:47:59.0±4.8, 68°.10N×163°.08W, h0km, mb2.9/2, mb1 3.7/3, mb1mx3.2/62, mbtmp3.3/3, ML4.0/1, Error ellipse: s-maj=82.9km s-min=56.7km az=31.0*
*AEIC **05** 12:48:02.5±1.6, 67°.79N±0°.07×162°.4W±0°.2, h22km±9km, ML3.1/29, Error ellipse: s-maj=11.8km s-min=9.4km az=224.0*
*NEIC **05** 12:48:03.8±1.6, 67°.76N±0°.10×162°.6W±0°.2, h36km±9km, Error ellipse: s-maj=14.7km s-min=11.3km az=150.0*

ISC 05 12:48:02.3±1.0**, 67°.72N**±0°.06×**162°.32W**±0°.07**, h10**km**, n32, σ0ˢ.99**/45**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.40**	**327**		**Pg**	**12 48 10.2**	**0.0**
RDOG					**Sg**	**12 48 14.9**	**-0.7**
ANM	**Nome**	**3.40**	**203**		**Pn**	**12 48 54.8**	**-0.6**
IM03		**3.81**	**113**		**Pn**	**12 49 00.9**	**+0.1**
IM03					**Sn**	**12 49 45.0**	**-0.6**
COLD	**Coldfoot**	**4.69**	**90**		**Pn**	**12 49 13.9**	**+0.9**
TOLK	**Toolik Lake Re**	**4.84**	**73**		**Pn**	**12 49 15.4**	**+0.2**
TOLK				Sn	**Sn**	**12 50 12.0**	**+0.7**
MLY	**Manley**	**5.38**	**115**		**Pn**	**12 49 22.4**	**-0.2**
MLY				Sn	**Sn**	**12 50 22.9**	**-1.6**
TTA	**Tatalina**	**5.49**	**148**		**Pn**	**12 49 24.1**	**+0.1**
TT01	**Tatalina**	**5.50**	**148**		**Pn**	**12 49 24.5**	**+0.2**
BPAW	**Bear Paw Mtn.**	**5.89**	**123**		**Pn**	**12 49 30.2**	**+0.6**
BPAW				Sn	**Sn**	**12 50 36.2**	**-0.7**
NEA	**Nenana**	**6.22**	**114**		**Pn**	**12 49 34.6**	**+0.5**
KTH	**Kantishna Hill**	**6.30**	**126**	Pn	**Pn**	**12 49 35.7**	**+0.5**
KTH				Sn	**Sn**	**12 50 45.5**	**-1.6**
MDM	**Murphy Dome**	**6.31**	**109**		**Pn**	**12 49 36.1**	**+0.9**
MDM				Sn	**Sn**	**12 50 47.2**	**0.0**
PPLA	**Purkeypile**	**6.43**	**134**	Pn	**Pn**	**12 49 38.1**	**+1.0**
TCOL	**CIGO, UAF Yank**	**6.49**	**109**		**Pn**	**12 49 39.1**	**+1.4**
COLA	**College**	**6.49**	**109**		**Pn**	**12 49 38.7**	**+1.0**
COLA				Sn	**Sn**	**12 50 49.6**	**-2.1**
TRF	**Thorofare Moun**	**6.57**	**125**		**Pn**	**12 49 39.1**	**+0.2**
TRF				Sn	**Sn**	**12 50 53.5**	**-0.4**
CCB	**Clear Creek Bu**	**6.63**	**111**		**Pn**	**12 49 40.1**	**+0.5**
CCB				Sn	**Sn**	**12 50 53.1**	**-2.1**
WRH	**Wood River Hil**	**6.63**	**113**		**Pn**	**12 49 40.2**	**+0.5**
WRH				Sn	**Sn**	**12 50 53.6**	**-1.5**
FYU	**Fort Yukon**	**6.75**	**92**	Pn	**Pn**	**12 49 41.2**	**-0.1**
BM03	**Burnt Mountain**	**6.78**	**84**		**Pn**	**12 49 42.7**	**+0.9**
IL31		**6.89**	**108**		**Pn**	**12 49 43.9**	**+0.7**
ILAR	**Eielson Array**	**6.89**	**108**	Pn	**Pn**	**12 49 43.2**	**0.0**
	2.6nm,0.3s,baz=303,slow=14,SNR=112						
ILAR				Sn	**Sn**	**12 51 00.1**	**-1.6**
	0.5nm,0.3s,baz=302,slow=24,SNR=5.5						
PS08	**TAPS Pump Stn8**	**7.04**	**110**		**Pn**	**12 49 46.5**	**+1.2**
RND	**Reindeer**	**7.06**	**121**		**Pn**	**12 49 46.0**	**+0.4**
HDA	**Harding Lake**	**7.07**	**111**		**Pn**	**12 49 46.1**	**+0.4**
WAT2	**Susitna Watana**	**7.46**	**123**		**Pn**	**12 49 52.5**	**+1.4**
WAT1	**Susitna Watana**	**7.56**	**124**		**Pn**	**12 49 53.7**	**+1.2**
SPWE	**Spurr West**	**7.71**	**142**		**Pn**	**12 49 56.5**	**+1.9**
DHY	**Denali Highway**	**7.77**	**120**		**Pn**	**12 49 55.9**	**+0.5**
DHY					**Sn**	**12 51 24.4**	**+0.9**
BC03		**9.72**	**109**		**Pn**	**12 50 22.6**	**+0.6**
YKA	**Yellowknife Ar**	**20.30**	**82**	P	**P**	**12 52 37.4**	**-0.4**
	0.2nm,0.4s,baz=302,slow=10,SNR=6.5						
TXAR	**Lajitas Array**	**51.41**	**107**	P	**P**	**12 57 08.0**	**+0.9**
	0.1nm,0.5s,baz=331,slow=9.2,SNR=1.8						

*IDC **05** 12:49:21.2±1.7, 19°.78N×99°.72E, h0km, mb3.2/2, mb1 3.2/2, mb1mx3.1/45, mbtmp3.2/2, Error ellipse: s-maj=17.2km s-min=15.8km az=63.0*

ISC 05 12:49:22.6±1.3**, 19°.73N**±0°.10×**99°.72E**±0°.07**, h10**km**, n12, σ0ˢ.56**/12**, Thailand**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMMT	**Chiang Mai**	**1.16**	**219**	P	**Pb**	**12 49 44.3**	**-0.5**
LAMP	**Lampang**	**1.20**	**184**	P	**Pb**	**12 49 45.1**	**-0.3**
NANT	**Nan**	**1.31**	**135**	P	**Pn**	**12 49 45.7**	**-1.3**
PHRA	**Phrae**	**1.31**	**158**	P	**Pb**	**12 49 47.2**	**-0.2**
CM09	**Chiang Mai Arr**	**1.45**	**208**	P	**Pb**	**12 49 49.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**1.46**	**210**	Pg	**Pn**	**12 49 49.0**	**0.0**
	165nm,0.3s,baz=19,slow=17,SNR=25						
CMAR				Lg	Lg	12 50 09.1	
	240nm,0.3s,baz=29,slow=35,SNR=24						
CM04	**Chiang Mai Arr**	**1.49**	**208**	P	**Pn**	**12 49 49.5**	**0.0**
PHIT	**Phitsanulok**	**2.61**	**165**	Pn	**Pn**	**12 50 05.4**	**+0.5**
PHIT	**Phitsanulok**	**2.61**	**165**	Pg	**Pg**	**12 50 12.9**	**+0.3**
NONG	**Nongkai**	**3.64**	**116**	P	**Pn**	**12 50 19.7**	**+0.7**
MKAR	**Makanchi Array**	**30.54**	**336**	P	**P**	**12 55 36.2**	**+0.1**
	0.5nm,0.7s,baz=138,slow=9.0,SNR=3.5						
ASAR	**Alice Springs**	**54.51**	**141**	P	**P**	**12 58 50.9**	**0.0**
	0.1nm,0.5s,baz=318,slow=6.8,SNR=4.1						

*IDC **05** 12:51:25.3±1.4, 19°.17S×71°.08W, h0km, mb3.8/4, mb1 4.0/6, mb1mx3.7/39, mbtmp3.9/6, ML3.8/2, Error ellipse: s-maj=41.2km s-min=26.1km az=92.0*
*GUC **05** 12:51:30.4±0.6, 19°.28S×71°.02W, h39km±2km, ML3.8*

ISC 05 12:51:27.2±3.3**, 19°.29S**±0°.04×**71°.10W**±0°.08**, h16**km±21km**, n24, σ0ˢ.94**/37**, mb3.8**/4**, 5C-9D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.97**	**108**	⇑*i*P	**Pb**	**12 51 45.8**	**-0.1**
PSGC				*e*S	**Sb**	**12 51 57.6**	**-0.9**
PSGC				IAML		12 51 59.2	
	comp=N,6µm,0.3s						
PB12	**IPOC Station P**	**0.99**	**48**	⇑*i*P	**Pb**	**12 51 46.6**	**+0.5**
PB12				*e*S	**Sb**	**12 51 59.2**	**+0.1**
PB12				IAML		12 52 01.1	
	comp=E,3µm,0.3s						
AP01	**Chacalluta**	**1.16**	**38**	*e*P	**Pn**	**12 51 49.3**	**+0.4**
AP01				*e*S	**Sb**	**12 52 03.9**	**0.0**
AP01				IAML		12 52 08.4	
	comp=N,3µm,0.5s						
MNMC	**Minye Minye**	**1.43**	**84**	⇑*i*P	**Pn**	**12 51 53.5**	**+0.6**
MNMC				*i* S	**Sn**	**12 52 11.2**	**-0.4**
MNMC				IAML		12 52 20.1	
	comp=E,5µm,0.3s						
PB11	**IPOC Station P**	**1.45**	**109**	⇑*i*P	**Pn**	**12 51 53.4**	**+0.5**
PB11				*i* S	**Sn**	**12 52 11.3**	**-0.4**
PB11				IAML		12 52 13.6	
	comp=E,4µm,0.3s						
TA01	**Diego Aracena**	**1.54**	**146**	⇓*i*P	**Pn**	**12 51 54.6**	**+0.5**
TA01				*i* S	**Sn**	**12 52 12.9**	**-0.8**
TA01				IAML		12 52 17.3	
	comp=E,1µm,0.2s						
PATCX	**Punta Patache**	**1.77**	**150**	⇓*i*P	**Pn**	**12 51 57.8**	**+0.5**
PATCX				*i* S	**Sn**	**12 52 19.0**	**-0.5**
PATCX				IAML		12 52 25.6	
	comp=E,881nm,0.5s						
PB16	**IPOC Station P**	**1.79**	**58**	⇑*i*P	**Pn**	**12 51 58.9**	**+1.0**
PB16				*i* S	**Sn**	**12 52 21.2**	**+0.5**
PB16				IAML		12 52 26.8	
	comp=N,1µm,0.6s						
GO01	**Chusmiza**	**1.84**	**102**	⇓*e*P	**Pn**	**12 51 59.5**	**+0.9**
GO01				*e*S	**Sn**	**12 52 21.9**	**+0.1**
GO01				IAML		12 52 25.3	
	comp=N,3µm,0.3s						
PB08	**IPOC Station P**	**2.02**	**115**	*e*P	**Pn**	**12 52 01.9**	**+0.9**
PB08				*e*S	**Sn**	**12 52 26.8**	**+0.6**
PB08				IAML		12 52 29.4	
	comp=N,2µm,0.4s						
PB01	**IPOC Station P**	**2.31**	**139**	⇓*i*P	**Pn**	**12 52 05.4**	**+0.6**
PB01				*i* S	**Sn**	**12 52 31.8**	**-1.2**
PB01				IAML		12 52 33.9	
	comp=N,714nm,0.4s						
PB02	**IPOC Station P**	**2.32**	**151**	⇓*i*P	**Pn**	**12 52 05.7**	**+0.8**
PB02				*i* S	**Sn**	**12 52 31.6**	**-1.6**
PB02				IAML		12 52 40.6	
	comp=E,910nm,0.2s						
PB07	**IPOC Station P**	**2.68**	**155**	⇓*i*P	**Pn**	**12 52 10.4**	**+0.4**
PB07				IAML		12 53 00.9	
	comp=E,376nm,0.3s						
PB03	**IPOC Station P**	**3.02**	**155**	⇓*i*P	**Pn**	**12 52 15.1**	**+0.4**
PB09	**IPOC Station P**	**3.04**	**145**	⇓*i*P	**Pn**	**12 52 16.4**	**+1.5**
PB09				IAML		12 53 03.0	
	comp=N,380nm,0.4s						
PB04	**IPOC Station P**	**3.16**	**164**	⇓*i*P	**Pn**	**12 52 16.5**	**0.0**
LVC	**Limon Verde**	**3.89**	**149**	Pn	**Pn**	**12 52 28.6**	**+1.9**
	comp=N,8.4nm,0.3s,baz=351,slow=9.9,SNR=22						
LVC				Sn	**Sn**	**12 53 12.1**	**-0.1**
	comp=N,16nm,0.3s,baz=73,slow=17,SNR=8.2						
LPAZ	**La Paz**	**4.12**	**44**	Pn	**Pb**	**12 52 37.5**	**-2.2**
	comp=N,1.2nm,0.3s,baz=165,slow=3.3,SNR=29						
SIV	**San Ignacio**	**10.11**	**73**	Pn	**Pn**	**12 53 53.1**	**+1.2**
	comp=N,0.6nm,0.3s,baz=284,slow=9.4,SNR=7.3						
PLCA	**Paso Flores**	**21.38**	**179**	P	**P**	**12 56 15.7**	**+1.5**
	comp=N,1.4nm,0.8s,baz=356,slow=14,SNR=3.2						
PTGA	**Pitinga**	**21.43**	**32**	P	**P**	**12 56 13.8**	**-1.0**
	comp=N,3.5nm,0.2s,baz=253,slow=23,SNR=11						
TORD	**Torodi Ar. Bea**	**78.59**	**72**	P	**P**	**13 03 27.6**	**-1.1**
	comp=N,0.4nm,0.6s,baz=237,slow=6.7,SNR=2.2						
YKA	**Yellowknife Ar**	**88.44**	**341**	P	**P**	**13 04 18.9**	**+0.7**
	comp=N,0.6nm,0.7s,baz=136,slow=5.1,SNR=12						
MKAR	**Makanchi Array**	**144.97**	**32**	PKP	**PKPdf**	**13 11 04.1**	**+0.3**
	comp=N,0.3nm,0.5s,baz=337,slow=3.3,SNR=4.7						

*IDC **05** 12:53:35.0±1.1, 11°.72S×163°.51E, h0km, mb4.0/5, mb1 4.2/8, mb1mx3.9/48, mbtmp4.1/8, ML4.3/3, Error ellipse: s-maj=34.1km s-min=23.5km az=142.0*
*NEIC **05** 12:53:39.3±1.0, 11°.72S±0°.09×163°.5E±0°.1, h29km±7km, mb4.3/13, Error ellipse: s-maj=17.0km s-min=11.9km az=60.0*

ISC 05 12:53:36.8±0.6**, 11°.69S**±0°.08×**163°.46E**±0°.09**, h10**km**, n23, σ0ˢ.95**/25**, mb4.2**/11**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.12**	**303**	Pn	**Pn**	**12 54 40.8**	**+0.9**
	40nm,0.3s,baz=182,slow=11,SNR=19						
HNR	**Honiara**	**4.12**	**303**		**Pn**	**12 54 40.5**	**+0.6**
HNR				Sn	**Sn**	**12 55 26.8**	**-1.3**
DZM	**Mont Dzumac**	**10.71**	**165**	Pn	**Pn**	**12 56 09.6**	**-0.9**
	1.9nm,0.3s,baz=29,slow=11,SNR=77						
TARA	**Tarawa**	**16.01**	**37**	Pn	**Pn**	**12 57 23.0**	**+0.8**
TARA				IAmb	IAmb	12 57 37.6	
	comp=Z,11nm,0.8s						
CTA	**Charters Tower**	**18.53**	**241**	P	**P**	**12 57 54.8**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=73,slow=12,SNR=3.9						
PATS	**Pohnpei**	**19.10**	**344**	P	**P**	**12 57 59.2**	**-0.7**
ARMA	**Armidale**	**21.64**	**209**	P	**P**	**12 58 29.9**	**+2.5**
ARMA				IAmb	IAmb	12 58 47.8	
	comp=Z,6.7nm,1.0s						
WR0	**Warramunga Arr**	**28.98**	**250**	P	**P**	**12 59 36.1**	**-0.8**
WR0				IAmb	IAmb	12 59 46.9	
	comp=Z,4.3nm,1.0s						
WB0	**Warramunga Arr**	**29.08**	**250**	P	**P**	**12 59 37.2**	**-0.6**
WB0				IAmb	IAmb	12 59 39.2	
	comp=Z,13nm,1.4s						
WB2	**Warramunga Arr**	**29.15**	**250**	P	**P**	**12 59 37.0**	**-1.4**
WB2				IAmb	IAmb	12 59 38.9	
	comp=Z,7.5nm,1.2s						
WRA	**Warramunga Arr**	**29.16**	**250**	P	**P**	**12 59 38.2**	**-0.3**
	comp=Z,3.0nm,0.6s,baz=80,slow=9.1,SNR=18						
WRA				PcP	**PcP**	**13 02 46.5**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=78,slow=3.5,SNR=4.6						
BKZ	**Black Stump Fm**	**29.72**	**159**	P	**P**	**12 59 42.8**	**-0.5**
AS31	**Alice Springs**	**30.51**	**243**	P	**P**	**12 59 49.5**	**-1.0**
ASAR	**Alice Springs**	**30.51**	**243**	P	**P**	**12 59 49.7**	**-0.8**
	comp=Z,2.8nm,0.7s,baz=68,slow=9.8,SNR=38						
BBOO	**Buckleboo**	**32.77**	**226**	P	**P**	**13 00 09.9**	**-0.3**
BBOO				IAmb	IAmb	13 00 11.1	
	comp=Z,7.5nm,1.0s						
FITZ	**Fitzroy Crossi**	**37.05**	**255**	P	**P**	**13 00 46.7**	**-0.6**
FITZ				IAmb	IAmb	13 00 51.8	
	comp=Z,6.5nm,1.2s						
QSPA	**South Pole Qui**	**78.32**	**180**	P	**P**	**13 05 37.3**	**+0.1**
MLY	**Manley**	**83.82**	**18**	P	**P**	**13 06 05.9**	**-0.3**
HDA	**Harding Lake**	**84.58**	**19**	P	**P**	**13 06 09.7**	**-0.3**
ILAR	**Eielson Array**	**84.84**	**19**	P	**P**	**13 06 10.6**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=236,slow=6.6,SNR=7.7						
NVAR	**Mina Array Bea**	**88.15**	**50**	P	**P**	**13 06 29.0**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=235,slow=5.2,SNR=3.8						
MKAR	**Makanchi Array**	**92.46**	**317**	P	**P**	**13 06 48.8**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=93,slow=7.4,SNR=2.0						
ARCES	**ARCESS Array B**	**116.37**	**345**	PKP	**PKPdf**	**13 12 19.3**	**-0.9**
	comp=Z,1.4nm,0.9s,baz=20,slow=3.9,SNR=4.5						

*NEIC **05** 12:56:15.7±1.4, 19°.30S±0°.03×71°.08W±0°.04, h27km±2km, mb4.0/4, Error ellipse: s-maj=5.0km s-min=4.3km az=67.0*
*GUC **05** 12:56:16.9±0.7, 19°.30S×70°.94W, h42km±2km, ML3.5*

ISC 05 12:56:13.5±1.7**, 19°.32S**±0°.03×**71°.11W**±0°.06**, h12**km±10km**, n45, σ0ˢ.95**/65**, 6C-6D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.97**	**107**	⇑*i*P	**Pb**	**12 56 32.5**	**+0.1**
PSGC				*i* S	**Sg**	**12 56 43.7**	**-1.3**
PSGC				IAML		12 56 46.4	
	comp=N,2µm,0.6s						
PSGCX	**Pisagua**	**0.97**	**107**		**Pb**	**12 56 32.5**	**+0.1**
PSGCX				Sg	**Sg**	**12 56 44.1**	**-0.9**
PB12	**IPOC Station P**	**1.02**	**47**	⇓*i*P	**Pg**	**12 56 33.6**	**+0.5**
PB12				*i* S	**Sb**	**12 56 45.6**	**-0.9**
PB12				IAML		12 56 47.9	
	comp=E,2µm,0.5s						
PB12	**IPOC Station P**	**1.02**	**47**		**Pb**	**12 56 33.4**	**+0.3**
PB12				Sn	**Sb**	**12 56 46.2**	**-0.3**
AP01	**Chacalluta**	**1.19**	**38**	⇑*i*P	**Pb**	**12 56 36.4**	**+0.4**
AP01				*i* S	**Sb**	**12 56 49.8**	**-1.5**
AP01				IAML		12 56 54.3	
	comp=N,3µm,0.4s						
AP01	**Chacalluta**	**1.19**	**38**	Pn	**Pn**	**12 56 35.3**	**-0.7**
AP01				Sn	**Sb**	**12 56 51.0**	**-0.3**
TA02	**Huaiquique**	**1.32**	**136**	⇑*i*P	**Pb**	**12 56 38.8**	**+0.6**
TA02				*i* S	**Sb**	**12 56 55.2**	**0.0**
TA02				IAML		12 56 56.6	
	comp=N,2µm,0.4s						
PB11	**IPOC Station P**	**1.44**	**108**	⇑*i*P	**Pn**	**12 56 40.1**	**+0.5**
PB11				*i* S	**Sn**	**12 56 57.8**	**-0.8**
PB11				IAML		12 57 00.6	
	comp=E,2µm,0.6s						
PB11	**IPOC Station P**	**1.44**	**108**		**Pn**	**12 56 40.1**	**+0.5**
PB11				Sn	**Sn**	**12 56 57.8**	**-0.8**
MNMC	**Minye Minye**	**1.44**	**83**	⇑*i*P	**Pn**	**12 56 40.3**	**+0.6**
MNMC				*i* S	**Sn**	**12 56 57.3**	**-1.4**
MNMC				IAML		12 57 07.2	
	comp=E,1µm,0.4s						
MNMC	**Minye Minye**	**1.44**	**83**		**Pn**	**12 56 40.3**	**+0.6**
MNMC				Sn	**Sn**	**12 56 58.0**	**-0.8**
TA01	**Diego Aracena**	**1.52**	**145**	⇓*i*P	**Pn**	**12 56 41.4**	**+0.9**
TA01				*i* S	**Sn**	**12 56 57.8**	**-2.4**
TA01				IAML		12 57 03.9	
	comp=E,570nm,0.3s						
TA01	**Diego Aracena**	**1.52**	**145**	Pn	**Pn**	**12 56 41.4**	**+0.9**
TA01				Sn	**Sn**	**12 56 59.4**	**-0.9**
PATCX	**Punta Patache**	**1.75**	**149**	⇓*i*P	**Pn**	**12 56 44.6**	**+0.9**
PATCX				*i* S	**Sn**	**12 57 05.6**	**-0.3**
PATCX				IAML		12 57 13.5	
	comp=E,635nm,0.5s						
PATCX	**Punta Patache**	**1.75**	**149**		**Pn**	**12 56 44.6**	**+0.9**
PATCX				Sn	**Sn**	**12 57 06.0**	**0.0**
PB16	**IPOC Station P**	**1.81**	**58**	⇑*i*P	**Pn**	**12 56 46.0**	**+1.0**
PB16				*i* S	**Sn**	**12 57 08.1**	**0.0**
PB16				IAML		12 57 13.8	
	comp=N,565nm,0.7s						
PB16	**IPOC Station P**	**1.81**	**58**		**Pn**	**12 56 45.8**	**+0.9**
PB16				Sn	**Sn**	**12 57 07.9**	**-0.1**
GO01	**Chusmiza**	**1.84**	**101**	⇓*i*P	**Pn**	**12 56 46.5**	**+1.1**
GO01				*i* S	**Sn**	**12 57 08.3**	**-0.5**
GO01				IAML		12 57 11.8	
	comp=N,898nm,0.3s						
GO01	**Chusmiza**	**1.84**	**101**		**Pn**	**12 56 46.5**	**+1.1**
GO01				Sn	**Sn**	**12 57 08.7**	**-0.1**
PB08	**IPOC Station P**	**2.02**	**114**	⇓*i*P	**Pn**	**12 56 48.8**	**+1.1**
PB08				*i* S	**Sn**	**12 57 12.7**	**-0.4**
PB08				IAML		12 57 17.8	
	comp=N,426nm,0.4s						
PB08	**IPOC Station P**	**2.02**	**114**		**Pn**	**12 56 49.2**	**+1.4**
PB02	**IPOC Station P**	**2.30**	**150**	⇓*i*P	**Pn**	**12 56 52.5**	**+1.2**
PB02				IAML		12 57 33.9	
	comp=E,819nm,0.5s						
PB01	**IPOC Station P**	**2.30**	**139**	*e*P	**Pn**	**12 56 52.2**	**+0.9**
PB01				IAML		12 57 26.6	
	comp=E,475nm,0.3s						
PB01	**IPOC Station P**	**2.30**	**139**		**Pn**	**12 56 52.3**	**+1.0**
PB07	**IPOC Station P**	**2.66**	**155**	*e*P	**Pn**	**12 56 57.3**	**+0.9**
PB07				IAML		12 57 53.3	
	comp=E,481nm,0.8s						
PB07	**IPOC Station P**	**2.66**	**155**		**Pn**	**12 56 57.2**	**+0.9**
PB03	**IPOC Station P**	**3.00**	**155**	*e*P	**Pn**	**12 57 01.9**	**+0.9**
PB03				IAML		12 57 51.5	
	comp=E,154nm,0.6s						
PB09	**IPOC Station P**	**3.02**	**145**	*e*P	**Pn**	**12 57 03.2**	**+1.9**
PB09				IAML		12 57 56.3	
	comp=E,291nm,0.7s						
PB09	**IPOC Station P**	**3.02**	**145**		**Pn**	**12 57 03.4**	**+1.9**
PB04	**IPOC Station P**	**3.13**	**163**	*e*P	**Pn**	**12 57 03.4**	**+0.5**
PB04				IAML		12 58 08.7	
	comp=N,172nm,0.6s						
PB04	**IPOC Station P**	**3.13**	**163**		**Pn**	**12 57 03.4**	**+0.5**
PB06	**IPOC Station P**	**3.67**	**157**	*e*P	**Pn**	**12 57 10.6**	**+0.4**
PB06				IAML		12 58 16.9	
	comp=N,94nm,0.7s						
PB06	**IPOC Station P**	**3.67**	**157**		**Pn**	**12 57 10.6**	**+0.4**
LVC	**Limon Verde**	**3.87**	**148**		**Pn**	**12 57 15.3**	**+2.2**
PB15	**IPOC Station P**	**4.16**	**159**		**Pn**	**12 57 17.4**	**+0.3**
PB10	**IPOC Station P**	**4.21**	**173**		**Pn**	**12 57 17.4**	**-0.1**
PB14	**IPOC Station P**	**5.32**	**173**		**Pn**	**12 57 32.6**	**-0.5**
GO02	**Mina Guanaco**	**5.99**	**167**		**Pn**	**12 57 43.0**	**+0.8**
AC02	**Maricunga**	**7.70**	**167**	Pn	**Pn**	**12 58 06.8**	**+0.8**
AC05	**El Transito**	**9.51**	**176**	Pn	**Pn**	**12 58 30.0**	**-0.4**
GO05	**Huala**	**15.65**	**182**	Pn	**Pn**	**12 59 54.3**	**+0.3**
GO05				IAmb	IAmb	12 59 59.1	
	comp=Z,7.3nm,0.8s						
PTGA	**Pitinga**	**21.46**	**32**	P	**P**	**13 01 00.8**	**-1.1**
PTGA				IAmb	IAmb	13 01 10.0	
	comp=Z,8.5nm,1.4s						
RUSC	**La Rusia**	**25.12**	**355**	P	**P**	**13 01 40.8**	**+1.8**
SNAA	**Sanae**	**65.00**	**161**	P	**P**	**13 06 53.0**	**-0.2**
SNAA				IAmb	IAmb	13 06 53.9	
	comp=Z,3.1nm,1.5s						
QSPA	**South Pole Qui**	**70.86**	**180**	P	**P**	**13 07 30.2**	**+0.1**

*BJI **05** 13:03:44.5±0.0, 15°.90S×167°.80E, h170km, mB5.1/34, mb5.0/55*
*NEIC **05** 13:03:45.0±1.6, 15°.88S±0°.07×167°.77E±0°.08, h162km±4km, mb5.2/91, Error ellipse: s-maj=11.8km s-min=9.9km az=118.0*
*IDC **05** 13:03:45.0±0.7, 15°.88S×167°.81E, h158km±6km, mb4.4/26, mb1 4.5/29, mb1mx4.2/53, mbtmp4.9/29, MS4.2/4, Ms1 4.2/4, ms1mx3.7/42, Error ellipse: s-maj=13.1km s-min=8.6km az=93.0*

ISC 05 13:03:46.6±0.3**, 15°.89S**±0°.05×**167°.82E**±0°.05**, h177**km**, n216, σ1ˢ.17**/221**, mb5.0**/75**, 2C-2D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.29**	**192**	P	**Pn**	**13 05 16.1**	**-1.3**
	26nm,0.3s,baz=344,slow=11,SNR=116						
DZM				S	**Sn**	**13 06 25.9**	**-3.1**
	baz=116,slow=23,SNR=1.2						
DZM				LR	LR	13 07 36.2	
	comp=Z,598nm,18.4s,baz=82,slow=37						
MSVF	**Nonsavu**	**9.96**	**102**		**Pn**	**13 06 07.2**	**+1.4**
HNR	**Honiara**	**10.01**	**309**	P	**Pn**	**13 06 04.8**	**-1.5**
	32nm,0.3s,baz=67,slow=0.6,SNR=9.3						
HNR				S	**S**	**13 07 58.8**	**+0.2**
	8.4nm,0.3s,baz=299,slow=9.9,SNR=1.6						
HNR	**Honiara**	**10.01**	**309**	Pn	**Pn**	**13 06 04.5**	**-1.8**
TARA	**Tarawa**	**17.86**	**17**	P	**P**	**13 07 41.7**	**-0.8**
TARA				IAmb	IAmb	13 07 46.4	
	comp=Z,232nm,1.2s						
EIDS	**Eidsvold**	**18.27**	**236**	P	**Pn**	**13 07 48.7**	**-0.4**
	baz=18,SNR=13						
EIDS	**Eidsvold**	**18.27**	**236**	Pn	**Pn**	**13 07 48.3**	**-0.8**
KRVT	**Keravat (AS076**	**19.32**	**305**	P	**P**	**13 07 56.6**	**-1.9**
	comp=Z,1.5nm,0.3s,baz=166,slow=21,SNR=4.5						
AFI	**Afiamalu**	**19.81**	**87**	P	**P**	**13 08 04.8**	**+1.0**
AFI				IAmb	IAmb	13 08 44.6	
	comp=Z,111nm,1.4s						
OUZ	**Omahuta**	**19.94**	**166**		**P**	**13 08 06.4**	**+1.6**
OUZ				IAmb	IAmb	13 08 10.4	
	comp=Z,96nm,1.3s						
RMQ	**Roma**	**20.64**	**236**	P	**P**	**13 08 14.3**	**+1.8**
	baz=21,SNR=23						
ARMA	**Armidale**	**20.72**	**223**	P	**P**	**13 08 15.2**	**+1.8**
	baz=21,SNR=16						
ARMA	**Armidale**	**20.72**	**223**		**P**	**13 08 12.5**	**-0.9**
ARMA				IAmb	IAmb	13 08 17.9	
	comp=Z,62nm,1.1s						
CTA	**Charters Tower**	**20.93**	**255**	P	**P**	**13 08 15.4**	**-0.3**
	comp=Z,8.1nm,0.7s,baz=89,slow=12,SNR=16						
CTAO	**Charters Tower**	**20.93**	**255**		**P**	**13 08 15.0**	**-0.7**
NIUE	**Niue**	**21.45**	**102**	P	**P**	**13 08 21.1**	**-0.1**
	baz=22,SNR=3.1						
NIUE	**Niue**	**21.45**	**102**	P	**P**	**13 08 21.5**	**+0.3**
MTSU	**Mount Surprise**	**22.59**	**261**	P	**P**	**13 08 33.0**	**+0.6**
	baz=23,SNR=8.2						
MGCD	**Mangrove Creek**	**22.94**	**218**	P	**P**	**13 08 36.6**	**+1.3**
	baz=23,SNR=6.2						
RIV	**Riverview**	**23.35**	**217**	P	**P**	**13 08 40.6**	**+1.5**
	baz=23,SNR=3.6						
HIZ	**Hauiti**	**23.38**	**166**	P	**P**	**13 08 40.8**	**+1.5**
HIZ				IAmb	IAmb	13 08 43.6	
	comp=Z,152nm,1.0s						
MXZ	**Matakaoa Point**	**23.50**	**159**	P	**P**	**13 08 42.5**	**+2.1**
URZ	**Urewera**	**23.74**	**162**	P	**P**	**13 08 43.1**	**+0.5**
	comp=Z,15nm,0.5s,baz=284,slow=3.4,SNR=15						
URZ	**Urewera**	**23.74**	**162**	P	**P**	**13 08 43.7**	**+1.1**
URZ				IAmb	IAmb	13 08 45.6	
	comp=Z,298nm,2.0s						
COEN	**Coen**	**23.89**	**271**	P	**P**	**13 08 45.1**	**+0.8**
	baz=24,SNR=4.0						
COEN	**Coen**	**23.89**	**271**	P	**P**	**13 08 44.7**	**+0.5**
KNTN	**Kanton**	**23.99**	**59**	P	**P**	**13 08 46.6**	**+1.6**
KNTN				IAmb	IAmb	13 08 47.2	
	comp=Z,56nm,1.1s						
QLP	**Quilpie**	**24.39**	**240**	P	**P**	**13 08 49.7**	**+1.1**
	baz=24,SNR=28						
BKZ	**Black Stump Fm**	**24.41**	**164**	P	**P**	**13 08 49.3**	**+0.6**
BKZ				IAmb	IAmb	13 08 50.8	
	comp=Z,42nm,0.8s						
PATS	**Pohnpei**	**24.46**	**337**	P	**P**	**13 08 49.2**	**-0.1**
	baz=24,SNR=7.3						
PATS	**Pohnpei**	**24.46**	**337**	P	**P**	**13 08 48.9**	**-0.5**
PATS				IAmb	IAmb	13 08 50.9	
	comp=Z,104nm,0.9s						
KWAJ	**Kwajalein Atol**	**24.53**	**359**	P	**P**	**13 08 51.1**	**+1.2**
QRZ	**Quartz Range**	**25.18**	**172**	P	**P**	**13 08 57.5**	**+1.8**
QRZ				IAmb	IAmb	13 08 58.6	
	comp=Z,149nm,1.1s						
CNB	**Canberra Magne**	**25.44**	**217**	P	**P**	**13 08 59.3**	**+1.2**
	baz=26,SNR=15						
CMSA	**Cobar Meteorol**	**25.48**	**228**	P	**P**	**13 08 59.2**	**+0.7**
	baz=26,SNR=28						
CAN	**Canberra**	**25.66**	**218**	P	**P**	**13 09 00.1**	**0.0**
CAN				IAmb	IAmb	13 09 03.2	
	comp=Z,67nm,1.6s						
NNZ	**Nelson**	**25.70**	**170**	P	**P**	**13 09 01.7**	**+1.5**
BFZ	**Birch Farm**	**25.77**	**165**	P	**P**	**13 09 00.7**	**-0.2**
BFZ				IAmb	IAmb	13 09 09.2	
	comp=Z,119nm,1.3s						
TUWZ	**Tuamarina**	**26.00**	**169**	P	**P**	**13 09 02.9**	**-0.1**
SNZO	**South Karori**	**26.03**	**168**	P	**P**	**13 09 03.0**	**-0.2**
SNZO				IAmb	IAmb	13 09 43.4	
	comp=Z,129nm,1.1s						
BHW	**Baring Head**	**26.15**	**168**	P	**P**	**13 09 03.9**	**-0.5**
THZ	**Tophouse**	**26.16**	**171**	P	**P**	**13 09 04.6**	**+0.1**
THZ				IAmb	IAmb	13 09 31.4	
	comp=Z,185nm,1.6s						
MSWZ	**Moikau Station**	**26.24**	**167**	P	**P**	**13 09 04.8**	**-0.4**
BSWZ	**Blackbirch Sta**	**26.26**	**170**	P	**P**	**13 09 04.5**	**-0.9**
CMWZ	**Cape Campbell**	**26.36**	**169**	P	**P**	**13 09 05.7**	**-0.6**
PLWZ	**Palliser**	**26.39**	**167**	P	**P**	**13 09 04.8**	**-1.7**
KHZ	**Kahutara**	**26.89**	**171**	P	**P**	**13 09 09.3**	**-1.6**
LTZ	**Lake Taylor**	**27.08**	**173**	P	**P**	**13 09 13.0**	**+0.3**
QIS	**Mount Isa**	**27.18**	**256**	P	**P**	**13 09 14.6**	**+0.7**
	baz=27,SNR=4.2						
OXZ	**Oxford**	**27.59**	**173**	P	**P**	**13 09 17.5**	**+0.4**
FOZ	**Fox Glacier**	**27.61**	**177**	P	**P**	**13 09 18.1**	**+0.8**
RPZ	**Rata Peaks**	**27.87**	**175**	P	**P**	**13 09 20.7**	**+1.0**
	comp=Z,75nm,0.6s,baz=316,slow=2.0,SNR=32						
RPZ	**Rata Peaks**	**27.87**	**175**	P	**P**	**13 09 20.1**	**+0.3**
MQZ	**McQueen's Vall**	**28.03**	**173**	P	**P**	**13 09 21.7**	**+0.6**
LBZ	**Lake Benmore**	**28.48**	**176**	P	**P**	**13 09 24.1**	**-1.0**
LBZ				IAmb	IAmb	13 09 27.0	
	comp=Z,67nm,0.8s						
STKA	**Stephens Creek**	**28.68**	**232**	P	**P**	**13 09 28.1**	**+1.1**
	baz=29,SNR=28						
STKA	**Stephens Creek**	**28.68**	**232**	P	**P**	**13 09 28.1**	**+1.1**
	comp=Z,35nm,0.7s,baz=45,slow=8.0,SNR=75						
STKA				PcP	**PcP**	**13 12 33.9**	**+0.7**
	comp=Z,3.8nm,0.6s,baz=90,slow=3.4,SNR=4.4						
STKA				ScP	**ScP**	**13 16 00.1**	**+2.2**
	comp=Z,4.6nm,0.8s,baz=13,slow=6.0,SNR=7.7						
STKA	**Stephens Creek**	**28.68**	**232**	P	**P**	**13 09 27.8**	**+0.8**
WKZ	**Wanaka**	**28.87**	**178**	P	**P**	**13 09 27.0**	**-1.6**
ODZ	**Otahua Downs**	**29.16**	**176**	P	**P**	**13 09 29.6**	**-1.6**
ODZ				IAmb	IAmb	13 09 31.6	
	comp=Z,35nm,0.9s						
TOO	**Toolangi**	**29.26**	**218**	P	**P**	**13 09 33.2**	**+1.1**
	baz=29,SNR=5.3						
TOO	**Toolangi**	**29.26**	**218**	P	**P**	**13 09 32.0**	**-0.1**
TOO				IAmb	IAmb	13 09 48.6	

	comp=Z,106nm,1.9s						
MLZ	Mavora Lakes	29.39	180	P	P	13 09 32.7	-0.4
MLZ				IAmb	IAmb	13 09 48.3	
	comp=Z,108nm,1.8s						
PYZ	Puysegur Point	30.20	182	P	P	13 09 39.3	-1.0
ARPS	Mount Arapiles	31.05	223	P	P	13 09 49.0	+1.1
	baz=31,SNR=5.0						
RAR	Rarotonga	31.14	105	P	P	13 09 48.6	-0.2
HTT	Hallett	31.39	231	P	P	13 09 51.7	+0.8
	baz=31,SNR=13						
WR0	Warramunga Arr	31.89	258	P	P	13 09 54.6	-0.9
WB0	Warramunga Arr	32.03	258	P	P	13 09 55.8	-0.9
WB2	Warramunga Arr	32.07	258	P	P	13 09 56.0	-1.0
WRAB	Tennant Creek	32.07	258	P	P	13 09 55.5	-1.5
WRA	Warramunga Arr	32.08	258	P	P	13 09 56.2	-1.0
	comp=Z,3.5nm,0.7s,baz=89,slow=8.9,SNR=27						
WRA				PcP	PcP	13 12 43.1	+0.7
	comp=Z,2.2nm,0.8s,baz=86,slow=3.1,SNR=5.2						
WRA				ScP	ScP	13 16 11.7	+2.4
	comp=Z,2.5nm,1.0s,baz=84,slow=3.4,SNR=8.8						
TAU	Tasmania Unive	32.14	209	P	P	13 09 56.5	-0.8
AS31	Alice Springs	32.78	251	P	P	13 10 02.8	-0.4
ASAR	Alice Springs	32.78	251	P	P	13 10 03.0	-0.2
	comp=Z,13nm,0.6s,baz=78,slow=8.8,SNR=283						
ASAR				PcP	PcP	13 12 44.8	+0.5
	comp=Z,2.1nm,0.7s,baz=89,slow=3.3,SNR=6.2						
ASAR				S	S	13 15 09.3	+2.1
	comp=Z,0.8nm,0.9s,baz=73,slow=17,SNR=4.1						
ASAR				ScP	ScP	13 16 13.9	+2.2
	comp=Z,3.3nm,0.9s,baz=93,slow=3.0,SNR=13						
BBOO	Buckleboo	33.31	234	P	P	13 10 08.5	+0.8
	baz=33,SNR=59						
BBOO	Buckleboo	33.31	234	P	P	13 10 08.2	+0.5
BBOO				IAmb	IAmb	13 10 09.4	
	comp=Z,48nm,0.7s						
KDU	Kakadu	34.38	271	P	P	13 10 17.0	-0.1
	baz=34,SNR=3.7						
MTN	Manton Dam	35.64	270	P	P	13 10 28.0	+0.1
	baz=36,SNR=4.3						
MTN	Manton Dam	35.64	270	P	P	13 10 27.4	-0.5
FAKI	Fak Fak	37.30	287	P	P	13 10 40.7	-1.3
KNRA	Kununurra	37.55	265	P	P	13 10 43.7	-0.3
	baz=38,SNR=7.2						
KNRA	Kununurra	37.55	265	P	P	13 10 43.0	-1.0
KNRA				IAmb	IAmb	13 10 44.6	
	comp=Z,35nm,1.1s						
WRKA	Warakurna	38.02	250	P	P	13 10 47.6	-0.4
	baz=38,SNR=22						
XMAS	Kiritimati	38.67	66	P	P	13 10 52.5	-0.9
SIJI	Sorong	39.02	289	P	P	13 10 57.0	+0.8
	comp=Z,23nm,1.0s,baz=104,slow=7.3,SNR=9.0						
FORT	Forrest	39.18	241	P	P	13 10 58.3	+0.9
	baz=39,SNR=32						
FORT	Forrest	39.18	241	P	P	13 10 57.4	-0.1
FORT				IAmb	IAmb	13 10 59.2	
	comp=Z,52nm,0.8s						
FITZ	Fitzroy Crossi	40.34	261	P	P	13 11 07.4	+0.3
	baz=40,SNR=14						
FITZ	Fitzroy Crossi	40.34	261	P	P	13 11 07.6	+0.5
	comp=Z,16nm,0.7s,baz=92,slow=7.9,SNR=38						
FITZ	Fitzroy Crossi	40.34	261	P	P	13 11 07.1	-0.1
BATI	Baumata	43.33	272	LR	LR	13 29 25.7	
	comp=Z,161nm,18.8s,baz=196,slow=36						
SANI	Sanana	43.43	284	P	P	13 11 33.1	+0.8
	comp=Z,7.2nm,0.7s						
MEEK	Meekatharra	46.84	248	P	P	13 11 59.6	+0.5
	baz=47,SNR=18						
KLBR	Kellerberrin	48.02	242	P	P	13 12 08.1	0.0
	baz=48,SNR=7.5						
KCP	Kidapawan	48.04	295⇓	iP	P	13 12 10.7	+2.3
NWAO	Narrogin (SRO)	48.63	240	P	P	13 12 13.1	+0.5
	baz=49,SNR=9.9						
NWAO	Narrogin (SRO)	48.63	240	P	P	13 12 12.2	-0.4
	comp=Z,40nm,0.9s,baz=86,slow=7.7,SNR=17						
NWAO	Narrogin (SRO)	48.63	240	P	P	13 12 12.2	-0.4
NWAO				IAmb	IAmb	13 12 13.9	
	comp=Z,52nm,0.9s						
NWAO	Narrogin (SRO)	48.63	240	P	P	13 12 12.2	-0.4
NWAO				IAmb	IAmb	13 12 13.9	
	comp=Z,41nm,0.9s						
MORW	Morawa	49.26	245	P	P	13 12 17.9	+0.4
	baz=49,SNR=8.0						
MORW	Morawa	49.26	245	P	P	13 12 17.7	+0.1
MORW				IAmb	IAmb	13 12 18.9	
	comp=Z,48nm,1.4s						
JCJ	Chichijima	49.45	329	P	P	13 12 18.1	-0.7
	comp=Z,129nm,0.7s,baz=251,slow=8.7,SNR=8.3						
MPSI	Mapaga	49.97	284	P	P	13 12 23.4	+0.4
	comp=Z,8.2nm,0.8s						
AIN	Ainahou	50.32	47	P	P	13 12 25.2	-0.6
MLOA	Mauna Loa Obse	50.34	47	P	P	13 12 25.3	-0.9
MLH	Mauna Loa	50.45	47	P	P	13 12 27.0	+0.2
HMH	Humu'ula Sheep	50.45	47	P	P	13 12 27.2	+0.3
POHA	Pohakuloa	50.52	47	P	P	13 12 27.1	-0.2
HPAH	Hawaii Prepara	50.59	46	P	P	13 12 27.8	+0.2
HPAH				IAmb	IAmb	13 13 22.3	
	comp=Z,154nm,1.6s						
GIRL	Giralia	50.82	254	P	P	13 12 30.5	+1.2
JHJ2	Mitsune	55.59	331	P	P	13 13 03.5	-0.3
UGM	Wanagama	56.48	271	P	P	13 13 10.3	-0.3
INU	Inuyama	58.74	331	P	P	13 13 25.3	-0.6
INU				IAmb	IAmb	13 13 27.3	
	comp=Z,82nm,1.6s						
MJAR	Matsushiro Arr	59.17	332	P	P	13 13 28.5	-0.4
	comp=Z,28nm,0.8s,baz=160,slow=7.9,SNR=64						
MAJO	Matsushiro	59.17	332	P	P	13 13 28.5	-0.4
MAJO				IAmb	IAmb	13 13 29.7	
	comp=Z,45nm,0.9s						
MAT	Matsushiro	59.17	332	P	P	13 13 28.7	-0.2
CISI	Cisompet, Garu	59.17	271	P	P	13 13 28.9	-0.5
CISI				IAmb	IAmb	13 13 44.7	
	comp=Z,89nm,1.7s						
MJB9	Matsu-Tunnel	59.18	332	P	P	13 13 28.7	-0.2
MJB9				IAmb	IAmb	13 13 29.7	
	comp=Z,45nm,0.9s						
YULB	Yu-li	59.94	310	P	P	13 13 33.5	-0.9
YULB				IAmb	IAmb	13 14 35.3	
	comp=Z,93nm,1.7s						
JNU	Nakatsue	60.17	324	P	P	13 13 36.1	+0.3
	comp=Z,33nm,0.8s,baz=96,slow=2.6,SNR=18						
JNU	Nakatsue	60.17	324	P	P	13 13 35.6	-0.2
JNU				IAmb	IAmb	13 13 37.2	
	comp=Z,50nm,1.0s						
NACB	Ninganchiao	60.18	311	P	P	13 13 35.4	-0.6
TPUB	Ta-pu	60.38	309	P	P	13 13 36.8	-0.7
TPUB				IAmb	IAmb	13 14 31.8	
	comp=Z,86nm,1.3s						
SSLB	Suanglung	60.43	310	P	P	13 13 37.0	-0.7
YHNB	Yeheng	60.64	311	P	P	13 13 39.4	+0.1
VNDA	Vanda	61.73	181	P	P	13 13 46.6	+1.0
	comp=Z,4.2nm,0.6s,baz=2.1,slow=7.6,SNR=25						
VNDA	Vanda	61.73	181	P	P	13 13 46.4	+0.8
VNDA				IAmb	IAmb	13 13 48.6	
	comp=Z,63nm,1.9s						
CASY	Casey	62.67	203	P	P	13 13 52.5	+0.5
CASY				IAmb	IAmb	13 13 53.2	
	comp=Z,81nm,1.7s						
JKA	Kamikawa-asahi	64.00	340	P	P	13 14 02.6	+1.6
ASAJ	Asahikawa	64.00	340	P	P	13 14 02.6	+1.6
	comp=Z,9.5nm,0.4s,baz=208,slow=6.8,SNR=24						
KSRS	Korea Array	64.99	326	P	P	13 14 08.4	+0.9
	comp=Z,5.8nm,0.8s,baz=140,slow=7.1,SNR=17						
NJ2	Nanjing	66.87	316	*e*P	P	13 14 20.4	+0.7
NJ2				pmax	pmax		
	comp=Z,33nm,1.1s						
USA0B	Ussuriysk Arra	68.15	333	P	P	13 14 28.6	+1.1
USA0B				IAmb	IAmb	13 14 30.0	
	comp=Z,67nm,1.1s						
USRK	Ussuriysk Ar.	68.15	333	P	P	13 14 28.9	+1.4
	comp=Z,25nm,0.8s,baz=147,slow=5.5,SNR=32						
IPM	Ipoh	69.09	281	P	P	13 14 32.1	-1.9
WHN	Wuhan	69.11	312	P	P	13 14 34.7	+1.0
WHN				pmax	pmax		
	comp=Z,32nm,0.6s						
PEA0B	Petropavlovsk-	69.26	353	P	P	13 14 34.8	+0.7
PEA0B				IAmb	IAmb	13 15 44.4	
	comp=Z,37nm,1.6s						
PETK	Petropavlovsk-	69.26	353	P	P	13 14 36.2	+2.0
	comp=Z,3.2nm,0.6s,baz=158,slow=9.6,SNR=6.7						
PETK				pP	pP	13 15 12.7	-2.7
	comp=Z,2.7nm,0.8s,baz=162,slow=8.7,SNR=2.9						
DL2	Dalian	69.54	323	P	P	13 14 37.2	+1.0
DL2				pmax	pmax		
	comp=Z,90nm,0.8s						
MDJ	Mudanjiang	69.55	332	P	P	13 14 37.4	+1.3
MDJ				pmax	pmax		
	comp=Z,72nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,550nm,10.2s						
MDJ	Mudanjiang	69.55	332	P	P	13 14 36.5	+0.4
MDJ				IAmb	IAmb	13 14 38.3	
	comp=Z,64nm,1.0s						
TIA	Tai'an	70.55	318	P	P	13 14 42.7	+0.3
TIA				pmax	pmax		
	comp=Z,18nm,1.2s						
CN2	Changchun	70.91	329	*e*P	P	13 14 41.6	-2.8
CN2				*e*pP	pP	13 15 29.3	+2.9
CN2				*e*S	S	13 23 44.2	-1.1
CN2				pmax	pmax		
	comp=Z,50nm,0.8s						
GSI	Gunungsitoli	71.40	277	P	P	13 14 47.5	-0.5
KLR	Kul'dur	72.28	336	P	P	13 14 53.8	+1.3
	comp=Z,12nm,0.7s,baz=125,slow=3.4,SNR=37						
ENH	Enshi	72.51	309	P	P	13 14 53.1	-1.2
ENH				IAmb	IAmb	13 14 55.7	
	comp=Z,30nm,1.2s						
GYA	Guiyang	72.81	305⇓	*i*P	P	13 14 58.3	+2.0
GYA				pP	pP	13 15 38.0	-0.8
GYA				SS	SS	13 28 47.1	-5.1
GYA				pmax	pmax		
	comp=Z,20nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,3.5s						
BJT	Baijiatuau	73.49	321	P	P	13 15 00.0	+0.3
BJT				IAmb	IAmb	13 15 01.9	
	comp=Z,19nm,0.8s						
BJI	Beijing	73.50	321	P	P	13 15 01.0	+1.2
BJI				pmax	pmax		
	comp=Z,20nm,0.6s						
QSPA	South Pole Qui	74.15	180	P	P	13 15 04.1	+0.7
QSPA				IAmb	IAmb	13 15 05.4	
	comp=Z,55nm,0.9s						
XAN	Xi'an	74.86	313	P	P	13 15 08.9	+0.9
XAN				pmax	pmax		
	comp=Z,20nm,1.2s						
XAN				pmax	pmax		
	comp=Z,140nm,7.9s						
XAN	Xi'an	74.86	313	P	P	13 15 07.4	-0.6
KMI	Kunming	75.37	302	P	P	13 15 13.8	+2.6
KMI				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC	Hu-ho-hao-te	76.81	320	P	P	13 15 19.7	+0.8
HHC				S	S	13 24 48.5	-3.3
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,96nm,6.8s						
HIA	Hailar	77.55	330	P	P	13 15 22.8	+0.1
HIA				IAmb	IAmb	13 15 25.0	
	comp=Z,29nm,1.1s						
SEY	Seymchan	79.49	353	P	P	13 15 32.7	-0.3
	comp=Z,2.1nm,0.7s,baz=144,slow=7.6,SNR=7.5						
LZH	Lanzhou	79.49	312	*e*P	P	13 15 36.0	+2.2
LZH				pP	pP	13 16 21.2	+4.2
LZH				PP	PP	13 18 38.4	+1.4
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
LZH				pmax	pmax		
	comp=Z,110nm,5.4s						
LZH				LR	LR		
	comp=Z,300nm,16.3s						
LZH				LR	LR		
	comp=Z,250nm,16.8s						
LZH				LR	LR		
	comp=Z,320nm,17.2s						
MAW	Mawson	81.02	202	P	P	13 15 40.6	-0.6
	comp=Z,11nm,1.1s,baz=321,slow=13,SNR=6.7						
MAW	Mawson	81.02	202	IAmb	IAmb	13 15 43.0	
	comp=Z,2.0nm,0.9s						
YAK	Yakutsk	83.29	343	P	P	13 15 53.6	+0.7
	comp=Z,2.8nm,0.3s,baz=300,slow=0.9,SNR=6.4						
YAK	Yakutsk	83.29	343	IAmb	IAmb	13 15 54.2	
	comp=Z,19nm,0.9s						
ULN	Ulaanbaatar	83.38	324	P	P	13 15 54.3	+0.3
ULN				IAmb	IAmb	13 15 56.0	
	comp=Z,32nm,0.9s						
SONM	Songino Array	83.74	323	P	P	13 15 56.6	+0.8
	comp=Z,19nm,1.1s,baz=140,slow=5.4,SNR=53						
BRDH	Bariadhala	83.80	296	LR	LR	13 51 25.4	
	comp=Z,952nm,21.6s,baz=2.0,slow=34						
GTA	Gaotai	83.85	314	P	P	13 15 57.8	+1.2
GTA				pP	pP	13 16 38.2	-1.6
GTA				sP	sP	13 16 55.5	-2.8
GTA				pmax	pmax		
	comp=Z,15nm,1.1s						
CCB	Clear Creek Bu	87.10	18	P	P	13 16 10.2	-1.6
HDA	Harding Lake	87.17	18	P	P	13 16 09.9	-2.3
BBB	Bella Bella	87.43	34	LR	LR	13 49 40.5	
	comp=Z,141nm,20.1s,baz=123,slow=32						
IL31		87.46	18	P	P	13 16 11.6	-1.9
ILAR	Eielson Array	87.46	18	P	P	13 16 12.2	-1.4
	comp=Z,1.3nm,0.5s,baz=243,slow=5.1,SNR=20						
NVAR	Mina Array Bea	87.62	49	P	P	13 16 16.0	+0.8
	comp=Z,0.2nm,0.4s,baz=232,slow=10,SNR=2.6						
NVAR				pP	pP	13 16 56.7	-1.9
	comp=Z,0.2nm,0.3s,baz=225,slow=7.0,SNR=2.1						
SYO	Syowa Base	87.76	196⇑	*i*P	P	13 16 14.2	-0.9
SYO	Syowa Base	87.76	196⇑	*e*PcP	PcP	13 16 16.2	-0.6
TIXI	Tiksi	91.20	349	P	P	13 16 30.4	-0.6
	comp=Z,0.7nm,0.3s,baz=89,slow=4.6,SNR=3.3						
SNAA	Sanae	92.43	183	P	P	13 16 36.8	-0.1
VNA3	Neumayer Olymp	93.07	181	P	P	13 16 39.6	-0.2
VNA2	Neumayer--Watz	93.35	182	P	P	13 16 41.2	+0.1
	baz=186,slow=3.6						
VNA1	Neumayer--Stat	93.64	181	P	P	13 16 42.4	0.0
WMQ	Urumqi	93.92	314	*e*P	P	13 16 44.8	+0.6
WMQ				pP	pP	13 17 28.4	+0.2
WMQ				pmax	pmax		
	comp=Z,18nm,0.6s						
WMQ				LR	LR		
	comp=Z,190nm,16.3s						
WMQ				LR	LR		
	comp=Z,62nm,21.9s						
WMQ				LR	LR		
	comp=Z,280nm,21.9s						
YKA	Yellowknife Ar	98.32	27	P	P	13 17 02.6	-1.0
	comp=Z,0.3nm,0.7s,baz=257,slow=3.9,SNR=4.2						
YKA				pP	pP	13 17 42.4	-5.4
	comp=Z,1.2nm,0.9s,baz=253,slow=4.3,SNR=4.8						
MKAR	Makanchi Array	98.40	316	P	Pdif	13 17 05.1	+0.6
	comp=Z,1.5nm,0.8s,baz=100,slow=6.4,SNR=14						
MKAR				pP	pP	13 17 44.9	-3.3
	comp=Z,0.9nm,0.8s,baz=116,slow=4.2,SNR=2.7						
MKAR				PP	PP	13 21 10.8	+3.7
	comp=Z,1.4nm,1.0s,baz=99,slow=7.9,SNR=5.6						
MAKZ	Makanchi	98.62	316	P	P	13 17 03.8	-1.6
ZALV	Zalesovo Beam	98.64	324	P	P	13 17 05.0	-0.2
	comp=Z,1.2nm,0.4s,baz=108,slow=4.8,SNR=8.7						
ARCES	ARCESS Array B	121.50	345	PKP	PKiKP	13 22 18.4	0.0
	comp=Z,1.5nm,0.5s,baz=64,slow=1.6,SNR=33						
BOSA	Boshof	122.84	219	PKP	PKPdf	13 22 22.4	+0.1
	comp=Z,5.7nm,0.9s,baz=211,slow=3.2,SNR=4.9						
FINES	FINESS Array B	126.99	338	PKP	PKiKP	13 22 29.5	0.0
	comp=Z,1.9nm,0.9s,baz=81,slow=2.5,SNR=6.1						
NB2	NORSAR Subarra	131.87	345	SKPa	SKPab	13 25 49.9	+1.1
	comp=Z,8.1nm,1.4s,baz=38,slow=4.8						
NOA	NORSAR Array B	131.87	345	PKP	PKPdf	13 22 38.6	+0.2
	comp=Z,0.1nm,0.3s,baz=57,slow=2.5,SNR=1.3						
NOA				SKPbc	SKPab	13 25 50.0	+1.1
	comp=Z,2.0nm,0.9s,baz=31,slow=3.0,SNR=5.6						
AKASG	Malin Array Be	131.99	326	SKPbc	SKPab	13 25 51.2	+1.7
	comp=Z,7.0nm,0.9s,baz=44,slow=4.2,SNR=15						
CONA	Conrad Observa	140.58	330	*i* PKPdf	PKPdf	13 22 55.2	+0.2
	comp=Z,3.6nm,0.8s						
GERES	GERESS Array B	140.91	333	SKPbc	SKiKP	13 26 18.5	+0.7
	comp=Z,0.7nm,0.7s,baz=341,slow=2.8,SNR=5.9						
SOKA	Soboth	141.86	329	*i* PKPdf	PKPdf	13 22 55.3	-2.1
	comp=Z,3.3nm,1.2s						
KBA	Koelnbreinsper	142.38	331	*i* PKPdf	PKPdf	13 22 55.2	-3.2
	comp=Z,5.1nm,1.2s						
ABTA	Abfaltersbach	143.01	331	*i* PKPdf	PKPbc	13 22 56.3	-0.5
	comp=Z,13nm,1.4s						
WTTA	Wattenberg	143.01	333	*i* PKPdf	PKPbc	13 22 56.9	+0.1
	comp=Z,3.8nm,0.5s						
MOTA	Moosalm	143.18	333	*i* PKPdf	PKPbc	13 22 57.5	+0.2
	comp=Z,5.6nm,0.6s						
SQTA	Sankt Quirin	143.23	333	*i* PKPdf	PKPbc	13 22 57.7	+0.4
	comp=Z,8.4nm,0.8s						
FETA	Feichten	143.60	333	*i* PKPdf	PKPbc	13 22 59.3	+0.9
	comp=Z,8.6nm,0.8s,SNR=5.4						
DAVA	Damuels	143.75	334	*i* PKPdf	PKPdf	13 22 59.9	-0.8
	comp=Z,2.8nm,0.6s						
CTI	Castel Tesino	143.93	331		PKPbc	13 22 59.5	+0.1
FUORN	Ofenpass-Fuorn	144.11	333		PKPbc	13 23 00.7	+0.6
TUE	Stuetta	144.62	334		PKPbc	13 23 01.9	+0.3
SALO	Salr	144.77	332		PKPab	13 23 01.3	-0.5
ZCCA	Zocca	145.51	330		PKPbc	13 23 04.3	+0.1
MURB	Monte Urbino	145.53	327		PKPab	13 23 04.8	0.0
INTR	Introdacqua	145.64	325		PKPbc	13 23 04.5	-0.3
TIP	Timpagrande	145.66	318		PKPbc	13 23 05.0	+0.1
OSSC	Osservatorio P	145.99	329	PKPbc	PKPbc	13 23 05.2	-0.4
MSSA	Maissana	146.22	331		PKPbc	13 23 05.9	-0.5
BNI	Bardonecchia	146.86	335		PKPbc	13 23 07.9	-0.4
SSB	Saint Sauveur	147.49	338		PKPbc	13 23 09.5	-0.3
KEST	Kesra	152.44	320	PKPbc	PKiKP	13 23 22.9	+0.5
	comp=Z,9.9nm,1.1s,baz=258,slow=4.3,SNR=4.7						
KEST				PKPab	PKPab	13 23 33.4	+0.4
	comp=Z,6.6nm,0.7s,baz=291,slow=5.0,SNR=4.4						
KEST	Kesra	152.44	320		PKPbc	13 23 21.9	-0.3
TORD	Torodi Ar. Bea	166.30	260	PKP	PKPdf	13 23 30.9	-0.6
	comp=Z,0.7nm,0.7s,baz=208,slow=1.0,SNR=3.7						
TORD				PKPab	PKPab	13 24 33.4	-0.4
	comp=Z,1.6nm,0.9s,baz=98,slow=3.6,SNR=6.0						
DBIC	Dimbokro	168.37	219	PKPab	PKPab	13 24 42.5	-0.2
	comp=Z,3.0nm,0.8s,baz=180,slow=4.0,SNR=3.6						

*NEIC **05** 13:07:59.0±2.0, 53°.49N±0°.07×163°.78W±0°.07, h2km±5km, mb3.9/15, ML3.6/22(AEIC), Error ellipse: s-maj=11.3km s-min=5.0km az=157.0*

*IDC **05** 13:07:59.5±0.9, 53°.65N×163°.78W, h0km, mb3.8/22, mb1 4.0/24, mb1mx3.9/69, mbtmp3.8/24, ML3.5/2, Error ellipse: s-maj=23.8km s-min=12.7km az=3.0*

*AEIC **05** 13:08:01±2.0, 53°.43N±0°.08×163°.73W±0°.06, h30km±5km, Error ellipse: s-maj=11.5km s-min=4.9km az=164.0*

ISC 05 13:08:00.1±2.1**, 53°.53N**±0°.08×**163°.65W**±0°.04**, h9**km±12km**, n101,** σ1s.**05**/105**, mb4.0**/21**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESP	Westdahl Peak	1.16	327		Pb	13 08 22.4	+0.1
WEBT	Westdahl Beart	1.25	329		Pn	13 08 24.1	+0.3
FALS	False Pass	1.34	6		Pg	13 08 26.2	+0.5
FALS					Sn	13 08 44.1	+1.2
AKUT	Akutan	1.40	297		Pn	13 08 25.6	-0.1
AKUT					Sb	13 08 43.7	-0.5
AKLV	Akutan Long Va	1.51	296		Pn	13 08 26.9	-0.4
AKLV					Sn	13 08 45.8	-1.3
AKRB	Akutan Reef Bi	1.55	294		Pn	13 08 27.8	-0.1
UNV	Unalaska Valle	1.73	282		Pn	13 08 29.4	-0.8
UNV					Sn	13 08 50.1	-2.3
DT1	Dutton Round H	1.78	26		Pn	13 08 31.4	+0.5
MNAT	Makushin Natee	1.84	282		Pn	13 08 30.9	-0.9
MREP	Makushin Rep't	1.86	280		Pn	13 08 31.7	-0.5
MSW	Makushin Switc	1.90	283		Pn	13 08 32.1	-0.5
MSW					Sn	13 08 55.2	-1.5
PVV	Pavlof Volcano	2.15	30		Pb	13 08 37.4	-1.7
OKFG	Magazine Ridge	2.55	269		Pn	13 08 41.2	-0.3
SDPT	Sand Point	2.60	44		Pb	13 08 44.5	-2.4
CNBA	Chernabura Isl	2.72	60		Pn	13 08 45.0	+1.1
OKSP	Okmok Steeple	2.79	266		Pn	13 08 44.3	-0.6
NIKH	Nikolski High	3.17	262	Pn	Pn	13 08 49.1	-1.1
CHGN	Chignik	4.11	45		Pn	13 09 05.1	+2.1
SPIA	Saint Paul Isl	5.25	317	Pn	Pn	13 09 18.8	+0.2
ATKA	Atka Island	6.52	263	Pn	Pn	13 09 36.1	0.0
OHAK	Old Harbor	6.97	54		Pn	13 09 42.4	+0.1
KDAK	Kodiak Island	7.57	51	Pn	Pn	13 09 49.9	-0.6
	1.2nm,0.3s,baz=171,slow=3.3,SNR=24						
KDAK				Sn	Sn	13 11 12.2	-4.2
	0.6nm,0.3s,baz=324,slow=16,SNR=0.9						
KDAK	Kodiak Island	7.57	51		Pn	13 09 50.6	+0.1
ADK	Adak	8.09	264	Pn	Pn	13 09 57.2	-0.4
CNPM	China Poot	9.12	44	Pn	Pn	13 10 13.0	+1.3
RSO	Redoubt South	9.14	36	Pn	Pn	13 10 13.5	+1.3
BRLK	Bradley Lake	9.40	43	Pn	Pn	13 10 16.9	+1.3
SEW	Seward	10.19	44	Pn	Pn	13 10 27.0	+0.7
TTA	Tatalina	10.25	20	Pn	Pn	13 10 28.7	+1.5
RC01	Rabbit Creek A	10.66	39	Pn	Pn	13 10 33.0	+0.1
GAMB	Gambell	11.09	341	Pn	Pn	13 10 40.3	+1.7
ANM	Nome	11.11	356	Pn	Pn	13 10 41.4	+2.5
PMR	Palmer	11.21	38	Pn	Pn	13 10 40.2	0.0
MID	Middleton Isla	11.23	51	Pn	Pn	13 10 41.8	+1.2
KNK	Knik Glacier	11.35	40	Pn	Pn	13 10 42.7	+0.4
GHO	Glory Hole Cre	11.40	38	Pn	Pn	13 10 40.9	-2.1
GLI	Glacier Island	11.59	44	Pn	Pn	13 10 44.3	-1.2
HIN	Hinchinbrook I	11.60	47	Pn	Pn	13 10 45.9	+0.3
SML	Sawmill	11.64	38	Pn	Pn	13 10 47.4	+1.1
FID	Port Fidalgo	11.78	45	Pn	Pn	13 10 47.6	-0.5
EYAK	Cordova Ski Ar	11.99	47	Pn	Pn	13 10 50.9	-0.1
KTH	Kantishna Hill	12.03	28	Pn	Pn	13 10 51.6	+0.1
SCM	Sheep Creek Mo	12.04	40		Pn	13 10 51.0	-0.7
TRF	Thorofare Moun	12.13	30		Pn	13 10 53.8	+0.8
BPAW	Bear Paw Mtn.	12.44	27		Pn	13 10 58.8	+1.7
RND	Reindeer	12.54	32	Pn	Pn	13 10 58.5	0.0
DHY	Denali Highway	12.80	35		Pn	13 11 00.8	-1.3
CRQM	Cirque	13.24	49	Pn	Pn	13 11 08.8	+0.6
GLB	Gilahina Butte	13.25	45		Pn	13 11 08.4	+0.2
MLY	Manley	13.25	24		Pn	13 11 10.3	+2.1
VRDI	Verde Repeater	13.31	47	Pn	Pn	13 11 08.8	-0.3
TGL	Tana Glacier	13.38	49	Pn	Pn	13 11 09.6	-0.4
WRH	Wood River Hil	13.54	30	Pn	Pn	13 11 12.8	+0.7
MCARA	McCarthy VSAT	13.56	46	Pn	Pn	13 11 12.8	+0.4
BALM	Baldy	13.71	48	Pn	Pn	13 11 15.6	+1.1
YAH	Yahtse	13.73	51	Pn	Pn	13 11 15.4	+0.5
CCB	Clear Creek Bu	13.75	30		Pn	13 11 14.7	-0.3
HDA	Harding Lake	13.84	31	Pn	Pn	13 11 15.8	-0.5
BARN	Barnard Glacie	14.03	49	Pn	Pn	13 11 19.3	+0.3
MENT	Mentasta	14.05	40		Pn	13 11 18.9	-0.2
ILAR	Eielson Array	14.12	30	Pn	Pn	13 11 18.5	-1.5
	0.1nm,0.3s,baz=222,slow=12,SNR=5.4						
CTGM	Chitina Glacie	14.14	49	Pn	Pn	13 11 19.8	-0.6
DOT	Dot Lake	14.32	37	Pn	Pn	13 11 22.5	-0.4
DHAK	Deception Hill	15.12	58	Pn	Pn	13 11 34.0	+0.3
COLD	Coldfoot	15.21	20	P	P	13 11 38.6	-1.2
COLD				IAmb	IAmb	13 12 03.2	
	comp=Z,3.6nm,0.8s						
EGAK	Eagle	16.02	36	Pn	Pn	13 11 44.9	-0.4
DAWY	Dawson	16.30	40	Pn	Pn	13 11 49.2	+0.3
DAWY				IAmb	IAmb	13 12 05.9	
	comp=Z,7.1nm,0.7s						
TOLK	Toolik Lake Re	16.55	18	P	P	13 11 54.2	-0.5
TOLK				IAmb	IAmb	13 12 25.6	
	comp=Z,5.6nm,0.8s						
SKAG	Skagway	16.64	58	P	P	13 11 55.2	-0.5
WHY	Whitehorse	17.08	54	P	P	13 12 01.0	+0.4
EPYK	Eagle Plains	18.43	35	P	Pn	13 12 14.9	-0.6
EPYK				IAmb	IAmb	13 12 30.3	
	comp=Z,5.7nm,0.7s						
BILL	Bilibino	20.34	327	P	P	13 12 35.0	-1.3
BILL				IAmb	IAmb	13 12 55.4	
	comp=Z,4.5nm,1.0s						
INK	Inuvik	20.50	32	P	P	13 12 37.8	-0.2
	comp=Z,1.4nm,0.5s,baz=250,slow=12,SNR=17						
INK	Inuvik	20.50	32	P	P	13 12 37.3	-0.6
INK				IAmb	IAmb	13 12 54.9	
	comp=Z,4.2nm,0.7s						
PEA0B	Petropavlovsk-	22.91	285	P	P	13 13 03.7	-0.2
PETK	Petropavlovsk-	22.91	285	P	P	13 13 04.0	+0.1
	comp=Z,3.5nm,0.6s,baz=90,slow=12,SNR=11						
SEY	Seymchan	24.50	310	P	P	13 13 18.9	-0.5
	comp=Z,0.4nm,0.4s,baz=254,slow=23,SNR=5.5						
YKA	Yellowknife Ar	26.85	51	P	P	13 13 41.3	+0.8
	comp=Z,1.0nm,0.6s,baz=267,slow=7.4,SNR=18						
TIXI	Tiksi	33.56	328	P	P	13 14 39.4	-0.3
	comp=Z,0.7nm,0.3s,baz=96,slow=9.5,SNR=3.9						
TIXI	Tiksi	33.56	328	P	P	13 14 38.4	-1.3
TIXI				IAmb	IAmb	13 14 48.0	
	comp=Z,1.5nm,0.8s						
RES	Resolute Bay	33.81	26	P	P	13 14 43.0	+1.0
	comp=Z,1.0nm,0.6s,baz=178,slow=14,SNR=4.1						
RES	Resolute Bay	33.81	26	P	P	13 14 42.0	+0.1
RES				IAmb	IAmb	13 15 25.9	
	comp=Z,7.1nm,1.5s						
NVAR	Mina Array Bea	34.30	97	P	P	13 14 48.1	+1.3
	comp=Z,0.9nm,0.8s,baz=296,slow=8.6,SNR=5.9						
ELK	Elko	34.65	92	P	P	13 14 51.9	+2.1
	comp=Z,1.6nm,0.7s,baz=304,slow=10,SNR=7.2						
ELK	Elko	34.65	92	IAmb	IAmb	13 14 52.7	
	comp=Z,12nm,1.9s						
PDAR	Pinedale Array	36.82	84	P	P	13 15 09.4	+1.0
	comp=Z,0.3nm,0.6s,baz=282,slow=2.9,SNR=4.3						
ULM	Lac du Bonnet	40.53	66	P	P	13 15 39.0	-0.2
	comp=Z,0.8nm,0.5s,baz=329,slow=4.8,SNR=3.2						
ULM	Lac du Bonnet	40.53	66	IAmb	IAmb	13 15 53.0	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,3.0nm,0.9s						
MJAR	Matsushiro Arr	43.16	271	P	P	13 16 00.2	-0.7
	comp=Z,1.0nm,0.6s,baz=43,slow=5.9,SNR=2.6						
KSRS	Korea Array	48.66	280	P	P	13 16 45.1	+0.9
	comp=Z,1.6nm,1.0s,baz=47,slow=7.8,SNR=2.9						
TXAR	Lajitas Array	49.33	94	P	P	13 16 51.2	+1.7
	comp=Z,0.6nm,0.5s,baz=295,slow=5.0,SNR=13						
SONM	Songino Array	53.62	303	P	P	13 17 21.3	-0.2
	comp=Z,1.5nm,0.6s,baz=45,slow=7.4,SNR=3.5						
ARCES	ARCESS Array B	57.07	356	P	P	13 17 45.0	-0.9
	comp=Z,1.4nm,0.9s,baz=1.7,slow=9.0,SNR=1.8						
FINES	FINESS Array B	65.12	355	P	P	13 18 40.1	-0.4
	comp=Z,2.5nm,0.9s,baz=57,slow=5.1,SNR=8.5						
MKAR	Makanchi Array	65.44	316	P	P	13 18 42.8	-0.2
	comp=Z,0.9nm,0.7s,baz=49,slow=6.7,SNR=5.6						
NB2	NORSAR Subarra	65.71	3	P	P	13 18 45.8	+1.3
	comp=Z,1.6nm,0.8s,baz=356,slow=6.5						
NOA	NORSAR Array B	65.71	3	P	P	13 18 44.2	-0.2
	comp=Z,0.8nm,0.7s,baz=357,slow=6.6,SNR=4.3						
AKASG	Malin Array Be	75.58	352	P	P	13 19 44.5	-0.2
	comp=Z,0.6nm,0.3s,baz=14,slow=5.9,SNR=2.9						
GERES	GERESS Array B	77.98	2	P	P	13 19 59.0	+0.6
	comp=Z,0.2nm,0.3s,baz=327,slow=5.3,SNR=1.6						
ESDC	Sonseca Array	85.53	16	P	P	13 20 38.5	+0.2
	comp=Z,0.3nm,0.4s,baz=323,slow=6.1,SNR=1.6						
BRTR	Keskin Array B	85.93	347	P	P	13 20 40.9	+0.4
	comp=Z,0.7nm,0.6s,baz=4.7,slow=1.8,SNR=5.1						

*NEIC **05** 13:19:47.9±2.0, 5°.52S±0°.06×131°.29E±0°.09, h91km±7km, mb4.7/37, Error ellipse: s-maj=13.1km s-min=8.9km az=91.0*

*IDC **05** 13:19:48.0±2.4, 5°.50S×131°.23E, h81km±23km, mb4.0/14, mb1 4.3/17, mb1mx4.1/37, mbtmp4.5/17, MS3.7/1, Ms1 3.7/1, ms1mx2.9/45, Error ellipse: s-maj=24.1km s-min=13.9km az=77.0*

*DJA **05** 13:19:48.5±0.3, 5°S±3°×13°1E±°, h92km±5km, M4.7/18, mb4.7/18, mB5.1/9, MLv5.0/12, Mw(mB)4.5/9*

ISC 05 13:19:48.6±0.3, **5°.63S**±0°.04×**131°.32E**±0°.05, **h100**km, **n137**, σ1s.**96**/140, **mb4.6**/36, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.79	308	P	Pn	13 20 16.8	-1.7
BNDI				S	Sn	13 20 36.9	-4.3
SAUI	Saumlaki	2.34	180	P	Pn	13 20 27.7	+2.1
SAUI	Saumlaki	2.34	180		Pn	13 20 26.7	+1.1
FAKI	Fak Fak	2.85	19	P	Pn	13 20 30.2	-2.3
FAKI				S	Sn	13 21 01.3	-4.8
FAKI	Fak Fak	2.85	19		Pn	13 20 30.1	-2.3
MSAI	Masohi	3.29	314	P	Pn	13 20 35.6	-2.7
AAI	Ambon	3.66	302	P	Pn	13 20 41.5	-1.8
SIJI	Sorong	4.73	359	P	Pn	13 20 54.4	-3.4
	78nm,0.3s,baz=207,slow=22,SNR=287						
SIJI				S	Sn	13 21 42.7	-8.8
	74nm,0.3s,baz=227,slow=23,SNR=19						
NLAI	Namlea	4.83	299	P	Pn	13 20 59.8	+0.7
RKPI	Ransiki, Papua	4.99	35	P	Pn	13 21 00.3	-1.0
LBMI	Labuha	6.25	322	P	Pn	13 21 15.1	-3.3
	0.9nm1μm51nm,0.4s						
SANI	Sanana	6.40	304	P	Pn	13 21 16.7	-3.7
	0.4nm1μm106nm,0.5s						
KDU	Kakadu	7.10	171	P	Pn	13 21 29.5	-0.4
	baz=7.2,SNR=581						
KDU				S	Sn	13 22 44.0	-5.2
	baz=7.2						
MTN	Manton Dam	7.17	181	P	Pn	13 21 30.7	-0.1
	baz=7.3,SNR=577						
MTN				S	Sn	13 22 47.9	-2.9
	baz=7.3						
MTN	Manton Dam	7.17	181		Pn	13 21 30.8	-0.1
SOEI	Soe	8.10	239	P	Pn	13 21 44.2	+0.6
	0.8nm2μm102nm,0.4s						
SOEI	Soe	8.10	239		Pn	13 21 42.9	-0.8
SMPI	Sarmi	8.22	64	P	Pn	13 21 47.0	+1.9
BATI	Baumata	8.84	239	P	Pn	13 21 53.4	-0.2
	31nm,0.3s,baz=104,slow=3.1,SNR=36						
BATI				S	Sn	13 23 27.3	-4.2
	8.6nm,0.3s,baz=136,slow=7.1,SNR=2.2						
BATI	Baumata	8.84	239	P	Pn	13 21 53.6	0.0
	0.4nm946nm113nm,0.7s						
LUWI	Luwuk	9.67	298	P	Pn	13 22 03.7	-1.2
	4μm60nm,0.6s						
LUWI	Luwuk	9.67	298		Pn	13 22 03.1	-1.8
EDFI	Ende, Flores	10.04	251	P	Pn	13 22 10.2	+0.2
	8.9nm,0.6s						
KNRA	Kununurra	10.29	194	P	Pn	13 22 11.7	-1.7
	baz=10,SNR=111						
KNRA				S	Sn	13 23 59.5	-7.3
	baz=10						
KNRA	Kununurra	10.29	194		Pn	13 22 11.6	-1.8
MRSI	Marisa	11.16	303	P	Pn	13 22 22.5	-2.6
	807nm26nm,0.6s						
BNSI	Bone	11.23	276	P	Pn	13 22 40.4	+14
KAPI	Kappang	11.53	273	Pn	Pn	13 22 30.0	-0.1
BASI	Baing, Sumba	11.57	246	P	Pn	13 22 28.5	-2.2
SPSI	Sidrap Palu	11.62	278	P	Pn	13 22 35.9	+4.5
TTSI	Tana Toraja	11.75	282	P	Pn	13 22 34.8	+1.8
WBSI	Waikabubak, Su	12.47	251	P	Pn	13 22 42.4	-0.3
	31nm,0.9s						
FITZ	Fitzroy Crossi	13.57	204	P	Pn	13 22 52.5	-4.6
	baz=14,SNR=170						
FITZ				S	Sn	13 25 14.0	-13
	baz=14						
FITZ	Fitzroy Crossi	13.57	204	P	Pn	13 22 52.7	-4.4
	10nm,0.3s,baz=33,slow=10,SNR=121						
FITZ				S	Sn	13 25 16.0	-11
	18nm,0.3s,baz=172,slow=10,SNR=11						
FITZ	Fitzroy Crossi	13.57	204	P	Pn	13 22 52.5	-4.6
PLAI	Plampang	13.80	256	P	Pn	13 23 01.0	+0.9
	21nm,1.1s						
COEN	Coen	14.31	126	P	Pn	13 23 06.3	-0.3
	baz=14,SNR=32						
COEN				S	Sn	13 25 36.2	-8.3
	baz=14						
COEN	Coen	14.31	126	Pn	Pn	13 23 06.4	-0.3
WB0	Warramunga Arr	14.37	168		Pn	13 23 03.6	-3.7
WRAB	Tennant Creek	14.52	169		Pn	13 23 05.4	-4.0
WRA	Warramunga Arr	14.53	169	P	Pn	13 23 05.5	-4.0
	2.9nm,0.3s,baz=348,slow=13,SNR=92						
WRA				S	Sn	13 25 39.3	-10
	9.4nm,0.3s,baz=348,slow=22,SNR=6.7						
WB2	Warramunga Arr	14.53	169		Pn	13 23 05.3	-4.1
WR0	Warramunga Arr	14.58	168		Pn	13 23 05.9	-4.3
SMKI	Samarinda	14.99	290	P	P	13 23 32.4	+14
QIS	Mount Isa	16.88	152	P	Pn	13 23 39.5	+0.6
	baz=17,SNR=15						
JAGI	Jajag, Banyuwa	17.27	260		Pn	13 23 42.8	-0.9
JAGI				IAmb	IAmb	13 24 17.0	
	comp=Z,27nm,1.0s						
MTSU	Mount Surprise	17.77	135	P	P	13 23 49.1	0.0
	baz=18,SNR=7.8						
AS31	Alice Springs	18.10	172	P	P	13 23 52.5	-0.2
AS31				IAmb	IAmb	13 23 58.4	
	comp=Z,16nm,0.6s						
ASAR	Alice Springs	18.10	172	P	P	13 23 53.6	+0.8
	comp=Z,3.9nm,0.3s,baz=353,slow=12,SNR=115						
ASAR				S	S	13 27 06.9	-8.3
	comp=Z,3.1nm,0.3s,baz=351,slow=26,SNR=7.9						
KKM	Kota Kinabalu	19.02	307	P	P	13 24 02.0	-0.9
PSA00	Pilbara Seismi	19.35	214	P	P	13 24 06.8	+0.4
PSA00				IAmb	IAmb	13 24 15.2	
	comp=Z,24nm,0.9s						
WRKA	Warakurna	19.51	188	P	P	13 24 10.2	+2.1
	baz=20,SNR=128						
CTA	Charters Tower	20.43	136	P	P	13 24 21.6	+3.5
	comp=Z,3.8nm,0.7s,baz=310,slow=11,SNR=5.6						
SBUM	Sibu	20.69	292	P	P	13 24 20.1	-0.9
UGM	Wanagama	20.77	263	P	P	13 24 20.8	-1.1
KSM	Kuching	22.14	288	P	P	13 24 36.6	+0.3
GIRL	Giralia	23.62	223	P	P	13 24 52.1	+1.3
MEEK	Meekatharra	24.15	209	P	P	13 24 56.6	+1.1
	baz=24,SNR=14						
QLP	Quilpie	24.21	151	P	P	13 24 57.4	+1.4
	baz=24,SNR=11						
FORT	Forrest	25.20	187	P	P	13 25 07.0	+2.0
	baz=25,SNR=19						
FORT	Forrest	25.20	187	P	P	13 25 06.4	+1.3
FORT				IAmb	IAmb	13 25 07.8	
	comp=Z,28nm,0.6s						
XMIS	Christmas Isla	25.86	258	P	P	13 25 11.7	+0.5
XMIS				IAmb	IAmb	13 25 12.7	
	comp=Z,37nm,1.1s						
BBOO	Buckleboo	27.40	171	P	P	13 25 24.2	-0.6
MORW	Morawa	27.43	210	P	P	13 25 26.2	+1.1
	baz=28,SNR=5.1						
MORW	Morawa	27.43	210	P	P	13 25 25.0	-0.1
MORW				IAmb	IAmb	13 25 56.7	
	comp=Z,63nm,1.8s						
STKA	Stephens Creek	27.83	161	P	P	13 25 31.6	+2.9
	baz=28,SNR=7.2						
STKA	Stephens Creek	27.83	161	P	P	13 25 31.4	+2.8
	comp=Z,2.8nm,0.5s,baz=339,slow=10.0,SNR=12						
STKA	Stephens Creek	27.83	161	P	P	13 25 30.6	+1.9
BLDU	Ballidu	28.40	207	P	P	13 25 35.2	+1.4
	baz=29,SNR=8.3						
HTT	Hallett	28.55	167	P	P	13 25 38.1	+2.9
	baz=29,SNR=3.8						
KLBR	Kellerberrin	28.78	205	P	P	13 25 39.0	+1.8
	baz=29,SNR=8.6						
NWAO	Narrogin (SRO)	30.16	204	P	P	13 25 51.8	+2.5
	baz=30,SNR=3.5						
NWAO	Narrogin (SRO)	30.16	204	P	P	13 25 50.5	+1.1
NWAO	Narrogin (SRO)	30.16	204	P	P	13 25 50.4	+1.1
NWAO				IAmb	IAmb	13 25 58.1	
	comp=Z,58nm,1.9s						
SSLB	Suanglung	30.94	341	P	P	13 25 55.1	-1.2
QIZ	Qiongzhong	32.37	320	P	P	13 26 08.7	-0.2
QIZ				S	S	13 31 17.6	+1.6
QIZ				sS	sS	13 31 55.8	+3.9
QIZ				LR	LR		
	comp=N,860nm,12.7s						
QIZ				LR	LR		
	comp=E,370nm,16.2s						
QIZ				LR	LR		
	comp=Z,390nm,19.6s						
PBKT	Sadao Pong	37.25	307	P	P	13 26 49.0	-1.9
JNU	Nakatsue	38.54	359	LR	LR	13 40 52.1	
	comp=Z,129nm,21.8s,baz=76,slow=33						
NJ2	Nanjing	39.31	343	eP	P	13 27 07.8	-0.2
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
WHN	Wuhan	39.47	337	P	P	13 27 08.6	-0.7
GYA	Guiyang	39.85	324	eP	P	13 27 13.0	+0.2
GYA				pP	pwP	13 27 38.8	-4.4
GYA				PP	PnPn	13 28 51.0	+0.4
GYA				PcP	PcP	13 29 18.3	+1.4
GYA				S	S	13 33 11.4	+1.1
GYA				sS	sS	13 33 51.8	+4.9
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA				pmax	pmax		
	comp=Z,70nm,4.0s						
GYA				LR	LR		
	comp=N,250nm,4.2s						
GYA				LR	LR		
	comp=E,130nm,4.1s						
GYA				LR	LR		
	comp=Z,110nm,6.2s						
CMAR	Chiang Mai Arr	39.90	308	P	P	13 27 13.2	+0.1
	comp=Z,5.2nm,0.7s,baz=143,slow=7.9,SNR=6.4						
ENH	Enshi	41.38	331	P	P	13 27 23.6	-1.5
ENH				IAmb	IAmb	13 27 25.4	
	comp=Z,12nm,0.6s						
MAJO	Matsushiro	42.45	8	P	P	13 27 32.9	-0.8
MAJO				IAmb	IAmb	13 27 34.5	
	comp=Z,14nm,0.9s						
MAT	Matsushiro	42.45	8	P	P	13 27 33.0	-0.7
MJAR	Matsushiro Arr	42.45	8	P	P	13 27 33.3	-0.4
	comp=Z,6.0nm,0.9s,baz=185,slow=9.7,SNR=16						
MJB9	Matsu-Tunnel	42.45	8	P	P	13 27 33.0	-0.7
MJB9				IAmb	IAmb	13 27 34.5	
	comp=Z,14nm,0.9s						
KSRS	Korea Array	42.98	356	P	P	13 27 38.0	0.0
	comp=Z,0.9nm,0.6s,baz=171,slow=9.0,SNR=4.7						
XAN	Xi'an	44.78	333	P	P	13 27 51.4	-1.1
XAN				pmax	pmax		
	comp=Z,19nm,0.7s						
XAN				pmax	pmax		
	comp=Z,96nm,4.1s						
XAN	Xi'an	44.78	333	P	P	13 27 51.2	-1.3
XAN				IAmb	IAmb	13 27 52.6	
	comp=Z,14nm,0.7s						
LZH	Lanzhou	48.85	330	eP	P	13 28 24.7	+0.4
LZH				pP	pP	13 28 46.0	0.0
LZH				sP	sP	13 29 02.0	+5.7
LZH				PP	PP	13 30 20.8	+2.2
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
LZH				pmax	pmax		
	comp=Z,65nm,4.3s						
USRK	Ussuriysk Ar.	49.60	1	P	P	13 28 30.6	+0.9
	comp=Z,4.0nm,0.6s,baz=182,slow=7.6,SNR=11						
HHC	Hu-ho-hao-te	49.68	340	P	P	13 28 31.8	+1.3
HHC				pP	pP	13 28 55.3	+3.0
HHC				S	S	13 35 33.1	+1.3
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,5.2s						
HHC				LR	LR		
	comp=N,230nm,14.2s						
HHC				LR	LR		
	comp=E,140nm,15.2s						
HHC				LR	LR		
	comp=Z,200nm,17.3s						
ODAN	Odare	53.38	309	eP	P	13 28 58.2	-0.3
	comp=Z,32nm,0.7s						
TAPN	Taplejung	53.38	310	eP	P	13 28 58.5	-0.1
	comp=Z,30nm,0.5s						
GTA	Gaotai	53.43	330	eP	P	13 28 59.4	+0.9
GTA				pP	pP	13 29 23.6	+3.1
GTA				sP	sP	13 29 34.4	+3.7
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				LR	LR		
	comp=N,280nm,15.6s						
GTA				LR	LR		
	comp=E,410nm,14.9s						
GTA				LR	LR		
	comp=Z,340nm,14.6s						
RAMN	Ramite	54.03	309	eP	P	13 29 03.4	+0.1
	comp=Z,62nm,0.6s						
KLR	Kul'dur	54.63	0	P	P	13 29 07.8	+0.9
	comp=Z,1.0nm,0.6s,baz=197,slow=6.2,SNR=4.3						
JIRN	Jiri	54.70	310	eP	P	13 29 08.1	-0.2
GUN	Gumba	55.06	310	eP	P	13 29 10.6	-0.3
	comp=Z,48nm,0.7s						
PKI	Pulchoki	55.26	309	eP	P	13 29 11.6	-0.6
	comp=Z,21nm,0.8s						
PKIN	Phulchoki	55.27	309	eP	P	13 29 11.5	-0.8
KKN	Kakani	55.47	309	eP	P	13 29 13.3	-0.3
	comp=Z,30nm,0.8s						
DMN	Daman	55.51	309	eP	P	13 29 13.7	-0.3
	comp=Z,40nm,0.9s						
KOLN	Koldanda	56.76	308	eP	P	13 29 22.9	+0.1
DANN	Dangsing	56.91	309	eP	P	13 29 23.7	-0.3
	comp=Z,27nm,0.6s						
PYUN	Piuthan	57.39	308	eP	P	13 29 27.3	+0.1
ULN	Ulaanbaatar	57.39	341	P	P	13 29 26.6	-0.2
ULN				IAmb	IAmb	13 29 28.9	
	comp=Z,5.1nm,0.8s						
SONM	Songino Array	57.58	340	P	P	13 29 28.6	+0.5
	comp=Z,2.7nm,0.7s,baz=159,slow=6.3,SNR=13						
PETK	Petropavlovsk-	62.63	18	P	P	13 30 04.0	+1.7
	comp=Z,2.9nm,0.7s,baz=194,slow=7.9,SNR=8.4						
WMQ	Urumqi	62.98	326	eP	P	13 30 05.7	+0.8
WMQ				pP	pP	13 30 27.3	-0.2
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
WMQ				LR	LR		
	comp=N,200nm,19.5s						
WMQ				LR	LR		
	comp=E,190nm,19.5s						
WMQ				LR	LR		
	comp=Z,290nm,20.9s						
NIL	Nilore	67.33	310	P	P	13 30 32.9	-0.3
NIL				IAmb	IAmb	13 30 34.3	
	comp=Z,7.7nm,0.7s						
YAK	Yakutsk	67.48	359	P	P	13 30 33.3	-0.2
MKAR	Makanchi Array	67.82	326	P	P	13 30 37.0	+0.9
	comp=Z,13nm,0.7s,baz=119,slow=8.3,SNR=74						
KSH	Kashi	67.91	317	P	P	13 30 38.3	+1.4
KSH				pP	PcP	13 31 05.6	+2.9
KSH				PP	PP	13 33 14.8	+6.8
KSH				S	S	13 39 26.4	-1.6
KSH	Kashi	67.91	317	SS	SS	13 43 51.4	-0.5
KSH				pmax	pmax		
	comp=Z,20nm,1.2s						
KSH				pmax	pmax		
	comp=Z,160nm,4.7s						
KSH				LR	LR		
	comp=N,110nm,10.2s						
KSH				LR	LR		
	comp=E,110nm,10.0s						
KSH				LR	LR		
	comp=Z,300nm,16.8s						
MAKZ	Makanchi	68.00	326	P	P	13 30 37.7	+0.5
MAKZ				IAmb	IAmb	13 30 38.8	
	comp=Z,14nm,1.1s						
KDJ	Kajisay	68.37	320	P	P	13 30 40.0	+0.3
KDJ				IAmb	IAmb	13 30 41.9	
	comp=Z,5.4nm,0.8s						
ZAA0	Zalesovo Array	70.95	333	P	P	13 30 54.5	-0.6
ZAA0				IAmb	IAmb	13 30 55.9	
	comp=Z,7.2nm,0.8s						
ZALV	Zalesovo Beam	70.95	333	P	P	13 30 55.3	+0.2
	comp=Z,5.3nm,0.6s,baz=125,slow=4.9,SNR=16						
XMAS	Kiritimati	71.55	86	P	P	13 30 58.6	-1.0
GAR	Garm	71.65	314	P	P	13 30 59.5	-0.3
GAR				IAmb	IAmb	13 31 02.5	
	comp=Z,13nm,0.8s						
BTK	Batken	71.72	315	P	P	13 30 59.1	-1.1
BTK				IAmb	IAmb	13 31 36.9	
	comp=Z,4.6nm,0.6s						
KURK	Kurchatov	72.05	328	P	P	13 31 00.9	-0.9
KURK				IAmb	IAmb	13 31 03.4	
	comp=Z,9.0nm,1.1s						
KK31	Karatay Array	73.19	318	P	P	13 31 08.8	+0.1
KKAR	Karatay Array	73.19	318	P	P	13 31 08.9	+0.1
TIXI	Tiksi	77.14	359	P	P	13 31 31.1	+0.3
BRVK	Borovoye	77.69	327	P	P	13 31 34.3	0.0
BRVK				IAmb	IAmb	13 31 35.7	
	comp=Z,5.7nm,0.8s						
SOCY	Socotra	78.87	284	P	P	13 31 41.8	+0.1
GEYT	Alibeck	80.34	310	P	P	13 31 49.6	+0.5
	comp=Z,1.5nm,0.5s,baz=145,slow=5.4,SNR=3.9						
NRIK	Noril'sk	80.56	346	P	P	13 31 50.8	+1.2
	comp=Z,2.7nm,0.6s,baz=146,slow=5.2,SNR=7.6						
ABKAR	Akbulak array	82.26	321	P	P	13 31 58.1	-0.9
RND	Reindeer	90.46	26	P	P	13 32 38.0	-0.9
ILAR	Eielson Array	91.56	25	P	P	13 32 43.5	-0.3
	comp=Z,1.1nm,0.7s,baz=258,slow=4.3,SNR=11						
TXAR	Lajitas Array	123.11	59	PKP	PKiKP	13 38 35.8	+1.2
	comp=Z,0.1nm,0.5s,baz=224,slow=3.3,SNR=3.7						
TORD	Torodi Ar. Bea	129.81	282	PKP	PKPdf	13 38 48.4	+0.9
	comp=Z,1.5nm,0.7s,baz=59,slow=2.9,SNR=6.3						
PDPR	Patillas Dam,	159.06	53		PKPdf	13 39 35.2	-0.7

*IDC **05** 13:30:52.1±56.0, 20°.01S×175°.11W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/51, mbtmp3.9/3, Error ellipse: s-maj=1055.0km s-min=179.5km az=83.0*

*NEIC **05** 13:31:18.9±1.4, 20°.9S±0°.2×175°.6W±0°.2, h197km±11km, mb4.4/13, Error ellipse: s-maj=32.6km s-min=20.5km az=137.0*

ISC 05 13:31:13.9±1.0, **20°.8S**±0°.2×**175°.6W**±0°.2, **h150**km, **n19**, σ0s.**65**/19, **mb4.4**/10, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BFZ	Birch Farm	21.05	198	P	P	13 35 46.4	+0.4
MSWZ	Moikau Station	22.01	199	P	P	13 35 56.7	+0.5
PLWZ	Palliser	22.15	198	P	P	13 35 56.0	-1.6
TUWZ	Tuamarina	22.44	201	P	P	13 36 00.6	+0.3
EIDS	Eidsvold	30.97	255	P	P	13 37 17.7	+0.5
EIDS				IAmb	IAmb	13 37 54.7	
	comp=Z,10nm,1.6s						
CTAO	Charters Tower	35.73	264	P	P	13 37 58.8	+0.3
CTAO				IAmb	IAmb	13 38 28.5	
	comp=Z,33nm,1.9s						
STKA	Stephens Creek	39.73	245	P	P	13 38 32.1	+0.2
	comp=Z,0.4nm,0.3s,baz=94,slow=11,SNR=1.7						
STKA	Stephens Creek	39.73	245	P	P	13 38 31.9	0.0
WR0	Warramunga Arr	46.62	262	P	P	13 39 26.8	-0.7
WR0				IAmb	IAmb	13 40 20.7	
	comp=Z,17nm,1.5s						
AS31	Alice Springs	46.67	257	P	P	13 39 27.2	-0.6
ASAR	Alice Springs	46.67	257	P	P	13 39 27.4	-0.4
	comp=Z,1.4nm,0.8s,baz=99,slow=8.2,SNR=20						
WB0	Warramunga Arr	46.80	262	P	P	13 39 28.2	-0.5
WB2	Warramunga Arr	46.80	262	P	P	13 39 28.4	-0.4
WB2				IAmb	IAmb	13 39 58.3	
	comp=Z,26nm,1.8s						
WRA	Warramunga Arr	46.81	262	P	P	13 39 28.4	-0.5
	comp=Z,0.5nm,0.3s,baz=95,slow=8.0,SNR=39						
KNRA	Kununurra	52.91	266	P	P	13 40 15.4	+0.5
KNRA				IAmb	IAmb	13 41 15.7	
	comp=Z,31nm,1.4s						
FITZ	Fitzroy Crossi	55.24	262	P	P	13 40 32.1	+0.3
BEKR	Beckworth	79.28	40	P	P	13 43 02.3	-0.7
BEKR				IAmb	IAmb	13 43 36.2	
	comp=Z,8.0nm,1.2s						
TX31	Lajitas Ar. Si	85.29	56	P	P	13 43 35.0	+0.6
TX32	Lajitas Array	85.29	56	P	P	13 43 34.9	+0.6
TX32				IAmb	IAmb	13 45 10.8	
	comp=Z,6.7nm,0.8s						

*BJI **05** 13:34:22.7±0.0, 18°.99N×99°.58E, h10km, mB4.6/13, mb4.3/16, ML4.6/5, Ms4.1/9, Ms7 4.0/10*

*IDC **05** 13:34:28.2±0.8, 19°.73N×99°.75E, h0km, mb3.8/10, mb1 3.9/10, mb1mx3.7/48, mbtmp3.8/10, MS4.4/1, Ms1 4.4/1, ms1mx3.3/46, Error ellipse: s-maj=21.9km s-min=11.9km az=96.0*

*NEIC **05** 13:34:29.5±1.3, 19°.67N±0°.05×99°.67E±0°.05, h10km±1km, mb4.4/9, Error ellipse: s-maj=10.6km s-min=2.9km az=135.0*

ISC 05 13:34:29.8±0.5, **19°.65N**±0°.04×**99°.64E**±0°.05, **h10**km, **n49**, σ1s.**64**/46, **mb4.0**/15, **Thailand**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMMT	Chiang Mai	1.06	218	P	Pg	13 34 49.6	-0.6
CHTO	Chiang Mai	1.06	218	Pn	Pb	13 34 50.0	-0.3
LAMP	Lampang	1.12	180	P	Pb	13 34 51.5	+0.1
PHRA	Phrae	1.28	154	P	Pb	13 34 53.9	-0.1
NANT	Nan	1.31	130	P	Pn	13 34 52.8	-1.5
CM09	Chiang Mai Arr	1.35	207	P	Pb	13 34 55.5	+0.3
CM31	Chiang Mai Arr	1.36	209	P	Pn	13 34 55.0	+0.2
CM31	Chiang Mai Arr	1.36	209		Pn	13 34 55.5	+0.6
CMAR	Chiang Mai Arr	1.36	209	Pg	Pb	13 34 55.6	+0.3
	444nm,0.3s,baz=19,slow=19,SNR=845						
CMAR				Lg	Lg	13 35 14.9	
	485nm,0.3s,baz=117,slow=5.0,SNR=7.0						
CMAR				LR	LR	13 35 27.0	
	comp=Z,539nm,18.4s,baz=152,slow=40						
CM15	Chiang Mai Arr	1.37	210	P	Pn	13 34 54.8	-0.3
CM02	Chiang Mai Arr	1.38	208	P	Pn	13 34 55.3	+0.2
CM01	Chiang Mai Arr	1.39	208	P	Pn	13 34 55.5	+0.3
CM04	Chiang Mai Arr	1.40	207	P	Pb	13 34 56.3	+0.3
CM05	Chiang Mai Arr	1.41	208	P	Pb	13 34 56.3	+0.1
CM13	Chiang Mai Arr	1.41	210	P	Pn	13 34 55.4	-0.1
PBKT	Sadao Pong	3.32	157		Pn	13 35 21.9	+0.1
SLVN	Son La	4.33	67		Pn	13 35 35.5	-0.4
KMI	Kunming	6.15	27	Pg	Pg	13 36 26.4	-1.3
KMI	Kunming	6.15	27	Sg	Sg	13 37 53.8	+6.4
SHL	Shillong	9.27	311		Pn	13 36 43.7	0.0
KULM	Kulim	14.31	176	Pn	Pn	13 37 52.9	+0.3
LHMI	Lhok Sumawe	14.58	191	Pn	Pn	13 37 55.2	-1.1
KCSI	Kotacane, Aceh	16.14	187	P	P	13 38 26.9	+6.8
LZH	Lanzhou	16.78	12	eP	P	13 38 26.7	-0.7
LZH				pP	pP	13 38 29.8	-0.6
LZH				sP	sP	13 38 33.0	+1.2
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,57nm,4.7s						
LZH				LR	LR		
	comp=N,230nm,12.5s						
LZH				LR	LR		
	comp=E,290nm,13.6s						
LZH				LR	LR		
	comp=Z,300nm,14.2s						
WHN	Wuhan	17.16	48	P	P	13 38 45.2	+14
GTA	Gaotai	19.69	0	eP	Pn	13 39 02.3	+1.6
GTA				pP	sP	13 39 07.0	+3.3
GTA				sP	pP	13 39 10.2	+7.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				LR	LR		
	comp=N,260nm,14.6s						
GTA				LR	LR		
	comp=E,390nm,13.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GTA				LR	LR		
	comp=Z,340nm,14.0s						
SBUM	**Sibu**	**21.06**	**143**	P	**P**	**13 39 12.7**	**-1.6**
HHC	**Hu-ho-hao-te**	**23.46**	**23**	P	**P**	**13 39 40.1**	**+0.6**
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,7.9s						
WMQ	**Urumqi**	**26.09**	**340**	*e*P	**P**	**13 40 04.7**	**+0.9**
WMQ				sP	sP	13 40 11.7	+3.4
WMQ				LR	LR		
	comp=N,83nm,9.1s						
WMQ				LR	LR		
	comp=E,170nm,12.1s						
WMQ				LR	LR		
	comp=Z,220nm,10.1s						
KSH	**Kashi**	**28.41**	**319**	P	**P**	**13 40 24.9**	**+0.2**
KSH				pP	sP	13 40 29.1	-0.1
KSH				sP	pP	13 40 32.4	+4.5
KSH				pmax	pmax		
	comp=Z,240nm,5.2s						
SONM	**Songino Array**	**28.64**	**10**	P	**P**	**13 40 25.8**	**-0.9**
	0.8nm,0.6s,baz=195,slow=9.2,SNR=5.5						
KDJ	**Kajisay**	**29.39**	**325**	P	**P**	**13 40 30.9**	**-2.5**
KDJ				IAmb	IAmb	13 40 37.7	
	comp=Z,7.0nm,1.2s						
MK31	**Makanchi Array**	**30.57**	**336**	P	**P**	**13 40 43.0**	**-0.6**
MKAR	**Makanchi Array**	**30.57**	**336**	P	**P**	**13 40 43.4**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=139,slow=9.6,SNR=9.9						
AAK	**Ala-Archa**	**31.22**	**323**	P	**P**	**13 40 48.2**	**-1.4**
AAK				IAmb	IAmb	13 40 53.8	
	comp=Z,12nm,1.3s						
GAR	**Garm**	**31.81**	**314**	P	**P**	**13 40 54.1**	**-0.7**
KURBB	**Kurchatov Arra**	**35.14**	**337**	P	**P**	**13 41 23.3**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=145,slow=8.6,SNR=7.3						
KURK	**Kurchatov**	**35.18**	**337**	P	**P**	**13 41 23.4**	**-0.4**
KURK				IAmb	IAmb	13 41 29.8	
	comp=Z,5.3nm,1.3s						
ZALV	**Zalesovo Beam**	**36.08**	**345**	P	**P**	**13 41 30.9**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=158,slow=9.4,SNR=3.8						
BVAR	**Borovoye Array**	**40.26**	**333**	P	**P**	**13 42 06.7**	**0.0**
	comp=Z,1.0nm,0.5s,baz=134,slow=11,SNR=8.3						
ARU	**Arti**	**47.73**	**330**	P	**P**	**13 43 05.4**	**-1.3**
ARU				IAmb	IAmb	13 43 08.7	
	comp=Z,3.3nm,0.8s						
WRA	**Warramunga Arr**	**52.01**	**137**	P	**P**	**13 43 39.4**	**-0.3**
	comp=Z,1.1nm,0.9s,baz=283,slow=4.6,SNR=4.3						
ASAR	**Alice Springs**	**54.50**	**141**	P	**P**	**13 43 57.7**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=320,slow=6.9,SNR=13						
TIXI	**Tiksi**	**54.72**	**11**	P	**P**	**13 43 57.2**	**-1.7**
CTA	**Charters Tower**	**60.38**	**128**	LR	LR	14 14 17.7	
	comp=Z,340nm,19.8s,baz=234,slow=40						
FINES	**FINESS Array B**	**65.08**	**329**	P	**P**	**13 45 10.2**	**-0.1**
	comp=Z,3.0nm,0.9s,baz=102,slow=14,SNR=4.3						
STKA	**Stephens Creek**	**65.13**	**141**	P	**P**	**13 45 11.2**	**+0.2**
	comp=Z,2.3nm,0.9s,baz=320,slow=10,SNR=2.9						
STKA	**Stephens Creek**	**65.13**	**141**	IAmb	IAmb	13 45 47.9	
	comp=Z,5.7nm,1.9s						
NOA	**NORSAR Array B**	**72.26**	**329**	P	**P**	**13 45 54.4**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=82,slow=5.9,SNR=2.4						

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*SKHL **05** 13:35:17.0±0.2, 44°.96N×149°.04E, h115km±4km, mb4.6/3, msh5.5/5*

*JMA **05** 13:35:18.8±0.7, 44°.56N×149°.12E, h105km, M3.7*

ISC 05 13:35:13.5±3.7**, 44°.9N**±0°.1×**149°.4E**±0°.2**, h121**km±16km**, n20, σ2s.26**/30**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.12**	**290**	*i* P	**Pn**	**13 35 37.2**	**+0.4**
KUR				AMB	AMB	13 35 37.6	
	190nm,0.5s						
KUR				AMB	AMB	13 35 37.6	
	410nm,0.5s						
KUR				*i* S	**Sn**	**13 35 52.6**	**-1.8**
KUR				A	A	13 35 56.5	
	1μm,0.5s						
KUR				A	A	13 35 56.5	
	1μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.63**	**253**	*i* P	**Pn**	**13 35 56.5**	**+1.5**
YUK				AMB	AMB	13 35 58.9	
	40nm,0.4s						
YUK				AMB	AMB	13 35 58.9	
	30nm,0.4s						
YUK				AMB	AMB	13 35 58.9	
	50nm,0.4s						
YUK				*i* S	**Sn**	**13 36 26.0**	**-0.9**
YUK				A	A	13 36 30.0	
	200nm,0.4s						
YUK				A	A	13 36 30.0	
	360nm,0.4s						
LAGR	**Lagunnoye**	**2.68**	**254**	*e*P	**Pn**	**13 35 57.3**	**+1.8**
LAGR				AMB	AMB	13 35 59.0	
	120nm,0.5s						
LAGR				*i* S	**Sn**	**13 36 28.1**	**+0.2**
LAGR				A	A	13 36 29.5	
	260nm,0.4s						
LAGR				A	A	13 36 29.5	
	430nm,0.4s						
GRPR	**Tuman**	**2.71**	**253**	*e*P	**Pn**	**13 35 58.5**	**+2.6**
GRPR				*i* S	**Sn**	**13 36 28.9**	**+0.3**
GRPR				A	A	13 36 33.0	
	360nm,0.4s						
GRPR				A	A	13 36 33.0	
	280nm,0.4s						
GLVR	**Golovnino**	**2.97**	**249**	*e*P	**Pn**	**13 36 01.5**	**+2.1**
GLVR				*i* S	**Sn**	**13 36 34.9**	**+0.2**
GLVR				A	A	13 36 40.0	
	340nm,0.4s						
GLVR				A	A	13 36 40.0	
	290nm,0.4s						
NEM2	**Nemuro 2**	**3.00**	**242**	P	**Pn**	**13 36 01.3**	**+1.6**
NEM2				*e*S	**Sn**	**13 36 33.9**	**-1.4**
NMR	**Nemuro--Hokkai**	**3.01**	**242**	*i* P	**Pn**	**13 36 01.6**	**+1.8**
NMR				*i* S	**Sn**	**13 36 34.3**	**-1.2**
JRA	**Rausu**	**3.17**	**255**	P	**Pn**	**13 36 05.3**	**+3.3**
JNK	**Nakash**	**3.57**	**251**	P	**Pn**	**13 36 09.9**	**+2.7**
JAK	**Akkeshi**	**3.84**	**243**	P	**Pn**	**13 36 12.4**	**+1.5**
JAK				*e*S	**Sn**	**13 36 54.7**	**-0.7**
JAR	**Ashorobuto**	**4.32**	**251**	P	**Pn**	**13 36 20.2**	**+3.0**
JOB	**Onbets**	**4.44**	**246**	P	**Pn**	**13 36 21.2**	**+2.3**
JOB				*e*S	**Sn**	**13 37 09.8**	**+0.1**
JKK2	**Kamakawa 2**	**4.84**	**261**	P	**Pn**	**13 36 27.1**	**+2.9**
JCH	**Churui**	**4.89**	**245**	P	**Pn**	**13 36 26.9**	**+2.1**
JCH				*e*S	**Sn**	**13 37 18.9**	**-1.5**
YSS	**Yuzh-Sakhalins**	**5.07**	**297**	*e*P	**Pn**	**13 36 27.9**	**+0.7**
JNB	**Noboribetsu**	**6.49**	**251**	*e*S	**Sn**	**13 37 57.8**	**-1.2**
JKB	**Kayabe**	**6.75**	**247**	*e*S	**Sn**	**13 38 02.3**	**-3.1**
JANG	**Nango**	**7.31**	**235**	*e*S	**Sn**	**13 38 14.3**	**-4.7**
JTM	**Tenmabayashi**	**7.32**	**239**	*e*S	**Sn**	**13 38 15.0**	**-4.3**
EKMR	**Ekimchan**	**13.54**	**313**	*e*P	**Pn**	**13 38 19.7**	**-0.7**

IDC 05 13:38:25.5±7.9**, 20°.94S**×**179°.36W, h0**km**, mb4.2**/5**, mb1 4.3**/5**, mb1mx3.8**/49**, mbtmp4.2**/5**, Error ellipse: s-maj=180.4km s-min=44.4km az=117.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.45**	**244**	P	P	13 45 32.1	-0.2
	0.7nm,0.4s,baz=92,slow=11,SNR=4.3						
ASAR	**Alice Springs**	**43.18**	**257**	P	P	13 46 27.9	-0.6
	3.4nm,0.8s,baz=97,slow=8.0,SNR=41						
WRA	**Warramunga Arr**	**43.28**	**263**	P	P	13 46 28.9	-0.4
	0.7nm,0.3s,baz=95,slow=7.9,SNR=104						
SIJI	**Sorong**	**52.13**	**286**	P	P	13 47 39.1	+1.1
	13nm,0.8s,baz=108,slow=6.4,SNR=9.6						
MJAR	**Matsushiro Arr**	**69.82**	**325**	P	P	13 49 37.5	-0.5
	0.9nm,0.7s,baz=138,slow=6.2,SNR=4.2						

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*NEIC **05** 13:38:29.6±2.4, 20°.26S±0°.06×67°.90W±0°.08, h156km±5km, mb4.9/268, Error ellipse: s-maj=11.1km s-min=8.6km az=89.0*

*VAO **05** 13:38:31.1±0.3, 20°.11S×68°.09W, h163km±3km, mb4.6*

*IDC **05** 13:38:31.3±0.7, 20°.20S×67°.96W, h160km±6km, mb4.3/26, mb1 4.4/32, mb1mx4.3/49, mbtmp4.8/32, Error ellipse: s-maj=10.1km s-min=7.2km az=93.0*

*SJA **05** 13:38:31.0±1.1, 20°.26S×68°.18W, h182km±8km, ML4.9, MW4.5*

*GUC **05** 13:38:32.8±0.5, 20°.23S×68°.19W, h172km±3km, ML5.1, MW4.9*

*SCB **05** 13:38:32.7±2.0, 20°.31S×68°.28W, h192km±14km, ML4.8/6, Error ellipse: s-maj=12.8km s-min=8.7km az=1.0*

ISC 05 13:38:31.4±0.5**, 20°.21S**±0°.03×**68°.10W**±0°.04**, h168**km±5km**, n737, σ1s.23**/792**, mb4.8**/137**, 13C-15D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**1.00**	**274**	⇑*i*P	**Pn**	**13 38 59.0**	**+0.6**
PB08				*i* S	**Sn**	**13 39 19.1**	**+0.1**
PB08	**IPOC Station P**	**1.00**	**274**	P	**Pn**	**13 38 58.3**	**-0.1**
PB08				S	**Sn**	**13 39 18.6**	**-0.5**
PB08	**IPOC Station P**	**1.00**	**274**		**Pn**	**13 38 59.1**	**+0.6**
PB08	**IPOC Station P**	**1.00**	**274**	*e*P	**Pn**	**13 38 59.3**	**+0.9**
PB08				⇓*e*S	**Sn**	**13 39 19.6**	**+0.5**
PB08				IAML		13 39 23.1	
	comp=Z,4μm,0.3s						
GO01	**Chusmiza**	**1.17**	**297**	⇓*i*P	**Pn**	**13 39 00.2**	**+0.3**
GO01				*i* S	**Sn**	**13 39 21.7**	**-0.1**
GO01				IAML		13 39 27.1	
	comp=E,14μm,0.2s						
GO01	**Chusmiza**	**1.17**	**297**		**Pn**	**13 39 00.2**	**+0.3**
PB11	**IPOC Station P**	**1.54**	**287**	*i* P	**Pn**	**13 39 03.0**	**0.0**
PB11				*i* S	**Sn**	**13 39 26.4**	**-0.8**
PB11				IAML		13 39 29.8	
	comp=N,21μm,0.2s						
PB11	**IPOC Station P**	**1.54**	**287**	P	**Pn**	**13 39 03.0**	**0.0**
PB11				S	**Sn**	**13 39 26.1**	**-1.1**
PB11				AML	AML	13 39 27.5	
	comp=N,13μm,0.3s						
PB11	**IPOC Station P**	**1.54**	**287**		**Pn**	**13 39 02.9**	**0.0**
PB11	**IPOC Station P**	**1.54**	**287**	*e*P	**Pn**	**13 39 03.0**	**0.0**
PB11				⇓*e*S	**Sn**	**13 39 27.9**	**+0.7**
PB11				IAML		13 39 30.4	
	comp=Z,7μm,0.5s						
PB01	**IPOC Station P**	**1.54**	**237**	⇑*i*P	**Pn**	**13 39 03.0**	**0.0**
PB01				*i* S	**Sn**	**13 39 26.5**	**-0.8**
PB01				IAML		13 39 27.8	
	comp=N,19μm,0.2s						
PB01	**IPOC Station P**	**1.54**	**237**	P	**Pn**	**13 39 02.3**	**-0.7**
PB01				S	**Sn**	**13 39 26.1**	**-1.2**
PB01	**IPOC Station P**	**1.54**	**237**		**Pn**	**13 39 02.9**	**0.0**
MNMC	**Minye Minye**	**1.78**	**307**	⇓*i*P	**Pn**	**13 39 06.0**	**+0.5**
MNMC				*i* S	**Sn**	**13 39 31.6**	**-0.3**
MNMC				IAML		13 39 33.7	
	comp=E,27μm,0.2s						
MNMC	**Minye Minye**	**1.78**	**307**	P	**Pn**	**13 39 05.7**	**+0.1**
MNMC				S	**Sn**	**13 39 31.5**	**-0.4**
MNMC				AML	AML	13 39 32.0	
	comp=E,18μm,0.4s						
MNMC	**Minye Minye**	**1.78**	**307**		**Pn**	**13 39 06.1**	**+0.5**
MNMCX	**Minye Minye**	**1.78**	**307**	⇓*e*P	**Pn**	**13 39 06.0**	**+0.4**
MNMCX				*e*S	**Sn**	**13 39 32.1**	**+0.2**
MNMCX				IAML		13 39 35.0	
	comp=Z,12μm,0.4s						
PB09	**IPOC Station P**	**1.91**	**214**	⇑*i*P	**Pn**	**13 39 07.6**	**+0.7**
PB09				*i* S	**Sn**	**13 39 34.6**	**+0.3**
PB09				IAML		13 39 37.9	
	comp=N,3μm,0.5s						
PB09	**IPOC Station P**	**1.91**	**214**		**Pn**	**13 39 07.7**	**+0.7**
PB09	**IPOC Station P**	**1.91**	**214**	*i* P	**Pn**	**13 39 07.5**	**+0.7**
PB09				*e*S	**Sn**	**13 39 34.6**	**+0.3**
PB09				IAML		13 39 37.6	
	comp=Z,3μm,0.8s						
TA02	**Huaiquique**	**1.91**	**268**	*e*P	**Pn**	**13 39 06.5**	**-0.3**
TA02				*i* S	**Sn**	**13 39 32.2**	**-1.8**
TA02				IAML		13 39 34.3	
	comp=E,35μm,0.2s						
TA01	**Diego Aracena**	**1.99**	**259**	⇑*i*P	**Pn**	**13 39 07.0**	**-0.5**
TA01				*i* S	**Sn**	**13 39 32.9**	**-2.6**
TA01				IAML		13 39 33.8	
	comp=N,7μm,0.4s						
PSGC	**Pisagua**	**2.00**	**287**	⇓*i*P	**Pn**	**13 39 07.4**	**-0.5**
PSGC				*i* S	**Sn**	**13 39 33.8**	**-2.2**
PSGC				IAML		13 39 35.9	
	comp=N,19μm,0.4s						
PSGC	**Pisagua**	**2.00**	**287**	P	**Pn**	**13 39 07.3**	**-0.6**
PSGC				S	**Sn**	**13 39 32.7**	**-3.3**
PSGC				AML	AML	13 39 35.5	
	comp=N,11μm,0.4s						
PSGCX	**Pisagua**	**2.00**	**287**		**Pn**	**13 39 07.4**	**-0.4**
PSGCX	**Pisagua**	**2.00**	**287**	*e*P	**Pn**	**13 39 07.4**	**-0.4**
PSGCX				*e*S	**Sn**	**13 39 34.5**	**-1.4**
PSGCX				IAML		13 39 35.7	
	comp=Z,12μm,0.3s						
PB02	**IPOC Station P**	**2.01**	**236**	⇑*i*P	**Pn**	**13 39 07.9**	**-0.1**
PB02				*i* S	**Sn**	**13 39 34.8**	**-1.5**
PB02				IAML		13 39 37.8	
	comp=E,17μm,0.3s						
PB02	**IPOC Station P**	**2.01**	**236**	P	**Pn**	**13 39 07.8**	**-0.1**
PB02				S	**Sn**	**13 39 33.9**	**-2.4**
PB02				AML	AML	13 39 37.5	
	comp=E,18μm,0.4s						
PB02	**IPOC Station P**	**2.01**	**236**	*e*P	**Pn**	**13 39 07.9**	**-0.1**
PB02				⇓*e*S	**Sn**	**13 39 35.5**	**-0.7**
PB02				IAML		13 39 37.3	
	comp=Z,14μm,0.2s						
PATCX	**Punta Patache**	**2.02**	**252**	⇑*i*P	**Pn**	**13 39 07.8**	**-0.2**
PATCX				*i* S	**Sn**	**13 39 34.1**	**-2.2**
PATCX				IAML		13 39 35.7	
	comp=E,13μm,0.4s						
PATCX	**Punta Patache**	**2.02**	**252**		**Pn**	**13 39 07.8**	**-0.2**
PATCX	**Punta Patache**	**2.02**	**252**	*e*P	**Pn**	**13 39 07.9**	**-0.1**
PATCX				⇓*e*S	**Sn**	**13 39 35.5**	**-0.8**
PATCX				IAML		13 39 37.6	
	comp=Z,7μm,0.3s						
PB07	**IPOC Station P**	**2.25**	**228**	⇑*i*P	**Pn**	**13 39 10.6**	**-0.1**
PB07				*e*S	**Sn**	**13 39 39.5**	**-1.7**
PB07				IAML		13 39 41.0	
	comp=N,8μm,0.2s						
PB07	**IPOC Station P**	**2.25**	**228**		**Pn**	**13 39 10.6**	**-0.1**
PB07	**IPOC Station P**	**2.25**	**228**	*e*P	**Pn**	**13 39 10.8**	**+0.1**
PB07				⇓*e*S	**Sn**	**13 39 39.9**	**-1.3**
PB07				IAML		13 39 41.6	
	comp=Z,5μm,0.8s						
PB16	**IPOC Station P**	**2.29**	**324**	⇓*i*P	**Pn**	**13 39 12.8**	**+1.1**
PB16				*i* S	**Sn**	**13 39 43.5**	**+0.7**
PB16				IAML		13 39 46.6	
	comp=N,5μm,0.7s						
PB16	**IPOC Station P**	**2.29**	**324**		**Pn**	**13 39 12.9**	**+1.1**
PB16	**IPOC Station P**	**2.29**	**324**	⇓*e*P	**Pn**	**13 39 13.0**	**+1.3**
PB16				⇓*e*S	**Sn**	**13 39 44.1**	**+1.3**
PB16				IAML		13 39 46.5	
	comp=Z,2μm,0.6s						
PB03	**IPOC Station P**	**2.40**	**220**	⇑*i*P	**Pn**	**13 39 12.4**	**0.0**
PB03				*i* S	**Sn**	**13 39 42.3**	**-1.9**
PB03				IAML		13 39 44.9	
	comp=E,4μm,0.6s						
PB03	**IPOC Station P**	**2.40**	**220**	*e*P	**Pn**	**13 39 12.6**	**+0.2**
PB03				*e*S	**Sn**	**13 39 43.3**	**-0.9**
PB03				IAML		13 39 45.2	
	comp=Z,3μm,0.4s						
LVC	**Limon Verde**	**2.50**	**197**	P	**Pn**	**13 39 14.4**	**+0.5**
	comp=Z,281nm,0.3s,baz=20,slow=12,SNR=593						
LVC				S	**Sn**	**13 39 46.8**	**-0.1**
	comp=Z,133nm,0.3s,baz=153,slow=18,SNR=10.0						
LVC	**Limon Verde**	**2.50**	**197**	*e*P	**Pn**	**13 39 14.7**	**+0.8**
LVC				*i* S	**Sn**	**13 39 46.7**	**-0.1**
LVC	**Limon Verde**	**2.50**	**197**		**Pn**	**13 39 14.5**	**+0.7**
LVC	**Limon Verde**	**2.50**	**197**	*i* P	**Pn**	**13 39 14.6**	**+0.8**
LVC				*e*S	**Sn**	**13 39 46.8**	**-0.1**
LVC	**Limon Verde**	**2.50**	**197**	*e*P	**Pn**	**13 39 14.6**	**+0.7**
LVC				*e*S	**Sn**	**13 39 47.6**	**+0.7**
PB12	**IPOC Station P**	**2.64**	**307**	⇓*i*P	**Pn**	**13 39 14.2**	**-1.1**
PB12				*i* S	**Sn**	**13 39 46.5**	**-2.7**
PB12				IAML		13 39 48.6	
	comp=N,10μm,0.2s						
PB12	**IPOC Station P**	**2.64**	**307**		**Pn**	**13 39 14.3**	**-1.0**
PB12	**IPOC Station P**	**2.64**	**307**	⇓*e*P	**Pn**	**13 39 14.2**	**-1.1**
PB12				*e*S	**Sn**	**13 39 46.6**	**-2.7**
PB12				IAML		13 39 48.3	
	comp=Z,7μm,0.2s						
AP01	**Chacalluta**	**2.80**	**310**	*e*P	**Pn**	**13 39 16.4**	**-0.8**
AP01				*e*S	**Sn**	**13 39 50.0**	**-2.6**
PB06	**IPOC Station P**	**2.84**	**209**	⇑*i*P	**Pn**	**13 39 17.9**	**+0.2**
PB06				*e*S	**Sn**	**13 39 52.4**	**-1.3**
PB06				IAML		13 39 53.4	
	comp=E,4μm,0.5s						
PB06	**IPOC Station P**	**2.84**	**209**	P	**Pn**	**13 39 17.3**	**-0.4**
PB06	**IPOC Station P**	**2.84**	**209**		**Pn**	**13 39 17.7**	**0.0**
PB06	**IPOC Station P**	**2.84**	**209**	*i* P	**Pn**	**13 39 18.0**	**+0.3**
PB06				*e*S	**Sn**	**13 39 52.6**	**-1.1**
PB06				IAML		13 39 55.9	
	comp=Z,2μm,1.0s						
PB04	**IPOC Station P**	**2.85**	**222**	*i* P	**Pn**	**13 39 17.8**	**-0.1**
PB04				*i* S	**Sn**	**13 39 51.4**	**-2.6**
PB04	**IPOC Station P**	**2.85**	**222**	P	**Pn**	**13 39 15.9**	**-2.0**
PB04				S	**Sn**	**13 39 49.7**	**-4.3**
PB04				AML	AML	13 39 56.1	
	comp=Z,143nm,0.5s						
PB04	**IPOC Station P**	**2.85**	**222**		**Pn**	**13 39 17.6**	**-0.3**
PB04	**IPOC Station P**	**2.85**	**222**	*i* P	**Pn**	**13 39 17.7**	**-0.1**
PB04				*e*S	**Sn**	**13 39 52.2**	**-1.8**
PB04				IAML		13 39 56.9	
	comp=Z,3μm,0.7s						
YJA	**Yavi**	**3.10**	**130**	P	**Pn**	**13 39 22.4**	**+1.2**
YJA	**Yavi**	**3.10**	**130**	*i* P	**Pn**	**13 39 23.1**	**+1.9**
BBOJ	**La Paz, Jacaqu**	**3.22**	**358**	P	**Pn**	**13 39 24.9**	**+2.0**
PB15	**IPOC Station P**	**3.25**	**203**	⇑*e*P	**Pn**	**13 39 22.9**	**+0.1**
PB15				*e*S	**Sn**	**13 40 01.6**	**-1.2**
PB15	**IPOC Station P**	**3.25**	**203**		**Pn**	**13 39 23.0**	**+0.2**
PB15	**IPOC Station P**	**3.25**	**203**	*i* P	**Pn**	**13 39 23.3**	**+0.5**
PB15				*e*S	**Sn**	**13 40 01.6**	**-1.2**
PB05	**IPOC Station P**	**3.28**	**216**	⇑*i*P	**Pn**	**13 39 22.9**	**-0.2**
PB05				*i* S	**Sn**	**13 40 00.4**	**-3.0**
PB05				IAML		13 40 03.3	
	comp=N,2μm,0.6s						
PB05	**IPOC Station P**	**3.28**	**216**	*i* P	**Pn**	**13 39 22.9**	**-0.2**
PB05				*e*S	**Sn**	**13 40 00.5**	**-3.0**
PB05				IAML		13 40 04.2	
	comp=Z,2μm,0.9s						
BBOE	**La Paz, Chanca**	**3.38**	**2**	P	**Pn**	**13 39 27.0**	**+2.1**
BBOD	**La Paz, Gloria**	**3.59**	**352**	P	**Pn**	**13 39 29.4**	**+1.9**
LPAZ	**La Paz**	**3.90**	**360**	P	**Pn**	**13 39 33.0**	**+1.4**
	comp=Z,71nm,0.3s,baz=164,slow=8.2,SNR=631						
LPAZ				S	**Sn**	**13 40 18.9**	**+0.5**
	comp=Z,40nm,0.3s,baz=25,slow=18,SNR=13						
LPAZ	**La Paz**	**3.90**	**360**	P	**Pn**	**13 39 33.1**	**+1.5**
LPAZ				S	**Sn**	**13 40 18.2**	**-0.2**
LPAZ				AML	AML	13 40 20.2	
	comp=Z,144nm,0.6s						
LPAZ	**La Paz**	**3.90**	**360**	*i* P	**Pn**	**13 39 33.1**	**+1.5**
LPAZ				*e*S	**Sn**	**13 40 19.7**	**+1.3**
LPAZ	**La Paz**	**3.90**	**360**	*e*S	**Sn**	**13 40 15.4**	**-3.0**
PB10	**IPOC Station P**	**4.00**	**214**	⇑*i*P	**Pn**	**13 39 31.1**	**-1.2**
PB10				*i* S	**Sn**	**13 40 14.4**	**-5.3**
PB10	**IPOC Station P**	**4.00**	**214**	P	**Pn**	**13 39 29.9**	**-2.3**
PB10	**IPOC Station P**	**4.00**	**214**		**Pn**	**13 39 30.9**	**-1.3**
BS09	**Huarina**	**4.03**	**353**	P	**Pn**	**13 39 35.5**	**+2.4**
BS09				S	**Sn**	**13 40 20.7**	**-0.5**
BBOB	**La Paz, Bander**	**4.05**	**359**	P	**Pn**	**13 39 34.8**	**+1.4**
AZAP	**Zapla**	**4.88**	**145**	*i* P	**Pn**	**13 39 44.2**	**+0.4**
AZAP				*e*S	**Sn**	**13 40 39.5**	**-1.1**
PB14	**IPOC Station P**	**4.88**	**205**		**Pn**	**13 39 42.1**	**-1.9**
ASTB	**Santa Barbara**	**5.02**	**138**	*i* P	**Pn**	**13 39 46.0**	**+0.4**
GO02	**Mina Guanaco**	**5.12**	**195**		**Pn**	**13 39 46.2**	**-0.8**
SIV	**San Ignacio**	**7.89**	**59**	P	**Pn**	**13 40 21.2**	**-2.2**
	comp=Z,166nm,0.3s,baz=266,slow=9.2,SNR=1635						
PTLB	**Pontes e Lacer**	**9.76**	**62**	*e*P	**Pn**	**13 40 46.1**	**-2.0**
GO04	**Tololo Observa**	**10.22**	**193**		Pn	13 40 50.4	-3.8
VILB	**Vilhena**	**10.46**	**48**	*e*P	**Pn**	**13 40 55.5**	**-1.8**
VILB				*e*S	**Sn**	**13 42 51.7**	**-1.7**
AMOG	**MOGNA**	**10.69**	**182**	*i* P	**Pn**	**13 40 57.1**	**-3.1**
CPUP	**Villa Florida**	**11.62**	**124**	P	**Pn**	**13 41 11.6**	**-0.7**
	comp=Z,1.5nm,0.3s,baz=306,slow=12,SNR=61						
CPUP	**Villa Florida**	**11.62**	**124**		**Pn**	**13 41 09.9**	**-2.4**
NNA	**Nana**	**11.72**	**313**	P	**Pn**	**13 41 14.2**	**+0.4**
	comp=Z,7.7nm,0.3s,baz=182,slow=9.9,SNR=8.2						
NNA				S	**Sn**	**13 43 19.7**	**-4.2**
	comp=Z,5.7nm,0.3s,baz=27,slow=24,SNR=3.0						
NNA	**Nana**	**11.72**	**313**		**Pn**	**13 41 12.3**	**-1.5**
SAML	**Samuel**	**12.16**	**24**		**Pn**	**13 41 17.3**	**-2.1**
SAML	**Samuel**	**12.16**	**24**	*e*P	**Pn**	**13 41 17.1**	**-2.3**
SAML				*e*S	**Sn**	**13 43 32.2**	**-2.1**
ROC1	**El Roble**	**12.98**	**191**	Pn	Pn	13 41 25.3	-4.6
PEL	**Peldehue**	**13.09**	**190**	P	**Pn**	**13 41 31.9**	**+0.8**
C2SB	**Chapadao do Su**	**14.46**	**87**	*e*P	**Pn**	**13 41 49.0**	**+0.6**
CLDB	**Colider**	**15.04**	**54**	*e*P	**Pn**	**13 41 55.0**	**-0.7**
GO05	**Huala**	**15.13**	**192**	P	**Pn**	**13 41 55.3**	**-1.2**
PTGB	**Pitanga**	**15.48**	**110**	*e*P	**Pn**	**13 42 01.9**	**+0.8**
PTGB				*e*S	**Sn**	**13 44 55.8**	**+2.0**
PCMB	**Pacaembu**	**15.79**	**98**	*e*P	**Pn**	**13 42 04.5**	**-0.3**
ARAG	**Araguaiana, MT**	**16.12**	**76**	*e*P	**P**	**13 42 08.7**	**-0.3**
ITAB	**Concordia**	**16.20**	**119**	*e*P	**Pn**	**13 42 10.6**	**+0.9**
ITAB				*e*S	**Sn**	**13 45 10.9**	**+0.1**
H03N1	**Juan Fernandez**	**16.32**	**214**	P	**Pn**	**13 42 15.8**	**+4.9**
	baz=111,slow=14,SNR=18						
H03N1				T	T	13 59 25.4	
	baz=32,slow=73,SNR=6.0						
H03N2	**Juan Fernandez**	**16.33**	**214**	P	**Pn**	**13 42 15.8**	**+4.9**
	baz=111,slow=14,SNR=17						
H03N2				T	T	13 59 23.0	
	baz=32,slow=73,SNR=4.9						
H03N3	**Juan Fernandez**	**16.34**	**214**	P	**Pn**	**13 42 15.6**	**+4.6**
	baz=111,slow=14,SNR=21						
H03N3				T	T	13 59 23.9	
	baz=32,slow=73,SNR=5.4						
ATAH	**Atahualpa**	**16.39**	**321**	P	**P**	**13 42 12.8**	**+0.4**
	comp=Z,1.4nm,0.3s,baz=137,slow=12,SNR=16						
H03S3	**Juan Fernandez**	**16.62**	**213**	P	**Pn**	**13 42 18.7**	**+4.3**
	baz=31,slow=20,SNR=6.8						
H03S1	**Juan Fernandez**	**16.63**	**213**	P	**Pn**	**13 42 18.7**	**+4.1**
	baz=31,slow=20,SNR=4.2						
H03S2	**Juan Fernandez**	**16.64**	**213**	P	**Pn**	**13 42 19.1**	**+4.4**
	baz=31,slow=20,SNR=5.8						
PLTB	**Pedras Altas**	**17.36**	**134**	*e*P	**P**	**13 42 22.3**	**-0.1**
FRTB	**Fartura**	**17.49**	**104**	*e*P	**P**	**13 42 24.7**	**+0.8**
CNLB	**Canela**	**18.07**	**123**	*e*P	**P**	**13 42 30.7**	**+0.4**
IPMB	**Ipameri, GO**	**18.92**	**87**	*e*P	**P**	**13 42 39.5**	**-0.1**
RCLB	**Rio Claro- Sao**	**19.29**	**100**	*e*P	**P**	**13 42 43.3**	**-0.2**
SPB	**Sao Paulo**	**19.46**	**104**	*e*P	**P**	**13 42 46.5**	**+1.2**
BDFB	**Brasilia**	**19.64**	**80**	P	**P**	**13 42 47.2**	**-0.2**
	comp=Z,4.6nm,0.3s,baz=252,slow=8.6,SNR=18						
BDFB	**Brasilia**	**19.64**	**80**	P	**P**	**13 42 46.0**	**-1.4**
BDFB				IAmb	IAmb	13 42 51.4	
	comp=Z,25nm,0.5s						
PET01	**Itanhaem-SP**	**19.69**	**106**	*e*P	**P**	**13 42 48.9**	**+1.1**
VAO	**Valinhos**	**19.84**	**102**	*e*P	**P**	**13 42 49.2**	**-0.3**
PLCA	**Paso Flores**	**20.56**	**185**	P	**P**	**13 42 58.3**	**+1.2**
	comp=Z,5.7nm,0.9s,baz=352,slow=11,SNR=8.0						
PLCA	**Paso Flores**	**20.56**	**185**	*e*P	**P**	**13 42 58.2**	**+1.2**
PTGA	**Pitinga**	**20.93**	**23**	P	**P**	**13 42 59.8**	**-1.3**
	comp=Z,41nm,0.3s,baz=210,slow=14,SNR=103						
PTGA				S	**S**	**13 46 40.1**	**-5.0**
	comp=Z,9.2nm,0.7s,baz=296,slow=21,SNR=5.9						
PTGA	**Pitinga**	**20.93**	**23**	P	**P**	**13 42 59.3**	**-1.8**
PTGA				IAmb	IAmb	13 43 05.6	
	comp=Z,47nm,0.7s						
PTGA	**Pitinga**	**20.93**	**23**	*e*P	**P**	**13 42 59.9**	**-1.3**
PARB	**Paraibuna**	**21.10**	**103**	*e*P	**P**	**13 43 02.2**	**-0.7**
BSCB	**Bom Sucesso**	**21.84**	**96**	*e*P	**P**	**13 43 10.4**	**-0.4**
ESAR	**Angra dos Reis**	**22.16**	**102**	*e*P	**P**	**13 43 14.2**	**+0.3**
PUAC	**Puerto Asis, P**	**22.24**	**337**	*e*P	**P**	**13 43 14.5**	**-0.2**
MAN01	**Angra dos Reis**	**22.60**	**101**	*e*P	**P**	**13 43 18.0**	**-0.1**
MALB	**Monte Alegre**	**22.70**	**38**	*e*P	**P**	**13 43 17.5**	**-1.5**
SMTB	**Santa Maria do**	**22.80**	**63**	*e*P	**P**	**13 43 19.6**	**-0.4**
JANB	**Januaria**	**23.23**	**81**	*e*P	**P**	**13 43 23.1**	**-0.8**
BOAV	**Boa Vista**	**23.66**	**19**	*e*P	**P**	**13 43 27.4**	**-0.3**
SOTA	**Rioblanco**	**23.73**	**338**	*e*P	**P**	**13 43 30.2**	**+1.3**
PCON	**Cinco Dias**	**23.83**	**339**	*e*P	**P**	**13 43 31.4**	**+1.5**
ORTC	**Ortega, Tolima**	**24.98**	**343**	*e*P	**P**	**13 43 39.7**	**0.0**
GR1C	**Gorgona, Isla**	**25.10**	**336**	*e*P	**P**	**13 43 42.0**	**+1.3**
CHIC	**Chingaza**	**25.30**	**347**	*e*P	**P**	**13 43 43.5**	**+0.4**
YOTC	**Yotoco, Valle**	**25.37**	**340**	*e*P	**P**	**13 43 42.7**	**-0.7**
SJMB	**Sao Joao De Ma**	**25.41**	**91**	*e*P	**P**	**13 43 44.0**	**+0.4**
BSFB	**Barra de Sao F**	**25.71**	**92**	*e*P	**P**	**13 43 46.1**	**-0.2**
GUY2C	**Guyana, Caldas**	**26.27**	**343**	*e*P	**P**	**13 43 52.4**	**+0.6**
SPBC	**San Pablo de B**	**26.36**	**347**	*e*P	**P**	**13 43 51.7**	**-0.6**
RUSC	**La Rusia**	**26.40**	**349**	*e*P	**P**	**13 43 52.7**	**-0.3**
RUSC	**La Rusia**	**26.40**	**349**	P	**P**	**13 43 53.0**	**0.0**
CBOC	**Ciudad Bolivar**	**27.06**	**342**	*e*P	**P**	**13 43 58.7**	**+0.2**
HELC	**Santa Helena**	**27.24**	**344**	*e*P	**P**	**13 43 59.2**	**-1.2**
PTBC	**PUERTO BERRIO,**	**27.31**	**346**	*e*P	**P**	**13 43 58.2**	**-2.4**
PAMC	**Pamplona, Colo**	**27.75**	**350**	*e*P	**P**	**13 44 04.1**	**-1.0**
ZARC	**Zaragoza, Cauc**	**28.32**	**346**	*e*P	**P**	**13 44 07.5**	**-2.1**
SDV	**Santo Domingo**	**29.02**	**355**	P	**P**	**13 44 15.6**	**-0.4**
	comp=Z,3.4nm,0.4s,baz=127,slow=20,SNR=2.2						
SDV	**Santo Domingo**	**29.02**	**355**	*e*P	**P**	**13 44 14.9**	**-1.1**
ROSB	**Rosrio**	**29.03**	**57**	*e*P	**P**	**13 44 15.9**	**0.0**
MDP	**Montagnes des**	**29.39**	**33**	P	**P**	**13 44 19.1**	**+0.1**
	comp=Z,4.4nm,0.4s,baz=215,slow=9.0,SNR=7.6						
SMLC	**San Martn de**	**29.42**	**348**	*e*P	**P**	**13 44 16.4**	**-2.9**
PLCV	**Puerto La Cruz**	**30.38**	**7**	P	**P**	**13 44 28.5**	**+0.7**
PCRV	**Puerto La Cruz**	**30.39**	**7**	P	**P**	**13 44 28.5**	**+0.6**
	comp=Z,13nm,0.6s,baz=332,slow=1.1,SNR=6.9						

ARGC **Ariguani, Magd** 30.49 348 *eP* P 13 44 27.0 -1.7
SJCC **San Jacinto, C** 30.72 346 *eP* P 13 44 29.2 -1.6
BCIP **Isla Barro Col** 31.40 337 *eP* P 13 44 39.2 +2.5
URIC **Uribia, Colomb** 31.94 353 P P 13 44 38.9 -2.6
NBMO **Morrinhos-CE** 32.10 62 *eP* P 13 44 42.2 -0.7
RCBR **Riachuelo** 34.38 70 P P 13 45 02.9 +0.2
comp=Z,35nm,0.5s,baz=241,slow=3.8,SNR=45
JTS **Las Juntas de** 34.55 330 P P 13 45 06.2 +2.0
comp=Z,3.5nm,0.7s,baz=242,slow=13,SNR=4.2
JTS **Las Juntas de** 34.55 330 IAmb IAmb 13 45 10.3
comp=Z,9.1nm,0.9s
FDF **Fort de France** 35.39 12 P P 13 45 11.3 0.0
MLPR **Magueyes Islan** 37.96 2 P P 13 45 30.9 -2.0
CRPR **Cabo Rojo, PR** 37.99 2 P P 13 45 31.9 -1.2
CRPR IAmb IAmb 13 45 40.0
comp=Z,18nm,0.7s
OBIP **Obispado Ponce** 38.05 2 P P 13 45 32.4 -1.2
PDPR **Patillas Dam,** 38.05 3 P P 13 45 31.4 -2.2
PDPR IAmb IAmb 13 46 59.9
comp=Z,42nm,1.1s
SJG **San Juan** 38.13 3 P P 13 45 32.3 -2.1
SJG IAmb IAmb 13 45 38.5
comp=Z,18nm,0.7s
ANWB **Willy Bob** 38.15 10 P P 13 45 32.5 -2.0
MTP **Monte Pirata** 38.15 4 P P 13 45 32.2 -2.3
CBYP **Canovanas** 38.31 3 P P 13 45 33.5 -2.4
AOPR **Arecibo Observ** 38.34 2 P P 13 45 34.3 -1.9
AOPR IAmb IAmb 13 45 44.6
comp=Z,41nm,1.3s
CUPR **Culebra, Puert** 38.38 4 P P 13 45 35.9 -0.5
CUPR IAmb IAmb 13 45 45.4
comp=Z,17nm,1.1s
DR12 **Loma Pena Alta** 38.78 358 P P 13 45 38.1 -1.7
APG **El Apazote** 41.33 326 P P 13 46 03.1 +2.0
comp=Z,27nm,0.7s,baz=158,slow=4.0,SNR=28
CCIG **Comitan** 43.28 325 P P 13 46 16.8 0.0
CCIG IAmb IAmb 13 46 18.9
comp=Z,30nm,1.1s
TEIG **Tepich** 44.78 333 P P 13 46 28.6 +0.2
comp=Z,10.0nm,0.4s,baz=292,slow=0.0,SNR=9.6
TEIG **Tepich** 44.78 333 P P 13 46 27.3 -1.2
TEIG IAmb IAmb 13 47 53.3
comp=Z,62nm,1.6s
CMIG **Matias Romero** 45.45 323 P P 13 46 35.3 +1.4
comp=Z,5.4nm,0.5s,baz=107,slow=6.8,SNR=9.3
061Z **Ochoppi** 47.46 344 P P 13 46 48.6 -0.7
656A **Willston** 51.22 344 P P 13 47 17.3 -0.4
656A IAmb IAmb 13 47 19.1
comp=Z,34nm,0.9s
553A **Crawfordville** 52.52 342 P P 13 47 27.9 +0.6
158A **Hollywood** 53.91 347 P P 13 47 38.9 +1.5
baz=166
157A **Early Branch** 54.02 347 P P 13 47 38.9 +0.7
baz=165
ZAIG **Zacatecas** 54.38 320 P P 13 47 42.5 +1.1
ZAIG IAmb IAmb 13 47 44.3
comp=Z,13nm,0.8s
Y55A **Saluda** 55.42 346 P P 13 47 48.7 +0.4
baz=164
X56A **White Oak** 55.77 347 P P 13 47 50.7 -0.1
baz=165
Z50A **Ashland** 55.82 342 P P 13 47 51.0 -0.2
baz=160,SNR=10
Z50A **Ashland** 55.82 342 P P 13 47 50.6 -0.6
Z50A IAmb IAmb 13 47 51.9
comp=Z,19nm,0.9s
X55A **Gracelyn & Ava** 55.88 346 P P 13 47 52.0 +0.4
baz=165
Y52A **Lilburn** 55.89 344 P P 13 47 51.4 -0.2
baz=162
Y52A **Lilburn** 55.89 344 P P 13 47 50.5 -1.2
Y52A IAmb IAmb 13 48 35.9
comp=Z,12nm,1.2s
LRAL **Lakeview Retre** 55.94 341 P P 13 47 51.7 -0.3
baz=159
LRAL **Lakeview Retre** 55.94 341 P P 13 47 51.2 -0.9
LRAL IAmb IAmb 13 47 52.5
comp=Z,9.1nm,0.8s
V62A **Hyde County Ai** 55.97 352 P P 13 47 52.2 0.0
baz=171
X54A **Belton** 56.12 346 P P 13 47 54.0 +0.6
baz=164
W57A **Gilead** 56.21 348 P P 13 47 54.2 +0.3
baz=167
KMSC **Kings Mountain** 56.47 347 P P 13 47 56.1 +0.4
baz=165
V59A **Middlesex** 56.49 350 P P 13 47 56.1 +0.2
baz=169
Y49A **Blount Mountai** 56.53 342 P P 13 47 55.5 -0.7
Y49A IAmb IAmb 13 47 56.6
comp=Z,15nm,1.1s
W54A **Cherokee Point** 56.60 346 P P 13 47 57.5 +0.8
baz=164
V57A **Coltrane Farms** 56.88 349 P P 13 47 58.5 -0.1
baz=167
V56A **Mocksville** 56.94 348 P P 13 47 59.5 +0.4
baz=166
FPAL **Fort Paine** 56.94 343 P P 13 47 58.6 -0.5
FPAL IAmb IAmb 13 49 42.8
comp=Z,42nm,1.8s
833A **Chaparral WMA,** 56.95 327 P P 13 47 59.0 -0.3
baz=145
V55A **Taylorsville** 57.12 347 P P 13 48 01.0 +0.7
baz=165
V55A **Taylorsville** 57.12 347 P P 13 48 01.0 +0.7
V55A IAmb IAmb 13 48 01.5
comp=Z,12nm,0.8s
V54A **Nebo** 57.21 347 P P 13 48 01.6 +0.6
baz=165
X48A **Hartselle** 57.27 341 P P 13 48 00.9 -0.5
X48A IAmb IAmb 13 48 02.1
comp=Z,18nm,0.6s
V53A **Saluda** 57.30 346 P P 13 48 01.2 -0.5
V53A IAmb IAmb 13 48 45.8
comp=Z,52nm,1.9s
U57A **Blanch** 57.33 349 P P 13 48 01.4 -0.3
baz=168
W50A **Signal Mountai** 57.48 343 P P 13 48 02.0 -1.0
W50A IAmb IAmb 13 48 03.3
comp=Z,12nm,0.7s
CPCT **Cooper Cave** 57.51 344 P P 13 48 02.7 -0.3
CPCT IAmb IAmb 13 48 51.1
comp=Z,41nm,1.9s
TKL **Tuckaleechee C** 57.52 345 P P 13 48 02.9 -0.2
comp=Z,9.5nm,0.8s,baz=166,slow=8.5,SNR=9.6
TKL **Tuckaleechee C** 57.52 345 P P 13 48 02.2 -0.9
TKL IAmb IAmb 13 48 03.8
comp=Z,11nm,0.8s
T59A **Double "B" Far** 57.57 351 P P 13 48 03.5 +0.1
baz=170
NATX **Nacogdoches** 57.61 333 P P 13 48 05.1 +1.3
baz=150
V52A **Sevierville** 57.65 345 P P 13 48 03.6 -0.4
V52A IAmb IAmb 13 48 04.8
comp=Z,16nm,1.1s
SWET **Sewanee** 57.66 343 P P 13 48 03.7 -0.5
T58A **Grand View Acr** 57.70 350 P P 13 48 04.6 +0.2
baz=168
U55A **TA2, Sparta** 57.72 348 P P 13 48 05.5 +0.9
baz=166
V51A **Loudon** 57.80 344 P P 13 48 04.6 -0.5
V51A IAmb IAmb 13 49 45.9
comp=Z,21nm,1.4s
T57A **Hurt** 57.87 349 P P 13 48 05.7 +0.2
baz=168
T57A **Hurt** 57.87 349 P P 13 48 05.0 -0.5
U54A **Nelsons Funny** 57.90 347 P P 13 48 06.4 +0.6
baz=165
T56A **Rocky Mt** 58.03 349 P P 13 48 06.9 +0.2
baz=167
OXF **Oxford** 58.08 339 P P 13 48 06.9 -0.1
baz=156
OXF **Oxford** 58.08 339 P P 13 48 06.0 -1.0
PLAL **Pickwick Lake** 58.08 341 P P 13 48 06.2 -0.9
PLAL IAmb IAmb 13 48 07.3
comp=Z,15nm,0.9s
435B **Jarrell** 58.09 330 P P 13 48 07.2 0.0
baz=147
T55A **Pulaski** 58.26 348 P P 13 48 08.9 +0.5
baz=166
CCAR **Cane Creek** 58.37 337 P P 13 48 07.2 -1.8
T54A **Tazewell** 58.37 347 P P 13 48 08.9 -0.2
baz=165
V48A **Smith Brothers** 58.41 342 P P 13 48 08.7 -0.6
T53A **Wise** 58.49 346 P P 13 48 10.0 0.0
baz=164,SNR=5.3

S57A **Dark Hollow, R** 58.56 350 P P 13 48 11.1 +0.8
baz=168
W45A **Hickory Valley** 58.59 340 P P 13 48 09.8 -0.8
CLTN **Cedars of Leba** 58.60 343 P P 13 48 09.9 -0.7
CLTN IAmb IAmb 13 48 11.3
comp=Z,18nm,0.7s
U49A **Red Boiling Sp** 58.84 343 P P 13 48 11.4 -0.9
U49A IAmb IAmb 13 48 12.3
comp=Z,12nm,0.5s
S55A **Lewisburg** 58.84 349 P P 13 48 13.1 +0.7
baz=166,SNR=5.3
JCT **Junction City** 58.91 328 P P 13 48 12.8 -0.1
baz=145
JCT **Junction City** 58.91 328 P P 13 48 12.8 -0.1
JCT IAmb IAmb 13 48 14.4
comp=Z,12nm,1.0s
R57A **Stanardsville** 59.02 350 P P 13 48 14.0 +0.5
baz=169
S54A **Dingess, Beckl** 59.03 348 P P 13 48 13.7 +0.1
baz=166
S54A **Dingess, Beckl** 59.03 348 P P 13 48 13.3 -0.3
WHTX **Lake Whitney,** 59.04 331 P P 13 48 14.4 +0.7
baz=148,SNR=5.8
WHTX **Lake Whitney,** 59.04 331 P P 13 48 13.6 -0.1
Z38A **Mt. Pleasant** 59.05 334 P P 13 48 13.8 0.0
WVT **Waverly** 59.07 341 P P 13 48 13.3 -0.5
baz=158
WVT **Waverly** 59.07 341 P P 13 48 13.0 -0.9
T50A **Nancy** 59.08 344 P P 13 48 13.1 -0.8
T50A IAmb IAmb 13 48 14.3
comp=Z,11nm,1.0s
S53A **Williamson** 59.08 347 P P 13 48 14.3 +0.4
baz=165
R55A **Marlinton** 59.27 349 P P 13 48 15.7 +0.4
baz=167
R55A **Marlinton** 59.27 349 P P 13 48 14.6 -0.7
R54A **Victor** 59.33 348 P P 13 48 16.4 +0.7
baz=166
UALR **University of** 59.34 337 P P 13 48 15.3 -0.4
UALR IAmb IAmb 13 48 16.6
comp=Z,13nm,0.6s
Q58A **Fox Den Farm,** 59.52 351 P P 13 48 17.4 +0.5
baz=170
MIAR **Mount Ida** 59.60 336 P P 13 48 17.8 +0.3
baz=152,SNR=11
MIAR **Mount Ida** 59.60 336 P P 13 48 17.2 -0.3
MIAR IAmb IAmb 13 48 18.7
comp=Z,12nm,0.7s
W41B **Gary Mavity, V** 59.66 337 P P 13 48 17.9 -0.1
baz=154,SNR=5.4
R53A **Hurricane** 59.67 347 P P 13 48 18.5 +0.5
baz=165
Q57A **Strasburg** 59.72 351 P P 13 48 19.1 +0.8
baz=169
WHAR **Wooly Hollow** 59.78 337 P P 13 48 18.1 -0.7
WHAR IAmb IAmb 13 48 19.6
comp=Z,17nm,1.0s
Q56A **Snyder Ridge,** 59.85 350 P P 13 48 19.6 +0.4
Q55A **Buckhannon** 59.96 349 P P 13 48 20.6 +0.7
baz=167
P58A **Park, Wackersv** 60.01 352 P P 13 48 21.6 +1.4
baz=170
TX32 **Lajitas Array** 60.02 324 P P 13 48 21.1 +0.4
TXAR **Lajitas Array** 60.02 324 P P 13 48 21.4 +0.7
comp=Z,3.3nm,0.5s,baz=153,slow=8.8,SNR=33
TXAR S S 13 56 24.2 +4.0
comp=Z,0.1nm,0.3s,baz=155,slow=12,SNR=3.9
TX31 **Lajitas Ar. Si** 60.02 324 P P 13 48 20.9 +0.2
TX31 IAmb IAmb 13 48 22.2
comp=Z,14nm,0.7s
LCAR **Lake Charles** 60.08 339 P P 13 48 20.2 -0.6
LCAR IAmb IAmb 13 48 21.3
comp=Z,13nm,0.5s
Q54A **Coxs Mills** 60.08 349 P P 13 48 21.2 +0.5
baz=166
Q54A **Coxs Mills** 60.08 349 P P 13 48 20.8 +0.1
Q54A IAmb IAmb 13 48 21.4
comp=Z,11nm,0.6s
Q53A **Leroy** 60.09 348 P P 13 48 21.2 +0.4
baz=166,SNR=8.0
P57A **Homestead Farm** 60.10 351 P P 13 48 21.4 +0.5
baz=169
T45A **Paducah** 60.13 341 P P 13 48 20.6 -0.6
R50A **Paris** 60.15 345 P P 13 48 20.5 -0.7
R50A IAmb IAmb 13 48 21.5
comp=Z,9.3nm,0.9s
P56A **Dayton Farm, R** 60.25 350 P P 13 48 22.9 +1.0
baz=168
W39A **Magazine** 60.26 336 P P 13 48 23.1 +1.1
baz=152,SNR=14
W39A **Magazine** 60.26 336 P P 13 48 21.6 -0.4
W39A IAmb IAmb 13 48 23.8
comp=Z,21nm,0.9s
FCAR **Ozark Folk Cen** 60.26 338 P P 13 48 21.2 -0.8
FCAR IAmb IAmb 13 48 22.5
comp=Z,14nm,0.9s
Q52A **Bidwell** 60.34 347 P P 13 48 23.0 +0.5
baz=165
X37A **Clayton** 60.36 334 P P 13 48 22.8 +0.1
R49A **Shelbyville** 60.36 345 P P 13 48 22.4 -0.3
R49A IAmb IAmb 13 48 23.0
comp=Z,6.6nm,0.7s
P55A **Reedsville** 60.41 350 P P 13 48 23.7 +0.7
baz=167
PBMO **Poplar Bluff** 60.48 339 P P 13 48 23.1 -0.3
MCWV **Mont Chateau** 60.56 350 P P 13 48 24.7 +0.8
baz=167
ABTX **Abilene, Hawle** 60.59 330 P P 13 48 25.0 +0.7
baz=146
ABTX **Abilene, Hawle** 60.59 330 P P 13 48 23.6 -0.7
ABTX IAmb IAmb 13 48 25.9
comp=Z,15nm,1.0s
WCI **Wyandotte Cave** 60.59 344 P P 13 48 23.8 -0.5
baz=160
WCI **Wyandotte Cave** 60.59 344 P P 13 48 23.4 -0.8
O60A **Telford** 60.60 354 P P 13 48 25.3 +1.1
baz=172
P54A **Burton** 60.62 349 P P 13 48 24.9 +0.5
baz=167
P53A **Whipple** 60.67 348 P P 13 48 25.4 +0.6
baz=166,SNR=5.7
P53A **Whipple** 60.67 348 P P 13 48 24.3 -0.4
O57A **Amberson** 60.76 352 P P 13 48 26.1 +0.8
baz=170
T42A **Van Buren** 60.93 339 P P 13 48 25.8 -0.8
U40A **Yellville** 60.94 337 P P 13 48 26.6 -0.1
baz=153,SNR=8.5
U40A **Yellville** 60.94 337 P P 13 48 26.3 -0.3
U40A IAmb IAmb 13 48 27.5
comp=Z,12nm,0.9s
S44A **Carbondale** 60.94 341 P P 13 48 25.9 -0.6
SIUC **Southern Illin** 60.95 341 P P 13 48 26.0 -0.6
O56A **Blue Knob Stat** 60.95 351 P P 13 48 27.4 +0.7
baz=169
P52A **Corning** 60.96 348 P P 13 48 26.6 -0.1
baz=165
O55A **Ligonier** 61.01 350 P P 13 48 27.4 +0.4
baz=168
P51A **Williamsport** 61.01 347 P P 13 48 26.6 -0.4
baz=164
P51A **Williamsport** 61.01 347 P P 13 48 25.9 -1.1
P51A IAmb IAmb 13 48 27.4
comp=Z,25nm,1.3s
O54A **Avella** 61.16 349 P P 13 48 28.3 +0.3
baz=167
O54A **Avella** 61.16 349 P P 13 48 27.8 -0.2
M66A **Nantucket** 61.19 358 P P 13 48 28.8 +0.7
baz=178
SSPA **Standing Stone** 61.22 352 P P 13 48 28.9 +0.5
baz=170
SSPA **Standing Stone** 61.22 352 P P 13 48 28.4 0.0
SSPA IAmb IAmb 13 49 46.5
comp=Z,52nm,1.9s
HHAR **Hobbs** 61.27 336 P P 13 48 28.7 -0.2
HHAR IAmb IAmb 13 48 29.9
comp=Z,13nm,0.8s
N57A **Milroy** 61.29 352 P P 13 48 29.1 +0.3
baz=170
P50A **Jamestown** 61.29 346 P P 13 48 29.3 +0.4
baz=163
O52A **Adamsville** 61.37 348 P P 13 48 29.5 +0.1
baz=165,SNR=5.6
O52A **Adamsville** 61.37 348 P P 13 48 29.1 -0.3
O53A **New Philadelph** 61.38 349 P P 13 48 29.8 +0.3
baz=166,SNR=5.5
X34A **Smith Ranch, M** 61.41 332 P P 13 48 29.6 -0.2

X34A IAmb IAmb 13 48 31.4
comp=Z,16nm,0.8s
P49A **Miami Univ. Ec** 61.43 345 P P 13 48 30.0 +0.1
baz=162
W35A **Tecumseh** 61.47 333 P P 13 48 29.7 -0.5
N55A **Marion Center** 61.52 351 P P 13 48 31.1 +0.7
baz=168,SNR=5.3
BLO **Bloomington** 61.54 344 P P 13 48 29.5 -1.1
O51A **Pataskala** 61.55 347 P P 13 48 30.6 -0.1
baz=165,SNR=5.5
OLIL **Olney** 61.56 342 P P 13 48 29.8 -0.9
OLIL IAmb IAmb 13 48 30.6
comp=Z,17nm,0.6s
U38A **Gravette** 61.58 336 P P 13 48 30.7 -0.2
U38A IAmb IAmb 13 48 33.4
comp=Z,10.0nm,1.1s
TUL1 **Leonard** 61.67 335 P P 13 48 31.8 +0.3
baz=150
TUL1 **Leonard** 61.67 335 P P 13 48 31.6 0.0
TUL1 IAmb IAmb 13 48 32.9
comp=Z,34nm,1.4s
ACSO **Alum Creek Sta** 61.71 347 P P 13 48 31.3 -0.4
baz=164
ACSO **Alum Creek Sta** 61.71 347 P P 13 48 31.2 -0.5
ACSO IAmb IAmb 13 48 32.5
comp=Z,26nm,0.9s
M58A **Price's Panora** 61.76 353 P P 13 48 32.8 +0.8
baz=171
O50A **Cable** 61.77 347 P P 13 48 32.2 +0.1
baz=164
M57A **Sunshine Farm,** 61.80 352 P P 13 48 32.9 +0.6
baz=170
M57A **Sunshine Farm,** 61.80 352 P P 13 48 31.7 -0.6
M57A IAmb IAmb 13 48 33.4
comp=Z,21nm,1.3s
M59A **Waymart** 61.81 354 P P 13 48 32.7 +0.3
baz=172
L63A **North Scituate** 61.84 357 P P 13 48 33.0 +0.5
baz=176
N53A **Lisbon** 61.85 349 P P 13 48 32.9 +0.3
baz=166,SNR=5.6
N53A **Lisbon** 61.85 349 P P 13 48 32.7 +0.1
N54A **Moraine State** 61.85 350 P P 13 48 32.4 -0.3
baz=167
N54A **Moraine State** 61.85 350 P P 13 48 32.8 +0.1
N54A IAmb IAmb 13 48 34.3
comp=Z,30nm,1.4s
KSPA **Keystone Colle** 61.86 353 P P 13 48 32.8 +0.1
KSPA IAmb IAmb 13 50 39.4
comp=Z,39nm,1.5s
CCM **Cathedral Cave** 61.91 339 P P 13 48 33.3 +0.2
baz=155
CCM **Cathedral Cave** 61.91 339 P P 13 48 32.8 -0.2
WMOK **Wichita Mounta** 61.94 332 P P 13 48 33.2 -0.2
baz=147
WMOK **Wichita Mounta** 61.94 332 P P 13 48 32.9 -0.5
L65A **Cape Cod Natio** 61.95 358 P P 13 48 33.9 +0.7
baz=178
O49A **Covington** 61.97 346 P P 13 48 33.8 +0.4
baz=163
O49A **Covington** 61.97 346 P P 13 48 33.0 -0.4
O49A IAmb IAmb 13 48 34.2
comp=Z,26nm,1.1s
Q44A **Meyer Farm, Va** 61.99 342 P P 13 48 32.7 -0.9
N52A **McGinn's Farm,** 62.01 348 P P 13 48 34.2 +0.5
baz=166
M56A **Emporium** 62.09 351 P P 13 48 34.5 +0.2
baz=169
M56A **Emporium** 62.09 351 P P 13 48 34.0 -0.2
M56A IAmb IAmb 13 49 13.9
comp=Z,35nm,1.5s
P46A **Rosedale** 62.14 343 P P 13 48 33.8 -0.8
L60A **Shokan** 62.14 355 P P 13 48 34.9 +0.3
baz=174
M55A **Ridgway** 62.16 351 P P 13 48 34.4 -0.3
baz=169
M55A **Ridgway** 62.16 351 P P 13 48 34.5 -0.3
M55A IAmb IAmb 13 48 35.8
comp=Z,11nm,0.8s
O48A **Farmland** 62.22 345 P P 13 48 35.0 -0.1
baz=162,SNR=5.3
N51A **Ashland** 62.25 348 P P 13 48 35.7 +0.5
baz=165
N51A **Ashland** 62.25 348 P P 13 48 34.9 -0.4
N50A **Nevada** 62.26 347 P P 13 48 35.3 -0.1
baz=164
L61A **Hillsdale 1, H** 62.29 355 P P 13 48 35.9 +0.3
baz=174
M54A **Oil Creek Stat** 62.34 350 P P 13 48 36.1 +0.2
baz=168,SNR=5.1
M54A **Oil Creek Stat** 62.34 350 P P 13 48 35.9 0.0
M54A IAmb IAmb 13 48 37.0
comp=Z,10.0nm,0.7s
L58A **Harry Jones Me** 62.35 353 P P 13 48 36.5 +0.6
baz=172
L59A **Walton** 62.42 354 P P 13 48 36.9 +0.4
baz=173
CLNB **Carlsbad** 62.42 326 P P 13 48 37.6 +0.9
L57A **Andrews Acres** 62.42 353 P P 13 48 36.7 +0.2
baz=171
M53A **WI Miller and** 62.44 349 P P 13 48 36.7 +0.2
baz=167,SNR=5.5
R40A **Maddies Statio** 62.47 339 P P 13 48 36.4 -0.4
HRV **Adam Dziewonsk** 62.48 357 P P 13 48 37.3 +0.5
baz=176
L61B **Northampton** 62.49 356 P P 13 48 36.6 -0.2
baz=175
BINY **Binghamton** 62.52 353 P P 13 48 38.0 +0.9
baz=172
BINY **Binghamton** 62.52 353 P P 13 48 37.3 +0.2
BINY IAmb IAmb 13 48 39.0
comp=Z,21nm,1.1s
ALLY **Alegheny Colle** 62.55 350 P P 13 48 37.2 -0.1
M51A **Elyria** 62.61 348 P P 13 48 38.1 +0.5
baz=165
GDL2 **Guadalupe Moun** 62.62 326 P P 13 48 38.7 +0.6
N49A **Columbus Grove** 62.63 346 P P 13 48 37.6 -0.2
baz=163,SNR=8.6
N49A **Columbus Grove** 62.63 346 P P 13 48 37.3 -0.5
L56A **Greenwood** 62.65 352 P P 13 48 38.5 +0.5
baz=170
L56A **Greenwood** 62.65 352 P P 13 48 38.0 0.0
N48A **Decatur** 62.76 346 P P 13 48 39.1 +0.4
baz=162
MNTX **Cornudas Mount** 62.78 325 P P 13 48 39.0 -0.1
baz=140,SNR=14
MNTX **Cornudas Mount** 62.78 325 P P 13 48 38.1 -0.9
P43A **Skaggs, Pawnee** 62.82 342 P P 13 48 37.9 -1.1
SFIN **Lafayette** 62.82 344 P P 13 48 38.2 -0.9
baz=160,SNR=9.1
SFIN **Lafayette** 62.82 344 P P 13 48 37.7 -1.4
T35A **Sooner Cattle** 62.83 335 P P 13 48 39.5 +0.3
T35A IAmb IAmb 13 48 41.3
comp=Z,20nm,0.9s
M50A **Fremont** 62.85 347 P P 13 48 38.9 -0.3
baz=164
L53A **Girard** 62.87 350 P P 13 48 39.5 +0.2
baz=167
N47A **Urbana** 62.94 345 P P 13 48 39.6 -0.3
baz=162,SNR=6.3
N47A **Urbana** 62.94 345 P P 13 48 39.0 -0.9
K59A **Cooperstown** 62.98 354 P P 13 48 40.9 +0.8
baz=173
ERPA **Erie** 62.98 350 P P 13 48 40.5 +0.4
baz=168,SNR=5.7
ERPA **Erie** 62.98 350 P P 13 48 39.8 -0.3
L54A **Sinclairville** 62.99 351 P P 13 48 40.4 +0.3
baz=168
K58A **Earlville** 63.05 354 P P 13 48 41.4 +0.8
baz=172
K58A **Earlville** 63.05 354 P P 13 48 40.8 +0.2
K58A IAmb IAmb 13 48 41.9
comp=Z,14nm,0.8s
WVNY **West Valley, N** 63.05 351 P P 13 48 40.6 0.0
K57A **Scipio Center** 63.11 353 P P 13 48 41.2 +0.3
baz=171
M49A **Liberty Center** 63.11 347 P P 13 48 40.6 -0.4
baz=163,SNR=5.6
K56A **Middlesex** 63.17 352 P P 13 48 41.4 0.0
baz=170
MSTX **Muleshoe** 63.20 328 P P 13 48 42.1 +0.2
baz=143,SNR=8.2
MSTX **Muleshoe** 63.20 328 P P 13 48 40.8 -1.1
MSTX IAmb IAmb 13 48 43.1
comp=Z,25nm,0.9s
J62A **Henniker** 63.21 357 P P 13 48 41.4 -0.2

baz=176
K54A Basiliko Farm, 63.27 351 P **P** 13 48 43.0 +1.1
baz=169
K55A Perry 63.30 352 P **P** 13 48 42.4 +0.2
baz=170
J60A Lant Hill Farm 63.33 356 P **P** 13 48 44.1 +1.7
baz=174
AMTX Amarillo 63.41 329 P **P** 13 48 43.4 +0.2
baz=145
AMTX Amarillo 63.41 329 P **P** 13 48 42.9 -0.3
AMTX IAmb IAmb 13 48 45.0
comp=Z,18nm,1.4s
P40A Paris 63.51 339 P **P** 13 48 43.1 -0.5
HDIL Hopedale 63.59 342 P **P** 13 48 43.9 -0.2
baz=158
HDIL Hopedale 63.59 342 P **P** 13 48 43.5 -0.7
J58A Remsen 63.60 354 P **P** 13 48 44.7 +0.6
baz=172
J59A Piesco 63.63 355 P **P** 13 48 45.8 +1.4
baz=173
J59A Piesco 63.63 355 P **P** 13 48 44.7 +0.3
J59A IAmb IAmb 13 48 45.9
comp=Z,11nm,0.8s
L48A N Adams 63.66 346 P **P** 13 48 44.6 0.0
baz=163
J56A Wolcott 63.68 353 P **P** 13 48 44.7 +0.1
baz=171
J56A Wolcott 63.68 353 P **P** 13 48 44.2 -0.5
J56A IAmb IAmb 13 48 45.5
comp=Z,13nm,0.7s
J57A Williamstown 63.72 354 P **P** 13 48 45.0 +0.1
baz=172
J55A Hilton 63.79 352 P **P** 13 48 45.3 -0.1
J55A IAmb IAmb 13 49 52.2
comp=Z,31nm,1.4s
I58A Old Forge 63.90 354 P **P** 13 48 46.4 +0.3
baz=173
J54A Appleton 63.91 351 P **P** 13 48 47.0 +0.8
baz=169
I59A Olmsteadville 63.91 355 P **P** 13 48 47.3 +1.1
baz=174
I60A Shoreham 63.92 356 P **P** 13 48 47.1 +0.9
baz=175
I63A Otisfield 63.99 358 P **P** 13 48 47.8 +1.2
baz=177
K50A Casco 64.09 348 P **P** 13 48 46.7 -0.6
P38A Dawn 64.09 338 P **P** 13 48 47.0 -0.5
NCB Newcomb 64.11 355 P **P** 13 48 47.6 +0.1
NCB IAmb IAmb 13 49 54.6
comp=Z,42nm,1.8s
J52A Paris 64.16 350 P **P** 13 48 48.0 +0.2
baz=167
N41A Harden Midland 64.20 341 P **P** 13 48 47.1 -1.0
N41A IAmb IAmb 13 48 48.3
comp=Z,18nm,0.8s
I57A Carthage 64.21 354 P **P** 13 48 48.4 +0.3
baz=172
K48A Perry 64.42 347 P **P** 13 48 49.1 -0.4
baz=163,SNR=6.4
K47A Vermontville 64.48 346 P **P** 13 48 49.6 -0.3
baz=162
H58A Gabriels 64.55 355 P **P** 13 48 50.4 0.0
baz=174
I55A Frankford 64.71 352 P **P** 13 48 51.4 +0.1
baz=170
H59A Cadyville 64.74 356 P **P** 13 48 52.3 +0.8
baz=174
121A Cookes Peak, D 64.74 323 P **P** 13 48 53.9 +1.8
baz=139,SNR=8.1
121A Cookes Peak, D 64.74 323 P **P** 13 48 53.8 +1.7
121A IAmb IAmb 13 48 54.9
comp=Z,16nm,1.1s
J49A Marlette 64.75 348 P **P** 13 48 51.6 -0.1
baz=164
KSU1 Kansas State U 64.76 336 P **P** 13 48 51.9 +0.1
baz=150
KSU1 Kansas State U 64.76 336 P **P** 13 48 51.7 -0.1
LONY Lake Ozonia 64.79 355 P **P** 13 48 52.2 +0.3
baz=173
LONY Lake Ozonia 64.79 355 P **P** 13 48 52.2 +0.3
J48A Bridge Port 64.82 347 P **P** 13 48 52.0 -0.1
baz=164
H55A Tweed 64.98 353 P **P** 13 48 53.1 +0.1
baz=171
J47A Sunmer 64.98 347 P **P** 13 48 53.0 -0.1
baz=163
J47A Sunmer 64.98 347 P **P** 13 48 52.5 -0.7
G60A Masonville 65.11 357 P **P** 13 48 54.9 +1.0
baz=176
G62A West of Eustis 65.15 358 P **P** 13 48 54.9 +0.7
baz=178
H53A Bobcaygeon 65.18 352 P **P** 13 48 54.7 +0.3
baz=169
G57A Newington 65.30 355 P **P** 13 48 55.8 +0.6
baz=173
K43A Burlington 65.33 344 P **P** 13 48 54.9 -0.5
BNM Barren Site 65.33 325 P **P** 13 48 56.6 +0.7
SADO Sadowa 65.45 351 P **P** 13 48 56.2 +0.1
comp=Z,4.6nm,0.5s,baz=173,slow=4.8,SNR=5.3
SADO Sadowa 65.45 351 P **P** 13 48 55.1 -1.0
SADO IAmb IAmb 13 48 56.3
comp=Z,6.0nm,0.6s
PLVO Plevna 65.45 353 P **P** 13 48 55.5 -0.6
PLVO IAmb IAmb 13 48 57.2
comp=Z,20nm,1.5s
L40A Anamosa 65.55 341 P **P** 13 48 56.2 -0.6
L40A IAmb IAmb 13 48 58.0
comp=Z,16nm,1.0s
G55A Calabogie 65.62 353 P **P** 13 48 57.5 +0.3
baz=171
I48A Sherman Twp 65.66 348 P **P** 13 48 57.4 -0.1
baz=164
I47A Gladwin 65.66 347 P **P** 13 48 57.4 -0.1
baz=163
G53A Haliburton 65.72 352 P **P** 13 48 57.3 -0.5
baz=169
F64A Sherman 65.76 360 P **P** 13 48 58.5 +0.4
CBKS Cedar Bluff 65.78 333 P **P** 13 48 59.3 +0.9
baz=148,SNR=6.8
CBKS Cedar Bluff 65.78 333 P **P** 13 48 58.6 +0.2
I46A Reed City 65.79 346 P **P** 13 48 57.4 -0.9
baz=162
ANMO Albuquerque 65.85 326 P **P** 13 48 59.9 +0.8
comp=Z,4.4nm,0.6s,baz=137,slow=7.3,SNR=15
ANMO Albuquerque 65.85 326 P **P** 13 49 00.4 +1.3
baz=140
ANMO Albuquerque 65.85 326 P **P** 13 48 60.0 +0.8
G54A Lake Saint Pet 65.92 352 P **P** 13 48 59.4 +0.3
baz=170
N35A Tabor 65.94 337 P **P** 13 48 59.3 -0.1
SCIA State Center 66.03 340 P **P** 13 49 00.4 +0.5
baz=154
SCIA State Center 66.03 340 P **P** 13 48 59.6 -0.3
JFWS Jewell Farm 66.05 342 P **P** 13 48 60.0 0.0
baz=157,SNR=6.5
JFWS Jewell Farm 66.05 342 P **P** 13 48 59.6 -0.4
JFWS IAmb IAmb 13 49 00.7
comp=Z,19nm,0.7s
H48A Harrisville 66.08 348 P **P** 13 48 59.8 -0.4
baz=164
H48A Harrisville 66.08 348 P **P** 13 48 59.7 -0.4
H48A IAmb IAmb 13 49 00.5
comp=Z,13nm,0.8s
TUC Tucson 66.31 321 P **P** 13 49 01.3 -0.7
baz=136
TUC Tucson 66.31 321 P **P** 13 49 03.3 +1.3
H46A Fife Lake 66.31 347 P **P** 13 49 01.2 -0.4
baz=162
E63A Oxbow 66.32 360 P **P** 13 49 02.3 +0.7
baz=180
E61A Lac Etchemin 66.36 358 P **P** 13 49 03.1 +1.1
baz=178
ALGO Algonquin Park 66.47 352 P **P** 13 49 02.6 0.0
baz=170
F52A Sundridge 66.48 351 P **P** 13 49 02.4 -0.3
baz=169
T25A Trinidad 66.53 329 P **P** 13 49 05.0 +1.5
baz=143,SNR=6.3
K38A Parkersburg 66.56 340 P **P** 13 49 02.8 -0.5
I42A Draeger Farm, 66.58 344 P **P** 13 49 03.2 -0.2
I42A IAmb IAmb 13 49 03.8
comp=Z,16nm,0.6s
E56A St. Veronique 66.73 355 P **P** 13 49 04.3 +0.1
baz=173
H43A Windswept, Lux 66.83 345 P **P** 13 49 04.4 -0.5
H43A IAmb IAmb 13 49 05.4
comp=Z,20nm,0.7s
E53A Dumoine, Ponti 66.84 353 P **P** 13 49 05.2 +0.3
baz=170
E54A Lac Daplat, Po 66.84 353 P **P** 13 49 04.7 -0.2
baz=171
F49A Sandfield 66.87 349 P **P** 13 49 05.0 -0.2
baz=166
G45A Suttons Bay 66.88 347 P **P** 13 49 05.4 +0.2
baz=162
G45A Suttons Bay 66.88 347 P **P** 13 49 04.6 -0.6
G45A IAmb IAmb 13 49 05.5
comp=Z,13nm,0.8s
G46A Petoskey 66.98 347 P **P** 13 49 06.0 +0.2
baz=163
D62A Allapoint, All 66.98 359 P **P** 13 49 06.0 +0.2
F48A Evansville 67.03 349 P **P** 13 49 06.1 0.0
baz=165
I40A Norwalk 67.05 342 P **P** 13 49 06.1 -0.2
I40A IAmb IAmb 13 49 06.6
comp=Z,13nm,0.5s
D61A St Aubert, Com 67.12 358 P **P** 13 49 08.2 +1.5
baz=178
D58A Chemin du LacG 67.13 356 P **P** 13 49 07.6 +0.9
baz=175
BATG Bathurst New B 67.20 2 P **P** 13 49 07.7 +0.5
D56A ZEC Mazanza, M 67.21 355 P **P** 13 49 07.3 0.0
baz=173
E51A G1948 Merrick 67.22 351 P **P** 13 49 07.6 +0.3
baz=168
D55A Sainte-Anne-du 67.25 355 P **P** 13 49 07.8 +0.3
baz=172
214A Organ Pipe Nat 67.27 320 P **P** 13 49 10.1 +2.1
baz=134,SNR=11
214A Organ Pipe Nat 67.27 320 P **P** 13 49 09.7 +1.6
214A IAmb IAmb 13 49 11.2
comp=Z,20nm,1.0s
LIC Lamto 67.30 74 *e*P **P** 13 49 07.8 -0.8
comp=Z,24nm,0.5s
BGNE Belgrade 67.35 336 P **P** 13 49 08.8 +0.5
X18A Snowlake 67.43 323 P **P** 13 49 09.9 +0.7
F45A CMU Biological 67.47 347 P **P** 13 49 09.1 +0.2
baz=162
TIC Toumodi 67.48 73 *e*P **P** 13 49 08.1 -1.6
comp=Z,5.6nm,0.4s
D53A Lac Vacive, Po 67.53 353 P **P** 13 49 09.6 +0.3
baz=170
D53A Lac Vacive, Po 67.53 353 P **P** 13 49 08.8 -0.5
D53A IAmb IAmb 13 49 10.3
comp=Z,18nm,1.4s
SDCO Great Sand Dun 67.54 329 P **P** 13 49 11.6 +1.7
baz=142,SNR=30
SDCO Great Sand Dun 67.54 329 P **P** 13 49 11.3 +1.3
SDCO IAmb IAmb 13 49 12.4
comp=Z,42nm,1.5s
E48A Lockeyer 67.59 350 P **P** 13 49 09.9 +0.2
baz=166
KIC Kosan Boka 67.61 74 *e*P **P** 13 49 09.7 -0.9
comp=Z,27nm,0.5s
DBIC Dimbokro 67.64 74 P **P** 13 49 10.1 -0.6
comp=Z,8.3nm,0.4s,baz=222,slow=7.1,SNR=25
DBIC Dimbokro 67.64 74 P **P** 13 49 09.7 -1.0
DBIC IAmb IAmb 13 49 11.1
comp=Z,12nm,0.7s
W18A Petrified Fore 67.75 324 P **P** 13 49 12.9 +1.7
baz=138,SNR=9.7
W18A Petrified Fore 67.75 324 P **P** 13 49 10.4 -0.8
W18A IAmb IAmb 13 49 13.9
comp=Z,19nm,1.2s
E47A Iron Bridge 67.76 349 P **P** 13 49 11.2 +0.5
baz=165
E46A Sault Ste Mari 67.87 348 P **P** 13 49 10.5 -0.9
E46A IAmb IAmb 13 49 11.8
comp=Z,9.4nm,0.7s
D50A G1974 Best Tow 67.89 351 P **P** 13 49 11.8 +0.3
baz=168
I37A Lemond, Waseca 67.99 341 P **P** 13 49 11.3 -0.9
I37A IAmb IAmb 13 49 13.1
comp=Z,21nm,0.9s
X16A Lo Mia Camp, P 68.20 322 P **P** 13 49 15.3 +1.3
S22A 4UR Ranch, Cre 68.20 328 P **P** 13 49 15.6 +1.6
baz=141,SNR=6.1
D48A Paudash Townsh 68.20 350 P **P** 13 49 13.3 -0.2
baz=166
D47A Chapleau 68.31 349 P **P** 13 49 13.8 -0.4
baz=165
D46A Sault St. Mari 68.32 348 P **P** 13 49 13.4 -0.8
baz=164
E43A Lone Tree Farm 68.45 346 P **P** 13 49 14.4 -0.6
E43A IAmb IAmb 13 49 15.5
comp=Z,7.7nm,0.6s
OGNE Ogallala 68.53 333 P **P** 13 49 16.9 +1.2
baz=146
OGNE Ogallala 68.53 333 P **P** 13 49 15.3 -0.5
OGNE IAmb IAmb 13 49 17.7
comp=Z,20nm,0.7s
MVCO Mesa Verde 68.64 326 P **P** 13 49 17.2 +0.4
MVCO IAmb IAmb 13 49 19.2
comp=Z,29nm,1.4s
ECSD EROS Data Cent 68.80 338 P **P** 13 49 17.7 +0.4
baz=151
ECSD EROS Data Cent 68.80 338 P **P** 13 49 17.4 0.0
SPMN Marine on St. 68.90 342 P **P** 13 49 17.4 -0.4
baz=155
WUAZ Wupatki 68.95 323 P **P** 13 49 20.8 +2.2
baz=137,SNR=12
WUAZ Wupatki 68.95 323 P **P** 13 49 20.3 +1.7
WUAZ IAmb IAmb 13 49 21.8
comp=Z,21nm,0.9s
ISCO Idaho Springs 69.21 330 P **P** 13 49 21.8 +1.5
baz=142,SNR=5.9
ISCO Idaho Springs 69.21 330 P **P** 13 49 21.6 +1.3
PV01 Paradox Valley 69.38 327 P **P** 13 49 22.8 +1.6
PV01 IAmb IAmb 13 49 24.2
comp=Z,17nm,1.3s
D41A Chassel 69.46 345 P **P** 13 49 21.3 0.0
D41A IAmb IAmb 13 49 22.4
comp=Z,14nm,0.8s
PV15 Paradox Valley 69.49 327 P **P** 13 49 23.3 +1.3
PV15 IAmb IAmb 13 49 25.0
comp=Z,24nm,1.2s
PV13 Radium Mtn., P 69.53 327 P **P** 13 49 23.6 +1.4
Y12C Blythe 69.55 320 P **P** 13 49 23.9 +1.8
baz=134
Y12C Blythe 69.55 320 P **P** 13 49 23.8 +1.7
Y12C IAmb IAmb 13 49 25.2
comp=Z,15nm,0.9s
PV05 Paradox Valley 69.61 326 P **P** 13 49 23.9 +1.2
PV03 Paradox Valley 69.61 327 P **P** 13 49 23.1 +0.5
F36A Milaca 69.69 341 P **P** 13 49 22.3 -0.4
PDMCI Parker Dam,Lak 69.70 321 P **P** 13 49 24.8 +1.8
baz=134
IKP In-Ko-Pah, Jac 69.78 318 P **P** 13 49 25.9 +2.2
baz=132
E38A The Farm, Brul 69.81 343 P **P** 13 49 22.9 -0.5
E38A IAmb IAmb 13 49 24.8
comp=Z,43nm,1.8s
QSPA South Pole Qui 69.97 180 P **P** 13 49 22.5 -2.0
QSPA IAmb IAmb 13 49 46.9
comp=Z,27nm,1.8s
CHGQ Chibougamau 70.03 356 P **P** 13 49 24.7 0.0
baz=174
BC3 Big Chuckawall 70.05 319 P **P** 13 49 27.6 +2.3
baz=133,SNR=11
W13A Hualapai Mount 70.10 321 P **P** 13 49 27.4 +1.7
U15A North Rim 70.12 323 P **P** 13 49 27.5 +1.5
U15A IAmb IAmb 13 49 29.5
comp=Z,18nm,0.9s
MONP2 Monument Peak 70.14 318 P **P** 13 49 28.1 +2.1
baz=132
BAR Barrett 70.16 318 P **P** 13 49 27.7 +1.8
BAR IAmb IAmb 13 49 28.9
comp=Z,12nm,0.9s
MATQ Matagami 70.17 353 P **P** 13 49 25.3 -0.2
baz=170
IRM Iron Mountain 70.20 320 P **P** 13 49 28.1 +2.0
baz=133,SNR=10
N23A Red Feather La 70.23 330 P **P** 13 49 28.2 +1.8
baz=142
F33A 5 Mile Ranch, 70.55 339 P **P** 13 49 27.6 -0.3
BELC Belle Mtn. Jos 70.62 319 P **P** 13 49 30.3 +1.5
baz=133
XPFO Pion Flat 70.64 319 P **P** 13 49 27.8 -1.1
XPFO IAmb IAmb 13 49 32.6
comp=Z,30nm,1.6s
PFO Pinyon Flats O 70.64 319 P **P** 13 49 31.1 +2.2
comp=Z,5.2nm,0.7s,baz=125,slow=5.8,SNR=9.6
PFO Pinyon Flats O 70.64 319 P **P** 13 49 30.7 +1.8
baz=132
PFO Pinyon Flats O 70.64 319 P **P** 13 49 28.0 -0.9
PFO IAmb IAmb 13 49 32.6
comp=Z,30nm,1.6s
O20A White River Ci 70.74 328 P **P** 13 49 31.4 +1.9
baz=140,SNR=5.6
O20A White River Ci 70.74 328 P **P** 13 49 28.0 -1.4
O20A IAmb IAmb 13 49 32.2
comp=Z,16nm,1.1s
GMRC Granite Mounta 70.94 320 P **P** 13 49 33.1 +2.4
baz=133,SNR=17
EYMN Ely 71.02 344 P **P** 13 49 30.5 -0.3
baz=157,SNR=6.9
EYMN Ely 71.02 344 P **P** 13 49 30.3 -0.4
EYMN IAmb IAmb 13 49 31.4
comp=Z,9.7nm,0.5s
LCMT Little Creek M 71.08 323 P **P** 13 49 33.1 +1.6
SRU San Rafael Swe 71.12 326 P **P** 13 49 33.0 +1.3
HEC Hector,Ludlow 71.38 320 P **P** 13 49 35.7 +2.4
baz=132,SNR=7.0
P17A Butcher Ranch, 71.50 326 P **P** 13 49 34.9 +0.9
CCUT Cedar City 71.52 323 P **P** 13 49 36.8 +2.5
TUQ Turquoise Moun 71.54 320 P **P** 13 49 36.7 +2.4
baz=133
MSU Marysvale 71.56 325 P **P** 13 49 36.5 +2.0
TMUT Trail Mountain 71.62 326 P **P** 13 49 36.6 +1.7
RDMU Red Mountain 71.73 328 P **P** 13 49 36.6 +1.2
BFSC Mount Baldy Ra 71.80 318 P **P** 13 49 37.4 +1.5
baz=131
SHPR Sheep Range 71.82 322 P **P** 13 49 37.7 +1.8
K22A Casper 71.88 331 P **P** 13 49 37.8 +1.6
baz=142
K22A Casper 71.88 331 P **P** 13 49 37.7 +1.4
RSSD Black Hills 71.98 334 P **P** 13 49 38.4 +1.5
baz=145
RSSD Black Hills 71.98 334 P **P** 13 49 37.6 +0.8
GSC Goldstone, Bar 71.98 320 P **P** 13 49 39.1 +2.2
baz=132,SNR=5.1
GSC Goldstone, Bar 71.98 320 P **P** 13 49 38.7 +1.8
EDW2 Edwards Air Fo 72.43 319 P **P** 13 49 41.3 +1.7
baz=131
PSUT Pine Spring 72.49 324 P **P** 13 49 41.9 +1.8
NLU North Lily Min 72.56 326 P **P** 13 49 42.0 +1.6
AGMN Agassiz Nation 72.59 341 P **P** 13 49 40.6 +0.5
baz=153
AGMN Agassiz Nation 72.59 341 P **P** 13 49 39.9 -0.2
JLU Jordanelle 72.70 327 P **P** 13 49 42.0 +0.7
TPNV Topopah Spring 72.76 321 P **P** 13 49 44.1 +2.5
baz=133,SNR=14
TPNV Topopah Spring 72.76 321 P **P** 13 49 43.2 +1.6
TPNV IAmb IAmb 13 49 45.1
comp=Z,16nm,1.0s
FURC Furnace Creek, 72.80 321 P **P** 13 49 44.1 +2.6
baz=132,SNR=6.2
MPMC Manual Prospec 72.90 320 P **P** 13 49 44.3 +1.9
baz=132,SNR=7.0
TCUT Toone Canyon 73.06 327 P **P** 13 49 44.8 +1.4
ARVC Arvin 73.11 318 P **P** 13 49 45.9 +2.5
baz=131
DUG Dugway, Tooele 73.12 326 P **P** 13 49 45.7 +2.1
baz=136,SNR=8.2
DUG Dugway, Tooele 73.12 326 P **P** 13 49 45.2 +1.7
ISA Isabella, Lake 73.24 319 P **P** 13 49 46.7 +2.4
baz=131,SNR=7.0
ISA Isabella, Lake 73.24 319 P **P** 13 49 45.7 +1.4
R11A Troy Canyon, C 73.33 323 P **P** 13 49 47.4 +2.5
baz=134,SNR=13
R11A Troy Canyon, C 73.33 323 P **P** 13 49 46.6 +1.7
BW06 Boulder Array 73.39 329 P **P** 13 49 46.8 +1.6
baz=140
BW06 Boulder Array 73.39 329 P **P** 13 49 46.2 +1.0
PDAR Pinedale Array 73.39 329 P **P** 13 49 46.1 +1.0
comp=Z,2.1nm,0.8s,baz=128,slow=8.7,SNR=18
MDND Maddock 73.41 338 P **P** 13 49 45.8 +0.9
baz=149
MDND Maddock 73.41 338 P **P** 13 49 46.0 +1.1
HWUT Hardware Ranch 73.50 327 P **P** 13 49 46.6 +0.8
HWUT IAmb IAmb 13 49 49.9
comp=Z,11nm,0.7s
CWC Cottonwood Cre 73.51 320 P **P** 13 49 47.8 +1.8
baz=132
PKM Mcpherson Peak 73.58 318 P **P** 13 49 48.1 +1.6
baz=130
VES Vestal, Richgr 73.73 319 P **P** 13 49 48.5 +1.4
baz=131
SPUT South Promonto 73.74 327 P **P** 13 49 48.1 +1.0
BGU Big Grassy Mou 73.76 326 P **P** 13 49 48.0 +0.7
SMMC Simmler 73.96 318 P **P** 13 49 50.8 +2.4
baz=130
AHID Auburn Hatcher 74.13 329 P **P** 13 49 50.2 +0.7
AHID IAmb IAmb 13 49 51.9
comp=Z,13nm,0.8s
ULM Lac du Bonnet 74.33 342 P **P** 13 49 50.3 +0.1
comp=Z,11nm,0.5s,baz=149,slow=6.1,SNR=27
ULM Lac du Bonnet 74.33 342 P **P** 13 49 49.8 -0.3
ULM IAmb IAmb 13 49 51.0
comp=Z,13nm,0.7s
TPAW Teton Pass 74.60 329 P **P** 13 49 53.6 +1.4
SCHQ Schefferville 74.75 1 P **P** 13 49 52.5 0.0
comp=Z,5.0nm,0.7s,baz=157,slow=2.1,SNR=6.7
SCHQ Schefferville 74.75 1 P **P** 13 49 52.8 +0.3
FXWY Fox Creek 74.75 329 P **P** 13 49 54.3 +1.2
MLAC Mammoth, Mammo 74.75 320 P **P** 13 49 54.9 +1.7
baz=131
ELK Elko 74.81 325 P **P** 13 49 55.2 +1.8
comp=Z,3.4nm,0.7s,baz=143,slow=5.7,SNR=19
ELK Elko 74.81 325 P **P** 13 49 54.8 +1.3
OMMB Old Mammoth Mi 74.84 320 P **P** 13 49 53.9 +0.1
NV11 Mina Array Sit 74.88 321 P **P** 13 49 54.2 +0.4
MDPB Devils Postpil 74.89 320 P **P** 13 49 55.1 +1.0
IMW Indian Meadow 74.90 329 P **P** 13 49 55.4 +1.4
FLWY Flagg Ranch 74.92 330 P **P** 13 49 55.6 +1.5
FLWY IAmb IAmb 13 49 57.2
comp=Z,24nm,0.9s
NVAR Mina Array Bea 74.96 321 P **P** 13 49 56.4 +2.0
comp=Z,3.0nm,0.8s,baz=154,slow=6.8,SNR=20
LAO LASA Array 74.96 334 P **P** 13 49 55.3 +1.3
baz=143,SNR=6.2
LAO LASA Array 74.96 334 P **P** 13 49 55.2 +1.2
RLMT Red Lodge 75.05 331 P **P** 13 49 56.5 +1.8
baz=140,SNR=15
RLMT Red Lodge 75.05 331 P **P** 13 49 56.1 +1.4
H17A Grant Village 75.10 330 P **P** 13 49 57.3 +2.2
baz=139,SNR=8.0
H17A Grant Village 75.10 330 P **P** 13 49 57.2 +2.2
LKWY Lake 75.15 330 P **P** 13 49 58.3 +3.0
LKWY IAmb IAmb 13 49 59.2
comp=Z,14nm,0.9s
RYN Ryan 75.22 321 P **P** 13 49 57.6 +1.8
KVN Kaiserville 75.25 322 P **P** 13 49 57.6 +1.5
YNE Yellowstone No 75.30 331 P **P** 13 49 57.9 +1.7
YNR Norris Junctio 75.39 330 P **P** 13 49 58.8 +2.1
YMR Madison River 75.49 330 P **P** 13 49 57.9 +0.6
YHH Holmes Hill 75.53 330 P **P** 13 49 59.6 +2.0
DGMT Dagmar 75.60 336 P **P** 13 49 59.2 +1.6
baz=145,SNR=5.5
DGMT Dagmar 75.60 336 P **P** 13 49 58.7 +1.1
DGMT IAmb IAmb 13 50 00.1
comp=Z,16nm,0.8s
YHB Horse Butte 75.66 330 P **P** 13 50 00.8 +2.5
YHL Hebgen Lake 75.73 330 P **P** 13 50 00.4 +1.7
GCMT Greycliff 75.75 331 P **P** 13 49 59.5 +0.9
YERR Yerington 75.88 321 P **P** 13 50 01.2 +1.7
CMB Columbia Colle 75.94 320 P **P** 13 50 01.0 +1.2
PNTR Pine Nut 76.16 321 P **P** 13 50 02.1 +0.9
TOA0 Torodi Ar. Sit 76.21 70 P **P** 13 50 01.0 -0.7
TOA0 IAmb IAmb 13 50 02.3
comp=Z,22nm,0.8s
TORD Torodi Ar. Bea 76.21 70 P **P** 13 50 01.2 -0.5
comp=Z,20nm,0.7s,baz=252,slow=5.3,SNR=102
TORD S **S** 13 59 27.8 -4.6
comp=Z,1.0nm,1.0s,baz=248,slow=10,SNR=4.6
PAHR Pah Rah Range 76.43 322 P **P** 13 50 04.5 +1.9
PAHR IAmb IAmb 13 50 06.0
comp=Z,20nm,0.8s
MCMT McKenzie Canyo 76.51 329 P **P** 13 50 05.0 +1.9
DLMT Dillon 76.78 329 P **P** 13 50 06.3 +1.9
AFDM Forest Hills D 76.88 320 P **P** 13 50 05.6 +0.6
MFID Camas Ranch 76.99 326 P **P** 13 50 07.0 +1.4
MFID IAmb IAmb 13 50 09.0
comp=Z,28nm,1.4s
LRM Limekiln Ridge 77.05 330 P **P** 13 50 07.7 +1.6
SYO Syowa Base 77.43 159⇑ *i*PcP **PcP** 13 50 15.9 -1.4
SYO Syowa Base 77.43 159‖ *ep*P pP 13 50 42.2 -7.7
EGMT Eagleton 77.50 333 P **P** 13 50 09.4 +1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=140,SNR=9.3						
EGMT	**Eagleton**	**77.50**	**333**	P	**P**	**13 50 08.4**	**+0.1**
ORV	**Oroville**	**77.58**	**321**	P	**P**	**13 50 10.4**	**+1.5**
O03E	**Paynes Creek**	**78.23**	**321**	P	**P**	**13 50 13.9**	**+1.4**
	baz=130						
J08A	**Circle Bar Ran**	**78.35**	**325**	P	**P**	**13 50 13.9**	**+0.7**
MOD	**Modoc Plateau**	**78.40**	**323**	P	**P**	**13 50 14.4**	**+0.9**
MSO	**Missoula**	**78.49**	**330**	P	**P**	**13 50 15.8**	**+2.0**
	baz=137						
MSO	**Missoula**	**78.49**	**330**	P	**P**	**13 50 15.3**	**+1.5**
O02D	**Mt. Diablo Mer**	**78.74**	**320**	P	**P**	**13 50 16.4**	**+1.0**
	baz=129						
BMO	**Blue Mountains**	**78.75**	**327**	P	**P**	**13 50 15.9**	**+0.6**
BMO				IAmb	IAmb	13 50 18.1	
	comp=Z,13nm,0.8s						
WDC	**Whiskeytown Da**	**78.85**	**321**	P	**P**	**13 50 15.1**	**-0.7**
N02D	**Trinity Center**	**79.19**	**321**	P	**P**	**13 50 18.6**	**+0.8**
	baz=129						
M04C	**Macdoel**	**79.20**	**322**	P	**P**	**13 50 19.6**	**+1.8**
	baz=130,SNR=5.8						
K05A	**Summer Lake**	**79.27**	**323**	P	**P**	**13 50 20.5**	**+2.2**
K05A				IAmb	IAmb	13 50 21.5	
	comp=Z,17nm,1.0s						
JTMT	**Jette**	**79.32**	**330**	P	**P**	**13 50 19.6**	**+1.2**
I07A	**Izee**	**79.39**	**325**	P	**P**	**13 50 20.4**	**+1.6**
F10A	**Beach Ranch, E**	**79.49**	**328**	P	**P**	**13 50 20.8**	**+1.5**
M02C	**Callahan**	**79.54**	**321**	P	**P**	**13 50 20.7**	**+1.1**
	baz=129						
YBH	**Yreka Blue Hor**	**79.67**	**322**	P	**P**	**13 50 20.9**	**+0.5**
	comp=Z,3.2nm,0.6s,baz=123,slow=5.1,SNR=9.2						
YBH	**Yreka Blue Hor**	**79.67**	**322**	P	**P**	**13 50 20.5**	**+0.1**
YBH				IAmb	IAmb	13 52 52.9	
	comp=Z,28nm,1.9s						
L04D	**Klamath Falls**	**79.74**	**322**	P	**P**	**13 50 22.1**	**+1.3**
	baz=129						
J05D	**Fort Rock, OR**	**79.82**	**324**	P	**P**	**13 50 22.5**	**+1.3**
	baz=130						
G08A	**Pilot Rock**	**79.91**	**326**	P	**P**	**13 50 23.0**	**+1.4**
PINE	**Pine Mountain**	**79.98**	**324**	P	**P**	**13 50 23.8**	**+1.7**
PINE				IAmb	IAmb	13 50 25.4	
	comp=Z,14nm,0.9s						
FFC	**Flin Flon**	**80.06**	**341**	P	**P**	**13 50 22.4**	**+0.4**
WALA	**Waterton Lakes**	**80.10**	**331**	P	**P**	**13 50 23.5**	**+0.9**
J04D	**Umpqua Nationa**	**80.28**	**323**	P	**P**	**13 50 25.1**	**+1.4**
	baz=130						
I05D	**Terrebonne, OR**	**80.56**	**324**	P	**P**	**13 50 27.3**	**+2.3**
	baz=130,SNR=9.0						
I04A	**Tendick Farm,**	**80.80**	**323**	P	**P**	**13 50 27.5**	**+1.2**
	baz=130						
K02D	**Willamette Mer**	**80.83**	**322**	P	**P**	**13 50 27.9**	**+1.4**
	baz=128						
NEW	**Newport**	**81.03**	**329**	P	**P**	**13 50 27.7**	**+0.3**
	comp=Z,2.4nm,0.6s,baz=126,slow=13,SNR=3.9						
NEW	**Newport**	**81.03**	**329**	IAmb	IAmb	13 50 29.2	
	comp=Z,7.5nm,1.2s						
D08A	**Wollman Farm,**	**81.08**	**328**	P	**P**	**13 50 29.0**	**+1.3**
D08A				IAmb	IAmb	13 50 30.5	
	comp=Z,19nm,1.3s						
G05D	**Wamic, OR**	**81.13**	**325**	P	**P**	**13 50 28.9**	**+0.9**
	baz=131						
C09A	**Chrisman Ranch**	**81.27**	**328**	P	**P**	**13 50 29.9**	**+1.3**
C09A				IAmb	IAmb	13 50 31.3	
	comp=Z,21nm,0.7s						
LTY	**Liberty**	**82.11**	**327**	P	**P**	**13 50 33.9**	**+0.8**
LTY				IAmb	IAmb	13 50 35.5	
	comp=Z,12nm,0.8s						
E04D	**Cinebar**	**82.64**	**326**	P	**P**	**13 50 35.5**	**-0.3**
	baz=130						
D05A	**Enumclaw**	**82.74**	**326**	P	**P**	**13 50 37.4**	**+1.1**
D05A				IAmb	IAmb	13 50 38.5	
	comp=Z,22nm,0.9s						
B06A	**Marblemount**	**83.35**	**327**	P	**P**	**13 50 40.0**	**+0.7**
B06A				IAmb	IAmb	13 50 41.0	
	comp=Z,21nm,0.8s						
B05A	**Bryant**	**83.49**	**327**	P	**P**	**13 50 40.9**	**+0.8**
	baz=130,SNR=7.4						
D03D	**Eldon**	**83.54**	**326**	P	**P**	**13 50 41.4**	**+1.0**
	baz=129						
A04D	**Lummi Island**	**84.10**	**327**	P	**P**	**13 50 44.5**	**+1.4**
	baz=130						
ESDC	**Sonseca Array**	**84.38**	**44**	P	**P**	**13 50 46.2**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=249,slow=4.7,SNR=3.0						
PGC	**Sidney**	**84.43**	**327**	P	**P**	**13 50 46.1**	**+1.3**
PGC				IAmb	IAmb	13 50 47.4	
	comp=Z,15nm,0.8s						
LLLB	**Lillooet**	**84.90**	**329**	P	**P**	**13 50 47.9**	**+0.7**
YKA	**Yellowknife Ar**	**90.23**	**340**	P	**P**	**13 51 13.2**	**+0.8**
	comp=Z,7.0nm,0.6s,baz=133,slow=4.9,SNR=141						
ILAR	**Eielson Array**	**103.42**	**334**	PKiKP	**PKiKP**	**13 56 30.7**	**+0.7**
	comp=Z,0.4nm,0.9s,baz=104,slow=3.8,SNR=2.7						
TIXI	**Tiksi**	**127.61**	**353**	PKP	**PKPdf**	**13 57 15.7**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=2.7,slow=1.9,SNR=4.3						
SEY	**Seymchan**	**129.21**	**337**	PKP	**PKiKP**	**13 57 20.4**	**+0.6**
	comp=Z,3.3nm,0.9s,baz=133,slow=3.7,SNR=15						
ASAR	**Alice Springs**	**131.40**	**207**	PKP	**PKiKP**	**13 57 25.6**	**0.0**
	comp=Z,0.6nm,0.6s,baz=131,slow=1.7,SNR=17						
ASAR				SKPbc	**SKPab**	**14 00 35.5**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=145,slow=4.6,SNR=4.4						
PETK	**Petropavlovsk-**	**131.97**	**324**	PKP	**PKiKP**	**13 57 26.0**	**+0.4**
	comp=Z,1.4nm,0.9s,baz=145,slow=3.6,SNR=5.6						
WRA	**Warramunga Arr**	**134.44**	**210**	PKP	**PKiKP**	**13 57 31.3**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=150,slow=1.8,SNR=7.8						
ZALV	**Zalesovo Beam**	**140.47**	**25**	PKP	**PKPdf**	**13 57 41.0**	**+0.6**
	comp=Z,1.7nm,0.5s,baz=270,slow=1.5,SNR=6.4						
JAY	**Jayapura**	**143.83**	**235**	PKP	**PKPdf**	**13 57 47.4**	**-0.3**
	comp=Z,3.8nm,0.4s,baz=122,slow=9.4,SNR=4.3						
MK31	**Makanchi Array**	**144.15**	**35**		PKPbc	13 57 46.3	+0.6
MKAR	**Makanchi Array**	**144.15**	**35**	PKP	**PKPdf**	**13 57 47.0**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=328,slow=2.7,SNR=13						
JKA	**Kamikawa-asahi**	**145.08**	**320**		**PKPab**	**13 57 49.3**	**+0.5**
ASAJ	**Asahikawa**	**145.08**	**320**	PKPbc	**PKPab**	**13 57 49.3**	**+0.5**
	comp=Z,6.5nm,0.9s,baz=95,slow=7.3,SNR=5.8						
TLY	**Talaya**	**147.93**	**10**	PKPbc	**PKiKP**	**13 57 58.3**	**-0.1**
	comp=Z,1.7nm,0.4s,baz=340,slow=15,SNR=3.2						
WMQ	**Urumqi**	**148.98**	**35**	*e*PKPbc	**PKPdf**	**13 57 54.8**	**-0.6**
USRK	**Ussuriysk Ar.**	**150.81**	**330**	PKPbc	**PKiKP**	**13 58 04.8**	**+0.3**
	comp=Z,4.4nm,0.7s,baz=228,slow=2.2,SNR=8.1						
SIJI	**Sorong**	**151.74**	**224**	PKPbc	**PKiKP**	**13 58 08.6**	**+1.2**
	comp=Z,8.2nm,0.8s,baz=46,slow=4.1,SNR=6.8						
MJAR	**Matsushiro Arr**	**151.84**	**311**	PKPbc	**PKiKP**	**13 58 07.7**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=85,slow=1.2,SNR=6.3						
MAT	**Matsushiro**	**151.84**	**311**	PKP	**PKiKP**	**13 58 07.4**	**+0.5**
SONM	**Songino Array**	**152.08**	**8**	PKP	**PKPdf**	**13 58 01.1**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=317,slow=1.2,SNR=5.3						
SONM				PKPbc	**PKiKP**	**13 58 08.1**	**+0.9**
	comp=Z,2.8nm,0.3s,baz=315,slow=1.4,SNR=19						
KSRS	**Korea Array**	**157.87**	**324**	PKPab	**PKPab**	**13 58 42.8**	**+0.9**
	comp=Z,1.6nm,0.8s,baz=46,slow=3.8,SNR=4.4						
HHC	**Hu-ho-hao-te**	**159.43**	**1**	*e*P	PKPdf	13 58 25.2	+15
LZH	**Lanzhou**	**162.67**	**22**	*e*PKP	**PKPdf**	**13 58 14.0**	**+0.2**
LZH				pPKP	PKPab	13 58 56.0	-7.0
LZH				sPKP		13 59 13.2	
NJ2	**Nanjing**	**166.66**	**334**	*e*PKP	**PKPdf**	**13 58 16.6**	**-0.5**
CD2	**Chengdu**	**167.06**	**33**	PKP	**PKPdf**	**13 58 15.0**	**-2.6**
WHN	**Wuhan**	**169.48**	**348**	PKP	**PKPdf**	**13 58 14.6**	**-4.5**

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*IDC **05** 13:45:16.3±4.5, 67°.65N×163°.44W, h0km, mb3.2/2, mb1 4.0/4, mb1mx3.4/57, mbtmp3.6/4, ML3.8/2, Error ellipse: s-maj=62.1km s-min=53.7km az=33.0*

*AEIC **05** 13:45:19±1.9, 67°.66N±0°.05×162°.5W±0°.1, h14km±6km, ML3.0/27, Error ellipse: s-maj=7.9km s-min=7.1km az=87.0*

*NEIC **05** 13:45:21.0±2.3, 67°.73N±0°.09×162°.7W±0°.1, h32km±6km, Error ellipse: s-maj=13.3km s-min=6.6km az=155.0*

ISC 05 13:45:18.8±0.8**, 67°.68N**±0°.05×**162°.52W**±0°.06**, h10km, n39, σ1^{s}24**/44**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.41**	**339**		**Pb**	**13 45 27.8**	**-0.3**
RDOG					**Sb**	**13 45 34.0**	**-0.4**
ANM	**Nome**	**3.34**	**202**		**Pn**	**13 46 11.0**	**0.0**
ANM					**Sn**	**13 46 50.9**	**+0.3**
IM03		**3.86**	**112**		**Pn**	**13 46 18.3**	**+0.2**
IM03					**Sn**	**13 47 03.2**	**-0.3**
COLD	**Coldfoot**	**4.76**	**90**	Pn	**Pn**	**13 46 32.6**	**+2.0**
TOLK	**Toolik Lake Re**	**4.93**	**73**	Pn	**Pn**	**13 46 34.0**	**+1.1**
MLY	**Manley**	**5.43**	**114**		**Pn**	**13 46 39.5**	**-0.3**
TTA	**Tatalina**	**5.49**	**147**	Pn	**Pn**	**13 46 41.7**	**+1.1**
TTA	**Tatalina**	**5.49**	**147**		**Sn**	**13 47 43.9**	**+0.1**
TT01	**Tatalina**	**5.51**	**147**		**Pn**	**13 46 42.0**	**+1.1**
PS01	**TAPS Pump Stn**	**5.63**	**56**		**Pn**	**13 46 43.4**	**+1.0**
BPAW	**Bear Paw Mtn.**	**5.93**	**122**		**Pn**	**13 46 47.6**	**+1.0**
NEA	**Nenana**	**6.28**	**113**		**Pn**	**13 46 52.5**	**+1.2**
KTH	**Kantishna Hill**	**6.33**	**125**		**Pn**	**13 46 53.6**	**+1.4**
MDM	**Murphy Dome**	**6.37**	**109**		**Pn**	**13 46 54.5**	**+1.9**
PPLA	**Purkeypile**	**6.46**	**133**		**Pn**	**13 46 55.5**	**+1.5**
TCOL	**CIGO, UAF Yank**	**6.54**	**109**		**Pn**	**13 46 56.7**	**+1.7**
COLA	**College**	**6.55**	**109**		**Pn**	**13 46 56.8**	**+1.7**
TRF	**Thorofare Moun**	**6.61**	**124**		**Pn**	**13 46 57.8**	**+1.8**
WRH	**Wood River Hil**	**6.69**	**112**		**Pn**	**13 46 58.0**	**+1.1**
CCB	**Clear Creek Bu**	**6.69**	**110**		**Pn**	**13 46 57.8**	**+0.9**
FYU	**Fort Yukon**	**6.83**	**91**	Pn	**Pn**	**13 46 60.0**	**+1.1**
MCK	**McKinley**	**6.85**	**119**		**Pn**	**13 47 00.2**	**+1.0**
BM03	**Burnt Mountain**	**6.86**	**84**		**Pn**	**13 47 00.2**	**+0.9**
IL31		**6.95**	**107**		**Pn**	**13 47 01.3**	**+0.7**
ILAR	**Eielson Array**	**6.95**	**107**	Pn	**Pn**	**13 47 00.8**	**+0.1**
	2.9nm,0.3s,baz=303,slow=14,SNR=157						
ILAR				Sn	**Sn**	**13 48 18.7**	**-0.9**
	0.4nm,0.3s,baz=300,slow=24,SNR=9.7						
PRP	**Porcupine Dome**	**7.10**	**100**	Pn	**Pn**	**13 47 03.8**	**+1.0**
RND	**Reindeer**	**7.10**	**121**		**Pn**	**13 47 03.8**	**+1.1**
HDA	**Harding Lake**	**7.13**	**110**		**Pn**	**13 47 03.2**	**+0.2**
DHY	**Denali Highway**	**7.82**	**119**	Pn	**Pn**	**13 47 13.6**	**+1.0**
DOT	**Dot Lake**	**8.61**	**109**	Pn	**Pn**	**13 47 21.3**	**-2.0**
SCM	**Sheep Creek Mo**	**8.73**	**125**	Pn	**Pn**	**13 47 24.2**	**-0.8**
EGAK	**Eagle**	**9.08**	**99**	Pn	**Pn**	**13 47 29.5**	**-0.3**
MENT	**Mentasta**	**9.17**	**112**	Pn	**Pn**	**13 47 30.6**	**-0.4**
EPYK	**Eagle Plains**	**10.14**	**85**	Pn	**Pn**	**13 47 45.1**	**+0.8**
INK	**Inuvik**	**10.85**	**73**	Pn	**Pn**	**13 47 53.5**	**-0.4**
	0.3nm,0.3s,baz=289,slow=9.3,SNR=18						
INK				Sn	**Sn**	**13 49 51.6**	**-3.4**
	0.1nm,0.3s,baz=118,slow=20,SNR=3.1						
UNV	**Unalaska Valle**	**14.01**	**190**	P	**P**	**13 48 43.7**	**-1.3**
NIKH	**Nikolski High**	**15.07**	**195**	Pn	**Pn**	**13 48 50.6**	**-0.9**
YKA	**Yellowknife Ar**	**20.38**	**82**	P	**P**	**13 49 56.3**	**+1.1**
	0.5nm,0.5s,baz=304,slow=9.9,SNR=8.1						
TXAR	**Lajitas Array**	**51.47**	**107**	P	**P**	**13 54 26.0**	**+1.9**
	0.3nm,0.6s,baz=353,slow=5.4,SNR=4.2						

KRSC 05 13:49:55.8±1.5**, 51°.10N**×**157°.65E, h124km**±17km**, ML3.5, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**0.65**	**305**	*e*P	Pn	13 50 16.7	+1.7
KDTR	**Khodutka, Kamc**	**0.76**	**20**	*i* P	Pn	13 50 18.3	+2.4
KDTR				*e*S	Sn	13 50 33.3	+2.1
SKR	**Severo-Kuril's**	**1.06**	**248**	*e*P	Pn	13 50 19.9	+1.3
SKR				*e*S	Sn	13 50 36.7	+0.8
ASAK	**Asacha**	**1.30**	**7**	*e*P	Pn	13 50 23.1	+1.9
ASAK				*e*S	Sn	13 50 42.2	+1.6
MIPR	**Malaya Ipel'ka**	**1.31**	**335**	*e*P	Pn	13 50 22.0	+0.7
ALID	**Alaid**	**1.35**	**261**	*e*P	Pn	13 50 22.1	+0.2
MTVR	**Mutnovka**	**1.43**	**13**	*e*P	Pn	13 50 25.0	+2.3
MTVR				*e*S	Sn	13 50 45.6	+2.3
RUS	**Russkaya**	**1.44**	**21**	*e*P	Pn	13 50 24.8	+2.1
RUS				*e*S	Sn	13 50 44.7	+1.5
GRL	**Gorelyy**	**1.48**	**10**	*e*P	Pn	13 50 25.5	+2.2
GRL				*e*S	Sn	13 50 46.1	+1.8
KRMR	**Karymshinskiy**	**1.76**	**9**	*e*P	Pn	13 50 28.0	+1.6
KRMR				*e*S	Sn	13 50 50.8	+0.9
APC	**Apacha**	**1.86**	**351**	*e*P	Pn	13 50 28.7	+1.1
APC				*e*S	Sn	13 50 51.8	-0.2
DALK	**Dalny**	**2.05**	**19**	*e*P	Pn	13 50 32.0	+2.0
DALK				*e*S	Sn	13 50 57.4	+1.2
UGLR	**Uglovaya**	**2.24**	**18**	*e*P	Pn	13 50 35.0	+2.6
UGLR				*e*S	Sn	13 51 02.4	+1.9
AVH	**Avacha**	**2.27**	**17**	*e*P	Pn	13 50 35.5	+2.7
AVH				*e*S	Sn	13 51 03.9	+2.6
KOK	**Koryaka**	**2.28**	**15**	*e*P	Pn	13 50 35.7	+2.7
SMAR	**Somma**	**2.28**	**18**	*e*P	Pn	13 50 35.2	+2.1
KRER	**Koryakskii**	**2.31**	**17**	*e*P	Pn	13 50 35.9	+2.4
KRER				*e*S	Sn	13 51 04.8	+2.4
SDLR	**Sedlovina**	**2.31**	**19**	*e*P	Pn	13 50 35.4	+2.0
SDLR				*e*S	Sn	13 51 03.2	+0.9
NLC	**Nalytchevo**	**2.33**	**26**	*e*S	Sn	13 51 01.7	-0.6
KRX	**Arik**	**2.35**	**15**	*e*P	Pn	13 50 35.9	+2.0
KRX				*e*S	Sn	13 51 03.8	+0.7
SPN	**Mys Shipunski**	**2.48**	**35**	*e*P	Pn	13 50 37.3	+1.9
SPN				*e*S	Sn	13 51 06.6	+0.7
KZV	**Kizimen**	**4.33**	**21**	*e*P	Pn	13 51 03.0	+3.2
KZV				*e*S	Sn	13 51 50.7	+1.2
TUMD	**Tumrok D**	**4.43**	**21**	*e*P	Pn	13 51 03.3	+2.2
TUMD				*e*S	Sn	13 51 51.9	0.0
TUMR	**Tumrok**	**4.46**	**19**	*e*P	Pn	13 51 03.6	+2.1
KMNR	**Kamenistaya**	**4.92**	**17**	*e*P	Pn	13 51 10.4	+2.8
KBTR	**Krutoberegovo**	**5.97**	**29**	*e*P	Pn	13 51 22.7	+1.0
BKI	**Bering**	**6.48**	**47**	*e*S	Sn	13 52 37.5	-3.4

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*DJA **05** 14:02:07.6±1.1, 9°S±9°×12°3E±°, h102km±14km, M3.3/7, mb3.9/1, MLv3.1/7*

*IDC **05** 14:02:08.8±1.5, 9°.71S×123°.23E, h114km±12km, mb3.2/1, mb1 3.2/4, mb1mx3.0/40, mbtmp3.5/4, Error ellipse: s-maj=88.1km s-min=22.4km az=69.0*

ISC 05 14:02:07.3±1.0**, 9°.46S**±0°.09×**123°.58E**±0°.10**, h100km, n10, σ3^{s}32**/16**, Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.74**	**113**	P	**Pn**	**14 02 27.8**	**+2.6**
SOEI				S	**Sn**	**14 02 42.6**	**+3.9**
BATI	**Baumata**	**0.74**	**174**	P	**Pn**	**14 02 27.9**	**+2.7**
	85nm,0.3s,baz=155,slow=0.3,SNR=160						
BATI				S	**Sn**	**14 02 42.4**	**+3.7**
	49nm,0.3s,baz=17,slow=9.0,SNR=9.1						
BATI	**Baumata**	**0.74**	**174**	P	**Pn**	**14 02 27.8**	**+2.6**
BATI				S	**Sn**	**14 02 42.9**	**+4.3**
MMRI	**Maumere**	**1.56**	**302**	P	**Pn**	**14 02 32.7**	**-1.7**
EDFI	**Ende, Flores**	**2.00**	**291**	P	**Pn**	**14 02 38.7**	**-1.3**
PLAI	**Plampang**	**5.77**	**276**	P	**Pn**	**14 03 29.5**	**-1.0**
FITZ	**Fitzroy Crossi**	**8.81**	**167**	P	**Pn**	**14 04 12.5**	**+0.6**
	0.8nm,0.3s,baz=357,slow=8.6,SNR=30						
FITZ				S	**Sn**	**14 05 47.0**	**-2.6**
	1.8nm,0.3s,baz=182,slow=13,SNR=14						
WRA	**Warramunga Arr**	**14.71**	**136**	P	**Pn**	**14 05 31.1**	**+0.6**
	0.1nm,0.3s,baz=305,slow=15,SNR=8.3						
WRA				S	**Sn**	**14 08 07.0**	**-5.9**
	0.4nm,0.3s,baz=325,slow=30,SNR=9.5						
ASAR	**Alice Springs**	**17.23**	**146**	P	**P**	**14 06 02.8**	**+0.9**
	0.1nm,0.3s,baz=321,slow=12,SNR=12						
ASAR				S	**Sn**	**14 09 08.5**	**-5.1**
	0.1nm,0.3s,baz=316,slow=22,SNR=7.1						
MKAR	**Makanchi Array**	**67.01**	**330**	P	**P**	**14 12 49.5**	**-0.1**
	0.4nm,0.7s,baz=140,slow=7.2,SNR=2.7						

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*IDC **05** 14:34:22.5±1.8, 19°.92N×99°.71E, h0km, mb3.7/2, mb1 3.7/2, mb1mx3.2/62, mbtmp3.7/2, Error ellipse: s-maj=21.1km s-min=14.2km az=96.0*

ISC 05 14:34:23.1±1.3**, 19°.86N**±0°.09×**99°.80E**±0°.09**, h10km, n13, σ0^{s}72**/13**, Thailand**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMMT	**Chiang Mai**	**1.31**	**218**	P	**Pn**	**14 34 47.3**	**-0.3**
LAMP	**Lampang**	**1.34**	**187**	P	**Pb**	**14 34 48.4**	**+0.1**
NANT	**Nan**	**1.35**	**141**	P	**Pb**	**14 34 48.5**	**0.0**
PHRA	**Phrae**	**1.41**	**163**	P	**Pg**	**14 34 50.3**	**+0.1**
CM09	**Chiang Mai Arr**	**1.60**	**209**	P	**Pb**	**14 34 52.8**	**0.0**
CM31	**Chiang Mai Arr**	**1.61**	**210**	P	**Pb**	**14 34 53.4**	**+0.5**
CMAR	**Chiang Mai Arr**	**1.61**	**210**	Pg	**Pb**	**14 34 52.9**	**-0.1**
	4.1nm,0.3s,baz=18,slow=16,SNR=4.6						
CMAR				Lg	Lg	14 35 13.3	
	5.4nm,0.3s,baz=26,slow=28,SNR=4.6						
CM15	**Chiang Mai Arr**	**1.62**	**211**	P	**Pb**	**14 34 53.7**	**+0.5**
CM01	**Chiang Mai Arr**	**1.64**	**209**	P	**Pb**	**14 34 53.6**	**+0.2**
CM04	**Chiang Mai Arr**	**1.65**	**208**	P	**Pb**	**14 34 53.3**	**-0.3**
CM05	**Chiang Mai Arr**	**1.66**	**209**	P	**Pb**	**14 34 53.9**	**+0.1**
MKAR	**Makanchi Array**	**30.45**	**336**	P	**P**	**14 40 34.4**	**-1.5**
	0.5nm,0.8s,baz=143,slow=10,SNR=4.2						
ZALV	**Zalesovo Beam**	**35.92**	**345**	P	**P**	**14 41 25.0**	**+1.5**
	0.6nm,0.3s,baz=163,slow=12,SNR=2.2						

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*MOS **05** 14:38:25.8±1.4, 44°.51N×148°.35E, h96km, mb3.9/6, Error ellipse: s-maj=11.1km s-min=7.8km az=69.7*

*SKHL **05** 14:38:27.0±0.5, 44°.50N×148°.20E, h100km±4km, mb4.7/7, msha5.5/5*

*JMA **05** 14:38:27.1±0.3, 44°.01N×148°.09E, h0km, M4.0*

*NEIC **05** 14:38:29.9±1.7, 44°.8N±0°.1×148°.1E±0°.1, h95km±10km, mb4.2/13, Error ellipse: s-maj=18.0km s-min=12.4km az=141.0*

*IDC **05** 14:38:30.6±3.5, 44°.96N×148°.03E, h94km±23km, mb3.6/11, mb1 3.6/14, mb1mx3.4/63, mbtmp3.8/14, Error ellipse: s-maj=56.6km s-min=19.5km az=157.0*

ISC 05 14:38:25.9±1.0**, 44°.40N**±0°.06×**148°.39E**±0°.07**, h83km**±8km**, n86, σ1^{s}52**/101**, mb4.0**/16**, 2C-7D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.92**	**336**	*i* P	**Pn**	**14 38 44.5**	**+0.5**
KUR				AMB	AMB	14 38 45.0	
	130nm,0.4s						
KUR				AMB	AMB	14 38 45.0	
	180nm,0.4s						
KUR				AMB	AMB	14 38 45.0	
	620nm,0.4s						
KUR				*i* S	**Sn**	**14 38 58.0**	**+0.4**
KUR				A	A	14 38 59.8	
	3μm,0.5s						
KUR				A	A	14 38 59.8	
	740nm,0.5s						
KUR	**Kuril'sk**	**0.92**	**336**	*d i*PN	**Pn**	**14 38 44.5**	**+0.5**
KUR				*i* S	**Sn**	**14 38 57.6**	**0.0**
KUR				pmax	pmax		
	comp=Z,621nm,0.3s						
KUR				pmax	pmax		
	comp=N,92nm,0.2s						
KUR				pmax	pmax		
	comp=E,219nm,0.2s						
KUR				smax	smax		
	comp=N,3μm,0.2s						
KUR				smax	smax		
	comp=E,742nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.85**	**260**	*i* P	**Pn**	**14 38 56.5**	**+0.7**
YUK				AMB	AMB	14 38 57.0	
	comp=E,70nm,0.4s						
YUK				AMB	AMB	14 38 57.0	
	comp=E,60nm,0.4s						
YUK				AMB	AMB	14 38 57.0	
	comp=E,310nm,0.4s						
YUK				*i* S	**Sn**	**14 39 18.2**	**-0.4**
YUK				A	A	14 39 22.0	
	comp=E,800nm,0.4s						
YUK				A	A	14 39 22.0	
	comp=E,650nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.85**	**260**	*d i*PN	**Pn**	**14 38 56.5**	**+0.7**
YUK				*i* S	**Sn**	**14 39 18.1**	**-0.5**
YUK				pmax	pmax		
	comp=N,71nm,0.2s						
YUK				pmax	pmax		
	comp=E,54nm,0.2s						
YUK				pmax	pmax		
	comp=Z,311nm,0.2s						
YUK				smax	smax		
	comp=E,448nm,0.3s						
YUK				smax	smax		
	comp=N,803nm,0.2s						
LAGR	**Lagunnoye**	**1.90**	**261**	*i* P	**Pn**	**14 38 56.9**	**+0.4**
LAGR				AMB	AMB	14 38 58.0	
	comp=N,180nm,0.4s						
LAGR				*i* S	**Sn**	**14 39 18.9**	**-0.9**
LAGR				A	A	14 39 23.0	
	comp=N,1μm,0.5s						
LAGR				A	A	14 39 23.0	
	comp=N,280nm,0.5s						
LAGR	**Lagunnoye**	**1.90**	**261**	⇓*i*PN	**Pn**	**14 38 56.9**	**+0.4**
LAGR				*i* S	**Sn**	**14 39 18.9**	**-0.9**
LAGR				pmax	pmax		
	comp=Z,202nm,0.4s						
LAGR				smax	smax		
	comp=N,1μm,0.5s						
LAGR				smax	smax		
	comp=E,277nm,0.2s						
GRPR	**Tuman**	**1.93**	**259**	*i* P	**Pn**	**14 38 57.5**	**+0.7**
GRPR				AMB	AMB	14 38 58.0	
	comp=E,140nm,0.4s						
GRPR				*i* S	**Sn**	**14 39 19.4**	**-1.0**
GRPR				A	A	14 39 22.0	
	comp=E,730nm,0.4s						
GRPR				A	A	14 39 22.0	
	comp=E,680nm,0.4s						
GRPR	**Tuman**	**1.93**	**259**	⇓*i*PN	**Pn**	**14 38 57.5**	**+0.7**
GRPR				*i* S	**Sn**	**14 39 19.4**	**-1.0**
GRPR				pmax	pmax		
	comp=Z,139nm,0.4s						
GRPR				pmax	pmax		
	comp=E,176nm,0.2s						
GRPR				pmax	pmax		
	comp=N,91nm,0.1s						
GRPR				smax	smax		
	comp=E,676nm,0.3s						
GRPR				smax	smax		
	comp=N,832nm,0.2s						
GLVR	**Golovnino**	**2.17**	**253**	*i* P	**Pn**	**14 39 01.1**	**+1.0**
GLVR				AMB	AMB	14 39 01.7	
	comp=N,120nm,0.4s						
GLVR				*i* S	**Sn**	**14 39 26.2**	**0.0**
GLVR				A	A	14 39 30.0	
	comp=N,340nm,0.5s						
GLVR				A	A	14 39 30.0	
	comp=N,720nm,0.5s						
GLVR	**Golovnino**	**2.17**	**253**	⇓*i*PN	**Pn**	**14 39 01.1**	**+1.0**
GLVR				*i* S	**Sn**	**14 39 26.2**	**0.0**
GLVR				pmax	pmax		
	comp=Z,145nm,0.2s						
GLVR				smax	smax		
	comp=N,437nm,0.4s						
GLVR				smax	smax		
	comp=E,717nm,0.3s						
NEM2	**Nemuro 2**	**2.17**	**243**	P	**Pn**	**14 39 00.2**	**+0.1**
NEM2				*e*S	**Sn**	**14 39 24.1**	**-2.1**
NMR	**Nemuro--Hokkai**	**2.18**	**243**	*i* P	**Pn**	**14 39 00.0**	**-0.2**
NMR	**Nemuro--Hokkai**	**2.18**	**243**	⇓*i*PN	**Pn**	**14 39 00.2**	**0.0**
NMR				*i* S	**Sn**	**14 39 24.2**	**-2.2**
JRA	**Rausu**	**2.40**	**260**	P	**Pn**	**14 39 04.7**	**+1.6**
JRA				*e*S	**Sn**	**14 39 32.3**	**+0.8**
JNSB	**Nemuroshibetsu**	**2.52**	**257**	P	**Pn**	**14 39 06.4**	**+1.7**
JNSB				*e*S	**Sn**	**14 39 35.5**	**+1.0**
JKHN	**Kushirohamanak**	**2.68**	**242**	P	**Pn**	**14 39 07.4**	**+0.5**
JNK	**Nakash**	**2.77**	**254**	P	**Pn**	**14 39 09.7**	**+1.6**
JNK				*e*S	**Sn**	**14 39 40.3**	**-0.3**
JAK	**Akkeshi**	**3.02**	**244**	P	**Pn**	**14 39 12.1**	**+0.6**
JAK				*e*S	**Sn**	**14 39 44.7**	**-2.0**
JTKR	**Abashiri--Toko**	**3.25**	**264**	P	**Pn**	**14 39 16.3**	**+1.7**
JAR	**Ashorobuto**	**3.52**	**253**	*e*S	**Sn**	**14 39 58.6**	**-0.1**
JCH	**Churui**	**4.07**	**246**	P	**Pn**	**14 39 26.7**	**+1.0**
JCH				*e*S	**Sn**	**14 40 10.0**	**-2.1**
JKK2	**Kamakawa 2**	**4.09**	**265**	P	**Pn**	**14 39 28.4**	**+2.3**
JKA	**Kamikawa-asahi**	**4.17**	**268**	*i* P	**Pn**	**14 39 29.3**	**+2.2**
JKA	**Kamikawa-asahi**	**4.17**	**268**		**Pn**	**14 39 29.3**	**+2.2**
ASAJ	**Asahikawa**	**4.17**	**268**	P	**Pn**	**14 39 29.3**	**+2.2**
	comp=E,1.2nm,0.3s,baz=20,slow=6.6,SNR=12						
ERM	**Erimo**	**4.50**	**240**	PN	**Pn**	**14 39 34.2**	**+2.6**
ERM	**Erimo**	**4.50**	**240**	Pn	**Pn**	**14 39 34.2**	**+2.6**
JNBK	**Urakawa-nobuka**	**4.62**	**245**	P	**Pn**	**14 39 34.3**	**+1.0**
YSS	**Yuzh-Sakhalins**	**4.70**	**305**	*i* P	**Pn**	**14 39 36.0**	**+1.7**
YSS				AMB	AMB	14 39 37.6	
	comp=E,20nm,0.6s						
YSS				*e*S	**Sn**	**14 40 25.8**	**-1.7**
YSS				A	A	14 40 29.0	
	comp=E,20nm,0.9s						
YSS	**Yuzh-Sakhalins**	**4.70**	**305**	⇑*i*PN	**Pn**	**14 39 36.0**	**+1.7**
YSS				*e*S	**Sn**	**14 40 25.8**	**-1.7**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS				smax	smax		
	comp=E,20nm,0.9s						
YSS	**Yuzh-Sakhalins**	**4.70**	**305**	Pn	**Pn**	**14 39 36.2**	**+1.9**
JKB	**Kayabe**	**5.94**	**248**	P	**Pn**	**14 39 51.8**	**+0.7**
JKB				*e*S	**Sn**	**14 40 54.2**	**-3.5**
JOT	**Ohata**	**6.18**	**243**	*e*S	**Sn**	**14 40 58.8**	**-4.8**
PEA0B	**Petropavlovsk-**	**10.66**	**32**	PN	**Pn**	**14 40 56.6**	**+1.2**
PEA0B	**Petropavlovsk-**	**10.66**	**32**	Pn	**Pn**	**14 40 56.6**	**+1.2**
PETK	**Petropavlovsk-**	**10.66**	**32**	P	**Pn**	**14 40 55.0**	**-0.5**
	comp=E,0.2nm,0.3s,baz=213,slow=15,SNR=13						
PETK	**Petropavlovsk-**	**10.66**	**32**	PN	**Pn**	**14 40 55.0**	**-0.5**
PET	**Petropavlovsk**	**10.97**	**34**	*i* P	**Pn**	**14 40 58.3**	**-1.3**
PET	**Petropavlovsk**	**10.97**	**34**	⇓*i*PN	**Pn**	**14 40 58.3**	**-1.3**
PET				*i* S	**Sn**	**14 42 59.3**	**-1.0**
EKMR	**Ekimchan**	**13.36**	**316**	*e*P	**Pn**	**14 41 28.8**	**-3.1**
MA2	**Magadan**	**15.27**	**5**	P	**Pn**	**14 41 57.9**	**+1.3**
MA2	**Magadan**	**15.27**	**5**	P	**Pn**	**14 41 57.9**	**+1.3**
JNU	**Nakatsue**	**17.66**	**236**	P	**Pn**	**14 42 30.5**	**+4.1**
JNU				IAmb	IAmb	14 42 39.4	
	comp=Z,64nm,1.9s						

SEY	Seymchan	18.71	6	P	P	14 42 37.1	-0.4
	comp=Z,0.2nm,0.3s,baz=198,slow=9.7,SNR=11						
YAK	Yakutsk	20.77	335	P	P	14 42 57.8	-2.1
	comp=Z,2.3nm,0.4s,baz=142,slow=3.5,SNR=5.6						
YAK	Yakutsk	20.77	335⇑	iP	P	14 42 56.8	-3.0
YAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YAK	Yakutsk	20.77	335	P	P	14 42 57.0	-2.9
YAK				IAmb	IAmb	14 42 58.9	
	comp=Z,5.9nm,0.6s						
BILL	Bilibino	25.49	16	eP	P	14 43 45.0	-1.0
BILL	Bilibino	25.49	16	eP	P	14 43 45.0	-1.0
BILL				e		14 44 23.6	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.6s						
BILL	Bilibino	25.49	16	P	P	14 43 46.0	0.0
H11N2	WAKE ISLAND Hy	29.03	142	T	T	15 15 16.4	
	baz=332,slow=76,SNR=100						
H11N1	WAKE ISLAND Hy	29.05	142	T	T	15 15 18.6	
	baz=332,slow=76,SNR=86						
H11N3	WAKE ISLAND Hy	29.05	142	T	T	15 15 18.2	
	baz=332,slow=76,SNR=98						
H11S1	WAKE ISLAND Hy	30.03	143	T	T	15 16 27.9	
	baz=333,slow=76,SNR=83						
H11S3	WAKE ISLAND Hy	30.04	143	T	T	15 16 28.7	
	baz=333,slow=76,SNR=55						
H11S2	WAKE ISLAND Hy	30.05	143	T	T	15 16 27.6	
	baz=333,slow=76,SNR=29						
ILAR	Eielson Array	40.44	37	P	P	14 45 57.0	+1.4
	comp=Z,0.5nm,0.6s,baz=278,slow=5.3,SNR=5.2						
GLB	Gilahina Butte	42.13	42	P	P	14 46 11.4	+1.8
GLB				IAmb	IAmb	14 46 50.9	
	comp=Z,4.1nm,1.2s						
MK31	Makanchi Array	45.08	297	P	P	14 46 34.1	+0.6
MK31				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MK31	Makanchi Array	45.08	297	P	P	14 46 34.1	+0.6
MKAR	Makanchi Array	45.08	297	P	P	14 46 32.9	-0.6
	comp=Z,1.3nm,0.6s,baz=78,slow=8.1,SNR=14						
MKAR	Makanchi Array	45.08	297	eP	P	14 46 34.2	+0.7
MKAR	Makanchi Array	45.08	297	eP	P	14 46 34.2	+0.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MAKZ	Makanchi	45.27	298	P	P	14 46 35.9	+0.9
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MAKZ	Makanchi	45.27	298	P	P	14 46 35.9	+0.9
MAKZ				IAmb	IAmb	14 46 36.3	
	comp=Z,1.7nm,0.7s						
KURK	Kurchatov	45.91	304	eP	P	14 46 38.5	-1.4
KURK	Kurchatov	45.91	304	P	P	14 46 38.5	-1.4
KURK				pmax	pmax		
	comp=Z,7.0nm,1.8s						
KURK	Kurchatov	45.91	304	P	P	14 46 38.5	-1.4
KURK				IAmb	IAmb	14 47 53.8	
	comp=Z,6.6nm,1.8s						
RES	Resolute Bay	54.09	17	P	P	14 47 41.2	-0.2
	comp=Z,1.2nm,0.7s,baz=330,slow=5.7,SNR=2.5						
RES	Resolute Bay	54.09	17	P	P	14 47 41.1	-0.2
RES				IAmb	IAmb	14 48 56.3	
	comp=Z,10.0nm,1.8s						
YKA	Yellowknife Ar	54.77	34	P	P	14 47 47.9	+1.4
	comp=Z,0.3nm,0.5s,baz=302,slow=6.7,SNR=4.2						
ARCES	ARCESS Array B	58.95	340	P	P	14 48 13.4	-2.6
	comp=Z,1.5nm,0.9s,baz=30,slow=8.4,SNR=3.7						
FINES	FINESS Array B	64.70	333	P	P	14 48 53.9	-0.8
	comp=Z,1.6nm,0.5s,baz=35,slow=7.0,SNR=11						
OBN	Obninsk	65.32	324	eP	P	14 48 56.6	-2.1
OBN	Obninsk	65.32	324	eP	P	14 48 56.6	-2.1
OBN				e		14 49 29.6	
OBN				e		14 51 22.2	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NC303	NORSAR Array S	69.12	339	P	P	14 49 22.7	0.0
NC405	NORSAR Array S	69.13	339	P	P	14 49 22.0	-0.7
NC204	NORSAR Array S	69.23	340	P	P	14 49 23.8	+0.3
NB201	NORSAR Array S	69.29	339	P	P	14 49 23.7	-0.1
NB2	NORSAR Subarra	69.32	339	P	P	14 49 23.6	-0.4
	comp=Z,1.1nm,0.7s,baz=30,slow=6.2						
NOA	NORSAR Array B	69.32	339	P	P	14 49 23.4	-0.6
	comp=Z,0.9nm,0.5s,baz=31,slow=6.6,SNR=8.4						
NAO01	NORSAR Array S	69.57	339	P	P	14 49 25.6	+0.1
KBZ	Khabaz	70.03	312	P	P	14 49 30.1	+1.5
	comp=Z,2.6nm,0.9s,baz=83,slow=5.6,SNR=5.0						
AKASG	Malin Array Be	71.58	324	P	P	14 49 38.0	+0.1
	comp=Z,0.9nm,0.4s,baz=34,slow=6.4,SNR=3.2						
AKASG	Malin Array Be	71.58	324	P	P	14 49 38.0	+0.1
GERES	GERESS Array B	79.02	331	P	P	14 50 21.2	+0.5
	comp=Z,0.6nm,0.4s,baz=34,slow=5.0,SNR=4.5						

*IDC **05** 14:39:46.7±1.0, 5°.70S×122°.88E, h0km, mb4.0/4, mb1 4.2/8, mb1mx3.8/51, mbtmp4.1/8, ML3.8/4, MS3.4/1, Ms1 3.4/1, ms1mx2.8/38, Error ellipse: s-maj=50.7km s-min=17.0km az=59.0*

*DJA **05** 14:39:48.8±0.2, 6°S±2°×12°3E±°, h10km, M4.2/17, mB5.2/2, mb4.5/7, MLv4.1/17, Mw(mB)4.5/2*

*NEIC **05** 14:39:50.5±1.5, 5°.85S±0°.06×122°.74E±0°.08, h27km±3km, mb4.2/13, Error ellipse: s-maj=11.7km s-min=8.6km az=70.0*

ISC 05 14:39:50.9±0.7, **5°.78S**±0°.06×**122°.73E**±0°.06, **h35**km, **n48**, σ**1s.92**/50, **mb4.3**/7, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBSI	Bau Bau	0.33	332	P	Pn	14 39 56.0	-3.2
BBSI				S	Sn	14 40 02.1	-2.8
BKSI	Bulukumba	2.63	280	P	Pn	14 40 30.5	-0.4
BKSI				S	Sn	14 41 01.0	-0.7
MMRI	Maumere	2.88	190	P	Pn	14 40 34.0	-0.4
MMRI	Maumere	2.88	190	Pn	Pn	14 40 33.6	-0.8
BNSI	Bone	2.95	298	P	Pn	14 40 36.0	+0.7
BNSI				S	Sn	14 41 10.4	+0.9
KAPI	Kappang	3.06	284	Pn	Pn	14 40 37.4	+0.6
	10nm,0.3s,baz=140,slow=11,SNR=19						
KAPI				Sn	Sn	14 41 14.6	+2.4
	12nm,0.3s,baz=254,slow=21,SNR=2.0						
KAPI	Kappang	3.06	284	Pn	Pn	14 40 36.1	-0.7
EDFI	Ende, Flores	3.13	199	P	Pn	14 40 36.6	-1.3
SPSI	Sidrap Palu	3.46	301	P	Pn	14 40 41.0	-1.3
TTSI	Tana Toraja	3.97	313	P	Pn	14 40 55.8	+6.4
SOEI	Soe	4.24	159	P	Pn	14 40 54.4	+1.3
SOEI	Soe	4.24	159		Pn	14 40 50.5	-2.6
BATI	Baumata	4.50	168	Pn	Pn	14 40 58.5	+1.9
	13nm,0.3s,baz=29,slow=1.0,SNR=15						
BATI				LR	LR	14 42 55.7	
	comp=Z,465nm,20.4s,baz=76,slow=42						
BATI	Baumata	4.50	168	P	Pn	14 41 00.5	+3.9
LUWI	Luwuk	4.71	1	P	Pn	14 41 01.8	+2.3
LUWI	Luwuk	4.71	1	Pn	Pn	14 41 01.0	+1.5
BASI	Baing, Sumba	4.90	206	P	Pn	14 41 01.0	-1.1
SANI	Sanana	4.93	41	P	Pn	14 41 04.1	+1.5
	0.1nm12nm,1.2s						
NLAI	Namlea	5.04	60	P	Pn	14 41 06.5	+2.5
	0.3nm83nm,0.8s						
WBSI	Waikabubak, Su	5.07	221	P	Pn	14 41 03.4	-1.1
PLAI	Plampang	5.77	238	P	Pn	14 41 11.1	-3.0
	0.1nm34nm,0.7s						
AAI	Ambon	5.83	69	P	Pn	14 41 17.0	+2.0
	0.2nm3μm39nm,0.7s						
MRSI	Marisa	6.26	353	P	Pn	14 41 22.6	+1.7
	0.1nm30nm,0.9s						
MPSI	Mapaga	6.70	335	P	Pn	14 41 28.1	+1.2
	0.1nm15nm,0.8s						
LBMI	Labuha	6.98	43	P	Pn	14 41 32.1	+1.3
	0.1nm22nm,0.8s						
TNTI	Ternate	7.99	36	Pn	Pn	14 41 44.7	+0.1
MTN	Manton Dam	10.86	131		Pn	14 42 22.3	-1.7
KNRA	Kununurra	11.48	149	Pn	Pn	14 42 31.9	-0.6
FITZ	Fitzroy Crossi	12.57	167	Pn	Pn	14 42 46.9	-0.5
	0.1nm,0.3s,baz=5.9,slow=12,SNR=1.8						
FITZ	Fitzroy Crossi	12.57	167		Pn	14 42 46.6	-0.8
WB0	Warramunga Arr	17.95	142	P	Pn	14 43 54.2	-3.7
WB0				IAmb	IAmb	14 44 00.2	
	comp=Z,51nm,2.0s						
WRA	Warramunga Arr	18.05	142	P	Pn	14 43 57.1	-2.0
	comp=Z,0.5nm,0.3s,baz=315,slow=12,SNR=32						
WRAB	Tennant Creek	18.05	142	P	Pn	14 43 55.1	-4.0
WB2	Warramunga Arr	18.05	142	P	Pn	14 43 55.4	-3.8
WB2				IAmb	IAmb	14 44 00.5	
	comp=Z,7.9nm,0.8s						
WR0	Warramunga Arr	18.18	142	P	Pn	14 43 57.0	-3.8
AS31	Alice Springs	20.79	150		Pn	14 44 30.5	-1.3
ASAR	Alice Springs	20.79	150	P	P	14 44 29.5	+0.3
	comp=Z,3.1nm,0.7s,baz=338,slow=13,SNR=48						
ASAR				PcP	PcP	14 48 38.6	+0.9
	comp=Z,0.4nm,0.7s,baz=344,slow=2.4,SNR=4.7						
COEN	Coen	21.71	114	P	P	14 44 39.5	+0.3
MORW	Morawa	24.01	195	P	P	14 45 02.7	+0.1
BBOO	Buckleboo	29.63	157	P	P	14 45 54.1	+1.0
STKA	Stephens Creek	31.40	148	P	P	14 46 09.5	+0.7
	comp=Z,2.8nm,1.0s,baz=324,slow=8.7,SNR=4.0						
STKA	Stephens Creek	31.40	148	IAmb	IAmb	14 47 17.3	
	comp=Z,4.5nm,1.8s						
MK31	Makanchi Array	63.41	330	P	P	14 50 18.9	+1.9
MK31				IAmb	IAmb	14 50 24.4	
	comp=Z,3.0nm,1.2s						
MKAR	Makanchi Array	63.41	330	P	P	14 50 18.1	+1.1
	comp=Z,0.9nm,0.6s,baz=130,slow=7.3,SNR=11						
ZAA0	Zalesovo Array	67.46	337	P	P	14 50 43.9	+0.9
ZAA0				IAmb	IAmb	14 50 44.6	
	comp=Z,2.8nm,0.9s						
ZALV	Zalesovo Beam	67.46	337	P	P	14 50 44.4	+1.4
	comp=Z,2.5nm,0.8s,baz=134,slow=4.3,SNR=8.0						
KURK	Kurchatov	67.85	331	P	P	14 50 45.2	-0.4
KURK				IAmb	IAmb	14 50 48.0	
	comp=Z,2.4nm,0.9s						
VNDA	Vanda	74.60	172	P	P	14 51 27.0	+1.0
VNDA				IAmb	IAmb	14 52 41.1	
	comp=Z,7.9nm,1.6s						

IDC 05 14:42:42.7±12.0, **17°.60S**×**178°.76W**, **h610**km±147km, **mb3.0**/6, **mb1 3.2**/6, **mb1mx2.8**/47, **mbtmp4.0**/6, **Error ellipse: s-maj=60.1km s-min=47.2km az=118.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.36	259	P	P	14 50 00.1	-0.7
	0.9nm,1.1s,baz=85,slow=7.2,SNR=5.1						
ASAR	Alice Springs	44.55	254	P	P	14 50 02.3	0.0
	1.5nm,0.4s,baz=89,slow=7.8,SNR=58						
SIJI	Sorong	51.84	283	P	P	14 50 56.8	+0.5
	5.4nm,0.7s,baz=198,slow=20,SNR=5.2						
PETK	Petropavlovsk-	73.30	345	P	P	14 53 12.9	-0.3
	1.0nm,0.9s,baz=130,slow=9.5,SNR=5.1						
SEY	Seymchan	83.40	347	P	P	14 54 06.8	+0.1
	1.5nm,0.6s,baz=122,slow=13,SNR=11						
TXAR	Lajitas Array	86.12	58	P	P	14 54 21.1	+0.3
	0.2nm,0.6s,baz=201,slow=4.8,SNR=2.0						
BRTR	Keskin Array B	144.33	315	PKP	PKPdf	15 01 10.2	-0.7
	0.8nm,0.9s,baz=36,slow=2.4,SNR=4.4						

*DJA **05** 15:06:26.6±1.0, 2°N±3°×9°6E±°, h15km±3km, M4.2/10, mB4.7/1, mb4.6/2, MLv4.0/10, Mw(mB)4.0/1*

*NEIC **05** 15:06:29.2±0.8, 2°.12N±0°.07×96°.3E±0°.1, h28km±8km, mb4.3/6, Error ellipse: s-maj=20.8km s-min=8.9km az=75.0*

*IDC **05** 15:06:36.3±11.0, 2°.38N×96°.69E, h75km±83km, mb3.6/5, mb1 3.6/6, mb1mx3.2/37, mbtmp3.8/6, ML2.8/1, MS3.2/2, Ms1 3.3/2, ms1mx2.7/50, Error ellipse: s-maj=146.1km s-min=20.1km az=59.0*

ISC 05 15:06:27.8±1.0, **2°.05N**±0°.06×**96°.23E**±0°.10, **h27**km, **n36**, σ**1s.34**/29, **mb4.2**/8, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.37	16	P	Pn	15 06 35.8	-1.6
SNSI				S	Sn	15 06 40.8	-2.9
TPTI		1.53	38	P	Pn	15 06 52.4	-1.0
TPTI				S	Sb	15 07 15.0	+0.5
GSI	Gunungsitoli	1.54	119	P	Pn	15 06 53.1	-0.4
GSI	Gunungsitoli	1.54	119		Pn	15 06 53.2	-0.3
KCSI	Kotacane, Aceh	2.12	47	P	Pn	15 07 02.0	+0.4
MLSI	Meulaboh, Aceh	2.21	5	P	Pn	15 07 01.5	-1.2
RPSI	Rantau Prapat	2.77	77		Pn	15 07 11.3	+0.9
RPSI	Rantau Prapat	2.77	77		Pn	15 07 11.8	+1.3
PSI	Prapat	2.80	75	P	Pn	15 07 11.8	+0.8
	2.8nm,0.3s,baz=180,slow=1.9,SNR=14						
PBSI	Pulau Batu	2.93	136	P	Pb	15 07 16.8	-2.6
LHMI	Lhok Sumawe	3.24	13	Pn	Pn	15 07 17.4	+0.6
MNSI	Mandailing Nat	3.58	110	P	Pn	15 07 22.2	+0.7
IPM	Ipoh	5.36	63		Pn	15 07 46.8	+0.6
KULM	Kulim	5.46	54		Pn	15 07 47.9	+0.4
MYKOM	Kota Tinggi	7.62	92	Pn	Pn	15 08 18.2	+1.0
MNAI	Manna	9.26	133	Pn	Pn	15 08 41.7	+2.0
MDSI	Maura Dua	10.26	129	P	Pn	15 09 00.4	+7.0
LEM	Lembang	14.39	128	LR	LR	15 16 31.7	
	comp=Z,90nm,19.5s,baz=198,slow=42						
XMIS	Christmas Isla	15.59	143	Pn	P	15 10 07.7	-2.2
XMIS				IAmb	IAmb	15 10 33.9	
	comp=Z,31nm,1.0s						
SBUM	Sibu	15.99	88	Pn	Pn	15 10 10.8	-0.2
CMAR	Chiang Mai Arr	16.52	9	LR	LR	15 17 22.8	
	comp=Z,75nm,19.6s,baz=180,slow=40						
H08S2	Diego Garcia H	25.56	248	T	T	15 38 27.8	
	baz=68,slow=75,SNR=274						
H08S3	Diego Garcia H	25.56	248	T	T	15 38 32.7	
	baz=68,slow=75,SNR=313						
H08S1	Diego Carcia H	25.58	248	T	T	15 38 32.2	
	baz=68,slow=75,SNR=380						
H01W3	Cape Leeuwin H	40.40	157	T	T	15 57 04.7	
	baz=333,slow=76,SNR=41						
H01W2	Cape Leeuwin H	40.41	157	T	T	15 57 06.8	
	baz=333,slow=76,SNR=43						
H01W1	Cape Leeuwin H	40.42	157	T	T	15 57 09.1	
	baz=333,slow=76,SNR=34						
WRA	Warramunga Arr	43.31	122	P	P	15 14 29.1	+1.4
	comp=Z,0.6nm,0.8s,baz=303,slow=9.5,SNR=3.3						
ASAR	Alice Springs	44.68	127	P	P	15 14 40.7	+1.9
	comp=Z,0.3nm,0.7s,baz=303,slow=7.8,SNR=7.7						
MK31	Makanchi Array	46.19	347	P	P	15 14 51.1	+0.8
MK31				IAmb	IAmb	15 14 52.4	
	comp=Z,2.4nm,0.8s						
MKAR	Makanchi Array	46.19	347	P	P	15 14 51.8	+1.5
	comp=Z,2.9nm,0.7s,baz=161,slow=8.0,SNR=27						
MAKZ	Makanchi	46.27	346	P	P	15 14 52.2	+1.2
MAKZ				IAmb	IAmb	15 14 53.0	
	comp=Z,2.8nm,0.7s						
SONM	Songino Array	46.45	9	P	P	15 14 52.8	+0.4
	comp=Z,0.8nm,0.6s,baz=177,slow=9.1,SNR=4.4						
ZAA0	Zalesovo Array	52.57	352	P	P	15 15 39.5	+0.6
ZALV	Zalesovo Beam	52.57	352	P	P	15 15 40.1	+1.2
	comp=Z,5.7nm,0.7s,baz=176,slow=7.0,SNR=21						
BRVK	Borovoye	55.20	341	P	P	15 15 58.8	+0.7
BRVK				IAmb	IAmb	15 15 59.8	
	comp=Z,1.6nm,0.7s						

IDC 05 15:13:26.5±4.5, **2°.09S**×**140°.50E**, **h0**km, **mb3.1**/2, **mb1 3.2**/3, **mb1mx3.1**/29, **mbtmp3.1**/3, **ML3.0**/1, **Error ellipse: s-maj=162.0km s-min=32.5km az=87.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.73	198	P	Pn	15 17 47.4	0.0
	0.1nm,0.3s,baz=22,slow=12,SNR=1.8						
ASAR	Alice Springs	22.38	196	P	P	15 18 26.1	-0.5
	0.3nm,0.6s,baz=23,slow=9.6,SNR=8.3						
MKAR	Makanchi Array	70.41	322	P	P	15 24 42.9	+0.3
	0.2nm,0.5s,baz=120,slow=8.5,SNR=2.3						

*ISK **05** 15:16:49.0, 35°.52N×36°.68E, h8km, ML2.9/22*

*DDA **05** 15:16:50.3, 35°.65N×36°.70E, h19km±1km, ML2.7*

*GRAL **05** 15:16:51.6±0.3, 35°.59N×36°.91E, h5km±4km, MD3.3*

ISC 05 15:16:49.2±1.2, **35°.59N**±0°.02×**36°.80E**±0°.04, **h13**km±11km, **n39**, σ**0s.99**/48, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAYL	Yayladag	0.71	308	iP	Pg	15 17 02.6	-0.4
TAHT	Tahtakopru-Hat	0.93	328	PG	Pg	15 17 07.1	0.0
TAHT				SG	Sn	15 17 21.3	+0.2
KUZU	Kuzuini	1.20	11	iP	Pg	15 17 13.0	+0.6
KUZU				iS	Sg	15 17 28.8	+0.9
KUZU				IAML		15 17 41.0	
	comp=N,255nm,0.4s						
HWQ	Hawqa	1.48	208	eP	Pg	15 17 18.3	+0.6
HWQ				eS	Sg	15 17 37.8	+0.8
KRTD	Karatas-Adana	1.50	312	PN	Pb	15 17 16.5	-0.4
KRTS	Karatas	1.51	311	PN	Pb	15 17 16.4	-0.7
YURE	YUREGIR	1.55	323	PN	Pb	15 17 17.6	-0.2
YURE	YUREGIR	1.55	323	iP	Pb	15 17 17.6	-0.2
KAMA	Osmaniye	1.59	356	iP	Pb	15 17 18.6	0.0
KAMA				iS	Sg	15 17 40.4	-0.2
KAMA				IAML		15 17 45.0	
	comp=N,33nm,0.6s						
GAZ	Gaziantep	1.61	12	PN	Pg	15 17 20.2	0.0
CEYT	Ceyhan	1.65	329	PN	Pb	15 17 18.9	-0.5
HCB	Kahramanmara	1.75	3	iP	Pn	15 17 19.9	+0.6
AYKD	Aykdinkavak	1.82	0	iP	Pb	15 17 21.6	-0.7
GZT	Gaziantep	1.87	19	iP	Pb	15 17 23.2	0.0
GZT				iS	Sg	15 17 48.9	-0.4
GZT				IAML		15 17 56.0	
	comp=N,95nm,0.5s						
KMRS	Kahramanmaras	1.91	2	PN	Pb	15 17 23.3	-0.6
BHL	Bhannes	1.93	210	eP	Pb	15 17 24.4	+0.2
BHL				eS	Sb	15 17 48.8	+0.6
ANDN	Andirin	2.02	350	iP	Pn	15 17 22.6	-0.5
ANDN				iS	Sn	15 17 48.7	+0.5
DED	Mersin	2.11	311	iP	Pn	15 17 25.7	+1.4
DQRL	Deir Qamar	2.13	209	eP	Pb	15 17 27.2	-0.6
EREN	Erenkoy	2.14	269	PN	Pn	15 17 24.8	+0.2
AKO	Adana	2.16	330	iP	Pn	15 17 25.1	+0.2
KARA	Karaisali	2.18	320	PN	Pn	15 17 26.4	+1.3
MERS	Mersin	2.24	305	PN	Pn	15 17 27.4	+1.4
KIZK	Mersin	2.33	293	PN	Pn	15 17 28.6	+1.5
KIZK	Mersin	2.33	293	iP	Pb	15 17 29.2	-1.8
GULE	Gulek	2.35	317	iP	Pb	15 17 30.3	-1.1
GULE				iS	Sb	15 17 59.9	-0.5
GULE				IAML		15 18 08.0	
	comp=E,80nm,0.6s						
SHBL	Chebaa	2.40	202	eP	Pb	15 17 30.9	-1.5
SHBL				eS	Sb	15 17 59.9	-2.0
URFA	Urfa	2.46	41	PN	Pb	15 17 32.7	-0.7
CMRD	Camardi-Nigde	2.53	325	PN	Pn	15 17 30.9	+0.9
IKL	Isikli	2.61	285	PN	Pn	15 17 31.2	+0.2
KEBE	Keben-Mersin	2.64	290	PN	Pn	15 17 32.3	+0.8
AKKU	Akkuyu-Mersin	2.69	283	PN	Pn	15 17 32.8	+0.6
SARI	SarD1z-Kayseri	2.83	354	PN	Pn	15 17 36.4	+2.2
TEVE	Tevekalti-Mers	2.84	288	PN	Pn	15 17 35.1	+0.7
CSS	Mathiatis	2.90	259	PN	Pn	15 17 34.9	-0.2
BERE	Bereket-Mersin	2.99	286	PN	Pn	15 17 36.9	+0.4
MALT	Malatya	3.02	25	PN	Pb	15 17 39.7	-3.1
TEKE	Tekeli-Mersin	3.04	281	PN	Pn	15 17 37.5	+0.5
MMLI	Mount Malkishu	3.35	200	PN	Pn	15 17 42.1	+0.9

*IDC **05** 15:49:48.1±1.2, 3°.68N×82°.49W, h0km, mb3.9/6, mb1 4.2/7, mb1mx3.9/32, mbtmp4.0/7, ML4.6/1, MS3.4/5, Ms1 3.4/5, ms1mx2.9/29, Error ellipse: s-maj=70.7km s-min=21.4km az=57.0*

*NEIC **05** 15:49:51.3±1.1, 3°.4N±0°.1×82°.8W±0°.1, h25km±5km, mb4.5/12, Error ellipse: s-maj=17.9km s-min=13.5km az=222.0*

ISC 05 15:49:50.0±0.7, **3°.25N**±0°.08×**82°.78W**±0°.07, **h24**km, **n45**, σ**1s.85**/50, **mb4.4**/12, **South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAC1	Pacto, Paraso	4.97	127	eP	Pn	15 50 56.7	-6.6
PAC1				eS	Sn	15 51 57.0	-3.1
CUSE	Cuicocha Este	5.26	124	eP	Pn	15 51 06.4	-1.3
MALC	Bahia Malaga	5.48	82	eP	Pn	15 51 12.4	+2.2
MALC				eS	Sn	15 52 12.2	-0.4
BBAC	Balboa, Cauca	5.66	102	eP	Pn	15 51 13.4	+0.5
BBAC				eS	Sn	15 52 14.0	-3.2
POPC	Popayan, Colom	6.13	96	eP	Pn	15 51 20.2	+0.7
POPC				eS	Sn	15 52 25.6	-3.4
SOTA	Rioblanco	6.26	100	eP	Pn	15 51 23.2	+1.8
SOTA				eS	Sn	15 52 28.8	-3.7
PCON	Cinco Dias	6.44	98	eP	Pn	15 51 25.8	+1.9
PCON				eS	Sn	15 52 33.5	-3.5
YOTC	Yotoco, Valle	6.46	83	eP	Pn	15 51 25.2	+1.3
YOTC				eS	Sn	15 52 36.6	-0.3
BCIP	Isla Barro Col	6.56	26		Pn	15 51 26.6	+1.5
CBOC	Ciudad Bolivar	7.22	69	eP	Pn	15 51 35.9	+1.5
CBOC				eS	Sn	15 52 57.6	+1.8
JTS	Las Juntas de	7.32	343	Pn	Pn	15 51 32.7	-2.8
	10nm,0.3s,baz=149,slow=10,SNR=52						
JTS				Sn	Sn	15 52 53.6	-4.3
	baz=60,slow=22,SNR=0.9						
JTS	Las Juntas de	7.32	343		Pn	15 51 32.4	-3.2
ACON	Acoyapa	8.98	345	Pn	Pn	15 51 57.0	-1.3
ESPN	Las Esperanzas	9.01	350	Pn	Pn	15 51 58.0	-0.8
CSGN	Cosiguina Volc	10.76	334	Pn	Pn	15 52 24.5	+1.7
ATAH	Atahualpa	11.21	157	LR	LR	15 56 44.2	
	comp=Z,256nm,19.8s,baz=341,slow=36						
NNA	Nana	16.25	159	LR	LR	16 00 40.5	
	comp=Z,60nm,19.3s,baz=357,slow=39						
TEIG	Tepich	17.70	343	LR	LR	16 00 11.3	
	comp=Z,59nm,20.1s,baz=298,slow=36						
LPAZ	La Paz	24.22	144	P	P	15 55 09.4	+3.5
	1.3nm,0.7s,baz=326,slow=13,SNR=6.1						
LPAZ	La Paz	24.22	144	P	P	15 55 09.0	+3.2
ZAIG	Zacatecas	27.28	317	P	P	15 55 31.8	-1.4
ZAIG				IAmb	IAmb	15 55 32.4	
	comp=Z,4.0nm,0.4s						
SIV	San Ignacio	28.75	132	LR	LR	16 08 18.1	
	comp=Z,80nm,18.6s,baz=280,slow=38						
LVC	Limon Verde	29.06	153	LR	LR	16 08 38.4	
	comp=Z,121nm,18.2s,baz=284,slow=39						
TXAR	Lajitas Array	32.65	325	PcP	PcP	15 59 08.5	+2.2
	comp=Z,0.1nm,0.3s,baz=133,slow=4.0,SNR=3.5						
LCAR	Lake Charles	33.56	348	P	P	15 56 27.9	-0.3
LCAR				IAmb	IAmb	15 56 28.6	
	comp=Z,3.9nm,0.8s						
NV11	Mina Array Sit	47.61	322	P	P	15 58 25.4	+1.0
NV11				IAmb	IAmb	15 58 49.6	
	comp=Z,6.8nm,1.7s						
NVAR	Mina Array Bea	47.70	322	P	P	15 58 26.4	+1.2
	comp=Z,1.4nm,0.7s,baz=134,slow=7.0,SNR=11						
NVAR				PcP	PcP	15 59 54.6	+0.3
	comp=Z,0.4nm,0.7s,baz=165,slow=3.5,SNR=3.5						
NVAR	Mina Array Bea	47.70	322	P	P	15 58 26.0	+0.9
ULM	Lac du Bonnet	48.12	349	P	P	15 58 26.6	-1.4
	comp=Z,2.6nm,0.6s,baz=140,slow=9.0,SNR=4.7						
ULM	Lac du Bonnet	48.12	349	P	P	15 58 27.0	-1.0
ULM				IAmb	IAmb	15 59 43.8	
	comp=Z,15nm,1.8s						
YKA	Yellowknife Ar	63.65	344	P	P	16 00 18.9	-0.1
	comp=Z,0.7nm,0.8s,baz=138,slow=7.3,SNR=12						
YKA				PcP	PcP	16 00 55.3	+0.1
	comp=Z,0.4nm,0.7s,baz=141,slow=4.7,SNR=6.3						
BCAR	Beaver Creek A	73.48	336	P	P	16 01 21.1	+0.6
TULEG	Thule	73.63	3	P	P	16 01 21.1	+0.1
IL31		76.25	337	P	P	16 01 36.6	+0.3
ILAR	Eielson Array	76.25	337	P	P	16 01 36.6	+0.3
	comp=Z,0.5nm,0.7s,baz=107,slow=3.6,SNR=6.7						
ILAR	Eielson Array	76.25	337	P	P	16 01 36.3	-0.1
BMAR	Burnt Mountain	76.46	340	P	P	16 01 38.6	+1.0
RND	Reindeer	76.55	335	P	P	16 01 38.7	+0.5
RND				IAmb	IAmb	16 01 39.8	
	comp=Z,3.3nm,0.8s						
CCB	Clear Creek Bu	76.56	336	P	P	16 01 38.3	+0.2
BPAW	Bear Paw Mtn.	77.68	335	P	P	16 01 44.4	-0.1
BPAW				IAmb	IAmb	16 01 45.5	
	comp=Z,3.5nm,0.9s						
PPLA	Purkeypile	77.82	334	P	P	16 01 45.5	0.0
MLY	Manley	77.87	336	P	P	16 01 46.1	+0.6
MLY				IAmb	IAmb	16 01 48.5	
	comp=Z,12nm,2.0s						
IMAR	Indian Mountai	79.36	337	P	P	16 01 53.5	-0.2
TORD	Torodi Ar. Bea	83.89	77	P	P	16 02 19.0	+0.3
	comp=Z,1.9nm,1.1s,baz=292,slow=3.3,SNR=4.4						
TORD	Torodi Ar. Bea	83.89	77	P	P	16 02 19.0	+0.3

*IDC **05** 16:02:00.7±1.0, 0°.31N×126°.17E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.6/33, mbtmp3.8/7, ML3.0/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/34, Error ellipse: s-maj=43.5km s-min=18.0km az=69.0*

*NEIC **05** 16:02:01.7±1.1, 0°.3N±0°.1×126°.28E±0°.03, h10km±2km, mb4.1/11, Error ellipse: s-maj=18.3km s-min=5.3km az=185.0*

*DJA **05** 16:02:02.7±0.3, 0°N±3°×12°6E±°, h10km, M3.6/10, mb3.7/3, MLv3.5/10*

ISC 05 16:02:01.8±0.6, **0°.34N**±0°.06×**126°.33E**±0°.06, **h10**km, **n31**, σ**0s.82**/31, **mb4.0**/10, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.13	68	P	Pn	16 02 23.6	-0.1
TNTI				S	Sn	16 02 38.7	-0.6
TNTI	Ternate	1.13	68		Pn	16 02 23.6	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LBMI	Labuha	1.52	130	P	Pn	16 02 29.0	-0.2
LBMI				S	Sn	16 02 48.0	-1.1
KMSI	Cibinong	2.36	276	P	Pb	16 02 43.1	-1.3
SANI	Sanana	2.40	188	P	Pn	16 02 41.4	+0.2
SIJI	Sorong	5.08	104	Pn	Pn	16 03 18.9	+0.8
	0.5nm,0.3s,baz=270,slow=20,SNR=2.2						
TTSI	Tana Toraja	7.32	243	P	Pn	16 03 50.4	+1.5
	0.1nm12nm,1.4s						
SPSI	Sidrap Palu	7.82	237	P	Pn	16 03 57.4	+1.6
JAGI	Jajag, Banyuwa	14.96	234	P	P	16 05 38.4	-0.7
KNRA	Kununurra	16.09	172	P	P	16 05 52.4	+0.7
KNRA				IAmb	IAmb	16 06 05.0	
	comp=Z,48nm,1.4s						
WB0	Warramunga Arr	21.49	159	P	P	16 06 51.0	0.0
WRAB	Tennant Creek	21.63	159	P	P	16 06 52.0	-0.4
WRAB				IAmb	IAmb	16 07 03.2	
	comp=Z,7.7nm,1.1s						
WRA	Warramunga Arr	21.63	159	P	P	16 06 52.5	0.0
	comp=Z,1.6nm,0.7s,baz=340,slow=11,SNR=20						
WB2	Warramunga Arr	21.64	159	P	P	16 06 52.2	-0.3
WB2				IAmb	IAmb	16 07 35.5	
	comp=Z,8.7nm,1.2s						
WR0	Warramunga Arr	21.72	159	P	P	16 06 53.0	-0.4
WR0				IAmb	IAmb	16 07 22.4	
	comp=Z,13nm,1.6s						
PSA00	Pilbara Seismi	22.68	196	P	P	16 07 02.4	-1.3
AS31	Alice Springs	24.97	163	P	P	16 07 26.5	+0.7
ASAR	Alice Springs	24.97	163	P	P	16 07 26.9	+1.1
	comp=Z,1.2nm,0.4s,baz=343,slow=11,SNR=48						
ASAR	Alice Springs	24.97	163	P	P	16 07 25.8	0.0
HNR	Honiara	34.85	107	LR	LR	16 24 45.2	
	comp=Z,28nm,19.2s,baz=88,slow=39						
STKA	Stephens Creek	35.15	157	P	P	16 08 56.5	+0.6
	comp=Z,1.2nm,0.9s,baz=309,slow=14,SNR=1.4						
STKA	Stephens Creek	35.15	157	IAmb	IAmb	16 09 59.6	
	comp=Z,6.3nm,2.0s						
USRK	Ussuriysk Ar.	43.96	6	P	P	16 10 09.9	+0.8
PETK	Petropavlovsk-	58.71	22	P	P	16 12 01.0	+1.4
	comp=Z,1.0nm,0.5s,baz=182,slow=4.4,SNR=16						
PETK	Petropavlovsk-	58.71	22	P	P	16 12 00.8	+1.1
MK31	Makanchi Array	60.12	327	P	P	16 12 09.0	-0.6
MK31				IAmb	IAmb	16 13 44.0	
	comp=Z,1.0nm,1.0s						
MKAR	Makanchi Array	60.12	327	P	P	16 12 09.1	-0.5
	comp=Z,0.8nm,0.6s,baz=123,slow=7.8,SNR=11						
MKAR	Makanchi Array	60.12	327	P	P	16 12 08.7	-0.9
MAKZ	Makanchi	60.30	326	P	P	16 12 10.7	-0.1
ZALV	Zalesovo Beam	63.42	334	P	P	16 12 31.6	0.0
	comp=Z,0.5nm,0.3s,baz=134,slow=8.3,SNR=1.9						
ABKAR	Akbulak array	74.52	321	P	P	16 13 40.3	-0.5

*IDC **05** 16:02:42.7±6.1, 21°.44S×179°.16W, h611^{km}±69^{km}, mb2.8/8, mb1 3.1/8, mb1mx2.9/34, mbtmp3.7/8, Error ellipse: s-maj=71.1km s-min=25.6km az=153.0*

ISC 05 16:02:41.8±1.5**, 21°.4S**±0°.5×**179°.2W**±0°.3**, h602**^{km}**, n12,** σ**0^s.48**/12**, mb3.3**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.27	258	P	P	16 09 52.3	+0.3
	0.3nm,0.4s,baz=91,slow=7.4,SNR=1.8						
ASAR				PcP	PcP	16 11 27.3	+0.1
	0.5nm,0.7s,baz=116,slow=3.7,SNR=4.3						
WRA	Warramunga Arr	43.42	263	P	P	16 09 53.0	-0.2
	0.2nm,0.4s,baz=95,slow=7.8,SNR=6.5						
FITZ	Fitzroy Crossi	51.85	263	P	P	16 10 56.1	+0.1
	1.2nm,0.8s,baz=90,slow=10,SNR=1.5						
PETK	Petropavlovsk-	76.90	346	P	P	16 13 33.5	+0.6
	1.2nm,1.0s,baz=138,slow=6.9,SNR=2.1						
NVAR	Mina Array Bea	82.43	44	P	P	16 14 02.8	+0.3
	0.5nm,0.6s,baz=226,slow=8.0,SNR=4.8						
TXAR	Lajitas Array	88.46	58	P	P	16 14 32.0	+0.5
	0.5nm,0.9s,baz=212,slow=4.4,SNR=4.8						
ILAR	Eielson Array	89.46	13	P	P	16 14 34.4	-0.7
	0.3nm,0.7s,baz=215,slow=6.2,SNR=2.5						
PDAR	Pinedale Array	90.37	44	P	P	16 14 39.9	-0.4
	0.6nm,0.8s,baz=191,slow=2.4,SNR=4.9						
ARCES	ARCESS Array B	129.63	349	PKP	PKPdf	16 20 42.0	-0.6
	0.7nm,0.6s,baz=29,slow=2.8,SNR=7.0						
AKASG	Malin Array Be	143.29	330	PKP	PKPab	16 21 05.9	-0.8
	0.4nm,0.3s,baz=46,slow=4.4,SNR=6.3						
BRTR	Keskin Array B	146.65	311	PKPbc	PKPbc	16 21 17.1	-0.2
	0.6nm,0.7s,baz=48,slow=1.8,SNR=4.5						
GERES	GERESS Array B	150.78	342	PKPbc	PKPbc	16 21 27.2	+0.1
	0.6nm,0.6s,baz=42,slow=1.6,SNR=4.4						

*IDC **05** 16:04:06.3±1.1, 0°.27N×126°.03E, h0^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.6/32, mbtmp3.6/6, ML3.2/1, MS3.7/1, Ms1 3.7/1, ms1mx2.5/34, Error ellipse: s-maj=45.1km s-min=20.0km az=69.0*

*NEIC **05** 16:04:07.7±2.2, 0°.3N±0°.1×126°.26E±0°.07, h10^{km}±1^{km}, mb4.3/9, Error ellipse: s-maj=18.8km s-min=9.8km az=156.0*

*DJA **05** 16:04:07.4±0.4, 0°N±4°×12°6E±°, h10^{km}, M3.5/7, MLv3.5/7*

ISC 05 16:04:07.7±0.8**, 0°.21N**±0°.07×**126°.31E**±0°.05**, h10**^{km}**, n22,** σ**1^s.45**/20**, mb3.8**/7**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.20	62	P	Pb	16 04 29.2	-1.3
TNTI				S	Sb	16 04 44.1	-1.9
TNTI	Ternate	1.20	62	Pn	Pb	16 04 30.1	-0.4
LBMI	Labuha	1.46	125	P	Pn	16 04 34.6	+0.5
LBMI				S	Sn	16 04 52.7	-0.6
SANI	Sanana	2.27	188	P	Pn	16 04 45.5	+0.3
KMSI	Cibinong	2.36	279	P	Pn	16 04 47.7	+1.2
LUWI	Luwuk	3.75	251	Pn	Pn	16 05 06.4	+0.7
SIJI	Sorong	5.07	102	Pn	Pn	16 05 26.9	+3.0
	0.8nm,0.3s,baz=297,slow=18,SNR=2.8						
WB0	Warramunga Arr	21.38	159	P	P	16 08 56.3	+0.8
WB0				IAmb	IAmb	16 09 07.4	
	comp=Z,35nm,2.0s						
WRA	Warramunga Arr	21.52	159	P	P	16 08 58.4	+1.3
	comp=Z,1.0nm,0.5s,baz=333,slow=11,SNR=8.5						
WRA	Warramunga Arr	21.52	159	P	P	16 08 56.6	-0.5
WB2	Warramunga Arr	21.52	159	P	P	16 08 57.8	+0.6
WB2				IAmb	IAmb	16 09 01.6	
	comp=Z,24nm,1.9s						
PSA00	Pilbara Seismi	22.55	196	P	P	16 09 05.6	-2.6
TPUB	Ta-pu	23.61	347	P	P	16 09 18.9	-0.1
AS31	Alice Springs	24.85	163	P	P	16 09 32.7	+2.1
ASAR	Alice Springs	24.85	163	P	P	16 09 32.5	+1.9
	comp=Z,0.8nm,0.3s,baz=343,slow=11,SNR=19						
CTA	Charters Tower	28.08	137	LR	LR	16 24 26.7	
	comp=Z,134nm,18.1s,baz=148,slow=43						
FORT	Forrest	30.86	177	P	P	16 10 25.0	+0.8
SONM	Songino Array	50.50	343	P	P	16 13 06.0	-0.1
	comp=Z,0.3nm,0.5s,baz=158,slow=4.7,SNR=2.3						
SONM	Songino Array	50.50	343	IAmb	IAmb	16 13 10.4	
	comp=Z,2.0nm,1.6s						
PETK	Petropavlovsk-	58.83	22	P	P	16 14 06.5	+0.2
	comp=Z,0.7nm,0.6s,baz=193,slow=5.9,SNR=7.9						
MKAR	Makanchi Array	60.22	327	P	P	16 14 14.8	-1.3
	comp=Z,0.3nm,0.4s,baz=122,slow=7.6,SNR=6.2						
KMBO	Kilima Mbogo	89.06	269	P	P	16 17 02.1	-2.2

*IDC **05** 16:07:23.5±1.0, 19°.65N×99°.84E, h0^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.5/32, mbtmp3.6/6, Error ellipse: s-maj=25.5km s-min=13.4km az=110.0*

*NEIC **05** 16:07:26.2±1.5, 19°.57N±0°.07×99°.55E±0°.06, h10^{km}±1^{km}, mb4.0/3, Error ellipse: s-maj=12.2km s-min=10.1km az=181.0*

ISC 05 16:07:25.9±0.8**, 19°.55N**±0°.08×**99°.59E**±0°.09**, h10**^{km}**, n17,** σ**0^s.98**/13**, mb3.7**/8**, Thailand**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHTO	Chiang Mai	0.95	220		Pg	16 07 45.0	+0.7
CM31	Chiang Mai Arr	1.25	209		Pn	16 07 49.8	+0.3
CMAR	Chiang Mai Arr	1.25	209	Pg	Pn	16 07 50.4	+1.0
	561nm,0.3s,baz=29,slow=17,SNR=333						
CMAR				Lg	Lg	16 08 10.1	
	565nm,0.3s,baz=360,slow=31,SNR=18						
CMAR	Chiang Mai Arr	1.25	209		Pn	16 07 49.9	+0.5
PBKT	Sadao Pong	3.24	156		Pn	16 08 17.2	+0.4
SLVN	Son La	4.42	66	Pn	Pn	16 08 34.5	+1.3
SONM	Songino Array	28.75	10	P	P	16 13 23.5	-0.3
	0.3nm,0.5s,baz=202,slow=11,SNR=2.3						
KDJ	Kajisay	29.44	325	P	P	16 13 29.9	-0.2
KDJ				IAmb	IAmb	16 13 33.0	
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	30.65	336	P	P	16 13 38.6	-1.8
	comp=Z,1.0nm,0.8s,baz=150,slow=8.7,SNR=5.0						
MKAR	Makanchi Array	30.65	336	P	P	16 13 38.1	-2.3
KKAR	Karatay Array	33.89	320	P	P	16 14 09.4	+0.5
ZALV	Zalesovo Beam	36.16	345	P	P	16 14 25.9	-2.4
	comp=Z,0.3nm,0.3s,baz=133,slow=6.1,SNR=1.4						
BRVK	Borovoye	40.40	333	P	P	16 15 04.6	+0.6
BRVK				IAmb	IAmb	16 15 05.8	
	comp=Z,1.7nm,0.7s						
ABKAR	Akbulak array	43.36	322	P	P	16 15 26.1	-2.2
WRA	Warramunga Arr	51.96	137	P	P	16 16 33.2	-2.3
	comp=Z,0.5nm,0.8s,baz=324,slow=7.9,SNR=2.3						
ASAR	Alice Springs	54.45	141	P	P	16 16 52.5	-1.3
	comp=Z,0.2nm,0.6s,baz=320,slow=6.9,SNR=6.6						
GERES	GERESS Array B	72.88	316	P	P	16 18 55.6	+0.3
	comp=Z,0.5nm,0.7s,baz=77,slow=5.9,SNR=5.5						

*SOME **05** 16:15:58.2, 43°.93N×84°.18E, h10^{km}*

*NNC **05** 16:16:07.1±3.4, 43°.95N×83°.54E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=28.8km s-min=14.6km az=125.0*

ISC 05 16:15:52.5±3.2**, 43°.66N**±0°.10×**84°.2E**±0°.1**, h10**^{km}**, n15,** σ**1^s.64**/17**, 6C-7D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DJR	Jarkent	3.27	283	eP	Pg	16 16 56.3	+1.2
	8.0nm,0.1s						
DJR				eS	Sg	16 17 38.4	+1.0
	103nm,0.3s						
DJR	Jarkent	3.27	283	Pg	Pg	16 16 55.1	0.0
	7.1nm,0.2s						
DJR				Lg	Lg	16 17 38.4	
	102nm,0.1s						
MK31	Makanchi Array	3.42	337	Pg	Pg	16 16 58.4	+0.4
	4.5nm,0.3s,baz=149,slow=17,SNR=16						
MK31				⇑Lg	Lg	16 17 41.5	
	9.7nm,0.3s,baz=153,slow=27,SNR=9.6						
PDGK	Podgornoye	3.46	266	⇑Pn	Pb	16 16 56.1	+2.2
	11nm,0.5s						
PDGK				⇓Lg	Lg	16 17 42.8	
	38nm,0.5s						
MAKZ	Makanchi	3.52	334	⇓Pn	Pg	16 17 00.7	+0.7
	6.0nm,0.4s						
MAKZ				⇑Lg	Lg	16 17 43.8	
	19nm,0.5s						
KAPS	Kapalarasan	3.84	297	eP	Pg	16 17 06.1	0.0
	3.4nm,0.2s						
KAPS				eS	Sg	16 17 54.9	-0.9
	53nm,0.3s						
KAPS	Kapalarasan	3.84	297	Pg	Pb	16 17 00.4	0.0
	1.8nm,0.1s						
KAPS				Lg	Lg	16 17 47.5	
	21nm,0.5s						
TDK	Taldyqorghan	4.38	290	eP	Pg	16 17 17.0	+0.6
	14nm,0.1s						
TDK				eS	Sg	16 18 13.8	+0.7
	119nm,0.4s						
TDK	Taldyqorghan	4.38	290	Pg	Pg	16 17 13.6	-2.8
	43nm,0.3s						
TDK				Lg	Lg	16 18 09.5	
	122nm,0.4s						
MDOK	Medeo	5.25	267	Pg	Pg	16 17 31.5	-1.5
	4.9nm,0.6s						
MDOK				Lg	Lg	16 18 41.4	
	17nm,0.6s						
KUU	Kurty	5.71	275	Pg	Pg	16 17 39.6	-2.3
	1.2nm,0.1s						
KUU				Lg	Lg	16 18 54.3	
	20nm,0.2s						
TKM2	Tokmak 2	6.34	266	⇓Pn	Pb	16 17 37.3	-5.7
	2.9nm,0.7s						
TKM2				⇑Lg	Lg	16 19 14.7	
	7.8nm,0.7s						
AAK	Ala-Archa	7.19	265	⇑Pg	Pg	16 18 08.5	-1.6
	2.7nm,0.8s						
AAK				⇓Lg	Lg	16 19 41.8	
	8.9nm,1.1s						
KURBB	Kurchatov Arra	7.97	333	⇑Pg	Pg	16 18 22.0	-3.0
	2.7nm,1.1s						
KURBB				⇓Lg	Lg	16 20 04.0	
	18nm,0.6s						
KURK	Kurchatov	8.02	334	⇓Pg	Pg	16 18 25.1	-0.9
	1.4nm,0.7s						
KURK				⇓Lg	Lg	16 20 07.6	
	14nm,0.7s						

IDC 05 16:20:16.9±1.2**, 19°.73N**×**99°.75E, h0**^{km}**, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.3**/37**, mbtmp3.5**/4**, Error ellipse: s-maj=20.2km s-min=14.9km az=106.0, Thailand**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	1.48	211	Pg	Pn	16 20 44.5	-0.3
	260nm,0.3s,baz=23,slow=20,SNR=253						
CMAR				Lg	Lg	16 21 04.0	
	332nm,0.3s,baz=41,slow=34,SNR=11						
MKAR	Makanchi Array	30.55	336	P	P	16 26 32.5	+0.4
	0.2nm,0.5s,baz=147,slow=8.8,SNR=2.8						
ZALV	Zalesovo Beam	36.03	345	P	P	16 27 20.4	+0.7
	0.8nm,0.6s,baz=159,slow=9.3,SNR=1.7						
WRA	Warramunga Arr	51.99	137	P	P	16 29 27.5	-0.7
	0.4nm,0.7s,baz=326,slow=7.9,SNR=2.9						
ASAR	Alice Springs	54.49	141	P	P	16 29 45.9	-0.7
	0.3nm,0.7s,baz=322,slow=7.2,SNR=9.5						

*ATH **05** 16:25:39.8, 38°.29N×20°.42E, h10^{km}±1^{km}, ML2.6/3, Error ellipse: s-maj=2.1km s-min=0.7km az=245.0*

*THE **05** 16:25:40.1, 38°.30N×20°.43E, h9^{km}±1^{km}, ML2.7/8, Error ellipse: s-maj=1.6km s-min=0.4km az=262.0*

ISC 05 16:25:40.2±1.4**, 38°.29N**±0°.02×**20°.43E**±0°.04**, h9**^{km}±6^{km}**, n24,** σ**0^s.35**/45**, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KEF1	Kardakata, Kep	0.03	114	P	Pg	16 25 41.6	-0.3
KEF1				S	Sg	16 25 43.0	0.0
KEF4	Livadi, Kephal	0.03	191	P	Pg	16 25 41.6	-0.2
KEF4				S	Sg	16 25 43.1	+0.1
AGT1	Agia Thekli	0.06	223	P	Pg	16 25 41.7	-0.4
AGT1				S	Sg	16 25 43.4	0.0
	20µm,0.2s						
LXRA	Lixouri, Kepha	0.09	178	P	Pg	16 25 42.4	-0.1
LXRA				S	Sg	16 25 44.6	+0.4
KEF3	Kipouria, Keph	0.11	217	P	Pg	16 25 42.6	-0.2
KEF3				S	Sg	16 25 44.8	+0.2
CHV1	Chavriata, Kef	0.12	201	P	Pg	16 25 42.6	-0.2
CHV1				S	Sg	16 25 45.1	+0.4
	13µm,0.2s						
ARGA	Argostoli. Kep	0.12	162	P	Pg	16 25 42.5	-0.4
ARGA				S	Sg	16 25 45.2	+0.3
ARG2	Argostoli	0.12	159	P	Pg	16 25 43.1	+0.2
ARG2				S	Sg	16 25 45.1	+0.3
KEF2	Argostoli. Kep	0.13	161	P	Pg	16 25 43.0	-0.2
KEF2				S	Sg	16 25 45.5	+0.3
VSK1	VASILIKIADES	0.16	41	P	Pg	16 25 43.3	-0.3
VSK1				S	Sg	16 25 46.0	+0.1
	3µm,0.2s						
VLS	Valsamata	0.17	133	P	Pg	16 25 43.5	-0.3
VLS				S	Sg	16 25 46.6	+0.4
	4µm,0.1s						
VLS	Valsamata	0.17	133	P	Pg	16 25 43.5	-0.3
VLS				S	Sg	16 25 46.5	+0.3
VLS				AML	AML	16 25 46.5	
	comp=N,7830µm,0.2s						
VLS				AML	AML	16 25 47.2	
	comp=E,8185µm,0.1s						
FSK	Fiskardo	0.20	31	P	Pg	16 25 43.9	-0.3
FSK				S	Sg	16 25 47.6	+0.6
	comp=E,1µm,0.3s						
FSK	Fiskardo	0.20	31	P	Pg	16 25 43.9	-0.3
FSK				S	Sg	16 25 47.1	+0.1
FSK				AML	AML	16 25 47.8	
	comp=N,2988µm,0.4s						
FSK				AML	AML	16 25 47.9	
	comp=E,2929µm,0.2s						
KFL	Anninata	0.33	123	P	Pg	16 25 46.4	-0.4
KFL				S	Sg	16 25 51.4	+0.2
	comp=E,2µm,0.4s						
KFL	Anninata	0.33	123	P	Pg	16 25 46.4	-0.4
KFL				S	Sg	16 25 51.6	+0.4
KFL				AML	AML	16 25 52.5	
	comp=E,5742µm,0.3s						
KFL				AML	AML	16 25 54.9	
	comp=N,2058µm,0.6s						
EVGI	Lefkada island	0.37	28	P	Pg	16 25 47.3	-0.3
EVGI				S	Sg	16 25 53.2	+0.7
EVGI	Lefkada island	0.37	28	P	Pg	16 25 47.3	-0.3
EVGI				S	Sg	16 25 52.9	+0.5
MGNA	Meganis	0.46	38	P	Pg	16 25 49.1	0.0
MGNA				S	Sg	16 25 55.5	+0.3
LKD2	Lefkada island	0.53	19	P	Pg	16 25 50.4	0.0
LKD2				S	Sg	16 25 57.5	+0.1
	comp=N,115nm,0.6s						
LKD2	Lefkada island	0.53	19	P	Pg	16 25 50.1	-0.3
TSLK	Tsoukalades, L	0.56	18	P	Pg	16 25 50.5	-0.6
KRI1	kERI	0.70	154	P	Pg	16 25 53.1	-0.5
KRI1				S	Sb	16 26 04.4	+0.2
	comp=N,625nm,0.2s						
RLS	Riolos of Patr	0.85	106	P	Pg	16 25 55.9	-0.6

*IDC **05** 16:35:17.8±2.0, 24°.22N×122°.47E, h0^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.5/37, mbtmp3.6/5, MS3.1/6, Ms1 3.1/6, ms1mx2.7/47, Error ellipse: s-maj=169.4km s-min=20.3km az=65.0*

*TAP **05** 16:35:22.4, 24°.09N×122°.26E, h28^{km}, ML3.9, C*

*JMA **05** 16:35:22.4±0.1, 24°.01N×122°.25E, h28^{km}±3^{km}, M3.5*

ISC 05 16:35:21.3±1.0**, 24°.04N**±0°.02×**122°.25E**±0°.02**, h17**^{km}±7^{km}**, n143,** σ**0^s.96**/261**, mb3.5**/5**, MS3.2**/5**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.52	348	P	Pb	16 35 32.1	+0.2
	baz=338						
EOS1				S	Sb	16 35 39.2	+0.1
	baz=338						
HWA	Hwalien	0.59	264	eP	Pn	16 35 35.3	+0.4
	baz=259						
HWA				eS	Sn	16 35 44.0	-0.2
	baz=259						
TWD	Chiawan	0.59	274	i P	Pb	16 35 34.2	+0.9
	baz=269						
TWD				eS	Sb	16 35 43.6	+2.1
	baz=269						
ENA	Nanau	0.60	310	i P	Pg	16 35 33.5	+0.3
	baz=313						
ENA				S	Sb	16 35 42.6	+1.1
	baz=313						
NACB	Ninganchiao	0.61	282	P	Pb	16 35 34.5	+1.0
	baz=264						
NACB				eS	Sb	16 35 43.3	+1.4
	baz=264						
TWC	Suao	0.67	327	i P	Pg	16 35 34.1	-0.4
	baz=324						
TWC				eS	Sg	16 35 43.1	-0.3
	baz=324						
ETLH	Xiulin Townshi	0.72	283	P	Pb	16 35 36.4	+0.9
	baz=267						
ETLH				S	Sn	16 35 47.8	+0.3
	baz=267						
JYNG	Yonagunijimaku	0.76	57	P	Pb	16 35 36.7	+0.6
JYNG				S	Sb	16 35 46.7	+0.6
ESL	Shilin	0.78	253	i P	Pg	16 35 36.8	+0.3
	baz=243						
ESL				S	Sb	16 35 47.9	+1.2
	baz=243						
YOJ	Yonaguni jima	0.81	59	P	Pb	16 35 38.0	+0.9
	baz=60						
YOJ				S	Sn	16 35 49.9	+0.2
	baz=60						
YOJ	Yonaguni jima	0.81	59	P	Pb	16 35 37.7	+0.7
YOJ				S	Sb	16 35 48.4	+0.7
EGFH	Guangfu	0.84	244	i P	Pg	16 35 37.9	+0.3
	baz=231						
EGFH				S	Sb	16 35 49.5	+1.1
	baz=231						
ILA	Ilan	0.85	328	i P	Pb	16 35 38.2	+0.6
	baz=324						
ILA				S	Sb	16 35 50.3	+1.5
	baz=324						
TWE	Neicheng	0.86	322	i P	Pg	16 35 38.0	0.0
	baz=324						
TWE				S	Sb	16 35 49.7	+0.8
	baz=324						
ENTT	Nioudou	0.86	314	i P	Pb	16 35 38.5	+0.7
	baz=320						
ENTT				S	Sb	16 35 49.6	+0.6
	baz=320						
NDT	Datong Townshi	0.87	310	i P	Pb	16 35 39.0	+1.0
	baz=316						
NDT				eS	Sb	16 35 50.5	+1.1
	baz=316						
NNSB	Datong	0.88	296	P	Pb	16 35 38.9	+0.7
	baz=293						
NNSB				S	Sg	16 35 50.0	0.0
	baz=293						
NNSH	Datong	0.88	296	i P	Pb	16 35 38.9	+0.8
	baz=292						
NNSH				eS	Sb	16 35 51.0	+1.3
	baz=292						
NNS	Nan Shan	0.89	297	i P	Pb	16 35 39.0	+0.6
	baz=293						
NNS				S	Sb	16 35 51.5	+1.4
	baz=293						
NTC	Toucheng	0.89	335	P	Pb	16 35 38.9	+0.6
	baz=343						
NTC				S	Sb	16 35 50.4	+0.4
	baz=343						
SLBB	Yuanshan	0.90	322	i P	Pb	16 35 39.1	+0.6
	baz=318						
SLBB				S	Sb	16 35 51.5	+1.3
	baz=318						
WHF	Hehuan Shan	0.90	277	i P	Pg	16 35 39.2	+0.2
	baz=262						
WHF				S	Sb	16 35 51.7	+1.0
	baz=262						
HGSD	Ruisui	0.93	234	i P	Pg	16 35 39.0	-0.4
	baz=233						
CHGB	Renai	0.98	271	P	Pg	16 35 40.5	+0.1
	baz=257						
CHGB				S	Sg	16 35 53.4	+0.1
	baz=257						
OWD	Renai	0.98	265	i P	Pg	16 35 40.3	-0.1
	baz=263						
OWD				i S	Sg	16 35 52.7	-0.6
	baz=263						
NWLT	Wulai	1.00	317	i P	Pg	16 35 41.0	+0.3
	baz=314						
NWLT				eS	Sg	16 35 54.3	+0.5
	baz=314						
TIPB	Shuangxi	1.00	338	P	Pb	16 35 40.6	+0.4
	baz=334						
TIPB				S	Sb	16 35 52.7	-0.5
	baz=334						
EHY	Hungye	1.00	238	i P	Pb	16 35 40.2	0.0
	baz=237						
EHY				eS	Sg	16 35 54.9	+1.0
	baz=237						
YHNB	Yeheng	1.01	308	P	Pg	16 35 41.0	+0.1
	baz=294						
YHNB				eS	Sg	16 35 54.2	0.0
	baz=294						
TDCB	Techi	1.01	282	P	Pg	16 35 41.5	+0.4
	baz=269						
TDCB				S	Sb	16 35 54.8	+1.1
	baz=269						
NSK	Sanguang	1.02	308	i P	Pb	16 35 41.0	+0.3
	baz=305						
NSK				S	Sg	16 35 54.9	+0.2
	baz=305						
VWDT	VWDT	1.05	254	P	Pb	16 35 41.5	+0.4
	baz=242						
VWDT				S	Sg	16 35 55.8	+0.4
	baz=242						
YULB	Yu-li	1.08	233	P	Pb	16 35 41.6	0.0
	baz=247						
YULB				S	Sb	16 35 56.7	+1.1
	baz=247						
NWF	Wu-fen Shan	1.11	338	i P	Pb	16 35 42.1	+0.1
	baz=349						
NWF				S	Sb	16 35 56.3	+0.1
	baz=349						
WFSB	Wu-fen Shan	1.11	338	P	Pb	16 35 42.2	+0.1
	baz=349						
WFSB				S	Sb	16 35 56.4	+0.2
	baz=349						
TWA	Mucha	1.11	327	i P	Pg	16 35 43.0	+0.2
	baz=324						
TWA				S	Sg	16 35 57.3	-0.1
	baz=324						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NHDH	**Xindian Distri**	**1.13**	**325**	P	**Pg**	**16 35 43.5**	**+0.4**
	baz=333						
NHDH				S	**Sb**	**16 35 57.3**	**+0.6**
	baz=333						
TAP	**Taipei**	**1.20**	**326**	P	**Pn**	**16 35 43.7**	**+0.4**
	baz=323						
TAP				*e*S	**Sb**	**16 35 59.4**	**+0.6**
	baz=323						
DPDB	**Guoxing**	**1.21**	**270**	*i* P	**Pn**	**16 35 44.1**	**+0.6**
	baz=260						
DPDB				S	**Sb**	**16 36 00.1**	**+1.0**
	baz=260						
SSLB	**Suanglung**	**1.21**	**258**	P	**Pn**	**16 35 43.7**	**+0.2**
	baz=257						
SSLB				*e*S	**Sb**	**16 36 00.1**	**+1.0**
	baz=257						
WHP	**Taichung City**	**1.21**	**281**	*i* P	**Pg**	**16 35 45.2**	**+0.4**
	baz=269						
WHP				*e*S	**Sn**	**16 36 00.9**	**+1.2**
	baz=269						
FULB	**Fuli**	**1.21**	**226**	*i* P	**Pn**	**16 35 43.0**	**-0.5**
	baz=214						
FULB				S	**Sb**	**16 35 58.6**	**-0.7**
	baz=214						
WLTB	**Daxi**	**1.21**	**312**	*i* P	**Pb**	**16 35 44.3**	**+0.5**
	baz=297						
WLTB				S	**Sg**	**16 36 01.3**	**+0.7**
	baz=297						
CHKT	**Chengkung**	**1.24**	**221**	*i* P	**Pn**	**16 35 43.2**	**-0.7**
	baz=211						
CHKT				S	**Sb**	**16 35 58.2**	**-1.7**
	baz=211						
YM01	**YM01**	**1.26**	**331**	P	**Pb**	**16 35 45.1**	**+0.5**
	baz=344						
YM01				S	**Sb**	**16 36 00.2**	**-0.4**
	baz=344						
YM10	**YM10**	**1.27**	**331**	*i* P	**Pn**	**16 35 44.6**	**+0.2**
	baz=342						
YM10				S	**Sg**	**16 36 02.2**	**-0.3**
	baz=342						
LIOB	**Emei**	**1.27**	**298**	*i* P	**Pb**	**16 35 45.7**	**+0.8**
	baz=296						
LIOB				S	**Sg**	**16 36 02.3**	**-0.2**
	baz=296						
YM11	**YM11**	**1.27**	**331**	*i* P	**Pn**	**16 35 44.5**	**+0.1**
	baz=343						
YM11				*e*S	**Sb**	**16 36 00.9**	**-0.2**
	baz=343						
TYC	**Yuchr**	**1.28**	**264**	*i* P	**Pn**	**16 35 44.9**	**+0.5**
	baz=263						
TYC				*e*S	**Sb**	**16 36 00.9**	**-0.2**
	baz=263						
YM08	**YM08**	**1.29**	**332**	P	**Pn**	**16 35 44.8**	**+0.2**
	baz=343						
YM08				S	**Sb**	**16 36 01.7**	**+0.3**
	baz=343						
TWS1	**Kuangyinshan**	**1.29**	**325**	*i* P	**Pb**	**16 35 45.7**	**+0.4**
	baz=333						
TWS1				S	**Sg**	**16 36 02.9**	**-0.3**
	baz=333						
YM03	**YM03**	**1.30**	**331**	P	**Pn**	**16 35 45.1**	**+0.3**
	baz=342						
YM03				*e*S	**Sb**	**16 36 01.3**	**-0.5**
	baz=342						
YUS	**Yu-Shan**	**1.31**	**245**	*i* P	**Pn**	**16 35 45.8**	**+0.6**
	baz=244						
YUS				S	**Sb**	**16 36 01.9**	**-0.5**
	baz=244						
ANP	**Anpu**	**1.32**	**330**	*i* P	**Pn**	**16 35 46.0**	**+0.9**
	baz=328						
ANP				*e*S	**Sb**	**16 36 01.4**	**-0.9**
	baz=328						
WHYT	**Xinyi Township**	**1.32**	**255**	P	**Pg**	**16 35 47.0**	**+0.2**
	baz=243						
WHYT				S	**Sb**	**16 36 03.2**	**+0.8**
	baz=243						
NTST	**Danshui**	**1.33**	**327**	*i* P	**Pn**	**16 35 45.8**	**+0.7**
	baz=339						
NTST				*e*S	**Sb**	**16 36 02.7**	**+0.1**
	baz=339						
NCU	**National Centr**	**1.33**	**314**	P	**Pb**	**16 35 46.4**	**+0.5**
	baz=311						
NCU				S	**Sg**	**16 36 04.5**	**0.0**
	baz=311						
NCUH	**Zhongli**	**1.33**	**314**	P	**Pn**	**16 35 46.2**	**+1.0**
	baz=311						
NCUH				*e*S	**Sg**	**16 36 04.2**	**-0.3**
	baz=311						
TWY	**Chenhua**	**1.36**	**335**	*i* P	**Pb**	**16 35 47.1**	**+0.8**
	baz=332						
TWY				S	**Sg**	**16 36 05.0**	**-0.3**
	baz=332						
SBCB	**Hsinchu**	**1.37**	**303**	P	**Pb**	**16 35 46.9**	**+0.4**
	baz=300						
SBCB				*e*S	**Sn**	**16 36 04.2**	**+0.7**
	baz=300						
TWQ1	**Liyutan**	**1.38**	**283**	*i* P	**Pb**	**16 35 47.6**	**+1.0**
	baz=281						
TWQ1				S	**Sb**	**16 36 05.2**	**+1.1**
	baz=281						
IRIF	**Iriomote-Funau**	**1.39**	**78**	P	**Pn**	**16 35 46.9**	**+1.0**
IRIF				S	**Sn**	**16 36 04.7**	**+0.9**
HSN	**Hsinchu**	**1.39**	**303**	*e*P	**Pb**	**16 35 47.2**	**+0.4**
	baz=302						
HSN				S	**Sg**	**16 36 05.5**	**-0.6**
	baz=302						
NSY	**Sanyi**	**1.41**	**286**	*i* P	**Pg**	**16 35 48.7**	**+0.3**
	baz=283						
NSY				S	**Sg**	**16 36 06.2**	**-0.5**
	baz=283						
WJS	**Zhushan**	**1.41**	**261**	*i* P	**Pb**	**16 35 47.9**	**+0.8**
	baz=260						
WJS				S	**Sg**	**16 36 08.9**	**+2.2**
	baz=260						
ELDTW	**Lidau**	**1.41**	**233**	*i* P	**Pn**	**16 35 46.1**	**-0.3**
	baz=221						
ELDTW				*e*S	**Sn**	**16 36 04.0**	**-0.6**
	baz=221						
NMLH	**Miaoli**	**1.42**	**291**	*i* P	**Pn**	**16 35 47.5**	**+1.2**
	baz=288						
NMLH				*i* S	**Sg**	**16 36 06.6**	**-0.5**
	baz=288						
ALS	**Alishan**	**1.42**	**248**	P	**Pn**	**16 35 47.8**	**+1.1**
	baz=247						
ALS				S	**Sn**	**16 36 05.8**	**+0.6**
	baz=247						
HATJ	**Hateruma jima**	**1.43**	**89**	P	**Pn**	**16 35 47.4**	**+1.0**
HATJ				S	**Sn**	**16 36 05.6**	**+0.8**
TCU	**Taichung**	**1.44**	**274**	P	**Pg**	**16 35 48.9**	**-0.1**
	baz=273						
TCU				*i* S	**Sg**	**16 36 07.6**	**-0.2**
	baz=273						
WNT	**Mingjian**	**1.44**	**264**	*i* P	**Pb**	**16 35 48.2**	**+0.6**
	baz=262						
WNT				*i* S	**Sb**	**16 36 07.2**	**+1.5**
	baz=262						
PTSB	**Yuanli**	**1.46**	**286**	P	**Pb**	**16 35 49.1**	**+1.0**
	baz=284						
PTSB				S	**Sb**	**16 36 07.2**	**+0.7**
	baz=284						
WDJ	**Dajia District**	**1.50**	**282**	*e*P	**Pb**	**16 35 49.4**	**+0.8**
	baz=280						
WDJ				S	**Sg**	**16 36 09.4**	**-0.3**
	baz=280						
CHN5	**Tsauling**	**1.50**	**253**	*i* P	**Pb**	**16 35 49.6**	**+0.8**
	baz=252						
CHN5				S	**Sn**	**16 36 07.7**	**+0.9**
	baz=252						
TWH	**Lutao**	**1.50**	**208**	*e*P	**Pn**	**16 35 47.0**	**-0.5**
	baz=208						
TWH				S	**Sn**	**16 36 05.8**	**-0.9**
	baz=208						
WCHH	**Zhanghua**	**1.54**	**272**	P	**Pb**	**16 35 50.3**	**+0.9**
	baz=270						
WCHH				*i* S	**Sg**	**16 36 10.7**	**-0.4**
	baz=270						
WGK	**Gukeng**	**1.58**	**257**	P	**Pb**	**16 35 50.9**	**+0.8**
	baz=256						
WGK				S	**Sg**	**16 36 11.7**	**-0.7**
	baz=256						
PCYT	**Pengchaiyu**	**1.59**	**354**	*e*P	**Pn**	**16 35 48.2**	**-0.5**
	baz=338						
PCYT				*e*S	**Sn**	**16 36 10.1**	**+1.2**
	baz=338						
WDLH	**Douliu**	**1.60**	**258**	*i* P	**Pn**	**16 35 50.3**	**+1.5**
	baz=257						
WDLH				S	**Sb**	**16 36 11.9**	**+1.5**
	baz=257						
JKRS	**Kuro-shima**	**1.62**	**83**	P	**Pn**	**16 35 50.8**	**+1.6**
JKRS				S	**Sn**	**16 36 11.5**	**+1.8**
STYT	**Tauyuan**	**1.62**	**238**	*i* P	**Pn**	**16 35 50.4**	**+1.1**
	baz=237						
STYT				S	**Sn**	**16 36 11.5**	**+1.7**
	baz=237						
TWGBT	**Beinan**	**1.62**	**221**	P	**Pn**	**16 35 48.4**	**-0.8**
	baz=233						
TWGBT				*e*S	**Sn**	**16 36 10.5**	**+0.8**
	baz=233						
TWG	**Pinlang**	**1.63**	**222**	*i* P	**Pn**	**16 35 48.8**	**-0.4**
	baz=233						
TWG				S	**Sn**	**16 36 09.1**	**-0.7**
	baz=233						
TTN	**Taitung**	**1.63**	**218**	*e*S	**Sn**	**16 36 08.4**	**-1.5**
	baz=209						
TPUB	**Ta-pu**	**1.66**	**244**	P	**Pb**	**16 35 51.4**	**0.0**
	baz=244						
TPUB				*e*S	**Sn**	**16 36 11.6**	**+1.0**
	baz=244						
CHN4	**Tsaushan**	**1.66**	**246**	*i* P	**Pb**	**16 35 52.1**	**+0.6**
	baz=246						
CHN4				*e*S	**Sb**	**16 36 13.2**	**+1.0**
	baz=246						
WTP	**Ta-pu**	**1.69**	**242**	*i* P	**Pn**	**16 35 51.5**	**+1.3**
	baz=242						
WTP				S	**Sb**	**16 36 14.9**	**+1.7**
	baz=242						
RLNB	**Erlin**	**1.73**	**265**	P	**Pb**	**16 35 53.1**	**+0.4**
	baz=264						
RLNB				S	**Sb**	**16 36 15.1**	**+0.9**
	baz=264						
CHY	**Chiayi**	**1.75**	**252**	P	**Pb**	**16 35 53.6**	**+0.6**
	baz=252						
CHY				S	**Sb**	**16 36 15.9**	**+1.1**
	baz=252						
JIJ	**Ishigaki jima**	**1.76**	**79**	P	**Pn**	**16 35 51.6**	**+0.5**
JIJ				S	**Sn**	**16 36 13.6**	**+0.5**
TWK	**Hsinying**	**1.79**	**245**	*i* P	**Pb**	**16 35 53.8**	**+0.1**
	baz=244						
TWK				S	**Sn**	**16 36 15.6**	**+1.8**
	baz=244						
CHN1	**Nanshi**	**1.79**	**242**	*i* P	**Pb**	**16 35 53.9**	**+0.2**
	baz=242						
CHN1				*i* S	**Sb**	**16 36 16.7**	**+0.8**
	baz=242						
SGST	**Jiashian**	**1.80**	**238**	*i* P	**Pn**	**16 35 53.5**	**+1.9**
	baz=238						
SGST				*i* S	**Sb**	**16 36 17.1**	**+0.9**
	baz=238						
SNST	**Tainan City**	**1.80**	**243**	*i* P	**Pb**	**16 35 53.8**	**-0.1**
	baz=243						
SNST				S	**Sb**	**16 36 18.2**	**+2.0**
	baz=243						
SLGT	**Liugui**	**1.80**	**235**	P	**Pb**	**16 35 53.7**	**-0.2**
	baz=225						
SLGT				S	**Sb**	**16 36 17.1**	**+0.9**
	baz=225						
WTCT	**Ta-ch'eng**	**1.81**	**265**	*e*P	**Pb**	**16 35 53.9**	**-0.1**
	baz=277						
WTCT				S	**Sb**	**16 36 16.8**	**+0.5**
	baz=277						
ECL	**Taimali**	**1.87**	**220**	*i* P	**Pn**	**16 35 52.5**	**0.0**
	baz=230						
WLGB	**Puzi**	**1.87**	**253**	P	**Pn**	**16 35 54.4**	**+1.9**
	baz=252						
WLGB				S	**Sb**	**16 36 19.3**	**+1.2**
	baz=252						
WSF	**Szhu**	**1.90**	**258**	P	**Pb**	**16 35 55.0**	**-0.5**
	baz=257						
WSF				S	**Sb**	**16 36 19.7**	**+0.8**
	baz=257						
JISG	**Ishigakijimahi**	**1.96**	**74**	P	**Pn**	**16 35 54.4**	**+0.6**
JISG				S	**Sn**	**16 36 18.3**	**+0.3**
SSD	**Sandimen**	**1.97**	**229**	*i* P	**Pn**	**16 35 55.8**	**+1.9**
	baz=223						
SSD				*e*S	**Sn**	**16 36 19.8**	**+1.7**
	baz=223						
CHN3	**Shinhua**	**1.98**	**241**	P	**Pb**	**16 35 57.0**	**+0.1**
	baz=241						
CHN3				*e*S	**Sb**	**16 36 22.4**	**+1.2**
	baz=241						
CHN8	**Yiju**	**1.99**	**250**	*i* P	**Pn**	**16 35 55.5**	**+1.2**
	baz=249						
CHN8				*i* S	**Sb**	**16 36 21.5**	**-0.1**
	baz=249						
MASBT	**Mashibuluo**	**2.06**	**226**	P	**Pn**	**16 35 55.9**	**+0.8**
	baz=222						
MASBT				*e*S	**Sn**	**16 36 21.4**	**+0.9**
	baz=222						
TWM1	**Shoushan**	**2.07**	**234**	*i* P	**Pb**	**16 35 58.5**	**0.0**
	baz=234						
TWM1				*e*S	**Sb**	**16 36 25.1**	**+1.2**
	baz=234						
SCLT	**Jiali**	**2.07**	**246**	*e*S	**Sb**	**16 36 24.7**	**+0.7**
	baz=246						
SGLT	**Jiouru**	**2.08**	**231**	P	**Pb**	**16 35 59.2**	**+0.6**
	baz=220						
SGLT				*e*S	**Sn**	**16 36 23.4**	**+2.5**
	baz=220						
TAW	**Tawu**	**2.09**	**217**	*e*P	**Pn**	**16 35 56.2**	**+0.7**
	baz=218						
TAW				*e*S	**Sn**	**16 36 20.6**	**-0.6**
	baz=218						
EAST	**Anshuo**	**2.09**	**218**	*i* P	**Pn**	**16 35 56.2**	**+0.5**
	baz=219						
EAST				*e*S	**Sn**	**16 36 20.1**	**-1.2**
	baz=219						
LAY	**Lan-yu**	**2.10**	**198**	P	**Pn**	**16 35 54.9**	**-0.8**
	baz=207						
LAY				S	**Sn**	**16 36 19.2**	**-2.2**
	baz=207						
SNJT	**Kaohsiung City**	**2.17**	**234**	P	**Pn**	**16 35 59.4**	**+2.6**
	baz=235						
SNJT				*e*S	**Sb**	**16 36 27.8**	**+0.9**
	baz=235						
SSPT	**Xinbi**	**2.19**	**225**	P	**Pn**	**16 35 58.9**	**+2.0**
	baz=220						
SSPT				*e*S	**Sn**	**16 36 24.2**	**+0.6**
	baz=220						
SCZT	**Fangliau**	**2.24**	**222**	P	**Pn**	**16 36 00.1**	**+2.5**
	baz=218						
SCZT				*e*S	**Sn**	**16 36 25.4**	**+0.6**
	baz=218						
JTJ	**Tarama**	**2.32**	**75**	P	**Pn**	**16 36 00.9**	**+2.2**
JTJ				*e*S	**Sn**	**16 36 28.1**	**+1.2**
WLCH	**Liuqiu**	**2.41**	**226**	*e*P	**Pb**	**16 36 03.1**	**-1.0**
	baz=216						
WLCH				*e*S	**Sb**	**16 36 35.0**	**+1.5**
	baz=216						
HEN	**Hengchun**	**2.46**	**215**	*e*P	**Pn**	**16 36 02.2**	**+1.6**
	baz=216						
HEN				*e*S	**Sn**	**16 36 30.8**	**+0.5**
	baz=216						
TWKBT	**Hengchun**	**2.48**	**213**	P	**Pn**	**16 36 01.6**	**+0.7**
	baz=214						
TWKBT				*e*S	**Sn**	**16 36 30.5**	**-0.2**
	baz=214						
TWK1	**Hengchun**	**2.48**	**213**	P	**Pn**	**16 36 01.0**	**+0.1**
	baz=214						
TWK1				S	**Sn**	**16 36 31.4**	**+0.7**
	baz=214						
WDGT	**Dungji**	**2.50**	**252**	P	**Pn**	**16 36 00.4**	**-0.7**
	baz=241						
WDGT				S	**Sn**	**16 36 32.6**	**+1.4**
	baz=241						
PHUB	**P'eng-hu**	**2.50**	**258**	P	**Pn**	**16 36 02.8**	**+1.5**
	baz=272						
PHUB				S	**Sn**	**16 36 32.2**	**+0.7**
	baz=272						
PNG	**Penghu**	**2.51**	**260**	*i* P	**Pn**	**16 36 01.6**	**+0.3**
	baz=259						
PNG				S	**Sn**	**16 36 32.0**	**+0.5**
	baz=259						
PTTC	**Pingtan**	**2.68**	**303**	*e*P	**Pn**	**16 36 03.8**	**+0.2**
	baz=301						
PTTC				*e*S	**Sn**	**16 36 33.9**	**-1.8**
	baz=301						
VWUC	**VWUC**	**2.72**	**291**	P	**Pn**	**16 36 04.2**	**0.0**
	baz=289						
VWUC				*e*S	**Sn**	**16 36 35.7**	**-1.0**
	baz=289						
JMJ	**Miyako jima 2**	**2.88**	**74**	*e*P	**Pn**	**16 36 08.4**	**+1.9**
	baz=74						
MATB	**Ma-tsu**	**2.96**	**316**	*e*P	**Pn**	**16 36 07.7**	**+0.1**
	baz=313						
PTMZ	**Houxiangcun**	**3.01**	**290**	P	**Pn**	**16 36 08.9**	**+0.6**
	baz=288						
PTMZ				*e*S	**Sn**	**16 36 42.3**	**-1.8**
	baz=288						
LYJJ	**Jianjiangzhen**	**3.36**	**318**	*e*P	**Pn**	**16 36 13.4**	**+0.3**
	baz=317						
XPSS	**Dashiqiu**	**3.42**	**328**	P	**Pn**	**16 36 13.7**	**-0.2**
	baz=336						
KNM	**Kinmen**	**3.50**	**277**	*e*P	**Pn**	**16 36 18.2**	**+3.2**
	baz=274						
KNM				*e*S	**Sn**	**16 36 59.3**	**+3.3**
	baz=274						
KNMB	**Chin-men Tao**	**3.54**	**278**	P	**Pn**	**16 36 15.5**	**-0.1**
	baz=275						
KNMB				*e*S	**Sn**	**16 36 56.4**	**-0.7**
	baz=275						
MHZQ	**Yeshan**	**3.56**	**306**	*e*P	**Pn**	**16 36 15.6**	**-0.2**
	baz=304						
AXDP	**Jialang**	**3.99**	**283**	P	**Pn**	**16 36 22.4**	**+0.7**
	baz=270						
AXDP				*e*S	**Sn**	**16 37 08.3**	**+0.3**
	baz=270						
ZPLA	**Ao Xicun**	**4.11**	**269**	*e*S	**Sn**	**16 37 10.3**	**-0.9**
	baz=268						
KSRS	**Korea Array**	**14.22**	**19**	LR	LR	16 45 02.8	
	comp=Z,30nm,20.8s,baz=176,slow=42						
SONM	**Songino Array**	**26.88**	**336**	P	**P**	**16 40 60.0**	**-1.4**
	0.4nm,0.4s,baz=159,slow=10,SNR=1.8						
SONM				LR	LR	16 53 00.2	
	comp=Z,60nm,18.2s,baz=78,slow=40						
TLY	**Talaya**	**31.07**	**337**	LR	LR	16 53 23.3	
	comp=Z,25nm,20.4s,baz=137,slow=35						
MKAR	**Makanchi Array**	**39.11**	**316**	P	**P**	**16 42 47.3**	**-0.5**
	0.2nm,0.4s,baz=101,slow=10,SNR=4.3						
ZALV	**Zalesovo Beam**	**40.89**	**327**	P	**P**	**16 43 00.3**	**-2.1**
	0.5nm,0.4s,baz=139,slow=9.3,SNR=2.4						
WRA	**Warramunga Arr**	**45.28**	**164**	P	**P**	**16 43 37.6**	**-0.7**
	0.3nm,0.5s,baz=346,slow=8.6,SNR=7.3						
TIXI	**Tiksi**	**47.78**	**3**	LR	LR	17 06 41.3	
	comp=Z,23nm,19.0s,baz=210,slow=40						
ASAR	**Alice Springs**	**48.76**	**166**	P	**P**	**16 44 05.8**	**+0.4**
	0.9nm,1.1s,baz=353,slow=6.5,SNR=15						
GEYT	**Alibeck**	**55.70**	**301**	LR	LR	17 10 37.2	
	comp=Z,26nm,18.8s,baz=160,slow=38						
NOA	**NORSAR Array B**	**78.80**	**332**	LR	LR	17 24 41.3	
	comp=Z,17nm,18.4s,baz=210,slow=38						

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*IDC **05** 16:42:43.8±1.4, 2°.01S×128°.26E, h0km, mb3.2/3, mb1 3.3/5, mb1mx3.2/46, mbtmp3.2/5, ML3.0/2, Error ellipse: s-maj=31.1km s-min=25.0km az=65.0*
*DJA **05** 16:42:46.5±1.5, 2°S±3°×12°8E±°, h18km±15km, M3.1/8, MLv3.1/8*
ISC 05 16:42:47.9±0.9**, 2°.16S**±0°.07×**128°.24E**±0°.05**, h33km, n10, σ1s.04**/13**, mb3.4**/3**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**1.57**	**227**	P	**Pb**	**16 43 15.8**	**-0.5**
LBMI	**Labuha**	**1.68**	**334**	P	**Pn**	**16 43 15.3**	**+0.3**
LBMI				S	**Sn**	**16 43 35.3**	**-0.1**
SANI	**Sanana**	**2.25**	**273**	P	**Pn**	**16 43 22.8**	**-0.1**
SANI				S	**Sn**	**16 43 47.5**	**-2.0**
TNTI	**Ternate**	**3.04**	**343**	P	**Pn**	**16 43 33.6**	**-0.1**
SIJI	**Sorong**	**3.29**	**67**	Pn	**Pn**	**16 43 36.6**	**-0.5**
	5.7nm,0.3s,baz=243,slow=11,SNR=30						
SIJI				Sn	**Sn**	**16 44 13.7**	**-1.4**
	1.9nm,0.3s,baz=62,slow=19,SNR=9.2						
FAKI	**Fak Fak**	**4.08**	**101**	P	**Pn**	**16 43 47.8**	**-0.2**
WRA	**Warramunga Arr**	**18.66**	**162**	P	**Pn**	**16 47 04.1**	**+0.3**
	0.0nm,0.3s,baz=342,slow=11,SNR=1.8						
ASAR	**Alice Springs**	**22.08**	**166**	P	**P**	**16 47 42.2**	**+1.9**
	0.2nm,0.4s,baz=346,slow=12,SNR=6.9						
MKAR	**Makanchi Array**	**63.24**	**326**	P	**P**	**16 53 13.8**	**+0.6**
	0.2nm,0.5s,baz=116,slow=8.4,SNR=2.5						
KURBB	**Kurchatov Arra**	**67.49**	**328**	P	**P**	**16 53 40.5**	**-0.1**
	0.2nm,0.6s,baz=138,slow=6.8,SNR=2.9						

IDC 05 16:51:25.7±2.1**, 0°.44N**×**126°.46E, h0km, mb2.9**/3**, mb1 3.2**/3**, mb1mx3.0**/42**, mbtmp3.0**/3**, Error ellipse: s-maj=167.5km s-min=28.4km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.68**	**160**	P	P	16 56 17.2	-1.1
	0.2nm,0.7s,baz=338,slow=11,SNR=6.8						
ASAR	**Alice Springs**	**25.03**	**164**	P	P	16 56 52.4	+0.7
	0.2nm,0.5s,baz=344,slow=12,SNR=9.9						
MKAR	**Makanchi Array**	**60.11**	**326**	P	P	17 01 34.9	-0.1
	0.1nm,0.5s,baz=130,slow=5.5,SNR=1.7						

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*IDC **05** 16:58:30.2±1.4, 5°.99N×124°.98E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/39, mbtmp3.4/4, Error ellipse: s-maj=44.5km s-min=17.2km az=99.0*
*MAN **05** 16:58:35.7, 6°.53N×126°.42E, h21km, MS2.9*
ISC 05 16:58:34.1±2.1**, 6°.41N**±0°.07×**126°.6E**±0°.1**, h32km**±13km**, n11, σ1s.67**/15**, mb3.3**/4**, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.63**	**328**	*e*P	**Pb**	**16 58 45.7**	**-1.1**
MATI				*e*S	**Sn**	**16 58 55.0**	**-0.8**
DDMP	**Don Marcelino,**	**0.93**	**251**	*e*P	**Pb**	**16 58 51.2**	**-0.5**
DDMP				*e*S	**Sn**	**16 59 04.0**	**+0.9**
DAV	**Davao City (W)**	**1.20**	**303**	Pn	**Pn**	**16 58 55.2**	**+0.5**
	196nm,0.3s,baz=118,slow=2.8,SNR=8.6						
DAV				Sn	**Sn**	**16 59 12.0**	**+2.1**
	139nm,0.3s,baz=101,slow=24,SNR=15						
DMPH	**Davao City--Mi**	**1.27**	**302**⇑	*i*P	**Pn**	**16 58 55.1**	**-0.5**
KCP	**Kidapawan**	**1.61**	**292**⇓	*i*P	**Pn**	**16 58 59.8**	**-0.6**
KCP				*i* S	**Sb**	**16 59 25.2**	**+2.0**
SKMP	**Bagumbayan, Su**	**2.04**	**273**	*e*P	**Pn**	**16 59 06.4**	**+0.1**
SKMP				*e*S	**Sn**	**16 59 27.0**	**-3.6**
CGP	**Cagayan de Oro**	**2.77**	**317**⇑	*e*P	**Pn**	**16 59 16.8**	**+0.6**
CGP				*e*S	**Sn**	**16 59 48.3**	**-0.3**
FITZ	**Fitzroy Crossi**	**24.37**	**182**	P	**P**	**17 03 48.1**	**-1.3**
	1.1nm,0.7s,baz=8.1,slow=14,SNR=2.0						
WRA	**Warramunga Arr**	**27.27**	**164**	P	**P**	**17 04 17.6**	**+1.8**
	0.4nm,0.9s,baz=336,slow=11,SNR=1.4						
ASAR	**Alice Springs**	**30.73**	**167**	P	P	17 04 45.8	-0.7
	0.2nm,0.5s,baz=348,slow=7.5,SNR=8.2						
MKAR	**Makanchi Array**	**55.30**	**324**	P	P	17 08 01.1	-3.5
	0.2nm,0.5s,baz=122,slow=7.4,SNR=2.7						

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*IDC **05** 17:29:49.3±0.8, 67°.87N×162°.46W, h0km, mb3.7/15, mb1 3.9/17, mb1mx3.7/58, mbtmp3.7/17, ML3.5/2, MS2.8/4, Ms1 2.8/4, ms1mx2.5/55, Error ellipse: s-maj=25.6km s-min=12.8km az=17.0*
*AEIC **05** 17:29:50±1.5, 67°.71N±0°.05×162°.5W±0°.1, h14km±3km, ML3.5/24, mb3.9/5(NEIC), Error ellipse: s-maj=7.3km s-min=5.1km az=207.0*
*NEIC **05** 17:29:51.4±1.4, 67°.75N±0°.03×162°.5W±0°.1, h19km±4km, Error ellipse: s-maj=7.9km s-min=3.5km az=64.0*
ISC 05 17:29:50.1±0.5**, 67°.76N**±0°.05×**162°.42W**±0°.05**, h10km, n66, σ1s.23**/67**, mb3.9**/15**, MS2.9**/3**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.35**	**328**		**Pg**	**17 29 57.5**	**+0.5**
RDOG	**Red Dog Mine**	**0.35**	**328**		**Sb**	**17 30 03.7**	**-0.3**
ANM	**Nome**	**3.42**	**202**		**Pn**	**17 30 42.9**	**-0.6**
ANM					**Sn**	**17 31 23.6**	**-0.5**
IM03		**3.86**	**113**		**Pn**	**17 30 49.8**	**+0.4**
IM03					**Sn**	**17 31 34.5**	**-0.2**
IMAR	**Indian Mountai**	**3.86**	**113**		**Pn**	**17 30 49.2**	**-0.3**
IM05	**Indian Mountai**	**3.87**	**113**		**Pn**	**17 30 50.0**	**+0.4**
COLD	**Coldfoot**	**4.73**	**91**		**Pn**	**17 31 03.1**	**+1.7**
TOLK	**Toolik Lake Re**	**4.87**	**74**		**Pn**	**17 31 04.5**	**+1.0**
TOLK					**Sn**	**17 32 00.4**	**+0.6**
MLY	**Manley**	**5.43**	**115**		**Pn**	**17 31 11.6**	**+0.4**
GAMB	**Gambell**	**5.53**	**228**		**Pn**	**17 31 11.0**	**-1.4**
TT01	**Tatalina**	**5.56**	**148**		**Pn**	**17 31 13.0**	**+0.2**
BPAW	**Bear Paw Mtn.**	**5.94**	**123**		**Pn**	**17 31 18.8**	**+0.7**
NEA	**Nenana**	**6.28**	**114**		**Pn**	**17 31 23.6**	**+0.9**
KTH	**Kantishna Hill**	**6.35**	**126**		**Pn**	**17 31 24.8**	**+1.1**
MDM	**Murphy Dome**	**6.36**	**110**		**Pn**	**17 31 24.8**	**+1.1**
PPLA	**Purkeypile**	**6.49**	**134**		**Pn**	**17 31 26.8**	**+1.1**
TCOL	**CIGO, UAF Yank**	**6.54**	**109**		**Pn**	**17 31 28.4**	**+2.2**
COLA	**College**	**6.54**	**109**		**Pn**	**17 31 28.0**	**+1.8**
COLA	**College**	**6.54**	**109**	Pn	**Pn**	**17 31 26.3**	**+0.1**
TRF	**Thorofare Moun**	**6.62**	**125**		**Pn**	**17 31 28.7**	**+1.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CCB	**Clear Creek Bu**	**6.68**	**111**		**Pn**	**17 31 28.8**	**+0.6**
WRH	**Wood River Hil**	**6.68**	**113**		**Pn**	**17 31 28.3**	**+0.1**
BM03	**Burnt Mountain**	**6.82**	**85**		**Pn**	**17 31 30.7**	**+0.6**
BMAR	**Burnt Mountain**	**6.82**	**84**		**Pn**	**17 31 30.4**	**+0.2**
MCK	**McKinley**	**6.86**	**120**		**Pn**	**17 31 30.4**	**-0.3**
IL31		**6.94**	**108**		**Pn**	**17 31 31.9**	**+0.2**
ILAR	**Eielson Array**	**6.94**	**108**	Pn	**Pn**	**17 31 32.2**	**+0.5**
	4.0nm,0.3s,baz=302,slow=14,SNR=344						
ILAR				Sn	**Sn**	**17 32 49.0**	**-1.6**
	1.2nm,0.3s,baz=305,slow=24,SNR=9.4						
ILAR	**Eielson Array**	**6.94**	**108**		**Pn**	**17 31 31.8**	**0.0**
PRP	**Porcupine Dome**	**7.08**	**101**		**Pn**	**17 31 33.6**	**-0.1**
RND	**Reindeer**	**7.11**	**121**		**Pn**	**17 31 35.2**	**+1.0**
HDA	**Harding Lake**	**7.12**	**111**		**Pn**	**17 31 34.4**	**+0.2**
DHY	**Denali Highway**	**7.82**	**120**		**Pn**	**17 31 44.9**	**+0.9**
GHO	**Glory Hole Cre**	**8.31**	**130**		**Pn**	**17 31 50.8**	**+0.2**
DOT	**Dot Lake**	**8.60**	**110**		**Pn**	**17 31 54.7**	**+0.2**
MENT	**Mentasta**	**9.16**	**113**		**Pn**	**17 32 03.7**	**+1.4**
BCAR	**Beaver Creek A**	**9.77**	**109**		**Pn**	**17 32 10.5**	**-0.1**
EPYK	**Eagle Plains**	**10.09**	**86**		**Pn**	**17 32 15.1**	**+0.1**
INK	**Inuvik**	**10.79**	**74**	Pn	**Pn**	**17 32 22.8**	**-1.5**
	0.4nm,0.3s,baz=284,slow=8.5,SNR=13						
INK				Sn	**Sn**	**17 34 18.6**	**-6.3**
	0.3nm,0.3s,baz=126,slow=18,SNR=4.8						
INK				LR	LR	17 36 17.7	
	comp=Z,36nm,18.8s,baz=350,slow=36						
INK	**Inuvik**	**10.79**	**74**		**Pn**	**17 32 23.9**	**-0.4**
YAH	**Yahtse**	**11.64**	**120**	Pn	**Pn**	**17 32 32.6**	**-3.7**
BILL	**Bilibino**	**11.72**	**286**		**Pn**	**17 32 35.7**	**-1.4**
SEY	**Seymchan**	**19.09**	**277**	P	**Pn**	**17 34 14.3**	**+1.0**
	0.1nm,0.3s,baz=68,slow=9.6,SNR=5.5						
YKA	**Yellowknife Ar**	**20.33**	**82**	P	**P**	**17 34 25.8**	**-0.2**
	0.9nm,0.5s,baz=305,slow=10,SNR=15						
RES	**Resolute Bay**	**21.55**	**42**	P	**P**	**17 34 39.0**	**0.0**
	1.0nm,0.8s,baz=108,slow=12,SNR=1.9						
RES				LR	LR	17 44 06.1	
	comp=Z,45nm,19.1s,baz=114,slow=40						
RES	**Resolute Bay**	**21.55**	**42**	IAmb	IAmb	17 34 45.6	
	comp=Z,2.0nm,0.9s						
MA2	**Magadan**	**21.78**	**271**	LR	LR	17 43 30.0	
	comp=Z,24nm,20.5s,baz=27,slow=38						
TIXI	**Tiksi**	**22.95**	**311**	P	**P**	**17 34 54.2**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=77,slow=11,SNR=5.2						
TIXI	**Tiksi**	**22.95**	**311**	P	**P**	**17 34 53.6**	**-0.3**
TIXI				IAmb	IAmb	17 35 06.6	
	comp=Z,2.8nm,1.4s						
PETK	**Petropavlovsk-**	**23.95**	**252**	P	**P**	**17 35 04.1**	**0.0**
	comp=Z,0.5nm,0.7s,baz=56,slow=10.0,SNR=2.0						
NRIK	**Noril'sk**	**35.09**	**325**	P	**P**	**17 36 43.0**	**+0.2**
	comp=Z,2.5nm,0.5s,baz=79,slow=8.0,SNR=4.5						
PDAR	**Pinedale Array**	**37.36**	**105**	P	**P**	**17 37 04.0**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=331,slow=8.1,SNR=5.0						
PDAR				PcP	**PcP**	**17 39 21.9**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=316,slow=3.8,SNR=2.6						
NVAR	**Mina Array Bea**	**38.09**	**118**	P	**P**	**17 37 10.4**	**+1.5**
	comp=Z,1.0nm,0.8s,baz=308,slow=7.2,SNR=6.6						
KSRS	**Korea Array**	**48.30**	**268**	P	**P**	**17 38 31.8**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=36,slow=11,SNR=2.9						
ZALV	**Zalesovo Beam**	**48.79**	**314**	P	**P**	**17 38 34.6**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=18,slow=6.9,SNR=7.6						
ZALV	**Zalesovo Beam**	**48.79**	**314**	P	**P**	**17 38 34.1**	**-0.6**
TXAR	**Lajitas Array**	**51.46**	**107**	P	**P**	**17 38 56.2**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=335,slow=6.0,SNR=13						
TXAR	**Lajitas Array**	**51.46**	**107**	P	**P**	**17 38 56.0**	**+0.6**
KURK	**Kurchatov**	**53.37**	**316**	P	**P**	**17 39 09.0**	**-0.2**
KURK				IAmb	IAmb	17 39 09.7	
	comp=Z,2.2nm,0.7s						
KURBB	**Kurchatov Arra**	**53.48**	**316**	P	**P**	**17 39 09.6**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=26,slow=7.2,SNR=7.7						
MKAR	**Makanchi Array**	**55.93**	**311**	P	**P**	**17 39 27.0**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=42,slow=6.4,SNR=9.8						
AKASG	**Malin Array Be**	**61.54**	**352**	P	**P**	**17 40 06.7**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=8.4,slow=6.9,SNR=7.7						
AKASG	**Malin Array Be**	**61.54**	**352**	IAmb	IAmb	17 40 07.4	
	comp=Z,0.8nm,0.9s						
AAK	**Ala-Archa**	**61.92**	**316**	P	**P**	**17 40 09.8**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=175,slow=5.8,SNR=5.4						
AAK	**Ala-Archa**	**61.92**	**316**	IAmb	IAmb	17 40 11.1	
	comp=Z,1.9nm,0.8s						
ESDC	**Sonseca Array**	**71.66**	**17**	P	**P**	**17 41 12.0**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=352,slow=6.3,SNR=5.4						
BRTR	**Keskin Array B**	**72.15**	**347**	LR	LR	18 18 02.6	
	comp=Z,6.8nm,18.0s,baz=184,slow=40						

*IDC **05** 17:35:28.1±1.2, 19°.79N×99°.59E, h0^{km}, mb3.8/7, mb1 3.8/7, mb1mx3.4/51, mbtmp3.8/7, MS3.5/2, Ms1 3.5/2, ms1mx2.6/44, Error ellipse: s-maj=25.3km s-min=12.3km az=101.0*

ISC 05 17:35:28.3±0.8**, 19°.68N**±0°.06×**99°.72E**±0°.05**, h10^{km}, n17,** σ0^s.**82**/18**, mb3.7**/7**, Thailand**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAYA	**Payao**	**0.34**	**156**	P	**Pb**	**17 35 36.6**	**+0.1**
CMMT	**Chiang Mai**	**1.13**	**221**	P	**Pb**	**17 35 49.0**	**-1.0**
LAMP	**Lampang**	**1.15**	**184**	P	**Pn**	**17 35 50.9**	**+0.4**
PHRA	**Phrae**	**1.27**	**158**	P	**Pg**	**17 35 52.8**	**+0.1**
NANT	**Nan**	**1.27**	**133**	P	**Pb**	**17 35 51.6**	**-0.8**
CM09	**Chiang Mai Arr**	**1.41**	**210**	P	**Pg**	**17 35 55.0**	**-0.4**
CMAR	**Chiang Mai Arr**	**1.42**	**211**	Pg	**Pg**	**17 35 55.0**	**-0.5**
	328nm,0.3s,baz=17,slow=17,SNR=120						
CMAR				Lg	Lg	17 36 14.3	
	322nm,0.3s,baz=22,slow=19,SNR=32						
CMAR				LR	LR	17 36 16.6	
	comp=Z,389nm,19.9s,baz=216,slow=33						
PHIT	**Phitsanulok**	**2.56**	**165**	Pg	**Pg**	**17 36 17.1**	**-0.3**
PHIT				Pn	**Pn**	**17 36 10.7**	**+0.8**
NONG	**Nongkai**	**3.62**	**116**	Pg	**Pg**	**17 36 36.1**	**-1.6**
NONG				Pn	**Pn**	**17 36 25.6**	**+1.1**
LEM	**Lembang**	**27.46**	**163**	LR	LR	17 54 02.1	
	comp=Z,63nm,19.8s,baz=180,slow=40						
SONM	**Songino Array**	**28.61**	**9**	P	**P**	**17 41 25.4**	**+0.5**
	0.4nm,0.6s,baz=196,slow=9.0,SNR=2.0						
MKAR	**Makanchi Array**	**30.58**	**336**	P	**P**	**17 41 43.5**	**+1.2**
	0.7nm,0.6s,baz=148,slow=9.1,SNR=7.6						
AAK	**Ala-Archa**	**31.25**	**323**	P	**P**	**17 41 49.1**	**+0.6**
	0.7nm,0.4s,baz=119,slow=5.9,SNR=6.1						
KURBB	**Kurchatov Arra**	**35.15**	**336**	P	**P**	**17 42 21.5**	**-0.6**
	0.6nm,0.7s,baz=145,slow=9.2,SNR=4.6						
ZALV	**Zalesovo Beam**	**36.08**	**345**	P	**P**	**17 42 30.1**	**+0.1**
	0.6nm,0.3s,baz=145,slow=10,SNR=2.5						
BVAR	**Borovoye Array**	**40.27**	**333**	P	**P**	**17 43 04.4**	**-1.0**
	0.6nm,0.5s,baz=134,slow=8.3,SNR=7.4						
FINES	**FINESS Array B**	**65.10**	**329**	P	**P**	**17 46 08.6**	**-0.4**
	1.5nm,0.9s,baz=99,slow=8.6,SNR=1.6						
FINES				LR	LR	18 16 36.0	
	comp=Z,42nm,18.7s,baz=208,slow=38						

*IDC **05** 17:36:21.3±1.1, 23°.78S×175°.90W, h0^{km}, mb4.1/7, mb1 4.2/7, mb1mx3.9/47, mbtmp4.1/7, MS3.7/11, Ms1 3.7/11, ms1mx3.4/35, Error ellipse: s-maj=32.3km s-min=26.5km az=157.0*

*NEIC **05** 17:36:22.5±1.6, 23°.8S±0°.1×175°.8W±0°.2, h10^{km}±1^{km}, mb4.6/12, Error ellipse: s-maj=30.0km s-min=17.1km az=134.0*

ISC 05 17:36:22.7±0.9**, 23°.8S**±0°.2×**175°.9W**±0°.2**, h10^{km}, n33,** σ0^s.**68**/21**, mb4.4**/12**, MS3.7**/12**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**7.25**	**51**	Pn	Pn	17 38 03.2	-5.4
RAR	**Rarotonga**	**15.10**	**83**	LR	LR	17 45 58.5	
	comp=Z,143nm,18.3s,baz=302,slow=38						
DZM	**Mont Dzumac**	**16.38**	**272**	*e*LR	LR	17 44 03.3	
	comp=Z,282nm,22.4s						
DZM	**Mont Dzumac**	**16.38**	**272**	LR	LR	17 45 04.7	
	comp=Z,159nm,20.1s,baz=62,slow=32						
TBI	**Tubuai**	**24.20**	**94**	*e*LR	LR	17 47 23.2	
	comp=Z,199nm,28.2s						
PPT2	**Papeete2**	**25.34**	**81**	*e*LR	LR	17 47 40.2	
	comp=Z,265nm,28.0s						
PPT	**Papeete**	**25.34**	**81**	LR	LR	17 51 02.7	
	comp=Z,92nm,18.2s,baz=201,slow=35						
CTA	**Charters Tower**	**35.26**	**268**	P	**P**	**17 43 18.5**	**+0.7**
	4.2nm,0.3s,baz=93,slow=12,SNR=23						
CTAO	**Charters Tower**	**35.26**	**268**	P	**P**	**17 43 18.1**	**+0.3**
CTAO				IAmb	IAmb	17 43 28.1	
	comp=Z,11nm,1.3s						
KRVT	**Keravat (AS076**	**36.51**	**297**	LR	LR	17 56 51.9	
	comp=Z,81nm,18.6s,baz=145,slow=34						
TAOE	**Nuku Hiva Isla**	**37.22**	**73**	*e*LR	LR	17 53 04.7	
	comp=Z,88nm,26.1s						
STKA	**Stephens Creek**	**38.28**	**248**	P	**P**	**17 43 43.2**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=88,slow=10.0,SNR=3.9						
STKA				LR	LR	17 58 21.6	
	comp=Z,160nm,18.0s,baz=33,slow=34						
STKA	**Stephens Creek**	**38.28**	**248**	P	**P**	**17 43 43.6**	**+0.2**
AS31	**Alice Springs**	**45.78**	**260**	P	**P**	**17 44 43.8**	**-1.1**
ASAR	**Alice Springs**	**45.78**	**260**	P	**P**	**17 44 44.4**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=93,slow=7.2,SNR=22						
ASAR				LR	LR	18 03 15.7	
	comp=Z,99nm,18.4s,baz=116,slow=35						
WR0	**Warramunga Arr**	**46.00**	**265**	P	**P**	**17 44 46.9**	**+0.3**
WR0				IAmb	IAmb	17 45 00.7	
	comp=Z,8.9nm,1.5s						
WB2	**Warramunga Arr**	**46.17**	**265**	P	**P**	**17 44 47.3**	**-0.7**
WB2				IAmb	IAmb	17 44 51.0	
	comp=Z,4.0nm,1.0s						
WRAB	**Tennant Creek**	**46.18**	**265**	P	**P**	**17 44 46.9**	**-1.1**
WRAB				IAmb	IAmb	17 44 58.7	
	comp=Z,3.2nm,0.7s						
WB0	**Warramunga Arr**	**46.18**	**265**	P	**P**	**17 44 47.2**	**-0.8**
WB0				IAmb	IAmb	17 44 49.3	
	comp=Z,4.4nm,0.8s						
WRA	**Warramunga Arr**	**46.19**	**265**	P	**P**	**17 44 47.1**	**-0.9**
	comp=Z,1.9nm,0.7s,baz=102,slow=8.2,SNR=44						
WRA	**Warramunga Arr**	**46.19**	**265**	P	**P**	**17 44 46.9**	**-1.1**
KNRA	**Kununurra**	**52.47**	**268**	P	**P**	**17 45 36.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**54.60**	**264**	LR	LR	18 07 42.9	
	comp=Z,120nm,18.4s,baz=149,slow=34						
BATI	**Baumata**	**58.99**	**272**	LR	LR	18 10 25.9	
	comp=Z,203nm,18.9s,baz=108,slow=35						
MORW	**Morawa**	**60.46**	**249**	P	**P**	**17 46 32.9**	**0.0**
MORW				IAmb	IAmb	17 46 43.5	
	comp=Z,17nm,1.4s						
QSPA	**South Pole Qui**	**66.31**	**180**	P	**P**	**17 47 11.8**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=24,slow=1.1,SNR=12						
QSPA				LR	LR	18 10 03.0	
	comp=Z,81nm,21.0s,baz=70,slow=30						
QSPA	**South Pole Qui**	**66.31**	**180**	P	**P**	**17 47 11.7**	**+0.5**
QSPA				IAmb	IAmb	17 47 39.9	
	comp=Z,9.9nm,1.4s						
PMSA	**Palmer Station**	**77.51**	**156**	P	**P**	**17 48 17.9**	**-0.3**
PETK	**Petropavlovsk-**	**79.94**	**344**	P	**P**	**17 48 32.4**	**+0.8**
	comp=Z,2.3nm,0.9s,baz=116,slow=6.6,SNR=8.5						
PETK				LR	LR	18 18 53.2	
	comp=Z,35nm,19.2s,baz=67,slow=32						
PETK	**Petropavlovsk-**	**79.94**	**344**	P	**P**	**17 48 31.9**	**+0.3**
KSRS	**Korea Array**	**80.63**	**318**	LR	LR	18 19 38.6	
	comp=Z,34nm,18.9s,baz=140,slow=32						
TXAR	**Lajitas Array**	**87.19**	**56**	P	**P**	**17 49 09.3**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=209,slow=7.2,SNR=2.6						
AKASG	**Malin Array Be**	**146.82**	**330**	PKPbc	**PKPbc**	**17 56 04.1**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=42,slow=3.9,SNR=4.4						

WEL 05 17:40:28.6±0.7**, 34°S**±4°×**18°0E**±1°0**, h22^{km}**±5^{km}**, M4.6**/36**, mB5.2**/17**, ML4.9**/35**, MLv4.7**/36**, Mw(mB)4.6**/17**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.59**	**198**	P	Pb	17 41 27.5	-3.8
MXZ				S	Sn	17 42 08.6	+4.0
WMGZ	**Waiomatatini S**	**3.81**	**195**	P	Pn	17 41 30.1	+4.2
WMGZ				S	Sb	17 42 15.5	-5.2
HAZ	**Te Kaha**	**3.92**	**202**	P	Pn	17 41 30.8	+3.4
HAZ				S	Sn	17 42 16.7	+4.0
PUZ	**Puketiti**	**4.09**	**196**	P	Pn	17 41 32.6	+2.9
PUZ				S	Sn	17 42 19.7	+2.8
RUGZ	**Raukumara Rang**	**4.14**	**202**	P	Pn	17 41 33.5	+2.9
RUGZ				S	Sn	17 42 21.9	+3.4
CNGZ	**Carnagh Statio**	**4.49**	**195**	P	Pn	17 41 38.0	+2.7
EDRZ	**Edgecumbe**	**4.62**	**210**	P	Pn	17 41 40.3	+3.3
KARZ	**Kaharoa**	**4.76**	**215**	P	Pn	17 41 41.6	+2.6
OMRZ	**Omania**	**4.77**	**213**	P	Pn	17 41 42.7	+3.5
RIGZ	**Rimuhau**	**4.81**	**198**	P	Pn	17 41 42.7	+3.0
RIGZ				S	Sn	17 42 35.7	+1.0
RRRZ	**Republican Roa**	**4.91**	**210**	P	Pn	17 41 43.7	+2.7
MUGZ	**Murupara**	**4.92**	**208**	P	Pn	17 41 42.7	+1.5
MUGZ				S	Sn	17 42 38.4	+0.9
RTZ	**Ruatahuna**	**4.96**	**205**	P	Pn	17 41 42.6	+0.8
RTZ				S	Sn	17 42 37.6	-1.1
PRGZ	**Paritu Road**	**4.99**	**196**	P	Pn	17 41 43.3	+1.2
PRGZ				S	Sn	17 42 38.3	-0.7
SNGZ	**Shannon Statio**	**5.00**	**201**	P	Pn	17 41 43.4	+1.1
SNGZ				S	Sn	17 42 39.5	+0.1
HSRZ	**Hossack Road**	**5.00**	**213**	P	Pn	17 41 45.5	+3.2
PRRZ	**Plateau Road**	**5.09**	**210**	P	Pn	17 41 45.5	+2.0
KNZ	**Kokohu**	**5.13**	**198**	P	Pn	17 41 44.3	+0.3
KNZ				S	Sn	17 42 40.0	-2.5
ALRZ	**Allen Road**	**5.17**	**210**	P	Pn	17 41 46.2	+1.6
MHGZ	**Mahia Peninsul**	**5.20**	**195**	P	Pn	17 41 45.8	+0.8
MHGZ				S	Sn	17 42 40.1	-4.2
RAHZ	**Arahi**	**5.20**	**203**	P	Pn	17 41 45.7	+0.7
MTHZ	**Maungataniwha**	**5.23**	**205**	P	Pn	17 41 47.2	+1.8
GLKZ	**Green Lake**	**5.28**	**24**	P	Pn	17 41 45.8	-0.3
GLKZ				S	Sn	17 42 47.4	+1.1
WHHZ	**Waihua**	**5.30**	**201**	P	Pn	17 41 46.7	+0.3
KUTZ	**Kaahu Road**	**5.34**	**215**	P	Pn	17 41 49.5	+2.6
MRHZ	**Matea Rd**	**5.37**	**208**	P	Pn	17 41 48.4	+1.0
NMHZ	**Naumai**	**5.46**	**204**	P	Pn	17 41 49.4	+0.8
ARHZ	**Aropaoanui**	**5.55**	**202**	P	Pn	17 41 50.3	+0.5
HATZ	**Hinemaiaia**	**5.55**	**210**	P	Pn	17 41 50.5	+0.7
MCHZ	**McNeill Hill**	**5.81**	**203**	P	Pn	17 41 53.3	0.0
CKHZ	**Cape Kidnapper**	**5.89**	**200**	P	Pn	17 41 54.3	-0.1
KAHZ	**Kahuranaki**	**6.07**	**201**	P	Pn	17 41 56.1	-0.9
BHHZ	**Black Hill Sta**	**6.07**	**207**	P	Pn	17 41 56.0	-1.1
MOVZ	**Moawhango**	**6.12**	**210**	P	Pn	17 41 56.5	-1.3
PXZ	**Pawanui**	**6.29**	**200**	P	Pn	17 41 58.8	-1.2
PRHZ	**Porangahau**	**6.58**	**201**	P	Pn	17 42 02.5	-1.4
TSZ	**Takapari Road**	**6.61**	**206**	P	Pn	17 42 02.3	-2.1
BFZ	**Birch Farm**	**7.08**	**202**	P	Pn	17 42 08.2	-2.5
MRZ	**Mangatainoka R**	**7.28**	**205**	P	Pn	17 42 09.9	-3.6
HOWZ	**Holdsworth Sta**	**7.51**	**205**	P	Pn	17 42 12.2	-4.6
OGWZ	**Otaki Gorge**	**7.56**	**207**	P	Pn	17 42 12.9	-4.6
TMWZ	**Te Maipa**	**7.57**	**202**	P	Pn	17 42 13.7	-3.9
KIW	**Kapiti Island**	**7.70**	**208**	P	Pn	17 42 14.4	-4.9
CAW	**Cannon Point**	**7.85**	**206**	P	Pn	17 42 16.4	-5.0
TRWZ	**Traveller**	**7.90**	**202**	P	Pn	17 42 17.7	-4.4
MSWZ	**Moikau Station**	**8.06**	**204**	P	Pn	17 42 19.4	-4.9
BHW	**Baring Head**	**8.19**	**206**	P	Pn	17 42 20.7	-5.4
PLWZ	**Palliser**	**8.20**	**204**	P	Pn	17 42 21.2	-5.0

*NIED **05** 17:46:00, 36°.90N×143°.80E, h5^{km}, Mw3.5 Best double couple: $M_0$2.07000×10^{14} NP1:ϕ_s212.00000°, δ69.00000°, λ-85.00000°. NP2:ϕ_s19.00000°, δ22.00000°, λ-103.00000°.*

JMA 05 17:46:36.3±0.3**, 36°.94N**×**143°.78E, h53^{km}, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.29**	**307**	P	Pn	17 47 12.5	+0.9
JIKH				S	Sn	17 47 39.2	+0.6
JFK	**Kawauchi**	**2.36**	**281**	P	Pn	17 47 13.6	+1.0
JFK				*e*S	Sn	17 47 41.4	+1.0
ONAJ	**Iwakimizuishiy**	**2.39**	**275**	S	Sn	17 47 42.4	+1.2
JMST	**Minamisoumatoc**	**2.44**	**290**	P	Pn	17 47 14.6	+1.0
JMST				*e*S	Sn	17 47 42.9	+0.7
JIO	**Ouri**	**2.45**	**309**	P	Pn	17 47 14.8	+1.0
JIO				S	Sn	17 47 42.8	+0.3
JFT	**Otama**	**2.81**	**283**	P	Pn	17 47 20.7	+2.0
JFT				*e*S	Sn	17 47 53.5	+2.1
JMK	**Ichinoseki**	**2.85**	**316**	P	Pn	17 47 20.2	+0.9
JOM	**Ohasama**	**3.20**	**323**	P	Pn	17 47 25.3	+1.2
JOM				*e*S	Sn	17 48 01.0	0.0
BSO1	**Boso 1**	**3.22**	**226**	P	Pn	17 47 24.4	+0.5
JYK	**Kaneyama**	**3.35**	**307**	P	Pn	17 47 28.2	+2.1
JAG	**Ashikaga**	**3.52**	**263**	P	Pn	17 47 29.9	+1.5
JAG				S	Sn	17 48 08.7	-0.1
JRY	**Ryogami san**	**4.04**	**258**	P	Pn	17 47 36.8	+1.2
JRY				S	Sn	17 48 21.8	+0.2
JOD2	**Odawara 2**	**4.15**	**248**	P	Pn	17 47 38.2	+1.0
JOD2				*e*S	Sn	17 48 24.3	-0.1
JHJ2	**Mitsune**	**5.02**	**222**	P	Pn	17 47 49.2	+0.2
JKB	**Kayabe**	**5.38**	**338**	*e*S	Sn	17 48 52.5	-2.0
JCH	**Churui**	**5.68**	**357**	P	Pn	17 47 57.1	-0.9
JCH				*e*S	Sn	17 48 57.1	-4.7
NEM2	**Nemuro 2**	**6.59**	**13**	P	Pn	17 48 07.5	-3.0
JTKR	**Abashiri--Toko**	**7.02**	**1**	P	Pn	17 48 15.6	-0.8
JTKR				*e*S	Sn	17 49 30.0	-4.9

*IDC **05** 17:50:38.0±1.1, 1°.05S×127°.24E, h0^{km}, mb3.7/5, mb1 3.9/8, mb1mx3.6/40, mbtmp3.8/8, ML3.7/3, Error ellipse: s-maj=27.7km s-min=18.7km az=63.0*

*NEIC **05** 17:50:40.9±2.4, 1°.05S±0°.05×127°.21E±0°.07, h25^{km}±5^{km}, mb4.3/14, Error ellipse: s-maj=10.7km s-min=6.9km az=86.0*

*DJA **05** 17:50:40.2±0.2, 1°S±2°×12°7E±°, h10^{km}, M4.0/16, mb4.2/10, mB5.1/2, MLv3.8/16, Mw(mB)4.5/2*

ISC 05 17:50:39.8±1.4**, 1°.06S**±0°.04×**127°.27E**±0°.05**, h13^{km}**±10^{km}**, n60,** σ**1^s.30**/65**, mb4.4**/8**, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.48**	**28**	P	**Pg**	**17 50 49.6**	**+0.4**
LBMI				S	**Sg**	**17 50 56.4**	**+0.8**
SANI	**Sanana**	**1.62**	**233**	P	**Pn**	**17 51 06.6**	**-1.5**
SANI				S	**Sb**	**17 51 30.9**	**+0.9**
TNTI	**Ternate**	**1.82**	**3**	P	**Pn**	**17 51 10.7**	**-0.2**
TNTI				S	**Sb**	**17 51 34.8**	**-1.0**
TNTI	**Ternate**	**1.82**	**3**		**Pn**	**17 51 10.4**	**-0.5**
NLAI	**Namlea**	**2.17**	**185**	P	**Pn**	**17 51 16.2**	**+0.5**
NLAI				S	**Sn**	**17 51 42.8**	**+0.2**
AAI	**Ambon**	**2.77**	**161**	P	**Pn**	**17 51 25.4**	**+1.5**
MSAI	**Masohi**	**2.81**	**144**	P	**Pb**	**17 51 28.3**	**-1.6**
MSAI				S	**Sb**	**17 52 02.8**	**-1.5**
KMSI	**Cibinong**	**3.67**	**296**	P	**Pn**	**17 51 36.6**	**+0.2**
KMSI				S	**Sn**	**17 52 20.5**	**+0.9**
SIJI	**Sorong**	**4.00**	**87**	Pn	**Pn**	**17 51 42.3**	**+1.4**
	6.5nm,0.3s,baz=228,slow=9.5,SNR=28						
SIJI				Sn	**Sn**	**17 52 30.5**	**+2.8**
	0.7nm,0.3s,baz=37,slow=20,SNR=1.0						
LUWI	**Luwuk**	**4.50**	**270**	P	**Pn**	**17 51 48.0**	**+0.2**
LUWI	**Luwuk**	**4.50**	**270**	Pn	**Pn**	**17 51 46.5**	**-1.3**
FAKI	**Fak Fak**	**5.30**	**110**	P	**Pn**	**17 52 00.5**	**+1.6**
	0.1nm26nm,0.6s						
FAKI	**Fak Fak**	**5.30**	**110**	Pn	**Pn**	**17 51 58.9**	**0.0**
MRSI	**Marisa**	**5.55**	**286**	P	**Pn**	**17 52 02.8**	**+0.6**
	0.1nm13nm,0.7s						
APSI	**Ampana**	**5.63**	**271**	P	**Pn**	**17 52 04.0**	**+0.7**
MPSI	**Mapaga**	**7.50**	**281**	P	**Pn**	**17 52 28.8**	**-0.3**
TTSI	**Tana Toraja**	**7.71**	**255**	P	**Pn**	**17 52 32.0**	**+0.1**
	0.1nm12nm,0.5s						
BNSI	**Bone**	**7.89**	**245**	P	**Pn**	**17 52 35.7**	**+1.3**
	0.1nm11nm,1.1s						
SPSI	**Sidrap Palu**	**8.03**	**249**	P	**Pn**	**17 52 37.7**	**+1.3**
	658nm53nm,0.6s						
BKSI	**Bulukumba**	**8.30**	**239**	P	**Pn**	**17 52 42.2**	**+2.2**
	16nm,0.6s						
KAPI	**Kappang**	**8.48**	**242**	Pn	**Pn**	**17 52 42.9**	**+0.5**
	2.3nm,0.3s,baz=25,slow=3.2,SNR=6.8						
KAPI	**Kappang**	**8.48**	**242**		**Pn**	**17 52 42.8**	**+0.3**
EDFI	**Ende, Flores**	**9.45**	**216**	P	**Pn**	**17 52 56.9**	**+1.0**
	5.7nm,0.9s						
MTN	**Manton Dam**	**12.32**	**162**	Pn	**Pn**	**17 53 33.9**	**-1.2**
KNRA	**Kununurra**	**14.60**	**174**	Pn	**Pn**	**17 54 07.6**	**+1.3**
FITZ	**Fitzroy Crossi**	**17.01**	**185**	P	**Pn**	**17 54 38.5**	**+0.9**
	0.1nm,0.3s,baz=11,slow=16,SNR=1.5						
WB0	**Warramunga Arr**	**19.86**	**160**	P	**P**	**17 55 07.1**	**-3.8**
WRA	**Warramunga Arr**	**20.00**	**160**	P	**P**	**17 55 10.9**	**-1.5**
	0.8nm,0.5s,baz=341,slow=12,SNR=23						
WRA	**Warramunga Arr**	**20.00**	**160**	IAmb	IAmb	17 55 17.3	
	comp=Z,0.1nm,0.8s						
WB2	**Warramunga Arr**	**20.00**	**160**	P	**P**	**17 55 10.4**	**-2.1**
WB2				IAmb	IAmb	17 55 10.9	
	comp=Z,26nm,1.9s						
WR0	**Warramunga Arr**	**20.09**	**160**	P	**P**	**17 55 11.8**	**-1.5**
WR0				IAmb	IAmb	17 55 37.7	
	comp=Z,21nm,1.9s						
COEN	**Coen**	**20.29**	**130**	P	**P**	**17 55 15.4**	**-0.2**
AS31	**Alice Springs**	**23.37**	**165**	P	**P**	**17 55 48.2**	**-0.2**
ASAR	**Alice Springs**	**23.38**	**165**	P	**P**	**17 55 47.5**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=343,slow=11,SNR=20						
ASAR	**Alice Springs**	**23.38**	**165**	P	**P**	**17 55 47.7**	**-0.8**
STKA	**Stephens Creek**	**33.50**	**158**	P	**P**	**17 57 21.4**	**+2.1**
	comp=Z,0.7nm,0.6s,baz=359,slow=8.9,SNR=4.5						
STKA	**Stephens Creek**	**33.50**	**158**	P	**P**	**17 57 20.1**	**+0.9**
STKA				IAmb	IAmb	17 57 38.5	
	comp=Z,7.9nm,1.9s						
TAPN	**Taplejung**	**47.38**	**310**	*e*P	**P**	**17 59 14.8**	**+0.4**
ODAN	**Odare**	**47.38**	**309**	*e*P	**P**	**17 59 14.8**	**+0.4**
	comp=Z,7.3nm,0.8s						
RAMN	**Ramite**	**48.04**	**309**	*e*P	**P**	**17 59 20.3**	**+0.8**
	comp=Z,13nm,0.7s						
JIRN	**Jiri**	**48.70**	**309**	*e*P	**P**	**17 59 25.4**	**+0.6**
	comp=Z,10nm,0.7s						
GUN	**Gumba**	**49.06**	**309**	*e*P	**P**	**17 59 28.5**	**+1.0**
PKI	**Pulchoki**	**49.27**	**309**	*e*P	**P**	**17 59 29.1**	**0.0**
PKIN	**Phulchoki**	**49.28**	**309**	*e*P	**P**	**17 59 29.3**	**+0.2**
KKN	**Kakani**	**49.47**	**309**	*e*P	**P**	**17 59 30.7**	**+0.2**
	comp=Z,15nm,1.1s						
DMN	**Daman**	**49.52**	**308**	*e*P	**P**	**17 59 31.2**	**+0.3**
GKN	**Gorkha**	**50.07**	**309**	*e*P	**P**	**17 59 36.0**	**+1.0**
KOLN	**Koldanda**	**50.78**	**308**	*e*P	**P**	**17 59 41.2**	**+0.8**
	comp=Z,11nm,0.6s						
DANN	**Dangsing**	**50.92**	**309**	*e*P	**P**	**17 59 42.5**	**+0.9**
	comp=Z,19nm,0.7s						
SONM	**Songino Array**	**51.99**	**342**	P	**P**	**17 59 49.1**	**0.0**
	comp=Z,0.4nm,0.6s,baz=144,slow=5.4,SNR=2.1						
SONM	**Songino Array**	**51.99**	**342**	IAmb	IAmb	17 59 54.7	
	comp=Z,0.6nm,0.7s						
TLY	**Talaya**	**56.23**	**343**	P	**P**	**18 00 17.2**	**-2.6**
MK31	**Makanchi Array**	**61.80**	**327**	P	**P**	**18 00 57.5**	**-1.0**
MK31				IAmb	IAmb	18 01 02.1	
	comp=Z,4.2nm,1.6s						
MKAR	**Makanchi Array**	**61.80**	**327**	P	**P**	**18 00 58.2**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=115,slow=7.8,SNR=43						
MKAR	**Makanchi Array**	**61.80**	**327**	P	**P**	**18 00 57.9**	**-0.6**
KSH	**Kashi**	**61.84**	**317**	P	**P**	**18 01 03.3**	**+4.2**
KSH				pP	pwP	18 01 06.6	+0.2
KSH				sP	sP	18 01 09.0	+4.9
KSH				pmax	pmax		
	comp=Z,12nm,0.8s						
KSH				pmax	pmax		
	comp=Z,380nm,5.5s						
MAKZ	**Makanchi**	**61.98**	**326**	P	**P**	**18 00 60.0**	**+0.2**
MAKZ				IAmb	IAmb	18 02 42.0	
	comp=Z,2.5nm,0.6s						
YAK	**Yakutsk**	**62.95**	**1**	P	**P**	**18 01 05.5**	**-0.4**
KURK	**Kurchatov**	**66.06**	**329**	P	**P**	**18 01 25.8**	**-0.7**
KURK				IAmb	IAmb	18 01 31.5	
	comp=Z,2.3nm,0.6s						
ABKAR	**Akbulak array**	**76.20**	**321**	P	**P**	**18 02 27.5**	**-0.4**

*WEL **05** 17:57:21.0±0.4, 35°S±5°×18°0E±1°1, h151^{km}±8^{km}, M4.3/22, mB4.5/2, ML4.5/10, MLv4.3/22, Mw(mB)3.7/2*

*NEIC **05** 17:57:26.0±1.3, 35°.4S±0°.2×180°.0W±0°.2, h154^{km}±12^{km}, mb4.4/10, Error ellipse: s-maj=40.5km s-min=11.1km az=136.0*

*IDC **05** 17:57:25.6±5.4, 35°.27S×179°.87E, h143^{km}±48^{km}, mb3.9/5, mb1 4.0/6, mb1mx3.6/38, mbtmp4.3/6, Error ellipse: s-maj=55.6km s-min=33.4km az=9.0*

ISC 05 17:57:25.9±1.0**, 35°.27S**±0°.08×**180°.0E**±0°.1**, h150^{km}, n61,** σ**1^s.48**/74**, mb4.4**/10**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.65**	**210**	Pn	**Pn**	**17 58 07.9**	**-0.8**
MXZ	**Matakaoa Point**	**2.65**	**210**	P	**Pn**	**17 58 08.4**	**-0.3**
MXZ				S	**Sn**	**17 58 42.7**	**+0.8**
WMGZ	**Waiomatatini S**	**2.83**	**206**	P	**Pn**	**17 58 11.8**	**+0.7**
WMGZ				S	**Sn**	**17 58 49.9**	**+3.9**
PKGZ	**Pakihiroa**	**3.02**	**210**	P	**Pn**	**17 58 13.7**	**+0.2**
PKGZ				S	**Sn**	**17 58 52.7**	**+2.3**
HAZ	**Te Kaha**	**3.04**	**215**	P	**Pn**	**17 58 13.8**	**+0.2**
HAZ				S	**Sn**	**17 58 53.7**	**+3.1**
PUZ	**Puketiti**	**3.11**	**206**	P	**Pn**	**17 58 14.7**	**+0.1**
PUZ				S	**Sn**	**17 58 55.0**	**+2.6**
RUGZ	**Raukumara Rang**	**3.25**	**214**	P	**Pn**	**17 58 17.1**	**+0.5**
RUGZ				S	**Sn**	**17 58 59.8**	**+4.0**
CNGZ	**Carnagh Statio**	**3.50**	**203**	P	**Pn**	**17 58 20.3**	**+0.7**
TKGZ	**Te Karaka**	**3.59**	**208**	P	**Pn**	**17 58 20.2**	**-0.4**
TKGZ				S	**Sn**	**17 59 05.1**	**+1.9**
MWZ	**Matawai**	**3.63**	**212**	P	**Pn**	**17 58 20.8**	**-0.5**
MWZ				S	**Sn**	**17 59 05.0**	**+0.7**
OPRZ	**Ohinepanea**	**3.75**	**226**	P	**Pn**	**17 58 23.2**	**+0.3**
URZ	**Urewera**	**3.76**	**217**	P	**Pn**	**17 58 21.7**	**-1.2**
	4.0nm,0.3s,baz=278,slow=4.7,SNR=96						
URZ				S	**Sn**	**17 59 06.1**	**-1.1**
	6.6nm,0.3s,baz=140,slow=23,SNR=6.1						
URZ	**Urewera**	**3.76**	**217**	P	**Pn**	**17 58 21.7**	**-1.2**
URZ				S	**Sn**	**17 59 06.0**	**-1.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
RIGZ	**Rimuhau**	**3.85**	**206**	P	**Pn**	**17 58 24.5**	**+0.3**
RIGZ				S	**Sn**	**17 59 10.8**	**+1.3**
PRGZ	**Paritu Road**	**4.00**	**204**	P	**Pn**	**17 58 26.3**	**+0.1**
PRGZ				S	**Sn**	**17 59 15.8**	**+2.7**
SNGZ	**Shannon Statio**	**4.08**	**210**	P	**Pn**	**17 58 26.6**	**-0.6**
SNGZ				S	**Sn**	**17 59 15.6**	**+0.7**
MUGZ	**Murupara**	**4.09**	**218**	P	**Pn**	**17 58 26.1**	**-1.2**
MUGZ				S	**Sn**	**17 59 14.6**	**-0.5**
RTZ	**Ruatahuna**	**4.10**	**215**	P	**Pn**	**17 58 26.4**	**-1.1**
RTZ				S	**Sn**	**17 59 13.6**	**-1.8**
KNZ	**Kokohu**	**4.17**	**205**	P	**Pn**	**17 58 26.9**	**-1.3**
KNZ				S	**Sn**	**17 59 14.2**	**-2.6**
RAHZ	**Arahi**	**4.30**	**211**	P	**Pn**	**17 58 31.2**	**+1.1**
WHHZ	**Waihua**	**4.38**	**209**	P	**Pn**	**17 58 30.5**	**-0.5**
NMHZ	**Naumai**	**4.57**	**212**	P	**Pn**	**17 58 33.2**	**-0.4**
BKZ	**Black Stump Fm**	**4.77**	**214**	Pn	**Pn**	**17 58 34.6**	**-1.7**
BKZ	**Black Stump Fm**	**4.77**	**214**	P	**Pn**	**17 58 34.8**	**-1.4**
MCHZ	**McNeill Hill**	**4.91**	**211**	P	**Pn**	**17 58 37.3**	**-0.8**
KAHZ	**Kahuranaki**	**5.14**	**208**	P	**Pn**	**17 58 40.1**	**-1.0**
HIZ	**Hauiti**	**5.21**	**230**	Pn	**Pn**	**17 58 42.9**	**+0.8**
BHHZ	**Black Hill Sta**	**5.23**	**215**	P	**Pn**	**17 58 40.8**	**-1.5**
MOVZ	**Moawhango**	**5.32**	**218**	P	**Pn**	**17 58 41.6**	**-1.9**
PXZ	**Pawanui**	**5.35**	**206**	P	**Pn**	**17 58 41.7**	**-2.1**
TSZ	**Takapari Road**	**5.74**	**212**	P	**Pn**	**17 58 46.8**	**-2.2**
BFZ	**Birch Farm**	**6.14**	**207**	P	**Pn**	**17 58 51.5**	**-2.9**
GLKZ	**Green Lake**	**6.25**	**17**	S	Sn	17 59 51.1	-15
TMWZ	**Te Maipa**	**6.65**	**208**	P	**Pn**	**17 58 58.3**	**-2.9**
OGWZ	**Otaki Gorge**	**6.70**	**213**	P	**Pn**	**17 58 58.9**	**-3.0**
KHZ	**Kahutara**	**8.71**	**213**		**Pn**	**17 59 25.6**	**-3.0**
LTZ	**Lake Taylor**	**9.59**	**216**	Pn	**Pn**	**17 59 39.7**	**-0.6**
CTA	**Charters Tower**	**33.27**	**288**	P	**P**	**18 03 49.8**	**+0.6**
	1.1nm,0.4s,baz=119,slow=15,SNR=2.0						
AS31	**Alice Springs**	**41.40**	**273**	P	**P**	**18 04 57.0**	**-0.5**
AS31				IAmb	IAmb	18 04 58.9	
	comp=Z,5.2nm,0.3s						
ASAR	**Alice Springs**	**41.40**	**273**	P	**P**	**18 04 57.5**	**-0.1**
	comp=Z,4.7nm,0.3s,baz=116,slow=7.1,SNR=52						
ASAR	**Alice Springs**	**41.40**	**273**	P	**P**	**18 04 57.2**	**-0.4**
WR0	**Warramunga Arr**	**42.66**	**279**	P	**P**	**18 05 08.0**	**+0.1**
WB2	**Warramunga Arr**	**42.82**	**279**	P	**P**	**18 05 08.9**	**-0.2**
WRAB	**Tennant Creek**	**42.83**	**279**	P	**P**	**18 05 09.2**	**+0.1**
WRAB				IAmb	IAmb	18 05 18.7	
	comp=Z,6.4nm,1.2s						
WRA	**Warramunga Arr**	**42.83**	**279**	P	**P**	**18 05 07.8**	**-1.4**
	comp=Z,3.5nm,0.3s,baz=120,slow=7.6,SNR=63						
WRA				PcP	**PcP**	**18 06 57.8**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=122,slow=3.5,SNR=1.4						
WRA	**Warramunga Arr**	**42.83**	**279**	P	**P**	**18 05 09.0**	**-0.2**
WB0	**Warramunga Arr**	**42.88**	**279**	P	**P**	**18 05 09.2**	**-0.4**
WB0				IAmb	IAmb	18 05 13.5	
	comp=Z,12nm,1.5s						
FORT	**Forrest**	**43.34**	**261**	P	**P**	**18 05 13.4**	**+0.2**
FORT				IAmb	IAmb	18 05 28.4	
	comp=Z,9.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**50.84**	**275**	P	**P**	**18 06 11.5**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=127,slow=6.2,SNR=13						
FITZ	**Fitzroy Crossi**	**50.84**	**275**	P	**P**	**18 06 11.7**	**+0.3**
MORW	**Morawa**	**53.64**	**258**	P	**P**	**18 06 31.9**	**-0.1**
MORW				IAmb	IAmb	18 06 35.2	
	comp=Z,8.4nm,1.2s						
PSA00	**Pilbara Seismi**	**53.87**	**268**	P	**P**	**18 06 33.2**	**-0.5**
H03N3	**Juan Fernandez**	**79.43**	**123**	T	T	19 37 56.0	
	baz=230,slow=74						
H03N2	**Juan Fernandez**	**79.43**	**123**	T	T	19 37 48.8	
	baz=230,slow=74						
H03N1	**Juan Fernandez**	**79.44**	**123**	T	T	19 37 56.4	
	baz=230						
PETK	**Petropavlovsk-**	**90.12**	**347**	P	**P**	**18 10 08.7**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=135,slow=7.3,SNR=5.3						
PETK	**Petropavlovsk-**	**90.12**	**347**	P	**P**	**18 10 08.8**	**+0.5**
ARCES	**ARCESS Array B**	**142.92**	**345**	PKP	**PKPdf**	**18 16 38.6**	**-2.0**
	comp=Z,0.9nm,0.8s,baz=64,slow=2.1,SNR=1.8						
FINES	**FINESS Array B**	**149.00**	**336**	PKPbc	**PKPbc**	**18 16 55.5**	**+0.2**
	comp=Z,2.4nm,0.9s,baz=28,slow=6.3,SNR=9.4						
BRTR	**Keskin Array B**	**153.01**	**290**	PKPbc	**PKiKP**	**18 17 05.8**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=136,slow=3.8,SNR=9.8						
AKASG	**Malin Array Be**	**153.84**	**315**	PKPbc	**PKiKP**	**18 17 07.1**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=63,slow=1.8,SNR=4.5						

*IDC **05** 17:59:07.3±2.1, 3°.17N×128°.47E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/42, mbtmp3.5/4, MS3.4/2, Ms1 3.4/2, ms1mx2.5/32, Error ellipse: s-maj=115.6km s-min=23.9km az=71.0*

*DJA **05** 17:59:33.4±0.8, 3°N±6°×12°8E±°, h217km±6km, M3.9/8, mb4.2/1, mB4.7/1, MLv3.7/8, Mw(mB)4.0/1*

ISC 05 17:59:29.7±1.6**, 2°.9N**±0°.1×**128°.6E**±0°.1**, h200**km**, n10, σ1s.88**/9**, mb3.5**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.46**	**210**	P	**Pn**	**18 00 15.5**	**+2.3**
LBMI	**Labuha**	**3.70**	**197**	P	**Pn**	**18 00 30.6**	**+2.8**
KMSI	**Cibinong**	**5.17**	**243**	P	**Pn**	**18 00 47.5**	**+1.3**
KMSI				S	**Sn**	**18 01 46.2**	**-0.4**
SANI	**Sanana**	**5.58**	**208**	P	**Pn**	**18 00 51.3**	**-0.3**
FITZ	**Fitzroy Crossi**	**21.09**	**188**	P	**P**	**18 03 56.5**	**-2.3**
	2.6nm,1.0s,baz=9.5,slow=6.1,SNR=2.2						
WRA	**Warramunga Arr**	**23.41**	**166**	P	**P**	**18 04 20.5**	**-0.4**
	0.6nm,0.4s,baz=343,slow=9.8,SNR=14						
ASAR	**Alice Springs**	**26.93**	**169**	P	**P**	**18 04 51.6**	**-1.0**
	0.3nm,0.3s,baz=354,slow=7.2,SNR=18						
JNU	**Nakatsue**	**30.12**	**4**	LR	LR	18 16 01.9	
	comp=Z,36nm,19.6s,baz=101,slow=34						
MKAR	**Makanchi Array**	**59.28**	**325**	P	**P**	**18 09 10.3**	**-0.1**
	0.2nm,0.4s,baz=116,slow=9.2,SNR=4.5						
ARU	**Arti**	**76.61**	**328**	LR	LR	18 47 00.1	
	comp=Z,37nm,18.0s,baz=92,slow=38						

*STR **05** 18:00:59.4±0.8, 44°N±6°×1°0E±2°1, h2km±16km, MLv2.5/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

*GEN **05** 18:01:00.2, 44°.16N×10°.14E, h3km, Ml2.3*

*LDG **05** 18:01:01.5±0.1, 44°.13N×10°.15E, h2km, Ml2.8/16, Error ellipse: s-maj=3.7km s-min=2.6km az=11.0*

*PRU **05** 18:01:03.5±0.0, 44°.11N×10°.13E, h11km*

ROM 05 18:00:59.7±0.1**, 44°.154N**±0°.004×**10°.139E**±0°.004**, h6**km**, ML2.4**/31**, Error ellipse: s-maj=0.3km s-min=0.3km az=9.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EQUI	**Equi**	**0.02**	**40**	P	Pg	18 01 01.0	+0.1
EQUI				S	Sg	18 01 01.3	-0.5
EQUI	**Equi**	**0.02**	**40**	P	Pg	18 01 01.0	+0.1
FIVI	**Fivizzano**	**0.09**	**354**	P	Pg	18 01 02.1	+0.4
FIVI				S	Sg	18 01 03.4	+0.3
VLC	**Villacollemand**	**0.18**	**88**	P	Pg	18 01 04.1	+0.8
VLC				S	Sg	18 01 07.0	+1.2
VLC				AML	AML		
	comp=E,928µm,1.5s						
VLC				AML	AML		
	comp=N,1220µm,1.2s						
VLC				AML	AML		
	comp=E,937µm,1.5s						
VLC				AML	AML		
	comp=N,1195µm,1.2s						
VLC				AML	AML		
	comp=N,1225µm,1.2s						
SARO	**Sassorosso**	**0.19**	**81**	P	Pg	18 01 04.3	+0.8
SARO				S	Sg	18 01 07.3	+1.1
SARO	**Sassorosso**	**0.19**	**81**	P	Pg	18 01 04.3	+0.8
SARO				S	Sg	18 01 07.4	+1.2
SARO				AML	AML		
	comp=E,815µm,1.3s						
SARO				AML	AML		
	comp=N,1475µm,0.4s						
PLMA	**Palmaria, Port**	**0.23**	**243**	P	Pg	18 01 05.3	+1.0
PLMA				S	Sg	18 01 08.9	+1.5
CARD	**Cardoso**	**0.28**	**117**	P	Pg	18 01 06.0	+0.8
CARD				S	Sg	18 01 10.1	+1.2
CARD	**Cardoso**	**0.28**	**117**	P	Pg	18 01 06.0	+0.8
CARD				AML	AML		
	comp=N,1435µm,1.2s						
CARD				AML	AML		
	comp=E,1175µm,2.5s						
ERBM	**Eremo**	**0.33**	**36**	P	Pb	18 01 07.3	-0.7
ERBM				AML	AML		
	comp=N,1440µm,0.9s						
ERBM				AML	AML		
	comp=E,1270µm,1.2s						
ERBM				AML	AML		
	comp=E,1275µm,1.2s						
ERBM				AML	AML		
	comp=N,1445µm,0.9s						
GRAM	**Graiana**	**0.34**	**351**	P	Pg	18 01 07.2	+0.8
GRAM				S	Sg	18 01 12.3	+1.4
GRAM	**Graiana**	**0.34**	**351**	AML	AML		
	comp=N,7045µm,1.2s						
GRAM				AML	AML		
	comp=E,9705µm,1.7s						
BDI	**Bagni Di Lucca**	**0.34**	**105**	P	Pg	18 01 07.1	+0.7
BDI				AML	AML		
	comp=E,754µm,0.4s						
BDI				AML	AML		
	comp=N,528µm,2.5s						
BDI				AML	AML		
	comp=E,657µm,0.4s						
BDI				AML	AML		
	comp=E,754µm,0.4s						
BDI				AML	AML		
	comp=N,637µm,0.4s						
MAIM	**Mastiano**	**0.35**	**133**	P	Pb	18 01 07.7	-0.6
MAIM				S	Sb	18 01 12.7	-1.4
MAIM	**Mastiano**	**0.35**	**133**	P	Pb	18 01 07.6	-0.7
MAIM				S	Sb	18 01 13.0	-1.1
MAIM				AML	AML		
	comp=N,674µm,2.8s						
MAIM				AML	AML		
	comp=E,637µm,1.3s						
MAIM				AML	AML		
	comp=N,674µm,2.8s						
POPM	**Popiglio**	**0.46**	**104**	P	Pg	18 01 09.4	+0.8
POPM				S	Sb	18 01 16.5	-0.7
POPM	**Popiglio**	**0.46**	**104**	P	Pg	18 01 09.3	+0.8
POPM				AML	AML		
	comp=E,874µm,0.5s						
POPM				AML	AML		
	comp=N,1110µm,0.2s						
MSSA	**Maissana**	**0.47**	**290**	P	Pg	18 01 09.6	+0.7
MSSA				AML	AML		
	comp=E,426µm,0.9s						
MSSA				AML	AML		
	comp=N,424µm,1.4s						
MSSA				AML	AML		
	comp=E,426µm,0.9s						
PII	**Pisa**	**0.51**	**147**	P	Pb	18 01 10.6	-0.5
PII				AML	AML		
	comp=E,976µm,0.4s						
PII				AML	AML		
	comp=N,1165µm,2.3s						
MTCR	**Monte La Croce**	**0.63**	**101**	P	Pg	18 01 12.5	+0.6
MTCR				AML	AML		
	comp=E,508µm,0.9s						
MTCR				AML	AML		
	comp=N,534µm,0.6s						
MTCR				AML	AML		
	comp=E,506µm,0.9s						
MTCR				AML	AML		
	comp=N,534µm,0.6s						
ZCCA	**Zocca**	**0.63**	**72**	P	Pb	18 01 12.8	-0.4
ZCCA				AML	AML		
	comp=E,384µm,1.4s						
ZCCA				AML	AML		
	comp=N,448µm,0.5s						
ZCCA				AML	AML		
	comp=E,432µm,2.5s						
ZCCA				AML	AML		
	comp=N,406µm,0.5s						
CRMI	**Carmignano**	**0.70**	**121**	AML	AML		
	comp=E,78µm,0.5s						
CRMI				AML	AML		
	comp=N,86µm,3.4s						
FNVD	**Fontana Vidola**	**0.71**	**89**	AML	AML		
	comp=E,397µm,0.8s						
FNVD				AML	AML		
	comp=N,378µm,0.6s						
FNVD				AML	AML		
	comp=E,398µm,0.8s						
GROG	**Isola di Gorgo**	**0.75**	**194**	P	Pg	18 01 14.3	+0.2
GROG				S	Sb	18 01 25.6	0.0
GROG				AML	AML		
	comp=E,490µm,1.4s						
GROG				AML	AML		
	comp=N,432µm,0.2s						
GROG				AML	AML		
	comp=E,489µm,1.4s						
GORR	**Gorreto**	**0.76**	**307**	P	Pg	18 01 14.7	+0.4
GORR				S	Sb	18 01 25.4	-0.5
GORR	**Gorreto**	**0.76**	**307**	P	Pg	18 01 14.6	+0.4
GORR				AML	AML		
	comp=E,336µm,0.4s						
GORR				AML	AML		
	comp=N,360µm,1.3s						
GORR				AML	AML		
	comp=E,335µm,0.4s						
BOB	**Bobbio (Coli)**	**0.79**	**321**	AML	AML		
	comp=N,303µm,1.2s						
BOB				AML	AML		
	comp=E,316µm,0.8s						
SEI	**Scarperia**	**0.88**	**96**	S	Sn	18 01 33.0	+1.2
OSSC	**Osservatorio P**	**1.02**	**128**	AML	AML		
	comp=N,265µm,1.1s						
OSSC				AML	AML		
	comp=E,193µm,1.1s						
OSSC				AML	AML		
	comp=E,164µm,3.2s						
OSSC				AML	AML		
	comp=N,192µm,0.6s						
RUFI	**Rufina**	**1.04**	**107**	P	Pn	18 01 22.0	+1.2
LMD	**Lutirano**	**1.13**	**93**	P	Pn	18 01 26.4	+4.3
LMD				AML	AML		
	comp=N,66µm,3.0s						
LMD				AML	AML		
	comp=E,69µm,2.7s						
PCP	**Piancastagn**	**1.21**	**289**	AML	AML		
	comp=N,103µm,2.7s						
PCP				AML	AML		
	comp=N,103µm,2.7s						
PCP				AML	AML		
	comp=E,71µm,1.4s						
FINB	**Finale Ligure**	**1.30**	**272**	P	Pg	18 01 24.8	+0.1
FINB				AML	AML		
	comp=E,67µm,0.4s						
FINB				AML	AML		
	comp=N,78µm,0.4s						
FINB				AML	AML		
	comp=E,67µm,0.4s						
FINB				AML	AML		
	comp=N,78µm,0.4s						
MAGA	**Magasa**	**1.66**	**12**	P	Pg	18 01 34.0	+2.5
MAGA				AML	AML		
	comp=E,459µm,1.3s						
MAGA				AML	AML		
	comp=N,320µm,0.4s						
NEGI	**Seborga**	**1.78**	**261**	P	Pn	18 01 31.1	0.0
NEGI				AML	AML		
	comp=N,49µm,3.4s						
NEGI				AML	AML		
	comp=E,35µm,1.5s						
NEGI				AML	AML		
	comp=N,49µm,3.4s						
PGF	**Pioggiola**	**1.81**	**208**	*e*Pn	Pn	18 01 30.8	-0.6
PGF				*e*Sn	Sn	18 01 53.2	-1.5
	comp=N,18nm,0.3s						
ATVO	**AVT- Monte Val**	**1.81**	**114**	P	Pg	18 01 37.9	+3.4
PIEI	**Pieia**	**1.84**	**109**	P	Pg	18 01 37.2	+2.2
NARO	**Abbazia di Nar**	**1.85**	**106**	P	Pg	18 01 38.1	+3.0
SAOF	**Saorge**	**1.87**	**266**	P	Pn	18 01 32.2	0.0
SAOF				AML	AML		
	comp=E,102µm,0.5s						
SAOF				AML	AML		
	comp=N,87µm,1.2s						
SAOF	**Saorge**	**1.87**	**266**	Pn	Pn	18 01 32.6	+0.3
ATFO	**Monte Foce - G**	**1.93**	**113**	P	Pb	18 01 36.0	+0.7
ATFO				AML	AML		
	comp=N,67µm,2.4s						
ATFO				AML	AML		
	comp=E,71µm,2.6s						
MURB	**Monte Urbino**	**1.95**	**116**	P	Pb	18 01 35.2	-0.4
MURB				AML	AML		
	comp=N,193µm,0.2s						
MURB				AML	AML		
	comp=E,174µm,0.2s						
MPAG	**Monte Paganucc**	**1.97**	**105**	P	Pg	18 01 38.2	+0.8
SBF	**Sospel**	**1.97**	**262**	*e*Pn	Pn	18 01 33.2	-0.5
SBF	**Sospel**	**1.97**	**262**	*e*Pg	Pg	18 01 38.4	+0.9
SBF				*e*Sn	Sn	18 01 56.9	-1.8
	comp=E,22nm,0.4s						
FRON	**Frontone**	**1.98**	**108**	P	Pb	18 01 36.0	-0.1
TURF	**col de Turini**	**1.99**	**266**	Pn	Pn	18 01 34.0	0.0
TURF				Sn	Sn	18 01 59.4	+0.1
ESCA	**l'Escarene**	**2.02**	**262**	Pn	Pn	18 01 34.7	+0.3
SSFR	**Montelago di S**	**2.04**	**110**	P	Pn	18 01 35.7	+1.1
SSFR				AML	AML		
	comp=E,300µm,2.3s						
SSFR				AML	AML		
	comp=N,300µm,3.1s						
SSFR				AML	AML		
	comp=E,238µm,2.8s						
SSFR				AML	AML		
	comp=N,141µm,1.8s						
ASSB	**Assisi San Ben**	**2.14**	**120**	P	Pn	18 01 36.9	+0.9
ASSB				AML	AML		
	comp=N,73µm,1.7s						
ASSB				AML	AML		
	comp=E,86µm,0.3s						
ISO	**Isola**	**2.22**	**272**	Pn	Pn	18 01 38.3	+1.2
CIRO	**Champorcher**	**2.33**	**309**	P	Pb	18 01 40.6	-1.7
CIRO				AML	AML		
	comp=E,35µm,0.7s						
CIRO				AML	AML		
	comp=N,29µm,1.4s						
CALF	**Calern**	**2.36**	**261**	Pn	Pn	18 01 39.1	+0.1
CALF				Sn	Sn	18 02 07.0	-1.3
TUE	**Stuetta**	**2.38**	**347**	P	Pb	18 01 43.5	+0.3
TUE				AML	AML		
	comp=E,46µm,1.4s						
TUE				AML	AML		
	comp=N,45µm,0.2s						
TUE				AML	AML		
	comp=E,51µm,1.4s						
TUE				AML	AML		
	comp=N,52µm,1.1s						
ARRO	**Arrone**	**2.48**	**129**	P	Pn	18 01 41.4	+0.8
MBDF	**Montbardon**	**2.48**	**285**	*e*Pn	Pn	18 01 40.8	+0.1
MBDF	**Montbardon**	**2.48**	**285**	*e*Pg	Pb	18 01 45.3	+0.6
MBDF				*e*Sn	Sn	18 02 11.2	-0.2
	comp=N,14nm,0.5s						
FRF	**La Foret Royal**	**2.59**	**258**	*e*Pn	Pn	18 01 41.8	-0.4
FRF				*e*Sn	Sn	18 02 12.2	-1.8
	comp=N,4.5nm,0.2s						
OGAG	**Argentiere**	**2.60**	**278**	Pn	Pb	18 01 45.2	-1.6
DAVOX	**Davos/Dischmat**	**2.63**	**356**	P	Pb	18 01 47.4	0.0
LMR	**La Mourre**	**2.75**	**254**	*e*Pn	Pn	18 01 43.5	-0.9
LMR				*e*Sn	Sn	18 02 15.4	-2.5
	comp=N,5.4nm,0.3s						
LPG	**La Plagne**	**2.76**	**300**	*e*Pn	Pn	18 01 46.0	+1.3
LPG	**La Plagne**	**2.76**	**300**	*e*Pg	Pb	18 01 49.5	-0.1
LPG				*e*Sn	Sn	18 02 18.5	0.0
	comp=N,5.4nm,0.5s						
LPL	**La Plagne**	**2.78**	**301**	*e*Pn	Pn	18 01 46.4	+1.5
LPL	**La Plagne**	**2.78**	**301**	*e*Pg	Pb	18 01 49.0	-0.9
LPL				*e*Sn	Sn	18 02 18.2	-0.7
	comp=N,6.0nm,0.3s						
BRES	**Bressanone**	**2.78**	**23**	P	Pb	18 01 48.3	-1.6
BRES				AML	AML		
	comp=E,90µm,0.4s						
BRES				AML	AML		
	comp=N,66µm,3.5s						
FETA	**Feichten**	**2.90**	**8**	*e*Pn	Pb	18 01 51.4	-0.5
	comp=N,0.4nm,0.2s						
FETA				Sn	Sn	18 02 22.7	+1.0
	comp=N,2.3nm,0.4s						
RSL	**Roselend**	**2.93**	**303**	Pn	Pb	18 01 49.7	-2.7
RSL				Sn	Sn	18 02 25.4	+2.9
BNALP	**Bannalp**	**2.97**	**337**	P	Pb	18 01 53.5	+0.4
TRI	**Trieste**	**3.01**	**58**	S	Sn	18 02 27.0	+2.9
SABO	**M.te Sabotino**	**3.06**	**52**	S	Sb	18 02 29.0	-3.1
ABTA	**Abfaltersbach**	**3.08**	**32**	*i* Pn	Pb	18 01 54.1	-0.9
	comp=N,0.8nm,0.2s						
DAVA	**Damuels**	**3.14**	**357**	*e*Pn	Pb	18 01 54.0	-2.0
	comp=N,6.8nm,0.3s						
DAVA				*e*Sn	Sb	18 02 32.0	-2.5
	comp=N,10nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.14**	**286**	*e*Pn	Pn	18 01 51.9	+2.1
ORIF				*e*Sn	Sn	18 02 26.5	-1.1
	comp=N,3.8nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.14**	**286**	Pn	Pn	18 01 52.2	+2.5
ORIF				Sn	Sn	18 02 30.0	+2.4
MLYF	**Mely**	**3.15**	**268**	Pn	Pn	18 01 51.5	+1.6
SQTA	**Sankt Quirin**	**3.16**	**13**	*e*Pn	Pb	18 01 54.6	-1.7
	comp=N,7.5nm,0.4s						
SQTA				*e*Sn	Sb	18 02 33.9	-1.1
	comp=N,4.7nm,0.3s						
ARTF	**Artigues**	**3.19**	**261**	Pn	Pn	18 01 51.2	+0.9
ASEAF	**Site Antares,**	**3.20**	**246**	Pn	Pn	18 01 50.1	0.0
ASEAF				Sn	Sn	18 02 25.7	-2.7
BSTF	**la Bastide-des**	**3.25**	**267**	Pn	Pn	18 01 52.3	+1.1
BSTF				Sn	Sn	18 02 30.0	-0.2
MOTA	**Moosalm**	**3.26**	**12**	*e*Pn	Pb	18 01 55.4	-2.6
	comp=N,2.0nm,0.3s						
MOTA				*e*Sn	Sb	18 02 36.5	-1.6
	comp=N,2.8nm,0.3s						
WTTA	**Wattenberg**	**3.28**	**18**	*e*Pn	Pb	18 01 56.2	-2.2
	comp=N,3.5nm,0.3s						
WTTA				*e*Sn	Sb	18 02 35.0	-3.7
	comp=N,16nm,0.8s						
SMRF	**Simiane la Rot**	**3.29**	**268**	*e*Pn	Pn	18 01 52.9	+1.1
SMRF				*e*Sn	Sn	18 02 30.7	-0.6
	comp=N,6.2nm,0.5s						
GUAR	**Guarcino**	**3.31**	**134**	S	Sn	18 02 33.0	+1.2
WATA	**Walderalm**	**3.34**	**17**	*e*Pn	Pb	18 01 57.3	-2.0
	comp=N,3.9nm,0.3s						
WATA				*e*Sn	Sb	18 02 37.1	-3.1
	comp=N,3.9nm,0.2s						
RUSF	**Rustrel**	**3.36**	**268**	Pn	Pn	18 01 54.1	+1.3
OGSM	**Saint Maurice**	**3.48**	**296**	Pn	Pn	18 01 56.7	+2.4
MYKA	**Terra Mystica**	**3.50**	**44**	*e*Sn	Sn	18 02 38.8	+2.5
	comp=N,3.2nm,0.5s						
OG35	**Corcelles**	**3.75**	**302**	Pn	Pn	18 02 01.1	+3.1
OG35				Sn	Sn	18 02 44.0	+1.5
CABF	**La Chapelle**	**3.77**	**312**	*e*Pn	Pn	18 02 01.0	+2.6
CABF				*e*Sn	Sn	18 02 43.6	+0.6
	comp=N,1.7nm,0.3s						
OBKA	**Obir**	**3.90**	**51**	*e*Sn	Sn	18 02 50.2	+3.9
	comp=N,5.6nm,0.5s						
VIVF	**Saint-Julien-l**	**3.97**	**282**	*e*Pn	Pn	18 02 02.1	+1.0
HINF	**Hinteralfeld**	**4.32**	**329**	*e*Pn	Pn	18 02 08.6	+2.7
HINF				*e*Sn	Sn	18 02 55.8	-0.8
	comp=N,6.6nm,0.4s						
LASF	**Ste Croix**	**4.52**	**271**	*e*Pn	Pn	18 02 08.8	+0.1
HAU	**Haudompre**	**4.67**	**327**	*e*Pn	Pn	18 02 13.1	+2.4
HAU				*e*Sn	Sn	18 03 04.6	-0.5
	comp=N,14nm,0.5s						
CDF	**Champ du Feu**	**4.70**	**336**	*e*Pn	Pn	18 02 13.3	+2.1
CDF				*e*Sn	Sn	18 03 05.2	-0.8
	comp=N,6.6nm,0.4s						
KOGS	**Kog**	**4.88**	**60**	P	Pg	18 02 33.0	-0.3
SMF	**Signal de Mont**	**5.09**	**302**	*e*Sn	Sn	18 03 15.0	-0.4
	comp=N,2.1nm,0.3s						
SFTF	**Sexfontaines**	**5.38**	**321**	*e*Pn	Pn	18 02 21.2	+0.8
SFTF				*e*Sn	Sn	18 03 20.0	-2.7
	comp=N,2.7nm,0.3s						
AVF	**Avril sur Loir**	**5.45**	**301**	*e*Pn	Pn	18 02 21.9	+0.5
CONA	**Conrad Observa**	**5.49**	**45**	*e*Pn	Pn	18 02 27.9	+5.9
	comp=N,0.7nm,0.3s						
CONA				*e*Sn	Sn	18 03 28.8	+3.4
	comp=N,1.7nm,0.6s						
KHC	**Kasperske Hory**	**5.51**	**24**	*e*PN	Pn	18 02 23.9	+1.6
KHC				*e*SN	Sn	18 03 26.7	+0.7
STON	**Ston**	**5.65**	**101**	P	Pg	18 02 45.7	-2.1
BGF	**Bois d'Agland**	**5.67**	**298**	*e*Pn	Pn	18 02 25.6	+1.1
BGF				*e*Sn	Sn	18 03 29.2	-0.7
	comp=N,4.5nm,0.5s						
MTLF	**Montolieu**	**5.80**	**265**	*e*Pn	Pn	18 02 25.9	-0.3
MTGR	**Montagna Grand**	**6.56**	**162**	P	Pn	18 02 40.5	+3.8

ROM 05 18:01:30.5±0.1**, 43°.269N**±0°.003×**12°.766E**±0°.004**, h11**km**, ML0.8**/1**, Error ellipse: s-maj=0.3km s-min=0.1km az=125.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOSV	**Fossato di Vic**	**0.03**	**352**	P	Pg	18 01 33.0	+0.3
FOSV				S	Sg	18 01 34.5	+0.3
FOSV				AML	AML		
	comp=E,158µm,0.1s						
FOSV				AML	AML		
	comp=N,256µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.12**	**228**	P	Pg	18 01 34.2	+0.6
ATCC				AML	AML		

comp=E,232μm,0.3s
ATCC AML AML
comp=N,188μm,1.7s
ATCC AML AML
comp=E,232μm,0.3s
ATCC AML AML
comp=N,188μm,1.7s
ATCC AVT- Casa Cast 0.12 228 P Pg 18 01 34.2 +0.6
ATCC S Sg 18 01 36.8 +0.9
SNTG Esanatoglia 0.13 96 P Pg 18 01 34.1 +0.4
SNTG S Sg 18 01 36.5 +0.6
SNTG AML AML
comp=N,82μm,3.4s
SNTG AML AML
comp=E,45μm,0.3s
SSFR Montelago di S 0.17 4 P Pg 18 01 34.7 +0.3
SSFR S Sg 18 01 37.9 +0.9
ASSB Assisi San Ben 0.24 199 P Pg 18 01 35.9 +0.3
ASSB S Sg 18 01 39.9 +1.0
EL6 Elcito 0.25 76 P Pg 18 01 36.3 +0.5
EL6 S Sb 18 01 40.5 -1.0
ARVD Arcevia 0.26 29 P Pg 18 01 36.4 +0.4
ARVD AML AML
comp=E,34μm,1.8s
ARVD AML AML
comp=N,36μm,0.1s
ARVD AML AML
comp=N,36μm,0.1s
ARVD AML AML
comp=E,34μm,1.8s
ARVD Arcevia 0.26 29 P Pg 18 01 36.3 +0.4
ARVD S Sb 18 01 40.7 -1.0
ATVO AVT- Monte Val 0.29 293 AML AML
comp=N,43μm,1.5s
ATVO AML AML
comp=E,40μm,1.4s
CSP1 Cessapalombo 0.37 119 P Pg 18 01 38.2 +0.3
CSP1 S Sb 18 01 44.2 -0.6

*KRNET **05** 18:15:43.0±0.1, 41°.96N×77°.50E, h24km, mb3.7*
*SOME **05** 18:15:43.3, 41°.97N×77°.50E, h20km*
*NNC **05** 18:15:44.0±0.9, 42°.05N×77°.47E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=5.6km s-min=3.8km az=179.0*
*KNET **05** 18:15:44.3±0.8, 42°.07N×77°.42E, h11km±3km, ml3.0, Error ellipse: s-maj=7.8km s-min=4.7km az=2.0*
ISC 05 18:15:43.6±1.2,**41°.99N**±0°.04×**77°.47E**±0°.02,**h13**km±8km, **n75**,σ1§**02**/134,**35C-25D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**0.26**	**304**	⇑*i*P		**Pg**	**18 15 49.7**	**+0.5**
KDJ	baz=8.0			⇑*i*S		**Sg**	**18 15 53.9**	**+0.9**
ANVS	**Anan'yevo**	**0.81**	**10**	⇑*i*P		**Pb**	**18 15 58.6**	**-1.1**
ANVS	baz=9.0			⇑*i*S		**Sb**	**18 16 10.2**	**-0.5**
PRZ	**Przheval'sk**	**0.85**	**54**	⇓*i*P		**Pb**	**18 15 59.2**	**-1.2**
PRZ	baz=52			⇓*i*S		**Sb**	**18 16 11.0**	**-0.8**
ULHL	**Ulahol**	**0.95**	**286**	⇓*i*P		**Pb**	**18 16 01.4**	**-0.8**
ULHL	baz=88			⇓*i*S		**Sb**	**18 16 14.5**	**-0.3**
ULHL	**Ulahol**	**0.95**	**286**	⇑P		**Pb**	**18 16 01.9**	**-0.2**
ULHL	40nm,0.1s,SNR=351			⇑S		**Sb**	**18 16 14.9**	**+0.1**
TNSS	**Tian-Shan**	**1.12**	**340**	*e*P		**Pb**	**18 16 04.7**	**-0.5**
TNSS	354nm,0.2s baz=40			*e*S		**Sg**	**18 16 20.1**	**+0.1**
TNSS	**Tian-Shan**	**1.12**	**340**	*e*P		**Pb**	**18 16 04.7**	**-0.5**
TNSS	77nm,0.1s			*e*S		**Sg**	**18 16 20.1**	**+0.1**
TNSS	**Tian-Shan**	**1.12**	**340**	P		**Pb**	**18 16 04.6**	**-0.5**
TNSS	596nm,0.2s 93nm,0.2s			S		**Sb**	**18 16 19.2**	**-0.7**
MDOK	**Medeo**	**1.22**	**345**	*e*P		**Pn**	**18 16 06.1**	**-0.5**
MDOK	598nm,0.3s baz=45			*e*S		**Sn**	**18 16 22.5**	**-0.5**
MDOK	**Medeo**	**1.22**	**345**	*e*P		**Pn**	**18 16 06.1**	**-0.5**
MDOK	134nm,0.1s			*e*S		**Sn**	**18 16 22.5**	**-0.5**
MDOK	**Medeo**	**1.22**	**345**	P		**Pn**	**18 16 05.9**	**-0.7**
MDOK	504nm,0.3s 76nm,0.4s			S		**Sb**	**18 16 22.2**	**-0.2**
MDOK	**Medeo**	**1.22**	**345**	Pg		**Pn**	**18 16 05.3**	**-1.2**
MDOK	476nm,0.6s 154nm,0.3s			Lg		Lg	18 16 20.0	
IZV	**Izvestkoviy**	**1.23**	**329**	*e*P		**Pn**	**18 16 06.3**	**-0.4**
IZV	606nm,0.6s baz=29			*e*S		**Sn**	**18 16 23.1**	**-0.2**
IZV	**Izvestkoviy**	**1.23**	**329**	*e*P		**Pn**	**18 16 06.3**	**-0.4**
IZV	54nm,0.1s			*e*S		**Sn**	**18 16 23.1**	**-0.2**
NRN	**Naryn**	**1.23**	**244**	⇑*i*P		**Pn**	**18 16 06.5**	**-0.4**
NRN	496nm,0.2s baz=45			⇑*i*S		**Sb**	**18 16 23.3**	**+0.3**
BOOM	**Boomskoye usch**	**1.25**	**294**	⇑*i*P		**Pn**	**18 16 06.4**	**-0.6**
BOOM	baz=95			⇑*i*S		**Sb**	**18 16 22.9**	**-0.3**
SATY	**Saty**	**1.27**	**32**	*e*P		**Pn**	**18 16 06.9**	**-0.5**
SATY	58nm,0.1s			*e*S		**Sb**	**18 16 23.6**	**-0.4**
SATY	**Saty**	**1.27**	**32**	P		**Pn**	**18 16 07.2**	**-0.2**
SATY	905nm,0.1s			S		**Sb**	**18 16 23.3**	**-0.7**
KOTS	**Kotyrbulak**	**1.28**	**348**	*e*P		**Pn**	**18 16 07.3**	**-0.1**
KOTS	baz=48			*e*S		**Sg**	**18 16 24.7**	**-0.1**
KOTS	**Kotyrbulak**	**1.28**	**348**	*e*P		**Pn**	**18 16 07.3**	**-0.1**
KOTS	380nm,0.2s 1μm,0.3s			*e*S		**Sg**	**18 16 24.7**	**-0.1**
KNDC	**Almaty**	**1.29**	**343**	⇓P		**Pn**	**18 16 07.5**	**+0.1**
KNDC	125nm,0.7s 576nm,0.3s			⇑S		**Sg**	**18 16 25.3**	**+0.1**
AAA	**Alma-Ata**	**1.29**	**342**	*e*P		**Pb**	**18 16 08.0**	**+0.2**
AAA	126nm,0.1s 535nm,0.2s			*e*S		**Sg**	**18 16 25.7**	**+0.4**
AAA	**Alma-Ata**	**1.29**	**342**	P		**Pn**	**18 16 07.8**	**+0.3**
AAA	4.7nm,0.1s 494nm,0.3s			S		**Sg**	**18 16 24.9**	**-0.4**
MTBS	**Maitube**	**1.38**	**326**	*e*P		**Pn**	**18 16 09.0**	**+0.3**
MTBS	baz=26			*e*S		**Sb**	**18 16 27.4**	**+0.4**
MTBS	**Maitube**	**1.38**	**326**	*e*P		**Pn**	**18 16 09.0**	**+0.3**
MTBS	46nm,0.1s 586nm,0.2s			*e*S		**Sb**	**18 16 27.4**	**+0.4**
MTBS	**Maitube**	**1.38**	**326**	P		**Pn**	**18 16 07.1**	**-1.7**
MTBS				S		**Sn**	**18 16 23.1**	**-3.9**
KST	**Kastek**	**1.54**	**314**	*e*P		**Pb**	**18 16 12.3**	**+0.2**
KST	baz=14			*e*S		**Sg**	**18 16 33.0**	**-0.2**
KST	**Kastek**	**1.54**	**314**	*e*P		**Pb**	**18 16 12.3**	**+0.2**
KST	52nm,0.1s 618nm,0.3s			*e*S		**Sg**	**18 16 32.9**	**-0.2**
KST	**Kastek**	**1.54**	**314**	P		**Pn**	**18 16 11.6**	**+0.7**
KST	58nm,0.2s 257nm,0.3s			S		**Sn**	**18 16 30.8**	**-0.1**
KURS	**Kuram**	**1.59**	**19**	*e*P		**Pb**	**18 16 12.7**	**-0.2**
KURS	baz=18			*e*S		**Sb**	**18 16 33.7**	**+0.8**
KURS	**Kuram**	**1.59**	**19**	*e*P		**Pb**	**18 16 12.7**	**-0.2**
KURS	36nm,0.1s 188nm,0.2s			*e*S		**Sb**	**18 16 33.7**	**+0.8**
KURS	**Kuram**	**1.59**	**19**	P		**Pb**	**18 16 12.7**	**-0.2**
KURS	17nm,0.2s 212nm,0.4s			S		**Sb**	**18 16 32.9**	**0.0**
UZB	**Uzynbulak**	**1.63**	**44**	*e*P		**Pn**	**18 16 12.8**	**+0.6**
UZB	baz=43			*e*S		**Sb**	**18 16 34.1**	**-0.1**
UZB	**Uzynbulak**	**1.63**	**44**	*e*P		**Pn**	**18 16 12.8**	**+0.6**
UZB	29nm,0.3s 264nm,0.2s			*e*S		**Sb**	**18 16 34.1**	**-0.1**
KZA	**Kyzart**	**1.66**	**274**	⇑*i*P		**Pn**	**18 16 13.3**	**+0.4**
KZA	baz=75			⇑*i*S		**Sn**	**18 16 35.1**	**+0.8**
KZA	**Kyzart**	**1.66**	**274**	⇑P		**Pb**	**18 16 14.7**	**+0.3**
KZA	19nm,0.3s,SNR=39 51nm,0.2s			⇓S		**Sg**	**18 16 37.6**	**+0.5**
TKM2	**Tokmak 2**	**1.67**	**305**	⇓*i*P		**Pn**	**18 16 13.4**	**+0.5**
TKM2	baz=5.0			⇓*i*S		**Sb**	**18 16 36.0**	**+0.4**
TKM2	**Tokmak 2**	**1.67**	**305**	P		**Pn**	**18 16 14.1**	**+1.2**
TKM2	36nm,0.2s,SNR=112 340nm,0.2s			⇓S		**Sg**	**18 16 37.2**	**-0.3**
TKM2	**Tokmak 2**	**1.67**	**305**	⇓P		**Pn**	**18 16 13.6**	**+0.7**
TKM2	19nm,0.3s 86nm,0.4s			⇑S		**Sg**	**18 16 36.8**	**-0.7**
KTBS	**Karatobe**	**1.82**	**342**	*e*P		**Pb**	**18 16 16.6**	**-0.3**
KTBS	baz=38			*e*S		**Sg**	**18 16 40.8**	**-1.4**
KTBS	**Karatobe**	**1.82**	**342**	*e*P		**Pb**	**18 16 16.6**	**-0.3**
KTBS	88nm,0.3s 623nm,0.2s			*e*S		**Sg**	**18 16 40.8**	**-1.4**
KBK	**Karagaybulak**	**1.99**	**291**	⇑*i*P		**Pn**	**18 16 17.9**	**+0.7**
KBK	baz=91			⇑*i*S		**Sb**	**18 16 43.5**	**-1.1**
KBK	**Karagaybulak**	**1.99**	**291**	P		**Pb**	**18 16 19.7**	**-0.1**
KBK	20nm,0.2s,SNR=31 173nm,0.3s			⇓S		**Sg**	**18 16 47.5**	**-0.1**
PDGK	**Podgornoye**	**2.00**	**47**	⇓Pn		**Pn**	**18 16 18.4**	**+1.0**
PDGK	9.5nm,0.3s 73nm,0.3s			⇑Sn		**Sb**	**18 16 45.1**	**+0.1**
KUU	**Kurty**	**2.08**	**337**	*e*P		**Pb**	**18 16 21.0**	**-0.3**
KUU	39nm,0.1s 264nm,0.3s			*e*S		**Sb**	**18 16 48.1**	**+1.0**
KUU	**Kurty**	**2.08**	**337**	Pg		**Pb**	**18 16 20.7**	**-0.6**
KUU	48nm,0.4s 308nm,0.4s			Lg		Lg	18 16 46.4	
KRBS	**Karabastau**	**2.16**	**323**	*e*P		**Pb**	**18 16 22.5**	**-0.2**
KRBS	66nm,0.2s 123nm,0.2s			*e*S		**Sb**	**18 16 50.7**	**+1.2**
UCH	**Uchtor**	**2.22**	**277**	⇑*i*P		**Pn**	**18 16 21.0**	**+0.4**
UCH	baz=78			⇑*i*S		**Sn**	**18 16 48.5**	**+0.4**
UCH	**Uchtor**	**2.22**	**277**	⇑P		**Pb**	**18 16 24.0**	**+0.2**
UCH	13nm,0.4s,SNR=26 44nm,0.3s			⇓S		**Sb**	**18 16 53.6**	**+2.2**
ARXS	**Arharly**	**2.24**	**7**	*e*P		**Pb**	**18 16 23.8**	**-0.2**
ARXS	60nm,0.2s 192nm,0.2s			*e*S		**Sb**	**18 16 53.1**	**+1.3**
ARXS	**Arharly**	**2.24**	**7**	Pg		**Pb**	**18 16 24.7**	**+0.7**
ARXS	43nm,0.4s 128nm,0.3s			Lg		Lg	18 16 53.1	
CHMS	**Chumysh**	**2.25**	**298**	⇑*i*P		**Pn**	**18 16 21.2**	**+0.5**
CHMS	baz=98			⇑*i*S		**Sn**	**18 16 49.6**	**+1.2**
CHMS	**Chumysh**	**2.25**	**298**	⇓P		**Pb**	**18 16 23.2**	**-1.1**
CHMS	13nm,0.2s,SNR=19 59nm,0.2s			⇓S		**Sb**	**18 16 53.1**	**+1.0**
FRU1	**Bishkek**	**2.26**	**292**	⇑*i*P		**Pn**	**18 16 21.2**	**+0.4**
FRU1	baz=93			⇑*i*S		**Sn**	**18 16 50.0**	**+1.3**
AAK	**Ala-Archa**	**2.30**	**287**	⇓*e*P		**Pn**	**18 16 21.9**	**+0.4**
AAK	baz=88			⇓*i*S		**Sn**	**18 16 51.1**	**+1.3**
AAK	**Ala-Archa**	**2.30**	**287**	⇑P		**Pb**	**18 16 24.9**	**-0.3**
AAK	10nm,0.2s,SNR=29 47nm,0.2s			⇑S		**Sg**	**18 16 56.3**	**-1.4**
AAK	**Ala-Archa**	**2.30**	**287**	⇓Pn		**Pb**	**18 16 24.6**	**-0.6**
AAK	12nm,0.5s 26nm,0.5s			⇑Lg		Lg	18 16 55.9	
USP	**Ospenovka**	**2.54**	**301**	⇓*i*P		**Pn**	**18 16 25.1**	**+0.4**
USP	baz=2.0			⇓*i*S		**Sn**	**18 16 56.6**	**+1.1**
USP	**Ospenovka**	**2.54**	**301**	⇓P		**Pn**	**18 16 26.6**	**+1.9**
USP	10nm,0.3s,SNR=25 baz=2.0			⇓S		**Sb**	**18 16 56.6**	**+1.1**
KTMS	**Ketmen**	**2.58**	**54**	*e*P		**Pb**	**18 16 29.0**	**-0.8**
KTMS	1.0nm,0.1s 88nm,0.3s			*e*S		**Sb**	**18 17 01.9**	**+0.5**
AML	**Almayashu**	**2.82**	**274**	⇑*i*P		**Pn**	**18 16 29.4**	**+0.6**
AML	baz=75			⇑*i*S		**Sn**	**18 17 03.7**	**+0.9**
EKS2	**Erkin-Say**	**2.82**	**285**	⇓*i*P		**Pn**	**18 16 29.2**	**+0.6**
EKS2	baz=86			⇓*i*S		**Sn**	**18 17 03.4**	**+0.8**
DJR	**Jarkent**	**2.89**	**35**	*e*P		**Pb**	**18 16 34.6**	**-0.6**
DJR	5.0nm,0.1s 63nm,0.2s			*e*S		**Sb**	**18 17 11.2**	**+0.7**
DJR	**Jarkent**	**2.89**	**35**	Pg		**Pb**	**18 16 36.4**	**+1.2**
DJR	9.2nm,0.2s 47nm,0.3s			Lg		Lg	18 17 12.7	
TDK	**Taldyqorghan**	**3.09**	**12**	*e*P		**Pb**	**18 16 39.1**	**+0.6**
TDK	35nm,0.2s 223nm,0.2s			*e*S		**Sb**	**18 17 19.2**	**+3.1**
TDK	**Taldyqorghan**	**3.09**	**12**	Pg		**Pb**	**18 16 39.7**	**+1.2**
TDK	25nm,0.3s 183nm,0.7s			Lg		Lg	18 17 18.8	
MRKS	**Merke**	**3.24**	**285**	*e*P		**Pb**	**18 16 42.9**	**+1.8**
MRKS	3.8nm,0.3s 79nm,0.3s			*e*S		**Sg**	**18 17 25.5**	**-2.1**
MRKS	**Merke**	**3.24**	**285**	Pg		**Pb**	**18 16 41.4**	**+0.4**
MRKS	0.6nm,0.1s 27nm,0.3s			Lg		Lg	18 17 21.9	
KAPS	**Kapalarasan**	**3.57**	**22**	*e*P		**Pb**	**18 16 47.9**	**+1.2**
KAPS	5.3nm,0.2s 56nm,0.3s			*e*S		**Sb**	**18 17 34.1**	**+4.1**
KAPS	**Kapalarasan**	**3.57**	**22**	Pg		**Pb**	**18 16 49.4**	**+2.7**
KAPS	1.8nm,0.2s 54nm,0.4s			Lg		Lg	18 17 34.9	
KK31	**Karatay Array**	**5.26**	**285**	⇑Pg		**Pg**	**18 17 21.1**	**-3.3**
KK31	3.0nm,0.7s,baz=96,slow=16,SNR=19 5.0nm,0.5s,baz=91,slow=33,SNR=14			Lg		Lg	18 18 27.3	
MK31	**Makanchi Array**	**5.92**	**34**	⇓Pn		**Pn**	**18 17 12.5**	**+1.5**
MK31	0.4nm,0.3s,baz=214,slow=14,SNR=14 3.2nm,0.6s,baz=209,slow=30,SNR=6.0			⇑Lg		Lg	18 18 45.5	
OTUK	**Ortayu**	**7.24**	**332**	⇑Pn		**Pn**	**18 17 30.0**	**+0.9**
OTUK	1.9nm,0.9s 11nm,0.6s			⇑Lg		Lg	18 19 32.6	
KURBB	**Kurchatov Arra**	**8.67**	**4**	⇓Lg		Lg	18 20 17.8	
KURK	**Kurchatov**	**8.77**	**5**	⇑Lg		Lg	18 20 17.9	
	20nm,0.7s 16nm,1.2s							

*NEIC **05** 18:34:14.7±1.7, 10°.3S±0°.1×161°.3E±0°.1, h76km±8km, mb4.7/22, Error ellipse: s-maj=20.8km s-min=12.0km az=46.0*
*IDC **05** 18:34:15.5±2.4, 10°.31S×161°.27E, h85km±18km, mb3.6/9, mb1 3.8/11, mb1mx3.6/35, mbtmp4.0/11, MS3.2/3, Ms1 3.2/3, ms1mx2.7/30, Error ellipse: s-maj=26.5km s-min=16.1km az=82.0*
ISC 05 18:34:13.3±0.6,**10°.30S**±0°.06×**161°.43E**±0°.08,**h61**km,**n41**, σ1§**30**/42,**mb4.3**/18,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.70**	**300**	P		**Pn**	**18 34 42.1**	**+1.4**
HNR	264nm,0.3s,baz=73,slow=2.0,SNR=90 comp=Z,35nm,18.8s,baz=95,slow=27			LR		LR	18 34 57.9	
HNR	632nm,0.3s,baz=302,slow=21,SNR=14			S		**Sn**	**18 35 01.8**	**+0.4**
HNR	**Honiara**	**1.70**	**300**	Pn		**Pn**	**18 34 42.0**	**+1.4**
HNR				Sn		**Sn**	**18 35 00.7**	**-0.7**
DZM	**Mont Dzumac**	**12.65**	**158**	P		**Pn**	**18 37 14.0**	**+3.3**
DZM	0.5nm,0.3s,baz=11,slow=9.3,SNR=45 0.9nm,0.3s,baz=202,slow=23,SNR=1.9			S		**Sn**	**18 39 28.4**	**-1.6**
DZM	**Mont Dzumac**	**12.65**	**158**			**Pn**	**18 37 12.0**	**+1.3**
TARA	**Tarawa**	**16.27**	**45**	P		**Pn**	**18 37 58.0**	**-0.1**
TARA	comp=Z,136nm,1.9s			IAmb		IAmb	18 38 26.0	
PATS	**Pohnpei**	**17.30**	**350**	P		**P**	**18 38 14.0**	**+2.6**
PATS	comp=Z,68nm,1.1s			IAmb		IAmb	18 38 40.2	
CTA	**Charters Tower**	**17.57**	**235**	P		**P**	**18 38 15.3**	**+0.8**
CTAO	**Charters Tower**	**17.57**	**235**	P		**P**	**18 38 16.2**	**+1.7**
EIDS	**Eidsvold**	**17.92**	**212**	P		**Pn**	**18 38 19.4**	**+1.1**
ARMA	**Armidale**	**22.00**	**203**	P		**P**	**18 39 02.5**	**-0.2**
ARMA	comp=Z,34nm,1.6s			IAmb		IAmb	18 39 47.3	
WR0	**Warramunga Arr**	**27.64**	**247**	P		**P**	**18 39 53.6**	**-1.9**
WB0	**Warramunga Arr**	**27.72**	**247**	P		**P**	**18 39 54.9**	**-1.3**
WB0	comp=Z,28nm,1.8s			IAmb		IAmb	18 40 15.1	
WRAB	**Tennant Creek**	**27.80**	**247**	P		**P**	**18 39 55.2**	**-1.7**
WRAB	comp=Z,16nm,1.6s			IAmb		IAmb	18 40 13.0	
WB2	**Warramunga Arr**	**27.81**	**247**	P		**P**	**18 39 55.8**	**-1.2**
WRA	**Warramunga Arr**	**27.82**	**247**	P		**P**	**18 39 55.6**	**-1.4**
WRA	comp=Z,1.1nm,0.5s,baz=77,slow=9.0,SNR=8.2 **Warramunga Arr**	**27.82**	**247**	P		**P**	**18 39 56.3**	**-0.7**
ASAR	**Alice Springs**	**29.42**	**240**	P		**P**	**18 40 09.1**	**-2.2**
MTN	comp=Z,0.6nm,0.8s,baz=62,slow=9.5,SNR=9.4 **Manton Dam**	**29.78**	**262**	P		**P**	**18 40 12.9**	**-1.7**
MTN	comp=Z,40nm,1.4s			IAmb		IAmb	18 40 33.5	
KNRA	**Kununurra**	**32.25**	**257**	P		**P**	**18 40 36.8**	**+0.5**
KNRA	comp=Z,41nm,1.4s			IAmb		IAmb	18 41 47.5	
BBOO	**Buckleboo**	**32.37**	**222**	P		**P**	**18 40 36.1**	**-1.1**
BBOO	comp=Z,48nm,1.8s			IAmb		IAmb	18 40 59.4	
FITZ	**Fitzroy Crossi**	**35.50**	**253**	P		**P**	**18 41 03.1**	**-1.4**
FITZ	comp=Z,12nm,1.5s			IAmb		IAmb	18 41 59.5	
RAR	**Rarotonga**	**38.78**	**111**	LR		LR	18 56 07.1	
MJAR	comp=Z,49nm,18.5s,baz=260,slow=34 **Matsushiro Arr**	**51.46**	**336**	P		**P**	**18 43 11.2**	**-1.3**
MJAR	comp=Z,1.2nm,0.6s,baz=158,slow=8.3,SNR=9.0 **Matsushiro Arr**	**51.46**	**336**	P		**P**	**18 43 11.3**	**-1.2**
MAJO	**Matsushiro**	**51.46**	**336**	P		**P**	**18 43 11.6**	**-0.9**
MJB9	**Matsu-Tunnel**	**51.47**	**336**	P		**P**	**18 43 11.7**	**-0.9**
JNU	**Nakatsue**	**52.08**	**327**	P		**P**	**18 43 16.9**	**-0.3**
SSLB	**Suanglung**	**52.09**	**311**	P		**P**	**18 43 17.2**	**-0.2**
KSRS	**Korea Array**	**56.94**	**328**	LR		LR	19 08 14.9	
USRK	comp=Z,4.5nm,18.1s,baz=120,slow=36 **Ussuriysk Ar.**	**60.46**	**336**	P		**P**	**18 44 17.0**	**+0.3**
USRK	comp=Z,2.5nm,0.6s,baz=157,slow=5.5,SNR=7.7 **Ussuriysk Ar.**	**60.46**	**336**	P		**P**	**18 44 17.1**	**+0.4**
VNDA	**Vanda**	**67.21**	**180**	P		**P**	**18 45 00.1**	**-0.4**
VNDA	comp=Z,1.1nm,0.8s,baz=340,slow=6.5,SNR=4.2 comp=Z,40nm,18.1s,baz=139,slow=32			LR		LR	19 10 41.1	
SONM	**Songino Array**	**75.60**	**325**	P		**P**	**18 45 51.5**	**-0.2**
SONM	comp=Z,1.6nm,0.6s,baz=145,slow=5.7,SNR=11 **Songino Array**	**75.60**	**325**	P		**P**	**18 45 51.6**	**-0.2**
BILL	**Bilibino**	**78.21**	**2**	P		**P**	**18 46 06.1**	**+0.3**
BILL	comp=Z,3.2nm,0.9s			IAmb		IAmb	18 46 07.2	
IMAR	**Indian Mountai**	**82.90**	**17**	P		**P**	**18 46 31.9**	**+0.9**
YAH	**Yahtse**	**83.48**	**25**	P		**P**	**18 46 34.7**	**+0.3**
YAH	comp=Z,15nm,1.5s			IAmb		IAmb	18 47 38.9	
ILAR	**Eielson Array**	**84.20**	**20**	P		**P**	**18 46 36.5**	**-1.2**
MKAR	comp=Z,0.4nm,0.5s,baz=240,slow=4.4,SNR=6.5 **Makanchi Array**	**90.09**	**318**	P		**P**	**18 47 05.8**	**-0.9**
MKAR	comp=Z,0.4nm,0.5s,baz=92,slow=6.0,SNR=7.0 **Makanchi Array**	**90.09**	**318**	P		**P**	**18 47 05.6**	**-1.1**
YKA	**Yellowknife Ar**	**96.27**	**28**	P		**P**	**18 47 33.6**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=261,slow=4.2,SNR=2.2							

*JMA **05** 18:40:08.8±0.1, 23°.38N×121°.38E, h0km*
*TAP **05** 18:40:10.1, 23°.40N×121°.29E, h8km, ML3.5, C*
ISC 05 18:40:10.0±0.8,**23°.39N**±0°.01×**121°.34E**±0°.02,**h12**km±4km, **n118**,σ0§**84**/193,**11C-15D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
YULB	**Yu-li**	**0.04**	**278**	⇑*i*P		**Pg**	**18 40 11.7**	**-0.7**
YULB	baz=168			*i* S		**Sg**	**18 40 12.8**	**-1.2**
TWF1	**Yuli**	**0.05**	**230**	⇑*i*P		**Pg**	**18 40 11.9**	**-0.5**
TWF1	baz=169			*i* S		**Sg**	**18 40 13.2**	**-0.9**
EHY	**Hungye**	**0.12**	**352**	⇓*i*P		**Pg**	**18 40 12.9**	**-0.3**
EHY	baz=16			S		**Sg**	**18 40 14.5**	**-1.0**
HGSD	**Ruisui**	**0.13**	**36**	⇑*i*P		**Pg**	**18 40 14.2**	**+0.9**
HGSD	baz=52			*i* S		**Sg**	**18 40 16.9**	**+1.2**
FULB	**Fuli**	**0.19**	**193**	⇑*i*P		**Pg**	**18 40 14.9**	**+0.6**
FULB	baz=188			*e*S		**Sg**	**18 40 18.1**	**+0.8**
CHKT	**Chengkung**	**0.29**	**176**	*e*P		**Pb**	**18 40 17.0**	**-0.1**
CHKT	baz=168			*e*S		**Sb**	**18 40 23.1**	**+1.3**
EGFH	**Guangfu**	**0.29**	**16**	P		**Pg**	**18 40 16.0**	**0.0**
EGFH	baz=14			S		**Sg**	**18 40 19.9**	**-0.1**
ELDTW	**Lidau**	**0.36**	**237**	⇑*i*P		**Pg**	**18 40 16.5**	**-0.7**
ELDTW	baz=230			*e*S		**Sg**	**18 40 20.6**	**-1.5**
VWDT	**VWDT**	**0.41**	**333**	⇓*i*P		**Pg**	**18 40 18.0**	**-0.1**
VWDT	baz=337			*e*S		**Sg**	**18 40 23.2**	**-0.5**
ESL	**Shilin**	**0.43**	**11**	P		**Pg**	**18 40 18.4**	**-0.3**
ESL	baz=17			S		**Sg**	**18 40 24.0**	**-0.4**
ALS	**Alishan**	**0.51**	**284**	⇓*i*P		**Pg**	**18 40 19.9**	**-0.1**
ALS	baz=274			S		**Sg**	**18 40 26.5**	**-0.4**
SSLB	**Suanglung**	**0.53**	**318**	⇓*i*P		**Pg**	**18 40 20.0**	**-0.5**
SSLB	baz=319			*e*S		**Sg**	**18 40 26.0**	**-1.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=319						
WHYT	Xinyi Township	0.54	305⇓	iP	Pb	18 40 20.7	-0.8
	baz=305						
WHYT				S	Sg	18 40 27.9	0.0
	baz=305						
STYT	Tauyuan	0.58	248⇑	iP	Pg	18 40 21.1	-0.3
	baz=245						
STYT				S	Sg	18 40 27.8	-1.4
	baz=245						
OWD	Renai	0.58	345	eP	Pg	18 40 20.9	-0.6
	baz=354						
OWD				eS	Sg	18 40 28.1	-1.2
	baz=354						
TWGBT	Beinan	0.61	203	eP	Pg	18 40 21.6	-0.5
	baz=208						
TWGBT				eS	Sg	18 40 30.3	+0.1
	baz=208						
TWG	Pinlang	0.62	204	eP	Pg	18 40 21.6	-0.4
	baz=208						
TWG				eS	Sg	18 40 30.2	0.0
	baz=208						
HWA	Hwalien	0.64	22	eP	Pb	18 40 23.1	0.0
	baz=16						
HWA				eS	Sg	18 40 30.8	0.0
	baz=16						
SMLT	Sun Moon Lake	0.64	321⇓	iP	Pg	18 40 22.2	-0.3
	baz=322						
SMLT				eS	Sg	18 40 30.3	-0.7
	baz=322						
CHN5	Tsauling	0.64	289⇓	iP	Pb	18 40 22.8	-0.4
	baz=289						
CHN5				S	Sb	18 40 31.6	-0.6
	baz=289						
TPUB	Ta-pu	0.66	263⇑	iP	Pb	18 40 23.0	-0.5
	baz=258						
TPUB				iS	Sg	18 40 31.4	-0.1
	baz=258						
TYC	Yuchr	0.68	319⇓	iP	Pg	18 40 22.8	-0.4
	baz=321						
TYC				eS	Sg	18 40 31.6	-0.7
	baz=321						
WTP	Ta-pu	0.68	258⇑	iP	Pb	18 40 23.4	-0.5
	baz=254						
WTP				iS	Sg	18 40 32.1	-0.2
	baz=254						
TWH	Lutao	0.69	169	eP	Pb	18 40 24.5	+0.7
	baz=168						
TWH				eS	Sn	18 40 36.1	0.0
	baz=168						
CHGB	Renai	0.69	347⇓	eP	Pg	18 40 23.1	-0.3
	baz=356						
CHGB				eS	Sb	18 40 32.9	-0.8
	baz=356						
CHN4	Tsaushan	0.69	267⇑	iP	Pb	18 40 23.7	-0.2
	baz=259						
CHN4				S	Sg	18 40 32.5	+0.1
	baz=259						
WJS	Zhushan	0.71	308	P	Pb	18 40 24.6	+0.2
	baz=315						
WJS				S	Sb	18 40 34.6	+0.6
	baz=315						
TWD	Chiawan	0.73	19	iP	Pb	18 40 24.0	-0.6
	baz=21						
TWD				S	Sg	18 40 33.0	-0.7
	baz=21						
DPDB	Guoxing	0.75	330⇓	iP	Pg	18 40 24.3	-0.2
	baz=339						
DPDB				eS	Sg	18 40 33.3	-1.0
	baz=339						
SLGT	Liugui	0.75	239⇑	iP	Pg	18 40 24.4	-0.2
	baz=232						
SLGT				eS	Sb	18 40 34.7	-0.5
	baz=232						
WHF	Hehuan Shan	0.76	355⇓	iP	Pg	18 40 24.2	-0.6
	baz=357						
WHF				S	Sg	18 40 34.4	-0.5
	baz=357						
SGST	Jiashian	0.76	247⇑	iP	Pg	18 40 23.9	-0.8
	baz=242						
SGST				eS	Sg	18 40 34.2	-0.6
	baz=242						
CHN1	Nanshi	0.77	255	P	Pb	18 40 25.6	+0.2
	baz=247						
CHN1				eS	Sb	18 40 36.1	+0.2
	baz=247						
WGK	Gukeng	0.77	293⇓	iP	Pb	18 40 25.9	+0.5
	baz=288						
WGK				eS	Sb	18 40 37.5	+1.6
	baz=288						
WNT	Mingjian	0.78	309⇓	iP	Pb	18 40 26.1	+0.6
	baz=310						
WNT				eS	Sb	18 40 37.3	+1.4
	baz=310						
SNST	Tainan City	0.79	258	eP	Pb	18 40 25.9	+0.1
	baz=257						
SNST				eS	Sb	18 40 36.3	-0.1
	baz=257						
WDLH	Douliu	0.80	292	eP	Pb	18 40 26.3	+0.5
	baz=292						
WDLH				eS	Sb	18 40 37.7	+1.2
	baz=292						
CHN2	Minshiung	0.81	280	eP	Pn	18 40 26.8	-0.4
	baz=280						
CHN2				eS	Sn	18 40 38.6	-0.5
	baz=280						
NACB	Ninganchiao	0.82	16	eP	Pg	18 40 25.2	-0.6
	baz=18						
NACB				eS	Sg	18 40 36.2	-0.4
	baz=18						
ETLH	Xiulin Townshi	0.83	9	eP	Pg	18 40 25.4	-0.7
	baz=23						
ETLH				eS	Sb	18 40 37.0	-0.5
	baz=23						
CHY	Chiayi	0.85	278	P	Pb	18 40 27.1	+0.4
	baz=277						
CHY				S	Sb	18 40 39.1	+1.1
	baz=277						
ECL	Taimali	0.86	204	P	Pg	18 40 25.9	-0.8
	baz=190						
ECL				eS	Sg	18 40 36.8	-1.2
	baz=190						
TDCB	Techi	0.88	349⇓	iP	Pg	18 40 26.5	-0.5
	baz=350						
TDCB				eS	Sg	18 40 36.3	-2.2
	baz=350						
SSD	Sandimen	0.91	226	P	Pg	18 40 26.6	-1.1
	baz=221						
SSD				eS	Sg	18 40 38.4	-1.2
	baz=221						
CHN3	Shinhua	0.95	251	eP	Pn	18 40 30.1	+1.0
	baz=249						
CHN3				eS	Sn	18 40 44.5	+1.9
	baz=249						
WHP	Taichung City	0.96	338	eP	Pb	18 40 28.2	-0.4
	baz=338						
WHP				eS	Sb	18 40 41.0	-0.2
	baz=338						
WLGB	Puzi	0.96	276	P	Pb	18 40 29.1	+0.5
	baz=275						
WLGB				S	Sn	18 40 42.7	-0.1
	baz=275						
TCU	Taichung	0.97	321	P	Pn	18 40 29.7	+0.2
	baz=322						
TCU				eS	Sn	18 40 43.2	+0.1
	baz=322						
WCHH	Zhanghua	0.99	314	eP	Pn	18 40 29.8	+0.1
	baz=314						
WCHH				eS	Sn	18 40 44.2	+0.5
	baz=314						
MASBT	Mashibuluo	1.01	220	iP	Pg	18 40 28.3	-1.2
	baz=215						
MASBT				eS	Sg	18 40 41.4	-1.3
	baz=215						
TWM1	Shoushan	1.01	237	eP	Pn	18 40 30.8	+0.8
	baz=235						
TWM1				eS	Sn	18 40 45.0	+0.8
	baz=235						
SGLT	Jiouru	1.02	230	eP	Pn	18 40 30.5	+0.4
	baz=225						
RLNB	Erlin	1.03	299	eP	Pb	18 40 29.6	-0.1
	baz=299						
NNSB	Datong	1.04	2	P	Pg	18 40 29.5	-0.5
	baz=3.0						
NNSB				S	Sg	18 40 42.9	-0.7
	baz=3.0						
NNSH	Datong	1.04	2	P	Pg	18 40 29.5	-0.6
	baz=2.0						
NNSH				eS	Sg	18 40 42.6	-1.0
	baz=2.0						
CHN8	Yiju	1.04	268	P	Pn	18 40 30.5	+0.2
	baz=267						
CHN8				eS	Sn	18 40 45.6	+0.8
	baz=267						
NNS	Nan Shan	1.05	2⇓	iP	Pg	18 40 29.7	-0.6
	baz=2.0						
NNS				S	Sg	18 40 43.5	-0.5
	baz=2.0						
WSF	Szhu	1.06	284	P	Pn	18 40 30.6	0.0
	baz=298						
WSF				eS	Sb	18 40 45.0	+1.0
	baz=298						
SCLT	Jiali	1.08	259	eP	Pn	18 40 32.0	+1.1
	baz=258						
SCLT				eS	Sn	18 40 47.2	+1.5
	baz=258						
WTCT	Ta-ch'eng	1.08	296	eP	Pb	18 40 30.8	+0.1
	baz=296						
WTCT				eS	Sn	18 40 46.3	+0.4
	baz=296						
TWQ1	Liyutan	1.09	332	P	Pn	18 40 31.4	+0.3
	baz=332						
TWQ1				eS	Sn	18 40 47.0	+0.8
	baz=332						
EAST	Anshuo	1.10	205	P	Pg	18 40 30.4	-0.8
	baz=190						
ENA	Nanau	1.10	19	eP	Pg	18 40 29.5	-1.7
	baz=24						
TAW	Tawu	1.10	202	eP	Pg	18 40 30.6	-0.6
	baz=184						
SNJT	Kaohsiung City	1.12	236	eP	Pn	18 40 32.8	+1.4
	baz=234						
SSPT	Xinbi	1.15	219	eP	Pb	18 40 31.8	0.0
	baz=210						
WDJ	Dajia District	1.15	326	P	Pn	18 40 33.1	+1.2
	baz=326						
WDJ				eS	Sn	18 40 50.3	+2.7
	baz=326						
NSY	Sanyi	1.15	333	P	Pn	18 40 33.3	+1.3
	baz=333						
NSY				eS	Sn	18 40 49.8	+2.1
	baz=333						
PTSB	Yuanli	1.21	331	P	Pn	18 40 34.0	+1.3
	baz=331						
PTSB				eS	Sn	18 40 52.0	+3.0
	baz=331						
SCZT	Fangliau	1.21	213	P	Pg	18 40 32.2	-1.1
	baz=208						
SCZT				eS	Sb	18 40 49.0	+0.6
	baz=208						
NDT	Datong Townshi	1.22	7	P	Pn	18 40 33.3	+0.4
	baz=18						
NDT				eS	Sg	18 40 47.5	-1.9
	baz=18						
NMLH	Miaoli	1.25	336	P	Pn	18 40 34.3	+1.0
	baz=336						
NMLH				eS	Sn	18 40 52.1	+2.0
	baz=336						
ENTT	Nioudou	1.26	9	P	Pn	18 40 33.9	+0.4
	baz=29						
ENTT				eS	Sb	18 40 50.4	+0.4
	baz=29						
YHNB	Yeheng	1.28	1	P	Pb	18 40 34.1	0.0
	baz=18						
YHNB				eS	Sg	18 40 50.0	-1.2
	baz=18						
NSK	Sanguang	1.28	1	P	Pb	18 40 34.1	-0.1
	baz=1.0						
NSK				S	Sg	18 40 49.7	-1.7
	baz=1.0						
LIOB	Emei	1.29	347	P	Pb	18 40 34.6	+0.4
	baz=358						
TWC	Suao	1.30	21	eP	Pn	18 40 33.5	-0.5
	baz=25						
LAY	Lan-yu	1.36	172	eP	Pn	18 40 32.8	-1.9
	baz=170						
WLCH	Liuqiu	1.36	221	eP	Pg	18 40 36.4	+0.2
	baz=216						
TWE	Neicheng	1.36	13	eP	Pg	18 40 35.8	-0.4
	baz=33						
EOS1	EOS1	1.36	32	eP	Pn	18 40 35.3	+0.5
	baz=38						
SLBB	Yuanshan	1.39	11	eP	Pg	18 40 36.4	-0.3
	baz=28						
NWLT	Wulai	1.39	6	eP	Pg	18 40 36.2	-0.6
	baz=1.0						
WLTB	Daxi	1.46	357	eP	Pg	18 40 38.1	0.0
	baz=1.0						
WDGT	Dungji	1.55	266	eP	Pn	18 40 37.4	0.0
	baz=263						
NHDH	Xindian Distri	1.58	6	eP	Pg	18 40 39.5	-0.9
	baz=27						
NCUH	Zhongli	1.58	355	eP	Pg	18 40 40.3	0.0
	baz=2.0						
TATO	Taipei	1.59	5	eP	Pg	18 40 40.1	-0.4
	baz=32						
TWA	Mucha	1.60	8	eP	Pb	18 40 39.6	0.0
	baz=28						
PHUB	P'eng-hu	1.63	275	eP	Pn	18 40 38.2	-0.3
	baz=273						
TIPB	Shuangxi	1.64	16	eP	Pb	18 40 40.0	-0.2
	baz=21						
PNG	Penghu	1.65	277	eP	Pn	18 40 38.3	-0.5
	baz=275						
TAP1	Taipei	1.65	6	eP	Pg	18 40 41.4	-0.4
	baz=34						
TWS1	Kuangyinshan	1.71	2	eP	Pg	18 40 42.6	-0.2
	baz=351						
YM01	YM01	1.76	7	eP	Pb	18 40 42.4	+0.1
	baz=35						
YM04	YM04	1.77	6	eP	Pn	18 40 40.7	+0.3
	baz=34						
NTST	Danshui	1.77	3	eP	Pg	18 40 43.6	-0.5
	baz=31						
YM10	YM10	1.77	6	eP	Pb	18 40 42.4	-0.1
	baz=35						
YM11	YM11	1.78	7	eP	Pb	18 40 43.0	+0.3
	baz=34						
YM03	YM03	1.79	6	eP	Pg	18 40 43.3	-1.2
	baz=33						
ANP	Anpu	1.80	5	eP	Pg	18 40 43.7	-0.8
	baz=32						
YM08	YM08	1.81	7	eP	Pb	18 40 42.8	-0.3
	baz=34						
VWUC	VWUC	2.35	313	eP	Pn	18 40 47.6	-0.9
	baz=317						
HATJ	Hateruma jima	2.35	73	P	Pn	18 40 48.2	-0.3
HATJ				eS	Sn	18 41 17.4	+0.1
IRIF	Iriomote-Funau	2.38	66	P	Pn	18 40 49.4	+0.6
IRIF				eS	Sn	18 41 18.8	+0.8
PTTC	Pingtan	2.54	326	eP	Pn	18 40 50.5	-0.6
	baz=332						
JKRS	Kuro-shima	2.59	70	P	Pn	18 40 52.0	+0.3
JKRS				eS	Sn	18 41 24.0	+1.0
PTMZ	Houxiangcun	2.61	310	eP	Pn	18 40 52.0	0.0
	baz=291						
JIJ	Ishigaki jima	2.74	69	P	Pn	18 40 53.6	-0.2
JIJ				S	Sn	18 41 26.5	-0.4
KNMB	Chin-men Tao	2.91	292	eP	Pn	18 40 54.8	-1.3
	baz=289						
JISG	Ishigakijimahi	2.97	66	P	Pn	18 40 56.2	-0.7
JISG				eS	Sn	18 41 32.4	0.0
JTJ	Tarama	3.32	67	P	Pn	18 41 02.2	+0.5
JTJ				S	Sn	18 41 42.6	+1.5
MHZQ	Yeshan	3.42	323	eP	Pn	18 41 03.1	0.0
	baz=328						
AXDP	Jialang	3.43	297	eP	Pn	18 41 03.1	-0.1
	baz=293						
XPSS	Dashiqiu	3.68	344	eP	Pn	18 41 06.5	-0.2
	baz=352						
JIRB	Irabujima	3.78	67	P	Pn	18 41 08.6	+0.5
JIRB				S	Sn	18 41 54.1	+1.5
JMJ	Miyako jima 2	3.88	68	eP	Pn	18 41 09.7	+0.2
	baz=68						
JMJ2	Miyako jima3	3.88	69	P	Pn	18 41 09.4	-0.1

*IDC **05** 18:45:25.0±5.8, 6°.55S×154°.77E, h82km±42km, mb3.3/5, mb1 3.5/7, mb1mx3.3/36, mbtmp3.7/7, ML2.6/2, MS2.5/3, Ms1 2.5/3, ms1mx2.3/21, Error ellipse: s-maj=50.8km s-min=20.6km az=98.0*

ISC 05 18:45:21.5±1.4**, 6°.5S**±0°.1×**155°.0E**±0°.2**, h56km, n10, σ1s.38**/9**, mb3.5**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.71	306	P	Pn	18 46 16.7	+0.3
	2.1nm,0.3s,baz=61,slow=2.6,SNR=4.7						
KRVT				S	Sn	18 46 58.3	-0.5
	5.1nm,0.3s,baz=33,slow=21,SNR=2.0						
HNR	Honiara	5.67	121	LR	LR	18 48 46.8	
	comp=Z,52nm,20.8s,baz=219,slow=34						
PMG	Port Moresby	8.29	249	P	Pn	18 47 20.4	+1.3
	1.7nm,0.3s,baz=51,slow=6.2,SNR=6.9						
PMG				LR	LR	18 50 11.6	
	comp=Z,32nm,21.4s,baz=87,slow=36						
WRA	Warramunga Arr	24.10	234	P	P	18 50 31.7	-0.4
	0.6nm,0.4s,baz=58,slow=9.7,SNR=12						
ASAR	Alice Springs	26.49	228	P	P	18 50 52.9	-1.0
	0.3nm,0.3s,baz=57,slow=9.2,SNR=6.9						
FITZ	Fitzroy Crossi	30.86	245	LR	LR	19 02 21.3	
	comp=Z,8.2nm,21.6s,baz=121,slow=33						
PETK	Petropavlovsk-	59.46	2	P	P	18 55 19.9	+1.5
	1.3nm,1.0s,baz=170,slow=8.8,SNR=5.2						
CMAR	Chiang Mai Arr	60.61	295	P	P	18 55 27.0	-0.1
	0.8nm,0.7s,baz=117,slow=5.3,SNR=4.6						
MKAR	Makanchi Array	83.08	319	P	P	18 57 41.4	+0.1
	0.3nm,0.7s,baz=90,slow=4.3,SNR=3.0						
TORD	Torodi Ar. Bea	152.92	286	PKPbc	PKPbc	19 05 11.2	-2.4
	0.4nm,0.6s,baz=75,slow=2.2,SNR=2.3						

*GCG **05** 18:51:56.8±1.0, 13°.19N×90°.98W, h12km±48km, MD3.9*
*SNET **05** 18:51:57.4±1.1, 13°.17N×90°.72W, h12km±10km, ML3.3*

ISC 05 18:51:55.3±2.5**, 13°.11N**±0°.10×**90°.85W**±0°.07**, h16**km±12km**, n18, σ0s.72**/25**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	1.12	21	eP	Pg	18 52 16.9	-0.2
IXG				eS	Sn	18 52 32.8	+1.0
IXG	Ixpaco	1.12	21	eP	Pb	18 52 16.1	-0.4
PCG	Pacaya	1.29	11	eP	Pb	18 52 19.4	0.0
FUG	Fuego 3	1.33	0	eP	Pg	18 52 21.0	0.0
CEVE	Cerro Verde	1.39	59	eP	Pn	18 52 20.2	-0.1
CEVE				eS	Sn	18 52 37.8	-0.6
CEVE				IAML		18 52 43.2	
	comp=Z,584nm,0.2s						
RTR	El Retiro	1.41	56	eP	Pn	18 52 20.8	+0.4
SNJE	San Jose	1.43	58	eP	Pn	18 52 20.9	+0.2
NBG	Las Nubes	1.54	18	eP	Pg	18 52 25.2	+0.1
NBG				eS	Sg	18 52 45.6	+0.3
BOQS	Boqueron	1.65	68	eP	Pb	18 52 25.5	0.0
STG3	Santiaguito 3,	1.73	336	eP	Pn	18 52 25.0	0.0
STG3				eS	Sb	18 52 47.5	-1.0
LFRS	El Faro	1.81	74	eP	Pn	18 52 27.1	+1.1
LFRS				eS	Sb	18 52 49.4	-1.3
MTO3	Montecristo	1.93	48	eP	Pn	18 52 28.2	+0.5
MTO3				eS	Sb	18 52 53.3	-1.0
COEG	Centro de Oper	1.98	75	eP	Pn	18 52 28.5	+0.2
COEG				eS	Sn	18 52 53.4	+0.6
MRL	Marmol	2.26	30	eP	Pn	18 52 33.7	+1.5
TECA	Tecapa	2.32	80	eP	Pn	18 52 33.9	+0.9
PACA	Pacayal	2.49	82	eP	Pn	18 52 35.8	+0.5
LCND	La Caada	2.89	86	eP	Pn	18 52 41.1	+0.4
CNCH	Conchagua	2.94	87	eP	Pn	18 52 41.7	+0.2

*BJI **05** 19:12:01.5±0.0, 19°.37N×99°.63E, h10km, mB4.5/14, mb4.3/18, ML4.2/3, Ms3.9/6, Ms7 3.8/5*
*IDC **05** 19:12:04.1±0.8, 19°.77N×99°.78E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.6/41, mbtmp3.8/9, MS3.1/6, Ms1 3.1/6, ms1mx2.8/54, Error ellipse: s-maj=22.3km s-min=11.8km az=107.0*
*NEIC **05** 19:12:05.3±1.1, 19°.75N±0°.07×99°.68E±0°.06, h10km±1km, mb4.1/12, Error ellipse: s-maj=12.0km s-min=9.8km az=155.0*

ISC 05 19:12:05.4±0.6**, 19°.70N**±0°.05×**99°.71E**±0°.05**, h10km, n60, σ1s.04**/55**, mb4.1**/14**, MS3.1**/5**, Thailand**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMMT	Chiang Mai	1.14	219	P	Pb	19 12 27.3	+0.1
CHTO	Chiang Mai	1.14	219		Pb	19 12 27.1	-0.1
LAMP	Lampang	1.17	183	P	Pb	19 12 28.2	+0.4
PHRA	Phrae	1.29	157	P	Pb	19 12 30.2	+0.3
NANT	Nan	1.30	133	P	Pn	19 12 28.6	-1.1
CM31	Chiang Mai Arr	1.43	210	P	Pb	19 12 32.8	+0.6
CM31	Chiang Mai Arr	1.43	210		Pn	19 12 31.6	+0.1
CMAR	Chiang Mai Arr	1.43	210	Pg	Pb	19 12 32.5	+0.4
	260nm,0.3s,baz=16,slow=16,SNR=307						
CMAR				Lg	Lg	19 12 52.0	
	584nm,0.3s,baz=35,slow=30,SNR=15						
CMAR	Chiang Mai Arr	1.43	210		Pn	19 12 31.9	+0.5
CM15	Chiang Mai Arr	1.44	211	P	Pb	19 12 32.9	+0.5
CM02	Chiang Mai Arr	1.45	210	P	Pb	19 12 32.9	+0.4
CM04	Chiang Mai Arr	1.46	208	P	Pb	19 12 33.0	+0.2
CM05	Chiang Mai Arr	1.48	209	P	Pb	19 12 33.1	+0.1
CM13	Chiang Mai Arr	1.48	211	P	Pn	19 12 33.1	+0.9
UTTA	Uttaradit	2.10	157	P	Pn	19 12 41.2	+0.5
MHMT	Maesarieng	2.26	228	P	Pn	19 12 44.9	+2.0
PBKT	Sadao Pong	3.34	159		Pn	19 12 58.3	+0.6
SLVN	Son La	4.26	67		Pn	19 13 10.0	-0.4
KMI	Kunming	6.08	27	Pg	Pg	19 14 04.9	+2.9
KMI	Kunming	6.08	27	Sg	Sg	19 15 22.5	+1.6
ODAN	Odare	13.37	305	eP	Pn	19 15 13.9	-1.6
RAMN	Ramite	14.03	303	eP	Pn	19 15 22.4	-2.2
GUN	Gumba	15.05	305	eP	Pn	19 15 37.8	-0.8
PKI	Pulchoki	15.26	304	eP	Pn	19 15 39.8	-1.5
PKIN	Phulchoki	15.27	304	eP	Pn	19 15 40.3	-1.1
GKN	Gorkha	16.06	304	eP	Pn	19 15 50.6	-1.0
PSI	Prapat	16.81	183	LR	LR	19 23 11.5	
	comp=Z,59nm,18.6s,baz=312,slow=39						
DANN	Dangsing	16.91	304	eP	Pn	19 16 02.7	+0.1
WHN	Wuhan	17.08	48	P	P	19 16 08.1	+2.0
PYUN	Piuthan	17.41	302	eP	Pn	19 16 08.4	-0.3
GTA	Gaotai	19.64	0	eP	Pn	19 16 36.1	+0.3
GTA				pP	sP	19 16 40.2	+1.4
GTA				sP	pP	19 16 43.4	+6.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,62nm,4.1s						
GTA				LR	LR		
	comp=N,75nm,16.5s						
GTA				LR	LR		
	comp=E,340nm,13.0s						
KSH	Kashi	28.41	319	P	P	19 18 01.3	+0.9
KSH				pP	sP	19 18 05.5	+0.6
KSH				sP	pP	19 18 08.4	+4.8
KSH				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,110nm,4.5s						
SONM	Songino Array	28.59	9	P	P	19 18 02.4	+0.6
	1.3nm,0.6s,baz=193,slow=11,SNR=9.2						
SONM	Songino Array	28.59	9	P	P	19 18 02.3	+0.4
ULN	Ulaanbaatar	28.72	10	P	P	19 18 03.0	-0.1
ULN				IAmb	IAmb	19 18 04.5	
	comp=Z,2.6nm,0.8s						
KDJ	Kajisay	29.39	324	P	P	19 18 09.9	+0.9
KDJ				IAmb	IAmb	19 18 17.2	
	comp=Z,3.4nm,0.8s						
KSRS	Korea Array	30.28	48	LR	LR	19 31 09.9	
	comp=Z,27nm,19.4s,baz=270,slow=38						
MK31	Makanchi Array	30.56	336	P	P	19 18 18.5	-0.7
MKAR	Makanchi Array	30.56	336	P	P	19 18 19.8	+0.7
	comp=Z,0.7nm,0.5s,baz=144,slow=9.3,SNR=9.2						
MKAR				PcP	PcP	19 21 16.9	-0.9
	comp=Z,0.3nm,0.7s,baz=137,slow=4.8,SNR=2.6						
MKAR	Makanchi Array	30.56	336	P	P	19 18 19.2	0.0
AAK	Ala-Archa	31.22	323	P	P	19 18 27.3	+2.0
	comp=Z,1.8nm,0.7s,baz=135,slow=20,SNR=2.4						
AAK	Ala-Archa	31.22	323	P	P	19 18 25.5	+0.2
AAK				IAmb	IAmb	19 18 33.3	
	comp=Z,3.0nm,0.9s						
KK31	Karatay Array	33.84	320	P	P	19 18 46.2	-1.8
KKAR	Karatay Array	33.84	320	P	P	19 18 47.4	-0.7
KURK	Kurchatov	35.16	337	P	P	19 18 58.4	-0.9
KURK				IAmb	IAmb	19 19 11.8	
	comp=Z,4.2nm,1.4s						
ZALV	Zalesovo Beam	36.05	345	P	P	19 19 06.3	-0.6
	comp=Z,1.4nm,0.5s,baz=134,slow=8.5,SNR=8.0						
ZALV	Zalesovo Beam	36.05	345	P	P	19 19 07.1	+0.2
MJAR	Matsushiro Arr	37.59	55	P	P	19 19 19.1	-1.2
	comp=Z,1.1nm,0.8s,baz=268,slow=7.6,SNR=3.5						
MJAR	Matsushiro Arr	37.59	55	IAmb	IAmb	19 19 25.8	
	comp=Z,1.5nm,1.1s						
YAK	Yakutsk	47.13	19	P	P	19 20 37.3	-0.2
WRA	Warramunga Arr	52.00	137	P	P	19 21 15.7	+0.4

	comp=Z,0.5nm,0.7s,baz=325,slow=8.0,SNR=2.3						
WR0	Warramunga Arr	52.14	137	P	P	19 21 17.0	+0.7
MA2	Magadan	53.86	29	LR	LR	19 47 28.8	
	comp=Z,29nm,19.9s,baz=162,slow=40						
ASAR	Alice Springs	54.49	141	P	P	19 21 34.2	+0.6
	comp=Z,0.4nm,0.6s,baz=331,slow=7.2,SNR=7.7						
TIXI	Tiksi	54.66	11	LR	LR	19 44 59.1	
	comp=Z,16nm,20.7s,baz=30,slow=36						
TIXI	Tiksi	54.66	11	P	P	19 21 32.7	-1.4
TIXI				IAmb	IAmb	19 21 33.6	
	comp=Z,1.5nm,0.8s						
BRTR	Keskin Array B	59.46	305	LR	LR	19 54 37.6	
	comp=Z,14nm,18.5s,baz=156,slow=43						
FINES	FINESS Array B	65.07	329	P	P	19 22 44.6	-1.2
	comp=Z,1.5nm,0.8s,baz=123,slow=7.0,SNR=5.5						
FINES	FINESS Array B	65.07	329	P	P	19 22 45.4	-0.5
NOA	NORSAR Array B	72.25	329	P	P	19 23 29.9	-0.8
	comp=Z,0.6nm,0.9s,baz=83,slow=5.7,SNR=3.2						
NOA				LR	LR	19 57 48.3	
	comp=Z,10nm,19.4s,baz=185,slow=38						

IDC ***05*** *19:22:19.0±1.5, 43°.75N×105°.52W, h0km, mb1 3.6/3, mb1mx3.3/38, mbtmp3.3/3, ML3.2/3, Error ellipse: s-maj=32.2km s-min=10.6km az=148.0*

NEIC ***05*** *19:22:20.0±1.9, 43°.59N±0°.06×105°.1W±0°.1, h0km±2km, ML3.3/60, Error ellipse: s-maj=15.1km s-min=9.5km az=84.0*

ISC 05 19:22:19.6±1.0**, 43°.54N**±0°.04×**105°.24W**±0°.05**, h0km, n54, σ1s.60**/52**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	1.05	56	Pg	Pg	19 22 39.8	+0.1
K22A	Casper	1.29	227		Pg	19 22 44.0	-0.3
PHWY	Pilot Hill	2.24	184		Pb	19 23 00.7	-0.4
RWWY	Rawlins	2.35	219	Pn	Pn	19 23 01.6	+1.9
RWWY				IAML		19 23 37.7	
	164nm,0.9s						
LAO	LASA Array	3.23	348		Pn	19 23 11.7	+0.1
BW06	Boulder Array	3.25	258	Pn	Pn	19 23 14.0	+1.9
PDAR	Pinedale Array	3.25	258	Pn	Pn	19 23 13.2	+1.2
	2.7nm,0.3s,baz=77,slow=17,SNR=23						
PDAR				Lg	Lg	19 23 55.5	
	4.0nm,0.3s,baz=76,slow=31,SNR=2.0						
PDAR	Pinedale Array	3.25	258		Pn	19 23 13.6	+1.5
RLMT	Red Lodge	3.29	300	Pn	Pn	19 23 12.9	+0.3
RLMT				IAML		19 24 15.0	
	47nm,1.1s						
RLMT				IAML		19 24 15.7	
	46nm,0.9s						
OGNE	Ogallala	3.52	136		Pg	19 23 27.3	+0.2
YNE	Yellowstone No	3.73	295	Pn	Pn	19 23 20.4	+1.8
YMP	Mirror Lake Pl	3.74	290		Pn	19 23 19.2	+0.4
ISCO	Idaho Springs	3.75	184	Pn	Pn	19 23 19.1	+0.2
ISCO				IAML		19 24 34.1	
	23nm,0.9s						
LKWY	Lake	3.86	287		Pn	19 23 24.3	+3.9
LKWY				IAML		19 24 40.4	
	47nm,0.9s						
LKWY				IAML		19 24 41.7	
	32nm,1.1s						
GCMT	Greycliff	3.88	307	Pn	Pn	19 23 20.6	0.0
H17A	Grant Village	3.94	284		Pn	19 23 23.8	+2.2
H17A				IAML		19 24 27.4	
	comp=E,22nm,1.3s						
H17A				IAML		19 24 30.4	
	comp=N,27nm,1.1s						
FLWY	Flagg Ranch	3.99	280		Pn	19 23 23.1	+0.9
FLWY				IAML		19 24 39.0	
	comp=N,53nm,1.1s						
SNOW	Snow King Moun	4.01	271		Pn	19 23 20.1	-2.4
SNOW				IAML		19 24 41.0	
	comp=N,50nm,1.6s						
SNOW				IAML		19 24 59.1	
	comp=N,44nm,1.3s						
O20A	White River Ci	4.07	214	Pn	Pn	19 23 25.6	+2.2
O20A				IAML		19 24 44.2	
	comp=E,34nm,0.8s						
O20A				IAML		19 24 45.8	
	comp=N,40nm,1.2s						
YPP	Pitchstone Pla	4.09	282		Pn	19 23 23.3	-0.2
YNR	Norris Junctio	4.09	289	Pn	Pn	19 23 24.7	+1.1
REDW	Red Top Meadow	4.09	269		Pn	19 23 24.9	+1.3
REDW				IAML		19 24 38.8	
	comp=N,46nm,0.8s						
IMW	Indian Meadow	4.15	277		Pn	19 23 25.7	+1.3
IMW				IAML		19 24 37.6	
	comp=N,33nm,0.9s						
IMW				IAML		19 24 49.8	
	comp=N,23nm,0.6s						
TPAW	Teton Pass	4.15	271		Pn	19 23 25.6	+1.1
TPAW				IAML		19 24 38.5	
	comp=N,38nm,0.9s						
TPAW				IAML		19 24 60.0	
	comp=N,20nm,1.1s						
FXWY	Fox Creek	4.20	273	Pn	Pn	19 23 26.3	+1.1
YHH	Holmes Hill	4.22	289		Pn	19 23 27.7	+2.3
AHID	Auburn Hatcher	4.36	262		Pn	19 23 28.9	+1.7
AHID				IAML		19 24 44.7	
	comp=N,39nm,5.0s						
AHID				IAML		19 24 55.6	
	comp=E,29nm,2.9s						
RDMU	Red Mountain	4.38	229		Pg	19 23 41.2	-2.3
YHB	Horse Butte	4.45	288	Pn	Pn	19 23 28.7	+0.1
YHL	Hebgen Lake	4.47	289		Pn	19 23 30.9	+2.0
SMCO	Snowmass	4.55	197		Pg	19 23 45.7	-1.0
SMCO				IAML		19 25 03.3	
	comp=E,17nm,1.2s						
DGMT	Dagmar	4.99	8		Pn	19 23 38.2	+2.5
HWUT	Hardware Ranch	5.05	250	Pn	Pn	19 23 37.2	+0.4
HWUT				IAML		19 25 14.6	
	comp=E,24nm,0.8s						
TCUT	Toone Canyon	5.17	244	Pn	Pn	19 23 38.5	+0.1
JLU	Jordanelle	5.47	240		Pn	19 23 43.5	+0.9
EGMT	Eagleton	5.48	326		Pn	19 23 38.2	-4.4
MCMT	McKenzie Canyo	5.62	286	Pn	Pn	19 23 45.8	+1.2
PV22	Blue Mesa, Par	5.67	209		Pb	19 24 01.5	+2.0
PV07	Paradox Valley	5.71	208		Pb	19 24 00.3	+0.1
PV21	Cone Mtn., Par	5.72	211	Pn	Pn	19 23 45.9	-0.1
PV15	Paradox Valley	5.74	206		Pb	19 24 03.1	+2.4
P17A	Butcher Ranch,	5.79	227		Pb	19 24 01.7	+0.2
SDCO	Great Sand Dun	5.79	182		Pg	19 24 10.1	-0.5
PV23	Carpenter Ridg	5.83	211		Pb	19 24 04.6	+2.4
PV04	Paradox Valley	5.84	210	Pn	Pn	19 23 49.7	+2.2
PV02	Paradox Valley	5.95	208		Pn	19 23 46.9	-2.2
SRU	San Rafael Swe	5.95	224		Pb	19 24 05.1	+0.9
PV17	East Wray Mesa	5.96	209	Pn	Pn	19 23 49.1	-0.2
PV18	Skein Mesa, Pa	5.97	209	Pn	Pn	19 23 51.7	+2.3
PV13	Radium Mtn., P	6.02	208	Pn	Pn	19 23 50.2	+0.1
PV05	Paradox Valley	6.19	210	Pn	Pn	19 23 50.9	-1.5
ULM	Lac du Bonnet	9.28	40	Pn	Pn	19 24 31.2	-3.3
	comp=E,0.5nm,0.3s,baz=230,slow=14,SNR=2.8						
ULM				Lg	Lg	19 27 04.0	
	comp=E,0.2nm,0.3s,baz=134,slow=7.3,SNR=4.3						
NVAR	Mina Array Bea	11.11	247	Pn	Pn	19 25 00.3	+0.4
	comp=E,0.2nm,0.3s,baz=62,slow=14,SNR=1.8						
TXAR	Lajitas Array	14.23	174	Pg	P	19 26 43.4	+53
	comp=E,0.0nm,0.3s,baz=354,slow=16,SNR=2.6						
TXAR				Lg	Lg	19 29 48.0	
	comp=E,0.0nm,0.3s,baz=345,slow=32,SNR=2.1						

SNET 05 19:22:48.1±1.2**, 15°.08N×87°.65W, h13km**±11km**, ML3.0, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGUH	Tegucigalpa,Un	1.08	160	*e*P	Pb	19 23 06.7	-1.9
TGUH	Tegucigalpa,Un	1.08	160	*e*P	Pb	19 23 06.7	-2.0
TGUH				*e*S	Sb	19 23 21.9	-0.8
FAGO	Alcalda de S	1.44	198	*e*P	Pn	19 23 13.0	-0.9
ESQI	Esquipulas	1.72	253	*e*P	Pn	19 23 18.1	+0.2
ESQI				*e*S	Sg	19 23 42.8	-0.7
PACA	Pacayal	1.73	202	*e*P	Pn	19 23 18.0	0.0
PACA				*e*S	Sb	19 23 42.4	+0.9
PACA	Pacayal	1.73	202	*e*P	Pn	19 23 17.9	-0.1
LCND	La Caada	1.77	188	*e*S	Sb	19 23 42.6	-0.1
LCND	La Caada	1.77	188	*e*P	Pn	19 23 18.4	-0.2
LCND				IAML		19 23 49.5	
	comp=Z,240nm,0.4s						
TECA	Tecapa	1.78	208	*e*P	Pn	19 23 19.6	+0.8
COEB	Comit de Eme	1.79	209	*e*S	Sb	19 23 43.6	+0.4
COEB				IAML		19 23 44.9	
	comp=Z,252nm,0.4s						
MTO3	Montecristo	1.79	248	*e*P	Pb	19 23 20.1	-0.8
MTO3				*e*S	Sb	19 23 44.4	+1.0
MTO3	Montecristo	1.79	248	*e*P	Pb	19 23 19.9	-1.0
MTO3				IAML		19 23 49.8	
	comp=Z,89nm,0.6s						
CNCH	Conchagua	1.80	186	*e*P	Pn	19 23 19.3	+0.3
CNCH				*e*S	Sb	19 23 43.8	+0.3
CNCH	Conchagua	1.80	186	*e*P	Pn	19 23 19.1	+0.1
CNCH				*e*S	Sb	19 23 43.3	-0.3
COEG	Centro de Oper	1.88	220	*e*P	Pn	19 23 20.4	+0.4
COEG				*e*S	Sb	19 23 45.2	-0.5
COEG				*e*S	Sn	19 23 45.6	+2.0
MRL	Marmol	1.97	270	*e*P	Pn	19 23 22.0	+0.6
MRL	Marmol	1.97	270	*e*P	Pn	19 23 21.8	+0.4
MRL				*e*S	Sn	19 23 46.7	+0.7
LFRS	El Faro	1.99	224	*e*S	Sb	19 23 49.9	+0.8
BOQS	Boqueron	2.07	230	*e*S	Sb	19 23 52.3	+0.8
CEVE	Cerro Verde	2.28	237	*e*S	Sb	19 23 58.1	+0.5
CEVE				IAML		19 24 01.3	
	comp=Z,202nm,0.4s						

IDC ***05*** *19:31:55.6±2.2, 7°.02S×129°.58E, h135km±23km, mb3.3/5, mb1 3.5/10, mb1mx3.3/42, mbtmp3.8/10, Error ellipse: s-maj=25.3km s-min=19.1km az=109.0*

ISC 05 19:31:51.9±0.7**, 7°.14S**±0°.06×**129°.84E**±0°.10**, h104km, n10, σ2s.51**/15**, mb3.5**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.39	13	P	Pn	19 33 26.9	+3.4
	0.7nm,0.3s,baz=66,slow=24,SNR=7.6						
SIJI				S	Sn	19 34 34.2	-1.0
	2.7nm,0.3s,baz=216,slow=23,SNR=8.5						
BATI	Baumata	6.82	243	P	Pn	19 33 31.8	+2.4
	2.1nm,0.3s,baz=64,slow=5.7,SNR=4.3						
BATI				S	Sn	19 34 45.4	-0.3
	2.3nm,0.3s,baz=56,slow=14,SNR=6.2						
FITZ	Fitzroy Crossi	11.63	200	P	Pn	19 34 37.5	+2.8
	0.4nm,0.3s,baz=28,slow=9.4,SNR=16						
FITZ				S	Sn	19 36 40.3	-2.4
	0.6nm,0.3s,baz=77,slow=14,SNR=3.1						
WRA	Warramunga Arr	13.45	162	P	P	19 35 02.8	-1.4
	0.8nm,0.3s,baz=343,slow=12,SNR=54						
WRA				S	Sn	19 37 26.1	-0.8
	1.2nm,0.3s,baz=337,slow=22,SNR=7.3						
ASAR	Alice Springs	16.89	167	P	P	19 35 47.6	+5.2
	0.8nm,0.3s,baz=345,slow=9.3,SNR=77						
ASAR				S	Sn	19 38 47.8	-2.0
	0.1nm,0.3s,baz=344,slow=26,SNR=4.0						
CMAR	Chiang Mai Arr	39.70	310	P	P	19 39 12.7	-1.6
	0.5nm,0.6s,baz=140,slow=7.6,SNR=4.7						
SONM	Songino Array	58.52	342	P	P	19 41 36.9	-0.6
	0.2nm,0.4s,baz=150,slow=3.2,SNR=1.9						
MKAR	Makanchi Array	68.26	327	P	P	19 42 41.0	-0.6
	0.5nm,0.4s,baz=134,slow=5.6,SNR=17						
ZALV	Zalesovo Beam	71.64	334	P	P	19 42 59.8	-2.3
	0.4nm,0.3s,baz=134,slow=5.9,SNR=2.2						
TIXI	Tiksi	78.63	360	P	P	19 43 40.5	-1.3
	0.2nm,0.5s,baz=202,slow=2.9,SNR=1.7						

IDC ***05*** *19:51:32.8±0.8, 11°.91N×141°.96E, h0km, mb4.0/10, mb1 4.2/10, mb1mx3.8/53, mbtmp4.0/10, MS3.1/10, Ms1 3.1/10, ms1mx2.9/39, Error ellipse: s-maj=36.7km s-min=20.0km az=92.0*

NEIC ***05*** *19:51:38.5±1.5, 11°.9N±0°.2×142°.0E±0°.1, h37km±10km, mb4.3/14, Error ellipse: s-maj=27.0km s-min=5.9km az=147.0*

ISC 05 19:51:39.8±0.8**, 11°.9N**±0°.1×**142°.0E**±0°.1**, h50km, n40, σ0s.89**/32**, mb4.2**/17**, MS3.1**/9**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	3.29	58	Pn	Pn	19 52 27.8	-1.1
DAV	Davao City (W)	16.87	255	LR	LR	20 02 34.2	
	comp=Z,38nm,18.8s,baz=116,slow=39						
PMG	Port Moresby	21.75	166	LR	LR	20 05 32.1	
	comp=Z,38nm,18.4s,baz=323,slow=38						
JNU	Nakatsue	23.47	336	LR	LR	20 04 05.7	
	comp=Z,38nm,21.6s,baz=154,slow=32						
MJAR	Matsushiro Arr	24.80	353	LR	LR	20 05 28.4	
	comp=Z,26nm,20.1s,baz=240,slow=34						
KSRS	Korea Array	28.43	336	LR	LR	20 08 42.3	
	comp=Z,27nm,19.0s,baz=178,slow=36						
WB0	Warramunga Arr	32.32	193	P	P	19 58 03.6	-0.7
WB0				IAmb	IAmb	19 58 11.8	
	comp=Z,6.6nm,1.4s						
WR0	Warramunga Arr	32.47	193	P	P	19 58 05.6	-0.1
WR0				IAmb	IAmb	19 58 16.7	
	comp=Z,4.9nm,1.2s						
WRAB	Tennant Creek	32.49	193		P	19 58 06.0	+0.2
WRAB				IAmb	IAmb	19 58 23.8	
	comp=Z,4.5nm,1.1s						
WB2	Warramunga Arr	32.50	193	P	P	19 58 06.4	+0.5
WB2				IAmb	IAmb	19 58 24.7	
	comp=Z,8.7nm,1.3s						
WRA	Warramunga Arr	32.50	193	P	P	19 58 05.5	-0.5
	comp=Z,1.0nm,0.6s,baz=13,slow=9.6,SNR=5.9						
ASAR	Alice Springs	36.20	193	P	P	19 58 37.9	0.0
	comp=Z,0.5nm,0.6s,baz=16,slow=12,SNR=14						
KLR	Kul'dur	38.20	349	LR	LR	20 12 57.1	
	comp=Z,37nm,20.1s,baz=144,slow=34						
SONM	Songino Array	46.58	327	P	P	20 00 03.8	+0.8
	comp=Z,0.7nm,0.6s,baz=148,slow=8.8,SNR=6.6						
SONM				LR	LR	20 21 11.5	
	comp=Z,21nm,20.0s,baz=79,slow=38						
SONM	Songino Array	46.58	327	P	P	20 00 03.7	+0.8
MKAR	Makanchi Array	60.80	317	P	P	20 01 47.0	+0.2
	comp=Z,0.8nm,0.8s,baz=98,slow=8.7,SNR=6.7						
MKAR				LR	LR	20 29 36.3	
	comp=Z,18nm,18.2s,baz=255,slow=38						
MKAR	Makanchi Array	60.80	317	P	P	20 01 46.8	-0.1
ZAA0	Zalesovo Array	61.41	326	P	P	20 01 50.6	-0.2
ZALV	Zalesovo Beam	61.41	326	P	P	20 01 50.0	-0.8
	comp=Z,0.7nm,0.4s,baz=104,slow=6.3,SNR=4.1						
ZALV	Zalesovo Beam	61.41	326	P	P	20 01 50.0	-0.8
KURK	Kurchatov	64.10	321	P	P	20 02 08.6	-0.1
NIL	Nilore	65.87	302	P	P	20 02 20.1	-0.5
BPAW	Bear Paw Mtn.	69.42	26	P	P	20 02 43.3	+0.8
BRVK	Borovoye	69.61	322	P	P	20 02 43.9	+0.2
BRVK				IAmb	IAmb	20 02 44.8	
	comp=Z,2.2nm,0.7s						
MLY	Manley	69.78	25	P	P	20 02 45.7	+1.0
ILAR	Eielson Array	71.31	25	P	P	20 02 53.8	-0.2
	comp=Z,0.8nm,0.6s,baz=248,slow=6.3,SNR=12						
ILAR	Eielson Array	71.31	25	P	P	20 02 53.6	-0.4
DOT	Dot Lake	72.32	27	P	P	20 03 00.5	+0.4
DOT				IAmb	IAmb	20 03 01.7	
	comp=Z,2.6nm,0.9s						
BMAR	Burnt Mountain	72.76	23	P	P	20 03 04.6	+1.9
YAH	Yahtse	72.97	30	P	P	20 03 04.1	-0.1
ABKAR	Akbulak array	75.92	318	P	P	20 03 20.8	-0.5
YKA	Yellowknife Ar	85.66	27	P	P	20 04 12.3	-0.7
	comp=Z,0.5nm,0.7s,baz=290,slow=4.5,SNR=3.0						
RES	Resolute Bay	86.85	13	P	P	20 04 18.9	+0.3
RES				IAmb	IAmb	20 04 20.9	
	comp=Z,2.1nm,0.7s						
ARCES	ARCESS Array B	87.83	342	P	P	20 04 22.9	-0.6
	comp=Z,0.5nm,0.5s,baz=56,slow=7.4,SNR=9.5						
NVAR	Mina Array Bea	90.18	51	P	P	20 04 37.4	+2.0
	comp=Z,1.2nm,0.7s,baz=266,slow=6.6,SNR=7.6						
NVAR	Mina Array Bea	90.18	51	P	P	20 04 37.2	+1.8
FINES	FINESS Array B	91.50	334	P	P	20 04 39.3	-1.5
	comp=Z,3.7nm,1.0s,baz=67,slow=5.1,SNR=12						
FINES	FINESS Array B	91.50	334	P	P	20 04 39.5	-1.3
AKASG	Malin Array Be	94.77	324	LR	LR	20 50 33.0	
	comp=Z,24nm,18.2s,baz=280,slow=37						
BRTR	Keskin Array B	96.17	313	LR	LR	20 53 56.4	
	comp=Z,9.1nm,18.0s,baz=163,slow=39						

IDC ***05*** *19:54:11.0±1.7, 11°.60S×162°.09E, h0km, mb3.9/4, mb1 4.0/6, mb1mx3.7/52, mbtmp3.9/6, ML3.8/2, MS2.8/2, Ms1 2.8/2, ms1mx2.5/30, Error ellipse: s-maj=37.6km s-min=30.6km az=91.0*

ISC 05 19:54:16.1±1.1**, 11°.6S**±0°.1×**162°.0E**±0°.2**, h39km, n7, σ1s.34**/7**, mb3.5**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	2.98	316	Pn	Pn	19 55 00.4	-0.4
	27nm,0.3s,baz=176,slow=16,SNR=2.7						
HNR				Sn	Sn	19 55 34.0	-1.3
	16nm,0.3s,baz=172,slow=19,SNR=1.6						
HNR				LR	LR	19 56 21.6	
	comp=Z,131nm,20.7s,baz=66,slow=43						
DZM	Mont Dzumac	11.23	159	Pn	Pn	19 56 53.3	-0.9
	0.3nm,0.3s,baz=12,slow=7.8,SNR=8.2						
DZM				Sn	Sn	19 58 49.6	-8.9
	0.1nm,0.3s,baz=273,slow=13,SNR=1.8						
WRA	Warramunga Arr	27.88	249	P	P	20 00 03.3	+0.8
	0.6nm,0.6s,baz=79,slow=9.7,SNR=5.5						
ASAR	Alice Springs	29.30	242	P	P	20 00 15.5	+0.3
	0.9nm,0.7s,baz=65,slow=9.5,SNR=11						
KSRS	Korea Array	58.36	328	LR	LR	20 29 09.5	
	comp=Z,11nm,18.4s,baz=134,slow=36						
SONM	Songino Array	77.00	325	P	P	20 06 06.9	+1.9
	0.2nm,0.4s,baz=143,slow=7.5,SNR=2.4						
YKA	Yellowknife Ar	97.14	28	P	P	20 07 43.7	-0.4
	0.2nm,0.5s,baz=261,slow=3.6,SNR=2.4						

ANF ***05*** *20:04:26.7±0.4, 43°.73N×105°.36W, h0km, ML3.6/13, Error ellipse: s-maj=4.7km s-min=3.4km az=106.0*

NEIC ***05*** *20:04:27.5±1.4, 43°.80N±0°.05×105°.29W±0°.04, h0km±2km, ML3.3/55, Error ellipse: s-maj=9.0km s-min=4.6km az=164.0*

IDC ***05*** *20:04:27.4±1.8, 43°.94N×105°.65W, h0km, mb3.8/2, mb1 3.7/7, mb1mx3.4/47, mbtmp3.5/7, ML3.5/5, MS3.2/1, Ms1 3.2/1, ms1mx2.1/49, Error ellipse: s-maj=60.8km s-min=8.5km az=146.0*

ISC 05 20:04:26.3±0.8**, 43°.81N**±0°.04×**105°.26W**±0°.05**, h0km, n72, σ1s.10**/74**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.94	70	P	Pn	20 04 46.4	-0.5
	baz=248						
RSSD	Black Hills	0.94	70		Pn	20 04 46.1	-0.8
K22A	Casper	1.48	219	P	Pn	20 04 53.3	-1.1
	baz=38,SNR=228						
K22A				S	Sg	20 05 12.3	-1.6
	baz=38						
K22A	Casper	1.48	219		Pn	20 04 53.3	-1.1
K22A				IAML		20 05 18.3	
	comp=N,731nm,0.3s						
K22A				IAML		20 05 18.7	
	comp=E,480nm,0.3s						
PHWY	Pilot Hill	2.51	183		Pn	20 05 09.2	+0.6
PHWY				IAML		20 05 45.8	
	comp=E,92nm,0.3s						
N23A	Red Feather La	2.96	190	P	Pn	20 05 15.8	+1.0
	baz=8.5,SNR=45						
N23A				Sb	Sb	20 05 55.7	-1.0
	baz=8.5						
LAO	LASA Array	2.96	347	P	Pn	20 05 16.3	+1.6
	baz=168						
LAO				Sb	Sg	20 06 00.1	-1.3
	baz=168						
LAO	LASA Array	2.96	347		Pn	20 05 15.9	+1.3
RLMT	Red Lodge	3.16	296	P	Pn	20 05 18.6	+1.1
	baz=115,SNR=28						
RLMT	Red Lodge	3.16	296		Pn	20 05 18.8	+1.3
RLMT				IAML		20 06 12.3	
	comp=E,83nm,0.4s						
RLMT				IAML		20 06 17.0	
	comp=E,65nm,0.3s						
BW06	Boulder Array	3.31	253	P	Pn	20 05 20.3	+0.7
	baz=71,SNR=57						
BW06				Sb	Sb	20 06 07.1	+0.2
	baz=71						
BW06	Boulder Array	3.31	253		Pn	20 05 20.6	+1.1
PDAR	Pinedale Array	3.31	253	Pn	Pn	20 05 20.4	+0.8
	comp=E,5.9nm,0.3s,baz=72,slow=16,SNR=96						
PDAR				Lg	Lg	20 06 02.0	
	comp=E,4.6nm,0.3s,baz=68,slow=27,SNR=3.6						
YMP	Mirror Lake Pl	3.64	287		Pn	20 05 25.0	+0.8
GCMT	Greycliff	3.71	304		Pn	20 05 26.7	+1.6
OGNE	Ogallala	3.73	139	P	Pn	20 05 26.2	+1.0
	baz=320						
OGNE	Ogallala	3.73	139		Pn	20 05 26.3	+1.0
OGNE				IAML		20 06 35.6	
	comp=E,97nm,0.8s						
H17A	Grant Village	3.88	281	P	Pn	20 05 28.6	+1.2
	baz=98						
H17A	Grant Village	3.88	281		Pn	20 05 28.5	+1.1
FLWY	Flagg Ranch	3.94	276		Pn	20 05 29.5	+1.3
FLWY				IAML		20 06 39.3	
	comp=E,64nm,2.0s						
FLWY				IAML		20 06 44.4	
	comp=E,47nm,1.3s						
SNOW	Snow King Moun	4.01	267		Pn	20 05 30.3	+1.1
SNOW				IAML		20 06 36.7	
	comp=E,40nm,1.2s						
SNOW				IAML		20 07 03.8	
	comp=E,35nm,1.7s						
ISCO	Idaho Springs	4.01	184	P	Pn	20 05 29.8	+0.5
	baz=2.7						
ISCO	Idaho Springs	4.01	184		Pn	20 05 30.3	+1.0
YPP	Pitchstone Pla	4.03	279		Pn	20 05 30.3	+0.8
REDW	Red Top Meadow	4.09	266		Pn	20 05 31.4	+1.1
REDW				IAML		20 06 39.4	
	comp=E,38nm,0.7s						
REDW				IAML		20 06 49.2	
	comp=E,41nm,1.1s						
IMW	Indian Meadow	4.11	273		Pn	20 05 32.1	+1.4
IMW				IAML		20 06 02.2	
	comp=E,32nm,0.4s						
IMW				IAML		20 06 47.1	
	comp=E,24nm,0.9s						
YHH	Holmes Hill	4.13	286		Pn	20 05 32.1	+1.1
TPAW	Teton Pass	4.14	268		Pn	20 05 32.4	+1.3
TPAW				IAML		20 06 55.4	
	comp=E,31nm,1.0s						
FXWY	Fox Creek	4.19	270		Pn	20 05 33.1	+1.5
E28A	Huff	4.25	48		Pn	20 05 34.1	+1.8
O20A	White River Ci	4.29	212	P	Pn	20 05 33.4	+0.3
	baz=30						
O20A	White River Ci	4.29	212		Pn	20 05 34.0	+1.0
O20A				IAML		20 06 47.6	
	comp=E,38nm,0.7s						
O20A				IAML		20 07 29.6	
	comp=N,40nm,1.9s						
YHL	Hebgen Lake	4.38	286	Pn	Pn	20 05 35.9	+1.5
AHID	Auburn Hatcher	4.39	258		Pn	20 05 35.2	+0.8
AHID				IAML		20 06 49.9	
	comp=N,42nm,1.2s						
AHID				IAML		20 06 57.2	
	comp=E,29nm,1.1s						
RDMU	Red Mountain	4.55	226		Pn	20 05 36.3	-0.4
DGMT	Dagmar	4.72	9	P	Pn	20 05 39.5	+0.7
	baz=190,SNR=8.2						
DGMT				Sb	Sg	20 06 54.4	-3.5
	baz=190						
DGMT	Dagmar	4.72	9		Pn	20 05 38.6	-0.2
SMCO	Snowmass	4.80	196		Pn	20 05 39.6	-0.7
SMCO				IAML		20 06 58.8	
	comp=E,25nm,0.3s						
SMCO				IAML		20 06 59.5	
	comp=E,25nm,0.3s						
HWUT	Hardware Ranch	5.14	247		Pn	20 05 45.5	+0.8
HWUT				IAML		20 06 32.7	
	comp=E,25nm,0.6s						
HWUT				IAML		20 07 12.0	
	comp=E,26nm,0.9s						
KSCO	Kaye Shedlock'	5.18	157	P	Pn	20 05 45.3	0.0
	baz=337						
KSCO	Kaye Shedlock'	5.18	157		Pn	20 05 46.0	+0.8
EGMT	Eagleton	5.26	325	P	Pn	20 05 46.7	+0.6
	baz=143						
EGMT	Eagleton	5.26	325		Pn	20 05 47.1	+0.9
CTU	Camp Tracy	5.74	239		Pn	20 05 53.5	+0.6
SPUT	South Promonto	5.87	247		Pn	20 05 56.1	+1.5
PV07	Paradox Valley	5.94	207		Pn	20 05 57.0	+1.3
SRU	San Rafael Swe	6.14	222	Pn	Pn	20 05 59.0	+0.7
PV11	David Mesa, Pa	6.14	208	Pn	Pn	20 05 59.3	+0.8
PV18	Skein Mesa, Pa	6.20	208	Pn	Pn	20 06 00.2	+0.8
ECSD	EROS Data Cent	6.26	88	Pn	Pn	20 05 59.6	-0.3
TMUT	Trail Mountain	6.34	227	Pn	Pn	20 06 02.5	+1.1
NLU	North Lily Min	6.38	235		Pn	20 06 01.8	+0.1
BGU	Big Grassy Mou	6.44	246		Pn	20 06 03.8	+1.3
CBKS	Cedar Bluff	6.49	138		Pn	20 06 03.7	+0.6
Q16A	Castle Valley	6.61	224	Pn	Pn	20 06 03.9	-0.9
DUG	Dugway, Tooele	6.69	240	P	Pn	20 06 02.4	-3.5
	baz=55,SNR=21						
DUG	Dugway, Tooele	6.69	240		Pn	20 06 02.4	-3.5
MSU	Marysvale	7.43	227		Pn	20 06 16.3	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AGMN	**Agassiz Nation**	**7.93**	**52**		**Pn**	**20 06 24.3**	**+1.6**
ELK	**Elko**	**8.01**	**251**	Pn	**Pn**	**20 06 25.8**	**+1.7**
	comp=E,0.8nm,0.3s,baz=78,slow=8.6,SNR=11						
ELK	**Elko**	**8.01**	**251**		**Pn**	**20 06 26.2**	**+2.1**
ULM	**Lac du Bonnet**	**9.08**	**42**	Pn	**Pn**	**20 06 38.4**	**-0.2**
	comp=E,1.6nm,0.3s,baz=242,slow=11,SNR=9.0						
ULM				Lg	Lg	20 09 08.0	
	comp=E,0.2nm,0.3s,baz=308,slow=19,SNR=1.3						
ULM	**Lac du Bonnet**	**9.08**	**42**		**Pn**	**20 06 38.9**	**+0.3**
B35A	**Bob, Littlefor**	**9.21**	**56**		**Pn**	**20 06 40.7**	**+0.3**
AMTX	**Amarillo**	**9.33**	**162**		**Pn**	**20 06 42.9**	**+0.8**
FFC	**Flin Flon**	**11.13**	**10**		**Pn**	**20 07 06.9**	**+0.2**
NVAR	**Mina Array Bea**	**11.21**	**246**	Pn	**Pn**	**20 07 08.7**	**+0.8**
	comp=E,0.1nm,0.3s,baz=61,slow=12,SNR=2.3						
YKA	**Yellowknife Ar**	**19.50**	**347**	P	**P**	**20 08 55.1**	**+0.4**
	comp=E,0.1nm,0.3s,baz=159,slow=13,SNR=4.2						
ROSC	**El Rosal**	**47.42**	**136**	LR	LR	20 35 40.8	
	comp=E,24nm,18.2s,baz=146,slow=39						
ZALV	**Zalesovo Beam**	**82.24**	**354**	P	**P**	**20 16 49.2**	**+0.1**
	comp=E,0.4nm,0.4s,baz=354,slow=5.9,SNR=2.3						
MKAR	**Makanchi Array**	**89.54**	**355**	P	**P**	**20 17 26.1**	**+0.7**
	comp=E,0.3nm,0.7s,baz=7.4,slow=3.3,SNR=3.6						
MKAR	**Makanchi Array**	**89.54**	**355**	P	**P**	**20 17 26.2**	**+0.9**

*IDC **05** 20:05:22.8±0.9, 19.°76N×99.°63E, h0km, mb3.8/13, mb1 3.9/13, mb1mx3.7/47, mbtmp3.8/13, Error ellipse: s-maj=26.1km s-min=11.8km az=98.0*

*NEIC **05** 20:05:24.2±1.6, 19.°63N±0.°03×99.°53E±0.°06, h10km±1km, mb4.2/15, Error ellipse: s-maj=10.7km s-min=3.1km az=117.0*

ISC 05 20:05:23.9±0.5**, 19.°68N**±0.°05×**99.°59E**±0.°05**, h10**km**, n52, σ0.s88**/53**, mb4.0**/19**, Thailand**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYA	**Payao**	**0.41**	**140**	P	**Pb**	**20 05 33.1**	**-0.2**
CMMT	**Chiang Mai**	**1.05**	**215**	P	**Pn**	**20 05 45.1**	**+0.3**
CHTO	**Chiang Mai**	**1.06**	**216**		**Pg**	**20 05 43.2**	**-1.1**
LAMP	**Lampang**	**1.15**	**178**	P	**Pb**	**20 05 46.0**	**+0.1**
PHRA	**Phrae**	**1.32**	**153**	P	**Pn**	**20 05 48.4**	**0.0**
CM09	**Chiang Mai Arr**	**1.35**	**205**	P	**Pn**	**20 05 49.0**	**+0.1**
CM31	**Chiang Mai Arr**	**1.36**	**207**		**Pn**	**20 05 48.2**	**-0.8**
CMAR	**Chiang Mai Arr**	**1.36**	**207**	Pg	**Pg**	**20 05 51.1**	**+1.1**
	149nm,0.3s,baz=19,slow=20,SNR=898						
CMAR				Lg	Lg	20 06 08.4	
	310nm,0.3s,baz=20,slow=26,SNR=14						
CMAR	**Chiang Mai Arr**	**1.36**	**207**		**Pn**	**20 05 49.0**	**0.0**
NANT	**Nan**	**1.36**	**130**	P	**Pn**	**20 05 48.4**	**-0.7**
CM15	**Chiang Mai Arr**	**1.37**	**207**	P	**Pn**	**20 05 49.6**	**+0.4**
CM02	**Chiang Mai Arr**	**1.38**	**206**	P	**Pn**	**20 05 48.4**	**-0.9**
CM04	**Chiang Mai Arr**	**1.40**	**205**	P	**Pn**	**20 05 49.8**	**+0.2**
CM05	**Chiang Mai Arr**	**1.41**	**206**	P	**Pb**	**20 05 50.5**	**+0.1**
MHMT	**Maesarieng**	**2.17**	**227**	Pg	**Pg**	**20 06 06.6**	**+1.0**
MHMT				Pn	**Pn**	**20 06 01.4**	**+1.3**
PBKT	**Sadao Pong**	**3.36**	**157**		**Pn**	**20 06 17.6**	**+1.1**
SLVN	**Son La**	**4.37**	**67**		**Pn**	**20 06 31.5**	**+1.0**
SHL	**Shillong**	**9.22**	**311**	Pn	**Pn**	**20 07 37.1**	**-0.1**
NIL	**Nilore**	**27.25**	**306**	P	**P**	**20 11 07.4**	**-1.0**
NIL				IAmb	IAmb	20 11 10.3	
	comp=Z,4.4nm,0.9s						
SONM	**Songino Array**	**28.63**	**10**	P	**P**	**20 11 21.1**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=194,slow=12,SNR=5.5						
SONM	**Songino Array**	**28.63**	**10**	P	**P**	**20 11 20.7**	**+0.1**
PRZ	**Przheval'sk**	**28.93**	**326**	P	**P**	**20 11 25.7**	**+2.2**
KDJ	**Kajisay**	**29.34**	**325**	P	**P**	**20 11 28.8**	**+1.6**
KDJ				IAmb	IAmb	20 11 33.2	
	comp=Z,3.9nm,0.9s						
MK31	**Makanchi Array**	**30.53**	**336**	P	**P**	**20 11 37.9**	**+0.4**
MKAR	**Makanchi Array**	**30.53**	**336**	P	**P**	**20 11 38.9**	**+1.4**
	comp=Z,1.6nm,0.7s,baz=146,slow=9.2,SNR=17						
MKAR	**Makanchi Array**	**30.53**	**336**	P	**P**	**20 11 38.3**	**+0.8**
AAK	**Ala-Archa**	**31.17**	**323**	P	**P**	**20 11 43.4**	**+0.1**
	comp=Z,2.6nm,0.9s,baz=149,slow=5.2,SNR=4.8						
AAK	**Ala-Archa**	**31.17**	**323**	P	**P**	**20 11 44.9**	**+1.6**
AAK				IAmb	IAmb	20 11 46.6	
	comp=Z,6.5nm,1.2s						
FRU1	**Bishkek**	**31.21**	**323**	P	**P**	**20 11 43.9**	**+0.4**
GAR	**Garm**	**31.76**	**314**	P	**P**	**20 11 47.1**	**-1.3**
GAR				IAmb	IAmb	20 11 52.8	
	comp=Z,3.5nm,0.8s						
BTK	**Batken**	**31.95**	**316**	P	**P**	**20 11 50.4**	**+0.3**
BTK				IAmb	IAmb	20 11 52.1	
	comp=Z,4.0nm,1.0s						
KKAR	**Karatay Array**	**33.79**	**320**	P	**P**	**20 12 06.3**	**+0.2**
KKAR	**Karatay Array**	**33.79**	**320**	P	**P**	**20 12 06.4**	**+0.2**
KKAR				IAmb	IAmb	20 12 24.1	
	comp=Z,4.8nm,1.6s						
KURK	**Kurchatov**	**35.14**	**337**	P	**P**	**20 12 18.6**	**+1.0**
KURK				IAmb	IAmb	20 12 22.6	
	comp=Z,2.7nm,0.8s						
ZALV	**Zalesovo Beam**	**36.04**	**345**	P	**P**	**20 12 25.9**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=151,slow=9.6,SNR=3.8						
ZALV	**Zalesovo Beam**	**36.04**	**345**	P	**P**	**20 12 25.8**	**+0.4**
BVAR	**Borovoye Array**	**40.22**	**333**	P	**P**	**20 13 01.3**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=132,slow=10,SNR=8.5						
GEYT	**Alibeck**	**40.25**	**306**	P	**P**	**20 12 59.5**	**-1.6**
GYA0B	**ALIBECK ARRAY**	**40.25**	**306**	P	**P**	**20 13 00.2**	**-1.0**
BRVK	**Borovoye**	**40.28**	**333**	P	**P**	**20 13 02.0**	**+0.8**
ABKAR	**Akbulak array**	**43.26**	**322**	P	**P**	**20 13 26.0**	**+0.4**
ABKAR	**Akbulak array**	**43.26**	**322**	P	**P**	**20 13 26.4**	**+0.8**
ABKAR				IAmb	IAmb	20 15 05.2	
	comp=Z,79nm,0.4s						
NRIK	**Noril'sk**	**50.21**	**354**	P	**P**	**20 14 18.2**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=153,slow=11,SNR=1.8						
WRA	**Warramunga Arr**	**52.05**	**137**	P	**P**	**20 14 35.5**	**+1.3**
	comp=Z,0.4nm,0.9s,baz=325,slow=7.6,SNR=1.7						
ASAR	**Alice Springs**	**54.55**	**141**	P	**P**	**20 14 52.2**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=319,slow=7.5,SNR=2.3						
BRTR	**Keskin Array B**	**59.39**	**305**	P	**P**	**20 15 26.2**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=106,slow=7.7,SNR=2.5						
FINES	**FINESS Array B**	**65.04**	**329**	P	**P**	**20 16 03.2**	**-0.9**
	comp=Z,1.9nm,0.9s,baz=103,slow=4.4,SNR=1.7						
ARCES	**ARCESS Array B**	**66.16**	**338**	P	**P**	**20 16 10.9**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=73,slow=8.2,SNR=5.2						
ARCES	**ARCESS Array B**	**66.16**	**338**	P	**P**	**20 16 11.1**	**-0.2**
NOA	**NORSAR Array B**	**72.22**	**329**	P	**P**	**20 16 49.0**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=81,slow=6.1,SNR=3.4						
GERES	**GERESS Array B**	**72.79**	**316**	P	**P**	**20 16 52.7**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=69,slow=7.3,SNR=5.3						
GERES	**GERESS Array B**	**72.79**	**316**	P	**P**	**20 16 53.1**	**+0.3**

*IDC **05** 20:16:18.5±63.0, 21.°00S×178.°58W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/30, mbtmp4.0/3, Error ellipse: s-maj=1151.0km s-min=153.0km az=83.0*

*NEIC **05** 20:17:03.9±1.8, 22.°2S±0.°2×178.°9W±0.°2, h424km±13km, mb4.4/15, Error ellipse: s-maj=28.5km s-min=24.0km az=126.0*

ISC 05 20:17:05.9±1.2**, 22.°2S**±0.°2×**178.°9W**±0.°2**, h450**km**, n19, σ1.s01**/19**, mb4.3**/10**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.29**	**246**	P	**P**	**20 23 29.1**	**-0.8**
	1.3nm,0.6s,baz=85,slow=5.7,SNR=7.3						
STKA	**Stephens Creek**	**36.29**	**246**	P	**P**	**20 23 29.4**	**-0.5**
BBOO	**Buckleboo**	**41.03**	**245**	P	**P**	**20 24 07.2**	**-1.4**
AS31	**Alice Springs**	**43.30**	**259**	P	**P**	**20 24 27.0**	**+0.3**
ASAR	**Alice Springs**	**43.30**	**259**	P	**P**	**20 24 27.1**	**+0.3**
	1.1nm,0.4s,baz=95,slow=7.5,SNR=26						
ASAR	**Alice Springs**	**43.30**	**259**	P	**P**	**20 24 26.7**	**-0.1**
WR0	**Warramunga Arr**	**43.34**	**264**	P	**P**	**20 24 26.8**	**-0.2**
WR0				IAmb	IAmb	20 24 30.3	
	comp=Z,18nm,1.7s						
WB0	**Warramunga Arr**	**43.51**	**264**	P	**P**	**20 24 28.9**	**+0.5**
WB0				IAmb	IAmb	20 24 30.2	
	comp=Z,36nm,2.0s						
WB2	**Warramunga Arr**	**43.51**	**264**	P	**P**	**20 24 28.9**	**+0.5**
WB2				IAmb	IAmb	20 26 04.3	
	comp=Z,29nm,1.9s						
WRA	**Warramunga Arr**	**43.53**	**264**	P	**P**	**20 24 29.2**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=91,slow=8.3,SNR=103						
WRA	**Warramunga Arr**	**43.53**	**264**	P	**P**	**20 24 28.8**	**+0.3**
WAKE	**Wake Island**	**43.55**	**340**	P	**P**	**20 24 28.7**	**+0.2**
FORT	**Forrest**	**47.84**	**248**	P	**P**	**20 24 60.0**	**-1.5**
FORT				IAmb	IAmb	20 25 12.5	
	comp=Z,18nm,1.1s						
KNRA	**Kununurra**	**49.70**	**268**	P	**P**	**20 25 17.4**	**+1.8**
FITZ	**Fitzroy Crossi**	**51.96**	**264**	P	**P**	**20 25 33.8**	**+1.7**
SOEI	**Soe**	**55.70**	**273**	P	**P**	**20 25 60.0**	**+1.0**
SOEI				IAmb	IAmb	20 26 51.2	
	comp=Z,25nm,1.0s						
MORW	**Morawa**	**58.39**	**249**	P	**P**	**20 26 16.4**	**-0.8**
MORW				IAmb	IAmb	20 27 29.1	
	comp=Z,26nm,1.5s						
QSPA	**South Pole Qui**	**67.89**	**180**	P	**P**	**20 27 19.2**	**+1.1**
QSPA				IAmb	IAmb	20 28 49.0	
	comp=Z,12nm,1.7s						
PSUT	**Pine Spring**	**85.79**	**45**	P	**P**	**20 28 56.1**	**-0.8**

IDC 05 20:26:41.6±3.8**, 10.°66S**×**162.°72E, h0**km**, mb3.5**/3**, mb1 3.6**/4**, mb1mx3.4**/33**, mbtmp3.5**/4**, ML3.9**/1**, Error ellipse: s-maj=75.4km s-min=44.6km az=107.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.99**	**294**	Pn	Pn	20 27 30.4	0.0
	17nm,0.3s,baz=130,slow=16,SNR=2.0						
HNR				Sn	Sn	20 27 58.6	-8.3
	30nm,0.3s,baz=210,slow=22,SNR=8.7						
WRA	**Warramunga Arr**	**28.85**	**248**	P	P	20 32 41.6	-0.5
	0.3nm,0.6s,baz=78,slow=8.6,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**29.23**	**8**	T	T	21 02 10.2	
	baz=194,slow=76,SNR=8.1						
H11S3	**WAKE ISLAND Hy**	**29.23**	**8**	T	T	21 02 09.0	
	baz=194,slow=76,SNR=7.6						
H11S1	**WAKE ISLAND Hy**	**29.25**	**8**	T	T	21 02 10.7	
	baz=194,slow=76,SNR=2.8						
ASAR	**Alice Springs**	**30.34**	**241**	P	P	20 32 55.6	+0.3
	0.2nm,0.3s,baz=62,slow=10,SNR=7.3						
H11N1	**WAKE ISLAND Hy**	**30.46**	**8**	T	T	21 03 44.5	
	baz=193,slow=76,SNR=7.2						
H11N3	**WAKE ISLAND Hy**	**30.47**	**8**	T	T	21 03 42.8	
	baz=193,slow=76,SNR=5.4						
H11N2	**WAKE ISLAND Hy**	**30.48**	**8**	T	T	21 03 44.5	
	baz=193,slow=76,SNR=9.4						
SONM	**Songino Array**	**76.62**	**325**	P	P	20 38 34.5	+0.1
	0.3nm,0.6s,baz=133,slow=6.2,SNR=2.9						

IDC 05 20:36:42.6±1.4**, 3.°94S**×**149.°19E, h0**km**, mb3.7**/4**, mb1 3.9**/5**, mb1mx3.6**/42**, mbtmp3.7**/5**, ML3.6**/1**, MS3.1**/5**, Ms1 3.1**/5**, ms1mx2.7**/37**, Error ellipse: s-maj=39.9km s-min=28.5km az=148.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.85**	**97**	Pn	Pn	20 37 29.2	-0.2
	8.4nm,0.3s,baz=342,slow=3.2,SNR=5.7						
HNR	**Honiara**	**11.99**	**118**	LR	LR	20 44 27.6	
	comp=Z,66nm,19.4s,baz=232,slow=39						
WRA	**Warramunga Arr**	**21.51**	**221**	P	P	20 41 32.6	-0.7
	1.5nm,0.7s,baz=40,slow=12,SNR=8.2						
ASAR	**Alice Springs**	**24.55**	**216**	P	P	20 42 04.2	-0.1
	1.0nm,0.9s,baz=50,slow=7.3,SNR=6.9						
FITZ	**Fitzroy Crossi**	**27.01**	**237**	P	P	20 42 27.0	+0.5
	6.0nm,0.9s,baz=64,slow=7.4,SNR=6.7						
FITZ				LR	LR	20 53 12.6	
	comp=Z,48nm,19.8s,baz=80,slow=37						
KAPI	**Kappang**	**29.37**	**267**	LR	LR	20 56 10.8	
	comp=Z,24nm,18.1s,baz=12,slow=40						
KSRS	**Korea Array**	**45.69**	**336**	LR	LR	21 02 40.1	
	comp=Z,25nm,18.3s,baz=138,slow=34						
TLY	**Talaya**	**67.57**	**331**	LR	LR	21 14 41.1	
	comp=Z,20nm,19.3s,baz=114,slow=34						
MKAR	**Makanchi Array**	**77.33**	**320**	P	P	20 48 38.7	-0.6
	0.4nm,0.9s,baz=101,slow=4.6,SNR=3.3						
TORD	**Torodi Ar. Bea**	**146.62**	**288**	PKPbc	PKPbc	20 56 27.4	+0.1
	0.7nm,0.9s,baz=87,slow=3.2,SNR=3.2						

*NEIC **05** 20:41:00.2±1.3, 19.°0S±0.°3×169.°5E±0.°2, h255km±13km, mb4.5/10, Error ellipse: s-maj=44.7km s-min=19.0km az=140.0*

*IDC **05** 20:41:01.1±2.7, 19.°03S×169.°53E, h262km±24km, mb3.5/9, mb1 3.7/11, mb1mx3.4/38, mbtmp4.2/11, Error ellipse: s-maj=37.5km s-min=19.2km az=146.0*

ISC 05 20:40:59.8±1.0**, 18.°9S**±0.°1×**169.°6E**±0.°2**, h246**km**, n32, σ1.s01**/29**, mb3.9**/13**, 1C-1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.28**	**222**	P	**Pn**	**20 42 07.4**	**+0.6**
	7.4nm,0.3s,baz=55,slow=18,SNR=58						
DZM	**Mont Dzumac**	**4.28**	**222**		**Pn**	**20 42 07.0**	**+0.2**
HNR	**Honiara**	**13.25**	**314**	P	**P**	**20 44 00.6**	**0.0**
	12nm,0.3s,baz=73,slow=2.0,SNR=5.8						
HNR	**Honiara**	**13.25**	**314**	P	**P**	**20 44 00.4**	**-0.2**
CTA	**Charters Tower**	**21.99**	**263**	P	**P**	**20 45 35.0**	**+0.8**
	2.1nm,0.6s,baz=94,slow=13,SNR=1.7						
STKA	**Stephens Creek**	**28.27**	**237**	P	**P**	**20 46 31.2**	**+0.7**
	2.1nm,0.6s,baz=48,slow=6.9,SNR=6.8						
STKA	**Stephens Creek**	**28.27**	**237**	P	**P**	**20 46 30.9**	**+0.4**
WR0	**Warramunga Arr**	**33.00**	**262**	P	**P**	**20 47 11.0**	**-1.1**
WR0				IAmb	IAmb	20 48 10.2	
	comp=Z,26nm,1.9s						
WB0	**Warramunga Arr**	**33.15**	**263**	P	**P**	**20 47 12.2**	**-1.3**
WB0				IAmb	IAmb	20 47 28.2	
	comp=Z,20nm,1.6s						
WB2	**Warramunga Arr**	**33.18**	**262**	P	**P**	**20 47 12.6**	**-1.1**
WRAB	**Tennant Creek**	**33.18**	**262**	P	**P**	**20 47 12.4**	**-1.3**
WRAB				IAmb	IAmb	20 48 31.5	
	comp=Z,15nm,1.6s						
WRA	**Warramunga Arr**	**33.19**	**262**	P	**P**	**20 47 12.2**	**-1.6**
	comp=Z,1.2nm,0.5s,baz=81,slow=5.9,SNR=19						
WRA	**Warramunga Arr**	**33.19**	**262**	P	**P**	**20 47 12.5**	**-1.3**
AS31	**Alice Springs**	**33.49**	**256**	P	**P**	**20 47 15.6**	**-0.8**
AS31				IAmb	IAmb	20 47 16.3	
	comp=Z,4.8nm,0.5s						
ASAR	**Alice Springs**	**33.49**	**256**	P	**P**	**20 47 15.8**	**-0.7**
	comp=Z,8.3nm,0.5s,baz=82,slow=8.9,SNR=156						
ASAR	**Alice Springs**	**33.49**	**256**	P	**P**	**20 47 14.9**	**-1.5**
KNRA	**Kununurra**	**39.02**	**268**	P	**P**	**20 48 02.7**	**-0.4**
FITZ	**Fitzroy Crossi**	**41.57**	**264**	P	**P**	**20 48 23.9**	**-0.1**
	comp=Z,3.8nm,0.8s,baz=94,slow=6.6,SNR=11						
FITZ	**Fitzroy Crossi**	**41.57**	**264**	P	**P**	**20 48 23.8**	**-0.1**
FITZ				IAmb	IAmb	20 49 45.8	
	comp=Z,37nm,1.8s						
PETK	**Petropavlovsk-**	**72.46**	**353**	P	**P**	**20 52 00.7**	**+1.5**
	comp=Z,1.4nm,0.7s,baz=146,slow=8.0,SNR=4.4						
SYO	**Syowa Base**	**85.32**	**196**	⇓eX	P	20 53 15.0	+6.2
SYO	**Syowa Base**	**85.32**	**196**	⇑epP	pP	20 54 09.0	+1.5
SONM	**Songino Array**	**87.15**	**323**	P	**P**	**20 53 18.3**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=134,slow=4.2,SNR=3.2						
IMAR	**Indian Mountai**	**89.05**	**14**	P	**P**	**20 53 27.0**	**+0.5**
IL31		**89.84**	**17**		**P**	**20 53 29.8**	**-0.4**
ILAR	**Eielson Array**	**89.84**	**17**	P	**P**	**20 53 28.9**	**-1.3**
	comp=Z,0.8nm,1.0s,baz=235,slow=5.6,SNR=5.6						
ILAR	**Eielson Array**	**89.84**	**17**	P	**P**	**20 53 29.4**	**-0.8**
TXAR	**Lajitas Array**	**96.35**	**61**	P	**P**	**20 54 00.8**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=210,slow=3.0,SNR=2.6						
YKA	**Yellowknife Ar**	**100.25**	**27**	P	**Pdif**	**20 54 19.3**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=243,slow=4.7,SNR=5.4						
ARCES	**ARCESS Array B**	**124.84**	**345**	PKP	**PKPdf**	**20 59 28.0**	**-1.7**
	comp=Z,1.4nm,0.9s,baz=46,slow=3.5,SNR=4.4						
ARCES	**ARCESS Array B**	**124.84**	**345**		**PKPdf**	**20 59 29.4**	**-0.3**
GERES	**GERESS Array B**	**144.35**	**332**	PKP	PKPbc	21 00 05.4	-0.3
	comp=Z,0.3nm,0.6s,baz=28,slow=2.3,SNR=2.5						

*BJI **05** 21:17:00.9±0.0, 19.°50N×99.°68E, h9km, mB4.5/27, mb4.2/32, ML4.7/5, Ms4.3/33, Ms7 4.0/30*

*IDC **05** 21:17:02.3±0.6, 19.°73N×99.°75E, h0km, mb3.9/15, mb1 4.0/15, mb1mx3.8/42, mbtmp3.9/15, MS3.4/16, Ms1 3.4/16, ms1mx3.2/47, Error ellipse: s-maj=18.5km s-min=10.9km az=94.0*

*NEIC **05** 21:17:03.5±2.7, 19.°77N±0.°05×99.°61E±0.°03, h10km±1km, mb4.4/16, Error ellipse: s-maj=8.5km s-min=3.5km az=336.0*

ISC 05 21:17:03.9±0.4**, 19.°65N**±0.°04×**99.°64E**±0.°04**, h10**km**, n80, σ1.s89**/77**, mb4.2**/26**, MS3.5**/18**, 1D, Thailand**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMMT	**Chiang Mai**	**1.06**	**218**	P	**Pb**	**21 17 24.9**	**+0.6**
CHTO	**Chiang Mai**	**1.06**	**218**		**Pb**	**21 17 24.5**	**+0.1**
CHTO					**Sg**	**21 17 39.2**	**+1.1**
LAMP	**Lampang**	**1.12**	**180**	P	**Pb**	**21 17 26.0**	**+0.6**
PHRA	**Phrae**	**1.27**	**154**	P	**Pn**	**21 17 28.5**	**+0.7**
NANT	**Nan**	**1.31**	**130**	P	**Pn**	**21 17 27.4**	**-0.9**
CM09	**Chiang Mai Arr**	**1.34**	**207**	P	**Pn**	**21 17 29.7**	**+0.9**
CM31	**Chiang Mai Arr**	**1.35**	**209**	Pn	**Pn**	**21 17 29.8**	**+0.9**
CM31					**Sb**	**21 17 49.6**	**+2.8**
CMAR	**Chiang Mai Arr**	**1.35**	**209**	Pg	**Pn**	**21 17 30.6**	**+1.7**
	892nm,0.3s,baz=19,slow=19,SNR=1333						
CMAR				Lg	Lg	21 17 49.6	
	2µm,0.3s,baz=26,slow=29,SNR=37						
CM15	**Chiang Mai Arr**	**1.37**	**210**	P	**Pn**	**21 17 29.8**	**+0.7**
CM02	**Chiang Mai Arr**	**1.37**	**208**	P	**Pn**	**21 17 29.8**	**+0.6**
CM05	**Chiang Mai Arr**	**1.40**	**208**	P	**Pn**	**21 17 30.3**	**+0.7**
MHMT	**Maesarieng**	**2.18**	**228**	P	**Pn**	**21 17 40.4**	**+0.1**
PBKT	**Sadao Pong**	**3.31**	**157**		**Pn**	**21 17 57.0**	**+1.1**
SLVN	**Son La**	**4.34**	**67**		**Pn**	**21 18 09.0**	**-1.0**
SLVN				Pg	**Pb**	**21 18 23.6**	**+3.2**
SLVN					**Sn**	**21 18 58.0**	**-2.7**
KMI	**Kunming**	**6.16**	**27**	Pg	**Pg**	**21 19 02.1**	**+0.2**
KMI				Sg	**Sg**	**21 20 25.1**	**+3.4**
KMI				smax	smax		
	comp=N,81nm,1.4s						
KMI				smax	smax		
	comp=E,81nm,1.4s						
KMI				LR	LR		
	comp=N,780nm,4.7s						
KMI				LR	LR		
	comp=E,290nm,5.7s						
KMI				LR	LR		
	comp=Z,880nm,9.3s						
SHL	**Shillong**	**9.27**	**311**		Pn	21 19 15.8	-2.1
GYA	**Guiyang**	**9.37**	**42**	eP	Pn	21 19 48.7	+30
GYA				S	Sn	21 21 27.6	+23
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA				pmax	pmax		
	comp=Z,120nm,3.8s						
GYA				LR	LR		
	comp=N,510nm,6.3s						
GYA				LR	LR		
	comp=E,740nm,6.3s						
GYA				LR	LR		
	comp=Z,300nm,7.6s						
QIZ	**Qiongzhong**	**9.66**	**92**	P	**Pn**	**21 19 23.2**	**+0.2**
QIZ				S	**Sn**	**21 21 11.5**	**-0.1**
QIZ				LR	LR		
	comp=Z,970nm,12.8s						
QIZ				LR	LR		
	comp=Z,480nm,10.6s						
QIZ				LR	LR		
	comp=Z,450nm,13.2s						
LSA	**Lhasa**	**12.63**	**324**		**Pn**	**21 20 03.2**	**-0.9**
ODAN	**Odare**	**13.34**	**305**	eP	**Pn**	**21 20 12.5**	**-1.2**
	comp=Z,19nm,0.8s						
TAPN	**Taplejung**	**13.35**	**307**	eP	**Pn**	**21 20 13.5**	**-0.4**
RAMN	**Ramite**	**14.00**	**304**	eP	**Pn**	**21 20 22.1**	**-0.6**
	comp=Z,8.3nm,0.6s						
JIRN	**Jiri**	**14.67**	**305**	eP	**Pn**	**21 20 30.9**	**-1.0**
	comp=Z,14nm,0.6s						
GUN	**Gumba**	**15.03**	**306**	eP	**Pn**	**21 20 35.5**	**-1.3**
PKI	**Pulchoki**	**15.23**	**304**	eP	**Pn**	**21 20 37.8**	**-1.7**
PKIN	**Phulchoki**	**15.24**	**304**	eP	**Pn**	**21 20 38.4**	**-1.2**
	comp=Z,5.3nm,0.5s						
GKN	**Gorkha**	**16.04**	**304**	eP	**Pn**	**21 20 48.3**	**-1.5**
KCSI	**Kotacane, Aceh**	**16.13**	**187**	P	**Pn**	**21 20 54.1**	**+3.2**
	comp=Z,22nm,1.5s						
XAN	**Xi'an**	**16.54**	**28**	P	**Pn**	**21 20 54.4**	**-1.7**
XAN				S	**Sn**	**21 24 01.5**	**+1.7**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
XAN				LR	LR		
	comp=Z,570nm,12.2s						
XAN				LR	LR		
	comp=Z,750nm,10.8s						
XAN				LR	LR		
	comp=Z,440nm,13.6s						
XAN	**Xi'an**	**16.54**	**28**	Pn	**Pn**	**21 20 53.7**	**-2.4**
KOLN	**Koldanda**	**16.75**	**302**	eP	**Pn**	**21 20 57.7**	**-1.3**
	comp=Z,13nm,0.7s						
PSI	**Prapat**	**16.76**	**182**	LR	LR	21 27 31.3	
	comp=Z,139nm,20.9s,baz=5.0,slow=37						
LZH	**Lanzhou**	**16.79**	**12**	eP	**Pn**	**21 20 57.1**	**-2.3**
LZH				pP	P	21 21 03.0	+1.4
LZH				sP	pP	21 21 07.4	+2.8
LZH				PP	**PnPn**	**21 21 10.8**	**+1.9**
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH				pmax	pmax		
	comp=Z,68nm,5.4s						
LZH				LR	LR		
	comp=Z,390nm,9.2s						
LZH				LR	LR		
	comp=Z,280nm,10.8s						
LZH				LR	LR		
	comp=Z,230nm,9.2s						
DANN	**Dangsing**	**16.88**	**304**	eP	**Pn**	**21 20 59.2**	**-1.5**
	comp=Z,14nm,0.6s						
WHN	**Wuhan**	**17.16**	**48**	P	P	21 21 15.5	+10
WHN				S	**Sn**	**21 24 09.6**	**-5.3**
WHN				LR	LR		
	comp=N,3µm,8.5s						
WHN				LR	LR		
	comp=E,1µm,8.4s						
WHN				LR	LR		
	comp=Z,700nm,11.6s						
PYUN	**Piuthan**	**17.38**	**302**	eP	**Pn**	**21 21 05.9**	**-1.0**
	comp=Z,67nm,1.0s						
TPRI	**Tanjung Pinang**	**19.22**	**165**	P	**P**	**21 21 27.6**	**-0.7**
GTA	**Gaotai**	**19.70**	**0**	⇓P	**P**	**21 21 34.6**	**+1.1**
GTA				pP	sP	21 21 40.1	+2.2
GTA				sP	pP	21 21 43.3	+6.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,150nm,4.4s						
GTA				LR	LR		
	comp=Z,310nm,8.3s						
GTA				LR	LR		
	comp=Z,810nm,12.4s						
GTA				LR	LR		
	comp=Z,340nm,9.5s						
SBUM	**Sibu**	**21.06**	**143**	P	**P**	**21 21 47.8**	**-0.6**
PMBI	**Palembang**	**23.00**	**167**	P	**P**	**21 22 07.6**	**-1.4**
HHC	**Hu-ho-hao-te**	**23.46**	**23**	P	**P**	**21 22 15.3**	**+1.6**
HHC				pP	pP	21 22 19.4	+2.5
HHC				PP	**PnPn**	**21 22 47.5**	**+7.3**
HHC				S	**S**	**21 26 27.8**	**+0.4**
HHC				sS	pS	21 26 31.5	+1.0
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,46nm,6.0s						
HHC				LR	LR		
	comp=Z,170nm,10.6s						
HHC				LR	LR		
	comp=Z,140nm,7.5s						
HHC				LR	LR		
	comp=Z,110nm,13.1s						
WMQ	**Urumqi**	**26.10**	**340**	eP	**P**	**21 22 38.4**	**+0.5**
WMQ				pP	pP	21 22 41.8	+0.6
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,20nm,3.7s						
WMQ				LR	LR		
	comp=Z,48nm,13.3s						
WMQ				LR	LR		
	comp=Z,58nm,12.1s						
WMQ				LR	LR		
	comp=Z,150nm,10.3s						
NIL	**Nilore**	**27.30**	**306**	P	**P**	**21 22 45.7**	**-3.2**
NIL				IAmb	IAmb	21 23 04.5	
	comp=Z,6.8nm,0.8s						
LEM	**Lembang**	**27.46**	**163**	LR	LR	21 34 31.1	
	comp=Z,200nm,18.5s,baz=348,slow=38						
DAV	**Davao City (W)**	**28.11**	**113**	LR	LR	21 34 15.6	
	comp=Z,63nm,21.5s,baz=230,slow=37						
KSH	**Kashi**	**28.41**	**319**	P	**P**	**21 23 01.0**	**+2.2**
KSH				sP	sP	21 23 10.4	+7.0
KSH				PP	**PnPn**	**21 23 51.7**	**+4.0**
KSH				S	**S**	**21 27 46.1**	**+0.1**
KSH				SS	**SnSn**	**21 29 09.6**	**+5.7**
KSH				pmax	pmax		
	comp=Z,30nm,1.6s						
KSH				pmax	pmax		
	comp=Z,41nm,4.7s						
KSH				LR	LR		
	comp=Z,160nm,5.3s						
KSH				LR	LR		
	comp=Z,150nm,6.4s						
KSH				LR	LR		
	comp=Z,310nm,11.6s						
SONM	**Songino Array**	**28.65**	**10**	P	**P**	**21 23 01.2**	**+0.3**

	comp=Z,1.5nm,0.7s,baz=194,slow=8.9,SNR=13						
SONM				LR	LR	21 34 51.1	
	comp=Z,34nm,19.6s,baz=234,slow=37						
ULN	Ulaanbaatar	28.79	10	P	P	21 22 58.3	-3.8
ULN				IAmb	IAmb	21 23 03.5	
	comp=Z,5.1nm,1.1s						
PRZ	Przheval'sk	28.98	326	P	P	21 23 01.1	-2.9
KDJ	Kajisay	29.39	325	P	P	21 23 06.3	-1.3
KDJ				IAmb	IAmb	21 23 12.5	
	comp=Z,10.0nm,0.9s						
KSRS	Korea Array	30.36	48	LR	LR	21 35 02.7	
	comp=Z,48nm,18.9s,baz=236,slow=36						
MK31	Makanchi Array	30.57	336	P	P	21 23 17.1	-0.8
MKAR	Makanchi Array	30.57	336	P	P	21 23 18.5	+0.7
	comp=Z,2.0nm,0.6s,baz=141,slow=8.8,SNR=22						
AAK	Ala-Archa	31.22	323	P	P	21 23 24.0	+0.3
GAR	Garm	31.81	314	P	P	21 23 26.6	-2.4
GAR				IAmb	IAmb	21 23 35.8	
	comp=Z,9.4nm,1.1s						
BTK	Batken	32.00	316	P	P	21 23 28.2	-2.3
KURK	Kurchatov	35.18	337	P	P	21 23 55.7	-2.3
KURK				IAmb	IAmb	21 24 06.9	
	comp=Z,6.3nm,1.2s						
ZAA0	Zalesovo Array	36.08	345	P	P	21 24 02.5	-3.2
ZALV	Zalesovo Beam	36.08	345	P	P	21 24 05.5	-0.1
	comp=Z,2.6nm,0.8s,baz=159,slow=9.5,SNR=10						
ZALV				LR	LR	21 40 56.8	
	comp=Z,52nm,18.5s,baz=129,slow=40						
MJAR	Matsushiro Arr	37.67	55	LR	LR	21 40 11.5	
	comp=Z,49nm,18.3s,baz=275,slow=37						
KLR	Kul'dur	39.13	34	P	P	21 24 31.3	-0.2
	comp=Z,0.6nm,0.3s,baz=270,slow=1.0,SNR=2.3						
BVAR	Borovoye Array	40.26	333	P	P	21 24 41.1	+0.2
	comp=Z,1.8nm,0.6s,baz=124,slow=9.3,SNR=14						
GEYT	Alibeck	40.30	306	LR	LR	21 45 05.8	
	comp=Z,46nm,19.3s,baz=245,slow=42						
BRVK	Borovoye	40.33	333	P	P	21 24 39.5	-2.0
BRVK				IAmb	IAmb	21 24 47.9	
	comp=Z,5.5nm,0.8s						
ASAJ	Asahikawa	43.23	46	LR	LR	21 42 33.5	
	comp=Z,33nm,18.2s,baz=72,slow=36						
YAK	Yakutsk	47.20	19	LR	LR	21 47 37.1	
	comp=Z,46nm,18.6s,baz=217,slow=39						
ARU	Arti	47.73	330	P	P	21 25 39.6	-1.2
ARU				IAmb	IAmb	21 25 44.8	
	comp=Z,6.1nm,1.0s						
NRIK	Noril'sk	50.24	354	P	P	21 25 58.2	-1.6
	comp=Z,2.2nm,0.6s,baz=200,slow=4.8,SNR=4.4						
NRIK				LR	LR	21 48 01.2	
	comp=Z,54nm,19.8s,baz=137,slow=37						
WRA	Warramunga Arr	52.00	137	P	P	21 26 14.1	+0.3
	comp=Z,1.4nm,0.8s,baz=327,slow=8.1,SNR=5.9						
WRA				PcP	PcP	21 27 25.6	-0.6
	comp=Z,1.0nm,1.0s,baz=302,slow=3.9,SNR=2.8						
ASAR	Alice Springs	54.50	141	P	P	21 26 32.2	+0.1
	comp=Z,0.6nm,0.4s,baz=323,slow=7.4,SNR=12						
ASAR				PcP	PcP	21 27 33.5	-2.1
	comp=Z,0.4nm,0.6s,baz=324,slow=4.6,SNR=2.1						
ASAR				LR	LR	21 49 19.1	
	comp=Z,141nm,21.9s,baz=105,slow=36						
TIXI	Tiksi	54.72	11	LR	LR	21 52 50.2	
	comp=Z,40nm,20.3s,baz=228,slow=39						
TIXI	Tiksi	54.72	11	P	P	21 26 31.9	-1.2
TIXI				IAmb	IAmb	21 26 37.1	
	comp=Z,5.4nm,1.4s						
BRTR	Keskin Array B	59.44	305	P	P	21 27 07.8	+0.6
	comp=Z,0.4nm,0.8s,baz=108,slow=4.7,SNR=2.3						
BRTR				LR	LR	21 56 49.6	
	comp=Z,17nm,18.6s,baz=144,slow=40						
AKASG	Malin Array Be	62.68	318	P	P	21 27 29.4	+0.6
	comp=Z,0.2nm,0.4s,baz=73,slow=6.0,SNR=6.2						
FINES	FINESS Array B	65.08	329	P	P	21 27 43.6	-0.8
	comp=Z,1.7nm,0.7s,baz=116,slow=4.4,SNR=5.5						
STKA	Stephens Creek	65.13	141	P	P	21 27 45.0	-0.1
	comp=Z,0.9nm,0.6s,baz=294,slow=7.6,SNR=4.5						
ARCES	ARCESS Array B	66.20	338	P	P	21 27 50.7	-0.9
	comp=Z,1.3nm,0.8s,baz=69,slow=6.6,SNR=4.6						
NB2	NORSAR Subarra	72.26	329	P	P	21 28 28.7	-0.6
	comp=Z,2.7nm,0.9s,baz=81,slow=6.2						
NOA	NORSAR Array B	72.26	329	P	P	21 28 28.4	-0.9
	comp=Z,1.3nm,0.8s,baz=81,slow=6.0,SNR=5.8						
NOA				LR	LR	22 02 47.5	
	comp=Z,28nm,19.5s,baz=355,slow=38						
GERES	GERESS Array B	72.84	316	P	P	21 28 31.7	-1.4
	comp=Z,0.5nm,0.6s,baz=66,slow=4.8,SNR=3.7						
GERES				LR	LR	22 03 59.3	
	comp=Z,37nm,21.4s,baz=98,slow=39						

IDC 05 21:19:22.9±1.8**,6°.06S**×**129°.70E,h0km,mb3.6**/1**, mb1 3.4**/4**,mb1mx3.2**/34**,mbtmp3.3**/4**,ML3.1**/3**,MS4.0**/1**, Ms1 4.0**/1**,ms1mx2.5**/32**,Error ellipse: s-maj=72.9km s-min=29.2km az=80.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.39	17	Pn	Pn	21 20 45.8	+1.3
	1.5nm,0.3s,baz=204,slow=20,SNR=1.9						
SIJI				Sn	Sn	21 21 37.9	-9.5
	3.3nm,0.3s,baz=249,slow=23,SNR=15						
WRA	Warramunga Arr	14.52	162	Pn	Pn	21 22 48.2	-1.6
	0.1nm,0.3s,baz=348,slow=14,SNR=1.7						
WRA				Sn	Sn	21 25 17.9	-14
	0.1nm,0.3s,baz=350,slow=23,SNR=1.8						
ASAR	Alice Springs	17.97	167	P	P	21 23 35.5	+0.6
	0.1nm,0.3s,baz=345,slow=8.9,SNR=4.9						
HNR	Honiara	30.15	98	LR	LR	21 37 02.1	
	comp=Z,304nm,20.8s,baz=145,slow=35						
MKAR	Makanchi Array	67.28	327	P	P	21 30 19.1	-0.4
	0.3nm,0.4s,baz=114,slow=8.1,SNR=5.1						

GCMT 05 21:27:06.0±0.2**,21°.13S**±0°.02×**174°.08E**±0°.01**,h12km, MW5.0**/104**,Moment Tensor Solution. s32,c40; s104,c149; Duration: 0 Moment tensor: Scale** 10^{16} **Nm;** M_{rr}-2.57±.14; $M_{\theta\theta}$-0.27±.10; $M_{\phi\phi}$2.84±.10; $M_{r\theta}$-0.97±.32; $M_{\theta\phi}$-1.19±.06; $M_{\phi r}$1.38±.23; **Best double couple:** $M_0$3.37200×10^{16} **NP1:**ϕ_s354.00000°,δ32.00000°, λ-70.00000°. **NP2:**ϕ_s151.00000°,δ60.00000°, λ-102.00000°. **Principal axes:** T 3.6660, Plg15.0000°, Azm250.0000°; N -0.5920, Plg10.0000°, Azm157.0000°; P -3.0780, Plg72.0000°, Azm34.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.17	261	*e*LR	LR	21 29 41.6	
	comp=Z,6μm,25.9s						
TBI	Tubuai	33.77	101	*e*LQ	LQ	21 41 07.0	
	566nm,27.8s						
TBI				*e*LR	LR	21 42 34.8	
	comp=Z,690nm,30.8s,baz=256						
PPT2	Papeete2	34.42	91	*e*S	S	21 38 56.9	-25
	153nm,25.2s						
PPT2				*e*LR	LR	21 42 51.0	
	comp=Z,1μm,28.5s,baz=263						
TAOE	Nuku Hiva Isla	45.71	82	*e*LR	LR	21 48 08.2	
	comp=Z,737nm,28.6s						
RKT	Rikitea	47.04	102	*e*LR	LR	21 48 40.8	
	comp=Z,556nm,32.2s						

TAP ***05*** *21:53:51.0,23°.75N×121°.69E,h44km,ML3.1,C*
JMA ***05*** *21:53:50.3±0.1,23°.73N×121°.67E,h45km±2km,M3.0*
ISC 05 21:53:50.7±1.0**,23°.74N**±0°.02×**121°.72E**±0°.02**,h31km**±11km**, n77,**σ0s.70/145**,6D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	Hwalien	0.26	337	*e*P	Pn	21 53 59.1	+0.7
	baz=350						
HWA				*e*S	Sn	21 54 05.4	+2.1
	baz=350						
ESL	Shilin	0.27	286	P	Pn	21 53 59.0	+0.4
	baz=286						
ESL				S	Sn	21 54 04.5	+0.9
	baz=286						
EGFH	Guangfu	0.28	256	P	Pn	21 53 59.2	+0.6
	baz=261						
EGFH				*e*S	Sn	21 54 04.8	+1.1
	baz=261						
TWD	Chiawan	0.36	342	*e*P	Pn	21 53 59.8	0.0
	baz=353						
TWD				*e*S	Sn	21 54 06.4	+0.7
	baz=353						
HGSD	Ruisui	0.36	228	*i* P	Pn	21 54 00.4	+0.7
	baz=230						
HGSD				*e*S	Sn	21 54 07.9	+2.0
	baz=230						
EHY	Hungye	0.43	238	*i* P	Pn	21 54 00.6	-0.1
	baz=242						
EHY				S	Sn	21 54 07.4	-0.1
	baz=242						
NACB	Ninganchiao	0.45	345	P	Pn	21 54 00.7	-0.3
	baz=352						
NACB				*e*S	Sn	21 54 08.0	+0.1
	baz=352						
ETLH	Xiulin Townshi	0.52	335	P	Pn	21 54 01.6	-0.4
	baz=338						
ETLH				S	Sn	21 54 09.2	-0.6
	baz=338						
YULB	Yu-li	0.52	228⇓	*i*P	Pn	21 54 01.6	-0.3
	baz=235						
YULB				*e*S	Sn	21 54 09.2	-0.5
	baz=235						
VWDT	VWDT	0.53	272⇓	*i*P	Pn	21 54 02.4	+0.3
	baz=271						
VWDT				*i* S	Sn	21 54 10.3	+0.4
	baz=271						
OWD	Renai	0.54	294	P	Pn	21 54 02.3	-0.1
	baz=294						
OWD				S	Sn	21 54 10.0	-0.5
	baz=294						
TWF1	Yuli	0.54	225⇓	*i*P	Pn	21 54 02.0	-0.3
	baz=231						
TWF1				*e*S	Sn	21 54 09.9	-0.4
	baz=231						
WHF	Hehuan Shan	0.58	314⇓	*i*P	Pn	21 54 02.7	-0.5
	baz=309						
WHF				S	Sn	21 54 11.2	-0.6
	baz=309						
CHGB	Renai	0.59	303⇓	*i*P	Pn	21 54 03.1	0.0
	baz=309						
CHGB				*e*S	Sn	21 54 11.8	0.0
	baz=309						
FULB	Fuli	0.66	216	*e*P	Pn	21 54 03.8	-0.1
	baz=224						
FULB				*e*S	Sn	21 54 14.2	+0.9
	baz=224						
ENA	Nanau	0.69	2	*e*P	Pn	21 54 04.0	-0.2
	baz=13						
ENA				*e*S	Sn	21 54 13.4	-0.4
	baz=13						
SSLB	Suanglung	0.70	274	*e*P	Pn	21 54 04.3	-0.2
	baz=269						
SSLB				*e*S	Sn	21 54 14.9	+0.6
	baz=269						
CHKT	Chengkung	0.71	207	P	Pn	21 54 04.2	-0.4
	baz=196						
CHKT				S	Sn	21 54 13.9	-0.5
	baz=196						
TDCB	Techi	0.72	315⇓	*i*P	Pn	21 54 05.0	+0.1
	baz=316						
TDCB				S	Sn	21 54 14.7	-0.3
	baz=316						
YUS	Yu-Shan	0.74	251	*e*P	Pn	21 54 05.7	+0.2
	baz=249						
YUS				*e*S	Sn	21 54 15.4	-0.5
	baz=249						
NNSB	Datong	0.75	336	*e*P	Pb	21 54 05.0	-0.4
	baz=339						
NNSB				*e*S	Sn	21 54 14.8	-0.9
	baz=339						
NNSH	Datong	0.75	336	*e*P	Pb	21 54 05.0	-0.4
	baz=338						
NNSH				*e*S	Sb	21 54 14.7	-0.8
	baz=338						
NNS	Nan Shan	0.77	336	P	Pb	21 54 05.3	-0.4
	baz=339						
NNS				*e*S	Sn	21 54 15.6	-0.4
	baz=339						
DPDB	Guoxing	0.78	292	*e*P	Pb	21 54 05.8	-0.1
	baz=295						
DPDB				*e*S	Sn	21 54 17.4	+1.0
	baz=295						
WHYT	Xinyi Township	0.79	267	*e*P	Pb	21 54 06.4	+0.4
	baz=264						
WHYT				*e*S	Sn	21 54 17.5	+0.9
	baz=264						
TYC	Yuchr	0.81	282	*e*P	Pb	21 54 06.0	-0.2
	baz=285						
TYC				*e*S	Sn	21 54 17.5	+0.8
	baz=285						
ELDTW	Lidau	0.84	230	P	Pn	21 54 05.9	-0.6
	baz=225						
ELDTW				*e*S	Sn	21 54 17.0	-0.9
	baz=225						
ALS	Alishan	0.87	255	*e*P	Pb	21 54 06.5	-0.9
	baz=259						
ALS				*e*S	Sn	21 54 19.3	+0.6
	baz=259						
TWC	Suao	0.88	8	*e*P	Pn	21 54 06.7	-0.2
	baz=11						
TWC				*e*S	Sb	21 54 18.4	-0.4
	baz=11						
NDT	Datong Townshi	0.88	348	*e*P	Pb	21 54 06.8	-0.7
	baz=343						
NDT				*e*S	Sb	21 54 18.5	-0.5
	baz=343						
WHP	Taichung City	0.89	307	*e*P	Pb	21 54 07.5	-0.2
	baz=313						
WHP				*e*S	Sb	21 54 19.2	0.0
	baz=313						
EOS1	EOS1	0.89	25	*e*P	Pb	21 54 07.7	0.0
	baz=38						
EOS1				*e*S	Sb	21 54 20.5	+1.4
	baz=38						
ENTT	Nioudou	0.91	351	*e*P	Pb	21 54 07.2	-0.8
	baz=347						
ENTT				*e*S	Sb	21 54 19.2	-0.5
	baz=347						
WJS	Zhushan	0.91	275	*e*P	Pb	21 54 08.4	+0.4
	baz=275						
WJS				*e*S	Sb	21 54 21.0	+1.2
	baz=275						
WNT	Mingjian	0.96	279	*e*P	Pb	21 54 09.0	+0.3
	baz=279						
WNT				*e*S	Sb	21 54 22.3	+1.2
	baz=279						
CHN5	Tsauling	0.96	262	P	Pb	21 54 08.7	-0.2
	baz=261						
CHN5				*e*S	Sb	21 54 22.4	+1.0
	baz=261						
YHNB	Yeheng	0.98	341	*e*P	Pb	21 54 08.4	-0.8
	baz=344						
YHNB				*e*S	Sn	21 54 20.6	-0.6
	baz=344						
TWE	Neicheng	0.98	357	*e*P	Pb	21 54 08.3	-0.8
	baz=351						
TWE				*e*S	Sn	21 54 20.1	-1.0
	baz=351						
NSK	Sanguang	0.99	341	P	Pb	21 54 08.5	-0.9
	baz=344						
NSK				*e*S	Sn	21 54 20.9	-0.5
	baz=344						
SLBB	Yuanshan	1.01	356	*e*P	Pn	21 54 08.6	-0.2
	baz=357						
TCU	Taichung	1.04	293	*e*P	Pb	21 54 10.0	0.0
	baz=294						
TCU				*e*S	Sb	21 54 24.7	+1.4
	baz=294						
STYT	Tauyuan	1.05	237	P	Pb	21 54 09.8	-0.5
	baz=231						
STYT				*e*S	Sb	21 54 23.6	-0.2
	baz=231						
NWLT	Wulai	1.05	349	*e*P	Pb	21 54 09.4	-1.0
	baz=351						
TWQ1	Liyutan	1.06	305	P	Pb	21 54 10.0	-0.4
	baz=307						
TWQ1				S	Sb	21 54 24.5	+0.5
	baz=307						
WGK	Gukeng	1.06	267	P	Pb	21 54 10.0	-0.4
	baz=267						
WGK				*e*S	Sb	21 54 24.7	+0.7
	baz=267						
WDLH	Douliu	1.08	268	*e*P	Pb	21 54 10.1	-0.7
	baz=267						
WDLH				*e*S	Sb	21 54 25.3	+0.6
	baz=267						
TWGBT	Beinan	1.09	213	*e*P	Pn	21 54 08.9	-0.9
	baz=211						
TWG	Pinlang	1.09	213	P	Pn	21 54 09.0	-0.8
	baz=211						
TWG				*e*S	Sn	21 54 21.7	-2.1
	baz=211						
TPUB	Ta-pu	1.09	247	P	Pb	21 54 10.6	-0.4
	baz=245						
TPUB				*e*S	Sb	21 54 25.8	+0.9
	baz=245						
NSY	Sanyi	1.10	308	*e*P	Pb	21 54 10.7	-0.6
	baz=310						
NSY				*e*S	Sb	21 54 25.8	+0.5
	baz=310						
LIOB	Emei	1.11	325	*e*P	Pb	21 54 10.9	-0.4
	baz=314						
LIOB				*e*S	Sb	21 54 25.1	-0.4
	baz=314						
WCHH	Zhanghua	1.11	288	*e*P	Pb	21 54 11.0	-0.4
	baz=302						
WCHH				*e*S	Sb	21 54 26.3	+0.8
	baz=302						
WTP	Ta-pu	1.13	244	*e*P	Pb	21 54 11.4	-0.2
	baz=243						
WTP				*e*S	Sb	21 54 26.6	+0.7
	baz=243						
WDJ	Dajia District	1.16	302	*e*P	Pb	21 54 11.3	-0.8
	baz=303						
NMLH	Miaoli	1.16	313	*e*P	Pb	21 54 11.1	-1.1
	baz=315						
NMLH				*e*S	Sb	21 54 26.7	-0.2
	baz=315						
PTSB	Yuanli	1.17	308	*e*P	Pn	21 54 10.6	-0.3
	baz=309						
CHY	Chiayi	1.21	259	*e*P	Pb	21 54 12.6	-0.3
	baz=258						
CHN1	Nanshi	1.22	244	P	Pb	21 54 12.7	-0.6
	baz=242						
CHN1				*e*S	Sb	21 54 29.2	+0.5
	baz=242						
TWK	Hsinying	1.22	248	*e*P	Pb	21 54 12.3	-0.9
	baz=246						
TWK				*e*S	Sb	21 54 29.3	+0.6
	baz=246						
SGST	Jiashian	1.23	238	P	Pb	21 54 12.2	-1.2
	baz=249						
SGST				*e*S	Sb	21 54 29.0	+0.1
	baz=249						
SLGT	Liugui	1.23	233	*e*P	Pb	21 54 12.9	-0.5
	baz=221						
SLGT				*e*S	Sb	21 54 28.9	0.0
	baz=221						
TIPB	Shuangxi	1.23	5	P	Pb	21 54 12.7	-0.8
	baz=358						
TIPB				*e*S	Sb	21 54 29.8	+0.8
	baz=358						
SNST	Tainan City	1.23	246	*e*P	Pb	21 54 13.4	0.0
	baz=244						
SNST				*e*S	Sb	21 54 29.3	+0.3
	baz=244						
RLNB	Erlin	1.25	277	*e*P	Pb	21 54 13.0	-0.7
	baz=277						
RLNB				*e*S	Sb	21 54 30.3	+0.8
	baz=277						
JYNG	Yonagunijimaku	1.33	57	P	Pb	21 54 14.0	-1.0
JYNG				*e*S	Sn	21 54 30.6	+0.9
NWF	Wu-fen Shan	1.33	2	*e*P	Pb	21 54 15.3	+0.3
	baz=353						
WFSB	Wu-fen Shan	1.33	2	*e*P	Pb	21 54 14.5	-0.5
	baz=353						
ECL	Taimali	1.33	212	*e*P	Pb	21 54 14.3	-0.8
	baz=211						
YOJ	Yonaguni jima	1.38	58	P	Pn	21 54 14.8	+1.0
YOJ				S	Sn	21 54 31.8	+0.8
IRIF	Iriomote-Funau	1.93	72	P	Pn	21 54 22.4	+1.0
IRIF				S	Sn	21 54 45.8	+1.2
HATJ	Hateruma jima	1.94	80	P	Pn	21 54 22.0	+0.6
HATJ				S	Sn	21 54 45.1	+0.4
JKRS	Kuro-shima	2.15	76	P	Pn	21 54 25.1	+0.7
JKRS				*e*S	Sn	21 54 51.0	+1.0
JIJ	Ishigaki jima	2.30	74	P	Pn	21 54 26.6	+0.1
JIJ				S	Sn	21 54 53.0	-0.7
JISG	Ishigakijimahi	2.52	70	P	Pn	21 54 29.5	+0.1
JISG				S	Sn	21 54 58.3	-0.7
JTJ	Tarama	2.87	71	P	Pn	21 54 34.5	+0.3
JTJ				S	Sn	21 55 07.6	-0.1
JIRB	Irabujima	3.33	70	P	Pn	21 54 40.9	+0.3
JIRB				S	Sn	21 55 19.0	-0.2
JMJ2	Miyako jima3	3.44	72	P	Pn	21 54 42.6	+0.5
JMJ2				S	Sn	21 55 22.4	+0.5

IDC ***05*** *21:58:02.3±1.9,39°.70N×77°.36E,h0km,mb3.3/5, mb1 3.4/10,mb1mx3.3/57,mbtmp3.4/10,ML2.9/5,MS2.5/2, Ms1 2.5/2,ms1mx2.2/37,Error ellipse: s-maj=27.4km s-min=24.4km az=171.0*
SOME ***05*** *21:58:02.7,40°.10N×77°.15E,h0km*
KRNET ***05*** *21:58:06.4±0.1,40°.14N×77°.27E,h13km,mb3.9*
BJI ***05*** *21:58:07.3±0.0,40°.18N×77°.22E,h10km,mb3.5/1,ML3.8/8*
NNC ***05*** *21:58:10.7±1.6,40°.33N×77°.17E,h0km,mb4.0,mpv3.7, Error ellipse: s-maj=11.8km s-min=9.9km az=155.0*
ISC 05 21:58:04.3±0.8**,40°.15N**±0°.05×**77°.26E**±0°.03**,h10km,n88,** σ**1s.60**/110**,41C-8D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	1.17	238	Pg	Pn	21 58 36.8	+10
KSH				Sg	Sn	21 58 59.4	+17
KSH				smax	smax		
	comp=N,2μm,0.5s						
KSH				smax	smax		
	comp=E,1μm,0.5s						
KDJ	Kajisay	1.98	358⇑	*e*P	Pg	21 58 43.7	+1.4
	baz=58						
KDJ			⇑	*i*S	Sg	21 59 10.3	+2.3
	baz=58						
ULHL	Ulahol	2.23	340⇑	*i*P	Pg	21 58 47.5	+0.4
	baz=40						
ULHL			⇑	*i*S	Sg	21 59 16.9	+0.9
	baz=40						
ULHL	Ulahol	2.23	340	P	Pg	21 58 47.4	+0.4
	SNR=132						
KZA	Kyzart	2.45	323⇑	*e*P	Pg	21 58 50.6	-0.7
	baz=23						
KZA			⇑	*i*S	Sg	21 59 22.0	-1.1
	baz=23						
KZA	Kyzart	2.45	323	P	Pg	21 58 50.9	-0.4
	SNR=204						
PRZ	Przheval'sk	2.49	20⇑	*e*P	Pg	21 58 51.4	-0.6
	baz=20						
PRZ			⇑	*i*S	Sg	21 59 23.3	-1.0
	baz=20						
BOOM	Boomskoye usch	2.54	338⇑	*i*P	Pg	21 58 51.6	-1.4
	baz=38						
BOOM			⇑	*i*S	Sg	21 59 24.2	-1.8
	baz=38						
ANVS	Anan'yevo	2.65	7⇑	*i*P	Pg	21 58 53.5	-1.6
	baz=6.0						
ANVS			⇑	*i*S	Sg	21 59 27.2	-2.3
	baz=6.0						
TNSS	Tian-Shan	2.90	356	*e*P	Pg	21 58 57.9	-1.9
	37nm,0.6s						
TNSS				*e*S	Sg	21 59 37.7	+0.3
	319nm,0.6s						
TNSS	Tian-Shan	2.90	356	Pg	Pg	21 58 57.9	-1.9
	37nm,0.6s						
TNSS				Lg	Lg	21 59 37.4	
	319nm,0.6s						
IZV	Izvestkoviy	2.93	351	*e*P	Pg	21 58 59.8	-0.6
	26nm,0.3s						
IZV				*e*S	Sg	21 59 40.2	+1.9
	364nm,0.3s						
UCH	Uchtor	2.93	316	P	Pb	21 58 57.5	+0.6
	SNR=55						
MDOK	Medeo	3.02	357	*e*P	Pg	21 59 00.9	-1.2
	9.7nm,0.2s						
MDOK				*e*S	Sg	21 59 42.7	+1.5
	334nm,0.3s						
MDOK	Medeo	3.02	357	Pn	Pg	21 59 00.2	-1.9
	51nm,0.6s						
MDOK				Lg	Lg	21 59 42.3	
	270nm,0.6s						
MDOK	Medeo	3.02	357	Pg	Pg	21 59 01.3	-0.8
	18nm,0.4s						
MDOK				Lg	Lg	21 59 42.2	
	272nm,0.8s						
SATY	Saty	3.04	16	*e*P	Pg	21 59 01.3	-1.1
	37nm,0.4s						
SATY				*e*S	Sg	21 59 43.6	+1.8
	416nm,0.4s						

SATY	Saty	3.04	16	Pg	Pg	21 59 01.7	-0.7
	37nm,0.8s						
SATY				Lg	Lg	21 59 43.1	
	431nm,0.5s						
TKM2	Tokmak 2	3.04	336	⇑eP	Pb	21 58 58.7	+0.1
	baz=36						
TKM2				⇑iS	Sb	21 59 36.2	+0.4
	baz=36						
TKM2	Tokmak 2	3.04	336	P	Pb	21 58 59.3	+0.7
	SNR=56						
TKM2	Tokmak 2	3.04	336	⇑Pn	Pb	21 58 59.2	+0.6
	28nm,0.7s						
TKM2				⇑Lg	Lg	21 59 42.5	
	253nm,0.7s						
MTBS	Maitube	3.04	349	eP	Pg	21 59 00.9	-1.7
	8.8nm,0.1s						
MTBS				eS	Sg	21 59 42.8	+0.7
	151nm,0.3s						
MTBS	Maitube	3.04	349	Pg	Pg	21 59 01.0	-1.7
	28nm,0.5s						
MTBS				Lg	Lg	21 59 41.7	
	119nm,0.4s						
KBK	Karagaybulak	3.05	326	⇑eP	Pb	21 58 59.1	+0.4
	baz=26						
KBK				⇑eS	Sb	21 59 36.3	+0.2
	baz=26						
KBK	Karagaybulak	3.05	326	P	Pb	21 58 59.5	+0.8
	SNR=114						
KST	Kastek	3.05	342	eP	Pg	21 59 01.6	-1.2
	30nm,0.5s						
KST				eS	Sg	21 59 43.5	+1.2
	188nm,0.4s						
KST	Kastek	3.05	342	Pg	Pg	21 59 01.8	-0.9
	32nm,0.5s						
KST				Lg	Lg	21 59 42.9	
	192nm,0.7s						
AAA	Alma-Ata	3.07	355	eP	Pg	21 59 01.6	-1.5
	23nm,0.3s						
AAA				eS	Sg	21 59 43.9	+1.0
	304nm,0.6s						
AAA	Alma-Ata	3.07	355	Pg	Pg	21 59 02.4	-0.7
	23nm,0.3s						
AAA				Lg	Lg	21 59 44.2	
	22nm,0.6s						
KNDC	Almaty	3.08	356	⇑Pg	Pg	21 59 02.6	-0.6
	64nm,0.6s						
KNDC				⇑Lg	Lg	21 59 44.9	
	735nm,0.8s						
AAK	Ala-Archa	3.24	321	Pn	Pb	21 59 02.0	0.0
	2.3nm,0.3s,baz=134,slow=8.3,SNR=44						
AAK				Sn	Sg	21 59 47.0	-1.3
	17nm,0.3s,baz=233,slow=22,SNR=15						
AAK				LR	LR	22 00 09.3	
	comp=Z,42nm,21.5s,baz=152,slow=35						
AAK	Ala-Archa	3.24	321	⇑eP	Pb	21 59 01.3	-0.7
	baz=21						
AAK				⇑eS	Sb	21 59 40.8	-0.8
	baz=21						
AAK	Ala-Archa	3.24	321	P	Pb	21 59 02.0	0.0
	SNR=14						
AAK	Ala-Archa	3.24	321	⇑Pn	Pb	21 59 01.9	-0.1
	39nm,0.9s						
AAK				⇑Lg	Lg	21 59 48.4	
	241nm,1.1s						
UZB	Uzynbulak	3.28	23	eP	Pg	21 59 05.8	-1.2
	31nm,0.3s						
UZB				eS	Sg	21 59 50.8	+1.3
	111nm,0.4s						
FRU1	Bishkek	3.31	324	⇑iP	Pb	21 59 02.5	-0.6
	baz=24						
FRU1				⇑iS	Sb	21 59 42.5	-1.0
	baz=24						
AML	Almayashu	3.34	308	⇑eP	Pb	21 59 03.3	-0.5
	baz=8.0						
AML				⇑iS	Sb	21 59 43.6	-1.1
	baz=8.0						
AML	Almayashu	3.34	308	P	Pb	21 59 03.5	-0.4
	SNR=102						
KURS	Kuram	3.41	11	eP	Pg	21 59 07.8	-1.7
	28nm,0.4s						
KURS				eS	Sg	21 59 54.2	+0.5
	157nm,0.6s						
KURS	Kuram	3.41	11	Pg	Pg	21 59 09.3	-0.3
	46nm,0.8s						
KURS				Lg	Lg	21 59 55.6	
	81nm,1.0s						
CHMS	Chumysh	3.41	327	⇑iP	Pb	21 59 03.9	-0.9
	baz=27						
CHMS				⇑iS	Sb	21 59 44.8	-1.6
	baz=27						
CHMS	Chumysh	3.41	327	P	Pb	21 59 04.1	-0.7
	SNR=45						
ARSB	Arslanbob	3.45	291	⇑iP	Pb	21 59 03.8	-1.8
	baz=91						
ARSB				⇑iS	Sb	21 59 46.3	-1.3
	baz=91						
PDGK	Podgornoye	3.59	27	⇑Pn	Pb	21 59 06.2	-1.8
	4.2nm,0.6s						
PDGK				⇓Pg	Pg	21 59 13.0	-0.1
	26nm,0.6s						
PDGK				⇓Lg	Lg	22 00 00.3	
	118nm,0.6s						
EKS2	Erkin-Say	3.63	315	⇑iP	Pb	21 59 06.7	-1.8
	baz=15						
EKS2				⇑iS	Sb	21 59 50.2	-2.4
	baz=15						
EKS2	Erkin-Say	3.63	315	P	Pb	21 59 07.8	-0.7
	SNR=9.5						
USP	Ospenovka	3.74	327	⇓eP	Pb	21 59 07.9	-2.5
	baz=27						
USP				⇓iS	Sb	21 59 52.4	-3.4
	baz=27						
USP	Ospenovka	3.74	327	P	Pb	21 59 08.2	-2.1
	SNR=11						
KUU	Kurty	3.81	350	eP	Pg	21 59 14.6	-2.5
	1.1nm,0.3s						
KUU				eS	Sg	22 00 06.2	-0.2
	105nm,0.4s						
KUU	Kurty	3.81	350	Pg	Pg	21 59 14.9	-2.2
	13nm,0.7s						
KUU				Lg	Lg	22 00 05.5	
	66nm,0.8s						
SGDS	Sogindy	3.84	330	Pg	Pg	21 59 15.2	-2.7
	25nm,0.7s						
SGDS				Lg	Lg	22 00 06.0	
	84nm,0.8s						
MRKS	Merke	3.99	312	eP	Pg	21 59 17.4	-3.2
	11nm,0.2s						
MRKS				eS	Sg	22 00 10.7	-1.7
	38nm,0.3s						
MRKS	Merke	3.99	312	Pg	Pb	21 59 15.2	+0.5
	12nm,0.7s						
MRKS				Lg	Lg	22 00 05.6	
	38nm,0.5s						
MNBS	Baschi	4.02	12	eP	Pg	21 59 19.3	-2.0
	0.2nm,0.3s						
MNBS				eS	Sg	22 00 13.8	+0.4
	2.3nm,0.5s						
DJR	Jarkent	4.59	23	eP	Pg	21 59 29.2	-2.9
	2.2nm,0.1s						
DJR				eS	Sg	22 00 31.1	-0.4
	67nm,0.4s						
DJR	Jarkent	4.59	23	Pg	Pg	21 59 29.8	-2.3
	2.8nm,0.4s						
DJR				Lg	Lg	22 00 31.1	
	70nm,0.7s						
TDK	Taldyqorghan	4.93	10	eP	Pg	21 59 35.0	-3.6
	17nm,0.3s						
TDK				eS	Sg	22 00 40.9	-1.5
	214nm,0.4s						
TDK	Taldyqorghan	4.93	10	Pg	Pg	21 59 35.0	-3.6
	60nm,0.9s						
TDK				Lg	Lg	22 00 40.7	
	193nm,0.6s						
KAPS	Kapalarasan	5.36	16	eP	Pg	21 59 43.5	-3.4
	2.1nm,0.3s						
KAPS				eS	Sg	22 00 55.8	-0.7
	37nm,0.5s						
KAPS	Kapalarasan	5.36	16	Pg	Pg	21 59 45.6	-1.4
	6.7nm,0.6s						
KAPS				Lg	Lg	22 00 57.6	
	24nm,1.1s						
KK31	Karatay Array	5.85	303	⇑Pn	Pb	21 59 38.4	-8.0
	0.3nm,0.3s,baz=119,slow=12,SNR=5.8						
KK31				⇑Pg	Pg	21 59 55.5	-0.8
	4.1nm,0.6s,baz=126,slow=16,SNR=15						
KK31				⇑Lg	Lg	22 01 13.1	
	12nm,0.7s,baz=118,slow=27,SNR=5.7						
MAKZ	Makanchi	7.49	26	⇓Pg	Pg	22 00 23.5	-4.1
	2.6nm,0.8s						
MAKZ				⇑Lg	Lg	22 02 04.1	
	10nm,1.2s						
MK31	Makanchi Array	7.59	27	⇑Pn	Pn	22 00 01.1	+6.2
	0.7nm,0.6s,baz=210,slow=14,SNR=8.9						
MK31				⇑Lg	Lg	22 02 06.0	
	6.3nm,0.7s						
MKAR	Makanchi Array	7.59	27	Pn	Pn	22 00 00.3	+5.4
	0.3nm,0.3s,baz=215,slow=14,SNR=9.1						
MKAR				Lg	Lg	22 02 04.6	
	0.8nm,0.3s,baz=214,slow=30,SNR=5.7						
WMQ	Urumqi	8.60	61	eP	Pn	22 00 15.4	+6.6
OTUK	Ortayu	8.83	338	⇓Lg	Lg	22 02 45.0	
	42nm,0.8s						
KURBB	Kurchatov Arra	10.52	4	Pn	Pn	22 00 40.0	+5.0
	0.0nm,0.3s,baz=190,slow=12,SNR=8.5						
KURBB				Lg	Lg	22 03 37.8	
	0.1nm,0.3s,baz=191,slow=30,SNR=10						
KURBB	Kurchatov Arra	10.52	4	⇓Lg	Lg	22 03 44.8	
	38nm,1.4s						
KURK	Kurchatov	10.61	5	⇓Lg	Lg	22 03 43.6	
	39nm,1.4s						
PYUN	Piuthan	12.92	157	eP	Pn	22 01 08.6	+0.5
	8.8nm,0.3s						
DANN	Dangsing	12.93	154	eP	Pn	22 01 08.8	+0.4
GKN	Gorkha	13.56	151	eP	Pn	22 01 16.1	-0.7
BVAR	Borovoye Array	13.71	342	Pn	Pn	22 01 21.6	+3.0
	0.1nm,0.3s,baz=154,slow=17,SNR=4.8						
BVAR				Lg	Lg	22 05 19.3	
	0.1nm,0.3s,baz=153,slow=32,SNR=6.0						
KKN	Kakani	14.00	149	eP	Pn	22 01 21.6	-1.3
	7.9nm,0.5s						
GUN	Gumba	14.13	147	eP	Pn	22 01 23.7	-1.1
PKIN	Phulchoki	14.23	149	eP	Pn	22 01 24.9	-1.2
PKI	Pulchoki	14.24	149	eP	Pn	22 01 25.7	-0.6
JIRN	Jiri	14.48	147	eP	Pn	22 01 28.8	-0.9
ZALV	Zalesovo Beam	14.72	18	Pn	P	22 01 36.4	-2.2
	0.2nm,0.3s,baz=215,slow=12,SNR=2.2						
RAMN	Ramite	15.28	147	eP	Pn	22 01 38.6	-1.7
TAPN	Taplejung	15.43	143	eP	Pn	22 01 40.9	-1.4
ODAN	Odare	15.70	144	eP	Pn	22 01 45.1	-0.7
AKTO	Aktyubinsk	16.95	314	LR	LR	22 09 32.5	
	comp=Z,20nm,18.1s,baz=359,slow=40						
ARU	Arti	20.39	329	P	Pn	22 02 44.0	+0.9
	0.4nm,0.3s,baz=135,slow=20,SNR=1.2						
SONM	Songino Array	22.23	60	P	P	22 03 01.9	+0.8
	0.1nm,0.3s,baz=246,slow=11,SNR=1.7						
ARCES	ARCESS Array B	39.82	334	P	P	22 05 40.6	+3.4
	1.0nm,0.7s,baz=96,slow=7.4,SNR=3.7						
TORD	Torodi Ar. Bea	70.65	271	P	P	22 09 20.8	+0.5
	0.2nm,0.7s,baz=44,slow=5.4,SNR=4.2						
YKA	Yellowknife Ar	77.26	6	P	P	22 10 00.6	+2.3
	0.2nm,0.5s,baz=348,slow=4.9,SNR=4.6						

NEIC ***05*** *22:39:28.4±2.3, 35°.6S±0°.1×15°.5W±0°.1, h10km±1km, mb4.6/19, Error ellipse: s-maj=24.5km s-min=13.6km az=203.0*

IDC ***05*** *22:39:31.4±0.7, 35°.19S×15°.38W, h0km, mb4.0/12, mb1 4.1/12, mb1mx4.0/30, mbtmp4.0/12, MS4.6/18, Ms1 4.5/18, ms1mx4.5/22, Error ellipse: s-maj=27.0km s-min=16.8km az=178.0*

GCMT ***05*** *22:39:37.4±0.1, 35°.28S±0°.01×15°.22W±0°.01, h15km, MW5.3/145, Moment Tensor Solution. s92,c130; s145,c262; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.06±.02; $M_{\theta\theta}$-0.44±.02; $M_{\phi\phi}$0.50±.02; $M_{r\theta}$-0.09±.05; $M_{\theta\phi}$0.84±.01; $M_{\phi r}$0.26±.05; Best double couple: $M_0$1.00500×10^{17} NP1:ϕ_s75.00000°, δ74.00000°, λ-2.00000°. NP2:ϕ_s166.00000°, δ88.00000°, λ-164.00000°. Principal axes: T 1.0280, Plg10.0000°, Azm299.0000°; N -0.0470, Plg74.0000°, Azm173.0000°; P -0.9810, Plg13.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 22:39:29.4±0.5**, 35°.6S**±0°.1×**15°.48W**±0°.08**, h10km, n63, σ2s06**/37**, mb4.3**/17**, MS4.6**/22**, Tristan da Cunha region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H09N1	TRISTAN DA CUN	2.92	120	T	T	22 43 22.8	
	SNR=12						
H09W1	TRISTAN DA CUN	2.92	121	T	T	22 43 30.6	
	SNR=68						
TRIS	Tristan da Cun	2.92	120	Pn	Pn	22 40 15.3	-0.6
TRIS					Sn	22 40 49.5	-1.6
H10N1	ASCENSION HYDR	27.68	2	T	T	23 13 47.0	
	baz=188,slow=77						
H10N3	ASCENSION HYDR	27.68	2	T	T	23 13 49.6	
	baz=188,slow=77						
H10N2	ASCENSION HYDR	27.70	2	T	T	23 13 48.3	
	baz=188,slow=77						
SUR	Sutherland	30.15	94	LR	LR	22 55 10.5	
	comp=Z,1μm,18.9s,baz=250,slow=31						
SUR	Sutherland	30.15	94	P	P	22 45 38.7	-1.0
BOSA	Boshof	35.01	90	P	P	22 46 24.2	+1.9
	5.2nm,0.8s,baz=254,slow=8.8,SNR=5.3						
BOSA				LR	LR	22 57 42.7	
	comp=Z,1μm,20.6s,baz=245,slow=31						
BOSA	Boshof	35.01	90	P	P	22 46 21.6	-0.6
BOSA				IAmb	IAmb	22 46 38.3	
	comp=Z,8.2nm,1.1s						
BDFB	Brasilia	35.21	296	P	P	22 46 26.8	+2.8
	comp=Z,1.1nm,0.3s,baz=146,slow=3.6,SNR=1.6						
BDFB				LR	LR	22 57 52.0	
	comp=Z,2μm,21.6s,baz=139,slow=31						
BDFB	Brasilia	35.21	296	P	P	22 46 22.2	-1.9
BDFB				IAmb	IAmb	22 46 40.1	
	comp=Z,7.4nm,1.1s						
SNAA	Sanae	36.70	173	P	P	22 46 42.8	+6.7
	comp=Z,0.7nm,0.8s,baz=354,slow=9.8,SNR=2.0						
SNAA	Sanae	36.70	173	P	P	22 46 37.5	+1.3
LBTB	Lobatse	36.77	85	P	P	22 46 39.2	+1.9
	comp=Z,5.0nm,1.0s,baz=216,slow=8.9,SNR=3.5						
LBTB	Lobatse	36.77	85	P	P	22 46 36.8	-0.6
LBTB				IAmb	IAmb	22 46 43.1	
	comp=Z,6.7nm,1.0s						
CPUP	Villa Florida	36.83	273	P	P	22 46 40.0	+2.3
	comp=Z,0.7nm,0.3s,baz=152,slow=3.7,SNR=3.0						
PMSA	Palmer Station	40.97	209	LR	LR	23 01 11.8	
	comp=Z,608nm,18.5s,baz=55,slow=31						
LIC	Lamto	42.79	15	eP	P	22 47 27.4	+0.1
	comp=Z,77nm,1.9s						
KIC	Kosan Boka	42.98	16	eP	P	22 47 29.7	+0.8
	comp=Z,18nm,1.0s						
PLCA	Paso Flores	42.99	246	LR	LR	23 02 19.0	
	comp=Z,567nm,20.7s,baz=84,slow=32						
TIC	Toumodi	43.20	15	eP	P	22 47 29.0	-1.6
DBIC	Dimbokro	43.26	15	P	P	22 47 29.4	-1.7
	comp=Z,2.9nm,0.7s,baz=169,slow=13,SNR=2.8						
DBIC				LR	LR	23 01 13.3	
	comp=Z,281nm,19.6s,baz=170,slow=30						
DBIC	Dimbokro	43.26	15	IAmb	IAmb	22 47 33.7	
	comp=Z,23nm,1.5s						
LSZ	Lusaka	43.90	74	P	P	22 47 37.4	+0.9
	comp=Z,3.3nm,0.9s,baz=204,slow=7.8,SNR=7.9						
SIV	San Ignacio	45.01	284	P	P	22 47 47.4	+2.1
	comp=Z,2.8nm,1.0s,baz=140,slow=10.0,SNR=9.0						
CO01	Juntas del Tor	45.76	261	P	P	22 47 49.0	-2.4
CO01				IAmb	IAmb	22 48 04.3	
	comp=Z,14nm,1.4s						
GO02	Mina Guanaco	47.31	267	P	P	22 48 02.9	-0.7
PB14	IPOC Station P	48.21	267	P	P	22 48 10.2	-0.5
PB09	IPOC Station P	48.58	271	P	P	22 48 12.8	-0.6
PB07	IPOC Station P	49.13	271	P	P	22 48 15.7	-2.0
PB08	IPOC Station P	49.31	273	P	P	22 48 18.0	-1.2
GO01	Chusmiza	49.58	274	P	P	22 48 20.8	-0.6
LPAZ	La Paz	50.49	278	P	P	22 48 32.5	+4.0
	comp=Z,0.5nm,0.5s,baz=113,slow=5.3,SNR=4.8						
LPAZ				LR	LR	23 09 25.3	
	comp=Z,485nm,19.8s,baz=118,slow=36						
LPAZ	La Paz	50.49	278	P	P	22 48 26.6	-1.9
PB16	IPOC Station P	50.52	275	P	P	22 48 26.6	-2.0
PB16				IAmb	IAmb	22 48 45.3	
	comp=Z,9.6nm,1.3s						
SAML	Samuel	50.86	290	P	P	22 48 28.3	-2.3
TOA0	Torodi Ar. Sit	51.17	22	P	P	22 48 31.7	-1.1
TOA0				IAmb	IAmb	22 48 43.8	
	comp=Z,8.5nm,0.9s						
TORD	Torodi Ar. Bea	51.17	22	P	P	22 48 32.1	-0.7
	comp=Z,5.3nm,0.9s,baz=197,slow=7.4,SNR=18						
TORD				LR	LR	23 05 39.0	
	comp=Z,1μm,20.4s,baz=210,slow=31						
MAW	Mawson	53.21	152	LR	LR	23 06 52.5	
	comp=Z,577nm,20.8s,baz=263,slow=31						
VNDA	Vanda	67.09	179	LR	LR	23 17 28.9	
	comp=Z,215nm,18.8s,baz=176,slow=34						
RUSC	La Rusia	67.98	295	P	P	22 50 25.5	-3.9
ROSC	El Rosal	68.20	293	LR	LR	23 19 24.4	
	comp=Z,1μm,18.0s,baz=187,slow=35						
KEST	Kesra	74.68	21	LR	LR	23 20 48.5	
	comp=Z,751nm,20.3s,baz=167,slow=33						
ESDC	Sonseca Array	75.69	9	P	P	22 51 16.7	+2.0
	comp=Z,0.5nm,0.8s,baz=171,slow=6.5,SNR=2.8						
ESDC				LR	LR	23 21 57.5	
	comp=Z,189nm,18.9s,baz=220,slow=34						
BRTR	Keskin Array B	87.60	36	P	P	22 52 20.6	+2.8
	comp=Z,0.5nm,0.7s,baz=219,slow=7.7,SNR=3.1						
GERES	GERESS Array B	88.03	19	LR	LR	23 28 10.9	
	comp=Z,265nm,22.0s,baz=205,slow=33						
KBZ	Khabaz	95.16	38	LR	LR	23 36 31.8	
	comp=Z,135nm,18.5s,baz=48,slow=36						
H01W2	Cape Leeuwin H	95.54	140	T	T	00 40 30.3	
	baz=221,slow=75						
H01W3	Cape Leeuwin H	95.55	140	T	T	00 40 30.7	
	baz=221,slow=75						
H01W1	Cape Leeuwin H	95.55	141	T	T	00 40 33.5	
	baz=221,slow=75						
NOA	NORSAR Array B	98.78	13	LR	LR	23 36 37.0	
	comp=Z,104nm,19.2s,baz=180,slow=35						
GEYT	Alibeck	99.97	50	LR	LR	23 37 21.3	
	comp=Z,249nm,19.4s,baz=15,slow=35						
SCHQ	Schefferville	100.30	333	LR	LR	23 32 29.6	
	comp=Z,135nm,19.1s,baz=65,slow=32						
TBI	Tubuai	106.93	224	eLR	LR	23 29 49.6	
	comp=Z,276nm,28.8s						
PPT2	Papeete2	111.49	227	eLR	LR	23 31 50.6	
	comp=Z,484nm,30.2s						
TAOE	Nuku Hiva Isla	111.67	241	eLR	LR	23 31 50.9	
	comp=Z,177nm,26.8s						
DZM	Mont Dzumac	122.58	182	eLR	LR	23 37 00.8	
	comp=Z,310nm,21.4s						
YKA	Yellowknife Ar	125.01	326	PKP	PKiKP	22 58 32.3	+3.0
	comp=Z,0.2nm,0.4s,baz=107,slow=2.2,SNR=4.7						
ILAR	Eielson Array	139.03	331	PKP	PKiKP	22 58 58.4	+0.9
	comp=Z,0.2nm,0.6s,baz=5.6,slow=0.7,SNR=2.7						
KSRS	Korea Array	150.66	76	PKPbc	PKPab	22 59 25.8	-2.7
	comp=Z,0.6nm,0.5s,baz=269,slow=1.8,SNR=1.6						
SEY	Seymchan	151.66	12	PKPbc	PKPab	22 59 27.4	-4.4
	comp=Z,3.6nm,0.7s,baz=110,slow=1.0,SNR=12						
KLR	Kul'dur	152.50	50	PKPbc	PKiKP	22 59 29.0	+3.3
	comp=Z,2.7nm,0.9s,baz=340,slow=7.9,SNR=5.7						

NEIC ***05*** *22:40:15.6±1.5, 21°.16S±0°.09×174°.16E±0°.08, h10km±1km, mb4.3/10, Error ellipse: s-maj=15.4km s-min=12.1km az=158.0*

IDC ***05*** *22:40:15.5±0.8, 20°.99S×174°.05E, h0km, mb4.1/7, mb1 4.3/9, mb1mx4.0/39, mbtmp4.1/9, ML3.5/2, MS4.0/14, Ms1 4.0/14, ms1mx3.7/37, Error ellipse: s-maj=28.4km s-min=22.4km az=132.0*

GCMT ***05*** *22:40:20.6±0.3, 21°.06S±0°.02×174°.02E±0°.02, h18km±1km, MW5.0/84, Moment Tensor Solution. s15,c21; s84,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.01±.21; $M_{\theta\theta}$-0.48±.14; $M_{\phi\phi}$2.49±.14; $M_{r\theta}$-0.60±.35; $M_{\theta\phi}$-1.59±.08; $M_{\phi r}$2.32±.31; Best double couple: $M_0$3.54800×10^{16} NP1:ϕ_s321.00000°, δ25.00000°, λ-113.00000°. NP2: ϕ_s166.00000°, δ67.00000°, λ-80.00000°. Principal axes: T 4.1010, Plg21.0000°, Azm248.0000°; N -1.1070, Plg10.0000°, Azm342.0000°; P -2.9940, Plg66.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 22:40:15.6±0.5**, 21°.16S**±0°.09×**174°.32E**±0°.08**, h10km, n57, σ1s67**/47**, mb4.0**/10**, MS4.1**/14**, 1C, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.90	47		Pn	22 41 30.8	+1.4
MSVF				Sn	Sn	22 42 26.2	-0.1
DZM	Mont Dzumac	7.38	262	ePn	Pn	22 42 03.5	0.0
	16nm,0.7s						
DZM				eLR	LR	22 43 48.8	
	comp=Z,5μm,25.4s						
DZM	Mont Dzumac	7.38	262	Pn	Pn	22 42 03.5	0.0
	0.4nm,0.3s,baz=55,slow=21,SNR=8.1						
DZM	Mont Dzumac	7.38	262		Pn	22 42 01.5	-2.0
RAO	Raoul Island	10.69	140	LR	LR	22 46 11.5	
	comp=Z,317nm,21.6s,baz=70,slow=32						
URZ	Urewera	17.21	173	P	P	22 44 20.0	+2.3
	0.3nm,0.3s,baz=45,slow=7.1,SNR=3.3						
URZ				LR	LR	22 49 27.5	
	comp=Z,228nm,20.4s,baz=5.0,slow=32						
URZ	Urewera	17.21	173	IAmb	IAmb	22 44 23.2	
	comp=Z,32nm,1.2s						
HNR	Honiara	18.10	308	LR	LR	22 51 03.5	
	comp=Z,254nm,18.7s,baz=148,slow=36						
MSWZ	Moikau Station	20.21	178	P	P	22 44 50.6	0.0
LTZ	Lake Taylor	21.62	184	P	P	22 45 05.7	-0.3
LTZ				IAmb	IAmb	22 45 12.2	
	comp=Z,16nm,0.9s						
EIDS	Eidsvold	21.75	254	P	P	22 45 04.9	-2.4
ARMA	Armidale	22.38	241	P	P	22 45 12.2	-2.0
ARMA				IAmb	IAmb	22 45 17.7	
	comp=Z,8.6nm,1.1s						
RPZ	Rata Peaks	22.65	186	LR	LR	22 52 48.3	
	comp=Z,204nm,18.1s,baz=338,slow=33						
CTA	Charters Tower	26.27	267	LR	LR	22 56 04.8	
	comp=Z,801nm,19.5s,baz=109,slow=36						
KRVT	Keravat (AS076	27.38	305	LR	LR	22 56 19.1	
	comp=Z,221nm,20.2s,baz=153,slow=36						
PMG	Port Moresby	28.63	290	LR	LR	22 55 43.3	
	comp=Z,405nm,19.4s,baz=48,slow=33						
STKA	Stephens Creek	31.05	243	LR	LR	22 57 37.5	
	comp=Z,403nm,21.4s,baz=61,slow=34						
TBI	Tubuai	33.54	101	eLQ	LQ	22 54 21.5	
	comp=Z,520nm,28.0s						
TBI				eLR	LR	22 55 46.8	
	comp=Z,506nm,30.5s						
PPT2	Papeete2	34.20	90	eS	S	22 52 23.6	-4.9
	comp=Z,120nm,25.0s						
PPT2				eLR	LR	22 56 06.4	
	comp=Z,934nm,28.2s						
PPT	Papeete	34.20	90	LR	LR	22 57 25.0	
	comp=Z,207nm,21.6s,baz=237,slow=30						
ASAR	Alice Springs	37.36	258	P	P	22 47 28.1	-0.6
	comp=Z,2.1nm,0.9s,baz=80,slow=8.8,SNR=13						
ASAR				LR	LR	23 02 19.4	
	comp=Z,274nm,18.3s,baz=107,slow=36						
WRA	Warramunga Arr	37.39	265	P	P	22 47 27.5	-1.5
	comp=Z,1.3nm,1.1s,baz=98,slow=3.8,SNR=4.0						
WRA				LR	LR	23 02 54.9	
	comp=Z,841nm,18.1s,baz=100,slow=37						
JAY	Jayapura	37.61	295	LR	LR	23 02 25.6	
	comp=Z,158nm,19.9s,baz=192,slow=36						
TAOE	Nuku Hiva Isla	45.49	81	eS	S	22 55 11.6	-6.2
	comp=Z,118nm,26.3s						
TAOE				eLR	LR	23 01 14.6	
	comp=Z,582nm,28.8s						
FITZ	Fitzroy Crossi	45.81	265	P	P	22 48 35.7	-2.3
FITZ				IAmb	IAmb	22 48 40.0	
	comp=Z,5.0nm,1.1s						
BATI	Baumata	49.78	274	LR	LR	23 09 37.4	
	comp=Z,247nm,19.8s,baz=112,slow=36						
POHA	Pohakuloa	50.24	38	P	P	22 49 12.3	-0.2
PTCN	Pitcairn Islan	50.98	106	P	P	22 49 18.7	+0.9
VNDA	Vanda	56.73	183	P	P	22 50 01.9	+2.8
	comp=Z,0.9nm,0.7s,baz=358,slow=7.7,SNR=7.3						
VNDA	Vanda	56.73	183	P	P	22 49 58.6	-0.5
QSPA	South Pole Qui	68.90	180	P	P	22 51 20.4	-0.1
MAW	Mawson	78.42	201	P	P	22 52 18.4	+2.3
	comp=Z,4.3nm,0.8s,baz=134,slow=8.5,SNR=4.7						
SEY	Seymchan	85.59	350	P	P	22 52 54.7	+1.1
	comp=Z,1.3nm,0.3s,baz=153,slow=6.8,SNR=9.4						
NVAR	Mina Array Bea	86.57	47	P	P	22 53 00.8	+1.4
	comp=Z,0.6nm,0.6s,baz=231,slow=5.7,SNR=3.9						
NVAR				LR	LR	23 23 34.2	
	comp=Z,191nm,21.4s,baz=184,slow=30						
SNAA	Sanae	87.39	181	P	P	22 53 03.2	+0.5
SNAA	Sanae	87.39	181	P	P	22 53 03.1	+0.3
PINE	Pine Mountain	87.66	41	P	P	22 53 04.6	0.0
VNA3	Neumayer Olymp	87.80	179	P	P	22 53 05.2	+0.6
VNA2	Neumayer--Watz	88.15	179	P	P	22 53 07.2	+0.8
	baz=179,slow=4.2						
VNA1	Neumayer--Stat	88.42	179	P	P	22 53 08.1	+0.5
TXAR	Lajitas Array	93.54	60	P	P	22 53 34.8	+2.6
	comp=Z,0.5nm,0.9s,baz=231,slow=4.3,SNR=5.2						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KRLC	**Kraliky**	**146.12**	**334**	*e*PKP	**PKPab**	**22 59 57.1**	**+0.6**
CLL	**Collm**	**146.55**	**339**	⇑*i*PKPbc	**PKPab**	**22 59 58.8**	**+0.7**
	comp=Z,5.0nm,0.8s						
KHC	**Kasperske Hory**	**148.15**	**336**	*e*PKP	**PKiKP**	**23 00 02.5**	**-0.9**
GERES	**GERESS Array B**	**148.33**	**335**	PKPbc	**PKPbc**	**23 00 02.3**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=33,slow=3.2,SNR=15						
SOKA	**Soboth**	**149.47**	**331**	*e*PKiKP	**PKPbc**	**23 00 05.3**	**+0.2**
	comp=Z,2.7nm,1.4s						
OBKA	**Obir**	**149.82**	**332**	*e*PKPbc	**PKPbc**	**23 00 05.7**	**-0.3**
	comp=Z,4.1nm,1.2s						
KBA	**Koelnbreinsper**	**149.89**	**334**	*e*PKiKP	**PKPbc**	**23 00 06.1**	**-0.2**
	comp=Z,6.9nm,1.7s						
WATA	**Walderalm**	**150.38**	**336**	*e*PKiKP	**PKiKP**	**23 00 07.7**	**-0.5**
	comp=Z,2.5nm,0.9s						
WTTA	**Wattenberg**	**150.42**	**336**	*e*PKiKP	**PKiKP**	**23 00 07.9**	**-0.4**
	comp=Z,4.8nm,0.9s						
ABTA	**Abfaltersbach**	**150.50**	**334**	*e*PKPbc	**PKPbc**	**23 00 07.3**	**-0.3**
	comp=Z,4.1nm,1.0s						
MOTA	**Moosalm**	**150.56**	**336**	*e*PKiKP	**PKiKP**	**23 00 08.1**	**-0.5**
	comp=Z,3.5nm,0.7s						
RETA	**Reutte**	**150.56**	**337**	*e*PKiKP	**PKiKP**	**23 00 08.2**	**-0.3**
	comp=Z,2.0nm,0.8s						
SQTA	**Sankt Quirin**	**150.62**	**336**	*i* PKiKP	**PKiKP**	**23 00 08.4**	**-0.2**
	comp=Z,3.3nm,0.6s						
FETA	**Feichten**	**150.97**	**337**	*e*PKiKP	**PKiKP**	**23 00 09.4**	**0.0**
	comp=Z,4.1nm,1.0s						
ESDC	**Sonseca Array**	**161.49**	**356**	PKPab	**PKPab**	**23 01 02.2**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=20,slow=4.1,SNR=2.7						
TORD	**Torodi Ar. Bea**	**169.36**	**223**	PKP	**PKPdf**	**23 00 24.2**	**0.0**
	comp=Z,1.3nm,1.0s,baz=334,slow=1.0,SNR=4.2						
TORD				PKPab	**pPKPab**	**23 01 37.6**	**-1.4**
	comp=Z,1.4nm,0.7s,baz=107,slow=3.9,SNR=6.8						

*IDC **05** 22:52:22.4±0.6, 19°.70S×70°.53W, h0km, mb4.4/14, mb1 4.5/17, mb1mx4.4/35, mbtmp4.4/17, ML4.0/3, MS4.2/9, Ms1 4.2/9, ms1mx4.0/19, Error ellipse: s-maj=21.7km s-min=12.2km az=61.0*

*NEIC **05** 22:52:23.9±2.4, 19°.95S±0°.03×70°.89W±0°.02, h16km±3km, mb5.0/111, Mwr4.8/49, Mww4.9, ML4.7(GUC), Error ellipse: s-maj=4.6km s-min=2.7km az=197.0*

*GUC **05** 22:52:24.5±0.8, 19°.86S×70°.87W, h42km±2km, ML4.8*

*NEIC **05** 22:52:25.2, 19°.93S×70°.90W, h19km, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr1.37; Mθθ-0.26; Mφφ-1.11; Mrθ0.24; Mθφ0.53; Mφr-1.03; Fault plane solution: M0 1.73000×10^16 NP1:φs327.23000°, δ26.81000°, λ76.80000°. NP2:φs161.95000°, δ63.95000°, λ96.58000°. Principal axes: T 1.7490, Plg70.0000°, Azm86.0000°; N -0.0364, Plg6.0000°, Azm339.0000°; P -1.7126, Plg19.0000°, Azm247.0000°;*

*BJI **05** 22:52:25.0±0.0, 19°.90S×70°.80W, h19km, mB5.5/2, Ms5.2/3, Ms7 5.1/4*

*NEIC **05** 22:52:28, 20°.04S×70°.99W, h26km, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr1.56; Mθθ-0.18; Mφφ-1.38; Mrθ1.06; Mθφ0.42; Mφr-1.69; Fault plane solution: M0 2.52000×10^16 NP1:φs151.00000°, δ71.00000°, λ83.00000°. NP2:φs352.00000°, δ20.00000°, λ110.00000°. Principal axes: T 2.5703, Plg63.0000°, Azm51.0000°; N -0.1037, Plg7.0000°, Azm153.0000°; P -2.4666, Plg26.0000°, Azm247.0000°;*

*VAO **05** 22:52:29.2±0.7, 19°.86S×70°.69W, h66km±6km, mb4.7*

ISC 05 22:52:23.3±1.2**, 19°.89S**±0°.02×**70°.84W**±0°.04**, h13**km±7km**, n488,** σ1s.21/458**, mb4.9**/67**, MS4.6**/11**, 6C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.73**	**67**	⇓*i*P	**Pb**	**22 52 38.8**	**+0.7**
PSGC				*i* S	**Sn**	**22 52 49.4**	**-1.2**
PSGCX	**Pisagua**	**0.73**	**67**		**Pb**	**22 52 38.7**	**+0.6**
PSGCX				Sg	**Sn**	**22 52 50.5**	**-0.2**
TA02	**Huaiquique**	**0.76**	**120**	⇓*i*P	**Pn**	**22 52 39.5**	**-0.3**
TA02				*i* S	**Sn**	**22 52 51.4**	**+0.1**
TA02				IAML		22 52 54.7	
	comp=N,61µm,0.4s						
TA01	**Diego Aracena**	**0.91**	**138**	⇓*i*P	**Pn**	**22 52 42.0**	**+0.1**
TA01				*i* S	**Sn**	**22 52 55.9**	**+0.9**
TA01				IAML		22 52 57.9	
	comp=E,31µm,0.4s						
TA01	**Diego Aracena**	**0.91**	**138**	Pg	**Pn**	**22 52 42.0**	**+0.1**
PB11	**IPOC Station P**	**1.12**	**84**	⇓*i*P	**Pg**	**22 52 45.4**	**+0.5**
PB11				*i* S	**Sn**	**22 53 01.0**	**+0.7**
PB11				IAML		22 53 04.7	
	comp=E,31µm,0.7s						
PB11	**IPOC Station P**	**1.12**	**84**		**Pn**	**22 52 45.1**	**+0.2**
PB11					**Sn**	**22 53 01.4**	**+1.1**
PATCX	**Punta Patache**	**1.13**	**146**	⇑*i*P	**Pb**	**22 52 45.1**	**+0.3**
PATCX				*e*S	**Sn**	**22 53 01.1**	**+0.6**
PATCX				IAML		22 53 13.9	
	comp=E,19µm,0.4s						
PATCX	**Punta Patache**	**1.13**	**146**		**Pb**	**22 52 45.0**	**+0.3**
PB12	**IPOC Station P**	**1.35**	**21**	⇑*i*P	**Pn**	**22 52 48.1**	**0.0**
PB12				*i* S	**Sb**	**22 53 06.2**	**+0.2**
PB12				IAML		22 53 13.6	
	comp=E,19µm,0.5s						
PB12	**IPOC Station P**	**1.35**	**21**		**Pn**	**22 52 48.0**	**-0.1**
PB12					**Sg**	**22 53 07.9**	**+0.9**
MNMC	**Minye Minye**	**1.39**	**57**	*e*P	**Pg**	**22 52 50.2**	**+0.1**
MNMC				*e*S	**Sg**	**22 53 09.6**	**+1.3**
MNMC				IAML		22 53 22.9	
	comp=N,31µm,0.6s						
MNMC	**Minye Minye**	**1.39**	**57**		**Pb**	**22 52 49.9**	**+0.5**
GO01	**Chusmiza**	**1.56**	**82**	⇑*i*P	**Pb**	**22 52 52.7**	**+0.3**
GO01				*i* S	**Sg**	**22 53 13.6**	**-0.1**
GO01	**Chusmiza**	**1.56**	**82**		**Pb**	**22 52 52.8**	**+0.3**
AP01	**Chacalluta**	**1.58**	**17**	*e*P	**Pb**	**22 52 51.9**	**-0.6**
AP01				*e*S	**Sb**	**22 53 12.0**	**-0.4**
AP01				IAML		22 53 17.4	
	comp=E,56µm,0.7s						
AP01	**Chacalluta**	**1.58**	**17**	Pn	**Pb**	**22 52 51.9**	**-0.6**
PB08	**IPOC Station P**	**1.60**	**99**	⇑*i*P	**Pb**	**22 52 53.0**	**-0.1**
PB08				*i* S	**Sb**	**22 53 14.2**	**+0.8**
PB08				IAML		22 53 17.9	
	comp=E,10µm,0.5s						
PB08	**IPOC Station P**	**1.60**	**99**		**Pb**	**22 52 53.0**	**-0.1**
PB02	**IPOC Station P**	**1.67**	**148**	⇑*i*P	**Pn**	**22 52 52.9**	**+0.4**
PB02				*i* S	**Sb**	**22 53 15.6**	**+0.4**
PB02				IAML		22 53 25.6	
	comp=E,25µm,0.4s						
PB01	**IPOC Station P**	**1.71**	**133**	⇑*i*P	**Pn**	**22 52 53.9**	**+1.0**
PB01				*i* S	**Sb**	**22 53 16.2**	**+0.1**
PB01				IAML		22 53 23.1	
	comp=N,15µm,0.5s						
PB01	**IPOC Station P**	**1.71**	**133**		**Pn**	**22 52 54.0**	**+1.0**
PB16	**IPOC Station P**	**1.99**	**39**	*e*P	**Pn**	**22 52 58.3**	**+1.0**
PB16				*e*S	**Sb**	**22 53 24.8**	**+0.1**
PB16				IAML		22 53 30.9	
	comp=N,9µm,0.6s						
PB16	**IPOC Station P**	**1.99**	**39**		**Pn**	**22 52 58.2**	**+0.9**
PB07	**IPOC Station P**	**2.03**	**154**	*i* P	**Pn**	**22 52 57.7**	**+0.1**
PB07				IAML		22 53 35.1	
	comp=N,6µm,0.5s						
PB07	**IPOC Station P**	**2.03**	**154**		**Pn**	**22 52 57.6**	**0.0**
PB03	**IPOC Station P**	**2.38**	**155**	*e*P	**Pn**	**22 53 02.2**	**0.0**
PB03				IAML		22 53 47.8	
	comp=E,6µm,0.5s						
PB09	**IPOC Station P**	**2.41**	**142**	*e*P	**Pn**	**22 53 04.4**	**+1.6**
PB09				*e*S	**Sg**	**22 53 39.5**	**-1.5**
PB09				IAML		22 53 47.3	
	comp=E,11µm,0.6s						
PB09	**IPOC Station P**	**2.41**	**142**		**Pn**	**22 53 04.4**	**+1.6**
PB04	**IPOC Station P**	**2.52**	**165**	*e*P	**Pn**	**22 53 03.5**	**-0.7**
PB04				IAML		22 53 57.2	
	comp=E,5µm,0.5s						
PB04	**IPOC Station P**	**2.52**	**165**		**Pn**	**22 53 03.6**	**-0.6**
PB05	**IPOC Station P**	**3.01**	**169**	*e*P	**Pn**	**22 53 09.6**	**-1.3**
PB05				IAML		22 54 19.0	
	comp=E,2µm,0.5s						
PB06	**IPOC Station P**	**3.04**	**157**	*e*P	**Pn**	**22 53 11.0**	**-0.4**
PB06				IAML		22 54 11.4	
	comp=E,3µm,0.5s						
PB06	**IPOC Station P**	**3.04**	**157**		**Pn**	**22 53 11.1**	**-0.4**
LVC	**Limon Verde**	**3.25**	**147**	Pn	**Pn**	**22 53 16.1**	**+1.7**
	comp=E,44nm,0.3s,baz=315,slow=12,SNR=108						
LVC				Sn	**Sn**	**22 53 55.6**	**+2.4**
	comp=E,73nm,0.3s,baz=260,slow=14,SNR=3.9						
LVC				LR	LR	22 53 58.8	
	comp=E,426nm,21.0s,baz=324,slow=30						
LVC				Lg	Lg	22 54 06.6	
	comp=E,333nm,0.3s,baz=79,slow=20,SNR=7.8						
LVC	**Limon Verde**	**3.25**	**147**		**Pn**	**22 53 16.0**	**+1.5**
LVC	**Limon Verde**	**3.25**	**147**	*e*P	**Pn**	**22 53 15.9**	**+1.5**
LVC				*e*S	**Sn**	**22 53 54.7**	**+1.5**
PB15	**IPOC Station P**	**3.54**	**159**	*e*P	**Pn**	**22 53 17.8**	**-0.5**
PB10	**IPOC Station P**	**3.62**	**176**	*e*P	**Pn**	**22 53 17.4**	**-1.8**
PB10	**IPOC Station P**	**3.62**	**176**		**Pn**	**22 53 17.7**	**-1.4**
LPAZ	**La Paz**	**4.41**	**36**	Pn	**Pn**	**22 53 35.2**	**+4.5**
	comp=E,7.7nm,0.3s,baz=240,slow=4.6,SNR=55						
LPAZ				LR	LR	22 55 24.2	
	comp=E,3µm,19.9s,baz=242,slow=44						
LPAZ	**La Paz**	**4.41**	**36**		**Pn**	**22 53 34.5**	**+3.8**
LPAZ	**La Paz**	**4.41**	**36**		**Pn**	**22 53 34.9**	**+4.3**
LPAZ	**La Paz**	**4.41**	**36**	*e*P	**Pn**	**22 53 34.4**	**+3.8**
PB14	**IPOC Station P**	**4.73**	**175**	*e*P	**Pn**	**22 53 32.7**	**-2.1**
AC02	**Maricunga**	**7.09**	**168**	Pn	**Pn**	**22 54 07.8**	**+0.5**
GO03	**Copiap**	**7.69**	**176**	Pn	**Pn**	**22 54 14.6**	**-0.6**
GO03				Sn	**Sn**	**22 55 37.1**	**-5.2**
AC05	**El Transito**	**8.92**	**177**	Pn	**Pn**	**22 54 32.4**	**+0.2**
NNA	**Nana**	**9.75**	**323**	Pn	**Pn**	**22 54 45.7**	**+2.2**
	comp=E,1.1nm,0.3s,baz=219,slow=13,SNR=1.4						
NNA				Sn	**Sn**	**22 56 29.8**	**-3.2**
	comp=E,2.9nm,0.3s,baz=180,slow=20,SNR=1.7						
NNA				LR	LR	22 58 09.8	
	comp=E,400nm,20.6s,baz=161,slow=36						
NNA	**Nana**	**9.75**	**323**		**Pn**	**22 54 44.2**	**+0.7**
SIV	**San Ignacio**	**10.07**	**69**	Pn	**Pn**	**22 54 46.3**	**-1.5**
	comp=E,2.7nm,0.3s,baz=262,slow=10,SNR=38						
SIV				Sn	**Sn**	**22 56 35.5**	**-5.2**
	baz=212,slow=19,SNR=1.1						
CO01	**Juntas del Tor**	**10.07**	**176**	Pn	**Pn**	**22 54 47.9**	**-0.1**
GO04	**Tololo Observa**	**10.24**	**180**	Pn	**Pn**	**22 54 53.3**	**+3.0**
CO02	**Combarbal**	**11.27**	**181**	Pn	**Pn**	**22 55 01.9**	**-2.4**
PTLB	**Pontes e Lacer**	**11.99**	**70**	*e*P	**Pn**	**22 55 13.6**	**-0.5**
PTLB				*e*S	**Sn**	**22 57 27.3**	**-0.5**
VILB	**Vilhena**	**12.31**	**58**	*e*P	**Pn**	**22 55 19.9**	**+1.3**
VILB				*e*S	**Sn**	**22 57 34.9**	**-0.9**
ROC1	**El Roble**	**13.04**	**181**	Pn	**Pn**	**22 55 28.3**	**-0.3**
SAML	**Samuel**	**13.15**	**35**		**Pn**	**22 55 27.3**	**-2.7**
CPUP	**Villa Florida**	**13.98**	**120**	Pn	**Pn**	**22 55 40.4**	**-0.9**
	comp=E,0.1nm,0.3s,baz=306,slow=15,SNR=1.7						
H03N1	**Juan Fernandez**	**15.30**	**206**	T	T	23 11 51.3	
	baz=32,slow=72						
H03N2	**Juan Fernandez**	**15.30**	**207**	T	T	23 11 43.7	
	baz=32,slow=72						
H03N3	**Juan Fernandez**	**15.31**	**206**	T	T	23 11 42.7	
	baz=32,slow=72						
BI02	**San Fabin de**	**16.72**	**181**	Pn	**Pn**	**22 56 16.0**	**-1.5**
C2SB	**Chapadao do Su**	**17.02**	**89**	*e*P	**Pn**	**22 56 21.8**	**+0.4**
CLDB	**Colider**	**17.04**	**60**	*e*P	**Pn**	**22 56 21.0**	**-0.6**
ARAG	**Araguaiana, MT**	**18.58**	**80**	*e*P	**P**	**22 56 39.8**	**-0.6**
ITAB	**Concordia**	**18.63**	**117**	*e*P	**P**	**22 56 40.2**	**-0.6**
FRTB	**Fartura**	**20.07**	**104**	*e*P	**P**	**22 56 55.7**	**-1.0**
CNLB	**Canela**	**20.42**	**121**	*e*P	**P**	**22 56 59.7**	**-0.9**
PLCA	**Paso Flores**	**20.78**	**179**	P	Pn	22 57 06.2	-0.5
	comp=E,5.9nm,0.9s,baz=347,slow=9.5,SNR=8.9						
PLCA	**Paso Flores**	**20.78**	**179**	P	**P**	**22 57 02.2**	**-2.1**
PLCA	**Paso Flores**	**20.78**	**179**	*e*P	Pn	22 57 06.3	-0.4
PUAC	**Puerto Asis, P**	**21.08**	**344**	*e*P	**P**	**22 57 09.8**	**+2.2**
IPMB	**Ipameri, GO**	**21.48**	**89**	*e*P	**P**	**22 57 11.7**	**-0.3**
PTGA	**Pitinga**	**21.81**	**30**	P	**P**	**22 57 13.2**	**-2.3**
	comp=E,28nm,0.7s,baz=206,slow=17,SNR=18						
PTGA	**Pitinga**	**21.81**	**30**	P	**P**	**22 57 13.7**	**-1.8**
PTGA	**Pitinga**	**21.81**	**30**	*e*P	**P**	**22 57 13.3**	**-2.2**
GCUF	**Volcan Galeras**	**21.93**	**342**	*e*P	**P**	**22 57 21.9**	**+4.6**
SPB	**Sao Paulo**	**22.04**	**104**	P	**P**	**22 57 16.0**	**-1.9**
SPB	**Sao Paulo**	**22.04**	**104**	*e*P	**P**	**22 57 18.0**	**+0.1**
BDFB	**Brasilia**	**22.13**	**83**	P	**P**	**22 57 16.0**	**-3.1**
	comp=E,12nm,0.7s,baz=242,slow=13,SNR=13						
BDFB	**Brasilia**	**22.13**	**83**	P	**P**	**22 57 17.6**	**-1.5**
CRUC	**La Cruz**	**22.15**	**344**	*e*P	P	22 57 27.9	+8.4
GARC	**Garzon, Huila**	**22.41**	**348**	*e*P	**P**	**22 57 22.4**	**+0.2**
VAO	**Valinhos**	**22.43**	**102**	*e*P	**P**	**22 57 20.3**	**-1.9**
BBAC	**Balboa, Cauca**	**22.66**	**343**	*e*P	**P**	**22 57 26.8**	**+1.9**
PCON	**Cinco Dias**	**22.74**	**345**	*e*P	**P**	**22 57 24.2**	**-1.9**
PARB	**Paraibuna**	**23.68**	**103**	*e*P	**P**	**22 57 33.2**	**-1.8**
ORTC	**Ortega, Tolima**	**24.04**	**349**	*e*P	**P**	**22 57 39.3**	**+0.8**
YOTC	**Yotoco, Valle**	**24.33**	**347**	*e*P	**P**	**22 57 42.4**	**+1.2**
BOAV	**Boa Vista**	**24.35**	**26**	*e*P	**P**	**22 57 40.0**	**-1.2**
BSCB	**Bom Sucesso**	**24.44**	**97**	*e*P	**P**	**22 57 41.1**	**-1.1**
CHIC	**Chingaza**	**24.53**	**353**	*e*P	**P**	**22 57 43.3**	**0.0**
ROSC	**El Rosal**	**24.81**	**352**	P	**P**	**22 57 46.2**	**+0.3**
	comp=E,7.8nm,0.5s,baz=143,slow=20,SNR=1.8						
ROSC	**El Rosal**	**24.81**	**352**	P	**P**	**22 57 45.1**	**-0.8**
ROSC				IAmb	IAmb	22 57 58.2	
	comp=Z,15nm,0.7s						
VAS01	**Vassouras-RJ**	**25.66**	**100**	*e*P	**P**	**22 57 51.5**	**-1.6**
RUSC	**La Rusia**	**25.71**	**355**	*e*P	**P**	**22 57 54.6**	**+0.4**
RUSC	**La Rusia**	**25.71**	**355**	P	**P**	**22 57 54.7**	**+0.5**
JANB	**Januaria**	**25.74**	**83**	*e*P	**P**	**22 57 52.5**	**-1.5**
HELC	**Santa Helena**	**26.32**	**349**	*e*P	**P**	**22 58 01.1**	**+1.5**
PTBC	**PUERTO BERRIO,**	**26.50**	**352**	*e*P	**P**	**22 57 59.3**	**-1.5**
DBBC	**Dabeiba**	**27.25**	**348**	*e*P	**P**	**22 58 12.7**	**+5.0**
ZARC	**Zaragoza, Cauc**	**27.50**	**351**	*e*P	**P**	**22 58 08.8**	**-0.9**
SJMB	**Sao Joao De Ma**	**28.00**	**93**	*e*P	**P**	**22 58 12.6**	**-1.6**
SDV	**Santo Domingo**	**28.59**	**0**	P	**P**	**22 58 17.8**	**-2.0**
	comp=Z,4.2nm,0.4s,baz=198,slow=20,SNR=1.5						
SDV	**Santo Domingo**	**28.59**	**0**	P	**P**	**22 58 18.1**	**-1.6**
SDV	**Santo Domingo**	**28.59**	**0**	*e*P	**P**	**22 58 18.6**	**-1.2**
SJCC	**San Jacinto, C**	**29.91**	**351**	*e*P	**P**	**22 58 29.4**	**-1.8**
CRPR	**Cabo Rojo, PR**	**37.84**	**6**	P	**P**	**22 59 38.2**	**-1.7**
CRPR				IAmb	IAmb	22 59 41.2	
	comp=Z,57nm,1.4s						
CBYP	**Canovanas**	**38.24**	**8**	P	**P**	**22 59 41.4**	**-2.0**
TEIG	**Tepich**	**43.37**	**336**	P	**P**	**23 00 26.2**	**+0.5**
	comp=Z,6.1nm,0.8s,baz=118,slow=0.0,SNR=5.4						
TEIG	**Tepich**	**43.37**	**336**	IAmb	IAmb	23 00 49.9	
	comp=Z,23nm,1.2s						
Z59A	**Georgetown, SC**	**53.44**	**351**	P	**P**	**23 01 44.3**	**+1.1**
	baz=170						
NHSC	**New Hope**	**53.45**	**350**	P	**P**	**23 01 44.2**	**+1.0**
	baz=169						
Z57A	**Bowman**	**53.72**	**350**	P	**P**	**23 01 46.0**	**+0.8**
	baz=169						
Y60A	**Bolivia**	**54.05**	**352**	P	**P**	**23 01 49.1**	**+1.5**
	baz=172						
GOGA	**Godfrey**	**54.35**	**347**	P	**P**	**23 01 50.6**	**+0.8**
	baz=166						
Y55A	**Saluda**	**54.55**	**349**	P	**P**	**23 01 51.6**	**+0.4**
	baz=167						
X60A	**Albert Glenn T**	**54.59**	**353**	P	**P**	**23 01 52.0**	**+0.5**
	baz=172						
X59A	**McDuffie Farm,**	**54.66**	**352**	P	**P**	**23 01 52.5**	**+0.5**
	baz=171						
X57A	**Johnson Farm,**	**54.77**	**351**	P	**P**	**23 01 53.2**	**+0.4**
	baz=169						
Z50A	**Ashland**	**54.77**	**345**	P	**P**	**23 01 52.7**	**-0.2**
	baz=163,SNR=5.0						
LRAL	**Lakeview Retre**	**54.84**	**343**	P	**P**	**23 01 53.5**	**+0.1**
	baz=162						
Y52A	**Lilburn**	**54.92**	**347**	P	**P**	**23 01 54.1**	**+0.1**
	baz=165						
X56A	**White Oak**	**54.94**	**350**	P	**P**	**23 01 54.5**	**+0.4**
	baz=168						
BIRD	**Birdtown, Kers**	**55.00**	**350**	IAmb	IAmb	23 01 56.1	
	comp=Z,18nm,1.0s						
X55A	**Gracelyn & Ava**	**55.02**	**349**	P	**P**	**23 01 55.1**	**+0.4**
	baz=168						
W58A	**Raeford**	**55.19**	**352**	P	**P**	**23 01 56.5**	**+0.7**
	baz=170						
X54A	**Belton**	**55.24**	**348**	P	**P**	**23 01 56.7**	**+0.5**
	baz=167						
W57A	**Gilead**	**55.42**	**351**	P	**P**	**23 01 58.7**	**+1.2**
	baz=170						
W56A	**Indian Trail**	**55.50**	**350**	P	**P**	**23 01 58.5**	**+0.4**
	baz=169						
KMSC	**Kings Mountain**	**55.63**	**350**	P	**P**	**23 01 59.7**	**+0.7**
	baz=168						
W54A	**Cherokee Point**	**55.72**	**349**	P	**P**	**23 02 00.3**	**+0.5**
	baz=167						
V59A	**Middlesex**	**55.79**	**353**	P	**P**	**23 02 01.1**	**+0.9**
	baz=172						
V58A	**Windy Hill, Pi**	**55.93**	**352**	P	**P**	**23 02 01.6**	**+0.4**
	baz=171						
V57A	**Coltrane Farms**	**56.11**	**351**	P	**P**	**23 02 02.9**	**+0.4**
	baz=170						
V56A	**Mocksville**	**56.15**	**351**	P	**P**	**23 02 03.3**	**+0.6**
	baz=169						
V55A	**Taylorsville**	**56.30**	**350**	P	**P**	**23 02 04.5**	**+0.7**
	baz=168						
U59A	**Littleton**	**56.32**	**353**	P	**P**	**23 02 04.5**	**+0.5**
	baz=172						
V54A	**Nebo**	**56.35**	**349**	P	**P**	**23 02 04.7**	**+0.4**
	baz=168,SNR=5.5						
U58A	**Oxford**	**56.45**	**353**	P	**P**	**23 02 05.8**	**+0.9**
	baz=171						
U57A	**Blanch**	**56.59**	**352**	P	**P**	**23 02 06.8**	**+0.9**
	baz=170						
U56A	**King**	**56.65**	**351**	P	**P**	**23 02 07.5**	**+1.1**
	baz=169						
Z41A	**Richland Creek**	**56.86**	**338**	P	**P**	**23 02 08.8**	**+1.0**
	baz=155						
T59A	**Double "B" Far**	**56.91**	**354**	P	**P**	**23 02 08.8**	**+0.7**
	baz=172,SNR=5.8						
T59A	**Double "B" Far**	**56.91**	**354**	P	**P**	**23 02 07.7**	**-0.4**
T59A				IAmb	IAmb	23 02 09.9	
	comp=Z,16nm,0.8s						
U55A	**TA2, Sparta**	**56.91**	**350**	P	**P**	**23 02 08.4**	**+0.2**
	baz=169						
OXF	**Oxford**	**56.91**	**342**	P	**P**	**23 02 08.3**	**+0.1**
	baz=159						
T58A	**Grand View Acr**	**56.99**	**353**	P	**P**	**23 02 09.6**	**+0.8**
	baz=171,SNR=7.4						
T60A	**Surry**	**56.99**	**354**	P	**P**	**23 02 09.7**	**+1.0**
	baz=174						
U54A	**Nelsons Funny**	**57.06**	**349**	P	**P**	**23 02 09.6**	**+0.3**
	baz=168						
T57A	**Hurt**	**57.13**	**352**	P	**P**	**23 02 10.6**	**+0.9**
	baz=171						
T56A	**Rocky Mt**	**57.27**	**351**	P	**P**	**23 02 11.6**	**+0.8**
	baz=170						
S61A	**Accomac**	**57.44**	**355**	P	**P**	**23 02 12.8**	**+1.0**
	baz=175						
T55A	**Pulaski**	**57.47**	**351**	P	**P**	**23 02 13.0**	**+0.8**
	baz=169,SNR=5.2						
BLA	**Blacksburg**	**57.51**	**351**	P	**P**	**23 02 12.4**	**-0.1**
	baz=169						
T54A	**Tazewell**	**57.54**	**350**	P	**P**	**23 02 12.8**	**+0.1**
	baz=168						
WHTX	**Lake Whitney,**	**57.55**	**333**	P	**P**	**23 02 13.4**	**+0.6**
	baz=150						
S58A	**Poland Farm, P**	**57.59**	**353**	P	**P**	**23 02 13.5**	**+0.5**
	baz=172						
S56A	**Natural Bridge**	**57.84**	**352**	P	**P**	**23 02 15.4**	**+0.6**
	baz=170						
S57A	**Dark Hollow, R**	**57.85**	**352**	P	**P**	**23 02 15.5**	**+0.7**
	baz=171,SNR=5.4						
R58B	**Mineral**	**57.92**	**353**	P	**P**	**23 02 16.1**	**+0.8**
	baz=172						
WVT	**Waverly**	**57.99**	**344**	P	**P**	**23 02 14.8**	**-1.0**
	baz=161						
WVT	**Waverly**	**57.99**	**344**	P	**P**	**23 02 15.0**	**-0.8**
WVT				IAmb	IAmb	23 02 15.9	
	comp=Z,13nm,1.0s						
S55A	**Lewisburg**	**58.07**	**351**	P	**P**	**23 02 17.0**	**+0.6**
	baz=169,SNR=5.1						
S54A	**Dingess, Beckl**	**58.22**	**350**	P	**P**	**23 02 18.2**	**+0.8**
	baz=168						
R58A	**Rapidan**	**58.27**	**353**	P	**P**	**23 02 18.6**	**+0.9**
	baz=172						
TXAR	**Lajitas Array**	**58.29**	**326**	P	**P**	**23 02 18.6**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=149,slow=8.7,SNR=20						
TX31	**Lajitas Ar. Si**	**58.29**	**326**	IAmb	IAmb	23 03 17.4	
	comp=Z,46nm,1.9s						
TX32	**Lajitas Array**	**58.29**	**326**	P	**P**	**23 02 18.6**	**+0.4**
MIAR	**Mount Ida**	**58.30**	**338**	P	**P**	**23 02 18.3**	**+0.3**
	baz=155,SNR=8.5						
MIAR	**Mount Ida**	**58.30**	**338**	IAmb	IAmb	23 02 19.4	
	comp=Z,14nm,1.0s						
R57A	**Stanardsville**	**58.33**	**353**	P	**P**	**23 02 19.3**	**+1.1**
	baz=172,SNR=5.7						
W41B	**Gary Mavity, V**	**58.41**	**339**	P	**P**	**23 02 19.0**	**+0.2**
	baz=156						
R55A	**Marlinton**	**58.52**	**351**	P	**P**	**23 02 20.2**	**+0.6**
	baz=170						
R54A	**Victor**	**58.54**	**351**	P	**P**	**23 02 20.1**	**+0.5**
	baz=169						
T47A	**Sharon Grove**	**58.62**	**345**	IAmb	IAmb	23 02 20.9	
	comp=Z,19nm,1.1s						
Q58A	**Fox Den Farm,**	**58.87**	**354**	P	**P**	**23 02 22.7**	**+0.9**
	baz=173						
W39A	**Magazine**	**58.95**	**338**	P	**P**	**23 02 23.5**	**+0.9**
	baz=155,SNR=6.7						
W39A	**Magazine**	**58.95**	**338**	IAmb	IAmb	23 02 24.5	
	comp=Z,9.4nm,0.9s						
X37A	**Clayton**	**58.99**	**336**	IAmb	IAmb	23 02 24.7	
	comp=Z,16nm,0.8s						
Q57A	**Strasburg**	**59.04**	**353**	P	**P**	**23 02 24.4**	**+1.3**
	baz=172						
ABTX	**Abilene, Hawle**	**59.04**	**332**	P	**P**	**23 02 23.9**	**+0.6**
	baz=148						
ABTX	**Abilene, Hawle**	**59.04**	**332**	P	**P**	**23 02 21.3**	**-2.0**
ABTX				IAmb	IAmb	23 02 24.9	
	comp=Z,9.3nm,0.9s						
Q56A	**Snyder Ridge,**	**59.14**	**352**	P	**P**	**23 02 25.1**	**+1.3**
	baz=171,SNR=6.2						
Q55A	**Buckhannon**	**59.21**	**352**	P	**P**	**23 02 25.3**	**+1.0**
	baz=170						
Q53A	**Leroy**	**59.29**	**350**	P	**P**	**23 02 25.1**	**+0.3**
	baz=168						
Q54A	**Coxs Mills**	**59.31**	**351**	P	**P**	**23 02 25.4**	**+0.4**
	baz=169						
P58A	**Pank, Wackersv**	**59.38**	**354**	P	**P**	**23 02 26.3**	**+0.9**
	baz=173						
P59A	**Jarrettsville**	**59.42**	**355**	P	**P**	**23 02 26.7**	**+1.0**
	baz=174						
P57A	**Homestead Farm**	**59.44**	**354**	P	**P**	**23 02 26.9**	**+1.1**
	baz=172						
Q52A	**Bidwell**	**59.51**	**350**	P	**P**	**23 02 27.0**	**+0.7**
	baz=168						
P56A	**Dayton Farm, R**	**59.55**	**353**	P	**P**	**23 02 27.2**	**+0.6**
	baz=171						
P60A	**Greenville**	**59.56**	**356**	P	**P**	**23 02 27.3**	**+0.7**
	baz=175						
WCI	**Wyandotte Cave**	**59.61**	**346**	P	**P**	**23 02 27.3**	**+0.3**
	baz=163						
P55A	**Reedsville**	**59.68**	**352**	P	**P**	**23 02 28.4**	**+0.8**
	baz=170						
U40A	**Yellville**	**59.69**	**339**	P	**P**	**23 02 27.7**	**0.0**
	baz=156						
Q51A	**Peebles**	**59.77**	**349**	P	**P**	**23 02 28.8**	**+0.7**
	baz=166						
MCWV	**Mont Chateau**	**59.83**	**352**	P	**P**	**23 02 29.3**	**+0.8**
	baz=170						
P54A	**Burton**	**59.86**	**351**	P	**P**	**23 02 29.5**	**+0.7**
	baz=170						
P53A	**Whipple**	**59.88**	**351**	P	**P**	**23 02 29.4**	**+0.5**
	baz=169						
O58A	**Lewisberry**	**59.97**	**355**	P	**P**	**23 02 30.5**	**+1.0**
	baz=174						
O59A	**Robesonia**	**60.09**	**355**	P	**P**	**23 02 31.3**	**+0.9**
	baz=174						
O57A	**Amberson**	**60.12**	**354**	P	**P**	**23 02 31.6**	**+1.1**
	baz=173						
P52A	**Corning**	**60.15**	**350**	P	**P**	**23 02 30.4**	**-0.3**
	baz=168						
O56A	**Blue Knob Stat**	**60.28**	**353**	P	**P**	**23 02 32.5**	**+0.9**
	baz=172,SNR=5.9						
O56A	**Blue Knob Stat**	**60.28**	**353**	IAmb	IAmb	23 02 33.9	
	comp=Z,19nm,0.9s						
O55A	**Ligonier**	**60.30**	**353**	P	**P**	**23 02 32.6**	**+0.8**
	baz=171,SNR=6.1						
TUL1	**Leonard**	**60.32**	**337**	P	**P**	**23 02 32.4**	**+0.4**
	baz=153						
P50A	**Jamestown**	**60.41**	**349**	P	**P**	**23 02 32.7**	**+0.2**
	baz=166						
O54A	**Avella**	**60.42**	**352**	P	**P**	**23 02 32.7**	**+0.1**
	baz=170						
WMOK	**Wichita Mounta**	**60.47**	**334**	P	**P**	**23 02 33.0**	**-0.1**
	baz=150						
P49A	**Miami Univ. Ec**	**60.52**	**348**	P	**P**	**23 02 33.4**	**+0.1**
	baz=165						
O52A	**Adamsville**	**60.57**	**350**	P	**P**	**23 02 33.9**	**+0.3**
	baz=168						
O53A	**New Philadelph**	**60.60**	**351**	P	**P**	**23 02 34.2**	**+0.4**
	baz=169						
N57A	**Milroy**	**60.65**	**354**	P	**P**	**23 02 35.0**	**+0.8**
	baz=173						
N58A	**Sunbury**	**60.66**	**355**	P	**P**	**23 02 35.1**	**+0.9**
	baz=174						
N58A	**Sunbury**	**60.66**	**355**	IAmb	IAmb	23 02 36.2	
	comp=Z,15nm,1.0s						
N59A	**State Game Lan**	**60.67**	**356**	P	**P**	**23 02 35.2**	**+0.9**
	baz=175						
O51A	**Pataskala**	**60.73**	**350**	P	**P**	**23 02 35.1**	**+0.4**
	baz=167						
CCM	**Cathedral Cave**	**60.75**	**342**	P	**P**	**23 02 34.7**	**-0.2**
	baz=158						
CCM	**Cathedral Cave**	**60.75**	**342**	P	**P**	**23 02 34.5**	**-0.4**
CCM				IAmb	IAmb	23 02 36.3	
	comp=Z,12nm,1.2s						
N55A	**Marion Center**	**60.83**	**353**	P	**P**	**23 02 36.4**	**+1.0**
	baz=171,SNR=11						
ACSO	**Alum Creek Sta**	**60.87**	**349**	P	**P**	**23 02 36.2**	**+0.6**
	baz=167						

N56A	West Decatur	60.89	354	P	P	23 02 36.6	+0.8
	baz=172,SNR=6.4						
O50A	Cable	60.90	349	P	P	23 02 36.2	+0.3
	baz=166						
M60A	Port Jervis	61.00	357	P	P	23 02 37.3	+0.8
	baz=176						
M62A	Hamden	61.05	358	P	P	23 02 37.6	+0.9
	baz=178						
MNTX	Cornudas Mount	61.06	326	P	P	23 02 37.3	+0.1
	baz=143,SNR=8.5						
N53A	Lisbon	61.09	351	P	P	23 02 37.9	+0.7
	baz=169						
N54A	Moraine State	61.13	352	P	P	23 02 38.1	+0.7
	baz=170,SNR=5.2						
M58A	Price's Panora	61.17	355	P	P	23 02 38.9	+1.2
	baz=174						
M57A	Sunshine Farm,	61.19	355	P	P	23 02 39.0	+1.2
	baz=173						
N52A	McGinn's Farm,	61.23	351	P	P	23 02 38.6	+0.6
	baz=168						
M59A	Waymart	61.27	356	P	P	23 02 38.9	+0.6
	baz=175						
R40A	Maddies Statio	61.27	341	IAmb	IAmb	23 02 39.2	
	comp=Z,28nm,1.6s						
O48A	Farmland	61.30	348	P	P	23 02 39.0	+0.4
	baz=165						
M56A	Emporium	61.44	354	P	P	23 02 40.3	+0.8
	baz=172,SNR=6.1						
L63A	North Scituate	61.44	359	P	P	23 02 40.3	+0.9
	baz=179						
T35A	Sooner Cattle	61.48	337	IAmb	IAmb	23 02 42.0	
	comp=Z,12nm,0.9s						
M55A	Ridgway	61.48	353	P	P	23 02 40.7	+0.8
	baz=172,SNR=12						
L64A	Middleborough	61.51	360	P	P	23 02 40.5	+0.6
	baz=180						
MSTX	Muleshoe	61.60	330	P	P	23 02 41.1	+0.2
	baz=146,SNR=5.7						
MSTX	Muleshoe	61.60	330	IAmb	IAmb	23 02 42.8	
	comp=Z,11nm,0.9s						
M54A	Oil Creek Stat	61.63	352	P	P	23 02 41.3	+0.5
	baz=171,SNR=6.6						
L60A	Shokan	61.64	357	P	P	23 02 41.9	+1.1
	baz=176						
M53A	WI Miller and	61.69	352	P	P	23 02 41.4	+0.2
	baz=170						
N49A	Columbus Grove	61.76	349	P	P	23 02 41.3	-0.3
	baz=166,SNR=5.6						
L58A	Harry Jones Me	61.79	356	P	P	23 02 42.8	+0.9
	baz=175,SNR=7.0						
M51A	Elyria	61.81	350	P	P	23 02 41.7	-0.2
	baz=168						
L61A	Hillsdale 1, H	61.82	358	P	P	23 02 42.6	+0.6
	baz=177						
L57A	Andrews Acres	61.83	355	P	P	23 02 43.0	+0.9
	baz=174						
SFIN	Lafayette	61.84	346	P	P	23 02 41.9	-0.3
	baz=163						
N48A	Decatur	61.86	348	P	P	23 02 42.8	+0.5
	baz=165						
L59A	Walton	61.89	356	P	P	23 02 43.4	+0.9
	baz=176						
BINY	Binghamton	61.96	356	P	P	23 02 43.9	+0.9
	baz=175						
N47A	Urbana	62.02	347	P	P	23 02 43.3	0.0
	baz=164						
L56A	Greenwood	62.02	354	P	P	23 02 44.2	+0.7
	baz=173						
L56A	Greenwood	62.02	354	IAmb	IAmb	23 02 44.8	
	comp=Z,13nm,0.8s						
L61B	Northampton	62.05	358	P	P	23 02 43.8	+0.3
	baz=178						
HRV	Adam Dziewonsk	62.08	359	P	P	23 02 44.3	+0.6
	baz=179						
L53A	Girard	62.14	352	P	P	23 02 44.3	+0.1
	baz=170						
L55A	Hinsdale	62.16	354	P	P	23 02 45.2	+0.9
	baz=172,SNR=7.1						
VNA3	Neumayer Olymp	62.17	161	P	P	23 02 45.5	+1.4
M49A	Liberty Center	62.26	349	P	P	23 02 44.6	-0.3
	baz=166						
ERPA	Erie	62.27	352	P	P	23 02 45.4	+0.4
	baz=170						
K61A	Williamstown	62.28	358	P	P	23 02 46.2	+1.0
	baz=178						
L54A	Sinclairville	62.30	353	P	P	23 02 46.1	+0.8
	baz=171,SNR=14						
P40A	Paris	62.35	342	IAmb	IAmb	23 02 47.1	
	comp=Z,20nm,1.4s						
VNA1	Neumayer--Stat	62.40	160	P	P	23 02 48.2	+2.6
K59A	Cooperstown	62.46	357	P	P	23 02 47.4	+1.0
	baz=176,SNR=7.1						
K58A	Earlville	62.49	356	P	P	23 02 47.4	+0.8
	baz=175,SNR=6.3						
K57A	Scipio Center	62.52	355	P	P	23 02 47.4	+0.6
	baz=174						
K56A	Middlesex	62.56	355	P	P	23 02 47.6	+0.5
	baz=173						
K54A	Basiliko Farm,	62.60	353	P	P	23 02 48.2	+0.9
	baz=172,SNR=5.6						
K55A	Perry	62.66	354	P	P	23 02 48.1	+0.5
	baz=172						
VNA2	Neumayer--Watz	62.76	161	P	P	23 02 49.5	+1.4
	baz=288,slow=9.8						
L48A	N Adams	62.79	349	P	P	23 02 48.9	+0.4
	baz=166						
J63A	Strafford	62.85	360	P	P	23 02 50.9	+2.0
	baz=180						
121A	Cookes Peak, D	62.98	325	P	P	23 02 51.6	+1.4
	baz=141						
K52A	Tillsonburg	63.02	352	P	P	23 02 50.3	+0.3
	baz=170						
J58A	Remsen	63.07	356	P	P	23 02 50.9	+0.6
	baz=175						
J56A	Wolcott	63.09	355	P	P	23 02 50.9	+0.4
	baz=174						
J59A	Piesco	63.13	357	P	P	23 02 51.6	+0.9
	baz=176,SNR=7.6						
J57A	Williamstown	63.16	356	P	P	23 02 51.5	+0.5
	baz=175						
J57A	Williamstown	63.16	356	IAmb	IAmb	23 02 52.1	
	comp=Z,13nm,0.8s						
J55A	Hilton	63.17	354	P	P	23 02 51.4	+0.4
	baz=173						
J54A	Appleton	63.26	354	P	P	23 02 52.0	+0.5
	baz=172						
I58A	Old Forge	63.38	357	P	P	23 02 53.1	+0.6
	baz=176,SNR=5.8						
I59A	Olmsteadville	63.43	358	P	P	23 02 53.6	+0.9
	baz=177,SNR=5.7						
J52A	Paris	63.44	352	P	P	23 02 53.0	+0.2
	baz=170,SNR=7.0						
I62A	Tamworth	63.45	360	P	P	23 02 53.8	+0.9
	baz=180						
I60A	Shoreham	63.46	358	P	P	23 02 53.9	+1.0
	baz=178						
I61A	Oroboro, Fairl	63.52	359	P	P	23 02 54.4	+1.1
	baz=179						
K47A	Vermontville	63.60	348	P	P	23 02 54.1	+0.2
	baz=165						
I63A	Otisfield	63.62	0	P	P	23 02 55.0	+1.0
	baz=180						
I57A	Carthage	63.66	356	P	P	23 02 55.4	+1.1
	baz=175						
LBNH	Lisbon	63.82	359	P	P	23 02 56.1	+0.8
	baz=179						
J49A	Marlette	63.94	350	P	P	23 02 55.4	-0.8
	baz=167						
J48A	Bridge Port	63.99	350	P	P	23 02 55.8	-0.6
	baz=166						
J48A	Bridge Port	63.99	350	IAmb	IAmb	23 02 56.9	
	comp=Z,18nm,1.0s						
H58A	Gabriels	64.06	357	P	P	23 02 57.6	+0.7
	baz=177						
I51A	Listowel	64.06	352	P	P	23 02 56.8	-0.1
	baz=169,SNR=6.2						
I55A	Frankford	64.10	355	P	P	23 02 57.6	+0.5
	baz=173						
H61A	Lyndonville	64.11	359	P	P	23 02 58.2	+1.0
	baz=179						
H62A	Milan	64.15	360	P	P	23 02 58.4	+1.0
	baz=180						
H60A	Morristown	64.16	359	P	P	23 02 58.5	+1.0
	baz=178						
ANMO	Albuquerque	64.18	328	P	P	23 02 58.6	+0.4
	baz=143						
ANMO	Albuquerque	64.18	328	P	P	23 02 56.5	-1.6
H64A	Troy	64.23	1	P	P	23 02 59.0	+1.0
	baz=182						
H63A	New Sharon	64.24	1	P	P	23 02 59.0	+1.0
	baz=181						
H59A	Cadyville	64.27	358	P	P	23 02 59.2	+1.0
	baz=177						
LONY	Lake Ozonia	64.28	357	P	P	23 02 59.2	+0.8
	baz=176						
LONY	Lake Ozonia	64.28	357	IAmb	IAmb	23 03 00.1	
	comp=Z,10nm,0.9s						
H65A	Eastbrook	64.31	2	P	P	23 02 59.3	+0.8
	baz=183						
H56A	Elgin	64.36	356	P	P	23 02 59.4	+0.6
	baz=174						
SNAA	Sanae	64.38	161	P	P	23 03 00.3	+1.4
SNAA	Sanae	64.38	161	P	P	23 02 57.8	-1.0
SNAA				IAmb	IAmb	23 03 02.2	
	comp=Z,7.3nm,1.0s						
H55A	Tweed	64.39	355	P	P	23 02 59.4	+0.4
	baz=173						
H66A	Whiting	64.44	3	P	P	23 03 00.1	+0.7
	baz=184						
I49A	Point Hope	64.46	350	IAmb	IAmb	23 02 59.9	
	comp=Z,16nm,0.9s						
H53A	Bobcaygeon	64.54	354	P	P	23 03 00.3	+0.3
	baz=172,SNR=6.4						
G60A	Masonville	64.69	359	P	P	23 03 02.1	+1.1
	baz=178						
G63A	Kingsbury	64.70	1	P	P	23 03 02.0	+1.0
	baz=181						
H52A	Wyevale	64.75	353	P	P	23 03 01.6	+0.2
	baz=171						
G57A	Newington	64.79	357	P	P	23 03 02.4	+0.8
	baz=176						
G62A	West of Eustis	64.79	0	P	P	23 03 03.1	+1.4
	baz=180,SNR=8.7						
G62A	West of Eustis	64.79	0	P	P	23 03 03.1	+1.4
G65A	Princeton	64.84	3	P	P	23 03 02.4	+0.4
	baz=183						
I48A	Sherman Twp	64.84	350	P	P	23 03 01.5	-0.5
	baz=167,SNR=5.7						
PKME	Peaks-Kenny Pk	64.85	1	P	P	23 03 02.6	+0.6
	baz=182						
G64A	Maxfield	64.85	2	P	P	23 03 02.9	+0.8
	baz=182						
G61A	St-Isidore-de-	64.86	359	P	P	23 03 03.3	+1.2
	baz=179						
T25A	Trinidad	64.96	331	P	P	23 03 04.4	+1.1
	baz=145						
JFWS	Jewell Farm	65.00	344	P	P	23 03 03.8	+0.7
	baz=160						
G55A	Calabogie	65.05	355	P	P	23 03 03.9	+0.5
	baz=174						
G53A	Haliburton	65.08	354	P	P	23 03 04.0	+0.4
	baz=172,SNR=9.4						
ORIO	Orleans, Innes	65.16	356	P	P	23 03 05.6	+1.5
	baz=175						
G54A	Lake Saint Pet	65.31	354	P	P	23 03 05.5	+0.5
	baz=173						
F64A	Sherman	65.48	2	P	P	23 03 06.9	+0.9
	baz=183						
F61A	St Evariste	65.55	360	P	P	23 03 07.2	+0.7
	baz=180						
F60A	Warwick	65.55	359	P	P	23 03 07.2	+0.7
	baz=179						
GLMI	Grayling	65.62	349	P	P	23 03 07.6	+0.5
	baz=166						
KSCO	Kaye Shedlock'	65.72	333	P	P	23 03 08.8	+0.8
	baz=147						
F52A	Sundridge	65.82	354	P	P	23 03 08.5	+0.2
	baz=171						
G47A	Hillman	65.83	350	P	P	23 03 08.9	+0.6
	baz=167						
ALGO	Algonquin Park	65.86	354	P	P	23 03 08.9	+0.4
	baz=173						
E60A	Ste Agathe de	65.94	360	P	P	23 03 09.8	+0.7
	baz=179						
SDCO	Great Sand Dun	65.96	330	P	P	23 03 11.0	+1.3
	baz=144						
E58A	La Victoria	65.98	358	P	P	23 03 10.2	+0.8
	baz=178						
E61A	Lac Etchemin	66.00	0	P	P	23 03 10.5	+1.0
	baz=180						
F51A	Arnstein	66.02	353	P	P	23 03 10.2	+0.6
	baz=171						
E63A	Oxbow	66.03	2	P	P	23 03 10.3	+0.6
	baz=182						
F49A	Sandfield	66.13	351	P	P	23 03 09.7	-0.6
	baz=169						
E55A	Montcerf-Lytto	66.20	356	P	P	23 03 11.4	+0.7
	baz=175						
E56A	St. Veronique	66.23	357	P	P	23 03 11.4	+0.5
	baz=176,SNR=6.6						
E52A	Mattawa	66.24	354	P	P	23 03 11.6	+0.6
	baz=172						
E53A	Dumoine, Ponti	66.24	355	P	P	23 03 11.2	+0.2
	baz=173						
E54A	Lac Daplat, Po	66.26	355	P	P	23 03 11.0	-0.1
	baz=174						
F48A	Evansville	66.27	351	P	P	23 03 10.9	-0.3
	baz=168						
X16A	Lo Mia Camp, P	66.40	324	IAmb	IAmb	23 03 15.9	
	comp=Z,9.9nm,1.3s						
E51A	G1948 Merrick	66.57	353	P	P	23 03 13.4	+0.3
	baz=171						
F45A	CMU Biological	66.61	349	P	P	23 03 12.7	-0.6
	baz=165						
D57A	Chemin Vers le	66.65	358	P	P	23 03 14.3	+0.7
	baz=177						
D63A	Stockholm	66.66	2	P	P	23 03 14.6	+1.0
	baz=183						
D62A	Allapoint, All	66.67	1	P	P	23 03 14.8	+1.0
	baz=182						
D62A	Allapoint, All	66.67	1	P	P	23 03 14.8	+1.0
D62A				IAmb	IAmb	23 03 15.2	
	comp=Z,11nm,0.8s						
D58A	Chemin du LacG	66.69	358	P	P	23 03 14.6	+0.7
	baz=178,SNR=6.6						
D56A	ZEC Mazanza, M	66.72	357	P	P	23 03 14.3	+0.2
	baz=176						
D55A	Sainte-Anne-du	66.72	357	P	P	23 03 14.3	+0.2
	baz=175						
E48A	Lockeyer	66.85	352	P	P	23 03 14.6	-0.3
	baz=168						
D54A	Lac Fusel, La	66.93	356	P	P	23 03 15.2	-0.2
	baz=174						
D53A	Lac Vacive, Po	66.94	355	P	P	23 03 15.1	-0.4
	baz=173						
D53A	Lac Vacive, Po	66.94	355	IAmb	IAmb	23 03 16.8	
	comp=Z,7.3nm,0.9s						
MVCO	Mesa Verde	66.97	328	P	P	23 03 15.5	-0.8
	baz=142						
E47A	Iron Bridge	66.98	351	P	P	23 03 15.4	-0.3
	baz=167						
D51A	Lot 18 Range I	67.11	354	P	P	23 03 16.7	+0.2
	baz=171						
WUAZ	Wupatki	67.18	325	P	P	23 03 18.4	+0.9
	baz=139						
D50A	G1974 Best Tow	67.23	353	P	P	23 03 17.6	+0.3
	baz=171,SNR=5.3						
D48A	Paudash Townsh	67.48	352	P	P	23 03 19.3	+0.4
	baz=169						
ECSD	EROS Data Cent	67.58	340	P	P	23 03 19.7	+0.1
	baz=154						
ECSD	EROS Data Cent	67.58	340	IAmb	IAmb	23 03 20.9	
	comp=Z,13nm,1.2s						
ISCO	Idaho Springs	67.67	332	P	P	23 03 21.1	+0.5
	baz=145						
SPMN	Marine on St.	67.82	343	P	P	23 03 21.8	+0.7
	baz=158						
MONP2	Monument Peak	68.20	320	P	P	23 03 25.0	+1.0
	baz=134						
W13A	Hualapai Mount	68.27	323	IAmb	IAmb	23 03 27.7	
	comp=Z,19nm,1.9s						
N23A	Red Feather La	68.71	332	P	P	23 03 27.9	+0.8
	baz=145						
GMRC	Granite Mounta	69.06	322	P	P	23 03 30.3	+1.0
	baz=135,SNR=8.6						
CHGQ	Chibougamau	69.56	358	P	P	23 03 31.6	-0.2
	baz=176						
MATQ	Matagami	69.60	355	P	P	23 03 32.1	0.0
	baz=173						
LIC	Lamto	69.70	75	*e*P	P	23 03 32.4	-1.1
	comp=Z,15nm,0.8s						
TIC	Toumodi	69.87	75	*e*P	P	23 03 35.8	+1.2
	comp=Z,3.3nm,0.3s						
KIC	Kosan Boka	70.01	75	*e*P	P	23 03 34.5	-0.9
	comp=Z,14nm,0.8s						
DBIC	Dimbokro	70.03	75	P	P	23 03 34.5	-1.0
	comp=Z,6.8nm,0.8s,baz=239,slow=7.7,SNR=7.0						
DBIC				LR	LR	23 32 55.7	
	comp=Z,280nm,19.6s,baz=231,slow=35						
QSPA	South Pole Qui	70.29	180	P	P	23 03 36.1	-0.4
QSPA				IAmb	IAmb	23 03 39.8	
	comp=Z,11nm,1.2s						
K22A	Casper	70.39	333	P	P	23 03 37.7	+0.3
	baz=144						
EDW2	Edwards Air Fo	70.51	320	P	P	23 03 38.5	+0.3
	baz=133						
RSSD	Black Hills	70.58	335	P	P	23 03 39.4	+0.9
	baz=147						
RSSD	Black Hills	70.58	335	P	P	23 03 37.4	-1.1
RSSD				IAmb	IAmb	23 03 40.6	
	comp=Z,6.4nm,0.7s						
B35A	Bob, Littlefor	70.96	344	IAmb	IAmb	23 03 41.1	
	comp=Z,7.8nm,1.0s						
MPMC	Manual Prospec	71.02	321	P	P	23 03 42.4	+1.0
	baz=134						
ISA	Isabella, Lake	71.33	321	P	P	23 03 44.8	+1.7
	baz=133,SNR=5.2						
DUG	Dugway, Tooele	71.43	327	P	P	23 03 45.2	+1.5
	baz=139						
DUG	Dugway, Tooele	71.43	327	IAmb	IAmb	23 03 56.7	
	comp=Z,9.9nm,1.1s						
AGMN	Agassiz Nation	71.48	343	P	P	23 03 44.5	+1.0
	baz=155						
R11A	Troy Canyon, C	71.55	324	P	P	23 03 46.3	+1.8
	baz=136,SNR=7.4						
PKM	Mcpherson Peak	71.63	319	P	P	23 03 46.4	+1.4
	baz=132						
CWC	Cottonwood Cre	71.63	321	P	P	23 03 46.4	+1.4
	baz=134						
VES	Vestal, Richgr	71.82	320	P	P	23 03 47.0	+1.1
	baz=133						
BW06	Boulder Array	71.83	331	P	P	23 03 47.5	+1.3
	baz=142						
PDAR	Pinedale Array	71.83	331	P	P	23 03 46.7	+0.6
	comp=Z,0.8nm,0.7s,baz=128,slow=6.4,SNR=8.4						
HWUT	Hardware Ranch	71.88	329	IAmb	IAmb	23 03 50.6	
	comp=Z,7.2nm,1.0s						
TBI	Tubuai	72.31	251	*e*S	S	23 13 16.0	+3.4
	comp=Z,154nm,27.2s						
TBI	Tubuai	72.31	251	*e*LR	LR	23 25 54.0	
	comp=Z,276nm,28.8s						
AHID	Auburn Hatcher	72.54	330	IAmb	IAmb	23 03 52.6	
	comp=Z,7.8nm,0.9s						
REDW	Red Top Meadow	72.89	331	IAmb	IAmb	23 04 12.0	
	comp=Z,7.6nm,1.1s						
OMMB	Old Mammoth Mi	72.97	322	IAmb	IAmb	23 03 56.3	
	comp=Z,9.0nm,0.9s						
TPAW	Teton Pass	73.03	331	IAmb	IAmb	23 04 08.5	
	comp=Z,13nm,1.5s						
NVAR	Mina Array Bea	73.12	323	P	P	23 03 55.8	+1.9
	comp=Z,3.1nm,0.8s,baz=151,slow=6.3,SNR=13						
ULM	Lac du Bonnet	73.26	344	LR	LR	23 38 23.1	
	comp=Z,326nm,20.3s,baz=155,slow=38						
ULM	Lac du Bonnet	73.26	344	IAmb	IAmb	23 03 54.9	
	comp=Z,14nm,1.4s						
PMOZ	Porto Moniz, M	73.30	45	*e*P	P	23 03 59.6	+4.6
IMW	Indian Meadow	73.34	331	IAmb	IAmb	23 03 57.8	
	comp=Z,21nm,1.6s						
FLWY	Flagg Ranch	73.37	331	IAmb	IAmb	23 03 58.3	
	comp=Z,14nm,0.9s						
RLMT	Red Lodge	73.56	333	P	P	23 03 57.8	+1.5
	baz=143,SNR=9.4						
RLMT	Red Lodge	73.56	333	IAmb	IAmb	23 03 58.9	
	comp=Z,6.9nm,0.8s						
LAO	LASA Array	73.57	335	P	P	23 03 57.3	+1.1
	baz=146,SNR=5.3						
LAO	LASA Array	73.57	335	IAmb	IAmb	23 03 58.5	
	comp=Z,16nm,1.1s						
PPT2	Papeete2	73.93	257	*e*S	S	23 13 35.3	+4.0
	comp=Z,161nm,24.0s						
PPT2	Papeete2	73.93	257	*e*LR	LR	23 26 40.4	
	comp=Z,169nm,24.8s						
YHL	Hebgen Lake	74.19	331	P	P	23 03 59.9	-0.3
DGMT	Dagmar	74.30	338	P	P	23 04 01.8	+1.4
	baz=148						
DGMT	Dagmar	74.30	338	IAmb	IAmb	23 04 02.8	
	comp=Z,19nm,0.9s						
PAHR	Pah Rah Range	74.61	323	IAmb	IAmb	23 04 06.0	
	comp=Z,12nm,0.9s						
AFDM	Forest Hills D	75.01	322	P	P	23 04 03.9	-0.8
ORV	Oroville	75.72	322	IAmb	IAmb	23 04 12.1	
	comp=Z,9.4nm,1.0s						
EGMT	Eagleton	76.06	334	IAmb	IAmb	23 04 12.7	
	comp=Z,9.4nm,0.6s						
O03E	Paynes Creek	76.38	322	P	P	23 04 13.3	+0.7
	baz=131						
O02D	Mt. Diablo Mer	76.88	322	P	P	23 04 16.4	+1.0
	baz=131						
MSO	Missoula	76.94	331	P	P	23 04 17.1	+1.4
	baz=139						
N02D	Trinity Center	77.34	322	P	P	23 04 18.9	+0.9
	baz=131						
M04C	Macdoel	77.38	323	P	P	23 04 19.1	+0.8
	baz=132						
K05A	Summer Lake	77.49	325	P	P	23 04 18.0	-1.0
K05A				IAmb	IAmb	23 04 23.1	
	comp=Z,21nm,1.5s						
M02C	Callahan	77.70	323	P	P	23 04 21.0	+1.0
	baz=131						
VNDA	Vanda	78.11	190	P	P	23 04 24.0	+2.3
	comp=Z,0.6nm,0.8s,baz=87,slow=5.0,SNR=4.7						
TOA0	Torodi Ar. Sit	78.53	71	P	P	23 04 23.4	-1.7
TOA0				IAmb	IAmb	23 04 25.5	
	comp=Z,21nm,0.9s						
TORD	Torodi Ar. Bea	78.53	71	P	P	23 04 23.8	-1.4
	comp=Z,14nm,0.8s,baz=253,slow=5.2,SNR=52						
TORD				LR	LR	23 38 50.7	
	comp=Z,277nm,18.1s,baz=210,slow=36						
WALA	Waterton Lakes	78.61	333	IAmb	IAmb	23 04 27.4	
	comp=Z,10nm,1.1s						
G03D	McMinnville, O	80.42	325	P	P	23 04 36.3	+1.6
	baz=131						
PCVE	Castro Verde	82.19	45	*e*P	P	23 04 45.3	+1.0
	comp=Z,42nm,2.0s						
MVO	Moncorvo	84.73	43	*e*P	P	23 04 57.7	+0.3
	comp=Z,20nm,1.8s						
PBRG	Braganca	85.25	42	*e*P	P	23 05 00.1	+0.2
BOSA	Boshof	85.80	119	LR	LR	23 40 29.8	
	comp=Z,110nm,20.3s,baz=212,slow=34						
ESDC	Sonseca Array	85.97	45	P	P	23 05 03.8	+0.2
	comp=Z,2.9nm,1.0s,baz=244,slow=4.9,SNR=11						
YKA	Yellowknife Ar	89.08	341	P	P	23 05 18.2	+0.3
	comp=Z,2.7nm,0.8s,baz=138,slow=5.3,SNR=40						
YKA				LR	LR	23 49 52.6	
	comp=Z,137nm,18.0s,baz=0.0,slow=39						
KEST	Kesra	93.79	53	LR	LR	23 48 37.1	
	comp=Z,241nm,19.6s,baz=272,slow=36						
TOLK	Toolik Lake Re	104.32	338	P	Pdif	23 06 27.9	+0.8
	baz=108						
DZM	Mont Dzumac	110.21	236	*e*LR	LR	23 43 19.7	
	comp=Z,310nm,21.4s						
H11S2	WAKE ISLAND Hy	125.87	279	T	T	01 30 49.4	
	baz=101,slow=74						
H11S1	WAKE ISLAND Hy	125.88	279	T	T	01 30 46.5	
	baz=101,slow=74						
H11S3	WAKE ISLAND Hy	125.89	279	T	T	01 30 43.2	
	baz=101,slow=74						
H11N3	WAKE ISLAND Hy	125.91	280	T	T	01 30 57.8	
	baz=101,slow=74						
H11N2	WAKE ISLAND Hy	125.93	280	T	T	01 30 58.0	
	baz=101,slow=74						
H11N1	WAKE ISLAND Hy	125.93	280	T	T	01 30 51.5	
	baz=101,slow=74						
SEY	Seymchan	127.91	337	PKP	PKiKP	23 11 29.4	+0.4
	comp=Z,3.5nm,0.7s,baz=89,slow=3.3,SNR=9.8						
PETK	Petropavlovsk-	130.20	324	PKP	PKPdf	23 11 33.2	+0.1
	comp=Z,2.0nm,0.7s,baz=68,slow=9.8,SNR=3.9						
BVAR	Borovoye Array	135.45	33	PKP	PKiKP	23 11 44.4	-0.2
	comp=Z,1.2nm,0.7s,baz=232,slow=1.6,SNR=3.4						
KURK	Kurchatov	140.92	31		PKPdf	23 11 50.3	-2.8
ZALV	Zalesovo Beam	141.22	23	PKP	PKPdf	23 11 54.3	+0.8
	comp=Z,3.8nm,0.7s,baz=285,slow=2.8,SNR=11						
KDJ	Kajisay	145.06	43		PKPdf	23 12 02.1	+1.1
MAKZ	Makanchi	145.16	33		PKPab	23 12 00.6	+0.2
NIL	Nilore	145.31	59		PKPdf	23 12 02.0	+0.5
MKAR	Makanchi Array	145.33	33	PKPbc	PKPdf	23 12 01.6	+0.4
	comp=Z,6.8nm,0.7s,baz=330,slow=4.4,SNR=22						
KSH	Kashi	145.44	48	PKPbc	PKPab	23 12 02.4	+0.6
KSH				PP	PP	23 15 23.2	+1.6
KSH				SKKS		23 22 11.6	
KSH				SS	SS	23 34 10.1	-3.6
KSH				AMB	AMB		
	comp=Z,170nm,7.4s						
KSH				LR	LR		

	comp=Z,70nm,15.2s						
KSH				LR	LR		
	comp=Z,42nm,8.8s						
KSH				LR	LR		
	comp=Z,190nm,6.9s						
KLR	**Kul'dur**	**145.59**	**334**	PKPbc	**PKPab**	**23 12 01.9**	**0.0**
	comp=Z,7.8nm,1.0s,baz=28,slow=3.4,SNR=14						
PRZ	**Przheval'sk**	**145.66**	**42**		**PKiKP**	**23 12 05.1**	**-1.0**
TLY	**Talaya**	**147.98**	**6**		**PKiKP**	**23 12 10.4**	**+0.1**
USRK	**Ussuriysk Ar.**	**149.19**	**327**	PKPbc	**PKiKP**	**23 12 12.8**	**-0.2**
	comp=Z,7.6nm,1.0s,baz=22,slow=1.6,SNR=5.3						
MAJO	**Matsushiro**	**149.66**	**309**		**PKiKP**	**23 12 14.7**	**+0.4**
MJB9	**Matsu-Tunnel**	**149.66**	**309**		**PKiKP**	**23 12 14.7**	**+0.4**
WMQ	**Urumqi**	**150.14**	**32**	*e*PKPbc	**PKPdf**	**23 12 08.4**	**-0.8**
WMQ				LR	LR		
	comp=Z,1μm,29.1s						
WMQ				LR	LR		
	comp=Z,160nm,29.2s						
HYB	**Hyderabad**	**150.91**	**90**	*i* PKP	**PKiKP**	**23 12 18.0**	**+0.6**
SONM	**Songino Array**	**152.03**	**4**	PKP	**PKPdf**	**23 12 13.2**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=221,slow=1.5,SNR=2.4						
SONM				PKPbc	**PKiKP**	**23 12 18.8**	**-0.2**
	comp=Z,4.1nm,0.7s,baz=317,slow=1.6,SNR=15						
ULN	**Ulaanbaatar**	**152.04**	**3**		**PKiKP**	**23 12 20.1**	**+1.1**
HHC	**Hu-ho-hao-te**	**159.01**	**355**	*e*PKP	**PKPdf**	**23 12 19.2**	**-2.4**
LZH	**Lanzhou**	**163.20**	**15**	*e*PKP	**PKPdf**	**23 12 23.2**	**-3.1**
LZH				pPKP	sPKPdf	23 12 33.9	+3.1
LZH				sPKP		23 12 39.0	
NJ2	**Nanjing**	**165.09**	**326**	*e*PKP	**PKPdf**	**23 12 26.9**	**-1.0**
CD2	**Chengdu**	**167.99**	**23**	PKP	**PKPdf**	**23 12 28.5**	**-1.8**

*NIED **05** 23:00:00, 41°.50N×142°.00E, h53km, Mw4.6 Best double couple: $M_0$9.38000×10^{15} NP1:ϕ_s19.00000°, δ71.00000°, λ92.00000°. NP2:ϕ_s194.00000°, δ19.00000°, λ86.00000°.*

*BGR **05** 23:00:19.1±0.0, 41°.91N×143°.47E, h33km, mb4.6*

*BJI **05** 23:00:19.9±0.0, 41°.40N×142°.18E, h72km, mB4.8/34, mb4.7/45, Ms4.8/28, Ms7 4.5/30*

*MOS **05** 23:00:20.2±1.0, 41°.53N×142°.09E, h62km, mb4.8/24, Error ellipse: s-maj=7.1km s-min=4.8km az=97.9*

*JMA **05** 23:00:21.2±0.1, 41°.50N×142°.04E, h64km±2km, M4.5 Broadband fault plane solution: P waves. NP1: ϕ_s184.00000°, δ16.00000°, λ78.00000°. NP2:ϕ_s17.00000°, δ74.00000°, λ94.00000°. Principal axes: T Plg61.0000°, Azm292.0000°; N Plg3.0000°, Azm196.0000°; P Plg29.0000°, Azm104.0000°;*

JMA Felt II J1.

*NEIC **05** 23:00:21.4±1.9, 41°.43N±0°.06×142°.11E±0°.09, h65km±6km, mb4.6/54 Error ellipse: s-maj=11.1km s-min=6.8km az=131.0*

*IDC **05** 23:00:23.0±1.8, 41°.49N×142°.00E, h74km±15km, mb4.1/31, mb1 4.2/37, mb1mx4.1/58, mbtmp4.3/37, MS3.6/17, Ms1 3.6/17, ms1mx3.5/42, Error ellipse: s-maj=13.2km s-min=12.1km az=123.0*

ISC 05 23:00:21.2±0.6**, 41°.47N**±0°.03×**142°.11E**±0°.03**, h61**km±5km**, n254,** σ1^{s}**40**/272**, mb4.5**/98**, 18C-32D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAHD	**Aomorihigashid**	**0.62**	**251**	⇓P	**Pn**	**23 00 34.8**	**+0.3**
JAHD				S	**Sn**	**23 00 44.6**	**+0.4**
JARK	**Aomorirokkasho**	**0.73**	**231**	⇓P	**Pn**	**23 00 35.8**	**0.0**
JARK				S	**Sn**	**23 00 46.2**	**-0.3**
JOT	**Ohata**	**0.80**	**264**	⇓P	**Pn**	**23 00 36.5**	**-0.2**
JOT				*e*S	**Sn**	**23 00 47.8**	**-0.3**
JKB	**Kayabe**	**0.91**	**298**	⇓P	**Pn**	**23 00 37.3**	**-0.8**
JNBK	**Urakawa-nobuka**	**0.94**	**31**	⇑P	**Pn**	**23 00 38.3**	**-0.2**
JNBK				*e*S	**Sn**	**23 00 51.5**	**+0.2**
ERM	**Erimo**	**0.95**	**55**	P	**Pn**	**23 00 39.3**	**+0.7**
ERM						23 00 52.8	
ERM	**Erimo**	**0.95**	**55**		**Pn**	**23 00 39.3**	**+0.7**
ERM					**Sn**	**23 00 52.8**	**+1.2**
JEM	**Erimo**	**0.95**	**55**	⇑P	**Pn**	**23 00 39.2**	**+0.5**
JEM				*e*S	**Sn**	**23 00 52.4**	**+0.8**
JTM	**Tenmabayashi**	**1.04**	**229**	⇓P	**Pn**	**23 00 40.2**	**+0.4**
JTM				S	**Sn**	**23 00 53.8**	**+0.2**
JIAM	**Iburiatsuma**	**1.16**	**353**	⇓P	**Pn**	**23 00 42.1**	**+0.8**
JANG	**Nango**	**1.19**	**203**	⇓P	**Pn**	**23 00 41.9**	**+0.2**
JANG				*e*S	**Sn**	**23 00 57.1**	**+0.1**
JSR	**Shiriuchi**	**1.27**	**273**	P	**Pn**	**23 00 42.6**	**-0.2**
JNB	**Noboribetsu**	**1.28**	**322**	P	**Pn**	**23 00 42.1**	**-0.8**
JNB				*e*S	**Sn**	**23 00 57.3**	**-1.9**
JBT2	**Biratori 2**	**1.32**	**8**	⇓P	**Pn**	**23 00 43.9**	**+0.4**
JYM2	**Yakumo 2**	**1.45**	**297**	⇓P	**Pn**	**23 00 45.4**	**+0.2**
JEW	**Eniwo**	**1.45**	**341**	⇓P	**Pn**	**23 00 45.4**	**+0.1**
JEW				S	**Sn**	**23 01 03.3**	**-0.1**
JCH	**Churui**	**1.48**	**39**	⇓P	**Pn**	**23 00 46.7**	**+1.1**
JCH				*e*S	**Sn**	**23 01 05.5**	**+1.6**
JOMM	**Oshimamatsumae**	**1.58**	**273**	⇓P	**Pn**	**23 00 46.7**	**-0.2**
JOMM				*e*S	**Sn**	**23 01 05.6**	**-0.8**
JAH	**Hinai**	**1.70**	**222**	P	**Pn**	**23 00 49.4**	**+0.8**
JFR	**Furan**	**1.73**	**12**	⇓P	**Pn**	**23 00 49.2**	**+0.2**
JOSM	**Okushiri--Mats**	**2.06**	**288**	⇓P	**Pn**	**23 00 52.8**	**-0.7**
ASAJ	**Asahikawa**	**2.67**	**8**	P	**Pn**	**23 01 02.6**	**+0.9**
	36nm,0.3s,baz=218,slow=11,SNR=125						
ASAJ				S	**Sn**	**23 01 32.3**	**-0.6**
	44nm,0.3s,baz=150,slow=20,SNR=2.8						
JKA	**Kamikawa-asahi**	**2.67**	**8**		**Pn**	**23 01 02.6**	**+0.9**
JKA					**Sn**	**23 01 32.3**	**-0.6**
NMR	**Nemuro--Hokkai**	**3.28**	**53**	⇓*i*P	**Pn**	**23 01 08.9**	**-1.2**
NMR				*i* S	**Sn**	**23 01 44.5**	**-3.4**
GRPR	**Tuman**	**3.69**	**46**	⇓*i*P	**Pn**	**23 01 15.7**	**0.0**
GRPR				*i* S	**Sn**	**23 01 56.6**	**-1.4**
GRPR				pmax	pmax		
	comp=Z,710nm,0.3s						
GRPR				pmax	pmax		
	comp=N,187nm,0.4s						
GRPR				pmax	pmax		
	comp=E,465nm,0.4s						
GRPR				smax	smax		
	comp=N,744nm,0.3s						
GRPR				smax	smax		
	comp=E,4μm,0.3s						
LAGR	**Lagunnoye**	**3.74**	**45**	*e*P	**Pn**	**23 01 16.8**	**+0.4**
LAGR				*i* S	**Sn**	**23 01 57.9**	**-1.3**
LAGR				pmax	pmax		
	comp=Z,842nm,0.4s						
LAGR				pmax	pmax		
	comp=N,921nm,0.3s						
LAGR				pmax	pmax		
	comp=E,428nm,0.2s						
LAGR				smax	smax		
	comp=N,878nm,0.4s						
LAGR				smax	smax		
	comp=E,4μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.77**	**46**	*d i*P	**Pn**	**23 01 16.8**	**0.0**
YUK				*i* S	**Sn**	**23 01 57.4**	**-2.4**
YUK				pmax	pmax		
	comp=Z,875nm,0.4s						
YUK				pmax	pmax		
	comp=N,133nm,0.5s						
YUK				pmax	pmax		
	comp=E,243nm,0.8s						
YUK				pmax	pmax		
	comp=Z,1μm,1.0s						
YUK				smax	smax		
	comp=N,2μm,0.4s						
YUK				smax	smax		
	comp=E,5μm,0.5s						
TEY	**Ternei**	**5.37**	**313**	*e*P	**Pn**	**23 01 38.6**	**-0.1**
YSS	**Yuzh-Sakhalins**	**5.50**	**5**	*e*P	**Pn**	**23 01 41.7**	**+1.2**
YSS				*e*S	**Sn**	**23 02 41.4**	**-0.9**
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS				MLR	MLR		
	comp=Z,600nm,11.0s						
YSS	**Yuzh-Sakhalins**	**5.50**	**5**	Pn	**Pn**	**23 01 42.1**	**+1.6**
KUR	**Kuril'sk**	**5.63**	**46**	*c i*P	**Pn**	**23 01 43.3**	**+1.0**
KUR				*e*S	**Sn**	**23 02 45.8**	**+0.2**
KUR				pmax	pmax		
	comp=Z,142nm,0.4s						
KUR				pmax	pmax		
	comp=N,71nm,0.3s						
KUR				pmax	pmax		
	comp=E,83nm,0.3s						
KUR				smax	smax		
	comp=N,302nm,0.3s						
KUR				smax	smax		
	comp=E,371nm,0.3s						
KUR				smax	smax		
	comp=E,814nm,2.0s						
KUR				smax	smax		
	comp=N,731nm,2.1s						
MJB9	**Matsu-Tunnel**	**5.78**	**213**		**Pn**	**23 01 47.3**	**+2.9**
MAJO	**Matsushiro**	**5.78**	**213**	⇑*i*P	**Pn**	**23 01 46.9**	**+2.5**
MAJO	**Matsushiro**	**5.78**	**213**		**Pn**	**23 01 47.2**	**+2.7**
MAT	**Matsushiro**	**5.78**	**213**	P	**Pn**	**23 01 46.8**	**+2.4**
MAT				S	**Sn**	**23 02 54.0**	**+4.6**
MJAR	**Matsushiro Arr**	**5.78**	**213**	P	**Pn**	**23 01 46.8**	**+2.4**
	comp=N,0.4nm,0.3s,baz=24,slow=16,SNR=27						
MJAR				LR	LR	23 04 23.4	
	comp=N,345nm,21.1s,baz=40,slow=42						
INU	**Inuyama**	**7.30**	**215**		**Pn**	**23 02 07.3**	**+2.1**
USA0B	**Ussuriysk Arra**	**7.92**	**294**	⇓*i*P	**Pn**	**23 02 15.4**	**+1.8**
USA0B	**Ussuriysk Arra**	**7.92**	**294**	Pn	**Pn**	**23 02 13.4**	**-0.2**
USRK	**Ussuriysk Ar.**	**7.92**	**294**	P	**Pn**	**23 02 13.7**	**+0.1**
	baz=97,slow=13,SNR=16						
USRK				LR	LR	23 05 09.3	
	comp=N,542nm,21.8s,baz=121,slow=36						
MSHR	**Mys Shultsa**	**8.23**	**281**	⇑*i*P	**Pn**	**23 02 18.9**	**+1.1**
JHJ	**Hachijo jima 2**	**8.54**	**193**	P	**Pn**	**23 02 20.4**	**-1.7**
	comp=N,5.9nm,0.3s,baz=49,slow=19,SNR=1.6						
JHJ				S	**Sn**	**23 03 51.4**	**-5.6**
	comp=N,30nm,0.3s,baz=250,slow=24,SNR=12						
JHJ2	**Mitsune**	**8.54**	**193**	Pn	**Pn**	**23 02 21.5**	**-0.6**
JHJ2				Sn	**Sn**	**23 03 53.2**	**-3.8**
KLR	**Kul'dur**	**10.64**	**320**	P	**Pn**	**23 02 52.7**	**+2.0**
	comp=N,0.2nm,0.3s,baz=128,slow=14,SNR=12						
KLR				LR	LR	23 06 59.3	
	comp=N,433nm,20.2s,baz=132,slow=38						
KLR	**Kul'dur**	**10.64**	**320**	*d i*P	**Pn**	**23 02 53.6**	**+2.9**
KLR				pmax	pmax		
	comp=Z,16nm,1.2s						
KSRS	**Korea Array**	**11.67**	**255**	P	**Pn**	**23 03 07.2**	**+2.2**
	comp=Z,0.8nm,0.3s,baz=64,slow=14,SNR=12						
KSRS				LR	LR	23 07 18.8	
	comp=Z,196nm,18.4s,baz=64,slow=36						
KS19	**Wonju Array Si**	**11.70**	**255**		Pn	23 03 11.2	+5.9
JNU	**Nakatsue**	**12.21**	**231**	P	**Pn**	**23 03 12.9**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=90,slow=3.0,SNR=2.8						
JNU				LR	LR	23 07 45.4	
	comp=Z,207nm,21.0s,baz=43,slow=36						
JNU	**Nakatsue**	**12.21**	**231**	Pn	**Pn**	**23 03 14.0**	**+1.6**
JNU				Sn	**Sn**	**23 05 24.7**	**-2.1**
SKR	**Severo-Kuril's**	**13.38**	**42**	*e*P	Pn	23 03 19.9	-8.1
SKR				pmax	pmax		
	comp=Z,100nm,5.3s						
SKR				pmax	pmax		
	comp=Z,100nm,6.6s						
SKR				MLR	MLR		
	comp=Z,100nm,14.0s						
JCJ	**Chichijima**	**14.34**	**180**	P	**Pn**	**23 03 38.8**	**-2.2**
	comp=Z,3.0nm,0.3s,baz=285,slow=20,SNR=2.2						
JCJ				LR	LR	23 10 31.0	
	comp=Z,53nm,20.5s,baz=115,slow=42						
PEA0B	**Petropavlovsk-**	**15.69**	**37**	P	**Pn**	**23 03 57.2**	**-1.0**
PEA0B				pmax	pmax		
	comp=Z,18nm,1.4s						
PEA0B	**Petropavlovsk-**	**15.69**	**37**	Pn	**Pn**	**23 03 57.2**	**-1.0**
PETK	**Petropavlovsk-**	**15.69**	**37**	P	**Pn**	**23 03 56.7**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=202,slow=14,SNR=5.1						
PETK				LR	LR	23 10 00.4	
	comp=Z,150nm,21.6s,baz=242,slow=37						
ZEA	**Zeya**	**15.80**	**326**	*e*P	**Pn**	**23 03 58.8**	**-0.9**
ZEA				pmax	pmax		
	comp=N,35nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,43nm,1.2s						
MA2	**Magadan**	**18.91**	**14**	LR	LR	23 12 46.4	
	comp=Z,72nm,19.8s,baz=232,slow=39						
BJI	**Beijing**	**19.68**	**274**	P	**P**	**23 04 43.8**	**-1.4**
BJI				S	**S**	**23 08 22.6**	**-1.2**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BJI				LR	LR		
	comp=Z,93nm,4.7s						
BJI				LR	LR		
	comp=Z,210nm,13.9s						
BJT	**Baijiatuau**	**19.69**	**274**	P	**P**	**23 04 42.6**	**-2.7**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJT	**Baijiatuau**	**19.69**	**274**	P	**P**	**23 04 42.6**	**-2.7**
NJ2	**Nanjing**	**20.82**	**251**	*e*P	Pn	23 04 59.8	-0.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
NJ2				LR	LR		
	comp=Z,4μm,11.8s						
NJ2				LR	LR		
	comp=Z,1μm,8.5s						
YAK	**Yakutsk**	**21.90**	**344**	LR	LR	23 14 05.5	
	comp=Z,105nm,18.2s,baz=138,slow=38						
YAK	**Yakutsk**	**21.90**	**344**	*e*P	**P**	**23 05 05.7**	**-3.2**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK	**Yakutsk**	**21.90**	**344**	P	**P**	**23 05 05.4**	**-3.5**
YAK				IAmb	IAmb	23 05 09.3	
	comp=Z,20nm,0.9s						
SEY	**Seymchan**	**22.34**	**12**	P	**P**	**23 05 11.4**	**-2.3**
	comp=Z,1.7nm,0.4s,baz=203,slow=7.4,SNR=8.1						
HHC	**Hu-ho-hao-te**	**22.95**	**279**	P	**P**	**23 05 20.9**	**+0.5**
HHC				pP	sP	23 05 38.8	-2.6
HHC				sP	pP	23 05 46.7	+13
HHC				S	**S**	**23 09 24.2**	**-1.8**
HHC				sS	Sn	23 09 47.1	+1.1
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,37nm,5.4s						
HHC				LR	LR		
	comp=Z,150nm,8.6s						
HHC				LR	LR		
	comp=Z,190nm,11.4s						
TIY	**Taiyuan**	**23.12**	**270**	*e*P	**P**	**23 05 25.3**	**+3.2**
TIY				S	**S**	**23 09 30.5**	**+1.8**
TIY				pmax	pmax		
	comp=Z,78nm,5.1s						
TIY				LR	LR		
	comp=Z,2μm,12.5s						
TIY				LR	LR		
	comp=Z,910nm,12.4s						
BOD	**Bodaibo**	**24.21**	**322**	*e*P	**P**	**23 05 30.1**	**-1.7**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.2s						
WHN	**Wuhan**	**24.86**	**253**	P	**P**	**23 05 36.4**	**-1.6**
WHN				LR	LR		
	comp=Z,5μm,6.9s						
TPUB	**Ta-pu**	**25.52**	**231**	P	**P**	**23 05 42.3**	**-1.8**
ULN	**Ulaanbaatar**	**25.58**	**296**	*ce*P	**P**	**23 05 44.9**	**+0.3**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SONM	**Songino Array**	**26.02**	**296**	P	**P**	**23 05 48.1**	**-0.5**
	comp=Z,5.9nm,0.7s,baz=86,slow=8.5,SNR=32						
SONM				LR	LR	23 16 37.6	
	comp=Z,217nm,19.7s,baz=84,slow=38						
XAN	**Xi'an**	**27.15**	**265**	P	**P**	**23 05 56.8**	**-1.9**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,77nm,5.2s						
XAN	**Xi'an**	**27.15**	**265**	P	**P**	**23 05 56.4**	**-2.3**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
XAN	**Xi'an**	**27.15**	**265**	P	**P**	**23 05 56.4**	**-2.3**
TLY	**Talaya**	**28.04**	**305**	LR	LR	23 17 51.1	
	comp=Z,182nm,19.0s,baz=356,slow=38						
ZAK	**Zakamensk**	**28.16**	**302**	*e*P	**P**	**23 06 06.8**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
BILL	**Bilibino**	**29.64**	**18**	⇓*i*P	**P**	**23 06 20.4**	**0.0**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BILL	**Bilibino**	**29.64**	**18**	P	**P**	**23 06 20.5**	**0.0**
MOY	**Mondy**	**29.68**	**304**	*e*P	**P**	**23 06 21.4**	**+0.2**
LZH	**Lanzhou**	**30.14**	**272**	*e*P	**P**	**23 06 28.4**	**+3.0**
LZH				pP	pP	23 06 43.5	+3.3
LZH				sP	sP	23 06 53.0	+5.7
LZH				PP	**PnPn**	**23 07 28.3**	**+3.5**
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				pmax	pmax		
	comp=Z,78nm,4.6s						
LZH				LR	LR		
	comp=Z,480nm,13.4s						
LZH				LR	LR		
	comp=Z,440nm,13.2s						
LZH				LR	LR		
	comp=Z,490nm,15.3s						
H11N2	**WAKE ISLAND Hy**	**30.22**	**128**	T	T	23 38 58.8	
	baz=321,slow=75						
H11N1	**WAKE ISLAND Hy**	**30.23**	**128**	T	T	23 38 58.6	
	baz=321						
H11N3	**WAKE ISLAND Hy**	**30.24**	**128**	T	T	23 39 00.6	
	baz=321,slow=75						
TIXI	**Tiksi**	**30.97**	**352**	LR	LR	23 19 10.6	
	comp=Z,50nm,19.9s,baz=214,slow=36						
H11S1	**WAKE ISLAND Hy**	**31.06**	**130**	T	T	23 39 58.1	
	baz=323,slow=76						
H11S3	**WAKE ISLAND Hy**	**31.07**	**130**	T	T	23 40 01.3	
	baz=323,slow=76						
H11S2	**WAKE ISLAND Hy**	**31.08**	**130**	T	T	23 40 02.1	
	baz=323,slow=76						
GTA	**Gaotai**	**32.03**	**281**	*e*P	**P**	**23 06 41.8**	**-0.2**
GTA				pP	pP	23 06 58.4	+1.5
GTA				sP	sP	23 07 07.0	+3.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,110nm,7.0s						
GTA				LR	LR		
	comp=Z,850nm,10.2s						
GTA				LR	LR		
	comp=Z,900nm,12.1s						
GYA	**Guiyang**	**32.73**	**254**	*e*P	**P**	**23 06 51.3**	**+3.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA				pmax	pmax		
	comp=Z,60nm,3.9s						
GYA				LR	LR		
	comp=Z,2μm,7.3s						
DGZ	**Jazzator, Alta**	**38.38**	**301**	⇓*i*P	**P**	**23 07 37.7**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,16nm,1.2s						
ZAA0	**Zalesovo Array**	**39.45**	**308**	P	**P**	**23 07 45.0**	**-0.2**
ZAA0				IAmb	IAmb	23 07 46.0	
	comp=Z,7.5nm,0.8s						
ZALV	**Zalesovo Beam**	**39.45**	**308**	P	**P**	**23 07 44.9**	**-0.2**
	comp=Z,8.1nm,0.6s,baz=90,slow=7.4,SNR=33						
ZALV				PcP	**PcP**	**23 09 52.5**	**+0.6**
	comp=Z,2.7nm,0.6s,baz=106,slow=2.6,SNR=5.0						
ZALV				LR	LR	23 25 00.8	
	comp=Z,156nm,18.8s,baz=170,slow=38						
WMQ	**Urumqi**	**39.49**	**292**	*e*P	**P**	**23 07 47.4**	**+1.7**
WMQ				LR	LR		
	comp=Z,890nm,20.7s						
WMQ				LR	LR		
	comp=Z,870nm,20.7s						
WMQ				LR	LR		
	comp=Z,180nm,23.5s						
NRIK	**Noril'sk**	**39.52**	**333**	P	**P**	**23 07 45.2**	**-0.3**
	comp=Z,3.2nm,0.5s,baz=102,slow=11,SNR=7.0						
NRIK				LR	LR	23 24 57.3	
	comp=Z,218nm,20.4s,baz=151,slow=37						
MK31	**Makanchi Array**	**42.36**	**298**	P	**P**	**23 08 09.4**	**+0.2**
MK31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MK31	**Makanchi Array**	**42.36**	**298**	P	**P**	**23 08 09.4**	**+0.2**
MK31				IAmb	IAmb	23 08 13.6	
	comp=Z,5.7nm,0.8s						
MKAR	**Makanchi Array**	**42.36**	**298**	P	**P**	**23 08 09.1**	**-0.1**
	comp=Z,7.2nm,0.9s,baz=84,slow=12,SNR=49						
MKAR				PcP	**PcP**	**23 10 02.0**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=42,slow=3.7,SNR=2.4						
MAKZ	**Makanchi**	**42.56**	**298**	P	**P**	**23 08 10.7**	**-0.1**
MAKZ				IAmb	IAmb	23 08 15.4	
	comp=Z,8.8nm,0.9s						
MAKZ				PP	**PP**	**23 09 52.1**	**+1.8**
CMAR	**Chiang Mai Arr**	**43.29**	**251**	LR	LR	23 26 55.7	
	comp=Z,69nm,19.8s,baz=255,slow=37						
KURK	**Kurchatov**	**43.74**	**305**	*c i*P	**P**	**23 08 19.8**	**-0.4**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KURK	**Kurchatov**	**43.74**	**305**	P	**P**	**23 08 20.0**	**-0.3**
KURK				IAmb	IAmb	23 08 20.9	
	comp=Z,11nm,0.6s						
KURBB	**Kurchatov Arra**	**43.81**	**305**	P	**P**	**23 08 20.6**	**-0.2**
	comp=Z,8.0nm,0.5s,baz=78,slow=8.9,SNR=70						
COLA	**College**	**45.08**	**35**	*c i*P	**P**	**23 08 32.1**	**+1.4**
COLA				pmax	pmax		
	comp=Z,16nm,0.9s						
SML	**Sawmill**	**45.15**	**39**	P	**P**	**23 08 32.9**	**+1.4**
SML				pmax	pmax		
	comp=Z,18nm,1.4s						
SML	**Sawmill**	**45.15**	**39**	P	**P**	**23 08 32.9**	**+1.4**
SML				IAmb	IAmb	23 08 51.8	
	comp=Z,18nm,1.4s						
DHY	**Denali Highway**	**45.45**	**37**	P	**P**	**23 08 35.0**	**+1.1**
ILAR	**Eielson Array**	**45.50**	**35**	P	**P**	**23 08 35.0**	**+1.0**
	comp=Z,6.9nm,1.0s,baz=272,slow=6.8,SNR=16						
HDA	**Harding Lake**	**45.51**	**35**	P	**P**	**23 08 35.7**	**+1.6**
HDA				IAmb	IAmb	23 08 35.8	
	comp=Z,6.4nm,1.0s						
KDJ	**Kajisay**	**47.33**	**294**	IAmb	IAmb	23 08 49.8	
	comp=Z,5.1nm,0.9s						
BVAR	**Borovoye Array**	**48.08**	**310**	P	**P**	**23 08 54.7**	**+0.4**
	comp=Z,4.2nm,0.3s,baz=78,slow=9.0,SNR=57						
BVAR				PcP	**PcP**	**23 10 22.0**	**+0.8**
	comp=Z,1.6nm,0.5s,baz=59,slow=4.9,SNR=2.0						
TKM2	**Tokmak 2**	**48.11**	**295**	P	**P**	**23 08 55.7**	**+0.7**
	SNR=26						
BRVK	**Borovoye**	**48.13**	**310**	P	**P**	**23 08 54.7**	**0.0**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	**Borovoye**	**48.13**	**310**	P	**P**	**23 08 54.7**	**0.0**
BRVK				IAmb	IAmb	23 08 56.0	
	comp=Z,4.3nm,0.8s						
KBK	**Karagaybulak**	**48.66**	**295**	P	**P**	**23 08 59.6**	**+0.4**
	SNR=17						
KZA	**Kyzart**	**48.67**	**294**	P	**P**	**23 09 01.2**	**+1.6**
	SNR=6.3						
USP	**Ospenovka**	**48.73**	**296**	P	**P**	**23 08 57.2**	**-2.4**
	SNR=8.0						
AAK	**Ala-Archa**	**48.97**	**295**	P	**P**	**23 09 01.3**	**-0.3**
	comp=Z,2.8nm,0.4s,baz=106,slow=5.4,SNR=16						
AAK	**Ala-Archa**	**48.97**	**295**	P	**P**	**23 09 01.7**	**+0.1**
	SNR=7.7						
AAK	**Ala-Archa**	**48.97**	**295**	⇓*i*P	**P**	**23 09 01.2**	**-0.4**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AAK	**Ala-Archa**	**48.97**	**295**	P	**P**	**23 09 01.2**	**-0.4**
KSH	**Kashi**	**49.21**	**291**	P	**P**	**23 09 07.7**	**+4.3**
KSH				pP	sP	23 09 24.3	-1.6
KSH				PcP	**PcP**	**23 10 28.4**	**+2.7**
KSH				S	**S**	**23 16 08.8**	**+4.1**
KSH				SS	**SS**	**23 19 37.7**	**+1.4**
KSH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,140nm,4.9s						
KSH				LR	LR		
	comp=Z,140nm,10.2s						
KSH				LR	LR		
	comp=Z,130nm,8.5s						
KSH				LR	LR		
	comp=Z,140nm,13.7s						
EKS2	**Erkin-Say**	**49.45**	**296**	P	**P**	**23 09 05.3**	**+0.1**
	SNR=8.1						
AML	**Almayashu**	**49.72**	**295**	P	**P**	**23 09 08.2**	**+0.6**
	SNR=5.8						
INK	**Inuvik**	**50.22**	**29**	P	**P**	**23 09 11.4**	**+1.0**
	comp=Z,8.7nm,0.6s,baz=300,slow=7.0,SNR=47						
KK31	**Karatay Array**	**51.47**	**297**	IAmb	IAmb	23 09 20.5	
	comp=Z,4.9nm,1.0s						
KKAR	**Karatay Array**	**51.47**	**297**	IAmb	IAmb	23 09 20.5	
	comp=Z,4.9nm,1.0s						
GAR	**Garm**	**53.38**	**293**	P	**P**	**23 09 32.8**	**-1.9**
GAR				IAmb	IAmb	23 09 37.1	
	comp=Z,8.0nm,1.1s						
GAR				PcP	**PcP**	**23 10 41.0**	**-0.3**
ARU	**Arti**	**53.45**	**317**	P	**P**	**23 09 34.5**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=71,slow=6.8,SNR=6.3						
ARU	**Arti**	**53.45**	**317**	*c i*P	**P**	**23 09 34.5**	**-0.2**
ARU				*PP	**pP**	**23 09 49.4**	**-1.0**
ARU						23 10 36.7	
ARU				S	**S**	**23 17 04.1**	**+1.7**
ARU				pmax	pmax		
	comp=Z,16nm,1.7s						
ARU				MLR	MLR		
	comp=Z,283nm,18.0s						
ARU	**Arti**	**53.45**	**317**	P	**P**	**23 09 34.0**	**-0.7**

ARU				IAmb	IAmb	23 09 35.2	
	comp=Z,4.6nm,0.9s						
NIL	**Nilore**	**53.84**	**286**	P	**P**	**23 09 36.5**	**-1.5**
NIL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NIL	**Nilore**	**53.84**	**286**	P	**P**	**23 09 36.5**	**-1.5**
NIL				IAmb	IAmb	23 09 45.7	
	comp=Z,7.4nm,0.8s						
AKTO	**Aktyubinsk**	**56.17**	**310**	P	**P**	**23 09 54.2**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=80,slow=14,SNR=8.1						
SPITS	**Spitsbergen Ar**	**56.29**	**348**	P	**P**	**23 09 54.6**	**-0.3**
	comp=Z,3.4nm,0.7s,baz=76,slow=7.6,SNR=9.8						
KBL	**Kabul**	**56.42**	**289**	P	**P**	**23 09 54.5**	**-2.3**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBL	**Kabul**	**56.42**	**289**	P	**P**	**23 09 54.5**	**-2.3**
KBL				IAmb	IAmb	23 09 56.9	
	comp=Z,4.4nm,0.8s						
GSI	**Gunungsitoli**	**56.60**	**237**	P	**P**	**23 09 57.4**	**-0.6**
KIRV	**Kirov**	**57.08**	**321**	P	**P**	**23 10 00.7**	**0.0**
	comp=Z,8.6nm,0.6s,baz=63,slow=4.7,SNR=6.3						
LEM	**Lembang**	**57.51**	**222**	LR	LR	23 35 34.9	
	comp=Z,218nm,20.8s,baz=300,slow=37						
RES	**Resolute Bay**	**58.18**	**15**	P	**P**	**23 10 08.5**	**+0.3**
RES				pmax	pmax		
	comp=Z,16nm,0.9s						
YKA	**Yellowknife Ar**	**59.73**	**32**	P	**P**	**23 10 19.2**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=300,slow=5.5,SNR=10						
ARCES	**ARCESS Array B**	**60.05**	**339**	P	**P**	**23 10 21.5**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=52,slow=9.3,SNR=9.5						
ARCES				LR	LR	23 40 15.4	
	comp=Z,132nm,20.8s,baz=178,slow=40						
KLMR	**Klimovskoe**	**60.33**	**327**	*e*P	**P**	**23 10 20.4**	**-2.8**
KLMR				pmax	pmax		
	comp=Z,11nm,1.1s						
KLMR	**Klimovskoe**	**60.33**	**327**	*e*P	**P**	**23 10 20.4**	**-2.8**
KLMR				AMP		23 10 23.6	
	comp=Z,11nm,1.1s						
WB0	**Warramunga Arr**	**61.34**	**188**	P	**P**	**23 10 30.2**	**-0.3**
WB0				IAmb	IAmb	23 10 31.9	
	comp=Z,9.7nm,1.2s						
DAG	**Danmarks Havn**	**61.41**	**355**	*i* P	**P**	**23 10 29.8**	**-0.6**
DAG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DAG	**Danmarks Havn**	**61.41**	**355**	*i* P	**P**	**23 10 29.8**	**-0.6**
	comp=Z,3.1nm,0.7s						
WRAB	**Tennant Creek**	**61.51**	**188**	⇑*i*P	**P**	**23 10 32.1**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WR0	**Warramunga Arr**	**61.52**	**188**	P	**P**	**23 10 31.8**	**0.0**
WB2	**Warramunga Arr**	**61.52**	**188**	P	**P**	**23 10 31.2**	**-0.5**
WB2				IAmb	IAmb	23 10 48.9	
	comp=Z,8.8nm,1.2s						
WRA	**Warramunga Arr**	**61.52**	**188**	P	**P**	**23 10 31.5**	**-0.3**
	comp=Z,1.9nm,0.5s,baz=6.2,slow=6.9,SNR=31						
GEYT	**Alibeck**	**62.22**	**297**	P	**P**	**23 10 36.2**	**-0.3**
	comp=Z,3.0nm,0.5s,baz=5.7,slow=1.5,SNR=11						
GYA0B	**ALIBECK ARRAY**	**62.22**	**297**	P	**P**	**23 10 36.8**	**+0.2**
GYA0B				IAmb	IAmb	23 10 37.4	
	comp=Z,5.2nm,0.6s						
OBN	**Obninsk**	**64.89**	**322**	*e*P	**P**	**23 10 51.6**	**-2.1**
OBN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
FIA1	**FINESS Array S**	**65.16**	**332**	P	**P**	**23 10 55.0**	**-0.4**
FIA1				IAmb	IAmb	23 11 11.1	
	comp=Z,11nm,1.1s						
FINES	**FINESS Array B**	**65.16**	**332**	P	**P**	**23 10 55.0**	**-0.3**
	comp=Z,5.4nm,0.6s,baz=55,slow=7.1,SNR=28						
ASAR	**Alice Springs**	**65.25**	**188**	P	**P**	**23 10 56.8**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=2.6,slow=5.8,SNR=12						
VSR	**Storozhevoye**	**65.98**	**318**	⇓*i*P	**P**	**23 11 01.0**	**+0.2**
VSR				pmax	pmax		
	comp=Z,11nm,0.5s						
SUMG	**Summit**	**66.25**	**0**	*i* P	**P**	**23 11 03.5**	**+0.7**
SUMG				pmax	pmax		
	comp=Z,20nm,0.8s						
SUMG	**Summit**	**66.25**	**0**	IAmb	IAmb	23 11 04.1	
	comp=Z,8.0nm,0.9s						
SUMG	**Summit**	**66.25**	**0**	*i* P	**P**	**23 11 03.5**	**+0.7**
	comp=Z,20nm,0.8s						
AKT	**Akhty**	**66.91**	**305**	*e*P	**P**	**23 11 07.5**	**+0.4**
AKT				*e**PP	**pP**	**23 11 26.1**	**+2.8**
AKT				*e*		23 11 35.5	
AKT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KVAR	**Kislovodsk Arr**	**68.44**	**310**	P	**P**	**23 11 17.5**	**+0.8**
	comp=Z,9.3nm,1.1s,baz=90,slow=20,SNR=3.6						
KIV	**Kislovodsk**	**68.44**	**310**	⇓P	**P**	**23 11 18.4**	**+1.7**
KIV	**Kislovodsk**	**68.44**	**310**	*e*P	**P**	**23 11 17.5**	**+0.8**
KIV				pmax	pmax		
	comp=Z,53nm,1.1s						
KBZ	**Khabaz**	**68.45**	**310**	P	**P**	**23 11 15.9**	**-0.7**
	comp=Z,4.3nm,0.7s,baz=62,slow=2.8,SNR=9.5						
KBZ	**Khabaz**	**68.45**	**310**	⇓*i*P	**P**	**23 11 15.8**	**-0.8**
TBLG	**Delisi**	**68.57**	**307**	P	**P**	**23 11 19.9**	**+2.4**
FCC	**Fort Churchill**	**69.81**	**27**	P	**P**	**23 11 24.0**	**-0.7**
FCC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FCC	**Fort Churchill**	**69.81**	**27**	P	**P**	**23 11 24.0**	**-0.7**
NC204	**NORSAR Array S**	**70.26**	**337**	P	**P**	**23 11 27.6**	**0.0**
HFS	**Hagfors**	**70.28**	**335**	P	**P**	**23 11 27.2**	**-0.4**
	comp=Z,1.8nm,0.3s,baz=42,slow=6.8,SNR=29						
NB201	**NORSAR Array S**	**70.28**	**337**	P	**P**	**23 11 27.6**	**-0.1**
NB201				IAmb	IAmb	23 11 28.8	
	comp=Z,3.0nm,0.5s						
NB2	**NORSAR Subarra**	**70.31**	**337**	P	**P**	**23 11 28.0**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=35,slow=6.5						
NOA	**NORSAR Array B**	**70.31**	**337**	P	**P**	**23 11 27.6**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=37,slow=6.3,SNR=14						
NORES	**NORESS Array B**	**70.46**	**337**	P	**P**	**23 11 33.2**	**+4.5**
NORES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
LRM	**Limekiln Ridge**	**70.63**	**46**	P	**P**	**23 11 30.4**	**0.0**
DLMT	**Dillon**	**70.84**	**46**	P	**P**	**23 11 30.7**	**-0.9**
AKASG	**Malin Array Be**	**71.14**	**322**	P	**P**	**23 11 32.6**	**-0.3**
	comp=Z,3.2nm,0.5s,baz=45,slow=6.0,SNR=18						
AKBB	**Malin Array Si**	**71.14**	**322**	⇓*i*P	**P**	**23 11 33.0**	**0.0**
KVN	**Kaiserville**	**71.67**	**54**	P	**P**	**23 11 37.0**	**+0.3**
KVN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KVN	**Kaiserville**	**71.67**	**54**	P	**P**	**23 11 37.0**	**+0.3**
NVAR	**Mina Array Bea**	**71.94**	**55**	P	**P**	**23 11 39.6**	**+1.3**
	comp=Z,0.6nm,0.5s,baz=302,slow=6.0,SNR=2.4						
FRB	**Frobisher Bay**	**72.34**	**14**	P	**P**	**23 11 40.0**	**+0.1**
FRB				pmax	pmax		
	comp=Z,16nm,1.2s						
SORM	**Soroca**	**73.32**	**320**	⇓P	**P**	**23 11 46.0**	**-0.1**
SORM	**Soroca**	**73.32**	**320**	⇓P	**P**	**23 11 46.0**	**-0.1**
PDAR	**Pinedale Array**	**74.20**	**47**	P	**P**	**23 11 52.1**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=266,slow=2.0,SNR=11						
MALT	**Malatya**	**74.48**	**308**	P	**P**	**23 11 55.1**	**+1.9**
KWP	**Kalwaria Pacla**	**74.85**	**324**	P	**P**	**23 11 56.0**	**+1.0**
KWP				pmax	pmax		
	comp=Z,15nm,0.7s						
BURAR	**Bucovina Array**	**75.18**	**321**	⇑P	**P**	**23 11 57.6**	**+0.6**
BURAR	**Bucovina Array**	**75.18**	**321**	⇑P	**P**	**23 11 57.6**	**+0.6**
OJC	**Ojcow**	**75.67**	**326**	P	**P**	**23 12 00.7**	**+1.0**
OJC				pmax	pmax		
	comp=Z,11nm,1.4s						
OJC	**Ojcow**	**75.67**	**326**	IAmb	IAmb	23 12 01.4	
	comp=Z,8.4nm,0.9s						
TRPA	**Tarpa**	**76.03**	**323**	⇓P	**P**	**23 12 02.9**	**+1.2**
NIE	**Niedzica**	**76.06**	**325**	P	**P**	**23 12 03.4**	**+1.5**
NIE				pmax	pmax		
	comp=Z,3.0nm,1.4s						
BR131	**Keskin Array S**	**76.33**	**311**	⇑*i*P	**P**	**23 12 04.2**	**+0.4**
BR131	**Keskin Array S**	**76.33**	**311**	P	**P**	**23 12 02.7**	**-1.1**
BRTR	**Keskin Array B**	**76.33**	**311**	P	**P**	**23 12 04.0**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=65,slow=3.6,SNR=10						
BRTR	**Keskin Array B**	**76.33**	**311**	*ce*P	**P**	**23 12 04.5**	**+0.7**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KSP	**Ksiaz**	**76.62**	**328**	P	**P**	**23 12 05.8**	**+0.7**
KSP				pmax	pmax		
	comp=Z,6.0nm,1.4s						
CHVC	**Chvalec**	**76.92**	**328**	*e*P	**P**	**23 12 07.6**	**+0.8**
MORC	**Moravsky Berou**	**76.94**	**327**	*e*P	**P**	**23 12 07.3**	**+0.3**
MORC	**Moravsky Berou**	**76.94**	**327**	⇑P	**P**	**23 12 07.7**	**+0.7**
MORC	**Moravsky Berou**	**76.94**	**327**	⇑P	**P**	**23 12 07.7**	**+0.7**
MORC	**Moravsky Berou**	**76.94**	**327**	IAmb	IAmb	23 12 08.7	
	comp=Z,7.5nm,1.3s						
DPC	**Dobruska-Polom**	**77.00**	**328**	*e*P	**P**	**23 12 07.9**	**+0.7**
DPC	**Dobruska-Polom**	**77.00**	**328**	*e*P	**P**	**23 12 07.9**	**+0.7**
KRLC	**Kraliky**	**77.02**	**327**	*e*P	**P**	**23 12 07.7**	**+0.3**
KRLC	**Kraliky**	**77.02**	**327**	*e*P	**P**	**23 12 07.7**	**+0.3**
ARR	**Arges**	**77.08**	**320**	⇓P	**P**	**23 12 09.7**	**+1.8**
VYHS	**Vyhne**	**77.39**	**325**	*e*P	**P**	**23 12 09.0**	**-0.4**
VYHS	**Vyhne**	**77.39**	**325**	*e*P	**P**	**23 12 09.0**	**-0.4**
BRG	**Berggiesshubel**	**77.52**	**329**	*e*P	**P**	**23 12 11.2**	**+1.2**
	comp=Z,3.2nm,1.1s						
BRG	**Berggiesshubel**	**77.52**	**329**	*e*P	**P**	**23 12 11.2**	**+1.2**
BRG				pmax	pmax		
	comp=Z,3.0nm,1.2s						
CLL	**Collm**	**77.52**	**330**	⇑*i*P	**P**	**23 12 11.1**	**+1.0**
	comp=Z,4.0nm,0.8s						
CLL				L	L	23 28 00.0	
	comp=Z,100nm,20.2s						
CLL	**Collm**	**77.52**	**330**	⇑*i*P	**P**	**23 12 11.1**	**+1.0**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NRS	**Narsarsuaq**	**77.54**	**4**	P	**P**	**23 12 10.5**	**+0.5**
NRS				pmax	pmax		
	comp=Z,25nm,1.1s						
NRS	**Narsarsuaq**	**77.54**	**4**	P	**P**	**23 12 08.9**	**-1.0**
VRAC	**Vranov**	**77.70**	**327**	*e*P	**P**	**23 12 11.4**	**+0.3**
VRAC	**Vranov**	**77.70**	**327**	⇓P	**P**	**23 12 12.3**	**+1.2**
VRAC	**Vranov**	**77.70**	**327**	⇓P	**P**	**23 12 12.3**	**+1.2**
KRUC	**Moravsky**	**77.97**	**327**	*e*P	**P**	**23 12 13.0**	**+0.4**
KRUC	**Moravsky**	**77.97**	**327**	P	**P**	**23 12 13.5**	**+0.9**
KRUC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PRU	**Pruhonice**	**77.99**	**328**	*e*P	**P**	**23 12 13.8**	**+1.1**
PRU	**Pruhonice**	**77.99**	**328**	*e*P	**P**	**23 12 13.8**	**+1.1**
PBCC	**Pribram**	**78.44**	**329**	*e*P	**P**	**23 12 15.8**	**+0.5**
KHC	**Kasperske Hory**	**79.05**	**328**	*e*P	**P**	**23 12 19.5**	**+0.9**
KHC	**Kasperske Hory**	**79.05**	**328**	*e*P	**P**	**23 12 19.5**	**+0.9**
EKA	**Eskdalemuir Ar**	**79.13**	**341**	P	**P**	**23 12 18.1**	**-0.8**
GERES	**GERESS Array B**	**79.23**	**328**	P	**P**	**23 12 19.6**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=33,slow=6.6,SNR=8.1						
RAYN	**Ar Rayn**	**79.49**	**292**	P	**P**	**23 12 21.6**	**+0.1**
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
RAYN	**Ar Rayn**	**79.49**	**292**	P	**P**	**23 12 21.6**	**+0.1**
RAYN				IAmb	IAmb	23 12 23.5	
	comp=Z,7.4nm,1.1s						
GRF	**Grafenberg Arr**	**79.50**	**330**	*e*P	**P**	**23 12 21.8**	**+0.7**
	comp=Z,12nm,1.5s,baz=36,slow=4.8						
VTS	**Vitosha**	**79.79**	**319**	P	**P**	**23 12 23.6**	**+0.7**
VTS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VTS	**Vitosha**	**79.79**	**319**	P	**P**	**23 12 23.6**	**+0.7**
SOKA	**Soboth**	**80.42**	**326**	*e*P	**P**	**23 12 26.9**	**+0.8**
	comp=Z,5.2nm,0.9s						
OBKA	**Obir**	**80.75**	**326**	*e*P	**P**	**23 12 28.1**	**+0.2**
	comp=Z,3.2nm,0.9s						
KBA	**Koelnbreinsper**	**80.79**	**327**	*e*PcP	**P**	**23 12 29.7**	**+1.4**
	comp=Z,10nm,1.7s						
KBA	**Koelnbreinsper**	**80.79**	**327**	P	**P**	**23 12 29.4**	**+1.1**
KBA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SCHQ	**Schefferville**	**80.93**	**16**	P	**P**	**23 12 28.9**	**+0.3**
	comp=Z,3.5nm,0.9s,baz=322,slow=12,SNR=3.0						
SCHQ	**Schefferville**	**80.93**	**16**	P	**P**	**23 12 27.3**	**-1.3**
SCHQ				IAmb	IAmb	23 12 29.3	
	comp=Z,9.2nm,1.3s						
WATA	**Walderalm**	**81.29**	**328**	*e*P	**P**	**23 12 32.0**	**+1.1**
	comp=Z,2.7nm,0.6s						
WTTA	**Wattenberg**	**81.32**	**328**	*e*P	**P**	**23 12 31.5**	**+0.4**
	comp=Z,2.9nm,0.7s						
ABTA	**Abfaltersbach**	**81.40**	**328**	*e*P	**P**	**23 12 31.6**	**+0.3**
	comp=Z,4.9nm,1.7s						
MOTA	**Moosalm**	**81.47**	**329**	*e*P	**P**	**23 12 32.0**	**+0.2**
	comp=Z,6.2nm,1.0s						
RETA	**Reutte**	**81.48**	**329**	*e*P	**P**	**23 12 31.3**	**-0.5**
	comp=Z,8.3nm,1.3s						
SQTA	**Sankt Quirin**	**81.53**	**329**	*e*P	**P**	**23 12 32.3**	**+0.3**
	comp=Z,3.4nm,1.0s						
LENM	**Lemitar**	**81.59**	**52**	P	**P**	**23 12 31.4**	**-1.3**
DAVA	**Damuels**	**81.99**	**329**	*e*P	**P**	**23 12 34.8**	**+0.3**
	comp=Z,6.6nm,1.1s						
FUORN	**Ofenpass-Fuorn**	**82.39**	**329**	P	**P**	**23 12 36.1**	**-0.7**
FUORN				IAmb	IAmb	23 12 38.4	
	comp=Z,5.4nm,0.7s						
TXAR	**Lajitas Array**	**87.00**	**53**	P	**P**	**23 13 01.0**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=253,slow=3.8,SNR=4.5						
ESDC	**Sonseca Array**	**93.54**	**334**	P	**P**	**23 13 30.1**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=28,slow=4.6,SNR=5.7						
SNAA	**Sanae**	**145.13**	**199**	PKPdf	**PKPdf**	**23 19 51.1**	**+0.6**
VNA2	**Neumayer--Watz**	**146.71**	**198**	PKPdf	**PKPbc**	**23 19 54.9**	**0.0**
	baz=102,slow=2.1						

*IDC **05** 23:04:55.1±0.6, 19°.69N×99°.65E, h0km, mb4.1/21, mb1 4.2/22, mb1mx4.0/58, mbtmp4.1/22, ML4.1/1, MS4.1/13, Ms1 4.1/13, ms1mx3.8/38, Error ellipse: s-maj=17.9km s-min=10.8km az=97.0*

*NEIC **05** 23:04:55.9±2.3, 19°.63N±0°.04×99°.60E±0°.04, h10km±1km, mb4.3/15, Error ellipse: s-maj=8.7km s-min=3.5km az=316.0*

*GCMT **05** 23:04:55.9±0.3, 19°.64N±0°.02×99°.60E±0°.02, h12km, MW4.8/94, Moment Tensor Solution. s7,c7; s94,c128; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.70±.07; $M_{\theta\theta}$-0.81±.06; $M_{\phi\phi}$1.51±.06; $M_{r\theta}$-0.12±.20; $M_{\theta\phi}$1.23±.05; $M_{\phi r}$-0.35±.19; Best double couple: $M_0$1.71400×10^{16} NP1:ϕ_s249.00000°,δ83.00000°,λ4.00000°. NP2: ϕ_s158.00000°,δ86.00000°,λ173.00000°. Principal axes: T 2.0900, Plg7.0000°, Azm113.0000°; N -0.7490, Plg82.0000°, Azm310.0000°; P -1.3370, Plg2.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 23:04:56.0±0.4**, 19°.62N**±0°.03×**99°.54E**±0°.04**, h10km, n79, σ1§33**/81**, mb4.2**/26**, MS4.0**/11**, Thailand**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMMT	**Chiang Mai**	**0.98**	**215**	P	**Pb**	**23 05 15.9**	**+0.8**
CHTO	**Chiang Mai**	**0.98**	**215**	Pn	**Pg**	**23 05 15.7**	**+0.8**
CHTO					**Sn**	**23 05 30.1**	**+0.3**
LAMP	**Lampang**	**1.09**	**176**	P	**Pb**	**23 05 17.8**	**+0.8**
CM09	**Chiang Mai Arr**	**1.28**	**204**	P	**Pb**	**23 05 20.9**	**+0.7**
CM31	**Chiang Mai Arr**	**1.29**	**206**	P	**Pn**	**23 05 20.8**	**+0.7**
CM31	**Chiang Mai Arr**	**1.29**	**206**	Pn	**Pn**	**23 05 20.7**	**+0.7**
CMAR	**Chiang Mai Arr**	**1.29**	**206**	Pg	**Pb**	**23 05 21.1**	**+0.8**
	847nm,0.3s,baz=14,slow=15,SNR=221						
CMAR				Lg	Lg	23 05 41.1	
	1μm,0.3s,baz=36,slow=31,SNR=19						
PHRA	**Phrae**	**1.29**	**150**	P	**Pb**	**23 05 21.1**	**+0.8**
CM02	**Chiang Mai Arr**	**1.31**	**206**	P	**Pn**	**23 05 21.1**	**+0.7**
CM04	**Chiang Mai Arr**	**1.32**	**204**	P	**Pb**	**23 05 21.6**	**+0.6**
CM13	**Chiang Mai Arr**	**1.33**	**207**	P	**Pn**	**23 05 21.2**	**+0.5**
CM05	**Chiang Mai Arr**	**1.34**	**205**	P	**Pn**	**23 05 21.4**	**+0.6**
NANT	**Nan**	**1.36**	**126**	P	**Pn**	**23 05 20.1**	**-1.1**
MHMT	**Maesarieng**	**2.10**	**227**	Pg	**Pg**	**23 05 37.1**	**+0.9**
MHMT				Pn	**Pn**	**23 05 31.7**	**+0.5**
PHIT	**Phitsanulok**	**2.55**	**161**	Pg	**Pg**	**23 05 45.3**	**+0.3**
PHIT				Pn	**Pn**	**23 05 38.6**	**+1.1**
PBKT	**Sadao Pong**	**3.32**	**156**	Pn	**Pn**	**23 05 49.4**	**+1.4**
NONG	**Nongkai**	**3.75**	**114**	Pg	**Pb**	**23 06 04.6**	**+2.3**
NONG				Pn	**Pn**	**23 05 54.0**	**+0.1**
SLVN	**Son La**	**4.43**	**67**		**Pn**	**23 06 03.6**	**+0.2**
SLVN				Pg	**Pb**	**23 06 16.4**	**+2.4**
KMI	**Kunming**	**6.23**	**28**	Pg	**Pg**	**23 06 54.2**	**-1.1**
KMI				Sg	**Sg**	**23 08 17.7**	**+1.7**
KMI				smax	smax		
	comp=N,100nm,1.8s						
KMI				smax	smax		
	comp=E,93nm,1.3s						
KMI	**Kunming**	**6.23**	**28**	Pn	**Pn**	**23 06 27.5**	**-0.8**
KMI					**Pg**	**23 06 55.2**	**-0.1**
BRDH	**Bariadhala**	**7.98**	**294**	LR	LR	23 10 58.0	
	comp=E,6μm,18.6s,baz=148,slow=45						
SHL	**Shillong**	**9.22**	**311**	*e*x	**Pn**	**23 07 09.0**	**-0.4**
SHL	**Shillong**	**9.22**	**311**		**Pn**	**23 07 09.0**	**-0.4**
TEZP	**TEZPUR**	**9.33**	**320**	*e*P	**Pn**	**23 07 10.4**	**-0.1**
QIZ	**Qiongzhong**	**9.74**	**92**	P	**Pn**	**23 07 20.2**	**+3.9**
QIZ				S	Sn	23 09 20.8	+15
QIZ				LR	LR		
	comp=N,4μm,11.8s						
QIZ				LR	LR		
	comp=E,2μm,12.7s						
QIZ				LR	LR		
	comp=Z,3μm,15.2s						
QIZ	**Qiongzhong**	**9.74**	**92**	Pn	**Pn**	**23 07 15.3**	**-1.0**
QIZ				Sn	**Sn**	**23 09 03.7**	**-2.2**
ODAN	**Odare**	**13.29**	**305**	*e*P	**Pn**	**23 08 04.5**	**-0.6**
	comp=Z,18nm,0.7s						
TAPN	**Taplejung**	**13.30**	**308**	*e*P	**Pn**	**23 08 04.3**	**-1.0**
	comp=Z,10nm,0.4s						
RAMN	**Ramite**	**13.95**	**304**	*e*P	**Pn**	**23 08 13.8**	**-0.3**
JIRN	**Jiri**	**14.61**	**306**	*e*P	**Pn**	**23 08 21.9**	**-1.4**
	comp=Z,9.8nm,0.4s						
GUN	**Gumba**	**14.98**	**306**	*e*P	**Pn**	**23 08 26.8**	**-1.4**
IPM	**Ipoh**	**15.12**	**174**	Pn	**Pn**	**23 08 27.4**	**-2.4**
IPM				IAmb	IAmb	23 08 41.8	
	comp=Z,16nm,1.4s						
PKI	**Pulchoki**	**15.18**	**304**	*e*P	**Pn**	**23 08 29.4**	**-1.4**
PKIN	**Phulchoki**	**15.19**	**304**	*e*P	**Pn**	**23 08 29.5**	**-1.4**
GKN	**Gorkha**	**15.98**	**304**	*e*P	**Pn**	**23 08 39.5**	**-1.7**
XAN	**Xi'an**	**16.61**	**28**		**Pn**	**23 08 47.4**	**-1.7**
PSI	**Prapat**	**16.73**	**182**	Pn	**P**	**23 08 53.0**	**0.0**
	comp=Z,0.7nm,0.3s,baz=360,slow=12,SNR=1.7						
PSI				LR	LR	23 15 12.3	
	comp=Z,459nm,18.9s,baz=277,slow=36						
DANN	**Dangsing**	**16.83**	**304**	*e*P	**Pn**	**23 08 50.0**	**-2.1**
	comp=Z,106nm,0.6s						
RPSI	**Rantau Prapat**	**16.83**	**182**	P	**Pn**	**23 08 53.0**	**+1.1**
RPSI	**Rantau Prapat**	**16.83**	**182**		**P**	**23 08 54.5**	**+0.5**
RPSI				IAmb	IAmb	23 09 00.0	
	comp=Z,58nm,1.4s						
PYUN	**Piuthan**	**17.32**	**302**	*e*P	**Pn**	**23 08 56.6**	**-1.7**
	comp=Z,42nm,0.8s						
KSM	**Kuching**	**20.89**	**148**	P	**P**	**23 09 35.1**	**-3.5**
KSM				IAmb	IAmb	23 09 46.1	
	comp=Z,17nm,1.2s						
SBUM	**Sibu**	**21.09**	**142**	P	**P**	**23 09 38.6**	**-2.2**
BJT	**Baijiatuau**	**24.85**	**32**	P	**P**	**23 10 17.8**	**-0.8**
BJT				IAmb	IAmb	23 10 23.2	
	comp=Z,8.8nm,0.9s						
SONM	**Songino Array**	**28.69**	**10**	P	**P**	**23 10 54.9**	**+1.5**
	comp=Z,3.2nm,0.8s,baz=193,slow=9.2,SNR=17						
ULN	**Ulaanbaatar**	**28.83**	**11**	P	**P**	**23 10 55.0**	**+0.4**
ULN				IAmb	IAmb	23 10 58.5	
	comp=Z,8.4nm,0.9s						
KDJ	**Kajisay**	**29.36**	**325**	P	**P**	**23 11 00.4**	**+0.9**
KDJ				IAmb	IAmb	23 11 02.8	
	comp=Z,4.4nm,0.8s						
KSRS	**Korea Array**	**30.44**	**48**	LR	LR	23 22 48.4	
	comp=Z,266nm,18.4s,baz=239,slow=35						
MK31	**Makanchi Array**	**30.57**	**336**	P	**P**	**23 11 12.4**	**+2.5**
MKAR	**Makanchi Array**	**30.57**	**336**	P	**P**	**23 11 10.6**	**+0.7**
	comp=Z,2.2nm,0.6s,baz=152,slow=9.7,SNR=9.6						
MKAR				LR	LR	23 24 20.5	
	comp=Z,287nm,18.4s,baz=144,slow=38						
AAK	**Ala-Archa**	**31.19**	**323**	P	**P**	**23 11 17.2**	**+1.6**
	comp=Z,1.8nm,0.8s,baz=131,slow=11,SNR=8.7						
AAK	**Ala-Archa**	**31.19**	**323**	P	**P**	**23 11 16.6**	**+1.0**
KAPI	**Kappang**	**31.54**	**139**	LR	LR	23 26 41.6	
	comp=Z,353nm,18.6s,baz=332,slow=41						
KURBB	**Kurchatov Arra**	**35.13**	**337**	P	**P**	**23 11 50.6**	**+0.9**
	comp=Z,1.7nm,0.6s,baz=144,slow=9.2,SNR=6.9						
MAT	**Matsushiro**	**37.76**	**55**	PKP	**P**	**23 12 14.0**	**+1.7**
MJAR	**Matsushiro Arr**	**37.76**	**55**	P	**P**	**23 12 14.0**	**+1.6**
	comp=Z,9.2nm,0.9s,baz=173,slow=0.7,SNR=21						
MJAR				LR	LR	23 28 05.7	
	comp=Z,232nm,18.5s,baz=265,slow=37						
JCJ	**Chichijima**	**39.70**	**71**	LR	LR	23 28 09.4	
	comp=Z,111nm,21.6s,baz=117,slow=35						
BVAR	**Borovoye Array**	**40.25**	**333**	P	**P**	**23 12 33.8**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=135,slow=10,SNR=5.3						
NRIK	**Noril'sk**	**50.26**	**354**	P	**P**	**23 13 51.4**	**-0.8**
	comp=Z,2.0nm,0.6s,baz=178,slow=9.9,SNR=3.0						
WRA	**Warramunga Arr**	**52.04**	**137**	P	**P**	**23 14 06.3**	**+0.1**
	comp=Z,0.8nm,0.9s,baz=326,slow=7.7,SNR=3.2						
WRA				LR	LR	23 39 03.2	
	comp=Z,282nm,21.9s,baz=210,slow=39						
KIRV	**Kirov**	**53.07**	**330**	P	**P**	**23 14 13.2**	**0.0**
	comp=Z,5.3nm,0.5s,baz=67,slow=7.7,SNR=2.8						
ASAR	**Alice Springs**	**54.53**	**141**	P	**P**	**23 14 23.6**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=325,slow=7.4,SNR=6.5						
TIXI	**Tiksi**	**54.77**	**11**	P	**P**	**23 14 25.0**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=216,slow=4.0,SNR=4.4						
TIXI	**Tiksi**	**54.77**	**11**	P	**P**	**23 14 23.6**	**-1.9**
TIXI				IAmb	IAmb	23 14 27.4	
	comp=Z,2.7nm,0.7s						
PETK	**Petropavlovsk-**	**55.52**	**38**	LR	LR	23 39 04.5	
	comp=Z,128nm,18.9s,baz=237,slow=37						
BRTR	**Keskin Array B**	**59.39**	**305**	LR	LR	23 44 45.8	
	comp=Z,104nm,21.4s,baz=137,slow=40						
FINES	**FINESS Array B**	**65.06**	**329**	P	**P**	**23 15 37.2**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=100,slow=3.4,SNR=5.2						
STKA	**Stephens Creek**	**65.16**	**141**	P	**P**	**23 15 38.0**	**+0.6**
	comp=Z,3.1nm,0.9s,baz=24,slow=11,SNR=4.1						
STKA				LR	LR	23 49 58.8	
	comp=Z,139nm,18.1s,baz=279,slow=42						
STKA	**Stephens Creek**	**65.16**	**141**	P	**P**	**23 15 34.5**	**-2.9**
STKA				IAmb	IAmb	23 15 40.0	
	comp=Z,2.1nm,1.2s						
SPITS	**Spitsbergen Ar**	**69.53**	**347**	P	**P**	**23 16 04.0**	**-0.5**
	comp=Z,5.2nm,0.8s,baz=77,slow=7.6,SNR=1.9						
HFS	**Hagfors**	**71.15**	**328**	P	**P**	**23 16 14.7**	**0.0**
	comp=Z,1.7nm,0.8s,baz=94,slow=5.8,SNR=3.1						
NOA	**NORSAR Array B**	**72.25**	**329**	P	**P**	**23 16 21.3**	**0.0**
	comp=Z,0.6nm,0.8s,baz=81,slow=6.2,SNR=2.9						
GERES	**GERESS Array B**	**72.80**	**316**	P	**P**	**23 16 24.4**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=8.5,slow=2.7,SNR=8.3						
MLY	**Manley**	**80.38**	**24**	P	**P**	**23 17 06.5**	**-1.0**
MLY				IAmb	IAmb	23 17 11.4	
	comp=Z,4.1nm,1.0s						
ILAR	**Eielson Array**	**81.95**	**23**	P	**P**	**23 17 14.8**	**-1.0**
	comp=Z,0.7nm,1.0s,baz=301,slow=4.7,SNR=4.9						
ILAR				LR	LR	23 55 11.3	
	comp=Z,202nm,21.1s,baz=88,slow=37						
PRP	**Porcupine Dome**	**82.08**	**22**	P	**P**	**23 17 16.0**	**-0.6**
PRP				IAmb	IAmb	23 17 20.3	
	comp=Z,2.9nm,1.0s						
ESDC	**Sonseca Array**	**87.58**	**311**	P	**P**	**23 17 45.5**	**+0.8**
	comp=Z,0.6nm,1.0s,baz=91,slow=7.8,SNR=4.1						
TORD	**Torodi Ar. Bea**	**92.86**	**285**	P	**P**	**23 18 11.2**	**+1.4**
	comp=Z,0.8nm,1.1s,baz=65,slow=4.7,SNR=2.5						
TORD				LR	LR	00 06 41.7	
	comp=Z,95nm,18.6s,baz=130,slow=40						
YKA	**Yellowknife Ar**	**93.82**	**15**	P	**P**	**23 18 14.4**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=316,slow=3.6,SNR=5.1						

BEO 05 23:10:29.1±0.5**, 42°.54N**×**23°.00E, h0km, ML1.5**/6**, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTS	**Vitosha**	**0.19**	**66**	*e*Pg	Pg	23 10 32.0	-0.8
VTS				*e*Sg	Sg	23 10 34.0	-1.3
BOSS	**Bosilegrad**	**0.38**	**264**	*e*Pg	Pg	23 10 36.5	+0.1
BOSS				*e*Sg	Sg	23 10 41.2	-0.2
ZAPS	**Zavoj**	**0.78**	**340**	*e*Pg	Pg	23 10 43.9	-0.2
ZAPS				*e*Sg	Sg	23 10 54.5	+0.3
BARS	**Barje**	**0.91**	**288**	*e*Pg	Pg	23 10 45.6	-1.0
BARS				*e*Sg	Sg	23 10 57.5	-1.0
ZAGS	**Zajecar**	**1.39**	**337**	*e*Pg	Pg	23 10 53.9	-1.8
ZAGS				*e*Sg	Sg	23 11 12.6	-1.2
SELS	**Selova**	**1.54**	**297**	*e*Pg	Pn	23 10 56.5	-1.3
SELS				*e*Sg	Sg	23 11 18.0	-0.5

PRU 05 23:16:11.5±0.0**, 50°.24N**×**18°.81E, h0km, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORC	**Moravsky Berou**	**0.94**	**241**	*e*PG	Pg	23 16 28.8	-0.7
MORC				*e*SG	Sg	23 16 41.3	-0.4
LANS	**Liptovska Anna**	**1.17**	**158**	*e*PG	Pg	23 16 33.5	-0.4
LANS				*e*SG	Sg	23 16 49.4	+0.3
LANS				*e*LG	Lg	23 16 53.5	
KRLC	**Kraliky**	**1.31**	**264**	*e*PG	Pg	23 16 34.7	-2.0
KRLC				*e*SG	Sg	23 16 52.6	-1.1
DPC	**Dobruska-Polom**	**1.60**	**275**	*e*SG	Sg	23 17 02.9	+0.1
CHVC	**Chvalec**	**1.80**	**282**	*e*SG	Sb	23 17 08.7	+0.3

*HEL **05** 23:34:13.3±0.1, 67°.82N×20°.14E, h0km, ML1.9, ML1.5(UPP), Explosion*

UPP 05 23:34:12.7±0.1**, 67°.82N**×**20°.17E, h1km, ML1.6, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.15**	**25**	P	Pg	23 34 15.8	+0.2
KUA				S	Sg	23 34 17.8	+0.3
KUA	**Kurravaara**	**0.15**	**25**	*i* P	Pg	23 34 15.8	+0.2
KUA				*i* S	Sg	23 34 17.8	+0.3
KOVU	**Salmi**	**0.41**	**360**	P	Pg	23 34 20.5	0.0
KOVU				S	Sg	23 34 25.9	+0.1

KOVU	Salmi	0.41	360	iP	Pg	23 34 20.5	0.0
KOVU				iS	Sg	23 34 25.9	+0.1
KOVU	Salmi	0.41	360	P	Sg	23 34 26.1	+0.3
DUNU	Dundret	0.72	167	P	Pg	23 34 26.1	-0.3
DUNU	Dundret	0.72	167	iP	Pg	23 34 26.1	-0.3
LANU	Lannavaara	0.73	70	P	Pg	23 34 26.2	-0.4
LANU	Lannavaara	0.73	70	eP	Pg	23 34 26.1	-0.5
LANU				eS	Sg	23 34 36.0	+0.1
MASU	Masugnsbyn	0.79	117	P	Pg	23 34 27.7	-0.1
MASU	Masugnsbyn	0.79	117	iP	Pg	23 34 27.7	-0.1
KIF	Kilpisjarvi	1.22	11	eP	Pg	23 34 36.0	0.0
KIF				eS	Sg	23 34 51.8	+0.1
KIF				MSG		23 34 58.6	
	comp=Z,13nm,0.2s						
KIF	Kilpisjarvi	1.22	11	eP	Pg	23 34 35.7	-0.3
PAJU	Pajala	1.39	124	P	Pn	23 34 38.0	-1.2
PAJU				S	Sg	23 34 56.4	-0.9
PAJU	Pajala	1.39	124	eP	Pn	23 34 38.0	-1.2
PAJU				eS	Sg	23 34 56.4	-0.9
HEF	Hetta	1.44	64	eP	Pn	23 34 38.9	-1.0
HEF				eS	Sg	23 34 57.8	-1.0
HEF				MSG		23 35 00.4	
	comp=Z,6.6nm,0.2s						
HEF	Hetta	1.44	64	eP	Pn	23 34 38.9	-1.0
ERTU	Ertsjaerv	1.49	147	eP	Pn	23 34 39.9	-0.8
ERTU				eS	Sg	23 35 00.1	-0.5
TOF	Tornio	2.39	135	eP	Pn	23 34 54.5	+1.6
TOF				eS	Sb	23 35 25.0	-1.4
TOF				MSG		23 35 28.4	
	comp=Z,5.1nm,0.2s						
SGF	Sodankyl	2.46	96	eP	Pb	23 34 56.0	-1.7
SGF				eS	Sn	23 35 25.0	+0.4
RNF	Rovaniemi	2.58	115	eP	Pn	23 34 57.4	+1.9
RNF				eSB	Sb	23 35 31.6	-0.2
ARE0	ARCESS Array S	2.60	46	eP	Pn	23 34 57.1	+1.2
ARE0				eS	Sn	23 35 27.7	-0.4
OBF0	Syolatti, Pyha	3.72	152	eS	Sn	23 35 55.4	-0.2

UPP 05 23:34:18.3±0.2, 67°.82N×20°.19E, h0km, ML2.1, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.15	22	P	Pg	23 34 21.4	+0.2
KUA				S	Sg	23 34 23.3	+0.2
KOVU	Salmi	0.41	359	S	Sg	23 34 31.6	+0.2
LANU	Lannavaara	0.72	70	P	Pg	23 34 31.8	-0.3
LANU				S	Sg	23 34 41.6	+0.3
PAJU	Pajala	1.38	124	P	Pg	23 34 43.8	-1.0
HARU	Harads	1.69	169	P	Pn	23 34 49.1	+0.2

IDC 05 23:45:16.8±1.0, 3°.47N×92°.66E, h0km, mb4.3/17, mb1 4.4/19, mb1mx4.2/45, mbtmp4.3/19, ML4.7/1, MS3.3/6, Ms1 3.3/6, ms1mx3.0/42, Error ellipse: s-maj=31.3km s-min=17.6km az=37.0
DJA 05 23:45:18.5±0.3, 3°N±4°×9°3E±°, h10km, M4.8/15, mb4.7/15, mB5.2/7, MLv5.1/7, Mw(mB)4.6/7
NEIC 05 23:45:20.6±2.0, 3°.50N±0°.06×92°.74E±0°.07, h28km±5km, mb4.6/29, Error ellipse: s-maj=11.9km s-min=6.7km az=120.0
ISC 05 23:45:17.7±0.6, 3°.40N±0°.07×92°.72E±0°.06, h10km, n109, σ1s65/112, mb4.5/42, 5C-2D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	3.73	105	P	Pn	23 46 16.8	+1.4
SNSI				S	Sn	23 46 55.8	-3.7
MLSI	Meulaboh, Aceh	3.77	77	P	Pn	23 46 16.7	+0.7
MLSI				S	Sn	23 46 57.9	-2.6
LHMI	Lhok Sumawe	4.59	67	P	Pn	23 46 29.8	+2.6
LHMI				S	Sn	23 47 18.2	-2.4
LHMI	Lhok Sumawe	4.59	67		Pn	23 46 30.1	+2.9
LHMI					Sn	23 47 18.8	-1.8
KCSI	Kotacane, Aceh	5.04	88	P	Pn	23 46 36.7	+3.2
	2.4nm7μm282nm,0.8s						
KCSI				S	Sn	23 47 29.1	-2.7
	2.4nm7μm282nm,0.8s						
GSI	Gunungsitoli	5.28	113	P	Pn	23 46 38.3	+1.6
	2.8nm8μm332nm,0.5s						
GSI				S	Sn	23 47 34.7	-2.9
	2.8nm8μm332nm,0.5s						
GSI	Gunungsitoli	5.28	113		Pn	23 46 38.6	+1.9
PSI	Prapat	6.22	95	Pn	Pn	23 46 52.2	+2.4
	18nm,0.3s,baz=359,slow=6.2,SNR=26						
PSI				Sn	Sn	23 47 57.8	-3.3
	17nm,0.3s,baz=0.6,slow=7.7,SNR=8.5						
PSI				LR	LR	23 48 47.5	
	comp=Z,163nm,20.5s,baz=277,slow=33						
RPSI	Rantau Prapat	6.23	96		Pn	23 46 52.7	+2.8
RPSI				Sn	Sn	23 47 57.6	-3.6
RPSI	Rantau Prapat	6.23	96		Pn	23 46 52.2	+2.4
RPSI					Sn	23 47 57.8	-3.4
MNSI	Mandailing Nat	7.32	111	P	Pn	23 47 07.2	+2.4
SISI	Saibi	7.91	126	P	Pn	23 47 15.5	+2.6
	0.1nm29nm,1.0s						
KULM	Kulim	8.12	76		Pn	23 47 17.4	+1.5
IPM	Ipoh	8.35	82		Pn	23 47 20.4	+1.4
PDSI	Padang	8.84	119	P	Pn	23 47 27.8	+2.1
TPRI	Tanjung Pinang	12.05	102	P	Pn	23 48 25.0	+15
MNAI	Manna	12.80	127	P	Pn	23 48 22.0	+2.0
	87nm,1.1s						
MNAI	Manna	12.80	127	Pn	Pn	23 48 22.1	+2.0
PBKT	Sadao Pong	15.39	31		Pn	23 48 54.8	-0.3
CM31	Chiang Mai Arr	16.16	22		Pn	23 49 04.3	-0.8
CM31				IAmb	IAmb	23 49 09.2	
	comp=Z,27nm,0.9s						
CMAR	Chiang Mai Arr	16.16	22	Pn	Pn	23 49 03.9	-1.2
	baz=217,slow=14,SNR=33						
CMAR				LR	LR	23 54 52.6	
	comp=Z,50nm,18.2s,baz=275,slow=36						
CHTO	Chiang Mai	16.48	21		Pn	23 49 07.7	-1.6
CHTO					Sn	23 52 18.3	+5.9
KSM	Kuching	17.67	96		Pn	23 49 24.9	+0.7
LEM	Lembang	18.01	124	LR	LR	23 56 13.4	
	comp=Z,76nm,22.0s,baz=283,slow=36						
HYB	Hyderabad	19.68	316	iP	Pn	23 49 50.5	+1.8
HYB				eS	S	23 53 25.0	-4.4
SLVN	Son La	20.88	30	P	P	23 49 59.0	-1.3
SLVN				IAmb	IAmb	23 50 05.5	
	comp=Z,17nm,0.8s						
SHL	Shillong	22.05	358	P	P	23 50 12.0	-1.1
SHL				IAmb	IAmb	23 50 16.2	
	comp=Z,38nm,1.0s						
ODAN	Odare	23.88	348	eP	P	23 50 32.0	+0.1
	comp=Z,61nm,1.3s						
RAMN	Ramite	24.14	347	eP	P	23 50 35.1	+0.7
	comp=Z,15nm,0.6s						
TAPN	Taplejung	24.29	349	eP	P	23 50 35.4	-0.4
JIRN	Jiri	24.92	346	eP	P	23 50 41.8	+0.2
	comp=Z,53nm,1.0s						
PKI	Pulchoki	25.03	345	eP	P	23 50 42.9	+0.4
	comp=Z,30nm,1.1s						
PKIN	Phulchoki	25.04	344	eP	P	23 50 43.5	+0.9
GUN	Gumba	25.23	346	eP	P	23 50 44.9	+0.5
	comp=Z,59nm,1.3s						
KKN	Kakani	25.27	344	eP	P	23 50 45.2	+0.6
GKN	Gorkha	25.65	343	eP	P	23 50 48.6	+0.6
	comp=Z,47nm,1.1s						
KOLN	Koldanda	25.75	341	eP	P	23 50 50.6	+1.7
	comp=Z,15nm,0.9s						
LSA	Lhasa	26.20	357	P	P	23 50 52.4	-0.9
LSA				IAmb	IAmb	23 50 55.3	
	comp=Z,12nm,0.6s						
DANN	Dangsing	26.24	342	eP	P	23 50 53.7	+0.2
PYUN	Piuthan	26.26	340	eP	P	23 50 54.4	+0.9
KAPI	Kappang	28.27	107	LR	LR	00 02 39.5	
	comp=Z,39nm,18.4s,baz=260,slow=37						
WBSI	Waikabubak, Su	29.56	116	P	P	23 51 11.0	-12
WHN	Wuhan	33.86	35	P	P	23 52 11.8	+11
XAN	Xi'an	34.02	24	P	P	23 52 01.4	-0.6
XAN				pmax	pmax		
	comp=Z,30nm,0.9s						
XAN				pmax	pmax		
	comp=Z,130nm,8.1s						
XAN	Xi'an	34.02	24	P	P	23 52 01.7	-0.3
NIL	Nilore	35.16	331	P	P	23 52 12.1	+0.2
NIL				IAmb	IAmb	23 52 12.8	
	comp=Z,9.5nm,0.8s						
GTA	Gaotai	36.42	9	eP	P	23 52 23.7	+0.9
GTA				pP	sP	23 52 27.0	+1.8
GTA				sP	pwP	23 52 29.9	-0.3
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSH	Kashi	39.04	339	P	P	23 52 46.5	+1.6
KSH				pP	pwP	23 52 57.7	+5.3
KSH				sP	sP	23 53 01.9	+15
KSH				pmax	pmax		
	comp=Z,32nm,1.3s						
KSH				pmax	pmax		
	comp=Z,200nm,3.9s						
SAUI	Saumlaki	40.11	107	P	P	23 52 54.3	+0.3
GAR	Garm	40.88	333	IAmb	IAmb	23 53 00.5	
	comp=Z,10nm,1.0s						
PRZ	Przheval'sk	40.96	344	P	P	23 53 00.5	-0.5
KDJ	Kajisay	40.99	342	P	P	23 53 01.2	+0.1
CHGR	Chuyangaron	41.15	332	P	P	23 53 01.0	-1.4
CHGR				IAmb	IAmb	23 53 02.4	
	comp=Z,12nm,0.8s						
BTK	Batken	41.53	334	IAmb	IAmb	23 53 07.7	
	comp=Z,20nm,1.1s						
BOOM	Boomskoye usch	41.71	341	P	P	23 53 05.4	-1.7
MK31	Makanchi Array	44.16	350	P	P	23 53 25.6	-1.1
MK31				IAmb	IAmb	23 53 27.8	
	comp=Z,6.8nm,0.8s						
MKAR	Makanchi Array	44.16	350	P	P	23 53 26.8	+0.1
	comp=Z,7.1nm,0.7s,baz=169,slow=8.7,SNR=72						
KK31	Karatay Array	44.19	337	P	P	23 53 26.1	-0.9
KK31				IAmb	IAmb	23 53 27.8	
	comp=Z,5.3nm,0.8s						
KKAR	Karatay Array	44.19	337	P	P	23 53 26.0	-1.0
KKAR				IAmb	IAmb	23 53 27.8	
	comp=Z,5.3nm,0.8s						
MAKZ	Makanchi	44.24	349	P	P	23 53 26.2	-1.1
MAKZ				IAmb	IAmb	23 53 28.3	
	comp=Z,5.5nm,0.8s						
SONM	Songino Array	45.81	13	P	P	23 53 40.5	+0.5
	comp=Z,3.2nm,0.7s,baz=196,slow=8.8,SNR=19						
SONM				PcP	PcP	23 55 18.4	+1.0
	comp=Z,1.9nm,0.8s,baz=191,slow=3.0,SNR=5.3						
GEYT	Alibeck	46.70	322	P	P	23 53 48.0	+1.0
	comp=Z,5.7nm,0.8s,baz=152,slow=9.9,SNR=13						
GEYT				LR	LR	00 15 01.3	
	comp=Z,57nm,20.2s,baz=235,slow=38						
GYA0B	ALIBECK ARRAY	46.70	322	P	P	23 53 45.8	-1.2
GYA0B				IAmb	IAmb	23 53 49.0	
	comp=Z,7.9nm,0.8s						
WRA	Warramunga Arr	46.99	121	P	P	23 53 50.7	+1.2
	comp=Z,1.3nm,0.6s,baz=297,slow=8.9,SNR=3.9						
ASAR	Alice Springs	48.29	126	P	P	23 54 00.8	+1.3
	comp=Z,0.8nm,0.8s,baz=301,slow=7.2,SNR=5.6						
KURK	Kurchatov	48.63	348	P	P	23 54 00.2	-1.5
RAYN	Ar Rayn	49.78	298	P	P	23 54 09.4	-1.7
ZALV	Zalesovo Beam	50.80	354	P	P	23 54 18.7	+0.5
	comp=Z,8.0nm,0.5s,baz=183,slow=7.9,SNR=32						
BRVK	Borovoye	52.85	343	P	P	23 54 31.9	-1.6
BRVK				IAmb	IAmb	23 54 33.9	
	comp=Z,4.3nm,0.9s						
KBZ	Khabaz	59.51	320	P	P	23 55 21.2	0.0
	comp=Z,2.7nm,0.8s,baz=152,slow=10,SNR=6.7						
BRTR	Keskin Array B	64.34	313	P	P	23 55 53.7	-0.4
	comp=Z,1.5nm,0.7s,baz=130,slow=6.2,SNR=11						
NRIK	Noril'sk	65.93	358	P	P	23 56 03.2	-0.3
	comp=Z,3.8nm,0.6s,baz=153,slow=5.7,SNR=12						
SORM	Soroca	70.55	320	⇓P	P	23 56 32.9	-0.1
AKASG	Malin Array Be	70.81	323	P	P	23 56 33.7	-0.8
	comp=Z,0.2nm,0.3s,baz=89,slow=4.5,SNR=7.5						
VRI	Vrincioaia	70.98	318	⇓P	P	23 56 37.1	+1.3
PLOR	Plostina	71.03	318	⇑P	P	23 56 37.4	+1.3
TESR	Tescani	71.20	318	⇑P	P	23 56 37.9	+0.8
MLR	Muntele Rosu	71.41	317	⇑P	P	23 56 39.9	+1.4
BIZ	Bicaz	71.68	319	⇑P	P	23 56 40.3	+0.4
TIXI	Tiksi	71.87	11	P	P	23 56 40.1	-0.4
	comp=Z,12nm,0.6s,baz=252,slow=5.8,SNR=8.3						
TIXI	Tiksi	71.87	11	P	P	23 56 39.5	-1.0
BURAR	Bucovina Array	72.44	319	⇑P	P	23 56 45.3	+0.7
LIT	Litokhoron	72.74	311	P	P	23 56 46.2	-0.2
SEY	Seymchan	73.56	24	P	P	23 56 50.9	+0.2
	comp=Z,1.9nm,0.6s,baz=17,slow=20						
FINES	FINESS Array B	76.01	333	P	P	23 57 04.3	-0.7
	comp=Z,1.7nm,0.7s,baz=125,slow=17,SNR=4.7						
ZST	Bratislava	77.90	318	eP	P	23 57 16.0	+0.1
KRLC	Kraliky	78.39	320	eP	P	23 57 19.6	+0.9
DPC	Dobruska-Polom	78.72	321	eP	P	23 57 22.1	+1.6
ARSA	Arzberg	78.83	317	eP	P	23 57 22.4	+1.3
	comp=Z,5.5nm,0.9s						
CHVC	Chvalec	78.92	321	eP	P	23 57 22.8	+1.2
ARCES	ARCESS Array B	78.98	341	P	P	23 57 21.9	+0.4
	comp=Z,2.3nm,0.9s,baz=88,slow=2.9,SNR=5.6						
SOKA	Soboth	79.09	317	eP	P	23 57 23.8	+1.2
	comp=Z,6.8nm,1.3s						
OBKA	Obir	79.40	317	eP	P	23 57 26.7	+2.3
	comp=Z,6.0nm,1.1s						
GEC2	GERESS Array S	80.22	319	P	P	23 57 30.1	+1.3
GEC2				IAmb	IAmb	23 57 30.7	
	comp=Z,7.4nm,1.1s						
GERES	GERESS Array B	80.22	319	P	P	23 57 29.4	+0.7
	comp=Z,3.7nm,0.9s,baz=96,slow=6.0,SNR=30						
BRG	Berggiesshubel	80.29	321	e(P)	P	23 57 30.0	+1.1
	comp=Z,3.6nm,1.1s						
KHC	Kasperske Hory	80.33	319	eP	P	23 57 30.2	+0.9
CLL	Collm	80.93	321	eP	P	23 57 34.0	+1.6
WTTA	Wattenberg	81.46	317	eP	P	23 57 35.9	+0.4
	comp=Z,4.6nm,0.8s						
WATA	Walderalm	81.51	317	eP	P	23 57 36.0	+0.2
	comp=Z,3.0nm,0.8s						
SQTA	Sankt Quirin	81.75	317	eP	P	23 57 37.3	+0.3
	comp=Z,3.0nm,0.7s						
MOTA	Moosalm	81.83	317	eP	P	23 57 37.7	+0.2
	comp=Z,5.4nm,1.0s						
FETA	Feichten	82.06	317	eP	P	23 57 39.5	+0.8
	comp=Z,3.5nm,0.9s						
RETA	Reutte	82.07	317	eP	P	23 57 39.3	+0.7
	comp=Z,5.6nm,1.0s						
DAVA	Damuels	82.66	317	eP	P	23 57 43.4	+1.6
	comp=Z,7.1nm,1.0s						
ESDC	Sonseca Array	93.00	310	P	P	23 58 32.1	+0.2
	comp=Z,0.5nm,0.8s,baz=73,slow=4.4,SNR=3.8						
DBIC	Dimbokro	97.12	277	LR	LR	00 41 56.9	
	comp=Z,32nm,18.1s,baz=240,slow=35						
ILAR	Eielson Array	99.39	22	P	Pdif	23 58 59.9	-0.4
	comp=Z,0.3nm,0.7s,baz=303,slow=5.3,SNR=2.2						
TXAR	Lajitas Array	143.85	25	PKP	PKPbc	00 04 54.1	+2.3
	comp=Z,0.5nm,0.8s,baz=318,slow=1.2,SNR=3.8						

IDC 06 00:02:00.5±1.8, 22°.12N×122°.07E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/51, mbtmp3.7/6, MS4.0/1, Ms1 4.0/1, ms1mx2.8/39, Error ellipse: s-maj=144.9km s-min=18.8km az=67.0
JMA 06 00:02:16.4±0.2, 22°.09N×121°.71E, h103km
TAP 06 00:02:16.2, 22°.14N×121°.65E, h121km, ML4.2, D
ISC 06 00:02:15.6±0.8, 22°.14N±0°.04×121°.63E±0°.04, h129km±5km, n120, σ0s98/201, mb3.5/6, 21D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu	0.12	215	iP	Pn	00 02 33.0	-0.3
	baz=212						
LAY				S	Sn	00 02 45.2	-1.4
	baz=212						
TWH	Lutao	0.58	346	P	Pn	00 02 34.5	-0.6
	baz=349						
TWH				S	Sn	00 02 48.5	-1.4
	baz=349						
TAW	Tawu	0.71	288	eP	Pn	00 02 36.1	+0.2
	baz=290						
TAW				eS	Sn	00 02 50.3	-1.0
	baz=290						
TSEB	Hengchuen, Pin	0.72	251	⇓iP	Pn	00 02 37.2	+1.2
	baz=256						
TSEB				S	Sn	00 02 52.5	+1.1
	baz=256						
TTN	Taitung	0.76	324	eP	Pn	00 02 37.3	+1.0
	baz=319						
TTN				eS	Sn	00 02 52.2	+0.2
	baz=319						
EAST	Anshuo	0.76	289	eP	Pn	00 02 36.5	+0.1
	baz=293						
EAST				eS	Sn	00 02 52.3	+0.1
	baz=293						
ECL	Taimali	0.77	306	⇓iP	Pn	00 02 36.2	-0.2
	baz=313						
ECL				eS	Sn	00 02 51.0	-1.3
	baz=313						
TWKBT	Hengchun	0.78	256	⇓iP	Pn	00 02 37.3	+0.8
	baz=258						
TWKBT				S	Sn	00 02 52.2	-0.1
	baz=258						
TWK1	Hengchun	0.79	256	⇓iP	Pn	00 02 37.3	+0.8
	baz=258						
TWK1				eS	Sn	00 02 52.4	-0.1
	baz=258						
HEN	Hengchun	0.84	261	eP	Pn	00 02 37.7	+0.8
	baz=272						
HEN				eS	Sn	00 02 53.0	-0.1
	baz=272						
TWGBT	Beinan	0.84	323	⇓iP	Pn	00 02 37.0	-0.1
	baz=319						
TWGBT				S	Sn	00 02 51.8	-1.6
	baz=319						
TWG	Pinlang	0.85	323	⇓iP	Pn	00 02 37.0	-0.1
	baz=319						
TWG				eS	Sn	00 02 51.9	-1.6
	baz=319						
SCZT	Fangliau	0.96	284	⇓iP	Pn	00 02 38.4	+0.4
	baz=285						
SCZT				S	Sn	00 02 54.0	-1.1
	baz=285						
CHKT	Chengkung	0.99	346	eP	Pn	00 02 38.6	+0.3
	baz=348						
CHKT				eS	Sn	00 02 55.2	-0.3
	baz=348						
MASBT	Mashibuluo	1.03	297	⇓iP	Pn	00 02 39.2	+0.5
	baz=293						
MASBT				eS	Sn	00 02 55.2	-1.1
	baz=293						
SSPT	Xinbi	1.04	289	⇓iP	Pn	00 02 39.7	+0.9
	baz=291						
SSPT				eS	Sn	00 02 56.9	+0.5
	baz=291						
FULB	Fuli	1.10	344	⇓iP	Pn	00 02 40.1	+0.6
	baz=339						
FULB				S	Sn	00 02 58.4	+0.9
	baz=339						
SSD	Sandimen	1.10	303	⇓iP	Pn	00 02 40.0	+0.6
	baz=297						
SSD				eS	Sn	00 02 57.9	+0.4
	baz=297						
WLCH	Liuqiu	1.18	281	P	Pn	00 02 42.1	+2.0
	baz=282						
WLCH				eS	Sn	00 03 01.4	+2.7
	baz=282						
ELDTW	Lidau	1.19	332	P	Pn	00 02 40.6	+0.1
	baz=333						
ELDTW				eS	Sn	00 02 59.2	-0.1
	baz=333						
TWP	Hsiaoliuchiu	1.19	280	⇓iP	Pn	00 02 42.2	+1.9
	baz=282						
TWP				eS	Sn	00 03 01.7	+2.6
	baz=282						
SGLT	Jiouru	1.20	299	eP	Pn	00 02 41.8	+1.4
	baz=297						
SGLT				eS	Sn	00 02 59.9	+0.6
	baz=297						
SLGT	Liugui	1.24	313	⇓iP	Pn	00 02 41.8	+0.9
	baz=314						
TWF1	Yuli	1.25	346	P	Pn	00 02 41.1	+0.2
	baz=338						
TWF1				eS	Sn	00 03 00.2	0.0
	baz=338						
YULB	Yu-li	1.28	346	P	Pn	00 02 41.4	0.0
	baz=339						
YULB				eS	Sn	00 02 59.5	-1.5
	baz=339						
KAU	Kaohsiung	1.29	290	eP	Pn	00 02 43.0	+1.6
	baz=291						
KAU				eS	Sn	00 03 01.6	+0.6
	baz=291						
STYT	Tauyuan	1.30	322	⇓iP	Pn	00 02 42.2	+0.7
	baz=316						
STYT				eS	Sn	00 03 01.0	-0.3
	baz=316						
TWM1	Shoushan	1.31	302	P	Pn	00 02 43.1	+1.5
	baz=303						
SNJT	Kaohsiung City	1.34	297	eP	Pn	00 02 43.1	+1.3
	baz=299						
SNJT				eS	Sn	00 03 02.8	+0.9
	baz=299						
SGST	Jiashian	1.35	314	⇓iP	Pn	00 02 41.9	-0.1
	baz=308						
SGST				eS	Sn	00 03 00.8	-1.2
	baz=308						
HGSD	Ruisui	1.36	352	eP	Pn	00 02 42.5	+0.4
	baz=345						
HGSD				eS	Sn	00 03 03.0	+0.7
	baz=345						
EHY	Hungye	1.39	348	eP	Pn	00 02 42.5	+0.1
	baz=342						
EHY				eS	Sn	00 03 01.5	-1.4
	baz=342						
WTP	Ta-pu	1.45	320	⇓iP	Pn	00 02 43.8	+0.7
	baz=321						
WTP				eS	Sn	00 03 03.6	-0.5
	baz=321						
CHN1	Nanshi	1.45	316	⇓iP	Pn	00 02 43.7	+0.6
	baz=311						
CHN1				eS	Sn	00 03 03.7	-0.5
	baz=311						
TPUB	Ta-pu	1.48	322	⇓iP	Pn	00 02 44.0	+0.6
	baz=323						
TPUB				eS	Sn	00 03 03.7	-1.0
	baz=323						
YUS	Yu-Shan	1.48	335	⇓iP	Pn	00 02 45.0	+1.0
	baz=326						
YUS				eS	Sn	00 03 05.8	+0.2
	baz=326						
CHN3	Shinhua	1.49	309	eP	Pn	00 02 45.3	+1.7
	baz=310						
CHN3				eS	Sn	00 03 05.9	+1.0
	baz=310						
SNST	Tainan City	1.50	316	P	Pn	00 02 44.2	+0.6
	baz=317						
SNST				eS	Sn	00 03 03.7	-1.4
	baz=317						
EGFH	Guangfu	1.53	353	eP	Pn	00 02 44.3	+0.3
	baz=347						
EGFH				eS	Sn	00 03 04.3	-1.4
	baz=347						
CHN4	Tsaushan	1.54	322	iP	Pn	00 02 44.7	+0.6
	baz=323						
CHN4				eS	Sn	00 03 05.0	-0.8
	baz=323						
TWK	Hsinying	1.54	317	⇓iP	Pn	00 02 44.7	+0.5
	baz=312						
TWK				eS	Sn	00 03 05.2	-0.8
	baz=312						
ALS	Alishan	1.56	331	⇓iP	Pn	00 02 45.3	+0.7
	baz=323						
ALS				eS	Sn	00 03 06.8	0.0
	baz=323						
TAI1	Yung-k'ang	1.57	305	eP	Pn	00 02 45.7	+1.2
	baz=307						
VWDT	VWDT	1.67	345	eP	Pn	00 02 47.0	+1.5
	baz=348						
VWDT				eS	Sn	00 03 07.9	-0.6
	baz=348						
ESL	Shilin	1.68	354	eP	Pn	00 02 45.9	+0.2
	baz=350						
ESL				eS	Sn	00 03 07.8	-0.9
	baz=350						
SCLT	Jiali	1.68	308	eP	Pn	00 02 46.4	+0.8
	baz=310						
SCLT				eS	Sn	00 03 09.0	+0.4
	baz=310						
CHN5	Tsauling	1.69	329	eP	Pn	00 02 46.5	+0.5
	baz=323						
CHN5				eS	Sn	00 03 09.0	-0.2
	baz=323						
WHYT	Xinyi Township	1.71	335	eP	Pn	00 02 46.7	+0.6
	baz=337						
CHY	Chiayi	1.75	321	P	Pn	00 02 46.8	+0.3
	baz=331						
CHY				eS	Sn	00 03 09.4	-0.7
	baz=331						
SSLB	Suanglung	1.75	339	eP	Pn	00 02 47.1	+0.5
	baz=332						
SSLB				eS	Sn	00 03 10.6	+0.3
	baz=332						
CHN8	Yiju	1.78	313	P	Pn	00 02 47.2	+0.4
	baz=315						
CHN8				eS	Sn	00 03 10.0	-0.7
	baz=315						
WLGB	Puzi	1.81	318	eP	Pn	00 02 47.6	+0.4
	baz=326						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WLGB				eS	Sn	00 03 11.0	-0.4
	baz=326						
WGK	Gukeng	1.83	328	P	Pn	00 02 48.1	+0.7
	baz=322						
WGK				eS	Sn	00 03 11.8	+0.1
	baz=322						
WDLH	Douliu	1.84	327	P	Pn	00 02 48.1	+0.5
	baz=329						
WDLH				S	Sn	00 03 11.2	-0.9
	baz=329						
OWD	Renai	1.85	347	P	Pn	00 02 49.0	+1.1
	baz=352						
OWD				eS	Sn	00 03 11.8	-0.8
	baz=352						
WJS	Zhushan	1.87	334	eP	Pn	00 02 48.7	+0.8
	baz=335						
WJS				eS	Sn	00 03 12.9	+0.1
	baz=335						
TWD	Chiawan	1.93	359	P	Pn	00 02 49.1	+0.4
	baz=7.0						
TWD				eS	Sn	00 03 12.7	-1.4
	baz=7.0						
WNT	Mingjian	1.94	334	P	Pn	00 02 49.7	+0.9
	baz=328						
WNT				eS	Sn	00 03 14.4	+0.2
	baz=328						
CHGB	Renai	1.96	348	eP	Pn	00 02 50.6	+1.3
	baz=353						
CHGB				eS	Sn	00 03 14.5	-0.5
	baz=353						
WSF	Szhu	1.98	319	eP	Pn	00 02 49.2	0.0
	baz=321						
WSF				eS	Sn	00 03 14.1	-0.9
	baz=321						
DPDB	Guoxing	1.99	341	P	Pn	00 02 50.2	+0.7
	baz=335						
DPDB				eS	Sn	00 03 14.8	-0.7
	baz=335						
WHF	Hehuan Shan	2.02	351	P	Pn	00 02 51.2	+1.0
	baz=357						
WHF				eS	Sn	00 03 16.5	-0.3
	baz=357						
NACB	Ninganchiao	2.03	359	P	Pn	00 02 50.2	+0.4
	baz=4.0						
ETLH	Xiulin Townshi	2.06	356	P	Pn	00 02 50.8	+0.4
	baz=357						
ETLH				eS	Sn	00 03 15.8	-1.3
	baz=357						
RLNB	Erlin	2.10	326	P	Pn	00 02 50.8	+0.1
	baz=328						
RLNB				S	Sn	00 03 16.7	-1.0
	baz=328						
WDGT	Dungji	2.13	302	iP	Pn	00 02 51.1	0.0
	baz=310						
WDGT				eS	Sn	00 03 16.6	-1.7
	baz=310						
TDCB	Techi	2.15	349	P	Pn	00 02 52.8	+1.2
	baz=349						
TDCB				eS	Sn	00 03 19.7	+0.6
	baz=349						
WCHH	Zhanghua	2.17	333	eP	Pn	00 02 52.1	+0.5
	baz=330						
WCHH				eS	Sn	00 03 19.5	+0.3
	baz=330						
TCU	Taichung	2.18	337	eP	Pn	00 02 52.9	+1.2
	baz=331						
TCU				eS	Sn	00 03 19.7	+0.2
	baz=331						
WHP	Taichung City	2.22	344	P	Pn	00 02 53.3	+1.0
	baz=337						
WHP				eS	Sn	00 03 21.4	+0.9
	baz=337						
ENA	Nanau	2.28	3	eP	Pn	00 02 53.6	+0.6
	baz=9.0						
ENA				eS	Sn	00 03 21.6	-0.2
	baz=9.0						
NNSB	Datong	2.29	354	P	Pn	00 02 54.4	+1.2
	baz=358						
NNSB				eS	Sn	00 03 22.2	+0.1
	baz=358						
NNSH	Datong	2.29	354	P	Pn	00 02 54.3	+1.1
	baz=358						
NNSH				eS	Sn	00 03 22.2	0.0
	baz=358						
NNS	Nan Shan	2.30	354	P	Pn	00 02 54.7	+1.3
	baz=359						
NNS				eS	Sn	00 03 23.3	+0.8
	baz=359						
TWQ1	Liyutan	2.33	340	eP	Pn	00 02 54.0	+0.3
	baz=342						
TWQ1				eS	Sn	00 03 24.0	+1.0
	baz=342						
PHUB	P'eng-hu	2.34	306	P	Pn	00 02 53.5	-0.2
	baz=308						
PHUB				S	Sn	00 03 20.9	-2.1
	baz=308						
PNG	Penghu	2.38	307	iP	Pn	00 02 54.3	+0.1
	baz=316						
PNG				S	Sn	00 03 22.6	-1.4
	baz=316						
NSY	Sanyi	2.40	341	eP	Pn	00 02 55.3	+0.7
	baz=342						
EOS1	EOS1	2.44	11	eP	Pn	00 02 56.3	+1.3
	baz=16						
NDT	Datong Townshi	2.45	358	eP	Pn	00 02 56.6	+1.4
	baz=3.0						
TWC	Suao	2.47	5	eP	Pn	00 02 55.6	+0.3
	baz=10.0						
ENTT	Nioudou	2.49	359	P	Pn	00 02 57.2	+1.5
	baz=359						
YHNB	Yeheng	2.53	355	P	Pn	00 02 57.8	+1.6
	baz=355						
YHNB				eS	Sn	00 03 27.7	+0.2
	baz=355						
NSK	Sanguang	2.54	354	eP	Pn	00 02 58.3	+2.0
	baz=355						
NSK				eS	Sn	00 03 28.9	+1.3
	baz=355						
LIOB	Emei	2.56	347	eP	Pn	00 02 57.0	+0.5
	baz=338						
TWE	Neicheng	2.57	1	eP	Pn	00 02 57.4	+0.8
	baz=355						
SLBB	Yuanshan	2.60	0	eP	Pn	00 02 58.3	+1.2
NWLT	Wulai	2.63	358	eP	Pn	00 02 58.7	+1.2
	baz=3.0						
NWLT				eS	Sn	00 03 30.6	+0.9
	baz=3.0						
HATJ	Hateruma jima	2.77	46	P	Pn	00 03 00.1	+0.9
TIPB	Shuangxi	2.83	4	eP	Pn	00 03 00.7	+0.7
	baz=12						
TIPB				eS	Sn	00 03 33.9	-0.2
	baz=12						
IRIF	Iriomote-Funau	2.92	41	P	Pn	00 03 02.2	+1.1
NWF	Wu-fen Shan	2.92	3	eP	Pn	00 03 02.2	+0.9
	baz=352						
NWF				eS	Sn	00 03 38.3	+1.8
	baz=352						
WFSB	Wu-fen Shan	2.92	3	eP	Pn	00 03 02.4	+1.2
	baz=353						
YM04	YM04	3.00	358	eP	Pn	00 03 03.8	+1.6
	baz=359						
YM10	YM10	3.00	359	eP	Pn	00 03 03.6	+1.3
	baz=359						
YM11	YM11	3.01	359	eP	Pn	00 03 03.1	+0.7
	baz=359						
JKRS	Kuro-shima	3.03	46	P	Pn	00 03 02.9	+0.4
JIJ	Ishigaki jima	3.20	46	P	Pn	00 03 05.2	+0.4
JISG	Ishigakijimahi	3.47	45	P	Pn	00 03 08.5	+0.2
VWUC	VWUC	3.47	325	P	Pn	00 03 08.2	-0.1
	baz=328						
VWUC				eS	Sn	00 03 47.1	-2.1
	baz=328						
PTMZ	Houxiangcun	3.69	322	eP	Pn	00 03 11.3	+0.1
	baz=325						
KNM	Kinmen	3.71	308	eP	Pn	00 03 13.2	+1.8
	baz=309						
PTTC	Pingtan	3.75	333	eP	Pn	00 03 12.2	+0.2
	baz=336						
PTTC				eS	Sn	00 03 53.4	-2.4
	baz=336						
JTJ	Tarama	3.77	48	P	Pn	00 03 13.0	+0.8
KNMB	Chin-men Tao	3.77	308	P	Pn	00 03 12.4	+0.1
	baz=311						
ZPLA	Ao Xicun	3.99	297	eP	Pn	00 03 15.5	+0.3
	baz=299						
ZPLA				eS	Sn	00 03 59.9	-1.5
	baz=299						
JMJ2	Miyako jima3	4.27	52	P	Pn	00 03 19.8	+0.9
MATB	Ma-tsu	4.28	339	eP	Pn	00 03 18.5	-0.5
	baz=341						
AXDP	Jialang	4.34	310	eP	Pn	00 03 20.0	+0.2
	baz=312						
AXDP				eS	Sn	00 04 08.1	-1.6
	baz=312						
ZZJH	Jiuhuzhen	4.35	303	P	Pn	00 03 20.3	+0.4
	baz=305						
ZZJH				eS	Sn	00 04 08.5	-1.3
	baz=305						
MHZQ	Yeshan	4.60	329	eP	Pn	00 03 23.6	+0.2
	baz=332						
LYJJ	Jianjiangzhen	4.71	339	eP	Pn	00 03 24.5	-0.3
	baz=341						
XPSS	Dashiqiu	4.95	345	eP	Pn	00 03 27.6	-0.4
	baz=354						
SONM	Songino Array	28.41	338	P	P	00 07 58.2	+0.3
	0.2nm,0.4s,baz=167,slow=7.0,SNR=1.8						
MKAR	Makanchi Array	40.10	317	P	P	00 09 40.2	+1.8
	0.5nm,0.5s,baz=114,slow=9.5,SNR=6.4						
FITZ	Fitzroy Crossi	40.18	174	P	P	00 09 38.0	-1.4
	1.8nm,0.9s,baz=7.3,slow=22,SNR=1.3						
ZALV	Zalesovo Beam	42.18	328	P	P	00 09 56.6	+1.3
	1.3nm,0.4s,baz=111,slow=9.3,SNR=5.1						
WRA	Warramunga Arr	43.63	163	P	P	00 10 05.4	-2.0
	0.5nm,0.5s,baz=344,slow=8.9,SNR=5.2						
ASAR	Alice Springs	47.07	165	P	P	00 10 33.3	-1.2
	0.3nm,0.3s,baz=342,slow=7.0,SNR=6.6						
HNR	Honiara	48.95	126	LR	LR	00 30 35.9	
	comp=Z,150nm,19.4s,baz=219,slow=35						

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*SOME **06** 00:05:01.3, 39°.47N×74°.05E, h5km*
*NNC **06** 00:05:06.1±1.8, 39°.69N×74°.13E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=12.3km s-min=11.5km az=178.0*
*KRNET **06** 00:05:09.7±0.1, 39°.62N×74°.34E, mb2.7*
ISC 06 00:05:10.2±2.0, **39°.5N**±0°.1×**74°.29E**±0°.05, **h10**km, **n20**, σ**1s.59**/33, **20C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	2.67	350	⇑iP	Pn	00 05 54.6	+0.9
	baz=49						
AML				⇑iS	Sn	00 06 26.9	+0.5
	baz=49						
KZA	Kyzart	2.68	15	⇑iP	Pn	00 05 54.5	+0.6
	baz=15						
KZA				⇑iS	Sn	00 06 27.4	+0.8
	baz=15						
BTK	Batken	2.74	283	⇑iP	Pn	00 05 57.2	+2.9
	baz=80						
BTK				⇑iS	Sb	00 06 31.8	-1.2
	baz=80						
UCH	Uchtor	2.74	3	⇑iP	Pn	00 05 55.3	+0.6
	baz=3.0						
UCH				⇑iS	Sn	00 06 28.5	+0.5
	baz=3.0						
ULHL	Ulahol	3.12	28	⇑iP	Pn	00 06 00.8	+1.1
	baz=28						
ULHL				⇑iS	Sn	00 06 37.9	+0.7
	baz=28						
AAK	Ala-Archa	3.15	3	⇑iP	Pn	00 06 00.9	+0.9
	baz=2.0						
AAK				⇑iS	Sn	00 06 38.1	+0.4
	baz=2.0						
AAK	Ala-Archa	3.15	3	⇑Pg	Pn	00 06 00.2	+0.2
	2.8nm,0.8s						
AAK				⇑Lg	Lg	00 06 40.9	
	3.7nm,0.8s						
BOOM	Boomskoye usch	3.24	22	⇓eP	Pn	00 06 02.3	+0.9
	baz=22						
BOOM				⇓iS	Sn	00 06 40.4	+0.3
	baz=22						
MRKS	Merke	3.35	346	eP	Pn	00 06 02.5	-0.3
	0.7nm,0.1s						
MRKS				eS	Sn	00 06 45.2	+2.6
	3.1nm,0.5s						
MRKS	Merke	3.35	346	Pg	Pn	00 06 03.3	+0.6
	0.7nm,0.1s						
MRKS				Lg	Lg	00 06 45.2	
	3.1nm,0.5s						
KDJ	Kajisay	3.43	39	⇓iP	Pn	00 06 04.8	+0.9
	baz=40						
KDJ				⇓iS	Sn	00 06 45.7	+1.0
	baz=40						
TKM2	Tokmak 2	3.56	16	⇑iP	Pn	00 06 06.6	+0.8
	baz=16						
TKM2				⇑iS	Sn	00 06 48.4	+0.3
	baz=16						
TKM2	Tokmak 2	3.56	16	⇑Pg	Pn	00 06 07.6	+1.9
	1.4nm,0.8s						
TKM2				⇑Lg	Lg	00 06 53.4	
	2.4nm,0.5s						
KST	Kastek	3.76	19	eP	Pn	00 06 09.7	+1.3
	3.7nm,0.5s						
KST				eS	Sn	00 06 57.2	+4.3
	4.7nm,0.6s						
IZV	Izvestkoviy	3.95	26	eP	Pn	00 06 16.7	+5.7
	3.1nm,0.3s						
IZV				eS	Sb	00 07 08.9	+1.0
	2.4nm,0.2s						
IZV	Izvestkoviy	3.95	26	Pg	Pn	00 06 16.0	+5.0
	3.1nm,0.3s						
IZV				Lg	Lg	00 07 08.0	
	2.4nm,0.2s						
TNSS	Tian-Shan	4.07	29	eP	Pb	00 06 19.1	-3.2
	1.8nm,0.5s						
TNSS				eS	Sb	00 07 13.2	+1.7
	2.6nm,0.6s						
TNSS	Tian-Shan	4.07	29	Pg	Pb	00 06 19.0	-3.2
	1.5nm,0.3s						
TNSS				Lg	Lg	00 07 12.8	
	1.5nm,0.6s						
IUG	Iuzhnay	4.18	311	eP	Pn	00 06 13.8	-0.4
	0.8nm,0.3s						
IUG				eS	Sn	00 07 04.2	+1.0
	3.5nm,0.3s						
PRZ	Przheval'sk	4.31	45	⇑iP	Pn	00 06 17.2	+1.2
	baz=46						
PRZ				⇑iS	Sn	00 07 06.5	0.0
	baz=46						

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*IDC **06** 00:13:47.7±2.8, 40°.74N×50°.43E, h0km, mb3.5/2, mb1 3.6/5, mb1mx3.3/39, mbtmp3.5/5, ML2.6/2, Error ellipse: s-maj=74.1km s-min=21.0km az=19.0*
ISC 06 00:13:52.5±1.1, **40°.8N**±0°.1×**50°.54E**±0°.07, **h35**km, **n7**, σ**3s.42**/11, **2C-2D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBZ	Khabaz	6.37	300	Pn	Pn	00 15 25.2	+1.5
	0.1nm,0.3s,baz=289,slow=7.1,SNR=2.0						
KBZ				Sn	Sn	00 16 30.1	-5.1
	0.2nm,0.3s,baz=315,slow=23,SNR=1.3						
GEYT	Alibeck	6.54	114	Pn	Pn	00 15 26.6	+0.3
	0.2nm,0.3s,baz=292,slow=16,SNR=6.0						
GEYT				Sn	Sn	00 16 35.6	-4.0
	0.3nm,0.3s,baz=179,slow=19,SNR=1.4						
AB31	Akbulak array	10.73	35	⇑P	Pn	00 16 27.8	+4.2
	1.2nm,0.2s,baz=211,slow=13,SNR=9.7						
AB31				⇓S	Sn	00 18 19.3	-3.1
	4.4nm,0.3s,baz=211,slow=28,SNR=4.7						
AKTO	Aktyubinsk	10.94	26	⇑P	Pn	00 16 29.5	+3.1
	0.5nm,0.4s						
AKTO				⇓S	Sn	00 18 24.0	-3.4
	2.7nm,0.6s						
AKASG	Malin Array Be	17.79	311	P	Pn	00 17 57.5	+0.3
	1.7nm,0.3s,baz=117,slow=12,SNR=6.7						
MKAR	Makanchi Array	23.57	65	P	P	00 19 00.6	+0.9
	0.1nm,0.3s,baz=269,slow=9.7,SNR=3.8						
FINES	FINESS Array B	25.44	332	P	P	00 19 16.8	+0.1
	1.4nm,0.5s,baz=130,slow=11,SNR=11						

WEL 06 00:18:43.0, 41°S±1°×**17°4E**±°, **h71**km±3km, **M3.8**/22, **ML4.2**/22, **MLv3.8**/22, **Error ellipse: s-maj=0.0km s-min=0.0km az=56.6, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.29	210	P	Pn	00 18 54.8	+0.5
DUWZ				S	Sn	00 19 03.4	+0.9
TCW	Tory Channel	0.67	169	P	Pn	00 18 58.3	+0.6
TCW				S	Sn	00 19 09.2	+0.7
KIW	Kapiti Island	0.68	117	P	Pn	00 18 57.9	+0.1
KIW				S	Sn	00 19 09.2	+0.5
OGWZ	Otaki Gorge	0.85	109	P	Pn	00 18 59.8	+0.1
OGWZ				S	Sn	00 19 12.7	+0.6
NNZ	Nelson	0.87	219	P	Pn	00 19 00.7	+0.7
NNZ				S	Sn	00 19 14.0	+1.6
TUWZ	Tuamarina	0.89	188	P	Pn	00 19 00.6	+0.5
TUWZ				S	Sn	00 19 14.1	+1.2
CAW	Cannon Point	0.92	128	P	Pn	00 19 02.0	+1.5
CAW				S	Sn	00 19 14.1	+0.6
OHWZ	Ohakea	0.98	70	P	Pn	00 19 02.2	+0.9
BHW	Baring Head	1.03	146	P	Pn	00 19 03.1	+1.1
BHW				S	Sn	00 19 18.5	+2.4
WAZ	Wanganui	1.04	40	P	Pn	00 19 02.7	+0.6
LREZ	Lake Rotokare	1.11	12	P	Pn	00 19 03.8	+0.9
HOWZ	Holdsworth Sta	1.12	108	P	Pn	00 19 02.7	-0.5
HOWZ				S	Sn	00 19 21.7	+3.5
MRZ	Mangatainoka R	1.12	96	P	Pn	00 19 02.8	-0.4
NMEZ	Namu Road	1.15	351	P	Pn	00 19 03.8	+0.3
BSWZ	Blackbirch Sta	1.18	189	P	Pn	00 19 04.9	+1.1
CMWZ	Cape Campbell	1.20	176	P	Pn	00 19 06.4	+2.3
MTW	Mount Morrison	1.22	120	P	Pn	00 19 05.2	+0.8
MSWZ	Moikau Station	1.22	135	P	Pn	00 19 05.3	+0.9
QRZ	Quartz Range	1.23	257	P	Pn	00 19 04.5	0.0
KHEZ	Kahui Hut	1.26	357	P	Pn	00 19 05.2	+0.2
POWZ	Post Office Ro	1.27	83	P	Pn	00 19 06.2	+1.1
NBEZ	Newall Road No	1.29	352	P	Pn	00 19 05.7	+0.4
PAWZ	Paruwai Farm	1.30	130	P	Pn	00 19 05.9	+0.5
PLWZ	Palliser	1.34	140	P	Pn	00 19 06.0	+0.1
PKE	Pukeiti	1.36	356	P	Pn	00 19 06.5	+0.3
DREZ	Durham Road	1.36	3	P	Pn	00 19 06.6	+0.4
TIWZ	Tintock	1.37	100	P	Pn	00 19 05.8	-0.5
PRWZ	Pori Road	1.42	91	P	Pn	00 19 06.8	-0.1
TMWZ	Te Maipa	1.46	113	P	Pn	00 19 07.5	0.0
TRWZ	Traveller	1.47	126	P	Pn	00 19 08.1	+0.6
MHEZ	Mangahewa	1.48	6	P	Pn	00 19 08.5	+0.7
TSZ	Takapari Road	1.50	71	P	Pn	00 19 07.8	-0.2
VRZ	Vera Road	1.51	20	P	Pn	00 19 08.6	+0.4
THZ	Tophouse	1.52	217	P	Pn	00 19 09.4	+1.2
MTVZ	Mangateitei	1.56	42	P	Pn	00 19 09.5	+0.5
PKVZ	Pokaka	1.58	37	P	Pn	00 19 09.3	+0.2
CPWZ	Castlepoint	1.63	103	P	Pn	00 19 09.7	0.0
BFZ	Birch Farm	1.63	95	P	Pn	00 19 08.7	-1.0
TRVZ	Turoa	1.67	42	P	Pn	00 19 11.0	+0.6
MOVZ	Moawhango	1.70	48	P	Pn	00 19 10.6	-0.2
FWVZ	Far West T-bar	1.70	41	P	Pn	00 19 11.4	+0.5
PNHZ	Pukenui	1.72	69	P	Pn	00 19 10.2	-0.8
TUVZ	Tukino	1.75	43	P	Pn	00 19 12.7	+1.3
NGZ	Ngauruhoe	1.79	40	P	Pn	00 19 12.0	0.0
TWVZ	Taurewa	1.80	35	P	Pn	00 19 12.1	0.0
ANWZ	Angora Road	1.81	88	P	Pn	00 19 11.5	-0.5
WTVZ	West Tongariro	1.83	39	P	Pn	00 19 12.6	+0.1
BHHZ	Black Hill Sta	1.84	55	P	Pn	00 19 12.2	-0.3
WPHZ	Waipukurau	1.85	76	P	Pn	00 19 11.8	-0.8
KRVZ	Karewarewa	1.87	40	P	Pn	00 19 13.4	+0.3
KHZ	Kahutara	1.91	193	P	Pn	00 19 14.3	+0.9
KRHZ	Kereru	1.96	63	P	Pn	00 19 13.2	-0.9
KATZ	Kakaramea	1.99	38	P	Pn	00 19 15.9	+1.2
RITZ	Rihia Road	2.07	41	P	Pn	00 19 18.1	+2.5
KWHZ	Kaweka Forest	2.10	58	P	Pn	00 19 16.6	+0.5
DSZ	Denniston Nort	2.11	235	P	Pn	00 19 16.9	+0.7
HIZ	Hauiti	2.11	16	P	Pn	00 19 16.2	-0.1
RATZ	Rangitukua	2.11	38	P	Pn	00 19 17.6	+1.3
PXZ	Pawanui	2.17	77	P	Pn	00 19 16.2	-0.7
WATZ	Wairara	2.23	35	P	Pn	00 19 18.3	+0.6
KAHZ	Kahuranaki	2.25	71	P	Pn	00 19 16.7	-1.4
MCHZ	McNeill Hill	2.27	62	P	Pn	00 19 17.5	-0.9
BKZ	Black Stump Fm	2.30	54	P	Pn	00 19 20.7	+2.0
MRHZ	Matea Rd	2.47	47	P	Pn	00 19 22.1	+1.0
TLZ	Tolley Road	2.48	27	P	Pn	00 19 21.2	0.0
NMHZ	Naumai	2.53	56	P	Pn	00 19 25.1	+3.1
GVZ	Greta Valley S	2.55	198	P	Pn	00 19 22.3	+0.3
ARHZ	Aropaoanui	2.56	61	P	Pn	00 19 27.4	+5.0
LTZ	Lake Taylor	2.62	211	P	Pn	00 19 23.4	+0.3
ALRZ	Allen Road	2.63	42	P	Pn	00 19 24.9	+1.7
MTHZ	Maungataniwha	2.70	52	P	Pn	00 19 22.6	-1.7
RAHZ	Arahi	2.82	56	P	Pn	00 19 30.6	+4.9
WHHZ	Waihua	2.82	60	P	Pn	00 19 31.3	+5.5
AMCZ	Amberley	2.84	202	P	Pn	00 19 26.1	+0.1
RTZ	Ruatahuna	2.94	50	P	Pn	00 19 29.8	+2.3
INZ	Inchbonnie	2.95	222	P	Pn	00 19 28.3	+0.7
OMRZ	Omania	3.00	36	P	Pn	00 19 30.4	+2.0
TOZ	Tahuroa Road	3.02	21	P	Pn	00 19 28.4	0.0
SNGZ	Shannon Statio	3.06	56	P	Pn	00 19 34.2	+5.2
LIRZ	Lichensteins R	3.10	35	P	Pn	00 19 29.5	0.0
OXZ	Oxford	3.17	208	P	Pn	00 19 29.5	-1.1
MHGZ	Mahia Peninsul	3.24	66	P	Pn	00 19 29.3	-2.2
URZ	Urewera	3.26	46	P	Pn	00 19 33.2	+1.4
OKCZ	Okains Bay	3.27	193	P	Pn	00 19 31.0	-0.9
MQZ	McQueen's Vall	3.33	198	P	Pn	00 19 31.4	-1.4
RIGZ	Rimuhau	3.37	58	P	Pn	00 19 31.1	-2.1
AKCZ	Akaroa Harbour	3.44	195	P	Pn	00 19 33.0	-1.2
MWZ	Matawai	3.45	51	P	Pn	00 19 37.7	+3.3
AWAZ	Awhitu Peninsu	3.51	7	P	Pn	00 19 35.1	-0.1
MKAZ	Moumakai	3.54	14	P	Pn	00 19 35.3	-0.2
WTAZ	Waiatarua	3.63	6	P	Pn	00 19 37.1	+0.3
ETAZ	East Tamaki Re	3.65	10	P	Pn	00 19 37.4	+0.3
MBAZ	Motutapu North	3.83	10	P	Pn	00 19 39.7	+0.2
WIAZ	Waiheke Island	3.84	12	P	Pn	00 19 39.7	+0.1
RPZ	Rata Peaks	3.89	215	P	Pn	00 19 40.9	+0.5
ABAZ	Army Bay	3.98	8	P	Pn	00 19 41.7	+0.1
HAZ	Te Kaha	3.99	47	P	Pn	00 19 39.9	-1.9
KUZ	Kuaotunu	4.00	19	P	Pn	00 19 41.2	-0.7
PUZ	Puketiti	4.06	54	P	Pn	00 19 45.0	+2.3
FOZ	Fox Glacier	4.37	226	P	Pn	00 19 46.8	0.0
MXZ	Matakaoa Point	4.42	49	P	Pn	00 19 53.7	+6.0
WCZ	Waipu Caves	4.61	2	P	Pn	00 19 50.3	+0.2
LBZ	Lake Benmore	4.81	216	P	Pn	00 19 51.5	-1.4
JCZ	Jackson Bay	5.29	227	P	Pn	00 19 59.5	0.0
OUZ	Omahuta	5.34	355	P	Pn	00 19 60.0	-0.2
WKZ	Wanaka	5.69	220	P	Pn	00 20 06.9	+2.0
CTZ	Chatham Island	7.59	118	P	Pn	00 20 29.8	-1.1
CTZ				S	Sn	00 21 45.8	-9.5

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*IDC **06** 00:26:53.6±1.2, 7°.27S×155°.24E, h0km, mb3.8/5, mb1 4.1/6, mb1mx3.8/32, mbtmp3.9/6, ML3.8/1, MS2.9/1, Ms1 2.9/1, ms1mx2.6/33, Error ellipse: s-maj=43.5km s-min=25.5km az=130.0*
ISC 06 00:26:54.9±1.1, **7°.3S**±0°.2×**155°.2E**±0°.2, **h10**km, **n9**, σ**1s.27**/9, **mb3.8**/5, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	4.35	312	Pn	Pn	00 28 03.0	+1.9
	5.4nm,0.3s,baz=234,slow=21,SNR=1.6						
KRVT				Sn	Sn	00 28 49.9	-2.0
	16nm,0.3s,baz=349,slow=22,SNR=4.6						
PMG	Port Moresby	8.28	255	LR	LR	00 32 13.6	
	comp=Z,78nm,18.5s,baz=66,slow=39						
WRA	Warramunga Arr	23.87	236	P	P	00 32 08.5	-0.3
	2.5nm,0.8s,baz=60,slow=9.6,SNR=7.9						
ASAR	Alice Springs	26.18	229	P	P	00 32 30.1	+0.2
	1.3nm,0.7s,baz=60,slow=8.7,SNR=15						
ILAR	Eielson Array	83.54	21	P	P	00 39 22.2	-0.7
	0.2nm,0.4s,baz=247,slow=5.7,SNR=4.5						
MKAR	Makanchi Array	83.77	319	P	P	00 39 24.6	+0.1
	0.3nm,0.6s,baz=124,slow=6.0,SNR=3.7						
YKA	Yellowknife Ar	96.46	28	P	P	00 40 24.8	+0.6
	0.7nm,0.8s,baz=264,slow=4.4,SNR=8.5						
BDFB	Brasilia	147.61	135	PKPbc	PKiKP	00 46 42.1	-0.8
	1.6nm,0.6s,baz=319,slow=27,SNR=2.6						
TORD	Torodi Ar. Bea	153.34	285	PKPbc	PKiKP	00 46 54.2	-0.4
	1.0nm,0.8s,baz=70,slow=2.2,SNR=2.9						

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*MOS **06** 00:50:15.8±1.5, 19°.76N×99°.67E, h10km, mb5.2/68, MS4.6/17, Error ellipse: s-maj=6.5km s-min=3.6km az=116.0*
*BJI **06** 00:50:15.2±0.0, 19°.65N×99°.64E, h10km, mB5.0/51, mb4.8/63, ML5.9/2, Ms5.5/73, Ms7 5.1/69*
*IDC **06** 00:50:15.1±0.4, 19°.74N×99°.69E, h0km, mb4.5/38, mb1 4.6/40, mb1mx4.5/58, mbtmp4.5/40, ML4.3/2, Error ellipse: s-maj=10.5km s-min=9.0km az=70.0*
*NEIC **06** 00:50:16.3±1.9, 19°.70N±0°.04×99°.63E±0°.05, h10km±1km, mb5.0/90, Error ellipse: s-maj=8.1km s-min=6.6km az=136.0*
*GCMT **06** 00:50:16.3±0.2, 19°.73N±0°.01×99°.71E±0°.01, h13km±1km, MW5.2/142, Moment Tensor Solution. s91,c121; s142,c235; Duration: 1s.0 Moment tensor: Scale 10^16*

Nm; Mrr-0.74±.15; Mθθ-4.89±.15; Mφφ5.62±.16; Mrθ-0.30±.34; Mθφ6.30±.16; Mφr-0.21±.34; Best double couple: M0 8.21200×10[16] NP1:φs160.00000°,δ88.00000°, λ180.00000°. NP2:φs250.00000°,δ90.00000°,λ2.00000°. Principal axes: T 8.5800, Plg2.0000°, Azm115.0000°; N -0.7450, Plg88.0000°, Azm257.0000°; P -7.8440, Plg1.0000°, Azm25.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

BGR ***06*** *00:50:22.9±0.0, 19°.02N×99°.20E, h33km, mb5.0*

ISC 06 00:50:17.1±0.5, **19°.60N**±0°.03×**99°.63E**±0°.03, **h15**km±2km, **h15**km**:pP-P, n481,** σ**2.22**/510, **mb4.9**/180, **MS4.8**/30, **36C-12D, Thailand**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAYA	**Payao**	**0.33**	**136**	P	**Pb**	**00 50 25.1**	**+0.3**
PAYA				S	**Sb**	**00 50 31.5**	**+1.7**
CMMT	**Chiang Mai**	**1.01**	**220**	P	**Pn**	**00 50 37.9**	**+1.0**
CMMT				S	**Sn**	**00 50 52.8**	**+1.9**
CHTO	**Chiang Mai**	**1.01**	**220**	P	**Pn**	**00 50 37.8**	**+0.9**
CHTO						00 50 52.9	
CHTO	**Chiang Mai**	**1.01**	**220**		**Pn**	**00 50 37.8**	**+0.9**
CHTO				Sg	**Sn**	**00 50 52.9**	**+2.0**
LAMP	**Lampang**	**1.07**	**180**	P	**Pn**	**00 50 38.7**	**+1.1**
PHRA	**Phrae**	**1.23**	**152**	P	**Pg**	**00 50 40.8**	**-0.1**
PHRA				S	**Sg**	**00 50 59.0**	**+2.0**
NANT	**Nan**	**1.29**	**128**	P	**Pn**	**00 50 39.0**	**-1.7**
CM09	**Chiang Mai Arr**	**1.30**	**208**	P	**Pg**	**00 50 42.3**	**+0.2**
CM31	**Chiang Mai Arr**	**1.31**	**210**		**Pg**	**00 50 41.8**	**-0.6**
CMAR	**Chiang Mai Arr**	**1.31**	**210**	Pg	**Pg**	**00 50 41.9**	**-0.4**
	3μm,0.3s,baz=25,slow=19,SNR=1157						
CMAR				Lg	Lg	00 51 03.5	
	3μm,0.3s,baz=45,slow=34,SNR=5.0						
CMAR				LR	LR	00 51 29.6	
	comp=Z,225μm,20.5s,baz=35,slow=51						
CM02	**Chiang Mai Arr**	**1.32**	**209**	P	**Pg**	**00 50 42.6**	**-0.1**
CM04	**Chiang Mai Arr**	**1.34**	**207**	P	**Pg**	**00 50 42.9**	**-0.1**
CM05	**Chiang Mai Arr**	**1.35**	**209**	P	**Pg**	**00 50 43.0**	**-0.3**
CM13	**Chiang Mai Arr**	**1.35**	**210**	P	**Pg**	**00 50 43.0**	**-0.3**
MHMT	**Maesarieng**	**2.14**	**229**	P	**Pn**	**00 50 53.4**	**+1.0**
PHIT	**Phitsanulok**	**2.51**	**163**	Pg	**Pg**	**00 51 06.7**	**+1.4**
PHIT				Pn	**Pn**	**00 50 58.7**	**+1.3**
PBKT	**Sadao Pong**	**3.27**	**157**		**Pn**	**00 51 09.2**	**+1.2**
NONG	**Nongkai**	**3.66**	**114**	Pg	**Pg**	**00 51 25.5**	**-1.9**
NONG				Pn	**Pn**	**00 51 13.3**	**0.0**
CHAI	**Chaiyaphum**	**4.31**	**148**	Pg	**Pg**	**00 51 37.2**	**-2.5**
CHAI				Pn	**Pn**	**00 51 24.4**	**+2.2**
SLVN	**Son La**	**4.37**	**66**		**Pn**	**00 51 21.1**	**-2.0**
KMI	**Kunming**	**6.21**	**27**	Pn	**Pn**	**00 51 50.5**	**+2.0**
KMI				Sg	**Sg**	**00 53 34.3**	**-2.2**
KMI				LR	LR		
	comp=Z,84μm,5.7s						
KMI	**Kunming**	**6.21**	**27**	P	**Pn**	**00 51 50.3**	**+1.8**
KMI	**Kunming**	**6.21**	**27**	Pn	**Pn**	**00 51 50.3**	**+1.8**
BRDH	**Bariadhala**	**8.06**	**294**	Pn	**Pn**	**00 52 14.1**	**+0.4**
	28nm,0.3s,baz=80,slow=12,SNR=6.8						
BRDH				Sn	**Sn**	**00 53 49.5**	**+4.8**
	34nm,0.3s,baz=103,slow=19,SNR=1.4						
BRDH				Lg	Lg	00 54 26.2	
	44nm,0.3s,baz=20,slow=17,SNR=1.8						
AGT	**Agartala**	**8.88**	**300**	*e*x	**Pn**	**00 52 25.7**	**+0.8**
SHL	**Shillong**	**9.30**	**311**	*e*P	**Pn**	**00 52 29.2**	**-1.7**
SHL				IAmb	IAmb	00 52 34.9	
	comp=Z,150nm,0.8s						
SHL	**Shillong**	**9.30**	**311**	P	**Pn**	**00 52 29.4**	**-1.5**
SHL	**Shillong**	**9.30**	**311**		**Pn**	**00 52 29.4**	**-1.5**
GYA	**Guiyang**	**9.41**	**42**	⇑*i*P	**Pn**	**00 52 32.5**	**+0.1**
GYA				PP	**PnPn**	**00 52 46.2**	**+6.0**
GYA				S	**Sn**	**00 54 23.2**	**+5.1**
GYA				SS	**SnSn**	**00 54 29.2**	**-0.9**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,3.5s						
GYA				LR	LR		
	comp=Z,9μm,6.4s						
GYA				LR	LR		
	comp=Z,6μm,4.7s						
GYA				LR	LR		
	comp=Z,6μm,5.1s						
QIZ	**Qiongzhong**	**9.66**	**92**	P	**Pn**	**00 52 35.6**	**-0.2**
QIZ				S	**Sn**	**00 54 25.3**	**+1.2**
QIZ				pmax	pmax		
	comp=Z,340nm,6.7s						
QIZ				LR	LR		
	comp=Z,31μm,12.7s						
QIZ				LR	LR		
	comp=Z,14μm,12.2s						
QIZ				LR	LR		
	comp=Z,8μm,12.7s						
QIZ	**Qiongzhong**	**9.66**	**92**	Pn	**Pn**	**00 52 36.9**	**+1.1**
QIZ				Sn	**Sn**	**00 54 20.4**	**-3.7**
GUWA	**GUWAHATI**	**9.83**	**313**	*e*P	**Pn**	**00 52 36.4**	**-1.6**
PBA	**Port Blair**	**10.31**	**221**	*e*P	Pn	00 52 49.9	+5.3
PBA				IAmb	IAmb	00 53 02.8	
	comp=Z,88nm,0.4s						
CD2	**Chengdu**	**11.87**	**18**	P	**Pn**	**00 53 05.1**	**-0.8**
CD2				S	**Sn**	**00 55 21.3**	**+3.1**
CD2				pmax	pmax		
	comp=Z,70nm,1.1s						
CD2				LR	LR		
	comp=Z,16μm,10.1s						
CD2				LR	LR		
	comp=Z,18μm,10.8s						
CD2				LR	LR		
	comp=Z,22μm,10.1s						
LSA	**Lhasa**	**12.67**	**324**	P	**Pn**	**00 53 17.5**	**+0.2**
LSA	**Lhasa**	**12.67**	**324**	P	**Pn**	**00 53 15.8**	**-1.5**
LSA	**Lhasa**	**12.67**	**324**	Pn	**Pn**	**00 53 15.8**	**-1.5**
GTK	**Tadong**	**12.70**	**309**	*e*x	Pn	00 53 09.9	-7.6
BWNR	**Bhubaneshwar**	**13.02**	**275**	*e*P	**Pn**	**00 53 21.5**	**-0.2**
BWNR				IAmb	IAmb	00 53 42.2	
	comp=Z,28nm,0.3s						
ODAN	**Odare**	**13.37**	**305**	*e*P	**Pn**	**00 53 24.3**	**-2.4**
	comp=Z,176nm,1.0s						
TAPN	**Taplejung**	**13.38**	**307**	*e*P	**Pn**	**00 53 25.1**	**-1.8**
	comp=Z,112nm,1.0s						
BOK	**Bokaro**	**13.44**	**291**	*e*P	**Pn**	**00 53 25.2**	**-2.2**
BOK				IAmb	IAmb	00 53 45.0	
	comp=Z,55nm,1.5s						
ENH	**Enshi**	**13.88**	**38**	Pn	**Pn**	**00 53 31.9**	**-1.6**
RAMN	**Ramite**	**14.03**	**304**	*e*P	**Pn**	**00 53 33.7**	**-2.0**
	comp=Z,91nm,0.9s						
KULM	**Kulim**	**14.26**	**176**		**Pn**	**00 53 41.2**	**+2.5**
LHMI	**Lhok Sumawe**	**14.52**	**191**	Pn	**Pn**	**00 53 41.5**	**-0.8**
JIRN	**Jiri**	**14.69**	**306**	*e*P	**Pn**	**00 53 42.8**	**-2.1**
	comp=Z,157nm,0.9s						
GUN	**Gumba**	**15.05**	**306**	*e*P	**Pn**	**00 53 46.3**	**-3.5**
	comp=Z,178nm,0.9s						
IPM	**Ipoh**	**15.09**	**175**	Pn	**Pn**	**00 53 51.2**	**+1.2**
IPM				IAmb	IAmb	00 53 56.0	
	comp=Z,66nm,1.6s						
PKI	**Pulchoki**	**15.25**	**304**	*e*P	**Pn**	**00 53 49.2**	**-3.2**
	comp=Z,84nm,0.9s						
PKIN	**Phulchoki**	**15.27**	**304**	*e*P	**Pn**	**00 53 49.7**	**-2.8**
KKN	**Kakani**	**15.46**	**305**	*e*P	**Pn**	**00 53 53.0**	**-2.0**
DMN	**Daman**	**15.51**	**304**	*e*P	**Pn**	**00 53 53.5**	**-2.2**
	comp=Z,90nm,1.0s						
MLSI	**Meulaboh, Aceh**	**15.56**	**192**	P	**P**	**00 54 00.9**	**+0.5**
	comp=Z,159nm,1.1s						
GKN	**Gorkha**	**16.06**	**304**	*e*P	**Pn**	**00 53 59.6**	**-3.1**
KCSI	**Kotacane, Aceh**	**16.08**	**187**	P	**P**	**00 54 06.9**	**+0.7**
	comp=Z,1μmcomp=Z,57nm,1.1s						
XAN	**Xi'an**	**16.59**	**28**	P	**Pn**	**00 54 05.6**	**-3.7**
XAN				pP	pP	00 54 15.3	-0.7
XAN				sP	sP	00 54 20.6	+2.6
XAN				pmax	pmax		
	comp=Z,34nm,1.7s						
XAN				pmax	pmax		
	comp=Z,410nm,3.5s						
XAN				LR	LR		
	comp=Z,8μm,12.8s						
XAN				LR	LR		
	comp=Z,4μm,9.3s						
XAN				LR	LR		
	comp=Z,7μm,14.1s						
XAN	**Xi'an**	**16.59**	**28**	P	**Pn**	**00 54 05.6**	**-3.7**
XAN				pmax	pmax		
	comp=Z,46nm,1.0s						
XAN	**Xi'an**	**16.59**	**28**		**Pn**	**00 54 05.6**	**-3.7**
PSI	**Prapat**	**16.71**	**182**	Pn	**P**	**00 54 14.5**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=360,slow=9.9,SNR=16						
PSI				Lg	Lg	00 59 17.1	
	comp=Z,0.3nm,0.3s,baz=0.1,slow=6.6,SNR=1.8						
PSI	**Prapat**	**16.71**	**182**	P	**P**	**00 54 13.8**	**+0.5**
PSI				pmax	pmax		
	comp=Z,47nm,1.0s						
KOLN	**Koldanda**	**16.77**	**302**	*e*P	**Pn**	**00 54 09.0**	**-2.9**
	comp=Z,212nm,1.1s						
RPSI	**Rantau Prapat**	**16.81**	**182**		**P**	**00 54 13.8**	**-0.5**
LZH	**Lanzhou**	**16.84**	**12**	⇑P	**Pn**	**00 54 12.9**	**+0.3**
LZH				pP	pP	00 54 17.1	-1.9
LZH				sP	sP	00 54 20.7	-0.3
LZH				S	**S**	**00 57 24.8**	**-5.4**
LZH				sS	sS	00 57 32.0	-5.0
LZH				SS	**SnSn**	**00 57 41.8**	**+8.6**
LZH				pmax	pmax		
	comp=Z,50nm,1.3s						
LZH				pmax	pmax		
	comp=Z,1μm,4.7s						
LZH				LR	LR		
	comp=Z,3μm,13.0s						
LZH				LR	LR		
	comp=Z,10μm,15.2s						
LZH				LR	LR		
	comp=Z,4μm,12.5s						
DANN	**Dangsing**	**16.91**	**304**	*e*P	**Pn**	**00 54 10.3**	**-3.3**
	comp=Z,186nm,1.1s						
WHN	**Wuhan**	**17.20**	**48**	⇑P	**P**	**00 54 21.5**	**+3.0**
WHN				S	**Sn**	**00 57 27.5**	**-0.7**
WHN				LR	LR		
	comp=Z,14μm,9.4s						
PYUN	**Piuthan**	**17.40**	**302**	*e*P	**Pn**	**00 54 16.8**	**-3.0**
	comp=Z,270nm,0.9s						
MYKOM	**Kota Tinggi**	**18.17**	**166**	Pn	**Pn**	**00 54 27.1**	**-2.0**
GSI	**Gunungsitoli**	**18.29**	**187**	P	**P**	**00 54 34.3**	**+3.6**
	comp=Z,124nm,1.0s						
GSI	**Gunungsitoli**	**18.29**	**187**	P	**Pn**	**00 54 30.4**	**-0.2**
QZH	**Quanzhou**	**18.33**	**70**	P	**Pn**	**00 54 29.2**	**-1.8**
QZH				S	**Sn**	**00 57 50.9**	**-4.7**
QZH				LR	LR		
	comp=Z,30μm,8.5s						
QZH				LR	LR		
	comp=Z,8μm,7.1s						
QZH				LR	LR		
	comp=Z,6μm,14.2s						
TPRI	**Tanjung Pinang**	**19.17**	**165**	P	Pn	00 54 51.5	+10
BKNI	**Bangkinang**	**19.20**	**176**	P	**Pn**	**00 54 44.0**	**+2.4**
	comp=Z,2μmcomp=Z,39nm,0.8s						
BKNI	**Bangkinang**	**19.20**	**176**	P	**Pn**	**00 54 41.2**	**-0.4**
BKNI				IAmb	IAmb	00 55 19.1	
	comp=Z,62nm,0.9s						
NGP	**Nagpur**	**19.36**	**278**	*e*P	**Pn**	**00 54 43.1**	**-0.3**
NGP				IAmb	IAmb	00 54 50.1	
	comp=Z,48nm,1.1s						
GTA	**Gaotai**	**19.75**	**0**	*e*P	**P**	**00 54 47.0**	**+0.4**
GTA				pP	sP	00 54 51.0	-1.9
GTA				sP	pP	00 54 54.2	+3.3
GTA				S	**S**	**00 58 21.6**	**-7.3**
GTA				sS	Sn	00 58 29.8	0.0
GTA				SS	**SnSn**	**00 58 48.5**	**+4.1**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,810nm,6.5s						
GTA				LR	LR		
	comp=Z,4μm,12.1s						
GTA				LR	LR		
	comp=Z,26μm,13.6s						
GTA				LR	LR		
	comp=Z,5μm,11.1s						
SZP	**Santa**	**19.85**	**92**	P	**P**	**00 54 47.2**	**-0.6**
SZP				IAmb	IAmb	00 54 53.8	
	comp=Z,76nm,1.0s						
RGRI	**Rengat**	**20.00**	**172**	P	Pn	00 55 07.7	+17
HYB	**Hyderabad**	**20.10**	**267**	*i* P	Pn	00 54 52.0	-0.4
HYB				*e*S	**S**	**00 58 36.0**	**-0.2**
HYB	**Hyderabad**	**20.10**	**267**	*e*P	Pn	00 54 51.9	-0.5
HYB				IAmb	IAmb	00 54 56.4	
	comp=Z,318nm,1.9s						
PDSI	**Padang**	**20.40**	**178**	P	Pn	00 55 00.0	+4.1
SDSI	**Sungai Dareh**	**20.48**	**175**	P	Pn	00 55 01.6	+4.8
KSM	**Kuching**	**20.83**	**149**	P	**P**	**00 54 59.5**	**+1.2**
BHPL	**Bhopal**	**20.98**	**284**	*e*P	**P**	**00 54 59.4**	**-0.7**
BHPL				IAmb	IAmb	00 55 07.2	
	comp=Z,127nm,1.2s						
KKM	**Kota Kinabalu**	**21.02**	**128**	P	**P**	**00 55 01.6**	**+1.0**
KKM				IAmb	IAmb	00 55 04.5	
	comp=Z,130nm,1.3s						
SBUM	**Sibu**	**21.02**	**143**	P	**P**	**00 55 01.8**	**+1.3**
TIY	**Taiyuan**	**21.22**	**29**	*e*P	**P**	**00 55 02.3**	**-0.3**
TIY				S	**S**	**00 59 00.3**	**+2.1**
TIY				SS	**SnSn**	**00 59 27.7**	**+7.2**
TIY				pmax	pmax		
	comp=Z,27nm,0.8s						
TIY				LR	LR		
	comp=Z,2μm,7.9s						
TIY				LR	LR		
	comp=Z,4μm,18.2s						
NJ2	**Nanjing**	**21.25**	**50**	*e*P	**P**	**00 55 02.6**	**-0.2**
NJ2				pP	**pP**	**00 55 05.4**	**-1.7**
NJ2				S	Sn	00 59 03.3	-2.5
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,290nm,3.5s						
NJ2				LR	LR		
	comp=Z,24μm,11.9s						
NJ2				LR	LR		
	comp=Z,20μm,11.2s						
NJ2				LR	LR		
	comp=Z,5μm,9.0s						
DDI	**Dehra Dun**	**22.25**	**303**	*e*x	**P**	**00 55 17.1**	**+3.5**
DDI				IAmb	IAmb	00 55 21.4	
	comp=Z,96nm,0.3s						
SSE	**Sheshan**	**22.55**	**55**	P	**P**	**00 55 20.3**	**+3.5**
SSE				S	**S**	**00 59 27.6**	**+3.9**
SSE				pmax	pmax		
	comp=Z,27nm,0.7s						
SSE				pmax	pmax		
	comp=Z,260nm,3.5s						
SSE				LR	LR		
	comp=Z,9μm,11.2s						
SSE				LR	LR		
	comp=Z,7μm,10.0s						
TIA	**Tai'an**	**22.59**	**39**	P	**P**	**00 55 17.0**	**-0.2**
TIA				S	**S**	**00 59 21.0**	**-3.3**
TIA				pmax	pmax		
	comp=Z,17nm,1.2s						
TIA				pmax	pmax		
	comp=Z,480nm,3.4s						
TIA				LR	LR		
	comp=Z,5μm,15.2s						
TIA				LR	LR		
	comp=Z,7μm,15.5s						
TIA				LR	LR		
	comp=Z,2μm,7.3s						
BTO	**Baotou**	**22.75**	**21**	*e*P	**P**	**00 55 17.5**	**-1.5**
SMLA	**Simla**	**23.27**	**304**	*e*P	**P**	**00 55 22.6**	**-1.6**
HHC	**Hu-ho-hao-te**	**23.51**	**23**	P	**P**	**00 55 27.7**	**+1.0**
HHC				sP	sP	00 55 36.3	+3.0
HHC				S	**S**	**00 59 42.6**	**+2.4**
HHC				sS	sS	00 59 49.0	+1.2
HHC				SS	**SnSn**	**01 00 23.1**	**+6.5**
HHC				pmax	pmax		
	comp=Z,27nm,0.7s						
HHC				pmax	pmax		
	comp=Z,430nm,5.4s						
HHC				LR	LR		
	comp=Z,2μm,11.6s						
HHC				LR	LR		
	comp=Z,2μm,10.4s						
HHC				LR	LR		
	comp=Z,3μm,12.0s						
BHK	**Bhakra**	**23.97**	**304**	*e*x	**P**	**00 55 33.2**	**+2.0**
POO	**Poona**	**24.38**	**272**	*e*P	**P**	**00 55 37.2**	**+2.1**
DHRM	**DHARAMSHALA**	**24.41**	**306**	*e*P	**P**	**00 55 34.2**	**-1.3**
DHRM				IAmb	IAmb	00 55 37.3	
	comp=Z,60nm,0.7s						
DHRM				*i* x	x	00 59 51.7	
BJT	**Baijiatuau**	**24.82**	**31**	P	**P**	**00 55 35.7**	**-3.1**
BJT				pmax	pmax		
	comp=Z,58nm,1.2s						
BJT	**Baijiatuau**	**24.82**	**31**	P	**P**	**00 55 35.7**	**-3.1**
BJT				IAmb	IAmb	00 55 42.0	
	comp=Z,58nm,1.2s						
BJI	**Beijing**	**24.84**	**31**	P	**P**	**00 55 39.2**	**+0.2**
BJI				S	**S**	**01 00 02.7**	**+1.4**
BJI				pmax	pmax		
	comp=Z,41nm,1.2s						
BJI				LR	LR		
	comp=Z,2μm,15.7s						
BJI				LR	LR		
	comp=Z,4μm,17.7s						
WMQ	**Urumqi**	**26.14**	**340**	*e*P	**P**	**00 55 51.8**	**+1.0**
WMQ				pP	sP	00 55 55.5	-1.9
WMQ				SS	SS	01 01 21.7	
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,100nm,3.7s						
WMQ				LR	LR		
	comp=Z,2μm,11.1s						
WMQ				LR	LR		
	comp=Z,2μm,13.5s						
WMQ				LR	LR		
	comp=Z,1μm,14.7s						
WMQ	**Urumqi**	**26.14**	**340**	P	**P**	**00 55 50.5**	**-0.3**
WMQ				pmax	pmax		
	comp=Z,37nm,1.1s						
WMQ	**Urumqi**	**26.14**	**340**	P	**P**	**00 55 50.5**	**-0.3**
WMQ				IAmb	IAmb	00 56 23.7	
	comp=Z,37nm,1.1s						
DL2	**Dalian**	**27.05**	**40**	P	**P**	**00 56 03.9**	**+4.9**
DL2				S	**S**	**01 00 43.5**	**+7.1**
DL2				pmax	pmax		
	comp=Z,150nm,4.6s						
DL2				LR	LR		
	comp=Z,3μm,15.5s						
DL2				LR	LR		
	comp=Z,6μm,15.4s						
DL2				LR	LR		
	comp=Z,3μm,9.2s						
NIL	**Nilore**	**27.32**	**306**	P	**P**	**00 56 00.6**	**-1.0**
NIL				pmax	pmax		
	comp=Z,68nm,1.0s						
NIL	**Nilore**	**27.32**	**306**	P	**P**	**00 56 00.6**	**-1.0**
SONM	**Songino Array**	**28.70**	**10**	P	**P**	**00 56 13.2**	**-0.6**
	comp=Z,18nm,1.1s,baz=192,slow=10,SNR=45						
ULN	**Ulaanbaatar**	**28.84**	**10***c*	*i*P	**P**	**00 56 15.5**	**+0.4**
ULN				pmax	pmax		
	comp=Z,28nm,1.2s						
ULN	**Ulaanbaatar**	**28.84**	**10**	P	**P**	**00 56 13.0**	**-2.1**
ULN				IAmb	IAmb	00 56 17.7	
	comp=Z,22nm,1.1s						
UZB	**Uzynbulak**	**29.18**	**328**	*e*P	**P**	**00 56 17.9**	**-0.3**
UZB				*e*S	**S**	**01 01 11.0**	**+0.7**
UZB				*e*LR	LR	01 08 59.2	
	comp=Z,268nm,10.4s						
UZB	**Uzynbulak**	**29.18**	**328**	*e*P	**P**	**00 56 17.9**	**-0.3**
UZB				*e*S	**S**	**01 01 10.9**	**+0.7**
UZB				MLR	MLR		
	comp=Z,268nm,10.0s						
KDJ	**Kajisay**	**29.43**	**325**	IAmb	IAmb	00 56 27.5	
	comp=Z,26nm,0.8s						
SATY	**Saty**	**29.43**	**327**	*e*P	**P**	**00 56 20.9**	**+0.5**
	comp=Z,11nm,0.8s						
SATY				*e*S	**S**	**01 01 09.8**	**-4.3**
SATY				*e*LR	LR	01 08 17.6	
	comp=Z,226nm,10.9s						
SATY	**Saty**	**29.43**	**327**	*e*P	**P**	**00 56 20.9**	**+0.5**
SATY				*e*S	**S**	**01 01 09.7**	**-4.3**
SATY				pmax	pmax		
	comp=Z,11nm,0.8s						
SATY				MLR	MLR		
	comp=Z,226nm,11.0s						
TJN	**Taejon**	**29.50**	**50**	⇑*i*P	**P**	**00 56 22.0**	**+1.1**
TTSI	**Tana Toraja**	**30.00**	**136**	P	**P**	**00 56 28.7**	**+3.2**
	comp=Z,35nm,1.1s						
ULHL	**Ulahol**	**30.02**	**324**	P	**P**	**00 56 29.8**	**+4.1**
	SNR=13						
TNSS	**Tian-Shan**	**30.17**	**326**	*e*P	**P**	**00 56 27.8**	**+0.5**
TNSS	**Tian-Shan**	**30.17**	**326**	*e*P	**P**	**00 56 27.7**	**+0.5**
MDOK	**Medeo**	**30.21**	**326**	*e*P	**P**	**00 56 27.9**	**+0.6**
MDOK				*e*S	**S**	**01 01 30.0**	**+3.7**
MDOK				*e*LR	LR	01 08 37.9	
	comp=Z,856nm,17.3s						
MDOK	**Medeo**	**30.21**	**326**	*e*P	**P**	**00 56 27.9**	**+0.6**
MDOK				*e*S	**S**	**01 01 30.0**	**+3.7**
MDOK				MLR	MLR		
	comp=Z,856nm,17.0s						
ZSN	**Zaisan**	**30.28**	**340**	*e*P	P	00 56 34.6	+7.0
ZSN				*e*S	**S**	**01 01 34.7**	**+7.7**
ZSN				*e*LR	LR	01 08 22.2	
	comp=Z,473nm,12.0s						
ZSN	**Zaisan**	**30.28**	**340**	*e*P	P	00 56 34.6	+6.9
ZSN				*e*S	**S**	**01 01 34.7**	**+7.7**
ZSN				MLR	MLR		
	comp=Z,473nm,12.0s						
AAA	**Alma-Ata**	**30.31**	**326**	*e*P	**P**	**00 56 28.3**	**+0.2**
AAA	**Alma-Ata**	**30.31**	**326**	*e*P	**P**	**00 56 28.3**	**+0.2**
BOOM	**Boomskoye usch**	**30.35**	**324**	P	**P**	**00 56 29.0**	**+0.4**
BOOM				pmax	pmax		
	comp=Z,58nm,1.5s						
BOOM	**Boomskoye usch**	**30.35**	**324**	P	**P**	**00 56 28.9**	**+0.4**
BOOM				IAmb	IAmb	00 56 33.5	
	comp=Z,58nm,1.4s						
KS19	**Wonju Array Si**	**30.38**	**48**	P	**P**	**00 56 29.7**	**+1.0**
KS19				IAmb	IAmb	00 57 30.5	
	comp=Z,60nm,1.8s						
KSRS	**Korea Array**	**30.40**	**48**	P	**P**	**00 56 27.1**	**-1.8**
	comp=Z,3.2nm,0.8s,baz=246,slow=10,SNR=10.0						
KZA	**Kyzart**	**30.47**	**323**	P	**P**	**00 56 34.5**	**+4.6**
	SNR=6.8						
LUWI	**Luwuk**	**30.60**	**129**	P	**P**	**00 56 32.4**	**+1.6**
	comp=Z,52nm,1.1s						
MK31	**Makanchi Array**	**30.62**	**336**	*e*P	**P**	**00 56 30.9**	**+0.2**
MKAR	**Makanchi Array**	**30.62**	**336**	P	**P**	**00 56 30.9**	**+0.1**
	comp=Z,7.3nm,0.6s,baz=141,slow=9.1,SNR=46						
MAKZ	**Makanchi**	**30.75**	**336**	P	**P**	**00 56 32.1**	**+0.2**
MAKZ					**pP**	**00 56 32.7**	**-3.8**
TKM2	**Tokmak 2**	**30.82**	**324**	P	**P**	**00 56 33.3**	**+0.5**
	SNR=33						
ZAK	**Zakamensk**	**30.85**	**5**	*e*P	**P**	**00 56 32.6**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,11nm,1.7s						
UCH	**Uchtor**	**30.99**	**322**	P	**P**	**00 56 36.1**	**+1.6**
	SNR=8.3						
KBK	**Karagaybulak**	**31.01**	**323**	P	**P**	**00 56 35.1**	**+0.7**
	SNR=13						
KUU	**Kurty**	**31.09**	**326**	*e*P	**P**	**00 56 35.7**	**+0.8**
	comp=Z,41nm,1.7s						
KUU				*e*S	**S**	**01 01 40.7**	**+0.9**
KUU				*e*LR	LR	01 10 30.4	
	comp=Z,288nm,7.7s						
KUU	**Kurty**	**31.09**	**326**	*e*P	**P**	**00 56 35.7**	**+0.8**
KUU				*e*S	**S**	**01 01 40.6**	**+0.9**
KUU				pmax	pmax		
	comp=Z,41nm,1.7s						
KUU				MLR	MLR		
	comp=Z,288nm,8.0s						
AAK	**Ala-Archa**	**31.26**	**323**	P	**P**	**00 56 37.4**	**+0.8**
	comp=Z,30nm,1.1s,baz=139,slow=6.4,SNR=23						
AAK	**Ala-Archa**	**31.26**	**323**	P	P	00 56 41.7	+5.1
	SNR=13						
AAK	**Ala-Archa**	**31.26**	**323**	P	**P**	**00 56 37.8**	**+1.2**
AAK				pmax	pmax		
	comp=Z,71nm,1.4s						
AAK	**Ala-Archa**	**31.26**	**323**	P	**P**	**00 56 37.8**	**+1.2**
CHMS	**Chumysh**	**31.34**	**324**	P	**P**	**00 56 39.3**	**+2.1**
	SNR=11						
AML	**Almayashu**	**31.41**	**321**	P	**P**	**00 56 39.0**	**+0.8**
	SNR=22						
DGZ	**Jazzator, Alta**	**31.58**	**345**	⇑*i*P	**P**	**00 56 41.0**	**+1.7**
DGZ				pmax	pmax		
	comp=Z,20nm,1.7s						
USP	**Ospenovka**	**31.66**	**324**	P	**P**	**00 56 43.7**	**+3.7**
	SNR=19						
EKS2	**Erkin-Say**	**31.68**	**322**	P	**P**	**00 56 41.5**	**+1.3**
	SNR=12						
SGDS	**Sogindy**	**31.71**	**324**	*e*P	**P**	**00 56 40.2**	**-0.2**
	comp=Z,44nm,1.4s						
SGDS				*e*S	**S**	**01 01 52.2**	**+2.6**
SGDS				*e*LR	LR	01 11 04.0	
	comp=Z,361nm,11.4s						
GAR	**Garm**	**31.84**	**314**	IAmb	IAmb	00 56 45.3	
	comp=Z,27nm,0.8s						
MOY	**Mondy**	**32.02**	**2**	*e*P	**P**	**00 56 44.5**	**+1.4**
MOY				pmax	pmax		
	comp=Z,30nm,1.6s						
BTK	**Batken**	**32.03**	**316**	P	**P**	**00 56 43.5**	**+0.2**
BTK				pmax	pmax		
	comp=Z,116nm,1.9s						

BTK **Batken** 32.03 316 P **P** 00 56 43.5 +0.2
TLY **Talaya** 32.17 5 P **P** 00 56 45.3 +1.0
comp=Z,2.7nm,0.5s,baz=187,slow=9.2,SNR=3.1
TLY **Talaya** 32.17 5*c* *i*P **P** 00 56 46.2 +1.9
TLY *e*S **S** 01 02 00.1 +3.5
TLY *e*SS **SnSn** 01 03 50.8 +3.4
TLY *e*SSS SSS 01 04 13.0
TLY pmax pmax
comp=Z,54nm,1.6s
TLY MLR MLR
comp=Z,4µm,9.0s
TLY **Talaya** 32.17 5 IAmb IAmb 00 57 27.5
comp=Z,9.6nm,0.8s
CHGR **Chuyangaron** 32.48 312 P **P** 00 56 45.4 -1.9
BTLS **Baital** 33.07 326 *e*P **P** 00 56 52.9 +0.7
comp=Z,9.1nm,1.4s
BTLS *e*S **S** 01 02 10.2 -0.4
BTLS *e*LR LR 01 10 32.9
BTLS **Baital** 33.07 326 *e*P **P** 00 56 52.9 +0.7
BTLS *e*S **S** 01 02 10.2 -0.4
BTLS pmax pmax
comp=Z,9.0nm,1.4s
DZA **Taraz** 33.26 321 *e*P **P** 00 56 53.6 -0.5
DZA **Taraz** 33.26 321 *e*P **P** 00 56 53.5 -0.5
JBG **Jabagly** 33.47 319 *e*P **P** 00 56 55.3 -0.7
JBG pmax pmax
comp=Z,33nm,1.9s
JBG MLR MLR
comp=Z,251nm,13.0s
IUG **luzhnay** 33.64 318 *e*P **P** 00 56 57.6 +0.1
IUG *e*S **S** 01 02 25.9 +6.0
IUG **luzhnay** 33.64 318 *e*P **P** 00 56 57.5 +0.1
IUG *e*S **S** 01 02 25.8 +6.0
KK31 **Karatay Array** 33.88 320 *i*P **P** 00 56 58.6 -0.7
KK31 **Karatay Array** 33.88 320 IAmb IAmb 00 57 21.7
comp=Z,12nm,0.9s
KKAR **Karatay Array** 33.88 320 IAmb IAmb 00 57 21.7
comp=Z,12nm,0.9s
BRLS **Boroldav** 34.24 320 *i*S **S** 01 02 28.2 -0.8
KURBB **Kurchatov Arra** 35.19 337 P **P** 00 57 10.3 -0.2
KURK **Kurchatov** 35.23 337⇑ *i*P **P** 00 57 11.5 +0.6
KURK pmax pmax
comp=Z,27nm,1.5s
KURK **Kurchatov** 35.23 337 P **P** 00 57 10.4 -0.5
KURK IAmb IAmb 00 57 17.0
comp=Z,20nm,0.9s
OTUK **Ortayu** 36.10 329 P **P** 00 57 17.9 -0.5
ZAA0 **Zalesovo Array** 36.13 345 IAmb IAmb 00 57 25.2
comp=Z,19nm,0.8s
ZALV **Zalesovo Beam** 36.13 345 P **P** 00 57 18.4 -0.1
comp=Z,12nm,0.9s,baz=148,slow=8.7,SNR=31
USA0B **Ussuriysk Arra** 36.45 40⇓ *i*P **P** 00 57 21.8 +0.4
USRK **Ussuriysk Ar.** 36.45 40 P **P** 00 57 20.7 -0.7
comp=Z,5.3nm,0.7s,baz=241,slow=8.4,SNR=7.7
SIJI **Sorong** 37.10 120 P **P** 00 57 28.4 +1.1
comp=Z,18nm,0.4s,baz=299,slow=6.3,SNR=18
BRZS **Berezniki** 37.14 331 *e*P **P** 00 57 27.5 +0.1
comp=Z,20nm,0.5s
BRZS **Berezniki** 37.14 331 *e*P **P** 00 57 27.4 +0.1
BRZS pmax pmax
comp=Z,20nm,0.5s
MJB9 **Matsu-Tunnel** 37.70 55 P **P** 00 57 30.8 -1.5
MJB9 IAmb IAmb 00 57 34.4
comp=Z,28nm,1.1s
MAJO **Matsushiro** 37.70 55⇑ *i*P **P** 00 57 33.7 +1.5
MAJO pmax pmax
comp=Z,27nm,0.9s
MAJO **Matsushiro** 37.70 55 P **P** 00 57 30.1 -2.2
MAJO IAmb IAmb 00 57 34.4
comp=Z,28nm,1.1s
MAT **Matsushiro** 37.70 55 P **P** 00 57 31.7 -0.5
MAT S **S** 01 03 22.4 +0.3
MJAR **Matsushiro Arr** 37.70 55 P **P** 00 57 32.1 -0.2
comp=Z,12nm,0.9s,baz=266,slow=10.0,SNR=35
SOEI **Soe** 37.95 138 P **P** 00 57 34.0 -0.6
comp=Z,47nm,0.9s
KLR **Kul'dur** 39.18 33 P **P** 00 57 42.9 -1.5
comp=Z,8.5nm,0.9s,baz=250,slow=7.2,SNR=16
KLR **Kul'dur** 39.18 33*c* *i*P **P** 00 57 44.3 -0.1
KLR pmax pmax
comp=Z,23nm,1.2s
BOD **Bodaibo** 39.61 12 *e*P **P** 00 57 47.2 -0.7
BOD pmax pmax
comp=Z,25nm,1.6s
ZEA **Zeya** 40.14 25 *e*P **P** 00 57 53.8 +1.4
ZEA pmax pmax
comp=E,21nm,0.8s
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=Z,50nm,1.2s
GEYT **Alibeck** 40.33 306 P **P** 00 57 53.8 -0.4
comp=Z,7.6nm,0.8s,baz=131,slow=8.1,SNR=17
GYA0B **ALIBECK ARRAY** 40.33 306 P **P** 00 57 53.5 -0.7
BRVK **Borovoye** 40.37 333*c* *i*P **P** 00 57 54.7 +0.4
BRVK pmax pmax
comp=Z,27nm,1.0s
BRVK **Borovoye** 40.37 333 P **P** 00 57 54.5 +0.1
BRVK IAmb IAmb 00 57 58.5
comp=Z,24nm,1.0s
ASAJ **Asahikawa** 43.27 46 P **P** 00 58 18.0 -0.2
comp=Z,6.8nm,0.8s,baz=320,slow=26,SNR=1.4
ASAJ **Asahikawa** 43.27 46 P **P** 00 58 18.0 -0.2
JKA **Kamikawa-asahi** 43.27 46 P **P** 00 58 18.0 -0.2
AKTO **Aktyubinsk** 45.00 323 P **P** 00 58 31.1 -0.9
comp=Z,16nm,0.9s
YUK **Yuzh-Kuril'sk** 45.47 47 P **P** 00 58 35.2 -0.5
YUK *e* 01 00 24.2
YUK *e*S **S** 01 05 16.4 -0.5
YUK MLR MLR
comp=Z,995nm,13.0s
YUK MLR MLR
comp=N,525nm,14.0s
YUK MLR MLR
comp=E,1µm,14.0s
JAY **Jayapura** 45.93 114 P **P** 00 58 39.6 -0.3
comp=E,4.0nm,0.7s,baz=345,slow=5.5,SNR=4.1
SVE **Sverdlovsk** 47.05 332 *e*P **P** 00 58 48.7 +0.7
SVE *e*S **S** 01 05 42.0 +2.7
SVE pmax pmax
comp=Z,63nm,1.0s
SVE MLR MLR
comp=Z,933nm,17.0s
YAK **Yakutsk** 47.25 19 *e*P **P** 00 58 50.0 +0.5
YAK *e**PP **sP** 00 58 56.1 -0.1
YAK *e* 01 00 29.1
YAK *e*S **S** 01 05 42.1 +0.2
YAK *e**SS **sS** 01 05 56.1 +6.3
YAK pmax pmax
comp=Z,24nm,0.9s
YAK pmax pmax
comp=N,11nm,0.9s
YAK pmax pmax
comp=E,15nm,1.0s
YAK smax smax
comp=E,57nm,2.7s
YAK smax smax
comp=N,30nm,2.2s
YAK MLR MLR
comp=Z,925nm,15.0s
YAK MLR MLR
comp=N,596nm,15.0s
YAK MLR MLR
comp=E,693nm,16.0s
ARU **Arti** 47.77 330 P **P** 00 58 52.9 -0.8
comp=E,6.0nm,0.8s,baz=140,slow=5.4,SNR=11
ARU **Arti** 47.77 330*c* *i*P **P** 00 58 52.8 -0.8
ARU 01 00 18.4
ARU 01 00 42.8
ARU S **S** 01 05 49.3 -0.2
ARU pmax pmax
comp=Z,32nm,1.0s
ARU MLR MLR
comp=Z,718nm,19.0s
ARU **Arti** 47.77 330 P **P** 00 58 53.4 -0.2
AKT **Akhty** 48.92 308 *e*P **P** 00 59 02.3 -0.6
AKT *e* 01 00 27.4
AKT *e* 01 00 55.7
AKT pmax pmax
comp=Z,9.0nm,0.7s
MAK **Makhachkala** 49.36 310 *e*P **P** 00 59 02.8 -3.2
MAK *e*S **S** 01 06 05.9 -6.4
MAK pmax pmax
comp=Z,64nm,0.8s
MAK MLR MLR
comp=Z,761nm,15.0s
LGD **Lagodekhi** 50.08 309 P **P** 00 59 11.5 -0.1
RAYN **Ar Rayn** 50.25 285 P **P** 00 59 12.8 -0.4
RAYN pmax pmax
comp=Z,11nm,1.0s
RAYN **Ar Rayn** 50.25 285 P **P** 00 59 12.8 -0.4
RAYN IAmb IAmb 00 59 17.2
comp=Z,11nm,0.9s
NRIK **Noril'sk** 50.29 354 P **P** 00 59 12.1 -0.6
comp=Z,9.6nm,0.9s,baz=160,slow=6.9,SNR=26
NRIK **Noril'sk** 50.29 354 *i*P **P** 00 59 13.1 +0.4
GROC **Groznyy** 50.63 310 *e*P **P** 00 59 15.9 +0.1
GROC *e* 01 00 33.3
GROC pmax pmax
comp=Z,24nm,1.0s
KZRT **Kazreti** 51.38 308 P **P** 00 59 24.6 +3.1
GUDG **Gudauri** 51.47 309 P **P** 00 59 26.2 +3.8
WB0 **Warramunga Arr** 51.88 137 P **P** 00 59 25.5 +0.2
ZEI **Tsey** 51.94 309 *e*P **P** 00 59 23.7 -2.1
ZEI pmax pmax
comp=Z,13nm,0.7s
WRA **Warramunga Arr** 51.97 137 P **P** 00 59 26.4 +0.4
comp=Z,6.1nm,0.8s,baz=327,slow=8.0,SNR=24
WB2 **Warramunga Arr** 51.98 137 P **P** 00 59 25.6 -0.5
AKH **Akhalkalaki** 52.06 308 P **P** 00 59 27.5 +0.8
AKH **Akhalkalaki** 52.06 308 IAmb IAmb 00 59 31.5
comp=Z,22nm,1.0s
NCK **Nalchik** 52.27 310⇑ *i*P **P** 00 59 30.1 +2.1
NCK pmax pmax
comp=Z,8.0nm,0.8s
KARS **Kars** 52.28 307 P **P** 00 59 31.9 +3.6
KBZ **Khabaz** 52.80 310 P **P** 00 59 31.2 -0.7
comp=Z,4.6nm,0.8s,baz=141,slow=6.3,SNR=10.0
KBZ **Khabaz** 52.80 310⇑ *i*P **P** 00 59 34.9 +3.0
GOF **Gofitskoye** 52.90 312⇑ *e*P **P** 00 59 34.1 +1.4
GOF pmax pmax
comp=Z,13nm,0.6s
KIV **Kislovodsk** 52.98 311 *e*P **P** 00 59 32.9 -0.5
KIV *e*S **S** 01 07 01.5 -1.2
KIV *e*SS **SS** 01 10 41.3 -0.4
KIV *e*SSS SSS 01 12 27.2
KIV pmax pmax
comp=Z,100nm,1.1s
KIV pmax pmax
comp=Z,47nm,4.1s
KIV **Kislovodsk** 52.98 311 P **P** 00 59 33.1 -0.4
KIV IAmb IAmb 00 59 37.4
comp=Z,26nm,0.9s
KIRV **Kirov** 53.13 330⇑ *e*P **P** 00 59 34.3 +0.2
MA2 **Magadan** 53.98 29*c* *i*P **P** 00 59 41.2 +0.9
MA2 pmax pmax
comp=Z,22nm,0.9s
MA2 **Magadan** 53.98 29 P **P** 00 59 39.2 -1.1
AS31 **Alice Springs** 54.46 141 P **P** 00 59 44.2 -0.2
AS31 IAmb IAmb 01 01 29.1
comp=Z,6.4nm,0.6s
ASAR **Alice Springs** 54.46 141 P **P** 00 59 45.0 +0.7
comp=Z,3.2nm,0.6s,baz=322,slow=7.4,SNR=23
TIXI **Tiksi** 54.77 11*c* *i*P **P** 00 59 45.2 -0.7
TIXI pmax pmax
comp=Z,30nm,1.2s
TIXI **Tiksi** 54.77 11 P **P** 00 59 44.4 -1.4
VRH **Novokhopyorsk** 54.95 319 *e*P **P** 00 59 49.3 +1.8
VRH pmax pmax
comp=Z,20nm,1.0s
VRH MLR MLR
comp=Z,670nm,18.0s
PMG **Port Moresby** 54.97 117 P **P** 00 59 49.1 +0.9
comp=Z,22nm,0.8s,baz=22,slow=3.3,SNR=3.2
PMG **Port Moresby** 54.97 117⇓ *i*P P 00 59 53.4 +5.2
PMG pmax pmax
comp=Z,167nm,1.3s
PMG **Port Moresby** 54.97 117 IAmb IAmb 00 59 54.3
comp=Z,51nm,1.4s
SOC **Sochi** 55.08 310 *e*P **P** 00 59 49.0 +0.4
SOC *e* 01 01 48.3
SOC *e*S **S** 01 07 31.9 +1.2
SOC pmax pmax
comp=Z,20nm,0.8s
SOC MLR MLR
comp=Z,247nm,12.0s
PETK **Petropavlovsk-** 55.48 38 P **P** 00 59 51.2 -0.2
comp=Z,2.1nm,0.8s,baz=224,slow=4.1,SNR=5.1
PRGR **Permogore** 56.11 332 *e*P **P** 00 59 54.0 -1.7
PRGR pmax pmax
comp=Z,20nm,0.8s
SEY **Seymchan** 56.12 26⇓ *i*P **P** 00 59 55.3 -0.4
VSR **Storozhevoye** 56.53 319 *e*P **P** 00 59 59.5 +0.7
VSR pmax pmax
comp=Z,6.0nm,0.9s
VSR MLR MLR
comp=Z,570nm,13.0s
ANN **Anapa** 56.82 311 *e*P **P** 01 00 01.7 +0.7
ANN *e**PP **pP** 01 00 05.1 -0.8
ANN *e*S **S** 01 07 57.9 +4.0
ANN pmax pmax
comp=Z,97nm,1.0s
ANN MLR MLR
comp=Z,582nm,13.0s
LPSR **Galich'ya Gora** 56.93 321 *e*P **P** 01 00 03.3 +1.6
LPSR pmax pmax
comp=Z,10.0nm,0.8s
LPSR MLR MLR
comp=Z,730nm,16.0s
KVT **Kavak** 57.63 307 P **P** 01 00 11.4 +4.5
DIKM **Dikmen** 58.24 307 P **P** 01 00 10.7 -0.4
MOS **Moscow** 58.31 324 *e*P **P** 01 00 10.7 -0.7
MOS pmax pmax
comp=Z,52nm,1.4s
MOS pmax pmax
comp=Z,100nm,1.9s
MOS MLR MLR
comp=Z,600nm,18.0s
MMAI **Mount Meron Ar** 58.32 297 P **P** 01 00 12.3 +0.4
comp=Z,9.4nm,0.9s,baz=91,slow=8.6
KLMR **Klimovskoe** 58.62 330 *e*P **P** 01 00 11.8 -1.6
KLMR *e* 01 02 23.3
KLMR pmax pmax
comp=Z,57nm,1.2s
KLMR **Klimovskoe** 58.62 330 *e*P **P** 01 00 11.8 -1.6
KLMR AMP 01 00 18.6
comp=Z,57nm,1.2s
KLMR *e*PP **PP** 01 02 23.4 +0.5
OBN **Obninsk** 58.78 323 P **P** 01 00 15.2 +0.6
comp=Z,3.4nm,0.8s,baz=78,slow=9.4,SNR=2.2
OBN **Obninsk** 58.78 323⇓ *i*P **P** 01 00 17.2 +2.6
OBN *i* 01 01 06.2
OBN *i* 01 02 23.7
OBN *i*S **S** 01 08 14.4 -4.8
OBN *i*SS **SS** 01 12 08.1 -4.2
OBN pmax pmax
comp=Z,43nm,1.4s
OBN MLR MLR
comp=Z,550nm,19.0s
OBN **Obninsk** 58.78 323 P **P** 01 00 14.2 -0.4
BR131 **Keskin Array S** 59.46 305⇑ *i*P **P** 01 00 22.6 +2.8
BRTR **Keskin Array B** 59.46 305 P **P** 01 00 18.9 -0.9
comp=Z,2.3nm,0.8s,baz=122,slow=7.1,SNR=9.9
BRTR **Keskin Array B** 59.46 305 P **P** 01 00 19.0 -0.9
CSS **Mathiatis** 59.90 300 P **P** 01 00 22.1 -0.7
CSS IAmb IAmb 01 00 29.2
comp=Z,19nm,1.0s
ANTO **Ankara** 60.11 305 P **P** 01 00 22.8 -1.4
ANTO pmax pmax
comp=Z,11nm,0.8s
ANTO **Ankara** 60.11 305 P **P** 01 00 22.8 -1.4
ANTO IAmb IAmb 01 00 27.6
comp=Z,11nm,0.8s
BR231 **Keskin MP Arra** 60.13 305 P **P** 01 00 23.3 -1.1
BR231 IAmb IAmb 01 00 28.2
comp=Z,14nm,0.8s
CTA **Charters Tower** 60.35 128 P **P** 01 00 26.4 +0.4
comp=Z,3.6nm,0.7s,baz=306,slow=9.4,SNR=6.1
AKASG **Malin Array Be** 62.72 318 P **P** 01 00 41.5 0.0
comp=Z,2.2nm,0.6s,baz=77,slow=6.4,SNR=13
AKBB **Malin Array Si** 62.72 318⇓ *i*P **P** 01 00 43.8 +2.3
AKBB **Malin Array Si** 62.72 318 IAmb IAmb 01 00 44.6
comp=Z,10nm,1.2s
BILL **Bilibino** 63.29 23*c* *i*P **P** 01 00 44.6 -0.5
BILL *i* 01 01 24.9
BILL *i* 01 03 05.3
BILL pmax pmax
comp=Z,17nm,1.2s
BILL MLR MLR
comp=Z,1µm,17.0s
BILL **Bilibino** 63.29 23 P **P** 01 00 44.5 -0.5
BILL IAmb IAmb 01 00 46.4
comp=Z,16nm,1.2s
CFR **Carcaliu** 63.42 311⇑ P **P** 01 00 46.3 0.0
NACGM **Naroch** 64.36 322 *e* **P** 01 00 52.0 -0.3
NACGM *e*LQ LQ 01 29 16.0
NACGM *e*LR LR 01 30 32.0
VRI **Vrincioaia** 64.39 312⇓ P **P** 01 00 54.0 +1.2
VRI **Vrincioaia** 64.39 312 P **P** 01 00 53.9 +1.2
BISRR **Bisoca** 64.42 312⇓ P P 01 01 01.6 +8.7
PLOR **Plostina** 64.45 312⇓ P **P** 01 00 54.1 +1.0
PLOR **Plostina** 64.45 312 P **P** 01 00 54.1 +1.0
KMBO **Kilima Mbogo** 64.50 259 P **P** 01 00 55.7 +1.5
comp=Z,3.1nm,1.0s,baz=58,slow=9.3,SNR=4.6
KMBO **Kilima Mbogo** 64.50 259 *i*P P 01 00 59.2 +5.0
KMBO pmax pmax
comp=Z,3.0nm,1.0s
KMBO **Kilima Mbogo** 64.50 259 P **P** 01 00 53.1 -1.1
KMBO IAmb IAmb 01 00 57.2
comp=Z,14nm,1.5s
VSU **Vasula** 64.57 326 *e*P **P** 01 00 55.1 +1.5
IIGN **Ignalina** 64.69 323 *e*P **P** 01 00 55.6 +1.1
ISAL **Salakas** 64.76 323 *e*P **P** 01 00 56.0 +1.1
BIZ **Bicaz** 64.78 313⇓ P **P** 01 00 55.7 +0.5
KARP **Karpathos** 64.88 301 P **P** 01 00 55.1 -1.0
MLR **Muntele Rosu** 64.96 312⇑ P **P** 01 00 57.0 +0.5
MLR **Muntele Rosu** 64.96 312 P **P** 01 00 56.2 -0.4
MLR pmax pmax
comp=Z,34nm,1.2s
MLR **Muntele Rosu** 64.96 312 P **P** 01 00 56.1 -0.4
OZUR 65.04 313⇑ P **P** 01 00 58.1 +1.1
STKA **Stephens Creek** 65.09 141 P **P** 01 00 57.2 -0.2
comp=Z,9.3nm,0.9s,baz=313,slow=2.8,SNR=6.9
STKA **Stephens Creek** 65.09 141 P **P** 01 00 55.6 -1.8
STKA pmax pmax
comp=Z,2.0nm,0.9s
STKA **Stephens Creek** 65.09 141 P **P** 01 00 55.6 -1.8
FINES **FINESS Array B** 65.12 329 P **P** 01 00 56.0 -1.2
comp=Z,2.7nm,0.5s,baz=88,slow=5.4,SNR=28
FINES **FINESS Array B** 65.12 329 *i*P **P** 01 00 56.7 -0.5
FINES pmax pmax
comp=Z,3.0nm,0.5s
ELND **Elena** 65.17 309⇑ P **P** 01 00 59.2 +1.3
DOPR **Dopca** 65.32 312⇑ P **P** 01 00 60.0 +1.2
BURAR **Bucovina Array** 65.36 314⇑ P **P** 01 00 59.4 +0.2
BURAR **Bucovina Array** 65.36 314 P **P** 01 00 59.3 +0.2
BUR08 **Bucovina Ar. S** 65.37 314 P **P** 01 00 57.2 -2.0
BUR08 IAmb IAmb 01 01 05.1
comp=Z,14nm,1.4s
COPA **Copaceanca** 65.56 310⇑ P **P** 01 01 00.5 +0.2
KEV **Kevo** 65.76 339 P **P** 01 00 59.6 -1.5
KEV pmax pmax
comp=Z,35nm,1.5s
KEV **Kevo** 65.76 339 P **P** 01 00 59.6 -1.5
ARR **Arges** 65.89 312⇓ P **P** 01 01 01.9 -0.6
PABE **Paberze** 65.98 323 *e*P **P** 01 01 03.2 +0.5
LVV **L'vov** 66.05 317 *e*P **P** 01 01 02.3 -1.1
LVV *e*S **S** 01 09 47.2 -3.8
LVV MLR MLR
comp=E,100nm,15.0s
LVV MLR MLR
comp=N,200nm,14.0s
LVV MLR MLR
comp=Z,200nm,13.0s
ARCES **ARCESS Array B** 66.25 338 P **P** 01 01 03.8 -0.6
comp=Z,2.5nm,0.6s,baz=69,slow=6.6,SNR=5.9
KWP **Kalwaria Pacla** 66.92 316 P **P** 01 01 11.0 +2.0
DEV **Deva** 67.06 312⇑ P **P** 01 01 10.8 +0.8
DEV **Deva** 67.06 312 P **P** 01 01 10.7 +0.8
DRGR 67.12 313⇑ P **P** 01 01 10.3 0.0
DRGR 67.12 313 P **P** 01 01 13.7 +3.3
DRGR pmax pmax
comp=Z,27nm,1.0s
PBUR **Paburge** 67.13 323 *e*P **P** 01 01 10.3 +0.1
VTS **Vitosha** 67.13 309⇑ P **P** 01 01 11.6 +1.0
VTS **Vitosha** 67.13 309 P **P** 01 01 09.8 -0.9
VTS pmax pmax
comp=Z,5.0nm,0.9s
VTS **Vitosha** 67.13 309 P **P** 01 01 09.8 -0.9
KOLS **Kolonicke sedl** 67.25 316 *e*P **P** 01 01 10.8 -0.3
KOLS **Kolonicke sedl** 67.25 316 *e*P **P** 01 01 10.8 -0.3
UZH **Uzhgorod** 67.26 315 *e*P **P** 01 01 14.2 +3.1
UZH *i* 01 01 19.6
UZH *i* 01 01 39.2
BZS **Buzias** 67.98 312⇑ P **P** 01 01 15.4 -0.3
BZS **Buzias** 67.98 312 P P 01 01 20.9 +5.2
BZS pmax pmax
comp=Z,5.0nm,1.4s
MDVR **Moldovita** 68.00 311⇑ P **P** 01 01 16.4 +0.4
NIE **Niedzica** 68.50 316 *e*P **P** 01 01 20.1 +1.1
NIE **Niedzica** 68.50 316 P **P** 01 01 20.3 +1.3
FNA **Florina** 68.73 307 P **P** 01 01 22.5 +1.9
FNA pmax pmax
comp=Z,12nm,1.5s
FNA **Florina** 68.73 307 IAmb IAmb 01 01 25.7
comp=Z,9.6nm,0.9s
OJC **Ojcow** 68.75 317 *e*P **P** 01 01 20.8 +0.3
OJC **Ojcow** 68.75 317 P **P** 01 01 23.3 +2.8
OJC **Ojcow** 68.75 317 IAmb IAmb 01 01 23.9
comp=Z,7.1nm,0.9s
VYHS **Vyhne** 69.56 316 *e*P **P** 01 01 25.7 +0.2
VYHS **Vyhne** 69.56 316 *e*P **P** 01 01 25.7 +0.2
OKC **Ostrava-Krasne** 69.85 317 *e*P **P** 01 01 28.3 +1.0
OKC **Ostrava-Krasne** 69.85 317 *e*P **P** 01 01 28.3 +1.0
SRO **Srobarova** 69.99 315 *e*P **P** 01 01 31.1 +2.9
SRO **Srobarova** 69.99 315 *e*P **P** 01 01 31.1 +2.9
MORC **Moravsky Berou** 70.25 317 *e*P **P** 01 01 32.4 +2.6
MORC **Moravsky Berou** 70.25 317 ⇓P **P** 01 01 30.0 +0.2
MORC **Moravsky Berou** 70.25 317 P **P** 01 01 30.0 +0.2
JAVC **Velka Javorina** 70.28 316 *e*P **P** 01 01 34.3 +4.3
KRLC **Kraliky** 70.69 317 *e*P **P** 01 01 31.7 -0.8
KRLC *e* 01 01 35.4
KRLC **Kraliky** 70.69 317 *e*P **P** 01 01 31.7 -0.8
KRLC *e*pP **pP** 01 01 35.4 -2.1
KSP **Ksiaz** 70.90 318 *e*P **P** 01 01 34.1 +0.4
KSP **Ksiaz** 70.90 318 P **P** 01 01 35.0 +1.3
VRAC **Vranov** 70.92 317 *e*P **P** 01 01 34.1 +0.2
VRAC **Vranov** 70.92 317 ⇓P **P** 01 01 34.5 +0.6
VRAC **Vranov** 70.92 317 P **P** 01 01 34.4 +0.6
DPC **Dobruska-Polom** 70.95 318 *e*P **P** 01 01 33.9 -0.2
DPC *e* 01 01 37.1
DPC **Dobruska-Polom** 70.95 318 *e*P **P** 01 01 33.9 -0.2
DPC *e*pP **pP** 01 01 37.1 -2.0
KRUC **Moravsky** 71.08 316 *e*P **P** 01 01 37.5 +2.6
CHVC **Chvalec** 71.09 318 *e*P **P** 01 01 34.5 -0.4
CHVC *e*pP **pP** 01 01 37.6 -2.3
HFS **Hagfors** 71.21 328 P **P** 01 01 34.8 -0.6
comp=Z,2.6nm,0.5s,baz=120,slow=5.5,SNR=2.3
CONA **Conrad Observa** 71.60 315 *e*pP **P** 01 01 38.5 +0.4
comp=Z,12nm,1.5s
TREC **Trest** 71.64 317 *e*P **P** 01 01 41.4 +3.2
TREC **Trest** 71.64 317 *e*P **P** 01 01 41.4 +3.2
ARSA **Arzberg** 71.94 315 *e*P **P** 01 01 40.3 +0.2
comp=Z,4.2nm,0.8s
GOPC **GO Pecny, Ondr** 71.99 317 *e*P **P** 01 01 43.2 +2.8
GOPC **GO Pecny, Ondr** 71.99 317 *e*P **P** 01 01 43.2 +2.8
PVCC **Panska Ves** 72.03 318 P **P** 01 01 45.1 +4.6
NC405 **NORSAR Array S** 72.05 329 P **P** 01 01 39.2 -1.3
GCIS **Gornji Cirnik** 72.10 313 *i*P **P** 01 01 44.2 +3.1
PRU **Pruhonice** 72.14 317 *e*P **P** 01 01 41.2 0.0
PRU *e* 01 01 44.0
PRU **Pruhonice** 72.14 317 *e*P **P** 01 01 41.2 0.0
PRU *e*pP **pP** 01 01 44.0 -2.2
RGN **Rugen** 72.16 322 *e*P **P** 01 01 42.8 +1.6
NORES **NORESS Array B** 72.19 329 P **P** 01 01 43.8 +2.5
RUE **Ruedersdorf** 72.21 320 *e*P **P** 01 01 43.0 +1.5
RUE **Ruedersdorf** 72.21 320 *e*P **P** 01 01 44.7 +3.1
comp=Z,33nm,1.0s,baz=79,slow=5.8
CRES **Cresnjev** 72.22 313 *i*P **P** 01 01 44.2 +2.4
NB2 **NORSAR Subarra** 72.30 329 P **P** 01 01 40.7 -1.3
comp=Z,12nm,1.2s,baz=82,slow=6.2
NOA **NORSAR Array B** 72.30 329 P **P** 01 01 41.0 -1.0
comp=Z,3.1nm,0.8s,baz=82,slow=6.0,SNR=11
SOKA **Soboth** 72.37 314 *e*pP **P** 01 01 44.1 +1.3
comp=Z,5.6nm,1.1s
BRG **Berggiesshubel** 72.37 318 *e*P **P** 01 01 45.3 +2.7
comp=Z,8.3nm,1.1s
BRG S **SKiKP** 01 11 13.0 -4.9
BRG **Berggiesshubel** 72.37 318 *e*P **P** 01 01 45.6 +3.1
comp=Z,14nm,1.2s,baz=79,slow=5.8
BRG **Berggiesshubel** 72.37 318 *e*P **P** 01 01 45.3 +2.7
BRG S **SKiKP** 01 11 13.0 -4.9

BRG pmax pmax
comp=Z,8.0nm,1.1s
NC204 NORSAR Array S 72.49 330 P **P 01 01 41.5 -1.6**
MOA Molln 72.68 315 *eP* **P 01 01 44.5 0.0**
comp=Z,12nm,1.1s
OBKA Obir 72.72 314 pP **P 01 01 46.0 +1.1**
comp=Z,7.8nm,1.3s
FBE Freiberg 72.73 319 *eP* **P 01 01 48.2 +3.5**
comp=Z,22nm,1.2s,baz=79,slow=5.8
GEC2 GERESS Array S 72.87 316 *eP* **P 01 01 48.9 +3.2**
comp=Z,14nm,1.2s,baz=79,slow=5.8
GEC2 GERESS Array S 72.87 316 lAmb lAmb 01 01 50.1
comp=Z,9.2nm,1.0s
GERES GERESS Array B 72.87 316 P **P 01 01 45.6 -0.1**
comp=Z,4.2nm,0.8s,baz=65,slow=6.3,SNR=18
CLL Collm 72.88 319 *i* P **P 01 01 48.9 +3.3**
comp=Z,15nm,1.3s
CLL Collm 72.88 319 *eP* **P 01 01 49.3 +3.7**
comp=Z,15nm,1.3s,baz=79,slow=5.8
CLL Collm 72.88 319 *i* P **P 01 01 48.9 +3.3**
CLL pmax pmax
comp=Z,15nm,1.3s
CLL Collm 72.88 319 P **P 01 01 45.5 -0.1**
CLL lAmb lAmb 01 01 51.8
comp=Z,16nm,1.3s
KHC Kasperske Hory 72.90 317⇓ *i* P **P 01 01 49.2 +3.4**
KHC pmax pmax
comp=Z,14nm,1.0s
KHC Kasperske Hory 72.90 317 *eP* **P 01 01 48.4 +2.6**
KHC Kasperske Hory 72.90 317 P **P 01 01 43.8 -2.1**
CADS Cadrg 73.33 314 *eP* **P 01 01 47.2 -1.2**
WET Wettzell 73.35 317 *eP* **P 01 01 51.7 +3.3**
comp=Z,18nm,1.4s,baz=79,slow=5.8
TANN Tannenbergstha 73.38 318 *eP* **P 01 01 51.6 +2.9**
comp=Z,29nm,1.6s,baz=79,slow=5.8
NKC Novy Kostel 73.42 318 *eP* **P 01 01 52.0 +3.2**
NKC Novy Kostel 73.42 318 *eP* **P 01 01 52.0 +3.2**
KBA Koelnbreinsper 73.43 315 *eP* **P 01 01 48.6 -0.6**
comp=Z,6.7nm,0.9s
WERN Wernitzgruen 73.45 318 *eP* **P 01 01 52.2 +3.2**
comp=Z,6.4nm,0.9s,baz=79,slow=5.8
GUNZ Gunzen 73.47 318 *eP* **P 01 01 52.3 +3.1**
comp=Z,15nm,1.3s,baz=79,slow=5.8
PLN Plauen 73.56 318 *eP* **P 01 01 52.7 +3.1**
comp=Z,8.4nm,1.2s,baz=79,slow=5.8
NEUB Neuenburg 73.66 319 *eP* **P 01 01 53.2 +3.0**
comp=Z,15nm,1.0s,baz=79,slow=5.8
ROTZ Rotzenmuhle 73.66 318 *eP* **P 01 01 53.8 +3.6**
comp=Z,24nm,1.4s,baz=79,slow=5.8
RJOB Jochberg 73.67 315 *eP* **P 01 01 53.2 +2.8**
comp=Z,11nm,1.1s,baz=79,slow=5.8
MANZ Manzenberg 73.68 318 *eP* **P 01 01 53.8 +3.4**
comp=Z,9.2nm,1.2s,baz=79,slow=5.8
MOX Moxa 73.86 319 *eP* **P 01 01 54.5 +3.0**
comp=Z,12nm,1.3s,baz=79,slow=5.8
BSEG Bad Segeberg 74.00 322 *eP* **P 01 01 55.7 +3.6**
comp=Z,24nm,1.3s,baz=79,slow=5.8
ABTA Abfaltersbach 74.06 314 *eP* **P 01 01 52.8 +0.1**
comp=Z,9.9nm,1.4s
GRF Grafenberg Arr 74.30 318 *eP* **P 01 01 57.6 +3.6**
comp=Z,29nm,1.6s,baz=79,slow=5.8
CLZ Clausthal 74.39 320 *eP* **P 01 01 57.8 +3.2**
comp=Z,18nm,1.0s,baz=79,slow=5.8
NRDL Niedersach Rie 74.42 321 *eP* **P 01 01 57.8 +3.3**
comp=Z,38nm,1.7s,baz=79,slow=5.8
NOR Nord 74.43 352 *eP* **P 01 01 56.5 +2.3**
NOR Nord 74.43 352 *i* P **P 01 01 56.5 +2.3**
NRCA Norcia 74.45 310 lAmb lAmb 01 02 37.2
comp=Z,11nm,1.0s
WTTA Wattenberg 74.54 315 *eP* **P 01 01 54.7 -0.9**
comp=Z,12nm,1.1s
WATA Walderalm 74.56 315 *eP* **P 01 01 55.1 -0.6**
comp=Z,10nm,0.9s
GTTG Gottingen 74.70 320 *eP* **P 01 01 59.4 +3.2**
comp=Z,20nm,1.1s,baz=79,slow=5.8
SQTA Sankt Quirin 74.83 315 *eP* **P 01 01 56.7 -0.6**
comp=Z,8.6nm,0.6s
UBBA Unterbreizbach 74.83 319 *eP* **P 01 01 60.0 +3.1**
comp=Z,6.3nm,0.9s,baz=79,slow=5.8
MOTA Moosalm 74.87 315 P **P 01 01 56.9 -0.6**
comp=Z,15nm,1.0s
RETA Reutte 75.07 315 *eP* **P 01 01 58.0 -0.6**
comp=Z,11nm,0.7s
FETA Feichten 75.19 315 *eP* **P 01 01 58.5 -0.9**
comp=Z,14nm,1.3s
UBR Ueberruh 75.46 316 *eP* **P 01 02 03.3 +2.5**
comp=Z,9.9nm,1.0s,baz=79,slow=5.8
FUORN Ofenpass-Fuorn 75.60 315 P **P 01 02 00.5 -1.4**
DAVA Damuels 75.70 315 *eP* **P 01 02 02.1 -0.2**
comp=Z,11nm,0.9s
STU Stuttgart 75.80 317 *eP* **P 01 02 05.8 +3.2**
comp=Z,26nm,1.1s,baz=79,slow=5.8
TNS Taunus Mts 75.93 319 *eP* **P 01 02 06.5 +3.1**
comp=Z,13nm,0.9s,baz=79,slow=5.8
AHRW Bad Neuenahr-A 76.71 319 *eP* **P 01 02 11.2 +3.4**
comp=Z,20nm,1.3s,baz=79,slow=5.8
CDF Champ du Feu 77.12 317 *eP* **P 01 02 14.6 +4.3**
CDF pmax pmax
comp=Z,6.0nm,0.8s
DAG Danmarks Havn 77.20 348 *i* P **P 01 02 13.0 +3.0**
DAG pmax pmax
comp=Z,200nm,1.1s
DAG Danmarks Havn 77.20 348 *i* P **P 01 02 13.0 +3.0**
comp=Z,6.2nm,1.1s
DZM Mont Dzumac 77.31 119 *e*LR LR 01 26 19.3
comp=Z,436nm,23.1s
WLF Walferdange 77.51 318 sP sP 01 02 16.1 -3.0
WLF Walferdange 77.51 318 *eP* sP 01 02 16.1 -3.0
comp=Z,35nm,1.4s,baz=79,slow=5.8
WLF Walferdange 77.51 318 P **P 01 02 11.9 -0.4**
WLF pmax pmax
comp=Z,18nm,1.0s
WLF Walferdange 77.51 318 P **P 01 02 11.9 -0.4**
WLF lAmb lAmb 01 02 19.3
comp=Z,18nm,1.0s
HAU Haudompre 77.83 317 *eP* **P 01 02 17.9 +3.7**
HAU pmax pmax
comp=Z,9.0nm,1.2s
SBF Sospel 78.22 312 *eP* **P 01 02 20.7 +4.2**
SBF pmax pmax
comp=Z,8.0nm,0.8s
BNI Bardonecchia 78.42 314 P **P 01 02 17.0 -0.6**
BNI pmax pmax
comp=Z,12nm,1.3s
BNI Bardonecchia 78.42 314 P **P 01 02 17.0 -0.6**
BNI lAmb lAmb 01 02 31.6
comp=Z,12nm,1.3s
MBDF Montbardon 78.44 313 *eP* P 01 02 23.1 +5.3
MBDF pmax pmax
comp=Z,11nm,1.1s
ORIF Oris-en-Rattie 79.00 314 *eP* **P 01 02 25.5 +4.7**
ORIF pmax pmax
comp=Z,4.0nm,0.9s
KEST Kesra 79.04 304 P **P 01 02 21.2 0.0**
comp=Z,2.2nm,0.8s,baz=351,slow=23,SNR=3.2
KEST Kesra 79.04 304 P **P 01 02 19.2 -2.0**
KEST lAmb lAmb 01 02 42.1
comp=Z,22nm,1.4s
LOR Lormes 79.65 316 *eP* **P 01 02 28.6 +4.4**
LOR pmax pmax
comp=Z,12nm,1.4s
VIVF Saint-Julien-l 79.84 314 *eP* **P 01 02 27.7 +2.4**
VIVF pmax pmax
comp=Z,8.0nm,1.0s
SMF Signal de Mont 79.85 316 *eP* **P 01 02 27.4 +2.1**
SMF pmax pmax
comp=Z,7.0nm,0.9s
SSF Saint Saulge 79.95 316 *eP* **P 01 02 30.3 +4.5**
SSF pmax pmax
comp=Z,7.0nm,0.8s
AVF Avril sur Loir 80.13 316 *eP* **P 01 02 28.9 +2.2**
AVF pmax pmax
comp=Z,22nm,1.7s
MLY Manley 80.36 24 P **P 01 02 26.5 -1.3**
BPAW Bear Paw Mtn. 80.67 25 lAmb lAmb 01 02 32.6
comp=Z,17nm,1.3s
PPLA Purkeypile 80.70 26 lAmb lAmb 01 02 32.9
comp=Z,39nm,1.5s
TCF Toulx Ste Croi 81.04 316 *eP* **P 01 02 33.1 +1.4**
TCF pmax pmax
comp=Z,2.0nm,0.2s
EKA Eskdalemuir Ar 81.12 326 P **P 01 02 34.6 +2.7**
NEA Nenana 81.20 24 lAmb lAmb 01 02 34.1
comp=Z,13nm,1.4s
LDF La Druitiere 81.76 319 *eP* **P 01 02 39.9 +4.5**
LDF pmax pmax
comp=Z,7.0nm,0.8s
RJF Les Rejaudoux 81.82 315 *eP* P 01 02 41.0 +5.2
RJF pmax pmax
comp=Z,11nm,1.3s
RND Reindeer 81.83 25 lAmb lAmb 01 02 37.1
comp=Z,15nm,1.2s
ILAR Eielson Array 81.94 23 P **P 01 02 34.0 -2.0**
comp=Z,1.0nm,1.0s,baz=249,slow=4.6,SNR=5.7
ILAR PP **PP 01 05 44.3 +1.2**
comp=Z,1.3nm,1.0s,baz=286,slow=6.3,SNR=7.0
SML Sawmill 82.80 26 lAmb lAmb 01 02 42.8
comp=Z,16nm,1.1s
SGMF Saint Gilles 83.39 319 *eP* P 01 02 48.9 +5.0
SGMF pmax pmax
comp=Z,31nm,1.3s
ROSF Rostrenen 83.81 319 *eP* P 01 02 51.2 +5.1
ROSF pmax pmax
comp=Z,28nm,1.1s
SUMG Summit 83.88 348 *i* P P 01 03 02.0 +16
comp=Z,38nm,1.2s
ETSF Etsaut 84.05 313 *eP* P 01 02 52.7 +5.1
ETSF pmax pmax
comp=Z,25nm,1.7s
INK Inuvik 84.30 17 P **P 01 02 47.8 -0.4**
INK pmax pmax
comp=Z,15nm,1.3s
INK Inuvik 84.30 17 P **P 01 02 47.8 -0.4**
INK lAmb lAmb 01 02 51.0
comp=Z,15nm,1.2s
RES Resolute Bay 85.47 4 lAmb lAmb 01 03 17.2
comp=Z,6.7nm,1.0s
BOSA Boshof 86.31 238 P **P 01 02 59.3 +0.3**
comp=Z,3.4nm,0.9s,baz=104,slow=2.5,SNR=4.1
BOSA Boshof 86.31 238 P **P 01 02 56.8 -2.2**
BOSA pmax pmax
comp=Z,43nm,1.6s
BOSA Boshof 86.31 238 P **P 01 02 56.8 -2.2**
ESDC Sonseca Array 87.65 311 P **P 01 03 05.5 0.0**
comp=Z,3.0nm,1.1s,baz=57,slow=4.4,SNR=10.0
WHY Whitehorse 88.82 24 lAmb lAmb 01 03 13.5
comp=Z,9.9nm,1.2s
TORD Torodi Ar. Bea 92.95 285 P **P 01 03 30.0 -0.6**
comp=Z,0.9nm,0.7s,baz=57,slow=4.5,SNR=5.2
TORD PP **PP 01 07 13.9 +0.7**
comp=Z,1.7nm,1.0s,baz=29,slow=3.4,SNR=4.7
YKA Yellowknife Ar 93.82 15 P **P 01 03 34.2 +0.7**
comp=Z,0.7nm,1.0s,baz=330,slow=4.1,SNR=6.8
YKA PP **PP 01 07 19.1 +0.9**
comp=Z,0.7nm,0.8s,baz=332,slow=7.7,SNR=6.4
SYO Syowa Base 98.13 198⇑ *eP* **P 01 03 48.4 -4.4**
SYO Syowa Base 98.13 198⇑ *e*Pdiff Pdif 01 03 54.6 +1.8
PPT2 Papeete2 114.80 101 *e*LR LR 01 43 23.4
comp=Z,632nm,29.0s
TBI Tubuai 116.14 107 *e*LR LR 01 44 11.4
comp=Z,550nm,31.5s
W39A Magazine 124.04 13 PKPpre 01 09 04.3
ABTX Abilene, Hawle 124.90 20 **PKiKP 01 09 18.1 +0.5**
TXAR Lajitas Array 126.41 25 PKP **PKiKP 01 09 21.5 +0.7**
comp=Z,0.5nm,0.8s,baz=77,slow=0.4,SNR=6.4
JCT Junction City 126.82 21 PKIKP **PKiKP 01 09 22.0 +0.5**
BDFB Wasilla 148.94 272 PKPbc **PKPbc 01 10 06.2 +0.6**
comp=Z,3.2nm,0.8s,baz=39,slow=3.8,SNR=3.6
SDV Santo Domingo 150.12 340 **PKiKP 01 10 09.8 +0.3**
RUSC La Rusia 153.67 343 **PKPdf 01 10 09.3 0.0**
RUSC PKPbc **PKPbc 01 10 19.3 +2.1**
PLCA Paso Flores 157.32 200 PKPab **PKPab 01 10 44.3 +0.3**
comp=Z,3.4nm,1.1s,baz=229,slow=13,SNR=2.5
CPUP Villa Florida 157.77 248 PKPab **PKPab 01 10 46.0 -0.4**
comp=Z,1.4nm,0.9s,baz=96,slow=6.0,SNR=4.3
CPUP Villa Florida 157.77 248 PKIKP **PKPdf 01 10 11.5 -2.3**
CPUP Villa Florida 157.77 248 PKPdf **PKPdf 01 10 11.5 -2.3**
CPUP **PKPab 01 10 44.0 -2.4**

*BJI **06** 00:58:18.7±0.0, 19°.39N×99°.42E, h16km, mB5.4/46, mb4.9/60, ML5.7/4, Ms5.7/66, Ms7 5.4/60*
*MOS **06** 00:58:19.7±1.0, 19°.63N×99°.47E, h11km, mb5.2/78, MS4.9/26, Error ellipse: s-maj=6.2km s-min=3.4km az=115.4*
*SOME **06** 00:58:19.0±0.0, 19°.63N×99°.48E, h10km, mb5.3/6, Ms4.6/4*
*NEIC **06** 00:58:20.5±2.4, 19°.62N±0°.04×99°.47E±0°.05, h10km±1km, mb5.0/124, Error ellipse: s-maj=7.8km s-min=5.2km az=118.0*
*GCMT **06** 00:58:20.5±0.1, 19°.63N±0°.01×99°.57E±0°.01, h12km, MW5.3/144, Moment Tensor Solution. s53,c66; s144,c253; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr-0.42±.02; Mθθ-0.47±.01; Mφφ0.89±.01; Mrθ0.25±.05; Mrφ0.56±.01; Mθφ-0.14±.04; Best double couple: M0 0.98000×10^17 NP1:φ240.00000°, δ66.00000°, λ-24.00000°. NP2:φ340.00000°, δ68.00000°, λ-154.00000°. Principal axes: T 1.0990, Plg2.0000°, Azm110.0000°; N -0.2390, Plg57.0000°, Azm17.0000°; P -0.8600, Plg33.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **06** 00:58:22.0±1.7, 19°.61N×99°.50E, h16km±10km, mb4.7/51, mb1 4.7/53, mb1mx4.6/67, mbtmp4.8/53, ML4.8/2, MS4.7/22, Ms1 4.7/22, ms1mx4.5/48 Error ellipse: s-maj=9.6km s-min=7.2km az=64.0*
*KLM **06** 00:58:22.0, 19°.70N×99°.15E, h10km, mb5.1*
*BGR **06** 00:58:24.4±0.0, 19°.02N×99°.20E, h33km, mb5.1*
ISC 06 00:58:20.9±0.6, 19°.61N±0°.03×99°.44E±0°.03, h10km±3km, n602, σ1°80/584, mb5.0/227, MS4.9/53, 35C-20D, Thailand

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHTO	**Chiang Mai**	**0.92**	**210**	P	**Pn**	**00 58 40.0**	**0.0**
CHTO						00 58 54.5	
CHTO	**Chiang Mai**	**0.92**	**210**	Pg	**Pn**	**00 58 40.0**	**0.0**
CHTO					**Sn**	**00 58 54.5**	**+1.2**
CM31	**Chiang Mai Arr**	**1.24**	**202**		**Pg**	**00 58 44.9**	**+0.1**
CM31				Sn	**Sn**	**00 59 01.2**	**0.0**
CMAR	**Chiang Mai Arr**	**1.24**	**202**	Pg	**Pg**	**00 58 44.7**	**-0.1**
	2μm,0.3s,baz=14,slow=15,SNR=140						
CMAR				Lg	Lg	00 59 04.3	
	4μm,0.3s,baz=236,slow=30,SNR=9.0						
PBKT	**Sadao Pong**	**3.36**	**154**		**Pn**	**00 59 13.8**	**+0.3**
SLVN	**Son La**	**4.52**	**67**	Pn	**Pn**	**00 59 30.1**	**+0.5**
SLVN				Pg	**Pb**	**00 59 43.1**	**+2.6**
KMI	**Kunming**	**6.28**	**29**	Pn	Pn	00 59 58.9	+5.1
KMI				Pg	**Pg**	**01 00 16.5**	**-4.7**
KMI				Sg	**Sg**	**01 01 42.5**	**0.0**
KMI				LR	LR		
	comp=N,383μm,6.1s						
KMI				LR	LR		
	comp=Z,159μm,6.5s						
KMI	**Kunming**	**6.28**	**29**	P	**Pn**	**00 59 54.2**	**+0.4**
KMI	**Kunming**	**6.28**	**29**	Pn	**Pn**	**00 59 54.2**	**+0.4**
KMI					**Pg**	**01 00 19.2**	**-2.0**
BRDH	**Bariadhala**	**7.89**	**294**	Pn	**Pn**	**01 00 17.6**	**+1.9**
	30nm,0.3s,baz=67,slow=21,SNR=1.9						
BRDH				Sn	**Sn**	**01 01 43.5**	**-1.6**
	34nm,0.3s,baz=70,slow=13,SNR=3.5						
BRDH				Lg	Lg	01 02 14.4	
	36nm,0.3s,baz=323,slow=23,SNR=4.4						
BRDH				LR	LR	01 04 32.4	
	comp=Z,13μm,19.5s,baz=150,slow=47						
AGT	**Agartala**	**8.71**	**301**	*ex*	**Pn**	**01 00 30.0**	**+3.0**
SHL	**Shillong**	**9.15**	**312**	*eP*	**Pn**	**01 00 33.5**	**+0.2**
SHL				lAmb	lAmb	01 00 39.3	
	comp=Z,233nm,1.0s						
SHL	**Shillong**	**9.15**	**312**	P	**Pn**	**01 00 33.3**	**+0.1**
SHL						01 02 11.4	
SHL	**Shillong**	**9.15**	**312**		**Pn**	**01 00 33.3**	**+0.1**
SHL					**Sn**	**01 02 11.4**	**-5.0**
GYA	**Guiyang**	**9.52**	**43**⇑	*iP*	**Pn**	**01 00 39.8**	**+1.6**
GYA				PP	**PnPn**	**01 00 53.9**	**+7.8**
GYA				S	**Sn**	**01 02 30.4**	**+5.0**
GYA				SS	**SnSn**	**01 02 42.9**	**+5.5**
GYA				pmax	pmax		
	comp=Z,30nm,1.4s						
GYA				pmax	pmax		
	comp=Z,1μm,6.4s						
GYA				LR	LR		
	comp=Z,18μm,6.2s						
GYA				LR	LR		
	comp=Z,14μm,6.0s						
GYA				LR	LR		
	comp=Z,19μm,6.2s						
GUWA	**GUWAHATI**	**9.69**	**314**	*eP*	**Pn**	**01 00 39.5**	**-0.9**
GUWA				lAmb	lAmb	01 00 50.3	
	comp=Z,49nm,0.6s						
QIZ	**Qiongzhong**	**9.84**	**92**	P	**Pn**	**01 00 41.8**	**-0.8**
QIZ				S	**Sn**	**01 02 33.9**	**+0.7**
QIZ				LR	LR		
	comp=Z,24μm,12.3s						
QIZ				LR	LR		
	comp=Z,12μm,13.7s						
QIZ				LR	LR		
	comp=Z,11μm,15.2s						
CD2	**Chengdu**	**11.90**	**18**	P	**Pn**	**01 01 14.4**	**+3.6**
CD2				S	**Sn**	**01 03 24.8**	**+1.0**
CD2				pmax	pmax		
	comp=Z,160nm,1.1s						
CD2				LR	LR		
	comp=Z,33μm,10.8s						
CD2				LR	LR		
	comp=Z,21μm,6.5s						
CD2				LR	LR		
	comp=Z,45μm,10.1s						
LSA	**Lhasa**	**12.55**	**325**	P	**Pn**	**01 01 22.4**	**+2.4**
LSA	**Lhasa**	**12.55**	**325**	P	**Pn**	**01 01 20.9**	**+0.9**
LSA	**Lhasa**	**12.55**	**325**		**Pn**	**01 01 20.9**	**+0.9**
ODAN	**Odare**	**13.21**	**305**	*eP*	**Pn**	**01 01 28.3**	**-0.6**
	comp=Z,245nm,1.0s						
TAPN	**Taplejung**	**13.23**	**308**	*eP*	**Pn**	**01 01 28.9**	**-0.2**
RAMN	**Ramite**	**13.87**	**304**	*eP*	**Pn**	**01 01 37.3**	**-0.5**
	comp=Z,112nm,0.7s						
KULM	**Kulim**	**14.29**	**175**	Pn	**Pn**	**01 01 40.1**	**-3.3**
KULM	**Kulim**	**14.29**	**175**	P	**P**	**01 01 48.0**	**-2.7**
LHMI	**Lhok Sumawe**	**14.50**	**190**	Pn	**Pn**	**01 01 45.1**	**-1.3**
JIRN	**Jiri**	**14.54**	**306**	*eP*	**Pn**	**01 01 45.8**	**-1.3**
GUN	**Gumba**	**14.90**	**306**	*eP*	**Pn**	**01 01 51.2**	**-0.8**
	comp=Z,106nm,0.9s						
PKI	**Pulchoki**	**15.09**	**304**	*eP*	**Pn**	**01 01 53.2**	**-1.4**
	comp=Z,107nm,1.0s						
PKIN	**Phulchoki**	**15.11**	**304**	*eP*	**Pn**	**01 01 53.1**	**-1.6**
	comp=Z,72nm,0.8s						
IPM	**Ipoh**	**15.12**	**174**	Pn	**Pn**	**01 01 52.2**	**-2.6**
IPM	**Ipoh**	**15.12**	**174**	P	**P**	**01 01 58.0**	**-2.0**
KKN	**Kakani**	**15.30**	**305**	*eP*	**Pn**	**01 01 55.2**	**-2.1**
	comp=Z,72nm,0.7s						
DMN	**Daman**	**15.35**	**304**	*eP*	**Pn**	**01 01 57.1**	**-0.8**
	comp=Z,106nm,1.1s						
MLSI	**Meulaboh, Aceh**	**15.54**	**191**	P	**P**	**01 02 05.0**	**+0.4**
	comp=Z,332nm,1.6s						
GKN	**Gorkha**	**15.90**	**304**	*eP*	**Pn**	**01 02 03.4**	**-1.6**
	comp=Z,273nm,0.9s						
KCSI	**Kotacane, Aceh**	**16.08**	**186**	P	**P**	**01 02 10.4**	**-0.2**
	comp=Z,236nm,1.7s						
KOLN	**Koldanda**	**16.61**	**302**	*eP*	**Pn**	**01 02 12.4**	**-1.8**
	comp=Z,228nm,1.0s						
XAN	**Xi'an**	**16.66**	**29**	P	**Pn**	**01 02 13.6**	**-1.0**
XAN				pP	sP	01 02 27.0	+5.5
XAN				pmax	pmax		
	comp=Z,74nm,1.3s						
XAN				pmax	pmax		
	comp=Z,1μm,5.3s						
XAN				LR	LR		
	comp=Z,16μm,11.4s						
XAN				LR	LR		
	comp=Z,19μm,13.1s						
XAN				LR	LR		
	comp=Z,12μm,13.3s						
XAN	**Xi'an**	**16.66**	**29**	P	**Pn**	**01 02 12.5**	**-2.1**
XAN				pmax	pmax		
	comp=Z,71nm,1.0s						
XAN	**Xi'an**	**16.66**	**29**		**Pn**	**01 02 12.5**	**-2.1**
XAN				lAmb	lAmb	01 02 19.5	
	comp=Z,71nm,1.0s						
PSI	**Prapat**	**16.72**	**182**	Pn	**P**	**01 02 18.8**	**+1.0**
	comp=Z,1.5nm,0.3s,baz=360,slow=7.6,SNR=21						
PSI				Lg	Lg	01 07 18.7	
	baz=0.6,slow=7.8,SNR=0.8						
PSI				LR	LR	01 08 28.3	
	comp=Z,3μm,18.5s,baz=271,slow=36						
DANN	**Dangsing**	**16.75**	**304**	*eP*	**Pn**	**01 02 13.8**	**-2.2**
	comp=Z,188nm,0.9s						
RPSI	**Rantau Prapat**	**16.82**	**182**	P	**P**	**01 02 18.8**	**0.0**
RPSI	**Rantau Prapat**	**16.82**	**182**	P	**Pn**	**01 02 16.8**	**0.0**
RPSI				lAmb	lAmb	01 02 26.2	
	comp=Z,68nm,1.0s						
LZH	**Lanzhou**	**16.86**	**12**⇑	P	**P**	**01 02 19.5**	**+0.1**
LZH				pP	sP	01 02 23.6	-0.2
LZH				sP	pP	01 02 26.5	+4.1
LZH				PP	**PnPn**	**01 02 33.1**	**+6.2**
LZH				SS	**S**	**01 05 42.5**	**+7.1**
LZH				pmax	pmax		
	comp=Z,20nm,1.5s						
LZH				pmax	pmax		
	comp=Z,120nm,5.4s						
LZH				LR	LR		
	comp=Z,9μm,8.1s						
LZH				LR	LR		
	comp=Z,8μm,9.8s						
LZH				LR	LR		
	comp=Z,9μm,9.8s						
PVM	**Polavaram**	**17.07**	**265**	*eP*	**Pn**	**01 02 20.6**	**+0.8**
PYUN	**Piuthan**	**17.24**	**302**	*eP*	**Pn**	**01 02 20.7**	**-1.4**
	comp=Z,560nm,1.2s						
WHN	**Wuhan**	**17.32**	**48**⇑	P	**P**	**01 02 26.3**	**+2.0**
WHN				S	**Sn**	**01 05 30.0**	**-5.8**
WHN				LR	LR		
	comp=Z,63μm,10.2s						
WHN				LR	LR		
	comp=Z,37μm,9.9s						
WHN				LR	LR		
	comp=Z,27μm,7.6s						
MYLAV	**Mylavaram**	**18.09**	**264**	*eP*	**Pn**	**01 02 31.3**	**-1.2**
MYKOM	**Kota Tinggi**	**18.23**	**166**	Pn	**Pn**	**01 02 31.2**	**-3.0**
MYKOM	**Kota Tinggi**	**18.23**	**166**	P	**P**	**01 02 37.0**	**+2.6**
GSI	**Gunungsitoli**	**18.29**	**186**	P	**P**	**01 02 35.1**	**0.0**
	comp=Z,150nm,2.2s						
ADKI	**Addanki**	**18.92**	**262**	*eP*	**Pn**	**01 02 44.2**	**+1.6**
RPR	**Rampur**	**19.04**	**271**	*eP*	**Pn**	**01 02 44.1**	**+0.1**
BKNI	**Bangkinang**	**19.23**	**175**	P	**Pn**	**01 02 51.7**	**+5.3**
NJS	**Nagarjunasagar**	**19.38**	**264**	*eP*	**Pn**	**01 02 48.4**	**+0.3**
MDRS	**Chennai**	**19.52**	**253**	*eP*	**Pn**	**01 02 52.4**	**+2.5**
MDRS				lAmb	lAmb	01 02 54.6	
	comp=Z,34nm,0.7s						
GTA	**Gaotai**	**19.73**	**1**⇑	P	**Pn**	**01 02 52.2**	**-0.1**
GTA				pP	sP	01 02 56.9	+1.5
GTA				sP	pP	01 02 59.2	+5.2
GTA				S	**S**	**01 06 27.7**	**-5.7**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,2μm,6.2s						
GTA				LR	LR		
	comp=Z,6μm,9.8s						
GTA				LR	LR		
	comp=Z,25μm,14.3s						
GTA				LR	LR		
	comp=Z,7μm,11.1s						
SKHT	**Srikalahasti**	**19.77**	**256**	*eP*	**Pn**	**01 02 53.3**	**+0.4**
SRLM	**Srisailam**	**19.86**	**263**	*eP*	**Pn**	**01 02 53.9**	**-0.1**
HYB	**Hyderabad**	**19.93**	**267**	*iP*	**Pn**	**01 02 55.0**	**+0.3**
	comp=Z,50nm,1.0s						
HYB	**Hyderabad**	**19.93**	**267**	*eP*	**Pn**	**01 02 55.3**	**+0.6**
HYBB	**Hyderabad (bro**	**19.93**	**267**	*eP*	**Pn**	**01 02 54.8**	**+0.1**
SRSP	**Sriramsagar**	**19.93**	**272**	*eP*	**Pn**	**01 02 54.3**	**-0.4**
SZP	**Santa**	**20.03**	**92**	P	**P**	**01 02 53.0**	**-1.1**
TPUB	**Ta-pu**	**20.06**	**76**	P	**P**	**01 02 51.5**	**-2.9**
SDSI	**Sungai Dareh**	**20.51**	**174**	P	Pn	01 03 02.6	+1.0
	comp=Z,5μmcomp=Z,117nm,1.7s						
KSM	**Kuching**	**20.93**	**148**	P	**P**	**01 03 02.9**	**-1.1**
KSM				lAmb	lAmb	01 03 07.3	
	comp=Z,86nm,1.1s						
KSM	**Kuching**	**20.93**	**148**	P	Pn	01 03 07.0	+0.5
SBUM	**Sibu**	**21.15**	**142**	P	**P**	**01 03 05.8**	**-0.5**
SBUM	**Sibu**	**21.15**	**142**	P	**P**	**01 03 09.0**	**+2.7**
KKM	**Kota Kinabalu**	**21.17**	**127**	P	**P**	**01 03 07.4**	**+0.8**
TIY	**Taiyuan**	**21.30**	**29**	*eP*	**P**	**01 03 08.2**	**+0.4**
TIY				S	**S**	**01 06 57.1**	**-7.3**
TIY				pmax	pmax		
	comp=Z,39nm,0.9s						
TIY				pmax	pmax		
	comp=Z,2μm,4.4s						
TIY				LR	LR		
	comp=Z,8μm,8.8s						
TIY				LR	LR		
	comp=Z,3μm,6.6s						
TIY				LR	LR		
	comp=Z,5μm,8.7s						
NJ2	**Nanjing**	**21.38**	**51**	*eP*	**P**	**01 03 09.4**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,40nm,0.5s						

NJ2 LR LR
comp=Z,29µm,12.3s
NJ2 LR LR
comp=Z,24µm,11.3s
NJ2 LR LR
comp=Z,7µm,8.2s
KLRI Killari 21.67 270 *e*P **P 01 03 12.8 +0.8**
URV Uravakonda 21.67 261 *e*P **P 01 03 13.0 +1.0**
DDI Dehra Dun 22.09 303 *e*P **P 01 03 18.7 +2.3**
DDI IAmb IAmb 01 03 21.6
comp=Z,50nm,0.6s
TIA Tai'an 22.69 40 P **P 01 03 22.9 +0.2**
TIA S **S 01 07 32.7 +1.7**
TIA pmax pmax
comp=Z,19nm,0.9s
TIA LR LR
comp=Z,7µm,14.8s
TIA LR LR
comp=Z,9µm,14.7s
TIA LR LR
comp=Z,4µm,7.0s
SSE Sheshan 22.69 55 P **P 01 03 23.9 +1.2**
SSE S **S 01 07 32.1 +1.0**
SSE pmax pmax
comp=Z,42nm,1.1s
SSE pmax pmax
comp=Z,980nm,6.4s
SSE LR LR
comp=Z,1µm,12.2s
SSE LR LR
comp=Z,8µm,11.1s
BTO Baotou 22.80 21 *e*P **P 01 03 24.2 +0.3**
SMLA Simla 23.11 304 *e*P **P 01 03 26.4 -0.7**
HHC Hu-ho-hao-te 23.57 23 P **P 01 03 32.4 +0.6**
HHC PP **PnPn 01 04 00.7 +2.1**
HHC S **S 01 07 43.6 -2.4**
HHC sS pS 01 07 50.4 +1.1
HHC pmax pmax
comp=Z,46nm,1.3s
HHC pmax pmax
comp=Z,270nm,7.6s
HHC LR LR
comp=Z,5µm,10.4s
HHC LR LR
comp=Z,3µm,10.0s
HHC LR LR
comp=Z,5µm,12.3s
BHK Bhakra 23.82 304 *ex* **P 01 03 39.2 +5.0**
DHRM DHARAMSHALA 24.25 306 *e*P **P 01 03 38.8 +0.2**
MDSI Maura Dua 24.40 168 P **P 01 03 39.0 -0.6**
comp=Z,1µmcomp=Z,75nm,1.4s
BJT Baijiatuau 24.90 32 P **P 01 03 44.5 +0.5**
BJT pmax pmax
comp=Z,71nm,1.0s
BJT Baijiatuau 24.90 32 P **P 01 03 44.5 +0.5**
BJI Beijing 24.92 32 P **P 01 03 46.3 +2.1**
BJI pmax pmax
comp=Z,71nm,1.1s
TBP Tagbilaran 25.57 109 *e*P **P 01 03 46.4 -3.9**
WMQ Urumqi 26.07 340 *e*P **P 01 03 57.1 +2.5**
WMQ pP sP 01 03 59.8 +0.6
WMQ sP pP 01 04 03.1 +5.2
WMQ pmax pmax
comp=Z,22nm,0.9s
WMQ pmax pmax
comp=Z,83nm,3.6s
WMQ LR LR
comp=Z,2µm,11.1s
WMQ LR LR
comp=Z,2µm,12.7s
DL2 Dalian 27.16 40 P **P 01 04 05.4 +1.0**
DL2 S **S 01 08 45.8 +2.8**
DL2 pmax pmax
comp=Z,64nm,1.2s
DL2 LR LR
comp=Z,5µm,15.6s
DL2 LR LR
comp=Z,7µm,16.1s
DL2 LR LR
comp=Z,4µm,12.0s
NIL Nilore 27.17 306 P **P 01 04 03.4 -1.2**
NIL pmax pmax
comp=Z,44nm,0.9s
NIL Nilore 27.17 306 P **P 01 04 03.4 -1.2**
LEM Lembang 27.48 162 P **P 01 04 09.4 +1.8**
comp=Z,31nm,0.7s,baz=60,slow=2.8,SNR=4.2
SONM Songino Array 28.71 10 P **P 01 04 19.3 +0.9**
comp=Z,23nm,1.0s,baz=192,slow=10,SNR=65
SONM ScP **ScP 01 11 09.5 -0.8**
comp=Z,0.8nm,0.5s,baz=188,slow=4.5,SNR=5.1
ULN Ulaanbaatar 28.85 11*c iP* **P 01 04 20.1 +0.4**
ULN pmax pmax
comp=Z,56nm,1.1s
ULN Ulaanbaatar 28.85 11 P **P 01 04 19.6 -0.1**
ULN **pP 01 04 20.5 -2.5**
PRZ Przheval'sk 28.91 327 P **P 01 04 22.8 +2.5**
PRZ pmax pmax
comp=Z,60nm,0.9s
UZB Uzunbulak 29.07 328 *e*P **P 01 04 22.6 +0.9**
comp=Z,13nm,1.0s
UZB Uzunbulak 29.07 328 *e*P **P 01 04 22.6 +0.9**
UZB pmax pmax
comp=Z,13nm,1.0s
KDJ Kajisay 29.31 325 P **P 01 04 25.7 +1.9**
KDJ pmax pmax
comp=Z,40nm,0.9s
SATY Saty 29.32 328 *e*P **P 01 04 24.4 +0.5**
comp=Z,33nm,1.5s
SATY eLR LR 01 16 48.5
SATY Saty 29.32 328 *e*P **P 01 04 24.4 +0.5**
SATY pmax pmax
comp=Z,33nm,1.5s
TJN Taejon 29.63 50*d iP* **P 01 04 27.0 +0.5**
ULHL Ulahol 29.90 324 P **P 01 04 30.6 +1.5**
SNR=27
TNSS Tian-Shan 30.06 326 *e*P **P 01 04 32.3 +1.5**
TNSS Tian-Shan 30.06 326 *e*P **P 01 04 32.2 +1.5**
MDOK Medeo 30.09 326 *e*P **P 01 04 32.0 +1.2**
MDOK eLR LR 01 16 58.2
comp=Z,1µm,15.1s
MDOK Medeo 30.09 326 *e*P **P 01 04 31.9 +1.2**
MDOK MLR MLR
comp=Z,1µm,15.0s
TTSI Tana Toraja 30.14 136 P **P 01 04 33.2 +2.0**
comp=Z,18nm,1.3s
AAA Alma-Ata 30.20 326 *e*P **P 01 04 33.3 +1.8**
AAA eLR LR 01 17 18.8
comp=Z,1µm,16.0s
AAA Alma-Ata 30.20 326 *e*P **P 01 04 33.3 +1.8**
AAA MLR MLR
comp=Z,1µm,16.0s
BOOM Boomskoye usch 30.23 324 P **P 01 04 33.6 +1.6**
BOOM pmax pmax
comp=Z,36nm,1.1s
BOOM Boomskoye usch 30.23 324 P **P 01 04 33.6 +1.6**
BOOM IAmb IAmb 01 04 37.8
comp=Z,36nm,1.1s
KZA Kyzart 30.35 323 P **P 01 04 34.7 +1.4**
SNR=6.5
KSRS Korea Array 30.52 48 P **P 01 04 34.3 -0.1**
comp=Z,5.1nm,1.0s,baz=244,slow=9.0,SNR=12
KSRS LR LR 01 17 35.4
comp=Z,891nm,19.4s,baz=236,slow=38
MK31 Makanchi Array 30.53 336 *i* P **P 01 04 35.2 +0.8**
MKAR Makanchi Array 30.53 336 P **P 01 04 35.4 +1.0**
comp=Z,42nm,0.7s,baz=144,slow=9.2,SNR=72
MKAR ScP **ScP 01 11 14.9 -1.1**
comp=Z,1.8nm,1.0s,baz=133,slow=5.1,SNR=4.4
MAKZ Makanchi 30.66 336 P **P 01 04 36.8 +1.2**
MAKZ pmax pmax
comp=Z,16nm,0.9s
MAKZ Makanchi 30.66 336 P **P 01 04 36.8 +1.2**
MAKZ IAmb IAmb 01 04 40.7
comp=Z,16nm,0.8s
TKM2 Tokmak 2 30.71 324 P **P 01 04 37.6 +1.4**
SNR=61
LUWI Luwuk 30.75 129 P **P 01 04 37.9 +1.3**
comp=Z,8µmcomp=Z,7µmcomp=Z,87nm,1.4s
LUWI Luwuk 30.75 129 P **P 01 04 36.1 -0.5**
TDK Taldyqorghan 30.75 330 eLR LR 01 16 32.8
comp=Z,1µm,11.9s
ZAK Zakamensk 30.85 5 *e*P **P 01 04 37.8 +0.5**
ZAK pmax pmax
comp=Z,23nm,1.4s
UCH Uchtor 30.86 322 P **P 01 04 42.2 +4.3**
SNR=7.5

KBK Karagaybulak 30.89 323 P **P 01 04 39.6 +1.7**
SNR=16
KUU Kurty 30.97 327 *e*P **P 01 04 38.1 -0.2**
comp=Z,73nm,2.1s
KUU *e*LR LR 01 18 25.3
comp=Z,948nm,13.6s
KUU Kurty 30.97 327 *e*P **P 01 04 38.1 -0.2**
KUU pmax pmax
comp=Z,73nm,2.1s
KUU MLR MLR
comp=Z,948nm,14.0s
JNU Nakatsue 31.08 58 LR LR 01 18 36.4
comp=Z,2µm,18.8s,baz=246,slow=39
AAK Ala-Archa 31.14 323 P **P 01 04 41.6 +1.6**
comp=Z,29nm,1.0s,baz=140,slow=5.2,SNR=17
AAK Ala-Archa 31.14 323 P **P 01 04 44.7 +4.7**
SNR=30
AAK Ala-Archa 31.14 323 P **P 01 04 39.8 -0.2**
CHMS Chumysh 31.23 324 P **P 01 04 41.4 +0.8**
SNR=7.1
AML Almayashu 31.28 322 P **P 01 04 42.9 +1.3**
SNR=28
DGZ Jazzator, Alta 31.52 345*‖ iP* **P 01 04 44.7 +1.5**
DGZ pmax pmax
comp=Z,35nm,1.5s
USP Ospenovka 31.54 324 P **P 01 04 48.1 +4.7**
SNR=14
EKS2 Erkin-Say 31.56 322 P **P 01 04 45.6 +1.9**
SNR=17
SGDS Sogindy 31.59 324 *e*P **P 01 04 44.6 +0.8**
comp=Z,42nm,1.4s
BTK Batken 31.89 316 P **P 01 04 47.6 +1.0**
BTK pmax pmax
comp=Z,33nm,1.0s
BTK Batken 31.89 316 P **P 01 04 47.5 +1.0**
MOY Mondy 32.01 2 *e*P **P 01 04 49.6 +2.1**
MOY pmax pmax
comp=Z,47nm,1.5s
TLY Talaya 32.17 5 P **P 01 04 51.3 +2.5**
comp=Z,7.2nm,0.8s,baz=196,slow=8.8,SNR=15
TLY LR LR 01 19 05.3
comp=Z,3µm,20.8s,baz=178,slow=39
TLY Talaya 32.17 5*c iP* **P 01 04 51.5 +2.7**
TLY pmax pmax
comp=Z,99nm,1.5s
TLY MLR MLR
comp=Z,10µm,11.0s
TLY Talaya 32.17 5 P **P 01 04 50.5 +1.7**
TLY IAmb IAmb 01 04 52.5
comp=Z,13nm,1.0s
TLY PP **PP 01 05 59.9 -1.6**
CHGR Chuyangaron 32.33 312 P **P 01 04 49.8 -0.7**
CHGR IAmb IAmb 01 04 55.7
comp=Z,16nm,0.7s
BTLS Baital 32.95 326 *e*P **P 01 04 56.0 +0.3**
comp=Z,17nm,1.4s
BTLS Baital 32.95 326 *e*P **P 01 04 56.0 +0.3**
BTLS pmax pmax
comp=Z,17nm,1.4s
DZA Taraz 33.13 321 *e*P **P 01 04 59.8 +2.4**
DZA Taraz 33.13 321 *e*P **P 01 04 59.7 +2.4**
IUG Iuzhnay 33.51 319 *e*P **P 01 05 01.0 +0.2**
IUG Iuzhnay 33.51 319 *e*P **P 01 05 00.9 +0.2**
PLAI Plampang 33.54 146 P **P 01 05 02.4 +1.3**
comp=Z,661nmcomp=Z,30nm,1.3s
KK31 Karatay Array 33.75 320 *e*P **P 01 05 02.8 +0.1**
KK31 Karatay Array 33.75 320 IAmb IAmb 01 05 07.0
comp=Z,13nm,0.8s
KKAR Karatay Array 33.75 320 IAmb IAmb 01 05 07.0
comp=Z,13nm,0.8s
CIT Chita 34.18 16 *e*P **P 01 05 07.8 +1.5**
CIT *e* 01 05 16.2
KURBB Kurchatov Arra 35.10 337 P **P 01 05 14.9 +0.7**
comp=Z,32nm,0.7s,baz=145,slow=8.9,SNR=87
KURBB S **S 01 10 49.2 +2.4**
comp=Z,0.6nm,1.0s,baz=278,slow=38,SNR=1.8
KURBB ScP **ScP 01 11 30.5 -1.1**
comp=Z,1.4nm,0.9s,baz=149,slow=3.0,SNR=5.1
KURBB Kurchatov Arra 35.10 337 P **P 01 05 14.6 +0.4**
KURK Kurchatov 35.14 337*c iP* **P 01 05 15.2 +0.6**
KURK pmax pmax
comp=Z,63nm,0.8s
KURK Kurchatov 35.14 337 P **P 01 05 15.4 +0.8**
KURK PP **PnPn 01 06 30.0 -2.1**
MDJ Mudanjiang 35.34 38 P **P 01 05 17.2 +0.8**
MDJ pmax pmax
comp=Z,15nm,1.4s
MDJ pmax pmax
comp=Z,150nm,7.5s
OTUK Ortayu 35.99 329 P **P 01 05 22.4 +0.4**
HRA Herat 36.04 302 P **P 01 05 22.6 -0.2**
ZALV Zalesovo Beam 36.07 345 P **P 01 05 23.2 +0.7**
comp=Z,34nm,1.0s,baz=154,slow=8.9,SNR=29
USA0B Ussuriysk Arra 36.55 41*‖ iP* **P 01 05 27.2 +0.4**
USA0B Ussuriysk Arra 36.55 41 P **P 01 05 26.4 -0.4**
USRK Ussuriysk Ar. 36.55 41 P **P 01 05 26.4 -0.4**
comp=Z,9.1nm,0.9s,baz=243,slow=8.3,SNR=12
BRZS Berezniki 37.04 331 *e*P **P 01 05 32.2 +1.3**
comp=Z,79nm,1.3s
BRZS Berezniki 37.04 331 *e*P **P 01 05 32.2 +1.3**
BRZS pmax pmax
comp=Z,79nm,1.3s
SIJI Sorong 37.27 119 P **P 01 05 33.4 +0.2**
comp=Z,22nm,0.9s,baz=315,slow=9.8,SNR=10.0
MJB9 Matsu-Tunnel 37.84 55 P **P 01 05 36.9 -1.0**
MJB9 IAmb IAmb 01 05 46.0
comp=Z,16nm,1.0s
MAJO Matsushiro 37.84 55*‖ iP* **P 01 05 38.8 +0.9**
MAJO pmax pmax
comp=Z,29nm,1.5s
MAJO Matsushiro 37.84 55 P **P 01 05 37.1 -0.8**
MAT Matsushiro 37.84 55 P **P 01 05 37.7 -0.2**
MJAR Matsushiro Arr 37.84 55 P **P 01 05 38.0 +0.1**
comp=Z,7.1nm,0.9s,baz=264,slow=9.1,SNR=14
MJAR PcP **PcP 01 07 53.2 -1.2**
comp=Z,3.9nm,1.0s,baz=265,slow=3.1,SNR=4.0
MJAR LR LR 01 21 31.5
comp=Z,1µm,18.4s,baz=260,slow=37
MJAR Matsushiro Arr 37.84 55 P **P 01 05 38.0 +0.1**
BATI Baumata 38.05 139 LR LR 01 24 11.3
comp=Z,2µm,18.9s,baz=348,slow=41
WSAR Wadi Sarin 38.07 283 LR LR 01 23 31.0
comp=Z,1µm,20.7s,baz=124,slow=40
JHJ Hachijo jima 2 38.33 61 LR LR 01 22 56.8
comp=Z,1µm,18.3s,baz=283,slow=38
KLR Kul'dur 39.26 34 P **P 01 05 49.2 -0.5**
comp=Z,18nm,1.1s,baz=252,slow=9.0,SNR=24
KLR Kul'dur 39.26 34*d iP* **P 01 05 50.1 +0.5**
KLR pmax pmax
comp=Z,31nm,1.1s
BOD Bodaibo 39.63 12 *e*P **P 01 05 53.2 +0.6**
BOD pmax pmax
comp=Z,33nm,1.3s
JCJ Chichijima 39.80 71 LR LR 01 23 51.5
comp=Z,549nm,18.2s,baz=235,slow=38
GEYT Alibeck 40.17 306 P **P 01 05 58.1 +0.6**
comp=Z,4.4nm,0.8s,baz=148,slow=12,SNR=7.3
GEYT LR LR 01 26 11.7
comp=Z,874nm,19.1s,baz=125,slow=42
GYA0B ALIBECK ARRAY 40.17 306 P **P 01 05 58.5 +1.1**
ZEA Zeya 40.20 25 *e*P **P 01 05 59.0 +1.6**
ZEA *e*S **S 01 11 56.0 -8.2**
ZEA pmax pmax
comp=E,42nm,0.8s
ZEA pmax pmax
comp=N,47nm,1.0s
ZEA pmax pmax
comp=Z,64nm,1.0s
ZEA smax smax
comp=E,1µm,13.0s
ZEA MLR MLR
comp=E,2µm,10.0s
ZEA MLR MLR
comp=N,3µm,9.0s
BVAR Borovoye Array 40.21 333 P **P 01 05 58.4 +0.9**
comp=N,14nm,0.8s,baz=140,slow=11,SNR=26
BRVK Borovoye 40.27 333 P **P 01 05 59.0 +1.0**
BRVK pmax pmax
comp=Z,43nm,1.1s
BRVK Borovoye 40.27 333 P **P 01 05 59.0 +1.0**
BRVK IAmb IAmb 01 06 02.9
comp=Z,43nm,1.1s
ASAJ Asahikawa 43.38 46 P **P 01 06 25.1 +1.6**
comp=Z,9.9nm,0.7s,baz=249,slow=17,SNR=5.8
JKA Kamikawa-asahi 43.39 46 P **P 01 06 25.1 +1.6**
AKTO Aktyubinsk 44.88 323 P **P 01 06 35.3 -0.2**
comp=Z,18nm,0.8s,baz=118,slow=8.9,SNR=21
FITZ Fitzroy Crossi 45.46 144 P **P 01 06 40.2 -0.1**
comp=Z,4.4nm,0.8s,baz=16,slow=6.5,SNR=5.6
PSA00 Pilbara Seismi 45.54 153 P **P 01 06 41.9 +0.9**
PSA00 IAmb IAmb 01 06 42.1
comp=Z,27nm,0.9s
YUK Yuzh-Kuril'sk 45.59 47 P **P 01 06 42.8 +1.6**
YUK *e*S S 01 13 34.2 +11
YUK MLR MLR
comp=Z,2µm,15.0s
YUK MLR MLR
comp=N,924nm,14.0s
YUK MLR MLR
comp=E,2µm,14.0s
JAY Jayapura 46.10 114 P **P 01 06 45.5 -0.2**
comp=E,5.9nm,0.8s,baz=271,slow=9.4,SNR=6.5
SVE Sverdlovsk 46.95 332*‖ eP* **P 01 06 53.7 +2.0**
SVE *e*S **S 01 13 45.2 +2.4**
SVE pmax pmax
comp=Z,103nm,1.1s
SVE MLR MLR
comp=Z,893nm,13.0s
YAK Yakutsk 47.30 19 *e*P **P 01 06 55.2 +0.9**
YAK *e*S **S 01 13 48.1 +0.6**
YAK *e**SS sS 01 14 02.2 +9.1
YAK pmax pmax
comp=Z,30nm,1.0s
YAK pmax pmax
comp=N,20nm,1.0s
YAK pmax pmax
comp=E,24nm,1.0s
YAK smax smax
comp=N,195nm,4.4s
YAK smax smax
comp=E,181nm,3.3s
YAK MLR MLR
comp=Z,978nm,13.0s
YAK MLR MLR
comp=N,537nm,13.0s
ARU Arti 47.67 331 P **P 01 06 57.3 0.0**
comp=N,10.0nm,0.8s,baz=131,slow=6.1,SNR=29
ARU Arti 47.67 331*c iP* **P 01 06 59.2 +1.9**
ARU pmax pmax
comp=Z,85nm,1.5s
ARU Arti 47.67 331 P **P 01 06 57.8 +0.5**
AKT Akhty 48.77 308 *e*P **P 01 07 06.3 +0.1**
AKT *e* 01 08 32.3
AKT pmax pmax
comp=Z,9.0nm,0.8s
MAK Makhachkala 49.21 310 *e*P **P** 01 07 04.4 -5.0
MAK *e*S **S 01 14 07.0 -8.2**
MAK pmax pmax
comp=Z,93nm,1.1s
MAK MLR MLR
comp=Z,1µm,16.0s
LGD Lagodekhi 49.93 309 P **P 01 07 16.9 +1.9**
RAYN Ar Rayn 50.07 285 P **P 01 07 16.2 -0.2**
RAYN pmax pmax
comp=Z,7.0nm,1.0s
RAYN Ar Rayn 50.07 285 P **P 01 07 16.2 -0.2**
NRIK Noril'sk 50.26 355 P **P 01 07 16.7 -0.3**
comp=Z,36nm,1.1s,baz=157,slow=5.9,SNR=38
NRIK Noril'sk 50.26 355 *i* P **P 01 07 17.6 +0.6**
GROC Groznyy 50.49 310 *e*P **P 01 07 21.2 +2.1**
GROC pmax pmax
comp=Z,19nm,1.0s
MORW Morawa 50.98 161 P **P 01 07 21.2 -1.8**
MORW IAmb IAmb 01 07 24.9
comp=Z,24nm,1.1s
KZRT Kazreti 51.23 308 P **P 01 07 28.5 +3.7**
GUDG Gudauri 51.32 309 P **P** 01 07 30.8 +5.1
ZEI Tsey 51.79 309 *e*P **P 01 07 28.6 -0.6**
ZEI pmax pmax
comp=Z,8.0nm,0.7s
AKH Akhalkalaki 51.91 308 P **P 01 07 34.1 +4.0**
AKH Akhalkalaki 51.91 308 IAmb IAmb 01 07 35.4
comp=Z,14nm,0.9s
WB0 Warramunga Arr 52.01 137 P **P 01 07 30.7 -0.2**
WRA Warramunga Arr 52.11 137 P **P 01 07 30.8 -0.7**
comp=Z,5.2nm,0.9s,baz=322,slow=7.7,SNR=16
WRA PcP **PcP 01 08 43.2 -0.3**
comp=Z,3.9nm,0.9s,baz=335,slow=3.7,SNR=6.2
WRA LR LR 01 32 17.0
comp=Z,499nm,20.5s,baz=330,slow=39
WRA Warramunga Arr 52.11 137*‖ iP* **P 01 07 31.3 -0.2**
WRA pmax pmax
comp=Z,6.0nm,0.9s
WRAB Tennant Creek 52.11 137*‖ iP* **P 01 07 31.6 +0.1**
WRAB pmax pmax
comp=Z,11nm,1.1s
WB2 Warramunga Arr 52.11 137 P **P 01 07 30.0 -1.6**
WB2 PcP **PcP 01 08 37.9 -5.7**
KARS Kars 52.13 307 P **P 01 07 35.6 +3.9**
KBZ Khabaz 52.65 310 P **P 01 07 35.1 -0.2**
comp=Z,2.7nm,0.8s,baz=134,slow=9.6,SNR=5.4
KBZ LR LR 01 35 07.3
comp=Z,564nm,18.9s,baz=79,slow=42
KBZ Khabaz 52.65 310*‖ iP* **P 01 07 37.7 +2.4**
KIV Kislovodsk 52.84 311 *e*P **P 01 07 37.1 +0.2**
KIV pmax pmax
comp=Z,66nm,1.1s
KIV Kislovodsk 52.84 311 P **P 01 07 37.1 +0.2**
KIV IAmb IAmb 01 07 40.8
comp=Z,25nm,1.1s
KIRV Kirov 53.02 330 P **P 01 07 38.7 +0.9**
comp=Z,20nm,0.6s,baz=115,slow=8.7,SNR=17
KIRV Kirov 53.02 330*‖ eP* **P 01 07 40.6 +2.8**
MA2 Magadan 54.05 29 P **P 01 07 45.9 +0.5**
comp=Z,17nm,0.8s,baz=259,slow=7.8,SNR=10
MA2 Magadan 54.05 29*c iP* **P 01 07 46.9 +1.5**
MA2 pmax pmax
comp=Z,48nm,1.4s
MA2 Magadan 54.05 29 P **P 01 07 45.2 -0.2**
MA2 IAmb IAmb 01 07 47.5
comp=Z,28nm,1.1s
ASAR Alice Springs 54.59 140 P **P 01 07 49.0 -0.8**
comp=Z,4.9nm,0.8s,baz=319,slow=7.1,SNR=34
ASAR PcP **PcP 01 08 51.6 -1.3**
comp=Z,3.8nm,0.9s,baz=337,slow=3.3,SNR=6.8
TIXI Tiksi 54.79 11 P **P 01 07 50.4 -0.1**
comp=Z,4.7nm,0.5s,baz=210,slow=5.3,SNR=24
TIXI Tiksi 54.79 11*‖ iP* **P 01 07 50.4 -0.1**
TIXI pmax pmax
comp=Z,35nm,1.3s
TIXI Tiksi 54.79 11 P **P 01 07 50.1 -0.4**
TIXI IAmb IAmb 01 08 06.9
comp=Z,9.9nm,0.7s
VRH Novokhopyorsk 54.82 319 *e*P **P 01 07 50.8 -0.3**
VRH pmax pmax
comp=Z,20nm,1.1s
VRH MLR MLR
comp=Z,1µm,18.0s
ATD Arta Tunnel 54.90 270 LR LR 01 30 33.6
comp=Z,391nm,19.5s,baz=78,slow=35
NWAO Narrogin (SRO) 54.95 162 P **P 01 07 51.8 -0.3**
comp=Z,7.1nm,0.8s,baz=0.7,slow=4.0,SNR=4.3
NWAO Narrogin (SRO) 54.95 162 IAmb IAmb 01 07 53.3
comp=Z,20nm,1.1s
PMG Port Moresby 55.14 117 P **P 01 07 53.7 -0.2**
comp=Z,23nm,0.7s,baz=299,slow=7.2,SNR=5.5
PMG Port Moresby 55.14 117*‖ iP* **P 01 07 54.1 +0.2**
PMG Port Moresby 55.14 117 P **P 01 07 53.6 -0.2**
PRGR Permogore 56.01 332 *e*P **P 01 07 59.4 -0.1**
PRGR pmax pmax
comp=Z,34nm,0.8s
SEY Seymchan 56.18 26 P **P 01 08 01.0 +0.3**
comp=Z,2.0nm,0.5s,baz=258,slow=5.0,SNR=7.2
SEY Seymchan 56.18 26*‖ iP* **P 01 08 02.0 +1.3**
VSR Storozhevoye 56.40 319 *e*P **P 01 08 01.1 -1.3**
VSR pmax pmax
comp=Z,7.0nm,0.8s
VSR MLR MLR
comp=Z,970nm,16.0s
GAZ Gaziantep 56.52 302 IAmb IAmb 01 08 08.2
comp=Z,11nm,1.0s
LPSR Galich'ya Gora 56.81 321 *e*P **P 01 08 05.2 -0.1**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
LPSR MLR MLR
comp=Z,830nm,16.0s
KRVT Keravat (AS076 56.89 109 P **P 01 08 07.0 +0.5**
comp=Z,19nm,0.3s,baz=235,slow=1.5,SNR=5.1
MMAI Mount Meron Ar 58.15 297 P **P 01 08 16.4 +1.1**
comp=Z,4.6nm,0.8s,baz=91,slow=8.3,SNR=14
MOS Moscow 58.20 324 *e*P **P 01 08 12.8 -2.2**
MOS *e*S **S 01 16 12.2 -4.4**

MOS pmax pmax
comp=Z,25nm,0.8s
MOS MLR MLR
comp=Z,700nm,19.0s
KLMR Klimovskoe 58.52 330 *eP* **P 01 08 17.1 -0.1**
KLMR pmax pmax
comp=Z,75nm,1.4s
KLMR Klimovskoe 58.52 330 *eP* **P 01 08 17.2 0.0**
KLMR AMP 01 08 21.6
comp=Z,75nm,1.4s
OBN Obninsk 58.66 323 P **P 01 08 19.6 +1.3**
comp=Z,3.0nm,0.7s,baz=123,slow=6.1,SNR=6.6
OBN Obninsk 58.66 323 *i* P **P 01 08 20.0 +1.7**
OBN *i* 01 08 26.6
OBN *i* 01 10 29.8
OBN pmax pmax
comp=Z,31nm,1.4s
OBN MLR MLR
comp=Z,699nm,19.0s
OBN Obninsk 58.66 323 P **P 01 08 18.6 +0.4**
OBN IAmb IAmb 01 08 22.8
comp=Z,14nm,0.7s
ILGA Ilgaz 59.24 307 IAmb IAmb 01 08 27.2
comp=Z,14nm,0.9s
BR131 Keskin Array S 59.31 305⇑ *iP* **P 01 08 23.2 -0.1**
BRTR Keskin Array B 59.31 305 P **P 01 08 23.1 -0.2**
comp=Z,3.3nm,0.9s,baz=110,slow=7.6,SNR=14
CSS Mathiatis 59.74 300 IAmb IAmb 01 08 33.4
comp=Z,9.7nm,0.8s
ANTO Ankara 59.95 305 P **P 01 08 26.3 -1.4**
ANTO pmax pmax
comp=Z,10.0nm,0.9s
ANTO Ankara 59.95 305 P **P 01 08 26.3 -1.4**
ANTO IAmb IAmb 01 08 32.2
comp=Z,10nm,0.8s
BR231 Keskin MP Arra 59.97 305 IAmb IAmb 01 08 32.3
comp=Z,11nm,0.8s
TMCR Tamitsa 60.16 334 *eP* **P 01 08 30.2 +1.8**
CTA Charters Tower 60.50 128 P **P 01 08 30.4 -1.1**
comp=Z,15nm,1.1s,baz=321,slow=5.0,SNR=11
CTAO Charters Tower 60.50 128 P **P 01 08 31.2 -0.3**
CTAO pmax pmax
comp=Z,34nm,1.2s
CTAO Charters Tower 60.50 128 P **P 01 08 31.2 -0.3**
ELL Elmali 62.38 302 P **P 01 08 44.9 +0.7**
AKASG Malin Array Be 62.58 318 P **P 01 08 44.3 -0.8**
comp=Z,7.6nm,0.9s,baz=77,slow=6.3,SNR=15
AKASG LR LR 01 38 35.8
comp=Z,412nm,19.3s,baz=105,slow=38
AKBB Malin Array Si 62.58 318⇓ *iP* **P 01 08 47.3 +2.2**
AKBB Malin Array Si 62.58 318 IAmb IAmb 01 08 57.9
comp=Z,9.3nm,0.9s
APA Apatity 62.93 337⇓ *iP* **P 01 08 49.5 +2.3**
APA pmax pmax
comp=Z,9.0nm,0.9s
SORM Soroca 63.10 315⇓P **P 01 08 48.0 -0.6**
SORM Soroca 63.10 315 P **P 01 08 48.0 -0.6**
CFR Carcaliu 63.28 311⇓P **P 01 08 49.5 -0.4**
CFR Carcaliu 63.28 311 P **P 01 08 49.4 -0.4**
BILL Bilibino 63.34 23⇑ *iP* **P 01 08 50.1 +0.2**
BILL *i* 01 11 07.8
BILL pmax pmax
comp=Z,17nm,1.2s
BILL MLR MLR
comp=Z,2µm,15.0s
BILL Bilibino 63.34 23 P **P 01 08 49.1 -0.8**
BILL IAmb IAmb 01 08 51.7
comp=Z,14nm,1.1s
HARR Harsova 63.44 311⇓P **P 01 08 51.5 +0.6**
HARR Harsova 63.44 311 P **P 01 08 51.5 +0.6**
YER Yerkesik 63.65 302 P **P 01 08 55.8 +3.2**
ABPO Ambohimpanom 64.00 236 P **P 01 08 53.8 -1.4**
ABPO pmax pmax
comp=Z,39nm,1.2s
ABPO Ambohimpanom 64.00 236 P **P 01 08 53.8 -1.4**
NACGM Naroch 64.23 322 *e* **P 01 08 55.0 -1.0**
VRI Vrincioaia 64.25 312⇑P **P 01 08 57.5 +1.1**
VRI Vrincioaia 64.25 312 P **P 01 08 57.4 +1.1**
BISRR Bisoca 64.27 312⇑P **P 01 08 56.7 +0.1**
PLOR Plostina 64.30 312⇓P **P 01 08 57.5 +0.7**
PLOR Plostina 64.30 312 P **P 01 08 57.4 +0.7**
KMBO Kilima Mbogo 64.33 259 P **P 01 08 58.7 +1.1**
comp=Z,6.8nm,0.8s,baz=45,slow=10,SNR=13
KMBO LR LR 01 34 39.6
comp=Z,555nm,21.7s,baz=74,slow=34
KMBO Kilima Mbogo 64.33 259 *i* P **P 01 09 00.4 +2.8**
KMBO pmax pmax
comp=Z,7.0nm,0.8s
KMBO Kilima Mbogo 64.33 259 P **P 01 08 55.9 -1.7**
BIZ Bicaz 64.64 313⇓P **P 01 08 58.3 -0.6**
MLR Muntele Rosu 64.81 312 P **P 01 09 00.2 0.0**
comp=Z,24nm,0.8s,baz=196,slow=0.4,SNR=25
MLR Muntele Rosu 64.81 312⇓P **P 01 09 01.4 +1.3**
ELND Elena 65.02 309⇑P **P 01 09 01.7 +0.3**
FINES FINESS Array B 65.02 329 P **P 01 09 01.5 +0.5**
comp=Z,4.4nm,0.5s,baz=83,slow=4.5,SNR=30
ALN Alexandroupoli 65.05 307 IAmb IAmb 01 09 02.6
comp=Z,9.7nm,1.0s
DOPR Dopca 65.18 312⇑P **P 01 09 03.3 +0.9**
STKA Stephens Creek 65.22 141 P **P 01 09 02.7 0.0**
comp=Z,9.8nm,0.9s,baz=313,slow=7.8,SNR=12
STKA Stephens Creek 65.22 141 P **P 01 09 01.5 -1.2**
BURAR Bucovina Array 65.22 314⇑P **P 01 09 02.9 +0.2**
BURAR Bucovina Array 65.22 314 P **P 01 09 02.9 +0.2**
KEV Kevo 65.68 339 P **P 01 09 06.0 +0.9**
KEV pmax pmax
comp=Z,28nm,1.1s
KEV Kevo 65.68 339 P **P 01 09 04.1 -1.0**
ARR Arges 65.74 312⇑P **P 01 09 05.6 -0.5**
LVV L'vov 65.92 317 *eP* **P 01 09 08.7 +1.6**
LVV *eS* **S 01 17 53.6 -0.8**
ARCES ARCESS Array B 66.16 338 P **P 01 09 08.0 -0.3**
comp=Z,8.6nm,0.9s,baz=89,slow=6.4,SNR=15
ARCES ARCESS Array B 66.16 338 P **P 01 09 08.0 -0.3**
ARE0 ARCESS Array S 66.16 338 *eP* **P 01 09 08.2 -0.1**
KWP Kalwaria Pacla 66.78 316 P **P 01 09 13.6 +1.0**
SRS Serrai 66.87 307 P **P 01 09 15.5 +2.1**
SRS pmax pmax
comp=Z,11nm,0.9s
KTK1 Kautokeino 66.90 338 *eP* **P 01 09 13.4 +0.3**
DEV Deva 66.91 312⇑P **P 01 09 12.9 -0.6**
DEV Deva 66.91 312 P **P 01 09 12.9 -0.6**
HAMF Hammerfest 66.92 339 *eP* **P 01 09 12.8 -0.3**
DRGR 66.97 313⇓P **P 01 09 15.1 +1.1**
VTS Vitosha 66.98 309⇑P **P 01 09 14.6 +0.4**
VTS Vitosha 66.98 309 P **P 01 09 14.9 +0.7**
VTS pmax pmax
comp=Z,12nm,1.0s
VTS Vitosha 66.98 309 IAmb IAmb 01 09 19.6
comp=Z,12nm,1.1s
TRPA Tarpa 66.99 315⇑P **P 01 09 13.3 -0.7**
UZH Uzhgorod 67.12 315 *eP* **P 01 09 17.5 +2.8**
UZH *e* 01 09 19.6
UZH *e* 01 09 25.0
UZH *i* 01 09 45.2
EIDS Eidsvold 67.23 130 P **P 01 09 14.3 -1.4**
EIDS IAmb IAmb 01 09 17.8
comp=Z,7.9nm,1.1s
HERR Herculane 67.34 311⇓P **P 01 09 17.5 +1.2**
HOPEN Hopen 67.43 346 *eP* **P 01 09 17.0 +0.7**
BZS Buzias 67.83 312⇑P **P 01 09 19.6 +0.2**
BZS Buzias 67.83 312 P **P 01 09 21.5 +2.1**
BZS pmax pmax
comp=Z,7.0nm,2.4s
MDVR Moldovita 67.85 311⇑P **P 01 09 20.5 +1.0**
NIE Niedzica 68.36 316 *eP* **P 01 09 23.9 +1.2**
NIE Niedzica 68.36 316 P **P 01 09 23.9 +1.2**
TRO Tromso 68.47 338 *eP* **P 01 09 22.6 -0.3**
FNA Florina 68.58 307 P **P 01 09 23.9 -0.3**
FNA pmax pmax
comp=Z,15nm,1.0s
FNA Florina 68.58 307 IAmb IAmb 01 09 26.4
comp=Z,15nm,1.0s
OJC Ojcow 68.61 317 *eP* **P 01 09 23.6 -0.5**
OJC Ojcow 68.61 317 P **P 01 09 25.2 +1.0**
OJC Ojcow 68.61 317 IAmb IAmb 01 09 29.1
comp=Z,14nm,1.0s
BJO1 Bjornoya 68.69 343 *eP* **P 01 09 24.3 +0.1**
PSZ Piszkesteto 68.78 315⇓P **P 01 09 25.3 0.0**
PSZ Piszkesteto 68.78 315 P P 01 09 30.2 +4.9
PSZ pmax pmax
comp=Z,7.0nm,3.5s
VYHS Vyhne 69.42 315 *eP* **P 01 09 29.8 +0.6**
VYHS Vyhne 69.42 315 *eP* **P 01 09 29.8 +0.6**

SPITS Spitsbergen Ar 69.51 347 P **P 01 09 29.2 -0.1**
comp=Z,16nm,0.9s,baz=111,slow=8.1,SNR=20
HSPB Hornsund (broa 69.65 346 *eP* **P 01 09 28.8 -1.3**
OKC Ostrava-Krasne 69.71 317 *eP* **P 01 09 31.4 +0.4**
OKC MLR MLR
comp=Z,500nm,18.8s
OKC Ostrava-Krasne 69.71 317 AMS AMS 01 38 10.0
comp=Z,500nm,18.8s
OKC Ostrava-Krasne 69.71 317 *eP* **P 01 09 31.4 +0.4**
OKC Ostrava-Krasne 69.71 317 *ex* x 01 09 43.0
OKC Ostrava-Krasne 69.71 317 *eS* S 01 18 25.4 -14
SRO2 Moca 69.80 315 *eP* **P 01 09 31.2 -0.3**
SRO2 Moca 69.80 315 *eP* **P 01 09 31.2 -0.3**
STEI Steigen 69.82 336 *eP* **P 01 09 31.2 -0.1**
SRO Srobarova 69.85 315 P **P 01 09 35.7 +3.9**
MORC Moravsky Berou 70.11 317 *eP* **P 01 09 34.1 +0.6**
MORC Moravsky Berou 70.11 317⇓P **P 01 09 33.9 +0.4**
MORC Moravsky Berou 70.11 317 P **P 01 09 33.9 +0.4**
MORC Moravsky Berou 70.11 317 IAmb IAmb 01 09 37.8
comp=Z,7.8nm,0.9s
JAVC Velka Javorina 70.14 316 *eP* **P 01 09 35.2 +1.5**
MBAR Mbarara 70.19 262⇑ *iP* **P 01 09 35.9 +1.2**
MBAR pmax pmax
comp=Z,29nm,1.8s
MBAR Mbarara 70.19 262 P **P 01 09 34.2 -0.5**
MOR8 Moi Rana 70.23 335 *eP* **P 01 09 34.0 +0.1**
KBS Kingsbay 70.41 348 *eP* **P 01 09 35.7 +1.0**
LOF Lofoten 70.45 337 *eP* **P 01 09 35.3 +0.2**
MODS Modra-Piesok 70.46 316 *eP* **P 01 09 35.1 -0.6**
MODS pmax pmax
comp=Z,11nm,1.0s
MODS Modra-Piesok 70.46 316 *eP* **P 01 09 35.1 -0.6**
KRLC Kraliky 70.56 317 *eP* **P 01 09 36.2 0.0**
KRLC MLR MLR
comp=Z,700nm,22.9s
KRLC Kraliky 70.56 317 AMS AMS 01 42 10.0
comp=Z,700nm,22.9s
KRLC Kraliky 70.56 317 *eP* **P 01 09 36.2 0.0**
ZST Bratislava 70.60 315 *eP* **P 01 09 35.9 -0.6**
ZST Bratislava 70.60 315 *eP* **P 01 09 35.9 -0.6**
KSP Ksiaz 70.77 318 *eP* **P 01 09 38.5 +1.1**
KSP Ksiaz 70.77 318 P **P 01 09 38.3 +0.9**
VRAC Vranov 70.78 317 *eP* **P 01 09 38.5 +0.9**
VRAC Vranov 70.78 317⇓P **P 01 09 38.0 +0.3**
VRAC Vranov 70.78 317 P **P 01 09 37.9 +0.3**
DPC Dobruska-Polom 70.82 318 *eP* **P 01 09 38.1 +0.3**
DPC *eS* **S 01 18 47.7 -5.1**
DPC MLR MLR
comp=Z,700nm,16.9s
DPC Dobruska-Polom 70.82 318 AMS AMS 01 42 30.0
comp=Z,700nm,16.9s
DPC Dobruska-Polom 70.82 318 *eP* **P 01 09 38.1 +0.3**
DPC Dobruska-Polom 70.82 318 *eS* **S 01 18 47.7 -5.1**
KRUC Moravsky 70.95 316 *eP* **P 01 09 39.3 +0.7**
CHVC Chvalec 70.95 318 AMS AMS 01 35 10.0
comp=Z,600nm,16.4s
CHVC Chvalec 70.95 318 *eP* **P 01 09 39.3 +0.7**
CHVC Chvalec 70.95 318 *eS* **S 01 18 54.4 0.0**
UPC Upice 70.99 318 *eP* **P 01 09 39.5 +0.7**
UPC *eS* **S 01 18 52.7 -2.1**
UPC MLR MLR
comp=Z,600nm,16.7s
UPC Upice 70.99 318 AMS AMS 01 42 30.0
comp=Z,600nm,16.7s
UPC Upice 70.99 318 *eP* **P 01 09 39.5 +0.7**
UPC Upice 70.99 318 *eS* **S 01 18 52.7 -2.1**
SOP Sopron 71.04 315 P **P 01 09 40.5 +1.4**
SOP pmax pmax
comp=Z,17nm,1.0s
BLY Banja Luka 71.06 312⇓P **P 01 09 40.4 +1.1**
BLY Banja Luka 71.06 312 IAmb IAmb 01 09 47.2
comp=Z,9.2nm,0.9s
HFS Hagfors 71.10 328 P **P 01 09 39.2 0.0**
comp=Z,8.6nm,0.8s,baz=91,slow=2.8,SNR=19
CONA Conrad Observa 71.47 315 *epP* **P 01 09 42.5 +0.6**
comp=Z,16nm,1.1s,SNR=5.6
TREC Trest 71.50 317 *eP* **P 01 09 42.2 +0.2**
TREC MLR MLR
comp=Z,700nm,21.0s
TREC Trest 71.50 317 AMS AMS 01 40 20.0
comp=Z,700nm,21.0s
TREC Trest 71.50 317 *eP* **P 01 09 42.2 +0.2**
ARSA Arzberg 71.80 315 *eP* **P 01 09 44.3 +0.5**
comp=Z,12nm,0.9s
GOPC GO Pecny, Ondr 71.86 317 *eP* **P 01 09 45.0 +0.9**
GOPC *eS* **S 01 18 58.9 -6.0**
GOPC MLR MLR
comp=Z,600nm,17.0s
GOPC GO Pecny, Ondr 71.86 317 AMS AMS 01 36 00.0
comp=Z,600nm,17.0s
GOPC GO Pecny, Ondr 71.86 317 *eP* **P 01 09 45.0 +0.9**
GOPC GO Pecny, Ondr 71.86 317 *ex* x 01 09 55.5
GOPC GO Pecny, Ondr 71.86 317 *eS* **S 01 18 58.9 -6.0**
PVCC Panska Ves 71.90 318 *eP* **P 01 09 44.9 +0.6**
PVCC MLR MLR
comp=Z,700nm,16.3s
PVCC Panska Ves 71.90 318 AMS AMS 01 44 20.0
comp=Z,700nm,16.3s
PVCC Panska Ves 71.90 318 *eP* **P 01 09 44.9 +0.6**
NC405 NORSAR Array S 71.95 329 P **P 01 09 43.6 -0.8**
PRU Pruhonice 72.00 317 *eP* **P 01 09 45.4 +0.5**
PRU *e* 01 10 00.9
PRU MLR MLR
comp=Z,700nm,17.6s
PRU Pruhonice 72.00 317 AMS AMS 01 36 30.0
comp=Z,700nm,17.6s
PRU Pruhonice 72.00 317 *eP* **P 01 09 45.4 +0.5**
PRU Pruhonice 72.00 317 *ePCP* **PcP 01 10 00.9 -2.6**
PRU Pruhonice 72.00 317 *ex* x 01 18 53.8
RUE Ruedersdorf 72.08 320 *eP* **P 01 09 46.4 +1.1**
comp=Z,35nm,0.8s,baz=79,slow=5.8
NC602 NORSAR Array S 72.08 329 *eP* **P 01 09 45.7 +0.5**
NORES NORESS Array B 72.08 329 P **P 01 09 45.8 +0.6**
NORES pmax pmax
comp=Z,5.0nm,0.7s
NB2 NORSAR Subarra 72.20 329 P **P 01 09 45.7 -0.2**
comp=Z,13nm,1.0s,baz=83,slow=5.9
NB2 NORSAR Subarra 72.20 329 P **P 01 09 45.7 -0.2**
baz=83,slow=5.9
NOA NORSAR Array B 72.20 329 P **P 01 09 45.8 -0.1**
comp=Z,5.2nm,0.8s,baz=82,slow=6.0,SNR=18
NOA LR LR 01 44 18.6
comp=Z,614nm,21.6s,baz=80,slow=38
SOKA Soboth 72.23 314 *epP* **P 01 09 46.9 +0.5**
comp=Z,11nm,0.9s,SNR=8.8
BRG Berggiesshubel 72.24 318 *eP* **P 01 09 46.8 +0.5**
comp=Z,11nm,0.7s
BRG S **SKiKP 01 19 25.0 +2.2**
comp=N,2µm,22.3s
comp=E,786nm,30.6s
comp=Z,594nm,25.4s
BRG Berggiesshubel 72.24 318 *eP* **P 01 09 47.3 +1.0**
comp=Z,15nm,1.0s,baz=79,slow=5.8
BRG Berggiesshubel 72.24 318 *eP* **P 01 09 46.8 +0.5**
BRG pmax pmax
comp=Z,11nm,0.7s
BRG MLR MLR
comp=N,2µm,22.3s
BRG MLR MLR
comp=E,786nm,30.6s
BRG MLR MLR
comp=Z,594nm,25.4s
NC204 NORSAR Array S 72.38 330 P **P 01 09 46.3 -0.7**
PBCC Pribram 72.40 317 *eP* **P 01 09 48.2 +0.9**
MOA Molln 72.54 315 *eP* **P 01 09 48.7 +0.5**
comp=Z,17nm,0.8s,SNR=14
OBKA Obir 72.58 314 *epP* **P 01 09 49.2 +0.6**
comp=Z,12nm,0.9s
FBE Freiberg 72.60 319 *eP* **P 01 09 49.7 +1.3**
comp=Z,27nm,1.0s,baz=79,slow=5.8
GEC2 GERESS Array S 72.73 316 *eP* **P 01 09 50.4 +1.0**
comp=Z,18nm,1.0s,baz=79,slow=5.8
GEC2 GERESS Array S 72.73 316 IAmb IAmb 01 09 53.7
comp=Z,15nm,0.9s
GERES GERESS Array B 72.73 316 P **P 01 09 49.6 +0.1**
comp=Z,11nm,0.8s,baz=74,slow=5.7,SNR=57
GERES LR LR 01 45 28.1
comp=Z,862nm,20.8s,baz=86,slow=39
CLL Collm 72.75 319⇑ *iP* **P 01 09 50.7 +1.4**
comp=Z,14nm,1.0s
CLL *eS* **S 01 19 19.0 +4.1**
CLL Collm 72.75 319 *eP* **P 01 09 50.8 +1.5**
comp=Z,14nm,1.0s,baz=79,slow=5.8
CLL Collm 72.75 319⇑ *iP* **P 01 09 50.7 +1.4**
CLL *eS* **S 01 19 19.0 +4.1**

CLL pmax pmax
comp=Z,14nm,1.0s
CLL MLR MLR
comp=Z,600nm,24.5s
CLL Collm 72.75 319 IAmb IAmb 01 09 55.3
comp=Z,16nm,1.1s
KHC Kasperske Hory 72.76 317⇑ *iP* **P 01 09 50.4 +0.9**
KHC pmax pmax
comp=Z,21nm,1.1s
KHC Kasperske Hory 72.76 317 AMS AMS 01 45 00.0
comp=Z,900nm,16.7s
KHC Kasperske Hory 72.76 317 *eP* **P 01 09 49.5 0.0**
KHC Kasperske Hory 72.76 317 *ex* x 01 10 02.0
KHC Kasperske Hory 72.76 317 *eS* **S 01 19 14.4 -0.9**
DOMB Dombas 73.06 330 *eP* **P 01 09 51.1 +0.1**
KONO Kongsberg 73.21 328 *eP* **P 01 09 52.6 +0.7**
WET Wettzell 73.21 317 *eP* **P 01 09 53.3 +1.2**
comp=Z,19nm,1.0s,baz=79,slow=5.8
TANN Tannenbergstha 73.25 318 *eP* **P 01 09 53.2 +0.8**
comp=Z,19nm,1.0s,baz=79,slow=5.8
TRI Trieste 73.27 313 P **P 01 09 57.2 +4.7**
NKC Novy Kostel 73.29 318 *eP* **P 01 09 53.1 +0.5**
NKC MLR MLR
comp=Z,700nm,14.8s
NKC Novy Kostel 73.29 318 AMS AMS 01 37 10.0
comp=Z,700nm,14.8s
NKC Novy Kostel 73.29 318 *eP* **P 01 09 53.1 +0.5**
KBA Koelnbreinsper 73.29 315 *eP* **P 01 09 52.7 -0.2**
comp=Z,18nm,0.7s,SNR=17
KBA Koelnbreinsper 73.29 315 P **P 01 09 52.7 -0.2**
WERN Wernitzgruen 73.32 318 *eP* **P 01 09 53.9 +1.1**
comp=Z,19nm,1.2s,baz=79,slow=5.8
GUNZ Gunzen 73.34 318 *eP* **P 01 09 54.0 +1.1**
comp=Z,13nm,0.9s,baz=79,slow=5.8
PLN Plauen 73.42 318 *eP* **P 01 09 54.3 +0.9**
comp=Z,8.6nm,0.9s,baz=79,slow=5.8
NEUB Neuenburg 73.53 319 *eP* **P 01 09 54.8 +0.9**
comp=Z,20nm,0.9s,baz=79,slow=5.8
ROTZ Rotzenmuhle 73.53 318 *eP* **P 01 09 55.4 +1.4**
comp=Z,25nm,1.0s,baz=79,slow=5.8
RJOB Jochberg 73.53 315 *eP* **P 01 09 54.6 +0.5**
comp=Z,17nm,0.9s,baz=79,slow=5.8
MANZ Manzenberg 73.55 318 *eP* **P 01 09 55.3 +1.2**
comp=Z,8.6nm,1.1s,baz=79,slow=5.8
SKAR Skarslia 73.66 329 *eP* **P 01 09 55.3 +0.7**
MOX Moxa 73.73 318 *eP* **P 01 09 56.1 +0.9**
comp=Z,16nm,1.1s,baz=79,slow=5.8
BSEG Bad Segeberg 73.88 322 *eP* **P 01 09 57.5 +1.5**
comp=Z,23nm,0.9s,baz=79,slow=5.8
GOET G??ttrup 73.89 325 *i* P **P 01 09 58.7 +2.8**
comp=Z,28nm,0.9s
INTR Introdacqua 73.91 309 IAmb IAmb 01 10 06.4
comp=Z,19nm,1.1s
ABTA Abfaltersbach 73.92 314 *eP* **P 01 09 56.0 -0.5**
comp=Z,13nm,1.1s
ASSE Asse, Remlinge 74.02 320 *eP* **P 01 09 57.7 +0.9**
comp=Z,9.5nm,0.9s,baz=79,slow=5.8
MUD Monsted U'grnd 74.03 325 *i* P **P 01 09 58.2 +1.5**
MUD pmax pmax
comp=Z,11nm,0.9s
MUD Monsted U'grnd 74.03 325 *i* P **P 01 09 58.2 +1.5**
comp=Z,11nm,0.9s
GRF Grafenberg Arr 74.17 318 *eP* **P 01 09 59.0 +1.3**
comp=Z,25nm,1.1s,baz=79,slow=5.8
CLZ Clausthal 74.26 320 *eP* **P 01 09 59.5 +1.2**
comp=Z,19nm,1.0s,baz=79,slow=5.8
NRDL Niedersach Rie 74.29 321 *eP* **P 01 09 59.8 +1.5**
comp=Z,18nm,1.1s,baz=79,slow=5.8
NRCA Norcia 74.31 310 IAmb IAmb 01 10 02.8
comp=Z,23nm,1.0s
NOR Nord 74.39 352 *i* P **P 01 09 58.6 +0.1**
NOR pmax pmax
comp=Z,7.0nm,0.8s
NOR Nord 74.39 352 *i* P **P 01 09 58.6 +0.1**
comp=Z,7.0nm,0.8s
WTTA Wattenberg 74.40 315 *eP* **P 01 09 58.6 -0.7**
comp=Z,15nm,0.7s,SNR=9.8
WTTA Wattenberg 74.40 315 P **P 01 09 58.9 -0.5**
WATA Walderalm 74.42 315 *eP* **P 01 09 59.1 -0.3**
comp=Z,12nm,0.8s,SNR=9.5
FUR Furstenfeldbru 74.45 316 *eP* **P 01 10 00.4 +1.0**
comp=Z,28nm,1.0s,baz=79,slow=5.8
GTTG Gottingen 74.57 320 *eP* **P 01 10 00.9 +0.9**
comp=Z,20nm,0.9s,baz=79,slow=5.8
CTI Castel Tesino 74.65 314 IAmb IAmb 01 10 03.7
comp=Z,14nm,0.9s
RETH Rethem/Aller, 74.68 321 *eP* **P 01 10 01.7 +1.0**
comp=Z,20nm,1.4s,baz=79,slow=5.8
SQTA Sankt Quirin 74.69 315 *eP* **P 01 10 00.3 -0.7**
comp=Z,9.7nm,0.5s
MOTA Moosalm 74.73 315 *eP* **P 01 10 00.8 -0.5**
comp=Z,33nm,0.8s,SNR=18
RETA Reutte 74.93 315 *eP* **P 01 10 02.0 -0.3**
comp=Z,28nm,0.7s,SNR=23
FETA Feichten 75.06 315 *eP* **P 01 10 02.6 -0.6**
comp=Z,16nm,1.0s,SNR=9.6
UBR Ueberruh 75.32 316 *eP* **P 01 10 04.8 +0.2**
comp=Z,27nm,1.3s,baz=79,slow=5.8
FUORN Ofenpass-Fuorn 75.46 315 P **P 01 10 04.7 -0.9**
FUORN IAmb IAmb 01 10 18.1
comp=Z,11nm,1.1s
OSSC Osservatorio P 75.49 311 IAmb IAmb 01 10 10.2
comp=Z,13nm,0.9s
DAVA Damuels 75.56 315 *eP* **P 01 10 06.2 +0.2**
comp=Z,18nm,0.8s
STU Stuttgart 75.67 317 *eP* **P 01 10 07.4 +1.0**
comp=Z,28nm,0.9s,baz=79,slow=5.8
STU Stuttgart 75.67 317 P **P 01 10 10.1 +3.7**
IBBN Ibbenburen 75.74 321 *eP* **P 01 10 07.9 +1.2**
comp=Z,12nm,0.9s,baz=79,slow=5.8
TNS Taunus Mts 75.80 319 *eP* **P 01 10 08.2 +1.0**
comp=Z,16nm,1.0s,baz=79,slow=5.8
TUE Stuetta 76.11 315 P **P 01 10 08.2 -1.0**
TUE IAmb IAmb 01 10 22.9
comp=Z,18nm,1.0s
BUG Bochum-Univer 76.24 320 *eP* **P 01 10 10.7 +1.1**
comp=Z,13nm,0.8s,baz=79,slow=5.8
BFO Black Forest 76.33 317 P **P 01 10 09.2 -1.0**
BFO pmax pmax
comp=Z,8.0nm,1.0s
BFO Black Forest 76.33 317 P **P 01 10 09.2 -1.0**
BFO IAmb IAmb 01 10 15.6
comp=Z,7.6nm,1.0s
AHRW Bad Neuenahr-A 76.58 319 *eP* **P 01 10 12.9 +1.4**
comp=Z,14nm,0.9s,baz=79,slow=5.8
CDF Champ du Feu 76.99 317 *eP* **P 01 10 14.0 -0.1**
CDF pmax pmax
comp=Z,6.0nm,0.8s
DAG Danmarks Havn 77.14 348 *i* P **P 01 10 13.8 -0.5**
DAG pmax pmax
comp=Z,15nm,1.2s
DAG Danmarks Havn 77.14 348 *i* P **P 01 10 13.8 -0.5**
comp=Z,15nm,1.2s
MEM Membach 77.22 319 P **P 01 10 14.9 -0.3**
MEM sP **sP 01 10 19.8 -0.2**
MEM PcP **PcP 01 10 24.1 -1.8**
WLF Walferdange 77.38 318 P **P 01 10 17.2 +1.2**
WLF Walferdange 77.38 318 *eP* **P 01 10 17.5 +1.4**
comp=Z,28nm,1.1s,baz=79,slow=5.8
WLF Walferdange 77.38 318 IAmb IAmb 01 10 33.3
comp=Z,23nm,1.1s
HINF Hinteralfeld 77.42 316 *eP* **P 01 10 16.2 -0.2**
HINF pmax pmax
comp=Z,21nm,1.7s
HAU Haudompre 77.69 317 *eP* **P 01 10 18.0 +0.1**
HAU pmax pmax
comp=Z,9.0nm,0.9s
BCLA Clavier 77.70 319 P **P 01 10 17.6 -0.3**
BCLA sP **sP 01 10 22.5 -0.1**
LPG La Plagne 78.10 314 *eP* **P 01 10 21.0 +0.4**
LPG pmax pmax
comp=Z,17nm,0.8s
LPL La Plagne 78.11 314 *eP* **P 01 10 21.0 +0.4**
LPL pmax pmax
comp=Z,17nm,0.9s
CABF La Chapelle 78.24 315 *eP* **P 01 10 21.4 +0.3**
CABF pmax pmax
comp=Z,14nm,0.9s
BNI Bardonecchia 78.28 314 IAmb IAmb 01 10 27.9
comp=Z,9.1nm,0.9s
KEST Kesra 78.89 304 P **P 01 10 25.2 +0.3**
comp=Z,9.2nm,1.1s,baz=85,slow=2.2,SNR=5.6
KEST LR LR 01 49 56.9
comp=Z,231nm,21.2s,baz=14,slow=39
KEST Kesra 78.89 304 P **P 01 10 23.4 -1.4**
TOLK Toolik Lake Re 79.23 20 P **P 01 10 26.7 +0.6**
baz=296

TOLK	Toolik Lake Re	79.23	20	IAmb	IAmb	01 10 27.8	
	comp=Z,9.1nm,0.7s						
LOR	Lormes	79.52	316	eP	P	01 10 27.9	-0.1
LOR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VIVF	Saint-Julien-l	79.70	314	eP	P	01 10 29.1	+0.1
VIVF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AVF	Avril sur Loir	79.99	316	eP	P	01 10 29.6	-0.9
AVF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MLY	Manley	80.42	24	P	P	01 10 33.2	+0.6
MLY				IAmb	IAmb	01 10 36.4	
	comp=Z,15nm,0.9s						
BPAW	Bear Paw Mtn.	80.73	25	IAmb	IAmb	01 10 38.9	
	comp=Z,18nm,1.1s						
PPLA	Purkeypile	80.76	26	IAmb	IAmb	01 10 38.0	
	comp=Z,23nm,1.2s						
EKA	Eskdalemuir Ar	81.00	326	P	P	01 10 35.5	-0.3
EKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MDM	Murphy Dome	81.40	23	IAmb	IAmb	01 10 40.8	
	comp=Z,24nm,1.1s						
CAF	Calviac	81.44	315	eP	P	01 10 38.9	+0.5
CAF				pmax	pmax		
	comp=Z,14nm,1.4s						
COLA	College	81.58	23	⇓iP	P	01 10 40.1	+1.4
COLA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
POKR	Poker Plat Res	81.62	23	P	P	01 10 39.9	+1.0
	baz=299						
RJF	Les Rejaudoux	81.68	315	eP	P	01 10 40.3	+0.7
RJF				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MCK	McKinley	81.71	25	IAmb	IAmb	01 10 43.2	
	comp=Z,11nm,0.9s						
FLN	La Foliniere	81.79	319	eP	P	01 10 40.3	+0.2
FLN				pmax	pmax		
	comp=Z,23nm,1.3s						
MTLF	Montolieu	81.85	313	eP	P	01 10 43.2	+2.6
MTLF				pmax	pmax		
	comp=Z,10.0nm,1.2s						
RND	Reindeer	81.89	25	IAmb	IAmb	01 10 53.1	
	comp=Z,11nm,1.1s						
ILAR	Eielson Array	82.00	23	P	P	01 10 39.7	-1.2
	comp=Z,1.7nm,0.8s,baz=284,slow=5.1,SNR=13						
ILAR				PP	PP	01 13 50.1	+2.0
	comp=Z,7.3nm,1.2s,baz=289,slow=6.5,SNR=11						
PRP	Porcupine Dome	82.12	22	IAmb	IAmb	01 10 44.9	
	comp=Z,11nm,1.0s						
KDAK	Kodiak Island	82.77	31	LR	LR	01 48 58.6	
	comp=Z,378nm,21.5s,baz=315,slow=37						
A36M	Sachs Harbour	83.77	13	P	P	01 10 50.3	+0.4
	baz=318						
SUMG	Summit	83.83	348	i P	P	01 10 47.6	-3.2
SUMG	Summit	83.83	348	IAmb	IAmb	01 10 52.7	
	comp=Z,6.8nm,0.9s						
SUMG	Summit	83.83	348	i P	P	01 10 47.6	-3.2
SJPF	Ste Jean	84.29	314	eP	P	01 10 54.2	+1.0
SJPF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
INK	Inuvik	84.34	17	P	P	01 10 52.0	-0.8
	comp=Z,13nm,1.1s,baz=319,slow=6.7,SNR=23						
LBTB	Lobatse	84.39	241	P	P	01 10 53.7	-0.4
LBTB				pmax	pmax		
	comp=Z,17nm,1.1s						
LBTB	Lobatse	84.39	241	P	P	01 10 53.6	-0.4
LBTB				IAmb	IAmb	01 10 58.6	
	comp=Z,17nm,1.1s						
EPYK	Eagle Plains	84.62	20	P	P	01 10 54.5	+0.1
	baz=308						
EPYK	Eagle Plains	84.62	20	IAmb	IAmb	01 10 57.5	
	comp=Z,11nm,0.8s						
DAWY	Dawson	85.11	22	IAmb	IAmb	01 11 00.2	
	comp=Z,7.6nm,1.1s						
MCARA	McCarthy VSAT	85.26	25	IAmb	IAmb	01 11 01.9	
	comp=Z,7.5nm,0.9s						
RES	Resolute Bay	85.47	4	IAmb	IAmb	01 11 01.5	
	comp=Z,12nm,0.9s						
CRQM	Cirque	85.55	26	IAmb	IAmb	01 11 02.2	
	comp=Z,12nm,1.1s						
TGL	Tana Glacier	85.68	26	IAmb	IAmb	01 11 02.0	
	comp=Z,8.7nm,0.9s						
BALM	Baldy	85.72	25	IAmb	IAmb	01 11 04.2	
	comp=Z,5.4nm,0.9s						
C36M	Paulatuk	86.02	14	P	P	01 11 00.8	-0.5
	baz=319						
C36M	Paulatuk	86.02	14	IAmb	IAmb	01 11 03.7	
	comp=Z,8.4nm,0.8s						
BOSA	Boshof	86.16	238	P	P	01 11 03.6	+0.7
	comp=Z,3.6nm,0.8s,baz=75,slow=6.7,SNR=4.6						
BOSA				LR	LR	01 45 45.5	
	comp=Z,311nm,19.7s,baz=49,slow=33						
BOSA	Boshof	86.16	238	P	P	01 11 01.8	-1.1
ESDC	Sonseca Array	87.50	311	P	P	01 11 09.2	-0.1
	comp=Z,3.0nm,1.0s,baz=53,slow=4.7,SNR=17						
PBRG	Braganca	88.56	314	eP	P	01 11 16.4	+2.2
WHY	Whitehorse	88.88	24	IAmb	IAmb	01 11 19.2	
	comp=Z,6.8nm,1.0s						
MVO	Moncorvo	89.02	314	eP	P	01 11 17.5	+1.0
	comp=Z,13nm,1.1s						
MVO	Moncorvo	89.02	314	eS	S	01 22 12.4	+7.2
MVO	Moncorvo	89.02	314	eLR	LR	01 46 13.9	
	comp=Z,255nm,18.0s						
PGAV	Gavieira, Arco	89.52	315	eP	P	01 11 20.2	+1.4
	comp=Z,28nm,1.6s						
PGAV	Gavieira, Arco	89.52	315	eS	S	01 22 17.2	+7.4
PGAV	Gavieira, Arco	89.52	315	eLR	LR	01 46 45.8	
	comp=Z,232nm,18.0s						
MTE	Manteigas	89.70	313	eP	P	01 11 20.4	+0.7
	comp=Z,25nm,1.6s						
MTE	Manteigas	89.70	313	eS	S	01 22 18.4	+6.8
MTE	Manteigas	89.70	313	eLR	LR	01 41 04.6	
	comp=Z,270nm,20.0s						
PMRV	Marv??o	90.02	312	eP	P	01 11 21.9	+0.8
	comp=Z,17nm,2.5s						
PMRV	Marv??o	90.02	312	eS	S	01 22 17.6	+3.2
PMRV	Marv??o	90.02	312	eLR	LR	01 43 01.8	
	comp=Z,215nm,18.0s						
EVO	Evora	90.84	312	eP	P	01 11 26.4	+1.5
	comp=Z,19nm,1.9s						
MAW	Mawson	91.04	193	P	P	01 11 25.6	+0.7
	comp=Z,4.3nm,0.9s,baz=360,slow=7.7,SNR=3.6						
MAW	Mawson	91.04	193	IAmb	IAmb	01 11 28.3	
	comp=Z,2.2nm,1.1s						
PVAQ	Vaqueiros	91.12	310	eLR	LR	01 43 30.4	
	comp=Z,184nm,18.0s						
TORD	Torodi Ar. Bea	92.77	285	P	P	01 11 32.7	-1.5
	comp=Z,1.1nm,0.9s,baz=70,slow=4.5,SNR=4.8						
TORD				PP	PP	01 15 16.5	+0.2
	comp=Z,2.2nm,1.1s,baz=46,slow=2.7,SNR=5.0						
TORD				LR	LR	01 57 16.4	
	comp=Z,379nm,21.8s,baz=55,slow=38						
YKA	Yellowknife Ar	93.85	15	P	P	01 11 37.5	-0.7
	comp=Z,1.9nm,0.9s,baz=327,slow=3.6,SNR=13						
YKA				PP	PP	01 15 22.7	-0.3
	comp=Z,1.1nm,1.0s,baz=328,slow=6.7,SNR=6.2						
YKA				PKKP	PKKPdf	01 28 40.5	-0.6
	comp=Z,0.3nm,0.9s,baz=152,slow=2.1,SNR=4.8						
YKA	Yellowknife Ar	93.85	15	i P	P	01 11 38.2	-0.1
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SYO	Syowa Base	98.09	198⇑	epPKiKP	PKiKP	01 16 33.0	+2.9
SNAA	Sanae	112.33	200⇑	iPKIKP	PKiKP	01 16 59.0	+2.6
ANMO	Albuquerque	120.42	25	PKIKP	PKPdf	01 17 12.8	-0.6
ANMO	Albuquerque	120.42	25		PKPdf	01 17 12.8	-0.6
U40A	Yellville	123.13	12	P	PKPdf	01 17 17.4	-0.9
	baz=346						
MNTX	Cornudas Mount	123.70	25	P	PKiKP	01 17 19.8	0.0
	baz=332						
MNTX	Cornudas Mount	123.70	25		PKPdf	01 17 18.1	-1.4
WVT	Waverly	124.14	7	P	PKPdf	01 17 19.6	-0.6
	baz=352						
MIAR	Mount Ida	124.73	13	PKIKP	PKPdf	01 17 19.2	-2.2
MIAR	Mount Ida	124.73	13	P	PKPdf	01 17 21.2	-0.1
	baz=345						
MIAR	Mount Ida	124.73	13		PKPdf	01 17 19.2	-2.2
V55A	Taylorsville	124.83	1	P	PKiKP	01 17 21.8	-0.1
	baz=359						
ABTX	Abilene, Hawle	124.94	20	P	PKiKP	01 17 22.1	-0.1
	baz=338						
TXAR	Lajitas Array	126.47	25	PKP	PKPdf	01 17 24.7	-0.3
	comp=Z,1.2nm,0.9s,baz=248,slow=1.3,SNR=10.0						
TXAR				PP	PP	01 19 22.2	+3.0
	comp=Z,0.4nm,0.9s,baz=343,slow=3.9,SNR=3.8						
JCT	Junction City	126.87	21	P	PKPdf	01 17 25.6	0.0
	baz=337						
MATN	Matagalpa	147.23	10		PKPbc	01 18 04.8	-0.8
BDFB	Brasilia	148.76	272	PKPbc	PKPbc	01 18 09.2	-0.4
	comp=Z,9.4nm,0.8s,baz=147,slow=3.1,SNR=13						
BDFB	Brasilia	148.76	272	PKP2	PKPbc	01 18 09.7	+0.1
BDFB	Brasilia	148.76	272		PKPbc	01 18 09.7	+0.1
SPB	Sao Paulo	148.98	257		PKPbc	01 18 10.3	+0.4
SDV	Santo Domingo	150.04	340		PKPbc	01 18 12.4	-0.6
RUSC	La Rusia	153.61	343		PKPdf	01 18 12.1	-1.7
RUSC				PKPbc	PKPbc	01 18 20.7	-0.9
PLCA	Paso Flores	157.27	200	PKPab	PKPab	01 18 47.6	-0.7
	comp=Z,2.4nm,0.8s,baz=186,slow=6.0,SNR=4.0						
PLCA	Paso Flores	157.27	200	PKIKP	PKPdf	01 18 15.3	-2.2
PLCA	Paso Flores	157.27	200	PKPdf	PKPdf	01 18 15.3	-2.2
PLCA					PKPab	01 18 46.7	-1.7
CPUP	Villa Florida	157.61	248	PKP	PKPdf	01 18 18.1	-0.1
	comp=Z,2.9nm,1.1s,baz=201,slow=1.9,SNR=4.0						
CPUP				PKPab	PKPab	01 18 49.2	-1.0
	comp=Z,2.9nm,1.0s,baz=65,slow=5.7,SNR=5.0						
LPAZ	La Paz	167.72	284	PKP	PKPdf	01 18 28.9	-0.2
	comp=Z,3.7nm,1.0s,baz=48,slow=3.6,SNR=9.8						
LPAZ	La Paz	167.72	284		PKPdf	01 18 29.0	-0.2
LPAZ				PKPab	PKPab	01 19 32.0	-3.5
PB11	IPOC Station P	169.72	267		PKPdf	01 18 27.0	-2.8

PRU 06 00:58:22.2±0.0**, 50°.04N×18°.57E, h0^{km}, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.34	234	ePG	Pg	00 58 28.9	+0.2
OKC				eSG	Sg	00 58 34.2	+1.1
	comp=Z,4.8nm,0.4s						
MORC	Moravsky Berou	0.71	249	ePG	Pg	00 58 36.1	+0.2
MORC				eSG	Sg	00 58 45.6	+0.5
KRLC	Kraliky	1.15	272	ePG	Pg	00 58 43.3	-1.0
KRLC				eSG	Sg	00 58 58.1	-1.1
	comp=Z,2.7nm,0.7s						
DPC	Dobruska-Polom	1.48	283	ePG	Pn	00 58 49.5	-0.6
DPC				eSG	Sg	00 59 08.9	-0.7
	comp=Z,1.8nm,0.6s						
CHVC	Chvalec	1.70	290	ePG	Pn	00 58 53.7	+0.5
CHVC				eSG	Sg	00 59 17.1	+0.2

*SNET **06** 01:04:32.1±1.6, 13°.93N×90°.93W, h25^{km}±405^{km}, ML3.1*
*GCG **06** 01:04:33.0±0.5, 13°.70N×90°.96W, h39^{km}±65^{km}, MD3.7*
ISC 06 01:04:33.8±1.9**, 13°.8N**±0°.1×**90°.91W**±0°.08**, h73^{km}, n16, σ1^s.15**/20**, 1C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	0.58	51	eP	Pn	01 04 46.6	-1.3
FUG	Fuego 3	0.64	6	eP	Pn	01 04 47.9	-0.7
PCG	Pacaya	0.65	26	eP	Pn	01 04 48.3	-0.5
ERG	Entre ros, C	0.90	315	eP	Pn	01 04 50.9	-0.4
NBG	Las Nubes	0.95	35⇑	eP	Pn	01 04 52.5	+0.3
NBG				eS	Sn	01 05 07.3	+1.5
STG3	Santiaguito 3,	1.11	325	eP	Pn	01 04 53.2	-0.8
RTR	El Retiro	1.23	85	eP	Pn	01 04 55.1	-0.5
SBLS	San Blas	1.25	88	eP	Pn	01 04 54.9	-0.9
SNJE	San Jose	1.27	87	eP	Pn	01 04 55.2	-0.8
BOQS	Boqueron	1.58	92	eP	Pn	01 04 59.5	-0.7
BOQS				eS	Sn	01 05 20.4	+0.3
MTO3	Montecristo	1.61	68	eP	Pn	01 04 59.0	-1.6
MTO3				eS	Sn	01 05 20.4	-0.4
MTO3				IAML		01 05 25.4	
	comp=Z,72nm,0.4s						
ESQI	Esquipulas	1.69	63	eP	Pn	01 05 00.4	-1.2
ESQI				IAML		01 05 29.4	
	comp=Z,82nm,0.4s						
LFRS	El Faro	1.80	95	eP	Pn	01 05 02.3	-0.7
LBRS	Las Brisas	1.81	92	eP	Pn	01 05 03.3	+0.2
TECA	Tecapa	2.36	97	eP	Pn	01 05 09.7	-0.8
CNCH	Conchagua	3.04	100	eP	Pn	01 05 18.7	-1.0
CNCH				eS	Sn	01 05 57.9	+2.9
CNCH				IAML		01 06 04.0	
	comp=Z,344nm,0.4s						

*JMA **06** 01:16:53.6±0.1, 29°.79N×140°.42E, h255^{km}, M4.2*
*IDC **06** 01:16:55.6±1.0, 29°.80N×140°.20E, h194^{km}±15^{km}, mb3.2/6, mb1 3.3/11, mb1mx3.0/47, mbtmp3.8/11, MS3.9/1, Ms1 3.9/1, ms1mx3.3/21, Error ellipse: s-maj=45.4km s-min=10.4km az=71.0*
ISC 06 01:16:55.8±0.7**, 29°.92N**±0°.06×**140°.5E**±0°.1**, h200^{km}, n22, σ1^s.53**/27**, mb3.0**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.20	151	P	Pn	01 17 47.7	-0.1
CBIJ				eS	Sn	01 18 29.5	+1.0
JCJ	Chichijima	3.20	151	P	Pn	01 17 47.8	-0.1
	52nm,0.3s,baz=357,slow=18,SNR=54						
JCJ				S	Sn	01 18 27.9	-0.6
	30nm,0.3s,baz=282,slow=23,SNR=6.0						
JHJ2	Mitsune	3.23	350	P	Pn	01 17 50.5	+2.4
JHJ	Hachijo jima 2	3.24	350	P	Pn	01 17 50.3	+2.0
	49nm,0.3s,baz=198,slow=23,SNR=46						
JHJ				S	Sn	01 18 28.3	-1.2
	17nm,0.3s,baz=65,slow=22,SNR=2.0						
JHH2	Haha-jima-NKT2	3.61	155	P	Pn	01 17 52.4	-0.4
JHH2				eS	Sn	01 18 37.9	+0.5
JMKN	Mikurajimanish	4.03	350	P	Pn	01 18 00.3	+2.4
BSO1	Boso 1	4.74	5	P	Pn	01 18 08.4	+2.1
BSO1				eX		01 19 02.9	
JOD2	Odawara 2	5.45	348	P	Pn	01 18 17.4	+1.5
JIE	Ise	5.47	325	P	Pn	01 18 16.9	+0.7
JTNC	Tanabenakahech	5.66	315	P	Pn	01 18 18.3	-0.4
JRY	Ryogami san	6.22	348	P	Pn	01 18 26.6	+0.8
JRY				eS	Sn	01 19 37.6	+0.4
MJAR	Matsushiro Arr	6.87	345	P	Pn	01 18 34.5	+0.3
	0.4nm,0.3s,baz=160,slow=9.2,SNR=18						
MJAR				S	Sn	01 19 52.0	-0.4
	0.1nm,0.3s,baz=125,slow=15,SNR=4.1						
JMK	Ichinoseki	9.03	4	S	Sn	01 20 38.8	-4.8
KSRS	Korea Array	12.85	309	P	Pn	01 19 51.8	+0.5
	0.3nm,0.3s,baz=118,slow=13,SNR=5.3						
ASAJ	Asahikawa	14.27	6	P	P	01 20 10.8	+0.4
	1.0nm,0.3s,baz=209,slow=6.3,SNR=4.1						
USRK	Ussuriysk Ar.	15.76	337	LR	LR	01 25 34.6	
	comp=Z,446nm,18.2s,baz=189,slow=33						
KLR	Kul'dur	20.39	343	P	P	01 21 17.8	+0.7
	2.2nm,0.4s,baz=167,slow=9.6,SNR=8.5						
MKAR	Makanchi Array	47.53	308	P	P	01 25 09.8	-1.1
	0.1nm,0.3s,baz=91,slow=6.2,SNR=2.3						
WRA	Warramunga Arr	49.92	188	P	P	01 25 29.4	+0.1
	0.2nm,0.3s,baz=1.7,slow=7.4,SNR=1.8						
KURBB	Kurchatov Arra	50.00	313	P	P	01 25 28.2	-1.4
	0.3nm,0.6s,baz=103,slow=7.9,SNR=5.2						
ARCES	ARCESS Array B	70.38	340	P	P	01 27 48.8	+1.3
	1.1nm,0.6s,baz=61,slow=9.9,SNR=6.0						
FINES	FINESS Array B	74.75	333	P	P	01 28 13.8	+0.4
	1.3nm,0.7s,baz=108,slow=4.2,SNR=5.2						

*NEIC **06** 01:18:36.1±1.5, 5°.57N±0°.06×94°.48E±0°.10, h66^{km}±10^{km}, mb4.2/4, Error ellipse: s-maj=14.7km s-min=6.6km az=111.0*
*IDC **06** 01:18:36.7±6.1, 5°.61N×94°.52E, h66^{km}±49^{km}, mb3.5/7, mb1 3.7/8, mb1mx3.3/45, mbtmp3.8/8, ML4.0/1, Error ellipse: s-maj=97.7km s-min=19.3km az=58.0*
ISC 06 01:18:34.3±1.0**, 5°.58N**±0°.10×**94°.4E**±0°.1**, h46^{km}, n20, σ1^s.07**/20**, mb4.0**/9**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.56	98	Pn	Pn	01 19 15.0	+1.8
LHMI				Sn	Sn	01 19 42.2	-0.9
PSI	Prapat	5.29	121	P	Pn	01 19 52.9	+2.0
	5.0nm,0.3s,baz=360,slow=5.9,SNR=23						
GSI	Gunungsitoli	5.30	143	Pn	Pn	01 19 51.9	+0.9
GSI				Sn	Sn	01 20 50.1	-0.7
RPSI	Rantau Prapat	5.34	122		Pn	01 19 52.5	+1.0
RPSI				Sn	Sn	01 20 51.2	-0.7
RPSI	Rantau Prapat	5.34	122		Pn	01 19 52.9	+1.3
KULM	Kulim	6.22	92	Pn	Pn	01 20 04.2	+0.5
H08S3	Diego Garcia H	25.50	239	T	T	01 51 16.5	
	baz=60,slow=75,SNR=77						
H08S2	Diego Garcia H	25.51	239	T	T	01 51 17.9	
	baz=60,slow=75,SNR=73						
H08S1	Diego Carcia H	25.52	239	T	T	01 51 20.5	
	baz=60,slow=75,SNR=81						
MK31	Makanchi Array	42.37	348	P	P	01 26 22.9	-1.1
MKAR	Makanchi Array	42.37	348	P	P	01 26 24.3	+0.3
	0.4nm,0.6s,baz=157,slow=6.6,SNR=4.8						
SONM	Songino Array	43.33	12	P	P	01 26 31.7	-0.3
	0.2nm,0.3s,baz=202,slow=6.8,SNR=2.2						
WB0	Warramunga Arr	46.71	124	P	P	01 26 58.0	-1.1
WB0				IAmb	IAmb	01 27 01.6	
	comp=Z,3.8nm,1.0s						
WRA	Warramunga Arr	46.75	124	P	P	01 26 59.1	-0.3
	comp=Z,0.4nm,0.4s,baz=303,slow=9.0,SNR=12						
WB2	Warramunga Arr	46.76	124	P	P	01 26 57.8	-1.6
WR0	Warramunga Arr	46.92	124	P	P	01 27 00.1	-0.7
WR0				IAmb	IAmb	01 27 13.3	
	comp=Z,2.6nm,1.0s						
ASAR	Alice Springs	48.27	129	P	P	01 27 10.9	-0.3
	comp=Z,0.8nm,0.5s,baz=300,slow=7.9,SNR=13						
ZALV	Zalesovo Beam	48.85	352	P	P	01 27 15.7	+0.6
	comp=Z,0.7nm,0.3s,baz=171,slow=9.8,SNR=2.3						
FINES	FINESS Array B	74.85	332	P	P	01 30 10.5	+0.7
	comp=Z,2.3nm,0.9s,baz=142,slow=6.5,SNR=3.6						
ARCES	ARCESS Array B	77.50	340	P	P	01 30 24.4	-0.4
	comp=Z,0.6nm,0.7s,baz=99,slow=4.7,SNR=1.2						

*IDC **06** 01:37:36.5±1.7, 16°.73S×177°.92W, h0^{km}, mb4.3/4, mb1 4.5/4, mb1mx3.9/32, mbtmp4.3/4, Error ellipse: s-maj=159.6km s-min=28.8km az=156.0*
*NEIC **06** 01:38:33.3±0.7, 17°.8S±0°.4×178°.4W±0°.2, h566^{km}±14^{km}, mb4.0/12, Error ellipse: s-maj=61.4km s-min=14.1km az=161.0*
ISC 06 01:38:31.5±1.6**, 18°.3S**±0°.4×**178°.1W**±0°.2**, h550^{km}, n17, σ0^s.74**/16**, mb4.0**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.70	278	P	P	01 39 52.5	+1.2
EIDS	Eidsvold	29.42	251	P	P	01 43 51.1	0.0
ARMA	Armidale	30.02	240	P	P	01 43 56.2	-0.1
ARMA				IAmb	IAmb	01 44 09.3	
	comp=Z,5.3nm,1.1s						
COEN	Coen	37.40	271	P	P	01 44 58.5	+0.1
STKA	Stephens Creek	38.72	242	P	P	01 45 09.6	+0.7
	comp=Z,2.2nm,0.5s,baz=97,slow=9.4,SNR=5.5						
STKA	Stephens Creek	38.72	242	P	P	01 45 09.8	+0.9
BBOO	Buckleboo	43.49	241	P	P	01 45 47.1	+0.4
BBOO				IAmb	IAmb	01 45 59.8	
	comp=Z,4.9nm,1.0s						
WR0	Warramunga Arr	44.67	260	P	P	01 45 55.2	-0.8
WR0				IAmb	IAmb	01 46 04.7	
	comp=Z,4.0nm,1.1s						
WB0	Warramunga Arr	44.82	260	P	P	01 45 56.3	-0.9
WB0				IAmb	IAmb	01 45 57.3	
	comp=Z,2.6nm,0.6s						
WB2	Warramunga Arr	44.84	260	P	P	01 45 56.2	-1.1
WB2				IAmb	IAmb	01 46 12.4	
	comp=Z,5.6nm,1.1s						
WRA	Warramunga Arr	44.86	260	P	P	01 45 56.8	-0.7
	comp=Z,1.0nm,0.3s,baz=91,slow=7.7,SNR=35						
AS31	Alice Springs	44.98	255	P	P	01 45 57.9	-0.4
AS31				IAmb	IAmb	01 45 59.4	
	comp=Z,3.8nm,0.5s						
ASAR	Alice Springs	44.98	255	P	P	01 45 58.5	+0.1
	comp=Z,9.2nm,0.5s,baz=88,slow=9.0,SNR=128						
FITZ	Fitzroy Crossi	53.26	261	P	P	01 46 59.6	+0.1
UGM	Wanagama	69.92	268	P	P	01 48 47.3	-1.1
TXAR	Lajitas Array	85.94	57	P	P	01 50 14.2	+0.1
	comp=Z,0.5nm,0.7s,baz=226,slow=5.9,SNR=7.8						
CM31	Chiang Mai Arr	89.28	290	P	P	01 50 23.5	-6.3

*SOF **06** 01:54:22.5, 42°.54N×23°.04E, h11^{km}, MD2.9*
*SKO **06** 01:54:23.6, 42°.61N×23°.01E, h4^{km}*
*BEO **06** 01:54:23.5±0.3, 42°.57N×23°.00E, h4^{km}±1^{km}, ML3.0/17*
*THE **06** 01:54:27.0, 42°.53N×23°.05E, h31^{km}±22^{km}, ML3.2/3, Error ellipse: s-maj=22.6km s-min=1.3km az=0.0*
ISC 06 01:54:22.5±1.0**, 42°.54N**±0°.02×**22°.99E**±0°.02**, h4^{km}**±9^{km}**, n101, σ1^s.43**/140**, 25C-25D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTS	Vitosha	0.20	66	ePg	Pg	01 54 26.5	+0.2
VTS				eSg	Sg	01 54 28.9	0.0
VTS	Vitosha	0.20	66	⇑P	Pg	01 54 26.6	+0.3
VTS				⇑S	Sg	01 54 29.3	+0.3
VTS	Vitosha	0.20	66	i Pg	Pg	01 54 26.5	+0.2
BOSS	Bosilegrad	0.38	264	ePg	Pg	01 54 30.9	+1.0
BOSS				eSg	Sg	01 54 36.3	+1.4
KKB	Krupnik	0.67	174	i Pg	Pb	01 54 36.8	0.0
ZAPS	Zavoj	0.78	340	ePg	Pb	01 54 38.3	-0.4
ZAPS				eSg	Sb	01 54 48.9	-0.7
PGB	Panagyurishte	0.87	89	i Pg	Pb	01 54 39.0	-1.1
BARS	Barje	0.91	288	ePg	Pg	01 54 39.9	-0.1
BARS				eSg	Sg	01 54 51.9	+0.1
BARS	Barje	0.91	288	ePg	Sg	01 54 52.5	+0.7
STIP	Stip	1.04	216	i Pg	Pb	01 54 39.3	-3.7
STIP				eSg	Sg	01 54 53.4	-2.4
STIP	Stip	1.04	216	i Pg	Pb	01 54 39.3	-3.7
STIP				eSg	Sg	01 54 53.4	-2.4
MMB	Musomiste	1.09	150	i Pg	Pn	01 54 44.7	+0.1
BLKB	Belogradchik	1.11	348	⇑S	Sb	01 54 58.3	-0.8
VAY	Valandovo	1.26	195	i Pg	Pg	01 54 47.9	+1.3
VAY				i Sg	Sg	01 55 04.8	+2.0
VAY				eLg	Lg	01 55 07.6	
	comp=N,436nm,0.7s						
VAY				eLg	Lg	01 55 07.8	
	comp=E,353nm,0.6s						
VAY	Valandovo	1.26	195	i Pg	Pg	01 54 47.9	+1.3
VAY				i Sg	Sg	01 55 04.8	+2.0
VAY				eLg	Lg	01 55 07.6	
	comp=N,436nm,0.7s						
VAY				eLg	Lg	01 55 07.8	
	comp=E,353nm,0.6s						
SKO	Skopje	1.28	244	ePg	Pg	01 54 47.7	+0.6
SKO				eSg	Sg	01 55 05.9	+2.1
SKO	Skopje	1.28	244	i Pg	Pb	01 54 47.2	0.0
SKO	Skopje	1.28	244	i Pg	Pb	01 54 47.2	0.0
PLD	Plovdiv	1.34	108	i P	Pg	01 54 47.8	-0.3
NVR	Nevrokopi	1.35	151	P	Pg	01 54 49.3	+0.9
NVR				S	Sg	01 55 05.6	-0.3
	comp=E,740nm,0.4s						
KNT	Kendrikon	1.38	183	P	Pg	01 54 49.4	+0.5
KNT				S	Sg	01 55 06.8	+0.1
	comp=E,752nm,0.3s						
ZAGS	Zajecar	1.39	337	ePg	Pn	01 54 48.3	-0.3
ZAGS				eSg	Sg	01 55 07.5	+0.3
BOVS	Bovan	1.45	320	ePg	Pb	01 54 50.0	0.0
BOVS				eSg	Sn	01 55 08.2	-0.6
PLVB	Pleven	1.47	54	⇓P	Pg	01 54 50.6	0.0
PLVB				⇓S	Sg	01 55 11.9	+2.3
SRS	Serrai	1.49	162	P	Pg	01 54 51.1	+0.1
SRS				S	Sg	01 55 09.5	-0.8
	comp=E,578nm,0.4s						
BAIL	Bailesti	1.50	10	⇑P	Pb	01 54 50.2	-0.7
RZN	Rozhen	1.54	123	i P	Pg	01 54 51.8	-0.1
SELS	Selova	1.54	297	ePg	Pn	01 54 50.2	-0.5
SELS				eSg	Sn	01 55 10.3	-0.8
PUNG	Punghina	1.74	359	⇑P	Pn	01 54 52.6	-0.8
VLAD	Vladila	1.79	35	⇑P	Pb	01 54 54.3	-1.4
THE	Thessaloniki	1.91	181	P	Pb	01 54 56.8	-0.9
KAVA	Kavala	1.91	143	P	Pb	01 54 56.8	-1.1
HORT	Hortiatis	1.94	178	P	Pb	01 54 57.3	-1.1
DIM	Dimitrovgrad	1.95	104	i P	Pb	01 54 57.5	-1.0
KDZ	Kurdzhali	2.01	115	i P	Pb	01 54 59.4	-0.2
ZIMR		2.07	56	⇓P	Pb	01 54 59.8	-0.7
KUBS	Kucevo	2.10	333	ePn	Pb	01 54 59.6	-1.6
KUBS				eSn	Sn	01 55 24.5	-0.6
SRE	Strehaia	2.13	4	⇓P	Pn	01 54 59.4	+0.6
FNA	Florina	2.13	215	P	Pb	01 55 00.1	-1.6
GRUS	Gruza	2.14	310	ePn	Pn	01 54 58.9	-0.1
GRUS				eSn	Sn	01 55 26.0	0.0
ELND	Elena	2.16	79	⇓P	Pb	01 55 00.5	-1.6
ELND				⇑S	Sg	01 55 31.7	-0.1
OHR	Ohrid	2.17	230	i Pn	Pg	01 55 03.6	-0.5
OHR				eSn	Sb	01 55 28.6	-1.1
OHR				eLg	Lg	01 55 34.9	
	comp=E,99nm,0.5s						
OHR				eLg	Lg	01 55 36.5	
	comp=N,77nm,0.6s						
OHR	Ohrid	2.17	230	i Pn	Pg	01 55 03.6	-0.5
OHR				eSn	Sb	01 55 28.6	-1.1
OHR				eLg	Lg	01 55 34.9	
	comp=E,99nm,0.5s						
OHR				eLg	Lg	01 55 36.5	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=N,77nm,0.6s						
KTI	Kastanea	2.24	197	P	Pn	01 55 01.5	+1.0
COPA	Copaceanca	2.27	45	⇓P	Pb	01 55 02.9	-1.2
SZH	Strazhica	2.28	70	*i* P	Pb	01 55 02.5	-1.7
THAS	Thassos island	2.32	146	P	Pn	01 55 02.0	+0.5
IVAS	Ivanjica	2.33	297	*e*Pn	Pn	01 55 01.0	-0.6
IVAS				*e*Sn	Sn	01 55 31.4	+0.7
SJES	Sjenica	2.33	289	*e*Pn	Pn	01 55 02.1	+0.4
SJES				*e*Sn	Sn	01 55 31.2	+0.3
RDO	Rodhopi	2.35	125	P	Pn	01 55 02.5	+0.6
HERR	Herculane	2.38	350	⇓P	Pn	01 55 01.7	-0.6
MDVR	Moldovita	2.43	338	⇑P	Pn	01 55 02.7	-0.3
MDVR				⇑S	Sn	01 55 33.6	+0.5
HUMR	Humele	2.46	35	⇓P	Pn	01 55 03.6	+0.2
TRUS	Trudelj	2.53	313	*e*Pn	Pn	01 55 03.6	-0.7
TRUS				*e*Sn	Sn	01 55 36.8	+1.2
TIR	Tirane	2.62	244	⇓P	Pn	01 55 06.1	+0.5
DIVS	Divibare	2.69	306	*e*Pn	Pn	01 55 06.2	-0.4
DIVS				*e*Sn	Sn	01 55 40.9	+1.3
DIVS	Divibare	2.69	306	*e*Pn	Pn	01 55 05.9	-0.7
PDG	Podgorica	2.77	269	⇓P	Pn	01 55 06.9	-0.6
PDG	Podgorica	2.77	269	*e*Pn	Pn	01 55 08.5	+0.9
RAZG	Razgrad	2.77	67	⇓P	Pb	01 55 09.3	-3.3
RAZG				⇓S	Sb	01 55 47.6	+0.7
ALN	Alexandroupoli	2.81	125	P	Pn	01 55 09.2	+1.0
DRME	Dracevica, Mon	2.84	264	*e*Pn	Pb	01 55 11.4	-2.4
GZR	Gura Zlata	2.86	357	⇑P	Pn	01 55 08.7	-0.2
RUDO	Rudo	2.87	293	*e*Pn	Pn	01 55 08.2	-0.7
BBLS	Lazići	2.94	298	*e*Pn	Pn	01 55 11.9	+1.9
BBLS				*e*Sn	Sn	01 55 45.6	-0.2
BBLS	Lazići	2.94	298	*e*Pn	Pn	01 55 08.7	-1.3
ARR	Arges	3.07	22	⇑P	Pn	01 55 11.7	-0.1
ARR				⇓S	Sn	01 55 49.2	+0.3
MTUR	Matau	3.08	28	⇓P	Pn	01 55 12.5	+0.6
SULR		3.19	47	⇑P	Pb	01 55 15.6	-4.1
TEKS	Tekeris	3.22	310	*e*Pn	Pn	01 55 12.4	-1.5
BZS	Buzias	3.23	343	⇑P	Pn	01 55 13.5	-0.5
VOIR		3.26	26	⇓P	Pn	01 55 14.7	+0.3
VOIR				⇑S	Sn	01 55 54.9	+1.3
BRY	Bratogost	3.30	278	*e*Pn	Pn	01 55 16.3	+1.2
DEV	Deva	3.34	359	⇑P	Pn	01 55 15.5	0.0
TREB	Trebinje	3.43	275	*e*Pn	Pn	01 55 17.2	+0.5
RASA	Rasa	3.46	60	⇓P	Pn	01 55 18.9	+1.8
FRGS	Fruska Gora	3.49	320	*e*Pn	Pn	01 55 18.1	+0.6
FRGS				*e*Sn	Sn	01 55 59.7	+0.5
FRGS	Fruska Gora	3.49	320	*e*Pn	Pn	01 55 15.6	-1.9
DBRK	Dubrovnik	3.58	274	*e*Pn	Pn	01 55 20.7	+1.9
DBRK				Sn	Sn	01 56 04.3	+2.8
DBRK	Dubrovnik	3.58	274	*i* Pg	Pg	01 55 30.5	-0.6
MLR	Muntele Rosu	3.64	35	⇑P	Pn	01 55 21.6	+1.9
MLR				⇓S	Sb	01 56 06.0	-5.9
DOPR	Dopca	3.84	26	⇓P	Pn	01 55 22.6	+0.3
SIRR	Siria	3.85	346	⇓P	Pn	01 55 22.6	+0.1
STON	Ston	3.92	277	*i* Pg	Pn	01 55 26.2	+2.9
STON				Sg	Pb	01 55 30.4	-1.7
OZUR		4.08	28	⇑P	Pn	01 55 26.0	+0.3
HARR	Harsova	4.18	57	⇓P	Pn	01 55 27.8	+0.8
TLBR	Topalu	4.18	60	⇓P	Pn	01 55 26.3	-0.7
PLOR	Plostina	4.23	37	⇑P	Pn	01 55 29.5	+1.8
DRGR		4.26	357	⇓P	Pn	01 55 29.1	+1.0
VRI	Vrincioaia	4.28	38	⇑P	Pn	01 55 30.1	+1.8
VRI				⇑S	Sn	01 56 21.8	+3.2
ODBI	Odobesti	4.35	41	⇑P	Pn	01 55 29.6	+0.3
TIRR	Tirgusor	4.38	62	⇓P	Pn	01 55 30.6	+0.8
TIRR	Tirgusor	4.38	62	⇓P	Pn	01 55 30.6	+0.8
MAKA	Makarska	4.45	282	*i* Pg	Pn	01 55 32.8	+2.1
MAKA				Sg	Pb	01 55 42.9	+1.8
TOPG	Topolog	4.55	57	⇑P	Pn	01 55 33.3	+1.2
CFR	Carcaliu	4.56	53	⇓P	Pn	01 55 32.9	+0.7
CFR				⇑S	Sn	01 56 28.6	+3.0
BLY	Banja Luka	4.76	300	*e*Pn	Pn	01 55 35.2	+0.2
MORH	Mrgy, Hungar	4.82	321	*e*Pn	Pn	01 55 34.9	-0.9
TLCR		4.97	56	⇑P	Pn	01 55 39.4	+1.6
BURAR	Bucovina Array	5.32	16	⇑P	Pn	01 55 43.9	+1.2
KOLS	Kolonicke sedl	6.42	356	*e*PG	Pg	01 56 28.9	+3.6
KOLS				*e*SG	Sg	01 57 48.0	-0.4

*IDC **06** 01:56:46.8±1.8, 10°.13S×123°.31E, h41km±17km, mb3.8/5, mb1 4.0/6, mb1mx3.5/48, mbtmp4.1/6, ML4.2/1, MS2.9/2, Ms1 2.9/2, ms1mx2.6/33, Error ellipse: s-maj=41.0km s-min=20.0km az=54.0*

*DJA **06** 01:56:48.1±0.2, 10°S±3°×12°3E±°, h39km±4km, M4.2/15, mb4.4/15, mB5.1/4, MLv4.1/13, Mw(mB)4.4/4*

ISC 06 01:56:46.5±0.7**, 10°.33S**±0°.06×**123°.37E**±0°.05**, h35**km**, n23,** σ$2^{s}46$/28**, mb4.0**/5**, Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Baumata	0.31	68	P	Pn	01 56 57.3	+2.6
	1μm,0.3s,baz=94,slow=1.2,SNR=923						
BATI				S	Sn	01 57 04.8	+4.5
	4μm,0.3s,baz=5.2,slow=5.7,SNR=23						
BATI	Baumata	0.31	68	P	Pn	01 56 57.5	+2.8
BATI				S	Sn	01 57 04.1	+3.8
SOEI	Soe	1.05	57	P	Pn	01 57 06.4	+1.5
SOEI				S	Sn	01 57 19.5	+1.1
MMRI	Maumere	2.02	326	P	Pn	01 57 19.0	+0.9
EDFI	Ende, Flores	2.28	313	P	Pn	01 57 23.3	+1.5
BASI	Baing, Sumba	2.75	272	P	Pn	01 57 31.7	+3.6
BASI				S	Sn	01 58 04.0	+3.9
WBSI	Waikabubak, Su	3.98	280	P	Pn	01 57 47.7	+2.6
BBSI	Bau Bau	4.87	351	P	Pn	01 57 58.9	+1.5
PLAI	Plampang	5.71	285	P	Pn	01 58 11.7	+2.8
	0.3nm1μm91nm,0.6s						
BKSI	Bulukumba	5.92	327	P	Pn	01 58 12.7	+0.9
	0.1nm382nm32nm,0.7s						
KAPI	Kappang	6.38	326	P	Pn	01 58 19.1	+1.0
	2.7nm,0.3s,baz=159,slow=7.0,SNR=3.9						
KAPI				LR	LR	02 01 00.9	
	comp=Z,139nm,21.4s,baz=120,slow=41						
FITZ	Fitzroy Crossi	8.03	164	P	Pn	01 58 42.5	+1.7
	2.4nm,0.3s,baz=355,slow=11,SNR=34						
FITZ				S	Sn	02 00 07.9	-2.6
	21nm,0.3s,baz=154,slow=11,SNR=19						
FITZ				LR	LR	02 02 37.9	
	comp=Z,68nm,18.5s,baz=338,slow=43						
JAGI	Jajag, Banyuwa	9.28	281	P	Pn	01 58 58.4	+0.5
	18nm,0.7s						
WRA	Warramunga Arr	14.26	133	P	Pn	02 00 02.3	-3.8
	1.7nm,0.3s,baz=252,slow=10.0,SNR=42						
WRA				S	Sn	02 02 30.6	-13
	3.0nm,0.3s,baz=300,slow=23,SNR=14						
CNJI	Cibinong	16.32	279	P	P	02 00 37.5	+1.7
ASAR	Alice Springs	16.64	144	P	Pn	02 00 36.0	-1.3
	1.9nm,0.3s,baz=318,slow=12,SNR=95						
ASAR				S	Sn	02 03 28.8	-12
	0.8nm,0.3s,baz=314,slow=22,SNR=9.1						
KASI	Kota Agung	19.29	283	P	P	02 01 09.4	+0.9
	937nm88nm,0.9s						
CTA	Charters Tower	24.09	116	P	P	02 02 00.5	+1.4
	3.3nm,0.7s,baz=278,slow=13,SNR=4.3						
STKA	Stephens Creek	27.28	145	P	P	02 02 28.3	+0.5
	1.7nm,0.5s,baz=317,slow=9.6,SNR=5.0						
CMAR	Chiang Mai Arr	37.40	320	P	P	02 03 54.4	-2.0
	0.9nm,0.3s,baz=137,slow=7.8,SNR=5.0						
SONM	Songino Array	59.83	347	P	P	02 06 45.6	-2.9
	0.3nm,0.5s,baz=161,slow=10,SNR=2.5						
MKAR	Makanchi Array	67.65	331	P	P	02 07 38.1	-1.9
	1.4nm,0.6s,baz=138,slow=7.7,SNR=19						
TORD	Torodi Ar. Bea	122.93	279	PKP	PKPdf	02 15 40.5	+0.4
	0.5nm,0.6s,baz=94,slow=2.1,SNR=7.2						

*NEIC **06** 01:59:58.5±1.9, 39°.36N±0°.03×23°.88E±0°.05, h15km±4km, Error ellipse: s-maj=5.7km s-min=4.7km az=107.0*

*IDC **06** 01:59:59.9±0.8, 39°.39N×23°.72E, h0km, mb3.9/13, mb1 3.9/22, mb1mx3.8/70, mbtmp3.8/22, ML3.6/10, MS3.4/6, Ms1 3.4/6, ms1mx3.1/52, Error ellipse: s-maj=13.9km s-min=10.7km az=122.0*

*DDA **06** 01:59:59.1, 39°.41N×23°.91E, h18km±2km, MW4.1*

*ISK **06** 01:59:59.9, 39°.34N×23°.84E, h11km, ML4.4/37*

*ATH **06** 02:00:00.2, 39°.35N×23°.88E, h29km, ML4.2/47, Error ellipse: s-maj=1.0km s-min=0.6km az=252.0*

*THE **06** 02:00:01.5, 39°.34N×23°.88E, h13km, ML4.3/13, Error ellipse: s-maj=0.7km s-min=0.4km az=213.0*

*PDG **06** 02:00:01.1±0.6, 39°.36N×23°.86E, h22km, ML4.0/13, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

ISC 06 02:00:00.3±1.0**, 39°.36N**±0°.02×**23°.87E**±0°.01**, h16**km±7km**,** **n423,** σ$1^{s}68$/505**, mb4.0**/17**, 41C-33D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKIA	Skiathos	0.37	239	P	Pb	02 00 08.6	+0.1
SKIA				S	Sb	02 00 14.3	+0.3
	375μm,0.6s						
SKIA	Skiathos	0.37	239	P	Pb	02 00 08.7	+0.3
SKIA				S	Sb	02 00 14.6	+0.6
SKIA				AML	AML	02 00 14.9	
SKIA				AML	AML	02 00 15.4	
NEO	Neokhori	0.51	264	P	Pb	02 00 11.1	+0.2
NEO				S	Sb	02 00 18.7	+0.8
	45μm,0.4s						
NEO	Neokhori	0.51	264	P	Pb	02 00 11.0	+0.2
NEO				S	Sb	02 00 18.4	+0.5
NEO				AML	AML	02 00 20.6	
	comp=E,78874μm,0.3s						
NEO				AML	AML	02 00 21.6	
PAIG	Paliouri	0.59	345	P	Pn	02 00 13.3	-0.7
PAIG				S	Sn	02 00 22.4	-0.8
	comp=E,28μm,0.5s						
PAIG	Paliouri	0.59	345	P	Pn	02 00 13.1	-0.8
PAIG				S	Sn	02 00 21.8	-1.5
PAIG				AML	AML	02 00 23.9	
	comp=E,58851μm,0.6s						
PAIG				AML	AML	02 00 23.9	
	comp=N,55038μm,0.5s						
MRKA	Markates	0.69	199	P	Pb	02 00 13.9	0.0
MRKA				S	Sb	02 00 23.9	+0.7
	comp=N,46μm,0.6s						
MRKA	Markates	0.69	199	P	Pb	02 00 13.8	-0.1
MRKA				S	Sb	02 00 23.9	+0.7
MRKA				AML	AML	02 00 26.1	
MRKA				AML	AML	02 00 26.9	
	comp=N,81242μm,0.6s						
SKY	Skiros Island	0.71	132	P	Pn	02 00 15.0	-0.7
SKY				S	Sn	02 00 24.9	-1.4
	comp=N,49μm,0.2s						
SKY	Skiros Island	0.71	132	P	Pn	02 00 14.8	-0.9
SKY				S	Sn	02 00 25.0	-1.4
SKY				AML	AML	02 00 27.7	
	comp=E,92309μm,0.2s						
SKY				AML	AML	02 00 29.5	
KYMI	Kymi, Euboea I	0.75	166	P	Pn	02 00 15.3	-0.8
KYMI				S	Sn	02 00 26.6	-0.5
	comp=E,20μm,0.6s						
KYMI	Kymi, Euboea I	0.75	166	P	Pn	02 00 15.4	-0.8
KYMI				S	Sb	02 00 25.4	+0.6
KYMI				AML	AML	02 00 27.6	
	comp=E,49535μm,0.6s						
KYMI				AML	AML	02 00 27.7	
	comp=N,31798μm,0.5s						
OUR	Ouranopolis	0.98	5	P	Pn	02 00 20.0	+0.6
OUR				S	Sn	02 00 34.0	+1.1
	comp=N,15μm,0.4s						
OUR	Ouranopolis	0.98	5	P	Pn	02 00 19.9	+0.6
OUR				AML	AML	02 00 37.1	
	comp=N,35202μm,0.4s						
OUR				AML	AML	02 00 37.1	
	comp=E,25609μm,0.4s						
OUR	Ouranopolis	0.98	5	PG	Pn	02 00 19.9	+0.6
OUR				SG	Sn	02 00 33.7	+0.8
LKR	Lokris	0.98	224	P	Pn	02 00 19.4	0.0
LKR				S	Sn	02 00 32.9	0.0
	comp=E,24μm,0.5s						
LKR	Lokris	0.98	224	P	Pn	02 00 19.3	-0.1
LKR				S	Sn	02 00 32.8	-0.2
LKR				AML	AML	02 00 34.7	
	comp=N,47924μm,0.3s						
LKR				AML	AML	02 00 35.1	
	comp=E,47875μm,0.7s						
PLG	Polygyros	1.07	342	P	Pg	02 00 21.1	+0.2
PLG	Polygyros	1.07	342	P	Pg	02 00 20.9	0.0
PLG				S	Sn	02 00 35.3	+0.2
PLG				AML	AML	02 00 36.1	
	comp=E,37092μm,0.6s						
PLG				AML	AML	02 00 36.8	
	comp=N,27480μm,0.7s						
LIA	Limnos Island	1.15	62	P	Pg	02 00 22.2	-0.2
LIA				S	Sg	02 00 38.6	+1.2
	comp=N,16μm,0.5s						
LIA	Limnos Island	1.15	62	P	Pg	02 00 22.2	-0.2
LIA				S	Sg	02 00 37.4	0.0
LIA				AML	AML	02 00 40.4	
	comp=E,26214μm,0.5s						
LIA				AML	AML	02 00 41.1	
	comp=N,36613μm,0.4s						
LRSO	Larissa Observ	1.19	286	P	Pg	02 00 23.1	-0.1
LRSO				S	Sg	02 00 40.0	+1.3
	comp=N,13μm,0.8s						
LRSO	Larissa Observ	1.19	286	P	Pg	02 00 22.9	-0.3
VIL2	Platees	1.24	203	P	Pg	02 00 23.7	-0.4
VIL2				AML	AML	02 00 45.1	
	comp=E,29458μm,0.6s						
VIL2				AML	AML	02 00 45.6	
	comp=N,12734μm,0.6s						
AGG	Agios Georgios	1.25	255	P	Pb	02 00 23.5	+0.1
AGG	Agios Georgios	1.25	255	P	Pb	02 00 23.4	+0.1
AGG				AML	AML	02 00 45.0	
	comp=N,35888μm,0.6s						
AGG				AML	AML	02 00 45.4	
	comp=E,30154μm,1.0s						
AGG	Agios Georgios	1.25	255	PN	Pb	02 00 23.5	+0.1
AGG				SN	Sg	02 00 40.4	-0.1
AGG	Agios Georgios	1.25	255	*i* P	Pb	02 00 23.2	-0.2
AGG				*i* S	Sg	02 00 42.3	+1.8
AGG	Agios Georgios	1.25	255		Pn	02 00 22.4	-0.6
AGG				Sn	Sb	02 00 37.3	-1.9
VILL	Villia	1.27	200	P	Pb	02 00 23.8	-0.1
VILL				S	Sg	02 00 41.1	-0.2
	comp=E,1μm,0.6s						
DION	Dionisos Attik	1.28	178	P	Pg	02 00 24.3	-0.7
DION	Dionisos Attik	1.28	178	P	Pg	02 00 24.2	-0.7
DION				S	Sg	02 00 41.7	0.0
LIT	Litokhoron	1.30	305	P	Pb	02 00 24.4	+0.1
LIT				S	Sg	02 00 41.6	-0.6
	comp=E,8μm,0.5s						
LIT	Litokhoron	1.30	305	P	Pb	02 00 24.3	0.0
LIT				AML	AML	02 00 42.2	
	comp=N,19280μm,0.5s						
LIT				AML	AML	02 00 42.5	
	comp=E,11519μm,0.5s						
LIT	Litokhoron	1.30	305	*i* P	Pb	02 00 24.4	+0.1
LIT				*i* S	Sn	02 00 41.1	+0.3
LIT	Litokhoron	1.30	305	Pn	Pn	02 00 22.7	-1.0
LIT				Sn	Sb	02 00 38.8	-2.0
PTL	Penteli	1.31	180	P	Pb	02 00 24.4	-0.1
PTL	Penteli	1.31	180	P	Pb	02 00 24.4	-0.1
PTL				AML	AML	02 00 46.7	
	comp=N,10207μm,0.5s						
PTL				AML	AML	02 00 48.4	
	comp=E,17882μm,0.8s						
PROD	Prodromos	1.33	215	P	Pb	02 00 24.5	-0.4
HORT	Hortiatis	1.37	335	P	Pg	02 00 25.9	-0.8
HORT	Hortiatis	1.37	335	P	Pg	02 00 25.9	-0.8
HORT				AML	AML	02 00 55.1	
	comp=E,15148μm,0.7s						
HORT				AML	AML	02 00 55.2	
	comp=N,9736μm,0.7s						
HORT	Hortiatis	1.37	335	PN	Pg	02 00 25.9	-0.8
ATH	Athens Observa	1.39	185	P	Pb	02 00 25.7	-0.2
ATH	Athens Observa	1.39	185	P	Pb	02 00 25.7	-0.2
ATH				AML	AML	02 00 47.6	
	comp=E,10878μm,0.7s						
ATH				AML	AML	02 00 50.0	
	comp=N,21808μm,0.7s						
ATHU	Athens Univers	1.39	183	P	Pb	02 00 25.5	-0.4
ATHU	Athens Univers	1.39	183	P	Pb	02 00 25.6	-0.3
ATHU				AML	AML	02 00 48.6	
	comp=E,3582μm,0.7s						
ATHU				AML	AML	02 00 50.4	
	comp=N,7757μm,0.6s						
MAKR	Makrakomi, Fth	1.40	256	P	Pg	02 00 26.3	-0.8
MAKR	Makrakomi, Fth	1.40	256	P	Pb	02 00 26.0	0.0
MAKR				AML	AML	02 00 49.1	
	comp=N,63606μm,0.6s						
MAKR				AML	AML	02 00 50.7	
	comp=E,49754μm,0.7s						
KARY	Karystos	1.40	161	P	Pb	02 00 25.9	0.0
KARY				S	Sb	02 00 43.1	-0.4
	comp=E,9μm,0.4s						
KARY	Karystos	1.40	161	P	Pb	02 00 26.0	0.0
KARY				AML	AML	02 00 47.4	
	comp=N,13092μm,0.4s						
KARY				AML	AML	02 00 48.4	
	comp=E,21180μm,0.5s						
THAS	Thassos island	1.41	27	P	Pb	02 00 25.4	-0.7
THAS	Thassos island	1.41	27	P	Pn	02 00 25.2	0.0
THAS				AML	AML	02 00 51.9	
	comp=E,12251μm,0.3s						
THAS				AML	AML	02 00 52.1	
	comp=N,11595μm,0.2s						
THE	Thessaloniki	1.45	332	P	Pb	02 00 27.0	+0.1
THE	Thessaloniki	1.45	332	P	Pb	02 00 27.0	+0.1
THE				AML	AML	02 00 58.7	
	comp=E,6320μm,0.9s						
THE				AML	AML	02 00 59.6	
	comp=N,4718μm,0.8s						
THL	Klokotos Trika	1.45	279	P	Pb	02 00 26.6	-0.3
THL	Klokotos Trika	1.45	279	P	Pb	02 00 26.6	-0.3
THL				AML	AML	02 00 50.1	
	comp=N,5906μm,1.2s						
THL				AML	AML	02 00 53.9	
	comp=E,4421μm,0.7s						
VLY	Voula,Athens	1.50	182	P	Pb	02 00 27.3	-0.5
VLY	Voula,Athens	1.50	182	P	Pb	02 00 27.2	-0.6
VLY				AML	AML	02 00 53.4	
	comp=E,22893μm,0.5s						
VLY				AML	AML	02 00 55.3	
	comp=N,20817μm,0.6s						
LOUT	Loutraki	1.54	207	P	Pb	02 00 27.7	-0.7
LOUT	Loutraki	1.54	207	P	Pb	02 00 27.6	-0.7
LOUT				AML	AML	02 00 58.3	
	comp=E,3123μm,0.6s						
LOUT				AML	AML	02 01 03.0	
	comp=N,2928μm,0.6s						
SIGR	SIGRI	1.55	95	P	Pb	02 00 28.1	-0.4
SIGR	SIGRI	1.55	95	P	Pb	02 00 28.0	-0.6
SIGR				AML	AML	02 00 54.8	
	comp=E,9002μm,0.6s						
SIGR				AML	AML	02 01 03.3	
	comp=N,7877μm,0.7s						
SIGR	SIGRI	1.55	95	PN	Pb	02 00 28.4	-0.1
SIGR				SN	Sg	02 00 49.5	-0.6
KALE	Kalithea	1.66	235	P	Pb	02 00 29.6	-0.9
KALE	Kalithea	1.66	235	P	Pb	02 00 29.5	-1.1
KALE				AML	AML	02 00 59.1	
	comp=E,11692μm,0.8s						
KALE				AML	AML	02 01 03.5	
	comp=N,13338μm,0.7s						
EVR	Evrytania	1.66	255	P	Pb	02 00 30.0	-0.6
EVR	Evrytania	1.66	255	P	Pb	02 00 29.8	-0.8
EVR				AML	AML	02 00 58.5	
	comp=N,6938μm,1.0s						
EVR				AML	AML	02 01 04.4	
	comp=E,9922μm,1.0s						
SMTH	Samothraki Isl	1.69	48	P	Pn	02 00 29.3	+0.1
SMTH	Samothraki Isl	1.69	48	P	Pn	02 00 29.1	-0.1
SMTH				AML	AML	02 00 57.6	
	comp=N,3398μm,0.5s						
SMTH				AML	AML	02 00 60.0	
	comp=E,4464μm,0.4s						
KTI	Kastanea	1.70	308	P	Pb	02 00 30.7	-0.5
ANX	Ano Chora	1.70	244	P	Pb	02 00 30.6	-0.6
SERG	Sergoula	1.70	237	P	Pb	02 00 30.4	-0.8
KAVA	Kavala	1.71	17	P	Pn	02 00 29.6	+0.2
KAVA	Kavala	1.71	17	P	Pn	02 00 29.6	+0.2
KAVA				AML	AML	02 01 03.4	
	comp=N,4927μm,0.3s						
KAVA				AML	AML	02 01 05.3	
	comp=E,5536μm,0.4s						
TRIZ	Trizonia	1.72	235	P	Pb	02 00 30.5	-1.0
TRIZ	Trizonia	1.72	235	P	Pb	02 00 30.3	-1.2
BOZC	Bozcaada	1.75	73	PN	Pb	02 00 30.9	-1.1
BOZC				SN	Sg	02 00 54.9	-1.8
BOZC	Bozcaada	1.75	73	*i* P	Pb	02 00 30.7	-1.3
BOZC				*i* S	Sb	02 00 54.3	+0.5
ALIK	Aliki, Aigiali	1.76	232	P	Pb	02 00 31.6	-0.5
GADA	Gvkgeada	1.77	61	PN	Pb	02 00 31.4	-0.9
SRS	Serrai	1.77	353	P	Pb	02 00 31.1	-1.2
SRS	Serrai	1.77	353	P	Pn	02 00 30.8	+0.6
SRS				AML	AML	02 01 02.5	
	comp=N,4561μm,0.7s						
SRS				AML	AML	02 01 18.4	
	comp=E,4678μm,1.3s						
EFP	Efpalio	1.79	239	P	Pb	02 00 31.6	-1.1
LAKA	Lakka	1.85	234	P	Pb	02 00 32.6	-1.2
LAKA	Lakka	1.85	234	P	Pb	02 00 32.4	-1.3
PRK	Paraskevi	1.86	93	P	Pb	02 00 33.5	-0.4
PRK	Paraskevi	1.86	93	P	Pb	02 00 32.7	-1.2
PRK				AML	AML	02 01 12.1	
	comp=N,11437μm,1.0s						
PRK				AML	AML	02 01 14.6	
	comp=E,10452μm,1.1s						
KZN	Kozani	1.88	301	P	Pb	02 00 33.1	-1.1
KZN	Kozani	1.88	301	P	Pb	02 00 32.9	-1.3
KZN				AML	AML	02 01 01.1	
	comp=E,5543μm,0.5s						
KZN				AML	AML	02 01 03.3	
	comp=N,4140μm,0.6s						
KLV	Kalavryta, Ach	1.88	226	P	Pb	02 00 32.8	-1.5
DID	Didima	1.92	195	P	Pn	02 00 32.9	+0.6
KNT	Kendrikon	1.95	338	P	Pb	02 00 34.2	-1.2
KNT	Kendrikon	1.95	338	P	Pb	02 00 34.1	-1.2
KNT				AML	AML	02 01 11.8	
	comp=E,3358μm,0.6s						
KNT				AML	AML	02 01 13.2	
	comp=N,4305μm,0.6s						
KNT	Kendrikon	1.95	338	PN	Pb	02 00 34.2	-1.2
EZN	Ezine	1.95	75	PN	Pb	02 00 34.3	-1.1
CHOS	Chios island	1.96	119	P	Pb	02 00 34.2	-1.4
CHOS	Chios island	1.96	119	P	Pb	02 00 34.1	-1.4
CHOS				AML	AML	02 01 07.6	
	comp=E,8362μm,0.6s						
CHOS				AML	AML	02 01 07.6	
	comp=N,7366μm,0.6s						
CHOS	Chios island	1.96	119	PN	Pb	02 00 34.3	-1.4
NVR	Nevrokopi	1.99	360	P	Pn	02 00 34.1	+0.8
NVR	Nevrokopi	1.99	360	P	Pn	02 00 34.1	+0.8
KPRO	Kipourio	2.03	288	P	Pb	02 00 35.5	-1.3
KPRO	Kipourio	2.03	288	P	Pb	02 00 35.1	-1.7
KPRO				AML	AML	02 01 20.6	
	comp=N,6912μm,1.1s						
KPRO				AML	AML	02 01 22.2	
	comp=E,7622μm,1.2s						
KRND	KRANIDI	2.05	196	P	Pn	02 00 34.9	+0.8
KRND	KRANIDI	2.05	196	P	Pn	02 00 34.6	+0.5
KRND				AML	AML	02 01 12.8	
	comp=E,8345μm,0.7s						
KRND				AML	AML	02 01 13.5	
	comp=N,9214μm,0.7s						
MEV	Metsovon	2.09	283	P	Pb	02 00 36.3	-1.5
AYVA	Ayvalik	2.19	90	*i* P	Pn	02 00 37.2	+1.3
AYVA				*i* S	Sg	02 01 08.7	-1.9
RDO	Rodhopi	2.19	35	P	Pn	02 00 36.3	+0.2
RDO	Rodhopi	2.19	35	P	Pn	02 00 36.2	+0.2
RDO	Rodhopi	2.19	35	PN	Pn	02 00 36.4	+0.4
DRO	Drossia	2.20	231	P	Pb	02 00 38.0	-1.7
TRIP	Tripoli	2.22	215	P	Pn	02 00 37.9	+1.4
TRIP	Tripoli	2.22	215	P	Pn	02 00 37.8	+1.3
TRIP				AML	AML	02 01 15.6	
	comp=N,5581μm,0.6s						
TRIP				AML	AML	02 01 19.8	
	comp=E,5951μm,0.8s						
ENEZ	Enez	2.23	51	PN	Pb	02 00 38.3	-1.8
MMB	Musomiste	2.23	357	*i* P	Pn	02 00 37.0	+0.4
SERI	Serifos	2.25	167	P	Pn	02 00 37.2	+0.4
GELI	Tayfur-Gelibol	2.25	62	PN	Pb	02 00 38.9	-1.7
PENT	Pentalofos	2.27	293	P	Pn	02 00 38.6	+1.4
PENT	Pentalofos	2.27	293	P	Pn	02 00 38.5	+1.3
ALN	Alexandroupoli	2.27	47	P	Pn	02 00 37.4	+0.3
ALN	Alexandroupoli	2.27	47	P	Pn	02 00 37.3	+0.3
ALN				AML	AML	02 01 16.7	
	comp=N,3519μm,1.1s						
ALN				AML	AML	02 01 21.5	
	comp=E,2923μm,1.0s						
ALN	Alexandroupoli	2.27	47	PN	Pn	02 00 37.2	+0.1
ALN	Alexandroupoli	2.27	47		Pn	02 00 35.3	-1.7
RLS	Riolos of Patr	2.29	236	P	Pb	02 00 39.4	-1.7
RLS	Riolos of Patr	2.29	236	P	Pn	02 00 38.9	+1.6
VLX	Vlachokerasia	2.31	211	P	Pn	02 00 39.2	+1.5
URLA	Izmir	2.35	114	PN	Pn	02 00 39.7	+1.4
URLA	Izmir	2.35	114	*i* P	Pn	02 00 39.6	+1.4
URLA				*i* S	Sg	02 01 16.8	+1.0
JAN	Janina	2.36	278	P	Pb	02 00 40.9	-1.5
DKL	Dikili	2.37	96	PN	Pb	02 00 40.3	-2.3
FNA	Florina	2.39	307	P	Pn	02 00 40.3	+1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FNA	Florina	2.39	307	P	Pn	02 00 40.1	+1.3
FNA				AML	AML	02 01 13.9	
	comp=N,2542µm,0.5s						
FNA				AML	AML	02 01 28.4	
	comp=E,2239µm,0.8s						
FNA	Florina	2.39	307	PN	Pn	02 00 39.9	+1.1
FNA	Florina	2.39	307	iP	Pn	02 00 40.4	+1.7
FNA	Florina	2.39	307		Pn	02 00 38.1	-0.6
FNA				Sn	Sn	02 01 05.3	-2.4
RZN	Rozhen	2.41	15	iP	Pn	02 00 40.2	+0.9
RZN				S	Sn	02 01 10.3	+1.7
ERIK	Erikli-Kesan	2.42	56	PN	Pn	02 00 40.8	+1.7
NEST	Nestorio	2.42	297	P	Pb	02 00 41.1	-2.3
NEST	Nestorio	2.42	297	P	Pn	02 00 40.7	+1.5
NEST				AML	AML	02 01 31.7	
	comp=E,2635µm,0.8s						
NEST				AML	AML	02 01 44.8	
	comp=N,2839µm,0.9s						
LPK	Lapseki	2.44	65	PN	Pb	02 00 41.3	-2.5
AMT	Artemida-Makis	2.49	224	P	Pb	02 00 42.2	-2.5
ZEDA	zmir-Bergama	2.52	98	iP	Pn	02 00 42.1	+1.5
ZEDA				iS	Sg	02 01 24.8	+3.5
TSLK	Tsoukalades, L	2.56	259	P	Pb	02 00 44.8	-1.0
LKD2	Lefkada island	2.57	258	P	Pb	02 00 45.0	-0.9
KDZ	Kurdzhali	2.57	27	iP	Pn	02 00 41.3	0.0
KDZ				S	Sg	02 01 24.2	+1.2
KDZ	Kurdzhali	2.57	27	PN	Pn	02 00 41.7	+0.4
KKB	Krupnik	2.58	347	iP	Pn	02 00 42.5	+1.2
KKB				S	Sn	02 01 12.4	0.0
EVGI	Lefkada island	2.61	255	P	Pb	02 00 45.5	-1.2
APE	Apeiranthos	2.63	150	P	Pn	02 00 43.1	+1.0
APE	Apeiranthos	2.63	150	P	Pn	02 00 43.1	+1.0
APE	Apeiranthos	2.63	150	⇑P	Pn	02 00 43.2	+1.0
APE	Apeiranthos	2.63	150	PN	Pn	02 00 43.5	+1.3
APE	Apeiranthos	2.63	150	iP	Pn	02 00 41.8	-0.4
APE				iS	Sn	02 01 11.7	-2.1
MHLA	Plaka, Milos I	2.65	170	P	Pn	02 00 42.9	+0.7
MHLA				AML	AML	02 01 30.3	
	comp=N,9230µm,0.7s						
MHLA				AML	AML	02 01 32.4	
	comp=E,7379µm,1.0s						
ITM	Ithomi	2.66	216	P	Pb	02 00 44.8	-2.7
ITM	Ithomi	2.66	216	P	Pn	02 00 44.5	+2.0
ITM	Ithomi	2.66	216	PN	Pn	02 00 43.5	+1.0
ITM	Ithomi	2.66	216		Pn	02 00 41.7	-0.8
DGB	zmir	2.69	118	iP	Pn	02 00 44.4	+1.5
DGB				iS	Sg	02 01 28.6	+1.9
KFL	Anninata	2.71	244	P	Pb	02 00 46.6	-1.9
FSK	Fiskardo	2.73	252	P	Pb	02 00 46.0	-2.8
VLI	Veliai	2.74	196	P	Pn	02 00 44.3	+0.8
VLI	Veliai	2.74	196	P	Pn	02 00 44.1	+0.6
VLI				AML	AML	02 01 41.3	
	comp=E,3967µm,0.8s						
VLI				AML	AML	02 01 42.6	
	comp=N,4778µm,0.8s						
IGT	Igoumenitsa	2.75	275	P	Pb	02 00 47.2	-1.8
PLD	Plovdiv	2.81	13	iP	Pn	02 00 46.5	+1.9
VLS	Valsamata	2.82	246	P	Pb	02 00 47.4	-2.9
KRBG	Karabiga-Canak	2.83	68	PN	Pn	02 00 46.9	+2.1
SMG	Samos	2.85	124	P	Pn	02 00 46.4	+1.3
SMG	Samos	2.85	124	P	Pn	02 00 46.0	+0.9
SMG				AML	AML	02 01 34.5	
	comp=E,1207µm,0.7s						
SMG				AML	AML	02 01 36.2	
	comp=N,1102µm,0.7s						
IOSP	Ios island	2.86	157	P	Pn	02 00 46.1	+0.9
IOSP	Ios island	2.86	157	P	Pn	02 00 46.2	+0.9
IOSP				AML	AML	02 01 35.5	
	comp=N,6131µm,0.6s						
IOSP				AML	AML	02 01 37.6	
	comp=E,5838µm,0.6s						
DYR	Agios Nikonas	2.86	206	P	Pn	02 00 46.6	+1.3
RKY	Sarkoy-Tekirda	2.86	61	PN	Pn	02 00 47.4	+2.1
SART	Tekirdag	2.87	61	iP	Pn	02 00 46.1	+0.7
SART				iS	Sg	02 01 32.3	-0.1
BALY	Balya	2.92	81	iP	Pn	02 00 47.8	+1.7
BALY				iS	Sg	02 01 34.0	-0.2
OHR	Ohrid	2.93	308	iPn	Pn	02 00 48.2	+2.0
OHR	Ohrid	2.93	308	iPn	Pn	02 00 48.2	+2.0
DIM	Dimitrovgrad	2.97	25	iP	Pn	02 00 47.9	+1.2
PYL	PYLOS	2.98	215	P	Pn	02 00 49.6	+2.7
STEP	BALIKESIR_Sava	2.98	88	iP	Pn	02 00 48.4	+1.4
STEP				iS	Sg	02 01 39.1	+3.0
AMGA	Amorgos Island	2.98	147	P	Pn	02 00 48.0	+1.0
GONE	Gonen-Balikesi	3.02	76	PN	Pn	02 00 49.5	+2.1
SRN	Sarande	3.04	281	P	Pb	02 00 51.1	-2.8
AKHS	Akhisar	3.10	98	iP	Pn	02 00 50.4	+1.8
AKHS				iS	Sg	02 01 41.3	+1.3
BALB	Balikesir	3.11	84	PN	Pn	02 00 50.9	+2.2
GCAM	G?zelcaml?	3.11	121	PN	Pn	02 00 50.5	+1.8
GCAM	G?zelcaml?	3.11	121	iP	Pn	02 00 50.0	+1.3
GCAM				iS	Sg	02 01 40.8	+0.6
TPE	Tepelena	3.12	289	P	Pb	02 00 53.4	-1.9
MRMT	Marmara Adasi	3.12	65	PN	Pn	02 00 51.1	+2.2
CMBO	Columbo, Santo	3.13	157	P	Pn	02 00 50.0	+1.1
CMBO	Columbo, Santo	3.13	157	P	Pn	02 00 50.0	+1.1
CMBO				AML	AML	02 01 44.5	
	comp=N,18496µm,0.6s						
CMBO				AML	AML	02 01 45.1	
	comp=E,11369µm,0.6s						
THR5	Thira Island,	3.16	158	P	Pn	02 00 50.9	+1.5
KEK	Kerkira	3.17	278	P	Pb	02 00 52.9	-3.3
THR3	Thira Island,	3.18	157	P	Pn	02 00 51.2	+1.5
PGB	Panagyurishte	3.20	4	iP	Pg	02 01 00.2	-1.3
PGB				S	Sg	02 01 43.9	+1.0
SKO	Skopje	3.20	325	iPn	Pn	02 00 46.2	-3.7
SKO	Skopje	3.20	325	iPn	Pn	02 00 46.2	-3.7
EDC	Edincik	3.23	71	PN	Pn	02 00 52.6	+2.3
THR6	Thira Island,	3.23	158	P	Pn	02 00 51.8	+1.5
SANT	Santorini	3.24	157	P	Pn	02 00 51.4	+1.0
SANT				AML	AML	02 01 49.2	
	comp=E,4062µm,0.9s						
SANT				AML	AML	02 01 57.5	
	comp=N,1313µm,0.8s						
SANT	Santorini	3.24	157	⇓P	Pb	02 00 55.2	-2.2
SANT	Santorini	3.24	157	iP	Pn	02 00 49.6	-0.9
SANT	Santorini	3.24	157	Pn	Pn	02 00 48.7	-1.8
VTS	Vitosha	3.29	352	P	Pn	02 00 53.1	+1.8
VTS	Vitosha	3.29	352	⇑P	Pn	02 00 52.9	+1.6
VTS	Vitosha	3.29	352	iP	Pn	02 00 52.8	+1.5
VTS				S	Sn	02 01 31.1	+0.9
VTS	Vitosha	3.29	352		Pn	02 00 50.0	-1.3
VTS				Sn	Sn	02 01 27.5	-2.7
EDRB	Edirne	3.31	40	PN	Pn	02 00 52.8	+1.4
ANAF	Anafi Island	3.35	153	P	Pn	02 00 53.5	+1.5
ANAF				AML	AML	02 01 51.5	
	comp=N,6253µm,1.0s						
ANAF				AML	AML	02 01 51.9	
	comp=E,8397µm,0.5s						
CRLT	Corlu	3.44	58	PN	Pn	02 00 55.7	+2.4
AYDB	Zeytinkoy-Aydi	3.45	113	PN	Pn	02 00 55.4	+2.0
KIRK	Kırklareli	3.45	44	iP	Pn	02 00 53.9	+0.6
PHP	Peshkopia	3.50	313	P	Pn	02 00 56.2	+2.1
DURS	Dursunbey	3.57	85	iP	Pn	02 00 56.6	+1.5
DURS				iS	Sg	02 01 54.6	-0.3
AYDN	Tasoluk	3.57	117	iP	Pn	02 00 57.3	+2.3
AYDN				iS	Sg	02 01 53.7	-1.2
KOSK	Kos Island	3.58	136	PN	Pn	02 00 57.0	+2.0
TIR	Tirane	3.65	304	⇓P	Pn	02 00 57.9	+1.8
TIR	Tirane	3.65	304		Pn	02 00 54.2	-1.8
TIR				Sn	Sn	02 01 36.1	-2.7
MANT	Manisa	3.76	102		Pn	02 00 56.9	-0.9
SLVT	Silivri	3.81	59	PN	Pn	02 01 00.8	+2.6
KULA	Kula-Manisa	3.83	101	PN	Pn	02 01 00.9	+2.3
ELND	Elena	3.87	22	⇓P	Pn	02 01 00.4	+1.3
IMMV	Iera Moni Meta	3.89	179	P	Pn	02 01 00.6	+1.2
IMMV	Iera Moni Meta	3.89	179	PN	Pn	02 01 01.2	+1.8
DAT	Datca	3.93	131	PN	Pn	02 01 02.1	+2.1
VAM	Vamos	3.95	176	P	Pn	02 01 01.8	+1.5
USAK	Uak-Merkez	4.06	98	iP	Pn	02 01 04.1	+2.4
PLVB	Pleven	4.06	8	⇓P	Pn	02 01 03.4	+1.7
IDI	Anoyia	4.14	168	P	Pn	02 01 03.9	+1.0
IDI	Anoyia	4.14	168	Pn	Pn	02 01 04.1	+1.1
	comp=E,18nm,0.3s,baz=329,slow=12,SNR=107						
IDI				Lg	Lg	02 02 08.2	
	comp=E,5.9nm,0.3s,baz=280,slow=21,SNR=3.1						
IDI				LR	LR	02 03 11.9	
	comp=E,341nm,19.7s,baz=320,slow=46						
IDI	Anoyia	4.14	168	⇑P	Pn	02 01 06.8	+3.8
IDI	Anoyia	4.14	168		Pn	02 01 02.3	-0.6
SZH	Strazhica	4.20	21	iP	Pn	02 01 05.1	+1.4
SCTE	Santa Cesarea	4.23	281		Pn	02 01 04.4	+0.4
GEDZ	Gediz	4.31	92	PN	Pn	02 01 07.9	+2.6
TVSB	Tavsanli	4.33	87	PN	Pn	02 01 08.2	+2.7
ULC	Ulcinj	4.38	308	⇓iPn	Pn	02 01 07.7	+1.6
ULC				iSn	Sn	02 01 57.5	+0.7
PVY	Plav	4.38	319	⇑iPn	Pn	02 01 07.8	+1.5
PVY				iSn	Sn	02 01 57.8	+0.7
TAVA	DENIZLI_Tavas	4.39	114	iP	Pn	02 01 08.5	+2.2
YLV	Yalova	4.40	72	PN	Pn	02 01 09.2	+2.8
ZIMR		4.44	14	⇓P	Pn	02 01 08.3	+1.4
TURN	Turunc	4.48	122	PN	Pn	02 01 07.4	-0.1
TURN	Turunc	4.48	122	iP	Pn	02 01 07.5	0.0
GVD	Gavdhos	4.51	178	PN	Pn	02 01 10.1	+2.1
DRME	Dracevica, Mon	4.54	310	ePn	Pn	02 01 11.4	+3.0
DRME	Dracevica, Mon	4.54	310	⇓iPn	Pn	02 01 10.3	+1.9
DRME				iSn	Sn	02 02 01.7	+0.9
DALY	Dalyan (Mula)	4.55	122	PN	Pn	02 01 10.9	+2.5
KARP	Karpathos	4.62	144	PN	Pn	02 01 11.4	+2.0
KARP	Karpathos	4.62	144		Pn	02 01 07.8	-1.6
KARP				Sn	Sn	02 01 57.5	-5.2
IVA	Berane	4.62	321	⇓iPn	Pn	02 01 11.2	+1.7
IVA				iSn	Sn	02 02 04.0	+1.1
ZKR	Zakros	4.63	155	PN	Pn	02 01 11.9	+2.3
RAZG	Razgrad	4.65	24	⇓P	Pn	02 01 10.9	+1.2
PDG	Podgorica	4.65	313	⇑P	Pn	02 01 11.5	+1.7
PDG	Podgorica	4.65	313	ePn	Pn	02 01 13.0	+3.2
PDG	Podgorica	4.65	313		Pn	02 01 10.1	+0.2
PDG				Sn	Sn	02 02 02.5	-1.0
TTG	Podgorica	4.65	313	⇓iPn	Pn	02 01 11.6	+1.7
TTG				iSn	Sn	02 02 04.7	+1.2
VLAD	Vladila	4.65	5	⇑P	Pn	02 01 11.4	+1.6
NEF	NEVSHA	4.67	32	iP	Pn	02 01 11.0	+0.9
PRD	Provadia	4.67	34	iP	Pn	02 01 10.8	+0.8
BUM	Brajici-Budva	4.79	309	⇑iPn	Pn	02 01 13.6	+1.9
BUM				iSn	Sn	02 02 08.0	+1.1
KOME	Kolasin	4.79	318	⇑iPn	Pn	02 01 13.7	+1.8
KOME				iSn	Sn	02 02 08.2	+1.0
COPA	Copaceanca	4.88	11	⇓P	Pn	02 01 14.1	+1.2
CEME	Cevo	4.92	312	⇑iPn	Pn	02 01 15.3	+1.7
CEME				iSn	Sn	02 02 10.8	+0.6
FETY	Fethiye	4.93	122	PN	Pn	02 01 16.5	+2.8
PUNG	Punghina	4.96	352	⇓P	Pn	02 01 15.3	+1.2
NKME	Niksic	5.04	314	⇓iPn	Pn	02 01 17.0	+1.8
NKME				iSn	Sn	02 02 13.6	+0.4
NKY	Niksic	5.05	315	⇓iPn	Pn	02 01 17.2	+1.8
NKY				iSn	Sn	02 02 13.9	+0.4
HCY	Herceg Novi	5.11	309	ePn	Pn	02 01 18.7	+2.5
HCY	Herceg Novi	5.11	309	⇓iPn	Pn	02 01 17.7	+1.5
HCY				iSn	Sn	02 02 15.3	+0.5
TAR1	Taranto	5.20	285	ePn	Pn	02 01 19.5	+2.2
PLE	Pljevlja	5.21	321	⇑iPn	Pn	02 01 19.4	+1.8
PLE				iSn	Sn	02 02 18.0	+0.6
HUMR	Humele	5.23	9	⇓P	Pn	02 01 19.2	+1.4
SRE	Strehaia	5.32	355	⇑P	Pn	02 01 20.3	+1.3
TREB	Trebinje	5.36	311	ePn	Pn	02 01 21.6	+2.1
BRY	Bratogost	5.36	313	ePn	Pn	02 01 22.1	+2.4
BRY	Bratogost	5.36	313	⇓iPn	Pn	02 01 21.4	+1.7
BRY				iSn	Sn	02 02 21.3	+0.1
UPM	Unac-Piva	5.36	317	ePn	Pn	02 01 23.1	+3.3
UPM	Unac-Piva	5.36	317	⇑iPn	Pn	02 01 21.6	+1.8
UPM				iSn	Sn	02 02 21.2	-0.1
ELL	Elmali	5.43	117	Pn	Pn	02 01 18.3	-2.4
RASA	Rasa	5.43	26	⇓P	Pn	02 01 23.4	+2.9
RUDO	Rudo	5.43	323	ePn	Pn	02 01 22.3	+1.7
DBRK	Dubrovnik	5.45	309	ePn	Pn	02 01 22.6	+1.8
DBRK				Sn	Sn	02 02 23.5	+0.4
TIP	Timpagrande	5.52	270	⇑P	Pn	02 01 24.6	+2.7
TIP	Timpagrande	5.52	270		Pn	02 01 20.8	-1.1
DIVS	Divibare	5.55	330	ePn	Pn	02 01 24.2	+1.9
LEHL	Lehliu	5.56	22	⇑P	Pn	02 01 24.2	+1.8
ICOR	Ion Corvin	5.59	30	⇓P	Pn	02 01 24.2	+1.5
SULR		5.60	18	⇓P	Pn	02 01 24.8	+1.9
BBLS	Lazići	5.61	325	ePn	Pn	02 01 27.4	+4.3
HERR	Herculane	5.62	349	⇑P	Pn	02 01 23.9	+0.7
BAI	Bari	5.63	290	⇑iPn	Pn	02 01 24.9	+1.6
MDVR	Moldovita	5.65	344	⇑P	Pn	02 01 24.8	+1.2
MATE	Matera	5.65	285	⇓P	Pn	02 01 25.4	+1.9
SG1	Sgolgore (BA)	5.71	287	⇑iPn	Pn	02 01 25.8	+1.4
STON	Ston	5.83	309	ePn	Pn	02 01 27.2	+1.1
STON	Ston	5.83	309	ePn	Pn	02 01 27.9	+1.8
STON				Sn	Sn	02 02 33.4	+0.8
SECR		5.90	15	⇓P	Pn	02 01 29.5	+2.5
MTUR	Matau	5.93	8	⇑P	Pn	02 01 29.6	+2.1
HAPS	Han Pijesak,Bl	5.99	324	ePn	Pn	02 01 26.4	-1.9
ARR	Arges	6.03	5	⇑P	Pn	02 01 30.3	+1.4
TLBR	Topalu	6.04	30	⇑P	Pn	02 01 30.2	+1.2
ISR	Istrita	6.09	18	⇓P	Pn	02 01 32.1	+2.5
TIRR	Tirgusor	6.12	32	⇑P	Pn	02 01 31.1	+1.2
TIRR	Tirgusor	6.12	32	⇑P	Pn	02 01 31.1	+1.2
TIRR	Tirgusor	6.12	32		Pn	02 01 28.3	-1.7
HARR	Harsova	6.12	28	⇓P	Pn	02 01 31.3	+1.3
VOIR		6.14	8	⇓P	Pn	02 01 31.9	+1.5
ACER	Acerenza	6.25	286		Pn	02 01 30.1	-1.8
MLR	Muntele Rosu	6.32	13	Pn	Pn	02 01 34.8	+2.0
	comp=E,2.6nm,0.3s,baz=263,slow=5.0,SNR=34						
MLR				Sn	Sn	02 02 46.5	+1.8
	comp=E,0.4nm,0.3s,baz=232,slow=15,SNR=1.1						
MLR				Lg	Lg	02 03 19.9	
	baz=243,slow=11,SNR=2.2						
MLR				LR	LR	02 04 41.4	
	comp=E,720nm,18.5s,baz=222,slow=45						
MLR	Muntele Rosu	6.32	13	⇑P	Pn	02 01 35.5	+2.7
MLR	Muntele Rosu	6.32	13		Pn	02 01 30.9	-2.0
CEL	Celeste	6.33	263		Pn	02 01 30.8	-2.2
GRER		6.44	20	⇑P	Pn	02 01 35.7	+1.3
TOPG	Topolog	6.45	30	⇑P	Pn	02 01 35.9	+1.3
BZS	Buzias	6.47	346	⇑P	Pn	02 01 35.8	+1.0
MAKA	Makarska	6.48	309	ePn	Pn	02 01 36.1	+1.2
MAKA				Sn	Sn	02 02 47.1	-1.4
FRGS	Fruska Gora	6.53	334	ePn	Pn	02 01 37.0	+1.3
BISRR	Bisoca	6.53	18	⇑P	Pn	02 01 38.3	+2.6
SGRT	San Giovanni R	6.64	294	Pn	Pn	02 01 36.1	-1.1
SGRT					Sn	02 02 50.3	-2.2
DOPR	Dopca	6.70	9	⇑P	Pn	02 01 39.9	+2.0
MDB	Medias	6.79	3	⇑P	Pn	02 01 41.8	+2.6
PLOR	Plostina	6.80	17	⇓P	Pn	02 01 42.0	+2.6
ODBI	Odobesti	6.82	19	⇑P	Pn	02 01 41.5	+1.9
VRI	Vrincioaia	6.84	17	⇓P	Pn	02 01 42.4	+2.5
DOB	Doboj	6.88	323	ePn	Pn	02 01 43.5	+3.1
OZUR		6.88	11	⇑P	Pn	02 01 42.7	+2.3
TLCR		6.88	31	⇓P	Pn	02 01 41.9	+1.5
MGRS	Mrkonjic Grad	7.15	317	ePn	Pn	02 01 46.2	+2.0
VARL	Varlezi	7.16	23	⇓P	Pn	02 01 46.5	+2.2
KIJV	Kijevo	7.26	312	ePn	Pn	02 01 48.0	+2.3
KIJV				Sn	Sn	02 03 07.5	-0.3
PAOL	Paolisi	7.32	286		Pn	02 01 44.9	-1.6
BLY	Banja Luka	7.33	319	⇑P	Pn	02 01 49.5	+2.8
BLY	Banja Luka	7.33	319	ePn	Pn	02 01 49.2	+2.6
BLY	Banja Luka	7.33	319		Pn	02 01 46.0	-0.7
CJR	Cluj-Napoca	7.35	359	⇑P	Pn	02 01 49.4	+2.4
TESR	Tescani	7.43	15	⇑P	Pn	02 01 50.3	+2.3
BIR	Birlad	7.43	21	⇑P	Pn	02 01 49.5	+1.5
ZIRJ	Zirje	7.52	307	iPn	Pn	02 01 50.7	+1.5
ZIRJ				Sn	Sn	02 03 11.7	-2.4
BR131	Keskin Array S	7.56	84		Pn	02 01 48.9	-1.0
BR131				Sn	Sn	02 03 13.5	-1.8
MORI	Morici	7.59	309	ePn	Pn	02 01 52.2	+2.0
VAE	Valguarnera	7.66	259	Pn	Pn	02 01 52.9	+1.7
	comp=E,1.3nm,0.3s,baz=176,slow=11,SNR=3.0						
VAE				Sn	Sn	02 03 21.6	+3.9
	comp=E,0.6nm,0.3s,baz=237,slow=22,SNR=1.7						
ARCR	ARCALIA	7.73	2	⇑P	Pn	02 01 54.0	+1.9
BIZ	Bicaz	7.75	11	⇑P	Pn	02 01 54.8	+2.4
LEOM	Leova	7.80	23	⇑P	Pn	02 01 55.3	+2.2
VASR	Vaslui	7.82	20	⇑P	Pn	02 01 55.5	+2.1
MORH	Mrgy, Hungar	7.86	332	ePn	Pn	02 01 55.4	+1.6
UDBI	Udbina	7.95	313	ePn	Pn	02 01 58.2	+3.0
INTR	Introdacqua	8.02	292		Pn	02 01 53.5	-2.7
DUGI	Dugi Otok	8.06	308	ePn	Pn	02 01 57.9	+1.3
WDD	Wied Dalam	8.21	248		Pn	02 01 56.2	-2.5
BURAR	Bucovina Array	8.31	6	⇓P	Pn	02 02 02.4	+2.3
BUR08	Bucovina Ar. S	8.34	6		Pn	02 01 59.3	-1.3
MILM	Milestii Mici	8.37	24	⇓P	Pn	02 02 02.5	+1.6
AQU	L'Aquila	8.48	294	ePn	Pn	02 02 04.0	+1.6
NVLJ	Novalja	8.48	311	iPn	Pn	02 02 03.0	+0.6
CLTB	Caltabellotta	8.55	261		Pn	02 02 01.8	-1.6
TRPA	Tarpa	8.82	354	⇓P	Pn	02 02 08.5	+1.5
NRCA	Norcia	8.83	297		Pn	02 02 06.2	-1.1
CRES	Cresnjev	8.96	319	ePn	Pn	02 02 10.4	+1.5
CRES	Cresnjev	8.96	319	ePn	Pn	02 02 10.0	+1.1
PSZ	Piszkesteto	9.03	343	⇑P	Pn	02 02 11.0	+1.0
LEGS	Legarje	9.11	319	ePn	Pn	02 02 13.1	+2.1
RIY	Rijeka	9.15	314	ePn	Pn	02 02 14.3	+2.7
SORM	Soroca	9.35	19	⇓P	Pn	02 02 15.2	+0.9
MURB	Monte Urbino	9.39	298		Pn	02 02 14.5	-0.4
CEY	Cerknica	9.44	316	ePn	Pn	02 02 13.5	-2.1
VNDS	Vrh nad Dolski	9.53	318	ePn	Pn	02 02 18.3	+1.4
KOLS	Kolonicke sedl	9.64	354	ePN	Pn	02 02 23.6	+5.3
JAVS	Javornik	9.74	315	ePn	Pn	02 02 20.8	+1.1
CRNS	Crni Vrh	9.75	317	ePn	Pn	02 02 20.9	+1.1
SOKA	Soboth	9.76	321	ePn	Pn	02 02 21.9	+1.9
	comp=E,4.0nm,0.7s,SNR=6.9						
SOKA				eSn	Sn	02 04 07.5	-1.9
	comp=E,1.4nm,0.7s						
VYHS	Vyhne	9.82	340	ePN	Pn	02 02 27.2	+6.4
VOJS	Vojsko	9.92	315	iPn	Pn	02 02 23.9	+1.7
VOJS				eSn	Sn	02 04 10.4	-2.9
ARSA	Arzberg	9.96	325	ePn	Pn	02 02 25.8	+3.1
	comp=E,1.1nm,0.2s						
ARSA				eSn	Sn	02 04 12.6	-1.5
	comp=E,2.9nm,0.4s						
ZST	Bratislava	10.10	333	ePN	Pn	02 02 26.5	+2.0
MODS	Modra-Piesok	10.19	334	eSN	Sn	02 04 13.9	-5.8
CONA	Conrad Observa	10.34	329	iPn	Pn	02 02 32.0	+4.0
	comp=E,0.7nm,0.2s						
CONA				iSn	Sn	02 04 23.6	+0.1
	comp=E,2.3nm,0.4s						
KBA	Koelnbreinsper	10.88	319	Pn	Pn	02 02 36.6	+1.2
	comp=E,2.4nm,0.7s,SNR=4.4						
MOA	Molln	10.97	324	ePn	Pn	02 02 39.3	+2.8
	comp=E,2.9nm,0.6s,SNR=6.7						
MOA				eSn	Sn	02 04 38.2	-0.7
	comp=E,0.8nm,0.3s						
ABTA	Abfaltersbach	11.11	315	ePn	Pn	02 02 39.6	+1.1
	comp=E,3.8nm,0.6s,SNR=7.2						
ABTA				Sn	Sn	02 04 43.5	+1.1
	comp=E,7.2nm,0.8s						
CTI	Castel Tesino	11.20	311		Pn	02 02 38.6	-1.1
VRAC	Vranov	11.22	335	LR	LR	02 07 21.4	
	comp=E,47nm,19.2s,baz=16,slow=40						
MMAI	Mount Meron Ar	11.26	121	Pn	Pn	02 02 42.1	+1.5
	comp=E,1.4nm,0.3s,baz=310,slow=12,SNR=15						
WTTA	Wattenberg	11.90	316	ePn	Pn	02 02 50.8	+1.4
	comp=E,1.7nm,0.5s						
WTTA				Sn	Sn	02 04 57.7	-4.1
	comp=E,17nm,0.8s						
AKASG	Malin Array Be	11.95	17	Pn	Pn	02 02 50.9	+1.0
	comp=E,1.0nm,0.3s,baz=197,slow=13,SNR=5.5						
GERES	GERESS Array B	11.96	326	Pn	Pn	02 02 50.9	+0.7
	comp=E,0.1nm,0.3s,baz=150,slow=14,SNR=8.1						
GERES				LR	LR	02 08 11.4	
	comp=E,332nm,21.2s,baz=58,slow=41						
KEST	Kesra	12.08	257	Pn	Pn	02 02 53.0	+1.1
	comp=E,0.5nm,0.3s,baz=39,slow=5.4,SNR=15						
KEST	Kesra	12.08	257		Pn	02 02 51.0	-0.8
SQTA	Sankt Quirin	12.11	315	Pn	Pn	02 02 53.5	+1.4
	comp=E,3.1nm,0.5s,SNR=5.4						
SQTA				eSn	Sn	02 05 03.2	-3.7
	comp=E,5.2nm,0.5s						
KHC	Kasperske Hory	12.23	326	ePN	Pn	02 02 56.2	+2.4
KHC	Kasperske Hory	12.23	326		Pn	02 02 54.1	+0.4
MOTA	Moosalm	12.24	315	eSn	Sn	02 05 05.8	-4.3
	comp=E,7.4nm,0.9s						
FETA	Feichten	12.26	313	ePn	Pn	02 02 56.5	+2.2
	comp=E,1.8nm,0.7s						
FETA				Sn	Sn	02 05 07.4	-3.3
	comp=E,3.4nm,0.8s						
FUORN	Ofenpass-Fuorn	12.32	311	Pn	Pn	02 02 53.5	-1.6
RETA	Reutte	12.51	315	eSn	Sn	02 05 13.4	-3.2
	comp=E,2.5nm,0.5s						
DAVOX	Davos/Dischmat	12.62	311	Pn	Pn	02 03 01.2	+1.9
	comp=E,0.2nm,0.3s,baz=128,slow=19,SNR=2.3						
ASF	Jabal al Asfar	12.77	120	Pn	Pn	02 03 06.1	+4.9
	comp=E,0.1nm,0.3s,baz=140,slow=16,SNR=1.4						
KBZ	Khabaz	14.89	67	Pn	P	02 03 35.0	-0.7
	comp=E,0.1nm,0.3s,baz=289,slow=10,SNR=2.1						
ESDC	Sonseca Array	21.45	280	P	P	02 04 48.4	+0.5
	comp=E,4.1nm,0.8s,baz=73,slow=10.0,SNR=28						
HFS	Hagfors	21.76	346	P	P	02 04 51.0	+0.1
	comp=E,3.3nm,0.9s,baz=108,slow=9.7,SNR=4.3						
PAB	San Pablo	21.76	280	P	P	02 04 48.0	-3.2
FINES	FINESS Array B	22.15	3	P	P	02 04 55.6	+0.5
	comp=E,1.8nm,0.8s,baz=165,slow=9.8,SNR=4.3						
FINES				LR	LR	02 14 23.3	
	comp=E,168nm,19.3s,baz=119,slow=39						
NC602	NORSAR Array S	22.74	344	P	P	02 04 58.3	-3.0
NAO01	NORSAR Array S	22.98	344	P	P	02 05 01.8	-2.1
NAO01				IAmb	IAmb	02 05 06.6	
	comp=Z,24nm,1.1s						
NC405	NORSAR Array S	23.05	345	P	P	02 05 02.4	-2.2
NC405				IAmb	IAmb	02 05 08.1	
	comp=Z,5.5nm,1.0s						
NB201	NORSAR Array S	23.08	344	P	P	02 05 03.9	-1.1
NB2	NORSAR Subarra	23.09	344	P	P	02 05 06.4	+1.4
	comp=Z,8.8nm,1.2s,baz=152,slow=11						
NOA	NORSAR Array B	23.09	344	P	P	02 05 05.6	+0.6
	comp=Z,3.8nm,0.9s,baz=153,slow=11,SNR=8.1						
NOA				LR	LR	02 15 09.1	
	comp=Z,86nm,18.9s,baz=170,slow=40						
NC204	NORSAR Array S	23.39	344	P	P	02 05 08.8	+0.7
KLMR	Klimovskoe	23.62	19	e	P	02 05 11.4	+1.1
KLMR				AMP		02 05 17.2	
	comp=Z,19nm,1.1s						
EKA	Eskdalemuir Ar	24.08	320	P	P	02 05 15.6	+0.8
	comp=Z,1.3nm,0.5s,baz=117,slow=9.6,SNR=5.5						
ARU	Arti	28.44	42	P	P	02 05 57.0	+3.0
	comp=Z,0.7nm,0.3s,baz=297,slow=22,SNR=1.5						
ARU	Arti	28.44	42	P	P	02 05 51.3	-2.8
ARU				IAmb	IAmb	02 06 02.0	
	comp=Z,6.2nm,1.1s						
TOA0	Torodi Ar. Sit	32.64	223	P	P	02 06 29.4	-2.1
TOA0				IAmb	IAmb	02 06 36.8	
	comp=Z,3.0nm,0.9s						
TORD	Torodi Ar. Bea	32.64	223	P	P	02 06 33.0	+1.5
	comp=Z,1.8nm,0.7s,baz=31,slow=8.7,SNR=13						
KURK	Kurchatov	39.46	55	P	P	02 07 26.4	-3.2
KURK				IAmb	IAmb	02 07 39.2	
	comp=Z,3.4nm,1.1s						
DBIC	Dimbokro	41.57	226	P	P	02 07 48.7	+1.4
	comp=Z,3.3nm,0.8s,baz=13,slow=7.4,SNR=4.1						
DBIC	Dimbokro	41.57	226	P	P	02 07 43.7	-3.6
DBIC				IAmb	IAmb	02 08 00.4	
	comp=Z,6.1nm,0.8s						
MK31	Makanchi Array	42.45	60	P	P	02 07 50.8	-3.4
MKAR	Makanchi Array	42.45	60	P	P	02 07 56.9	+2.6
	comp=Z,1.0nm,0.5s,baz=283,slow=6.6,SNR=10						
ZALV	Zalesovo Beam	42.95	49	P	P	02 08 00.9	+2.8
	comp=Z,1.4nm,0.4s,baz=278,slow=7.8,SNR=6.6						
NRIK	Noril'sk	44.56	27	P	P	02 08 14.1	+3.1
	comp=Z,1.3nm,0.4s,baz=288,slow=5.6,SNR=3.7						
SONM	Songino Array	57.67	52	P	P	02 09 53.3	+3.4
	comp=Z,0.5nm,0.8s,baz=262,slow=5.2,SNR=3.8						
YKA	Yellowknife Ar	73.15	341	P	P	02 11 30.7	+1.1
	comp=Z,0.4nm,0.9s,baz=42,slow=6.0,SNR=4.0						

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*IDC **06** 02:01:43.9±5.6, 24.˚42S×175.˚08W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.6/53, mbtmp4.0/3, Error ellipse: s-maj=254.9km s-min=55.3km az=153.0*

*NEIC **06** 02:01:47.9±1.6, 24.˚40S±0.˚10×175.˚1W±0.˚1, h32km±6km, mb4.4/5, Error ellipse: s-maj=17.5km s-min=13.8km az=108.0*

ISC 06 02:01:47.8±0.8**, 24.˚4S**±0.˚1×**175.˚0W**±0.˚1**, h35km, n14, σ1.53/14, mb4.2/4, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.49	207	Pn	Pn	02 03 07.2	+0.1
MSVF	Nonsavu	9.25	314	Pn	Pn	02 03 57.6	-1.2
RAR	Rarotonga	14.42	80	Pn	Pn	02 05 07.9	-1.4
MSWZ	Moikau Station	18.82	203		P	02 06 04.4	0.0
CTA	Charters Tower	36.02	269	P	P	02 08 47.0	+1.2
	1.3nm,0.3s,baz=81,slow=12,SNR=2.0						
CTAO	Charters Tower	36.02	269	P	P	02 08 45.0	-0.9
CTAO				IAmb	IAmb	02 08 53.7	
	comp=Z,4.4nm,0.9s						
BBOO	Buckleboo	43.44	247	P	P	02 09 46.2	-1.3
ASAR	Alice Springs	46.43	260	P	P	02 10 12.7	+1.2
	comp=Z,0.8nm,0.6s,baz=95,slow=7.1,SNR=6.6						
WB2	Warramunga Arr	46.89	265	P	P	02 10 14.9	-0.1
WB0	Warramunga Arr	46.90	265	P	P	02 10 15.1	+0.1
WB0				IAmb	IAmb	02 10 33.3	
	comp=Z,5.1nm,1.1s						
WRA	Warramunga Arr	46.90	265	P	P	02 10 14.9	-0.2
	comp=Z,1.5nm,0.6s,baz=106,slow=7.6,SNR=4.9						

MLOA Mauna Loa Obse 47.59 25 P P 02 10 22.1 +1.3
AKASG Malin Array Be 147.73 331 PKPbc PKiKP 02 21 29.7 -0.8
comp=Z,0.5nm,0.4s,baz=42,slow=4.3,SNR=6.9
CLL Collm 152.42 349 ePKPbc PKiKP 02 21 44.0 +3.8

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*MEX **06** 02:07:54.4±0.7, 16.28N×95.22W, h12km±10km, MD4.0*
*NEIC **06** 02:07:55.0±1.8, 16.29N±0.05×95.25W±0.02, h35km±2km, Md4.0/16(MEX), Error ellipse: s-maj=9.0km s-min=3.6km az=170.0*
ISC 06 02:07:50.6±3.0**, 16.27N**±0.04×**95.22W**±0.03**, h8**km±22km**, n22, σ1.20**/36**, Oaxaca**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
CMIG Matias Romero 0.88 21 Pb 02 08 08.0 -0.1
CMIG Sb 02 08 19.2 -0.8
CMIG Matias Romero 0.88 21 i P Pb 02 08 08.0 -0.1
CMIG i S Sb 02 08 19.2 -0.8
HUIG Huatulco 0.99 240 Pb 02 08 10.2 +0.1
HUIG Sb 02 08 22.9 -0.4
HUIG Huatulco 0.99 240 i P Pb 02 08 10.2 +0.1
HUIG i S Sb 02 08 22.9 -0.4
PANG Puerto Angel 1.35 244 Pn 02 08 16.8 +1.1
PANG Sn 02 08 33.4 -0.4
VHO Vista Hermosa 1.66 299 eP Pn 02 08 20.5 +0.3
VHO i S Sn 02 08 40.4 -1.4
PEIG Puerto Escondi 1.87 262 eP Pn 02 08 22.2 -0.8
PCIG 2.00 106 Pn 02 08 24.4 -0.4
PCIG 2.00 106 eP Pn 02 08 24.4 -0.4
TGIG 2.07 76 Pb 02 08 27.6 -0.9
TGIG 2.07 76 eP Pn 02 08 25.7 -0.1
TGIG i S Sn 02 08 50.3 -1.5
YOIG Yosondua 2.31 285 eP Pn 02 08 30.0 +0.8
YOIG i S Sn 02 08 56.5 -1.4
TOIG Toxpalan 2.53 316 eP Pn 02 08 32.8 +0.7
TOIG i S Sn 02 09 01.9 -1.3
TXIG Tlaxiaco 2.63 292 eP Pn 02 08 33.3 -0.3
TXIG eS Sn 02 09 04.5 -1.5
PNIG Pinotepa 2.80 273 Pn 02 08 36.4 +0.7
PNIG Pinotepa 2.80 273 eP Pn 02 08 36.4 +0.7
PNIG i S Sn 02 09 08.7 -1.0
CCIG Comitan 2.96 89 Pb 02 08 41.2 -2.5
CCIG Sn Sn 02 09 13.9 0.0
TLIG Tlapa 3.45 292 Pn 02 08 46.2 +1.4
TLIG Sn Sn 02 09 25.7 -0.4
TEIG Tepich 7.68 58 Pn 02 09 44.7 +1.9
TEIG Sn Sn 02 11 12.0 +1.9
TGUH Tegucigalpa,Un 7.98 105 Pn Pn 02 09 49.7 +2.6
352A Blakely 17.81 30 P 02 12 02.0 +2.3
MIAR Mount Ida 18.26 4 P 02 12 04.6 0.0

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*IDC **06** 02:27:27.9±0.7, 7.16S×154.88E, h0km, mb4.3/14, mb1 4.5/15, mb1mx4.3/39, mbtmp4.3/15, ML4.4/1, MS3.6/9, Ms1 3.6/9, ms1mx3.3/27, Error ellipse: s-maj=24.4km s-min=16.6km az=105.0*
*BJI **06** 02:27:29.0±0.0, 7.20S×155.00E, h23km, mB5.0/16, mb4.8/21, Ms4.9/7, Ms7 4.7/6*
*NEIC **06** 02:27:34.4±1.4, 7.3S±0.1×155.0E±0.1, h55km±4km, mb4.8/51, Error ellipse: s-maj=22.5km s-min=14.3km az=147.0*
ISC 06 02:27:33.1±0.5**, 7.22S**±0.07×**155.02E**±0.08**, h41**km**, n91, σ1.33**/74**, mb4.8**/44**, MS3.6**/9**, Bougainville-Solomon Islands region**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
KRVT Keravat (AS076 4.16 314 Pn Pn 02 28 32.6 -1.5
24nm,0.3s,baz=26,slow=2.4,SNR=12
KRVT Sn Sn 02 29 21.3 -0.2
26nm,0.3s,baz=274,slow=14,SNR=6.4
HNR Honiara 5.34 115 LR LR 02 30 54.3
comp=Z,524nm,18.6s,baz=269,slow=38
PMG Port Moresby 8.08 254 Pn Pn 02 29 28.1 +0.2
5.0nm,0.3s,baz=33,slow=11,SNR=12
PMG Sn Sn 02 31 01.0 +3.0
3.7nm,0.3s,baz=292,slow=22,SNR=8.2
PMG Port Moresby 8.08 254 Pn 02 29 28.3 +0.4
PMG Sn 02 30 57.1 -0.9
JAY Jayapura 15.01 287 LR LR 02 37 35.1
comp=Z,298nm,19.0s,baz=177,slow=41
CTA Charters Tower 15.36 213 Pn P 02 31 10.5 -0.6
0.2nm,0.3s,baz=34,slow=13,SNR=8.9
CTAO Charters Tower 15.36 213 Pn 02 31 06.2 -0.9
EIDS Eidsvold 18.43 191 P P 02 31 43.8 -1.3
WR0 Warramunga Arr 23.55 235 P P 02 32 36.9 -3.1
WB0 Warramunga Arr 23.58 236 P P 02 32 39.0 -1.3
WB2 Warramunga Arr 23.70 236 P P 02 32 39.9 -1.5
WRA Warramunga Arr 23.71 236 P P 02 32 40.0 -1.5
6.0nm,0.9s,baz=61,slow=9.7,SNR=17
WRA LR LR 02 40 44.0
comp=Z,116nm,21.8s,baz=175,slow=34
AS31 Alice Springs 26.04 229 P P 02 33 01.6 -1.1
ASAR Alice Springs 26.04 229 P P 02 33 01.8 -1.0
2.6nm,0.9s,baz=64,slow=8.6,SNR=14
ASAR LR LR 02 42 17.2
comp=Z,139nm,20.9s,baz=102,slow=34
STKA Stephens Creek 27.54 205 P P 02 33 17.4 +1.3
7.5nm,0.6s,baz=29,slow=13,SNR=16
STKA LR LR 02 44 03.9
comp=Z,149nm,18.3s,baz=27,slow=36
STKA Stephens Creek 27.54 205 P P 02 33 15.0 -1.1
PSA00 Pilbara Seismi 36.82 243 P P 02 34 36.6 -0.9
PSA00 IAmb IAmb 02 34 39.8
comp=Z,11nm,1.1s
KSRS Korea Array 51.15 332 P P 02 36 30.9 -1.2
comp=Z,1.2nm,0.6s,baz=146,slow=5.7,SNR=2.7
XAN Xi'an 59.89 316 P P 02 37 35.3 +0.2
XAN pP sP 02 37 49.0 -0.1
XAN pmax pmax
comp=Z,8.0nm,0.6s
XAN pmax pmax
comp=Z,110nm,4.7s
PETK Petropavlovsk- 60.14 2 P P 02 37 36.8 +0.5
comp=Z,1.7nm,0.6s,baz=173,slow=7.3,SNR=4.2
PETK LR LR 03 02 38.1
comp=Z,19nm,19.4s,baz=237,slow=35
CM31 Chiang Mai Arr 60.91 296 P P 02 37 40.7 -1.6
LZH Lanzhou 64.50 316 eP P 02 38 10.1 +4.0
LZH pP sP 02 38 18.2 -2.0
LZH sP pwP 02 38 22.2 -2.0
LZH pmax pmax
comp=Z,23nm,1.2s
GTA Gaotai 68.92 317 eP P 02 38 33.1 -1.1
GTA pP sP 02 38 46.0 -3.0
GTA sP pwP 02 38 50.2 -0.8
GTA pmax pmax
comp=Z,3.0nm,0.8s
GTA pmax pmax
comp=Z,59nm,6.7s
GTA LR LR
comp=Z,250nm,13.0s
GTA LR LR
comp=Z,140nm,14.0s
SHL Shillong 69.44 301 P P 02 38 38.0 +0.4
SHL IAmb IAmb 02 38 52.2
comp=Z,15nm,1.0s
SONM Songino Array 69.54 327 P P 02 38 38.7 +0.8
comp=Z,1.3nm,0.6s,baz=140,slow=5.3,SNR=11
VNDA Vanda 70.35 178 P P 02 38 44.5 +2.3
comp=Z,0.6nm,0.8s,baz=341,slow=7.6,SNR=3.7
TAPN Taplejung 73.54 301 eP P 02 39 03.6 +1.0
comp=Z,28nm,1.0s
ODAN Odare 73.67 301 eP P 02 39 04.7 +1.4
comp=Z,52nm,0.7s
RAMN Ramite 74.37 300 eP P 02 39 08.4 +1.0
comp=Z,8.7nm,0.6s
JIRN Jiri 74.92 301 eP P 02 39 12.3 +1.6
GUN Gumba 75.26 301 eP P 02 39 13.8 +1.2
comp=Z,37nm,0.7s
BILL Bilibino 75.51 4 P P 02 39 13.2 +0.5
BILL IAmb IAmb 02 39 24.5
comp=Z,9.8nm,0.8s
PKI Pulchoki 75.56 301 eP P 02 39 15.0 +0.6
comp=Z,25nm,1.0s
PKIN Phulchoki 75.58 301 eP P 02 39 15.5 +1.1
KKN Kakani 75.73 301 eP P 02 39 16.5 +1.3
comp=Z,27nm,0.7s
DMN Daman 75.83 301 eP P 02 39 17.3 +1.5
comp=Z,28nm,0.8s
KOLN Koldanda 77.16 301 eP P 02 39 24.4 +1.1
DANN Dangsing 77.18 301 eP P 02 39 24.3 +0.8
comp=Z,16nm,0.7s
PYUN Piuthan 77.77 301 eP P 02 39 28.0 +1.3
CNPM China Poot 78.95 25 P P 02 39 32.9 +0.6
PMR Palmer 80.99 24 IAmb IAmb 02 39 54.4
comp=Z,16nm,0.8s
GHO Glory Hole Cre 81.17 24 IAmb IAmb 02 39 55.6
comp=Z,15nm,0.8s
SML Sawmill 81.42 24 P P 02 39 46.4 +0.8
KTH Kantishna Hill 81.43 22 P P 02 39 45.1 -0.5
KTH IAmb IAmb 02 39 56.1
comp=Z,12nm,1.0s
GLI Glacier Island 81.43 25 P P 02 39 46.6 +1.1
TRF Thorofare Moun 81.60 22 IAmb IAmb 02 39 59.3
comp=Z,9.3nm,0.8s
RND Reindeer 82.11 22 P P 02 39 49.0 -0.1
RND IAmb IAmb 02 39 59.9
comp=Z,12nm,0.8s
MLY Manley 82.36 20 P P 02 39 50.8 +0.4
DHY Denali Highway 82.48 23 IAmb IAmb 02 40 02.7
comp=Z,9.1nm,1.0s
NEA Nenana 82.68 21 IAmb IAmb 02 40 02.6
comp=Z,6.5nm,0.8s
WRH Wood River Hil 82.98 21 IAmb IAmb 02 40 04.1
comp=Z,7.7nm,1.0s
VRDI Verde Repeater 83.14 25 IAmb IAmb 02 40 07.0
comp=Z,17nm,1.0s
CCB Clear Creek Bu 83.18 21 IAmb IAmb 02 40 04.9
comp=Z,8.3nm,1.0s
HDA Harding Lake 83.36 22 IAmb IAmb 02 40 09.6
comp=Z,6.1nm,0.8s
MCARA McCarthy VSAT 83.39 25 IAmb IAmb 02 40 10.0
comp=Z,14nm,0.8s
YAH Yahtse 83.47 27 IAmb IAmb 02 40 09.1
comp=Z,11nm,0.9s
BALM Baldy 83.52 26 P P 02 39 55.8 -0.8
BALM IAmb IAmb 02 40 08.9
comp=Z,12nm,0.8s
IL31 83.58 21 P 02 39 57.0 +0.4
ILAR Eielson Array 83.58 21 P P 02 39 56.2 -0.4
comp=Z,2.3nm,0.8s,baz=218,slow=7.7,SNR=30
ILAR LR LR 03 15 15.9
comp=Z,32nm,18.4s,baz=162,slow=34
MKAR Makanchi Array 83.59 319 P P 02 39 57.9 +0.7
comp=Z,3.5nm,0.9s,baz=105,slow=5.6,SNR=22
MAKZ Makanchi 83.80 319 P P 02 39 57.9 -0.3
MAKZ IAmb IAmb 02 40 10.0
comp=Z,5.6nm,0.8s
BARN Barnard Glacie 83.83 26 P P 02 39 58.9 +0.6
MENT Mentasta 83.85 24 IAmb IAmb 02 40 10.0
comp=Z,6.6nm,0.6s
DOT Dot Lake 84.06 23 P P 02 39 59.4 +0.2
DOT IAmb IAmb 02 40 10.8
comp=Z,14nm,0.8s
ZALV Zalesovo Beam 84.38 326 P P 02 40 00.3 -0.6
comp=Z,1.4nm,0.6s,baz=134,slow=4.3,SNR=3.8
ZALV LR LR 03 18 06.1
comp=Z,15nm,20.9s,baz=162,slow=36
TOLK Toolik Lake Re 84.83 18 IAmb IAmb 02 40 14.9
comp=Z,8.4nm,0.9s
HYT Haines Junctio 85.56 27 P P 02 40 07.8 +0.8
EGAK Eagle 85.72 23 IAmb IAmb 02 40 20.0
comp=Z,10nm,0.8s
KDJ Kajisay 85.88 313 IAmb IAmb 02 40 21.4
comp=Z,6.5nm,0.8s
DAWY Dawson 86.09 24 IAmb IAmb 02 40 23.3
comp=Z,5.3nm,0.8s
KSH Kashi 86.18 310 P P 02 40 12.9 +2.4
KSH S S 02 50 42.6 0.0
KSH SS SS 02 56 27.0 +4.7
KSH pmax pmax
comp=Z,14nm,0.9s
KSH pmax pmax
comp=Z,220nm,6.3s
KSH LR LR
comp=Z,68nm,6.0s
KSH LR LR
comp=Z,99nm,8.4s
KSH LR LR
comp=Z,100nm,10.9s
WHY Whitehorse 86.70 28 P P 02 40 12.8 +0.3
WHY IAmb IAmb 02 40 24.7
comp=Z,5.2nm,1.0s
AAK Ala-Archa 87.93 313 P P 02 40 18.8 -0.2
comp=Z,0.8nm,0.4s,baz=56,slow=5.5,SNR=2.1
EPYK Eagle Plains 88.06 22 PcP 02 40 20.6 -0.1
INK Inuvik 89.92 21 IAmb IAmb 02 40 38.5
comp=Z,2.9nm,0.7s
NVAR Mina Array Bea 91.84 52 P P 02 40 39.6 +2.1
comp=Z,2.3nm,1.0s,baz=260,slow=4.4,SNR=11
NVAR LR LR 03 14 37.4
comp=Z,45nm,21.5s,baz=287,slow=31
NV11 Mina Array Sit 91.96 52 P P 02 40 36.6 -1.2
NV11 IAmb IAmb 02 40 50.6
comp=Z,7.4nm,1.1s
WVOR Wild Horse Val 92.13 48 P P 02 40 37.6 -0.9
R11A Troy Canyon, C 93.95 52 P P 02 40 44.8 -2.4
YKA Yellowknife Ar 96.53 28 P P 02 40 59.2 +1.2
comp=Z,2.3nm,0.9s,baz=261,slow=4.5,SNR=23
PDAR Pinedale Array 98.83 48 P Pdif 02 41 10.5 +1.2
comp=Z,0.3nm,0.6s,baz=342,slow=33,SNR=2.7
GERES GERESS Array B 127.26 329 PKP PKiKP 02 46 34.5 +0.6
comp=Z,0.4nm,0.7s,baz=343,slow=2.8,SNR=3.6
ESDC Sonseca Array 142.59 333 PKhKP PKPpre 02 47 02.1
comp=Z,0.3nm,0.7s,baz=143,slow=37,SNR=1.8
PCBR Castelo Branco 143.93 337 ePKP PKPdf 02 47 05.0 +0.5
EVO Evora 145.26 336 ePKP PKPdf 02 47 07.0 +0.2
PBEJ Beja 145.64 336 ePKP PKiKP 02 47 09.4 -2.1
PNCL Nicolau / Gran 145.83 337 ePKP PKiKP 02 47 09.9 -2.0
MESJ Messejana 145.94 336 ePKP PKiKP 02 47 11.0 -1.1
PVAQ Vaqueiros 146.11 335 ePKP PKiKP 02 47 11.3 -1.2
BDFB Brasilia 147.80 135 PKPbc PKPbc 02 47 15.3 +0.6
comp=Z,2.2nm,0.6s,baz=292,slow=4.8,SNR=4.2
TORD Torodi Ar. Bea 153.11 285 PKPbc PKiKP 02 47 27.8 +0.3
comp=Z,1.9nm,0.7s,baz=57,slow=2.7,SNR=12

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*IDC **06** 02:41:25.4±1.4, 33.31N×88.06E, h0km, mb3.5/7, mb1 3.6/10, mb1mx3.4/44, mbtmp3.5/10, ML2.8/3, MS3.1/9, Ms1 3.1/9, ms1mx2.9/49, Error ellipse: s-maj=32.1km s-min=26.3km az=47.0*
ISC 06 02:41:26.1±0.7**, 33.36N**±0.08×**88.27E**±0.09**, h10**km**, n28, σ1.20**/21**, mb3.8**/5**, MS3.1**/8**, Xizang**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
LSA Lhasa 4.40 145 Pn Pn 02 42 32.9 -0.5
LSA smax smax
comp=N,550nm,0.7s
LSA smax smax
comp=E,220nm,0.7s
JIRN Jiri 5.96 198 eP Pn 02 42 55.9 +1.2
comp=E,39nm,0.5s
TAPN Taplejung 6.01 185 eP Pn 02 42 56.3 +0.9
comp=E,41nm,0.5s
PKI Pulchoki 6.28 204 eP Pn 02 42 59.4 +0.4
comp=E,27nm,0.8s
DANN Dangsing 6.32 219 eP Pn 02 42 59.9 +0.3
ODAN Odare 6.53 187 eP Pn 02 43 02.5 +0.1
comp=E,65nm,0.5s
RAMN Ramite 6.55 193 eP Pn 02 43 02.1 -0.6
comp=E,50nm,0.6s
KOLN Koldanda 6.87 217 eP Pn 02 43 06.9 -0.2
comp=E,6.3nm,0.3s
PYUN Piuthan 6.94 222 eP Pn 02 43 07.0 -1.0
comp=E,29nm,0.6s
WMQ Urumqi 10.45 358 eP Pn 02 43 57.1 +1.1
WMQ sP 02 44 03.0
WMQ LR LR
comp=N,140nm,7.1s
WMQ LR LR
comp=E,200nm,7.1s
WMQ LR LR
comp=Z,57nm,7.1s
MKAR Makanchi Array 14.17 343 Pn Pn 02 44 44.4 -2.4
comp=Z,0.0nm,0.3s,baz=159,slow=14,SNR=3.3
AAK Ala-Archa 14.26 314 Pn Pn 02 44 49.3 +1.2
comp=Z,0.1nm,0.3s,baz=106,slow=8.2,SNR=3.8
CMAR Chiang Mai Arr 17.66 145 P Pn 02 45 29.8 -2.5
comp=Z,0.5nm,0.3s,baz=14,slow=20,SNR=2.5
CMAR LR LR 02 53 03.0
comp=Z,60nm,18.9s,baz=330,slow=39
KURBB Kurchatov Arra 18.68 340 P P 02 45 44.5 +0.4
comp=Z,0.0nm,0.3s,baz=156,slow=12,SNR=6.1
SONM Songino Array 19.89 38 P Pn 02 45 59.6 +0.3
comp=Z,1.4nm,0.9s,baz=226,slow=12,SNR=9.6
ZALV Zalesovo Beam 20.73 354 P Pn 02 46 09.0 +0.1
comp=Z,0.3nm,0.3s,baz=194,slow=5.5,SNR=1.6
ZALV LR LR 02 54 41.8
comp=Z,53nm,20.1s,baz=40,slow=38
TLY Talaya 21.45 27 LR LR 02 55 34.7
comp=Z,47nm,18.7s,baz=258,slow=39
GEYT Alibeck 24.87 289 P P 02 46 49.3 +0.4
comp=Z,2.6nm,0.8s,baz=108,slow=9.5,SNR=5.5
GEYT LR LR 02 57 33.3
comp=Z,60nm,20.3s,baz=25,slow=39
AKTO Aktyubinsk 27.98 317 LR LR 02 58 17.1
comp=Z,44nm,18.9s,baz=121,slow=36
ARU Arti 30.80 327 LR LR 03 01 07.6
comp=Z,57nm,19.5s,baz=116,slow=38
KIRV Kirov 36.13 326 LR LR 03 04 55.5
comp=Z,35nm,21.2s,baz=69,slow=39
OBN Obninsk 41.76 317 LR LR 03 08 60.0
comp=Z,12nm,18.2s,baz=24,slow=40
KAPI Kappang 48.43 136 LR LR 03 12 32.8
comp=Z,17nm,19.3s,baz=155,slow=38
NB2 NORSAR Subarra 55.29 325 P P 02 50 59.6 +0.1
comp=Z,0.5nm,0.6s,baz=82,slow=6.9
NOA NORSAR Array B 55.29 325 P P 02 50 59.1 -0.3
comp=Z,1.6nm,0.9s,baz=84,slow=7.2,SNR=5.4
GERES GERESS Array B 56.08 310 P P 02 51 06.0 +0.6
comp=Z,0.7nm,0.8s,baz=88,slow=6.9,SNR=5.3
ASAR Alice Springs 71.45 136 P P 02 52 49.1 +2.2
comp=Z,0.2nm,0.7s,baz=339,slow=7.2,SNR=1.6
TORD Torodi Ar. Bea 80.07 279 P P 02 53 35.2 -1.2
comp=Z,0.5nm,0.7s,baz=294,slow=35,SNR=3.2

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*IDC **06** 02:52:59.1±1.6, 72.70N×4.97E, h0km, mb3.0/2, mb1 3.4/5, mb1mx3.1/46, mbtmp3.3/5, ML3.0/3, Error ellipse: s-maj=30.1km s-min=18.5km az=44.0*
*BER **06** 02:53:03.0±1.5, 72.75N×4.79E, h14km±33km, ML1.9, Confirmed Earthquake*
ISC 06 02:53:00.2±1.2**, 72.72N**±0.10×**5.2E**±0.1**, h10**km**, n16, σ1.54**/18**, Norwegian Sea**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
LOF Lofoten 5.39 145 eP Pn 02 54 21.6 +1.2
TRO Tromso 5.40 118 eP Pn 02 54 21.8 +1.2
TRO eS Sn 02 55 21.2 -1.6
TRO IAML 02 55 23.0
comp=Z,3.3nm,0.4s
STEI Steigen 5.87 140 eP Pn 02 54 28.3 +1.2
SPA0 Spitsbergen Ar 6.15 22 eP Pn 02 54 31.1 +0.2
SPITS Spitsbergen Ar 6.15 22 Pn Pn 02 54 31.1 +0.2
baz=202,slow=15,SNR=9.3
HAMF Hammerfest 6.17 101 eP Pn 02 54 32.5 +1.3
KIF Kilpisjarvi 6.32 118 eP Pn 02 54 35.1 +1.9
KIF eS Sn 02 55 42.7 -2.6
KONS Konsvik 6.82 152 eP Pn 02 54 40.9 +0.7
KTK1 Kautokeino 6.97 113 eP Pn 02 54 44.6 +2.4
ARCES ARCESS Array B 7.29 106 Pn Pn 02 54 47.6 +1.1
comp=Z,0.4nm,0.3s,baz=316,slow=12,SNR=13
ARCES Sn Sn 02 56 07.5 -1.6
comp=Z,0.3nm,0.3s,baz=301,slow=15,SNR=2.0
MOR8 Moi Rana 7.32 149 eP Pn 02 54 47.5 +0.4
HEF Hetta 7.49 116 eP Pn 02 54 51.0 +1.6
SCO Scoresbysund 8.83 269 i P Pn 02 54 59.3 -8.3
FINES FINESS Array B 13.80 134 Pn Pn 02 56 15.9 +0.3
comp=Z,0.1nm,0.3s,baz=333,slow=11,SNR=6.5
GERES GERESS Array B 24.26 166 P P 02 58 18.7 +1.5
comp=Z,0.4nm,0.6s,baz=358,slow=16,SNR=3.8
YKA Yellowknife Ar 39.09 320 P P 03 00 25.8 -1.0
comp=Z,0.1nm,0.3s,baz=25,slow=7.7,SNR=1.2

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*SOME **06** 03:23:42.5, 40.63N×77.65E, h10km*
*KRNET **06** 03:23:44.2±0.1, 40.66N×77.61E, h16km, mb3.4*
*NNC **06** 03:23:47.1±1.5, 40.77N×77.67E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=11.3km s-min=7.6km az=170.0*
ISC 06 03:23:40.8±2.2**, 40.55N**±0.09×**77.63E**±0.04**, h12**km±16km**, n57, σ2.14**/85**, 22C-14D, Kyrgyzstan-Xinjiang border region**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
KDJ Kajisay 1.61 348 ⇑i P Pg 03 24 12.7 +0.8
baz=48
KDJ ⇑i S Sg 03 24 33.3 +0.4
baz=48
ULHL Ulahol 1.99 329 ⇑i P Pb 03 24 19.4 +2.2
baz=27
ULHL ⇑i S Sg 03 24 45.4 +0.5
baz=27
ULHL Ulahol 1.99 329 P Pb 03 24 19.4 +2.2
SNR=15
PRZ Przheval'sk 2.02 16 ⇓eP Pb 03 24 19.9 +2.3
baz=18
PRZ ⇓i S Sg 03 24 46.4 +0.7
baz=18
ANVS Anan'yevo 2.23 1 ⇓i P Pb 03 24 23.4 +2.1
baz=1.0
ANVS ⇓i S Sg 03 24 51.7 -0.9
baz=1.0
BOOM Boomskoye usch 2.32 327 ⇑i P Pb 03 24 24.2 +1.5
baz=26
BOOM ⇑i S Sg 03 24 53.7 -1.6
baz=26
KZA Kyzart 2.35 311 ⇑i P Pb 03 24 25.1 +1.6
baz=9.0
KZA ⇑i S Sg 03 24 55.4 -1.2
baz=9.0
KZA Kyzart 2.35 311 P Pb 03 24 26.4 +3.0
SNR=74
TNSS Tian-Shan 2.54 349 eP Pg 03 24 29.6 +0.1
85nm,0.5s
TNSS eS Sg 03 25 03.6 +1.2
78nm,0.5s
TNSS Tian-Shan 2.54 349 Pg Pg 03 24 29.6 +0.1
85nm,0.5s
TNSS Lg Lg 03 25 03.6
78nm,0.5s
SATY Saty 2.57 13 eP Pb 03 24 29.6 +2.6
13nm,1.1s
SATY eS Sg 03 25 03.2 -0.3
42nm,0.5s
SATY Saty 2.57 13 Pg Pb 03 24 29.6 +2.6
13nm,1.1s
SATY Lg Lg 03 25 03.2
42nm,0.5s
IZV Izvestkoviy 2.60 343 eP Pb 03 24 30.1 +2.6
32nm,0.3s
IZV eS Sg 03 25 04.7 +0.3
115nm,0.5s
IZV Izvestkoviy 2.60 343 Pg Pb 03 24 30.1 +2.6
32nm,0.3s
IZV Lg Lg 03 25 04.7
115nm,0.5s
MDOK Medeo 2.65 351 eP Pb 03 24 31.1 +2.8
57nm,0.5s
MDOK eS Sg 03 25 05.7 -0.3
84nm,0.6s
MDOK Medeo 2.65 351 ⇑Pn Pb 03 24 30.9 +2.6
37nm,0.5s
MDOK Lg Lg 03 25 05.4
59nm,0.5s
MTBS Maitube 2.73 341 eP Pb 03 24 32.5 +2.8
23nm,0.4s
MTBS eS Sg 03 25 08.1 -0.4
41nm,0.3s
MTBS Maitube 2.73 341 Pg Pb 03 24 32.5 +2.8
23nm,0.4s
MTBS Lg Lg 03 25 08.1
41nm,0.3s
KST Kastek 2.79 334 eP Pg 03 24 33.8 -0.4
21nm,0.4s
KST eS Sg 03 25 10.4 0.0
38nm,0.7s
KST Kastek 2.79 334 Pg Pg 03 24 33.8 -0.4
21nm,0.4s
KST Lg Lg 03 25 10.4
38nm,0.7s
UZB Uzynbulak 2.80 21 eP Pb 03 24 33.3 +2.5
6.1nm,0.2s
UZB eS Sg 03 25 09.7 -1.0
36nm,0.6s
UZB Uzynbulak 2.80 21 Pg Pb 03 24 33.7 +2.9
6.1nm,0.2s
UZB Lg Lg 03 25 09.7
36nm,0.6s
TKM2 Tokmak 2 2.82 328 ⇑i P Pb 03 24 31.5 +0.3
baz=27

TKM2				⇑*i*S	**Sb**	**03 25 06.0**	**+0.2**
	baz=27						
TKM2	**Tokmak 2**	**2.82**	**328**	P	**Pb**	**03 24 33.9**	**+2.7**
	SNR=11						
TKM2	**Tokmak 2**	**2.82**	**328**	⇓Pg	**Pb**	**03 24 33.6**	**+2.3**
	7.7nm,0.5s						
TKM2				⇓Lg	Lg	03 25 11.3	
	12nm,0.5s						
UCH	**Uchtor**	**2.88**	**307**	⇑*i*P	**Pb**	**03 24 32.7**	**+0.2**
	baz=5.0						
UCH				⇑*i*S	**Sb**	**03 25 08.1**	**+0.2**
	baz=5.0						
UCH	**Uchtor**	**2.88**	**307**	P	**Pb**	**03 24 32.9**	**+0.4**
	SNR=12						
KBK	**Karagaybulak**	**2.91**	**317**	P	**Pg**	**03 24 36.6**	**0.0**
	SNR=11						
KURS	**Kuram**	**2.96**	**8**	*e*P	**Pb**	**03 24 36.5**	**+2.8**
	14nm,0.5s						
KURS				*e*S	**Sg**	**03 25 15.0**	**-1.1**
	9.4nm,0.4s						
KURS	**Kuram**	**2.96**	**8**	Pg	**Pb**	**03 24 36.5**	**+2.8**
	14nm,0.5s						
KURS				Lg	Lg	03 25 15.0	
	9.4nm,0.4s						
PDGK	**Podgornoye**	**3.10**	**26**	Pg	**Pb**	**03 24 38.9**	**+2.8**
	5.4nm,0.4s						
PDGK				Lg	Lg	03 25 19.1	
	36nm,0.8s						
PDGK	**Podgornoye**	**3.10**	**26**	⇓Pn	**Pb**	**03 24 34.5**	**-1.6**
	1.8nm,0.5s						
PDGK				⇑Pg	**Pg**	**03 24 39.1**	**-1.2**
	8.3nm,0.5s						
PDGK				⇓Lg	Lg	03 25 19.2	
	88nm,0.8s						
AAK	**Ala-Archa**	**3.14**	**313**	⇑*i*P	**Pb**	**03 24 36.0**	**-0.8**
	baz=11						
AAK				⇑*i*S	**Sb**	**03 25 14.0**	**-1.1**
	baz=11						
AAK	**Ala-Archa**	**3.14**	**313**	P	**Pg**	**03 24 40.6**	**-0.4**
	SNR=17						
AAK	**Ala-Archa**	**3.14**	**313**	⇑Pn	**Pb**	**03 24 38.6**	**+1.9**
	16nm,0.6s						
AAK				⇓Lg	Lg	03 25 22.4	
	50nm,0.8s						
CHMS	**Chumysh**	**3.26**	**320**	⇑*i*P	**Pb**	**03 24 37.7**	**-1.0**
	baz=18						
CHMS				⇑*i*S	**Sb**	**03 25 16.6**	**-1.7**
	baz=18						
CHMS	**Chumysh**	**3.26**	**320**	P	**Pg**	**03 24 42.8**	**-0.5**
	SNR=6.6						
AML	**Almayashu**	**3.36**	**299**	⇓*i*P	**Pb**	**03 24 39.7**	**-0.9**
	baz=98						
AML				⇓*i*S	**Sb**	**03 25 20.3**	**-1.2**
	baz=98						
AML	**Almayashu**	**3.36**	**299**	P	**Pg**	**03 24 45.2**	**0.0**
	SNR=7.2						
KUU	**Kurty**	**3.48**	**344**	*e*P	**Pb**	**03 24 45.1**	**+2.7**
	3.0nm,0.1s						
KUU				*e*S	**Sg**	**03 25 29.7**	**-2.8**
	29nm,0.7s						
KUU	**Kurty**	**3.48**	**344**	Pg	**Pb**	**03 24 45.1**	**+2.7**
	3.0nm,0.1s						
KUU				Lg	Lg	03 25 29.7	
	29nm,0.7s						
KTMS	**Ketmen**	**3.54**	**34**	*e*P	**Pb**	**03 24 46.1**	**+2.7**
	0.4nm,0.1s						
KTMS				*e*S	**Sg**	**03 25 31.5**	**-2.8**
	17nm,0.4s						
KTMS	**Ketmen**	**3.54**	**34**	Pg	**Pb**	**03 24 46.1**	**+2.7**
	0.4nm,0.1s						
KTMS				Lg	Lg	03 25 31.5	
	17nm,0.4s						
MNBS	**Baschi**	**3.57**	**9**	*e*P	**Pb**	**03 24 47.8**	**+3.7**
	4.6nm,0.3s						
MNBS				*e*S	**Sg**	**03 25 34.3**	**-1.3**
	38nm,0.3s						
MNBS	**Baschi**	**3.57**	**9**	Pg	**Pb**	**03 24 47.8**	**+3.7**
	4.6nm,0.3s						
MNBS				Lg	Lg	03 25 34.3	
	38nm,0.3s						
EKS2	**Erkin-Say**	**3.58**	**307**	⇑*i*P	**Pb**	**03 24 42.3**	**-1.8**
	baz=6.0						
EKS2				⇑*i*S	**Sb**	**03 25 24.8**	**-2.8**
	baz=6.0						
EKS2	**Erkin-Say**	**3.58**	**307**	P	**Pg**	**03 24 50.5**	**+1.1**
	SNR=7.0						
USP	**Ospenovka**	**3.58**	**320**	⇓*i*P	**Pb**	**03 24 42.1**	**-2.1**
	baz=19						
USP				⇓*i*S	**Sb**	**03 25 24.2**	**-3.4**
	baz=19						
USP	**Ospenovka**	**3.58**	**320**	P	**Pg**	**03 24 48.3**	**-1.1**
	SNR=17						
SGDS	**Sogindy**	**3.66**	**323**	Pg	**Pb**	**03 24 48.9**	**+3.4**
	9.4nm,0.4s						
SGDS				Lg	Lg	03 25 36.3	
	11nm,0.5s						
MRKS	**Merke**	**3.96**	**305**	*e*P	**Pb**	**03 24 55.2**	**+4.5**
	6.4nm,0.4s						
MRKS				*e*S	**Sg**	**03 25 47.0**	**-1.0**
	5.3nm,0.4s						
MRKS	**Merke**	**3.96**	**305**	Pg	**Pb**	**03 24 55.2**	**+4.5**
	6.4nm,0.5s						
MRKS				Lg	Lg	03 25 47.0	
	5.3nm,0.4s						
DJR	**Jarkent**	**4.11**	**22**	*e*P	**Pb**	**03 24 56.6**	**+3.5**
	2.7nm,0.3s						
DJR				*e*S	**Sg**	**03 25 49.8**	**-2.9**
	6.5nm,0.3s						
DJR	**Jarkent**	**4.11**	**22**	Pg	**Pb**	**03 24 56.6**	**+3.5**
	2.7nm,0.3s						
DJR				Lg	Lg	03 25 49.8	
	6.5nm,0.3s						
KAPS	**Kapalarasan**	**4.90**	**14**	*e*P	**Pg**	**03 25 12.5**	**-2.2**
	2.6nm,0.4s						
KAPS				*e*S	**Sg**	**03 26 17.0**	**-1.1**
	5.9nm,0.5s						
KAPS	**Kapalarasan**	**4.90**	**14**	Pg	**Pg**	**03 25 12.5**	**-2.2**
	2.6nm,0.4s						
KAPS				Lg	Lg	03 26 17.0	
	6.2nm,0.5s						
KK31	**Karatay Array**	**5.90**	**298**	⇑Pg	**Pg**	**03 25 35.7**	**+2.0**
	0.7nm,0.6s,baz=111,slow=16,SNR=5.0						
KK31				⇓Lg	Lg	03 26 54.1	
	1.1nm,0.5s,baz=114,slow=27,SNR=5.5						

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*SJA **06** 03:24:02.9±0.8, 25°.52S×69°.77W, h86^{km}±32^{km}, ML3.7, MW3.6*
*NEIC **06** 03:24:02.1±1.8, 25°.41S±0°.04×69°.8W±0°.1, h77^{km}±7^{km}, Error ellipse: s-maj=16.8km s-min=5.6km az=80.0*
*GUC **06** 03:24:02.8±0.7, 25°.41S×69°.77W, h73^{km}±3^{km}, ML4.0*
ISC 06 03:24:02.4±1.1**, 25°.42S**±0°.03×**69°.84W**±0°.06**, h75**^{km}±11^{km}**, n61,** σ1^s.**20**/77**, 6C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**0.34**	**42**	*e*P	**Pn**	**03 24 15.0**	**+0.2**
GO02				*e*S	**Sn**	**03 24 24.2**	**+0.2**
GO02				IAML		03 24 24.9	
	comp=N,22μm,0.1s						
GO02	**Mina Guanaco**	**0.34**	**42**	Pn	**Pn**	**03 24 14.1**	**-0.8**
GO02				Sn	**Sn**	**03 24 23.9**	**0.0**
PB14	**IPOC Station P**	**0.94**	**327**	⇑*e*P	**Pn**	**03 24 22.6**	**+1.8**
PB14				*e*S	**Sn**	**03 24 36.8**	**+2.4**
PB14	**IPOC Station P**	**0.94**	**327**	Pn	**Pn**	**03 24 22.0**	**+1.3**
PB14				Sn	**Sn**	**03 24 36.4**	**+2.0**
AC02	**Maricunga**	**1.55**	**156**	⇑*e*P	**Pn**	**03 24 30.2**	**+1.5**
AC02				*e*S	**Sn**	**03 24 50.6**	**+2.1**
AC02				IAML		03 24 52.2	
	comp=E,3μm,0.2s						
AC02	**Maricunga**	**1.55**	**156**	Pn	**Pn**	**03 24 27.6**	**-1.1**
AC02				Sn	**Sn**	**03 24 48.6**	**+0.1**
PB10	**IPOC Station P**	**2.00**	**341**	⇑*i*P	**Pn**	**03 24 35.5**	**+1.3**
PB10				IAML		03 25 09.6	
	comp=E,739nm,0.4s						
PB10	**IPOC Station P**	**2.00**	**341**		**Pn**	**03 24 34.0**	**-0.2**
GO03	**Copiap**	**2.20**	**189**	*e*P	**Pn**	**03 24 38.1**	**+1.3**
GO03				*e*S	**Sn**	**03 25 05.2**	**+2.0**
GO03	**Copiap**	**2.20**	**189**		**Pn**	**03 24 36.3**	**-0.6**
GO03				Sn	**Sn**	**03 25 05.4**	**+2.2**
GO03	**Copiap**	**2.20**	**189**	*i* P	**Pn**	**03 24 38.3**	**+1.4**
GO03				*e*S	**Sn**	**03 25 03.4**	**+0.2**
PB15	**IPOC Station P**	**2.23**	**9**	⇑*i*P	**Pn**	**03 24 38.7**	**+1.3**
PB15				*e*S	**Sn**	**03 25 05.9**	**+1.7**
PB15	**IPOC Station P**	**2.23**	**9**		**Pn**	**03 24 38.2**	**+0.8**
PB15				Sn	**Sn**	**03 25 04.2**	**+0.1**
PB05	**IPOC Station P**	**2.57**	**353**	⇑*i*P	**Pn**	**03 24 42.4**	**+0.3**
PB05				*e*S	**Sn**	**03 25 13.3**	**+0.8**
PB05				IAML		03 25 24.8	
	comp=E,414nm,0.3s						
PB06	**IPOC Station P**	**2.71**	**5**	*e*P	**Pn**	**03 24 44.6**	**+0.6**
PB06				*e*S	**Sn**	**03 25 17.7**	**+1.9**
PB06				IAML		03 25 24.3	
	comp=N,491nm,0.3s						
PB06	**IPOC Station P**	**2.71**	**5**		**Pn**	**03 24 42.8**	**-1.2**
LVC	**Limon Verde**	**2.92**	**17**	*e*P	**Pn**	**03 24 48.0**	**+1.0**
LVC				*e*S	**Sn**	**03 25 23.5**	**+2.3**
LVC	**Limon Verde**	**2.92**	**17**		**Pn**	**03 24 47.0**	**0.0**
PB04	**IPOC Station P**	**3.08**	**355**	⇑*e*P	**Pn**	**03 24 49.0**	**0.0**
PB04				IAML		03 25 36.5	
	comp=N,493nm,0.7s						
PB04	**IPOC Station P**	**3.08**	**355**		**Pn**	**03 24 49.0**	**0.0**
PB03	**IPOC Station P**	**3.35**	**1**	*e*P	**Pn**	**03 24 52.1**	**-0.6**
AC05	**El Transito**	**3.43**	**186**	Pn	**Pn**	**03 24 54.3**	**+0.7**
AC05				Sn	**Sn**	**03 25 32.7**	**-0.5**
PB09	**IPOC Station P**	**3.65**	**9**	*e*P	**Pn**	**03 24 58.0**	**+1.4**
PB09	**IPOC Station P**	**3.65**	**9**		**Pn**	**03 24 57.5**	**+0.8**
PB07	**IPOC Station P**	**3.67**	**359**	*e*P	**Pn**	**03 24 56.5**	**-0.5**
PB07	**IPOC Station P**	**3.67**	**359**		**Pn**	**03 24 57.3**	**+0.2**
PB07				Sn	**Sn**	**03 25 38.2**	**-1.1**
PB02	**IPOC Station P**	**4.08**	**359**	*e*P	**Pn**	**03 25 01.9**	**-0.6**
PB01	**IPOC Station P**	**4.37**	**4**	*e*P	**Pn**	**03 25 06.0**	**-0.4**
PB01	**IPOC Station P**	**4.37**	**4**		**Pn**	**03 25 06.0**	**-0.4**
AZAP	**Zapla**	**4.50**	**76**	*e*P	**Pn**	**03 25 10.2**	**+1.8**
AZAP				*e*S	**Sn**	**03 25 59.8**	**+0.2**
CO01	**Juntas del Tor**	**4.55**	**183**	Pn	**Pn**	**03 25 09.9**	**+0.9**
PATCX	**Punta Patache**	**4.58**	**356**	Pn	**Pn**	**03 25 07.5**	**-1.8**
CYA	**Choya**	**4.70**	**131**	*i* P	**Pn**	**03 25 11.8**	**+0.9**
GO04	**Tololo Observa**	**4.81**	**190**		**Pn**	**03 25 13.2**	**+0.7**
GO04	**Tololo Observa**	**4.81**	**190**	*i* P	**Pn**	**03 25 12.9**	**+0.3**
TA01	**Diego Aracena**	**4.84**	**356**	Pn	**Pn**	**03 25 12.1**	**-0.7**
CO03	**El Pedregal**	**5.45**	**188**	Pn	**Pn**	**03 25 20.0**	**-1.2**
AMOG	**MOGNA**	**5.63**	**168**	*i* P	**Pn**	**03 25 24.5**	**+0.9**
AMOG				IAML		03 26 40.5	
	comp=Z,34nm,0.5s						
PB11	**IPOC Station P**	**5.63**	**2**	Pn	**Pn**	**03 25 23.1**	**-0.7**
GO01	**Chusmiza**	**5.75**	**6**	Pn	**Pn**	**03 25 24.2**	**-1.5**
APLL	**PUNTA DE LOS L**	**5.76**	**150**	*i* P	**Pn**	**03 25 25.6**	**+0.2**
PSGCX	**Pisagua**	**5.80**	**357**	Pn	**Pn**	**03 25 24.6**	**-1.4**
CO02	**Combarbal**	**5.86**	**190**	Pn	**Pn**	**03 25 26.7**	**0.0**
RTLL	**Cerro Villicun**	**6.01**	**169**	*i* P	**Pn**	**03 25 29.3**	**+0.5**
RTLL				IAML		03 26 47.5	
	comp=Z,40nm,0.7s						
RTLS	**Leoncito**	**6.38**	**176**	*e*P	**Pn**	**03 25 35.4**	**+1.4**
RTLS				IAML		03 27 02.7	
	comp=Z,24nm,0.7s						
RTCV	**Cerro Valdivia**	**6.52**	**170**	*i* P	**Pn**	**03 25 36.5**	**+0.7**
RTCV				IAML		03 27 23.5	
	comp=Z,34nm,4.2s						
CO04	**Los Peladeros**	**6.68**	**188**	Pn	**Pn**	**03 25 36.0**	**-2.1**
PB12	**IPOC Station P**	**6.79**	**356**	Pn	**Pn**	**03 25 37.5**	**-2.0**
PB16	**IPOC Station P**	**7.05**	**3**	Pn	**Pn**	**03 25 41.7**	**-1.9**
ASAL	**Salagasta**	**7.20**	**173**	*i* P	**Pn**	**03 25 46.0**	**+0.9**
ASAL				*e*P		03 25 47.6	
ASAL				IAML		03 27 31.9	
	comp=Z,11nm,3.2s						
ACAN	**Cantantal**	**7.22**	**162**	*i* P	**Pn**	**03 25 45.5**	**+0.3**
ACAN				IAML		03 27 13.3	
	comp=Z,7.7nm,0.7s						
VA03	**San Esteban**	**7.35**	**185**	Pn	**Pn**	**03 25 45.6**	**-1.4**
ARCO	**CERRO ARCO**	**7.44**	**174**	*i* P	Pn	03 25 39.2	-9.2
ARCO				IAML		03 27 40.8	
	comp=Z,11nm,0.4s						
TCA	**Tanti**	**7.49**	**143**	*i* P	**Pn**	**03 25 48.6**	**-0.5**
TCA				IAML		03 27 11.4	
	comp=Z,6.9nm,0.9s						
ROC1	**El Roble**	**7.60**	**187**	Pn	**Pn**	**03 25 49.7**	**-1.0**
ROC1	**El Roble**	**7.60**	**187**	*i* P	**Pn**	**03 25 50.6**	**0.0**
AAGR	**Agrelo**	**7.69**	**174**	*i* P	**Pn**	**03 25 52.5**	**+0.7**
MRA	**San Martin**	**7.86**	**154**	*i* P	**Pn**	**03 25 53.3**	**-0.8**
MRA				IAML		03 27 51.2	
	comp=Z,5.4nm,0.6s						
MT02	**Curacav**	**7.90**	**188**	Pn	**Pn**	**03 25 52.1**	**-2.4**
MT01	**Popeta**	**8.51**	**188**	Pn	**Pn**	**03 26 01.7**	**-1.2**
LPAZ	**La Paz**	**9.22**	**10**	Pn	**Pn**	**03 26 12.2**	**-1.1**

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*NEIC **06** 03:25:39.0±1.2, 7°.07S±0°.04×155°.32E±0°.10, h11^{km}±6^{km}, mb4.4/7, Error ellipse: s-maj=14.0km s-min=5.8km az=98.0*
*IDC **06** 03:25:45.1±4.5, 7°.21S×155°.41E, h54^{km}±37^{km}, mb4.0/10, mb1 4.2/12, mb1mx3.9/36, mbtmp4.3/12, ML3.0/2, MS3.6/14, Ms1 3.6/14, ms1mx3.4/42, Error ellipse: s-maj=34.8km s-min=18.3km az=107.0*
ISC 06 03:25:44.5±0.6**, 7°.11S**±0°.08×**155°.34E**±0°.08**, h50**^{km}**, n37,** σ**1^s.43**/31**, mb4.3**/15**, MS3.5**/10**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**4.29**	**312**	Pn	**Pn**	**03 26 43.7**	**-3.6**
RABL				Sn	**Sn**	**03 27 33.4**	**-2.8**
KRVT	**Keravat (AS076**	**4.32**	**310**	P	**Pn**	**03 26 49.9**	**+2.2**
	6.9nm,0.3s,baz=40,slow=2.4,SNR=3.5						
KRVT				S	**Sn**	**03 27 37.1**	**+0.3**
	22nm,0.3s,baz=118,slow=8.4,SNR=4.4						
KRVT				LR	LR	03 28 50.0	
	comp=Z,1μm,18.3s,baz=138,slow=42						
HNR	**Honiara**	**5.11**	**117**	LR	LR	03 29 12.9	
	comp=Z,1μm,18.2s,baz=292,slow=42						
HNR	**Honiara**	**5.11**	**117**	Pn	Pn	03 26 53.2	-5.3
HNR				Sn	**Sn**	**03 27 55.6**	**-0.6**
PMG	**Port Moresby**	**8.41**	**254**	P	**Pn**	**03 27 46.0**	**+2.1**
	2.3nm,0.3s,baz=45,slow=9.7,SNR=6.1						
PMG				LR	LR	03 31 00.2	
	comp=Z,322nm,20.3s,baz=60,slow=37						
PMG	**Port Moresby**	**8.41**	**254**	Pn	**Pn**	**03 27 41.2**	**-2.7**
CTA	**Charters Tower**	**15.62**	**213**	P	**P**	**03 29 26.1**	**+1.2**
	0.3nm,0.3s,baz=36,slow=15,SNR=7.2						
DZM	**Mont Dzumac**	**18.33**	**145**	LR	LR	03 36 21.0	
	comp=Z,263nm,19.2s,baz=226,slow=35						
WR0	**Warramunga Arr**	**23.88**	**236**	P	**P**	**03 30 52.9**	**-0.7**
WR0				IAmb	IAmb	03 30 55.4	
	comp=Z,15nm,0.8s						
WB0	**Warramunga Arr**	**23.90**	**236**	P	**P**	**03 30 53.9**	**0.0**
WB0				IAmb	IAmb	03 30 55.6	
	comp=Z,12nm,1.1s						
WB2	**Warramunga Arr**	**24.02**	**236**	P	**P**	**03 30 53.9**	**-1.0**
WB2				IAmb	IAmb	03 30 56.8	
	comp=Z,8.2nm,0.9s						
WRA	**Warramunga Arr**	**24.03**	**236**	P	**P**	**03 30 55.2**	**+0.2**
	comp=Z,7.5nm,0.8s,baz=61,slow=9.6,SNR=19						
SIJI	**Sorong**	**24.79**	**283**	P	**P**	**03 31 03.5**	**+1.5**
	comp=Z,4.4nm,0.3s,baz=68,slow=5.0,SNR=4.8						
AS31	**Alice Springs**	**26.35**	**229**	P	**P**	**03 31 16.0**	**-0.2**
AS31				IAmb	IAmb	03 31 16.5	
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**26.35**	**229**	P	**P**	**03 31 16.2**	**+0.1**
	comp=Z,2.4nm,0.7s,baz=59,slow=9.3,SNR=30						
ASAR				LR	LR	03 41 40.8	
	comp=Z,102nm,18.4s,baz=160,slow=36						
STKA	**Stephens Creek**	**27.77**	**206**	P	**P**	**03 31 27.4**	**-1.4**
	comp=Z,1.8nm,0.7s,baz=28,slow=13,SNR=6.1						
STKA				LR	LR	03 41 47.0	
	comp=Z,152nm,19.8s,baz=25,slow=35						
STKA	**Stephens Creek**	**27.77**	**206**	P	**P**	**03 31 27.5**	**-1.3**
FITZ	**Fitzroy Crossi**	**30.92**	**247**	P	**P**	**03 31 56.0**	**-0.8**
FITZ				IAmb	IAmb	03 31 57.3	
	comp=Z,5.7nm,0.9s						
FORT	**Forrest**	**34.74**	**224**	P	**P**	**03 32 29.5**	**-0.6**
JNU	**Nakatsue**	**46.28**	**331**	LR	LR	03 51 32.2	
	comp=Z,254nm,19.1s,baz=86,slow=33						
MJAR	**Matsushiro Arr**	**46.30**	**341**	LR	LR	03 53 37.4	
	comp=Z,14nm,18.8s,baz=185,slow=36						
KSRS	**Korea Array**	**51.20**	**332**	LR	LR	03 53 14.0	
	comp=Z,18nm,20.4s,baz=128,slow=32						
ASAJ	**Asahikawa**	**52.28**	**348**	LR	LR	03 56 18.5	
	comp=Z,46nm,19.5s,baz=134,slow=35						
PETK	**Petropavlovsk-**	**60.02**	**2**	P	**P**	**03 35 47.6**	**+1.6**
	comp=Z,4.1nm,0.7s,baz=173,slow=9.2,SNR=9.4						
PETK				LR	LR	03 58 07.0	
	comp=Z,27nm,21.6s,baz=237,slow=32						
CMAR	**Chiang Mai Arr**	**61.14**	**295**	P	**P**	**03 35 55.9**	**+1.6**
	comp=Z,3.9nm,0.3s,baz=126,slow=5.5,SNR=5.9						
SONM	**Songino Array**	**69.62**	**327**	P	**P**	**03 36 48.8**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=136,slow=6.0,SNR=9.4						
KDAK	**Kodiak Island**	**77.12**	**26**	LR	LR	04 08 09.7	
	comp=Z,20nm,19.6s,baz=113,slow=33						
ILAR	**Eielson Array**	**83.36**	**21**	P	**P**	**03 38 05.0**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=249,slow=4.2,SNR=7.0						
ILAR				LR	LR	04 09 51.8	
	comp=Z,59nm,21.5s,baz=250,slow=32						
MK31	**Makanchi Array**	**83.72**	**319**	P	**P**	**03 38 08.7**	**+0.5**
MKAR	**Makanchi Array**	**83.72**	**319**	P	**P**	**03 38 08.7**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=100,slow=5.8,SNR=9.7						
TOLK	**Toolik Lake Re**	**84.63**	**18**	P	**P**	**03 38 12.7**	**+0.3**
BBB	**Bella Bella**	**87.41**	**37**	LR	LR	04 11 54.8	
	comp=Z,51nm,19.3s,baz=203,slow=32						
EPYK	**Eagle Plains**	**87.84**	**22**	P	**P**	**03 38 26.6**	**-1.6**
INK	**Inuvik**	**89.71**	**21**	P	**P**	**03 38 36.8**	**-0.1**
YKA	**Yellowknife Ar**	**96.28**	**28**	P	**P**	**03 39 07.3**	**0.0**
	comp=Z,0.8nm,0.9s,baz=259,slow=4.7,SNR=8.6						
BDFB	**Brasilia**	**147.65**	**134**	PKPbc	**PKiKP**	**03 45 25.9**	**-0.8**
	comp=Z,2.3nm,0.7s,baz=69,slow=5.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	**153.39**	**285**	PKPbc	**PKiKP**	**03 45 38.9**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=70,slow=1.7,SNR=4.5						

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*IDC **06** 03:47:03.5±6.5, 17°.09S×176°.28W, h0^{km}, mb4.0/3, mb1 4.3/3, mb1mx3.7/37, mbtmp4.0/3, MS3.7/1, Ms1 3.7/1, ms1mx2.7/37, Error ellipse: s-maj=304.1km s-min=34.6km az=143.0*
*NEIC **06** 03:47:20.9±1.2, 17°.0S±0°.4×176°.5W±0°.3, h137^{km}±13^{km}, mb4.1/6, Error ellipse: s-maj=63.1km s-min=26.2km az=147.0*
ISC 06 03:47:08.7±3.0**, 16°.9S**±0°.7×**176°.4W**±0°.6**, h35**^{km}**, n12,** σ**0^s.61**/11**, mb4.3**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBOO	**Buckleboo**	**45.60**	**240**	P	**P**	**03 55 25.9**	**+0.2**
BBOO				IAmb	IAmb	03 55 42.9	
	comp=Z,4.3nm,1.1s						
WB0	**Warramunga Arr**	**46.71**	**259**	P	**P**	**03 55 35.7**	**+1.1**
WB0				IAmb	IAmb	03 55 51.0	
	comp=Z,4.4nm,1.1s						
WB2	**Warramunga Arr**	**46.73**	**258**	P	**P**	**03 55 35.2**	**+0.4**
WB2				IAmb	IAmb	03 55 42.3	
	comp=Z,4.3nm,1.1s						
WRA	**Warramunga Arr**	**46.75**	**258**	P	**P**	**03 55 34.8**	**-0.2**
	comp=Z,1.3nm,0.4s,baz=95,slow=7.2,SNR=17						
AS31	**Alice Springs**	**46.95**	**253**	P	**P**	**03 55 37.0**	**+0.5**
ASAR	**Alice Springs**	**46.95**	**253**	P	**P**	**03 55 36.7**	**+0.2**
	comp=Z,2.8nm,0.4s,baz=90,slow=8.5,SNR=17						
MTN	**Manton Dam**	**50.80**	**267**	P	**P**	**03 56 05.8**	**-0.3**
MTN				IAmb	IAmb	03 56 18.3	
	comp=Z,4.9nm,0.7s						
FORT	**Forrest**	**52.20**	**244**	P	**P**	**03 56 15.7**	**-0.7**
SIJI	**Sorong**	**53.94**	**282**	LR	LR	04 18 52.2	
	comp=Z,71nm,20.0s,baz=214,slow=35						
ILAR	**Eielson Array**	**84.50**	**12**	P	**P**	**03 59 38.1**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=216,slow=5.6,SNR=1.6						
BRTR	**Keskin Array B**	**145.44**	**317**	PKPbc	**PKPdf**	**04 06 43.0**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=90,slow=4.9,SNR=2.1						
GERES	**GERESS Array B**	**147.12**	**348**	PKPbc	**PKPab**	**04 06 49.4**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=28,slow=4.4,SNR=4.1						

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*OSPL **06** 03:53:29.3±0.3, 20°.39N×76°.43W, h5^{km}, ML2.9*
SSNC 06 03:53:54.8±1.7**, 20°.08N**×**73°.37W, h28**^{km}±25^{km}**, MD2.8, ML1.6, MW2.5, Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASC	**Masc**	**0.81**	**277**	*e*P	Pb	03 54 08.4	-1.9
MASC				*e*S	Sb	03 54 18.5	-2.4
MASC				IAML		03 54 19.7	
	comp=N,22nm,0.1s						
MASC				IAML		03 54 19.7	
	comp=E,18nm,0.1s						
MOAC	**Moa**	**1.60**	**292**	*e*P	Pn	03 54 19.6	-1.6
MOAC				*e*S	Sn	03 54 38.8	-2.1
MOAC				IAML		03 54 42.3	
	comp=E,3.1nm,0.2s						
MOAC				IAML		03 54 42.6	
	comp=N,7.1nm,0.3s						
GTBY	**Guantanamo Bay**	**1.64**	**265**	*i* P	Pn	03 54 20.7	-1.1
GTBY				*e*S	Sn	03 54 37.8	-4.1
JAKH	**Jacmel**	**2.00**	**156**	*i* P	Pb	03 54 33.1	+2.6
JAKH				IAML		03 54 45.6	
	comp=Z,20nm,2.0s						
RCC	**Rio Carpintero**	**2.19**	**268**	*e*P	Pn	03 54 27.8	-1.5
RCC				*e*S	Sn	03 54 53.2	-2.3
RCC				IAML		03 54 55.9	
	comp=N,2.6nm,0.2s						
RCC				IAML		03 54 56.5	
	comp=E,2.0nm,0.1s						
SDDR	**Presa de Saban**	**2.25**	**119**	*i* P	Pb	03 54 43.6	+8.8
SDDR				IAML		03 55 12.5	
	comp=Z,4.2nm,0.6s						
LMGC	**Las Mercedes**	**3.41**	**270**	*e*P	Pn	03 54 45.1	-1.1
LMGC				*e*S	Sn	03 55 20.9	-4.8
LMGC				IAML		03 55 26.9	
	comp=E,1.3nm,0.2s						
LMGC				IAML		03 55 27.2	
	comp=N,2.1nm,0.2s						
CCCC	**Cccc**	**4.26**	**286**	*e*P	Pn	03 54 51.9	-6.0
CCCC				*e*S	Sn	03 55 33.8	-13
CCCC				IAML		03 55 34.5	
	comp=N,0.5nm,0.4s						
CCCC				IAML		03 55 34.6	
	comp=E,0.5nm,0.6s						

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*IDC **06** 03:54:09.3±1.6, 11°.07S×161°.17E, h0^{km}, mb4.0/5, mb1 4.1/6, mb1mx3.8/49, mbtmp4.0/6, ML3.8/1, Error ellipse: s-maj=42.8km s-min=27.3km az=119.0*
ISC 06 03:54:12.1±1.4**, 11°.0S**±0°.1×**161°.2E**±0°.2**, h18**^{km}**, n7,** σ**1^s.83**/8**, mb3.9**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.98**	**321**	Pn	**Pb**	**03 54 46.1**	**-1.6**
	31nm,0.3s,baz=238,slow=7.9,SNR=2.3						
HNR				Sn	**Sb**	**03 55 14.1**	**+2.1**
	53nm,0.3s,baz=172,slow=13,SNR=4.1						
CTA	**Charters Tower**	**17.00**	**236**	Pn	**P**	**03 58 13.1**	**+2.2**
	0.3nm,0.3s,baz=64,slow=17,SNR=7.2						
WRA	**Warramunga Arr**	**27.35**	**248**	P	**P**	**03 59 56.8**	**+0.3**
	1.9nm,0.9s,baz=77,slow=10,SNR=2.4						
STKA	**Stephens Creek**	**27.57**	**218**	P	**P**	**03 59 58.0**	**-0.3**
	2.2nm,0.9s,baz=56,slow=11,SNR=2.6						
ASAR	**Alice Springs**	**28.89**	**241**	P	**P**	**04 00 08.7**	**-1.5**
	1.2nm,0.7s,baz=72,slow=9.3,SNR=13						
SONM	**Songino Array**	**76.04**	**325**	P	**P**	**04 05 57.4**	**-1.1**
	0.7nm,0.6s,baz=142,slow=6.3,SNR=3.7						
NVAR	**Mina Array Bea**	**89.41**	**51**	P	**P**	**04 07 09.7**	**+1.3**
	0.5nm,0.6s,baz=223,slow=6.1,SNR=4.7						

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*IDC **06** 03:58:31.5±2.5, 31°.61S×68°.91W, h98^{km}±22^{km}, mb3.6/4, mb1 3.6/9, mb1mx3.4/41, mbtmp3.8/9, Error ellipse: s-maj=30.2km s-min=20.3km az=90.0*
*SJA **06** 03:58:32.2±0.7, 31°.70S×69°.05W, h114^{km}±3^{km}, ML3.5, MW3.6*
ISC 06 03:58:32.6±0.7**, 31°.56S**±0°.07×**69°.06W**±0°.06**, h115**^{km}±6^{km}**, n20,** σ**1^s.50**/27**, mb3.7**/4**, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.31**	**221**	*i* P	**Pn**	**03 58 49.5**	**0.0**
RTLS				*e*S	**Sn**	**03 59 02.5**	**+0.5**
RTLS				IAML		03 59 03.5	
	comp=Z,829nm,0.4s						
RTCV	**Cerro Valdivia**	**0.53**	**124**	*i* P	**Pn**	**03 58 50.4**	**+0.1**
RTCV				*e*S	**Sn**	**03 59 03.1**	**-0.5**
RTCV				IAML		03 59 07.2	
	comp=Z,1μm,2.0s						
AMOG	**MOGNA**	**0.79**	**38**	*i* P	**Pn**	**03 58 53.9**	**+1.6**
AMOG				*e*S	**Sn**	**03 59 08.8**	**+1.7**
AMOG				IAML		03 59 12.8	
	comp=Z,844nm,0.6s						
ACAN	**Cantantal**	**1.74**	**115**	*e*P	**Pn**	**03 59 02.6**	**-0.1**
ACAN				*e*S	**Sn**	**03 59 24.7**	**-0.9**
ACAN				IAML		03 59 27.3	
	comp=Z,481nm,0.3s						
PEL	**Peldehue**	**2.09**	**221**	*i* P	**Pn**	**03 59 06.5**	**-0.6**
ROC1	**El Roble**	**2.17**	**229**	*e*P	**Pn**	**03 59 07.7**	**-0.6**
ROC1				*e*S	**Sn**	**03 59 34.4**	**-1.2**
APLL	**PUNTA DE LOS L**	**2.47**	**62**	*i* P	**Pn**	**03 59 12.9**	**+1.0**
ACLC	**CERRO LA CRUZ**	**2.80**	**41**	*i* P	**Pn**	**03 59 18.7**	**+2.3**
MRA	**San Martin**	**2.96**	**108**	*i* P	**Pn**	**03 59 18.4**	**0.0**
MRA				IAML		04 00 13.0	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,123nm,0.6s						
LVC	Limon Verde	8.92	1	P	Pn	04 00 37.3	-1.6
	comp=Z,0.5nm,0.3s,baz=190,slow=5.7,SNR=1.9						
LVC				S	Sn	04 02 13.9	-4.0
	comp=Z,0.3nm,0.3s,baz=272,slow=15,SNR=1.2						
PLCA	Paso Flores	9.23	187	P	Pn	04 00 42.0	-0.7
	comp=Z,0.1nm,0.3s,baz=282,slow=22,SNR=2.0						
CPUP	Villa Florida	11.52	66	P	Pn	04 01 10.6	-3.0
	comp=Z,0.3nm,0.3s,baz=246,slow=11,SNR=6.6						
CPUP				S	Sn	04 03 10.8	-10
	comp=Z,0.2nm,0.3s,baz=232,slow=14,SNR=1.3						
LPAZ	La Paz	15.23	3	P	Pn	04 02 04.0	+1.8
	comp=Z,0.1nm,0.3s,baz=210,slow=6.3,SNR=5.2						
SIV	San Ignacio	17.13	27	P	P	04 02 25.7	+0.7
	comp=Z,0.2nm,0.3s,baz=226,slow=13,SNR=6.4						
QSPA	South Pole Qui	58.67	180	P	P	04 08 18.0	+0.2
	comp=Z,0.9nm,0.9s,baz=356,slow=3.5,SNR=3.6						
TXAR	Lajitas Array	68.92	328	P	P	04 09 26.6	+1.3
	comp=Z,0.5nm,0.6s,baz=154,slow=9.1,SNR=11						
ANMO	Albuquerque	74.93	329	P	P	04 10 02.7	+1.5
	comp=Z,0.4nm,0.4s,baz=33,slow=19,SNR=2.8						
TORD	Torodi Ar. Bea	81.00	69	P	P	04 10 35.5	+0.4
	comp=Z,0.8nm,0.6s,baz=278,slow=6.5,SNR=7.4						
ZALV	Zalesovo Beam	150.83	32	PKPbc	PKPbc	04 18 11.8	+0.7
	comp=Z,1.6nm,0.5s,baz=291,slow=1.7,SNR=3.4						
MKAR	Makanchi Array	153.27	47	PKPbc	PKPbc	04 18 17.3	+0.4
	comp=Z,0.2nm,0.5s,baz=11,slow=1.2,SNR=2.2						
MKAR				PKPab	PKPab	04 18 29.6	+0.4
	comp=Z,0.5nm,0.7s,baz=322,slow=3.5,SNR=4.7						

*DJA **06** 04:01:46.0±1.3, 6˚S±9˚×15˚6E±1˚5, h10^{km}, M4.6/11, mb4.6/11, mB4.4/1, Mw(mB)3.6/1*
*IDC **06** 04:01:57.5±0.8, 7˚01S×155˚27E, h0^{km}, mb4.3/13, mb1 4.4/13, mb1mx4.1/51, mbtmp4.3/13, MS3.4/10, Ms1 3.4/10, ms1mx3.1/40, Error ellipse: s-maj=30.4km s-min=16.6km az=117.0*
*NEIC **06** 04:02:03.7±1.5, 7˚1S±0˚1×154˚91E±0˚09, h35^{km}±1^{km}, mb4.6/16, Error ellipse: s-maj=19.5km s-min=15.1km az=198.0*
ISC 06 04:02:00.9±0.7**, 7˚16S**±0˚08×**155˚04E**±0˚10**, h10^{km}, n44,** σ**2^{s}12**/31**, mb4.5**/18**, MS3.4**/7**, 1C, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	4.13	313	Pg	Pb	04 03 16.4	+2.8
	20nm,0.3s,baz=344,slow=3.9,SNR=11						
KRVT				Lg	Lg	04 04 09.1	
	9.8nm,0.3s,baz=255,slow=20,SNR=1.1						
KRVT				LR	LR	04 04 52.5	
	comp=Z,217nm,18.8s,baz=197,slow=42						
PMG	Port Moresby	8.12	253	Pn	Pn	04 04 05.2	+6.3
	2.2nm,0.3s,baz=63,slow=11,SNR=6.7						
PMG				LR	LR	04 07 14.8	
	comp=Z,263nm,19.0s,baz=340,slow=38						
PMG	Port Moresby	8.12	253		Pn	04 03 57.5	-1.3
COEN	Coen	13.48	239	Pn	Pn	04 05 11.8	-0.6
CTA	Charters Tower	15.43	213	Pn	Pn	04 05 44.4	+5.6
	0.4nm,0.3s,baz=42,slow=13,SNR=13						
CTAO	Charters Tower	15.43	213	P	Pn	04 05 39.4	+0.7
DZM	Mont Dzumac	18.46	145	LR	LR	04 11 51.7	
	comp=Z,106nm,19.8s,baz=330,slow=32						
EIDS	Eidsvold	18.50	191	P	P	04 06 18.1	+0.8
WR0	Warramunga Arr	23.61	235	P	P	04 07 08.7	-3.6
WR0				IAmb	IAmb	04 07 14.3	
	comp=Z,21nm,0.8s						
WB0	Warramunga Arr	23.64	236	P	P	04 07 11.6	-0.9
WB0				IAmb	IAmb	04 07 14.5	
	comp=Z,16nm,1.0s						
WB2	Warramunga Arr	23.76	236	P	P	04 07 12.4	-1.3
WB2				IAmb	IAmb	04 07 15.7	
	comp=Z,19nm,0.9s						
WRA	Warramunga Arr	23.77	236	P	P	04 07 14.3	+0.5
	comp=Z,12nm,0.8s,baz=62,slow=9.5,SNR=5.9						
WRA				LR	LR	04 16 19.4	
	comp=Z,81nm,18.8s,baz=105,slow=36						
MSVF	Nonsavu	24.77	117	P	P	04 07 23.3	+0.1
MSVF				IAmb	IAmb	04 07 31.8	
	comp=Z,26nm,0.9s						
AS31	Alice Springs	26.10	229	P	P	04 07 34.2	-0.9
ASAR	Alice Springs	26.10	229	P	P	04 07 34.9	-0.3
	comp=Z,3.7nm,0.6s,baz=57,slow=9.8,SNR=44						
ASAR				LR	LR	04 17 07.5	
	comp=Z,104nm,19.5s,baz=90,slow=34						
STKA	Stephens Creek	27.61	205	P	P	04 07 49.6	+1.0
	comp=Z,6.9nm,0.9s,baz=0.8,slow=12,SNR=12						
STKA				LR	LR	04 18 57.5	
	comp=Z,141nm,18.5s,baz=26,slow=37						
STKA	Stephens Creek	27.61	205	P	P	04 07 48.4	-0.2
H11S3	WAKE ISLAND Hy	27.96	24	T	T	04 36 13.7	
	baz=203,slow=75,SNR=74						
H11S2	WAKE ISLAND Hy	27.96	24	T	T	04 36 11.3	
	baz=203,slow=75,SNR=102						
H11S1	WAKE ISLAND Hy	27.97	24	T	T	04 36 14.5	
	baz=203,slow=75,SNR=60						
FITZ	Fitzroy Crossi	30.63	246	P	P	04 08 15.7	+0.1
	comp=Z,8.4nm,0.8s,baz=59,slow=6.7,SNR=9.8						
FITZ				LR	LR	04 20 46.2	
	comp=Z,39nm,21.1s,baz=90,slow=36						
FITZ	Fitzroy Crossi	30.63	246	P	P	04 08 13.7	-1.9
FITZ				IAmb	IAmb	04 08 16.7	
	comp=Z,8.3nm,0.9s						
BATI	Baumata	31.16	262	LR	LR	04 24 08.8	
	comp=Z,140nm,18.3s,baz=116,slow=42						
FORT	Forrest	34.51	224	P	P	04 08 48.1	-1.3
KAPI	Kappang	35.15	271	P	P	04 08 55.9	+0.7
	comp=Z,7.7nm,0.8s,baz=99,slow=12,SNR=4.5						
BHW	Baring Head	38.40	156	P	P	04 09 22.4	0.0
ASAJ	Asahikawa	52.26	349	LR	LR	04 30 26.2	
	comp=Z,36nm,20.0s,baz=130,slow=33						
KRJI	Kerinci	53.61	273	P	P	04 11 16.7	-6.3
PETK	Petropavlovsk-	60.07	2	P	P	04 12 06.1	-1.9
	comp=Z,6.8nm,1.1s,baz=169,slow=8.1,SNR=6.5						
PETK				LR	LR	04 34 36.5	
	comp=Z,14nm,21.8s,baz=62,slow=33						
SONM	Songino Array	69.50	327	P	P	04 13 08.7	-1.1
	comp=Z,0.4nm,0.5s,baz=124,slow=5.1,SNR=2.3						
VNDA	Vanda	70.42	178	P	P	04 13 14.1	-0.7
	comp=Z,0.8nm,0.8s,baz=333,slow=3.9,SNR=5.6						
RC01	Rabbit Creek A	80.39	24	P	P	04 14 14.7	+2.3
PMR	Palmer	80.92	24	P	P	04 14 15.0	-0.1
PMR				IAmb	IAmb	04 14 22.3	
	comp=Z,6.0nm,0.5s						
GHO	Glory Hole Cre	81.10	24	P	P	04 14 17.1	+0.9
QSPA	South Pole Qui	82.82	180	P	P	04 14 24.7	-0.7
	comp=Z,3.1nm,0.8s,baz=94,slow=2.0,SNR=6.5						
QSPA	South Pole Qui	82.82	180	P	P	04 14 24.9	-0.5
QSPA				IAmb	IAmb	04 14 36.9	
	comp=Z,6.9nm,1.1s						
ILAR	Eielson Array	83.50	21	P	P	04 14 24.6	-4.0
	comp=Z,0.8nm,0.6s,baz=245,slow=4.8,SNR=12						
MKAR	Makanchi Array	83.56	319	P	P	04 14 27.4	-1.9
	comp=Z,0.5nm,0.7s,baz=115,slow=6.3,SNR=4.7						
EPYK	Eagle Plains	87.99	22	P	P	04 14 49.2	-1.7
INK	Inuvik	89.85	21	P	P	04 14 57.1	-2.5
	comp=Z,1.3nm,0.5s,baz=268,slow=5.0,SNR=11						
INK	Inuvik	89.85	21	P	P	04 14 56.6	-3.0
INK				IAmb	IAmb	04 15 07.5	
	comp=Z,2.7nm,1.0s						
SYO	Syowa Base	92.19	199⇑	*e*pP	pP	04 15 19.6	+7.3
YKA	Yellowknife Ar	96.45	28	P	P	04 15 27.4	-2.7
	comp=Z,0.2nm,0.5s,baz=90,slow=18,SNR=3.3						
TORD	Torodi Ar. Bea	153.11	285	PKPbc	PKPdf	04 21 58.9	+6.3
	comp=Z,0.4nm,0.8s,baz=86,slow=2.7,SNR=2.0						

*IDC **06** 04:03:02.7±1.4, 67˚80N×162˚14W, h0^{km}, mb3.8/8, mb1 4.1/9, mb1mx3.7/54, mbtmp3.8/9, ML4.1/1, MS3.5/2, Ms1 3.4/2, ms1mx2.6/49, Error ellipse: s-maj=44.2km s-min=18.5km az=29.0*
*AEIC **06** 04:03:02.8±1.4, 67˚69N±0˚05×162˚4W±0˚1, h20^{km}±4^{km}, ML3.7/51, mb4.1/5(NEIC), Error ellipse: s-maj=6.8km s-min=6.2km az=158.0*
*NEIC **06** 04:03:04.2±1.3, 67˚71N±0˚05×162˚3W±0˚1, h24^{km}±4^{km}, Error ellipse: s-maj=8.4km s-min=6.6km az=52.0*
ISC 06 04:03:02.5±0.7**, 67˚70N**±0˚05×**162˚21W**±0˚05**, h10^{km}, n72,** σ**1^{s}44**/80**, mb4.0**/10**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.45	324		Pb	04 03 11.2	-1.2
RDOG					Sb	04 03 18.1	-1.1
ANM	Nome	3.40	204		Pn	04 03 55.1	-0.3
ANM					Sn	04 04 35.0	-0.8
IM03		3.76	113		Pn	04 04 01.0	+0.7
PS05	TAPS Pump Stn5	4.57	96		Pn	04 04 12.2	+0.6
COLD	Coldfoot	4.64	90		Pn	04 04 13.5	+0.9
TOLK	Toolik Lake Re	4.81	73	P	Pn	04 04 17.2	+2.3
	baz=265						
TOLK				S	Sn	04 05 12.9	+2.3
	baz=265						
TOLK	Toolik Lake Re	4.81	73		Pn	04 04 16.7	+1.8
TOLK					Sn	04 05 12.7	+2.1
PS06	TAPS Pump Stn6	5.27	105		Pn	04 04 21.8	+0.6
MLY	Manley	5.33	115		Pn	04 04 22.1	+0.1
TTA	Tatalina	5.44	149		Pn	04 04 24.0	+0.4
TTA					Sn	04 05 26.5	+0.3
TT01	Tatalina	5.46	149		Pn	04 04 24.3	+0.5
PS01	TAPS Pump Stn	5.52	56		Pn	04 04 26.0	+1.4
CHUM	Lake Minchumin	5.58	129		Pn	04 04 25.2	-0.2
BPAW	Bear Paw Mtn.	5.84	123		Pn	04 04 29.6	+0.6
NEA	Nenana	6.17	114		Pn	04 04 34.3	+0.7
KTH	Kantishna Hill	6.25	126		Pn	04 04 35.1	+0.4
MDM	Murphy Dome	6.26	109		Pn	04 04 35.5	+0.7
BWN	Browne	6.29	118		Pn	04 04 36.8	+1.6
PPLA	Purkeypile	6.38	134		Pn	04 04 37.3	+0.7
TCOL	CIGO, UAF Yank	6.44	109	P	Pn	04 04 38.7	+1.6
	baz=302						
TCOL	CIGO, UAF Yank	6.44	109		Pn	04 04 38.6	+1.4
COLA	College	6.44	109		Pn	04 04 38.4	+1.2
POKR	Poker Plat Res	6.47	107	P	Pn	04 04 38.5	+0.9
	baz=300						
POKR	Poker Plat Res	6.47	107		Pn	04 04 38.0	+0.4
TRF	Thorofare Moun	6.52	125		Pn	04 04 39.1	+0.7
CCB	Clear Creek Bu	6.58	111		Pn	04 04 39.8	+0.6
WRH	Wood River Hil	6.58	113		Pn	04 04 39.9	+0.7
FYU	Fort Yukon	6.71	92		Pn	04 04 40.8	-0.1
BM03	Burnt Mountain	6.74	84		Pn	04 04 42.2	+0.8
MCK	McKinley	6.76	120		Pn	04 04 42.5	+0.9
IL31		6.84	108		Pn	04 04 43.2	+0.5
ILAR	Eielson Array	6.84	108	Pn	Pn	04 04 43.0	+0.2
	21nm,0.3s,baz=303,slow=14,SNR=1002						
ILAR				Sn	Sn	04 05 59.7	-0.9
	baz=309,slow=27,SNR=1.8						
PRP	Porcupine Dome	6.99	100		Pn	04 04 44.8	0.0
PS08	TAPS Pump Stn8	7.00	110		Pn	04 04 45.8	+1.0
RND	Reindeer	7.01	122		Pn	04 04 46.1	+1.0
HDA	Harding Lake	7.02	111	P	Pn	04 04 45.9	+0.7
	baz=304						
HDA				S	Sn	04 06 03.9	-1.1
	baz=304						
HDA				S	Sn	04 06 03.9	-1.1
	baz=304						
HDA	Harding Lake	7.02	111		Pn	04 04 46.2	+1.0
WAT2	Susitna Watana	7.41	123		Pn	04 04 52.0	+1.4
SPNN	North Nagishla	7.55	143		Pn	04 04 53.7	+1.1
STLK	Strandline Lak	7.64	140		Pn	04 04 55.3	+1.5
SPWE	Spurr West	7.67	143		Pn	04 04 55.4	+1.2
DHY	Denali Highway	7.72	120		Pn	04 04 55.8	+0.8
SPBG	Spurr Blockage	7.72	142		Pn	04 04 56.5	+1.6
GHO	Glory Hole Cre	8.21	130		Pn	04 05 01.9	+0.3
DFR	Drift River	8.24	145		Pn	04 05 03.0	+1.0
PMR	Palmer	8.29	131		Pn	04 05 01.9	-0.6
SML	Sawmill	8.36	128		Pn	04 05 04.7	+1.2
SCM	Sheep Creek Mo	8.64	126		Pn	04 05 08.5	+1.0
EGAK	Eagle	8.97	99		Pn	04 05 12.2	+0.4
MENT	Mentasta	9.06	113		Pn	04 05 13.2	0.0
DAWY	Dawson	9.99	101		Pn	04 05 25.4	-0.5
EPYK	Eagle Plains	10.02	86	P	Pn	04 05 27.2	+0.9
	baz=289						
EPYK	Eagle Plains	10.02	86		Pn	04 05 26.6	+0.4
INK	Inuvik	10.73	73	Pn	Pn	04 05 35.4	-0.5
	0.8nm,0.3s,baz=291,slow=7.8,SNR=36						
INK				Sn	Sn	04 07 30.0	-5.7
	0.8nm,0.3s,baz=332,slow=6.8,SNR=5.7						
INK	Inuvik	10.73	73		Pn	04 05 35.2	-0.6
INK					Sn	04 07 34.9	-0.9
A36M	Sachs Harbour	13.27	55	P	Pn	04 06 08.8	-1.7
	baz=270						
YKA	Yellowknife Ar	20.26	82	P	Pn	04 07 38.1	-1.5
	2.2nm,0.6s,baz=302,slow=9.9,SNR=32						
RES	Resolute Bay	21.54	42	S	S	04 11 43.8	-5.7
	1.0nm,0.7s,baz=167,slow=6.2,SNR=2.0						
RES	Resolute Bay	21.54	42	P	P	04 07 50.2	-1.0
RES					S	04 11 49.4	-0.1
BMO	Blue Mountains	32.65	111	P	P	04 09 31.9	-2.3
BMO				IAmb	IAmb	04 09 38.3	
	comp=Z,4.5nm,1.1s						
PDAR	Pinedale Array	37.26	105	P	P	04 10 15.8	+1.6
	comp=Z,0.6nm,0.5s,baz=332,slow=7.7,SNR=8.8						
NVAR	Mina Array Bea	37.99	118	P	P	04 10 22.9	+2.5
	comp=Z,0.9nm,0.6s,baz=320,slow=7.3,SNR=5.0						
PV01	Paradox Valley	41.68	107	P	P	04 10 50.2	-1.0
PV01				IAmb	IAmb	04 10 53.6	
	comp=Z,2.3nm,0.7s						
ARCES	ARCESS Array B	42.93	356	LR	LR	04 28 11.5	
	comp=Z,26nm,21.3s,baz=18,slow=35						
ZALV	Zalesovo Beam	48.89	314	P	P	04 11 49.6	+1.8
	comp=Z,1.4nm,0.7s,baz=22,slow=8.2,SNR=2.8						
FINES	FINESS Array B	51.02	355	P	P	04 12 05.2	+1.3
	comp=Z,1.3nm,0.7s,baz=46,slow=8.2,SNR=4.0						
TX31	Lajitas Ar. Si	51.36	108	P	P	04 12 06.7	-0.2
TX32	Lajitas Array	51.36	108	P	P	04 12 06.7	-0.3
TX32				IAmb	IAmb	04 12 09.0	
	comp=Z,2.2nm,0.8s						
TXAR	Lajitas Array	51.36	108	P	P	04 12 08.4	+1.5
	comp=Z,1.6nm,0.6s,baz=335,slow=5.9,SNR=33						
MKAR	Makanchi Array	56.04	312	P	P	04 12 41.3	+0.4
	comp=Z,0.4nm,0.7s,baz=46,slow=10,SNR=3.5						
ESDC	Sonseca Array	71.69	18	P	P	04 14 25.6	+1.5
	comp=Z,0.3nm,0.6s,baz=354,slow=6.4,SNR=3.0						
PPT	Papeete	85.53	168	LR	LR	04 47 50.7	
	comp=Z,46nm,19.2s,baz=335,slow=31						

*IDC **06** 04:05:35.8±0.8, 56˚17S×24˚31W, h0^{km}, mb4.1/5, mb1 4.2/6, mb1mx3.9/23, mbtmp4.1/6, ML3.7/1, MS3.7/2, Ms1 3.6/2, ms1mx3.1/20, Error ellipse: s-maj=35.1km s-min=19.8km az=73.0*
*NEIC **06** 04:05:41.8±0.7, 56˚3S±0˚2×24˚5W±0˚4, h46^{km}±8^{km}, mb4.5/19, Error ellipse: s-maj=30.5km s-min=19.8km az=63.0*
ISC 06 04:05:37.1±0.8**, 56˚2S**±0˚1×**24˚4W**±0˚2**, h10^{km}, n36,** σ**0^{s}74**/33**, mb4.4**/15**, 1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.08	160	P	Pn	04 09 22.2	-0.6
VNA3	Neumayer Olymp	16.34	163	P	Pn	04 09 24.6	-1.6
VNA2	Neumayer--Watz	16.47	160	P	Pn	04 09 26.8	-1.1
	baz=325,slow=13						
SNAA	Sanae	17.97	158	P	P	04 09 48.7	+1.5
SNAA	Sanae	17.97	158	P	P	04 09 47.6	+0.3
	0.2nm,0.3s,baz=308,slow=13,SNR=17						
SNAA	Sanae	17.97	158	P	P	04 09 47.5	+0.3
SYO	Syowa Base	30.46	140⇓	*i*P	P	04 11 58.8	+9.5
QSPA	South Pole Qui	34.02	180	P	P	04 12 21.0	+0.2
	1.7nm,0.6s,baz=214,slow=1.9,SNR=21						
QSPA	South Pole Qui	34.02	180	P	P	04 12 20.5	-0.4
CPUP	Villa Florida	38.13	308	P	P	04 12 56.2	+0.1
	0.7nm,0.8s,baz=160,slow=8.2,SNR=6.3						
CPUP	Villa Florida	38.13	308	P	P	04 12 56.4	+0.3
AC05	El Transito	42.34	291	P	P	04 13 30.9	-0.3
AC05				IAmb	IAmb	04 13 50.4	
	comp=Z,7.8nm,1.0s						
BOSA	Boshof	44.52	73	LR	LR	04 28 44.4	
	comp=Z,65nm,18.0s,baz=213,slow=31						
GO02	Mina Guanaco	44.97	295	P	P	04 13 52.1	-0.5
GO02				IAmb	IAmb	04 14 04.7	
	comp=Z,11nm,1.1s						
VNDA	Vanda	46.46	182	P	P	04 14 04.8	+1.4
	comp=Z,0.9nm,0.7s,baz=194,slow=5.0,SNR=7.5						
VNDA	Vanda	46.46	182	P	P	04 14 04.0	+0.6
LVC	Limon Verde	46.75	297	P	P	04 14 06.5	-0.3
LVC				IAmb	IAmb	04 14 25.9	
	comp=Z,6.1nm,0.9s						
PB06	IPOC Station P	47.00	296	P	P	04 14 08.8	+0.4
PB09	IPOC Station P	47.60	297	P	P	04 14 14.1	+0.9
PB09				IAmb	IAmb	04 14 31.1	
	comp=Z,5.3nm,0.9s						
PB07	IPOC Station P	47.98	297	P	P	04 14 16.4	+0.3
PB01	IPOC Station P	48.36	298	P	P	04 14 18.8	-0.1
PB01				IAmb	IAmb	04 14 32.1	
	comp=Z,8.0nm,1.0s						
PATCX	Punta Patache	48.88	297	P	P	04 14 21.8	-1.1
GO01	Chusmiza	49.38	299	P	P	04 14 25.6	-1.7
GO01				IAmb	IAmb	04 14 32.0	
	comp=Z,4.6nm,0.8s						
PB11	IPOC Station P	49.53	298	P	P	04 14 27.6	-0.4
PB11				IAmb	IAmb	04 14 40.5	
	comp=Z,7.1nm,0.9s						
PSGCX	Pisagua	49.90	298	P	P	04 14 30.4	-0.3
MNMC	Minye Minye	50.03	299	P	P	04 14 31.3	-0.7
MNMC				IAmb	IAmb	04 14 37.7	
	comp=Z,2.5nm,0.6s						
PB16	IPOC Station P	50.67	300	P	P	04 14 36.8	-0.4
PB12	IPOC Station P	50.83	299	P	P	04 14 37.9	+0.1
PB12				IAmb	IAmb	04 14 44.4	
	comp=Z,7.4nm,1.1s						
LPAZ	La Paz	51.77	302	P	P	04 14 46.3	+0.9
	comp=Z,2.1nm,0.6s,baz=125,slow=4.8,SNR=10						
LPAZ	La Paz	51.77	302	P	P	04 14 45.3	-0.2
LPAZ				IAmb	IAmb	04 14 47.0	
	comp=Z,2.1nm,0.7s						
TOA0	Torodi Ar. Sit	72.47	27	P	P	04 17 03.7	+0.1
TOA0				IAmb	IAmb	04 17 15.0	
	comp=Z,3.7nm,1.1s						
TORD	Torodi Ar. Bea	72.47	27	P	P	04 17 03.8	+0.2
	comp=Z,2.3nm,0.7s,baz=204,slow=6.4,SNR=20						
KEST	Kesra	95.99	27	LR	LR	04 56 08.0	
	comp=Z,42nm,19.8s,baz=305,slow=32						
INK	Inuvik	146.94	320	PKPbc	PKPbc	04 25 17.8	-0.3
	comp=Z,1.5nm,0.9s,baz=70,slow=0.8,SNR=6.2						
SONM	Songino Array	149.19	85	PKPbc	PKPbc	04 25 24.5	-0.4
	comp=Z,1.0nm,0.6s,baz=228,slow=3.3,SNR=6.0						
ILAR	Eielson Array	151.40	311	PKPbc	PKPbc	04 25 28.9	-0.6
	comp=Z,0.9nm,0.8s,baz=161,slow=1.3,SNR=7.3						

*BJI **06** 04:32:04.9±0.0, 19˚96S×177˚28W, h553^{km}, mB5.0/35, mb5.4/64*
*NEIC **06** 04:32:06.4±1.4, 20˚05S±0˚07×177˚79W±0˚09, h548^{km}±5^{km}, mb5.1/332, Mwc5.4(GCMT), Error ellipse: s-maj=12.2km s-min=9.9km az=119.0*
*IDC **06** 04:32:08.2±0.5, 20˚00S×177˚90W, h552^{km}±5^{km}, mb4.8/35, mb1 4.8/36, mb1mx4.8/42, mbtmp5.6/36, Error ellipse: s-maj=9.1km s-min=7.9km az=169.0*
*GCMT **06** 04:32:10.4±0.2, 19˚87S±0˚02×178˚00W±0˚03, h560^{km}±1^{km}, MW5.4/106, Moment Tensor Solution. s106,c145; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.76±.03; $M_{\theta\theta}$1.06±.04; $M_{\phi\phi}$-0.29±.05; $M_{r\theta}$-0.84±.05; $M_{\theta\phi}$-0.43±.04; $M_{\phi r}$-0.90±.05; Best double couple: $M_0$1.57700×10^{17} NP1:ϕ_s315.00000°, δ38.00000°, λ-29.00000°. NP2:ϕ_s68.00000°, δ73.00000°, λ-125.00000°. Principal axes: T 1.3930, Plg20.0000°, Azm183.0000°; N 0.3730, Plg33.0000°, Azm80.0000°; P -1.7620, Plg50.0000°, Azm299.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
*NEIC **06** 04:32:10, 19˚97S×177˚90W, h564^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.72; $M_{\theta\theta}$1.01; $M_{\phi\phi}$-0.29; $M_{r\theta}$-0.79; $M_{\theta\phi}$-0.29; $M_{\phi r}$-0.85; Fault plane solution: $M_0$1.50000×10^{17} NP1:ϕ_s64.00000°, δ73.00000°, λ-122.00000°. NP2:ϕ_s310.00000°, δ36.00000°, λ-29.00000°. Principal axes: T 1.3178, Plg22.0000°, Azm178.0000°; N 0.3133, Plg31.0000°, Azm75.0000°; P -1.6310, Plg51.0000°, Azm298.0000°;*
*BGR **06** 04:32:18.4±0.0, 19˚62S×176˚64W, h650^{km}±2^{km}*
ISC 06 04:32:07.5±0.4**, 20˚12S**±0˚04×**177˚80W**±0˚04**, h558^{km}**±3^{km}**, h559^{km}:pP-P, n941,** σ**1^{s}30**/980**, mb5.1**/215**, 56C-38D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.59	301	P	P	04 33 35.1	+0.5
MSVF				S	S	04 34 43.7	-1.8
NIUE	Niue	7.50	83	P	P	04 34 00.3	-0.3
	baz=7.4,SNR=39						
NIUE				S	S	04 35 33.9	+0.7
	baz=7.4						
NIUE	Niue	7.50	83	P	P	04 33 59.9	-0.7
NIUE				S	S	04 35 31.7	-1.5
AFI	Afiamalu	8.45	44	P	P	04 34 07.2	-2.9
AFI				S	S	04 35 41.0	-10
RAO	Raoul Island	9.09	181	P	P	04 34 15.0	-1.1
	166nm,0.3s,baz=275,slow=22,SNR=5.8						
RAO				S	S	04 35 57.4	-4.5
	82nm,0.3s,baz=82,slow=23,SNR=3.2						
RAO	Raoul Island	9.09	181	P	P	04 34 14.8	-1.4
RAO				S	S	04 36 00.2	-1.7
FUNA	Funafuti	11.89	345	P	P	04 34 43.8	-1.2
DZM	Mont Dzumac	14.83	260	*e*P	P	04 35 14.5	-0.7
	190nm,0.9s						
DZM	Mont Dzumac	14.83	260	P	P	04 35 14.5	-0.7
	12nm,0.3s,baz=102,slow=3.6,SNR=49						
DZM				S	S	04 37 53.4	+3.7
	baz=329,slow=13,SNR=9.3						
DZM	Mont Dzumac	14.83	260	P	P	04 35 14.8	-0.5
DZM					S	04 37 48.8	-0.9
OUZ	Omahuta	16.84	205	P	P	04 35 35.4	+1.1
MXZ	Matakaoa Point	17.70	190	P	P	04 35 40.8	-1.3
KNTN	Kanton	18.24	20	P	P	04 35 45.5	-1.8
URZ	Urewera	18.60	193	P	P	04 35 47.7	-2.6
	66nm,0.3s,baz=296,slow=2.7,SNR=162						
URZ				ScP	ScP	04 42 34.4	+0.7
	1.5nm,0.3s,baz=44,slow=17,SNR=5.4						
HIZ	Hauiti	19.40	198	P	P	04 35 58.5	+0.9
BKZ	Black Stump Fm	19.61	193	P	P	04 35 57.2	-2.3
MSWZ	Moikau Station	22.03	194	P	P	04 36 20.0	-1.3
SNZO	South Karori	22.06	195	P	P	04 36 20.6	-1.0
BHW	Baring Head	22.11	195	P	P	04 36 20.7	-1.3
TARA	Tarawa	23.20	336	P	P	04 36 30.4	-1.6
MQZ	McQueen's Vall	24.84	197	IAmb	IAmb	04 36 53.2	
	comp=Z,52nm,0.6s						
RPZ	Rata Peaks	25.30	199	P	P	04 36 49.4	-0.9
	comp=Z,86nm,0.6s,baz=9.0,slow=2.3,SNR=34						
FOZ	Fox Glacier	25.54	201	P	P	04 36 51.8	-0.6
LBZ	Lake Benmore	26.18	200	IAmb	IAmb	04 37 00.0	
	comp=Z,68nm,1.2s						
PPT2	Papeete2	26.82	89	*e*P	P	04 37 05.3	+1.2
	comp=Z,16nm,0.4s						
PPT	Papeete	26.82	89	P	P	04 37 05.4	+1.4
	comp=Z,21nm,0.4s,baz=39,slow=6.7,SNR=12						
WKZ	Wanaka	26.96	201	IAmb	IAmb	04 37 18.3	
	comp=Z,119nm,1.1s						
TVO	Taravao	27.09	90	*e*P	P	04 37 07.2	+0.7
	comp=Z,4.6nm,0.4s						
MLZ	Mavora Lakes	27.73	202	IAmb	IAmb	04 37 15.5	
	comp=Z,74nm,0.8s						
PMOR	Pomariorio Ree	28.94	85	*e*P	P	04 37 23.4	+0.9
	comp=Z,20nm,0.4s						
EIDS	Eidsvold	29.13	254	P	P	04 37 24.5	+0.4
	baz=29,SNR=8.7						
ARMA	Armidale	29.40	244	P	P	04 37 27.7	+1.2
	baz=30,SNR=36						
ARMA	Armidale	29.40	244	P	P	04 37 26.9	+0.4
ARMA				IAmb	IAmb	04 37 28.6	
	comp=Z,66nm,0.8s						
XMAS	Kiritimati	29.73	45	P	P	04 37 28.9	-0.6
XMAS				IAmb	IAmb	04 37 30.9	
	comp=Z,77nm,0.9s						
MGCD	Mangrove Creek	30.56	238	P	P	04 37 37.0	+0.7
	baz=31,SNR=3.9						
RMQ	Roma	31.30	252	P	P	04 37 43.8	+1.0
	baz=31,SNR=26						
KWAJ	Kwajalein Atol	32.13	332	P	P	04 37 48.5	-1.3
CNB	Canberra Magne	32.59	235	P	P	04 37 55.0	+1.3
	baz=33,SNR=8.7						
KRVT	Keravat (AS076	33.32	294	P	P	04 37 58.5	-1.5
	comp=Z,203nm,0.6s,baz=311,slow=2.8,SNR=28						
CTA	Charters Tower	33.71	264	P	P	04 38 03.8	+0.5
	comp=Z,315nm,0.7s,baz=94,slow=11,SNR=176						
CTA				ScP	ScP	04 43 22.7	+3.9
	comp=Z,11nm,0.9s,baz=98,slow=3.6,SNR=5.0						
CTAO	Charters Tower	33.71	264	P	P	04 38 03.3	0.0
CMSA	Cobar Meteorol	34.62	243	P	P	04 38 11.3	+0.6
	baz=35,SNR=26						
QLP	Quilpie	35.35	252	P	P	04 38 17.1	+0.3
	baz=35,SNR=58						
PMG	Port Moresby	35.44	282	P	P	04 38 18.0	+0.3
	comp=Z,381nm,0.8s,baz=82,slow=5.6,SNR=79						
PMG	Port Moresby	35.44	282	P	P	04 38 16.7	-1.1
PATS	Pohnpei	35.63	316	P	P	04 38 20.1	+0.8
	baz=36,SNR=6.6						
PATS	Pohnpei	35.63	316	P	P	04 38 18.2	-1.1
MTSU	Mount Surprise	35.80	267	P	P	04 38 20.9	+0.3
	baz=36,SNR=102						
TOO	Toolangi	36.27	233	P	P	04 38 25.1	+0.7
	baz=36,SNR=14						

TOO Toolangi 36.27 233 P P 04 38 24.5 +0.2
TOO IAmb IAmb 04 38 25.9
comp=Z,21nm,0.7s
COEN Coen 37.74 273 P P 04 38 37.0 +0.3
baz=38,SNR=16
COEN Coen 37.74 273 P P 04 38 36.8 +0.1
STKA Stephens Creek 38.12 244 P P 04 38 40.4 +0.9
comp=Z,112nm,1.1s,baz=89,slow=9.9,SNR=98
STKA Stephens Creek 38.12 244 P P 04 38 39.4 -0.1
ARPS Mount Arapiles 38.85 236 P P 04 38 45.9 +0.6
baz=39,SNR=13
QIS Mount Isa 39.85 262 P P 04 38 53.4 -0.3
baz=40,SNR=28
HTT Hallett 40.56 242 P P 04 38 59.7 +0.5
baz=41,SNR=40
WAKE Wake Island 42.02 338 P P 04 39 09.6 -1.1
WAKE IAmb IAmb 04 39 11.2
comp=Z,171nm,1.1s
MMPI Merauke 42.02 280 P P 04 39 10.9 0.0
comp=Z,941nm,0.7s
BBOO Buckleboo 42.88 243 P P 04 39 17.7 +0.3
baz=43,SNR=30
BBOO Buckleboo 42.88 243 P P 04 39 17.6 +0.1
GENI Genyem 44.55 288 P P 04 39 30.8 +0.2
comp=Z,6µmcomp=Z,592nm,0.7s
WR0 Warramunga Arr 44.65 262 P P 04 39 30.6 -0.6
WR0 S S 04 45 26.5 -1.0
AS31 Alice Springs 44.78 256 P P 04 39 32.1 -0.2
AS31 IAmb IAmb 04 39 33.8
comp=Z,97nm,0.9s
ASAR Alice Springs 44.79 256 P P 04 39 32.5 +0.2
comp=Z,318nm,0.8s,baz=87,slow=8.6,SNR=1712
ASAR PcP PcP 04 41 02.7 +0.3
comp=Z,23nm,0.8s,baz=102,slow=3.6,SNR=8.7
ASAR ScP ScP 04 44 04.5 +2.6
comp=Z,9.0nm,0.8s,baz=103,slow=4.6,SNR=5.8
ASAR S S 04 45 27.4 -2.1
comp=Z,20nm,0.8s,baz=94,slow=16,SNR=19
WB0 Warramunga Arr 44.81 262 P P 04 39 31.9 -0.7
WB2 Warramunga Arr 44.83 262 P P 04 39 32.1 -0.6
WRAB Tennant Creek 44.83 262 P P 04 39 31.9 -0.8
WRA Warramunga Arr 44.84 262 P P 04 39 32.1 -0.6
comp=Z,148nm,0.6s,baz=96,slow=8.0,SNR=135
WRA PcP PcP 04 41 03.0 +0.4
comp=Z,14nm,0.7s,baz=100,slow=3.4,SNR=5.2
WRA S S 04 45 26.6 -3.6
comp=Z,12nm,0.9s,baz=93,slow=13,SNR=9.8
SMPI Sarmi 46.12 287 P P 04 39 42.4 -0.1
comp=Z,10µmcomp=Z,160nm,1.0s
KDU Kakadu 48.13 271 P P 04 39 57.3 -0.3
baz=48,SNR=63
MTN Manton Dam 49.34 270 P P 04 40 06.2 -0.4
baz=49,SNR=74
MTN Manton Dam 49.34 270 P P 04 40 05.6 -1.0
FORT Forrest 49.61 246 P P 04 40 08.2 -0.2
baz=50,SNR=154
FORT Forrest 49.61 246 P P 04 40 07.8 -0.7
GUMO Guam 49.70 309 P P 04 40 07.9 -1.3
WRKA Warakurna 49.75 254 P P 04 40 09.6 +0.1
baz=50,SNR=150
KNRA Kununurra 50.87 266 P P 04 40 17.6 -0.2
baz=51,SNR=26
KNRA Kununurra 50.87 266 P P 04 40 17.4 -0.3
FAKI Fak Fak 51.60 283 P P 04 40 22.9 -0.2
comp=Z,2µmcomp=Z,148nm,1.2s
FAKI Fak Fak 51.60 283 P P 04 40 22.5 -0.5
FAKI IAmb IAmb 04 40 24.6
comp=Z,133nm,1.1s
FITZ Fitzroy Crossi 53.26 262 P P 04 40 35.1 +0.2
baz=53,SNR=46
FITZ Fitzroy Crossi 53.26 262 P P 04 40 35.1 +0.2
FITZ IAmb IAmb 04 40 35.7
comp=Z,58nm,0.7s
SIJI Sorong 53.32 285 ScP ScP 04 44 40.7 +2.2
comp=Z,13nm,0.7s,baz=5.4,slow=4.6,SNR=4.6
MSAI Masohi 54.49 281 P P 04 40 43.1 -0.5
comp=Z,26nm,0.7s
KMBL Kambalda 54.88 245 P P 04 40 45.7 -0.5
baz=55,SNR=7.9
AAI Ambon 55.04 280 P P 04 40 47.0 -0.5
comp=Z,206nm,1.2s
NLAI Namlea 56.22 280 P P 04 40 55.4 -0.2
comp=Z,2µmcomp=Z,158nm,1.4s
SOEI Soe 56.67 271 P P 04 41 00.4 +1.5
comp=Z,6µmcomp=Z,785nm,0.9s
LBMI Labuha 56.85 283 P P 04 41 00.6 +0.6
comp=Z,2µmcomp=Z,180nm,1.2s
BATI Baumata 57.11 271 P P 04 41 03.3 +1.5
comp=Z,200nm,0.7s,baz=167,slow=1.8,SNR=17
BATI Baumata 57.11 271 P P 04 41 03.0 +1.2
comp=Z,156nm,0.8s
TNTI Ternate 57.55 284 P P 04 41 04.8 +0.1
comp=Z,3µmcomp=Z,249nm,1.1s
TNTI Ternate 57.55 284 P P 04 41 04.0 -0.7
TNTI IAmb IAmb 04 41 06.0
comp=Z,276nm,1.1s
SANI Sanana 57.69 281 P P 04 41 04.6 -1.1
comp=Z,6µmcomp=Z,184nm,1.1s
MBWA Marble Bar 58.12 257 P P 04 41 08.0 -0.5
MBWA IAmb IAmb 04 41 09.1
comp=Z,146nm,0.8s
MEEK Meekatharra 58.22 251 P P 04 41 08.6 -0.5
baz=58,SNR=36
VNDA Vanda 58.30 185 P P 04 41 11.2 +2.4
comp=Z,19nm,0.6s,baz=0.2,slow=7.9,SNR=240
VNDA ScP ScP 04 45 02.6 +3.4
comp=Z,9.5nm,0.8s,baz=347,slow=5.1,SNR=8.0
VNDA Vanda 58.30 185 P P 04 41 10.3 +1.6
KLBR Kellerberrin 58.38 245 P P 04 41 10.1 0.0
baz=58,SNR=41
NWAO Narrogin (SRO) 58.70 243 P P 04 41 12.4 +0.1
baz=59,SNR=13
NWAO Narrogin (SRO) 58.70 243 P P 04 41 12.0 -0.3
NWAO IAmb IAmb 04 41 14.1
comp=Z,59nm,0.9s
NWAO Narrogin (SRO) 58.70 243 IAmb IAmb 04 41 14.1
comp=Z,44nm,0.9s
RKGY Rocky Gully 58.79 241 P P 04 41 13.5 +0.7
baz=59,SNR=30
MMRI Maumere 58.92 272 P P 04 41 13.4 -0.6
comp=Z,9µmcomp=Z,282nm,0.9s
BLDU Ballidu 59.38 246 P P 04 41 16.7 -0.2
baz=59,SNR=66
EDFI Ende, Flores 59.40 272 P P 04 41 16.7 -0.7
comp=Z,1µmcomp=Z,142nm,1.0s
MUN Mundaring 59.66 244 P P 04 41 18.7 +0.1
baz=60,SNR=34
BASI Baing, Sumba 60.00 270 P P 04 41 22.0 +0.8
comp=Z,3µmcomp=Z,302nm,1.2s
MORW Morawa 60.14 247 P P 04 41 21.8 -0.1
baz=60,SNR=28
MORW Morawa 60.14 247 P P 04 41 21.4 -0.5
MORW IAmb IAmb 04 41 22.8
comp=Z,83nm,0.9s
KMSI Cibinong 60.56 283 P P 04 41 24.8 -0.1
comp=Z,141nm,0.9s
LUWI Luwuk 61.05 280 P P 04 41 28.5 +0.4
comp=Z,5µmcomp=Z,289nm,1.3s
LUWI Luwuk 61.05 280 P P 04 41 27.4 -0.7
H01W1 Cape Leeuwin H 61.08 241 P P 04 41 30.0 +2.3
baz=107,slow=7.4,SNR=16
H01W3 Cape Leeuwin H 61.10 241 P P 04 41 30.1 +2.2
baz=107,slow=7.4,SNR=7.3
H01W2 Cape Leeuwin H 61.10 241 P P 04 41 30.1 +2.3
baz=107,slow=7.4,SNR=7.2
WBSI Waikabubak, Su 61.29 270 P P 04 41 29.3 -0.5
comp=Z,2µmcomp=Z,179nm,0.7s
KCP Kidapawan 62.28 290 ⇓iP P 04 41 36.2 0.0
KAPI Kappang 62.44 275 P P 04 41 36.3 -0.8
KAPI IAmb IAmb 04 41 37.6
comp=Z,36nm,0.8s
GIRL Giralia 62.83 254 P P 04 41 40.7 +1.2
baz=63,SNR=23
CASY Casey 64.38 205 P P 04 41 49.5 +0.8
CASY IAmb IAmb 04 41 50.5
comp=Z,42nm,0.9s
DNP Denpasar 65.51 269 P P 04 41 56.9 +0.2
comp=Z,46µmcomp=Z,507nm,0.8s
RCP Roxas 66.42 293⇑eP P 04 42 02.2 -0.1
SMKI Samarinda 66.43 279 P P 04 42 04.2 +1.8
comp=Z,216nm,1.5s
JHJ Hachijo jima 2 66.66 322 P P 04 42 03.4 0.0
comp=Z,424nm,0.8s,baz=240,slow=21,SNR=18
GRJI Gresik 68.64 270 P P 04 42 16.9 +1.0
comp=Z,2µmcomp=Z,227nm,0.9s
SPMM Sapulut 69.08 283 P P 04 42 20.0 +1.4
KKM Kota Kinabalu 69.84 285 P P 04 42 22.6 -0.7

INU Inuyama 69.85 322 IAmb IAmb 04 42 23.8
comp=Z,54nm,1.0s
QSPA South Pole Qui 69.94 180 P P 04 42 24.0 +1.0
QSPA IAmb IAmb 04 42 25.7
comp=Z,116nm,0.8s
MJAR Matsushiro Arr 70.02 323 P P 04 42 23.4 -0.3
comp=Z,88nm,0.6s,baz=139,slow=6.1,SNR=248
MAJO Matsushiro 70.02 323 P P 04 42 23.0 -0.7
MAT Matsushiro 70.02 323 P P 04 42 23.3 -0.4
MAT S S 04 50 51.0 +0.7
MJB9 Matsu-Tunnel 70.02 323 P P 04 42 22.7 -1.0
JOW Kunigami 70.07 310 P P 04 42 25.1 +1.0
comp=Z,7.9nm,0.7s,baz=105,slow=16,SNR=9.6
JOW Kunigami 70.07 310 IAmb IAmb 04 42 25.9
comp=Z,43nm,0.8s
UGM Wanagama 70.16 269 P P 04 42 24.9 -0.1
ADK Adak 71.70 1 P P 04 42 32.9 -0.2
ADK IAmb IAmb 04 42 33.5
comp=Z,90nm,0.7s
JNU Nakatsue 72.13 317 P P 04 42 36.0 -0.1
comp=Z,72nm,0.9s,baz=90,slow=3.0,SNR=31
JNU Nakatsue 72.13 317 IAmb IAmb 04 42 37.3
comp=Z,109nm,1.0s
YOJ Yonaguni jima 72.67 305 P P 04 42 38.3 -1.1
SMY Shemya 72.88 355 IAmb IAmb 04 42 40.5
comp=Z,124nm,1.0s
YULB Yu-li 73.45 303 P P 04 42 42.7 -1.1
YULB IAmb IAmb 04 42 43.8
comp=Z,57nm,0.6s
ASAJ Asahikawa 73.49 331 P P 04 42 45.4 +1.7
comp=Z,190nm,0.8s,baz=212,slow=6.8,SNR=111
KSM Kuching 73.54 278 P P 04 42 44.5 -0.2
KSM Kuching 73.54 278 P P 04 42 46.0 +1.3
XMIS Christmas Isla 73.93 265 P P 04 42 46.5 -0.3
YHNB Yeheng 74.05 304 P P 04 42 45.5 -1.8
TATO Taipei 74.12 305 P P 04 42 46.8 -0.9
YSS Yuzh-Sakhalins 75.64 333 P P 04 42 55.5 -0.2
PEA0B Petropavlovsk- 75.95 345 P P 04 42 57.1 -0.1
PEA0B IAmb IAmb 04 42 58.5
comp=Z,121nm,0.9s
PETK Petropavlovsk- 75.95 345 P P 04 42 57.2 0.0
comp=Z,89nm,0.8s,baz=134,slow=8.6,SNR=99
PETK PKiKP PKiKP 04 48 36.9 -0.3
comp=Z,2.2nm,0.7s,baz=145,slow=5.4,SNR=4.8
QZH Quanzhou 76.36 303⇓iP P 04 43 00.7 +0.6
QZH pmax pmax
comp=Z,100nm,0.8s
KSRS Korea Array 76.73 318 P P 04 43 02.8 +0.9
comp=Z,25nm,0.7s,baz=137,slow=6.3,SNR=75
KSRS PP PP 04 46 04.4 -0.6
comp=Z,0.9nm,0.4s,baz=140,slow=9.6,SNR=2.5
KS19 Wonju Array Si 76.79 318 IAmb IAmb 04 43 03.4
comp=Z,35nm,0.9s
INCN Inchon 77.56 318 P P 04 43 05.1 -1.2
INCN IAmb IAmb 04 43 08.3
comp=Z,102nm,1.1s
PKM Mcpherson Peak 77.60 46 P P 04 43 08.8 +1.9
baz=234,SNR=5.7
SAO San Andreas Ge 77.63 43 P P 04 43 07.4 +0.6
SAO IAmb IAmb 04 43 09.6
comp=Z,40nm,0.8s
CIS Catalina Islan 77.71 47 P P 04 43 08.8 +1.5
baz=236
SMMC Simmler 77.72 45 P P 04 43 09.5 +2.2
baz=234
CHGN Chignik 77.87 11 IAmb IAmb 04 43 08.2
comp=Z,61nm,0.8s
KCPM Cahto Peak 78.09 40 IAmb IAmb 04 43 12.9
comp=Z,39nm,1.0s
DECC Green Verdugo 78.24 47 P P 04 43 11.5 +1.4
baz=236
109C Camp Elliot, M 78.34 49 P P 04 43 12.3 +1.7
baz=237
KMRM Mail Ridge 78.35 39 P P 04 43 10.8 +0.1
KMRM IAmb IAmb 04 43 13.9
comp=Z,95nm,0.8s
ARVC Arvin 78.40 46 P P 04 43 12.6 +1.6
baz=235
MNAI Manna 78.42 270 P P 04 43 11.0 -0.5
VES Vestal, Richgr 78.63 45 P P 04 43 13.5 +1.4
baz=235,SNR=5.5
MURC Murrieta 78.66 48 P P 04 43 14.1 +1.6
baz=236,SNR=7.7
HKPS Hong Kong Po S 78.68 299 P P 04 43 11.6 -1.1
BFSC Mount Baldy Ra 78.70 47 P P 04 43 14.0 +1.3
baz=236,SNR=6.4
USA0B Ussuriysk Arra 78.76 326 P P 04 43 12.5 -0.1
USA0B IAmb IAmb 04 43 15.0
comp=Z,126nm,0.8s
USRK Ussuriysk Ar. 78.76 326 P P 04 43 14.2 +1.6
comp=Z,108nm,0.8s,baz=130,slow=3.3,SNR=166
MONP2 Monument Peak 78.82 49 P P 04 43 15.5 +2.0
baz=237,SNR=9.2
EDW2 Edwards Air Fo 78.82 46 P P 04 43 15.0 +1.7
baz=236,SNR=21
O02D Mt. Diablo Mer 78.87 40 P P 04 43 15.8 +2.4
baz=232,SNR=13
IKP In-Ko-Pah, Jac 78.91 49 P P 04 43 15.9 +2.0
baz=237,SNR=7.4
ISA Isabella, Lake 78.94 46 P P 04 43 15.7 +1.8
baz=235,SNR=14
PFO Pinyon Flats O 79.19 48 P P 04 43 17.0 +1.7
comp=Z,11nm,0.8s,baz=263,slow=3.4,SNR=10
PFO Pinyon Flats O 79.19 48 P P 04 43 17.0 +1.7
baz=237
PFO Pinyon Flats O 79.19 48 P P 04 43 14.9 -0.4
DLV T Lat 79.19 287 IAmb IAmb 04 43 18.0
comp=Z,118nm,0.9s
XPFO Pion Flat 79.19 48 P P 04 43 15.1 -0.2
AFDM Forest Hills D 79.23 42 P P 04 43 15.4 +0.1
WDC Whiskeytown Da 79.27 40 P P 04 43 15.5 +0.1
ORV Oroville 79.27 41 P P 04 43 15.5 0.0
SWSC Sam W. Stewart 79.29 49 P P 04 43 17.5 +1.8
baz=237
LRMC Laurel Mtn Rad 79.37 46 P P 04 43 17.8 +1.6
baz=236,SNR=5.3
N02D Trinity Center 79.41 39 P P 04 43 18.5 +2.2
baz=231,SNR=16
O03E Paynes Creek 79.54 40 P P 04 43 18.3 +1.3
baz=232,SNR=14
M02C Callahan 79.58 39 P P 04 43 19.4 +2.2
baz=231,SNR=20
CWC Cottonwood Cre 79.64 45 P P 04 43 19.4 +1.6
baz=235
BELC Belle Mtn. Jos 79.72 48 P P 04 43 19.8 +1.7
baz=237,SNR=5.7
OHAK Old Harbor 79.74 13 P P 04 43 17.4 -0.1
OHAK IAmb IAmb 04 43 18.9
comp=Z,71nm,1.0s
NJ2 Nanjing 79.78 310⇓iP P 04 43 19.3 +1.0
NJ2 pmax pmax
comp=Z,76nm,1.1s
MLAC Mammoth, Mammo 79.82 44 P P 04 43 20.7 +2.0
baz=235
MPMC Manual Prospec 79.82 46 P P 04 43 20.4 +1.7
baz=236,SNR=17
GSC Goldstone, Bar 79.87 47 P P 04 43 20.4 +1.5
baz=236,SNR=8.9
YBH Yreka Blue Hor 79.88 39 P P 04 43 20.8 +2.0
comp=Z,32nm,0.7s,baz=200,slow=2.0,SNR=99
YBH Yreka Blue Hor 79.88 39 P P 04 43 20.4 +1.6
YBH Yreka Blue Hor 79.88 39 IAmb IAmb 04 43 21.8
comp=Z,39nm,0.8s
TIN Tinemaha, Big 79.89 44 P P 04 43 20.9 +1.9
baz=235
BC3 Big Chuckawall 79.92 49 P P 04 43 21.1 +2.0
baz=238
HEC Hector,Ludlow 79.93 47 P P 04 43 20.8 +1.6
baz=237,SNR=6.2
K02D Willamette Mer 79.93 37 P P 04 43 20.8 +1.8
baz=230
WAKR Walker 79.94 43 P P 04 43 19.6 +0.3
WAKR IAmb IAmb 04 43 22.3
comp=Z,48nm,1.1s
GLA Glamis 80.04 49 P P 04 43 22.0 +2.2
baz=238,SNR=6.4
J01E Myrtle Point 80.08 37 P P 04 43 21.3 +1.7
baz=230
BEKR Beckworth 80.16 41 P P 04 43 20.4 0.0
PNTR Pine Nut 80.18 42 P P 04 43 20.9 +0.3
PNTR IAmb IAmb 04 43 23.3
comp=Z,69nm,0.8s
KGM Kluang 80.26 276 P P 04 43 22.0 +0.7
VCNR Virginia City 80.27 42 P P 04 43 21.2 +0.2
MDJ Mudanjiang 80.32 325 P P 04 43 22.0 +1.2
MDJ pP pP 04 45 19.8 +0.9

MDJ sP sP 04 46 18.0 +2.3
MDJ PP PP 04 46 35.0 +0.7
MDJ S S 04 52 45.6 +4.7
MDJ sS sS 04 56 14.4 +3.4
MDJ SS SS 04 58 13.3 +4.1
MDJ pmax pmax
comp=Z,220nm,0.8s
MDJ pmax pmax
comp=Z,200nm,3.5s
MDJ Mudanjiang 80.32 325 IAmb IAmb 04 43 23.1
comp=Z,151nm,0.8s
YERR Yerington 80.34 42 IAmb IAmb 04 43 23.9
comp=Z,35nm,0.9s
GMRC Granite Mounta 80.38 48 P P 04 43 23.2 +1.7
baz=237,SNR=13
IRM Iron Mountain 80.40 48 P P 04 43 23.6 +2.0
baz=238,SNR=13
KDAK Kodiak Island 80.41 13 P P 04 43 20.6 -0.3
KDAK IAmb IAmb 04 43 23.3
comp=Z,51nm,0.8s
L04D Klamath Falls 80.42 38 P P 04 43 23.3 +1.7
baz=232,SNR=21
M04C Macdoel 80.42 39 P P 04 43 23.4 +1.8
baz=232,SNR=16
TUQ Turquoise Moun 80.54 47 P P 04 43 24.0 +1.5
baz=237
SHOC Shoshone, Teco 80.56 46 P P 04 43 23.6 +1.3
baz=237
Y12C Blythe 80.62 49 P P 04 43 24.7 +2.0
baz=238,SNR=8.4
NVAR Mina Array Bea 80.62 43 P P 04 43 24.4 +1.5
comp=Z,23nm,0.9s,baz=226,slow=9.1,SNR=87
NVAR pP pP 04 45 24.8 +4.0
comp=Z,3.2nm,0.9s,baz=224,slow=8.4,SNR=3.9
NVAR PKKPbc PKKPbc 05 02 00.6 +1.2
comp=Z,0.4nm,0.5s,baz=243,slow=0.3,SNR=3.7
PAHR Pah Rah Range 80.67 42 P P 04 43 23.5 +0.5
NV11 Mina Array Sit 80.72 43 IAmb IAmb 04 43 25.9
comp=Z,36nm,0.9s
I02D Swisshome 80.73 36 P P 04 43 24.9 +2.0
baz=230
I03D Drain, OR 80.75 37 P P 04 43 24.7 +1.7
baz=231,SNR=7.0
QIZ Qiongzhong 80.87 294 P P 04 43 25.4 +1.1
QIZ pmax pmax
comp=Z,40nm,0.9s
QIZ Qiongzhong 80.87 294 IAmb IAmb 04 43 26.1
comp=Z,45nm,1.0s
214A Organ Pipe Nat 80.93 51 P P 04 43 26.4 +2.0
baz=239
K04D Chiloquin, OR 80.99 38 P P 04 43 26.2 +1.7
baz=232,SNR=5.4
NEE2 Needles Airpor 81.09 48 P P 04 43 27.0 +1.9
baz=238
KVN Kaiserville 81.11 43 P P 04 43 25.6 +0.3
KVN IAmb IAmb 04 43 27.8
comp=Z,31nm,0.8s
TPNV Topopah Spring 81.15 45 P P 04 43 27.2 +1.7
baz=237,SNR=17
J04D Umpqua Nationa 81.17 38 P P 04 43 27.4 +1.9
baz=232,SNR=26
PDMCI Parker Dam,Lak 81.18 49 P P 04 43 27.5 +1.9
baz=238,SNR=8.7
I04A Tendick Farm, 81.34 37 P P 04 43 27.5 +1.3
baz=231,SNR=8.3
MOD Modoc Plateau 81.41 40 IAmb IAmb 04 43 29.3
comp=Z,46nm,0.9s
K05A Summer Lake 81.56 39 IAmb IAmb 04 43 30.5
comp=Z,89nm,1.0s
PMSA Palmer Station 81.56 157 P P 04 43 28.8 +1.9
comp=Z,26nm,0.6s,baz=159,slow=1.3,SNR=6.2
PMSA Palmer Station 81.56 157 P P 04 43 28.2 +1.3
PMSA IAmb IAmb 04 43 29.5
comp=Z,47nm,0.9s
H04D Lebanon 81.61 36 P P 04 43 29.3 +1.8
baz=231,SNR=8.0
SHPR Sheep Range 81.64 46 P P 04 43 27.6 -0.4
J05D Fort Rock, OR 81.70 38 P P 04 43 30.2 +2.0
baz=232,SNR=89
G03D McMinnville, O 81.75 36 P P 04 43 30.1 +1.9
baz=230
W13A Hualapai Mount 81.78 48 P P 04 43 28.4 -0.5
BKNI Bangkinang 81.81 273 IAmb IAmb 04 43 31.9
comp=Z,130nm,1.0s
MAW Mawson 81.98 200 P P 04 43 30.1 +1.1
comp=Z,7.8nm,0.7s,baz=144,slow=10,SNR=7.5
H04A Detroit Lake 82.02 36 IAmb IAmb 04 43 31.3
comp=Z,32nm,0.6s
CN2 Changchun 82.11 322 eP P 04 43 30.5 +0.4
CN2 pmax pmax
comp=Z,100nm,1.0s
PINE Pine Mountain 82.17 38 IAmb IAmb 04 43 33.7
comp=Z,85nm,0.9s
I05D Terrebonne, OR 82.28 37 P P 04 43 32.6 +1.6
baz=232,SNR=20
CNPM China Poot 82.29 13 P P 04 43 30.4 -0.2
CNPM IAmb IAmb 04 43 31.9
comp=Z,58nm,0.8s
KLR Kul'dur 82.30 329 P P 04 43 31.8 +1.0
comp=Z,34nm,0.9s,baz=107,slow=3.9,SNR=74
R11A Troy Canyon, C 82.35 45 P P 04 43 32.8 +1.1
baz=237,SNR=19
R11A Troy Canyon, C 82.35 45 P P 04 43 31.4 -0.3
WHN Wuhan 82.37 306 ⇓P P 04 43 32.6 +0.9
WHN pmax pmax
comp=Z,200nm,1.1s
F04D Rainier, OR 82.44 35 P P 04 43 33.8 +2.2
baz=231
BRLK Bradley Lake 82.58 13 P P 04 43 31.9 -0.2
BRLK IAmb IAmb 04 43 33.2
comp=Z,46nm,0.9s
TUC Tucson 82.60 52 P P 04 43 35.5 +2.5
baz=241
TUC Tucson 82.60 52 P P 04 43 33.4 +0.4
TUC IAmb IAmb 04 43 36.5
comp=Z,38nm,1.1s
F04A Amboy 82.67 35 IAmb IAmb 04 43 34.7
comp=Z,40nm,0.6s
WVOR Wild Horse Val 82.72 40 IAmb IAmb 04 43 36.0
comp=Z,53nm,1.1s
NLWA Neilton Lookou 82.82 34 IAmb IAmb 04 43 36.4
comp=Z,48nm,1.1s
RSO Redoubt South 82.83 12 P P 04 43 33.1 -0.5
G05D Wamic, OR 82.85 36 P P 04 43 35.3 +1.5
baz=232
H02S1 DAWSON INLET T 82.86 26 P P 04 43 34.5 +1.0
SNR=8.9
E04D Cinebar 82.98 35 P P 04 43 36.1 +1.8
baz=231
TIA Tai'an 83.16 312 P P 04 43 36.0 +0.5
TIA pmax pmax
comp=Z,51nm,0.9s
X16A Lo Mia Camp, P 83.16 50 IAmb IAmb 04 43 39.1
comp=Z,33nm,1.1s
F05D White Salmon 83.16 36 P P 04 43 36.6 +1.3
baz=232
I07A Izee 83.18 38 IAmb IAmb 04 43 38.3
comp=Z,44nm,0.9s
SEW Seward 83.21 14 IAmb IAmb 04 43 36.1
comp=Z,43nm,0.8s
D04E Lakebay 83.26 34 P P 04 43 37.9 +2.1
baz=231
IPM Ipoh 83.27 277 P P 04 43 34.0 -2.6
319A Douglas 83.28 53 IAmb IAmb 04 43 40.0
comp=Z,50nm,0.9s
D03D Eldon 83.32 34 P P 04 43 37.7 +1.7
baz=230,SNR=11
MA2 Magadan 83.47 345 P P 04 43 36.0 -0.5
comp=Z,34nm,0.7s,baz=145,slow=7.1,SNR=12
MA2 Magadan 83.47 345 P P 04 43 35.8 -0.7
MA2 Magadan 83.47 345 IAmb IAmb 04 43 37.1
comp=Z,49nm,0.8s
U15A North Rim 83.57 48 IAmb IAmb 04 43 41.0
comp=Z,46nm,0.9s
D05A Enumclaw 83.68 35 IAmb IAmb 04 43 43.1
comp=Z,50nm,1.1s
WUAZ Wupatki 83.76 49 P P 04 43 40.5 +1.7
baz=240
GAMB Gambell 83.76 3 IAmb IAmb 04 43 39.7
comp=Z,77nm,0.7s
PGC Sidney 83.84 33 IAmb IAmb 04 43 40.9
comp=Z,37nm,0.8s
KULM Kulim 83.90 278 P P 04 43 41.0 +1.3
BBB Bella Bella 83.98 28 IAmb IAmb 04 43 40.9
comp=Z,21nm,0.7s
G08A Pilot Rock 84.21 37 IAmb IAmb 04 43 43.2
comp=Z,47nm,1.1s

A04D	Lummi Island	84.27	33	P	P	04 43 42.3	+1.7
	baz=231,SNR=7.8						
B05A	Bryant	84.30	34	P	P	04 43 42.3	+1.4
	baz=231,SNR=17						
E07A	Sunnyside	84.46	36	IAmb	IAmb	04 43 43.8	
	comp=Z,22nm,0.7s						
FID	Port Fidalgo	84.47	15	IAmb	IAmb	04 43 41.8	
	comp=Z,23nm,0.8s						
EYAK	Cordova Ski Ar	84.47	15	IAmb	IAmb	04 43 42.5	
	comp=Z,24nm,0.7s						
HAWA	Hanford	84.54	36	IAmb	IAmb	04 43 44.7	
	comp=Z,38nm,1.1s						
KNK	Knik Glacier	84.60	14	IAmb	IAmb	04 43 43.2	
	comp=Z,51nm,0.7s						
RAGM	Ragged Mountai	84.61	16	IAmb	IAmb	04 43 44.7	
	comp=Z,58nm,1.2s						
RPSI	Rantau Prapat	84.61	275	P	P	04 43 42.9	-0.2
RPSI	Rantau Prapat	84.61	275	IAmb	IAmb	04 43 44.7	
	comp=Z,118nm,1.0s						
PMR	Palmer	84.61	13	IAmb	IAmb	04 43 42.6	
	comp=Z,33nm,0.6s						
PSI	Prapat	84.64	275	P	P	04 43 42.9	-0.6
	comp=Z,87nm,0.9s,baz=180,slow=2.7,SNR=11						
W18A	Petrified Fore	84.73	50	P	P	04 43 45.1	+1.6
	baz=241						
121A	Cookes Peak, D	84.94	53	P	P	04 43 46.8	+2.2
	baz=242,SNR=15						
121A	Cookes Peak, D	84.94	53	IAmb	IAmb	04 43 48.0	
	comp=Z,26nm,0.8s						
SML	Sawmill	84.98	14	IAmb	IAmb	04 43 57.9	
	comp=Z,26nm,1.0s						
DUG	Dugway, Tooele	85.16	44	P	P	04 43 46.5	+1.1
	baz=238						
D08A	Wollman Farm,	85.27	36	IAmb	IAmb	04 43 48.2	
	comp=Z,25nm,0.9s						
WRAK	Wrangell Islan	85.30	23	IAmb	IAmb	04 43 47.8	
	comp=Z,44nm,0.8s						
DHAK	Deception Hill	85.36	19	IAmb	IAmb	04 43 48.6	
	comp=Z,37nm,0.7s						
E09A	Wood Farm, Sta	85.38	37	IAmb	IAmb	04 43 48.5	
	comp=Z,42nm,1.1s						
F10A	Beach Ranch, E	85.59	38	IAmb	IAmb	04 43 49.3	
	comp=Z,84nm,0.8s						
VRDI	Verde Repeater	85.64	16	IAmb	IAmb	04 43 48.2	
	comp=Z,25nm,0.9s						
GLB	Gilahina Butte	85.73	16	IAmb	IAmb	04 43 48.9	
	comp=Z,32nm,0.8s						
BJT	Baijiatuau	85.75	315	IAmb	IAmb	04 43 49.9	
	comp=Z,46nm,0.8s						
BJI	Beijing	85.75	315	P	P	04 43 48.7	+0.6
BJI				pmax	pmax		
	comp=Z,55nm,0.8s						
BALM	Baldy	85.77	16	IAmb	IAmb	04 43 49.3	
	comp=Z,43nm,0.9s						
B08A	Colville Reser	85.82	35	IAmb	IAmb	04 43 49.9	
	comp=Z,24nm,0.8s						
LLLB	Lillooet	85.88	32	IAmb	IAmb	04 43 50.6	
	comp=Z,28nm,1.1s						
MCARA	McCarthy VSAT	85.88	16	IAmb	IAmb	04 43 49.9	
	comp=Z,44nm,1.1s						
BARN	Barnard Glacie	85.97	17	IAmb	IAmb	04 43 50.6	
	comp=Z,51nm,0.8s						
CTGM	Chitina Glacie	85.98	17	IAmb	IAmb	04 43 50.5	
	comp=Z,39nm,0.8s						
KTH	Kantishna Hill	86.01	12	IAmb	IAmb	04 43 49.1	
	comp=Z,57nm,1.0s						
BESE	Bessie Mountai	86.04	21	IAmb	IAmb	04 43 51.4	
	comp=Z,34nm,1.0s						
SEY	Seymchan	86.05	347	P	P	04 43 49.2	+0.3
	comp=Z,78nm,0.9s,baz=148,slow=5.3,SNR=136						
C09A	Chrisman Ranch	86.06	36	IAmb	IAmb	04 43 51.5	
	comp=Z,41nm,1.1s						
Y22D	IRIS PASSCAL I	86.29	52	P	P	04 43 53.1	+2.1
	baz=243						
MNTX	Cornudas Mount	86.38	55	P	P	04 43 53.2	+1.9
	baz=244,SNR=41						
MNTX	Cornudas Mount	86.38	55	IAmb	IAmb	04 43 54.4	
	comp=Z,30nm,1.1s						
SKAG	Skagway	86.56	20	IAmb	IAmb	04 43 56.1	
	comp=Z,29nm,1.0s						
MCK	McKinley	86.57	12	IAmb	IAmb	04 43 52.8	
	comp=Z,77nm,0.8s						
MVCO	Mesa Verde	86.61	48	P	P	04 43 53.4	+0.9
	baz=242						
GYA	Guiyang	86.62	300	⇓iP	P	04 43 53.6	+0.9
GYA				pP	pP	04 45 54.1	+0.6
GYA				sP	sP	04 46 49.1	+0.1
GYA				SKS	SKSac	04 53 26.9	+0.1
GYA				S	S	04 53 39.8	-3.9
GYA				SS	SS	04 59 44.3	+2.1
GYA				pmax	pmax		
	comp=Z,50nm,0.9s						
GYA				pmax	pmax		
	comp=Z,100nm,4.7s						
TX31	Lajitas Ar. Si	86.70	57	IAmb	IAmb	04 43 56.2	
	comp=Z,60nm,0.9s						
TX32	Lajitas Array	86.70	57	IAmb	IAmb	04 43 56.2	
	comp=Z,20nm,0.9s						
TXAR	Lajitas Array	86.70	57	P	P	04 43 55.0	+2.1
	comp=Z,15nm,0.7s,baz=218,slow=6.8,SNR=250						
TXAR				pP	pP	04 45 55.5	+2.3
	comp=Z,2.3nm,0.9s,baz=218,slow=5.9,SNR=5.3						
TXAR				PKKPbc	PKKPbc	05 01 45.2	+0.6
	comp=Z,1.0nm,0.8s,baz=104,slow=2.5,SNR=9.4						
PV23	Carpenter Ridg	86.84	47	IAmb	IAmb	04 43 55.9	
	comp=Z,20nm,0.8s						
BWN	Browne	86.85	12	IAmb	IAmb	04 43 53.5	
	comp=Z,107nm,1.1s						
SLVN	Son La	86.90	294	IAmb	IAmb	04 43 57.8	
	comp=Z,35nm,1.1s						
PV12	Saucer Basin,	86.92	47	IAmb	IAmb	04 43 58.3	
	comp=Z,16nm,0.8s						
HYT	Haines Junctio	86.96	19	IAmb	IAmb	04 43 55.5	
	comp=Z,24nm,0.9s						
NEW	Newport	86.96	36	P	P	04 43 54.4	+0.7
	baz=235,SNR=8.2						
ANMO	Albuquerque	87.02	51	P	P	04 43 56.0	+1.5
	baz=243						
ANMO	Albuquerque	87.02	51	P	P	04 43 54.0	-0.5
MENT	Mentasta	87.03	15	IAmb	IAmb	04 43 55.4	
	comp=Z,36nm,1.2s						
SYO	Syowa Base	87.13	193	⇓iP	P	04 43 53.0	-1.1
SYO	Syowa Base	87.13	193	⇑iPcP	PcP	04 43 55.7	+0.1
NEA	Nenana	87.29	12	IAmb	IAmb	04 43 55.8	
	comp=Z,30nm,0.8s						
MLY	Manley	87.39	11	IAmb	IAmb	04 43 55.6	
	comp=Z,41nm,0.6s						
DOT	Dot Lake	87.55	14	IAmb	IAmb	04 43 57.4	
	comp=Z,38nm,1.0s						
HDA	Harding Lake	87.58	13	P	P	04 43 56.0	-0.1
	baz=209						
DLBC	Dease Lake	87.63	23	IAmb	IAmb	04 43 59.0	
	comp=Z,21nm,0.8s						
WHY	Whitehorse	87.64	20	IAmb	IAmb	04 43 58.7	
	comp=Z,21nm,0.8s						
PBKT	Sadao Pong	87.68	288	IAmb	IAmb	04 44 00.6	
	comp=Z,96nm,1.1s						
TCOL	CIGO, UAF Yank	87.80	12	P	P	04 43 56.9	-0.2
	baz=208						
COLA	College	87.80	12	P	P	04 43 57.0	-0.1
IL31		87.91	13	IAmb	IAmb	04 43 58.3	
	comp=Z,46nm,1.1s						
ILAR	Eielson Array	87.91	13	P	P	04 43 57.2	-0.4
	comp=Z,29nm,0.8s,baz=217,slow=5.6,SNR=198						
ILAR				pP	pP	04 45 58.6	0.0
	comp=Z,2.6nm,1.1s,baz=283,slow=3.5,SNR=3.7						
ILAR				PKiKP	PKiKP	04 48 55.2	-0.6
	comp=Z,0.5nm,0.5s,baz=265,slow=3.2,SNR=5.2						
MSO	Missoula	87.96	38	P	P	04 43 59.0	+0.5
	baz=237,SNR=14						
DLMT	Dillon	87.98	40	IAmb	IAmb	04 44 01.3	
	comp=Z,35nm,0.9s						
S22A	4UR Ranch, Cre	88.03	49	P	P	04 44 00.8	+1.5
	baz=243,SNR=23						
REDW	Red Top Meadow	88.03	42	IAmb	IAmb	04 44 02.2	
	comp=Z,27nm,1.0s						
TPAW	Teton Pass	88.03	42	IAmb	IAmb	04 44 01.7	
	comp=Z,21nm,0.9s						
XAN	Xi'an	88.05	307	P	P	04 43 59.9	+0.8
XAN				pmax	pmax		
	comp=Z,190nm,0.9s						
FXWY	Fox Creek	88.06	42	IAmb	IAmb	04 44 02.7	
	comp=Z,17nm,1.1s						
POKR	Poker Plat Res	88.10	12	P	P	04 43 58.1	-0.4
	baz=208						
SNOW	Snow King Moun	88.14	42	IAmb	IAmb	04 44 02.2	
	comp=Z,43nm,1.0s						
O20A	White River Ci	88.17	46	P	P	04 44 00.8	+1.1
	baz=242,SNR=14						
O20A	White River Ci	88.17	46	IAmb	IAmb	04 44 02.8	
	comp=Z,12nm,0.8s						
IMW	Indian Meadow	88.25	42	IAmb	IAmb	04 44 02.8	
	comp=Z,30nm,0.8s						
SNAA	Sanae	88.38	178	P	P	04 44 00.4	+0.3
SNAA	Sanae	88.38	178	PKKPbc	PKKPbc	05 01 38.8	-3.1
	comp=Z,2.2nm,0.8s,baz=226,slow=5.7,SNR=7.9						
SNAA	Sanae	88.38	178	P	P	04 44 00.2	+0.2
FLWY	Flagg Ranch	88.49	42	IAmb	IAmb	04 44 04.1	
	comp=Z,44nm,0.9s						
HIA	Hailar	88.50	324	IAmb	IAmb	04 44 02.2	
	comp=Z,30nm,1.0s						
VNA3	Neumayer Olymp	88.50	176	P	P	04 44 01.1	+0.6
BW06	Boulder Array	88.56	43	P	P	04 44 02.4	+0.9
	baz=241,SNR=23						
BW06	Boulder Array	88.56	43	IAmb	IAmb	04 44 03.4	
	comp=Z,17nm,0.8s						
PDAR	Pinedale Array	88.56	43	P	P	04 44 02.2	+0.6
	comp=Z,12nm,0.6s,baz=214,slow=2.8,SNR=130						
PDAR				pP	pP	04 46 05.0	+2.6
	comp=Z,1.2nm,0.9s,baz=204,slow=3.3,SNR=3.5						
PDAR				PKKPbc	PKKPbc	05 01 40.1	-0.9
	comp=Z,1.1nm,0.8s,baz=73,slow=5.0,SNR=10						
RDOG	Red Dog Mine	88.60	6	IAmb	IAmb	04 44 02.3	
	comp=Z,25nm,1.0s						
BILL	Bilibino	88.68	354	P	P	04 44 00.9	-0.3
BILL				IAmb	IAmb	04 44 03.7	
	comp=Z,26nm,0.8s						
H17A	Grant Village	88.72	41	P	P	04 44 05.1	+2.8
	baz=240,SNR=28						
H17A	Grant Village	88.72	41	IAmb	IAmb	04 44 06.0	
	comp=Z,27nm,0.8s						
PRP	Porcupine Dome	88.84	13	IAmb	IAmb	04 44 03.8	
	comp=Z,25nm,0.8s						
LKWY	Lake	88.92	41	IAmb	IAmb	04 44 07.0	
	comp=Z,30nm,0.9s						
VNA2	Neumayer--Watz	88.95	177	P	P	04 44 03.4	+0.8
	baz=188,slow=4.1						
SDCO	Great Sand Dun	88.97	49	P	P	04 44 04.6	+1.0
	baz=243,SNR=17						
WALA	Waterton Lakes	89.17	36	IAmb	IAmb	04 44 06.1	
	comp=Z,21nm,0.8s						
VNA1	Neumayer--Stat	89.17	177	P	P	04 44 04.4	+0.7
HHC	Hu-ho-hao-te	89.22	314	P	P	04 44 05.7	+1.2
HHC				pmax	pmax		
	comp=Z,33nm,1.1s						
HHC				pmax	pmax		
	comp=Z,60nm,7.3s						
MSTX	Muleshoe	89.34	53	P	P	04 44 06.3	+1.1
	baz=245						
MSTX	Muleshoe	89.34	53	IAmb	IAmb	04 44 07.2	
	comp=Z,29nm,0.9s						
KMI	Kunming	89.34	297	P	P	04 44 05.2	-0.4
KMI				pmax	pmax		
	comp=Z,170nm,1.0s						
KMI				pmax	pmax		
	comp=Z,370nm,3.1s						
PLCA	Paso Flores	89.40	133	P	P	04 44 07.4	+2.0
	comp=Z,4.8nm,1.0s,baz=229,slow=5.9,SNR=5.9						
PLCA				pP	pP	04 46 08.5	+1.8
	comp=Z,4.1nm,1.0s,baz=298,slow=4.4,SNR=4.1						
PLCA				PKKPbc	PKKPbc	05 01 38.1	-0.2
	comp=Z,1.9nm,0.9s,baz=39,slow=2.1,SNR=6.4						
COLD	Coldfoot	89.47	10	IAmb	IAmb	04 44 06.7	
	comp=Z,16nm,0.9s						
T25A	Trinidad	89.48	50	P	P	04 44 06.9	+1.0
	baz=244,SNR=5.9						
RWWY	Rawlins	89.58	45	IAmb	IAmb	04 44 08.3	
	comp=Z,26nm,0.9s						
833A	Chaparral WMA,	89.71	60	P	P	04 44 08.4	+1.4
	baz=247						
ISCO	Idaho Springs	89.81	47	P	P	04 44 08.5	+1.0
	baz=243,SNR=5.4						
FYU	Fort Yukon	89.81	12	IAmb	IAmb	04 44 07.7	
	comp=Z,12nm,0.6s						
RLMT	Red Lodge	89.89	41	P	P	04 44 09.1	+1.5
	baz=241,SNR=24						
RLMT	Red Lodge	89.89	41	IAmb	IAmb	04 44 10.4	
	comp=Z,21nm,0.9s						
N23A	Red Feather La	90.07	46	P	P	04 44 10.0	+1.4
	baz=243,SNR=18						
BTO	Baotou	90.16	314	eP	P	04 44 09.0	+0.2
CMAR	Chiang Mai Arr	90.16	290	P	P	04 44 10.6	+1.4
	comp=Z,67nm,0.9s,baz=118,slow=2.9,SNR=74						
JCT	Junction City	90.23	58	P	P	04 44 10.0	+0.7
	baz=247						
JCT	Junction City	90.23	58	IAmb	IAmb	04 44 11.1	
	comp=Z,13nm,0.7s						
K22A	Casper	90.48	44	P	P	04 44 11.4	+1.0
	baz=243,SNR=14						
K22A	Casper	90.48	44	IAmb	IAmb	04 44 12.4	
	comp=Z,20nm,0.9s						
AMTX	Amarillo	90.54	53	P	P	04 44 11.5	+0.7
	baz=246						
AMTX	Amarillo	90.54	53	IAmb	IAmb	04 44 12.5	
	comp=Z,14nm,1.0s						
PHWY	Pilot Hill	90.58	46	IAmb	IAmb	04 44 12.9	
	comp=Z,9.9nm,0.8s						
CD2	Chengdu	90.74	303	P	P	04 44 11.3	-0.4
CD2				S	S	04 54 25.1	+4.1
CD2				pmax	pmax		
	comp=Z,30nm,1.1s						
TOLK	Toolik Lake Re	90.86	10	P	P	04 44 11.6	+0.3
	baz=206						
TOLK	Toolik Lake Re	90.86	10	IAmb	IAmb	04 44 12.8	
	comp=Z,20nm,0.9s						
EGMT	Eagleton	91.01	39	P	P	04 44 13.5	+0.9
	baz=240						
EGMT	Eagleton	91.01	39	IAmb	IAmb	04 44 14.7	
	comp=Z,14nm,1.0s						
ABTX	Abilene, Hawle	91.19	56	P	P	04 44 14.6	+0.9
	baz=247						
ABTX	Abilene, Hawle	91.19	56	IAmb	IAmb	04 44 16.4	
	comp=Z,20nm,0.9s						
KSCO	Kaye Shedlock'	91.55	49	P	P	04 44 16.6	+1.3
	baz=245						
KSCO	Kaye Shedlock'	91.55	49	IAmb	IAmb	04 44 17.7	
	comp=Z,32nm,1.1s						
EPYK	Eagle Plains	91.57	15	P	P	04 44 14.9	+0.2
	baz=218						
EPYK	Eagle Plains	91.57	15	IAmb	IAmb	04 44 16.0	
	comp=Z,39nm,0.8s						
YAK	Yakutsk	91.83	338	P	P	04 44 15.7	-0.2
	comp=Z,34nm,0.8s,baz=201,slow=0.4,SNR=9.5						
YAK	Yakutsk	91.83	338	P	P	04 44 15.0	-0.8
435B	Jarrell	92.11	58	P	P	04 44 19.0	+1.0
	baz=248						
LAO	LASA Array	92.50	41	P	P	04 44 21.1	+1.7
	baz=243						
LAO	LASA Array	92.50	41	IAmb	IAmb	04 44 22.3	
	comp=Z,19nm,0.8s						
WHTX	Lake Whitney,	92.66	57	P	P	04 44 21.0	+0.5
	baz=248						
WMOK	Wichita Mounta	92.67	54	P	P	04 44 21.3	+0.9
	baz=247						
LZH	Lanzhou	92.69	307	⇑P	P	04 44 22.3	+1.6
LZH				pP	pP	04 46 21.2	-1.0
LZH				sP	sP	04 47 14.9	-2.8
LZH				PP	PP	04 48 14.0	+1.2
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.9s						
RSSD	Black Hills	92.75	44	P	P	04 44 21.5	+0.7
	baz=244						
RSSD	Black Hills	92.75	44	P	P	04 44 20.6	-0.3
RSSD				IAmb	IAmb	04 44 23.2	
	comp=Z,20nm,1.1s						
X34A	Smith Ranch, M	93.34	54	IAmb	IAmb	04 44 25.9	
	comp=Z,8.1nm,0.8s						
CBKS	Cedar Bluff	93.54	50	P	P	04 44 25.0	+0.7
	baz=247						
CBKS	Cedar Bluff	93.54	50	IAmb	IAmb	04 44 26.3	
	comp=Z,17nm,0.9s						
INK	Inuvik	93.86	15	P	P	04 44 24.9	-0.1
	comp=Z,18nm,0.9s,baz=220,slow=3.7,SNR=67						
INK	Inuvik	93.86	15	IAmb	IAmb	04 44 25.9	
	comp=Z,23nm,0.9s						
W35A	Tecumseh	94.28	54	P	P	04 44 24.2	-3.6
DGMT	Dagmar	94.52	40	P	P	04 44 30.0	+1.4
	baz=245						
DGMT	Dagmar	94.52	40	IAmb	IAmb	04 44 30.9	
	comp=Z,33nm,0.9s						
ULN	Ulaanbaatar	95.20	319	P	P	04 44 31.1	-0.7
ULN				IAmb	IAmb	04 44 32.7	
	comp=Z,13nm,1.1s						
SONM	Songino Array	95.59	319	P	P	04 44 32.9	-0.6
	comp=Z,2.3nm,0.7s,baz=135,slow=4.7,SNR=17						
SONM				PP	PP	04 48 29.7	-4.9
	comp=Z,3.2nm,1.2s,baz=123,slow=5.5,SNR=4.5						
BGNE	Belgrade	95.65	48	P	P	04 44 35.4	+1.6
	baz=248						
K31A	O'Neill	95.68	47	IAmb	IAmb	04 44 35.8	
	comp=Z,16nm,0.7s						
KSU1	Kansas State U	95.91	51	P	P	04 44 36.6	+1.6
	baz=249						
KSU1	Kansas State U	95.91	51	IAmb	IAmb	04 44 37.5	
	comp=Z,11nm,0.7s						
YKA	Yellowknife Ar	96.09	25	P	P	04 44 35.2	0.0
	comp=Z,4.5nm,0.9s,baz=238,slow=4.4,SNR=68						
YKA				pP	pP	04 46 39.0	+1.9
	comp=Z,0.8nm,0.9s,baz=238,slow=4.3,SNR=3.6						
YKA				PKiKP	PKiKP	04 49 09.6	-0.3
	comp=Z,0.5nm,0.7s,baz=211,slow=1.3,SNR=5.9						
YKA				PKKPbc	PKKPbc	05 01 20.2	-1.8
	comp=Z,0.2nm,0.8s,baz=43,slow=2.2,SNR=5.5						
W39A	Magazine	96.66	55	P	P	04 44 38.6	+0.2
	baz=250						
GTA	Gaotai	96.88	309	⇑P	P	04 44 40.3	+0.8
GTA				pP	pP	04 46 43.0	+1.6
GTA				sP	sP	04 47 35.1	-1.7
GTA				PP	PP	04 48 50.6	+6.0
GTA				S	S	04 55 17.0	+3.1
GTA				pmax	pmax		
	comp=Z,12nm,1.2s						
GTA				pmax	pmax		
	comp=Z,130nm,7.8s						
C36M	Paulatuk	97.04	17	P	P	04 44 39.7	+0.4
	baz=230						
ECSD	EROS Data Cent	97.54	46	P	P	04 44 42.6	+0.3
	baz=249						
TIXI	Tiksi	98.43	345	P	Pdif	04 44 44.8	-0.6
	comp=Z,2.9nm,0.6s,baz=132,slow=5.6,SNR=12						
TIXI				PP	PP	04 48 51.5	-3.9
	comp=Z,0.6nm,0.3s,baz=116,slow=9.6,SNR=5.1						
TIXI	Tiksi	98.43	345		Pdif	04 44 43.1	-2.4
TIXI				IAmb	IAmb	04 44 45.8	
	comp=Z,4.6nm,0.8s						
A36M	Sachs Harbour	98.47	14	P	P	04 44 45.8	+0.2
	baz=229						
LPAZ	La Paz	102.03	112	PKKPbc	PKKPbc	05 01 04.9	0.0
	comp=Z,1.4nm,0.6s,baz=28,slow=1.2,SNR=9.0						
RAMN	Ramite	103.65	294	eP	PKiKP	04 49 24.8	-0.1
JIRN	Jiri	104.19	295	eP	PKiKP	04 49 25.4	-0.7
PKI	Pulchoki	104.84	294	eP	PKiKP	04 49 26.5	-0.7
PKIN	Phulchoki	104.85	294	eP	PKiKP	04 49 26.3	-0.9
	comp=Z,14nm,0.6s						
KKN	Kakani	105.00	294	eP	PKiKP	04 49 26.6	-0.8
DMN	Daman	105.11	294	eP	PKiKP	04 49 26.5	-1.1
CPUP	Villa Florida	106.07	126	PKKPbc	PKKPbc	05 00 51.7	-0.9
	comp=Z,1.3nm,0.8s,baz=50,slow=1.6,SNR=3.6						
KOLN	Koldanda	106.44	294	eP	PKiKP	04 49 29.1	-0.9
DANN	Dangsing	106.44	295	eP	PKiKP	04 49 29.2	-0.9
	comp=Z,30nm,0.6s						
PYUN	Piuthan	107.04	294	eP	PKiKP	04 49 30.1	-1.0
	comp=Z,12nm,0.5s						
D47A	Chapleau	107.59	46	P	PKiKP	04 49 30.5	-0.8
	baz=259						
W58A	Raeford	108.08	59	P	PKiKP	04 49 31.7	-0.8
	baz=258						
V58A	Windy Hill, Pi	108.33	58	P	PKiKP	04 49 32.5	-0.6
	baz=258						
D48A	Paudash Townsh	108.48	46	P	PKiKP	04 49 32.3	-0.7
	baz=260						
D49A	Beulah Townshi	108.80	46	P	PKiKP	04 49 32.9	-0.7
	baz=260						
O55A	Ligonier	109.04	53	P	PKiKP	04 49 32.9	-1.4
	baz=259						
F51A	Arnstein	109.57	47	P	PKiKP	04 49 34.4	-0.7
	baz=261						
D50A	G1974 Best Tow	109.81	46	P	PKiKP	04 49 34.2	-1.3
	baz=261						
K54A	Basiliko Farm,	109.91	51	P	PKiKP	04 49 35.6	-0.3
	baz=261						
N56A	West Decatur	109.92	53	P	PKiKP	04 49 35.4	-0.6
	baz=260						
E51A	G1948 Merrick	109.95	47	P	PKiKP	04 49 35.3	-0.5
	baz=262						
NRIK	Noril'sk	110.29	338	PKiKP	PKiKP	04 49 35.6	-0.1
	comp=Z,2.1nm,0.5s,baz=121,slow=4.1,SNR=6.1						
H53A	Bobcaygeon	110.29	49	P	PKiKP	04 49 36.2	-0.3
	baz=261						
O57A	Amberson	110.30	53	P	PKiKP	04 49 36.1	-0.6
	baz=260						
ZALV	Zalesovo Beam	110.31	321	PKiKP	PKiKP	04 49 35.3	-0.9
	comp=Z,8.3nm,0.6s,baz=172,slow=0.9,SNR=17						
G54A	Lake Saint Pet	110.76	48	P	PKiKP	04 49 36.2	-1.1
	baz=262						
O58A	Lewisberry	110.83	54	P	PKiKP	04 49 37.1	-0.6
	baz=261						
ALGO	Algonquin Park	110.86	47	P	PKiKP	04 49 37.0	-0.5
	baz=262						
M57A	Sunshine Farm,	110.86	52	P	PKiKP	04 49 37.0	-0.6
	baz=261						
MKAR	Makanchi Array	111.07	314	Pdiff	Pdif	04 45 42.3	-0.1
	comp=Z,1.5nm,0.7s,baz=96,slow=5.1,SNR=14						
MKAR				PKiKP	PKiKP	04 49 37.1	-0.9
	comp=Z,9.3nm,0.6s,baz=124,slow=0.2,SNR=64						
MKAR				PKKPab	PKKPab	05 00 49.5	+2.1
	comp=Z,0.7nm,1.1s,baz=258,slow=6.1,SNR=3.7						
L57A	Andrews Acres	111.17	52	P	PKiKP	04 49 37.6	-0.7
	baz=262						
E53A	Dumoine, Ponti	111.18	47	P	PKiKP	04 49 37.9	-0.2
	baz=263						
D53A	Lac Vacive, Po	111.24	46	P	PKiKP	04 49 37.8	-0.4
	baz=263						
K57A	Scipio Center	111.51	51	P	PKiKP	04 49 38.0	-0.9
	baz=262						
E54A	Lac Daplat, Po	111.52	47	P	PKiKP	04 49 37.9	-0.8
	baz=263						
MATQ	Matagami	111.58	43	P	PKiKP	04 49 37.8	-0.9
	baz=264						
BINY	Binghamton	111.83	52	P	PKiKP	04 49 38.6	-0.9
	baz=262						
H56A	Elgin	111.94	49	P	PKiKP	04 49 39.0	-0.6
	baz=263						
D54A	Lac Fusel, La	111.96	46	P	PKiKP	04 49 38.6	-0.9
	baz=264						
M59A	Waymart	112.15	52	P	PKiKP	04 49 39.9	-0.2
	baz=262						
I57A	Carthage	112.29	50	P	PKiKP	04 49 39.9	-0.4
	baz=263						
J58A	Remsen	112.49	50	P	PKiKP	04 49 40.4	-0.4
	baz=263						
SMLA	Simla	112.64	296	i x	PKiKP	04 49 41.5	+0.1
D55A	Sainte-Anne-du	112.75	46	P	PKiKP	04 49 40.6	-0.5
	baz=264						
G57A	Newington	112.90	49	P	PKiKP	04 49 40.7	-0.7
	baz=264						
E56A	St. Veronique	113.00	47	P	PKiKP	04 49 40.9	-0.7
	baz=265						
J59A	Piesco	113.07	50	P	PKiKP	04 49 41.3	-0.5
	baz=264						
D56A	ZEC Mazanza, M	113.24	46	P	PKiKP	04 49 41.4	-0.6
	baz=265						
E57A	Chemin Saint G	113.60	47	P	PKiKP	04 49 42.4	-0.4
	baz=265						
D57A	Chemin Vers le	113.83	47	P	PKiKP	04 49 42.6	-0.6
	baz=266						
KURBB	Kurchatov Arra	113.89	317	PKiKP	PKiKP	04 49 42.2	-0.9
	comp=Z,13nm,0.7s,baz=97,slow=1.9,SNR=117						
KURBB				SKP	SKPdf	04 52 27.4	+1.4
	comp=Z,2.8nm,0.8s,baz=92,slow=2.0,SNR=7.6						
I60A	Shoreham	113.98	50	P	PKiKP	04 49 43.2	-0.3
	baz=265						
L61B	Northampton	114.29	52	P	PKPdf	04 49 43.8	-0.4
	baz=264						
H60A	Morristown	114.47	49	P	PKPdf	04 49 43.8	-0.6
	baz=265						
J61A	Chester	114.47	51	P	PKPdf	04 49 43.9	-0.6
	baz=265						
D58A	Chemin du LacG	114.52	47	P	PKPdf	04 49 43.8	-0.7
	baz=266						
I61A	Oroboro, Fairl	114.77	50	P	PKPdf	04 49 44.9	-0.1
	baz=265						
KSH	Kashi	114.82	305	PKP	PKiKP	04 49 46.6	+1.1
KSH				PP	PP	04 51 01.1	+6.4
KSH				sPKP		04 52 43.9	
KSH				SKKS		04 56 57.8	
KSH				SS	SS	05 06 14.6	+6.5
KSH				AMB	AMB		
	comp=Z,180nm,4.4s						
ULHL	Ulahol	114.89	308	P	PKPdf	04 49 45.3	-0.3

SNR=8.0
J62A Henniker 115.00 51 P PKPdf 04 49 45.3 -0.2
baz=265
F60A Warwick 115.09 48 P PKPdf 04 49 45.4 -0.2
baz=266
TKM2 Tokmak 2 115.42 309 P PKPdf 04 49 46.1 -0.6
SNR=15
E60A Ste Agathe de 115.47 47 P PKPdf 04 49 45.9 -0.4
baz=267
KZA Kyzart 115.61 308 P PKiKP 04 49 47.2 -0.1
SNR=6.6
KBK Karagaybulak 115.88 308 P PKPdf 04 49 47.3 -0.2
SNR=7.5
G62A West of Eustis 116.05 49 P PKPdf 04 49 47.1 -0.3
baz=267
HUMP Col San Antoni 116.10 79 PKPdf 04 49 46.4 -1.9
E61A Lac Etchemin 116.13 47 P PKiKP 04 49 47.7 0.0
baz=268
UCH Uchtor 116.17 308 P PKiKP 04 49 48.3 -0.2
SNR=14
AAK Ala-Archa 116.21 308 PKP PKPdf 04 49 47.8 -0.3
comp=Z,4.9nm,0.6s,baz=123,slow=0.4,SNR=6.0
AAK Ala-Archa 116.21 308 PKPdf 04 49 47.4 -0.7
USP Ospenovka 116.25 309 P PKPdf 04 49 47.5 -0.4
SNR=14
EKS2 Erkin-Say 116.74 308 P PKiKP 04 49 49.0 -0.1
SNR=6.7
AML Almayashu 116.77 308 P PKiKP 04 49 49.5 0.0
SNR=18
PKME Peaks-Kenny Pk 116.92 49 P PKPdf 04 49 48.8 -0.3
baz=268
H64A Troy 116.95 49 P PKPdf 04 49 48.8 -0.5
baz=268
F63A Nahmakanta, Br 117.07 48 P PKPdf 04 49 48.9 -0.6
baz=268
D62A Allapoint, All 117.14 47 P PKPdf 04 49 49.0 -0.5
baz=269
G64A Maxfield 117.30 49 P PKPdf 04 49 49.4 -0.4
baz=268
E63A Oxbow 117.56 47 P PKPdf 04 49 49.8 -0.5
baz=269
F64A Sherman 117.60 48 P PKPdf 04 49 50.0 -0.4
baz=269
D63A Stockholm 117.78 47 P PKPdf 04 49 50.1 -0.7
baz=270
E64A Bridgewater 117.97 47 P PKPdf 04 49 50.6 -0.5
baz=270
G65A Princeton 118.14 49 P PKPdf 04 49 51.2 -0.2
baz=269
SCHQ Schefferville 118.26 38 PKP PKPdf 04 49 51.1 -0.3
comp=Z,2.8nm,0.7s,baz=342,slow=7.2,SNR=4.0
BVAR Borovoye Array 118.91 320 PKP PKPdf 04 49 52.3 -0.5
comp=Z,29nm,0.7s,baz=85,slow=1.8,SNR=74
BVAR PP PP 04 51 24.5 +2.5
comp=Z,3.7nm,0.8s,baz=101,slow=7.7,SNR=4.5
BVAR SKP SKPdf 04 52 36.7 +1.1
comp=Z,4.6nm,0.9s,baz=90,slow=3.0,SNR=5.1
BRVK Borovoye 118.97 320 PKPdf 04 49 52.6 -0.2
BDFB Brasilia 119.19 122 PKP PKiKP 04 49 54.6 0.0
comp=Z,1.8nm,0.4s,baz=196,slow=3.5,SNR=4.3
BDFB PKKPbc PKKPbc 05 00 10.0 +0.5
comp=Z,6.0nm,0.8s,baz=106,slow=2.8,SNR=8.3
BDFB PKKPab PKKPab 05 00 14.0 -0.2
comp=Z,5.8nm,0.8s,baz=159,slow=7.1,SNR=3.4
BDFB Brasilia 119.19 122 PKPdf 04 49 54.1 -0.4
KBL Kabul 119.87 299 PKPdf 04 49 54.3 -1.1
ILULI Ilulissat 121.33 20 i P PKPdf 04 49 56.5 -0.4
comp=Z,28nm,0.7s
OPO Ambohidratompo 121.48 232 PKP PKiKP 04 49 59.4 +0.3
comp=Z,8.8nm,0.8s,baz=233,slow=0.7,SNR=5.4
SPA0 Spitsbergen Ar 121.50 357 ePKPdf PKPdf 04 49 57.0 -0.1
DAG Danmarks Havn 122.35 6 ⇓iP PKPdf 04 49 57.5 -1.2
comp=Z,10nm,0.8s
SFJD Kangerlussuaq 122.53 22 i P PKPdf 04 49 58.9 -0.3
SUMG Summit 122.74 13 PKPdf 04 49 59.6 -0.4
SUMG Summit 122.74 13 i P PKPdf 04 50 00.0 -0.1
comp=Z,61nm,1.1s
SUR Sutherland 124.84 199 PKP PKiKP 04 50 06.4 +0.8
comp=Z,17nm,0.9s,baz=225,slow=3.2,SNR=12
SUR Sutherland 124.84 199 PKPdf 04 50 04.8 -0.3
BJO1 Bjornoya 124.84 355 ePKPdf PKPdf 04 50 02.3 -1.2
ARU Arti 125.00 326 PKPdf 04 50 04.2 -0.1
BOSA Boshof 126.67 205 PKP PKiKP 04 50 09.5 +0.4
comp=Z,6.6nm,0.8s,baz=165,slow=1.4,SNR=9.8
SCO Scoresbysund 127.61 10 i P PKiKP 04 50 09.7 +0.2
comp=Z,29nm,1.1s
HAMF Hammerfest 127.88 351 ePKPdf PKPdf 04 50 09.5 +0.1
KEV Kevo 128.13 349 PKPdf 04 50 09.5 -0.4
ARCES ARCESS Array B 128.58 350 PKP PKPdf 04 50 10.7 -0.1
comp=Z,14nm,0.6s,baz=11,slow=1.5,SNR=47
ARCES SKPbc SKiKP 04 52 40.7 -14
comp=Z,8.5nm,0.9s,baz=20,slow=3.9,SNR=7.7
ARE0 ARCESS Array S 128.59 350 ePKPdf PKPdf 04 50 10.3 -0.5
GEYT Alibeck 128.74 303 PKP PKPdf 04 50 11.9 -0.2
comp=Z,12nm,0.7s,baz=222,slow=2.0,SNR=21
GEYT pPKP pPKPdf 04 52 23.4 +1.3
comp=Z,3.1nm,0.9s,baz=96,slow=4.5,SNR=3.0
GEYT SKPbc SKiKP 04 52 42.9 -13
comp=Z,18nm,0.8s,baz=304,slow=0.5,SNR=19
GYA0B ALIBECK ARRAY 128.74 303 PKPdf 04 50 11.5 -0.6
KTK1 Kautokeino 129.42 350 ePKPdf PKPdf 04 50 11.9 -0.5
TRO Tromso 129.45 352 ePKPdf PKPdf 04 50 12.3 -0.1
LBTB Lobatse 129.69 208 PKP PKiKP 04 50 15.7 +0.4
comp=Z,3.3nm,0.6s,baz=183,slow=2.3,SNR=6.9
LBTB SKPbc SKPbc 04 52 47.4 +2.4
comp=Z,7.2nm,0.9s,baz=147,slow=8.9,SNR=5.6
SOCY Socotra 129.80 269 PKPdf 04 50 13.8 -1.0
UOSS Minazif 130.15 286 PKPdf 04 50 14.5 -0.6
LOF Lofoten 131.47 354 ePKPdf PKPdf 04 50 15.2 -1.1
STEI Steigen 131.50 353 ePKPdf PKPdf 04 50 16.3 0.0
KLMR Klimovskoe 131.61 337 ePKPdf PKPdf 04 50 03.4 -13
KLMR AMP 04 50 18.3
comp=Z,38nm,1.5s
KLMR ePP PP 04 52 37.8 -6.9
KONS Konsvik 133.10 354 ePKPdf PKPdf 04 50 17.4 -2.0
FINES FINESS Array B 135.46 344 PKhKP PKPpre 04 50 11.5
comp=Z,3.3nm,0.7s,baz=38,slow=2.7,SNR=7.6
FINES PKP PKPdf 04 50 23.7 -0.2
comp=Z,14nm,0.7s,baz=108,slow=4.6,SNR=15
FINES SKPbc SKPab 04 53 04.4 -4.2
comp=Z,6.2nm,0.8s,baz=45,slow=5.7,SNR=7.1
LSZ Lusaka 136.52 218 PKP PKiKP 04 50 28.8 -0.6
comp=Z,7.6nm,0.6s,baz=127,slow=1.8,SNR=15
LSZ SKPbc SKiKP 04 53 10.3 -2.6
comp=Z,3.6nm,0.8s,baz=179,slow=12,SNR=4.7
VSU Vasula 137.75 341 eP PKPdf 04 50 25.4 -2.9
DOMB Dombas 137.84 355 ePKPdf PKPdf 04 50 26.0 -2.4
AKN Aaknes 137.85 357 ePKPdf PKPdf 04 50 26.8 -1.6
TSUM Tsumeb 138.11 202 PKP PKiKP 04 50 31.9 -0.7
comp=Z,3.9nm,0.7s,baz=180,slow=3.1,SNR=5.7
TSUM SKPbc SKiKP 04 53 14.9 -1.1
comp=Z,7.7nm,0.9s,baz=138,slow=2.9,SNR=5.1
TBLG Delisi 138.16 311 PKPdf 04 50 28.7 -0.9
NB2 NORSAR Subarra 138.63 353 PKP PKPdf 04 50 20.3 -10
comp=Z,7.6nm,0.7s,baz=20,slow=4.0
NOA NORSAR Array B 138.63 353 PKhKP PKPpre 04 50 20.0
comp=Z,7.0nm,0.7s,baz=21,slow=3.9,SNR=25
NOA PKP PKPdf 04 50 30.5 +0.6
comp=Z,3.4nm,0.6s,baz=49,slow=1.8,SNR=8.3
NOA SKPbc SKiKP 04 53 14.2 -1.4
comp=Z,5.0nm,1.0s,baz=14,slow=4.4,SNR=4.4
KBZ Khabaz 138.77 314 PKP PKiKP 04 50 32.4 -0.5
comp=Z,5.8nm,0.8s,baz=125,slow=5.2,SNR=8.9
KBZ SKPbc SKiKP 04 53 15.2 -1.1
comp=Z,3.1nm,0.8s,baz=199,slow=15,SNR=4.1
NC602 NORSAR Array S 138.89 353 ePKPdf PKPdf 04 50 24.1 -6.2
SKAR Skarslia 139.25 355 ePKPdf PKPdf 04 50 25.4 -5.6
ASK Askoy 139.62 358 ePKPdf PKPdf 04 50 24.8 -6.8
KMBO Kilima Mbogo 139.68 243 SKPbc SKiKP 04 53 19.8 +0.2
comp=Z,2.8nm,0.9s,baz=72,slow=1.5,SNR=4.9
IZAR Zarasai 140.11 339 eP PKPdf 04 50 28.5 -4.2
KONO Kongsberg 140.16 354 ePKPdf PKPdf 04 50 27.7 -4.9
CUKT Cukurca 140.22 304 eP PKPdf 04 50 27.4 -6.2
SENK Senkaya-Erzuru 140.24 310 eP PKPdf 04 50 28.6 -5.1
ISAL Salakas 140.29 339 eP PKPdf 04 50 27.4 -5.5
AKDM Akdamar-Van 140.43 306 eP PKPdf 04 50 28.8 -5.2
IIGN Ignalina 140.44 339 eP PKPdf 04 50 28.3 -4.9
BLS5 Blasjo 140.62 357 ePKPdf PKPdf 04 50 27.9 -5.6
PABE Paberze 141.05 340 eP PKPdf 04 50 29.6 -4.7
PBUR Paburge 141.22 342 eP PKPdf 04 50 30.9 -3.7
HOMB Homborsund 141.62 355 ePKPdf PKPdf 04 50 31.7 -3.5
BNGB Bingl 141.96 308 eP PKPdf 04 50 33.6 -3.1
DYBB Diyarbakir 142.68 307 eP PKPdf 04 50 35.9 -2.0
GOET G??ttrup 142.77 354 ⇓iP PKPdf 04 50 35.6 -1.7
comp=Z,142nm,0.9s
AKASG Malin Array Be 142.77 331 PKhKP PKPpre 04 50 34.2
comp=Z,117nm,0.7s,baz=42,slow=4.6,SNR=220
AKASG SKP SKPbc 04 53 17.3 -6.0
comp=Z,2.3nm,0.6s,baz=39,slow=4.2,SNR=4.8
AKASG SKPbc SKiKP 04 53 24.9 +0.4
comp=Z,9.2nm,0.7s,baz=41,slow=3.1,SNR=8.5
PTK Pertek 142.94 308 eP PKPdf 04 50 37.3 -1.2
SVRC Sivrice-ELAZID 143.17 308 eP PKPbc 04 50 37.7 +0.5
MUD Monsted U'grnd 143.35 354 ⇓iP PKPab 04 50 36.6 0.0
comp=Z,161nm,0.9s
BSD Bornholm Skovb 143.76 348 ⇓iP PKPbc 04 50 37.8 -0.4
comp=Z,208nm,0.8s
URFA Urfa 143.83 306 eP PKPdf 04 50 40.1 +0.1
MALT Malatya 143.85 308 eP PKPdf 04 50 40.2 +0.2
RSDY Resadiye-TOKAT 143.87 312 eP PKPdf 04 50 39.6 -0.3
SVSK Karacayir 144.29 311 eP PKPab 04 50 41.2 +0.4
TOKT Tokat 144.45 312 eP PKPab 04 50 41.2 -0.3
DARE Darende-Malaty 144.45 309 eP PKPab 04 50 41.9 +0.3
KVT Kavak 144.47 314 eP PKPab 04 50 41.8 +0.3
RGN Rugen 144.60 349 eP PKPbc 04 50 40.9 0.0
RGN Rugen 144.60 349 ePKPbc PKPab 04 50 41.1 -0.3
baz=15,slow=2.5
ESK Eskdalemuir 144.62 5 PKPdf 04 50 40.5 -0.2
DIKM Dikmen 144.75 315 ⇑P PKPab 04 50 42.8 +0.3
SORM Soroca 144.98 329 ⇑P PKPbc 04 50 42.0 -0.2
SKMB Sankelmark Bun 145.03 353 ePKPbc PKPab 04 50 43.0 0.0
baz=15,slow=2.5
GAZ Gaziantep 145.14 307 eP PKPbc 04 50 43.5 +0.3
KMRS Kahramanmaras 145.26 307 eP PKPbc 04 50 43.4 -0.1
MBAR Mbarara 145.28 237 PKPab 04 50 45.4 -0.1
SARI SarD1z-Kayseri 145.29 309 eP PKPbc 04 50 44.1 +0.4
BZK Bozkurt 145.43 316 ⇓P PKPab 04 50 44.5 -0.6
KIS Kishinev 145.52 327 ⇓iP PKPbc 04 50 44.0 +0.2
comp=Z,360nm,1.2s
MILM Milestii Mici 145.58 327 ⇓P PKPbc 04 50 44.0 0.0
YOZ Yozgat 145.59 312 eP PKPbc 04 50 43.9 -0.6
BSEG Bad Segeberg 145.68 351 ePKPdf PKPdf 04 50 42.9 +0.5
baz=13,slow=1.5
BSEG ePKPbc PKPbc 04 50 44.7 +0.7
baz=15,slow=2.5
HLG Helgoland 145.72 354 ePKPbc PKPab 04 50 45.1 -0.7
baz=15,slow=2.5
CORM Corum 145.84 313 eP PKiKP 04 50 56.0 +8.2
LEOM Leova 146.16 327 ⇑P PKPbc 04 50 45.7 +0.1
TAHT Tahtakopru-Hat 146.18 306 eP PKPbc 04 50 45.9 -0.1
DSB Dublin 146.28 9 PKPdf 04 50 43.6 +0.1
VASR Vaslui 146.28 328 ⇑P PKPbc 04 50 46.2 +0.3
CEYT Ceyhan 146.29 307 eP PKPbc 04 50 46.2 -0.1
CANT Cankiri 146.33 314 eP PKPbc 04 50 46.0 -0.4
YURE YUREGIR 146.44 307 eP PKPbc 04 50 47.1 +0.3
RUE Ruedersdorf 146.47 347 eP PKPbc 04 50 46.8 +0.5
RUE Ruedersdorf 146.47 347 ePKPbc PKPbc 04 50 46.8 +0.5
baz=15,slow=2.5
BIR Birlad 146.62 327 ⇑P PKiKP 04 50 48.1 -0.9
TLCR 146.71 325 ⇑P PKPbc 04 50 47.4 +0.2
BRTR Keskin Array B 146.72 313 PKP PKPdf 04 50 43.9 -1.0
comp=Z,43nm,0.7s,baz=123,slow=2.0,SNR=120
BRTR PKPbc PKPbc 04 50 47.5 -0.1
comp=Z,43nm,0.7s,baz=146,slow=5.8,SNR=122
KRTS Karatas 146.72 307 eP PKPbc 04 50 47.2 -0.3
VARL Varlezi 146.75 327 ⇓P PKiKP 04 50 48.4 -0.9
BURAR Bucovina Array 146.82 331 ⇑P PKiKP 04 50 48.7 -0.9
GHRR 146.87 327 ⇑P PKiKP 04 50 49.1 -0.4
BIZ Bicaz 146.90 329 ⇑P PKiKP 04 50 49.0 -0.6
TESR Tescani 146.94 328 ⇑P PKPbc 04 50 47.8 0.0
JURR Jurilovca 146.94 324 ⇓P PKPbc 04 50 48.1 +0.3
YAYX Yaylak 146.95 311 eP PKPbc 04 50 47.6 -0.6
RETH Rethem/Aller, 146.97 352 ePKPdf PKPdf 04 50 45.1 +0.5
baz=13,slow=1.5
RETH ePKPbc PKPbc 04 50 48.2 +0.6
baz=15,slow=2.5
RETH ePKPab PKPab 04 50 51.2 +0.4
baz=14,slow=4.2
HWQ Hawqa 147.01 302 eP PKPbc 04 50 48.8 +0.2
SCHL Schela 147.03 326 ⇑P PKPbc 04 50 48.2 +0.2
KOLS Kolonicke sedl 147.05 335 ePKP PKPdf 04 50 45.9 +0.9
KOLS e 04 50 48.8
CFR Carcaliu 147.08 325 ⇑P PKPbc 04 50 48.6 +0.5
NRDL Niedersach Rie 147.11 351 ePKPdf PKPdf 04 50 45.3 +0.5
baz=13,slow=1.5
NRDL ePKPbc PKPbc 04 50 48.5 +0.6
baz=15,slow=2.5
SERE Sereflikochisa 147.12 312 eP PKPbc 04 50 47.9 -0.8
TOPG Topolog 147.15 325 ⇓P PKiKP 04 50 49.1 -1.0
PETR Petresti 147.19 327 ⇓P PKiKP 04 50 49.8 -0.4
ANTO Ankara 147.23 314 ⇑P PKiKP 04 50 49.7 -0.9
ANTO Ankara 147.23 314 PKPdf 04 50 45.1 -0.5
AFSR Afar-Bala (An 147.24 313 eP PKPbc 04 50 48.6 -0.3
LOD Lodumlu 147.25 314 eP PKPbc 04 50 48.6 -0.3
ODBI Odobesti 147.26 327 ⇑P PKiKP 04 50 49.9 -0.4
MERS Mersin 147.26 308 eP PKPbc 04 50 47.7 -1.3
BHL Bhannes 147.34 302 eP PKPbc 04 50 49.8 +0.4
VRI Vrincioaia 147.35 327 ⇑P PKPbc 04 50 49.3 +0.3
ASSE Asse, Remlinge 147.38 350 ePKPbc PKPbc 04 50 49.3 +0.6
baz=15,slow=2.5
TIRR Tirgusor 147.40 324 ⇓P PKPbc 04 50 49.1 +0.1
PLOR Plostina 147.40 328 ⇑P PKPbc 04 50 48.7 -0.3
SHBL Chebaa 147.42 301 eP PKiKP 04 50 50.4 -0.9
DQRL Deir Qamar 147.47 301 eP PKiKP 04 50 50.5 -0.7
KULU Kulu 147.47 312 eP PKPbc 04 50 49.7 +0.1
HARR Harsova 147.51 325 ⇑P PKPbc 04 50 49.6 +0.3
EFOR EFORIE 147.51 323 ⇓P PKPbc 04 50 49.9 +0.6
BMR Baia Mare 147.54 333 ⇓P PKiKP 04 50 50.1 -0.8
TLBR Topalu 147.54 324 ⇑P PKiKP 04 50 50.2 -0.7
GRER 147.56 327 ⇑P PKiKP 04 50 50.9 0.0
MFTR Murfatlar 147.57 324 ⇑P PKiKP 04 50 50.4 -0.6
BISRR Bisoca 147.58 327 ⇓P PKiKP 04 50 50.2 -0.9
TRPA Tarpa 147.58 334 ⇓P PKPbc 04 50 49.8 +0.5
IBBN Ibbenburen 147.59 354 ePKPdf PKPdf 04 50 46.2 +0.5
baz=13,slow=1.5
IBBN ePKPbc PKPbc 04 50 49.9 +0.6
baz=15,slow=2.5
IBBN ePKPab PKPab 04 50 53.7 +0.3
baz=14,slow=4.2
ARCR ARCALIA 147.61 331 ⇑P PKiKP 04 50 50.5 -0.5
OZUR 147.66 329 ⇑P PKPbc 04 50 50.2 +0.4
CHVC Chvalec 147.68 343 ePKPDF PKPdf 04 50 46.6 +0.6
CHVC ex x 04 50 50.3
KIZK Mersin 147.68 307 eP PKPbc 04 50 49.7 -0.3
CLZ Clausthal 147.70 350 ePKPdf PKPdf 04 50 46.5 +0.5
baz=13,slow=1.5
CLZ ePKPbc PKiKP 04 50 50.5 -0.6
baz=15,slow=2.5
CLZ ePKPab PKPab 04 50 54.3 +0.4
baz=14,slow=4.2
MANR Mangalia 147.70 323 ⇓P PKiKP 04 50 50.6 -0.6
CLL Collm 147.74 347 i PKPdf PKPdf 04 50 47.2 +1.2
comp=Z,31nm,1.4s
CLL i PKPbc PKiKP 04 50 51.3 +0.1
comp=Z,232nm,0.8s
CLL i PKPab PKPab 04 50 55.2 +1.2
comp=Z,87nm,0.8s
CLL i (pPKPbc) 04 53 00.1
comp=Z,13nm,1.1s
CLL eSKPbc SKiKP 04 53 38.0 +3.4
CLL Collm 147.74 347 ePKPdf PKPdf 04 50 47.3 +1.4
baz=13,slow=1.5
CLL ePKPbc PKiKP 04 50 51.2 +0.1
baz=15,slow=2.5
CLL ePKPab PKPab 04 50 55.3 +1.2
baz=14,slow=4.2
CLL epPKPbc pPKPab 04 53 17.9 +19
OKC Ostrava-Krasne 147.74 341 ⇑ePKP PKPbc 04 50 50.3 +0.6
OKC ePKPAB PKPab 04 50 54.9 +0.8
CHBY Cihanbeyli 147.75 311 eP PKPbc 04 50 49.5 -0.8
UPC Upice 147.76 343 ⇑ePKP PKiKP 04 50 50.5 -0.7
UPC ePKPAB PKPab 04 50 55.1 +0.9
DPC Dobruska-Polom 147.82 343 ePKPDF PKPdf 04 50 46.8 +0.6
DPC ⇑ePKP PKPbc 04 50 50.5 +0.5
DPC ePKPAB PKPab 04 50 55.7 +1.2
ROSA Rosais 147.87 48 PKPbc 04 50 49.2 -1.2
AMRR Amara 147.88 325 ⇑P PKiKP 04 50 51.1 -0.5
LANS Liptovska Anna 147.90 338 ePKP PKPdf 04 50 47.5 +1.1
LANS e 04 50 51.8
KRLC Kraliky 147.94 342 ePKPDF PKPdf 04 50 46.9 +0.5
KRLC ⇑ePKP PKPbc 04 50 50.6 +0.3
BRG Berggiesshubel 147.94 346 ePKP PKPdf 04 50 46.9 +0.6
comp=Z,22nm,1.1s
BRG Berggiesshubel 147.94 346 i PKP PKPab 04 50 55.2 +0.3
comp=Z,55nm,0.8s
BRG epPKP pPKPdf 04 52 55.0 -1.1
comp=Z,63nm,2.9s
BRG Berggiesshubel 147.94 346 ePKPdf PKPdf 04 50 46.8 +0.4
baz=13,slow=1.5
BRG ePKPbc PKiKP 04 50 51.0 -0.6
baz=15,slow=2.5
BRG ePKPab PKPab 04 50 55.3 +0.5
baz=14,slow=4.2
DOPR Dopca 147.94 329 ⇓P PKiKP 04 50 51.6 -0.2
ISR Istrita 147.96 327 ⇓P PKPbc 04 50 51.0 +0.5
MORC Moravsky Berou 147.98 341 ePKP PKPdf 04 50 46.9 +0.4
MORC e 04 50 50.9
MORC Moravsky Berou 147.98 341 ⇑P PKiKP 04 50 51.4 -0.4
EREN Erenkoy 148.00 305 eP PKPbc 04 50 50.0 -0.8
MLR Muntele Rosu 148.01 328 ⇑P PKPbc 04 50 51.1 +0.3
MLR Muntele Rosu 148.01 328 PKPdf 04 50 45.9 -0.9
PSN Preselentsi 148.02 323 P PKPbc 04 50 50.9 +0.3
PSN Preselentsi 148.02 323 P PKPbc 04 50 50.9 +0.3
KEBE Keben-Mersin 148.02 307 eP PKPbc 04 50 50.2 -0.8
FBE Freiberg 148.03 347 ePKPdf PKPdf 04 50 47.0 +0.5
baz=13,slow=1.5
FBE ePKPbc PKiKP 04 50 51.5 -0.2
baz=15,slow=2.5
FBE ePKPab PKPab 04 50 56.1 +0.8
baz=14,slow=4.2
GTTG Gottingen 148.05 351 ePKPdf PKPdf 04 50 46.9 +0.5
baz=13,slow=1.5
GTTG ePKPbc PKiKP 04 50 51.2 -0.6
baz=15,slow=2.5
GTTG ePKPab PKPab 04 50 55.7 +0.4
baz=14,slow=4.2
NEUB Neuenburg 148.07 349 ePKPdf PKPdf 04 50 46.9 +0.4
baz=13,slow=1.5
NEUB ePKPbc PKiKP 04 50 51.3 -0.5
baz=15,slow=2.5
PVCC Panska Ves 148.12 345 ⇑ePKP PKiKP 04 50 51.3 -0.6
IKL Isikli 148.12 307 eP PKPbc 04 50 50.8 -0.3
TEVE Tevekalti-Mers 148.22 307 eP PKPbc 04 50 51.5 0.0
CJR Cluj-Napoca 148.23 332 ⇑P PKiKP 04 50 52.1 -0.3
AKKU Akkuyu-Mersin 148.25 307 eP PKPbc 04 50 50.9 -0.6
LEHL Lehliu 148.25 325 ⇑P PKiKP 04 50 51.8 -0.6
SECR 148.26 327 ⇓P PKPbc 04 50 51.6 +0.3
LADK Ladik-KONYA 148.29 311 eP PKPbc 04 50 50.5 -1.2
KIZT Kizilcal 148.32 313 eP PKPbc 04 50 50.9 -0.8
KONT Konya--Tatoy 148.40 311 eP PKPbc 04 50 50.6 -1.2
SULR 148.41 326 ⇑P PKiKP 04 50 52.1 -0.6
BERE Bereket-Mersin 148.42 307 eP PKPbc 04 50 51.5 -0.6
GULT Gulveren 148.47 316 eP PKPbc 04 50 51.5 -0.5
VOIR 148.49 328 ⇑P PKiKP 04 50 52.4 -0.6
BUG Bochum--Univer 148.49 354 ePKPbc PKPbc 04 50 51.9 +0.3
baz=15,slow=2.5
DRGR 148.56 333 ⇓P PKiKP 04 50 52.5 -0.6
TEKE Tekeli-Mersin 148.58 307 eP PKPbc 04 50 51.3 -1.0
SRCK Saricakaya, Es 148.60 315 eP PKPbc 04 50 51.3 -0.9
PRU Pruhonice 148.62 345 ⇑ePKP PKPbc 04 50 52.1 +0.2
PRU ePKPAB PKPab 04 50 57.7 0.0
GOPC GO Pecny, Ondr 148.63 344 ⇑ePKP PKPbc 04 50 52.2 +0.2
GOPC ePKPAB PKPab 04 50 58.4 +0.6
MOX Moxa 148.64 348 ePKPdf PKPdf 04 50 47.7 +0.2
baz=13,slow=1.5
MOX ePKPbc PKiKP 04 50 52.6 -0.4
baz=15,slow=2.5
MOX ePKPab PKPab 04 50 58.0 +0.2
baz=14,slow=4.2
CIFT Cifteler, Eski 148.65 314 eP PKPbc 04 50 51.8 -0.7
VYHS Vyhne 148.68 339 ePKP PKPdf 04 50 47.5 -0.1
VYHS e 04 50 52.7
VRAC Vranov 148.68 342 ePKP PKPbc 04 50 49.8 -2.3
VRAC e 04 50 52.6
VRAC Vranov 148.68 342 ⇓P PKiKP 04 50 52.8 -0.4
PLN Plauen 148.69 348 ePKPdf PKPdf 04 50 47.9 +0.3
baz=13,slow=1.5
PLN ePKPbc PKiKP 04 50 52.8 -0.3
baz=15,slow=2.5
PLN ePKPab PKPab 04 50 58.4 +0.4
baz=14,slow=4.2
TANN Tannenbergstha 148.69 347 ePKPdf PKPdf 04 50 47.9 +0.2
baz=13,slow=1.5
TANN ePKPbc PKiKP 04 50 52.9 -0.3
baz=15,slow=2.5
TANN ePKPab PKPab 04 50 58.6 +0.5
baz=14,slow=4.2
ARR Arges 148.74 329 ⇓P PKPbc 04 50 52.7 +0.2
JAVC Velka Javorina 148.75 340 ePKP PKPdf 04 50 49.2 +1.4
JAVC e 04 50 54.0
UBBA Unterbreizbach 148.75 350 ePKPbc PKiKP 04 50 52.6 -0.5
baz=15,slow=2.5
PRD Provadia 148.76 323 P PKiKP 04 50 53.1 -0.4
PRD Provadia 148.76 323 P PKiKP 04 50 53.1 -0.4
GUNZ Gunzen 148.77 347 ePKPdf PKPdf 04 50 48.1 +0.4
baz=13,slow=1.5
GUNZ ePKPbc PKiKP 04 50 53.2 -0.1
baz=15,slow=2.5
PSZ Piszkesteto 148.79 337 ⇓P PKPbc 04 50 52.8 +0.3
PSZ Piszkesteto 148.79 337 PKPdf 04 50 47.8 -0.1
NEF NEVSHA 148.79 323 P PKiKP 04 50 53.1 -0.5
NEF NEVSHA 148.79 323 P PKiKP 04 50 53.1 -0.5
WERN Wernitzgruen 148.83 347 ePKPdf PKPdf 04 50 48.4 +0.5
baz=13,slow=1.5
WERN ePKPbc PKiKP 04 50 53.5 0.0
baz=15,slow=2.5
WERN ePKPab PKPab 04 50 59.4 +0.8
baz=14,slow=4.2
CSS Mathiatis 148.84 305 P PKPbc 04 50 52.7 -0.3
CSS Mathiatis 148.84 305 PKPdf PKPdf 04 50 47.0 -1.3
CSS PKPbc 04 50 52.7 -0.3
NKC Novy Kostel 148.87 347 ePKPDF PKPdf 04 50 48.1 +0.2
NKC ⇑ePKP PKiKP 04 50 53.2 -0.3
NKC ePKPAB PKPab 04 50 59.0 +0.2
KRUC Moravsky 148.96 342 ePKP PKPdf 04 50 48.2 +0.2
KRUC e 04 50 53.2
ADVT Abdulvahap 148.97 317 eP PKPbc 04 50 52.5 -0.6
TREC Trest 149.01 343 ePKPDF PKPdf 04 50 48.4 +0.3
TREC ⇑ePKP PKPbc 04 50 53.1 +0.2
TREC ePKPAB PKPab 04 51 00.1 +0.7
RAZG Razgrad 149.02 324 ⇑P PKiKP 04 50 53.7 -0.4
CAVI Cavuskoy 149.03 316 eP PKPbc 04 50 53.0 -0.3
PBCC Pribram 149.03 345 ⇑ePKP PKiKP 04 50 53.4 -0.5
PBCC ePKPAB PKPab 04 50 59.8 +0.3
LEF Lefka 149.12 305 ⇑P PKiKP 04 50 54.0 -0.5
LEF Lefka 149.12 305 eP PKPbc 04 50 53.1 -0.5
SMOL Smolenice 149.13 340 ePKP PKiKP 04 50 54.5 +0.4
YLV Yalova 149.14 317 eP PKPbc 04 50 52.7 -0.9
GAZI Gazipasa 149.14 308 eP PKPbc 04 50 52.5 -1.2
HUMR Humele 149.17 327 ⇑P PKPbc 04 50 53.5 +0.1
MANZ Manzenberg 149.17 347 ePKPdf PKPdf 04 50 48.6 +0.2
baz=13,slow=1.5
MANZ ePKPbc PKiKP 04 50 54.2 0.0
baz=15,slow=2.5
MANZ epPKPbc pPKPab 04 53 20.7 +16
MODS Modra-Piesok 149.30 340 ePKP PKPdf 04 50 48.4 -0.2
MODS e 04 50 53.7
CTKS Kestanelik-??a 149.30 319 eP PKPbc 04 50 53.0 -0.8
COPA Copaceanca 149.32 327 ⇑P PKPbc 04 50 54.0 +0.2
UCC Uccle 149.34 357 PKiKP PKiKP 04 50 53.9 -0.5
ROTZ Rotzenmuhle 149.36 347 ePKPdf PKPdf 04 50 48.7 0.0
baz=13,slow=1.5
ROTZ ePKPbc PKiKP 04 50 54.5 -0.1
baz=15,slow=2.5
SHUT Suhut-Afyon 149.39 313 eP PKPbc 04 50 53.5 -0.8
AHRW Bad Neuenahr-A 149.40 354 ePKPbc PKiKP 04 50 54.3 -0.3
baz=15,slow=2.5
AHRW ePKPab PKPab 04 51 01.2 +0.3
baz=14,slow=4.2
SIRR Siria 149.42 333 ⇑P PKiKP 04 50 54.5 -0.3
MEM Membach 149.43 355 PKPdf PKPdf 04 50 49.8 +1.1
MEM PKPbc PKiKP 04 50 54.2 -0.4
MEM PKPab PKPab 04 51 00.8 -0.2
ARMT Armutlu 149.46 318 eP PKPbc 04 50 53.5 -0.8
BSTI Sart Tilman 149.49 356 PKiKP PKiKP 04 50 54.6 -0.1
BSTI PKPab PKPab 04 51 00.1 -1.2
SLVT Silivri 149.49 319 eP PKiKP 04 50 55.3 +0.2
ZST Bratislava 149.51 340 ePKP PKiKP 04 50 54.4 -0.5
ZST e 04 51 01.5
SZH Strazhica 149.53 325 P PKPbc 04 50 54.4 0.0
SZH Strazhica 149.53 325 P PKPbc 04 50 54.4 0.0
TNS Taunus Mts 149.56 352 ePKPdf PKPdf 04 50 49.3 +0.3
baz=13,slow=1.5
TNS ePKPbc PKiKP 04 50 54.9 -0.1
baz=15,slow=2.5
TNS ePKPab PKPab 04 51 01.9 +0.2
baz=14,slow=4.2
GZR Gura Zlata 149.60 331 ⇑P PKPbc 04 50 54.8 +0.2
GRF Grafenberg Arr 149.63 348 ePKPdf PKPdf 04 50 49.2 +0.1
baz=13,slow=1.5
GRF ePKPbc PKiKP 04 50 55.2 +0.1
baz=15,slow=2.5

GRF				*e*PKPab	**PKPab**	**04 51 02.6**	**+0.6**
	baz=14,slow=4.2						
SNF	**Seneffe**	**149.63**	**357**	PKiKP	**PKiKP**	**04 50 54.8**	**-0.2**
SNF				PKPab	**PKPab**	**04 51 02.1**	**+0.2**
KHC	**Kasperske Hory**	**149.65**	**345**	*e*PKPDF	**PKPdf**	**04 50 49.5**	**+0.3**
KHC				⇑*e*PKP	**PKiKP**	**04 50 54.9**	**-0.3**
KHC				*e*PKPAB	**PKPab**	**04 51 02.9**	**+0.8**
BCLA	**Clavier**	**149.67**	**356**	PKiKP	**PKiKP**	**04 50 54.7**	**-0.5**
BCLA				PKPab	**PKPab**	**04 51 01.5**	**-0.5**
TVSB	**Tavsanli**	**149.68**	**315**	*e*P	**PKPbc**	**04 50 54.4**	**-0.6**
BHOU	**Houvegnez**	**149.68**	**355**	PKiKP	**PKiKP**	**04 50 55.2**	**0.0**
JMB	**Yambol**	**149.69**	**323**	P	**PKiKP**	**04 50 55.1**	**-0.4**
JMB	**Yambol**	**149.69**	**323**	P	**PKiKP**	**04 50 55.1**	**-0.4**
BGES	**Gesves**	**149.72**	**356**	PKiKP	**PKPbc**	**04 50 54.8**	**+0.2**
BGES				PKPab	**PKPab**	**04 51 00.8**	**-1.4**
ELND	**Elena**	**149.79**	**324**	⇓P	**PKiKP**	**04 50 55.6**	**-0.1**
WET	**Wettzell**	**149.80**	**346**	*e*PKPdf	**PKPdf**	**04 50 49.5**	**+0.1**
	baz=13,slow=1.5						
WET				*e*PKPbc	**PKiKP**	**04 50 55.4**	**-0.1**
	baz=15,slow=2.5						
WET				*e*PKPab	**PKPab**	**04 51 03.4**	**+0.8**
	baz=14,slow=4.2						
BMRD	**Maredsous**	**149.82**	**357**	PKiKP	**PKiKP**	**04 50 55.2**	**-0.2**
BMRD				PKPab	**PKPab**	**04 51 02.1**	**-0.5**
VLAD	**Vladila**	**149.84**	**327**	⇑P	**PKiKP**	**04 50 56.0**	**+0.3**
GEC2	**GERESS Array S**	**149.89**	**345**	*e*PKPdf	**PKPdf**	**04 50 49.7**	**0.0**
	baz=13,slow=1.5						
GEC2				*e*PKPbc	**PKiKP**	**04 50 55.6**	**-0.2**
	baz=15,slow=2.5						
GEC2				*e*PKPab	**PKPab**	**04 51 03.4**	**+0.3**
	baz=14,slow=4.2						
GEC2	**GERESS Array S**	**149.89**	**345**	PKPdf	**PKPdf**	**04 50 49.2**	**-0.4**
GEC2					**PKPbc**	**04 50 55.2**	**+0.1**
GERES	**GERESS Array B**	**149.89**	**345**	PKP	**PKPdf**	**04 50 49.7**	**0.0**
	comp=Z,3.3nm,0.8s,baz=70,slow=1.6,SNR=29						
GERES				PKPbc	**PKiKP**	**04 50 55.5**	**-0.3**
	comp=Z,58nm,0.8s,baz=40,slow=2.3,SNR=203						
SRE	**Strehaia**	**149.95**	**329**	⇑P	**PKiKP**	**04 50 56.3**	**+0.4**
BZS	**Buzias**	**149.95**	**332**	⇓P	**PKiKP**	**04 50 55.7**	**-0.2**
EDRB	**Edirne**	**149.99**	**322**	*e*P	**PKPbc**	**04 50 54.7**	**-0.8**
DOU	**Dourbes**	**150.03**	**357**	PKiKP	**PKiKP**	**04 50 55.8**	**-0.1**
CONA	**Conrad Observa**	**150.13**	**341**	*i* PKPdf	**PKPdf**	**04 50 50.0**	**0.0**
	comp=Z,12nm,1.5s,SNR=54						
CONA				*i* PKiKP	**PKiKP**	**04 50 56.3**	**0.0**
	comp=Z,67nm,0.7s						
CONA				*e*PKPab	**PKPab**	**04 51 05.1**	**+0.9**
	comp=Z,24nm,0.7s						
PLVB	**Pleven**	**150.15**	**326**	⇓P	**PKiKP**	**04 50 56.2**	**-0.2**
HERR	**Herculane**	**150.16**	**330**	⇓P	**PKPbc**	**04 50 55.9**	**+0.1**
MRMT	**Marmara Adasi**	**150.23**	**319**	*e*P	**PKPbc**	**04 50 55.4**	**-0.8**
KORT	**Korkueli**	**150.25**	**310**	*e*P	**PKPbc**	**04 50 56.4**	**0.0**
BANR	**Banloc**	**150.35**	**332**	⇑P	**PKiKP**	**04 50 57.3**	**+0.6**
WLF	**Walferdange**	**150.35**	**355**	PKiKP	**PKiKP**	**04 50 57.2**	**+0.6**
WLF				PKPab	**PKPab**	**04 51 05.4**	**+0.5**
WLF	**Walferdange**	**150.35**	**355**	*e*PKPbc	**PKiKP**	**04 50 57.2**	**+0.6**
	baz=15,slow=2.5						
WLF				*e*PKPab	**PKPab**	**04 51 05.6**	**+0.7**
	baz=14,slow=4.2						
PUNG	**Punghina**	**150.37**	**329**	⇑P	**PKiKP**	**04 50 56.4**	**-0.3**
DIM	**Dimitrovgrad**	**150.56**	**323**	P	**PKiKP**	**04 50 56.9**	**-0.3**
DIM	**Dimitrovgrad**	**150.56**	**323**	P	**PKiKP**	**04 50 56.9**	**-0.3**
MDVR	**Moldovita**	**150.56**	**331**	⇓P	**PKiKP**	**04 50 57.2**	**-0.1**
BALB	**Balikesir**	**150.60**	**317**	*e*P	**PKPbc**	**04 50 56.3**	**-0.7**
MPEP	**Malo Peshtene**	**150.63**	**327**	P	**PKiKP**	**04 50 57.6**	**+0.2**
MPEP	**Malo Peshtene**	**150.63**	**327**	P	**PKiKP**	**04 50 57.6**	**+0.2**
MOA	**Molln**	**150.66**	**343**	*i* PKPdf	**PKPdf**	**04 50 50.9**	**+0.1**
	comp=Z,7.1nm,1.0s						
MOA				*i* PKiKP	**PKPbc**	**04 50 56.9**	**0.0**
	comp=Z,21nm,0.6s,SNR=9.0						
MOA				*i* PKPab	**PKPab**	**04 51 06.9**	**+0.6**
	comp=Z,31nm,0.8s						
ELL	**Elmali**	**150.68**	**310**	*e*P	**PKPbc**	**04 50 57.2**	**-0.2**
KULA	**Kula-Manisa**	**150.69**	**314**	*e*P	**PKPbc**	**04 50 56.4**	**-0.9**
ARSA	**Arzberg**	**150.84**	**341**	*i* PKiKP	**PKPbc**	**04 50 57.1**	**-0.2**
	comp=Z,16nm,0.8s,SNR=7.4						
ARSA				*e*PKPab	**PKPab**	**04 51 07.4**	**+0.3**
	comp=Z,17nm,0.8s						
ERIK	**Erikli-Kesan**	**150.85**	**320**	*e*P	**PKPbc**	**04 50 56.6**	**-0.9**
STU	**Stuttgart**	**150.87**	**350**	*e*PKPbc	**PKiKP**	**04 50 57.8**	**+0.1**
	baz=15,slow=2.5						
STU				*e*PKPab	**PKPab**	**04 51 07.3**	**+0.2**
	baz=14,slow=4.2						
LPK	**Lapseki**	**150.88**	**319**	*e*P	**PKPbc**	**04 50 56.9**	**-0.7**
KDZ	**Kurdzhali**	**150.88**	**323**	P	**PKPbc**	**04 50 57.6**	**0.0**
KDZ	**Kurdzhali**	**150.88**	**323**	P	**PKPbc**	**04 50 57.6**	**0.0**
PGB	**Panagyurishte**	**150.97**	**325**	P	**PKPbc**	**04 50 57.7**	**-0.1**
PGB	**Panagyurishte**	**150.97**	**325**	P	**PKPbc**	**04 50 57.7**	**-0.1**
PLD	**Plovdiv**	**150.98**	**324**	P	**PKPbc**	**04 50 57.3**	**-0.5**
PLD	**Plovdiv**	**150.98**	**324**	P	**PKPbc**	**04 50 57.3**	**-0.5**
ALN	**Alexandroupoli**	**150.99**	**321**	P	**PKPbc**	**04 50 57.1**	**-0.7**
GELI	**Tayfur-Gelibol**	**151.04**	**320**	*e*P	**PKPbc**	**04 50 57.1**	**-0.8**
FUR	**Furstenfeldbru**	**151.08**	**347**	*e*PKPdf	**PKPdf**	**04 50 51.3**	**-0.1**
	baz=13,slow=1.5						
FUR				*e*PKPbc	**PKiKP**	**04 50 58.3**	**+0.1**
	baz=15,slow=2.5						
FUR				*e*PKPab	**PKPab**	**04 51 08.6**	**+0.6**
	baz=14,slow=4.2						
AKAS	**Kas**	**151.13**	**310**	*e*P	**PKPbc**	**04 50 57.3**	**-1.2**
RDO	**Rodhopi**	**151.14**	**322**	P	**PKPbc**	**04 50 57.9**	**-0.2**
RJOB	**Jochberg**	**151.14**	**345**	*e*PKPbc	**PKiKP**	**04 50 58.1**	**-0.3**
	baz=15,slow=2.5						
RJOB				*e*PKPab	**PKPab**	**04 51 09.4**	**+1.0**
	baz=14,slow=4.2						
RZN	**Rozhen**	**151.25**	**323**	P	**PKPbc**	**04 50 58.4**	**-0.2**
RZN	**Rozhen**	**151.25**	**323**	P	**PKPbc**	**04 50 58.4**	**-0.2**
VTS	**Vitosha**	**151.42**	**326**	P	**PKiKP**	**04 50 59.1**	**-0.2**
VTS	**Vitosha**	**151.42**	**326**	⇓P	**PKiKP**	**04 50 59.0**	**-0.2**
VTS	**Vitosha**	**151.42**	**326**	P	**PKPbc**	**04 50 58.9**	**0.0**
VTS	**Vitosha**	**151.42**	**326**	P	**PKPbc**	**04 50 58.9**	**0.0**
BFO	**Black Forest**	**151.43**	**351**	*e*PKPdf	**PKPdf**	**04 50 51.7**	**-0.2**
	baz=13,slow=1.5						
BFO				*e*PKPbc	**PKiKP**	**04 50 58.9**	**0.0**
	baz=15,slow=2.5						
BFO				*e*PKPab	**PKPab**	**04 51 09.6**	**+0.1**
	baz=14,slow=4.2						
BFO				*e*pPKPbc	pPKPab	04 53 24.9	+11
BFO	**Black Forest**	**151.43**	**351**		**PKPdf**	**04 50 51.3**	**-0.6**
BFO				PKPbc	**PKiKP**	**04 50 58.6**	**-0.2**
SOKA	**Soboth**	**151.51**	**341**	*i* PKPdf	**PKPdf**	**04 50 52.0**	**-0.2**
	comp=Z,6.5nm,0.9s,SNR=16						
SOKA				*i* PKiKP	**PKPbc**	**04 50 58.5**	**-0.4**
	comp=Z,29nm,0.8s						
SOKA				*i* PKPab	**PKPab**	**04 51 09.9**	**-0.1**
	comp=Z,41nm,0.9s						
AYDB	**Zeytinkoy-Aydi**	**151.51**	**314**	*e*P	**PKPbc**	**04 50 58.5**	**-0.8**
GADA	**Gvkgeada**	**151.52**	**320**	*e*P	**PKPdf**	**04 50 47.0**	**-5.2**
DALY	**Dalyan (Mula)**	**151.54**	**311**	*e*P	**PKPbc**	**04 50 58.7**	**-0.5**
TURN	**Turunc**	**151.55**	**312**	*e*P	**PKiKP**	**04 50 59.5**	**+0.1**
SMTH	**Samothraki Isl**	**151.57**	**321**	P	**PKPbc**	**04 50 58.4**	**-0.8**
KBA	**Koelnbreinsper**	**151.62**	**344**	*i* PKPdf	**PKPdf**	**04 50 51.9**	**-0.5**
	comp=Z,7.3nm,1.2s,SNR=6.8						
KBA				*i* PKPbc	**PKPbc**	**04 50 58.6**	**-0.6**
	comp=Z,31nm,0.6s						
KBA				*i* PKPab	**PKPab**	**04 51 11.7**	**+1.1**
	comp=Z,37nm,0.7s						
YER	**Yerkesik**	**151.65**	**312**	*e*P	**PKPbc**	**04 50 59.0**	**-0.5**
UBR	**Ueberruh**	**151.77**	**349**	*e*PKPdf	**PKPdf**	**04 50 52.5**	**0.0**
	baz=13,slow=1.5						
UBR				*e*PKPbc	**PKiKP**	**04 50 59.6**	**-0.1**
	baz=15,slow=2.5						
WATA	**Walderalm**	**151.80**	**346**	*i* PKPdf	**PKPdf**	**04 50 52.3**	**-0.4**
	comp=Z,12nm,1.0s						
WATA				*i* PKiKP	**PKPbc**	**04 50 59.4**	**-0.2**
	comp=Z,29nm,0.7s,SNR=7.2						
WATA				*i* PKPab	**PKPab**	**04 51 11.3**	**+0.1**
	comp=Z,45nm,1.2s						
OBKA	**Obir**	**151.80**	**342**	*i* PKPbc	**PKPbc**	**04 50 59.0**	**-0.6**
	comp=Z,15nm,0.8s,SNR=6.5						
OBKA				*i* PKPab	**PKPab**	**04 51 10.9**	**-0.3**
	comp=Z,26nm,0.8s						
KAVA	**Kavala**	**151.82**	**323**	P	**PKPbc**	**04 50 58.4**	**-1.3**
RETA	**Reutte**	**151.83**	**348**	*i* PKPdf	**PKPdf**	**04 50 52.3**	**-0.3**
	comp=Z,3.0nm,0.8s						
RETA				*i* PKiKP	**PKPbc**	**04 50 59.5**	**-0.1**
	comp=Z,26nm,0.9s,SNR=8.3						
RETA				*i* PKPab	**PKPab**	**04 51 11.4**	**+0.1**
	comp=Z,38nm,1.1s						
WTTA	**Wattenberg**	**151.85**	**346**	*i* PKPdf	**PKPdf**	**04 50 52.6**	**-0.2**
	comp=Z,7.8nm,0.8s,SNR=5.4						
WTTA				*i* PKiKP	**PKiKP**	**04 50 59.9**	**-0.1**
	comp=Z,59nm,0.8s						
WTTA				*i* PKPab	**PKPab**	**04 51 11.9**	**+0.3**
	comp=Z,34nm,0.7s						
MMB	**Musomiste**	**151.87**	**324**	P	**PKPbc**	**04 50 59.4**	**-0.4**
MMB	**Musomiste**	**151.87**	**324**	P	**PKPbc**	**04 50 59.4**	**-0.4**
MOTA	**Moosalm**	**151.89**	**347**	*i* PKPdf	**PKPdf**	**04 50 52.3**	**-0.5**
	comp=Z,14nm,0.9s,SNR=6.6						
MOTA				*i* PKiKP	**PKPbc**	**04 50 59.7**	**-0.1**
	comp=Z,55nm,1.3s						
MOTA				*i* PKPab	**PKPab**	**04 51 11.6**	**-0.1**
	comp=Z,51nm,1.0s						
MYKA	**Terra Mystica**	**151.95**	**343**	*i* PKPdf	**PKPdf**	**04 50 52.0**	**-0.8**
	comp=Z,8.4nm,0.9s						
MYKA				*i* PKPbc	**PKPbc**	**04 50 59.2**	**-0.7**
	comp=Z,28nm,0.6s,SNR=10						
MYKA				*i* PKPab	**PKPab**	**04 51 11.2**	**-0.6**
	comp=Z,28nm,0.7s						
SQTA	**Sankt Quirin**	**151.99**	**347**	*i* PKPdf	**PKPdf**	**04 50 52.6**	**-0.3**
	comp=Z,13nm,0.8s,SNR=5.9						
SQTA				*i* PKiKP	**PKiKP**	**04 51 00.1**	**-0.2**
	comp=Z,34nm,0.7s						
SQTA				*i* PKPab	**PKPab**	**04 51 12.2**	**+0.1**
	comp=Z,14nm,0.7s						
KKB	**Krupnik**	**152.03**	**325**	P	**PKiKP**	**04 51 00.1**	**-0.2**
KKB	**Krupnik**	**152.03**	**325**	P	**PKiKP**	**04 51 00.1**	**-0.2**
GCAM	**G?zelcaml?**	**152.08**	**314**	*e*P	**PKPbc**	**04 50 59.2**	**-1.1**
ABTA	**Abfaltersbach**	**152.13**	**345**	*i* PKPdf	**PKPdf**	**04 50 52.3**	**-0.8**
	comp=Z,19nm,0.7s,SNR=16						
ABTA				*i* PKPbc	**PKPbc**	**04 50 59.8**	**-0.5**
	comp=Z,54nm,0.6s						
ABTA				*i* PKPab	**PKPab**	**04 51 12.4**	**-0.2**
	comp=Z,36nm,0.7s						
URLA	**Izmir**	**152.15**	**316**	*e*P	**PKPbc**	**04 50 59.5**	**-1.0**
DAVA	**Damuels**	**152.19**	**349**	*i* PKPdf	**PKPdf**	**04 50 52.9**	**-0.3**
	comp=Z,8.9nm,0.8s						
DAVA				*i* PKiKP	**PKPbc**	**04 51 00.3**	**-0.2**
	comp=Z,57nm,1.1s,SNR=9.8						
DAVA				*i* PKPab	**PKPab**	**04 51 12.7**	**-0.2**
	comp=Z,19nm,0.7s						
LJU	**Ljubljana**	**152.23**	**341**	*i* PKPdf	**PKPdf**	**04 50 53.1**	**-0.1**
LJU				*i* PKPbc	**PKiKP**	**04 51 00.5**	**-0.1**
LJU				*e*PKPab	**PKPab**	**04 51 12.8**	**-0.1**
FETA	**Feichten**	**152.28**	**347**	*i* PKPdf	**PKPdf**	**04 50 53.4**	**0.0**
	comp=Z,21nm,0.8s,SNR=21						
FETA				*i* PKiKP	**PKiKP**	**04 51 00.9**	**0.0**
	comp=Z,29nm,0.8s						
FETA				*i* PKPab	**PKPab**	**04 51 13.7**	**+0.4**
	comp=Z,32nm,1.3s						
ROBS	**Robic**	**152.34**	**343**	*i* PKPdf	**PKPdf**	**04 50 52.6**	**-0.7**
ROBS				*e*PKPab	**PKPab**	**04 51 12.7**	**-0.7**
DAT	**Datca**	**152.34**	**312**	*e*P	**PKPbc**	**04 50 58.8**	**-2.3**
GBAS	**Gorenja Brezov**	**152.35**	**341**	*e*PKPdf	**PKPdf**	**04 50 52.8**	**-0.5**
GBAS				*i* PKPbc	**PKPbc**	**04 51 00.5**	**-0.2**
GBAS				*i* PKPab	**PKPab**	**04 51 13.3**	**-0.2**
BODT	**Bodrum**	**152.36**	**313**	*e*P	**PKPbc**	**04 50 59.3**	**-1.7**
BLY	**Banja Luka**	**152.47**	**337**	⇓P	**PKiKP**	**04 51 01.4**	**+0.3**
BOJS	**Bojanci**	**152.49**	**340**	*i* PKPdf	**PKPdf**	**04 50 53.7**	**+0.2**
BOJS				*i* PKPbc	**PKiKP**	**04 51 01.3**	**+0.2**
KNT	**Kendrikon**	**152.62**	**325**	P	**PKPab**	**04 51 15.1**	**+0.3**
TUE	**Stuetta**	**153.07**	**349**		**PKPdf**	**04 50 53.9**	**-0.7**
KARP	**Karpathos**	**153.21**	**310**	P	**PKPbc**	**04 51 02.6**	**-0.3**
LIT	**Litokhoron**	**153.57**	**323**	P	**PKPab**	**04 51 18.2**	**-0.7**
FNA	**Florina**	**153.70**	**326**	P	**PKPbc**	**04 51 02.8**	**-1.0**
SANT	**Santorini**	**153.99**	**313**	⇑P	**PKPbc**	**04 51 02.8**	**-1.8**
SANT	**Santorini**	**153.99**	**313**		**PKPbc**	**04 51 03.5**	**-1.1**
ANX	**Ano Chora**	**154.91**	**321**	P	**PKPbc**	**04 51 07.4**	**+0.9**
KALE	**Kalithea**	**154.91**	**321**	P	**PKiKP**	**04 51 06.0**	**-0.5**
SERG	**Sergoula**	**154.95**	**321**	P	**PKPbc**	**04 51 06.5**	**0.0**
IMMV	**Iera Moni Meta**	**155.49**	**313**	P	**PKPab**	**04 51 26.9**	**-0.4**
EVGI	**Lefkada island**	**155.62**	**323**	P	**PKPab**	**04 51 28.0**	**+0.3**
ITM	**Ithomi**	**155.82**	**319**	P	**PKPab**	**04 51 28.3**	**-0.4**
MATE	**Matera**	**156.08**	**332**	⇓P	**PKPab**	**04 51 27.9**	**-1.7**
PGAV	**Gavieira, Arco**	**156.49**	**20**	*e*PKPdf	**PKPdf**	**04 50 59.8**	**+0.6**
PCAB	**Cabril**	**156.80**	**20**	*e*PKPdf	**PKPdf**	**04 51 00.3**	**+0.8**
PCAB	**Cabril**	**156.80**	**20**	*e*PKPab	**PKPab**	**04 51 33.0**	**+0.3**
PBRG	**Braganca**	**157.09**	**17**	*e*PKPab	**PKPab**	**04 51 34.3**	**+0.3**
TIP	**Timpagrande**	**157.24**	**330**	⇑P	**PKPab**	**04 51 35.2**	**+0.4**
MVO	**Moncorvo**	**157.60**	**19**	*e*PKPdf	**PKPdf**	**04 51 01.2**	**+0.6**
MVO	**Moncorvo**	**157.60**	**19**	*e*PKPab	**PKPab**	**04 51 36.7**	**+0.4**
PVIS	**Viseu**	**157.74**	**21**	*e*PKPab	**PKPab**	**04 51 37.3**	**+0.4**
COI	**Coimbra**	**158.01**	**22**	*e*PKPab	**PKPab**	**04 51 38.6**	**+0.6**
PCAS	**Casmilo, Conde**	**158.12**	**22**	*e*PKPdf	**PKPdf**	**04 51 02.2**	**+1.0**
PCAS	**Casmilo, Conde**	**158.12**	**22**	*e*PKPab	**PKPab**	**04 51 38.7**	**+0.2**
MTE	**Manteigas**	**158.14**	**20**	*e*PKPdf	**PKPdf**	**04 51 02.1**	**+0.8**
MTE	**Manteigas**	**158.14**	**20**	*e*PKPab	**PKPab**	**04 51 38.3**	**-0.3**
PSBE	**So Bento**	**158.48**	**24**	*e*PKPdf	**PKPdf**	**04 51 02.1**	**+0.4**
PSBE	**So Bento**	**158.48**	**24**	*e*PKPab	**PKPab**	**04 51 40.3**	**+0.2**
PCBR	**Castelo Branco**	**158.66**	**21**	*e*PKPdf	**PKPdf**	**04 51 03.1**	**+1.3**
PCBR	**Castelo Branco**	**158.66**	**21**	*e*PKPab	**PKPab**	**04 51 40.8**	**0.0**
PMAFR	**Mafra**	**158.78**	**25**	*e*PKPab	**PKPab**	**04 51 41.7**	**+0.3**
PMRV	**Marv??o**	**159.06**	**21**	*e*PKPdf	**PKPdf**	**04 51 03.3**	**+1.0**
PMRV	**Marv??o**	**159.06**	**21**	*e*PKPab	**PKPab**	**04 51 42.5**	**-0.1**
PMTG	**Montargil**	**159.09**	**23**	*e*PKPab	**PKPab**	**04 51 41.3**	**-1.4**
EVO	**Evora**	**159.64**	**24**	*e*PKPab	**PKPab**	**04 51 45.0**	**-0.1**
VSL	**Villasalto**	**159.73**	**344**	PKPdf	**PKPdf**	**04 51 02.3**	**-0.8**
PNCL	**Nicolau / Gran**	**159.80**	**25**	*e*PKPdf	**PKPdf**	**04 51 03.7**	**+0.5**
PNCL	**Nicolau / Gran**	**159.80**	**25**	*e*PKPab	**PKPab**	**04 51 46.0**	**+0.1**
ESDC	**Sonseca Array**	**159.81**	**14**	PKP	**PKPdf**	**04 51 04.0**	**+0.8**
	comp=Z,1.5nm,0.9s,baz=351,slow=3.2,SNR=14						
ESDC				PKPab	**PKPab**	**04 51 46.2**	**+0.4**
	comp=Z,11nm,1.1s,baz=343,slow=4.0,SNR=22						
PAB	**San Pablo**	**159.84**	**15**		**PKPdf**	**04 51 02.9**	**-0.4**
PBEJ	**Beja**	**160.13**	**24**	*e*PKPdf	**PKPdf**	**04 51 04.4**	**+0.8**
PBEJ	**Beja**	**160.13**	**24**	*e*PKPab	**PKPab**	**04 51 47.8**	**+0.5**
MESJ	**Messejana**	**160.16**	**25**	*e*PKPdf	**PKPdf**	**04 51 04.8**	**+1.2**
MESJ	**Messejana**	**160.16**	**25**	*e*PKPab	**PKPab**	**04 51 47.3**	**-0.1**
PTEO	**Sao Teotonio**	**160.21**	**26**	*e*PKPdf	**PKPdf**	**04 51 05.2**	**+1.6**
PCVE	**Castro Verde**	**160.41**	**25**	*e*PKPab	**PKPab**	**04 51 47.5**	**-1.1**
MORF	**Marmelete**	**160.44**	**27**	*e*PKPdf	**PKPdf**	**04 51 05.2**	**+1.2**
PVAQ	**Vaqueiros**	**160.74**	**25**	*e*PKPab	**PKPab**	**04 51 50.4**	**+0.4**
KEST	**Kesra**	**163.23**	**339**	PKP	**PKPdf**	**04 51 06.7**	**-0.1**
	comp=Z,5.3nm,0.9s,baz=299,slow=4.8,SNR=7.2						
KEST				PKPab	**PKPab**	**04 52 01.4**	**+0.4**
	comp=Z,11nm,0.8s,baz=187,slow=1.2,SNR=11						
LIC	**Lamto**	**164.50**	**152**	*e*PKIKP	**PKPdf**	**04 51 07.9**	**-0.6**
	comp=Z,55nm,0.9s						
LIC	**Lamto**	**164.50**	**152**	*e*P	**PKPab**	**04 52 08.3**	**+1.2**
	comp=Z,20nm,0.6s						
KIC	**Kosan Boka**	**164.75**	**153**	*e*PKIKP	**PKPdf**	**04 51 08.1**	**-0.7**
	comp=Z,72nm,1.3s						
KIC	**Kosan Boka**	**164.75**	**153**	*e*P	**PKPab**	**04 52 09.3**	**+1.1**
	comp=Z,21nm,0.8s						
TIC	**Toumodi**	**164.88**	**151**	*e*PKIKP	**PKPdf**	**04 51 08.3**	**-0.6**
	comp=Z,48nm,1.1s						
TIC	**Toumodi**	**164.88**	**151**	*e*P	**PKPab**	**04 52 10.3**	**+1.5**
DBIC	**Dimbokro**	**164.98**	**152**	PKP	**PKPdf**	**04 51 08.6**	**-0.3**
	comp=Z,11nm,1.0s,baz=210,slow=2.2,SNR=6.2						
DBIC				PKPab	**PKPab**	**04 52 10.8**	**+1.6**
	comp=Z,5.1nm,0.6s,baz=183,slow=6.2,SNR=11						
DBIC	**Dimbokro**	**164.98**	**152**	PKPdf	**PKPdf**	**04 51 07.9**	**-1.0**
DBIC					**PKPab**	**04 52 09.2**	**0.0**
TOA0	**Torodi Ar. Sit**	**173.05**	**176**		**PKPdf**	**04 51 12.9**	**-0.9**
TORD	**Torodi Ar. Bea**	**173.05**	**176**	PKP	**PKPdf**	**04 51 13.1**	**-0.8**
	comp=Z,12nm,0.9s,baz=325,slow=0.8,SNR=44						
TORD				PKPab	**PKPab**	**04 52 45.9**	**+1.1**
	comp=Z,1.3nm,0.6s,baz=170,slow=4.0,SNR=9.5						
TORD				PP	**PP**	**04 56 36.5**	**+0.8**
	comp=Z,1.5nm,0.8s,baz=183,slow=5.2,SNR=4.3						

*SJA **06** 04:44:31.7±0.9, 31°.64S×70°.67W, h81km±13km, ML3.5, MW3.6*
*GUC **06** 04:44:32.4±0.8, 31°.77S×70°.71W, h96km±4km, ML3.6*
ISC 06 04:44:30.7±1.5**, 31°.71S**±0°.03×**70°.66W**±0°.04**, h125km**±10km**, n38,** σ1^{s}**41**/70**, 1C-14D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO04	**Los Peladeros**	**0.43**	**219**	⇓*i*P	**Pn**	**04 44 48.7**	**-0.4**
CO04				*i* S	**Sn**	**04 45 00.5**	**-2.5**
CO04				IAML		04 45 05.0	
	comp=N,3µm,0.2s						
CO02	**Combarbal**	**0.58**	**330**	⇑*i*P	**Pn**	**04 44 50.3**	**+0.5**
CO02				*i* S	**Sn**	**04 45 03.5**	**-0.8**
CO03	**El Pedregal**	**0.87**	**358**	⇓*i*P	**Pn**	**04 44 52.8**	**+0.8**
CO03				*i* S	**Sn**	**04 45 07.7**	**-0.5**
VA03	**San Esteban**	**1.05**	**175**	⇓*i*P	**Pn**	**04 44 54.0**	**+0.2**
VA03				*i* S	**Sn**	**04 45 10.2**	**-1.1**
RTLS	**Leoncito**	**1.16**	**95**	*i* P	**Pn**	**04 44 55.6**	**+0.5**
RTLS				*i* S	**Sn**	**04 45 12.1**	**-1.4**
RTLS				IAML		04 45 14.1	
	comp=Z,716nm,0.4s						
ROCH	**El Roble**	**1.29**	**193**	⇓*i*P	**Pn**	**04 44 56.5**	**+0.1**
ROCH				*i* S	**Sn**	**04 45 15.1**	**-0.8**
ROCH				IAML		04 45 18.6	
	comp=N,1µm,0.4s						
ROC1	**El Roble**	**1.30**	**193**	*i* P	**Pn**	**04 44 56.5**	**+0.1**
ROC1				*i* S	**Sn**	**04 45 15.6**	**-0.4**
PEL	**Peldehue**	**1.43**	**181**	⇓*i*P	**Pn**	**04 44 58.1**	**+0.5**
PEL				*i* S	**Sn**	**04 45 17.4**	**-0.8**
PEL				IAML		04 45 19.2	
	comp=N,1µm,0.2s						
PEL	**Peldehue**	**1.43**	**181**	*i* P	**Pn**	**04 44 58.1**	**+0.5**
PEL				*i* S	**Sn**	**04 45 17.6**	**-0.7**
GO04	**Tololo Observa**	**1.54**	**355**	⇓*i*P	**Pn**	**04 45 00.3**	**+1.2**
GO04				*i* S	**Sn**	**04 45 21.2**	**+0.5**
GO04	**Tololo Observa**	**1.54**	**355**	*i* P	**Pn**	**04 45 00.3**	**+1.2**
GO04				*i* S	**Sn**	**04 45 21.2**	**+0.5**
MT02	**Curacav**	**1.60**	**195**	⇓*i*P	**Pn**	**04 44 59.9**	**+0.4**
MT02				*i* S	**Sn**	**04 45 20.6**	**-1.0**
FCH	**Farellones**	**1.64**	**169**	⇓*i*P	**Pn**	**04 45 01.7**	**+1.3**
FCH				*i* S	**Sn**	**04 45 23.4**	**+0.3**
CLCH	**Cerro Calan**	**1.68**	**177**	⇓*i*P	**Pn**	**04 45 01.4**	**+0.8**
CLCH				*i* S	**Sn**	**04 45 23.4**	**-0.1**
CLCH				IAML		04 45 27.1	
	comp=N,986nm,0.5s						
FSR	**Penalolen**	**1.77**	**176**	*e*P	**Pn**	**04 45 03.5**	**+1.9**
FSR				*e*S	**Sn**	**04 45 25.5**	**+0.3**
ASAL	**Salagasta**	**1.78**	**120**	*i* P	**Pn**	**04 45 03.4**	**+1.7**
ASAL				*i* S	**Sn**	**04 45 26.9**	**+1.4**
ASAL				IAML		04 45 27.4	
	comp=Z,263nm,0.4s						
MT03	**Universidad Ad**	**1.78**	**176**	⇓*i*P	**Pn**	**04 45 02.7**	**+0.9**
MT03				*i* S	**Sn**	**04 45 24.8**	**-0.8**
CO01	**Juntas del Tor**	**1.79**	**16**	⇓*i*P	**Pn**	**04 45 04.2**	**+2.1**
CO01				*i* S	**Sn**	**04 45 27.3**	**+1.2**
CO01				IAML		04 45 28.3	
	comp=N,464nm,0.2s						
RTCV	**Cerro Valdivia**	**1.81**	**95**	*i* P	**Pn**	**04 45 02.9**	**+0.9**
RTCV				*i* S	**Sn**	**04 45 25.8**	**-0.2**
RTCV				IAML		04 45 27.1	
	comp=Z,451nm,0.4s						
ARCO	**CERRO ARCO**	**1.85**	**128**	*i* P	**Pn**	**04 45 04.6**	**+2.0**
ARCO				*i* S	**Sn**	**04 45 27.7**	**+0.6**
ARCO				IAML		04 45 31.5	
	comp=Z,417nm,0.4s						
RTLL	**Cerro Villicun**	**1.90**	**79**	*i* P	**Pn**	**04 45 03.9**	**+0.7**
RTLL				*i* S	**Sn**	**04 45 27.3**	**-0.8**
RTLL				IAML		04 45 29.6	
	comp=Z,764nm,0.5s						
UTNM	**Universidad Te**	**1.93**	**128**	*i* P	**Pn**	**04 45 06.0**	**+2.5**
UTNM				*i* S	**Sn**	**04 45 30.7**	**+1.9**
UTNM				IAML		04 45 31.4	
	comp=Z,245nm,0.4s						
AMOG	**MOGNA**	**2.01**	**68**	*i* P	**Pn**	**04 45 05.5**	**+1.0**
AMOG				*i* S	**Sn**	**04 45 29.7**	**-0.7**
AMOG				IAML		04 45 37.4	
	comp=Z,461nm,0.3s						
AAGR	**Agrelo**	**2.07**	**132**	*i* P	**Pn**	**04 45 07.6**	**+2.3**
AAGR				*i* S	**Sn**	**04 45 32.7**	**+0.9**
AAGR				IAML		04 45 36.9	
	comp=Z,236nm,0.7s						
LMEL	**Las Melosas**	**2.17**	**170**	⇓*i*P	**Pn**	**04 45 08.1**	**+1.5**
LMEL				*i* S	**Sn**	**04 45 34.7**	**+0.6**
MT01	**Popeta**	**2.21**	**193**	⇓*i*P	**Pn**	**04 45 07.6**	**+0.7**
MT01				*i* S	**Sn**	**04 45 34.1**	**-0.6**
MT01				IAML		04 45 35.6	
	comp=N,546nm,0.2s						
AVIZ	**Vizcacheras**	**2.52**	**135**	*i* P	**Pn**	**04 45 12.8**	**+1.9**
AC05	**El Transito**	**2.88**	**7**	⇓*i*P	**Pn**	**04 45 18.0**	**+2.3**
AC05				*e*S	**Sn**	**04 45 51.6**	**+1.2**
AC05				IAML		04 45 53.1	
	comp=N,476nm,0.2s						
ACAN	**Cantantal**	**3.00**	**102**	*i* P	**Pn**	**04 45 17.9**	**+0.7**
ACAN				*i* S	**Sn**	**04 45 51.7**	**-1.3**
ACAN				IAML		04 45 55.7	
	comp=Z,78nm,0.4s						
BO02	**Sierra Bellavi**	**3.08**	**182**	*e*P	**Pn**	**04 45 19.1**	**+0.9**
BO02				*e*S	**Sn**	**04 45 53.1**	**-1.7**
BO02				IAML		04 45 57.5	
	comp=E,476nm,0.3s						
LAMA	**Las Malvinas**	**3.44**	**160**	*i* P	**Pn**	**04 45 25.7**	**+2.9**
GO05	**Huala**	**3.46**	**198**	*e*P	**Pn**	**04 45 22.7**	**-0.4**
APLL	**PUNTA DE LOS L**	**3.78**	**71**	*e*P	**Pn**	**04 45 28.0**	**+0.6**
ACLC	**CERRO LA CRUZ**	**3.92**	**55**	*i* P	**Pn**	**04 45 30.5**	**+1.0**
MRA	**San Martin**	**4.25**	**101**	*i* P	**Pn**	**04 45 33.9**	**+0.1**
MRA				*i* S	**Sn**	**04 46 20.5**	**-2.3**
MRA				IAML		04 46 23.1	
	comp=Z,55nm,0.3s						
TCA	**Tanti**	**5.19**	**87**	*i* P	**Pn**	**04 45 46.0**	**-0.3**
TCA				*i* S	**Sn**	**04 46 41.2**	**-4.0**
TCA				IAML		04 47 18.1	
	comp=Z,49nm,0.9s						
CYA	**Choya**	**5.32**	**53**	*i* P	**Pn**	**04 45 47.4**	**-0.7**
CYA				*i* S	**Sn**	**04 46 43.9**	**-4.4**
CYA				IAML		04 47 33.6	
	comp=Z,15nm,0.6s						
PB14	**IPOC Station P**	**7.06**	**2**	*i* P	**Pn**	**04 46 10.6**	**-1.2**
PB14				IAML		04 48 02.2	
	comp=Z,23nm,2.2s						

IDC 06 04:51:36.2±59.0**, 18°.78S×177°.46W, h0km, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.7**/42**, mbtmp4.2**/3**, Error ellipse: s-maj=1096.0km s-min=166.9km az=81.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.02**	**242**	P	P	04 59 05.0	+0.3
	1.7nm,0.5s,baz=68,slow=11,SNR=5.7						
WRA	**Warramunga Arr**	**45.37**	**260**	P	P	04 59 56.7	0.0
	1.1nm,0.3s,baz=98,slow=8.2,SNR=5.6						
ASAR	**Alice Springs**	**45.43**	**255**	P	P	04 59 56.7	-0.5
	2.4nm,0.6s,baz=90,slow=7.9,SNR=26						

*SOME **06** 05:19:24.9, 40°.23N×74°.05E, h15km*
*KRNET **06** 05:19:28.6±0.1, 40°.34N×73°.89E, h17km, mb3.4*
*NNC **06** 05:19:32.1±1.8, 40°.51N×73°.84E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=15.0km s-min=7.8km az=174.0*
ISC 06 05:19:26.2±1.2**, 40°.26N**±0°.06×**74°.08E**±0°.03**, h10km, n51,** σ1^{s}**72**/79**, 27C-14D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**1.35**	**322**	⇑*i*P	**Pn**	**05 19 51.4**	**+0.1**
	baz=25						
ARSB				⇑*i*S	**Sb**	**05 20 08.6**	**-0.5**
	baz=25						
AML	**Almayashu**	**1.90**	**351**	⇑*i*P	**Pb**	**05 20 01.7**	**+0.6**
	baz=55						
AML				⇑*i*S	**Sg**	**05 20 26.8**	**-0.4**
	baz=55						
AML	**Almayashu**	**1.90**	**351**	P	**Pb**	**05 20 01.5**	**+0.4**
	SNR=72						
UCH	**Uchtor**	**2.00**	**9**	⇓*i*P	**Pg**	**05 20 04.7**	**+0.2**
	baz=14						
UCH				⇓*i*S	**Sg**	**05 20 31.7**	**+1.3**
	baz=14						
UCH	**Uchtor**	**2.00**	**9**	P	**Pg**	**05 20 04.5**	**0.0**
	SNR=130						
KZA	**Kyzart**	**2.02**	**26**	⇑*i*P	**Pg**	**05 20 06.2**	**+1.2**
	baz=30						
KZA				⇑*i*S	**Sg**	**05 20 34.1**	**+2.8**
	baz=30						
KZA	**Kyzart**	**2.02**	**26**	P	**Pg**	**05 20 06.4**	**+1.4**
	SNR=58						
ARK	**Arkit**	**2.22**	**315**	⇑*i*P	**Pb**	**05 20 06.0**	**-0.5**
	baz=15						
ARK				⇑*i*S	**Sb**	**05 20 33.8**	**-0.3**
	baz=15						
AAK	**Ala-Archa**	**2.40**	**7**	⇑*i*P	**Pb**	**05 20 10.2**	**+0.6**
	baz=11						
AAK				⇑*i*S	**Sg**	**05 20 40.9**	**-2.4**
	baz=11						
AAK	**Ala-Archa**	**2.40**	**7**	P	**Pg**	**05 20 11.5**	**-0.6**
	SNR=49						
AAK	**Ala-Archa**	**2.40**	**7**	⇓Pn	**Pg**	**05 20 11.6**	**-0.6**
	22nm,0.4s						
AAK				⇑Lg	Lg	05 20 42.6	
	16nm,0.5s						
EKS2	**Erkin-Say**	**2.41**	**355**	⇓*i*P	**Pb**	**05 20 10.2**	**+0.4**
	baz=58						
EKS2				⇓*i*S	**Sb**	**05 20 40.4**	**+0.8**
	baz=58						
EKS2	**Erkin-Say**	**2.41**	**355**	P	**Pb**	**05 20 11.0**	**+1.2**
	SNR=18						
KBK	**Karagaybulak**	**2.49**	**15**	⇓*i*P	**Pb**	**05 20 11.8**	**+0.8**
	baz=19						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KBK				⇓iS	Sg	05 20 43.9	-2.1
	baz=19						
KBK	Karagaybulak	2.49	15	P	Pg	05 20 13.4	-0.4
	SNR=25						
BTK	Batken	2.51	267	⇑iP	Pb	05 20 11.0	-0.3
	baz=64						
BTK				⇑iS	Sb	05 20 42.2	0.0
	baz=64						
MRKS	Merke	2.57	346	eP	Pb	05 20 13.2	+0.8
	58nm,0.6s						
MRKS				eS	Sg	05 20 46.4	-2.3
	40nm,0.3s						
MRKS	Merke	2.57	346	Pg	Pb	05 20 13.2	+0.8
	58nm,0.6s						
MRKS				Lg	Lg	05 20 46.4	
	40nm,0.3s						
ULHL	Ulahol	2.57	39	⇑iP	Pg	05 20 14.7	-0.8
	baz=42						
ULHL				⇑iS	Sg	05 20 47.4	-1.4
	baz=42						
BOOM	Boomskoye usch	2.63	32	⇓iP	Pb	05 20 14.9	+1.3
	baz=35						
BOOM				⇓iS	Sg	05 20 48.2	-2.6
	baz=35						
CHMS	Chumysh	2.79	10	⇑iP	Pb	05 20 15.7	-0.4
	baz=13						
CHMS				⇑iS	Sb	05 20 50.3	0.0
	baz=13						
CHMS	Chumysh	2.79	10	P	Pg	05 20 19.5	0.0
	SNR=6.0						
TKM2	Tokmak 2	2.90	23	⇓iP	Pb	05 20 18.2	+0.2
	baz=26						
TKM2				⇓iS	Sb	05 20 54.1	+0.5
	baz=26						
TKM2	Tokmak 2	2.90	23	P	Pg	05 20 21.9	+0.3
	SNR=21						
TKM2	Tokmak 2	2.90	23	⇑Pn	Pb	05 20 18.8	+0.7
	4.6nm,0.3s						
TKM2				⇑Lg	Lg	05 20 59.7	
	9.5nm,0.7s						
KDJ	Kajisay	3.00	50	⇑iP	Pb	05 20 20.7	+1.0
	baz=53						
KDJ				⇑iS	Sb	05 20 58.4	+1.9
	baz=53						
USP	Ospenovka	3.02	6	⇑iP	Pb	05 20 18.6	-1.5
	baz=9.0						
USP				⇑iS	Sb	05 20 55.5	-1.6
	baz=9.0						
USP	Ospenovka	3.02	6	P	Pb	05 20 20.5	+0.4
	SNR=6.4						
KST	Kastek	3.12	26	eP	Pb	05 20 23.6	+1.8
	14nm,0.4s						
KST				eS	Sg	05 21 03.9	-2.6
	22nm,0.5s						
SGDS	Sogindy	3.22	7	Pg	Pb	05 20 25.6	+2.1
	16nm,0.3s						
SGDS				Lg	Lg	05 21 06.8	
	7.1nm,0.3s						
IZV	Izvestkoviy	3.37	34	eP	Pb	05 20 27.1	+1.1
	7.9nm,0.5s						
IZV				eS	Sb	05 21 09.6	+2.6
	18nm,0.5s						
IZV	Izvestkoviy	3.37	34	Pg	Pg	05 20 29.7	-1.0
	7.9nm,0.5s						
IZV				Lg	Lg	05 21 14.0	
	18nm,0.5s						
MTBS	Maitube	3.37	31	eP	Pb	05 20 25.8	-0.2
	8.7nm,0.3s						
MTBS				eS	Sb	05 21 08.0	+1.0
	6.7nm,0.4s						
TNSS	Tian-Shan	3.51	37	eP	Pb	05 20 29.7	+1.1
	7.0nm,0.3s						
TNSS				eS	Sb	05 21 15.1	+3.5
	8.5nm,0.5s						
TNSS	Tian-Shan	3.51	37	Pg	Pg	05 20 32.7	-0.8
	7.0nm,0.3s						
TNSS				Lg	Lg	05 21 19.0	
	8.5nm,0.5s						
IUG	Iuzhnay	3.59	303	eP	Pb	05 20 30.7	+0.9
	2.9nm,0.3s						
IUG				eS	Sb	05 21 16.0	+2.6
	34nm,0.4s						
IUG	Iuzhnay	3.59	303	Pg	Pb	05 20 30.7	+0.9
	2.9nm,0.3s						
IUG				Lg	Lg	05 21 15.9	
	34nm,0.5s						
MDOK	Medeo	3.66	36	eP	Pb	05 20 33.6	+2.6
	4.6nm,0.3s						
MDOK				eS	Sg	05 21 20.4	-3.2
	9.4nm,0.7s						
MDOK	Medeo	3.66	36	⇑Pg	Pg	05 20 38.5	+2.3
	3.4nm,0.5s						
MDOK				Lg	Lg	05 21 24.1	
	9.4nm,0.7s						
MDOK	Medeo	3.66	36	Pg	Pg	05 20 35.0	-1.3
	4.3nm,0.5s						
MDOK				Lg	Lg	05 21 23.0	
	9.4nm,0.7s						
ANVS	Anan'yevo	3.69	46	⇑iP	Pb	05 20 30.2	-1.4
	baz=48						
ANVS				⇑iS	Sb	05 21 14.9	-1.6
	baz=48						
KK31	Karatay Array	3.90	318	⇑Pg	Pb	05 20 36.5	+1.4
	1.4nm,0.4s,baz=135,slow=16,SNR=17						
KK31				⇓Lg	Lg	05 21 27.3	
	3.5nm,0.4s,baz=131,slow=29,SNR=5.4						
KUU	Kurty	4.00	24	eP	Pb	05 20 39.0	+2.2
	6.9nm,0.3s						
KUU				eS	Sg	05 21 30.0	-4.7
	7.0nm,0.6s						
BRLS	Borolday	4.22	312	eP	Pb	05 20 41.4	+1.0
	1.5nm,0.4s						
BRLS				eS	Sb	05 21 34.5	+3.1
	4.5nm,0.3s						
BRLS	Borolday	4.22	312	Pg	Pb	05 20 41.4	+1.0
	1.5nm,0.4s						
BRLS				Lg	Lg	05 21 34.5	
	4.5nm,0.3s						
UZB	Uzynbulak	4.69	50	eP	Pb	05 20 51.0	+2.3
	3.3nm,0.4s						
UZB				eS	Sg	05 21 52.0	-4.9
	3.5nm,0.6s						
UZB	Uzynbulak	4.69	50	Pg	Pg	05 20 55.8	-0.3
	3.3nm,0.4s						
UZB				Lg	Lg	05 21 57.7	
	3.5nm,0.6s						
MNBS	Baschi	4.99	39	eP	Pg	05 21 00.2	-1.5
	4.4nm,0.5s						
MNBS				eS	Sg	05 22 06.1	-0.3
	2.9nm,0.4s						
MNBS	Baschi	4.99	39	Pg	Pg	05 21 00.3	-1.5
	4.4nm,0.5s						
MNBS				Lg	Lg	05 22 06.1	
	2.9nm,0.4s						
PDGK	Podgornoye	5.08	51	⇓Pg	Pg	05 21 07.0	+3.6
	1.7nm,0.6s						
PDGK				⇓Lg	Lg	05 22 13.1	
	10nm,0.9s						
KTMS	Ketmen	5.67	54	eP	Pg	05 21 12.4	-2.3
	1.0nm,0.1s						
KTMS				eS	Sg	05 22 26.9	-1.1
	4.7nm,0.1s						

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*IDC **06** 05:24:58.6±3.8, 68°.24N×162°.86W, h0km, mb3.3/3, mb1 3.7/4, mb1mx3.3/50, mbtmp3.4/4, ML3.9/2, Error ellipse: s-maj=61.8km s-min=49.2km az=173.0*

*AEIC **06** 05:25:00.5±1.2, 67°.63N±0°.06×162°.2W±0°.2, h2km±6km, ML3.1/31, Error ellipse: s-maj=9.0km s-min=7.3km az=47.0*

*NEIC **06** 05:25:02.6±1.5, 67°.75N±0°.09×162°.5W±0°.2, h32km±7km, Error ellipse: s-maj=14.6km s-min=9.6km az=151.0*

ISC 06 05:25:01.3±0.8**, 67°.71N**±0°.06×**162°.30W**±0°.06**, h10km, n40,** σ**1s.15**/45**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.42	327		Sb	05 25 17.1	0.0
RDOG	Red Dog Mine	0.42	327	Pg	Pb	05 25 10.4	-0.4
ANM	Nome	3.40	203		Pn	05 25 54.0	-0.3
ANM					Sn	05 26 34.7	+0.2
IM03		3.79	113		Pn	05 25 59.6	0.0
COLD	Coldfoot	4.68	90		Pn	05 26 12.4	+0.5
TOLK	Toolik Lake Re	4.84	73	P	Pn	05 26 16.0	+1.8
	baz=264						
TOLK				S	Sn	05 27 09.7	-0.5
	baz=264						
TOLK	Toolik Lake Re	4.84	73		Pn	05 26 15.2	+1.1
MLY	Manley	5.37	115		Pn	05 26 20.7	-0.7
TTA	Tatalina	5.47	148		Pn	05 26 22.9	+0.1
TT01	Tatalina	5.49	148		Pn	05 26 23.0	0.0
GAMB	Gambell	5.53	229		Pn	05 26 21.9	-1.6
CHUM	Lake Minchumin	5.62	128		Pn	05 26 25.2	+0.5
BPAW	Bear Paw Mtn.	5.88	123		Pn	05 26 28.1	-0.3
NEA	Nenana	6.21	114		Pn	05 26 32.4	-0.5
KTH	Kantishna Hill	6.28	126		Pn	05 26 33.9	0.0
KTH					Sn	05 27 46.2	+0.4
MDM	Murphy Dome	6.30	109		Pn	05 26 34.6	+0.5
PPLA	Purkeypile	6.42	134		Pn	05 26 35.5	-0.3
TCOL	CIGO, UAF Yank	6.47	109	P	Pn	05 26 37.3	+0.9
	baz=302						
TCOL	CIGO, UAF Yank	6.47	109		Pn	05 26 37.1	+0.7
COLA	College	6.48	109		Pn	05 26 36.7	+0.2
POKR	Poker Plat Res	6.50	107	P	Pn	05 26 37.9	+1.0
	baz=300						
POKR	Poker Plat Res	6.50	107		Pn	05 26 36.6	-0.3
TRF	Thorofare Moun	6.55	125		Pn	05 26 37.7	-0.1
CCB	Clear Creek Bu	6.62	111		Pn	05 26 39.0	+0.5
WRH	Wood River Hil	6.62	113		Pn	05 26 38.7	+0.2
FYU	Fort Yukon	6.74	92		Pn	05 26 40.4	+0.3
BM03	Burnt Mountain	6.77	84		Pn	05 26 41.4	+0.8
MCK	McKinley	6.79	120		Pn	05 26 41.0	0.0
IL31		6.88	108		Pn	05 26 42.0	0.0
ILAR	Eielson Array	6.88	108	Pn	Pn	05 26 41.7	-0.4
	5.7nm,0.3s,baz=303,slow=14,SNR=287						
ILAR				Sn	Sn	05 28 00.3	0.0
	0.2nm,0.3s,baz=309,slow=22,SNR=1.7						
PRP	Porcupine Dome	7.02	100		Pn	05 26 43.9	-0.2
HDA	Harding Lake	7.06	111	P	Pn	05 26 44.9	+0.4
	baz=304						
HDA	Harding Lake	7.06	111		Pn	05 26 44.2	-0.4
DHY	Denali Highway	7.76	120		Pn	05 26 53.5	-0.7
BC03		9.71	109		Pn	05 27 20.3	-0.5
EPYK	Eagle Plains	10.05	86		Pn	05 27 26.2	+0.7
INK	Inuvik	10.76	74	Pn	Pn	05 27 34.3	-0.8
	0.2nm,0.3s,baz=284,slow=9.1,SNR=11						
INK				Sn	Sn	05 29 29.2	-6.1
	0.2nm,0.3s,baz=0.1,slow=8.5,SNR=3.2						
YKA	Yellowknife Ar	20.30	82	P	P	05 29 36.6	-0.1
	0.7nm,0.6s,baz=302,slow=11,SNR=9.4						
PDAR	Pinedale Array	37.30	105	P	P	05 32 15.1	+1.7
	0.3nm,0.6s,baz=318,slow=6.6,SNR=2.7						
TXAR	Lajitas Array	51.40	107	P	P	05 34 07.3	+1.2
	0.4nm,0.6s,baz=332,slow=5.5,SNR=7.0						

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*IDC **06** 05:43:44.8±4.7, 17°.70S×178°.69W, h524km±57km, mb3.5/12, mb1 3.8/13, mb1mx3.4/41, mbtmp4.4/13, Error ellipse: s-maj=26.1km s-min=19.1km az=178.0*

*NEIC **06** 05:43:45.6±1.5, 17°.7S±0°.1×178°.72W±0°.10, h538km±7km, mb4.4/51, Error ellipse: s-maj=15.0km s-min=13.3km az=184.0*

ISC 06 05:43:46.4±0.5**, 17°.7S**±0°.1×**178°.7W**±0°.1**, h547km, n69,** σ**1s.29**/64**, mb4.3**/35**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.12	268	P	P	05 45 05.2	+3.2
AFI	Afiamalu	7.62	62	P	P	05 45 40.0	-0.4
DZM	Mont Dzumac	14.66	250	P	P	05 46 52.1	-0.5
	1.2nm,0.3s,baz=66,slow=10,SNR=13						
KNTN	Kanton	16.30	26	P	P	05 47 08.5	-0.5
KNTN				IAmb	IAmb	05 47 10.7	
	comp=Z,38nm,1.4s						
OUZ	Omahuta	18.79	200	P	P	05 47 33.2	+1.8
OUZ				IAmb	IAmb	05 47 42.1	
	comp=Z,11nm,1.1s						
URZ	Urewera	20.85	189	P	P	05 47 48.1	-1.9
	comp=Z,4.9nm,0.6s,baz=266,slow=3.8,SNR=8.2						
URZ	Urewera	20.85	189	IAmb	IAmb	05 48 03.4	
	comp=Z,42nm,1.4s						
THZ	Tophouse	25.08	195	P	P	05 48 27.5	-0.3
KHZ	Kahutara	25.55	193	P	P	05 48 29.5	-2.4
LTZ	Lake Taylor	26.19	195	P	P	05 48 36.1	-1.5
FOZ	Fox Glacier	27.56	198	P	P	05 48 49.0	-0.5
WKZ	Wanaka	28.98	198	P	P	05 49 00.1	-1.8
EIDS	Eidsvold	29.11	249	P	P	05 49 03.1	-0.3
EIDS				IAmb	IAmb	05 49 03.7	
	comp=Z,6.0nm,0.7s						
MLZ	Mavora Lakes	29.74	199	P	P	05 49 07.1	-1.4
ARMA	Armidale	29.84	239	P	P	05 49 09.1	-0.7
ARMA				IAmb	IAmb	05 49 11.1	
	comp=Z,9.7nm,0.7s						
CTA	Charters Tower	33.23	260	P	P	05 49 38.7	-0.1
	comp=Z,1.4nm,0.5s,baz=76,slow=12,SNR=5.6						
COEN	Coen	36.85	270	P	P	05 50 08.7	-0.2
COEN				IAmb	IAmb	05 50 26.3	
	comp=Z,24nm,1.3s						
TOO	Toolangi	37.12	230	P	P	05 50 11.5	+0.7
TOO				IAmb	IAmb	05 50 11.8	
	comp=Z,17nm,0.9s						
STKA	Stephens Creek	38.52	241	P	P	05 50 22.9	+0.5
	comp=Z,5.6nm,0.5s,baz=87,slow=9.3,SNR=16						
STKA	Stephens Creek	38.52	241	P	P	05 50 22.3	0.0
KHU	Kahuku	43.12	33	P	P	05 50 59.9	+0.7
BBOO	Buckleboo	43.30	241	P	P	05 51 00.2	-0.1
BBOO				IAmb	IAmb	05 51 00.6	
	comp=Z,16nm,0.6s						
AIN	Ainahou	43.30	33	P	P	05 51 00.3	-0.3
MWH	Moku‘aweowe	43.32	33	P	P	05 50 59.2	-1.9
HUH	Hualalai	43.37	32	P	P	05 50 58.3	-2.9
MLOA	Mauna Loa Obse	43.38	33	P	P	05 50 57.7	-3.7
HMH	Humu‘ula Sheep	43.48	33	P	P	05 50 59.2	-2.9
WR0	Warramunga Arr	44.23	259	P	P	05 51 07.3	-0.4
WR0				IAmb	IAmb	05 51 22.8	
	comp=Z,12nm,1.4s						
WR0					pwP	05 52 48.2	-0.8
WB0	Warramunga Arr	44.39	260	P	P	05 51 07.8	-1.1
WB0				IAmb	IAmb	05 51 08.7	
	comp=Z,5.6nm,0.9s						
WB0					pP	05 52 48.6	+1.7
WB2	Warramunga Arr	44.41	259	P	P	05 51 08.3	-0.8
WB2				IAmb	IAmb	05 51 09.0	
	comp=Z,4.8nm,0.6s						
WRAB	Tennant Creek	44.42	259		P	05 51 03.3	-5.8
WRAB				IAmb	IAmb	05 51 14.8	
	comp=Z,12nm,0.5s						
WRA	Warramunga Arr	44.42	259	P	P	05 51 08.4	-0.8
	comp=Z,2.6nm,0.6s,baz=95,slow=6.8,SNR=17						
AS31	Alice Springs	44.61	254	P	P	05 51 10.2	-0.3
AS31				IAmb	IAmb	05 51 10.8	
	comp=Z,9.1nm,0.6s						
ASAR	Alice Springs	44.61	254	P	P	05 51 10.2	-0.4
	comp=Z,32nm,0.6s,baz=88,slow=8.2,SNR=394						
FORT	Forrest	49.88	244	P	P	05 51 49.3	-0.7
FORT				IAmb	IAmb	05 51 49.8	
	comp=Z,21nm,0.7s						
KNRA	Kununurra	50.26	264	P	P	05 51 52.5	-0.4
KNRA				IAmb	IAmb	05 51 54.8	
	comp=Z,45nm,1.5s						
FITZ	Fitzroy Crossi	52.82	260	P	P	05 52 11.4	0.0
	comp=Z,3.1nm,0.8s,baz=54,slow=4.8,SNR=8.3						
FITZ	Fitzroy Crossi	52.82	260	IAmb	IAmb	05 52 13.6	
	comp=Z,12nm,1.4s						
PSAB2	Pilbara Seismi	57.71	255	P	P	05 52 44.6	-0.9
PSAB2				IAmb	IAmb	05 52 58.2	
	comp=Z,18nm,1.4s						
PSAB3	Pilbara Seismi	57.71	255	P	P	05 52 45.0	-0.4
PSAB3				IAmb	IAmb	05 52 46.0	
	comp=Z,24nm,1.2s						
PSA00	Pilbara Seismi	57.72	255	P	P	05 52 44.5	-1.0
PSA00				IAmb	IAmb	05 52 45.3	
	comp=Z,7.7nm,0.7s						
PSAA2	Pilbara Seismi	57.72	255	P	P	05 52 44.4	-1.1
PSAA2				IAmb	IAmb	05 52 56.6	
	comp=Z,24nm,1.4s						
PSAD1	Pilbara Seismi	57.75	255	P	P	05 52 44.7	-1.0
PSAD1				IAmb	IAmb	05 52 45.5	
	comp=Z,7.0nm,0.6s						
PSAC1	Pilbara Seismi	57.76	255	P	P	05 52 44.9	-0.9
MJAR	Matsushiro Arr	67.56	323	P	P	05 53 48.7	0.0
	comp=Z,1.8nm,0.6s,baz=141,slow=5.9,SNR=6.1						
QSPA	South Pole Qui	72.39	180	P	P	05 54 17.5	+0.5
PEA0B	Petropavlovsk-	73.38	345	P	P	05 54 21.2	-1.4
PEA0B				IAmb	IAmb	05 54 27.1	
	comp=Z,18nm,1.4s						
PETK	Petropavlovsk-	73.38	345	P	P	05 54 23.0	+0.4
	comp=Z,2.8nm,0.7s,baz=141,slow=9.6,SNR=7.5						
PNTR	Pine Nut	78.94	43	P	P	05 54 55.1	+1.3
NVAR	Mina Array Bea	79.43	44	P	P	05 54 57.9	+1.4
	comp=Z,1.4nm,0.6s,baz=224,slow=10,SNR=7.0						
MOD	Modoc Plateau	80.06	40	P	P	05 55 00.8	+1.2
WVOR	Wild Horse Val	81.39	40	P	P	05 55 07.9	+1.5
J08A	Circle Bar Ran	82.00	40	P	P	05 55 11.0	+1.5
GHO	Glory Hole Cre	82.64	14	P	P	05 55 12.5	+0.3
GHO				IAmb	IAmb	05 55 13.4	
	comp=Z,9.8nm,1.0s						
SCM	Sheep Creek Mo	83.06	14	IAmb	IAmb	05 55 15.5	
	comp=Z,8.5nm,0.8s						
GLB	Gilahina Butte	83.61	16	IAmb	IAmb	05 55 17.8	
	comp=Z,4.2nm,0.6s						
TRF	Thorofare Moun	83.83	12	P	P	05 55 17.8	-0.4
TRF				IAmb	IAmb	05 55 19.0	
	comp=Z,6.1nm,0.8s						
RND	Reindeer	84.09	13	P	P	05 55 19.3	-0.2
RND				IAmb	IAmb	05 55 20.1	
	comp=Z,5.5nm,0.8s						
DHY	Denali Highway	84.13	14	P	P	05 55 19.5	-0.2
ILAR	Eielson Array	85.71	13	P	P	05 55 26.4	-0.8
	comp=Z,0.8nm,0.4s,baz=223,slow=5.0,SNR=17						
TX31	Lajitas Ar. Si	86.08	58	IAmb	IAmb	05 55 32.5	
	comp=Z,5.9nm,0.8s						
TX32	Lajitas Array	86.08	58	P	P	05 55 31.6	+1.7
TXAR	Lajitas Array	86.08	58	P	P	05 55 31.7	+1.8
	comp=Z,1.6nm,0.8s,baz=218,slow=6.3,SNR=23						
SNOW	Snow King Moun	86.89	43	P	P	05 55 35.1	+1.5
PDAR	Pinedale Array	87.35	44	P	P	05 55 36.4	+0.6
	comp=Z,0.9nm,0.5s,baz=217,slow=3.2,SNR=13						
BUR08	Bucovina Ar. S	144.27	332		PKPab	06 02 20.9	+0.4
BRTR	Keskin Array B	144.43	315	PKP	PKPbc	06 02 21.2	+0.2
	comp=Z,0.8nm,0.8s,baz=108,slow=4.0,SNR=4.4						
CLL	Collm	145.17	347	i PKPbc	PKPab	06 02 23.7	0.0
	comp=Z,7.0nm,0.8s						
GERES	GERESS Array B	147.31	345	PKPbc	PKPbc	06 02 29.0	+0.2
	comp=Z,1.4nm,0.6s,baz=33,slow=3.2,SNR=9.9						

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*IDC **06** 05:47:00.2±0.7, 9°.98S×160°.91E, h0km, mb4.2/16, mb1 4.4/17, mb1mx4.3/41, mbtmp4.2/17, ML3.9/1, MS3.6/6, Ms1 3.6/6, ms1mx3.2/32, Error ellipse: s-maj=17.7km s-min=15.9km az=79.0*

*NEIC **06** 05:47:05.7±1.3, 10°.02S±0°.09×160°.88E±0°.09, h35km±7km, mb4.5/27, Error ellipse: s-maj=15.5km s-min=9.7km az=223.0*

ISC 06 05:47:05.7±0.5**, 9°.98S**±0°.07×**160°.90E**±0°.08**, h35km, n52,** σ**0s.82**/44**, mb4.5**/29**, MS3.6**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.08	300	Pn	Pn	05 47 23.3	-1.1
	734nm,0.3s,baz=145,slow=7.1,SNR=87						
HNR				Sn	Sn	05 47 39.2	+1.0
	5μm,0.3s,baz=351,slow=23,SNR=39						
DZM	Mont Dzumac	13.14	157	ePn	Pn	05 50 10.4	+0.4
	12nm,0.7s						
DZM				eLR	LR	05 53 15.0	
	comp=Z,363nm,25.7s						
DZM	Mont Dzumac	13.14	157	Pn	Pn	05 50 09.9	-0.1
	0.6nm,0.3s,baz=336,slow=6.3,SNR=14						
DZM				LR	LR	05 54 09.8	
	comp=Z,309nm,18.6s,baz=5.0,slow=33						
DZM	Mont Dzumac	13.14	157		Pn	05 50 09.6	-0.5
PMG	Port Moresby	13.55	271	LR	LR	05 55 09.6	
	comp=Z,555nm,19.1s,baz=104,slow=36						
PATS	Pohnpei	16.91	351	Pn	Pn	05 50 60.0	+0.3
PATS				IAmb	IAmb	05 51 15.9	
	comp=Z,64nm,1.4s						
CTA	Charters Tower	17.33	233	P	Pn	05 51 07.6	+2.6
	comp=Z,0.4nm,0.3s,baz=59,slow=13,SNR=14						
EIDS	Eidsvold	17.92	210	P	Pn	05 51 14.0	+1.8
FUNA	Funafuti	18.12	87		Pn	05 51 15.3	+0.6
FUNA				IAmb	IAmb	05 51 17.6	
	comp=Z,41nm,0.9s						
ARMA	Armidale	22.09	202	P	P	05 51 57.7	-0.3
SMPI	Sarmi	23.43	288	P	P	05 52 12.2	+0.2
	comp=Z,42nm,0.4s						
WB2	Warramunga Arr	27.45	246	P	P	05 52 49.6	+1.0
WB2				IAmb	IAmb	05 52 56.3	
	comp=Z,11nm,1.0s						
WRA	Warramunga Arr	27.46	246	P	P	05 52 48.5	-0.2
	comp=Z,5.0nm,0.9s,baz=75,slow=9.3,SNR=7.3						
STKA	Stephens Creek	28.18	217	P	P	05 52 55.9	+0.9
	comp=Z,3.2nm,0.7s,baz=16,slow=13,SNR=1.9						
STKA				LR	LR	06 03 36.7	
	comp=Z,142nm,18.1s,baz=35,slow=35						
ASAR	Alice Springs	29.13	239	P	P	05 53 02.9	-0.7
	comp=Z,1.0nm,0.5s,baz=67,slow=9.7,SNR=5.0						
KNRA	Kununurra	31.81	256	P	P	05 53 23.6	-3.7
BKZ	Black Stump Fm	32.23	157	P	P	05 53 30.5	-0.3
BBOO	Buckleboo	32.25	222	P	P	05 53 31.4	+0.4
FITZ	Fitzroy Crossi	35.09	253	P	P	05 53 55.1	-0.7
	comp=Z,4.9nm,0.8s,baz=87,slow=3.6,SNR=3.6						
FITZ	Fitzroy Crossi	35.09	253	P	P	05 53 54.6	-1.3
PPT	Papeete	48.58	105	LR	LR	06 12 11.2	
	comp=Z,60nm,20.1s,baz=344,slow=31						
PPT2	Papeete2	48.58	105	eLR	LR	06 09 38.7	
	comp=Z,127nm,23.0s						
TBI	Tubuai	49.15	112	eLR	LR	06 09 53.8	
	comp=Z,120nm,27.0s						
JNU	Nakatsue	51.53	328	LR	LR	06 15 53.0	
	comp=Z,21nm,18.7s,baz=178,slow=34						
KSRS	Korea Array	56.40	329	P	P	05 56 43.9	+0.2
	comp=Z,1.3nm,0.6s,baz=139,slow=6.9,SNR=5.3						
KSRS				LR	LR	06 18 28.5	
	comp=Z,25nm,20.7s,baz=140,slow=34						
USRK	Ussuriysk Ar.	59.96	336	P	P	05 57 08.8	+0.3
	comp=Z,5.5nm,0.9s,baz=143,slow=6.2,SNR=4.9						
PETK	Petropavlovsk-	62.90	358	P	P	05 57 28.6	+0.5
	comp=Z,1.4nm,0.6s,baz=170,slow=7.3,SNR=4.7						
CMAR	Chiang Mai Arr	67.33	295	P	P	05 57 57.8	+0.1
	comp=Z,0.5nm,0.3s,baz=126,slow=4.6,SNR=1.2						
VNDA	Vanda	67.52	180	P	P	05 57 57.4	-0.5
	comp=Z,1.1nm,0.7s,baz=334,slow=6.9,SNR=12						
VNDA	Vanda	67.52	180	P	P	05 57 57.5	-0.3
SONM	Songino Array	75.04	325	P	P	05 58 43.7	-0.2
	comp=Z,3.5nm,0.7s,baz=140,slow=5.4,SNR=14						
QSPA	South Pole Qui	80.01	180	P	P	05 59 10.7	-0.7
QSPA				IAmb	IAmb	05 59 11.5	
	comp=Z,8.7nm,0.9s						
KTH	Kantishna Hill	81.95	20	P	P	05 59 21.4	-0.1
KTH				IAmb	IAmb	05 59 21.8	
	comp=Z,4.1nm,0.9s						
TRF	Thorofare Moun	82.09	20	P	P	05 59 22.7	+0.2
TRF				IAmb	IAmb	05 59 24.3	
	comp=Z,4.2nm,1.0s						
RND	Reindeer	82.55	20	P	P	05 59 25.2	+0.5
RND				IAmb	IAmb	05 59 40.1	
	comp=Z,10.0nm,1.4s						
MLY	Manley	83.00	19	P	P	05 59 26.5	-0.5
MLY				IAmb	IAmb	05 59 28.0	
	comp=Z,2.9nm,0.8s						
GLB	Gilahina Butte	83.20	23	P	P	05 59 29.4	+1.3
GLB				IAmb	IAmb	05 59 39.6	
	comp=Z,5.3nm,1.1s						
VRDI	Verde Repeater	83.21	24	P	P	05 59 28.6	+0.2
VRDI				IAmb	IAmb	05 59 31.0	
	comp=Z,3.3nm,0.8s						
WRH	Wood River Hil	83.49	20	IAmb	IAmb	05 59 29.3	
	comp=Z,4.6nm,1.2s						
BALM	Baldy	83.55	24	P	P	05 59 29.0	-0.9
BALM				IAmb	IAmb	05 59 32.1	
	comp=Z,4.1nm,0.9s						
COLA	College	83.83	20	P	P	05 59 31.3	+0.2
BARN	Barnard Glacie	83.84	24	P	P	05 59 32.7	+1.1
HDA	Harding Lake	83.84	20	IAmb	IAmb	05 59 44.6	
	comp=Z,5.9nm,1.2s						
MAW	Mawson	83.89	202	P	P	05 59 31.6	+0.1
	comp=Z,5.5nm,0.6s,baz=104,slow=8.4,SNR=5.9						
MAW	Mawson	83.89	202	P	P	05 59 31.4	-0.1
CTGM	Chitina Glacie	83.92	25	P	P	05 59 29.7	-2.2
ILAR	Eielson Array	84.09	20	P	P	05 59 31.8	-0.7
	comp=Z,1.4nm,0.8s,baz=248,slow=5.0,SNR=11						
DAWY	Dawson	86.34	22	P	P	05 59 44.6	+0.7
DAWY				IAmb	IAmb	05 59 45.9	
	comp=Z,3.8nm,1.0s						
NVAR	Mina Array Bea	89.02	51	P	P	05 59 58.5	+0.9
	comp=Z,0.9nm,0.8s,baz=229,slow=7.7,SNR=5.7						
MKAR	Makanchi Array	89.51	318	P	P	05 59 58.4	-1.0
	comp=Z,0.3nm,0.4s,baz=95,slow=6.1,SNR=4.8						
YKA	Yellowknife Ar	96.24	28	P	P	06 00 29.4	-0.7
	comp=Z,0.8nm,0.7s,baz=256,slow=4.3,SNR=12						
PDAR	Pinedale Array	96.36	48	P	P	06 00 31.8	+0.4
	comp=Z,0.4nm,0.7s,baz=252,slow=2.8,SNR=4.6						

IDC 06 06:01:03.5±123.0**, 20.̊49N×144.̊48E, h0km, Error ellipse: s-maj=243.9km s-min=23.6km az=101.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**21.03**	**92**	H	H	06 27 23.0	
	baz=279,slow=75,SNR=465						
H11S1	**WAKE ISLAND Hy**	**21.04**	**92**	H	H	06 27 23.6	
	baz=279,slow=75,SNR=691						
H11S2	**WAKE ISLAND Hy**	**21.05**	**92**	H	H	06 27 24.1	
	baz=279,slow=75,SNR=542						
H11N1	**WAKE ISLAND Hy**	**21.06**	**88**	H	H	06 27 25.6	
	baz=276,slow=75,SNR=1293						
H11N2	**WAKE ISLAND Hy**	**21.06**	**88**	H	H	06 27 25.9	
	baz=276,slow=75,SNR=1133						
H11N3	**WAKE ISLAND Hy**	**21.08**	**88**	H	H	06 27 26.9	
	baz=276,slow=75,SNR=777						
H03N2	**Juan Fernandez**	**139.49**	**118**	H	H	08 55 31.2	
	baz=266,slow=74,SNR=14						
H03N3	**Juan Fernandez**	**139.50**	**118**	H	H	08 55 33.2	
	baz=266,slow=74,SNR=21						
H03N1	**Juan Fernandez**	**139.51**	**118**	H	H	08 55 33.1	
	baz=266,slow=74,SNR=25						

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*RSPR **06** 06:02:28.4, 19.̊14N×66.̊49W, h31km±7km, MD3.1/13*
*NEIC **06** 06:02:28.2±0.9, 19.̊05N±0.̊06×66.̊49W±0.̊03, h35km±53km, Error ellipse: s-maj=9.4km s-min=4.6km az=185.0*
ISC 06 06:02:28.5±1.5**, 19.̊07N**±0.̊07×**66.̊47W**±0.̊03**, h35km, n58, σ0.̊62**/74**, 14C-3D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.59**	**186**	⇑eP	**Pn**	**06 02 40.1**	**-0.2**
EMPR	**Esperanza - Ma**	**0.59**	**186**	eS	**Sn**	**06 02 49.3**	**+0.6**
EMPR	**Esperanza - Ma**	**0.59**	**186**		**Pn**	**06 02 40.1**	**-0.2**
EMPR					**Sn**	**06 02 49.3**	**+0.6**
AOPR	**Arecibo Observ**	**0.76**	**201**	⇑eP	**Pn**	**06 02 41.9**	**-0.9**
AOPR	**Arecibo Observ**	**0.76**	**201**	eS	**Sn**	**06 02 52.7**	**-0.4**
AOPR	**Arecibo Observ**	**0.76**	**201**		**Pn**	**06 02 41.9**	**-0.9**
AOPR					**Sn**	**06 02 52.7**	**-0.4**
AGPR	**Aguadilla, PR**	**0.85**	**226**	⇑eP	**Pn**	**06 02 42.3**	**-1.7**
AGPR	**Aguadilla, PR**	**0.85**	**226**	eS	**Sn**	**06 02 54.4**	**-0.8**
AGPR	**Aguadilla, PR**	**0.85**	**226**		**Pn**	**06 02 42.3**	**-1.7**
AGPR					**Sn**	**06 02 54.4**	**-0.8**
CBYP	**Canovanas**	**0.98**	**144**	⇑eP	**Pn**	**06 02 45.2**	**-0.6**
CBYP	**Canovanas**	**0.98**	**144**	eS	**Sn**	**06 02 58.8**	**+0.3**
CBYP	**Canovanas**	**0.98**	**144**		**Pn**	**06 02 45.2**	**-0.6**
CBYP					**Sn**	**06 02 58.8**	**+0.3**
SJG	**San Juan**	**1.00**	**162**		**Pn**	**06 02 45.5**	**-0.4**
OBIP	**Obispado Ponce**	**1.03**	**187**	⇓eP	**Pn**	**06 02 46.1**	**-0.3**
OBIP	**Obispado Ponce**	**1.03**	**187**	eS	**Sn**	**06 02 59.8**	**+0.3**
OBIP	**Obispado Ponce**	**1.03**	**187**		**Pn**	**06 02 46.1**	**-0.3**
OBIP					**Sn**	**06 02 59.8**	**+0.3**
LSP	**Las Mesas**	**1.06**	**214**	⇑eP	**Pn**	**06 02 46.2**	**-0.7**
LSP	**Las Mesas**	**1.06**	**214**	eS	**Sn**	**06 03 00.6**	**+0.1**
LSP	**Las Mesas**	**1.06**	**214**		**Pn**	**06 02 46.2**	**-0.7**
LSP					**Sn**	**06 03 00.6**	**+0.1**
MPR	**Mayaguez**	**1.06**	**217**		**Pn**	**06 02 46.2**	**-0.6**
HUMP	**Col San Antoni**	**1.09**	**147**	⇑eP	**Pn**	**06 02 46.9**	**-0.4**
HUMP	**Col San Antoni**	**1.09**	**147**	eS	**Sn**	**06 03 01.1**	**0.0**
HUMP	**Col San Antoni**	**1.09**	**147**		**Pn**	**06 02 46.9**	**-0.4**
HUMP					**Sn**	**06 03 01.1**	**0.0**
PDPR	**Patillas Dam,**	**1.12**	**158**	⇓eP	**Pn**	**06 02 47.5**	**-0.2**
PDPR	**Patillas Dam,**	**1.12**	**158**	eS	**Sn**	**06 03 02.3**	**+0.3**
PDPR	**Patillas Dam,**	**1.12**	**158**		**Pn**	**06 02 47.5**	**-0.2**
PDPR					**Sn**	**06 03 02.3**	**+0.3**
IGPR	**InterUniversit**	**1.15**	**163**	⇑eP	**Pn**	**06 02 47.8**	**-0.2**
IGPR	**InterUniversit**	**1.15**	**163**	eS	**Sn**	**06 03 02.8**	**+0.3**
IGPR	**InterUniversit**	**1.15**	**163**		**Pn**	**06 02 47.7**	**-0.3**
IGPR	**InterUniversit**	**1.15**	**163**		**Sn**	**06 03 02.8**	**+0.3**
GBPR	**Guanica, Bosqu**	**1.15**	**200**	⇑eP	**Pn**	**06 02 48.1**	**0.0**
GBPR	**Guanica, Bosqu**	**1.15**	**200**	eS	**Sn**	**06 03 04.0**	**+1.3**
GBPR	**Guanica, Bosqu**	**1.15**	**200**		**Pn**	**06 02 48.1**	**0.0**
GBPR					**Sn**	**06 03 04.0**	**+1.3**
ICMP	**Isla Caja de M**	**1.17**	**183**	⇑eP	**Pn**	**06 02 48.5**	**+0.1**
ICMP	**Isla Caja de M**	**1.17**	**183**	eS	**Sn**	**06 03 04.3**	**+1.1**
ICMP	**Isla Caja de M**	**1.17**	**183**		**Pn**	**06 02 48.5**	**+0.1**
ICMP					**Sn**	**06 03 04.3**	**+1.1**
CRPR	**Cabo Rojo, PR**	**1.22**	**210**	⇑eP	**Pn**	**06 02 48.3**	**-0.7**
CRPR	**Cabo Rojo, PR**	**1.22**	**210**	eS	**Sn**	**06 03 04.2**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.22**	**210**		**Pn**	**06 02 48.3**	**-0.7**
CRPR					**Sn**	**06 03 04.2**	**0.0**
MLPR	**Magueyes Islan**	**1.22**	**207**	⇑eP	**Pn**	**06 02 48.5**	**-0.6**
MLPR	**Magueyes Islan**	**1.22**	**207**	eS	**Sn**	**06 03 04.1**	**-0.2**
MLPR	**Magueyes Islan**	**1.22**	**207**		**Pn**	**06 02 48.5**	**-0.6**
MLPR					**Sn**	**06 03 04.1**	**-0.2**
MTP	**Monte Pirata**	**1.30**	**138**	⇑eP	**Pn**	**06 02 49.6**	**-0.5**
MTP	**Monte Pirata**	**1.30**	**138**	eS	**Sn**	**06 03 06.3**	**+0.1**
MTP	**Monte Pirata**	**1.30**	**138**		**Pn**	**06 02 49.6**	**-0.5**
MTP					**Sn**	**06 03 06.3**	**+0.1**
CUPR	**Culebra, Puert**	**1.35**	**124**	⇓eP	**Pn**	**06 02 50.0**	**-0.9**
CUPR	**Culebra, Puert**	**1.35**	**124**	eS	**Sn**	**06 03 07.1**	**-0.6**
CUPR	**Culebra, Puert**	**1.35**	**124**		**Pn**	**06 02 50.0**	**-0.9**
CUPR					**Sn**	**06 03 07.1**	**-0.6**
STVI	**Saint Thomas**	**1.60**	**116**	⇑eP	**Pn**	**06 02 53.9**	**-0.4**
STVI	**Saint Thomas**	**1.60**	**116**	eS	**Sn**	**06 03 13.8**	**0.0**
STVI	**Saint Thomas**	**1.60**	**116**		**Pn**	**06 02 53.9**	**-0.4**
STVI					**Sn**	**06 03 13.8**	**0.0**
TBVI	**Tortola**	**1.87**	**110**	⇑eP	**Pn**	**06 02 57.9**	**-0.1**
TBVI	**Tortola**	**1.87**	**110**	eS	**Sn**	**06 03 20.1**	**-0.2**
TBVI	**Tortola**	**1.87**	**110**		**Pn**	**06 02 57.9**	**-0.1**
TBVI					**Sn**	**06 03 20.1**	**-0.2**
PCDR	**Punta Cana, DR**	**1.89**	**253**		**Pn**	**06 02 58.4**	**+0.1**
CDVI	**St. Croix**	**2.08**	**129**		**Pn**	**06 03 02.1**	**+1.2**
DR12	**Loma Pena Alta**	**2.77**	**265**		**Pn**	**06 03 10.8**	**+0.3**
SDDR	**Presa de Saban**	**4.56**	**270**		**Pn**	**06 03 36.3**	**+1.2**

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*IDC **06** 06:04:30.8±0.5, 19.̊03N×66.̊60W, h0km, mb4.2/22, mb1 4.4/22, mb1mx4.3/32, mbtmp4.2/22, MS3.5/9, Ms1 3.5/9, ms1mx3.2/26, Error ellipse: s-maj=16.0km s-min=10.7km az=64.0*
*OSPL **06** 06:04:33.4±0.5, 18.̊98N×66.̊27W, h2km±4km, ML4.1*
*NEIC **06** 06:04:34.5±1.9, 19.̊09N±0.̊04×66.̊47W±0.̊03, h20km±4km, Error ellipse: s-maj=5.4km s-min=3.8km az=171.0*
*RSPR **06** 06:04:36.4, 19.̊16N×66.̊49W, h23km±16km, MD3.9/16*
ISC 06 06:04:33.8±0.9**, 19.̊07N**±0.̊03×**66.̊48W**±0.̊02**, h18**km±4km**, n461, σ1.̊48**/458**, mb4.5**/58**, MS3.4**/7**, 24C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.59**	**184**	⇑eP	**Pn**	**06 04 48.1**	**+0.8**
EMPR	**Esperanza - Ma**	**0.59**	**184**	eS	**Sn**	**06 04 57.3**	**+0.8**
EMPR	**Esperanza - Ma**	**0.59**	**184**		**Pn**	**06 04 48.1**	**+0.8**
EMPR				Sg	**Sn**	**06 04 56.8**	**+0.3**
AOPR	**Arecibo Observ**	**0.77**	**200**	⇑eP	**Pn**	**06 04 50.1**	**+0.4**
AOPR	**Arecibo Observ**	**0.77**	**200**	⇑eP	**Pn**	**06 04 50.2**	**+0.5**
AOPR				eS	**Sn**	**06 05 00.8**	**0.0**
AOPR	**Arecibo Observ**	**0.77**	**200**		**Pn**	**06 04 50.1**	**+0.4**
AOPR				Sg	**Sn**	**06 05 00.5**	**-0.3**
AGPR	**Aguadilla, PR**	**0.85**	**225**	⇑eP	**Pg**	**06 04 50.6**	**+0.3**
AGPR	**Aguadilla, PR**	**0.85**	**225**		**Pg**	**06 04 50.3**	**0.0**
AGPR	**Aguadilla, PR**	**0.85**	**225**		**Pn**	**06 04 50.7**	**0.0**
AGPR	**Aguadilla, PR**	**0.85**	**225**	i P	**Pg**	**06 04 50.4**	**0.0**
AGPR				eS	**Sn**	**06 05 03.0**	**+0.3**
AGPR				IAML		06 05 13.2	
	comp=Z,4µm,0.4s						
UUPR	**Utuado, UPR, P**	**0.85**	**195**		**Pn**	**06 04 51.2**	**+0.4**
UUPR					**Sn**	**06 05 02.7**	**0.0**
CBYP	**Canovanas**	**0.99**	**143**	⇑eP	**Pg**	**06 04 53.3**	**+0.2**
CBYP	**Canovanas**	**0.99**	**143**	⇑eP	**Pg**	**06 04 53.3**	**+0.2**
CBYP				eS	**Sn**	**06 05 06.9**	**+0.4**
CBYP	**Canovanas**	**0.99**	**143**		**Pg**	**06 04 53.5**	**+0.3**
CBYP					**Sg**	**06 05 05.9**	**-0.3**
SJG	**San Juan**	**1.01**	**162**	Pn	**Pg**	**06 04 53.6**	**+0.3**
	comp=Z,138nm,0.3s,baz=232,slow=23,SNR=23						
SJG				Sn	**Sg**	**06 05 07.4**	**+0.8**
	comp=Z,488nm,0.3s,baz=272,slow=21,SNR=14						
SJG	**San Juan**	**1.01**	**162**		**Pg**	**06 04 54.0**	**+0.7**
OBIP	**Obispado Ponce**	**1.03**	**186**	⇑eP	**Pg**	**06 04 54.2**	**+0.4**
OBIP	**Obispado Ponce**	**1.03**	**186**	eS	**Sg**	**06 05 07.8**	**+0.4**
OBIP	**Obispado Ponce**	**1.03**	**186**		**Pg**	**06 04 54.2**	**+0.4**
OBIP					**Sg**	**06 05 07.8**	**+0.4**
MPR	**Mayaguez**	**1.06**	**216**		**Pn**	**06 04 53.8**	**+0.1**
MPR	**Mayaguez**	**1.06**	**216**	i P	**Pn**	**06 04 53.9**	**+0.1**
MPR				eS	**Sg**	**06 05 08.4**	**+0.1**
MPR				IAML		06 05 12.9	
	comp=Z,5µm,0.9s						
LSP	**Las Mesas**	**1.06**	**213**	⇑eP	**Pg**	**06 04 54.3**	**0.0**
LSP	**Las Mesas**	**1.06**	**213**		**Pg**	**06 04 54.3**	**0.0**
HUMP	**Col San Antoni**	**1.10**	**147**	⇑eP	**Pg**	**06 04 55.0**	**-0.1**
HUMP	**Col San Antoni**	**1.10**	**147**	⇑eP	**Pg**	**06 04 55.1**	**-0.1**
HUMP				eS	**Sg**	**06 05 09.7**	**0.0**
HUMP	**Col San Antoni**	**1.10**	**147**	Pn	**Pg**	**06 04 55.1**	**-0.1**
HUMP	**Col San Antoni**	**1.10**	**147**		**Sg**	**06 05 09.7**	**0.0**
PDPR	**Patillas Dam,**	**1.14**	**157**	⇑eP	**Pg**	**06 04 55.8**	**0.0**
PDPR	**Patillas Dam,**	**1.14**	**157**	⇑eP	**Pg**	**06 04 55.9**	**+0.1**
PDPR				eS	**Sg**	**06 05 10.6**	**-0.2**
PDPR	**Patillas Dam,**	**1.14**	**157**		**Pg**	**06 04 55.9**	**+0.1**
PDPR					**Sg**	**06 05 10.7**	**-0.1**
PDPR	**Patillas Dam,**	**1.14**	**157**	Pn	**Pg**	**06 04 55.8**	**0.0**
GBPR	**Guanica, Bosqu**	**1.16**	**199**	⇑eP	**Pg**	**06 04 56.1**	**0.0**
GBPR	**Guanica, Bosqu**	**1.16**	**199**	eS	**Sg**	**06 05 11.4**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.16**	**199**		**Pg**	**06 04 56.1**	**0.0**
GBPR					**Sg**	**06 05 11.4**	**+0.2**
IGPR	**InterUniversit**	**1.16**	**162**	⇑eP	**Pg**	**06 04 56.0**	**-0.3**
IGPR				eS	**Sg**	**06 05 11.2**	**-0.2**
IGPR	**InterUniversit**	**1.16**	**162**	⇑eP	**Pg**	**06 04 56.0**	**-0.3**
IGPR	**InterUniversit**	**1.16**	**162**		**Sg**	**06 05 11.2**	**-0.2**
IGPR	**InterUniversit**	**1.16**	**162**		**Pg**	**06 04 56.0**	**-0.3**
ICMP	**Isla Caja de M**	**1.18**	**182**	⇑eP	**Pg**	**06 04 56.6**	**-0.1**
ICMP	**Isla Caja de M**	**1.18**	**182**	eS	**Sg**	**06 05 12.3**	**+0.2**
ICMP	**Isla Caja de M**	**1.18**	**182**		**Pg**	**06 04 56.6**	**-0.1**
ICMP	**Isla Caja de M**	**1.18**	**182**		**Sg**	**06 05 12.3**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.22**	**209**	⇑eP	**Pb**	**06 04 56.7**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.22**	**209**	eS	**Sn**	**06 05 12.2**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.22**	**209**		**Pb**	**06 04 56.7**	**+0.5**
CRPR					**Sn**	**06 05 12.2**	**+0.4**
MLPR	**Magueyes Islan**	**1.22**	**206**	⇑eP	**Pb**	**06 04 56.6**	**+0.3**
MLPR	**Magueyes Islan**	**1.22**	**206**	eS	**Sn**	**06 05 12.0**	**+0.1**
MLPR	**Magueyes Islan**	**1.22**	**206**		**Pb**	**06 04 56.6**	**+0.3**
MLPR					**Sn**	**06 05 12.0**	**+0.1**
MTP	**Monte Pirata**	**1.31**	**138**	⇑eP	**Pb**	**06 04 57.7**	**-0.2**
MTP	**Monte Pirata**	**1.31**	**138**	eS	**Sb**	**06 05 14.9**	**+0.5**
MTP	**Monte Pirata**	**1.31**	**138**		**Pb**	**06 04 57.5**	**-0.3**
MTP	**Monte Pirata**	**1.31**	**138**		**Sb**	**06 05 14.9**	**+0.5**
CUPR	**Culebra, Puert**	**1.37**	**124**	⇑eP	**Pn**	**06 04 58.0**	**0.0**
CUPR	**Culebra, Puert**	**1.37**	**124**	eS	**Sb**	**06 05 16.0**	**0.0**
CUPR	**Culebra, Puert**	**1.37**	**124**		**Pn**	**06 04 58.1**	**+0.2**
CUPR	**Culebra, Puert**	**1.37**	**124**		**Sb**	**06 05 16.0**	**0.0**
STVI	**Saint Thomas**	**1.62**	**116**	⇑eP	**Pn**	**06 05 01.9**	**+0.5**
STVI	**Saint Thomas**	**1.62**	**116**	⇑eP	**Pb**	**06 05 02.1**	**-1.0**
STVI				eS	**Sn**	**06 05 21.8**	**0.0**
STVI	**Saint Thomas**	**1.62**	**116**		**Pb**	**06 05 02.1**	**-1.0**
STVI					**Sn**	**06 05 21.8**	**0.0**
STVI	**Saint Thomas**	**1.62**	**116**	Pn	**Pn**	**06 05 01.8**	**+0.4**
PCDR	**Punta Cana, DR**	**1.88**	**253**	⇑eP	**Pb**	**06 05 06.8**	**-0.8**
PCDR	**Punta Cana, DR**	**1.88**	**253**		**Pb**	**06 05 06.8**	**-0.8**
PCDR	**Punta Cana, DR**	**1.88**	**253**	i P	**Pb**	**06 05 06.7**	**-0.8**
PCDR				eS	**Sb**	**06 05 32.0**	**+1.3**
PCDR				IAML		06 05 44.5	
	comp=Z,2µm,0.6s						
TBVI	**Tortola**	**1.89**	**110**	eS	**Sn**	**06 05 28.1**	**-0.3**
TBVI	**Tortola**	**1.89**	**110**	⇑eP	**Pn**	**06 05 05.7**	**+0.7**
TBVI	**Tortola**	**1.89**	**110**		**Pn**	**06 05 05.7**	**+0.7**
TBVI					**Sn**	**06 05 28.1**	**-0.3**
CDVI	**St. Croix**	**2.10**	**129**	eP	**Pb**	**06 05 10.3**	**-0.9**
CDVI	**St. Croix**	**2.10**	**129**	eP	**Sb**	**06 05 36.4**	**-0.5**
CDVI	**St. Croix**	**2.10**	**129**		**Pb**	**06 05 10.2**	**-1.1**
DR12	**Loma Pena Alta**	**2.76**	**265**		**Pn**	**06 05 17.9**	**+0.8**
SDD	**Santo Domingo**	**3.31**	**260**		**Pn**	**06 05 26.1**	**+1.5**
BANI	**BANI**	**3.73**	**260**		**Pn**	**06 05 33.5**	**+2.9**
SKI	**Saint Kitts**	**3.96**	**115**	eP	**Pn**	**06 05 36.1**	**+2.4**
SKI	**Saint Kitts**	**3.96**	**115**	eP	**Pn**	**06 05 36.4**	**+2.8**
SKI	**Saint Kitts**	**3.96**	**115**	eS	**Sn**	**06 06 23.6**	**+4.0**
SKI	**Saint Kitts**	**3.96**	**115**		**Pn**	**06 05 36.1**	**+2.4**
SKOC	**St. Kitts, UWI**	**3.98**	**116**	eP	**Pn**	**06 05 36.7**	**+2.8**
SKOC				eS	**Sn**	**06 06 18.3**	**-1.8**
SC01	**Santiago de lo**	**4.02**	**276**	Pn	**Pn**	**06 05 36.4**	**+1.9**
NVDO	**Nevis, Disaste**	**4.16**	**117**	eP	**Pn**	**06 05 40.1**	**+3.7**
NVDO				eS	**Sn**	**06 06 23.0**	**-1.5**
SDDR	**Presa de Saban**	**4.54**	**270**		**Pn**	**06 05 43.9**	**+2.2**
ANWB	**Willy Bob**	**4.68**	**107**	eP	**Pn**	**06 05 44.7**	**+1.3**
ANWB	**Willy Bob**	**4.68**	**107**	eP	**Pn**	**06 05 44.7**	**+1.3**
ANWB	**Willy Bob**	**4.68**	**107**	eS	**Sn**	**06 06 40.0**	**+2.7**
ANWB	**Willy Bob**	**4.68**	**107**		**Pn**	**06 05 44.5**	**+1.0**
MLYT	**Lee's Yard**	**4.71**	**119**	eP	**Pn**	**06 05 48.5**	**+4.5**
MLYT	**Lee's Yard**	**4.71**	**119**	eS	**Sn**	**06 06 42.3**	**+4.2**
GRTK	**Grand Turk**	**4.99**	**300**	Pn	**Pn**	**06 05 45.9**	**-1.9**
ABD	**La Joyeuse, An**	**5.42**	**118**	eP	**Pn**	**06 05 56.1**	**+2.5**
ABD	**La Joyeuse, An**	**5.42**	**118**	eP	**Pn**	**06 05 58.2**	**+4.5**
ABD	**La Joyeuse, An**	**5.42**	**118**	eS	**Sn**	**06 07 00.6**	**+5.1**
CBE	**Ff, Capester**	**5.53**	**122**	eP	**Pn**	**06 05 56.0**	**+0.8**
CBE	**Ff, Capester**	**5.53**	**122**	eP	Pn	06 06 00.9	+5.7
CBE	**Ff, Capester**	**5.53**	**122**	eS	**Sn**	**06 06 53.6**	**-4.8**
PAPH	**Port-au-Prince**	**5.54**	**265**		**Pn**	**06 05 57.3**	**+2.0**
TDBA	**Terre de Bas,**	**5.63**	**124**	eP	**Pn**	**06 05 58.8**	**+2.2**
TDBA	**Terre de Bas,**	**5.63**	**124**	eP	Pb	06 06 03.9	-7.6
TDBA	**Terre de Bas,**	**5.63**	**124**	eS	**Sn**	**06 07 06.1**	**+5.3**
JAKH	**Jacmel**	**5.78**	**263**		**Pn**	**06 05 56.8**	**-1.9**
MAGL	**Barre de l'ile**	**5.86**	**121**	eP	**Pn**	**06 06 03.7**	**+4.0**
MAGL	**Barre de l'ile**	**5.86**	**121**	eP	Pn	06 06 05.7	+6.0
MAGL	**Barre de l'ile**	**5.86**	**121**	eS	**Sn**	**06 07 12.9**	**+6.5**
DWS	**Wesley**	**6.05**	**124**	eP	Pn	06 06 07.3	+5.0
DWS	**Wesley**	**6.05**	**124**	eS	**Sn**	**06 07 15.6**	**+4.5**
MDN	**Morne-Daniel**	**6.13**	**127**	eP	Pn	06 06 09.7	+6.2
SVN	**Savane Anatole**	**6.60**	**129**	eP	Pn	06 06 15.8	+5.8
GBMF	**Grand Be**	**6.63**	**129**	eP	Pn	06 06 16.5	+6.1
FDF	**Fort de France**	**6.69**	**129**	eP	**Pn**	**06 06 15.6**	**+4.4**
FDF	**Fort de France**	**6.69**	**129**	eS	**Sn**	**06 07 35.1**	**+8.2**
BIM	**Bigot**	**6.88**	**130**	eP	**Pn**	**06 06 15.3**	**+1.4**
BIM	**Bigot**	**6.88**	**130**	eP	**Pn**	**06 06 18.3**	**+4.4**
BIM	**Bigot**	**6.88**	**130**	eS	**Sn**	**06 07 27.0**	**-4.8**
LPMF	**Morne Lapointe**	**6.92**	**129**	eP	Pn	06 06 20.8	+6.4
MPOM	**Morne Pois Mar**	**7.09**	**130**	eP	Pn	06 06 23.2	+6.6
MPOM	**Morne Pois Mar**	**7.09**	**130**	eS	**Sn**	**06 07 39.6**	**+2.8**
SLBI	**Saint Lucia, B**	**7.29**	**133**	eP	**Pn**	**06 06 21.6**	**+2.2**
SLBI	**Saint Lucia, B**	**7.29**	**133**	eS	**Sn**	**06 07 39.3**	**-2.4**
SLAC	**Saint Lucia, A**	**7.43**	**133**	eP	**Pn**	**06 06 24.6**	**+3.3**
SVV	**Soufriere Volc**	**7.64**	**138**	eP	**Pn**	**06 06 26.6**	**+2.4**
SVB	**Belmont**	**7.65**	**138**	eP	**Pn**	**06 06 26.4**	**+2.1**
SVB	**Belmont**	**7.65**	**138**	eS	**Sn**	**06 07 52.0**	**+1.3**
SVB	**Belmont**	**7.65**	**138**	Pn	**Pn**	**06 06 26.1**	**+1.8**
SVCV	**St. Vincent, C**	**7.72**	**138**	eP	Pn	06 06 31.0	+5.7
GCMP	**Grenada, Carri**	**8.16**	**143**	eP	**Pn**	**06 06 29.0**	**-2.4**
GTBY	**Guantanamo Bay**	**8.18**	**277**	Pn	**Pn**	**06 06 31.4**	**-0.3**
GRGR	**Grenville**	**8.32**	**145**	eP	**Pn**	**06 06 33.4**	**-0.2**
GRGR	**Grenville**	**8.32**	**145**	Pn	**Pn**	**06 06 34.3**	**+0.7**
BBGH	**Gun Hill**	**8.89**	**131**	eP	Pn	06 06 50.7	+9.4
BBGH	**Gun Hill**	**8.89**	**131**	eS	Sn	06 08 37.4	+16
PCRV	**Puerto La Cruz**	**9.02**	**168**	Pn	**Pn**	**06 06 45.9**	**+2.6**
	comp=Z,3.0nm,0.3s,baz=352,slow=10.0,SNR=12						
PLCV	**Puerto La Cruz**	**9.05**	**168**		**Pn**	**06 06 45.9**	**+2.4**
URIC	**Uribia, Colomb**	**9.05**	**217**	eP	**Pn**	**06 06 42.9**	**-0.7**
URIC				eS	Sn	06 08 09.4	-16
URIC	**Uribia, Colomb**	**9.05**	**217**	Pn	**Pn**	**06 06 42.8**	**-0.7**
GUIV	**Guiria**	**9.33**	**153**	eP	**Pn**	**06 06 49.4**	**+2.0**
GUIV	**Guiria**	**9.33**	**153**	eS	**Sn**	**06 08 27.6**	**-4.4**
TRN	**Trinidad (W)**	**9.71**	**149**	eP	**Pn**	**06 06 56.1**	**+3.5**
TRN	**Trinidad (W)**	**9.71**	**149**	eS	**Sn**	**06 08 36.4**	**-4.8**
BAUV	**El Baul**	**10.18**	**189**	eP	**Pn**	**06 07 02.7**	**+3.6**
BAUV	**El Baul**	**10.18**	**189**	eS	Sn	06 08 43.7	-9.2
MTDJ	**Mount Denham**	**10.51**	**267**	Pn	**Pn**	**06 07 03.3**	**-0.4**
SDV	**Santo Domingo**	**10.90**	**202**	Pn	**Pn**	**06 07 10.9**	**+1.8**
	comp=Z,1.6nm,0.3s,baz=56,slow=8.4,SNR=9.3						
SDV				LR	LR	06 11 48.2	
	comp=Z,194nm,20.2s,baz=53,slow=40						
SDV	**Santo Domingo**	**10.90**	**202**	eP	**Pn**	**06 07 09.6**	**+0.5**
SDV	**Santo Domingo**	**10.90**	**202**		**Pn**	**06 07 09.7**	**+0.6**
SMLC	**San Martn de**	**12.59**	**217**	eP	Pn	06 07 27.1	-4.9
OCAC	**Ocana**	**12.65**	**213**	eP	**Pn**	**06 07 32.3**	**-0.7**
PAMC	**Pamplona, Colo**	**13.13**	**208**	eP	**Pn**	**06 07 40.9**	**+0.9**
BBSR	**BB Station**	**13.34**	**7**	Pn	**Pn**	**06 07 40.4**	**-1.8**
TAMC	**Tame, Arauca**	**13.58**	**203**	eP	**Pn**	**06 07 44.2**	**-1.4**
UREC	**San Jos de Ur**	**14.28**	**219**	eP	**Pn**	**06 07 55.1**	**-0.1**
RUSC	**La Rusia**	**14.59**	**207**		**Pn**	**06 08 01.0**	**+1.1**
PTBC	**PUERTO BERRIO,**	**14.68**	**213**	eP	**Pn**	**06 08 00.3**	**-0.4**
061Z	**Ochoppi**	**14.94**	**299**	Pn	**Pn**	**06 08 03.2**	**-0.9**
SPBC	**San Pablo de B**	**15.25**	**210**	eP	**Pn**	**06 08 08.4**	**0.0**
HELC	**Santa Helena**	**15.54**	**216**	eP	**Pn**	**06 08 11.8**	**-0.6**
CHIC	**Chingaza**	**16.00**	**207**	eP	**Pn**	**06 08 19.4**	**+1.0**
CBOC	**Ciudad Bolivar**	**16.08**	**216**	eP	**P**	**06 08 21.8**	**-0.7**
ROSC	**El Rosal**	**16.08**	**209**	Pn	**P**	**06 08 24.3**	**+1.6**
	comp=Z,3.8nm,0.3s,baz=353,slow=7.0,SNR=9.5						
ROSC				LR	LR	06 15 06.8	
	comp=Z,136nm,18.8s,baz=359,slow=40						
ROSC	**El Rosal**	**16.08**	**209**	eP	**P**	**06 08 24.7**	**+2.0**
ROSC	**El Rosal**	**16.08**	**209**	P	**P**	**06 08 24.7**	**+2.0**
ROSC				IAmb	IAmb	06 08 31.5	
	comp=Z,29nm,0.8s						
DWPF	**Disney Wildern**	**16.38**	**306**	P	**Pn**	**06 08 24.0**	**+1.2**
	baz=120						
RREF	**El Recreo**	**16.53**	**213**	eP	**Pn**	**06 08 26.4**	**+1.0**
ANIL	**Santa Ana**	**16.91**	**212**	eP	**P**	**06 08 32.6**	**+0.8**
ORTC	**Ortega, Tolima**	**17.33**	**211**	eP	**P**	**06 08 36.9**	**+0.6**
656A	**Willston**	**17.85**	**308**	P	**P**	**06 08 41.7**	**-0.1**
Y60A	**Bolivia**	**18.18**	**327**		**P**	**06 08 45.8**	**+0.4**
456A	**Hilliard**	**18.23**	**312**	P	**P**	**06 08 47.2**	**+1.2**
456A				IAmb	IAmb	06 09 05.5	
	comp=Z,41nm,0.8s						
X60A	**Albert Glenn T**	**18.51**	**329**	P	**Pn**	**06 08 50.8**	**+1.5**
	baz=144						
W61A	**Ground Anchor**	**18.55**	**332**	P	**Pn**	**06 08 49.6**	**-0.1**
	baz=147						
NHSC	**New Hope**	**18.59**	**321**	P	**Pn**	**06 08 50.3**	**+0.1**
	baz=135						
NHSC	**New Hope**	**18.59**	**321**	P	**Pn**	**06 08 52.7**	**+2.5**
157A	**Early Branch**	**18.79**	**319**	P	**P**	**06 08 51.9**	**-0.2**
	baz=133						
X59A	**McDuffie Farm,**	**18.82**	**328**	P	**Pn**	**06 08 53.4**	**+0.4**
	baz=142						
Y58A	**Scranton**	**18.88**	**324**	P	**Pn**	**06 08 59.2**	**+5.4**
V61A	**Roper**	**18.89**	**334**	P	**Pn**	**06 08 55.0**	**+1.2**
	baz=149						
CNNC	**Cliffs of the**	**19.01**	**330**	P	**Pn**	**06 08 59.3**	**+4.0**
Z57A	**Bowman**	**19.03**	**321**	P	**Pn**	**06 08 55.5**	**-0.1**
	baz=135						
V60A	**Jim Taylor Roa**	**19.16**	**332**	P	**Pn**	**06 08 56.8**	**-0.3**
	baz=147						
X58A	**Rowland**	**19.19**	**326**	P	**Pn**	**06 08 57.5**	**+0.1**
	baz=140						
255A	**Hazlehurst**	**19.26**	**315**	P	**Pn**	**06 09 00.8**	**+2.5**
255A				IAmb	IAmb	06 09 09.9	
	comp=Z,23nm,0.6s						
PCON	**Cinco Dias**	**19.27**	**211**	eP	**Pn**	**06 09 01.1**	**+2.0**
U61A	**Possum Corner**	**19.30**	**335**		**Pn**	**06 09 02.2**	**+3.4**
SOTA	**Rioblanco**	**19.54**	**212**	eP	**Pn**	**06 09 04.0**	**+1.7**
V59A	**Middlesex**	**19.60**	**330**	P	**Pn**	**06 09 01.8**	**-0.6**
	baz=145						
U60A	**Pendleton**	**19.71**	**334**	P	**Pn**	**06 09 03.2**	**-0.5**
	baz=149						
TIGA	**Tifton**	**19.74**	**312**	P	**P**	**06 09 03.1**	**+0.5**
	baz=124						
BIRD	**Birdtown, Kers**	**19.86**	**324**	P	**Pn**	**06 09 10.2**	**+4.6**
JTS	**Las Juntas de**	**19.87**	**247**	P	**Pn**	**06 09 05.7**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=227,slow=21,SNR=3.3						
BBAC	**Balboa, Cauca**	**19.96**	**213**	eP	**Pn**	**06 09 06.4**	**-0.6**
W57A	**Gilead**	**19.99**	**326**	P	**P**	**06 09 05.8**	**+0.5**
	baz=140						
W57A	**Gilead**	**19.99**	**326**	P	**Pn**	**06 09 12.1**	**+5.0**
X56A	**White Oak**	**20.07**	**323**	P	**P**	**06 09 06.7**	**+0.5**
	baz=136						
T60A	**Surry**	**20.12**	**336**	P	Pn	06 09 07.9	-0.6
	baz=151						
Y55A	**Saluda**	**20.17**	**320**	P	**P**	**06 09 08.1**	**+0.8**
	baz=133						
U58A	**Oxford**	**20.26**	**331**	P	**P**	**06 09 09.1**	**+0.9**
	baz=145						
T59A	**Double "B" Far**	**20.30**	**334**	P	**P**	**06 09 09.2**	**+0.5**
	baz=148						
X55A	**Gracelyn & Ava**	**20.41**	**322**	P	Pn	06 09 11.0	-1.0
	baz=135						
V57A	**Coltrane Farms**	**20.45**	**328**	P	**P**	**06 09 10.7**	**+0.4**
	baz=142						
TEIG	**Tepich**	**20.56**	**277**	P	**P**	**06 09 10.6**	**-1.0**
	comp=Z,3.9nm,0.4s,baz=235,slow=0.0,SNR=5.2						
TEIG	**Tepich**	**20.56**	**277**	IAmb	IAmb	06 09 24.5	
	comp=Z,13nm,0.8s						
S60A	**Water View**	**20.58**	**337**	P	Pn	06 09 12.9	-1.0
	baz=152						
HODGE	**Hodges**	**20.61**	**320**	P	Pn	06 09 18.4	+4.0
U57A	**Blanch**	**20.66**	**329**	P	**P**	**06 09 13.2**	**+0.6**
	baz=143						
GCUF	**Volcan Galeras**	**20.69**	**212**	eP	**P**	**06 09 12.4**	**-1.1**
PTGA	**Pitinga**	**20.70**	**161**	P	**P**	**06 09 13.4**	**+0.2**
	comp=Z,7.9nm,0.5s,baz=346,slow=14,SNR=21						
PTGA	**Pitinga**	**20.70**	**161**	P	**P**	**06 09 13.3**	**+0.2**
T58A	**Grand View Acr**	**20.71**	**332**	P	**P**	**06 09 12.8**	**-0.2**
	baz=146						
KMSC	**Kings Mountain**	**20.72**	**324**	P	Pn	06 09 15.0	-0.6
V56A	**Mocksville**	**20.76**	**326**	P	**P**	**06 09 13.8**	**+0.2**
	baz=140						
GOGA	**Godfrey**	**20.84**	**317**	P	**P**	**06 09 14.4**	**-0.1**
	baz=129						
GOGA	**Godfrey**	**20.84**	**317**		Pn	06 09 17.9	+1.0
S59A	**Mechanicsville**	**20.88**	**335**	P	**P**	**06 09 15.7**	**+0.9**
	baz=150						
X54A	**Belton**	**20.90**	**321**	P	**P**	**06 09 15.6**	**+0.5**
	baz=134						
S58A	**Poland Farm, P**	**21.06**	**334**	P	**P**	**06 09 17.1**	**+0.3**
	baz=148						
S58A	**Poland Farm, P**	**21.06**	**334**	P	**P**	**06 09 17.3**	**+0.5**
S58A				IAmb	IAmb	06 09 31.1	
	comp=Z,27nm,0.8s						
T57A	**Hurt**	**21.08**	**331**	P	**P**	**06 09 17.3**	**+0.3**
	baz=144						
T57A	**Hurt**	**21.08**	**331**	P	**P**	**06 09 17.1**	**0.0**
U56A	**King**	**21.11**	**327**	P	**P**	**06 09 17.9**	**+0.4**
	baz=141						
W54A	**Cherokee Point**	**21.16**	**322**	P	**P**	**06 09 18.8**	**+0.8**
	baz=135						
V55A	**Taylorsville**	**21.17**	**325**	P	**P**	**06 09 18.5**	**+0.3**
	baz=138						
R58B	**Mineral**	**21.28**	**335**	P	**P**	**06 09 19.9**	**+0.6**
	baz=149						
Y52A	**Lilburn**	**21.51**	**317**	P	**P**	**06 09 21.7**	**0.0**
	baz=129						
V54A	**Nebo**	**21.52**	**324**	P	**P**	**06 09 22.2**	**+0.3**
	baz=137						
S57A	**Dark Hollow, R**	**21.57**	**332**	P	**P**	**06 09 22.3**	**0.0**
	baz=146						
U55A	**TA2, Sparta**	**21.57**	**327**	P	**P**	**06 09 23.0**	**+0.5**
	baz=140						
Q59A	**Harwood**	**21.61**	**338**	P	**P**	**06 09 23.5**	**+0.8**
	baz=153						
R58A	**Rapidan**	**21.62**	**335**	P	**P**	**06 09 23.5**	**+0.6**
	baz=149						
S56A	**Natural Bridge**	**21.77**	**331**	P	**P**	**06 09 25.0**	**+0.5**
	baz=145						
BLA	**Blacksburg**	**21.81**	**329**	P	**P**	**06 09 25.3**	**+0.4**
	baz=142						
R57A	**Stanardsville**	**21.83**	**334**	P	**P**	**06 09 24.9**	**-0.2**
	baz=148						
T55A	**Pulaski**	**21.91**	**328**	P	**P**	**06 09 26.4**	**+0.4**
	baz=141						
U54A	**Nelsons Funny**	**22.00**	**325**	P	**P**	**06 09 27.4**	**+0.4**
	baz=138						
O61A	**Allentown**	**22.07**	**343**	P	**P**	**06 09 28.3**	**+0.6**
	baz=159						
P59A	**Jarrettsville**	**22.20**	**339**	P	**P**	**06 09 30.0**	**+1.0**
	baz=154						
T54A	**Tazewell**	**22.27**	**327**	P	**P**	**06 09 30.1**	**+0.1**
	baz=140						
S55A	**Lewisburg**	**22.29**	**330**	P	**P**	**06 09 30.6**	**+0.5**
	baz=143						
P58A	**Pank, Wackersv**	**22.39**	**338**	P	**P**	**06 09 31.8**	**+0.7**
	baz=152						
Z50A	**Ashland**	**22.39**	**313**	P	**P**	**06 09 31.3**	**+0.1**
	baz=124						
Q57A	**Strasburg**	**22.42**	**335**	P	**P**	**06 09 32.1**	**+0.6**
	baz=149						
O60A	**Telford**	**22.52**	**342**	P	**P**	**06 09 33.4**	**+0.9**
	baz=158						
R55A	**Marlinton**	**22.52**	**331**	P	**P**	**06 09 33.0**	**+0.3**
	baz=144						
N62A	**Caumsett State**	**22.59**	**346**	P	**P**	**06 09 34.1**	**+0.8**
	baz=163						
M65A	**Busby, Falmout**	**22.70**	**352**	P	**P**	**06 09 35.9**	**+1.6**
	baz=170						
S54A	**Dingess, Beckl**	**22.71**	**328**	P	**P**	**06 09 35.1**	**+0.5**
	baz=141						
Q56A	**Snyder Ridge,**	**22.74**	**334**	P	**P**	**06 09 35.6**	**+0.7**
	baz=148						
M63A	**Gales Ferry**	**22.76**	**349**	P	**P**	**06 09 35.3**	**+0.3**
	baz=166						
M64A	**Tiverton**	**22.77**	**351**	P	**P**	**06 09 36.2**	**+1.1**
	baz=168						
O58A	**Lewisberry**	**22.82**	**339**	P	**P**	**06 09 36.0**	**+0.2**
	baz=154						
R54A	**Victor**	**22.85**	**329**	P	**P**	**06 09 36.7**	**+0.6**
	baz=142						
N60A	**Cedar Hill Far**	**22.95**	**343**	P	**P**	**06 09 37.3**	**+0.3**
	baz=159						
M62A	**Hamden**	**22.96**	**348**	P	**P**	**06 09 38.0**	**+0.9**
	baz=164						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
P56A	Dayton Farm, R	22.99	335	P	P	06 09 37.5	+0.1
	baz=149						
M61A	Granite Spring	23.02	346	P	P	06 09 37.5	-0.3
	baz=162						
L63A	North Scituate	23.13	350	P	P	06 09 39.2	+0.4
	baz=168						
O57A	Amberson	23.15	338	P	P	06 09 39.5	+0.4
	baz=152						
N59A	State Game Lan	23.18	342	P	P	06 09 39.7	+0.3
	baz=157						
M60A	Port Jervis	23.25	344	P	P	06 09 40.7	+0.6
	baz=160						
APG	El Apazote	23.27	264	P	P	06 09 43.3	+2.5
	comp=Z,8.8nm,0.9s,baz=39,slow=7.7,SNR=7.7						
P55A	Reedsville	23.40	333	P	P	06 09 42.2	+0.5
	baz=147						
Q54A	Coxs Mills	23.42	331	P	P	06 09 42.6	+0.8
	baz=144						
O56A	Blue Knob Stat	23.54	336	P	P	06 09 43.3	+0.2
	baz=150						
N57A	Milroy	23.60	339	P	P	06 09 43.5	-0.1
	baz=153						
SSPA	Standing Stone	23.61	338	P	P	06 09 44.0	+0.3
	baz=152						
Q53A	Leroy	23.64	330	P	P	06 09 43.7	-0.3
	baz=142						
M59A	Waymart	23.66	343	P	P	06 09 44.3	+0.2
	baz=158						
P54A	Burton	23.76	332	P	P	06 09 45.7	+0.5
	baz=145						
L60A	Shokan	23.77	346	P	P	06 09 45.6	+0.4
	baz=162						
O55A	Ligonier	23.78	335	P	P	06 09 46.0	+0.7
	baz=149						
M58A	Price's Panora	23.80	341	P	P	06 09 46.0	+0.4
	baz=156						
L61A	Hillsdale 1, H	23.82	347	P	P	06 09 46.2	+0.5
	baz=163						
N56A	West Decatur	24.01	338	P	P	06 09 47.5	0.0
	baz=152						
P53A	Whipple	24.08	331	P	P	06 09 49.1	+1.0
	baz=143						
Q52A	Bidwell	24.08	329	P	P	06 09 48.4	+0.2
	baz=141						
N55A	Marion Center	24.14	336	P	P	06 09 48.9	+0.1
	baz=150						
L59A	Walton	24.16	344	P	P	06 09 49.1	+0.1
	baz=160						
O54A	Avella	24.20	333	P	P	06 09 49.9	+0.6
	baz=146						
L58A	Harry Jones Me	24.24	343	P	P	06 09 50.0	+0.3
	baz=158						
BINY	Binghamton	24.43	343	P	P	06 09 51.5	+0.2
	baz=158						
J63A	Strafford	24.44	352	P	P	06 09 52.7	+1.3
	baz=170						
M56A	Emporium	24.47	338	P	P	06 09 52.3	+0.6
	baz=152						
J62A	Henniker	24.50	351	P	P	06 09 52.8	+0.9
	baz=168						
L57A	Andrews Acres	24.50	341	P	P	06 09 52.6	+0.6
	baz=156						
P52A	Corning	24.54	330	P	P	06 09 52.8	+0.5
	baz=142						
CCIG	Comitan	24.59	268	P	P	06 09 53.7	+0.4
CCIG				IAmb	IAmb	06 09 59.0	
	comp=Z,14nm,0.7s						
O53A	New Philadelph	24.61	332	P	P	06 09 53.5	+0.5
	baz=145						
R50A	Paris	24.64	325	P	P	06 09 53.4	0.0
M55A	Ridgway	24.66	337	P	P	06 09 53.5	0.0
	baz=151						
K59A	Cooperstown	24.67	345	P	P	06 09 53.4	-0.1
	baz=161						
Q51A	Peebles	24.67	327	P	P	06 09 54.0	+0.4
	baz=139						
N54A	Moraine State	24.69	335	P	P	06 09 54.5	+0.8
	baz=148						
J61A	Chester	24.73	349	P	P	06 09 55.0	+0.9
	baz=166						
O52A	Adamsville	24.79	331	P	P	06 09 55.1	+0.5
	baz=143						
O52A	Adamsville	24.79	331	P	P	06 09 55.9	+1.3
O52A				IAmb	IAmb	06 09 56.5	
	comp=Z,20nm,1.1s						
J60A	Lant Hill Farm	24.80	348	P	P	06 09 55.8	+1.1
	baz=164						
L56A	Greenwood	24.84	340	P	P	06 09 55.4	+0.3
	baz=154						
K58A	Earlville	24.86	344	P	P	06 09 55.6	+0.4
	baz=159						
P51A	Williamsport	24.87	328	P	P	06 09 55.7	+0.3
	baz=140						
P51A	Williamsport	24.87	328	P	P	06 09 56.0	+0.6
N53A	Lisbon	24.91	333	P	P	06 09 55.5	-0.2
	baz=146						
N53A	Lisbon	24.91	333	P	P	06 09 56.7	+1.0
M54A	Oil Creek Stat	25.03	336	P	P	06 09 57.1	+0.3
	baz=149						
K57A	Scipio Center	25.07	342	P	P	06 09 56.8	-0.3
	baz=157						
O51A	Pataskala	25.17	330	P	P	06 09 57.8	-0.3
	baz=142						
L55A	Hinsdale	25.18	339	P	P	06 09 57.7	-0.4
	baz=153						
J59A	Piesco	25.24	346	P	P	06 09 58.7	+0.1
	baz=162						
I61A	Oroboro, Fairl	25.25	350	P	P	06 09 58.3	-0.4
	baz=167						
K56A	Middlesex	25.28	341	P	P	06 09 59.6	+0.6
	baz=155						
J58A	Remsen	25.32	345	P	P	06 09 59.7	+0.3
	baz=160						
WVT	Waverly	25.34	316	P	P	06 09 59.4	-0.2
	baz=126						
P50A	Jamestown	25.34	328	P	P	06 09 59.6	0.0
	baz=139						
I60A	Shoreham	25.35	348	P	P	06 10 00.3	+0.7
	baz=165						
M53A	WI Miller and	25.37	335	P	P	06 10 00.0	+0.1
	baz=147						
ACSO	Alum Creek Sta	25.41	330	P	P	06 10 00.1	-0.2
	baz=141						
ACSO	Alum Creek Sta	25.41	330	P	P	06 10 00.9	+0.7
ACSO				IAmb	IAmb	06 10 03.3	
	comp=Z,23nm,1.2s						
I59A	Olmsteadville	25.42	347	P	P	06 10 00.5	+0.2
	baz=164						
OXF	Oxford	25.51	312	P	P	06 10 00.7	-0.4
	baz=121						
L54A	Sinclairville	25.53	337	P	P	06 10 02.3	+1.0
	baz=151						
J57A	Williamstown	25.55	344	P	P	06 10 01.7	+0.2
	baz=159						
J57A	Williamstown	25.55	344	P	P	06 10 02.8	+1.4
I58A	Old Forge	25.56	346	P	P	06 10 02.7	+1.1
	baz=161						
L53A	Girard	25.64	336	P	P	06 10 03.6	+1.3
	baz=149						
O50A	Cable	25.66	329	P	P	06 10 03.2	+0.7
	baz=140						
J56A	Wolcott	25.67	342	P	P	06 10 02.9	+0.4
	baz=157						
ERPA	Erie	25.68	336	P	P	06 10 03.0	+0.4
	baz=149						
P49A	Miami Univ. Ec	25.76	326	P	P	06 10 03.7	+0.3
	baz=137						
H61A	Lyndonville	25.79	351	P	P	06 10 04.2	+0.6
	baz=168						
N50A	Nevada	25.91	330	P	P	06 10 05.3	+0.5
	baz=142						
I57A	Carthage	25.96	345	P	P	06 10 05.7	+0.5
	baz=160						
O49A	Covington	26.05	328	P	P	06 10 06.3	+0.3
	baz=139						
H59A	Cadyville	26.20	348	P	P	06 10 07.7	+0.3
	baz=164						
G62A	West of Eustis	26.29	354	P	P	06 10 09.3	+1.2
	baz=171						
G60A	Masonville	26.40	351	P	P	06 10 10.4	+1.3
	baz=168						
K52A	Tillsonburg	26.52	336	P	P	06 10 10.0	-0.3
	baz=149						
F63A	Nahmakanta, Br	26.64	356	P	P	06 10 10.9	-0.4
	baz=174						
N47A	Urbana	27.25	327	P	P	06 10 16.3	-0.6
	baz=137						
L48A	N Adams	27.43	330	P	P	06 10 18.4	-0.1
	baz=141						
UALR	University of	27.75	310	P	P	06 10 21.3	-0.1
K48A	Perry	27.96	332	P	P	06 10 22.8	-0.5
	baz=142						
SAML	Samuel	28.03	173	P	P	06 10 24.4	+0.4
D54A	Lac Fusel, La	29.22	346	P	P	06 10 34.1	-0.3
	baz=160						
D53A	Lac Vacive, Po	29.41	344	P	P	06 10 35.8	-0.3
	baz=158						
R40A	Maddies Statio	29.48	316	P	P	06 10 33.3	-3.4
E47A	Iron Bridge	30.61	337	P	P	06 10 46.0	-0.7
	baz=148						
F45A	CMU Biological	30.86	334	P	P	06 10 48.7	-0.2
	baz=143						
I42A	Draeger Farm,	31.08	328	P	P	06 10 49.8	-1.0
I42A				IAmb	IAmb	06 10 51.9	
	comp=Z,12nm,0.8s						
JFWS	Jewell Farm	31.10	325	P	P	06 10 50.6	-0.4
	baz=132						
JFWS	Jewell Farm	31.10	325	P	P	06 10 51.4	+0.3
JFWS				IAmb	IAmb	06 10 53.0	
	comp=Z,9.7nm,0.8s						
CHGQ	Chibougamau	31.41	350	P	P	06 10 53.9	+0.3
	baz=166						
G40A	Rib Lake	32.70	328	P	P	06 11 05.2	+0.1
D41A	Chassel	33.26	332	P	P	06 11 10.5	+0.6
F36A	Milaca	34.81	326	P	P	06 11 23.6	+0.1
F36A				IAmb	IAmb	06 11 23.9	
	comp=Z,5.6nm,1.1s						
LPAZ	La Paz	35.18	183	P	P	06 11 26.2	-1.3
	comp=Z,4.1nm,0.9s,baz=73,slow=3.6,SNR=11						
LPAZ	La Paz	35.18	183	P	P	06 11 27.1	-0.5
LPAZ				IAmb	IAmb	06 11 30.1	
	comp=Z,5.8nm,1.0s						
ECSD	EROS Data Cent	35.24	321	P	P	06 11 26.8	-0.4
	baz=125						
ECSD	EROS Data Cent	35.24	321	P	P	06 11 28.3	+1.1
EYMN	Ely	35.25	330	P	P	06 11 26.8	-0.4
	baz=136						
EYMN	Ely	35.25	330	P	P	06 11 26.0	-1.2
EYMN				IAmb	IAmb	06 11 29.3	
	comp=Z,9.2nm,1.1s						
TXAR	Lajitas Array	35.29	294	P	P	06 11 28.1	+0.2
	comp=Z,1.2nm,0.7s,baz=98,slow=9.2,SNR=9.3						
TXAR				PcP	PcP	06 13 59.4	+1.0
	comp=Z,1.2nm,0.7s,baz=118,slow=4.3,SNR=4.4						
TX31	Lajitas Ar. Si	35.29	294	P	P	06 11 29.3	+1.4
SCHQ	Schefferville	35.70	360	P	P	06 11 31.2	+0.2
	comp=Z,5.7nm,0.9s,baz=178,slow=7.3,SNR=8.1						
SCHQ				LR	LR	06 24 12.3	
	comp=Z,53nm,21.8s,baz=10.0,slow=33						
SCHQ	Schefferville	35.70	360	IAmb	IAmb	06 11 43.7	
	comp=Z,12nm,1.2s						
MNTX	Cornudas Mount	37.13	298	P	P	06 11 42.9	-0.7
	baz=100						
MNTX	Cornudas Mount	37.13	298	P	P	06 11 43.3	-0.2
PB16	IPOC Station P	37.29	185	P	P	06 11 43.3	-2.3
AGMN	Agassiz Nation	37.62	328	P	P	06 11 46.5	-0.9
	baz=131						
AGMN	Agassiz Nation	37.62	328	P	P	06 11 47.0	-0.5
MNMC	Minye Minye	38.09	185	P	P	06 11 50.0	-1.9
MNMC				IAmb	IAmb	06 11 52.4	
	comp=Z,14nm,0.9s						
GO01	Chusmiza	38.59	184	P	P	06 11 54.7	-1.7
PB11	IPOC Station P	38.72	185	P	P	06 11 55.0	-2.1
ULM	Lac du Bonnet	38.92	330	P	P	06 11 57.2	-1.1
	comp=Z,2.9nm,0.7s,baz=144,slow=6.4,SNR=4.7						
ULM				LR	LR	06 30 16.9	
	comp=Z,51nm,18.1s,baz=110,slow=40						
ULM	Lac du Bonnet	38.92	330	IAmb	IAmb	06 11 58.0	
	comp=Z,2.8nm,0.7s						
BDFB	Brasilia	38.99	151	P	P	06 11 58.5	-0.9
	comp=Z,2.3nm,0.5s,baz=296,slow=9.8,SNR=6.0						
BDFB				LR	LR	06 28 23.7	
	comp=Z,131nm,18.7s,baz=309,slow=37						
BDFB	Brasilia	38.99	151	IAmb	IAmb	06 12 07.5	
	comp=Z,5.6nm,1.1s						
PB08	IPOC Station P	39.06	184	P	P	06 11 59.1	-1.2
PB08				IAmb	IAmb	06 12 01.4	
	comp=Z,12nm,0.9s						
ISCO	Idaho Springs	39.44	310	P	P	06 12 02.8	-0.4
	baz=110						
ISCO	Idaho Springs	39.44	310	P	P	06 12 03.8	+0.6
PB01	IPOC Station P	39.98	184	P	P	06 12 05.1	-2.4
PB07	IPOC Station P	40.69	185	P	P	06 12 11.2	-2.3
K22A	Casper	41.11	314	P	P	06 12 16.5	-0.4
	baz=112						
PV13	Radium Mtn., P	41.32	306	P	P	06 12 19.9	+1.2
PV13				IAmb	IAmb	06 12 20.8	
	comp=Z,10nm,1.2s						
PV16	Nyswonger Mesa	41.44	307	P	P	06 12 20.6	+0.9
WUAZ	Wupatki	42.74	302	P	P	06 12 29.4	-0.9
	baz=100						
WUAZ	Wupatki	42.74	302	P	P	06 12 30.7	+0.5
WUAZ				IAmb	IAmb	06 12 32.5	
	comp=Z,11nm,1.2s						
PDAR	Pinedale Array	43.24	313	P	P	06 12 33.5	-0.9
	comp=Z,0.8nm,0.6s,baz=120,slow=8.8,SNR=7.7						
RLMT	Red Lodge	43.88	316	P	P	06 12 39.1	-0.3
	baz=112						
RLMT	Red Lodge	43.88	316	P	P	06 12 39.8	+0.3
SNOW	Snow King Moun	44.30	313	P	P	06 12 42.8	0.0
SNOW				IAmb	IAmb	06 12 45.3	
	comp=Z,8.7nm,1.1s						
REDW	Red Top Meadow	44.33	313	P	P	06 12 42.9	-0.2
REDW				IAmb	IAmb	06 12 44.2	
	comp=Z,6.5nm,0.9s						
GCMT	Greycliff	44.39	317	P	P	06 12 43.5	+0.1
TPAW	Teton Pass	44.44	313	P	P	06 12 44.4	+0.4
FXWY	Fox Creek	44.54	313	P	P	06 12 44.8	+0.1
IMW	Indian Meadow	44.56	314	P	P	06 12 45.2	+0.2
IMW				IAmb	IAmb	06 12 47.3	
	comp=Z,3.0nm,0.6s						
W13A	Hualapai Mount	44.70	301	P	P	06 12 47.8	+1.6
YMR	Madison River	44.84	315	P	P	06 12 48.2	+1.1
DUG	Dugway, Tooele	44.84	308	P	P	06 12 46.0	-1.1
	baz=104						
YHB	Horse Butte	45.02	315	P	P	06 12 50.5	+1.9
YHL	Hebgen Lake	45.05	315	P	P	06 12 51.2	+2.4
QLMT	Earthquake Lak	45.21	315	P	P	06 12 51.8	+1.8
IRM	Iron Mountain	45.61	299	P	P	06 12 52.8	-0.3
	baz=96						
CPUP	Villa Florida	46.00	169	P	P	06 12 53.4	-2.7
	comp=Z,1.9nm,0.6s,baz=350,slow=12,SNR=11						
CPUP				LR	LR	06 32 07.4	
	comp=Z,44nm,18.4s,baz=304,slow=36						
CPUP	Villa Florida	46.00	169	P	P	06 12 53.1	-3.0
MCMT	McKenzie Canyo	46.16	314	P	P	06 12 58.3	+0.7
MONP2	Monument Peak	46.55	298	P	P	06 13 00.5	-0.3
	baz=94						
TPNV	Topopah Spring	46.86	303	P	P	06 13 01.8	-1.3
	baz=98						
MSO	Missoula	47.53	317	P	P	06 13 08.1	0.0
	baz=109						
MPMC	Manual Prospec	47.73	302	P	P	06 13 08.8	-1.2
	baz=97						
MFID	Camas Ranch	47.82	312	P	P	06 13 10.8	+0.4
MFID				IAmb	IAmb	06 13 11.6	
	comp=Z,6.4nm,1.1s						
EDW2	Edwards Air Fo	48.02	300	P	P	06 13 11.9	-0.1
	baz=95						
NV11	Mina Array Sit	48.57	305	P	P	06 13 17.1	+0.7
NV11				IAmb	IAmb	06 13 17.8	
	comp=Z,5.2nm,1.0s						
NVAR	Mina Array Bea	48.68	305	P	P	06 13 17.0	-0.3
	comp=Z,0.6nm,0.4s,baz=106,slow=5.8,SNR=7.5						
BMO	Blue Mountains	49.21	313	P	P	06 13 20.8	-0.4
WVOR	Wild Horse Val	49.61	310	P	P	06 13 24.4	+0.2
WVOR				IAmb	IAmb	06 13 25.3	
	comp=Z,5.8nm,1.4s						
J08A	Circle Bar Ran	49.68	311	P	P	06 13 25.1	+0.3
J08A				IAmb	IAmb	06 13 26.7	
	comp=Z,12nm,1.5s						
NEW	Newport	50.02	318	P	P	06 13 26.4	-0.8
	baz=107						
NEW	Newport	50.02	318	P	P	06 13 26.7	-0.5
NEW				IAmb	IAmb	06 13 29.0	
	comp=Z,12nm,1.3s						
I07A	Izee	50.56	312	P	P	06 13 32.4	+0.9
LTY	Liberty	52.06	316	P	P	06 13 43.0	+0.4
LTY				IAmb	IAmb	06 13 43.9	
	comp=Z,5.5nm,1.1s						
L04D	Klamath Falls	52.26	309	P	P	06 13 44.1	-0.1
	baz=98						
YKA	Yellowknife Ar	54.49	335	P	P	06 13 58.8	-1.2
	comp=Z,1.5nm,0.8s,baz=113,slow=7.8,SNR=15						
YKA				LR	LR	06 36 39.0	
	comp=Z,60nm,21.7s,baz=0.0,slow=35						
SUMG	Summit	55.86	10	P	P	06 14 11.2	+1.0
SUMG	Summit	55.86	10	*i* P	P	06 14 11.0	+0.7
	comp=Z,11nm,0.7s						
ESDC	Sonseca Array	57.09	55	P	P	06 14 20.5	+1.3
	comp=Z,2.2nm,0.8s,baz=273,slow=7.1,SNR=16						
ESDC				LR	LR	06 34 40.2	
	comp=Z,40nm,21.5s,baz=255,slow=32						
PLCA	Paso Flores	59.62	184	P	P	06 14 35.1	-1.6
	comp=Z,2.1nm,0.9s,baz=14,slow=8.3,SNR=5.4						
PLCA	Paso Flores	59.62	184	IAmb	IAmb	06 14 39.8	
	comp=Z,8.7nm,1.4s						
TIC	Toumodi	60.91	93	*e*P	P	06 14 45.7	-0.4
LIC	Lamto	61.03	93	*e*P	P	06 14 48.1	+1.2
	comp=Z,44nm,1.5s						
DBIC	Dimbokro	61.06	93	P	P	06 14 47.6	+0.6
	comp=Z,2.1nm,0.5s,baz=277,slow=5.6,SNR=5.9						
KIC	Kosan Boka	61.26	93	*e*P	P	06 14 48.7	+0.3
	comp=Z,6.5nm,0.7s						
DAG	Danmarks Havn	62.46	11	*i* P	P	06 14 51.7	-3.8
A36M	Sachs Harbour	62.53	343	P	P	06 14 54.8	-1.1
	baz=114						
INK	Inuvik	63.98	338	P	P	06 15 04.5	-1.1
INK				IAmb	IAmb	06 15 06.5	
	comp=Z,8.4nm,1.3s						
TORD	Torodi Ar. Bea	65.43	84	P	P	06 15 16.0	0.0
	comp=Z,1.6nm,0.7s,baz=291,slow=6.4,SNR=8.2						
DAWY	Dawson	65.55	333	P	P	06 15 16.3	+0.3
DAWY				IAmb	IAmb	06 15 17.3	
	comp=Z,8.5nm,1.4s						
NOR	Nord	65.73	7	*i* P	P	06 15 12.3	-4.6
	comp=Z,1.7nm,0.8s						
EGAK	Eagle	66.38	333	P	P	06 15 22.3	+1.0
TGL	Tana Glacier	66.88	329	P	P	06 15 22.0	-2.7
TGL				IAmb	IAmb	06 15 23.7	
	comp=Z,4.8nm,0.8s						
MCARA	McCarthy VSAT	67.00	329	P	P	06 15 26.3	+1.0
VRDI	Verde Repeater	67.20	329	P	P	06 15 28.1	+1.3
NB2	NORSAR Subarra	67.55	31	P	P	06 15 29.8	+0.9
	comp=Z,3.9nm,0.9s,baz=268,slow=6.5						
NOA	NORSAR Array B	67.55	31	P	P	06 15 29.7	+0.8
	comp=Z,2.3nm,0.8s,baz=269,slow=6.3,SNR=7.3						
NOA				LR	LR	06 39 43.2	
	comp=Z,23nm,21.4s,baz=225,slow=31						
KEST	Kesra	67.84	58	P	P	06 15 32.4	+1.2
	comp=Z,4.4nm,0.8s,baz=31,slow=2.9,SNR=5.7						
KEST	Kesra	67.84	58	IAmb	IAmb	06 15 34.4	
	comp=Z,5.5nm,0.8s						
PRP	Porcupine Dome	68.27	334	P	P	06 15 32.6	-0.8
PRP				IAmb	IAmb	06 15 34.4	
	comp=Z,6.9nm,1.1s						
IL31		68.83	333	P	P	06 15 36.5	-0.2
IL31				IAmb	IAmb	06 15 37.2	
	comp=Z,9.8nm,1.4s						
ILAR	Eielson Array	68.83	333	P	P	06 15 36.1	-0.7
	comp=Z,2.2nm,0.8s,baz=103,slow=4.3,SNR=18						
HDA	Harding Lake	68.86	333	P	P	06 15 36.5	-0.4
	baz=90						
POKR	Poker Plat Res	69.07	333	P	P	06 15 37.2	-1.0
	baz=90						
CCB	Clear Creek Bu	69.23	333	P	P	06 15 38.7	-0.5
CCB				IAmb	IAmb	06 15 40.6	
	comp=Z,3.4nm,1.1s						
KHC	Kasperske Hory	69.38	44	*e*P	P	06 15 34.5	-6.0
KHC				*e*x	x	06 15 41.5	
BRG	Berggiesshubel	69.45	42	*e*P	P	06 15 41.3	+0.4
	comp=Z,4.8nm,1.0s						
GERES	GERESS Array B	69.49	44	P	P	06 15 41.7	+0.4
	comp=Z,0.8nm,0.6s,baz=265,slow=5.9,SNR=5.7						
RND	Reindeer	69.72	332	P	P	06 15 42.8	+0.4
NEA	Nenana	69.78	333	P	P	06 15 42.6	-0.1
NEA				IAmb	IAmb	06 15 43.1	
	comp=Z,6.2nm,1.0s						
TOLK	Toolik Lake Re	69.88	337	P	P	06 15 41.7	-1.6
	baz=89						
TRF	Thorofare Moun	70.36	332	P	P	06 15 46.7	+0.2
TRF				IAmb	IAmb	06 15 46.9	
	comp=Z,6.5nm,1.0s						
MLY	Manley	70.47	333	P	P	06 15 46.1	-0.8
MLY				IAmb	IAmb	06 15 48.2	
	comp=Z,6.5nm,1.2s						
BPAW	Bear Paw Mtn.	70.63	332	P	P	06 15 47.0	-0.9
BPAW				IAmb	IAmb	06 15 48.3	
	comp=Z,5.1nm,0.9s						
KTH	Kantishna Hill	70.64	332	P	P	06 15 48.1	+0.1
ARCES	ARCESS Array B	72.99	22	P	P	06 16 02.7	+0.7
	comp=Z,3.6nm,0.5s,baz=286,slow=4.9,SNR=32						
FINES	FINESS Array B	74.66	30	P	P	06 16 12.4	+0.6
	comp=Z,3.5nm,0.8s,baz=237,slow=6.6,SNR=6.1						
MLR	Muntele Rosu	78.31	46	P	P	06 16 33.8	+0.8
AKASG	Malin Array Be	79.00	40	P	P	06 16 36.9	+0.4
	comp=Z,0.2nm,0.2s,baz=273,slow=4.8,SNR=9.7						
BRTR	Keskin Array B	85.49	50	P	P	06 17 11.9	+0.9
	comp=Z,1.0nm,0.8s,baz=297,slow=5.4,SNR=4.9						

IDC 06 06:04:41.8±125.0, 20°.49N×144°.50E, h0km, Error ellipse: s-maj=246.7km s-min=24.0km az=101.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	21.01	92	H	H	06 30 59.9	
	baz=279,slow=75,SNR=365						
H11S1	WAKE ISLAND Hy	21.02	92	H	H	06 31 00.7	
	baz=279,slow=75,SNR=326						
H11S2	WAKE ISLAND Hy	21.03	92	H	H	06 31 01.2	
	baz=279,slow=75,SNR=332						
H11N1	WAKE ISLAND Hy	21.05	88	H	H	06 31 02.7	
	baz=276,slow=75,SNR=237						
H11N2	WAKE ISLAND Hy	21.05	88	H	H	06 31 03.0	
	baz=276,slow=75,SNR=198						
H11N3	WAKE ISLAND Hy	21.06	88	H	H	06 31 04.2	
	baz=276,slow=75,SNR=172						
H03N2	Juan Fernandez	139.48	118	H	H	08 59 10.5	
	baz=267,slow=74,SNR=8.2						
H03N3	Juan Fernandez	139.48	118	H	H	08 59 11.7	
	baz=267,slow=74,SNR=11						
H03N1	Juan Fernandez	139.49	118	H	H	08 59 10.4	
	baz=267,slow=74,SNR=13						

TUL ***06*** *06:08:10.4±1.0, 35°.90N±0°.01×97°.265W±0°.009, h5km±5km, ML3.2, Error ellipse: s-maj=1.5km s-min=1.0km az=169.0*

NEIC ***06*** *06:08:10.9±1.1, 35°.904N±0°.010×97°.26W±0°.02, h5km±2km, Error ellipse: s-maj=3.0km s-min=2.2km az=224.0*

ANF ***06*** *06:08:10.5±0.7, 35°.85N×97°.22W, h1km±4km, ML3.6/8, Error ellipse: s-maj=3.6km s-min=3.0km az=12.0*

ISC 06 06:08:10.2±1.1, 35°.93N±0°.02×97°.26W±0°.03, h2km±11km, n38, σ0s.81/52, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK005	Luther M Schoo	0.28	169	Pg	Pg	06 08 15.7	0.0
OK005				Sg	Sg	06 08 19.5	+0.1
ADOK	Arcadia Dam	0.29	198	Pg	Pg	06 08 15.9	0.0
ADOK				Sg	Sg	06 08 19.9	+0.2
OK001	Jones High Sch	0.37	184	Pg	Pg	06 08 12.6	-4.8
OK001				Sg	Sg	06 08 22.4	+0.2
OKCFA	Oklahoma City	0.54	197	Pg	Pg	06 08 20.5	-0.1
OKCFA				Sg	Sg	06 08 27.0	-0.6
OKCSW	OKLAHOMA CITY	0.55	196	Pg	Pg	06 08 20.7	0.0
OKCSW				Sg	Sg	06 08 27.5	-0.3
FNO	Franklin	0.68	190	Pg	Pg	06 08 23.5	+0.2
FNO				Sg	Sg	06 08 32.6	+0.3
W35A	Tecumseh	0.84	158		Pg	06 08 25.7	-0.6
W35A				Sg	Sg	06 08 36.1	-1.1
T35A	Sooner Cattle	1.15	31	Pg	Pg	06 08 32.3	0.0
T35A				Sg	Sg	06 08 47.8	+0.6
TUL1	Leonard	1.19	91	P	Pg	06 08 32.2	-0.8
	baz=267						
TUL1				S	Sg	06 08 48.7	+0.2
	baz=267						
TUL1	Leonard	1.19	91		Pg	06 08 32.1	-0.9
TUL1				Sg	Sg	06 08 48.7	+0.2
X34A	Smith Ranch, M	1.41	200		Pn	06 08 36.5	-0.4
U32A	Winter Ranch,	1.48	288	Pn	Pn	06 08 37.6	-0.3
WMOK	Wichita Mounta	1.73	227	P	Pn	06 08 41.4	+0.1
	baz=49						
WMOK				S	Sb	06 09 04.0	-0.8
	baz=49						
WMOK	Wichita Mounta	1.73	227	Pn	Pb	06 08 41.7	-0.9
U38A	Gravette	2.38	77	Pn	Pn	06 08 51.8	+1.5
Z35A	Perchaven, San	2.60	180	Pn	Pn	06 08 53.6	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HHAR	Hobbs	2.71	82		Pn	06 08 55.6	+0.8
R32A	Long Quarter,	2.74	335	Pn	Pb	06 08 58.6	-1.4
W39A	Magazine	2.92	104	P	Pn	06 08 58.2	+0.5
	baz=284						
W39A	Magazine	2.92	104	Pn	Pn	06 08 58.6	+0.8
KSU1	Kansas State U	3.20	9	P	Pn	06 09 02.6	+1.0
	baz=189						
KSU1				Sb	Sg	06 09 53.1	-0.1
	baz=189						
KSU1	Kansas State U	3.20	9		Pn	06 09 02.2	+0.6
MIAR	Mount Ida	3.31	114	P	Pn	06 09 03.9	+0.8
	baz=295						
MIAR				S	Sn	06 09 43.4	+0.3
	baz=295						
MIAR	Mount Ida	3.31	114	Pn	Pn	06 09 03.9	+0.8
CBKS	Cedar Bluff	3.49	326	P	Pn	06 09 07.3	+1.7
	baz=145						
CBKS	Cedar Bluff	3.49	326		Pn	06 09 06.3	+0.8
U40A	Yellville	3.59	82		Pn	06 09 07.1	+0.2
AMTX	Amarillo	3.76	255		Pn	06 09 11.1	+1.8
ABTX	Abilene, Hawle	3.85	212	Pn	Pn	06 09 10.6	+0.1
ABTX					Pb	06 09 20.9	+2.1
X40A	Basin Creek Fa	3.90	110	Pn	Pn	06 09 11.2	+0.1
WHAR	Wooly Hollow	4.10	98	Pn	Pn	06 09 14.1	+0.2
W41B	Gary Mavity, V	4.15	99	P	Pn	06 09 15.1	+0.4
	baz=281						
W41B				S	Sn	06 10 03.4	-0.3
	baz=281						
UALR	University of	4.18	105	Pn	Pn	06 09 14.7	-0.3
Z41A	Richland Creek	4.54	125	S	Sn	06 10 11.8	-1.5
	baz=307						
R40A	Maddies Statio	4.63	58	Pn	Pn	06 09 21.8	+0.7
P38A	Dawn	4.72	38	Pn	Pn	06 09 23.1	+0.7
SDCO	Great Sand Dun	6.86	288		Pn	06 09 53.4	+1.3
PV09	Paradox Valley	9.81	289		Pn	06 10 32.5	-0.1

*RSPR **06** 06:11:07.8, 19°.17N×66°.50W, h28km±10km, MD3.2/15*
*NEIC **06** 06:11:08.5±1.4, 19°.01N±0°.03×66°.48W±0°.03, h32km±9km, Error ellipse: s-maj=5.0km s-min=3.6km az=219.0*
ISC 06 06:11:08.7±1.5**, 19°.04N**±0°.07×**66°.48W**±0°.03**, h35km, n53, σ0s.69**/67**, 14C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.56	185	⇓eP	Pn	06 11 19.7	-0.5
EMPR	Esperanza - Ma	0.56	185	eS	Sn	06 11 29.1	+0.8
EMPR	Esperanza - Ma	0.56	185		Pn	06 11 19.7	-0.5
EMPR					Sn	06 11 29.1	+0.8
AOPR	Arecibo Observ	0.74	201	⇑eP	Pn	06 11 21.9	-0.8
AOPR	Arecibo Observ	0.74	201	eS	Sn	06 11 32.9	+0.2
AOPR	Arecibo Observ	0.74	201		Pn	06 11 21.9	-0.8
AOPR					Sn	06 11 32.9	+0.2
AGPR	Aguadilla, PR	0.83	227	⇑eP	Pn	06 11 22.3	-1.6
AGPR	Aguadilla, PR	0.83	227	eS	Sn	06 11 33.9	-1.0
AGPR	Aguadilla, PR	0.83	227		Pn	06 11 22.3	-1.6
AGPR					Sn	06 11 33.9	-1.0
CBYP	Canovanas	0.96	142	⇑eP	Pn	06 11 25.0	-0.8
CBYP	Canovanas	0.96	142	eS	Sn	06 11 38.3	0.0
CBYP	Canovanas	0.96	142		Pn	06 11 25.0	-0.8
CBYP					Sn	06 11 38.3	0.0
SJG	San Juan	0.97	161		Pn	06 11 25.7	-0.2
OBIP	Obispado Ponce	1.00	187	⇑eP	Pn	06 11 25.8	-0.5
OBIP	Obispado Ponce	1.00	187	eS	Sn	06 11 39.7	+0.6
OBIP	Obispado Ponce	1.00	187		Pn	06 11 25.8	-0.5
OBIP					Sn	06 11 39.7	+0.6
LSP	Las Mesas	1.04	214	⇑eP	Pn	06 11 26.2	-0.6
LSP	Las Mesas	1.04	214	eS	Sn	06 11 40.4	+0.4
LSP	Las Mesas	1.04	214		Pn	06 11 26.2	-0.6
LSP					Sn	06 11 40.4	+0.4
MPR	Mayaguez	1.04	218		Pn	06 11 26.4	-0.4
HUMP	Col San Antoni	1.07	146	⇑eP	Pn	06 11 26.8	-0.4
HUMP	Col San Antoni	1.07	146	eS	Sn	06 11 41.3	+0.4
HUMP	Col San Antoni	1.07	146		Pn	06 11 26.8	-0.4
HUMP					Sn	06 11 41.3	+0.4
PDPR	Patillas Dam,	1.10	157	⇑eP	Pn	06 11 27.7	0.0
PDPR	Patillas Dam,	1.10	157	eS	Sn	06 11 42.7	+1.0
PDPR	Patillas Dam,	1.10	157		Pn	06 11 27.7	0.0
PDPR					Sn	06 11 42.7	+1.0
IGPR	InterUniversit	1.12	162	⇑eP	Pn	06 11 27.7	-0.2
IGPR	InterUniversit	1.12	162	eS	Sn	06 11 42.6	+0.4
IGPR	InterUniversit	1.12	162		Pn	06 11 28.0	0.0
IGPR	InterUniversit	1.12	162		Sn	06 11 42.6	+0.4
GBPR	Guanica, Bosqu	1.13	200	⇑eP	Pn	06 11 27.1	-0.9
GBPR	Guanica, Bosqu	1.13	200	eS	Sn	06 11 42.2	0.0
GBPR	Guanica, Bosqu	1.13	200		Pn	06 11 27.1	-0.9
GBPR					Sn	06 11 42.2	0.0
ICMP	Isla Caja de M	1.15	182		Pn	06 11 28.1	-0.2
CRPR	Cabo Rojo, PR	1.19	210	⇑eP	Pn	06 11 28.2	-0.6
CRPR	Cabo Rojo, PR	1.19	210	eS	Sn	06 11 44.1	+0.3
CRPR	Cabo Rojo, PR	1.19	210		Pn	06 11 28.2	-0.6
CRPR					Sn	06 11 44.1	+0.3
MLPR	Magueyes Islan	1.19	207	⇑eP	Pn	06 11 28.4	-0.5
MLPR	Magueyes Islan	1.19	207	eS	Sn	06 11 43.9	0.0
MLPR	Magueyes Islan	1.19	207		Pn	06 11 28.4	-0.5
MLPR					Sn	06 11 43.9	0.0
MTP	Monte Pirata	1.28	137	⇑eP	Pn	06 11 29.5	-0.6
MTP				eS	Sn	06 11 46.8	+0.7
MTP	Monte Pirata	1.28	137		Pn	06 11 29.5	-0.6
MTP					Sn	06 11 46.8	+0.7
CUPR	Culebra, Puert	1.34	123	⇑eP	Pn	06 11 29.8	-1.2
CUPR	Culebra, Puert	1.34	123	eS	Sn	06 11 47.3	-0.4
CUPR	Culebra, Puert	1.34	123		Pn	06 11 29.8	-1.2
CUPR					Sn	06 11 47.3	-0.4
STVI	Saint Thomas	1.60	115	⇑eP	Pn	06 11 33.7	-0.7
STVI	Saint Thomas	1.60	115	eS	Sn	06 11 53.7	-0.1
STVI	Saint Thomas	1.60	115		Pn	06 11 33.7	-0.7
STVI					Sn	06 11 53.7	-0.1
PCDR	Punta Cana, DR	1.88	254	Pn	Pn	06 11 39.1	+0.8
CDVI	St. Croix	2.07	128	Pn	Pn	06 11 42.3	+1.4
DR12	Loma Pena Alta	2.76	265	Pn	Pn	06 11 50.4	-0.2
SC01	Santiago de lo	4.04	276		Pn	06 12 20.4	+12
SDDR	Presa de Saban	4.55	270	Pn	Pn	06 12 16.4	+1.1

*DDA **06** 06:14:33.6, 35°.83N×31°.93E, h49km, MW3.1*
*NIC **06** 06:14:34.8±0.0, 35°.79N×32°.02E, h65km±8km, Ml2.6/4*
*ISK **06** 06:14:34.0, 35°.78N×32°.00E, h17km, ML2.8/14*
ISC 06 06:14:35.7±1.2**, 35°.86N**±0°.03×**32°.01E**±0°.03**, h25**km±13km**, n30, σ1s.42**/51**, Cyprus region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.45	33	PG	Pb	06 14 44.9	-0.2
GAZI	Gazipasa	0.45	33	iP	Pn	06 14 46.2	-0.4
GAZI				iS	Sn	06 14 54.5	+0.6
GAZI				IAML		06 14 55.0	
	comp=N,131nm,0.2s						
ALAN	Alanya-ANTALYA	0.70	2	PG	Pn	06 14 49.5	-0.5
ALFC	Alefka	0.85	145	P	Pb	06 14 50.8	-1.0
ALFC				AML	AML	06 15 01.6	
	comp=N,0.9nm,0.2s						
ALFC				AML	AML	06 15 01.6	
	comp=N,0.9nm,0.2s						
ALFC				AML	AML	06 15 02.1	
	comp=N,0.9nm,0.3s						
ALFC				AML	AML	06 15 02.1	
	comp=N,0.9nm,0.3s						
ALFC				S	Sb	06 15 02.3	-0.4
AKMS	Akamas	0.88	162	P	Pn	06 14 51.9	-0.5
AKMS				S	Sb	06 15 02.9	-0.7
AKMS				AML	AML	06 15 04.5	
	comp=N,0.6nm,0.2s						
AKMS				AML	AML	06 15 04.5	
	comp=N,0.6nm,0.2s						
TEKE	Tekeli-Mersin	0.94	72	PG	Pn	06 14 53.3	0.0
TEKE				SG	Sn	06 15 06.9	+1.0
AKDN	Akdeniz- Kıbrı	0.96	125	PG	Pb	06 14 52.5	-1.1
AKDN				SG	Sb	06 15 05.6	-0.3
LEF	Lefka	1.03	135	PG	Pn	06 14 53.0	-1.5
LEF	Lefka	1.03	135	iP	Pn	06 14 52.9	-1.6
LEF				iS	Sb	06 15 05.6	-2.3
ERMK	Ermenek	1.07	43	iP	Pn	06 14 52.4	-2.9
ERMK				iS	Sn	06 15 10.3	+0.8
KEPZ	Antalya-Kepez	1.09	343	iP	Pn	06 14 53.7	-1.8
KEPZ				iS	Sn	06 15 09.9	+0.1
BERE	Bereket-Mersin	1.10	63	PN	Pb	06 14 55.8	-0.3
BERE				SN	Sn	06 15 11.6	+1.5
NATA	Nata	1.17	157	P	Pb	06 14 57.6	+0.5
NATA				S	Sb	06 15 16.2	+4.3
AKK1	Akkuyu-Mersin	1.27	76	PN	Pb	06 14 58.2	-0.8
AKK2	Akkuyu-Mersin	1.28	77	PN	Pn	06 14 58.1	+0.2
AKKU	Akkuyu-Mersin	1.29	76	PN	Pn	06 14 58.1	+0.1
AKKU				SN	Sb	06 15 16.0	+0.7
GULN	MERSIN_Gulnar	1.29	75	iP	Pn	06 14 57.9	-0.1
GULN				iS	Sb	06 15 15.9	+0.6
GULN				IAML		06 15 17.0	
	comp=N,26nm,0.5s						
SZAC	Souni	1.31	147	P	Pb	06 15 01.0	+1.4
SZAC				S	Sb	06 15 18.9	+2.9
SZAC				AML	AML	06 15 20.1	
	comp=N,0.3nm,0.5s						
SZAC				AML	AML	06 15 20.1	
	comp=N,0.3nm,0.5s						
TISA	Tisan-Mersin	1.39	77	PN	Pn	06 14 59.4	0.0
TISA				SN	Sb	06 15 18.2	0.0
CSS	Mathiatis	1.40	129	PN	Pn	06 14 58.6	-1.0
IKL	Isikli	1.41	74	PN	Pn	06 15 00.2	+0.5
IKL				SN	Sb	06 15 19.1	+0.2
AKUM	Antalya-Kumluc	1.43	290	iP	Pn	06 14 57.9	-2.0
AKUM				iS	Sb	06 15 23.4	+4.1
KEBE	Keben-Mersin	1.50	66	PN	Pn	06 15 01.7	+0.7
KEBE				SN	Sb	06 15 21.7	+0.2
SEYD	Seydisehir-KON	1.55	355	PN	Pb	06 15 02.6	-1.2
MVOU	Mavrovouni	1.57	122	P	Pn	06 15 00.1	-1.8
MVOU				AML	AML	06 15 19.0	
	comp=N,0.1nm,0.3s						
MVOU				AML	AML	06 15 19.0	
	comp=N,0.1nm,0.3s						
MVOU				S	Sn	06 15 19.4	-1.9
SILI	Silifke-Mersin	1.63	71	PN	Pn	06 15 03.4	+0.6
EREN	Erenkoy	1.79	100	PN	Pn	06 15 05.3	+0.4
EREN				SN	Sn	06 15 27.7	+0.9
KIZK	Mersin	1.84	70	PN	Pn	06 15 06.4	+0.8
KIZK	Mersin	1.84	70	iP	Pn	06 15 06.2	+0.6
KIZK				iS	Sn	06 15 28.7	+0.7
KIZK				IAML		06 15 32.0	
	comp=N,14nm,0.4s						
KERG	Konya-Eregli	2.31	47	iP	Pn	06 15 12.1	-0.1
KERG				iS	Sn	06 15 39.5	-0.3
KERG				IAML		06 15 43.0	
	comp=E,9.1nm,0.6s						

IDC 06 06:14:59.8±3.8**, 30°.38S**×**138°.42E, h0km, mb1 3.2**/3**, mb1mx3.1**/42**, mbtmp2.9**/3**, ML2.9**/3**, Error ellipse: s-maj=97.3km s-min=22.7km az=45.0, South Australia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	3.10	120	Pn	Pn	06 15 50.4	+0.2
	0.5nm,0.3s,baz=299,slow=12,SNR=6.2						
STKA				Sn	Sn	06 16 28.1	+0.1
	1.6nm,0.3s,baz=91,slow=21,SNR=4.8						
ASAR	Alice Springs	7.80	328	Pn	Pn	06 16 54.7	0.0
	0.2nm,0.3s,baz=153,slow=12,SNR=9.4						
ASAR				Sn	Sn	06 18 24.0	+0.1
	0.2nm,0.3s,baz=152,slow=22,SNR=6.2						
WRA	Warramunga Arr	11.03	340	Pn	Pn	06 17 39.3	+0.4
	0.1nm,0.3s,baz=154,slow=12,SNR=2.4						

*NEIC **06** 06:22:59.6±2.5, 6°.33S±0°.08×154°.87E±0°.09, h35km±1km, mb5.1/108, Error ellipse: s-maj=15.6km s-min=13.0km az=132.0*
*GCMT **06** 06:23:01.6±0.2, 6°.67S±0°.02×154°.67E±0°.02, h43km, MW5.1/82, Moment Tensor Solution. s82,c102; s77,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.13±.18; $M_{\theta\theta}$-3.21±.16; $M_{\phi\phi}$-1.92±.15; $M_{r\theta}$0.85±.16; $M_{\theta\phi}$4.10±.12; $M_{\phi r}$-0.56±.15; Best double couple: $M_0$6.01000×10^{16} NP1:ϕ_s313.00000°, δ40.00000°, λ93.00000°. NP2:ϕ_s129.00000°, δ50.00000°, λ87.00000°. Principal axes: T 5.2200, Plg85.0000°, Azm19.0000°; N 1.5810, Plg2.0000°, Azm130.0000°; P -6.8010, Plg5.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **06** 06:23:03.7±0.5, 6°S±3°×15°5E±°, h64km±5km, M5.0/44, mb5.1/44, mB5.6/16, MLv4.8/1, Mw(mB)5.2/16, Mwp5.2/2*
*IDC **06** 06:23:04.1±2.0, 6°.30S×154°.79E, h72km±17km, mb4.7/33, mb1 4.7/38, mb1mx4.6/51, mbtmp4.9/38, MS4.1/27, Ms1 4.1/27, ms1mx4.0/34, Error ellipse: s-maj=13.8km s-min=9.1km az=78.0*
*BJI **06** 06:23:04.2±0.0, 5°.85S×154°.89E, h76km, mB5.1/47, mb5.1/61, Ms4.6/24, Ms7 4.3/27*
ISC 06 06:23:02.3±0.3**, 6°.30S**±0°.05×**154°.79E**±0°.05**, h56km, n395, σ1s.30**/358**, mb5.1**/105**, MS4.2**/37**, 5C-1D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.35	309		Pn	06 23 58.7	+6.5
KRVT	Keravat (AS076	3.39	306	P	Pn	06 23 55.4	+2.7
	55nm,0.3s,baz=62,slow=1.6,SNR=18						
HNR	Honiara	5.98	122	LR	LR	06 26 45.8	
	comp=Z,3μm,19.2s,baz=298,slow=37						
HNR	Honiara	5.98	122		Pn	06 24 31.7	+3.4
PMG	Port Moresby	8.17	247	P	Pn	06 24 59.7	+1.5
	7.9nm,0.3s,baz=53,slow=9.4,SNR=25						
PMG				LR	LR	06 28 00.3	
	comp=Z,3μm,21.4s,baz=60,slow=36						
PMG	Port Moresby	8.17	247		Pn	06 25 00.0	+1.8
PATS	Pohnpei	13.51	15	Pn	Pn	06 26 11.7	+0.5
COEN	Coen	13.73	235		Pn	06 26 15.8	+1.5
JAY	Jayapura	14.54	284	P	Pn	06 26 25.6	+0.5
	0.6nm,0.3s,baz=114,slow=6.4,SNR=4.4						
CTA	Charters Tower	16.02	210	P	Pn	06 26 44.1	-0.1
	0.5nm,0.3s,baz=33,slow=13,SNR=12						
CTAO	Charters Tower	16.02	210	P	Pn	06 26 44.0	-0.1
SMPI	Sarmi	16.59	284	P	Pn	06 26 51.6	+0.3
DZM	Mont Dzumac	19.31	145	eP	Pn	06 27 23.8	-0.6
	122nm,1.1s						
DZM				eLQ	LQ	06 31 10.8	
	2μm,32.8s						
DZM				eLR	LR	06 32 00.7	
	comp=Z,2μm,26.3s						
DZM	Mont Dzumac	19.31	145	P	Pn	06 27 23.9	-0.5
	2.3nm,0.3s,baz=265,slow=10,SNR=26						
DZM				LR	LR	06 34 05.6	
	comp=Z,795nm,20.5s,baz=322,slow=34						
DZM	Mont Dzumac	19.31	145	P	P	06 27 23.1	+0.2
KWAJ	Kwajalein Atol	19.71	41	P	Pn	06 27 30.1	+0.9
FAKI	Fak Fak	22.71	277	P	P	06 28 01.0	+1.3
	41nm,0.8s						
SAUI	Saumlaki	23.37	264	P	P	06 28 09.4	+3.2
WR0	Warramunga Arr	23.90	233	P	P	06 28 11.5	+0.5
WR0				IAmb	IAmb	06 28 13.7	
	comp=Z,46nm,1.1s						
WB0	Warramunga Arr	23.92	234	P	P	06 28 10.9	-0.4
WB0				IAmb	IAmb	06 28 13.8	
	comp=Z,47nm,1.2s						
WRAB	Tennant Creek	24.04	234	P	P	06 28 12.4	+0.1
WB2	Warramunga Arr	24.05	234	P	P	06 28 11.6	-0.8
WB2					S	06 32 32.2	+6.3
WRA	Warramunga Arr	24.05	234	P	P	06 28 12.3	-0.2
	comp=Z,18nm,0.9s,baz=58,slow=9.7,SNR=27						
WRA				PcP	PcP	06 31 53.7	+0.6
	comp=Z,10nm,0.7s,baz=58,slow=2.1,SNR=12						
SIJI	Sorong	24.08	282	P	P	06 28 13.8	+1.0
	comp=Z,26nm,0.8s,baz=59,slow=8.5,SNR=11						
SIJI				LR	LR	06 38 29.1	
	comp=Z,433nm,20.0s,baz=83,slow=38						
ARMA	Armidale	24.18	187	P	P	06 28 14.4	+0.8
MSVF	Nonsavu	25.39	119	P	P	06 28 25.0	+0.3
AS31	Alice Springs	26.49	227	P	P	06 28 34.4	-0.2
ASAR	Alice Springs	26.49	227	P	P	06 28 34.3	-0.3
	comp=Z,2.2nm,0.7s,baz=58,slow=8.6,SNR=27						
ASAR				PcP	PcP	06 31 59.1	+0.5
	comp=Z,11nm,0.7s,baz=59,slow=2.6,SNR=20						
ASAR				ScP	ScP	06 35 32.9	-1.1
	comp=Z,1.2nm,0.8s,baz=64,slow=4.2,SNR=2.3						
KNRA	Kununurra	27.17	248	P	P	06 28 41.3	+0.6
KNRA				IAmb	IAmb	06 28 57.7	
	comp=Z,60nm,1.5s						
H11S3	WAKE ISLAND Hy	27.29	25	T	T	06 56 56.3	
	baz=205,slow=74,SNR=453						
H11S2	WAKE ISLAND Hy	27.29	25	T	T	06 56 56.7	
	baz=205,slow=74,SNR=253						
H11S1	WAKE ISLAND Hy	27.30	25	T	T	06 56 60.0	
	baz=205,slow=74,SNR=183						
NLAI	Namlea	27.76	275	P	P	06 28 45.6	-0.4
	comp=Z,832nmcomp=Z,23nm,0.6s						
LBMI	Labuha	27.80	281	P	P	06 28 48.2	+1.8
	comp=Z,122nm,1.1s						
STKA	Stephens Creek	28.28	204	P	P	06 28 50.5	0.0
	comp=Z,3.6nm,0.6s,baz=26,slow=13,SNR=9.7						
STKA				PcP	PcP	06 32 02.9	+0.3
	comp=Z,8.8nm,0.8s,baz=5.3,slow=3.0,SNR=8.2						
STKA				LR	LR	06 39 33.2	
	comp=Z,834nm,21.6s,baz=9.7,slow=35						
H11N1	WAKE ISLAND Hy	28.46	24	T	T	06 58 33.6	
	baz=204,slow=76,SNR=10						
H11N3	WAKE ISLAND Hy	28.47	25	T	T	06 58 33.2	
	baz=204,slow=76,SNR=30						
H11N2	WAKE ISLAND Hy	28.48	24	T	T	06 58 47.5	
	baz=204,slow=76,SNR=5.7						
FITZ	Fitzroy Crossi	30.75	245	P	P	06 29 12.5	-0.1
	comp=Z,5.2nm,0.6s,baz=86,slow=5.5,SNR=15						
FITZ				PcP	PcP	06 32 10.3	+1.1
	comp=Z,15nm,0.8s,baz=147,slow=3.4,SNR=6.9						
FITZ				LR	LR	06 42 07.4	
	comp=Z,743nm,19.9s,baz=78,slow=37						
FITZ	Fitzroy Crossi	30.75	245	P	P	06 29 12.2	-0.3
FITZ				IAmb	IAmb	06 29 22.8	
	comp=Z,20nm,0.8s						
BATI	Baumata	31.04	261	LR	LR	06 43 13.1	
	comp=Z,627nm,21.1s,baz=140,slow=39						
BBOO	Buckleboo	31.62	211	P	P	06 29 19.0	-1.1
DAV	Davao City (W)	32.03	294	LR	LR	06 40 42.3	
	comp=Z,276nm,22.0s,baz=145,slow=33						
LUWI	Luwuk	32.36	278	P	P	06 29 27.6	+0.8
	comp=Z,3μmcomp=Z,69nm,0.9s						
EDFI	Ende, Flores	32.90	264	P	P	06 29 30.6	-1.0
	comp=Z,19nm,0.8s						
MRSI	Marisa	33.47	280	P	P	06 29 51.1	+15
OUZ	Omahuta	33.59	152	P	P	06 29 35.9	-1.3
OUZ				IAmb	IAmb	06 29 45.7	
	comp=Z,35nm,1.3s						
KAPI	Kappang	34.89	270	LR	LR	06 46 37.0	
	comp=Z,82nm,20.3s,baz=84,slow=40						
FORT	Forrest	34.96	223		pP	06 29 59.4	-2.2
WBSI	Waikabubak, Su	35.20	262	P	P	06 29 51.4	-0.1
	comp=Z,61nm,0.9s						
MPSI	Mapaga	35.44	279	P	P	06 29 53.4	-0.1
	comp=Z,37nm,0.9s						
PLAI	Plampang	36.77	264	P	P	06 30 03.6	-1.2
	comp=Z,731nmcomp=Z,65nm,0.8s						
PSA00	Pilbara Seismi	37.03	242	P	P	06 30 07.3	+0.3
PSA00				IAmb	IAmb	06 30 16.2	
	comp=Z,18nm,0.7s						
URZ	Urewera	37.71	151	P	P	06 30 13.1	+0.6
	comp=Z,31nm,1.0s,baz=219,slow=3.8,SNR=16						
URZ				LR	LR	06 45 03.1	
	comp=Z,209nm,18.0s,baz=330,slow=35						
URZ	Urewera	37.71	151	P	P	06 30 13.3	+0.8
URZ				IAmb	IAmb	06 30 14.6	
	comp=Z,36nm,1.0s						
BKZ	Black Stump Fm	38.14	152	P	P	06 30 15.8	-0.4
BKZ				IAmb	IAmb	06 30 21.9	
	comp=Z,19nm,0.7s						
THZ	Tophouse	38.82	158	P	P	06 30 22.1	+0.2
THZ				IAmb	IAmb	06 30 26.2	
	comp=Z,34nm,0.8s						
SNZO	South Karori	39.13	156	P	P	06 30 24.3	0.0
BSWZ	Blackbirch Sta	39.15	157	P	P	06 30 23.5	-1.0
BFZ	Birch Farm	39.26	154	P	P	06 30 23.1	-2.4
MSWZ	Moikau Station	39.44	156	P	P	06 30 26.0	-1.0
LTZ	Lake Taylor	39.49	160	P	P	06 30 26.8	-0.6
LTZ				IAmb	IAmb	06 30 28.8	
	comp=Z,26nm,0.8s						
PLWZ	Palliser	39.57	156	P	P	06 30 25.4	-2.7
KHZ	Kahutara	39.62	158	P	P	06 30 27.6	-0.9
KHZ				IAmb	IAmb	06 30 32.0	
	comp=Z,30nm,0.9s						
OXZ	Oxford	39.89	160	P	P	06 30 31.0	+0.4
OXZ				IAmb	IAmb	06 30 32.6	
	comp=Z,33nm,1.1s						
RPZ	Rata Peaks	39.92	162	P	P	06 30 31.1	+0.1
	comp=Z,19nm,0.8s,baz=279,slow=3.4,SNR=5.5						
RPZ				LR	LR	06 46 19.1	
	comp=Z,388nm,19.2s,baz=311,slow=35						
RPZ	Rata Peaks	39.92	162	IAmb	IAmb	06 30 46.2	
	comp=Z,60nm,1.4s						
LBZ	Lake Benmore	40.26	163	P	P	06 30 33.2	-0.6
KKM	Kota Kinabalu	40.41	287	IAmb	IAmb	06 30 37.0	
	comp=Z,37nm,1.0s						
MLZ	Mavora Lakes	40.61	166	P	P	06 30 35.9	-0.7
MLZ				IAmb	IAmb	06 30 53.1	
	comp=Z,37nm,1.4s						
MORW	Morawa	43.00	233	P	P	06 30 56.6	+0.2
PCJI	Pacitan	43.29	265	P	P	06 30 58.4	-0.5
	comp=Z,105nm,1.1s						
SBUM	Sibu	43.38	280	P	P	06 31 02.0	+2.3
NWAO	Narrogin (SRO)	43.80	228	LR	LR	06 49 17.0	
	comp=Z,471nm,20.0s,baz=85,slow=36						
NACB	Ninganchiao	44.33	314	P	P	06 31 07.0	-0.1
NACB				IAmb	IAmb	06 31 09.3	
	comp=Z,36nm,1.0s						
TPUB	Ta-pu	44.49	313	P	P	06 31 09.0	+0.6
TPUB				IAmb	IAmb	06 31 13.3	
	comp=Z,25nm,0.7s						
JNU	Nakatsue	45.30	331	P	P	06 31 14.7	0.0
	comp=Z,26nm,0.7s,baz=75,slow=0.6,SNR=14						
JNU				LR	LR	06 48 04.9	
	comp=Z,91nm,21.5s,baz=136,slow=33						
JNU	Nakatsue	45.30	331	P	P	06 31 13.9	-0.8
MJAR	Matsushiro Arr	45.36	341	P	P	06 31 16.5	+1.4
	comp=Z,3.8nm,0.8s,baz=157,slow=7.3,SNR=7.5						
MJAR				PcP	PcP	06 32 53.6	-0.2
	comp=Z,3.7nm,0.9s,baz=168,slow=3.3,SNR=4.1						
MJAR				LR	LR	06 51 38.2	
	comp=Z,75nm,18.1s,baz=130,slow=38						
MAT	Matsushiro	45.36	341	P	P	06 31 15.7	+0.6
CISI	Cisompet, Garu	46.63	266	P	P	06 31 24.1	-1.5
	comp=Z,6μmcomp=Z,84nm,1.1s						
LEM	Lembang	46.85	267	P	P	06 31 28.1	+0.7
	comp=Z,25nm,0.7s,baz=21,slow=9.7,SNR=4.3						
CNJI	Cibinong	47.32	266	P	P	06 31 29.5	-1.4
	comp=Z,1μmcomp=Z,135nm,1.1s						
KSRS	Korea Array	50.23	332	P	P	06 31 52.6	-0.1
	comp=Z,12nm,0.9s,baz=150,slow=8.8,SNR=26						
KSRS				LR	LR	06 48 28.2	
	comp=Z,58nm,21.9s,baz=138,slow=30						
MDSI	Maura Dua	50.41	269	P	P	06 31 53.5	-1.0
	comp=Z,1μmcomp=Z,11nm,0.7s						
QIZ	Qiongzhong	50.93	301	P	P	06 31 58.0	-0.4
QIZ				S	S	06 39 09.7	-1.7
QIZ				LR	LR		
	comp=Z,240nm,23.5s						
QIZ				LR	LR		
	comp=Z,230nm,20.6s						
QIZ				LR	LR		
	comp=Z,240nm,28.4s						
NJ2	Nanjing	51.25	320	eP	P	06 32 02.1	+1.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WHN	Wuhan	53.30	316	⇑P	P	06 32 17.5	+1.7
USRK	Ussuriysk Ar.	54.31	340	P	P	06 32 22.8	-0.1
	comp=Z,3.0nm,0.5s,baz=168,slow=6.4,SNR=9.1						
USRK				LR	LR	06 52 35.6	
	comp=Z,78nm,21.1s,baz=157,slow=33						
TIA	Tai'an	55.09	323	P	P	06 32 28.5	-0.2
TIA				pmax	pmax		
	comp=Z,11nm,0.8s						
PPT2	Papeete2	55.39	107	eS	S	06 40 13.8	+1.5
	comp=Z,93nm,25.0s						
PPT2				eLR	LR	06 48 47.4	
	comp=Z,246nm,25.8s						
MNSI	Mandailing Nat	55.55	275	P	P	06 32 31.1	-1.4
TBI	Tubuai	56.14	114	eS	S	06 40 22.9	+0.9
	comp=Z,76nm,28.0s						
TBI				eLQ	LQ	06 46 41.5	
	comp=Z,321nm,40.5s						
TBI				eLR	LR	06 49 06.4	
	comp=Z,679nm,28.8s,baz=285						
CN2	Changchun	56.48	335	eP	P	06 32 38.5	0.0
RPSI	Rantau Prapat	56.49	277	P	P	06 32 38.7	-0.5
RPSI	Rantau Prapat	56.49	277	P	P	06 32 38.8	-0.3
PSI	Prapat	56.51	278	P	P	06 32 38.8	-0.6
	comp=Z,5.1nm,0.6s,baz=180,slow=13,SNR=5.2						
ENH	Enshi	56.62	313	IAmb	IAmb	06 32 41.0	
	comp=Z,16nm,0.9s						
GYA	Guiyang	56.87	307	⇑iP	P	06 32 42.6	+0.8
GYA				sP	sP	06 33 13.2	+10
GYA				S	S	06 40 28.5	-3.2
GYA				SS	SS	06 44 11.5	-9.4
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		

comp=Z,100nm,4.7s
GYA LR LR
comp=Z,150nm,17.4s
SLVN Son La 56.96 300 P **P** **06 32 44.1 +1.7**
GSI Gunungsitoli 57.61 276 P **P** **06 32 46.3 -0.8**
comp=Z,88µmcomp=Z,166nm,0.8s
KLR Kul'dur 58.84 343 P **P** **06 32 55.7 +0.7**
comp=Z,14nm,0.9s,baz=145,slow=5.7,SNR=30
XAN Xi'an 59.06 316 P **P** **06 32 56.9 0.0**
XAN pP sP 06 33 22.0 +3.6
XAN pmax pmax
comp=Z,20nm,0.6s
XAN pmax pmax
comp=Z,67nm,3.9s
XAN LR LR
comp=Z,120nm,17.3s
XAN LR LR
comp=Z,170nm,22.8s
XAN Xi'an 59.06 316 P **P** **06 32 57.0 +0.1**
PEA0B Petropavlovsk- 59.23 2 P **P** **06 32 59.0 +1.4**
PETK Petropavlovsk- 59.23 2 P **P** **06 32 58.8 +1.2**
comp=Z,29nm,0.6s,baz=177,slow=9.6,SNR=30
PETK LR LR 06 54 47.4
comp=Z,258nm,22.0s,baz=234,slow=32
KMI Kunming 59.46 304 P **P** **06 32 58.5 -1.6**
KMI pP pP 06 33 17.5 +2.3
KMI sP sP 06 33 27.7 +6.2
KMI pmax pmax
comp=Z,91nm,0.8s
KMI pmax pmax
comp=Z,130nm,5.1s
KMI LR LR
comp=Z,200nm,7.0s
KMI LR LR
comp=Z,190nm,6.7s
KMI LR LR
comp=Z,240nm,12.3s
CMAR Chiang Mai Arr 60.30 295 P **P** **06 33 07.0 +1.4**
comp=Z,44nm,0.8s,baz=114,slow=5.9,SNR=90
CMAR LR LR 06 57 59.4
comp=Z,76nm,21.4s,baz=118,slow=35
CD2 Chengdu 61.21 310 P **P** **06 33 12.0 +0.3**
CD2 pmax pmax
comp=Z,40nm,0.5s
HHC Hu-ho-hao-te 61.41 324 P **P** **06 33 15.9 +3.0**
HHC pP sP 06 33 35.5 +1.1
HHC S **S** **06 41 33.2 +3.2**
HHC pmax pmax
comp=Z,9.0nm,0.9s
HHC pmax pmax
comp=Z,46nm,4.9s
HHC LR LR
comp=Z,160nm,18.0s
HHC LR LR
comp=Z,110nm,13.9s
HHC LR LR
comp=Z,85nm,17.7s
ADK Adak 62.88 19 P **P** **06 33 23.5 +1.2**
HIA Hailar 63.21 335 ⇑P **P** **06 33 23.6 -1.1**
LZH Lanzhou 63.68 315 ⇑P **P** **06 33 30.1 +1.9**
LZH pmax pmax
comp=Z,33nm,1.2s
LZH pmax pmax
comp=Z,140nm,5.4s
LZH LR LR
comp=Z,190nm,16.8s
LZH LR LR
comp=Z,220nm,17.9s
TAOE Nuku Hiva Isla 64.48 97 *e*LR LR 06 52 58.4
comp=Z,193nm,24.1s
MA2 Magadan 65.74 358 P **P** **06 33 41.3 +0.3**
GTA Gaotai 68.09 317 ⇑P **P** **06 33 57.1 +0.6**
GTA S **S** **06 42 55.3 +3.0**
GTA sS sS 06 43 20.7 +2.8
GTA pmax pmax
comp=Z,10.0nm,1.0s
GTA pmax pmax
comp=Z,120nm,6.5s
GTA LR LR
comp=Z,95nm,17.1s
GTA LR LR
comp=Z,410nm,20.0s
GTA LR LR
comp=Z,160nm,19.7s
BRDH Bariadhala 68.10 297 P **P** **06 33 58.0 +1.3**
comp=Z,43nm,0.3s,baz=91,slow=10,SNR=8.4
SONM Songino Array 68.64 327 P **P** **06 34 00.1 +0.3**
comp=Z,9.4nm,0.9s,baz=141,slow=5.3,SNR=38
SONM PKPPKP **P'P'df** **07 02 14.8 +1.2**
comp=Z,0.9nm,0.8s,baz=270,slow=2.7,SNR=4.8
SONM LR LR 07 06 19.0
comp=Z,65nm,18.0s,baz=183,slow=38
RKT Rikitea 69.39 112 *e*LR LR 06 55 14.4
comp=Z,512nm,27.5s
LSA Lhasa 70.71 304 IAmb IAmb 06 34 16.3
comp=Z,15nm,0.9s
YAK Yakutsk 70.83 348 P **P** **06 34 13.3 +0.6**
comp=Z,10nm,0.5s,baz=269,slow=0.5,SNR=5.0
YAK Yakutsk 70.83 348 IAmb IAmb 06 34 14.5
comp=Z,66nm,1.3s
VNDA Vanda 71.28 178 P **P** **06 34 14.8 -0.5**
comp=Z,4.4nm,1.0s,baz=330,slow=6.7,SNR=19
TAPN Taplejung 72.87 301 *e*P **P** **06 34 26.5 +0.4**
comp=Z,71nm,0.9s
ODAN Odare 73.00 300 *e*P **P** **06 34 27.3 +0.5**
comp=Z,53nm,0.7s
RAMN Ramite 73.71 300 *e*P **P** **06 34 31.2 +0.2**
JIRN Jiri 74.25 301 *e*P **P** **06 34 34.6 +0.3**
GAMB Gambell 74.30 15 IAmb IAmb 06 34 35.3
comp=Z,21nm,0.9s
GUN Gumba 74.58 301 *e*P **P** **06 34 36.4 +0.2**
comp=Z,68nm,0.8s
BILL Bilibino 74.60 4 P **P** **06 34 35.3 +0.2**
PKI Pulchoki 74.89 301 *e*P **P** **06 34 37.7 -0.3**
PKIN Phulchoki 74.91 301 *e*P **P** **06 34 37.8 -0.2**
KKN Kakani 75.06 301 *e*P **P** **06 34 39.0 +0.2**
DMN Daman 75.16 301 *e*P **P** **06 34 39.7 +0.2**
GKN Gorkha 75.67 301 *e*P **P** **06 34 42.2 0.0**
comp=Z,47nm,0.7s
KOLN Koldanda 76.50 300 *e*P **P** **06 34 47.0 0.0**
comp=Z,33nm,0.7s
DANN Dangsing 76.50 301 *e*P **P** **06 34 46.8 -0.3**
comp=Z,49nm,0.6s
PYUN Piuthan 77.10 301 *e*P **P** **06 34 50.5 +0.1**
comp=Z,49nm,0.8s
WMQ Urumqi 78.18 317 *e*P **P** **06 34 57.6 +1.7**
WMQ sP sP 06 35 25.3 +7.5
WMQ pmax pmax
comp=Z,6.0nm,1.1s
WMQ pmax pmax
comp=Z,39nm,3.9s
WMQ LR LR
comp=Z,310nm,29.2s
WMQ LR LR
comp=Z,1µm,29.0s
WMQ LR LR
comp=Z,110nm,23.7s
HYB Hyderabad 78.85 289 *i*P **P** **06 35 00.0 -0.1**
HYB *e* 06 35 12.5
TIXI Tiksi 79.64 352 P **P** **06 35 02.4 -0.8**
comp=Z,4.4nm,0.5s,baz=149,slow=6.1,SNR=13
TIXI Tiksi 79.64 352 P **P** **06 35 02.1 -1.1**
PMR Palmer 80.23 24 IAmb IAmb 06 35 07.8
comp=Z,18nm,1.1s
KTH Kantishna Hill 80.65 22 P **P** **06 35 08.3 -0.7**
SML Sawmill 80.67 24 P **P** **06 35 09.9 +0.8**
GLI Glacier Island 80.69 25 IAmb IAmb 06 35 10.5
comp=Z,39nm,1.4s
SCM Sheep Creek Mo 81.09 24 IAmb IAmb 06 35 13.1
comp=Z,33nm,1.2s
RND Reindeer 81.34 22 IAmb IAmb 06 35 13.3
comp=Z,18nm,1.1s
MLY Manley 81.57 20 P **P** **06 35 13.1 -0.7**
MLY IAmb IAmb 06 35 15.1
comp=Z,15nm,1.1s
NEA Nenana 81.90 21 IAmb IAmb 06 35 16.0
comp=Z,14nm,1.1s
CRQM Cirque 82.31 26 IAmb IAmb 06 35 20.4
comp=Z,20nm,1.0s
GLB Gilahina Butte 82.35 25 IAmb IAmb 06 35 22.3
comp=Z,23nm,1.0s
VRDI Verde Repeater 82.40 25 IAmb IAmb 06 35 20.8
comp=Z,17nm,1.1s
TGL Tana Glacier 82.45 26 IAmb IAmb 06 35 20.4
comp=Z,22nm,1.3s
TCOL CIGO, UAF Yank 82.50 21 P **P** **06 35 18.1 -0.4**
baz=238
HDA Harding Lake 82.59 22 P **P** **06 35 18.6 -0.5**
baz=238
MCARA McCarthy VSAT 82.66 25 IAmb IAmb 06 35 25.0
comp=Z,24nm,1.2s
MK31 Makanchi Array 82.75 319 P **P** **06 35 19.3 -1.0**
MK31 IAmb IAmb 06 35 21.7
comp=Z,18nm,0.9s
MKAR Makanchi Array 82.75 319 P **P** **06 35 19.5 -0.8**
comp=Z,21nm,0.9s,baz=102,slow=5.1,SNR=106
MKAR LR LR 07 12 32.8
comp=Z,74nm,20.3s,baz=73,slow=36
POKR Poker Plat Res 82.79 21 P **P** **06 35 19.9 -0.2**
baz=238
IL31 82.80 22 IAmb IAmb 06 35 20.3
comp=Z,13nm,1.1s
ILAR Eielson Array 82.80 22 P **P** **06 35 19.1 -1.0**
comp=Z,5.6nm,0.7s,baz=238,slow=5.3,SNR=55
ILAR LR LR 07 07 38.2
comp=Z,396nm,21.9s,baz=256,slow=32
MAKZ Makanchi 82.96 319 P **P** **06 35 20.3 -1.1**
CTGM Chitina Glacie 83.20 26 IAmb IAmb 06 35 28.1
comp=Z,15nm,0.9s
ZAA0 Zalesovo Array 83.49 326 IAmb IAmb 06 35 24.1
comp=Z,20nm,1.0s
ZALV Zalesovo Beam 83.49 326 P **P** **06 35 22.9 -1.0**
comp=Z,9.6nm,0.4s,baz=107,slow=5.0,SNR=29
ZALV LR LR 07 14 02.8
comp=Z,45nm,19.7s,baz=64,slow=37
QSPA South Pole Qui 83.67 180 P **P** **06 35 23.7 -1.1**
QSPA IAmb IAmb 06 35 25.7
comp=Z,16nm,0.8s
TOLK Toolik Lake Re 84.02 18 P **P** **06 35 27.5 +1.1**
baz=236
TOLK Toolik Lake Re 84.02 18 IAmb IAmb 06 35 28.1
comp=Z,16nm,0.9s
FYU Fort Yukon 84.31 20 IAmb IAmb 06 35 29.6
comp=Z,14nm,1.3s
EGAK Eagle 84.95 23 IAmb IAmb 06 35 33.0
comp=Z,11nm,0.9s
MAW Mawson 84.96 203 P **P** **06 35 31.3 +0.2**
comp=Z,15nm,0.6s,baz=98,slow=7.3,SNR=14
MAW LR LR 07 09 51.9
comp=Z,122nm,21.0s,baz=72,slow=33
MAW Mawson 84.96 203 IAmb IAmb 06 35 32.1
comp=Z,3.5nm,0.7s
KSH Kashi 85.41 310 P **P** **06 35 36.9 +2.8**
KSH sP sP 06 36 04.3 +8.5
KSH PP **PP** **06 38 56.0 +3.0**
KSH SKS **SKSac** **06 45 49.8 -5.0**
KSH S **S** **06 45 58.9 -2.3**
KSH SS **SS** **06 51 40.2 +2.8**
KSH pmax pmax
comp=Z,41nm,1.0s
KSH pmax pmax
comp=Z,89nm,4.9s
KSH LR LR
comp=Z,260nm,15.1s
KSH LR LR
comp=Z,57nm,8.9s
KSH LR LR
comp=Z,120nm,17.9s
ULHL Ulahol 85.78 313 P **P** **06 35 37.1 +1.1**
SNR=9.0
BOOM Boomskoye usch 86.05 313 IAmb IAmb 06 35 39.0
comp=Z,13nm,1.1s
KURK Kurchatov 86.16 322 P **P** **06 35 35.9 -1.5**
KURK IAmb IAmb 06 35 38.6
comp=Z,20nm,1.3s
TKM2 Tokmak 2 86.39 314 P **P** **06 35 39.4 +0.3**
SNR=9.9
KZA Kyzart 86.47 313 P **P** **06 35 40.4 +0.8**
SNR=7.7
UCH Uchtor 87.03 313 P **P** **06 35 43.7 +1.2**
SNR=6.8
AAK Ala-Archa 87.13 313 P **P** **06 35 42.8 +0.3**
comp=Z,7.4nm,0.6s,baz=127,slow=5.9,SNR=18
AAK Ala-Archa 87.13 313 P **P** **06 35 43.2 +0.6**
SNR=9.2
AAK Ala-Archa 87.13 313 P **P** **06 35 42.5 -0.1**
AAK IAmb IAmb 06 35 47.6
comp=Z,7.7nm,0.7s
USP Ospenovka 87.24 314 P **P** **06 35 43.4 +0.5**
SNR=8.9
EPYK Eagle Plains 87.29 22 P **P** **06 35 43.1 +0.5**
baz=248
AML Almayashu 87.61 313 P **P** **06 35 45.5 +0.3**
SNR=15
NRIK Noril'sk 88.01 341 P **P** **06 35 44.9 -1.1**
comp=Z,20nm,1.0s,baz=115,slow=4.9,SNR=26
NRIK LR LR 07 17 35.5
comp=Z,90nm,18.8s,baz=70,slow=37
O02D Mt. Diablo Mer 88.26 49 P **P** **06 35 50.3 +2.4**
baz=260
HUMO Hull Mountain 88.54 47 IAmb IAmb 06 35 52.7
comp=Z,12nm,1.1s
O03E Paynes Creek 89.02 49 P **P** **06 35 52.2 +0.7**
baz=261
H04D Lebanon 89.02 45 P **P** **06 35 53.1 +1.8**
baz=260
ORV Oroville 89.13 50 P **P** **06 35 51.4 -0.6**
INK Inuvik 89.14 21 IAmb IAmb 06 35 52.3
comp=Z,9.6nm,1.2s
J04D Umpqua Nationa 89.26 47 P **P** **06 35 54.4 +1.7**
baz=261
BTK Batken 89.41 310 P **P** **06 35 52.2 -1.1**
BTK IAmb IAmb 06 35 57.9
comp=Z,7.7nm,0.8s
AFDM Forest Hills D 89.45 51 P **P** **06 35 54.7 +1.2**
AFDM IAmb IAmb 06 35 55.3
comp=Z,8.6nm,0.9s
GAR Garm 89.64 309 P **P** **06 35 54.2 -0.3**
J05D Fort Rock, OR 89.90 47 P **P** **06 35 56.8 +1.1**
baz=261
K05A Summer Lake 90.06 47 IAmb IAmb 06 36 01.2
comp=Z,16nm,1.2s
PINE Pine Mountain 90.19 46 IAmb IAmb 06 35 59.5
comp=Z,13nm,1.4s
PNTR Pine Nut 90.53 51 P **P** **06 35 59.9 +1.1**
WAKR Walker 90.58 51 IAmb IAmb 06 36 01.2
comp=Z,6.8nm,0.7s
PAHR Pah Rah Range 90.77 50 IAmb IAmb 06 36 01.8
comp=Z,9.7nm,0.9s
ISA Isabella, Lake 90.98 54 P **P** **06 36 02.1 +1.3**
baz=263
EDW2 Edwards Air Fo 91.28 55 P **P** **06 36 03.6 +1.5**
baz=263
CWC Cottonwood Cre 91.39 54 P **P** **06 36 04.4 +1.6**
baz=263
NVAR Mina Array Bea 91.45 52 P **P** **06 36 04.1 +1.0**
comp=Z,13nm,0.8s,baz=253,slow=7.0,SNR=45
NVAR LR LR 07 12 27.3
comp=Z,171nm,19.5s,baz=271,slow=32
BFSC Mount Baldy Ra 91.48 56 P **P** **06 36 04.2 +1.1**
baz=263
BVAR Borovoye Array 91.62 323 P **P** **06 36 01.5 -1.7**
comp=Z,12nm,0.9s,baz=104,slow=4.9,SNR=49
109C Camp Elliot, M 91.79 57 P **P** **06 36 06.6 +2.1**
baz=264
MURC Murrieta 91.79 57 P **P** **06 36 06.1 +1.6**
baz=264
MPMC Manual Prospec 91.82 54 P **P** **06 36 06.0 +1.2**
baz=264
J08A Circle Bar Ran 91.91 47 IAmb IAmb 06 36 06.3
comp=Z,3.7nm,0.7s
GSC Goldstone, Bar 92.29 55 P **P** **06 36 08.0 +1.1**
baz=264
MONP2 Monument Peak 92.36 57 P **P** **06 36 08.8 +1.4**
baz=264
HEC Hector,Ludlow 92.63 55 P **P** **06 36 10.0 +1.6**
baz=264
C36M Paulatuk 92.72 21 P **P** **06 36 08.3 +0.4**
baz=260
SHOC Shoshone, Teco 92.78 54 P **P** **06 36 11.0 +1.9**
baz=264
BELC Belle Mtn. Jos 92.83 56 P **P** **06 36 11.1 +1.7**
baz=264
A36M Sachs Harbour 92.84 18 P **P** **06 36 08.2 -0.3**
baz=259
TPNV Topopah Spring 92.91 53 P **P** **06 36 11.1 +1.3**
baz=264
SYO Syowa Base 92.92 199 ⇑*i*P **P** **06 36 07.0 -1.9**
SYO Syowa Base 92.92 199 ⇓*e*PcP **P** **06 36 09.0 +0.1**
TUQ Turquoise Moun 93.03 55 P **P** **06 36 11.4 +1.1**
baz=264
GMRC Granite Mounta 93.18 56 P **P** **06 36 12.3 +1.3**
baz=265
BC3 Big Chuckawall 93.24 57 P **P** **06 36 12.9 +1.6**
baz=265
NEW Newport 93.38 42 P **P** **06 36 11.3 -0.2**
baz=264
IRM Iron Mountain 93.54 56 P **P** **06 36 14.0 +1.5**
baz=265
R11A Troy Canyon, C 93.57 52 P **P** **06 36 13.9 +1.1**
baz=265
SHPR Sheep Range 93.74 54 P **P** **06 36 14.8 +1.2**
NEE2 Needles Airpor 94.03 56 P **P** **06 36 16.2 +1.4**
baz=265
W13A Hualapai Mount 94.66 55 IAmb IAmb 06 36 20.8
comp=Z,9.4nm,0.9s
YKA Yellowknife Ar 95.82 28 P **P** **06 36 22.8 +0.5**
comp=Z,4.5nm,0.6s,baz=264,slow=4.3,SNR=76
YKA PKKP **PKKPbc** **06 53 10.5 -3.7**
comp=Z,1.1nm,0.6s,baz=91,slow=3.0,SNR=18
YKA LR LR 07 16 13.4
comp=Z,64nm,20.5s,baz=0.0,slow=33
DLMT Dillon 96.27 45 IAmb IAmb 06 36 41.6
comp=Z,8.0nm,1.1s
H17A Grant Village 97.67 46 P Pdif 06 36 33.6 +2.1
baz=269
EGMT Eagleton 98.29 42 P **P** **06 36 33.9 0.0**
baz=270
PDAR Pinedale Array 98.38 48 P **P** **06 36 34.4 -0.3**
comp=Z,1.6nm,0.7s,baz=250,slow=2.1,SNR=15
RLMT Red Lodge 98.61 45 P Pdif 06 36 37.6 +2.0
baz=270
ARU Arti 98.66 326 P **P** **06 36 33.2 -2.0**
comp=Z,0.8nm,0.3s,baz=160,slow=2.9,SNR=5.1
ARU Arti 98.66 326 IAmb IAmb 06 36 33.5
comp=Z,4.7nm,0.9s
GEYT Alibeck 99.09 307 LR LR 07 22 01.8
comp=Z,48nm,21.4s,baz=320,slow=36
AKTO Aktyubinsk 99.13 320 P **Pdif** **06 36 35.6 -1.9**
comp=Z,1.2nm,0.7s,baz=34,slow=3.4,SNR=4.2
LAO LASA Array 100.71 44 P **Pdif** **06 36 45.4 +0.7**
baz=272
SNAA Sanae 100.81 187 P **Pdif** **06 36 44.3 -0.4**
N23A Red Feather La 101.09 50 P **Pdif** **06 36 47.9 +1.1**
baz=271
DGMT Dagmar 101.99 42 P **Pdif** **06 36 51.1 +0.7**
baz=274
VNA2 Neumayer--Watz 102.02 186 P **Pdif** **06 36 54.1 +4.1**
baz=159,slow=3.6
RSSD Black Hills 102.38 46 P **Pdif** **06 36 52.4 0.0**
baz=273
T25A Trinidad 102.38 53 P **Pdif** **06 36 53.6 +1.1**
baz=272
TXAR Lajitas Array 103.11 61 PP **PKiKP** **06 41 13.9 -1.6**
comp=Z,0.4nm,0.9s,baz=254,slow=6.5,SNR=4.3
TXAR PKKPbc **PKKPbc** **06 52 52.8 +0.3**
comp=Z,0.8nm,0.7s,baz=98,slow=3.5,SNR=11
U40A Yellville 111.69 53 P **PKiKP** **06 41 30.4 -0.8**
baz=278
D47A Chapleau 116.15 40 P **PKPdf** **06 41 39.0 -0.4**
baz=290
WCI Wyandotte Cave 116.47 50 P **PKPdf** **06 41 39.4 -0.9**
baz=284
K48A Perry 116.84 45 P **PKPdf** **06 41 40.5 -0.3**
baz=288
L48A N Adams 116.87 46 P **PKPdf** **06 41 40.7 -0.2**
baz=287
E48A Lockeyer 116.96 41 P **PKPdf** **06 41 40.3 -0.7**
baz=291
LRAL Lakeview Retre 116.99 56 P **PKPdf** **06 41 40.8 -0.6**
baz=281
F49A Sandfield 117.29 41 P **PKPdf** **06 41 41.0 -0.6**
baz=291
P49A Miami Univ. Ec 117.33 49 P **PKPdf** **06 41 41.1 -0.7**
baz=285
N49A Columbus Grove 117.34 47 P **PKPdf** **06 41 41.3 -0.5**
baz=286
PLCA Paso Flores 117.40 142 PKP **PKPdf** **06 41 41.5 -0.6**
comp=Z,1.8nm,1.0s,baz=229,slow=3.1,SNR=5.8
O49A Covington 117.44 48 P **PKPdf** **06 41 40.9 -1.2**
baz=286
BRTR Keskin Array B 117.77 312 PKP **PKPdf** **06 41 41.6 -1.3**
comp=Z,0.6nm,0.5s,baz=354,slow=2.5,SNR=3.8
Z50A Ashland 117.83 56 P **PKPdf** **06 41 42.1 -0.9**
baz=281
Z50A Ashland 117.83 56 **PKPdf** **06 41 41.3 -1.8**
W50A Signal Mountai 117.92 53 **PKPdf** **06 41 41.2 -2.0**
O50A Cable 117.98 48 P **PKPdf** **06 41 42.4 -0.8**
baz=287
M50A Fremont 118.03 46 P **PKPdf** **06 41 42.1 -1.1**
baz=288
ACSO Alum Creek Sta 118.42 47 P **PKPdf** **06 41 43.0 -0.9**
baz=287
N51A Ashland 118.66 47 P **PKPdf** **06 41 43.7 -0.7**
baz=288
O51A Pataskala 118.72 47 P **PKPdf** **06 41 43.7 -0.9**
baz=287
F52A Sundridge 119.05 40 P **PKPdf** **06 41 44.5 -0.5**
baz=293
Y52A Lilburn 119.23 55 P **PKPdf** **06 41 45.7 0.0**
baz=283
T53A Wise 119.67 51 P **PKPdf** **06 41 46.3 -0.2**
baz=286
M53A WI Miller and 119.70 45 P **PKPdf** **06 41 45.7 -0.7**
baz=290
G53A Haliburton 119.76 41 P **PKPdf** **06 41 45.6 -0.7**
baz=293
ALGO Algonquin Park 119.80 40 P **PKPdf** **06 41 45.7 -0.7**
baz=294
N53A Lisbon 119.80 46 P **PKPdf** **06 41 46.3 -0.3**
baz=289
N53A Lisbon 119.80 46 **PKPdf** **06 41 46.4 -0.3**
GOGA Godfrey 119.81 55 P **PKPdf** **06 41 46.5 -0.3**
baz=283
P53A Whipple 119.81 48 P **PKPdf** **06 41 46.3 -0.4**
baz=288
Q53A Leroy 119.90 49 P **PKPdf** **06 41 46.0 -0.8**
baz=288
TIGA Tifton 120.13 57 P **PKPdf** **06 41 47.1 -0.4**
baz=282
E54A Lac Daplat, Po 120.14 39 P **PKiKP** **06 41 47.5 +0.3**
baz=295
BOSA Boshof 120.29 232 PKP **PKiKP** **06 41 48.2 0.0**
comp=Z,5.4nm,0.6s,baz=104,slow=2.2,SNR=11
O54A Arvella 120.33 47 P **PKPdf** **06 41 47.3 -0.3**
baz=289
N54A Moraine State 120.35 46 P **PKPdf** **06 41 46.9 -0.7**
baz=290
N54A Moraine State 120.35 46 **PKPdf** **06 41 47.1 -0.5**
Q54A Coxs Mills 120.38 48 P **PKPdf** **06 41 47.1 -0.7**
baz=288
L54A Sinclairville 120.38 44 P **PKPdf** **06 41 46.7 -1.0**
baz=291
M54A Oil Creek Stat 120.39 45 P **PKPdf** **06 41 47.4 -0.3**
baz=290
X54A Belton 120.42 54 P **PKPdf** **06 41 47.9 -0.1**
baz=284
W54A Cherokee Point 120.44 53 P **PKPdf** **06 41 47.7 -0.2**
baz=285
P54A Burton 120.44 47 P **PKPdf** **06 41 47.2 -0.7**
baz=289
V54A Nebo 120.45 52 P **PKPdf** **06 41 48.0 0.0**
baz=285
H55A Tweed 120.93 41 P **PKPdf** **06 41 47.7 -0.9**
baz=294
Q55A Buckhannon 120.93 48 P **PKPdf** **06 41 48.7 -0.2**
baz=289
U55A TA2, Sparta 120.95 51 P **PKPdf** **06 41 48.5 -0.5**
baz=286
Y55A Saluda 120.99 54 P **PKPdf** **06 41 48.7 -0.3**
baz=284
L55A Hinsdale 121.01 44 P **PKPdf** **06 41 48.0 -0.9**
baz=292
X55A Gracelyn & Ava 121.04 53 P **PKiKP** **06 41 49.4 +0.1**
baz=285
M55A Ridgway 121.04 45 P **PKPdf** **06 41 48.6 -0.4**
baz=291
O55A Ligonier 121.10 46 P **PKPdf** **06 41 48.9 -0.2**
baz=290
KMSC Kings Mountain 121.10 53 P **PKPdf** **06 41 49.1 -0.1**
baz=286
R55A Marlinton 121.13 49 P **PKPdf** **06 41 49.0 -0.3**
baz=288
BLA Blacksburg 121.22 50 P **PKPdf** **06 41 49.0 -0.5**
baz=287
D56A ZEC Mazanza, M 121.37 38 P **PKPdf** **06 41 48.7 -0.7**
baz=298
M56A Emporium 121.44 45 P **PKPdf** **06 41 49.0 -0.8**
baz=292
X56A White Oak 121.51 53 P **PKPdf** **06 41 49.8 -0.3**
baz=285
N56A West Decatur 121.57 45 P **PKPdf** **06 41 49.5 -0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=291						
V56A	Mocksville	121.57	52	P	PKPdf	06 41 49.8	-0.3
	baz=286						
T56A	Rocky Mt	121.58	50	P	PKPdf	06 41 49.5	-0.7
	baz=288						
O56A	Blue Knob Stat	121.61	46	P	PKPdf	06 41 49.9	-0.2
	baz=291						
L56A	Greenwood	121.63	44	P	PKPdf	06 41 49.3	-0.8
	baz=292						
P56A	Dayton Farm, R	121.67	47	P	PKPdf	06 41 49.8	-0.4
	baz=290						
W56A	Indian Trail	121.69	52	P	PKPdf	06 41 50.0	-0.4
	baz=286						
S56A	Natural Bridge	121.73	49	P	PKPdf	06 41 49.8	-0.7
	baz=288						
SSPA	Standing Stone	121.96	46	P	PKPdf	06 41 50.3	-0.4
	baz=291						
SSPA	Standing Stone	121.96	46		PKPdf	06 41 50.2	-0.5
V57A	Coltrane Farms	122.11	51	P	PKPdf	06 41 50.8	-0.4
	baz=287						
W57A	Gilead	122.15	52	P	PKPdf	06 41 51.0	-0.2
	baz=286						
N57A	Milroy	122.16	45	P	PKPdf	06 41 51.0	-0.1
	baz=292						
T57A	Hurt	122.18	50	P	PKPdf	06 41 50.8	-0.4
	baz=288						
M57A	Sunshine Farm,	122.23	44	P	PKPdf	06 41 51.1	-0.2
	baz=292						
X57A	Johnson Farm,	122.26	53	P	PKiKP	06 41 51.7	0.0
	baz=286						
P57A	Homestead Farm	122.28	47	P	PKPdf	06 41 50.6	-0.8
	baz=291						
O57A	Amberson	122.29	46	P	PKPdf	06 41 50.4	-1.0
	baz=291						
G58A	Ormstown	122.68	39	P	PKPdf	06 41 51.2	-0.8
	baz=297						
M58A	Price's Panora	122.68	44	P	PKPdf	06 41 51.9	-0.3
	baz=293						
R58A	Rapidan	122.70	48	P	PKPdf	06 41 51.2	-1.0
	baz=290						
N58A	Sunbury	122.71	45	P	PKPdf	06 41 51.8	-0.3
	baz=292						
Q58A	Fox Den Farm,	122.71	47	P	PKPdf	06 41 51.7	-0.6
	baz=290						
T58A	Grand View Acr	122.74	50	P	PKPdf	06 41 51.6	-0.7
	baz=289						
P58A	Pank, Wackersv	122.79	47	P	PKPdf	06 41 52.0	-0.3
	baz=291						
O58A	Lewisberry	122.83	46	P	PKPdf	06 41 51.9	-0.5
	baz=292						
X58A	Rowland	122.84	53	P	PKPdf	06 41 52.6	+0.1
	baz=287						
S58A	Poland Farm, P	122.89	49	P	PKPdf	06 41 52.2	-0.4
	baz=289						
U58A	Oxford	122.90	50	P	PKPdf	06 41 52.4	-0.2
	baz=288						
M59A	Waymart	123.33	44	P	PKPdf	06 41 52.9	-0.4
	baz=294						
T59A	Double "B" Far	123.48	49	P	PKPdf	06 41 53.6	-0.2
	baz=289						
F60A	Warwick	123.59	38	P	PKPdf	06 41 53.4	-0.2
	baz=300						
I60A	Shoreham	123.76	40	P	PKPdf	06 41 53.8	-0.3
	baz=297						
N60A	Cedar Hill Far	123.83	44	P	PKPdf	06 41 53.6	-0.8
	baz=294						
O60A	Telford	123.83	45	P	PKPdf	06 41 53.9	-0.4
	baz=293						
BRG	Berggiesshubel	124.94	331	ePKP	PKPdf	06 41 54.0	-2.1
	comp=Z,5.1nm,1.1s						
KHC	Kasperske Hory	126.23	329		PKPdf	06 41 56.4	-2.4
GERES	GERESS Array B	126.35	329	PKP	PKPdf	06 41 58.1	-0.9
	comp=Z,1.4nm,0.8s,baz=50,slow=2.1,SNR=8.7						
GCUF	Volcan Galeras	127.76	93	eP	PKPdf	06 42 02.0	-1.3
BBAC	Balboa, Cauca	127.95	92	eP	PKPdf	06 42 01.5	-1.7
SOTA	Rioblanco	128.59	92	eP	PKPdf	06 42 03.0	-1.9
PCON	Cinco Dias	128.82	92	eP	PKPdf	06 42 02.8	-2.6
YOTC	Yotoco, Valle	129.03	90	eP	PKPdf	06 42 03.9	-1.3
CBOC	Ciudad Bolivar	129.50	88	eP	PKPdf	06 42 04.8	-1.3
HELC	Santa Helena	130.00	87	eP	PKPdf	06 42 05.7	-1.6
RREF	El Recreo	130.10	89	eP	PKPdf	06 42 07.8	0.0
ORTC	Ortega, Tolima	130.12	90	eP	PKPdf	06 42 04.4	-2.7
ZARC	Zaragoza, Cauc	130.72	86	eP	PKPdf	06 42 06.5	-1.7
ROSC	El Rosal	131.11	89	PKP	PKPdf	06 42 09.7	+0.2
	comp=Z,14nm,0.5s,baz=197,slow=21,SNR=14						
ROSC	El Rosal	131.11	89	eP	PKPdf	06 42 08.8	-0.7
MACC	Macarena, Meta	131.34	93	eP	PKPdf	06 42 08.3	-1.1
SPBC	San Pablo de B	131.41	88	eP	PKPdf	06 42 08.2	-1.5
CHIC	Chingaza	131.68	89	eP	PKPdf	06 42 09.0	-1.6
LPAZ	La Paz	131.97	118	PKP	PKPdf	06 42 10.7	-0.5
	comp=Z,2.5nm,0.9s,baz=206,slow=1.1,SNR=8.0						
OCAC	Ocana	132.26	85	eP	PKPdf	06 42 10.0	-1.4
RUSC	La Rusia	132.41	88	eP	PKPdf	06 42 09.5	-2.6
RUSC	La Rusia	132.41	88	PKPdf	PKPdf	06 42 10.0	-2.0
SDV	Santo Domingo	134.92	84	PKP	PKPdf	06 42 15.9	-0.4
	comp=Z,18nm,0.7s,baz=270,slow=3.5						
SDV	Santo Domingo	134.92	84	eP	PKPdf	06 42 16.0	-0.4
SDV	Santo Domingo	134.92	84		PKPdf	06 42 16.1	-0.3
CPUP	Villa Florida	135.03	138	PKP	PKPdf	06 42 15.2	-0.9
	comp=Z,1.8nm,0.8s,baz=243,slow=2.2,SNR=5.0						
SIV	San Ignacio	138.16	122	PKP	PKPdf	06 42 21.5	-0.6
	comp=Z,1.4nm,0.7s,baz=218,slow=4.9,SNR=8.1						
PMRV	Marv??o	143.31	337	ePKP	PKPbc	06 42 27.4	-0.5
PMTG	Montargil	143.94	337	ePKP	PKPbc	06 42 29.8	+0.1
EVO	Evora	144.33	337	ePKP	PKPab	06 42 30.6	0.0
PTGA	Pitinga	144.61	100	PKP	PKPab	06 42 31.8	-0.6
	comp=Z,20nm,0.7s,baz=253,slow=3.6,SNR=38						
PBEJ	Beja	144.70	336	ePKP	PKPbc	06 42 32.3	+0.2
PNCL	Nicolau / Gran	144.89	337	ePKP	PKPbc	06 42 33.0	+0.3
MESJ	Messejana	145.00	336	ePKPdf	PKPbc	06 42 33.0	-0.1
MESJ	Messejana	145.00	336	ePKP	PKPdf	06 42 33.5	-0.2
PCVE	Castro Verde	145.11	336	ePKP	PKPdf	06 42 33.8	-0.1
PVAQ	Vaqueiros	145.17	335	ePKP	PKPbc	06 42 33.0	-0.7
PTEO	Sao Teotonio	145.46	337	ePKP	PKPab	06 42 35.2	+0.4
MORF	Marmelete	145.64	336	ePKPdf	PKPdf	06 42 34.3	-0.7
MORF	Marmelete	145.64	336	ePKP	PKPab	06 42 36.0	+0.5
BDFB	Brasilia	148.61	134	PKP	PKPdf	06 42 40.6	+0.1
	comp=Z,4.0nm,0.6s,baz=73,slow=1.1,SNR=6.5						
BDFB				PKPbc	PKPbc	06 42 43.6	-0.6
	comp=Z,10nm,0.7s,baz=356,slow=1.2,SNR=9.3						
BDFB				PKPab	PKPab	06 42 47.4	-0.4
	comp=Z,9.9nm,0.7s,baz=214,slow=3.6,SNR=12						
TOA0	Torodi Ar. Sit	152.64	286		PKPbc	06 42 53.0	-0.8
TORD	Torodi Ar. Bea	152.64	286	PKP	PKPdf	06 42 44.2	-2.5
	comp=Z,1.8nm,0.8s,baz=95,slow=1.2,SNR=7.0						
TORD				PKPbc	PKPbc	06 42 52.9	-0.8
	comp=Z,8.6nm,0.8s,baz=56,slow=2.0,SNR=22						
TORD				PKPab	PKPab	06 43 04.5	0.0
	comp=Z,5.6nm,0.8s,baz=87,slow=4.5,SNR=9.3						
KIC	Kosan Boka	159.66	271	ePKP1	PKPdf	06 43 14.3	+18
	comp=Z,12nm,1.1s						
KIC	Kosan Boka	159.66	271	ePKP1	PKPab	06 43 34.6	-0.1
	comp=Z,56nm,0.8s						
DBIC	Dimbokro	159.77	272	PKPab	PKPab	06 43 35.3	+0.1
	comp=Z,19nm,0.9s,baz=80,slow=4.8,SNR=13						
DBIC	Dimbokro	159.77	272		PKPab	06 43 35.5	+0.3
TIC	Toumodi	159.94	272	ePKP1	PKPdf	06 43 15.0	+19
TIC	Toumodi	159.94	272	ePKP1	PKPab	06 43 35.3	-0.6
	comp=Z,39nm,0.9s						
LIC	Lamto	159.94	271	ePKP1	PKPdf	06 43 14.1	+18
	comp=Z,14nm,0.6s						
LIC	Lamto	159.94	271	ePKP1	PKPab	06 43 35.3	-0.6
	comp=Z,63nm,1.0s						

GUC 06 06:41:34.5±0.7, 20°.61S×70°.81W, h37km±2km, ML2.9, 2C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA01	Diego Aracena	0.59	86	eP	Pn	06 41 45.7	-0.8
TA01				iS	Sn	06 41 54.4	-0.4
PATCX	Punta Patache	0.65	109	eP	Pn	06 41 47.0	-0.3
PATCX				iS	Sn	06 41 56.5	+0.2
PATCX				IAML		06 41 59.1	
	comp=E,676nm,0.4s						
TA02	Huaiquique	0.71	62	eP	Pn	06 41 48.1	0.0
TA02				iS	Sn	06 41 58.2	+0.4
TA02				IAML		06 41 59.0	
	comp=E,2μm,0.4s						
PB02	IPOC Station P	1.11	130	eP	Pn	06 41 54.4	+0.9
PB02				iS	Sn	06 42 09.1	+1.5
PB02				IAML		06 42 13.4	
	comp=N,779nm,0.4s						
PSGC	Pisagua	1.19	33	eP	Pn	06 41 55.3	+0.6
PSGC				iS	Sn	06 42 11.9	+2.2
PSGC				IAML		06 42 20.3	
	comp=E,204nm,0.3s						
PB01	IPOC Station P	1.31	110	eP	Pn	06 41 57.4	+1.2
PB01				iS	Sn	06 42 15.2	+2.7
PB01				IAML		06 42 16.9	
	comp=N,902nm,0.3s						
PB11	IPOC Station P	1.37	52	eP	Pn	06 41 58.0	+0.8
PB11				iS	Sn	06 42 17.1	+2.9
PB11				IAML		06 42 20.4	
	comp=N,577nm,0.3s						
PB07	IPOC Station P	1.41	143	⇑iP	Pn	06 41 58.5	+0.8
PB07				IAML		06 42 25.3	
	comp=E,264nm,0.7s						
PB08	IPOC Station P	1.62	74	eP	Pn	06 42 02.8	+2.0
PB08				iS	Sn	06 42 24.3	+3.7
PB08				IAML		06 42 27.7	
	comp=N,222nm,0.2s						
PB03	IPOC Station P	1.74	146	eP	Pn	06 42 03.2	+0.9
GO01	Chusmiza	1.78	59	eP	Pn	06 42 04.4	+1.2
GO01				iS	Sn	06 42 28.7	+4.0
GO01				IAML		06 42 32.0	
	comp=N,374nm,0.2s						
GO01	Chusmiza	1.78	59		P	06 42 04.4	
PB04	IPOC Station P	1.82	161	eP	Pn	06 42 03.7	+0.2
PB04				IAML		06 42 35.8	
	comp=E,167nm,0.6s						
MNMC	Minye Minye	1.86	38	eP	Pn	06 42 06.2	+2.1
MNMC				iS	Sn	06 42 31.9	+5.5
MNMC				IAML		06 42 36.4	
	comp=E,534nm,0.3s						
PB09	IPOC Station P	1.88	129	eP	Pn	06 42 06.6	+2.3
PB09				IAML		06 42 45.9	
	comp=E,148nm,0.6s						
PB12	IPOC Station P	2.03	13	IAML		06 42 43.3	
	comp=N,88nm,0.4s						
PB05	IPOC Station P	2.30	166	eP	Pn	06 42 09.8	-0.3
PB05				IAML		06 42 59.5	
	comp=N,45nm,0.6s						
PB06	IPOC Station P	2.38	151	⇑iP	Pn	06 42 11.7	+0.5
PB06				IAML		06 42 53.6	
	comp=E,67nm,0.5s						
PB16	IPOC Station P	2.57	29	eP	Pn	06 42 17.4	+3.2
PB16				IAML		06 43 02.2	
	comp=N,46nm,0.6s						

OSPL 06 07:08:04.0±1.7, 18°.88N×66°.05W, h0km±20km, ML2.8
NEIC 06 07:08:08.7±0.8, 19°.04N±0°.03×66°.47W±0°.03, h31km±10km, Error ellipse: s-maj=5.1km s-min=3.3km az=154.0
RSPR 06 07:08:09.2, 19°.12N×66°.48W, h37km±5km, MD3.2/14
ISC 06 07:08:09.5±1.4, 18°.99N±0°.06×66°.45W±0°.03, h29km±12km, n64, σ0s.79/79, 11C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.52	188	⇓eP	Pb	07 08 20.5	+0.4
EMPR	Esperanza - Ma	0.52	188	eS	Sn	07 08 29.8	+1.0
EMPR	Esperanza - Ma	0.52	188		Pb	07 08 20.6	+0.4
EMPR					Sn	07 08 29.8	+1.0
AOPR	Arecibo Observ	0.70	204	⇑eP	Pb	07 08 22.6	-0.7
AOPR	Arecibo Observ	0.70	204	eS	Sn	07 08 33.3	-0.2
AOPR	Arecibo Observ	0.70	204		Pb	07 08 22.7	-0.6
AOPR					Sn	07 08 33.2	-0.2
AGPR	Aguadilla, PR	0.82	230	⇑eP	Pn	07 08 23.1	-1.9
AGPR	Aguadilla, PR	0.82	230	eS	Sn	07 08 35.9	-0.2
AGPR	Aguadilla, PR	0.82	230		Pn	07 08 23.1	-1.9
AGPR					Sb	07 08 34.3	-1.5
AGPR	Aguadilla, PR	0.82	230	IAML		07 08 39.7	
	comp=Z,182nm,0.2s						
AGPR	Aguadilla, PR	0.82	230	iP	Pn	07 08 23.4	-1.6
AGPR				IAML		07 08 39.7	
	comp=Z,182nm,0.2s						
AGPR	Aguadilla, PR	0.82	230	iP	Pn	07 08 23.3	-1.8
AGPR	Aguadilla, PR	0.82	230	eS	Sn	07 08 38.9	+2.7
CBYP	Canovanas	0.91	142	⇑eP	Pn	07 08 25.8	-0.6
CBYP	Canovanas	0.91	142	eS	Sb	07 08 39.1	+0.6
CBYP	Canovanas	0.91	142		Pn	07 08 25.8	-0.6
CBYP					Sb	07 08 39.0	+0.5
SJG	San Juan	0.92	162		Pn	07 08 26.3	-0.2
SJG				Sn	Sb	07 08 39.5	+0.7
OBIP	Obispado Ponce	0.96	189	⇑eP	Pn	07 08 26.5	-0.4
OBIP	Obispado Ponce	0.96	189	eS	Sn	07 08 39.8	+0.2
OBIP	Obispado Ponce	0.96	189		Pn	07 08 26.5	-0.4
OBIP					Sn	07 08 39.6	0.0
LSP	Las Mesas	1.01	217	⇑eP	Pn	07 08 27.0	-0.8
LSP	Las Mesas	1.01	217	eS	Sb	07 08 41.4	0.0
LSP	Las Mesas	1.01	217		Pn	07 08 27.0	-0.8
LSP					Sb	07 08 41.4	0.0
MPR	Mayaguez	1.02	220		Pn	07 08 27.2	-0.6
MPR	Mayaguez	1.02	220	IAML		07 08 43.7	
	comp=Z,113nm,0.7s						
MPR	Mayaguez	1.02	220	iP	Pn	07 08 27.1	-0.7
MPR				eS	Sb	07 08 41.7	+0.3
MPR				IAML		07 08 43.7	
	comp=Z,113nm,0.7s						
MPR	Mayaguez	1.02	220	iP	Pn	07 08 27.0	-0.8
HUMP	Col San Antoni	1.02	146	⇓eP	Pn	07 08 27.6	-0.3
HUMP	Col San Antoni	1.02	146	eS	Sb	07 08 41.7	+0.2
HUMP	Col San Antoni	1.02	146		Pn	07 08 27.6	-0.3
HUMP					Sb	07 08 41.7	+0.2
PDPR	Patillas Dam,	1.05	157		Pn	07 08 28.2	0.0
PDPR				Sn	Sn	07 08 42.4	+0.5
IGPR	InterUniversit	1.07	162	⇑eP	Pn	07 08 28.5	0.0
IGPR	InterUniversit	1.07	162	eS	Sb	07 08 43.6	+0.6
IGPR	InterUniversit	1.07	162		Pn	07 08 28.6	0.0
GBPR	Guanica, Bosqu	1.09	202	⇑eP	Pn	07 08 28.7	-0.1
GBPR				eS	Sb	07 08 43.6	0.0
GBPR	Guanica, Bosqu	1.09	202		Pn	07 08 28.7	-0.1
GBPR					Sb	07 08 43.6	0.0
ICMP	Isla Caja de M	1.10	184	⇑eP	Pn	07 08 28.4	-0.5
ICMP	Isla Caja de M	1.10	184	eS	Sb	07 08 43.8	-0.1
ICMP	Isla Caja de M	1.10	184		Pn	07 08 28.9	0.0
ICMP					Sn	07 08 43.6	+0.4
CRPR	Cabo Rojo, PR	1.16	213	⇓eP	Pn	07 08 29.2	-0.7
CRPR	Cabo Rojo, PR	1.16	213	eS	Sn	07 08 44.6	-0.1
CRPR	Cabo Rojo, PR	1.16	213		Pn	07 08 29.1	-0.7
CRPR					Sn	07 08 44.5	-0.2
MLPR	Magueyes Islan	1.16	209	⇑eP	Pn	07 08 29.3	-0.5
MLPR	Magueyes Islan	1.16	209	eS	Sn	07 08 44.8	+0.1
MLPR	Magueyes Islan	1.16	209		Pn	07 08 29.3	-0.5
MLPR					Sn	07 08 44.4	-0.3
MTP	Monte Pirata	1.23	136	⇑eP	Pn	07 08 30.4	-0.4
MTP	Monte Pirata	1.23	136	eS	Sb	07 08 47.4	-0.3
MTP	Monte Pirata	1.23	136		Pn	07 08 30.1	-0.6
MTP					Sb	07 08 47.6	-0.1
CUPR	Culebra, Puert	1.30	121		Pn	07 08 30.5	-1.1
CUPR				Sn	Sn	07 08 47.3	-0.8
STVI	Saint Thomas	1.55	114	⇑eP	Pn	07 08 34.4	-0.8
STVI	Saint Thomas	1.55	114	eS	Sn	07 08 54.6	+0.3
STVI	Saint Thomas	1.55	114		Pn	07 08 34.4	-0.8
STVI					Sn	07 08 53.5	-0.8
PCDR	Punta Cana, DR	1.89	256		Pn	07 08 39.4	-0.5
PCDR	Punta Cana, DR	1.89	256	IAML		07 09 17.9	
	comp=Z,87nm,0.7s						
PCDR	Punta Cana, DR	1.89	256	iP	Pn	07 08 39.5	-0.3
PCDR				eS	Sb	07 09 07.9	+1.4
PCDR				IAML		07 09 17.9	
	comp=Z,87nm,0.7s						
PCDR	Punta Cana, DR	1.89	256	iP	Pn	07 08 39.6	-0.3
PCDR	Punta Cana, DR	1.89	256	eS	Sb	07 09 07.9	+1.4
CDVI	St. Croix	2.02	127	Pn	Pn	07 08 42.8	+1.2
DR12	Loma Pena Alta	2.78	266	Pn	Pn	07 08 51.6	-0.6
BANI	BANI	3.75	261	Pn	Pn	07 09 04.9	-0.6
SDDR	Presa de Saban	4.58	271		Pn	07 09 16.8	0.0
SDDR	Presa de Saban	4.58	271	IAML		07 09 28.5	
	comp=Z,13nm,0.6s						
SDDR	Presa de Saban	4.58	271	iP	Pn	07 09 17.6	+0.7
SDDR	Presa de Saban	4.58	271	iP	Pn	07 09 17.9	+1.1

IDC 06 07:08:58.5±2.8, 30°.87S×177°.89W, h0km, mb4.0/3, mb1 4.1/4, mb1mx3.8/38, mbtmp4.0/4, ML3.1/1, Error ellipse: s-maj=64.2km s-min=22.3km az=112.0
NEIC 06 07:09:00.3±1.2, 30°.82S±0°.06×178°.1W±0°.2, h7km±6km, mb4.4/7, Error ellipse: s-maj=23.3km s-min=7.1km az=102.0
ISC 06 07:09:00.9±1.0, 30°.83S±0°.08×178°.1W±0°.2, h10km, n25, σ1s.05/17, mb4.2/8, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.58	6	Pn	Pn	07 09 29.2	+0.2
	53nm,0.3s,baz=262,slow=22,SNR=2.0						
RAO				LR	LR	07 09 43.2	
	comp=Z,99nm,20.3s,baz=123,slow=28						
RAO				Sn	Sn	07 09 49.1	-0.5
	350nm,0.3s,baz=48,slow=23,SNR=8.2						
RAO	Raoul Island	1.58	6		Pn	07 09 28.4	-0.6
RAO					Sn	07 09 49.2	-0.5
URZ	Urewera	8.39	207	Pn	Pn	07 11 00.8	-1.7
	0.2nm,0.3s,baz=248,slow=10,SNR=1.4						
URZ				Sn	Sn	07 12 34.9	-2.4
	1.5nm,0.3s,baz=222,slow=19,SNR=6.0						
BKZ	Black Stump Fm	9.41	207	Pn	Pn	07 11 17.2	+0.5
STKA	Stephens Creek	34.28	258	P	P	07 15 49.9	+2.5
	2.0nm,0.7s,baz=121,slow=11,SNR=4.8						
STKA	Stephens Creek	34.28	258	P	P	07 15 47.8	+0.3
BBOO	Buckleboo	38.75	255	P	P	07 16 25.5	0.0
BBOO				IAmb	IAmb	07 16 28.6	
	comp=Z,18nm,1.4s						
ASAR	Alice Springs	42.98	267	P	P	07 17 00.7	+0.1
	comp=Z,1.1nm,0.7s,baz=105,slow=7.3,SNR=12						
ASAR	Alice Springs	42.98	267	P	P	07 16 59.8	-0.8
WB2	Warramunga Arr	44.00	273	P	P	07 17 08.4	-0.4
WB2				IAmb	IAmb	07 17 10.2	
	comp=Z,7.8nm,1.2s						
WRA	Warramunga Arr	44.01	273	P	P	07 17 09.0	+0.1
	comp=Z,1.2nm,0.5s,baz=111,slow=8.1,SNR=13						
WB0	Warramunga Arr	44.04	273	P	P	07 17 09.0	-0.1
WB0				IAmb	IAmb	07 17 12.7	
	comp=Z,3.7nm,0.8s						
VNDA	Vanda	47.66	186	P	P	07 17 34.8	-2.1
VNDA				IAmb	IAmb	07 17 39.4	
	comp=Z,3.2nm,1.4s						
QSPA	South Pole Qui	59.28	180	P	P	07 19 03.5	+0.9
SNAA	Sanae	77.73	178	P	P	07 20 57.7	+0.1
SNAA				IAmb	IAmb	07 21 05.6	
	comp=Z,5.6nm,1.5s						
MAJO	Matsushiro	78.54	325	P	P	07 21 02.5	0.0
H03S2	Juan Fernandez	80.31	124	T	T	08 50 13.9	
	baz=238,slow=74,SNR=3.9						
H03S1	Juan Fernandez	80.32	124	T	T	08 50 21.0	
	baz=238,slow=74,SNR=3.2						
H03S3	Juan Fernandez	80.33	124	T	T	08 50 17.9	
	baz=238,slow=74,SNR=4.7						
H03N3	Juan Fernandez	80.51	123	T	T	08 50 24.3	
	baz=242,slow=74,SNR=4.4						
H03N1	Juan Fernandez	80.52	123	T	T	08 50 24.4	
	baz=147,slow=74,SNR=7.9						
H10N3	ASCENSION HYDR	138.46	155	T	T	10 03 51.3	
	baz=204,slow=75,SNR=16						
H10N1	ASCENSION HYDR	138.47	155	T	T	10 03 53.4	
	baz=204,slow=75,SNR=12						
H10N2	ASCENSION HYDR	138.48	155	T	T	10 03 55.2	
	baz=204,slow=75,SNR=13						
FINES	FINESS Array B	145.51	340	PKPbc	PKPdf	07 28 37.4	-1.1
	comp=Z,1.9nm,0.5s,baz=68,slow=5.6,SNR=10						

IDC 06 07:15:56.3±2.6, 3°.78S×134°.95E, h0km, mb3.7/1, mb1 3.9/5, mb1mx3.6/35, mbtmp3.8/5, ML3.6/4, Error ellipse: s-maj=75.8km s-min=26.1km az=75.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	4.68	308	Pn	Pn	07 17 06.1	-2.1
	4.1nm,0.3s,baz=280,slow=23,SNR=12						
SIJI				Sn	Sn	07 17 58.0	-5.3
	2.0nm,0.3s,baz=146,slow=23,SNR=1.4						
WRA	Warramunga Arr	16.08	182	Pn	Pn	07 19 45.4	+1.5
	0.2nm,0.3s,baz=4.4,slow=12,SNR=10						
FITZ	Fitzroy Crossi	16.90	212	Pn	Pn	07 19 53.1	-1.4
	0.1nm,0.3s,baz=34,slow=11,SNR=2.0						
ASAR	Alice Springs	19.80	183	P	P	07 20 28.2	-0.3
	0.2nm,0.3s,baz=6.4,slow=10,SNR=16						
MKAR	Makanchi Array	68.39	324	P	P	07 27 00.6	+0.7
	0.4nm,0.6s,baz=111,slow=7.6,SNR=4.8						

TEH 06 07:36:10.0, 37°.10N×45°.07E, h7km, ML2.7
DDA 06 07:36:10.8, 37°.84N×45°.40E, h7km±4km, ML2.4
ISC 06 07:36:10.7±1.2, 37°.09N±0°.07×45°.39E±0°.04, h10km, n10, σ1s.43/13, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAHB	Mahabad	0.41	142	ePg	Pn	07 36 21.6	-1.2
IAZR	Azarshahr	0.75	38	ePg	Pn	07 36 27.8	+0.1
YOVA	Hakkari_Yksek	1.01	300	iP	Pg	07 36 28.1	-2.0
YOVA				iS	Sg	07 36 41.9	-1.5
YOVA				IAML		07 36 44.0	
	comp=N,66nm,0.4s						
ISHB	Shabestar	1.20	8	ePg	Pn	07 36 34.0	+0.1
ISHB				e		07 36 55.2	
ITBZ	Tabriz	1.29	27	ePg	Pg	07 36 36.2	+0.7
HAKT	HAKKARI	1.42	290	iP	Pn	07 36 36.4	-0.5
HAKT				iS	Sg	07 36 56.5	-0.1
HAKT				IAML		07 37 00.0	
	comp=E,25nm,0.3s						
CUKT	Cukurca	1.44	277	iP	Pg	07 36 41.3	+3.0
CUKT				iS	Sg	07 36 57.7	+0.8
CUKT				IAML		07 36 58.0	
	comp=E,110nm,0.4s						
CUKT				IAML		07 37 00.0	
	comp=N,96nm,0.8s						
IHRS	Heris	1.79	46	ePn	Pg	07 36 46.0	+0.9
IHSH	Hashtrud	1.92	50	ePn	Pn	07 36 42.8	-0.9
IHSH				e		07 37 10.5	
ISRB	Sarab	1.95	67	ePn	Pg	07 36 48.8	+0.6
ISRB				e		07 36 51.9	

RSPR 06 07:46:57.0, 19°.12N×66°.50W, h33km±8km, MD2.8/12, 8C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.64	183	eS	Sb	07 47 17.5	-1.1
EMPR	Esperanza - Ma	0.64	183	⇑eP	Pn	07 47 08.7	-1.0
EMPR	Esperanza - Ma	0.64	183		Pn	07 47 08.3	-1.4
EMPR					Sb	07 47 17.5	-1.1
AOPR	Arecibo Observ	0.81	197	⇓eP	Pn	07 47 10.4	-1.7
AOPR	Arecibo Observ	0.81	197	eS	Sn	07 47 20.9	-2.0
AOPR	Arecibo Observ	0.81	197		Pn	07 47 10.3	-1.7
AOPR					Sn	07 47 21.0	-1.8
AGPR	Aguadilla, PR	0.87	222	⇓eP	Pn	07 47 11.0	-1.9
AGPR	Aguadilla, PR	0.87	222	eS	Sn	07 47 22.4	-2.0
AGPR	Aguadilla, PR	0.87	222		Pn	07 47 10.8	-2.1
AGPR					Sn	07 47 23.3	-1.1
UUPR	Utuado, UPR, P	0.89	194		Pn	07 47 11.6	-1.6
UUPR					Sn	07 47 22.5	-2.3
CBYP	Canovanas	1.04	144	⇑eP	Pn	07 47 13.6	-1.7
CBYP	Canovanas	1.04	144	eS	Sn	07 47 26.8	-1.9
CBYP	Canovanas	1.04	144		Pn	07 47 13.5	-1.8
CBYP					Sn	07 47 26.9	-1.8
SJG	San Juan	1.05	162	Pn	Pn	07 47 14.6	-0.9
OBIP	Obispado Ponce	1.07	185	⇑eP	Pn	07 47 14.5	-1.2
OBIP	Obispado Ponce	1.07	185	eS	Sn	07 47 27.9	-1.6
OBIP	Obispado Ponce	1.07	185		Pn	07 47 14.3	-1.4
OBIP					Sn	07 47 27.8	-1.7
MPR	Mayaguez	1.09	214	Pn	Pn	07 47 15.3	-0.6
LSP	Las Mesas	1.09	211	⇑eP	Pn	07 47 14.6	-1.4
LSP	Las Mesas	1.09	211	eS	Sn	07 47 28.8	-1.1
LSP	Las Mesas	1.09	211		Pn	07 47 14.6	-1.4
LSP					Sn	07 47 28.8	-1.1
HUMP	Col San Antoni	1.15	148	⇑eP	Pn	07 47 15.8	-1.0
HUMP	Col San Antoni	1.15	148	eS	Sn	07 47 29.5	-1.8
HUMP	Col San Antoni	1.15	148		Pn	07 47 15.1	-1.6
HUMP					Sn	07 47 29.6	-1.8
IGPR	InterUniversit	1.21	162	⇑eP	Pn	07 47 16.8	-0.7
IGPR	InterUniversit	1.21	162	eS	Sn	07 47 31.0	-1.7
IGPR	InterUniversit	1.21	162	Pn	Pn	07 47 16.7	-0.8
ICMP	Isla Caja de M	1.23	181	Pn	Pn	07 47 16.9	-0.9
CRPR	Cabo Rojo, PR	1.25	208	⇓eP	Pn	07 47 16.9	-1.2
CRPR	Cabo Rojo, PR	1.25	208	eS	Sn	07 47 32.3	-1.5
CRPR	Cabo Rojo, PR	1.25	208		Pn	07 47 17.0	-1.1
CRPR					Sn	07 47 32.2	-1.5
MLPR	Magueyes Islan	1.25	204	⇑eP	Pn	07 47 16.9	-1.3
MLPR	Magueyes Islan	1.25	204	eS	Sn	07 47 32.3	-1.6
MLPR	Magueyes Islan	1.25	204		Pn	07 47 17.1	-1.1
MLPR					Sn	07 47 32.3	-1.6
MTP	Monte Pirata	1.36	138	⇑eP	Pn	07 47 18.0	-1.6
MTP	Monte Pirata	1.36	138		Pn	07 47 18.1	-1.5
CUPR	Culebra, Puert	1.41	125	Pn	Pn	07 47 19.0	-1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STVI	Saint Thomas	1.65	117⇓	eP	Pn	07 47 22.5	-1.2
STVI	Saint Thomas	1.65	117	eS	Sn	07 47 42.2	-1.5
STVI	Saint Thomas	1.65	117		Pn	07 47 22.4	-1.3
STVI					Sn	07 47 42.1	-1.6

*SJA **06** 07:49:28.0±0.8, 20°00S×70°88W, h21km±2km, ML3.6, MW3.8*
*GUC **06** 07:49:30.0±0.6, 19°97S×70°94W, h34km±2km, ML3.8*
ISC 06 07:49:29.9±2.0**, 19°98S**±0°03×**70°92W**±0°07**, h28**km±17km**, n37,** σ**1ˢ13**/62**, 4C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TA02	Huaiquique	0.79	112	eP	Pn	07 49 43.7	-1.6
TA02				eS	Sn	07 49 54.6	-1.5
TA02				IAML		07 49 56.9	
	comp=E,7μm,0.4s						
PSGC	Pisagua	0.84	63⇑	iP	Pn	07 49 44.3	-1.7
PSGC				i S	Sn	07 49 56.0	-1.4
PSGCX	Pisagua	0.84	63	i P	Pn	07 49 44.4	-1.6
PSGCX				i S	Sn	07 49 56.0	-1.4
PSGCX				IAML		07 49 58.3	
	comp=Z,2μm,0.7s						
TA01	Diego Aracena	0.90	130⇓	iP	Pn	07 49 45.8	-1.0
TA01				eS	Sn	07 49 58.4	-0.5
PATCX	Punta Patache	1.10	140⇓	iP	Pn	07 49 48.8	-0.7
PATCX				i S	Sn	07 50 03.8	-0.1
PATCX	Punta Patache	1.10	140	i P	Pn	07 49 48.9	-0.7
PATCX				i S	Sn	07 50 03.8	-0.1
PATCX				IAML		07 50 07.9	
	comp=Z,1μm,0.4s						
PB11	IPOC Station P	1.21	80⇑	iP	Pn	07 49 50.7	-0.4
PB11				eS	Sn	07 50 06.6	0.0
PB11				IAML		07 50 08.2	
	comp=N,6μm,0.3s						
PB11	IPOC Station P	1.21	80	i P	Pn	07 49 50.8	-0.3
PB11				i S	Sn	07 50 06.8	+0.2
PB11				IAML		07 50 07.9	
	comp=Z,2μm,0.4s						
PB12	IPOC Station P	1.47	22⇑	iP	Pn	07 49 54.3	-0.4
PB12				eS	Sn	07 50 13.4	+0.5
PB12				IAML		07 50 19.6	
	comp=E,1μm,0.6s						
PB12	IPOC Station P	1.47	22	eP	Pn	07 49 54.5	-0.2
PB12				i S	Sb	07 50 14.7	-0.2
PB12				IAML		07 50 18.1	
	comp=Z,753nm,0.4s						
MNMC	Minye Minye	1.50	56⇑	eP	Pn	07 49 55.5	+0.2
MNMC				eS	Sb	07 50 15.7	-0.5
MNMC				IAML		07 50 22.4	
	comp=E,4μm,0.2s						
MNMCX	Minye Minye	1.50	56	i P	Pn	07 49 55.8	+0.5
MNMCX				i S	Sb	07 50 16.7	+0.5
MNMCX				IAML		07 50 23.2	
	comp=Z,2μm,0.5s						
PB02	IPOC Station P	1.64	145⇓	eP	Pn	07 49 56.6	-0.4
PB02				eS	Sn	07 50 17.2	0.0
PB02				IAML		07 50 26.6	
	comp=E,2μm,0.5s						
PB02	IPOC Station P	1.64	145	i P	Pn	07 49 56.6	-0.4
PB02				eS	Sb	07 50 19.3	-0.7
PB02				IAML		07 50 24.4	
	comp=Z,2μm,0.3s						
GO01	Chusmiza	1.65	79	eP	Pn	07 49 57.9	+0.4
GO01				eS	Sb	07 50 19.8	-0.8
PB08	IPOC Station P	1.67	96	eP	Pn	07 49 57.9	+0.3
PB08				eS	Sn	07 50 19.8	+1.6
PB08				IAML		07 50 22.2	
	comp=N,2μm,0.5s						
PB08	IPOC Station P	1.67	96	i P	Pn	07 49 58.2	+0.6
PB08				eS	Sb	07 50 20.4	-0.6
PB08				IAML		07 50 21.1	
	comp=Z,569nm,0.6s						
AP01	Chacalluta	1.69	19	IAML		07 50 27.0	
	comp=E,3μm,0.4s						
PB01	IPOC Station P	1.71	129	eP	Pn	07 49 57.9	0.0
PB01				eS	Sn	07 50 19.9	+1.0
PB01				IAML		07 50 27.4	
	comp=N,959nm,0.4s						
PB01	IPOC Station P	1.71	129	i P	Pn	07 49 58.0	0.0
PB01				i S	Sn	07 50 20.6	+1.8
PB01				IAML		07 50 25.2	
	comp=Z,657nm,0.7s						
PB07	IPOC Station P	1.99	151	eP	Pn	07 50 01.2	-0.7
PB07				IAML		07 50 36.4	
	comp=E,534nm,0.4s						
PB07	IPOC Station P	1.99	151	i P	Pn	07 50 01.2	-0.7
PB07				i S	Sb	07 50 32.2	+2.2
PB07				IAML		07 50 36.5	
	comp=Z,498nm,0.6s						
PB16	IPOC Station P	2.11	39	eP	Pn	07 50 04.4	+0.5
PB16				eS	Sn	07 50 31.4	+1.9
PB16				IAML		07 50 34.9	
	comp=N,710nm,0.3s						
PB16	IPOC Station P	2.11	39	eP	Pn	07 50 05.3	+1.4
PB16				i S	Sb	07 50 33.2	-0.7
PB16				IAML		07 50 38.5	
	comp=Z,695nm,0.3s						
PB03	IPOC Station P	2.33	152	eP	Pn	07 50 05.8	-0.7
PB03				IAML		07 50 47.9	
	comp=E,251nm,0.5s						
PB03	IPOC Station P	2.33	152	eP	Pn	07 50 05.9	-0.7
PB03				i S	Sb	07 50 42.2	+2.4
PB03				IAML		07 50 48.8	
	comp=Z,289nm,0.8s						
PB09	IPOC Station P	2.39	139	eP	Pn	07 50 08.2	+0.8
PB09				eS	Sb	07 50 39.2	-2.4
PB09				IAML		07 50 47.6	
	comp=E,702nm,0.4s						
PB09	IPOC Station P	2.39	139	i P	Pn	07 50 08.3	+0.9
PB09				eS	Sb	07 50 42.2	+0.6
PB09				IAML		07 50 48.3	
	comp=Z,455nm,1.1s						
PB04	IPOC Station P	2.45	163	eP	Pn	07 50 07.0	-1.2
PB04				IAML		07 50 57.3	
	comp=E,318nm,0.4s						
PB04	IPOC Station P	2.45	163	i P	Pn	07 50 07.0	-1.2
PB04				IAML		07 50 53.1	
	comp=Z,227nm,0.6s						
PB05	IPOC Station P	2.94	167	eP	Pn	07 50 13.1	-1.7
PB05	IPOC Station P	2.94	167	i P	Pn	07 50 13.2	-1.7
PB05				IAML		07 51 11.6	
	comp=Z,114nm,0.5s						
PB06	IPOC Station P	2.99	155	eP	Pn	07 50 14.5	-1.1
PB06	IPOC Station P	2.99	155	i P	Pn	07 50 14.6	-1.1
PB06				i S	Sb	07 51 01.4	+2.7
PB06				IAML		07 51 09.1	
	comp=Z,160nm,0.5s						
LVC	Limon Verde	3.22	145	i P	Pn	07 50 19.9	+0.9
LVC				IAML		07 51 13.0	
	comp=Z,88nm,0.6s						
PB15	IPOC Station P	3.48	158	eP	Pn	07 50 21.4	-1.1
PB15	IPOC Station P	3.48	158	i P	Pn	07 50 21.4	-1.1
PB15				IAML		07 51 37.0	
	comp=Z,226nm,0.4s						

*IDC **06** 08:08:00.9±0.8, 20°29S×66°21E, h0km, mb3.9/15, mb1 4.0/15, mb1mx3.9/50, mbtmp3.9/15, Error ellipse: s-maj=31.9km s-min=20.2km az=75.0*
ISC 06 08:08:02.5±0.8**, 20°3S**±0°1×**66°2E**±0°2**, h10**km**, n19,** σ**0ˢ70**/16**, mb3.9**/15**, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	13.98	27	T	T	08 25 25.7	
	baz=204,slow=76,SNR=89						
H08S2	Diego Garcia H	13.99	27	T	T	08 25 24.0	
	baz=204,slow=76,SNR=83						
H08S3	Diego Garcia H	14.01	27	T	T	08 25 23.5	
	baz=204,slow=76,SNR=112						
CMAR	Chiang Mai Arr	50.16	42	P	P	08 16 59.2	+0.6
	2.7nm,0.3s,baz=249,slow=7.6,SNR=1.5						
ASAR	Alice Springs	62.37	107	P	P	08 18 25.4	-0.5
	0.7nm,0.8s,baz=251,slow=6.0,SNR=6.5						
AAK	Ala-Archa	63.09	7	P	P	08 18 30.6	+0.3
	0.5nm,0.2s,baz=184,slow=16,SNR=0.9						
WRA	Warramunga Arr	63.56	103	P	P	08 18 33.6	-0.3
	0.9nm,0.8s,baz=257,slow=5.5,SNR=4.6						
SNAA	Sanae	64.31	199	P	P	08 18 38.5	+0.6
	0.8nm,0.9s,baz=28,slow=11,SNR=2.6						
BRTR	Keskin Array B	67.00	333	P	P	08 18 55.9	+0.1
	0.5nm,0.6s,baz=179,slow=8.6,SNR=2.7						
KBZ	Khabaz	67.20	342	P	P	08 18 57.5	+0.8
	4.8nm,1.1s,baz=191,slow=10,SNR=1.6						
MKAR	Makanchi Array	68.35	12	P	P	08 19 03.3	-0.7
	0.6nm,0.8s,baz=172,slow=4.4,SNR=3.7						
QSPA	South Pole Qui	69.81	180	P	P	08 19 12.9	-0.2
	2.9nm,1.1s,baz=276,slow=3.6,SNR=3.0						
AKTO	Aktyubinsk	70.79	354	P	P	08 19 18.7	-0.2
	0.8nm,0.8s,baz=169,slow=10,SNR=2.4						
KURBB	Kurchatov Arra	71.45	8	P	P	08 19 21.8	-1.1
	2.0nm,1.0s,baz=204,slow=6.5,SNR=4.6						
BVAR	Borovoye Array	73.11	3	P	P	08 19 31.6	-1.2
	0.4nm,0.5s,baz=184,slow=5.8,SNR=2.1						
ZALV	Zalesovo Beam	75.67	11	P	P	08 19 48.4	+0.8
	0.8nm,0.4s,baz=277,slow=29,SNR=1.9						
SONM	Songino Array	76.82	27	P	P	08 19 55.1	+0.5
	0.5nm,0.7s,baz=222,slow=1.9,SNR=3.6						
AKASG	Malin Array Be	77.83	337	P	P	08 19 59.7	-0.2
	0.4nm,0.4s,baz=146,slow=4.6,SNR=1.2						
ULM	Lac du Bonnet	146.89	339	PKPbc	PKPab	08 27 45.7	-0.7
	2.9nm,0.7s,baz=353,slow=5.0,SNR=2.2						

*IDC **06** 08:11:59.1±0.7, 20°21S×66°32E, h0km, mb4.0/16, mb1 4.1/16, mb1mx3.9/49, mbtmp4.0/16, MS3.9/31, Ms1 4.0/31, ms1mx3.8/55, Error ellipse: s-maj=28.8km s-min=16.9km az=79.0*
*NEIC **06** 08:12:00.2±0.7, 20°2S±0°1×66°3E±0°1, h10km±1km, mb4.7/24, Error ellipse: s-maj=20.1km s-min=19.7km az=175.0*
*GCMT **06** 08:12:03.2±0.3, 20°08S±0°03×66°30E±0°02, h14km±1km, MW4.9/97, Moment Tensor Solution. s21,c22; s97,c120; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.57±.16; Mθθ0.95±.10; Mφφ1.62±.10; Mrθ-0.21±.31; Mθφ-0.95±.08; Mφr-0.37±.26; Best double couple: M0 2.46500×10^16 NP1:φs137.00000°, δ43.00000°, λ-101.00000°. NP2: φs332.00000°, δ48.00000°, λ-80.00000°. Principal axes: T 2.3040, Plg2.0000°, Azm55.0000°; N 0.3240, Plg7.0000°, Azm145.0000°; P -2.6270, Plg82.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 06 08:12:00.3±0.6**, 20°2S**±0°1×**66°2E**±0°1**, h10**km**, n73,** σ**0ˢ59**/48**, mb4.4**/25**, MS4.0**/31**, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RER	Riviere de l'E	9.87	263	Pn	Pn	08 14 21.5	-1.0
H08S1	Diego Carcia H	13.85	27	T	T	08 29 16.8	
	baz=204,slow=76,SNR=350						
H08S2	Diego Garcia H	13.86	27	T	T	08 29 17.7	
	baz=204,slow=76,SNR=259						
H08S3	Diego Garcia H	13.87	27	T	T	08 29 23.9	
	baz=204,slow=76,SNR=444						
KMBO	Kilima Mbogo	34.09	300	LR	LR	08 29 40.1	
	comp=Z,234nm,21.4s,baz=95,slow=31						
BOSA	Boshof	38.11	249	LR	LR	08 32 06.4	
	comp=Z,291nm,18.3s,baz=162,slow=32						
PSI	Prapat	39.37	58	LR	LR	08 32 32.4	
	comp=Z,449nm,20.2s,baz=250,slow=31						
LEM	Lembang	42.23	78	LR	LR	08 33 16.3	
	comp=Z,289nm,22.0s,baz=181,slow=30						
MAW	Mawson	47.45	182	LR	LR	08 35 39.6	
	comp=Z,160nm,20.6s,baz=6.5,slow=30						
RAYN	Ar Rayn	47.92	334	P	P	08 20 39.9	+0.8
RAYN				IAmb	IAmb	08 20 46.7	
	comp=Z,16nm,2.0s						
CMAR	Chiang Mai Arr	50.03	42	P	P	08 20 55.5	+0.2
	comp=Z,0.7nm,0.4s,baz=240,slow=8.3,SNR=5.1						
CMAR				LR	LR	08 38 47.0	
	comp=Z,244nm,21.3s,baz=235,slow=32						
CMAR	Chiang Mai Arr	50.03	42	P	P	08 20 53.8	-1.6
SHL	Shillong	51.86	30	P	P	08 21 08.7	-0.5
NIL	Nilore	53.95	7	P	P	08 21 24.8	+0.5
KAPI	Kappang	54.11	81	LR	LR	08 41 46.9	
	comp=Z,72nm,19.8s,baz=260,slow=33						
HRA	Herat	54.40	356	P	P	08 21 27.0	-0.8
KBL	Kabul	54.49	3	P	P	08 21 28.5	0.0
LSA	Lhasa	55.10	27	P	P	08 21 33.2	-0.1
BATI	Baumata	56.06	89	LR	LR	08 40 38.3	
	comp=Z,166nm,21.8s,baz=238,slow=31						
ARSB	Arslanbob	61.52	6	P	P	08 22 17.7	+0.2
ARSB				IAmb	IAmb	08 22 25.2	
	comp=Z,5.6nm,1.1s						
ASAR	Alice Springs	62.34	107	P	P	08 22 22.9	-0.5
	comp=Z,1.9nm,0.9s,baz=259,slow=6.1,SNR=15						
ASAR				LR	LR	08 45 26.6	
	comp=Z,326nm,21.7s,baz=278,slow=32						
ASAR	Alice Springs	62.34	107	P	P	08 22 22.4	-1.1
AAK	Ala-Archa	62.97	7	P	P	08 22 28.2	+0.9
	comp=Z,0.6nm,0.3s,baz=188,slow=14,SNR=1.8						
AAK				LR	LR	08 46 37.0	
	comp=Z,90nm,21.0s,baz=182,slow=33						
AAK	Ala-Archa	62.97	7	P	P	08 22 27.7	+0.5
AAK				IAmb	IAmb	08 22 34.6	
	comp=Z,13nm,1.8s						
BOOM	Boomskoye usch	63.00	8	P	P	08 22 27.7	+0.2
BOOM				IAmb	IAmb	08 22 35.5	
	comp=Z,7.0nm,1.4s						
KK31	Karatay Array	63.10	4	P	P	08 22 28.4	+0.5
KK31				IAmb	IAmb	08 22 44.9	
	comp=Z,11nm,1.9s						
WRA	Warramunga Arr	63.52	103	P	P	08 22 30.9	-0.4
	comp=Z,2.8nm,1.0s,baz=258,slow=6.2,SNR=10.0						
WRA				LR	LR	08 46 14.5	
	comp=Z,225nm,21.4s,baz=260,slow=32						
WRA	Warramunga Arr	63.52	103	P	P	08 22 30.9	-0.4
SNAA	Sanae	64.43	199	P	P	08 22 37.6	+1.0
	comp=Z,1.9nm,0.9s,baz=69,slow=2.9,SNR=5.5						
SNAA	Sanae	64.43	199	P	P	08 22 37.1	+0.6
ENH	Enshi	65.17	41	P	P	08 22 42.2	+0.3
BRTR	Keskin Array B	66.93	333	P	P	08 22 52.9	-0.2
	comp=Z,1.0nm,0.7s,baz=144,slow=7.0,SNR=5.9						
BRTR				LR	LR	08 51 18.1	
	comp=Z,46nm,18.9s,baz=138,slow=35						
BRTR	Keskin Array B	66.93	333	P	P	08 22 52.6	-0.5
STKA	Stephens Creek	67.52	117	LR	LR	08 47 55.3	
	comp=Z,163nm,21.5s,baz=212,slow=32						
XAN	Xi'an	67.53	38	P	P	08 22 56.5	-0.4
XAN				IAmb	IAmb	08 22 58.6	
	comp=Z,8.3nm,1.0s						
MKAR	Makanchi Array	68.22	12	P	P	08 23 01.5	+0.5
	comp=Z,1.0nm,0.9s,baz=224,slow=5.1,SNR=4.7						
MKAR				LR	LR	08 50 54.7	
	comp=Z,84nm,21.3s,baz=196,slow=34						
MKAR	Makanchi Array	68.22	12	P	P	08 23 01.3	+0.3
ABKAR	Akbulak array	69.36	356	P	P	08 23 07.9	0.0
ABKAR	Akbulak array	69.36	356	P	P	08 23 08.3	+0.4
ABKAR				IAmb	IAmb	08 23 14.8	
	comp=Z,6.8nm,1.2s						
QSPA	South Pole Qui	69.92	180	P	P	08 23 11.8	+0.3
	comp=Z,2.1nm,1.1s,baz=267,slow=2.4,SNR=3.6						
QSPA	South Pole Qui	69.92	180	P	P	08 23 11.5	-0.1
AKTO	Aktyubinsk	70.69	354	P	P	08 23 17.3	+1.3
	comp=Z,0.6nm,0.3s,baz=173,slow=8.1,SNR=2.3						
KURBB	Kurchatov Arra	71.33	8	P	P	08 23 20.3	+0.3
	comp=Z,1.0nm,0.9s,baz=210,slow=6.8,SNR=4.7						
KURK	Kurchatov	71.43	8	P	P	08 23 20.6	0.0
TORD	Torodi Ar. Bea	71.60	292	LR	LR	08 53 46.6	
	comp=Z,98nm,18.6s,baz=120,slow=35						
VNDA	Vanda	71.65	167	P	P	08 23 21.8	+0.1
	comp=Z,0.6nm,0.8s,baz=272,slow=17,SNR=4.0						
VNDA				LR	LR	08 51 09.0	
	comp=Z,54nm,18.5s,baz=209,slow=33						
BVAR	Borovoye Array	72.99	3	P	P	08 23 30.8	+0.9
	comp=Z,0.3nm,0.4s,baz=193,slow=5.8,SNR=2.8						
BRVK	Borovoye	73.02	3	P	P	08 23 30.3	+0.3
JAY	Jayapura	74.55	87	LR	LR	08 54 35.2	
	comp=Z,81nm,20.9s,baz=288,slow=34						
DBIC	Dimbokro	74.77	283	LR	LR	08 54 55.0	
	comp=Z,161nm,19.1s,baz=102,slow=34						
VAE	Valguarnera	75.29	320	LR	LR	08 57 37.8	
	comp=Z,59nm,18.3s,baz=140,slow=36						
ZAA0	Zalesovo Array	75.55	11	P	P	08 23 44.6	-0.1
ZAA0				IAmb	IAmb	08 23 51.2	
	comp=Z,7.1nm,1.2s						
ZALV	Zalesovo Beam	75.55	11	P	P	08 23 45.6	+0.9
	comp=Z,3.2nm,0.6s,baz=211,slow=5.2,SNR=5.0						
ZALV				LR	LR	08 56 22.0	
	comp=Z,68nm,18.2s,baz=182,slow=35						
ZALV	Zalesovo Beam	75.55	11	P	P	08 23 44.6	-0.2
ARU	Arti	76.59	356	P	P	08 23 51.3	+0.6
	comp=Z,1.5nm,0.2s,baz=126,slow=8.4,SNR=1.4						
ARU	Arti	76.59	356	P	P	08 23 50.8	+0.2
ARU				IAmb	IAmb	08 23 58.4	
	comp=Z,14nm,1.4s						
SONM	Songino Array	76.69	27	P	P	08 23 52.6	+1.0
	comp=Z,0.3nm,0.4s,baz=215,slow=4.8,SNR=3.8						
SONM				LR	LR	08 56 51.1	
	comp=Z,98nm,20.9s,baz=242,slow=35						
SONM	Songino Array	76.69	27	P	P	08 23 51.4	-0.2
BURAR	Bucovina Array	76.89	333	P	P	08 23 52.7	+0.1
ULN	Ulaanbaatar	76.99	27	P	P	08 23 53.5	+0.2
ULN				IAmb	IAmb	08 24 04.7	
	comp=Z,2.3nm,0.6s						
KEST	Kesra	77.41	316	LR	LR	08 59 13.8	
	comp=Z,85nm,18.3s,baz=272,slow=37						
AKASG	Malin Array Be	77.75	337	P	P	08 23 57.5	+0.2
	comp=Z,0.6nm,0.4s,baz=151,slow=4.7,SNR=5.5						
AKASG	Malin Array Be	77.75	337	P	P	08 23 57.2	-0.1
AKBB	Malin Array Si	77.75	337	P	P	08 23 56.8	-0.5
AKBB				IAmb	IAmb	08 23 59.0	
	comp=Z,19nm,1.9s						
OBN	Obninsk	79.16	343	LR	LR	09 01 00.2	
	comp=Z,9.5nm,18.4s,baz=254,slow=37						
KSRS	Korea Array	81.55	45	LR	LR	08 59 58.8	
	comp=Z,114nm,19.8s,baz=235,slow=35						
DAVOX	Davos/Dischmat	83.78	325	LR	LR	09 03 38.5	
	comp=Z,38nm,18.1s,baz=91,slow=37						
MDT	Midelt	85.73	307	LR	LR	09 04 01.9	
	comp=Z,62nm,18.4s,baz=143,slow=36						
MJAR	Matsushiro Arr	88.23	50	LR	LR	09 05 14.0	
	comp=Z,89nm,18.6s,baz=250,slow=36						
ESDC	Sonseca Array	88.43	313	LR	LR	09 05 55.5	
	comp=Z,64nm,18.0s,baz=165,slow=37						
NRIK	Noril'sk	90.58	7	LR	LR	09 05 52.7	
	comp=Z,41nm,18.3s,baz=205,slow=36						
HFS	Hagfors	90.64	337	LR	LR	09 06 26.4	
	comp=Z,28nm,19.2s,baz=112,slow=36						
ARCES	ARCESS Array B	94.06	347	LR	LR	09 07 26.6	
	comp=Z,24nm,21.1s,baz=154,slow=35						

IDC 06 08:49:01.1±50.0**, 16°35S**×**177°81W, h0**km**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/31**, mbtmp3.8**/3**, Error ellipse: s-maj=926.3km s-min=166.1km az=77.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.89	240	P	P	08 56 37.8	+0.9
	0.9nm,0.6s,baz=91,slow=9.4,SNR=2.9						
WRA	Warramunga Arr	45.49	258	P	P	08 57 21.7	-1.0
	0.3nm,0.3s,baz=96,slow=7.6,SNR=14						
ASAR	Alice Springs	45.78	253	P	P	08 57 24.9	+0.1
	1.2nm,0.6s,baz=87,slow=8.2,SNR=30						

*IDC **06** 09:18:46.6±1.4, 37°04N×27°45E, h0km, mb3.8/5, mb1 3.8/6, mb1mx3.5/37, mbtmp3.7/6, ML2.6/1, Error ellipse: s-maj=46.6km s-min=19.4km az=151.0*
*DDA **06** 09:18:47.8, 37°02N×27°43E, h10km, MW3.8*
*ATH **06** 09:18:47.9, 37°02N×27°42E, h29km±1km, ML3.6/7, Error ellipse: s-maj=1.9km s-min=1.1km az=246.0*
*ISK **06** 09:18:47.6, 37°03N×27°47E, h7km, ML3.7/27*
*THE **06** 09:18:48.0, 37°05N×27°47E, h3km±2km, ML3.8/4, Error ellipse: s-maj=2.1km s-min=0.4km az=259.0*
*NIC **06** 09:18:50.0±0.0, 36°95N×27°36E, h56km±6km, Ml4.1/3*
ISC 06 09:18:48.1±0.8**, 37°03N**±0°02×**27°44E**±0°02**, h12**km±4km**, n95,** σ**1ˢ01**/124**, mb3.9**/5**, 9C-4D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.04	1	i P	Pg	09 18 50.1	-0.2
BDRM				i S	Sg	09 18 51.2	-0.7
BODT	Bodrum	0.11	288	PG	Pg	09 18 51.4	+0.3
BODT				SG	Sg	09 18 53.7	+0.5
YKAV	Yalikavak-Bodr	0.16	307	PG	Pg	09 18 51.7	-0.1
DAT	Datca	0.32	160	PG	Pg	09 18 54.3	-0.3
DAT	Datca	0.32	160	i P	Pg	09 18 54.5	0.0
DAT				i S	Sg	09 18 59.5	+0.6
DAT				IAML		09 19 01.0	
	comp=N,3μm,0.2s						
DAT				IAML		09 19 01.0	
	comp=E,2μm,0.2s						
KOSK	Kos Island	0.46	234	P	Pb	09 18 57.8	-0.4
KOSK				S	Sb	09 19 05.2	+0.2
	comp=E,16μm,0.4s						
KOSK	Kos Island	0.46	234	PG	Pg	09 18 57.5	+0.3
NISR	Nisiros	0.48	211	P	Pb	09 18 58.2	-0.4
NISR				S	Sb	09 19 06.0	+0.3
	comp=E,6μm,0.2s						
NISR	Nisiros	0.48	211	P	Pb	09 18 58.5	-0.1
NISR				S	Sb	09 19 05.2	-0.5
NISR				AML	AML	09 19 08.5	
	comp=E,16180μm,0.2s						
NISR				AML	AML	09 19 09.0	
	comp=N,9042μm,0.2s						
MRSB	Marmaris-Mugla	0.68	117	PG	Pg	09 19 00.5	-0.8
YER	Yerkesik	0.68	81	PG	Pg	09 19 00.6	-0.7
GCAM	G?zelcaml?	0.69	346	PG	Pg	09 19 01.4	-0.1
GCAM	G?zelcaml?	0.69	346	i P	Pg	09 19 01.3	-0.2
GCAM				i S	Sb	09 19 12.0	+0.3
GCAM				IAML		09 19 16.0	
	comp=N,2μm,0.6s						
SMG	Samos	0.83	325	P	Pg	09 19 04.1	-0.1
SMG				S	Sb	09 19 16.1	+0.3
	comp=N,8μm,0.4s						
SMG	Samos	0.83	325	P	Pg	09 19 04.1	-0.1
SMG				S	Sg	09 19 15.5	+0.3
SMG				AML	AML	09 19 20.6	
	comp=E,16447μm,0.4s						
SMG				AML	AML	09 19 21.1	
	comp=N,14854μm,0.5s						
TURN	Turunc	0.94	99	PG	Pg	09 19 00.8	-5.5
TURN	Turunc	0.94	99	i P	Pg	09 19 00.5	-5.8
TURN				i S	Sg	09 19 12.0	-6.6
ARG	Arkhangelos	0.98	146	P	Pg	09 19 06.4	-0.5
ARG				S	Sn	09 19 21.1	-0.4
	comp=N,6μm,0.5s						
ARG	Arkhangelos	0.98	146	P	Pg	09 19 06.4	-0.5
ARG				S	Sn	09 19 21.4	-0.2
ARG				AML	AML	09 19 23.4	
	comp=N,13615μm,0.6s						
ARG				AML	AML	09 19 25.4	
	comp=E,8779μm,0.5s						
ARG	Arkhangelos	0.98	146	PG	Pg	09 19 06.6	-0.3
ARG	Arkhangelos	0.98	146	⇑P	Pb	09 19 07.3	+0.3
ARG				S	Sn	09 19 21.3	-0.2
AYDB	Zeytinkoy-Aydi	0.98	21	PG	Pg	09 19 06.7	-0.4
DALY	Dalyan (Mula)	0.99	102	PG	Pg	09 19 06.7	-0.5
DALY	Dalyan (Mula)	0.99	102	i P	Pg	09 19 06.5	-0.7
DALY				i S	Sn	09 19 21.1	-0.7
DALY				IAML		09 19 25.0	
	comp=E,737nm,0.4s						
DALY				IAML		09 19 28.0	
	comp=N,1μm,0.9s						
DGB	zmir	1.12	337	i P	Pb	09 19 09.0	-0.4
DGB				i S	Sb	09 19 24.1	+0.2
DGB				IAML		09 19 27.0	
	comp=E,421nm,0.4s						
DGB				IAML		09 19 29.0	
	comp=N,449nm,0.3s						
TAVA	DENIZLI_Tavas	1.25	69	i P	Pn	09 19 11.4	-0.2
TAVA				i S	Sn	09 19 28.4	-0.1
TAVA				IAML		09 19 35.0	
	comp=E,436nm,0.5s						
TAVA				IAML		09 19 37.0	
	comp=N,469nm,1.2s						
FETY	Fethiye	1.37	106	PN	Pn	09 19 13.2	+0.1
FETY	Fethiye	1.37	106	i P	Pn	09 19 13.3	+0.1
FETY				i S	Sg	09 19 33.9	+1.6
FETY				IAML		09 19 37.0	
	comp=N,488nm,0.4s						
FETY				IAML		09 19 37.0	
	comp=E,563nm,0.4s						
DENT	Denizli	1.46	60	PN	Pb	09 19 15.1	-0.2
URLA	Izmir	1.49	333	PN	Pb	09 19 15.8	0.0
URLA	Izmir	1.49	333	i P	Pn	09 19 14.5	-0.3
URLA				i S	Sg	09 19 37.5	+1.4
URLA				IAML		09 19 41.0	
	comp=N,372nm,0.5s						
URLA				IAML		09 19 43.0	
	comp=E,463nm,0.6s						
KARP	Karpathos	1.49	189	P	Pn	09 19 14.3	-0.5
KARP	Karpathos	1.49	189	P	Pn	09 19 14.3	-0.5
KARP				S	Sn	09 19 33.6	-0.7
KARP				AML	AML	09 19 39.4	
	comp=E,1571μm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KARP				AML	AML	09 19 47.8	
	comp=N,920µm,0.6s						
KARP	**Karpathos**	**1.49**	**189**	PN	**Pn**	**09 19 15.1**	**+0.3**
KARP	**Karpathos**	**1.49**	**189**	⇑P	**Pn**	**09 19 14.0**	**-0.8**
KARP				S	**Sn**	**09 19 31.7**	**-2.6**
KARP				AML	AML	09 19 39.2	
	comp=N,1.6nm,0.4s						
KARP				AML	AML	09 19 39.2	
	comp=N,1.6nm,0.4s						
KARP				AML	AML	09 19 40.4	
	comp=N,1.0nm,0.6s						
KARP				AML	AML	09 19 40.4	
	comp=N,1.0nm,0.6s						
ANAF	**Anafi Island**	**1.50**	**244**	P	**Pn**	**09 19 14.9**	**0.0**
ANAF	**Anafi Island**	**1.50**	**244**	P	**Pn**	**09 19 14.9**	**0.0**
ANAF				S	**Sn**	**09 19 34.0**	**-0.5**
ANAF				AML	AML	09 19 42.0	
	comp=E,11211µm,0.4s						
ANAF				AML	AML	09 19 42.1	
	comp=N,8680µm,0.4s						
APE	**Apeiranthos**	**1.53**	**272**	P	**Pn**	**09 19 15.1**	**-0.2**
APE	**Apeiranthos**	**1.53**	**272**	P	**Pn**	**09 19 15.2**	**-0.2**
APE				S	**Sn**	**09 19 34.8**	**-0.4**
APE				AML	AML	09 19 44.9	
	comp=N,1642µm,0.6s						
APE				AML	AML	09 19 45.5	
	comp=E,996µm,0.6s						
APE	**Apeiranthos**	**1.53**	**272**	⇓P	**Pn**	**09 19 15.5**	**+0.2**
APE				⇑S	**Sn**	**09 19 31.6**	**-3.7**
APE	**Apeiranthos**	**1.53**	**272**	PN	**Pn**	**09 19 15.3**	**-0.1**
APE	**Apeiranthos**	**1.53**	**272**	P	**Pn**	**09 19 15.1**	**-0.2**
APE				S	**Sn**	**09 19 33.2**	**-2.0**
GOLH	**Golhisar**	**1.71**	**82**	*i* P	**Pg**	**09 19 20.4**	**-0.4**
GOLH				*i* S	**Sg**	**09 19 43.2**	**+0.2**
GOLH				IAML		09 19 56.0	
	comp=N,495nm,0.9s						
MANT	**Manisa**	**1.71**	**31**	*i* P	**Pn**	**09 19 17.5**	**-0.4**
MANT				*i* S	**Sg**	**09 19 44.2**	**+1.1**
MANT				IAML		09 19 50.0	
	comp=E,178nm,0.5s						
KRBN	**Karaburun**	**1.71**	**336**	PN	**Pb**	**09 19 18.8**	**-0.8**
GOMA	**Golmarmara-Man**	**1.72**	**12**	PN	**Pb**	**09 19 18.8**	**-0.9**
SANT	**Santorini**	**1.72**	**248**	⇑P	**Pg**	**09 19 21.1**	**-0.1**
SANT	**Santorini**	**1.72**	**248**	PN	**Pb**	**09 19 19.1**	**-0.7**
THT2	**Imerovigli**	**1.73**	**251**	PN	**Pb**	**09 19 19.2**	**-0.6**
CHOS	**Chios island**	**1.75**	**321**	P	**Pn**	**09 19 18.2**	**-0.1**
CHOS	**Chios island**	**1.75**	**321**	P	**Pn**	**09 19 18.2**	**-0.1**
CHOS				S	**Sn**	**09 19 40.3**	**-0.4**
CHOS				AML	AML	09 19 50.4	
	comp=E,1366µm,0.7s						
CHOS				AML	AML	09 19 50.5	
	comp=N,1152µm,0.6s						
CHOS	**Chios island**	**1.75**	**321**	PN	**Pn**	**09 19 18.3**	**-0.1**
IOSP	**Ios island**	**1.75**	**261**	P	**Pn**	**09 19 18.3**	**-0.1**
IOSP	**Ios island**	**1.75**	**261**	P	**Pn**	**09 19 18.3**	**-0.1**
KULA	**Kula-Manisa**	**1.77**	**33**	PN	**Pn**	**09 19 18.4**	**-0.3**
AKHS	**Akhisar**	**1.87**	**9**	*i* P	**Pn**	**09 19 19.2**	**-0.9**
AKHS				*i* S	**Sn**	**09 19 42.1**	**-1.5**
AKS	**Akhisar**	**1.87**	**9**	PN	**Pb**	**09 19 21.2**	**-1.1**
AKAS	**Kas**	**1.91**	**114**	*i* P	**Pb**	**09 19 22.9**	**-0.1**
AKAS				IAML		09 19 56.0	
	comp=N,482nm,0.6s						
AKAS				IAML		09 19 58.0	
	comp=E,291nm,0.4s						
KSL	**Kastellorizon**	**1.93**	**116**	P	**Pb**	**09 19 22.1**	**-1.1**
ZEDA	**zmir-Bergama**	**1.96**	**352**	*i* P	**Pb**	**09 19 23.7**	**0.0**
ZEDA				*i* S	**Sg**	**09 19 51.3**	**+0.2**
ZEDA				IAML		09 19 58.0	
	comp=N,337nm,0.8s						
ZEDA				IAML		09 20 01.0	
	comp=E,155nm,0.6s						
ELL	**Elmali**	**2.00**	**97**	PN	**Pn**	**09 19 22.5**	**+0.7**
DKL	**Dikili**	**2.08**	**348**	PN	**Pn**	**09 19 24.0**	**+1.1**
USAK	**Uak-Merkez**	**2.10**	**36**	*i* P	**Pn**	**09 19 22.6**	**-0.5**
KHAL	**Karahalli**	**2.11**	**50**	*i* P	**Pn**	**09 19 23.9**	**+0.6**
DEMR	**Demre-Antalya**	**2.13**	**111**	PN	**Pn**	**09 19 24.4**	**+0.8**
ZKR	**Zakros**	**2.15**	**208**	P	**Pn**	**09 19 24.1**	**+0.3**
ZKR	**Zakros**	**2.15**	**208**	PN	**Pn**	**09 19 25.1**	**+1.2**
BASM	**Basmaki-Afyon**	**2.26**	**66**	PN	**Pn**	**09 19 26.2**	**+0.8**
NPS	**Neapolis**	**2.30**	**221**	P	**Pn**	**09 19 26.2**	**+0.2**
KORT	**Korkueli**	**2.33**	**90**	PN	**Pn**	**09 19 27.4**	**+1.0**
SIMA	**Simav-Kutahya**	**2.39**	**30**	PN	**Pn**	**09 19 27.2**	**0.0**
PRK	**Paraskevi**	**2.40**	**338**	P	**Pn**	**09 19 26.6**	**-0.7**
LAST	**Lasithi**	**2.45**	**221**	P	**Pn**	**09 19 28.2**	**+0.2**
KEMT	**Kemer-ANTALYA**	**2.53**	**99**	PN	**Pn**	**09 19 30.0**	**+0.9**
ISP	**Isparta**	**2.58**	**71**	PN	**Pn**	**09 19 30.7**	**+0.9**
IDI	**Anoyia**	**2.70**	**231**	⇑P	**Pb**	**09 19 37.9**	**+1.5**
IDI	**Anoyia**	**2.70**	**231**	PN	**Pn**	**09 19 32.8**	**+1.4**
AKMS	**Akamas**	**4.44**	**115**	P	**Pn**	**09 19 55.8**	**+0.4**
AKMS				AML	AML	09 20 50.6	
	comp=E,0.8nm,0.6s						
AKMS				AML	AML	09 20 53.1	
	comp=E,0.7nm,0.7s						
ALFC	**Alefka**	**4.57**	**113**	P	**Pn**	**09 19 58.2**	**+1.0**
ALFC				AML	AML	09 21 00.0	
	comp=E,0.4nm,0.9s						
ALFC				AML	AML	09 21 01.6	
	comp=E,0.5nm,0.9s						
OSC1	**CSNet OBS 1**	**4.71**	**137**	P	**Pn**	**09 20 00.7**	**+1.6**
OSC1				S	**Sn**	**09 20 53.6**	**0.0**
NATA	**Nata**	**4.73**	**117**	P	**Pn**	**09 20 00.6**	**+1.3**
LEF	**Lefka**	**4.80**	**112**	⇑P	**Pb**	**09 20 13.4**	**+1.1**
SZAC	**Souni**	**4.96**	**116**	⇑P	**Pn**	**09 20 03.5**	**+0.9**
ASGA	**Asgata**	**5.21**	**114**	P	**Pn**	**09 20 06.9**	**+0.9**
BRTR	**Keskin Array B**	**5.56**	**59**	Pn	**Pn**	**09 20 10.9**	**0.0**
	comp=E,0.2nm,0.3s,baz=350,slow=24,SNR=4.5						
BRTR				Sn	**Sn**	**09 21 16.8**	**+1.9**
	comp=E,0.2nm,0.3s,baz=321,slow=13,SNR=1.7						
VTS	**Vitosha**	**6.45**	**331**	⇓P	**Pn**	**09 20 21.2**	**-1.9**
MLR	**Muntele Rosu**	**8.53**	**353**	⇓P	**Pn**	**09 20 51.8**	**+0.2**
TIP	**Timpagrande**	**8.69**	**288**	⇑P	**Pn**	**09 20 52.1**	**-1.7**
VRI	**Vrincioaia**	**8.85**	**357**	⇑P	**Pn**	**09 20 55.8**	**-0.1**
OZUR		**9.15**	**353**	⇓P	**Pn**	**09 20 59.8**	**-0.2**
FINES	**FINESS Array B**	**24.45**	**358**	P	**P**	**09 24 06.6**	**0.0**
	comp=E,2.3nm,0.7s,baz=186,slow=12,SNR=5.2						
ESDC	**Sonseca Array**	**24.71**	**286**	P	**P**	**09 24 09.5**	**+0.2**
	comp=E,0.3nm,0.5s,baz=82,slow=9.2,SNR=3.2						
TORD	**Torodi Ar. Bea**	**33.10**	**231**	P	**P**	**09 25 24.2**	**+0.2**
	comp=E,1.0nm,0.6s,baz=36,slow=8.7,SNR=7.2						
MKAR	**Makanchi Array**	**41.21**	**58**	P	**P**	**09 26 33.4**	**+0.6**
	comp=E,0.7nm,0.7s,baz=280,slow=7.3,SNR=5.8						
ZALV	**Zalesovo Beam**	**42.38**	**48**	P	**P**	**09 26 43.1**	**+1.0**
	comp=E,0.9nm,0.3s,baz=283,slow=8.7,SNR=1.8						

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*NEIC **06** 09:36:56.8±1.1, 17.°26N±0.°06×95.°75W±0.°05, h91km±8km, Error ellipse: s-maj=9.3km s-min=6.5km az=153.0*

*MEX **06** 09:36:57.7±1.4, 17.°28N×95.°76W, h95km±8km, MD4.0*

ISC 06 09:36:56.7±1.2**, 17.°22N**±0.°05×**95.°76W**±0.°03**, h95**km±12km**, n21,** σ**0.°83**/38**, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.85**	**99**		**Pn**	**09 37 15.2**	**+0.1**
CMIG					**Sn**	**09 37 28.5**	**-0.5**
CMIG	**Matias Romero**	**0.85**	**99**	*e*P	**Pn**	**09 37 15.2**	**+0.1**
CMIG				*i* S	**Sn**	**09 37 28.5**	**-0.5**
VHO	**Vista Hermosa**	**0.94**	**261**	*e*P	**Pn**	**09 37 17.3**	**+0.9**
VHO				*i* S	**Sn**	**09 37 31.6**	**+0.5**
HUIG	**Huatulco**	**1.48**	**193**		**Pn**	**09 37 22.6**	**0.0**
HUIG					**Sn**	**09 37 42.6**	**+0.4**
HUIG	**Huatulco**	**1.48**	**193**	*e*P	**Pn**	**09 37 22.6**	**0.0**
HUIG				*i* S	**Sn**	**09 37 42.6**	**+0.4**
TUIG	**Tuzandepetl**	**1.51**	**58**		**Pn**	**09 37 22.7**	**-0.1**
TUIG					**Sn**	**09 37 42.2**	**-0.4**
TOIG	**Toxpalan**	**1.52**	**305**	*i* P	**Pn**	**09 37 23.9**	**+0.8**
TOIG				*i* S	**Sn**	**09 37 42.5**	**-0.5**
YOIG	**Yosondua**	**1.75**	**258**	*e*P	**Pn**	**09 37 26.6**	**+0.4**
YOIG				*i* S	**Sn**	**09 37 48.0**	**-0.5**
PEIG	**Puerto Escondi**	**1.80**	**228**	*e*P	**Pn**	**09 37 25.9**	**-0.7**
PEIG				*i* S	**Sn**	**09 37 49.8**	**+0.4**
PNIG	**Pinotepa**	**2.41**	**250**		**Pn**	**09 37 33.5**	**-1.1**
PNIG					**Sn**	**09 38 03.3**	**-0.3**
PNIG	**Pinotepa**	**2.41**	**250**	*i* P	**Pn**	**09 37 33.5**	**-1.1**
PNIG				*i* S	**Sn**	**09 38 02.6**	**-1.0**
TGIG		**2.56**	**100**		**Pn**	**09 37 36.8**	**+0.2**
TGIG					**Sn**	**09 38 05.3**	**-1.9**
TGIG		**2.56**	**100**	*e*P	**Pn**	**09 37 36.8**	**+0.2**
TGIG				*i* S	**Sn**	**09 38 07.3**	**+0.1**
TLIG	**Tlapa**	**2.70**	**278**		**Pn**	**09 37 39.2**	**+0.7**
TLIG				Sn	**Sn**	**09 38 08.5**	**-2.1**
PCIG		**2.87**	**121**		**Pn**	**09 37 40.1**	**-0.5**
PCIG		**2.87**	**121**	*e*P	**Pn**	**09 37 40.1**	**-0.5**
PCIG				*i* S	**Sn**	**09 38 15.0**	**+0.6**
CCIG	**Comitan**	**3.60**	**105**		**Pn**	**09 37 51.4**	**+0.9**
CCIG				Sn	**Sn**	**09 38 33.9**	**+1.7**
CCIG	**Comitan**	**3.60**	**105**	*e*P	**Pn**	**09 37 51.5**	**+0.9**
CCIG				*i* S	**Sn**	**09 38 31.1**	**-1.1**
SNET	**Serv Nac Est T**	**7.21**	**118**	Pn	**Pn**	**09 38 40.1**	**+0.5**
TEIG	**Tepich**	**7.70**	**66**	Pn	**Pn**	**09 38 46.1**	**0.0**
JTS	**Las Juntas de**	**12.55**	**122**	Pn	**Pn**	**09 39 52.4**	**+0.3**

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*KRSC **06** 09:46:27.6±1.3, 51.°85N×157.°46E, h143km±11km, ML3.8*

*IDC **06** 09:46:28.3±2.3, 51.°88N×156.°85E, h140km±13km, mb3.3/9, mb1 3.6/9, mb1mx3.3/50, mbtmp3.7/9, Error ellipse: s-maj=41.4km s-min=15.9km az=163.0*

ISC 06 09:46:28.8±0.8**, 51.°85N**±0.°06×**157.°39E**±0.°06**, h142**km±5km**, n42,** σ**1.°52**/61**, mb3.6**/9**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**0.43**	**95**	*i* P	**Pn**	**09 46 48.7**	**-0.2**
KDTR				*e*S	**Sn**	**09 47 03.6**	**-0.5**
PAU	**Pauzhetka**	**0.53**	**223**	*e*P	**Pn**	**09 46 49.6**	**+0.2**
PAU				*e*S	**Sn**	**09 47 05.1**	**+0.2**
MIPR	**Malaya Ipel'ka**	**0.57**	**318**	*e*P	**Pn**	**09 46 49.3**	**-0.3**
MIPR				*e*S	**Sn**	**09 47 04.4**	**-1.2**
ASAK	**Asacha**	**0.62**	**31**	*e*P	**Pn**	**09 46 50.1**	**+0.1**
MTVR	**Mutnovka**	**0.80**	**38**	*e*P	**Pn**	**09 46 51.2**	**-0.1**
MTVR				*e*S	**Sn**	**09 47 07.9**	**-0.6**
GRL	**Gorelyy**	**0.82**	**31**	*e*P	**Pn**	**09 46 51.7**	**+0.3**
RUS	**Russkaya**	**0.91**	**50**	*e*P	**Pn**	**09 46 51.9**	**-0.1**
RUS				*e*S	**Sn**	**09 47 09.1**	**-0.6**
KRMR	**Karymshinskiy**	**1.08**	**25**	*e*P	**Pn**	**09 46 54.0**	**+0.5**
KRMR				*e*S	**Sn**	**09 47 13.1**	**+0.7**
APC	**Apacha**	**1.08**	**353**	*i* P	**Pn**	**09 46 53.2**	**-0.3**
APC				*e*S	**Sn**	**09 47 11.3**	**-1.1**
PETK	**Petropavlovsk-**	**1.27**	**9**	P	**Pn**	**09 46 55.4**	**+0.1**
	12nm,0.3s,baz=158,slow=11,SNR=793						
PETK				S	**Sn**	**09 47 15.9**	**+0.2**
	3.0nm,0.3s,baz=187,slow=23,SNR=13						
SKR	**Severo-Kuril's**	**1.42**	**215**	*e*P	**Pn**	**09 46 57.4**	**+0.6**
SKR				*e*S	**Sn**	**09 47 18.4**	**+0.2**
DALK	**Dalny**	**1.45**	**35**	*e*P	**Pn**	**09 46 57.3**	**+0.2**
DALK				*e*S	**Sn**	**09 47 18.8**	**0.0**
ALID	**Alaid**	**1.51**	**230**	*i* P	**Pn**	**09 46 58.5**	**+0.5**
UGLR	**Uglovaya**	**1.62**	**32**	*e*P	**Pn**	**09 47 00.3**	**+1.2**
UGLR				*e*S	**Sn**	**09 47 23.4**	**+1.0**
KOK	**Koryaka**	**1.63**	**27**	*e*P	**Pn**	**09 47 00.4**	**+1.1**
AVH	**Avacha**	**1.64**	**30**	*e*P	**Pn**	**09 47 00.3**	**+1.0**
SMAR	**Somma**	**1.66**	**31**	*e*P	**Pn**	**09 47 00.8**	**+1.1**
SMAR				*e*S	**Sn**	**09 47 24.2**	**+0.9**
KRER	**Koryakskii**	**1.68**	**29**	*e*P	**Pn**	**09 47 00.7**	**+0.8**
KRX	**Arik**	**1.69**	**27**	*e*P	**Pn**	**09 47 00.6**	**+0.6**
SDLR	**Sedlovina**	**1.70**	**32**	*e*P	**Pn**	**09 47 00.6**	**+0.6**
SDLR				*e*S	**Sn**	**09 47 23.9**	**-0.1**
NLC	**Nalytchevo**	**1.78**	**41**	*e*P	**Pn**	**09 47 00.3**	**-0.5**
NLC				*e*S	**Sn**	**09 47 23.5**	**-1.9**
SPN	**Mys Shipunski**	**2.04**	**51**	*e*P	**Pn**	**09 47 04.3**	**+0.5**
SPN				*e*S	**Sn**	**09 47 29.1**	**-1.7**
KZV	**Kizimen**	**3.70**	**27**	*e*P	**Pn**	**09 47 25.6**	**+0.7**
KZV				*e*S	**Sn**	**09 48 06.7**	**-1.8**
TUMD	**Tumrok D**	**3.81**	**27**	*e*P	**Pn**	**09 47 27.0**	**+0.8**
TUMD				*e*S	**Sn**	**09 48 11.2**	**+0.4**
TUMR	**Tumrok**	**3.81**	**24**	*e*P	**Pn**	**09 47 27.9**	**+1.6**
KMNR	**Kamenistaya**	**4.26**	**22**	*e*P	**Pn**	**09 47 33.4**	**+1.2**
KPT	**Kopyto**	**4.45**	**21**	*e*P	**Pn**	**09 47 35.7**	**+1.0**
KOZ	**Kozyrevsk**	**4.46**	**18**	*e*P	**Pn**	**09 47 35.8**	**+1.0**
LGNR	**Loginova**	**4.67**	**23**	*e*P	**Pn**	**09 47 39.7**	**+1.9**
SRDR	**Sredinnyy**	**4.68**	**16**	*e*P	**Pn**	**09 47 38.6**	**+0.9**
SRKR	**Sorokina**	**5.30**	**23**	*e*P	**Pn**	**09 47 47.3**	**+1.4**
KBG	**Krutoberegovo**	**5.41**	**33**	*e*P	**Pn**	**09 47 47.5**	**+0.2**
KBG				*e*S	**Sn**	**09 48 44.9**	**-3.8**
BKI	**Bering**	**6.12**	**53**	*e*P	**Pn**	**09 47 56.6**	**-0.2**
BKI				*e*S	**Sn**	**09 48 59.5**	**-6.2**
KSRS	**Korea Array**	**25.21**	**247**	P	**P**	**09 51 37.2**	**-3.9**
	2.1nm,1.2s,baz=44,slow=11,SNR=2.3						
ILAR	**Eielson Array**	**30.86**	**44**	P	**P**	**09 52 32.1**	**+1.0**
	1.1nm,0.7s,baz=266,slow=8.2,SNR=16						
INK	**Inuvik**	**35.86**	**36**	P	**P**	**09 53 15.0**	**+0.8**
	0.7nm,0.7s,baz=277,slow=7.0,SNR=9.0						
ZALV	**Zalesovo Beam**	**42.05**	**303**	P	**P**	**09 54 03.6**	**-2.3**
	1.0nm,0.4s,baz=330,slow=40,SNR=1.7						
YKA	**Yellowknife Ar**	**45.19**	**41**	P	**P**	**09 54 31.2**	**+0.4**
	0.8nm,0.9s,baz=297,slow=7.7,SNR=6.3						
MKAR	**Makanchi Array**	**47.19**	**295**	P	**P**	**09 54 44.7**	**-2.1**
	0.4nm,0.5s,baz=60,slow=8.0,SNR=6.2						
NVAR	**Mina Array Bea**	**57.74**	**68**	P	**P**	**09 56 07.5**	**+2.7**
	0.3nm,0.3s,baz=300,slow=6.1,SNR=1.8						
PDAR	**Pinedale Array**	**59.58**	**59**	P	**P**	**09 56 19.4**	**+2.0**
	0.8nm,0.7s,baz=326,slow=2.6,SNR=9.7						
TXAR	**Lajitas Array**	**72.66**	**65**	P	**P**	**09 57 42.7**	**+1.8**
	0.8nm,0.5s,baz=299,slow=5.4,SNR=12						

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*IDC **06** 09:50:21.0±4.1, 36.°50S×177.°92E, h168km±31km, mb4.1/2, mb1 4.4/2, mb1mx3.4/33, mbtmp4.6/2, Error ellipse: s-maj=58.9km s-min=30.7km az=33.0*

*WEL **06** 09:50:22.9, 37°S±5°×17°8E±°, h184km±6km, M3.9/125, MLv3.9/125, Error ellipse: s-maj=0.0km s-min=0.0km az=7.0*

*NEIC **06** 09:50:22.2±2.4, 36.°82S±0.°09×177.°6E±0.°1, h189km±7km, mb4.3/10, ML3.9(WEL), Error ellipse: s-maj=16.8km s-min=13.0km az=78.0*

ISC 06 09:50:23.8±0.8**, 36.°85S**±0.°06×**177.°64E**±0.°06**, h204**km±6km**, n179,** σ**1.°46**/200**, mb4.3**/8**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.89**	**143**		**Pn**	**09 50 51.6**	**-1.6**
MXZ				Sn	**Sn**	**09 51 13.0**	**-3.3**
MXZ	**Matakaoa Point**	**0.89**	**143**	P	**Pn**	**09 50 51.6**	**-1.6**
MXZ				S	**Sn**	**09 51 12.7**	**-3.5**
HAZ	**Te Kaha**	**0.91**	**173**	P	**Pn**	**09 50 51.9**	**-1.5**
HAZ				S	**Sn**	**09 51 13.2**	**-3.4**
RUGZ	**Raukumara Rang**	**1.11**	**179**	P	**Pn**	**09 50 53.2**	**-1.7**
WHRZ	**Whale Island**	**1.14**	**208**	P	**Pn**	**09 50 56.6**	**+1.7**
WMGZ	**Waiomatatini S**	**1.15**	**148**	P	**Pn**	**09 50 54.1**	**-0.9**
WMGZ				S	**Sn**	**09 51 17.3**	**-2.1**
PUZ	**Puketiti**	**1.31**	**158**	P	**Pn**	**09 50 55.5**	**-0.8**
PUZ				S	**Sn**	**09 51 19.5**	**-2.3**
OPRZ	**Ohinepanea**	**1.32**	**221**	P	**Pn**	**09 50 55.8**	**-0.5**
TWGZ	**Tauwhareparae**	**1.35**	**169**	P	**Pn**	**09 50 56.8**	**+0.1**
TWGZ				S	**Sn**	**09 51 22.3**	**0.0**
MARZ	**Manawahe**	**1.37**	**214**	P	**Pn**	**09 50 57.0**	**+0.2**
URZ	**Urewera**	**1.47**	**197**	P	**Pn**	**09 50 57.1**	**-0.4**
	20nm,0.3s,baz=38,slow=12,SNR=28						
URZ				S	**Sn**	**09 51 22.7**	**-1.3**
	198nm,0.3s,baz=60,slow=20,SNR=78						
URZ				LR	LR	09 51 50.3	
	comp=Z,234nm,18.9s,baz=310,slow=48						
URZ	**Urewera**	**1.47**	**197**		**Pn**	**09 50 58.2**	**+0.7**
URZ	**Urewera**	**1.47**	**197**	P	**Pn**	**09 50 57.2**	**-0.4**
URZ				S	**Sn**	**09 51 23.2**	**-0.8**
MWZ	**Matawai**	**1.48**	**183**	P	**Pn**	**09 50 57.3**	**-0.4**
MWZ				S	**Sn**	**09 51 23.4**	**-1.0**
LIRZ	**Lichensteins R**	**1.53**	**221**	P	**Pn**	**09 50 58.1**	**0.0**
KUZ	**Kuaotunu**	**1.55**	**273**	P	**Pn**	**09 50 56.0**	**-2.2**
TKGZ	**Te Karaka**	**1.59**	**174**	P	**Pn**	**09 50 58.7**	**0.0**
TKGZ				S	**Sn**	**09 51 25.2**	**-0.8**
OMRZ	**Omania**	**1.61**	**218**	P	**Pn**	**09 50 59.2**	**+0.3**
KARZ	**Kaharoa**	**1.61**	**223**	P	**Pn**	**09 50 59.1**	**+0.3**
TARZ	**Mount Tarawera**	**1.65**	**213**	P	**Pn**	**09 50 59.4**	**+0.1**
RAGZ	**Rawiri**	**1.65**	**186**	P	**Pn**	**09 50 59.9**	**+0.6**
KMRZ	**Kaimai**	**1.68**	**233**	P	**Pn**	**09 50 59.6**	**+0.1**
CNGZ	**Carnagh Statio**	**1.69**	**165**	P	**Pn**	**09 51 00.3**	**+0.7**
NGRZ	**Ngongotaha**	**1.70**	**222**	P	**Pn**	**09 51 00.3**	**+0.6**
HLRZ	**Highlands Stat**	**1.73**	**216**	P	**Pn**	**09 51 00.8**	**+0.7**
RRRZ	**Republican Roa**	**1.74**	**211**	P	**Pn**	**09 51 01.3**	**+1.3**
MUGZ	**Murupara**	**1.77**	**203**	P	**Pn**	**09 51 00.4**	**+0.1**
HSRZ	**Hossack Road**	**1.83**	**217**	P	**Pn**	**09 51 02.3**	**+1.4**
RTZ	**Ruatahuna**	**1.84**	**196**	P	**Pn**	**09 51 00.9**	**-0.1**
RTZ				S	**Sn**	**09 51 30.0**	**-0.3**
RIGZ	**Rimuhau**	**1.86**	**177**	P	**Pn**	**09 51 01.7**	**+0.5**
RIGZ				S	**Sn**	**09 51 30.8**	**+0.3**
GRZ	**Great Barrier**	**1.86**	**288**	P	**Pn**	**09 50 58.6**	**-2.6**
TOZ	**Tahuroa Road**	**1.92**	**242**	P	**Pn**	**09 51 02.1**	**+0.4**
PRRZ	**Plateau Road**	**1.92**	**211**	P	**Pn**	**09 51 02.3**	**+0.5**
GRRZ	**Galatos Road**	**1.93**	**219**	P	**Pn**	**09 51 03.0**	**+1.1**
SNGZ	**Shannon Statio**	**1.94**	**187**	P	**Pn**	**09 51 02.3**	**+0.2**
SNGZ				S	**Sn**	**09 51 32.5**	**+0.5**
ALRZ	**Allen Road**	**2.00**	**211**	P	**Pn**	**09 51 03.2**	**+0.6**
MKAZ	**Moumakai**	**2.00**	**262**	P	**Pn**	**09 51 01.9**	**-0.7**
WIAZ	**Waiheke Island**	**2.01**	**271**	P	**Pn**	**09 51 01.4**	**-1.3**
WPRZ	**Whakapapatarin**	**2.04**	**215**	P	**Pn**	**09 51 03.6**	**+0.6**
PRGZ	**Paritu Road**	**2.08**	**175**	P	**Pn**	**09 51 03.7**	**+0.3**
MTHZ	**Maungataniwha**	**2.10**	**197**	P	**Pn**	**09 51 04.4**	**+0.8**
MTHZ				S	**Sn**	**09 51 36.1**	**+1.2**
RAHZ	**Arahi**	**2.11**	**192**	P	**Pn**	**09 51 04.2**	**+0.5**
RAHZ				S	**Sn**	**09 51 35.7**	**+0.6**
KNZ	**Kokohu**	**2.17**	**179**	P	**Pn**	**09 51 04.6**	**+0.3**
ETAZ	**East Tamaki Re**	**2.18**	**266**	P	**Pn**	**09 51 03.9**	**-0.5**
KUTZ	**Kaahu Road**	**2.18**	**221**	P	**Pn**	**09 51 05.8**	**+1.3**
MBAZ	**Motutapu North**	**2.20**	**271**	P	**Pn**	**09 51 03.7**	**-1.0**
MRHZ	**Matea Rd**	**2.21**	**206**	P	**Pn**	**09 51 05.1**	**+0.3**
KBAZ	**Karaka Road Bo**	**2.22**	**263**	P	**Pn**	**09 51 04.9**	**+0.1**
TLZ	**Tolley Road**	**2.23**	**228**	P	**Pn**	**09 51 06.2**	**+1.2**
WHHZ	**Waihua**	**2.25**	**188**	P	**Pn**	**09 51 05.8**	**+0.6**
WHTZ	**Whakaora**	**2.25**	**216**	P	**Pn**	**09 51 07.5**	**+2.3**
ABAZ	**Army Bay**	**2.27**	**275**	P	**Pn**	**09 51 04.2**	**-1.2**
MHGZ	**Mahia Peninsul**	**2.31**	**175**	P	**Pn**	**09 51 06.6**	**+0.8**
EPAZ	**Eden Park BICE**	**2.33**	**268**	P	**Pn**	**09 51 05.7**	**-0.3**
NMHZ	**Naumai**	**2.34**	**196**	P	**Pn**	**09 51 07.3**	**+1.1**
WATZ	**Wairara**	**2.39**	**219**	P	**Pn**	**09 51 08.2**	**+1.5**
AWAZ	**Awhitu Peninsu**	**2.41**	**264**	P	**Pn**	**09 51 06.7**	**-0.3**
RVAZ	**Riverhead Bore**	**2.46**	**271**	P	**Pn**	**09 51 06.8**	**-0.7**
WTAZ	**Waiatarua**	**2.46**	**267**	P	**Pn**	**09 51 07.3**	**-0.3**
ARHZ	**Aropaoanui**	**2.46**	**192**	P	**Pn**	**09 51 08.1**	**+0.7**
BKZ	**Black Stump Fm**	**2.48**	**201**		**Pn**	**09 51 08.0**	**+0.2**
BKZ				Sn	**Sn**	**09 51 41.7**	**-0.6**
BKZ	**Black Stump Fm**	**2.48**	**201**	P	**Pn**	**09 51 07.9**	**+0.2**
RATZ	**Rangitukua**	**2.50**	**216**	P	**Pn**	**09 51 08.9**	**+1.0**
RITZ	**Rihia Road**	**2.55**	**213**	P	**Pn**	**09 51 09.9**	**+1.4**
KATZ	**Kakaramea**	**2.62**	**215**	P	**Pn**	**09 51 10.4**	**+1.0**
MCHZ	**McNeill Hill**	**2.70**	**196**	P	**Pn**	**09 51 10.9**	**+0.8**
KRVZ	**Karewarewa**	**2.74**	**215**	P	**Pn**	**09 51 12.0**	**+1.3**
KWHZ	**Kaweka Forest**	**2.74**	**200**	P	**Pn**	**09 51 11.1**	**+0.4**
HIZ	**Hauiti**	**2.77**	**232**		**Pn**	**09 51 12.6**	**+1.7**
HIZ	**Hauiti**	**2.77**	**232**	P	**Pn**	**09 51 12.7**	**+1.9**
WTVZ	**West Tongariro**	**2.78**	**215**	P	**Pn**	**09 51 12.1**	**+0.9**
WCZ	**Waipu Caves**	**2.81**	**288**	P	**Pn**	**09 51 09.3**	**-2.1**
TWVZ	**Taurewa**	**2.82**	**217**	P	**Pn**	**09 51 12.7**	**+1.0**
NGZ	**Ngauruhoe**	**2.83**	**214**	P	**Pn**	**09 51 12.8**	**+1.1**
CKHZ	**Cape Kidnapper**	**2.84**	**189**	P	**Pn**	**09 51 12.2**	**+0.5**
TUVZ	**Tukino**	**2.88**	**212**	P	**Pn**	**09 51 13.2**	**+0.8**
FWVZ	**Far West T-bar**	**2.91**	**214**	P	**Pn**	**09 51 13.4**	**+0.6**
BHHZ	**Black Hill Sta**	**2.92**	**205**	P	**Pn**	**09 51 12.7**	**+0.1**
DRZ	**Dome Shelter**	**2.92**	**213**	P	**Pn**	**09 51 14.1**	**+1.0**
TRVZ	**Turoa**	**2.95**	**213**	P	**Pn**	**09 51 14.0**	**+0.8**
MOVZ	**Moawhango**	**2.96**	**210**	P	**Pn**	**09 51 13.1**	**0.0**
KRHZ	**Kereru**	**2.96**	**199**	P	**Pn**	**09 51 13.1**	**-0.1**
KAHZ	**Kahuranaki**	**3.00**	**191**	P	**Pn**	**09 51 14.1**	**+0.5**
PKVZ	**Pokaka**	**3.04**	**216**	P	**Pn**	**09 51 14.9**	**+0.8**
MTVZ	**Mangateitei**	**3.06**	**213**	P	**Pn**	**09 51 15.1**	**+0.8**
VRZ	**Vera Road**	**3.22**	**224**	P	**Pn**	**09 51 17.9**	**+1.8**
PXZ	**Pawanui**	**3.23**	**191**	P	**Pn**	**09 51 16.3**	**0.0**
PNHZ	**Pukenui**	**3.26**	**200**	P	**Pn**	**09 51 16.4**	**-0.3**
WPHZ	**Waipukurau**	**3.34**	**196**	P	**Pn**	**09 51 17.9**	**+0.2**
TSZ	**Takapari Road**	**3.46**	**202**	P	**Pn**	**09 51 18.7**	**-0.5**
PRHZ	**Porangahau**	**3.50**	**193**	P	**Pn**	**09 51 19.6**	**0.0**
WAZ	**Wanganui**	**3.58**	**215**	P	**Pn**	**09 51 21.0**	**+0.6**
DREZ	**Durham Road**	**3.58**	**228**	P	**Pn**	**09 51 23.0**	**+2.5**
DVHZ	**Dannevirke**	**3.63**	**198**	P	**Pn**	**09 51 20.6**	**-0.6**
LREZ	**Lake Rotokare**	**3.65**	**223**	P	**Pn**	**09 51 23.1**	**+1.8**
OUZ	**Omahuta**	**3.66**	**295**	Pn	**Pn**	**09 51 19.1**	**-2.5**
OUZ	**Omahuta**	**3.66**	**295**	P	**Pn**	**09 51 19.3**	**-2.2**
PKE	**Pukeiti**	**3.72**	**230**	P	**Pn**	**09 51 24.7**	**+2.5**
ANWZ	**Angora Road**	**3.72**	**194**	P	**Pn**	**09 51 22.0**	**-0.2**
KHEZ	**Kahui Hut**	**3.76**	**228**	P	**Pn**	**09 51 25.3**	**+2.5**
OHWZ	**Ohakea**	**3.81**	**208**	P	**Pn**	**09 51 23.9**	**+0.5**
POWZ	**Post Office Ro**	**3.83**	**202**	P	**Pn**	**09 51 23.2**	**-0.3**
PRWZ	**Pori Road**	**3.92**	**199**	P	**Pn**	**09 51 24.3**	**-0.4**
BFZ	**Birch Farm**	**3.98**	**195**		**Pn**	**09 51 23.7**	**-1.7**
BFZ				Sn	**Sn**	**09 52 12.3**	**-1.6**
BFZ	**Birch Farm**	**3.98**	**195**	P	**Pn**	**09 51 23.7**	**-1.7**
MRZ	**Mangatainoka R**	**4.13**	**202**	P	**Pn**	**09 51 26.4**	**-0.9**
TIWZ	**Tintock**	**4.15**	**199**	P	**Pn**	**09 51 27.2**	**-0.4**
CPWZ	**Castlepoint**	**4.21**	**195**	P	**Pn**	**09 51 28.6**	**+0.4**
HOWZ	**Holdsworth Sta**	**4.37**	**202**	P	**Pn**	**09 51 29.1**	**-1.2**
OGWZ	**Otaki Gorge**	**4.41**	**205**	P	**Pn**	**09 51 29.7**	**-0.9**
TMWZ	**Te Maipa**	**4.46**	**197**	P	**Pn**	**09 51 30.6**	**-0.9**
KIW	**Kapiti Island**	**4.54**	**207**	P	**Pn**	**09 51 31.3**	**-1.1**
MTW	**Mount Morrison**	**4.61**	**201**	P	**Pn**	**09 51 31.8**	**-1.5**
CAW	**Cannon Point**	**4.70**	**204**	P	**Pn**	**09 51 32.9**	**-1.5**
TRWZ	**Traveller**	**4.79**	**198**	P	**Pn**	**09 51 34.5**	**-1.0**
PAWZ	**Paruwai Farm**	**4.84**	**200**	P	**Pn**	**09 51 34.8**	**-1.4**
DUWZ	**D'Urville Isla**	**4.90**	**215**	P	**Pn**	**09 51 35.6**	**-1.4**
MSWZ	**Moikau Station**	**4.92**	**201**		**Pn**	**09 51 35.3**	**-1.9**
MSWZ				Sn	**Sn**	**09 52 32.3**	**-3.0**
MSWZ	**Moikau Station**	**4.92**	**201**	P	**Pn**	**09 51 35.2**	**-2.0**
WEL	**Wellington**	**4.96**	**206**	P	**Pn**	**09 51 36.3**	**-1.3**
SNZO	**South Karori**	**5.01**	**206**		**Pn**	**09 51 36.7**	**-1.6**
SNZO				Sn	**Sn**	**09 52 34.1**	**-3.0**
BHW	**Baring Head**	**5.04**	**204**		**Pn**	**09 51 37.1**	**-1.6**
BHW	**Baring Head**	**5.04**	**204**	P	**Pn**	**09 51 36.9**	**-1.7**
PLWZ	**Palliser**	**5.06**	**201**	Pn	**Pn**	**09 51 37.3**	**-1.7**
PLWZ	**Palliser**	**5.06**	**201**	P	**Pn**	**09 51 37.3**	**-1.7**
TCW	**Tory Channel**	**5.08**	**210**	P	**Pn**	**09 51 37.5**	**-1.7**
TUWZ	**Tuamarina**	**5.40**	**211**	Pn	**Pn**	**09 51 41.5**	**-1.8**
TUWZ	**Tuamarina**	**5.40**	**211**	P	**Pn**	**09 51 41.6**	**-1.7**
NNZ	**Nelson**	**5.48**	**216**	Pn	**Pn**	**09 51 43.0**	**-1.3**
NNZ	**Nelson**	**5.48**	**216**	P	**Pn**	**09 51 42.7**	**-1.6**
CMWZ	**Cape Campbell**	**5.57**	**207**	Pn	**Pn**	**09 51 45.1**	**-0.3**
CMWZ	**Cape Campbell**	**5.57**	**207**	P	**Pn**	**09 51 44.6**	**-0.9**
QRZ	**Quartz Range**	**5.63**	**224**	Pn	**Pn**	**09 51 45.2**	**-1.0**
QRZ	**Quartz Range**	**5.63**	**224**	P	**Pn**	**09 51 44.4**	**-1.9**
BSWZ	**Blackbirch Sta**	**5.67**	**210**		**Pn**	**09 51 45.6**	**-1.1**
BSWZ	**Blackbirch Sta**	**5.67**	**210**	P	**Pn**	**09 51 45.0**	**-1.7**
THZ	**Tophouse**	**6.13**	**215**	Pn	**Pn**	**09 51 50.6**	**-2.1**
THZ	**Tophouse**	**6.13**	**215**	P	**Pn**	**09 51 50.9**	**-1.9**
KHZ	**Kahutara**	**6.40**	**208**		**Pn**	**09 51 54.4**	**-1.7**
KHZ	**Kahutara**	**6.40**	**208**	P	**Pn**	**09 51 54.1**	**-2.0**
DSZ	**Denniston Nort**	**6.66**	**221**	P	**Pn**	**09 51 57.6**	**-2.0**
GVZ	**Greta Valley S**	**7.06**	**209**	P	**Pn**	**09 52 02.5**	**-2.2**
LTZ	**Lake Taylor**	**7.22**	**213**	Pn	**Pn**	**09 52 04.9**	**-2.0**
LTZ	**Lake Taylor**	**7.22**	**213**	P	**Pn**	**09 52 04.2**	**-2.7**
AMCZ	**Amberley**	**7.39**	**210**	P	**Pn**	**09 52 07.0**	**-1.9**
INZ	**Inchbonnie**	**7.56**	**217**	P	**Pn**	**09 52 08.4**	**-2.8**
OKCZ	**Okains Bay**	**7.71**	**206**	P	**Pn**	**09 52 11.1**	**-2.0**
OXZ	**Oxford**	**7.76**	**212**	Pn	Pn	09 52 10.4	-3.4
OXZ	**Oxford**	**7.76**	**212**	P	**Pn**	**09 52 10.9**	**-3.0**
MQZ	**McQueen's Vall**	**7.84**	**208**	Pn	**Pn**	**09 52 11.6**	**-3.1**
MQZ	**McQueen's Vall**	**7.84**	**208**	P	**Pn**	**09 52 11.6**	**-3.1**
AKCZ	**Akaroa Harbour**	**7.89**	**206**	P	**Pn**	**09 52 13.4**	**-2.0**
RPZ	**Rata Peaks**	**8.50**	**214**	P	**Pn**	**09 52 22.1**	**-1.3**
	2.8nm,0.3s,baz=62,slow=15,SNR=7.2						
RPZ				S	**Sn**	**09 53 55.6**	**-3.5**
	2.8nm,0.3s,baz=209,slow=23,SNR=1.8						
RPZ	**Rata Peaks**	**8.50**	**214**		**Pn**	**09 52 21.8**	**-1.7**
RPZ	**Rata Peaks**	**8.50**	**214**	P	**Pn**	**09 52 22.1**	**-1.3**
FOZ	**Fox Glacier**	**8.96**	**219**	Pn	**Pn**	**09 52 27.6**	**-1.8**
LBZ	**Lake Benmore**	**9.42**	**215**	Pn	**Pn**	**09 52 35.3**	**-0.1**
LBZ	**Lake Benmore**	**9.42**	**215**	P	**Pn**	**09 52 33.1**	**-2.3**
ODZ	**Otahua Downs**	**9.74**	**211**	Pn	**Pn**	**09 52 38.0**	**-1.5**
ODZ	**Otahua Downs**	**9.74**	**211**	P	**Pn**	**09 52 37.8**	**-1.7**
WKZ	**Wanaka**	**10.30**	**217**	Pn	**Pn**	**09 52 45.6**	**-1.1**
HHSZ	**Highcliff Hill**	**10.46**	**208**	P	**Pn**	**09 52 47.8**	**-0.9**
SYZ	**Scrubby Hill**	**11.57**	**211**	P	**Pn**	**09 53 03.3**	**+0.4**
WHZ	**Wether Hill Ro**	**11.60**	**216**	P	**Pn**	**09 53 02.6**	**-0.7**
COEN	**Coen**	**38.26**	**297**	P	**P**	**09 57 26.4**	**+1.9**
COEN				IAmb	IAmb	09 57 38.4	
	comp=Z,17nm,1.4s						
AS31	**Alice Springs**	**39.67**	**277**	P	**P**	**09 57 35.7**	**-0.5**
ASAR	**Alice Springs**	**39.67**	**277**	P	**P**	**09 57 38.5**	**+2.4**
	comp=Z,5.0nm,0.5s,baz=118,slow=8.0,SNR=134						
ASAR				PcP	**PcP**	**09 59 39.7**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=111,slow=3.8,SNR=2.3						
RABL	**Rabaul**	**40.04**	**318**	P	**P**	**09 57 36.2**	**-3.0**
WR0	**Warramunga Arr**	**41.10**	**282**	P	**P**	**09 57 47.1**	**-0.7**
WR0				IAmb	IAmb	09 57 53.2	
	comp=Z,12nm,1.5s						
WB2	**Warramunga Arr**	**41.26**	**282**	P	**P**	**09 57 50.8**	**+1.7**
WB2				IAmb	IAmb	09 57 51.7	
	comp=Z,13nm,1.3s						
WRAB	**Tennant Creek**	**41.26**	**282**	P	**P**	**09 57 48.1**	**-1.1**
WRAB				IAmb	IAmb	09 57 51.7	
	comp=Z,14nm,1.3s						
WRA	**Warramunga Arr**	**41.27**	**282**	P	**P**	**09 57 50.9**	**+1.7**
	comp=Z,3.9nm,0.5s,baz=121,slow=7.4,SNR=81						
WRA				PcP	**PcP**	**09 59 45.0**	**+1.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.3nm,0.4s,baz=128,slow=3.0,SNR=5.0						
WB0	**Warramunga Arr**	**41.32**	**282**	P	**P**	**09 57 51.5**	**+1.9**
KNRA	**Kununurra**	**48.05**	**283**	P	**P**	**09 58 41.9**	**-0.9**
KNRA				IAmb	IAmb	09 58 59.6	
	comp=Z,18nm,1.1s						
FITZ	**Fitzroy Crossi**	**49.15**	**278**	P	**P**	**09 58 52.2**	**+1.1**
MORW	**Morawa**	**51.49**	**260**	P	**P**	**09 59 09.3**	**+0.8**
MORW				IAmb	IAmb	09 59 15.2	
	comp=Z,10nm,1.5s						
ARCES	**ARCESS Array B**	**143.94**	**344**	PKP	**PKPdf**	**10 09 33.5**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=35,slow=3.3,SNR=5.6						
FINES	**FINESS Array B**	**149.61**	**333**	PKPbc	**PKPbc**	**10 09 48.9**	**+0.8**
	comp=Z,1.8nm,0.6s,baz=64,slow=3.2,SNR=4.9						
TORD	**Torodi Ar. Bea**	**156.12**	**190**	PKPab	**PKPab**	**10 10 25.8**	**+3.2**
	comp=Z,0.3nm,0.4s,baz=161,slow=4.0,SNR=5.6						

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*NEIC **06** 10:04:04.6±1.4, 14°.3S±0°.1×167°.5E±0°.2, h93km±11km, mb4.1/10, Error ellipse: s-maj=24.2km s-min=15.6km az=70.0*
*IDC **06** 10:04:06.4±14.0, 14°.65S×166°.07E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.6/37, mbtmp3.9/4, ML4.2/1, Error ellipse: s-maj=241.0km s-min=37.9km az=58.0*
ISC 06 10:04:05.8±1.7**, 14°.4S**±0°.1×**167°.4E**±0°.2**, h100km, n16, σ1s.41**/18**, mb3.8**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.67**	**187**	Pn	**Pn**	**10 05 55.9**	**+0.9**
	3.8nm,0.3s,baz=84,slow=10,SNR=66						
DZM				Sn	**Sn**	**10 07 19.7**	**-0.6**
	4.8nm,0.3s,baz=108,slow=22,SNR=8.8						
DZM	**Mont Dzumac**	**7.67**	**187**		**Pn**	**10 05 55.4**	**+0.4**
DZM					**Sn**	**10 07 17.1**	**-3.3**
HNR	**Honiara**	**8.80**	**303**	Pn	**Pn**	**10 06 09.0**	**-1.3**
LHI	**Lord Howe Isla**	**18.66**	**203**	P	**P**	**10 08 16.6**	**+0.6**
PMG	**Port Moresby**	**20.41**	**282**	P	**P**	**10 08 34.9**	**-0.1**
PMG				IAmb	IAmb	10 08 47.2	
	comp=Z,24nm,1.2s						
OUZ	**Omahuta**	**21.46**	**166**	P	**P**	**10 08 46.6**	**+0.5**
OUZ				IAmb	IAmb	10 09 05.2	
	comp=Z,17nm,1.4s						
BKZ	**Black Stump Fm**	**25.93**	**164**	P	**P**	**10 09 28.9**	**+0.1**
STKA	**Stephens Creek**	**29.29**	**229**	P	**P**	**10 10 01.0**	**+2.2**
	comp=Z,1.0nm,0.6s,baz=61,slow=10,SNR=2.9						
STKA	**Stephens Creek**	**29.29**	**229**	P	**P**	**10 10 00.5**	**+1.6**
WB2	**Warramunga Arr**	**32.01**	**255**	P	**P**	**10 10 24.1**	**+1.1**
WB2				IAmb	IAmb	10 10 33.6	
	comp=Z,4.7nm,1.1s						
WRAB	**Tennant Creek**	**32.01**	**255**	P	**P**	**10 10 21.2**	**-1.8**
WRAB				IAmb	IAmb	10 10 33.2	
	comp=Z,6.1nm,1.3s						
WRA	**Warramunga Arr**	**32.02**	**255**	P	**P**	**10 10 22.8**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=85,slow=8.6,SNR=2.3						
AS31	**Alice Springs**	**32.90**	**249**	P	**P**	**10 10 31.7**	**+1.0**
ASAR	**Alice Springs**	**32.90**	**249**	P	**P**	**10 10 31.6**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=75,slow=9.1,SNR=13						
VNDA	**Vanda**	**63.18**	**181**	P	**P**	**10 14 22.9**	**+0.1**
VNDA				IAmb	IAmb	10 14 31.3	
	comp=Z,2.8nm,1.4s						
QSPA	**South Pole Qui**	**75.62**	**180**	P	**P**	**10 15 38.4**	**-1.3**
QSPA				IAmb	IAmb	10 15 40.5	
	comp=Z,0.8nm,0.8s						

IDC 06 10:11:38.1±4.2**, 1°.34S×127°.20E, h0km, mb3.5**/2**, mb1 3.6**/3**, mb1mx3.3**/44**, mbtmp3.3**/3**, ML2.8**/1**, Error ellipse: s-maj=228.3km s-min=33.9km az=86.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.77**	**160**	P	P	10 16 09.1	-0.8
	0.0nm,0.3s,baz=341,slow=12,SNR=1.9						
ASAR	**Alice Springs**	**23.13**	**164**	P	P	10 16 46.5	+0.5
	0.7nm,0.5s,baz=349,slow=11,SNR=15						
ILAR	**Eielson Array**	**89.45**	**25**	P	P	10 24 36.6	-0.1
	0.3nm,0.8s,baz=263,slow=7.2,SNR=4.4						

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*NEIC **06** 10:29:50.7±1.4, 5°.7S±0°.1×149°.6E±0°.1, h124km±7km, mb4.1/7, Error ellipse: s-maj=19.3km s-min=10.6km az=130.0*
*IDC **06** 10:29:50.8±1.3, 5°.79S×149°.68E, h127km±24km, mb3.6/6, mb1 3.7/8, mb1mx3.4/37, mbtmp3.9/8, Error ellipse: s-maj=57.0km s-min=8.7km az=132.0*
ISC 06 10:29:49.6±0.8**, 5°.6S**±0°.1×**149°.5E**±0°.1**, h100km, n19, σ1s.60**/21**, mb4.1**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.82**	**63**	P	**Pn**	**10 30 33.7**	**+0.8**
	4.7nm,0.3s,baz=63,slow=11,SNR=2.6						
KRVT				S	**Sn**	**10 31 08.1**	**+1.8**
	6.7nm,0.3s,baz=224,slow=22,SNR=6.8						
RABL	**Rabaul**	**2.99**	**62**	Pn	**Pn**	**10 30 36.3**	**+1.0**
PMG	**Port Moresby**	**4.45**	**211**	P	**Pn**	**10 30 56.2**	**+1.4**
	3.5nm,0.3s,baz=33,slow=5.8,SNR=8.8						
PMG				S	**Sn**	**10 31 47.3**	**+1.8**
	16nm,0.3s,baz=144,slow=22,SNR=14						
PMG	**Port Moresby**	**4.45**	**211**		**Pn**	**10 30 56.1**	**+1.3**
PMG					**Sn**	**10 31 47.4**	**+2.0**
WB0	**Warramunga Arr**	**20.36**	**225**	P	**P**	**10 34 17.5**	**-0.8**
WB0				IAmb	IAmb	10 34 21.0	
	comp=Z,13nm,1.4s						
WR0	**Warramunga Arr**	**20.39**	**224**	P	**P**	**10 34 17.0**	**-1.6**
WR0				IAmb	IAmb	10 34 17.5	
	comp=Z,6.6nm,1.4s						
WRAB	**Tennant Creek**	**20.50**	**225**	P	**P**	**10 34 18.5**	**-1.3**
WRAB				IAmb	IAmb	10 34 23.8	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**20.51**	**225**	P	**P**	**10 34 18.7**	**-1.2**
WB2				IAmb	IAmb	10 34 22.0	
	comp=Z,4.7nm,0.5s						
WRA	**Warramunga Arr**	**20.52**	**225**	P	**P**	**10 34 18.2**	**-1.8**
	comp=Z,3.1nm,0.6s,baz=49,slow=10,SNR=25						
KNRA	**Kununurra**	**22.69**	**242**	P	**P**	**10 34 40.8**	**-2.2**
AS31	**Alice Springs**	**23.42**	**218**	P	**P**	**10 34 48.7**	**-1.3**
ASAR	**Alice Springs**	**23.42**	**218**	P	**P**	**10 34 48.6**	**-1.3**
	comp=Z,0.9nm,0.3s,baz=49,slow=8.2,SNR=23						
FITZ	**Fitzroy Crossi**	**26.41**	**240**	P	**P**	**10 35 15.2**	**-1.8**
	comp=Z,6.1nm,0.7s,baz=70,slow=9.3,SNR=25						
FITZ	**Fitzroy Crossi**	**26.41**	**240**	P	**P**	**10 35 15.3**	**-1.8**
FITZ				IAmb	IAmb	10 35 19.1	
	comp=Z,10nm,0.9s						
TUWZ	**Tuamarina**	**41.82**	**152**	P	**P**	**10 37 27.4**	**-2.1**
CMAR	**Chiang Mai Arr**	**55.27**	**297**	P	P	10 39 12.4	-0.6
	comp=Z,0.7nm,0.4s,baz=116,slow=6.1,SNR=2.8						
PETK	**Petropavlovsk-**	**58.89**	**6**	P	**P**	**10 39 37.7**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=171,slow=7.6,SNR=9.5						
MKAR	**Makanchi Array**	**78.79**	**320**	P	**P**	**10 41 42.2**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=79,slow=7.5,SNR=1.4						
TORD	**Torodi Ar. Bea**	**147.40**	**286**	PKPbc	**PKPdf**	**10 49 20.9**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=23,slow=1.4,SNR=1.7						

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*SJA **06** 10:30:07.5±0.8, 25°.21S×70°.82W, h42km±30km, ML3.7, MW3.9*
*GUC **06** 10:30:07.8±0.7, 25°.26S×70°.60W, h58km±7km, ML3.9*
ISC 06 10:30:07.1±1.8**, 25°.31S**±0°.04×**70°.84W**±0°.09**, h31km**±16km**, n25, σ0s.97**/31**, 3C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB14	**IPOC Station P**	**0.79**	**30**	⇓*i*P	**Pb**	**10 30 22.3**	**-0.2**
PB14				*i* S	**Sn**	**10 30 33.0**	**-0.2**
PB14				IAML		10 30 33.7	
	comp=E,4μm,0.4s						
PB14	**IPOC Station P**	**0.79**	**30**	*i* P	**Pb**	**10 30 22.4**	**-0.1**
PB14				*e*S	**Sn**	**10 30 32.9**	**-0.3**
PB14				IAML		10 30 34.4	
	comp=Z,2μm,0.4s						
GO02	**Mina Guanaco**	**1.14**	**83**	*e*P	**Pn**	**10 30 26.0**	**-1.2**
GO02				*e*S	**Sn**	**10 30 39.2**	**-2.8**
GO02				IAML		10 30 40.3	
	comp=E,8μm,0.3s						
PB10	**IPOC Station P**	**1.81**	**8**	⇑*i*P	**Pn**	**10 30 36.3**	**+0.2**
PB10				*e*S	**Sn**	**10 30 57.9**	**-0.1**
PB10	**IPOC Station P**	**1.81**	**8**	*i* P	**Pn**	**10 30 36.3**	**+0.2**
PB10				*e*S	**Sn**	**10 30 57.9**	**-0.1**
PB10				IAML		10 31 09.4	
	comp=Z,296nm,0.9s						
AC02	**Maricunga**	**2.16**	**135**	⇑*i*P	**Pn**	**10 30 42.0**	**+0.6**
AC02				*e*S	**Sn**	**10 31 07.5**	**+0.1**
AC02				IAML		10 31 08.8	
	comp=E,2μm,0.3s						
PB15	**IPOC Station P**	**2.44**	**31**	*e*P	**Pn**	**10 30 44.8**	**-0.2**
PB15	**IPOC Station P**	**2.44**	**31**	*i* P	**Pn**	**10 30 46.1**	**+1.2**
PB05	**IPOC Station P**	**2.52**	**14**	⇓*i*P	**Pn**	**10 30 45.9**	**-0.1**
PB05				IAML		10 31 38.7	
	comp=E,366nm,0.4s						
PB05	**IPOC Station P**	**2.52**	**14**	*i* P	**Pn**	**10 30 46.0**	**+0.1**
PB05				IAML		10 31 32.7	
	comp=Z,223nm,0.4s						
PB06	**IPOC Station P**	**2.84**	**24**	*e*P	**Pn**	**10 30 50.8**	**+0.3**
PB06				IAML		10 31 41.9	
	comp=E,602nm,0.4s						
PB06	**IPOC Station P**	**2.84**	**24**	*i* P	**Pn**	**10 30 51.0**	**+0.5**
PB06				IAML		10 31 49.2	
	comp=Z,386nm,0.5s						
LVC	**Limon Verde**	**3.22**	**34**	*i* P	**Pn**	**10 30 57.2**	**+1.4**
LVC				IAML		10 31 49.1	
	comp=Z,509nm,1.4s						
PB03	**IPOC Station P**	**3.40**	**17**	*e*P	**Pn**	**10 30 57.8**	**-0.3**
PB03				IAML		10 31 57.3	
	comp=E,240nm,0.5s						
AC05	**El Transito**	**3.55**	**172**	⇑*i*P	**Pn**	**10 31 00.3**	**+0.1**
AC05				*e*S	**Sn**	**10 31 41.5**	**+0.4**
PB07	**IPOC Station P**	**3.67**	**14**	*e*P	**Pn**	**10 31 01.8**	**-0.1**
PB09	**IPOC Station P**	**3.79**	**23**	*e*P	**Pn**	**10 31 04.5**	**+0.9**
PB09	**IPOC Station P**	**3.79**	**23**	*i* P	**Pn**	**10 31 04.8**	**+1.2**
PB09				IAML		10 32 18.7	
	comp=Z,223nm,1.1s						
PB02	**IPOC Station P**	**4.07**	**13**	*e*P	**Pn**	**10 31 06.7**	**-0.6**
PB01	**IPOC Station P**	**4.43**	**17**	⇓*e*P	**Pn**	**10 31 12.0**	**-0.2**
GO04	**Tololo Observa**	**4.84**	**180**	*e*P	**Pn**	**10 31 17.2**	**-0.8**
AZAP	**Zapla**	**5.36**	**80**	*i* P	**Pn**	**10 31 27.9**	**+2.8**
YJA	**Yavi**	**5.79**	**58**	*i* P	Pn	10 31 38.2	+7.0
TCA	**Tanti**	**8.14**	**139**	*i* P	**Pn**	**10 32 03.8**	**+0.6**
MRA	**San Martin**	**8.38**	**149**	*i* P	**Pn**	**10 32 06.3**	**-0.3**

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*NEIC **06** 10:40:30.0±1.8, 15°.3N±0°.1×96°.47W±0°.03, h28km±16km, mb4.1/5, Md4.0/16(MEX), Error ellipse: s-maj=18.3km s-min=4.3km az=173.0*
*MEX **06** 10:40:31.0±0.5, 15°.24N×96°.52W, h16km±12km, MD4.0*
ISC 06 10:40:28.3±2.3**, 15°.2N**±0°.1×**96°.51W**±0°.05**, h26km**±14km**, n17, σ1s.10**/27**, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.68**	**35**		**Pb**	**10 40 41.4**	**-0.1**
HUIG					**Sb**	**10 40 50.7**	**+0.1**
HUIG	**Huatulco**	**0.68**	**35**	*i* P	**Pb**	**10 40 41.4**	**-0.1**
HUIG				*e*S	**Sb**	**10 40 50.7**	**+0.1**
PEIG	**Puerto Escondi**	**0.99**	**322**	*e*P	**Pn**	**10 40 46.4**	**-0.3**
VHO	**Vista Hermosa**	**1.86**	**353**	*e*P	**Pn**	**10 40 58.2**	**-0.6**
VHO				*i* S	**Sn**	**10 41 19.6**	**-2.0**
YOIG	**Yosondua**	**1.92**	**329**	*e*P	**Pn**	**10 41 00.1**	**+0.5**
YOIG				*e*S	**Sn**	**10 41 21.8**	**-1.1**
PNIG	**Pinotepa**	**1.95**	**307**		**Pn**	**10 41 00.2**	**+0.5**
PNIG					**Sn**	**10 41 22.2**	**-1.3**
PNIG	**Pinotepa**	**1.95**	**307**	*e*P	**Pn**	**10 41 00.2**	**+0.5**
PNIG				*e*S	**Sn**	**10 41 22.2**	**-1.3**
CMIG	**Matias Romero**	**2.44**	**40**		**Pn**	**10 41 07.0**	**+0.5**
CMIG					**Sn**	**10 41 34.6**	**-0.9**
CMIG	**Matias Romero**	**2.44**	**40**	*e*P	**Pn**	**10 41 07.0**	**+0.5**
CMIG				*i* S	**Sn**	**10 41 34.6**	**-0.9**
TLIG	**Tlapa**	**3.06**	**320**	Pn	**Pn**	**10 41 16.1**	**+0.9**
TLIG				Sn	**Sn**	**10 41 50.7**	**-0.3**
PCIG		**3.21**	**81**		**Pn**	**10 41 13.9**	**-3.2**
CCIG	**Comitan**	**4.34**	**75**	Pn	**Pn**	**10 41 34.3**	**+1.4**
CCIG				Sn	**Sn**	**10 42 23.3**	**+0.5**
TEIG	**Tepich**	**9.30**	**56**	Pn	**Pn**	**10 42 40.4**	**-0.3**
TX31	**Lajitas Ar. Si**	**15.53**	**336**	Pn	**Pn**	**10 44 06.7**	**+0.9**
TX31				IAmb	IAmb	10 44 19.6	
	comp=Z,7.5nm,0.8s						
TX32	**Lajitas Array**	**15.53**	**336**	Pn	**Pn**	**10 44 06.1**	**+0.3**
T35A	**Sooner Cattle**	**21.62**	**360**	P	**P**	**10 45 17.0**	**+0.5**
T35A				IAmb	IAmb	10 45 33.2	
	comp=Z,4.8nm,0.6s						
SMCO	**Snowmass**	**25.59**	**341**	P	**P**	**10 45 57.1**	**+1.3**
SMCO				IAmb	IAmb	10 46 03.8	
	comp=Z,6.7nm,1.2s						

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*ANF **06** 10:48:18.9±0.1, 35°.45N×118°.35W, h11km±1km, ML3.6/34, Error ellipse: s-maj=1.0km s-min=0.9km az=46.0*
*NEIC **06** 10:48:19.5±1.4, 35°.442N±0°.010×118°.35W±0°.01, h9km±3km, Error ellipse: s-maj=1.6km s-min=1.1km az=138.0*
*PAS **06** 10:48:19.8±1.4, 35°.45N±0°.01×118°.35W±0°.01, h5km±4km, ML3.5/228, Error ellipse: s-maj=1.7km s-min=1.6km az=103.0*
*SCEDC **06** 10:48:19.8, 35°.45N×118°.35W, h4km*
ISC 06 10:48:19.3±0.9**, 35°.45N**±0°.01×**118°.36W**±0°.01**, h11km**±7km**, n179, σ0s.82**/222**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSM	**Bird Springs**	**0.20**	**65**		**Pg**	**10 48 23.5**	**-0.1**
ISA	**Isabella, Lake**	**0.23**	**335**	P	**Pg**	**10 48 23.9**	**-0.3**
	baz=154,SNR=1000						
ISA				S	**Sg**	**10 48 27.4**	**-0.1**
	baz=154						
ISA	**Isabella, Lake**	**0.23**	**335**		**Sg**	**10 48 27.8**	**+0.3**
ISA	**Isabella, Lake**	**0.23**	**335**	Pg	**Pg**	**10 48 23.9**	**-0.3**
ISA				Sg	**Sg**	**10 48 27.7**	**+0.2**
WORM	**Onyx Ranch**	**0.26**	**21**		**Pg**	**10 48 24.6**	**-0.1**
WOFM	**Oak Flat**	**0.30**	**286**		**Pg**	**10 48 25.6**	**+0.1**
WASM	**Alta Sierra Ca**	**0.33**	**330**		**Pg**	**10 48 26.1**	**+0.1**
TEJ	**El Tejon**	**0.35**	**231**		**Pg**	**10 48 26.4**	**0.0**
CCAC	**Calif City Air**	**0.41**	**137**		**Pg**	**10 48 27.3**	**-0.1**
CCAC					**Sg**	**10 48 33.1**	**+0.2**
DTP	**Desert Tortois**	**0.46**	**114**		**Pg**	**10 48 28.2**	**-0.2**
MAGC	**SCE Magundon P**	**0.47**	**259**		**Pg**	**10 48 29.3**	**+0.7**
WCHM	**Chimney Peak**	**0.48**	**28**		**Pg**	**10 48 28.8**	**-0.1**
ARVC	**Arvin**	**0.51**	**230**	P	**Pg**	**10 48 29.6**	**+0.3**
	baz=50,SNR=193						
ARVC				S	**Sg**	**10 48 36.1**	**+0.1**
	baz=50						
ARVC	**Arvin**	**0.51**	**230**		**Pg**	**10 48 29.5**	**+0.3**
TJR	**Tejon Ranch**	**0.53**	**217**		**Pg**	**10 48 29.6**	**0.0**
SRTC	**Snort**	**0.55**	**64**		**Pg**	**10 48 30.4**	**+0.3**
LRMC	**Laurel Mtn Rad**	**0.55**	**87**	P	**Pg**	**10 48 29.9**	**-0.1**
	baz=267,SNR=112						
LRMC				S	**Sg**	**10 48 37.2**	**-0.1**
	baz=267						
LRMC	**Laurel Mtn Rad**	**0.55**	**87**		**Pg**	**10 48 30.0**	**-0.1**
JFS	**Joseph F. Stat**	**0.57**	**100**		**Pg**	**10 48 30.2**	**-0.3**
TPO	**Tropico Hills**	**0.58**	**170**		**Pg**	**10 48 30.6**	**-0.1**
TOW	**Tower One**	**0.60**	**54**		**Pb**	**10 48 31.3**	**-0.6**
THC	**Tehachapi Micr**	**0.60**	**205**		**Pg**	**10 48 30.8**	**-0.2**
THC					**Sg**	**10 48 38.8**	**-0.1**
BAKC	**Calstate**	**0.62**	**260**		**Pg**	**10 48 32.0**	**+0.6**
EDW2	**Edwards Air Fo**	**0.64**	**152**	P	**Pg**	**10 48 31.4**	**-0.4**
	baz=333,SNR=180						
EDW2				S	**Sg**	**10 48 39.9**	**-0.4**
	baz=333						
EDW2	**Edwards Air Fo**	**0.64**	**152**		**Pg**	**10 48 31.4**	**-0.4**
EDW2					**Sg**	**10 48 40.0**	**-0.4**
VPEM	**Volcano Peak E**	**0.66**	**41**		**Pg**	**10 48 32.0**	**-0.1**
RVCM	**Rose Valley Ce**	**0.67**	**34**		**Pg**	**10 48 32.2**	**-0.2**
JRC2	**Joshua Ridge**	**0.69**	**40**		**Pg**	**10 48 32.6**	**-0.1**
JRC2					**Sg**	**10 48 41.9**	**+0.1**
VES	**Vestal, Richgr**	**0.71**	**303**	P	**Pg**	**10 48 33.0**	**0.0**
	baz=123,SNR=135						
VES				S	**Sg**	**10 48 42.3**	**-0.1**
	baz=123						
VES	**Vestal, Richgr**	**0.71**	**303**		**Pg**	**10 48 33.0**	**0.0**
CLC	**China Lake**	**0.71**	**59**		**Pg**	**10 48 32.9**	**-0.3**
FOXC	**Fox Airport**	**0.71**	**172**		**Pg**	**10 48 33.1**	**-0.1**
WCSM	**Coso Springs S**	**0.74**	**40**		**Pg**	**10 48 33.6**	**-0.1**
ALPC	**Antelope**	**0.77**	**177**		**Pg**	**10 48 33.9**	**-0.2**
MFS	**McCloud Flat S**	**0.78**	**31**		**Pg**	**10 48 34.2**	**-0.1**
BTPC	**Burnt Peak**	**0.79**	**193**		**Pg**	**10 48 34.4**	**-0.3**
CCCA	**Chr Cany lake**	**0.81**	**85**		**Pg**	**10 48 35.0**	**0.0**
LEOC	**Leona Valley**	**0.82**	**177**		**Pg**	**10 48 34.8**	**-0.4**
HYS	**Haystack Butte**	**0.87**	**132**		**Pg**	**10 48 35.5**	**-0.7**
HYS					**Sg**	**10 48 46.9**	**-0.7**
SBB	**Saddle Back Bu**	**0.88**	**150**		**Pg**	**10 48 35.7**	**-0.6**
SBB					**Sg**	**10 48 47.4**	**-0.4**
OSI	**Osito Audit: C**	**0.89**	**200**	P	**Pg**	**10 48 36.1**	**-0.4**
	baz=20,SNR=9.5						
OSI				S	**Sg**	**10 48 48.1**	**0.0**
	baz=20						
OSI	**Osito Audit: C**	**0.89**	**200**		**Pg**	**10 48 36.2**	**-0.3**
OSI	**Osito Audit: C**	**0.89**	**200**	Pg	**Pg**	**10 48 35.6**	**-0.9**
OSI	**Osito Audit: C**	**0.89**	**200**	Sg	**Sg**	**10 48 47.7**	**-0.4**
OSI					**Sb**	**10 48 47.9**	**-0.9**
MPI	**Mount Pinos, F**	**0.91**	**226**		**Pg**	**10 48 36.7**	**-0.2**
MPMC	**Manual Prospec**	**0.93**	**49**	P	**Pg**	**10 48 36.9**	**-0.3**
	baz=229,SNR=804						
MPMC				S	**Sg**	**10 48 49.3**	**-0.1**
	baz=229						
MPMC	**Manual Prospec**	**0.93**	**49**		**Pg**	**10 48 36.9**	**-0.3**
ABL	**Mount Abel**	**0.93**	**230**		**Pg**	**10 48 36.9**	**-0.4**
CJV	**Casa Juvan**	**0.94**	**169**		**Pg**	**10 48 36.9**	**-0.5**
PYR	**Pyramid**	**0.94**	**200**		**Pg**	**10 48 37.0**	**-0.4**
LRRC	**Littlerock Res**	**0.96**	**164**		**Pg**	**10 48 37.4**	**-0.5**
BCW	**Bitter Crk WRg**	**1.01**	**240**		**Pg**	**10 48 38.3**	**-0.4**
CWC	**Cottonwood Cre**	**1.01**	**13**	P	**Pg**	**10 48 38.2**	**-0.6**
	baz=192						
CWC				S	**Sg**	**10 48 51.6**	**-0.3**
	baz=192						
CWC	**Cottonwood Cre**	**1.01**	**13**		**Pg**	**10 48 38.2**	**-0.6**
JNH	**Juniper Hills**	**1.06**	**162**		**Pb**	**10 48 39.1**	**-0.6**
IR2C	**Iron Canyon**	**1.06**	**182**		**Pb**	**10 48 39.2**	**-0.6**
RCTC	**Rector, Farmer**	**1.11**	**320**		**Pb**	**10 48 40.0**	**-0.6**
OAT	**Oat Mountain**	**1.13**	**191**		**Pb**	**10 48 39.2**	**-1.7**
CRGC	**Crocker Grade**	**1.14**	**260**		**Pb**	**10 48 40.7**	**-0.4**
RYS	**Reyes Peak**	**1.15**	**226**		**Pb**	**10 48 40.9**	**-0.4**
CHFC	**Chilao Flat St**	**1.15**	**166**		**Pb**	**10 48 40.7**	**-0.7**
CHFC					**Sb**	**10 48 55.7**	**-0.7**
ADO	**Adelanto Recei**	**1.18**	**140**		**Pb**	**10 48 41.4**	**-0.4**
ADO					**Sg**	**10 48 57.4**	**+0.2**
CGO	**Cerro Gordo**	**1.18**	**22**		**Pb**	**10 48 41.6**	**-0.4**
DECC	**Green Verdugo**	**1.20**	**179**	P	**Pn**	**10 48 41.7**	**-0.4**
	baz=359,SNR=35						
DECC				S	**Sg**	**10 48 58.5**	**+0.5**
	baz=359						
DECC	**Green Verdugo**	**1.20**	**179**		**Pg**	**10 48 42.6**	**+0.2**
VOG	**Valley Oaks Go**	**1.20**	**316**	P	**Pn**	**10 48 41.7**	**-0.3**
	baz=136,SNR=23						
VOG				S	**Sg**	**10 48 57.9**	**-0.1**
	baz=136						
VOG	**Valley Oaks Go**	**1.20**	**316**		**Pn**	**10 48 41.8**	**-0.3**
VOG					**Sg**	**10 48 58.0**	**0.0**
XTL	**Crystal Lake,**	**1.22**	**161**		**Pn**	**10 48 42.1**	**-0.5**
CARC	**Carrizo Plain**	**1.23**	**264**		**Pn**	**10 48 42.1**	**-0.4**
CARC					**Sn**	**10 48 59.4**	**+0.2**
VTV	**Victorville**	**1.23**	**136**		**Pn**	**10 48 42.0**	**-0.5**
VTV					**Sg**	**10 48 59.0**	**+0.1**
RRX	**Edison Barstow**	**1.25**	**117**	P	**Pn**	**10 48 42.7**	**-0.1**
	baz=298,SNR=53						
RRX				S	**Sn**	**10 48 59.6**	**-0.2**
	baz=298						
RRX	**Edison Barstow**	**1.25**	**117**		**Pb**	**10 48 43.2**	**+0.1**
GSC	**Goldstone, Bar**	**1.28**	**96**	P	**Pn**	**10 48 42.9**	**-0.3**
	baz=277,SNR=364						
GSC				S	**Sn**	**10 48 60.0**	**-0.4**
	baz=277						
GSC	**Goldstone, Bar**	**1.28**	**96**	Pg	**Pn**	**10 48 42.9**	**-0.3**
PASC	**Pasadena Art C**	**1.29**	**174**		**Pn**	**10 48 42.7**	**-0.6**
PASC				Sg	**Sb**	**10 49 00.2**	**0.0**
YEG	**Yeguas Mountai**	**1.31**	**270**		**Pb**	**10 48 44.0**	**0.0**
PKM	**Mcpherson Peak**	**1.32**	**245**	P	**Pn**	**10 48 43.5**	**-0.4**
	baz=64,SNR=38						
PKM				S	**Sb**	**10 49 01.6**	**+0.3**
	baz=64						
PKM	**Mcpherson Peak**	**1.32**	**245**		**Pn**	**10 48 43.6**	**-0.4**
GR2C	**Griffith Obs.**	**1.33**	**178**		**Pb**	**10 48 44.9**	**+0.5**
BFSC	**Mount Baldy Ra**	**1.34**	**154**	P	**Pn**	**10 48 43.9**	**-0.2**
	baz=335,SNR=80						
BFSC				S	**Sb**	**10 49 01.7**	**-0.1**
	baz=335						
BFSC	**Mount Baldy Ra**	**1.34**	**154**		**Pn**	**10 48 43.9**	**-0.2**
BFSC					**Sg**	**10 49 02.7**	**+0.2**
PEM	**Pine Mountain**	**1.34**	**163**		**Pn**	**10 48 44.3**	**+0.2**
DJJ	**Donna J Jenkin**	**1.35**	**184**		**Pb**	**10 48 44.6**	**0.0**
SMMC	**Simmler**	**1.35**	**265**	P	**Pn**	**10 48 43.7**	**-0.4**
	baz=84,SNR=25						
SMMC				S	**Sb**	**10 49 02.2**	**+0.3**
	baz=84						
SMMC	**Simmler**	**1.35**	**265**		**Pn**	**10 48 43.8**	**-0.4**
SSK	**Sunset Peak**	**1.35**	**156**		**Pn**	**10 48 44.4**	**0.0**
GVRC	**Garvey Reservo**	**1.41**	**172**		**Pg**	**10 48 46.5**	**0.0**
SS2	**San Sevaine**	**1.43**	**150**		**Pn**	**10 48 45.7**	**+0.5**
PSRC	**Puddingstone R**	**1.43**	**161**		**Pb**	**10 48 46.3**	**+0.3**
BCH	**Branch Mountai**	**1.44**	**260**		**Pn**	**10 48 45.0**	**-0.5**
RHC	**Rose Hills Cem**	**1.48**	**169**		**Pg**	**10 48 47.9**	**+0.2**
PT2	**Point Dume**	**1.49**	**195**		**Pb**	**10 48 47.1**	**+0.1**
SBC	**Santa Barbara**	**1.50**	**228**	Pg	**Pb**	**10 48 48.0**	**+0.8**
	baz=48,SNR=11						
FIGC	**Figueroa Mtn.**	**1.52**	**242**		**Pb**	**10 48 47.6**	**-0.1**
PAGB	**Antelope Grade**	**1.57**	**281**		**Pn**	**10 48 46.8**	**-0.4**
PAGB				Sn	**Sb**	**10 49 08.3**	**0.0**
FURC	**Furnace Creek,**	**1.58**	**50**	Pg	**Pg**	**10 48 49.1**	**-0.5**
	baz=230,SNR=59						
FURC				Sb	**Sg**	**10 49 09.7**	**-0.4**
	baz=230						
TIN	**Tinemaha, Big**	**1.60**	**4**	Pb	**Pb**	**10 48 49.0**	**0.0**
	baz=184,SNR=14						
TIN				Sb	**Sg**	**10 49 10.9**	**+0.1**
	baz=184						
TIN	**Tinemaha, Big**	**1.60**	**4**		**Pb**	**10 48 49.2**	**+0.2**
BTL	**Butler Peak**	**1.63**	**137**		**Pb**	**10 48 50.2**	**+0.5**
RVR	**Riverside**	**1.67**	**151**		**Pn**	**10 48 48.7**	**+0.2**
BREC	**Barre Substati**	**1.67**	**169**		**Pg**	**10 48 51.6**	**+0.3**
BBRC	**Big Bear Solar**	**1.68**	**135**	Pb	**Pb**	**10 48 50.0**	**-0.3**
	baz=316,SNR=8.0						
BBRC				Sb	**Sb**	**10 49 12.3**	**+0.8**
	baz=316						
BBRC	**Big Bear Solar**	**1.68**	**135**		**Pb**	**10 48 50.4**	**+0.1**
BBRC					**Sg**	**10 49 12.9**	**-0.4**
FMP	**Fort Macarthur**	**1.74**	**178**	Pg	**Pb**	**10 48 52.1**	**+0.9**
	baz=358						
FMP				Sb	**Sg**	**10 49 14.5**	**-0.7**
	baz=358						
CFT	**Crafton Hills**	**1.75**	**144**		**Pn**	**10 48 50.1**	**+0.4**
SHOC	**Shoshone, Teco**	**1.75**	**75**	Pb	**Pb**	**10 48 51.4**	**-0.1**
	baz=256						
HEC	**Hector,Ludlow**	**1.77**	**110**	Pg	**Pg**	**10 48 52.6**	**-0.6**
	baz=291,SNR=15						
HEC				Sb	**Sg**	**10 49 15.7**	**-0.6**
	baz=291						
SME	**Santa Rosa Min**	**1.82**	**153**		**Pn**	**10 48 50.8**	**+0.1**
PEC	**Perris**	**1.84**	**147**		**Pn**	**10 48 51.2**	**+0.3**
DSCC	**Desert Studies**	**1.87**	**99**		**Pn**	**10 48 50.6**	**-0.6**
FRI	**Friant**	**1.88**	**325**		**Pn**	**10 48 52.5**	**+1.0**
AMDNV	**Amargosa**	**1.96**	**59**		**Pn**	**10 48 52.2**	**-0.3**
GATR	**Gnd/Air Tx Cnt**	**1.98**	**244**		**Pb**	**10 48 55.6**	**+0.2**
TUQ	**Turquoise Moun**	**1.98**	**90**	P	**Pn**	**10 48 52.5**	**-0.5**
	baz=271,SNR=14						
TUQ				Sb	**Sg**	**10 49 22.0**	**-1.1**
	baz=271						
CIS	**Catalina Islan**	**2.05**	**181**	Sb	**Sb**	**10 49 23.6**	**+1.5**
	baz=1.5						
HMTC	**Hemet**	**2.07**	**147**		**Pn**	**10 48 54.2**	**+0.2**
MURC	**Murrieta**	**2.08**	**152**	P	**Pn**	**10 48 54.4**	**+0.2**
	baz=333,SNR=19						
MURC				S	**Sn**	**10 49 20.4**	**+0.2**
	baz=333						
MURC	**Murrieta**	**2.08**	**152**		**Pn**	**10 48 54.6**	**+0.3**
DGR	**Domenigoni Val**	**2.12**	**148**		**Pn**	**10 48 54.8**	**+0.1**
BLAC	**Blackrock camp**	**2.13**	**130**		**Pn**	**10 48 55.4**	**+0.4**
PMPB	**Monarch Peak**	**2.13**	**292**		**Pn**	**10 48 55.7**	**+0.8**
PMPB				Sn	**Sb**	**10 49 23.1**	**-1.3**
BACC	**Bachelor Mtn.**	**2.13**	**149**		**Pn**	**10 48 55.4**	**+0.4**
MLAC	**Mammoth, Mammo**	**2.21**	**350**	Pb	**Pb**	**10 48 59.5**	**+0.1**
	baz=170						
MLAC	**Mammoth, Mammo**	**2.21**	**350**		**Pb**	**10 48 59.3**	**-0.1**
OMMB	**Old Mammoth Mi**	**2.22**	**347**		**Pb**	**10 48 59.1**	**-0.6**
MDPB	**Devils Postpil**	**2.25**	**345**		**Pb**	**10 48 59.9**	**-0.3**
MMIM	**Miami Mountain**	**2.26**	**331**		**Pb**	**10 48 59.1**	**-1.1**
TPNV	**Topopah Spring**	**2.26**	**48**	P	**Pn**	**10 48 57.4**	**+0.5**
	baz=229,SNR=103						
TPNV	**Topopah Spring**	**2.26**	**48**		**Pn**	**10 48 57.6**	**+0.8**
GMRC	**Granite Mounta**	**2.31**	**106**	P	**Pn**	**10 48 56.9**	**-0.6**
	baz=288,SNR=17						
TPC	**Twentynine Pal**	**2.33**	**125**		**Pn**	**10 48 57.3**	**-0.4**
SNCC	**San Nicolas Is**	**2.40**	**204**	S	**Sn**	**10 49 28.1**	**0.0**
	baz=23						
PFO	**Pinyon Flats O**	**2.41**	**139**	P	**Pn**	**10 48 59.0**	**+0.1**
	baz=320,SNR=15						
PFO				Sb	**Sb**	**10 49 34.6**	**+1.9**
	baz=320						
PFO	**Pinyon Flats O**	**2.41**	**139**		**Pn**	**10 48 59.1**	**+0.1**
XPFO	**Pion Flat**	**2.42**	**139**		**Pn**	**10 48 59.0**	**0.0**

XPFO	Pion Flat	2.42	139		Pn	10 48 59.5	+0.6
FRD	Ford Ranch, An	2.43	143		Pb	10 49 04.0	+0.8
FRD	Ford Ranch, An	2.43	143		Pn	10 48 59.4	+0.3
GORC	Green Oak Ranc	2.48	158		Pn	10 48 60.0	+0.3
BORC	Borrego Spring	2.71	143		Pb	10 49 08.8	+1.0
109C	Camp Elliot, M	2.76	158	Pn	Pn	10 49 01.1	-2.5
SHPR	Sheep Range	2.80	67		Pn	10 49 04.6	+0.4
SAO	San Andreas Ge	2.82	298		Pn	10 49 05.7	+1.3
IRM	Iron Mountain	2.94	115	P	Pn	10 49 05.5	-0.6
	baz=297,SNR=5.9						
IRM				S	Sn	10 49 40.5	-0.9
	baz=297						
MONP2	Monument Peak	3.02	147	P	Pn	10 49 07.3	0.0
	baz=329						
MONP2				Sb	Sb	10 49 52.4	+2.2
	baz=329						
CMB	Columbia Colle	3.05	328		Pn	10 49 08.9	+1.3
BAR	Barrett	3.10	153		Pn	10 49 08.9	+0.6
NEE2	Needles Airpor	3.14	102	P	Pn	10 49 07.8	-0.9
	baz=284,SNR=6.9						
NEE2	Needles Airpor	3.14	102		Pn	10 49 08.0	-0.7
WAKR	Walker	3.17	344		Pn	10 49 10.0	+0.7
RYN	Ryan	3.17	358	Pn	Pn	10 49 11.5	+2.1
WESC	Westside Schoo	3.46	140		Pn	10 49 14.9	+1.8
Y12C	Blythe	3.59	117	Pn	Pn	10 49 14.7	-0.2
YERR	Yerington	3.59	349	Pn	Pn	10 49 18.4	+3.2
KVN	Kaiserville	3.60	3	Pn	Pn	10 49 16.9	+1.7
R11A	Troy Canyon, C	3.64	37	P	Pn	10 49 17.4	+1.6
	baz=218						
R11A	Troy Canyon, C	3.64	37	Pn	Pn	10 49 17.0	+1.2
W13A	Hualapai Mount	3.67	94	Pn	Pn	10 49 15.9	-0.4
PNTR	Pine Nut	3.76	345	Pn	Pb	10 49 21.7	-4.2
GLA	Glamis	3.78	128	Pn	Pn	10 49 19.0	+1.4
RUBR	Rubicon Trail	3.87	339	Pn	Pb	10 49 25.7	-2.1
VCNR	Virginia City	3.97	345	Pn	Pn	10 49 23.3	+2.9
AFDM	Forest Hills D	4.07	330	Pn	Pn	10 49 22.9	+1.4
PAHR	Pah Rah Range	4.32	349	Pn	Pn	10 49 26.5	+1.3
LCMT	Little Creek M	4.42	68		Pn	10 49 27.8	+1.4
CCUT	Cedar City	4.53	61	Pn	Pn	10 49 28.7	+0.5
Y14A	Wickenburg	4.66	107		Pn	10 49 29.4	-0.3
BEKR	Beckworth	4.68	341	Pn	Pn	10 49 28.9	-1.2
PSUT	Pine Spring	4.74	48	Pn	Pn	10 49 33.4	+2.5
KNB	Kanab	4.74	69		Pn	10 49 32.6	+1.7
SZCU	Shurtz Canyon	4.75	62	Pn	Pn	10 49 29.4	-1.7
U15A	North Rim	5.01	77		Pn	10 49 36.0	+1.2
PKCU	Pink Cliffs	5.26	66	Pn	Pn	10 49 40.0	+1.8
MTPU	Mount Pierson	5.59	61	Pn	Pn	10 49 42.4	-0.3
WUAZ	Wupatki	5.70	87	Pn	Pn	10 49 45.8	+1.7
X16A	Lo Mia Camp, P	5.77	98	Pn	Pn	10 49 45.9	+0.7
ELK	Elko	5.83	24		Pn	10 49 47.9	+2.0
MOD	Modoc Plateau	6.62	347	Pn	Pn	10 49 56.8	+0.1
X18A	Snowflake	6.96	95	Pn	Pn	10 50 01.1	-0.4

IDC 06 10:55:00.7±5.4, 17.12S×176.64W, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.5/33, mbtmp3.7/3, Error ellipse: s-maj=331.4km s-min=65.7km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.44	259	P	P	11 03 28.9	-0.8
	0.9nm,1.2s,baz=94,slow=8.2,SNR=6.7						
ASAR	Alice Springs	46.63	253	P	P	11 03 31.5	+0.3
	0.6nm,0.5s,baz=88,slow=8.0,SNR=14						
FITZ	Fitzroy Crossi	54.82	260	P	P	11 04 33.2	+0.1
	1.8nm,0.9s,baz=100,slow=6.1,SNR=1.8						
FINES	FINESS Array B	132.87	345	PKP	PKPdf	11 14 17.1	-0.4
	5.2nm,1.1s,baz=35,slow=7.0,SNR=3.8						

NEIC 06 11:24:30.9±1.8, 22.1S±0.1×179.4W±0.1, h568^{km}±8^{km}, mb4.7/50, Error ellipse: s-maj=17.3km s-min=13.3km az=126.0

IDC 06 11:24:31.8±2.3, 21.91S×179.51W, h566^{km}±28^{km}, mb3.6/14, mb1 3.8/15, mb1mx3.5/37, mbtmp4.5/15, Error ellipse: s-maj=19.1km s-min=14.9km az=15.0

ISC 06 11:24:32.1±0.4, 22.03S±0.06×179.38W±0.07, h592^{km}, n138, σ1^{s}48/148, mb4.5/38, 2C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.91	330	P	P	11 26 03.7	-0.4
RAO	Raoul Island	7.31	170	P	P	11 26 23.8	-0.7
	73nm,0.3s,baz=66,slow=20,SNR=3.1						
RAO	Raoul Island	7.31	170	P	P	11 26 23.2	-1.4
GLKZ	Green Lake	7.32	170	P	P	11 26 21.7	-2.9
GLKZ				S	S	11 27 55.0	-1.8
NIUE	Niue	9.33	73	P	P	11 26 43.4	-0.8
AFI	Afiamalu	10.84	43	P	P	11 26 56.3	-3.1
AFI					S	11 28 55.9	-4.4
DZM	Mont Dzumac	13.14	267	P	P	11 27 21.3	-1.3
	1.7nm,0.3s,baz=79,slow=18,SNR=13						
DZM	Mont Dzumac	13.14	267	P	P	11 27 21.2	-1.4
OUZ	Omahuta	14.51	204	P	P	11 27 36.7	+0.9
OUZ	Omahuta	14.51	204	P	P	11 27 36.3	+0.5
KUZ	Kuaotunu	15.27	195	P	P	11 27 43.2	+0.4
MXZ	Matakaoa Point	15.61	187	P	P	11 27 46.3	+0.3
MXZ				IAmb	IAmb	11 27 56.5	
	comp=Z,49nm,1.0s						
MKAZ	Moumakai	15.75	196	P	P	11 27 48.2	+0.9
WMGZ	Waiomatatini S	15.85	186	P	P	11 27 48.0	-0.2
AWAZ	Awhitu Peninsu	15.85	198	P	P	11 27 49.3	+1.0
HAZ	Te Kaha	15.86	188	P	P	11 27 48.3	0.0
PUZ	Puketiti	16.11	187	P	P	11 27 49.9	-0.9
OPRZ	Ohinepanea	16.14	192	P	P	11 27 51.6	+0.6
TOZ	Tahuroa Road	16.26	195	P	P	11 27 53.2	+1.2
KMRZ	Kaimai	16.27	193	P	P	11 27 53.5	+1.3
KARZ	Kaharoa	16.37	192	P	P	11 27 52.8	-0.3
URZ	Urewera	16.45	190	P	P	11 27 50.6	-3.2
	comp=Z,6.1nm,0.3s,baz=339,slow=3.0,SNR=40						
URZ				S	S	11 30 34.1	-3.9
	comp=Z,0.5nm,0.3s,baz=219,slow=23,SNR=5.9						
URZ	Urewera	16.45	190	P	P	11 27 50.8	-3.1
URZ	Urewera	16.45	190	P	P	11 27 50.7	-3.1
MWZ	Matawai	16.46	189	P	P	11 27 52.3	-1.7
TKGZ	Te Karaka	16.52	188	P	P	11 27 52.1	-2.3
TKGZ				S	S	11 30 41.2	+2.0
CNGZ	Carnagh Statio	16.53	187	P	P	11 27 54.4	-0.1
RRRZ	Republican Roa	16.63	191	P	P	11 27 55.8	+0.3
MUGZ	Murupara	16.72	191	P	P	11 27 54.9	-1.4
RIGZ	Rimuhau	16.80	188	P	P	11 27 55.5	-1.5
RIGZ				S	S	11 30 43.7	-0.1
PRRZ	Plateau Road	16.81	192	P	P	11 27 56.9	-0.2
TLZ	Tolley Road	16.82	194	P	P	11 27 58.8	+1.6
RTZ	Ruatahuna	16.82	190	P	P	11 27 53.0	-4.3
ALRZ	Allen Road	16.88	192	P	P	11 27 57.0	-0.8
KUTZ	Kaahu Road	16.91	193	P	P	11 27 58.6	+0.6
SNGZ	Shannon Statio	16.93	189	P	P	11 27 56.4	-1.8
SNGZ				S	S	11 30 43.7	-2.2
MTHZ	Maungataniwha	17.07	190	P	P	11 27 58.4	-1.1
RAHZ	Arahi	17.10	189	P	P	11 27 58.8	-0.9
KNZ	Kokohu	17.12	188	P	P	11 27 58.3	-1.5
KNZ				S	S	11 30 45.7	-3.2
MRHZ	Matea Rd	17.13	191	P	P	11 27 58.5	-1.6
HIZ	Hauiti	17.16	195	P	P	11 28 01.3	+1.1
HIZ	Hauiti	17.16	195	P	P	11 28 02.4	+2.2
MHGZ	Mahia Peninsul	17.22	187	P	P	11 28 00.3	-0.6
WHHZ	Waihua	17.23	189	P	P	11 28 00.1	-0.8
WHHZ				S	S	11 30 51.0	+0.2
RATZ	Rangitukua	17.29	193	P	P	11 28 00.7	-0.7
NMHZ	Naumai	17.32	190	P	P	11 28 00.7	-1.1
RITZ	Rihia Road	17.38	193	P	P	11 28 01.7	-0.5
KATZ	Kakaramea	17.41	193	P	P	11 28 03.2	+0.6
BKZ	Black Stump Fm	17.44	191	P	P	11 28 00.4	-2.4
BKZ				IAmb	IAmb	11 28 01.9	
	comp=Z,24nm,0.7s						
BKZ	Black Stump Fm	17.44	191	P	P	11 28 00.6	-2.3
KRVZ	Karewarewa	17.53	193	P	P	11 28 04.5	+0.7
TWVZ	Taurewa	17.55	193	P	P	11 28 04.1	+0.1
WTVZ	West Tongariro	17.56	193	P	P	11 28 04.9	+0.8
NGZ	Ngauruhoe	17.62	193	P	P	11 28 04.6	-0.1
FWVZ	Far West T-bar	17.70	193	P	P	11 28 05.0	-0.5
MOVZ	Moawhango	17.81	192	P	P	11 28 06.0	-0.3
BHHZ	Black Hill Sta	17.83	192	P	P	11 28 03.5	-2.9
KRHZ	Kereru	17.93	191	P	P	11 28 05.9	-1.4
KAHZ	Kahuranaki	17.99	189	P	P	11 28 07.6	-0.3
BFZ	Birch Farm	18.96	190	P	P	11 28 15.9	-0.7
MSWZ	Moikau Station	19.85	192	P	P	11 28 23.8	-0.9
SNZO	South Karori	19.86	193	P	P	11 28 23.3	-1.4
BHW	Baring Head	19.92	193	P	P	11 28 24.3	-1.0
QRZ	Quartz Range	19.95	198	P	P	11 28 26.0	+0.4
QRZ	Quartz Range	19.95	198	P	P	11 28 25.5	0.0
PLWZ	Palliser	20.00	192	P	P	11 28 25.6	-0.4
NNZ	Nelson	20.08	196	P	P	11 28 26.2	-0.6
TUWZ	Tuamarina	20.14	195	P	P	11 28 25.2	-2.1
CMWZ	Cape Campbell	20.38	194	P	P	11 28 29.1	-0.4
BSWZ	Blackbirch Sta	20.43	195	P	P	11 28 29.1	-0.8
KNTN	Kanton	20.54	22	P	P	11 28 30.7	-0.5
THZ	Tophouse	20.71	196	P	P	11 28 31.8	-0.8
THZ				IAmb	IAmb	11 28 36.3	
	comp=Z,21nm,0.6s						
KHZ	Kahutara	21.17	195	P	P	11 28 35.1	-1.4
KHZ				IAmb	IAmb	11 28 42.2	
	comp=Z,25nm,0.8s						
LTZ	Lake Taylor	21.83	197	P	P	11 28 40.7	-1.8
OXZ	Oxford	22.40	197	P	P	11 28 46.0	-1.5
MQZ	McQueen's Vall	22.60	195	P	P	11 28 47.8	-1.5
RPZ	Rata Peaks	23.03	198	P	P	11 28 50.6	-2.6
	comp=Z,10nm,0.5s,baz=39,slow=13,SNR=1.7						
RPZ	Rata Peaks	23.03	198	P	P	11 28 50.6	-2.6
RPZ				IAmb	IAmb	11 28 58.5	
	comp=Z,16nm,0.7s						
FOZ	Fox Glacier	23.24	200	P	P	11 28 54.3	-0.7
LBZ	Lake Benmore	23.90	199	P	P	11 28 59.8	-1.1
LBZ				IAmb	IAmb	11 29 06.6	
	comp=Z,54nm,1.4s						
WKZ	Wanaka	24.66	200	P	P	11 29 05.3	-2.3
WKZ				IAmb	IAmb	11 29 08.0	
	comp=Z,49nm,1.3s						
MLZ	Mavora Lakes	25.43	201	P	P	11 29 14.3	-0.1
MLZ				IAmb	IAmb	11 29 16.8	
	comp=Z,23nm,0.8s						
EIDS	Eidsvold	27.22	257	P	P	11 29 30.8	+0.4
EIDS				IAmb	IAmb	11 29 31.3	
	comp=Z,6.4nm,0.8s						
CAN	Canberra	30.59	237	P	P	11 30 00.2	+0.8
CAN				IAmb	IAmb	11 30 00.9	
	comp=Z,30nm,1.1s						
CTA	Charters Tower	32.09	267	P	P	11 30 12.7	+0.5
	comp=Z,8.8nm,0.3s,baz=92,slow=11,SNR=14						
CTAO	Charters Tower	32.09	267	P	P	11 30 12.8	+0.5
CTAO				IAmb	IAmb	11 30 13.1	
	comp=Z,13nm,0.5s						
TOO	Toolangi	33.96	235	P	P	11 30 27.6	-0.2
TOO				IAmb	IAmb	11 30 29.1	
	comp=Z,17nm,0.7s						
PMG	Port Moresby	34.48	286	P	P	11 30 32.4	0.0
	comp=Z,10nm,0.6s,baz=105,slow=14,SNR=2.7						
PMG	Port Moresby	34.48	286	P	P	11 30 31.1	-1.2
PMG				IAmb	IAmb	11 30 33.5	
	comp=Z,21nm,1.1s						
STKA	Stephens Creek	35.97	246	P	P	11 30 45.3	+0.7
	comp=Z,8.3nm,0.7s,baz=91,slow=11,SNR=21						
STKA	Stephens Creek	35.97	246	P	P	11 30 45.1	+0.6
COEN	Coen	36.43	276	P	P	11 30 49.1	+0.6
COEN				IAmb	IAmb	11 30 50.2	
	comp=Z,11nm,0.8s						
BBOO	Buckleboo	40.72	245	P	P	11 31 22.9	0.0
BBOO				IAmb	IAmb	11 31 23.8	
	comp=Z,25nm,1.2s						
AS31	Alice Springs	42.93	258	P	P	11 31 40.7	+0.3
ASAR	Alice Springs	42.93	258	P	P	11 31 40.7	+0.3
	comp=Z,15nm,0.8s,baz=94,slow=8.4,SNR=76						
ASAR				S	S	11 37 21.1	-2.6
	comp=Z,0.6nm,0.7s,baz=96,slow=17,SNR=4.9						
WR0	Warramunga Arr	42.95	264	P	P	11 31 39.7	-0.8
WB0	Warramunga Arr	43.12	264	P	P	11 31 41.5	-0.4
WB0				IAmb	IAmb	11 31 42.3	
	comp=Z,19nm,1.1s						
WB2	Warramunga Arr	43.12	264	P	P	11 31 41.3	-0.6
WB2				IAmb	IAmb	11 31 42.8	
	comp=Z,12nm,0.9s						
WRAB	Tennant Creek	43.13	264	P	P	11 31 41.5	-0.5
WRAB				IAmb	IAmb	11 31 42.4	
	comp=Z,14nm,0.9s						
WRA	Warramunga Arr	43.13	264	P	P	11 31 41.5	-0.5
	comp=Z,4.2nm,0.4s,baz=95,slow=7.9,SNR=84						
WRA				S	S	11 37 22.9	-3.8
	comp=Z,0.6nm,0.8s,baz=102,slow=14,SNR=2.7						
JAY	Jayapura	43.34	291	P	P	11 31 43.8	+0.1
	comp=Z,8.7nm,0.5s,baz=236,slow=1.8,SNR=6.1						
FORT	Forrest	47.52	248	P	P	11 32 15.4	+0.3
FORT				IAmb	IAmb	11 32 16.9	
	comp=Z,41nm,1.1s						
MTN	Manton Dam	47.91	272	P	P	11 32 17.8	-0.4
MTN				IAmb	IAmb	11 32 21.8	
	comp=Z,23nm,1.4s						
KNRA	Kununurra	49.29	268	P	P	11 32 28.8	+0.3
KNRA				IAmb	IAmb	11 32 29.1	
	comp=Z,16nm,0.8s						
FITZ	Fitzroy Crossi	51.56	264	P	P	11 32 45.7	+0.8
FITZ				IAmb	IAmb	11 32 46.5	
	comp=Z,15nm,1.1s						
SIJI	Sorong	52.41	287	P	P	11 32 51.4	+0.3
	comp=Z,38nm,0.7s,baz=88,slow=5.8,SNR=24						
SOEI	Soe	55.28	273	P	P	11 33 10.8	-0.6
SOEI				IAmb	IAmb	11 33 14.1	
	comp=Z,34nm,0.9s						
PSAC2	Pilbara Seismi	56.03	258	P	P	11 33 15.8	-0.5
PSAC2				IAmb	IAmb	11 33 17.2	
	comp=Z,15nm,1.0s						
PSAB2	Pilbara Seismi	56.07	258	P	P	11 33 16.5	-0.1
PSA00	Pilbara Seismi	56.08	258	P	P	11 33 16.6	0.0
PSAA1	Pilbara Seismi	56.09	258	P	P	11 33 17.0	+0.3
PSAD1	Pilbara Seismi	56.12	258	P	P	11 33 17.0	0.0
PSAD1				IAmb	IAmb	11 33 17.7	
	comp=Z,22nm,1.1s						
PSAC1	Pilbara Seismi	56.12	258	P	P	11 33 17.0	0.0
VNDA	Vanda	56.28	185	P	P	11 33 19.6	+2.4
	comp=Z,2.2nm,0.7s,baz=360,slow=7.1,SNR=34						
VNDA	Vanda	56.28	185	P	P	11 33 19.5	+2.4
NWAO	Narrogin (SRO)	56.54	244	P	P	11 33 20.3	+0.6
NWAO	Narrogin (SRO)	56.54	244	P	P	11 33 20.2	+0.6
NWAO				IAmb	IAmb	11 33 21.3	
	comp=Z,17nm,1.2s						
MORW	Morawa	58.06	249	P	P	11 33 30.2	+0.1
GIRL	Giralia	60.91	256	P	P	11 33 50.7	+1.7
CASY	Casey	62.03	206	P	P	11 33 56.5	+1.0
QSPA	South Pole Qui	68.04	180	P	P	11 34 35.4	+2.0
QSPA				IAmb	IAmb	11 34 36.2	
	comp=Z,9.6nm,0.9s						
PETK	Petropavlovsk-	77.43	346	P	P	11 35 28.2	+1.3
	comp=Z,1.1nm,0.6s,baz=134,slow=8.5,SNR=5.8						
NJ2	Nanjing	79.88	311	eP	P	11 35 40.9	+0.5
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
NVAR	Mina Array Bea	83.02	44	P	P	11 35 58.9	+2.3
	comp=Z,1.4nm,0.9s,baz=226,slow=8.3,SNR=7.0						
SYO	Syowa Base	84.95	193	⇑eP	P	11 36 04.4	-0.9
SYO	Syowa Base	84.95	193	⇑ePcP	P	11 36 05.8	+0.5
SNAA	Sanae	86.51	179	P	P	11 36 13.0	+0.1
VNA3	Neumayer Olymp	86.70	177	P	P	11 36 14.0	+0.3
VNA2	Neumayer--Watz	87.12	177	P	P	11 36 16.5	+0.8
	baz=190,slow=3.5						
TXAR	Lajitas Array	88.96	58	P	P	11 36 28.0	+2.9
	comp=Z,1.1nm,0.8s,baz=212,slow=4.4,SNR=11						
CMAR	Chiang Mai Arr	89.42	290	P	P	11 36 29.9	+2.6
	comp=Z,1.9nm,0.7s,baz=136,slow=3.0,SNR=11						
HHC	Hu-ho-hao-te	89.51	315	P	P	11 36 27.0	-0.3
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,35nm,5.2s						
ILAR	Eielson Array	90.09	13	P	P	11 36 30.0	+0.6
	comp=Z,0.4nm,0.7s,baz=218,slow=5.1,SNR=2.4						
PDAR	Pinedale Array	90.96	44	P	P	11 36 35.8	+1.6
	comp=Z,0.3nm,0.6s,baz=227,slow=5.9,SNR=4.5						
LZH	Lanzhou	92.68	308	eP	P	11 36 40.3	-1.9
LZH				pP	pP	11 38 45.6	-3.9
LZH				sP	sP	11 39 47.4	-0.4
LZH				PP	PP	11 40 33.3	-1.8
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,60nm,5.4s						
ARCES	ARCESS Array B	130.18	349	PKP	PKiKP	11 42 35.9	-0.1
	comp=Z,1.3nm,0.9s,baz=57,slow=3.9,SNR=5.3						
AKASG	Malin Array Be	143.69	329	PKP	PKPab	11 42 59.5	0.0
	comp=Z,1.4nm,0.6s,baz=43,slow=4.1,SNR=4.9						
GERES	GERESS Array B	151.29	342	PKPbc	PKiKP	11 43 20.4	+0.5
	comp=Z,0.4nm,0.4s,baz=350,slow=5.3,SNR=1.8						

SOME 06 11:35:33.8, 41.50N×68.62E, h10^{km}, 2D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	Iuzhnay	1.24	58	eP	Pb	11 35 57.5	+0.1
	22nm,0.2s						
IUG				eS	Sn	11 36 14.8	+0.7
	192nm,0.2s						
BRLS	Borolday	1.78	30	eP	Pn	11 36 01.8	-2.8
	4.2nm,0.2s						
BRLS				eS	Sn	11 36 22.0	-5.3
	40nm,0.1s						
KK31	Karatay Array	2.13	41	⇓Pg	Pb	11 36 11.4	-1.1
	0.6nm,0.2s,baz=222,slow=17,SNR=9.7						
KK31				⇓Lg	Lg	11 36 39.4	
	16nm,0.3s,baz=218,slow=29,SNR=36						
MRKS	Merke	3.65	69	eP	Pb	11 36 39.3	+0.9
	6.9nm,0.6s						
MRKS				eS	Sb	11 37 23.8	+1.0
	8.2nm,0.5s						

SOME 06 11:35:51.0, 40.93N×77.95E, h5^{km}

NNC 06 11:35:46.2±4.8, 41.32N×79.40E, h0^{km}, mb3.0, mpv2.6, 1C-2D, Error ellipse: s-maj=33.8km s-min=19.7km az=152.0, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	2.01	2	Pg	Pg	11 36 25.8	+1.1
	0.7nm,0.4s						
PDGK				Lg	Lg	11 36 51.5	
	1.5nm,0.8s						
PDGK	Podgornoye	2.01	2	⇑Pg	Pn	11 36 21.0	-0.5
	0.6nm,0.4s						
PDGK				⇓Lg	Lg	11 36 49.3	
	2.1nm,0.7s						
TNSS	Tian-Shan	2.50	314	eP	Pb	11 36 33.2	+0.8
	2.4nm,0.3s						
TNSS				eS	Sb	11 37 04.5	+0.7
	5.7nm,0.4s						
TNSS	Tian-Shan	2.50	314	Pg	Pb	11 36 33.2	+0.9
	2.4nm,0.3s						
TNSS				Lg	Lg	11 37 04.5	
	5.7nm,0.4s						
MDOK	Medeo	2.54	317	eP	Pg	11 36 34.6	-0.3
	2.6nm,0.2s						
MDOK				eS	Sg	11 37 06.9	-0.9
	12nm,0.8s						
MDOK	Medeo	2.54	317	⇓Pg	Pb	11 36 31.8	-0.9
	3.2nm,0.8s						
MDOK				Lg	Lg	11 37 06.6	
	15nm,0.8s						
MDOK	Medeo	2.54	317	Pg	Pg	11 36 34.5	-0.3
	2.6nm,0.2s						
MDOK				Lg	Lg	11 37 06.6	
	12nm,0.8s						
IZV	Izvestkoviy	2.69	311	eP	Pb	11 36 34.8	-0.6
	2.1nm,0.3s						
IZV				eS	Sb	11 37 07.1	-1.9
	6.0nm,0.3s						
KST	Kastek	3.08	305	eP	Pb	11 36 39.2	-2.8
	1.8nm,0.2s						
KST				eS	Sn	11 37 14.9	+1.0
	1.5nm,0.2s						
AAK	Ala-Archa	3.89	291	Pg	Pb	11 36 55.5	-0.2
	2.3nm,0.8s						
AAK				Lg	Lg	11 37 52.5	
	2.6nm,0.5s						
AAK	Ala-Archa	3.89	291	Pg	Pb	11 36 55.5	-0.2
	2.3nm,0.8s						
AAK				Lg	Lg	11 37 52.5	
	2.6nm,0.5s						

SOME 06 11:43:27.7, 44.65N×82.20E, h10^{km}

NNC 06 11:43:29.8±1.1, 44.64N×82.00E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=13.6km s-min=4.9km az=122.0

ISC 06 11:43:27.0±1.9, 44.63N±0.05×82.25E±0.08, h0^{km}±14^{km}, n14, σ0^{s}68/20, 2C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	Jarkent	1.78	261	eP	Pg	11 44 00.9	-0.2
	10nm,0.2s						
DJR				eS	Sg	11 44 25.0	+0.8
	6.4nm,0.2s						
KTMS	Ketmen	1.81	230	eP	Pg	11 44 01.6	0.0
	3.1nm,0.1s						
KTMS				eS	Sg	11 44 25.9	+0.9
	34nm,0.4s						
KAPS	Kapalarasan	2.15	289	eP	Pb	11 44 06.9	+0.1
	3.2nm,0.2s						
KAPS				eS	Sg	11 44 35.5	-0.7
	14nm,0.3s						
KAPS	Kapalarasan	2.15	289	Pg	Pb	11 44 06.0	-0.8
	2.2nm,0.1s						
KAPS				Lg	Lg	11 44 34.1	
	14nm,0.3s						
MK31	Makanchi Array	2.16	1	⇓Pn	Pg	11 44 08.0	-0.5
	3.3nm,0.3s,baz=185,slow=14,SNR=135						
MK31				⇑Lg	Lg	11 44 36.7	
	7.0nm,0.5s,baz=187,slow=28,SNR=29						
MAKZ	Makanchi	2.19	355	⇓Pn	Pb	11 44 07.8	+0.4
	5.2nm,0.6s						
MAKZ				⇑Lg	Lg	11 44 36.6	
	3.9nm,0.3s						
PDGK	Podgornoye	2.38	238	Pg	Pb	11 44 09.9	-0.7
	4.1nm,0.2s						
PDGK				Lg	Lg	11 44 41.1	
	5.8nm,0.4s						
PDGK	Podgornoye	2.38	238	⇓Pg	Pb	11 44 09.9	-0.7
	1.6nm,0.2s						
PDGK				⇓Lg	Lg	11 44 41.5	
	8.7nm,0.5s						
SHLS	Shalkode	2.49	235	eP	Pn	11 44 09.2	+0.3
	8.2nm,0.1s						
SHLS				eS	Sn	11 44 39.3	-0.7
	39nm,0.3s						
SHLS	Shalkode	2.49	235	Pg	Pn	11 44 08.8	-0.1
	8.2nm,0.1s						
SHLS				Lg	Lg	11 44 38.3	
	39nm,0.3s						
UZB	Uzynbulak	2.76	239	eP	Pb	11 44 17.0	-0.2
	8.7nm,0.2s						
UZB				eS	Sb	11 44 52.7	+1.0
	5.1nm,0.2s						
UZB	Uzynbulak	2.76	239	Pg	Pb	11 44 16.3	-1.0
	8.7nm,0.2s						
UZB				Lg	Lg	11 44 51.1	
	5.0nm,0.2s						
MNBS	Baschi	2.81	260	eP	Pb	11 44 17.9	-0.2
	12nm,0.2s						
MNBS				eS	Sb	11 44 53.9	+0.8
	6.9nm,0.2s						
MNBS	Baschi	2.81	260	Pg	Pb	11 44 17.9	-0.2
	12nm,0.2s						
MNBS				Lg	Lg	11 44 53.9	
	6.9nm,0.2s						

IDC 06 11:49:40.6±1.3, 3.11S×129.32E, h0^{km}, mb3.8/2, mb1 3.7/4, mb1mx3.5/33, mbtmp3.6/4, ML3.0/2, Error ellipse: s-maj=47.6km s-min=25.2km az=82.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	2.95	41	Pn	Pn	11 50 27.8	-1.0
	0.9nm,0.3s,baz=256,slow=23,SNR=6.9						
SIJI				Sn	Sn	11 51 01.1	-3.8
	1.1nm,0.3s,baz=73,slow=19,SNR=1.6						
WRA	Warramunga Arr	17.44	164	P	P	11 53 46.2	-0.6
	0.1nm,0.3s,baz=343,slow=12,SNR=5.1						
ASAR	Alice Springs	20.92	168	P	P	11 54 23.9	-1.0
	2.5nm,0.6s,baz=348,slow=10,SNR=16						
MKAR	Makanchi Array	64.63	326	P	P	12 00 20.1	+0.1
	0.7nm,0.4s,baz=131,slow=14,SNR=7.3						
CPUP	Villa Florida	150.04	168	PKPbc	PKPbc	12 09 34.4	+0.4
	1.3nm,0.9s,baz=180,slow=7.1,SNR=2.9						

IDC 06 12:04:12.4±1.5, 6.94N×73.06W, h153^{km}±46^{km}, mb3.1/2, mb1 3.6/4, mb1mx3.1/27, mbtmp3.7/4, Error ellipse: s-maj=106.6km s-min=14.6km az=133.0

RSNC 06 12:04:12.9±0.9, 6.85N×73.19W, h144^{km}±5^{km}, ML3.5, Mw3.8

ISC 06 12:04:11.4±0.9, 6.85N±0.03×73.13W±0.04, h155^{km}±7^{km},

n31,σ1˚39/55,1D,Northern Colombia

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PAMC Pamplona, Colo 0.65 41 *e*P **Pn 12 04 35.6 +0.9**
PAMC *e*S **Sn 12 04 52.2 -0.3**
PAMC *i* 12 04 54.2
comp=Z,1µm,0.5s
RUSC La Rusia 0.95 177 *e*P **Pn 12 04 37.0 +0.1**
RUSC *e*S **Sn 12 04 55.6 -0.7**
RUSC *i* 12 04 57.4
comp=Z,298nm,0.3s
PTBC PUERTO BERRIO, 1.36 257 *e*P **Pn 12 04 39.4 -0.5**
PTBC *e*S **Sn 12 05 00.0 -1.7**
PTBC *i* 12 05 03.5
comp=Z,311nm,0.2s
TAMC Tame, Arauca 1.39 107⇓*i*P **Pn 12 04 41.3 +1.0**
TAMC *e*S **Sn 12 05 02.8 +0.4**
SPBC San Pablo de B 1.52 218 *e*P **Pn 12 04 41.9 +0.2**
SPBC *e*S **Sn 12 05 03.6 -1.2**
SPBC *i* 12 05 10.3
comp=Z,411nm,0.4s
ZARC Zaragoza, Cauc 1.83 290 *e*P **Pn 12 04 45.3 +0.4**
ZARC *e*S **Sn 12 05 09.7 -1.0**
ZARC *i* 12 05 16.9
comp=Z,256nm,0.6s
SMLC San Martn de 2.15 334 *e*P **Pn 12 04 48.8 +0.1**
SMLC *e*S **Sn 12 05 16.2 -1.1**
SMLC *i* 12 05 20.5
comp=Z,265nm,0.1s
CHIC Chingaza 2.29 195 *e*P **Pn 12 04 51.1 +0.4**
CHIC *e*S **Sn 12 05 20.3 -0.6**
CHIC *i* 12 05 25.8
comp=Z,145nm,0.3s
ROSC El Rosal 2.32 211 P **Pn 12 04 53.1 +2.0**
comp=Z,51nm,0.3s,baz=128,slow=22,SNR=53
ROSC S **Sn 12 05 19.9 -1.7**
comp=Z,34nm,0.3s,baz=68,slow=18,SNR=8.7
ROSC El Rosal 2.32 211 *e*P **Pn 12 04 53.0 +2.0**
ROSC *e*S **Sn 12 05 22.4 +0.8**
ROSC *i* 12 05 29.9
comp=Z,268nm,0.4s
HELC Santa Helena 2.47 255 *e*P **Pn 12 04 53.8 +1.0**
HELC *e*S **Sn 12 05 24.0 -0.7**
HELC *i* 12 05 32.5
comp=Z,194nm,0.3s
CVER Cruz Verde, Cu 2.50 202 *e*P **Pn 12 04 52.6 -0.7**
UREC San Jos de Ur 2.55 291 *e*P **Pn 12 04 52.9 -0.5**
UREC *e*S **Sn 12 05 24.1 -1.7**
UREC *i* 12 05 34.6
comp=Z,170nm,0.2s
VILC Villavicencio, 2.78 192 *e*P **Pn 12 04 56.5 +0.1**
VILC *e*S **Sn 12 05 30.5 -0.6**
VILC *i* 12 05 41.7
comp=Z,265nm,0.5s
PTGC Puerto Gaitan, 2.81 159 *e*P **Pn 12 04 56.1 -0.5**
PTGC *e*S **Sn 12 05 29.0 -2.7**
PTGC *i* 12 05 32.0
comp=Z,136nm,0.4s
CBOC Ciudad Bolivar 3.03 251 *e*P **Pn 12 05 01.0 +1.5**
CBOC *e*S **Sn 12 05 36.5 -0.3**
CBOC *i* 12 05 45.7
comp=Z,60nm,0.7s
DBBC Dabeiba 3.06 273 *e*P **Pn 12 05 00.4 +0.5**
DBBC *e*S **Sn 12 05 35.7 -1.6**
DBBC *i* 12 05 42.9
comp=Z,277nm,0.4s
ARGC Ariguani, Magd 3.19 340 *e*P **Pn 12 05 02.5 +1.2**
ARGC *i* P 12 05 02.9
ARGC *e*S **Sn 12 05 41.0 +0.8**
ARGC *i* 12 05 50.4
comp=Z,64nm,0.5s
SDV Santo Domingo 3.19 51 P **Pn 12 05 02.3 +0.7**
comp=Z,19nm,0.3s,baz=184,slow=1.8,SNR=61
SDV S **Sn 12 05 39.0 -1.5**
comp=Z,20nm,0.3s,baz=55,slow=20,SNR=21
SDV Santo Domingo 3.19 51 *e*P **Pn 12 05 02.3 +0.7**
SDV *e*S **Sn 12 05 39.2 -1.3**
SDV *i* 12 05 42.7
comp=Z,54nm,0.6s
ORTC Ortega, Tolima 3.60 216 *e*P **Pn 12 05 06.9 +0.2**
ORTC *e*S **Sn 12 05 50.9 +1.2**
ORTC *i* 12 05 54.6
comp=Z,94nm,0.4s
SJCC San Jacinto, C 3.64 326 *e*P **Pn 12 05 06.9 -0.4**
SJCC *e*S **Sn 12 05 47.9 -2.7**
SJCC *i* 12 05 51.8
comp=Z,126nm,0.7s
YOTC Yotoco, Valle 4.29 229 *e*P **Pn 12 05 15.1 -0.5**
YOTC *e*S **Sn 12 06 05.1 -0.7**
SMRC Santa Marta, M 4.42 346 *e*P **Pn 12 05 16.9 -0.4**
SMRC *e*S **Sn 12 06 05.9 -2.8**
SMRC *i* 12 06 14.8
comp=Z,31nm,1.2s
MACC Macarena, Meta 4.73 189 *e*P **Pn 12 05 20.0 -1.4**
MACC *e*S **Sn 12 06 11.6 -4.5**
MACC *i* 12 06 14.6
comp=Z,46nm,1.0s
URIC Uribia, Colomb 4.95 13 *e*P **Pn 12 05 21.7 -2.6**
GARC Garzon, Huila 5.20 207 *e*P **Pn 12 05 27.2 -0.6**
GARC *i* 12 06 29.6
comp=Z,32nm,0.3s
PCON Cinco Dias 5.55 216 *e*P **Pn 12 05 34.5 +1.7**
PCON *i* 12 06 47.7
comp=Z,12nm,0.4s
BBAC Balboa, Cauca 6.32 221 *e*P **Pn 12 05 43.4 +0.8**
BBAC *i* 12 07 00.6
comp=Z,9.6nm,0.6s
TXAR Lajitas Array 36.44 312 P **P 12 11 02.6 +1.1**
comp=Z,0.3nm,0.6s,baz=130,slow=9.1,SNR=7.0
YKA Yellowknife Ar 63.23 340 P **P 12 14 23.6 +0.6**
comp=Z,0.5nm,0.6s,baz=131,slow=7.4,SNR=9.9

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*BJI **06** 12:18:27.3±0.0, 5.˚65S×152.˚22E, h45km, mB4.9/40, mb4.8/46, Ms4.7/24, Ms7 4.4/25*
*DJA **06** 12:18:30.6±2.2, 5˚S±5˚×15˚2E±˚, h26km±16km, M5.0/18, mB5.2/6, mb4.9/18, MLv5.3/1, Mw(mB)4.6/6*
*GCMT **06** 12:18:32.8±0.2, 5.˚80S±0.˚01×151.˚78E±0.˚02, h30km, MW5.0/87, Moment Tensor Solution. s57,c79; s87,c124; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.29±.16; Mθθ-3.29±.09; Mφφ0.00±.10; Mrθ1.99±.13; Mθφ-1.22±.09; Mφr-0.58±.16; Best double couple: M0 4.07500×10^16 NP1:φs234.00000°, δ35.00000°, λ61.00000°. NP2: φs89.00000°, δ60.00000°, λ109.00000°. Principal axes: T 4.0440, Plg69.0000°, Azm37.0000°; N 0.0590, Plg16.0000°, Azm259.0000°; P -4.1050, Plg14.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **06** 12:18:32.9±1.6, 5.˚47S×151.˚74E, h57km±13km, mb4.3/25, mb1 4.4/28, mb1mx4.3/45, mbtmp4.5/28, MS4.1/29, Ms1 4.1/29, ms1mx4.0/38 Error ellipse: s-maj=16.0km s-min=10.7km az=107.0*
*NEIC **06** 12:18:32.9±2.1, 5.˚51S±0.˚06×151.˚79E±0.˚07, h60km±4km, mb4.9/128, Error ellipse: s-maj=11.1km s-min=7.0km az=119.0*
ISC 06 12:18:31.3±0.3**, 5.˚58S**±0.˚04×**151.˚85E**±0.˚05**, h45km, n236, σ1˚50**/245**, mb4.9**/92**, MS4.3**/35**, 2C-1D, New Britain region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KRVT Keravat (AS076 1.28 8 P **Pn 12 18 53.7 +1.0**
3µm,0.3s,baz=205,slow=0.9,SNR=1837
KRVT S **Sn 12 19 12.8 +4.0**
baz=301,slow=18
RABL Rabaul 1.42 13 **Pn 12 18 55.7 +1.0**
RABL Sn **Sn 12 19 16.1 +4.0**
PMG Port Moresby 6.00 230 P **Pn 12 19 59.4 +1.7**
16nm,0.3s,baz=43,slow=8.9,SNR=34
PMG S **Sn 12 21 04.0 -1.2**
25nm,0.3s,baz=156,slow=23,SNR=12
PMG LR LR 12 21 34.5
comp=Z,246nm,21.5s,baz=16,slow=30
PMG Port Moresby 6.00 230 **Pn 12 19 59.1 +1.4**
PMG Sn **Sn 12 21 06.3 +1.1**
HNR Honiara 8.89 116 LR LR 12 23 37.4
comp=Z,1µm,20.7s,baz=285,slow=34
HNR Honiara 8.89 116 Pn **Pn 12 20 40.6 +3.3**
JAY Jayapura 11.52 285 P **Pn 12 21 14.6 +1.2**
0.5nm,0.3s,baz=28,slow=15,SNR=2.5
JAY LR LR 12 25 11.7
comp=Z,1µm,18.8s,baz=94,slow=35
COEN Coen 11.93 225 Pn **Pn 12 21 19.1 +0.2**
PATS Pohnpei 13.92 28 Pn **Pn 12 21 47.3 +1.2**
PATS Sn **Sn 12 24 14.1 -5.2**
CTA Charters Tower 15.41 200 P **Pn 12 22 07.4 +1.5**
0.2nm,0.3s,baz=28,slow=12,SNR=7.2
CTA LR LR 12 27 42.1
comp=Z,1µm,19.0s,baz=33,slow=36
CTAO Charters Tower 15.41 200 Pn **Pn 12 22 06.0 +0.1**
EIDS Eidsvold 19.69 182 P **Pn 12 22 57.9 -0.7**
SIJI Sorong 21.07 282 P **P 12 23 12.7 +0.7**
30nm,1.0s,baz=70,slow=9.0,SNR=9.7
DZM Mont Dzumac 21.64 141 *e*P **P 12 23 18.8 +0.7**
50nm,1.2s
DZM *e*S **S 12 27 16.0 +0.5**
498nm,23.8s
DZM *e*LQ LQ 12 27 40.3
1µm,27.7s
DZM *e*LR LR 12 28 33.4
comp=Z,2µm,23.1s
DZM Mont Dzumac 21.64 141 P **P 12 23 18.4 +0.3**
7.6nm,0.9s,baz=300,slow=18,SNR=2.8
DZM LR LR 12 31 03.4
comp=Z,1µm,19.6s,baz=313,slow=34
DZM Mont Dzumac 21.64 141 P **P 12 23 18.6 +0.5**
MTN Manton Dam 21.67 249 P **P 12 23 18.2 -0.2**
MTN IAmb IAmb 12 23 24.9
comp=Z,31nm,0.4s
WB0 Warramunga Arr 22.07 229 P **P 12 23 22.7 0.0**
WB0 IAmb IAmb 12 23 31.0
comp=Z,58nm,1.1s
WR0 Warramunga Arr 22.08 228 P **P 12 23 23.0 +0.2**
WR0 IAmb IAmb 12 23 26.2
comp=Z,34nm,1.1s
TARA Tarawa 22.15 72 P **P 12 23 23.9 +0.3**
TARA IAmb IAmb 12 23 27.0
comp=Z,92nm,0.9s
WRAB Tennant Creek 22.21 228 P **P 12 23 23.9 -0.3**
WRAB IAmb IAmb 12 23 32.3
comp=Z,44nm,1.1s
WB2 Warramunga Arr 22.21 228 P **P 12 23 24.0 -0.2**
WB2 IAmb IAmb 12 23 32.4
comp=Z,47nm,1.1s
WRA Warramunga Arr 22.22 228 P **P 12 23 23.9 -0.4**
comp=Z,12nm,0.6s,baz=52,slow=10,SNR=66
WRA S **S 12 27 24.1 -2.3**
comp=Z,18nm,1.2s,baz=53,slow=18,SNR=8.9
WRA ScP **ScP 12 30 57.0 +3.2**
comp=Z,1.8nm,0.8s,baz=49,slow=2.9,SNR=5.8
WRA LR LR 12 32 45.5
comp=Z,518nm,18.2s,baz=50,slow=38
ARMA Armidale 24.71 180 P **P 12 23 49.9 +1.3**
KNRA Kununurra 24.78 244 P **P 12 23 45.2 -4.0**
AS31 Alice Springs 24.94 222 P **P 12 23 50.5 -0.1**
ASAR Alice Springs 24.94 222 P **P 12 23 50.5 -0.1**
comp=Z,13nm,0.8s,baz=57,slow=8.5,SNR=80
ASAR S **S 12 28 17.5 +6.2**
comp=Z,4.7nm,1.1s,baz=40,slow=19,SNR=7.5
ASAR ScP **ScP 12 31 03.7 +2.7**
comp=Z,0.6nm,0.8s,baz=48,slow=1.9,SNR=4.2
ASAR LR LR 12 35 23.1
comp=Z,594nm,18.3s,baz=72,slow=40
SOEI Soe 27.64 260 P **P 12 24 14.0 -1.2**
SOEI IAmb IAmb 12 24 22.2
comp=Z,21nm,0.8s
STKA Stephens Creek 27.87 199 P **P 12 24 19.2 +2.3**
comp=Z,2.7nm,0.7s,baz=37,slow=10,SNR=6.8
STKA LR LR 12 35 44.4
comp=Z,508nm,18.8s,baz=27,slow=37
STKA Stephens Creek 27.87 199 P **P 12 24 17.8 +0.9**
BATI Baumata 28.28 259 P **P 12 24 20.4 -0.4**
comp=Z,66nm,0.9s,baz=128,slow=3.4,SNR=5.0
BATI LR LR 12 38 16.3
comp=Z,777nm,19.1s,baz=100,slow=42
BATI Baumata 28.28 259 P **P 12 24 22.3 +1.4**
comp=Z,30nm,0.8s
FITZ Fitzroy Crossi 28.45 242 P **P 12 24 21.6 -0.7**
comp=Z,37nm,0.8s,baz=48,slow=9.4,SNR=48
FITZ LR LR 12 37 26.4
comp=Z,237nm,19.4s,baz=76,slow=40
FITZ Fitzroy Crossi 28.45 242 P **P 12 24 21.8 -0.5**
FITZ IAmb IAmb 12 24 25.9
comp=Z,55nm,1.0s
EDFI Ende, Flores 30.08 262 P **P 12 24 37.0 +0.1**
comp=Z,14nm,1.0s
KAPI Kappang 31.96 269 LR LR 12 42 31.5
comp=Z,141nm,18.0s,baz=95,slow=45
WBSI Waikabubak, Su 32.41 261 P P 12 25 02.9 +5.5
comp=Z,75nm,0.9s
FORT Forrest 33.59 219 P **P 12 25 07.1 -0.3**
FORT IAmb IAmb 12 25 13.4
comp=Z,21nm,0.8s
PSA00 Pilbara Seismi 34.82 240 P **P 12 25 17.7 -0.5**
PSA00 IAmb IAmb 12 25 22.1
comp=Z,31nm,1.1s
RAO Raoul Island 37.02 133 LR LR 12 38 56.3
comp=Z,455nm,18.6s,baz=330,slow=33
GIRL Giralia 40.06 241 P **P 12 26 04.8 +2.2**
GIRL IAmb IAmb 12 26 06.5
comp=Z,23nm,0.9s
RPZ Rata Peaks 41.58 159 LR LR 12 41 45.4
comp=Z,584nm,19.6s,baz=286,slow=33
NWAO Narrogin (SRO) 42.17 225 LR LR 12 44 46.0
comp=Z,450nm,19.6s,baz=71,slow=37
YHNB Yeheng 42.24 317 P **P 12 26 20.2 -0.3**
JNU Nakatsue 43.33 334 P **P 12 26 26.4 -2.7**
comp=Z,9.7nm,0.9s,baz=161,slow=8.0,SNR=4.4
CISI Cisompet, Garu 43.77 265 P **P 12 26 31.3 -1.8**
MJAR Matsushiro Arr 43.80 344 P **P 12 26 30.1 -2.9**
comp=Z,2.6nm,0.9s,baz=177,slow=8.5,SNR=3.4
MJAR PcP **PcP 12 28 18.8 -0.1**
comp=Z,3.3nm,1.0s,baz=163,slow=3.5,SNR=5.1
MJAR LR LR 12 43 42.0
comp=Z,243nm,20.6s,baz=225,slow=35
LEM Lembang 43.98 266 LR LR 12 48 52.5
comp=Z,96nm,20.7s,baz=38,slow=42
QIZ Qiongzhong 48.06 302 P **P 12 27 07.1 +0.4**
QIZ S **S 12 34 02.1 -0.2**
QIZ LR LR
comp=Z,660nm,12.7s
QIZ LR LR
comp=Z,400nm,11.3s
QIZ LR LR
comp=Z,340nm,19.1s
KSRS Korea Array 48.28 334 P **P 12 27 07.0 -1.0**
comp=Z,2.8nm,0.9s,baz=147,slow=8.9,SNR=7.4
KSRS LR LR 12 48 35.1
comp=Z,129nm,18.2s,baz=159,slow=37
NJ2 Nanjing 48.86 322 *e*P **P 12 27 13.9 +1.2**
NJ2 pmax pmax
comp=Z,11nm,0.5s
NJ2 LR LR
comp=Z,410nm,19.4s
NJ2 LR LR
comp=Z,350nm,16.5s
NJ2 LR LR
comp=Z,690nm,22.6s
RAR Rarotonga 49.34 113 LR LR 12 46 12.8
comp=Z,85nm,18.2s,baz=280,slow=34
WHN Wuhan 50.77 317 ⇑P **P 12 27 28.5 +1.3**
USRK Ussuriysk Ar. 52.68 342 P **P 12 27 40.7 -0.6**
comp=Z,2.2nm,0.8s,baz=165,slow=6.6,SNR=3.0
USRK LR LR 12 49 52.3
comp=Z,144nm,18.1s,baz=163,slow=36
PSI Prapat 53.51 278 LR LR 12 53 17.1
comp=Z,127nm,20.2s,baz=113,slow=39
ENH Enshi 54.00 314 P **P 12 27 51.3 +0.1**
ENH IAmb IAmb 12 27 52.1
comp=Z,16nm,1.0s
SLVN Son La 54.08 301 P **P 12 27 52.0 -0.1**
GYA Guiyang 54.12 308⇓*i*P **P 12 27 55.4 +3.1**
GYA S **S 12 35 21.2 -5.0**
GYA pmax pmax
comp=Z,10.0nm,0.7s
GYA pmax pmax
comp=Z,130nm,5.5s
GYA LR LR
comp=Z,160nm,6.5s
GYA LR LR
comp=Z,150nm,5.2s
GYA LR LR
comp=Z,410nm,15.6s
XAN Xi'an 56.54 317 P **P 12 28 09.1 -0.4**
XAN pP sP 12 28 25.2 -2.3
XAN pmax pmax
comp=Z,10.0nm,1.1s
XAN pmax pmax
comp=Z,110nm,5.1s
XAN LR LR
comp=Z,220nm,19.5s
XAN LR LR
comp=Z,200nm,19.5s
XAN LR LR
comp=Z,290nm,18.4s
XAN Xi'an 56.54 317 P **P 12 28 09.2 -0.4**
XAN IAmb IAmb 12 28 11.0
comp=Z,11nm,1.1s
KMI Kunming 56.64 305 P **P 12 28 08.2 -2.4**
KMI sP sP 12 28 27.8 -0.9
KMI pmax pmax
comp=Z,14nm,1.0s
KMI pmax pmax
comp=Z,170nm,4.7s
KLR Kul'dur 57.33 344 P **P 12 28 12.7 -2.0**
comp=Z,2.5nm,0.8s,baz=210,slow=1.1,SNR=8.2
CMAR Chiang Mai Arr 57.36 296 P **P 12 28 15.9 +0.4**
comp=Z,2.5nm,0.8s,baz=119,slow=5.5,SNR=11
WRMHI West Rim 57.63 63 P **P 12 28 18.3 +0.8**
UWE Uwekahuna 57.64 63 P **P 12 28 15.1 -2.5**
NPH North Pit 57.65 63 P **P 12 28 16.3 -1.4**
RIM Rim 57.65 63 P **P 12 28 19.4 +1.7**
UWB Uwekahuna B 57.65 63 P **P 12 28 15.2 -2.5**
KKO Keanakako`i 57.66 63 P **P 12 28 17.6 -0.2**
SBLHI Steaming Bluff 57.66 63 P **P 12 28 14.9 -2.8**
BYL Byron's Ledge 57.66 63 P **P 12 28 16.5 -1.3**
HATHI Halema'uma'u T 57.67 63 P **P 12 28 15.6 -2.2**
PPT Papeete 58.40 107 LR LR 12 48 51.5
comp=Z,65nm,21.5s,baz=332,slow=31
PPT2 Papeete2 58.40 107 *e*LR LR 12 45 44.9
comp=Z,108nm,22.2s
PETK Petropavlovsk- 58.68 4 P **P 12 28 24.2 +0.1**
comp=Z,1.5nm,0.7s,baz=159,slow=8.1,SNR=12
PETK LR LR 12 49 50.1
comp=Z,176nm,20.8s,baz=236,slow=32
HHC Hu-ho-hao-te 59.13 325 P **P 12 28 28.8 +1.2**
HHC S **S 12 36 32.9 +1.0**
HHC SS **SS 12 40 32.5 +5.6**
HHC pmax pmax
comp=Z,6.0nm,0.8s
HHC pmax pmax
comp=Z,34nm,4.9s
HHC LR LR
comp=Z,170nm,18.4s
HHC LR LR
comp=Z,190nm,19.6s
HHC LR LR
comp=Z,200nm,19.6s
LZH Lanzhou 61.13 317 *e*P **P 12 28 43.0 +1.5**
LZH pP sP 12 28 59.4 -0.2
LZH pmax pmax
comp=Z,22nm,1.1s
LZH pmax pmax
comp=Z,93nm,5.4s
LZH LR LR
comp=Z,240nm,18.4s
LZH LR LR
comp=Z,180nm,17.3s
LZH LR LR
comp=Z,210nm,19.0s
GTA Gaotai 65.59 318 ⇑P **P 12 29 10.8 -0.1**
GTA pP sP 12 29 27.5 -1.6
GTA PcP **PcP 12 29 42.7 +0.5**
GTA sS sS 12 38 19.2 +3.8
GTA SS **SS 12 42 07.6 -0.5**
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA pmax pmax
comp=Z,75nm,7.1s
GTA LR LR
comp=Z,120nm,16.8s
GTA LR LR
comp=Z,630nm,15.9s
GTA LR LR
comp=Z,180nm,19.4s
SHL Shillong 65.89 301 P **P 12 29 12.5 -0.7**
SHL IAmb IAmb 12 29 13.4
comp=Z,21nm,1.1s
ULN Ulaanbaatar 66.16 329 P **P 12 29 13.7 -0.7**
ULN IAmb IAmb 12 29 15.8
comp=Z,12nm,1.1s
SONM Songino Array 66.48 328 P **P 12 29 16.5 +0.1**
comp=Z,6.0nm,0.8s,baz=135,slow=5.7,SNR=38
SONM LR LR 12 58 40.6
comp=Z,201nm,19.6s,baz=136,slow=36
TLY Talaya 70.28 330 P **P 12 29 39.7 -0.2**
TLY IAmb IAmb 12 29 41.0
comp=Z,10nm,1.1s
VNDA Vanda 72.09 178 P **P 12 29 51.5 +0.9**
comp=Z,1.8nm,1.1s,baz=334,slow=6.9,SNR=6.0
VNDA LR LR 12 59 22.7
comp=Z,107nm,19.3s,baz=331,slow=34
BILL Bilibino 74.15 6 P **P 12 30 03.4 +0.6**
WMQ Urumqi 75.67 318 *e*P **P 12 30 13.4 +1.3**
WMQ pP sP 12 30 29.5 -1.0
WMQ LR LR
comp=Z,630nm,27.9s
WMQ LR LR
comp=Z,660nm,29.2s
WMQ LR LR
comp=Z,92nm,29.1s
HYB Hyderabad 75.85 289 *i* P **P 12 30 13.0 -0.6**
HYB *e*pP **sP 12 30 31.0 -0.8**
CNPM China Poot 78.82 26 P **P 12 30 30.3 +0.9**
MKAR Makanchi Array 80.29 319 P **P 12 30 37.4 -0.2**
comp=Z,4.9nm,0.8s,baz=101,slow=6.5,SNR=33
MAKZ Makanchi 80.50 319 P **P 12 30 38.0 -0.8**
MAKZ IAmb IAmb 12 30 39.3
comp=Z,13nm,1.1s
GHO Glory Hole Cre 80.96 24 P **P 12 30 41.8 +0.8**
KTH Kantishna Hill 81.09 22 P **P 12 30 41.7 +0.1**
SML Sawmill 81.22 25 P **P 12 30 43.1 +0.7**
SML IAmb IAmb 12 30 44.5
comp=Z,10nm,0.7s
ZALV Zalesovo Beam 81.27 327 P **P 12 30 41.1 -1.6**
comp=Z,4.8nm,0.7s,baz=114,slow=5.9,SNR=21
ZALV LR LR 13 06 26.8
comp=Z,147nm,20.2s,baz=86,slow=35
TRF Thorofare Moun 81.28 23 P **P 12 30 41.9 -0.9**
GLI Glacier Island 81.29 26 P **P 12 30 43.5 +0.8**
GLI IAmb IAmb 12 30 49.7
comp=Z,11nm,0.8s
RND Reindeer 81.81 23 P **P 12 30 45.2 -0.2**
RND IAmb IAmb 12 30 46.9
comp=Z,6.1nm,0.7s
MCK McKinley 81.94 23 P **P 12 30 45.9 -0.2**
MCK IAmb IAmb 12 30 47.5
comp=Z,9.7nm,0.9s
MLY Manley 81.95 21 P **P 12 30 45.9 -0.2**
DHY Denali Highway 82.23 24 P **P 12 30 48.3 +0.6**
KDJ Kajisay 82.46 314 P **P 12 30 48.8 -0.7**
KDJ IAmb IAmb 12 30 51.1
comp=Z,15nm,0.9s
WRH Wood River Hil 82.63 22 P **P 12 30 49.4 -0.2**
KSH Kashi 82.72 311 P **P 12 30 53.8 +3.0**
KSH PP **PP 12 34 04.2 +2.9**
KSH S **S 12 41 06.3 +0.7**
KSH SS **SS 12 46 33.4 +4.6**
KSH pmax pmax
comp=Z,26nm,1.1s
KSH pmax pmax
comp=Z,94nm,4.8s
KSH LR LR
comp=Z,75nm,11.3s
KSH LR LR
comp=Z,110nm,7.9s
KSH LR LR
comp=Z,220nm,6.0s
CCB Clear Creek Bu 82.83 22 P **P 12 30 50.2 -0.4**
COLA College 82.92 22 P **P 12 30 51.4 +0.3**
COLA IAmb IAmb 12 30 52.6
comp=Z,9.2nm,0.6s
GLB Gilahina Butte 82.97 26 P **P 12 30 51.2 -0.3**
CRQM Cirque 82.97 27 P **P 12 30 52.4 +0.7**
VRDI Verde Repeater 83.03 26 P **P 12 30 52.9 +0.9**
HDA Harding Lake 83.04 23 P **P 12 30 51.3 -0.4**
ILAR Eielson Array 83.23 22 P **P 12 30 51.4 -1.3**
comp=Z,4.5nm,0.8s,baz=247,slow=4.4,SNR=41
ILAR LR LR 13 05 31.9
comp=Z,169nm,19.6s,baz=266,slow=34
BOOM Boomskoye usch 83.44 314 P **P 12 30 54.1 -0.4**
BOOM IAmb IAmb 12 30 57.6

comp=Z,8.0nm,0.9s
BALM Baldy 83.44 27 P P 12 30 54.7 +0.7
NIL Nilore 83.63 305 P P 12 30 54.6 -1.0
NIL IAmb IAmb 12 30 55.8
comp=Z,14nm,1.0s
MENT Mentasta 83.65 25 P P 12 30 55.5 +0.5
BARN Barnard Glacie 83.76 27 P P 12 30 55.9 +0.1
BARN IAmb IAmb 12 30 58.1
comp=Z,5.9nm,0.6s
TKM2 Tokmak 2 83.79 314 P P 12 30 56.1 -0.2
SNR=7.6
KURK Kurchatov 83.80 322 P P 12 30 55.2 -0.7
KURK IAmb IAmb 12 30 56.7
comp=Z,18nm,1.1s
DOT Dot Lake 83.82 24 P P 12 30 56.4 +0.6
KURBB Kurchatov Arra 83.83 322 P P 12 30 55.3 -0.8
comp=Z,6.7nm,1.0s,baz=107,slow=4.5,SNR=24
KZA Kyzart 83.84 313 P P 12 30 58.0 +1.1
SNR=11
CTGM Chitina Glacie 83.87 27 P P 12 30 56.0 -0.2
TOLK Toolik Lake Re 84.25 18 P P 12 30 57.9 0.0
QSPA South Pole Qui 84.39 180 P P 12 30 59.3 +0.5
UCH Uchtor 84.41 313 P P 12 31 00.7 +0.8
SNR=13
MAW Mawson 84.49 203 LR LR 13 06 03.1
comp=Z,140nm,20.5s,baz=65,slow=34
AAK Ala-Archa 84.51 314 P P 12 31 00.3 +0.4
SNR=5.8
AAK Ala-Archa 84.51 314 P P 12 30 59.2 -0.8
AAK IAmb IAmb 12 31 01.1
comp=Z,7.9nm,1.0s
USP Ospenovka 84.65 314 P P 12 31 00.7 +0.2
SNR=13
AML Almayashu 84.98 313 P P 12 31 03.4 +0.8
SNR=28
EKS2 Erkin-Say 85.03 314 P P 12 31 03.1 +0.6
SNR=9.4
ARSB Arslanbob 85.34 312 P P 12 31 04.2 +0.1
ARSB IAmb IAmb 12 31 06.1
comp=Z,26nm,1.1s
EGAK Eagle 85.44 23 P P 12 31 05.0 +1.1
EGAK IAmb IAmb 12 31 07.3
comp=Z,5.2nm,0.8s
HYT Haines Junctio 85.56 28 P P 12 31 04.0 -0.8
HYT IAmb IAmb 12 31 09.3
comp=Z,8.8nm,0.8s
DAWY Dawson 85.88 24 P P 12 31 07.3 +1.1
SKAG Skagway 86.15 29 P P 12 31 07.1 -0.4
MOBC Moresby Island 86.21 36 P P 12 31 07.3 -0.8
NRIK Noril'sk 86.39 341 P P 12 31 08.0 -0.5
comp=Z,1.3nm,0.4s,baz=151,slow=4.8,SNR=4.7
NRIK LR LR 13 11 48.5
comp=Z,100nm,18.1s,baz=79,slow=37
WHY Whitehorse 86.73 28 P P 12 31 11.1 +0.6
WHY IAmb IAmb 12 31 12.8
comp=Z,6.3nm,0.8s
WRAK Wrangell Islan 86.83 33 P P 12 31 11.1 +0.3
KKAR Karatay Array 87.48 314 P P 12 31 13.3 -1.1
KKAR IAmb IAmb 12 31 15.0
comp=Z,6.3nm,1.1s
EPYK Eagle Plains 87.74 22 P P 12 31 15.9 +0.7
EPYK IAmb IAmb 12 31 19.0
comp=Z,7.9nm,1.0s
BVAR Borovoye Array 89.29 323 P P 12 31 21.2 -1.6
comp=Z,8.4nm,0.9s,baz=100,slow=6.2,SNR=37
BRVK Borovoye 89.36 323 P P 12 31 21.7 -1.4
BRVK IAmb IAmb 12 31 23.1
comp=Z,10nm,1.0s
INK Inuvik 89.52 21 P P 12 31 22.9 -0.5
INK IAmb IAmb 12 31 25.3
comp=Z,5.5nm,1.1s
HUMO Hull Mountain 90.21 47 P P 12 31 27.2 -0.1
YBH Yreka Blue Hor 90.28 48 P P 12 31 28.4 +0.7
E03A Lebam 90.29 43 P P 12 31 27.4 -0.1
ORV Oroville 90.94 51 P P 12 31 28.8 -1.9
ORV IAmb IAmb 12 31 33.8
comp=Z,6.2nm,1.0s
H04A Detroit Lake 91.02 45 P P 12 31 27.6 -3.5
H04A IAmb IAmb 12 31 32.2
comp=Z,9.7nm,0.9s
AFDM Forest Hills D 91.28 51 P P 12 31 30.0 -2.4
AFDM IAmb IAmb 12 31 35.6
comp=Z,12nm,1.2s
CMB Columbia Colle 91.64 52 P P 12 31 32.8 -1.3
CMB IAmb IAmb 12 31 37.2
comp=Z,4.6nm,1.1s
K05A Summer Lake 91.73 47 P P 12 31 34.8 +0.2
PINE Pine Mountain 91.81 46 P P 12 31 33.8 -1.2
BEKR Beckworth 91.84 50 P P 12 31 35.1 -0.1
BEKR IAmb IAmb 12 31 37.5
comp=Z,5.9nm,1.0s
LLLB Lillooet 91.90 40 P P 12 31 35.9 +0.9
LLLB IAmb IAmb 12 31 37.1
comp=Z,9.3nm,1.0s
MOD Modoc Plateau 92.08 48 P P 12 31 36.2 0.0
VCNR Virginia City 92.33 51 P P 12 31 37.9 +0.4
VCNR IAmb IAmb 12 31 40.1
comp=Z,7.6nm,1.0s
LTY Liberty 92.34 43 P P 12 31 36.2 -0.9
LTY IAmb IAmb 12 31 38.3
comp=Z,5.6nm,0.9s
PNTR Pine Nut 92.35 51 P P 12 31 37.5 -0.1
WAKR Walker 92.43 52 P P 12 31 35.5 -2.4
PAHR Pah Rah Range 92.58 51 P P 12 31 39.4 +0.8
PAHR IAmb IAmb 12 31 41.0
comp=Z,8.2nm,1.1s
YERR Yerington 92.62 51 P P 12 31 39.1 +0.3
YERR IAmb IAmb 12 31 41.3
comp=Z,9.9nm,1.2s
MDPB Devils Postpil 92.63 53 P P 12 31 38.8 -0.2
MDPB IAmb IAmb 12 31 44.5
comp=Z,8.3nm,1.1s
I07A Izee 92.87 46 P P 12 31 39.3 -0.4
HAWA Hanford 93.04 44 P P 12 31 39.5 -0.8
RYN Ryan 93.15 52 P P 12 31 41.6 +0.4
RYN IAmb IAmb 12 31 43.8
comp=Z,8.8nm,1.1s
NVAR Mina Array Bea 93.31 52 P P 12 31 43.5 +1.5
comp=Z,5.9nm,0.9s,baz=257,slow=6.5,SNR=27
B08A Colville Reser 93.34 42 P P 12 31 40.6 -1.1
B08A IAmb IAmb 12 31 43.3
comp=Z,7.9nm,0.9s
G08A Pilot Rock 93.35 45 P P 12 31 42.3 +0.3
WVOR Wild Horse Val 93.36 48 P P 12 31 41.5 -0.5
KVN Kaiserville 93.52 51 P P 12 31 40.1 -2.9
KVN IAmb IAmb 12 31 45.4
comp=Z,9.5nm,1.1s
J08A Circle Bar Ran 93.55 47 P P 12 31 41.4 -1.5
BMO Blue Mountains 94.49 46 P P 12 31 45.7 -1.5
F10A Beach Ranch, E 94.61 44 P P 12 31 47.8 +0.1
NEW Newport 94.81 42 P P 12 31 46.4 -2.1
NEW IAmb IAmb 12 31 50.2
comp=Z,12nm,1.1s
R11A Troy Canyon, C 95.44 52 P P 12 31 52.5 +0.8
R11A IAmb IAmb 12 31 54.3
comp=Z,4.9nm,1.1s
MFID Camas Ranch 95.48 47 P P 12 31 52.5 +0.7
SHPR Sheep Range 95.69 54 P P 12 31 54.4 +1.5
SHPR IAmb IAmb 12 31 55.4
comp=Z,5.1nm,1.1s
ELK Elko 95.81 50 P P 12 31 51.9 -1.5
GEYT Alibeck 96.33 307 P P 12 31 56.1 +0.5
comp=Z,0.5nm,0.3s,baz=205,slow=3.0,SNR=1.3
YKA Yellowknife Ar 96.55 28 P P 12 31 56.5 +0.5
comp=Z,1.3nm,0.8s,baz=265,slow=4.3,SNR=17
YKA LR LR 13 09 30.1
comp=Z,119nm,21.9s,baz=0.0,slow=32
PSUT Pine Spring 96.80 52 P P 12 31 58.5 +0.5
WALA Waterton Lakes 96.96 41 P P 12 31 58.5 +0.1
CCUT Cedar City 97.16 53 P P 12 31 59.5 -0.2
LCMT Little Creek M 97.24 54 P P 12 31 57.8 -2.2
YHL Hebgen Lake 98.85 46 P P 12 32 07.1 0.0
AHID Auburn Hatcher 98.94 48 IAmb IAmb 12 32 10.2
comp=Z,4.4nm,1.0s
FXWY Fox Creek 98.98 47 IAmb IAmb 12 32 10.2
comp=Z,3.5nm,1.1s
TPAW Teton Pass 99.03 47 P Pdif 12 32 04.9 -3.1
TPAW IAmb IAmb 12 32 10.6
comp=Z,3.0nm,1.0s
IMW Indian Meadow 99.04 47 P Pdif 12 32 06.7 -1.4
IMW IAmb IAmb 12 32 11.2
comp=Z,3.6nm,1.1s
REDW Red Top Meadow 99.11 47 P Pdif 12 32 07.2 -1.0
REDW IAmb IAmb 12 32 11.6
comp=Z,3.9nm,1.1s
H17A Grant Village 99.29 46 P Pdif 12 32 08.9 -0.2
H17A IAmb IAmb 12 32 12.9
comp=Z,4.3nm,1.0s
PDAR Pinedale Array 100.07 48 P Pdif 12 32 13.1 +0.5
comp=Z,2.8nm,0.8s,baz=250,slow=3.0,SNR=17
AKASG Malin Array Be 114.57 324 PKP PKiKP 12 37 05.4 -1.2
comp=Z,0.5nm,0.4s,baz=62,slow=2.5,SNR=4.7
BRTR Keskin Array B 115.11 311 PKP PKiKP 12 37 07.6 -0.6
comp=Z,0.8nm,0.7s,baz=90,slow=3.7,SNR=4.1
NOA NORSAR Array B 117.31 340 PKP PKPdf 12 37 11.1 -0.6
comp=Z,0.7nm,0.7s,baz=40,slow=2.1,SNR=2.5
KOLS Kolonicke sedl 119.39 324 *e*PKP **PKiKP 12 37 17.1 +1.0**
LANS Liptovska Anna 120.89 326 *e*PKP **PKiKP 12 37 19.9 +0.9**
VTS Vitosha 121.58 317 PKPdf 12 37 17.5 -3.1
VYHS Vyhne 121.58 325 *e*PKP **PKPdf 12 37 20.3 0.0**
MODS Modra-Piesok 122.53 326 *e*PKP **PKPdf 12 37 22.0 -0.1**
BRG Berggiesshubel 122.87 330 *e*PKPdf **PKiKP 12 37 23.1 +0.3**
baz=46,slow=2.1
IDI Anoyia 123.03 309 PKP PKiKP 12 37 24.2 +0.5
comp=Z,11nm,0.9s,baz=311,slow=12,SNR=3.9
CLL Colln 123.06 330 *e*PKPdf **PKiKP 12 37 24.0 +0.8**
comp=Z,5.0nm,0.9s
CLL LV 13 31 00.0
comp=Z,100nm,21.9s
HLG Helgoland 123.45 336 *e*PKPdf **PKPdf 12 37 23.3 -0.3**
baz=46,slow=2.1
FNA Florina 123.60 316 PKPdf PKiKP 12 37 22.3 -2.2
CLZ Clausthal 123.98 332 *e*PKPdf **PKiKP 12 37 25.5 +0.5**
baz=46,slow=2.1
PLN Plauen 124.00 330 *e*PKPdf **PKiKP 12 37 25.3 +0.2**
baz=46,slow=2.1
WERN Wernitzgruen 124.01 330 *e*PKPdf **PKiKP 12 37 25.5 +0.3**
baz=46,slow=2.1
MOX Moxa 124.16 331 *e*PKPdf **PKiKP 12 37 25.5 +0.1**
baz=46,slow=2.1
MOX *e*L L 13 32 30.6
comp=Z,130nm,19.1s
GEC2 GERESS Array S 124.21 328 *e*PKPdf **PKiKP 12 37 25.6 -0.1**
GERES GERESS Array B 124.21 328 PKP PKPdf 12 37 25.2 -0.2
comp=Z,3.5nm,0.7s,baz=151,slow=3.0,SNR=13
MANZ Manzenberg 124.34 330 *e*PKPdf **PKiKP 12 37 26.0 +0.2**
baz=46,slow=2.1
WET Wettzell 124.46 328 *e*PKPdf **PKiKP 12 37 26.3 +0.3**
baz=46,slow=2.1
GRF Grafenberg Arr 124.97 330 *e*PKPdf **PKiKP 12 37 27.0 0.0**
baz=46,slow=2.1
GRF *e*L L 13 34 32.8
comp=Z,120nm,19.5s
TNS Taunus Mts 125.97 332 *e*PKPdf **PKiKP 12 37 29.2 +0.2**
baz=46,slow=2.1
AHRW Bad Neuenahr-A 126.38 333 *e*PKPdf **PKiKP 12 37 30.0 +0.2**
baz=46,slow=2.1
EKA Eskdalemuir Ar 126.49 343 PKP PKiKP 12 37 30.2 +0.3
comp=Z,1.0nm,0.6s,baz=0.0,slow=2.1,SNR=2.6
FUORN Ofenpass-Fuorn 127.41 327 PKPdf 12 37 27.6 -4.1
DAVOX Davos/Dischmat 127.51 328 PKP PKPdf 12 37 32.2 +0.3
comp=Z,5.1nm,0.8s,baz=146,slow=5.2,SNR=7.6
TUE Stuttgart 127.99 328 PKPdf 12 37 31.6 -1.3
NRCA Norcia 128.01 322 PKPdf 12 37 30.9 -1.9
ROSC El Rosal 134.03 89 PKP PKPdf 12 37 45.4 0.0
comp=Z,8.0nm,0.5s,baz=139,slow=19,SNR=1.4
ROSC El Rosal 134.03 89 PKPdf 12 37 44.6 -0.8
KEST Kesra 134.32 316 PKP PKPdf 12 37 42.1 -2.9
comp=Z,7.4nm,1.1s,baz=357,slow=18,SNR=2.7
LPAZ La Paz 134.87 119 PKP PKiKP 12 37 48.4 -0.3
comp=Z,1.6nm,0.7s,baz=50,slow=5.6,SNR=5.4
LPAZ La Paz 134.87 119 PKPdf 12 37 45.8 -1.4
CPUP Villa Florida 137.50 140 PKP PKPdf 12 37 50.0 -1.1
comp=Z,2.2nm,0.9s,baz=271,slow=3.1,SNR=5.3
SDV Santo Domingo 137.75 83 PKPdf 12 37 49.2 -2.9
ESDC Sonseca Array 139.65 331 PKP PKPdf 12 37 55.1 +0.4
comp=Z,0.8nm,0.9s,baz=34,slow=2.8,SNR=5.5
HUMP Col San Antoni 141.15 68 PKPdf 12 37 55.2 -2.7
MDT Midelt 145.13 324 PKP PKPbc 12 38 03.5 -0.7
comp=Z,3.2nm,0.5s,baz=277,slow=9.7,SNR=5.3
PTGA Pitinga 147.62 100 PKPdf 12 38 10.2 +0.8
PTGA PKPbc 12 38 12.7 +0.7
TORD Torodi Ar. Bea 149.63 286 PKPbc **PKPbc 12 38 16.6 -0.5**
comp=Z,35nm,0.8s,baz=77,slow=1.2,SNR=113
BDFB Brasilia 151.16 137 PKPbc **PKiKP 12 38 21.3 -0.1**
comp=Z,9.0nm,0.7s,baz=38,slow=3.0,SNR=10
BDFB Brasilia 151.16 137 PKiKP 12 38 21.3 -0.1
BDFB PKPab **PKPab 12 38 28.8 +0.1**
DBIC Dimbokro 156.81 274 PKPab **PKPab 12 38 52.4 -0.3**
comp=Z,7.8nm,0.9s,baz=66,slow=4.0,SNR=6.4

IDC 06 12:28:07.7±27.0**, 21°.79S**×**173°.42W, h0**km**, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.6**/38**, mbtmpg3.9**/4**, Error ellipse: s-maj=505.4km s-min=162.2km az=76.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**37.63**	**265**	P	P	12 35 25.4	+0.8
	2.2nm,0.4s,baz=92,slow=11,SNR=8.3						
STKA	**Stephens Creek**	**41.13**	**246**	P	P	12 35 52.9	-0.8
	0.6nm,0.5s,baz=79,slow=10,SNR=0.9						
ASAR	**Alice Springs**	**48.40**	**257**	P	P	12 36 51.4	-0.5
	0.6nm,0.6s,baz=96,slow=7.7,SNR=16						
WRA	**Warramunga Arr**	**48.66**	**262**	P	P	12 36 53.7	-0.2
	0.8nm,0.3s,baz=97,slow=8.4,SNR=43						

*ATH **06** 12:30:54.5, 36°.05N×27°.83E, h83**km**±5**km**, ML3.8/4, Error ellipse: s-maj=5.7km s-min=2.0km az=97.0*
*HLW **06** 12:30:55.6, 35°.84N×27°.93E, h31**km**±53**km**, Md4.7*
*DDA **06** 12:30:55.9, 36°.04N×27°.93E, h51**km**±5**km**, MW3.7*
*ISK **06** 12:30:55.5, 36°.05N×27°.86E, h26**km**, ML3.7/18*
*NIC **06** 12:30:56.4±0.0, 35°.80N×27°.99E, h62**km**±3**km**, Ml3.5/3*
*GII **06** 12:30:57.9±0.5, 35°.73N×28°.20E, h40**km**, MD2.9/5, Mm3.5/11*
*THE **06** 12:30:58.0, 36°.22N×27°.58E, h50**km**±7**km**, ML3.5/5, Error ellipse: s-maj=8.0km s-min=0.6km az=132.0*

ISC 06 12:30:54.1±0.8**, 35°.97N**±0°.03×**27°.90E**±0°.03**, h77**km±7**km**, n139, σ1°71/181, 1C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.30**	**38**	P	**Pn**	**12 31 08.0**	**+1.8**
ARG				S	**Sn**	**12 31 16.1**	**+1.1**
	7µm,0.3s						
ARG	**Arkhangelos**	**0.30**	**38**	P	**Pn**	**12 31 07.9**	**+1.8**
ARG				S	**Sn**	**12 31 16.1**	**+1.1**
ARG				AML	AML	12 31 18.6	
	comp=N,15025µm,0.3s						
ARG				AML	AML	12 31 19.7	
	comp=E,12650µm,0.3s						
ARG	**Arkhangelos**	**0.30**	**38**	P	**Pn**	**12 31 08.0**	**+1.8**
ARG				S	**Sn**	**12 31 17.0**	**+2.0**
KARP	**Karpathos**	**0.73**	**235**	P	**Pn**	**12 31 11.5**	**+1.6**
KARP				S	**Sn**	**12 31 22.7**	**+1.0**
	comp=E,8µm,0.1s						
KARP	**Karpathos**	**0.73**	**235**	P	**Pn**	**12 31 11.5**	**+1.6**
KARP	**Karpathos**	**0.73**	**235**	PG	**Pn**	**12 31 11.1**	**+1.2**
KARP				SG	**Sn**	**12 31 21.9**	**+0.2**
KARP	**Karpathos**	**0.73**	**235**	P	**Pn**	**12 31 11.5**	**+1.6**
KARP				S	**Sn**	**12 31 22.7**	**+1.0**
KARP				AML	AML	12 31 23.3	
	comp=E,18nm,0.1s						
KARP				AML	AML	12 31 23.3	
	comp=E,18nm,0.1s						
KARP				AML	AML	12 31 23.9	
	comp=E,13nm,0.1s						
KARP				AML	AML	12 31 23.9	
	comp=E,13nm,0.1s						
MRSB	**Marmaris-Mugla**	**0.78**	**18**	PG	**Pn**	**12 31 10.6**	**+0.2**
DAT	**Datca**	**0.80**	**341**	PG	**Pn**	**12 31 10.5**	**-0.2**
DAT				SG	**Sn**	**12 31 21.0**	**-2.1**
DAT	**Datca**	**0.80**	**341**	*i* P	**Pn**	**12 31 11.6**	**+0.9**
DAT				*i* S	**Sn**	**12 31 22.6**	**-0.5**
DAT				IAML		12 31 24.0	
	comp=N,614nm,0.3s						
DAT				IAML		12 31 24.0	
	comp=E,767nm,0.3s						
DALY	**Dalyan (Mula)**	**1.04**	**36**	PG	**Pn**	**12 31 14.8**	**+1.4**
DALY				SG	**Sn**	**12 31 27.9**	**0.0**
DALY	**Dalyan (Mula)**	**1.04**	**36**	*i* P	**Pn**	**12 31 15.2**	**+1.8**
DALY				*i* S	**Sn**	**12 31 27.7**	**-0.2**
DALY				IAML		12 31 30.0	
	comp=N,1µm,0.2s						
DALY				IAML		12 31 31.0	
	comp=E,605nm,0.2s						
TURN	**Turunc**	**1.06**	**32**	PG	**Pn**	**12 31 11.9**	**-1.8**
TURN	**Turunc**	**1.06**	**32**	*i* P	**Pn**	**12 31 12.7**	**-1.0**
TURN				*i* S	**Sn**	**12 31 24.1**	**-4.3**
TURN				IAML		12 31 25.0	
	comp=N,2µm,0.4s						
TURN				IAML		12 31 26.0	
	comp=E,2µm,0.3s						
BDRM	**Kayabasi**	**1.15**	**342**	*i* P	**Pn**	**12 31 15.6**	**+0.7**
BDRM				IAML		12 31 30.0	
	comp=E,893nm,0.3s						
BDRM				IAML		12 31 30.0	
	comp=N,929nm,0.4s						
FETY	**Fethiye**	**1.17**	**55**	PN	**Pn**	**12 31 16.3**	**+1.3**
FETY				SN	**Sn**	**12 31 31.5**	**+0.7**
FETY	**Fethiye**	**1.17**	**55**	*i* P	**Pn**	**12 31 16.5**	**+1.4**
FETY				*i* S	**Sn**	**12 31 31.4**	**+0.7**
FETY				IAML		12 31 32.0	
	comp=N,568nm,0.6s						
FETY				IAML		12 31 32.0	
	comp=E,673nm,0.9s						
BODT	**Bodrum**	**1.18**	**337**	PN	**Pn**	**12 31 15.7**	**+0.4**
BODT				SN	**Sn**	**12 31 30.5**	**-0.6**
YER	**Yerkesik**	**1.20**	**15**	PN	**Pn**	**12 31 16.5**	**+1.0**
YKAV	**Yalikavak-Bodr**	**1.25**	**337**	PN	**Pn**	**12 31 16.7**	**+0.6**
KSL	**Kastellorizon**	**1.38**	**82**	P	**Pn**	**12 31 19.6**	**+1.9**
KSL				S	**Sn**	**12 31 35.0**	**-0.5**
KSL				AML	AML	12 31 38.3	
	comp=N,2006µm,0.3s						
KSL				AML	AML	12 31 38.8	
	comp=E,2498µm,0.6s						
KSL	**Kastellorizon**	**1.38**	**82**	P	**Pn**	**12 31 20.0**	**+2.3**
KSL				S	**Sn**	**12 31 36.6**	**+1.1**
KSL				AML	AML	12 31 38.1	
	comp=E,2.0nm,0.3s						
KSL				AML	AML	12 31 38.1	
	comp=E,2.0nm,0.3s						
KSL				AML	AML	12 31 38.5	
	comp=E,2.5nm,0.6s						
KSL				AML	AML	12 31 38.5	
	comp=E,2.5nm,0.6s						
AKAS	**Kas**	**1.41**	**79**	PN	**Pn**	**12 31 20.1**	**+1.8**
AKAS	**Kas**	**1.41**	**79**	*i* P	**Pn**	**12 31 20.1**	**+1.8**
AKAS				*i* S	**Sn**	**12 31 35.5**	**-1.0**
AKAS				IAML		12 31 39.0	
	comp=N,732nm,0.4s						
AKAS				IAML		12 31 40.0	
	comp=E,491nm,0.3s						
ZKR	**Zakros**	**1.61**	**238**	P	**Pn**	**12 31 23.1**	**+2.3**
ZKR				S	**Sn**	**12 31 42.7**	**+1.7**
	comp=E,592nm,0.4s						
ZKR	**Zakros**	**1.61**	**238**	P	**Pn**	**12 31 23.1**	**+2.3**
ZKR	**Zakros**	**1.61**	**238**	PN	**Pn**	**12 31 23.1**	**+2.3**
ZKR	**Zakros**	**1.61**	**238**	P	**Pn**	**12 31 23.2**	**+2.3**
ZKR				S	**Sn**	**12 31 42.9**	**+1.8**
ZKR				AML	AML	12 31 44.7	
	comp=E,1.3nm,0.3s						
ZKR				AML	AML	12 31 44.7	
	comp=E,1.3nm,0.3s						
ZKR				AML	AML	12 31 45.5	
	comp=E,1.0nm,0.6s						
ZKR				AML	AML	12 31 45.5	
	comp=E,1.0nm,0.6s						
DEMR	**Demre-Antalya**	**1.65**	**80**	PN	**Pn**	**12 31 23.7**	**+2.5**
STIA	**Sitia Lasithi**	**1.66**	**243**	P	**Pn**	**12 31 23.3**	**+1.9**
AYDN	**Tasoluk**	**1.68**	**360**	*i* P	**Pn**	**12 31 22.9**	**+1.2**
AYDN				IAML		12 31 43.0	
	comp=E,337nm,0.3s						
AYDN				IAML		12 31 44.0	
	comp=N,345nm,0.3s						
TAVA	**DENIZLI_Tavas**	**1.70**	**28**	*i* P	**Pn**	**12 31 23.4**	**+1.4**
TAVA				*i* S	**Sn**	**12 31 42.4**	**-0.7**
TAVA				IAML		12 31 48.0	
	comp=E,258nm,0.5s						
TAVA				IAML		12 31 50.0	
	comp=N,218nm,0.2s						
ANAF	**Anafi Island**	**1.76**	**283**	P	**Pn**	**12 31 23.7**	**+0.9**
ANAF				S	**Sn**	**12 31 43.5**	**-1.0**
ANAF				AML	AML	12 31 44.5	
	comp=N,8730µm,0.4s						
ANAF				AML	AML	12 31 44.8	
	comp=E,8456µm,0.5s						
ELL	**Elmali**	**1.80**	**64**	PN	**Pn**	**12 31 25.7**	**+2.3**
ELL	**Elmali**	**1.80**	**64**	P	**Pn**	**12 31 26.0**	**+2.7**
ELL				S	**Sn**	**12 31 49.3**	**+3.8**
GCAM	**G?zelcaml?**	**1.80**	**343**	PN	**Pn**	**12 31 24.3**	**+1.0**
GCAM	**G?zelcaml?**	**1.80**	**343**	*i* P	**Pn**	**12 31 24.5**	**+1.2**
GCAM				IAML		12 31 45.0	
	comp=N,339nm,0.2s						
GCAM				IAML		12 31 47.0	
	comp=E,278nm,0.3s						
AMGA	**Amorgos Island**	**1.83**	**299**	P	**Pn**	**12 31 24.5**	**+0.8**
GOLH	**Golhisar**	**1.84**	**46**	*i* P	**Pn**	**12 31 26.4**	**+2.5**
GOLH				*i* S	**Sn**	**12 31 48.8**	**+2.3**
GOLH				IAML		12 31 50.0	
	comp=N,450nm,0.4s						
AYDB	**Zeytinkoy-Aydi**	**1.97**	**360**	PN	**Pn**	**12 31 26.5**	**+0.9**
NPS	**Neapolis**	**1.99**	**250**	P	**Pn**	**12 31 26.9**	**+1.1**
NPS				S	**Sn**	**12 31 49.1**	**-0.9**
	comp=N,988nm,0.3s						
NPS	**Neapolis**	**1.99**	**250**	P	**Pn**	**12 31 26.6**	**+0.8**
NPS				S	**Sn**	**12 31 50.3**	**+0.3**
NPS				AML	AML	12 31 51.9	
	comp=N,1670µm,0.3s						
NPS				AML	AML	12 31 52.0	
	comp=E,2245µm,0.3s						
DENT	**Denizli**	**2.00**	**27**	PN	**Pn**	**12 31 26.7**	**+0.8**
SANT	**Santorini**	**2.01**	**282**	P	**Pn**	**12 31 27.0**	**+1.0**
SANT	**Santorini**	**2.01**	**282**	PN	**Pn**	**12 31 27.8**	**+1.7**
AKUM	**Antalya-Kumluc**	**2.01**	**79**	*i* P	**Pn**	**12 31 27.6**	**+1.6**
AKUM				*i* S	**Sn**	**12 31 51.8**	**+1.4**
AKUM				IAML		12 31 55.0	
	comp=E,346nm,0.3s						
AKUM				IAML		12 31 55.0	
	comp=N,281nm,0.5s						
THT2	**Imerovigli**	**2.05**	**284**	PN	**Pn**	**12 31 28.7**	**+2.1**
LAST	**Lasithi**	**2.13**	**248**	P	**Pn**	**12 31 29.1**	**+1.4**
LAST				S	**Sn**	**12 31 53.2**	**-0.2**
	comp=N,378nm,0.4s						
LAST	**Lasithi**	**2.13**	**248**	P	**Pn**	**12 31 29.1**	**+1.4**
APE	**Apeiranthos**	**2.20**	**301**	P	**Pn**	**12 31 29.4**	**+0.8**
APE	**Apeiranthos**	**2.20**	**301**	PN	**Pn**	**12 31 29.9**	**+1.3**
DGB	**zmir**	**2.23**	**339**	*i* P	**Pn**	**12 31 29.5**	**+0.6**
DGB				IAML		12 31 56.0	
	comp=E,87nm,0.5s						
DGB				IAML		12 31 56.0	
	comp=N,69nm,0.7s						
KORT	**Korkueli**	**2.23**	**62**	PN	**Pn**	**12 31 31.9**	**+2.8**
KORT	**Korkueli**	**2.23**	**62**	*i* P	**Pn**	**12 31 32.8**	**+3.7**
KORT				IAML		12 32 04.0	
	comp=N,224nm,0.4s						
KORT				IAML		12 32 05.0	
	comp=E,237nm,0.4s						
KEMT	**Kemer-ANTALYA**	**2.24**	**73**	PN	**Pn**	**12 31 31.9**	**+2.8**
BRDR	**BURDUR-Merkez**	**2.44**	**45**	*i* P	**Pn**	**12 31 33.9**	**+1.9**
BRDR				IAML		12 32 04.0	
	comp=E,76nm,0.6s						
BRDR				IAML		12 32 05.0	
	comp=N,73nm,0.4s						
IDI	**Anoyia**	**2.54**	**255**	P	**Pn**	**12 31 34.0**	**+0.7**
IDI				S	**Sn**	**12 32 01.9**	**-1.4**
MANT	**Manisa**	**2.57**	**12**	*i* P	**Pn**	**12 31 34.5**	**+0.8**
MANT				IAML		12 32 04.0	
	comp=N,35nm,0.2s						
MANT				IAML		12 32 05.0	
	comp=E,36nm,0.6s						
BASM	**Basmaki-Afyon**	**2.60**	**41**	PN	**Pn**	**12 31 34.9**	**+0.9**
URLA	**Izmir**	**2.60**	**337**	PN	**Pn**	**12 31 35.9**	**+1.9**
URLA	**Izmir**	**2.60**	**337**	*i* P	**Pn**	**12 31 34.1**	**+0.1**
URLA				IAML		12 32 13.0	
	comp=N,29nm,0.6s						
URLA				IAML		12 32 17.0	
	comp=E,30nm,0.9s						
BCK	**Bucak**	**2.62**	**55**	PN	**Pn**	**12 31 37.0**	**+2.6**
KHAL	**Karahalli**	**2.71**	**28**	*i* P	**Pn**	**12 31 36.5**	**+1.0**
KHAL				*i* S	**Sn**	**12 32 05.8**	**-1.6**
KHAL				IAML		12 32 07.0	
	comp=E,82nm,0.3s						
KHAL				IAML		12 32 07.0	
	comp=N,44nm,0.4s						
ISP	**Isparta**	**2.80**	**48**	PN	**Pn**	**12 31 38.7**	**+1.9**
CHOS	**Chios island**	**2.82**	**329**	PN	**Pn**	**12 31 38.5**	**+1.5**
USAK	**Uak-Merkez**	**2.88**	**18**	*i* P	**Pn**	**12 31 38.7**	**+0.9**
USAK				IAML		12 32 13.0	
	comp=E,38nm,0.4s						
USAK				IAML		12 33 20.0	
	comp=N,22nm,3.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	2.90	359	*i* P	Pn	12 31 37.9	-0.1
AKHS				IAML		12 32 12.0	
	comp=E,36nm,0.3s						
KZIL	AFYON_Kizioren	2.90	38	*i* P	Pn	12 31 38.8	+0.6
KZIL				IAML		12 32 13.0	
	comp=E,30nm,0.8s						
KZIL				IAML		12 32 35.0	
	comp=N,28nm,1.0s						
ZEDA	zmir-Bergama	3.06	348	*i* P	Pn	12 31 40.8	+0.7
ZEDA				IAML		12 32 15.0	
	comp=N,40nm,0.7s						
ZEDA				IAML		12 32 16.0	
	comp=E,35nm,0.4s						
BAGO	Egridir - ISPA	3.07	48	*i* P	Pn	12 31 41.6	+1.2
KEPZ	Antalya-Kepez	3.13	72	*i* P	Pn	12 31 43.9	+2.7
KEPZ				IAML		12 32 22.0	
	comp=N,101nm,1.0s						
KEPZ				IAML		12 32 23.0	
	comp=E,134nm,0.9s						
DEMI	Demirci	3.13	12	*i* P	Pn	12 31 42.1	+0.9
DEMI				*i* S	Sn	12 32 15.7	-1.9
DEMI				IAML		12 32 17.0	
	comp=N,26nm,0.2s						
DEMI				IAML		12 32 18.0	
	comp=E,31nm,0.6s						
GDZ	Gediz	3.35	22	*i* P	Pn	12 31 45.1	+0.8
STEP	BALIKESIR_Sava	3.40	358	*i* P	Pn	12 31 45.3	+0.4
STEP				IAML		12 32 24.0	
	comp=N,75nm,0.6s						
STEP				IAML		12 32 26.0	
	comp=E,44nm,0.7s						
GAZI	Gazipasa	3.59	85	*i* P	Pn	12 31 47.8	+0.4
DURS	Dursunbey	3.65	7	*i* P	Pn	12 31 48.6	+0.3
DURS				IAML		12 32 28.0	
	comp=N,38nm,1.0s						
DURS				IAML		12 32 49.0	
	comp=E,15nm,0.4s						
BOLV	Bolvadin	3.66	41	*i* P	Pn	12 31 50.5	+2.0
BOLV				IAML		12 32 32.0	
	comp=N,23nm,0.5s						
BOLV				IAML		12 32 34.0	
	comp=E,16nm,0.9s						
DOGA	KONYA_Doganhis	3.69	54	*i* P	Pn	12 31 51.0	+2.0
DOGA				IAML		12 32 34.0	
	comp=E,44nm,0.6s						
DOGA				IAML		12 32 35.0	
	comp=N,50nm,0.7s						
OSC1	CSNet OBS 1	3.72	131	P	Pn	12 31 50.0	+0.8
OSC1				S	Sn	12 32 32.0	+0.2
AKMS	Akamas	3.75	103	P	Pn	12 31 51.2	+1.7
BALY	Balya	3.77	357	*i* P	Pn	12 31 50.7	+0.8
BALY				IAML		12 32 35.0	
	comp=E,18nm,0.4s						
BALY				IAML		12 32 35.0	
	comp=N,30nm,0.4s						
BAYC	CANAKKALE_Bayr	3.91	345	*i* P	Pn	12 31 52.4	+0.7
BAYC				IAML		12 32 37.0	
	comp=E,20nm,0.4s						
BAYC				IAML		12 32 38.0	
	comp=N,20nm,0.4s						
ALFC	Alefka	3.92	101	P	Pn	12 31 53.7	+1.8
NATA	Nata	4.00	106	P	Pn	12 31 54.2	+1.2
KONT	Konya--Tatoy	4.08	60	*i* P	Pn	12 31 56.5	+2.4
KONT				IAML		12 32 45.0	
	comp=E,18nm,0.8s						
KONT				IAML		12 32 48.0	
	comp=N,17nm,0.4s						
LEF	Lefka	4.16	100	*i* P	Pn	12 31 56.1	+0.9
LEF				IAML		12 32 43.0	
	comp=N,97nm,0.3s						
KDHN	Kadinhani	4.22	52	*i* P	Pn	12 31 57.8	+1.7
KDHN				IAML		12 32 50.0	
	comp=N,8.4nm,0.3s						
SZAC	Souni	4.25	105	⇑P	Pn	12 31 57.7	+1.3
ULDT	Uludag	4.28	13	*i* P	Pn	12 31 57.6	+0.7
ULDT				IAML		12 32 49.0	
	comp=N,11nm,0.5s						
ULDT				IAML		12 32 51.0	
	comp=E,9.4nm,0.6s						
ASGA	Asgata	4.53	104	P	Pn	12 32 01.6	+1.3
CSS	Mathiatis	4.55	101	Pn	Pn	12 32 01.3	+0.8
CSS	Mathiatis	4.55	101	P	Pn	12 32 02.3	+1.9
GULN	MERSIN_Gulnar	4.58	86	*i* P	Pn	12 32 02.8	+1.9
GULN				IAML		12 32 55.0	
	comp=E,38nm,0.3s						
GULN				IAML		12 32 57.0	
	comp=N,61nm,0.6s						
MATC	Matruh	4.65	187	P	Pn	12 32 02.9	+1.0
	baz=188						
MVOU	Mavrovouni	4.78	100	P	Pn	12 32 05.1	+1.5
SLUM	Salum	5.00	207	P	Pn	12 32 07.0	+0.4
	baz=209						
SLUM				S	Sn	12 32 58.7	-4.3
	baz=209						
EREN	Erenkoy	5.12	93	*i* P	Pn	12 32 09.8	+1.5
EREN				IAML		12 33 12.0	
	comp=N,41nm,0.3s						
KERG	Konya-Eregli	5.21	72	*i* P	Pn	12 32 12.2	+2.6
KERG				IAML		12 33 24.0	
	comp=E,15nm,0.6s						
KERG				IAML		12 33 26.0	
	comp=N,16nm,0.3s						
DELI	KIRIKKALE	6.23	48	*i* P	Pn	12 32 24.6	+1.2
DELI				IAML		12 34 24.0	
	comp=N,4.0nm,1.9s						
DELI				IAML		12 35 18.0	
	comp=E,2.9nm,1.9s						
HMYD	Mayadein	6.63	158	P	Pn	12 32 29.8	+0.9
	baz=157						
HNTI	Hanita	6.66	114	Pn	Pn	12 32 29.2	-0.2
HNTI				Sn	Sn	12 33 39.9	-3.9
HNAT	Natroun	6.73	159	P	Pn	12 32 30.7	+0.5
	baz=159						
MMA0B	Mount Meron ar	6.87	113	Pn	Pn	12 32 33.2	+1.0
MMA0B				Sn	Sn	12 33 46.0	-2.9
KOT	Kottamia	6.88	150	P	Pn	12 32 33.0	+0.7
	baz=149						
HHAG	Hagoal	6.97	148	P	Pn	12 32 35.5	+2.0
	baz=148						
GEM	Giv'at Ha'Em	6.97	111	Pn	Pn	12 32 33.4	-0.2
GEM				Sn	Sn	12 33 47.6	-3.8
RSH		6.98	134	P	Pn	12 32 33.6	-0.1
	baz=133						
KSDI	Kefar Szold	6.98	111	Pn	Pn	12 32 32.9	-0.7
KSDI				Sn	Sn	12 33 48.9	-2.6
NATI	Neve Ativ	7.01	110	Pn	Pn	12 32 33.9	-0.1
NATI				Sn	Sn	12 33 49.4	-2.8
SWA2		7.02	198	P	Pn	12 32 34.7	+0.4
	baz=199						
SWA2				S	Sn	12 33 47.3	-5.2
	baz=199						
HSAF	As Saff	7.05	153	P	Pn	12 32 35.3	+0.7
	baz=152						
GLL	Jalalah	7.14	152	P	Pn	12 32 36.6	+0.7
	baz=151						
AMAZ	Amatzia	7.33	125	Pn	Pn	12 32 38.2	-0.3
SUZ	Suez	7.39	144	P	Pn	12 32 40.4	+1.1
	baz=144						
KZIT	Kziot	7.42	131	Pn	Pn	12 32 39.7	0.0
KZIT				Sn	Sn	12 33 58.4	-3.9
YTIR	Yattir	7.57	125	Pn	Pn	12 32 41.5	-0.4
YTIR				Sn	Sn	12 34 03.8	-2.4
DSI	Dead Sea	7.62	123	Pn	Pn	12 32 42.2	-0.3
ZNM	Zenema	7.80	146	P	Pn	12 32 46.2	+1.3
	baz=145						
NBNS	Bani Suef	7.87	158	P	Pn	12 32 46.1	+0.2
	baz=157						
PRNI	Paran	8.18	131	Pn	Pn	12 32 49.4	-0.7
KRMI	Paran Flat	8.18	134	Pn	Pn	12 32 49.6	-0.5
HRFI	Mount Harif	8.43	133	Pn	Pn	12 32 53.3	-0.2
HRFI				Sn	Sn	12 34 23.3	-3.7
EIL	Elat	8.64	135	Pn	Pn	12 32 56.4	0.0
TAMRE	El Minia	8.66	162	P	Pn	12 32 57.1	+0.5
	baz=161						
GRB	Gharib	8.73	150	P	Pn	12 32 58.8	+1.2
	baz=150						
HFRF	Wahat Farafira	8.81	178	P	Pn	12 32 58.9	+0.2
	baz=177						
HBST	Basata	8.87	138	P	Pn	12 32 59.8	+0.3
	baz=137						
HDHB	Dhahab	9.20	140	P	Pn	12 33 05.0	+1.1
	baz=139						
HHRG	Al Ghardaqah	9.98	149	P	Pn	12 33 18.1	+3.4
	baz=149						
DBRK	Dubrovnik	10.08	314	*e*Pn	Pn	12 33 16.7	+0.8
STON	Ston	10.46	314	*i* Pn	Pn	12 33 21.8	+0.6
HDK1	Dakhla	10.48	172	P	Pn	12 33 21.6	+0.1
	baz=172						
MAKA	Makarska	11.11	314	*e*Pn	Pn	12 33 30.5	+0.6
MAKA				Sn	Sn	12 35 27.9	-4.4
KIJV	Kijevo	11.91	316	*e*Pn	Pn	12 33 42.1	+1.3
ZIRJ	Zirje	12.14	313	*e*Pn	Pn	12 33 44.1	+0.2
MORI	Morici	12.22	314	*i* Pn	Pn	12 33 46.2	+1.1
DUGI	Dugi Otok	12.68	313	*e*Pn	Pn	12 33 51.2	0.0
NVLJ	Novalja	13.12	315	*e*Pn	Pn	12 33 57.1	0.0
CLL	Collm	18.68	330	*i* P	Pn	12 35 10.9	+3.8

IDC 06 12:35:44.0±9.2, 47°.49N×151°.93E, h140km±69km, mb3.3/4, mb1 3.2/5, mb1mx2.9/58, mbtmp3.7/5, MS3.9/1, Ms1 3.9/1, ms1mx2.7/25, Error ellipse: s-maj=176.7km s-min=55.4km az=133.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	Asahikawa	7.34	246	P	Pn	12 37 28.5	0.0
	0.4nm,0.3s,baz=107,slow=30,SNR=5.4						
KSRS	Korea Array	20.28	249	P	P	12 40 09.0	+0.5
	0.9nm,0.6s,baz=60,slow=10,SNR=4.2						
MKAR	Makanchi Array	45.89	296	P	P	12 43 51.9	-0.3
	0.5nm,0.7s,baz=75,slow=5.0,SNR=4.4						
MKAR				LR	LR	13 06 19.9	
	comp=Z,129nm,18.9s,baz=98,slow=40						
FINES	FINESS Array B	63.02	334	P	P	12 45 55.8	+0.3
	1.2nm,0.6s,baz=36,slow=7.1,SNR=5.6						
HFS	Hagfors	67.48	339	P	P	12 46 24.0	-0.3
	2.3nm,0.8s,baz=38,slow=7.3,SNR=4.9						

IDC 06 12:42:12.0±1.0, 19°.69N×99°.66E, h0km, mb3.6/6, mb1 3.6/6, mb1mx3.4/44, mbtmp3.6/6, MS3.8/3, Ms1 3.8/3, ms1mx3.1/41, Error ellipse: s-maj=27.9km s-min=13.1km az=104.0

NEIC 06 12:42:13.4±2.2, 19°.60N±0°.04×99°.54E±0°.05, h10km±1km, mb4.3/6, Error ellipse: s-maj=10.2km s-min=2.9km az=134.0

ISC 06 12:42:13.8±0.7, 19°.62N±0°.05×99°.57E±0°.05, h10km, n31, σ1s.41/28, mb3.8/10, Thailand

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYA	Payao	0.39	132	P	Pg	12 42 20.3	-1.2
CMMT	Chiang Mai	0.99	216	P	Pg	12 42 32.4	-0.6
CHTO	Chiang Mai	1.00	216		Pg	12 42 31.9	-1.1
CHTO				Sn	Sg	12 42 46.7	+0.8
LAMP	Lampang	1.09	177	P	Pg	12 42 33.6	-1.3
PHRA	Phrae	1.28	151	P	Pn	12 42 36.5	-1.3
CM09	Chiang Mai Arr	1.29	205	P	Pn	12 42 37.3	-0.7
CMAR	Chiang Mai Arr	1.30	207	Pg	Pn	12 42 38.0	-0.1
	353nm,0.3s,baz=19,slow=17,SNR=838						
CMAR				Lg	Lg	12 42 57.4	
	525nm,0.3s,baz=31,slow=28,SNR=20						
CMAR				LR	LR	12 43 19.2	
	comp=Z,660nm,19.2s,baz=110,slow=48						
CM04	Chiang Mai Arr	1.34	205	P	Pn	12 42 37.7	-0.9
NANT	Nan	1.35	127	P	Pn	12 42 36.2	-2.5
MHMT	Maesarieng	2.11	227	Pg	Pb	12 42 54.3	+2.0
MHMT				Pn	Pn	12 42 49.4	+0.2
PBKT	Sadao Pong	3.32	156	Pg	Pb	12 43 15.7	+3.0
PBKT				Pn	Pn	12 43 05.3	-0.4
PBKT	Sadao Pong	3.32	156		Pn	12 43 05.4	-0.4
SLVN	Son La	4.41	67	Pn	Pn	12 43 22.1	+1.1
PSI	Prapat	16.73	182	Pn	P	12 46 13.7	+2.9
	0.4nm,0.3s,baz=360,slow=15,SNR=2.3						
RPSI	Rantau Prapat	16.84	182	P	P	12 46 13.7	+1.8
TWG	Pinlang	20.30	77	P	P	12 46 50.9	+1.0
KSM	Kuching	20.88	148	P	P	12 46 54.4	-1.8
SONM	Songino Array	28.68	10	P	P	12 48 11.1	+0.1
	0.3nm,0.4s,baz=204,slow=9.5,SNR=4.1						
KSRS	Korea Array	30.43	48	LR	LR	13 01 42.0	
	comp=Z,36nm,18.1s,baz=125,slow=39						
MKAR	Makanchi Array	30.57	336	P	P	12 48 26.6	-1.0
	0.8nm,0.7s,baz=146,slow=8.8,SNR=6.5						
AAK	Ala-Archa	31.20	323	P	P	12 48 33.8	+0.3
AAK				IAmb	IAmb	12 48 36.8	
	comp=Z,2.3nm,0.8s						
ZALV	Zalesovo Beam	36.09	345	P	P	12 49 16.1	+0.5
	comp=Z,0.4nm,0.4s,baz=138,slow=13,SNR=2.1						
AKTO	Aktyubinsk	44.95	323	P	P	12 50 27.2	-1.8
	comp=Z,0.9nm,0.6s,baz=124,slow=11,SNR=2.1						
WB0	Warramunga Arr	51.94	137	P	P	12 51 19.8	-3.4
WB0				IAmb	IAmb	12 51 31.6	
	comp=Z,5.9nm,1.1s						
WRA	Warramunga Arr	52.03	137	P	P	12 51 23.4	-0.5
	comp=Z,0.1nm,0.5s,baz=332,slow=7.8,SNR=1.4						
WRAB	Tennant Creek	52.03	137	P	P	12 51 21.6	-2.3
WRAB				IAmb	IAmb	12 51 26.2	
	comp=Z,9.0nm,1.3s						
WR0	Warramunga Arr	52.17	137	P	P	12 51 24.2	-0.8
WR0				IAmb	IAmb	12 51 25.0	
	comp=Z,3.4nm,1.0s						
ASAR	Alice Springs	54.52	141	P	P	12 51 41.5	-0.7
	comp=Z,0.2nm,0.5s,baz=315,slow=7.4,SNR=4.7						
GERES	GERESS Array B	72.81	316	LR	LR	13 32 05.3	
	comp=Z,177nm,20.9s,baz=82,slow=41						
NRCA	Norcia	74.39	310	P	P	12 53 48.5	-3.7
ESDC	Sonseca Array	87.59	311	LR	LR	13 42 24.5	
	comp=Z,73nm,20.1s,baz=60,slow=41						

IDC 06 12:52:19.1±72.0, 18°.12S×178°.81W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/32, mbtmp3.9/3, Error ellipse: s-maj=1317.0km s-min=174.7km az=79.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.19	241	P	P	12 59 41.5	+0.8
	1.5nm,1.0s,baz=90,slow=10,SNR=4.1						
WRA	Warramunga Arr	44.22	260	P	P	13 00 30.1	-0.3
	0.4nm,0.6s,baz=96,slow=6.0,SNR=1.3						
ASAR	Alice Springs	44.37	254	P	P	13 00 30.9	-0.7
	2.4nm,0.5s,baz=90,slow=8.5,SNR=57						

IDC 06 12:58:45.9±0.7, 7°.12S×124°.75E, h0km, mb4.0/9, mb1 4.2/12, mb1mx4.0/35, mbtmp4.2/12, ML4.2/4, MS3.4/16, Ms1 3.4/16, ms1mx3.2/42, Error ellipse: s-maj=25.8km s-min=16.1km az=75.0

BJI 06 12:58:49.3±0.0, 7°.18S×125°.02E, h35km, mB4.9/16, mb4.6/24, Ms4.9/1, Ms7 4.6/1

NEIC 06 12:58:50.0±2.1, 7°.07S±0°.05×124°.83E±0°.07, h31km±4km, mb4.5/15, Error ellipse: s-maj=9.3km s-min=7.2km az=82.0

DJA 06 12:58:50.3±1.1, 7°S±2°×12°5E±°, h25km±11km, M4.5/18, mb4.9/18, mB5.0/13, MLv4.6/18, Mw(mB)4.3/13

ISC 06 12:58:47.6±0.4, 7°.11S±0°.04×124°.85E±0°.05, h10km, n78, σ1s.85/80, mb4.3/19, MS3.5/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	2.69	192	P	Pb	12 59 35.4	-0.5
SOEI	Soe	2.69	192	Pn	Pb	12 59 35.5	-0.4
SOEI				Sn	Sn	13 00 03.6	-0.2
BBSI	Bau Bau	2.78	305	P	Pn	12 59 32.2	0.0
BBSI				S	Sn	13 00 02.7	-3.2
MMRI	Maumere	3.00	239	P	Pn	12 59 36.2	+1.0
MMRI				S	Sn	13 00 11.9	+0.7
MMRI	Maumere	3.00	239		Pn	12 59 35.5	+0.3
MMRI				Sn	Sn	13 00 08.2	-3.0
BATI	Baumata	3.29	201	Pn	Pb	12 59 44.0	-2.1
	13nm,0.3s,baz=82,slow=1.8,SNR=17						
BATI				Sn	Sb	13 00 26.3	0.0
	12nm,0.3s,baz=160,slow=23,SNR=6.8						
BATI				LR	LR	13 00 48.3	
	comp=Z,341nm,19.6s,baz=28,slow=38						
BATI	Baumata	3.29	201	P	Pb	12 59 42.6	-3.5
EDFI	Ende, Flores	3.52	242	P	Pn	12 59 43.6	+1.0
NLAI	Namlea	4.45	30	P	Pn	12 59 55.1	-0.1
BKSI	Bulukumba	5.02	290	P	Pn	13 00 02.9	-0.2
BKSI				S	Sn	13 01 00.6	-0.6
SANI	Sanana	5.16	13	P	Pn	13 00 04.0	-0.9
	0.5nm2μm115nm,0.9s						
BASI	Baing, Sumba	5.23	234	P	Pn	13 00 08.3	+2.4
	0.5nm1μm138nm,0.8s						
BNSI	Bone	5.43	299	P	Pn	13 00 08.4	-0.3
	0.9nm2μm269nm,0.7s						
KAPI	Kappang	5.48	292	Pn	Pn	13 00 09.6	+0.2
	12nm,0.3s,baz=145,slow=8.9,SNR=52						
KAPI				Sn	Sn	13 01 11.8	-0.6
	5.3nm,0.3s,baz=207,slow=23,SNR=11						
KAPI				LR	LR	13 02 20.9	
	comp=Z,387nm,20.9s,baz=122,slow=40						
KAPI	Kappang	5.48	292		Pn	13 00 09.3	0.0
KAPI				Sn	Sn	13 01 10.3	-2.2
SPSI	Sidrap Palu	5.94	301	P	Pn	13 00 15.6	-0.1
	0.3nm73nm,0.7s						
WBSI	Waikabubak, Su	5.95	245	P	Pn	13 00 16.1	+0.2
	0.4nm862nm97nm,0.9s						
LUWI	Luwuk	6.38	341	P	Pn	13 00 20.6	-1.1
	0.3nm1μm104nm,0.8s						
LUWI	Luwuk	6.38	341		Pn	13 00 20.6	-1.1
TTSI	Tana Toraja	6.43	309	P	Pn	13 00 23.7	+1.2
	0.4nm1μm117nm,0.7s						
APSI	Ampana	6.94	332	P	Pn	13 00 28.7	-0.7
	0.5nm1μm152nm,0.9s						
LBMI	Labuha	6.96	22	P	Pn	13 00 30.7	+1.0
	0.2nm1μm54nm,0.6s						
PLAI	Plampang	7.21	256	P	Pn	13 00 34.0	+0.9
	0.3nm84nm,0.8s						
MRSI	Marisa	8.08	339	P	Pn	13 00 42.6	-2.5
	0.1nm838nm44nm,0.8s						
MTN	Manton Dam	8.41	133		Pn	13 00 50.0	+0.3
FAKI	Fak Fak	8.47	61	P	Pn	13 00 52.0	+1.6
	1μm96nm,0.6s						
FAKI	Fak Fak	8.47	61		Pn	13 00 50.7	+0.2
MPSI	Mapaga	8.90	326	P	Pn	13 00 55.8	-0.5
	501nm43nm,0.8s						
SIJI	Sorong	8.91	46	Pn	Pn	13 00 57.2	+0.6
	2.0nm,0.3s,baz=237,slow=6.5,SNR=18						
SIJI				Sn	Sn	13 02 29.9	-7.2
	0.8nm,0.3s,baz=258,slow=20,SNR=0.9						
SIJI				LR	LR	13 05 02.3	
	comp=Z,372nm,19.9s,baz=289,slow=42						
KNRA	Kununurra	9.34	156		Pn	13 01 03.0	+0.7
FITZ	Fitzroy Crossi	10.95	176	Pn	Pn	13 01 23.8	-0.6
	0.7nm,0.3s,baz=352,slow=9.8,SNR=34						
FITZ				Sn	Sn	13 03 18.1	-9.0
	0.5nm,0.3s,baz=107,slow=17,SNR=3.3						
FITZ				LR	LR	13 05 33.2	
	comp=Z,150nm,21.1s,baz=351,slow=37						
FITZ	Fitzroy Crossi	10.95	176		Pn	13 01 23.7	-0.7
SMPI	Sarmi	14.72	70	P	P	13 02 26.8	+4.5
WB0	Warramunga Arr	15.62	145	Pn	Pn	13 02 24.2	-3.9
WB0				IAmb	IAmb	13 02 35.5	
	comp=Z,28nm,0.8s						
WRAB	Tennant Creek	15.73	145	Pn	Pn	13 02 25.7	-3.8
WRAB				IAmb	IAmb	13 02 36.1	
	comp=Z,39nm,0.8s						
WRA	Warramunga Arr	15.73	145	Pn	Pn	13 02 25.1	-4.4
	comp=Z,1.0nm,0.3s,baz=321,slow=14,SNR=38						
WRA				Sn	Sn	13 05 10.9	-13
	comp=Z,0.2nm,0.3s,baz=310,slow=22,SNR=4.0						
WRA				LR	LR	13 09 05.0	
	comp=Z,61nm,21.0s,baz=15,slow=39						
WB2	Warramunga Arr	15.74	145	Pn	Pn	13 02 25.7	-3.9
WR0	Warramunga Arr	15.86	145	Pn	Pn	13 02 28.0	-3.1
WR0				IAmb	IAmb	13 02 37.9	
	comp=Z,32nm,0.9s						
GENI	Genyem	15.91	74	P	P	13 02 37.3	+1.8
JAY	Jayapura	16.45	75	Pn	P	13 02 43.0	+1.5
	comp=Z,3.2nm,0.3s,baz=167,slow=22,SNR=16						
JAY				LR	LR	13 10 50.8	
	comp=Z,102nm,20.4s,baz=216,slow=44						
AS31	Alice Springs	18.62	153	P	P	13 03 04.7	-0.7
AS31				IAmb	IAmb	13 03 09.8	
	comp=Z,20nm,0.8s						
ASAR	Alice Springs	18.62	153	P	P	13 03 05.6	+0.1
	comp=Z,1.9nm,0.3s,baz=332,slow=12,SNR=94						
ASAR				S	Sn	13 06 23.5	-10
	comp=Z,0.1nm,0.3s,baz=321,slow=19,SNR=4.9						
ASAR				LR	LR	13 11 08.5	
	comp=Z,133nm,19.3s,baz=322,slow=40						
COEN	Coen	19.25	112	P	Pn	13 03 13.6	+0.2
MDSI	Maura Dua	20.73	276	P	Pn	13 03 32.6	+1.7
PMG	Port Moresby	22.20	97	P	P	13 03 44.2	-0.1
	comp=Z,17nm,0.8s,baz=189,slow=6.9,SNR=2.9						
PMG	Port Moresby	22.20	97	P	P	13 03 43.9	-0.4
PMG				IAmb	IAmb	13 03 50.8	
	comp=Z,25nm,1.0s						
MORW	Morawa	23.37	200	P	P	13 03 57.0	+0.5
MORW				IAmb	IAmb	13 04 05.7	
	comp=Z,11nm,1.1s						
FORT	Forrest	23.74	173	P	P	13 04 00.7	+0.6
NWAO	Narrogin (SRO)	26.64	194	P	P	13 04 26.1	-0.5
	comp=Z,4.3nm,0.7s,baz=40,slow=16,SNR=2.3						
NWAO				LR	LR	13 16 34.3	
	comp=Z,94nm,18.1s,baz=38,slow=40						
NWAO	Narrogin (SRO)	26.64	194	P	P	13 04 26.1	-0.5
NWAO				IAmb	IAmb	13 04 40.7	
	comp=Z,17nm,1.4s						
NWAO	Narrogin (SRO)	26.64	194	P	P	13 04 26.2	-0.5
NWAO				IAmb	IAmb	13 04 40.8	
	comp=Z,14nm,1.4s						
BBOO	Buckleboo	27.61	159	P	P	13 04 34.0	-1.4
BBOO				IAmb	IAmb	13 04 42.2	
	comp=Z,11nm,0.9s						
PSI	Prapat	27.68	290	LR	LR	13 15 25.0	
	comp=Z,127nm,21.2s,baz=107,slow=36						
STKA	Stephens Creek	29.18	150	P	P	13 04 49.7	+0.4
	comp=Z,2.1nm,0.8s,baz=326,slow=10,SNR=3.7						
STKA				LR	LR	13 18 25.8	
	comp=Z,203nm,18.1s,baz=357,slow=40						
STKA	Stephens Creek	29.18	150	P	P	13 04 49.3	0.0
TPUB	Ta-pu	30.51	352	P	P	13 05 01.2	+0.1
CMAR	Chiang Mai Arr	36.04	315	LR	LR	13 21 48.7	
	comp=Z,66nm,20.8s,baz=115,slow=38						
NJ2	Nanjing	39.36	352	*e*P	P	13 06 18.1	+0.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
DZM	Mont Dzumac	42.75	115	LR	LR	13 24 47.0	
	comp=Z,125nm,18.3s,baz=306,slow=36						
XAN	Xi'an	43.62	341	P	P	13 06 52.1	-0.3
XAN				pP	pwP	13 07 01.0	+1.4
XAN				sP	sP	13 07 06.4	+11
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSRS	Korea Array	44.43	3	LR	LR	13 26 31.8	
	comp=Z,15nm,20.6s,baz=170,slow=38						
MJAR	Matsushiro Arr	45.20	15	P	P	13 07 12.4	+7.5
	comp=Z,1.3nm,0.8s,baz=197,slow=9.8,SNR=2.9						
MJAR				LR	LR	13 24 00.3	
	comp=Z,24nm,21.6s,baz=190,slow=34						
LZH	Lanzhou	47.29	337	*e*P	P	13 07 24.9	+3.3
LZH				pP	pwP	13 07 35.6	+6.8
LZH				sP	sP	13 07 38.5	+14
LZH				PP	PP	13 09 15.3	+2.5
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,4.3s						
HHC	Hu-ho-hao-te	49.27	347	P	P	13 07 38.5	+1.8
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,45nm,6.5s						
USRK	Ussuriysk Ar.	51.48	7	P	P	13 08 02.4	+9.1
	comp=Z,1.9nm,0.6s,baz=184,slow=6.8,SNR=2.9						
GTA	Gaotai	51.77	335	*e*P	P	13 07 56.2	+0.5
GTA				pP	pwP	13 08 07.0	+4.1
GTA				sP	sP	13 08 10.8	+12
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,78nm,6.4s						
SONM	Songino Array	57.09	345	P	P	13 08 33.7	-0.6
	comp=Z,0.2nm,0.3s,baz=163,slow=10,SNR=1.9						
WMQ	Urumqi	60.81	330	*e*P	P	13 09 00.9	+0.8
KSH	Kashi	64.72	320	P	P	13 09 29.2	+2.8
KSH				pP	pwP	13 09 38.9	+5.2
KSH				sP	sP	13 09 43.8	+15
KSH				pmax	pmax		
	comp=Z,22nm,1.5s						
KSH				pmax	pmax		
	comp=Z,110nm,4.2s						
MKAR	Makanchi Array	65.61	329	P	P	13 09 31.4	-0.5
	comp=Z,1.0nm,0.7s,baz=128,slow=7.8,SNR=11						
PETK	Petropavlovsk-	66.14	21	P	P	13 09 36.8	+1.7
	comp=Z,0.8nm,0.8s,baz=298,slow=4.3,SNR=2.6						
AAK	Ala-Archa	67.40	322	LR	LR	13 41 15.4	
	comp=Z,32nm,19.1s,baz=96,slow=38						
ZALV	Zalesovo Beam	69.51	336	P	P	13 09 54.2	-2.1
	comp=Z,0.6nm,0.4s,baz=170,slow=8.8,SNR=1.9						
VNDA	Vanda	73.00	172	P	P	13 10 17.0	-0.1

	comp=Z,0.8nm,0.8s,baz=312,slow=6.7,SNR=5.1						
VNDA				LR	LR	13 39 32.3	
	comp=Z,36nm,21.5s,baz=334,slow=34						
MAW	Mawson	73.01	201	P	P	13 10 16.3	-0.9
	comp=Z,3.0nm,0.7s,baz=301,slow=16,SNR=4.3						
MAW	Mawson	73.01	201	P	P	13 10 16.8	-0.5
QSPA	South Pole Qui	82.87	180	P	P	13 11 11.8	-0.5
CPUP	Villa Florida	146.69	176	PKPbc	PKPbc	13 18 30.6	+0.1
	comp=Z,0.8nm,0.4s,baz=194,slow=7.9,SNR=4.8						

IDC 06 13:04:33.5±7.5, 9.29°S×156.28°E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.5/33, mbtmp4.0/3, MS3.4/2, Ms1 3.4/2, ms1mx2.7/30, Error ellipse: s-maj=125.8km s-min=89.4km az=17.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.62	93	LR	LR	13 06 42.5	
	comp=Z,360nm,18.4s,baz=210,slow=36						
DZM	Mont Dzumac	16.03	144	LR	LR	13 13 16.0	
	comp=Z,167nm,20.6s,baz=301,slow=33						
WRA	Warramunga Arr	23.70	241	P	P	13 09 47.5	+0.2
	6.2nm,1.1s,baz=67,slow=9.9,SNR=5.2						
ASAR	Alice Springs	25.73	234	P	P	13 10 05.8	-0.1
	2.4nm,1.0s,baz=66,slow=9.9,SNR=6.0						
STKA	Stephens Creek	26.29	209	P	P	13 10 10.7	-0.1
	2.9nm,0.8s,baz=44,slow=14,SNR=3.1						

NEIC 06 13:21:37.8±2.8, 29.83°S±0.05°×67.5°W±0.1°, h103km±7km, mb4.6/3, Error ellipse: s-maj=14.4km s-min=7.0km az=95.0
SJA 06 13:21:38.3±0.9, 29.74°S×67.65°W, h107km±13km, ML3.8, MW3.8
IDC 06 13:21:38.1±0.7, 29.90°S×67.73°W, h103km±6km, mb3.5/3, mb1 3.7/7, mb1mx3.5/31, mbtmp3.9/7, Error ellipse: s-maj=31.3km s-min=17.0km az=91.0
ISC 06 13:21:37.7±0.6, 29.74°S±0.05°×67.61°W±0.06°, h105km±6km, n62, σ1.64s/72, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMOG	MOGNA	1.42	212	eP	Pn	13 22 05.0	+1.6
AMOG				eS	Sn	13 22 24.4	+1.5
AMOG				IAML		13 22 25.3	
	comp=Z,1μm,0.5s						
RTLL	Cerro Villicun	1.76	205	eP	Pn	13 22 09.1	+1.6
RTLL				eS	Sn	13 22 31.7	+1.6
RTLL				IAML		13 22 35.6	
	comp=Z,794nm,0.5s						
CYA	Choya	2.04	51	eP	Pn	13 22 13.7	+2.6
CYA				eS	Sn	13 22 38.5	+2.0
CYA				IAML		13 22 39.8	
	comp=Z,1μm,0.3s						
CO01	Juntas del Tor	2.17	263	Pn	Pn	13 22 15.7	+2.8
RTCV	Cerro Valdivia	2.27	200	eP	Pn	13 22 15.7	+1.7
RTCV				eS	Sn	13 22 42.8	+1.1
RTCV				IAML		13 22 44.6	
	comp=Z,397nm,0.7s						
AC05	El Transito	2.50	290	Pn	Pn	13 22 19.8	+2.7
RTLS	Leoncito	2.52	215	eP	Pn	13 22 19.4	+1.9
RTLS				eS	Sn	13 22 49.3	+1.3
RTLS				IAML		13 22 50.6	
	comp=Z,184nm,0.5s						
ACAN	Cantantal	2.56	172	eP	Pn	13 22 19.8	+2.0
ACAN				IAML		13 22 57.0	
	comp=Z,157nm,0.4s						
LCO	Las Campanas	2.79	284	Pn	Pn	13 22 23.4	+2.3
GO04	Tololo Observa	2.80	260		Pn	13 22 22.9	+1.7
CO03	El Pedregal	2.88	247	Pn	Pn	13 22 23.6	+1.5
TCA	Tanti	3.05	122	eP	Pn	13 22 25.8	+1.5
TCA				eS	Sn	13 22 57.3	-3.0
TCA				IAML		13 23 01.6	
	comp=Z,445nm,0.8s						
AC02	Maricunga	3.19	335	Pn	Pn	13 22 29.6	+3.1
CO02	Combarbal	3.27	243	Pn	Pn	13 22 28.0	+0.6
CO04	Los Peladeros	3.70	231	Pn	Pn	13 22 33.7	+0.5
VA03	San Esteban	3.93	219	Pn	Pn	13 22 37.1	+1.0
PEL	Peldehue	4.30	217		Pn	13 22 41.7	+0.7
ROC1	El Roble	4.35	221		Pn	13 22 41.6	-0.4
MT05	Renca	4.52	215	Pn	Pn	13 22 44.5	+0.5
MT02	Curacav	4.63	220	Pn	Pn	13 22 45.0	-0.4
GO02	Mina Guanaco	4.88	338		Pn	13 22 50.9	+1.6
MT01	Popeta	5.15	216	Pn	Pn	13 22 50.9	-1.6
PB14	IPOC Station P	5.67	333		Pn	13 23 00.9	+1.1
BO02	Sierra Bellavi	5.71	207	Pn	Pn	13 22 59.8	-0.4
GO05	Huala	6.40	214		Pn	13 23 06.4	-3.2
PB15	IPOC Station P	6.71	345		Pn	13 23 13.9	0.0
PB10	IPOC Station P	6.73	336	Pn	Pn	13 23 14.2	+0.2
LVC	Limon Verde	7.19	350	P	Pn	13 23 22.4	+1.9
	comp=Z,5.2nm,0.3s,baz=134,slow=8.1,SNR=13						
LVC				S	Sn	13 24 40.0	-0.9
	comp=Z,3.4nm,0.3s,baz=20,slow=21,SNR=5.9						
LVC	Limon Verde	7.19	350		Pn	13 23 19.3	-1.3
PB06	IPOC Station P	7.22	345		Pn	13 23 20.9	+0.1
BI02	San Fabin de	7.56	203	Pn	Pn	13 23 23.2	-2.1
PB04	IPOC Station P	7.72	342	Pn	Pn	13 23 26.7	-0.8
PB09	IPOC Station P	8.04	349		Pn	13 23 32.1	+0.1
PB07	IPOC Station P	8.23	345		Pn	13 23 33.1	-1.5
PB01	IPOC Station P	8.82	348		Pn	13 23 41.0	-1.5
PB08	IPOC Station P	9.65	351	Pn	Pn	13 23 52.5	-1.6
CPUP	Villa Florida	9.69	72	P	Pn	13 23 54.8	+0.6
	comp=Z,0.5nm,0.3s,baz=240,slow=12,SNR=6.6						
CPUP	Villa Florida	9.69	72		Pn	13 23 53.0	-1.2
PB11	IPOC Station P	10.10	349	Pn	Pn	13 23 57.2	-2.8
GO01	Chusmiza	10.13	351	Pn	Pn	13 23 58.5	-2.1
PSGCX	Pisagua	10.35	347	Pn	Pn	13 23 59.6	-3.6
MNMC	Minye Minye	10.71	350	Pn	Pn	13 24 05.5	-2.8
PLCA	Paso Flores	11.23	192	P	Pn	13 24 13.1	-2.0
	comp=Z,0.2nm,0.3s,baz=12,slow=12,SNR=6.6						
PB16	IPOC Station P	11.48	351	Pn	Pn	13 24 18.3	-0.7
LPAZ	La Paz	13.39	358	P	Pn	13 24 45.8	+1.6
	comp=Z,0.3nm,0.3s,baz=175,slow=4.9,SNR=3.3						
LPAZ	La Paz	13.39	358	Pn	Pn	13 24 43.9	-0.3
SIV	San Ignacio	14.94	25	P	Pn	13 25 02.7	-0.8
	comp=Z,0.1nm,0.3s,baz=247,slow=12,SNR=4.5						
SAML	Samuel	21.09	12	P	P	13 26 14.1	+0.2
SAML				IAmb	IAmb	13 26 16.4	
	comp=Z,2.4nm,0.6s						
USHA	Ushuaia	25.09	181	P	P	13 26 50.0	-2.3
	comp=Z,35nm,0.4s,baz=79,slow=0.3,SNR=5.2						
VNA3	Neumayer Olymp	51.95	160	P	P	13 30 36.7	+1.2
VNA2	Neumayer--Watz	52.55	159	P	P	13 30 41.1	+1.2
	baz=281,slow=8.0						
SNAA	Sanae	54.17	159	P	P	13 30 52.7	+0.9
SNAA	Sanae	54.17	159	P	P	13 30 52.5	+0.7
	comp=Z,3.1nm,0.8s,baz=287,slow=8.2,SNR=22						
SNAA	Sanae	54.17	159	IAmb	IAmb	13 30 54.2	
	comp=Z,19nm,1.8s						
QSPA	South Pole Qui	60.49	180	P	P	13 31 37.5	+1.1
QSPA				IAmb	IAmb	13 31 38.6	
	comp=Z,5.4nm,0.8s						
TORD	Torodi Ar. Bea	79.17	68	P	P	13 33 33.6	+2.2
	comp=Z,1.3nm,0.8s,baz=228,slow=5.6,SNR=4.9						
PDAR	Pinedale Array	81.81	330	P	P	13 33 46.0	+0.9
	comp=Z,0.1nm,0.5s,baz=134,slow=7.8,SNR=2.3						
PDAR				pP	pP	13 34 14.3	+1.4
	comp=Z,0.4nm,0.7s,baz=118,slow=8.6,SNR=3.9						
ASAR	Alice Springs	123.02	204	PKP	PKPdf	13 40 21.5	-0.9
	comp=Z,0.2nm,0.7s,baz=151,slow=2.1,SNR=1.6						
WRA	Warramunga Arr	126.27	206	PKP	PKPdf	13 40 28.3	-0.4
	comp=Z,0.5nm,0.8s,baz=154,slow=1.6,SNR=5.3						
KURBB	Kurchatov Arra	147.19	41	PKPbc	PKPbc	13 41 08.8	+0.5
	comp=Z,0.2nm,0.2s,baz=294,slow=3.4,SNR=7.5						
KURBB				pPKPbc	pPKPbc	13 41 36.5	-0.7
	comp=Z,0.6nm,0.5s,baz=306,slow=3.7,SNR=2.6						
ZALV	Zalesovo Beam	148.62	32	PKPbc	PKiKP	13 41 13.2	-0.2
	comp=Z,1.2nm,0.6s,baz=297,slow=1.0,SNR=4.8						
ZALV				pPKPbc	pPKPbc	13 41 40.2	-1.0
	comp=Z,1.0nm,0.4s,baz=291,slow=4.8,SNR=3.0						
MKAR	Makanchi Array	151.11	46	PKPbc	PKiKP	13 41 19.2	+0.3
	comp=Z,0.9nm,0.7s,baz=300,slow=2.6,SNR=8.6						
MKAR				pPKPbc	pPKPbc	13 41 47.3	0.0
	comp=Z,0.8nm,0.8s,baz=302,slow=1.5,SNR=5.0						

IDC 06 13:22:06.7±28.0, 14.83°S×166.26°E, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.6/40, mbtmp3.9/4, ML3.5/1, Error ellipse: s-maj=490.0km s-min=47.3km az=53.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.20	179	Pn	Pn	13 23 53.5	+0.1
	0.9nm,0.3s,baz=22,slow=5.4,SNR=33						
DZM				Sn	Sn	13 25 11.6	-4.5
	0.4nm,0.3s,baz=114,slow=18,SNR=1.5						
STKA	Stephens Creek	28.19	229	P	P	13 28 01.0	-0.2
	1.1nm,0.4s,baz=50,slow=9.3,SNR=5.2						
WRA	Warramunga Arr	30.86	256	P	P	13 28 25.0	+0.1
	0.5nm,0.7s,baz=85,slow=8.9,SNR=6.7						
ASAR	Alice Springs	31.73	249	P	P	13 28 32.6	0.0
	1.0nm,0.6s,baz=80,slow=9.2,SNR=16						

THR 06 13:28:23.0±0.4, 28.12°N×58.12°E, h16km±4km, ML3.8
IDC 06 13:28:25.9±3.2, 28.18°N×58.33°E, h74km±34km, mb3.6/9, mb1 3.7/11, mb1mx3.3/54, mbtmp3.9/11, ML3.9/2, Error ellipse: s-maj=25.4km s-min=16.3km az=154.0
TEH 06 13:28:26.7, 28.10°N×58.37°E, h72km, ML3.8
OMAN 06 13:28:33.8±1.5, 27.57°N×58.28°E, h36km, ml3.8/17, Error ellipse: s-maj=127.2km s-min=35.2km az=7.0
ISC 06 13:28:27.1±0.7, 28.03°N±0.04°×58.35°E±0.05°, h100km, n45, σ2.06s/60, mb3.7/8, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNJ	Kahnooj	0.58	262	eP	Pn	13 28 41.3	-2.2
NIAN	Nian	1.42	251	eP	Pn	13 28 53.2	+0.8
IBND	Bandar-abas	1.71	251	eP	Pn	13 28 56.5	+0.6
CHMN	Cheshme madani	1.96	339	eP	Pn	13 28 57.8	-1.7
GENO	Geno	2.03	253	eP	Pn	13 29 00.4	+0.1
BNDS	Bandar-Abbas	2.03	253	ePg	Pn	13 28 57.3	-3.0
BNDS				eSg	Sn	13 29 22.0	-3.6
BNDS				IAML		13 29 25.0	
	comp=N,746nm,0.4s						
NGRK	Negar Kerman	2.15	319	eP	Pn	13 29 01.7	-0.3
NGRK				e		13 29 31.1	
KRBR	Kerman	2.39	325	ePn	Pn	13 29 01.3	-3.9
TVBK	TV Kerman	2.40	325	e		13 29 29.9	
TVBK				eP	Pn	13 29 04.7	-0.5
SZD1	Zahaedan-tmp	2.64	56	eP	Pn	13 29 08.2	-0.1
BANOM	Banah	2.78	222	P	Pn	13 29 10.5	+0.5
	SNR=16						
BANOM				S	Sn	13 29 40.7	-2.4
	SNR=14						
KHGB	Koh Gabri	2.85	325	eP	Pn	13 29 10.2	-1.0
MDH	Madha	3.28	214	P	Pn	13 29 16.6	0.0
	SNR=6.4						
MDH				S	Sn	13 29 50.3	-4.6
	SNR=7.4						
UOSS	Minazif	3.62	213	P	Pn	13 29 22.0	+0.7
NHDN	Nehbandan	3.66	23	eP	Pn	13 29 20.8	-1.1
NHDN				e		13 30 02.1	
HATD	Hatta, Dubai	3.76	212	P	Pn	13 29 23.9	+0.8
HATD				S	Sn	13 30 02.4	-4.1
NAZ	Nazwa, Dubai	3.87	219	P	Pn	13 29 25.5	+1.0
NAZ				S	Sn	13 30 07.7	-1.4
ASHO	Ashiyiah	3.92	212	P	Pn	13 29 27.7	+2.5
	SNR=11						
ASHO				S	Sn	13 30 07.9	-2.4
BSRN	Basiran	3.98	10	ePn	Pn	13 29 24.7	-1.5
BSRN				eSg	Sn	13 30 25.1	+13
BSRN	Basiran	3.98	10	eP	Pn	13 29 24.7	-1.5
FAQ	Al Faqa, Dubai	4.10	218	P	Pn	13 29 28.9	+1.2
FAQ				S	Sn	13 30 12.5	-2.2
SOHO	SOHO	4.21	203	P	Pn	13 29 29.3	+0.2
SOHO				S	Sn	13 30 13.2	-4.1
	SNR=8.6						
IKOO	Kooshah	4.42	7	eP	Pn	13 29 30.8	-1.4
BIDO	Bidbid	4.49	183	P	Pn	13 29 33.2	+0.2
BIDO				S	Sn	13 30 20.2	-4.0
HOQ	Hoqain	4.53	192	P	Pn	13 29 33.6	+0.1
HOQ				S	Sn	13 30 20.3	-4.7
	SNR=8.8						
WSAR	Wadi Sarin	4.78	177	P	Pn	13 29 37.1	+0.3
	comp=N,3.5nm,0.3s,baz=321,slow=4.5,SNR=69						
WSAR				S	Sn	13 30 26.1	-5.0
	comp=N,38nm,0.3s,baz=82,slow=15,SNR=29						
WSAR	Wadi Sarin	4.78	177	P	Pn	13 29 37.2	+0.3
	SNR=94						
WSAR				S	Sn	13 30 28.1	-3.0
ITEG	Tejag	4.86	4	eP	Pn	13 29 37.0	-1.2
ARQ	Araqi	4.96	200	P	Pn	13 29 41.4	+2.1
	SNR=15						
ARQ				S	Sn	13 30 33.8	-1.6
SMDO	Samad	4.96	183	P	Pn	13 29 39.6	+0.2
IMON	Monand	5.27	12	eP	Pn	13 29 43.7	0.0
BSY	Bisya	5.36	191	P	Pn	13 29 45.2	+0.4
BSY				S	Sn	13 30 42.9	-2.5
WBK	Wadi Bani Khal	5.42	174	P	Pn	13 29 46.0	+0.3
	SNR=27						
WBK				S	Sn	13 30 43.2	-3.7
	SNR=23						
ISAD	Sadrabad	5.60	315	eP	Pn	13 29 49.2	+1.0
JMDO	Jabal Madar	5.64	182	P	Pn	13 29 49.5	+0.9
JMDO				S	Sn	13 30 49.5	-2.6
AAK	Ala-Archa	19.59	38	P	P	13 32 47.7	+0.2
	comp=N,0.4nm,0.3s,baz=199,slow=7.3,SNR=6.5						
EIL	Elat	20.56	280	P	P	13 32 58.8	+1.0
	comp=N,10.0nm,1.0s,baz=19,slow=6.4,SNR=4.2						
BRTR	Keskin Array B	23.52	306	P	P	13 33 28.4	0.0
	comp=N,1.1nm,0.7s,baz=101,slow=12,SNR=6.1						
MKAR	Makanchi Array	26.52	39	P	P	13 33 55.6	+0.3
	comp=N,0.7nm,0.6s,baz=226,slow=8.2,SNR=8.0						
KURBB	Kurchatov Arra	27.27	29	P	P	13 34 02.1	+0.3
	comp=N,0.3nm,0.4s,baz=223,slow=8.5,SNR=7.4						
ZALV	Zalesovo Beam	32.35	29	P	P	13 34 46.6	-0.1
	comp=N,2.3nm,0.3s,baz=232,slow=9.2,SNR=12						
SONM	Songino Array	41.96	49	P	P	13 36 09.1	+0.9
	comp=N,0.4nm,0.5s,baz=280,slow=8.3,SNR=2.7						
TORD	Torodi Ar. Bea	54.62	266	P	P	13 37 46.9	+1.1
	comp=N,1.5nm,0.5s,baz=61,slow=7.4,SNR=16						
KSRS	Korea Array	58.09	61	P	P	13 38 10.1	0.0
	comp=N,0.6nm,0.5s,baz=280,slow=7.4,SNR=4.3						
WRA	Warramunga Arr	87.54	114	P	P	13 41 06.9	+2.7
	comp=N,0.6nm,0.6s,baz=317,slow=4.0,SNR=8.2						

IDC 06 13:47:02.9±1.0, 19.75°N×99.60°E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/36, mbtmp3.7/5, MS3.2/6, Ms1 3.3/6, ms1mx2.8/48, Error ellipse: s-maj=31.0km s-min=13.1km az=103.0
NEIC 06 13:47:04.0±2.0, 19.67°N±0.05°×99.50°E±0.06°, h12km±6km, mb4.2/3, Error ellipse: s-maj=8.6km s-min=5.5km az=123.0
ISC 06 13:47:03.5±0.7, 19.64°N±0.05°×99.61°E±0.06°, h10km, n36, σ0.83s/29, mb3.8/8, MS3.3/5, Thailand

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM34	Chiang Mai Arr	0.89	209	P	Pg	13 47 20.5	-0.2
CMMT	Chiang Mai	1.03	217	P	Pg	13 47 23.3	-0.1
CHTO	Chiang Mai	1.03	218		Pg	13 47 23.2	-0.1
CHTO				Sg	Sg	13 47 36.0	-0.7
CM35	Chiang Mai Arr	1.04	204	P	Pg	13 47 23.6	0.0
LAMP	Lampang	1.11	179	P	Pg	13 47 24.8	0.0
CM36	Chiang Mai Arr	1.21	204	P	Pb	13 47 26.3	-0.3
CM32	Chiang Mai Arr	1.21	217	P	Pb	13 47 26.8	+0.2
PHRA	Phrae	1.27	152	P	Pn	13 47 27.0	-0.3
NANT	Nan	1.32	129	P	Pn	13 47 24.4	-3.7
CMAR	Chiang Mai Arr	1.33	208	Pg	Pn	13 47 29.1	+0.9
	241nm,0.3s,baz=24,slow=18,SNR=826						
CMAR				Lg	Lg	13 47 48.3	
	346nm,0.3s,baz=35,slow=29,SNR=14						
CM15	Chiang Mai Arr	1.34	209	P	Pn	13 47 27.8	-0.5
CM02	Chiang Mai Arr	1.35	208	P	Pn	13 47 28.9	+0.5
CM01	Chiang Mai Arr	1.36	207	P	Pn	13 47 28.3	-0.2
CM05	Chiang Mai Arr	1.38	207	P	Pn	13 47 29.2	+0.3
CM13	Chiang Mai Arr	1.38	209	P	Pn	13 47 27.9	-0.9
UTTA	Uttaradit	2.08	154	P	Pn	13 47 37.4	-1.1
MHMT	Maesarieng	2.15	228	P	Pn	13 47 40.2	+0.7
PBKT	Sadao Pong	3.31	157	P	Pn	13 47 54.7	-0.7
PBKT	Sadao Pong	3.31	157		Pn	13 47 54.9	-0.5
SLVN	Son La	4.37	67	Pn	Pn	13 48 10.0	0.0
SHL	Shillong	9.26	311		Pn	13 49 15.7	-1.6
PSI	Prapat	16.75	182	LR	LR	13 57 30.8	
	comp=Z,92nm,19.0s,baz=91,slow=37						
TBP	Tagbilaran	25.43	109	iP	P	13 52 25.5	-6.1
SONM	Songino Array	28.66	10	P	P	13 52 59.4	-1.2
	1.1nm,0.9s,baz=198,slow=9.1,SNR=5.0						
KDJ	Kajisay	29.39	325	P	P	13 53 07.0	-0.2
KDJ				IAmb	IAmb	13 53 14.4	
	comp=Z,3.1nm,0.9s						
MKAR	Makanchi Array	30.58	336	P	P	13 53 17.5	+0.1
	comp=Z,0.8nm,0.8s,baz=143,slow=10,SNR=6.7						
KAPI	Kappang	31.51	139	LR	LR	14 07 57.7	
	comp=Z,38nm,18.1s,baz=323,slow=40						
KURK	Kurchatov	35.19	337	P	P	13 53 57.3	-0.3
KURK				IAmb	IAmb	13 54 02.6	
	comp=Z,1.8nm,0.8s						
ZALV	Zalesovo Beam	36.09	345	P	P	13 54 05.8	+0.6
	comp=Z,1.5nm,0.6s,baz=147,slow=8.9,SNR=4.7						
AKTO	Aktyubinsk	44.96	323	LR	LR	14 17 10.0	
	comp=Z,28nm,18.1s,baz=124,slow=40						
ARU	Arti	47.73	330	LR	LR	14 16 41.0	
	comp=Z,28nm,18.7s,baz=172,slow=37						
WRA	Warramunga Arr	52.01	137	P	P	13 56 15.1	+1.6
	comp=Z,0.4nm,0.8s,baz=324,slow=7.8,SNR=1.6						
ASAR	Alice Springs	54.50	141	P	P	13 56 33.6	+1.9
	comp=Z,0.5nm,0.9s,baz=320,slow=7.0,SNR=4.8						
TIXI	Tiksi	54.74	11	P	P	13 56 34.0	+1.3
TIXI				IAmb	IAmb	13 56 36.9	
	comp=Z,4.6nm,0.5s						
NOA	NORSAR Array B	72.26	329	LR	LR	14 32 35.8	
	comp=Z,16nm,18.6s,baz=245,slow=38						
KDAK	Kodiak Island	82.67	31	LR	LR	14 42 52.9	
	comp=Z,12nm,18.1s,baz=2.4,slow=41						

UPA 06 13:48:25.2±0.9, 6.42°N×82.56°W, h10km±30km, MW4.1
ISC 06 13:48:18.9±3.3, 6.1°N±0.2°×82.7°W±0.1°, h14km, n21, σ1.84s/35, 1C-2D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CACAO	El Cacao, Vera	2.23	55⇓	iP	Pn	13 48 56.7	+1.2
CACAO				eS	Sn	13 49 21.3	-1.7
MARI3	Mariato, Verag	2.33	47	eP	Pn	13 48 58.5	+1.7
MARI3				eS	Sn	13 49 22.9	-2.3
CHIR3	Chiriqui UPA,	2.36	9	eP	Pn	13 48 57.2	0.0
PONU3	Ponuga, Veragu	2.50	43	eP	Pn	13 49 00.5	+1.3
PONU3				eS	Sn	13 49 27.6	-1.9
PTJ1	Puerto Jimnez	2.54	346	eS	Sn	13 49 30.1	-0.5
TOSI3	Tonosi	2.62	59	eS	Sn	13 49 30.9	-1.5
BCO2	Palmira	2.66	4	eP	Pn	13 49 02.5	+0.9
BCO2				eS	Sn	13 49 30.7	-3.0
OCU3	Ocu, Herrera	2.68	45	eP	Pn	13 49 03.6	+1.9
BRU2	Volcan	2.73	0	eP	Pn	13 49 03.8	+1.3
BRU2				eS	Sn	13 49 34.1	-1.3
CHGR2	Aguacate	2.92	11⇑	eP	Pn	13 49 05.9	+0.9
CHGR2				eS	Sn	13 49 37.9	-2.1
AZU	Azuero	2.97	54	eP	Pn	13 49 07.6	+2.0
AZU				eS	Sn	13 49 39.6	-1.4
AZU	Azuero	2.97	54⇓	iP	Pn	13 49 07.6	+2.0
AZU				eS	Sn	13 49 40.0	-1.0
PNME	Penonome	3.38	44	eP	Pn	13 49 13.3	+2.0
VTON	El Valle, Cocl	3.61	45	eP	Pn	13 49 16.9	+2.3
VTON				eS	Sn	13 49 56.5	-0.6
ZANG	Zanguenga, Cho	4.03	44	eP	Pn	13 49 23.1	+2.8
ZANG				eS	Sn	13 50 05.6	-1.6
BCIP	Isla Barro Col	4.20	42	eP	Pn	13 49 24.9	+2.3
BCIP				eS	Sn	13 50 10.8	-0.7
BCIP	Isla Barro Col	4.20	42	eP	Pn	13 49 24.0	+1.4
BCIP				eS	Sn	13 50 11.3	-0.2
UPA	Univ. de Panam	4.28	47	eP	Pn	13 49 25.0	+1.3
UPA				eS	Sn	13 50 12.8	-0.7
UPA	Univ. de Panam	4.28	47	eP	Pn	13 49 26.5	+2.8
UPA				eS	Sn	13 50 14.0	+0.5
PTAC	Punta Ardita,	4.98	77	eP	Pn	13 49 33.3	0.0
PTAC				eS	Sn	13 50 26.6	-4.1
ORTC	Ortega, Tolima	7.72	106	eP	Pn	13 50 18.5	+7.4

IDC 06 13:51:47.6±0.9, 19.08°N×122.44°E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.7/39, mbtmp3.8/8, ML3.1/1, MS2.5/1, Ms1 2.7/1, ms1mx2.2/38, Error ellipse: s-maj=33.0km s-min=19.3km az=67.0
NEIC 06 13:51:48.7±1.7, 19.15°N±0.06°×122.5°E±0.1°, h10km±1km, mb4.5/6, Error ellipse: s-maj=18.0km s-min=9.3km az=291.0
MAN 06 13:51:50.8, 19.28°N×122.12°E, h15km, mb4.7, ML3.6, MS3.5
ISC 06 13:51:48.8±0.7, 19.21°N±0.05°×122.45°E±0.08°, h10km, n35, σ1.59s/38, mb3.9/11, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	1.31	340	eP	Pn	13 52 11.2	-2.0
BBP				eS	Sb	13 52 22.1	-8.3
APYP	Conner	1.76	221	eP	Pn	13 52 18.3	-1.0
APYP				eS	Sn	13 52 38.1	-3.7
ABRA	Dolores	2.26	227	eP	Pn	13 52 25.9	-0.3
ABRA				eS	Sn	13 52 51.4	-2.8
SIPP	Brgy, Tapao	2.28	236⇓	eP	Pn	13 52 26.8	+0.3
SIPP				eS	Sg	13 53 05.9	+3.8
CAUP	Cauayan	2.33	195	eP	Pb	13 52 30.1	-0.7
CAUP				eS	Sg	13 53 07.5	+3.9
SZP	Santa	2.51	229	Pn	Pn	13 52 30.6	+0.9
SMPP	San Manuel, Pa	3.47	209	eP	Pn	13 52 44.1	+1.1
SMPP				eS	Sn	13 53 23.9	-0.4
BALP	Baler	3.54	194	eP	Pn	13 52 45.7	+1.8
BALP				eS	Sn	13 53 24.6	-1.3
BOLP	Bolinao	3.70	221	eP	Pn	13 52 46.7	+0.6
BOLP				eS	Sn	13 53 30.2	+0.3
TWG	Pinlang	3.82	341	Pn	Pn	13 52 47.2	-0.6
YULB	Yu-li	4.30	346	Pn	Pn	13 52 53.2	-1.2
TPUB	Ta-pu	4.41	338		Pn	13 52 56.0	+0.1
SSLB	Suanglung	4.77	343		Pn	13 53 01.4	+0.6
NACB	Ninganchiao	5.01	351	Pn	Pn	13 53 02.7	-1.3
YOJ	Yonaguni jima	5.26	6	Pn	Pn	13 53 08.6	+1.1
YHNB	Yeheng	5.53	350	Pn	Pn	13 53 11.6	+0.3
JOW	Kunigami	9.29	34	Pn	Pn	13 54 04.3	+1.4
	0.4nm,0.3s,baz=35,slow=11,SNR=12						
JOW	Kunigami	9.29	34		Pn	13 54 03.4	+0.5
CMAR	Chiang Mai Arr	22.26	272	P	P	13 56 46.1	0.0
	1.2nm,0.7s,baz=76,slow=8.2,SNR=6.1						
CMAR				LR	LR	14 04 23.4	
	comp=Z,13nm,22.0s,baz=60,slow=34						
WRA	Warramunga Arr	40.62	163	P	P	13 59 28.2	-0.9
	0.6nm,0.8s,baz=343,slow=9.0,SNR=8.0						
WB2	Warramunga Arr	40.62	163	P	P	13 59 27.9	-1.2
WB2				IAmb	IAmb	13 59 40.5	
	comp=Z,28nm,1.9s						
WR0	Warramunga Arr	40.69	162	P	P	13 59 27.8	-1.9
WR0				IAmb	IAmb	14 00 39.8	
	comp=Z,29nm,1.9s						
H11N1	WAKE ISLAND Hy	41.82	82	T	T	14 45 00.2	
	baz=277,slow=75,SNR=28						
H11N2	WAKE ISLAND Hy	41.82	82	T	T	14 44 37.2	
	baz=277,slow=75,SNR=25						
H11N3	WAKE ISLAND Hy	41.84	82	T	T	14 45 00.2	
	baz=277,slow=75,SNR=16						
MKAR	Makanchi Array	42.79	319	P	P	13 59 47.3	+0.5
	comp=Z,1.6nm,0.5s,baz=113,slow=9.3,SNR=16						
PETK	Petropavlovsk-	43.44	30	P	P	13 59 58.2	+6.4
	comp=Z,0.7nm,0.7s,baz=208,slow=6.7,SNR=1.7						
ASAR	Alice Springs	44.05	165	P	P	13 59 56.5	-0.5
	comp=Z,0.4nm,0.5s,baz=347,slow=6.9,SNR=19						
KDJ	Kajisay	44.50	311	P	P	14 00 01.6	+0.8
ZALV	Zalesovo Beam	45.08	329	P	P	14 00 06.2	+1.2
	comp=Z,0.7nm,0.5s,baz=121,slow=6.9,SNR=2.2						
KKAR	Karatay Array	49.51	311	P	P	14 00 39.6	-0.1
KKAR				IAmb	IAmb	14 00 40.9	
	comp=Z,4.3nm,1.3s						
NWAO	Narrogin (SRO)	52.08	186	P	P	14 00 57.3	-1.7
FINES	FINESS Array B	76.33	331	P	P	14 03 39.5	+1.6
	comp=Z,1.7nm,0.8s,baz=90,slow=6.9,SNR=1.8						
CSS	Mathiatis	78.55	303	P	P	14 03 49.8	-1.1
YKA	Yellowknife Ar	87.08	23	P	P	14 04 35.2	+0.7
	comp=Z,0.3nm,0.7s,baz=306,slow=3.6,SNR=4.5						

GUC 06 14:28:33.5±0.8, 23.21°S×68.55°W, h104km±6km, ML3.0, 1C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.68	331	eP	Pn	14 28 51.1	-0.5
LVC				eS	Sn	14 29 03.9	-1.2
PB15	IPOC Station P	0.85	270⇓	iP	Pn	14 28 52.9	0.0
PB15				iS	Sn	14 29 07.6	+0.1
PB15	IPOC Station P	0.85	270	eP	Pn	14 28 52.9	-0.1
PB15				iS	Sn	14 29 07.7	+0.1
PB06	IPOC Station P	1.07	298	eP	Pn	14 28 54.9	-0.2
PB06				iS	Sn	14 29 11.1	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB06				IAML		14 29 12.0	
	comp=E,596nm,0.3s						
PB09	IPOC Station P	1.55	335	eP	Pn	14 29 01.4	+0.7
PB09				eS	Sn	14 29 22.0	+0.7
PB09				IAML		14 29 24.3	
	comp=N,145nm,0.3s						
PB05	IPOC Station P	1.57	283	⇑iP	Pn	14 29 00.3	-0.6
PB05				eS	Sn	14 29 20.6	-1.1
PB05				IAML		14 29 24.6	
	comp=N,111nm,0.3s						
PB03	IPOC Station P	1.61	316	eP	Pn	14 29 01.2	-0.3
PB03				eS	Sn	14 29 21.8	-0.8
PB03				IAML		14 29 26.4	
	comp=N,228nm,0.2s						
PB04	IPOC Station P	1.72	300	eP	Pn	14 29 02.7	-0.1
PB04				IAML		14 29 28.5	
	comp=N,274nm,0.4s						
PB01	IPOC Station P	2.33	338	eP	Pn	14 29 10.6	0.0

GUC 06 14:29:08.1±0.5, 19.98S×69.33W, h88km±2km, ML2.9, 7C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB08	IPOC Station P	0.23	135	eP	Pn	14 29 21.2	-0.2
PB08				eS	Sn	14 29 31.6	+0.3
PB08	IPOC Station P	0.23	135	⇑iP	Pn	14 29 21.4	0.0
PB08				i S	Sn	14 29 31.6	+0.3
PB08				IAML		14 29 32.2	
	comp=N,423nm,0.2s						
GO01	Chusmiza	0.33	23	eP	Pn	14 29 21.7	-0.3
GO01				eS	Sn	14 29 32.4	+0.1
GO01	Chusmiza	0.33	23	⇑iP	Pn	14 29 21.8	-0.3
GO01				i S	Sn	14 29 32.3	0.0
PB11	IPOC Station P	0.37	305	⇑iP	Pn	14 29 21.2	-0.7
PB11				eS	Sn	14 29 31.7	-0.4
PB11	IPOC Station P	0.37	305	⇑iP	Pn	14 29 21.2	-0.7
PB11				i S	Sn	14 29 31.5	-0.6
PB11				IAML		14 29 32.2	
	comp=N,1μm,0.2s						
PSGC	Pisagua	0.84	297	eP	Pn	14 29 24.9	-1.1
PSGC	Pisagua	0.84	297	⇑iP	Pn	14 29 24.9	-1.1
PSGC				i S	Sn	14 29 38.1	-1.2
MNMC	Minye Minye	0.88	343	⇑iP	Pn	14 29 26.3	-0.3
MNMC	Minye Minye	0.88	343	⇑iP	Pn	14 29 26.2	-0.3
MNMC				eS	Sn	14 29 41.0	+0.7
MNMC				IAML		14 29 42.5	
	comp=N,784nm,0.3s						
PB01	IPOC Station P	1.07	188	eP	Pn	14 29 28.1	-0.5
PB01				i S	Sn	14 29 40.8	-3.2
PB01				IAML		14 29 45.3	
	comp=E,270nm,0.3s						
PB12	IPOC Station P	1.65	325	eP	Pn	14 29 34.8	-1.0
PB12	IPOC Station P	1.65	325	⇓iP	Pn	14 29 34.8	-1.0
PB12				i S	Sn	14 29 56.3	-0.4
PB12				IAML		14 29 59.9	
	comp=N,188nm,0.3s						

*IDC **06** 14:30:58.2±0.7, 37.77N×142.73E, h0km, mb3.8/14, mb1 3.9/19, mb1mx3.8/51, mbtmp3.8/19, ML2.8/4, MS2.7/5, Ms1 2.7/5, ms1mx2.5/46, Error ellipse: s-maj=20.0km s-min=14.3km az=118.0*

*NEIC **06** 14:31:00.3±1.0, 37.79N±0.08×142.8E±0.1, h15km±5km, mb4.7/9, Error ellipse: s-maj=14.6km s-min=9.3km az=123.0*

*JMA **06** 14:31:00.7±0.2, 37.84N×142.54E, h32km±2km, M4.2*

*NIED **06** 14:31:00, 37.80N×142.50E, h23km, Mw3.8 Best double couple: $M_0$5.69000×10^14 NP1:ϕ_s174.00000°, δ71.00000°, λ-78.00000°. NP2:ϕ_s321.00000°, δ22.00000°, λ-121.00000°.*

ISC 06 14:31:00.4±0.6, 37.83N±0.05×142.41E±0.05, h14km, n59, σ1.56/59, mb3.8/18, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.89	303	P	Pn	14 31 18.2	-0.2
JIO	Ouri	1.04	307	P	Pn	14 31 20.6	0.0
JIO				S	Sg	14 31 34.6	+0.5
JMST	Minamisoumatoc	1.21	265	P	Pg	14 31 23.1	-0.6
JMST				S	Sg	14 31 39.5	-0.1
JKMT	Kesennumamotoy	1.22	323	P	Pn	14 31 22.7	-0.3
JKMT				S	Sb	14 31 38.9	0.0
JMM	Marumori	1.28	272	P	Pg	14 31 24.4	-0.7
JMM				eS	Sg	14 31 41.5	-0.3
JFK	Kawauchi	1.31	250	P	Pg	14 31 24.5	-1.0
JMK	Ichinoseki	1.46	320	P	Pn	14 31 26.9	+0.6
JOU	Okura	1.48	292	P	Pb	14 31 27.6	0.0
JFT	Otama	1.68	260	P	Pb	14 31 30.9	-0.1
JOM	Ohasama	1.86	332	P	Pn	14 31 33.0	+1.2
JYS	Shirataka	1.89	282	P	Pb	14 31 34.2	-0.5
JYK	Kaneyama	1.94	304	P	Pn	14 31 34.2	+1.2
JAW	Awa shima	2.57	285	P	Pb	14 31 44.5	-1.7
JANG	Nango	2.63	345	P	Pn	14 31 44.6	+2.2
JAG	Ashikaga	2.75	240	P	Pn	14 31 45.6	+1.5
MJAR	Matsushiro Arr	3.60	250	Pn	Pn	14 31 58.9	+3.2
	1.0nm,0.3s,baz=79,slow=15,SNR=43						
MJAR				Sn	Sb	14 32 44.3	-3.0
	0.4nm,0.3s,baz=86,slow=17,SNR=4.2						
MAJO	Matsushiro	3.60	250		Pn	14 31 58.3	+2.5
MAT	Matsushiro	3.60	250	P	Pn	14 31 58.8	+3.1
MAT				eS	Sb	14 32 45.0	-2.3
ERM	Erimo	4.21	8	Pn	Pn	14 32 03.6	-0.5
INU	Inuyama	5.00	242		Pn	14 32 18.3	+3.3
JHJ2	Mitsune	5.17	205	Pn	Pn	14 32 17.6	+0.3
JHJ	Hachijo jima 2	5.17	205	Pn	Pn	14 32 17.7	+0.4
	28nm,0.3s,baz=30,slow=20,SNR=25						
JHJ				Sn	Sn	14 33 14.8	-1.9
	28nm,0.3s,baz=99,slow=23,SNR=5.7						
JHJ				LR	LR	14 34 04.7	
	comp=Z,32nm,19.2s,baz=76,slow=36						
ASAJ	Asahikawa	6.28	1	Pn	Pn	14 32 32.9	+0.3
	0.6nm,0.3s,baz=206,slow=19,SNR=10						
ASAJ				Sn	Sn	14 33 41.0	-3.0
	0.6nm,0.3s,baz=31,slow=29,SNR=1.4						
JKA	Kamikawa-asahi	6.28	1		Pn	14 32 32.9	+0.3
JKA					Sn	14 33 41.0	-3.0
YSS	Yuzh-Sakhalins	9.12	1	Pn	Pn	14 33 12.0	+0.6
USRK	Ussuriysk Ar.	10.12	312	Pn	Pn	14 33 28.5	+3.4
	baz=113,slow=16,SNR=2.5						
JNU	Nakatsue	10.51	247	Pn	Pn	14 33 34.5	+3.8
KSRS	Korea Array	11.50	273	Pn	Pn	14 33 51.0	+7.0
	0.2nm,0.3s,baz=84,slow=14,SNR=3.3						
KSRS				LR	LR	14 38 13.9	
	comp=Z,62nm,18.3s,baz=90,slow=37						
KLR	Kul'dur	13.75	329	LR	LR	14 39 36.6	
	comp=Z,47nm,18.3s,baz=144,slow=37						
PETK	Petropavlovsk-	18.60	30	P	P	14 35 15.9	-1.1
	0.1nm,0.3s,baz=234,slow=12,SNR=4.7						
PETK				LR	LR	14 42 07.4	
	comp=Z,21nm,19.1s,baz=181,slow=36						
MA2	Magadan	22.41	11	LR	LR	14 44 09.2	
	comp=Z,23nm,20.9s,baz=222,slow=35						
SEY	Seymchan	25.86	10	P	P	14 36 31.8	+0.6
	2.5nm,0.8s,baz=192,slow=8.1,SNR=10						
H11N2	WAKE ISLAND Hy	27.90	123	T	T	15 05 58.3	
	baz=316,slow=75,SNR=233						
H11N1	WAKE ISLAND Hy	27.91	123	T	T	15 05 59.0	
	baz=316,slow=75,SNR=117						
H11N3	WAKE ISLAND Hy	27.92	123	T	T	15 05 57.3	
	baz=316,slow=75,SNR=215						
SONM	Songino Array	28.01	302	P	P	14 36 53.0	+2.1
	0.7nm,0.6s,baz=114,slow=9.2,SNR=4.8						
H11S1	WAKE ISLAND Hy	28.65	126	T	T	15 06 53.4	
	baz=318,slow=76,SNR=42						
H11S3	WAKE ISLAND Hy	28.65	126	T	T	15 06 53.4	
	baz=318,slow=76,SNR=56						
H11S2	WAKE ISLAND Hy	28.67	126	T	T	15 07 08.2	
	baz=318,slow=76,SNR=32						
ZALV	Zalesovo Beam	41.97	312	P	P	14 38 52.9	+2.3
	0.6nm,0.4s,baz=97,slow=12,SNR=2.1						
MKAR	Makanchi Array	44.37	302	P	P	14 39 11.9	+1.6
	0.4nm,0.5s,baz=83,slow=9.5,SNR=5.3						
KDAK	Kodiak Island	45.97	42	P	P	14 39 21.5	-1.2
	11nm,1.1s,baz=278,slow=15,SNR=2.8						
KURK	Kurchatov	46.07	308	P	P	14 39 23.9	+0.3
KURK				IAmb	IAmb	14 39 33.0	
	comp=Z,4.4nm,0.6s						
ILAR	Eielson Array	48.39	33	P	P	14 39 40.9	-0.6
	comp=Z,0.6nm,0.6s,baz=256,slow=6.0,SNR=5.7						
HIN	Hinchinbrook I	48.88	39	P	P	14 39 45.1	-0.3
INK	Inuvik	53.31	27	P	P	14 40 18.4	0.0
	comp=Z,0.6nm,0.6s,baz=321,slow=4.3,SNR=5.1						
C36M	Paulatuk	56.37	25	P	P	14 40 40.3	-0.3
WB0	Warramunga Arr	57.79	189	P	P	14 40 50.6	-0.5
WR0	Warramunga Arr	57.96	189	P	P	14 40 51.9	-0.5
WR0				IAmb	IAmb	14 41 00.6	
	comp=Z,7.1nm,1.1s						
WB2	Warramunga Arr	57.97	189	P	P	14 40 51.9	-0.5
WB2				IAmb	IAmb	14 42 50.3	
	comp=Z,19nm,1.8s						
WRA	Warramunga Arr	57.97	189	P	P	14 40 52.2	-0.2
	comp=Z,1.3nm,0.7s,baz=7.4,slow=7.1,SNR=14						
RES	Resolute Bay	61.63	15	P	P	14 41 16.6	-0.4
RES				IAmb	IAmb	14 42 38.8	
	comp=Z,12nm,1.8s						
ASAR	Alice Springs	61.69	189	P	P	14 41 17.9	-0.1
	comp=Z,0.5nm,0.7s,baz=15,slow=6.7,SNR=9.3						
YKA	Yellowknife Ar	62.72	31	P	P	14 41 24.1	-0.4
	comp=Z,0.2nm,0.5s,baz=297,slow=5.3,SNR=3.4						
FINES	FINESS Array B	68.48	332	P	P	14 42 02.8	+1.1
	comp=Z,2.1nm,1.0s,baz=52,slow=9.3,SNR=2.4						
NOA	NORSAR Array B	73.75	338	P	P	14 42 34.2	+0.5
	comp=Z,0.3nm,0.6s,baz=38,slow=5.6,SNR=1.8						
AKASG	Malin Array Be	74.15	323	P	P	14 42 36.3	+0.2
	comp=Z,0.2nm,0.3s,baz=43,slow=5.9,SNR=1.7						
PDAR	Pinedale Array	76.54	46	P	P	14 42 49.6	-0.7
	comp=Z,0.4nm,0.6s,baz=9.5,slow=5.0,SNR=3.7						
LPAZ	La Paz	145.60	60	PKPbc	PKPdf	14 50 38.7	-0.8
	comp=Z,1.0nm,0.7s,baz=307,slow=5.1,SNR=4.0						

*IDC **06** 14:33:12.0±1.9, 37.80N×142.90E, h0km, mb3.4/3, mb1 3.6/6, mb1mx3.4/49, mbtmp3.6/6, ML3.0/3, Error ellipse: s-maj=39.6km s-min=27.6km az=88.0*

*JMA **06** 14:33:15.1±0.2, 37.83N×142.49E, h28km±2km, M3.8*

ISC 06 14:33:13.9±3.8, 37.82N±0.05×142.56E±0.08, h12km±24km, n27, σ2.51/31, mb3.4/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.99	300	P	Pb	14 33 32.2	-0.8
JIO	Ouri	1.14	304	P	Pn	14 33 34.6	-1.1
JIO				eS	Sb	14 33 48.6	-1.7
JKMT	Kesennumamotoy	1.30	319	P	Pn	14 33 36.9	-1.0
JKMT				eS	Sn	14 33 53.0	-2.2
JMST	Minamisoumatoc	1.33	266	P	Pn	14 33 37.2	-1.0
JMST				eS	Sn	14 33 53.4	-2.4
JMM	Marumori	1.40	272	P	Pn	14 33 38.4	-0.8
JMM				eS	Sn	14 33 55.5	-2.0
JFK	Kawauchi	1.41	252	P	Pn	14 33 38.6	-0.8
JMK	Ichinoseki	1.54	317	P	Pn	14 33 40.7	-0.5
JOU	Okura	1.59	290	P	Pn	14 33 41.9	0.0
JFT	Otama	1.79	261	P	Pn	14 33 45.0	+0.4
JFT				eS	Sn	14 34 05.9	-1.3
JOM	Ohasama	1.92	329	P	Pn	14 33 46.9	+0.5
JYS	Shirataka	2.01	282	P	Pn	14 33 48.3	+0.7
JYS				eS	Sn	14 34 11.8	-0.8
JYK	Kaneyama	2.04	303	P	Pn	14 33 48.2	+0.1
JRG	Rokugo	2.18	317	P	Pn	14 33 51.3	+1.4
JANG	Nango	2.67	343	P	Pn	14 33 58.3	+1.6
JANG				eS	Sn	14 34 29.1	+0.1
MJAR	Matsushiro Arr	3.70	251	Pn	Pn	14 34 14.1	+3.2
	0.4nm,0.3s,baz=81,slow=14,SNR=1.8						
MJAR				Sn	Sn	14 35 01.0	+6.5
	0.1nm,0.3s,baz=85,slow=28,SNR=0.8						
MAT	Matsushiro	3.70	251	P	Pn	14 34 14.0	+3.1
MAT				eS	Sn	14 34 57.9	+3.4
JHJ	Hachijo jima 2	5.21	207	Pn	Pn	14 34 32.4	+0.8
	8.4nm,0.3s,baz=90,slow=19,SNR=0.9						
JHJ				Sn	Sn	14 35 23.8	-7.9
	3.1nm,0.3s,baz=338,slow=23,SNR=1.2						
ASAJ	Asahikawa	6.29	0	Pn	Pn	14 34 46.6	+0.2
	0.3nm,0.3s,baz=177,slow=17,SNR=1.5						
H11N2	WAKE ISLAND Hy	27.80	124	T	T	15 08 08.7	
	baz=316						
H11N1	WAKE ISLAND Hy	27.81	124	T	T	15 08 13.4	
	baz=316						
H11N3	WAKE ISLAND Hy	27.82	124	T	T	15 08 10.6	
	baz=316						
H11S1	WAKE ISLAND Hy	28.55	126	T	T	15 09 06.9	
	baz=318,slow=76,SNR=31						
H11S3	WAKE ISLAND Hy	28.55	126	T	T	15 09 06.1	
	baz=318,slow=76,SNR=24						
H11S2	WAKE ISLAND Hy	28.57	126	T	T	15 09 07.5	
	baz=318,slow=76,SNR=29						
MKAR	Makanchi Array	44.48	302	P	P	14 41 26.5	+1.6
	0.3nm,0.6s,baz=83,slow=9.9,SNR=2.2						
WRA	Warramunga Arr	57.98	189	P	P	14 43 06.2	-0.1
	0.4nm,0.6s,baz=6.9,slow=7.0,SNR=2.2						
ASAR	Alice Springs	61.70	189	P	P	14 43 32.3	+0.3
	0.2nm,0.8s,baz=19,slow=6.2,SNR=2.2						

JMA 06 14:33:58.9±0.2, 38.00N×144.08E, h48km, M3.7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.08	279	S	Sn	14 34 57.5	+1.4
OFUJ	Ofunato	2.18	300	eS	Sn	14 34 59.9	+1.5
JIO	Ouri	2.20	283	P	Pn	14 34 34.2	+1.3
JIO				S	Sn	14 35 00.0	+1.1
JKMT	Kesennumamotoy	2.20	292	eS	Sn	14 35 00.5	+1.5
JMK	Ichinoseki	2.44	294	eS	Sn	14 35 06.8	+2.0
JOM	Ohasama	2.63	305	eS	Sn	14 35 11.6	+2.1
JFT	Otama	3.00	262	S	Sn	14 35 21.2	+2.4
JRY	Ryogami san	4.59	246	P	Pn	14 35 07.0	+1.2
JRY				eS	Sn	14 35 57.7	-0.2
JCH	Churui	4.64	353	P	Pn	14 35 05.1	-1.3
JCH				eS	Sn	14 35 56.1	-2.9
JOD2	Odawara 2	4.86	237	eS	Sn	14 36 03.1	-1.3
NEM2	Nemuro 2	5.51	13	P	Pn	14 35 14.3	-4.0
NEM2				eS	Sn	14 36 11.2	-9.0
JTKR	Abashiri--Toko	5.97	359	P	Pn	14 35 23.2	-1.4
JTKR				eS	Sn	14 36 26.2	-5.3

*IDC **06** 14:40:53.9±1.4, 7.30S×155.26E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.7/36, mbtmp3.8/7, ML3.7/1, MS3.0/2, Ms1 3.0/2, ms1mx2.4/31, Error ellipse: s-maj=37.5km s-min=24.9km az=123.0*

*NEIC **06** 14:40:57.3±1.5, 7.9S±0.1×155.8E±0.1, h35km±1km, mb4.4/4, Error ellipse: s-maj=26.4km s-min=20.8km az=135.0*

ISC 06 14:40:55.4±1.9, 7.2S±0.1×155.4E±0.2, h10km, n15, σ1.68/11, mb4.0/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	4.34	313	Pn	Pb	14 42 11.9	0.0
KRVT	Keravat (AS076	4.37	310	Pn	Pn	14 42 02.1	+0.2
	4.4nm,0.3s,baz=108,slow=3.9,SNR=6.2						
KRVT				Sn	Sn	14 42 52.2	-0.7
	13nm,0.3s,baz=153,slow=4.3,SNR=5.9						
PMG	Port Moresby	8.41	254	LR	LR	14 45 34.5	
	comp=Z,43nm,18.4s,baz=82,slow=34						
PMG	Port Moresby	8.41	254	Pn	Pn	14 42 59.2	+1.8
WR0	Warramunga Arr	23.86	236	P	P	14 46 07.4	-1.7
WRAB	Tennant Creek	24.00	236	P	P	14 46 08.1	-2.4
WRAB				IAmb	IAmb	14 46 59.6	
	comp=Z,6.9nm,0.7s						
WB2	Warramunga Arr	24.01	236	P	P	14 46 08.4	-2.2
WRA	Warramunga Arr	24.02	236	P	P	14 46 09.3	-1.4
	comp=Z,1.4nm,0.9s,baz=60,slow=9.9,SNR=5.6						
ASAR	Alice Springs	26.33	229	P	P	14 46 30.1	-1.6
	comp=Z,0.5nm,0.6s,baz=63,slow=8.9,SNR=11						
STKA	Stephens Creek	27.73	206	LR	LR	14 56 47.9	
	comp=Z,61nm,19.8s,baz=23,slow=35						
FITZ	Fitzroy Crossi	30.91	247	P	P	14 47 10.4	-2.2
FITZ				IAmb	IAmb	14 47 44.5	
	comp=Z,12nm,1.3s						
SONM	Songino Array	69.68	327	P	P	14 52 06.3	+0.9
	comp=Z,0.6nm,0.4s,baz=151,slow=3.3,SNR=4.5						
ILAR	Eielson Array	83.40	21	P	P	14 53 23.6	+1.0
	comp=Z,1.0nm,0.6s,baz=254,slow=5.9,SNR=10						
MKAR	Makanchi Array	83.78	319	P	P	14 53 25.5	+0.5
	comp=Z,0.4nm,0.6s,baz=102,slow=8.9,SNR=3.9						
YKA	Yellowknife Ar	96.32	28	P	P	14 54 24.2	+0.1
	comp=Z,0.2nm,0.6s,baz=266,slow=4.4,SNR=4.5						

*BJI **06** 14:50:09.4±0.0, 19.24N×99.50E, h10km, mB4.5/24, mb4.3/31, ML4.5/4, Ms4.1/18, Ms7 3.8/16*

*IDC **06** 14:50:12.7±0.8, 19.72N×99.63E, h0km, mb3.9/11, mb1 4.0/11, mb1mx3.7/41, mbtmp3.9/11, MS3.2/6, Ms1 3.2/6, ms1mx2.8/41, Error ellipse: s-maj=24.0km s-min=11.8km az=102.0*

*NEIC **06** 14:50:14.2±1.3, 19.68N±0.06×99.53E±0.06, h10km±1km, mb4.6/15, Error ellipse: s-maj=9.6km s-min=9.1km az=186.0*

ISC 06 14:50:14.9±0.4, 19.60N±0.04×99.52E±0.04, h10km, n62, σ1.95/64, mb4.3/21, MS3.2/7, 3C-1D, Thailand

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAYA	Payao	0.41	126	P	Pg	14 50 21.6	-1.2
CHTO	Chiang Mai	0.96	215		Pg	14 50 34.2	+0.9
LAMP	Lampang	1.08	175	P	Pg	14 50 35.4	-0.3
CM09	Chiang Mai Arr	1.26	204	P	Pn	14 50 38.5	0.0
CMAR	Chiang Mai Arr	1.26	206	Pg	Pn	14 50 39.9	+1.3
	467nm,0.3s,baz=19,slow=21,SNR=1344						
CMAR				Lg	Lg	14 50 57.9	
	772nm,0.3s,baz=20,slow=26,SNR=17						
CM15	Chiang Mai Arr	1.28	206	P	Pn	14 50 39.2	+0.4
CM02	Chiang Mai Arr	1.28	205	P	Pn	14 50 39.3	+0.4
PHRA	Phrae	1.28	149	P	Pn	14 50 38.3	-0.6
CM04	Chiang Mai Arr	1.30	203	P	Pn	14 50 39.7	+0.5
NANT	Nan	1.37	125	P	Pn	14 50 37.5	-2.6
MHMT	Maesarieng	2.07	227	Pg	Pb	14 50 54.9	+2.4
MHMT				Pn	Pn	14 50 50.2	+0.5
PHIT	Phitsanulok	2.54	160	Pg	Pb	14 51 03.0	+2.3
PHIT				Pn	Pn	14 50 56.0	-0.2
PBKT	Sadao Pong	3.31	155		Pn	14 51 06.7	-0.1
SLVN	Son La	4.45	66		Pn	14 51 20.6	-2.0
KMI	Kunming	6.25	28	Pg	Pb	14 52 08.6	+4.7
KMI				Sg	Sg	14 53 35.9	+0.3
SHL	Shillong	9.22	311	eP	Pn	14 52 26.4	-1.7
SHL	Shillong	9.22	311		Pn	14 52 26.3	-1.8
GYA	Guiyang	9.47	43	eP	Pn	14 52 35.8	+4.2
GYA				S	Sn	14 54 28.7	+10
GYA				SS	SnSn	14 54 35.0	+4.7
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA				pmax	pmax		
	comp=Z,120nm,4.4s						
GYA				LR	LR		
	comp=E,350nm,5.0s						
GYA				LR	LR		
	comp=Z,160nm,4.8s						
QIZ	Qiongzhong	9.76	92	P	Pn	14 52 34.4	-1.0
QIZ				S	Sn	14 54 25.9	+0.7
QIZ				LR	LR		
	comp=N,540nm,13.2s						
QIZ				LR	LR		
	comp=E,340nm,11.8s						
QIZ				LR	LR		
	comp=Z,310nm,11.8s						
QIZ	Qiongzhong	9.76	92	Pn	Pn	14 52 35.8	+0.4
KCSI	Kotacane, Aceh	16.07	186	P	Pn	14 54 04.2	+3.1
	17nm,1.0s						
PSI	Prapat	16.71	182	Pn	P	14 54 15.9	+4.3
	0.5nm,0.3s,baz=360,slow=9.8,SNR=6.2						
RPSI	Rantau Prapat	16.81	182	P	P	14 54 15.9	+3.3
LZH	Lanzhou	16.86	12	eP	Pn	14 54 11.7	+0.5
LZH				pP	P	14 54 17.3	+4.0
LZH				sP	sP	14 54 20.9	+3.2
LZH				PP	PnPn	14 54 28.5	+7.7
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZH				pmax	pmax		
	comp=Z,67nm,4.8s						
LZH				LR	LR		
	comp=N,210nm,8.7s						
LZH				LR	LR		
	comp=E,220nm,8.7s						
LZH				LR	LR		
	comp=Z,190nm,10.8s						
KNMB	Chin-men Tao	18.14	71	P	Pn	14 54 25.7	-1.4
KNMB				IAmb	IAmb	14 55 03.7	
	comp=Z,44nm,0.7s						
GTA	Gaotai	19.74	1	eP	P	14 54 46.7	+1.7
GTA				pP	pP	14 54 50.7	+2.7
GTA				sP	sP	14 54 53.4	+4.0
GTA				S	S	14 58 27.4	-0.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,98nm,6.5s						
GTA				LR	LR		
	comp=Z,120nm,15.6s						
GTA				LR	LR		
	comp=Z,420nm,14.9s						
GTA				LR	LR		
	comp=Z,170nm,15.2s						
KSM	Kuching	20.88	148	P	P	14 54 57.9	+0.5
NACB	Ninganchiao	20.97	74	P	P	14 54 57.6	-0.7
NACB				IAmb	IAmb	14 54 58.5	
	comp=Z,24nm,0.9s						
NJ2	Nanjing	21.32	51	eP	P	14 55 01.3	-0.7
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,730nm,9.4s						
NJ2				LR	LR		
	comp=Z,630nm,10.4s						
NJ2				LR	LR		
	comp=Z,720nm,16.6s						
HHC	Hu-ho-hao-te	23.55	23	P	P	14 55 24.3	-1.2
HHC				pP	sP	14 55 33.2	+3.2
HHC				S	S	14 59 36.8	-2.9
HHC				sS	sS	14 59 48.9	+4.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,28nm,6.6s						
WMQ	Urumqi	26.10	340	eP	P	14 55 48.8	-0.1
NIL	Nilore	27.24	306	P	P	14 55 57.9	-1.4
NIL				IAmb	IAmb	14 56 01.6	
	comp=Z,5.7nm,0.6s						
LEM	Lembang	27.45	162	LR	LR	15 07 21.8	
	comp=Z,70nm,19.1s,baz=345,slow=37						
KSH	Kashi	28.38	319	P	P	14 56 09.1	-0.4
KSH				pP	pP	14 56 14.5	+1.8
KSH				sP	sP	14 56 17.5	+3.5
KSH				pmax	pmax		
	comp=Z,19nm,1.4s						
KSH				pmax	pmax		
	comp=Z,160nm,5.5s						
SONM	Songino Array	28.71	10	P	P	14 56 10.6	-1.8
	comp=Z,1.5nm,0.8s,baz=204,slow=8.9,SNR=4.3						
KDJ	Kajisay	29.37	325	P	P	14 56 18.4	+0.1
MKAR	Makanchi Array	30.57	336	P	P	14 56 28.4	-0.4
	comp=Z,4.0nm,0.7s,baz=144,slow=9.0,SNR=17						
AAK	Ala-Archa	31.20	323	LR	LR	15 09 60.0	
	comp=Z,23nm,19.0s,baz=107,slow=38						
AAK	Ala-Archa	31.20	323	P	P	14 56 34.2	-0.3
AAK				IAmb	IAmb	14 56 35.9	
	comp=Z,10.0nm,1.2s						
ARSB	Arslanbob	31.28	320	P	P	14 56 34.6	-0.6
ARSB				IAmb	IAmb	14 56 36.4	
	comp=Z,9.6nm,1.4s						
KAPI	Kappang	31.54	139	P	P	14 56 35.8	-1.7
GAR	Garm	31.76	314	P	P	14 56 38.2	-1.2
GAR				IAmb	IAmb	14 56 42.4	
	comp=Z,9.2nm,1.2s						
BTK	Batken	31.96	316	P	P	14 56 40.9	-0.3
BTK				IAmb	IAmb	14 56 41.4	
	comp=Z,5.4nm,0.8s						
TLY	Talaya	32.18	5	LR	LR	15 11 07.8	
	comp=Z,58nm,20.7s,baz=178,slow=39						
KKAR	Karatay Array	33.81	320	P	P	14 56 55.8	-1.4
KURK	Kurchatov	35.18	337	P	P	14 57 07.6	-1.3
KURK				IAmb	IAmb	14 57 11.8	
	comp=Z,5.0nm,0.7s						
ZALV	Zalesovo Beam	36.10	345	P	P	14 57 15.6	-1.1
	comp=Z,3.1nm,0.7s,baz=152,slow=8.7,SNR=13						
ZALV				LR	LR	15 12 58.8	
	comp=Z,22nm,18.7s,baz=56,slow=38						
KLR	Kul'dur	39.23	34	P	P	14 57 42.3	-1.0
	comp=Z,1.1nm,0.7s,baz=250,slow=11,SNR=4.1						
KLR				LR	LR	15 16 45.3	
	comp=Z,32nm,18.7s,baz=227,slow=41						
YAK	Yakutsk	47.28	19	P	P	14 58 47.6	-0.5
YAK				IAmb	IAmb	14 58 49.5	
	comp=Z,5.0nm,0.6s						
ARU	Arti	47.72	331	P	P	14 58 50.4	-1.2
NRIK	Noril'sk	50.28	355	P	P	14 59 09.8	-1.3
	comp=Z,1.3nm,0.3s,baz=158,slow=5.2,SNR=5.5						
WRA	Warramunga Arr	52.04	137	P	P	14 59 24.1	-1.0

	comp=Z,1.0nm,1.0s,baz=320,slow=7.8,SNR=3.4						
ASAR	**Alice Springs**	**54.53**	**141**	P	**P**	**14 59 42.3**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=318,slow=7.2,SNR=5.5						
BRTR	**Keskin Array B**	**59.38**	**305**	P	**P**	**15 00 16.3**	**-1.5**
	comp=Z,0.6nm,0.9s,baz=126,slow=6.4,SNR=3.6						
VRI	**Vrincioaia**	**64.32**	**312**	⇓P	**P**	**15 00 50.3**	**-0.4**
PLOR	**Plostina**	**64.37**	**312**	⇑P	**P**	**15 00 51.0**	**-0.1**
MLR	**Muntele Rosu**	**64.88**	**312**	⇑P	**P**	**15 00 54.4**	**-0.2**
MLR	**Muntele Rosu**	**64.88**	**312**	P	**P**	**15 00 53.5**	**-1.0**
FINES	**FINESS Array B**	**65.07**	**329**	P	**P**	**15 00 54.2**	**-1.1**
	comp=Z,1.6nm,0.8s,baz=112,slow=8.5,SNR=3.5						
MDVR	**Moldovita**	**67.92**	**311**	⇑P	P	15 01 10.9	-3.0
NOA	**NORSAR Array B**	**72.25**	**329**	P	**P**	**15 01 38.4**	**-1.8**
	comp=Z,0.8nm,0.8s,baz=83,slow=5.1,SNR=3.0						
NOA				LR	LR	15 35 44.7	
	comp=Z,14nm,18.1s,baz=250,slow=38						
GERES	**GERESS Array B**	**72.80**	**316**	P	**P**	**15 01 42.6**	**-1.1**
	comp=Z,1.3nm,0.9s,baz=95,slow=4.6,SNR=6.3						

RSNC 06 15:04:41.1±1.2, 0°.86N×77°.24W, h4km±5km, ML3.7, Mw4.2, 3C-3D, Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPAS2	**Pasto**	**0.36**	**358**	*i* Pg	Pg	15 04 47.2	-0.9
CPAS2				*e*Sg	Sg	15 04 53.0	+0.1
CPAS2				*i*		15 04 59.0	
	comp=Z,10µm,0.5s						
CMBC	**Cumbal**	**0.59**	**278**	*e*P	Pg	15 04 51.9	-0.6
PUAC	**Puerto Asis, P**	**0.74**	**115**	⇓*i*P	Pg	15 04 54.0	-1.3
PUAC				*e*S	Sg	15 05 04.2	-0.7
CRUC	**La Cruz**	**0.76**	**22**	⇑*e*P	Pg	15 04 54.5	-1.2
CRUC				*i*		15 05 12.2	
	comp=Z,3µm,0.5s						
BBAC	**Balboa, Cauca**	**1.15**	**360**	⇑*e*P	Pg	15 05 01.8	-1.4
BBAC				*e*S	Sg	15 05 17.9	-0.4
BBAC				*i*		15 05 19.1	
	comp=Z,1µm,0.9s						
CUSE	**Cuicocha Este**	**1.28**	**245**	⇓*i*P	Pg	15 05 03.6	-2.2
CUSE				*e*P	Pb	15 05 03.8	-2.3
CUSE				*e*S	Sg	15 05 21.3	-1.2
SOTA	**Rioblanco**	**1.41**	**26**	⇑*e*P	Pn	15 05 06.3	-1.8
SOTA				*e*S	Sg	15 05 11.7	-15
SOTA				*i*		15 05 13.6	
	comp=Z,867nm,0.6s						
PAC1	**Pacto, Paraso**	**1.66**	**249**	⇓*e*P	Pn	15 05 09.8	-1.4
PAC1				*e*S	Sn	15 05 32.6	-0.4
PCON	**Cinco Dias**	**1.68**	**30**	*e*P	Pn	15 05 11.3	-0.5
PCON				*e*S	Sg	15 05 38.4	+3.1
POPC	**Popayan, Colom**	**1.76**	**19**	*e*P	Pn	15 05 11.9	-0.7
POPC				*e*S	Sn	15 05 34.6	-1.0
TUMC	**Tumaco**	**1.77**	**303**	*e*P	Pn	15 05 12.9	+0.4
TUMC				*e*S	Sb	15 05 36.6	-0.1
TUMC				*i*		15 06 00.3	
	comp=Z,692nm,0.7s						
GARC	**Garzon, Huila**	**2.19**	**53**	*e*P	Pn	15 05 18.4	-0.1
GARC				*e*S	Sn	15 05 45.7	-0.4
GR1C	**Gorgona, Isla**	**2.32**	**336**	*e*P	Pn	15 05 20.0	0.0
GR1C				*e*S	Sn	15 05 49.1	0.0
BETC	**Betania**	**2.55**	**45**	*e*P	Pb	15 05 25.8	-1.7
BETC				*e*S	Sb	15 06 01.0	+1.8
MALC	**Bahia Malaga**	**3.13**	**358**	*e*P	Pn	15 05 27.2	-4.1
MACC	**Macarena, Meta**	**3.62**	**69**	*e*P	Pb	15 05 43.9	-1.9
MACC				*e*S	Sb	15 06 31.5	+1.4
ORTC	**Ortega, Tolima**	**3.62**	**33**	*e*P	Pn	15 05 40.1	+2.0
ORTC				*e*S	Sb	15 06 33.4	+3.2
ORTC				*i*		15 06 52.0	
	comp=Z,142nm,1.2s						
PRAC	**Prado**	**3.68**	**40**	*e*P	Pn	15 05 41.1	+2.3
PRAC				*i*		15 06 47.4	
	comp=Z,131nm,0.8s						
CVER	**Cruz Verde, Cu**	**4.82**	**41**	*e*P	Pb	15 06 06.9	+0.5
GUVC	**San Jose del G**	**4.90**	**70**	*e*P	Pb	15 06 04.0	-3.6
GUVC				*e*S	Sb	15 07 07.5	+0.6
CBOC	**Ciudad Bolivar**	**5.12**	**14**	*e*P	Pn	15 06 01.2	+2.5
CBOC				*i*		15 07 11.7	
	comp=Z,36nm,0.9s						
DBBC	**Dabeiba**	**6.20**	**10**	*e*P	Pn	15 06 18.5	+4.9
DBBC				*i*		15 08 00.0	
	comp=Z,64nm,1.5s						

TAP 06 15:13:41.6, 24°.43N×121°.88E, h23km, ML2.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.13**	**270**	P	Pb	15 13 46.6	+0.4
	baz=268						
ENA				*e*S	Sb	15 13 50.7	+1.3
	baz=268						
TWC	**Suao**	**0.18**	**351**	*i* P	Pb	15 13 47.3	+0.4
	baz=354						
TWC				S	Sb	15 13 51.1	+0.7
	baz=354						
EOS1	**EOS1**	**0.26**	**62**	P	Pb	15 13 48.1	+0.3
	baz=62						
EOS1				*e*S	Sb	15 13 53.4	+1.3
	baz=62						
TWE	**Neicheng**	**0.35**	**326**	P	Pb	15 13 49.8	+0.6
	baz=328						
TWE				*e*S	Sb	15 13 55.1	+0.7
	baz=328						
ENTT	**Nioudou**	**0.35**	**306**	P	Pb	15 13 49.9	+0.5
	baz=306						
ENTT				*e*S	Sb	15 13 55.4	+0.8
	baz=306						
ILA	**Ilan**	**0.36**	**340**	*e*P	Pb	15 13 50.3	+0.9
	baz=341						
ILA				*e*S	Sb	15 13 56.1	+1.5
	baz=341						
NACB	**Ninganchiao**	**0.36**	**226**	*e*P	Pb	15 13 49.6	+0.2
	baz=225						
NACB				S	Sb	15 13 56.2	+1.3
	baz=225						
NDT	**Datong Townshi**	**0.38**	**297**	P	Pb	15 13 50.2	+0.6
	baz=297						
NDT				*e*S	Sb	15 13 56.5	+1.3
	baz=297						
SLBB	**Yuanshan**	**0.39**	**326**	*e*P	Pb	15 13 50.8	+0.8
	baz=325						
SLBB				*e*S	Sn	15 13 57.5	-1.1
	baz=325						
ETLH	**Xiulin Townshi**	**0.42**	**239**	*e*P	Pb	15 13 50.8	+0.2
	baz=238						
ETLH				*e*S	Sb	15 13 57.7	+1.1
	baz=238						
TWD	**Chiawan**	**0.43**	**217**	*e*P	Pb	15 13 50.5	-0.1
	baz=215						
TWD				*e*S	Sb	15 13 58.0	+1.3
	baz=215						
NNSB	**Datong**	**0.45**	**270**	P	Pb	15 13 51.8	+0.8
	baz=269						
NNSB				S	Sb	15 13 58.4	+1.0
	baz=269						
NNSH	**Datong**	**0.45**	**270**	*e*P	Pb	15 13 51.5	+0.5
	baz=269						
NNSH				*e*S	Sb	15 13 58.3	+0.9
	baz=269						
NNS	**Nan Shan**	**0.46**	**271**	*e*P	Pb	15 13 51.6	+0.4
	baz=271						
NNS				*e*S	Sb	15 13 58.9	+1.2
	baz=271						
NWLT	**Wulai**	**0.49**	**315**	*e*P	Pb	15 13 51.9	+0.4
	baz=315						
NWLT				*e*S	Sb	15 13 59.6	+1.3
	baz=315						
YHNB	**Yeheng**	**0.52**	**298**	P	Pb	15 13 52.8	+0.7
	baz=297						
YHNB				*e*S	Sn	15 14 00.6	-1.1
	baz=297						
TIPB	**Shuangxi**	**0.54**	**355**	P	Pb	15 13 52.7	+0.2
	baz=354						
TIPB				*e*S	Sb	15 14 00.6	+0.6
	baz=354						
TWA	**Mucha**	**0.61**	**334**	*e*P	Pn	15 13 55.3	+0.4
	baz=334						
TWA				*e*S	Sn	15 14 03.2	-0.8
	baz=334						
NHDH	**Xindian Distri**	**0.62**	**329**	*e*P	Pn	15 13 55.4	+0.4
	baz=328						
NHDH				*e*S	Sn	15 14 03.5	-0.7
	baz=328						
WHF	**Hehuan Shan**	**0.63**	**243**	*e*P	Pb	15 13 54.5	+0.3
	baz=242						
WHF				*e*S	Sn	15 14 04.2	-0.8
	baz=242						
NWF	**Wu-fen Shan**	**0.65**	**352**	*e*P	Pb	15 13 54.8	+0.5
	baz=352						
NWF				*e*S	Sn	15 14 04.1	-0.8
	baz=352						
WFSB	**Wu-fen Shan**	**0.65**	**352**	*e*P	Pb	15 13 54.8	+0.5
	baz=352						
WFSB				*e*S	Sn	15 14 04.9	+0.1
	baz=352						
TATO	**Taipei**	**0.65**	**327**	*e*P	Pn	15 13 55.2	-0.1
	baz=327						
TATO				*e*S	Sb	15 14 03.5	+0.6
	baz=327						
TDCB	**Techi**	**0.68**	**255**	*e*P	Pn	15 13 56.0	+0.1
	baz=254						
TDCB				*e*S	Sn	15 14 05.3	-0.6
	baz=254						
TAP1	**Taipei**	**0.69**	**332**	*e*S	Sn	15 14 05.2	-0.6
	baz=331						
WLTB	**Daxi**	**0.71**	**307**	*e*P	Pb	15 13 55.6	+0.3
	baz=306						
WLTB				*e*S	Sn	15 14 07.2	+0.8
	baz=306						
CHGB	**Renai**	**0.74**	**240**	*e*P	Pb	15 13 56.2	+0.3
	baz=240						
CHGB				*e*S	Sn	15 14 07.0	-0.5
	baz=240						
YM01	**YM01**	**0.77**	**339**	*e*P	Pb	15 13 56.2	-0.1
	baz=338						
YM01				*e*S	Sn	15 14 07.4	-0.5
	baz=338						
YM10	**YM10**	**0.78**	**338**	*e*P	Pn	15 13 57.3	+0.1
	baz=338						
YM10				*e*S	Sn	15 14 08.3	0.0
	baz=338						
YM11	**YM11**	**0.78**	**339**	*e*P	Pb	15 13 56.8	+0.1
	baz=339						
YM11				*e*S	Sn	15 14 08.8	+0.5
	baz=339						
YM04	**YM04**	**0.79**	**337**	*e*P	Pb	15 13 56.0	-0.6
	baz=336						
YM04				*e*S	Sn	15 14 08.1	-0.2
	baz=336						
TWS1	**Kuangyinshan**	**0.79**	**328**	*e*P	Pb	15 13 56.8	+0.1
	baz=328						
TWS1				*e*S	Sn	15 14 08.2	-0.2
	baz=328						
OWD	**Renai**	**0.80**	**234**	*e*P	Pb	15 13 57.0	+0.1
	baz=233						
OWD				S	Sn	15 14 08.1	-0.7
	baz=233						
YM08	**YM08**	**0.80**	**341**	*e*P	Pb	15 13 56.6	-0.2
	baz=340						
YM08				*e*S	Sn	15 14 09.1	+0.4
	baz=340						
YM03	**YM03**	**0.81**	**338**	*e*P	Pn	15 13 58.8	+1.2
	baz=337						
YM03				*e*S	Sn	15 14 08.9	0.0
	baz=337						
LIOB	**Emei**	**0.81**	**286**	P	Pn	15 13 58.3	+0.6
	baz=285						
LIOB				S	Sn	15 14 10.2	+1.1
	baz=285						
ANP	**Anpu**	**0.82**	**337**	*e*P	Pb	15 13 56.6	-0.6
	baz=337						
ANP				*e*S	Sb	15 14 07.4	-0.5
	baz=337						
WHP	**Taichung City**	**0.86**	**260**	P	Pn	15 13 58.7	+0.3
	baz=259						
WHP				S	Sn	15 14 10.2	-0.1
	baz=259						
VWDT	**VWDT**	**0.95**	**225**	P	Pb	15 13 59.1	-0.3
	baz=225						
VWDT				S	Sn	15 14 12.4	+0.1
	baz=225						
DPDB	**Guoxing**	**0.95**	**246**	*e*P	Pb	15 13 59.3	-0.2
	baz=245						
DPDB				*e*S	Sn	15 14 12.8	+0.3
	baz=245						
HGSD	**Ruisui**	**1.02**	**204**	*e*P	Pb	15 14 01.3	+0.7
	baz=204						
HGSD				*e*S	Sn	15 14 15.9	+1.9
	baz=204						
EHY	**Hungye**	**1.05**	**209**	*e*S	Sn	15 14 15.2	+0.4
	baz=208						
SSLB	**Suanglung**	**1.06**	**233**	*e*S	Sn	15 14 17.4	+2.4
	baz=232						
TYC	**Yuchr**	**1.07**	**241**	*e*P	Pn	15 14 01.2	+0.1
	baz=240						
TYC				*e*S	Sb	15 14 14.8	-0.2
	baz=240						
YULB	**Yu-li**	**1.16**	**207**	*e*P	Pn	15 14 02.5	+0.1
	baz=207						
YULB				*e*S	Sb	15 14 18.8	+1.1
	baz=207						
TWF1	**Yuli**	**1.20**	**207**	*e*P	Pb	15 14 03.4	-0.2
	baz=206						
TWF1				*e*S	Sn	15 14 18.2	-0.2
	baz=206						
ALS	**Alishan**	**1.34**	**227**	*e*P	Pb	15 14 07.4	+1.1
	baz=226						
ALS				*e*S	Sb	15 14 25.4	+2.3
	baz=226						
CHN5	**Tsauling**	**1.38**	**233**	*e*P	Pb	15 14 06.9	+0.2
	baz=232						
CHN5				*e*S	Sb	15 14 25.2	+1.3
	baz=232						
CHKT	**Chengkung**	**1.41**	**200**	*e*P	Pn	15 14 05.6	-0.1
	baz=199						
CHKT				*e*S	Sb	15 14 24.9	+0.2
	baz=199						
ELDTW	**Lidau**	**1.47**	**213**	*e*P	Pn	15 14 07.0	+0.3
	baz=212						
ELDTW				*e*S	Sn	15 14 25.6	+0.4
	baz=212						
CHN4	**Tsaushan**	**1.59**	**228**	*e*P	Pb	15 14 10.6	+0.3
	baz=227						
CHN4				*e*S	Sb	15 14 31.7	+1.7
	baz=227						
TPUB	**Ta-pu**	**1.60**	**226**	*e*S	Sb	15 14 30.1	-0.3
	baz=225						

JMA 06 15:14:07.1, 24°.44N×123°.94E, h0km, M1.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIJ	**Ishigaki jima**	**0.20**	**112**	P	Pg	15 14 11.3	+0.4
JIJ				S	Sg	15 14 14.2	+0.7
JKRS	**Kuro-shima**	**0.21**	**163**	P	Pg	15 14 11.7	+0.6
JKRS				S	Sg	15 14 14.6	+0.7
IRIF	**Iriomote-Funau**	**0.22**	**241**	P	Pg	15 14 11.9	+0.6
IRIF				*e*S	Sg	15 14 15.0	+0.9
JISG	**Ishigakijimahi**	**0.37**	**66**	P	Pg	15 14 14.9	+0.7
JISG				*e*S	Sg	15 14 20.2	+1.2
HATJ	**Hateruma jima**	**0.40**	**198**	P	Pg	15 14 15.4	+0.6
HATJ				*e*S	Sg	15 14 21.3	+1.3
JTJ	**Tarama**	**0.72**	**74**	P	Pg	15 14 21.6	+0.6
JTJ				S	Sb	15 14 32.1	-0.9
YOJ	**Yonaguni jima**	**0.85**	**272**	P	Pb	15 14 24.1	-0.6
YOJ				*e*S	Sg	15 14 35.0	+0.7

MAN 06 15:21:07.1, 10°.40N×126°.14E, h18km, MS3.6, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.89**	**226**	⇓*i*P	Pb	15 21 23.3	-0.7
SCPH				*i* S	Sb	15 21 34.9	-0.6
MSLP	**Maasin**	**1.29**	**258**	*e*P	Pn	15 21 29.5	-0.8
MSLP				*e*S	Sg	15 21 48.2	-0.7
BUTP	**Butuan**	**1.51**	**200**	*e*P	Pn	15 21 32.3	-1.0
BUTP				*e*S	Sb	15 21 53.4	-0.1
OCLP	**Ormoc**	**1.64**	**294**	*e*P	Pn	15 21 35.3	+0.2
OCLP				*e*S	Sn	15 21 55.1	-0.6
LLP	**Lapu-Lapu**	**2.14**	**268**	*e*P	Pn	15 21 42.3	+0.3
LLP				*e*S	Sb	15 22 10.7	-0.9
TBP	**Tagbilaran**	**2.35**	**253**	*e*P	Pb	15 21 49.3	+0.4
TBP				*i* S	Sb	15 22 19.8	+2.1
CNP	**Catarman**	**2.55**	**326**	*e*P	Pn	15 21 47.7	+0.1
CNP				*e*S	Sn	15 22 19.8	+1.6
SNPH	**Sibulan**	**3.05**	**250**	⇓*e*P	Pn	15 21 56.2	+1.7
SNPH				*i* S	Sn	15 22 32.2	+1.6
CNOP	**Candoni, Negro**	**3.49**	**261**	*e*P	Pn	15 22 01.4	+0.8
CNOP				*e*S	Sn	15 22 42.9	+1.4
GUIM	**Jordan**	**3.50**	**274**	*e*P	Pn	15 22 01.8	+1.1
GUIM				*e*S	Sn	15 22 43.2	+1.5
RCP	**Roxas**	**3.53**	**289**	⇑*e*P	Pn	15 22 02.9	+1.8
PVCP	**Virac**	**3.73**	**329**	*e*P	Pn	15 22 04.7	+0.9
PVCP				*e*S	Sn	15 22 44.8	-2.5

*ATH **06** 15:50:31.8, 38°.22N×20°.40E, h10km±1km, ML2.0/2, Error ellipse: s-maj=2.3km s-min=1.2km az=235.0*
*THE **06** 15:50:32.3, 38°.22N×20°.43E, h8km±1km, ML2.6/6, Error ellipse: s-maj=1.8km s-min=0.6km az=229.0*
ISC 06 15:50:31.8±2.1**, 38°.22N**±0°.04×**20°.40E**±0°.05**, h10**km±9km**, n18, σ0ˢ.31**/33**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXRA	**Lixouri, Kepha**	**0.03**	**121**	P	**Pg**	**15 50 33.7**	**+0.1**
LXRA				S	**Sg**	**15 50 35.2**	**+0.2**
CHV1	**Chavriata, Kef**	**0.04**	**208**	P	**Pg**	**15 50 33.7**	**0.0**
CHV1				S	**Sg**	**15 50 35.2**	**+0.1**
	29µm,0.2s						
AGT1	**Agia Thekli**	**0.04**	**336**	P	**Pg**	**15 50 34.2**	**+0.5**
AGT1				S	**Sg**	**15 50 35.1**	**-0.1**
	15µm,0.2s						
KEF3	**Kipouria, Keph**	**0.04**	**254**	P	**Pg**	**15 50 33.7**	**-0.1**
KEF3				S	**Sg**	**15 50 34.8**	**-0.4**
KEF4	**Livadi, Kephal**	**0.04**	**21**	P	**Pg**	**15 50 33.8**	**0.0**
KEF4				S	**Sg**	**15 50 35.4**	**+0.1**
ARGA	**Argostoli. Kep**	**0.07**	**123**	P	**Pg**	**15 50 34.1**	**+0.1**
ARGA				S	**Sg**	**15 50 35.4**	**-0.2**
ARG2	**Argostoli**	**0.08**	**119**	P	**Pg**	**15 50 34.2**	**+0.1**
ARG2				S	**Sg**	**15 50 35.9**	**+0.1**
	10µm,0.1s						
KEF1	**Kardakata, Kep**	**0.08**	**41**	P	**Pg**	**15 50 34.1**	**-0.1**
KEF1				S	**Sg**	**15 50 35.7**	**-0.2**
KEF2	**Argostoli. Kep**	**0.08**	**127**	P	**Pg**	**15 50 34.2**	**+0.1**
KEF2				S	**Sg**	**15 50 35.8**	**-0.2**
VLS	**Valsamata**	**0.15**	**105**	P	**Pg**	**15 50 35.2**	**0.0**
VLS				S	**Sg**	**15 50 36.7**	**-0.9**
	2µm,0.1s						
VLS	**Valsamata**	**0.15**	**105**	P	**Pg**	**15 50 35.2**	**0.0**
VLS				S	**Sg**	**15 50 37.6**	**+0.1**
VSK1	**VASILIKIADES**	**0.23**	**33**	P	**Pg**	**15 50 36.9**	**+0.3**
FSK	**Fiskardo**	**0.27**	**27**	P	**Pg**	**15 50 37.3**	**-0.1**
FSK				S	**Sg**	**15 50 41.3**	**+0.2**
	275nm,0.3s						
FSK	**Fiskardo**	**0.27**	**27**	P	**Pg**	**15 50 37.3**	**-0.1**
FSK				S	**Sg**	**15 50 40.5**	**-0.6**
FSK				AML	AML	15 50 42.0	
	comp=N,361µm,0.3s						
FSK				AML	AML	15 50 42.7	
	comp=E,671µm,0.1s						
KFL	**Anninata**	**0.32**	**109**	P	**Pg**	**15 50 38.2**	**0.0**
KFL				S	**Sg**	**15 50 42.5**	**0.0**
	comp=E,772nm,0.3s						
KFL	**Anninata**	**0.32**	**109**	P	**Pg**	**15 50 38.1**	**0.0**
KFL				S	**Sg**	**15 50 43.4**	**+0.9**
KFL				AML	AML	15 50 45.8	
	comp=E,1959µm,0.3s						
KFL				AML	AML	15 50 48.2	
	comp=N,1149µm,0.4s						
EVGI	**Lefkada island**	**0.45**	**26**	P	**Pg**	**15 50 40.7**	**0.0**
EVGI	**Lefkada island**	**0.45**	**26**	P	**Pg**	**15 50 40.6**	**0.0**

*IDC **06** 16:17:33.3±1.1, 13°.72S×66°.20E, h0km, mb3.9/8, mb1 4.1/9, mb1mx3.7/54, mbtmp3.9/9, ML4.1/1, MS3.4/5, Ms1 3.4/5, ms1mx2.9/49, Error ellipse: s-maj=35.6km s-min=24.5km az=45.0*
*NEIC **06** 16:17:34.8±1.3, 13°.8S±0°.2×66°.2E±0°.2, h10km±1km, mb4.7/10, Error ellipse: s-maj=27.6km s-min=26.1km az=217.0*
ISC 06 16:17:34.6±0.7**, 13°.8S**±0°.2×**66°.2E**±0°.1**, h10**km**, n33, σ0ˢ.81**/21**, mb4.2**/12**, MS3.6**/5**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**8.68**	**46**	T	T	16 28 55.7	
	baz=225,slow=76,SNR=421						
H08S2	**Diego Garcia H**	**8.70**	**46**	T	T	16 28 54.0	
	baz=225,slow=76,SNR=416						
H08S3	**Diego Garcia H**	**8.70**	**46**	T	T	16 28 55.8	
	baz=225,slow=76,SNR=495						
OPO	**Ambohidratompo**	**18.86**	**253**	P	**Pn**	**16 21 57.0**	**+1.2**
	0.5nm,0.3s,baz=285,slow=7.1,SNR=2.2						
ABPO	**Ambohimpanom**	**18.92**	**252**		**Pn**	**16 21 57.0**	**+0.5**
ABPO				IAmb	IAmb	16 22 21.3	
	comp=Z,32nm,1.6s						
KMBO	**Kilima Mbogo**	**31.29**	**291**	LR	LR	16 33 42.4	
	comp=Z,68nm,20.5s,baz=94,slow=31						
BOSA	**Boshof**	**40.70**	**242**	LR	LR	16 38 42.9	
	comp=Z,77nm,19.0s,baz=40,slow=31						
H01W3	**Cape Leeuwin H**	**47.93**	**125**	T	T	17 17 33.5	
	baz=283,slow=75,SNR=31						
H01W2	**Cape Leeuwin H**	**47.93**	**125**	T	T	17 17 33.0	
	baz=283,slow=75,SNR=32						
H01W1	**Cape Leeuwin H**	**47.94**	**125**	T	T	17 17 32.4	
	baz=283,slow=75,SNR=31						
MORW	**Morawa**	**48.46**	**117**	P	**P**	**16 26 18.4**	**+0.8**
MMAI	**Mount Meron Ar**	**55.07**	**328**	LR	LR	16 48 23.3	
	comp=Z,22nm,18.4s,baz=170,slow=34						
FITZ	**Fitzroy Crossi**	**57.11**	**103**	P	**P**	**16 27 23.2**	**+1.5**
	comp=Z,2.2nm,0.8s,baz=238,slow=8.4,SNR=2.2						
CASY	**Casey**	**60.14**	**161**	P	**P**	**16 27 40.8**	**-1.2**
CASY				IAmb	IAmb	16 27 41.8	
	comp=Z,16nm,1.4s						
KNRA	**Kununurra**	**60.34**	**100**	P	**P**	**16 27 44.0**	**-0.2**
MKAR	**Makanchi Array**	**62.02**	**12**	P	**P**	**16 27 55.1**	**0.0**
	comp=Z,0.4nm,0.6s,baz=204,slow=7.5,SNR=5.8						
ASAR	**Alice Springs**	**64.37**	**110**	P	**P**	**16 28 11.4**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=273,slow=6.2,SNR=21						
AS31	**Alice Springs**	**64.37**	**110**	P	**P**	**16 28 11.7**	**+0.5**
KURBB	**Kurchatov Arra**	**65.05**	**9**	P	**P**	**16 28 15.2**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=206,slow=5.9,SNR=3.2						
WRA	**Warramunga Arr**	**65.12**	**106**	P	**P**	**16 28 16.8**	**+0.6**
	comp=Z,3.6nm,0.9s,baz=271,slow=5.8,SNR=14						
WB2	**Warramunga Arr**	**65.13**	**106**	P	**P**	**16 28 15.7**	**-0.5**
WB2				IAmb	IAmb	16 28 19.7	
	comp=Z,8.5nm,1.0s						
KURK	**Kurchatov**	**65.16**	**9**	P	**P**	**16 28 15.2**	**-0.4**
KURK	**Kurchatov**	**65.16**	**9**	IAmb	IAmb	16 28 29.5	
	comp=Z,5.0nm,1.6s						
WB0	**Warramunga Arr**	**65.19**	**106**	P	**P**	**16 28 16.8**	**+0.2**
WB0				IAmb	IAmb	16 28 52.8	
	comp=Z,10.0nm,1.3s						
WR0	**Warramunga Arr**	**65.31**	**106**	P	**P**	**16 28 17.8**	**+0.4**
TORD	**Torodi Ar. Bea**	**69.29**	**290**	LR	LR	16 58 44.2	
	comp=Z,29nm,18.4s,baz=160,slow=36						
ZALV	**Zalesovo Beam**	**69.33**	**12**	P	**P**	**16 28 41.8**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=219,slow=3.8,SNR=4.7						
SONM	**Songino Array**	**71.05**	**27**	P	**P**	**16 28 53.2**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=205,slow=6.4,SNR=2.9						
ESDC	**Sonseca Array**	**84.05**	**313**	LR	LR	17 07 06.1	
	comp=Z,24nm,20.2s,baz=250,slow=35						
MJAR	**Matsushiro Arr**	**84.19**	**50**	P	**P**	**16 30 07.2**	**+0.7**
	comp=Z,1.8nm,1.0s,baz=249,slow=8.7,SNR=4.2						
ILAR	**Eielson Array**	**124.27**	**16**	PKP	**PKPdf**	**16 36 31.8**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=308,slow=3.0,SNR=3.1						
YKA	**Yellowknife Ar**	**131.37**	**0**	PKP	**PKPdf**	**16 36 45.7**	**-1.2**
	comp=Z,0.2nm,0.6s,baz=16,slow=1.5,SNR=3.2						
PDAR	**Pinedale Array**	**150.91**	**354**	PKPbc	**PKPbc**	**16 37 27.6**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=13,slow=0.5,SNR=5.0						

*IDC **06** 16:29:47.5±10.0, 35°.97N×71°.29E, h84km±62km, mb3.4/1, mb1 3.5/6, mb1mx3.0/64, mbtmp3.8/6, ML3.6/5, Error ellipse: s-maj=148.3km s-min=37.1km az=155.0*
*NNC **06** 16:29:58.8±9.7, 37°.36N×70°.80E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=74.8km s-min=63.3km az=172.0*
ISC 06 16:29:55.1±2.2**, 36°.8N**±0°.2×**70°.84E**±0°.10**, h100**km**, n18, σ1ˢ.40**/23**, 3C, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.76**	**22**	P	**Pn**	**16 31 19.5**	**+1.1**
	SNR=34						
UCH	**Uchtor**	**6.11**	**27**	P	**Pn**	**16 31 24.1**	**+0.8**
	SNR=14						
EKS2	**Erkin-Say**	**6.27**	**20**	P	**Pn**	**16 31 27.1**	**+2.0**
	SNR=6.6						
KZA	**Kyzart**	**6.27**	**32**	P	**Pn**	**16 31 26.3**	**+0.9**
	SNR=6.9						
KK31	**Karatay Array**	**6.29**	**358**	Pn	**Pn**	**16 31 27.1**	**+1.8**
	1.1nm,0.3s,baz=177,slow=12,SNR=26						
KK31				⇑Sn	**Sn**	**16 32 33.8**	**-1.9**

	4.6nm,0.5s,baz=184,slow=24,SNR=4.8						
AAK	Ala-Archa	6.47	25	P	Pn	16 31 28.9	+1.1
	5.3nm,0.3s,baz=186,slow=6.8,SNR=28						
AAK				S	Sn	16 32 40.0	-0.2
	1.4nm,0.3s,baz=306,slow=24,SNR=7.3						
AAK	Ala-Archa	6.47	25	P	Pn	16 31 29.0	+1.1
	SNR=9.0						
AAK	Ala-Archa	6.47	25	Pn	Pn	16 31 28.9	+1.1
	5.7nm,0.4s						
AAK				Sn	Sn	16 32 39.9	-0.2
	6.8nm,0.5s						
ULHL	Ulahol	6.85	36	P	Pn	16 31 33.8	+0.7
	SNR=7.5						
CHMS	Chumysh	6.87	25	P	Pn	16 31 34.7	+1.5
	SNR=5.9						
USP	Ospenovka	7.03	22	P	Pn	16 31 36.4	+0.9
	SNR=8.7						
TKM2	Tokmak 2	7.12	29	P	Pn	16 31 37.2	+0.5
	SNR=19						
TKM2	Tokmak 2	7.12	29	⇑Pn	Pn	16 31 37.0	+0.3
	4.2nm,0.4s						
TKM2				⇑Sn	Sn	16 32 53.4	-2.7
	3.0nm,0.7s						
GEYT	Alibeck	10.19	280	P	Pn	16 32 18.1	-0.2
	0.7nm,0.3s,baz=96,slow=11,SNR=3.3						
GEYT				S	Sn	16 34 09.1	-1.5
	0.6nm,0.3s,baz=118,slow=15,SNR=2.3						
MKAR	Makanchi Array	13.12	37	P	Pn	16 32 55.9	-1.5
	0.1nm,0.3s,baz=229,slow=15,SNR=16						
KURBB	Kurchatov Arra	14.87	19	P	P	16 33 23.4	+0.2
	0.1nm,0.3s,baz=206,slow=10,SNR=16						
BVAR	Borovoye Array	16.22	359	P	P	16 33 40.5	+2.3
	0.1nm,0.3s,baz=171,slow=10,SNR=2.8						
ZALV	Zalesovo Beam	19.69	25	P	P	16 34 16.2	+0.1
	1.2nm,0.3s,baz=210,slow=12,SNR=7.8						

*NEIC **06** 16:31:29.3±0.3, 6°.3S±0°.1×155°.60E±0°.09, h35km±2km, mb4.3/4, Error ellipse: s-maj=24.1km s-min=13.8km az=23.0*

*IDC **06** 16:31:40.3±8.7, 6°.26S×154°.71E, h87km±49km, mb3.4/3, mb1 3.7/6, mb1mx3.3/42, mbtmp3.9/6, ML2.9/3, Error ellipse: s-maj=88.8km s-min=25.9km az=79.0*

ISC 06 16:31:34.8±2.3**, 6°.35S**±0°.10×**155°.0E**±0°.2**, h35km, n13, σ2s.34**/14**, mb4.1**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.51	308	Pn	Pn	16 32 28.2	+1.3
KRVT	Keravat (AS076	3.55	305	P	Pn	16 32 29.6	+2.1
	1.3nm,0.3s,baz=135,slow=20,SNR=1.8						
KRVT				S	Sn	16 33 08.5	+0.3
	9.6nm,0.3s,baz=125,slow=23,SNR=6.3						
HNR	Honiara	5.82	122	Pn	Pn	16 32 47.0	-12
PMG	Port Moresby	8.29	248	P	Pn	16 33 36.4	+3.8
	3.5nm,0.3s,baz=54,slow=12,SNR=15						
PMG				S	Sn	16 35 01.0	-4.1
	0.4nm,0.3s,baz=163,slow=22,SNR=2.0						
PMG	Port Moresby	8.29	248		Pn	16 33 36.6	+3.9
JAY	Jayapura	14.70	284	P	Pn	16 35 00.4	0.0
	0.2nm,0.3s,baz=345,slow=9.4,SNR=7.2						
WR0	Warramunga Arr	24.00	234	P	P	16 36 45.9	-0.5
WB0	Warramunga Arr	24.02	234	P	P	16 36 46.1	-0.5
WB0				IAmb	IAmb	16 37 02.8	
	comp=Z,20nm,1.8s						
WRAB	Tennant Creek	24.14	234	P	P	16 36 46.2	-1.5
WRAB				IAmb	IAmb	16 36 57.3	
	comp=Z,5.4nm,0.8s						
WB2	Warramunga Arr	24.14	234	P	P	16 36 47.4	-0.4
WRA	Warramunga Arr	24.15	234	P	P	16 36 47.3	-0.6
	comp=Z,1.1nm,0.9s,baz=66,slow=10,SNR=8.2						
ASAR	Alice Springs	26.57	227	P	P	16 37 08.8	-1.1
	comp=Z,0.5nm,0.6s,baz=58,slow=8.9,SNR=7.8						
CMAR	Chiang Mai Arr	60.47	295	P	P	16 41 40.0	-1.6
	comp=Z,0.8nm,0.5s,baz=124,slow=4.8,SNR=6.2						

*BJI **06** 16:33:33.6±0.0, 1°.87S×99°.31E, h42km, mB4.8/13, mb4.5/18, Ms4.2/2, Ms7 4.2/2*

*NEIC **06** 16:33:39.9±1.4, 1°.06S±0°.08×98°.85E±0°.07, h31km±4km, mb4.5/16, Error ellipse: s-maj=13.4km s-min=7.6km az=216.0*

*DJA **06** 16:33:39.6±0.5, 1°S±3°×9°9E±°, h19km±4km, M4.5/21, mB5.0/7, mb4.8/6, MLv4.5/21, Mw(mB)4.4/7*

*KLM **06** 16:33:40.0, 1°.09S×98°.78E, h23km, mb4.4*

*IDC **06** 16:33:43.3±3.0, 1°.00S×98°.96E, h58km±26km, mb3.8/18, mb1 3.9/20, mb1mx3.7/60, mbtmp4.1/20, ML3.7/2, MS3.4/9, Ms1 3.4/9, ms1mx3.0/43, Error ellipse: s-maj=24.9km s-min=11.7km az=54.0*

ISC 06 16:33:40.4±0.5**, 1°.04S**±0°.05×**98°.85E**±0°.06**, h35km, n84, σ1s.16**/76**, mb4.3**/26**, MS3.4**/9**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SISI	Saibi	0.37	139	P	Pn	16 33 50.3	+1.1
SISI				S	Sn	16 33 55.7	+0.4
PBSI	Pulau Batu	1.14	330	P	Pn	16 34 00.6	+0.8
PBSI				S	Sn	16 34 14.6	+0.5
PDSI	Padang	1.62	85	P	Pn	16 34 07.3	+0.8
MNSI	Mandailing Nat	1.97	22	P	Pn	16 34 12.2	+1.0
PPSI	Pulau Pagai	2.06	146	P	Pn	16 34 12.8	+0.2
SBSI	Sibolga	2.58	1	P	Pn	16 34 19.5	-0.1
SBSI				S	Sn	16 34 50.2	+0.4
BKNI	Bangkinang	2.58	58	P	Pn	16 34 21.3	+1.6
BKNI	Bangkinang	2.58	58	Pn	Pn	16 34 20.4	+0.7
SDSI	Sungai Dareh	2.58	88	P	Pn	16 34 21.6	+1.9
GSI	Gunungsitoli	2.66	331	P	Pn	16 34 21.1	+0.4
GSI	Gunungsitoli	2.66	331		Pn	16 34 21.3	+0.6
KRJI	Kerinci	2.81	112	P	Pn	16 34 25.6	+2.6
RPSI	Rantau Prapat	3.71	1		Pn	16 34 35.9	+0.6
RPSI	Rantau Prapat	3.71	1		Pn	16 34 36.3	+1.0
PSI	Prapat	3.82	1	P	Pn	16 34 36.3	-0.5
	1.7nm,0.3s,baz=180,slow=10,SNR=31						
MASI	Maura Aman, Be	3.98	122	P	Pn	16 34 40.8	+1.9
KSI	Kapahiang	4.55	125	P	Pn	16 34 48.5	+1.7
KCSI	Kotacane, Aceh	4.66	347	P	Pn	16 34 49.1	+0.8
MNAI	Manna	5.26	129	P	Pn	16 34 58.0	+1.4
	1.9nm10μm220nm,0.5s						
MNAI	Manna	5.26	129		Pn	16 34 57.5	+0.9
MYKOM	Kota Tinggi	5.74	61		Pn	16 35 03.4	+0.3
MYKOM	Kota Tinggi	5.74	61	P	Pn	16 35 04.0	+0.9
IPM	Ipoh	5.90	22		Pn	16 35 05.9	+0.5
IPM	Ipoh	5.90	22	P	Pn	16 35 08.0	+2.6
TPRI	Tanjung Pinang	6.00	71	P	Pn	16 35 08.1	+1.3
	1.0nm890nm31nm,0.5s						
MDSI	Maura Dua	6.33	123	P	Pn	16 35 13.1	+1.9
	0.1nm546nm36nm,0.8s						
LWLI	Liwa	6.53	127	P	Pn	16 35 15.7	+1.6
KULM	Kulim	6.54	16		Pn	16 35 14.8	+0.6
KULM	Kulim	6.54	16	P	Pn	16 35 15.0	+0.8
CISI	Cisompet, Garu	11.03	126	P	Pn	16 36 13.3	-2.5
CISI	Cisompet, Garu	11.03	126		Pn	16 36 13.4	-2.5
UGM	Wanagama	13.49	121	Pn	Pn	16 36 47.1	-2.3
SBUM	Sibu	13.81	75		Pn	16 36 53.8	0.0
DLV	T Lat	16.07	36	P	P	16 37 27.3	+0.3
DLV				IAmb	IAmb	16 37 54.5	
	comp=Z,98nm,1.9s						
KKM	Kota Kinabalu	18.71	68		Pn	16 37 57.5	+0.7
KKM				IAmb	IAmb	16 38 41.2	
	comp=Z,34nm,1.2s						
CMAR	Chiang Mai Arr	19.38	0	P	P	16 38 03.0	-0.3
	comp=Z,0.2nm,0.3s,baz=192,slow=10.0,SNR=18						
CMAR				LR	LR	16 46 03.3	
	comp=Z,137nm,19.9s,baz=195,slow=38						
SLVN	Son La	22.78	12	P	P	16 38 39.2	-0.9
LUWI	Luwuk	23.92	90	P	P	16 38 51.4	+0.1
H08S2	Diego Garcia H	27.07	255	T	T	17 07 17.0	
	baz=77,slow=75,SNR=912						
H08S3	Diego Garcia H	27.08	255	T	T	17 07 16.6	
	baz=77,slow=75,SNR=860						
H08S1	Diego Carcia H	27.09	255	T	T	17 07 17.7	
	baz=77,slow=75,SNR=642						
FITZ	Fitzroy Crossi	31.30	124	P	P	16 39 57.0	-0.4
	comp=Z,2.1nm,0.8s,baz=311,slow=7.3,SNR=2.0						
FITZ	Fitzroy Crossi	31.30	124	IAmb	IAmb	16 39 58.9	
	comp=Z,12nm,1.4s						
SIJI	Sorong	32.41	90	P	P	16 40 06.6	-0.7
	comp=Z,6.1nm,0.8s,baz=214,slow=11,SNR=2.7						
XAN	Xi'an	36.16	14	P	P	16 40 38.3	-1.3
XAN				pP	pP	16 40 50.0	+0.3
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,110nm,6.5s						
XAN				LR	LR		
	comp=Z,140nm,17.4s						
XAN				LR	LR		
	comp=Z,150nm,18.4s						
WB0	Warramunga Arr	39.44	120	P	P	16 41 06.8	-0.7
WB0				IAmb	IAmb	16 41 20.5	
	comp=Z,5.1nm,0.6s						
WRA	Warramunga Arr	39.47	121	P	P	16 41 07.5	-0.3
	comp=Z,1.9nm,0.6s,baz=300,slow=9.1,SNR=23						
WB2	Warramunga Arr	39.48	121	P	P	16 41 06.9	-0.9
WB2				IAmb	IAmb	16 41 21.3	
	comp=Z,6.1nm,0.6s						
WR0	Warramunga Arr	39.65	121	P	P	16 41 08.2	-1.0
WR0				IAmb	IAmb	16 41 22.4	
	comp=Z,7.2nm,0.6s						
GTA	Gaotai	40.27	1	eP	P	16 41 14.9	+0.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ASAR	Alice Springs	40.74	126	P	P	16 41 18.6	+0.4
	comp=Z,1.1nm,0.5s,baz=298,slow=7.6,SNR=28						
ASAR				PcP	PcP	16 43 20.3	+0.9
	comp=Z,0.9nm,0.7s,baz=301,slow=2.8,SNR=5.3						
ASAR				S	S	16 47 23.5	-3.3
	comp=Z,0.2nm,0.6s,baz=298,slow=14,SNR=2.5						
AS31	Alice Springs	40.74	126	P	P	16 41 18.5	+0.2
KSH	Kashi	45.48	335	smax	smax		
	comp=N,650nm,0.3s						
KSH				smax	smax		
	comp=E,420nm,0.3s						
KSH	Kashi	45.48	335	P	P	16 41 59.1	+2.6
KSH				pP	sP	16 42 11.7	+0.7
KSH				sP	pP	16 42 16.4	+10
KSH				pmax	pmax		
	comp=E,85nm,2.2s						
KSH				pmax	pmax		
	comp=E,260nm,4.7s						
KSRS	Korea Array	46.81	32	P	P	16 42 06.0	-0.7
	comp=E,1.9nm,0.8s,baz=222,slow=8.1,SNR=5.1						
BBOO	Buckleboo	47.13	136	P	P	16 42 10.1	+0.7
AAK	Ala-Archa	48.70	336	LR	LR	17 04 59.5	
	comp=E,26nm,21.4s,baz=154,slow=38						
SONM	Songino Array	49.12	7	P	P	16 42 26.0	+1.3
	comp=E,9.0nm,0.8s,baz=188,slow=8.9,SNR=27						
ULN	Ulaanbaatar	49.23	7	P	P	16 42 26.0	+0.5
MKAR	Makanchi Array	49.81	345	P	P	16 42 30.4	+0.6
	comp=E,1.7nm,0.7s,baz=152,slow=7.7,SNR=19						
MAKZ	Makanchi	49.90	345	P	P	16 42 30.9	+0.4
MAKZ				IAmb	IAmb	16 42 42.7	
	comp=Z,3.5nm,0.9s						
STKA	Stephens Creek	50.64	132	P	P	16 42 37.3	+0.9
	comp=Z,4.2nm,0.8s,baz=311,slow=4.3,SNR=9.2						
JHJ	Hachijo jima 2	51.39	45	LR	LR	17 06 30.0	
	comp=Z,22nm,18.6s,baz=58,slow=38						
USRK	Ussuriysk Ar.	53.87	29	P	P	16 42 60.0	-0.1
	comp=Z,3.6nm,0.8s,baz=248,slow=5.8,SNR=6.2						
KURBB	Kurchatov Arra	54.32	344	P	P	16 43 03.6	+0.4
	comp=Z,0.9nm,0.6s,baz=159,slow=7.0,SNR=4.0						
KURK	Kurchatov	54.38	344	P	P	16 43 03.6	-0.1
ZALV	Zalesovo Beam	56.03	350	P	P	16 43 15.7	+0.2
	comp=Z,1.0nm,0.4s,baz=189,slow=5.6,SNR=9.9						
KLR	Kul'dur	57.55	25	P	P	16 43 26.2	-0.2
	comp=Z,1.8nm,0.6s,baz=240,slow=7.9,SNR=9.8						
BVAR	Borovoye Array	58.90	340	P	P	16 43 35.7	-0.1
	comp=Z,0.6nm,0.6s,baz=126,slow=7.5,SNR=5.2						
AKTO	Aktyubinsk	61.97	332	P	P	16 43 57.0	+0.2
	comp=Z,0.6nm,0.6s,baz=129,slow=6.5,SNR=1.5						
KBZ	Khabaz	66.84	319	P	P	16 44 29.3	+0.5
	comp=Z,1.2nm,0.6s,baz=243,slow=7.3,SNR=2.2						
YAK	Yakutsk	67.12	15	P	P	16 44 29.2	-1.0
NRIK	Noril'sk	70.67	356	P	P	16 44 52.3	+0.2
	comp=Z,1.3nm,0.5s,baz=183,slow=6.3,SNR=4.6						
MAW	Mawson	70.93	194	LR	LR	17 10 28.1	
	comp=Z,107nm,18.2s,baz=238,slow=31						
BRTR	Keskin Array B	71.83	313	LR	LR	17 19 32.2	
	comp=Z,8.6nm,18.4s,baz=64,slow=38						
PETK	Petropavlovsk-	72.70	33	P	P	16 45 04.5	-0.2
	comp=Z,1.2nm,0.7s,baz=232,slow=3.4,SNR=4.8						
TIXI	Tiksi	75.11	9	LR	LR	17 22 34.8	
	comp=Z,23nm,18.8s,baz=221,slow=39						
TIXI	Tiksi	75.11	9	P	P	16 45 18.7	+0.3
TIXI				IAmb	IAmb	16 45 21.6	
	comp=Z,1.7nm,0.5s						
BOSA	Boshof	75.11	241	P	P	16 45 19.9	+0.4
	comp=Z,4.3nm,1.1s,baz=85,slow=11,SNR=1.7						
BOSA	Boshof	75.11	241	P	P	16 45 20.0	+0.4
MLR	Muntele Rosu	78.82	317	LR	LR	17 25 42.3	
	comp=Z,12nm,18.4s,baz=112,slow=40						
ARCES	ARCESS Array B	85.19	340	LR	LR	17 27 54.8	
	comp=Z,29nm,19.0s,baz=170,slow=38						
NOA	NORSAR Array B	89.75	331	LR	LR	17 30 17.9	
	comp=Z,13nm,19.4s,baz=260,slow=38						
CPUP	Villa Florida	144.38	218	PKP	PKPdf	16 53 12.9	-0.8
	comp=Z,5.7nm,0.8s,baz=127,slow=2.3,SNR=16						

IDC 06 17:05:51.7±3.4**, 3°.68N**×**128°.21E, h0km, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.1**/51**, mbtmp3.2**/3**, Error ellipse: s-maj=274.9km s-min=29.1km az=67.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.24	166	P	P	17 11 10.1	-0.4
	0.3nm,0.8s,baz=350,slow=11,SNR=1.4						
ASAR	Alice Springs	27.74	169	P	P	17 11 42.7	+0.5
	0.2nm,0.8s,baz=347,slow=6.9,SNR=1.8						
MKAR	Makanchi Array	58.44	325	P	P	17 15 49.2	-0.2
	0.2nm,0.4s,baz=110,slow=7.9,SNR=4.5						

*NAO **06** 17:10:29.7±0.8, 67°.03N×21°.17E, ML2.5*

*UPP **06** 17:10:29.2±0.1, 67°.05N×20°.98E, h1km, ML2.4, Explosion*

*IDC **06** 17:10:29.7±1.0, 67°.07N×21°.00E, h0km, mb1 2.8/4, mb1mx2.7/48, mbtmp2.8/4, ML2.0/4, Error ellipse: s-maj=19.0km s-min=8.7km az=116.0*

*HEL **06** 17:10:29.8±0.1, 67°.05N×20°.97E, h0km, ML2.2, ML2.2(UPP), Explosion*

*BER **06** 17:10:31.9±3.6, 67°.00N×21°.00E, h0km, ML1.7, Suspected explosion*

ISC 06 17:10:28.6±0.7**, 67°.05N**±0°.02×**20°.95E**±0°.02**, h0km, n64, σ1s.23**/97**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.17	297	P	Pg	17 10 32.6	+0.9
DUNU				S	Sg	17 10 35.5	+1.6
DUNU	Dundret	0.17	297	*i* P	Pg	17 10 32.6	+0.9
DUNU				*i* S	Sg	17 10 35.5	+1.6
MASU	Masugnsbyn	0.58	44	P	Pg	17 10 40.0	+0.4
MASU	Masugnsbyn	0.58	44	*i* P	Pg	17 10 40.0	+0.4
ERTU	Ertsjaerv	0.70	135	*e*P	Pg	17 10 42.0	+0.1
	baz=310						
ERTU				*e*S	Sg	17 10 51.3	+0.4
PAJU	Pajala	0.85	90	P	Pg	17 10 44.7	-0.1
PAJU	Pajala	0.85	90	*i* P	Pg	17 10 44.7	-0.1
HARU	Harads	0.89	179	P	Pg	17 10 45.7	+0.2
HARU	Harads	0.89	179	*i* P	Pg	17 10 45.7	+0.2
LANU	Lannavaara	1.08	21	P	Pg	17 10 48.9	-0.5
LANU	Lannavaara	1.08	21	*e*P	Pg	17 10 49.0	-0.4
KOVU	Salmi	1.22	346	P	Pg	17 10 51.5	-0.4
KOVU				S	Sb	17 11 08.6	-0.2
KOVU	Salmi	1.22	346	*e*P	Pg	17 10 51.5	-0.4
KOVU				*e*S	Sb	17 11 08.6	-0.2
SJUU	Sjulsmark	1.57	170	P	Pn	17 10 57.8	+0.2
SJUU				S	Sg	17 11 19.9	+1.0
SJUU	Sjulsmark	1.57	170	*e*P	Pn	17 10 57.8	+0.2
SJUU				*e*S	Sg	17 11 19.9	+1.0
TOF	Tornio	1.66	124	*e*P	Pn	17 10 59.3	+0.4
TOF				MSG		17 11 19.7	
	comp=Z,30nm,0.2s						
TOF				*e*SN	Sg	17 11 23.7	+1.8
HEF	Hetta	1.71	36	Pn	Pn	17 10 60.0	+0.3
HEF				Sn	Sg	17 11 24.0	+0.4
HEF	Hetta	1.71	36	*e*P	Pn	17 10 59.8	+0.1
	baz=218						
HEF				MSG		17 11 21.2	
	comp=Z,16nm,0.2s						
HEF				*e*SN	Sg	17 11 24.0	+0.4
HEF	Hetta	1.71	36	Pn	Pn	17 10 60.0	+0.3
HEF				Sn	Sg	17 11 24.0	+0.4
LILU	Lilltraesk	1.82	195	P	Pn	17 11 01.8	+0.7
LILU	Lilltraesk	1.82	195	*e*P	Pn	17 11 01.8	+0.7
KIF	Kilpisjarvi	1.97	358	Pn	Pn	17 11 03.2	+0.1
KIF				Sn	Sg	17 11 31.8	+0.1
KIF	Kilpisjarvi	1.97	358	*e*PB	Pb	17 11 05.0	-0.2
KIF				MSG		17 11 28.7	
	comp=Z,32nm,0.2s						
KIF				*e*SG	Sg	17 11 32.4	+0.6
KIF	Kilpisjarvi	1.97	358	*e*P	Pb	17 11 05.0	-0.2
KIF				*e*S	Sg	17 11 32.5	+0.8
RNF	Rovaniemi	2.05	100	*e*PB	Pb	17 11 05.6	-1.0
	baz=287						
RNF				*e*SG	Sg	17 11 33.6	-0.8
KTK1	Kautokeino	2.15	22	Pn	Pb	17 11 07.7	-0.7
KTK1				Sn	Sb	17 11 35.4	-0.3
KTK1	Kautokeino	2.15	22	*e*P	Pb	17 11 07.8	-0.6
KTK1				IAML		17 11 42.7	
	comp=Z,11nm,0.2s						
SGF	Sodankyl	2.21	77	*e*P	Pn	17 11 07.7	+1.3
	baz=263						
SGF				*e*SG	Sg	17 11 39.5	+0.2
I37NO	I37NO	2.22	338	*i*		17 24 30.0	
	baz=159,slow=327,SNR=14						
STEI	Steigen	2.37	295	*e*P	Pn	17 11 09.5	+0.9
STEI				IAML		17 11 49.4	
	comp=Z,6.6nm,0.2s						
BURU	Burvik	2.48	176	*e*P	Pn	17 11 11.8	+1.6
	baz=358						
SVAU	Svanoeiden	2.62	193	P	Pn	17 11 13.5	+1.4
SVAU	Svanoeiden	2.62	193	*e*P	Pn	17 11 13.5	+1.4
TRO	Tromso	2.71	345	Pn	Pn	17 11 15.4	+2.1
TRO				Sn	Sb	17 11 50.3	-1.1
TRO	Tromso	2.71	345	*e*P	Pn	17 11 15.0	+1.8
TRO				*e*S	Sb	17 11 50.6	-0.8
TRO				IAML		17 11 59.3	
	comp=Z,8.0nm,0.2s						
OUL	Oulu	2.82	132	*e*P	Pn	17 11 16.9	+2.1
	baz=315						
OBF0	Syolatti, Pyha	2.90	151	*e*PG	Pb	17 11 20.9	-0.1
	baz=336						
OBF0				*e*SB	Sb	17 11 55.1	-1.8
ARA0	ARCESS Array S	3.02	32	Pn	Pn	17 11 18.2	+0.6
	baz=211,slow=14						
ARA0				Sn	Sn	17 11 55.7	+1.2
	baz=204,slow=16						
ARA0	ARCESS Array S	3.02	32	Pn	Pn	17 11 18.2	+0.6
	baz=211,slow=14						
ARA0				Sn	Sn	17 11 55.7	+1.2
	baz=204,slow=16						
ARCES	ARCESS Array B	3.02	32	Pn	Pn	17 11 18.7	+1.1
	comp=Z,0.4nm,0.3s,baz=211,slow=14,SNR=19						
ARCES				Sn	Sn	17 11 55.0	+0.6
	comp=Z,0.5nm,0.3s,baz=206,slow=16,SNR=2.1						
ARE0	ARCESS Array S	3.02	32	*e*P	Pn	17 11 18.8	+1.2
ARE0				*e*SB	Sb	17 11 59.8	-0.7
ARE0	ARCESS Array S	3.02	32	*e*P	Pn	17 11 18.7	+1.2
ARE0				*e*S	Sn	17 11 54.2	-0.2
ARE0				IAML		17 12 04.2	
	comp=Z,6.3nm,0.1s						
LOF	Lofoten	3.04	294	*e*P	Pn	17 11 19.1	+1.3
LOF				IAML		17 12 16.9	
	comp=Z,6.1nm,0.4s						
OUF	Merijarvi	3.11	148	*e*PB	Pn	17 11 21.7	+2.9
	baz=333						
OUF				MSG		17 12 00.6	
	comp=Z,3.1nm,0.2s						
KONS	Konsvik	3.15	264	*e*P	Pn	17 11 19.2	-0.1
KONS				IAML		17 12 15.5	
	comp=Z,6.0nm,0.5s						
UMAU	Umeaa	3.18	182	*e*P	Pn	17 11 21.0	+1.3
	baz=0.0						
VRF	Varrio	3.42	74	*e*P	Pn	17 11 25.6	+2.5
VRF				*e*SG	Sb	17 12 14.8	+2.9
KU6	Riekki	3.72	102	*e*P	Pn	17 11 28.1	+0.9
	baz=288						
HAMF	Hammerfest	3.75	14	*e*P	Pn	17 11 29.8	+2.2
HAMF				IAML		17 12 37.8	
	comp=Z,4.8nm,0.3s						
HUSU	Husum	3.79	192	*e*P	Pn	17 11 29.6	+1.5
HEMU	Hemsoen	4.56	197	*e*P	Pn	17 11 40.6	+1.9
APA0	Apatity Array	4.70	78	Pn	Pn	17 11 41.1	+0.6
	baz=253,slow=11						
APA0	Apatity Array	4.70	78	Pn	Pn	17 11 41.1	+0.6
	baz=253,slow=11						
FIA0	FINESS Array S	6.05	156	Pn	Pn	17 12 00.8	+1.6
	baz=347,slow=14						
FIA0				Sn	Sn	17 13 07.5	-1.5
	baz=338,slow=18						
FIA0	FINESS Array S	6.05	156	Pn	Pn	17 12 00.8	+1.6
	baz=347,slow=14						
FIA0				Sn	Sn	17 13 07.5	-1.5
	baz=338,slow=18						
FINES	FINESS Array B	6.05	156	Pn	Pn	17 12 00.5	+1.3
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=7.3						
FINES				Sn	Sn	17 13 10.4	+1.4
	comp=Z,0.2nm,0.3s,baz=351,slow=20,SNR=4.2						
NB2	NORSAR Subarra	7.38	220	Pn	Pn	17 12 18.9	+1.5
	baz=23,slow=14						
NB2	NORSAR Subarra	7.38	220	Pn	Pn	17 12 18.9	+1.5
	baz=23,slow=14						
NOA	NORSAR Array B	7.38	220	Pn	Pn	17 12 16.8	-0.6
	comp=Z,0.0nm,0.3s,baz=45,slow=17,SNR=4.7						
NOA				Sn	Sn	17 13 39.9	-1.9
	comp=Z,0.0nm,0.3s,baz=236,slow=15,SNR=1.7						
NRA0	NORESS Array S	7.56	218	Pn	Pn	17 12 19.4	-0.5
	baz=25,slow=14						
NRA0				Sn	Sn	17 13 44.1	-2.2
	baz=45,slow=28						
NRA0	NORESS Array S	7.56	218	Pn	Pn	17 12 19.4	-0.5
	baz=25,slow=14						
NRA0				Sn	Sn	17 13 44.1	-2.2
	baz=45,slow=28						
HFS	Hagfors	7.65	208	Pn	Pn	17 12 21.4	+0.3
	baz=28,slow=14						
HFS				Sn	Sn	17 13 45.4	-3.0
	baz=30,slow=28						
HFS	Hagfors	7.65	208	Pn	Pn	17 12 21.4	+0.3
	comp=Z,0.1nm,0.3s,baz=28,slow=14,SNR=6.1						
HFS	Hagfors	7.65	208	Pn	Pn	17 12 21.4	+0.3
	baz=28,slow=14						
HFS				Sn	Sn	17 13 45.4	-3.0
	baz=30,slow=28						

NNC 06 17:57:29.4±2.9**, 36°.90N**×**70°.44E, h0km, mb3.7, mpv3.4, 4C-2D, Error ellipse: s-maj=23.5km s-min=21.8km az=134.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.20	0	⇑Pn	Pn	17 59 02.6	+0.4
	2.3nm,0.6s,baz=178,slow=13,SNR=27						
KK31				⇑Sn	Sn	18 00 14.4	+0.7
	2.0nm,0.5s,baz=186,slow=21,SNR=5.8						
AAK	Ala-Archa	6.53	27	⇓Pn	Pn	17 59 06.7	-0.1
	0.9nm,0.5s						
AAK				⇑Sn	Sn	18 00 24.2	+2.1
	3.5nm,0.5s						
TKM2	Tokmak 2	7.20	32	⇓Pn	Pn	17 59 15.7	-0.5
	1.1nm,0.5s						
TKM2				⇑Sn	Sn	18 00 39.5	+0.7
	5.1nm,0.8s						

*CNRM **06** 17:59:32.1±1.4, 35°.77N×5°.22W, h124km±15km, Error ellipse: s-maj=15.1km s-min=6.0km az=93.0*

*IGIL **06** 17:59:35.5, 35°.93N×4°.71W, h26km, ML2.4*

*SFS **06** 17:59:36.0, 35°.91N×4°.70W, h72km, ML2.9, ALBORAN W.*

*INMG **06** 17:59:36.9±2.1, 35°.99N×4°.72W, h71km±8km, ML2.4, Error ellipse: s-maj=6.0km s-min=5.1km az=7.0*

*MDD **06** 17:59:36.4±0.9, 35°.89N×4°.72W, h63km±8km, mb3.4/11, Error ellipse: s-maj=8.4km s-min=5.2km az=161.0, PRXIMO*

ISC 06 17:59:33.1±1.2**, 35°.84N**±0°.03×**4°.74W**±0°.03**, h90km**±7km**, n58, σ1s.74**/107**, 2C-4D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEU	Ceuta	0.52	277	P	Pn	17 59 48.0	+0.1
CEU				S	Sn	17 59 55.7	-3.3
CEU	Ceuta	0.52	277	*e*P	Pn	17 59 48.0	+0.1
CEU				*e*S	Sn	17 59 55.7	-3.3
ECEU	Ceuta	0.52	277	P	Pn	17 59 49.9	+2.0
	20nm,0.1s,SNR=7.9						
ECEU				S	Sn	17 59 58.2	-0.9
	13nm,0.1s,SNR=7.9						
SMIR	Smir Dam	0.55	253	P	Pn	17 59 50.1	+2.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SMIR				S	Sn	17 59 59.9	+0.5
EMIJ	**Mijas**	**0.72**	**358**	⇓P	**Pn**	**17 59 49.7**	**-0.1**
	3.2nm,0.1s,SNR=18						
EMIJ				S	**Sn**	**18 00 00.3**	**-2.0**
	25nm,0.1s,SNR=31						
EJIF	**Jimena Fronter**	**0.85**	**316**	P	**Pn**	**17 59 51.4**	**+0.3**
	180nm,0.1s,SNR=7.9						
EJIF				S	**Sn**	**18 00 03.6**	**-1.0**
	3µm,0.6s,SNR=7.9						
CHEFC	**Chefchaouen**	**0.88**	**214**	P	**Pn**	**17 59 53.8**	**+2.3**
CHEFC				S	**Sn**	**18 00 08.7**	**+3.4**
EMAL	**Malaga-Limoner**	**0.95**	**15**	*i* P	**Pn**	**17 59 52.8**	**+0.6**
EMAL				*e*S	**Sn**	**18 00 05.3**	**-1.2**
RSA	**Sarsar**	**1.30**	**223**	P	**Pn**	**17 59 58.6**	**+2.2**
RSA				S	**Sn**	**18 00 13.0**	**-0.9**
ELGU	**Los Guajares,**	**1.36**	**41**	P	**Pn**	**17 59 57.0**	**-0.1**
	6.4nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**18 00 13.6**	**-1.7**
	16nm,0.2s,SNR=7.9						
EGOR	**Sierra Gorda,**	**1.36**	**22**	P	**Pn**	**17 59 58.7**	**+1.4**
	6.1nm,0.4s,SNR=7.9						
EGOR				S	**Sn**	**18 00 14.2**	**-1.3**
	4.6nm,0.3s,SNR=7.9						
ESPR	**Espera**	**1.37**	**319**	P	**Pn**	**17 59 59.2**	**+2.1**
	1.3nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**18 00 14.9**	**-0.4**
	16nm,0.2s,SNR=7.9						
AKLM	**AKL**	**1.51**	**151**	P	**Pn**	**18 00 00.2**	**+1.2**
AKLM				S	**Sn**	**18 00 18.0**	**-0.6**
EQUE	**Quentar**	**1.72**	**37**	P	**Pn**	**18 00 03.7**	**+2.0**
	0.8nm,0.1s,SNR=6.4						
EQUE				S	**Sn**	**18 00 22.3**	**-1.1**
	0.8nm,0.2s,SNR=4.0						
EBER	**Berja**	**1.83**	**54**	P	**Pn**	**18 00 04.1**	**+0.9**
	3.7nm,0.2s,SNR=14						
EBER				S	**Sn**	**18 00 25.0**	**-1.1**
	6.0nm,0.2s						
HORN	**Hornachuelos**	**2.05**	**348**	P	**Pn**	**18 00 07.5**	**+1.7**
HORN				S	**Sn**	**18 00 31.5**	**+0.6**
ECAB	**El Cabril**	**2.30**	**346**	P	**Pn**	**18 00 10.4**	**+1.2**
	0.7nm,0.1s,SNR=11						
ECAB				S	**Sn**	**18 00 35.7**	**-1.1**
	6.2nm,0.1s,SNR=21						
EADA	**Adamuz**	**2.33**	**3**	⇓P	**Pn**	**18 00 11.4**	**+1.8**
	2.4nm,0.1s,SNR=18						
EADA				S	**Sn**	**18 00 37.7**	**+0.1**
	3.6nm,0.1s						
IFR	**Ifrane**	**2.34**	**188**	⇓*i*P	**Pn**	**18 00 09.9**	**0.0**
IFR				*e*S	**Sn**	**18 00 34.9**	**-3.2**
EQES	**Quesada**	**2.37**	**34**	P	**Pn**	**18 00 12.5**	**+2.2**
	0.8nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**18 00 40.2**	**+1.4**
	3.5nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.47**	**322**	P	**Pn**	**18 00 12.8**	**+1.3**
	0.6nm,0.1s,SNR=10.0						
EMIN				S	**Sn**	**18 00 40.0**	**-1.0**
	4.2nm,0.1s,SNR=22						
EGRO	**El Granado**	**2.78**	**308**	⇑P	**Pn**	**18 00 16.8**	**+1.2**
	4.8nm,0.1s,SNR=18						
EGRO				S	**Sn**	**18 00 47.2**	**-1.1**
	11nm,0.1s,SNR=17						
ZHG	**ZHG**	**2.86**	**214**	P	**Pn**	**18 00 16.3**	**-0.5**
ZHG				S	**Sn**	**18 00 47.5**	**-2.9**
PVAQ	**Vaqueiros**	**2.86**	**304**	*e*P	**Pn**	**18 00 17.7**	**+1.0**
PVAQ				*e*S	**Sn**	**18 00 49.2**	**-1.1**
PVAQ				A	A	18 00 50.7	
	10nm,0.1s						
PBDV	**Barranco-do-Ve**	**2.93**	**300**	*e*P	**Pn**	**18 00 18.8**	**+1.2**
PBDV				*e*S	**Sn**	**18 00 51.0**	**-1.0**
PBDV				A	A	18 00 55.0	
	6.9nm,0.4s						
MD31	**MD31**	**2.97**	**180**	P	**Pn**	**18 00 18.9**	**+0.7**
MD31				S	**Sn**	**18 00 52.8**	**-0.2**
PBAR	**Barrancos**	**2.97**	**322**	*e*S	**Sn**	**18 00 52.5**	**-0.4**
PCVE	**Castro Verde**	**3.20**	**305**	*e*P	**Pn**	**18 00 23.1**	**+1.9**
PCVE				*e*S	**Sn**	**18 00 57.6**	**-0.8**
PCVE				A	A	18 00 58.3	
	3.7nm,0.2s						
PBEJ	**Beja**	**3.32**	**312**	*e*S	**Sn**	**18 01 00.8**	**-0.6**
PBEJ				A	A	18 01 01.6	
	9.0nm,0.1s						
EBAD	**Badajoz**	**3.43**	**329**	⇑P	**Pn**	**18 00 26.1**	**+1.7**
	1.5nm,0.1s,SNR=18						
EBAD				S	**Sn**	**18 01 03.1**	**-0.8**
	23nm,0.2s,SNR=15						
MESJ	**Messejana**	**3.43**	**307**	*e*P	**Pn**	**18 00 25.7**	**+1.3**
MESJ				*e*S	**Sn**	**18 01 02.0**	**-2.1**
MESJ				AML	AML	18 01 04.1	
	comp=E,9.7nm,0.3s						
MESJ	**Messejana**	**3.43**	**307**	*e*P	**Pn**	**18 00 25.8**	**+1.4**
MESJ				*e*S	**Sn**	**18 01 02.6**	**-1.5**
MESJ				A	A	18 01 04.0	
	comp=E,8.3nm,0.2s						
MORF	**Marmelete**	**3.47**	**296**	*e*P	**Pn**	**18 00 26.2**	**+1.2**
MORF				*e*S	**Sn**	**18 01 03.4**	**-1.7**
MORF				AML	AML	18 01 06.3	
	comp=E,15nm,0.2s						
MORF	**Marmelete**	**3.47**	**296**	*e*P	**Pn**	**18 00 26.2**	**+1.2**
MORF				*e*S	**Sn**	**18 01 04.0**	**-1.1**
MORF				A	A	18 01 06.2	
	comp=E,9.6nm,0.2s						
PFVI	**Vila Bisbo**	**3.54**	**293**	P	**Pn**	**18 00 27.2**	**+1.4**
	comp=E,3.5nm,0.1s,SNR=4.0						
PFVI				S	**Sn**	**18 01 04.7**	**-1.9**
	comp=E,9.6nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.54**	**293**	*e*S	**Sn**	**18 01 05.2**	**-1.4**
PFVI				A	A	18 01 06.5	
	comp=E,5.0nm,0.1s						
PTEO	**Sao Teotonio**	**3.63**	**299**	*e*P	**Pn**	**18 00 28.6**	**+1.6**
PTEO				*e*S	**Sn**	**18 01 08.1**	**-0.7**
PTEO				A	A	18 01 09.9	
	comp=E,4.2nm,0.2s						
PAB	**San Pablo**	**3.71**	**5**	P	**Pn**	**18 00 29.8**	**+1.6**
	comp=E,0.5nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**18 01 09.1**	**-1.9**
	comp=E,0.6nm,0.1s,SNR=7.9						
EVO	**Evora**	**3.75**	**317**	⇓*e*P	**Pn**	**18 00 30.6**	**+2.0**
EVO				*e*S	**Sn**	**18 01 10.6**	**-1.1**
EVO	**Evora**	**3.75**	**317**	*e*P	**Pn**	**18 00 30.7**	**+2.0**
EVO				*e*S	**Sn**	**18 01 10.7**	**-1.1**
EVO				A	A	18 01 12.0	
	comp=E,22nm,0.1s						
PESTR	**Estremoz**	**3.78**	**324**	*e*S	**Sn**	**18 01 11.4**	**-1.1**
ETOB	**Tobarra**	**3.78**	**41**	P	**Pn**	**18 00 31.2**	**+2.0**
	comp=E,1.9nm,0.2s,SNR=6.3						
ETOB				S	**Sn**	**18 01 11.3**	**-1.4**
	comp=E,0.8nm,0.3s						
PNCL	**Nicolau / Gran**	**3.79**	**308**	*e*P	**Pn**	**18 00 30.6**	**+1.4**
PNCL				*e*S	**Sn**	**18 01 10.7**	**-2.0**
PNCL				A	A	18 01 12.4	
	comp=E,5.8nm,0.1s						
ESDC	**Sonseca Array**	**3.88**	**9**	P	**Pn**	**18 00 32.1**	**+1.6**
	comp=E,0.4nm,0.1s,baz=190,slow=12,SNR=4.8						
ESDC				S	**Sn**	**18 01 12.8**	**-2.1**
	comp=E,0.8nm,0.3s,baz=188,slow=23,SNR=7.9						
PMRV	**Marv??o**	**4.16**	**330**	*e*P	**Pn**	**18 00 36.2**	**+2.0**
PMRV				*e*S	**Sn**	**18 01 20.3**	**-1.3**
PMRV				A	A	18 01 35.2	
	comp=E,3.8nm,0.2s						
PMTG	**Montargil**	**4.25**	**320**	*e*P	**Pn**	**18 00 37.8**	**+2.3**
PMTG				*e*S	**Sn**	**18 01 22.5**	**-1.5**
PMTG				A	A	18 01 24.7	
	comp=E,2.8nm,0.1s						
EPLA	**Plasencia**	**4.35**	**346**	P	**Pn**	**18 00 38.4**	**+1.5**
	comp=E,0.6nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**18 01 23.9**	**-2.4**
	comp=E,1.8nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**4.54**	**332**	*e*S	**Sn**	**18 01 29.9**	**-1.1**
PMAFR	**Mafra**	**4.77**	**312**	*e*S	**Sn**	**18 01 35.4**	**-1.2**
PCAS	**Casmilo, Conde**	**5.15**	**326**	*e*S	**Sn**	**18 01 44.3**	**-1.5**
PCAS				A	A	18 01 48.1	
	comp=E,4.0nm,0.6s						
ETOR	**Torete**	**5.40**	**22**	P	**Pn**	**18 00 52.8**	**+1.6**
	comp=E,5.1nm,0.2s,SNR=8.4						
ETOR				S	**Sn**	**18 01 48.8**	**-3.2**
	comp=E,1.9nm,0.4s,SNR=7.9						
MVO	**Moncorvo**	**5.61**	**342**	P	**Pn**	**18 00 56.1**	**+2.1**
	comp=E,1.3nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**18 01 54.8**	**-2.4**
	comp=E,1.9nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.61**	**342**	*e*P	**Pn**	**18 00 56.1**	**+2.1**
MVO				*e*S	**Sn**	**18 01 55.5**	**-1.6**
MVO				A	A	18 01 59.0	
	comp=E,2.9nm,0.9s						
PBRG	**Braganca**	**6.16**	**346**	*e*P	**Pn**	**18 01 03.9**	**+2.4**
PBRG				*e*S	**Sn**	**18 02 06.6**	**-3.8**
ECAL	**Calabor**	**6.29**	**346**	S	**Sn**	**18 02 11.6**	**-2.0**
	comp=E,1.9nm,0.3s,SNR=7.9						
PCAB	**Cabril**	**6.40**	**337**	*e*S	**Sn**	**18 02 13.8**	**-2.5**
PCAB				A	A	18 02 15.1	
	comp=E,3.9nm,0.2s						
ELOB	**Lobios**	**6.55**	**338**	P	**Pn**	**18 01 09.2**	**+2.3**
	comp=E,0.6nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**18 02 17.9**	**-2.2**
	comp=E,2.2nm,0.3s,SNR=7.9						
PGAV	**Gavieira, Arco**	**6.71**	**337**	*e*P	**Pn**	**18 01 11.5**	**+2.5**
PGAV				*e*S	**Sn**	**18 02 20.8**	**-3.1**
PGAV				A	A	18 02 25.9	
	comp=E,2.2nm,0.6s						

IDC ***06*** *18:07:22.5±2.2, 7°.34S×129°.38E, h121km±27km, mb3.3/2, mb1 3.6/7, mb1mx3.3/39, mbtmp4.0/7, Error ellipse: s-maj=32.9km s-min=19.8km az=88.0*
NEIC ***06*** *18:07:23.9±1.6, 7°.21S±0°.10×129°.28E±0°.08, h151km±16km, mb4.3/9, Error ellipse: s-maj=14.5km s-min=11.4km az=196.0*
ISC 06 18:07:23.0±0.7**, 7°.30S**±0°.06×**129°.26E**±0°.07**, h150km, n27,** σ**2.s85**/30**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.13**	**109**	Pn	**Pn**	**18 08 01.1**	**+1.5**
FAKI	**Fak Fak**	**5.27**	**34**	Pn	**Pn**	**18 08 39.9**	**-0.1**
SOEI	**Soe**	**5.51**	**243**		**Pn**	**18 08 44.8**	**+1.6**
MTN	**Manton Dam**	**5.80**	**162**		**Pn**	**18 08 47.4**	**+0.3**
BATI	**Baumata**	**6.24**	**242**	P	**Pn**	**18 08 54.4**	**+1.4**
	18nm,0.3s,baz=97,slow=8.9,SNR=23						
BATI				S	**Sn**	**18 09 58.4**	**-5.0**
	6.6nm,0.3s,baz=63,slow=21,SNR=2.1						
SIJI	**Sorong**	**6.70**	**17**	P	**Pn**	**18 08 58.7**	**-0.3**
	1.8nm,0.3s,baz=211,slow=19,SNR=25						
SIJI				S	**Sn**	**18 10 10.3**	**-4.0**
	1.9nm,0.3s,baz=58,slow=21,SNR=4.2						
MMRI	**Maumere**	**7.08**	**259**	Pn	**Pn**	**18 09 06.1**	**+2.0**
KNRA	**Kununurra**	**8.34**	**183**		**Pn**	**18 09 19.9**	**-1.0**
LUWI	**Luwuk**	**8.98**	**314**	Pn	**Pn**	**18 09 27.5**	**-1.9**
FITZ	**Fitzroy Crossi**	**11.29**	**198**	P	**Pn**	**18 09 58.6**	**-1.5**
	1.0nm,0.3s,baz=23,slow=15,SNR=41						
FITZ				S	Sn	18 11 53.4	-12
	0.7nm,0.3s,baz=94,slow=19,SNR=2.6						
FITZ	**Fitzroy Crossi**	**11.29**	**198**		**Pn**	**18 09 57.7**	**-2.4**
WB0	**Warramunga Arr**	**13.35**	**159**	Pn	**Pn**	**18 10 24.5**	**-2.2**
WRA	**Warramunga Arr**	**13.49**	**159**	P	**Pn**	**18 10 26.3**	**-2.2**
	0.6nm,0.3s,baz=339,slow=12,SNR=39						
WRA				S	Sn	18 12 47.1	-11
	0.9nm,0.3s,baz=336,slow=23,SNR=8.0						
WB2	**Warramunga Arr**	**13.50**	**159**	Pn	**Pn**	**18 10 26.9**	**-1.7**
WR0	**Warramunga Arr**	**13.58**	**158**	Pn	**Pn**	**18 10 28.0**	**-1.7**
JAGI	**Jajag, Banyuwa**	**15.01**	**265**	P	**Pn**	**18 10 47.3**	**-0.4**
COEN	**Coen**	**15.18**	**117**	P	**P**	**18 10 50.7**	**-0.6**
COEN				IAmb	IAmb	18 11 06.6	
	comp=Z,19nm,1.3s						
PSA00	**Pilbara Seismi**	**16.85**	**212**		**Pn**	**18 11 11.7**	**+1.6**
PSA00				IAmb	IAmb	18 11 39.0	
	comp=Z,8.3nm,1.2s						
AS31	**Alice Springs**	**16.87**	**165**		**Pn**	**18 11 11.7**	**+1.3**
ASAR	**Alice Springs**	**16.87**	**165**	P	**Pn**	**18 11 12.2**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=341,slow=9.6,SNR=62						
ASAR				S	**S**	**18 14 08.4**	**-10**
	comp=Z,0.2nm,0.3s,baz=344,slow=25,SNR=4.2						
PMG	**Port Moresby**	**17.83**	**98**	P	**P**	**18 11 20.4**	**-0.1**
PMG				IAmb	IAmb	18 11 42.0	
	comp=Z,51nm,1.5s						
FORT	**Forrest**	**23.38**	**183**	P	**P**	**18 12 20.9**	**+2.6**
FORT				IAmb	IAmb	18 12 22.7	
	comp=Z,15nm,0.8s						
MORW	**Morawa**	**24.98**	**208**	P	**P**	**18 12 36.2**	**+3.3**
MORW				IAmb	IAmb	18 13 11.1	
	comp=Z,9.7nm,1.2s						
BBOO	**Buckleboo**	**26.15**	**167**	P	**P**	**18 12 45.9**	**+2.6**
STKA	**Stephens Creek**	**27.02**	**156**	P	**P**	**18 12 53.3**	**+2.2**
	comp=Z,1.4nm,0.8s,baz=331,slow=11,SNR=1.7						
STKA	**Stephens Creek**	**27.02**	**156**	P	**P**	**18 12 52.0**	**+0.9**
MKAR	**Makanchi Array**	**68.08**	**327**	P	**P**	**18 18 09.4**	**+2.9**
	comp=Z,0.2nm,0.3s,baz=120,slow=7.2,SNR=2.5						

IDC ***06*** *18:17:36.1±6.7, 18°.20S×174°.99W, h0km, mb4.3/2, mb1 4.5/2, mb1mx3.6/36, mbtmp4.3/2, Error ellipse: s-maj=297.1km s-min=66.7km az=144.0*
NEIC ***06*** *18:17:39.9±1.8, 19°.0S±0°.1×174°.8W±0°.1, h26km±7km, mb4.7/5, Error ellipse: s-maj=20.5km s-min=15.3km az=212.0*
ISC 06 18:17:41.3±0.9**, 19°.0S**±0°.1×**174°.8W**±0°.1**, h35km, n11,** σ**0.s84**/11**, mb4.5**/4**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.56**	**92**		**Pn**	**18 18 47.2**	**-0.7**
AFI	**Afiamalu**	**5.77**	**30**	Pn	**Pn**	**18 19 04.9**	**+0.4**
FUNA	**Funafuti**	**11.91**	**330**	Pn	**Pn**	**18 20 28.2**	**-0.6**
LTZ	**Lake Taylor**	**26.17**	**202**	P	**P**	**18 23 12.1**	**-0.4**
CTAO	**Charters Tower**	**36.72**	**262**	P	**P**	**18 24 46.1**	**+0.6**
CTAO				IAmb	IAmb	18 24 49.5	
	comp=Z,25nm,1.6s						
ASAR	**Alice Springs**	**47.87**	**255**	P	**P**	**18 26 16.1**	**-0.1**
	comp=Z,4.7nm,0.7s,baz=88,slow=8.6,SNR=87						
WRA	**Warramunga Arr**	**47.87**	**260**	P	**P**	**18 26 15.3**	**-1.0**
	comp=Z,1.8nm,0.8s,baz=97,slow=7.4,SNR=22						
KNRA	**Kununurra**	**53.84**	**264**	P	**P**	**18 27 00.4**	**-0.9**
FITZ	**Fitzroy Crossi**	**56.29**	**261**	P	**P**	**18 27 18.3**	**-0.6**
QSPA	**South Pole Qui**	**71.11**	**180**	P	**P**	**18 28 57.3**	**+1.3**
QSPA				IAmb	IAmb	18 28 58.0	
	comp=Z,6.9nm,1.6s						
BRTR	**Keskin Array B**	**147.96**	**316**	PKPbc	**PKPdf**	**18 37 21.1**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=96,slow=1.8,SNR=3.3						

IDC ***06*** *18:40:51.9±1.5, 18°.96S×168°.73E, h0km, mb4.1/5, mb1 4.3/7, mb1mx3.9/39, mbtmp4.3/7, ML4.1/2, MS3.5/20, Ms1 3.5/20, ms1mx3.4/37, Error ellipse: s-maj=32.9km s-min=28.6km az=68.0*
NEIC ***06*** *18:40:54.5±1.9, 19°.0S±0°.1×168°.79E±0°.08, h24km±7km, mb4.6/14, Error ellipse: s-maj=17.5km s-min=6.3km az=211.0*
ISC 06 18:40:56.6±0.8**, 19°.08S**±0°.09×**168°.7E**±0°.1**, h35km, n49,** σ**0.s82**/32**, mb4.5**/9**, MS3.5**/17**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.66**	**215**	Pn	**Pn**	**18 41 50.7**	**-0.2**
	4.1nm,0.3s,baz=28,slow=9.2,SNR=74						
DZM				Sn	**Sn**	**18 42 33.2**	**+0.3**
	41nm,0.3s,baz=285,slow=22,SNR=15						
DZM				LR	LR	18 43 09.2	
	comp=Z,1µm,18.1s,baz=36,slow=37						
HNR	**Honiara**	**12.81**	**317**	Pn	**Pn**	**18 43 55.3**	**-1.1**
	3.6nm,0.3s,baz=185,slow=8.9,SNR=2.2						
HNR				LR	LR	18 48 13.9	
	comp=Z,181nm,20.8s,baz=212,slow=35						
RAO	**Raoul Island**	**15.83**	**132**	LR	LR	18 49 19.9	
	comp=Z,283nm,19.0s,baz=304,slow=32						
OUZ	**Omahuta**	**16.64**	**166**	P	**P**	**18 44 48.8**	**-0.5**
ARMA	**Armidale**	**19.16**	**231**	P	**P**	**18 45 17.3**	**0.0**
MXZ	**Matakaoa Point**	**20.23**	**157**	P	Pn	18 45 30.9	+0.1
URZ	**Urewera**	**20.46**	**161**	P	**P**	**18 45 31.9**	**+0.7**
	9.9nm,0.7s,baz=322,slow=12,SNR=7.9						
URZ				LR	LR	18 52 23.2	
	comp=Z,215nm,18.2s,baz=3.0,slow=34						
BKZ	**Black Stump Fm**	**21.11**	**163**	P	**P**	**18 45 37.8**	**-0.5**
BKZ				IAmb	IAmb	18 46 01.7	
	comp=Z,16nm,1.0s						
CTA	**Charters Tower**	**21.19**	**264**	P	**P**	**18 45 39.3**	**0.0**
	comp=Z,1.7nm,0.5s,baz=104,slow=15,SNR=1.7						
CTAO	**Charters Tower**	**21.19**	**264**	P	**P**	**18 45 39.5**	**+0.2**
CTAO				IAmb	IAmb	18 45 49.9	
	comp=Z,17nm,1.1s						
BFZ	**Birch Farm**	**22.48**	**165**	P	**P**	**18 45 51.6**	**-1.2**
BFZ				IAmb	IAmb	18 46 19.9	
	comp=Z,44nm,1.3s						
PMG	**Port Moresby**	**22.98**	**292**	LR	LR	18 54 14.2	
	comp=Z,249nm,18.3s,baz=82,slow=35						
KHZ	**Kahutara**	**23.62**	**171**	P	**P**	**18 46 02.3**	**-2.1**
CAN	**Canberra**	**23.79**	**223**	P	**P**	**18 46 04.8**	**-1.4**
RPZ	**Rata Peaks**	**24.64**	**176**	LR	LR	18 55 43.2	
	comp=Z,390nm,18.7s,baz=4.5,slow=36						
COEN	**Coen**	**25.00**	**278**	P	**P**	**18 46 17.8**	**+0.3**
COEN				IAmb	IAmb	18 46 25.0	
	comp=Z,50nm,1.6s						
STKA	**Stephens Creek**	**27.52**	**237**	LR	LR	18 57 57.0	
	comp=Z,105nm,18.6s,baz=29,slow=37						
RAR	**Rarotonga**	**29.63**	**100**	LR	LR	18 57 18.1	
	comp=Z,38nm,19.1s,baz=254,slow=33						
JAY	**Jayapura**	**31.98**	**298**	LR	LR	19 00 22.9	
	comp=Z,99nm,18.6s,baz=87,slow=37						
WRA	**Warramunga Arr**	**32.38**	**263**	P	**P**	**18 47 23.5**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=88,slow=8.3,SNR=11						
ASAR	**Alice Springs**	**32.69**	**256**	P	**P**	**18 47 26.8**	**+0.9**
	comp=Z,4.2nm,0.6s,baz=85,slow=8.8,SNR=87						
ASAR				LR	LR	19 00 26.8	
	comp=Z,158nm,18.2s,baz=90,slow=36						
MTN	**Manton Dam**	**36.61**	**274**	P	**P**	**18 47 59.5**	**-0.3**
KNRA	**Kununurra**	**38.23**	**269**	P	**P**	**18 48 14.3**	**+0.8**
FITZ	**Fitzroy Crossi**	**40.77**	**264**	P	**P**	**18 48 36.1**	**+1.4**
FITZ				IAmb	IAmb	18 48 42.4	
	comp=Z,8.2nm,0.9s						
VNDA	**Vanda**	**58.57**	**182**	LR	LR	19 12 33.2	
	comp=Z,56nm,20.4s,baz=354,slow=32						
JHJ	**Hachijo jima 2**	**58.81**	**332**	LR	LR	19 12 51.1	
	comp=Z,19nm,21.9s,baz=322,slow=33						
MJAR	**Matsushiro Arr**	**62.39**	**333**	LR	LR	19 18 32.6	
	comp=Z,6.6nm,18.6s,baz=235,slow=36						
JNU	**Nakatsue**	**63.26**	**325**	LR	LR	19 15 31.3	
	comp=Z,23nm,21.1s,baz=124,slow=33						
KSRS	**Korea Array**	**68.10**	**326**	LR	LR	19 20 35.6	
	comp=Z,13nm,19.1s,baz=131,slow=35						
QSPA	**South Pole Qui**	**70.97**	**180**	P	**P**	**18 52 11.2**	**+0.7**
QSPA				IAmb	IAmb	18 52 36.4	
	comp=Z,16nm,1.5s						
USRK	**Ussuriysk Ar.**	**71.37**	**333**	LR	LR	19 22 58.4	
	comp=Z,13nm,19.3s,baz=218,slow=35						
PETK	**Petropavlovsk-**	**72.52**	**353**	LR	LR	19 18 46.2	
	comp=Z,35nm,20.6s,baz=242,slow=31						
SONM	**Songino Array**	**86.80**	**323**	P	**P**	**18 53 37.9**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=130,slow=4.5,SNR=5.8						
LPIG	**La Paz**	**89.79**	**64**	LR	LR	19 25 15.6	
	comp=Z,50nm,18.9s,baz=228,slow=30						
VNA3	**Neumayer Olymp**	**89.90**	**181**	P	**P**	**18 53 51.4**	**-0.4**
VNA2	**Neumayer--Watz**	**90.19**	**181**	P	**P**	**18 53 53.1**	**+0.1**
	baz=172,slow=4.8						
ILAR	**Eielson Array**	**90.23**	**17**	LR	LR	19 28 49.5	
	comp=Z,44nm,18.9s,baz=256,slow=32						
TXAR	**Lajitas Array**	**97.12**	**62**	LR	LR	19 30 46.9	
	comp=Z,28nm,19.5s,baz=0.0,slow=31						
ARCES	**ARCESS Array B**	**124.79**	**345**	PKP	**PKiKP**	**18 59 53.6**	**+1.2**
	comp=Z,1.9nm,0.9s,baz=50,slow=1.9,SNR=4.7						
CONA	**Conrad Observa**	**143.75**	**329**	*e*PKPdf	**PKPdf**	**19 00 28.6**	**+0.4**
	comp=Z,2.8nm,0.8s						
GERES	**GERESS Array B**	**144.12**	**332**	PKP	**PKPab**	**19 00 26.9**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=49,slow=4.4,SNR=4.9						
MOA	**Molln**	**144.58**	**330**	*e*PKPdf	PKPbc	19 00 29.0	+0.7
	comp=Z,3.2nm,1.1s						
SOKA	**Soboth**	**145.02**	**328**	*e*PKPdf	**PKPab**	**19 00 30.1**	**+0.4**
	comp=Z,2.3nm,0.7s						
KBA	**Koelnbreinsper**	**145.57**	**330**	*e*PKPab	**PKPdf**	**19 00 30.5**	**-1.0**
	comp=Z,2.3nm,0.8s						
ABTA	**Abfaltersbach**	**146.20**	**330**	*e*PKPab	**PKPdf**	**19 00 32.5**	**+0.1**
	comp=Z,2.2nm,0.8s						
MOTA	**Moosalm**	**146.40**	**332**	*e*PKPab	**PKPbc**	**19 00 34.4**	**+0.3**
	comp=Z,4.6nm,1.0s						
SQTA	**Sankt Quirin**	**146.45**	**332**	*e*PKPab	**PKPbc**	**19 00 34.6**	**+0.4**
	comp=Z,4.1nm,0.7s						
FUORN	**Ofenpass-Fuorn**	**147.33**	**332**		**PKPbc**	**19 00 36.5**	**-0.5**
BNI	**Bardonecchia**	**150.10**	**334**		**PKPbc**	**19 00 42.8**	**-1.1**

DRS ***06*** *18:44:50.2±0.0, 41°.10N×48°.79E, h23km*
AZER ***06*** *18:44:51.4, 41°.21N×48°.24E, h39km, ML3.0*
ISC 06 18:44:53.5±0.9**, 41°.18N**±0°.02×**48°.24E**±0°.02**, h33km**±2km**, n38,** σ**1.s49**/76**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
XNQ	**Khinaliq**	**0.08**	**263**	P	**Pn**	**18 44 59.0**	**-0.4**
	SNR=916						
XNQ				S	**Sb**	**18 45 05.3**	**+1.9**
QUBA	**Quba, Azerbaij**	**0.26**	**48**	P	**Pb**	**18 45 00.0**	**-0.7**
	SNR=67						
QUBA				S	**Sn**	**18 45 06.9**	**+1.7**
QSAR	**Qusar**	**0.33**	**3**	P	**Pb**	**18 45 00.6**	**-1.2**
	SNR=639						
QSAR				S	**Sn**	**18 45 08.0**	**+0.5**
QBL	**Gabala**	**0.39**	**233**	P	**Pb**	**18 45 01.7**	**-0.8**
	SNR=41						
QBL				S	**Sn**	**18 45 10.1**	**+1.2**
IML	**Ismayilli**	**0.39**	**187**	P	**Pn**	**18 45 01.9**	**-1.0**
	SNR=62						
IML				S	**Sn**	**18 45 11.2**	**+2.1**
PQL	**Pirkuli**	**0.47**	**146**	P	**Pn**	**18 45 03.0**	**-1.1**
	SNR=58						
PQL				S	**Sn**	**18 45 12.5**	**+1.1**
AKT	**Akhty**	**0.49**	**308**	*e*Pg	**Pb**	**18 45 02.6**	**-1.3**
	232nm,0.2s						
AKT				*e*Sg	**Sb**	**18 45 11.2**	**+0.1**
	2µm,0.4s						
SIZA	**Siyzn**	**0.51**	**102**	P	**Pn**	**18 45 03.5**	**-1.0**
	SNR=328						
SIZA				S	**Sn**	**18 45 13.8**	**+1.6**
ATGJ	**Altiaghaj**	**0.62**	**121**	P	**Pn**	**18 45 05.1**	**-0.9**
	SNR=40						
ATGJ				S	**Sn**	**18 45 16.1**	**+1.3**
SEKA	**Sheki**	**0.79**	**272**	P	**Pb**	**18 45 06.8**	**-2.1**
	SNR=197						
SEKA				S	**Sn**	**18 45 19.8**	**+0.8**
KDMR	**Kurdemir**	**0.81**	**183**	P	**Pb**	**18 45 07.6**	**-1.5**
	SNR=23						
KDMR				S	**Sn**	**18 45 22.3**	**+3.0**
GBS	**Qobustan**	**0.84**	**140**	P	**Pn**	**18 45 09.6**	**+0.6**
	SNR=8.9						
GBS				S	**Sn**	**18 45 24.8**	**+4.6**
DRN	**Derbent**	**0.85**	**4**	*e*Pg	**Pn**	**18 45 07.4**	**-1.7**
	388nm,0.4s						
DRN				*e*Sg	**Sb**	**18 45 19.9**	**-1.0**
	2µm,0.5s						
MNGR	**Mingechevir, A**	**0.96**	**245**	P	**Pn**	**18 45 10.7**	**0.0**
	SNR=6.7						
MNGR				S	**Sb**	**18 45 25.3**	**+1.1**
ZRD	**Zardab**	**0.99**	**205**	P	**Pn**	**18 45 10.4**	**-0.7**
	SNR=73						
ZRD				S	**Sb**	**18 45 26.4**	**+1.4**
URKR	**Urkarakh**	**1.08**	**335**	*e*Pg	**Pn**	**18 45 11.4**	**-1.1**
	180nm,0.2s						
URKR				*e*Sg	**Sn**	**18 45 26.4**	**0.0**
	626nm,0.2s						
BRDA	**Brd**	**1.22**	**222**	P	**Pn**	**18 45 13.8**	**-0.4**
BRDA				S	**Sb**	**18 45 33.9**	**+2.4**
ZKTA	**Zakatala**	**1.30**	**291**	P	**Pn**	**18 45 14.2**	**-1.1**
	SNR=78						
ZKTA				S	**Sb**	**18 45 34.4**	**+0.6**
SAAT	**Saatly**	**1.33**	**174**	P	**Pn**	**18 45 14.6**	**-1.1**
SAAT				S	**Sb**	**18 45 33.6**	**-0.8**
ALIB	**Äli-Bayra**	**1.35**	**154**	Pn	**Pb**	**18 45 16.9**	**-1.3**
ALIB				Sn	**Sb**	**18 45 34.1**	**-1.1**
AGDM	**Agdam**	**1.38**	**219**	Pn	**Pn**	**18 45 15.1**	**-1.2**
	SNR=136						
AGDM				Sn	**Sn**	**18 45 34.3**	**+0.8**
GNBR	**Gunib**	**1.54**	**322**	*e*Pg	**Pn**	**18 45 19.3**	**+0.6**
	28nm,0.5s						
GNBR				*e*Sg	**Sb**	**18 45 40.4**	**-0.2**
	194nm,0.7s						
BLQ	**Beylaqan**	**1.55**	**200**	Pn	**Pn**	**18 45 17.5**	**-1.3**
BLQ				Sn	**Sn**	**18 45 37.9**	**+0.2**
GANJ	**Ganja**	**1.55**	**250**	Pn	**Pn**	**18 45 16.9**	**-1.9**
	SNR=25						
GANJ				Sn	**Sn**	**18 45 38.4**	**+0.7**
XNZR	**Khunzakh**	**1.78**	**320**	*e*Pg	**Pb**	**18 45 25.1**	**-0.5**
XNZR				*e*Sg	**Sb**	**18 45 49.3**	**+1.7**
QRD	**Qoradiz**	**1.86**	**203**	Pn	**Pn**	**18 45 21.0**	**-1.9**
	SNR=9.0						
QRD				Sn	**Sn**	**18 45 44.4**	**-0.8**
KRNR	**Karanay**	**1.92**	**329**	*e*Pg	**Pn**	**18 45 24.0**	**0.0**
KRNR				*e*Sg	**Sb**	**18 45 50.0**	**-1.6**
	48nm,0.3s						
GDB	**GEDABAY**	**1.94**	**257**	Pn	**Pn**	**18 45 22.1**	**-2.2**
	SNR=20						
GDB				Sn	**Sn**	**18 45 49.0**	**+1.5**
GLBA	**Clilabad**	**1.94**	**177**	Pn	**Pn**	**18 45 22.8**	**-1.3**
	SNR=27						
GLBA				Sn	**Sn**	**18 45 46.9**	**-0.4**
DBC	**Dubki**	**2.12**	**331**	*e*Pn	**Pn**	**18 45 26.9**	**+0.3**
	15nm,0.4s						
DBC				*e*Sn	**Sn**	**18 45 52.1**	**+0.3**
	27nm,0.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
QZX	Qazax, Azerbai	2.17	268	Pn	Pn	18 45 26.7	-0.6
	SNR=22						
QZX				Sn	Sn	18 45 55.0	+1.9
DLMR	Dylym	2.24	328	ePn	Pb	18 45 37.0	+3.8
DLMR				eSn	Sn	18 45 53.0	-1.7
	101nm,0.4s						
YRD	Yardimli	2.26	180	Pn	Pn	18 45 26.7	-2.1
	SNR=11						
YRD				Sn	Sn	18 45 54.9	-0.6
LKRN	Lenkeran, Azer	2.50	170	Pn	Pn	18 45 31.0	-0.9
LKRN				Sn	Sn	18 46 03.4	+2.3
LRK	Lerik	2.54	178	Pn	Pn	18 45 30.5	-2.0
LRK				Sn	Sn	18 46 03.2	+0.9
ASTR	Astara	2.65	171	Pn	Pn	18 45 33.8	-0.1
ASTR				Sn	Sn	18 46 06.9	+2.0
SBZ	Shahbuz	2.72	230	Pn	Pn	18 45 35.1	+0.2
	SNR=8.2						
SBZ				Sn	Sn	18 46 09.4	+2.6
ORD	Ordubad	2.83	218	Pn	Pn	18 45 35.8	-0.7
	SNR=5.1						
ORD				Sn	Sn	18 46 09.5	-0.1

IDC ***06*** *18:47:51.3±4.7, 18.°91S×168.°55E, h0^{km}, mb3.8/3, mb1 4.0/4, mb1mx3.6/36, mbtmp3.8/4, ML3.3/1, Error ellipse: s-maj=102.5km s-min=42.5km az=111.0*
NEIC ***06*** *18:47:53.6±2.3, 19.°0S±0.°2×168.°8E±0.°5, h25^{km}±24^{km}, mb4.3/4, Error ellipse: s-maj=75.0km s-min=20.2km az=110.0*
ISC 06 18:47:54.5±3.5**, 19.°1S**±0.°2×**168.°9E**±0.°5**, h35^{km}, n9, σ1.s77**/11**, mb4.1**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.74	218	Pn	Pn	18 48 48.4	-1.4
	2.1nm,0.3s,baz=114,slow=16,SNR=42						
DZM				Sn	Sn	18 49 31.5	-1.1
	20nm,0.3s,baz=132,slow=23,SNR=17						
DZM	Mont Dzumac	3.74	218		Pn	18 48 49.3	-0.5
DZM					Sn	18 49 32.0	-0.7
ARMA	Armidale	19.28	231	P	Pn	18 52 21.4	+3.8
ARMA				IAmb	IAmb	18 52 48.8	
	comp=Z,14nm,1.2s						
WRA	Warramunga Arr	32.55	263	P	P	18 54 21.6	-1.0
	comp=Z,0.2nm,0.4s,baz=89,slow=8.4,SNR=12						
ASAR	Alice Springs	32.85	256	P	P	18 54 25.1	-0.2
	comp=Z,1.2nm,0.4s,baz=84,slow=8.7,SNR=27						
MTN	Manton Dam	36.79	274	P	P	18 54 59.5	+0.2
MTN				IAmb	IAmb	18 55 15.5	
	comp=Z,26nm,1.4s						
FITZ	Fitzroy Crossi	40.94	264	P	P	18 55 34.5	+0.5
FITZ				IAmb	IAmb	18 55 57.2	
	comp=Z,5.2nm,1.1s						
YOJ	Yonaguni jima	62.25	312	P	P	18 58 11.0	-2.1
SONM	Songino Array	86.93	323	P	P	19 00 36.7	+0.8
	comp=Z,0.5nm,0.5s,baz=116,slow=3.4,SNR=2.6						

IDC ***06*** *19:09:38.9±3.1, 43.°26N×105.°18W, h0^{km}, mb2.7/1, mb1 3.6/3, mb1mx3.3/46, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=67.5km s-min=10.7km az=157.0*
NEIC ***06*** *19:09:41.4±1.7, 43.°65N±0.°05×105.°24W±0.°06, h0^{km}±2^{km}, ML3.3/63, Error ellipse: s-maj=9.5km s-min=6.5km az=139.0*
ISC 06 19:09:40.8±1.0**, 43.°67N**±0.°05×**105.°25W**±0.°06**, h0^{km}, n46, σ1.s00**/46**, Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.99	63		Pb	19 10 01.0	+0.1
K22A	Casper	1.38	223		Pg	19 10 06.5	-0.8
K22A				IAML		19 10 28.4	
	comp=E,426nm,0.4s						
K22A				IAML		19 10 29.4	
	comp=N,579nm,0.3s						
PHWY	Pilot Hill	2.38	184		Pn	19 10 22.4	+1.1
RWWY	Rawlins	2.45	217		Pn	19 10 24.1	+1.9
RWWY				IAML		19 11 04.4	
	comp=N,205nm,0.7s						
LAO	LASA Array	3.09	348		Pn	19 10 31.6	+0.7
LAO				IAML		19 11 27.7	
	comp=N,84nm,0.8s						
LAO				IAML		19 11 30.4	
	comp=N,76nm,0.7s						
RLMT	Red Lodge	3.22	298		Pn	19 10 33.7	+0.9
BW06	Boulder Array	3.27	255		Pn	19 10 34.5	+1.0
BW06				IAML		19 11 23.7	
	comp=E,52nm,0.4s						
BW06				IAML		19 11 24.1	
	comp=N,47nm,0.6s						
PDAR	Pinedale Array	3.27	255	Pn	Pn	19 10 34.5	+0.9
	comp=N,2.5nm,0.3s,baz=77,slow=16,SNR=35						
PDAR				Lg	Lg	19 11 20.3	
	comp=N,18nm,0.3s,baz=295,slow=26,SNR=16						
OGNE	Ogallala	3.62	138		Pn	19 10 39.0	+0.7
YNE	Yellowstone No	3.66	293		Pn	19 10 39.4	+0.5
YMP	Mirror Lake Pl	3.68	289		Pn	19 10 40.1	+0.8
GCMT	Greycliff	3.79	305		Pn	19 10 41.5	+0.9
LKWY	Lake	3.81	285		Pn	19 10 41.5	+0.5
ISCO	Idaho Springs	3.88	184		Pn	19 10 42.7	+0.8
H17A	Grant Village	3.91	282		Pn	19 10 43.0	+0.7
H17A				IAML		19 11 45.8	
	comp=N,29nm,0.3s						
FLWY	Flagg Ranch	3.96	278		Pn	19 10 44.6	+1.6
FLWY				IAML		19 11 57.1	
	comp=N,40nm,1.2s						
FLWY				IAML		19 11 58.8	
	comp=N,26nm,1.2s						
SNOW	Snow King Moun	4.00	269		Pn	19 10 44.6	+1.0
SNOW				IAML		19 12 00.9	
	comp=N,34nm,1.0s						
SNOW				IAML		19 12 01.1	
	comp=N,53nm,0.9s						
YNR	Norris Junctio	4.04	287		Pn	19 10 44.6	+0.5
YPP	Pitchstone Pla	4.05	280		Pn	19 10 45.0	+0.7
REDW	Red Top Meadow	4.08	268		Pn	19 10 46.7	+2.0
REDW				IAML		19 11 58.1	
	comp=N,54nm,0.8s						
REDW				IAML		19 11 59.8	
	comp=N,36nm,0.7s						
IMW	Indian Meadow	4.12	275		Pn	19 10 46.4	+1.1
IMW				IAML		19 11 57.3	
	comp=N,25nm,0.6s						
IMW				IAML		19 11 59.4	
	comp=N,32nm,0.7s						
TPAW	Teton Pass	4.14	269		Pn	19 10 47.3	+1.7
TPAW				IAML		19 12 16.3	
	comp=N,30nm,0.9s						
YHH	Holmes Hill	4.17	287		Pn	19 10 46.5	+0.5
O20A	White River Ci	4.18	213		Pn	19 10 47.3	+1.3
O20A				IAML		19 11 55.0	
	comp=E,49nm,0.6s						
O20A				IAML		19 12 34.3	
	comp=N,33nm,2.4s						
FXWY	Fox Creek	4.19	272		Pn	19 10 47.4	+1.3
YMR	Madison River	4.23	286		Pn	19 10 47.4	+0.7
E28A	Huff	4.34	46	Pn	Pn	19 10 48.1	+0.1
AHID	Auburn Hatcher	4.37	260		Pn	19 10 49.8	+1.2
AHID				IAML		19 12 03.6	
	comp=E,34nm,0.8s						
AHID				IAML		19 12 09.7	
	comp=N,35nm,0.9s						
YHB	Horse Butte	4.41	286		Pn	19 10 50.0	+0.9
YHL	Hebgen Lake	4.42	287		Pn	19 10 49.9	+0.5
RDMU	Red Mountain	4.46	227		Pn	19 10 50.5	+0.6
SMCO	Snowmass	4.67	197		Pn	19 10 52.8	-0.2
DGMT	Dagmar	4.85	8		Pn	19 10 56.9	+1.8
KSCO	Kaye Shedlock’	5.06	156		Pn	19 10 57.5	-0.4
HWUT	Hardware Ranch	5.09	248		Pn	19 10 58.3	-0.2
HWUT				IAML		19 12 33.6	
	comp=N,22nm,0.8s						
HWUT				IAML		19 12 34.5	
	comp=N,19nm,1.2s						
EGMT	Eagleton	5.37	326	Pn	Pn	19 11 00.2	-2.0
LRM	Limekiln Ridge	5.56	295		Pn	19 11 05.1	+0.1
MCMT	McKenzie Canyo	5.58	285		Pn	19 11 04.7	-0.5
PV22	Blue Mesa, Par	5.79	209	Pn	Pn	19 11 08.4	+0.4
PV07	Paradox Valley	5.83	207	Pn	Pn	19 11 08.2	-0.4
P17A	Butcher Ranch,	5.88	226		Pn	19 11 09.1	-0.1
SRU	San Rafael Swe	6.04	223		Pn	19 11 10.5	-1.0
TMUT	Trail Mountain	6.25	228	Pn	Pn	19 11 13.3	-1.2
AGMN	Agassiz Nation	8.01	51		Pn	19 11 38.5	+0.2
ULM	Lac du Bonnet	9.18	41	Pn	Pn	19 11 54.0	-0.3
	comp=N,0.9nm,0.3s,baz=235,slow=13,SNR=4.7						
ULM				Lg	Lg	19 14 25.7	
	comp=N,0.1nm,0.3s,baz=134,slow=20,SNR=1.5						
YKA	Yellowknife Ar	19.63	347	P	Pn	19 14 12.2	+0.3
	comp=N,0.2nm,0.5s,baz=159,slow=11,SNR=2.6						

SOME ***06*** *19:26:41.5, 39.°60N×75.°22E, h5^{km}*
IDC ***06*** *19:26:43.0±1.5, 39.°41N×75.°56E, h0^{km}, mb3.8/11, mb1 3.8/18, mb1mx3.6/61, mbtmp3.7/18, ML3.0/7, MS3.0/10, Ms1 3.0/10, ms1mx2.8/44, Error ellipse: s-maj=26.3km s-min=16.2km az=146.0*
KRNET ***06*** *19:26:47.2±0.1, 39.°59N×75.°49E, h25^{km}, mb4.3*
BJI ***06*** *19:26:49.3±0.0, 39.°75N×75.°50E, h8^{km}, mb4.0/2, ML3.6/7*
NNC ***06*** *19:26:52.3±2.0, 40.°04N×75.°27E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=15.5km s-min=12.7km az=162.0*
ISC 06 19:26:45.2±1.4**, 39.°77N**±0.°04×**75.°52E**±0.°03**, h7^{km}**±10^{km}**, n109, σ2.s25**/138**, mb3.9**/10**, MS2.8**/7**, 39C-13D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	0.44	126	Pg	Pn	19 26 59.2	+1.2
KSH				Sg	Sb	19 27 08.4	+6.3
KSH				smax	smax		
	comp=N,16µm,0.7s						
KSH				smax	smax		
	comp=E,14µm,1.0s						
NRN	Naryn	1.70	12	⇑iP	Pg	19 27 20.2	+2.4
	baz=11						
NRN				⇑iS	Sg	19 27 44.5	+4.7
	baz=11						
KZA	Kyzart	2.31	355	⇑iP	Pg	19 27 29.0	-0.5
	baz=56						
KZA				⇑iS	Sg	19 27 59.8	+0.3
	baz=56						
KZA	Kyzart	2.31	355	P	Pg	19 27 29.2	-0.3
	SNR=243						
ARSB	Arslanbob	2.48	310	⇑iP	Pb	19 27 30.0	-0.1
	baz=13						
ARSB				⇑iS	Sb	19 28 01.3	+0.4
	baz=13						
ULHL	Ulahol	2.53	12	⇑iP	Pg	19 27 32.0	-1.7
	baz=12						
ULHL				⇑iS	Sg	19 28 04.7	-1.8
	baz=12						
ULHL	Ulahol	2.53	12	P	Pg	19 27 32.3	-1.5
	SNR=87						
UCH	Uchtor	2.57	343	⇑iP	Pb	19 27 32.4	+0.5
	baz=45						
UCH				⇑iS	Sb	19 28 05.5	+1.7
	baz=45						
UCH	Uchtor	2.57	343	P	Pb	19 27 32.8	+1.0
	SNR=215						
KDJ	Kajisay	2.67	28	⇑iP	Pb	19 27 33.8	+0.3
	baz=26						
KDJ				⇑iS	Sb	19 28 07.9	+1.4
	baz=26						
AML	Almayashu	2.73	330	⇑iP	Pb	19 27 34.3	-0.3
	baz=32						
AML				⇑iS	Sb	19 28 08.9	+0.5
	baz=32						
AML	Almayashu	2.73	330	P	Pb	19 27 34.9	+0.3
	SNR=130						
BOOM	Boomskoye usch	2.73	7	⇓iP	Pb	19 27 34.8	+0.3
	baz=7.0						
BOOM				⇓iS	Sb	19 28 09.6	+1.3
	baz=7.0						
KBK	Karagaybulak	2.91	352	⇑iP	Pb	19 27 37.0	-0.6
	baz=53						
KBK				⇑iS	Sb	19 28 13.7	+0.2
	baz=53						
KBK	Karagaybulak	2.91	352	P	Pb	19 27 38.1	+0.5
	SNR=155						
AAK	Ala-Archa	2.96	345	Pn	Pb	19 27 38.8	+0.4
	9.9nm,0.3s,baz=151,slow=7.6,SNR=517						
AAK				Sn	Sb	19 28 17.3	+2.3
	7.0nm,0.3s,baz=19,slow=19,SNR=7.3						
AAK				LR	LR	19 29 06.3	
	comp=Z,321nm,20.8s,baz=122,slow=43						
AAK	Ala-Archa	2.96	345	⇑iP	Pb	19 27 37.7	-0.8
	baz=46						
AAK				⇑iS	Sb	19 28 14.8	-0.1
	baz=46						
AAK	Ala-Archa	2.96	345	P	Pb	19 27 38.9	+0.4
	SNR=236						
AAK	Ala-Archa	2.96	345	⇑Pn	Pb	19 27 38.6	+0.1
	135nm,0.7s						
AAK				⇑Lg	Lg	19 28 16.7	
	160nm,0.7s						
FRU1	Bishkek	3.11	348	⇑iP	Pb	19 27 39.7	-1.1
	baz=49						
FRU1				⇑iS	Sb	19 28 18.2	-0.8
	baz=49						
TKM2	Tokmak 2	3.14	1	⇑iP	Pb	19 27 40.5	-1.1
	baz=1.0						
TKM2				⇑iS	Sb	19 28 19.8	-0.4
	baz=1.0						
TKM2	Tokmak 2	3.14	1	P	Pb	19 27 41.3	-0.3
	SNR=11						
TKM2	Tokmak 2	3.14	1	⇑Pn	Pb	19 27 41.0	-0.6
	79nm,0.8s						
TKM2				⇑Lg	Lg	19 28 22.5	
	409nm,0.8s						
EKS2	Erkin-Say	3.17	336	⇑iP	Pb	19 27 40.3	-1.6
	baz=38						
EKS2				⇑iS	Sb	19 28 19.4	-1.4
	baz=38						
EKS2	Erkin-Say	3.17	336	P	Pb	19 27 41.5	-0.4
	SNR=43						
CHMS	Chumysh	3.27	350	⇑iP	Pb	19 27 41.9	-1.8
	baz=51						
CHMS				⇑iS	Sb	19 28 22.1	-1.6
	baz=51						
CHMS	Chumysh	3.27	350	P	Pb	19 27 43.0	-0.7
	SNR=121						
KST	Kastek	3.28	6	eP	Pg	19 27 46.5	-1.7
	57nm,0.8s						
KST				eS	Sg	19 28 31.9	+1.2
	148nm,1.0s						
KST	Kastek	3.28	6	Pg	Pg	19 27 46.5	-1.7
	57nm,0.8s						
KST				Lg	Lg	19 28 31.9	
	148nm,1.0s						
ANVS	Anan'yevo	3.42	28	⇓iP	Pb	19 27 44.2	-2.0
	baz=27						
ANVS				⇓iS	Sb	19 28 25.8	-2.1
	baz=27						
MTBS	Maitube	3.42	11	eP	Pg	19 27 49.3	-1.5
	11nm,0.3s						
MTBS				eS	Sg	19 28 35.8	+0.7
	46nm,0.5s						
MTBS	Maitube	3.42	11	Pg	Pg	19 27 49.3	-1.5
	11nm,0.3s						
MTBS				Lg	Lg	19 28 35.8	
	46nm,0.5s						
TNSS	Tian-Shan	3.43	18	eP	Pg	19 27 48.8	-2.2
	38nm,0.6s						
TNSS				eS	Sg	19 28 36.9	+1.4
	89nm,0.7s						
MRKS	Merke	3.43	331	⇑iP	Pb	19 27 44.7	-1.7
	84nm,0.6s						
MRKS				eS	Sb	19 28 28.9	+0.5
	80nm,0.9s						
MRKS	Merke	3.43	331	Pg	Pb	19 27 44.9	-1.5
	84nm,0.6s						
MRKS				Lg	Lg	19 28 28.9	
	80nm,0.9s						
PRZ	Przheval'sk	3.47	38	⇓eP	Pb	19 27 45.0	-2.2
	baz=37						
PRZ				⇓eS	Sb	19 28 27.0	-2.6
	baz=37						
USP	Ospenovka	3.57	348	⇓iP	Pb	19 27 46.1	-2.7
	baz=49						
USP				⇓iS	Sb	19 28 29.1	-3.2
	baz=49						
USP	Ospenovka	3.57	348	P	Pb	19 27 46.6	-2.2
	SNR=50						
MDOK	Medeo	3.58	18	eP	Pg	19 27 51.8	-1.9
	12nm,0.5s						
MDOK				eS	Sg	19 28 40.3	+0.2
	168nm,0.9s						
MDOK	Medeo	3.58	18	⇑Pn	Pb	19 27 46.4	-2.5
	50nm,0.8s						
MDOK				⇓Lg	Lg	19 28 40.1	
	256nm,1.0s						
MDOK	Medeo	3.58	18	Pg	Pg	19 27 51.8	-1.9
	12nm,0.5s						
MDOK				Lg	Lg	19 28 40.3	
	168nm,0.9s						
KNDC	Almaty	3.61	17	⇑Pn	Pb	19 27 48.5	-0.9
	22nm,0.7s						
KNDC				⇓Pg	Pg	19 27 55.8	+1.5
	86nm,0.9s						
KNDC				⇓Lg	Lg	19 28 41.9	
	430nm,1.0s						
BTK	Batken	3.62	276	⇑iP	Pn	19 27 44.3	+2.4
	baz=79						
BTK				⇑iS	Sn	19 28 25.9	+0.9
	baz=79						
KOTS	Kotyrbulak	3.66	19	eP	Pg	19 27 53.5	-1.8
	45nm,0.6s						
KOTS				eS	Sg	19 28 43.9	+1.2
	541nm,1.1s						
SGDS	Sogindy	3.73	350	Pg	Pb	19 27 53.8	+2.3
	16nm,0.6s						
SGDS				Lg	Lg	19 28 43.5	
	160nm,1.0s						
KRBS	Karabastau	3.92	2	eP	Pg	19 27 58.3	-2.0
	7.9nm,0.8s						
KRBS				eS	Sg	19 28 51.5	+0.4
	19nm,0.8s						
KRBS	Karabastau	3.92	2	Pg	Pg	19 27 58.3	-2.0
	7.9nm,0.8s						
KRBS				Lg	Lg	19 28 51.5	
	19nm,0.8s						
SATY	Saty	3.94	33	eP	Pg	19 27 58.0	-2.6
	28nm,1.1s						
SATY				eS	Sg	19 28 50.7	-0.9
	75nm,1.3s						
SATY	Saty	3.94	33	Pg	Pg	19 27 58.0	-2.6
	28nm,1.1s						
SATY				Lg	Lg	19 28 50.7	
	75nm,1.3s						
KTBS	Karatobe	4.03	12	eP	Pg	19 28 00.6	-1.9
	9.4nm,0.5s						
KTBS				eS	Sg	19 28 55.2	+0.5
	91nm,0.9s						
KTBS	Karatobe	4.03	12	Pg	Pg	19 28 02.0	-0.5
	9.4nm,0.5s						
KTBS				Lg	Lg	19 28 58.4	
	91nm,0.9s						
KUU	Kurty	4.16	8	eP	Pg	19 28 02.8	-2.2
	12nm,0.7s						
KUU				eS	Sg	19 28 59.1	+0.2
	222nm,1.0s						
KUU	Kurty	4.16	8	Pg	Pg	19 28 02.8	-2.2
	12nm,0.7s						
KUU				Lg	Lg	19 28 59.1	
	222nm,1.0s						
KURS	Kuram	4.21	27	eP	Pg	19 28 03.6	-2.2
	30nm,0.9s						
KURS				eS	Sg	19 29 00.9	+0.5
	53nm,1.0s						
CHKK	Chushkaly	4.22	15	eP	Pg	19 28 03.6	-2.5
	29nm,0.8s						
CHKK				eS	Sg	19 29 00.5	-0.3
	119nm,1.0s						
UZB	Uzynbulak	4.28	37	eP	Pg	19 28 04.1	-3.0
	14nm,1.1s						
UZB				eS	Sg	19 29 01.1	-1.4
	49nm,1.4s						
UZB	Uzynbulak	4.28	37	Pg	Pg	19 28 04.1	-3.0
	14nm,1.1s						
UZB				Lg	Lg	19 29 01.1	
	49nm,1.4s						
DZA	Taraz	4.43	316	eP	Pb	19 28 02.6	-0.8
	36nm,0.1s						
DZA				eS	Sb	19 28 59.0	+2.0
	80nm,0.5s						
SHLS	Shalkode	4.50	40	eP	Pg	19 28 13.1	+1.8
	40nm,0.7s						
SHLS				eS	Sg	19 29 17.1	+7.6
	89nm,1.2s						
PDGK	Podgornoye	4.64	39	⇑Pg	Pg	19 28 18.1	+4.0
	33nm,0.9s						
PDGK				⇑Lg	Lg	19 29 16.4	
	135nm,1.2s						
IUG	Iuzhnay	4.78	301	eP	Pb	19 28 06.6	-2.8
	9.1nm,0.4s						
IUG				eS	Sb	19 29 06.6	-0.6
	187nm,0.9s						
MNBS	Baschi	4.81	26	eP	Pg	19 28 16.0	-1.3
	12nm,0.8s						
MNBS				eS	Sg	19 29 21.7	+2.1
	38nm,0.9s						
MNBS	Baschi	4.81	26	Pg	Pg	19 28 16.0	-1.3
	12nm,0.8s						
MNBS				Lg	Lg	19 29 21.7	
	38nm,0.9s						
KK31	Karatay Array	5.02	313	⇑Pn	Pn	19 28 04.1	+3.1
	2.4nm,0.5s,baz=122,slow=13,SNR=26						
KK31				⇑Lg	Lg	19 29 23.6	
	28nm,0.6s,baz=129,slow=26,SNR=5.4						
BRLS	Borolday	5.37	309	eP	Pb	19 28 21.2	+1.8
	1.0nm,0.6s						
BRLS				eS	Sb	19 29 30.4	+6.4
	30nm,1.0s						
BTLS	Baital	5.38	349	eP	Pb	19 28 23.5	+4.1
	6.9nm,0.8s						
BTLS				eS	Sg	19 29 34.7	-3.1
	39nm,1.1s						
BTLS	Baital	5.38	349	Pg	Pb	19 28 22.2	+2.7
	7.7nm,0.7s						
BTLS				Lg	Lg	19 29 32.6	
	11nm,0.7s						
DJR	Jarkent	5.55	34	eP	Pg	19 28 30.0	-1.6
	9.9nm,0.7s						
DJR				eS	Sg	19 29 45.9	+2.4
	15nm,0.8s						
DJR	Jarkent	5.55	34	Pg	Pg	19 28 30.0	-1.6
	5.5nm,0.4s						
DJR				Lg	Lg	19 29 45.9	
	15nm,1.1s						
CHCP	Chirah Chowk	6.37	197	P	Pn	19 28 24.2	+4.7
THN	Thein Dam	7.33	179	eP	Pn	19 28 40.0	+7.4
THN				eS	Sn	19 29 55.7	-0.3
THW	Thamme Wali	7.60	205	P	Pn	19 28 40.4	+3.9
SARP	Sargodha	8.17	197	P	Pn	19 28 46.2	+2.0
MK31	Makanchi Array	8.58	33	⇓Pn	Pn	19 28 58.2	+8.4
	2.4nm,0.7s,baz=208,slow=13,SNR=26						
MK31				⇓Lg	Lg	19 31 20.9	
	8.3nm,1.1s						
MKAR	Makanchi Array	8.58	33	Pn	Pn	19 28 54.4	+4.6
	0.0nm,0.3s,baz=210,slow=14,SNR=12						
MKAR				Lg	Lg	19 31 16.0	
	0.1nm,0.3s,baz=285,slow=9.7,SNR=2.1						
WMQ	Urumqi	9.95	62	eP	Pn	19 29 15.4	+6.7
KURBB	Kurchatov Arra	11.05	10	Pn	Pn	19 29 26.5	+2.9
	0.0nm,0.3s,baz=204,slow=11,SNR=1.9						
KURBB				Lg	Lg	19 32 32.2	
	0.0nm,0.3s,baz=198,slow=30,SNR=6.7						
DANN	Dangsing	13.28	147	eP	Pn	19 29 51.2	-3.2
GEYT	Alibeck	13.69	268	Pn	Pn	19 29 57.3	-2.5
	0.3nm,0.3s,baz=215,slow=36,SNR=2.3						
GEYT				Sn	Sn	19 32 26.6	-5.5
	0.7nm,0.3s,baz=134,slow=17,SNR=6.1						
GEYT				LR	LR	19 36 10.1	
	comp=Z,45nm,19.9s,baz=210,slow=41						
BVAR	Borovoye Array	13.71	347	Pn	Pn	19 30 01.8	+1.8
	0.2nm,0.3s,baz=155,slow=14,SNR=4.0						
BVAR				Lg	Lg	19 33 56.1	
	0.1nm,0.3s,baz=158,slow=16,SNR=3.3						
KOLN	Koldanda	13.72	148	eP	Pn	19 29 56.3	-4.1
GKN	Gorkha	13.96	144	eP	Pn	19 30 00.4	-3.2
	21nm,0.8s						
KKN	Kakani	14.44	143	eP	Pn	19 30 06.5	-3.7
	18nm,0.6s						
GUN	Gumba	14.62	141	eP	Pn	19 30 09.0	-3.8
PKIN	Phulchoki	14.67	143	eP	Pn	19 30 09.5	-4.0
	18nm,0.9s						
PKI	Pulchoki	14.68	143	eP	Pn	19 30 09.7	-4.0
	21nm,1.1s						
JIRN	Jiri	14.98	141	eP	Pn	19 30 14.9	-2.8
	75nm,0.7s						
ZALV	Zalesovo Beam	15.52	21	Pn	Pn	19 30 26.2	+1.9
	0.1nm,0.3s,baz=209,slow=12,SNR=6.7						
ZALV				LR	LR	19 37 00.0	
	comp=Z,34nm,19.1s,baz=71,slow=39						
RAMN	Ramite	15.77	141	eP	Pn	19 30 23.1	-4.9
	40nm,0.8s						
TAPN	Taplejung	16.00	137	eP	Pn	19 30 27.5	-3.6
	15nm,0.8s						
ODAN	Odare	16.24	139	eP	Pn	19 30 29.8	-4.2
	30nm,0.7s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AKTO	**Aktyubinsk**	**16.27**	**317**	Pn	**Pn**	**19 30 35.2**	**+1.1**
	0.1nm,0.3s,baz=114,slow=20,SNR=7.1						
ARU	**Arti**	**20.05**	**332**	P	Pn	19 31 20.7	+0.2
	0.5nm,0.3s,baz=114,slow=2.1,SNR=4.8						
WSAR	**Wadi Sarin**	**21.82**	**226**	LR	LR	19 41 05.0	
	comp=Z,26nm,19.3s,baz=36,slow=40						
SONM	**Songino Array**	**23.58**	**60**	P	**P**	**19 31 58.0**	**+1.5**
	0.8nm,0.7s,baz=286,slow=10,SNR=2.1						
KBZ	**Khabaz**	**24.56**	**290**	LR	LR	19 44 49.5	
	comp=Z,19nm,18.5s,baz=159,slow=44						
CMAR	**Chiang Mai Arr**	**29.34**	**130**	LR	LR	19 47 26.8	
	comp=Z,16nm,21.4s,baz=95,slow=43						
BRTR	**Keskin Array B**	**31.99**	**284**	P	**P**	**19 33 13.4**	**+1.3**
	1.2nm,0.8s,baz=96,slow=10,SNR=8.0						
AKASG	**Malin Array Be**	**33.86**	**304**	P	**P**	**19 33 27.9**	**-0.3**
	0.1nm,0.2s,baz=81,slow=7.6,SNR=4.1						
FINES	**FINESS Array B**	**36.91**	**323**	P	**P**	**19 33 54.7**	**+0.5**
	1.6nm,1.0s,baz=153,slow=21,SNR=3.6						
FINES				LR	LR	19 49 46.6	
	comp=Z,53nm,21.8s,baz=32,slow=37						
ARCES	**ARCESS Array B**	**39.58**	**335**	P	**P**	**19 34 17.6**	**+0.8**
	1.3nm,0.5s,baz=97,slow=9.9,SNR=9.3						
KSRS	**Korea Array**	**40.53**	**76**	LR	LR	19 54 08.0	
	comp=Z,12nm,18.5s,baz=180,slow=41						
TIXI	**Tiksi**	**41.40**	**23**	P	**P**	**19 34 32.2**	**+0.5**
	1.9nm,0.7s,baz=260,slow=4.8,SNR=11						
NOA	**NORSAR Array B**	**44.00**	**321**	LR	LR	19 54 10.0	
	comp=Z,30nm,21.6s,baz=35,slow=37						
GERES	**GERESS Array B**	**44.04**	**303**	P	**P**	**19 34 55.0**	**+1.4**
	1.5nm,0.8s,baz=69,slow=7.3,SNR=10						
ESDC	**Sonseca Array**	**59.08**	**298**	P	**P**	**19 36 46.3**	**+0.1**
	1.2nm,0.8s,baz=53,slow=7.3,SNR=9.6						
TORD	**Torodi Ar. Bea**	**69.32**	**270**	P	**P**	**19 37 52.9**	**-0.7**
	0.9nm,0.7s,baz=46,slow=5.9,SNR=6.1						
YKA	**Yellowknife Ar**	**77.75**	**5**	P	**P**	**19 38 42.6**	**+0.2**
	0.8nm,0.7s,baz=350,slow=5.3,SNR=17						
ULM	**Lac du Bonnet**	**90.03**	**354**	LR	LR	20 22 09.2	
	comp=Z,25nm,19.2s,baz=88,slow=37						

MEX ***06*** *19:35:03.4±0.3, 14°69N×93°28W, h29^{km}±9^{km}, MD3.5*
GCG ***06*** *19:35:05.5±0.7, 15°57N×92°81W, h35^{km}±999^{km}, MD3.9*
ISC 06 19:35:01.4±2.3**, 14°85N**±0°09×**93°23W**±0°08**, h12**^{km}±12^{km}**,**
n8, σ**0^{s}78**/16**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**0.85**	**0**	*e*P	**Pn**	**19 35 19.3**	**+0.1**
PCIG				*e*S	**Sn**	**19 35 31.4**	**-0.2**
THIG		**0.93**	**86**	*i* P	**Pg**	**19 35 19.3**	**-0.1**
THIG				*e*S	**Sg**	**19 35 31.3**	**-0.2**
STG3	**Santiaguito 3,**	**1.61**	**95**	*e*P	**Pn**	**19 35 29.9**	**+0.1**
STG3				*e*S	**Sn**	**19 35 49.6**	**-1.0**
CCIG	**Comitan**	**1.77**	**36**	*i* P	**Pn**	**19 35 32.4**	**+0.3**
CCIG				*e*S	**Sn**	**19 35 55.4**	**+0.8**
TGIG		**1.92**	**3**	*i* P	**Pn**	**19 35 34.1**	**+0.1**
TGIG				*e*S	**Sn**	**19 35 58.3**	**+0.1**
FUG	**Fuego 3**	**2.34**	**99**	*e*P	**Pn**	**19 35 40.9**	**+1.0**
FUG				*e*S	**Sn**	**19 36 07.1**	**-1.6**
CMIG	**Matias Romero**	**2.74**	**325**	*i* P	**Pn**	**19 35 45.8**	**+0.6**
CMIG				*i* S	**Sn**	**19 36 17.4**	**-0.9**
IXG	**Ixpaco**	**2.78**	**104**	*e*P	**Pn**	**19 35 46.9**	**+0.9**
IXG				*e*S	**Sn**	**19 36 19.5**	**0.0**

SNET ***06*** *19:42:56.6±0.7, 13°16N×89°63W, h35^{km}±4^{km}, ML3.5*
UCR ***06*** *19:42:56.8±0.7, 13°17N×89°63W, h33^{km}±4^{km}, ML3.4*
GCG ***06*** *19:42:59.5±0.4, 13°16N×90°02W, h16^{km}±5^{km}, MD3.9*
ISC 06 19:42:56.4±2.0**, 13°13N**±0°09×**89°63W**±0°04**, h28**^{km}±15^{km}**,**
n30, σ**0^{s}41**/38**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOQS	**Boqueron**	**0.69**	**30**	*e*P	**Pb**	**19 43 10.3**	**+0.2**
BOQS	**Boqueron**	**0.69**	**30**	*e*P	**Pb**	**19 43 10.3**	**+0.2**
SBLS	**San Blas**	**0.70**	**1**	*e*P	**Pn**	**19 43 10.3**	**-0.4**
SBLS				*e*S	**Sn**	**19 43 21.2**	**+0.4**
SBLS	**San Blas**	**0.70**	**1**	*e*P	**Pn**	**19 43 10.3**	**-0.4**
SBLS				*e*S	**Sn**	**19 43 21.2**	**+0.4**
SNJE	**San Jose**	**0.73**	**2**	*e*P	**Pb**	**19 43 10.8**	**+0.1**
SNJE	**San Jose**	**0.73**	**2**	*e*P	**Pb**	**19 43 10.8**	**+0.1**
LFRS	**El Faro**	**0.74**	**49**	*e*P	**Pn**	**19 43 10.6**	**-0.5**
LFRS	**El Faro**	**0.74**	**49**	*e*P	**Pn**	**19 43 10.6**	**-0.5**
RTR	**El Retiro**	**0.76**	**359**	*e*P	**Pn**	**19 43 11.0**	**-0.4**
RTR	**El Retiro**	**0.76**	**359**	*e*P	**Pn**	**19 43 11.0**	**-0.4**
LBRS	**Las Brisas**	**0.83**	**44**	*e*P	**Pb**	**19 43 12.4**	**0.0**
LBRS	**Las Brisas**	**0.83**	**44**	*e*P	**Pb**	**19 43 12.4**	**0.0**
TECA	**Tecapa**	**1.16**	**72**	*e*P	**Pn**	**19 43 16.3**	**-0.6**
TECA	**Tecapa**	**1.16**	**72**	*e*P	**Pn**	**19 43 16.3**	**-0.6**
MTO3	**Montecristo**	**1.29**	**12**	*e*P	**Pn**	**19 43 18.7**	**0.0**
MTO3	**Montecristo**	**1.29**	**12**	*e*P	**Pn**	**19 43 18.7**	**0.0**
IXG	**Ixpaco**	**1.30**	**323**	*e*P	**Pn**	**19 43 18.5**	**-0.4**
IXG	**Ixpaco**	**1.30**	**323**	*e*P	**Pb**	**19 43 19.5**	**-0.8**
IXG	**Ixpaco**	**1.30**	**323**	*e*P	**Pn**	**19 43 18.5**	**-0.4**
PACA	**Pacayal**	**1.32**	**75**	*e*P	**Pn**	**19 43 19.1**	**0.0**
PACA				*e*S	**Sn**	**19 43 36.3**	**+0.4**
PACA	**Pacayal**	**1.32**	**75**	*e*P	**Pn**	**19 43 19.1**	**0.0**
PACA				*e*S	**Sn**	**19 43 36.3**	**+0.4**
LCY	**Lacayo**	**1.34**	**77**	*e*P	**Pn**	**19 43 19.2**	**-0.1**
LCY	**Lacayo**	**1.34**	**77**	*e*P	**Pn**	**19 43 19.2**	**-0.1**
BLLM	**Bellamira**	**1.39**	**77**	*e*P	**Pn**	**19 43 19.7**	**-0.3**
BLLM	**Bellamira**	**1.39**	**77**	*e*P	**Pn**	**19 43 19.7**	**-0.3**
NBG	**Las Nubes**	**1.60**	**335**	*e*P	**Pb**	**19 43 25.8**	**+0.3**
FUG	**Fuego 3**	**1.76**	**318**	*e*P	**Pn**	**19 43 25.9**	**+0.7**
FUG				*e*S	**Sn**	**19 43 47.0**	**+0.3**
CNCH	**Conchagua**	**1.76**	**85**	*e*P	**Pn**	**19 43 25.1**	**0.0**
CNCH				*e*S	**Sn**	**19 43 46.7**	**+0.1**
CNCH				IAML		19 43 52.0	
	comp=Z,468nm,0.3s						
CNCH	**Conchagua**	**1.76**	**85**	*e*P	**Pn**	**19 43 25.1**	**0.0**
CNCH				*e*S	**Sn**	**19 43 46.7**	**+0.1**
CNCH				IAML		19 43 52.0	
	comp=Z,468nm,0.3s						
STG3	**Santiaguito 3,**	**2.45**	**310**	*e*P	**Pn**	**19 43 35.4**	**+0.7**
STG3				*e*S	**Sn**	**19 44 03.1**	**-0.7**

IDC ***06*** *19:43:33.5±1.1, 24°15N×122°43E, h0^{km}, mb3.7/7, mb1 3.8/7, mb1mx3.5/41, mbtmp3.7/7, MS3.1/1, Ms1 3.1/1, ms1mx2.3/33, Error ellipse: s-maj=65.7km s-min=21.6km az=65.0*
JMA ***06*** *19:43:36.8±0.1, 23°96N×122°32E, h21^{km}±3^{km}, M3.5*
TAP ***06*** *19:43:37.5, 24°03N×122°34E, h29^{km}, ML3.8, D*
ISC 06 19:43:36.8±1.1**, 23°99N**±0°02×**122°33E**±0°02**, h25**^{km}±9^{km}**,**
n119, σ**0^{s}97**/180**, mb3.5**/7**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.59**	**342**	P	**Pb**	**19 43 48.5**	**0.0**
	baz=331						
HWA	**Hwalien**	**0.66**	**269**	P	**Pn**	**19 43 50.5**	**-0.2**
	baz=254						
HWA				*e*S	**Sn**	**19 44 01.4**	**+1.2**
	baz=254						
TWD	**Chiawan**	**0.68**	**278**	*i* P	**Pb**	**19 43 50.0**	**0.0**
	baz=274						
TWD				S	**Sb**	**19 43 59.5**	**+0.6**
	baz=274						
ENA	**Nanau**	**0.69**	**309**	P	**Pb**	**19 43 50.1**	**-0.2**
	baz=313						
NACB	**Ninganchiao**	**0.70**	**286**	*i* P	**Pb**	**19 43 50.5**	**+0.2**
	baz=269						
NACB				S	**Sb**	**19 43 59.6**	**+0.1**
	baz=269						
JYNG	**Yonagunijimaku**	**0.73**	**51**	P	**Pn**	**19 43 51.0**	**-0.5**
JYNG				S	**Sb**	**19 44 00.4**	**0.0**
TWC	**Suao**	**0.76**	**325**	P	**Pb**	**19 43 50.7**	**-0.6**
	baz=322						
TWC				S	**Sb**	**19 44 00.5**	**-0.8**
	baz=322						
YOJ	**Yonaguni jima**	**0.78**	**53**	P	**Pn**	**19 43 52.0**	**-0.3**
YOJ				*e*S	**Sn**	**19 44 02.1**	**-1.1**
ETLH	**Xiulin Townshi**	**0.81**	**286**	P	**Pb**	**19 43 52.2**	**0.0**
	baz=271						
ETLH				*e*S	**Sn**	**19 44 03.6**	**-0.3**
	baz=271						
ESL	**Shilin**	**0.84**	**258**	*e*P	**Pb**	**19 43 52.1**	**-0.6**
	baz=246						
EGFH	**Guangfu**	**0.89**	**249**	*i* P	**Pb**	**19 43 53.6**	**+0.1**
	baz=247						
EGFH				S	**Sn**	**19 44 06.2**	**+0.4**
	baz=247						
ILA	**Ilan**	**0.94**	**326**	P	**Pn**	**19 43 54.8**	**+0.4**
	baz=323						
TWE	**Neicheng**	**0.95**	**320**	P	**Pn**	**19 43 54.5**	**0.0**
	baz=318						
ENTT	**Nioudou**	**0.95**	**313**	*e*P	**Pn**	**19 43 54.8**	**+0.1**
	baz=297						
NDT	**Datong Townshi**	**0.96**	**310**	P	**Pn**	**19 43 55.6**	**+0.8**
	baz=306						
NDT				*e*S	**Sn**	**19 44 07.5**	**-0.2**
	baz=306						
HGSD	**Ruisui**	**0.97**	**239**	P	**Pb**	**19 43 54.5**	**-0.4**
	baz=238						
HGSD				S	**Sb**	**19 44 07.3**	**+0.1**
	baz=238						
NNSB	**Datong**	**0.97**	**297**	P	**Pb**	**19 43 54.9**	**-0.1**
	baz=282						
NNSB				S	**Sn**	**19 44 08.2**	**+0.1**
	baz=282						
NNSH	**Datong**	**0.97**	**297**	*i* P	**Pn**	**19 43 55.1**	**+0.1**
	baz=293						
NNSH				S	**Sn**	**19 44 08.4**	**+0.3**
	baz=293						
NTC	**Toucheng**	**0.97**	**332**	*e*P	**Pn**	**19 43 55.3**	**+0.3**
	baz=341						
NNS	**Nan Shan**	**0.98**	**297**	*i* P	**Pn**	**19 43 55.3**	**+0.1**
	baz=283						
NNS				S	**Sn**	**19 44 08.7**	**+0.3**
	baz=283						
WHF	**Hehuan Shan**	**0.99**	**279**	P	**Pb**	**19 43 55.4**	**-0.1**
	baz=264						
WHF				S	**Sb**	**19 44 07.9**	**-0.4**
	baz=264						
SLBB	**Yuanshan**	**0.99**	**320**	P	**Pn**	**19 43 55.7**	**+0.5**
	baz=318						
EHY	**Hungye**	**1.04**	**243**	P	**Pn**	**19 43 55.8**	**0.0**
	baz=255						
EHY				*e*S	**Sb**	**19 44 09.3**	**-0.1**
	baz=255						
OWD	**Renai**	**1.06**	**268**	P	**Pb**	**19 43 56.0**	**-0.6**
	baz=266						
OWD				S	**Sb**	**19 44 09.4**	**-0.6**
	baz=266						
CHGB	**Renai**	**1.06**	**274**	P	**Pb**	**19 43 56.4**	**-0.3**
	baz=260						
CHGB				S	**Sb**	**19 44 10.1**	**-0.1**
	baz=260						
TIPB	**Shuangxi**	**1.08**	**335**	*e*P	**Pn**	**19 43 56.5**	**0.0**
	baz=342						
TWT	**Tachien**	**1.09**	**284**	*e*P	**Pb**	**19 43 57.6**	**+0.6**
	baz=268						
TWT				*e*S	**Sn**	**19 44 12.3**	**+1.3**
	baz=268						
NWLT	**Wulai**	**1.09**	**316**	*e*P	**Pb**	**19 43 57.5**	**+0.5**
	baz=301						
TDCB	**Techi**	**1.10**	**284**	*e*P	**Pn**	**19 43 56.8**	**-0.1**
	baz=272						
YHNB	**Yeheng**	**1.10**	**308**	*e*P	**Pb**	**19 43 57.0**	**-0.3**
	baz=305						
YHNB				S	**Sn**	**19 44 11.2**	**-0.1**
	baz=305						
VWDT	**VWDT**	**1.11**	**258**	*e*P	**Pn**	**19 43 57.4**	**+0.6**
	baz=256						
VWDT				*e*S	**Sb**	**19 44 11.5**	**+0.1**
	baz=256						
YULB	**Yu-li**	**1.12**	**238**	*e*P	**Pn**	**19 43 56.8**	**-0.1**
	baz=237						
NSK	**Sanguang**	**1.12**	**308**	*i* P	**Pb**	**19 43 57.3**	**-0.3**
	baz=305						
NSK				S	**Sn**	**19 44 12.6**	**+0.9**
	baz=305						
TWF1	**Yuli**	**1.14**	**236**	*e*P	**Pn**	**19 43 57.3**	**0.0**
	baz=235						
WFSB	**Wu-fen Shan**	**1.19**	**335**	*e*P	**Pn**	**19 43 57.6**	**-0.3**
	baz=332						
WFSB				*e*S	**Sn**	**19 44 14.6**	**+1.3**
	baz=332						
TWA	**Mucha**	**1.20**	**326**	P	**Pb**	**19 43 59.6**	**+0.7**
	baz=340						
NHDH	**Xindian Distri**	**1.22**	**323**	P	**Pb**	**19 43 59.3**	**+0.1**
	baz=333						
FULB	**Fuli**	**1.23**	**231**	P	**Pn**	**19 43 58.0**	**-0.6**
	baz=218						
FULB				*e*S	**Sn**	**19 44 13.6**	**-0.9**
	baz=218						
CHKT	**Chengkung**	**1.25**	**225**	*e*P	**Pn**	**19 43 57.9**	**-0.9**
	baz=215						
CHKT				S	**Sn**	**19 44 12.5**	**-2.3**
	baz=215						
SSLB	**Suanglung**	**1.27**	**261**	*e*P	**Pn**	**19 43 59.3**	**+0.1**
	baz=260						
TAP1	**Taipei**	**1.28**	**325**	*e*P	**Pb**	**19 44 00.4**	**+0.2**
	baz=322						
DPDB	**Guoxing**	**1.28**	**272**	P	**Pb**	**19 44 00.1**	**-0.2**
	baz=270						
TAP	**Taipei**	**1.29**	**325**	*e*P	**Pb**	**19 44 01.1**	**+0.7**
	baz=322						
WHP	**Taichung City**	**1.30**	**283**	*e*P	**Pb**	**19 44 01.7**	**+1.1**
	baz=272						
WLTB	**Daxi**	**1.31**	**311**	*e*P	**Pb**	**19 44 00.9**	**+0.2**
	baz=309						
SMLT	**Sun Moon Lake**	**1.31**	**266**	*e*P	**Pn**	**19 44 00.5**	**+0.8**
	baz=264						
IRIF	**Iriomote-Funau**	**1.32**	**75**	P	**Pb**	**19 44 00.9**	**-0.1**
IRIF				S	**Sb**	**19 44 18.5**	**+0.9**
YM01	**YM01**	**1.34**	**329**	P	**Pn**	**19 44 00.3**	**+0.2**
	baz=343						
HATJ	**Hateruma jima**	**1.35**	**87**	P	**Pb**	**19 44 01.2**	**-0.2**
YM10	**YM10**	**1.36**	**329**	P	**Pb**	**19 44 00.9**	**-0.7**
	baz=342						
YM11	**YM11**	**1.36**	**330**	*e*P	**Pb**	**19 44 00.7**	**-1.0**
	baz=342						
LIOB	**Emei**	**1.37**	**299**	*e*P	**Pb**	**19 44 01.9**	**+0.1**
	baz=296						
LIOB				*e*S	**Sb**	**19 44 19.4**	**+0.6**
	baz=296						
YM04	**YM04**	**1.37**	**328**	*e*P	**Pn**	**19 44 00.5**	**+0.1**
	baz=341						
YM08	**YM08**	**1.37**	**331**	*e*P	**Pb**	**19 44 01.1**	**-0.7**
	baz=328						
TWS1	**Kuangyinshan**	**1.38**	**323**	*e*P	**Pb**	**19 44 01.7**	**-0.3**
	baz=338						
ANP	**Anpu**	**1.40**	**328**	P	**Pb**	**19 44 02.0**	**-0.4**
	baz=326						
NTST	**Danshui**	**1.42**	**326**	*e*P	**Pb**	**19 44 02.1**	**-0.5**
	baz=339						
ELDTW	**Lidau**	**1.44**	**237**	P	**Pn**	**19 44 01.4**	**-0.1**
	baz=236						
TWY	**Chenhua**	**1.44**	**333**	P	**Pb**	**19 44 03.0**	**0.0**
	baz=330						
SBCB	**Hsinchu**	**1.46**	**303**	P	**Pb**	**19 44 03.0**	**-0.4**
	baz=301						
TWQ1	**Liyutan**	**1.47**	**284**	*e*P	**Pb**	**19 44 03.6**	**+0.2**
	baz=281						
TWQ1				S	**Sb**	**19 44 23.0**	**+1.3**
	baz=281						
WJS	**Zhushan**	**1.48**	**264**	*e*P	**Pb**	**19 44 03.8**	**+0.3**
	baz=262						
WJS				*e*S	**Sb**	**19 44 23.4**	**+1.5**
	baz=262						
NSY	**Sanyi**	**1.49**	**287**	*i* P	**Pb**	**19 44 04.2**	**+0.3**
	baz=283						
NSY				S	**Sb**	**19 44 24.4**	**+2.0**
	baz=283						
TWH	**Lutao**	**1.49**	**212**	P	**Pn**	**19 44 02.0**	**-0.1**
	baz=212						
TWH				S	**Sn**	**19 44 19.2**	**-1.6**
	baz=212						
NMLH	**Miaoli**	**1.51**	**292**	P	**Pb**	**19 44 04.2**	**0.0**
	baz=288						
NMLH				S	**Sb**	**19 44 23.9**	**+1.1**
	baz=288						
WNT	**Mingjian**	**1.51**	**266**	P	**Pb**	**19 44 04.4**	**+0.2**
	baz=264						
WNT				*e*S	**Sb**	**19 44 23.8**	**+0.9**
	baz=264						
TCU	**Taichung**	**1.52**	**276**	*e*P	**Pb**	**19 44 04.7**	**+0.3**
	baz=273						
TCU				S	**Sb**	**19 44 24.8**	**+1.6**
	baz=273						
PTSB	**Yuanli**	**1.55**	**287**	*e*P	**Pb**	**19 44 04.0**	**-0.9**
	baz=285						
JKRS	**Kuro-shima**	**1.56**	**80**	P	**Pb**	**19 44 04.2**	**-0.7**
WCHH	**Zhanghua**	**1.62**	**274**	S	**Sb**	**19 44 26.9**	**+0.8**
	baz=271						
TWGBT	**Beinan**	**1.64**	**225**	*e*P	**Pn**	**19 44 03.1**	**-1.0**
	baz=236						
TWGBT				*e*S	**Sn**	**19 44 23.5**	**-0.8**
	baz=236						
TWG	**Pinlang**	**1.64**	**225**	P	**Pn**	**19 44 03.7**	**-0.4**
	baz=236						
TWG				*e*S	**Sn**	**19 44 23.5**	**-1.0**
	baz=236						
STYT	**Tauyuan**	**1.66**	**241**	P	**Pn**	**19 44 05.4**	**+0.9**
	baz=230						
STYT				*e*S	**Sn**	**19 44 25.2**	**+0.2**
	baz=230						
WDLH	**Douliu**	**1.67**	**260**	*e*P	**Pb**	**19 44 06.5**	**-0.4**
	baz=258						
WDLH				*e*S	**Sb**	**19 44 27.9**	**+0.5**
	baz=258						
JIJ	**Ishigaki jima**	**1.70**	**77**	P	**Pn**	**19 44 05.6**	**+0.7**
TPUB	**Ta-pu**	**1.70**	**247**	P	**Pn**	**19 44 06.6**	**+1.6**
	baz=245						
TPUB				*e*S	**Sb**	**19 44 28.1**	**-0.4**
	baz=245						
CHN4	**Tsaushan**	**1.71**	**249**	P	**Pb**	**19 44 08.1**	**+0.4**
	baz=247						
CHN4				*e*S	**Sb**	**19 44 31.1**	**+2.3**
	baz=247						
WTP	**Ta-pu**	**1.74**	**245**	P	**Pb**	**19 44 07.8**	**-0.3**
	baz=244						
WTP				S	**Sb**	**19 44 30.7**	**+1.1**
	baz=244						
CHY	**Chiayi**	**1.81**	**255**	P	**Pb**	**19 44 09.3**	**0.0**
	baz=253						
CHY				S	**Sb**	**19 44 33.2**	**+1.6**
	baz=253						
TWK	**Hsinying**	**1.83**	**247**	P	**Pb**	**19 44 09.3**	**-0.5**
	baz=246						
TWK				S	**Sb**	**19 44 32.8**	**+0.5**
	baz=246						
CHN1	**Nanshi**	**1.84**	**245**	*e*P	**Pb**	**19 44 09.3**	**-0.4**
	baz=243						
CHN1				*e*S	**Sb**	**19 44 33.2**	**+0.9**
	baz=243						
SLGT	**Liugui**	**1.84**	**238**	P	**Pn**	**19 44 08.5**	**+1.6**
	baz=229						
SLGT				*e*S	**Sb**	**19 44 31.9**	**-0.4**
	baz=229						
SGST	**Jiashian**	**1.84**	**241**	*e*P	**Pn**	**19 44 08.8**	**+1.9**
	baz=229						
SGST				S	**Sb**	**19 44 32.4**	**0.0**
	baz=229						
SNST	**Tainan City**	**1.85**	**246**	*e*S	**Sb**	**19 44 33.8**	**+1.2**
	baz=245						
ECL	**Taimali**	**1.88**	**223**	*e*P	**Pn**	**19 44 05.3**	**-2.1**
	baz=233						
WTCT	**Ta-ch'eng**	**1.88**	**267**	*e*S	**Sb**	**19 44 34.0**	**+0.5**
	baz=277						
JISG	**Ishigakijimahi**	**1.90**	**71**	P	**Pn**	**19 44 08.5**	**+0.8**
WSF	**Szhu**	**1.96**	**260**	P	**Pb**	**19 44 11.0**	**-0.9**
	baz=258						
WSF				S	**Sb**	**19 44 36.4**	**+0.5**
	baz=258						
SSD	**Sandimen**	**1.99**	**232**	P	**Pn**	**19 44 10.2**	**+1.2**
	baz=226						
SSD				*e*S	**Sb**	**19 44 36.6**	**-0.1**
	baz=226						
CHN8	**Yiju**	**2.04**	**252**	S	**Sb**	**19 44 37.7**	**-0.6**
	baz=251						
LAY	**Lan-yu**	**2.07**	**200**	P	**Pn**	**19 44 09.1**	**-1.0**
	baz=202						
MASBT	**Mashibuluo**	**2.08**	**229**	P	**Pn**	**19 44 11.0**	**+0.9**
	baz=224						
MASBT				*e*S	**Sn**	**19 44 37.4**	**+2.2**
	baz=224						
EAST	**Anshuo**	**2.10**	**221**	P	**Pn**	**19 44 09.9**	**-0.6**
	baz=221						
TWM1	**Shoushan**	**2.10**	**237**	*e*P	**Pb**	**19 44 13.4**	**-0.8**
	baz=236						
TWM1				*e*S	**Sb**	**19 44 42.7**	**+2.8**
	baz=236						
SGLT	**Jiouru**	**2.11**	**234**	*e*P	**Pb**	**19 44 14.2**	**-0.1**
	baz=223						
SGLT				*e*S	**Sb**	**19 44 42.0**	**+1.9**
	baz=223						
SCZT	**Fangliau**	**2.25**	**225**	*e*P	**Pb**	**19 44 15.8**	**-1.0**
	baz=219						
SCZT				*e*S	**Sn**	**19 44 40.7**	**+1.2**
	baz=219						
JTJ	**Tarama**	**2.26**	**73**	P	**Pn**	**19 44 14.3**	**+1.7**
JTJ				*e*S	**Sb**	**19 44 42.2**	**-2.3**
TWKBT	**Hengchun**	**2.47**	**215**	P	**Pn**	**19 44 16.0**	**+0.5**
	baz=216						
TWKBT				*e*S	**Sn**	**19 44 45.6**	**+0.7**
	baz=216						
PHUB	**P'eng-hu**	**2.57**	**260**	P	**Pn**	**19 44 17.6**	**+0.7**
	baz=258						
PHUB				S	**Sn**	**19 44 48.3**	**+0.9**
	baz=258						
PNG	**Penghu**	**2.58**	**261**	P	**Pn**	**19 44 17.9**	**+0.9**
	baz=259						
PNG				*e*S	**Sn**	**19 44 48.5**	**+1.0**
	baz=259						
JIRB	**Irabujima**	**2.72**	**72**	P	**Pn**	**19 44 20.5**	**+1.5**
JIRB				S	**Sn**	**19 44 53.3**	**+2.1**
PTTC	**Pingtan**	**2.77**	**303**	*i* P	**Pn**	**19 44 19.7**	**0.0**
	baz=299						
PTTC				*e*S	**Sn**	**19 44 50.7**	**-1.6**
	baz=299						
VWUC	**VWUC**	**2.81**	**291**	P	**Pn**	**19 44 20.3**	**+0.1**
	baz=287						
VWUC				*e*S	**Sn**	**19 44 51.8**	**-1.4**
	baz=287						
JIKM	**Ikemajima**	**2.82**	**70**	P	**Pn**	**19 44 22.3**	**+2.0**
JIKM				*e*S	**Sn**	**19 44 55.7**	**+2.2**
JMJ2	**Miyako jima3**	**2.83**	**74**	P	**Pn**	**19 44 22.6**	**+2.1**
MATB	**Ma-tsu**	**3.05**	**315**	*e*P	**Pn**	**19 44 23.1**	**-0.4**
	baz=313						
PTMZ	**Houxiangcun**	**3.10**	**290**	*i* P	**Pn**	**19 44 24.4**	**+0.2**
	baz=286						
PTMZ				*e*S	**Sn**	**19 44 58.6**	**-2.0**
	baz=286						
KNM	**Kinmen**	**3.58**	**278**	*e*P	**Pn**	**19 44 32.8**	**+2.0**
	baz=274						
KNM				*e*S	**Sn**	**19 45 13.1**	**+0.7**
	baz=274						
KNMB	**Chin-men Tao**	**3.63**	**278**	*i* P	**Pn**	**19 44 31.7**	**+0.2**
	baz=275						
KNMB				*e*S	**Sn**	**19 45 11.0**	**-2.5**
	baz=275						
MHZQ	**Yeshan**	**3.66**	**306**	*e*P	**Pn**	**19 44 31.0**	**-0.8**
	baz=304						
KSRS	**Korea Array**	**14.25**	**18**	Pn	**P**	**19 47 01.7**	**-2.4**
	0.2nm,0.3s,baz=199,slow=12,SNR=5.2						
SONM	**Songino Array**	**26.96**	**336**	P	**P**	**19 49 15.9**	**-0.6**
	2.8nm,0.8s,baz=153,slow=9.5,SNR=7.3						
TLY	**Talaya**	**31.15**	**337**	LR	LR	20 03 51.8	
	comp=Z,28nm,18.2s,baz=106,slow=39						
MKAR	**Makanchi Array**	**39.21**	**316**	P	**P**	**19 51 03.6**	**+0.6**
	0.5nm,0.5s,baz=101,slow=9.5,SNR=10						
ZALV	**Zalesovo Beam**	**40.98**	**327**	P	**P**	**19 51 16.1**	**-1.4**
	1.0nm,0.5s,baz=106,slow=7.9,SNR=5.1						
WRA	**Warramunga Arr**	**45.21**	**164**	P	**P**	**19 51 52.7**	**+0.7**
	0.6nm,0.9s,baz=346,slow=9.3,SNR=2.8						
ASAR	**Alice Springs**	**48.69**	**166**	P	**P**	**19 52 21.4**	**+2.1**
	0.2nm,0.5s,baz=347,slow=7.6,SNR=1.8						
BRTR	**Keskin Array B**	**74.13**	**307**	P	**P**	**19 55 11.8**	**+0.3**
	0.7nm,0.8s,baz=60,slow=8.7,SNR=3.8						
YKA	**Yellowknife Ar**	**82.74**	**23**	P	**P**	**19 55 58.3**	**0.0**
	0.1nm,0.5s,baz=305,slow=5.2,SNR=2.5						

IDC 06 19:43:54.4±5.1**, 19°92S**×**173°83W, h0**^{km}**, mb3.7**/2**,**
mb1 3.9/2**, mb1mx3.5**/35**, mbtmp3.7**/2**, Error ellipse:**
s-maj=352.6km s-min=55.3km az=155.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**48.46**	**256**	P	P	19 52 38.0	-1.1
	0.4nm,0.5s,baz=100,slow=7.4,SNR=5.6						
WRA	**Warramunga Arr**	**48.56**	**261**	P	P	19 52 40.5	+0.6
	0.4nm,0.4s,baz=95,slow=8.3,SNR=19						
ARCES	**ARCESS Array B**	**129.00**	**351**	PKP	PKPdf	20 03 03.2	-0.4
	1.3nm,0.8s,baz=26,slow=2.3,SNR=4.1						

THE ***06*** *20:09:53.5, 38°24N×20°40E, h12^{km}, ML2.6/10, Error ellipse: s-maj=1.1km s-min=0.4km az=240.0*
ATH ***06*** *20:09:53.3, 38°24N×20°41E, h14^{km}±1^{km}, ML2.2/6, Error ellipse: s-maj=1.5km s-min=0.7km az=249.0*
ISC 06 20:09:53.4±1.0**, 38°24N**±0°03×**20°40E**±0°04**, h13**^{km}±5^{km}**,**
n38, σ**0^{s}31**/62**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGT1	**Agia Thekli**	**0.01**	**304**	P	**Pg**	**20 09 55.5**	**-0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AGT1				S	**Sg**	**20 09 56.8**	**-0.4**
	14µm,0.3s						
KEF4	**Livadi, Kephal**	**0.03**	**50**	P	**Pg**	**20 09 55.6**	**-0.1**
KEF4				S	**Sg**	**20 09 57.1**	**-0.2**
LXRA	**Lixouri, Kepha**	**0.05**	**145**	P	**Pg**	**20 09 55.9**	**+0.1**
LXRA				S	**Sg**	**20 09 57.8**	**+0.2**
KEF3	**Kipouria, Keph**	**0.06**	**226**	P	**Pg**	**20 09 56.0**	**+0.1**
KEF3				S	**Sg**	**20 09 57.7**	**+0.1**
CHV1	**Chavriata, Kef**	**0.06**	**194**	P	**Pg**	**20 09 56.0**	**+0.1**
CHV1				S	**Sg**	**20 09 57.9**	**+0.2**
	17µm,0.2s						
KEF1	**Kardakata, Kep**	**0.07**	**57**	P	**Pg**	**20 09 55.9**	**-0.1**
KEF1				S	**Sg**	**20 09 57.5**	**-0.3**
ARGA	**Argostoli. Kep**	**0.09**	**136**	P	**Pg**	**20 09 56.3**	**+0.1**
ARGA				S	**Sg**	**20 09 58.2**	**0.0**
ARG2	**Argostoli**	**0.09**	**133**	P	**Pg**	**20 09 56.3**	**0.0**
ARG2				S	**Sg**	**20 09 58.3**	**0.0**
	9µm,0.2s						
KEF2	**Argostoli. Kep**	**0.10**	**138**	P	**Pg**	**20 09 56.5**	**+0.1**
KEF2				S	**Sg**	**20 09 58.5**	**0.0**
VLS	**Valsamata**	**0.16**	**113**	P	**Pg**	**20 09 57.2**	**0.0**
VLS				S	**Sg**	**20 09 59.9**	**0.0**
	4µm,0.1s						
VLS	**Valsamata**	**0.16**	**113**	P	**Pg**	**20 09 57.2**	**0.0**
VLS				S	**Sg**	**20 09 59.9**	**0.0**
VLS				AML	AML	20 10 00.1	
	comp=N,7387µm,0.2s						
VLS				AML	AML	20 10 00.1	
	comp=E,7780µm,0.1s						
VSK1	**VASILIKIADES**	**0.21**	**38**	P	**Pg**	**20 09 58.1**	**+0.1**
VSK1				S	**Sg**	**20 10 01.7**	**+0.5**
	comp=E,3µm,0.2s						
FSK	**Fiskardo**	**0.25**	**30**	P	**Pg**	**20 09 58.8**	**+0.1**
FSK				S	**Sg**	**20 10 02.9**	**+0.5**
	comp=E,2µm,0.2s						
FSK	**Fiskardo**	**0.25**	**30**	P	**Pg**	**20 09 58.8**	**+0.1**
FSK				S	**Sg**	**20 10 02.8**	**+0.5**
FSK				AML	AML	20 10 03.5	
	comp=N,1431µm,0.1s						
FSK				AML	AML	20 10 04.2	
	comp=E,4281µm,0.1s						
KFL	**Anninata**	**0.33**	**113**	P	**Pg**	**20 10 00.2**	**0.0**
KFL				S	**Sg**	**20 10 05.4**	**+0.7**
	comp=E,1µm,0.2s						
KFL	**Anninata**	**0.33**	**113**	P	**Pg**	**20 10 00.2**	**0.0**
KFL				S	**Sg**	**20 10 05.0**	**+0.3**
KFL				AML	AML	20 10 06.1	
	comp=E,3652µm,0.3s						
KFL				AML	AML	20 10 06.4	
	comp=N,1711µm,0.2s						
EVGI	**Lefkada island**	**0.43**	**28**	P	**Pg**	**20 10 01.8**	**-0.1**
EVGI				S	**Sb**	**20 10 08.8**	**-0.4**
	comp=N,335nm,0.1s						
EVGI	**Lefkada island**	**0.43**	**28**	P	**Pg**	**20 10 01.9**	**-0.1**
EVGI				S	**Sg**	**20 10 07.6**	**0.0**
MGNA	**Meganis**	**0.52**	**36**	P	**Pg**	**20 10 02.9**	**-0.6**
MGNA				S	**Sg**	**20 10 11.0**	**+0.6**
LKD2	**Lefkada island**	**0.58**	**20**	P	**Pg**	**20 10 04.3**	**-0.5**
LKD2				S	**Sb**	**20 10 13.2**	**-0.5**
	comp=N,152nm,0.6s						
LKD2	**Lefkada island**	**0.58**	**20**	P	**Pg**	**20 10 04.3**	**-0.5**
LKD2				S	**Sg**	**20 10 12.9**	**+0.3**
LKD2				AML	AML	20 10 18.0	
	comp=E,217µm,0.2s						
LKD2				AML	AML	20 10 19.2	
	comp=N,256µm,0.2s						
TSLK	**Tsoukalades, L**	**0.62**	**19**	P	**Pg**	**20 10 05.1**	**-0.3**
TSLK				S	**Sb**	**20 10 14.7**	**+0.1**
	comp=N,210nm,0.7s						
TSLK	**Tsoukalades, L**	**0.62**	**19**	P	**Pg**	**20 10 05.1**	**-0.3**
TSLK				S	**Sg**	**20 10 13.9**	**+0.3**
TSLK				AML	AML	20 10 18.5	
	comp=N,401µm,0.4s						
TSLK				AML	AML	20 10 18.9	
	comp=E,311µm,0.4s						
VTN	**Vitineika**	**0.70**	**117**	P	**Pg**	**20 10 06.9**	**-0.1**
RLS	**Riolos of Patr**	**0.86**	**102**	P	**Pg**	**20 10 09.5**	**-0.5**
RLS				S	**Sg**	**20 10 21.3**	**0.0**
RLS				AML	AML	20 10 28.1	
	comp=E,127µm,0.3s						
RLS				AML	AML	20 10 28.2	
	comp=N,203µm,0.5s						
DRO	**Drossia**	**1.07**	**105**	P	**Pb**	**20 10 13.1**	**-0.7**
EFP	**Efpalio**	**1.20**	**81**	P	**Pn**	**20 10 15.9**	**0.0**
LAKA	**Lakka**	**1.24**	**90**	P	**Pn**	**20 10 16.1**	**-0.4**
AMT	**Artemida-Makis**	**1.25**	**124**	P	**Pb**	**20 10 16.8**	**-0.1**
IGT	**Igoumenitsa**	**1.29**	**358**	P	**Pb**	**20 10 17.8**	**+0.2**
SERG	**Sergoula**	**1.31**	**82**	P	**Pn**	**20 10 17.6**	**+0.2**
TRIZ	**Trizonia**	**1.32**	**84**	P	**Pn**	**20 10 17.6**	**+0.1**
KALE	**Kalithea**	**1.38**	**83**	P	**Pb**	**20 10 19.1**	**+0.1**
KLV	**Kalavryta, Ach**	**1.39**	**98**	P	**Pn**	**20 10 18.9**	**+0.3**
KEK	**Kerkira**	**1.54**	**342**	P	**Pb**	**20 10 21.9**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.56**	**60**	P	**Pb**	**20 10 22.7**	**+0.5**
ITM	**Ithomi**	**1.61**	**131**	P	**Pb**	**20 10 23.2**	**+0.2**
TRIP	**Tripoli**	**1.64**	**115**	P	**Pb**	**20 10 23.9**	**+0.3**

IDC 06 20:41:40.8±6.3**, 18°.26N**×**143°.98E, h0**km**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.4**/40**, mbtmp3.5**/4**, Error ellipse: s-maj=218.9km s-min=33.4km az=78.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**39.12**	**194**	P	P	20 49 10.2	+0.1
	0.5nm,0.5s,baz=12,slow=8.7,SNR=7.7						
FITZ	**Fitzroy Crossi**	**40.38**	**208**	P	P	20 49 21.8	+1.2
	1.3nm,0.8s,baz=25,slow=6.7,SNR=1.5						
ASAR	**Alice Springs**	**42.81**	**194**	P	P	20 49 39.2	-1.4
	0.2nm,0.5s,baz=16,slow=6.9,SNR=5.5						
MKAR	**Makanchi Array**	**57.59**	**314**	P	P	20 51 32.5	0.0
	0.2nm,0.4s,baz=92,slow=7.5,SNR=2.3						

*IDC **06** 20:52:26.6±0.8, 19°.66N×99°.76E, h0km, mb3.8/14, mb1 4.0/15, mb1mx3.7/55, mbtmp3.9/15, MS3.0/1, Ms1 3.0/1, ms1mx2.6/44, Error ellipse: s-maj=29.7km s-min=15.8km az=72.0*

*NEIC **06** 20:52:28.3±2.2, 19°.63N±0°.05×99°.56E±0°.05, h10km±1km, mb4.2/9, Error ellipse: s-maj=9.9km s-min=6.2km az=133.0*

ISC 06 20:52:28.2±0.5**, 19°.66N**±0°.05×**99°.59E**±0°.04**, h10**km**, n45, σ0s87**/47**, mb4.0**/18**, Thailand**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAYA	**Payao**	**0.40**	**139**	P	**Pg**	**20 52 36.4**	**+0.3**
PAYA				S	**Sg**	**20 52 42.7**	**+1.3**
CMMT	**Chiang Mai**	**1.04**	**216**	P	**Pg**	**20 52 47.7**	**-0.5**
CHTO	**Chiang Mai**	**1.04**	**216**		**Pg**	**20 52 47.0**	**-1.2**
CHTO					**Sg**	**20 53 01.9**	**+0.1**
LAMP	**Lampang**	**1.13**	**178**	P	**Pb**	**20 52 49.6**	**-0.4**
CM32	**Chiang Mai Arr**	**1.22**	**215**	P	**Pn**	**20 52 50.1**	**-1.4**
CM36	**Chiang Mai Arr**	**1.23**	**202**	P	**Pn**	**20 52 50.6**	**-0.9**
PHRA	**Phrae**	**1.30**	**152**	P	**Pn**	**20 52 52.6**	**+0.1**
CM09	**Chiang Mai Arr**	**1.34**	**205**	P	**Pb**	**20 52 53.7**	**+0.2**
CMAR	**Chiang Mai Arr**	**1.34**	**207**	Pg	**Pb**	**20 52 53.8**	**+0.3**
	568nm,0.3s,baz=12,slow=16,SNR=2220						
CMAR				Lg	Lg	20 53 12.8	
	165nm,0.3s,baz=23,slow=16,SNR=4.2						
NANT	**Nan**	**1.35**	**129**	P	**Pn**	**20 52 51.7**	**-1.6**
CM15	**Chiang Mai Arr**	**1.36**	**208**	P	**Pn**	**20 52 53.2**	**0.0**
CM02	**Chiang Mai Arr**	**1.36**	**207**	P	**Pn**	**20 52 53.4**	**+0.1**
CM01	**Chiang Mai Arr**	**1.37**	**206**	P	**Pn**	**20 52 53.5**	**0.0**
CM04	**Chiang Mai Arr**	**1.38**	**205**	P	**Pn**	**20 52 53.7**	**+0.1**
CM05	**Chiang Mai Arr**	**1.39**	**206**	P	**Pn**	**20 52 53.9**	**+0.1**
MHMT	**Maesarieng**	**2.16**	**227**	Pg	**Pg**	**20 53 09.3**	**-0.3**
MHMT				Pn	**Pn**	**20 53 04.2**	**-0.1**
PBKT	**Sadao Pong**	**3.34**	**157**		**Pn**	**20 53 20.8**	**+0.2**
SLVN	**Son La**	**4.37**	**67**		**Pn**	**20 53 33.6**	**-1.2**
PBA	**Port Blair**	**10.33**	**221**	Pn	Pn	20 54 54.8	-1.9
PSI	**Prapat**	**16.77**	**182**	Pn	**P**	**20 56 25.1**	**-0.7**
	baz=0.0,slow=20,SNR=1.5						
PSI				LR	LR	21 02 16.3	
	comp=Z,43nm,18.1s,baz=266,slow=35						
RPSI	**Rantau Prapat**	**16.87**	**182**	P	**Pn**	**20 56 25.1**	**+0.4**
KDJ	**Kajisay**	**29.36**	**325**	P	**P**	**20 58 31.6**	**0.0**
KDJ				IAmb	IAmb	20 58 35.7	
	comp=Z,4.6nm,0.8s						
MKAR	**Makanchi Array**	**30.55**	**336**	P	**P**	**20 58 43.5**	**+1.6**
	comp=Z,1.7nm,0.6s,baz=145,slow=8.8,SNR=20						
AAK	**Ala-Archa**	**31.19**	**323**	P	**P**	**20 58 49.5**	**+1.7**
	comp=Z,1.0nm,0.5s,baz=109,slow=3.2,SNR=6.1						
AAK	**Ala-Archa**	**31.19**	**323**	P	**P**	**20 58 48.1**	**+0.4**
AAK				IAmb	IAmb	20 58 51.8	
	comp=Z,4.8nm,1.1s						
GAR	**Garm**	**31.77**	**314**		**P**	**20 58 52.1**	**-0.8**
BTK	**Batken**	**31.96**	**316**	P	**P**	**20 58 53.9**	**-0.7**
BTK				IAmb	IAmb	20 58 57.4	
	comp=Z,2.7nm,0.7s						
KKAR	**Karatay Array**	**33.80**	**320**	P	**P**	**20 59 10.8**	**+0.2**
KKAR				IAmb	IAmb	20 59 32.9	
	comp=Z,3.4nm,1.4s						
KURBB	**Kurchatov Arra**	**35.11**	**337**	P	**P**	**20 59 22.2**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=141,slow=9.1,SNR=22						
KURK	**Kurchatov**	**35.16**	**337**	P	**P**	**20 59 22.5**	**+0.4**
KURK				IAmb	IAmb	20 59 25.1	
	comp=Z,2.6nm,0.8s						
ZALV	**Zalesovo Beam**	**36.06**	**345**	P	**P**	**20 59 30.8**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=159,slow=11,SNR=7.5						
GEYT	**Alibeck**	**40.26**	**306**	P	**P**	**21 00 06.6**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=94,slow=6.1,SNR=1.5						
BRVK	**Borovoye**	**40.30**	**333**	P	**P**	**21 00 06.7**	**+1.1**
WRA	**Warramunga Arr**	**52.04**	**137**	P	**P**	**21 01 37.1**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=323,slow=7.8,SNR=2.0						
ASAR	**Alice Springs**	**54.53**	**141**	P	**P**	**21 01 56.2**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=323,slow=7.2,SNR=5.5						
TIXI	**Tiksi**	**54.72**	**11**	P	**P**	**21 01 57.9**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=216,slow=4.8,SNR=3.7						
TIXI	**Tiksi**	**54.72**	**11**	P	**P**	**21 01 57.4**	**+0.1**
BRTR	**Keskin Array B**	**59.40**	**305**	P	**P**	**21 02 32.7**	**+1.5**
	comp=Z,0.2nm,0.4s,baz=57,slow=5.3,SNR=2.0						
MLR	**Muntele Rosu**	**64.89**	**312**	P	**P**	**21 03 10.3**	**+2.3**
FINES	**FINESS Array B**	**65.05**	**329**	P	**P**	**21 03 08.1**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=84,slow=5.9,SNR=4.2						
ARCES	**ARCESS Array B**	**66.17**	**338**	P	**P**	**21 03 15.4**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=15,slow=5.1,SNR=2.2						
NOA	**NORSAR Array B**	**72.23**	**329**	P	**P**	**21 03 52.6**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=32,slow=9.6,SNR=3.0						
GERES	**GERESS Array B**	**72.80**	**316**	P	**P**	**21 03 57.2**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=71,slow=5.8,SNR=8.5						
ESDC	**Sonseca Array**	**87.58**	**311**	P	**P**	**21 05 16.1**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=49,slow=3.9,SNR=1.9						
TXAR	**Lajitas Array**	**126.37**	**25**	PKP	**PKPdf**	**21 11 31.9**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=126,slow=1.7,SNR=1.0						

*IDC **06** 20:52:25.5±0.4, 36°.14S×97°.10W, h0km, mb4.6/31, mb1 4.7/32, mb1mx4.7/35, mbtmp4.6/32, ML5.1/1, MS5.6/18, Ms1 5.5/18, ms1mx5.5/21, Error ellipse: s-maj=11.4km s-min=10.6km az=112.0*

*MOS **06** 20:52:25.1±1.5, 36°.06S×96°.98W, h10km, mb5.4/24, MS5.6/35, Error ellipse: s-maj=11.0km s-min=7.3km az=89.5*

*NEIC **06** 20:52:28.3±1.8, 36°.17S±0°.09×97°.1W±0°.1, h17km±3km, mb5.6/361, Ms_20 5.7/626, Mwb6.1/46, Mwc6.3/67, Mww6.3, Mwc6.3(GCMT), Error ellipse: s-maj=13.2km s-min=12.7km az=224.0*

*NEIC **06** 20:52:29.8, 36°.30S×96°.69W, h13km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.09; $M_{\theta\theta}$0.03; $M_{\phi\phi}$-0.13; $M_{r\theta}$-0.13; $M_{\theta\phi}$-1.55; $M_{\phi r}$0.19; Fault plane solution: $M_0$1.57000×10^{18} NP1:ϕ_s268.23000°, δ82.54000°, λ174.83000°. NP2:ϕ_s358.90000°, δ84.88000°, λ7.50000°. Principal axes: T 1.5422, Plg9.0000°, Azm224.0000°; N 0.0601, Plg81.0000°, Azm33.0000°; P -1.6024, Plg2.0000°, Azm133.0000°;*

*BJI **06** 20:52:31.4±0.0, 36°.30S×96°.90W, h10km, mB5.5/41, Ms6.1/52, Ms7 6.0/51*

*GCMT **06** 20:52:34.3±0.0, 36°.40S×97°.60W, h16km, MW6.2/169, Moment Tensor Solution. s168,c420; s169,c696; Duration: 3s2 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.17±.01; $M_{\theta\theta}$0.03±.01; $M_{\phi\phi}$0.13±.01; $M_{r\theta}$0.39±.03; $M_{\theta\phi}$-2.72±.01; $M_{\phi r}$-0.76±.04; Best double couple: $M_0$2.83900×10^{18} NP1:ϕ_s90.00000°, δ76.00000°, λ174.00000°. NP2:ϕ_s181.00000°, δ84.00000°, λ15.00000°. Principal axes: T 3.0120, Plg14.0000°, Azm46.0000°; N -0.3480, Plg74.0000°, Azm203.0000°; P -2.6650, Plg6.0000°, Azm315.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **06** 20:52:35, 36°.41S×97°.64W, h16km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.28; $M_{\theta\theta}$0.10; $M_{\phi\phi}$0.17; $M_{r\theta}$0.40; $M_{\theta\phi}$-2.85; $M_{\phi r}$-0.78; Fault plane solution: $M_0$2.99000×10^{18} NP1:ϕ_s181.00000°, δ85.00000°, λ14.00000°. NP2:ϕ_s90.00000°, δ76.00000°, λ175.00000°. Principal axes: T 3.1888, Plg14.0000°, Azm46.0000°; N -0.4475, Plg75.0000°, Azm199.0000°; P -2.7412, Plg6.0000°, Azm314.0000°;*

*NEIC **06** 20:52:46, 35°.80S×97°.19W, h30km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.32; $M_{\theta\theta}$0.37; $M_{\phi\phi}$-0.04; $M_{r\theta}$0.82; $M_{\theta\phi}$-3.23; $M_{\phi r}$-1.70; Fault plane solution: $M_0$3.76000×10^{18} NP1:ϕ_s178.00000°, δ85.00000°, λ27.00000°. NP2:ϕ_s86.00000°, δ63.00000°, λ175.00000°. Principal axes: T 4.1109, Plg22.0000°, Azm45.0000°; N -0.8519, Plg63.0000°, Azm187.0000°; P -3.2590, Plg15.0000°, Azm309.0000°;*

*NEIC **06** 20:52:48.1, 36°.61S×97°.04W, h28km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.26; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$0.35; $M_{r\theta}$-1.31; $M_{\theta\phi}$-3.37; $M_{\phi r}$0.27; Fault plane solution: $M_0$3.63000×10^{18} NP1:ϕ_s2.30000°, δ68.74000°, λ0.66000°. NP2:ϕ_s272.06000°, δ89.38000°, λ158.74000°. Principal axes: T 3.8091, Plg15.0000°, Azm225.0000°; N -0.3626, Plg69.0000°, Azm90.0000°; P -3.4465, Plg14.0000°, Azm319.0000°;*

ISC 06 20:52:28.2±0.2**, 36°.38S**±0°.04×**96°.99W**±0°.04**, h10**km**, n1355, σ2s58**/1134**, mb5.6**/212**, MS5.7**/366**, 30C-16D, West Chile Rise**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**13.97**	**308**	Pn	Pn	20 55 40.9	-5.3
	8.9nm,0.3s,baz=202,slow=3.8,SNR=1.6						
RPN				Sn	**Sn**	**20 58 24.0**	**+2.7**
	3.2nm,0.3s,baz=312,slow=2.4,SNR=1.9						
RPN				LR	LR	20 59 23.8	
	comp=Z,110µm,21.3s,baz=82,slow=30						
RPN	**Rapa Nui**	**13.97**	**308**		Pn	20 55 40.7	-5.5
H03S2	**Juan Fernandez**	**15.00**	**86**	T	T	21 12 08.4	
	baz=254,slow=75,SNR=436						
H03S1	**Juan Fernandez**	**15.02**	**86**	T	T	21 12 11.8	
	baz=254,slow=75,SNR=264						
H03S3	**Juan Fernandez**	**15.02**	**86**	T	T	21 12 24.7	
	baz=254,slow=75,SNR=211						
H03N2	**Juan Fernandez**	**15.10**	**84**	T	T	21 12 10.7	
	baz=257,slow=73,SNR=176						
H03N3	**Juan Fernandez**	**15.10**	**84**	T	T	21 12 26.0	
	baz=257,slow=73,SNR=210						
H03N1	**Juan Fernandez**	**15.12**	**84**	T	T	21 12 28.1	
	baz=257,slow=73,SNR=224						
BI03	**Tigo**	**19.23**	**99**	P	**P**	**20 56 52.3**	**-0.3**
BI03				IAmb	IAmb	20 57 10.5	
	comp=Z,758nm,1.6s						
LL01	**San Ignacio de**	**19.89**	**115**	P	**P**	**20 56 59.9**	**+0.3**
LL01				IAmb	IAmb	20 57 13.0	
	comp=Z,325nm,1.4s						
LC01	**Cunco**	**20.03**	**105**	P	Pn	20 57 08.3	+5.3
GO05	**Huala**	**20.39**	**94**	P	**P**	**20 57 04.7**	**-0.4**
GO05				IAmb	IAmb	20 57 13.1	
	comp=Z,252nm,0.9s						
GO05	**Huala**	**20.39**	**94**	*i* P	**P**	**20 57 05.1**	**-0.1**
BI02	**San Fabin de**	**20.65**	**98**	P	**P**	**20 57 08.4**	**+0.3**
BI02				IAmb	IAmb	20 57 27.3	
	comp=Z,213nm,1.1s						
PLCA	**Paso Flores**	**21.09**	**110**	P	**P**	**20 57 13.5**	**+0.6**
	comp=Z,7.4nm,0.8s,baz=280,slow=11,SNR=9.3						
PLCA				S	Sn	21 01 12.8	-1.2
	comp=Z,19nm,1.3s,baz=310,slow=12,SNR=1.9						
PLCA				LR	LR	21 02 09.1	
	comp=Z,6µm,21.9s,baz=280,slow=27						
MT01	**Popeta**	**21.18**	**91**	P	**P**	**20 57 12.3**	**-1.5**
BO02	**Sierra Bellavi**	**21.35**	**94**	P	**P**	**20 57 16.1**	**+0.3**
BO02				IAmb	IAmb	20 57 36.2	
	comp=Z,413nm,1.4s						
MT02	**Curacav**	**21.43**	**89**	P	**P**	**20 57 17.2**	**+0.8**
ROC1	**El Roble**	**21.61**	**89**	P	**P**	**20 57 18.0**	**-0.6**
ROC1	**El Roble**	**21.61**	**89**	*i* P	**P**	**20 57 19.9**	**+1.3**
MT05	**Renca**	**21.72**	**90**	P	**P**	**20 57 19.7**	**+0.1**
PEL	**Peldehue**	**21.83**	**89**	P	**P**	**20 57 21.0**	**+0.3**
PEL				pmax	pmax		
	comp=Z,385nm,1.4s						
PEL				MLR	MLR		
	comp=Z,8µm,18.0s						
PEL	**Peldehue**	**21.83**	**89**	P	**P**	**20 57 21.0**	**+0.3**
PEL				IAmb	IAmb	20 57 42.9	
	comp=Z,385nm,1.4s						
CO04	**Los Peladeros**	**21.92**	**86**	P	**P**	**20 57 21.2**	**-0.8**
CO04				IAmb	IAmb	20 57 31.5	
	comp=Z,358nm,1.1s						
VA03	**San Esteban**	**22.04**	**88**	P	**P**	**20 57 23.0**	**-0.1**
VA03				IAmb	IAmb	20 57 33.6	
	comp=Z,261nm,1.1s						
CO02	**Combarbal**	**22.18**	**84**	P	**P**	**20 57 22.3**	**-2.3**
CO02				IAmb	IAmb	20 57 44.7	
	comp=Z,243nm,1.1s						
CO03	**El Pedregal**	**22.55**	**83**	P	**P**	**20 57 29.1**	**+0.4**
GO04	**Tololo Observa**	**22.71**	**82**	P	**P**	**20 57 30.9**	**+0.4**
GO04				IAmb	IAmb	20 58 04.5	
	comp=Z,549nm,1.6s						
GO04	**Tololo Observa**	**22.71**	**82**	*i* P	**P**	**20 57 33.6**	**+3.1**
GO09	**Cerro Castillo**	**23.04**	**138**	P	**P**	**20 57 32.9**	**-0.6**
GO09				IAmb	IAmb	20 58 08.5	
	comp=Z,421nm,1.6s						
RTLS	**Leoncito**	**23.35**	**87**	*i* P	**P**	**20 57 38.8**	**+1.7**
CO01	**Juntas del Tor**	**23.35**	**82**	P	**P**	**20 57 36.1**	**-1.1**
AC05	**El Transito**	**23.68**	**79**	P	**P**	**20 57 40.4**	**+0.2**
AC05				IAmb	IAmb	20 57 52.7	
	comp=Z,147nm,0.9s						
RTCV	**Cerro Valdivia**	**23.94**	**87**	*i* P	**P**	**20 57 43.6**	**+1.0**
CFA	**Coronel Fontan**	**24.26**	**87**	P	**P**	**20 57 44.5**	**-1.1**
	comp=Z,14nm,0.9s,baz=260,slow=11,SNR=20						
CFA				S	**S**	**21 02 13.4**	**+9.1**
	comp=Z,4.8nm,0.9s,baz=315,slow=3.4,SNR=2.0						
CFA				LR	LR	21 05 21.3	
	comp=Z,13µm,21.9s,baz=256,slow=32						
AMOG	**MOGNA**	**24.28**	**85**	*i* P	**P**	**20 57 47.1**	**+1.2**
GO10	**Punta Arenas**	**24.70**	**141**	P	**P**	**20 57 52.1**	**+2.7**
ACAN	**Cantantal**	**24.90**	**89**	*i* P	**P**	**20 57 52.6**	**+1.3**
AC02	**Maricunga**	**25.49**	**76**	P	**P**	**20 57 57.5**	**+0.3**
AC02				IAmb	IAmb	20 58 06.5	
	comp=Z,175nm,0.9s						
PB14	**IPOC Station P**	**25.64**	**70**	P	**P**	**20 57 58.3**	**-0.1**
PB14				IAmb	IAmb	20 58 04.6	
	comp=Z,224nm,1.1s						
GO02	**Mina Guanaco**	**25.97**	**72**	P	**P**	**20 58 00.9**	**-0.5**
GO02				IAmb	IAmb	20 58 09.9	
	comp=Z,123nm,0.9s						
MRA	**San Martin**	**26.04**	**90**	*i* P	**P**	**20 58 02.7**	**+0.9**
PB10	**IPOC Station P**	**26.15**	**68**	P	**P**	**20 58 02.7**	**0.0**
USHA	**Ushuaia**	**26.90**	**142**	P	**P**	**20 58 09.2**	**0.0**
	comp=Z,17nm,0.6s,baz=34,slow=0.6,SNR=1.5						
USHA				LR	LR	21 06 42.6	
	comp=Z,9µm,19.1s,baz=300,slow=32						
PB15	**IPOC Station P**	**27.14**	**69**	P	**P**	**20 58 10.5**	**-1.4**
PB15				IAmb	IAmb	20 58 20.4	
	comp=Z,204nm,1.0s						
PB04	**IPOC Station P**	**27.15**	**66**	P	**P**	**20 58 10.6**	**-1.3**
PB04				IAmb	IAmb	20 58 31.7	
	comp=Z,123nm,1.1s						
TCA	**Tanti**	**27.29**	**89**	*i* P	**P**	**20 58 14.2**	**+1.1**
MG01	**Puerto William**	**27.35**	**142**	P	**P**	**20 58 15.6**	**+2.4**
MG01				IAmb	IAmb	20 58 24.7	
	comp=Z,95nm,1.1s						
PB06	**IPOC Station P**	**27.36**	**68**	P	**P**	**20 58 12.6**	**-1.2**
PB06				IAmb	IAmb	20 58 22.2	
	comp=Z,155nm,1.0s						
CYA	**Choya**	**27.40**	**82**	*i* P	**P**	**20 58 15.6**	**+1.5**
PB07	**IPOC Station P**	**27.71**	**66**	P	**P**	**20 58 16.4**	**-0.6**
PB07				IAmb	IAmb	20 58 31.6	
	comp=Z,121nm,1.1s						
LVC	**Limon Verde**	**27.91**	**68**	P	**P**	**20 58 18.2**	**-0.8**
	comp=Z,85nm,0.9s,baz=232,slow=10,SNR=12						
LVC				LR	LR	21 06 56.0	
	comp=Z,13µm,19.6s,baz=238,slow=31						
LVC	**Limon Verde**	**27.91**	**68**	P	**P**	**20 58 17.7**	**-1.3**
LVC				pmax	pmax		
	comp=Z,214nm,1.3s						
LVC	**Limon Verde**	**27.91**	**68**	P	**P**	**20 58 17.7**	**-1.3**
LVC				IAmb	IAmb	20 58 28.4	
	comp=Z,214nm,1.2s						
PATCX	**Punta Patache**	**28.07**	**64**	P	**P**	**20 58 16.3**	**-3.9**
PATCX				IAmb	IAmb	20 58 34.1	
	comp=Z,180nm,1.0s						
PB09	**IPOC Station P**	**28.14**	**67**	P	**P**	**20 58 19.7**	**-1.1**
TA01	**Diego Aracena**	**28.22**	**63**	P	**P**	**20 58 20.5**	**-0.8**
PB01	**IPOC Station P**	**28.42**	**65**	P	**P**	**20 58 22.4**	**-0.8**
PB01				IAmb	IAmb	20 58 32.2	
	comp=Z,151nm,1.2s						
PSGCX	**Pisagua**	**28.88**	**62**	P	**P**	**20 58 26.8**	**-0.5**
PB11	**IPOC Station P**	**29.11**	**63**	P	**P**	**20 58 28.2**	**-1.2**
PB11				IAmb	IAmb	20 58 37.7	
	comp=Z,111nm,1.1s						
PB08	**IPOC Station P**	**29.23**	**64**	P	**P**	**20 58 29.5**	**-1.2**
PB08				IAmb	IAmb	20 58 39.6	
	comp=Z,141nm,1.0s						
PB12	**IPOC Station P**	**29.39**	**60**	P	**P**	**20 58 31.1**	**-0.7**
PB12				IAmb	IAmb	20 58 40.1	
	comp=Z,217nm,1.5s						
GO01	**Chusmiza**	**29.50**	**63**	P	**P**	**20 58 32.3**	**-1.0**
MNMC	**Minye Minye**	**29.56**	**62**	P	**P**	**20 58 32.5**	**-1.1**
MNMC				IAmb	IAmb	20 58 39.8	
	comp=Z,122nm,1.0s						
PB16	**IPOC Station P**	**30.15**	**61**	P	**P**	**20 58 37.3**	**-1.8**
PB16				IAmb	IAmb	20 58 50.9	
	comp=Z,88nm,1.3s						
NNA	**Nana**	**30.32**	**42**	P	**P**	**20 58 39.1**	**-1.0**
	comp=Z,23nm,1.1s,baz=236,slow=14,SNR=2.4						
NNA	**Nana**	**30.32**	**42**	⇑ *e*P	**P**	**20 58 38.9**	**-1.1**
NNA				pmax	pmax		
	comp=Z,164nm,1.2s						
NNA	**Nana**	**30.32**	**42**	P	**P**	**20 58 38.8**	**-1.3**
NNA				IAmb	IAmb	20 58 54.2	
	comp=Z,116nm,1.2s						
NNA	**Nana**	**30.32**	**42**	IAMs_20	IAMs_20	21 07 42.4	
	comp=Z,18µm,21.0s						
PTCN	**Pitcairn Islan**	**30.47**	**282**	IAMs_20	IAMs_20	21 06 59.6	
	comp=Z,26µm,21.0s						
EFI	**East Falkland**	**31.46**	**131**	⇓ *e*P	**P**	**20 58 52.5**	**+2.8**
EFI				pmax	pmax		
	comp=Z,317nm,1.8s						
EFI				MLR	MLR		
	comp=Z,4µm,17.0s						
EFI	**East Falkland**	**31.46**	**131**	P	**P**	**20 58 51.9**	**+2.2**
LPA	**La Plata**	**31.63**	**99**	P	**P**	**20 58 55.2**	**+3.8**
LPA				PP	**PnPn**	**20 59 52.8**	**-2.1**
LPA				S	**S**	**21 03 56.7**	**-3.7**
LPA				SS	**SnSn**	**21 05 41.6**	**-4.5**
LPA				SSS	SSS	21 06 07.1	
LPA				SCS	**ScS**	**21 09 21.2**	**-3.5**
LPA				SKIKS		21 16 05.6	
LPAZ	**La Paz**	**32.50**	**60**	P	**P**	**20 58 57.3**	**-2.5**
	comp=Z,22nm,0.9s,baz=178,slow=4.8,SNR=34						
LPAZ				S	**S**	**21 04 20.6**	**+5.2**
	comp=Z,3.7nm,1.2s,baz=194,slow=8.8,SNR=0.7						
LPAZ	**La Paz**	**32.50**	**60**	P	**P**	**20 58 57.1**	**-2.7**
LPAZ	**La Paz**	**32.50**	**60**		**P**	**20 58 57.8**	**-2.1**
ATAH	**Atahualpa**	**33.70**	**35**	P	**P**	**20 59 07.3**	**-2.8**
	comp=Z,2.8nm,0.5s,baz=349,slow=20,SNR=2.4						
PMSA	**Palmer Station**	**34.53**	**156**	P	**P**	**20 59 18.2**	**+1.8**
PMSA				IAmb	IAmb	21 00 13.8	
	comp=Z,172nm,1.6s						
CPUP	**Villa Florida**	**35.11**	**85**	P	**P**	**20 59 20.6**	**-1.2**
	comp=Z,8.9nm,0.9s,baz=255,slow=7.3,SNR=5.6						
CPUP				S	**S**	**21 04 50.9**	**-3.7**
	comp=Z,2.9nm,1.1s,baz=299,slow=2.4,SNR=1.9						
CPUP				LR	LR	21 12 22.4	
	comp=Z,4µm,18.5s,baz=250,slow=34						
CPUP	**Villa Florida**	**35.11**	**85**	P	**P**	**20 59 19.8**	**-2.0**
RKT	**Rikitea**	**35.30**	**281**	*e*P	**P**	**20 59 24.4**	**+0.9**
	comp=Z,122nm,1.3s						
RKT				*e*S	**S**	**21 04 58.4**	**+0.9**
	comp=Z,7µm,41.5s						
RKT				*e*LQ	LQ	21 07 22.9	
	comp=Z,58µm,28.0s						
RKT	**Rikitea**	**35.30**	**281**	*e*T	T	21 35 40.7	
	comp=Z,4.8nm,0.3s						
PLTB	**Pedras Altas**	**36.01**	**96**	*e*P	**P**	**20 59 32.2**	**+2.7**
PAYG	**Puerto Ayora**	**36.06**	**11**	P	**P**	**20 59 28.0**	**-2.1**
PAYG				IAmb	IAmb	21 00 36.4	
	comp=Z,82nm,1.2s						
PAYG	**Puerto Ayora**	**36.06**	**11**	IAMs_20	IAMs_20	21 10 29.7	
	comp=Z,13µm,19.0s						
SIV	**San Ignacio**	**37.79**	**67**	P	**P**	**20 59 42.6**	**-2.2**
	comp=Z,4.6nm,0.7s,baz=243,slow=10,SNR=7.9						
ITAB	**Concordia**	**38.91**	**90**	*e*P	**P**	**20 59 55.1**	**+1.0**
CNLB	**Canela**	**39.10**	**93**	*e*P	**P**	**20 59 57.0**	**+1.1**

PTLB Pontes e Lacer 39.57 68 *eP* **P 21 00 00.6 +0.9**
PTGB Pitanga 40.07 86 *eP* **P 21 00 04.0 0.0**
PAC1 Pacto, Paraso 40.19 29 *eP* **P 21 00 03.5 -1.5**
VILB Vilhena 40.39 64 *eP* **P 21 00 07.2 +0.6**
TRCB Terra Rica 40.53 83 *eP* **P 21 00 09.4 +1.6**
SAML Samuel 41.08 57 P **P 21 00 10.0 -2.3**
SAML pmax pmax
comp=Z,112nm,1.3s
SAML MLR MLR
comp=Z,5µm,22.0s
SAML Samuel 41.08 57 P **P 21 00 10.0 -2.3**
SAML IAmb IAmb 21 00 19.7
comp=Z,112nm,1.3s
SAML Samuel 41.08 57 *eP* **P 21 00 10.6 -1.7**
PUAC Puerto Asis, P 41.35 32 *eP* **P 21 00 17.1 +2.7**
GCUF Volcan Galeras 41.64 30 *eP* **P 21 00 17.4 +0.1**
TUMC Tumaco 41.64 28 P **P 21 00 16.2 -0.6**
SALV Santo Antonio 41.91 72 *eP* **P 21 00 20.0 +1.0**
CRUC La Cruz 42.11 31 *eP* **P 21 00 25.0 +3.9**
PCMB Pacaembu 42.23 82 *eP* **P 21 00 21.6 0.0**
TIJ01 Guaruva-PR 42.26 89 *eP* **P 21 00 24.6 +2.6**
BBAC Balboa, Cauca 42.40 30 *eP* **P 21 00 25.0 +1.7**
C2SB Chapadao do Su 42.48 78 *eP* **P 21 00 24.1 +0.4**
FRTB Fartura 42.73 86 *eP* **P 21 00 27.0 +1.2**
PCON Cinco Dias 43.03 31 *eP* **P 21 00 31.6 +2.9**
POPC Popayan, Colom 43.10 30 *eP* **P 21 00 31.0 +2.0**
GARC Garzon, Huila 43.28 32 *eP* **P 21 00 29.8 -0.7**
BETC Betania 43.75 32 *eP* P 21 00 39.4 +5.4
MACC Macarena, Meta 43.98 34 *eP* **P 21 00 38.2 +2.4**
HORQ Saladito 43.98 30 *eP* **P 21 00 38.5 +2.4**
PET01 Itanhaem-SP 44.13 88 *eP* **P 21 00 39.7 +2.7**
SPB Sao Paulo 44.33 88 P **P 21 00 37.1 -1.5**
SPB Sao Paulo 44.33 88 *eP* **P 21 00 40.3 +1.7**
YOTC Yotoco, Valle 44.55 30 *eP* **P 21 00 41.9 +1.4**
HOPE Hope Point 44.65 133 P **P 21 00 41.6 +0.8**
HOPE pmax pmax
comp=Z,140nm,1.0s
HOPE MLR MLR
comp=Z,5µm,21.0s
HOPE Hope Point 44.65 133 P **P 21 00 41.6 +0.8**
PRAC Prado 44.91 32 *eP* **P 21 00 45.4 +2.1**
ORTC Ortega, Tolima 44.93 32 *eP* **P 21 00 46.6 +3.2**
CLDB Colider 44.99 66 *eP* **P 21 00 43.8 -0.2**
VAO Valinhos 44.99 87 *eP* **P 21 00 45.6 +1.6**
ARAG Araguaiana, MT 45.02 75 *eP* **P 21 00 44.9 +0.7**
PIZC Pizarro, Choco 45.04 28 *eP* **P 21 00 46.3 +2.1**
ANIL Santa Ana 45.39 31 *eP* **P 21 00 49.0 +1.6**
RREF El Recreo 45.79 31 *eP* **P 21 00 51.1 +0.2**
PARB Paraibuna 45.91 88 *eP* **P 21 00 53.0 +1.7**
ROSC El Rosal 46.16 32 P **P 21 00 53.9 +0.3**
comp=Z,40nm,0.9s,baz=192,slow=3.9,SNR=17
ROSC S **S 21 07 44.2 +4.1**
comp=Z,5.9nm,0.4s,baz=249,slow=23,SNR=1.5
ROSC LR LR 21 17 41.1
comp=Z,8µm,21.1s,baz=222,slow=33
ROSC El Rosal 46.16 32 *eP* **P 21 00 58.2 +4.6**
ROSC El Rosal 46.16 32 P **P 21 00 52.7 -0.9**
ROSC IAmb IAmb 21 01 34.4
comp=Z,109nm,1.2s
CHIC Chingaza 46.23 33 *eP* **P 21 00 53.9 -0.3**
CBOC Ciudad Bolivar 46.39 29 *eP* **P 21 00 56.6 +1.5**
PTGC Puerto Gaitan, 46.58 35 *eP* **P 21 00 58.9 +2.5**
IPMB Ipameri, GO 46.58 80 *eP* **P 21 00 57.1 +0.6**
TBI Tubuai 46.80 271 *eS* **S 21 07 47.1 -1.4**
comp=Z,10µm,26.4s
TBI *eLQ* LQ 21 12 11.7
comp=Z,23µm,23.5s
TBI *eLR* LR 21 14 10.6
comp=Z,8µm,28.2s
TBI Tubuai 46.80 271 *eT* T 21 50 04.7
comp=Z,8.6nm,0.3s
HELC Santa Helena 46.88 30 *eP* **P 21 01 01.4 +2.1**
MACA Manacapuru-AM 47.02 54 *eP* **P 21 00 58.9 -1.0**
DBBC Dabeiba 47.37 29 *eP* **P 21 01 02.8 +0.1**
MAN01 Angra dos Reis 47.48 89 *eP* **P 21 01 06.1 +2.6**
PTBC PUERTO BERRIO, 47.63 31 *eP* **P 21 01 03.4 -1.3**
RUSC La Rusia 47.64 33 *eP* **P 21 01 04.4 -0.9**
RUSC La Rusia 47.64 33 P **P 21 01 04.0 -1.3**
BSCB Bom Sucesso 47.75 86 *eP* **P 21 01 08.2 +2.5**
TAOE Nuku Hiva Isla 47.77 294 *eS* **S 21 08 05.3 +2.6**
comp=Z,10µm,25.3s
TAOE *eLQ* LQ 21 12 39.3
comp=Z,16µm,32.7s
TAOE *eLR* LR 21 14 42.2
comp=Z,18µm,31.8s,baz=141
TAOE Nuku Hiva Isla 47.77 294 P **P 21 01 06.4 +0.5**
TAOE IAmb IAmb 21 01 29.0
comp=Z,105nm,1.1s
TAOE IAMs_20 IAMs_20 21 15 02.3
comp=Z,11µm,21.0s
JTS Las Juntas de 47.78 16 P **P 21 01 04.5 -1.2**
comp=Z,2.4nm,0.3s,baz=302,slow=21,SNR=2.2
JTS S **S 21 08 00.8 -1.6**
comp=Z,2.4nm,0.5s,baz=20,slow=23,SNR=1.4
JTS Las Juntas de 47.78 16 P **P 21 01 05.9 +0.1**
BDFB Brasilia 48.04 78 P **P 21 01 06.0 -2.0**
comp=Z,5.0nm,0.7s,baz=242,slow=7.3,SNR=7.6
BDFB LR LR 21 20 31.4
comp=Z,4µm,19.8s,baz=238,slow=35
BDFB Brasilia 48.04 78 P **P 21 01 05.2 -2.8**
BDFB IAmb IAmb 21 01 18.0
comp=Z,62nm,1.2s
BCIP Isla Barro Col 48.09 23 P **P 21 01 08.6 +0.5**
BCIP pmax pmax
comp=Z,262nm,1.9s
BCIP MLR MLR
comp=Z,6µm,21.0s
BCIP Isla Barro Col 48.09 23 P **P 21 01 08.6 +0.5**
BCIP IAMs_20 IAMs_20 21 16 12.0
comp=Z,6µm,21.0s
VAS01 Vassouras-RJ 48.18 88 *eP* **P 21 01 11.5 +2.5**
UREC San Jos de Ur 48.30 29 *eP* **P 21 01 07.0 -2.8**
ZARC Zaragoza, Cauc 48.33 30 *eP* **P 21 01 08.4 -1.6**
BRRC Barranca, Sant 48.46 32 *eP* **P 21 01 11.7 +0.7**
PAMC Pamplona, Colo 49.10 33 *eP* **P 21 01 14.8 -1.7**
PTGA Pitinga 49.32 53 P **P 21 01 15.7 -2.1**
comp=Z,6.8nm,0.8s,baz=182,slow=7.7,SNR=7.4
PTGA Pitinga 49.32 53 P **P 21 01 14.9 -2.9**
PTGA IAmb IAmb 21 01 26.9
comp=Z,56nm,1.3s
ACON Acoyapa 49.36 15 IAMs_20 IAMs_20 21 17 04.3
comp=Z,10µm,20.0s
VAH Vaihoa 49.59 281 *eP* **P 21 01 21.3 +1.5**
comp=Z,108nm,0.8s
CRIN San Cristobal 49.70 13 P **P 21 01 19.4 -1.2**
CRIN IAMs_20 IAMs_20 21 17 04.3
comp=Z,7µm,20.0s
ESPN Las Esperanzas 49.77 16 P **P 21 01 19.8 -1.2**
ESPN IAmb IAmb 21 01 31.7
comp=Z,80nm,1.0s
ESPN IAMs_20 IAMs_20 21 17 24.2
comp=Z,12µm,20.0s
PPTF Pamatai, Papee 49.82 278 P **P 21 01 22.0 +0.3**
PPTF IAMs_20 IAMs_20 21 15 52.7
comp=Z,11µm,21.0s
PPT2 Papeete2 49.83 278 *eP* **P 21 01 22.9 +1.2**
comp=Z,93nm,1.0s
PPT2 *eS* **S 21 08 30.7 -0.9**
comp=Z,11µm,28.0s
PPT2 *eLR* LR 21 15 21.0
comp=Z,14µm,24.0s,baz=118
SMLC San Martn de 49.84 30 *eP* **P 21 01 22.5 +0.9**
PPT Papeete 49.84 278 P **P 21 01 19.7 -2.0**
comp=Z,35nm,0.8s,baz=215,slow=23,SNR=1.5
PPT LR LR 21 16 33.3
comp=Z,8µm,18.8s,baz=115,slow=29
CSGN Cosiguina Volc 49.89 12 P **P 21 01 22.2 +0.2**
CSGN IAMs_20 IAMs_20 21 17 10.1
comp=Z,8µm,19.0s
MATN Matagalpa 50.14 14 P **P 21 01 22.3 -1.6**
MATN IAmb IAmb 21 01 36.5
comp=Z,64nm,1.1s
MATN IAMs_20 IAMs_20 21 17 16.9
comp=Z,9µm,21.0s
SNET Serv Nac Est T 50.33 10 IAMs_20 IAMs_20 21 17 19.7
comp=Z,8µm,19.0s
SJCC San Jacinto, C 50.40 28 *eP* **P 21 01 29.0 +3.1**
ARGC Ariguani, Magd 50.73 29 *eP* **P 21 01 30.9 +2.6**
TGUH Tegucigalpa,Un 50.99 12 P **P 21 01 29.9 -0.5**
TGUH IAmb IAmb 21 01 42.9
comp=Z,56nm,1.0s
TGUH IAMs_20 IAMs_20 21 17 44.4
comp=Z,8µm,20.0s
JANB Januaria 51.30 80 *eP* **P 21 01 33.6 +0.8**

SDV Santo Domingo 51.39 34 P **P 21 01 30.6 -3.0**
comp=Z,4.9nm,0.4s,baz=2.2,slow=22,SNR=1.5
SDV Santo Domingo 51.39 34 P **P 21 01 30.7 -2.9**
SDV IAmb IAmb 21 01 40.8
comp=Z,113nm,1.9s
BOAV Boa Vista 51.39 49 *eP* **P 21 01 32.9 -0.6**
APG El Apazote 51.47 8 P **P 21 01 32.0 -2.1**
comp=Z,4.5nm,0.8s,baz=68,slow=12,SNR=2.1
APG S **S 21 08 58.0 +3.6**
comp=Z,2.3nm,0.9s,baz=136,slow=7.2,SNR=1.9
SJMB Sao Joao De Ma 51.82 86 *eP* **P 21 01 38.2 +1.5**
SMRC Santa Marta, M 51.92 29 *eP* **P 21 01 39.3 +2.0**
BSFB Barra de Sao F 52.02 86 *eP* **P 21 01 41.1 +3.0**
MALB Monte Alegre 52.30 59 *eP* **P 21 01 41.0 +0.8**
CCIG Comitan 52.57 6 P **P 21 01 43.4 +1.1**
CCIG IAMs_20 IAMs_20 21 18 27.0
comp=Z,5µm,19.0s
BAUV El Baul 52.66 37 *eP* **P 21 01 40.2 -2.6**
CMIG Matias Romero 53.21 3 P **P 21 01 44.1 -2.6**
comp=Z,2.3nm,0.9s,baz=339,slow=6.2,SNR=2.3
CMIG S **S 21 09 16.0 -1.8**
comp=Z,1.7nm,0.4s,baz=194,slow=16,SNR=1.9
URIC Uribia, Colomb 53.31 31 *eP* **P 21 01 48.0 +0.5**
URIC Uribia, Colomb 53.31 31 P **P 21 01 45.7 -1.8**
TLIG Tlapa 53.66 358 P **P 21 01 48.5 -1.7**
QSPA South Pole Qui 53.84 180 P **P 21 01 51.8 +0.7**
QSPA IAmb IAmb 21 02 26.5
comp=Z,52nm,0.9s
QSPA South Pole Qui 53.84 180 IAMs_20 IAMs_20 21 22 29.2
comp=Z,5µm,18.0s
VNA3 Neumayer Olymp 55.18 157 P **P 21 02 00.3 -0.3**
PCRV Puerto La Cruz 55.42 40 P **P 21 01 59.8 -3.2**
comp=Z,12nm,0.8s,baz=206,slow=5.0,SNR=2.2
PLCV Puerto La Cruz 55.43 40 P **P 21 01 59.8 -3.3**
VNA1 Neumayer--Stat 55.76 156 P **P 21 02 04.7 0.0**
MOIG Morelia 55.89 355 P **P 21 02 05.2 -1.2**
MOIG IAmb IAmb 21 02 23.9
comp=Z,52nm,0.8s
VNA2 Neumayer--Watz 55.98 157 P **P 21 02 06.0 -0.3**
TEIG Tepich 56.89 10 P **P 21 02 12.1 -1.2**
comp=Z,8.6nm,0.7s
TEIG Tepich 56.89 10 P **P 21 02 11.7 -1.7**
TEIG IAmb IAmb 21 02 41.8
comp=Z,90nm,1.6s
TEIG Tepich 56.89 10 IAMs_20 IAMs_20 21 21 16.7
comp=Z,6µm,22.0s
GUIV Guiria 57.09 42 *eP* **P 21 02 17.5 +2.7**
VNDA Vanda 57.15 195 P **P 21 02 13.4 -1.1**
comp=Z,7.4nm,0.8s,baz=117,slow=7.4,SNR=17
VNDA S **S 21 10 14.4 +4.9**
comp=Z,0.3nm,0.9s,baz=339,slow=17,SNR=0.8
VNDA LR LR 21 20 53.9
comp=Z,6µm,20.6s,baz=106,slow=30
SNAA Sanae 57.20 158 P **P 21 02 14.5 -0.6**
SNAA Sanae 57.20 158 *deP* **P 21 02 16.6 +1.5**
SNAA Sanae 57.20 158 P **P 21 02 15.8 +0.8**
SNAA IAmb IAmb 21 02 35.9
comp=Z,83nm,1.3s
MTDJ Mount Denham 57.34 22 P **P 21 02 15.5 -1.1**
MTDJ IAmb IAmb 21 03 05.9
comp=Z,175nm,1.8s
MTDJ IAMs_20 IAMs_20 21 21 19.1
comp=Z,6µm,22.0s
FSCY Frank Sound, G 57.37 18 P **P 21 02 15.9 -0.8**
TRN Trinidad (W) 57.54 43 *eP* P 21 02 23.2 +5.2
CBCY The Bluff, Cay 58.14 19 P **P 21 02 20.4 -1.7**
MDP Montagnes des 58.48 55 P **P 21 02 23.2 -1.6**
comp=Z,14nm,0.7s,baz=22,slow=3.1,SNR=2.4
MDP S **S 21 10 29.0 +0.7**
comp=Z,9.3nm,0.9s,baz=11,slow=14,SNR=1.0
TOSP Speyside 58.55 43 *eP* P 21 02 31.7 +6.6
TOSP Speyside 58.55 43 P **P 21 02 23.6 -1.4**
GRGR Grenville 58.63 41 IAMs_20 IAMs_20 21 25 35.7
comp=Z,6µm,22.0s
ROSB Rosrio 58.92 68 *eP* **P 21 02 27.9 +0.1**
JAKH Jacmel 59.04 27 P **P 21 02 26.8 -1.6**
ZAIG Zacatecas 59.06 354 P **P 21 02 29.4 +0.5**
ZAIG IAmb IAmb 21 02 59.0
comp=Z,43nm,1.2s
LGNH Logne 59.26 27 P **P 21 02 29.8 -0.1**
PAPH Port-au-Prince 59.38 27 P **P 21 02 29.6 -1.2**
GTBY Guantanamo Bay 59.70 24 P **P 21 02 29.7 -3.3**
SVB Belmont 59.79 41 P **P 21 02 34.9 +1.2**
BANI BANI 60.01 29 P **P 21 02 35.8 +0.6**
SDDR Presa de Saban 60.18 28 P **P 21 02 33.9 -2.5**
SDDR IAmb IAmb 21 03 02.0
comp=Z,39nm,0.8s
SDD Santo Domingo 60.25 30 P **P 21 02 35.0 -1.7**
MCLT Moule a Chique 60.32 41 IAMs_20 IAMs_20 21 26 29.3
comp=Z,5µm,21.0s
BBGH Gun Hill 60.60 43 P **P 21 02 37.7 -1.6**
BBGH IAMs_20 IAMs_20 21 29 24.0
comp=Z,5µm,22.0s
DR12 Loma Pena Alta 60.76 30 P **P 21 02 38.4 -2.0**
SC01 Santiago de lo 60.80 29 P **P 21 02 40.1 -0.4**
MPOM Morne Pois Mar 60.98 41 *eP* **P 21 02 40.1 -1.7**
SLBS Sierra La Lagu 60.98 346 P **P 21 02 41.1 -0.6**
MLPR Magueyes Islan 61.02 33 P **P 21 02 41.5 -0.5**
CRPR Cabo Rojo, PR 61.02 33 P **P 21 02 40.1 -2.0**
CRPR IAmb IAmb 21 03 05.2
comp=Z,78nm,1.0s
FDF Fort de France 61.07 40 P **P 21 02 39.9 -2.6**
FDF pmax pmax
comp=Z,70nm,1.1s
FDF MLR MLR
comp=Z,7µm,21.0s
FDF Fort de France 61.07 40 P **P 21 02 39.9 -2.6**
FDF IAmb IAmb 21 02 51.8
comp=Z,70nm,1.1s
FDF IAMs_20 IAMs_20 21 27 29.3
comp=Z,7µm,21.0s
ICMP Isla Caja de M 61.17 33 P **P 21 02 41.1 -2.0**
MPR Mayaguez 61.19 33 P **P 21 02 41.0 -2.1**
MPR IAmb IAmb 21 02 57.9
comp=Z,115nm,1.5s
ILAM Ilet Lapin Mar 61.25 41 *eP* P 21 02 35.5 -8.1
OBIP Obispado Ponce 61.27 33 P **P 21 02 42.4 -1.4**
OBIP IAmb IAmb 21 02 54.7
comp=Z,79nm,1.2s
AOPR Arecibo Observ 61.48 33 P **P 21 02 41.8 -3.4**
AOPR IAmb IAmb 21 02 54.9
comp=Z,72nm,1.1s
PDPR Patillas Dam, 61.51 34 P **P 21 02 42.4 -2.9**
PDPR IAmb IAmb 21 02 55.1
comp=Z,50nm,1.1s
DLPL La Plaine 61.52 40 IAMs_20 IAMs_20 21 26 26.1
comp=Z,5µm,22.0s
SJG San Juan 61.54 34 P **P 21 02 42.5 -3.0**
comp=Z,18nm,0.3s,baz=250,slow=3.7,SNR=14
SJG San Juan 61.54 34 P **P 21 02 43.4 -2.1**
SJG pmax pmax
comp=Z,150nm,1.3s
SJG MLR MLR
comp=Z,2µm,20.0s
SJG San Juan 61.54 34 P **P 21 02 43.4 -2.1**
HUMP Col San Antoni 61.70 34 P **P 21 02 45.2 -1.4**
HUMP IAmb IAmb 21 03 08.5
comp=Z,52nm,1.2s
GCPR Guaynabo City 61.74 34 P **P 21 02 44.4 -2.5**
GCPR IAmb IAmb 21 03 18.2
comp=Z,58nm,1.1s
TDBA Terre de Bas, 61.75 39 *eP* **P 21 02 45.5 -1.6**
MTP Monte Pirata 61.79 34 P **P 21 02 45.4 -1.9**
MTP IAmb IAmb 21 03 18.2
comp=Z,42nm,1.2s
CBYP Canovanas 61.81 34 P **P 21 02 45.3 -2.2**
CBYP IAmb IAmb 21 02 57.6
comp=Z,89nm,1.2s
CDVI St. Croix 61.85 35 *eP* P 21 02 57.4 +10
CDVI St. Croix 61.85 35 P **P 21 02 46.0 -1.7**
CDVI IAmb IAmb 21 03 15.4
comp=Z,59nm,1.1s
NVL N'lazarevskaya 61.91 159 *eP* P 21 02 55.3 +7.8
NVL *eS* **S 21 11 09.1 -1.8**
NVL pmax pmax
comp=Z,28nm,0.8s
MAGL Barre de l'ile 62.02 39 *eP* **P 21 02 49.3 +0.4**
CUPR Culebra, Puert 62.10 34 P **P 21 02 46.9 -2.4**
CUPR IAmb IAmb 21 02 58.5
comp=Z,35nm,0.9s
SKI Saint Kitts 62.46 37 *eP* **P 21 02 53.3 +1.5**
SKI Saint Kitts 62.46 37 P **P 21 02 49.3 -2.5**
SKI pmax pmax
comp=Z,183nm,1.1s
SKI MLR MLR
comp=Z,5µm,22.0s
SKI Saint Kitts 62.46 37 P **P 21 02 49.3 -2.5**
SKI IAMs_20 IAMs_20 21 27 41.9
comp=Z,5µm,22.0s
SABA Saba 62.46 37 *eP* P 21 02 58.8 +7.0
SABA Saba 62.46 37 P **P 21 02 48.6 -3.2**
SABA IAMs_20 IAMs_20 21 27 37.9
comp=Z,4µm,21.0s
SEUS St. Eustatius 62.48 37 *eP* P 21 02 45.5 -6.4
SEUS St. Eustatius 62.48 37 P **P 21 02 49.3 -2.6**
SEUS IAMs_20 IAMs_20 21 27 39.3
comp=Z,5µm,22.0s
SMRT St. Maarten 62.91 37 *eP* **P 21 02 54.0 -0.8**
SMRT St. Maarten 62.91 37 P **P 21 02 52.4 -2.4**
SMRT IAmb IAmb 21 04 04.1
comp=Z,79nm,1.4s
ANWB Willy Bob 63.22 38 P **P 21 02 54.1 -2.6**
RCBR Riachuelo 63.40 77 P **P 21 02 57.3 -1.0**
comp=Z,16nm,1.1s,baz=154,slow=10,SNR=2.9
RCBR Riachuelo 63.40 77 P **P 21 02 57.0 -1.3**
RCBR Riachuelo 63.40 77 P **P 21 02 57.0 -1.3**
HPIG 63.50 351 P **P 21 02 56.8 -1.9**
HPIG IAmb IAmb 21 03 09.7
comp=Z,32nm,1.0s
HPIG IAMs_20 IAMs_20 21 23 52.3
comp=Z,5µm,22.0s
061Z Ochoppi 63.74 16 IAMs_20 IAMs_20 21 25 31.3
comp=Z,6µm,20.0s
833A Chaparral WMA, 64.39 358 P **P 21 03 05.5 +1.1**
baz=178
060A Indiantown 64.99 16 IAMs_20 IAMs_20 21 26 08.5
comp=Z,8µm,21.0s
BFZ Birch Farm 65.29 237 P **P 21 03 10.1 -0.2**
MXZ Matakaoa Point 65.31 241 P **P 21 03 10.9 +0.4**
NIUE Niue 65.43 264 IAMs_20 IAMs_20 21 22 23.2
comp=Z,8µm,20.0s
MSWZ Moikau Station 65.62 236 P **P 21 03 13.2 +0.8**
TXAR Lajitas Array 65.66 354 P **P 21 03 10.8 -1.9**
comp=Z,1.6nm,1.0s,baz=164,slow=10,SNR=10
TXAR LR LR 21 26 27.3
comp=Z,4µm,19.1s,baz=0.0,slow=31
DWPF Disney Wildern 65.79 15 P **P 21 03 13.6 +0.1**
baz=194
DWPF Disney Wildern 65.79 15 P **P 21 03 12.0 -1.5**
URZ Urewera 65.82 239 P **P 21 03 14.1 +0.3**
URZ IAmb IAmb 21 03 23.1
comp=Z,39nm,1.1s
BKZ Black Stump Fm 65.83 238 P **P 21 03 13.9 +0.1**
BKZ IAmb IAmb 21 03 17.7
comp=Z,72nm,1.1s
BHW Baring Head 65.87 235 P **P 21 03 14.3 +0.3**
HKT Hockley 65.98 1 P **P 21 03 12.8 -1.8**
HKT pmax pmax
comp=Z,89nm,1.5s
HKT Hockley 65.98 1 P **P 21 03 12.8 -1.8**
HKT IAmb IAmb 21 03 43.7
comp=Z,89nm,1.5s
SNZO South Karori 66.03 235 P **P 21 03 13.1 -1.9**
SNZO IAmb IAmb 21 03 14.2
comp=Z,81nm,1.1s
CMWZ Cape Campbell 66.15 235 P **P 21 03 15.4 -0.4**
MQZ McQueen's Vall 66.24 232 P **P 21 03 16.7 +0.3**
KHZ Kahutara 66.28 234 P **P 21 03 16.5 -0.1**
KHZ IAmb IAmb 21 03 20.2
comp=Z,89nm,1.2s
HSIG 66.36 347 P **P 21 03 16.3 -0.8**
BSWZ Blackbirch Sta 66.39 235 P **P 21 03 17.3 0.0**
TUWZ Tuamarina 66.48 235 P **P 21 03 16.0 -1.9**
JCT Junction City 66.56 357 P **P 21 03 16.8 -1.6**
JCT pmax pmax
comp=Z,45nm,1.0s
JCT Junction City 66.56 357 P **P 21 03 19.8 +1.5**
baz=177,SNR=7.2
JCT Junction City 66.56 357 P **P 21 03 16.8 -1.6**
JCT IAmb IAmb 21 03 33.5
comp=Z,45nm,0.9s
656A Willston 66.79 14 P **P 21 03 17.5 -2.3**
656A IAmb IAmb 21 03 29.4
comp=Z,65nm,0.9s
656A IAMs_20 IAMs_20 21 25 52.1
comp=Z,4µm,22.0s
435B Jarrell 66.81 359 P **P 21 03 21.3 +1.4**
baz=179
435B S **S 21 12 12.8 +0.5**
baz=179
OXZ Oxford 66.81 233 P **P 21 03 19.0 -1.1**
ODZ Otahua Downs 66.87 230 P **P 21 03 18.7 -1.7**
LTZ Lake Taylor 66.93 233 P **P 21 03 20.8 -0.1**
NNZ Nelson 66.95 235 P **P 21 03 19.4 -1.5**
THZ Tophouse 67.00 234 P **P 21 03 20.7 -0.7**
THZ IAmb IAmb 21 03 26.7
comp=Z,81nm,1.1s
RPZ Rata Peaks 67.25 232 P **P 21 03 22.8 0.0**
553A Crawfordville 67.26 12 P **P 21 03 20.2 -2.6**
HIZ Hauiti 67.26 238 P **P 21 03 21.0 -1.9**
451A Vernon 67.47 10 P **P 21 03 19.9 -4.2**
451A IAmb IAmb 21 04 11.8
comp=Z,58nm,1.1s
LBZ Lake Benmore 67.48 231 P **P 21 03 22.8 -1.4**
342A Flagon Creek P 67.54 4 P **P 21 03 24.1 -0.4**
QRZ Quartz Range 67.70 235 P **P 21 03 26.9 +1.1**
344A Westbrook Farm 67.73 6 P **P 21 03 25.2 -0.5**
346A Big Creek Wild 67.78 7 P **P 21 03 22.9 -3.1**
346A IAmb IAmb 21 03 46.2
comp=Z,42nm,0.7s
NATX Nacogdoches 67.81 2 P **P 21 03 27.7 +1.4**
baz=182
NATX Nacogdoches 67.81 2 P **P 21 03 23.6 -2.7**
NATX IAmb IAmb 21 03 55.4
comp=Z,73nm,0.9s
WKZ Wanaka 67.98 230 P **P 21 03 27.3 -0.2**
WHTX Lake Whitney, 68.01 360 P **P 21 03 28.2 +0.7**
baz=179
WHTX Lake Whitney, 68.01 360 P **P 21 03 25.2 -2.3**
237A Washetta, Mont 68.03 1 P **P 21 03 25.0 -2.6**
MNTX Cornudas Mount 68.17 352 P **P 21 03 29.5 +0.9**
baz=173
MNTX S **S 21 12 28.6 -0.1**
baz=173
MNTX Cornudas Mount 68.17 352 P **P 21 03 25.4 -3.1**
MLZ Mavora Lakes 68.27 229 P **P 21 03 29.4 +0.1**
319A Douglas 68.38 349 P **P 21 03 27.8 -2.1**
319A IAmb IAmb 21 03 49.4
comp=Z,56nm,1.3s
EPT El Paso 68.38 351 IAMs_20 IAMs_20 21 26 50.4
comp=Z,3µm,22.0s
352A Blakely 68.44 11 P **P 21 03 28.7 -1.5**
GDL2 Guadalupe Moun 68.57 353 P **P 21 03 27.1 -4.1**
CLNB Carlsbad 68.59 354 P **P 21 03 29.1 -2.1**
TIGA Tifton 68.62 12 P **P 21 03 31.9 +0.5**
baz=191
TIGA Tifton 68.62 12 P **P 21 03 31.3 0.0**
ABTX Abilene, Hawle 68.69 358 P **P 21 03 33.1 +1.3**
baz=178
ABTX Abilene, Hawle 68.69 358 P **P 21 03 31.9 +0.1**
ABTX IAmb IAmb 21 04 00.8
comp=Z,73nm,1.3s
DCZ Deep Cove 68.81 229 P **P 21 03 32.9 +0.4**
146A Union 69.06 7 IAMs_20 IAMs_20 21 29 07.7
comp=Z,5µm,22.0s
121A Cookes Peak, D 69.29 350 P **P 21 03 36.6 +0.9**
baz=171
121A S **S 21 12 43.2 +1.0**
baz=171
121A Cookes Peak, D 69.29 350 P **P 21 03 33.6 -2.1**
121A IAmb IAmb 21 04 05.7
comp=Z,61nm,1.8s
TUC Tucson 69.54 348 P **P 21 03 37.8 +0.6**
TUC pmax pmax
comp=Z,75nm,1.8s
TUC MLR MLR
comp=Z,2µm,20.0s
TUC Tucson 69.54 348 P **P 21 03 37.5 +0.4**
baz=168
TUC S **S 21 12 47.4 +2.4**
baz=168
TUC Tucson 69.54 348 P **P 21 03 37.8 +0.6**
TUC IAmb IAmb 21 04 36.1
comp=Z,75nm,1.8s
214A Organ Pipe Nat 69.57 346 P **P 21 03 37.7 +0.3**
baz=166
214A S **S 21 12 47.8 +2.5**
baz=166
214A Organ Pipe Nat 69.57 346 P **P 21 03 38.9 +1.5**

214A IAMs_20 IAMs_20 21 26 31.1
comp=Z,5µm,22.0s
257A Skidaway Islan 69.62 14 IAMs_20 IAMs_20 21 28 26.0
comp=Z,5µm,22.0s
152A Waverly Hall 69.64 11 P **P** **21 03 35.9 -1.8**
LRAL Lakeview Retre 69.68 9 P **P** **21 03 38.2 +0.4**
baz=188
LRAL Lakeview Retre 69.68 9 P **P** **21 03 37.7 -0.2**
LRAL IAmb IAmb 21 04 07.0
comp=Z,47nm,1.1s
LRAL IAMs_20 IAMs_20 21 29 14.3
comp=Z,3µm,22.0s
Z47A Carrollton 69.72 8 P **P** **21 03 37.1 -1.0**
Z47A IAMs_20 IAMs_20 21 29 09.2
comp=Z,5µm,22.0s
AFI Afiamalu 69.72 267 IAMs_20 IAMs_20 21 27 14.5
comp=Z,4µm,20.0s
OUZ Omahuta 69.77 241 P **P** **21 03 38.7 0.0**
OUZ IAmb IAmb 21 03 42.2
comp=Z,64nm,1.2s
154A Montrose 69.85 12 IAMs_20 IAMs_20 21 30 27.0
comp=Z,3µm,20.0s
Z50A Ashland 70.04 10 P **P** **21 03 40.3 +0.2**
baz=189
Z50A Ashland 70.04 10 P **P** **21 03 38.4 -1.8**
Z50A IAmb IAmb 21 03 49.7
comp=Z,32nm,0.8s
SYO Syowa Base 70.15 165⇑*e*P **P** **21 03 37.4 -3.0**
MSTX Muleshoe 70.19 355 P **P** **21 03 42.4 +1.3**
baz=175,SNR=10.0
MSTX Muleshoe 70.19 355 P **P** **21 03 38.5 -2.7**
MSTX IAmb IAmb 21 03 54.8
comp=Z,52nm,0.9s
Y45A Yeager Farm, C 70.22 7 IAMs_20 IAMs_20 21 30 30.7
comp=Z,4µm,22.0s
157A Early Branch 70.31 14 P **P** **21 03 42.9 +1.2**
baz=193
Y49A Blount Mountai 70.57 9 P **P** **21 03 41.3 -2.0**
GOGA Godfrey 70.57 12 P **P** **21 03 40.6 -2.7**
GOGA pmax pmax
comp=Z,59nm,1.4s
GOGA Godfrey 70.57 12 P **P** **21 03 44.6 +1.3**
baz=191,SNR=9.7
GOGA S **S** **21 12 59.2 +2.4**
baz=191
GOGA Godfrey 70.57 12 P **P** **21 03 40.6 -2.7**
GOGA IAmb IAmb 21 03 49.3
comp=Z,59nm,1.4s
X40A Basin Creek Fa 70.61 4 P **P** **21 03 44.5 +1.0**
baz=183
X34A Smith Ranch, M 70.62 359 P **P** **21 03 41.7 -1.9**
X34A IAmb IAmb 21 03 52.3
comp=Z,21nm,0.6s
MIAR Mount Ida 70.63 3 P **P** **21 03 42.1 -1.6**
MIAR pmax pmax
comp=Z,44nm,1.2s
MIAR Mount Ida 70.63 3 P **P** **21 03 44.4 +0.8**
baz=183
MIAR S **S** **21 12 57.1 -0.4**
baz=183
MIAR Mount Ida 70.63 3 P **P** **21 03 42.1 -1.6**
MIAR IAmb IAmb 21 04 12.3
comp=Z,44nm,1.2s
WMOK Wichita Mounta 70.77 358 P **P** **21 03 42.2 -2.3**
WMOK pmax pmax
comp=Z,48nm,1.7s
WMOK Wichita Mounta 70.77 358 P **P** **21 03 46.1 +1.5**
baz=178
WMOK S **S** **21 12 58.0 -1.2**
baz=178
WMOK Wichita Mounta 70.77 358 P **P** **21 03 42.2 -2.3**
OXF Oxford 70.88 7 P **P** **21 03 42.7 -2.4**
OXF pmax pmax
comp=Z,84nm,1.3s
OXF MLR MLR
comp=Z,5µm,22.0s
OXF Oxford 70.88 7 P **P** **21 03 46.1 +0.9**
baz=186
OXF Oxford 70.88 7 P **P** **21 03 42.7 -2.4**
OXF IAmb IAmb 21 04 14.1
comp=Z,84nm,1.2s
OXF IAMs_20 IAMs_20 21 30 38.0
comp=Z,5µm,22.0s
NHSC New Hope 70.89 15 IAMs_20 IAMs_20 21 29 27.6
comp=Z,6µm,22.0s
Y52A Lilburn 70.91 11 P **P** **21 03 46.5 +1.1**
baz=191,SNR=8.4
Y52A Lilburn 70.91 11 P **P** **21 03 43.8 -1.6**
Y52A IAmb IAmb 21 03 55.5
comp=Z,35nm,0.8s
Y52A IAMs_20 IAMs_20 21 30 57.1
comp=Z,3µm,21.0s
UALR University of 70.92 4 P **P** **21 03 43.6 -1.8**
UALR IAmb IAmb 21 04 14.1
comp=Z,37nm,0.9s
IKP In-Ko-Pah, Jac 70.96 343 P **P** **21 03 47.1 +1.2**
baz=164
Z57A Bowman 70.97 14 P **P** **21 03 46.2 +0.5**
baz=194
AMTX Amarillo 71.03 356 P **P** **21 03 47.9 +1.6**
baz=176
AMTX Amarillo 71.03 356 P **P** **21 03 43.6 -2.6**
GLA Glamis 71.06 344 IAMs_20 IAMs_20 21 27 22.3
comp=Z,5µm,21.0s
X48A Hartselle 71.07 9 P **P** **21 03 44.1 -2.2**
X48A IAmb IAmb 21 04 02.3
comp=Z,42nm,0.9s
X48A IAMs_20 IAMs_20 21 29 57.2
comp=Z,4µm,22.0s
BAR Barrett 71.12 343 IAMs_20 IAMs_20 21 27 02.1
comp=Z,5µm,22.0s
Z58A St. Stephen 71.19 15 P **P** **21 03 47.9 +0.8**
baz=194
MONP2 Monument Peak 71.27 343 P **P** **21 03 49.2 +1.3**
baz=164
W39A Magazine 71.27 3 P **P** **21 03 48.0 +0.5**
baz=183
W39A S S 21 13 14.0 +9.2
baz=183
W39A Magazine 71.27 3 P **P** **21 03 46.1 -1.4**
W39A IAmb IAmb 21 04 16.5
comp=Z,52nm,1.1s
W41B Gary Mavity, V 71.32 4 P **P** **21 03 50.3 +2.5**
baz=184,SNR=7.2
W41B S **S** **21 13 12.5 +7.1**
baz=184
FPAL Fort Paine 71.35 10 P **P** **21 03 46.3 -1.8**
Y55A Saluda 71.36 13 P **P** **21 03 49.2 +1.0**
baz=193
109C Camp Elliot, M 71.43 342 P **P** **21 03 50.3 +1.7**
baz=163
109C Camp Elliot, M 71.43 342 IAMs_20 IAMs_20 21 27 35.2
comp=Z,4µm,21.0s
WHAR Wooly Hollow 71.44 4 P **P** **21 03 47.0 -1.6**
WHAR IAmb IAmb 21 04 17.4
comp=Z,112nm,1.3s
PLAL Pickwick Lake 71.48 8 P **P** **21 03 46.4 -2.4**
X51A Calhoun 71.48 11 P **P** **21 03 46.4 -2.4**
X51A IAmb IAmb 21 04 05.7
comp=Z,78nm,0.9s
ANMO Albuquerque 71.50 352⇓*e*P **P** **21 03 50.2 +1.0**
ANMO pmax pmax
comp=Z,13nm,0.9s
ANMO Albuquerque 71.50 352 P **P** **21 03 50.9 +1.7**
baz=172
ANMO S **S** **21 13 11.5 +3.5**
baz=172
ANMO Albuquerque 71.50 352 P **P** **21 03 46.8 -2.4**
Y14A Wickenburg 71.53 346 P **P** **21 03 46.8 -2.5**
Y14A IAmb IAmb 21 05 23.4
comp=Z,86nm,1.7s
Y14A IAMs_20 IAMs_20 21 27 43.9
comp=Z,5µm,21.0s
W45A Hickory Valley 71.54 7 IAMs_20 IAMs_20 21 30 33.4
comp=Z,4µm,22.0s
X18A Snowflake 71.57 349 P **P** **21 03 47.0 -2.7**
X18A IAmb IAmb 21 04 20.9
comp=Z,76nm,1.5s
Y12C Blythe 71.66 345 P **P** **21 03 52.2 +2.3**
baz=165
Y12C Blythe 71.66 345 P **P** **21 03 47.3 -2.6**
Y12C IAmb IAmb 21 04 58.5
comp=Z,57nm,1.4s
Y12C IAMs_20 IAMs_20 21 27 42.4
comp=Z,6µm,20.0s
X16A Lo Mia Camp, P 71.71 347 P **P** **21 03 49.0 -1.5**
Y57A Sumter 71.72 14 P **P** **21 03 48.1 -2.2**

Y57A IAmb IAmb 21 04 12.4
comp=Z,38nm,0.8s
Y57A IAMs_20 IAMs_20 21 29 52.7
comp=Z,4µm,22.0s
Y58A Scranton 71.77 15 P **P** **21 03 48.6 -1.9**
Y58A IAMs_20 IAMs_20 21 30 16.9
comp=Z,6µm,21.0s
BC3 Big Chuckawall 71.77 344 P **P** **21 03 52.8 +2.0**
BC3 S **SKiKP** **21 13 21.7 -7.5**
baz=164
X54A Belton 71.86 13 P **P** **21 03 53.4 +2.3**
baz=192,SNR=10
X55A Gracelyn & Ava 71.92 13 P **P** **21 03 53.4 +1.9**
baz=193
TUL1 Leonard 71.93 1 P **P** **21 03 53.8 +2.3**
baz=181
TUL1 Leonard 71.93 1 P **P** **21 03 48.4 -3.2**
TUL1 IAmb IAmb 21 04 19.6
comp=Z,43nm,1.1s
XPFO Pion Flat 71.96 343 P **P** **21 03 48.7 -3.2**
XPFO Pion Flat 71.96 343 IAMs_20 IAMs_20 21 27 39.3
comp=Z,4µm,20.0s
PFO Pinyon Flats O 71.96 343⇑*e*P **P** **21 03 53.4 +1.5**
PFO pmax pmax
comp=Z,8.0nm,1.1s
PFO Pinyon Flats O 71.96 343 P **P** **21 03 53.6 +1.6**
baz=164
PFO Pinyon Flats O 71.96 343 IAMs_20 IAMs_20 21 27 39.3
comp=Z,4µm,20.0s
SWET Sewanee 71.97 10 P **P** **21 03 48.9 -3.0**
SWET IAmb IAmb 21 04 01.3
comp=Z,57nm,0.7s
Y59A Loris 72.02 16 P **P** **21 03 49.3 -2.7**
W50A Signal Mountai 72.04 10 P **P** **21 03 49.9 -2.3**
W50A IAmb IAmb 21 04 01.9
comp=Z,46nm,0.8s
FCAR Ozark Folk Cen 72.04 4 P **P** **21 03 49.7 -2.5**
X56A White Oak 72.06 14 P **P** **21 03 53.8 +1.5**
baz=193
W18A Petrified Fore 72.11 349 P **P** **21 03 48.5 -4.4**
PDMCI Parker Dam,Lak 72.12 345 P **P** **21 03 54.9 +2.3**
baz=165
IRM Iron Mountain 72.19 344 P **P** **21 03 54.9 +1.8**
baz=165
BG3 Lake Jocassee 72.20 12 P P 21 03 48.2 -5.0
BG3 IAmb IAmb 21 04 10.0
comp=Z,44nm,0.8s
BELC Belle Mtn. Jos 72.23 343 P **P** **21 03 55.4 +1.9**
baz=164
PAULI Pauline 72.23 13 P **P** **21 03 50.7 -2.6**
HALT Halls 72.27 7 IAMs_20 IAMs_20 21 31 06.8
comp=Z,5µm,22.0s
LCAR Lake Charles 72.28 5 P **P** **21 03 50.7 -2.9**
LCAR IAmb IAmb 21 04 21.9
comp=Z,85nm,1.2s
BIRD Birdtown, Kers 72.32 14 P **P** **21 03 51.0 -2.9**
BIRD IAmb IAmb 21 04 16.0
comp=Z,48nm,1.0s
BIRD IAMs_20 IAMs_20 21 29 24.4
comp=Z,3µm,21.0s
HHAR Hobbs 72.35 3 P **P** **21 03 51.7 -2.4**
HHAR IAmb IAmb 21 04 22.5
comp=Z,51nm,1.2s
V48A Smith Brothers 72.37 9 P **P** **21 03 51.6 -2.6**
V48A IAmb IAmb 21 04 09.3
comp=Z,44nm,0.8s
V48A IAMs_20 IAMs_20 21 30 36.6
comp=Z,4µm,21.0s
CPCT Cooper Cave 72.40 11 P **P** **21 03 52.0 -2.3**
CPCT IAmb IAmb 21 04 00.8
comp=Z,126nm,1.9s
SNCC San Nicolas Is 72.40 340 P **P** **21 03 52.5 -1.9**
U32A Winter Ranch, 72.41 358 P **P** **21 03 52.5 -2.0**
W54A Cherokee Point 72.42 13 P **P** **21 03 56.2 +1.7**
baz=192
W54A S **SKiKP** **21 13 25.0 -5.0**
baz=192
PEBM Pemiscott Bayo 72.43 6 IAMs_20 IAMs_20 21 32 09.9
comp=Z,3µm,22.0s
LNXT Lenox 72.45 6 IAMs_20 IAMs_20 21 31 46.5
comp=Z,5µm,21.0s
X58A Rowland 72.46 15 P **P** **21 03 52.2 -2.4**
X58A IAmb IAmb 21 04 04.3
comp=Z,38nm,0.9s
U40A Yellville 72.47 3 P **P** **21 03 56.8 +2.0**
baz=183
U40A Yellville 72.47 3 P **P** **21 03 52.7 -2.1**
U40A IAmb IAmb 21 04 23.6
comp=Z,86nm,1.6s
U38A Gravette 72.49 2 P **P** **21 03 53.1 -1.8**
U38A IAmb IAmb 21 04 09.8
comp=Z,42nm,0.9s
GLAT Glass 72.63 7 IAMs_20 IAMs_20 21 31 29.4
comp=Z,5µm,22.0s
KMSC Kings Mountain 72.63 13 P **P** **21 03 57.2 +1.5**
baz=193
KMSC Kings Mountain 72.63 13 P **P** **21 03 53.4 -2.3**
KMSC IAmb IAmb 21 04 06.0
comp=Z,57nm,0.8s
X59A McDuffie Farm, 72.64 16 P **P** **21 03 57.6 +1.9**
baz=195
WVT Waverly 72.64 8 P **P** **21 03 53.4 -2.3**
WVT pmax pmax
comp=Z,27nm,0.9s
WVT MLR MLR
comp=Z,3µm,22.0s
WVT Waverly 72.64 8 P **P** **21 03 57.1 +1.4**
baz=188
WVT Waverly 72.64 8 P **P** **21 03 53.4 -2.3**
TKL Tuckaleechee C 72.72 11 P **P** **21 03 53.9 -2.3**
TKL pmax pmax
comp=Z,29nm,1.0s
TKL Tuckaleechee C 72.72 11 P **P** **21 03 53.9 -2.3**
V51A Loudon 72.77 11 P **P** **21 03 55.0 -1.5**
V51A IAmb IAmb 21 04 29.7
comp=Z,146nm,1.7s
W56A Indian Trail 72.77 14 P **P** **21 03 57.4 +0.9**
baz=194
CLTN Cedars of Leba 72.78 9 P P 21 03 51.2 -5.3
PENMO Penman 72.78 6 IAMs_20 IAMs_20 21 31 23.3
comp=Z,4µm,22.0s
X60A Albert Glenn T 72.78 16 P **P** **21 03 57.9 +1.3**
baz=196
W13A Hualapai Mount 72.83 346 P **P** **21 03 53.8 -3.4**
W13A IAMs_20 IAMs_20 21 28 22.3
comp=Z,5µm,22.0s
BFSC Mount Baldy Ra 72.85 342 P **P** **21 03 58.1 +0.9**
baz=163
V53A Saluda 72.88 12 P **P** **21 03 54.9 -2.4**
V53A IAmb IAmb 21 04 13.8
comp=Z,61nm,0.8s
W57A Gilead 72.90 15 P **P** **21 03 58.1 +0.8**
baz=194
W57A Gilead 72.90 15 P **P** **21 03 55.3 -2.0**
W57A IAMs_20 IAMs_20 21 29 52.9
comp=Z,4µm,22.0s
GMRC Granite Mounta 72.91 344 P **P** **21 03 58.7 +1.2**
baz=164
GMRC S **SKiKP** **21 13 30.1 -0.9**
baz=164
HICK Hickman 72.91 7 IAMs_20 IAMs_20 21 31 57.7
comp=Z,4µm,21.0s
PASC Pasadena Art C 72.92 342 IAMs_20 IAMs_20 21 27 47.7
comp=Z,4µm,20.0s
T35A Sooner Cattle 72.92 0 P **P** **21 03 54.8 -2.6**
W58A Raeford 72.93 15 P **P** **21 03 58.5 +1.0**
baz=195
PARMO Parma 72.98 6 IAMs_20 IAMs_20 21 32 25.6
comp=Z,4µm,22.0s
DECC Green Verdugo 73.04 342 P **P** **21 03 60.0 +1.8**
baz=162
HENM Henderson Moun 73.06 6 IAMs_20 IAMs_20 21 31 42.7
comp=Z,4µm,21.0s
HEC Hector,Ludlow 73.10 343 P **P** **21 04 00.6 +1.9**
baz=164,SNR=6.1
SCZ2 Santa Cruz Isl 73.13 340 P **P** **21 04 01.0 +2.3**
baz=161
V54A Nebo 73.14 13 P **P** **21 03 59.3 +0.6**
baz=192
V55A Taylorsville 73.34 13 P **P** **21 04 01.4 +1.5**
baz=193
V55A Taylorsville 73.34 13 P **P** **21 03 58.8 -1.2**
V55A IAmb IAmb 21 04 21.9
comp=Z,52nm,1.2s
T45A Paducah 73.44 7 IAMs_20 IAMs_20 21 31 38.6
comp=Z,5µm,22.0s

V56A Mocksville 73.44 14 P **P** **21 04 01.5 +1.0**
baz=194
T25A Trinidad 73.47 354 P **P** **21 04 02.6 +1.6**
baz=174
OSI Osito Audit: C 73.48 341 IAMs_20 IAMs_20 21 28 33.5
comp=Z,6µm,20.0s
EDW2 Edwards Air Fo 73.55 342 P **P** **21 04 03.0 +1.7**
baz=162
T47A Sharon Grove 73.57 8 P **P** **21 04 00.0 -1.2**
T47A IAmb IAmb 21 04 16.3
comp=Z,44nm,0.8s
TUQ Turquoise Moun 73.59 344 P **P** **21 04 02.9 +1.3**
baz=164
V57A Coltrane Farms 73.66 15 P **P** **21 04 03.0 +1.2**
baz=194,SNR=6.1
GSC Goldstone, Bar 73.66 343 P **P** **21 04 00.1 -1.8**
GSC pmax pmax
comp=Z,51nm,1.5s
GSC MLR MLR
comp=Z,4µm,20.0s
GSC Goldstone, Bar 73.66 343 P **P** **21 04 04.0 +2.0**
baz=163,SNR=5.1
GSC Goldstone, Bar 73.66 343 P **P** **21 04 00.1 -1.8**
GSC IAMs_20 IAMs_20 21 28 35.3
comp=Z,4µm,20.0s
V58A Windy Hill, Pi 73.70 15 P **P** **21 04 03.3 +1.2**
baz=195
V59A Middlesex 73.86 16 P **P** **21 04 03.7 +0.8**
baz=195
T50A Nancy 73.89 10 P **P** **21 04 01.5 -1.6**
U56A King 73.98 14 IAMs_20 IAMs_20 21 30 14.5
comp=Z,4µm,22.0s
ARVC Arvin 73.99 342 P **P** **21 04 05.7 +1.9**
baz=162
MVCO Mesa Verde 73.99 350 P **P** **21 04 05.7 +1.7**
baz=170,SNR=5.2
MVCO Mesa Verde 73.99 350 P **P** **21 04 02.5 -1.6**
MVCO IAmb IAmb 21 04 23.5
comp=Z,55nm,1.1s
U55A TA2, Sparta 74.01 13 P **P** **21 04 04.4 +0.5**
baz=193
PKM Mcpherson Peak 74.02 341 P **P** **21 04 06.1 +1.9**
baz=161
LRMC Laurel Mtn Rad 74.04 343 P **P** **21 04 06.1 +1.9**
baz=163
S44A Carbondale 74.05 6 P **P** **21 04 03.4 -0.6**
S44A IAMs_20 IAMs_20 21 32 10.8
comp=Z,5µm,22.0s
SIUC Southern Illin 74.07 6 IAMs_20 IAMs_20 21 32 22.3
comp=Z,5µm,22.0s
SHOC Shoshone, Teco 74.11 344 P **P** **21 04 06.7 +2.2**
baz=164
SDCO Great Sand Dun 74.17 353 P **P** **21 04 06.2 +1.1**
baz=173
SDCO Great Sand Dun 74.17 353 P **P** **21 04 03.5 -1.7**
V62A Hyde County Ai 74.20 18 IAMs_20 IAMs_20 21 33 58.4
comp=Z,3µm,18.0s
T53A Wise 74.21 12 P **P** **21 04 06.7 +1.6**
baz=192
CCM Cathedral Cave 74.25 5 P **P** **21 04 03.2 -2.0**
CCM pmax pmax
comp=Z,64nm,0.9s
CCM Cathedral Cave 74.25 5 P **P** **21 04 06.1 +0.9**
baz=185
CCM Cathedral Cave 74.25 5 P **P** **21 04 03.1 -2.0**
CCM IAmb IAmb 21 04 20.4
comp=Z,64nm,0.8s
U57A Blanch 74.27 15 P **P** **21 04 06.0 +0.7**
baz=194
S22A 4UR Ranch, Cre 74.31 352 P **P** **21 04 07.9 +1.9**
baz=172,SNR=6.7
U58A Oxford 74.40 15 P **P** **21 04 07.2 +1.1**
baz=195
ISA Isabella, Lake 74.41 342 P **P** **21 04 05.5 -0.8**
ISA pmax pmax
comp=Z,199nm,2.4s
ISA MLR MLR
comp=Z,6µm,20.0s
ISA Isabella, Lake 74.41 342 P **P** **21 04 08.6 +2.3**
baz=162,SNR=7.5
ISA Isabella, Lake 74.41 342 P **P** **21 04 05.5 -0.8**
ISA IAmb IAmb 21 05 12.1
comp=Z,199nm,2.4s
ISA IAMs_20 IAMs_20 21 29 34.1
comp=Z,6µm,20.0s
R40A Maddies Statio 74.42 4 P **P** **21 04 04.7 -1.5**
SHPR Sheep Range 74.45 345 P **P** **21 04 05.3 -1.4**
SHPR IAMs_20 IAMs_20 21 29 29.2
comp=Z,5µm,20.0s
T54A Tazewell 74.45 13 P **P** **21 04 07.8 +1.3**
baz=193
KNB Kanab 74.49 347 P **P** **21 04 05.7 -1.1**
KNB pmax pmax
comp=Z,40nm,1.2s
KNB Kanab 74.49 347 P **P** **21 04 05.7 -1.1**
U59A Littleton 74.53 16 P **P** **21 04 08.4 +1.5**
baz=196
U59A Littleton 74.53 16 P **P** **21 04 05.1 -1.7**
MPMC Manual Prospec 74.55 343 P **P** **21 04 09.3 +2.0**
baz=163,SNR=7.6
LCMT Little Creek M 74.56 347 P **P** **21 04 06.1 -1.1**
T55A Pulaski 74.65 13 P **P** **21 04 10.2 +2.6**
baz=193,SNR=9.0
S51A Beattyville 74.68 11 P **P** **21 04 05.0 -2.7**
T56A Rocky Mt 74.71 14 P **P** **21 04 10.0 +2.0**
baz=194
VES Vestal, Richgr 74.73 342 P **P** **21 04 09.8 +1.7**
baz=162
U60A Pendleton 74.78 16 P **P** **21 04 10.0 +1.7**
baz=196
BLA Blacksburg 74.81 14 P **P** **21 04 09.3 +0.8**
baz=194
BLA Blacksburg 74.81 14 IAMs_20 IAMs_20 21 30 52.4
comp=Z,3µm,21.0s
T57A Hurt 74.84 15 P **P** **21 04 09.9 +1.2**
baz=195
T57A Hurt 74.84 15 IAMs_20 IAMs_20 21 31 58.1
comp=Z,4µm,22.0s
CBKS Cedar Bluff 74.86 358 P **P** **21 04 11.2 +2.4**
baz=178,SNR=8.7
WCI Wyandotte Cave 74.89 9 P **P** **21 04 05.7 -3.2**
WCI pmax pmax
comp=Z,42nm,0.9s
WCI MLR MLR
comp=Z,3µm,22.0s
WCI Wyandotte Cave 74.89 9 P **P** **21 04 10.1 +1.2**
baz=189
WCI Wyandotte Cave 74.89 9 P **P** **21 04 05.7 -3.2**
WCI IAmb IAmb 21 04 17.7
comp=Z,42nm,0.8s
WCI Wyandotte Cave 74.89 9 IAMs_20 IAMs_20 21 32 14.3
comp=Z,3µm,22.0s
SLM Saint Louis 74.90 5 IAMs_20 IAMs_20 21 33 05.4
comp=Z,3µm,21.0s
PV01 Paradox Valley 74.91 351 P **P** **21 04 07.3 -2.0**
PV01 IAmb IAmb 21 04 39.5
comp=Z,87nm,1.6s
PV01 IAMs_20 IAMs_20 21 31 33.3
comp=Z,3µm,21.0s
T58A Grand View Acr 74.94 15 P **P** **21 04 10.2 +1.0**
baz=195
PV13 Radium Mtn., P 74.97 350 P **P** **21 04 08.1 -1.6**
PV13 IAmb IAmb 21 05 04.8
comp=Z,238nm,2.3s
CWC Cottonwood Cre 75.05 343 P **P** **21 04 11.8 +1.7**
baz=162
PV03 Paradox Valley 75.07 350 P **P** **21 04 08.0 -2.3**
PV18 Skein Mesa, Pa 75.07 350 P **P** **21 04 08.1 -2.1**
SZCU Shurtz Canyon 75.10 347 P **P** **21 04 07.5 -2.9**
PV15 Paradox Valley 75.10 351 IAMs_20 IAMs_20 21 31 40.4
comp=Z,3µm,21.0s
CCUT Cedar City 75.11 347 P **P** **21 04 08.1 -2.4**
KSU1 Kansas State U 75.11 0 P **P** **21 04 11.7 +1.6**
baz=180
TPNV Topopah Spring 75.11 344 P **P** **21 04 09.2 -1.3**
TPNV pmax pmax
comp=Z,59nm,1.4s
TPNV MLR MLR
comp=Z,5µm,21.0s
TPNV Topopah Spring 75.11 344 P **P** **21 04 11.9 +1.5**
baz=164
TPNV Topopah Spring 75.11 344 P **P** **21 04 09.2 -1.3**
TPNV IAMs_20 IAMs_20 21 29 45.7
comp=Z,5µm,21.0s
PV12 Saucer Basin, 75.12 350 IAMs_20 IAMs_20 21 31 40.9
comp=Z,3µm,22.0s
PV20 West Nyswonger 75.17 350 P **P** **21 04 08.1 -2.7**

T59A Double "B" Far 75.17 16 P P 21 04 12.0 +1.5
baz=196
T59A Double "B" Far 75.17 16 P P 21 04 10.6 +0.1
T59A IAmb IAmb 21 04 42.1
comp=Z,105nm,1.8s
OLIL Olney 75.19 7 IAMs_20 IAMs_20 21 32 30.1
comp=Z,4µm,22.0s
R50A Paris 75.20 10 P P 21 04 08.2 -2.6
R50A IAmb IAmb 21 04 25.9
comp=Z,33nm,0.8s
PV04 Paradox Valley 75.21 350 P P 21 04 09.2 -1.8
PV04 IAMs_20 IAMs_20 21 32 37.8
comp=Z,3µm,21.0s
S54A Dingess, Beckl 75.22 13 IAMs_20 IAMs_20 21 35 00.2
comp=Z,3µm,20.0s
MAW Mawson 75.22 172 P P 21 04 11.5 +0.9
comp=Z,2.5nm,0.5s,baz=230,slow=16,SNR=2.1
MAW LR LR 21 34 34.4
comp=Z,3µm,21.0s,baz=192,slow=34
MAW Mawson 75.22 172 P P 21 04 10.7 +0.1
MAW pmax pmax
comp=Z,8.0nm,1.3s
MAW Mawson 75.22 172 P P 21 04 10.7 +0.1
Q44A Meyer Farm, Va 75.27 6 P P 21 04 08.6 -2.5
Q44A IAMs_20 IAMs_20 21 32 25.2
comp=Z,5µm,22.0s
PV23 Carpenter Ridg 75.28 350 IAMs_20 IAMs_20 21 30 35.2
comp=Z,3µm,22.0s
PV22 Blue Mesa, Par 75.33 350 P P 21 04 09.6 -2.2
S55A Lewisburg 75.34 13 P P 21 04 13.0 +1.5
baz=194
CASY Casey 75.49 191 P P 21 04 11.9 -0.3
T60A Surry 75.52 17 P P 21 04 13.4 +0.9
baz=197
S57A Dark Hollow, R 75.63 15 P P 21 04 15.7 +2.5
baz=195
S57A Dark Hollow, R 75.63 15 IAMs_20 IAMs_20 21 32 42.2
comp=Z,3µm,21.0s
R54A Victor 75.65 13 P P 21 04 14.0 +0.7
baz=193
P40A Paris 75.67 4 P P 21 04 10.6 -2.7
P40A IAmb IAmb 21 04 20.1
comp=Z,43nm,0.7s
TIN Tinemaha, Big 75.67 343 P P 21 04 15.3 +1.7
baz=162
S58A Poland Farm, P 75.68 15 P P 21 04 14.2 +0.8
baz=196
MSVF Nonsavu 75.74 258 *ce* P P 21 04 16.8 +2.3
MSVF pmax pmax
comp=Z,105nm,1.3s
MSVF MLR MLR
comp=Z,3µm,16.0s
MSVF Nonsavu 75.74 258 P P 21 04 13.5 -1.0
MSVF IAmb IAmb 21 04 21.5
comp=Z,105nm,1.2s
MSVF Nonsavu 75.74 258 IAMs_20 IAMs_20 21 35 05.4
comp=Z,3µm,18.0s
SMCO Snowmass 75.74 352 P P 21 04 12.2 -2.1
SMCO IAmb IAmb 21 04 36.7
comp=Z,51nm,1.1s
BLO Bloomington 75.79 8 IAMs_20 IAMs_20 21 32 43.2
comp=Z,3µm,22.0s
R55A Marlinton 75.91 14 P P 21 04 16.6 +1.8
baz=194,SNR=7.8
R55A Marlinton 75.91 14 IAMs_20 IAMs_20 21 34 54.4
comp=Z,3µm,20.0s
P43A Skaggs, Pawnee 75.96 6 IAMs_20 IAMs_20 21 33 09.4
comp=Z,4µm,22.0s
R58B Mineral 76.05 15 P P 21 04 16.4 +0.8
baz=196
R58B Mineral 76.05 15 P P 21 04 13.0 -2.6
S60A Water View 76.08 16 P P 21 04 16.6 +0.9
baz=197
Q51A Peebles 76.08 11 P P 21 04 16.8 +1.0
baz=191
SRU San Rafael Swe 76.15 349 P P 21 04 13.6 -2.8
SRU pmax pmax
comp=Z,25nm,1.0s
SRU San Rafael Swe 76.15 349 P P 21 04 13.6 -2.8
PSUT Pine Spring 76.15 346 P P 21 04 14.0 -2.4
Q52A Bidwell 76.19 12 P P 21 04 16.9 +0.6
baz=192
Q53A Leroy 76.21 12 P P 21 04 18.2 +1.7
baz=193,SNR=11
ISCO Idaho Springs 76.22 353 P P 21 04 19.1 +2.2
baz=173,SNR=8.0
R57A Stanardsville 76.24 15 P P 21 04 18.4 +1.7
baz=195
R11A Troy Canyon, C 76.32 345 P P 21 04 19.4 +2.0
baz=165,SNR=15
R11A Troy Canyon, C 76.32 345 P P 21 04 15.5 -1.8
R11A IAMs_20 IAMs_20 21 30 38.6
comp=Z,6µm,20.0s
R58A Rapidan 76.35 15 P P 21 04 18.9 +1.6
baz=196
P49A Miami Univ. Ec 76.38 10 P P 21 04 19.2 +1.8
baz=190
R59A King George, V 76.45 16 P P 21 04 18.7 +0.9
baz=196
Q54A Coxs Mills 76.46 13 P P 21 04 19.4 +1.6
baz=193
Q54A Coxs Mills 76.46 13 P P 21 04 16.6 -1.2
Q54A IAmb IAmb 21 04 39.9
comp=Z,56nm,1.3s
O44A Mansfield 76.56 7 IAMs_20 IAMs_20 21 33 35.3
comp=Z,4µm,22.0s
P51A Williamsport 76.57 11 P P 21 04 20.0 +1.5
baz=191
P50A Jamestown 76.58 10 P P 21 04 20.7 +2.1
baz=191,SNR=12
Q55A Buckhannon 76.61 13 P P 21 04 20.7 +1.9
baz=194,SNR=7.0
O20A White River Ci 76.84 351 P P 21 04 22.2 +2.0
baz=171
P53A Whipple 76.85 12 P P 21 04 21.8 +1.7
baz=193
P52A Corning 76.87 12 P P 21 04 21.2 +1.0
baz=192,SNR=8.7
HDIL Hopedale 76.88 6 IAMs_20 IAMs_20 21 33 59.9
comp=Z,3µm,22.0s
SFIN Lafayette 76.92 8 P P 21 04 22.6 +2.2
baz=188
Q57A Strasburg 76.97 15 P P 21 04 22.8 +2.0
baz=195
NVAR Mina Array Bea 77.00 343 P P 21 04 18.5 -2.7
comp=Z,0.6nm,0.5s,baz=17,slow=27,SNR=4.5
NVAR S S 21 14 04.2 -5.5
comp=Z,0.4nm,0.4s,baz=10,slow=27,SNR=1.5
NVAR LR LR 21 30 39.6
comp=Z,4µm,21.8s,baz=170,slow=30
Q58A Fox Den Farm, 77.04 15 P P 21 04 22.3 +1.1
baz=196,SNR=7.8
O49A Covington 77.08 10 P P 21 04 22.8 +1.4
baz=190
OGNE Ogallala 77.09 356 P P 21 04 23.6 +2.1
baz=176,SNR=5.5
P54A Burton 77.12 13 P P 21 04 22.6 +1.0
baz=193,SNR=8.2
O50A Cable 77.14 10 P P 21 04 23.4 +1.7
baz=191
CMB Columbia Colle 77.14 341 P P 21 04 20.8 -1.0
CMB pmax pmax
comp=Z,18nm,1.0s
CMB MLR MLR
comp=Z,7µm,20.0s
CMB Columbia Colle 77.14 341 P P 21 04 20.8 -1.0
P55A Reedsville 77.15 14 P P 21 04 23.1 +1.3
baz=194
Q59A Harwood 77.19 16 P P 21 04 23.4 +1.5
baz=196
NLU North Lily Min 77.22 348 P P 21 04 19.9 -2.5
RYN Ryan 77.24 343 IAMs_20 IAMs_20 21 30 55.0
comp=Z,4µm,21.0s
O51A Pataskala 77.29 11 P P 21 04 24.5 +1.9
baz=192
MCWV Mont Chateau 77.29 13 P P 21 04 24.2 +1.7
baz=194
ACSO Alum Creek Sta 77.32 11 P P 21 04 24.4 +1.7
baz=191
N23A Red Feather La 77.33 353 P P 21 04 25.2 +2.1
baz=172
P56A Dayton Farm, R 77.34 14 P P 21 04 24.0 +1.2
baz=195
WAKR Walker 77.34 342 IAMs_20 IAMs_20 21 31 20.8
comp=Z,5µm,19.0s
O52A Adamsville 77.39 12 P P 21 04 24.6 +1.5
baz=192,SNR=9.3

BGNE Belgrade 77.42 359 P P 21 04 25.5 +2.3
baz=179
P57A Homestead Farm 77.49 15 P P 21 04 25.4 +1.7
baz=195
P57A Homestead Farm 77.49 15 IAMs_20 IAMs_20 21 32 58.3
comp=Z,5µm,21.0s
KVN Kaiserville 77.54 343 P P 21 04 22.5 -1.8
KVN pmax pmax
comp=Z,20nm,1.0s
KVN MLR MLR
comp=Z,4µm,20.0s
KVN Kaiserville 77.54 343 P P 21 04 22.5 -1.8
KVN IAMs_20 IAMs_20 21 30 57.0
comp=Z,4µm,20.0s
DUG Dugway, Tooele 77.58 348 P P 21 04 22.9 -1.5
DUG pmax pmax
comp=Z,30nm,1.1s
DUG Dugway, Tooele 77.58 348 P P 21 04 26.2 +1.8
baz=167,SNR=8.0
DUG Dugway, Tooele 77.58 348 P P 21 04 22.9 -1.5
N47A Urbana 77.58 9 P P 21 04 25.7 +1.6
baz=189
N47A Urbana 77.58 9 IAMs_20 IAMs_20 21 33 34.4
comp=Z,3µm,22.0s
O53A New Philadelph 77.62 12 P P 21 04 25.7 +1.4
baz=193,SNR=12
N48A Decatur 77.64 9 P P 21 04 25.5 +1.0
baz=190
P58A Pank, Wackersv 77.64 15 P P 21 04 25.3 +0.8
baz=196
SDMD Soldier's Deli 77.67 16 IAMs_20 IAMs_20 21 33 44.1
comp=Z,4µm,21.0s
YERR Yerington 77.75 342 P P 21 04 24.5 -0.9
YERR IAMs_20 IAMs_20 21 31 07.6
comp=Z,4µm,21.0s
N49A Columbus Grove 77.82 10 P P 21 04 27.1 +1.7
baz=190,SNR=12
N49A Columbus Grove 77.82 10 P P 21 04 23.4 -2.1
N49A IAmb IAmb 21 04 40.9
comp=Z,66nm,0.8s
N50A Nevada 77.82 11 P P 21 04 27.3 +1.9
baz=191,SNR=12
M44A Midewin, Midew 77.82 7 IAMs_20 IAMs_20 21 34 13.8
comp=Z,3µm,22.0s
CTU Camp Tracy 77.89 349 P P 21 04 22.6 -3.5
MCCM Marconi Confer 77.92 339 IAMs_20 IAMs_20 21 30 21.2
comp=Z,5µm,22.0s
O55A Ligonier 77.93 14 P P 21 04 27.7 +1.6
baz=194
PNTR Pine Nut 77.94 342 P P 21 04 23.3 -3.2
P59A Jarrettsville 77.95 16 P P 21 04 27.9 +1.7
baz=197
RUBR Rubicon Trail 78.04 342 IAMs_20 IAMs_20 21 31 26.3
comp=Z,5µm,20.0s
N51A Ashland 78.08 11 P P 21 04 28.4 +1.5
baz=192
O56A Blue Knob Stat 78.13 14 P P 21 04 29.0 +1.7
baz=195,SNR=7.2
O56A Blue Knob Stat 78.13 14 P P 21 04 24.5 -2.7
O56A IAmb IAmb 21 05 14.3
comp=Z,69nm,1.1s
VCNR Virginia City 78.15 342 IAMs_20 IAMs_20 21 32 04.0
comp=Z,5µm,19.0s
AFDM Forest Hills D 78.15 341 P P 21 04 24.2 -3.2
N53A Lisbon 78.23 12 P P 21 04 29.1 +1.3
baz=193
N53A Lisbon 78.23 12 P P 21 04 24.4 -3.3
O57A Amberson 78.27 15 P P 21 04 29.1 +1.1
baz=196
M48A Edgerton 78.30 9 P P 21 04 29.6 +1.5
baz=190
P60A Greenville 78.32 17 P P 21 04 29.5 +1.2
baz=197
O58A Lewisberry 78.33 16 P P 21 04 30.2 +1.8
baz=196,SNR=5.2
M49A Liberty Center 78.39 10 P P 21 04 30.0 +1.3
baz=190
P61A Hammonton 78.39 17 IAMs_20 IAMs_20 21 35 28.3
comp=Z,5µm,20.0s
M50A Fremont 78.45 11 P P 21 04 31.1 +2.1
baz=191,SNR=7.4
PAHR Pah Rah Range 78.47 343 P P 21 04 26.7 -2.6
PAHR IAMs_20 IAMs_20 21 32 44.7
comp=Z,4µm,19.0s
PSUB Penn St. - Bra 78.48 17 P P 21 04 26.4 -2.7
PSUB IAmb IAmb 21 05 16.0
comp=Z,43nm,1.1s
N54A Moraine State 78.53 13 P P 21 04 30.4 +1.0
baz=194
N54A Moraine State 78.53 13 P P 21 04 26.6 -2.8
N54A IAmb IAmb 21 04 45.6
comp=Z,43nm,0.8s
N54A IAMs_20 IAMs_20 21 32 57.8
comp=Z,3µm,22.0s
N55A Marion Center 78.54 14 P P 21 04 31.4 +1.8
baz=194,SNR=10
ELK Elko 78.56 346 P P 21 04 27.4 -2.5
ELK pmax pmax
comp=Z,19nm,1.1s
ELK MLR MLR
comp=Z,4µm,20.0s
ELK Elko 78.56 346 P P 21 04 27.4 -2.5
ELK IAMs_20 IAMs_20 21 32 05.9
comp=Z,4µm,20.0s
POHA Pohakuloa 78.57 305 IAMs_20 IAMs_20 21 30 20.7
comp=Z,4µm,20.0s
SSPA Standing Stone 78.62 15 P P 21 04 27.1 -2.8
SSPA IAmb IAmb 21 04 51.9
comp=Z,54nm,1.1s
SSPA Standing Stone 78.62 15 IAMs_20 IAMs_20 21 33 33.3
comp=Z,5µm,22.0s
O59A Robesonia 78.67 16 P P 21 04 31.0 +0.8
baz=197
KHLU Kahalu`u 78.69 305 IAMs_20 IAMs_20 21 31 36.0
comp=Z,5µm,21.0s
HWUT Hardware Ranch 78.75 349 P P 21 04 27.9 -3.0
HOPS Hopland Field 78.77 340 P P 21 04 28.8 -2.0
HOPS IAMs_20 IAMs_20 21 30 59.5
comp=Z,5µm,20.0s
L48A N Adams 78.79 10 P P 21 04 31.6 +0.8
baz=190
N57A Milroy 78.81 15 P P 21 04 31.8 +0.8
baz=196
N56A West Decatur 78.81 14 P P 21 04 32.3 +1.2
baz=195
M52A Chesterland 78.85 12 P P 21 04 32.6 +1.4
baz=193
O60A Telford 78.86 17 P P 21 04 32.8 +1.6
baz=197,SNR=7.4
BEKR Beckworth 78.86 342 P P 21 04 29.4 -2.1
ORV Oroville 78.86 341 P P 21 04 29.1 -2.2
ORV pmax pmax
comp=Z,138nm,2.3s
ORV MLR MLR
comp=Z,7µm,20.0s
ORV Oroville 78.86 341 P P 21 04 29.1 -2.2
ORV IAmb IAmb 21 05 47.8
comp=Z,138nm,2.3s
HPAH Hawaii Prepara 78.87 305 IAMs_20 IAMs_20 21 29 55.7
comp=Z,6µm,22.0s
M53A WI Miller and 78.87 12 P P 21 04 32.8 +1.5
baz=193
N58A Sunbury 79.06 16 P P 21 04 33.9 +1.6
baz=196
N58A Sunbury 79.06 16 P P 21 04 29.8 -2.5
N58A IAMs_20 IAMs_20 21 34 37.1
comp=Z,6µm,22.0s
K43A Burlington 79.10 6 IAMs_20 IAMs_20 21 34 52.6
comp=Z,3µm,22.0s
L50A Kingsville 79.11 11 P P 21 04 35.2 +2.6
baz=191
M54A Oil Creek Stat 79.12 13 P P 21 04 34.1 +1.4
baz=194,SNR=6.5
M54A Oil Creek Stat 79.12 13 P P 21 04 30.3 -2.4
M54A IAMs_20 IAMs_20 21 36 52.4
comp=Z,3µm,20.0s
K22A Casper 79.13 353 P P 21 04 34.8 +1.9
baz=172,SNR=7.2
JFWS Jewell Farm 79.15 5 P P 21 04 35.5 +2.7
baz=185
JFWS Jewell Farm 79.15 5 IAMs_20 IAMs_20 21 35 26.0
comp=Z,4µm,22.0s
ALLY Alegheny Colle 79.17 13 IAMs_20 IAMs_20 21 33 29.7
comp=Z,3µm,22.0s
AAM Ann Arbor 79.24 10 P P 21 04 34.7 +1.4
baz=191
M55A Ridgway 79.25 14 P P 21 04 34.7 +1.3
baz=195
M55A Ridgway 79.25 14 P P 21 04 30.0 -3.4
N59A State Game Lan 79.35 16 P P 21 04 35.5 +1.5
baz=197
N59A State Game Lan 79.35 16 P P 21 04 31.1 -2.8
K46A Dorr 79.35 8 P P 21 04 36.2 +2.3
baz=189
M56A Emporium 79.38 14 P P 21 04 35.6 +1.5
baz=195,SNR=6.8
M56A Emporium 79.38 14 P P 21 04 31.4 -2.7
M56A IAMs_20 IAMs_20 21 34 18.3
comp=Z,3µm,21.0s
K47A Vermontville 79.43 9 P P 21 04 36.2 +1.9
baz=190
L53A Girard 79.44 13 P P 21 04 36.2 +1.8
baz=194
M57A Sunshine Farm, 79.45 15 P P 21 04 36.2 +1.7
baz=196
M57A Sunshine Farm, 79.45 15 IAMs_20 IAMs_20 21 34 49.3
comp=Z,6µm,21.0s
N60A Cedar Hill Far 79.45 17 P P 21 04 36.2 +1.7
baz=198,SNR=7.1
N61A South Mountain 79.53 17 P P 21 04 36.4 +1.5
baz=198
KCPM Cahto Peak 79.56 339 P P 21 04 31.4 -3.9
BW06 Boulder Array 79.60 351 P P 21 04 37.2 +1.7
baz=170,SNR=17
BW06 Boulder Array 79.60 351 P P 21 04 32.1 -3.5
BW06 IAmb IAmb 21 04 50.3
comp=Z,38nm,0.8s
BW06 IAMs_20 IAMs_20 21 35 30.4
comp=Z,2µm,18.0s
PDAR Pinedale Array 79.60 351 P P 21 04 32.2 -3.3
comp=Z,23nm,0.8s,baz=154,slow=6.5,SNR=28
PDAR PKKPbc PKKPbc 21 23 28.9 +3.6
comp=Z,0.5nm,0.7s,baz=90,slow=1.5,SNR=5.3
M58A Price's Panora 79.63 16 P P 21 04 37.0 +1.5
baz=196,SNR=6.7
O03E Paynes Creek 79.64 341 P P 21 04 37.6 +2.0
baz=160
ERPA Erie 79.65 13 P P 21 04 37.6 +2.0
baz=194
ERPA Erie 79.65 13 IAMs_20 IAMs_20 21 33 55.4
comp=Z,3µm,22.0s
K48A Perry 79.67 10 P P 21 04 37.8 +2.1
baz=190
ECSD EROS Data Cent 79.73 0 P P 21 04 37.9 +1.9
baz=180,SNR=16
ECSD EROS Data Cent 79.73 0 P P 21 04 33.4 -2.6
ECSD IAmb IAmb 21 05 05.6
comp=Z,115nm,1.4s
ODNJ Ogdensburg 79.77 17 P P 21 04 33.1 -3.1
ODNJ IAmb IAmb 21 04 57.2
comp=Z,176nm,2.1s
O02D Mt. Diablo Mer 79.79 340 P P 21 04 38.7 +2.3
baz=159
AHID Auburn Hatcher 79.81 349 IAMs_20 IAMs_20 21 34 26.1
comp=Z,3µm,20.0s
K50A Casco 79.86 11 P P 21 04 38.0 +1.4
baz=192
PAL Palisades 79.87 18 P P 21 04 38.4 +1.7
baz=198
PAL Palisades 79.87 18 IAMs_20 IAMs_20 21 36 33.4
comp=Z,4µm,20.0s
L54A Sinclairville 79.89 13 P P 21 04 38.1 +1.3
baz=194
KSPA Keystone Colle 79.96 16 P P 21 04 34.0 -3.2
M60A Port Jervis 80.00 17 P P 21 04 38.9 +1.4
baz=198,SNR=5.7
L55A Hinsdale 80.00 14 P P 21 04 39.1 +1.6
baz=195
M59A Waymart 80.02 16 P P 21 04 39.3 +1.8
baz=197
I37A Lemond, Waseca 80.08 3 P P 21 04 35.2 -2.6
I37A IAMs_20 IAMs_20 21 36 25.4
comp=Z,3µm,21.0s
KMRM Mail Ridge 80.09 340 P P 21 04 34.9 -3.2
I40A Norwalk 80.10 5 IAMs_20 IAMs_20 21 35 32.0
comp=Z,3µm,22.0s
WDC Whiskeytown Da 80.10 341 P P 21 04 36.3 -1.7
WDC pmax pmax
comp=Z,93nm,1.6s
WDC MLR MLR
comp=Z,3µm,19.0s
WDC Whiskeytown Da 80.10 341 P P 21 04 36.3 -1.7
WDC IAmb IAmb 21 05 03.9
comp=Z,92nm,1.6s
WDC IAMs_20 IAMs_20 21 31 34.8
comp=Z,3µm,19.0s
L56A Greenwood 80.13 15 P P 21 04 39.8 +1.6
baz=196
L56A Greenwood 80.13 15 P P 21 04 36.7 -1.5
L56A IAMs_20 IAMs_20 21 34 30.3
comp=Z,6µm,22.0s
L57A Andrews Acres 80.15 15 P P 21 04 39.8 +1.6
baz=196
WSPT Westport, CT 80.16 18 IAMs_20 IAMs_20 21 36 06.4
comp=Z,4µm,20.0s
WVNY West Valley, N 80.19 14 P P 21 04 35.3 -3.2
WVNY IAmb IAmb 21 04 48.0
comp=Z,42nm,0.9s
M61A Granite Spring 80.19 18 P P 21 04 40.2 +1.8
baz=199
J48A Bridge Port 80.21 10 P P 21 04 40.0 +1.5
baz=191
J48A Bridge Port 80.21 10 P P 21 04 36.2 -2.3
J48A IAmb IAmb 21 04 54.5
comp=Z,75nm,0.8s
I42A Draeger Farm, 80.23 6 IAMs_20 IAMs_20 21 35 27.4
comp=Z,3µm,22.0s
J49A Marlette 80.36 10 P P 21 04 39.2 -0.1
baz=191
REDW Red Top Meadow 80.36 350 IAMs_20 IAMs_20 21 34 55.6
comp=Z,2µm,20.0s
K54A Basiliko Farm, 80.37 14 P P 21 04 40.7 +1.3
baz=195
RSSD Black Hills 80.38 355 P P 21 04 37.5 -2.2
RSSD pmax pmax
comp=Z,32nm,0.8s
RSSD Black Hills 80.38 355 P P 21 04 41.1 +1.4
baz=174
RSSD Black Hills 80.38 355 P P 21 04 37.5 -2.2
YLE Yale 80.40 18 IAMs_20 IAMs_20 21 34 51.6
comp=Z,5µm,22.0s
L58A Harry Jones Me 80.41 16 P P 21 04 40.5 +0.9
baz=197
SNOW Snow King Moun 80.44 350 IAMs_20 IAMs_20 21 34 59.8
comp=Z,3µm,20.0s
TPAW Teton Pass 80.50 350 P P 21 04 38.3 -2.1
TPAW IAmb IAmb 21 05 02.5
comp=Z,62nm,1.0s
TPAW IAMs_20 IAMs_20 21 34 59.3
comp=Z,3µm,20.0s
N02D Trinity Center 80.51 341 P P 21 04 43.0 +2.6
baz=159,SNR=8.7
BINY Binghamton 80.52 16 P P 21 04 41.5 +1.2
baz=197
BINY Binghamton 80.52 16 P P 21 04 38.4 -1.8
BINY IAmb IAmb 21 04 46.3
comp=Z,205nm,2.2s
BINY IAMs_20 IAMs_20 21 36 04.7
comp=Z,5µm,21.0s
M62A Hamden 80.53 18 P P 21 04 41.6 +1.3
baz=199,SNR=6.6
K55A Perry 80.60 14 P P 21 04 42.5 +1.8
baz=195
MMNY Mt. Morris Dam 80.64 14 P P 21 04 37.7 -3.1
MMNY IAMs_20 IAMs_20 21 34 58.9
comp=Z,4µm,22.0s
KSCT Kent School, K 80.65 18 P P 21 04 38.1 -2.8
KSCT IAMs_20 IAMs_20 21 36 10.2
comp=Z,5µm,21.0s
FXWY Fox Creek 80.66 350 P P 21 04 38.5 -2.8
FXWY IAMs_20 IAMs_20 21 35 04.4
comp=Z,3µm,19.0s
J52A Paris 80.66 12 P P 21 04 43.1 +2.2
baz=193
KHMM Horse Mountain 80.70 340 IAMs_20 IAMs_20 21 34 07.7
comp=Z,4µm,18.0s
M63A Gales Ferry 80.71 19 P P 21 04 43.1 +1.8
baz=200
K56A Middlesex 80.72 15 P P 21 04 43.5 +2.1
baz=196
L60A Shokan 80.72 17 P P 21 04 43.4 +2.1
baz=198
L59A Walton 80.72 16 P P 21 04 43.4 +2.1
baz=198

L59A Walton 80.72 16 P P 21 04 38.0 -3.4
JCC Jacoby Creek, 80.73 340 IAMs_20 IAMs_20 21 31 56.5
comp=Z,4µm,22.0s
MOD Modoc Plateau 80.77 343 P P 21 04 39.2 -2.6
MOD IAMs_20 IAMs_20 21 33 11.5
comp=Z,4µm,20.0s
I47A Gladwin 80.82 9 P P 21 04 44.4 +2.6
baz=190
WVOR Wild Horse Val 80.89 344 IAMs_20 IAMs_20 21 32 46.6
comp=Z,3µm,22.0s
IMW Indian Meadow 80.90 350 P P 21 04 39.8 -2.8
IMW IAMs_20 IAMs_20 21 35 12.8
comp=Z,3µm,20.0s
H43A Windswept, Lux 80.90 7 IAMs_20 IAMs_20 21 36 08.3
comp=Z,3µm,21.0s
K57A Scipio Center 80.92 15 P P 21 04 44.9 +2.5
baz=196
M02C Callahan 80.94 341 P P 21 04 45.2 +2.6
baz=159
J54A Appleton 81.02 13 P P 21 04 45.4 +2.6
baz=195
M04C Macdoel 81.04 341 P P 21 04 45.2 +2.0
baz=160,SNR=10
FLWY Flagg Ranch 81.05 350 P P 21 04 41.0 -2.3
FLWY IAmb IAmb 21 05 04.2
comp=Z,52nm,1.0s
FLWY IAMs_20 IAMs_20 21 35 27.7
comp=Z,3µm,21.0s
M64A Tiverton 81.07 19 P P 21 04 45.7 +2.6
baz=201
L61A Hillsdale 1, H 81.08 17 P P 21 04 45.6 +2.4
baz=199
M66A Nantucket 81.09 20 P P 21 04 45.7 +2.5
baz=201
I48A Sherman Twp 81.09 10 P P 21 04 45.2 +2.0
baz=191
I51A Listowel 81.11 12 P P 21 04 45.5 +2.2
baz=193
K58A Earlville 81.14 16 P P 21 04 45.3 +1.8
baz=197,SNR=8.8
K58A Earlville 81.14 16 P P 21 04 41.6 -2.0
K58A IAmb IAmb 21 04 48.9
comp=Z,54nm,1.2s
J55A Hilton 81.17 14 P P 21 04 45.4 +1.8
baz=195
J55A Hilton 81.17 14 P P 21 04 41.6 -2.0
J55A IAMs_20 IAMs_20 21 35 14.6
comp=Z,5µm,22.0s
YBH Yreka Blue Hor 81.22 341 P P 21 04 43.4 -0.7
YBH pmax pmax
comp=Z,25nm,1.1s
YBH MLR MLR
comp=Z,4µm,21.0s
YBH Yreka Blue Hor 81.22 341 P P 21 04 43.4 -0.7
YBH IAMs_20 IAMs_20 21 32 30.5
comp=Z,4µm,21.0s
MFID Camas Ranch 81.25 346 P P 21 04 42.8 -1.5
MFID IAmb IAmb 21 05 15.2
comp=Z,188nm,2.5s
L63A North Scituate 81.25 19 P P 21 04 45.6 +1.5
baz=200
SPMN Marine on St. 81.31 3 P P 21 04 47.2 +2.8
baz=183
SPMN Marine on St. 81.31 3 P P 21 04 42.2 -2.1
K59A Cooperstown 81.32 16 P P 21 04 46.7 +2.2
baz=198
BRYW Bryant College 81.32 19 P P 21 04 42.7 -1.9
BRYW IAmb IAmb 21 04 52.1
comp=Z,38nm,0.8s
BRYW IAMs_20 IAMs_20 21 36 28.1
comp=Z,3µm,22.0s
H17A Grant Village 81.33 350 P P 21 04 48.3 +3.5
baz=169
H17A Grant Village 81.33 350 IAMs_20 IAMs_20 21 37 03.4
comp=Z,4µm,20.0s
J56A Wolcott 81.37 15 P P 21 04 47.1 +2.5
baz=196
J56A Wolcott 81.37 15 P P 21 04 42.4 -2.3
J56A IAMs_20 IAMs_20 21 36 00.0
comp=Z,5µm,21.0s
K60A Five Rivers En 81.40 17 P P 21 04 47.9 +3.0
baz=198
QUA2 Belchertown 81.45 18 P P 21 04 42.8 -2.3
QUA2 IAmb IAmb 21 04 52.4
comp=Z,45nm,0.8s
QUA2 IAMs_20 IAMs_20 21 35 21.5
comp=Z,5µm,22.0s
G40A Rib Lake 81.50 5 P P 21 04 43.8 -1.6
G40A IAmb IAmb 21 05 14.4
comp=Z,145nm,1.7s
G40A IAMs_20 IAMs_20 21 36 34.0
comp=Z,4µm,22.0s
L64A Middleborough 81.53 19 P P 21 04 47.7 +2.2
baz=201
L61B Northampton 81.53 18 P P 21 04 47.5 +1.9
baz=199
L04D Klamath Falls 81.57 341 P P 21 04 48.1 +2.1
baz=160
K61A Williamstown 81.59 17 P P 21 04 47.1 +1.2
baz=199,SNR=6.4
GLMI Grayling 81.60 9 P P 21 04 47.8 +1.9
baz=190
H48A Harrisville 81.64 10 P P 21 04 48.3 +2.2
baz=191
J57A Williamstown 81.68 15 P P 21 04 48.1 +1.7
baz=197
J57A Williamstown 81.68 15 P P 21 04 43.8 -2.6
J57A IAMs_20 IAMs_20 21 35 58.2
comp=Z,4µm,22.0s
K05A Summer Lake 81.69 342 P P 21 04 45.0 -1.7
K05A IAmb IAmb 21 05 52.1
comp=Z,119nm,1.5s
J08A Circle Bar Ran 81.73 344 P P 21 04 44.8 -2.0
J08A IAmb IAmb 21 05 16.7
comp=Z,44nm,1.0s
J08A IAMs_20 IAMs_20 21 34 12.0
comp=Z,3µm,20.0s
YHH Holmes Hill 81.76 350 P P 21 04 45.3 -1.8
J58A Remsen 81.78 16 P P 21 04 48.4 +1.4
baz=197
J58A Remsen 81.78 16 P P 21 04 44.3 -2.6
K04D Chiloquin, OR 81.81 342 P P 21 04 48.7 +1.5
baz=160
WES Weston 81.82 19 P P 21 04 45.7 -1.4
WES pmax pmax
comp=Z,27nm,1.0s
WES MLR MLR
comp=Z,3µm,21.0s
WES Weston 81.82 19 P P 21 04 45.7 -1.4
WES IAMs_20 IAMs_20 21 37 20.1
comp=Z,3µm,21.0s
K62A Royalston 81.85 18 P P 21 04 48.8 +1.5
baz=200
K62A Royalston 81.85 18 IAMs_20 IAMs_20 21 35 32.8
comp=Z,5µm,22.0s
YNE Yellowstone No 81.86 351 P P 21 04 46.0 -1.7
HRV Adam Dziewonsk 81.87 19 P P 21 04 48.2 +0.8
baz=200
HRV Adam Dziewonsk 81.87 19 IAMs_20 IAMs_20 21 39 55.5
comp=Z,2µm,18.0s
RLMT Red Lodge 81.88 351 P P 21 04 49.2 +1.6
baz=170,SNR=14
RLMT Red Lodge 81.88 351 P P 21 04 45.5 -2.2
RLMT IAMs_20 IAMs_20 21 36 22.8
comp=Z,3µm,19.0s
F36A Milaca 81.92 2 P P 21 04 44.8 -2.8
F36A IAMs_20 IAMs_20 21 37 09.1
comp=Z,3µm,22.0s
PECO Prince Edward 81.97 14 P P 21 04 45.3 -2.5
PECO IAMs_20 IAMs_20 21 35 60.0
comp=Z,5µm,21.0s
G47A Hillman 82.04 9 P P 21 04 49.4 +1.2
baz=190
K63A Dunstable 82.05 19 P P 21 04 49.3 +1.1
baz=200
J59A Piesco 82.06 16 P P 21 04 49.7 +1.3
baz=198
J59A Piesco 82.06 16 P P 21 04 46.5 -1.9
J59A IAmb IAmb 21 05 01.1
comp=Z,103nm,2.1s
MCMT McKenzie Canyo 82.09 349 P P 21 04 46.1 -2.7
J60A Lant Hill Farm 82.10 17 P P 21 04 49.4 +0.8
baz=199,SNR=5.8
HUMO Hull Mountain 82.11 341 P P 21 04 46.0 -2.7
HUMO IAMs_20 IAMs_20 21 32 58.8
comp=Z,4µm,20.0s
I55A Frankford 82.11 14 P P 21 04 49.6 +1.0
baz=195
F42A Maple Grove Fa 82.15 6 IAMs_20 IAMs_20 21 37 09.2
comp=Z,2µm,21.0s
I58A Old Forge 82.17 16 P P 21 04 49.6 +0.6
baz=198,SNR=6.6
ACCN Adirondack Com 82.17 17 P P 21 04 46.8 -2.2
ACCN IAmb IAmb 21 05 26.8
comp=Z,150nm,1.9s
DZM Mont Dzumac 82.24 248 eS S 21 15 01.6 -4.3
comp=Z,4µm,36.4s
DZM eSS SS 21 20 21.5 -3.9
comp=Z,2µm,28.9s
DZM eLQ LQ 21 26 53.3
comp=Z,35µm,32.8s
DZM eLR LR 21 30 26.2
comp=Z,14µm,31.7s,baz=148
I57A Carthage 82.25 15 P P 21 04 50.3 +0.9
baz=197,SNR=6.8
H53A Bobcaygeon 82.28 13 P P 21 04 50.6 +1.1
baz=195
J05D Fort Rock, OR 82.30 342 P P 21 04 51.7 +1.8
baz=160,SNR=12
F45A CMU Biological 82.34 8 P P 21 04 51.0 +1.3
baz=189
SADO Sadowa 82.37 13 P P 21 04 47.5 -2.5
K02D Willamette Mer 82.38 340 P P 21 04 52.3 +2.1
baz=158,SNR=7.3
J61A Chester 82.41 18 P P 21 04 51.0 +0.8
baz=200
DELO Deloro Mine 82.41 14 P P 21 04 47.5 -2.7
DELO IAMs_20 IAMs_20 21 36 02.5
comp=Z,4µm,21.0s
J04D Umpqua Nationa 82.48 342 P P 21 04 52.4 +1.5
baz=160
J62A Henniker 82.48 18 P P 21 04 51.6 +1.0
baz=200
I59A Gloeadville 82.52 17 P P 21 04 52.0 +1.2
baz=198
H55A Tweed 82.53 14 P P 21 04 52.1 +1.3
baz=196
NCB Newcomb 82.60 16 P P 21 04 49.5 -1.8
NCB IAMs_20 IAMs_20 21 36 56.8
comp=Z,5µm,21.0s
I07A Izee 82.65 344 P P 21 04 49.7 -2.0
I07A IAmb IAmb 21 05 08.8
comp=Z,40nm,1.0s
I07A IAMs_20 IAMs_20 21 35 27.3
comp=Z,4µm,18.0s
I60A Shoreham 82.70 17 P P 21 04 52.8 +1.1
baz=199
PINE Pine Mountain 82.71 343 P P 21 04 50.7 -1.4
PINE IAmb IAmb 21 05 21.9
comp=Z,37nm,0.9s
J63A Strafford 82.72 19 P P 21 04 53.4 +1.6
baz=201
E38A The Farm, Brul 82.75 4 IAMs_20 IAMs_20 21 38 05.1
comp=Z,4µm,21.0s
H56A Elgin 82.75 15 P P 21 04 52.8 +0.8
baz=196
G53A Haliburton 82.81 13 P P 21 04 53.8 +1.6
baz=195
HNH Hanover 82.81 18 IAMs_20 IAMs_20 21 36 12.3
comp=Z,5µm,22.0s
F48A Evansville 82.85 10 P P 21 04 53.9 +1.5
baz=192
E43A Lone Tree Farm 82.87 7 P P 21 04 48.0 -4.5
E43A IAmb IAmb 21 05 20.9
comp=Z,85nm,1.6s
E43A IAMs_20 IAMs_20 21 37 06.2
comp=Z,4µm,22.0s
F49A Sandfield 82.87 10 P P 21 04 53.8 +1.3
baz=192,SNR=8.3
BMO Blue Mountains 82.92 346 P P 21 04 49.4 -3.6
BMO pmax pmax
comp=Z,33nm,1.4s
BMO MLR MLR
comp=Z,4µm,19.0s
BMO Blue Mountains 82.92 346 P P 21 04 49.4 -3.6
BMO IAMs_20 IAMs_20 21 34 51.3
comp=Z,4µm,19.0s
PLVO Plevna 83.02 14 P P 21 04 49.2 -4.2
PLVO IAMs_20 IAMs_20 21 36 18.6
comp=Z,5µm,21.0s
H58A Gabriels 83.04 16 P P 21 04 54.0 +0.5
baz=198,SNR=7.0
I61A Oroboro, Fairl 83.04 18 P P 21 04 54.5 +1.0
baz=200
I04A Tendick Farm, 83.07 342 P P 21 04 56.5 +2.7
baz=160
LAO LASA Array 83.11 354 P P 21 04 56.0 +2.2
baz=172,SNR=12
LAO LASA Array 83.11 354 P P 21 04 50.4 -3.4
LAO IAmb IAmb 21 05 09.9
comp=Z,49nm,0.9s
LAO IAMs_20 IAMs_20 21 38 49.2
comp=Z,3µm,19.0s
LONY Lake Ozonia 83.14 16 P P 21 04 55.8 +1.8
baz=198,SNR=8.6
LONY Lake Ozonia 83.14 16 P P 21 04 49.4 -4.6
E46A Sault Ste Mari 83.15 9 P P 21 04 50.3 -3.7
E46A IAmb IAmb 21 05 30.0
comp=Z,74nm,1.2s
E46A IAMs_20 IAMs_20 21 37 35.0
comp=Z,3µm,22.0s
G54A Lake Saint Pet 83.17 13 P P 21 04 55.9 +1.8
baz=195
I62A Tamworth 83.21 18 P P 21 04 56.3 +1.9
baz=200
I62A Tamworth 83.21 18 IAMs_20 IAMs_20 21 36 12.9
comp=Z,4µm,22.0s
E44A Grand Marais A 83.22 8 P P 21 04 56.7 +2.4
baz=189
E44A Grand Marais A 83.22 8 IAMs_20 IAMs_20 21 38 54.6
comp=Z,2µm,21.0s
I03D Drain, OR 83.22 341 P P 21 04 57.1 +2.7
baz=159
G55A Calabogie 83.29 14 P P 21 04 56.6 +1.9
baz=196
I05D Terrebonne, OR 83.32 343 P P 21 04 57.5 +2.5
baz=160
F52A Sundridge 83.33 12 P P 21 04 56.9 +1.9
baz=194
F51A Arnstein 83.36 12 P P 21 04 57.2 +2.2
baz=194
H59A Cadyville 83.36 17 P P 21 04 56.9 +1.8
baz=198
E47A Iron Bridge 83.37 9 P P 21 04 56.9 +1.8
baz=191,SNR=8.5
LBNH Lisbon 83.40 18 P P 21 04 53.3 -2.0
LBNH pmax pmax
comp=Z,24nm,1.0s
LBNH MLR MLR
comp=Z,5µm,22.0s
LBNH Lisbon 83.40 18 P P 21 04 56.8 +1.5
baz=200
LBNH Lisbon 83.40 18 P P 21 04 53.3 -2.0
LBNH IAMs_20 IAMs_20 21 36 41.0
comp=Z,5µm,22.0s
D41A Chassel 83.40 6 IAMs_20 IAMs_20 21 37 27.5
comp=Z,3µm,22.0s
G57A Newington 83.51 15 P P 21 04 57.8 +2.0
baz=198
H60A Morristown 83.52 17 P P 21 04 58.1 +2.2
baz=195
E48A Lockeyer 83.55 10 P P 21 04 57.8 +1.8
baz=192
FRNY Flat Rock 83.57 17 IAMs_20 IAMs_20 21 37 25.3
comp=Z,5µm,22.0s
I63A Otisfield 83.57 19 P P 21 04 57.7 +1.6
baz=201
I63A Otisfield 83.57 19 IAMs_20 IAMs_20 21 35 48.4
comp=Z,3µm,22.0s
H61A Lyndonville 83.68 18 P P 21 04 58.0 +1.2
baz=200,SNR=9.0
G08A Pilot Rock 83.68 345 P P 21 04 55.1 -1.8
G08A IAMs_20 IAMs_20 21 35 30.5
comp=Z,4µm,19.0s
D46A Sault St. Mari 83.70 9 P P 21 04 59.5 +2.7
baz=190
E50A Wahnapitae 83.71 11 P P 21 04 59.2 +2.3
baz=193
ALGO Algonquin Park 83.71 13 P P 21 04 58.8 +1.9
baz=195
ORIO Orleans, Innes 83.73 15 P P 21 04 59.6 +2.7
baz=197
ORIO Orleans, Innes 83.73 15 P P 21 04 54.5 -2.5
I02D Swisshome 83.74 341 P P 21 04 60.0 +3.0
baz=158
G58A Ormstown 83.76 16 P P 21 04 59.4 +2.3
baz=198
H04D Lebanon 83.84 342 P P 21 05 00.0 +2.5
baz=159
H04A Detroit Lake 83.85 342 P P 21 04 55.9 -1.8
H04A IAmb IAmb 21 05 23.7
comp=Z,76nm,1.3s
H04A IAMs_20 IAMs_20 21 34 44.0
comp=Z,3µm,19.0s
MDND Maddock 83.88 358 P P 21 04 60.0 +2.3
baz=178
H62A Milan 83.91 18 P P 21 04 59.8 +1.9
baz=200
H62A Milan 83.91 18 IAMs_20 IAMs_20 21 36 34.4
comp=Z,5µm,22.0s
E52A Mattawa 83.92 13 P P 21 04 60.0 +2.0
baz=195
F55A Otter Lake 83.92 14 P P 21 05 00.0 +2.1
baz=196
F10A Beach Ranch, E 83.98 346 P P 21 04 56.9 -1.5
F10A IAMs_20 IAMs_20 21 35 26.4
comp=Z,4µm,20.0s
D47A Chapleau 83.99 9 P P 21 05 00.4 +2.1
baz=191
G06A Carlson Farm, 84.00 343 P P 21 04 58.8 +0.3
G06A IAmb IAmb 21 05 18.9
comp=Z,96nm,1.6s
E51A G1948 Merrick 84.02 12 P P 21 05 00.4 +1.9
baz=194,SNR=6.0
COR Corvallis 84.04 341 IAMs_20 IAMs_20 21 34 04.1
comp=Z,5µm,21.0s
EYMN Ely 84.09 4 P P 21 05 00.8 +2.0
baz=184
EYMN Ely 84.09 4 P P 21 04 56.8 -2.0
EYMN IAmb IAmb 21 05 27.3
comp=Z,67nm,1.4s
EYMN Ely 84.09 4 IAMs_20 IAMs_20 21 38 21.5
comp=Z,4µm,22.0s
G60A Masonville 84.11 17 P P 21 05 00.6 +1.6
baz=200
G05D Wamic, OR 84.17 343 P P 21 05 01.8 +2.5
baz=160
E53A Dumoine, Ponti 84.19 13 P P 21 05 00.6 +1.3
baz=195
MSO Missoula 84.22 348 P P 21 05 01.8 +2.2
baz=166
MSO Missoula 84.22 348 P P 21 04 58.1 -1.5
MSO IAmb IAmb 21 05 29.5
comp=Z,49nm,1.4s
H63A New Sharon 84.28 19 P P 21 05 01.8 +2.0
baz=201
D48A Paudash Townsh 84.28 10 P P 21 05 01.6 +1.8
baz=192
AGMN Agassiz Nation 84.31 1 P P 21 05 02.8 +2.9
baz=181,SNR=12
E54A Lac Daplat, Po 84.34 14 P P 21 05 01.8 +1.8
baz=196
D49A Beulah Townshi 84.44 11 P P 21 05 02.4 +1.8
baz=192
H64A Troy 84.47 20 P P 21 05 02.8 +2.0
baz=202
G61A St-Isidore-de- 84.48 18 P P 21 05 02.4 +1.6
baz=200
E55A Montcerf-Lytto 84.58 14 P P 21 05 03.5 +2.3
baz=197
D50A G1974 Best Tow 84.58 12 P P 21 05 03.4 +2.2
baz=194,SNR=9.3
D51A Lot 18 Range I 84.58 12 P P 21 05 03.1 +1.8
baz=194
G62A West of Eustis 84.67 18 P P 21 05 03.2 +1.4
baz=201
G62A West of Eustis 84.67 18 IAMs_20 IAMs_20 21 37 18.5
comp=Z,4µm,21.0s
TRQ Mont Tremblant 84.67 15 P P 21 04 59.2 -2.6
E09A Wood Farm, Sta 84.68 346 IAMs_20 IAMs_20 21 38 05.9
comp=Z,3µm,18.0s
F59A Saint Guilaume 84.71 17 P P 21 05 03.6 +1.7
baz=199
DGMT Dagmar 84.72 355 P P 21 05 04.5 +2.5
baz=174
H65A Eastbrook 84.79 20 P P 21 05 04.4 +2.0
baz=203
G63A Kingsbury 84.81 19 P P 21 05 04.7 +2.2
baz=202
E08A Dider Farm, El 84.85 345 P P 21 05 01.3 -1.3
E08A IAmb IAmb 21 05 41.2
comp=Z,58nm,1.2s
E08A IAMs_20 IAMs_20 21 37 12.3
comp=Z,3µm,18.0s
HAWA Hanford 84.85 345 P P 21 05 00.9 -1.7
HAWA IAmb IAmb 21 05 33.3
comp=Z,64nm,1.2s
D53A Lac Vacive, Po 84.86 13 P P 21 05 04.4 +1.6
baz=195,SNR=5.9
D53A Lac Vacive, Po 84.86 13 P P 21 05 00.1 -2.6
D53A IAmb IAmb 21 05 31.1
comp=Z,72nm,1.3s
D53A IAMs_20 IAMs_20 21 39 24.4
comp=Z,3µm,22.0s
E56A St. Veronique 84.87 15 P P 21 05 04.1 +1.4
baz=197,SNR=8.1
E57A Chemin Saint G 84.94 16 P P 21 05 05.4 +2.3
baz=198
F60A Warwick 85.02 17 P P 21 05 05.7 +2.2
baz=200
PKME Peaks-Kenny Pk 85.03 19 P P 21 05 05.9 +2.4
baz=202
PKME Peaks-Kenny Pk 85.03 19 IAMs_20 IAMs_20 21 41 19.3
comp=Z,2µm,19.0s
F04A Amboy 85.08 342 IAMs_20 IAMs_20 21 36 08.5
comp=Z,2µm,20.0s
E58A La Victoria 85.09 16 P P 21 05 05.6 +1.8
baz=199
D54A Lac Fusel, La 85.13 14 P P 21 05 05.5 +1.5
baz=196,SNR=6.3
H66A Whiting 85.14 21 P P 21 05 05.9 +1.8
baz=203
G64A Maxfield 85.17 20 P P 21 05 06.1 +1.9
baz=202
D55A Sainte-Anne-du 85.23 15 P P 21 05 06.4 +1.8
baz=197,SNR=6.9
D08A Wollman Farm, 85.36 345 P P 21 05 02.6 -2.6
D08A IAmb IAmb 21 05 44.6
comp=Z,60nm,1.3s
D08A IAMs_20 IAMs_20 21 37 13.8
comp=Z,3µm,19.0s
F03A Seaside 85.36 342 IAMs_20 IAMs_20 21 34 47.0
comp=Z,4µm,22.0s
D56A ZEC Mazanza, M 85.41 15 P P 21 05 07.7 +2.2
baz=198
G65A Princeton 85.45 20 P P 21 05 07.5 +1.9
baz=203
F63A Nahmakanta, Br 85.49 19 P P 21 05 07.8 +1.9
baz=202
F63A Nahmakanta, Br 85.49 19 P P 21 05 03.9 -2.0
F63A IAmb IAmb 21 05 13.2
comp=Z,24nm,0.8s
E60A Ste Agathe de 85.52 17 P P 21 05 08.6 +2.7
baz=200
D57A Chemin Vers le 85.57 16 P P 21 05 08.5 +2.2
baz=198
E04D Cinebar 85.70 343 P P 21 05 09.2 +2.3
baz=160
LON Longmire 85.70 343 IAMs_20 IAMs_20 21 36 01.0
comp=Z,4µm,19.0s
D58A Chemin du LacG 85.86 16 P P 21 05 09.1 +1.4
baz=199
VLDQ Val d'Or 85.90 13 P P 21 05 04.9 -2.9
VLDQ IAmb IAmb 21 05 35.0
comp=Z,85nm,1.7s
VLDQ IAMs_20 IAMs_20 21 39 10.4
comp=Z,3µm,22.0s
LTY Liberty 85.92 344 IAMs_20 IAMs_20 21 35 53.7
comp=Z,3µm,20.0s
E03A Lebam 85.94 342 IAMs_20 IAMs_20 21 34 55.2
comp=Z,5µm,22.0s
C09A Chrisman Ranch 85.94 346 P P 21 05 06.0 -2.0
C09A IAMs_20 IAMs_20 21 36 24.2
comp=Z,2µm,20.0s
D60A Saint Jean D'O 86.15 18 P P 21 05 10.8 +1.8
baz=201
D05A Enumclaw 86.16 343 IAMs_20 IAMs_20 21 36 16.0
comp=Z,3µm,20.0s
NEW Newport 86.16 347 P P 21 05 07.8 -1.4
NEW pmax pmax
comp=Z,85nm,1.3s
NEW MLR MLR
comp=Z,4µm,19.0s

NEW Newport 86.16 347 P P 21 05 11.5 +2.3
baz=164,SNR=9.2
NEW Newport 86.16 347 P P 21 05 07.8 -1.4
NEW IAmb IAmb 21 05 39.5
comp=Z,85nm,1.3s
NEW Newport 86.16 347 IAMs_20 IAMs_20 21 36 47.1
comp=Z,4µm,19.0s
ULM Lac du Bonnet 86.26 1 P P 21 05 06.0 -3.5
comp=Z,1.0nm,0.3s,baz=199,slow=3.3,SNR=2.1
ULM Lac du Bonnet 86.26 1 deP P 21 05 12.1 +2.5
ULM Lac du Bonnet 86.26 1 P P 21 05 06.0 -3.5
D04E Lakebay 86.33 343 P P 21 05 12.9 +2.9
baz=159
E63A Oxbow 86.33 19 P P 21 05 12.1 +2.1
baz=202
WALA Waterton Lakes 86.38 349 IAMs_20 IAMs_20 21 37 10.9
comp=Z,3µm,21.0s
TOO Toolangi 86.43 225 P P 21 05 09.6 -1.5
TOO pmax pmax
comp=Z,37nm,1.1s
TOO MLR MLR
comp=Z,10µm,19.0s
TOO Toolangi 86.43 225 P P 21 05 09.6 -1.5
TOO IAmb IAmb 21 05 17.8
comp=Z,37nm,1.1s
E64A Bridgewater 86.49 20 P P 21 05 13.0 +2.2
baz=203
D61A St Aubert, Com 86.60 18 P P 21 05 14.0 +2.6
baz=201
D03D Eldon 86.74 343 P P 21 05 14.7 +2.6
baz=159
D03D S S 21 15 51.9 +2.7
baz=159
D62A Allapoint, All 86.78 19 P P 21 05 14.3 +2.1
baz=202
D62A Allapoint, All 86.78 19 IAMs_20 IAMs_20 21 39 32.4
comp=Z,3µm,21.0s
NLWA Neilton Lookou 86.80 342 IAMs_20 IAMs_20 21 37 03.0
comp=Z,3µm,19.0s
D63A Stockholm 86.99 19 P P 21 05 14.7 +1.5
baz=203
B05A Bryant 87.19 344 P P 21 05 16.0 +1.8
baz=160
B05A S S 21 15 53.1 -0.4
baz=160
B06A Marblemount 87.30 344 IAMs_20 IAMs_20 21 36 58.1
comp=Z,4µm,21.0s
MATQ Matagami 87.46 12 P P 21 05 17.6 +2.2
baz=195
ARMA Armidale 87.52 234 P P 21 05 15.4 -1.3
ARMA IAmb IAmb 21 05 23.3
comp=Z,25nm,0.9s
A04D Lummi Island 87.76 343 P P 21 05 19.6 +2.8
baz=159
BATG Bathurst New B 87.77 21 P P 21 05 14.8 -2.2
CHGQ Chibougamau 88.21 14 P P 21 05 20.3 +1.2
baz=198,SNR=5.2
FFC Flin Flon 90.84 357 P P 21 05 30.2 -1.0
FFC pmax pmax
comp=Z,38nm,1.6s
FFC Flin Flon 90.84 357 P P 21 05 30.2 -1.0
FFC IAmb IAmb 21 05 60.0
comp=Z,38nm,1.6s
EIDS Eidsvold 91.21 237 P P 21 05 31.9 -2.0
EIDS IAmb IAmb 21 05 43.4
comp=Z,61nm,1.9s
STKA Stephens Creek 92.73 227 P P 21 05 40.5 -0.4
comp=Z,5.5nm,1.1s,baz=144,slow=6.0,SNR=4.0
STKA LR LR 21 38 51.7
comp=Z,11µm,21.7s,baz=128,slow=30
STKA Stephens Creek 92.73 227 P P 21 05 39.1 -1.7
STKA pmax pmax
comp=Z,12nm,2.0s
STKA Stephens Creek 92.73 227 P P 21 05 39.1 -1.7
MOBC Moresby Island 94.19 340 IAMs_20 IAMs_20 21 38 27.5
comp=Z,2µm,22.0s
DIB Dawson Inlet, 94.38 339 IAMs_20 IAMs_20 21 38 29.7
comp=Z,3µm,21.0s
SCHQ Schefferville 94.47 17 P P 21 05 46.5 -1.5
comp=Z,1.0nm,0.4s,baz=206,slow=6.8,SNR=2.2
SCHQ LR LR 21 45 10.2
comp=Z,4µm,19.0s,baz=210,slow=34
SCHQ Schefferville 94.47 17 P P 21 05 45.4 -2.6
HNR Honiara 94.81 255 P P 21 05 50.1 -0.6
comp=Z,26nm,0.4s,baz=31,slow=8.2,SNR=1.4
FCC Fort Churchill 94.81 2 P P 21 05 47.6 -1.8
FCC pmax pmax
comp=Z,26nm,1.3s
FCC Fort Churchill 94.81 2 P P 21 05 47.6 -1.8
FCC IAmb IAmb 21 06 17.4
comp=Z,26nm,1.3s
BOSA Boshof 95.58 132 LR LR 21 45 52.2
comp=Z,653nm,18.0s,baz=214,slow=34
DBIC Dimbokro 95.62 86 P P 21 05 54.2 -0.1
comp=Z,3.4nm,1.0s,baz=128,slow=12,SNR=2.1
DBIC LR LR 21 44 18.5
comp=Z,2µm,21.7s,baz=210,slow=32
WRAK Wrangell Islan 97.19 341 IAMs_20 IAMs_20 21 43 34.9
comp=Z,2µm,18.0s
DLBC Dease Lake 98.42 343 IAMs_20 IAMs_20 21 45 17.3
comp=Z,2µm,19.0s
SIT Sitka 98.55 340 IAMs_20 IAMs_20 21 40 58.9
comp=Z,4µm,21.0s
CMLA Cha da Macela 99.02 50 IAMs_20 IAMs_20 21 42 59.2
comp=Z,3µm,18.0s
JIS Juneau Island 99.36 341 IAMs_20 IAMs_20 21 41 33.1
comp=Z,4µm,22.0s
YKA Yellowknife Ar 99.55 352 P Pdif 21 06 09.7 -1.1
comp=Z,0.7nm,0.8s,baz=261,slow=38,SNR=2.8
YKA PKKP PKKPbc 21 22 29.9 -4.8
comp=Z,0.2nm,0.4s,baz=352,slow=3.3,SNR=4.8
YKA PKKPbc PKKPdf 21 22 39.7 -0.1
comp=Z,0.9nm,0.7s,baz=336,slow=3.1,SNR=10
YKA LR LR 21 47 29.4
comp=Z,3µm,18.1s,baz=0.0,slow=33
BESE Bessie Mountai 99.74 341 IAMs_20 IAMs_20 21 41 44.4
comp=Z,4µm,22.0s
SKAG Skagway 100.63 341 IAMs_20 IAMs_20 21 41 44.8
comp=Z,3µm,22.0s
DHAK Deception Hill 101.09 340 IAMs_20 IAMs_20 21 42 09.1
comp=Z,4µm,21.0s
PMOZ Porto Moniz, M 101.43 58 eLR LR 21 40 45.0
comp=Z,1µm,22.0s
WHY Whitehorse 101.55 342 IAMs_20 IAMs_20 21 43 19.2
comp=Z,3µm,22.0s
YKU2 Yakutat 101.86 339 IAMs_20 IAMs_20 21 42 01.3
comp=Z,4µm,21.0s
HYT Haines Junctio 102.36 341 IAMs_20 IAMs_20 21 42 33.7
comp=Z,4µm,22.0s
ASAR Alice Springs 103.36 227 Pdiff Pdif 21 06 27.9 -1.0
comp=Z,0.7nm,0.9s,baz=171,slow=2.9,SNR=3.5
ASAR PKiKP PKiKP 21 10 47.8 -0.3
comp=Z,0.2nm,0.5s,baz=132,slow=7.7,SNR=2.0
ASAR PKKPbc PKKPbc 21 22 20.4 -1.7
comp=Z,0.2nm,0.5s,baz=303,slow=2.9,SNR=3.3
ASAR PKKP PKKPdf 21 22 25.6 -3.6
comp=Z,0.6nm,0.8s,baz=323,slow=2.7,SNR=5.5
ASAR Alice Springs 103.36 227 P Pdif 21 06 28.0 -1.0
H01W1 Cape Leeuwin H 103.39 206 T T 23 02 32.9
baz=152,slow=76,SNR=68
H01W2 Cape Leeuwin H 103.39 206 T T 23 02 38.0
baz=152,slow=76,SNR=91
H01W3 Cape Leeuwin H 103.40 206 T T 23 02 37.0
baz=152,slow=76,SNR=70
CTGM Chitina Glacie 103.53 339 IAMs_20 IAMs_20 21 43 22.5
comp=Z,4µm,21.0s
TGL Tana Glacier 103.79 339 IAMs_20 IAMs_20 21 45 17.4
comp=Z,2µm,20.0s
MID Middleton Isla 103.82 336 IAMs_20 IAMs_20 21 42 35.2
comp=Z,2µm,20.0s
BALM Baldy 103.87 339 IAMs_20 IAMs_20 21 42 47.7
comp=Z,3µm,22.0s
CRQM Cirque 103.88 339 IAMs_20 IAMs_20 21 45 18.4
comp=Z,3µm,21.0s
NWAO Narrogin (SRO) 103.99 209 IAMs_20 IAMs_20 21 42 36.6
comp=Z,3µm,20.0s
VRDI Verde Repeater 104.35 339 IAMs_20 IAMs_20 21 45 43.3
comp=Z,2µm,19.0s
COEN Coen 104.38 240 IAMs_20 IAMs_20 21 43 37.9
comp=Z,3µm,22.0s
EYAK Cordova Ski Ar 104.50 337 IAMs_20 IAMs_20 21 43 15.4
comp=Z,3µm,20.0s
PMG Port Moresby 104.56 247 IAMs_20 IAMs_20 21 49 25.7
comp=Z,3µm,19.0s
TORD Torodi Ar. Bea 104.60 84 Pdiff Pdif 21 06 35.4 +1.0
comp=Z,0.2nm,0.5s,baz=304,slow=36,SNR=2.5
TORD PKiKP PKiKP 21 10 46.1 -4.2
comp=Z,1.6nm,1.0s,baz=257,slow=6.2,SNR=3.5
TORD PKKP PKKPab 21 22 33.8 -3.2
comp=Z,0.6nm,0.9s,baz=153,slow=1.0,SNR=3.6
HIN Hinchinbrook I 104.62 337 IAMs_20 IAMs_20 21 43 33.5
comp=Z,3µm,20.0s
GLB Gilahina Butte 104.62 339 IAMs_20 IAMs_20 21 48 44.5
comp=Z,2µm,19.0s
FID Port Fidalgo 104.89 337 IAMs_20 IAMs_20 21 42 42.1
comp=Z,3µm,22.0s
GLI Glacier Island 105.18 337 IAMs_20 IAMs_20 21 43 08.3
comp=Z,3µm,22.0s
MENT Mentasta 105.79 340 IAMs_20 IAMs_20 21 44 47.3
comp=Z,3µm,21.0s
WRA Warramunga Arr 105.92 230 Pdiff Pdif 21 06 39.6 -0.8
comp=Z,0.5nm,0.9s,baz=134,slow=4.1,SNR=2.2
SCM Sheep Creek Mo 105.98 338 IAMs_20 IAMs_20 21 44 12.5
comp=Z,3µm,22.0s
KNK Knik Glacier 106.02 337 IAMs_20 IAMs_20 21 44 27.4
comp=Z,3µm,21.0s
SDPT Sand Point 106.20 328 IAMs_20 IAMs_20 21 43 08.7
comp=Z,3µm,22.0s
SML Sawmill 106.28 337 IAMs_20 IAMs_20 21 45 24.2
comp=Z,2µm,22.0s
PMR Palmer 106.36 337 IAMs_20 IAMs_20 21 44 36.6
comp=Z,3µm,21.0s
GHO Glory Hole Cre 106.44 337 IAMs_20 IAMs_20 21 44 13.4
comp=Z,2µm,20.0s
DOT Dot Lake 106.45 340 IAMs_20 IAMs_20 21 44 59.7
comp=Z,3µm,20.0s
EGAK Eagle 106.59 342 IAMs_20 IAMs_20 21 45 09.4
comp=Z,3µm,20.0s
EPYK Eagle Plains 106.87 344 P PKiKP 21 10 54.6 +1.5
baz=147
EPYK Eagle Plains 106.87 344 IAMs_20 IAMs_20 21 46 33.7
comp=Z,2µm,20.0s
DHY Denali Highway 106.95 338 IAMs_20 IAMs_20 21 45 09.0
comp=Z,3µm,20.0s
C36M Paulatuk 107.29 350 IAMs_20 IAMs_20 21 50 59.6
comp=Z,3µm,20.0s
RND Reindeer 107.64 338 IAMs_20 IAMs_20 21 45 28.3
comp=Z,4µm,22.0s
HDA Harding Lake 107.84 340 IAMs_20 IAMs_20 21 46 05.6
comp=Z,2µm,20.0s
INK Inuvik 107.88 347 PKKPbc PKKPbc 21 22 15.9 +6.4
comp=Z,1.1nm,0.8s,baz=36,slow=4.4,SNR=3.9
MCK McKinley 107.91 338 IAMs_20 IAMs_20 21 45 37.3
comp=Z,3µm,22.0s
ILAR Eielson Array 108.10 340 Pdiff Pdif 21 06 46.9 -1.9
comp=Z,0.2nm,0.5s,baz=273,slow=23,SNR=2.0
ILAR PP PP 21 11 18.5 -0.4
comp=Z,0.7nm,0.8s,baz=179,slow=4.5,SNR=5.4
ILAR PKKPbc PKKPbc 21 22 13.4 +4.6
comp=Z,0.7nm,0.8s,baz=306,slow=3.6,SNR=7.0
TRF Thorofare Moun 108.11 338 IAMs_20 IAMs_20 21 45 19.6
comp=Z,3µm,22.0s
WRH Wood River Hil 108.22 339 IAMs_20 IAMs_20 21 47 57.4
comp=Z,2µm,18.0s
CCB Clear Creek Bu 108.27 339 IAMs_20 IAMs_20 21 54 15.7
comp=Z,2µm,21.0s
PRP Porcupine Dome 108.31 341 IAMs_20 IAMs_20 21 48 40.8
comp=Z,3µm,19.0s
KTH Kantishna Hill 108.38 338 IAMs_20 IAMs_20 21 47 16.7
comp=Z,2µm,19.0s
BWN Browne 108.39 339 IAMs_20 IAMs_20 21 45 39.8
comp=Z,2µm,22.0s
COLA College 108.45 340 IAMs_20 IAMs_20 21 49 01.7
comp=Z,2µm,20.0s
NEA Nenana 108.58 339 IAMs_20 IAMs_20 21 48 06.3
comp=Z,2µm,18.0s
BPAW Bear Paw Mtn. 108.79 338 IAMs_20 IAMs_20 21 46 01.8
comp=Z,3µm,22.0s
FYU Fort Yukon 109.04 342 IAMs_20 IAMs_20 21 47 54.2
comp=Z,3µm,21.0s
MLY Manley 109.40 339 IAMs_20 IAMs_20 21 47 22.7
comp=Z,2µm,20.0s
PFVI Vila Bisbo 109.53 58 eSS SS 21 27 04.5 +12
PFVI Vila Bisbo 109.53 58 IAMs_20 IAMs_20 21 55 31.3
comp=Z,2µm,21.0s
MORF Marmelete 109.74 58 eSS SS 21 27 11.5 +16
PMAFR Mafra 110.15 56 eSS SS 21 27 13.6 +13
PBDV Barranco-do-Ve 110.20 58 eSS SS 21 27 09.6 +7.9
PNCL Nicolau / Gran 110.23 57 eSS SS 21 27 12.6 +11
PCVE Castro Verde 110.32 58 eSS SS 21 27 23.4 +20
PVAQ Vaqueiros 110.42 58 eSS SS 21 27 16.7 +12
PVAQ Vaqueiros 110.42 58 eLR LR 21 44 59.0
comp=Z,1µm,22.0s
PSBE So Bento 110.76 56 eSS SS 21 27 27.1 +18
RES Resolute Bay 110.79 1 IAMs_20 IAMs_20 21 53 50.4
comp=Z,3µm,20.0s
PMTG Montargil 110.92 56 eSS SS 21 27 21.4 +10
PCAS Casmilo, Conde 111.23 55 eSS SS 21 27 21.1 +5.7
PESTR Estremoz 111.25 57 eSS SS 21 27 26.1 +10
COI Coimbra 111.37 55 IAMs_20 IAMs_20 21 51 46.7
comp=Z,2µm,21.0s
PMRV Marv??o 111.66 56 eSS SS 21 27 26.1 +4.9
PMRV Marv??o 111.66 56 eLR LR 21 45 13.9
comp=Z,1µm,18.0s
TOLK Toolik Lake Re 111.70 342 P PKiKP 21 11 03.4 +1.2
baz=136
TOLK Toolik Lake Re 111.70 342 IAMs_20 IAMs_20 21 48 35.5
comp=Z,3µm,21.0s
MTE Manteigas 112.04 55 eSS SS 21 27 31.2 +4.9
MTE Manteigas 112.04 55 eLR LR 21 44 24.8
comp=Z,2µm,22.0s
MTE Manteigas 112.04 55 IAMs_20 IAMs_20 21 52 16.5
comp=Z,2µm,22.0s
PGAV Gavieira, Arco 112.33 54 eSS SS 21 27 34.0 +3.9
PGAV Gavieira, Arco 112.33 54 eLR LR 21 45 39.7
comp=Z,690nm,20.0s
MVO Moncorvo 112.75 55 eSS SS 21 27 40.1 +4.4
MVO Moncorvo 112.75 55 eLR LR 21 45 36.6
comp=Z,798nm,24.0s
PBRG Braganca 113.25 54 eSS SS 21 27 59.0 +17
PAB San Pablo 113.78 58 IAMs_20 IAMs_20 21 54 10.8
comp=Z,2µm,21.0s
TULEG Thule 114.04 7 IAMs_20 IAMs_20 21 58 12.4
comp=Z,2µm,20.0s
ESDC Sonseca Array 114.10 58 PKiKP PKiKP 21 11 10.5 +2.9
comp=Z,0.2nm,0.5s,baz=184,slow=37,SNR=2.9
ESDC PP PP 21 12 11.7 +8.9
comp=Z,2.4nm,1.1s,baz=258,slow=6.6,SNR=6.1
RDOG Red Dog Mine 115.05 338 IAMs_20 IAMs_20 21 49 27.1
comp=Z,2µm,21.0s
SMY Shemya 117.35 317 IAMs_20 IAMs_20 21 49 14.5
comp=Z,3µm,22.0s
SCO Scoresbysund 119.09 22 IAMs_20 IAMs_20 21 58 19.8
comp=Z,2µm,21.0s
FLN La Foliniere 120.22 50 ePKIKP PKiKP 21 11 24.9 +5.9
FLN pmax pmax
comp=Z,28nm,1.6s
LDF La Druitiere 120.37 50 ePKIKP PKiKP 21 11 22.3 +2.9
LDF pmax pmax
comp=Z,16nm,1.2s
ESK Eskdalemuir 120.99 42 IAMs_20 IAMs_20 21 59 45.6
comp=Z,1µm,20.0s
BGF Bois d'Agland 121.50 53 ePKIKP PKiKP 21 11 28.4 +6.7
BGF pmax pmax
comp=Z,6.0nm,0.9s
CLF Chambon-Foret 121.65 51 IAMs_20 IAMs_20 21 56 59.3
comp=Z,1µm,22.0s
KEST Kesra 121.87 67 PKiKP PKPdf 21 11 22.2 -0.5
comp=Z,1.9nm,0.9s,baz=231,slow=4.6,SNR=1.6
AVF Avril sur Loir 121.91 53 ePKIKP PKiKP 21 11 28.7 +6.3
AVF pmax pmax
comp=Z,6.0nm,1.0s
SSF Saint Saulge 122.10 53 ePKIKP PKiKP 21 11 29.2 +6.4
SSF pmax pmax
comp=Z,9.0nm,1.2s
SMF Signal de Mont 122.17 53 ePKIKP PKiKP 21 11 29.4 +6.4
SMF pmax pmax
comp=Z,14nm,1.2s
LOR Lormes 122.40 52 ePKIKP PKiKP 21 11 29.9 +6.5
LOR pmax pmax
comp=Z,11nm,1.3s
ORIF Oris-en-Rattie 122.90 56 ePKIKP PKiKP 21 11 30.6 +6.0
ORIF pmax pmax
comp=Z,6.0nm,0.9s
FRF La Foret Royal 122.94 57 ePKIKP PKiKP 21 11 31.1 +6.5
FRF pmax pmax
comp=Z,15nm,1.1s
BNI Bardonecchia 123.48 56 IAMs_20 IAMs_20 22 02 38.4
comp=Z,1µm,22.0s
LPL La Plagne 123.67 55 ePKIKP PKiKP 21 11 30.8 +4.5
LPL pmax pmax
comp=Z,7.0nm,1.0s
LPG La Plagne 123.68 55 ePKIKP PKiKP 21 11 32.0 +5.6
LPG pmax pmax
comp=Z,7.0nm,0.9s
UCC Uccle 123.86 49 IAMs_20 IAMs_20 21 57 52.3
comp=Z,1µm,22.0s
PGF Pioggiola 124.20 59 ePKIKP PKiKP 21 11 34.1 +6.8
PGF pmax pmax
comp=Z,11nm,0.8s
HINF Hinteralfeld 124.50 53 ePKIKP PKiKP 21 11 33.9 +6.3
HINF pmax pmax
comp=Z,13nm,1.4s
BILL Bilibino 125.65 333 i PKIKP PKiKP 21 11 33.5 +4.3
BILL i 21 13 23.1
BILL i SS SS 21 30 15.5 -5.2
BILL pmax pmax
comp=Z,1.0nm,0.9s
BILL MLR MLR
comp=Z,3µm,17.0s
TUE Stuetta 125.71 55 IAMs_20 IAMs_20 22 01 00.1
comp=Z,2µm,22.0s
WDD Wied Dalam 125.78 69 IAMs_20 IAMs_20 22 05 45.9
comp=Z,2µm,20.0s
TNTI Ternate 125.80 240 IAMs_20 IAMs_20 21 59 43.6
comp=Z,1µm,22.0s
BUG Bochum--Univer 125.80 48 ePKPdf PKiKP 21 11 37.6 +7.6
baz=256,slow=1.9
TNS Taunus Mts 126.19 50 ePKPdf PKiKP 21 11 38.7 +7.8
baz=256,slow=1.9
DAVA Damuels 126.30 54 esPKPdf PKiKP 21 11 37.8 +6.4
comp=Z,15nm,1.4s
FUORN Ofenpass-Fuorn 126.36 55 IAMs_20 IAMs_20 22 01 09.3
comp=Z,1µm,21.0s
FETA Feichten 126.78 54 esPKiKP PKiKP 21 11 39.0 +6.7
comp=Z,23nm,1.0s
PEA0B Petropavlovsk- 126.84 313 ⇑ iPKIKP PKiKP 21 11 35.8 +3.8
PETK Petropavlovsk- 126.84 313 PKP PKPdf 21 11 30.0 -1.6
comp=Z,4.8nm,1.2s,baz=338,slow=43,SNR=2.1
PETK Petropavlovsk- 126.84 313 PKIKP PKPdf 21 11 30.0 -1.6
MURB Monte Urbino 126.88 59 PKPpre 21 11 17.0
RETA Reutte 126.93 54 esPKiKP PKiKP 21 11 39.7 +7.2
comp=Z,18nm,1.2s
CTI Castel Tesino 127.11 56 IAMs_20 IAMs_20 22 00 53.4
comp=Z,1µm,21.0s
MOTA Moosalm 127.11 54 epPKiKP PKiKP 21 11 38.4 +5.4
comp=Z,24nm,1.1s
SQTA Sankt Quirin 127.15 54 esPKPdf PKiKP 21 11 38.8 +5.8
comp=Z,36nm,1.3s
RETH Rethem/Aller, 127.37 47 ePKPdf PKiKP 21 11 40.8 +7.8
baz=256,slow=1.9
WATA Walderalm 127.42 54 esPKiKP PKiKP 21 11 40.7 +7.1
comp=Z,17nm,1.2s
WTTA Wattenberg 127.44 54 esPKPdf PKiKP 21 11 40.1 +6.4
comp=Z,29nm,1.5s
FUR Furstenfeldbru 127.44 53 ePKPdf PKiKP 21 11 40.6 +7.1
baz=256,slow=1.9
GTTG Gottingen 127.46 49 ePKPdf PKiKP 21 11 40.9 +7.6
baz=256,slow=1.9
INTR Introdacqua 127.46 61 IAMs_20 IAMs_20 22 07 02.4
comp=Z,1µm,22.0s
CEL Celeste 127.67 66 IAMs_20 IAMs_20 22 11 58.8
comp=Z,1µm,18.0s
NRDL Niedersach Rie 127.76 48 ePKPdf PKiKP 21 11 41.4 +7.7
baz=256,slow=1.9
CLZ Clausthal 127.77 49 ePKPdf PKiKP 21 11 41.6 +7.6
baz=256,slow=1.9
GRF Grafenberg Arr 127.79 51 ePKPdf PKiKP 21 11 41.7 +7.6
baz=256,slow=1.9
GRF eL L 22 01 04.5
comp=Z,861nm,21.1s
ABTA Abfaltersbach 127.88 55 epPKPdf PKiKP 21 11 39.0 +4.5
comp=Z,10nm,1.1s
ASSE Asse, Remlinge 128.02 48 ePKPdf PKiKP 21 11 42.0 +7.8
baz=256,slow=1.9
MOX Moxa 128.26 50 ePKPdf PKiKP 21 11 42.1 +7.1
baz=256,slow=1.9
MOX eL L 22 09 27.4
comp=Z,736nm,21.2s
MANZ Manzenberg 128.42 51 ePKPdf PKiKP 21 11 42.5 +7.1
baz=256,slow=1.9
KBA Koelnbreinsper 128.51 55 epPKiKP PKiKP 21 11 40.9 +5.1
comp=Z,10nm,1.7s
PLN Plauen 128.56 51 ePKPdf PKiKP 21 11 42.9 +7.3
baz=256,slow=1.9
GUNZ Gunzen 128.65 51 ePKPdf PKiKP 21 11 43.2 +7.4
baz=256,slow=1.9
WERN Wernitzgruen 128.66 51 ePKPdf PKiKP 21 11 43.3 +7.5
baz=256,slow=1.9
NKC Novy Kostel 128.69 51 ePKIKP PKiKP 21 11 43.1 +7.2
NKC Novy Kostel 128.69 51 ePKP PKiKP 21 11 43.1 +7.2
NKC ex x 21 11 49.0
NKC ePP PP 21 13 52.1 +10
NKC AMS AMS 21 55 10.0
comp=Z,4µm,39.3s
WET Wettzell 128.71 52 ePKPdf PKiKP 21 11 42.9 +7.0
baz=256,slow=1.9
TANN Tannenbergstha 128.74 51 ePKPdf PKiKP 21 11 43.3 +7.3
baz=256,slow=1.9
XMIS Christmas Isla 128.75 209 IAMs_20 IAMs_20 21 59 53.4
comp=Z,2µm,21.0s
UGM Wanagama 128.93 216 IAMs_20 IAMs_20 21 59 50.3
comp=Z,2µm,21.0s
KBS Kingsbay 129.05 14 IAMs_20 IAMs_20 22 05 06.4
comp=Z,2µm,20.0s
KHC Kasperske Hory 129.16 52 ePKIKP PKiKP 21 11 42.0 +5.1
KHC Kasperske Hory 129.16 52 ePKP PKiKP 21 11 42.0 +5.1
KHC ex x 21 11 49.0
OBKA Obir 129.17 56 epPKiKP PKiKP 21 11 42.3 +5.3
comp=Z,5.0nm,0.8s
GERES GERESS Array B 129.17 53 PKP PKiKP 21 11 37.2 +0.2
comp=Z,1.4nm,0.7s,baz=178,slow=3.5,SNR=4.6
CLL Collm 129.26 50 i PKPdf PKiKP 21 11 45.0 +8.1
comp=Z,29nm,1.3s
CLL ePP PP 21 13 47.0 +1.4
CLL ePKSdf PKSdf 21 15 08.0 -4.5
CLL ePPP PPP 21 16 42.0
CLL ePPS PPS 21 25 25.0
CLL e(SS) 21 31 37.0
CLL eSSS SSS 21 36 06.0
CLL LV 22 00 00.0
comp=Z,900nm,21.6s
CLL Collm 129.26 50 i PKIKP PKiKP 21 11 45.0 +8.1
CLL pmax pmax
comp=Z,29nm,1.3s
CLL MLR MLR
comp=Z,900nm,21.6s
MOA Molln 129.31 54 epPKiKP PKiKP 21 11 42.1 +5.0
comp=Z,9.0nm,1.4s
FBE Freiberg 129.40 50 ePKPdf PKiKP 21 11 44.6 +7.4
baz=256,slow=1.9
SOKA Soboth 129.54 56 epPKiKP PKiKP 21 11 42.6 +4.9
comp=Z,6.2nm,0.9s
PBCC Pribram 129.54 52 ePKP PKiKP 21 11 43.5 +5.9
PBCC ex x 21 11 50.9
NB2 NORSAR Subarra 129.68 37 PKPdf PKiKP 21 11 41.8 +4.3
comp=Z,14nm,1.4s,baz=270,slow=1.9
NB2 NORSAR Subarra 129.68 37 PKPdf PKiKP 21 11 41.8 +4.3
baz=270,slow=1.9
NOA NORSAR Array B 129.68 37 PKP PKPdf 21 11 34.3 -2.5
comp=Z,0.3nm,0.7s,baz=126,slow=14,SNR=1.7
SMRI Semarang 129.72 216 IAMs_20 IAMs_20 22 00 38.3
comp=Z,3µm,22.0s
BRG Berggiesshubel 129.75 50 ePKP PKiKP 21 11 44.7 +6.8
comp=Z,6.9nm,1.1s
BRG e 21 11 50.6
comp=Z,17nm,1.3s
BRG PP PP 21 13 42.0 -6.9
BRG SKP 21 15 05.0
BRG SDIFF 21 22 06.0
BRG SS SS 21 31 31.0 +18
BRG Berggiesshubel 129.75 50 ePKPdf PKiKP 21 11 44.9 +7.0
baz=256,slow=1.9
BRG Berggiesshubel 129.75 50 ePKIKP PKiKP 21 11 44.7 +6.8
BRG SS SS 21 31 31.0 +18
BRG pmax pmax
comp=Z,7.0nm,1.1s
PRU Pruhonice 129.95 52 ePP PP 21 13 53.2 +3.0
PRU ex x 21 31 52.5
PRU AMS AMS 21 56 00.0
comp=Z,4µm,36.8s
ARSA Arzberg 130.00 55 esPKPdf PKiKP 21 11 44.7 +6.1
comp=Z,5.8nm,0.8s
RGN Rugen 130.03 46 IAMs_20 IAMs_20 22 03 14.0
comp=Z,1µm,21.0s
PVCC Panska Ves 130.08 51 ePKIKP PKiKP 21 11 45.5 +6.9
PVCC Panska Ves 130.08 51 ePKP PKiKP 21 11 45.5 +6.9
PVCC AMS AMS 21 55 50.0
comp=Z,3µm,35.0s
GOPC GO Pecny, Ondr 130.09 52 ePP PP 21 13 56.0 +4.9
GOPC ex x 21 31 54.8

GOPC AMS AMS 21 55 50.0
comp=Z,3µm,32.3s
CONA Conrad Observa 130.37 54 *e*pPKiKP **PKiKP 21 11 44.6 +5.2**
comp=Z,5.3nm,0.9s
TREC Trest 130.42 53 *e*PKIKP **PKiKP 21 11 45.6 +6.2**
TREC Trest 130.42 53 *e*PKP **PKiKP 21 11 45.6 +6.2**
TREC AMS AMS 21 56 20.0
comp=Z,3µm,38.8s
CISI Cisompet, Garu 130.48 213 IAMs_20 IAMs_20 22 01 32.5
comp=Z,2µm,20.0s
BLY Banja Luka 130.52 59 ⇓P **PKiKP 21 11 47.0 +7.3**
SEY Seymchan 130.93 325 PKP **PKPdf 21 11 36.5 -2.6**
comp=Z,2.7nm,0.8s,baz=321,slow=23,SNR=2.1
SEY Seymchan 130.93 325⇓*i*PKIKP **PKiKP 21 11 41.0 +1.1**
UPC Upice 130.98 51 *e*PP PP 21 13 57.8 +1.0
UPC *e*x x 21 32 05.8
UPC AMS AMS 21 56 10.0
comp=Z,4µm,39.2s
CHVC Chvalec 131.02 51 AMS AMS 21 56 10.0
comp=Z,4µm,41.1s
OSTC Ostas 131.12 51 *e*PKP **PKiKP 21 11 46.8 +6.1**
OSTC *e*x x 21 11 52.2
OSTC *e*x x 21 32 14.3
OSTC AMS AMS 21 57 20.0
comp=Z,3µm,35.1s
VRAC Vranov 131.13 53 ⇑P PKiKP 21 11 55.0 +14
DPC Dobruska-Polom 131.15 51 *e*PKP **PKiKP 21 11 47.4 +6.6**
DPC *e*PP PP 21 14 10.1 +12
DPC *e*x x 21 32 03.5
DPC AMS AMS 21 56 20.0
comp=Z,3µm,37.5s
FURI Furi 131.39 113 IAMs_20 IAMs_20 22 05 20.6
comp=Z,1µm,20.0s
PDG Podgorica 131.39 62 ⇑P **PKiKP 21 11 47.0 +5.5**
KRLC Kraliky 131.39 52 AMS AMS 21 57 40.0
comp=Z,2µm,35.9s
MSEY Mahe Island 131.72 142 IAMs_20 IAMs_20 21 56 38.4
comp=Z,1µm,22.0s
OKC Ostrava-Krasne 132.22 52 *e*PKP **PKiKP 21 11 49.5 +6.6**
OKC *e*x x 21 11 56.7
OKC *e*x x 21 32 34.5
OKC AMS AMS 21 56 40.0
comp=Z,2µm,41.9s
YUK Yuzh-Kuril'sk 132.43 300 *i* P **Pdif 21 08 38.3 +0.9**
YUK *e* 21 11 39.0
YUK *e* 21 14 03.1
YUK *e*PS **PS 21 24 20.0 -2.3**
YUK *e*SSS SSS 21 36 36.5
YUK MLR MLR
comp=Z,2µm,19.0s
YUK MLR MLR
comp=E,4µm,23.0s
YUK MLR MLR
comp=N,2µm,15.0s
VYHS Vyhne 132.44 54 *e*PKIKP **PKiKP 21 11 45.7 +2.3**
VYHS Vyhne 132.44 54 *e*PKP **PKiKP 21 11 45.7 +2.3**
OJC Ojcow 133.33 52 *e*PKP **PKiKP 21 11 51.1 +5.9**
IDI Anoyia 133.49 73 ⇓P **PKiKP 21 11 52.4 +6.3**
NIE Niedzica 133.54 53 *e*PKP PKiKP 21 11 58.1 +12
BZS Buzias 133.77 59 ⇑P **PKiKP 21 11 48.6 +2.3**
BZS Buzias 133.77 59 PKIKP **PKiKP 21 11 48.5 +2.3**
HERR Herculane 134.18 60 ⇓P **PKiKP 21 11 53.4 +6.4**
VTS Vitosha 134.28 63 ⇑P **PKiKP 21 11 54.5 +6.9**
GZR Gura Zlata 134.53 59 ⇓P PKiKP 21 11 55.8 +8.0
UZH Uzhgorod 134.72 55 *e*PKIKP **PKPdf 21 11 45.4 -1.2**
DRGR 134.73 57 ⇑P **PKiKP 21 11 51.8 +3.6**
DRGR 134.73 57 ⇑PKIKP **PKiKP 21 11 51.8 +3.6**
TRPA Tarpa 134.82 55 ⇑P **PKiKP 21 11 49.7 +1.5**
KWP Kalwaria Pacla 135.12 53 *e*PKP **PKiKP 21 11 50.7 +1.9**
YSS Yuzh-Sakhalins 135.13 303 *i* PKIKP **PKiKP 21 11 49.0 +0.1**
YSS *e* 21 14 22.5
YSS *e* 21 24 35.8
YSS *e* 21 26 30.0
SUW Suwalki 135.73 47 *e*PKP **PKiKP 21 11 55.0 +5.1**
SUW Suwalki 135.73 47 IAMs_20 IAMs_20 22 06 18.1
comp=Z,1µm,22.0s
ARR Arges 135.82 59 ⇑P **PKiKP 21 11 56.8 +6.3**
PMBI Palembang 135.94 212 IAMs_20 IAMs_20 22 05 20.6
comp=Z,2µm,21.0s
VOIR 136.12 59 ⇓P PKiKP 21 12 05.0 +14
MJAR Matsushiro Arr 136.14 287 PKhKP PKPpre 21 11 44.7
comp=Z,0.7nm,0.5s,baz=197,slow=3.9,SNR=4.0
MAJO Matsushiro 136.14 287 IAMs_20 IAMs_20 22 03 42.1
comp=Z,2µm,20.0s
MAT Matsushiro 136.14 287 *e*PKP **PKPdf 21 11 49.7 0.0**
DOPR Dopca 136.43 59 ⇑P **PKiKP 21 11 59.2 +7.6**
BURAR Bucovina Array 136.54 56 ⇑P **PKPdf 21 11 47.1 -3.1**
BURAR Bucovina Array 136.54 56 ⇑PKIKP **PKPdf 21 11 47.1 -3.1**
MLR Muntele Rosu 136.75 59 ⇑P **PKiKP 21 11 57.6 +5.2**
SBUM Sibu 136.79 225 IAMs_20 IAMs_20 22 06 12.1
comp=Z,1µm,22.0s
FINES FINESS Array B 136.84 36 PKP **PKPdf 21 11 47.8 -2.3**
comp=Z,1.0nm,0.8s,baz=146,slow=21,SNR=2.0
BIZ Bicaz 137.06 57 ⇓P **PKiKP 21 11 53.2 +0.4**
KKM Kota Kinabalu 137.17 233 IAMs_20 IAMs_20 22 08 13.0
comp=Z,2µm,21.0s
BISRR Bisoca 137.29 60 ⇑P **PKPdf 21 11 51.0 -0.6**
PLOR Plostina 137.29 59 ⇑P **PKiKP 21 11 56.8 +3.3**
PLOR Plostina 137.29 59 PKIKP **PKiKP 21 11 56.7 +3.3**
VRI Vrincioaia 137.34 59 ⇓P **PKiKP 21 11 56.3 +2.8**
VRI Vrincioaia 137.34 59 PKIKP **PKiKP 21 11 56.3 +2.8**
RASA Rasa 137.39 62 ⇑P **PKPdf 21 11 45.7 -6.0**
TIXI Tiksi 137.57 340 PKP **PKPdf 21 11 47.4 -3.8**
comp=Z,3.8nm,0.7s,baz=90,slow=3.4,SNR=4.0
TIXI Tiksi 137.57 340⇑*e*PKIKP **PKiKP 21 11 53.3 +0.2**
TIXI Tiksi 137.57 340 PKPpre 21 11 40.6
TIXI PKPdf **PKPdf 21 11 51.9 +0.7**
TIXI IAMs_20 IAMs_20 22 06 09.4
comp=Z,2µm,21.0s
NACGM Naroch 137.83 46 *e*PP PP 21 14 42.0 +1.9
NACGM *e*PPP PPP 21 17 00.0
NACGM *e*SKKS 21 19 52.0
NACGM *e*PS **PS 21 25 00.0 -8.0**
NACGM *e*SS SS 21 33 54.0 +64
NACGM *e*SSS SSS 21 38 08.0
NACGM *e*LQ LQ 21 58 17.0
NACGM *e*LR LR 22 03 50.0
NACGM LRM MLR 22 07 14.0
comp=Z,3.8nm,24.0s
HARR Harsova 138.02 61 ⇑P **PKPdf 21 11 53.4 +0.5**
HARR Harsova 138.02 61 PKIKP **PKPdf 21 11 53.3 +0.5**
CFR Carcaliu 138.23 60 ⇑P **PKiKP 21 11 56.5 +1.2**
CFR Carcaliu 138.23 60 PKIKP **PKiKP 21 11 56.5 +1.2**
SORM Soroca 138.69 56 ⇓P **PKiKP 21 11 58.4 +2.2**
SORM Soroca 138.69 56 PKIKP **PKiKP 21 11 58.3 +2.2**
MILM Milestii Mici 138.90 58 ⇓P **PKiKP 21 11 57.1 +0.5**
KIS Kishinev 138.91 58 *e*PKP PKiKP 21 12 06.0 +9.4
KIS *e*SS SS 21 34 12.0 +69
KIS *e*SSS SSS 21 38 45.0
KIS *e*LR LR 21 58 16.0
comp=Z,1µm,22.0s
AKASG Malin Array Be 139.37 52 PKP **PKPdf 21 11 52.1 -3.0**
comp=Z,0.3nm,0.3s,baz=30,slow=16,SNR=1.5
AKBB Malin Array Si 139.37 52⇑*e*PKIKP **PKiKP 21 11 58.7 +1.3**
BKNI Bangkinang 140.42 209 IAMs_20 IAMs_20 22 08 21.9
comp=Z,2µm,22.0s
BR131 Keskin Array S 141.37 70⇑*e*PKIKP **PKPdf 21 11 59.9 +0.6**
BRTR Keskin Array B 141.37 70 PKP **PKPdf 21 11 58.9 -0.5**
comp=Z,1.1nm,0.8s,baz=225,slow=1.6,SNR=6.0
BRTR Keskin Array B 141.37 70*c i*PKIKP **PKiKP 21 12 04.4 +2.3**
BRTR pmax pmax
comp=Z,5.0nm,0.8s
YAK Yakutsk 141.43 327 *e*PKIKP **PKPdf 21 11 55.1 -3.4**
YAK *e* 21 14 57.8
YAK *e*SS SS 21 33 32.2 +0.7
YAK pmax pmax
comp=Z,11nm,1.0s
YAK pmax pmax
comp=N,3.0nm,1.1s
YAK pmax pmax
comp=Z,132nm,19.0s
YAK pmax pmax
comp=E,38nm,18.0s
YAK pmax pmax
comp=N,19nm,16.8s
USA0B Ussuriysk Arra 142.30 297⇑*e*PKIKP **PKiKP 21 12 03.8 +0.1**
USRK Ussuriysk Ar. 142.30 297 PKP **PKPdf 21 11 58.2 -2.4**
comp=N,1.4nm,0.6s,baz=257,slow=25,SNR=3.6
SIM Simferopol' 142.42 61 *i* PKIKP **PKiKP 21 12 07.1 +3.2**
SIM pmax pmax
comp=Z,17nm,1.1s
KLR Kul'dur 142.64 306⇑*e*PKIKP **PKiKP 21 12 04.2 0.0**
KLR *i* 21 12 08.7
KLMR Klimovskoe 143.27 34 *e*PKIKP **PKPdf 21 12 02.8 +1.0**
KLMR pmax pmax
comp=Z,77nm,1.4s
KLMR Klimovskoe 143.27 34 *e*PKPdf **PKPdf 21 12 02.9 +1.1**
KLMR AMP 21 12 19.7
comp=Z,77nm,1.4s
OBN Obninsk 143.40 44 *i* PKIKP PKPab 21 11 58.1 -0.2
OBN *i* 21 15 14.9
OBN pmax pmax
comp=Z,35nm,1.1s
OBN MLR MLR
comp=Z,787nm,19.0s
OBN Obninsk 143.40 44 IAMs_20 IAMs_20 22 14 59.5
comp=Z,909nm,20.0s
GAZ Gaziantep 143.58 75 PKPpre PKPpre 21 11 55.9
GAZ **PKPdf 21 12 03.1 -0.1**
MOS Moscow 143.86 43 *e*PKIKP PKPbc 21 12 01.8 +1.1
MOS *i* 21 12 05.8
MOS *e* 21 15 14.1
MOS *e*SS SS 21 34 38.3 +38
MDJ Mudanjiang 144.05 298 PKP **PKiKP 21 12 06.2 -1.0**
MDJ pPKP sPKPdf 21 12 08.8 +2.1
MDJ PP **PP 21 15 21.1 +2.6**
MDJ SKS **SKSdf 21 19 14.5 +1.4**
MDJ AMB AMB
comp=Z,120nm,4.5s
MDJ LR LR
comp=Z,1µm,21.4s
MDJ LR LR
comp=Z,2µm,22.8s
MDJ LR LR
comp=Z,4µm,22.1s
MDJ Mudanjiang 144.05 298 PKPab 21 12 01.3 +0.1
IPM Ipoh 144.19 212 PKPab 21 12 01.7 -0.9
IPM IAMs_20 IAMs_20 22 17 28.9
comp=Z,2µm,18.0s
KSRS Korea Array 144.33 286 PKP **PKPab 21 12 01.8 -0.7**
comp=Z,8.4nm,0.7s,baz=108,slow=3.6,SNR=26
SOCY Socotra 144.47 125 PKPab 21 12 02.8 -0.9
SOCY IAMs_20 IAMs_20 22 16 39.6
comp=Z,1µm,21.0s
TJN Taejon 144.53 284*de*PKIKP **PKPdf 21 12 06.5 +1.7**
ANN Anapa 144.77 62 *e*PKIKP **PKPdf 21 12 05.5 +0.6**
ANN *i* 21 12 10.2
ANN pmax pmax
comp=N,54nm,0.9s
ANN pmax pmax
comp=E,34nm,1.4s
ANN pmax pmax
comp=Z,169nm,1.1s
ZEA Zeya 144.94 314 *e*PKIKP **PKPdf 21 12 05.8 +0.8**
ZEA pmax pmax
comp=Z,41nm,1.0s
ZEA pmax pmax
comp=Z,300nm,9.0s
SSLB Suanglung 145.07 260 PKPbc 21 12 03.9 -1.7
KULM Kulim 145.08 212 PKPbc 21 12 03.2 -2.6
TPUB Ta-pu 145.08 259 IAMs_20 IAMs_20 22 05 50.2
comp=Z,1µm,22.0s
LPSR Galich'ya Gora 145.24 48 *e*PKIKP **PKPbc 21 12 03.3 -1.9**
LPSR pmax pmax
comp=Z,170nm,0.9s
RAYN Ar Rayn 145.28 101 IAMs_20 IAMs_20 22 26 40.7
comp=Z,1µm,20.0s
INCN Inchon 145.34 285 IAMs_20 IAMs_20 22 11 32.0
comp=Z,2µm,20.0s
VORR Voronezh 145.56 50 *e*PKIKP **PKPdf 21 12 06.0 -0.1**
VORR pmax pmax
comp=Z,300nm,1.6s
PRGR Permogore 145.59 31 *e*PKIKP **PKPdf 21 12 04.6 -1.2**
PRGR pmax pmax
comp=Z,101nm,1.0s
VSR Storozhevoye 145.60 50 *e*PKIKP **PKPdf 21 12 05.1 -1.1**
VSR pmax pmax
comp=Z,140nm,1.8s
VSR MLR MLR
comp=Z,2µm,26.0s
VORD Divnogorie 145.72 51 *e*PKIKP **PKiKP 21 12 09.6 -0.8**
VORD pmax pmax
comp=Z,30nm,0.9s
SOC Sochi 146.36 64 *e*PKP2 **PKPbc 21 12 09.0 0.0**
SOC *e* 21 15 30.6
SOC *e*PPP PPP 21 18 51.4
SOC pmax pmax
comp=Z,8.0nm,0.6s
SOC pmax pmax
comp=Z,71nm,1.0s
DLV T Lat 146.56 230 IAMs_20 IAMs_20 22 11 15.0
comp=Z,2µm,22.0s
NRIK Noril'sk 146.89 357 PKPbc **PKPdf 21 12 05.4 -2.5**
comp=Z,0.7nm,0.3s,baz=54,slow=4.8,SNR=1.6
NRIK Noril'sk 146.89 357 *e*PKP2 **PKiKP 21 12 12.6 +0.3**
CN2 Changchun 146.99 296 *e*PKPbc **PKPab 21 12 12.8 +0.5**
CN2 LR LR
comp=Z,970nm,21.0s
CN2 LR LR
comp=Z,1µm,21.0s
CN2 LR LR
comp=Z,1µm,22.0s
VRH Novokhopyorsk 147.19 50 *e*PKP2 **PKPdf 21 12 09.5 +0.7**
VRH pmax pmax
comp=Z,100nm,1.2s
VRH MLR MLR
comp=Z,700nm,20.0s
QZH Quanzhou 147.51 260 PKPbc **PKPbc 21 12 12.1 -0.7**
QZH PP PP 21 15 51.8 +13
QZH LR LR
comp=Z,420nm,22.3s
QZH LR LR
comp=Z,640nm,20.2s
QZH LR LR
comp=Z,1µm,23.2s
BCA Borcka 147.62 68 ⇑P **PKPab 21 12 21.6 +6.7**
SSE Sheshan 147.97 272 PKPbc **PKPab 21 12 17.6 +1.1**
SSE SS SS 21 34 47.1 -1.3
SSE AMB AMB
comp=Z,150nm,6.7s
SSE LR LR
comp=Z,500nm,21.2s
SSE LR LR
comp=Z,260nm,19.8s
SNY Shenyang 148.27 292 ⇓PKPbc **PKPab 21 12 20.3 +2.9**
SNY SS SS 21 34 52.7 +1.3
SNY AMB AMB
comp=Z,470nm,7.9s
SNY LR LR
comp=Z,880nm,24.0s
SNY LR LR
comp=Z,2µm,22.6s
SNY LR LR
comp=Z,3µm,26.0s
KIV Kislovodsk 148.51 63 *e*PKHKP PKPpre 21 12 08.6
KIV *i* 21 12 14.2
KIV pmax pmax
comp=Z,106nm,1.0s
KIV Kislovodsk 148.51 63 PKPdf 21 12 09.6 -1.8
KBZ Khabaz 148.67 64 PKPbc **PKPbc 21 12 15.8 +0.5**
comp=Z,8.2nm,1.0s,baz=168,slow=4.2,SNR=9.2
KBZ Khabaz 148.67 64 *i* PKP2 **PKPdf 21 12 13.1 +1.6**
GOF Gofitskoye 148.75 61⇑*e*PKP2 **PKiKP 21 12 16.8 -0.1**
GOF pmax pmax
comp=Z,89nm,1.0s
ZEI Tsey 149.39 66 *i* PKP2 **PKiKP 21 12 18.3 -0.3**
ZEI pmax pmax
comp=Z,83nm,1.1s
DL2 Dalian 149.47 287 PKPbc **PKPbc 21 12 18.0 +0.5**
DL2 *e*PP **PP 21 15 54.9 +4.3**
DL2 SS SS 21 35 04.9 -0.1
DL2 AMB AMB
comp=Z,390nm,3.9s
DL2 LR LR
comp=Z,630nm,18.0s
DL2 LR LR
comp=Z,2µm,19.1s
DL2 LR LR
comp=Z,3µm,22.4s
NJ2 Nanjing 150.16 272 *e*PKPbc **PKiKP 21 12 21.8 +1.6**
NJ2 SS SS 21 35 14.7 +1.8
NJ2 AMB AMB
comp=Z,470nm,7.9s
NJ2 LR LR
comp=Z,750nm,17.5s
NJ2 LR LR
comp=Z,860nm,18.0s
NJ2 LR LR
comp=Z,2µm,21.1s
HIA Hailar 150.44 307 PKIKP **PKPdf 21 12 12.4 -1.9**
HIA MLR MLR
comp=Z,4µm,21.0s
HIA Hailar 150.44 307 PKPdf 21 12 12.4 -1.9
HIA **sPKPbc 21 12 22.2 -0.3**
GZH Guangzhou 150.65 252 PKPbc **PKPdf 21 12 17.5 +2.2**
GZH SS SS 21 35 20.5 +2.4
GZH LR LR
comp=Z,1µm,25.3s
GZH LR LR
comp=Z,1µm,21.4s
QIZ Qiongzhong 150.77 241 PKPbc **PKPdf 21 12 16.2 +0.5**
QIZ SS SS 21 35 24.7 +5.7
QIZ AMB AMB
comp=Z,360nm,13.2s
QIZ LR LR
comp=Z,910nm,21.6s
QIZ LR LR
comp=Z,1µm,22.6s
QIZ LR LR
comp=Z,2µm,25.0s
QIZ Qiongzhong 150.77 241 IAMs_20 IAMs_20 22 11 51.4
comp=Z,2µm,22.0s
GROC Groznyy 150.78 65 *e*PKIKP **PKPbc 21 12 19.9 -0.6**
GROC *e* 21 16 00.1
GROC pmax pmax
comp=Z,63nm,1.2s
MAK Makhachkala 152.04 65 *e*PKIKP **PKPdf 21 12 14.2 -2.6**
MAK *e* 21 16 00.3
MAK pmax pmax
comp=Z,271nm,1.4s
TIA Tai'an 152.59 280 PKPbc **PKPab 21 12 31.8 -3.7**
TIA PP **PP 21 16 03.9 -4.8**
WHN Wuhan 153.29 267 PP PP 21 16 10.5 -2.1
WHN Wuhan 153.29 267 PKPbc **PKPab 21 12 38.2 -0.4**
BJT Baijiatuau 153.78 288 IAMs_20 IAMs_20 22 24 54.8
comp=Z,1µm,19.0s
ARU Arti 154.04 32 *i* PKIKP **PKPdf 21 12 21.6 +2.3**
ARU Arti 154.04 32 PKPdf **PKPdf 21 12 18.3 -1.0**
ARU **sPKPdf 21 12 24.8 +2.5**
UOSS Minazif 154.36 109 PKPbc 21 12 26.6 -2.5
UOSS Minazif 154.36 109 IAMs_20 IAMs_20 22 26 15.4
comp=Z,1µm,20.0s
WSAR Wadi Sarin 155.20 115 PKP **PKPdf 21 12 21.9 -0.1**
comp=Z,3.4nm,0.8s,baz=244,slow=14,SNR=1.8
SLVN Son La 156.42 236 PKPab 21 12 50.0 -2.2
SLVN IAMs_20 IAMs_20 22 19 06.0
comp=Z,2µm,22.0s
ENH Enshi 157.09 262 IAMs_20 IAMs_20 22 17 44.0
comp=Z,1µm,22.0s
CMAR Chiang Mai Arr 157.29 222 PKP **PKPdf 21 12 23.4 -1.4**
comp=Z,0.4nm,0.3s,baz=90,slow=6.8,SNR=2.2
CMAR PKPab **PKPab 21 12 56.0 +0.2**
comp=Z,4.5nm,1.0s,baz=184,slow=2.4,SNR=5.8
HHC Hu-ho-hao-te 157.30 290 PKP **PKPdf 21 12 27.0 +2.6**
HHC PP **PP 21 16 37.0 +2.0**
HHC SS SS 21 36 31.5 +0.7
HHC AMB AMB
comp=Z,74nm,9.5s
HHC LR LR
comp=Z,510nm,18.6s
HHC LR LR
comp=Z,1µm,17.5s
HHC LR LR
comp=Z,1µm,18.9s
CHTO Chiang Mai 157.57 223 IAMs_20 IAMs_20 22 21 24.7
comp=Z,2µm,19.0s
GYA Guiyang 157.57 251 *e*PKP **PKPdf 21 12 24.2 -1.0**
GYA PKPab **sPKPab 21 13 02.1 +2.3**
GYA SKKS 21 23 27.1
GYA SS **SS 21 36 33.8 0.0**
GYA AMB AMB
comp=Z,260nm,12.0s
GYA LR LR
comp=Z,830nm,23.5s
GYA LR LR
comp=Z,2µm,21.3s
GYA LR LR
comp=Z,1µm,20.1s
BTO Baotou 158.48 290 *e*P **PKPab 21 13 06.5 +5.8**
XAN Xi'an 158.72 271 PP PP 21 17 00.2 +17
XAN Xi'an 158.72 271 IAMs_20 IAMs_20 22 18 17.4
comp=Z,2µm,21.0s
XAN Xi'an 158.72 271 PKPbc PKPdf 21 12 38.3 +12
XAN Xi'an 158.72 271 pPKP PKPab 21 12 50.9 -11
XAN Xi'an 158.72 271 PKPab **PKPab 21 13 04.5 +2.6**
SONM Songino Array 159.30 311 PKPab **PKPab 21 12 59.9 -4.1**
comp=Z,2.4nm,0.5s,baz=72,slow=9.5,SNR=2.5
KMI Kunming 159.71 242 PKP **PKPdf 21 12 32.3 +4.4**
KMI Kunming 159.71 242 IAMs_20 IAMs_20 22 26 19.3
comp=Z,1µm,21.0s
ZAK Zakamensk 159.77 320 *e*PKP2 **PKPab 21 13 08.2 +2.3**
ZAK pmax pmax
comp=Z,13nm,1.6s
GEYT Alibeck 160.11 78 PKP **PKPdf 21 12 28.0 +0.3**
comp=Z,1.7nm,0.6s,baz=8.4,slow=40,SNR=3.9
CD2 Chengdu 161.90 258 PKP **PKPdf 21 12 29.4 -0.5**
CD2 sPKP 21 12 35.9
CD2 PP **PP 21 17 02.1 +2.1**
CD2 SKKS 21 23 48.2
CD2 SS **SS 21 37 22.6 +3.1**
CD2 AMB AMB
comp=Z,600nm,10.8s
CD2 LR LR
comp=Z,1µm,21.1s
CD2 LR LR
comp=Z,2µm,23.0s
CD2 LR LR
comp=Z,2µm,23.0s
ZALV Zalesovo Beam 162.38 356 PKP **PKPdf 21 12 26.3 -3.3**
comp=Z,0.3nm,0.3s,baz=261,slow=21,SNR=2.3
ZALV PKPab **PKPab 21 13 13.9 -3.1**
comp=Z,6.1nm,0.9s,baz=318,slow=2.0,SNR=3.6
LZH Lanzhou 163.19 275 *e*PKP **PKPdf 21 12 27.7 -3.4**
LZH sPKP 21 12 41.8
LZH SS SS 21 37 33.7 +0.4
LZH LR LR
comp=Z,1µm,19.7s
LZH LR LR
comp=Z,2µm,19.5s
LZH LR LR
comp=Z,2µm,21.2s
GTA Gaotai 166.39 288 *e*PKP **PKPdf 21 12 40.4 +6.6**
GTA PKPab **sPKPab 21 13 38.4 +0.3**
GTA PP **PP 21 17 27.6 +4.0**
GTA SKKS 21 24 17.8
GTA SS **SS 21 38 03.2 -2.6**
GTA AMB AMB
comp=Z,240nm,8.1s
GTA LR LR
comp=Z,1µm,21.3s
GTA LR LR
comp=Z,2µm,24.4s
GTA LR LR
comp=Z,4µm,24.4s
MKAR Makanchi Array 169.58 3 PKP **PKPdf 21 12 34.3 -1.3**
comp=Z,0.1nm,0.5s,baz=257,slow=33,SNR=2.2
MKAR PKPab **PKPab 21 13 45.5 -3.4**
comp=Z,0.4nm,0.8s,baz=304,slow=32,SNR=1.6
WMQ Urumqi 171.75 336 *e*PKP **PKPdf 21 12 38.0 +1.1**
WMQ LR LR
comp=Z,380nm,16.7s
WMQ LR LR
comp=Z,360nm,16.7s
WMQ LR LR
comp=Z,740nm,20.9s
KSH Kashi 173.62 58 PKP PKPdf 21 12 48.6 +11

*NIED **06** 20:55:00, 38.°00N×144.°50E, h8km, Mw3.6 Best double couple: M₀2.54000×10¹⁴ NP1:φs218.00000°, δ61.00000°, λ-89.00000°. NP2:φs36.00000°, δ29.00000°, λ-92.00000°.*
*IDC **06** 20:55:42.5±2.3, 37.°86N×145.°09E, h0km, mb3.5/3, mb1 3.6/7, mb1mx3.4/49, mbtmp3.6/7, ML3.4/3, MS2.3/2, Ms1 2.3/2, ms1mx2.0/35, Error ellipse: s-maj=50.8km s-min=24.9km az=80.0*
*JMA **06** 20:55:48.4±0.1, 38.°02N×144.°50E, h40km, M3.6*
ISC 06 20:55:48.5±1.5**, 38.°00N**±0.°06×**144.°6E**±0.°1**, h35km, n25,** σ2.s00/36**, mb3.6**/3**, Off east coast of Honshu**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JIKH Ishinomakikobu 2.52 278 P **Pn 20 56 26.7 -0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIKH				eS	Sn	20 56 55.1	-1.3
OFUJ	Ofunato	2.57	296	P	Pn	20 56 27.5	0.0
JKMT	Kesennumamotoy	2.62	289	P	Pn	20 56 28.1	-0.1
JKMT				eS	Sn	20 56 57.6	-1.1
JIO	Ouri	2.63	281	P	Pn	20 56 28.4	0.0
JIO				S	Sn	20 56 57.6	-1.5
MIYJ	Miyakonagasawa	2.71	306	P	Pn	20 56 29.4	-0.1
MIYJ				eS	Sn	20 57 00.5	-0.5
JMK	Ichinoseki	2.85	291	P	Pn	20 56 31.5	+0.1
JOM	Ohasama	3.00	300	P	Pn	20 56 33.8	+0.3
JANG	Nango	3.39	315	P	Pn	20 56 38.8	-0.1
JANG				eS	Sn	20 57 17.2	-0.7
JFT	Otama	3.44	263	S	Sn	20 57 18.6	-0.6
JYK	Kaneyama	3.48	287	P	Pn	20 56 41.2	+1.1
JYK				eS	Sn	20 57 20.4	+0.3
JOT	Ohata	4.37	322	P	Pn	20 56 53.7	+1.4
JCH	Churui	4.71	348	P	Pn	20 56 56.5	-0.5
JCH				eS	Sn	20 57 47.0	-3.4
JKB	Kayabe	4.77	326	P	Pn	20 57 00.2	+2.4
JRY	Ryogami san	5.00	248	P	Pn	20 57 00.8	-0.2
JRY				eS	Sn	20 57 54.3	-3.3
MJAR	Matsushiro Arr	5.33	256	Pn	Pn	20 57 07.3	+1.8
	0.2nm,0.3s,baz=81,slow=32,SNR=12						
MJAR				Sn	Sn	20 58 03.9	-1.8
	baz=333,slow=5.4,SNR=1.2						
NEM2	Nemuro 2	5.42	9	P	Pn	20 57 04.2	-2.6
NEM2				eS	Sn	20 58 02.1	-5.8
JTKR	Abashiri--Toko	5.99	355	P	Pn	20 57 14.0	-0.5
JTKR				eS	Sn	20 58 17.8	-4.0
JHJ	Hachijo jima 2	6.28	221	Pn	Pn	20 57 17.9	-0.6
	4.6nm,0.3s,baz=48,slow=9.8,SNR=1.3						
JHJ				Sn	Sn	20 58 25.3	-3.7
	6.4nm,0.3s,baz=34,slow=16,SNR=2.4						
ASAJ	Asahikawa	6.30	346	Pn	Pn	20 57 18.7	-0.1
	1.3nm,0.3s,baz=226,slow=11,SNR=10						
ASAJ				Sn	Sn	20 58 30.0	+0.5
	0.8nm,0.3s,baz=143,slow=30,SNR=2.9						
USRK	Ussuriysk Ar.	11.37	307	Pn	Pn	20 58 30.7	+2.4
	baz=72,slow=12,SNR=1.3						
KSRS	Korea Array	13.25	273	LR	LR	21 04 27.7	
	comp=Z,6.0nm,18.2s,baz=260,slow=38						
KLR	Kul'dur	14.57	324	LR	LR	21 04 44.5	
	comp=Z,17nm,18.9s,baz=151,slow=36						
MKAR	Makanchi Array	45.78	302	P	P	21 04 09.0	+2.4
	0.2nm,0.6s,baz=97,slow=6.0,SNR=3.2						
KURBB	Kurchatov Arra	47.43	308	P	P	21 04 21.5	+2.1
	0.6nm,0.5s,baz=79,slow=8.2,SNR=6.3						
WRA	Warramunga Arr	58.44	191	P	P	21 05 39.8	-1.0
	0.2nm,0.4s,baz=8.6,slow=7.2,SNR=6.3						

DJA 06 21:04:34.0±0.3, **10°S**±3°×**12°4E**±°, **h43**km±6km, **M3.9**/10, **mb4.2**/5, **MLv3.7**/10, **Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Baumata	0.21	213	P	Pn	21 04 44.2	+2.5
BATI				S	Sn	21 04 49.0	+1.9
SOEI	Soe	0.55	60	P	Pn	21 04 46.6	+0.9
MMRI	Maumere	2.06	312	P	Pn	21 05 05.9	-0.2
MMRI				S	Sn	21 05 30.0	-0.6
EDFI	Ende, Flores	2.42	302	P	Pn	21 05 10.9	-0.3
BASI	Baing, Sumba	3.16	266	P	Pn	21 05 22.2	+1.0
WBSI	Waikabubak, Su	4.34	275	P	Pn	21 05 37.3	-0.3
PLAI	Plampang	6.04	281	P	Pn	21 06 01.2	+0.3
	0.1nm27nm,1.0s						

DJA 06 21:05:26.7±0.5, **8°S**±4°×**10°7E**±°, **h10**km, **M3.8**/7, **MLv3.8**/7, **Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CNJI	Cibinong	0.81	45	P	Pb	21 05 42.8	0.0
CNJI				S	Sg	21 05 52.6	-0.2
CNJI	Cibinong	0.81	45	P	Pb	21 05 42.7	-0.1
CISI	Cisompet, Garu	1.29	76	P	Pn	21 05 49.8	-1.1
DBJI	Dramaga	1.33	9	P	Pn	21 05 50.5	-0.9
DBJI	Dramaga	1.33	9	P	Pn	21 05 50.2	-1.2
LEM	Lembang	1.49	45	P	Pn	21 05 53.8	+0.1
LEM				S	Sb	21 06 13.7	+0.1
PCJI	Pacitan	4.59	94	P	Pn	21 06 36.2	-0.1
PPSI	Pulau Pagai	8.26	308	P	Pn	21 07 25.4	-1.3

IDC 06 21:16:09.2±2.2, 7°50S×104°43E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.6/35, mbtmp3.8/6, ML3.3/1, Error ellipse: s-maj=55.1km s-min=24.4km az=32.0
ISC 06 21:16:12.6±1.7, **7°6S**±0°2×**104°4E**±0°1, **h27**km, **n10**, σ**0.71**/8, **mb3.9**/5, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LEM	Lembang	3.31	77	Pn	Pn	21 17 03.1	+0.3
	3.3nm,0.3s,baz=319,slow=20,SNR=2.6						
LEM				Sn	Sn	21 17 41.5	+0.1
	3.6nm,0.3s,baz=344,slow=16,SNR=2.0						
CMAR	Chiang Mai Arr	26.42	348	P	P	21 21 47.1	-0.1
	1.3nm,0.8s,baz=179,slow=8.3,SNR=9.1						
WRA	Warramunga Arr	31.53	116	P	P	21 22 32.6	-0.2
	0.7nm,0.8s,baz=286,slow=12,SNR=3.2						
H08S2	Diego Garcia H	31.59	268	T	T	21 56 12.0	
	baz=90,slow=74,SNR=26						
H08S3	Diego Garcia H	31.60	268	T	T	21 56 18.2	
	baz=90,slow=74,SNR=23						
H08S1	Diego Carcia H	31.61	268	T	T	21 56 13.6	
	baz=90,slow=74,SNR=21						
USRK	Ussuriysk Ar.	57.27	23	P	P	21 25 56.7	-1.0
	0.7nm,0.5s,baz=209,slow=6.9,SNR=5.4						
MKAR	Makanchi Array	57.59	342	P	P	21 26 01.1	+1.1
	0.7nm,0.4s,baz=155,slow=8.4,SNR=13						
ZALV	Zalesovo Beam	63.48	347	P	P	21 26 40.0	0.0
	1.0nm,0.7s,baz=155,slow=6.4,SNR=4.4						
TXAR	Lajitas Array	145.89	47	PKPbc	PKPab	21 35 51.1	+0.3
	0.4nm,0.7s,baz=242,slow=1.9,SNR=2.8						

IDC 06 21:18:00.5±10.0, **6°06S**×**154°76E**, **h0**km, **mb3.7**/3, **mb1 3.9**/3, **mb1mx3.5**/28, **mbtmp3.7**/3, **Error ellipse: s-maj=176.3km s-min=102.2km az=30.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.17	233	P	P	21 23 18.9	+0.2
	1.0nm,0.7s,baz=59,slow=9.3,SNR=5.1						
ASAR	Alice Springs	26.63	227	P	P	21 23 40.5	-0.5
	0.4nm,0.7s,baz=61,slow=9.2,SNR=5.9						
STKA	Stephens Creek	28.49	204	P	P	21 23 57.9	+0.4
	2.0nm,0.8s,baz=0.0,slow=11,SNR=3.9						

RSPR 06 21:36:34.1, 19°12N×66°49W, h36km±7km, **MD2.9**/9, **10C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EMPR	Esperanza - Ma	0.64	183	⇑eP	Pn	21 36 45.5	-1.3
EMPR	Esperanza - Ma	0.64	183	eS	Sn	21 36 54.9	-0.8
EMPR	Esperanza - Ma	0.64	183		Pn	21 36 45.5	-1.3
EMPR					Sn	21 36 54.9	-0.8
AOPR	Arecibo Observ	0.81	198	⇑eP	Pn	21 36 47.5	-1.5
AOPR	Arecibo Observ	0.81	198	eS	Sn	21 36 58.1	-1.8
AOPR	Arecibo Observ	0.81	198		Pn	21 36 47.5	-1.5
AOPR					Sn	21 36 58.1	-1.8
AGPR	Aguadilla, PR	0.88	222	Pn	Pn	21 36 49.5	-0.4
GCPR	Guaynabo City	0.90	154	Pn	Pn	21 36 48.9	-1.3
GCPR					Sn	21 37 00.6	-1.4
CBYP	Canovanas	1.04	144	⇑eP	Pn	21 36 50.6	-1.5
CBYP	Canovanas	1.04	144	⇑eP	Pn	21 36 50.9	-1.3
CBYP				eS	Sn	21 37 04.1	-1.4
CBYP	Canovanas	1.04	144		Sn	21 37 04.1	-1.4
CBYP	Canovanas	1.04	144	Pn	Pn	21 36 50.6	-1.6
OBIP	Obispado Ponce	1.08	186	Pn	Pn	21 36 51.6	-1.1
LSP	Las Mesas	1.10	211	⇑eP	Pn	21 36 51.7	-1.3
LSP	Las Mesas	1.10	211	eS	Sn	21 37 06.1	-0.8
LSP	Las Mesas	1.10	211		Pn	21 36 51.7	-1.3
LSP					Sn	21 37 06.1	-0.8
HUMP	Col San Antoni	1.15	148	⇑eP	Pn	21 36 52.8	-0.8
HUMP	Col San Antoni	1.15	148	eS	Sn	21 37 06.5	-1.6
HUMP	Col San Antoni	1.15	148		Pn	21 36 52.3	-1.3
HUMP					Sn	21 37 06.7	-1.4
IDE	Isla Desecheo	1.19	232	⇑eP	Pn	21 36 53.1	-1.0
IDE	Isla Desecheo	1.19	232		Pn	21 36 53.1	-1.0
PDPR	Patillas Dam,	1.19	158	⇑eP	Pn	21 36 53.0	-1.1
PDPR	Patillas Dam,	1.19	158	eS	Sn	21 37 07.8	-1.2
PDPR	Patillas Dam,	1.19	158		Pn	21 36 53.0	-1.1
PDPR					Sn	21 37 07.8	-1.2
IGPR	InterUniversit	1.21	162	Pn	Pn	21 36 53.8	-0.6
IGPR					Sn	21 37 08.0	-1.6
CRPR	Cabo Rojo, PR	1.26	208	⇓eP	Pn	21 36 54.1	-1.0
CRPR	Cabo Rojo, PR	1.26	208		Pn	21 36 54.1	-1.0
MLPR	Magueyes Islan	1.26	205	⇑eP	Pn	21 36 54.1	-1.1
MLPR	Magueyes Islan	1.26	205	eS	Sn	21 37 09.4	-1.5
MLPR	Magueyes Islan	1.26	205		Pn	21 36 54.1	-1.1
MLPR					Sn	21 37 09.4	-1.5
MTP	Monte Pirata	1.35	139	⇑eP	Pn	21 36 55.5	-0.9
MTP	Monte Pirata	1.35	139	eS	Sn	21 37 12.5	-0.7
MTP	Monte Pirata	1.35	139		Pn	21 36 55.5	-0.9
MTP					Sn	21 37 12.5	-0.7
CUPR	Culebra, Puert	1.41	125	Pn	Pn	21 36 56.4	-0.7
CUPR				Sn	Sn	21 37 12.7	-1.7
STVI	Saint Thomas	1.65	118	Pn	Pn	21 37 00.3	-0.2

IDC 06 21:39:49.0±2.1, 38°59N×123°05W, h0km, mb1 3.8/4, mb1mx3.4/49, mbtmp3.3/4, ML3.6/3, Error ellipse: s-maj=24.6km s-min=9.5km az=56.0
NCEDC 06 21:39:50.1±1.6, 38°82N±0°03×122°80W±0°03, h3km±4km, ML3.3/57, Error ellipse: s-maj=5.3km s-min=3.0km az=155.0
NEIC 06 21:39:50.0±1.6, 38°83N±0°01×122°72W±0°01, h1km±7km, Error ellipse: s-maj=2.6km s-min=0.7km az=218.0
ISC 06 21:39:49.9±0.9, **38°77N**±0°02×**122°84W**±0°02, **h8**km±5km, **n130**, σ**1.02**/134, **Northern California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GDXM	Geysers	0.05	44	Pg	Pg	21 39 50.6	-1.0
GDXM					Sg	21 39 51.1	-1.8
GAXM	Alexander Vall	0.09	134		Pg	21 39 52.4	+0.3
GACM	Adobe Creek	0.10	349		Pg	21 39 51.8	-0.5
GPMM	Pine Mountain	0.11	311		Pg	21 39 52.7	+0.2
GCVM	Cloverdale	0.14	269		Pg	21 39 54.0	+1.2
GSSM	Skaggs Springs	0.15	243		Pg	21 39 54.5	+1.4
NMCNC	Mill Creek, So	0.19	198		Pb	21 39 55.2	+1.4
MAC	Mark West Spri	0.24	158		Pg	21 39 55.8	+1.2
HOPS	Hopland Field	0.29	320	Pg	Pg	21 39 56.0	+0.4
GHLM	Highland Sprin	0.30	332		Pg	21 39 55.9	0.0
NSHM	Saint Helena R	0.31	144		Pg	21 39 56.9	+0.9
GDCM	Dry Creek	0.32	269		Pb	21 39 57.5	-0.4
GSNM	Snow Mountain	0.32	301		Pg	21 39 57.1	+0.8
GHCM	House Creek	0.33	239		Pb	21 39 57.9	-0.1
FTR	Fort Ross	0.36	226		Pn	21 39 58.6	-2.8
NTYM	Taylor	0.41	160		Pb	21 39 58.9	-0.4
CVS	Carmenet Viney	0.52	145		Pg	21 40 00.8	+0.8
GGUM	Gualala	0.52	279		Pb	21 40 01.2	-0.1
GWRM	Wonder Ranch	0.56	320		Pg	21 40 01.1	+0.3
GHOM	Hamilton Openi	0.61	297		Pb	21 40 02.8	-0.1
MCCM	Marconi Confer	0.63	183	Pg	Pn	21 40 03.8	-1.3
SNT	Sears Point	0.66	153		Pg	21 40 03.2	+0.6
NGVM		0.69	135		Pg	21 40 03.9	+0.7
GFC	Funks Creek	0.70	38		Pb	21 40 05.0	+0.7
NOLM	Olema	0.73	177		Pn	21 40 05.8	-0.8
GNAM	Navarro Ridge	0.75	305		Pn	21 40 05.5	-1.4
NPRM	Point Reyes	0.79	190		Pn	21 40 06.8	-0.5
GCK	Clark Valley	0.83	22		Pb	21 40 07.0	+0.4
GTC	Three Chop Rid	0.84	318		Pb	21 40 06.6	-0.2
NLHM	Lake Herman	0.85	140		Pb	21 40 06.7	-0.1
CPMM	Point Molate	0.89	158		Pg	21 40 07.6	+0.7
CSPM	San Pablo Ridg	0.91	153		Pn	21 40 08.6	-0.5
OSUM	Sutter Buttes	0.92	57		Pb	21 40 06.9	-1.1
CPIM	Pinole Ridge	0.92	148		Pb	21 40 08.2	0.0
SUTB	Sutter Butte	0.94	61		Pb	21 40 07.4	-1.0
KFPM	Farley Peak	0.98	332		Pb	21 40 08.8	-0.4
CTAM	Taylor	0.99	139		Pb	21 40 09.6	+0.3
BRK	Berkeley--Havi	1.01	153		Pn	21 40 09.9	-0.4
BL67	Building 67, L	1.01	153		Pn	21 40 09.9	-0.5
VAK	Adit at Lawren	1.01	152		Pn	21 40 09.9	-0.5
BRIB	Briones	1.01	147		Pb	21 40 09.2	-0.4
GVV	Valley View	1.01	7		Pb	21 40 09.7	-0.1
CVPM	Vollmer Peak	1.01	151		Pn	21 40 10.0	-0.4
BKS	Berkeley--Byer	1.01	152		Pb	21 40 09.6	-0.1
JPRM	Presidio of Sa	1.02	164		Pn	21 40 10.1	-0.4
KCPM	Cahto Peak	1.08	328		Pb	21 40 10.6	-0.4
BDM	Black Diamond	1.12	137		Pn	21 40 11.4	-0.4
CRPB	Russellman Par	1.13	139		Pn	21 40 11.0	-1.0
CRHM	Round Hill Res	1.13	144		Pb	21 40 11.0	-0.7
BGC	Bolinger Road	1.13	147		Pg	21 40 12.1	+0.5
KIPM	Iron Peak	1.15	334		Pb	21 40 12.3	+0.2
GROM	Round Mountain	1.15	6		Pn	21 40 12.4	0.0
CSLM	San Leandro Hi	1.19	151		Pg	21 40 13.2	+0.5
OHCM	Honcut	1.19	62		Pn	21 40 11.7	-1.2
CLCB	Lake Chabot	1.20	149		Pb	21 40 13.0	+0.1
SAC	San Andreas	1.23	164		Pg	21 40 13.9	+0.4
CMOB	Morgan Territo	1.26	139		Pn	21 40 13.3	-0.6
ORV	Oroville	1.30	53		Pn	21 40 12.4	-2.0
ORV	Oroville	1.30	53		Pn	21 40 13.0	-1.4
JCHM	Cahill Ridge	1.31	164		Pb	21 40 14.5	-0.1
CBSNC	Byron Hot Spri	1.34	135		Pn	21 40 15.0	+0.1
CVLM	Vallecito	1.39	145		Pn	21 40 15.5	-0.1
AASM	Arroyo Seco	1.40	104		Pn	21 40 13.9	-1.8
O02D	Mt. Diablo Mer	1.40	2		Pb	21 40 17.2	+0.8
MGL	Magalia	1.44	43		Pn	21 40 14.2	-2.2
JRSC	Jasper Ridge	1.45	161		Pn	21 40 15.9	-0.5
JSFB	Stanford Teles	1.46	159		Pg	21 40 18.6	+0.6
AFDM	Forest Hills D	1.47	83		Pn	21 40 14.9	-1.8
AFDM	Forest Hills D	1.47	83		Sn	21 40 32.7	-3.4
JFP	Foothills Park	1.50	160		Pb	21 40 17.9	0.0
LBPM	Beegum Peak	1.54	359		Pb	21 40 19.1	+0.3
CMLM	Mount Lewis	1.60	144		Pn	21 40 18.6	0.0
KMRM	Mail Ridge	1.60	335		Pn	21 40 18.5	0.0
CMMM	Mount Mocho	1.69	141		Pn	21 40 20.1	+0.2
MNHB	New Hogan Dam	1.71	111		Pn	21 40 18.7	-1.2
MHC	Mount Hamilton	1.71	146		Pn	21 40 20.3	+0.2
ARN	Arnold Ranch	1.75	144		Pn	21 40 21.0	+0.4
CCOB	Coe Ranch Numb	1.77	148		Pn	21 40 21.1	+0.3
WDC	Whiskeytown Da	1.82	7		Pn	21 40 22.6	+1.1
JLAB	Laurel Hill	1.84	151		Pn	21 40 21.1	-0.6
CMPM	Mikes Peak	1.85	139		Pn	21 40 22.4	+0.3
MCUB	Copperopolis B	1.92	114		Pn	21 40 22.9	0.0
LRDM	Redding Peak	2.00	32		Pn	21 40 23.9	-0.1
DONR	Donner Summit	2.04	73		Pn	21 40 25.5	+0.7
CMB	Columbia Colle	2.06	110		Pn	21 40 24.7	-0.2
CMB	Columbia Colle	2.06	110	Pn	Pn	21 40 24.5	-0.4
HPCM	Pacheco Lake	2.11	144		Pn	21 40 25.6	+0.1
RUBR	Rubicon Trail	2.11	82		Pn	21 40 25.7	0.0
TAHR	Tahoe	2.12	79		Pn	21 40 27.0	+1.1
SLD	San Luis Dam	2.12	142		Pn	21 40 25.8	+0.1
EMB	Emerald Bay	2.14	84		Pn	21 40 27.1	+0.9
SFJWR	San Luis Fatjo	2.17	142		Pn	21 40 26.6	+0.3
KBF	Kyburz Flat	2.17	69		Pn	21 40 27.9	+1.4
KHMM	Horse Mountain	2.21	342		Pn	21 40 27.8	+0.7
BEKR	Beckworth	2.21	60		Pn	21 40 27.4	+0.4
FRP	Fremont Peak	2.28	152		Pn	21 40 26.6	-1.3
SAO	San Andreas Ge	2.29	151	Pn	Pn	21 40 27.8	-0.1
BVYM	Vineyard	2.31	150		Pn	21 40 28.4	+0.1
BSLM	Silva Ranch	2.32	149		Pn	21 40 28.8	+0.5
LBCM	Butte Creek Ri	2.36	29		Pn	21 40 30.3	+1.2
MYLM	Yosemite Lake	2.36	125		Pn	21 40 29.3	+0.4
BCGM	Cienega Road	2.38	150		Pn	21 40 28.9	-0.3
BMRR	Black Mountain	2.38	55		Pn	21 40 30.8	+1.4
SCZ	Santa Cruz	2.45	152		Pn	21 40 29.9	-0.4
BJCM	Johnson Can.	2.50	152		Pn	21 40 30.1	-0.7
BRMM	Rolling Bench	2.51	140		Pn	21 40 31.8	+0.8
BEMM	Emmet	2.52	146		Pn	21 40 31.6	+0.4
BFC	Buffalo Canyon	2.52	86		Pn	21 40 32.8	+1.4
VCNR	Virginia City	2.54	77		Pn	21 40 32.7	+1.1
PNTR	Pine Nut	2.54	82		Pn	21 40 32.6	+0.9
WAKR	Walker	2.68	95		Pn	21 40 34.0	+0.5
PAHR	Pah Rah Range	2.84	70		Pn	21 40 35.6	-0.1
YBH	Yreka Blue Hor	2.96	2	Pn	Pn	21 40 40.5	+3.2
	0.3nm,0.3s,baz=164,slow=6.8,SNR=3.7						
YBH				Pg	Pb	21 40 45.5	+2.6
	1.0nm,0.3s,baz=172,slow=11,SNR=9.7						
YBH				Lg	Lg	21 41 28.2	
	baz=199,slow=19,SNR=2.0						
YBH	Yreka Blue Hor	2.96	2		Pn	21 40 38.7	+1.4
PMPB	Monarch Peak	3.02	147		Pn	21 40 38.3	+0.1
MDPB	Devils Postpil	3.17	110		Pn	21 40 41.7	+1.3
NVAR	Mina Array Bea	3.57	94	Pn	Pn	21 40 47.1	+1.3
	0.8nm,0.3s,baz=269,slow=14,SNR=7.7						
NVAR				Pg	Pb	21 40 54.3	+0.9
	3.3nm,0.3s,baz=263,slow=19,SNR=19						
NVAR				Lg	Lg	21 41 45.1	
	1.9nm,0.3s,baz=277,slow=28,SNR=2.4						
PAGB	Antelope Grade	3.67	145		Pn	21 40 48.1	+1.1
MOD	Modoc Plateau	3.68	31		Pn	21 40 46.7	-0.5
MOD				Pg	Pb	21 40 58.5	+3.3
KVN	Kaiserville	3.71	84		Pn	21 40 47.9	+0.2
HUMO	Hull Mountain	3.83	359	Pn	Pn	21 40 49.2	0.0
HUMO					Pb	21 41 00.1	+2.4
K05A	Summer Lake	4.22	20	Pn	Pn	21 40 54.1	-0.5
ISA	Isabella, Lake	4.67	130		Pn	21 41 01.4	+0.6
J08A	Circle Bar Ran	5.64	34	Pn	Pn	21 41 12.6	-1.5
ELK	Elko	6.18	69		Pn	21 41 22.3	+0.6
PFO	Pinyon Flats O	7.29	133	Pn	Pn	21 41 38.1	+1.3
	0.3nm,0.3s,baz=311,slow=16,SNR=1.9						
PFO	Pinyon Flats O	7.29	133		Pn	21 41 37.6	+0.8
XPFO	Pion Flat	7.29	133	Pn	Pn	21 41 36.9	0.0
PDAR	Pinedale Array	10.83	64	Pn	Pn	21 42 30.6	+5.2
	0.1nm,0.3s,baz=244,slow=13,SNR=5.6						
TXAR	Lajitas Array	18.44	115	P	Pn	21 44 06.4	+0.4
	baz=303,slow=8.5,SNR=2.5						

JMA 06 21:43:56.0±0.1, 23°94N×122°30E, h21km±2km, M3.3
TAP 06 21:43:56.7, 24°01N×122°30E, h22km, ML3.8, D
IDC 06 21:44:21.3±13.0, 24°55N×123°25E, h297km±147km, mb3.0/7, mb1 3.2/7, mb1mx2.9/42, mbtmp3.7/7, Error ellipse: s-maj=45.7km s-min=16.9km az=68.0
ISC 06 21:43:56.1±1.1, **23°95N**±0°02×**122°32E**±0°02, **h24**km±10km, **n122**, σ**0.79**/201, **mb3.6**/7, **Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.62	344	P	Pb	21 44 08.0	-0.3
	baz=343						
EOS1				S	Sb	21 44 16.1	-0.5
	baz=343						
HWA	Hwalien	0.65	273	P	Pb	21 44 09.4	+0.6
	baz=253						
HWA				eS	Sn	21 44 19.9	+0.5
	baz=253						
TWD	Chiawan	0.67	281	P	Pb	21 44 09.1	-0.2
	baz=276						
TWD				S	Sb	21 44 18.6	+0.5
	baz=276						
NACB	Ninganchiao	0.70	289	P	Pb	21 44 09.5	-0.1
	baz=268						
NACB				S	Sb	21 44 19.3	+0.4
	baz=268						
ENA	Nanau	0.71	312	P	Pb	21 44 09.3	-0.6
	baz=320						
ENA				eS	Sb	21 44 19.4	+0.2
	baz=320						
JYNG	Yonagunijimaku	0.76	49	P	Pb	21 44 10.4	-0.3
JYNG				S	Sb	21 44 20.9	+0.3
TWC	Suao	0.78	327	P	Pb	21 44 10.3	-0.8
	baz=325						
TWC				eS	Sb	21 44 19.0	-2.3
	baz=325						
ETLH	Xiulin Townshi	0.81	289	P	Pb	21 44 11.3	-0.2
	baz=272						
ETLH				S	Sb	21 44 22.6	+0.5
	baz=272						
YOJ	Yonaguni jima	0.81	51	P	Pb	21 44 11.9	+0.3
	baz=63						
YOJ				S	Sn	21 44 24.0	+0.6
	baz=63						
YOJ	Yonaguni jima	0.81	51	P	Pb	21 44 11.5	-0.1
YOJ				eS	Sn	21 44 23.2	-0.2
ESL	Shilin	0.82	261	P	Pb	21 44 11.0	-0.7
	baz=246						
ESL				eS	Sb	21 44 22.9	+0.4
	baz=246						
EGFH	Guangfu	0.86	251	eP	Pb	21 44 12.6	+0.1
	baz=247						
EGFH				eS	Sn	21 44 25.1	+0.5
	baz=247						
HGSD	Ruisui	0.94	241	eP	Pb	21 44 13.1	-0.7
	baz=237						
HGSD				eS	Sb	21 44 24.4	-1.3
	baz=237						
ILA	Ilan	0.96	328	eP	Pn	21 44 14.2	0.0
	baz=325						
ILA				eS	Sn	21 44 26.8	-0.4
	baz=325						
TWE	Neicheng	0.97	322	P	Pb	21 44 13.9	-0.3
	baz=321						
ENTT	Nioudou	0.97	315	P	Pb	21 44 14.2	-0.1
	baz=324						
ENTT				S	Sb	21 44 26.4	-0.3
	baz=324						
NNSB	Datong	0.98	299	eP	Pb	21 44 14.3	-0.2
	baz=283						
NNSB				eS	Sn	21 44 27.3	-0.4
	baz=283						
NNSH	Datong	0.98	299	P	Pb	21 44 14.3	-0.2
	baz=284						
NNSH				eS	Sn	21 44 27.2	-0.4
	baz=284						
NDT	Datong Townshi	0.98	312	eP	Pn	21 44 14.4	-0.1
	baz=308						
NDT				eS	Sb	21 44 26.8	-0.2
	baz=308						
WHF	Hehuan Shan	0.98	282	P	Pb	21 44 14.2	-0.6
	baz=278						
WHF				eS	Sb	21 44 27.1	-0.4
	baz=278						
NNS	Nan Shan	0.99	300	P	Pn	21 44 14.4	-0.3
	baz=283						
NNS				eS	Sb	21 44 27.3	-0.1
	baz=283						
NTC	Toucheng	1.00	334	eP	Pn	21 44 14.7	-0.1
	baz=331						
NTC				eS	Sn	21 44 28.5	+0.3
	baz=331						
SLBB	Yuanshan	1.01	322	P	Pb	21 44 15.1	+0.1
	baz=320						
EHY	Hungye	1.01	244	eP	Pn	21 44 14.7	-0.2
	baz=229						
EHY				eS	Sn	21 44 28.4	0.0
	baz=229						
OWD	Renai	1.04	270	P	Pn	21 44 15.2	-0.2
	baz=267						
OWD				S	Sb	21 44 28.7	-0.3
	baz=267						
CHGB	Renai	1.05	276	P	Pn	21 44 15.4	-0.2
	baz=261						
CHGB				S	Sn	21 44 29.7	+0.1
	baz=261						
TWT	Tachien	1.09	286	eP	Pb	21 44 16.4	+0.1
	baz=272						
TWT				eS	Sn	21 44 31.0	+0.5
	baz=272						
YULB	Yu-li	1.09	240	eP	Pn	21 44 15.6	-0.3
	baz=254						
YULB				eS	Sb	21 44 29.9	-0.1
	baz=254						
VWDT	VWDT	1.09	260	eP	Pn	21 44 16.0	0.0
	baz=257						
VWDT				eS	Sn	21 44 30.4	0.0
	baz=257						
TDCB	Techi	1.10	286	eP	Pn	21 44 16.2	0.0
	baz=273						
TDCB				eS	Sn	21 44 31.3	+0.5
	baz=273						
NWLT	Wulai	1.11	318	eP	Pb	21 44 16.4	-0.2
	baz=326						
NWLT				eS	Sn	21 44 31.2	+0.4
	baz=326						
TWF1	Yuli	1.11	238	P	Pn	21 44 16.1	-0.1
	baz=223						
TWF1				S	Sb	21 44 30.8	+0.1
	baz=223						
TIPB	Shuangxi	1.11	336	P	Pn	21 44 16.3	0.0
	baz=334						
TIPB				S	Sb	21 44 30.2	-0.6
	baz=334						
YHNB	Yeheng	1.12	310	eP	Pn	21 44 16.4	0.0
	baz=307						
YHNB				eS	Sn	21 44 32.1	+1.0
	baz=307						
FULB	Fuli	1.20	232	eP	Pn	21 44 16.9	-0.5
	baz=216						
FULB				eS	Sn	21 44 32.5	-0.5
	baz=216						
CHKT	Chengkung	1.22	226	eP	Pn	21 44 18.0	+0.4
	baz=213						

CHKT				eS	Sn	21 44 31.5	-1.8
	baz=213						
NWF	Wu-fen Shan	1.22	336	eP	Pn	21 44 17.9	+0.1
	baz=333						
NWF				eS	Sb	21 44 33.7	-0.2
	baz=333						
WFSB	Wu-fen Shan	1.22	336	eP	Pn	21 44 17.8	+0.1
	baz=333						
WFSB				eS	Sb	21 44 33.8	0.0
	baz=333						
TWA	Mucha	1.22	327	P	Pb	21 44 19.0	+0.4
	baz=324						
TWA				eS	Sb	21 44 35.7	+1.7
	baz=324						
NHDH	Xindian Distri	1.24	325	P	Pb	21 44 19.0	+0.1
	baz=334						
NHDH				eS	Sb	21 44 35.7	+1.3
	baz=334						
SSLB	Suanglung	1.26	263	eP	Pn	21 44 18.2	-0.1
	baz=260						
TATO	Taipei	1.27	324	eP	Pb	21 44 19.1	-0.2
	baz=320						
TATO				eS	Sb	21 44 35.0	-0.3
	baz=320						
DPDB	Guoxing	1.27	274	P	Pn	21 44 19.0	+0.4
	baz=271						
DPDB				S	Sb	21 44 36.5	+0.9
	baz=271						
WHP	Taichung City	1.29	285	eP	Pb	21 44 21.0	+1.1
	baz=270						
SMLT	Sun Moon Lake	1.30	267	eP	Pn	21 44 19.3	+0.4
	baz=253						
WLTB	Daxi	1.32	313	P	Pb	21 44 20.3	0.0
	baz=310						
WLTB				S	Sb	21 44 38.6	+1.8
	baz=310						
YUS	Yu-Shan	1.33	250	eP	Pb	21 44 20.7	-0.1
	baz=248						
YUS				eS	Sn	21 44 37.2	+0.3
	baz=248						
TYC	Yuchr	1.34	268	eP	Pn	21 44 19.8	+0.5
	baz=265						
IRIF	Iriomote-Funau	1.35	73	P	Pb	21 44 20.3	-0.4
IRIF				eS	Sn	21 44 36.9	+0.3
HATJ	Hateruma jima	1.36	85	P	Pb	21 44 20.7	-0.3
YM01	YM01	1.37	330	eP	Pb	21 44 20.8	-0.4
	baz=343						
YM01				eS	Sb	21 44 38.6	+0.3
	baz=343						
LIOB	Emei	1.38	301	P	Pb	21 44 21.2	0.0
	baz=297						
LIOB				S	Sb	21 44 39.1	+0.7
	baz=297						
YM10	YM10	1.38	330	eP	Pn	21 44 20.1	+0.1
	baz=345						
YM11	YM11	1.39	331	eP	Pn	21 44 20.1	0.0
	baz=345						
YM04	YM04	1.39	329	eP	Pn	21 44 20.2	+0.1
	baz=326						
YM04				eS	Sb	21 44 39.5	+0.6
	baz=326						
YM08	YM08	1.40	332	eP	Pn	21 44 20.5	+0.3
	baz=346						
TWS1	Kuangyinshan	1.41	325	eP	Pb	21 44 21.2	-0.6
	baz=333						
TWS1				eS	Sb	21 44 40.2	+0.9
	baz=333						
ELDTW	Lidau	1.41	238	eP	Pn	21 44 20.1	-0.4
	baz=236						
ELDTW				eS	Sn	21 44 37.4	-1.0
	baz=236						
YM03	YM03	1.41	330	eP	Pn	21 44 20.9	+0.5
	baz=328						
ANP	Anpu	1.43	330	eP	Pn	21 44 21.3	+0.6
	baz=327						
NTST	Danshui	1.45	327	eP	Pb	21 44 21.6	-0.8
	baz=341						
NCUH	Zhongli	1.45	315	eP	Pb	21 44 21.9	-0.5
	baz=312						
NCU	National Centr	1.45	315	eP	Pn	21 44 21.6	+0.7
	baz=311						
NCU				eS	Sb	21 44 41.5	+1.1
	baz=311						
ALS	Alishan	1.45	253	eP	Pb	21 44 22.1	-0.6
	baz=250						
TWH	Lutao	1.46	212	eP	Pn	21 44 20.7	-0.3
	baz=211						
TWH				eS	Sn	21 44 37.7	-1.6
	baz=211						
WJS	Zhushan	1.46	265	eP	Pb	21 44 23.9	+1.3
	baz=263						
WJS				eS	Sb	21 44 42.4	+1.6
	baz=263						
TWQ1	Liyutan	1.47	286	P	Pb	21 44 22.9	+0.1
	baz=283						
TWQ1				S	Sb	21 44 42.5	+1.6
	baz=283						
TWY	Chenhua	1.47	334	eP	Pb	21 44 22.5	-0.3
	baz=348						
SBCB	Hsinchu	1.48	305	eP	Pn	21 44 21.1	-0.1
	baz=302						
NSY	Sanyi	1.50	288	eP	Pb	21 44 23.4	+0.1
	baz=285						
NSY				eS	Sb	21 44 43.2	+1.4
	baz=285						
WNT	Mingjian	1.50	268	eP	Pb	21 44 23.2	-0.1
	baz=265						
WNT				eS	Sb	21 44 42.8	+0.9
	baz=265						
NMLH	Miaoli	1.51	293	eP	Pb	21 44 23.7	+0.2
	baz=289						
NMLH				eS	Sb	21 44 44.5	+2.3
	baz=289						
TCU	Taichung	1.51	278	P	Pb	21 44 23.8	+0.3
	baz=275						
TCU				eS	Sb	21 44 44.7	+2.4
	baz=275						
CHN5	Tsauling	1.54	257	eP	Pb	21 44 24.1	0.0
	baz=244						
CHN5				eS	Sb	21 44 44.3	+1.1
	baz=244						
PTSB	Yuanli	1.55	289	eP	Pb	21 44 24.0	-0.2
	baz=286						
JKRS	Kuro-shima	1.57	79	P	Pb	21 44 23.9	-0.6
JKRS				eS	Sb	21 44 44.1	+0.1
WDJ	Dajia District	1.58	285	eP	Pb	21 44 24.4	-0.3
	baz=281						
WDJ				eS	Sb	21 44 45.3	+1.0
	baz=281						
TWGBT	Beinan	1.60	225	eP	Pn	21 44 23.1	+0.1
	baz=237						
TWGBT				eS	Sn	21 44 42.1	-0.8
	baz=237						
TWG	Pinlang	1.60	226	eP	Pn	21 44 23.2	+0.2
	baz=237						
TWG				eS	Sn	21 44 42.1	-0.8
	baz=237						
WCHH	Zhanghua	1.61	275	eP	Pb	21 44 25.3	+0.1
	baz=272						
WCHH				eS	Sb	21 44 47.2	+2.0
	baz=272						
WGK	Gukeng	1.63	261	eP	Pb	21 44 26.8	+1.3
	baz=259						
WGK				eS	Sb	21 44 46.5	+0.9
	baz=259						
STYT	Tauyuan	1.63	242	eP	Pn	21 44 24.3	+0.8
	baz=229						
STYT				eS	Sn	21 44 44.7	+0.9
	baz=229						
WDLH	Douliu	1.65	261	eP	Pb	21 44 26.5	+0.7
	baz=259						
WDLH				eS	Sb	21 44 47.0	+0.8
	baz=259						
TPUB	Ta-pu	1.68	248	eP	Pb	21 44 25.7	-0.7
	baz=246						
TPUB				eS	Sb	21 44 47.6	+0.6
	baz=246						
WTP	Ta-pu	1.71	246	eP	Pb	21 44 26.4	-0.6
	baz=244						
WTP				eS	Sb	21 44 49.1	+1.0
	baz=244						
JIJ	Ishigaki jima	1.72	76	P	Pn	21 44 25.1	+0.5
JIJ				S	Sn	21 44 46.9	+1.1
SLGT	Liugui	1.81	239	eP	Pb	21 44 27.8	-0.8
	baz=228						
SLGT				eS	Sb	21 44 49.9	-0.9
	baz=228						
CHN1	Nanshi	1.81	245	eP	Pb	21 44 28.2	-0.4
	baz=244						
CHN1				eS	Sb	21 44 52.0	+1.1
	baz=244						
SGST	Jiashian	1.81	242	eP	Pb	21 44 27.5	-1.1
	baz=229						
SGST				eS	Sb	21 44 51.0	+0.1
	baz=229						
TWK	Hsinying	1.81	248	eP	Pb	21 44 28.1	-0.6
	baz=247						
TWK				eS	Sb	21 44 51.8	+0.8
	baz=247						
SNST	Tainan City	1.82	247	eP	Pb	21 44 29.0	+0.2
	baz=245						
SNST				eS	Sb	21 44 52.4	+1.2
	baz=245						
JISG	Ishigakijimahi	1.93	70	P	Pn	21 44 28.4	+1.0
JISG				eS	Sn	21 44 52.3	+1.4
SSD	Sandimen	1.96	233	eP	Pb	21 44 29.9	-1.2
	baz=225						
SSD				eS	Sb	21 44 53.7	-1.5
	baz=225						
LAY	Lan-yu	2.03	201	eP	Pn	21 44 28.8	0.0
	baz=200						
MASBT	Mashibuluo	2.04	230	eP	Pn	21 44 30.6	+1.5
	baz=222						
MASBT				eS	Sn	21 44 55.2	+1.4
	baz=222						
EAST	Anshuo	2.06	221	eP	Pn	21 44 30.5	+1.1
	baz=220						
SSPT	Xinbi	2.17	228	eP	Pb	21 44 34.0	-0.8
	baz=220						
SCZT	Fangliau	2.21	225	eP	Pb	21 44 34.6	-0.9
	baz=218						
SCZT				eS	Sn	21 44 59.8	+1.7
	baz=218						
JTJ	Tarama	2.28	72	P	Pn	21 44 33.5	+1.2
TSEB	Hengchuen, Pin	2.42	213	eP	Pb	21 44 38.7	-0.3
	baz=215						
TSEB				eS	Sn	21 45 04.2	+1.0
	baz=215						
TWKBT	Hengchun	2.43	215	eP	Pn	21 44 35.3	+0.9
	baz=216						
TWKBT				eS	Sn	21 45 04.0	+0.6
	baz=216						
TWK1	Hengchun	2.44	215	eP	Pn	21 44 36.9	+2.5
	baz=216						
TWK1				eS	Sn	21 45 04.1	+0.6
	baz=216						
WDGT	Dungji	2.53	255	eP	Pn	21 44 37.0	+1.3
	baz=253						
PNG	Penghu	2.56	262	eP	Pn	21 44 37.3	+1.2
	baz=260						
PTTC	Pingtan	2.78	304	eP	Pn	21 44 38.8	-0.4
	baz=302						
VWUC	VWUC	2.81	292	eP	Pn	21 44 39.6	0.0
	baz=290						
MATB	Ma-tsu	3.07	316	eP	Pn	21 44 42.6	-0.6
	baz=313						
PTMZ	Houxiangcun	3.11	291	eP	Pn	21 44 43.8	+0.1
	baz=289						
LYJJ	Jianjiangzhen	3.47	319	eP	Pn	21 44 48.2	-0.5
	baz=316						
XPSS	Dashiqiu	3.54	327	eP	Pn	21 44 49.5	0.0
	baz=336						
KNM	Kinmen	3.58	278	eP	Pn	21 44 52.0	+1.8
	baz=276						
KNMB	Chin-men Tao	3.62	279	eP	Pn	21 44 50.8	+0.1
	baz=277						
MHZQ	Yeshan	3.67	306	eP	Pn	21 44 51.0	-0.4
	baz=304						
AXDP	Jialang	4.07	284	eP	Pn	21 44 57.1	+0.2
	baz=282						
ZPLA	Ao Xicun	4.18	271	eP	Pn	21 44 58.8	+0.4
	baz=269						
SONM	Songino Array	26.99	336	P	P	21 49 34.9	-1.3
	1.8nm,0.6s,baz=151,slow=9.6,SNR=8.6						
MKAR	Makanchi Array	39.23	316	P	P	21 51 22.4	-0.2
	0.5nm,0.5s,baz=101,slow=9.5,SNR=9.4						
ZALV	Zalesovo Beam	41.01	327	P	P	21 51 35.7	-1.5
	0.7nm,0.4s,baz=111,slow=6.5,SNR=6.4						
WRA	Warramunga Arr	45.17	164	P	P	21 52 12.0	+0.8
	0.7nm,0.8s,baz=345,slow=8.4,SNR=3.1						
ASAR	Alice Springs	48.65	166	P	P	21 52 38.7	+0.3
	0.2nm,0.5s,baz=347,slow=7.6,SNR=4.3						
GEYT	Alibeck	55.81	301	P	P	21 53 31.5	-0.1
	0.7nm,0.4s,baz=52,slow=9.3,SNR=2.3						
ILAR	Eielson Array	68.94	27	P	P	21 54 48.6	-10
	0.2nm,0.5s,baz=297,slow=0.6,SNR=1.5						

*NEIC **06** 21:50:39.5±2.4, 6°.66S±0°.06×103°.34E±0°.09, h27km±6km, mb4.3/6, Error ellipse: s-maj=13.5km s-min=8.8km az=107.0*

*IDC **06** 21:50:44.4±6.2, 6°.41S×103°.56E, h53km±50km, mb3.6/9, mb1 3.7/10, mb1mx3.5/32, mbtmp3.9/10, ML3.7/1, Error ellipse: s-maj=50.7km s-min=17.9km az=55.0*

ISC 06 21:50:40.2±0.8**, 6°.7S**±0°.1×**103°.41E**±0°.08**, h35km, n24, σ2^{s}27**/25**, mb4.0**/12**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	Lembang	4.18	91	P	Pn	21 51 45.8	+4.1
	4.8nm,0.3s,baz=315,slow=20,SNR=3.0						
LEM				S	Sn	21 52 30.7	+1.2
	2.4nm,0.3s,baz=318,slow=20,SNR=1.3						
XMIS	Christmas Isla	4.33	149	Pn	Pn	21 51 44.7	+1.2
CISI	Cisompet, Garu	4.45	101		Pn	21 51 45.8	+0.6
CISI				Sn	Sn	21 52 31.8	-4.2
UGM	Wanagama	7.16	100	Pn	Pn	21 52 24.7	+2.3
UGM				Sn	Sn	21 53 38.8	-3.8
JAGI	Jajag, Banyuwa	10.79	100	Pn	Pn	21 53 12.9	+0.6
JAGI				Sn	Sn	21 55 07.6	-4.3
SOEI	Soe	20.86	100	P	P	21 55 18.6	-0.8
SOEI				IAmb	IAmb	21 55 26.1	
	comp=Z,23nm,1.0s						
CMAR	Chiang Mai Arr	25.42	350	P	P	21 56 04.5	-0.3
	comp=Z,2.0nm,0.7s,baz=181,slow=8.4,SNR=18						
H08S2	Diego Garcia H	30.68	266	T	T	22 29 23.0	
	baz=89,slow=75,SNR=5.2						
H08S3	Diego Garcia H	30.69	266	T	T	22 29 21.7	
	baz=89,slow=75,SNR=6.0						
H08S1	Diego Carcia H	30.70	266	T	T	22 29 22.5	
	baz=89,slow=75,SNR=5.8						
WB0	Warramunga Arr	32.75	116	P	P	21 57 11.2	+1.2
WB0				IAmb	IAmb	21 57 17.2	
	comp=Z,2.8nm,1.0s						
WRA	Warramunga Arr	32.76	117	P	P	21 57 12.5	+2.4
	comp=Z,1.0nm,0.9s,baz=292,slow=8.6,SNR=4.8						
WB2	Warramunga Arr	32.77	117	P	P	21 57 12.7	+2.5
WB2				IAmb	IAmb	21 57 13.9	
	comp=Z,3.6nm,0.9s						
ASAR	Alice Springs	33.78	123	P	P	21 57 22.1	+3.0
	comp=Z,0.4nm,0.6s,baz=299,slow=8.5,SNR=2.5						
STKA	Stephens Creek	43.50	130	P	P	21 58 42.5	+2.1
	comp=Z,0.7nm,0.4s,baz=329,slow=18,SNR=1.6						
STKA	Stephens Creek	43.50	130	P	P	21 58 40.2	-0.2
KSRS	Korea Array	49.57	26	P	P	21 59 27.5	-0.3
	comp=Z,1.6nm,0.5s,baz=191,slow=39,SNR=4.6						
KDJ	Kajisay	54.21	336	P	P	22 00 04.0	+1.4
KDJ				IAmb	IAmb	22 00 04.6	
	comp=Z,2.0nm,0.7s						
SONM	Songino Array	54.40	2	P	P	22 00 03.6	-0.3
	comp=Z,0.5nm,0.3s,baz=172,slow=8.2,SNR=5.4						
MKAR	Makanchi Array	56.51	343	P	P	22 00 19.1	+0.2
	comp=Z,0.8nm,0.5s,baz=152,slow=8.6,SNR=12						
USRK	Ussuriysk Ar.	56.89	24	P	P	22 00 20.6	-1.0
	comp=Z,2.1nm,0.7s,baz=205,slow=6.7,SNR=8.6						
DAMY	Dhamar	62.23	290	P	P	22 00 56.9	-2.4
ZALV	Zalesovo Beam	62.46	348	P	P	22 00 59.9	+0.1
	comp=Z,1.0nm,0.5s,baz=178,slow=7.1,SNR=6.0						
TXAR	Lajitas Array	146.00	45	PKPbc	PKiKP	22 10 19.2	-1.3
	comp=Z,0.4nm,0.5s,baz=272,slow=1.5,SNR=4.2						

*IDC **06** 22:02:22.9±1.0, 5°.70N×78°.21W, h0km, mb3.8/4, mb1 4.0/8, mb1mx3.8/30, mbtmp3.9/8, ML3.7/3, Error ellipse: s-maj=33.3km s-min=20.5km az=38.0*

*UPA **06** 22:02:24.5±1.7, 5°.71N×78°.26W, h20km±8km, MW4.1*

*RSNC **06** 22:02:25.4±1.1, 5°.72N×78°.22W, h35km±21km, ML3.2, Mw3.3*

ISC 06 22:02:21.8±1.7**, 5°.70N**±0°.03×**78°.27W**±0°.03**, h2km**±11km**, n81, σ2^{s}13**/127**, 17C-4D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIZC	Pizarro, Choco	1.16	129	⇑iP	Pg	22 02 44.3	+0.2
PIZC				eS	Sg	22 02 58.3	-0.9
PIZC				i		22 03 00.5	
	comp=Z,917nm,0.2s						
PTAC	Punta Ardita,	1.51	18	⇑iP	Pn	22 02 48.8	-1.2
PTAC				eS	Sb	22 03 04.5	-5.7
MALC	Bahia Malaga	1.92	151	⇑iP	Pn	22 02 56.0	+0.5
MALC				eS	Sn	22 03 17.3	-3.0
MALC				i		22 03 20.4	
	comp=Z,349nm,0.3s						
CBOC	Ciudad Bolivar	2.25	86	eP	Pn	22 02 59.4	-0.9
CBOC				eS	Sn	22 03 23.3	-5.5
CBOC				i		22 03 25.4	
	comp=Z,142nm,0.3s						
DBBC	Dabeiba	2.43	57	⇑iP	Pn	22 03 03.4	+0.7
DBBC				eS	Sn	22 03 30.8	-2.3
YOTC	Yotoco, Valle	2.56	132	⇑iP	Pn	22 03 04.3	-0.3
YOTC				eS	Sn	22 03 33.0	-3.5
YOTC				i		22 03 33.6	
	comp=Z,131nm,0.6s						
PCRI3	Pocri, Los San	2.68	317	iP	Pn	22 03 05.7	-0.3
PCRI3				iS	Sn	22 03 36.8	-2.3
GR1C	Gorgona, Isla	2.68	178	eP	Pn	22 03 04.7	-1.3
HORQ	Saladito	2.75	143	⇓iP	Pn	22 03 06.9	-0.3
HORQ				eS	Sn	22 03 35.4	-5.8
HORQ				i		22 03 38.3	
	comp=Z,61nm,0.3s						
TOSI3	Tonosi	2.75	308	⇑iP	Pn	22 03 06.1	-0.8
TOSI3				iS	Sn	22 03 39.9	-0.8
HELC	Santa Helena	2.77	80	eP	Pn	22 03 08.0	+0.4
HELC				eS	Sn	22 03 39.2	-2.6
HELC				i		22 03 42.1	
	comp=Z,79nm,0.8s						
HELC	Santa Helena	2.77	80	⇑iP	Pn	22 03 08.1	+0.4
HELC				iS	Sn	22 03 40.2	-1.6
HELC				iS	Sn	22 03 40.3	-1.6
UPD2	Meteti	2.84	5	eS	Sn	22 03 40.7	-2.4
UPD2	Meteti	2.84	5	⇑iP	Pn	22 03 08.6	+0.4
UPD2				iS	Sn	22 03 41.0	-2.2
AZU	Azuero	2.88	316	⇑iP	Pn	22 03 08.1	-0.7
AZU				eS	Sn	22 03 41.7	-2.3
AZU	Azuero	2.88	316	⇑iP	Pn	22 03 08.1	-0.7
	baz=144,slow=8.6						
AZU				AMP		22 03 09.3	
AZU				iS	Sn	22 03 42.5	-1.5
RREF	El Recreo	3.02	105	eP	Pn	22 03 12.1	+0.9
RREF				eS	Sn	22 03 45.4	-2.9
RREF				i		22 03 52.3	
	comp=Z,66nm,0.4s						
CACAO	El Cacao, Vera	3.05	303	⇑iP	Pn	22 03 10.0	-1.2
CACAO				iS	Sn	22 03 45.1	-3.1
CAPC	Capurgana	3.06	17	eP	Pn	22 03 10.7	-0.6
CAPC				eS	Sn	22 03 44.2	-4.2
CAPC				i		22 03 48.9	
	comp=Z,71nm,0.4s						
CAP2	Capurgana	3.07	17	eP	Pn	22 03 12.8	+1.4
ANIL	Santa Ana	3.10	113	eP	Pn	22 03 12.6	+0.6
ANIL				eS	Sn	22 03 50.8	+1.0
ANIL				i		22 03 59.9	
	comp=Z,125nm,0.4s						
PESE3	Pese, Herrera	3.20	313	eP	Pn	22 03 13.0	-0.2
PESE3				eS	Sn	22 03 48.7	-3.2
MARI3	Mariato, Verag	3.33	306	eP	Pn	22 03 14.4	-0.5
TABO3	Taboga, Panama	3.33	338	iP	Pn	22 03 14.0	-1.0
TABO3				iS	Sn	22 03 53.5	-1.6
OCU3	Ocu, Herrera	3.34	312	eP	Pn	22 03 15.3	+0.1
UREC	San Jos de Ur	3.40	53	eP	Pn	22 03 17.6	+1.6
UREC				eS	Sn	22 03 54.7	-2.2
UREC				i		22 03 59.2	
	comp=Z,76nm,0.4s						
VTON	El Valle, Cocl	3.42	328	⇑eP	Pn	22 03 16.4	+0.1
VTON				iS	Sn	22 03 56.3	-1.2
FLAM	Flamenco Islan	3.43	339	⇑eP	Pn	22 03 15.8	-0.6
PNME	Penonome	3.44	324	eP	Pn	22 03 16.6	0.0
CRIS3	El Cristo, Coc	3.45	318	⇑iP	Pn	22 03 16.8	+0.2
CRIS3				iS	Sn	22 03 56.5	-1.6
PONU3	Ponuga, Veragu	3.46	309	eP	Pn	22 03 16.9	+0.2
UPA	Univ. de Panam	3.49	339	⇑eP	Pn	22 03 16.7	-0.5
ORTC	Ortega, Tolima	3.50	120	eP	Pn	22 03 19.1	+1.7
ORTC				eS	Sn	22 03 57.8	-1.6
ORTC				i		22 04 04.6	
	comp=Z,48nm,0.7s						
CHOR3	La Chorrera	3.51	335	⇑eP	Pn	22 03 17.9	+0.4
CHOR3				iS	Sn	22 03 58.1	-1.4
POPC	Popayan, Colom	3.52	153	eP	Pn	22 03 18.2	+0.4
POPC				eS	Sn	22 03 56.2	-3.9
CHPO	Chepo, Panama	3.55	346	eP	Pn	22 03 17.7	-0.3
CNTA3	Canitas, Panam	3.55	350	⇓iP	Pn	22 03 17.9	-0.1
CNTA3				eS	Sn	22 03 58.1	-2.6
GMAL	Guarumal, Vera	3.59	305	eS	Sn	22 03 59.8	-1.7
STIA3	Santiago, Vera	3.59	312	eP	Pn	22 03 19.5	+0.9
ZANG	Zanguenga, Cho	3.60	334	⇓eP	Pn	22 03 18.9	+0.1
ZANG				iS	Sn	22 04 01.7	-0.2
CALO3	Calobre, Verag	3.65	316	eP	Pn	22 03 20.0	+0.6
GAMB1	Gamboa	3.69	337	eP	Pn	22 03 19.5	-0.4
SFRA3	San Francisco,	3.69	314	eP	Pn	22 03 18.7	-1.2
BCIP	Isla Barro Col	3.78	336	eP	Pn	22 03 20.6	-0.6
BCIP				eS	Sn	22 04 03.8	-2.5
BCIP				i		22 04 09.2	
	comp=Z,86nm,0.2s						
BCIP	Isla Barro Col	3.78	336	iP	Pn	22 03 20.7	-0.4
BCIP				iS	Sn	22 04 04.2	-2.1
MESA3	La Mesa, Verag	3.78	310	eP	Pn	22 03 21.9	+0.7
FRIJ	El Hiral	3.79	338	⇑iP	Pn	22 03 20.7	-0.5
FRIJ				iS	Sn	22 04 04.4	-2.1
BBAC	Balboa, Cauca	3.79	164	eP	Pn	22 03 15.7	-5.9
BBAC				eS	Sn	22 04 01.8	-5.2
BBAC				i		22 04 26.2	
	comp=Z,67nm,0.1s						
ZARC	Zaragoza, Cauc	3.83	62	eP	Pn	22 03 23.9	+2.0
ZARC				eS	Sn	22 04 07.7	+0.2
ZARC				i		22 04 13.3	
	comp=Z,40nm,0.3s						
PCON	Cinco Dias	3.83	151	eP	Pn	22 03 24.6	+2.1
PCON				eS	Sn	22 04 08.2	-0.2
PCON				i		22 04 17.2	
	comp=Z,32nm,0.6s						
MLIR	Monte Lirio	3.85	336	eP	Pn	22 03 21.7	-0.5
PTBC	PUERTO BERRIO,	3.88	77	eP	Pn	22 03 24.5	+1.8
PTBC				eS	Sn	22 04 07.7	-1.2
PTBC				i		22 04 13.2	
	comp=Z,26nm,0.4s						
PRAC	Prado	3.91	120	eP	Pn	22 03 24.9	+1.9
PRAC				eS	Sn	22 04 06.8	-2.7
PRAC				i		22 04 20.0	
	comp=Z,54nm,0.5s						
SOTA	Rioblanco	3.91	155	eP	Pn	22 03 24.7	+1.3
SOTA				eS	Sn	22 04 09.7	-0.4
CNAZ3	Canazas, Verag	3.93	312	eP	Pn	22 03 24.1	+0.9
ROSC	El Rosal	4.03	102	Pn	Pn	22 03 25.9	+1.0
	comp=Z,2.4nm,0.3s,baz=138,slow=20,SNR=1.8						
ROSC	El Rosal	4.03	102	eP	Pn	22 03 29.4	+4.5
BETC	Betania	4.12	137	eP	Pn	22 03 28.4	+2.5
BETC				eS	Sn	22 04 13.9	-0.8
SPBC	San Pablo de B	4.18	90	eP	Pn	22 03 28.4	+1.7
SPBC				eS	Sn	22 04 14.7	-1.6
CRUC	La Cruz	4.31	162	eP	Pn	22 03 30.8	+2.0
CRUC				i		22 04 20.7	
	comp=Z,18nm,0.4s						
GARC	Garzon, Huila	4.45	141	eP	Pn	22 03 33.5	+2.8
GARC				eS	Sn	22 04 20.8	-2.5
BRRC	Barranca, Sant	4.74	73	eP	Pn	22 03 36.6	+2.2
BRRC				i		22 04 46.5	
	comp=Z,18nm,0.8s						
VILC	Villavicencio,	4.82	109	eP	Pn	22 03 40.3	+4.6
VILC				i		22 04 41.8	
	comp=Z,19nm,0.4s						
DVD	David	4.96	303	eP	Pn	22 03 34.4	-3.0
RUSC	La Rusia	5.16	88	eP	Pn	22 03 43.3	+2.6
RUSC				eS	Sn	22 04 42.2	+1.1
RUSC				i		22 04 47.5	
	comp=Z,17nm,1.0s						
SJCC	San Jacinto, C	5.17	36	eP	Pn	22 03 42.7	+2.3
SJCC				eS	Sn	22 04 36.2	-4.6
SJCC				i		22 04 42.2	
	comp=Z,16nm,0.6s						
BCO2	Palmira	5.18	306	⇓eP	Pn	22 03 42.2	+1.6
BCO2				eS	Sn	22 04 40.1	-1.1
SMLC	San Martn de	5.18	53	eP	Pn	22 03 42.1	+1.6
SMLC				eS	Sn	22 04 36.2	-4.7
BRU2	Volcan	5.36	305	eP	Pn	22 03 44.1	+1.0
MACC	Macarena, Meta	5.65	128	eP	Pn	22 03 48.5	+1.6
MACC				eS	Sn	22 04 47.3	-5.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MACC				i		22 04 54.9	
	comp=Z,27nm,0.4s						
PAMC	Pamplona, Colo	5.77	73	eP	Pn	22 03 51.7	+2.7
PAMC				eS	Sn	22 04 53.9	-2.2
PAMC				i		22 05 07.2	
	comp=Z,15nm,1.1s						
TAMC	Tame, Arauca	6.48	83	eP	Pn	22 04 01.0	+2.6
TAMC				i		22 05 27.7	
	comp=Z,15nm,0.3s						
JTS	Las Juntas de	8.04	305	Pn	Pn	22 04 22.3	+2.5
	comp=Z,1.7nm,0.3s,baz=198,slow=8.3,SNR=6.2						
SDV	Santo Domingo	8.21	67	Pn	Pn	22 04 22.9	+0.6
	comp=Z,3.7nm,0.3s,baz=243,slow=13,SNR=4.6						
PTGA	Pitinga	19.36	109	P	P	22 06 48.5	-0.5
	comp=Z,0.3nm,0.3s,baz=278,slow=17,SNR=4.7						
LPAZ	La Paz	24.04	155	P	P	22 07 41.2	+2.0
	comp=Z,1.3nm,0.8s,baz=336,slow=5.8,SNR=5.5						
YKA	Yellowknife Ar	62.64	342	P	P	22 12 49.0	+1.4
	comp=Z,1.4nm,0.8s,baz=130,slow=7.6,SNR=22						
ESDC	Sonseca Array	74.31	51	P	P	22 14 02.5	+1.3
	comp=Z,0.2nm,0.6s,baz=189,slow=37,SNR=2.7						
ILAR	Eielson Array	75.84	336	P	P	22 14 11.4	+2.0
	comp=Z,1.0nm,0.7s,baz=114,slow=4.2,SNR=6.1						
ASAR	Alice Springs	144.26	237	PKP	PKPab	22 21 58.9	+0.6
	comp=Z,1.1nm,0.6s,baz=122,slow=3.9,SNR=12						
WRA	Warramunga Arr	145.29	243	PKPbc	PKPbc	22 22 02.7	+0.6
	comp=Z,0.8nm,0.7s,baz=97,slow=3.3,SNR=6.3						

*NEIC **06** 22:06:21.7±3.0, 0°.00S±0°.08×17°.91W±0°.06, h10km±1km, mb4.4/6, Error ellipse: s-maj=14.7km s-min=8.2km az=214.0*

*IDC **06** 22:06:22.2±3.3, 0°.24S×17°.68W, h0km, mb3.9/5, mb1 4.1/7, mb1mx3.7/31, mbtmp4.0/7, ML4.6/2, Error ellipse: s-maj=126.9km s-min=24.4km az=156.0*

ISC 06 22:06:24.7±0.6, **0°.07S**±0°.08×**17°.87W**±0°.09, **h23**km, **n18**, σ**1s.93**/16, **mb4.1**/7, **North of Ascension Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	8.41	156	T	T	22 16 58.7	
	baz=339						
H10N3	ASCENSION HYDR	8.42	157	T	T	22 16 55.7	
	baz=339						
H10N1	ASCENSION HYDR	8.43	156	T	T	22 16 57.5	
	baz=339						
ASCN	Ascension	8.56	156	Pn	Pn	22 08 27.3	0.0
ASCN				Sn	Sn	22 10 03.7	+0.5
DBIC	Dimbokro	14.60	62	Pn	Pn	22 09 49.0	-1.1
	2.4nm,0.3s,baz=244,slow=16,SNR=25						
DBIC				Sn	Sn	22 12 19.7	-12
	0.3nm,0.3s,baz=172,slow=18,SNR=1.4						
RCBR	Riachuelo	18.89	252	P	Pn	22 10 45.9	+1.4
	1.7nm,0.3s,baz=77,slow=14,SNR=11						
RCBR				S	Sn	22 14 01.7	-14
	0.2nm,0.3s,baz=148,slow=17,SNR=1.3						
RCBR	Riachuelo	18.89	252	P	P	22 10 41.3	-2.5
TORD	Torodi Ar. Bea	23.41	55	P	P	22 11 32.6	+0.3
	3.0nm,0.5s,baz=239,slow=10,SNR=19						
SPB	Sao Paulo	37.02	229	P	P	22 13 32.0	-1.0
TIP	Timpagrande	50.29	35	P	P	22 15 18.5	-1.1
TIP				IAmb	IAmb	22 15 24.9	
	comp=Z,4.9nm,1.1s						
HUMP	Col San Antoni	50.50	294	P	P	22 15 19.5	-1.9
OSSC	Osservatorio P	50.60	27	P	P	22 15 19.7	-2.1
WLF	Walferdange	53.65	19	P	P	22 15 42.1	-2.3
PDG	Podgorica	53.87	34	P	P	22 15 43.6	-2.5
PDG				IAmb	IAmb	22 15 47.9	
	comp=Z,5.8nm,1.1s						
AKASG	Malin Array Be	64.40	31	P	P	22 17 00.5	+1.6
	comp=Z,0.2nm,0.3s,baz=232,slow=7.5,SNR=4.3						
FINES	FINESS Array B	69.82	21	P	P	22 17 34.9	+1.8
	comp=Z,0.8nm,0.5s,baz=209,slow=4.5,SNR=11						
TXAR	Lajitas Array	86.37	299	P	P	22 19 08.2	+2.5
	comp=Z,0.6nm,0.7s,baz=116,slow=6.1,SNR=5.2						
YKA	Yellowknife Ar	93.18	332	P	P	22 19 39.2	+2.3
	comp=Z,0.3nm,0.8s,baz=89,slow=5.1,SNR=4.0						

*VIE **06** 22:29:10.5±0.9, 51°.35N×16°.09E, h0km, mb2.2/5, ml2.8/6, Error ellipse: s-maj=10.7km s-min=4.7km az=31.0 70 km WNW of Wroclaw Suspected Mining induced.*

ISC 06 22:29:08.9±1.3, **51°.47N**±0°.05×**16°.20E**±0°.03, **h0**km, **n30**, σ**0s.83**/59, **4C-1D**, **Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHVC	Chvalec	0.88	186	ePG	Pg	22 29 25.8	0.0
CHVC				eSG	Sg	22 29 37.6	+0.3
	comp=Z,52nm,0.5s						
OSTC	Ostas	0.91	180	ePG	Pg	22 29 26.4	+0.1
OSTC				eSG	Sg	22 29 38.5	+0.4
	comp=Z,43nm,0.4s						
UPC	Upice	0.97	187	ePG	Pg	22 29 27.4	0.0
UPC				eSG	Sg	22 29 40.1	+0.2
	comp=Z,111nm,0.5s						
DPC	Dobruska-Polom	1.12	176	ePG	Pg	22 29 29.7	-0.7
DPC				eSG	Sg	22 29 44.7	-0.1
	comp=Z,29nm,0.6s						
PVCC	Panska Ves	1.40	228	ePG	Pg	22 29 35.5	-0.2
PVCC				eSG	Sg	22 29 53.7	0.0
	comp=Z,153nm,0.4s						
KRLC	Kraliky	1.44	165	ePG	Pn	22 29 35.8	-0.5
KRLC				eSG	Sg	22 29 54.4	-0.7
	comp=Z,36nm,0.4s						
BRG	Berggiesshubel	1.54	248	PG	Pn	22 29 37.7	0.0
BRG				SG	Sg	22 29 58.3	-0.2
	55nm,0.4s						
GOPC	GO Pecny, Ondr	1.79	211	ePG	Pn	22 29 41.7	+0.5
GOPC				eSG	Sb	22 30 05.2	-0.5
	comp=Z,41nm,0.8s						
PRU	Pruhonice	1.82	216	ePG	Pn	22 29 42.0	+0.6
PRU				eSG	Sb	22 30 06.3	0.0
	comp=Z,40nm,0.4s						
MORC	Moravsky Berou	1.89	153	ePN	Pn	22 29 41.9	-0.6
MORC				eSG	Sb	22 30 08.3	-0.3
MORC	Moravsky Berou	1.89	153	⇑P	Pn	22 29 41.9	-0.6
MORC				⇑S	Sg	22 30 10.0	+0.3
CLL	Collm	2.01	267	i Pn	Pn	22 29 44.2	+0.1
CLL				i Pg	Pg	22 29 47.3	-0.2
CLL				i		22 29 49.3	
CLL				eSg	Sg	22 30 16.0	+2.5
	comp=Z,19nm,0.3s						
OKC	Ostrava-Krasne	2.05	142	ePG	Pb	22 29 47.3	+0.4
OKC				eSG	Sg	22 30 14.1	-0.5
	comp=Z,30nm,0.6s						
VRAC	Vranov	2.17	173	ePN	Pn	22 29 46.4	0.0
VRAC				eSG	Sg	22 30 17.8	-0.9
VRAC	Vranov	2.17	173	⇑P	Pn	22 29 47.2	+0.8
VRAC				⇓S	Sb	22 30 16.0	-0.6
TREC	Trest	2.22	192	ePN	Pn	22 29 47.9	+0.9
TREC				ePG	Pb	22 29 49.4	-0.5
TREC				eSG	Sb	22 30 18.9	+0.9
	comp=Z,33nm,0.5s						
PBCC	Pribram	2.27	219	ePG	Pb	22 29 50.7	-0.1
PBCC				eSG	Sg	22 30 20.8	-1.0
KRUC	Moravsky	2.41	177	ePN	Pn	22 29 49.7	+0.1
KRUC				eSG	Sg	22 30 25.8	-0.5
NKC	Novy Kostel	2.68	244	ePN	Pn	22 29 53.3	-0.1
NKC				ePG	Pb	22 29 58.1	+0.3
NKC				eSG	Sg	22 30 34.6	-0.4
	comp=Z,41nm,0.3s						
KHC	Kasperske Hory	2.88	217	ePN	Pn	22 29 56.0	-0.1
KHC				ePG	Pb	22 30 01.5	+0.3
KHC				eSN	Sn	22 30 31.0	-0.4
KHC				eSG	Sg	22 30 40.5	-0.9
SMOL	Smolenice	3.06	165	ePG	Pg	22 30 08.0	+0.5
SMOL				eSG	Sg	22 30 49.7	+2.6
SMOL				eLG	Lg	22 30 59.0	
LANS	Liptovska Anna	3.12	137	ePN	Pn	22 29 59.3	-0.1
LANS				eSG	Sg	22 30 50.8	+1.6
MODS	Modra-Piesok	3.17	167	ePG	Pg	22 30 09.2	-0.5
MODS				eSG	Sg	22 30 52.7	+1.9
MODS				eLG	Lg	22 31 01.2	
VYHS	Vyhne	3.42	149	ePN	Pn	22 30 02.3	-1.3
CONA	Conrad Observa	3.55	184	ePn	Pn	22 30 05.3	0.0
	comp=Z,2.1nm,0.3s						
BSD	Bornholm Skovb	3.74	349	i P	Pn	22 30 06.4	-1.4
MOA	Molln	3.83	200	ePn	Pn	22 30 09.1	0.0
	comp=Z,1.0nm,0.2s						
MOA				Sg	Sg	22 31 11.2	-0.8
	comp=Z,23nm,0.8s						
ARSA	Arzberg	4.24	186	ePn	Pn	22 30 16.8	+2.0
	comp=Z,1.2nm,0.3s						
KBA	Koelnbreinsper	4.77	204	ePn	Pn	22 30 22.8	+0.5
	comp=Z,0.7nm,0.3s						
BURAR	Bucovina Array	7.02	120	⇑P	Pn	22 30 53.2	+0.3

DJA 06 22:55:08.1±0.8, **5°S**±6°×**9°9E**±°, **h10**km, **M4.7**/11, **mB5.2**/3, **mb4.7**/5, **MLv4.7**/11, **Mw(mB)4.6**/3, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	2.45	17	P	Pn	22 55 48.4	+0.2
PPSI				S	Sn	22 56 14.4	-3.8
MASI	Maura Aman, Be	3.55	56	P	Pn	22 56 02.7	-0.6
MASI				S	Sn	22 56 42.5	-2.8
KSI	Kapahiang	3.61	66	P	Pn	22 56 05.1	+0.9
KSI				S	Sn	22 56 44.3	-2.7
KRJI	Kerinci	3.71	36	P	Pn	22 56 05.3	-0.4
KRJI				S	Sn	22 56 46.3	-3.3
SISI	Saibi	3.77	357	P	Pn	22 56 05.9	-0.5
SISI				S	Sn	22 56 46.6	-4.3
PDSI	Padang	4.34	16	P	Pn	22 56 13.5	-0.8
PDSI				S	Sn	22 56 59.3	-5.7
SDSI	Sungai Dareh	4.68	27	P	Pn	22 56 18.3	-0.6
SDSI				S	Sn	22 57 08.1	-5.2
LWLI	Liwa	4.76	89	P	Pn	22 56 21.7	+1.6
MNSI	Mandailing Nat	5.88	3	P	Pn	22 56 34.5	-0.9
GSI	Gunungsitoli	6.60	345	P	Pn	22 56 47.2	+1.9
	0.8nm97nm,1.0s						
SBSI	Sibolga	6.64	357	P	Pn	22 56 42.9	-2.9
CNJI	Cibinong	8.10	106	P	Pn	22 57 06.8	+0.9
	2μm48nm,1.1s						
KCSI	Kotacane, Aceh	8.72	350	P	Pn	22 57 14.7	+0.3
	9.0nm,1.6s						
CISI	Cisompet, Garu	8.82	106	P	Pn	22 57 16.5	+0.7

*KRSC **06** 23:09:39.6±1.2, 52°.82N×160°.32E, h47km±12km, ML5.0*

*BJI **06** 23:09:39.5±0.0, 53°.18N×160°.00E, h47km, mB4.9/34, mb4.7/39, Ms4.3/16, Ms7 4.1/16*

*MOS **06** 23:09:41.9±0.9, 52°.87N×160°.07E, h54km, mb5.2/72, MS3.4/5, Error ellipse: s-maj=5.9km s-min=2.9km az=92.5*

*NEIC **06** 23:09:44.9±1.6, 52°.91N±0°.10×159°.9E±0°.1, h67km±5km, mb4.8/142, Error ellipse: s-maj=14.7km s-min=10.9km az=152.0*

*IDC **06** 23:09:46.0±1.6, 53°.03N×159°.81E, h74km±14km, mb4.2/30, mb1 4.4/34, mb1mx4.3/46, mbtmp4.5/34, MS3.7/14, Ms1 3.7/14, ms1mx3.5/43, Error ellipse: s-maj=13.8km s-min=9.2km az=138.0*

*BGR **06** 23:09:46.2±0.0, 53°.37N×159°.66E, h33km, mb5.1*

ISC 06 23:09:42.6±0.6, **52°.91N**±0°.04×**160°.10E**±0°.03, **h50**km±5km, **n709**, σ**1s.32**/696, **mb4.9**/238, **MS3.9**/19, **64C-40D**, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.20	346	i P	Pn	23 09 50.0	-0.9
SPN				eS	Sn	23 09 55.4	-1.4
SPN	Mys Shipunski	0.20	346	PN	Pn	23 09 50.0	-0.9
SPN				S	Sn	23 09 55.4	-1.4
NLC	Nalytchevo	0.53	300	i P	Pn	23 09 54.0	-0.1
NLC				eS	Sn	23 10 02.8	+0.4
NLC	Nalytchevo	0.53	300	PN	Pn	23 09 54.0	-0.1
NLC				S	Sn	23 10 02.8	+0.4
SDLR	Sedlovina	0.82	297	i P	Pn	23 09 57.8	-0.3
SDLR	Sedlovina	0.82	297	PN	Pn	23 09 57.8	-0.3
DALK	Dalny	0.82	279	eP	Pn	23 09 58.0	+0.1
DALK				eS	Sn	23 10 10.3	+1.1
DALK	Dalny	0.82	279	PN	Pn	23 09 58.0	+0.1
DALK				S	Sn	23 10 10.3	+1.1
UGLR	Uglovaya	0.83	292	i P	Pn	23 09 58.5	+0.4
UGLR	Uglovaya	0.83	292	PN	Pn	23 09 58.5	+0.4
SMAR	Somma	0.86	295	i P	Pn	23 09 58.8	+0.1
SMAR	Somma	0.86	295	PN	Pn	23 09 58.8	+0.1
PET	Petropavlovsk	0.89	278	⇓iPN	Pn	23 09 59.0	+0.3
PET				eS	Sn	23 10 11.7	+1.1
PET				pmax	pmax		
	comp=Z,5μm,0.6s						
PET				smax	smax		
	comp=E,16μm,0.7s						
PET				smax	smax		
	comp=N,19μm,0.6s						
PET	Petropavlovsk	0.89	278		Pn	23 09 59.0	+0.3
AVH	Avacha	0.90	294	i P	Pn	23 09 59.6	+0.6
AVH				eS	Sn	23 10 12.6	+1.6
AVH	Avacha	0.90	294	PN	Pn	23 09 59.6	+0.6
AVH				S	Sn	23 10 12.6	+1.6
KRER	Koryakskii	0.91	296	i P	Pn	23 09 59.9	+0.6
KRER	Koryakskii	0.91	296	PN	Pn	23 09 59.9	+0.6
KOK	Koryaka	0.96	294	i P	Pn	23 10 00.4	+0.5
KOK	Koryaka	0.96	294	PN	Pn	23 10 00.4	+0.5
KRX	Arik	0.99	298	i P	Pn	23 10 00.6	+0.3
KRX	Arik	0.99	298	PN	Pn	23 10 00.6	+0.3
RUS	Russkaya	1.08	244	i P	Pn	23 10 01.0	-0.3
RUS				eS	Sn	23 10 15.4	+0.2
RUS	Russkaya	1.08	244	PN	Pn	23 10 01.0	-0.3
RUS				S	Sn	23 10 15.4	+0.2
KII	Karymskiy	1.20	341	i P	Pn	23 10 03.9	+0.9
KII	Karymskiy	1.20	341	PN	Pn	23 10 03.9	+0.9
KRMR	Karymshinskiy	1.20	267	eP	Pn	23 10 03.4	+0.4
KRMR				eS	Sn	23 10 19.8	+1.7
KRMR	Karymshinskiy	1.20	267	PN	Pn	23 10 03.4	+0.4
KRMR				S	Sn	23 10 19.8	+1.7
GRL	Gorelyy	1.28	255	eP	Pn	23 10 04.9	+0.6
GRL	Gorelyy	1.28	255	PN	Pn	23 10 04.9	+0.6
ASAK	Asacha	1.44	249	i P	Pn	23 10 07.1	+0.7
ASAK	Asacha	1.44	249	PN	Pn	23 10 07.1	+0.7
I44RU	PETROPAVLOVSK-	1.46	279	P	Pn	23 10 07.3	+0.8
	baz=87,slow=21,SNR=8.5						
PEA0B	Petropavlovsk-	1.47	279	d iPN	Pn	23 10 07.7	+1.1
PETK	Petropavlovsk-	1.47	279	P	Pn	23 10 07.8	+1.1
	comp=N,522nm,0.3s,baz=86,slow=19,SNR=4336						
PETK				LR	LR	23 10 55.9	
	comp=N,3μm,18.4s,baz=128,slow=55						
KDTR	Khodutka, Kamc	1.66	229	eP	Pn	23 10 09.2	0.0
KDTR				eS	Sn	23 10 29.9	+0.6
KDTR	Khodutka, Kamc	1.66	229	PN	Pn	23 10 09.2	0.0
KDTR				S	Sn	23 10 29.9	+0.6
APC	Apacha	1.78	272	i P	Pn	23 10 13.0	+2.1
APC				eS	Sn	23 10 35.4	+3.0
APC	Apacha	1.78	272	PN	Pn	23 10 13.0	+2.1
APC				S	Sn	23 10 35.4	+3.0
MIPR	Malaya Ipel'ka	2.14	254	eP	Pn	23 10 17.4	+1.6
MIPR	Malaya Ipel'ka	2.14	254	PN	Pn	23 10 17.4	+1.6
KZV	Kizimen	2.21	3	eP	Pn	23 10 18.1	+1.1
KZV	Kizimen	2.21	3	PN	Pn	23 10 18.1	+1.1
TUMD	Tumrok D	2.31	4	eP	Pn	23 10 19.1	+1.0
TUMD				eS	Sn	23 10 46.6	+1.3
TUMR	Tumrok	2.38	1	eP	Pn	23 10 21.1	+1.9
TUMR	Tumrok	2.38	1	PN	Pn	23 10 21.1	+1.9
PAU	Pauzhetka	2.49	236	eP	Pn	23 10 22.0	+1.4
PAU				eS	Sn	23 10 51.9	+2.2
PAU	Pauzhetka	2.49	236	PN	Pn	23 10 22.0	+1.4
PAU				S	Sn	23 10 51.9	+2.2
KMNR	Kamenistaya	2.85	2	i P	Pn	23 10 28.0	+2.3
KMNR	Kamenistaya	2.85	2	PN	Pn	23 10 28.0	+2.3
KIRR	Kirishev	3.06	3	eP	Pn	23 10 30.0	+1.5
KIRR	Kirishev	3.06	3	PN	Pn	23 10 30.0	+1.5
BZGR	Bezymyannyi-Gr	3.06	6	eP	Pn	23 10 30.6	+2.1
BZGR	Bezymyannyi-Gr	3.06	6	PN	Pn	23 10 30.6	+2.1
KPT	Kopyto	3.07	1	eP	Pn	23 10 30.4	+1.8
KPT	Kopyto	3.07	1	PN	Pn	23 10 30.4	+1.8
BZWR	Bezymyannyi-We	3.07	4	eP	Pn	23 10 30.1	+1.4
BZWR	Bezymyannyi-We	3.07	4	PN	Pn	23 10 30.1	+1.4
ESO	Esso	3.13	345	eP	Pn	23 10 31.3	+1.9
ESO	Esso	3.13	345	PN	Pn	23 10 31.3	+1.9
ZLN	Zelenaya	3.14	7	eP	Pn	23 10 32.2	+2.6
ZLN	Zelenaya	3.14	7	PN	Pn	23 10 32.2	+2.6
KOZ	Kozyrevsk	3.16	358	eP	Pn	23 10 31.7	+1.9
KOZ	Kozyrevsk	3.16	358	PN	Pn	23 10 31.7	+1.9
LGNR	Loginova	3.20	6	eP	Pn	23 10 33.5	+2.9
LGNR	Loginova	3.20	6	PN	Pn	23 10 33.5	+2.9
CIRR	Tsirk	3.24	6	eP	Pn	23 10 33.0	+2.0
CIRR	Tsirk	3.24	6	PN	Pn	23 10 33.0	+2.0
SKR	Severo-Kuril's	3.33	230	eP	Pn	23 10 33.8	+1.7
SKR				eS	Sn	23 11 11.9	+1.5
SKR	Severo-Kuril's	3.33	230	ePN	Pn	23 10 34.1	+2.0
SKR				eS	Sn	23 11 10.2	-0.2
SKR				pmax	pmax		
	comp=Z,97nm,0.4s						
SKR				smax	smax		
	comp=N,488nm,0.6s						
SKR				smax	smax		
	comp=E,1μm,0.7s						
SKR				MLR	MLR		
	comp=Z,300nm,16.0s						
SKR				MLR	MLR		
	comp=Z,600nm,14.0s						
SRDR	Sredinnyy	3.42	356	eP	Pn	23 10 35.0	+1.5
SRDR	Sredinnyy	3.42	356	PN	Pn	23 10 35.0	+1.5
KLY	Klyuchi	3.43	5	eP	Pn	23 10 36.5	+3.1
KLY	Klyuchi	3.43	5	PN	Pn	23 10 36.5	+3.1
ALID	Alaid	3.48	236	eP	Pn	23 10 36.2	+1.8
ALID	Alaid	3.48	236	PN	Pn	23 10 36.2	+1.8
KBTR	Krutoberegovo	3.67	24	i P	Pn	23 10 37.9	+1.2
KBTR	Krutoberegovo	3.67	24	PN	Pn	23 10 37.9	+1.2
KBG	Krutoberegovo	3.68	23	eP	Pn	23 10 38.9	+2.0
KBG	Krutoberegovo	3.68	23	PN	Pn	23 10 38.9	+2.0
BDR	Baidarnaya	3.72	9	eP	Pn	23 10 40.1	+2.5
BDR	Baidarnaya	3.72	9	PN	Pn	23 10 40.1	+2.5
SMKR	Semkarok	3.77	12	eP	Pn	23 10 39.8	+1.6
SMKR	Semkarok	3.77	12	PN	Pn	23 10 39.8	+1.6
SRKR	Sorokina	3.81	9	eP	Pn	23 10 41.2	+2.5
SRKR	Sorokina	3.81	9	PN	Pn	23 10 41.2	+2.5
BKI	Bering	4.15	54	eP	Pn	23 10 43.1	-0.3
BKI				eS	Sn	23 11 25.9	-4.7
BKI	Bering	4.15	54	PN	Pn	23 10 43.1	-0.3
PALN	Palana	6.20	359	eP	Pn	23 11 14.4	+3.0
PALN	Palana	6.20	359	PN	Pn	23 11 14.4	+3.0
OSSR	Ossora	6.57	13	eP	Pn	23 11 19.9	+3.5
OSSR	Ossora	6.57	13	PN	Pn	23 11 19.9	+3.5
TILK	Tilichiki	8.25	21	eP	Pn	23 11 41.0	+1.5
TILK	Tilichiki	8.25	21	PN	Pn	23 11 41.0	+1.5
MA2	Magadan	8.46	326	P	Pn	23 11 44.2	+1.8
	comp=Z,0.4nm,0.3s,baz=135,slow=9.8,SNR=9.5						
MA2				LR	LR	23 15 30.6	
	comp=Z,478nm,19.7s,baz=127,slow=42						
MA2	Magadan	8.46	326	d iPN	Pn	23 11 44.1	+1.8
MA2				pmax	pmax		
	comp=Z,12nm,0.8s						
MA2	Magadan	8.46	326		Pn	23 11 44.4	+2.1
SMY	Shemya	8.48	86	PN	Pn	23 11 42.7	0.0
SMY	Shemya	8.48	86		Pn	23 11 42.7	0.0
SEY	Seymchan	10.85	341	P	Pn	23 12 17.4	+2.4
	baz=150,slow=12,SNR=10						
SEY	Seymchan	10.85	341	⇑ePN	Pn	23 12 12.8	-2.2
YSS	Yuzh-Sakhalins	12.65	249	ePN	Pn	23 12 43.8	+4.1
JKA	Kamikawa-asahi	14.53	240	P	Pn	23 13 06.5	+1.4
ASAJ	Asahikawa	14.53	240	P	Pn	23 13 06.5	+1.4
	comp=Z,3.1nm,0.3s,baz=68,slow=13,SNR=16						
ASAJ				LR	LR	23 18 40.4	
	comp=Z,157nm,21.0s,baz=347,slow=37						
GRNR	Gornyy	14.78	271	⇓iP	P	23 13 15.2	+1.9
GRNR				pmax	pmax		
	comp=Z,30nm,0.8s						
BILL	Bilibino	15.47	9	i P	Pn	23 13 17.7	+0.5
BILL				pmax	pmax		
	comp=Z,51nm,1.3s						
BILL				MLR	MLR		
	comp=Z,206nm,20.0s						
BILL	Bilibino	15.47	9		P	23 13 20.3	-0.5
BILL				IAmb	IAmb	23 13 24.4	
	comp=Z,32nm,0.7s						
ERM	Erimo	15.77	233	P	Pn	23 13 20.2	-1.0
ERM				pmax	pmax		
	comp=Z,25nm,1.0s						
ERM	Erimo	15.77	233		Pn	23 13 20.2	-1.0
TEY	Ternei	17.27	252	⇑eP	Pn	23 13 35.7	-4.2
TEY				pmax	pmax		
	comp=N,20nm,0.8s						
TEY				pmax	pmax		
	comp=Z,30nm,0.7s						
TEY				pmax	pmax		
	comp=E,30nm,0.6s						
KLR	Kul'dur	18.14	270	P	Pn	23 13 50.9	+0.3
	comp=E,1.2nm,0.3s,baz=69,slow=8.1,SNR=28						
KLR	Kul'dur	18.14	270	d iP	Pn	23 13 51.8	+1.2
YAK	Yakutsk	18.57	311	eP	P	23 13 54.6	-0.4
YAK				eS	S	23 17 24.8	+1.0
YAK				pmax	pmax		
	comp=Z,48nm,1.0s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,24nm,1.1s						
YAK				smax	smax		
	comp=N,16nm,1.8s						
YAK				smax	smax		
	comp=E,14nm,1.6s						
YAK	Yakutsk	18.57	311	P	Pn	23 13 55.4	-0.3
YAK				IAmb	IAmb	23 13 57.3	
	comp=Z,55nm,0.9s						
ZEA	Zeya	19.55	286	eP	P	23 14 05.2	-0.6
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
USA0B	Ussuriysk Arra	20.44	256	deP	P	23 14 15.4	-0.1
USRK	Ussuriysk Ar.	20.44	256	P	P	23 14 15.1	-0.5
	comp=Z,17nm,0.6s,baz=60,slow=12,SNR=35						
USRK				LR	LR	23 21 54.9	
	comp=Z,279nm,20.9s,baz=59,slow=36						
MSHR	Mys Shultsa	21.89	253	⇑eP	P	23 14 30.6	-0.5
MAJO	Matsushiro	22.44	232	P	P	23 14 37.4	+0.3
MAJO				pmax	pmax		
	comp=Z,50nm,0.9s						
MAJO	Matsushiro	22.44	232	P	P	23 14 37.4	+0.3
MAT	Matsushiro	22.44	232	P	P	23 14 35.9	-1.2
MJAR	Matsushiro Arr	22.44	232	P	P	23 14 37.5	+0.3
	comp=Z,27nm,0.9s,baz=19,slow=11,SNR=59						
RDOG	Red Dog Mine	23.19	35	P	P	23 14 46.0	+1.4
TIXI	Tiksi	23.25	335	P	P	23 14 44.1	-1.0
	comp=Z,9.4nm,0.6s,baz=120,slow=10,SNR=25						
TIXI	Tiksi	23.25	335	d iP	P	23 14 43.7	-1.4
TIXI				pmax	pmax		
	comp=Z,12nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,211nm,20.0s						
TIXI	Tiksi	23.25	335	P	P	23 14 44.6	-0.5
INU	Inuyama	23.97	232	P	P	23 14 52.3	+0.2
TTA	Tatalina	24.87	49	P	P	23 15 01.4	+1.2
TTA				pmax	pmax		
	comp=Z,11nm,1.0s						
TTA	Tatalina	24.87	49	P	P	23 15 01.4	+1.2
HIA	Hailar	25.37	278	d iP	P	23 15 03.5	-1.4
HIA				pmax	pmax		
	comp=Z,18nm,0.8s						
HIA	Hailar	25.37	278	P	P	23 15 04.0	-0.8
HIA				IAmb	IAmb	23 15 04.4	
	comp=Z,21nm,0.6s						
BOD	Bodaibo	26.24	299	eP	P	23 15 10.6	-2.0
BOD				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KSRS	Korea Array	27.15	248	P	P	23 15 20.8	-0.1
	comp=Z,10nm,0.9s,baz=41,slow=9.9,SNR=16						
KSRS				LR	LR	23 27 03.2	
	comp=Z,113nm,19.0s,baz=26,slow=38						
KTH	Kantishna Hill	27.19	48	P	P	23 15 22.7	+1.5
MLY	Manley	27.30	44	P	P	23 15 23.6	+1.5
MLY					PcP	23 18 41.4	+1.1
COLD	Coldfoot	27.69	40	P	P	23 15 26.8	+1.3
TOLK	Toolik Lake Re	28.11	37	P	P	23 15 30.4	+1.1
RND	Reindeer	28.12	48	P	P	23 15 30.4	+0.9
RND				pmax	pmax		
	comp=Z,6.0nm,0.9s						
COLA	College	28.53	45	⇑eP	P	23 15 33.3	+0.3
COLA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
JNU	Nakatsue	28.80	238	P	P	23 15 36.3	+0.5
	comp=Z,14nm,0.8s,baz=48,slow=7.3,SNR=10						
JNU	Nakatsue	28.80	238	P	P	23 15 36.1	+0.4
JNU				IAmb	IAmb	23 15 38.8	
	comp=Z,16nm,0.9s						
ILAR	Eielson Array	28.94	45	P	P	23 15 37.1	+0.5
	comp=Z,1.4nm,0.7s,baz=264,slow=7.3,SNR=18						
BARN	Barnard Glacie	31.75	52	IAmb	IAmb	23 16 04.5	
	comp=Z,6.9nm,0.6s						
CTGM	Chitina Glacie	31.93	52	IAmb	IAmb	23 16 06.5	
	comp=Z,16nm,1.4s						
EPYK	Eagle Plains	33.03	41	IAmb	IAmb	23 16 24.8	
	comp=Z,18nm,1.5s						
H11N2	WAKE ISLAND Hy	33.53	168	T	T	23 51 53.5	
	baz=353,slow=76,SNR=441						
H11N3	WAKE ISLAND Hy	33.55	168	T	T	23 52 01.0	
	baz=353,slow=76,SNR=702						
ULN	Ulaanbaatar	33.55	283	d iP	P	23 16 16.8	-0.7
ULN				pmax	pmax		

comp=Z,5.0nm,1.0s
ULN Ulaanbaatar 33.55 283 P **P** **23 16 17.0 -0.5**
H11N1 WAKE ISLAND Hy 33.55 168 T T 23 51 58.1
baz=353,slow=76,SNR=863
TLY Talaya 33.80 291⇑ *eP* **P** **23 16 19.4 -0.1**
TLY pmax pmax
comp=Z,4.0nm,1.0s
SONM Songino Array 33.95 283 P **P** **23 16 20.3 -0.7**
comp=Z,3.5nm,0.7s,baz=68,slow=8.8,SNR=5.9
SONM PcP **PcP** **23 18 59.2 +1.1**
comp=Z,4.7nm,0.6s,baz=87,slow=2.5,SNR=7.3
SONM LR LR 23 31 40.8
comp=Z,244nm,18.7s,baz=82,slow=39
INK Inuvik 34.01 38 P **P** **23 16 22.7 +1.6**
INK pmax pmax
comp=Z,12nm,1.3s
INK Inuvik 34.01 38 IAmb IAmb 23 16 23.0
comp=Z,6.9nm,0.7s
HHC Hu-ho-hao-te 34.65 269 P **P** **23 16 27.4 +0.3**
HHC S **S** **23 21 52.9 -0.2**
HHC SS **SnSn** **23 24 01.5 -7.3**
HHC pmax pmax
comp=Z,11nm,0.9s
HHC pmax pmax
comp=Z,54nm,6.7s
HHC LR LR
comp=Z,160nm,14.7s
HHC LR LR
comp=Z,99nm,15.7s
HHC LR LR
comp=Z,130nm,15.5s
H11S1 WAKE ISLAND Hy 34.72 169 T T 23 53 23.3
baz=352,SNR=82
H11S3 WAKE ISLAND Hy 34.73 169 T T 23 53 26.8
baz=352,slow=74,SNR=142
H11S2 WAKE ISLAND Hy 34.73 169 T T 23 53 21.5
baz=352,slow=74,SNR=60
JOW Kunigami 35.21 235 P **P** **23 16 33.7 +1.8**
comp=Z,2.7nm,0.5s,baz=96,slow=15,SNR=13
MOY Mondy 35.29 292 *eP* **P** **23 16 32.6 +0.1**
NRIK Noril'sk 36.06 325 LR LR 23 32 47.1
comp=Z,409nm,18.8s,baz=70,slow=38
NJ2 Nanjing 36.20 251 *eP* **P** **23 16 39.2 -1.1**
NJ2 pmax pmax
comp=Z,13nm,0.5s
LZH Lanzhou 42.34 270 *eP* **P** **23 17 31.7 0.0**
LZH pP pP 23 17 46.9 +2.0
LZH sP sP 23 17 53.1 +2.5
LZH PP **PP** **23 19 10.5 +0.2**
LZH pmax pmax
comp=Z,16nm,1.1s
LZH pmax pmax
comp=Z,75nm,4.9s
LZH LR LR
comp=Z,160nm,14.6s
LZH LR LR
comp=Z,200nm,15.2s
LZH LR LR
comp=Z,120nm,15.2s
GTA Gaotai 42.63 277 *eP* **P** **23 17 33.8 -0.2**
GTA pP pP 23 17 49.0 +1.8
GTA PcP **PcP** **23 19 25.9 +0.6**
GTA sS sS 23 24 13.8 -1.7
GTA SS **SS** **23 26 54.5 -10**
GTA pmax pmax
comp=Z,9.0nm,1.0s
GTA pmax pmax
comp=Z,110nm,7.3s
GTA LR LR
comp=Z,97nm,20.3s
GTA LR LR
comp=Z,97nm,20.0s
GTA LR LR
comp=Z,160nm,18.7s
ZALV Zalesovo Beam 42.88 303 P **P** **23 17 33.1 -2.6**
comp=Z,1.5nm,0.6s,baz=46,slow=7.5,SNR=6.9
ZALV LR LR 23 36 38.0
comp=Z,137nm,19.1s,baz=86,slow=38
YKA Yellowknife Ar 43.30 42 P **P** **23 17 39.9 +1.0**
comp=Z,3.5nm,0.8s,baz=296,slow=7.4,SNR=22
YKA PcP **PcP** **23 19 28.1 +1.2**
comp=Z,1.1nm,0.8s,baz=302,slow=3.6,SNR=3.7
RES Resolute Bay 43.49 22 P **P** **23 17 41.7 +1.4**
RES pmax pmax
comp=Z,9.0nm,1.0s
DGZ Jazzator, Alta 43.76 296 *d iP* **P** **23 17 42.3 -0.7**
DGZ pmax pmax
comp=Z,10.0nm,0.9s
NOR Nord 45.72 359 P **P** **23 17 58.2 +0.2**
NOR pmax pmax
comp=Z,8.0nm,2.4s
WMQ Urumqi 47.04 289 *eP* **P** **23 18 10.1 +1.2**
WMQ pmax pmax
comp=Z,52nm,3.8s
WMQ LR LR
comp=Z,100nm,14.9s
WMQ LR LR
comp=Z,150nm,18.5s
WMQ LR LR
comp=Z,77nm,18.5s
TULEG Thule 47.13 14 P **P** **23 18 10.4 +1.3**
TULEG IAmb IAmb 23 18 11.1
comp=Z,8.2nm,0.7s
SPA0 Spitsbergen Ar 47.32 350 *eP* **P** **23 18 10.4 -0.1**
SPITS Spitsbergen Ar 47.32 350 P **P** **23 18 10.3 -0.3**
SPITS pmax pmax
comp=Z,10.0nm,0.4s
GYA Guiyang 47.46 258 *eP* **P** **23 18 13.0 +0.5**
GYA pmax pmax
comp=Z,10.0nm,0.5s
KURK Kurchatov 47.84 302 *c iP* **P** **23 18 12.7 -2.2**
KURK pmax pmax
comp=Z,9.0nm,0.7s
KURK Kurchatov 47.84 302 P **P** **23 18 13.4 -1.5**
KURK IAmb IAmb 23 18 16.2
comp=Z,8.8nm,0.7s
MKAR Makanchi Array 48.24 296 P **P** **23 18 16.0 -2.1**
comp=Z,4.0nm,0.5s,baz=57,slow=7.1,SNR=50
MKAR PcP **PcP** **23 19 44.2 -0.3**
comp=Z,0.7nm,0.5s,baz=62,slow=7.1,SNR=1.6
MKAR LR LR 23 39 27.9
comp=Z,110nm,19.9s,baz=60,slow=37
MKAR Makanchi Array 48.24 296 *i P* **P** **23 18 16.5 -1.6**
MKAR pmax pmax
comp=Z,4.0nm,0.5s
MAKZ Makanchi 48.40 296 P **P** **23 18 17.4 -2.0**
MAKZ pmax pmax
comp=Z,13nm,1.3s
MAKZ Makanchi 48.40 296 P **P** **23 18 17.4 -2.0**
MAKZ IAmb IAmb 23 18 19.8
comp=Z,13nm,1.2s
BJO1 Bjornoya 50.23 347 *eP* **P** **23 18 33.9 +1.0**
KULLO Kullorsuaq 50.37 12⇑ *iP* **P** **23 18 34.1 +0.2**
KULLO pmax pmax
comp=Z,14nm,0.8s
KULLO Kullorsuaq 50.37 12⇑ *iP* **P** **23 18 34.1 +0.2**
comp=Z,14nm,0.8s
BRVK Borovoye 50.54 309 *deP* **P** **23 18 33.9 -1.6**
BRVK pmax pmax
comp=Z,6.0nm,1.0s
BRVK Borovoye 50.54 309 P **P** **23 18 34.0 -1.5**
BRVK IAmb IAmb 23 18 36.5
comp=Z,4.2nm,0.7s
DAG Danmarks Havn 50.59 360 *i P* **P** **23 18 35.4 -0.2**
DAG pmax pmax
comp=Z,18nm,0.8s
DAG Danmarks Havn 50.59 360 *i P* **P** **23 18 35.4 -0.2**
comp=Z,18nm,0.8s
WALA Waterton Lakes 51.15 57 P **P** **23 18 41.2 +0.8**
JTMT Jette 51.80 59 P **P** **23 18 46.6 +1.4**
JTMT IAmb IAmb 23 18 47.8
comp=Z,6.9nm,1.0s
SLVN Son La 52.99 256 P **P** **23 18 55.4 +1.2**
PRZ Przheval'sk 53.12 294 P **P** **23 18 55.0 -0.1**
PRZ pmax pmax
comp=Z,7.0nm,1.1s
PRZ Przheval'sk 53.12 294 P **P** **23 18 55.0 -0.1**
PRZ IAmb IAmb 23 18 55.5
comp=Z,6.5nm,1.1s
FFC Flin Flon 53.15 46 P **P** **23 18 56.1 +1.2**
FFC pmax pmax
comp=Z,5.0nm,1.0s
FFC Flin Flon 53.15 46 P **P** **23 18 56.1 +1.2**
ARCES ARCESS Array B 53.47 342 P **P** **23 18 56.0 -1.1**
comp=Z,2.5nm,0.7s,baz=41,slow=8.0,SNR=7.4
ARCES PcP **PcP** **23 20 03.9 +0.5**

comp=Z,2.8nm,0.7s,baz=34,slow=4.5,SNR=4.2
ARU Arti 53.54 317 *c iP* **P** **23 18 56.2 -1.5**
ARU pmax pmax
comp=Z,6.0nm,0.7s
ARU Arti 53.54 317 P **P** **23 18 55.4 -2.4**
FCC Fort Churchill 53.62 39 P **P** **23 18 59.0 +0.7**
FCC pmax pmax
comp=Z,13nm,0.9s
FCC Fort Churchill 53.62 39 P **P** **23 18 59.0 +0.7**
FCC IAmb IAmb 23 19 00.6
comp=Z,13nm,0.9s
MFID Camas Ranch 53.80 64 P **P** **23 19 02.3 +2.2**
MFID IAmb IAmb 23 20 51.5
comp=Z,9.0nm,1.0s
KDJ Kajisay 54.03 294 P **P** **23 19 00.8 -1.0**
KDJ pmax pmax
comp=Z,10.0nm,0.7s
KDJ Kajisay 54.03 294 P **P** **23 19 00.8 -1.0**
KDJ IAmb IAmb 23 19 01.4
comp=Z,10nm,0.7s
SUMG Summit 54.14 7 P **P** **23 19 03.1 +0.7**
SUMG pmax pmax
comp=Z,17nm,1.0s
SUMG Summit 54.14 7 P **P** **23 19 03.1 +0.7**
SUMG Summit 54.14 7 *i P* **P** **23 19 02.8 +0.4**
comp=Z,25nm,0.9s
KTK1 Kautokeino 54.34 342 *eP* **P** **23 19 02.5 -0.9**
TKM2 Tokmak 2 54.37 296 P **P** **23 19 03.4 -0.9**
SNR=8.2
ULHL Ulahol 54.47 295 P **P** **23 19 04.0 -1.1**
SNR=9.3
TRO Tromso 54.54 344 *eP* **P** **23 19 04.2 -0.6**
PNTR Pine Nut 54.61 70 P **P** **23 19 07.7 +1.6**
PNTR IAmb IAmb 23 19 19.7
comp=Z,8.5nm,0.9s
USP Ospenovka 54.74 297 P **P** **23 19 06.1 -0.6**
SNR=13
KBK Karagaybulak 54.90 296 P **P** **23 19 06.9 -1.2**
SNR=7.8
FRU1 Bishkek 54.97 296 P **P** **23 19 07.9 -0.6**
FRU1 pmax pmax
comp=Z,29nm,0.3s
FRU1 Bishkek 54.97 296 P **P** **23 19 07.9 -0.6**
AAK Ala-Archa 55.16 296 P **P** **23 19 08.8 -1.1**
SNR=12
AAK Ala-Archa 55.16 296 *c iP* **P** **23 19 08.5 -1.5**
AAK pmax pmax
comp=Z,10.0nm,1.0s
AAK Ala-Archa 55.16 296 P **P** **23 19 08.8 -1.1**
AAK IAmb IAmb 23 19 10.3
comp=Z,9.8nm,1.0s
EKS2 Erkin-Say 55.53 297 P **P** **23 19 12.0 -0.6**
SNR=15
YHH Holmes Hill 55.54 60 P **P** **23 19 14.0 +1.2**
KIRV Kirov 55.55 324 *eP* **P** **23 19 11.6 -0.6**
NVAR Mina Array Bea 55.80 70 P **P** **23 19 16.6 +2.0**
comp=Z,1.9nm,0.7s,baz=301,slow=7.0,SNR=8.1
YNE Yellowstone No 55.83 59 P **P** **23 19 16.4 +1.6**
RLMT Red Lodge 56.13 58 P **P** **23 19 18.1 +1.2**
RLMT IAmb IAmb 23 19 33.6
comp=Z,6.1nm,0.8s
KSH Kashi 56.48 293 P **P** **23 19 22.2 +2.8**
KSH pP pP 23 19 33.3 +0.2
KSH sP sP 23 19 37.7 -1.0
KSH pmax pmax
comp=Z,47nm,1.8s
KSH pmax pmax
comp=Z,130nm,4.0s
LOF Lofoten 56.74 346 *eP* **P** **23 19 20.0 -0.7**
ARSB Arslanbob 56.88 296 IAmb IAmb 23 19 26.2
comp=Z,6.7nm,1.1s
KKAR Karatay Array 56.98 299 IAmb IAmb 23 19 25.1
comp=Z,6.4nm,0.8s
SHL Shillong 57.01 270 P **P** **23 19 21.9 -1.5**
SHL pmax pmax
comp=Z,21nm,0.4s
SHL Shillong 57.01 270 P **P** **23 19 21.9 -1.5**
PDAR Pinedale Array 57.61 61 P **P** **23 19 29.0 +1.5**
comp=Z,3.3nm,0.8s,baz=329,slow=2.6,SNR=23
CHTO Chiang Mai 57.87 258 P **P** **23 19 29.8 +0.5**
CHTO pmax pmax
comp=Z,16nm,0.6s
CHTO Chiang Mai 57.87 258 P **P** **23 19 29.8 +0.5**
CMAR Chiang Mai Arr 58.15 258 P **P** **23 19 31.4 +0.1**
comp=Z,2.8nm,0.9s,baz=20,slow=7.1,SNR=14
CMAR LR LR 23 45 59.1
comp=Z,44nm,19.6s,baz=110,slow=38
CMAR Chiang Mai Arr 58.15 258 *ceP* **P** **23 19 32.5 +1.3**
CMAR pmax pmax
comp=Z,2.0nm,0.8s
TAPN Taplejung 58.22 274 *eP* **P** **23 19 31.0 -1.0**
comp=Z,25nm,0.8s
KONS Konsvik 58.31 345 *eP* **P** **23 19 32.3 +0.6**
MOR8 Moi Rana 58.41 344 *eP* **P** **23 19 30.0 -2.4**
ODAN Odare 58.78 274 *eP* **P** **23 19 34.6 -1.2**
GUN Gumba 58.92 276 *eP* **P** **23 19 36.4 -0.5**
comp=Z,15nm,0.8s
BTK Batken 58.94 296 P **P** **23 19 35.3 -1.3**
BTK pmax pmax
comp=Z,10.0nm,0.7s
BTK Batken 58.94 296 P **P** **23 19 35.3 -1.3**
BTK IAmb IAmb 23 19 36.8
comp=Z,9.9nm,0.7s
ULM Lac du Bonnet 58.94 47 P **P** **23 19 37.1 +0.8**
comp=Z,5.2nm,0.4s,baz=319,slow=6.8,SNR=10
ULM Lac du Bonnet 58.94 47 IAmb IAmb 23 19 38.6
comp=Z,13nm,1.2s
RDMU Red Mountain 59.14 63 P **P** **23 19 39.7 +1.5**
TMUT Trail Mountain 59.16 65 P **P** **23 19 40.5 +2.1**
SUF Sumiainen 59.17 337 P **P** **23 19 37.3 -0.4**
SUF pmax pmax
comp=Z,24nm,1.0s
RAMN Ramite 59.19 275 *eP* **P** **23 19 37.6 -1.1**
comp=Z,36nm,0.6s
P17A Butcher Ranch, 59.29 64 P **P** **23 19 40.0 +0.8**
KKN Kakani 59.37 276 *eP* **P** **23 19 39.4 -0.5**
comp=Z,17nm,0.5s
PKI Pulchoki 59.45 276 *eP* **P** **23 19 39.5 -1.1**
comp=Z,19nm,0.8s
PKIN Phulchoki 59.45 276 *eP* **P** **23 19 39.3 -1.2**
comp=Z,16nm,0.7s
RSSD Black Hills 59.50 56 P **P** **23 19 42.2 +1.6**
RSSD pmax pmax
comp=Z,35nm,0.8s
RSSD Black Hills 59.50 56 P **P** **23 19 42.2 +1.6**
GKN Gorkha 59.60 277 *eP* **P** **23 19 40.4 -1.0**
comp=Z,7.5nm,0.3s
DMN Daan 59.60 276 *eP* **P** **23 19 40.8 -0.8**
comp=Z,20nm,0.7s
VAF Ylistaro 59.67 339 P **P** **23 19 42.1 +1.0**
VAF pmax pmax
comp=Z,24nm,1.0s
DANN Dangsing 59.87 278 *eP* **P** **23 19 42.4 -1.0**
comp=Z,23nm,0.8s
FINES FINESS Array B 60.29 337 P **P** **23 19 44.8 -0.6**
comp=Z,5.5nm,0.5s,baz=34,slow=8.2,SNR=55
FINES FINESS Array B 60.29 337 *i P* **P** **23 19 45.0 -0.4**
FINES pmax pmax
comp=Z,6.0nm,0.5s
NSS Namsos 60.33 345 *eP* **P** **23 19 45.2 -0.4**
AGMN Agassiz Nation 60.38 48 IAmb IAmb 23 19 48.1
comp=Z,7.7nm,1.1s
KOLN Koldanda 60.39 278 *eP* **P** **23 19 45.8 -1.1**
comp=Z,14nm,0.7s
PYUN Piuthan 60.52 278 *eP* **P** **23 19 46.1 -1.6**
comp=Z,37nm,0.9s
B35A Bob, Littlefor 61.29 47 IAmb IAmb 23 19 54.2
comp=Z,12nm,1.2s
SMLA Simla 61.76 285 *eP* **P** **23 19 54.0 -1.8**
SMLA IAmb IAmb 23 19 55.1
comp=Z,12nm,0.5s
HNR Honiara 62.09 180 LR LR 23 41 05.1
comp=Z,83nm,21.8s,baz=334,slow=30
NIL Nilore 62.19 290 P **P** **23 19 58.1 -0.6**
NIL pmax pmax
comp=Z,14nm,0.6s
NIL Nilore 62.19 290 P **P** **23 19 58.1 -0.6**
OBN Obninsk 62.67 327 *i P* **P** **23 20 01.8 +0.2**
OBN pmax pmax
comp=Z,6.0nm,1.2s
OBN MLR MLR
comp=Z,62nm,19.0s
MOL Molde 62.85 346 *eP* **P** **23 20 03.2 +0.5**
DOMB Dombas 63.12 345 *eP* **P** **23 20 04.5 -0.1**
ECSD EROS Data Cent 63.43 52 P **P** **23 20 07.5 +0.7**
NB2 NORSAR Subarra 63.72 344 P **P** **23 20 08.1 -0.4**

comp=Z,6.1nm,0.5s,baz=23,slow=6.9
NB2 NORSAR Subarra 63.72 344 P **P** **23 20 08.1 -0.4**
baz=23,slow=6.9
NOA NORSAR Array B 63.72 344 P **P** **23 20 08.2 -0.3**
comp=Z,7.0nm,0.6s,baz=21,slow=6.6,SNR=45
LPSR Galich'ya Gora 63.94 324 *eP* **P** **23 20 08.3 -1.7**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
NC602 NORSAR Array S 63.95 343 *eP* **P** **23 20 10.1 +0.2**
NORES NORESS Array B 63.95 343 P **P** **23 20 10.1 +0.1**
NORES pmax pmax
comp=Z,2.0nm,0.4s
VRH Novokhopyorsk 64.06 322 *eP* **P** **23 20 09.0 -1.8**
VRH pmax pmax
comp=Z,10.0nm,0.5s
ANMO Albuquerque 64.92 65⇑ *eP* **P** **23 20 14.1 -2.9**
VSR Storozhevoye 64.99 323 *deP* **P** **23 20 16.2 -0.7**
VSR pmax pmax
comp=Z,8.0nm,0.8s
VORD Divnogorie 65.15 323 *eP* **P** **23 20 15.5 -2.4**
VORD pmax pmax
comp=Z,7.0nm,0.5s
SCHQ Schefferville 65.81 28 P **P** **23 20 22.2 0.0**
comp=Z,7.2nm,0.7s,baz=349,slow=7.5,SNR=14
SCHQ Schefferville 65.81 28 IAmb IAmb 23 20 23.3
comp=Z,8.3nm,0.9s
E46A Sault Ste Mari 66.86 43 P **P** **23 20 28.8 -0.2**
E46A IAmb IAmb 23 20 29.6
comp=Z,8.6nm,0.8s
GEYT Alibeck 67.19 303 P **P** **23 20 30.1 -1.2**
comp=Z,1.9nm,0.6s,baz=20,slow=4.7,SNR=5.8
VLDQ Val d'Or 68.11 38 IAmb IAmb 23 20 36.6
comp=Z,12nm,0.8s
BIGH Upper Bighouse 68.20 351 *eP* **P** **23 20 37.5 +0.3**
BSD Bornholm Skovb 68.56 339 *i P* **P** **23 20 39.9 +0.4**
BSD pmax pmax
comp=Z,7.0nm,0.4s
BSD Bornholm Skovb 68.56 339 *i P* **P** **23 20 39.9 +0.4**
comp=Z,7.3nm,0.4s
AKASG Malin Array Be 68.78 329 P **P** **23 20 39.8 -1.1**
comp=Z,17nm,0.6s,baz=29,slow=6.2,SNR=38
AKASG LR LR 23 54 15.2
comp=Z,91nm,18.4s,baz=255,slow=39
AKASG Malin Array Be 68.78 329 *ceP* **P** **23 20 40.2 -0.7**
AKASG pmax pmax
comp=Z,17nm,0.6s
AKBB Malin Array Si 68.78 329 *d iP* **P** **23 20 40.7 -0.2**
D53A Lac Vacive, Po 68.88 38 P **P** **23 20 41.7 0.0**
D53A IAmb IAmb 23 20 42.9
comp=Z,40nm,1.9s
MCD Coleburn Disti 69.03 350 *eP* **P** **23 20 42.9 +0.5**
WMOK Wichita Mounta 69.19 60 P **P** **23 20 44.8 +1.0**
WMOK pmax pmax
comp=Z,8.0nm,0.9s
WMOK Wichita Mounta 69.19 60 P **P** **23 20 44.8 +1.0**
WMOK IAmb IAmb 23 20 45.7
comp=Z,8.0nm,0.8s
MDO Dochfour 69.28 351 *eP* **P** **23 20 44.4 +0.4**
KAC Achnashellach 69.31 352 *eP* **P** **23 20 44.5 +0.4**
NCK Nalchik 69.57 316⇓ *eP* **P** **23 20 44.8 -1.2**
NCK pmax pmax
comp=Z,4.0nm,0.8s
KIV Kislovodsk 69.58 317 *eP* **P** **23 20 45.5 -0.7**
KIV pmax pmax
comp=Z,12nm,1.0s
KIV MLR MLR
comp=Z,211nm,17.0s
DRUM Mains of Drumt 69.61 350 *eP* **P** **23 20 45.3 -0.8**
DRUM IAmb IAmb 23 20 46.7
comp=Z,20nm,0.5s
KBZ Khabaz 69.67 317 P **P** **23 20 47.0 +0.4**
comp=Z,5.3nm,0.9s,baz=192,slow=3.6,SNR=10.0
R40A Maddies Statio 69.72 53 IAmb IAmb 23 20 48.0
comp=Z,5.6nm,0.7s
GKP Gorka Klasztor 69.75 337 *eP* **P** **23 20 47.9 +1.0**
GKP Gorka Klasztor 69.75 337 P **P** **23 20 48.0 +1.1**
ZEI Tsey 70.02 315 *eP* **P** **23 20 47.1 -1.9**
ZEI pmax pmax
comp=Z,3.0nm,0.6s
BEL Belsk 70.18 335 *eP* **P** **23 20 47.6 -2.0**
INVG Invergeldie, C 70.25 351 *eP* **P** **23 20 49.8 -0.1**
INVG IAmb IAmb 23 20 50.9
comp=Z,15nm,0.7s
HHAR Hobbs 70.47 56 IAmb IAmb 23 20 52.2
comp=Z,9.6nm,0.5s
LAWE Loch Awe, Argy 70.54 351 *eP* **P** **23 20 52.0 +0.2**
LAWE IAmb IAmb 23 20 52.7
comp=Z,29nm,0.8s
BSEG Bad Segeberg 70.59 342 *eP* **P** **23 20 53.1 +1.0**
comp=Z,22nm,1.1s,baz=19,slow=5.9
ESY Stoneypath 70.61 350 *eP* **P** **23 20 52.3 +0.2**
TXAR Lajitas Array 70.70 67 P **P** **23 20 54.8 +1.5**
comp=Z,3.5nm,0.7s,baz=300,slow=4.4,SNR=11
PSI Prapat 70.72 248 LR LR 23 52 52.8
comp=Z,6.9nm,19.8s,baz=85,slow=37
TRQ Mont Tremblant 70.77 37 P **P** **23 20 53.5 +0.1**
EBL Broad Law 70.79 350 *eP* **P** **23 20 53.8 +0.5**
HORU Horodok 70.95 330 P **P** **23 20 54.6 +0.3**
U40A Yellville 70.95 55 IAmb IAmb 23 20 55.6
comp=Z,12nm,1.1s
LVV L'vov 71.11 332 *eP* **P** **23 20 55.2 -0.1**
LVV *eS* **S** **23 30 07.0 -0.8**
HYB Hyderabad 71.23 274 *i P* **P** **23 20 56.0 -0.5**
ESK Eskdalemuir 71.26 350 *eP* **P** **23 20 56.4 +0.3**
ESK Eskdalemuir 71.26 350 P **P** **23 20 56.5 +0.4**
ESK pmax pmax
comp=Z,37nm,1.3s
ESK Eskdalemuir 71.26 350 P **P** **23 20 56.5 +0.4**
RUE Ruedersdorf 71.26 339 *eP* **P** **23 20 57.3 +1.2**
comp=Z,37nm,0.9s,baz=19,slow=5.9
SORM Soroca 71.30 328 ⇓P **P** **23 20 56.4 -0.1**
SORM Soroca 71.30 328 P **P** **23 20 56.3 -0.1**
NEWG New Galloway 71.56 351 *eP* **P** **23 20 58.2 +0.3**
NEWG IAmb IAmb 23 21 00.4
comp=Z,23nm,1.1s
BKNI Bangkinang 71.59 245 P **P** **23 20 57.5 -1.1**
EDMD Edmundbyers 71.60 349 *eP* **P** **23 20 58.2 0.0**
S44A Carbondale 71.63 51 IAmb IAmb 23 21 00.0
comp=Z,9.9nm,0.8s
KWP Kalwaria Pacla 71.66 332 *eP* **P** **23 20 59.7 +1.1**
KWP Kalwaria Pacla 71.66 332 P **P** **23 20 59.7 +1.1**
MORS Morshin 71.77 331 P **P** **23 20 59.9 +0.6**
OJC Ojcow 71.91 334 *eP* **P** **23 21 01.1 +1.0**
OJC Ojcow 71.91 334 P **P** **23 21 00.6 +0.5**
OJC pmax pmax
comp=Z,17nm,0.7s
OJC Ojcow 71.91 334 P **P** **23 21 00.6 +0.5**
RETH Rethem/Aller, 71.92 342 *eP* **P** **23 21 01.0 +1.0**
comp=Z,21nm,1.0s,baz=19,slow=5.9
D62A Allapoint, All 71.93 33 P **P** **23 21 00.9 +0.7**
NRDL Niedersach Rie 72.00 341 *eP* **P** **23 21 01.3 +0.8**
comp=Z,20nm,0.9s,baz=19,slow=5.9
KSV Kosov 72.16 330 P **P** **23 21 02.1 +0.5**
KSP Ksiaz 72.22 337 *eP* **P** **23 21 03.1 +1.2**
KSP Ksiaz 72.22 337 P **P** **23 21 02.9 +1.0**
MILM Milestii Mici 72.22 327 ⇑P **P** **23 21 02.2 +0.2**
ASSE Asse, Remlinge 72.24 341 *eP* **P** **23 21 03.0 +1.1**
comp=Z,19nm,1.1s,baz=19,slow=5.9
KOLS Kolonicke sedl 72.41 332 *eP* **P** **23 21 03.7 +0.6**
KOLS pmax pmax
comp=Z,13nm,1.0s
KOLS Kolonicke sedl 72.41 332 *eP* **P** **23 21 03.7 +0.6**
HPK Haverah Park 72.42 349 *eP* **P** **23 21 03.7 +0.6**
HPK IAmb IAmb 23 21 04.3
comp=Z,41nm,0.7s
OSTC Ostas 72.50 337 *eP* **P** **23 21 04.3 +0.6**
CHVC Chvalec 72.51 337 *eP* **P** **23 21 04.3 +0.6**
NIE Niedzica 72.51 334 *eP* **P** **23 21 04.9 +1.2**
NIE Niedzica 72.51 334 P **P** **23 21 05.0 +1.2**
CLL Collm 72.53 339 *i P* **P** **23 21 05.1 +1.4**
CLL pmax pmax
comp=Z,28nm,1.0s
CLL *i* pP **pP** **23 21 18.8 +0.9**
comp=Z,9.0nm,1.0s
CLL Collm 72.53 339 *eP* **P** **23 21 05.2 +1.4**
comp=Z,28nm,1.0s,baz=19,slow=5.9
CLL Collm 72.53 339 *i P* **P** **23 21 05.1 +1.4**
CLL *i* *PP **pP** **23 21 18.8 +0.9**
CLL pmax pmax
comp=Z,28nm,1.0s
CLL Collm 72.53 339 P **P** **23 21 05.1 +1.4**
CLZ Clausthal 72.57 341 *eP* **P** **23 21 05.3 +1.2**
comp=Z,34nm,1.0s,baz=19,slow=5.9
UPC Upice 72.59 337 *eP* **P** **23 21 05.0 +0.8**
UPC Upice 72.59 337 *eP* **P** **23 21 05.0 +0.8**
IBBN Ibbenburen 72.62 343 *eP* **P** **23 21 05.3 +1.0**

comp=Z,41nm,1.2s,baz=19,slow=5.9
UZH Uzhgorod 72.68 332 *e*P P **23 21 04.5 -0.2**
UZH *i* 23 21 16.0
OKC Ostrava-Krasne 72.69 335 *e*P P **23 21 05.8 +1.1**
OKC Ostrava-Krasne 72.69 335 *e*P P **23 21 05.8 +1.1**
BRG Berggiesshubel 72.73 338⇓ *i*P P **23 21 05.4 +0.4**
comp=Z,14nm,1.2s
BRG Berggiesshubel 72.73 338 *e*P P **23 21 05.3 +0.4**
comp=Z,14nm,1.2s,baz=19,slow=5.9
BRG Berggiesshubel 72.73 338⇓ *i*P P **23 21 05.4 +0.4**
BRG pmax pmax
comp=Z,14nm,1.2s
BURAR Bucovina Array 72.74 330 ⇓P P **23 21 05.4 +0.2**
BURAR Bucovina Array 72.74 330 P P **23 21 05.4 +0.2**
VASR Vaslui 72.80 328 ⇑P P **23 21 06.3 +0.9**
LEOM Leova 72.80 327 ⇑P P **23 21 06.1 +0.7**
LEOM Leova 72.80 327 P P **23 21 06.1 +0.7**
KRLC Kraliky 72.81 336 *e*P P **23 21 06.0 +0.5**
KRLC Kraliky 72.81 336 *e*P P **23 21 06.0 +0.5**
FBE Freiberg 72.81 339 *e*P P **23 21 06.1 +0.7**
comp=Z,25nm,1.1s,baz=19,slow=5.9
NEUB Neuenburg 72.88 340 *e*P P **23 21 06.7 +0.8**
comp=Z,30nm,1.5s,baz=19,slow=5.9
MORC Moravsky Berou 72.90 336 *e*P P **23 21 07.0 +0.9**
MORC Moravsky Berou 72.90 336 ⇓P P **23 21 07.2 +1.2**
MORC Moravsky Berou 72.90 336 P P **23 21 06.7 +0.7**
MORC pmax pmax
comp=Z,16nm,0.8s
MORC Moravsky Berou 72.90 336 P P **23 21 06.7 +0.7**
MORC IAmb IAmb 23 21 07.9
comp=Z,16nm,0.8s
PVCC Panska Ves 72.91 338 *e*P P **23 21 07.1 +1.0**
PVCC Panska Ves 72.91 338 *e*P P **23 21 07.1 +1.0**
GTTG Gottingen 72.93 341 *e*P P **23 21 07.1 +0.9**
comp=Z,14nm,0.9s,baz=19,slow=5.9
TRSU Trosnyk 72.98 332 P P **23 21 07.6 +1.1**
LBWR Ladybower, Pea 72.98 349 *e*P P **23 21 06.7 +0.3**
LBWR IAmb IAmb 23 21 08.8
comp=Z,37nm,0.9s
LANS Liptovska Anna 72.98 334 *e*P P **23 21 08.4 +1.9**
LANS pmax pmax
comp=Z,22nm,0.7s
LANS Liptovska Anna 72.98 334 *e*P P **23 21 08.4 +1.9**
O52A Adamsville 73.01 45 IAmb IAmb 23 21 08.5
comp=Z,18nm,1.2s
G62A West of Eustis 73.06 35 IAmb IAmb 23 21 21.0
comp=Z,19nm,1.2s
TRPA Tarpa 73.06 332 ⇑P P **23 21 08.0 +1.0**
BIZ Bicaz 73.07 329 ⇑P P **23 21 07.5 +0.4**
BIR Birlad 73.18 328 ⇑P P **23 21 09.2 +1.5**
BIR Birlad 73.18 328 P P **23 21 09.2 +1.5**
BMR Baia Mare 73.20 331 ⇓P P **23 21 08.6 +0.8**
F64A Sherman 73.23 33 IAmb IAmb 23 21 08.9
comp=Z,9.3nm,0.7s
TESR Tescani 73.28 328 ⇓P P **23 21 08.7 +0.4**
KECS Kecovo 73.32 333 *e*P P **23 21 09.5 +1.0**
KECS pmax pmax
comp=Z,7.0nm,0.7s
KECS Kecovo 73.32 333 *e*P P **23 21 09.5 +1.0**
H62A Milan 73.40 36 IAmb IAmb 23 21 10.8
comp=Z,17nm,0.8s
PRU Pruhonice 73.42 338 *e*P P **23 21 09.8 +0.7**
PRU Pruhonice 73.42 338 *e*P P **23 21 09.8 +0.7**
GHRR 73.43 328 ⇑P P **23 21 10.7 +1.5**
GOPC GO Pecny, Ondr 73.44 337 *e*P P **23 21 09.3 +0.1**
GOPC GO Pecny, Ondr 73.44 337 *e*P P **23 21 09.3 +0.1**
MOX Moxa 73.45 340 *e*P P **23 21 10.1 +0.8**
comp=Z,19nm,1.1s,baz=19,slow=5.9
PLN Plauen 73.49 339 *e*P P **23 21 10.3 +0.8**
comp=Z,15nm,1.1s,baz=19,slow=5.9
TANN Tannenbergstha 73.49 339 *e*P P **23 21 10.5 +1.0**
comp=Z,19nm,1.3s,baz=19,slow=5.9
BUG Bochum--Univer 73.54 343 *e*P P **23 21 10.5 +0.8**
comp=Z,24nm,0.8s,baz=19,slow=5.9
GUNZ Gunzen 73.56 339 *e*P P **23 21 10.7 +0.7**
comp=Z,11nm,1.0s,baz=19,slow=5.9
VRAC Vranov 73.57 336 *e*P P **23 21 11.1 +1.1**
VRAC Vranov 73.57 336 ⇑P P **23 21 11.5 +1.5**
CWF Charnwood Fore 73.58 348 *e*P P **23 21 09.9 -0.1**
CWF IAmb IAmb 23 21 11.6
comp=Z,31nm,1.2s
UBBA Unterbreizbach 73.62 341 *e*P P **23 21 10.9 +0.9**
comp=Z,9.8nm,1.1s,baz=19,slow=5.9
WERN Wernitzgruen 73.62 339 *e*P P **23 21 11.3 +1.0**
comp=Z,17nm,0.9s,baz=19,slow=5.9
NKC Novy Kostel 73.66 339 *e*P P **23 21 11.3 +0.8**
NKC Novy Kostel 73.66 339 *e*P P **23 21 11.3 +0.8**
JAVC Velka Javorina 73.71 335 *e*P P **23 21 12.9 +2.0**
TLCR 73.74 326 ⇓P P **23 21 11.6 +0.6**
TLCR 73.74 326 P P **23 21 11.6 +0.6**
VYHS Vyhne 73.75 334 *e*P P **23 21 12.1 +1.1**
VYHS pmax pmax
comp=Z,12nm,0.6s
VYHS Vyhne 73.75 334 *e*P P **23 21 12.1 +1.1**
VRI Vrincioaia 73.82 328 ⇑P P **23 21 12.5 +1.0**
VRI Vrincioaia 73.82 328 P P **23 21 12.5 +1.0**
PBCC Pribram 73.83 338 *e*P P **23 21 12.6 +1.1**
KRUC Moravsky 73.84 336 *e*P P **23 21 12.6 +1.0**
TREC Trest 73.85 337 *e*P P **23 21 12.6 +1.0**
TREC Trest 73.85 337 *e*P P **23 21 12.6 +1.0**
OZUR 73.92 329 ⇑P P **23 21 12.6 +0.5**
MANZ Manzenberg 73.97 339 *e*P P **23 21 13.1 +0.8**
comp=Z,9.9nm,1.1s,baz=19,slow=5.9
CFR Carcaliu 73.97 327 ⇑P P **23 21 13.1 +0.7**
CFR Carcaliu 73.97 327 P P **23 21 13.0 +0.7**
HLM1 Long Mynd 73.98 349 *e*P P **23 21 12.8 +0.5**
HLM1 IAmb IAmb 23 21 13.5
comp=Z,17nm,1.0s
PSZ Piszkesteto 73.99 333 ⇑P P **23 21 14.2 +1.6**
PSZ Piszkesteto 73.99 333 P P **23 21 13.5 +0.9**
PSZ pmax pmax
comp=Z,16nm,0.9s
PSZ Piszkesteto 73.99 333 P P **23 21 13.5 +0.9**
PSZ IAmb IAmb 23 21 14.7
comp=Z,16nm,0.9s
CJR Cluj-Napoca 74.03 330 ⇑P P **23 21 13.9 +1.0**
CJR Cluj-Napoca 74.03 330 P P **23 21 13.8 +1.0**
I63A Otisfield 74.06 35 IAmb IAmb 23 21 15.0
comp=Z,14nm,0.8s
JURR Jurilovca 74.09 326 ⇑P P **23 21 13.8 +0.8**
SMOL Smolenice 74.09 335 *e*P P **23 21 14.7 +1.6**
SMOL pmax pmax
comp=Z,8.0nm,0.8s
SMOL Smolenice 74.09 335 *e*P P **23 21 14.7 +1.6**
BISRR Bisoca 74.11 328 ⇑P P **23 21 14.4 +1.1**
ROTZ Rotzenmuhle 74.15 339 *e*P P **23 21 14.2 +0.9**
comp=Z,13nm,1.0s,baz=19,slow=5.9
DOPR Dopca 74.16 329 ⇑P P **23 21 14.5 +1.0**
TOPG Topolog 74.16 327 ⇑P P **23 21 13.9 +0.5**
GRER 74.18 328 ⇓P P **23 21 15.0 +1.5**
DRGR 74.23 331 ⇓P P **23 21 14.2 +0.3**
DRGR 74.23 331 P P **23 21 14.2 +0.3**
DRGR pmax pmax
comp=Z,21nm,1.2s
MODS Modra-Piesok 74.26 335 *e*P P **23 21 14.5 +0.4**
MODS pmax pmax
comp=Z,17nm,0.9s
MODS Modra-Piesok 74.26 335 *e*P P **23 21 14.5 +0.4**
MLR Muntele Rosu 74.41 328 ⇑P P **23 21 16.3 +1.2**
MLR Muntele Rosu 74.41 328 P P **23 21 16.3 +1.2**
MLR pmax pmax
comp=Z,31nm,0.7s
GRF Grafenberg Arr 74.43 340 *e*P P **23 21 16.3 +1.3**
comp=Z,29nm,0.9s,baz=19,slow=5.9
GRF Grafenberg Arr 74.43 340 P P **23 21 16.6 +1.6**
AHRW Bad Neuenahr-A 74.44 343 *e*P P **23 21 16.0 +1.0**
comp=Z,16nm,1.0s,baz=19,slow=5.9
BEBN Eben Emael 74.44 343 P P **23 21 15.7 +0.8**
KHC Kasperske Hory 74.45 338 *e*P P **23 21 16.0 +0.9**
KHC Kasperske Hory 74.45 338 *e*P P **23 21 16.0 +0.9**
ZST Bratislava 74.47 335 *e*P P **23 21 16.0 +0.8**
ZST pmax pmax
comp=Z,14nm,0.8s
ZST Bratislava 74.47 335 *e*P P **23 21 16.0 +0.8**
HARR Harsova 74.47 327 ⇓P P **23 21 15.1 -0.2**
HARR Harsova 74.47 327 P P **23 21 15.1 -0.2**
DIKM Dikmen 74.49 320 ⇑P P **23 21 17.1 +1.6**
TNS Taunus Mts 74.49 342 *e*P P **23 21 16.4 +1.0**
comp=Z,18nm,0.8s,baz=19,slow=5.9
MCH1 Michaelchurch 74.51 349 *e*P P **23 21 15.6 +0.2**
MCH1 IAmb IAmb 23 21 16.4
comp=Z,95nm,1.6s
SRO Srobarova 74.51 334 *e*P P **23 21 16.7 +1.2**
SRO pmax pmax
comp=Z,16nm,0.7s
SRO Srobarova 74.51 334 *e*P P **23 21 16.7 +1.2**
TIRR Tirgusor 74.52 326 ⇑P P **23 21 15.8 +0.3**
TIRR Tirgusor 74.52 326 P P **23 21 15.8 +0.3**
SRO2 Moca 74.54 334 *e*P P **23 21 16.2 +0.6**
SRO2 pmax pmax
comp=Z,18nm,0.7s
SRO2 Moca 74.54 334 *e*P P **23 21 16.2 +0.6**
ISR Istrita 74.55 328 ⇑P P **23 21 17.2 +1.4**
ISR Istrita 74.55 328 P P **23 21 17.2 +1.4**
MEM Membach 74.56 343 P P **23 21 16.6 +0.9**
comp=Z,61nm,0.9s
TLBR Topalu 74.56 327 ⇑P P **23 21 16.7 +0.8**
WET Wettzell 74.59 338 *e*P P **23 21 17.1 +1.1**
comp=Z,17nm,1.0s,baz=19,slow=5.9
WET Wettzell 74.59 338 P P **23 21 17.2 +1.2**
BUD Budapest 74.63 334 P P **23 21 17.8 +1.7**
BUD pmax pmax
comp=Z,31nm,0.9s
UCC Uccle 74.66 344 P P **23 21 16.7 +0.4**
KVT Kavak 74.67 320 P P **23 21 18.1 +1.6**
BSTI Sart Tilman 74.67 343 P P **23 21 17.6 +1.3**
GEC2 GERESS Array S 74.69 338 *e*P P **23 21 17.2 +0.6**
comp=Z,16nm,1.2s,baz=19,slow=5.9
GERES GERESS Array B 74.69 338 P P **23 21 16.8 +0.2**
comp=Z,4.0nm,0.5s,baz=32,slow=6.2,SNR=41
GERES LR LR 23 59 35.3
comp=Z,24nm,19.5s,baz=10.0,slow=40
VOIR 74.74 329 ⇓P P **23 21 18.4 +1.4**
VOIR 74.74 329 P P **23 21 18.3 +1.4**
AMRR Amara 74.74 327 ⇓P P **23 21 18.2 +1.3**
MFTR Murfatlar 74.76 326 ⇓P P **23 21 17.6 +0.6**
BHOU Houvegnez 74.81 343 P P **23 21 18.2 +1.0**
BCLA Clavier 74.87 344 P P **23 21 18.1 +0.6**
comp=Z,17nm,1.0s
ARR Arges 74.93 329 ⇓P P **23 21 19.6 +1.5**
BGES Gesves 74.94 344 P P **23 21 18.3 +0.4**
comp=Z,18nm,1.0s
SNF Seneffe 74.95 344 P P **23 21 18.9 +0.9**
comp=Z,28nm,0.8s
SIRR Siria 75.01 332 ⇓P P **23 21 19.8 +1.4**
ICOR Ion Corvin 75.03 327 ⇓P P **23 21 19.2 +0.7**
CONA Conrad Observa 75.03 336 *e*P P **23 21 19.9 +1.3**
comp=Z,12nm,0.6s,SNR=14
SULR 75.03 328 ⇑P P **23 21 19.1 +0.6**
BMRD Maredsous 75.07 344 P P **23 21 19.3 +0.6**
comp=Z,27nm,0.8s
SOP Sopron 75.08 335 P P **23 21 20.6 +1.8**
SOP pmax pmax
comp=Z,21nm,1.5s
RASA Rasa 75.16 327 ⇑P P **23 21 20.2 +1.0**
SWET Sewanee 75.20 51 IAmb IAmb 23 21 31.4
comp=Z,9.5nm,0.8s
GIVF Givet 75.26 344 *e*P P **23 21 19.8 +0.1**
GIVF pmax pmax
comp=Z,16nm,0.8s
DOU Dourbes 75.30 344 P P **23 21 20.5 +0.6**
comp=Z,14nm,0.8s
BAIF Baives 75.40 344 *e*P P **23 21 20.8 +0.3**
BAIF pmax pmax
comp=Z,22nm,0.7s
WLF Walferdange 75.45 343 *e*P P **23 21 21.7 +0.8**
comp=Z,7.3nm,1.1s,baz=19,slow=5.9
GZR Gura Zlata 75.47 330 ⇑P P **23 21 21.5 +0.4**
MOA Molln 75.49 337 *e*P P **23 21 21.9 +0.8**
comp=Z,5.2nm,0.7s
ILGA Ilgaz 75.59 321 P P **23 21 22.9 +0.8**
STU Stuttgart 75.73 341 *e*P P **23 21 23.2 +0.7**
comp=Z,16nm,1.2s,baz=19,slow=5.9
ARSA Arzberg 75.74 336 *e*P P **23 21 24.0 +1.3**
comp=Z,7.6nm,0.6s
COPA Copaceanca 75.85 328 ⇓P P **23 21 23.5 +0.2**
FUR Furstenfeldbru 75.87 339 *e*P P **23 21 24.3 +1.0**
comp=Z,25nm,1.0s,baz=19,slow=5.9
FUR Furstenfeldbru 75.87 339 P P **23 21 25.4 +2.1**
MORH Mrgy, Hungar 75.90 334⇑ *i*P P **23 21 23.1 -0.3**
WRAB Tennant Creek 75.90 205⇓ *e*P P **23 21 24.3 +0.6**
WRAB pmax pmax
comp=Z,6.0nm,1.0s
WRA Warramunga Arr 75.92 205 P P **23 21 23.6 -0.2**
comp=Z,2.9nm,0.6s,baz=19,slow=6.0,SNR=12
RJOB Jochberg 75.94 338 *e*P P **23 21 25.0 +1.2**
comp=Z,10nm,0.9s,baz=19,slow=5.9
RAZG Razgrad 75.94 327 ⇓P P **23 21 24.0 +0.2**
NEF NEVSHA 75.96 326 *e*P P **23 21 24.3 +0.4**
PRD Provadia 75.97 326 *e*P P **23 21 24.7 +0.8**
HERR Herculane 76.04 330 ⇓P P **23 21 24.6 +0.3**
MALT Malatya 76.05 316 P P **23 21 25.7 +1.1**
ZIMR 76.23 328 ⇓P P **23 21 25.4 0.0**
BFO Black Forest 76.32 341 *e*P P **23 21 26.6 +0.8**
comp=Z,13nm,0.8s,baz=19,slow=5.9
BFO Black Forest 76.32 341 P P **23 21 25.9 0.0**
BFO pmax pmax
comp=Z,11nm,0.8s
BFO Black Forest 76.32 341 P P **23 21 25.9 0.0**
BFO IAmb IAmb 23 21 27.5
comp=Z,11nm,0.8s
MDVR Moldovita 76.34 331 ⇓P P **23 21 26.3 +0.2**
SOKA Soboth 76.40 336 *e*P P **23 21 27.5 +1.1**
comp=Z,7.5nm,0.8s,SNR=23
SZH Strazhica 76.40 327 *e*P P **23 21 25.8 -0.6**
BISS Bistriski jare 76.40 336 *i*P P **23 21 27.4 +1.0**
KBA Koelnbreinsper 76.43 337 *e*P P **23 21 28.3 +1.5**
comp=Z,42nm,0.8s,SNR=36
KBA Koelnbreinsper 76.43 337 P P **23 21 28.2 +1.5**
PUNG Punghina 76.44 330 ⇑P P **23 21 26.9 +0.4**
CDF Champ du Feu 76.44 342 *e*P P **23 21 26.9 +0.2**
CDF pmax pmax
comp=Z,18nm,0.7s
GROS Grobnik 76.49 336 *i*P P **23 21 27.7 +0.7**
FRGS Fruska Gora 76.55 332⇑ *i*P P **23 21 27.3 +0.1**
UBR Ueberruh 76.58 340 *e*P P **23 21 28.1 +0.7**
comp=Z,16nm,1.0s,baz=19,slow=5.9
WATA Wasseralm 76.59 339 *e*P P **23 21 28.7 +1.1**
comp=Z,12nm,0.9s,SNR=8.8
RETA Reutte 76.62 339 *e*P P **23 21 28.6 +0.9**
comp=Z,6.8nm,0.7s,SNR=5.4
WTTA Wattenberg 76.64 339 *e*P P **23 21 29.2 +1.3**
comp=Z,27nm,1.4s,SNR=10
WTTA Wattenberg 76.64 339 P P **23 21 29.2 +1.3**
ECH Echery 76.66 342 P P **23 21 28.4 +0.6**
ECH Echery 76.66 342 P P **23 21 28.4 +0.6**
ECH IAmb IAmb 23 21 29.4
comp=Z,17nm,0.8s
OBKA Obir 76.68 336 *e*P P **23 21 28.9 +0.9**
comp=Z,10nm,0.7s,SNR=11
MOTA Moosalm 76.68 339 *e*P P **23 21 29.0 +0.9**
comp=Z,15nm,0.8s,SNR=11
PLVB Pleven 76.71 328 ⇑P P **23 21 28.6 +0.5**
ELND Elena 76.72 327 ⇓P P **23 21 28.3 +0.1**
BR131 Keskin Array S 76.77 320*c* *i*P P **23 21 28.5 -0.2**
BRTR Keskin Array B 76.77 320 P P **23 21 28.5 -0.2**
comp=Z,5.1nm,0.6s,baz=35,slow=3.8,SNR=34
BRTR LR LR 00 00 55.9
comp=Z,36nm,18.8s,baz=344,slow=40
BRTR Keskin Array B 76.77 320*c* *e*P P **23 21 29.0 +0.3**
BRTR pmax pmax
comp=Z,5.0nm,0.6s
SQTA Sankt Quirin 76.78 339 *i*P P **23 21 29.8 +1.2**
comp=Z,19nm,0.8s,SNR=14
MYKA Terra Mystica 76.78 337 *e*P P **23 21 29.3 +0.7**
comp=Z,8.6nm,1.1s,SNR=5.9
ABTA Abfaltersbach 76.93 338 *i*P P **23 21 30.1 +0.6**
comp=Z,20nm,0.9s,SNR=17
ANTO Ankara 76.97 321 ⇓P P **23 21 30.9 +1.1**
ANTO Ankara 76.97 321 P P **23 21 30.3 +0.5**
ANTO pmax pmax
comp=Z,16nm,0.9s
ANTO Ankara 76.97 321 P P **23 21 30.2 +0.5**
ANTO IAmb IAmb 23 21 31.2
comp=Z,16nm,0.8s
DAVA Damuels 77.00 340 *e*P P **23 21 30.7 +0.8**
comp=Z,15nm,1.1s,SNR=7.0
HAU Haudompre 77.01 342 *e*P P **23 21 29.9 +0.1**
HAU pmax pmax
comp=Z,15nm,0.6s
FETA Feichten 77.07 339 *e*P P **23 21 31.5 +1.2**
comp=Z,16nm,0.8s,SNR=12
CRES Cresnjev 77.09 335⇑ *i*P P **23 21 30.6 +0.4**
HINF Hinteralfeld 77.10 342 *e*P P **23 21 30.2 -0.1**
HINF pmax pmax
comp=Z,8.0nm,0.7s
VISS Visnje 77.27 336 *i*P P **23 21 31.4 +0.2**
FLN La Foliniere 77.37 347 *e*P P **23 21 31.6 -0.1**
FLN pmax pmax
comp=Z,29nm,0.9s
CEY Cerknica 77.43 336⇑ *i*P P **23 21 32.1 -0.1**
BOJS Bojanci 77.44 335 *i*P P **23 21 32.8 +0.6**
DIVS Divibare 77.47 332⇑ *i*P P **23 21 32.5 0.0**
LDF La Druitiere 77.49 347 *e*P P **23 21 33.1 +0.7**
LDF pmax pmax
comp=Z,27nm,1.4s
FUORN Ofenpass-Fuorn 77.55 339 P P **23 21 33.9 +0.7**
FUORN IAmb IAmb 23 21 35.5
comp=Z,18nm,0.8s
BLY Banja Luka 77.64 334 ⇓P P **23 21 33.5 +0.2**
BLY Banja Luka 77.64 334⇑ *i*P P **23 21 33.3 0.0**
BLY Banja Luka 77.64 334 IAmb IAmb 23 21 34.3
comp=Z,5.5nm,0.6s
HAPS Han Pijesak,Bl 77.77 332⇑ *i*P P **23 21 34.0 -0.2**
GRR Gorron 77.79 347 *e*P P **23 21 34.2 +0.1**
GRR pmax pmax
comp=Z,22nm,0.8s
RIY Rijeka 77.80 336 *e*P P **23 21 34.6 +0.4**
PLD Plovdiv 77.84 328 P P **23 21 35.4 +0.9**
PLD pmax pmax
comp=Z,121nm,0.9s
VTS Vitosha 77.84 329 P P **23 21 35.0 +0.3**
VTS Vitosha 77.84 329 ⇑P P **23 21 35.0 +0.3**
VTS Vitosha 77.84 329 *e*P P **23 21 34.7 0.0**
BBLS Lazi?i 77.85 332⇑ *i*P P **23 21 35.3 +0.7**
MGRS Mrkonjic Grad 77.98 334 *e*P P **23 21 34.8 -0.5**
SGMF Saint Gilles 78.14 348 *e*P P **23 21 36.2 +0.2**
SGMF pmax pmax
comp=Z,23nm,0.8s
LOR Lormes 78.16 344 *e*P P **23 21 36.3 +0.1**
LOR pmax pmax
comp=Z,18nm,0.7s
RZN Rozhen 78.21 327 *e*P P 23 21 26.2 -11
PLE Pijevlja 78.35 332 P P **23 21 38.8 +1.4**
UOSS Minazit 78.36 296 P P **23 21 36.7 -1.0**
CABF La Chapelle 78.40 342 *e*P P **23 21 38.2 +0.6**
CABF pmax pmax
comp=Z,17nm,0.9s
NVLJ Novalja 78.42 335 *i*P P **23 21 37.4 -0.2**
SSF Saint Saulge 78.42 344 *e*P P **23 21 37.8 +0.2**
SSF pmax pmax
comp=Z,16nm,0.8s
RDO Rodhopi 78.43 327 P P **23 21 37.9 +0.2**
ALN Alexandroupoli 78.48 326 P P **23 21 36.0 -2.0**
KIJV Kijevo 78.54 334 *i*P P **23 21 38.5 +0.2**
QUIF Quistinic 78.55 349 *e*P P **23 21 38.4 +0.2**
QUIF pmax pmax
comp=Z,27nm,1.0s
UPM Unac-Piva 78.60 332⇑ *i*P P **23 21 39.1 +0.2**
MMB Musomiste 78.62 328 *e*P P **23 21 39.1 +0.2**
AVF Avril sur Loir 78.71 344 *e*P P **23 21 39.5 +0.3**
AVF pmax pmax
comp=Z,26nm,0.8s
SMF Signal de Mont 78.77 344 *e*P P **23 21 39.9 +0.3**
SMF pmax pmax
comp=Z,11nm,0.8s
NVR Nevrokopi 78.79 328 P P **23 21 39.2 -0.6**
MORI Morici 78.86 335 *i*P P **23 21 39.6 -0.4**
DUGI Dugi Otok 78.90 335 *i*P P **23 21 40.4 0.0**
BRY Bratogost 78.98 332⇑ *i*P P **23 21 40.4 -0.6**
SKO Skopje 78.99 330 *i*P P 23 21 29.8 -11
SKO Skopje 78.99 330 *i*P P 23 21 29.8 -11
STIP Stip 79.01 329⇑ *i*P P **23 21 40.1 -0.8**
STIP Stip 79.01 329⇑ *i*P P **23 21 40.1 -0.8**
MAKA Makarska 79.05 333 *i*P P **23 21 40.5 -0.5**
ZIRJ Zirje 79.07 335 *i*P P **23 21 41.0 -0.2**
SRS Serrai 79.09 328 P P **23 21 41.1 -0.3**
SRS Serrai 79.09 328 P P **23 21 41.5 +0.1**
SRS pmax pmax
comp=Z,34nm,1.0s
TREB Trebinje 79.21 332 *e*P P **23 21 41.0 -1.0**
PDG Podgorica 79.21 332 ⇓P P **23 21 41.8 -0.2**
PDG Podgorica 79.21 332⇑ *i*P P **23 21 41.6 -0.4**
VAY Valandovo 79.23 329⇑ *i*P P **23 21 42.5 +0.4**
VAY Valandovo 79.23 329⇑ *i*P P **23 21 42.5 +0.4**
VAY Valandovo 79.23 329 P P **23 21 43.1 +1.0**
VAY pmax pmax
comp=Z,31nm,1.0s
STON Ston 79.24 333⇑ *i*P P **23 21 41.3 -0.9**
STON Ston 79.24 333 *i*P P **23 21 41.2 -0.9**
KNT Kendrikon 79.27 329 P P **23 21 41.2 -1.2**
DBRK Dubrovnik 79.31 332 *i*P P **23 21 41.8 -0.8**
LPL La Plagne 79.33 341 *e*P P **23 21 44.1 +1.2**
LPL pmax pmax
comp=Z,34nm,0.7s
LPG La Plagne 79.34 341 *e*P P **23 21 44.3 +1.2**
LPG pmax pmax
comp=Z,44nm,0.8s
TCF Toulx Ste Croi 79.39 345 *e*P P **23 21 43.4 +0.4**
TCF pmax pmax
comp=Z,11nm,0.7s
HCY Herceg Novi 79.42 332⇑ *i*P P **23 21 42.4 -0.7**
HCY Herceg Novi 79.42 332 P P **23 21 43.4 +0.3**
DRME Dracevica, Mon 79.46 332⇑ *i*P P **23 21 43.1 -0.3**
PHP Peshkopia 79.55 330 P P **23 21 43.6 -0.4**
ZCCA Zocca 79.55 338 IAmb IAmb 23 21 47.4
comp=Z,17nm,0.8s
ASAR Alice Springs 79.59 204 P P **23 21 45.2 +1.0**
comp=Z,3.8nm,0.7s,baz=16,slow=5.3,SNR=27
LIA Limnos Island 79.67 326 P P **23 21 41.2 -3.3**
OUR Ouranopolis 79.67 327 P P **23 21 44.3 -0.2**
BNI Bardonecchia 79.79 341 P P **23 21 47.1 +1.8**
BNI Bardonecchia 79.79 341 IAmb IAmb 23 21 47.9
comp=Z,14nm,0.7s
PLG Polygyros 79.81 328 P P **23 21 44.5 -0.9**
SSB Saint Sauveur 79.97 343 P P **23 21 47.4 +1.3**
TIR Tirane 80.03 331 P P **23 21 46.8 +0.3**
TIR pmax pmax
comp=Z,23nm,0.8s
TIR Tirane 80.03 331 P P **23 21 46.8 +0.3**
ORIF Oris-en-Rattie 80.07 342 *e*P P **23 21 48.0 +1.2**
ORIF pmax pmax
comp=Z,28nm,0.8s
MBDF Montbardon 80.08 341 *e*P P **23 21 47.6 +0.7**
MBDF pmax pmax
comp=Z,14nm,0.8s
FNA Florina 80.09 329 P P **23 21 46.7 -0.2**
FNA pmax pmax
comp=Z,17nm,1.0s
FNA Florina 80.09 329 IAmb IAmb 23 21 47.7
comp=Z,12nm,0.8s
PAIG Paliouri 80.14 327 P P **23 21 46.0 -1.1**
OSSC Osservatorio P 80.27 338 IAmb IAmb 23 21 49.1
comp=Z,9.7nm,0.8s
VIVF Saint-Julien-l 80.35 343 P P **23 21 49.2 +1.0**
VIVF pmax pmax
comp=Z,25nm,0.9s
LIT Litokhoron 80.36 328 P P **23 21 47.4 -0.9**
LIT Litokhoron 80.36 328 P P **23 21 48.3 0.0**
LIT Litokhoron 80.36 328 IAmb IAmb 23 21 48.5
comp=Z,9.5nm,0.8s
RJF Les Rejaudoux 80.45 345 *e*P P **23 21 49.4 +0.7**
RJF pmax pmax
comp=Z,8.0nm,0.8s
NEST Nestorio 80.53 330 P P **23 21 48.9 -0.4**
CAF Calviac 80.74 344 *e*P P **23 21 51.4 +1.1**
CAF pmax pmax
comp=Z,15nm,0.8s
SBF Sospel 80.78 340 *e*P P **23 21 51.6 +1.1**
SBF pmax pmax
comp=Z,10.0nm,0.6s
SGRT San Giovanni R 80.81 334 IAmb IAmb 23 21 51.7
comp=Z,16nm,0.8s
KPRO Kipourio 80.85 329 P P **23 21 46.7 -4.3**
AQU L'Aquila 80.86 336⇑ *i*P P **23 21 52.9 +1.9**
AQU L'Aquila 80.86 336 P P **23 21 53.1 +2.1**
AQU pmax pmax
comp=Z,23nm,1.0s
AQU L'Aquila 80.86 336 IAmb IAmb 23 21 53.8
comp=Z,15nm,0.9s
CSS Mathiatis 81.02 318 P P **23 21 51.5 -0.4**
INTR Introdacqua 81.05 335 P P **23 21 52.0 -0.1**
INTR IAmb IAmb 23 21 54.1
comp=Z,17nm,0.8s
CASP Castiglione de 81.06 338 P P **23 21 50.0 -2.0**
MRKA Markates 81.27 327 P P **23 21 51.8 -1.4**
LMR La Mourre 81.47 341 *e*P P **23 21 54.7 +0.6**
LMR pmax pmax
comp=Z,12nm,1.0s
LKR Lokris 81.52 327 P P **23 21 52.4 -2.1**
AXAR Agios Charalam 81.52 328 P P **23 21 53.0 -1.5**
IGT Igoumenitsa 81.56 330 P P **23 21 54.3 -0.4**

IGT	**Igoumenitsa**	**81.56**	**330**	P	**P**	**23 21 54.4**	**-0.3**
IGT				pmax	pmax			
	comp=Z,27nm,1.3s							
EVR	**Evrytania**	**81.66**	**328**	P	**P**	**23 21 55.0**	**-0.3**
ACER	**Acerenza**	**81.66**	**333**	P	**P**	**23 21 55.5**	**+0.2**
PGF	**Pioggiola**	**81.71**	**339**	*e*P	**P**	**23 21 56.0**	**+0.5**
PGF				pmax	pmax			
	comp=Z,4.0nm,0.5s							
PTL	**Penteli**	**81.78**	**327**	P	P	23 21 50.8	-5.1
PAOL	**Paolisi**	**81.80**	**334**	IAmb	IAmb	23 21 57.1		
	comp=Z,8.8nm,1.0s							
VILL	**Villia**	**81.86**	**327**	P	**P**	**23 21 52.3**	**-4.0**
ATHU	**Athens Univers**	**81.88**	**327**	P	**P**	**23 21 54.3**	**-2.1**
ANX	**Ano Chora**	**81.92**	**328**	P	**P**	**23 21 52.1**	**-4.6**
KALE	**Kalithea**	**82.03**	**328**	P	P	23 21 51.0	-6.3
SERG	**Sergoula**	**82.04**	**328**	P	P	23 21 51.7	-5.6
EFP	**Efpalio**	**82.07**	**328**	P	P	23 21 49.5	-7.9
TRIZ	**Trizonia**	**82.08**	**328**	P	P	23 21 51.8	-5.6
LKD2	**Lefkada island**	**82.14**	**329**	P	**P**	**23 21 54.9**	**-2.9**
LAKA	**Lakka**	**82.22**	**328**	P	P	23 21 50.2	-8.0
MTLF	**Montolieu**	**82.25**	**344**	*e*P	**P**	**23 21 59.4**	**+1.1**
MTLF				pmax	pmax			
	comp=Z,14nm,1.0s							
KLV	**Kalavryta, Ach**	**82.34**	**328**	P	P	23 21 54.0	-4.9
DID	**Didima**	**82.48**	**327**	P	**P**	**23 21 55.5**	**-4.1**
RLS	**Riolos of Patr**	**82.55**	**328**	P	**P**	**23 21 59.7**	**-0.2**
DRO	**Drossia**	**82.57**	**328**	P	**P**	**23 21 55.8**	**-4.2**
VLS	**Valsamata**	**82.72**	**329**	P	**P**	**23 22 00.7**	**-0.1**
TRIP	**Tripoli**	**82.78**	**327**	P	**P**	**23 22 00.7**	**-0.5**
EPF	**Esparros**	**82.86**	**345**	*e*P	**P**	**23 22 02.0**	**+0.5**
EPF				pmax	pmax			
	comp=Z,15nm,1.1s							
TIP	**Timpagrande**	**82.94**	**332**	P	**P**	**23 22 01.6**	**-0.4**
TIP	**Timpagrande**	**82.94**	**332**	⇑P	**P**	**23 22 02.5**	**+0.5**
TIP	**Timpagrande**	**82.94**	**332**	P	**P**	**23 22 02.0**	**0.0**
AMT	**Artemida-Makis**	**82.95**	**328**	P	**P**	**23 21 57.7**	**-4.3**
SJPF	**Ste Jean**	**83.01**	**346**	*e*P	**P**	**23 22 04.9**	**+2.7**
SJPF				pmax	pmax			
	comp=Z,7.0nm,0.8s							
ETSF	**Etsaut**	**83.12**	**346**	*e*P	**P**	**23 22 04.1**	**+1.2**
ETSF				pmax	pmax			
	comp=Z,13nm,0.7s							
ITM	**Ithomi**	**83.20**	**328**	P	**P**	**23 22 01.8**	**-1.5**
PYL	**PYLOS**	**83.52**	**328**	P	**P**	**23 22 03.4**	**-1.6**
LAST	**Lasithi**	**83.82**	**324**	P	**P**	**23 22 03.9**	**-2.7**
PBRG	**Braganca**	**84.98**	**350**	*e*P	**P**	**23 22 13.3**	**+1.0**
	comp=Z,17nm,2.0s							
RAYN	**Ar Rayn**	**85.16**	**303**	P	**P**	**23 22 12.8**	**-0.7**
RAYN				pmax	pmax			
	comp=Z,21nm,0.7s							
RAYN	**Ar Rayn**	**85.16**	**303**	P	**P**	**23 22 12.8**	**-0.7**
CLTB	**Caltabellotta**	**85.40**	**334**	IAmb	IAmb	23 22 17.6		
	comp=Z,9.3nm,1.1s							
PVRL	**Vila Real**	**85.60**	**351**	*e*P	**P**	**23 22 16.5**	**+1.1**
MVO	**Moncorvo**	**85.64**	**350**	*e*P	**P**	**23 22 16.5**	**+0.8**
	comp=Z,18nm,1.9s							
STKA	**Stephens Creek**	**85.96**	**196**	P	**P**	**23 22 17.4**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=350,slow=9.2,SNR=3.8							
PVIS	**Viseu**	**86.17**	**351**	*e*P	**P**	**23 22 19.5**	**+1.2**
	comp=Z,28nm,2.1s							
MTE	**Manteigas**	**86.45**	**351**	*e*P	**P**	**23 22 20.4**	**+0.7**
	comp=Z,25nm,2.0s							
ESDC	**Sonseca Array**	**86.76**	**348**	P	**P**	**23 22 21.4**	**+0.3**
	comp=Z,4.1nm,0.6s,baz=1.3,slow=4.7,SNR=44							
PCAS	**Casmilo, Conde**	**86.89**	**351**	*e*P	**P**	**23 22 23.1**	**+1.4**
	comp=Z,45nm,1.9s							
PCBR	**Castelo Branco**	**87.00**	**350**	*e*P	**P**	**23 22 23.9**	**+1.6**
	comp=Z,16nm,2.9s							
KEST	**Kesra**	**88.13**	**337**	P	**P**	**23 22 28.0**	**+0.2**
	comp=Z,3.4nm,0.5s,baz=331,slow=1.5,SNR=16							
TORD	**Torodi Ar. Bea**	**111.64**	**337**	PKiKP	**PKiKP**	**23 28 11.4**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=4.7,slow=1.9,SNR=7.4							
DBIC	**Dimbokro**	**119.29**	**343**	PKP	**PKPdf**	**23 28 26.4**	**0.0**
	comp=Z,2.0nm,0.9s,baz=152,slow=7.9,SNR=1.5							
LPAZ	**La Paz**	**127.53**	**65**	PKP	**PKPdf**	**23 28 42.9**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=19,slow=5.7,SNR=5.3							
PLCA	**Paso Flores**	**144.00**	**91**	PKP	**PKPdf**	**23 29 11.0**	**-0.9**
	comp=Z,2.8nm,0.7s,baz=240,slow=4.0,SNR=4.7							

*IDC **06** 23:21:15.3±0.8,3°.54N×92°.66E, h0km,mb4.0/13, mb1 4.1/15,mb1mx3.9/51,mbtmp4.0/15,ML4.2/2, Error ellipse: s-maj=28.5km s-min=16.1km az=45.0*
*NEIC **06** 23:21:19.5±1.1,3°.48N±0°.09×92°.67E±0°.09, h28km±5km, mb4.2/15, Error ellipse: s-maj=13.8km s-min=13.1km az=116.0*
*DJA **06** 23:21:27.9±1.1,3°.N±6°×9°.3E±°, h10km,M4.4/8,mb4.3/5, mB5.1/2,MLv4.5/8,Mw(mB)4.5/2*
ISC 06 23:21:17.0±0.6,3°.43N±0°.08×92°.77E±0°.07, h10km, n53, σ1§95/57, mb4.2/22, 5C-2D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**3.69**	**106**	P	**Pn**	**23 22 15.9**	**+1.8**
SNSI				S	**Sn**	**23 22 53.0**	**-4.7**
MLSI	**Meulaboh, Aceh**	**3.72**	**77**	P	**Pn**	**23 22 16.5**	**+2.0**
MLSI				S	**Sn**	**23 22 55.8**	**-2.6**
LHMI	**Lhok Sumawe**	**4.53**	**67**	P	**Pn**	**23 22 27.0**	**+1.3**
LHMI	**Lhok Sumawe**	**4.53**	**67**	Pn	**Pn**	**23 22 27.7**	**+2.0**
KCSI	**Kotacane, Aceh**	**4.99**	**89**	P	**Pn**	**23 22 34.9**	**+2.9**
GSI	**Gunungsitoli**	**5.24**	**114**	P	**Pn**	**23 22 38.0**	**+2.5**
GSI				S	**Sn**	**23 23 33.3**	**-2.7**
GSI	**Gunungsitoli**	**5.24**	**114**		**Pn**	**23 22 36.6**	**+1.1**
PSI	**Prapat**	**6.17**	**96**	Pn	**Pn**	**23 22 50.9**	**+2.5**
	6.8nm,0.3s,baz=359,slow=6.1,SNR=23						
PSI				Sn	**Sn**	**23 23 57.5**	**-1.6**
	5.6nm,0.3s,baz=180,slow=21,SNR=7.6						
RPSI	**Rantau Prapat**	**6.18**	**97**		**Pn**	**23 22 50.8**	**+2.4**
RPSI	**Rantau Prapat**	**6.18**	**97**		**Pn**	**23 22 50.9**	**+2.5**
RPSI					**Sn**	**23 23 57.5**	**-1.7**
MNSI	**Mandailing Nat**	**7.29**	**111**	P	**Pn**	**23 23 05.5**	**+1.9**
KULM	**Kulim**	**8.07**	**76**		**Pn**	**23 23 15.9**	**+1.6**
IPM	**Ipoh**	**8.30**	**83**	Pn	**Pn**	**23 23 18.8**	**+1.3**
CMAR	**Chiang Mai Arr**	**16.11**	**22**	Pn	**Pn**	**23 25 01.4**	**-2.3**
	0.3nm,0.3s,baz=215,slow=13,SNR=20						
CHTO	**Chiang Mai**	**16.44**	**21**		**Pn**	**23 25 09.4**	**+1.4**
CHTO				IAmb	IAmb	23 25 58.3		
	comp=Z,8.1nm,0.5s							
SLVN	**Son La**	**20.83**	**30**	P	Pn	23 26 02.5	+1.0
SLVN				IAmb	IAmb	23 26 04.1		
	comp=Z,8.2nm,0.9s							
SHL	**Shillong**	**22.03**	**358**	P	**P**	**23 26 12.9**	**+0.9**
KOHI	**KOHIMA**	**22.20**	**3**	*e*P	**P**	**23 26 11.9**	**-1.9**
LSA	**Lhasa**	**26.17**	**357**	P	**P**	**23 26 51.5**	**-0.7**
LSA				IAmb	IAmb	23 26 54.2		
	comp=Z,6.5nm,0.7s							
XAN	**Xi'an**	**33.97**	**24**	P	**P**	**23 27 59.5**	**-1.4**
XAN				pP	pwP	23 28 08.7	+0.4
XAN				pmax	pmax			
	comp=Z,12nm,0.8s							
XAN				pmax	pmax			
	comp=Z,130nm,8.8s							
XAN	**Xi'an**	**33.97**	**24**	P	**P**	**23 27 59.9**	**-1.0**
LZH	**Lanzhou**	**34.07**	**16**	*e*P	**P**	**23 28 04.8**	**+3.0**
LZH				pP	pwP	23 28 16.8	+7.5
LZH				sP	sP	23 28 20.6	+16
LZH				PP	**PP**	**23 29 25.9**	**+6.9**
LZH				pmax	pmax			
	comp=Z,21nm,1.1s							
LZH				pmax	pmax			
	comp=Z,86nm,4.9s							
LZH				LR	LR			
	comp=N,130nm,14.3s							
LZH				LR	LR			
	comp=E,180nm,15.3s							
LZH				LR	LR			
	comp=Z,110nm,15.4s							
NIL	**Nilore**	**35.16**	**331**	P	**P**	**23 28 10.2**	**-0.9**
NIL				IAmb	IAmb	23 28 11.2		
	comp=Z,3.0nm,0.7s							
KSH	**Kashi**	**39.03**	**339**	P	**P**	**23 28 43.0**	**-1.0**
KSH				pP	pwP	23 28 53.2	+1.7
KSH				sP	sP	23 28 56.1	+10
KSH				pmax	pmax			
	comp=Z,68nm,2.1s							
WMQ	**Urumqi**	**40.47**	**354**	*e*P	**P**	**23 28 57.7**	**+1.7**
HHC	**Hu-ho-hao-te**	**40.92**	**22**	P	**P**	**23 29 02.9**	**+3.1**
HHC				pmax	pmax			
	comp=Z,5.0nm,0.9s							
HHC				pmax	pmax			
	comp=Z,49nm,5.0s							
KDJ	**Kajisay**	**40.98**	**342**	P	**P**	**23 28 59.9**	**-0.5**
BTK	**Batken**	**41.52**	**334**	P	**P**	**23 29 03.8**	**-0.9**
BTK				IAmb	IAmb	23 29 05.8		
	comp=Z,6.9nm,0.9s							
MKAR	**Makanchi Array**	**44.15**	**350**	P	**P**	**23 29 25.1**	**-0.7**
	comp=Z,3.1nm,0.7s,baz=168,slow=8.5,SNR=37							
KKAR	**Karatay Array**	**44.19**	**337**	P	**P**	**23 29 25.8**	**-0.4**
MAKZ	**Makanchi**	**44.22**	**349**	P	**P**	**23 29 26.2**	**-0.2**
MAKZ				IAmb	IAmb	23 29 26.8		
	comp=Z,2.1nm,0.8s							
GEYT	**Alibeck**	**46.71**	**322**	P	**P**	**23 29 45.7**	**-0.6**
	comp=Z,3.2nm,0.8s,baz=151,slow=9.4,SNR=7.9							
WRA	**Warramunga Arr**	**46.96**	**121**	P	**P**	**23 29 49.1**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=297,slow=8.9,SNR=6.9							
ASAR	**Alice Springs**	**48.27**	**126**	P	**P**	**23 29 59.5**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=295,slow=6.6,SNR=6.0							
KURK	**Kurchatov**	**48.61**	**348**	P	**P**	**23 30 00.2**	**-0.6**
KURK				IAmb	IAmb	23 30 01.1		
	comp=Z,2.6nm,0.9s							
ZALV	**Zalesovo Beam**	**50.78**	**354**	P	**P**	**23 30 16.8**	**-0.4**
	comp=Z,2.8nm,0.4s,baz=183,slow=7.1,SNR=15							
MJAR	**Matsushiro Arr**	**53.18**	**46**	P	**P**	**23 30 35.2**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=208,slow=2.3,SNR=2.0							
STKA	**Stephens Creek**	**58.13**	**131**	P	**P**	**23 31 12.7**	**+1.6**
	comp=Z,1.3nm,0.7s,baz=317,slow=12,SNR=3.2							
STKA	**Stephens Creek**	**58.13**	**131**	IAmb	IAmb	23 32 23.5		
	comp=Z,5.0nm,1.8s							
BRTR	**Keskin Array B**	**64.36**	**313**	P	**P**	**23 31 52.2**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=131,slow=8.4,SNR=5.0							
NRIK	**Noril'sk**	**65.90**	**358**	P	**P**	**23 32 01.3**	**-1.3**
	comp=Z,1.4nm,0.5s,baz=158,slow=7.9,SNR=4.2							
CFR	**Carcaliu**	**69.85**	**317**	⇓P	**P**	**23 32 27.1**	**-0.9**
HARR	**Harsova**	**69.86**	**317**	⇑P	**P**	**23 32 28.2**	**+0.1**
SORM	**Soroca**	**70.56**	**320**	⇑P	**P**	**23 32 31.0**	**-1.3**
AKASG	**Malin Array Be**	**70.82**	**323**	P	**P**	**23 32 31.3**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=90,slow=4.9,SNR=4.2							
BISRR	**Bisoca**	**70.92**	**317**	⇑P	**P**	**23 32 33.7**	**-1.0**
VRI	**Vrincioaia**	**70.99**	**318**	⇑P	**P**	**23 32 35.3**	**+0.3**
TESR	**Tescani**	**71.22**	**318**	⇑P	**P**	**23 32 36.0**	**-0.4**
MLR	**Muntele Rosu**	**71.43**	**317**	⇓P	**P**	**23 32 38.4**	**+0.5**
TIXI	**Tiksi**	**71.83**	**11**	P	**P**	**23 32 38.3**	**-1.2**
BOSA	**Boshof**	**72.12**	**29**	P	**P**	**23 32 42.0**	**-0.3**
	comp=Z,1.6nm,0.9s,baz=344,slow=20,SNR=1.4							
FINES	**FINESS Array B**	**76.00**	**333**	P	**P**	**23 33 03.3**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=64,slow=9.4,SNR=2.4							
GERES	**GERESS Array B**	**80.23**	**319**	P	**P**	**23 33 27.9**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=104,slow=5.6,SNR=12							

*HEL **06** 23:33:30.7, 67°.78N×20°.08E, h0km, ML1.7, Explosion*
UPP 06 23:33:31.1±0.1, 67°.82N×20°.17E, h1km, ML1.9, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.15**	**25**	P	Pg	23 33 34.0	+0.1
KUA				S	Sg	23 33 36.1	+0.3
KUA	**Kurravaara**	**0.15**	**25**	*i* P	Pg	23 33 34.0	+0.1
KUA				*i* S	Sg	23 33 36.1	+0.3
KOVU	**Salmi**	**0.40**	**359**	P	Pg	23 33 38.8	0.0
KOVU	**Salmi**	**0.40**	**359**	*i* P	Pg	23 33 38.8	0.0
DUNU	**Dundret**	**0.72**	**168**	P	Pg	23 33 44.5	-0.3
DUNU	**Dundret**	**0.72**	**168**	*i* P	Pg	23 33 44.5	-0.3
LANU	**Lannavaara**	**0.72**	**71**	P	Pg	23 33 44.7	-0.2
LANU	**Lannavaara**	**0.72**	**71**	*e*P	Pg	23 33 44.6	-0.3
MASU	**Masugnsbyn**	**0.79**	**117**	P	Pg	23 33 45.9	-0.3
MASU	**Masugnsbyn**	**0.79**	**117**	*i* P	Pg	23 33 45.9	-0.3
KIF	**Kilpisjarvi**	**1.21**	**11**	*e*PN	Pn	23 33 55.8	+0.7
	baz=188						
KIF				MSG		23 34 09.8	
	comp=Z,13nm,0.2s						
KIF				*e*SN	Sn	23 34 13.5	+1.3
KIF	**Kilpisjarvi**	**1.21**	**11**	*e*P	Pg	23 33 54.1	-0.2
PAJU	**Pajala**	**1.39**	**124**	P	Pn	23 33 56.3	-1.3
PAJU	**Pajala**	**1.39**	**124**	*e*P	Pn	23 33 56.3	-1.3
HEF	**Hetta**	**1.43**	**64**	*e*PG	Pn	23 33 57.4	-0.8
	baz=246						
HEF				MSG		23 34 15.3	
	comp=Z,3.1nm,0.2s						
HEF	**Hetta**	**1.43**	**64**	*e*P	Pn	23 33 56.7	-1.5
ERTU	**Ertsjaerv**	**1.50**	**147**	*e*PG	Pn	23 33 58.6	-0.5
KALU	**Kalix**	**2.34**	**146**	*e*PB	Pb	23 34 12.3	-1.6
KALU				*e*S	Sn	23 34 39.7	-0.2
TOF	**Tornio**	**2.39**	**135**	*e*PB	Pn	23 34 12.9	+1.5
TOF				MSG		23 34 41.4	
	comp=Z,4.6nm,0.2s						
TOF				*e*SG	Sg	23 34 46.5	-1.3
SGF	**Sodankyl**	**2.46**	**96**	*e*PB	Pb	23 34 14.8	-1.3
RNF	**Rovaniemi**	**2.58**	**115**	*e*PB	Pn	23 34 16.0	+2.0
RNF				*e*SG	Sb	23 34 51.2	+1.0
OUL	**Oulu**	**3.58**	**137**	*e*P	Pn	23 34 27.7	0.0
VRF	**Varrio**	**3.59**	**87**	*e*SB	Sb	23 35 15.4	-3.8

UPP 06 23:33:34.4±0.1, 67°.82N×20°.23E, h1km, ML2.0, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.14**	**17**	P	Pg	23 33 37.2	+0.2
KUA				S	Sg	23 33 39.2	+0.4
KOVU	**Salmi**	**0.40**	**356**	P	Pg	23 33 42.0	-0.1
KOVU				S	Sg	23 33 47.5	+0.2
LANU	**Lannavaara**	**0.70**	**70**	S	Sg	23 33 56.6	-0.2
DUNU	**Dundret**	**0.72**	**169**	P	Pg	23 33 47.8	-0.3
MASU	**Masugnsbyn**	**0.77**	**118**	S	Sg	23 33 59.4	+0.3
PAJU	**Pajala**	**1.37**	**125**	P	Pg	23 33 59.5	-1.1

IDC 07 00:19:27.3±3.2, 13°.82S×66°.06E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.4/45, mbtmp3.6/3, Error ellipse: s-maj=126.4km s-min=39.6km az=51.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**8.79**	**46**	T	T	00 30 38.5	
	baz=225,slow=75,SNR=77						
H08S2	**Diego Garcia H**	**8.81**	**47**	T	T	00 30 38.3	
	baz=225,slow=75,SNR=88						
H08S3	**Diego Garcia H**	**8.81**	**46**	T	T	00 30 40.6	
	baz=225,slow=75,SNR=94						
H01W3	**Cape Leeuwin H**	**48.04**	**125**	T	T	01 19 27.8	
	baz=283,slow=75,SNR=7.8						
H01W2	**Cape Leeuwin H**	**48.04**	**125**	T	T	01 19 25.4	
	baz=283,slow=75,SNR=5.4						
H01W1	**Cape Leeuwin H**	**48.05**	**125**	T	T	01 19 29.5	
	baz=283,slow=75,SNR=5.5						
MKAR	**Makanchi Array**	**62.07**	**13**	P	P	00 29 49.7	0.0
	0.2nm,0.6s,baz=183,slow=7.0,SNR=2.5						
ASAR	**Alice Springs**	**64.50**	**110**	P	P	00 30 06.2	-0.2
	0.5nm,0.7s,baz=268,slow=6.2,SNR=5.4						
WRA	**Warramunga Arr**	**65.25**	**106**	P	P	00 30 11.7	+0.2
	0.9nm,0.9s,baz=272,slow=5.9,SNR=4.6						
PDAR	**Pinedale Array**	**150.91**	**353**	PKPbc	PKPbc	00 39 22.2	-0.3
	0.4nm,0.7s,baz=86,slow=1.9,SNR=5.1						

*NEIC **07** 00:55:23.4±2.2, 16°.67N±0°.04×100°.48W±0°.05, h13km±3km, Error ellipse: s-maj=7.4km s-min=5.0km az=127.0*
*MEX **07** 00:55:23.2±0.7, 16°.57N×100°.57W, h13km±12km, MD4.6*
*IDC **07** 00:55:25.9±0.9, 17°.27N×100°.16W, h0km, mb4.4/14, mb1 4.6/19,mb1mx4.4/39,mbtmp4.3/19,ML3.5/5, MS3.7/21, Ms1 3.7/21,ms1mx3.6/32, Error ellipse: s-maj=24.5km s-min=12.1km az=52.0*
ISC 07 00:55:21.6±1.8, 16°.63N±0°.05×100°.58W±0°.04, h4km±10km, n190, σ1§41/114, mb4.6/91, MS3.7/15, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.51**	**36**	*i* P	**Pg**	**00 55 32.2**	**+0.9**
CAIG				*i* S	**Sb**	**00 55 40.2**	**-0.5**
CAIG	**El Cayaco**	**0.51**	**36**		**Pg**	**00 55 32.2**	**+0.9**
CAIG					**Sb**	**00 55 40.2**	**-0.5**
ACP2	**Acapulco**	**0.70**	**70**	*i* P	**Pg**	**00 55 35.0**	**-0.1**
ACP2				*i* S	**Sb**	**00 55 44.4**	**-2.0**
ACP2	**Acapulco**	**0.70**	**70**		**Pg**	**00 55 35.0**	**-0.1**
ACP2					**Sb**	**00 55 44.4**	**-2.0**
ZIIG	**Zihuatanejo**	**1.29**	**319**	*e*P	**Pn**	**00 55 44.1**	**-2.2**
ZIIG				*i* S	**Sb**	**00 55 59.8**	**-3.4**
ZIIG	**Zihuatanejo**	**1.29**	**319**		**Pn**	**00 55 44.1**	**-2.2**
ZIIG					**Sb**	**00 55 59.8**	**-3.4**
CRIG	**Cruz Grande**	**1.39**	**86**	*e*P	**Pn**	**00 55 44.5**	**-3.1**
MEIG	**Mezcala**	**1.58**	**35**	*e*P	**Pn**	**00 55 48.8**	**-1.6**
MEIG	**Mezcala**	**1.58**	**35**		**Pn**	**00 55 48.8**	**-1.6**
ARIG	**Puente Sto Nin**	**1.65**	**8**	*e*P	**Pn**	**00 55 50.1**	**-1.2**
ARIG				*i* S	**Sn**	**00 56 11.0**	**-2.1**
ARIG	**Puente Sto Nin**	**1.65**	**8**		**Pn**	**00 55 50.1**	**-1.2**
ARIG					**Sn**	**00 56 11.0**	**-2.1**
PLIG	**Platanillo**	**2.03**	**30**	*e*P	**Pn**	**00 55 55.4**	**-1.2**
PLIG				*e*S	**Sg**	**00 56 27.7**	**+0.9**
PLIG	**Platanillo**	**2.03**	**30**		**Pn**	**00 55 55.4**	**-1.2**
PLIG					**Sg**	**00 56 27.7**	**+0.9**
TLIG	**Tlapa**	**2.13**	**64**	*i* P	**Pn**	**00 55 56.4**	**-1.6**
TLIG	**Tlapa**	**2.13**	**64**		**Pn**	**00 55 56.4**	**-1.6**
PNIG	**Pinotepa**	**2.36**	**95**	*e*P	**Pn**	**00 55 58.4**	**-2.7**
PNIG	**Pinotepa**	**2.36**	**95**		**Pn**	**00 55 58.4**	**-2.7**
FTIG	**Fresnillo de T**	**2.66**	**61**	*i* P	**Pn**	**00 56 03.7**	**-1.5**
FTIG				*i* S	**Sg**	**00 56 45.8**	**-1.2**
TXIG	**Tlaxiaco**	**2.76**	**77**	*i* P	**Pn**	**00 56 05.3**	**-1.5**
HLIG	**Huajuapan de L**	**2.90**	**65**	*i* P	**Pn**	**00 56 07.3**	**-1.5**
YOIG	**Yosondua**	**2.91**	**85**	*e*P	**Pn**	**00 56 07.2**	**-1.7**
UNM	**Universidad Na**	**2.99**	**26**	*e*P	**Pn**	**00 56 09.3**	**-0.8**
UNM	**Universidad Na**	**2.99**	**26**		**Pn**	**00 56 09.5**	**-0.5**
PPM	**Popocatepetl**	**3.05**	**37**	*e*P	**Pn**	**00 56 09.1**	**-1.9**
MOIG	**Morelia**	**3.08**	**349**		**Pn**	**00 56 12.6**	**+1.3**
AZVM	**Cuida Lopez Ma**	**3.18**	**23**	*e*P	**Pn**	**00 56 12.2**	**-0.5**
AZVM	**Cuida Lopez Ma**	**3.18**	**23**		**Pn**	**00 56 12.2**	**-0.5**
PTVM	**Pico Tres Padr**	**3.26**	**25**	*e*P	**Pn**	**00 56 12.3**	**-1.4**
PTVM	**Pico Tres Padr**	**3.26**	**25**		**Pn**	**00 56 12.3**	**-1.4**
TOIG	**Toxpalan**	**3.66**	**66**	*e*P	**Pn**	**00 56 17.2**	**-1.8**
VHO	**Vista Hermosa**	**3.71**	**83**	*e*P	**Pn**	**00 56 18.7**	**-1.1**
HUIG	**Huatulco**	**4.38**	**101**	*e*P	**Pn**	**00 56 27.1**	**-1.8**
HUIG	**Huatulco**	**4.38**	**101**		**Pn**	**00 56 27.1**	**-1.8**
CMIG	**Matias Romero**	**5.47**	**84**	Pn	**Pn**	**00 56 42.0**	**-1.8**
	2.2nm,0.3s,baz=254,slow=13,SNR=19						
CMIG				Lg	Lg	00 58 07.9	
	5.9nm,0.3s,baz=221,slow=20,SNR=4.9						
CMIG				LR	LR	00 58 42.3	
	comp=Z,706nm,21.4s,baz=266,slow=39						
CCIG	**Comitan**	**8.10**	**91**		**Pn**	**00 57 20.4**	**+0.1**
APG	**El Apazote**	**9.87**	**98**	Pn	**Pn**	**00 57 44.2**	**-0.2**
	0.5nm,0.3s,baz=316,slow=19,SNR=12						
APG				Lg	Lg	01 00 40.4	
	0.3nm,0.3s,baz=217,slow=20,SNR=1.6						
APG				LR	LR	01 01 45.4	
	comp=Z,325nm,19.5s,baz=284,slow=40						
LPIG	**La Paz**	**11.76**	**311**	LR	LR	01 01 56.3	
	comp=Z,325nm,18.6s,baz=54,slow=33						
TEIG	**Tepich**	**12.21**	**71**	LR	LR	01 02 55.4	
	comp=Z,245nm,20.2s,baz=254,slow=39						
TXAR	**Lajitas Array**	**12.96**	**348**	Pn	**Pn**	**00 58 26.7**	**+0.1**
	0.0nm,0.3s,baz=161,slow=16,SNR=5.1						
TXAR				Lg	Lg	01 02 06.6	
	0.1nm,0.3s,baz=160,slow=16,SNR=1.6						
TXAR				LR	LR	01 03 24.4	
	comp=Z,563nm,18.7s,baz=0.0,slow=38						
TGUH	**Tegucigalpa,Un**	**13.09**	**99**		**Pn**	**00 58 28.0**	**-0.5**
JCT	**Junction City**	**13.80**	**3**	Pn	**Pn**	**00 58 37.2**	**-0.9**
MATN	**Matagalpa**	**14.64**	**103**		**Pn**	**00 58 49.7**	**+0.1**
WHTX	**Lake Whitney,**	**15.55**	**10**	Pn	**Pn**	**00 59 01.5**	**-0.2**
441A	**DeRidder**	**15.59**	**24**	Pn	**Pn**	**00 59 02.0**	**-0.2**
HSIG		**15.59**	**324**	Pn	**Pn**	**00 59 03.2**	**+1.0**
MNTX	**Cornudas Mount**	**15.62**	**345**	Pn	**Pn**	**00 59 03.2**	**+0.6**
CLNB	**Carlsbad**	**15.85**	**350**	Pn	**Pn**	**00 59 04.9**	**-0.8**
GDL2	**Guadalupe Moun**	**15.88**	**348**		**Pn**	**00 59 07.6**	**+1.5**
237A	**Washetta, Mont**	**15.90**	**15**	Pn	**Pn**	**00 59 07.4**	**+1.1**
237A				IAmb	IAmb	00 59 10.7	
	comp=Z,60nm,0.9s						
ABTX	**Abilene, Hawle**	**15.94**

TKL				LR	LR	01 12 13.6		
	comp=Z,86nm,20.8s,baz=216,slow=43							
O20A	**White River Ci**	**24.35**	**346**	IAmb	IAmb	01 00 48.5		
	comp=Z,21nm,1.1s							
GTBY	**Guantanamo Bay**	**24.39**	**78**	P	**P**	**01 00 41.9**	**+0.7**	
TPNV	**Topopah Spring**	**24.53**	**329**	IAmb	IAmb	01 00 46.9		
	comp=Z,21nm,1.1s							
NHSC	**New Hope**	**24.65**	**45**	P	**P**	**01 00 43.7**	**+0.3**	
WCI	**Wyandotte Cave**	**24.91**	**27**	P	**P**	**01 00 45.8**	**+0.2**	
WCI				IAmb	IAmb	01 00 47.7		
	comp=Z,14nm,0.8s							
PHWY	**Pilot Hill**	**24.94**	**351**	IAmb	IAmb	01 00 48.0		
	comp=Z,11nm,1.0s							
R11A	**Troy Canyon, C**	**25.33**	**332**	IAmb	IAmb	01 00 54.4		
	comp=Z,12nm,1.1s							
BIRD	**Birdtown, Kers**	**25.42**	**41**	P	**P**	**01 00 50.1**	**-0.2**	
DUG	**Dugway, Tooele**	**25.77**	**338**	IAmb	IAmb	01 00 56.7		
	comp=Z,12nm,0.9s							
W57A	**Gilead**	**26.04**	**41**	P	**P**	**01 00 55.4**	**-0.6**	
K22A	**Casper**	**26.43**	**350**	IAmb	IAmb	01 01 03.9		
	comp=Z,15nm,1.1s							
HWUT	**Hardware Ranch**	**26.63**	**341**	IAmb	IAmb	01 01 04.0		
	comp=Z,20nm,1.0s							
NVAR	**Mina Array Bea**	**26.71**	**328**	P	**P**	**01 01 05.2**	**+2.9**	
	comp=Z,8.3nm,0.9s,baz=153,slow=9.5,SNR=12							
NVAR				LR	LR	01 11 36.6		
	comp=Z,128nm,20.4s,baz=334,slow=37							
RYN	**Ryan**	**26.97**	**328**	P	**P**	**01 01 06.0**	**+1.4**	
RYN				IAmb	IAmb	01 01 11.2		
	comp=Z,15nm,1.1s							
S54A	**Dingess, Beckl**	**27.06**	**35**	IAmb	IAmb	01 01 12.1		
	comp=Z,19nm,1.1s							
KVN	**Kaiserville**	**27.08**	**329**	IAmb	IAmb	01 01 26.2		
	comp=Z,15nm,1.2s							
BW06	**Boulder Array**	**27.15**	**345**	IAmb	IAmb	01 01 08.2		
	comp=Z,14nm,1.0s							
PDAR	**Pinedale Array**	**27.15**	**345**	P	**P**	**01 01 07.3**	**+1.1**	
	comp=Z,7.7nm,0.8s,baz=145,slow=10,SNR=60							
ECSD	**EROS Data Cent**	**27.22**	**6**	IAmb	IAmb	01 01 09.5		
	comp=Z,11nm,1.1s							
WAKR	**Walker**	**27.36**	**326**	IAmb	IAmb	01 01 15.2		
	comp=Z,12nm,1.2s							
CMB	**Columbia Colle**	**27.53**	**325**	IAmb	IAmb	01 01 20.6		
	comp=Z,13nm,1.4s							
AHID	**Auburn Hatcher**	**27.55**	**343**	P	**P**	**01 01 10.5**	**+0.7**	
YERR	**Yerington**	**27.61**	**327**	IAmb	IAmb	01 01 46.5		
	comp=Z,16nm,1.3s							
T57A	**Hurt**	**27.69**	**39**	IAmb	IAmb	01 01 11.5		
	comp=Z,13nm,1.0s							
REDW	**Red Top Meadow**	**28.04**	**344**	IAmb	IAmb	01 01 34.9		
	comp=Z,18nm,1.1s							
R55A	**Marlinton**	**28.07**	**36**	IAmb	IAmb	01 01 15.8		
	comp=Z,13nm,1.0s							
Q54A	**Coxs Mills**	**28.18**	**34**	IAmb	IAmb	01 02 02.8		
	comp=Z,14nm,1.2s							
TPAW	**Teton Pass**	**28.19**	**344**	IAmb	IAmb	01 01 40.3		
	comp=Z,12nm,1.0s							
FXWY	**Fox Creek**	**28.34**	**344**	IAmb	IAmb	01 01 21.9		
	comp=Z,7.9nm,0.9s							
S57A	**Dark Hollow, R**	**28.38**	**38**	IAmb	IAmb	01 01 16.9		
	comp=Z,9.9nm,0.9s							
FLWY	**Flagg Ranch**	**28.67**	**345**	IAmb	IAmb	01 01 23.4		
	comp=Z,12nm,1.1s							
RUSC	**La Rusia**	**28.96**	**108**	P	**P**	**01 01 23.4**	**+0.6**	
MFID	**Camas Ranch**	**29.68**	**337**	IAmb	IAmb	01 01 50.5		
	comp=Z,11nm,1.1s							
O56A	**Blue Knob Stat**	**30.32**	**35**	IAmb	IAmb	01 01 34.1		
	comp=Z,13nm,1.1s							
MOD	**Modoc Plateau**	**30.35**	**330**	IAmb	IAmb	01 01 44.9		
	comp=Z,14nm,1.4s							
M54A	**Oil Creek Stat**	**30.64**	**32**	IAmb	IAmb	01 01 38.4		
	comp=Z,11nm,0.9s							
J08A	**Circle Bar Ran**	**30.68**	**334**	IAmb	IAmb	01 01 47.7		
	comp=Z,16nm,1.2s							
MSO	**Missoula**	**32.09**	**343**	IAmb	IAmb	01 01 52.0		
	comp=Z,11nm,1.0s							
B35A	**Bob, Littlefor**	**32.14**	**9**	IAmb	IAmb	01 01 51.0		
	comp=Z,10.0nm,1.0s							
ATAH	**Atahualpa**	**32.24**	**135**	P	P	01 01 58.0	+6.2	
	comp=Z,12nm,1.1s,baz=267,slow=7.8,SNR=5.4							
G08A	**Pilot Rock**	**32.47**	**335**	IAmb	IAmb	01 02 12.3		
	comp=Z,7.2nm,1.1s							
JTMT	**Jette**	**33.02**	**343**	IAmb	IAmb	01 01 59.9		
	comp=Z,11nm,1.1s							
SADO	**Sadowa**	**33.35**	**28**	IAmb	IAmb	01 01 60.0		
	comp=Z,7.1nm,0.8s							
ULM	**Lac du Bonnet**	**33.75**	**5**	P	**P**	**01 02 03.0**	**-1.1**	
	comp=Z,12nm,0.9s,baz=192,slow=8.3,SNR=14							
ULM				LR	LR	01 15 26.9		
	comp=Z,95nm,20.0s,baz=196,slow=36							
PECO	**Prince Edward**	**33.75**	**31**	IAmb	IAmb	01 02 04.7		
	comp=Z,7.9nm,1.0s							
DELO	**Deloro Mine**	**33.87**	**30**	IAmb	IAmb	01 02 04.9		
	comp=Z,11nm,1.0s							
J57A	**Williamstown**	**33.89**	**33**	IAmb	IAmb	01 02 05.8		
	comp=Z,11nm,1.0s							
WALA	**Waterton Lakes**	**34.12**	**344**	IAmb	IAmb	01 02 09.8		
	comp=Z,10nm,0.9s							
LTY	**Liberty**	**34.76**	**336**	IAmb	IAmb	01 02 32.8		
	comp=Z,9.0nm,1.1s							
LON	**Longmire**	**34.81**	**334**	IAmb	IAmb	01 02 33.3		
	comp=Z,9.3nm,1.2s							
D53A	**Lac Vacive, Po**	**35.77**	**27**	IAmb	IAmb	01 02 29.7		
	comp=Z,12nm,1.4s							
TRQ	**Mont Tremblant**	**36.59**	**31**	P	**P**	**01 02 28.3**	**-0.5**	
LLLB	**Lillooet**	**37.97**	**338**	IAmb	IAmb	01 02 43.3		
	comp=Z,7.6nm,0.8s							
FFC	**Flin Flon**	**38.03**	**359**	P	**P**	**01 02 40.4**	**-0.4**	
FFC				IAmb	IAmb	01 02 41.5		
	comp=Z,11nm,0.8s							
LATQ	**La Tuque**	**38.28**	**31**	P	**P**	**01 02 41.9**	**-1.0**	
G65A	**Princeton**	**39.69**	**37**	IAmb	IAmb	01 02 55.8		
	comp=Z,18nm,1.0s							
FCC	**Fort Churchill**	**42.34**	**5**	P	**P**	**01 03 16.4**	**0.0**	
FCC				IAmb	IAmb	01 03 17.5		
	comp=Z,17nm,0.9s							
PTGA	**Pitinga**	**43.60**	**109**	P	P	01 03 32.1	+4.8	
	comp=Z,3.8nm,0.8s,baz=311,slow=8.3,SNR=4.7							
PTGA	**Pitinga**	**43.60**	**109**	P	**P**	**01 03 26.5**	**-0.8**	
SAML	**Samuel**	**44.88**	**122**	P	**P**	**01 03 37.6**	**+0.1**	
SAML				IAmb	IAmb	01 04 01.8		
	comp=Z,9.0nm,1.4s							
LPAZ	**La Paz**	**45.76**	**134**	P	P	01 03 52.2	+7.1	
	comp=Z,2.3nm,0.7s,baz=337,slow=12,SNR=8.3							
LPAZ				LR	LR	01 21 18.0		
	comp=Z,107nm,18.2s,baz=292,slow=34							
LPAZ	**La Paz**	**45.76**	**134**	P	**P**	**01 03 45.1**	**-0.1**	
SCHQ	**Schefferville**	**46.11**	**26**	P	**P**	**01 03 46.2**	**-0.5**	
	comp=Z,13nm,0.9s,baz=231,slow=7.0,SNR=16							
SCHQ				LR	LR	01 26 09.4		
	comp=Z,97nm,18.3s,baz=342,slow=41							
SCHQ	**Schefferville**	**46.11**	**26**	IAmb	IAmb	01 03 47.4		
	comp=Z,28nm,1.1s							
YKA	**Yellowknife Ar**	**46.86**	**351**	P	**P**	**01 03 52.3**	**-0.2**	
	comp=Z,8.4nm,0.9s,baz=160,slow=8.0,SNR=80							
YKA				PcP	**PcP**	**01 05 30.1**	**+4.8**	
	comp=Z,5.2nm,1.2s,baz=151,slow=4.6,SNR=5.2							
YKA				LR	LR	01 24 04.3		
	comp=Z,241nm,18.4s,baz=0.0,slow=37							
DLBC	**Dease Lake**	**47.07**	**339**	P	**P**	**01 03 55.4**	**+1.1**	
DAWY	**Dawson**	**54.27**	**340**	P	**P**	**01 04 49.2**	**+0.7**	
DAWY				IAmb	IAmb	01 04 59.9		
	comp=Z,6.9nm,1.4s							
EPYK	**Eagle Plains**	**55.08**	**343**	IAmb	IAmb	01 05 49.9		
	comp=Z,5.8nm,1.1s							
EGAK	**Eagle**	**55.32**	**340**	IAmb	IAmb	01 05 00.4		
	comp=Z,7.3nm,1.1s							
INK	**Inuvik**	**55.72**	**346**	IAmb	IAmb	01 05 07.6		
	comp=Z,5.5nm,0.9s							
HDA	**Harding Lake**	**57.08**	**338**	IAmb	IAmb	01 05 17.7		
	comp=Z,9.4nm,1.2s							
ILAR	**Eielson Array**	**57.26**	**338**	P	**P**	**01 05 10.7**	**+0.8**	
	comp=Z,2.8nm,0.9s,baz=149,slow=6.0,SNR=23							
WRH	**Wood River Hil**	**57.52**	**338**	IAmb	IAmb	01 05 32.2		
	comp=Z,10nm,1.3s							
MLY	**Manley**	**58.78**	**338**	P	**P**	**01 05 21.3**	**+0.6**	
TTA	**Tatalina**	**59.88**	**334**	IAmb	IAmb	01 05 36.8		
	comp=Z,6.8nm,1.1s							
CPUP	**Villa Florida**	**59.92**	**135**	P	P	01 05 34.7	+5.7	
	comp=Z,2.5nm,0.9s,baz=325,slow=7.3,SNR=5.1							
CPUP				LR	LR	01 30 10.8		
	comp=Z,38nm,20.1s,baz=228,slow=35							
CPUP	**Villa Florida**	**59.92**	**135**	P	**P**	**01 05 28.9**	**-0.1**	
CPUP				IAmb	IAmb	01 05 47.2		
	comp=Z,8.3nm,1.4s							
PLCA	**Paso Flores**	**63.52**	**155**	P	P	01 06 00.6	+7.4	
	comp=Z,2.9nm,0.9s,baz=339,slow=8.2,SNR=3.8							
PLCA				LR	LR	01 30 01.9		
	comp=Z,85nm,18.1s,baz=270,slow=32							
SUMG	**Summit**	**66.03**	**17**	P	**P**	**01 06 09.7**	**+0.3**	
SUMG	**Summit**	**66.03**	**17**	*i* P	**P**	**01 06 08.0**	**-1.5**	
	comp=Z,21nm,1.0s							
DAG	**Danmarks Havn**	**72.07**	**14**	*i* P	**P**	**01 06 45.6**	**-0.8**	
	comp=Z,3.4nm,1.0s							
BILL	**Bilibino**	**75.89**	**337**	P	**P**	**01 07 10.1**	**+1.2**	
ESDC	**Sonseca Array**	**84.51**	**50**	P	**P**	**01 07 56.0**	**-0.1**	
	comp=Z,1.1nm,0.8s,baz=310,slow=5.0,SNR=8.1							
ESDC				LR	LR	01 46 07.0		
	comp=Z,24nm,18.5s,baz=230,slow=36							
NOA	**NORSAR Array B**	**85.68**	**27**	LR	LR	01 48 27.7		
	comp=Z,19nm,18.0s,baz=320,slow=38							
ARCES	**ARCESS Array B**	**86.12**	**17**	LR	LR	01 48 35.2		
	comp=Z,53nm,18.6s,baz=341,slow=37							
FINES	**FINESS Array B**	**91.46**	**23**	LR	LR	01 50 37.6		
	comp=Z,36nm,18.4s,baz=311,slow=36							
GERES	**GERESS Array B**	**92.68**	**37**	P	**P**	**01 08 34.9**	**-0.1**	
	comp=Z,0.3nm,0.6s,baz=309,slow=2.0,SNR=2.2							
GERES				LR	LR	01 54 45.3		
	comp=Z,24nm,18.0s,baz=290,slow=39							
NRIK	**Noril'sk**	**94.06**	**357**	LR	LR	01 52 57.4		
	comp=Z,81nm,20.4s,baz=14,slow=37							
HYB	**Hyderabad**	**146.15**	**1**	*i* P	**PKPdf**	**01 15 03.5**	**+0.4**	

IDC 07 00:56:40.0±7.5, 7.78S×127.77E, h172km±81km, mb3.1/1, mb1 3.5/5, mb1mx3.2/30, mbtmp4.0/5, MS2.9/1, Ms1 2.9/1, ms1mx2.3/14, Error ellipse: s-maj=80.4km s-min=24.5km az=38.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.72**	**239**	P	Pn	00 57 51.0	+0.7
	44nm,0.3s,baz=84,slow=6.0,SNR=20						
BATI				S	Sn	00 58 45.5	+0.2
	28nm,0.3s,baz=320,slow=18,SNR=11						
FITZ	**Fitzroy Crossi**	**10.46**	**191**	P	Pn	00 59 05.3	-0.4
	0.3nm,0.3s,baz=8.7,slow=9.4,SNR=12						
FITZ				S	Sn	01 00 53.0	-9.0
	0.3nm,0.3s,baz=51,slow=6.5,SNR=3.7						
WRA	**Warramunga Arr**	**13.66**	**153**	P	Pn	00 59 45.4	-1.5
	0.6nm,0.3s,baz=329,slow=13,SNR=9.8						
WRA				S	Sn	01 02 08.5	-10
	0.3nm,0.3s,baz=334,slow=22,SNR=3.2						
ASAR	**Alice Springs**	**16.85**	**160**	P	Pn	01 00 26.9	+0.9
	0.3nm,0.3s,baz=336,slow=10,SNR=13						
ASAR				S	S	01 03 28.9	-3.2
	0.2nm,0.3s,baz=333,slow=20,SNR=5.7						
NWAO	**Narrogin (SRO)**	**26.86**	**200**	LR	LR	01 13 39.0	
	comp=Z,30nm,21.1s,baz=314,slow=38						
MKAR	**Makanchi Array**	**67.69**	**328**	P	P	01 07 18.6	-0.1
	0.6nm,0.9s,baz=116,slow=6.6,SNR=2.4						

*IDC **07** 01:18:53.3±0.8, 5.35N×126.08E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.7/33, mbtmp3.8/9, Error ellipse: s-maj=54.6km s-min=18.2km az=80.0*
*MAN **07** 01:19:04.8, 5.50N×126.47E, h119km, mb4.7, ML3.5, MS3.4*

ISC 07 01:19:05.4±0.9, 5.2N±0.1×126.4E±0.1, h100km, n17, σ2.336/23, mb3.6/8, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.12**	**324**	*e*P	**Pn**	**01 19 27.6**	**+0.5**
DDMP				*e*S	**Sn**	**01 19 43.3**	**-0.2**
DDMP	**Don Marcelino,**	**1.12**	**324**	*e*P	**Pn**	**01 19 27.6**	**+0.5**
DDMP				*e*S	**Sn**	**01 19 43.3**	**-0.2**
GSPH	**General Santos**	**1.67**	**302**	*e*P	**Pn**	**01 19 33.4**	**-0.5**
GSPH				*i* S	**Sn**	**01 19 54.2**	**-1.3**
DMPH	**Davao City--Mi**	**2.06**	**335**	⇑*i*P	**Pn**	**01 19 36.4**	**-2.5**
DMPH				*i* S	**Sn**	**01 20 01.4**	**-2.9**
KCP	**Kidapawan**	**2.21**	**325**	⇓*i*P	**Pn**	**01 19 43.3**	**+2.6**
KCP				*i* S	**Sn**	**01 20 16.7**	**+8.9**
SKMP	**Bagumbayan, Su**	**2.25**	**306**	*e*P	**Pn**	**01 19 40.8**	**-0.4**
SKMP				*e*S	**Sn**	**01 20 08.3**	**-0.3**
SKMP	**Bagumbayan, Su**	**2.25**	**306**	*e*P	**Pn**	**01 19 40.8**	**-0.4**
SKMP				*e*S	**Sn**	**01 20 08.3**	**-0.3**
FITZ	**Fitzroy Crossi**	**23.16**	**182**	P	**P**	**01 24 03.5**	**+0.2**
	0.8nm,0.3s,baz=353,slow=9.8,SNR=10						
WRA	**Warramunga Arr**	**26.18**	**163**	P	**P**	**01 24 32.9**	**+2.1**
	0.3nm,0.5s,baz=334,slow=11,SNR=1.3						
ASAR	**Alice Springs**	**29.61**	**166**	P	P	01 25 02.7	+1.3
	0.1nm,0.4s,baz=341,slow=8.1,SNR=1.3						
ASAR				PcP	**PcP**	**01 28 04.6**	**+0.7**
	0.4nm,0.6s,baz=340,slow=1.2,SNR=2.3						
USRK	**Ussuriysk Ar.**	**39.16**	**6**	P	**P**	**01 26 23.1**	**-0.3**
	0.6nm,0.5s,baz=168,slow=7.4,SNR=5.1						
MKAR	**Makanchi Array**	**56.16**	**325**	P	**P**	**01 28 33.8**	**-1.0**
	0.6nm,0.4s,baz=117,slow=7.2,SNR=16						
ILAR	**Eielson Array**	**83.94**	**25**	P	**P**	**01 31 24.3**	**+0.1**
	0.5nm,0.8s,baz=227,slow=6.6,SNR=4.7						
ARCES	**ARCESS Array B**	**88.96**	**340**	P	**P**	**01 31 47.7**	**-0.8**
	1.9nm,0.7s,baz=80,slow=6.6,SNR=8.1						
FINES	**FINESS Array B**	**90.38**	**332**	P	**P**	**01 31 54.6**	**-0.7**
	1.3nm,0.8s,baz=37,slow=6.0,SNR=6.5						
YKA	**Yellowknife Ar**	**98.32**	**24**	P	Pdif	01 32 32.8	+1.2
	0.3nm,0.9s,baz=317,slow=4.4,SNR=2.4						
TORD	**Torodi Ar. Bea**	**122.12**	**289**	PKP	**PKiKP**	**01 37 49.3**	**-0.4**
	0.3nm,0.4s,baz=76,slow=1.7,SNR=9.7						

*ROM **07** 01:28:29.4±0.1, 47.169N±0.008×11.111E±0.009, h14km±1km, ML1.6/7, Error ellipse: s-maj=1.0km s-min=0.4km az=344.0*
*PRU **07** 01:28:30.3±0.0, 47.21N×11.09E, h3km*
*BGR **07** 01:28:30.8±0.3, 47.20N×11.07E, h9km±3km, ML1.8/18, Error ellipse: s-maj=4.4km s-min=2.2km az=177.0*
BGR Weakly felt by a few people.

VIE 07 01:28:29.2±0.2, 47.17N×11.07E, h7km±3km, mb1.2/10, ml2.0/16, Error ellipse: s-maj=1.1km s-min=0.9km az=146.0 7 km WSW of Gries im Sellrain felt 3 ems98 at Umhausen / Tyrol, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SQTA	**Sankt Quirin**	**0.11**	**60**	*i* Pg	Pg	01 28 32.0	+0.3
	61nm,0.1s,SNR=707						
SQTA				*e*Sg	Sg	01 28 33.6	+0.2
	137nm,0.1s						
MOTA	**Moosalm**	**0.18**	**8**	*i* Pg	Pg	01 28 33.2	+0.3
	29nm,0.2s,SNR=222						
MOTA				*e*Sg	Sg	01 28 35.8	+0.3
	190nm,0.2s						
FETA	**Feichten**	**0.27**	**238**	*i* Pg	Pg	01 28 35.2	+0.6
	4.9nm,0.1s,SNR=58						
FETA				*i* Sg	Sg	01 28 39.0	+0.7
	6.9nm,0.0s						
PART	**Garmisch-Parte**	**0.33**	**5**	*e*Pg	Pg	01 28 35.5	-0.2
PART				*e*Sg	Sg	01 28 40.0	-0.2
ROSI	**Rosskopf**	**0.33**	**135**	P	Pg	01 28 36.1	+0.4
ROSI				S	Sg	01 28 40.9	+0.7
ROSI				AML	AML		
	comp=E,541μm,2.4s						
ROSI				AML	AML		
	comp=N,533μm,1.2s						
ROSI				AML	AML		
	comp=E,542μm,2.4s						
RETA	**Reutte**	**0.38**	**327**	*i* Pg	Pg	01 28 36.4	-0.3
	comp=E,0.9nm,0.1s,SNR=35						
RETA				*e*Sg	Sg	01 28 41.8	+0.1
	comp=E,6.4nm,0.1s						
WATA	**Walderalm**	**0.39**	**64**	*e*Pg	Pg	01 28 36.4	-0.3
	comp=E,5.5nm,0.1s,SNR=13						
WATA				*e*Sg	Sg	01 28 41.9	+0.1
	comp=E,22nm,0.2s						
WTTA	**Wattenberg**	**0.40**	**76**	*e*Pg	Pg	01 28 37.0	0.0
WTTA				*e*Sg	Sg	01 28 43.0	+0.7
WTTA	**Wattenberg**	**0.40**	**76**	*i* Pg	Pg	01 28 36.9	-0.1
	comp=E,4.1nm,0.1s,SNR=18						
WTTA				*e*Sg	Sg	01 28 42.8	+0.6
	comp=E,14nm,0.1s						
WTTA	**Wattenberg**	**0.40**	**76**	P	Pg	01 28 36.9	-0.1
WTTA				S	Sg	01 28 42.9	+0.6
WTTA				AML	AML		
	comp=N,56μm,1.8s						
WTTA				AML	AML		
	comp=E,45μm,0.9s						
ABSI	**Aberstueckl**	**0.47**	**158**	P	Pg	01 28 38.9	+0.6
ABSI				S	Sg	01 28 45.6	+1.1
ABSI				AML	AML		
	comp=N,106μm,0.4s						
ABSI				AML	AML		
	comp=E,57μm,0.3s						
ABSI				AML	AML		
	comp=N,106μm,0.4s						
OBER	**Oberstdorf**	**0.58**	**295**	*e*Pg	Pb	01 28 41.3	-0.4
OBER				*e*Sg	Sb	01 28 49.4	-0.9
BRES	**Bressanone**	**0.65**	**135**	P	Pg	01 28 42.1	+0.3
BRES				S	Sg	01 28 50.5	+0.2
MOSI	**Grossmontoni**	**0.66**	**213**	P	Pb	01 28 42.5	-0.6
MOSI				S	Sg	01 28 50.9	+0.5
MOSI				AML	AML		
	comp=N,114μm,0.3s						
MOSI				AML	AML		
	comp=E,94μm,1.3s						
APPI	**Appiano**	**0.70**	**171**	P	Pg	01 28 43.1	+0.6
APPI				S	Sg	01 28 52.1	+0.5
APPI				AML	AML		
	comp=N,39μm,1.5s						
APPI				AML	AML		
	comp=E,37μm,0.5s						
RISI	**Rein**	**0.72**	**107**	P	Pg	01 28 43.0	-0.1
RISI				AML	AML		
	comp=N,99μm,1.6s						
RISI				AML	AML		
	comp=N,99μm,1.6s						
RISI				AML	AML		
	comp=E,63μm,1.1s						
KOSI	**Kohlern**	**0.73**	**163**	P	Pg	01 28 43.8	+0.5
FUORN	**Ofenpass-Fuorn**	**0.78**	**226**	P	Pg	01 28 44.3	+0.2
FUORN				S	Sg	01 28 55.1	+0.9
DAVA	**Damuels**	**0.82**	**279**	*e*Pg	Pg	01 28 45.1	+0.2
DAVA				*e*Sg	Sb	01 28 57.5	+0.4
DAVA	**Damuels**	**0.82**	**279**	*e*Pg	Pg	01 28 44.2	-0.8
	comp=E,0.8nm,0.1s						
DAVA				Sg	Sb	01 28 57.4	+0.2
	comp=E,5.3nm,0.2s,SNR=6.7						
UBR	**Ueberruh**	**0.83**	**309**	*e*Pg	Pb	01 28 46.4	+0.4
UBR				*e*Sg	Sb	01 28 58.0	+0.5
DAVOX	**Davos/Dischmat**	**0.90**	**245**	P	Pg	01 28 46.5	0.0
DAVOX				S	Sb	01 28 59.6	+0.1
DAVOX				AML	AML		
	comp=E,17μm,0.6s						
DAVOX				AML	AML		
	comp=N,17μm,1.4s						
FUR	**Furstenfeldbru**	**1.01**	**8**	*e*Sg	Sb	01 29 02.9	+0.4
ABTA	**Abfaltersbach**	**1.07**	**112**	*e*Pg	Pg	01 28 49.8	0.0
	comp=N,0.5nm,0.1s						
ABTA				Sg	Sg	01 29 02.9	-0.8
	comp=N,6.0nm,0.3s,SNR=4.1						
PLONS	**Plons/SG**	**1.16**	**265**	*e*Pn	Pn	01 28 54.1	+2.2
PLONS				*e*Sn	Sg	01 29 06.3	-0.2
RJOB	**Jochberg**	**1.30**	**63**	*e*Pg	Pg	01 28 55.5	+1.4
RJOB				*e*Sg	Sn	01 29 15.5	+3.9
WILA	**Wila**	**1.49**	**280**	*e*Pg	Pg	01 28 58.6	+0.9
WILA				*e*Sg	Sg	01 29 19.1	+2.0
KBA	**Koelnbreinsper**	**1.56**	**92**	*e*Pn	Pb	01 28 58.0	-0.5
KBA				*e*Pg	Pg	01 29 00.2	+1.2
KBA				*e*Sg	Sg	01 29 20.1	+0.9
KBA	**Koelnbreinsper**	**1.56**	**92**	Pn	Pn	01 28 57.3	-0.2
	comp=N,2.2nm,0.3s						
KBA				Sn	Sb	01 29 18.5	+0.1
	comp=N,5.3nm,0.5s						
NORI	**Noerdlinger Ri**	**1.58**	**349**	*e*Pg	Pg	01 28 59.6	+0.1
NORI				*e*Sg	Sg	01 29 20.5	+0.5
GRC3	**Grafenberg Arr**	**1.76**	**11**	*e*Sg	Sg	01 29 25.0	-0.7
MYKA	**Terra Mystica**	**1.84**	**106**	Pg	Pg	01 29 05.0	+0.4
	comp=N,0.2nm,0.1s						
SLE	**Schleitheim**	**1.85**	**290**	*e*Sg	Sg	01 29 28.8	+0.2
GRC1	**Grafenberg Arr**	**1.86**	**9**	*e*Sg	Sg	01 29 28.0	-0.8
GRC4	**Grafenberg Arr**	**1.95**	**9**	*e*Sg	Sg	01 29 30.9	-0.9
GRB5	**Grafenberg Arr**	**1.99**	**12**	*e*Sg	Sb	01 29 31.7	+1.0
SULZ	**Cheisacher**	**2.04**	**281**	*e*Sn	Sn	01 29 28.0	-1.8
BFO	**Black Forest**	**2.19**	**303**	*e*Sg	Sg	01 29 39.5	+0.2
WET	**Wettzell**	**2.32**	**31**	*e*Pn	Pn	01 29 07.7	-0.1
GEC2	**GERESS Array S**	**2.44**	**45**	*e*Pn	Pn	01 29 09.7	+0.2
KHC	**Kasperske Hory**	**2.59**	**40**	*e*PG	Pb	01 29 16.8	+0.9
KHC				*ex*	x	01 29 20.5	
KHC				*e*SG	Sg	01 29 50.1	-2.1
	comp=N,5.6nm,0.7s						
NKC	**Novy Kostel**	**3.20**	**16**	*e*SG	Sg	01 30 10.3	-1.7
	comp=N,2.4nm,0.3s						

*LDG **07** 01:29:10.2±0.1, 46.67N×7.60E, h8km, Md1.8/2, Ml1.9/8, Error ellipse: s-maj=2.7km s-min=1.1km az=101.0*
*STR **07** 01:29:10.3±0.8, 47.N±3.×±., h29km±8km, MLv1.6/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

ZUR 07 01:29:09.5, 46.65N×7.57E, h7km±1km, MLh1.2/10, 4C-6D, Error ellipse: s-maj=2.3km s-min=0.8km az=236.0, Switzerland

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

LPL	**La Plagne**	**1.27**	**208**	*e*Pg	Pg	01 29 34.9	+1.0
LPL				*e*Sg	Sn	01 29 51.8	+0.5
	0.9nm,0.3s						
LPG	**La Plagne**	**1.28**	**207**	*e*Pn	Pn	01 29 33.6	-0.5
LPG	**La Plagne**	**1.28**	**207**	*e*Pg	Pb	01 29 35.2	+1.1
LPG				*e*Sg	Sn	01 29 52.1	+0.5
	1.2nm,0.3s						
KIZ	**Kirchzarten**	**1.33**	**10**	Pg	Pn	01 29 34.4	0.0
OG35	**Corcelles**	**1.51**	**247**	Pg	Pg	01 29 39.1	+0.6
OG35				Sg	Sg	01 29 58.3	+0.3
ECH	**Echery**	**1.59**	**350**	Pg	Pb	01 29 39.4	+0.2
ECH				Sg	Sn	01 29 59.0	+0.1
HAU	**Haudompre**	**1.59**	**329**	*e*Pn	Pn	01 29 37.1	-1.0
HAU	**Haudompre**	**1.59**	**329**	*e*Pg	Pg	01 29 39.8	-0.2
HAU				*e*Sn	Sn	01 29 56.6	-2.3
HAU				*e*Sg	Sb	01 30 00.0	+0.4
	5.2nm,0.2s						
OGSM	**Saint Maurice**	**1.67**	**232**	Pg	Pg	01 29 41.7	+0.3
OGSM				Sg	Sg	01 30 03.6	+0.6
CDF	**Champ du Feu**	**1.78**	**354**	*e*Pn	Pn	01 29 39.4	-1.3
CDF	**Champ du Feu**	**1.78**	**354**	*e*Pg	Pg	01 29 43.1	-0.4
CDF				*e*Sn	Sn	01 30 00.6	-3.0
	1.1nm,0.2s						
CDF				*e*Sg	Sb	01 30 05.3	+0.4
	1.3nm,0.2s						
PAGF	**Fort de Pagny**	**2.28**	**327**	*e*Pn	Pn	01 29 46.8	-0.7
	baz=146						
SFTF	**Sexfontaines**	**2.32**	**313**	*e*Pn	Pn	01 29 47.0	-1.1
	baz=132						
SFTF	**Sexfontaines**	**2.32**	**313**	*e*Pg	Pg	01 29 53.4	-0.5
LOR	**Lormes**	**2.62**	**285**	*e*Pn	Pn	01 29 51.6	-0.6
	baz=105						
LOR				*e*Sn	Sn	01 30 21.7	-2.5
LOR				*e*Sg	Sg	01 30 33.4	-0.1
	0.7nm,0.2s						

*THE **07** 01:30:15.1, 38.31N×21.71E, h10km±2km, ML1.7/8, Error ellipse: s-maj=2.6km s-min=0.4km az=119.0*

ATH 07 01:30:14.7, 38.32N×21.70E, h12km±3km, ML1.8/12, Error ellipse: s-maj=3.1km s-min=0.6km az=86.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPR	**University Cam**	**0.08**	**118**	P	Pg	01 30 17.0	-0.3
UPR	**University Cam**	**0.08**	**118**	P	Pg	01 30 17.1	-0.2
EFP	**Efpalio**	**0.20**	**57**	P	Pg	01 30 18.8	-0.2
EFP				S	Sg	01 30 22.0	+0.1
	480nm,0.2s						
EFP	**Efpalio**	**0.20**	**57**	P	Pg	01 30 18.8	-0.2
EFP				S	Sg	01 30 22.4	+0.5
EFP				AML	AML	01 30 22.8	
	comp=N,856μm,0.2s						
EFP				AML	AML	01 30 23.7	
	comp=E,1006μm,0.2s						
LAKA	**Lakka**	**0.24**	**110**	P	Pg	01 30 19.5	-0.2
LAKA				S	Sg	01 30 23.0	-0.1
	comp=E,132nm,0.3s						
LAKA	**Lakka**	**0.24**	**110**	P	Pg	01 30 19.5	-0.2
LAKA				S	Sg	01 30 23.0	-0.1
LAKA				AML	AML	01 30 23.5	
	comp=E,354μm,0.2s						
LAKA				AML	AML	01 30 23.8	
	comp=N,187μm,0.1s						
SERG	**Sergoula**	**0.30**	**72**	P	Pg	01 30 20.8	0.0
SERG	**Sergoula**	**0.30**	**72**	P	Pg	01 30 20.8	0.0
SERG				S	Sg	01 30 25.4	+0.5
SERG				AML	AML	01 30 25.6	
	comp=N,749μm,0.2s						
SERG				AML	AML	01 30 26.1	
	comp=E,508μm,0.2s						
TRIZ	**Trizonia**	**0.30**	**81**	P	Pg	01 30 20.7	-0.1
TRIZ	**Trizonia**	**0.30**	**81**	P	Pg	01 30 20.8	0.0
TRIZ				S	Sg	01 30 25.5	+0.6
RLS	**Riolos of Patr**	**0.32**	**215**	P	Pg	01 30 21.6	+0.4
RLS				S	Sg	01 30 26.2	+0.7
	comp=E,172nm,0.3s						
RLS	**Riolos of Patr**	**0.32**	**215**	P	Pg	01 30 21.6	+0.4
RLS				S	Sg	01 30 25.3	-0.2
RLS				AML	AML	01 30 28.8	
	comp=N,394μm,0.3s						
RLS				AML	AML	01 30 29.1	
	comp=E,300μm,0.3s						
ANX	**Ano Chora**	**0.32**	**33**	P	Pg	01 30 21.3	0.0
ANX				S	Sb	01 30 26.8	-1.0
	comp=E,472nm,0.3s						
ANX	**Ano Chora**	**0.32**	**33**	P	Pg	01 30 21.4	0.0
ANX				S	Sg	01 30 26.0	+0.2
ANX				AML	AML	01 30 27.1	
	comp=N,1119μm,0.3s						
ANX				AML	AML	01 30 27.1	
	comp=E,762μm,0.3s						
KALE	**Kalithea**	**0.35**	**79**	P	Pg	01 30 21.6	-0.3
KALE				S	Sg	01 30 27.6	+0.9
	comp=E,118nm,0.2s						
KALE	**Kalithea**	**0.35**	**79**	P	Pg	01 30 21.7	-0.2
KALE				S	Sg	01 30 27.1	+0.5
KALE				AML	AML	01 30 27.7	
	comp=N,219μm,0.2s						
KALE				AML	AML	01 30 29.6	
	comp=E,250μm,0.2s						
DRO	**Drossia**	**0.37**	**178**	P	Pg	01 30 22.2	+0.1
DRO				S	Sb	01 30 28.1	-0.8
	comp=E,228nm,0.3s						
DRO	**Drossia**	**0.37**	**178**	P	Pg	01 30 22.1	0.0
DRO				S	Sg	01 30 27.5	+0.5
DRO				AML	AML	01 30 29.6	
	comp=E,446μm,0.2s						
DRO				AML	AML	01 30 32.8	
	comp=N,462μm,0.5s						
KLV	**Kalavryta, Ach**	**0.45**	**128**	P	Pg	01 30 23.3	-0.3
KLV	**Kalavryta, Ach**	**0.45**	**128**	P	Pg	01 30 23.2	-0.4
KLV				S	Sg	01 30 29.6	-0.1
PDO	**Prodromos**	**0.49**	**305**	P	Pg	01 30 24.1	-0.3
PDO				S	Sg	01 30 31.5	+0.7
PDO				AML	AML	01 30 36.1	
	comp=E,202μm,0.2s						
PDO				AML	AML	01 30 38.7	
	comp=N,283μm,0.4s						
EVR	**Evrytania**	**0.60**	**8**	P	Pg	01 30 26.0	-0.5
EVR				S	Sb	01 30 36.0	+0.2
	comp=N,48nm,0.3s						
EVR	**Evrytania**	**0.60**	**8**	P	Pg	01 30 26.0	-0.5
EVR				S	Sb	01 30 35.5	-0.3
KFL	**Anninata**	**0.75**	**254**	P	Pb	01 30 29.7	0.0
MAKR	**Makrakomi, Fth**	**0.77**	**26**	P	Pg	01 30 29.6	0.0
MAKR				S	Sb	01 30 41.0	+0.4
	comp=N,165nm,0.3s						
MAKR	**Makrakomi, Fth**	**0.77**	**26**	P	Pg	01 30 29.3	-0.4
MAKR				S	Sb	01 30 40.3	-0.3
MAKR				AML	AML	01 30 42.9	
	comp=E,430μm,0.2s						
MAKR				AML	AML	01 30 43.7	
	comp=N,227μm,0.4s						
AMT	**Artemida-Makis**	**0.79**	**179**	P	Pb	01 30 30.7	+0.3
AMT				S	Sb	01 30 41.4	+0.4
AMT				AML	AML	01 30 51.5	
	comp=E,179μm,0.8s						
AMT				AML	AML	01 30 53.6	
	comp=N,161μm,0.6s						
AGG	**Agios Georgios**	**0.86**	**35**	P	Pg	01 30 30.2	-1.1
VLS	**Valsamata**	**0.88**	**261**	P	Pg	01 30 31.6	-0.2
VLS				AML	AML	01 30 33.9	
	comp=E,54μm,0.1s						
VLS				S	Sg	01 30 42.9	-0.4
VLS				AML	AML	01 30 46.8	
	comp=N,209μm,0.3s						
FSK	**Fiskardo**	**0.90**	**279**	P	Pg	01 30 31.8	-0.4
TRIP	**Tripoli**	**0.91**	**150**	P	Pg	01 30 31.8	-0.5
TRIP				S	Sb	01 30 45.2	+0.5
LKD2	**Lefkada island**	**0.94**	**300**	P	Pg	01 30 32.6	-0.3
PROD	**Prodromos**	**0.95**	**93**	P	Pb	01 30 33.2	+0.1
TSLK	**Tsoukalades, L**	**0.96**	**302**	P	Pb	01 30 33.3	0.0
KEF2	**Argostoli. Kep**	**0.96**	**261**	P	Pg	01 30 32.7	-0.6
KEF2				S	Sb	01 30 46.4	+0.3
KEF1	**Kardakata, Kep**	**0.97**	**268**	P	Pg	01 30 32.8	-0.5
KEF4	**Livadi, Kephal**	**1.00**	**267**	P	Pb	01 30 33.3	-0.7
LKR	**Lokris**	**1.07**	**72**	P	Pb	01 30 34.2	-1.0
VLX	**Vlachokerasia**	**1.09**	**150**	P	Pb	01 30 35.4	-0.2
ITM	**Ithomi**	**1.15**	**171**	P	Pg	01 30 37.3	+0.4
VIL2	**Platees**	**1.24**	**95**	P	Pg	01 30 38.5	-0.1
THL	**Klokotos Trika**	**1.27**	**11**	P	Pb	01 30 38.8	+0.2
PYL	**PYLOS**	**1.42**	**179**	P	Pb	01 30 41.6	+0.3
DID	**Didima**	**1.47**	**123**	P	Pb	01 30 41.6	-0.3

ATH 07 01:30:15.4, 39.86N×20.01E, h14km±3km, ML2.3/9, Error ellipse: s-maj=4.3km s-min=1.0km az=199.0, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASA	**Kassiopi**	**0.13**	**207**	P	Pg	01 30 18.4	-0.4
KASA				S	Sg	01 30 20.8	-0.3
KASA				AML	AML	01 30 21.2	
	comp=N,7123μm,0.2s						
KASA				AML	AML	01 30 21.5	
	comp=E,7246μm,0.2s						
KEK	**Kerkira**	**0.22**	**228**	P	Pg	01 30 20.3	0.0
KEK				S	Sb	01 30 24.5	-0.6
KEK				AML	AML	01 30 24.6	
	comp=E,6149μm,0.4s						
KEK				AML	AML	01 30 24.8	
	comp=N,5318μm,0.2s						
IGT	**Igoumenitsa**	**0.41**	**143**	P	Pg	01 30 22.9	-0.7
IGT				S	Sb	01 30 30.0	-0.5
IGT				AML	AML	01 30 31.1	
	comp=N,742μm,0.3s						
IGT				AML	AML	01 30 32.5	
	comp=E,579μm,0.2s						
JAN	**Janina**	**0.68**	**107**	P	Pg	01 30 27.8	-0.8
JAN				S	Sb	01 30 38.1	-0.2
JAN				AML	AML	01 30 41.4	
	comp=N,563μm,0.3s						
JAN				AML	AML	01 30 45.6	
	comp=E,511μm,0.3s						
MEV	**Metsovon**	**0.94**	**94**	P	Pb	01 30 33.4	-0.2
NEST	**Nestorio**	**0.97**	**55**	P	Pb	01 30 33.8	-0.3
NEST				AML	AML	01 30 56.5	
	comp=E,80μm,0.3s						
NEST				AML	AML	01 30 58.2	
	comp=N,109μm,0.4s						
KPRO	**Kipourio**	**1.04**	**84**	P	Pb	01 30 35.1	-0.2
KPRO				S	Sn	01 30 50.4	+0.2
KPRO				AML	AML	01 30 52.0	
	comp=N,426μm,0.5s						
KPRO				AML	AML	01 30 56.2	
	comp=E,458μm,0.5s						
TSLK	**Tsoukalades, L**	**1.15**	**154**	P	Pn	01 30 37.2	+0.2
TSLK				AML	AML	01 30 56.9	
	comp=N,416μm,0.4s						
TSLK				AML	AML	01 31 03.0	
	comp=E,227μm,0.5s						
TSLK	**Tsoukalades, L**	**1.15**	**154**	AML	AML	01 30 56.9	
	comp=N,416μm,0.4s						
TSLK				AML	AML	01 31 03.0	
	comp=E,227μm,0.5s						
SCTE	**Santa Cesarea**	**1.21**	**281**	P	Pg	01 30 39.1	+0.5
SCTE				S	Sg	01 30 54.4	+0.1
SCTE				AML	AML	01 30 59.0	
	comp=E,118μm,0.2s						
SCTE				AML	AML	01 30 59.1	
	comp=N,112μm,0.2s						
OHR	**Ohrid**	**1.39**	**25**	*e*Pn	Pg	01 30 43.3	+1.2
OHR				*e*Sg	Sg	01 31 05.3	+5.1
OHR	**Ohrid**	**1.39**	**25**	*e*Pn	Pg	01 30 43.3	+1.2
OHR				*e*Sg	Sg	01 31 05.3	+5.1
FNA	**Florina**	**1.39**	**48**	P	Pb	01 30 41.7	+0.4
FNA				AML	AML	01 31 05.9	
	comp=E,294μm,0.6s						
FNA				AML	AML	01 31 08.4	
	comp=N,278μm,0.5s						
KZN	**Kozani**	**1.42**	**71**	P	Pg	01 30 43.3	+0.5
LIT	**Litokhoron**	**1.92**	**82**	P	Pb	01 30 50.0	-0.3
STIP	**Stip**	**2.47**	**41**	*e*Pn	Pb	01 31 01.1	+1.5
STIP	**Stip**	**2.47**	**41**	*e*Pn	Pb	01 31 01.1	+1.5
KNT	**Kendrikon**	**2.56**	**58**	P	Pn	01 30 57.9	+1.4
DBRK	**Dubrovnik**	**3.14**	**334**	*e*Pn	Pn	01 31 06.6	+2.2
DBRK				Sn	Sn	01 31 42.6	+0.8
STON	**Ston**	**3.48**	**331**	*e*Pn	Pn	01 31 10.2	+1.2
STON				Sn	Sn	01 31 51.0	+1.0
MAKA	**Makarska**	**4.10**	**328**	*e*Pn	Pn	01 31 18.3	+0.7
MAKA				Sn	Sn	01 32 06.4	+1.1
ZIRJ	**Zirje**	**5.00**	**321**	*e*Pn	Pn	01 31 30.9	+0.9

KRSC 07 01:33:05.0±0.9, 51.17N×155.77E, h266km±9km, ML3.9, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**0.33**	**206**	P	Pn	01 33 40.2	+0.7
MIPR	**Malaya Ipel'ka**	**1.27**	**28**	P	Pn	01 33 43.6	+0.5
KDTR	**Khodutka, Kamc**	**1.58**	**65**	P	Pn	01 33 46.5	+1.3
KDTR				S	S	01 34 16.6	-0.5
ASAK	**Asacha**	**1.80**	**46**	P	Pn	01 33 48.2	+1.1
GRL	**Gorelyy**	**1.99**	**45**	P	Pn	01 33 50.0	+1.3
MTVR	**Mutnovka**	**1.99**	**48**	P	Pn	01 33 50.0	+1.2
MTVR				S	S	01 34 23.4	-0.1
RUS	**Russkaya**	**2.12**	**52**	P	Pn	01 33 50.8	+1.1
RUS				S	S	01 34 24.7	-0.5
KRMR	**Karymshinskiy**	**2.21**	**40**	P	Pn	01 33 50.4	-0.1
KOK	**Koryaka**	**2.76**	**38**	P	Pn	01 33 57.5	+1.5
UGLR	**Uglovaya**	**2.78**	**41**	P	Pn	01 33 58.0	+1.9
UGLR				S	S	01 34 37.4	+0.6
AVH	**Avacha**	**2.78**	**40**	P	Pn	01 33 58.5	+2.4
SMAR	**Somma**	**2.81**	**40**	P	Pn	01 33 57.9	+1.4
KRX	**Arik**	**2.82**	**38**	P	Pn	01 33 57.8	+1.2
SPN	**Mys Shipunski**	**3.26**	**52**	P	Pn	01 34 01.7	+0.7
KZV	**Kizimen**	**4.80**	**33**	P	Pn	01 34 19.8	+1.0
TUMR	**Tumrok**	**4.89**	**31**	P	Pn	01 34 21.3	+1.4
TUMD	**Tumrok D**	**4.91**	**33**	P	Pn	01 34 21.7	+1.7
KBTR	**Krutoberegovo**	**6.56**	**37**	P	Pn	01 34 41.4	+1.3

*IDC **07** 01:48:27.9±1.6, 1.04N×122.97E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.5/36, mbtmp3.8/4, ML4.0/1, Error ellipse: s-maj=150.9km s-min=23.2km az=65.0*
*DJA **07** 01:48:44.2±1.1, 1.1N±5.2×12.2E±7.1, h121km±12km, M3.5/5, MLv3.5/5*

ISC 07 01:48:43.6±1.1, 0.5N±0.1×122.07E±0.06, h135km±10km, n8, c0§68/11, mb3.7/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.13**	**264**	P	**Pn**	**01 49 01.7**	**-0.1**
LUWI	**Luwuk**	**1.68**	**155**	P	**Pn**	**01 49 14.5**	**+0.5**
LUWI				S	**Sn**	**01 49 37.7**	**+0.4**
KMSI	**Cibinong**	**1.91**	**87**	P	**Pn**	**01 49 16.5**	**-0.2**
KMSI				S	**Sn**	**01 49 42.2**	**+0.1**
MPSI	**Mapaga**	**2.18**	**266**	P	**Pn**	**01 49 19.9**	**-0.1**
MPSI				S	**Sn**	**01 49 47.7**	**-0.2**
FITZ	**Fitzroy Crossi**	**18.80**	**169**	P	**P**	**01 52 52.2**	**-0.6**
	0.3nm,0.3s,baz=4.6,slow=9.0,SNR=8.7						
WRA	**Warramunga Arr**	**23.60**	**150**	P	**P**	**01 53 41.6**	**-0.8**
	2.0nm,0.8s,baz=337,slow=9.2,SNR=11						
ASAR	**Alice Springs**	**26.62**	**155**	P	**P**	**01 54 08.9**	**-0.9**
	0.6nm,0.5s,baz=340,slow=12,SNR=9.3						
MKAR	**Makanchi Array**	**57.71**	**329**	P	**P**	**01 58 21.2**	**+1.0**
	0.5nm,0.5s,baz=128,slow=9.0,SNR=6.9						

*BGR **07** 02:21:27.8±0.0, 23.39S×177.63W, h33km*
*IDC **07** 02:22:23.5±3.7, 23.36S×179.45E, h501km±37km, mb3.4/10, mb1 3.6/12, mb1mx3.4/35, mbtmp4.3/12, Error ellipse: s-maj=26.6km s-min=17.0km az=64.0*
*NEIC **07** 02:22:25.3±1.4, 23.42S±0.09×179.3E±0.1, h520km±6km, mb4.5/30, Error ellipse: s-maj=16.9km s-min=12.1km az=106.0*

ISC 07 02:22:23.7±0.4, 23.44S±0.08×179.25E±0.08, h500km, n79, σ1§35/84, mb4.2/20, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.79**	**349**	P	**P**	**02 24 00.3**	**+2.1**
NIUE	**Niue**	**10.99**	**69**	P	**P**	**02 24 52.9**	**+1.3**
DZM	**Mont Dzumac**	**11.89**	**274**	P	**P**	**02 25 01.7**	**+0.5**
	0.2nm,0.3s,baz=127,slow=20,SNR=1.7						
DZM	**Mont Dzumac**	**11.89**	**274**	P	**P**	**02 25 02.5**	**+1.2**
OUZ	**Omahuta**	**12.72**	**201**	P	**P**	**02 25 12.4**	**+2.7**
AFI	**Afiamalu**	**12.73**	**43**	P	**P**	**02 25 11.8**	**+1.6**
URZ	**Urewera**	**14.88**	**187**	P	**P**	**02 25 32.1**	**-0.3**
	3.5nm,0.3s,baz=21,slow=4.2,SNR=13						
BKZ	**Black Stump Fm**	**15.85**	**188**	P	**P**	**02 25 42.9**	**+0.2**
BKZ				AmB	AmB	02 25 49.8	
	comp=Z,11nm,0.9s						
BFZ	**Birch Farm**	**17.37**	**188**	P	**P**	**02 25 58.0**	**0.0**
BFZ				AmB	AmB	02 26 08.5	
	comp=Z,19nm,1.0s						
QRZ	**Quartz Range**	**18.23**	**196**	P	**P**	**02 26 07.1**	**+1.1**
NNZ	**Nelson**	**18.39**	**194**	P	**P**	**02 26 08.4**	**+1.0**
NNZ				AmB	AmB	02 26 19.4	
	comp=Z,20nm,0.9s						
THZ	**Tophouse**	**19.02**	**195**	P	**P**	**02 26 14.6**	**+1.3**
THZ				AmB	AmB	02 26 18.5	
	comp=Z,14nm,0.9s						
LTZ	**Lake Taylor**	**20.14**	**195**	P	**P**	**02 26 23.0**	**-0.4**
MQZ	**McQueen's Vall**	**20.93**	**193**	P	**P**	**02 26 31.0**	**+0.5**
MQZ				AmB	AmB	02 26 35.8	
	comp=Z,23nm,1.2s						
RPZ	**Rata Peaks**	**21.32**	**197**	P	**P**	**02 26 33.2**	**-0.9**
	comp=Z,5.3nm,0.5s,baz=27,slow=6.8,SNR=1.7						
RPZ	**Rata Peaks**	**21.32**	**197**	P	**P**	**02 26 33.5**	**-0.6**
RPZ				AmB	AmB	02 26 46.7	
	comp=Z,14nm,1.1s						
KNTN	**Kanton**	**22.33**	**24**	P	**P**	**02 26 43.4**	**-0.2**
KNTN				AmB	AmB	02 26 51.1	
	comp=Z,12nm,0.8s						
WKZ	**Wanaka**	**22.91**	**199**	P	**P**	**02 26 48.3**	**-0.1**
CAN	**Canberra**	**28.78**	**239**	P	**P**	**02 27 40.5**	**+0.1**
CAN				AmB	AmB	02 27 53.8	
	comp=Z,12nm,1.1s						
CTAO	**Charters Tower**	**30.79**	**270**	P	**P**	**02 27 59.2**	**+1.2**
CTAO				AmB	AmB	02 28 01.6	
	comp=Z,9.6nm,1.1s						
TOO	**Toolangi**	**32.12**	**236**	P	**P**	**02 28 10.2**	**+0.9**
TOO				AmB	AmB	02 28 27.4	
	comp=Z,8.2nm,1.1s						
STKA	**Stephens Creek**	**34.26**	**247**	P	**P**	**02 28 29.6**	**+2.2**
	comp=Z,3.7nm,0.6s,baz=90,slow=10.0,SNR=12						
STKA				PcP	**PcP**	**02 30 50.2**	**+0.4**
	comp=Z,1.4nm,0.4s,baz=123,slow=5.6,SNR=3.7						
STKA	**Stephens Creek**	**34.26**	**247**	P	**P**	**02 28 27.7**	**+0.3**
BBOO	**Buckleboo**	**38.99**	**246**	P	**P**	**02 29 07.0**	**+0.5**
ASAR	**Alice Springs**	**41.43**	**260**	P	**P**	**02 29 27.6**	**+1.4**
	comp=Z,3.5nm,0.6s,baz=94,slow=7.9,SNR=40						
ASAR				PcP	**PcP**	**02 31 12.6**	**0.0**
	comp=Z,1.1nm,0.7s,baz=117,slow=4.1,SNR=5.8						
ASAR				S	**S**	**02 35 04.1**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=92,slow=16,SNR=5.1						
WR0	**Warramunga Arr**	**41.56**	**266**	P	**P**	**02 29 27.0**	**-0.2**
WB2	**Warramunga Arr**	**41.74**	**266**	P	**P**	**02 29 29.0**	**+0.3**
WB0	**Warramunga Arr**	**41.74**	**266**	P	**P**	**02 29 29.3**	**+0.6**
WRA	**Warramunga Arr**	**41.75**	**266**	P	**P**	**02 29 29.8**	**+1.0**
	comp=Z,4.6nm,0.6s,baz=90,slow=5.8,SNR=96						
WRA				PcP	**PcP**	**02 31 13.5**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=98,slow=7.6,SNR=1.8						
WRA				S	**S**	**02 35 05.0**	**-4.6**
	comp=Z,1.2nm,1.0s,baz=96,slow=13,SNR=4.9						
FORT	**Forrest**	**45.83**	**249**	P	**P**	**02 30 00.1**	**-0.3**
MTN	**Manton Dam**	**46.73**	**274**	P	**P**	**02 30 07.2**	**-0.2**
MTN				AmB	AmB	02 30 14.3	
	comp=Z,12nm,1.1s						
KNRA	**Kununurra**	**48.00**	**270**	P	**P**	**02 30 17.8**	**+0.8**
KNRA				AmB	AmB	02 30 22.9	
	comp=Z,12nm,0.8s						
VNDA	**Vanda**	**54.77**	**185**	P	**P**	**02 31 06.4**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=11,slow=7.3,SNR=9.4						
CASY	**Casey**	**60.22**	**206**	P	**P**	**02 31 42.4**	**0.0**
CASY				AmB	AmB	02 31 42.9	
	comp=Z,8.0nm,0.6s						
QSPA	**South Pole Qui**	**66.64**	**180**	P	**P**	**02 32 24.6**	**+0.8**
QSPA				AmB	AmB	02 32 26.8	
	comp=Z,11nm,1.0s						
KSRS	**Korea Array**	**77.46**	**320**	P	**P**	**02 33 26.1**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=156,slow=6.6,SNR=2.6						
MAW	**Mawson**	**77.93**	**201**	P	**P**	**02 33 29.6**	**+0.5**
	comp=Z,5.6nm,0.6s,baz=137,slow=6.7,SNR=6.6						
MAW	**Mawson**	**77.93**	**201**	P	**P**	**02 33 29.4**	**+0.3**
PETK	**Petropavlovsk-**	**78.50**	**347**	P	**P**	**02 33 32.7**	**+0.4**
	comp=Z,2.8nm,0.8s,baz=141,slow=8.1,SNR=5.3						
SNAA	**Sanae**	**85.13**	**179**	P	**P**	**02 34 05.0**	**-1.1**
SNAA	**Sanae**	**85.13**	**179**	P	**P**	**02 34 04.7**	**-1.4**
COR	**Corvallis**	**85.62**	**37**	P	**P**	**02 34 08.3**	**-0.4**
COR				AmB	AmB	02 34 13.0	
	comp=Z,12nm,0.9s						
VNA2	**Neumayer--Watz**	**85.77**	**178**	P	**P**	**02 34 08.3**	**-0.8**
	baz=195,slow=3.4						
VNA1	**Neumayer--Stat**	**86.02**	**177**	P	**P**	**02 34 09.7**	**-0.6**
GHO	**Glory Hole Cre**	**88.68**	**15**	P	**P**	**02 34 22.4**	**-0.5**
GHO				AmB	AmB	02 34 24.8	
	comp=Z,7.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**88.72**	**291**	P	**P**	**02 34 25.1**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=121,slow=3.3,SNR=4.2						
TXAR	**Lajitas Array**	**90.78**	**58**	P	**P**	**02 34 33.8**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=213,slow=6.5,SNR=2.5						
PV17	**East Wray Mesa**	**91.04**	**48**	P	**P**	**02 34 34.2**	**-0.4**
PV03	**Paradox Valley**	**91.11**	**48**	P	**P**	**02 34 34.2**	**-0.6**
LVC	**Limon Verde**	**99.47**	**120**	Pdif	**Pdif**	**02 35 10.5**	**-2.8**
MKAR	**Makanchi Array**	**111.34**	**313**	PKiKP	**PKiKP**	**02 39 59.1**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=132,slow=1.1,SNR=2.9						
ARCES	**ARCESS Array B**	**131.30**	**348**	PKP	**PKPdf**	**02 40 36.5**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=60,slow=1.8,SNR=8.1						
FINES	**FINESS Array B**	**137.79**	**341**	PKhKP	PKPpre	02 40 40.2	
	comp=Z,0.5nm,0.5s,baz=27,slow=4.7,SNR=4.6						
FINES				PKP	**PKPdf**	**02 40 49.8**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=64,slow=3.2,SNR=3.8						
NB2	**NORSAR Subarra**	**141.52**	**351**	PKP	**PKPdf**	**02 40 51.8**	**-5.3**
	comp=Z,0.8nm,0.7s,baz=17,slow=3.1						
NOA	**NORSAR Array B**	**141.52**	**351**	PKhKP	**PKPdf**	**02 40 51.7**	**-5.3**
	comp=Z,0.9nm,0.6s,baz=16,slow=4.6,SNR=4.7						
AKASG	**Malin Array Be**	**144.22**	**327**	PKP	PKPbc	02 41 00.5	-1.1
	comp=Z,1.6nm,0.4s,baz=45,slow=4.4,SNR=19						
BRTR	**Keskin Array B**	**146.75**	**307**	PK

PZZ					S	Sb	02 38 59.1	-0.8		
PZZ	**Stroppo**	**0.27**	**94**		P	Pg	02 38 54.6	+0.7		
PZZ					S	Sb	02 38 59.2	-0.7		
PZZ					AML	AML				
	comp=E,63µm,0.2s									
PZZ					AML	AML				
	comp=N,69µm,0.5s									
DOI	**San Damiano**	**0.36**	**94**		P	Pb	02 38 56.5	-0.4		
DOI					S	Sb	02 39 02.0	-0.5		
RRL	**Rocca Remolon**	**0.39**	**5**		P	Pg	02 38 56.8	+0.5		
RRL					S	Sb	02 39 03.0	-0.8		
RRL	**Rocca Remolon**	**0.39**	**5**		P	Pg	02 38 56.8	+0.5		
RRL					S	Sb	02 39 03.6	-0.2		
ISO	**Isola**	**0.41**	**148**		Pg	Pg	02 38 56.4	0.0		
ISO					Sg	Sg	02 39 01.5	-0.4		
BHB	**Bricherasio**	**0.48**	**49**		P	Pb	02 38 58.7	-0.3		
BHB					S	Sb	02 39 05.7	-0.4		
BHB	**Bricherasio**	**0.48**	**49**		P	Pb	02 38 58.8	-0.2		
BHB					S	Sb	02 39 05.7	-0.4		
STV	**Sant Anna di V**	**0.50**	**124**		P	Pg	02 38 58.5	+0.2		
STV					S	Sg	02 39 05.0	+0.1		
STV	**Sant Anna di V**	**0.50**	**124**		P	Pg	02 38 58.5	+0.2		
STV					S	Sg	02 39 05.1	+0.2		
STV					AML	AML				
	comp=N,23µm,1.6s									
STV					AML	AML				
	comp=E,18µm,1.5s									
BNI	**Bardonecchia**	**0.53**	**355**		P	Pb	02 38 59.5	-0.3		
BNI					S	Sb	02 39 06.7	-0.8		
OGDI	**Digne**	**0.53**	**218**		Pg	Pb	02 38 59.5	-0.2		
OGDI					Sg	Sb	02 39 06.5	-0.8		
ENR	**Entracque**	**0.57**	**122**		P	Pg	02 38 59.7	+0.2		
ENR					S	Sg	02 39 07.4	+0.4		
ENR	**Entracque**	**0.57**	**122**		P	Pg	02 38 59.9	+0.3		
ENR					AML	AML				
	comp=N,31µm,0.5s									
ENR					AML	AML				
	comp=N,31µm,0.5s									
ENR					AML	AML				
	comp=E,35µm,1.0s									
OGMO	**Fort Saint-Gob**	**0.68**	**356**		Pg	Pg	02 39 01.4	-0.3		
OGMO					Sg	Sg	02 39 10.9	+0.3		
RSP	**Reno Superiore**	**0.72**	**31**		P	Pb	02 39 03.7	+0.6		
RSP					S	Sb	02 39 13.6	+0.5		
TURF	**col de Turini**	**0.72**	**140**		Pg	Pg	02 39 02.4	0.0		
TURF					Sg	Sg	02 39 11.9	0.0		
ORIF	**Oris-en-Rattie**	**0.73**	**303**	*eP*	Pg	Pg	02 39 01.6	-1.0		
ORIF				*eSg*	Sg	Sg	02 39 10.6	-1.6		
	comp=E,6.2nm,0.3s									
ORIF	**Oris-en-Rattie**	**0.73**	**303**		Pg	Pg	02 39 01.8	-0.7		
ORIF					Sg	Sg	02 39 11.3	-0.9		
CALF	**Calern**	**0.79**	**171**		Pg	Pg	02 39 03.3	-0.3		
CALF					Sg	Sg	02 39 14.0	+0.2		
SAOF	**Saorge**	**0.79**	**133**		P	Pg	02 39 03.9	+0.1		
SAOF	**Saorge**	**0.79**	**133**		Pg	Pg	02 39 03.9	+0.1		
SAOF					Sg	Sb	02 39 14.7	-0.4		
GDM	**Grand'Maison**	**0.81**	**327**		Pg	Pg	02 39 03.7	-0.4		
GDM					Sg	Sg	02 39 14.6	-0.1		
SBF	**Sospel**	**0.83**	**143**	*eP*	Pg	Pg	02 39 03.8	-0.6		
SBF				*eSg*	Sg	Sg	02 39 15.1	-0.1		
	comp=E,3.9nm,0.2s									
ESCA	**l'Escarene**	**0.83**	**147**		Pg	Pg	02 39 04.1	-0.4		
ESCA					Sg	Sg	02 39 15.6	+0.3		
GBOS	**Grotte di Boss**	**0.83**	**110**		P	Pg	02 39 04.7	+0.2		
GBOS					S	Sb	02 39 15.9	-0.3		
MLYF	**Mely**	**0.89**	**233**		Pg	Pg	02 39 05.5	0.0		
NEGI	**Seborga**	**0.97**	**134**		P	Pg	02 39 07.1	0.0		
NEGI					S	Sg	02 39 19.4	-0.2		
NEGI	**Seborga**	**0.97**	**134**		P	Pg	02 39 07.1	0.0		
FRF	**La Foret Royal**	**0.97**	**184**	*eP*	Pg	Pg	02 39 06.1	-1.0		
FRF				*eSg*	Sg	Sg	02 39 18.7	-1.0		
	comp=E,5.8nm,0.2s									
LPG	**La Plagne**	**0.97**	**0**	*eP*	Pg	Pg	02 39 07.1	0.0		
LPG				*eSg*	Sb	Sb	02 39 20.3	-0.1		
	comp=E,1.5nm,0.3s									
LPL	**La Plagne**	**0.99**	**359**	*eP*	Pg	Pg	02 39 07.5	0.0		
LPL				*eSg*	Sb	Sb	02 39 21.1	+0.2		
	comp=E,1.0nm,0.3s									
SMRF	**Simiane la Rot**	**1.01**	**237**	*eP*	Pg	Pg	02 39 07.5	-0.3		
SMRF				*eSg*	Sg	Sg	02 39 19.2	-1.7		
	comp=E,1.6nm,0.2s									
BSTF	**la Bastide-des**	**1.02**	**231**		Pg	Pn	02 39 09.4	+0.6		
BSTF					Sg	Sn	02 39 23.2	+0.1		
RORO	**Rocca Rossa**	**1.03**	**113**		P	Pg	02 39 08.1	-0.2		
RORO					S	Sb	02 39 22.4	+0.5		
RUSF	**Rustrel**	**1.08**	**238**		Pg	Pn	02 39 09.5	-0.1		
RUSF					Sg	Sb	02 39 23.8	+0.5		
ARTF	**Artigues**	**1.16**	**216**		Pg	Pb	02 39 09.9	-0.6		
ARTF					Sg	Sg	02 39 25.9	+0.1		
LMR	**La Mourre**	**1.21**	**188**	*eP*	Pg	Pn	02 39 10.8	-0.4		
LMR				*eSg*	Sb	Sb	02 39 23.9	-2.9		
	comp=E,4.2nm,0.3s									
VIVF	**Saint-Julien-l**	**1.52**	**283**	*ePn*	Pn	Pn	02 39 14.3	-1.2		
VIVF				*eSn*	Sn	Sn	02 39 33.0	-2.3		
	comp=E,2.1nm,0.3s									
PGF	**Pioggiola**	**2.57**	**140**	*ePn*	Pn	Pn	02 39 30.0	-0.1		
PGF				*eSn*	Sn	Sn	02 40 00.3	-1.1		

*IDC **07** 02:43:05.8±0.6,28°.43S×176°.61W, h0km, mb4.3/14, mb1 4.4/16, mb1mx4.3/40, mbtmp4.2/16, ML4.1/2, MS4.0/21, Ms1 4.0/21, ms1mx3.8/38, Error ellipse: s-maj=23.2km s-min=14.6km az=146.0*
*NEIC **07** 02:43:10.5±1.8,28°.35S±0°.08×176°.7W±0°.1, h35km±1km, mb4.6/15, Error ellipse: s-maj=18.5km s-min=10.2km az=300.0*

ISC 07 02:43:09.7±0.5,**28°.38S**±0°.07×**176°.65W**±0°.08,**h29**km,**n67**, σ1§**41**/48,**mb4.4**/19,**MS3.9**/21,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.41**	**232**	Pn		**Pb**	**02 43 34.2**	**-1.2**
	323nm,0.3s,baz=45,slow=20,SNR=11							
RAO				Sn		**Sb**	**02 43 54.8**	**+1.8**
	1µm,0.3s,baz=90,slow=20,SNR=6.2							
RAO				LR		LR	02 44 01.7	
	comp=Z,2µm,18.1s,baz=99,slow=40							
RAO	**Raoul Island**	**1.41**	**232**			**Pn**	**02 43 33.4**	**0.0**
RAO				Sn		**Sn**	**02 43 50.1**	**-0.9**
URZ	**Urewera**	**11.14**	**206**	Pn		Pn	02 45 38.7	-8.3
	0.8nm,0.3s,baz=102,slow=19,SNR=1.9							
URZ				Sn		Sn	02 47 37.2	-13
	1.2nm,0.3s,baz=301,slow=13,SNR=1.4							
MSVF	**Nonsavu**	**11.66**	**334**	Pn		**Pn**	**02 45 52.7**	**-1.6**
THZ	**Tophouse**	**15.84**	**210**	Pn		**Pn**	**02 46 47.8**	**-2.8**
DZM	**Mont Dzumac**	**16.53**	**289**	*eP*		**P**	**02 47 07.0**	**+5.0**
	92nm,1.6s							
DZM				eLR		LR	02 50 57.7	
	comp=Z,1µm,25.3s							
DZM	**Mont Dzumac**	**16.53**	**289**	Pn		**Pn**	**02 46 58.8**	**-0.8**
	0.3nm,0.3s,baz=133,slow=19,SNR=1.7							
DZM				LR		LR	02 52 38.3	
	comp=Z,1µm,18.2s,baz=146,slow=34							
DZM	**Mont Dzumac**	**16.53**	**289**			**Pn**	**02 46 59.0**	**-0.6**
RAR	**Rarotonga**	**16.90**	**69**	LR		LR	02 54 24.0	
	comp=Z,622nm,18.3s,baz=253,slow=40							
RPZ	**Rata Peaks**	**18.21**	**210**	P		**Pn**	**02 47 19.2**	**-1.2**
	1.1nm,0.3s,baz=21,slow=9.0,SNR=1.5							
RPZ				LR		LR	02 54 41.2	
	comp=Z,502nm,19.6s,baz=30,slow=38							
RPZ	**Rata Peaks**	**18.21**	**210**	P		**Pn**	**02 47 19.6**	**-0.7**
RPZ				IAmb		IAmb	02 47 30.0	
	comp=Z,17nm,0.8s							
MLZ	**Mavora Lakes**	**20.82**	**211**	P		**P**	**02 47 49.1**	**+0.3**
MLZ				IAmb		IAmb	02 47 52.0	
	comp=Z,23nm,1.2s							
TBI	**Tubuai**	**24.95**	**85**	*e*LQ		LQ	02 53 22.8	
	comp=Z,376nm,30.8s							
TBI				eLR		LR	02 54 27.4	
	comp=Z,408nm,30.5s							
TBI	**Tubuai**	**24.95**	**85**	*e*T		T	03 14 02.9	
	comp=Z,22nm,0.4s							
PAE	**Paea**	**27.04**	**73**	*e*T		T	03 16 43.8	
	comp=Z,8.2nm,0.4s							
PPT2	**Papeete2**	**27.08**	**72**	eLR		LR	02 55 40.9	
	comp=Z,385nm,25.8s							
PPT2	**Papeete2**	**27.08**	**72**	*e*T		T	03 16 47.6	
	comp=Z,7.2nm,0.4s							
PPT	**Papeete**	**27.09**	**72**	LR		LR	02 59 25.9	
	comp=Z,274nm,18.7s,baz=206,slow=36							
HNR	**Honiara**	**28.97**	**306**	LR		LR	02 59 57.3	
	comp=Z,270nm,18.6s,baz=159,slow=35							
VAH	**Vaihoa**	**29.86**	**70**	*e*T		T	03 20 15.6	
	comp=Z,5.7nm,0.3s							
CTA	**Charters Tower**	**34.71**	**275**	P		**P**	**02 49 57.1**	**-0.2**
	comp=Z,1.4nm,0.3s,baz=50,slow=9.3,SNR=2.0							
CTA				LR		LR	03 03 27.5	
	comp=Z,847nm,19.3s,baz=132,slow=35							
CTAO	**Charters Tower**	**34.71**	**275**	P		**P**	**02 49 55.7**	**-1.6**
CTAO				IAmb		IAmb	02 50 10.0	
	comp=Z,4.9nm,0.7s							
STKA	**Stephens Creek**	**36.12**	**254**	P		**P**	**02 50 09.7**	**+0.4**
	comp=Z,3.7nm,0.7s,baz=106,slow=12,SNR=5.9							
STKA				LR		LR	03 03 05.1	
	comp=Z,194nm,20.5s,baz=66,slow=33							
STKA	**Stephens Creek**	**36.12**	**254**	P		**P**	**02 50 09.3**	**0.0**
TAOE	**Nuku Hiva Isla**	**39.44**	**68**	*e*LR		LR	03 01 10.0	
	comp=Z,194nm,22.3s							
BBOO	**Buckleboo**	**40.68**	**252**	P		**P**	**02 50 46.9**	**-0.8**
BBOO				IAmb		IAmb	02 51 02.9	
	comp=Z,14nm,1.1s							
ASAR	**Alice Springs**	**44.44**	**264**	P		**P**	**02 51 18.8**	**+0.4**
	comp=Z,3.4nm,0.9s,baz=117,slow=7.8,SNR=22							
ASAR				LR		LR	03 09 52.0	
	comp=Z,578nm,18.2s,baz=108,slow=36							
WB2	**Warramunga Arr**	**45.23**	**269**	P		**P**	**02 51 24.1**	**-0.6**
WB2				IAmb		IAmb	02 51 35.0	
	comp=Z,11nm,1.1s							
WRA	**Warramunga Arr**	**45.24**	**269**	P		**P**	**02 51 25.3**	**+0.5**
	comp=Z,6.5nm,0.9s,baz=108,slow=7.8,SNR=13							
WRA				LR		LR	03 09 19.2	
	comp=Z,144nm,18.3s,baz=115,slow=35							
WB0	**Warramunga Arr**	**45.26**	**270**	P		**P**	**02 51 24.2**	**-0.7**
WB0				IAmb		IAmb	02 51 26.6	
	comp=Z,13nm,1.0s							
JAY	**Jayapura**	**48.07**	**295**	LR		LR	03 11 32.3	
	comp=Z,109nm,18.6s,baz=190,slow=36							
VNDA	**Vanda**	**50.22**	**186**	P		**P**	**02 52 02.0**	**-0.6**
	comp=Z,1.1nm,1.1s,baz=19,slow=8.9,SNR=3.5							
MTN	**Manton Dam**	**50.88**	**277**	P		**P**	**02 52 08.5**	**+0.1**
MTN				IAmb		IAmb	02 52 09.4	
	comp=Z,14nm,1.1s							
HLP	**Hilina Pali**	**51.70**	**26**	P		**P**	**02 52 12.0**	**-2.4**
AIN	**Ainahou**	**51.71**	**26**	P		**P**	**02 52 13.5**	**-1.1**
FITZ	**Fitzroy Crossi**	**53.58**	**268**	P		**P**	**02 52 29.2**	**+0.8**
	comp=Z,5.7nm,1.1s,baz=113,slow=13,SNR=2.9							
FITZ	**Fitzroy Crossi**	**53.58**	**268**	P		**P**	**02 52 27.3**	**-1.1**
FITZ				IAmb		IAmb	02 52 30.4	
	comp=Z,6.9nm,1.1s							
QSPA	**South Pole Qui**	**61.73**	**180**	P		**P**	**02 53 25.6**	**+0.4**
KAPI	**Kappang**	**64.44**	**278**	LR		LR	03 23 29.5	
	comp=Z,104nm,18.3s,baz=38							
LEM	**Lebanga**	**74.25**	**271**	LR		LR	03 29 46.7	
	comp=Z,75nm,18.1s,baz=106,slow=38							
MAW	**Mawson**	**74.60**	**200**	P		**P**	**02 54 46.1**	**+0.4**
	comp=Z,3.2nm,1.0s,baz=168,slow=19,SNR=1.6							
MAW	**Mawson**	**74.60**	**200**	P		**P**	**02 54 46.3**	**+0.6**
MJAR	**Matsushiro Arr**	**77.28**	**324**	P		**P**	**02 55 02.3**	**+1.0**
	comp=Z,2.7nm,0.8s,baz=178,slow=4.8,SNR=6.1							
MJAR				LR		LR	03 23 10.8	
	comp=Z,22nm,21.8s,baz=195,slow=31							
SNAA	**Sanae**	**80.13**	**178**	P		**P**	**02 55 18.7**	**+2.0**
VNA2	**Neumayer--Watz**	**80.68**	**176**	P		P	02 55 26.1	+6.5
PLCA	**Paso Flores**	**83.01**	**133**	P		**P**	**02 55 32.2**	**-0.4**
	comp=Z,2.9nm,1.0s,baz=242,slow=17,SNR=3.1							
PLCA				LR		LR	03 26 42.2	
	comp=Z,101nm,18.1s,baz=292,slow=32							
KSRS	**Korea Array**	**83.59**	**319**	LR		LR	03 31 13.8	
	comp=Z,30nm,18.4s,baz=150,slow=34							
PFO	**Pinyon Flats O**	**83.97**	**47**	LR		LR	03 26 11.3	
	comp=Z,100nm,19.1s,baz=235,slow=31							
PETK	**Petropavlovsk-**	**84.17**	**345**	LR		LR	03 29 53.3	
	comp=Z,38nm,18.8s,baz=184,slow=33							
YBH	**Yreka Blue Hor**	**85.72**	**37**	LR		LR	03 29 32.2	
	comp=Z,80nm,18.3s,baz=204,slow=32							
NVAR	**Mina Array Bea**	**85.96**	**42**	P		**P**	**02 55 48.6**	**+1.2**
	comp=Z,1.7nm,0.9s,baz=222,slow=7.0,SNR=7.6							
USRK	**Ussuriysk Ar.**	**86.14**	**326**	P		**P**	**02 55 48.6**	**+0.8**
	comp=Z,2.4nm,0.9s,baz=134,slow=6.2,SNR=2.6							
PSI	**Prapat**	**86.41**	**275**	LR		LR	03 38 12.9	
	comp=Z,119nm,18.1s,baz=92,slow=38							
KLR	**Kul'dur**	**89.90**	**329**	LR		LR	03 33 05.6	
	comp=Z,66nm,19.2s,baz=114,slow=33							
TXAR	**Lajitas Array**	**90.31**	**57**	P		**P**	**02 56 09.5**	**+1.3**
	comp=Z,2.0nm,1.1s,baz=216,slow=6.2,SNR=8.6							
TXAR				LR		LR	03 30 32.2	
	comp=Z,68nm,19.1s,baz=0.0,slow=32							
ANMO	**Albuquerque**	**91.40**	**51**	P		**P**	**02 56 09.4**	**-3.8**
ANMO				IAmb		IAmb	02 56 18.9	
	comp=Z,1.8nm,1.0s							
PDAR	**Pinedale Array**	**93.86**	**43**	P		**P**	**02 56 25.4**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=209,slow=2.7,SNR=3.8							
ILAR	**Eielson Array**	**95.70**	**12**	P		**P**	**02 56 33.2**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=225,slow=5.7,SNR=5.6							
ARCES	**ARCESS Array B**	**136.86**	**349**	PKP		**PKiKP**	**03 02 29.2**	**-1.3**
	comp=Z,0.9nm,0.7s,baz=0.0,slow=2.0,SNR=4.0							
FINES	**FINESS Array B**	**143.63**	**342**	PKP		**PKPdf**	**03 02 40.7**	**-0.4**
	comp=Z,1.8nm,0.9s,baz=45,slow=4.1,SNR=2.5							
KBZ	**Khabaz**	**144.91**	**307**	PKP		**PKPdf**	**03 02 43.7**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=90,slow=2.7,SNR=2.7							
NB2	**NORSAR Subarra1**	**146.92**	**353**	PKP		**PKPab**	**03 02 49.8**	**-0.4**
	comp=Z,12nm,1.4s,baz=10,slow=3.2							
NOA	**NORSAR Array B**	**146.92**	**353**	PKPbc		**PKPab**	**03 02 49.2**	**-1.0**
	comp=Z,2.2nm,0.9s,baz=13,slow=4.5,SNR=4.8							
AKASG	**Malin Array Be**	**150.35**	**326**	PKPbc		**PKiKP**	**03 02 58.3**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=39,slow=2.7,SNR=9.3							
BRTR	**Keskin Array B**	**152.59**	**302**	PKPbc		**PKiKP**	**03 03 05.0**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=112,slow=5.5,SNR=3.8							
TORD	**Torodi Ar. Bea**	**164.77**	**174**	PKPab		**PKPab**	**03 04 07.1**	**+0.1**
	comp=Z,0.9nm,1.0s,baz=184,slow=2.8,SNR=3.1							
ESDC	**Sonseca Array**	**167.21**	**26**	PKPab		**PKPab**	**03 04 18.6**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=304,slow=2.7,SNR=4.8							

*IDC **07** 02:46:10.1±1.3,5°.92N×77°.84W, h0km, mb3.4/3, mb1 3.6/5, mb1mx3.4/29, mbtmp3.6/5, ML2.3/2, MS2.9/2, Ms1 2.9/2, ms1mx2.4/19, Error ellipse: s-maj=39.8km s-min=29.3km az=29.0*
*UPA **07** 02:46:13.1±1.0,5°.86N×77°.70W, h21km±13km, MW4.0*
*RSNC **07** 02:46:14.3±2.1,5°.97N×77°.47W, h0km±10km, ML2.9, Mw3.8*

ISC 07 02:46:14.6±1.9,**5°.95N**±0°.03×**77°.67W**±0°.03,**h31**km±14km, **n42**,σ1§**76**/63,**mb3.4**/3,**3C-2D**,**Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PIZC	**Pizarro, Choco**	**1.02**	**162**	*i*↓*P*		**Pn**	**02 46 32.1**	**-0.7**
PIZC				*eS*		**Sn**	**02 46 46.8**	**+0.6**
PIZC				*i*			02 46 47.5	
	comp=Z,369nm,0.7s							
PTAC	**Punta Ardita,**	**1.20**	**354**	*eP*		**Pn**	**02 46 34.5**	**-0.8**
PTAC				*eS*		**Sb**	**02 46 53.4**	**+1.5**
PTAC	**Punta Ardita,**	**1.20**	**354**	*eP*		**Pn**	**02 46 34.3**	**-1.0**
PTAC				*eS*		**Sb**	**02 46 51.4**	**-0.5**
CBOC	**Ciudad Bolivar**	**1.66**	**93**	*i*↑*P*		**Pn**	**02 46 39.5**	**-2.1**
CBOC				*eS*		**Sn**	**02 46 59.3**	**-2.7**
CBOC				*i*			02 47 04.1	
	comp=Z,169nm,0.6s							
DBBC	**Dabeiba**	**1.80**	**54**	*i*↑*P*		**Pn**	**02 46 42.6**	**-1.0**
DBBC				*eS*		**Sn**	**02 47 06.0**	**+0.4**
HELC	**Santa Helena**	**2.15**	**83**	*i*↑*P*		**Pn**	**02 46 47.8**	**-0.8**
HELC				*eS*		**Sn**	**02 47 18.2**	**-1.6**
HELC				*i*			02 47 18.4	
	comp=Z,95nm,0.8s							
HELC	**Santa Helena**	**2.15**	**83**	*i* P		**Pn**	**02 46 47.9**	**-0.7**
HELC				*eS*		**Sn**	**02 47 15.3**	**+0.9**
YOTC	**Yotoco, Valle**	**2.36**	**146**	*eP*		**Pn**	**02 46 49.5**	**-1.8**
RREF	**El Recreo**	**2.54**	**114**	*eP*		**Pn**	**02 46 54.2**	**0.0**
RREF				*eS*		**Sn**	**02 47 25.7**	**+1.3**
RREF				*i*			02 47 30.5	
	comp=Z,47nm,0.7s							
UPD2	**Meteti**	**2.61**	**353**	*eP*		**Pn**	**02 46 57.0**	**+2.4**
UPD2				*eS*		**Sb**	**02 47 29.9**	**-2.3**
UPD2	**Meteti**	**2.61**	**353**	*eP*		**Pn**	**02 46 55.1**	**+0.5**
UPD2				*eS*		**Sn**	**02 47 26.3**	**+1.0**
CAPC	**Capurgana**	**2.69**	**7**	*eP*		**Pn**	**02 46 57.9**	**+2.1**
CAPC				*i*			02 47 45.1	
	comp=Z,54nm,1.6s							
CAP2	**Capurgana**	**2.70**	**7**	*eP*		**Pn**	**02 46 57.5**	**+1.5**
CAP2				*eS*		**Sn**	**02 47 29.2**	**+1.5**
UREC	**San Jos de Ur**	**2.78**	**50**	*eP*		**Pn**	**02 46 57.2**	**+0.1**
UREC				*i*			02 47 37.7	
	comp=Z,72nm,0.8s							
PCRI3	**Pocri, Los San**	**2.96**	**305**	*eP*		**Pn**	**02 46 59.4**	**-0.2**
ORTC	**Ortega, Tolima**	**3.15**	**130**	*eP*		**Pn**	**02 47 02.9**	**+0.7**
ORTC				*i*			02 47 50.4	
	comp=Z,32nm,1.2s							
AZU	**Azuero**	**3.17**	**306**	*eP*		**Pn**	**02 47 01.7**	**-0.6**
AZU				*eS*		**Sn**	**02 47 38.6**	**-0.5**
AZU				*i*			02 47 47.1	
	comp=Z,44nm,0.7s							
AZU	**Azuero**	**3.17**	**306**	*i*↓*P*		**Pn**	**02 47 01.8**	**-0.6**
AZU				*eS*		**Sn**	**02 47 38.2**	**-0.9**
PTBC	**PUERTO BERRIO,**	**3.25**	**79**	*eP*		**Pn**	**02 47 04.4**	**+0.8**
PTBC				*eS*		**Sn**	**02 47 41.2**	**0.0**
PTBC				*i*			02 48 01.3	
	comp=Z,30nm,0.6s							
ROSC	**El Rosal**	**3.52**	**108**	Pn		**Pn**	**02 47 09.9**	**+2.5**
	comp=Z,2.5nm,0.3s,baz=294,slow=20,SNR=4.2							
PRAC	**Prado**	**3.55**	**128**	*eP*		**Pn**	**02 47 10.1**	**+2.4**
PRAC				*eS*		**Sn**	**02 47 47.9**	**-0.8**
PRAC				*i*			02 48 07.8	
	comp=Z,21nm,0.8s							
VTON	**El Valle, Cocl**	**3.59**	**318**	*eP*		**Pn**	**02 47 07.9**	**-0.3**
VTON				*eS*		**Sn**	**02 47 49.1**	**-0.4**
SPBC	**San Pablo de B**	**3.59**	**94**	*eP*		**Pn**	**02 47 08.9**	**+0.6**
SPBC				*i*			02 48 12.0	
	comp=Z,24nm,0.6s							
OCU3	**Ocu, Herrera**	**3.67**	**303**	*eP*		**Pn**	**02 47 08.9**	**-0.3**
OCU3				*eS*		**Sn**	**02 47 56.0**	**+4.5**
MARI3	**Mariato, Verag**	**3.70**	**297**	*eP*		**Pn**	**02 47 10.8**	**+1.1**
MARI3				*eS*		**Sn**	**02 47 46.0**	**-6.4**
PCON	**Cinco Dias**	**3.81**	**160**	*eP*		**Pn**	**02 47 12.8**	**+1.1**
PCON				*i*			02 48 05.3	
	comp=Z,14nm,0.6s							
BCIP	**Isla Barro Col**	**3.85**	**326**	*eP*		**Pn**	**02 47 13.1**	**+1.3**
BCIP				*eS*		**Sn**	**02 47 57.5**	**+1.5**
BCIP				*i*			02 48 17.2	
	comp=Z,30nm,1.8s							
BCIP	**Isla Barro Col**	**3.85**	**326**	*eP*		**Pn**	**02 47 11.1**	**-0.7**
BCIP				*eS*		**Sn**	**02 47 52.6**	**-3.4**
SOTA	**Rioblanco**	**3.93**	**164**	*eP*		**Pn**	**02 47 13.5**	**+0.2**
GMAL	**Guarumal, Vera**	**3.97**	**297**	*eP*		**Pn**	**02 47 12.3**	**-1.1**
CHIC	**Chingaza**	**4.14**	**108**	*eP*		**Pn**	**02 47 17.9**	**+1.9**
CHIC				*i*			02 48 10.9	
	comp=Z,14nm,1.4s							
GARC	**Garzon, Huila**	**4.32**	**150**	*eP*		**Pn**	**02 47 20.0**	**+1.5**
GARC				*i*			02 48 13.6	
	comp=Z,13nm,0.6s							
SMLC	**San Martn de**	**4.56**	**51**	*eP*		**Pn**	**02 47 22.1**	**+0.6**
SMLC				*eS*		**Sn**	**02 48 11.0**	**-2.5**
SMLC				*i*			02 48 33.5	
	comp=Z,16nm,0.6s							
RUSC	**La Rusia**	**4.57**	**90**	*eP*		**Pn**	**02 47 23.4**	**+1.4**
RUSC				*i*			02 48 37.2	
	comp=Z,19nm,1.1s							
PAMC	**Pamplona, Colo**	**5.13**	**74**	*eP*		**Pn**	**02 47 31.2**	**+1.5**
PAMC				*eS*		**Sn**	**02 48 24.1**	**-4.1**
PAMC				*i*			02 48 35.9	
	comp=Z,14nm,0.9s							
PAMC				*i*			02 48 55.1	
	comp=Z,13nm,0.6s							
SDV	**Santo Domingo**	**7.57**	**67**	Pn		**Pn**	**02 48 04.9**	**+1.9**
	comp=Z,1.3nm,0.3s,baz=248,slow=11,SNR=9.8							
SDV				LR		LR	02 51 09.9	
	comp=Z,94nm,18.4s,baz=274,slow=39							
PTGA	**Pitinga**	**18.88**	**110**	LR		LR	02 59 11.3	
	comp=Z,33nm,19.8s,baz=35,slow=41							
SIV	**San Ignacio**	**27.30**	**143**	P		**P**	**02 51 56.5**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=322,slow=11,SNR=3.8							
YKA	**Yellowknife Ar**	**62.59**	**342**	P		**P**	**02 56 35.4**	**-0.1**
	comp

IDC ***07*** *02:52:02.7±3.8, 1.74N×128.46E, h72km±36km, mb3.7/10, mb1 3.9/12, mb1mx3.7/34, mbtmp4.0/12, ML4.0/2, Error ellipse: s-maj=35.2km s-min=14.6km az=83.0*
NEIC ***07*** *02:52:04.6±1.6, 1.55N±0.08×128.24E±0.08, h104km±8km, mb4.3/4, Error ellipse: s-maj=14.1km s-min=7.8km az=132.0*
DJA ***07*** *02:52:04.0±0.5, 2°N±4°×12°8E±°, h41km±11km, M4.4/9, mB5.1/1, mb4.6/4, MLv4.2/9, Mw(mB)4.5/1*
ISC 07 02:52:04.6±0.6, 1.63N±0.07×128.42E±0.07, h100km, n50, σ1§52/47, mb4.2/17, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.35**	**231**	P		**Pn**	**02 52 27.7**	**-1.4**
TNTI				S		**Sn**	**02 52 46.8**	**-0.9**
TNTI	**Ternate**	**1.35**	**231**			**Pn**	**02 52 27.6**	**-1.5**
LBMI	**Labuha**	**2.43**	**202**	P		**Pn**	**02 52 46.1**	**+3.2**
SIJI	**Sorong**	**3.77**	**131**	P		**Pn**	**02 53 00.5**	**-0.3**
	26nm,0.3s,baz=336,slow=20,SNR=54							
SIJI				S		**Sn**	**02 53 43.0**	**-1.3**
	9.1nm,0.3s,baz=11,slow=7.7,SNR=6.4							
KMSI	**Cibinong**	**4.56**	**257**	P		**Pn**	**02 53 12.3**	**+0.9**
FAKI	**Fak Fak**	**5.92**	**140**	P		**Pn**	**02 53 30.4**	**+0.5**
	0.3nm2µm42nm,0.7s							
FAKI	**Fak Fak**	**5.92**	**140**			**Pn**	**02 53 30.1**	**+0.2**
FAKI				Sn		**Sn**	**02 54 34.8**	**-1.6**
LUWI	**Luwuk**	**6.24**	**245**	Pn		**Pn**	**02 53 31.0**	**-3.2**
MRSI	**Marisa**	**6.58**	**260**	P		**Pn**	**02 53 39.7**	**+0.9**
	0.2nm30nm,0.8s							
SPSI	**Sidrap Palu**	**10.28**	**237**	P		**Pn**	**02 54 30.7**	**+1.5**
FITZ	**Fitzroy Crossi**	**19.79**	**188**	P		**Pn**	**02 56 28.6**	**-1.0**
	0.2nm,0.3s,baz=21,slow=11,SNR=2.5							
FITZ	**Fitzroy Crossi**	**19.79**	**188**	P		**P**	**02 56 26.4**	**-0.8**
FITZ				IAmb		IAmb	02 56 39.3	
	comp=Z,5.8nm,1.1s							
WB0	**Warramunga Arr**	**22.06**	**165**	P		**P**	**02 56 50.8**	**-0.7**
WB0				IAmb		IAmb	02 56 55.6	
	comp=Z,7.4nm,0.5s							
WRA	**Warramunga Arr**	**22.21**	**165**	P		**P**	**02 56 53.7**	**+0.6**
	comp=Z,3.4nm,0.7s,baz=347,slow=9.7,SNR=17							
WB2	**Warramunga Arr**	**22.21**	**165**	P		**P**	**02 56 52.0**	**-1.2**
WB2				IAmb		IAmb	02 56 57.0	
	comp=Z,5.7nm,0.7s							
WR0	**Warramunga Arr**	**22.28**	**165**	P		**P**	**02 56 54.7**	**+0.9**
AS31	**Alice Springs**	**25.70**	**168**	P		**P**	**02 57 23.2**	**-2.5**
ASAR	**Alice Springs**	**25.70**	**168**	P		**P**	**02 57 27.1**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=349,slow=7.3,SNR=10.0							
STKA	**Stephens Creek**	**35.59**	**161**	P		**P**	**02 58 55.4**	**+2.7**
	comp=Z,2.7nm,0.4s,baz=341,slow=10,SNR=8.0							
STKA	**Stephens Creek**	**35.59**	**161**	P		**P**	**02 58 51.6**	**-1.0**
MJAR	**Matsushiro Arr**	**35.90**	**14**	P		**P**	**02 58 54.2**	**-1.1**
	comp=Z,1.3nm,0.5s,baz=190,slow=10,SNR=5.2							
NWAO	**Narrogin (SRO)**	**35.96**	**196**	P		**P**	**02 58 54.8**	**-1.0**
ARMA	**Armidale**	**38.80**	**147**	P		**P**	**02 59 20.7**	**+0.8**
ARMA				IAmb		IAmb	02 59 26.5	
	comp=Z,5.8nm,0.9s							
H11S3	**WAKE ISLAND Hy**	**41.09**	**63**	T		T	03 43 13.1	
	baz=249,SNR=5.5							
H11S2	**WAKE ISLAND Hy**	**41.10**	**63**	T		T	03 43 13.6	
	baz=249,SNR=3.6							
H11S1	**WAKE ISLAND Hy**	**41.10**	**63**	T		T	03 43 13.6	
	baz=249							
H11N1	**WAKE ISLAND Hy**	**41.69**	**62**	T		T	03 43 55.9	
	baz=248,slow=75,SNR=6.0							
H11N2	**WAKE ISLAND Hy**	**41.70**	**62**	T		T	03 43 57.0	
	baz=248,SNR=5.1							
H11N3	**WAKE ISLAND Hy**	**41.71**	**62**	T		T	03 43 59.3	
	baz=248,slow=75,SNR=6.1							
TOO	**Toolangi**	**42.09**	**160**	P		**P**	**02 59 46.0**	**-0.8**
TOO				IAmb		IAmb	02 59 58.0	
	comp=Z,6.1nm,1.0s							
ODAN	**Odare**	**46.66**	**306**	*eP*		**P**	**03 00 25.6**	**+1.9**
RAMN	**Ramite**	**47.34**	**306**	*eP*		**P**	**03 00 31.0**	**+2.0**
	comp=Z,9.4nm,0.5s							
JIRN	**Jiri**	**47.97**	**307**	*eP*		**P**	**03 00 35.7**	**+1.7**
	comp=Z,12nm,0.5s							
GUN	**Gumba**	**48.32**	**307**	*eP*		**P**	**03 00 38.4**	**+1.7**
	comp=Z,12nm,0.5s							
PKI	**Pulchoki**	**48.56**	**306**	*eP*		**P**	**03 00 39.9**	**+1.4**
ULN	**Ulaanbaatar**	**49.63**	**341**	P		**P**	**03 00 43.6**	**-2.6**
ULN				IAmb		IAmb	03 00 49.1	
	comp=Z,3.8nm,1.1s							
SONM	**Songino Array**	**49.82**	**341**	P		**P**	**03 00 48.1**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=152,slow=7.9,SNR=6.0							
KOLN	**Koldanda**	**50.11**	**306**	*eP*		**P**	**03 00 51.9**	**+1.8**
	comp=Z,11nm,0.6s							
DANN	**Dangsing**	**50.21**	**306**	*eP*		**P**	**03 00 52.5**	**+1.5**
	comp=Z,14nm,0.6s							
PYUN	**Piuthan**	**50.73**	**306**	*eP*		**P**	**03 00 56.8**	**+1.9**
	comp=Z,5.5nm,0.3s							
PETK	**Petropavlovsk-**	**56.76**	**21**	P		**P**	**03 01 38.9**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=194,slow=8.6,SNR=6.0							
MKAR	**Makanchi Array**	**60.23**	**325**	P		**P**	**03 02 03.4**	**+1.0**
	comp=Z,2.9nm,0.5s,baz=119,slow=8.5,SNR=34							
MAKZ	**Makanchi**	**60.42**	**325**	P		**P**	**03 02 02.2**	**-1.4**
MAKZ				IAmb		IAmb	03 02 05.3	
	comp=Z,2.9nm,0.6s							
KDJ	**Kajisay**	**61.03**	**318**	P		**P**	**03 02 07.5**	**-0.6**
KDJ				IAmb		IAmb	03 02 09.9	
	comp=Z,1.5nm,0.5s							
MCQ	**Macquarie Isla**	**61.36**	**160**	P		**P**	**03 02 09.0**	**-0.7**
ZALV	**Zalesovo Beam**	**63.22**	**333**	P		**P**	**03 02 21.5**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=140,slow=9.4,SNR=1.7							
KURK	**Kurchatov**	**64.41**	**327**	P		**P**	**03 02 29.2**	**-0.9**
VNDA	**Vanda**	**81.15**	**173**	P		**P**	**03 04 10.7**	**+2.1**
	comp=Z,0.9nm,0.8s,baz=320,slow=7.0,SNR=4.0							
ILAR	**Eielson Array**	**86.27**	**25**	P		**P**	**03 04 35.8**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=257,slow=4.9,SNR=4.3							
TORD	**Torodi Ar. Bea**	**125.16**	**287**	PKP		**PKiKP**	**03 10 54.6**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=89,slow=2.0,SNR=2.8							

IDC 07 03:24:51.3±5.0, 30.77N×141.57E, h0km, mb3.5/2, mb1 3.6/4, mb1mx3.4/47, mbtmp3.5/4, ML2.9/2, Error ellipse: s-maj=248.1km s-min=31.3km az=75.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JCJ	**Chichijima**	**3.71**	**171**	Pn		Pn	03 25 48.3	-1.5
	2.3nm,0.3s,baz=288,slow=20,SNR=1.7							
JCJ				Sn		Sn	03 26 29.8	-4.3
	5.0nm,0.3s,baz=327,slow=23,SNR=1.6							
MJAR	**Matsushiro Arr**	**6.40**	**335**	Pn		Pn	03 26 26.0	-0.8
	0.1nm,0.3s,baz=152,slow=11,SNR=6.2							
MAT	**Matsushiro**	**6.40**	**335**	P		Pn	03 26 27.1	+0.3
WRA	**Warramunga Arr**	**50.90**	**189**	P		P	03 33 52.8	-1.4
	2.9nm,1.1s,baz=5.3,slow=7.5,SNR=2.4							
ASAR	**Alice Springs**	**54.63**	**189**	P		P	03 34 23.4	+1.6
	0.5nm,0.9s,baz=0.6,slow=5.3,SNR=4.1							

AEIC ***07*** *03:31:04±1.7, 67.76N±0.08×162.5W±0.2, h25km±6km, ML3.3, Error ellipse: s-maj=12.9km s-min=6.3km az=147.0*
IDC ***07*** *03:31:04.8±11.0, 67.85N×162.18W, h0km, mb3.5/3, mb1 4.0/4, mb1mx3.4/60, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=258.0km s-min=55.1km az=141.0*
ISC 07 03:31:03.7±0.8, 67.70N±0.05×162.47W±0.06, h10km, n49, σ1§81/55, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RDOG	**Red Dog Mine**	**0.39**	**335**			**Pb**	**03 31 12.6**	**-0.1**
RDOG						**Sb**	**03 31 18.2**	**-0.5**
ANM	**Nome**	**3.36**	**202**			**Sn**	**03 32 35.4**	**-0.7**
ANM	**Nome**	**3.36**	**202**	Pn		**Pn**	**03 31 56.5**	**+0.3**
IM03		**3.85**	**113**			**Pn**	**03 32 03.5**	**+0.7**
IM01	**Indian Mountai**	**3.85**	**112**			**Pn**	**03 32 03.6**	**+0.7**
IM01						**Sn**	**03 32 48.3**	**+0.1**
PS05	**TAPS Pump Stn5**	**4.67**	**96**			**Pn**	**03 32 15.6**	**+1.5**
COLD	**Coldfoot**	**4.74**	**90**			**Pn**	**03 32 17.2**	**+2.1**
TOLK	**Toolik Lake Re**	**4.91**	**73**	P		**Pn**	**03 32 19.7**	**+2.3**
	baz=266							
TOLK				S		**Sn**	**03 33 15.2**	**+1.1**
	baz=266							
TOLK	**Toolik Lake Re**	**4.91**	**73**			**Pn**	**03 32 18.9**	**+1.5**
TOLK						**Sn**	**03 33 15.1**	**+1.0**
PS06	**TAPS Pump Stn6**	**5.37**	**104**			**Pn**	**03 32 24.0**	**+0.3**
MLY	**Manley**	**5.42**	**114**			**Pn**	**03 32 25.0**	**+0.5**
GAMB	**Gambell**	**5.48**	**228**	Pn		**Pn**	**03 32 25.1**	**0.0**
TTA	**Tatalina**	**5.50**	**148**			**Pn**	**03 32 26.5**	**+1.0**
TT01	**Tatalina**	**5.52**	**148**			**Pn**	**03 32 26.8**	**+1.0**
PS01	**TAPS Pump Stn**	**5.60**	**56**			**Pn**	**03 32 27.8**	**+0.9**
BPAW	**Bear Paw Mtn.**	**5.93**	**122**			**Pn**	**03 32 32.8**	**+1.4**
NEA	**Nenana**	**6.27**	**114**			**Pn**	**03 32 37.2**	**+1.1**
KTH	**Kantishna Hill**	**6.33**	**126**			**Pn**	**03 32 38.1**	**+1.1**
MDM	**Murphy Dome**	**6.36**	**109**			**Pn**	**03 32 38.5**	**+1.3**
PPLA	**Purkeypile**	**6.46**	**133**			**Pn**	**03 32 40.4**	**+1.6**
TCOL	**CIGO, UAF Yank**	**6.53**	**109**	P		**Pn**	**03 32 41.5**	**+1.8**
	baz=303							
TCOL	**CIGO, UAF Yank**	**6.53**	**109**			**Pn**	**03 32 41.4**	**+1.7**
COLA	**College**	**6.54**	**109**			**Pn**	**03 32 41.4**	**+1.8**
POKR	**Poker Plat Res**	**6.56**	**106**	P		**Pn**	**03 32 41.8**	**+1.7**
	baz=300							
POKR	**Poker Plat Res**	**6.56**	**106**			**Pn**	**03 32 41.6**	**+1.6**
TRF	**Thorofare Moun**	**6.60**	**124**			**Pn**	**03 32 42.3**	**+1.5**
WRH	**Wood River Hil**	**6.68**	**112**			**Pn**	**03 32 42.8**	**+1.2**
CCB	**Clear Creek Bu**	**6.68**	**110**			**Pn**	**03 32 42.9**	**+1.3**
BM03	**Burnt Mountain**	**6.84**	**84**			**Pn**	**03 32 45.0**	**+1.1**
MCK	**McKinley**	**6.85**	**119**			**Pn**	**03 32 45.2**	**+1.2**
ILAR	**Eielson Array**	**6.94**	**108**	Pn		**Pn**	**03 32 45.9**	**+0.6**
	3.5nm,0.3s,baz=302,slow=14,SNR=317							
ILAR				Sn		**Sn**	**03 34 02.2**	**-2.0**
	0.2nm,0.3s,baz=306,slow=21,SNR=3.7							
PRP	**Porcupine Dome**	**7.08**	**100**			**Pn**	**03 32 48.0**	**+0.7**
RND	**Reindeer**	**7.10**	**121**			**Pn**	**03 32 48.7**	**+1.3**
HDA	**Harding Lake**	**7.12**	**110**	P		**Pn**	**03 32 48.9**	**+1.2**
	baz=305							
HDA	**Harding Lake**	**7.12**	**110**			**Pn**	**03 32 47.5**	**-0.2**
SVW2	**Sparrevohn**	**7.26**	**153**			**Pn**	**03 32 50.8**	**+1.1**
SVW2	**Sparrevohn**	**7.26**	**153**			**Sn**	**03 34 10.6**	**-1.5**
WAT2	**Susitna Watana**	**7.49**	**123**			**Pn**	**03 32 54.7**	**+1.7**
SPWE	**Spurr West**	**7.73**	**142**			**Pn**	**03 32 58.5**	**+2.3**
DHY	**Denali Highway**	**7.81**	**119**			**Pn**	**03 32 58.8**	**+1.5**
DOT	**Dot Lake**	**8.60**	**109**			**Pn**	**03 33 06.4**	**-1.5**
EPYK	**Eagle Plains**	**10.12**	**86**	P		**Pn**	**03 33 30.1**	**+1.4**
	baz=290							
EPYK	**Eagle Plains**	**10.12**	**86**			**Pn**	**03 33 27.3**	**-1.5**
INK	**Inuvik**	**10.82**	**73**	Pn		**Pn**	**03 33 37.5**	**-0.8**
	0.5nm,0.3s,baz=284,slow=11,SNR=23							
INK				Sn		**Sn**	**03 35 32.8**	**-6.4**
	0.1nm,0.3s,baz=328,slow=9.5,SNR=3.2							
INK	**Inuvik**	**10.82**	**73**			**Pn**	**03 33 36.6**	**-1.7**
INK						**Sn**	**03 35 33.4**	**-5.9**
A36M	**Sachs Harbour**	**13.35**	**55**	P		**Pn**	**03 34 11.7**	**-1.1**
	baz=270							
YKA	**Yellowknife Ar**	**20.36**	**82**	P		Pn	03 35 40.9	-1.0
	1.0nm,0.6s,baz=308,slow=9.6,SNR=20							
PDAR	**Pinedale Array**	**37.36**	**105**	P		**P**	**03 38 18.3**	**+2.0**
	0.3nm,0.4s,baz=334,slow=6.3,SNR=4.3							
TXAR	**Lajitas Array**	**51.45**	**107**	P		**P**	**03 40 10.9**	**+2.0**
	0.9nm,0.7s,baz=340,slow=5.9,SNR=14							

IDC ***07*** *03:31:42.8±1.2, 2.46N×126.77E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.5/50, mbtmp3.8/6, Error ellipse: s-maj=104.8km s-min=18.7km az=68.0*
ISC 07 03:31:49.7±1.3, 2.5N±0.3×126.9E±0.6, h53km, n6, σ1§01/8, mb3.8/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.48**	**183**	P		**P**	**03 36 23.4**	**+0.1**
	1.6nm,0.6s,baz=2.2,slow=11,SNR=1.8							
WRA	**Warramunga Arr**	**23.45**	**162**	P		**P**	**03 36 53.9**	**-0.7**
	1.0nm,0.3s,baz=340,slow=11,SNR=11							
WRA				PcP		**PcP**	**03 40 40.9**	**+1.2**
	0.3nm,0.5s,baz=358,slow=1.9,SNR=1.6							
ASAR	**Alice Springs**	**26.86**	**166**	P		**P**	**03 37 25.6**	**-0.1**
	0.6nm,0.7s,baz=342,slow=7.1,SNR=7.2							
ASAR				PcP		**PcP**	**03 40 48.7**	**+1.5**
	0.3nm,0.6s,baz=2.6,slow=2.1,SNR=2.7							
STKA	**Stephens Creek**	**36.91**	**159**	P		**P**	**03 38 53.0**	**-0.5**
	1.9nm,0.7s,baz=318,slow=6.8,SNR=4.2							
MKAR	**Makanchi Array**	**58.67**	**326**	P		**P**	**03 41 41.0**	**-0.9**
	0.2nm,0.3s,baz=117,slow=7.2,SNR=5.7							
KURBB	**Kurchatov Arra**	**62.88**	**328**	P		**P**	**03 42 10.3**	**0.0**
	0.5nm,0.6s,baz=130,slow=6.2,SNR=6.9							

IDC ***07*** *03:53:19.3±1.8, 6.76S×128.93E, h0km, mb3.6/2, mb1 3.7/5, mb1mx3.5/35, mbtmp3.5/5, ML3.6/4, Error ellipse: s-maj=56.4km s-min=25.6km az=82.0*
ISC 07 03:53:34.6±1.4, 7.64S±0.10×128.6E±0.1, h151km, n6, σ2§21/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BATI	**Baumata**	**5.52**	**242**	Pn		**Pn**	**03 54 54.3**	**-0.7**
	4.8nm,0.3s,baz=122,slow=19,SNR=1.5							
BATI				Sn		**Sn**	**03 55 58.7**	**+1.0**
	3.5nm,0.3s,baz=18,slow=16,SNR=1.5							
FITZ	**Fitzroy Crossi**	**10.79**	**195**	Pn		**Pn**	**03 56 06.3**	**+1.2**
	0.3nm,0.3s,baz=16,slow=8.7,SNR=19							
FITZ				Sn		**Sn**	**03 58 02.0**	**-2.5**
	0.6nm,0.3s,baz=307,slow=20,SNR=5.7							
WRA	**Warramunga Arr**	**13.43**	**156**	Pn		**P**	**03 56 42.3**	**-1.1**
	0.2nm,0.3s,baz=331,slow=13,SNR=8.8							
WRA				Sn		**Sn**	**03 59 05.4**	**-2.7**
	0.5nm,0.3s,baz=328,slow=24,SNR=8.3							
ASAR	**Alice Springs**	**16.72**	**163**	P		**Pn**	**03 57 24.2**	**+4.0**
	0.1nm,0.3s,baz=339,slow=9.6,SNR=2.0							
ASAR				S		**S**	**04 00 26.8**	**+0.6**
	0.2nm,0.3s,baz=351,slow=27,SNR=4.4							
MKAR	**Makanchi Array**	**68.02**	**328**	P		**P**	**04 04 17.0**	**-0.6**
	0.3nm,0.5s,baz=123,slow=7.8,SNR=4.1							
KURBB	**Kurchatov Arra**	**72.34**	**329**	P		**P**	**04 04 43.3**	**-0.5**
	0.3nm,0.5s,baz=127,slow=5.0,SNR=4.3							

IDC ***07*** *03:56:46.2±0.8, 19.44S×70.28W, h0km, mb4.1/12, mb1 4.3/15, mb1mx4.2/32, mbtmp4.2/15, ML4.3/3, MS3.4/8, Ms1 3.4/8, ms1mx3.3/31, Error ellipse: s-maj=22.1km s-min=17.6km az=61.0*
NEIC ***07*** *03:56:50.2±1.1, 19.54S±0.03×70.41W±0.05, h31km±4km, Error ellipse: s-maj=6.3km s-min=4.4km az=84.0*
GUC ***07*** *03:56:51.9±0.8, 19.57S×70.41W, h35km±2km, ML4.4*
VAO ***07*** *03:56:56.9±1.1, 19.54S×70.04W, h76km±9km, mb4.4*
ISC 07 03:56:50.6±0.9, 19.55S±0.02×70.40W±0.04, h33km±3km, n131, σ1§14/144, mb4.4/19, MS3.3/5, 2C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PSGC	**Pisagua**	**0.27**	**101**	*eP*		**Pb**	**03 56 58.4**	**+0.2**
PSGC				*i* S		**Sb**	**03 57 04.0**	**+0.8**
PSGC				IAML			03 57 04.7	
	comp=E,33µm,0.2s							
PSGCX	**Pisagua**	**0.27**	**101**			**Pn**	**03 56 57.6**	**-0.5**
PSGCX						**Sb**	**03 57 03.9**	**+0.7**
PB11	**IPOC Station P**	**0.74**	**107**	*eP*		**Pb**	**03 57 05.1**	**-0.1**
PB11				*i* S		**Sb**	**03 57 15.5**	**+0.4**
PB11				IAML			03 57 16.4	
	comp=N,14µm,0.3s							
PB11	**IPOC Station P**	**0.74**	**107**			**Pn**	**03 57 04.2**	**-0.6**
PB11						**Sb**	**03 57 15.3**	**+0.2**
TA02	**Huaiquique**	**0.77**	**160**	*eP*		**Pn**	**03 57 04.8**	**-0.3**
TA02				*i* S		**Sn**	**03 57 15.1**	**-0.4**
TA02				IAML			03 57 15.4	
	comp=N,31µm,0.1s							
MNMC	**Minye Minye**	**0.87**	**62**	*eP*		**Pb**	**03 57 07.8**	**+0.4**
MNMC				*i* S		**Sb**	**03 57 20.4**	**+1.5**
MNMC	**Minye Minye**	**0.87**	**62**			**Pn**	**03 57 06.7**	**0.0**
MNMC						**Sb**	**03 57 18.7**	**-0.2**
PB12	**IPOC Station P**	**0.93**	**4**	*eP*		**Pb**	**03 57 08.0**	**-0.3**
PB12				*i* S		**Sb**	**03 57 21.1**	**+0.6**
PB12	**IPOC Station P**	**0.93**	**4**	Pn		**Pn**	**03 57 07.5**	**0.0**
TA01	**Diego Aracena**	**1.04**	**168**	*eP*		**Pn**	**03 57 08.7**	**-0.2**
TA01				*i* S		**Sn**	**03 57 22.1**	**-0.1**
TA01				IAML			03 57 24.9	
	comp=N,11µm,0.7s							
TA01	**Diego Aracena**	**1.04**	**168**			**Pn**	**03 57 08.7**	**-0.2**
GO01	**Chusmiza**	**1.15**	**96**	*eP*		**Pb**	**03 57 11.9**	**-0.3**
GO01				*i* S		**Sb**	**03 57 28.0**	**+1.0**
GO01	**Chusmiza**	**1.15**	**96**			**Pn**	**03 57 10.4**	**-0.4**
AP01	**Chacalluta**	**1.17**	**3**	*iP*		**Pb**	**03 57 12.1**	**-0.2**
AP01				*eS*		**Sb**	**03 57 28.2**	**+1.0**
AP01				IAML			03 57 31.1	
	comp=E,13µm,0.5s							
AP01	**Chacalluta**	**1.17**	**3**	Pn		**Pb**	**03 57 11.7**	**-0.6**
PATCX	**Punta Patache**	**1.29**	**170**	*eP*		**Pn**	**03 57 12.6**	**+0.2**
PATCX				*i* S		**Sb**	**03 57 29.7**	**-1.0**
PATCX	**Punta Patache**	**1.29**	**170**			**Pn**	**03 57 12.2**	**-0.2**
PB08	**IPOC Station P**	**1.32**	**117**	*eP*		**Pn**	**03 57 13.8**	**+0.8**
PB08				*i* S		**Sb**	**03 57 31.6**	**-0.3**
PB08	**IPOC Station P**	**1.32**	**117**			**Pn**	**03 57 13.1**	**0.0**
PB16	**IPOC Station P**	**1.47**	**35**	*eP*		**Pb**	**03 57 17.9**	**+0.1**
PB16				*i* S		**Sb**	**03 57 38.1**	**+1.7**
PB16	**IPOC Station P**	**1.47**	**35**			**Pn**	**03 57 15.9**	**+0.5**
PB16				Sn		**Sn**	**03 57 33.8**	**+0.1**
PB01	**IPOC Station P**	**1.72**	**150**	*eP*		**Pn**	**03 57 18.9**	**+0.6**
PB01				*i* S		**Sb**	**03 57 41.3**	**-1.8**
PB01	**IPOC Station P**	**1.72**	**150**			**Pn**	**03 57 18.2**	**-0.1**
PB02	**IPOC Station P**	**1.83**	**165**	*eP*		**Pn**	**03 57 20.5**	**+0.7**
PB02				*eS*		**Sn**	**03 57 43.0**	**+1.1**
PB02				IAML			03 57 57.7	
	comp=E,8µm,0.5s							
PB07	**IPOC Station P**	**2.22**	**167**	*iP*		**Pn**	**03 57 26.1**	**+0.7**
PB07				*eS*		**Sn**	**03 57 52.9**	**+1.1**
PB07				IAML			03 58 11.2	
	comp=E,3µm,0.8s							
PB07	**IPOC Station P**	**2.22**	**167**			**Pn**	**03 57 25.1**	**-0.2**
PB09	**IPOC Station P**	**2.49**	**154**	*iP*		**Pn**	**03 57 30.9**	**+1.9**
PB09				*eS*		**Sn**	**03 58 00.6**	**+2.2**
PB09				IAML			03 58 13.1	
	comp=N,3µm,0.6s							
PB09	**IPOC Station P**	**2.49**	**154**			**Pn**	**03 57 28.9**	**-0.1**
PB03	**IPOC Station P**	**2.56**	**166**	*eP*		**Pn**	**03 57 30.8**	**+0.8**
PB03				*i* S		**Sn**	**03 58 01.9**	**+1.7**
PB03				IAML			03 58 11.0	
	comp=E,2µm,0.6s							
PB04	**IPOC Station P**	**2.79**	**175**	*eP*		**Pn**	**03 57 32.9**	**-0.1**
PB04				*eS*		**Sn**	**03 58 05.6**	**-0.1**
PB04	**IPOC Station P**	**2.79**	**175**			**Pn**	**03 57 33.0**	**-0.1**
PB06	**IPOC Station P**	**3.24**	**166**	*eP*		**Pn**	**03 57 39.2**	**-0.1**
PB06				*eS*		**Sn**	**03 58 18.9**	**+2.1**
PB06				IAML			03 58 33.7	
	comp=N,1µm,0.4s							
PB06	**IPOC Station P**	**3.24**	**166**			**Pn**	**03 57 39.3**	**-0.1**
PB05	**IPOC Station P**	**3.30**	**177**	*iP*		**Pn**	**03 57 39.2**	**-0.9**
PB05				*eS*		**Sn**	**03 58 19.8**	**+1.6**
PB05				IAML			03 58 36.1	
	comp=N,1µm,0.4s							
LVC	**Limon Verde**	**3.35**	**156**	Pn		**Pn**	**03 57 43.1**	**+2.0**
	comp=N,17nm,0.3s,baz=351,slow=10,SNR=148							
LVC				Sn		**Sn**	**03 58 24.1**	**+4.2**
	comp=N,38nm,0.3s,baz=284,slow=17,SNR=6.1							
LVC	**Limon Verde**	**3.35**	**156**			**Pn**	**03 57 41.2**	**+0.2**
PB15	**IPOC Station P**	**3.75**	**167**			**Pn**	**03 57 46.1**	**-0.2**
PB15				Sn		**Sn**	**03 58 29.3**	**-0.1**
LPAZ	**La Paz**	**3.90**	**34**	Pn		**Pb**	**03 57 54.8**	**-4.2**
	comp=N,11nm,0.3s,baz=221,slow=3.6,SNR=204							
LPAZ	**La Paz**	**3.90**	**34**			**Pn**	**03 57 47.9**	**-0.9**
LPAZ	**La Paz**	**3.90**	**34**	*eP*		Pn	03 57 53.9	+5.1
PB10	**IPOC Station P**	**3.95**	**182**	Pn		**Pn**	**03 57 47.8**	**-1.2**
PB14	**IPOC Station P**	**5.06**	**180**			**Pn**	**03 58 02.1**	**-2.3**
GO02	**Mina Guanaco**	**5.64**	**172**			**Pn**	**03 58 12.4**	**0.0**
AC02	**Maricunga**	**7.35**	**171**			**Pn**	**03 58 35.4**	**-0.8**
SIV	**San Ignacio**	**9.57**	**70**	Pn		**Pn**	**03 59 05.4**	**-0.7**
	comp=N,4.6nm,0.3s,baz=267,slow=11,SNR=81							
SIV				LR		LR	04 03 28.4	
	comp=N,326nm,19.3s,baz=275,slow=43							
PTLB	**Pontes e Lacer**	**11.49**	**71**	*eP*		**Pn**	**03 59 32.8**	**+0.3**
VILB	**Vilhena**	**11.79**	**58**	*eP*		**Pn**	**03 59 37.7**	**+1.2**
VILB				*eS*		**Sn**	**04 01 46.1**

comp=Z,2.2nm,0.7s,baz=222,slow=6.0,SNR=6.3
SCHQ Schefferville 74.14 2 P **P** **04 08 23.4 0.0**
SCHQ IAmb IAmb 04 08 42.5
comp=Z,3.6nm,1.0s
PAHR Pah Rah Range 74.58 323 IAmb IAmb 04 08 29.4
comp=Z,3.7nm,0.8s
TORD Torodi Ar. Bea 78.04 71 P **P** **04 08 45.6 -0.9**
comp=Z,6.4nm,0.7s,baz=251,slow=5.3,SNR=31
ESDC Sonseca Array 85.44 45 P **P** **04 09 24.5 -0.6**
comp=Z,0.6nm,0.9s,baz=248,slow=5.6,SNR=4.5
YKA Yellowknife Ar 88.89 341 P **P** **04 09 41.5 +0.4**
comp=Z,2.2nm,0.7s,baz=136,slow=5.2,SNR=44
H11S2 WAKE ISLAND Hyd 26.22 279 T T 06 34 49.9
baz=101,slow=74,SNR=270
H11S1 WAKE ISLAND Hyd 26.22 279 T T 06 34 48.6
baz=101,slow=74,SNR=229
H11S3 WAKE ISLAND Hyd 26.23 279 T T 06 34 51.4
baz=101,slow=74,SNR=221
H11N3 WAKE ISLAND Hyd 26.25 281 T T 06 34 52.9
baz=101,slow=74,SNR=63
H11N2 WAKE ISLAND Hyd 26.27 281 T T 06 34 54.5
baz=101,slow=74,SNR=58
H11N1 WAKE ISLAND Hyd 26.27 281 T T 06 34 55.2
baz=101,slow=74,SNR=47
ASAR Alice Springs 130.94 210 PKP **PKPdf** **04 15 59.6 +0.1**
comp=Z,0.3nm,0.4s,baz=137,slow=1.9,SNR=2.7
WRA Warramunga Arr 133.87 213 PKP **PKPdf** **04 16 05.3 +0.1**
comp=Z,0.6nm,0.7s,baz=145,slow=1.8,SNR=7.1
ZALV Zalesovo Beam 140.75 23 PKP **PKPdf** **04 16 17.4 +0.7**
comp=Z,1.0nm,0.3s,baz=263,slow=1.0,SNR=4.2
KDJ Kajisay 144.53 43 **PKPdf** **04 16 23.6 -0.4**
MAKZ Makanchi 144.65 33 **PKPdf** **04 16 23.8 -0.1**
MKAR Makanchi Array 144.82 33 PKP **PKPdf** **04 16 24.0 -0.2**
comp=Z,2.1nm,0.4s,baz=325,slow=2.9,SNR=37
SONM Songino Array 151.66 5 PKPbc **PKiKP** **04 16 42.7 +0.5**
comp=Z,1.3nm,0.6s,baz=324,slow=0.9,SNR=7.4

*IDC **07** 04:03:50.1±0.9, 12°.30N×144°.31E, h0km, mb3.8/8, mb1 4.1/8, mb1mx3.7/48, mbtmp3.8/8, Error ellipse: s-maj=35.5km s-min=22.3km az=112.0*
*NEIC **07** 04:03:55.3±1.9, 12°.24N±0°.05×144°.4E±0°.1, h42km±7km, mb4.2/4, Error ellipse: s-maj=19.0km s-min=7.6km az=92.0*
ISC 07 04:03:54.0±0.7, 12°.26N±0°.08×144°.3E±0°.1, h30km, n18, σ1§13/16, mb3.9/10, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.42**	**21**		**Pb**	**04 04 18.7**	**-1.1**
GUMO				Sn	**Sn**	**04 04 35.1**	**-0.4**
PATS	**Pohnpei**	**14.79**	**110**	Pn	**Pn**	**04 07 21.8**	**+0.6**
H11N1	**WAKE ISLAND Hy**	**22.89**	**68**	T	T	04 32 59.5	
	baz=255,slow=75,SNR=5.0						
H11N2	**WAKE ISLAND Hy**	**22.90**	**68**	T	T	04 32 59.7	
	baz=255,slow=75,SNR=5.5						
H11N3	**WAKE ISLAND Hy**	**22.91**	**68**	T	T	04 33 01.8	
	baz=255,slow=75,SNR=6.0						
WRA	**Warramunga Arr**	**33.48**	**197**	P	**P**	**04 10 31.0**	**+0.2**
	1.2nm,0.8s,baz=20,slow=9.8,SNR=4.8						
ASAR	**Alice Springs**	**37.13**	**196**	P	**P**	**04 11 03.1**	**+0.9**
	0.4nm,0.8s,baz=12,slow=10,SNR=4.6						
EIDS	**Eidsvold**	**37.97**	**170**	P	**P**	**04 11 07.7**	**-1.5**
EIDS				IAmb	IAmb	04 11 20.1	
	comp=Z,3.0nm,1.1s						
IPM	**Ipoh**	**43.50**	**264**	P	**P**	**04 11 54.5**	**-0.6**
CMAR	**Chiang Mai Arr**	**44.12**	**284**	P	**P**	**04 12 00.8**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=86,slow=5.2,SNR=4.4						
CMWZ	**Cape Campbell**	**60.37**	**155**	P	**P**	**04 13 59.0**	**-1.3**
MKAR	**Makanchi Array**	**62.09**	**317**	P	**P**	**04 14 12.4**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=92,slow=9.7,SNR=7.3						
MAKZ	**Makanchi**	**62.31**	**317**	P	**P**	**04 14 13.4**	**-0.1**
MAKZ				IAmb	IAmb	04 14 14.4	
	comp=Z,1.9nm,0.8s						
ILAR	**Eielson Array**	**69.98**	**25**	P	**P**	**04 15 02.3**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=253,slow=5.8,SNR=6.2						
INK	**Inuvik**	**75.78**	**22**	P	**P**	**04 15 37.2**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=275,slow=6.6,SNR=3.3						
INK	**Inuvik**	**75.78**	**22**	P	**P**	**04 15 35.1**	**-1.6**
YKA	**Yellowknife Ar**	**84.27**	**27**	P	**P**	**04 16 23.7**	**+1.0**
	comp=Z,0.9nm,1.0s,baz=286,slow=5.0,SNR=5.7						
NVAR	**Mina Array Bea**	**88.15**	**51**	P	**P**	**04 16 44.9**	**+2.3**
	comp=Z,0.5nm,0.7s,baz=253,slow=6.4,SNR=4.0						

*IDC **07** 04:10:14.3±1.2, 51°.55N×15°.87E, h0km, mb1 3.2/4, mb1mx3.0/44, mbtmp3.0/4, ML2.8/4, Error ellipse: s-maj=17.3km s-min=9.6km az=128.0*
*VIE **07** 04:10:14.9±1.0, 51°.46N×15°.91E, h0km, mb2.4/6, ml2.6/6, Error ellipse: s-maj=11.7km s-min=4.1km az=32.0 87 km WNW of Wroclaw Suspected Mining induced.*
ISC 07 04:10:11.1±0.8, 51°.69N±0°.04×16°.05E±0°.03, h0km, n30, σ1§25/54, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHVC	**Chvalec**	**1.10**	**180**	*e*PG	**Pb**	**04 10 32.8**	**-0.2**
CHVC				*e*SG	**Sg**	**04 10 46.1**	**-0.3**
OSTC	**Ostas**	**1.14**	**175**	*e*PG	**Pb**	**04 10 33.4**	**-0.2**
OSTC				*e*SG	**Sg**	**04 10 47.2**	**-0.3**
	comp=Z,88nm,1.0s						
UPC	**Upice**	**1.18**	**181**	*e*PG	**Pg**	**04 10 34.1**	**+0.4**
UPC				*e*SG	**Sg**	**04 10 48.0**	**-1.0**
	comp=Z,105nm,0.5s						
DPC	**Dobruska-Polom**	**1.35**	**173**	*e*PG	**Pg**	**04 10 36.9**	**0.0**
DPC				*e*SG	**Sg**	**04 10 53.4**	**-1.0**
	comp=Z,32nm,0.4s						
PVCC	**Panska Ves**	**1.49**	**219**	*e*PG	**Pb**	**04 10 40.2**	**+0.6**
PVCC				*e*SG	**Sg**	**04 10 59.0**	**+0.2**
	comp=Z,71nm,0.4s						
BRG	**Berggiesshubel**	**1.55**	**239**	PN	**Pn**	**04 10 40.2**	**+0.3**
BRG				PG	**Pg**	**04 10 41.6**	**+0.8**
BRG				SG	**Sb**	**04 11 01.6**	**+0.8**
	47nm,0.4s						
KRLC	**Kraliky**	**1.68**	**164**	*e*PG	**Pn**	**04 10 41.9**	**+0.2**
KRLC				*e*SG	**Sn**	**04 11 03.8**	**-0.2**
	comp=Z,59nm,0.6s						
CLL	**Collm**	**1.94**	**260**	*e*Pn	**Pn**	**04 10 47.0**	**+1.7**
	comp=Z,15nm,0.4s						
CLL				*i* Pg	**Pg**	**04 10 49.9**	**+1.7**
CLL				*i*		04 10 53.8	
CLL				*i* (Sn)	**Sn**	**04 11 05.5**	**-4.8**
CLL				*i* Sg	**Sg**	**04 11 15.0**	**+1.6**
	comp=Z,23nm,0.5s						
CLL				*e*		04 11 22.0	
GOPC	**GO Pecny, Ondr**	**1.95**	**205**	*e*PG	**Pb**	**04 10 47.4**	**0.0**
PRU	**Pruhonice**	**1.95**	**210**	*e*PN	**Pn**	**04 10 45.3**	**-0.1**
PRU				*e*PG	**Pb**	**04 10 47.5**	**+0.1**
PRU				*e*SG	**Sb**	**04 11 12.0**	**-0.3**
	comp=Z,25nm,0.4s						
MORC	**Moravsky Berou**	**2.14**	**153**	*e*PN	**Pn**	**04 10 48.0**	**0.0**
MORC				*e*SG	**Sb**	**04 11 18.1**	**+0.4**
OKC	**Ostrava-Krasne**	**2.28**	**143**	*e*PG	**Pg**	**04 10 54.8**	**0.0**
OKC				*e*SG	**Sb**	**04 11 22.4**	**+0.6**
	comp=Z,38nm,0.6s						
VRAC	**Vranov**	**2.41**	**171**	Pn	**Pn**	**04 10 52.9**	**+1.2**
	comp=Z,2.0nm,0.3s,baz=326,slow=12,SNR=7.5						
VRAC				Lg	Lg	04 11 24.7	
	comp=Z,3.2nm,0.3s,baz=62,slow=21,SNR=8.9						
VRAC	**Vranov**	**2.41**	**171**	*e*SG	**Sg**	**04 11 27.5**	**-0.8**
TREC	**Trest**	**2.42**	**189**	*e*PG	**Pb**	**04 10 56.6**	**+1.1**
TREC				*e*SG	**Sb**	**04 11 26.9**	**+1.0**
KRUC	**Moravsky**	**2.64**	**175**	*e*SG	**Sb**	**04 11 33.0**	**+0.9**
NKC	**Novy Kostel**	**2.70**	**239**	*e*PN	**Pn**	**04 10 56.6**	**+0.8**
NKC				*e*PG	**Pg**	**04 11 02.7**	**-0.1**
NKC				*e*SG	**Sg**	**04 11 37.2**	**-0.6**
	comp=Z,36nm,0.5s						
KHC	**Kasperske Hory**	**3.01**	**213**	*e*PN	**Pn**	**04 11 00.5**	**+0.5**
KHC				*e*PG	**Pb**	**04 11 06.7**	**+1.2**
KHC				*e*SG	**Sb**	**04 11 45.3**	**+2.5**
	comp=Z,7.7nm,0.5s						
GERES	**GERESS Array B**	**3.22**	**209**	Pn	**Pn**	**04 11 03.5**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=26,slow=13,SNR=14						
GERES				Pg	**Pb**	**04 11 09.8**	**+0.6**
	comp=Z,2.4nm,0.3s,baz=28,slow=19,SNR=24						
GERES				Lg	Lg	04 11 52.0	
	comp=Z,2.7nm,0.3s,baz=29,slow=31,SNR=6.5						
LANS	**Liptovska Anna**	**3.35**	**138**	*e*SG	**Sg**	**04 12 00.0**	**+1.3**
MODS	**Modra-Piesok**	**3.41**	**166**	*e*SG	**Sg**	**04 12 00.4**	**-0.2**
BSD	**Bornholm Skovb**	**3.50**	**349**	*i* P	**Pn**	**04 11 08.0**	**+1.3**
BSD				*i* S	**Sn**	**04 11 47.1**	**-1.6**
CONA	**Conrad Observa**	**3.77**	**182**	*e*Pn	**Pn**	**04 11 11.3**	**+0.9**
	comp=Z,1.1nm,0.2s						
MOA	**Molln**	**4.01**	**197**	*e*Pn	**Pn**	**04 11 14.6**	**+0.8**
	comp=Z,2.4nm,0.3s						
MOA				Sg	**Sg**	**04 12 17.6**	**-2.2**
	comp=Z,7.1nm,0.5s						
ARSA	**Arzberg**	**4.46**	**185**	*e*Pn	**Pn**	**04 11 21.8**	**+1.9**
	comp=Z,0.7nm,0.3s						
ARSA				Sg	**Sg**	**04 12 33.1**	**-1.0**
	comp=Z,2.7nm,0.4s						
KBA	**Koelnbreinsper**	**4.94**	**202**	*e*Pn	**Pn**	**04 11 27.8**	**+1.1**
	comp=Z,1.8nm,0.4s						
KBA				Sg	**Sg**	**04 12 50.7**	**+1.0**
	comp=Z,2.3nm,0.5s						
DAVOX	**Davos/Dischmat**	**6.36**	**222**	Lg	Lg	04 13 31.2	
	comp=Z,0.2nm,0.3s,baz=150,slow=20,SNR=2.2						
AKASG	**Malin Array Be**	**8.34**	**92**	Pn	**Pn**	**04 12 15.1**	**+2.0**
	comp=Z,1.1nm,0.3s,baz=275,slow=11,SNR=8.3						
FINES	**FINESS Array B**	**11.22**	**25**	Pn	**Pn**	**04 12 51.9**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=208,slow=11,SNR=3.7						
EKA	**Eskdalemuir Ar**	**11.99**	**295**	Pn	**Pn**	**04 13 01.1**	**-2.0**
	baz=102,slow=14,SNR=3.5						

*IDC **07** 04:20:33.8±0.3, 6°.93S×154°.80E, h0km, mb5.2/33, mb1 5.2/39, mb1mx5.1/45, mbtmp5.1/39, ML4.8/5, MS5.5/37, Ms1 5.5/37, ms1mx5.5/40, Error ellipse: s-maj=13.0km s-min=9.7km az=71.0*
*NEIC **07** 04:20:33.9±1.4, 6°.96S±0°.06×154°.90E±0°.06, h10km±1km, mb5.7/285, Ms_20 6.1/762, Mwb6.0/25, Mww6.0, Mwc6.0(GCMT), Error ellipse: s-maj=10.3km s-min=9.8km az=89.0*
*NEIC **07** 04:20:34.8, 6°.96S×154°.88E, h9km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}=0.04; $M_{\theta\theta}$=0.93; $M_{\phi\phi}$=0.97; $M_{r\theta}$=0.51; $M_{\theta\phi}$=0.14; $M_{r\phi}$=0.06; Fault plane solution: $M_0$1.09000×10^{18} NP1:φs227.05000°, δ77.70000°, λ-22.10000°. NP2:φs322.00000°, δ68.43000°, λ-166.76000°. Principal axes: T 0.9921, Plg6.0000°, Azm276.0000°; N 0.1744, Plg65.0000°, Azm19.0000°; P -1.1665, Plg24.0000°, Azm183.0000°;*
*MOS **07** 04:20:35.0±1.4, 6°.83S×154°.76E, h14km, mb5.8/45, MS5.7/32 Error ellipse: s-maj=7.1km s-min=5.4km az=108.0*
*BJI **07** 04:20:36.0±0.0, 6°.64S×155°.29E, h31km, mB5.8/74, mb5.5/85, Ms5.9/98, Ms7 5.7/89*
*DJA **07** 04:20:38.3±1.1, 7°.5S±2°×15°.5E±°, h26km±8km, M5.9/96, mB6.3/95, mb5.7/96, Mw5.9/13, Mw(mB)6.0/95, Mwp5.8/58*
*GCMT **07** 04:20:39.9±0.1, 7°.03S×154°.84E, h13km, MW6.0/160, Moment Tensor Solution. s151,c336; s160,c494; Duration: 24 Moment tensor: Scale 10^{18}Nm; M_{rr}0.13±.01; $M_{\theta\theta}$-1.05±.01; $M_{\phi\phi}$0.92±.01; $M_{r\theta}$0.58±.03; $M_{\theta\phi}$0.16±.01; $M_{r\phi}$-0.14±.01; Best double couple: $M_0$1.12900×10^{18} NP1:φs227.00000°, δ68.00000°, λ-11.00000°. NP2:φs321.00000°, δ80.00000°, λ-158.00000°. Principal axes: T 0.9480, Plg8.0000°, Azm92.0000°; N 0.3610, Plg66.0000°, Azm344.0000°; P -1.3100, Plg23.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **07** 04:20:40, 6°.65S×154°.88E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.11; $M_{\theta\theta}$-0.64; $M_{\phi\phi}$0.53; $M_{r\theta}$1.17; $M_{\theta\phi}$0.02; $M_{r\phi}$-0.29; Fault plane solution: $M_0$1.34000×10^{18} NP1:φs110.00000°, δ83.00000°, λ105.00000°. NP2:φs223.00000°, δ17.00000°, λ24.00000°. Principal axes: T 1.0571, Plg50.0000°, Azm37.0000°; N 0.4520, Plg15.0000°, Azm288.0000°; P -1.5091, Plg36.0000°, Azm187.0000°;*
*NEIC **07** 04:20:40, 7°.04S×154°.86E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.15; $M_{\theta\theta}$-1.09; $M_{\phi\phi}$0.94; $M_{r\theta}$0.61; $M_{\theta\phi}$0.22; $M_{r\phi}$-0.13; Fault plane solution: $M_0$1.22000×10^{18} NP1:φs323.00000°, δ79.00000°, λ-160.00000°. NP2:φs228.00000°, δ70.00000°, λ-12.00000°. Principal axes: T 0.9672, Plg6.0000°, Azm94.0000°; N 0.3967, Plg67.0000°, Azm351.0000°; P -1.3638, Plg22.0000°, Azm187.0000°;*
ISC 07 04:20:39.1±0.2, 7°.02S±0°.03×154°.95E±0°.03, h41km, n1554, σ1§62/1231, mb5.7/247, MS6.1/466, 61C-52D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.94**	**315**		**Pn**	**04 21 33.9**	**-3.3**
KRVT	**Keravat (AS076**	**3.96**	**313**	Pn	**Pn**	**04 21 35.6**	**-1.8**
	135nm,0.3s,baz=355,slow=2.3,SNR=78						
KRVT				Sn	**Sn**	**04 22 22.8**	**+0.1**
	295nm,0.3s,baz=315,slow=22,SNR=5.8						
HNR	**Honiara**	**5.50**	**116**	Pn	**Pn**	**04 22 01.0**	**+2.4**
	20nm,0.3s,baz=294,slow=4.9,SNR=1.5						
HNR				LR	LR	04 24 18.4	
	comp=Z,161μm,19.2s,baz=283,slow=40						
HNR	**Honiara**	**5.50**	**116**	P	**Pn**	**04 22 01.0**	**+2.4**
HNR	**Honiara**	**5.50**	**116**		**Pn**	**04 21 57.1**	**-1.4**
PMG	**Port Moresby**	**8.07**	**252**	Pn	**Pn**	**04 22 32.5**	**-1.3**
	10nm,0.3s,baz=35,slow=11,SNR=21						
PMG				Sn	**Sn**	**04 24 06.4**	**+2.6**
	3.8nm,0.3s,baz=244,slow=22,SNR=6.8						
PMG				LR	LR	04 25 30.2	
	comp=Z,99μm,18.4s,baz=61,slow=37						
PMG	**Port Moresby**	**8.07**	**252**	*ce*P	**Pn**	**04 22 34.9**	**+1.1**
PMG	**Port Moresby**	**8.07**	**252**		**Pn**	**04 22 31.4**	**-2.3**
PMG				Sn	**Sn**	**04 24 02.3**	**-1.5**
COEN	**Coen**	**13.47**	**238**	P	**Pn**	**04 23 49.0**	**+1.2**
	baz=13						
COEN	**Coen**	**13.47**	**238**		**Pn**	**04 23 46.6**	**-1.2**
PATS	**Pohnpei**	**14.16**	**14**	P	**Pn**	**04 23 56.0**	**-1.2**
	baz=14,SNR=8.9						
PATS	**Pohnpei**	**14.16**	**14**		**Pn**	**04 23 54.6**	**-2.6**
PATS				Sn	**Sn**	**04 26 32.1**	**-1.0**
MMPI	**Merauke**	**14.50**	**263**	P	**Pn**	**04 24 03.2**	**+1.4**
	33μm29μm834nm,2.1s						
JAY	**Jayapura**	**14.88**	**287**	Pn	**Pn**	**04 24 05.4**	**-1.5**
	2.1nm,0.3s,baz=287,slow=4.8,SNR=9.1						
JAY				LR	LR	04 29 37.8	
	comp=Z,30μm,20.1s,baz=70,slow=37						
JAY	**Jayapura**	**14.88**	**287**	P	**Pn**	**04 24 06.9**	**+0.1**
	12μm20m70nm,1.4s						
MTSU	**Mount Surprise**	**15.15**	**222**	P	**Pn**	**04 24 12.6**	**+2.2**
	baz=15,SNR=51						
GENI	**Genyem**	**15.37**	**286**	P	**Pn**	**04 24 12.9**	**-0.3**
	24μm9μm229nm,1.2s						
CTA	**Charters Tower**	**15.49**	**212**	P	**P**	**04 24 18.0**	**-0.7**
	baz=15						
CTA	**Charters Tower**	**15.49**	**212**	Pn	**Pn**	**04 24 15.3**	**+0.5**
	2.4nm,0.3s,baz=37,slow=12,SNR=48						
CTA				LR	LR	04 29 43.5	
	comp=Z,34μm,19.4s,baz=33,slow=36						
CTAO	**Charters Tower**	**15.49**	**212**	P	**Pn**	**04 24 12.9**	**-1.9**
CTAO				pmax	pmax		
	comp=Z,316nm,1.2s						
CTAO	**Charters Tower**	**15.49**	**212**		**Pn**	**04 24 12.9**	**-1.9**
SMPI	**Sarmi**	**16.93**	**286**	P	**Pn**	**04 24 32.8**	**-0.4**
	comp=Z,20μmcomp=Z,7μmcomp=Z,223nm,1.4s						
EIDS	**Eidsvold**	**18.62**	**191**	P	**Pn**	**04 24 55.8**	**+2.0**
	baz=19,SNR=45						
EIDS	**Eidsvold**	**18.62**	**191**	P	**Pn**	**04 24 53.9**	**0.0**
EIDS				IAmb	IAmb	04 25 00.3	
	comp=Z,734nm,1.6s						
DZM	**Mont Dzumac**	**18.63**	**145**	*e*Pn	**Pn**	**04 24 55.8**	**+1.7**
	comp=Z,765nm,1.4s						
DZM				*e*LQ	LQ	04 28 33.3	
	comp=Z,116μm,31.4s						
DZM				*e*LR	LR	04 29 19.3	
	comp=Z,37μm,23.8s						
DZM	**Mont Dzumac**	**18.63**	**145**	P	**Pn**	**04 24 55.5**	**+1.4**
	comp=Z,3.1nm,0.3s,baz=349,slow=18,SNR=22						
DZM				LR	LR	04 30 33.9	
	comp=Z,28μm,20.7s,baz=320,slow=32						
DZM	**Mont Dzumac**	**18.63**	**145**	P	**P**	**04 24 51.3**	**-2.2**
DZM				IAmb	IAmb	04 25 09.2	
	comp=Z,937nm,1.6s						
I22FR	**PORTLAGUERRE I**	**18.95**	**144**	*i*		06 18 40.0	
	baz=325,slow=312,SNR=2.6						
TARA	**Tarawa**	**19.77**	**66**	P	**P**	**04 25 04.3**	**-1.6**
TARA				IAmb	IAmb	04 25 17.2	
	comp=Z,1μm,1.4s						
QIS	**Mount Isa**	**20.05**	**226**	P	**P**	**04 25 08.6**	**-0.4**
	baz=20,SNR=35						
KWAJ	**Kwajalein Atol**	**20.16**	**39**	P	**P**	**04 25 08.7**	**-1.4**
KWAJ				pmax	pmax		
	comp=Z,5μm,2.0s						
KWAJ				MLR	MLR		
	comp=Z,47μm,18.0s						
KWAJ	**Kwajalein Atol**	**20.16**	**39**	P	**P**	**04 25 08.7**	**-1.4**
RMQ	**Roma**	**20.24**	**196**	P	Pn	04 25 12.6	-0.6
	baz=20,SNR=248						
RKPI	**Ransiki, Papua**	**21.41**	**284**	P	**P**	**04 25 24.0**	**+0.3**
	comp=Z,15μmcomp=Z,601nm,1.3s						
QLP	**Quilpie**	**21.97**	**206**	P	**P**	**04 25 29.4**	**-0.1**
	baz=22,SNR=20						
GUMO	**Guam**	**22.79**	**334**	P	**P**	**04 25 36.5**	**-1.8**
GUMO				pmax	pmax		
	comp=Z,391nm,1.1s						
GUMO				MLR	MLR		
	comp=Z,14μm,22.0s						
GUMO	**Guam**	**22.79**	**334**	P	**P**	**04 25 36.5**	**-1.8**
GUMO				IAmb	IAmb	04 25 54.4	
	comp=Z,391nm,1.1s						
KDU	**Kakadu**	**22.84**	**254**	P	**P**	**04 25 38.0**	**-1.0**
	baz=23,SNR=50						
FAKI	**Fak Fak**	**22.97**	**279**	P	**P**	**04 25 40.8**	**+0.5**
	comp=Z,29μmcomp=Z,16μmcomp=Z,399nm,2.5s						
FAKI	**Fak Fak**	**22.97**	**279**	P	**P**	**04 25 38.0**	**-2.3**
FAKI				IAmb	IAmb	04 25 53.5	
	comp=Z,611nm,1.3s						
SAUI	**Saumlaki**	**23.46**	**266**	P	**P**	**04 25 46.8**	**+1.6**
	comp=Z,41μmcomp=Z,36μmcomp=Z,790nm,2.7s						
SAUI	**Saumlaki**	**23.46**	**266**	P	**P**	**04 25 44.0**	**-1.2**
ARMA	**Armidale**	**23.49**	**187**	P	**P**	**04 25 46.3**	**+0.9**
	baz=24,SNR=49						
ARMA	**Armidale**	**23.49**	**187**	P	**P**	**04 25 44.6**	**-0.8**
ARMA				IAMs_20	IAMs_20	04 33 32.4	
	comp=Z,48μm,20.0s						
WR9	**Warramunga Arr**	**23.63**	**235**	P	**P**	**04 25 46.1**	**-0.6**
	baz=24						
WRAB	**Tennant Creek**	**23.75**	**235**	*de*P	**P**	**04 25 46.8**	**-1.1**
WRAB	**Tennant Creek**	**23.75**	**235**	P	**P**	**04 25 46.1**	**-1.8**
WRAB				IAmb	IAmb	04 25 53.1	
	comp=Z,484nm,1.1s						
WRA	**Warramunga Arr**	**23.77**	**235**	P	**P**	**04 25 46.2**	**-1.9**
	comp=Z,226nm,1.1s,baz=60,slow=9.4,SNR=83						
WRA				PcP	**PcP**	**04 29 33.0**	**+1.8**
	comp=Z,8.5nm,0.5s,baz=60,slow=2.4,SNR=9.6						
WRA				ScP	**ScP**	**04 33 12.1**	**+5.7**
	comp=Z,18nm,1.0s,baz=56,slow=2.7,SNR=9.7						
WRA				LR	LR	04 33 33.1	
	comp=Z,5μm,18.5s,baz=50,slow=33						
WRA	**Warramunga Arr**	**23.77**	**235**	*i* P	**P**	**04 25 46.2**	**-1.9**
WRA				pmax	pmax		
	comp=Z,227nm,1.0s						
FUNA	**Funafuti**	**24.07**	**95**	P	**P**	**04 25 49.5**	**-1.4**
FUNA				IAmb	IAmb	04 26 08.2	
	comp=Z,326nm,1.2s						
MTN	**Manton Dam**	**24.15**	**254**	P	**P**	**04 25 51.7**	**+0.1**
	baz=24,SNR=38						
MTN	**Manton Dam**	**24.15**	**254**	P	**P**	**04 25 50.1**	**-1.6**
MTN				IAMs_20	IAMs_20	04 36 30.5	
	comp=Z,41μm,18.0s						
SIJI	**Sorong**	**24.39**	**283**	P	**P**	**04 25 53.0**	**-0.9**
	comp=Z,434nm,1.1s,baz=87,slow=7.4,SNR=56						
SIJI				LR	LR	04 36 05.9	
	comp=Z,21μm,21.6s,baz=109,slow=38						
MSVF	**Nonsavu**	**24.92**	**117**	*c* *i*P	**P**	**04 26 00.7**	**+2.0**
MSVF				pmax	pmax		
	comp=Z,311nm,1.5s						
MSVF				MLR	MLR		
	comp=Z,27μm,15.0s						
MSVF	**Nonsavu**	**24.92**	**117**	P	**P**	**04 25 59.6**	**+0.9**
CMSA	**Cobar Meteorol**	**25.89**	**198**	P	**P**	**04 26 06.7**	**-0.5**
	baz=26,SNR=79						
ASAR	**Alice Springs**	**26.12**	**228**	P	**P**	**04 26 08.0**	**-1.5**
	comp=Z,38nm,0.8s,baz=61,slow=8.7,SNR=93						
ASAR				ScP	**ScP**	**04 33 18.1**	**+5.1**
	comp=Z,17nm,0.9s,baz=50,slow=2.4,SNR=22						
ASAR				LR	LR	04 35 22.4	
	comp=Z,12μm,19.3s,baz=53,slow=34						
MSAI	**Masohi**	**26.16**	**277**	P	**P**	**04 26 09.2**	**-0.7**
	comp=Z,2μmcomp=Z,27nm,0.8s						
MGCD	**Mangrove Creek**	**26.31**	**187**	P	**P**	**04 26 12.6**	**+1.6**
	baz=26,SNR=18						
AAI	**Ambon**	**26.84**	**276**	P	**P**	**04 26 16.1**	**+0.1**
	comp=Z,15μmcomp=Z,5μmcomp=Z,152nm,1.1s						
KNRA	**Kununurra**	**27.05**	**249**	P	**P**	**04 26 17.6**	**-0.3**
	baz=27,SNR=49						
KNRA	**Kununurra**	**27.05**	**249**	P	**P**	**04 26 17.3**	**-0.6**
KNRA				IAMs_20	IAMs_20	04 37 51.4	
	comp=Z,44μm,18.0s						
STKA	**Stephens Creek**	**27.70**	**205**	P	**P**	**04 26 22.2**	**-1.3**
	baz=28,SNR=54						
STKA	**Stephens Creek**	**27.70**	**205**	P	**P**	**04 26 22.4**	**-1.1**
	comp=Z,36nm,0.7s,baz=16,slow=10,SNR=21						
STKA				ScP	**ScP**	**04 33 22.7**	**+5.2**
	comp=Z,42nm,1.0s,baz=38,slow=4.8,SNR=14						
STKA				LR	LR	04 36 46.6	
	comp=Z,39μm,21.2s,baz=21,slow=35						
STKA	**Stephens Creek**	**27.70**	**205**	P	**P**	**04 26 22.9**	**-0.6**
STKA				pmax	pmax		
	comp=Z,27nm,1.0s						
STKA	**Stephens Creek**	**27.70**	**205**	P	**P**	**04 26 22.9**	**-0.6**
STKA					**ScP**	**04 33 17.8**	**+0.3**
YNG	**Young**	**27.82**	**192**	P	**P**	**04 26 25.5**	**+1.9**
	baz=28,SNR=8.2						
NLAI	**Namlea**	**27.98**	**276**	P	**P**	**04 26 27.5**	**+1.2**
	comp=Z,4μmcomp=Z,80nm,0.9s						
LBMI	**Labu

MRSI Marisa 33.76 281 P **P** **04 27 16.3 -0.9**
comp=Z,3µmcomp=Z,137nm,1.2s
BASI Baing, Sumba 34.12 262 P **P** **04 27 23.0 +2.6**
comp=Z,4µmcomp=Z,5µmcomp=Z,294nm,1.2s
FORT Forrest 34.54 223 P **P** **04 27 22.4 -1.4**
baz=34,SNR=25
FORT Forrest 34.54 223 P **P** **04 27 22.9 -0.9**
BKSI Bulukumba 34.66 271 P **P** **04 27 25.2 +0.2**
comp=Z,9µmcomp=Z,4µmcomp=Z,80nm,1.2s
BNSI Bone 34.76 272 P **P** **04 27 26.8 +0.9**
comp=Z,4µmcomp=Z,86nm,2.0s
KAPI Kappang 35.05 271 P **P** **04 27 26.9 -1.5**
KAPI pmax pmax
comp=Z,485nm,1.6s
KAPI Kappang 35.05 271 P **P** **04 27 26.9 -1.5**
SPSI Sidrap Palu 35.14 273 P **P** **04 27 29.2 0.0**
comp=Z,3µmcomp=Z,65nm,1.0s
TTSI Tana Toraja 35.20 275 P **P** **04 27 29.0 -0.7**
comp=Z,7µmcomp=Z,4µmcomp=Z,112nm,2.0s
WBSI Waikabubak, Su 35.27 263 P **P** **04 27 31.8 +1.5**
comp=Z,5µmcomp=Z,234nm,1.0s
MPSI Mapaga 35.72 280 P **P** **04 27 32.8 -1.4**
comp=Z,2µmcomp=Z,81nm,1.0s
MOO Moorlands 35.94 190 P **P** **04 27 37.2 +1.5**
baz=36,SNR=4.4
JCJ Chichijima 36.09 340 LR LR 04 39 37.5
comp=Z,5µm,21.0s,baz=156,slow=32
TAU Tasmania Unive 36.38 189 P **P** **04 27 40.8 +1.4**
TAU pmax pmax
comp=Z,277nm,1.2s
TAU MLR MLR
comp=Z,13µm,19.0s
TAU Tasmania Unive 36.38 189 P **P** **04 27 40.8 +1.4**
TAU IAmb IAmb 04 27 45.6
comp=Z,277nm,1.1s
MBWA Marble Bar 36.83 244 P **P** **04 27 42.3 -1.3**
MBWA IAmb IAmb 04 27 47.3
comp=Z,215nm,1.6s
MBWA Marble Bar 36.83 244 IAMs_20 IAMs_20 04 43 57.0
comp=Z,20µm,18.0s
PSA00 Pilbara Seismi 36.85 243 P **P** **04 27 42.1 -1.6**
PSA00 IAmb IAmb 04 27 45.7
comp=Z,185nm,1.1s
PLAI Plampang 36.85 265 P **P** **04 27 42.7 -1.1**
comp=Z,11µmcomp=Z,5µmcomp=Z,212nm,1.0s
PSAD3 Pilbara Seismi 36.93 243 IAMs_20 IAMs_20 04 43 44.8
comp=Z,22µm,20.0s
RCP Roxas 36.97 300⇑*e*P **P** **04 27 44.5 -0.3**
URZ Urewera 37.01 150 P **P** **04 27 47.1 +2.2**
comp=Z,57nm,1.1s,baz=39,slow=6.4,SNR=12
URZ LR LR 04 41 10.8
comp=Z,12µm,18.5s,baz=336,slow=33
URZ Urewera 37.01 150 IAmb IAmb 04 27 51.7
comp=Z,118nm,1.2s
QRZ Quartz Range 37.15 158 P **P** **04 27 47.2 +1.2**
QRZ IAmb IAmb 04 28 04.7
comp=Z,249nm,1.5s
BKZ Black Stump Fm 37.44 152 IAMs_20 IAMs_20 04 42 01.6
comp=Z,25µm,18.0s
THZ Tophouse 38.10 158 IAMs_20 IAMs_20 04 41 11.2
comp=Z,24µm,20.0s
BFZ Birch Farm 38.55 154 IAMs_20 IAMs_20 04 43 15.0
comp=Z,26µm,18.0s
FOZ Fox Glacier 38.65 163 IAMs_20 IAMs_20 04 43 27.6
comp=Z,24µm,18.0s
LTZ Lake Taylor 38.76 160 IAMs_20 IAMs_20 04 43 08.7
comp=Z,23µm,18.0s
KHZ Kahutara 38.90 158 P **P** **04 28 00.6 -0.1**
KHZ IAmb IAmb 04 28 17.6
comp=Z,256nm,1.6s
KHZ IAMs_20 IAMs_20 04 41 48.4
comp=Z,29µm,20.0s
RPZ Rata Peaks 39.19 161 P **P** **04 28 04.6 +1.4**
comp=Z,30nm,0.8s,baz=257,slow=5.1,SNR=12
RPZ LR LR 04 43 02.9
comp=Z,16µm,19.1s,baz=331,slow=34
RPZ Rata Peaks 39.19 161 IAMs_20 IAMs_20 04 44 12.0
comp=Z,21µm,18.0s
KMBL Kambalda 39.25 228 P **P** **04 28 02.7 -1.2**
baz=39,SNR=10
DNP Denpasar 39.39 265 P **P** **04 28 04.5 -0.7**
SRBI Singaraja 39.39 266 P **P** **04 28 04.2 -1.1**
comp=Z,6µmcomp=Z,3µmcomp=Z,109nm,1.1s
PGP Puerto Galera 39.43 301⇑*i*P **P** **04 28 09.7 +4.1**
LBZ Lake Benmore 39.53 163 IAMs_20 IAMs_20 04 42 21.0
comp=Z,35µm,20.0s
WKZ Wanaka 39.61 164 IAMs_20 IAMs_20 04 41 35.1
comp=Z,37µm,22.0s
MEEK Meekatharra 39.66 236 P **P** **04 28 06.3 -1.1**
baz=40,SNR=30
ODZ Otahua Downs 40.27 163 P **P** **04 28 11.9 -0.2**
ODZ IAMs_20 IAMs_20 04 42 53.5
comp=Z,32µm,20.0s
JAGI Jajag, Banyuwa 40.44 265 P **P** **04 28 12.0 -2.0**
comp=Z,5µmcomp=Z,4µmcomp=Z,179nm,1.0s
JAGI Jajag, Banyuwa 40.44 265 P **P** **04 28 11.7 -2.2**
JAGI IAmb IAmb 04 28 22.9
comp=Z,168nm,1.0s
GIRL Giralia 42.14 244 P **P** **04 28 28.5 +0.7**
baz=42,SNR=8.9
GIRL Giralia 42.14 244 IAMs_20 IAMs_20 04 47 06.4
comp=Z,27µm,19.0s
JOW Kunigami 42.43 324 P **P** **04 28 33.6 +3.5**
comp=Z,3.9nm,0.8s,baz=118,slow=12,SNR=6.4
JHJ Hachijo jima 2 42.44 341 LR LR 04 46 26.4
comp=Z,5µm,18.3s,baz=162,slow=37
KLBR Kellerberrin 42.44 230 P **P** **04 28 27.9 -2.2**
baz=42,SNR=10
MORW Morawa 42.71 234 P **P** **04 28 32.1 -0.3**
baz=42,SNR=11
MORW Morawa 42.71 234 P **P** **04 28 31.1 -1.2**
BLDU Ballidu 42.81 232 P **P** **04 28 34.4 +1.2**
baz=43,SNR=6.1
PBKI Pangkalan Bun 43.32 273 P **P** **04 28 41.0 +3.5**
comp=Z,25µmcomp=Z,702nm,1.1s
PCJI Pacitan 43.39 266 P **P** **04 28 37.2 -0.8**
comp=Z,6µmcomp=Z,427nm,1.1s
NWAO Narrogin (SRO) 43.45 228 P **P** **04 28 38.9 +0.6**
baz=43,SNR=4.9
NWAO Narrogin (SRO) 43.45 228 LR LR 04 45 50.9
comp=Z,8µm,20.4s,baz=64,slow=35
NWAO Narrogin (SRO) 43.45 228 P **P** **04 28 37.3 -1.0**
NWAO pmax pmax
comp=Z,117nm,1.2s
NWAO Narrogin (SRO) 43.45 228 P **P** **04 28 37.2 -1.0**
NWAO IAmb IAmb 04 28 42.9
comp=Z,118nm,1.2s
WOJI Wonogiri, Jawa 43.65 266 P **P** **04 28 41.1 +1.0**
comp=Z,5µmcomp=Z,110nm,0.9s
SBUM Sibu 43.67 281 P **P** **04 28 37.9 -2.5**
MUN Mundaring 43.79 230 P **P** **04 28 40.7 -0.3**
baz=44,SNR=12
UGM Wanagama 44.04 266 P **P** **04 28 45.1 +1.7**
comp=Z,9µmcomp=Z,7µmcomp=Z,318nm,1.4s
UGM Wanagama 44.04 266 P **P** **04 28 41.7 -1.7**
UGM IAmb IAmb 04 28 52.4
comp=Z,148nm,1.0s
MIDW Midway 44.06 36 IAMs_20 IAMs_20 04 44 11.0
comp=Z,24µm,20.0s
SMRI Semarang 44.16 267 P P 04 28 54.3 +10
RKGY Rocky Gully 44.44 226 P **P** **04 28 46.3 +0.1**
baz=44,SNR=5.6
TWG Pinlang 44.47 313 IAmb IAmb 04 28 58.6
comp=Z,128nm,0.8s
YULB Yu-li 44.66 314 P **P** **04 28 46.4 -1.7**
YULB IAmb IAmb 04 29 02.8
comp=Z,114nm,1.1s
NACB Ninganchiao 44.94 315 P **P** **04 28 48.8 -1.5**
TPUB Ta-pu 45.09 313 P **P** **04 28 49.4 -2.2**
TPUB IAmb IAmb 04 29 00.2
comp=Z,124nm,1.0s
SSLB Suanglung 45.15 314 IAmb IAmb 04 28 59.5
comp=Z,95nm,1.0s
KSM Kuching 45.33 279 P **P** **04 28 52.2 -1.5**
KSM Kuching 45.33 279 P **P** **04 28 53.0 -0.6**
TATO Taipei 45.52 315 P **P** **04 28 53.2 -1.7**
RAR Rarotonga 45.95 113 P **P** **04 29 00.3 +2.0**
comp=Z,32nm,0.9s,baz=243,slow=4.5,SNR=3.2
RAR LR LR 04 45 49.6
comp=Z,2µm,19.0s,baz=282,slow=33
JNU Nakatsue 46.01 332 P **P** **04 28 57.9 -0.8**
comp=Z,43nm,1.0s,baz=136,slow=4.0,SNR=11
JNU LR LR 04 46 29.8
comp=Z,2µm,20.4s,baz=136,slow=34
JNU Nakatsue 46.01 332 P **P** **04 28 56.2 -2.5**
JNU IAmb IAmb 04 29 14.0
comp=Z,67nm,1.0s

MJAR Matsushiro Arr 46.09 341 P **P** **04 28 58.5 -0.7**
comp=Z,2.6nm,0.5s,baz=156,slow=8.3,SNR=6.1
MJAR ScP **ScP** **04 34 31.0 +5.9**
comp=Z,1.2nm,0.3s,baz=129,slow=3.3,SNR=2.2
MJAR LR LR 04 49 20.0
comp=Z,3µm,18.1s,baz=205,slow=38
MAJO Matsushiro 46.09 341⇓*e*P **P** **04 28 58.6 -0.6**
MAJO pmax pmax
comp=Z,25nm,1.1s
MAT Matsushiro 46.09 341 P **P** **04 28 58.2 -1.0**
MAT S **S** **04 35 43.2 +1.1**
CISI Cisompet, Garu 46.74 266 P **P** **04 29 04.8 0.0**
comp=Z,7µmcomp=Z,7µmcomp=Z,322nm,1.0s
CNJI Cibinong 47.43 267 P **P** **04 29 10.3 +0.2**
comp=Z,7µmcomp=Z,467nm,1.4s
QZH Quanzhou 47.56 313⇓*i*P **P** **04 29 12.5 +1.6**
QZH S **S** **04 36 06.7 +3.3**
QZH pmax pmax
comp=Z,140nm,1.2s
QZH pmax pmax
comp=Z,880nm,4.9s
QZH LR LR
comp=Z,4µm,17.4s
QZH LR LR
comp=Z,2µm,16.6s
QZH LR LR
comp=Z,6µm,17.5s
DBJI Dramaga 47.84 268 P P 04 29 27.6 +14
XMAS Kiritimati 48.36 81 P **P** **04 29 17.2 0.0**
XMAS IAmb IAmb 04 29 26.3
comp=Z,84nm,1.0s
HKC Hong Kong Obse 49.43 307⇓P **P** **04 29 28.0 +2.7**
SSE Sheshan 49.79 321 P **P** **04 29 30.1 +2.2**
SSE S **S** **04 36 39.1 +4.4**
SSE pmax pmax
comp=Z,29nm,1.2s
SSE pmax pmax
comp=Z,450nm,4.5s
SSE LR LR
comp=Z,1µm,13.1s
TJN Taejon 50.33 331*de*P **P** **04 29 31.0 -0.9**
GZH Guangzhou 50.49 308 P **P** **04 29 35.3 +1.9**
GZH S **S** **04 36 48.2 +3.5**
GZH pmax pmax
comp=Z,2µm,7.6s
GZH LR LR
comp=Z,3µm,14.4s
GZH LR LR
comp=Z,5µm,18.1s
LWLI Liwa 50.63 269 P **P** **04 29 35.9 +1.1**
comp=Z,7µmcomp=Z,110nm,1.0s
TPRI Tanjung Pinang 50.92 277 P **P** **04 29 37.6 +0.8**
comp=Z,7µmcomp=Z,174nm,1.4s
KSRS Korea Array 50.93 332 P **P** **04 29 35.5 -0.9**
comp=Z,13nm,1.0s,baz=149,slow=8.2,SNR=16
KSRS ScP **ScP** **04 34 50.4 +4.8**
comp=Z,2.7nm,0.9s,baz=144,slow=5.9,SNR=4.9
KSRS LR LR 04 50 33.4
comp=Z,2µm,18.3s,baz=134,slow=35
QIZ Qiongzhong 51.43 301 P **P** **04 29 39.5 -1.0**
QIZ S **S** **04 37 00.2 +2.3**
QIZ pmax pmax
comp=Z,10.0nm,1.6s
QIZ pmax pmax
comp=Z,1µm,8.0s
QIZ LR LR
comp=Z,2µm,18.2s
QIZ LR LR
comp=Z,5µm,20.2s
QIZ LR LR
comp=Z,8µm,22.0s
YUK Yuzh-Kuril'sk 51.47 352 *e*P **P** **04 29 41.5 +1.2**
YUK *e* 04 31 39.3
YUK *e*S **S** **04 36 59.5 +1.9**
YUK SS **SS** **04 40 33.9 -0.3**
YUK MLR MLR
comp=Z,6µm,18.0s
YUK MLR MLR
comp=N,8µm,15.0s
YUK MLR MLR
comp=E,3µm,15.0s
MYKOM **Kota Tinggi 51.73 278** P **P** **04 29 43.0 +0.1**
NJ2 Nanjing 51.90 321 *e*P **P** **04 29 45.2 +1.4**
NJ2 pP **pP** **04 29 54.5 +0.6**
NJ2 S **S** **04 37 06.0 +2.1**
NJ2 pmax pmax
comp=E,77nm,1.9s
NJ2 pmax pmax
comp=E,1µm,3.5s
NJ2 LR LR
comp=E,6µm,17.5s
NJ2 LR LR
comp=E,7µm,17.1s
NJ2 LR LR
comp=E,6µm,18.5s
ASAJ Asahikawa 52.10 349 P **P** **04 29 45.1 0.0**
comp=E,12nm,0.6s,baz=165,slow=20,SNR=2.8
ASAJ LR LR 04 50 29.4
comp=E,6µm,19.5s,baz=172,slow=34
KSI Kapahiang 52.21 271 P P 04 29 58.7 +12
KUR Kuril'sk 52.40 354*di*P P 04 29 53.9 +6.7
KUR S **S** **04 37 17.5 +7.3**
KUR pmax pmax
comp=Z,2µm,10.5s
KUR pmax pmax
comp=Z,166nm,1.9s
KUR pmax pmax
comp=E,105nm,1.6s
KUR MLR MLR
comp=Z,3µm,13.0s
KUR MLR MLR
comp=N,2µm,10.0s
KUR MLR MLR
comp=E,1µm,15.0s
KEKH Kekaha 52.96 56 P **P** **04 29 52.3 +0.4**
SDSI Sungai Dareh 53.70 274 P **P** **04 29 56.9 -0.5**
comp=E,5µmcomp=E,281nm,1.4s
WHN Wuhan 53.92 316⇑P **P** **04 29 59.3 +0.6**
WHN S **S** **04 37 33.8 +2.3**
WHN pmax pmax
comp=E,94nm,1.0s
WHN pmax pmax
comp=E,2µm,7.9s
WHN LR LR
comp=E,3µm,10.7s
WHN LR LR
comp=E,5µm,10.8s
WHN LR LR
comp=E,13µm,26.1s
KIP Kipapa 54.11 57⇓*e*P **P** **04 30 01.8 +1.5**
KIP pmax pmax
comp=Z,235nm,1.8s
KIP MLR MLR
comp=Z,6µm,17.0s
KIP Kipapa 54.11 57 P **P** **04 29 59.7 -0.6**
VLA Vladivostok 54.12 339*de*P **P** **04 29 59.9 0.0**
VLA pmax pmax
comp=Z,47nm,0.8s
VLA MLR MLR
comp=Z,3µm,17.0s
BKNI Bangkinang 54.26 275 P **P** **04 30 03.0 +1.4**
comp=Z,7µmcomp=Z,8µmcomp=Z,286nm,1.7s
TEY Ternei 54.37 344⇓*e*P **P** **04 30 02.2 +0.5**
TEY *e* 04 37 34.4
TEY pmax pmax
comp=Z,10.0nm,1.8s
PDSI Padang 54.66 274 P **P** **04 30 03.6 -0.9**
comp=Z,3µmcomp=Z,85nm,1.4s
YSS Yuzh-Sakhalins 54.81 350⇑*e*P **P** **04 30 06.3 +1.4**
YSS *e* 04 31 07.2
YSS *e* 04 32 03.7
YSS *e*S **S** **04 37 45.3 +2.4**
YSS *e*PS **PnS** **04 38 06.9 +10**
YSS *e*SSS SSS 04 43 28.7
YSS pmax pmax
comp=Z,20nm,0.7s
YSS pmax pmax
comp=Z,500nm,9.7s
YSS MLR MLR
comp=N,6µm,16.0s
YSS MLR MLR
comp=E,2µm,16.0s
PPSI Pulau Pagai 54.87 272 P P 04 30 22.1 +16
IPM Ipoh 55.01 280 P **P** **04 30 05.8 -1.3**
IPM IAmb IAmb 04 30 22.7
comp=Z,80nm,1.1s

IPM Ipoh 55.01 280 P **P** **04 30 07.0 -0.1**
USA0B Ussuriysk Arra 55.03 340*de*P **P** **04 30 06.0 -0.6**
USRK Ussuriysk Ar. 55.03 340 P **P** **04 30 06.0 -0.5**
comp=Z,15nm,1.1s,baz=175,slow=6.7,SNR=16
USRK LR LR 04 50 27.8
comp=Z,3µm,21.6s,baz=145,slow=33
PPT Papeete 55.04 106 LR LR 04 49 29.8
comp=Z,4µm,19.8s,baz=270,slow=31
PPT2 Papeete2 55.04 106 *e*S **S** **04 37 48.3 +1.1**
PPT2 comp=Z,4µm,29.8s *e*LQ LQ 04 43 50.4
PPT2 comp=Z,14µm,28.8s *e*LR LR 04 46 07.4
comp=Z,7µm,24.0s
DL2 Dalian 55.16 329 P **P** **04 30 03.7 -3.9**
DL2 S **S** **04 37 47.7 -0.2**
DL2 pmax pmax
comp=Z,49nm,1.9s
DL2 pmax pmax
comp=Z,1µm,10.2s
DL2 LR LR
comp=Z,5µm,16.9s
DL2 LR LR
comp=Z,4µm,16.8s
DL2 LR LR
comp=Z,6µm,15.9s
KHLH Kahului Airpor 55.22 59 IAmb IAmb 04 30 11.8
comp=Z,155nm,1.1s
KHLH IAMs_20 IAMs_20 04 49 33.1
comp=Z,13µm,22.0s
HUH Hualalai 55.23 60 IAmb IAmb 04 30 19.5
comp=Z,157nm,1.1s
HLK Haleakala 55.31 59 IAmb IAmb 04 30 12.8
comp=Z,132nm,1.0s
AIN Ainahou 55.43 61 IAmb IAmb 04 30 22.4
comp=Z,172nm,1.1s
HPAH Hawaii Prepara 55.49 60 IAMs_20 IAMs_20 04 54 05.2
comp=Z,11µm,18.0s
POHA Pohakuloa 55.52 60 P **P** **04 30 09.7 -1.1**
POHA Pohakuloa 55.52 60 IAMs_20 IAMs_20 04 57 39.0
comp=Z,11µm,18.0s
KULM Kulim 55.55 281 IAmb IAmb 04 30 16.0
comp=Z,84nm,1.1s
KULM Kulim 55.55 281 P **P** **04 30 10.0 -0.9**
TBI Tubuai 55.71 113 *e*S **S** **04 37 56.4 +0.5**
comp=Z,2µm,34.0s
TBI *e*LQ LQ 04 44 04.0
comp=Z,36µm,29.8s
TBI *e*LR LR 04 46 30.6
comp=Z,19µm,34.5s
TIA Tai'an 55.75 323 P **P** **04 30 11.2 -0.7**
TIA S **S** **04 38 00.0 +4.0**
TIA pmax pmax
comp=Z,420nm,2.8s
TIA LR LR
comp=Z,4µm,16.2s
TIA LR LR
comp=Z,3µm,18.1s
TIA LR LR
comp=Z,4µm,20.1s
MNSI Mandailing Nat 55.78 276 P **P** **04 30 11.0 -1.5**
comp=Z,5µmcomp=Z,102nm,1.1s
SISI Saibi 55.96 273 P **P** **04 30 14.5 +0.7**
comp=Z,3µmcomp=Z,93nm,1.2s
MDJ Mudanjiang 56.24 338 P **P** **04 30 15.5 +0.3**
MDJ S **S** **04 38 01.4 -0.7**
MDJ pmax pmax
comp=Z,27nm,1.8s
MDJ pmax pmax
comp=Z,400nm,7.5s
MDJ LR LR
comp=Z,4µm,15.7s
MDJ LR LR
comp=Z,3µm,15.2s
MDJ LR LR
comp=Z,5µm,18.0s
MDJ Mudanjiang 56.24 338 P **P** **04 30 13.6 -1.6**
PMOR Pomariorio Ree 56.54 103 *e*P **P** **04 30 18.8 +0.9**
comp=Z,202nm,1.2s
RPSI Rantau Prapat 56.74 278 IAmb IAmb 04 30 30.9
comp=Z,186nm,1.8s
CN2 Changchun 57.19 335 *e*P **P** **04 30 20.6 -1.4**
CN2 *es*P pP 04 30 32.1 -0.4
CN2 *e*S **S** **04 38 14.4 -0.3**
CN2 pmax pmax
comp=Z,30nm,1.2s
CN2 pmax pmax
comp=Z,1µm,10.0s
CN2 LR LR
comp=Z,4µm,22.0s
CN2 LR LR
comp=Z,5µm,22.0s
CN2 LR LR
comp=Z,7µm,25.0s
GYA Guiyang 57.43 307⇑*i*P **P** **04 30 24.8 +0.6**
GYA PP **PP** **04 32 32.1 +0.1**
GYA S **S** **04 38 20.9 +2.2**
GYA pmax pmax
comp=Z,60nm,1.1s
GYA pmax pmax
comp=Z,880nm,4.4s
GYA LR LR
comp=Z,2µm,18.9s
GYA LR LR
comp=Z,2µm,20.0s
GYA LR LR
comp=Z,5µm,16.8s
SKR Severo-Kuril's 57.47 1 *e*P **P** **04 30 23.9 +0.1**
SKR *e* 04 31 21.7
SKR *e* 04 32 32.8
SKR *e*S **S** **04 38 20.5 +2.4**
SKR *e* 04 40 16.6
SKR pmax pmax
comp=Z,68nm,1.1s
SKR pmax pmax
comp=Z,1µm,12.9s
SKR pmax pmax
comp=Z,1µm,11.2s
SKR MLR MLR
comp=Z,2µm,17.0s
GSI Gunungsitoli 57.84 276 P **P** **04 30 26.2 -1.0**
comp=Z,20µmcomp=Z,414nm,1.0s
GSI Gunungsitoli 57.84 276 IAmb IAmb 04 30 42.4
comp=Z,162nm,1.1s
KCSI Kotacane, Aceh 58.02 279 P **P** **04 30 28.0 -0.4**
comp=Z,2µmcomp=Z,51nm,0.7s
TYV Tymovskoe 58.62 351 *e*P **P** **04 30 32.5 +0.7**
TYV *e*S **S** **04 38 38.4 +5.3**
TYV pmax pmax
comp=Z,600nm,6.9s
TYV pmax pmax
comp=Z,28nm,1.4s
TYV smax smax
comp=E,2µm,8.2s
BJI Beijing 58.91 326 P **P** **04 30 36.6 +2.5**
BJI PcP **PcP** **04 31 23.4 +0.3**
BJI S **S** **04 38 40.0 +2.7**
BJI pmax pmax
comp=E,24nm,0.8s
BJI LR LR
comp=E,3µm,20.0s
BJI LR LR
comp=E,3µm,21.0s
BJI LR LR
comp=E,4µm,29.2s
LHMI Lhok Sumawe 59.15 280 P **P** **04 30 39.7 +3.5**
comp=E,7µmcomp=E,5µmcomp=E,182nm,1.6s
MLSI Meulaboh, Aceh 59.49 279 P **P** **04 30 39.5 +0.8**
comp=E,3µmcomp=E,140nm,1.2s
KLR Kul'dur 59.57 343 P **P** **04 30 37.9 -0.6**
comp=E,18nm,1.1s,baz=149,slow=5.0,SNR=18
KLR LR LR 04 54 19.0
comp=E,2µm,21.8s,baz=154,slow=34
KLR Kul'dur 59.57 343*ce*P **P** **04 30 38.2 -0.3**
KLR pmax pmax
comp=Z,54nm,1.0s
TIY Taiyuan 59.58 322 *e*P **P** **04 30 39.8 +0.9**
TIY S **S** **04 38 44.1 -2.1**
TIY pmax pmax
comp=Z,41nm,1.1s
TIY pmax pmax
comp=Z,390nm,5.2s
TIY LR LR
comp=Z,2µm,16.6s
TIY LR LR
comp=Z,3µm,15.7s
TIY LR LR

comp=Z,3µm,17.4s
XAN Xi'an 59.69 316 P P 04 30 38.8 -0.9
XAN PcP **PcP 04 31 27.5 +1.1**
XAN PcS **PcS 04 35 26.1 -2.6**
XAN S **S 04 38 47.7 0.0**
XAN pmax pmax
comp=Z,81nm,0.9s
XAN pmax pmax
comp=Z,830nm,3.5s
XAN LR LR
comp=Z,4µm,17.7s
XAN LR LR
comp=Z,4µm,19.6s
GRNR Gornyy 59.74 346 ||*i* P **P 04 30 43.7 +4.0**
GRNR pmax pmax
comp=Z,10.0nm,1.2s
PET Petropavlovsk 59.89 3*c i* P **P 04 30 42.4 +1.8**
PET *e* 04 32 57.1
PET *e*S **S 04 38 51.3 +1.9**
PET *e*PS **PnS 04 39 09.5 +2.8**
PET 04 45 23.4
PET pmax pmax
comp=Z,700nm,13.8s
PET pmax pmax
comp=Z,74nm,0.8s
PET pmax pmax
comp=Z,2µm,11.8s
PEA0B Petropavlovsk- 59.94 2*c i* P **P 04 30 40.7 -0.2**
PETK Petropavlovsk- 59.94 2 P **P 04 30 41.2 +0.2**
comp=Z,32nm,0.8s,baz=168,slow=7.6,SNR=31
PETK LR LR 04 52 27.6
comp=Z,7µm,21.9s,baz=176,slow=32
KMI Kunming 59.99 304 P **P 04 30 40.0 -2.1**
KMI pP sP 04 30 55.6 -0.7
KMI PP **PP 04 32 57.6 +2.7**
KMI S **S 04 38 44.3 -7.9**
KMI pmax pmax
comp=Z,120nm,2.0s
KMI LR LR
comp=Z,6µm,20.2s
KMI LR LR
comp=Z,7µm,20.8s
KMI LR LR
comp=Z,10µm,25.6s
KMI Kunming 59.99 304 P **P 04 30 39.5 -2.6**
KMI pmax pmax
comp=Z,342nm,1.5s
KMI Kunming 59.99 304 P **P 04 30 39.5 -2.6**
CMAR Chiang Mai Arr 60.75 296 P **P 04 30 48.0 +0.8**
comp=Z,23nm,0.9s,baz=115,slow=5.2,SNR=26
CMAR LR LR 04 55 00.6
comp=Z,2µm,21.5s,baz=114,slow=34
CHTO Chiang Mai 60.87 296 P **P 04 30 46.7 -1.3**
CHTO pmax pmax
comp=Z,93nm,1.1s
CHTO Chiang Mai 60.87 296 P **P 04 30 46.7 -1.3**
CHTO IAmb IAmb 04 31 01.6
comp=Z,93nm,1.1s
NKL Nikolayevsk 61.15 350 *e*P P 04 30 54.7 +5.6
NKL *e*S **S 04 39 12.9 +7.4**
NKL pmax pmax
comp=Z,36nm,0.8s
NKL pmax pmax
comp=N,5.0nm,1.1s
NKL pmax pmax
comp=E,2.0nm,0.9s
NKL pmax pmax
comp=Z,116nm,8.9s
SMY Shemya 61.71 13 IAMs_20 IAMs_20 04 55 00.1
comp=Z,12µm,20.0s
CD2 Chengdu 61.79 311 P **P 04 30 53.9 -0.2**
CD2 S **S 04 39 16.6 +1.9**
CD2 SS **SS 04 43 21.6 +4.3**
CD2 pmax pmax
comp=Z,470nm,0.7s
CD2 pmax pmax
comp=Z,2µm,6.8s
CD2 LR LR
comp=Z,5µm,18.6s
CD2 LR LR
comp=Z,5µm,17.2s
CD2 LR LR
comp=Z,9µm,18.6s
HHC Hu-ho-hao-te 62.08 324 P **P 04 30 58.2 +2.3**
HHC sP pwP 04 31 11.5 -0.4
HHC S **S 04 39 18.6 +0.5**
HHC pmax pmax
comp=Z,23nm,0.8s
HHC pmax pmax
comp=Z,370nm,5.1s
HHC LR LR
comp=Z,2µm,18.0s
HHC LR LR
comp=Z,2µm,18.7s
HHC LR LR
comp=Z,3µm,19.4s
BTO Baotou 62.84 323 *e*P **P 04 31 04.2 +3.2**
ADK Adak 63.50 19 P **P 04 31 03.9 -1.1**
ADK pmax pmax
comp=Z,106nm,1.1s
ADK Adak 63.50 19 P **P 04 31 03.9 -1.1**
ADK IAmb IAmb 04 31 15.0
comp=Z,106nm,1.1s
ADK Adak 63.50 19 IAMs_20 IAMs_20 04 55 26.8
comp=Z,16µm,20.0s
HIA Hailar 63.92 335 P **P 04 31 06.2 -1.7**
HIA pmax pmax
comp=Z,34nm,0.8s
HIA MLR MLR
comp=Z,5µm,19.0s
HIA Hailar 63.92 335 P **P 04 31 06.2 -1.7**
HIA IAmb IAmb 04 31 17.9
comp=Z,34nm,0.8s
LZH Lanzhou 64.30 316 ⇑P **P 04 31 11.8 +1.0**
LZH pP pP 04 31 16.0 -5.6
LZH S **S 04 39 49.4 +3.3**
LZH sS pS 04 39 58.1 -0.4
LZH pmax pmax
comp=Z,95nm,1.6s
LZH pmax pmax
comp=Z,2µm,6.5s
LZH LR LR
comp=Z,4µm,16.3s
LZH LR LR
comp=Z,3µm,15.2s
LZH LR LR
comp=Z,4µm,17.9s
ATKA Atka Island 64.61 20 IAMs_20 IAMs_20 04 55 49.1
comp=Z,17µm,20.0s
ZEA Zeya 64.88 342 *e*P **P 04 31 13.0 -1.0**
ZEA *e*S **S 04 39 52.0 -0.3**
ZEA *e* 04 41 04.0
ZEA pmax pmax
comp=N,57nm,1.2s
ZEA pmax pmax
comp=E,29nm,1.2s
ZEA pmax pmax
comp=Z,85nm,1.2s
ZEA pmax pmax
comp=Z,1µm,12.0s
ZEA smax smax
comp=E,2µm,12.0s
ZEA smax smax
comp=N,900nm,14.0s
MA2 Magadan 66.46 358*d i* P **P 04 31 24.0 0.0**
MA2 pmax pmax
comp=Z,58nm,0.8s
MA2 MLR MLR
comp=Z,3µm,18.0s
MA2 Magadan 66.46 358 P **P 04 31 22.1 -1.9**
MA2 IAmb IAmb 04 31 32.8
comp=Z,60nm,0.8s
CASY Casey 66.56 198 P **P 04 31 24.6 -0.1**
CASY IAmb IAmb 04 31 30.5
comp=Z,85nm,1.3s
CASY Casey 66.56 198 IAMs_20 IAMs_20 04 57 07.5
comp=Z,12µm,20.0s
NIKH Nikolski High 67.18 23 IAMs_20 IAMs_20 04 56 00.3
comp=Z,14µm,20.0s
GTA Gaotai 68.72 317 ⇑P **P 04 31 39.8 +0.9**
GTA pP pP 04 31 44.0 -5.9
GTA S **S 04 40 41.9 +2.3**
GTA pmax pmax
comp=Z,39nm,1.5s
GTA pmax pmax
comp=Z,1µm,9.0s
GTA LR LR
comp=Z,2µm,18.7s
GTA LR LR
comp=Z,3µm,18.1s
GTA LR LR
comp=Z,3µm,18.4s
UNV Unalaska Valle 68.76 23 IAMs_20 IAMs_20 04 55 51.0
comp=Z,12µm,21.0s
RKT Rikitea 68.98 112 *e*S **S 04 40 42.8 -0.1**
comp=Z,2µm,26.8s
RKT *e*LQ LQ 04 49 42.9
comp=Z,10µm,30.2s
RKT *e*LR LR 04 52 39.3
comp=Z,18µm,26.0s
ULN Ulaanbaatar 68.99 328*d i* P **P 04 31 39.4 -1.1**
ULN pmax pmax
comp=Z,71nm,1.4s
ULN Ulaanbaatar 68.99 328 P **P 04 31 39.8 -0.7**
ULN IAmb IAmb 04 31 52.0
comp=Z,47nm,1.1s
AKUT Akutan 69.27 23 IAMs_20 IAMs_20 04 55 54.4
comp=Z,10µm,22.0s
AGT Agartala 69.28 299 *ex* **P 04 31 45.5 +2.9**
SONM Songino Array 69.33 327 P **P 04 31 42.4 -0.2**
comp=Z,40nm,1.2s,baz=141,slow=5.3,SNR=28
SONM PKPPKP **P'P'df 04 59 53.9 +3.1**
comp=Z,2.8nm,1.0s,baz=298,slow=1.6,SNR=4.1
SONM LR LR 05 02 54.7
comp=Z,4µm,18.4s,baz=119,slow=37
SEY Seymchan 69.77 359 P **P 04 31 45.3 +0.5**
comp=Z,17nm,1.1s,baz=167,slow=5.0,SNR=17
SEY Seymchan 69.77 359 ||*i* P **P 04 31 44.2 -0.5**
FALS False Pass 70.73 24 IAMs_20 IAMs_20 04 59 47.2
comp=Z,11µm,20.0s
LSA Lhasa 71.24 304 P **P 04 31 55.4 +0.3**
LSA S **S 04 41 12.6 +2.4**
LSA pmax pmax
comp=Z,190nm,1.5s
LSA LR LR
comp=Z,3µm,17.8s
LSA LR LR
comp=Z,6µm,16.4s
LSA LR LR
comp=Z,9µm,22.1s
YAK Yakutsk 71.57 348 P **P 04 31 55.9 +0.2**
comp=Z,9.1nm,0.4s,baz=332,slow=6.2,SNR=7.2
YAK LR LR 05 01 28.7
comp=Z,2µm,21.7s,baz=160,slow=34
YAK Yakutsk 71.57 348 *e*P **P 04 31 55.8 +0.2**
YAK *e**PP **pP 04 32 06.2 -0.8**
YAK *e* 04 32 16.3
YAK *e* 04 34 30.9
YAK *e*PPP PPP 04 36 17.9
YAK *e*S **S 04 41 13.3 +1.7**
YAK *e* 04 41 56.0
YAK pmax pmax
comp=Z,62nm,1.5s
YAK pmax pmax
comp=N,37nm,1.6s
YAK pmax pmax
comp=E,15nm,1.6s
YAK pmax pmax
comp=Z,133nm,2.6s
YAK pmax pmax
comp=E,45nm,2.5s
YAK pmax pmax
comp=N,90nm,2.6s
YAK smax smax
comp=N,359nm,4.4s
YAK smax smax
comp=E,716nm,4.3s
YAK MLR MLR
comp=Z,2µm,18.0s
YAK MLR MLR
comp=N,3µm,18.0s
YAK MLR MLR
comp=E,591nm,16.0s
YAK Yakutsk 71.57 348 P **P 04 31 54.9 -0.7**
YAK IAmb IAmb 04 32 08.0
comp=Z,62nm,1.0s
CNBA Chernabura Isl 72.30 26 IAMs_20 IAMs_20 04 58 32.1
comp=Z,8µm,20.0s
ZAK Zakamensk 72.48 328 *e*P **P 04 32 00.2 -1.4**
ZAK pmax pmax
comp=Z,56nm,1.2s
BOD Bodaibo 72.62 338 *e*P **P 04 31 59.9 -2.2**
BOD pmax pmax
comp=Z,34nm,2.1s
TLY Talaya 73.06 329 P **P 04 32 06.4 +1.5**
comp=Z,4.4nm,0.5s,baz=350,slow=20,SNR=3.3
TLY LR LR 05 04 20.1
comp=Z,2µm,19.2s,baz=124,slow=36
TLY Talaya 73.06 329*c i* P **P 04 32 04.4 -0.5**
TLY *e*S **S 04 41 30.5 +1.3**
TLY *e* 04 42 13.5
TLY *e*SS **SS 04 46 11.0 0.0**
TLY pmax pmax
comp=Z,45nm,0.9s
TLY MLR MLR
comp=Z,6µm,14.0s
TLY Talaya 73.06 329 P **P 04 32 03.8 -1.1**
BWNR Bhubaneshwar 73.15 294 *ex* **P 04 32 06.4 +0.4**
BWNR IAmb IAmb 04 32 12.3
comp=Z,117nm,0.6s
TAPN Taplejung 73.37 301 *e*P **P 04 32 08.0 +0.4**
comp=Z,650nm,1.0s
PTCN Pitcairn Islan 73.46 114 IAMs_20 IAMs_20 04 57 34.1
comp=Z,7µm,20.0s
ODAN Odare 73.50 301 *e*P **P 04 32 08.9 +0.6**
comp=Z,557nm,0.8s
RAMN Ramite 74.20 300 *e*P **P 04 32 12.7 +0.3**
comp=Z,139nm,0.8s
MOY Mondy 74.40 328 *e*P **P 04 32 12.4 -0.5**
MOY pmax pmax
comp=Z,80nm,2.8s
JIRN Jiri 74.75 301 *e*P **P 04 32 15.3 -0.5**
comp=Z,404nm,1.0s
GAMB Gambell 74.95 15 IAmb IAmb 04 32 20.5
comp=Z,95nm,1.5s
GAMB IAMs_20 IAMs_20 04 59 11.1
comp=Z,9µm,22.0s
GUN Gumba 75.09 301 *e*P **P 04 32 17.2 -0.5**
comp=Z,713nm,1.0s
BILL Bilibino 75.30 4*c i* P **P 04 32 17.4 -0.2**
BILL pmax pmax
comp=Z,97nm,1.0s
BILL MLR MLR
comp=Z,5µm,18.0s
BILL Bilibino 75.30 4 P **P 04 32 17.3 -0.3**
BILL IAmb IAmb 04 32 27.3
comp=Z,82nm,0.9s
PKI Pulchoki 75.39 301 *e*P **P 04 32 18.8 -0.6**
comp=Z,401nm,1.1s
PKIN Phulchoki 75.41 301 *e*P **P 04 32 19.4 0.0**
comp=Z,250nm,1.1s
KKN Kakani 75.56 301 *e*P **P 04 32 19.8 -0.4**
comp=Z,330nm,0.9s
DMN Daman 75.66 301 *e*P **P 04 32 20.8 0.0**
comp=Z,732nm,1.0s
GKN Gorkha 76.17 301 *e*P **P 04 32 23.3 -0.3**
comp=Z,822nm,1.1s
PVM Polavaram 76.32 290 *e*P **P 04 32 24.1 -0.4**
PVM IVmBBB 04 32 27.9
comp=Z,612nm,3.2s
OHAK Old Harbor 76.56 26 IAmb IAmb 04 32 35.0
comp=Z,69nm,1.0s
OHAK IAMs_20 IAMs_20 05 02 44.6
comp=Z,7µm,19.0s
KOLN Koldanda 76.99 300 *e*P **P 04 32 28.0 -0.3**
comp=Z,457nm,1.0s
DANN Dangsing 77.01 301 *e*P **P 04 32 27.7 -0.8**
MYLAV Mylavaram 77.15 289 *e*P **P 04 32 28.7 -0.4**
MYLAV IVmB_BB 04 32 31.1
comp=Z,610nm,3.2s
KDAK Kodiak Island 77.20 26 P **P 04 32 29.2 +0.6**
comp=Z,28nm,0.9s,baz=245,slow=2.9,SNR=9.2
KDAK Kodiak Island 77.20 26 P **P 04 32 28.9 +0.4**
KDAK IAmb IAmb 04 32 39.1
comp=Z,54nm,0.9s
ANM Nome 77.26 16 IAmb IAmb 04 32 38.5
comp=Z,67nm,1.2s
ANM IAMs_20 IAMs_20 05 03 31.4
comp=Z,10µm,19.0s
SKHT Srikalahasti 77.46 286 *e*P **P 04 32 31.0 +0.2**
SKHT IVmBBB 04 32 33.6
comp=Z,413nm,1.8s
PYUN Piuthan 77.60 301 *e*P **P 04 32 31.5 -0.2**
comp=Z,914nm,1.2s
ADKI Addanki 77.60 288 *e*P **P 04 32 31.1 -0.6**
ADKI IVmBBB 04 32 35.2
comp=Z,535nm,3.3s
SVW2 Sparrevohn 78.03 22 IAmb IAmb 04 32 39.9
comp=Z,192nm,1.8s
SVW2 IAMs_20 IAMs_20 05 01 11.9
comp=Z,9µm,22.0s
NJS Nagarjunasagar 78.36 288 *e*P **P 04 32 35.1 -0.8**
NJS IVmB_BB 04 32 37.4
comp=Z,512nm,3.4s
SRLM Srisailam 78.67 288 *e*P **P 04 32 36.8 -0.8**
SRLM IVmB_BB 04 32 39.1
comp=Z,632nm,3.2s
HOM Homer 78.70 25 IAMs_20 IAMs_20 05 02 39.9
comp=Z,8µm,21.0s
CNPM China Poot 78.80 25 IAMs_20 IAMs_20 05 02 30.5
comp=Z,9µm,21.0s
WMQ Urumqi 78.81 317 P **P 04 32 39.2 +1.3**
WMQ PcP **pP 04 32 49.9 +1.2**
WMQ S **S 04 42 34.8 +1.8**
WMQ SS **SS 04 47 41.8 +3.3**
WMQ pmax pmax
comp=Z,33nm,1.7s
WMQ pmax pmax
comp=Z,580nm,3.9s
WMQ LR LR
comp=Z,1µm,23.3s
WMQ LR LR
comp=Z,1µm,21.5s
WMQ LR LR
comp=Z,3µm,23.3s
RPR Rampur 78.82 291 *e*P **P 04 32 38.2 -0.2**
RPR IVmBBB 04 32 41.3
comp=Z,475nm,2.7s
TTA Tatalina 79.06 21 IAmb IAmb 04 32 44.0
comp=Z,83nm,1.4s
BRLK Bradley Lake 79.08 25 IAMs_20 IAMs_20 05 02 31.5
comp=Z,7µm,20.0s
HYB Hyderabad 79.23 289 *i* P **P 04 32 40.0 -0.7**
comp=Z,77nm,0.8s
HYB *e*PcP **PcP 04 32 47.5 -1.4**
HYB *e*S **S 04 42 41.0 +2.6**
HYBB Hyderabad (bro 79.23 289 *e*P **P 04 32 39.9 -0.8**
HYBB IVmBBB 04 32 43.4
comp=Z,553nm,3.0s
NGP Nagpur 79.50 293 *ex* **P 04 32 41.4 -0.7**
NGP IAmb IAmb 04 32 46.6
comp=Z,39nm,0.8s
SRSP Sriramsagar 79.71 291 *e*P **P 04 32 42.3 -1.0**
SRSP IVmB_BB 04 32 44.5
comp=Z,587nm,2.9s
SEW Seward 79.87 25 IAmb IAmb 04 32 47.8
comp=Z,101nm,1.1s
SEW IAMs_20 IAMs_20 05 02 10.8
comp=Z,10µm,22.0s
URV Uravakonda 80.01 286 *e*P **P 04 32 44.4 -0.6**
URV IVmB_BB 04 32 46.7
comp=Z,1µm,3.4s
RC01 Rabbit Creek A 80.30 24 IAmb IAmb 04 32 55.5
comp=Z,82nm,1.0s
RC01 IAMs_20 IAMs_20 05 05 36.2
comp=Z,10µm,19.0s
PPLA Purkeypile 80.41 22 IAmb IAmb 04 33 05.3
comp=Z,97nm,1.4s
RDOG Red Dog Mine 80.55 15 IAmb IAmb 04 32 52.0
comp=Z,141nm,1.4s
KNK Knik Glacier 81.00 24 IAmb IAmb 04 33 01.0
comp=Z,68nm,1.0s
KNK IAMs_20 IAMs_20 05 05 44.6
comp=Z,9µm,20.0s
GHO Glory Hole Cre 81.01 24 IAmb IAmb 04 33 00.7
comp=Z,76nm,1.0s
GHO IAMs_20 IAMs_20 05 05 40.0
comp=Z,9µm,20.0s
DGZ Jazzator, Alta 81.13 323*d i* P **P 04 32 50.4 0.0**
DGZ pmax pmax
comp=Z,33nm,1.3s
DGZ MLR MLR
comp=Z,4µm,17.0s
KLRI Killari 81.18 289 *e*P **P 04 32 50.5 -0.7**
KLRI IVmB_BB 04 32 54.1
comp=Z,796nm,4.4s
SML Sawmill 81.26 24 IAMs_20 IAMs_20 05 05 56.6
comp=Z,10µm,20.0s
HIN Hinchinbrook I 81.27 25 IAMs_20 IAMs_20 05 04 50.0
comp=Z,6µm,19.0s
GLI Glacier Island 81.27 25 IAmb IAmb 04 32 59.5
comp=Z,87nm,0.8s
GLI IAMs_20 IAMs_20 05 04 43.9
comp=Z,6µm,20.0s
TRF Thorofare Moun 81.43 22 IAmb IAmb 04 33 02.2
comp=Z,69nm,1.2s
FID Port Fidalgo 81.46 25 IAMs_20 IAMs_20 05 05 06.3
comp=Z,8µm,19.0s
BPAW Bear Paw Mtn. 81.56 21 IAmb IAmb 04 33 04.6
comp=Z,103nm,1.8s
EYAK Cordova Ski Ar 81.67 25 IAmb IAmb 04 32 59.7
comp=Z,130nm,1.6s
EYAK IAMs_20 IAMs_20 05 03 09.4
comp=Z,6µm,20.0s
SCM Sheep Creek Mo 81.68 24 IAmb IAmb 04 33 10.0
comp=Z,98nm,0.9s
SCM IAMs_20 IAMs_20 05 05 37.6
comp=Z,6µm,20.0s
ZSN Zaisan 81.93 320 *e*P **P 04 32 54.3 -0.3**
comp=Z,114nm,2.3s
ZSN *e*S **S 04 43 06.7 +1.2**
comp=Z,403nm,7.5s
ZSN Zaisan 81.93 320 *e*P **P 04 32 54.2 -0.3**
ZSN *e*S **S 04 43 06.7 +1.2**
ZSN pmax pmax
comp=Z,114nm,2.3s
ZSN smax smax
comp=N,403nm,7.5s
RND Reindeer 81.94 22 IAmb IAmb 04 33 06.9
comp=Z,223nm,1.8s
MLY Manley 82.19 20 IAmb IAmb 04 33 00.0
comp=Z,60nm,1.2s
DHY Denali Highway 82.32 23 IAmb IAmb 04 33 11.3
comp=Z,41nm,0.9s
DHY IAMs_20 IAMs_20 05 03 36.6
comp=Z,8µm,21.0s
NEA Nenana 82.51 21 IAmb IAmb 04 33 03.1
comp=Z,69nm,1.2s
NEA IAMs_20 IAMs_20 05 05 39.7
comp=Z,10µm,20.0s
WRH Wood River Hil 82.81 21 IAmb IAmb 04 33 11.0
comp=Z,59nm,1.0s
CRQM Cirque 82.89 26 IAmb IAmb 04 33 11.6
comp=Z,106nm,1.0s
GLB Gilahina Butte 82.93 25 IAMs_20 IAMs_20 05 03 58.8
comp=Z,6µm,20.0s
QSPA South Pole Qui 82.96 180 P **P 04 32 59.6 -0.2**
QSPA South Pole Qui 82.96 180 IAMs_20 IAMs_20 05 12 31.2
comp=Z,5µm,18.0s
VRDI Verde Repeater 82.98 25 IAmb IAmb 04 33 16.9
comp=Z,107nm,1.2s
VRDI IAMs_20 IAMs_20 05 04 00.1
comp=Z,6µm,22.0s
CCB Clear Creek Bu 83.01 21 IAmb IAmb 04 33 11.2
comp=Z,108nm,1.5s
TGL Tana Glacier 83.02 26 IAmb IAmb 04 33 10.6
comp=Z,72nm,1.0s
MDM Murphy Dome 83.03 21 IAmb IAmb 04 33 11.3
comp=Z,149nm,1.9s
MDM IAMs_20 IAMs_20 05 07 46.0
comp=Z,9µm,22.0s
TCOL CIGO, UAF Yank 83.11 21 P **P 04 32 59.8 -0.4**
baz=237
COLA College 83.12 21*d i* P **P 04 32 58.7 -1.6**
COLA pmax pmax
comp=Z,117nm,1.8s
COLA College 83.12 21 P **P 04 32 59.6 -0.6**
COLA College 83.12 21 IAMs_20 IAMs_20 05 08 00.3
comp=Z,10µm,19.0s
HDA Harding Lake 83.19 22 P **P 04 33 00.4 -0.4**
baz=238
HDA Harding Lake 83.19 22 IAmb IAmb 04 33 12.4
comp=Z,34nm,1.0s
MCARA McCarthy VSAT 83.23 25 IAmb IAmb 04 33 20.9
comp=Z,59nm,1.0s
BALM Baldy 83.36 26 IAmb IAmb 04 33 12.3
comp=Z,71nm,1.0s
MK31 Makanchi Array 83.39 319 *i* P **P 04 33 01.6 -0.6**
MKAR Makanchi Array 83.39 319 P **P 04 33 01.9 -0.3**
comp=Z,14nm,0.8s,baz=84,slow=7.3,SNR=29

MKAR PKKPbc **PKKPbc** **04 51 24.0 +0.6**
comp=Z,1.5nm,1.0s,baz=318,slow=1.6,SNR=6.2
MKAR LR LR 05 11 25.1
comp=Z,2μm,19.1s,baz=99,slow=37
POKR Poker Plat Res 83.40 21 P **P** **04 33 00.9 -0.8**
baz=238
ILAR Eielson Array 83.41 22 P **P** **04 33 00.9 -0.9**
comp=Z,7.0nm,1.0s,baz=260,slow=4.4,SNR=39
ILAR LR LR 05 07 51.3
comp=Z,12μm,19.7s,baz=240,slow=34
ILAR Eielson Array 83.41 22 P **P** **04 33 01.0 -0.9**
MAKZ Makanchi 83.60 319 P **P** **04 33 02.2 -1.0**
COLD Coldfoot 83.64 19 IAMs_20 IAMs_20 05 08 09.2
comp=Z,7μm,20.0s
BARN Barnard Glacie 83.67 26 IAmb IAmb 04 33 14.3
comp=Z,74nm,1.0s
MENT Mentasta 83.69 24 IAmb IAmb 04 33 20.0
comp=Z,79nm,1.4s
MENT IAMs_20 IAMs_20 05 04 05.8
comp=Z,8μm,22.0s
POO Poona 83.83 289 *ex* **P** **04 33 05.0 -0.1**
DOT Dot Lake 83.90 23 IAmb IAmb 04 33 09.1
comp=Z,99nm,1.2s
DOT IAMs_20 IAMs_20 05 04 49.2
comp=Z,9μm,21.0s
BHK Bhakra 83.92 303 *ex* **P** **04 33 06.5 +1.2**
ZALV Zalesovo Beam 84.17 326 P **P** **04 33 05.2 -0.7**
comp=Z,10nm,0.5s,baz=115,slow=5.5,SNR=11
ZALV LR LR 05 12 23.4
comp=Z,2μm,19.8s,baz=110,slow=37
SHLS Shalkode 84.30 315 *eP* **P** **04 33 05.6 -1.4**
comp=Z,124nm,1.8s
SHLS *eS* **S** **04 43 27.8 -2.2**
SHLS Shalkode 84.30 315 *eP* **P** **04 33 05.6 -1.4**
SHLS *eS* **S** **04 43 27.7 -2.2**
SHLS pmax pmax
comp=Z,124nm,1.8s
PDGK Podgornoye 84.32 315 P **P** **04 33 06.1 -1.0**
MAW Mawson 84.36 203 P **P** **04 33 07.3 +0.7**
baz=84,SNR=17
MAW Mawson 84.36 203 P **P** **04 33 06.7 +0.1**
comp=Z,22nm,0.8s,baz=90,slow=3.7,SNR=16
MAW LR LR 05 07 35.7
comp=Z,4μm,20.1s,baz=89,slow=33
MAW Mawson 84.36 203 P **P** **04 33 06.1 -0.6**
AJM Ajmer 84.49 297 *i*P **P** **04 33 07.0 -1.2**
UZB Uzynbulak 84.61 315 *i*P **P** **04 33 08.5 -0.2**
comp=Z,150nm,2.7s
UZB *eS* **S** **04 43 35.4 +2.4**
comp=Z,848nm,11.8s
UZB Uzynbulak 84.61 315 *c i*P **P** **04 33 08.4 -0.2**
UZB *eS* **S** **04 43 35.4 +2.4**
UZB pmax pmax
comp=Z,150nm,2.7s
UZB smax smax
comp=N,848nm,11.8s
TOLK Toolik Lake Re 84.65 18 P **P** **04 33 08.3 +0.2**
baz=235
TOLK Toolik Lake Re 84.65 18 IAMs_20 IAMs_20 05 08 23.8
comp=Z,9μm,20.0s
SATY Saty 85.02 314 *eP* **P** **04 33 10.8 +0.1**
comp=Z,106nm,2.3s
SATY Saty 85.02 314 *eP* **P** **04 33 10.8 +0.1**
SATY pmax pmax
comp=Z,106nm,2.3s
SIT Sitka 85.05 31 IAmb IAmb 04 33 21.2
comp=Z,31nm,0.9s
SIT IAMs_20 IAMs_20 05 08 25.3
comp=Z,6μm,19.0s
TDK Taldyqorghan 85.50 316 *eP* **P** **04 33 12.9 0.0**
comp=Z,334nm,2.3s
TDK *eS* **S** **04 43 41.3 -0.3**
TDK Taldyqorghan 85.50 316 *eP* **P** **04 33 12.9 0.0**
TDK *eS* **S** **04 43 41.3 -0.3**
TDK pmax pmax
comp=Z,334nm,2.3s
EGAK Eagle 85.55 23 IAmb IAmb 04 33 22.1
comp=Z,58nm,1.1s
MOBC Moresby Island 85.58 35 IAmb IAmb 04 33 16.1
comp=Z,131nm,1.4s
MOBC IAMs_20 IAMs_20 05 03 33.6
comp=Z,6μm,21.0s
CRAG Craig 85.67 33 IAmb IAmb 04 33 16.6
comp=Z,94nm,1.4s
KDJ Kajisay 85.68 313 IAmb IAmb 04 33 19.9
comp=Z,114nm,1.1s
SKAG Skagway 85.91 29 IAmb IAmb 04 33 27.2
comp=Z,92nm,1.1s
DAWY Dawson 85.93 24 IAmb IAmb 04 33 21.2
comp=Z,116nm,1.4s
DAWY IAMs_20 IAMs_20 05 09 03.1
comp=Z,7μm,20.0s
JIS Juneau Island 85.95 30 IAmb IAmb 04 33 27.5
comp=Z,91nm,1.4s
JIS IAMs_20 IAMs_20 05 15 26.0
comp=Z,6μm,18.0s
KSH Kashi 85.99 310 P **P** **04 33 17.6 +2.0**
KSH S **S** **04 43 51.7 +4.9**
KSH SS **SS** **04 49 31.1 +5.6**
KSH pmax pmax
comp=Z,830nm,2.1s
KSH pmax pmax
comp=Z,2μm,4.9s
KSH LR LR
comp=Z,3μm,12.0s
KSH LR LR
comp=Z,3μm,15.5s
KSH LR LR
comp=Z,4μm,18.3s
MDOK Medeo 86.01 314 *eP* **P** **04 33 15.3 -0.3**
MDOK *eS* **S** **04 43 49.2 +2.2**
MDOK Medeo 86.01 314 *eP* **P** **04 33 15.3 -0.3**
MDOK *eS* **S** **04 43 49.1 +2.2**
AAA Alma-Ata 86.12 314 *eP* **P** **04 33 15.9 -0.1**
AAA *eLR* LR 05 10 27.5
comp=Z,1μm,18.2s
AAA Alma-Ata 86.12 314 *eP* **P** **04 33 16.0 -0.1**
AAA *eS* **S** **04 43 46.3 -1.5**
AAA pmax pmax
comp=Z,400nm,2.6s
AAA smax smax
comp=N,2μm,11.2s
WRAK Wrangell Islan 86.38 32 IAMs_20 IAMs_20 05 03 56.6
comp=Z,6μm,21.0s
ULHL Ulahol 86.38 313 P **P** **04 33 18.4 +0.9**
SNR=27
WHY Whitehorse 86.55 28 IAMs_20 IAMs_20 05 07 19.6
comp=Z,6μm,20.0s
KUU Kurty 86.68 315 *eP* **P** **04 33 18.0 -0.8**
comp=Z,429nm,3.2s
KUU *eS* **SKSac** **04 43 41.8 -0.6**
KUU Kurty 86.68 315 *eP* **P** **04 33 17.9 -0.8**
KUU *eS* **SKSac** **04 43 41.8 -0.6**
KUU pmax pmax
comp=Z,429nm,3.2s
KURK Kurchatov 86.82 322 *d i*P **P** **04 33 18.8 -0.4**
KURK pmax pmax
comp=Z,61nm,2.4s
KURK MLR MLR
comp=Z,3μm,20.0s
KURK Kurchatov 86.82 322 P **P** **04 33 17.6 -1.6**
KURK IAmb IAmb 04 33 36.5
comp=Z,53nm,1.6s
KURBB Kurchatov Arra 86.85 322 P **P** **04 33 19.3 0.0**
comp=Z,2.7nm,0.6s,baz=111,slow=3.1,SNR=19
KURBB PKKPbc **PKKPbc** **04 51 16.9 +1.6**
comp=Z,1.6nm,1.0s,baz=284,slow=3.0,SNR=6.5
NIL Nilore 86.98 304 P **P** **04 33 18.6 -1.9**
NIL pmax pmax
comp=Z,99nm,1.0s
NIL Nilore 86.98 304 P **P** **04 33 18.6 -1.9**
TKM2 Tokmak 2 86.99 314 P **P** **04 33 20.0 -0.5**
SNR=18
TKM2 Tokmak 2 86.99 314 P **P** **04 33 20.2 -0.3**
KZA Kyzart 87.07 313 P **P** **04 33 23.1 +1.9**
SNR=69
UCH Uchtor 87.63 313 P **P** **04 33 25.5 +1.5**
SNR=29
AAK Ala-Archa 87.73 313 P **P** **04 33 25.2 +1.2**
comp=Z,9.8nm,0.6s,baz=92,slow=5.6,SNR=25
AAK LR LR 05 14 58.5
comp=Z,1μm,19.4s,baz=87,slow=37
AAK Ala-Archa 87.73 313 P **P** **04 33 24.9 +0.9**
SNR=13
AAK Ala-Archa 87.73 313 P **P** **04 33 24.1 +0.1**
AAK Ala-Archa 87.73 313 P **P** **04 33 22.7 -1.3**
AAK IAmb IAmb 04 33 37.1
comp=Z,100nm,1.6s
JCC Jacoby Creek, 87.79 49 IAMs_20 IAMs_20 05 13 37.5
comp=Z,5μm,18.0s
USP Ospenovka 87.85 314 P **P** **04 33 25.1 +0.6**
SNR=5.3
EPYK Eagle Plains 87.90 22 P **P** **04 33 24.8 +0.7**
baz=247
KCPM Cahto Peak 87.91 50 IAMs_20 IAMs_20 05 08 26.8
comp=Z,8μm,19.0s
KMRM Mail Ridge 87.92 49 IAMs_20 IAMs_20 05 07 59.8
comp=Z,8μm,20.0s
KHMM Horse Mountain 88.02 49 IAMs_20 IAMs_20 05 13 55.6
comp=Z,7μm,18.0s
MCCM Marconi Confer 88.17 51 IAMs_20 IAMs_20 05 07 13.7
comp=Z,6μm,19.0s
HOPS Hopland Field 88.17 51 IAMs_20 IAMs_20 05 08 09.8
comp=Z,6μm,18.0s
DLBC Dease Lake 88.18 31 IAMs_20 IAMs_20 05 12 08.1
comp=Z,9μm,20.0s
AML Almayashu 88.21 313 P **P** **04 33 28.0 +1.4**
SNR=33
EKS2 Erkin-Say 88.25 313 P **P** **04 33 28.6 +2.2**
SNR=13
J01E Myrtle Point 88.31 46 P **P** **04 33 27.3 +0.8**
baz=259
GDXM Geysers 88.35 51 IAMs_20 IAMs_20 05 06 37.5
comp=Z,7μm,20.0s
K02D Willamette Mer 88.42 47 P **P** **04 33 28.0 +0.8**
baz=259
I02D Swisshome 88.56 45 P **P** **04 33 28.8 +1.1**
baz=259
O02D Mt. Diablo Mer 88.60 49 P **P** **04 33 28.7 +0.5**
baz=260
NRIK Noril'sk 88.74 341 P **P** **04 33 28.4 +0.5**
comp=Z,15nm,1.0s,baz=136,slow=5.1,SNR=14
NRIK LR LR 05 12 18.2
comp=Z,3μm,20.4s,baz=112,slow=35
NRIK Noril'sk 88.74 341 *eP* **P** **04 33 26.2 -1.8**
NRIK pmax pmax
comp=Z,30nm,1.0s
M02C Callahan 88.77 48 P **P** **04 33 29.8 +0.9**
baz=260
N02D Trinity Center 88.81 49 P **P** **04 33 29.7 +0.7**
baz=260
I03D Drain, OR 88.83 46 P **P** **04 33 29.7 +0.8**
baz=259
WDC Whiskeytown Da 88.86 49 IAmb IAmb 04 33 35.3
comp=Z,86nm,1.9s
WDC IAMs_20 IAMs_20 05 09 00.8
comp=Z,6μm,18.0s
SAO San Andreas Ge 89.06 53 IAMs_20 IAMs_20 05 15 28.4
comp=Z,6μm,18.0s
G03D McMinnville, O 89.17 44 P **P** **04 33 30.7 +0.1**
baz=259
NLWA Neilton Lookou 89.18 42 IAMs_20 IAMs_20 05 04 37.6
comp=Z,7μm,22.0s
E03A Lebam 89.22 43 IAmb IAmb 04 33 42.6
comp=Z,70nm,0.9s
L04D Klamath Falls 89.32 47 P **P** **04 33 31.1 -0.4**
baz=260
O03E Paynes Creek 89.37 49 P **P** **04 33 32.1 +0.4**
baz=260,SNR=8.6
H04D Lebanon 89.42 45 P **P** **04 33 32.1 +0.4**
baz=260
ORV Oroville 89.47 50 IAmb IAmb 04 33 37.5
comp=Z,47nm,1.4s
PMPB Monarch Peak 89.48 54 IAMs_20 IAMs_20 05 05 56.7
comp=Z,7μm,22.0s
F04D Rainier, OR 89.51 44 P **P** **04 33 32.6 +0.4**
baz=260
I04A Tendick Farm, 89.52 46 P **P** **04 33 32.8 +0.5**
baz=260
M04C Macdoel 89.59 48 P **P** **04 33 32.7 -0.1**
baz=260
J04D Umpqua Nationa 89.64 46 P **P** **04 33 33.1 0.0**
baz=260
D03D Eldon 89.72 42 P **P** **04 33 34.0 +0.9**
baz=259
INK Inuvik 89.75 21 P **P** **04 33 33.0 +0.3**
comp=Z,16nm,0.9s,baz=255,slow=6.2,SNR=18
INK PKKPbc **PKKPbc** **04 51 09.3 +0.6**
comp=Z,2.1nm,1.0s,baz=147,slow=4.1,SNR=4.4
INK Inuvik 89.75 21 P **P** **04 33 33.0 +0.3**
INK Inuvik 89.75 21 IAmb IAmb 04 33 37.4
comp=Z,102nm,1.5s
AFDM Forest Hills D 89.78 51 IAmb IAmb 04 33 39.0
comp=Z,82nm,1.5s
K04D Chiloquin, OR 89.79 47 P **P** **04 33 34.4 +0.7**
baz=260
H04A Detroit Lake 89.83 45 IAMs_20 IAMs_20 05 06 09.2
comp=Z,9μm,21.0s
PAGB Antelope Grade 89.85 54 IAMs_20 IAMs_20 05 07 13.5
comp=Z,6μm,20.0s
D04E Lakebay 89.87 43 P **P** **04 33 34.4 +0.6**
baz=260
E04D Cinebar 89.90 43 P **P** **04 33 34.7 +0.8**
baz=260
BTK Batken 89.99 310 IAmb IAmb 04 33 46.9
comp=Z,84nm,1.0s
SMMC Simmler 89.99 55 P **P** **04 33 37.2 +2.5**
baz=262,SNR=5.3
DZA Taraz 90.07 313 *eP* **P** **04 33 34.6 -0.3**
DZA Taraz 90.07 313 *eP* **P** **04 33 34.5 -0.3**
PKM Mcpherson Peak 90.08 55 P **P** **04 33 36.8 +1.5**
baz=262,SNR=8.3
SNCC San Nicolas Is 90.08 57 P **P** **04 33 35.9 +0.8**
baz=262
CMB Columbia Colle 90.09 52 IAmb IAmb 04 33 39.4
comp=Z,83nm,1.8s
CMB IAMs_20 IAMs_20 05 08 23.7
comp=Z,6μm,20.0s
SBC Santa Barbara 90.09 55 P **P** **04 33 36.2 +1.1**
baz=262
A04D Lummi Island 90.19 41 P **P** **04 33 36.2 +1.0**
baz=260
J05D Fort Rock, OR 90.28 47 P **P** **04 33 36.9 +0.9**
baz=261
I05D Terrebonne, OR 90.37 46 P **P** **04 33 37.0 +0.7**
baz=261
BEKR Beckworth 90.39 50 IAmb IAmb 04 33 42.0
comp=Z,123nm,1.9s
D05A Enumclaw 90.40 43 IAmb IAmb 04 33 48.7
comp=Z,43nm,1.2s
D05A IAMs_20 IAMs_20 05 11 20.9
comp=Z,8μm,18.0s
K05A Summer Lake 90.44 47 IAmb IAmb 04 33 53.5
comp=Z,51nm,1.3s
K05A IAMs_20 IAMs_20 05 08 29.3
comp=Z,8μm,20.0s
B05A Bryant 90.51 42 P **P** **04 33 37.3 +0.6**
baz=260
G05D Wamic, OR 90.54 45 P **P** **04 33 36.9 -0.1**
baz=261
F05D White Salmon 90.54 44 P **P** **04 33 37.5 +0.5**
baz=261
PINE Pine Mountain 90.57 46 IAmb IAmb 04 33 49.6
comp=Z,36nm,1.0s
KBL Kabul 90.57 305 P **P** **04 33 36.0 -1.6**
KBL pmax pmax
comp=Z,52nm,1.2s
KBL Kabul 90.57 305 P **P** **04 33 36.0 -1.6**
KBL IAmb IAmb 04 33 41.4
comp=Z,52nm,1.1s
VOG Valley Oaks Go 90.63 54 P **P** **04 33 38.1 +0.6**
baz=262
KK31 Karatay Array 90.69 313 *i* P **P** **04 33 37.8 0.0**
KKAR Karatay Array 90.69 313 IAmb IAmb 04 33 50.0
comp=Z,42nm,1.3s
VES Vestal, Richgr 90.80 54 P **P** **04 33 39.8 +1.4**
baz=262,SNR=12
SCI2 San Clemente I 90.85 57 P **P** **04 33 38.4 -0.3**
baz=262
PNTR Pine Nut 90.86 51 P **P** **04 33 38.8 -0.1**
WAKR Walker 90.90 51 IAMs_20 IAMs_20 05 09 09.0
comp=Z,5μm,20.0s
ARVC Arvin 90.91 55 P **P** **04 33 38.2 -0.8**
baz=262,SNR=5.5
OSI Osito Audit: C 90.93 55 P **P** **04 33 38.6 -0.5**
baz=262
OSI Osito Audit: C 90.93 55 IAMs_20 IAMs_20 05 05 52.2
comp=Z,5μm,20.0s
B06A Marblemount 90.96 41 IAMs_20 IAMs_20 05 15 12.5
comp=Z,7μm,18.0s
G06A Carlson Farm, 91.01 45 IAMs_20 IAMs_20 05 06 44.3
comp=Z,9μm,21.0s
CIS Catalina Islan 91.02 57 P **P** **04 33 39.0 -0.5**
baz=262
CHGR Chuyangaron 91.05 309 IAMs_20 IAMs_20 05 16 28.5
comp=Z,5μm,20.0s
MDPB Devils Postpil 91.06 52 IAMs_20 IAMs_20 05 09 14.3
comp=Z,6μm,20.0s
OMMB Old Mammoth Mi 91.11 52 IAmb IAmb 04 33 44.6
comp=Z,128nm,1.9s
OMMB IAMs_20 IAMs_20 05 09 15.9
comp=Z,7μm,20.0s
YERR Yerington 91.12 51 IAmb IAmb 04 33 43.3
comp=Z,34nm,1.2s
FMP Fort Macarthur 91.16 56 P **P** **04 33 39.4 -0.6**
baz=262
BRLS Boroldav 91.17 313 *eS* **S** **04 44 31.5 -3.9**
DECC Green Verdugo 91.20 56 P **P** **04 33 40.3 0.0**
baz=262
MLAC Mammoth, Mammo 91.25 52 P **P** **04 33 40.6 -0.1**
baz=262
C06D Leavenworth 91.25 42 P **P** **04 33 40.5 +0.3**
baz=261
ISA Isabella, Lake 91.27 54 P **P** **04 33 40.6 -0.1**
baz=262,SNR=14
ISA Isabella, Lake 91.27 54 IAmb IAmb 04 33 44.8
comp=Z,59nm,1.4s
ISA IAMs_20 IAMs_20 05 15 42.2
comp=Z,6μm,18.0s
PASC Pasadena Art C 91.31 56 IAMs_20 IAMs_20 05 09 23.3
comp=Z,6μm,19.0s
EDW2 Edwards Air Fo 91.56 55 P **P** **04 33 42.4 +0.4**
baz=263,SNR=13
RYN Ryan 91.63 51 IAmb IAmb 04 33 55.1
comp=Z,33nm,1.0s
RYN IAMs_20 IAMs_20 05 09 23.3
comp=Z,5μm,19.0s
TIN Tinemaha, Big 91.65 53 P **P** **04 33 42.6 +0.1**
baz=263
CWC Cottonwood Cre 91.69 54 P **P** **04 33 42.8 +0.1**
baz=263
E07A Sunnyside 91.75 43 IAMs_20 IAMs_20 05 09 31.6
comp=Z,9μm,20.0s
BFSC Mount Baldy Ra 91.75 56 P **P** **04 33 42.2 -0.9**
baz=263,SNR=8.8
NVAR Mina Array Bea 91.77 52 P **P** **04 33 44.7 +1.6**
comp=Z,14nm,0.9s,baz=249,slow=4.2,SNR=57
NVAR LR LR 05 09 23.5
comp=Z,5μm,20.1s,baz=268,slow=32
LRMC Laurel Mtn Rad 91.89 55 P **P** **04 33 43.5 -0.1**
baz=263,SNR=26
HAWA Hanford 91.94 44 IAMs_20 IAMs_20 05 09 27.9
comp=Z,9μm,20.0s
KVN Kaiserville 92.01 51 IAmb IAmb 04 33 47.3
comp=Z,93nm,1.5s
WVOR Wild Horse Val 92.04 48 IAMs_20 IAMs_20 05 09 33.9
comp=Z,7μm,20.0s
109C Camp Elliot, M 92.04 57 P **P** **04 33 44.3 +0.1**
baz=263
109C Camp Elliot, M 92.04 57 IAMs_20 IAMs_20 05 13 07.9
comp=Z,8μm,18.0s
MURC Murrieta 92.06 57 P **P** **04 33 44.1 -0.2**
baz=263
MPMC Manual Prospec 92.11 54 P **P** **04 33 45.1 +0.3**
baz=263,SNR=25
G08A Pilot Rock 92.19 45 IAMs_20 IAMs_20 05 13 54.5
comp=Z,8μm,18.0s
E08A Dider Farm, El 92.28 44 IAMs_20 IAMs_20 05 07 46.8
comp=Z,10μm,21.0s
J08A Circle Bar Ran 92.28 47 IAMs_20 IAMs_20 05 10 45.1
comp=Z,8μm,19.0s
BVAR Borovoye Array 92.28 323 P **P** **04 33 44.6 -0.2**
comp=Z,4.5nm,0.8s,baz=82,slow=5.2,SNR=14
SYO Syowa Base 92.29 199 *eP* **P** **04 33 42.4 -2.2**
SYO Syowa Base 92.29 199 *i* PcP **PcP** **04 33 45.4 +0.1**
SYO Syowa Base 92.29 199 *i* pP **P** **04 33 46.4 +1.8**
PNT Penticton 92.30 41 P P 04 33 38.8 -6.2
PNT pmax pmax
comp=Z,213nm,1.9s
B08A Colville Reser 92.35 42 IAmb IAmb 04 33 47.1
comp=Z,32nm,1.4s
BRVK Borovoye 92.35 323 *d i*P **P** **04 33 44.4 -0.8**
BRVK pmax pmax
comp=Z,19nm,1.6s
BRVK Borovoye 92.35 323 P **P** **04 33 42.8 -2.3**
BBRC Big Bear Solar 92.36 56 P **P** **04 33 45.5 -0.4**
baz=263
RRX Edison Barstow 92.37 55 P **P** **04 33 46.2 +0.4**
baz=263
BAR Barrett 92.38 58 IAMs_20 IAMs_20 05 08 46.9
comp=Z,6μm,20.0s
GSC Goldstone, Bar 92.58 55 P **P** **04 33 47.7 +0.9**
baz=263,SNR=7.9
GSC Goldstone, Bar 92.58 55 IAmb IAmb 04 33 50.2
comp=Z,50nm,1.4s
GSC IAMs_20 IAMs_20 05 15 43.8
comp=Z,7μm,18.0s
MONP2 Monument Peak 92.61 57 P **P** **04 33 47.2 0.0**
baz=263,SNR=6.0
FURC Furnace Creek, 92.67 54 P **P** **04 33 47.5 +0.5**
baz=263,SNR=34
PFO Pinyon Flats O 92.67 57 *d i*P **P** **04 33 49.5 +2.2**
PFO pmax pmax
comp=Z,62nm,1.5s
PFO Pinyon Flats O 92.67 57 P **P** **04 33 47.6 +0.4**
baz=264
PFO Pinyon Flats O 92.67 57 P **P** **04 33 46.8 -0.5**
PFO IAmb IAmb 04 33 50.7
comp=Z,60nm,1.5s
XPFO Pion Flat 92.67 57 P **P** **04 33 46.6 -0.7**
XPFO IAmb IAmb 04 33 50.7
comp=Z,61nm,1.5s
IKP In-Ko-Pah, Jac 92.85 58 P **P** **04 33 48.4 +0.3**
baz=264
HEC Hector,Ludlow 92.91 55 P **P** **04 33 48.7 +0.4**
baz=264,SNR=6.4
E09A Wood Farm, Sta 92.91 44 IAmb IAmb 04 33 59.6
comp=Z,34nm,1.1s
C09A Chrisman Ranch 92.98 42 IAmb IAmb 04 33 50.1
comp=Z,33nm,1.5s
SHOC Shoshone, Teco 93.07 54 P **P** **04 33 49.5 +0.5**
baz=264,SNR=15
BELC Belle Mtn. Jos 93.09 56 P **P** **04 33 49.5 +0.2**
baz=264,SNR=13
SWSC Sam W. Stewart 93.14 57 P **P** **04 33 49.1 -0.1**
baz=264
TPNV Topopah Spring 93.21 53 P **P** **04 33 49.3 -0.4**
baz=264
TPNV Topopah Spring 93.21 53 IAMs_20 IAMs_20 05 09 51.4
comp=Z,6μm,20.0s
BMO Blue Mountains 93.30 45 IAMs_20 IAMs_20 05 16 50.9
comp=Z,7μm,18.0s
TUQ Turquoise Moun 93.31 55 P **P** **04 33 49.5 -0.6**
baz=264
C36M Paulatuk 93.34 21 P **P** **04 33 49.5 +0.2**
baz=259
C36M Paulatuk 93.34 21 IAmb IAmb 04 33 53.6
comp=Z,46nm,1.1s
C36M IAMs_20 IAMs_20 05 12 46.5
comp=Z,7μm,20.0s
GMRC Granite Mounta 93.45 56 P **P** **04 33 50.8 -0.1**
baz=264,SNR=16
A36M Sachs Harbour 93.48 18 P **P** **04 33 50.0 +0.1**
baz=258
F10A Beach Ranch, E 93.48 44 IAmb IAmb 04 34 02.0
comp=Z,26nm,1.1s
F10A IAMs_20 IAMs_20 05 08 01.6
comp=Z,8μm,22.0s
BC3 Big Chuckawall 93.50 57 P **P** **04 33 52.5 +1.4**
baz=264,SNR=11
NEW Newport 93.80 42 P **P** **04 33 52.2 +0.2**
baz=264
IRM Iron Mountain 93.81 56 P **P** **04 33 52.7 +0.2**
baz=264,SNR=17
R11A Troy Canyon, C 93.88 52 P **P** **04 33 52.8 0.0**
baz=264
R11A Troy Canyon, C 93.88 52 IAmb IAmb 04 33 56.9
comp=Z,66nm,1.4s
R11A IAMs_20 IAMs_20 05 10 47.1
comp=Z,5μm,19.0s
GLA Glamis 93.97 57 P **P** **04 33 53.2 +0.1**
baz=264
GLA Glamis 93.97 57 IAMs_20 IAMs_20 05 14 33.8
comp=Z,7μm,18.0s
SHPR Sheep Range 94.03 54 IAmb IAmb 04 33 57.3
comp=Z,87nm,1.5s
SHPR IAMs_20 IAMs_20 05 17 40.4
comp=Z,6μm,18.0s
MFID Camas Ranch 94.20 47 IAMs_20 IAMs_20 05 11 18.0
comp=Z,8μm,19.0s
Y12C Blythe 94.29 57 P **P** **04 33 55.0 +0.5**
baz=264,SNR=6.3

Y12C	**Blythe**	**94.29**	**57**	IAmb	IAmb	04 33 59.2		
	comp=Z,80nm,1.6s							
Y12C				IAMs_20	IAMs_20	05 16 34.2		
	comp=Z,6µm,18.0s							
NEE2	**Needles Airpor**	**94.31**	**56**	P	**P**	**04 33 54.6**	**0.0**	
	baz=265							
PDMCI	**Parker Dam,Lak**	**94.65**	**56**	P	**P**	**04 33 56.2**	**0.0**	
	baz=265							
113A	**Mohawk Valley,**	**94.83**	**58**	IAMs_20	IAMs_20	05 15 02.7		
	comp=Z,6µm,18.0s							
W13A	**Hualapai Mount**	**94.94**	**55**	IAMs_20	IAMs_20	05 16 42.3		
	comp=Z,6µm,18.0s							
214A	**Organ Pipe Nat**	**95.56**	**59**	P	**P**	**04 33 60.0**	**-0.5**	
	baz=265							
214A	**Organ Pipe Nat**	**95.56**	**59**	IAMs_20	IAMs_20	05 11 09.2		
	comp=Z,5µm,19.0s							
Y14A	**Wickenburg**	**95.56**	**57**	IAMs_20	IAMs_20	05 18 31.3		
	comp=Z,6µm,18.0s							
JTMT	**Jette**	**95.66**	**43**	IAMs_20	IAMs_20	05 13 38.0		
	comp=Z,8µm,19.0s							
SRIG	**Santa Rosalia**	**95.67**	**63**	IAMs_20	IAMs_20	05 10 54.4		
	comp=Z,8µm,20.0s							
MSO	**Missoula**	**95.82**	**44**	P	**P**	**04 34 00.1**	**-1.3**	
	baz=266							
WALA	**Waterton Lakes**	**95.99**	**41**	IAmb	IAmb	04 34 07.2		
	comp=Z,36nm,1.4s							
DUG	**Dugway, Tooele**	**96.18**	**50**	P	**P**	**04 34 02.1**	**-1.2**	
	baz=266							
DUG	**Dugway, Tooele**	**96.18**	**50**	IAmb	IAmb	04 34 06.3		
	comp=Z,38nm,1.9s							
U15A	**North Rim**	**96.33**	**54**	IAmb	IAmb	04 34 17.6		
	comp=Z,18nm,0.9s							
U15A				IAMs_20	IAMs_20	05 11 20.1		
	comp=Z,7µm,20.0s							
YKA	**Yellowknife Ar**	**96.38**	**28**	P	**P**	**04 34 03.4**	**0.0**	
	comp=Z,32nm,1.0s,baz=261,slow=4.3,SNR=124							
YKA				PKKPbc	**PKKPbc**	**04 50 49.6**	**-1.7**	
	comp=Z,1.2nm,0.9s,baz=89,slow=3.0,SNR=9.0							
YKA				LR	LR	05 14 49.4		
	comp=Z,1µm,19.0s,baz=0.0,slow=34							
DLMT	**Dillon**	**96.66**	**45**	IAMs_20	IAMs_20	05 20 22.9		
	comp=Z,7µm,18.0s							
X16A	**Lo Mia Camp, P**	**96.89**	**56**	IAMs_20	IAMs_20	05 16 53.1		
	comp=Z,7µm,18.0s							
HSIG		**96.94**	**62**	IAMs_20	IAMs_20	05 10 34.9		
	comp=Z,7µm,20.0s							
WUAZ	**Wupatki**	**97.02**	**55**	P	**P**	**04 34 06.5**	**-0.7**	
	baz=266							
WUAZ	**Wupatki**	**97.02**	**55**	IAmb	IAmb	04 34 21.4		
	comp=Z,14nm,0.9s							
WUAZ				IAMs_20	IAMs_20	05 16 46.3		
	comp=Z,5µm,18.0s							
HWUT	**Hardware Ranch**	**97.21**	**49**	IAMs_20	IAMs_20	05 12 53.9		
	comp=Z,7µm,20.0s							
TUC	**Tucson**	**97.30**	**58**	P	**P**	**04 34 06.4**	**-2.0**	
	baz=266							
TUC	**Tucson**	**97.30**	**58**	IAMs_20	IAMs_20	05 16 39.2		
	comp=Z,5µm,18.0s							
AHID	**Auburn Hatcher**	**97.61**	**48**	IAMs_20	IAMs_20	05 13 31.3		
	comp=Z,8µm,20.0s							
FXWY	**Fox Creek**	**97.70**	**47**	IAMs_20	IAMs_20	05 17 28.6		
	comp=Z,7µm,18.0s							
TPAW	**Teton Pass**	**97.75**	**47**	IAMs_20	IAMs_20	05 14 10.9		
	comp=Z,6µm,19.0s							
IMW	**Indian Meadow**	**97.78**	**47**	IAMs_20	IAMs_20	05 18 23.8		
	comp=Z,8µm,18.0s							
REDW	**Red Top Meadow**	**97.82**	**47**	IAMs_20	IAMs_20	05 13 16.7		
	comp=Z,6µm,20.0s							
SNOW	**Snow King Moun**	**97.89**	**47**	IAMs_20	IAMs_20	05 14 16.7		
	comp=Z,6µm,19.0s							
FLWY	**Flagg Ranch**	**97.96**	**47**	IAMs_20	IAMs_20	05 18 38.3		
	comp=Z,7µm,18.0s							
H17A	**Grant Village**	**98.06**	**46**	P	**P**	**04 34 10.1**	**-1.7**	
	baz=268							
X18A	**Snowflake**	**98.13**	**56**	IAmb	IAmb	04 34 17.2		
	comp=Z,32nm,1.8s							
W18A	**Petrified Fore**	**98.33**	**56**	P	**P**	**04 34 10.3**	**-2.8**	
	baz=267							
W18A	**Petrified Fore**	**98.33**	**56**	IAMs_20	IAMs_20	05 18 25.2		
	comp=Z,6µm,18.0s							
319A	**Douglas**	**98.53**	**59**	IAMs_20	IAMs_20	05 11 04.1		
	comp=Z,7µm,20.0s							
NVL	**N'lazarevskaya**	**98.55**	**192**	*e*P	**P**	**04 34 09.0**	**-4.1**	
NVL				*e*PPP	PPP	04 40 33.5		
NVL				*e*S	**SKSac**	**04 44 46.1**	**-1.5**	
NVL				*e*SS	**SS**	**04 52 23.9**	**+0.8**	
NVL				pmax	pmax			
	comp=Z,11nm,1.1s							
EGMT	**Eagleton**	**98.71**	**43**	P	**P**	**04 34 12.3**	**-2.1**	
	baz=269							
EGMT	**Eagleton**	**98.71**	**43**	IAMs_20	IAMs_20	05 17 03.8		
	comp=Z,6µm,18.0s							
BW06	**Boulder Array**	**98.75**	**48**	P	**P**	**04 34 12.1**	**-2.8**	
	baz=269							
BW06	**Boulder Array**	**98.75**	**48**	IAMs_20	IAMs_20	05 14 49.4		
	comp=Z,8µm,20.0s							
PDAR	**Pinedale Array**	**98.75**	**48**	P	Pdif	04 34 15.3	+0.4	
	comp=Z,3.7nm,0.8s,baz=248,slow=1.6,SNR=25							
PDAR				PP	**PP**	**04 38 19.1**	**+2.6**	
	comp=Z,3.2nm,1.1s,baz=258,slow=4.4,SNR=5.8							
PV05	**Paradox Valley**	**98.96**	**53**	IAmb	IAmb	04 34 19.6		
	comp=Z,29nm,1.3s							
PV05				IAMs_20	IAMs_20	05 12 24.4		
	comp=Z,4µm,20.0s							
RLMT	**Red Lodge**	**99.00**	**45**	P	**Pdif**	**04 34 13.2**	**-2.7**	
	baz=269							
RLMT	**Red Lodge**	**99.00**	**45**	IAMs_20	IAMs_20	05 19 48.9		
	comp=Z,6µm,18.0s							
PV14	**Lion Creek, Pa**	**99.03**	**52**	IAMs_20	IAMs_20	05 14 15.4		
	comp=Z,6µm,18.0s							
PV23	**Carpenter Ridg**	**99.04**	**52**	IAmb	IAmb	04 34 29.1		
	comp=Z,30nm,1.0s							
PV19	**Morning Glory**	**99.06**	**52**	IAmb	IAmb	04 34 20.4		
	comp=Z,32nm,1.3s							
PV19				IAMs_20	IAMs_20	05 24 07.2		
	comp=Z,5µm,18.0s							
PV20	**West Nyswonger**	**99.07**	**52**	IAmb	IAmb	04 34 19.6		
	comp=Z,41nm,1.5s							
PV21	**Cone Mtn., Par**	**99.07**	**52**	IAMs_20	IAMs_20	05 14 08.5		
	comp=Z,5µm,20.0s							
PV16	**Nyswonger Mesa**	**99.11**	**52**	IAmb	IAmb	04 34 19.9		
	comp=Z,41nm,1.5s							
PV16				IAMs_20	IAMs_20	05 14 18.6		
	comp=Z,5µm,18.0s							
PV18	**Skein Mesa, Pa**	**99.12**	**52**	IAmb	IAmb	04 34 19.7		
	comp=Z,16nm,1.2s							
PV18				IAMs_20	IAMs_20	05 14 18.7		
	comp=Z,4µm,19.0s							
PV11	**David Mesa, Pa**	**99.15**	**52**	IAmb	IAmb	04 34 19.9		
	comp=Z,44nm,1.4s							
PV11				IAMs_20	IAMs_20	05 14 19.4		
	comp=Z,6µm,19.0s							
PV03	**Paradox Valley**	**99.16**	**52**	IAmb	IAmb	04 34 20.0		
	comp=Z,43nm,1.6s							
PV03				IAMs_20	IAMs_20	05 14 29.9		
	comp=Z,5µm,19.0s							
PV13	**Radium Mtn., P**	**99.18**	**53**	IAmb	IAmb	04 34 20.1		
	comp=Z,16nm,1.1s							
PV13				IAMs_20	IAMs_20	05 12 29.4		
	comp=Z,5µm,21.0s							
PV12	**Saucer Basin,**	**99.20**	**52**	IAMs_20	IAMs_20	05 14 20.9		
	comp=Z,6µm,18.0s							
PV22	**Blue Mesa, Par**	**99.22**	**52**	IAMs_20	IAMs_20	05 23 47.4		
	comp=Z,7µm,18.0s							
PV07	**Paradox Valley**	**99.33**	**52**	IAMs_20	IAMs_20	05 14 25.3		
	comp=Z,6µm,20.0s							
ARU	**Arti**	**99.33**	**326**	LR	LR	05 22 23.1		
	comp=Z,2µm,19.5s,baz=88,slow=37							
ARU	**Arti**	**99.33**	**326**	P	**Pdif**	**04 34 17.2**	**+0.4**	
ARU						04 38 21.5		
ARU				S	**SKSac**	**04 44 52.0**	**+0.1**	
ARU				PS	**PS**	**04 47 14.8**	**-3.0**	
ARU				SS	**SS**	**04 52 28.5**	**-7.1**	
PV01	**Paradox Valley**	**99.38**	**53**	IAmb	IAmb	04 34 20.9		
	comp=Z,18nm,1.3s							
PV01				IAMs_20	IAMs_20	05 16 22.7		
	comp=Z,4µm,20.0s							
MVCO	**Mesa Verde**	**99.41**	**54**	P	**Pdif**	**04 34 15.1**	**-2.9**	
	baz=268							
MVCO	**Mesa Verde**	**99.41**	**54**	IAmb	IAmb	04 34 31.6		
	comp=Z,48nm,2.0s							
MVCO				IAMs_20	IAMs_20	05 15 19.6		
	comp=Z,5µm,20.0s							
PV15	**Paradox Valley**	**99.46**	**52**	IAmb	IAmb	04 34 21.4		
	comp=Z,25nm,1.4s							
PV15				IAMs_20	IAMs_20	05 14 29.6		
	comp=Z,5µm,19.0s							
GEYT	**Alibeck**	**99.65**	**307**	P	**Pdif**	**04 34 18.6**	**-0.1**	
	comp=Z,3.1nm,0.7s,baz=54,slow=7.5,SNR=8.2							
GEYT				PP	**PP**	**04 38 23.4**	**+0.2**	
	comp=Z,1.2nm,0.4s,baz=130,slow=6.0,SNR=3.8							
GEYT				LR	LR	05 20 43.6		
	comp=Z,2µm,21.8s,baz=75,slow=36							
O20A	**White River Ci**	**99.68**	**51**	P	**Pdif**	**04 34 15.9**	**-3.2**	
	baz=269							
O20A	**White River Ci**	**99.68**	**51**	IAMs_20	IAMs_20	05 14 20.4		
	comp=Z,4µm,20.0s							
121A	**Cookes Peak, D**	**99.85**	**58**	P	**Pdif**	**04 34 16.7**	**-3.3**	
	baz=268							
121A	**Cookes Peak, D**	**99.85**	**58**	IAMs_20	IAMs_20	05 18 25.6		
	comp=Z,7µm,18.0s							
SNAA	**Sanae**	**100.12**	**187**	P	**Pdif**	**04 34 20.5**	**+0.3**	
	comp=Z,1.6nm,0.8s,baz=272,slow=3.3,SNR=4.8							
SNAA				PP	**PP**	**04 38 28.3**	**+2.9**	
	comp=Z,3.8nm,1.1s,baz=189,slow=6.8,SNR=5.2							
SNAA				PKKPbc	**PKKPdf**	**04 50 44.0**	**-0.8**	
	comp=Z,2.3nm,1.1s,baz=322,slow=2.2,SNR=4.0							
SNAA	**Sanae**	**100.12**	**187**	*e*P	**Pdif**	**04 34 21.8**	**+1.6**	
SNAA	**Sanae**	**100.12**	**187**		**Pdif**	**04 34 20.0**	**-0.2**	
Y22D	**IRIS PASSCAL I**	**100.61**	**57**	IAMs_20	IAMs_20	05 24 18.8		
	comp=Z,7µm,18.0s							
S22A	**4UR Ranch, Cre**	**100.75**	**53**	P	**Pdif**	**04 34 20.7**	**-3.3**	
	baz=270							
EPT	**El Paso**	**100.91**	**59**	IAMs_20	IAMs_20	05 11 56.8		
	comp=Z,7µm,21.0s							
K22A	**Casper**	**100.98**	**48**	IAMs_20	IAMs_20	05 16 32.5		
	comp=Z,5µm,19.0s							
ANMO	**Albuquerque**	**101.01**	**56**	*e*P	**Pdif**	**04 34 27.4**	**+2.3**	
ANMO	**Albuquerque**	**101.01**	**56**	P	**Pdif**	**04 34 22.2**	**-2.9**	
	baz=269							
ANMO	**Albuquerque**	**101.01**	**56**	IAMs_20	IAMs_20	05 29 13.6		
	comp=Z,4µm,18.0s							
LAO	**LASA Array**	**101.12**	**44**	IAMs_20	IAMs_20	05 13 45.7		
	comp=Z,6µm,20.0s							
VNA2	**Neumayer--Watz**	**101.33**	**186**	Pdiff	**Pdif**	**04 34 28.5**	**+3.0**	
	baz=142,slow=2.4							
N23A	**Red Feather La**	**101.43**	**50**	P	**Pdif**	**04 34 24.4**	**-2.6**	
	baz=271							
HPIG		**101.49**	**64**	IAMs_20	IAMs_20	05 14 06.7		
	comp=Z,7µm,20.0s							
ISCO	**Idaho Springs**	**101.70**	**51**	P	**Pdif**	**04 34 25.2**	**-3.0**	
	baz=271							
ISCO	**Idaho Springs**	**101.70**	**51**	IAMs_20	IAMs_20	05 21 49.8		
	comp=Z,4µm,18.0s							
PHWY	**Pilot Hill**	**101.80**	**49**	IAMs_20	IAMs_20	05 16 35.5		
	comp=Z,6µm,20.0s							
SDCO	**Great Sand Dun**	**101.80**	**53**	P	**Pdif**	**04 34 26.0**	**-2.7**	
	baz=270							
SDCO	**Great Sand Dun**	**101.80**	**53**	IAMs_20	IAMs_20	05 16 11.8		
	comp=Z,6µm,20.0s							
MNTX	**Cornudas Mount**	**101.86**	**59**	IAMs_20	IAMs_20	05 12 59.1		
	comp=Z,6µm,20.0s							
RES	**Resolute Bay**	**102.00**	**15**	IAMs_20	IAMs_20	05 20 56.9		
	comp=Z,6µm,20.0s							
DGMT	**Dagmar**	**102.41**	**42**	P	**Pdif**	**04 34 29.3**	**-1.5**	
	baz=274							
DGMT	**Dagmar**	**102.41**	**42**	IAMs_20	IAMs_20	05 18 45.7		
	comp=Z,7µm,18.0s							
T25A	**Trinidad**	**102.67**	**54**	P	**Pdif**	**04 34 30.6**	**-1.9**	
	baz=271							
RSSD	**Black Hills**	**102.75**	**46**	P	**Pdif**	**04 34 31.7**	**-1.0**	
RSSD				MLR	MLR			
	comp=Z,7µm,18.0s							
RSSD	**Black Hills**	**102.75**	**46**	P	**Pdif**	**04 34 29.8**	**-2.8**	
	baz=273							
RSSD	**Black Hills**	**102.75**	**46**		**Pdif**	**04 34 31.7**	**-1.0**	
FFC	**Flin Flon**	**103.24**	**35**	IAMs_20	IAMs_20	05 23 29.9		
	comp=Z,7µm,18.0s							
TXAR	**Lajitas Array**	**103.31**	**62**	Pdiff	**Pdif**	**04 34 39.0**	**+3.6**	
	comp=Z,0.9nm,0.7s,baz=205,slow=5.5,SNR=3.9							
TXAR				PP	**PKiKP**	**04 38 55.3**	**+0.7**	
	comp=Z,1.2nm,1.1s,baz=258,slow=6.1,SNR=4.5							
TXAR				PKKPbc	**PKKPbc**	**04 50 30.9**	**+0.4**	
	comp=Z,1.2nm,1.0s,baz=108,slow=4.1,SNR=7.0							
KSCO	**Kaye Shedlock'**	**104.03**	**52**	IAMs_20	IAMs_20	05 17 55.7		
	comp=Z,5µm,19.0s							
MSTX	**Muleshoe**	**104.06**	**57**	P	**Pdif**	**04 34 35.4**	**-3.2**	
	baz=271							
MSTX	**Muleshoe**	**104.06**	**57**	IAMs_20	IAMs_20	05 19 46.0		
	comp=Z,5µm,18.0s							
ZAIG	**Zacatecas**	**104.17**	**68**	IAMs_20	IAMs_20	05 14 57.1		
	comp=Z,6µm,20.0s							
ABPO	**Ambohimpanom**	**104.27**	**248**	IAMs_20	IAMs_20	05 20 13.5		
	comp=Z,5µm,18.0s							
E28A	**Huff**	**104.93**	**44**	IAMs_20	IAMs_20	05 15 56.5		
	comp=Z,7µm,21.0s							
AMTX	**Amarillo**	**104.94**	**56**	IAMs_20	IAMs_20	05 17 06.2		
	comp=Z,4µm,20.0s							
MDND	**Maddock**	**105.53**	**42**	IAMs_20	IAMs_20	05 20 36.2		
	comp=Z,7µm,18.0s							
KBS	**Kingsbay**	**105.80**	**353**	IAMs_20	IAMs_20	05 22 29.7		
	comp=Z,4µm,20.0s							
CBKS	**Cedar Bluff**	**106.29**	**52**	IAMs_20	IAMs_20	05 16 43.6		
	comp=Z,4µm,20.0s							
SUSD	**Miller**	**106.37**	**46**	P	**PKiKP**	**04 38 56.8**	**-2.8**	
	baz=276							
SUSD	**Miller**	**106.37**	**46**	IAMs_20	IAMs_20	05 18 55.8		
	comp=Z,6µm,20.0s							
TULEG	**Thule**	**106.61**	**10**	IAMs_20	IAMs_20	05 21 33.5		
	comp=Z,5µm,20.0s							
JCT	**Junction City**	**106.66**	**60**	P	**PKiKP**	**04 38 57.8**	**-2.8**	
	baz=272							
JCT	**Junction City**	**106.66**	**60**	IAMs_20	IAMs_20	05 23 40.2		
	comp=Z,7µm,18.0s							
K31A	**O'Neill**	**106.71**	**48**	IAMs_20	IAMs_20	05 16 46.0		
	comp=Z,7µm,22.0s							
ABTX	**Abilene, Hawle**	**106.72**	**58**	IAMs_20	IAMs_20	05 15 35.6		
	comp=Z,6µm,21.0s							
U32A	**Winter Ranch,**	**107.05**	**54**	IAMs_20	IAMs_20	05 23 49.8		
	comp=Z,6µm,18.0s							
R32A	**Long Quarter,**	**107.12**	**52**	IAMs_20	IAMs_20	05 28 33.6		
	comp=Z,4µm,18.0s							
UNM	**Universidad Na**	**107.24**	**72**	IAMs_20	IAMs_20	05 18 00.7		
	comp=Z,5µm,20.0s							
BGNE	**Belgrade**	**107.28**	**49**	IAMs_20	IAMs_20	05 21 10.3		
	comp=Z,5µm,19.0s							
WMOK	**Wichita Mounta**	**107.33**	**56**	IAMs_20	IAMs_20	05 28 33.5		
	comp=Z,4µm,18.0s							
D32A	**Dogwood Acres,**	**107.37**	**43**	IAMs_20	IAMs_20	05 24 01.8		
	comp=Z,5µm,18.0s							
MAK	**Makhachkala**	**107.50**	**313**	*e*P	**Pdif**	**04 34 47.9**	**-5.6**	
MAK				*e*		04 45 26.0		
MAK				*e*PS	**PS**	**04 48 43.2**	**-1.0**	
MAK				*e*SS	SS	04 54 21.1	-7.6	
MAK				pmax	pmax			
	comp=Z,109nm,1.3s							
TLIG	**Tlapa**	**107.77**	**74**	IAMs_20	IAMs_20	05 16 38.8		
	comp=Z,7µm,20.0s							
F33A	**5 Mile Ranch,**	**108.05**	**44**	IAMs_20	IAMs_20	05 17 50.2		
	comp=Z,5µm,20.0s							
X34A	**Smith Ranch, M**	**108.12**	**56**	IAMs_20	IAMs_20	05 28 39.4		
	comp=Z,7µm,18.0s							
ECSD	**EROS Data Cent**	**108.13**	**46**	IAMs_20	IAMs_20	05 18 24.4		
	comp=Z,5µm,21.0s							
KLMR	**Klimovskoe**	**108.33**	**332**	*e*Pdif	**Pdif**	**04 34 46.9**	**-10**	
KLMR				AMP		04 35 07.9		
	comp=Z,15nm,1.4s							
KLMR				*e*PP	**PKiKP**	**04 39 02.4**	**-0.3**	
KLMR				*e*PKKPab	**PKKPbc**	**04 50 09.9**	**-6.1**	
KLMR				LQ	LQ	05 10 10.2		
KLMR				LQ	LQ	05 10 10.2		
KLMR				LR	LR	05 16 02.2		
KLMR				AMP		05 29 12.5		
	comp=Z,3µm,17.2s							
KVTX	**Kingsville**	**108.41**	**63**	IAMs_20	IAMs_20	05 17 06.0		
	comp=Z,5µm,19.0s							
735A	**Kenedy**	**108.44**	**62**	IAMs_20	IAMs_20	05 21 33.7		
	comp=Z,7µm,18.0s							
L34A	**Svendsen Farm,**	**108.53**	**48**	IAMs_20	IAMs_20	05 23 26.4		
	comp=Z,4µm,18.0s							
WHTX	**Lake Whitney,**	**108.60**	**59**	IAMs_20	IAMs_20	05 16 07.4		
	comp=Z,5µm,22.0s							
Z35A	**Perchaven, San**	**108.69**	**57**	IAMs_20	IAMs_20	05 17 00.6		
	comp=Z,4µm,22.0s							
KSU1	**Kansas State U**	**108.70**	**51**	IAMs_20	IAMs_20	05 18 48.1		
	comp=Z,5µm,20.0s							
T35A	**Sooner Cattle**	**109.00**	**53**	IAMs_20	IAMs_20	05 19 17.3		
	comp=Z,6µm,20.0s							
ARCES	**ARCESS Array B**	**109.59**	**343**	PKiKP	**PKiKP**	**04 39 06.1**	**+1.2**	
	comp=Z,5.1nm,0.9s,baz=90,slow=2.4,SNR=6.4							
ARCES				PKKPbc	**PKKPbc**	**04 50 11.4**	**-0.7**	
	comp=Z,2.0nm,0.8s,baz=298,slow=2.6,SNR=4.6							
TUL1	**Leonard**	**109.67**	**54**	P	**PKiKP**	**04 39 04.1**	**-2.0**	
	baz=276							
TUL1	**Leonard**	**109.67**	**54**	IAMs_20	IAMs_20	05 22 03.4		
	comp=Z,6µm,20.0s							
F36A	**Milaca**	**109.96**	**44**	IAMs_20	IAMs_20	05 18 06.5		
	comp=Z,5µm,22.0s							
237A	**Washetta, Mont**	**110.00**	**59**	IAMs_20	IAMs_20	05 18 06.7		
	comp=Z,5µm,20.0s							
X37A	**Clayton**	**110.14**	**56**	IAMs_20	IAMs_20	05 23 40.0		
	comp=Z,6µm,18.0s							
GOF	**Gofitskoye**	**110.37**	**315**	*e*PKiKP	PKiKP	04 38 51.3	-16	
I37A	**Lemond, Waseca**	**110.38**	**46**	IAMs_20	IAMs_20	05 30 54.9		
	comp=Z,5µm,18.0s							
SPMN	**Marine on St.**	**110.58**	**44**	IAMs_20	IAMs_20	05 31 05.9		
	comp=Z,5µm,18.0s							
Z38A	**Mt. Pleasant**	**110.58**	**57**	IAMs_20	IAMs_20	05 31 41.1		
	comp=Z,5µm,18.0s							
U38A	**Gravette**	**110.75**	**54**	IAMs_20	IAMs_20	05 29 28.7		
	comp=Z,5µm,18.0s							
KIV	**Kislovodsk**	**110.82**	**314**	*i* PKiKP	**PKiKP**	**04 39 07.4**	**-0.7**	
KIV				*e*		04 39 43.3		
KIV				*e*		04 45 46.9		
KIV				*e*PS	**PS**	**04 49 13.8**	**-3.5**	
KIV				*e*SS	SS	04 55 13.5	0.0	
KIV				pmax	pmax			
	comp=Z,16nm,1.1s							
KIV				MLR	MLR			
	comp=Z,5µm,21.0s							
SCIA	**State Center**	**110.88**	**48**	IAMs_20	IAMs_20	05 19 23.3		
	comp=Z,6µm,21.0s							
EYMN	**Ely**	**110.89**	**41**	P	**PKiKP**	**04 39 06.3**	**-1.7**	
	baz=283							
EYMN	**Ely**	**110.89**	**41**	IAMs_20	IAMs_20	05 18 18.8		
	comp=Z,7µm,22.0s							
NATX	**Nacogdoches**	**110.99**	**59**	IAMs_20	IAMs_20	05 18 05.7		
	comp=Z,6µm,21.0s							
N38A	**Joes South For**	**111.04**	**49**	IAMs_20	IAMs_20	05 22 59.9		
	comp=Z,7µm,20.0s							
K38A	**Parkersburg**	**111.07**	**47**	IAMs_20	IAMs_20	05 19 25.5		
	comp=Z,6µm,22.0s							
HHAR	**Hobbs**	**111.12**	**54**	IAMs_20	IAMs_20	05 28 40.7		
	comp=Z,5µm,18.0s							
W39A	**Magazine**	**111.38**	**55**	P	**PKiKP**	**04 39 07.6**	**-1.6**	
	baz=277							
W39A	**Magazine**	**111.38**	**55**	IAMs_20	IAMs_20	05 31 37.5		
	comp=Z,5µm,18.0s							
S39A	**Bolivar**	**111.43**	**52**	IAMs_20	IAMs_20	05 20 56.7		
	comp=Z,6µm,20.0s							
MIAR	**Mount Ida**	**111.62**	**56**	P	**PKiKP**	**04 39 07.8**	**-2.0**	
	baz=277							
MIAR	**Mount Ida**	**111.62**	**56**	IAMs_20	IAMs_20	05 22 30.1		
	comp=Z,5µm,20.0s							
OBN	**Obninsk**	**111.74**	**327**	*i* PKiKP	**PKiKP**	**04 39 11.6**	**+2.3**	
OBN				*i*		04 39 55.1		
OBN				*i* SS	SS	04 55 19.0	-5.6	
OBN				pmax	pmax			
	comp=Z,5.0nm,0.7s							
U40A	**Yellville**	**111.98**	**54**	P	**PKiKP**	**04 39 07.7**	**-2.7**	
	baz=278							
U40A	**Yellville**	**111.98**	**54**	IAMs_20	IAMs_20	05 24 47.4		
	comp=Z,5µm,19.0s							
WLAR	**White Oak Lake**	**112.10**	**57**	IAMs_20	IAMs_20	05 29 48.9		
	comp=Z,6µm,18.0s							
X40A	**Basin Creek Fa**	**112.24**	**56**	P	**PKiKP**	**04 39 08.9**	**-2.0**	
	baz=277							
X40A	**Basin Creek Fa**	**112.24**	**56**	IAMs_20	IAMs_20	05 24 56.4		
	comp=Z,6µm,19.0s							
L40A	**Anamosa**	**112.31**	**47**	IAMs_20	IAMs_20	05 20 25.2		
	comp=Z,7µm,21.0s							
441A	**DeRidder**	**112.33**	**60**	IAMs_20	IAMs_20	05 21 41.4		
	comp=Z,7µm,20.0s							
G40A	**Rib Lake**	**112.36**	**44**	IAMs_20	IAMs_20	05 23 05.2		
	comp=Z,4µm,19.0s							
WHAR	**Wooly Hollow**	**112.58**	**55**	IAMs_20	IAMs_20	05 22 54.4		
	comp=Z,4µm,20.0s							
W41B	**Gary Mavity, V**	**112.63**	**55**	P	**PKiKP**	**04 39 08.6**	**-3.0**	
	baz=278							
FCAR	**Ozark Folk Cen**	**112.63**	**54**	IAMs_20	IAMs_20	05 27 54.7		
	comp=Z,6µm,18.0s							
JFWS	**Jewell Farm**	**112.84**	**46**	P	**PKiKP**	**04 39 08.7**	**-3.2**	
	baz=282	

346A	**Big Creek Wild**	**115.44**	**59**	IAMs_20	IAMs_20	05 28 57.5		
	comp=Z,5µm,18.0s							
F45A	**CMU Biological**	**115.44**	**42**	P	**PKiKP**	**04 39 15.6**	**-1.0**	
	baz=287							
J45A	**Montague**	**115.47**	**45**	IAMs_20	IAMs_20	05 29 10.4		
	comp=Z,5µm,18.0s							
ILULI	**Ilulissat**	**115.57**	**10**	IAMs_20	IAMs_20	05 28 08.3		
	comp=Z,5µm,20.0s							
146A	**Union**	**115.61**	**57**	IAMs_20	IAMs_20	05 21 04.8		
	comp=Z,5µm,22.0s							
SFIN	**Lafayette**	**115.71**	**48**	IAMs_20	IAMs_20	05 32 02.3		
	comp=Z,6µm,18.0s							
P46A	**Rosedale**	**115.80**	**49**	IAMs_20	IAMs_20	05 24 44.8		
	comp=Z,6µm,19.0s							
L46A	**Eue Claire**	**115.90**	**47**	IAMs_20	IAMs_20	05 24 18.4		
	comp=Z,6µm,20.0s							
I46A	**Reed City**	**115.98**	**44**	P	**PKPdf**	**04 39 16.7**	**-1.1**	
	baz=286							
G46A	**Petoskey**	**115.99**	**43**	P	**PKPdf**	**04 39 16.7**	**-1.1**	
	baz=288							
WVT	**Waverly**	**116.03**	**53**	P	**PKPdf**	**04 39 16.8**	**-1.3**	
	baz=281							
WVT	**Waverly**	**116.03**	**53**	IAMs_20	IAMs_20	05 21 39.5		
	comp=Z,5µm,22.0s							
E46A	**Sault Ste Mari**	**116.04**	**41**		**PKPdf**	**04 39 17.3**	**-0.5**	
PLAL	**Pickwick Lake**	**116.04**	**55**	IAMs_20	IAMs_20	05 25 57.9		
	comp=Z,5µm,18.0s							
D46A	**Sault St. Mari**	**116.05**	**41**	P	**PKPdf**	**04 39 16.8**	**-1.1**	
	baz=289							
Z47A	**Carrollton**	**116.34**	**56**	IAMs_20	IAMs_20	05 22 15.2		
	comp=Z,6µm,22.0s							
BLO	**Bloomington**	**116.41**	**50**	IAMs_20	IAMs_20	05 24 05.2		
	comp=Z,6µm,20.0s							
MICGM	**Minsk**	**116.58**	**329**	*e*PKP	**PKPdf**	**04 39 17.0**	**-1.6**	
MICGM				*e*PP	**PP**	**04 40 24.0**	**-1.9**	
MICGM				*e*PPP	PPP	04 42 32.0		
MICGM				*e*SKS	**SKSac**	**04 46 10.0**	**+3.5**	
MICGM				*e*SS	**SS**	**04 56 18.0**	**-10**	
MICGM				*e*SSS	SSS	05 00 27.0		
MICGM				*e*LQ	LQ	05 18 30.0		
MICGM				*e*LR	LR	05 26 25.0		
MICGM				LRM	MLR	05 32 30.0		
	comp=Z,8.2nm,20.0s							
MNK	**Minsk**	**116.58**	**329**	*e*PKIKP	**PKPdf**	**04 39 17.0**	**-1.6**	
MNK				*e*		04 40 24.0		
MNK				*e*		04 46 10.0		
D47A	**Chapleau**	**116.59**	**40**	P	**PKiKP**	**04 39 20.1**	**+1.1**	
	baz=290,SNR=8.6							
I47A	**Gladwin**	**116.61**	**44**	IAMs_20	IAMs_20	05 29 57.6		
	comp=Z,5µm,19.0s							
J47A	**Sumner**	**116.62**	**45**	P	**PKPdf**	**04 39 18.6**	**-0.5**	
	baz=287							
J47A	**Sunmer**	**116.62**	**45**	IAMs_20	IAMs_20	05 34 44.9		
	comp=Z,5µm,18.0s							
N47A	**Urbana**	**116.62**	**48**	P	**PKPdf**	**04 39 18.6**	**-0.5**	
	baz=285							
N47A	**Urbana**	**116.62**	**48**	IAMs_20	IAMs_20	05 23 36.4		
	comp=Z,5µm,20.0s							
K47A	**Vermontville**	**116.65**	**46**	P	**PKPdf**	**04 39 19.0**	**-0.1**	
	baz=286							
SNET	**Serv Nac Est T**	**116.66**	**78**	IAMs_20	IAMs_20	05 19 51.9		
	comp=Z,4µm,20.0s							
E47A	**Iron Bridge**	**116.68**	**41**	P	**PKPdf**	**04 39 18.3**	**-0.7**	
	baz=289							
G47A	**Hillman**	**116.71**	**43**	P	**PKiKP**	**04 39 20.4**	**+1.2**	
	baz=288,SNR=5.8							
PLCA	**Paso Flores**	**116.73**	**143**	PKP	**PKiKP**	**04 39 21.2**	**+1.7**	
	comp=Z,4.4nm,1.0s,baz=220,slow=3.0,SNR=4.0							
WCI	**Wyandotte Cave**	**116.80**	**51**	PKiKP	**PKPdf**	**04 39 18.3**	**-1.2**	
WCI				MLR	MLR			
	comp=Z,8µm,18.0s							
WCI	**Wyandotte Cave**	**116.80**	**51**	P	**PKPdf**	**04 39 18.6**	**-0.9**	
	baz=283							
WCI	**Wyandotte Cave**	**116.80**	**51**		**PKPdf**	**04 39 18.3**	**-1.2**	
V48A	**Smith Brothers**	**116.91**	**53**	IAMs_20	IAMs_20	05 36 45.7		
	comp=Z,4µm,18.0s							
NACGM	**Naroch**	**116.95**	**329**	*e*PKP	PKPdf	04 39 07.0	-12	
NACGM				*e*PP	PP	04 40 38.0	+9.5	
NACGM				*e*PPP	PPP	04 43 10.0		
NACGM				*e*SKS	SKSdf	04 47 04.0	+36	
NACGM				*e*SKKS	SKKSac	04 48 06.0	+40	
NACGM				*e*SKSP		04 50 44.0		
NACGM				*e*SS	**SKKSdf**	**04 57 22.0**	**-1.3**	
NACGM				*e*SSS	SSS	05 02 53.0		
NACGM				*e*LQ	LQ	05 15 14.0		
NACGM				*e*LR	LR	05 25 16.0		
NACGM				LRM	MLR	05 33 38.0		
	comp=Z,10nm,22.0s							
X48A	**Hartselle**	**116.97**	**55**	IAMs_20	IAMs_20	05 26 26.6		
	comp=Z,5µm,19.0s							
I48A	**Sherman Twp**	**117.12**	**44**	P	**PKPdf**	**04 39 19.5**	**-0.4**	
	baz=288							
N48A	**Decatur**	**117.12**	**48**	P	**PKPdf**	**04 39 19.6**	**-0.5**	
	baz=285							
O48A	**Farmland**	**117.18**	**48**	P	**PKPdf**	**04 39 19.3**	**-0.9**	
	baz=285							
M48A	**Edgerton**	**117.18**	**47**	IAMs_20	IAMs_20	05 26 34.9		
	comp=Z,5µm,19.0s							
H48A	**Harrisville**	**117.21**	**43**	P	**PKPdf**	**04 39 19.0**	**-1.1**	
	baz=288							
CLTN	**Cedars of Leba**	**117.23**	**53**	IAMs_20	IAMs_20	05 31 38.1		
	comp=Z,6µm,18.0s							
K48A	**Perry**	**117.24**	**45**	P	**PKPdf**	**04 39 18.4**	**-1.9**	
	baz=287							
L48A	**N Adams**	**117.26**	**46**	P	**PKPdf**	**04 39 19.1**	**-1.2**	
	baz=286							
LRAL	**Lakeview Retre**	**117.26**	**57**	P	**PKPdf**	**04 39 19.9**	**-0.7**	
	baz=280							
LRAL	**Lakeview Retre**	**117.26**	**57**	IAMs_20	IAMs_20	05 22 53.4		
	comp=Z,6µm,21.0s							
KMBO	**Kilima Mbogo**	**117.31**	**265**	PKP	**PKiKP**	**04 39 22.6**	**+1.0**	
	comp=Z,1.9nm,0.7s,baz=304,slow=7.0,SNR=4.1							
F48A	**Evansville**	**117.32**	**42**	P	**PKiKP**	**04 39 20.7**	**+0.3**	
	baz=290,SNR=5.8							
J48A	**Bridge Port**	**117.33**	**45**	P	**PKPdf**	**04 39 19.3**	**-1.1**	
	baz=287							
J48A	**Bridge Port**	**117.33**	**45**	IAMs_20	IAMs_20	05 23 16.6		
	comp=Z,5µm,21.0s							
D48A	**Paudash Townsh**	**117.38**	**40**	P	**PKiKP**	**04 39 21.1**	**+0.7**	
	baz=291,SNR=5.8							
E48A	**Lockeyer**	**117.40**	**41**	P	**PKiKP**	**04 39 21.7**	**+1.2**	
	baz=290,SNR=7.3							
TEIG	**Tepich**	**117.49**	**71**	IAMs_20	IAMs_20	05 20 22.4		
	comp=Z,4µm,22.0s							
AKASG	**Malin Array Be**	**117.53**	**324**	PKP	**PKPdf**	**04 39 19.8**	**-0.7**	
	comp=Z,9.0nm,0.6s,baz=58,slow=2.3,SNR=27							
AKASG				PP	**PP**	**04 40 33.4**	**+0.7**	
	comp=Z,2.1nm,0.9s,baz=56,slow=6.3,SNR=7.8							
AKASG				PKKPbc	**PKKPbc**	**04 49 44.1**	**-0.6**	
	comp=Z,0.7nm,0.3s,baz=265,slow=3.3,SNR=7.2							
Y49A	**Blount Mountai**	**117.59**	**55**	IAMs_20	IAMs_20	05 28 57.2		
	comp=Z,4µm,19.0s							
P49A	**Miami Univ. Ec**	**117.69**	**49**	P	**PKiKP**	**04 39 21.3**	**+0.1**	
	baz=285							
K49A	**Clarkson**	**117.71**	**45**	P	**PKPdf**	**04 39 20.3**	**-0.8**	
	baz=287							
M49A	**Liberty Center**	**117.72**	**47**	P	**PKPdf**	**04 39 20.4**	**-0.9**	
	baz=286							
N49A	**Columbus Grove**	**117.72**	**47**	P	**PKiKP**	**04 39 22.6**	**+1.3**	
	baz=286,SNR=7.5							
N49A	**Columbus Grove**	**117.72**	**47**	IAMs_20	IAMs_20	05 24 08.3		
	comp=Z,5µm,20.0s							
SWET	**Sewanee**	**117.72**	**54**	IAMs_20	IAMs_20	05 28 11.4		
	comp=Z,4µm,20.0s							
F49A	**Sandfield**	**117.72**	**42**	P	**PKiKP**	**04 39 21.9**	**+0.8**	
	baz=290,SNR=7.2							
J49A	**Marlette**	**117.76**	**44**	P	**PKPdf**	**04 39 20.8**	**-0.5**	
	baz=288							
I49A	**Point Hope**	**117.79**	**44**	P	**PKiKP**	**04 39 21.9**	**+0.6**	
	baz=288							
O49A	**Covington**	**117.80**	**48**	P	**PKiKP**	**04 39 21.6**	**+0.1**	
	baz=285							
O49A	**Covington**	**117.80**	**48**	IAMs_20	IAMs_20	05 29 40.7		
	comp=Z,5µm,19.0s							
250A	**Grady**	**118.04**	**58**	IAMs_20	IAMs_20	05 32 04.4		
	comp=Z,6µm,18.0s							
Z50A	**Ashland**	**118.11**	**56**	P	**PKPdf**	**04 39 20.8**	**-1.4**	
	baz=281							
Z50A	**Ashland**	**118.11**	**56**	IAMs_20	IAMs_20	05 30 08.8		
	comp=Z,5µm,18.0s							
FPAL	**Fort Paine**	**118.11**	**55**	IAMs_20	IAMs_20	05 27 37.9		
	comp=Z,6µm,19.0s							
W50A	**Signal Mountai**	**118.22**	**54**	IAMs_20	IAMs_20	05 28 44.6		
	comp=Z,4µm,19.0s							
R50A	**Paris**	**118.29**	**50**	IAMs_20	IAMs_20	05 26 24.0		
	comp=Z,5µm,19.0s							
K50A	**Casco**	**118.30**	**45**	IAMs_20	IAMs_20	05 29 21.3		
	comp=Z,5µm,20.0s							
O50A	**Cable**	**118.34**	**48**	P	**PKPdf**	**04 39 20.2**	**-2.3**	
	baz=286							
P50A	**Jamestown**	**118.35**	**49**	P	**PKPdf**	**04 39 21.9**	**-0.6**	
	baz=286							
BR131	**Keskin Array S**	**118.36**	**312**	*i* PKiKP	**PKPdf**	**04 39 21.8**	**-0.9**	
BRTR	**Keskin Array B**	**118.36**	**312**	PKP	**PKPdf**	**04 39 22.8**	**0.0**	
	comp=Z,6.0nm,1.0s,baz=134,slow=2.5,SNR=20							
BRTR				PKKPbc	**PKKPab**	**04 49 44.5**	**+1.2**	
	comp=Z,1.6nm,0.7s,baz=207,slow=3.0,SNR=8.4							
L50A	**Kingsville**	**118.39**	**46**	P	**PKPdf**	**04 39 22.0**	**-0.5**	
	baz=288							
M50A	**Fremont**	**118.41**	**46**	P	**PKPdf**	**04 39 21.7**	**-0.9**	
	baz=287							
M50A	**Fremont**	**118.41**	**46**	IAMs_20	IAMs_20	05 30 43.5		
	comp=Z,4µm,19.0s							
N50A	**Nevada**	**118.51**	**47**	P	**PKPdf**	**04 39 22.6**	**-0.2**	
	baz=287							
D50A	**G1974 Best Tow**	**118.63**	**39**	P	**PKPdf**	**04 39 22.1**	**-0.8**	
	baz=293							
BI02	**San Fabin de**	**118.69**	**139**		**PKPdf**	**04 39 20.9**	**-2.5**	
451A	**Vernon**	**118.71**	**59**	IAMs_20	IAMs_20	05 31 58.1		
	comp=Z,3µm,19.0s							
Z51A	**Franklin**	**118.71**	**56**	IAMs_20	IAMs_20	05 29 33.8		
	comp=Z,5µm,19.0s							
X51A	**Calhoun**	**118.72**	**54**	IAMs_20	IAMs_20	05 28 41.8		
	comp=Z,6µm,19.0s							
ACSO	**Alum Creek Sta**	**118.79**	**48**	P	**PKPdf**	**04 39 22.4**	**-0.9**	
	baz=286							
ACSO	**Alum Creek Sta**	**118.79**	**48**	IAMs_20	IAMs_20	05 27 29.7		
	comp=Z,4µm,19.0s							
CPCT	**Cooper Cave**	**118.80**	**53**	IAMs_20	IAMs_20	05 23 02.8		
	comp=Z,6µm,22.0s							
Q51A	**Peebles**	**118.84**	**49**	P	**PKPdf**	**04 39 22.9**	**-0.6**	
	baz=286							
MATQ	**Matagami**	**118.91**	**36**	P	**PKPdf**	**04 39 22.9**	**-0.3**	
	baz=296							
P51A	**Williamsport**	**118.94**	**49**	P	**PKPdf**	**04 39 23.4**	**-0.2**	
	baz=286							
P51A	**Williamsport**	**118.94**	**49**	IAMs_20	IAMs_20	05 33 01.8		
	comp=Z,5µm,18.0s							
ANTO	**Ankara**	**118.95**	**312**	⇑P	**PKiKP**	**04 39 27.6**	**+3.8**	
ANTO	**Ankara**	**118.95**	**312**	PKIKP	**PKiKP**	**04 39 23.9**	**+0.1**	
ANTO	**Ankara**	**118.95**	**312**		**PKiKP**	**04 39 23.9**	**+0.1**	
D51A	**Lot 18 Range I**	**118.96**	**39**	P	**PKiKP**	**04 39 23.7**	**+0.2**	
	baz=293							
N51A	**Ashland**	**119.03**	**47**	P	**PKPdf**	**04 39 23.6**	**-0.2**	
	baz=287							
N51A	**Ashland**	**119.03**	**47**	IAMs_20	IAMs_20	05 36 47.1		
	comp=Z,4µm,18.0s							
M51A	**Elyria**	**119.05**	**46**	P	**PKiKP**	**04 39 25.0**	**+1.1**	
	baz=288							
F51A	**Arnstein**	**119.05**	**41**	P	**PKiKP**	**04 39 24.3**	**+0.6**	
	baz=292,SNR=6.6							
I51A	**Listowel**	**119.07**	**43**	P	**PKiKP**	**04 39 24.6**	**+0.7**	
	baz=290,SNR=5.6							
O51A	**Plaskala**	**119.09**	**48**	P	**PKPdf**	**04 39 23.3**	**-0.6**	
	baz=287							
K51A	**Iona Station**	**119.09**	**45**	P	**PKPdf**	**04 39 23.3**	**-0.5**	
	baz=289							
E51A	**G1948 Merrick**	**119.10**	**40**	P	**PKPdf**	**04 39 23.3**	**-0.4**	
	baz=293							
SORM	**Soroca**	**119.11**	**322**	⇑P	**PKiKP**	**04 39 25.1**	**+1.4**	
SORM	**Soroca**	**119.11**	**322**	⇑PKIKP	**PKiKP**	**04 39 25.1**	**+1.4**	
152A	**Waverly Hall**	**119.21**	**57**	IAMs_20	IAMs_20	05 23 52.1		
	comp=Z,6µm,21.0s							
SUW	**Suwalki**	**119.22**	**330**	IAMs_20	IAMs_20	05 32 02.1		
	comp=Z,4µm,21.0s							
352A	**Blakely**	**119.25**	**58**	IAMs_20	IAMs_20	05 33 35.5		
	comp=Z,5µm,18.0s							
KIS	**Kishinev**	**119.28**	**321**	*e*PKiKP	**PKiKP**	**04 39 25.0**	**+0.9**	
KIS	**Kishinev**	**119.28**	**321**	*e*PP	PP	04 40 55.0	+10	
KIS	**Kishinev**	**119.28**	**321**	*e*PPP	PPP	04 43 18.0		
KIS	**Kishinev**	**119.28**	**321**	*e*PKIKP	**PKiKP**	**04 39 25.0**	**+0.9**	
KIS				*e*		04 40 55.0		
KIS				*e*PPP	PPP	04 43 18.0		
W52A	**Murphy**	**119.35**	**54**	IAMs_20	IAMs_20	05 26 49.8		
	comp=Z,5µm,20.0s							
EIL	**Elat**	**119.45**	**300**	PKP	**PKiKP**	**04 39 25.5**	**+0.6**	
	comp=Z,11nm,1.0s,baz=301,slow=5.6,SNR=5.3							
F52A	**Sundridge**	**119.49**	**41**	P	**PKiKP**	**04 39 25.8**	**+1.2**	
	baz=292,SNR=5.6							
HFS	**Hagfors**	**119.50**	**339**	PKP	**PKiKP**	**04 39 24.8**	**+0.7**	
	comp=Z,3.7nm,0.7s,baz=174,slow=1.4,SNR=3.2							
Y52A	**Lilburn**	**119.51**	**55**	P	**PKiKP**	**04 39 25.2**	**+0.2**	
	baz=282							
Y52A	**Lilburn**	**119.51**	**55**	IAMs_20	IAMs_20	05 32 31.8		
	comp=Z,5µm,18.0s							
H52A	**Wyevale**	**119.54**	**42**	P	**PKiKP**	**04 39 24.8**	**+0.2**	
	baz=291							
N52A	**McGinn's Farm,**	**119.56**	**47**	P	**PKPdf**	**04 39 23.9**	**-0.9**	
	baz=288							
M52A	**Chesterland**	**119.57**	**46**	P	**PKPdf**	**04 39 23.9**	**-0.9**	
	baz=288							
P52A	**Corning**	**119.58**	**48**	P	**PKPdf**	**04 39 24.3**	**-0.6**	
	baz=287							
LSQQ	**Lebel-sur-Quev**	**119.61**	**37**	P	**PKPdf**	**04 39 23.6**	**-1.1**	
	baz=296							
K52A	**Tillsonburg**	**119.63**	**44**	P	**PKPdf**	**04 39 24.0**	**-0.9**	
	baz=290							
J52A	**Paris**	**119.64**	**44**	P	**PKPdf**	**04 39 23.7**	**-1.2**	
	baz=290							
O52A	**Adamsville**	**119.66**	**48**	P	**PKPdf**	**04 39 24.4**	**-0.6**	
	baz=287							
O52A	**Adamsville**	**119.66**	**48**	IAMs_20	IAMs_20	05 29 38.8		
	comp=Z,5µm,20.0s							
Q52A	**Bidwell**	**119.67**	**49**	P	**PKiKP**	**04 39 25.1**	**0.0**	
	baz=286							
NB2	**NORSAR Subarra**	**119.70**	**341**	PKPdf	**PKiKP**	**04 39 25.1**	**+0.5**	
	comp=Z,9.7nm,1.1s,baz=42,slow=1.8							
NB2	**NORSAR Subarra**	**119.70**	**341**	PKPdf	**PKiKP**	**04 39 25.1**	**+0.5**	
	baz=42,slow=1.8							
NOA	**NORSAR Array B**	**119.70**	**341**	PKP	**PKiKP**	**04 39 25.7**	**+1.1**	
	comp=Z,2.9nm,0.8s,baz=46,slow=2.0,SNR=10							
E52A	**Mahawa**	**119.73**	**40**	P	**PKPdf**	**04 39 24.8**	**-0.1**	
	baz=293							
553A	**Crawfordville**	**119.90**	**59**	IAMs_20	IAMs_20	05 36 30.7		
	comp=Z,4µm,18.0s							
BOSA	**Boshof**	**119.97**	**231**	PKP	**PKiKP**	**04 39 27.2**	**+1.0**	
	comp=Z,6.0nm,0.9s,baz=162,slow=2.2,SNR=13							
TLCR		**119.98**	**319**	⇑P	**PKiKP**	**04 39 27.3**	**+1.8**	
TLCR		**119.98**	**319**	⇑PKIKP	**PKiKP**	**04 39 27.3**	**+1.8**	
T53A	**Wise**	**120.00**	**51**	P	**PKPdf**	**04 39 25.8**	**-0.1**	
	baz=285							
D53A	**Lac Vacive, Po**	**120.01**	**39**	P	**PKPdf**	**04 39 25.0**	**-0.4**	
	baz=294							
D53A	**Lac Vacive, Po**	**120.01**	**39**		**PKPdf**	**04 39 24.2**	**-1.3**	
O53A	**New Philadelph**	**120.08**	**47**	P	**PKiKP**	**04 39 25.9**	**0.0**	
	baz=288							
R53A	**Hurricane**	**120.08**	**50**	P	**PKiKP**	**04 39 26.3**	**+0.3**	
	baz=286							
BO02	**Sierra Bellavi**	**120.09**	**137**		**PKPdf**	**04 39 24.9**	**-1.3**	
GOGA	**Godfrey**	**120.09**	**55**	P	**PKPdf**	**04 39 26.0**	**0.0**	
	baz=282							
GOGA	**Godfrey**	**120.09**	**55**	IAMs_20	IAMs_20	05 28 51.3		
	comp=Z,5µm,19.0s							
LEF	**Lefka**	**120.09**	**307**	⇓P	**PKiKP**	**04 39 27.9**	**+1.8**	
M53A	**WI Miller and**	**120.09**	**46**	P	**PKiKP**	**04 39 26.8**	**+0.9**	
	baz=289,SNR=5.6							
JURR	**Jurilovca**	**120.10**	**318**	⇑P	**PKiKP**	**04 39 27.6**	**+1.9**	
BG3	**Lake Jocassee**	**120.17**	**54**	IAMs_20	IAMs_20	05 25 16.2		
	comp=Z,3µm,21.0s							
P53A	**Whipple**	**120.17**	**48**	P	**PKiKP**	**04 39 26.5**	**+0.4**	
	baz=287,SNR=7.6							
P53A	**Whipple**	**120.17**	**48**	IAMs_20	IAMs_20	05 34 03.5		
	comp=Z,6µm,18.0s							
N53A	**Lisbon**	**120.18**	**47**	P	**PKiKP**	**04 39 26.1**	**0.0**	
	baz=288,SNR=11							
G53A	**Haliburton**	**120.20**	**41**	P	**PKiKP**	**04 39 26.2**	**+0.3**	
	baz=293,SNR=8.9							
L53A	**Girard**	**120.22**	**45**	P	**PKiKP**	**04 39 26.2**	**0.0**	
	baz=290							
ALGO	**Algonquin Park**	**120.24**	**40**	P	**PKiKP**	**04 39 26.6**	**+0.5**	
	baz=294,SNR=9.0							
Q53A	**Leroy**	**120.26**	**49**	P	**PKPdf**	**04 39 25.9**	**-0.3**	
	baz=287							
E53A	**Dumoine, Ponti**	**120.32**	**40**	P	**PKPdf**	**04 39 26.0**	**-0.1**	
	baz=294							
TOPG	**Topolog**	**120.38**	**319**	⇑P	**PKiKP**	**04 39 27.9**	**+1.5**	
ALLY	**Alegheny Colle**	**120.40**	**45**	IAMs_20	IAMs_20	05 29 32.1		
	comp=Z,6µm,20.0s							
CFR	**Carcaliu**	**120.43**	**319**	⇑P	**PKiKP**	**04 39 27.5**	**+1.1**	
CFR	**Carcaliu**	**120.43**	**319**	⇑PKIKP	**PKiKP**	**04 39 27.5**	**+1.1**	
H53A	**Bobcaygeon**	**120.43**	**42**	P	**PKiKP**	**04 39 26.5**	**0.0**	
	baz=292,SNR=6.2							
G54A	**Lake Saint Pet**	**120.44**	**41**	P	**PKPdf**	**04 39 26.0**	**-0.3**	
	baz=293,SNR=7.2							
TIRR	**Tirgusor**	**120.52**	**318**	⇓P	**PKiKP**	**04 39 28.7**	**+2.1**	
TIRR	**Tirgusor**	**120.52**	**318**	⇓P	**PKiKP**	**04 39 28.7**	**+2.1**	
TIRR	**Tirgusor**	**120.52**	**318**	⇓PKIKP	**PKiKP**	**04 39 28.7**	**+2.1**	
TIRR	**Tirgusor**	**120.52**	**318**	IAMs_20	IAMs_20	05 36 41.5		
	comp=Z,5µm,20.0s							
154A	**Montrose**	**120.55**	**56**	IAMs_20	IAMs_20	05 29 03.7		
	comp=Z,5µm,20.0s							
E54A	**Lac Daplat, Po**	**120.60**	**39**	P	**PKPdf**	**04 39 26.2**	**-0.5**	
	baz=295							
D54A	**Lac Fusel, La**	**120.63**	**38**	P	**PKPdf**	**04 39 26.5**	**-0.1**	
	baz=296							
MANR	**Mangalia**	**120.64**	**317**	⇓P	**PKiKP**	**04 39 29.3**	**+2.4**	
U54A	**Nelsons Funny**	**120.67**	**52**	P	**PKiKP**	**04 39 27.7**	**+0.5**	
	baz=285							
O54A	**Avella**	**120.70**	**47**	P	**PKiKP**	**04 39 27.5**	**+0.3**	
	baz=288,SNR=7.3							
O54A	**Avella**	**120.70**	**47**	IAMs_20	IAMs_20	05 38 15.4		
	comp=Z,5µm,18.0s							
S54A	**Dingess, Beckl**	**120.72**	**50**	P	**PKPdf**	**04 39 26.4**	**-0.7**	
	baz=286							
S54A	**Dingess, Beckl**	**120.72**	**50**	IAMs_20	IAMs_20	05 26 26.1		
	comp=Z,6µm,20.0s							
T54A	**Tazewell**	**120.72**	**51**	P	**PKPdf**	**04 39 26.8**	**-0.4**	
	baz=286							
CHGQ	**Chibougamau**	**120.72**	**35**	P	**PKiKP**	**04 39 27.4**	**+0.6**	
	baz=299,SNR=5.5							
X54A	**Belton**	**120.72**	**54**	P	**PKiKP**	**04 39 27.9**	**+0.5**	
	baz=284							
MATP	**Matopo**	**120.73**	**241**	PKhKP	**PKPdf**	**04 39 25.4**	**-2.5**	
	comp=Z,9.8nm,0.6s,baz=154,slow=1.4,SNR=23							
Q54A	**Coxs Mills**	**120.73**	**49**	P	**PKiKP**	**04 39 27.6**	**+0.3**	
	baz=287,SNR=9.2							
Q54A	**Coxs Mills**	**120.73**	**49**	IAMs_20	IAMs_20	05 25 57.4		
	comp=Z,6µm,20.0s							
N54A	**Moraine State**	**120.74**	**46**	P	**PKPdf**	**04 39 27.1**	**0.0**	
	baz=289,SNR=8.0							
N54A	**Moraine State**	**120.74**	**46**	IAMs_20	IAMs_20	05 31 28.1		
	comp=Z,6µm,19.0s							
W54A	**Cherokee Point**	**120.74**	**53**	P	**PKiKP**	**04 39 27.9**	**+0.5**	
	baz=284							
HARR	**Harsova**	**120.75**	**318**	⇑P	**PKiKP**	**04 39 28.1**	**+1.1**	
HARR	**Harsova**	**120.75**	**318**	⇑PKIKP	**PKiKP**	**04 39 28.1**	**+1.1**	
JTS	**Las Juntas de**	**120.76**	**82**	IAMs_20	IAMs_20	05 30 27.7		
	comp=Z,3µm,18.0s							
V54A	**Nebo**	**120.76**	**52**	P	**PKiKP**	**04 39 27.6**	**+0.2**	
	baz=285,SNR=5.3							
L54A	**Sinclairville**	**120.78**	**45**	P	**PKiKP**	**04 39 27.3**	**0.0**	
	baz=290,SNR=9.3							
M54A	**Oil Creek Stat**	**120.79**	**45**	P	**PKPdf**	**04 39 26.9**	**-0.2**	
	baz=290,SNR=9.9							
M54A	**Oil Creek Stat**	**120.79**	**45**	IAMs_20	IAMs_20	05 29 53.3		
	comp=Z,6µm,20.0s							
P54A	**Burton**	**120.81**	**48**	P	**PKPdf**	**04 39 27.1**	**-0.2**	
	baz=288,SNR=8.1							
TESR	**Tescani**	**120.84**	**321**	⇑P	**PKiKP**	**04 39 29.0**	**+1.8**	
R54A	**Victor**	**120.85**	**50**	P	**PKiKP**	**04 39 28.4**	**+0.9**	
	baz=287							
J54A	**Appleton**	**120.88**	**43**	P	**PKiKP**	**04 39 28.1**	**+0.7**	
	baz=292							
HODGE	**Hodges**	**120.89**	**54**	IAMs_20	IAMs_20	05 29 59.3		
	comp=Z,5µm,18.0s							
BIZ	**Bicaz**	**120.99**	**321**	⇓P	**PKiKP**	**04 39 28.8**	**+1.3**	
VRI	**Vrincioaia**	**121.06**	**320**	⇓P	**PKiKP**	**04 39 29.8**	**+2.1**	
VRI	**Vrincioaia**	**121.06**	**320**	⇓PKIKP	**PKiKP**

	comp=Z,5µm,18.0s									
DOPR	**Dopca**	121.86	321	⇑	P		PKiKP	04 39 31.5	+2.2	
V56A	**Mocksville**	121.89	52		P		PKiKP	04 39 29.7	+0.1	
	baz=286									
E56A	**St. Veronique**	121.89	39		P		PKiKP	04 39 29.2	-0.1	
	baz=297									
T56A	**Rocky Mt**	121.91	51		P		PKiKP	04 39 29.8	+0.2	
	baz=287									
Q56A	**Snyder Ridge,**	121.94	48		P		PKiKP	04 39 29.8	+0.2	
	baz=289									
H56A	**Elgin**	121.95	41		P		PKiKP	04 39 29.8	+0.4	
	baz=294									
N56A	**West Decatur**	121.96	46		P		PKiKP	04 39 29.9	+0.2	
	baz=291,SNR=12									
K56A	**Middlesex**	121.99	43		P		PKiKP	04 39 30.0	+0.4	
	baz=292									
O56A	**Blue Knob Stat**	121.99	46		P		PKiKP	04 39 29.8	+0.1	
	baz=290,SNR=11									
O56A	**Blue Knob Stat**	121.99	46		IAMs_20		IAMs_20	05 28 56.2		
	comp=Z,5µm,20.0s									
W56A	**Indian Trail**	122.00	53		P		PKiKP	04 39 30.0	+0.2	
	baz=285,SNR=5.2									
L56A	**Greenwood**	122.04	44		P		PKPdf	04 39 29.7	+0.1	
	baz=292,SNR=8.1									
L56A	**Greenwood**	122.04	44		IAMs_20		IAMs_20	05 31 35.2		
	comp=Z,6µm,19.0s									
P56A	**Dayton Farm, R**	122.05	47		P		PKPdf	04 39 29.7	+0.1	
	baz=289,SNR=6.4									
ORIO	**Orleans, Innes**	122.07	40		P		PKiKP	04 39 30.0	+0.4	
	baz=296									
ORIO	**Orleans, Innes**	122.07	40		IAMs_20		IAMs_20	05 28 12.5		
	comp=Z,3µm,19.0s									
S56A	**Natural Bridge**	122.08	50		P		PKiKP	04 39 29.9	-0.1	
	baz=288									
J56A	**Wolcott**	122.08	43		P		PKPdf	04 39 29.4	-0.1	
	baz=293,SNR=6.7									
RAZG	**Razgrad**	122.13	318	⇑	P		PKiKP	04 39 31.9	+2.0	
157A	**Early Branch**	122.28	56		P		PKPdf	04 39 30.2	-0.1	
	baz=284									
VOIR		122.31	320	⇓	P		PKiKP	04 39 31.3	+1.1	
VOIR		122.31	320	⇓	PKiKP		PKiKP	04 39 31.3	+1.1	
KOLS	**Kolonicke sedl**	122.34	325	*e*	PKiKP		PKiKP	04 39 31.3	+1.2	
KOLS	**Kolonicke sedl**	122.34	325	*e*	PKP		PKiKP	04 39 31.3	+1.2	
SSPA	**Standing Stone**	122.35	46				PKPdf	04 39 29.7	-0.4	
SSPA	**Standing Stone**	122.35	46		IAMs_20		IAMs_20	05 33 48.0		
	comp=Z,5µm,18.0s									
Z57A	**Bowman**	122.37	55		P		PKiKP	04 39 30.7	+0.1	
	baz=284									
D57A	**Chemin Vers le**	122.38	38		P		PKiKP	04 39 30.7	+0.5	
	baz=298,SNR=5.7									
257A	**Skidaway Islan**	122.41	57		IAMs_20		IAMs_20	05 30 18.9		
	comp=Z,5µm,20.0s									
V57A	**Coltrane Farms**	122.43	52		P		PKiKP	04 39 30.9	+0.3	
	baz=286									
BSD	**Bornholm Skovb**	122.44	334	*e*	PKiKP		PKiKP	04 39 31.2	+1.2	
BSD	**Bornholm Skovb**	122.44	334	*i*	P		PKiKP	04 39 31.2	+1.2	
Y57A	**Sumter**	122.44	54		P		PKPdf	04 39 30.5	0.0	
	baz=285									
Y57A	**Sumter**	122.44	54		IAMs_20		IAMs_20	05 28 46.4		
	comp=Z,6µm,20.0s									
W57A	**Gilead**	122.46	53		P		PKiKP	04 39 30.6	-0.1	
	baz=286,SNR=6.3									
UZH	**Uzhgorod**	122.48	325	⇑	*i* PKiKP		PKiKP	04 39 32.0	+1.7	
UZH					*e*			04 39 37.4		
UZH					*e*			04 46 40.3		
E57A	**Chemin Saint G**	122.50	38		P		PKiKP	04 39 31.5	+1.0	
	baz=297,SNR=7.9									
MANT	**Manisa**	122.50	311		IAMs_20		IAMs_20	05 38 41.7		
	comp=Z,5µm,20.0s									
Q57A	**Strasburg**	122.51	48		P		PKiKP	04 39 30.7	0.0	
	baz=289									
S57A	**Dark Hollow, R**	122.51	49		P		PKPdf	04 39 30.3	-0.2	
	baz=288									
T57A	**Hurt**	122.52	50		P		PKiKP	04 39 30.8	+0.1	
	baz=288,SNR=6.1									
K57A	**Scipio Center**	122.53	43		P		PKPdf	04 39 30.5	0.0	
	baz=293,SNR=9.1									
N57A	**Milroy**	122.55	46		P		PKPdf	04 39 30.6	+0.1	
	baz=291,SNR=11									
G57A	**Newington**	122.56	40		P		PKiKP	04 39 30.8	+0.3	
	baz=296									
X57A	**Johnson Farm,**	122.57	53		P		PKiKP	04 39 31.3	+0.4	
	baz=285									
L57A	**Andrews Acres**	122.58	44		P		PKPdf	04 39 30.6	0.0	
	baz=292,SNR=5.5									
TRPA	**Tarpa**	122.58	324	⇑	P		PKiKP	04 39 31.1	+0.6	
ARR	**Arges**	122.60	320	⇓	P		PKiKP	04 39 32.4	+1.6	
J57A	**Williamstown**	122.61	42		P		PKiKP	04 39 31.1	+0.3	
	baz=294,SNR=5.8									
I57A	**Carthage**	122.61	42		P		PKiKP	04 39 30.7	0.0	
	baz=295,SNR=6.3									
U57A	**Blanch**	122.62	51		P		PKiKP	04 39 31.5	+0.5	
	baz=287									
GO04	**Tololo Observa**	122.63	133		IAMs_20		IAMs_20	05 20 51.9		
	comp=Z,3µm,21.0s									
M57A	**Sunshine Farm,**	122.63	45		P		PKPdf	04 39 30.8	+0.1	
	baz=292,SNR=10									
M57A	**Sunshine Farm,**	122.63	45		IAMs_20		IAMs_20	05 27 23.1		
	comp=Z,6µm,20.0s									
P57A	**Homestead Farm**	122.65	47		P		PKPdf	04 39 30.6	-0.1	
	baz=290,SNR=6.4									
P57A	**Homestead Farm**	122.65	47		IAMs_20		IAMs_20	05 32 43.0		
	comp=Z,5µm,19.0s									
R57A	**Stanardsville**	122.67	49		P		PKiKP	04 39 31.6	+0.6	
	baz=289									
O57A	**Amberson**	122.68	46		P		PKPdf	04 39 30.9	+0.1	
	baz=291,SNR=9.3									
HUMR	**Humele**	122.74	319	⇑	P		PKiKP	04 39 32.6	+1.6	
LSZ	**Lusaka**	122.79	247		PKP		PKiKP	04 39 32.9	+0.8	
	comp=Z,34nm,1.3s,baz=102,slow=3.0,SNR=11									
ELND	**Elena**	122.81	317	⇓	P		PKiKP	04 39 33.5	+2.3	
NHSC	**New Hope**	122.84	55		P		PKiKP	04 39 31.9	+0.3	
	baz=284									
NHSC	**New Hope**	122.84	55		IAMs_20		IAMs_20	05 31 18.1		
	comp=Z,5µm,19.0s									
DWPF	**Disney Wildern**	122.84	61		IAMs_20		IAMs_20	05 40 55.0		
	comp=Z,3µm,18.0s									
LATQ	**La Tuque**	122.87	37		P		PKiKP	04 39 31.7	+0.5	
	baz=299									
LATQ	**La Tuque**	122.87	37		IAMs_20		IAMs_20	05 34 22.1		
	comp=Z,4µm,19.0s									
D58A	**Chemin du LacG**	122.95	37		P		PKiKP	04 39 31.9	+0.6	
	baz=299									
V58A	**Windy Hill, Pi**	122.97	52		P		PKiKP	04 39 31.8	+0.1	
	baz=287									
LONY	**Lake Ozonia**	123.03	40		P		PKiKP	04 39 31.5	-0.1	
	baz=296,SNR=7.3									
OJC	**Ojcow**	123.03	327	*e*	PKP		PKiKP	04 39 32.1	+0.8	
E58A	**La Victoria**	123.05	38		P		PKiKP	04 39 31.9	+0.3	
	baz=298									
R58A	**Rapidan**	123.05	49		P		PKiKP	04 39 31.7	-0.1	
	baz=289									
Y58A	**Scranton**	123.05	54		P		PKiKP	04 39 32.0	+0.1	
	baz=285									
Q58A	**Fox Den Farm,**	123.08	48		P		PKPdf	04 39 31.6	-0.1	
	baz=290,SNR=6.0									
T58A	**Grand View Acr**	123.08	50		P		PKPdf	04 39 31.0	-0.7	
	baz=288,SNR=6.8									
M58A	**Price's Panora**	123.08	45		P		PKiKP	04 39 31.8	0.0	
	baz=292,SNR=8.3									
BINY	**Binghamton**	123.09	44		P		PKiKP	04 39 31.9	+0.1	
	baz=293,SNR=6.1									
W58A	**Raeford**	123.10	53		P		PKiKP	04 39 32.3	+0.4	
	baz=286									
J58A	**Remsen**	123.10	42		P		PKiKP	04 39 31.8	0.0	
	baz=295,SNR=9.9									
K58A	**Earlville**	123.10	43		P		PKiKP	04 39 31.8	0.0	
	baz=294,SNR=7.5									
N58A	**Sunbury**	123.11	45		P		PKPdf	04 39 31.7	+0.1	
	baz=292,SNR=12									
G58A	**Ormstown**	123.13	40		P		PKiKP	04 39 32.3	+0.6	
	baz=297									
DRGR		123.13	323	⇑	P		PKiKP	04 39 33.5	+1.7	
DRGR		123.13	323	⇑	PKiKP		PKiKP	04 39 33.5	+1.7	
X58A	**Rowland**	123.14	53		P		PKiKP	04 39 32.2	+0.1	
	baz=286									
I58A	**Old Forge**	123.17	42		P		PKiKP	04 39 32.2	+0.3	
	baz=295,SNR=6.1									
P58A	**Pank, Wackersv**	123.17	47		P		PKiKP	04 39 32.0	0.0	
	baz=290,SNR=6.1									
NIE	**Niedzica**	123.19	326	*e*	PKP		PKiKP	04 39 32.8	+1.0	
O58A	**Lewisberry**	123.22	46		P		PKPdf	04 39 31.9	+0.1	
	baz=291,SNR=10.0									
U58A	**Oxford**	123.24	51		P		PKiKP	04 39 32.2	0.0	
	baz=288,SNR=5.7									
IVI	**Ivigtut**	123.24	13		IAMs_20		IAMs_20	05 29 18.1		
	comp=Z,5µm,21.0s									
S58A	**Poland Farm, P**	123.24	49		P		PKiKP	04 39 32.2	0.0	
	baz=289									
L58A	**Harry Jones Me**	123.25	44		P		PKiKP	04 39 32.4	+0.3	
	baz=293,SNR=7.1									
R58B	**Mineral**	123.26	49		P		PKiKP	04 39 32.4	+0.2	
	baz=289									
R58B	**Mineral**	123.26	49		IAMs_20		IAMs_20	05 33 20.2		
	comp=Z,5µm,19.0s									
PAGS	**Pennsylvania G**	123.32	46		IAMs_20		IAMs_20	05 34 44.5		
	comp=Z,5µm,20.0s									
H58A	**Gabriels**	123.37	40		P		PKiKP	04 39 32.4	+0.1	
	baz=296,SNR=13									
PLVB	**Pleven**	123.46	318	⇓	P		PKiKP	04 39 33.7	+1.2	
RGN	**Rugen**	123.50	334		IAMs_20		IAMs_20	05 36 05.0		
	comp=Z,4µm,20.0s									
CBN	**Corbin Frederi**	123.55	48		P		PKiKP	04 39 33.2	+0.4	
	baz=290									
CBN	**Corbin Frederi**	123.55	48		IAMs_20		IAMs_20	05 36 23.0		
	comp=Z,5µm,18.0s									
J59A	**Piesco**	123.57	42		P		PKPdf	04 39 32.6	+0.1	
	baz=295,SNR=10									
H59A	**Cadyville**	123.59	40		P		PKiKP	04 39 32.8	+0.1	
	baz=297									
F59A	**Saint Guilaume**	123.60	38		P		PKiKP	04 39 33.7	+1.0	
	baz=298									
D59A	**Saint-Raymond**	123.62	37		P		PKiKP	04 39 33.2	+0.6	
	baz=300									
K59A	**Cooperstown**	123.63	42		P		PKPdf	04 39 32.5	-0.2	
	baz=295,SNR=6.5									
V59A	**Middlesex**	123.66	51		P		PKiKP	04 39 33.1	+0.1	
	baz=288									
Y59A	**Loris**	123.67	54		P		PKiKP	04 39 33.3	+0.2	
	baz=286									
MVL	**Millersville**	123.67	46		IAMs_20		IAMs_20	05 40 12.8		
	comp=Z,4µm,18.0s									
O59A	**Robesonia**	123.67	46		P		PKPdf	04 39 32.8	+0.1	
	baz=292,SNR=9.8									
W59A	**Clinton**	123.68	52		P		PKiKP	04 39 33.8	+0.7	
	baz=287									
061Z	**Ochoppi**	123.68	64		IAMs_20		IAMs_20	05 27 53.5		
	comp=Z,4µm,21.0s									
X59A	**McDuffie Farm,**	123.72	53		P		PKiKP	04 39 33.6	+0.4	
	baz=286									
M59A	**Waymart**	123.73	44		P		PKiKP	04 39 33.2	+0.1	
	baz=293,SNR=14									
N59A	**State Game Lan**	123.74	45		P		PKiKP	04 39 33.1	0.0	
	baz=293,SNR=9.3									
N59A	**State Game Lan**	123.74	45		IAMs_20		IAMs_20	05 33 03.4		
	comp=Z,6µm,20.0s									
L59A	**Walton**	123.74	43		P		PKiKP	04 39 33.0	-0.1	
	baz=294,SNR=7.4									
RDO	**Rodhopi**	123.74	315		P		PKiKP	04 39 33.3	+0.2	
R59A	**King George, V**	123.75	48		P		PKiKP	04 39 33.6	+0.5	
	baz=290									
GZR	**Gura Zlata**	123.75	321	⇓	P		PKiKP	04 39 34.8	+1.8	
GZR	**Gura Zlata**	123.75	321	⇓	PKiKP		PKiKP	04 39 34.8	+1.8	
P59A	**Jarrettsville**	123.75	47		P		PKiKP	04 39 33.2	0.0	
	baz=291									
S59A	**Mechanicsville**	123.76	49		P		PKiKP	04 39 33.3	+0.1	
	baz=290									
T59A	**Double "B" Far**	123.82	50		P		PKiKP	04 39 33.7	+0.3	
	baz=289,SNR=5.9									
U59A	**Littleton**	123.83	51		P		PKiKP	04 39 33.6	+0.2	
	baz=288									
MBAR	**Mbarara**	123.83	265		PKP		PKiKP	04 39 35.5	+1.2	
	comp=Z,3.7nm,0.2s,baz=102,slow=1.7,SNR=5.3									
MBAR	**Mbarara**	123.83	265	⇑	*i* PKiKP		PKiKP	04 39 36.6	+2.3	
MBAR	**Mbarara**	123.83	265				PKPdf	04 39 32.0	-2.0	
I59A	**Olmsteadville**	123.84	41		P		PKPdf	04 39 33.0	0.0	
	baz=296,SNR=8.8									
Q59A	**Harwood**	123.86	47		P		PKiKP	04 39 33.9	+0.5	
	baz=291									
NRS	**Narsarsuaq**	123.87	12		IAMs_20		IAMs_20	05 29 13.7		
	comp=Z,6µm,22.0s									
060A	**Indiantown**	123.97	62		IAMs_20		IAMs_20	05 28 29.9		
	comp=Z,4µm,20.0s									
F60A	**Warwick**	124.06	38		P		PKPdf	04 39 33.3	+0.1	
	baz=299,SNR=6.1									
CNNC	**Cliffs of the**	124.09	52		P		PKiKP	04 39 34.2	+0.3	
	baz=287									
CNNC	**Cliffs of the**	124.09	52		IAMs_20		IAMs_20	05 28 25.7		
	comp=Z,5µm,20.0s									
RZN	**Rozhen**	124.09	316	*e*	P		PKPdf	04 39 33.2	-0.5	
R60A	**Leonardtown, M**	124.12	48		P		PKiKP	04 39 34.0	+0.1	
	baz=290									
OKC	**Ostrava-Krasne**	124.12	328		AMS		AMS	05 37 40.0		
	comp=Z,3µm,17.7s									
E60A	**Ste Agathe de**	124.17	37		P		PKiKP	04 39 33.9	+0.1	
	baz=300									
Y60A	**Bolivia**	124.19	53		P		PKiKP	04 39 34.2	0.0	
	baz=286									
I60A	**Shoreham**	124.20	41		P		PKiKP	04 39 33.9	0.0	
	baz=297,SNR=14									
D60A	**Saint Jean D'O**	124.20	37		P		PKiKP	04 39 33.8	+0.1	
	baz=301									
X60A	**Albert Glenn T**	124.22	53		P		PKiKP	04 39 34.1	-0.1	
	baz=287									
PSZ	**Piszkesteto**	124.22	325	⇑	P		PKiKP	04 39 34.2	+0.3	
PSZ	**Piszkesteto**	124.22	325	⇑	PKiKP		PKiKP	04 39 34.2	+0.3	
PSZ	**Piszkesteto**	124.22	325		IAMs_20		IAMs_20	05 35 09.7		
	comp=Z,4µm,20.0s									
HERR	**Herculane**	124.22	321	⇑	P		PKiKP	04 39 35.4	+1.5	
O60A	**Telford**	124.23	45		P		PKiKP	04 39 33.9	-0.1	
	baz=293,SNR=12									
N60A	**Cedar Hill Far**	124.23	45		P		PKPdf	04 39 33.8	+0.1	
	baz=293,SNR=9.3									
G60A	**Masonville**	124.23	39		P		PKPdf	04 39 33.8	+0.1	
	baz=298									
P60A	**Greenville**	124.25	46		P		PKiKP	04 39 34.2	+0.1	
	baz=292,SNR=6.0									
P60A	**Greenville**	124.25	46		IAMs_20		IAMs_20	05 28 38.1		
	comp=Z,6µm,20.0s									
H60A	**Morristown**	124.26	40		P		PKiKP	04 39 34.2	+0.2	
	baz=298									
S60A	**Water View**	124.26	49		P		PKiKP	04 39 34.4	+0.2	
	baz=290									
U60A	**Pendleton**	124.28	50		P		PKiKP	04 39 34.4	+0.2	
	baz=289									
W60A	**Pink Hill**	124.28	52		P		PKiKP	04 39 34.5	+0.1	
	baz=287									
K60A	**Five Rivers En**	124.34	42		P		PKiKP	04 39 34.7	+0.5	
	baz=295									
M60A	**Port Jervis**	124.38	44		P		PKPdf	04 39 34.1	+0.1	
	baz=294,SNR=5.6									
L60A	**Shokan**	124.38	43		P		PKiKP	04 39 34.5	+0.1	
	baz=295									
J60A	**Lant Hill Farm**	124.38	41		P		PKiKP	04 39 34.6	+0.3	
	baz=296,SNR=5.7									
T60A	**Surry**	124.39	49		P		PKiKP	04 39 34.6	+0.2	
	baz=290									
Q60A	**Greensboro**	124.40	47		P		PKiKP	04 39 34.6	+0.2	
	baz=291									
Q60A	**Greensboro**	124.40	47		IAMs_20		IAMs_20	05 39 54.2		
	comp=Z,5µm,18.0s									
V60A	**Jim Taylor Roa**	124.42	51		P		PKiKP	04 39 34.8	+0.3	
	baz=288									
MORC	**Moravsky Berou**	124.48	328	*e*	PKP		PKiKP	04 39 34.7	+0.4	
MORC	**Moravsky Berou**	124.48	328	⇑	P		PKiKP	04 39 34.7	+0.4	
MORC	**Moravsky Berou**	124.48	328	⇑	PKiKP		PKiKP	04 39 34.7	+0.4	
D61A	**St Aubert, Com**	124.49	36		P		PKiKP	04 39 34.6	+0.3	
	baz=302									
KSP	**Ksiaz**	124.49	329	*e*	PKP		PKiKP	04 39 36.5	+2.3	
VYHS	**Vyhne**	124.50	326	*e*	PKiKP		PKiKP	04 39 34.8	+0.4	
VYHS	**Vyhne**	124.50	326	*e*	PKP		PKiKP	04 39 34.8	+0.4	
F61A	**St Evariste**	124.64	38		P		PKiKP	04 39 34.8	+0.1	
	baz=300,SNR=6.4									
G61A	**St-Isidore-de-**	124.65	38		P		PKiKP	04 39 34.9	+0.2	
	baz=299									
KRLC	**Kraliky**	124.70	328	*e*	PKiKP		PKiKP	04 39 36.9	+2.1	
KRLC					*e*			04 41 25.4		
KRLC					MLR		MLR			
	comp=Z,3µm,21.1s									
KRLC	**Kraliky**	124.70	328	*e*	PKP		PKiKP	04 39 36.9	+2.1	
KRLC				*e*	PP		PP	04 41 25.4	+3.9	
KRLC					AMS		AMS	05 34 40.0		
	comp=Z,3µm,21.1s									
OSTC	**Ostas**	124.70	329	*e*	PKP		PKiKP	04 39 36.9	+2.2	
OSTC				*ex*	x		x	04 39 44.2		
OSTC					AMS		AMS	05 31 50.0		
	comp=Z,4µm,25.4s									
E61A	**Lac Etchemin**	124.71	37		P		PKPdf	04 39 34.7	+0.1	
	baz=301,SNR=13									
VTS	**Vitosha**	124.71	318		P		PKiKP	04 39 35.1	-0.1	
VTS	**Vitosha**	124.71	318	⇓	P		PKiKP	04 39 36.5	+1.3	
VTS	**Vitosha**	124.71	318	*e*	P		PKiKP	04 39 35.8	+0.6	
VTS	**Vitosha**	124.71	318	⇓	PKiKP		PKiKP	04 39 36.5	+1.3	
MDVR	**Moldovita**	124.71	321	⇑	P		PKiKP	04 39 36.6	+1.7	
K61A	**Williamstown**	124.73	42		P		PKiKP	04 39 35.0	0.0	
	baz=296,SNR=9.8									
L61A	**Hillsdale 1, H**	124.75	43		P		PKiKP	04 39 35.3	+0.2	
	baz=295									
H61A	**Lyndonville**	124.76	39		P		PKiKP	04 39 35.3	+0.2	
	baz=298,SNR=6.9									
CHVC	**Chvalec**	124.77	329	*e*	PKP		PKiKP	04 39 36.9	+2.0	
CHVC					AMS		AMS	05 34 10.0		
	comp=Z,3µm,20.3s									
DPC	**Dobruska-Polom**	124.77	329	*e*	PKiKP		PKiKP	04 39 37.1	+2.2	
DPC				*e*				04 39 44.2		
DPC				*e*				04 41 26.0		
DPC					MLR		MLR			
	comp=Z,4µm,23.0s									
DPC	**Dobruska-Polom**	124.77	329	*e*	PKP		PKiKP	04 39 37.1	+2.2	
DPC				*ex*	x			04 39 44.2		
DPC				*e*	PP		PP	04 41 26.0	+4.0	
DPC					AMS		AMS	05 31 50.0		
	comp=Z,4µm,23.0s									
MMB	**Musomiste**	124.81	317	*e*	P		PKPdf	04 39 34.4	-0.5	
W61A	**Ground Anchor**	124.81	52		P		PKiKP	04 39 35.2	-0.1	
	baz=288									
NVR	**Nevrokopi**	124.82	316		P		PKiKP	04 39 35.4	+0.1	
N61A	**South Mountain**	124.83	45		P		PKiKP	04 39 35.4	+0.2	
	baz=294									
UPC	**Upice**	124.84	329		AMS		AMS	05 32 40.0		
	comp=Z,4µm,21.4s									
I61A	**Oroboro, Fairl**	124.86	40		P		PKiKP	04 39 35.7	+0.5	
	baz=298,SNR=8.2									
U61A	**Possum Corner**	124.87	50		P		PKiKP	04 39 35.4	0.0	
	baz=289									
LBNH	**Lisbon**	124.89	40		P		PKiKP	04 39 35.2	-0.1	
	baz=298									
J61A	**Chester**	124.90	41		P		PKiKP	04 39 35.5	+0.2	
	baz=297,SNR=6.8									
O61A	**Allentown**	124.91	45		P		PKiKP	04 39 35.7	+0.3	
	baz=293									
V61A	**Roper**	124.94	51		P		PKiKP	04 39 35.6	0.0	
	baz=289									
ATAH	**Atahualpa**	124.97	104		PKP		PKiKP	04 39 38.5	+1.7	
	comp=Z,10nm,0.8s,baz=209,slow=9.3,SNR=5.3									
M61A	**Granite Spring**	124.97	44		P		PKiKP	04 39 35.7	+0.2	
	baz=295									
PAL	**Palisades**	125.00	44		P		PKiKP	04 39 36.2	+0.7	
	baz=294									
R61A	**Willards**	125.01	48		P		PKiKP	04 39 36.0	+0.4	
	baz=291									
NNA	**Nana**	125.15	110	⇑	*i* PKiKP		PKiKP	04 39 37.3	+0.6	
BSEG	**Bad Segeberg**	125.20	335	*e*	PKPdf		PKiKP	04 39 36.3	+0.7	
	baz=49,slow=1.8									
D62A	**Allapoint, All**	125.21	36		P		PKiKP	04 39 35.9	+0.1	
	baz=303,SNR=6.6									
D62A	**Allapoint, All**	125.21	36				PKPdf	04 39 34.2	-1.2	
L61B	**Northampton**	125.22	42		P		PKiKP	04 39 35.8	-0.2	
	baz=296,SNR=5.5									
H62A	**Milan**	125.22	39		P		PKiKP	04 39 36.1	+0.2	
	baz=299									
VRAC	**Vranov**	125.25	328		PKP		PKiKP	04 39 36.2	+0.4	
	comp=Z,6.5nm,0.9s,baz=37,slow=2.5,SNR=14									
VRAC	**Vranov**	125.25	328	*e*	PKP		PKiKP	04 39 36.0	+0.1	
VRAC	**Vranov**	125.25	328	⇓	P		PKiKP	04 39 37.0	+1.1	
VRAC	**Vranov**	125.25	328	⇓	PKiKP		PKiKP	04 39 37.0	+1.1	
G62A	**West of Eustis**	125.29	38		P		PKiKP	04 39 36.4	+0.3	
	baz=300									
K62A	**Royalston**	125.42	42		P		PKPdf	04 39 36.1	+0.1	
	baz=297,SNR=5.3

baz=303,SNR=5.2
HRV **Adam Dziewonsk** 125.94 41 PKIKP **PKiKP** 04 39 37.8 +0.4
HRV **Adam Dziewonsk** 125.94 41 P **PKiKP** 04 39 37.8 +0.4
baz=297
HRV **Adam Dziewonsk** 125.94 41 **PKiKP** 04 39 37.8 +0.4
PKME **Peaks-Kenny Pk** 126.02 38 P **PKiKP** 04 39 37.8 +0.3
baz=301
PQI **Presque Isle** 126.03 35 IAMs_20 IAMs_20 05 36 11.5
comp=Z,5µm,19.0s
M63A **Gales Ferry** 126.10 43 P **PKiKP** 04 39 37.8 +0.1
baz=296
DIVS **Divibare** 126.12 321 ⇑*i*P **PKiKP** 04 39 37.8 0.0
SKO **Skopje** 126.19 318 *i* P **PKiKP** 04 39 37.8 -0.1
SKO **Skopje** 126.19 318 *i* P **PKiKP** 04 39 37.8 -0.1
L63A **North Scituate** 126.19 42 P **PKiKP** 04 39 37.9 0.0
baz=297
F64A **Sherman** 126.27 36 P **PKiKP** 04 39 38.0 0.0
baz=303,SNR=5.3
E64A **Bridgewater** 126.27 36 P **PKiKP** 04 39 37.9 -0.1
baz=304
LIT **Litokhoron** 126.28 315 P **PKPdf** 04 39 37.3 -0.5
NRDL **Niedersach Rie** 126.31 334 *e*PKPdf **PKiKP** 04 39 38.3 +0.6
baz=49,slow=1.9
ASSE **Asse, Remlinge** 126.32 333 *e*PKPdf **PKiKP** 04 39 38.3 +0.6
baz=49,slow=1.9
IDI **Anoyia** 126.32 309 PKP **PKiKP** 04 39 38.9 +0.4
comp=Z,25nm,0.9s,baz=176,slow=9.2,SNR=4.4
IDI **Anoyia** 126.32 309 ⇑P **PKiKP** 04 39 41.1 +2.6
G64A **Maxfield** 126.35 37 P **PKiKP** 04 39 38.0 -0.1
baz=302
H64A **Troy** 126.39 38 P **PKiKP** 04 39 38.1 -0.1
baz=301,SNR=5.4
RETH **Rethem/Aller,** 126.46 335 *e*PKPdf **PKiKP** 04 39 38.5 +0.4
baz=49,slow=1.9
CONA **Conrad Observa** 126.46 327 *e*PKiKP **PKiKP** 04 39 38.4 0.0
comp=Z,28nm,1.5s,SNR=10
I64A **Boothbay** 126.50 39 P **PKiKP** 04 39 38.6 +0.1
baz=300
BBLS **Lazići** 126.60 321 ⇑*i*P **PKiKP** 04 39 38.9 +0.1
M64A **Tiverton** 126.60 42 P **PKiKP** 04 39 38.9 +0.2
baz=297
CLZ **Clausthal** 126.65 333 *e*PKPdf **PKiKP** 04 39 39.2 +0.6
baz=49,slow=1.9
TANN **Tannenbergstha** 126.65 331 *e*PKPdf **PKiKP** 04 39 39.0 +0.3
baz=49,slow=1.9
L64A **Middleborough** 126.67 42 P **PKiKP** 04 39 38.9 +0.1
baz=298
RUDO **Rudo** 126.75 321 *e*P **PKPdf** 04 39 38.3 -0.2
GUNZ **Gunzen** 126.75 331 *e*PKPdf **PKiKP** 04 39 39.2 +0.3
baz=49,slow=1.9
PLN **Plauen** 126.75 331 *e*PKPdf **PKiKP** 04 39 39.1 +0.3
baz=49,slow=1.9
FNA **Florina** 126.76 317 P **PKPdf** 04 39 38.2 -0.5
HAPS **Han Pijesak,BI** 126.77 321 *e*P **PKiKP** 04 39 39.1 -0.1
WERN **Wernitzgruen** 126.78 331 *e*PKPdf **PKiKP** 04 39 39.4 +0.5
baz=49,slow=1.9
NKC **Novy Kostel** 126.78 331 AMS AMS 05 36 00.0
comp=Z,3µm,19.8s
MOX **Moxa** 126.90 332 *e*PKPdf **PKiKP** 04 39 39.4 +0.3
baz=49,slow=1.9
MOX *e*L L 05 38 58.6
comp=Z,4µm,20.6s
KHC **Kasperske Hory** 126.93 329 *e*PKIKP **PKiKP** 04 39 39.3 +0.1
KHC *e* 04 39 47.6
KHC MLR MLR
comp=Z,3µm,20.8s
KHC **Kasperske Hory** 126.93 329 *e*PKP **PKiKP** 04 39 39.3 +0.1
KHC *ex* x 04 39 47.6
KHC AMS AMS 05 35 30.0
comp=Z,3µm,20.8s
H65A **Eastbrook** 126.95 38 P **PKiKP** 04 39 39.4 +0.1
baz=302,SNR=5.3
PHP **Peshkopia** 126.98 318 P **PKPdf** 04 39 39.1 0.0
MAKR **Makrakomi, Fth** 126.99 314 P **PKPdf** 04 39 39.1 -0.1
OHR **Ohrid** 127.00 317 *i* P **PKPdf** 04 39 39.3 +0.1
OHR **Ohrid** 127.00 317 *i* P **PKPdf** 04 39 39.3 +0.1
GTTG **Gottingen** 127.04 333 *e*PKPdf **PKiKP** 04 39 39.8 +0.5
baz=49,slow=1.9
ARSA **Arzberg** 127.04 326 pPKPdf **PKiKP** 04 39 40.2 +0.7
comp=Z,8.1nm,1.3s
GEC2 **GERESS Array S** 127.04 329 *e*PKPdf **PKiKP** 04 39 39.6 0.0
baz=49,slow=1.9
GERES **GERESS Array B** 127.04 329 PKP **PKiKP** 04 39 39.3 -0.2
comp=Z,10nm,0.8s,baz=48,slow=2.0,SNR=43
G65A **Princeton** 127.09 37 P **PKiKP** 04 39 39.4 -0.2
baz=303,SNR=5.5
KOGS **Kog** 127.10 325 *i* PKPdf **PKiKP** 04 39 39.6 0.0
KOGS *e*PP PP 04 41 57.3 +20
KOGS *e* 04 53 12.2
MANZ **Manzenberg** 127.11 331 *e*PKPdf **PKiKP** 04 39 39.9 +0.3
baz=49,slow=1.9
ROTZ **Rotzenmuhle** 127.20 330 *e*PKPdf **PKiKP** 04 39 39.9 +0.2
baz=49,slow=1.9
UPM **Unac-Piva** 127.25 320 *e*P **PKPdf** 04 39 38.2 -1.5
WET **Wettzell** 127.27 330 *e*PKPdf **PKiKP** 04 39 40.1 +0.2
baz=49,slow=1.9
MEV **Metsovon** 127.30 316 P **PKiKP** 04 39 41.1 +0.7
ANX **Ano Chora** 127.31 314 P **PKiKP** 04 39 40.6 +0.2
KLV **Kalavryta, Ach** 127.37 313 P **PKPdf** 04 39 39.6 -0.3
MOA **Molln** 127.37 328 *e*pPKPdf **PKiKP** 04 39 40.6 +0.4
comp=Z,10.0nm,1.2s
PDG **Podgorica** 127.40 319 ⇓P **PKiKP** 04 39 40.9 +0.6
PDG **Podgorica** 127.40 319 ⇓*i*P **PKiKP** 04 39 40.4 +0.1
PDG **Podgorica** 127.40 319 IAMs_20 IAMs_20 05 38 32.5
comp=Z,3µm,22.0s
IBBN **Ibbenburen** 127.44 335 *e*PKPdf **PKiKP** 04 39 40.5 +0.5
baz=49,slow=1.9
H66A **Whiting** 127.47 37 P **PKiKP** 04 39 40.6 +0.3
baz=303
BLY **Banja Luka** 127.50 323 ⇓P **PKiKP** 04 39 41.4 +1.0
BLY **Banja Luka** 127.50 323 *e*P **PKiKP** 04 39 41.1 +0.7
TIR **Tirane** 127.52 318 ⇓P **PKiKP** 04 39 42.1 +1.5
TIR **Tirane** 127.52 318 ⇓PKIKP **PKiKP** 04 39 42.1 +1.5
UBBA **Unterbreizbach** 127.53 333 *e*PKPdf **PKiKP** 04 39 40.5 +0.3
baz=49,slow=1.9
GCUF **Volcan Galeras** 127.56 94 *e*P **PKiKP** 04 39 43.0 +0.9
DRME **Dracevica, Mon** 127.57 319 ⇓*i*P **PKiKP** 04 39 40.9 +0.2
BRY **Bratogost** 127.63 320 *e*P **PKiKP** 04 39 41.0 0.0
SOKA **Soboth** 127.65 326 *e*PKiKP **PKPdf** 04 39 40.3 0.0
comp=Z,22nm,1.1s,SNR=12
GRF **Grafenberg Arr** 127.73 331 *e*PKPdf **PKiKP** 04 39 40.9 +0.2
baz=49,slow=1.9
GRF *e*L L 05 38 33.2
comp=Z,2µm,21.1s
MGRS **Mrkonjic Grad** 127.74 323 *e*P **PKiKP** 04 39 43.2 +2.2
BBAC **Balboa, Cauca** 127.76 93 *e*P **PKiKP** 04 39 43.0 +0.9
HCY **Herceg Novi** 127.89 320 *e*P **PKPdf** 04 39 40.6 -0.1
CRES **Cresnjev** 127.91 325 ⇑*i*P **PKiKP** 04 39 41.1 -0.2
LVC **Limon Verde** 127.95 126 PKP **PKiKP** 04 39 43.6 +1.2
comp=Z,9.5nm,0.7s,baz=245,slow=2.6,SNR=4.6
LVC **Limon Verde** 127.95 126 **PKPdf** 04 39 38.8 -3.1
OBKA **Obir** 128.02 326 *e*PKiKP **PKPdf** 04 39 41.0 0.0
comp=Z,7.4nm,0.9s
STON **Ston** 128.18 321 ⇓*i*P **PKPdf** 04 39 41.0 -0.2
RJOB **Jochberg** 128.21 328 *e*PKPdf **PKPdf** 04 39 41.3 0.0
baz=49,slow=1.9
BOJS **Bojanci** 128.21 325 *i* PKPdf **PKiKP** 04 39 42.0 +0.2
BOJS eSS SS 04 59 00.8 +4.2
LJU **Ljubljana** 128.31 326 *e*PKPdf **PKiKP** 04 39 42.1 +0.1
LJU *e* 04 43 13.3
LJU *e*SS SS 04 59 00.7 +3.0
LJU *e* 05 03 25.4
LJU **Ljubljana** 128.31 326 ⇑*i*P **PKiKP** 04 39 42.2 +0.1
KBA **Koelnbreinsper** 128.33 327 *e*PKiKP **PKPdf** 04 39 41.5 -0.2
comp=Z,13nm,1.1s,SNR=5.6
KBA **Koelnbreinsper** 128.33 327 PKIKP **PKPdf** 04 39 41.4 -0.2
SOTA **Rioblanco** 128.41 93 *e*P **PKiKP** 04 39 43.7 -0.1
MYKA **Terra Mystica** 128.45 327 *e*PKiKP **PKPdf** 04 39 41.5 -0.3
comp=Z,15nm,1.6s,SNR=5.2
CEY **Cerknica** 128.55 325 ⇑*i*P **PKiKP** 04 39 42.3 -0.3
PCON **Cinco Dias** 128.64 93 *e*P **PKiKP** 04 39 45.9 +1.6
TNS **Taunus Mts** 128.66 333 *e*PKPdf **PKiKP** 04 39 42.9 +0.2
baz=49,slow=1.9
FUR **Furstenfeldbru** 128.72 329 *e*PKPdf **PKiKP** 04 39 42.6 -0.3
baz=49,slow=1.9
YOTC **Yotoco, Valle** 128.88 91 *e*P **PKPdf** 04 39 43.4 -0.2
TRI **Trieste** 128.94 326 IAMs_20 IAMs_20 05 37 04.5
comp=Z,4µm,21.0s
ABTA **Abfaltersbach** 128.99 327 *e*PKiKP **PKiKP** 04 39 43.2 -0.3
comp=Z,30nm,1.3s,SNR=10
AHRW **Bad Neuenahr-A** 129.03 334 *e*PKPdf **PKiKP** 04 39 43.5 +0.2
baz=49,slow=1.9
WATA **Walderalm** 129.10 328 *e*PKiKP **PKPdf** 04 39 43.4 +0.3
comp=Z,32nm,1.3s,SNR=8.5
WTTA **Wattenberg** 129.12 328 *e*PKiKP **PKiKP** 04 39 43.6 -0.3
comp=Z,50nm,1.2s,SNR=15
WTTA **Wattenberg** 129.12 328 PKIKP **PKiKP** 04 39 43.5 -0.3
STU **Stuttgart** 129.33 331 *e*PKPdf **PKiKP** 04 39 44.2 +0.2
baz=49,slow=1.9
STU **Stuttgart** 129.33 331 IAMs_20 IAMs_20 05 40 39.4
comp=Z,3µm,20.0s
MOTA **Moosalm** 129.34 329 *e*PKiKP **PKPdf** 04 39 43.8 +0.2
comp=Z,32nm,1.4s,SNR=10
CBOC **Ciudad Bolivar** 129.37 88 *e*P **PKiKP** 04 39 46.3 +1.0
SQTA **Sankt Quirin** 129.37 329 *e*PKiKP **PKiKP** 04 39 44.2 -0.1
comp=Z,21nm,0.9s,SNR=9.1
RETA **Reutte** 129.42 329 *e*pPKPdf **PKiKP** 04 39 44.7 +0.4
comp=Z,14nm,1.3s
UBR **Ueberruh** 129.63 330 *e*PKPdf **PKiKP** 04 39 44.4 -0.3
baz=49,slow=1.9
FETA **Feichten** 129.75 329 *e*pPKPdf **PKiKP** 04 39 45.4 +0.3
comp=Z,30nm,1.4s,SNR=14
HELC **Santa Helena** 129.87 88 *e*P **PKPdf** 04 39 45.5 -0.2
CTI **Castel Tesino** 129.89 327 IAMs_20 IAMs_20 05 38 56.5
comp=Z,4µm,20.0s
MATE **Matera** 129.95 319 ⇓P **PKiKP** 04 39 46.2 +0.7
RREF **El Recreo** 129.95 89 *e*P **PKiKP** 04 39 46.8 -0.3
ORTC **Ortega, Tolima** 129.96 91 *e*P **PKiKP** 04 39 46.1 -0.2
DAVA **Damuels** 130.01 329 *e*PKiKP **PKPdf** 04 39 44.7 -0.1
comp=Z,14nm,0.8s,SNR=5.1
BFO **Black Forest** 130.05 331 *e*PKPdf **PKPdf** 04 39 44.9 +0.2
baz=49,slow=1.9
BFO **Black Forest** 130.05 331 PKIKP **PKPdf** 04 39 40.7 -4.0
BFO **Black Forest** 130.05 331 **PKPdf** 04 39 40.7 -4.0
BFO IAMs_20 IAMs_20 05 41 08.4
comp=Z,3µm,20.0s
WLF **Walferdange** 130.08 334 *e*PKPdf **PKiKP** 04 39 46.2 +0.7
baz=49,slow=1.9
WLF **Walferdange** 130.08 334 IAMs_20 IAMs_20 05 42 44.0
comp=Z,3µm,21.0s
PRAC **Prado** 130.30 91 *e*P **PKPdf** 04 39 46.4 +0.2
DAVOX **Davos/Dischmat** 130.34 329 PKP **PKPdf** 04 39 45.5 0.0
comp=Z,8.4nm,0.6s,baz=203,slow=0.4,SNR=20
DAVOX SKPbc **SKPbc** 04 43 09.1 +3.5
comp=Z,3.3nm,0.6s,baz=0.0,slow=2.0,SNR=3.0
SJCC **San Jacinto, C** 130.37 83 *e*P **PKPdf** 04 39 46.5 +0.3
TIP **Timpagrande** 130.65 317 ⇑P **PKiKP** 04 39 47.1 +0.1
TIP **Timpagrande** 130.65 317 **PKPdf** 04 39 43.6 -2.5
TUE **Stuetta** 130.82 329 **PKPdf** 04 39 43.1 -3.4
TUE IAMs_20 IAMs_20 05 41 54.1
comp=Z,4µm,19.0s
PTBC **PUERTO BERRIO** 130.96 87 *e*P **PKPdf** 04 39 43.8 -3.6
ROSC **El Rosal** 130.97 90 PKP **PKiKP** 04 39 48.8 0.0
comp=Z,5.9nm,0.5s,baz=118,slow=3.2,SNR=10
ROSC SKPbc **SKPab** 04 43 13.2 +3.8
comp=Z,11nm,0.8s,baz=236,slow=2.0,SNR=6.9
AQU **L'Aquila** 131.12 322 ⇑*i*P **PKPdf** 04 39 47.4 +0.5
MACC **Macarena, Meta** 131.14 93 *e*P **PKPdf** 04 39 47.5 -0.2
SPBC **San Pablo de B** 131.28 89 *e*P **PKPdf** 04 39 47.0 -1.1
LPAZ **La Paz** 131.49 119 PKP **PKiKP** 04 39 50.4 +0.4
comp=Z,17nm,1.2s,baz=254,slow=7.6,SNR=5.7
LPAZ SKPbc **SKPab** 04 43 16.4 +4.6
comp=Z,14nm,1.1s,baz=152,slow=5.1,SNR=11
CHIC **Chingaza** 131.53 90 *e*P **PKPdf** 04 39 45.8 -3.2
RUSC **La Rusia** 132.28 88 *e*P **PKPdf** 04 39 47.8 -2.7
RUSC **La Rusia** 132.28 88 **PKPdf** 04 39 44.6 -5.9
CLF **Chambon-Foret** 133.00 335 IAMs_20 IAMs_20 05 42 03.1
comp=Z,4µm,19.0s
BNI **Bardonecchia** 133.16 329 IAMs_20 IAMs_20 05 43 31.8
comp=Z,3µm,20.0s
GRTK **Grand Turk** 133.26 67 IAMs_20 IAMs_20 05 40 30.8
comp=Z,4µm,19.0s
SDDR **Presa de Saban** 133.55 71 IAMs_20 IAMs_20 05 45 57.6
comp=Z,3µm,19.0s
SC01 **Santiago de lo** 134.00 70 IAMs_20 IAMs_20 05 36 20.6
comp=Z,3µm,20.0s
SSB **Saint Sauveur** 134.05 331 IAMs_20 IAMs_20 05 44 06.3
comp=Z,3µm,19.0s
CPUP **Villa Florida** 134.40 138 PKhKP PKPpre 04 39 43.8
comp=Z,2.8nm,1.1s,baz=244,slow=4.6,SNR=3.5
CPUP PKP **PKiKP** 04 39 54.9 -0.1
comp=Z,8.4nm,0.7s,baz=228,slow=1.5,SNR=5.8
CPUP SKPbc **SKiKP** 04 43 25.7 -2.3
comp=Z,5.6nm,1.1s,baz=224,slow=4.1,SNR=3.5
SDV **Santo Domingo** 134.84 84 PKP **PKiKP** 04 39 56.5 +0.1
comp=Z,15nm,1.0s,baz=258,slow=1.9,SNR=10.0
SDV SKPbc **SKiKP** 04 43 28.3 -1.1
comp=Z,15nm,0.9s,baz=27,slow=20,SNR=7.8
KEST **Kesra** 137.47 317 PKP **PKiKP** 04 40 00.8 -0.2
comp=Z,7.0nm,0.6s,baz=24,slow=1.8,SNR=9.4
KEST SKPbc **SKiKP** 04 43 34.2 +0.2
comp=Z,17nm,1.1s,baz=302,slow=5.5,SNR=4.6
SIV **San Ignacio** 137.64 123 PKhKP PKPpre 04 39 50.5
comp=Z,7.9nm,1.1s,baz=243,slow=3.4,SNR=13
SIV PKP **PKPdf** 04 40 00.6 +0.8
comp=Z,5.9nm,0.8s,baz=244,slow=5.0,SNR=11
SIV SKPbc **SKiKP** 04 43 35.9 +1.0
comp=Z,6.1nm,0.8s,baz=228,slow=3.4,SNR=7.0
MAHO **Mahon** 138.01 326 PKP PKiKP 04 40 10.0 +8.2
SJG **San Juan** 138.50 71 PKhKP PKPpre 04 39 53.0
comp=Z,2.7nm,0.3s,baz=341,slow=3.1,SNR=4.4
SJG PKP **PKiKP** 04 40 03.0 -0.4
comp=Z,16nm,0.9s,baz=50,slow=2.4,SNR=7.4
SJG SKPbc **SKiKP** 04 43 37.4 +0.9
comp=Z,18nm,0.9s,baz=44,slow=3.4,SNR=6.2
SJG **San Juan** 138.50 71 *e*P PKPdf 04 39 52.8 -8.5
SJG **San Juan** 138.50 71 PKIKP **PKPdf** 04 40 01.6 +0.3
SJG **San Juan** 138.50 71 PKPdf **PKPdf** 04 40 01.6 +0.3
CDVI **St. Croix** 139.86 71 *e*P **PKPdf** 04 40 00.9 -2.9
SABA **Saba** 141.31 71 *e*P PKPdf 04 39 54.0 -12
SABA **Saba** 141.31 71 IAMs_20 IAMs_20 05 38 50.3
comp=Z,3µm,20.0s
SMRT **St. Maarten** 141.38 70 *e*P **PKPdf** 04 40 03.6 -3.0
SMRT **St. Maarten** 141.38 70 PKPpre 04 39 58.6
SMRT IAMs_20 IAMs_20 05 55 19.1
comp=Z,3µm,19.0s
UCM **Universidad Co** 141.53 333 PKP **PKPdf** 04 40 04.3 -2.0
SEUS **St. Eustatius** 141.58 71 *e*P **PKPdf** 04 40 02.0 -4.9
SEUS **St. Eustatius** 141.58 71 IAMs_20 IAMs_20 05 37 58.4
comp=Z,3µm,22.0s
PBRG **Braganca** 141.73 338 *e*PKP **PKPdf** 04 40 05.9 -0.7
SKI **Saint Kitts** 141.83 71 *e*P **PKPdf** 04 40 01.8 -5.6
PGAV **Gavieira, Arco** 142.14 339 *e*PKP **PKPdf** 04 40 08.9 +1.5
PGAV **Gavieira, Arco** 142.14 339 *e*LQ LQ 05 23 50.5
PGAV *e*LR LR 05 29 45.2
comp=Z,1µm,18.0s
PCAB **Cabril** 142.28 339 *e*PKP **PKiKP** 04 40 10.2 -0.4
ESDC **Sonseca Array** 142.37 333 PKhKP PKPpre 04 40 03.6
comp=Z,3.6nm,1.0s,baz=9.5,slow=4.1,SNR=13
ESDC PKP **PKiKP** 04 40 10.3 -0.5
comp=Z,6.2nm,1.0s,baz=17,slow=2.8,SNR=13
ESDC PP **PP** 04 43 15.0 +1.0
comp=Z,3.1nm,1.1s,baz=20,slow=5.6,SNR=5.9
MVO **Moncorvo** 142.39 337 *e*PKP **PKPdf** 04 40 09.3 +1.5
MVO **Moncorvo** 142.39 337 *e*LQ LQ 05 24 52.1
MVO *e*LR LR 05 30 37.2
comp=Z,2µm,24.0s
CART **Cartagena** 142.54 328 PKP **PKPdf** 04 40 07.7 -0.4
SPB **Sao Paulo** 142.54 145 IAMs_20 IAMs_20 05 45 51.7
comp=Z,3µm,20.0s
PVRL **Vila Real** 142.55 338 *e*PKP **PKPdf** 04 40 08.6 +0.5
PAB **San Pablo** 142.64 333 PKIKP **PKPdf** 04 40 06.9 -1.4
PAB **San Pablo** 142.64 333 **PKPdf** 04 40 06.9 -1.4
ANWB **Willy Bob** 142.66 70 *e*P **PKPdf** 04 40 06.0 -2.8
PVIS **Viseu** 143.11 338 *e*PKP **PKPdf** 04 40 08.4 -0.7
CBE **Ff, Capester** 143.13 73 *e*P **PKPdf** 04 40 10.0 +0.2
TDBA **Terre de Bas,** 143.14 73 *e*P **PKiKP** 04 40 13.9 +1.0
ABD **La Joyeuse, An** 143.17 72 *e*P PKPab 04 40 06.0 +0.6
MTE **Manteigas** 143.25 337 *e*PKP **PKiKP** 04 40 11.4 -1.3
MTE **Manteigas** 143.25 337 *e*LQ LQ 05 20 00.8
MTE **Manteigas** 143.25 337 *e*LR LR 05 31 00.4
comp=Z,2µm,20.0s
MTE **Manteigas** 143.25 337 **PKPdf** 04 40 08.6 -0.8
MAGL **Barre de l'ile** 143.46 73 *e*P **PKPdf** 04 40 10.0 -0.3
DWS **Wesley** 143.49 73 *e*P **PKiKP** 04 40 15.4 +1.7
GRGR **Grenville** 143.58 79 *e*P **PKiKP** 04 40 12.6 -1.4
PCBR **Castelo Branco** 143.71 337 *e*PKP **PKPdf** 04 40 11.2 +1.1
COI **Coimbra** 143.74 338 IAMs_20 IAMs_20 05 49 10.2
comp=Z,3µm,20.0s
GCMP **Grenada, Carri** 143.77 78 *e*P **PKiKP** 04 40 14.0 -0.3
FDF **Fort de France** 143.77 75 *e*P **PKiKP** 04 40 14.0 -0.4
BIM **Bigot** 143.88 75 *e*P PKPab 04 40 06.3 -1.9
PCAS **Casmilo, Conde** 143.91 338 *e*PKP **PKiKP** 04 40 13.5 -0.4
TRN **Trinidad (W)** 143.91 82 *e*P **PKiKP** 04 40 17.9 +3.3
PMRV **Marv??o** 144.03 336 *e*PKP **PKPdf** 04 40 11.5 +0.8
PMRV **Marv??o** 144.03 336 *e*LQ LQ 05 23 08.2
PMRV *e*LR LR 05 31 18.9
comp=Z,1µm,18.0s
ILAM **Ilet Lapin Mar** 144.03 75 *e*P **PKiKP** 04 40 13.9 -0.9
SLBI **Saint Lucia, B** 144.04 76 *e*P **PKiKP** 04 40 15.4 +0.6
MPOM **Morne Pois Mar** 144.09 75 *e*P PKPbc 04 40 10.0 +0.5
PTGA **Pitinga** 144.33 101 PKP PKPbc 04 40 10.6 +0.3
comp=Z,37nm,0.8s,baz=275,slow=6.0,SNR=44
PTGA **Pitinga** 144.33 101 PKPbc 04 40 10.5 +0.2
PSBE **So Bento** 144.49 338 *e*PKP **PKPdf** 04 40 13.0 +1.5
PMTG **Montargil** 144.66 337 *e*PKP **PKPdf** 04 40 12.5 +0.7
TOSP **Speyside** 144.73 80 **PKPab** 04 40 11.4 0.0
EMAL **Malaga-Limoner** 144.92 331 PKP **PKPab** 04 40 09.2 -2.3
EVO **Evora** 145.04 336 PKP **PKPdf** 04 40 12.6 +0.2
EVO **Evora** 145.04 336 *e*PKP **PKiKP** 04 40 14.5 -1.8
MELI **Melilla** 145.29 327 PKP **PKPbc** 04 40 12.3 -0.4
LIS **Lisbon** 145.32 338 *e*PKPdf **PKPdf** 04 40 13.0 +0.1
LIS AMS AMS 05 48 23.7
comp=Z,3µm,13.9s
PBEJ **Beja** 145.42 336 *e*PKP **PKiKP** 04 40 15.7 -1.4
BBGH **Gun Hill** 145.51 77 *e*P **PKiKP** 04 40 24.8 +6.9
REAL **Reales** 145.52 331 PKP **PKPab** 04 40 14.0 +0.1
PNCL **Nicolau / Gran** 145.61 337 *e*PKP **PKPab** 04 40 14.6 +0.7
MESJ **Messejana** 145.72 336 *e*PKPdf **PKPdf** 04 40 13.7 0.0
MESJ AMS AMS 05 49 18.4
comp=Z,3µm,27.3s
MESJ **Messejana** 145.72 336 *e*PKP **PKiKP** 04 40 16.9 -0.8
PCVE **Castro Verde** 145.83 336 *e*PKP **PKPab** 04 40 15.7 +0.9
PVAQ **Vaqueiros** 145.89 335 *e*PKP **PKPab** 04 40 15.2 +0.2
PVAQ **Vaqueiros** 145.89 335 *e*LQ LQ 05 27 41.5
PVAQ *e*LR LR 05 32 25.4
comp=Z,2µm,22.0s
PVAQ **Vaqueiros** 145.89 335 IAMs_20 IAMs_20 05 46 04.2
comp=Z,3µm,22.0s
SFS **San Fernando** 146.00 332 PKP **PKPdf** 04 40 12.5 -1.7
CEU **Ceuta** 146.06 331 PKP **PKPdf** 04 40 11.7 -2.6
PVLZ **Peaen de** 146.10 329 PKP **PKPdf** 04 40 13.6 -0.8
PBDV **Barranco-do-Ve** 146.11 335 *e*PKP **PKiKP** 04 40 18.3 -0.3
PTEO **Sao Teotonio** 146.18 336 *e*PKP **PKPbc** 04 40 15.3 -0.1
MORF **Marmelete** 146.35 336 *e*PKPdf **PKPdf** 04 40 14.8 0.0
MORF AMS AMS 05 49 31.0
comp=Z,3µm,22.5s
MORF **Marmelete** 146.35 336 *e*PKIKP **PKPdf** 04 40 14.4 -0.4
MORF **Marmelete** 146.35 336 *e*PKP **PKiKP** 04 40 18.5 -0.6
PFVI **Vila Bisbo** 146.57 336 IAMs_20 IAMs_20 05 48 59.3
comp=Z,3µm,20.0s
H07S1 **FLORES T-PHASE** 147.31 9 *e*PKP **PKPab** 04 40 20.6 +0.1
IFR **Ifrane** 147.81 328 PKP **PKPbc** 04 40 21.3 +0.8
BDFB **Brasilia** 148.00 135 PKP **PKPbc** 04 40 20.2 -1.1
comp=Z,50nm,0.8s,baz=242,slow=1.8,SNR=25
BDFB PKPbc **PKPab** 04 40 23.9 -0.1
comp=Z,50nm,0.8s,baz=254,slow=1.7,SNR=32
BDFB **Brasilia** 148.00 135 **PKPbc** 04 40 19.9 -1.4
BDFB **Brasilia** 148.00 135 PKPdf **PKPdf** 04 40 16.5 -1.7
BDFB PKPbc **PKPdf** 04 40 19.9 -1.4
PGRA **Graciosa** 148.02 4 *e*PKP **PKiKP** 04 40 22.8 +0.4
ROSA **Rosais** 148.31 5 *e*PKP **PKPab** 04 40 24.6 +0.2
ROSA **Rosais** 148.31 5 IAMs_20 IAMs_20 05 41 06.6
comp=Z,3µm,20.0s
PCED **Cedros** 148.35 5 *e*PKP **PKPab** 04 40 24.0 -0.6
PSCM **Serra do Cume** 148.40 3 *e*PKP **PKiKP** 04 40 23.8 +0.6
PMAN **Manadas** 148.40 5 *e*PKP **PKPab** 04 40 25.4 +0.6
ADH **Angra Heroismo** 148.44 3 *e*PKP **PKiKP** 04 40 23.4 +0.1
PICO **Pico** 148.51 5 *e*PKP **PKiKP** 04 40 23.5 0.0
PCAN **Candelaria** 148.54 5 *e*PKP **PKiKP** 04 40 24.0 +0.5
AVE **Averroes** 149.15 330 PKP **PKPbc** 04 40 22.6 -1.0
PSET **Sete Cidades** 149.32 1 *e*PKP **PKiKP** 04 40 25.8 +0.6
BART **Pico Bartolome** 149.38 0 *e*PKP **PKiKP** 04 40 25.5 +0.1
GRON **Grota Negra** 149.38 1 *e*PKP **PKiKP** 04 40 25.1 -0.2
CMLA **Cha da Macela** 149.39 1 *e*PKP **PKiKP** 04 40 25.2 -0.1
PDA **Ponta Delgada** 149.40 1 *e*PKP **PKPbc** 04 40 24.0 -0.1
PSMA **Santa Maria** 150.16 0 *e*PKP **PKPbc** 04 40 26.4 -0.4
MDP **Montagnes des** 152.50 92 PKPbc **PKiKP** 04 40 33.0 +0.6
comp=Z,14nm,0.7s,baz=267,slow=6.8,SNR=8.4
TORD **Torodi Ar. Bea** 152.98 285 PKP **PKPdf** 04 40 25.6 -0.2
comp=Z,7.6nm,1.1s,baz=39,slow=1.1,SNR=18
TORD PKPbc **PKiKP** 04 40 33.4 +0.1
comp=Z,72nm,1.0s,baz=57,slow=1.4,SNR=75
TORD PP **PP** 04 44 18.1 +0.1
comp=Z,5.1nm,0.9s,baz=58,slow=4.1,SNR=5.4
PMOZ **Porto Moniz, M** 153.30 345 eLR LR 05 33 21.7
comp=Z,1µm,18.0s
KIC **Kosan Boka** 159.81 269 *e*PKP2 **PKPdf** 04 40 36.7 +1.9
comp=Z,129nm,1.8s
DBIC **Dimbokro** 159.94 270 PKP **PKPdf** 04 40 35.8 +0.8
comp=Z,7.7nm,1.0s,baz=51,slow=6.5,SNR=4.2
DBIC PKPab **PKPab** 04 41 14.6 +0.1
comp=Z,25nm,1.1s,baz=86,slow=7.0,SNR=4.8
LIC **Lamto** 160.09 269 *e*PKP2 **PKPdf** 04 40 35.6 +0.5
comp=Z,86nm,1.6s
TIC **Toumodi** 160.10 270 *e*PKP2 **PKPdf** 04 40 37.2 +2.1

NIED ***07*** *04:24:00,39˚.50N×144˚.60E,h8km,Mw3.9 Best double couple: M0 8.03000×10^14 NP1:φs 195.00000˚, δ62.00000˚, λ-103.00000˚. NP2:φs 40.00000˚, δ31.00000˚, λ-68.00000˚.*

IDC ***07*** *04:24:25.2± 2.5, 39˚.29N×144˚.91E, h0km, mb3.7/7, mb1 3.9/10, mb1mx3.7/59, mbtmp3.8/10, ML3.6/3, MS3.5/1, Ms1 3.5/1, ms1mx2.7/57, Error ellipse: s-maj=52.1km s-min=24.9km az=154.0*

JMA ***07*** *04:24:29.6± 0.2, 39˚.50N×144˚.60E, h49km, M4.0*

ISC 07 04:24:29.0±1.0, 39˚.47N±0˚.05×144˚.60E±0˚.07, h23km, n31, σ1§96/46, mb3.8/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**2.15**	**274**	P	**Pb**	**04 25 04.0**	**-3.3**
MIYJ				*e*S	**Sn**	**04 25 29.4**	**-0.1**
JTH	**Tanohata**	**2.16**	**283**	P	**Pb**	**04 25 04.0**	**-3.4**
JTH				*e*S	**Sn**	**04 25 29.4**	**-0.3**
OFUJ	**Ofunato**	**2.31**	**261**	P	**Pb**	**04 25 06.0**	**-3.9**
OFUJ				*e*S	**Sn**	**04 25 32.5**	**-0.8**
JKEN	**Kujiedanarisaw**	**2.34**	**289**	P	**Pb**	**04 25 06.4**	**-4.1**
JKEN				*e*S	**Sn**	**04 25 33.3**	**-0.8**
JANG	**Nango**	**2.54**	**292**	P	**Pn**	**04 25 09.1**	**+0.3**
JANG				*e*S	**Sn**	**04 25 39.4**	**+0.4**
JOM	**Ohasama**	**2.56**	**271**	P	**Pb**	**04 25 10.1**	**-4.1**
JOM				*e*S	**Sn**	**04 25 39.9**	**+0.4**
JMK	**Ichinoseki**	**2.68**	**260**	P	**Pn**	**04 25 11.3**	**+0.6**
JMK				*e*S	**Sn**	**04 25 42.1**	**-0.3**
JNBK	**Urakawa-nobuka**	**3.14**	**334**	P	**Pn**	**04 25 18.0**	**+1.0**
JCH	**Churui**	**3.28**	**344**	P	**Pn**	**04 25 19.1**	**+0.2**
JCH				S	**Sn**	**04 25 57.0**	**-0.2**
JOT	**Ohata**	**3.32**	**306**	P	**Pn**	**04 25 20.8**	**+1.3**
JYK	**Kaneyama**	**3.34**	**262**	P	**Pn**	**04 25 20.9**	**+1.1**
JYK				*e*S	**Sn**	**04 25 59.9**	**+1.1**
JAK	**Akkeshi**	**3.52**	**1**	P	**Pn**	**04 25 22.4**	**+0.1**
JAK				*e*S	**Sn**	**04 26 01.2**	**-2.0**
JKB	**Kayabe**	**3.63**	**313**	P	**Pn**	**04 25 25.1**	**+1.3**
JKB				*e*S	**Sn**	**04 26 06.6**	**+0.7**
JFT	**Otama**	**3.87**	**241**	P	**Pn**	**04 25 27.2**	**+0.1**
JFT				*e*S	**Sn**	**04 26 09.7**	**-2.2**
JAR	**Ashorobuto**	**3.88**	**351**	P	**P

0.7nm,0.4s,baz=41,slow=6.7,SNR=5.2

*IDC **07** 04:30:11.2±1.4,61˚.19S×36˚.53W,h0km,mb4.0/3, mb1 4.0/4,mb1mx3.8/39,mbtmp3.9/4,ML3.6/1,Error ellipse: s-maj=75.9km s-min=35.3km az=50.0*

ISC 07 04:30:11.2±0.9, 60˚.9S±0˚.9×3˚.5W±˚, h10km, n12, σ1§60/11, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.53**	**143**	P	**Pn**	**04 33 38.3**	**+1.9**
VNA2	**Neumayer--Watz**	**14.91**	**144**	P	**Pn**	**04 33 42.7**	**+1.1**
	baz=303,slow=16						
SNAA	**Sanae**	**16.56**	**144**	P	**P**	**04 34 06.0**	**+0.2**
SNAA	**Sanae**	**16.56**	**144**	Pn	**P**	**04 34 05.9**	**+0.2**
	0.2nm,0.3s,baz=320,slow=16,SNR=2.5						
SNAA				Sn	**Sn**	**04 37 03.2**	**-3.5**
	0.1nm,0.3s,baz=231,slow=7.4,SNR=2.7						
CPUP	**Villa Florida**	**37.76**	**326**	P	**P**	**04 37 25.5**	**-1.5**
	0.4nm,0.4s,baz=162,slow=3.2,SNR=3.6						
SIV	**San Ignacio**	**48.62**	**326**	P	**P**	**04 38 55.6**	**+0.7**
	1.1nm,0.9s,baz=190,slow=11,SNR=3.4						
TORD	**Torodi Ar. Bea**	**79.40**	**36**	P	P	04 42 22.9	+5.7
	4.0nm,0.8s,baz=185,slow=6.1,SNR=1.2						
YKA	**Yellowknife Ar**	**137.03**	**318**	PKP	**PKiKP**	**04 49 34.1**	**-0.3**
	0.2nm,0.6s,baz=138,slow=2.6,SNR=6.2						
MKAR	**Makanchi Array**	**142.02**	**83**	PKhKP	PKPpre	04 49 41.9	
	0.3nm,0.5s,baz=204,slow=2.5,SNR=3.2						
KURBB	**Kurchatov Arra**	**142.86**	**75**	PKP	**PKPdf**	**04 49 43.7**	**+0.2**
	0.1nm,0.3s,baz=240,slow=3.6,SNR=4.3						
INK	**Inuvik**	**146.80**	**318**	PKPbc	**PKPbc**	**04 49 51.9**	**+0.3**
	0.9nm,0.5s,baz=85,slow=2.4,SNR=7.3						
ILAR	**Eielson Array**	**150.03**	**307**	PKPbc	**PKiKP**	**04 50 01.1**	**+0.1**
	1.1nm,0.9s,baz=141,slow=2.1,SNR=7.8						

*IDC **07** 04:34:55.6±1.5,7˚.24S×154˚.87E,h0km,mb4.0/7, mb1 1.4/2,mb1mx3.8/39,mbtmp4.0/8,ML3.9/1,Error ellipse: s-maj=47.9km s-min=23.8km az=109.0*
*NEIC **07** 04:34:59.1±2.7,7˚.58S±0˚.08×155˚.2E±0˚.3,h35km±2km, mb4.2/3,Error ellipse: s-maj=45.1km s-min=12.1km az=82.0*

ISC 07 04:34:59.7±1.2, 7˚.4S±0˚.1×154˚.8E±0˚.2, h31km, n13, σ1§91/13, mb4.0/10, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**4.11**	**318**	Pn	**Pn**	**04 35 58.5**	**-1.8**
	8.2nm,0.3s,baz=74,slow=12,SNR=2.0						
EIDS	**Eidsvold**	**18.26**	**191**		**P**	**04 39 06.7**	**-4.1**
WB0	**Warramunga Arr**	**23.32**	**236**	P	**P**	**04 40 06.7**	**+1.2**
WB0				IAmb	IAmb	04 40 07.7	
	comp=Z,7.4nm,1.1s						
WB2	**Warramunga Arr**	**23.44**	**236**	P	**P**	**04 40 07.5**	**+0.9**
WB2				IAmb	IAmb	04 40 12.4	
	comp=Z,4.8nm,0.9s						
WRA	**Warramunga Arr**	**23.45**	**236**	P	**P**	**04 40 08.2**	**+1.4**
	comp=Z,4.1nm,0.8s,baz=60,slow=9.8,SNR=7.5						
ASAR	**Alice Springs**	**25.79**	**229**	P	**P**	**04 40 29.3**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=59,slow=8.3,SNR=4.3						
STKA	**Stephens Creek**	**27.32**	**205**	P	**P**	**04 40 44.0**	**+2.1**
	comp=Z,2.0nm,0.7s,baz=20,slow=17,SNR=3.1						
ULN	**Ulaanbaatar**	**69.21**	**328**	P	**P**	**04 46 03.5**	**-0.1**
ULN				IAmb	IAmb	04 46 04.9	
	comp=Z,2.3nm,0.4s						
SONM	**Songino Array**	**69.54**	**327**	P	**P**	**04 46 06.1**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=147,slow=4.6,SNR=4.5						
MKAR	**Makanchi Array**	**83.55**	**319**	P	**P**	**04 47 24.9**	**0.0**
	comp=Z,1.0nm,0.7s,baz=109,slow=5.2,SNR=9.4						
ZALV	**Zalesovo Beam**	**84.38**	**326**	P	**P**	**04 47 31.3**	**+2.4**
	comp=Z,0.4nm,0.3s,baz=77,slow=9.0,SNR=1.3						
YKA	**Yellowknife Ar**	**96.75**	**28**	P	**P**	**04 48 26.8**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=259,slow=4.1,SNR=12						
TORD	**Torodi Ar. Bea**	**152.94**	**284**	PKPbc	**PKiKP**	**04 54 55.3**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=81,slow=2.5,SNR=3.4						

*IDC **07** 04:39:05.8±2.8,42˚.76N×47˚.21E,h0km,mb3.3/3, mb1 3.4/6,mb1mx3.2/50,mbtmp3.3/6,ML3.1/3,Error ellipse: s-maj=69.4km s-min=11.6km az=4.0*
*DRS **07** 04:39:07.8±0.0,43˚.02N×47˚.33E,h12km*
*MOS **07** 04:39:07.7±0.0,42˚.96N×47˚.28E,h5km,MPVA4.2*
*NORS **07** 04:39:08.5±0.0,42˚.85N×47˚.24E,h3km,MPVA4.1,Felt I=II-III MSK at Makhachkala, Buynaksk, Korkmaskala*

ISC 07 04:39:09.0±1.0, 42˚.99N±0˚.03×47˚.32E±0˚.02, h6km±7km, n52, σ1§15/84, mb3.2/3, 3C-5D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAK	**Makhachkala**	**0.14**	**102**	*e*Pg	**Pg**	**04 39 11.9**	**+0.1**
MAK				*e*Sg	**Sg**	**04 39 14.3**	**+0.6**
MAK	**Makhachkala**	**0.14**	**102**	*e*PG	**Pg**	**04 39 11.8**	**0.0**
MAK				pmax	pmax		
	comp=Z,2µm,0.3s						
BUJR	**Buynaksk**	**0.23**	**224**	*i* Pg	**Pg**	**04 39 13.5**	**+0.1**
BUJR				*e*Sg	**Sg**	**04 39 17.4**	**+0.9**
BUJR	**Buynaksk**	**0.23**	**224**	*i*PG	**Pg**	**04 39 13.4**	**-0.1**
BUJR				pmax	pmax		
	comp=Z,3µm,0.3s						
KRNR	**Karanay**	**0.35**	**242**	*i* Pg	**Pg**	**04 39 15.0**	**-0.8**
KRNR				*i* Sg	**Sg**	**04 39 20.0**	**-0.3**
KRNR	**Karanay**	**0.35**	**242**	*i*PG	**Pg**	**04 39 15.0**	**-0.8**
KRNR				pmax	pmax		
	comp=Z,329nm,0.1s						
DBC	**Dubki**	**0.36**	**275**	*i* Pg	**Pg**	**04 39 15.5**	**-0.6**
DBC				*e*Sg	**Sg**	**04 39 21.0**	**+0.2**
DBC	**Dubki**	**0.36**	**275**	*e*PG	**Pg**	**04 39 15.5**	**-0.6**
DBC				*e*S	**Sg**	**04 39 21.5**	**+0.6**
DBC				pmax	pmax		
	comp=Z,223nm,0.2s						
UNCR	**Uncukul**	**0.48**	**235**	*i* Pg	**Pg**	**04 39 18.0**	**-0.2**
UNCR				*e*Sg	**Sg**	**04 39 24.5**	**+0.1**
UNCR	**Uncukul**	**0.48**	**235**	*i* PG	**Pg**	**04 39 18.0**	**-0.2**
UNCR				*e*S	**Sg**	**04 39 24.5**	**+0.1**
UNCR				pmax	pmax		
	comp=Z,500nm,0.2s						
DLMR	**Dylym**	**0.51**	**279**	*e*Pg	**Pg**	**04 39 19.0**	**+0.1**
DLMR				*e*Sg	**Sb**	**04 39 28.0**	**-0.3**
DLMR	**Dylym**	**0.51**	**279**	*e*PG	**Pg**	**04 39 19.0**	**+0.1**
DLMR				*e*S	**Sb**	**04 39 28.0**	**-0.3**
DLMR				pmax	pmax		
	comp=Z,172nm,0.1s						
XNZR	**Khunzakh**	**0.64**	**226**	*e*Pg	**Pg**	**04 39 21.8**	**+0.5**
XNZR				*e*Sg	**Sg**	**04 39 30.2**	**+0.6**
XNZR	**Khunzakh**	**0.64**	**226**	*e*PG	**Pg**	**04 39 20.7**	**-0.6**
XNZR				*e*S	**Sg**	**04 39 30.4**	**+0.8**
GNBR	**Gunib**	**0.66**	**204**	*i* Pg	**Pb**	**04 39 22.3**	**-0.7**
GNBR				*e*Sg	**Sb**	**04 39 32.8**	**+0.4**
GNBR	**Gunib**	**0.66**	**204**	*i*PG	**Pb**	**04 39 22.2**	**-0.7**
GNBR				*e*S	**Sb**	**04 39 32.7**	**+0.4**
GNBR				pmax	pmax		
	comp=Z,315nm,0.5s						
URKR	**Urkarakh**	**0.85**	**164**	*e*Pg	**Pg**	**04 39 25.8**	**+0.4**
URKR				*e*Sg	**Sn**	**04 39 39.8**	**-0.9**
URKR	**Urkarakh**	**0.85**	**164**	*e*PG	**Pg**	**04 39 25.8**	**+0.4**
URKR				*e*		04 39 40.3	
URKR				pmax	pmax		
	comp=Z,185nm,0.5s						
URKR				smax	smax		
	comp=N,471nm,0.6s						
BTLR	**Botlikh**	**0.87**	**249**	*e*Pg	**Pb**	**04 39 26.0**	**-0.7**
BTLR				*e*Sg	**Sb**	**04 39 38.7**	**+0.1**
BTLR	**Botlikh**	**0.87**	**249**	*e*PG	**Pb**	**04 39 25.9**	**-0.7**
BTLR				*e*		04 39 38.7	
BTLR				pmax	pmax		
	comp=Z,84nm,0.4s						
BTLR				smax	smax		
	comp=E,348nm,0.8s						
GROC	**Groznyy**	**1.14**	**281**	*e*Pg	**Pn**	**04 39 32.6**	**+1.1**
GROC				*e*Sg	**Sn**	**04 39 49.4**	**+1.9**
GROC	**Groznyy**	**1.14**	**281**	*e*PG	**Pb**	**04 39 30.9**	**-0.2**
DRN	**Derbent**	**1.21**	**142**	*e*Pg	**Pn**	**04 39 32.9**	**+0.4**
DRN				*e*Sg	**Sn**	**04 39 51.0**	**+1.7**
DRN	**Derbent**	**1.21**	**142**	*e*PG	**Pn**	**04 39 32.7**	**+0.2**
DRN				*e*		04 39 51.1	
DRN				pmax	pmax		
	comp=Z,182nm,0.3s						
DRN				smax	smax		
	comp=N,479nm,0.6s						
AKT	**Akhty**	**1.54**	**169**	*i* Pg	**Pb**	**04 39 38.0**	**0.0**
AKT				*e*Sg	**Sg**	**04 39 59.6**	**+1.2**
AKT	**Akhty**	**1.54**	**169**	*e*PG	**Pb**	**04 39 37.7**	**-0.3**
AKT				*e*S	**Sg**	**04 39 59.5**	**+1.1**
AKT				pmax	pmax		
	comp=Z,99nm,0.3s						
SEKA	**Sheki**	**1.78**	**183**	PN	**Pg**	**04 39 43.9**	**+0.8**
KMGR	**Komgaron**	**1.80**	**273**	*e*PN	**Pg**	**04 39 45.3**	**+1.7**
KMGR				*e*S	**Sg**	**04 40 10.8**	**+3.9**
VLKR	**Vladikavkaz**	**1.94**	**273**	*e*PN	**Pg**	**04 39 46.0**	**-0.2**
VLKR				*e*S	**Sg**	**04 40 11.9**	**+0.5**
TRKR	**Terskaya**	**2.03**	**292**	*e*PN	**Pg**	**04 39 48.6**	**+0.7**
TRKR				*e*S	**Sg**	**04 40 15.8**	**+1.7**
BTKR	**Batakoyurt**	**2.07**	**282**	*e*PN	**Pg**	**04 39 49.6**	**+0.9**
BTKR				*e*S	**Sg**	**04 40 18.5**	**+3.0**
DGRG	**David-gareji**	**2.11**	**224**	*e*Pg	**Pn**	**04 39 45.4**	**+0.5**
LACR	**Lac**	**2.23**	**267**	*ce*PN	**Pb**	**04 39 48.1**	**-1.7**
ARNR	**Ardon**	**2.23**	**276**	*e*Pg	**Pb**	**04 39 48.7**	**-1.1**
ARNR				*e*Sg	**Sn**	**04 40 15.2**	**+0.7**
KORR	**Kora**	**2.39**	**273**	*e*Pn	**Pn**	**04 39 49.7**	**+0.9**
KORR				*e*Sn	**Sb**	**04 40 20.9**	**-1.4**
KORR	**Kora**	**2.39**	**273**	*ce*PN	**Pn**	**04 39 44.4**	**-4.4**
GANJ	**Ganja**	**2.46**	**198**	PN	**Pb**	**04 39 52.3**	**-1.3**
ZEI	**Tsey**	**2.52**	**267**	*e*Pn	**Pn**	**04 39 52.0**	**+1.2**
ZEI				*e*Sn	**Sb**	**04 40 24.0**	**-2.2**
ZEI	**Tsey**	**2.52**	**267**	*e*PN	**Pb**	**04 39 55.5**	**+0.6**
ZEI				*e*S	**Sb**	**04 40 27.0**	**+0.8**
DIGR	**Digorskoe uzhe**	**2.75**	**269**	*e*Pn	**Pn**	**04 39 55.3**	**+1.4**
DIGR				*e*Sn	**Sn**	**04 40 28.9**	**+1.4**
KBZ	**Khabaz**	**3.31**	**284**	Pn	**Pn**	**04 40 00.7**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=133,slow=8.1,SNR=12						
KBZ				Sn	**Sn**	**04 40 42.1**	**+1.1**
	comp=Z,2.2nm,0.3s,baz=13,slow=4.7,SNR=4.3						
KBZ				Lg	Lg	04 40 51.6	
	comp=Z,2.5nm,0.3s,baz=351,slow=9.6,SNR=5.1						
KBZ	**Khabaz**	**3.31**	**284**	*e*PN	**Pn**	**04 40 00.0**	**-1.4**
NEY	**Neytrino**	**3.38**	**276**	*e*Pn	**Pn**	**04 40 03.1**	**+0.6**
NEY				*e*Sn	**Sn**	**04 40 41.6**	**-1.4**
BEYR	**Belyy Ugol+**	**3.43**	**289**	*e*Pn	**Pn**	**04 40 02.7**	**-0.4**
KVAR	**Kislovodsk Arr**	**3.50**	**288**	Pn	**Pn**	**04 40 04.1**	**-0.1**
	baz=131,slow=20,SNR=1.9						
KVAR				Sn	**Sn**	**04 40 45.7**	**-0.3**
	baz=225,slow=15,SNR=3.3						
KIV	**Kislovodsk**	**3.51**	**288**	*e*PN	**Pn**	**04 40 02.8**	**-1.4**
GOF	**Gofitskoye**	**3.71**	**305**	*e*Pn	**Pn**	**04 40 07.3**	**+0.4**
GOF				*e*Sn	**Sn**	**04 40 52.1**	**+1.0**
BVAR	**Borovoye Array**	**18.33**	**49**	P	**Pn**	**04 43 22.2**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=213,slow=16,SNR=3.9						
FINES	**FINESS Array B**	**22.41**	**333**	P	**P**	**04 44 08.2**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=134,slow=11,SNR=3.7						
KURBB	**Kurchatov Arra**	**22.56**	**59**	P	**P**	**04 44 09.1**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=266,slow=11,SNR=9.2						
KURK	**Kurchatov**	**22.63**	**59**	P	**P**	**04 44 09.1**	**-1.4**
MKAR	**Makanchi Array**	**24.93**	**69**	P	**P**	**04 44 33.2**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=274,slow=10.0,SNR=2.1						

*IDC **07** 04:39:17.4±2.5,6˚.60S×154˚.40E,h0km,mb3.6/3, mb1 3.9/3,mb1mx3.5/39,mbtmp3.6/3,MS4.6/1,Ms1 4.6/1, ms1mx4.0/33,Error ellipse: s-maj=175.6km s-min=35.0km az=133.0*
*NEIC **07** 04:39:18.5±0.6,6˚.5S±0˚.2×154˚.0E±0˚.2,h10km±2km, mb4.0/8,Error ellipse: s-maj=36.2km s-min=7.9km az=317.0*

ISC 07 04:39:23.2±1.2, 6˚.5S±0˚.2×153˚.9E±0˚.2, h48km, n15, σ1§84/14, mb3.7/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAO	**Charters Tower**	**15.45**	**208**	Pn	**Pn**	**04 42 58.4**	**+0.3**
DZM	**Mont Dzumac**	**19.68**	**143**	P	**P**	**04 43 46.7**	**-1.9**
DZM				IAmb	IAmb	04 43 48.5	
	comp=Z,7.4nm,1.1s						
WR0	**Warramunga Arr**	**23.10**	**233**	P	**P**	**04 44 23.7**	**-1.5**
WR0				IAmb	IAmb	04 44 24.7	
	comp=Z,1.8nm,0.8s						
WB0	**Warramunga Arr**	**23.12**	**233**	P	**P**	**04 44 25.8**	**+0.4**
WB2	**Warramunga Arr**	**23.24**	**233**	P	**P**	**04 44 26.6**	**0.0**
WRA	**Warramunga Arr**	**23.25**	**233**	P	**P**	**04 44 29.9**	**+3.2**
	comp=Z,1.7nm,0.8s,baz=57,slow=9.5,SNR=4.6						
AS31	**Alice Springs**	**25.74**	**226**	P	**P**	**04 44 50.0**	**+0.5**
ASAR	**Alice Springs**	**25.74**	**226**	P	**P**	**04 44 51.4**	**+1.9**
	comp=Z,0.6nm,0.7s,baz=60,slow=8.8,SNR=2.6						
FITZ	**Fitzroy Crossi**	**29.89**	**245**	P	**P**	**04 45 27.5**	**+0.8**
FITZ				IAmb	IAmb	04 45 33.6	
	comp=Z,4.4nm,1.1s						
LUWI	**Luwuk**	**31.52**	**279**	P	**P**	**04 45 39.2**	**-1.9**
JCJ	**Chichijima**	**35.24**	**342**	LR	LR	04 58 24.1	
	comp=Z,995nm,20.5s,baz=32,slow=32						
MORW	**Morawa**	**42.20**	**233**	P	**P**	**04 47 12.6**	**+0.9**
MORW				IAmb	IAmb	04 47 14.9	
	comp=Z,6.6nm,1.0s						
XMIS	**Christmas Isla**	**47.86**	**262**	P	**P**	**04 47 55.6**	**-1.3**
YKA	**Yellowknife Ar**	**96.37**	**28**	P	**P**	**04 52 47.0**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=265,slow=4.4,SNR=1.8						
TORD	**Torodi Ar. Bea**	**151.85**	**286**	PKPbc	**PKiKP**	**04 59 17.4**	**+3.2**
	comp=Z,0.4nm,0.8s,baz=65,slow=1.2,SNR=2.3						

IDC 07 04:41:51.7±2.8, 6˚.54S×154˚.42E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/37, mbtmp3.5/3, Error ellipse: s-maj=223.2km s-min=35.0km az=132.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.61**	**234**	P	P	04 47 04.1	-0.5
	1.2nm,0.9s,baz=59,slow=9.6,SNR=3.4						
ASAR	**Alice Springs**	**26.05**	**227**	P	P	04 47 27.1	+0.1
	0.5nm,0.9s,baz=54,slow=8.9,SNR=4.7						
YKA	**Yellowknife Ar**	**96.20**	**28**	P	P	04 55 21.1	-0.4
	0.2nm,0.8s,baz=267,slow=5.6,SNR=2.4						
TORD	**Torodi Ar. Bea**	**152.35**	**286**	PKPbc	PKiKP	05 01 51.2	+0.1
	0.4nm,0.9s,baz=79,slow=2.4,SNR=2.1						

*IDC **07** 04:42:54.1±1.8,7˚.04S×154˚.91E,h0km,mb3.8/4, mb1 4.0/5,mb1mx3.7/38,mbtmp3.8/5,ML4.1/1,Error ellipse: s-maj=52.5km s-min=30.3km az=120.0*

ISC 07 04:43:00.5±1.5, 7˚.0S±0˚.2×154˚.7E±0˚.2, h39km, n6, σ0§67/6, mb3.8/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.78**	**315**	Pn	**Pn**	**04 43 55.9**	**-0.3**
	12nm,0.3s,baz=277,slow=3.7,SNR=5.5						
WRA	**Warramunga Arr**	**23.61**	**235**	P	**P**	**04 48 08.0**	**-0.1**
	2.0nm,0.8s,baz=57,slow=9.3,SNR=6.1						
ASAR	**Alice Springs**	**25.98**	**228**	P	**P**	**04 48 29.6**	**-0.2**
	0.5nm,0.7s,baz=64,slow=9.2,SNR=4.9						
MKAR	**Makanchi Array**	**83.22**	**319**	P	**P**	**04 55 23.9**	**+1.0**
	0.7nm,0.7s,baz=103,slow=5.8,SNR=6.4						
YKA	**Yellowknife Ar**	**96.45**	**28**	P	**P**	**04 56 24.9**	**-0.4**
	0.3nm,0.8s,baz=264,slow=4.8,SNR=4.5						
TORD	**Torodi Ar. Bea**	**152.76**	**285**	PKPbc	**PKPbc**	**05 02 54.0**	**-0.2**
	0.7nm,0.7s,baz=56,slow=2.4,SNR=4.2						

*IDC **07** 04:43:05.8±0.8,7˚.22S×155˚.05E,h0km,mb4.4/18, mb1 4.6/20,mb1mx4.4/41,mbtmp4.4/20,ML3.2/2,Error ellipse: s-maj=25.4km s-min=15.4km az=122.0*
*NEIC **07** 04:43:11.3±1.5,7˚.2S±0˚.1×154˚.9E±0˚.1,h35km±2km, mb4.6/16,Error ellipse: s-maj=21.1km s-min=17.2km az=162.0*
*DJA **07** 04:43:11.3±0.8,7˚.S±5˚×15˚.5E±˚,h47km±9km,M4.6/12, mb4.6/12,mB5.0/1,Mw(mB)4.3/1*

ISC 07 04:43:12.4±0.5, 7˚.13S±0˚.07×154˚.85E±0˚.09, h41km, n43, σ1§92/42, mb4.5/27, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.96**	**315**	Pn	**Pn**	**04 44 09.3**	**-1.4**
	15nm,0.3s,baz=268,slow=3.8,SNR=4.0						
PMG	**Port Moresby**	**7.94**	**253**	Pn	**Pn**	**04 45 05.8**	**+0.5**
	4.0nm,0.3s,baz=72,slow=9.6,SNR=4.7						
PMG	**Port Moresby**	**7.94**	**253**	Pn	**Pn**	**04 45 05.2**	**-0.1**
CTA	**Charters Tower**	**15.34**	**212**	Pn	**P**	**04 46 51.1**	**+0.7**
	0.5nm,0.3s,baz=35,slow=13,SNR=14						
CTAO	**Charters Tower**	**15.34**	**212**	Pn	**Pn**	**04 46 45.1**	**-1.1**
CTAO				IAmb	IAmb	04 46 53.8	
	comp=Z,12nm,0.8s						
DZM	**Mont Dzumac**	**18.60**	**144**	P	**Pn**	**04 47 28.1**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=295,slow=8.0,SNR=7.7						
DZM	**Mont Dzumac**	**18.60**	**144**	P	**P**	**04 47 25.2**	**-1.2**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**23.61**	**235**	P	**P**	**04 48 20.0**	**+0.2**
WRAB				IAmb	IAmb	04 48 23.5	
	comp=Z,27nm,0.9s						
WRA	**Warramunga Arr**	**23.62**	**235**	P	**P**	**04 48 19.5**	**-0.5**
	comp=Z,19nm,0.9s,baz=58,slow=8.8,SNR=20						
MTN	**Manton Dam**	**24.02**	**254**	P	**P**	**04 48 22.5**	**-1.3**
SIJI	**Sorong**	**24.32**	**284**	P	**P**	**04 48 27.3**	**+0.8**
	comp=Z,17nm,0.6s,baz=62,slow=11,SNR=6.2						
ASAR	**Alice Springs**	**25.97**	**228**	P	**P**	**04 48 42.0**	**+0.5**
	comp=Z,8.7nm,0.7s,baz=62,slow=8.6,SNR=5.3						
KNRA	**Kununurra**	**26.91**	**249**	P	**P**	**04 48 49.1**	**-0.9**
KNRA				IAmb	IAmb	04 48 55.1	
	comp=Z,25nm,0.9s						
STKA	**Stephens Creek**	**27.55**	**205**	P	**P**	**04 48 55.3**	**-0.2**
	comp=Z,8.9nm,0.8s,baz=21,slow=11,SNR=8.6						
STKA	**Stephens Creek**	**27.55**	**205**	P	**P**	**04 48 54.7**	**-0.8**
FITZ	**Fitzroy Crossi**	**30.46**	**246**	P	**P**	**04 49 22.1**	**+0.6**
	comp=Z,11nm,0.6s,baz=63,slow=7.8,SNR=36						
FITZ	**Fitzroy Crossi**	**30.46**	**246**	P	**P**	**04 49 21.5**	**0.0**
FITZ				IAmb	IAmb	04 49 22.7	
	comp=Z,12nm,0.7s						
KAPI	**Kappang**	**34.95**	**271**	P	**P**	**04 50 01.5**	**+0.6**
	comp=Z,10.0nm,0.8s,baz=167,slow=1.4,SNR=3.5						
KAPI	**Kappang**	**34.95**	**271**	P	**P**	**04 49 59.9**	**-1.0**
PSA00	**Pilbara Seismi**	**36.71**	**243**	P	**P**	**04 50 15.8**	**0.0**
KSRS	**Korea Array**	**50.99**	**332**	P	**P**	**04 52 12.7**	**+2.6**
	comp=Z,1.3nm,0.7s,baz=146,slow=6.3,SNR=4.1						
KLR	**Kul'dur**	**59.65**	**343**	P	**P**	**04 53 14.6**	**+2.2**
	comp=Z,1.9nm,0.6s,baz=137,slow=2.3,SNR=6.1						
XAN	**Xi'an**	**59.70**	**316**	P	P	04 53 19.1	+6.0
XAN				pP	pwP	04 53 34.1	+2.1
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN				LR	LR		
	comp=N,770nm,14.7s						
XAN				LR	LR		
	comp=E,970nm,15.2s						
XAN				LR	LR		
	comp=Z,1µm,16.7s						
KMI	**Kunming**	**59.97**	**304**	P	**P**	**04 53 15.4**	**+0.1**
KMI				pP	sP	04 53 31.4	+2.3
KMI				sP	pwP	04 53 46.6	+13
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,8µm,18.8s						
KMI				LR	LR		
	comp=N,4µm,14.7s						
KMI				LR	LR		
	comp=E,3µm,18.0s						
KMI				LR	LR		
	comp=Z,2µm,18.6s						
PETK	**Petropavlovsk-**	**60.05**	**2**	P	**P**	**04 53 15.9**	**+0.9**
	comp=Z,6.3nm,0.8s,baz=179,slow=8.3,SNR=10						
CMAR	**Chiang Mai Arr**	**60.71**	**296**	P	**P**	**04 53 21.4**	**+1.2**
	comp=Z,1.2nm,0.3s,baz=120,slow=5.9,SNR=9.1						
GTA	**Gaotai**	**68.73**	**317**	*e*P	**P**	**04 54 10.4**	**-1.9**
GTA				pP	pP	04 54 22.8	+0.6
GTA				sP	sP	04 54 27.8	+1.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	**Songino Array**	**69.37**	**327**	P	**P**	**04 54 15.8**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=140,slow=4.6,SNR=4.7						
BILL	**Bilibino**	**75.42**	**4**	P	**P**	**04 54 51.8**	**+0.2**
BILL				IAmb	IAmb	04 54 57.0	
	comp=Z,3.9nm,0.7s						
QSPA	**South Pole Qui**	**82.85**	**180**	P	**P**	**04 55 33.2**	**+0.7**
QSPA				IAmb	IAmb	04 55 35.2	
	comp=Z,9.2nm,0.9s						
MKAR	**Makanchi Array**	**83.41**	**319**	P	**P**	**04 55 36.0**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=102,slow=6.0,SNR=7.0						
ILAR	**Eielson Array**	**83.55**	**22**	P	**P**	**04 55 34.0**	**-1.8**
	comp=Z,1.2nm,0.8s,baz=243,slow=5.5,SNR=9.0						
ZALV	**Zalesovo Beam**	**84.21**	**326**	P	**P**	**04 55 38.7**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=113,slow=4.4,SNR=3.6						
MAW	**Mawson**	**84.22**	**203**	P	**P**	**04 55 38.6**	**-0.7**
	comp=Z,5.0nm,0.8s,baz=56,slow=7.8,SNR=4.2						
MAW	**Mawson**	**84.22**	**203**	P	**P**	**04 55 38.9**	**-0.3**
HYT	**Haines Junctio**	**85.56**	**27**	P	**P**	**04 55 45.9**	**-0.3**
HYT				IAmb	IAmb	04 55 52.3	
	comp=Z,5.1nm,0.8s						
KDJ	**Kajisay**	**85.68**	**313**	P	**P**	**04 55 45.8**	**-1.6**
KDJ				IAmb	IAmb	04 55 53.4	
	comp=Z,1.8

JAY Jayapura 14.81 287 P **Pn** **04 48 32.0 +0.9**
comp=Z,35nm,1.1s
MTSU Mount Surprise 15.10 222 P **Pn** **04 48 36.4 +1.4**
baz=15,SNR=61
GENI Genyem 15.29 286 P **Pn** **04 48 39.2 +1.7**
comp=Z,84nm,1.6s
CTA Charters Tower 15.46 212 Pn **Pn** **04 48 39.4 -0.3**
comp=Z,0.7nm,0.3s,baz=31,slow=14,SNR=16
CTA LR LR 04 54 17.9
comp=Z,9µm,18.5s,baz=46,slow=36
CTAO Charters Tower 15.46 212 P **Pn** **04 48 39.1 -0.5**
CTAO IAmb IAmb 04 48 46.3
comp=Z,292nm,1.1s
CTAO Charters Tower 15.46 212 IAmb IAmb 04 50 24.8
comp=Z,61nm,1.0s
SMPI Sarmi 16.86 286 P **Pn** **04 48 57.0 -0.5**
comp=Z,94nm,1.2s
EIDS Eidsvold 18.61 191 P **Pn** **04 49 20.2 +1.2**
baz=19,SNR=27
EIDS Eidsvold 18.61 191 P **P** **04 49 18.2 -0.2**
DZM Mont Dzumac 18.68 144 P **P** **04 49 18.4 -0.9**
comp=Z,1.1nm,0.3s,baz=7.0,slow=9.3,SNR=18
DZM LR LR 04 55 22.5
comp=Z,3µm,18.1s,baz=328,slow=33
DZM Mont Dzumac 18.68 144 P **P** **04 49 19.2 0.0**
DZM IAmb IAmb 04 49 34.1
comp=Z,209nm,1.5s
QIS Mount Isa 20.00 226 P **P** **04 49 33.9 +0.2**
baz=20,SNR=63
KWAJ Kwajalein Atol 20.20 39 P **P** **04 49 35.2 -0.6**
KWAJ IAmb IAmb 04 49 51.1
comp=Z,225nm,1.0s
RMQ Roma 20.23 196 P Pn 04 49 37.7 -0.5
baz=20,SNR=110
RKPI Ransiki, Papua 21.34 284 P **P** **04 49 48.8 +0.6**
comp=Z,294nm,0.9s
QLP Quilpie 21.94 206 P **P** **04 49 55.5 +1.0**
baz=22,SNR=10
KDU Kakadu 22.77 254 P **P** **04 50 02.6 -0.9**
baz=23,SNR=53
FAKI Fak Fak 22.90 279 P **P** **04 50 03.9 -0.9**
comp=Z,8µmcomp=Z,122nm,1.1s
FAKI Fak Fak 22.90 279 P **P** **04 50 03.2 -1.6**
FAKI IAmb IAmb 04 50 15.6
comp=Z,89nm,1.0s
SAUI Saumlaki 23.39 266 P **P** **04 50 08.8 -1.0**
comp=Z,790nm,2.1s
ARMA Armidale 23.49 187 P **P** **04 50 11.4 +0.8**
baz=24,SNR=32
ARMA Armidale 23.49 187 P **P** **04 50 11.4 +0.8**
WR8 Warramunga Arr 23.59 235 P **P** **04 50 11.0 -0.6**
baz=24
WRAB Tennant Creek 23.70 235 P **P** **04 50 12.5 -0.1**
WB2 Warramunga Arr 23.70 235 IAmb IAmb 04 52 02.3
comp=Z,19nm,0.8s
WRA Warramunga Arr 23.71 235 P **P** **04 50 11.8 -0.9**
comp=Z,177nm,1.0s,baz=59,slow=9.4,SNR=31
WRA PcP **PcP** **04 53 57.5 +1.2**
comp=Z,2.8nm,0.4s,baz=61,slow=2.4,SNR=6.1
WRA ScP **ScP** **04 57 35.7 +4.2**
comp=Z,9.0nm,1.1s,baz=54,slow=1.9,SNR=11
WRA LR LR 04 58 24.8
comp=Z,4µm,21.5s,baz=50,slow=34
MTN Manton Dam 24.08 254 P **P** **04 50 17.2 +0.9**
baz=24,SNR=6.0
MTN Manton Dam 24.08 254 P **P** **04 50 14.6 -1.6**
SIJI Sorong 24.32 283 P **P** **04 50 18.9 +0.5**
comp=Z,195nm,1.1s,baz=82,slow=7.7,SNR=52
SIJI LR LR 05 00 49.4
comp=Z,3µm,18.8s,baz=66,slow=39
MSVF Nonsavu 24.99 117 P **P** **04 50 25.0 +0.5**
MSVF IAmb IAmb 04 50 44.8
comp=Z,111nm,1.0s
CMSA Cobar Meteorol 25.87 198 P **P** **04 50 32.6 +0.4**
baz=26,SNR=114
ASAR Alice Springs 26.07 228 P **P** **04 50 33.6 -0.7**
comp=Z,41nm,0.8s,baz=59,slow=9.0,SNR=55
ASAR ScP **ScP** **04 57 42.8 +4.7**
comp=Z,7.6nm,0.9s,baz=52,slow=3.2,SNR=14
ASAR LR LR 05 00 40.3
comp=Z,6µm,18.2s,baz=48,slow=36
MGCD Mangrove Creek 26.30 187 P **P** **04 50 38.3 +2.1**
baz=26,SNR=12
AAI Ambon 26.76 276 P **P** **04 50 40.8 +0.2**
comp=Z,102nm,0.5s
KNRA Kununurra 26.98 249 P **P** **04 50 42.8 +0.3**
baz=27,SNR=24
KNRA Kununurra 26.98 249 P **P** **04 50 42.1 -0.5**
STKA Stephens Creek 27.67 205 P **P** **04 50 48.5 -0.1**
baz=28,SNR=37
STKA Stephens Creek 27.67 205 P **P** **04 50 48.4 -0.1**
comp=Z,101nm,1.0s,baz=8.8,slow=9.8,SNR=17
STKA ScP **ScP** **04 57 47.8 +5.1**
comp=Z,16nm,1.1s,baz=30,slow=4.2,SNR=8.3
STKA LR LR 05 02 03.7
comp=Z,7µm,18.0s,baz=11,slow=37
STKA Stephens Creek 27.67 205 P **P** **04 50 48.0 -0.5**
YNG Young 27.81 192 P **P** **04 50 50.8 +1.0**
baz=28,SNR=7.2
NLAI Namlea 27.91 276 P **P** **04 50 51.7 +0.8**
comp=Z,54nm,1.0s
LBMI Labuha 28.02 282 P **P** **04 50 53.6 +1.7**
comp=Z,7µmcomp=Z,449nm,1.8s
TNTI Ternate 28.51 285 P **P** **04 50 58.0 +1.8**
comp=Z,4µmcomp=Z,88nm,1.1s
TNTI Ternate 28.51 285 P **P** **04 50 54.1 -2.1**
TNTI IAmb IAmb 04 50 58.4
comp=Z,94nm,1.1s
CNB Canberra Magne 28.62 189 P **P** **04 50 58.6 +1.5**
baz=29,SNR=5.4
CAN Canberra 28.69 190 P **P** **04 50 55.2 -2.5**
SANI Sanana 29.20 278 P **P** **04 51 03.3 +0.9**
comp=Z,4µmcomp=Z,53nm,1.0s
HTT Hallett 30.16 207 P **P** **04 51 10.7 0.0**
baz=30,SNR=18
SOEI Soe 30.40 263 P **P** **04 51 13.7 +0.6**
comp=Z,69nm,2.3s
FITZ Fitzroy Crossi 30.54 246 P **P** **04 51 13.7 -0.4**
baz=31,SNR=19
FITZ Fitzroy Crossi 30.54 246 P **P** **04 51 14.0 -0.2**
comp=Z,46nm,0.8s,baz=78,slow=7.9,SNR=29
FITZ LR LR 05 04 30.9
comp=Z,4µm,18.2s,baz=66,slow=38
FITZ Fitzroy Crossi 30.54 246 P **P** **04 51 13.5 -0.6**
FITZ IAmb IAmb 04 51 14.7
comp=Z,52nm,0.8s
BATI Baumata 31.01 262 LR LR 05 05 46.8
comp=Z,4µm,18.9s,baz=128,slow=40
BATI Baumata 31.01 262 P **P** **04 51 17.9 -0.5**
comp=Z,66nm,1.6s
BBOO Buckleboo 31.06 212 P **P** **04 51 18.1 -0.5**
baz=31,SNR=9.2
BBOO Buckleboo 31.06 212 P **P** **04 51 17.1 -1.5**
BBOO IAmb IAmb 04 51 19.7
comp=Z,60nm,1.1s
BBOO Buckleboo 31.06 212 IAmb IAmb 04 52 43.9
comp=Z,19nm,0.9s
WRKA Warakurna 31.10 232 P **P** **04 51 18.2 -0.9**
baz=31,SNR=15
TOO Toolangi 31.60 194 P **P** **04 51 24.4 +1.1**
baz=32,SNR=4.5
TOO Toolangi 31.60 194 P **P** **04 51 22.7 -0.6**
KMSI Cibinong 31.73 283 P **P** **04 51 26.9 +2.2**
comp=Z,274nm,1.1s
ARPS Mount Arapiles 31.92 200 P **P** **04 51 26.5 +0.4**
baz=32,SNR=17
MMRI Maumere 32.37 265 P **P** **04 51 30.5 +0.2**
comp=Z,153nm,1.7s
MMRI Maumere 32.37 265 P **P** **04 51 29.0 -1.3**
LUWI Luwuk 32.55 279 P **P** **04 51 33.6 +1.7**
comp=Z,4µmcomp=Z,118nm,1.0s
LUWI Luwuk 32.55 279 P **P** **04 51 30.6 -1.3**
EDFI Ende, Flores 32.91 265 P **P** **04 51 34.2 -1.0**
comp=Z,58nm,1.1s
OUZ Omahuta 32.93 151 P **P** **04 51 32.1 -2.8**
OUZ IAmb IAmb 04 51 41.3
comp=Z,91nm,1.5s
MRSI Marisa 33.69 281 P **P** **04 51 42.9 +1.1**
comp=Z,1µmcomp=Z,60nm,1.2s
BASI Baing, Sumba 34.05 262 P **P** **04 51 46.3 +1.3**
comp=Z,3µmcomp=Z,220nm,1.6s
FORT Forrest 34.50 223 P **P** **04 51 48.2 -0.5**
baz=34,SNR=13
FORT Forrest 34.50 223 P **P** **04 51 48.2 -0.5**
BKSI Bulukumba 34.59 271 P **P** **04 51 51.2 +1.6**
comp=Z,53nm,1.6s
BNSI Bone 34.69 272 P **P** **04 51 52.0 +1.5**
comp=Z,81nm,2.0s
KAPI Kappang 34.98 271 P **P** **04 51 53.3 +0.3**
comp=Z,86nm,1.1s,baz=80,slow=5.7,SNR=16
KAPI Kappang 34.98 271 P **P** **04 51 52.3 -0.7**
KAPI IAmb IAmb 04 52 06.7
comp=Z,40nm,1.1s
SPSI Sidrap Palu 35.07 273 P **P** **04 51 54.1 +0.3**
comp=Z,56nm,1.2s
TTSI Tana Toraja 35.13 275 P **P** **04 51 56.1 +1.7**
comp=Z,3µmcomp=Z,54nm,1.5s
WBSI Waikabubak, Su 35.20 263 P **P** **04 51 55.6 +0.6**
comp=Z,88nm,1.1s
MPSI Mapaga 35.65 280 P **P** **04 51 58.3 -0.5**
comp=Z,53nm,0.8s
MOO Moorlands 35.94 190 P **P** **04 52 02.9 +2.0**
baz=36,SNR=4.9
HIZ Hauiti 36.20 153 P **P** **04 52 03.4 +0.2**
TAU Tasmania Unive 36.37 189 P **P** **04 52 03.6 -1.0**
TAU IAmb IAmb 04 52 11.0
comp=Z,70nm,1.1s
MBWA Marble Bar 36.76 244 P **P** **04 52 07.0 -1.3**
MBWA IAmb IAmb 04 52 08.3
comp=Z,60nm,0.8s
PLAI Plampang 36.78 265 P **P** **04 52 07.8 -0.7**
comp=Z,4µmcomp=Z,104nm,1.1s
PSA00 Pilbara Seismi 36.78 243 P **P** **04 52 07.4 -1.0**
PSA00 IAmb IAmb 04 52 10.6
comp=Z,30nm,0.8s
PSA00 **PP** **04 53 28.7 -4.1**
URZ Urewera 37.05 150 P **P** **04 52 11.9 +1.4**
comp=Z,19nm,1.1s,baz=2.9,slow=3.1,SNR=9.9
URZ Urewera 37.05 150 IAmb IAmb 04 52 30.6
comp=Z,43nm,1.2s
SMKI Samarinda 38.12 278 P **P** **04 52 19.4 -0.5**
TUWZ Tuamarina 38.24 157 P **P** **04 52 20.1 -0.3**
BKB Balikpapan 38.29 277 P **P** **04 52 21.6 +0.3**
comp=Z,78nm,0.6s
MSWZ Moikau Station 38.76 155 P **P** **04 52 24.0 -0.9**
KHZ Kahutara 38.94 158 P **P** **04 52 25.9 -0.3**
KHZ IAmb IAmb 04 52 42.5
comp=Z,66nm,1.1s
KMBL Kambalda 39.20 227 P **P** **04 52 28.5 -0.2**
baz=39,SNR=19
RPZ Rata Peaks 39.22 161 P **P** **04 52 29.3 +0.7**
comp=Z,9.2nm,0.8s,baz=21,slow=7.8,SNR=4.6
RPZ Rata Peaks 39.22 161 P **P** **04 52 28.0 -0.7**
SRBI Singaraja 39.32 266 P **P** **04 52 30.0 +0.1**
comp=Z,70nm,1.5s
MEEK Meekatharra 39.60 236 P **P** **04 52 32.2 0.0**
baz=40,SNR=16
MQZ McQueen's Vall 39.74 160 P **P** **04 52 32.1 -0.9**
JAGI Jajag, Banyuwa 40.37 265 P **P** **04 52 36.8 -1.8**
comp=Z,116nm,1.5s
JAGI Jajag, Banyuwa 40.37 265 P **P** **04 52 36.1 -2.5**
JAGI **PcP** **04 54 38.4 -3.1**
KKM Kota Kinabalu 40.70 288 P **P** **04 52 39.4 -2.0**
KKM IAmb IAmb 04 52 42.7
comp=Z,111nm,1.2s
GIRL Giralia 42.08 244 P **P** **04 52 53.5 +0.9**
baz=42,SNR=4.9
GIRL Giralia 42.08 244 P **P** **04 52 50.9 -1.7**
KLBR Kellerberrin 42.38 230 P **P** **04 52 54.4 -0.5**
baz=42,SNR=6.9
MORW Morawa 42.65 234 P **P** **04 52 56.9 -0.2**
baz=43,SNR=11
MORW Morawa 42.65 234 P **P** **04 52 55.3 -1.8**
MORW IAmb IAmb 04 52 57.8
comp=Z,87nm,1.1s
MORW PP **PP** **04 54 33.6 -3.0**
BLDU Ballidu 42.76 232 P **P** **04 52 57.3 -0.7**
baz=43,SNR=7.3
PBKI Pangkalan Bun 43.24 273 P **P** **04 53 03.5 +1.3**
comp=Z,472nm,1.2s
PCJI Pacitan 43.31 266 P **P** **04 53 02.6 -0.1**
comp=Z,4µmcomp=Z,239nm,1.6s
NWAO Narrogin (SRO) 43.39 228 P **P** **04 53 03.0 -0.1**
baz=43,SNR=4.4
NWAO Narrogin (SRO) 43.39 228 P **P** **04 53 03.0 -0.1**
comp=Z,37nm,1.1s,baz=88,slow=7.1,SNR=6.2
NWAO Narrogin (SRO) 43.39 228 P **P** **04 53 01.9 -1.3**
WOJI Wonogiri, Jawa 43.58 266 P **P** **04 53 05.0 +0.2**
comp=Z,59nm,1.6s
SBUM Sibu 43.59 281 P **P** **04 53 03.9 -1.1**
SBUM Sibu 43.59 281 P **P** **04 53 06.0 +1.0**
MUN Mundaring 43.73 230 P **P** **04 53 05.5 -0.3**
baz=44
UGM Wanagama 43.97 266 P **P** **04 53 08.6 +0.6**
comp=Z,156nm,1.6s
UGM Wanagama 43.97 266 P **P** **04 53 05.9 -2.2**
RKGY Rocky Gully 44.39 226 P **P** **04 53 12.0 +0.9**
baz=44,SNR=4.8
YULB Yu-li 44.60 314 P **P** **04 53 10.5 -2.4**
YULB IAmb IAmb 04 53 15.5
comp=Z,42nm,0.9s
NACB Ninganchiao 44.88 315 P **P** **04 53 12.7 -2.4**
TPUB Ta-pu 45.03 313 IAmb IAmb 04 53 17.0
comp=Z,39nm,0.8s
SSLB Suanglung 45.10 314 IAmb IAmb 04 53 26.4
comp=Z,43nm,0.9s
KSM Kuching 45.26 279 P **P** **04 53 16.2 -2.1**
KSM IAmb IAmb 04 53 22.2
comp=Z,51nm,1.1s
KSM Kuching 45.26 279 P **P** **04 53 19.0 +0.7**
YHNB Yeheng 45.35 315 P **P** **04 53 16.7 -2.2**
JNU Nakatsue 45.97 332 P **P** **04 53 24.4 +0.8**
comp=Z,13nm,0.9s,baz=344,slow=1.3,SNR=5.5
JNU Nakatsue 45.97 332 P **P** **04 53 22.1 -1.5**
JNU IAmb IAmb 04 53 36.7
comp=Z,22nm,0.8s
MJAR Matsushiro Arr 46.06 341 P **P** **04 53 25.3 +1.1**
comp=Z,1.3nm,0.4s,baz=161,slow=9.8,SNR=5.1
CISI Cisompet, Garu 46.66 266 P **P** **04 53 28.6 -0.8**
comp=Z,4µmcomp=Z,85nm,0.9s
CISI Cisompet, Garu 46.66 266 P **P** **04 53 26.3 -3.1**
CNJI Cibinong 47.35 267 P **P** **04 53 34.7 -0.1**
comp=Z,4µmcomp=Z,137nm,1.3s
SSE Sheshan 49.74 321 P **P** **04 53 53.9 +1.1**
SSE pmax pmax
comp=Z,9.0nm,0.8s
DLV T Lat 49.82 292 P **P** **04 53 51.7 -2.2**
LWLI Liwa 50.56 269 P **P** **04 54 00.2 +0.7**
comp=Z,115nm,0.9s
KSRS Korea Array 50.90 332 P **P** **04 54 00.6 -0.8**
comp=Z,4.0nm,0.8s,baz=148,slow=8.0,SNR=10.0
KSRS ScP **ScP** **04 59 14.3 +3.6**
comp=Z,5.1nm,1.1s,baz=134,slow=4.2,SNR=5.2
KSRS LR LR 05 13 01.6
comp=Z,491nm,19.6s,baz=160,slow=33
MYKOM Kota Tinggi 51.66 278 P **P** **04 54 09.0 +1.4**
NJ2 Nanjing 51.85 321 *eP* **P** **04 54 10.8 +2.1**
NJ2 pmax pmax
comp=Z,38nm,2.2s
KRJI Kerinci 53.44 273 P **P** **04 54 21.7 +0.8**
comp=Z,17µmcomp=Z,368nm,0.5s
SDSI Sungai Dareh 53.62 274 P **P** **04 54 22.1 0.0**
comp=Z,186nm,1.4s
WHN Wuhan 53.87 316 ⇑P **P** **04 54 24.3 +0.7**
WHN pmax pmax
comp=Z,110nm,0.9s
BKNI Bangkinang 54.19 275 P **P** **04 54 27.0 +0.7**
comp=Z,159nm,1.5s
BKNI Bangkinang 54.19 275 P **P** **04 54 23.4 -2.9**
PDSI Padang 54.58 274 P **P** **04 54 29.0 -0.2**
comp=Z,34nm,1.1s
IPM Ipoh 54.94 280 P **P** **04 54 30.7 -1.1**
IPM IAmb IAmb 04 54 46.9
comp=Z,33nm,1.1s
IPM Ipoh 54.94 280 P **P** **04 54 33.0 +1.2**
USRK Ussuriysk Ar. 55.00 340 P **P** **04 54 31.1 -0.5**
comp=Z,4.1nm,0.9s,baz=156,slow=10.0,SNR=8.0
KULM Kulim 55.48 281 P **P** **04 54 34.2 -1.4**
KULM IAmb IAmb 04 54 46.1
comp=Z,18nm,0.9s
KULM Kulim 55.48 281 P **P** **04 54 36.0 +0.4**
MNSI Mandailing Nat 55.71 276 P **P** **04 54 36.4 -0.8**
comp=Z,96nm,1.1s
TIA Tai'an 55.71 323 P **P** **04 54 36.6 -0.2**
TIA pmax pmax
comp=Z,14nm,0.9s
SISI Saibi 55.89 273 P **P** **04 54 38.8 +0.2**
comp=Z,56nm,1.4s
MDJ Mudanjiang 56.21 338 P **P** **04 54 42.3 +2.0**
MDJ pP pP 04 54 45.4 -5.1
MDJ pmax pmax
comp=Z,18nm,1.2s
RPSI Rantau Prapat 56.67 278 P **P** **04 54 42.7 -1.4**
CN2 Changchun 57.15 335 *eP* **P** **04 54 49.5 +2.5**
ENH Enshi 57.16 313 P **P** **04 54 45.6 -1.7**
GYA Guiyang 57.37 307 ⇓ *iP* **P** **04 54 50.4 +1.4**
GYA S **S** **05 02 46.3 +3.2**
GYA SS **SS** **05 06 37.5 +4.1**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,380nm,4.7s
GYA LR LR
comp=Z,750nm,14.4s
GYA LR LR
comp=Z,1µm,15.9s
GYA LR LR
comp=Z,1µm,14.5s
SLVN Son La 57.39 301 P **P** **04 54 47.0 -2.1**
GSI Gunungsitoli 57.76 276 P **P** **04 54 51.4 -0.5**
comp=Z,564nm,1.2s
GSI Gunungsitoli 57.76 276 P **P** **04 54 49.4 -2.5**
KCSI Kotacane, Aceh 57.95 279 P **P** **04 54 52.4 -0.8**
comp=Z,24nm,1.6s
PBKT Sadao Pong 58.23 294 P **P** **04 54 53.2 -1.8**
PBKT IAmb IAmb 04 54 57.5
comp=Z,46nm,1.4s
BJI Beijing 58.87 326 P **P** **04 54 59.3 +0.3**
BJI pmax pmax
comp=Z,7.0nm,2.0s
MLSI Meulaboh, Aceh 59.42 279 P **P** **04 55 03.3 -0.1**
comp=Z,87nm,1.3s
XAN Xi'an 59.63 316 P **P** **04 55 04.0 -0.6**
XAN PcP **PcP** **04 55 52.6 +1.2**
XAN pmax pmax
comp=Z,46nm,1.8s
XAN LR LR
comp=Z,1µm,13.2s
XAN LR LR
comp=Z,1µm,15.2s
XAN LR LR
comp=Z,1µm,16.7s
XAN Xi'an 59.63 316 P **P** **04 55 02.4 -2.1**
XAN Xi'an 59.63 316 IAmb IAmb 04 57 01.6
comp=Z,10nm,0.7s
KMI Kunming 59.92 304 P **P** **04 55 05.4 -1.6**
KMI pmax pmax
comp=Z,37nm,1.3s
KMI pmax pmax
comp=Z,3µm,6.3s
KMI LR LR
comp=Z,1µm,15.6s
KMI LR LR
comp=Z,1µm,17.1s
KMI LR LR
comp=Z,2µm,19.2s
KMI Kunming 59.92 304 P **P** **04 55 04.5 -2.4**
PETK Petropavlovsk- 59.93 2 P **P** **04 55 06.1 0.0**
comp=Z,12nm,0.9s,baz=185,slow=7.3,SNR=12
PETK LR LR 05 16 25.8
comp=Z,974nm,21.8s,baz=171,slow=32
CMAR Chiang Mai Arr 60.68 296 P **P** **04 55 12.7 +0.7**
comp=Z,21nm,1.0s,baz=115,slow=5.1,SNR=25
CHTO Chiang Mai 60.80 296 P **P** **04 55 11.4 -1.4**
CD2 Chengdu 61.73 311 P **P** **04 55 19.2 +0.3**
CD2 pmax pmax
comp=Z,210nm,0.8s
HHC Hu-ho-hao-te 62.03 324 P **P** **04 55 23.3 +2.5**
HHC pmax pmax
comp=Z,6.0nm,0.9s
HHC pmax pmax
comp=Z,200nm,5.7s
HIA Hailar 63.88 335 P **P** **04 55 31.7 -1.2**
HIA IAmb IAmb 04 55 41.8
comp=Z,11nm,0.7s
LZH Lanzhou 64.24 316 ⇑P **P** **04 55 37.2 +1.6**
LZH pP pP 04 55 41.5 -4.8
LZH sP sP 04 55 44.0 -6.4
LZH PP **PP** **04 57 56.3 -1.1**
LZH pmax pmax
comp=Z,29nm,1.3s
LZH pmax pmax
comp=Z,170nm,6.2s
LZH LR LR
comp=Z,1µm,16.6s
LZH LR LR
comp=Z,1µm,15.9s
LZH LR LR
comp=Z,990nm,17.3s
MA2 Magadan 66.45 358 P **P** **04 55 48.5 -0.7**
MA2 IAmb IAmb 04 55 58.6
comp=Z,12nm,0.7s
CASY Casey 66.54 198 P **P** **04 55 49.0 -0.7**
CASY IAmb IAmb 04 55 52.9
comp=Z,16nm,0.9s
GTA Gaotai 68.67 317 ⇑P **P** **04 56 05.3 +1.4**
GTA pP pP 04 56 09.5 -5.0
GTA sP sP 04 56 12.2 -6.5
GTA pmax pmax
comp=Z,26nm,1.1s
GTA pmax pmax
comp=Z,970nm,6.0s
GTA LR LR
comp=Z,1µm,17.5s
GTA LR LR
comp=Z,1µm,18.4s
GTA LR LR
comp=Z,2µm,16.5s
ULN Ulaanbaatar 68.95 328 P **P** **04 56 04.4 -1.1**
ULN Ulaanbaatar 68.95 328 IAmb IAmb 04 57 54.5
comp=Z,12nm,0.8s
SHL Shillong 69.20 301 P **P** **04 56 05.9 -1.6**
SONM Songino Array 69.28 327 P **P** **04 56 07.7 +0.2**
comp=Z,8.8nm,1.0s,baz=129,slow=4.8,SNR=21
SONM LR LR 05 24 54.6
comp=Z,727nm,20.6s,baz=108,slow=35
LSA Lhasa 71.18 304 P **P** **04 56 17.9 -2.1**
TAPN Taplejung 73.31 301 *eP* **P** **04 56 32.0 -0.5**
comp=Z,223nm,1.0s
ODAN Odare 73.44 301 *eP* **P** **04 56 33.2 +0.1**
RAMN Ramite 74.14 300 *eP* **P** **04 56 36.6 -0.7**
comp=Z,53nm,0.6s
JIRN Jiri 74.69 301 *eP* **P** **04 56 40.7 +0.1**
comp=Z,206nm,1.0s
GUN Gumba 75.02 301 *eP* **P** **04 56 42.4 -0.1**
comp=Z,200nm,0.7s
BILL Bilibino 75.30 4 P **P** **04 56 42.0 -0.8**
PKI Pulchoki 75.33 301 *eP* **P** **04 56 43.9 -0.4**
comp=Z,320nm,1.2s
PKIN Phulchoki 75.34 301 *eP* **P** **04 56 43.8 -0.5**
comp=Z,166nm,1.0s
KKN Kakani 75.50 301 *eP* **P** **04 56 45.3 +0.2**
comp=Z,195nm,0.9s
DMN Daman 75.60 301 *eP* **P** **04 56 45.8 +0.1**
comp=Z,228nm,0.8s
GKN Gorkha 76.10 301 *eP* **P** **04 56 48.2 -0.3**
comp=Z,512nm,1.3s
OHAK Old Harbor 76.59 26 P **P** **04 56 50.4 0.0**
OHAK IAmb IAmb 04 56 53.4
comp=Z,40nm,1.2s
KOLN Koldanda 76.93 301 *eP* **P** **04 56 52.8 -0.4**
comp=Z,229nm,1.0s
DANN Dangsing 76.94 301 *eP* **P** **04 56 52.8 -0.6**
comp=Z,152nm,0.9s
PYUN Piuthan 77.53 301 *eP* **P** **04 56 56.0 -0.6**
comp=Z,318nm,1.1s
WMQ Urumqi 78.75 317 *eP* **P** **04 57 04.0 +1.1**
WMQ pP PcP 04 57 08.8 -2.8
WMQ PcP **pP** **04 57 14.0 +0.6**
WMQ PP **PP** **05 00 04.3 +2.7**
WMQ pmax pmax
comp=Z,10.0nm,2.1s
WMQ pmax pmax
comp=Z,340nm,5.5s
WMQ LR LR
comp=Z,570nm,20.7s
WMQ LR LR
comp=Z,590nm,18.1s
WMQ LR LR
comp=Z,600nm,19.3s
CNPM China Poot 78.82 25 P **P** **04 57 02.5 -0.3**
TTA Tatalina 79.08 21 P **P** **04 57 02.5 -1.7**
HYB Hyderabad 79.16 289 *i* P **P** **04 57 05.5 -0.1**
RC01 Rabbit Creek A 80.33 24 P **P** **04 57 10.2 -0.7**
RC01 IAmb IAmb 04 57 21.7
comp=Z,32nm,1.0s
PMR Palmer 80.85 24 P **P** **04 57 12.8 -0.8**
PMR IAmb IAmb 04 57 17.7
comp=Z,29nm,1.0s

KNK	Knik Glacier	81.02	24	IAmb	IAmb	04 57 24.8	
	comp=Z,43nm,1.2s						
GHO	Glory Hole Cre	81.03	24	IAmb	IAmb	04 57 24.6	
	comp=Z,45nm,1.2s						
KTH	Kantishna Hill	81.28	22	IAmb	IAmb	04 57 20.1	
	comp=Z,29nm,1.2s						
SML	Sawmill	81.29	24	IAmb	IAmb	04 57 33.1	
	comp=Z,47nm,1.0s						
RND	Reindeer	81.96	22	IAmb	IAmb	04 57 23.2	
	comp=Z,23nm,1.2s						
MCK	McKinley	82.11	22	P	P	04 57 20.9	+0.5
MCK				IAmb	IAmb	04 57 35.8	
	comp=Z,40nm,1.0s						
MLY	Manley	82.21	20	P	P	04 57 20.4	-0.5
DHY	Denali Highway	82.35	23	IAmb	IAmb	04 57 31.5	
	comp=Z,22nm,1.0s						
NEA	Nenana	82.53	21	IAmb	IAmb	04 57 28.6	
	comp=Z,16nm,0.9s						
WRH	Wood River Hil	82.83	21	IAmb	IAmb	04 57 43.2	
	comp=Z,42nm,1.5s						
CRQM	Cirque	82.92	26	IAmb	IAmb	04 57 30.2	
	comp=Z,38nm,1.1s						
QSPA	South Pole Qui	82.97	180	P	P	04 57 24.3	-0.7
VRDI	Verde Repeater	83.00	25	IAmb	IAmb	04 57 41.5	
	comp=Z,25nm,1.1s						
MDM	Murphy Dome	83.05	21	P	P	04 57 24.9	-0.4
TCOL	CIGO, UAF Yank	83.13	21	P	P	04 57 27.7	+2.1
	baz=237						
HDA	Harding Lake	83.22	22	P	P	04 57 26.4	+0.3
	baz=238						
HDA	Harding Lake	83.22	22	IAmb	IAmb	04 57 40.8	
	comp=Z,14nm,1.0s						
MKAR	Makanchi Array	83.33	319	P	P	04 57 27.1	0.0
	comp=Z,6.8nm,0.8s,baz=102,slow=5.8,SNR=17						
BALM	Baldy	83.39	26	IAmb	IAmb	04 57 40.8	
	comp=Z,39nm,1.2s						
ILAR	Eielson Array	83.43	22	P	P	04 57 25.9	-1.2
	comp=Z,2.6nm,0.7s,baz=241,slow=5.6,SNR=17						
ILAR				LR	LR	05 32 13.6	
	comp=Z,2μm,19.6s,baz=251,slow=34						
MAKZ	Makanchi	83.55	319	P	P	04 57 27.9	-0.3
MAKZ				IAmb	IAmb	04 57 45.3	
	comp=Z,26nm,1.1s						
MAKZ	Makanchi	83.55	319	IAmb	IAmb	04 59 12.0	
	comp=Z,11nm,1.1s						
BARN	Barnard Glacie	83.70	26	IAmb	IAmb	04 57 43.3	
	comp=Z,22nm,0.8s						
ZALV	Zalesovo Beam	84.12	326	P	P	04 57 29.9	-1.0
	comp=Z,3.4nm,0.6s,baz=119,slow=4.8,SNR=8.0						
MAW	Mawson	84.34	203	P	P	04 57 32.7	+0.9
	baz=84,SNR=12						
MAW	Mawson	84.34	203	P	P	04 57 31.9	+0.1
	comp=Z,33nm,1.1s,baz=77,slow=6.5,SNR=18						
MAW				LR	LR	05 33 38.5	
	comp=Z,1μm,18.0s,baz=68,slow=35						
MAW	Mawson	84.34	203	P	P	04 57 31.3	-0.5
TOLK	Toolik Lake Re	84.67	18	P	P	04 57 34.0	+0.5
	baz=235						
TOLK	Toolik Lake Re	84.67	18	IAmb	IAmb	04 57 50.1	
	comp=Z,12nm,0.9s						
PRZ	Przheval'sk	84.83	314	P	P	04 57 33.6	-1.4
SIT	Sitka	85.08	31	IAmb	IAmb	04 57 40.8	
	comp=Z,13nm,0.9s						
DIB	Dawson Inlet,	85.34	35	IAmb	IAmb	04 57 58.4	
	comp=Z,38nm,1.3s						
HYT	Haines Junctio	85.44	27	P	P	04 57 37.9	+0.2
HYT				IAmb	IAmb	04 57 46.4	
	comp=Z,29nm,0.9s						
EGAK	Eagle	85.58	23	IAmb	IAmb	04 57 54.1	
	comp=Z,17nm,0.9s						
KDJ	Kajisay	85.62	313	IAmb	IAmb	04 57 48.5	
	comp=Z,16nm,0.8s						
BESE	Bessie Mountai	85.86	30	IAmb	IAmb	04 57 53.8	
	comp=Z,20nm,1.0s						
KSH	Kashi	85.93	310	P	P	04 57 42.7	+2.2
KSH				sP	pP	04 57 51.7	+0.5
KSH				PP	PP	05 01 06.2	+5.4
KSH				SKS	S	05 08 06.0	-5.5
KSH				S	SKKSac	05 08 14.8	+4.0
KSH				pmax	pmax		
	comp=Z,150nm,1.4s						
KSH				pmax	pmax		
	comp=Z,790nm,6.1s						
KSH				LR	LR		
	comp=Z,690nm,9.0s						
KSH				LR	LR		
	comp=Z,530nm,12.2s						
KSH				LR	LR		
	comp=Z,1μm,16.3s						
SKAG	Skagway	85.94	29	P	P	04 57 39.5	-0.4
SKAG				IAmb	IAmb	04 57 45.9	
	comp=Z,22nm,1.1s						
DAWY	Dawson	85.96	24	P	P	04 57 40.6	+0.6
JIS	Juneau Island	85.98	30	IAmb	IAmb	04 57 48.2	
	comp=Z,18nm,1.2s						
ULHL	Ulahol	86.33	313	P	P	04 57 43.5	+0.9
	SNR=9.2						
WHY	Whitehorse	86.58	28	IAmb	IAmb	04 57 48.9	
	comp=Z,15nm,1.1s						
KURK	Kurchatov	86.77	322	P	P	04 57 43.5	-0.6
KURBB	Kurchatov Arra	86.80	322	P	P	04 57 43.7	-0.7
	comp=Z,1.5nm,0.8s,baz=111,slow=4.2,SNR=12						
NIL	Nilore	86.92	304	P	P	04 57 44.8	-0.6
TKM2	Tokmak 2	86.94	314	P	P	04 57 45.5	0.0
	SNR=5.4						
KZA	Kyzart	87.01	313	P	P	04 57 47.6	+1.4
	SNR=21						
UCH	Uchtor	87.58	313	P	P	04 57 50.2	+1.2
	SNR=14						
AAK	Ala-Archa	87.67	313	P	P	04 57 47.4	-1.6
	comp=Z,2.9nm,0.5s,baz=96,slow=3.8,SNR=12						
AAK	Ala-Archa	87.67	313	P	P	04 57 48.1	-0.9
EPYK	Eagle Plains	87.92	22	P	P	04 57 50.0	+0.6
	baz=248						
AML	Almayashu	88.16	313	P	P	04 57 53.4	+1.8
	SNR=15						
EKS2	Erkin-Say	88.20	313	P	P	04 57 53.0	+1.6
	SNR=5.7						
ARSB	Arslanbob	88.53	312	P	P	04 57 52.4	-0.7
ARSB				IAmb	IAmb	04 58 11.6	
	comp=Z,18nm,1.1s						
NRIK	Noril'sk	88.71	341	P	P	04 57 51.6	-1.4
	comp=Z,1.8nm,0.5s,baz=74,slow=7.5,SNR=5.1						
INK	Inuvik	89.77	21	IAmb	IAmb	04 58 09.9	
	comp=Z,20nm,1.3s						
AFDM	Forest Hills D	89.83	51	IAmb	IAmb	04 58 06.2	
	comp=Z,18nm,1.3s						
J05D	Fort Rock, OR	90.33	47	P	P	04 58 02.5	+1.1
	baz=261						
KBL	Kabul	90.51	305	P	P	04 58 00.8	-1.8
KBL				IAmb	IAmb	04 58 11.4	
	comp=Z,16nm,0.9s						
PINE	Pine Mountain	90.62	46	IAmb	IAmb	04 58 24.0	
	comp=Z,18nm,1.4s						
KKAR	Karatay Array	90.64	313	IAmb	IAmb	04 58 13.6	
	comp=Z,20nm,1.4s						
PNTR	Pine Nut	90.91	51	P	P	04 58 03.0	-1.3
PNTR				IAmb	IAmb	04 58 21.1	
	comp=Z,8.4nm,0.8s						
PAHR	Pah Rah Range	91.16	50	P	P	04 58 06.0	+0.6
PAHR				IAmb	IAmb	04 58 11.3	
	comp=Z,19nm,1.3s						
CWC	Cottonwood Cre	91.74	54	P	P	04 58 09.1	+0.9
	baz=263						
NVAR	Mina Array Bea	91.82	52	P	P	04 58 08.5	-0.1
	comp=Z,5.0nm,0.9s,baz=250,slow=5.9,SNR=14						
LRMC	Laurel Mtn Rad	91.94	55	P	P	04 58 10.9	+1.8
	baz=263						
WVOR	Wild Horse Val	92.09	48	IAmb	IAmb	04 58 30.8	
	comp=Z,9.1nm,1.0s						
MPMC	Manual Prospec	92.17	54	P	P	04 58 12.1	+1.8
	baz=263						
BVAR	Borovoye Array	92.23	323	P	P	04 58 08.7	-1.2
	comp=Z,1.2nm,0.6s,baz=214,slow=33,SNR=5.4						
SYO	Syowa Base	92.27	199	I/P	P	04 58 08.0	-1.8
SYO	Syowa Base	92.27	199	ePcP	PcP	04 58 12.2	+1.7
FURC	Furnace Creek,	92.72	54	P	P	04 58 14.2	+1.8
	baz=263						
TPNV	Topopah Spring	93.27	53	P	P	04 58 16.2	+1.0
	baz=264						
TPNV	Topopah Spring	93.27	53	IAmb	IAmb	04 58 26.9	
	comp=Z,21nm,1.4s						
C36M	Paulatuk	93.36	21	P	P	04 58 14.4	-0.2
	baz=259						
C36M	Paulatuk	93.36	21	IAmb	IAmb	04 58 26.2	
	comp=Z,12nm,0.9s						
GMRC	Granite Mounta	93.51	56	P	P	04 58 17.8	+1.4
	baz=264						
F10A	Beach Ranch, E	93.53	44	IAmb	IAmb	04 58 22.1	
	comp=Z,17nm,1.5s						
R11A	Troy Canyon, C	93.94	52	P	P	04 58 19.8	+1.5
	baz=264						
R11A	Troy Canyon, C	93.94	52	IAmb	IAmb	04 58 34.4	
	comp=Z,17nm,1.4s						
SHPR	Sheep Range	94.09	54	P	P	04 58 18.7	-0.3
SHPR				IAmb	IAmb	04 58 35.4	
	comp=Z,9.9nm,1.0s						
ELK	Elko	94.44	50	IAmb	IAmb	04 58 26.4	
	comp=Z,13nm,1.3s						
U15A	North Rim	96.39	54	IAmb	IAmb	04 58 51.5	
	comp=Z,8.4nm,1.1s						
YKA	Yellowknife Ar	96.41	28	P	P	04 58 28.5	-0.3
	comp=Z,8.7nm,0.8s,baz=263,slow=4.1,SNR=23						
YKA				PKKPbc	PKKPbc	05 15 13.5	-3.0
	comp=Z,0.2nm,0.6s,baz=92,slow=2.4,SNR=4.1						
BW06	Boulder Array	98.80	48	P	Pdif	04 58 41.5	+1.1
	baz=269						
PDAR	Pinedale Array	98.80	48	P	P	04 58 40.1	-0.2
	comp=Z,1.9nm,0.9s,baz=226,slow=2.1,SNR=12						
GEYT	Alibeck	99.59	307	P	Pdif	04 58 43.2	-0.6
	comp=Z,1.4nm,0.6s,baz=190,slow=7.5,SNR=4.4						
VNA2	Neumayer--Watz	101.32	186	Pdiff	Pdif	04 58 52.1	+1.3
TXAR	Lajitas Array	103.37	62	Pdiff	Pdif	04 59 01.4	+0.5
	comp=Z,0.3nm,0.9s,baz=259,slow=2.0,SNR=4.2						
TXAR				PP	PKiKP	05 03 19.0	-0.9
	comp=Z,0.3nm,0.7s,baz=251,slow=7.6,SNR=3.9						
TXAR				PKKPbc	PKKPbc	05 14 56.2	+0.7
	comp=Z,0.9nm,1.1s,baz=142,slow=4.7,SNR=3.8						
AKASG	Malin Array Be	117.48	324	PKP	PKPdf	05 03 45.4	-0.3
	comp=Z,1.7nm,0.6s,baz=58,slow=2.2,SNR=5.5						
AKASG				PP	PP	05 04 59.1	+1.5
	comp=Z,1.3nm,0.8s,baz=57,slow=5.8,SNR=4.2						
AKASG				PKKPbc	PKKPab	05 14 15.1	+3.2
	comp=Z,0.8nm,0.5s,baz=262,slow=3.5,SNR=4.6						
BRTR	Keskin Array B	118.30	311	PKP	PKiKP	05 03 48.5	+0.6
	comp=Z,2.5nm,1.1s,baz=67,slow=4.2,SNR=5.3						
BRTR				PP	PP	05 05 07.8	+3.8
	comp=Z,1.2nm,0.9s,baz=100,slow=6.5,SNR=4.7						
LSQQ	Lebel-sur-Quev	119.64	37	P	PKiKP	05 03 50.1	+0.1
	baz=296						
NB2	NORSAR Subarra	119.67	341	PKPdf	PKPdf	05 03 49.6	-0.1
	comp=Z,15nm,1.7s,baz=44,slow=1.8						
NB2	NORSAR Subarra	119.67	341	PKPdf	PKPdf	05 03 49.6	-0.1
	baz=44,slow=1.8						
NOA	NORSAR Array B	119.67	341	PKP	PKiKP	05 03 50.1	+0.3
	comp=Z,0.4nm,0.7s,baz=357,slow=1.0,SNR=1.5						
BOSA	Boshof	119.92	231	PKP	PKiKP	05 03 51.4	0.0
	comp=Z,2.7nm,1.0s,baz=113,slow=2.4,SNR=3.4						
BOSA	Boshof	119.92	231		PKPdf	05 03 50.4	-0.9
P53A	Whipple	120.22	48	P	PKiKP	05 03 51.9	+0.5
	baz=287						
X55A	Gracelyn & Ava	121.39	54	P	PKiKP	05 03 54.9	+1.1
	baz=284						
MLR	Muntele Rosu	121.66	320		PKPdf	05 03 53.0	-1.1
L56A	Greenwood	122.08	44		PKPdf	05 03 54.7	-0.2
KOLS	Kolonicke sedl	122.29	325	ePKP	PKiKP	05 03 56.6	+1.4
U57A	Blanch	122.67	51	P	PKiKP	05 03 57.6	+1.3
	baz=287						
M57A	Sunshine Farm,	122.68	45	P	PKiKP	05 03 57.2	+1.0
	baz=292						
O57A	Amberson	122.73	46	P	PKiKP	05 03 56.8	+0.4
	baz=291						
M58A	Price's Panora	123.13	45	P	PKiKP	05 03 57.9	+0.7
	baz=292						
N58A	Sunbury	123.15	45	P	PKiKP	05 03 57.7	+0.5
	baz=292						
O58A	Lewisberry	123.27	46	P	PKiKP	05 03 57.9	+0.5
	baz=291						
S58A	Poland Farm, P	123.29	49	P	PKiKP	05 03 58.8	+1.3
	baz=289						
H58A	Gabriels	123.42	40	P	PKiKP	05 03 58.3	+0.7
	baz=296						
M59A	Waymart	123.78	44	P	PKiKP	05 03 59.0	+0.6
	baz=293						
N60A	Cedar Hill Far	124.27	45	P	PKiKP	05 04 00.1	+0.7
	baz=293						
O60A	Telford	124.27	45	P	PKiKP	05 03 59.9	+0.5
	baz=293						
MORC	Moravsky Berou	124.43	328		PKPdf	05 03 59.3	+0.1
ODNJ	Ogdensburg	124.53	44		PKPdf	05 03 58.9	-0.7
VTS	Vitosha	124.65	318		PKPdf	05 03 59.8	-0.2
E61A	Las Etchemin	124.75	37	P	PKiKP	05 04 01.3	+1.1
	baz=301						
BSEG	Bad Segeberg	125.16	335	ePKPdf	PKiKP	05 04 02.2	+1.5
	baz=49,slow=1.8						
MODS	Modra-Piesok	125.38	327	ePKP	PKiKP	05 04 01.9	+0.5
BRG	Berggiesshubel	125.60	331	ePKP	PKiKP	05 04 02.6	+0.9
	comp=Z,24nm,1.8s						
BRG				e		05 04 11.2	
	comp=Z,20nm,1.4s						
BRG	Berggiesshubel	125.60	331	ePKPdf	PKiKP	05 04 02.8	+1.1
	baz=49,slow=1.8						
CLL	Collm	125.77	331	i PKPdf	PKiKP	05 04 03.7	+1.7
	comp=Z,6.0nm,0.8s						
CLL	Collm	125.77	331	ePKPdf	PKiKP	05 04 04.0	+2.0
	baz=49,slow=1.8						
FBE	Freiberg	125.85	331	ePKPdf	PKiKP	05 04 03.6	+1.4
	baz=49,slow=1.8						
NRDL	Niedersach Rie	126.27	334	ePKPdf	PKiKP	05 04 04.4	+1.5
	baz=49,slow=1.8						
NEUB	Neuenburg	126.41	332	ePKPdf	PKiKP	05 04 04.4	+1.1
	baz=49,slow=1.8						
RETH	Rethem/Aller,	126.42	335	ePKPdf	PKiKP	05 04 04.5	+1.3
	baz=49,slow=1.8						
TANN	Tannenbergstha	126.61	331	ePKPdf	PKiKP	05 04 05.0	+1.1
	baz=49,slow=1.8						
CLZ	Clausthal	126.61	333	ePKPdf	PKiKP	05 04 05.0	+1.3
	baz=49,slow=1.8						
GUNZ	Gunzen	126.71	331	ePKPdf	PKiKP	05 04 05.3	+1.3
	baz=49,slow=1.8						
PLN	Plauen	126.71	331	ePKPdf	PKiKP	05 04 04.9	+1.0
	baz=49,slow=1.8						
WERN	Wernitzgruen	126.74	331	ePKPdf	PKiKP	05 04 05.1	+1.1
	baz=49,slow=1.8						
KHC	Kasperske Hory	126.89	329	ePKP	PKiKP	05 04 04.7	+0.3
KHC				ex	x	05 04 14.3	
GEC2	GERESS Array S	127.00	329	ePKPdf	PKiKP	05 04 05.4	+0.7
	baz=49,slow=1.8						
GERES	GERESS Array B	127.00	329	PKP	PKPdf	05 04 04.3	+0.1
	comp=Z,3.1nm,0.8s,baz=56,slow=2.4,SNR=15						
GTTG	Gottingen	127.00	333	ePKPdf	PKiKP	05 04 05.7	+1.2
	baz=49,slow=1.8						
MANZ	Manzenberg	127.06	331	ePKPdf	PKiKP	05 04 05.7	+1.0
	baz=49,slow=1.8						
ROTZ	Rotzenmuhle	127.16	330	ePKPdf	PKiKP	05 04 05.8	+0.9
	baz=49,slow=1.8						
GRF	Grafenberg Arr	127.69	331	ePKPdf	PKiKP	05 04 06.9	+1.0
	baz=49,slow=1.8						
RJOB	Jochberg	128.17	328	ePKPdf	PKiKP	05 04 07.2	+0.2
	baz=49,slow=1.8						
PB08	IPOC Station P	128.98	123		PKPdf	05 04 07.9	-1.3
MNMC	Minye Minye	129.07	121		PKiKP	05 04 10.4	+0.5
FUORN	Ofenpass-Fuorn	130.21	328		PKPdf	05 04 10.4	-0.1
NRCA	Norcia	130.97	323		PKPdf	05 04 11.2	-0.7
ROSC	El Rosal	131.04	90	PKP	PKiKP	05 04 15.0	+0.8
	comp=Z,2.8nm,0.4s,baz=99,slow=12,SNR=4.2						
LPAZ	La Paz	131.56	119	PKP	PKiKP	05 04 16.1	+0.6
	comp=Z,3.8nm,1.0s,baz=24,slow=3.6,SNR=7.9						
LPAZ				SKPbc	SKPab	05 07 41.0	+3.7
	comp=Z,6.4nm,1.1s,baz=291,slow=2.6,SNR=12						
RUSC	La Rusia	132.35	88		PKPdf	05 04 13.2	-2.7
CPUP	Villa Florida	134.45	138	PKP	PKiKP	05 04 20.2	-0.1
	comp=Z,2.7nm,0.9s,baz=311,slow=2.6,SNR=7.1						
KEST	Kesra	137.41	317	PKP	PKiKP	05 04 26.2	+0.1
	comp=Z,4.0nm,0.8s,baz=54,slow=4.5,SNR=3.6						
PGAV	Gavieira, Arco	142.11	339	ePKP	PKPdf	05 04 31.2	-1.4
ESDC	Sonseca Array	142.33	333	PKP	PKPdf	05 04 33.6	+0.6
	comp=Z,1.0nm,0.8s,baz=69,slow=4.9,SNR=4.5						
PCBR	Castelo Branco	143.67	337	ePKP	PKPdf	05 04 35.7	+0.4
PMRV	Marv??o	143.99	336	ePKP	PKiKP	05 04 38.4	-1.0
EVO	Evora	145.01	336	ePKP	PKPdf	05 04 38.2	+0.5
LIS	Lisbon	145.29	338	ePKPdf	PKPdf	05 04 38.4	+0.3
PBEJ	Beja	145.38	336	ePKP	PKPab	05 04 39.8	+1.4
PNCL	Nicolau / Gran	145.58	337	ePKP	PKPab	05 04 39.6	+0.5
MESJ	Messejana	145.69	336	ePKPdf	PKPbc	05 04 39.1	0.0
MESJ	Messejana	145.69	336	ePKP	PKPab	05 04 40.5	+1.0
PCVE	Castro Verde	145.79	335	ePKP	PKPab	05 04 41.0	+1.1
MDT	Midelt	148.02	326	P	PKiKP	05 04 47.5	-0.5
	SNR=9.7						
BDFB	Brasilia	148.06	135	PKPbc	PKPbc	05 04 46.1	-0.6
	comp=Z,26nm,0.9s,baz=216,slow=0.9,SNR=14						
BDFB	Brasilia	148.06	135	PKPdf	PKPdf	05 04 42.0	-1.6
CZD	Col de Zad	148.09	327	P	PKPab	05 04 49.1	-0.3
	SNR=11						
TZRR	Tazzarine	150.08	325	P	PKiKP	05 04 53.0	+0.7
	SNR=9.6						
ZGR	Zagora	150.60	324	P	PKiKP	05 04 54.0	+0.6
	SNR=9.9						
OUK	Oukaimeden	151.01	328	P	PKiKP	05 04 56.0	+1.5
	SNR=6.0						
TORD	Torodi Ar. Bea	152.91	285	PKP	PKPdf	05 04 51.0	0.0
	comp=Z,2.1nm,0.9s,baz=85,slow=1.0,SNR=4.1						
TORD				PKPbc	PKiKP	05 04 58.4	0.0
	comp=Z,26nm,0.9s,baz=51,slow=2.2,SNR=35						
TORD				PP	PP	05 08 45.6	+2.8
	comp=Z,2.9nm,1.0s,baz=89,slow=5.0,SNR=3.8						

NEIC ***07*** *04:46:20.7±1.7, 10°.1S±0°.1×161°.40E±0°.10, h99km±8km, mb4.8/16, Error ellipse: s-maj=18.9km s-min=7.3km az=221.0*

IDC ***07*** *04:46:22.4±4.2, 10°.19S×161°.32E, h109km±25km, mb4.5/13, mb1 4.6/14, mb1mx4.3/38, mbtmp4.9/14, Error ellipse: s-maj=45.2km s-min=17.0km az=112.0*

ISC 07 04:46:21.2±0.8, 10°.14S±0°.09×161°.4E±0°.1, h100km, n43, σ1s03/44, mb4.9/13, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.57	296	P	Pn	04 46 48.7	+0.4
	305nm,0.3s,baz=152,slow=3.1,SNR=18						
HNR				S	Sn	04 47 10.8	+1.8
	524nm,0.3s,baz=158,slow=7.7,SNR=7.3						
HNR	Honiara	1.57	296		Sn	04 47 08.8	-0.2
HNR	Honiara	1.57	296		Pn	04 46 47.9	-0.5
PATS	Pohnpei	17.14	350		Pn	04 50 13.5	-1.1
CTA	Charters Tower	17.62	234	P	Pn	04 50 21.1	+0.6
	1.5nm,0.3s,baz=52,slow=11,SNR=3.6						
CTA	Charters Tower	17.62	234	P	Pn	04 50 21.1	+0.6
CTAO	Charters Tower	17.62	234		Pn	04 50 22.7	+2.3
COEN	Coen	18.20	256		Pn	04 50 27.3	-0.2
JAY	Jayapura	21.88	289	P	P	04 51 05.8	-0.5
	8.4nm,0.6s,baz=22,slow=8.1,SNR=4.9						
JAY	Jayapura	21.88	289	P	P	04 51 05.8	-0.5
WR0	Warramunga Arr	27.65	246	P	P	04 51 57.6	-2.2
WB0	Warramunga Arr	27.73	247	P	P	04 51 59.5	-1.1
WB2	Warramunga Arr	27.82	246	P	P	04 52 00.7	-0.6
WRA	Warramunga Arr	27.83	246	P	P	04 52 00.8	-0.6
	18nm,0.6s,baz=76,slow=9.2,SNR=6.4						
WRA	Warramunga Arr	27.83	246	P	P	04 52 00.8	-0.6
AS31	Alice Springs	29.45	239	P	P	04 52 15.9	+0.1
ASAR	Alice Springs	29.45	239	P	P	04 52 15.1	-0.7
	4.7nm,0.8s,baz=65,slow=10,SNR=0.9						
ASAR	Alice Springs	29.45	239	P	P	04 52 15.1	-0.7
TOO	Toolangi	30.84	205	P	P	04 52 28.3	+0.5
KNRA	Kununurra	32.24	257	P	P	04 52 41.0	+0.6
BBOO	Buckleboo	32.45	222	P	P	04 52 42.2	+0.1
FITZ	Fitzroy Crossi	35.50	253	P	P	04 53 08.1	-0.5
	14nm,0.8s,baz=55,slow=9.3,SNR=2.3						
FITZ	Fitzroy Crossi	35.50	253	P	P	04 53 07.5	-1.0
NWAO	Narrogin (SRO)	46.46	234	P	P	04 54 38.6	+0.2
	33nm,1.0s,baz=68,slow=11,SNR=5.6						
NWAO	Narrogin (SRO)	46.46	234		P	04 54 38.6	+0.2
MJAR	Matsushiro Arr	51.30	336	P	P	04 55 14.1	-1.0
	6.8nm,0.6s,baz=155,slow=8.1,SNR=8.7						
MJAR	Matsushiro Arr	51.30	336	P	P	04 55 14.1	-1.0
MAJO	Matsushiro	51.30	336	P	P	04 55 14.6	-0.6
JNU	Nakatsue	51.91	327	P	P	04 55 18.6	-1.3
	16nm,0.8s,baz=61,slow=1.2,SNR=3.5						
ASAJ	Asahikawa	56.63	344	P	P	04 55 55.7	+1.9
	11nm,0.6s,baz=212,slow=8.9,SNR=5.4						
KSRS	Korea Array	56.78	328	P	P	04 55 54.4	-0.6
	2.4nm,0.6s,baz=136,slow=6.6,SNR=4.3						
KSRS	Korea Array	56.78	328	P	P	04 55 54.4	-0.6
USRK	Ussuriysk Ar.	60.29	336	P	P	04 56 20.6	+1.4
	14nm,0.7s,baz=148,slow=4.4,SNR=13						
CASY	Casey	65.70	200	P	P	04 56 53.6	-1.2
XAN	Xi'an	66.37	314	P	P	04 56 58.6	-1.1
ULN	Ulaanbaatar	75.09	326	P	P	04 57 53.6	+1.3
SONM	Songino Array	75.44	325	P	P	04 57 55.8	+1.4
	12nm,0.7s,baz=140,slow=5.4,SNR=10						
ILAR	Eielson Array	84.07	20	P	P	04 58 40.5	+0.1
	3.2nm,0.8s,baz=242,slow=5.3,SNR=1.8						
ILAR	Eielson Array	84.07	20	P	P	04 58 40.5	+0.1
MKAR	Makanchi Array	89.94	318	P	P	04 59 08.6	-0.7
	7.9nm,0.8s,baz=95,slow=6.5,SNR=5.5						
MKAR	Makanchi Array	89.94	318	P	P	04 59 08.6	-0.7
MAKZ	Makanchi	90.15	318	P	P	04 59 09.8	-0.5
CLL	Collm	131.48	334	e(PKPdf)	PKiKP	05 05 25.0	+2.0

IDC ***07*** *04:56:12.2±0.6, 7°.00S×154°.99E, h0km, mb4.4/16, mb1 4.6/18, mb1mx4.4/38, mbtmp4.4/18, ML4.0/2, Error ellipse: s-maj=20.7km s-min=16.2km az=117.0*

NEIC ***07*** *04:56:17.5±1.3, 6°.98S±0°.06×154°.91E±0°.09, h35km±1km, mb4.8/26, Error ellipse: s-maj=15.8km

XAN				pP	pwP	05 06 36.5	+1.8	
XAN				sP	sP	05 06 43.2	+9.1	
XAN				pmax	pmax			
	comp=Z,7.0nm,1.1s							
PETK	**Petropavlovsk-**	**59.95**	**2**	P	**P**	**05 06 19.4**	**-0.9**	
	comp=Z,2.0nm,0.8s,baz=251,slow=4.4,SNR=2.3							
CMAR	**Chiang Mai Arr**	**60.76**	**296**	P	**P**	**05 06 27.8**	**+1.2**	
	comp=Z,1.8nm,0.4s,baz=115,slow=5.2,SNR=12							
CASY	**Casey**	**66.55**	**198**	P	**P**	**05 07 04.7**	**+0.8**	
CASY				IAmb	IAmb	05 07 17.9		
	comp=Z,6.2nm,0.9s							
GTA	**Gaotai**	**68.73**	**317**	*eP*	**P**	**05 07 19.9**	**+1.6**	
GTA				pP	pP	05 07 28.4	-0.5	
GTA				sP	sP	05 07 32.1	-0.9	
GTA				pmax	pmax			
	comp=Z,4.0nm,0.9s							
SONM	**Songino Array**	**69.34**	**327**	P	**P**	**05 07 21.8**	**0.0**	
	comp=Z,0.8nm,0.7s,baz=122,slow=7.8,SNR=5.3							
LSA	**Lhasa**	**71.25**	**304**	P	**P**	**05 07 32.1**	**-2.3**	
TAPN	**Taplejung**	**73.38**	**301**	*eP*	**P**	**05 07 48.3**	**+1.4**	
	comp=Z,50nm,1.0s							
ODAN	**Odare**	**73.51**	**301**	*eP*	**P**	**05 07 48.3**	**+0.7**	
	comp=Z,37nm,0.7s							
RAMN	**Ramite**	**74.21**	**300**	*eP*	**P**	**05 07 52.2**	**+0.5**	
	comp=Z,8.3nm,0.5s							
JIRN	**Jiri**	**74.76**	**301**	*eP*	**P**	**05 07 56.0**	**+0.9**	
	comp=Z,34nm,0.9s							
GUN	**Gumba**	**75.10**	**301**	*eP*	**P**	**05 07 58.0**	**+1.0**	
	comp=Z,36nm,0.8s							
BILL	**Bilibino**	**75.31**	**4**	P	**P**	**05 07 57.4**	**+0.5**	
BILL				IAmb	IAmb	05 08 07.0		
	comp=Z,7.2nm,1.1s							
PKI	**Pulchoki**	**75.40**	**301**	*eP*	**P**	**05 07 59.2**	**+0.5**	
	comp=Z,28nm,1.1s							
PKIN	**Phulchoki**	**75.42**	**301**	*eP*	**P**	**05 07 59.2**	**+0.5**	
DMN	**Daman**	**75.67**	**301**	*eP*	**P**	**05 08 01.3**	**+1.1**	
GKN	**Gorkha**	**76.18**	**301**	*eP*	**P**	**05 08 04.1**	**+1.2**	
KOLN	**Koldanda**	**77.00**	**300**	*eP*	**P**	**05 08 08.1**	**+0.4**	
	comp=Z,29nm,0.9s							
DANN	**Dangsing**	**77.02**	**301**	*eP*	**P**	**05 08 08.4**	**+0.6**	
	comp=Z,26nm,0.8s							
PYUN	**Piuthan**	**77.61**	**301**	*eP*	**P**	**05 08 12.1**	**+1.0**	
	comp=Z,36nm,1.0s							
QSPA	**South Pole Qui**	**82.95**	**180**	P	**P**	**05 08 39.5**	**+0.5**	
MKAR	**Makanchi Array**	**83.40**	**319**	P	**P**	**05 08 41.4**	**-0.1**	
	comp=Z,1.8nm,0.9s,baz=111,slow=5.3,SNR=9.4							
ILAR	**Eielson Array**	**83.42**	**22**	P	**P**	**05 08 39.8**	**-1.3**	
	comp=Z,1.0nm,0.7s,baz=240,slow=5.5,SNR=14							
MAKZ	**Makanchi**	**83.61**	**319**	P	**P**	**05 08 41.5**	**-1.0**	
MAKZ				IAmb	IAmb	05 09 01.1		
	comp=Z,4.8nm,0.8s							
BARN	**Barnard Glacie**	**83.68**	**26**	P	**P**	**05 08 42.5**	**-0.4**	
BARN				IAmb	IAmb	05 08 44.9		
	comp=Z,7.3nm,0.8s							
CTGM	**Chitina Glacie**	**83.78**	**26**	P	**P**	**05 08 42.6**	**-0.6**	
ZALV	**Zalesovo Beam**	**84.18**	**326**	P	**P**	**05 08 43.9**	**-1.3**	
	comp=Z,0.8nm,0.4s,baz=108,slow=7.1,SNR=4.7							
MAW	**Mawson**	**84.35**	**203**	P	**P**	**05 08 45.4**	**-0.5**	
	comp=Z,5.3nm,0.8s,baz=65,slow=11,SNR=4.6							
MAW	**Mawson**	**84.35**	**203**	P	**P**	**05 08 46.2**	**+0.3**	
HYT	**Haines Junctio**	**85.42**	**27**	P	**P**	**05 08 51.0**	**-0.5**	
EGAK	**Eagle**	**85.56**	**23**	P	**P**	**05 08 52.0**	**0.0**	
EGAK				IAmb	IAmb	05 08 54.0		
	comp=Z,5.5nm,1.1s							
DAWY	**Dawson**	**85.94**	**24**	P	**P**	**05 08 53.8**	**-0.1**	
DAWY				IAmb	IAmb	05 08 57.3		
	comp=Z,4.6nm,1.0s							
KURBB	**Kurchatov Arra**	**86.86**	**322**	P	**P**	**05 08 58.2**	**-0.5**	
	comp=Z,0.4nm,0.7s,baz=96,slow=4.4,SNR=2.2							
EPYK	**Eagle Plains**	**87.90**	**22**	P	**P**	**05 09 02.9**	**-0.6**	
DLBC	**Dease Lake**	**88.19**	**31**	P	**P**	**05 09 04.3**	**-0.6**	
NVAR	**Mina Array Bea**	**91.77**	**52**	P	**P**	**05 09 22.6**	**+0.2**	
	comp=Z,1.1nm,0.7s,baz=256,slow=6.6,SNR=6.8							
SYO	**Syowa Base**	**92.28**	**199**	*teX*	**P**	**05 09 20.7**	**-3.1**	
YKA	**Yellowknife Ar**	**96.38**	**28**	P	**P**	**05 09 43.2**	**+0.5**	
	comp=Z,1.3nm,0.5s,baz=261,slow=4.3,SNR=43							
PDAR	**Pinedale Array**	**98.75**	**48**	P	Pdif	05 09 53.8	-0.4	
	comp=Z,0.5nm,1.0s,baz=190,slow=4.6,SNR=2.6							
CLL	**Collm**	**125.82**	**332**	*e*PKPdf	**PKiKP**	**05 15 17.0**	**+0.9**	
KHC	**Kasperske Hory**	**126.94**	**329**	*e*PKPDF	**PKPdf**	**05 15 15.0**	**-3.0**	
GERES	**GERESS Array B**	**127.06**	**329**	PKP	**PKPdf**	**05 15 18.0**	**-0.4**	
	comp=Z,0.7nm,0.5s,baz=52,slow=2.2,SNR=4.9							
CPUP	**Villa Florida**	**134.39**	**138**	PKP	**PKiKP**	**05 15 33.9**	**-0.3**	
	comp=Z,0.9nm,0.6s,baz=328,slow=8.2,SNR=3.9							
BDFB	**Brasilia**	**147.99**	**135**	PKPbc	**PKPbc**	**05 16 00.1**	**-0.5**	
	comp=Z,5.9nm,0.7s,baz=220,slow=2.6,SNR=7.2							
BDFB	**Brasilia**	**147.99**	**135**		**PKPbc**	**05 15 59.6**	**-1.0**	
TORD	**Torodi Ar. Bea**	**152.99**	**285**	PKP	**PKPdf**	**05 16 04.5**	**-0.6**	
	comp=Z,0.6nm,0.8s,baz=58,slow=2.3,SNR=2.6							
TORD				PKPbc	**PKiKP**	**05 16 12.7**	**+0.1**	
	comp=Z,2.0nm,0.4s,baz=56,slow=2.1,SNR=24							

*IDC **07** 05:13:57.1±1.4, 1°.09N×123°.65E, h0km, mb4.0/4, mb1 4.2/6, mb1mx3.7/49, mbtmp4.1/6, ML4.1/2, Error ellipse: s-maj=55.0km s-min=21.1km az=66.0*
*DJA **07** 05:14:03.4±0.7, 1°.N±4°×12°.3E±°, h14km±6km, M4.4/13, mb4.7/4, MLv4.3/13, MLv4.3/3*
ISC 07 05:14:03.0±1.1, 1°.02N±0°.09×123°.24E±0°.05, h35km, n15, σ2s 01/18, mb4.1/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.86**	**121**	P		**Pn**	**05 14 20.3**	**+1.6**
KMSI				S		**Sn**	**05 14 32.3**	**+2.2**
MRSI	**Marisa**	**1.40**	**247**	P		**Pn**	**05 14 26.0**	**-0.1**
LUWI	**Luwuk**	**2.10**	**193**	P		**Pn**	**05 14 37.5**	**+1.8**
LUWI				S		**Sn**	**05 15 03.0**	**+2.4**
MPSI	**Mapaga**	**3.41**	**259**	P		**Pn**	**05 14 56.6**	**+2.9**
SANI	**Sanana**	**4.11**	**138**	P		**Pn**	**05 15 04.3**	**+1.0**
LBMI	**Labuha**	**4.57**	**111**	P		**Pn**	**05 15 11.6**	**+1.9**
TTSI	**Tana Toraja**	**5.29**	**220**	P		**Pn**	**05 15 21.5**	**+1.9**
	0.5nm0.5nm130nm,0.7s							
SPSI	**Sidrap Palu**	**6.04**	**215**	P		**Pn**	**05 15 31.6**	**+1.6**
	0.2nm0.2nm46nm,0.9s							
BNSI	**Bone**	**6.23**	**210**	P		**Pn**	**05 15 34.8**	**+2.3**
	0.2nm63nm,1.0s							
KAPI	**Kappang**	**6.93**	**210**	Pn		**Pn**	**05 15 43.8**	**+1.6**
	6.2nm,0.3s,baz=127,slow=6.6,SNR=7.4							
KAPI				Sn		**Sn**	**05 16 59.4**	**-0.4**
	2.3nm,0.3s,baz=254,slow=22,SNR=6.9							
FITZ	**Fitzroy Crossi**	**19.14**	**173**	P		**P**	**05 18 21.4**	**-2.0**
	0.3nm,0.3s,baz=3.7,slow=9.4,SNR=6.6							
WRA	**Warramunga Arr**	**23.51**	**153**	P		**P**	**05 19 07.2**	**-2.8**
	3.0nm,0.4s,baz=333,slow=10.0,SNR=27							
ASAR	**Alice Springs**	**26.64**	**158**	P		**P**	**05 19 37.0**	**-1.7**
	0.6nm,0.6s,baz=342,slow=12,SNR=6.9							
STKA	**Stephens Creek**	**37.06**	**154**	P		**P**	**05 21 08.4**	**-1.4**
	2.6nm,0.5s,baz=330,slow=9.4,SNR=8.0							
MKAR	**Makanchi Array**	**57.88**	**328**	P		**P**	**05 23 52.0**	**+0.5**
	0.8nm,0.5s,baz=127,slow=8.6,SNR=12							

*ASRS **07** 05:21:46.3, 53°.77N×90°.95E, M2.3, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
NNC 07 05:21:59.1±2.0, 53°.47N×90°.42E, h0km, mb3.6, mpv3.3, 5C-5D, Error ellipse: s-maj=16.6km s-min=11.4km az=87.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.36**	**280**	⇓P	n	Pn	05 22 53.3	+0.5
	2.5nm,0.8s							
ZAA0				⇓Lg		Lg	05 23 45.1	
	14nm,0.9s							
KURBB	**Kurchatov Arra**	**7.86**	**254**	⇑P	n	Pn	05 23 53.8	-0.8
	2.2nm,0.5s							
KURBB				⇓Sn		Sn	05 25 25.7	+1.5
	35nm,0.8s							
KURBB				⇑Lg		Lg	05 26 10.3	
	64nm,1.0s							
MK31	**Makanchi Array**	**8.48**	**221**	⇑P	n	Pn	05 24 02.1	-1.0
	0.9nm,0.6s,baz=32,slow=13,SNR=6.0							
MK31				⇑Sn		Sn	05 25 40.8	+1.4
	5.2nm,0.9s							
MK31				⇓Lg		Lg	05 26 27.1	
	23nm,1.2s,baz=57,slow=35,SNR=6.2							
MAKZ	**Makanchi**	**8.59**	**222**	⇑Sn		Sn	05 25 44.5	+2.3
	3.7nm,0.8s							
MAKZ				⇓Lg		Lg	05 26 31.2	
	16nm,1.1s							

*SOME **07** 05:31:09.3, 40°.72N×77°.65E, h5km*
*KRNET **07** 05:31:11.0±0.1, 40°.67N×77°.51E, h35km, mb3.6*
*NNC **07** 05:31:10.1±1.0, 40°.69N×77°.69E, h5km, 9km, mb4.3, mpv3.9, Error ellipse: s-maj=6.9km s-min=4.7km az=172.0*
ISC 07 05:31:09.5±1.6, 40°.69N±0°.05×77°.61E±0°.03, h0km±11km, n71, σ1s 33/107, 19C-31D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.48**	**348**	⇓*iP*	n	**Pn**	**05 31 37.8**	**+0.3**
	baz=51							
KDJ				⇓*iS*		**Sg**	**05 31 57.7**	**+0.8**
	baz=51							
KSH	**Kashi**	**1.71**	**227**	⇑*iP*	n	**Pn**	**05 31 41.1**	**+0.4**
	baz=27							
KSH				⇑*iS*		**Sn**	**05 32 02.8**	**-0.6**
	baz=27							
ULHL	**Ulahol**	**1.86**	**327**	⇓*iP*	n	**Pn**	**05 31 43.2**	**+0.3**
	baz=29							
ULHL				⇓*iS*		**Sn**	**05 32 06.8**	**-0.4**
	baz=29							
ULHL	**Ulahol**	**1.86**	**327**	P		**Pb**	**05 31 44.8**	**+0.2**
	SNR=70							
PRZ	**Przheval'sk**	**1.89**	**18**	⇑*iP*		**Pb**	**05 31 44.5**	**-0.5**
	baz=20							
PRZ				⇑*iS*		**Sb**	**05 32 09.4**	**+0.2**
	baz=20							
ANVS	**Anan'yevo**	**2.09**	**1**	⇑*eP*		**Pn**	**05 31 47.3**	**+1.3**
	baz=3.0							
ANVS				⇑*iS*		**Sb**	**05 32 13.9**	**-1.2**
	baz=3.0							
KZA	**Kyzart**	**2.25**	**309**	⇓*iP*	n	**Pn**	**05 31 48.3**	**-0.1**
	baz=10.0							
KZA				⇓*iS*		**Sn**	**05 32 16.0**	**-1.1**
	baz=10.0							
KZA	**Kyzart**	**2.25**	**309**	P		**Pb**	**05 31 51.8**	**+0.5**
	SNR=109							
TNSS	**Tian-Shan**	**2.40**	**348**	⇑*eP*		**Pb**	**05 31 55.1**	**+1.4**
	162nm,0.4s							
TNSS				*eS*		**Sg**	**05 32 28.0**	**+1.5**
	142nm,0.4s							
TNSS	**Tian-Shan**	**2.40**	**348**	Pg		**Pb**	**05 31 55.1**	**+1.4**
	162nm,0.4s							
TNSS				Lg		Lg	05 32 28.0	
	142nm,0.4s							
SATY	**Saty**	**2.44**	**14**	⇓*eP*		**Pb**	**05 31 55.2**	**+0.9**
	25nm,0.3s							
SATY				*eS*		**Sg**	**05 32 28.3**	**+0.3**
	68nm,0.4s							
SATY	**Saty**	**2.44**	**14**	Pg		**Pb**	**05 31 55.2**	**+0.9**
	27nm,0.5s							
SATY				Lg		Lg	05 32 28.3	
	74nm,0.6s							
IZV	**Izvestkoviy**	**2.46**	**343**	*eP*		**Pb**	**05 31 56.1**	**+1.4**
	49nm,0.5s							
IZV				*eS*		**Sg**	**05 32 30.1**	**+1.6**
	168nm,0.7s							
IZV	**Izvestkoviy**	**2.46**	**343**	Pg		**Pb**	**05 31 56.1**	**+1.4**
	49nm,0.5s							
IZV				Lg		Lg	05 32 30.1	
	168nm,0.7s							
MDOK	**Medeo**	**2.51**	**351**	⇑*eP*		**Pb**	**05 31 56.6**	**+1.2**
	101nm,0.5s							
MDOK				*eS*		**Sg**	**05 32 30.4**	**+0.4**
	142nm,0.5s							
MDOK	**Medeo**	**2.51**	**351**	⇓Pg		**Pb**	**05 31 56.2**	**+0.7**
	73nm,0.5s							
MDOK				⇓Lg		Lg	05 32 31.6	
	119nm,0.6s							
MDOK	**Medeo**	**2.51**	**351**	Pg		**Pb**	**05 31 56.5**	**+1.0**
	88nm,0.4s							
MDOK				Lg		Lg	05 32 30.4	
	102nm,0.4s							
KOTS	**Kotyrbulak**	**2.57**	**352**	*eP*		**Pb**	**05 31 57.9**	**+1.3**
	115nm,0.4s							
KOTS				*eS*		**Sg**	**05 32 33.0**	**+1.0**
	298nm,0.5s							
KOTS	**Kotyrbulak**	**2.57**	**352**	Pg		**Pb**	**05 31 57.9**	**+1.3**
	115nm,0.4s							
KOTS				Lg		Lg	05 32 33.0	
	298nm,0.5s							
AAA	**Alma-Ata**	**2.57**	**349**	⇓*eP*		**Pg**	**05 31 58.8**	**0.0**
	122nm,0.3s							
AAA				*eS*		**Sg**	**05 32 34.4**	**+2.3**
	90nm,0.8s							
AAA	**Alma-Ata**	**2.57**	**349**	Pg		**Pg**	**05 31 58.7**	**0.0**
	122nm,0.3s							
AAA				Lg		Lg	05 32 34.4	
	90nm,0.8s							
MTBS	**Maitube**	**2.59**	**341**	*eP*		**Pb**	**05 31 58.1**	**+1.2**
	45nm,0.3s							
MTBS				*eS*		**Sg**	**05 32 33.2**	**+0.4**
	64nm,0.3s							
MTBS	**Maitube**	**2.59**	**341**	Pg		**Pb**	**05 31 58.1**	**+1.2**
	45nm,0.3s							
MTBS				Lg		Lg	05 32 33.2	
	64nm,0.3s							
KST	**Kastek**	**2.65**	**333**	⇓*eP*		**Pb**	**05 31 59.1**	**+1.2**
	45nm,0.3s							
KST				*eS*		**Sg**	**05 32 35.3**	**+0.6**
	69nm,0.5s							
KST	**Kastek**	**2.65**	**333**	Pg		**Pb**	**05 31 59.1**	**+1.2**
	45nm,0.3s							
KST				Lg		Lg	05 32 35.3	
	69nm,0.5s							
UZB	**Uzynbulak**	**2.67**	**23**	*eP*		**Pb**	**05 31 59.3**	**+1.0**
	13nm,0.5s							
UZB				*eS*		**Sg**	**05 32 35.4**	**0.0**
	70nm,0.6s							
UZB	**Uzynbulak**	**2.67**	**23**	Pg		**Pb**	**05 31 59.3**	**+1.0**
	13nm,0.5s							
UZB				Lg		Lg	05 32 35.4	
	58nm,0.5s							
TKM2	**Tokmak 2**	**2.69**	**327**	⇓*iP*		**Pn**	**05 31 55.0**	**+0.8**
	baz=28							
TKM2				⇓*iS*		**Sn**	**05 32 27.1**	**-0.5**
	baz=28							
TKM2	**Tokmak 2**	**2.69**	**327**	P		**Pn**	**05 31 54.8**	**+0.6**
	SNR=19							
TKM2	**Tokmak 2**	**2.69**	**327**	⇑Pg		**Pb**	**05 31 59.3**	**+0.7**
	45nm,1.0s							
TKM2				⇑Lg		Lg	05 32 36.9	
	37nm,0.7s							
UCH	**Uchtor**	**2.79**	**304**	⇑*iP*		**Pn**	**05 31 55.9**	**+0.1**
	baz=6.0							
UCH				⇑*iS*		**Sn**	**05 32 28.8**	**-1.5**
	baz=6.0							
UCH	**Uchtor**	**2.79**	**304**	P		**Pn**	**05 31 58.3**	**+2.5**
	SNR=20							
KBK	**Karagaybulak**	**2.80**	**315**	⇑*iP*		**Pn**	**05 31 56.2**	**+0.5**
	baz=17							
KBK				⇑*iS*		**Sn**	**05 32 29.2**	**-1.0**
	baz=17							
KBK	**Karagaybulak**	**2.80**	**315**	P		**Pb**	**05 32 02.1**	**+1.7**
	SNR=11							
SHLS	**Shalkode**	**2.83**	**29**	*eP*		**Pb**	**05 32 02.4**	**+1.5**
	20nm,0.3s							
SHLS				*eS*		**Sg**	**05 32 40.8**	**+0.4**
	126nm,0.4s							
SHLS	**Shalkode**	**2.83**	**29**	Pg		**Pb**	**05 32 02.4**	**+1.5**
	20nm,0.3s							
SHLS				Lg		Lg	05 32 40.8	
	126nm,0.4s							
PDGK	**Podgornoye**	**2.99**	**27**	Pg		**Pb**	**05 32 04.4**	**+0.7**
	8.8nm,0.3s							
PDGK				Lg		Lg	05 32 43.9	
	52nm,0.5s							
PDGK	**Podgornoye**	**2.99**	**27**	⇑Pg		**Pb**	**05 32 04.4**	**+0.7**
	10nm,0.4s							
PDGK				⇑Lg		Lg	05 32 44.8	
	130nm,0.8s							
AAK	**Ala-Archa**	**3.04**	**311**	⇑*iP*		**Pn**	**05 31 59.4**	**+0.5**
	baz=12							
AAK				⇑*eS*		**Sn**	**05 32 34.5**	**-1.6**
	baz=12							
AAK	**Ala-Archa**	**3.04**	**311**	P		**Pb**	**05 32 06.0**	**+1.5**
	SNR=18							
AAK	**Ala-Archa**	**3.04**	**311**	⇑Pg		**Pb**	**05 32 05.8**	**+1.3**
	32nm,0.6s							
AAK				⇓Lg		Lg	05 32 46.4	
	108nm,0.8s							
FRU1	**Bishkek**	**3.07**	**315**	⇓*iP*		**Pn**	**05 32 00.1**	**+0.7**
	baz=16							
FRU1				⇓*iS*		**Sn**	**05 32 35.5**	**-1.4**
	baz=16							
KTBS	**Karatobe**	**3.10**	**347**	*eP*		**Pb**	**05 32 06.6**	**+1.1**
	19nm,0.4s							
KTBS				*eS*		**Sg**	**05 32 47.9**	**-1.1**
	82nm,0.5s							
KTBS	**Karatobe**	**3.10**	**347**	Pg		**Pb**	**05 32 06.6**	**+1.1**
	19nm,0.4s							
KTBS				Lg		Lg	05 32 47.1	
	44nm,0.6s							
CHMS	**Chumysh**	**3.14**	**318**	⇓*iP*		**Pn**	**05 32 00.9**	**+0.6**
	baz=19							
CHMS				⇓*iS*		**Sn**	**05 32 37.1**	**-1.4**
	baz=19							
CHMS	**Chumysh**	**3.14**	**318**	P		**Pb**	**05 32 08.7**	**+2.4**
	SNR=5.5							
CHKK	**Chushkaly**	**3.20**	**352**	*eP*		**Pb**	**05 32 08.5**	**+1.3**
	32nm,0.3s							
CHKK				*eS*		**Sg**	**05 32 50.8**	**-1.4**
	51nm,0.2s							
CHKK	**Chushkaly**	**3.20**	**352**	Pg		**Pb**	**05 32 08.1**	**+1.0**
	32nm,0.3s							
CHKK				Lg		Lg	05 32 51.4	
	51nm,0.2s							
AML	**Almayashu**	**3.28**	**297**	⇓*iP*		**Pn**	**05 32 02.2**	**-0.2**
	baz=98							
AML				⇓*eS*		**Sn**	**05 32 40.2**	**-2.1**
	baz=98							
AML	**Almayashu**	**3.28**	**297**	P		**Pb**	**05 32 10.5**	**+1.8**
	SNR=7.9							
KRBS	**Karabastau**	**3.33**	**335**	*eP*		**Pb**	**05 32 10.8**	**+1.4**
	19nm,0.4s							
KRBS				*eS*		**Sg**	**05 32 55.4**	**-1.1**
	39nm,0.6s							
KRBS	**Karabastau**	**3.33**	**335**	Pg		**Pb**	**05 32 10.8**	**+1.4**
	19nm,0.4s							
KRBS				Lg		Lg	05 32 55.4	
	39nm,0.6s							
KUU	**Kurty**	**3.34**	**344**	*eP*		**Pb**	**05 32 10.7**	**+1.1**
	11nm,0.5s							
KUU				*eS*		**Sg**	**05 32 55.1**	**-1.6**
	46nm,0.4s							
KUU	**Kurty**	**3.34**	**344**	Pg		**Pb**	**05 32 10.7**	**+1.1**
	11nm,0.5s							
KUU				Lg		Lg	05 32 55.1	
	46nm,0.4s							
KTMS	**Ketmen**	**3.43**	**36**	*eP*		**Pb**	**05 32 11.6**	**+0.4**
	3.4nm,0.4s							
KTMS				*eS*		**Sb**	**05 32 56.2**	**+2.8**
	21nm,0.4s							
KTMS	**Ketmen**	**3.43**	**36**	Pg		**Pb**	**05 32 11.6**	**+0.4**
	3.4nm,0.4s							
KTMS				Lg		Lg	05 32 56.9	
	21nm,0.4s							
USP	**Ospenovka**	**3.46**	**319**	⇓*iP*		**Pn**	**05 32 05.3**	**+0.6**
	baz=20							
USP				⇓*iS*		**Sn**	**05 32 45.1**	**-1.4**
	baz=20							
USP	**Ospenovka**	**3.46**	**319**	P		**Pb**	**05 32 13.8**	**+2.1**
	SNR=11							
EKS2	**Erkin-Say**	**3.48**	**306**	⇓*eP*		**Pn**	**05 32 05.2**	**+0.2**
	baz=7.0							
EKS2				⇓*eS*		**Sn**	**05 32 45.0**	**-2.0**
	baz=7.0							
EKS2	**Erkin-Say**	**3.48**	**306**	P		**Pg**	**05 32 15.9**	**-0.3**
	SNR=10							
ARXS	**Arharly**	**3.53**	**3**	*eP*		**Pb**	**05 32 14.8**	**+2.0**
	21nm,0.4s							
ARXS				*eS*		**Sg**	**05 33 01.6**	**-1.1**
	34nm,0.6s							
ARXS	**Arharly**	**3.53**	**3**	Pg		**Pb**	**05 32 12.2**	**-0.6**
	21nm,0.4s							
ARXS				Lg		Lg	05 32 58.0	
	10.0nm,0.6s							
ARSB	**Arslanbob**	**3.56**	**282**	⇓*iP*		**Pn**	**05 32 06.5**	**+0.4**
	baz=82							
ARSB				⇓*iS*		**Sn**	**05 32 46.9**	**-2.0**
	baz=82							
MRKS	**Merke**	**3.87**	**304**	*eP*		**Pb**	**05 32 21.7**	**+3.1**
	14nm,0.3s							
MRKS				*eS*		**Sg**	**05 33 14.1**	**+0.3**
	14nm,0.5s							
MRKS	**Merke**	**3.87**	**304**	Pg		**Pb**	**05 32 21.7**	**+3.1**
	14nm,0.3s							
MRKS				Lg		Lg	05 33 14.1	
	6.3nm,0.6s							
DJR	**Jarkent**	**3.98**	**23**	*eP*		**Pb**	**05 32 22.7**	**+2.1**
	9.4nm,0.4s							
DJR				*eS*		**Sg**	**05 33 15.5**	**-1.9**
	11nm,0.3s							
DJR	**Jarkent**	**3.98**	**23**	Pg		**Pb**	**05 32 22.7**	**+2.1**
	9.4nm,0.4s							
DJR				Lg		Lg	05 33 15.5	
	11nm,0.3s							
KAPS	**Kapalarasan**	**4.77**	**15**	⇓*eP*		**Pg**	**05 32 38.9**	**-2.0**
	4.3nm,0.4s							
KAPS				*eS*		**Sg**	**05 33 42.9**	**+0.3**
	7.9nm,0.8s							
KAPS	**Kapalarasan**	**4.77**	**15**	Pg		**Pg**	**05 32 38.6**	**-2.2**
	4.3nm,0.4s							
KAPS				Lg		Lg	05 33 42.6	
	7.9nm,0.8s							
KK31	**Karatay Array**	**5.82**	**297**	⇓Pg		**Pg**	**05 32 57.9**	**-3.0**
	1.0nm,0.4s,baz=106,slow=17,SNR=12							
KK31				⇓Lg		Lg	05 34 15.9	
	2.6nm,0.6s,baz=101,slow=28,SNR=6.7							
MK31	**Makanchi Array**	**6.98**	**27**	⇓Pn		**Pn**	**05 32 53.5**	**+0.5**
	0.2nm,0.4s							
MK31				⇑Sn		**Sn**	**05 34 12.8**	**-0.2**
	0.6nm,0.6s,baz=209,slow=26,SNR=3.5							
MK31				Lg		Lg	05 34 51.1	
	3.8nm,0.9s,baz=214,slow=29,SNR=4.1							

*IDC **07** 05:35:32.6±1.5, 6°.12S×154°.76E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.8/37, mbtmp3.8/8, Error ellipse: s-maj=66.7km s

SPBC				*e*S	**Sn**	**05 36 41.5**	**-0.6**
SPBC				*i*		05 36 44.2	
	comp=Z,460nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.85**	**291**	*e*P	**Pn**	**05 36 22.8**	**+0.5**
ZARC				*e*S	**Sn**	**05 36 48.1**	**-0.4**
ZARC				*i*		05 36 55.5	
	comp=Z,160nm,0.3s						
SMLC	**San Martn de**	**2.18**	**334**	*e*P	**Pn**	**05 36 27.0**	**+1.0**
SMLC				*e*S	**Sn**	**05 36 54.4**	**-0.9**
SMLC				*i*		05 37 02.3	
	comp=Z,185nm,0.1s						
CHIC	**Chingaza**	**2.26**	**196**	*e*P	**Pn**	**05 36 28.1**	**+0.7**
CHIC				*e*S	**Sn**	**05 36 57.6**	**-0.1**
CHIC				*i*		05 37 01.4	
	comp=Z,75nm,0.7s						
ROSC	**El Rosal**	**2.31**	**211**	P	**Pn**	**05 36 30.0**	**+2.1**
	comp=Z,40nm,0.3s,baz=269,slow=20,SNR=89						
ROSC				S	**Sn**	**05 36 58.3**	**-0.2**
	comp=Z,44nm,0.3s,baz=203,slow=23,SNR=21						
ROSC	**El Rosal**	**2.31**	**211**	⇑*i*P	**Pn**	**05 36 29.8**	**+1.9**
ROSC				*e*S	**Sn**	**05 36 59.5**	**+0.9**
ROSC				*i*		05 37 05.4	
	comp=Z,122nm,0.6s						
HELC	**Santa Helena**	**2.48**	**255**	*e*P	**Pn**	**05 36 31.1**	**+1.2**
HELC				*e*S	**Sn**	**05 37 01.9**	**-0.2**
HELC				*i*		05 37 08.5	
	comp=Z,72nm,0.3s						
UREC	**San Jos de Ur**	**2.57**	**291**	*e*P	**Pn**	**05 36 30.3**	**-0.4**
UREC				*e*S	**Sn**	**05 37 03.0**	**-0.5**
UREC				*i*		05 37 13.9	
	comp=Z,113nm,0.2s						
VILC	**Villavicencio,**	**2.75**	**192**	*e*P	**Pn**	**05 36 33.4**	**+0.4**
VILC				*e*S	**Sn**	**05 37 06.4**	**-1.5**
VILC				*i*		05 37 10.7	
	comp=Z,101nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.78**	**159**	*e*P	**Pn**	**05 36 33.2**	**0.0**
PTGC				*e*S	**Sn**	**05 37 06.6**	**-1.6**
RREF	**El Recreo**	**2.93**	**229**	*e*P	**Pn**	**05 36 36.5**	**+0.8**
RREF				*e*S	**Sn**	**05 37 13.3**	**+0.9**
RREF				*i*		05 37 22.0	
	comp=Z,104nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.04**	**252**	*e*P	**Pn**	**05 36 38.2**	**+1.6**
CBOC				*e*S	**Sn**	**05 37 13.8**	**-0.1**
CBOC				*i*		05 37 20.7	
	comp=Z,41nm,0.5s						
DBBC	**Dabeiba**	**3.08**	**274**	*e*P	**Pn**	**05 36 38.5**	**+1.5**
DBBC				*e*S	**Sn**	**05 37 14.4**	**-0.5**
DBBC				*i*		05 37 18.4	
	comp=Z,149nm,0.4s						
ARGC	**Ariguani, Magd**	**3.22**	**340**	*e*P	**Pn**	**05 36 40.5**	**+1.8**
ARGC				*e*S	**Sn**	**05 37 18.0**	**0.0**
ARGC				*i*		05 37 24.6	
	comp=Z,36nm,0.2s						
PRAC	**Prado**	**3.56**	**210**	*e*P	**Pn**	**05 36 43.4**	**+0.4**
PRAC				*e*S	**Sn**	**05 37 25.8**	**+0.1**
PRAC				*i*		05 37 33.8	
	comp=Z,53nm,0.3s						
ORTC	**Ortega, Tolima**	**3.59**	**216**	*e*P	**Pn**	**05 36 44.5**	**+1.0**
ORTC				*e*S	**Sn**	**05 37 26.4**	**-0.1**
ORTC				*i*		05 37 34.1	
	comp=Z,64nm,0.2s						
SJCC	**San Jacinto, C**	**3.67**	**326**	*e*P	**Pn**	**05 36 44.3**	**-0.3**
SJCC				*e*S	**Sn**	**05 37 25.9**	**-2.6**
SJCC				*i*		05 37 30.1	
	comp=Z,35nm,0.4s						
GUVC	**San Jose del G**	**4.28**	**173**	*e*P	**Pn**	**05 36 52.5**	**+0.1**
GUVC				*e*S	**Sn**	**05 37 40.8**	**-1.7**
GUVC				*i*		05 37 45.6	
	comp=Z,62nm,0.3s						
YOTC	**Yotoco, Valle**	**4.28**	**229**	*e*P	**Pn**	**05 36 52.8**	**+0.4**
SMRC	**Santa Marta, M**	**4.45**	**346**	*e*P	**Pn**	**05 36 54.9**	**+0.3**
SMRC				*e*S	**Sn**	**05 37 43.4**	**-3.1**
MACC	**Macarena, Meta**	**4.70**	**189**	*e*P	**Pn**	**05 36 56.9**	**-1.1**
MACC				*e*S	**Sn**	**05 37 48.2**	**-4.2**
MACC				*i*		05 37 54.7	
	comp=Z,14nm,0.3s						
URIC	**Uribia, Colomb**	**4.97**	**13**	*e*P	**Pn**	**05 37 00.5**	**-0.9**
URIC				*e*S	**Sn**	**05 37 53.2**	**-5.5**
GARC	**Garzon, Huila**	**5.18**	**207**	*e*P	**Pn**	**05 37 04.0**	**-0.5**
GARC				*e*S	**Sn**	**05 37 58.2**	**-5.8**
GARC				*i*		05 38 08.7	
	comp=Z,22nm,0.3s						
PCON	**Cinco Dias**	**5.54**	**216**	*e*P	**Pn**	**05 37 10.4**	**+1.0**
SOTA	**Rioblanco**	**5.82**	**217**	*e*P	**Pn**	**05 37 14.5**	**+1.5**
TXAR	**Lajitas Array**	**36.47**	**312**	P	**P**	**05 42 39.1**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=116,slow=8.1,SNR=2.4						
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**05 46 00.2**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=132,slow=7.0,SNR=9.6						
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc	**PKiKP**	**05 55 18.2**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=118,slow=3.6,SNR=2.2						

IDC 07 05:42:58.5±5.7, 7°06S×154°38E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.4/41, mbtmp3.6/2, MS3.8/1, Ms1 3.8/1, ms1mx3.3/28, Error ellipse: s-maj=343.1km s-min=57.5km az=128.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.28**	**235**	P	P	05 48 07.7	-0.4
	1.5nm,0.8s,baz=62,slow=10,SNR=3.1						
ASAR	**Alice Springs**	**25.68**	**228**	P	P	05 48 30.7	+0.3
	0.6nm,0.7s,baz=60,slow=8.7,SNR=5.1						
KSRS	**Korea Array**	**50.71**	**333**	LR	LR	06 11 08.5	
	comp=Z,100nm,20.7s,baz=328,slow=33						
TORD	**Torodi Ar. Bea**	**152.45**	**285**	PKPbc	PKPbc	06 02 57.7	-0.2
	0.6nm,1.0s,baz=76,slow=3.5,SNR=2.1						

*IDC **07** 05:44:07.5±1.3, 19°.51S×70°.50W, h0km, mb4.0/5, mb1 4.1/8, mb1mx3.8/31, mbtmp4.0/8, ML4.0/3, Error ellipse: s-maj=32.7km s-min=23.8km az=90.0*
*NEIC **07** 05:44:11.6±1.8, 19°.77S±0°.02×70°.59W±0°.09, h29km±5km, Error ellipse: s-maj=11.8km s-min=3.2km az=96.0*
*GUC **07** 05:44:12.8±0.7, 19°.76S×70°.51W, h35km±1km, ML4.0*
ISC 07 05:44:10.9±1.3, 19°.75S±0°.03×70°.58W±0°.06, h25km±10km, n54, σ1§11/66, mb4.1/4, 6C-9D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.46**	**71**	⇓*i*P	**Pb**	**05 44 21.0**	**+0.5**
PSGC				*i* S	**Sb**	**05 44 27.1**	**+0.1**
PSGCX	**Pisagua**	**0.46**	**71**		**Pb**	**05 44 20.5**	**+0.1**
TA02	**Huaiquique**	**0.67**	**141**	⇓*i*P	**Pb**	**05 44 24.0**	**+0.1**
TA02				*i* S	**Sb**	**05 44 32.8**	**-0.1**
TA02				IAML		05 44 36.3	
	comp=N,13μm,0.1s						
PB11	**IPOC Station P**	**0.87**	**91**	⇓*i*P	**Pb**	**05 44 27.2**	**-0.2**
PB11				*i* S	**Sb**	**05 44 37.2**	**-1.6**
PB11				IAML		05 44 41.8	
	comp=N,15μm,0.3s						
PB11	**IPOC Station P**	**0.87**	**91**	Pn	**Pn**	**05 44 27.5**	**-0.2**
TA01	**Diego Aracena**	**0.90**	**155**	⇓*i*P	**Pb**	**05 44 27.5**	**-0.3**
TA01				*i* S	**Sb**	**05 44 39.2**	**-0.1**
TA01				IAML		05 44 39.9	
	comp=N,5μm,0.4s						
TA01	**Diego Aracena**	**0.90**	**155**		**Pb**	**05 44 27.5**	**-0.3**
MNMC	**Minye Minye**	**1.11**	**57**	⇑*i*P	**Pb**	**05 44 31.7**	**0.0**
MNMC				*i* S	**Sn**	**05 44 45.9**	**0.0**
MNMC				IAML		05 44 50.3	
	comp=E,9μm,0.2s						
MNMC	**Minye Minye**	**1.11**	**57**		**Pb**	**05 44 31.8**	**+0.2**
PATCX	**Punta Patache**	**1.14**	**159**	⇓*i*P	**Pn**	**05 44 31.3**	**0.0**
PATCX				*i* S	**Sn**	**05 44 46.0**	**-0.2**
PATCX				IAML		05 44 49.5	
	comp=E,3μm,0.3s						
PATCX	**Punta Patache**	**1.14**	**159**		**Pn**	**05 44 31.2**	**-0.1**
PB12	**IPOC Station P**	**1.15**	**12**	⇓*i*P	**Pb**	**05 44 32.0**	**-0.2**
PB12				*i* S	**Sb**	**05 44 47.1**	**+0.3**
PB12	**IPOC Station P**	**1.15**	**12**		**Pb**	**05 44 32.2**	**0.0**
GO01	**Chusmiza**	**1.31**	**87**	⇓*i*P	**Pb**	**05 44 34.8**	**-0.3**
GO01				*i* S	**Sn**	**05 44 51.2**	**+0.2**
GO01				IAML		05 44 53.8	
	comp=N,11μm,0.1s						
GO01	**Chusmiza**	**1.31**	**87**		**Pb**	**05 44 34.9**	**-0.3**
PB08	**IPOC Station P**	**1.40**	**106**	⇓*i*P	**Pb**	**05 44 35.9**	**-0.7**
PB08				*i* S	**Sb**	**05 44 53.5**	**-0.7**
PB08				IAML		05 44 56.8	
	comp=N,3μm,0.3s						
PB08	**IPOC Station P**	**1.40**	**106**		**Pn**	**05 44 35.5**	**+0.4**
PB01	**IPOC Station P**	**1.65**	**142**	⇓*i*P	**Pn**	**05 44 38.8**	**+0.5**
PB01				*e*S	**Sn**	**05 44 59.0**	**+0.2**
PB01				IAML		05 45 03.3	
	comp=E,2μm,0.5s						
PB01	**IPOC Station P**	**1.65**	**142**		**Pn**	**05 44 39.2**	**+0.9**
PB02	**IPOC Station P**	**1.69**	**158**	⇑*i*P	**Pn**	**05 44 39.5**	**+0.6**
PB02				*i* S	**Sn**	**05 45 00.3**	**+0.5**
PB02				IAML		05 45 03.2	
	comp=E,3μm,0.3s						
PB16	**IPOC Station P**	**1.73**	**36**	⇑*i*P	**Pb**	**05 44 41.7**	**-0.7**
PB16				*e*S	**Sb**	**05 45 04.2**	**+0.2**
PB16				IAML		05 45 07.1	
	comp=N,1μm,0.4s						
PB16	**IPOC Station P**	**1.73**	**36**		**Pb**	**05 44 41.9**	**-0.5**
PB07	**IPOC Station P**	**2.07**	**162**	⇑*i*P	**Pn**	**05 44 44.7**	**+0.4**
PB07				*i* S	**Sn**	**05 45 09.4**	**0.0**
PB07				IAML		05 45 17.9	
	comp=E,1μm,0.5s						
PB07	**IPOC Station P**	**2.07**	**162**		**Pn**	**05 44 44.4**	**+0.1**
PB09	**IPOC Station P**	**2.39**	**149**	⇑*i*P	**Pn**	**05 44 50.4**	**+1.7**
PB09				*e*S	**Sn**	**05 45 18.9**	**+1.7**
PB09				IAML		05 45 28.2	
	comp=E,1μm,0.4s						
PB09	**IPOC Station P**	**2.39**	**149**		**Pn**	**05 44 50.2**	**+1.5**
PB03	**IPOC Station P**	**2.42**	**161**	⇑*i*P	**Pn**	**05 44 49.4**	**+0.5**
PB03				*e*S	**Sn**	**05 45 19.2**	**+1.3**
PB03				IAML		05 45 30.7	
	comp=E,1μm,0.3s						
PB04	**IPOC Station P**	**2.60**	**171**	*e*P	**Pn**	**05 44 52.6**	**+1.1**
PB04				IAML		05 45 33.3	
	comp=E,872nm,0.5s						
PB04	**IPOC Station P**	**2.60**	**171**		**Pn**	**05 44 51.9**	**+0.3**
PB06	**IPOC Station P**	**3.09**	**162**		**Pn**	**05 44 58.1**	**-0.2**
LVC	**Limon Verde**	**3.25**	**152**	Pn	**Pn**	**05 45 02.4**	**+1.8**
	comp=E,11nm,0.3s,baz=340,slow=8.9,SNR=56						
LVC				Sn	**Sn**	**05 45 41.7**	**+3.1**
	comp=E,35nm,0.3s,baz=106,slow=20,SNR=7.7						
LVC	**Limon Verde**	**3.25**	**152**		**Pn**	**05 45 02.2**	**+1.7**
PB15	**IPOC Station P**	**3.59**	**163**		**Pn**	**05 45 05.2**	**0.0**
PB10	**IPOC Station P**	**3.75**	**180**	Pn	**Pn**	**05 45 07.0**	**-0.1**
LPAZ	**La Paz**	**4.16**	**35**	Pn	**Pn**	**05 45 17.3**	**+4.0**
	comp=E,3.6nm,0.3s,baz=103,slow=1.5,SNR=30						
LPAZ	**La Paz**	**4.16**	**35**		**Pn**	**05 45 16.7**	**+3.3**
PB14	**IPOC Station P**	**4.86**	**178**	Pn	**Pn**	**05 45 22.2**	**-0.5**
GO02	**Mina Guanaco**	**5.46**	**171**		**Pn**	**05 45 30.4**	**-0.7**
AC02	**Maricunga**	**7.18**	**170**	Pn	**Pn**	**05 45 55.1**	**+0.4**
AC05	**El Transito**	**9.05**	**178**	Pn	**Pn**	**05 46 19.9**	**-0.2**
SIV	**San Ignacio**	**9.79**	**69**	Pn	**Pn**	**05 46 29.4**	**-0.8**
	comp=E,3.0nm,0.3s,baz=278,slow=8.8,SNR=74						
CPUP	**Villa Florida**	**13.84**	**121**	Pn	**Pn**	**05 47 26.8**	**+1.2**
	comp=E,0.1nm,0.3s,baz=298,slow=12,SNR=3.9						
H03N1	**Juan Fernandez**	**15.53**	**207**	T	T	06 03 52.0	
	baz=32,slow=72,SNR=252						
H03N2	**Juan Fernandez**	**15.54**	**207**	T	T	06 03 51.8	
	baz=32,slow=72,SNR=153						
H03N3	**Juan Fernandez**	**15.55**	**207**	T	T	06 03 53.1	
	baz=32,slow=72,SNR=291						
PLCA	**Paso Flores**	**20.92**	**180**	P	Pn	05 48 54.8	+0.6
	comp=E,1.2nm,0.4s,baz=354,slow=11,SNR=6.1						
PTGA	**Pitinga**	**21.57**	**30**	P	**P**	**05 48 56.5**	**-2.2**
	comp=E,6.1nm,0.2s,baz=258,slow=23,SNR=24						
PTGA	**Pitinga**	**21.57**	**30**	P	**P**	**05 48 57.4**	**-1.4**
PTGA				IAmb	IAmb	05 48 58.3	
	comp=Z,4.5nm,0.8s						
BDFB	**Brasilia**	**21.88**	**83**	P	**P**	**05 49 01.0**	**-1.2**
	comp=Z,1.1nm,0.4s,baz=229,slow=12,SNR=3.4						
RUSC	**La Rusia**	**25.60**	**354**	P	**P**	**05 49 38.7**	**-0.1**
YNE	**Yellowstone No**	**73.78**	**332**	P	**P**	**05 55 44.8**	**+1.5**
TORD	**Torodi Ar. Bea**	**78.26**	**71**	P	**P**	**05 56 08.0**	**-1.2**
	comp=Z,1.3nm,0.5s,baz=247,slow=5.5,SNR=18						
YKA	**Yellowknife Ar**	**89.03**	**341**	P	**P**	**05 57 03.3**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=135,slow=5.1,SNR=16						
MKAR	**Makanchi Array**	**145.09**	**33**	PKP	**PKPab**	**06 03 45.9**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=329,slow=2.5,SNR=7.9						

IDC 07 05:47:36.1±2.4, 6°75S×154°59E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/43, mbtmp3.8/4, Error ellipse: s-maj=149.6km s-min=32.9km az=135.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.63**	**234**	P	P	05 52 49.0	-0.1
	1.4nm,0.8s,baz=60,slow=9.7,SNR=3.4						
ASAR	**Alice Springs**	**26.04**	**228**	P	P	05 53 11.4	+0.1
	0.8nm,0.7s,baz=65,slow=7.9,SNR=6.4						
FITZ	**Fitzroy Crossi**	**30.38**	**246**	P	P	05 53 50.9	+0.8
	3.9nm,1.1s,baz=61,slow=12,SNR=2.0						
YKA	**Yellowknife Ar**	**96.31**	**28**	P	P	06 01 07.8	+1.4
	0.1nm,0.4s,baz=264,slow=4.7,SNR=2.3						
TORD	**Torodi Ar. Bea**	**152.57**	**286**	PKPbc	PKPbc	06 07 33.4	-2.2
	0.3nm,0.7s,baz=73,slow=2.2,SNR=2.4						

MAN 07 05:49:49.1, 9°76N×124°09E, h53km, mb4.1, ML2.9, MS2.6, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBP	**Tagbilaran**	**0.23**	**253**	*i* P	Pn	05 49 59.6	+1.6
LLP	**Lapu-Lapu**	**0.57**	**348**	*e*P	Pn	05 50 03.7	+2.3
LLP				*e*S	Sn	05 50 13.2	+3.0
MSLP	**Maasin**	**0.84**	**64**	*e*P	Pn	05 50 05.7	+0.8
MSLP				*e*S	Sn	05 50 31.3	+15
GUIM	**Jordan**	**1.71**	**300**	*e*P	Pn	05 50 17.1	+0.6
GUIM				*e*S	Sn	05 50 35.0	-2.2

*IDC **07** 05:50:53.6±1.1, 7°.13S×154°.97E, h0km, mb3.9/9, mb1 4.2/10, mb1mx3.9/47, mbtmp3.9/10, ML3.9/1, Error ellipse: s-maj=38.3km s-min=23.3km az=137.0*
ISC 07 05:50:60.0±1.1, 7°.0S±0°.2×154°.8E±0°.2, h41km, n11, σ0§97/10, mb3.9/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.90**	**314**	Pn	**Pn**	**05 51 56.5**	**-0.9**
	7.3nm,0.3s,baz=100,slow=18,SNR=1.7						
WRA	**Warramunga Arr**	**23.67**	**235**	P	**P**	**05 56 07.3**	**-0.7**
	1.5nm,0.4s,baz=57,slow=9.3,SNR=12						
ASAR	**Alice Springs**	**26.04**	**228**	P	**P**	**05 56 28.9**	**-0.7**
	0.9nm,0.8s,baz=64,slow=8.4,SNR=6.2						
CMAR	**Chiang Mai Arr**	**60.66**	**296**	P	**P**	**06 01 09.7**	**+2.2**
	1.1nm,0.8s,baz=117,slow=4.0,SNR=5.2						
SONM	**Songino Array**	**69.28**	**327**	P	**P**	**06 02 03.2**	**0.0**
	0.4nm,0.5s,baz=150,slow=6.8,SNR=3.6						
MKAR	**Makanchi Array**	**83.33**	**319**	P	**P**	**06 03 22.6**	**-0.1**
	0.6nm,0.6s,baz=98,slow=5.0,SNR=4.1						
ILAR	**Eielson Array**	**83.46**	**22**	P	**P**	**06 03 22.8**	**-0.2**
	2.9nm,0.4s,baz=241,slow=5.9,SNR=5.3						
NVAR	**Mina Array Bea**	**91.86**	**52**	P	**P**	**06 04 04.5**	**0.0**
	0.7nm,0.8s,baz=253,slow=5.6,SNR=2.4						
YKA	**Yellowknife Ar**	**96.44**	**28**	P	**P**	**06 04 24.3**	**-0.3**
	0.6nm,0.8s,baz=265,slow=4.4,SNR=6.4						
PDAR	**Pinedale Array**	**98.84**	**48**	P	Pdif	06 04 36.4	+0.2
	0.2nm,0.8s,baz=219,slow=4.2,SNR=2.0						
TORD	**Torodi Ar. Bea**	**152.89**	**285**	PKPbc	**PKiKP**	**06 10 54.0**	**0.0**
	0.5nm,0.7s,baz=66,slow=4.0,SNR=2.6						

*IDC **07** 05:56:47.5±1.8, 7°.44S×155°.28E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.7/40, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=49.4km s-min=28.4km az=117.0*
ISC 07 05:56:52.5±1.5, 7°.5S±0°.2×155°.2E±0°.2, h31km, n8, σ0§43/8, mb3.8/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**4.45**	**314**	Pn	**Pn**	**05 57 58.2**	**+0.3**
	5.2nm,0.3s,baz=49,slow=19,SNR=1.8						
WRA	**Warramunga Arr**	**23.74**	**236**	P	**P**	**06 02 02.3**	**+0.1**
	2.7nm,0.9s,baz=59,slow=9.8,SNR=6.9						
ASAR	**Alice Springs**	**26.03**	**229**	P	**P**	**06 02 23.6**	**+0.4**
	0.6nm,0.6s,baz=67,slow=8.9,SNR=7.0						
CMAR	**Chiang Mai Arr**	**61.18**	**296**	P	**P**	**06 07 04.6**	**-0.1**
	0.6nm,0.5s,baz=132,slow=4.5,SNR=4.5						
SONM	**Songino Array**	**69.84**	**327**	P	**P**	**06 08 00.3**	**-0.1**
	0.2nm,0.4s,baz=111,slow=6.5,SNR=2.2						
MKAR	**Makanchi Array**	**83.89**	**319**	P	**P**	**06 09 19.0**	**-0.5**
	0.6nm,0.8s,baz=106,slow=4.4,SNR=5.8						
YKA	**Yellowknife Ar**	**96.64**	**28**	P	**P**	**06 10 19.8**	**+0.5**
	0.6nm,0.9s,baz=267,slow=4.7,SNR=6.1						
TORD	**Torodi Ar. Bea**	**153.35**	**284**	PKPbc	**PKPbc**	**06 16 48.2**	**-0.5**
	0.7nm,0.9s,baz=82,slow=2.0,SNR=3.5						

ISC 07 05:58:34.4±1.7, 51°.32N±0°.08×16°.17E±0°.05, h0km, n19, σ1§17/30, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHVC	**Chvalec**	**0.74**	**186**	*e*PG	**Pg**	**05 58 49.0**	**+0.5**
CHVC				*e*SG	**Sb**	**05 59 01.0**	**+0.2**
	comp=Z,19nm,0.3s						
OSTC	**Ostas**	**0.77**	**178**	*e*PG	**Pg**	**05 58 49.8**	**+0.7**
OSTC				*e*SG	**Sb**	**05 59 01.8**	**+0.2**
	comp=Z,27nm,0.5s						
UPC	**Upice**	**0.82**	**187**	*e*PG	**Pg**	**05 58 50.5**	**+0.4**
UPC				*e*SG	**Sb**	**05 59 03.4**	**+0.3**
	comp=Z,42nm,0.4s						
DPC	**Dobruska-Polom**	**0.98**	**174**	*e*PG	**Pg**	**05 58 53.1**	**0.0**
DPC				*e*SG	**Sb**	**05 59 08.0**	**+0.3**
	comp=Z,14nm,0.4s						
PVCC	**Panska Ves**	**1.28**	**233**	*e*SG	**Sg**	**05 59 16.8**	**+1.1**
	comp=Z,39nm,0.2s						
PVCC	**Panska Ves**	**1.28**	**233**	*e*PG	**Pg**	**05 58 58.0**	**-1.0**
KRLC	**Kraliky**	**1.31**	**162**	*e*PG	**Pg**	**05 58 59.3**	**-0.1**
KRLC				*e*SG	**Sb**	**05 59 17.5**	**+0.3**
	comp=Z,21nm,0.3s						
BRG	**Berggiesshubel**	**1.47**	**253**	SG	**Sn**	**05 59 20.6**	**-1.6**
	38nm,0.4s						
BRG	**Berggiesshubel**	**1.47**	**253**	PG	**Pn**	**05 59 00.1**	**-2.0**
PRU	**Pruhonice**	**1.69**	**218**	*e*SG	**Sn**	**05 59 29.0**	**+1.5**
	comp=Z,13nm,0.5s						
PRU	**Pruhonice**	**1.69**	**218**	*e*PG	**Pn**	**05 59 04.2**	**-1.0**
MORC	**Moravsky Berou**	**1.78**	**150**	*e*PN	**Pn**	**05 59 04.9**	**-1.5**
MORC				*e*SG	**Sg**	**05 59 32.1**	**+0.6**
CLL	**Collm**	**1.99**	**271**	*i* Pg	**Pn**	**05 59 09.8**	**+0.6**
CLL				*i* Sg	**Sn**	**05 59 36.1**	**+1.3**
	comp=Z,10.0nm,0.4s						
VRAC	**Vranov**	**2.03**	**172**	*e*PN	**Pn**	**05 59 09.4**	**-0.5**
VRAC				*e*SG	**Sg**	**05 59 40.2**	**+0.5**
KRUC	**Moravsky**	**2.27**	**176**	*e*SG	**Sg**	**05 59 47.5**	**+0.3**
NKC	**Novy Kostel**	**2.60**	**247**	*e*PG	**Pb**	**05 59 21.3**	**-0.6**
NKC				*e*SG	**Sb**	**05 59 57.6**	**+3.2**
	comp=Z,17nm,0.4s						
KHC	**Kasperske Hory**	**2.75**	**218**	*e*PG	**Pb**	**05 59 23.6**	**-0.9**
KHC				*e*SN	**Sn**	**05 59 52.7**	**-1.1**
KHC				*e*SG	**Sg**	**06 00 03.0**	**+0.3**
	comp=Z,6.1nm,0.4s						
LANS	**Liptovska Anna**	**3.04**	**134**	*e*SG	**Sg**	**06 00 13.8**	**+1.9**
MODS	**Modra-Piesok**	**3.04**	**166**	*e*SG	**Sg**	**06 00 13.1**	**+1.2**

*IDC **07** 06:02:12.2±4.7, 68°.16N×163°.44W, h0km, mb3.0/2, mb1 3.7/4, mb1mx3.3/55, mbtmp3.3/4, ML3.4/2, Error ellipse: s-maj=74.8km s-min=56.9km az=26.0*
*AEIC **07** 06:02:16±1.6, 67°.76N±0°.09×162°.4W±0°.2, h27km±7km, ML2.8, Error ellipse: s-maj=15.3km s-min=8.4km az=141.0*
*NEIC **07** 06:02:17.5±2.0, 67°.76N±0°.09×162°.6W±0°.2, h31km±7km, Error ellipse: s-maj=15.9km s-min=4.8km az=140.0*
ISC 07 06:02:15.7±0.9, 67°.70N±0°.06×162°.45W±0°.06, h10km, n27, σ1§43/35, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RDOG	**Red Dog Mine**	**0.39**	**334**		**Pb**	**06 02 25.0**	**+0.3**
RDOG					**Sb**	**06 02 29.6**	**-1.2**
ANM	**Nome**	**3.37**	**202**		**Pn**	**06 03 09.1**	**+0.8**
ANM					**Sn**	**06 03 47.8**	**-0.5**
IM03		**3.85**	**113**		**Pn**	**06 03 14.6**	**-0.2**
PS05	**TAPS Pump Stn5**	**4.66**	**96**		**Pn**	**06 03 25.9**	**-0.1**
PS05					**Sn**	**06 04 18.6**	**-1.5**
COLD	**Coldfoot**	**4.74**	**90**		**Pn**	**06 03 28.0**	**+0.9**
COLD					**Sn**	**06 04 21.5**	**-0.4**
TOLK	**Toolik Lake Re**	**4.90**	**73**		**Pn**	**06 03 30.7**	**+1.4**
TOLK					**Sn**	**06 04 27.2**	**+1.2**
MLY	**Manley**	**5.42**	**114**		**Pn**	**06 03 36.1**	**-0.4**
TTA	**Tatalina**	**5.50**	**148**		**Pn**	**06 03 37.8**	**+0.2**
TTA					**Sn**	**06 04 40.2**	**-0.6**
TT01	**Tatalina**	**5.52**	**148**		**Pn**	**06 03 37.9**	**+0.1**
BPAW	**Bear Paw Mtn.**	**5.92**	**122**		**Pn**	**06 03 43.9**	**+0.6**
NEA	**Nenana**	**6.26**	**114**		**Pn**	**06 03 48.4**	**+0.4**
KTH	**Kantishna Hill**	**6.33**	**126**		**Pn**	**06 03 49.5**	**+0.5**
MDM	**Murphy Dome**	**6.35**	**109**		**Pn**	**06 03 50.0**	**+0.8**
PPLA	**Purkeypile

GO01				*e*S	**Sb**	**06 07 25.5**	**+1.3**
GO01				IAML		06 07 31.2	
	comp=N,3μm,0.5s						
PB01	**IPOC Station P**	**1.70**	**126**	⇑*i*P	**Pn**	**06 07 01.4**	**+0.5**
PB01				*i* S	**Sn**	**06 07 23.1**	**+1.0**
PB01				IAML		06 07 30.7	
	comp=N,3μm,0.6s						
PB07	**IPOC Station P**	**1.95**	**149**	*e*P	**Pn**	**06 07 04.1**	**-0.4**
PB16	**IPOC Station P**	**2.18**	**39**	⇑*i*P	**Pn**	**06 07 08.7**	**+0.7**
PB16				*i* S	**Sb**	**06 07 37.7**	**-0.5**
PB03	**IPOC Station P**	**2.29**	**151**	⇑*i*P	**Pn**	**06 07 08.8**	**-0.4**
PB03				*e*S	**Sn**	**06 07 36.8**	**-0.2**
PB03				IAML		06 08 03.7	
	comp=E,548nm,0.6s						
PB09	**IPOC Station P**	**2.37**	**138**	⇑*i*P	**Pn**	**06 07 11.0**	**+0.8**
PB09				*e*S	**Sb**	**06 07 42.0**	**-1.2**
PB09				IAML		06 07 56.2	
	comp=E,2μm,0.4s						
LVC	**Limon Verde**	**3.19**	**144**	Pn	**Pn**	**06 07 22.9**	**+1.3**
	comp=E,7.4nm,0.3s,baz=335,slow=10.0,SNR=64						
LVC				Sn	**Sn**	**06 08 00.2**	**+0.9**
	comp=E,18nm,0.3s,baz=115,slow=21,SNR=12						
LPAZ	**La Paz**	**4.60**	**36**	Pn	**Pn**	**06 07 45.6**	**+4.3**
	comp=E,0.4nm,0.3s,baz=230,slow=4.9,SNR=14						
SIV	**San Ignacio**	**10.22**	**68**	Pn	**Pn**	**06 08 54.2**	**-3.8**
	comp=E,0.1nm,0.3s,baz=258,slow=9.3,SNR=2.9						
H03N1	**Juan Fernandez**	**15.11**	**206**	T	T	06 25 44.1	
	baz=33,slow=72,SNR=35						
H03N2	**Juan Fernandez**	**15.12**	**206**	T	T	06 25 43.9	
	baz=33,slow=72,SNR=19						
H03N3	**Juan Fernandez**	**15.13**	**206**	T	T	06 25 34.0	
	baz=33,slow=72,SNR=18						
PLCA	**Paso Flores**	**20.63**	**179**	P	Pn	06 11 16.2	+3.3
	comp=E,2.5nm,0.8s,baz=358,slow=11,SNR=3.9						
PTGA	**Pitinga**	**22.00**	**31**	P	**P**	**06 11 22.3**	**-3.2**
	comp=E,2.8nm,0.6s,baz=294,slow=22,SNR=4.6						
BDFB	**Brasilia**	**22.26**	**82**	P	**P**	**06 11 27.6**	**-0.9**
	comp=E,0.8nm,0.4s,baz=230,slow=13,SNR=1.8						
TORD	**Torodi Ar. Bea**	**78.69**	**71**	P	**P**	**06 18 32.9**	**-0.9**
	comp=E,3.7nm,0.9s,baz=249,slow=5.0,SNR=11						
YKA	**Yellowknife Ar**	**89.19**	**341**	P	**P**	**06 19 27.3**	**+1.0**
	comp=E,0.2nm,0.7s,baz=144,slow=4.5,SNR=5.2						
MKAR	**Makanchi Array**	**145.52**	**33**	PKPbc	**PKPab**	**06 26 10.0**	**+0.5**
	comp=E,1.3nm,0.9s,baz=319,slow=3.5,SNR=8.7						
SONM	**Songino Array**	**152.19**	**4**	PKPbc	**PKiKP**	**06 26 28.3**	**+1.2**
	comp=E,0.7nm,0.8s,baz=333,slow=0.3,SNR=2.3						

IDC 07 06:10:13.6±1.7, 19°.17N×145°.28E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.5/57, mbtmp3.8/4, Error ellipse: s-maj=167.6km s-min=29.8km az=113.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.33**	**196**	P	P	06 17 53.0	0.0
	2.9nm,0.7s,baz=18,slow=9.0,SNR=28						
FITZ	**Fitzroy Crossi**	**41.76**	**209**	P	P	06 18 05.0	+0.1
	1.0nm,0.3s,baz=39,slow=6.6,SNR=19						
ASAR	**Alice Springs**	**44.00**	**195**	P	P	06 18 22.5	-0.5
	0.7nm,0.4s,baz=14,slow=7.0,SNR=13						
YKA	**Yellowknife Ar**	**77.76**	**28**	P	P	06 22 12.4	+0.1
	0.1nm,0.6s,baz=287,slow=4.9,SNR=2.3						

*DDA **07** 06:17:46.8, 36°.15N×35°.79E, h20km±1km, ML2.4*
*ISK **07** 06:17:46.8, 36°.15N×35°.79E, h5km, ML2.6/18*
*GII **07** 06:17:48.4±0.0, 36°.10N×35°.83E, h6km*
ISC 07 06:17:48.0±1.0, 36°.15N±0°.03×35°.80E±0°.03, h12km±8km, n33, σ1s02/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAYL	**Yayladag**	**0.28**	**115**	*i* P	**Pg**	**06 17 53.2**	**-0.7**
YAYL				IAML		06 17 58.0	
	comp=N,405nm,0.6s						
YAYL				*i* S	**Sg**	**06 17 58.0**	**+0.3**
YAYL				IAML		06 18 03.0	
	comp=E,326nm,0.2s						
TAHT	**Tahtakopru-Hat**	**0.39**	**54**	PG	**Pg**	**06 17 55.6**	**-0.2**
TAHT				SG	**Sb**	**06 18 02.3**	**-0.4**
KRTS	**Karatas**	**0.54**	**321**	PG	**Pg**	**06 17 58.4**	**-0.3**
YURE	**YUREGIR**	**0.69**	**349**	PG	**Pg**	**06 18 01.0**	**-0.4**
YURE	**YUREGIR**	**0.69**	**349**	*i* P	**Pg**	**06 18 00.3**	**-1.1**
YURE				*i* S	**Sn**	**06 18 13.0**	**-1.1**
CEYT	**Ceyhan**	**0.86**	**357**	PG	**Pg**	**06 18 04.7**	**+0.1**
KUZU	**Kuzuini**	**1.20**	**59**	*i* P	**Pn**	**06 18 10.4**	**-0.3**
KUZU				*i* S	**Sg**	**06 18 27.9**	**+1.0**
KUZU				IAML		06 18 30.0	
	comp=N,392nm,0.4s						
KUZU				IAML		06 18 32.0	
	comp=E,364nm,0.2s						
KAMA	**Osmaniye**	**1.25**	**34**	*i* P	**Pn**	**06 18 11.0**	**-0.4**
KAMA				*i* S	**Sn**	**06 18 28.1**	**0.0**
KAMA				IAML		06 18 29.0	
	comp=E,61nm,0.5s						
KAMA				IAML		06 18 31.0	
	comp=N,48nm,0.3s						
MERS	**Mersin**	**1.25**	**305**	PN	**Pb**	**06 18 11.5**	**-0.1**
KARA	**Karaisali**	**1.26**	**332**	PN	**Pg**	**06 18 11.9**	**-0.3**
KIZK	**Mersin**	**1.37**	**284**	PN	**Pg**	**06 18 14.2**	**-0.3**
GULE	**Gulek**	**1.40**	**324**	*i* P	**Pn**	**06 18 12.9**	**-0.6**
GULE				*i* S	**Sg**	**06 18 36.9**	**+3.9**
GULE				IAML		06 18 46.0	
	comp=E,81nm,0.6s						
HCB	**Kahramanmara**	**1.49**	**37**	*i* P	**Pn**	**06 18 13.2**	**-1.5**
HCB				*i* S	**Sb**	**06 18 34.2**	**-0.3**
HCB				IAML		06 18 39.0	
	comp=E,43nm,0.6s						
HCB				IAML		06 19 12.0	
	comp=N,49nm,2.3s						
GAZ	**Gaziantep**	**1.53**	**48**	PN	**Pb**	**06 18 16.4**	**+0.1**
KMRS	**Kahramanmaras**	**1.62**	**33**	PN	**Pb**	**06 18 17.7**	**-0.1**
CMRD	**Camardi-Nigde**	**1.64**	**337**	PN	**Pb**	**06 18 17.7**	**-0.6**
KEBE	**Keben-Mersin**	**1.71**	**281**	PN	**Pb**	**06 18 18.6**	**-0.8**
IKL	**Isikli**	**1.71**	**274**	PN	**Pb**	**06 18 18.8**	**-0.6**
AKKU	**Akkuyu-Mersin**	**1.82**	**271**	PN	**Pn**	**06 18 19.9**	**+0.8**
KERG	**Konya-Eregli**	**1.84**	**314**	*i* P	**Pb**	**06 18 20.9**	**-0.8**
KERG				*i* S	**Sg**	**06 18 47.9**	**+0.6**
KERG				IAML		06 18 50.0	
	comp=N,26nm,0.6s						
KERG				IAML		06 19 00.0	
	comp=E,18nm,0.4s						
GZT	**Gaziantep**	**1.86**	**49**	*i* P	**Pn**	**06 18 18.7**	**-1.1**
GZT				*i* S	**Sb**	**06 18 46.1**	**+0.8**
GZT				IAML		06 18 50.0	
	comp=N,56nm,0.5s						
GZT				IAML		06 18 57.0	
	comp=E,62nm,0.4s						
TEVE	**Tevekalti-Mers**	**1.92**	**279**	PN	**Pb**	**06 18 21.9**	**-1.1**
YAHY	**KAYSERI_Yahyal**	**1.97**	**350**	*i* P	**Pb**	**06 18 23.0**	**-0.9**
YAHY				*i* S	**Sg**	**06 18 50.6**	**-0.8**
BERE	**Bereket-Mersin**	**2.09**	**276**	PN	**Pb**	**06 18 24.3**	**-1.6**
TEKE	**Tekeli-Mersin**	**2.17**	**271**	PN	**Pb**	**06 18 25.5**	**-1.7**
SARI	**SarD1z-Kayseri**	**2.31**	**12**	PN	**Pn**	**06 18 27.4**	**+1.4**
GULA	**Gulagac**	**2.52**	**331**	PN	**Pn**	**06 18 30.1**	**+1.3**
URFA	**Urfa**	**2.75**	**61**	PN	**Pn**	**06 18 33.9**	**+1.9**
NATI	**Neve Ativ**	**2.88**	**181**	Pn	**Pn**	**06 18 34.1**	**+0.4**
NATI				Sn	**Sn**	**06 19 08.6**	**+0.3**
GEM	**Giv'at Ha'Em**	**2.94**	**182**	Pn	**Pn**	**06 18 34.7**	**+0.2**
GEM				Sn	**Sn**	**06 19 09.6**	**0.0**
KSDI	**Kefar Szold**	**2.95**	**182**	Pn	**Pn**	**06 18 34.8**	**+0.1**
KSDI				Sn	**Sn**	**06 19 10.4**	**+0.3**
MMA0B	**Mount Meron ar**	**3.15**	**186**	Pn	**Pn**	**06 18 37.8**	**+0.4**
MMA0B				Sn	**Sn**	**06 19 15.1**	**+0.2**
MMLI	**Mount Malkishu**	**3.72**	**185**	Pn	**Pn**	**06 18 46.2**	**+0.9**

*TIR **07** 06:19:59.6, 37°.62N×19°.63E, h2km, Md3.5/7*
*ATH **07** 06:20:03.1, 37°.62N×19°.65E, h11km±1km, ML4.1/19, Error ellipse: s-maj=2.7km s-min=1.1km az=54.0*
*THE **07** 06:20:04.1, 37°.71N×19°.63E, h0km±2km, ML4.5/12, Error ellipse: s-maj=3.0km s-min=1.4km az=214.0*
*MOS **07** 06:20:05.5±1.2, 37°.79N×19°.79E, h16km, mb4.5/12, Error ellipse: s-maj=6.7km s-min=3.3km az=72.0*
*IDC **07** 06:20:05.1±0.7, 37°.86N×20°.03E, h0km, mb4.1/18, mb1 4.1/30, mb1mx4.0/56, mbtmp4.0/30, ML4.0/12, Error ellipse: s-maj=14.2km s-min=12.0km az=161.0*
*MED_RC **07** 06:20:06.9±0.3, 37°.75N×19°.78E, h12km±2km, MW4.3/18, Moment Tensor Solution. Mantle waves: s18,c29; Duration: 1s0 Moment tensor: Scale 10^15^Nm; Mrr0.66±.45; Mθθ-0.11±.33; Mϕϕ-0.55±.29; Mrθ1.48±.66; Mθϕ-3.52±.25; Mϕr-0.91±.55; Best double couple: Mo3.97000×10^15^ NP1:ϕ181.00000°, δ68.00000°, λ16.00000°. NP2:ϕ85.00000°, δ75.00000°, λ157.00000°. Principal axes: T 4.0500, Plg27.0000°, Azm42.0000°; N -0.1700, Plg63.0000°, Azm234.0000°; P -3.8900, Plg5.0000°, Azm134.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*NEIC **07** 06:20:07.5±2.2, 37°.80N±0°.06×19°.91E±0°.06, h16km±4km, mb4.6/5 Error ellipse: s-maj=9.0km s-min=6.4km az=189.0*
*PDG **07** 06:20:08.7±0.7, 38°.79N×20°.61E, h40km±11km, ML4.1/13, Error ellipse: s-maj=0.9km s-min=1.3km az=0.0*
*GII **07** 06:20:21.8±0.4, 36°.09N×20°.24E, h150km*
ISC 07 06:20:06.3±1.1, 37°.73N±0°.03×19°.73E±0°.02, h15km±6km, n324, σ1s71/376, mb4.3/33, 26C-16D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.68**	**46**	P	**Pg**	**06 20 17.8**	**-1.7**
CHV1	**Chavriata, Kef**	**0.68**	**49**	P	**Pg**	**06 20 18.3**	**-1.3**
CHV1				S	**Sb**	**06 20 29.4**	**+0.3**
	88μm,0.5s						
LXRA	**Lixouri, Kepha**	**0.73**	**50**	P	**Pg**	**06 20 19.1**	**-1.4**
LXRA				S	**Sb**	**06 20 31.1**	**+0.8**
AGT1	**Agia Thekli**	**0.73**	**45**	P	**Pg**	**06 20 19.0**	**-1.5**
AGT1				S	**Sb**	**06 20 30.9**	**+0.5**
	38μm,0.4s						
KEF2	**Argostoli. Kep**	**0.74**	**54**	P	**Pg**	**06 20 18.7**	**-2.0**
KEF2				S	**Sb**	**06 20 31.8**	**+1.1**
ARGA	**Argostoli. Kep**	**0.74**	**53**	P	**Pg**	**06 20 19.1**	**-1.5**
ARG2	**Argostoli**	**0.74**	**53**	P	**Pg**	**06 20 19.0**	**-1.8**
ARG2				S	**Sb**	**06 20 32.0**	**+1.1**
KEF4	**Livadi, Kephal**	**0.76**	**46**	P	**Pg**	**06 20 19.4**	**-1.6**
KEF1	**Kardakata, Kep**	**0.80**	**47**	P	**Pg**	**06 20 19.7**	**-2.1**
VLS	**Valsamata**	**0.81**	**57**	P	**Pg**	**06 20 19.6**	**-2.4**
VLS				S	**Sn**	**06 20 34.0**	**-0.9**
	54μm,0.5s						
VLS	**Valsamata**	**0.81**	**57**	P	**Pg**	**06 20 19.9**	**-2.2**
VLS				S	**Sb**	**06 20 33.9**	**+1.0**
VLS				AML	AML	06 20 35.4	
	comp=N,95671μm,0.4s						
VLS				AML	AML	06 20 35.5	
VLS	**Valsamata**	**0.81**	**57**	P	**Pg**	**06 20 19.8**	**-2.2**
VLS				S	**Sb**	**06 20 33.8**	**+1.0**
KRI1	**kERI**	**0.86**	**94**	P	**Pg**	**06 20 21.1**	**-1.9**
KRI1				S	**Sb**	**06 20 35.0**	**+0.7**
	comp=N,41μm,0.8s						
KFL	**Anninata**	**0.92**	**65**	P	**Pb**	**06 20 21.5**	**-2.3**
KFL				S	**Sn**	**06 20 36.8**	**-0.7**
	comp=N,40μm,0.8s						
KFL	**Anninata**	**0.92**	**65**	P	**Pb**	**06 20 23.2**	**-0.7**
KFL				S	**Sn**	**06 20 37.0**	**-0.5**
ZAK2	**Zakynthos**	**0.93**	**86**	P	**Pg**	**06 20 24.1**	**-0.1**
ZAK2				S	**Sn**	**06 20 38.8**	**+1.1**
	comp=N,116μm,0.6s						
VSK1	**VASILIKIADES**	**0.94**	**44**	P	**Pb**	**06 20 22.6**	**-1.7**
VSK1				S	**Sn**	**06 20 39.1**	**+1.0**
	comp=N,19μm,0.5s						
FSK	**Fiskardo**	**0.98**	**42**	P	**Pb**	**06 20 22.8**	**-2.1**
FSK				S	**Sn**	**06 20 39.5**	**+0.5**
	comp=N,10μm,1.1s						
FSK	**Fiskardo**	**0.98**	**42**	P	**Pb**	**06 20 24.3**	**-0.5**
FSK				S	**Sn**	**06 20 38.9**	**-0.1**
FSK				AML	AML	06 20 43.3	
	comp=N,18286μm,0.8s						
FSK				AML	AML	06 20 43.5	
	comp=E,13258μm,0.4s						
EVGI	**Lefkada island**	**1.15**	**39**	P	**Pb**	**06 20 27.2**	**-0.6**
EVGI				S	**Sg**	**06 20 44.7**	**+1.3**
EVGI	**Lefkada island**	**1.15**	**39**	P	**Pb**	**06 20 27.5**	**-0.3**
EVGI				S	**Sg**	**06 20 43.8**	**+0.4**
VTN	**Vitineika**	**1.17**	**81**	P	**Pn**	**06 20 27.3**	**-0.7**
VTN				S	**Sg**	**06 20 45.6**	**+1.6**
VTN	**Vitineika**	**1.17**	**81**	P	**Pn**	**06 20 27.2**	**-0.7**
MGNA	**Meganis**	**1.24**	**42**	P	**Pn**	**06 20 29.2**	**+0.1**
MGNA				S	**Sg**	**06 20 47.3**	**+0.9**
LKD2	**Lefkada island**	**1.28**	**34**	P	**Pn**	**06 20 29.3**	**-0.3**
LKD2				S	**Sg**	**06 20 49.7**	**+2.0**
	comp=E,10μm,0.8s						
LKD2	**Lefkada island**	**1.28**	**34**	*i* PN	**Pn**	**06 20 29.3**	**-0.3**
LKD2	**Lefkada island**	**1.28**	**34**	P	**Pn**	**06 20 29.6**	**0.0**
LKD2				S	**Sg**	**06 20 49.7**	**+2.0**
LKD2				AML	AML	06 20 53.0	
	comp=N,18443μm,0.8s						
LKD2				AML	AML	06 20 54.2	
	comp=E,21384μm,0.8s						
TSLK	**Tsoukalades, L**	**1.31**	**33**	P	**Pn**	**06 20 29.2**	**-0.8**
TSLK	**Tsoukalades, L**	**1.31**	**33**	P	**Pb**	**06 20 30.2**	**+0.1**
TSLK				S	**Sg**	**06 20 49.7**	**+1.1**
AST1	**Astakos**	**1.34**	**53**	P	**Pb**	**06 20 31.2**	**+0.1**
AST1				S	**Sg**	**06 20 50.1**	**+0.5**
	comp=E,34μm,0.6s						
RLS	**Riolos of Patr**	**1.41**	**76**	P	**Pn**	**06 20 31.6**	**+0.2**
RLS	**Riolos of Patr**	**1.41**	**76**	P	**Pn**	**06 20 31.7**	**+0.4**
RLS				S	**Sg**	**06 20 52.8**	**+1.0**
RLS				AML	AML	06 20 56.8	
	comp=N,10150μm,0.7s						
RLS				AML	AML	06 21 08.4	
	comp=E,7848μm,0.9s						
DRO	**Drossia**	**1.58**	**81**	P	**Pb**	**06 20 34.5**	**-0.7**
DRO	**Drossia**	**1.58**	**81**	P	**Pn**	**06 20 34.2**	**+0.5**
DRO				AML	AML	06 21 06.4	
	comp=N,18297μm,0.5s						
DRO				AML	AML	06 21 11.6	
	comp=E,17384μm,1.3s						
AMT	**Artemida-Makis**	**1.58**	**97**	P	**Pn**	**06 20 33.3**	**-0.5**
AMT	**Artemida-Makis**	**1.58**	**97**	P	**Pn**	**06 20 33.2**	**-0.5**
AMT				S	**Sg**	**06 20 56.6**	**-0.7**
AMT				AML	AML	06 21 06.1	
	comp=E,17402μm,1.0s						
AMT				AML	AML	06 21 10.4	
	comp=N,11844μm,0.7s						
UPR	**University Cam**	**1.71**	**71**	P	**Pb**	**06 20 36.8**	**-0.7**
PYL	**PYLOS**	**1.81**	**117**	P	**Pn**	**06 20 36.6**	**-0.2**
PYL	**PYLOS**	**1.81**	**117**	P	**Pn**	**06 20 36.7**	**-0.1**
PYL				AML	AML	06 21 18.1	
	comp=E,3402μm,0.7s						
PYL				AML	AML	06 21 24.3	
	comp=N,2426μm,1.4s						
ITM	**Ithomi**	**1.83**	**107**	P	**Pn**	**06 20 37.0**	**-0.2**
ITM				S	**Sb**	**06 21 02.7**	**+0.5**
ITM				AML	AML	06 21 19.0	
	comp=N,4342μm,0.8s						
ITM				AML	AML	06 21 22.4	
	comp=E,3306μm,1.2s						
ITM	**Ithomi**	**1.83**	**107**		**Pn**	**06 20 37.3**	**+0.1**
LAKA	**Lakka**	**1.85**	**73**	P	**Pn**	**06 20 38.3**	**+0.9**
LAKA	**Lakka**	**1.85**	**73**	P	**Pn**	**06 20 38.3**	**+0.9**
LAKA				AML	AML	06 21 12.6	
	comp=N,5831μm,1.3s						
LAKA				AML	AML	06 21 16.3	
	comp=E,4698μm,0.7s						
EFP	**Efpalio**	**1.85**	**67**	P	**Pn**	**06 20 38.2**	**+0.8**
EFP	**Efpalio**	**1.85**	**67**	P	**Pn**	**06 20 38.2**	**+0.8**
EFP				AML	AML	06 21 15.4	
	comp=N,7266μm,1.3s						
EFP				AML	AML	06 21 20.7	
	comp=E,4657μm,0.5s						
IGT	**Igoumenitsa**	**1.86**	**15**	P	**Pn**	**06 20 37.2**	**-0.3**
IGT				S	**Sb**	**06 21 02.3**	**-0.6**
	comp=E,4μm,1.4s						
IGT	**Igoumenitsa**	**1.86**	**15**	*i* PN	**Pg**	**06 20 42.7**	**+0.8**
IGT	**Igoumenitsa**	**1.86**	**15**	P	**Pb**	**06 20 39.4**	**-0.6**
IGT				AML	AML	06 21 14.5	
	comp=E,7775μm,1.3s						
IGT				AML	AML	06 21 22.2	
	comp=N,6792μm,1.5s						
IGT	**Igoumenitsa**	**1.86**	**15**	P	**Pb**	**06 20 39.3**	**-0.6**
IGT				S	**Sb**	**06 21 02.3**	**-0.6**
ANX	**Ano Chora**	**1.93**	**63**	P	**Pn**	**06 20 39.7**	**+1.1**
ANX	**Ano Chora**	**1.93**	**63**	P	**Pb**	**06 20 39.9**	**-1.3**
KLV	**Kalavryta, Ach**	**1.94**	**80**	P	**Pn**	**06 20 39.5**	**+0.8**
KLV	**Kalavryta, Ach**	**1.94**	**80**	P	**Pn**	**06 20 39.6**	**+0.9**
KLV				AML	AML	06 21 15.4	
	comp=E,5339μm,0.8s						
KLV				AML	AML	06 21 20.3	
	comp=N,5000μm,1.0s						
TRIZ	**Trizonia**	**1.95**	**70**	P	**Pn**	**06 20 39.7**	**+0.9**
TRIZ	**Trizonia**	**1.95**	**70**	P	**Pn**	**06 20 39.5**	**+0.7**
SERG	**Sergoula**	**1.96**	**69**	P	**Pn**	**06 20 39.6**	**+0.7**
SERG	**Sergoula**	**1.96**	**69**	P	**Pn**	**06 20 39.5**	**+0.7**
SERG				AML	AML	06 21 19.9	
	comp=N,5096μm,0.8s						
SERG				AML	AML	06 21 22.9	
	comp=E,4160μm,0.7s						
KEK	**Kerkira**	**1.98**	**2**	P	**Pn**	**06 20 39.3**	**+0.1**
KEK				S	**Sb**	**06 21 05.5**	**-0.9**
	comp=E,3μm,0.9s						
KEK	**Kerkira**	**1.98**	**2**	P	**Pn**	**06 20 40.0**	**+0.8**
KEK				S	**Sb**	**06 21 07.3**	**+1.0**
KEK				AML	AML	06 21 22.5	
	comp=E,6137μm,1.0s						
KEK				AML	AML	06 21 23.8	
	comp=N,3815μm,0.6s						
KALE	**Kalithea**	**2.01**	**70**	P	**Pn**	**06 20 40.6**	**+0.9**
KALE	**Kalithea**	**2.01**	**70**	P	**Pn**	**06 20 40.5**	**+0.8**
KALE				AML	AML	06 21 29.0	
	comp=E,4818μm,0.7s						
KALE				AML	AML	06 21 29.4	
	comp=N,8197μm,0.8s						
EVR	**Evrytania**	**2.02**	**54**	P	**Pn**	**06 20 41.1**	**+1.3**
EVR	**Evrytania**	**2.02**	**54**	P	**Pb**	**06 20 41.3**	**-1.4**
TRIP	**Tripoli**	**2.03**	**95**	P	**Pn**	**06 20 40.2**	**+0.3**
TRIP				AML	AML	06 21 14.3	
	comp=E,3403μm,0.6s						
TRIP				AML	AML	06 21 34.8	
	comp=N,4110μm,0.8s						
JAN	**Janina**	**2.11**	**24**	P	**Pn**	**06 20 41.6**	**+0.6**
JAN				AML	AML	06 21 26.7	
	comp=E,6621μm,1.0s						
JAN				AML	AML	06 21 32.7	
	comp=N,4778μm,0.6s						
JAN	**Janina**	**2.11**	**24**	P	**Pn**	**06 20 41.6**	**+0.6**
VLX	**Vlachokerasia**	**2.14**	**99**	P	**Pn**	**06 20 42.1**	**+0.7**
SRN	**Sarande**	**2.15**	**6**	*i* PN	**Pb**	**06 20 45.4**	**+0.5**
SRN				*i* SN	**Sg**	**06 21 14.9**	**-0.6**
MAKR	**Makrakomi, Fth**	**2.28**	**55**	P	**Pb**	**06 20 45.3**	**-1.8**
MAKR	**Makrakomi, Fth**	**2.28**	**55**	P	**Pb**	**06 20 45.2**	**-1.9**
MEV	**Metsovon**	**2.36**	**29**	P	**Pn**	**06 20 46.0**	**+1.4**
AGG	**Agios Georgios**	**2.41**	**57**	P	**Pn**	**06 20 46.4**	**+1.2**
AGG	**Agios Georgios**	**2.41**	**57**	P	**Pn**	**06 20 45.6**	**+0.4**
AGG	**Agios Georgios**	**2.41**	**57**		**Pn**	**06 20 45.6**	**+0.4**
SCTE	**Santa Cesarea**	**2.54**	**338**		**Pn**	**06 20 47.5**	**+0.6**
THL	**Klokotos Trika**	**2.56**	**44**	P	**Pn**	**06 20 48.6**	**+1.5**
THL				AML	AML	06 21 37.4	
	comp=E,3366μm,0.9s						
THL				AML	AML	06 21 38.9	
	comp=N,2749μm,1.1s						
KPRO	**Kipourio**	**2.56**	**29**	P	**Pn**	**06 20 49.1**	**+1.9**
TPE	**Tepelena**	**2.57**	**5**	*i* PN	**Sn**	**06 21 14.8**	**-3.4**
LOUT	**Loutraki**	**2.58**	**83**	P	**Pn**	**06 20 47.6**	**+0.1**
PENT	**Pentalofos**	**2.69**	**24**	P	**Pn**	**06 20 51.1**	**+2.0**
LKR	**Lokris**	**2.73**	**69**	P	**Pn**	**06 20 49.5**	**0.0**
VLO	**Vlora**	**2.74**	**356**	*i* PN	Pg	06 21 04.9	+6.1
TIP	**Timpagrande**	**2.74**	**303**	P	**Pn**	**06 20 50.9**	**+1.1**
TIP	**Timpagrande**	**2.74**	**303**	⇑P	**Pn**	**06 20 51.5**	**+1.8**
TIP				⇑S	**Sn**	**06 21 25.1**	**+2.4**
TIP	**Timpagrande**	**2.74**	**303**		**Pn**	**06 20 50.6**	**+0.8**
VLI	**Veliai**	**2.75**	**111**	P	**Pn**	**06 20 51.2**	**+1.4**
DID	**Didima**	**2.79**	**94**	P	**Pn**	**06 20 49.4**	**-1.0**
VIL2	**Platees**	**2.84**	**79**	P	**Pn**	**06 20 51.2**	**+0.2**
VIL2				AML	AML	06 21 56.7	
	comp=E,3534μm,0.8s						
VIL2				AML	AML	06 22 01.4	
	comp=N,2471μm,0.9s						
NEST	**Nestorio**	**2.87**	**21**	P	**Pn**	**06 20 53.2**	**+1.7**
KZN	**Kozani**	**3.02**	**31**	P	**Pn**	**06 20 55.2**	**+1.6**
KZN	**Kozani**	**3.02**	**31**	P	**Pn**	**06 20 55.1**	**+1.6**
CEL	**Celeste**	**3.08**	**281**		**Pn**	**06 20 56.8**	**+2.5**
ATH	**Athens Observa**	**3.16**	**84**	P	**Pn**	**06 20 58.1**	**+2.6**
MRKA	**Markates**	**3.19**	**71**	P	**Pn**	**06 20 55.4**	**-0.4**
LIT	**Litokhoron**	**3.20**	**41**	P	**Pn**	**06 20 56.9**	**+1.0**
LIT	**Litokhoron**	**3.20**	**41**	P	**Pn**	**06 20 56.6**	**+0.6**
LIT	**Litokhoron**	**3.20**	**41**		**Pn**	**06 20 56.6**	**+0.6**
ATHU	**Athens Univers**	**3.22**	**85**	P	**Pn**	**06 20 56.2**	**0.0**
FNA	**Florina**	**3.30**	**22**	*i* PN	**Pn**	**06 20 58.5**	**+1.1**
FNA	**Florina**	**3.30**	**22**	P	**Pn**	**06 20 58.8**	**+1.4**
FNA	**Florina**	**3.30**	**22**		**Pn**	**06 20 58.8**	**+1.4**
TAR1	**Taranto**	**3.38**	**326**	⇓*i*Pn	**Pn**	**06 20 59.1**	**+0.7**
TAR1				Sn	**Sn**	**06 21 37.7**	**-0.4**
OHR	**Ohrid**	**3.47**	**13**	*i* Pn	**Pn**	**06 21 01.7**	**+1.9**
OHR	**Ohrid**	**3.47**	**13**	*i* Pn	**Pn**	**06 21 01.7**	**+1.9**
OHR	**Ohrid**	**3.47**	**13**	P	**Pn**	**06 21 02.0**	**+2.2**
TIR	**Tirane**	**3.61**	**2**	*i* PN	**Pb**	**06 21 06.3**	**-3.4**
TIR	**Tirane**	**3.61**	**2**	⇓P	**Pn**	**06 21 02.5**	**+0.9**
TIR	**Tirane**	**3.61**	**2**	P	**Pn**	**06 21 03.0**	**+1.4**
TIR	**Tirane**	**3.61**	**2**		**Pn**	**06 21 03.0**	**+1.4**
PAIG	**Paliouri**	**3.78**	**53**	P	**Pn**	**06 21 03.6**	**-0.4**
THE	**Thessalo

UPM				*i* Sn	**Sn**	**06 22 27.6**	**-3.2**
VTS	**Vitosha**	**5.57**	**28**	⇑P	**Pn**	**06 21 28.9**	**+0.3**
VTS	**Vitosha**	**5.57**	**28**	*e*P	**Pn**	**06 21 28.6**	**0.0**
VTS	**Vitosha**	**5.57**	**28**	P	**Pn**	**06 21 28.3**	**-0.4**
VTS	**Vitosha**	**5.57**	**28**		**Pn**	**06 21 28.2**	**-0.4**
PLE	**Pljevlja**	**5.60**	**357**	⇓ *i* Pn	**Pn**	**06 21 29.7**	**+0.7**
PLE				*i* Sn	**Sn**	**06 22 30.1**	**-3.0**
PLD	**Plovdiv**	**5.80**	**40**	P	**Pn**	**06 21 33.1**	**+1.4**
PLD				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ALN	**Alexandroupoli**	**5.83**	**55**	P	**Pn**	**06 21 31.8**	**-0.3**
ALN	**Alexandroupoli**	**5.83**	**55**		**Pn**	**06 21 31.8**	**-0.3**
MAKA	**Makarska**	**5.92**	**340**	Sn	**Sn**	**06 22 38.8**	**-2.0**
MAKA	**Makarska**	**5.92**	**340**	*e*Pn	**Pn**	**06 21 33.5**	**+0.2**
BBLS	**Lazići**	**6.13**	**358**	*e*Pn	**Pn**	**06 21 35.0**	**-1.3**
INTR	**Introdacqua**	**6.19**	**315**		**Pn**	**06 21 39.7**	**+2.5**
KARP	**Karpathos**	**6.36**	**108**	Pn	**Pn**	**06 21 40.8**	**+1.3**
DIVS	**Divibare**	**6.36**	**2**	*e*Pn	**Pn**	**06 21 38.2**	**-1.3**
HAPS	**Han Pijesak,BI**	**6.37**	**355**	*e*Pn	**Pn**	**06 21 39.7**	**0.0**
ZIRJ	**Zirje**	**6.68**	**334**	*e*Pn	**Pn**	**06 21 42.7**	**-1.0**
ZIRJ					Sn	**Sn**	**06 22 54.0**	**-5.5**
KIJV	**Kijevo**	**6.75**	**339**		Sn	**Sn**	**06 22 58.8**	**-2.6**
KIJV	**Kijevo**	**6.75**	**339**	*i* Pn	**Pn**	**06 21 45.1**	**+0.3**
PLVB	**Pleven**	**6.76**	**32**	⇓P	**Pn**	**06 21 45.9**	**+1.0**
TEKS	**Tekeris**	**6.81**	**359**	*e*Pn	**Pn**	**06 21 43.8**	**-1.8**
MORI	**Morici**	**6.84**	**335**	*i* Pn	**Pn**	**06 21 46.7**	**+0.7**
MGRS	**Mrkonjic Grad**	**6.97**	**344**	*e*Pn	**Pn**	**06 21 48.5**	**+0.7**
ELND	**Elena**	**7.00**	**40**	⇓P	**Pn**	**06 21 48.6**	**+0.5**
DUGI	**Dugi Otok**	**7.18**	**332**	*e*Pn	**Pn**	**06 21 51.1**	**+0.4**
BLY	**Banja Luka**	**7.27**	**346**	⇑P	**Pn**	**06 21 53.5**	**+1.7**
BLY	**Banja Luka**	**7.27**	**346**	*e*Pn	**Pn**	**06 21 51.9**	**+0.1**
BLY	**Banja Luka**	**7.27**	**346**		**Pn**	**06 21 52.6**	**+0.8**
SZH	**Strazhica**	**7.27**	**39**	*e*P	**Pn**	**06 21 52.0**	**+0.1**
UDBI	**Udbina**	**7.42**	**337**	*e*Pn	**Pn**	**06 21 54.5**	**+0.5**
FRGS	**Fruska Gora**	**7.42**	**0**	*e*Pn	**Pn**	**06 21 52.9**	**-1.0**
HERR	**Herculane**	**7.42**	**15**	⇑P	**Pn**	**06 21 54.7**	**+0.8**
NVLJ	**Novalja**	**7.74**	**333**	Sn	**Sn**	**06 23 20.9**	**-4.8**
NVLJ	**Novalja**	**7.74**	**333**	*i* Pn	**Pn**	**06 21 58.8**	**+0.5**
RAZG	**Razgrad**	**7.78**	**39**	⇑P	**Pn**	**06 21 59.6**	**+0.8**
MURB	**Monte Urbino**	**7.79**	**317**		**Pn**	**06 22 00.9**	**+1.9**
NEF	**NEVSHA**	**7.97**	**44**	*e*P	**Pn**	**06 21 59.8**	**-1.7**
GZR	**Gura Zlata**	**7.99**	**16**	⇑P	**Pn**	**06 22 03.0**	**+1.2**
BZS	**Buzias**	**8.00**	**10**	⇑P	**Pn**	**06 22 03.2**	**+1.3**
BZS	**Buzias**	**8.00**	**10**	P	**Pn**	**06 22 04.3**	**+2.4**
BZS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BOJS	**Bojanci**	**8.46**	**338**	*i* Pn	**Pn**	**06 22 07.3**	**-0.8**
BOJS				*i*		06 22 08.6	
BOJS				*i*		06 22 20.1	
BOJS				*i* Sn	**Sn**	**06 23 36.2**	**-7.1**
BOJS				*e*		06 23 39.4	
BOJS				*i*		06 23 55.9	
ARR	**Arges**	**8.46**	**24**	⇑P	**Pn**	**06 22 08.9**	**+0.6**
MORH	**Mrgy, Hungar**	**8.51**	**355**	*e*Pn	**Pn**	**06 22 07.6**	**-1.3**
KEST	**Kesra**	**8.57**	**260**	Pn	Pn	06 22 15.7	+5.8
	comp=Z,0.7nm,0.3s,baz=26,slow=6.6,SNR=5.5						
KEST	**Kesra**	**8.57**	**260**		**Pn**	**06 22 13.1**	**+3.2**
PTJ	**Puntijarka**	**8.63**	**342**	*i* Pn	**Pn**	**06 22 09.6**	**-1.1**
VOIR		**8.66**	**26**	⇑P	**Pn**	**06 22 12.2**	**+1.1**
VOIR		**8.66**	**26**	P	**Pn**	**06 22 11.8**	**+0.7**
VOIR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CRES	**Cresnjev**	**8.69**	**340**	*e*Pn	**Pn**	**06 22 11.3**	**-0.1**
ICOR	**Ion Corvin**	**8.83**	**41**	⇑P	**Pn**	**06 22 13.6**	**+0.4**
CEY	**Cerknica**	**8.93**	**335**	*e*Pn	**Pn**	**06 22 14.9**	**+0.3**
ISR	**Istrita**	**8.97**	**33**	⇑P	**Pn**	**06 22 16.5**	**+1.2**
ISR	**Istrita**	**8.97**	**33**	P	**Pn**	**06 22 17.3**	**+2.0**
ISR				pmax	pmax		
	comp=Z,73nm,1.3s						
MLR	**Muntele Rosu**	**9.04**	**29**	Pn	**Pn**	**06 22 16.3**	**+0.1**
	comp=Z,1.1nm,0.3s,baz=197,slow=9.2,SNR=11						
MLR	**Muntele Rosu**	**9.04**	**29**	⇑P	**Pn**	**06 22 17.9**	**+1.7**
MLR	**Muntele Rosu**	**9.04**	**29**		**Pn**	**06 22 15.8**	**-0.4**
TRI	**Trieste**	**9.13**	**333**	P	**Pn**	**06 22 16.5**	**-0.8**
TRI	**Trieste**	**9.13**	**333**	Pn	**Pn**	**06 22 16.5**	**-0.8**
LJU	**Ljubljana**	**9.16**	**337**	*e*Pn	**Pn**	**06 22 18.8**	**+1.0**
HARR	**Harsova**	**9.29**	**39**	⇑P	**Pn**	**06 22 19.9**	**+0.2**
TIRR	**Tirgusor**	**9.38**	**42**	⇓P	**Pn**	**06 22 21.0**	**+0.2**
TIRR	**Tirgusor**	**9.38**	**42**	⇓P	**Pn**	**06 22 21.0**	**+0.2**
TIRR	**Tirgusor**	**9.38**	**42**	P	**Pn**	**06 22 20.5**	**-0.3**
TIRR	**Tirgusor**	**9.38**	**42**		**Pn**	**06 22 20.5**	**-0.3**
OBKA	**Obir**	**9.57**	**338**	*e*Pn	**Pn**	**06 22 24.4**	**+0.8**
	comp=Z,4.4nm,0.4s,SNR=7.6						
SOKA	**Soboth**	**9.59**	**340**	*e*Pn	**Pn**	**06 22 23.5**	**-0.3**
	comp=Z,16nm,0.4s,SNR=10.0						
PLOR	**Plostina**	**9.61**	**30**	⇑P	**Pn**	**06 22 25.5**	**+1.5**
TOPG	**Topolog**	**9.65**	**40**	⇓P	**Pn**	**06 22 24.7**	**+0.1**
VRI	**Vrincioaia**	**9.66**	**30**	⇑P	**Pn**	**06 22 26.2**	**+1.6**
VRI	**Vrincioaia**	**9.66**	**30**	P	**Pn**	**06 22 25.8**	**+1.2**
VRI				pmax	pmax		
	comp=Z,25nm,1.1s						
CFR	**Carcaliu**	**9.75**	**38**	⇑P	**Pn**	**06 22 26.1**	**+0.3**
ARSA	**Arzberg**	**10.00**	**343**	*e*Pn	**Pn**	**06 22 28.6**	**-0.7**
	comp=Z,5.1nm,0.4s						
CTI	**Castel Tesino**	**10.26**	**327**	P	**Pn**	**06 22 33.0**	**+0.1**
CTI	**Castel Tesino**	**10.26**	**327**		**Pn**	**06 22 33.0**	**+0.1**
BIZ	**Bicaz**	**10.33**	**25**	⇑P	**Pn**	**06 22 34.7**	**+0.8**
SALO	**Salr**	**10.46**	**322**	Pn	**Pn**	**06 22 35.7**	**+0.1**
KBA	**Koelnbreinsper**	**10.46**	**335**	P	**Pn**	**06 22 39.9**	**+4.2**
KBA				pmax	pmax		
	comp=Z,11nm,1.1s						
BURAR	**Bucovina Array**	**10.66**	**20**	⇓P	**Pn**	**06 22 40.2**	**+1.7**
MOA	**Molln**	**10.87**	**340**	*e*Pn	**Pn**	**06 22 41.8**	**+0.5**
	comp=Z,6.6nm,0.4s,SNR=8.5						
BRTR	**Keskin Array B**	**11.05**	**75**	Pn	**Pn**	**06 22 42.0**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=260,slow=12,SNR=1.4						
BRTR	**Keskin Array B**	**11.05**	**75**	P	**Pn**	**06 22 42.0**	**-1.8**
UZH	**Uzhgorod**	**11.05**	**9**	*e*P	**Pn**	**06 22 47.8**	**+4.2**
UZH				*e*S	**Sn**	**06 24 53.9**	**+7.0**
UZH				MLR	MLR		
	comp=N,150nm,14.0s						
UZH				MLR	MLR		
	comp=E,170nm,14.0s						
FUORN	**Ofenpass-Fuorn**	**11.31**	**325**		**Pn**	**06 22 49.9**	**+2.4**
FETA	**Feichten**	**11.41**	**327**	*e*Pn	**Pn**	**06 22 50.0**	**+1.2**
	comp=E,1.9nm,0.5s,SNR=4.1						
DAVOX	**Davos/Dischmat**	**11.61**	**324**	Pn	**Pn**	**06 22 53.3**	**+1.9**
	comp=E,1.6nm,0.3s,baz=144,slow=17,SNR=7.6						
DAVOX				Sn	**Sn**	**06 24 59.1**	**-1.8**
	comp=E,1.9nm,0.3s,baz=71,slow=12,SNR=4.3						
TUE	**Stuetta**	**11.64**	**322**		**Pn**	**06 22 53.0**	**+1.1**
NIE	**Niedzica**	**11.69**	**2**	P	**Pn**	**06 22 56.7**	**+4.3**
NIE				pmax	pmax		
	comp=Z,3.0nm,1.7s						
GEC2	**GERESS Array S**	**11.94**	**340**	P	**Pn**	**06 22 58.5**	**+2.6**
GEC2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GERES	**GERESS Array B**	**11.94**	**340**	Pn	**Pn**	**06 22 55.4**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=153,slow=15,SNR=8.2						
GERES				Sn	**Sn**	**06 25 01.7**	**-7.0**
	comp=Z,0.5nm,0.3s,baz=155,slow=24,SNR=4.6						
KHC	**Kasperske Hory**	**12.23**	**341**	*e*P	**Pn**	**06 22 59.5**	**-0.4**
KHC	**Kasperske Hory**	**12.23**	**341**	*e*PN	**Pn**	**06 22 59.5**	**-0.4**
KHC				*e*SN	**Sn**	**06 25 08.4**	**-7.5**
MMAI	**Mount Meron Ar**	**13.62**	**106**	Pn	**Pn**	**06 23 16.2**	**-2.8**
	comp=Z,2.7nm,0.3s,baz=281,slow=11,SNR=1.5						
DSI	**Dead Sea**	**14.27**	**111**	Pn	**Pn**	**06 23 26.1**	**-1.6**
DSI				Sn	Sn	06 25 53.5	-12
GHAJ	**Ghor Haditha**	**14.54**	**111**	Pn	**Pn**	**06 23 29.9**	**-1.5**
AKASG	**Malin Array Be**	**14.62**	**25**	Pn	**Pn**	**06 23 29.7**	**-2.8**
	comp=Z,0.9nm,0.3s,baz=214,slow=11,SNR=7.9						
AKBB	**Malin Array Si**	**14.62**	**25**	*i* P	**Pn**	**06 23 31.6**	**-0.9**
PRNI	**Paran**	**14.64**	**116**	Pn	**Pn**	**06 23 28.8**	**-4.0**
PRNI				Sn	Sn	06 25 59.4	-15
HRFI	**Mount Harif**	**14.84**	**117**	Pn	**Pn**	**06 23 31.6**	**-3.9**
HRFI				Sn	Sn	06 26 04.3	-15
TNS	**Taunus Mts**	**14.87**	**331**	P	P	**06 23 42.1**	**+0.5**
TNS				pmax	pmax		
	comp=Z,11nm,0.8s						
MBRI	**Mt Berech**	**14.89**	**118**	Pn	Pn	06 23 31.3	-5.0
MBRI				Sn	Sn	06 26 06.1	-15
EIL	**Elat**	**14.99**	**118**	Pn	**Pn**	**06 23 35.5**	**-2.1**
	comp=Z,0.8nm,0.3s,baz=308,slow=4.0,SNR=5.3						
EIL	**Elat**	**14.99**	**118**	Pn	Pn	06 23 31.9	-5.7
EIL				Sn	Sn	06 26 07.5	-16
SOC	**Sochi**	**16.24**	**63**	*e*P	**Pn**	**06 23 52.7**	**-1.0**
SOC				*e*		06 26 53.4	
SOC				pmax	pmax		
	comp=Z,13nm,0.7s						
SOC				MLR	MLR		
	comp=Z,334nm,17.0s						
KIV	**Kislovodsk**	**18.42**	**63**	*e*P	**Pn**	**06 24 21.1**	**+0.1**
KIV				pmax	pmax		
	comp=Z,30nm,1.1s						
KBZ	**Khabaz**	**18.52**	**64**	P	**P**	**06 24 21.6**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=182,slow=3.0,SNR=6.2						
KBZ	**Khabaz**	**18.52**	**64**	*i* P	**Pn**	**06 24 22.3**	**+0.2**
KBZ				pmax	pmax		
	comp=Z,11nm,1.3s						
ESDC	**Sonseca Array**	**18.59**	**283**	P	**Pn**	**06 24 25.0**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=87,slow=9.8,SNR=5.9						
ZEI	**Tsey**	**19.10**	**67**	*e*P	**Pn**	**06 24 30.5**	**+1.1**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.4s						
VSR	**Storozhevoye**	**19.26**	**39**	*i* P	**P**	**06 24 30.1**	**+0.1**
VSR				pmax	pmax		
	comp=Z,13nm,0.5s						
LPSR	**Galich'ya Gora**	**20.01**	**36**	*e*P	**P**	**06 24 38.2**	**0.0**
LPSR				pmax	pmax		
	comp=Z,50nm,1.0s						
MDT	**Midelt**	**20.45**	**263**	P	Pn	06 24 47.5	+2.2
	comp=Z,2.0nm,0.8s,baz=37,slow=11,SNR=4.0						
VRH	**Novokhopyorsk**	**20.57**	**42**	*e*P	**P**	**06 24 44.2**	**-0.1**
VRH				pmax	pmax		
	comp=Z,20nm,0.5s						
PBRG	**Braganca**	**20.72**	**290**	*e*P	Pn	06 24 48.6	+0.2
	comp=Z,30nm,1.8s						
OBN	**Obninsk**	**20.81**	**28**	*i* P	**P**	**06 24 47.9**	**+1.1**
OBN				*i*		06 24 54.9	
OBN				*i*		06 25 05.4	
OBN				pmax	pmax		
	comp=Z,13nm,0.9s						
MVO	**Moncorvo**	**20.92**	**288**	*e*P	Pn	06 24 50.2	-0.6
	comp=Z,32nm,1.8s						
VSU	**Vasula**	**21.24**	**10**	*i* P	**P**	**06 24 52.5**	**+1.1**
VSU				pmax	pmax		
	comp=Z,157nm,0.9s						
PMRV	**Marv??o**	**21.25**	**283**	*e*P	**P**	**06 24 55.6**	**+3.9**
	comp=Z,13nm,1.3s						
PCBR	**Castelo Branco**	**21.29**	**284**	*e*P	**P**	**06 24 54.1**	**+2.0**
	comp=Z,24nm,1.7s						
MTE	**Manteigas**	**21.31**	**286**	*e*P	**P**	**06 24 54.3**	**+1.8**
PVIS	**Viseu**	**21.57**	**287**	*e*P	**P**	**06 24 57.3**	**+2.0**
	comp=Z,22nm,1.9s						
PBEJ	**Beja**	**21.76**	**279**	*e*P	**P**	**06 25 01.0**	**+3.8**
EVO	**Evora**	**21.81**	**281**	*e*P	**P**	**06 25 00.2**	**+2.5**
	comp=Z,29nm,1.8s						
AKT	**Akhty**	**21.85**	**71**	*e*P	**P**	**06 24 56.5**	**-1.8**
AKT				*e*		06 25 17.5	
AKT				pmax	pmax		
	comp=Z,24nm,1.5s						
HFS	**Hagfors**	**22.75**	**352**	P	**P**	**06 25 08.2**	**+0.6**
	comp=Z,9.5nm,0.8s,baz=165,slow=12,SNR=12						
EKA	**Eskdalemuir Ar**	**23.44**	**326**	P	**P**	**06 25 15.8**	**+1.2**
	comp=Z,6.6nm,0.7s,baz=129,slow=14,SNR=18						
ESK	**Eskdalemuir**	**23.45**	**326**	P	**P**	**06 25 16.3**	**+1.5**
ESK				pmax	pmax		
	comp=Z,19nm,1.0s						
ESK	**Eskdalemuir**	**23.45**	**326**	P	**P**	**06 25 16.3**	**+1.5**
ESK				IAmb	IAmb	06 25 26.5	
	comp=Z,19nm,0.9s						
NB2	**NORSAR Subarra**	**23.94**	**350**	P	**P**	**06 25 19.7**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=159,slow=9.3						
NOA	**NORSAR Array B**	**23.94**	**350**	P	**P**	**06 25 19.2**	**-0.3**
	comp=Z,3.3nm,0.8s,baz=160,slow=9.5,SNR=6.4						
FINES	**FINESS Array B**	**24.06**	**7**	P	**P**	**06 25 19.7**	**-0.9**
	comp=Z,6.3nm,0.6s,baz=170,slow=9.7,SNR=25						
FINES	**FINESS Array B**	**24.06**	**7**	*i* P	**P**	**06 25 20.7**	**+0.1**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KLMR	**Klimovskoe**	**26.28**	**22**	*e*P	**P**	**06 25 38.7**	**-2.0**
KLMR				pmax	pmax		
	comp=Z,31nm,1.4s						
KLMR	**Klimovskoe**	**26.28**	**22**	*e*P	**P**	**06 25 38.8**	**-2.0**
KLMR				AMP		06 25 50.5	
	comp=Z,31nm,1.4s						
TORD	**Torodi Ar. Bea**	**29.29**	**218**	P	**P**	**06 26 10.8**	**+2.7**
	comp=Z,1.4nm,0.8s,baz=36,slow=8.4,SNR=9.6						
AKTO	**Aktyubinsk**	**29.95**	**53**	P	**P**	**06 26 11.8**	**-1.9**
	comp=Z,1.1nm,0.4s,baz=257,slow=9.0,SNR=4.3						
ARU	**Arti**	**31.80**	**41**	*ce*P	**P**	**06 26 29.2**	**-0.7**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	**ARCESS Array B**	**32.01**	**4**	P	**P**	**06 26 30.9**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=185,slow=12,SNR=5.9						
ARCES	**ARCESS Array B**	**32.01**	**4**	P	**P**	**06 26 31.0**	**-0.7**
BRVK	**Borovoye**	**37.82**	**49**	*i* P	**P**	**06 27 21.7**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BRVK	**Borovoye**	**37.82**	**49**	P	**P**	**06 27 21.8**	**-0.1**
BRVK				IAmb	IAmb	06 27 31.2	
	comp=Z,10nm,1.5s						
DBIC	**Dimbokro**	**38.14**	**222**	P	**P**	**06 27 27.7**	**+2.8**
	comp=Z,1.3nm,0.6s,baz=1.4,slow=16,SNR=1.3						
SPITS	**Spitsbergen Ar**	**40.58**	**359**	P	**P**	**06 27 44.9**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=150,slow=18,SNR=1.3						
AAK	**Ala-Archa**	**41.51**	**65**	*i* P	**P**	**06 27 52.2**	**-0.7**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KURK	**Kurchatov**	**43.04**	**53**	*i* P	**P**	**06 28 05.4**	**+0.3**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KSH	**Kashi**	**43.36**	**69**	P	**P**	**06 28 08.2**	**+0.2**
KSH				sP	pwP	06 28 19.9	+3.6
KSH				PP	**PcP**	**06 29 54.3**	**-2.2**
KSH				S	**S**	**06 34 31.4**	**-4.0**
KSH				pmax	pmax		
	comp=Z,16nm,1.1s						
KSH				pmax	pmax		
	comp=Z,210nm,4.4s						
KSH				LR	LR		
	comp=N,28nm,4.5s						
KSH				LR	LR		
	comp=E,110nm,5.1s						
KSH				LR	LR		
	comp=Z,440nm,14.6s						
MK31	**Makanchi Array**	**46.07**	**58**	*i* P	**P**	**06 28 30.0**	**+0.6**
MKAR	**Makanchi Array**	**46.07**	**58**	P	**P**	**06 28 28.1**	**-1.2**
	comp=Z,2.7nm,0.4s,baz=275,slow=7.0,SNR=37						
ZALV	**Zalesovo Beam**	**46.45**	**48**	P	**P**	**06 28 31.4**	**-0.8**
	comp=Z,5.6nm,0.4s,baz=278,slow=9.0,SNR=21						
NRIK	**Noril'sk**	**47.47**	**26**	P	**P**	**06 28 40.2**	**+0.2**
	comp=Z,2.6nm,0.6s,baz=258,slow=7.1,SNR=6.1						
SCHQ	**Schefferville**	**58.36**	**317**	P	**P**	**06 30 02.2**	**+1.7**
	comp=Z,1.1nm,0.5s,baz=48,slow=4.0,SNR=4.6						
SCHQ	**Schefferville**	**58.36**	**317**	P	**P**	**06 30 01.9**	**+1.3**
BATG	**Bathurst New B**	**60.93**	**309**	P	**P**	**06 30 20.1**	**+1.8**
BATG				IAmb	IAmb	06 30 24.6	
	comp=Z,8.7nm,1.3s						
BOD	**Bodaibo**	**61.11**	**38**	*e*P	**P**	**06 30 18.8**	**-0.6**
BOD				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SONM	**Songino Array**	**61.22**	**50**	P	**P**	**06 30 20.0**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=280,slow=7.2,SNR=6.8						
CMAR	**Chiang Mai Arr**	**70.57**	**81**	P	**P**	**06 31 20.6**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=306,slow=7.5,SNR=7.0						
BILL	**Bilibino**	**71.59**	**13**	*i* P	**P**	**06 31 26.0**	**-0.4**
BILL				*i*		06 31 45.6	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
YKA	**Yellowknife Ar**	**73.59**	**340**	P	**P**	**06 31 40.3**	**+1.9**
	comp=Z,0.4nm,0.5s,baz=38,slow=5.2,SNR=15						
ILAR	**Eielson Array**	**77.29**	**354**	P	**P**	**06 32 01.4**	**+1.9**
	comp=Z,0.3nm,0.6s,baz=344,slow=2.4,SNR=4.2						
PPLA	**Purkeypile**	**79.50**	**356**	P	**P**	**06 32 13.0**	**+1.0**
ASAR	**Alice Springs**	**122.75**	**96**	PKP	**PKiKP**	**06 39 02.5**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=282,slow=1.8,SNR=2.3						

*IDC **07** 06:23:24.5±1.4, 7.22S×154.84E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.8/36, mbtmp3.8/7, ML4.0/1, MS3.4/1, Ms1 3.4/1, ms1mx3.0/35, Error ellipse: s-maj=46.9km s-min=23.5km az=117.0*

*NEIC **07** 06:23:28.4±1.1, 7.3S±0.1×154.9E±0.2, h25km±8km, mb4.2/4, Error ellipse: s-maj=29.4km s-min=11.1km az=121.0*

ISC 07 06:23:30.7±1.1, 7.2S±0.1×154.6E±0.2, h39km, n14, σ1s53/14, mb3.8/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.83**	**320**	Pn		**Pn**	**Pn**	**06 24 30.3**	**+3.2**
KRVT	**Keravat (AS076**	**3.83**	**318**	Pn		**Pn**	**Pn**	**06 24 26.2**	**-0.9**
	11nm,0.3s,baz=23,slow=8.2,SNR=5.0								
KRVT						Sn	**Sn**	**06 25 08.9**	**-2.0**
	3.7nm,0.3s,baz=124,slow=18,SNR=1.8								
WR0	**Warramunga Arr**	**23.25**	**235**	P		**P**	**P**	**06 28 35.7**	**+0.8**
WB0	**Warramunga Arr**	**23.27**	**235**	P		**P**	**P**	**06 28 34.1**	**-0.9**
WB0				IAmb		IAmb	IAmb	06 28 52.9	
	comp=Z,12nm,1.4s								
WB2	**Warramunga Arr**	**23.39**	**235**	P		**P**	**P**	**06 28 37.3**	**+1.0**
WB2				IAmb		IAmb	IAmb	06 28 38.6	
	comp=Z,7.8nm,1.1s								
WRA	**Warramunga Arr**	**23.41**	**235**	P		**P**	**P**	**06 28 36.8**	**+0.5**
	comp=Z,3.1nm,0.7s,baz=56,slow=8.8,SNR=30								
ASAR	**Alice Springs**	**25.77**	**228**	P		**P**	**P**	**06 28 59.3**	**+1.2**
	comp=Z,1.6nm,0.6s,baz=60,slow=9.1,SNR=22								
STKA	**Stephens Creek**	**27.42**	**205**	P		**P**	**P**	**06 29 11.2**	**-1.6**
	comp=Z,1.2nm,0.7s,baz=327,slow=9.2,SNR=3.3								
FITZ	**Fitzroy Crossi**	**30.23**	**246**	P		**P**	**P**	**06 29 38.9**	**+0.9**
DAV	**Davao City (W)**	**32.22**	**295**	LR		LR	LR	06 39 21.5	
	comp=Z,78nm,21.9s,baz=168,slow=30								
MKAR	**Makanchi Array**	**83.28**	**319**	P		**P**	**P**	**06 35 54.3**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=96,slow=5.4,SNR=6.1								
ILAR	**Eielson Array**	**83.67**	**22**	P		**P**	**P**	**06 35 55.2**	**+0.2**
	comp=Z,0.1nm,0.6s,baz=255,slow=3.5,SNR=1.6								
YKA	**Yellowknife Ar**	**96.67**	**28**	P		**P**	**P**	**06 36 55.1**	**-1.4**
	comp=Z,0.1nm,0.4s,baz=270,slow=4.3,SNR=1.7								
TORD	**Torodi Ar. Bea**	**152.70**	**285**	PKPbc		**PKiKP**	**PKiKP**	**06 43 25.1**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=84,slow=1.9,SNR=6.3								

*IDC **07** 06:24:59.9±2.1, 6.28N×126.92E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/42, mbtmp3.6/3, Error ellipse: s-maj=80.1km s-min=19.8km az=51.0*

ISC 07 06:25:01.3±1.8, 6.2N±0.3×126.8E±0.3, h10km, n5, σ1s33/6, mb3.4/3, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.50**	**304**	Pn		**Pn**	**Pb**	**06 25 29.1**	**-0.2**
	49nm,0.3s,baz=242,slow=6.5,SNR=3.7								
DAV				Sn		**Sg**		**06 25 50.4**	**+0.8**
	167nm,0.3s,baz=233,slow=23,SNR=5.7								
DMPH	**Davao City--Mi**	**1.56**	**303**	⇓ *e*P		Pg		06 25 40.5	+9.1
DMPH				*i* S		**Sn**		**06 25 48.9**	**-0.7**
WRA	**Warramunga Arr**	**27.03**	**164**	P		**P**		**06 30 45.8**	**+1.8**
	0.6nm,0.3s,baz=342,slow=10,SNR=2.1								
ASAR	**Alice Springs**	**30.50**	**167**	P		**P**		**06 31 13.9**	**-0.9**
	0.3nm,0.6s,baz=348,slow=7.3,SNR=5.5								
MKAR	**Makanchi Array**	**55.59**	**324**	P		**P**		**06 34 37.3**	**0.0**
	0.2nm,0.5s,baz=116,slow=6.9,SNR=4.3								

*NEIC **07** 06:26:44.0±1.8, 16.56N±0.04×100.46W±0.03, h17km±3km, Md4.0/25(MEX), Error ellipse: s-maj=5.6km s-min=3.2km az=198.0*

*MEX **07** 06:26:46.6±0.8, 16.64N×100.40W, h4km±12km, MD4.0*

ISC 07 06:26:39.6±2.0, 16.50N±0.07×100.40W±0.04, h8km±11km, n20, σ1s89/40, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.56**	**13**	*i* P		**Pn**	**Pb**	**06 26 54.1**	**+0.2**
CAIG				*i* S		**Sb**		**06 27 00.

MMIG	**Aquila**	**1.14**	**252**		**Pn**	**07 16 02.3**	**-0.1**
MMIG					**Sn**	**07 16 17.3**	**0.0**
ZIIG	**Zihuatanejo**	**1.25**	**146**	*i* P	**Pn**	**07 16 03.9**	**0.0**
ZIIG				*e*S	**Sn**	**07 16 18.1**	**-1.8**
ZIIG	**Zihuatanejo**	**1.25**	**146**		**Pn**	**07 16 03.9**	**0.0**
ZIIG					**Sn**	**07 16 18.1**	**-1.8**
MOIG	**Morelia**	**1.41**	**43**	*e*P	**Pn**	**07 16 05.4**	**-0.8**
MOIG	**Morelia**	**1.41**	**43**		**Pn**	**07 16 05.4**	**-0.8**
COIG	**Colima**	**1.50**	**291**	*e*P	**Pn**	**07 16 07.8**	**+0.4**
EZ5V		**1.56**	**302**	*e*P	**Pn**	**07 16 09.0**	**+0.7**
EZ5V		**1.56**	**302**		**Pn**	**07 16 09.0**	**+0.7**
R15V		**1.76**	**288**	*e*P	**Pn**	**07 16 11.3**	**+0.5**
R15V		**1.76**	**288**		**Pn**	**07 16 11.3**	**+0.5**
ARIG	**Puente Sto Nin**	**1.80**	**101**	*e*P	**Pn**	**07 16 11.5**	**+0.2**
ARIG	**Puente Sto Nin**	**1.80**	**101**		**Pn**	**07 16 11.5**	**+0.2**
CAIG	**El Cayaco**	**2.43**	**130**	*e*P	**Pn**	**07 16 20.0**	**+0.1**
CAIG	**El Cayaco**	**2.43**	**130**		**Pn**	**07 16 20.0**	**+0.1**
MEIG	**Mezcala**	**2.56**	**106**	*e*P	**Pn**	**07 16 22.3**	**+0.7**
MEIG	**Mezcala**	**2.56**	**106**		**Pn**	**07 16 22.3**	**+0.7**
CJM	**Chamela**	**2.82**	**288**	*e*P	**Pn**	**07 16 24.9**	**-0.2**
CRIG	**Cruz Grande**	**3.49**	**122**	*e*P	**Pn**	**07 16 34.8**	**+0.5**
TLIG	**Tlapa**	**3.62**	**107**	*e*P	**Pn**	**07 16 37.7**	**+1.5**
TLIG	**Tlapa**	**3.62**	**107**		**Pn**	**07 16 37.7**	**+1.5**
FTIG	**Fresnillo de T**	**3.94**	**100**	*e*P	**Pn**	**07 16 41.8**	**+1.3**
ZAIG	**Zacatecas**	**4.12**	**355**		**Pn**	**07 16 43.0**	**-0.1**
TXIG	**Tlaxiaco**	**4.44**	**107**	*e*P	**Pn**	**07 16 49.3**	**+1.7**
PNIG	**Pinotepa**	**4.49**	**119**	*e*P	**Pn**	**07 16 48.1**	**+0.1**
PNIG	**Pinotepa**	**4.49**	**119**		**Pn**	**07 16 48.1**	**+0.1**
YOIG	**Yosondua**	**4.78**	**111**	*e*P	**Pn**	**07 16 54.0**	**+1.8**

*ATH **07** 07:20:19.7, 38°.39N×20°.52E, h14km±1km, ML2.5/12, Error ellipse: s-maj=1.7km s-min=0.6km az=271.0*
*THE **07** 07:20:20.0, 38°.40N×20°.50E, h9km, ML2.9/10, Error ellipse: s-maj=0.9km s-min=0.3km az=285.0*
ISC 07 07:20:19.6±0.8, 38°.40N±0°.02×20°.51E±0°.03, h11km±5km, n48, σ0s57/73, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.05**	**74**	P	**Pg**		**07 20 21.8**	**+0.1**
VSK1				S	**Sg**		**07 20 23.2**	**-0.1**
	31μm,0.2s							
FSK	**Fiskardo**	**0.08**	**35**	P	**Pg**		**07 20 22.1**	**+0.1**
FSK				S	**Sg**		**07 20 23.7**	**-0.1**
	6μm,0.1s							
FSK	**Fiskardo**	**0.08**	**35**	P	**Pg**		**07 20 22.1**	**+0.1**
FSK				S	**Sg**		**07 20 23.9**	**+0.1**
FSK				AML	AML		07 20 24.1	
	comp=E,13350μm,0.1s							
FSK				AML	AML		07 20 24.2	
	comp=N,11886μm,0.2s							
KEF1	**Kardakata, Kep**	**0.12**	**193**	P	**Pg**		**07 20 22.6**	**+0.1**
KEF1				S	**Sg**		**07 20 25.0**	**+0.4**
KEF4	**Livadi, Kephal**	**0.15**	**205**	P	**Pg**		**07 20 23.2**	**+0.2**
KEF4				S	**Sg**		**07 20 26.0**	**+0.6**
AGT1	**Agia Thekli**	**0.17**	**213**	P	**Pg**		**07 20 23.4**	**0.0**
AGT1				S	**Sg**		**07 20 26.3**	**+0.3**
	comp=N,13μm,0.2s							
LXRA	**Lixouri, Kepha**	**0.20**	**195**	P	**Pg**		**07 20 24.2**	**+0.3**
LXRA				S	**Sg**		**07 20 28.2**	**+1.4**
ARG2	**Argostoli**	**0.22**	**184**	P	**Pg**		**07 20 24.3**	**+0.2**
ARG2				S	**Sg**		**07 20 28.1**	**+0.9**
	comp=N,17μm,0.2s							
ARGA	**Argostoli. Kep**	**0.22**	**185**	P	**Pg**		**07 20 24.2**	**+0.1**
ARGA				S	**Sg**		**07 20 27.9**	**+0.7**
KEF3	**Kipouria, Keph**	**0.23**	**213**	P	**Pg**		**07 20 24.4**	**+0.1**
KEF3				S	**Sg**		**07 20 28.4**	**+0.8**
VLS	**Valsamata**	**0.23**	**163**	P	**Pg**		**07 20 24.6**	**+0.2**
VLS				S	**Sg**		**07 20 28.4**	**+0.8**
	comp=N,3μm,0.1s							
VLS	**Valsamata**	**0.23**	**163**	P	**Pg**		**07 20 24.5**	**+0.2**
VLS				S	**Sg**		**07 20 28.5**	**+1.0**
VLS				AML	AML		07 20 29.6	
	comp=E,7809μm,0.1s							
VLS				AML	AML		07 20 30.0	
	comp=N,5000μm,0.2s							
KEF2	**Argostoli. Kep**	**0.23**	**183**	P	**Pg**		**07 20 24.5**	**+0.1**
KEF2				S	**Sg**		**07 20 28.4**	**+0.8**
CHV1	**Chavriata, Kef**	**0.23**	**205**	P	**Pg**		**07 20 24.5**	**+0.1**
CHV1				S	**Sg**		**07 20 28.5**	**+0.8**
	comp=N,14μm,0.2s							
EVGI	**Lefkada island**	**0.25**	**28**	P	**Pg**		**07 20 25.3**	**+0.4**
EVGI				S	**Sg**		**07 20 29.1**	**+0.7**
EVGI	**Lefkada island**	**0.25**	**28**	P	**Pg**		**07 20 25.2**	**+0.3**
EVGI				S	**Sg**		**07 20 29.8**	**+1.4**
MGNA	**Meganis**	**0.34**	**41**	P	**Pg**		**07 20 26.7**	**+0.2**
MGNA				S	**Sb**		**07 20 32.5**	**-0.8**
KFL	**Anninata**	**0.36**	**142**	P	**Pg**		**07 20 27.1**	**+0.3**
KFL				S	**Sg**		**07 20 32.3**	**+0.7**
	comp=N,2μm,0.3s							
KFL	**Anninata**	**0.36**	**142**	P	**Pg**		**07 20 27.1**	**+0.3**
KFL				S	**Sg**		**07 20 32.7**	**+1.1**
KFL				AML	AML		07 20 34.4	
	comp=N,2921μm,0.3s							
KFL				AML	AML		07 20 35.1	
	comp=E,3870μm,0.3s							
LKD2	**Lefkada island**	**0.41**	**17**	P	**Pg**		**07 20 27.8**	**+0.1**
LKD2				S	**Sg**		**07 20 34.4**	**+1.2**
	comp=E,565nm,0.2s							
LKD2	**Lefkada island**	**0.41**	**17**	P	**Pg**		**07 20 27.8**	**+0.1**
LKD2				S	**Sb**		**07 20 34.6**	**-0.6**
LKD2				AML	AML		07 20 38.6	
	comp=E,1318μm,0.3s							
LKD2				AML	AML		07 20 39.3	
	comp=N,950μm,0.2s							
TSLK	**Tsoukalades, L**	**0.45**	**15**	P	**Pg**		**07 20 28.5**	**+0.1**
TSLK				S	**Sg**		**07 20 35.0**	**+0.7**
	comp=N,720nm,0.2s							
TSLK	**Tsoukalades, L**	**0.45**	**15**	P	**Pg**		**07 20 28.6**	**+0.2**
TSLK				S	**Sg**		**07 20 35.3**	**+1.0**
TSLK				AML	AML		07 20 37.7	
	comp=N,1754μm,0.3s							
TSLK				AML	AML		07 20 38.4	
	comp=E,1141μm,0.2s							
AST1	**Astakos**	**0.48**	**72**	P	**Pg**		**07 20 29.6**	**+0.6**
AST1				S	**Sb**		**07 20 36.5**	**-0.7**
	comp=E,2μm,0.3s							
VTN	**Vitineika**	**0.72**	**131**	P	**Pb**		**07 20 34.1**	**-0.1**
VTN	**Vitineika**	**0.72**	**131**	P	**Pb**		**07 20 34.0**	**-0.2**
RLS	**Riolos of Patr**	**0.83**	**114**	P	**Pg**		**07 20 35.6**	**0.0**
RLS				AML	AML		07 20 54.8	
	comp=N,274μm,0.4s							
RLS				AML	AML		07 20 56.5	
	comp=E,287μm,0.3s							
DRO	**Drossia**	**1.05**	**115**	P	**Pb**		**07 20 39.4**	**-0.4**
DRO	**Drossia**	**1.05**	**115**	P	**Pb**		**07 20 39.3**	**-0.5**
DRO				AML	AML		07 21 03.0	
	comp=E,779μm,0.4s							
DRO				AML	AML		07 21 05.5	
	comp=N,779μm,0.4s							
EFP	**Efpalio**	**1.10**	**88**	P	**Pb**		**07 20 40.0**	**-0.7**
EFP				AML	AML		07 21 02.9	
	comp=N,633μm,0.6s							
EFP				AML	AML		07 21 03.7	
	comp=E,873μm,0.5s							
ANX	**Ano Chora**	**1.13**	**79**	P	**Pb**		**07 20 40.8**	**-0.4**
ANX	**Ano Chora**	**1.13**	**79**	P	**Pb**		**07 20 40.6**	**-0.6**
ANX				AML	AML		07 21 04.6	
	comp=E,666μm,0.5s							
ANX				AML	AML		07 21 05.9	
	comp=N,586μm,0.5s							
IGT	**Igoumenitsa**	**1.14**	**353**	P	**Pb**		**07 20 41.0**	**-0.5**
IGT				S	**Sn**		**07 20 57.5**	**+0.2**
IGT				AML	AML		07 21 01.4	
	comp=E,280μm,0.4s							
IGT				AML	AML		07 21 02.3	
	comp=N,230μm,0.3s							
LAKA	**Lakka**	**1.17**	**97**	P	**Pb**		**07 20 41.3**	**-0.6**
SERG	**Sergoula**	**1.22**	**89**	P	**Pn**		**07 20 42.2**	**-0.5**
SERG				AML	AML		07 21 05.7	
	comp=N,528μm,0.7s							
SERG				AML	AML		07 21 05.9	
	comp=E,376μm,0.5s							
TRIZ	**Trizonia**	**1.23**	**91**	P	**Pn**		**07 20 42.5**	**-0.3**
AMT	**Artemida-Makis**	**1.28**	**132**	P	**Pn**		**07 20 42.9**	**-0.6**
KALE	**Kalithea**	**1.28**	**90**	P	**Pn**		**07 20 43.2**	**-0.4**
KALE				AML	AML		07 21 08.6	
	comp=E,206μm,0.7s							
KALE				AML	AML		07 21 09.2	
	comp=N,290μm,0.7s							
KLV	**Kalavryta, Ach**	**1.34**	**105**	P	**Pn**		**07 20 44.4**	**0.0**
MAKR	**Makrakomi, Fth**	**1.41**	**64**	P	**Pb**		**07 20 46.2**	**+0.1**
KEK	**Kerkira**	**1.43**	**338**	P	**Pg**		**07 20 47.1**	**+0.1**
MEV	**Metsovon**	**1.50**	**22**	P	**Pg**		**07 20 48.4**	**0.0**
AGG	**Agios Georgios**	**1.56**	**66**	P	**Pb**		**07 20 48.9**	**+0.3**
TRIP	**Tripoli**	**1.64**	**121**	P	**Pb**		**07 20 50.0**	**0.0**
ITM	**Ithomi**	**1.66**	**137**	P	**Pb**		**07 20 50.9**	**+0.7**
THL	**Klokotos Trika**	**1.66**	**45**	P	**Pb**		**07 20 50.5**	**+0.3**
KPRO	**Kipourio**	**1.69**	**23**	P	**Pb**		**07 20 51.2**	**+0.4**
PYL	**PYLOS**	**1.79**	**146**	P	**Pb**		**07 20 51.6**	**-0.8**

*IDC **07** 07:25:36.0±1.5, 6°.59S×155°.39E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.7/48, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=37.5km s-min=29.9km az=104.0*
ISC 07 07:25:41.5±1.1, 6°.5S±0°.1×155°.5E±0°.1, h35km, n10, σ1s11/11, mb3.7/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**4.04**	**302**	P	**Pn**	**Pn**	**07 26 40.9**	**-0.1**
	5.6nm,0.3s,baz=320,slow=12,SNR=1.8							
KRVT				Sn	**Sn**	**Sn**	**07 27 27.7**	**+0.5**
	14nm,0.3s,baz=104,slow=16,SNR=4.9							
HNR	**Honiara**	**5.32**	**124**	*e*P	Pn		07 27 03.0	+4.4
PMG	**Port Moresby**	**8.71**	**250**	Pn	**Pn**		**07 27 46.4**	**+1.3**
	4.5nm,0.3s,baz=107,slow=6.0,SNR=6.7							
WRA	**Warramunga Arr**	**24.48**	**235**	P	**P**		**07 30 56.1**	**-1.5**
	0.8nm,0.4s,baz=60,slow=9.7,SNR=12							
WRA				PcP	**PcP**		**07 34 35.6**	**-0.3**
	0.5nm,0.8s,baz=57,slow=2.9,SNR=4.6							
ASAR	**Alice Springs**	**26.85**	**228**	P	**P**		**07 31 18.1**	**-0.9**
	0.2nm,0.5s,baz=62,slow=8.5,SNR=2.4							
CMAR	**Chiang Mai Arr**	**60.98**	**295**	P	**P**		**07 35 51.7**	**-0.2**
	1.4nm,0.3s,baz=117,slow=5.9,SNR=4.5							
SONM	**Songino Array**	**69.16**	**327**	P	**P**		**07 36 45.0**	**+0.3**
	0.4nm,0.5s,baz=103,slow=8.9,SNR=2.3							
MKAR	**Makanchi Array**	**83.33**	**319**	P	**P**		**07 38 04.1**	**-0.9**
	0.4nm,0.6s,baz=104,slow=5.1,SNR=5.1							
YKA	**Yellowknife Ar**	**95.68**	**28**	P	**P**		**07 39 05.1**	**+1.7**
	0.2nm,0.5s,baz=266,slow=4.5,SNR=3.0							
TORD	**Torodi Ar. Bea**	**153.33**	**286**	PKPbc	**PKPbc**		**07 45 36.1**	**-0.9**
	0.6nm,0.8s,baz=79,slow=2.6,SNR=2.7							

*ATH **07** 08:03:46.2, 36°.11N×21°.59E, h31km±10km, ML3.3/18, Error ellipse: s-maj=10.8km s-min=2.2km az=195.0*
*THE **07** 08:03:47.4, 36°.15N×21°.64E, h8km±1km, ML3.4/7, Error ellipse: s-maj=2.6km s-min=1.1km az=254.0*
*HLW **07** 08:03:51.1, 35°.53N×21°.27E, h14km±9km, Md3.9, Ml3.6*
ISC 07 08:03:46.6±1.5, 36°.07N±0°.05×21°.40E±0°.05, h29km±14km, n64, σ1s43/74, 4C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.87**	**18**	P	**Pb**		**08 04 02.1**	**-1.0**
PYL				S	**Sb**		**08 04 13.2**	**-1.2**
	8μm,0.5s							
PYL	**PYLOS**	**0.87**	**18**	P	**Pb**		**08 04 02.0**	**-1.0**
PYL				S	**Sb**		**08 04 13.6**	**-0.8**
PYL				AML	AML		08 04 14.1	
	comp=N,11656μm,0.5s							
PYL				AML	AML		08 04 14.2	
	comp=E,18876μm,0.5s							
ITM	**Ithomi**	**1.19**	**21**	P	**Pn**		**08 04 06.6**	**-0.6**
ITM				S	**Sn**		**08 04 22.1**	**-0.3**
	comp=E,1μm,0.7s							
ITM	**Ithomi**	**1.19**	**21**	P	**Pn**		**08 04 06.7**	**-0.5**
ITM				S	**Sn**		**08 04 22.3**	**-0.1**
ITM				AML	AML		08 04 29.1	
	comp=E,3090μm,0.9s							
ITM				AML	AML		08 04 31.8	
	comp=N,2633μm,0.5s							
VLI	**Velíai**	**1.40**	**62**	P	**Pn**		**08 04 10.2**	**+0.1**
VLI				S	**Sn**		**08 04 26.9**	**-0.7**
	comp=N,2μm,0.7s							
VLI	**Velíai**	**1.40**	**62**	P	**Pn**		**08 04 10.3**	**+0.1**
VLI				AML	AML		08 04 31.9	
	comp=N,4011μm,0.8s							
VLI				AML	AML		08 04 39.4	
	comp=E,2852μm,0.6s							
MNVA	**Monemvasia**	**1.46**	**64**	P	**Pn**		**08 04 10.7**	**-0.2**
AMT	**Artemida-Makis**	**1.48**	**9**	P	**Pn**		**08 04 12.2**	**+0.9**
AMT				S	**Sb**		**08 04 31.7**	**-0.2**
	comp=E,2μm,0.5s							
AMT	**Artemida-Makis**	**1.48**	**9**	P	**Pn**		**08 04 11.7**	**+0.4**
AMT				AML	AML		08 04 43.2	
	comp=E,3084μm,0.6s							
AMT				AML	AML		08 04 47.7	
	comp=N,2562μm,0.6s							
VLX	**Vlachokerasia**	**1.52**	**31**	P	**Pn**		**08 04 10.5**	**-1.4**
VLX				S	**Sn**		**08 04 31.3**	**+0.6**
	comp=N,2μm,0.7s							
VLX	**Vlachokerasia**	**1.52**	**31**	P	**Pn**		**08 04 10.5**	**-1.4**
VLX				AML	AML		08 04 37.7	
	comp=E,2597μm,0.7s							
VLX				AML	AML		08 04 38.2	
	comp=N,3589μm,0.7s							
TRIP	**Tripoli**	**1.61**	**25**	P	**Pn**		**08 04 12.9**	**-0.3**
TRIP				S	**Sn**		**08 04 33.2**	**+0.1**
	comp=N,865nm,0.5s							
TRIP	**Tripoli**	**1.61**	**25**	P	**Pn**		**08 04 12.2**	**-1.0**
TRIP				AML	AML		08 04 47.3	
	comp=N,1971μm,0.6s							
TRIP				AML	AML		08 04 50.7	
	comp=E,1292μm,0.6s							
DRO	**Drossia**	**1.90**	**7**	P	**Pn**		**08 04 18.2**	**+1.2**
DRO	**Drossia**	**1.90**	**7**	P	**Pn**		**08 04 17.8**	**+0.8**
DRO				AML	AML		08 04 55.6	
	comp=N,1913μm,0.7s							
DRO				AML	AML		08 05 02.0	
	comp=E,1759μm,0.9s							
KRND	**KRANIDI**	**1.92**	**46**	P	**Pn**		**08 04 16.7**	**-0.6**
RODP	**Rodopos**	**1.98**	**104**	P	**Pn**		**08 04 18.5**	**+0.3**
RODP				S	**Sn**		**08 04 42.1**	**+0.1**
	comp=E,162nm,0.5s							
RLS	**Riolos of Patr**	**1.98**	**1**	P	**Pn**		**08 04 20.1**	**+1.9**
RLS				AML	AML		08 04 58.5	
	comp=E,393μm,0.8s							
RLS				AML	AML		08 05 13.5	
	comp=N,664μm,0.8s							
DID	**Didima**	**2.05**	**45**	P	**Pn**		**08 04 18.2**	**-1.0**
DID	**Didima**	**2.05**	**45**	P	**Pn**		**08 04 18.3**	**-1.0**
DID				AML	AML		08 04 55.4	
	comp=E,913μm,0.5s							
DID				AML	AML		08 05 00.5	
	comp=N,798μm,0.5s							
KLV	**Kalavryta, Ach**	**2.06**	**17**	P	**Pn**		**08 04 19.4**	**+0.1**
KLV	**Kalavryta, Ach**	**2.06**	**17**	P	**Pn**		**08 04 20.1**	**+0.8**
KLV				AML	AML		08 05 05.2	
	comp=N,470μm,1.0s							
KLV				AML	AML		08 05 08.8	
	comp=E,472μm,0.6s							
IMMV	**Iera Moni Meta**	**2.18**	**105**	P	**Pn**		**08 04 21.5**	**+0.6**
IMMV	**Iera Moni Meta**	**2.18**	**105**	P	**Pn**		**08 04 21.0**	**0.0**
IMMV				AML	AML		08 05 06.7	
	comp=E,781μm,0.5s							
IMMV				AML	AML		08 05 18.9	
	comp=N,868μm,1.0s							
VLS	**Valsamata**	**2.20**	**343**	P	**Pn**		**08 04 22.3**	**+1.1**
LAKA	**Lakka**	**2.21**	**12**	P	**Pn**		**08 04 22.8**	**+1.4**
LAKA	**Lakka**	**2.21**	**12**	P	**Pn**		**08 04 22.8**	**+1.4**
LAKA				AML	AML		08 05 04.8	
	comp=N,820μm,0.7s							
LAKA				AML	AML		08 05 11.4	
	comp=E,547μm,1.0s							
KEF3	**Kipouria, Keph**	**2.29**	**339**	P	**Pn**		**08 04 23.4**	**+1.0**
KEF1	**Kardakata, Kep**	**2.33**	**342**	P	**Pn**		**08 04 23.2**	**+0.4**
TRIZ	**Trizonia**	**2.35**	**13**	P	**Pn**		**08 04 24.9**	**+1.6**
TRIZ	**Trizonia**	**2.35**	**13**	P	**Pn**		**08 04 24.8**	**+1.6**
VAM	**Vamos**	**2.37**	**105**	P	**Pn**		**08 04 23.4**	**-0.1**
EFP	**Efpalio**	**2.39**	**10**	P	**Pn**		**08 04 24.5**	**+0.8**
EFP				AML	AML		08 05 15.4	
	comp=N,432μm,0.9s							
EFP				AML	AML		08 05 18.8	
	comp=E,545μm,0.8s							
KALE	**Kalithea**	**2.39**	**14**	P	**Pn**		**08 04 25.0**	**+1.2**
KALE	**Kalithea**	**2.39**	**14**	P	**Pn**		**08 04 25.0**	**+1.2**
KALE				AML	AML		08 05 21.2	
	comp=E,431μm,0.8s							
KALE				AML	AML		08 05 22.1	
	comp=N,482μm,1.0s							
SERG	**Sergoula**	**2.40**	**12**	P	**Pn**		**08 04 25.5**	**+1.6**
SERG	**Sergoula**	**2.40**	**12**	P	**Pn**		**08 04 25.0**	**+1.1**
SERG				AML	AML		08 05 14.1	
	comp=E,493μm,0.6s							
SERG				AML	AML		08 05 15.4	
	comp=N,585μm,0.6s							
FSK	**Fiskardo**	**2.48**	**345**	P	**Pn**		**08 04 26.6**	**+1.6**
FSK				AML	AML		08 05 25.6	
	comp=N,180μm,0.6s							
FSK				AML	AML		08 05 29.9	
	comp=E,242μm,0.7s							
MHLO	**Agia Marina, M**	**2.50**	**75**	P	**Pn**		**08 04 23.8**	**-1.4**
ANX	**Ano Chora**	**2.55**	**9**	P	**Pn**		**08 04 28.4**	**+2.3**
ANX	**Ano Chora**	**2.55**	**9**	P	**Pn**		**08 04 28.0**	**+1.9**
ANX				AML	AML		08 05 23.9	
	comp=N,839μm,0.8s							
ANX				AML	AML		08 05 29.9	
	comp=E,626μm,1.2s							
VIL2	**Platees**	**2.61**	**34**	P	**Pn**		**08 04 25.6**	**-1.2**
VLY	**Voula,Athens**	**2.61**	**46**	P	**Pn**		**08 04 25.5**	**-1.3**
EVGI	**Lefkada island**	**2.62**	**347**	P	**Pn**		**08 04 28.1**	**+1.2**
ATHU	**Athens Univers**	**2.69**	**44**	P	**Pn**		**08 04 27.1**	**-0.8**
LKD2	**Lefkada island**	**2.78**	**348**	P	**Pn**		**08 04 31.4**	**+2.2**
LKD2	**Lefkada island**	**2.78**	**348**	P	**Pn**		**08 04 31.4**	**+2.2**
TSLK	**Tsoukalades, L**	**2.81**	**348**	P	**Pn**		**08 04 31.8**	**+2.2**
DION	**Dionisos Attik**	**2.85**	**45**	P	**Pn**		**08 04 29.1**	**-1.0**
EVR	**Evrytania**	**2.86**	**6**	P	**Pn**		**08 04 32.7**	**+2.3**
LKR	**Lokris**	**2.87**	**26**	P	**Pn**		**08 04 29.3**	**-1.1**
IDI	**Anoyia**	**2.94**	**104**	P	**Pn**		**08 04 31.3**	**-0.2**
IDI				AML	AML		08 05 06.1	
	comp=E,489μm,0.5s							
IDI				AML	AML		08 05 09.1	
	comp=N,228μm,0.2s							
IDI	**Anoyia**	**2.94**	**104**	⇑P	**Pb**		**08 04 42.7**	**+4.3**
IDI				⇑S	**Sn**		**08 05 05.6**	**-0.3**
MAKR	**Makrakomi, Fth**	**3.00**	**11**	P	**Pn**		**08 04 34.6**	**+2.5**
AGG	**Agios Georgios**	**3.04**	**14**	P	**Pn**		**08 04 33.5**	**+0.7**
MRKA	**Markates**	**3.15**	**33**	P	**Pn**		**08 04 33.3**	**-1.0**
TIP	**Timpagrande**	**4.82**	**311**	⇑P	**Pn**		**08 04 58.6**	**+1.4**
TIP				⇑S	**Sn**		**08 05 50.5**	**-1.6**
OHR	**Ohrid**	**5.06**	**355**	*e*Pn	Pb		08 05 24.5	+10
OHR	**Ohrid**	**5.06**	**355**	*e*Pn	Pb		08 05 24.5	+10
SLUM	**Salum**	**5.56**	**144**	P	**Pn**		**08 05 08.4**	**+1.1**
	baz=139							
SLUM				AMP			08 06 00.0	
	baz=139							
SLUM				S	**Sn**		**08 06 04.9**	**-5.3**
	baz=139							
STIP	**Stip**	**5.65**	**6**	*i* Pn	**Pn**		**08 05 09.7**	**+1.1**
STIP	**Stip**	**5.65**	**6**	*i* Pn	**Pn**		**08 05 09.7**	**+1.1**
SWA2		**7.62**	**152**	P	**Pn**		**08 05 36.2**	**+0.6**
	baz=149							
SWA2				S	Sn		08 06 52.9	-8.0
	baz=149							
SWA2				AMP			08 07 00.0	
	baz=149							
GLL	**Jalalah**	**10.81**	**124**	P	**Pn**		**08 06 19.0**	**-0.5**
	baz=121							

IDC 07 08:05:03.8±3.7, 7°.03S×154°.47E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.4/36, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=73.8km s-min=31.4km az=87.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.64**	**318**	Pn	Pn	Pn	08 06 02.5	+1.1
	5.9nm,0.3s,baz=198,slow=3.2,SNR=1.6							
KRVT				Sn	Sn	Sn	08 06 45.5	+0.4
	6.0nm,0.3s,baz=58,slow=22,SNR=2.3							
WRA	**Warramunga Arr**	**23.37**	**235**	P	P		08 10 13.9	-0.4
	0.9nm,0.8s,baz=58,slow=10.0,SNR=1.8							
ASAR	**Alice Springs**	**25.76**	**228**	P	P		08 10 36.6	+0.1
	0.5nm,0.8s,baz=58,slow=8.8,SNR=6.2							
MKAR	**Makanchi Array**	**83.09**	**319**	P	P		08 17 31.4	-0.2
	0.3nm,0.7s,baz=104,slow=6.1,SNR=2.1							

*NIED **07** 08:27:00, 38°.90N×142°.50E, h53km, Mw3.7 Best double couple: M0=4.48000×10^14 NP1:φs=85.00000°, δ=50.00000°, λ=115.00000°. NP2:φs=229.00000°, δ=46.00000°, λ=63.00000°.*
*JMA **07** 08:27:05.2±0.1, 38°.90N×142°.49E, h40km±1km, M3.9*
*IDC **07** 08:27:09.1±2.9, 38°.83N×142°.42E, h75km±26km, mb3.2/6, mb1 3.5/10, mb1mx3.2/64, mbtmp3.6/10, MS2.6/2, Ms1 2.6/2, ms1mx2.1/34, Error ellipse: s-maj=29.1km s-min=19.1km az=114.0*
ISC 07 08:27:05.4±1.8, 38°.88N±0°.05×142°.49E±0°.08, h31km±12km, n30, σ1s56/34, mb3.7/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.67**	**288**	P	**Pb**		**08 27 18.2**	**-0.5**
OFUJ				S	**Sb**		**08 27 27.6**	**-0.1**
JKMT	**Kesennumamotoy**	**0.80**	**265**	P	**Pb**		**08 27 20.1**	**-0.7**
JKMT				S	**Sb**		**08 27 30.6**	**-0.6**
MIYJ	**Miyakonagasawa**	**0.87**	**324**	P	**Pn**		**08 27 20.8**	**-0.7**
MIYJ				S	**Sb**		**08 27 31.9**	**-1.5**
JIO	**Ouri**	**0.99**	**245**	P	**Pn**		**08 27 22.7**	**-0.4**
JIO				S	**Sb**		**08 27 35.1**	**

1.2nm,0.6s,baz=99,slow=3.9,SNR=8.2
WRA Warramunga Arr 43.99 263 P P 08 38 58.7 -0.6
1.0nm,0.3s,baz=97,slow=7.3,SNR=53
WRA PcP **PcP** 08 40 32.2 +0.1
0.4nm,0.7s,baz=91,slow=3.6,SNR=1.6
FITZ Fitzroy Crossi 52.42 263 P P 08 40 01.9 0.0
1.3nm,0.9s,baz=69,slow=5.0,SNR=5.8
VNDA Vanda 57.45 185 P P 08 40 36.4 +0.5
0.6nm,0.6s,baz=354,slow=7.2,SNR=9.6
BVAR Borovoye Array 119.03 320 PKP **PKPdf** 08 49 25.2 -0.2
0.7nm,0.4s,baz=150,slow=3.3,SNR=4.3
ARCES ARCESS Array B 129.22 349 PKP **PKiKP** 08 49 45.6 +0.4
1.6nm,0.8s,baz=85,slow=2.6,SNR=3.6
AKASG Malin Array Be 143.10 330 PKP PKPab 08 50 08.2 -0.2
1.8nm,0.5s,baz=41,slow=4.3,SNR=7.4
GERES GERESS Array B 150.44 343 PKPbc **PKPbc** 08 50 28.9 +0.1
1.0nm,0.7s,baz=101,slow=1.4,SNR=4.5
TORD Torodi Ar. Bea 172.27 182 PKPab **PKPab** 08 52 12.7 -1.2
0.3nm,0.6s,baz=149,slow=3.0,SNR=2.5

*VAO **07** 08:37:16.0±1.4,24.08S×66.99W,h212km,mb4.2*
*NEIC **07** 08:37:17.7±1.8,24.01S±0.06×66.72W±0.09,h199km±5km, mb4.3/41,Error ellipse: s-maj=11.7km s-min=9.2km az=83.0*
*SJA **07** 08:37:17.7±0.7,24.06S×66.78W,h210km±7km,ML4.6, MW4.3*
*IDC **07** 08:37:18.1±0.9,23.92S×66.65W,h199km±8km,mb3.7/13, mb1 3.9/19,mb1mx3.9/25,mbtmp4.3/19,Error ellipse: s-maj=13.2km s-min=11.6km az=34.0*
ISC 07 08:37:17.9±0.6,24.03S±0.05×66.79W±0.04,h203km±6km, n115,σ1§33/119,mb4.2/29,Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AZAP	**Zapla**	**1.59**	**97**	*eP*		**Pn**	**08 37 54.1**	**+1.1**
AZAP				*eS*		**S**	**08 38 20.3**	**+0.5**
YJA	**Yavi**	**2.19**	**33**	*eP*		**Pn**	**08 38 00.7**	**+1.6**
YJA				*eS*		**S**	**08 38 32.6**	**+1.9**
LVC	**Limon Verde**	**2.41**	**306**	P		**Pn**	**08 38 02.8**	**+1.4**
	73nm,0.3s,baz=114,slow=7.8,SNR=913							
LVC				S		**S**	**08 38 35.8**	**+1.1**
	201nm,0.3s,baz=118,slow=23,SNR=36							
PB15	**IPOC Station P**	**2.59**	**288**			**Pn**	**08 38 04.7**	**+1.5**
PB15				Sn		**S**	**08 38 38.5**	**+0.5**
PB15	**IPOC Station P**	**2.59**	**288**	*eP*		**Pn**	**08 38 04.6**	**+1.3**
PB15				*eS*		**S**	**08 38 38.9**	**+0.9**
GO02	**Mina Guanaco**	**2.78**	**246**			**Pn**	**08 38 06.5**	**+1.0**
GO02				Sn		**S**	**08 38 43.2**	**+1.2**
PB06	**IPOC Station P**	**2.88**	**297**			**Pn**	**08 38 07.5**	**+1.0**
PB09	**IPOC Station P**	**3.17**	**314**			**Pn**	**08 38 11.3**	**+1.3**
PB09				Sn		**S**	**08 38 51.2**	**+1.1**
PB09	**IPOC Station P**	**3.17**	**314**	*eP*		**Pn**	**08 38 11.4**	**+1.4**
PB09				*eS*		**S**	**08 38 50.6**	**+0.5**
PB09				IAML			08 38 53.2	
	comp=Z,983nm,0.5s							
PB05	**IPOC Station P**	**3.34**	**290**	*eP*		**Pn**	**08 38 12.8**	**+0.9**
PB05				*eS*		**S**	**08 38 53.2**	**-0.4**
PB05				IAML			08 38 58.2	
	comp=Z,539nm,0.4s							
PB14	**IPOC Station P**	**3.35**	**259**			**Pn**	**08 38 12.6**	**+0.5**
PB14				Sn		**S**	**08 38 52.7**	**-1.2**
PB03	**IPOC Station P**	**3.37**	**305**	*eP*		**Pn**	**08 38 13.0**	**+0.7**
PB03				*eS*		**S**	**08 38 54.1**	**-0.1**
PB03				IAML			08 38 56.6	
	comp=Z,1μm,0.2s							
PB10	**IPOC Station P**	**3.48**	**278**			**Pn**	**08 38 14.1**	**+0.6**
PB10				Sn		**S**	**08 38 55.8**	**-0.7**
PB10	**IPOC Station P**	**3.48**	**278**	*eP*		**Pn**	**08 38 14.3**	**+0.8**
PB10				*eS*		**S**	**08 38 56.7**	**+0.2**
PB10				IAML			08 39 01.6	
	comp=Z,612nm,0.3s							
AC02	**Maricunga**	**3.50**	**217**			**Pn**	**08 38 15.4**	**+1.3**
PB04	**IPOC Station P**	**3.52**	**298**			**Pn**	**08 38 14.6**	**+0.4**
PB04				Sn		**S**	**08 38 56.5**	**-1.1**
PB04	**IPOC Station P**	**3.52**	**298**	*eP*		**Pn**	**08 38 15.0**	**+0.9**
PB04				*eS*		**S**	**08 38 57.5**	**-0.1**
PB04				IAML			08 38 60.0	
	comp=Z,709nm,0.3s							
PB07	**IPOC Station P**	**3.66**	**308**			**Pn**	**08 38 14.8**	**-1.1**
PB07				Sn		**S**	**08 38 59.1**	**-1.6**
PB07	**IPOC Station P**	**3.66**	**308**	*eP*		**Pn**	**08 38 16.5**	**+0.6**
PB07				*eS*		**S**	**08 39 00.4**	**-0.3**
PB07				IAML			08 39 07.1	
	comp=Z,818nm,0.3s							
PB01	**IPOC Station P**	**3.88**	**320**			**Pn**	**08 38 18.7**	**+0.3**
PB08	**IPOC Station P**	**4.45**	**330**			**Pn**	**08 38 26.4**	**+0.5**
PATCX	**Punta Patache**	**4.46**	**315**			**Pn**	**08 38 25.1**	**-0.6**
TA01	**Diego Aracena**	**4.66**	**317**			**Pn**	**08 38 28.2**	**0.0**
GO01	**Chusmiza**	**4.88**	**332**			**Pn**	**08 38 31.4**	**0.0**
PSGCX	**Pisagua**	**5.39**	**324**			**Pn**	**08 38 35.9**	**-1.6**
MNMC	**Minye Minye**	**5.53**	**331**			**Pn**	**08 38 38.7**	**-0.8**
AC05	**El Transito**	**5.71**	**212**			**Pn**	**08 38 41.2**	**-0.4**
GO04	**Tololo Observa**	**7.08**	**209**	Pn		**Pn**	**08 39 57.7**	**-1.7**
CO03	**El Pedregal**	**7.61**	**206**			**Pn**	**08 39 04.7**	**-1.4**
CFA	**Coronel Fontan**	**7.65**	**189**	P		**Pn**	**08 39 05.3**	**-1.3**
	comp=Z,5.6nm,0.3s,baz=348,slow=11,SNR=158							
CFA				S		**S**	**08 40 26.8**	**-6.3**
	comp=Z,8.2nm,0.3s,baz=202,slow=15,SNR=14							
LPAZ	**La Paz**	**7.81**	**350**	P		**Pn**	**08 39 09.7**	**+0.4**
	comp=Z,4.5nm,0.3s,baz=131,slow=4.8,SNR=100							
LPAZ				S		**S**	**08 40 35.5**	**-2.4**
	comp=Z,0.5nm,0.3s,baz=1.1,slow=18,SNR=1.7							
CO02	**Combarbal**	**8.06**	**207**	Pn		**Pn**	**08 39 10.0**	**-1.9**
CO04	**Los Peladeros**	**8.79**	**204**	Pn		**Pn**	**08 39 19.7**	**-1.9**
CPUP	**Villa Florida**	**8.87**	**107**	P		**Pn**	**08 39 21.5**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=286,slow=11,SNR=59							
VA03	**San Esteban**	**9.30**	**200**	Pn		**Pn**	**08 39 28.5**	**+0.3**
SIV	**San Ignacio**	**9.64**	**35**	P		**Pn**	**08 39 30.8**	**-1.7**
	comp=Z,0.8nm,0.3s,baz=230,slow=14,SNR=28							
SIV				S		S	08 41 09.7	-11
	baz=222,slow=15,SNR=3.0							
ROC1	**El Roble**	**9.65**	**202**	Pn		**Pn**	**08 39 33.1**	**+0.3**
MT02	**Curacav**	**9.95**	**202**	Pn		**Pn**	**08 39 34.2**	**-2.2**
AQDB	**Aquidauana**	**10.87**	**73**	*eP*		**Pn**	**08 39 47.1**	**-1.2**
PTLB	**Pontes e Lacer**	**11.17**	**42**	*eP*		**Pn**	**08 39 51.3**	**-1.0**
BO02	**Sierra Bellavi**	**11.27**	**197**			**Pn**	**08 39 54.7**	**+1.3**
VILB	**Vilhena**	**12.67**	**31**	*eP*		**Pn**	**08 40 11.0**	**-0.2**
TRCB	**Terra Rica**	**13.06**	**87**	*eP*		**Pn**	**08 40 15.9**	**-0.2**
BI02	**San Fabin de**	**13.17**	**196**	P		**Pn**	**08 40 17.9**	**+0.6**
ITAB	**Concordia**	**13.60**	**107**	*eP*		**Pn**	**08 40 22.2**	**-0.6**
PLTB	**Pedras Altas**	**13.96**	**126**	*eP*		**Pn**	**08 40 24.9**	**-2.3**
PLTB				*eS*		**S**	**08 43 04.0**	**+1.5**
PCMB	**Pacaembu**	**14.52**	**84**	*eP*		**Pn**	**08 40 33.8**	**-0.5**
CNLB	**Canela**	**15.18**	**114**	*eP*		**Pn**	**08 40 41.6**	**-0.6**
SAML	**Samuel**	**15.39**	**14**	P		**Pn**	**08 40 44.2**	**-0.7**
SAML				IAmb		IAmb	08 40 45.6	
	comp=Z,5.8nm,0.7s							
SAML	**Samuel**	**15.39**	**14**	*eP*		**Pn**	**08 40 44.1**	**-0.7**
FRTB	**Fartura**	**15.80**	**91**	*eP*		**Pn**	**08 40 49.5**	**-0.2**
ARAG	**Araguaiana, MT**	**16.34**	**62**	*eP*		**Pn**	**08 40 55.7**	**-0.5**
CLDB	**Colider**	**16.76**	**41**	*eP*		**P**	**08 40 58.5**	**-1.6**
PLCA	**Paso Flores**	**16.95**	**190**	P		**P**	**08 41 02.6**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=6.5,slow=14,SNR=17							
BB19B	**Bebedouro**	**17.13**	**84**	*eP*		**P**	**08 41 04.1**	**0.0**
SPB	**Sao Paulo**	**17.72**	**93**	*eP*		**P**	**08 41 10.4**	**-0.2**
RCLB	**Rio Claro- Sao**	**17.78**	**89**	*eP*		**P**	**08 41 10.4**	**-0.8**
PET01	**Itanhaem-SP**	**17.81**	**95**	*eP*		**P**	**08 41 11.2**	**-0.3**
VAO	**Valinhos**	**18.21**	**91**	*eP*		**P**	**08 41 15.4**	**-0.6**
IPMB	**Ipameri, GO**	**18.36**	**74**	*eP*		**P**	**08 41 17.4**	**-0.1**
PARB	**Paraibuna**	**19.40**	**92**	*eP*		**P**	**08 41 27.8**	**-1.0**
BDFB	**Brasilia**	**19.52**	**68**	P		**P**	**08 41 29.9**	**-0.3**
	comp=Z,2.9nm,0.3s,baz=243,slow=11,SNR=39							
BDFB	**Brasilia**	**19.52**	**68**	IAmb		IAmb	08 41 31.2	
	comp=Z,31nm,0.7s							
BSCB	**Bom Sucesso**	**20.56**	**86**	*eP*		**P**	**08 41 40.2**	**-1.0**
JANB	**Januaria**	**22.96**	**71**	*eP*		**P**	**08 42 03.5**	**-1.3**
PTGA	**Pitinga**	**24.09**	**17**	P		**P**	**08 42 14.4**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=275,slow=22,SNR=2.3							
BSFB	**Barra de Sao F**	**24.68**	**83**	*eP*		**P**	**08 42 19.2**	**-1.2**
VNA1	**Neumayer--Stat**	**57.25**	**160**	P		**P**	**08 46 48.0**	**+4.4**
VNA2	**Neumayer--Watz**	**57.62**	**160**	P		**P**	**08 46 47.7**	**+1.4**
SNAA	**Sanae**	**59.26**	**161**	P		**P**	**08 46 58.5**	**+0.9**
SNAA	**Sanae**	**59.26**	**161**	P		**P**	**08 46 58.5**	**+0.9**
SNAA				IAmb		IAmb	08 46 59.5	
	comp=Z,4.3nm,0.8s							
Z50A	**Ashland**	**59.82**	**341**	P		**P**	**08 47 02.0**	**+0.1**
Z50A				IAmb		IAmb	08 47 02.5	
	comp=Z,5.0nm,0.7s							
SWET	**Sewanee**	**61.66**	**342**	IAmb		IAmb	08 47 14.9	
	comp=Z,4.9nm,0.7s							
JCT	**Junction City**	**62.77**	**328**	IAmb		IAmb	08 47 23.3	
	comp=Z,5.2nm,0.7s							
WVT	**Waverly**	**63.06**	**341**	P		**P**	**08 47 22.5**	**-0.9**
T47A	**Sharon Grove**	**63.65**	**342**	IAmb		IAmb	08 47 27.6	
	comp=Z,5.1nm,0.9s							
TXAR	**Lajitas Array**	**63.82**	**324**	P		**P**	**08 47 29.6**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=154,slow=8.3,SNR=11							
W39A	**Magazine**	**64.22**	**336**	IAmb		IAmb	08 47 33.2	
	comp=Z,4.7nm,0.7s							
CCM	**Cathedral Cave**	**65.89**	**339**	P		**P**	**08 47 40.6**	**-1.2**
CCM				IAmb		IAmb	08 47 42.5	
	comp=Z,7.5nm,0.7s							
QSPA	**South Pole Qui**	**66.17**	**180**	P		**P**	**08 47 44.3**	**+0.9**
R40A	**Maddies Statio**	**66.45**	**338**	IAmb		IAmb	08 47 46.1	
	comp=Z,3.3nm,0.6s							
MSTX	**Muleshoe**	**67.07**	**328**	IAmb		IAmb	08 47 51.5	
	comp=Z,5.3nm,0.8s							
LIC	**Lamto**	**67.27**	**72**	*eP*		**P**	**08 47 50.7**	**-0.3**
	comp=Z,6.6nm,0.7s							
TIC	**Toumodi**	**67.48**	**71**	*eP*		**P**	**08 47 49.4**	**-3.0**
KIC	**Kosan Boka**	**67.58**	**72**	*eP*		**P**	**08 47 52.1**	**-0.9**
	comp=Z,5.5nm,0.7s							
DBIC	**Dimbokro**	**67.63**	**71**	P		**P**	**08 47 52.3**	**-1.0**
	comp=Z,1.0nm,0.3s,baz=167,slow=13,SNR=1.4							
ANMO	**Albuquerque**	**69.68**	**326**	P		**P**	**08 48 07.1**	**+1.3**
ECSD	**EROS Data Cent**	**72.78**	**338**	IAmb		IAmb	08 48 25.6	
	comp=Z,5.4nm,0.9s							
F36A	**Milaca**	**73.68**	**341**	IAmb		IAmb	08 48 29.9	
	comp=Z,6.5nm,0.8s							
VNDA	**Vanda**	**74.70**	**190**	P		**P**	**08 48 36.8**	**+2.1**
	comp=Z,0.9nm,0.7s,baz=115,slow=3.7,SNR=7.4							
TORD	**Torodi Ar. Bea**	**76.40**	**69**	P		**P**	**08 48 44.9**	**-0.5**
	comp=Z,2.6nm,0.5s,baz=261,slow=5.5,SNR=32							
R11A	**Troy Canyon, C**	**77.09**	**323**	IAmb		IAmb	08 48 52.4	
	comp=Z,6.2nm,1.5s							
PDAR	**Pinedale Array**	**77.27**	**329**	P		**P**	**08 48 50.2**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=131,slow=8.7,SNR=7.9							
ULM	**Lac du Bonnet**	**78.32**	**341**	P		**P**	**08 48 55.1**	**0.0**
	comp=Z,4.4nm,0.7s,baz=157,slow=6.3,SNR=7.1							
ULM	**Lac du Bonnet**	**78.32**	**341**	IAmb		IAmb	08 48 56.1	
	comp=Z,4.1nm,0.6s							
SCHQ	**Schefferville**	**78.54**	**360**	P		**P**	**08 48 55.3**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=228,slow=2.9,SNR=6.4							
SCHQ	**Schefferville**	**78.54**	**360**	IAmb		IAmb	08 49 09.7	
	comp=Z,17nm,1.5s							
NVAR	**Mina Array Bea**	**78.68**	**321**	P		**P**	**08 48 59.2**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=156,slow=5.7,SNR=4.0							
BOSA	**Boshof**	**80.55**	**117**	P		**P**	**08 49 07.5**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=224,slow=7.0,SNR=4.0							
BOSA	**Boshof**	**80.55**	**117**	IAmb		IAmb	08 49 18.9	
	comp=Z,4.4nm,1.1s							
MAW	**Mawson**	**81.35**	**163**	P		**P**	**08 49 12.6**	**+1.3**
	comp=Z,1.7nm,0.5s,baz=199,slow=5.3,SNR=6.9							
MAW	**Mawson**	**81.35**	**163**	IAmb		IAmb	08 49 14.1	
	comp=Z,2.4nm,1.1s							
J08A	**Circle Bar Ran**	**82.16**	**325**	IAmb		IAmb	08 49 18.7	
	comp=Z,3.4nm,0.7s							
PINE	**Pine Mountain**	**83.77**	**324**	IAmb		IAmb	08 49 27.1	
	comp=Z,4.1nm,0.8s							
ESDC	**Sonseca Array**	**86.29**	**43**	P		**P**	**08 49 36.9**	**0.0**
	comp=Z,0.8nm,0.6s,baz=230,slow=6.2,SNR=5.4							
YKA	**Yellowknife Ar**	**94.22**	**340**	P		**P**	**08 50 13.7**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=134,slow=4.9,SNR=39							
ASAR	**Alice Springs**	**128.50**	**204**	PKP		**PKPdf**	**08 56 01.6**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=139,slow=1.8,SNR=34							
AKTO	**Aktyubinsk**	**130.18**	**43**	PKP		**PKiKP**	**08 56 05.2**	**+1.0**
	comp=Z,1.0nm,0.5s,baz=13,slow=4.8,SNR=3.7							
WRA	**Warramunga Arr**	**131.68**	**207**	PKP		**PKPdf**	**08 56 08.1**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=159,slow=1.8,SNR=38							
ZALV	**Zalesovo Beam**	**143.33**	**28**	PKP		PKPab	08 56 25.1	+1.1
	comp=Z,4.0nm,0.6s,baz=289,slow=4.1,SNR=17							
MKAR	**Makanchi Array**	**146.43**	**40**	PKPbc		**PKPdf**	**08 56 34.4**	**+1.2**
	comp=Z,6.2nm,0.6s,baz=315,slow=2.5,SNR=46							
SIJI	**Sorong**	**149.66**	**218**	PKPbc		**PKPbc**	**08 56 45.3**	**+1.0**
	comp=Z,2.0nm,0.3s,baz=358,slow=6.7,SNR=4.9							
KLR	**Kul'dur**	**150.94**	**335**	PKPbc		**PKPbc**	**08 56 46.6**	**+0.4**
	comp=Z,3.9nm,0.7s,baz=60,slow=2.9,SNR=16							
KLR				PKPab		**PKPab**	**08 56 54.7**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=328,slow=9.5,SNR=4.1							
SONM	**Songino Array**	**155.64**	**11**	PKPab		**PKPab**	**08 57 14.9**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=337,slow=6.4,SNR=3.7							
LZH	**Lanzhou**	**165.52**	**32**	*e*PKP		**PKPdf**	**08 56 54.6**	**-3.9**
LZH				pPKP		PKPab	08 57 56.8	-1.2
LZH				sPKP			08 58 20.3	

IDC 07 08:44:56.6±2.5,54.31N×86.11E,h0km,mb1 3.3/2, mb1mx3.0/49,mbtmp3.3/2,ML2.9/2,Error ellipse: s-maj=18.8km s-min=11.8km az=52.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.84**	**245**	*i*			08 49 33.7	
	baz=63,slow=308,SNR=9.1							
ZALV	**Zalesovo Beam**	**0.84**	**245**	Pg		Pg	08 45 11.0	-1.7
	1.2nm,0.3s,baz=64,slow=16,SNR=8.7							
ZALV				Lg		Lg	08 45 24.8	
	4.4nm,0.3s,baz=69,slow=28,SNR=15							
ZALV				Rg		Rg	08 45 30.8	
	9.0nm,0.5s,baz=48,slow=20,SNR=8.9							
KURBB	**Kurchatov Arra**	**5.92**	**235**	Pn		Pn	08 46 26.6	+1.1
	0.2nm,0.3s,baz=52,slow=14,SNR=8.7							
KURBB				Lg		Lg	08 48 05.3	
	0.0nm,0.3s,baz=54,slow=35,SNR=1.6							
MKAR	**Makanchi Array**	**7.91**	**199**	Pn		Pn	08 46 53.2	+0.5
	0.3nm,0.3s,baz=25,slow=13,SNR=8.7							
MKAR				Sn		Sn	08 48 23.9	+1.0
	0.1nm,0.3s,baz=16,slow=21,SNR=5.7							
MKAR				Lg		Lg	08 49 08.0	
	0.1nm,0.3s,baz=29,slow=30,SNR=4.2							

*TEH **07** 08:51:30.0,36.20N×45.27E,h6km,ML2.8*
*ISN **07** 08:51:32.4±1.6,36.16N×45.28E,h43km±11km,ML2.7*
ISC 07 08:51:34.3±1.3,36.24N±0.05×45.25E±0.05,h35km,n10, σ1§63/13,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MAHB	**Mahabad**	**0.64**	**35**	*e*Pg		**Pn**	**08 51 44.2**	**-2.9**
MAHB				*e*Sg		**Sn**	**08 51 54.4**	**-1.7**
IKRK	**Kirkuk**	**1.12**	**222**	*e*Pg		**Pn**	**08 51 52.0**	**-1.5**
	baz=45							
IKRK				AML		AML	08 52 05.9	
	comp=N,197nm,0.4s							
IKRK				AML		AML	08 52 06.0	
	comp=E,209nm,0.2s							
IKRK				*e*Sg		**Sn**	**08 52 08.0**	**+0.3**
IAZR	**Azarshahr**	**1.55**	**22**	*e*Pn		**Pn**	**08 51 59.7**	**0.0**
IAZR				*e*			08 52 27.1	
MSL	**Mosul**	**1.73**	**276**	*e*Pn		**Pn**	**08 52 01.0**	**-1.0**
MSL				AML		AML	08 52 22.5	
	comp=N,73nm,0.4s							
MSL				AML		AML	08 52 23.2	
	comp=E,132nm,0.6s							
MSL				*e*Sn		**Sn**	**08 52 24.0**	**+1.1**
IDHR	**Dehrash**	**1.80**	**149**	*e*			08 52 06.2	
IDHR				*e*Pn		**Pn**	**08 52 02.6**	**-0.5**
ILIN	**Lien**	**1.92**	**133**	*e*Pn		**Pn**	**08 52 05.1**	**+0.3**
ISHB	**Shabestar**	**2.06**	**8**	*e*Pn		**Pn**	**08 52 07.7**	**+1.1**
IGHG	**Ghaleghazi**	**2.19**	**150**	*e*			08 52 51.9	
IGHG				*e*Pn		**Pn**	**08 52 08.6**	**+0.1**
IMRD	**Marand**	**2.49**	**8**	*e*Pn		**Pn**	**08 52 15.3**	**+2.7**
IMRD				*e*			08 52 20.3	
IKOM	**Komasi**	**2.77**	**137**	*e*Pn		**Pn**	**08 52 17.8**	**+1.4**
IKOM				*e*			08 52 26.0	

*IDC **07** 08:57:40.8±1.1,28.54S×176.48W,h0km,mb3.8/6, mb1 4.1/6,mb1mx3.8/37,mbtmp3.8/6,MS3.3/2,Ms1 3.3/2, ms1mx2.8/24,Error ellipse: s-maj=40.3km s-min=20.7km az=156.0*
ISC 07 08:57:45.4±1.0,28.6S±0.3×176.5W±0.2,h29km,n9, σ1§45/8,mb3.8/6,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.41**	**242**	Pn		**Pb**	**08 58 10.5**	**-0.6**
	116nm,0.3s,baz=95,slow=21,SNR=2.4							
RAO				Sn		**Sb**	**08 58 30.9**	**+2.2**
	321nm,0.3s,baz=47,slow=20,SNR=7.0							
URZ	**Urewera**	**11.02**	**207**	Pn		Pn	09 00 13.4	-7.6
	0.3nm,0.3s,baz=1.2,slow=4.4,SNR=1.9							
URZ				Sn		Sn	09 02 13.5	-10
	1.4nm,0.3s,baz=152,slow=20,SNR=9.3							
DZM	**Mont Dzumac**	**16.73**	**289**	LR		LR	09 06 56.8	
	comp=Z,110nm,18.7s,baz=102,slow=33							
STKA	**Stephens Creek**	**36.20**	**254**	P		**P**	**09 04 45.4**	**-0.3**
	2.3nm,0.7s,baz=111,slow=6.0,SNR=4.5							
STKA				LR		LR	09 17 37.2	
	comp=Z,46nm,18.1s,baz=28,slow=33							
ASAR	**Alice Springs**	**44.56**	**264**	P		**P**	**09 05 54.1**	**-0.8**
	0.8nm,0.6s,baz=93,slow=7.3,SNR=22							
WRA	**Warramunga Arr**	**45.39**	**270**	P		**P**	**09 06 00.3**	**-1.3**
	0.4nm,0.3s,baz=109,slow=6.3,SNR=10							
QSPA	**South Pole Qui**	**61.51**	**180**	P		**P**	**09 07 58.9**	**-0.5**
	3.1nm,1.0s,baz=40,slow=2.5,SNR=6.7							
NVAR	**Mina Array Bea**	**86.02**	**42**	P		**P**	**09 10 25.0**	**+1.6**
	0.2nm,0.3s,baz=213,slow=6.5,SNR=4.1							
TXAR	**Lajitas Array**	**90.30**	**57**	P		**P**	**09 10 44.0**	**+0.1**
	0.2nm,0.8s,baz=241,slow=3.7,SNR=2.1							

UCR 07 08:59:34.0±1.1,10.13N×84.60W,h71km±3km,MD3.5,2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SRA1	**San Ramn**	**0.12**	**109**	*e*P		Pn	08 59 44.3	-0.3
SRA1				*e*S		Sn	08 59 53.0	+0.8
FORC	**Fortuna**	**0.35**	**348**	*i* P		Pn	08 59 45.0	0.0
FORC				*i* S		Sn	08 59 54.4	+0.3
CEDE	**Laguna Cedeo**	**0.38**	**343**	||*i*P	Pn	08 59 46.0	+0.1
HDC	**Heredia**	**0.49**	**105**	*e*P		Pn	08 59 47.0	+0.1
HDC				*e*S		Sn	08 59 57.5	+1.1
SJS	**Escuela Geolog**	**0.56**	**109**	*e*P		Pn	08 59 47.8	+0.1
SJS				*e*S		Sn	08 59 58.6	+0.9
ACAL	**Aguas Claras**	**0.67**	**319**	||*i*P	Pn	08 59 48.7	0.0
LCR2	**La Lucha 2**	**0.70**	**123**	*e*P		Pn	08 59 48.8	-0.3
LCR2				*e*S		Sn	09 00 00.7	+0.4
PTEN	**Parque Tenorio**	**0.70**	**327**	*i* P		Pn	08 59 49.1	0.0
PTEN				*i* S		Sn	09 00 01.0	+0.8
CUI	**Cuipilapa**	**0.77**	**313**	*i* P		Pn	08 59 49.8	0.0
CUI				*i* S		Sn	09 00 01.7	+0.2
PLVR	**Palo Verde**	**0.78**	**287**	*e*P		Pn	08 59 50.3	+0.3
PLVR				*e*S		Sn	09 00 03.5	+1.6
COLC	**Colonia**	**0.80**	**312**	*i* P		Pn	08 59 50.1	-0.1
HORNC	**Hornillas**	**0.82**	**316**	*i* P		Pn	08 59 50.2	-0.2
LIM1	**Limonal**	**0.86**	**311**	*i* P		Pn	08 59 50.7	-0.2
GUAI	**GUAI**	**0.91**	**279**	*i* P		Pn	08 59 52.0	+0.5
GUAI				*i* S		Sn	09 00 05.1	+0.7
GPS2	**Hotel Rincn d**	**0.97**	**310**	*i* P		Pn	08 59 52.1	-0.1
BUEV	**Buena Vista**	**1.04**	**310**	*e*P		Pn	08 59 52.9	-0.3
LAPC	**Finca la Perla**	**1.04**	**308**	*i* P		Pn	08 59 52.9	-0.3
GB1A	**Borinquen Arri**	**1.05**	**311**	*e*P		Pn	08 59 53.2	-0.1
GB1A				*e*S		Sn	09 00 08.4	+0.8
EDPN	**Palmar Norte**	**1.61**	**136**	*e*S		Sn	09 00 21.9	+1.4
ACON	**Acoyapa**	**1.92**	**343**	*e*P		Pn	09 00 04.8	+0.2

*HEL **07** 09:00:52.8±0.1,64.81N×31.06E,h0km,ML1.7,Explosion*
*KOLA **07** 09:00:53.1,64.80N×30.21E,h0km*
*MOS **07** 09:00:53.5,64.80N×30.84E,M2.8,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*NAO **07** 09:00:54.8±1.5,64.82N×30.70E,ML2.4*
*BER **07** 09:00:56.0±4.0,64.82N×30.51E,h0km,ML1.9,Suspected explosion*
*IDC **07** 09:00:57.3±1.6,64.80N×30.22E,h0km,mb

	comp=Z,0.0nm,0.3s,baz=56,slow=12,SNR=1.3										
NOA					Lg		Lg		09 05 50.5		
	comp=Z,0.0nm,0.3s,baz=36,slow=21,SNR=3.6										

ATH ***07*** *09:03:23.7, 38.°12N×20.°37E, h18km, ML2.4/9, Error ellipse: s-maj=2.1km s-min=1.0km az=59.0*
THE ***07*** *09:03:23.9, 38.°12N×20.°38E, h17km, ML2.8/8, Error ellipse: s-maj=0.8km s-min=0.4km az=235.0*
ISC 07 09:03:23.7±1.2, 38.°12N±0.°04×20.°37E±0.°06, h18km±3km, n37, σ0.°37/57, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.07**	**11**	P			**Pg**	**09 03 27.1**	**0.0**
CHV1				S			**Sg**	**09 03 29.5**	**+0.1**
KEF3	**Kipouria, Keph**	**0.09**	**351**	P			**Pg**	**09 03 27.2**	**-0.1**
KEF3				S			**Sg**	**09 03 29.7**	**0.0**
LXRA	**Lixouri, Kepha**	**0.10**	**34**	P			**Pg**	**09 03 27.6**	**+0.2**
LXRA				S			**Sg**	**09 03 30.3**	**+0.4**
KEF2	**Argostoli. Kep**	**0.11**	**63**	P			**Pg**	**09 03 27.5**	**0.0**
KEF2				S			**Sg**	**09 03 30.1**	**0.0**
ARGA	**Argostoli. Kep**	**0.11**	**56**	P			**Pg**	**09 03 27.5**	**0.0**
ARGA				S			**Sg**	**09 03 30.2**	**+0.2**
ARG2	**Argostoli**	**0.11**	**57**	P			**Pg**	**09 03 27.6**	**+0.1**
ARG2				S			**Sg**	**09 03 30.1**	**0.0**
	36μm,0.1s								
AGT1	**Agia Thekli**	**0.14**	**6**	P			**Pg**	**09 03 27.8**	**0.0**
AGT1				S			**Sg**	**09 03 30.7**	**+0.2**
	15μm,0.2s								
KEF4	**Livadi, Kephal**	**0.15**	**18**	P			**Pg**	**09 03 28.0**	**+0.1**
KEF4				S			**Sg**	**09 03 31.3**	**+0.5**
KEF1	**Kardakata, Kep**	**0.18**	**27**	P			**Pg**	**09 03 28.4**	**0.0**
KEF1				S			**Sg**	**09 03 31.8**	**+0.3**
VLS	**Valsamata**	**0.19**	**71**	P			**Pb**	**09 03 28.4**	**+0.2**
VLS				S			**Sg**	**09 03 31.8**	**+0.1**
	13μm,0.1s								
VLS	**Valsamata**	**0.19**	**71**	P			**Pb**	**09 03 28.4**	**+0.2**
VLS				S			**Sg**	**09 03 31.8**	**+0.1**
VLS					AML		AML	09 03 32.0	
	comp=E,13512μm,0.1s								
VLS					AML		AML	09 03 32.0	
	comp=N,29228μm,0.2s								
VSK1	**VASILIKIADES**	**0.33**	**28**	P			**Pg**	**09 03 30.7**	**-0.1**
VSK1				S			**Sb**	**09 03 36.2**	**+0.1**
	comp=N,3μm,0.2s								
KFL	**Anninata**	**0.33**	**91**	P			**Pg**	**09 03 30.8**	**-0.1**
KFL				S			**Sg**	**09 03 35.8**	**+0.1**
	comp=N,2μm,0.3s								
KFL	**Anninata**	**0.33**	**91**	P			**Pg**	**09 03 30.7**	**-0.1**
KFL				S			**Sb**	**09 03 36.0**	**-0.2**
KFL					AML		AML	09 03 36.6	
	comp=E,4936μm,0.4s								
KFL					AML		AML	09 03 37.7	
	comp=N,2706μm,0.2s								
FSK	**Fiskardo**	**0.38**	**24**	P			**Pg**	**09 03 31.3**	**-0.3**
FSK				S			**Sg**	**09 03 37.2**	**+0.3**
	comp=N,1μm,0.4s								
FSK	**Fiskardo**	**0.38**	**24**	P			**Pg**	**09 03 31.3**	**-0.3**
FSK				S			**Sg**	**09 03 37.1**	**+0.3**
FSK					AML		AML	09 03 38.3	
	comp=E,2656μm,0.2s								
FSK					AML		AML	09 03 40.7	
	comp=N,1311μm,0.6s								
EVGI	**Lefkada island**	**0.55**	**24**	P			**Pg**	**09 03 34.4**	**-0.4**
EVGI				S			**Sb**	**09 03 43.2**	**+0.8**
EVGI	**Lefkada island**	**0.55**	**24**	P			**Pg**	**09 03 34.4**	**-0.4**
EVGI				S			**Sb**	**09 03 43.2**	**+0.8**
MGNA	**Meganis**	**0.63**	**32**	P			**Pb**	**09 03 36.0**	**-0.3**
LKD2	**Lefkada island**	**0.71**	**19**	P			**Pb**	**09 03 37.0**	**-0.6**
LKD2				S			**Sg**	**09 03 47.3**	**+0.1**
	comp=N,258nm,0.3s								
LKD2	**Lefkada island**	**0.71**	**19**	P			**Pb**	**09 03 37.0**	**-0.6**
LKD2					AML		AML	09 03 56.9	
	comp=E,509μm,0.4s								
LKD2					AML		AML	09 03 58.9	
	comp=N,515μm,0.3s								
TSLK	**Tsoukalades, L**	**0.74**	**18**	P			**Pb**	**09 03 37.7**	**-0.4**
TSLK				S			**Sg**	**09 03 48.9**	**+0.7**
	comp=N,275nm,0.5s								
TSLK	**Tsoukalades, L**	**0.74**	**18**	P			**Pb**	**09 03 37.7**	**-0.4**
TSLK					AML		AML	09 03 55.0	
	comp=E,534μm,0.5s								
TSLK					AML		AML	09 03 56.8	
	comp=N,572μm,0.6s								
RLS	**Riolos of Patr**	**0.87**	**94**	P			**Pb**	**09 03 39.8**	**-0.5**
DRO	**Drossia**	**1.07**	**98**	P			**Pb**	**09 03 43.8**	**0.0**
DRO					AML		AML	09 04 10.4	
	comp=E,330μm,0.6s								
DRO					AML		AML	09 04 16.9	
	comp=N,321μm,0.3s								
AMT	**Artemida-Makis**	**1.21**	**118**	P			**Pg**	**09 03 47.9**	**+0.7**
AMT					AML		AML	09 04 12.9	
	comp=E,298μm,0.4s								
AMT					AML		AML	09 04 16.3	
	comp=N,337μm,0.7s								
EFP	**Efpalio**	**1.25**	**75**	P			**Pg**	**09 03 47.4**	**-0.5**
LAKA	**Lakka**	**1.28**	**84**	P			**Pg**	**09 03 48.0**	**-0.4**
ANX	**Ano Chora**	**1.31**	**68**	P			**Pg**	**09 03 48.6**	**-0.5**
ANX					AML		AML	09 04 13.3	
	comp=E,307μm,0.7s								
ANX					AML		AML	09 04 18.7	
	comp=N,329μm,0.5s								
SERG	**Sergoula**	**1.36**	**77**	P			**Pn**	**09 03 47.8**	**-0.1**
TRIZ	**Trizonia**	**1.37**	**79**	P			**Pb**	**09 03 48.4**	**-0.3**
KLV	**Kalavryta, Ach**	**1.41**	**92**	P			**Pb**	**09 03 49.4**	**-0.1**
ITM	**Ithomi**	**1.55**	**127**	P			**Pg**	**09 03 53.2**	**-0.4**
PYL	**PYLOS**	**1.64**	**138**	P			**Pb**	**09 03 53.1**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.65**	**57**	P			**Pb**	**09 03 53.6**	**+0.1**
MAKR					AML		AML	09 04 25.5	
	comp=N,143μm,0.7s								
MAKR					AML		AML	09 04 31.9	
	comp=E,168μm,0.8s								
AGG	**Agios Georgios**	**1.79**	**59**	P			**Pg**	**09 03 57.1**	**-1.0**
THL	**Klokotos Trika**	**1.94**	**41**	P			**Pb**	**09 03 59.1**	**+0.7**

IDC ***07*** *09:38:57.9±1.0, 19.°65N×99.°68E, h0km, mb3.9/8, mb1 3.9/8, mb1mx3.6/45, mbtmp3.9/8, MS3.1/7, Ms1 3.1/7, ms1mx2.8/43, Error ellipse: s-maj=25.1km s-min=12.3km az=100.0*
NEIC ***07*** *09:38:58.2±1.9, 19.°66N±0.°05×99.°58E±0.°03, h10km±1km, mb4.5/14, Error ellipse: s-maj=9.7km s-min=3.9km az=331.0*
ISC 07 09:38:58.8±0.5, 19.°67N±0.°05×99.°55E±0.°07, h10km, n40, σ1§30/38, mb4.2/15, MS3.0/6, Thailand

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHTO	**Chiang Mai**	**1.02**	**214**				**Pg**	**09 39 18.2**	**-0.2**
CHTO					Sg		**Sg**	**09 39 31.3**	**-0.5**
CM09	**Chiang Mai Arr**	**1.33**	**204**	P			**Pn**	**09 39 23.9**	**+0.5**
CM31	**Chiang Mai Arr**	**1.33**	**206**	P			**Pn**	**09 39 23.7**	**+0.3**
CMAR	**Chiang Mai Arr**	**1.33**	**206**	Pg			**Pn**	**09 39 22.9**	**-0.5**
	191nm,0.3s,baz=15,slow=17,SNR=336								
CMAR					Lg		Lg	09 39 42.1	
	466nm,0.3s,baz=33,slow=22,SNR=13								
CM15	**Chiang Mai Arr**	**1.34**	**206**	P			**Pn**	**09 39 23.5**	**-0.1**
CM02	**Chiang Mai Arr**	**1.35**	**205**	P			**Pn**	**09 39 23.5**	**-0.2**
CM02				S			**Sb**	**09 39 42.6**	**+1.0**
CM01	**Chiang Mai Arr**	**1.36**	**205**	P			**Pn**	**09 39 24.0**	**+0.2**
CM04	**Chiang Mai Arr**	**1.37**	**203**	P			**Pn**	**09 39 24.1**	**+0.1**
CM04				S			**Sb**	**09 39 43.1**	**+0.9**
CM13	**Chiang Mai Arr**	**1.38**	**206**	P			**Pn**	**09 39 23.7**	**-0.4**
CM05	**Chiang Mai Arr**	**1.38**	**205**	P			**Pn**	**09 39 24.3**	**+0.1**
SLVN	**Son La**	**4.41**	**67**				**Pn**	**09 40 07.4**	**+1.6**
SLVN					Sn		**Sn**	**09 40 56.2**	**-1.0**
SHL	**Shillong**	**9.20**	**311**	Pn			**Pn**	**09 41 11.1**	**-0.7**
PSI	**Prapat**	**16.77**	**182**	Pn			**P**	**09 42 59.0**	**+2.7**
	0.5nm,0.3s,baz=359,slow=10,SNR=8.2								
PSI					LR		LR	09 48 31.5	
	comp=Z,25nm,21.0s,baz=104,slow=34								
RPSI	**Rantau Prapat**	**16.88**	**182**	P			**Pn**	**09 42 59.0**	**+3.8**
RPSI	**Rantau Prapat**	**16.88**	**182**				**Pn**	**09 42 53.8**	**-1.5**
RPSI					IAmb		IAmb	09 43 02.8	
	comp=Z,19nm,1.4s								
DAV	**Davao City (W)**	**28.19**	**113**	LR			LR	09 56 22.1	
	comp=Z,39nm,18.5s,baz=276,slow=37								
SONM	**Songino Array**	**28.64**	**10**	P			**P**	**09 44 56.8**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=195,slow=9.2,SNR=5.3								
ULN	**Ulaanbaatar**	**28.78**	**11**	P			**P**	**09 44 56.6**	**-0.4**
KDJ	**Kajisay**	**29.33**	**325**	P			**P**	**09 45 04.8**	**+2.8**
KDJ					IAmb		IAmb	09 45 05.9	
	comp=Z,5.0nm,0.9s								
KSRS	**Korea Array**	**30.41**	**48**	LR			LR	09 57 10.8	
	comp=Z,31nm,18.9s,baz=230,slow=36								
MKAR	**Makanchi Array**	**30.53**	**336**	P			**P**	**09 45 13.2**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=147,slow=8.3,SNR=18								
JNU	**Nakatsue**	**30.96**	**58**	P			**P**	**09 45 14.9**	**-1.4**
JNU					IAmb		IAmb	09 45 21.7	
	comp=Z,18nm,1.3s								
AAK	**Ala-Archa**	**31.16**	**323**	P			**P**	**09 45 20.3**	**+2.2**
	comp=Z,1.1nm,0.5s,baz=129,slow=7.8,SNR=5.0								
AAK					LR		LR	09 58 41.2	
	comp=Z,25nm,18.5s,baz=168,slow=38								
AAK	**Ala-Archa**	**31.16**	**323**	P			**P**	**09 45 16.9**	**-1.2**
AAK					IAmb		IAmb	09 45 22.7	
	comp=Z,6.1nm,1.4s								
KAPI	**Kappang**	**31.57**	**139**	P			**P**	**09 45 21.2**	**-0.4**
KKAR	**Karatay Array**	**33.78**	**320**	P			**P**	**09 45 40.4**	**-0.5**
KURBB	**Kurchatov Arra**	**35.10**	**337**	P			**P**	**09 45 52.7**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=147,slow=8.7,SNR=16								
KURK	**Kurchatov**	**35.14**	**337**	P			**P**	**09 45 51.7**	**-0.7**
KURK					IAmb		IAmb	09 45 56.9	
	comp=Z,3.5nm,0.8s								
USRK	**Ussuriysk Ar.**	**36.44**	**41**	LR			LR	10 02 12.8	
	comp=Z,30nm,19.5s,baz=296,slow=38								
KLR	**Kul'dur**	**39.16**	**34**	LR			LR	10 04 49.3	
	comp=Z,34nm,18.0s,baz=236,slow=40								
BVAR	**Borovoye Array**	**40.21**	**333**	P			**P**	**09 46 36.1**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=114,slow=9.6,SNR=4.2								
ERM	**Erimo**	**42.98**	**49**	P			**P**	**09 46 57.2**	**-1.0**
MTN	**Manton Dam**	**44.84**	**134**	P			**P**	**09 47 11.7**	**-1.7**
MTN					IAmb		IAmb	09 47 26.4	
	comp=Z,10.0nm,1.1s								
AKTO	**Aktyubinsk**	**44.91**	**323**	P			**P**	**09 47 14.9**	**+1.4**
	comp=Z,1.5nm,0.8s,baz=131,slow=9.1,SNR=4.9								
AKTO					LR		LR	10 08 52.8	
	comp=Z,25nm,19.9s,baz=119,slow=40								
FITZ	**Fitzroy Crossi**	**45.43**	**144**	P			**P**	**09 47 16.7**	**-1.4**
FITZ					IAmb		IAmb	09 47 34.1	
	comp=Z,5.2nm,1.1s								
WRA	**Warramunga Arr**	**52.07**	**137**	P			**P**	**09 48 09.2**	**0.0**
	comp=Z,0.8nm,1.0s,baz=324,slow=8.1,SNR=3.0								
ASAR	**Alice Springs**	**54.56**	**141**	P			**P**	**09 48 27.3**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=316,slow=7.0,SNR=4.0								
ILGA	**Ilgaz**	**59.30**	**307**	P			**P**	**09 48 59.9**	**-1.3**
ILGA					IAmb		IAmb	09 49 14.5	
	comp=Z,13nm,1.3s								
VTS	**Vitosha**	**67.03**	**309**	P			P	09 49 50.6	-1.8
VTS					IAmb		IAmb	09 50 03.7	
	comp=Z,2.0nm,0.8s								
TOO	**Toolangi**	**71.48**	**143**	P			**P**	**09 50 18.6**	**-1.2**

SJA ***07*** *09:44:48.0±0.6, 34.°66S×72.°27W, h40km, ML3.6, MW3.8*
GUC ***07*** *09:44:50.2±0.7, 34.°78S×71.°76W, h46km±2km, ML3.8*
ISC 07 09:44:51.3±1.1, 34.°76S±0.°04×71.°74W±0.°06, h29km±11km, n21, σ1§04/37, 3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GO05	**Huala**	**0.30**	**211**	*e*P			**Pb**	**09 44 58.5**	**-0.1**
GO05				*e*S			**Sb**	**09 45 04.4**	**+0.8**
BO02	**Sierra Bellavi**	**0.79**	**93**	*i*P			**Pn**	**09 45 05.7**	**-0.9**
BO02				*e*S			**Sb**	**09 45 16.7**	**-0.2**
MT01	**Popeta**	**0.98**	**25**	*i*P			**Pn**	**09 45 07.8**	**-1.3**
MT01				*i* S			**Sn**	**09 45 22.0**	**0.0**
MT01					IAML			09 45 25.7	
	comp=E,3μm,0.2s								
RCDM	**Rinconada Maip**	**1.48**	**32**	*e*P			**Pn**	**09 45 16.3**	**+0.3**
RCDM				*e*S			**Sn**	**09 45 35.8**	**+1.3**
RCDM					IAML			09 45 42.1	
	comp=E,3μm,0.1s								
LMEL	**Las Melosas**	**1.56**	**55**	*e*P			**Pn**	**09 45 17.0**	**-0.3**
LMEL				*e*S			**Sn**	**09 45 37.6**	**+0.9**
LMEL					IAML			09 45 42.9	
	comp=N,3μm,0.2s								
MT02	**Curacav**	**1.57**	**19**	*e*P			**Pn**	**09 45 16.3**	**-1.1**
MT02				*e*S			**Sn**	**09 45 36.8**	**0.0**
MT03	**Universidad Ad**	**1.62**	**39**	*e*P			**Pn**	**09 45 17.7**	**-0.3**
MT03				*e*S			**Sn**	**09 45 39.1**	**+1.1**
FSR	**Penalolen**	**1.62**	**39**	*e*P			**Pn**	**09 45 18.4**	**+0.4**
FSR				*e*S			**Sn**	**09 45 39.3**	**+1.2**
PEL	**Peldehue**	**1.83**	**29**	*e*P			**Pn**	**09 45 20.9**	**+0.1**
PEL				*e*S			**Sn**	**09 45 44.5**	**+1.3**
PEL					IAML			09 45 48.7	
	comp=N,1μm,0.2s								
PEL	**Peldehue**	**1.83**	**29**	*e*P			**Pn**	**09 45 21.0**	**+0.1**
PEL				*e*S			**Sn**	**09 45 46.0**	**+2.8**
FCH	**Farellones**	**1.87**	**41**	*e*P			**Pn**	**09 45 21.5**	**-0.1**
FCH				*e*S			**Sn**	**09 45 46.0**	**+1.6**
FCH					IAML			09 45 51.5	
	comp=N,1μm,0.3s								
ROC1	**El Roble**	**1.88**	**19**	*e*P			**Pn**	**09 45 21.3**	**-0.3**
ROC1				*e*S			**Sn**	**09 45 43.5**	**-1.0**
ROCH	**El Roble**	**1.88**	**19**	*e*P			**Pn**	**09 45 21.4**	**-0.3**
ROCH				*e*S			**Sn**	**09 45 45.5**	**+0.9**
ROCH					IAML			09 45 51.4	
	comp=N,1μm,0.5s								
BI02	**San Fabin de**	**1.94**	**169**	*e*P			**Pn**	**09 45 22.2**	**-0.2**
BI02				*e*S			**Sn**	**09 45 45.5**	**-0.4**
EDS3	**Malargue**	**2.17**	**118**	*e*P			**Pb**	**09 45 29.9**	**-0.1**
VA03	**San Esteban**	**2.22**	**27**	*e*P			**Pn**	**09 45 26.1**	**-0.2**
VA03				*e*S			**Sn**	**09 45 53.0**	**+0.2**
VA03					IAML			09 46 01.6	
	comp=E,1μm,0.3s								
RTLS	**Leoncito**	**3.59**	**35**	*e*P			**Pn**	**09 45 46.9**	**+1.6**
RTLS					IAML			09 46 51.2	
	comp=Z,89nm,1.3s								
RTCV	**Cerro Valdivia**	**3.94**	**44**	*e*P			**Pn**	**09 45 50.3**	**+0.4**
RTCV					IAML			09 47 10.9	
	comp=Z,39nm,3.7s								
RTLL	**Cerro Villicun**	**4.38**	**40**	*e*P			**Pn**	**09 45 56.7**	**+0.7**
AMOG	**MOGNA**	**4.69**	**37**	*e*P			**Pn**	**09 46 00.2**	**0.0**
AMOG				*e*S			**Sb**	**09 47 06.0**	**-2.8**
AMOG					IAML			09 47 06.7	
	comp=Z,57nm,0.4s								
TCA	**Tanti**	**6.90**	**62**	*e*P			**Pn**	**09 46 30.7**	**+0.1**

IDC ***07*** *09:47:15.1±2.3, 17.°13S×70.°39W, h142km±22km, mb3.0/3, mb1 3.4/7, mb1mx3.2/26, mbtmp3.7/7, Error ellipse: s-maj=33.8km s-min=13.8km az=108.0*
ISC 07 09:47:15.8±1.1, 17.°14S±0.°08×70.°4W±0.°1, h150km, n10, σ1§04/9, mb3.2/3, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.28**	**69**	P			**Pn**	**09 47 55.1**	**+0.2**
	11nm,0.3s,baz=275,slow=8.6,SNR=426								
LPAZ					S		**Sn**	**09 48 24.6**	**-0.4**
	2.2nm,0.3s,baz=41,slow=5.1,SNR=7.4								
LVC	**Limon Verde**	**5.61**	**166**	P			**Pn**	**09 48 38.6**	**+1.0**
	0.8nm,0.3s,baz=339,slow=8.1,SNR=11								
LVC					S		**Sn**	**09 49 40.1**	**-1.6**
	1.9nm,0.3s,baz=223,slow=23,SNR=15								
SIV	**San Ignacio**	**8.97**	**84**	P			**Pn**	**09 49 22.2**	**0.0**
	baz=277,slow=13								
H03N1	**Juan Fernandez**	**17.98**	**204**	T			T	10 09 09.9	
	baz=27,slow=73,SNR=9.8								
H03N2	**Juan Fernandez**	**17.98**	**204**	T			T	10 09 10.0	
	baz=27,slow=73,SNR=7.9								
H03N3	**Juan Fernandez**	**17.99**	**204**	T			T	10 09 10.9	
	baz=27,slow=73,SNR=7.1								
PTGA	**Pitinga**	**19.24**	**33**	P			**P**	**09 51 27.3**	**-1.3**
	0.6nm,0.3s,baz=329,slow=19,SNR=2.5								
TXAR	**Lajitas Array**	**56.29**	**325**	P			**P**	**09 56 40.6**	**-0.5**
	0.1nm,0.6s,baz=156,slow=7.5,SNR=2.4								
TORD	**Torodi Ar. Bea**	**77.23**	**72**	P			**P**	**09 58 54.7**	**+0.8**
	0.3nm,0.4s,baz=254,slow=4.8,SNR=5.1								
YKA	**Yellowknife Ar**	**86.64**	**341**	P			**P**	**09 59 42.4**	**+0.4**
	0.2nm,0.6s,baz=135,slow=5.4,SNR=5.4								

MDD ***07*** *09:54:05.2±1.3, 36.°48N×9.°92W, h40km, mbLg2.5/25, Error ellipse: s-maj=11.5km s-min=10.4km az=52.0, PRXIMO*
INMG ***07*** *09:54:06.2±1.1, 36.°55N×9.°78W, h14km±4km, ML2.2, Error ellipse: s-maj=4.5km s-min=3.6km az=46.0*
IGIL ***07*** *09:54:06.2, 36.°55N×9.°78W, h14km, ML2.0*
CNRM ***07*** *09:54:09.2±2.0, 36.°20N×9.°50W, h40km, Error ellipse: s-maj=18.4km s-min=8.2km az=87.0*
ISC 07 09:54:02.3±1.7, 36.°44N±0.°05×9.°98W±0.°08, h35km, n60, σ1§69/110, 6C-1D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.16**	**53**	P			**Pn**	**09 54 23.4**	**+1.4**
	16nm,0.3s,SNR=18								
PFVI					S		**Sn**	**09 54 36.3**	**-0.3**
	24nm,0.1s,SNR=10								
PFVI	**Vila Bisbo**	**1.16**	**53**	*i*P			**Pn**	**09 54 23.4**	**+1.4**
PFVI				*e*S			**Sn**	**09 54 36.4**	**-0.2**
PFVI					A		A	09 54 37.3	
	21nm,0.3s								
MORF	**Marmelete**	**1.37**	**50**	*e*P			**Pn**	**09 54 26.5**	**+1.5**
MORF				*e*S			**Sn**	**09 54 41.3**	**-0.8**
MORF					AML		AML	09 54 43.7	
	comp=N,32nm,0.2s								
MORF	**Marmelete**	**1.37**	**50**	P			**Pn**	**09 54 26.5**	**+1.5**
MORF				S			**Sn**	**09 54 41.3**	**-0.8**
	comp=N,32nm,0.2s								
MORF	**Marmelete**	**1.37**	**50**	*e*P			**Pn**	**09 54 26.5**	**+1.5**
MORF				*e*S			**Sn**	**09 54 42.1**	**+0.1**
MORF					A		A	09 54 42.4	
	comp=N,15nm,0.1s								
PTEO	**Sao Teotonio**	**1.49**	**42**	P			**Pn**	**09 54 28.2**	**+1.5**
PTEO				S			**Sn**	**09 54 45.1**	**+0.2**
	comp=N,6.3nm,0.3s								
PTEO	**Sao Teotonio**	**1.49**	**42**	*e*P			**Pn**	**09 54 28.2**	**+1.5**
PTEO				*e*S			**Sn**	**09 54 45.1**	**+0.2**
PTEO					A		A	09 54 45.8	
	comp=N,13nm,0.3s								
PBDV	**Barranco-do-Ve**	**1.83**	**63**	P			**Pn**	**09 54 33.0**	**+1.7**
PBDV				S			**Sn**	**09 54 52.9**	**-0.3**
	comp=N,5.2nm,0.2s								
PBDV	**Barranco-do-Ve**	**1.83**	**63**	*e*P			**Pn**	**09 54 33.0**	**+1.7**
PBDV				*e*S			**Sn**	**09 54 52.9**	**-0.3**
PBDV					A		A	09 54 56.7	
	comp=N,5.2nm,0.2s								
PCVE	**Castro Verde**	**1.96**	**52**	P			**Pn**	**09 54 34.9**	**+1.9**
PCVE				S			**Sn**	**09 54 56.5**	**+0.1**
	comp=N,7.3nm,0.3s								
PCVE	**Castro Verde**	**1.96**	**52**	*e*Pn			**Pn**	**09 54 34.9**	**+1.9**
PCVE				*e*Sn			**Sn**	**09 54 56.5**	**+0.1**
PCVE					A		A	09 54 58.8	
	comp=N,7.3nm,0.3s								
MESJ	**Messejana**	**1.98**	**45**	*e*P			**Pn**	**09 54 35.0**	**+1.6**
MESJ				*e*S			**Sn**	**09 54 56.0**	**-1.0**
MESJ					AML		AML	09 55 00.5	
	comp=N,11nm,0.0s								
MESJ	**Messejana**	**1.98**	**45**	P			**Pn**	**09 54 35.0**	**+1.6**
MESJ				S			**Sn**	**09 54 56.0**	**-1.0**
	comp=N,11nm,0.0s								
MESJ	**Messejana**	**1.98**	**45**	*e*Pn			**Pn**	**09 54 35.0**	**+1.6**
MESJ				*e*Sn			**Sn**	**09 54 56.5**	**-0.5**
MESJ					A		A	09 54 59.4	
	comp=N,8.3nm,1.3s								
PNCL	**Nicolau / Gran**	**2.03**	**34**	P			**Pn**	**09 54 35.5**	**+1.4**
PNCL				S			**Sn**	**09 54 57.9**	**-0.3**
	comp=N,9.5nm,0.1s								
PNCL	**Nicolau / Gran**	**2.03**	**34**	*e*Pn			**Pn**	**09 54 35.5**	**+1.4**
PNCL				*e*Sn			**Sn**	**09 54 57.9**	**-0.3**
PNCL					A		A	09 55 00.2	
	comp=N,9.5nm,0.1s								
PVAQ	**Vaqueiros**	**2.05**	**61**	P			**Pn**	**09 54 36.0**	**+1.7**
PVAQ				S			**Sn**	**09 54 58.2**	**-0.5**
	comp=N,7.6nm,0.5s								
PVAQ	**Vaqueiros**	**2.05**	**61**	P			**Pn**	**09 54 36.6**	**+2.3**
PVAQ				S			**Sn**	**09 55 03.0**	**+4.3**
PVAQ	**Vaqueiros**	**2.05**	**61**	*e*Pn			**Pn**	**09 54 36.0**	**+1.7**
PVAQ				*e*Sn			**Sn**	**09 54 58.2**	**-0.5**
PVAQ					A		A	09 55 01.5	
	comp=N,7.6nm,0.5s								
EGRO	**El Granado**	**2.28**	**60**	P			**Pn**	**09 54 39.1**	**+1.6**
	comp=N,1.4nm,0.1s,SNR=7.9								
EGRO					S		**Sn**	**09 55 03.9**	**-0.4**
	comp=N,5.3nm,0.1s,SNR=7.9								
PBEJ	**Beja**	**2.31**	**46**	P			**Pn**	**09 54 39.2**	**+1.2**
PBEJ				S			**Sn**	**09 55 04.4**	**-0.8**
	comp=N,2.7nm,0.2s								
PBEJ	**Beja**	**2.31**	**46**	*e*Pn			**Pn**	**09 54 39.2**	**+1.2**
PBEJ				*e*Sn			**Sn**	**09 55 04.4**	**-0.8**
PBEJ					A		A	09 55 08.3	
	comp=N,5.3nm,0.2s								
PMAFR	**Mafra**	**2.57**	**12**	P			**Pn**	**09 54 42.8**	**+1.2**
	comp=N,23nm,0.7s,SNR=6.2		

comp=N,0.7nm,0.1s,SNR=7.9
PAB S Sn 09 56 17.9 -4.1
comp=N,0.5nm,0.3s,SNR=7.9
MD31 MD31 5.58 128 P Pn 09 55 24.3 +1.3
MD31 S Sn 09 56 22.1 -3.8
ELOB Lobios 5.62 15 P Pn 09 55 24.3 +0.8
comp=N,0.4nm,0.1s,SNR=7.9
ELOB S Sn 09 56 23.1 -3.8
comp=N,1.1nm,0.1s,SNR=7.9
PGAV Gavieira, Arco 5.68 13 P Pn 09 55 26.1 +1.8
PGAV S Sn 09 56 26.0 -2.3
comp=N,1.7nm,0.5s
PGAV Gavieira, Arco 5.68 13 *e*Pn Pn 09 55 26.1 +1.8
PGAV *e*Sn Sn 09 56 26.0 -2.3
PGAV A A 09 56 28.8
comp=N,1.7nm,0.5s
MDT Midelt 5.71 128 P Pn 09 55 24.9 +0.1
MDT S Sn 09 56 24.4 -4.8
PBRG Braganca 5.92 24 S Sn 09 56 31.4 -2.8
comp=N,0.9nm,0.2s
PBRG Braganca 5.92 24 *e*Sn Sn 09 56 31.4 -2.8
PBRG A A 09 56 32.2
comp=N,1.8nm,0.2s
ECAL Calabor 6.04 24 P Pn 09 55 30.5 +1.2
comp=N,0.8nm,0.1s,SNR=7.9
ECAL S Sn 09 56 35.5 -1.8
comp=N,2.7nm,0.2s,SNR=7.9
ETOB Tobarra 7.05 69 P Pn 09 55 43.8 +0.7
comp=N,0.5nm,0.2s,SNR=7.9

*MDD **07** 10:10:41.0±1.1,37°.12N×10°.13W,h11km±9km,mbLg3.1/45, Error ellipse: s-maj=13.5km s-min=5.2km az=49.0, PRXIMO*
*CNRM **07** 10:10:41.2,36°.75N×10°.04W,h54km*
*INMG **07** 10:10:41.8±1.2,37°.03N×10°.19W,h22km±18km, MD2.7, ML2.8, Error ellipse: s-maj=18.0km s-min=2.6km az=58.0*
*IGIL **07** 10:10:41.6,37°.00N×10°.22W,h29km, ML3.0*
ISC 07 10:10:38.6±2.1,37°09N±0°.05×10°18W±0°.08,h24km±14km, **n95,σ1§77**/159, **4C-4D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PFVI	**Vila Bisbo**	**1.08**	**88**	⇓P		**Pn**	**10 11 00.0**	**+1.7**
	9.8nm,0.3s,SNR=18							
PFVI				S		**Sn**	**10 11 13.6**	**+0.9**
	644nm,0.1s,SNR=33							
PFVI	**Vila Bisbo**	**1.08**	**88**	P		**Pn**	**10 10 59.7**	**+1.4**
PFVI				S		**Sn**	**10 11 13.2**	**+0.5**
PFVI	**Vila Bisbo**	**1.08**	**88**	⇓*e*P		**Pn**	**10 11 00.0**	**+1.7**
PFVI				*e*S		**Sn**	**10 11 13.9**	**+1.3**
PFVI				A		A	10 11 14.7	
	195nm,0.2s							
MORF	**Marmelete**	**1.24**	**80**	*e*P		**Pb**	**10 11 02.4**	**+1.0**
MORF				*e*S		**Sb**	**10 11 17.4**	**+0.4**
MORF				AML		AML	10 11 19.0	
	comp=N,361nm,0.1s							
MORF	**Marmelete**	**1.24**	**80**	P		**Pb**	**10 11 02.4**	**+1.0**
MORF				S		**Sb**	**10 11 17.4**	**+0.4**
	comp=N,361nm,0.1s							
MORF	**Marmelete**	**1.24**	**80**	⇑*e*P		**Pb**	**10 11 02.4**	**+1.0**
MORF				*e*S		**Sb**	**10 11 17.7**	**+0.7**
MORF				A		A	10 11 18.4	
	comp=N,213nm,0.2s							
PTEO	**Sao Teotonio**	**1.25**	**68**	P		**Pb**	**10 11 02.8**	**+1.4**
PTEO				S		**Sb**	**10 11 18.7**	**+1.6**
	comp=N,42nm,0.3s							
PTEO	**Sao Teotonio**	**1.25**	**68**	*e*P		**Pb**	**10 11 02.8**	**+1.4**
PTEO				*e*S		**Sb**	**10 11 18.7**	**+1.6**
PTEO				A		A	10 11 19.7	
	comp=N,84nm,0.3s							
PNCL	**Nicolau / Gran**	**1.66**	**52**	P		**Pb**	**10 11 08.6**	**+0.1**
PNCL				S		**Sb**	**10 11 28.6**	**-0.4**
	comp=N,73nm,0.5s							
PNCL	**Nicolau / Gran**	**1.66**	**52**	⇑*e*Pn		**Pb**	**10 11 08.6**	**+0.1**
PNCL				*e*Sn		**Sb**	**10 11 28.6**	**-0.4**
PNCL				A		A	10 11 30.9	
	comp=N,73nm,0.5s							
MESJ	**Messejana**	**1.73**	**64**	*e*P		**Pn**	**10 11 09.3**	**+2.1**
MESJ				*e*S		**Sb**	**10 11 29.5**	**-1.5**
MESJ				AML		AML	10 11 32.9	
	comp=E,64nm,0.1s							
MESJ	**Messejana**	**1.73**	**64**	P		**Pn**	**10 11 09.3**	**+2.1**
MESJ				S		**Sb**	**10 11 29.5**	**-1.5**
	comp=E,64nm,0.1s							
MESJ	**Messejana**	**1.73**	**64**	*e*Pn		**Pn**	**10 11 09.3**	**+2.1**
MESJ				*e*Sn		**Sb**	**10 11 30.2**	**-0.8**
MESJ				A		A	10 11 35.4	
	comp=E,33nm,0.3s							
PCVE	**Castro Verde**	**1.79**	**72**	P		**Pn**	**10 11 10.2**	**+2.2**
PCVE				S		**Sb**	**10 11 31.3**	**-1.4**
	comp=E,62nm,0.2s							
PCVE	**Castro Verde**	**1.79**	**72**	⇑*e*Pn		**Pn**	**10 11 10.2**	**+2.2**
PCVE				*e*Sn		**Sb**	**10 11 31.3**	**-1.4**
PCVE				A		A	10 11 32.2	
	comp=E,62nm,0.2s							
PBDV	**Barranco-do-Ve**	**1.81**	**85**	P		**Pn**	**10 11 10.2**	**+1.9**
PBDV				S		**Sb**	**10 11 31.3**	**-1.9**
	comp=E,66nm,0.2s							
PBDV	**Barranco-do-Ve**	**1.81**	**85**	⇓*e*Pn		**Pn**	**10 11 10.2**	**+1.9**
PBDV				*e*Sn		**Sb**	**10 11 31.3**	**-1.9**
PBDV				A		A	10 11 32.9	
	comp=E,66nm,0.2s							
PMAFR	**Mafra**	**1.99**	**21**	P		**Pn**	**10 11 12.9**	**+2.1**
	comp=E,3.8nm,0.1s,SNR=5.6							
PMAFR				S		**Sb**	**10 11 37.0**	**-1.4**
	comp=E,68nm,0.2s,SNR=12							
PMAFR	**Mafra**	**1.99**	**21**	*e*Pn		**Pn**	**10 11 12.9**	**+2.1**
PMAFR				*e*Sn		**Sb**	**10 11 36.8**	**-1.7**
PMAFR				A		A	10 11 38.3	
	comp=E,61nm,0.1s							
PVAQ	**Vaqueiros**	**1.99**	**80**	P		**Pn**	**10 11 12.9**	**+2.1**
PVAQ				S		**Sb**	**10 11 36.1**	**-2.4**
	comp=E,78nm,0.1s							
PVAQ	**Vaqueiros**	**1.99**	**80**	P		**Pn**	**10 11 12.6**	**+1.8**
PVAQ				S		**Sb**	**10 11 36.2**	**-2.4**
PVAQ	**Vaqueiros**	**1.99**	**80**	*e*Pn		**Pn**	**10 11 12.9**	**+2.1**
PVAQ				*e*Sn		**Sb**	**10 11 36.1**	**-2.4**
PVAQ				A		A	10 11 38.3	
	comp=E,78nm,0.1s							
PBEJ	**Beja**	**2.06**	**62**	P		**Pn**	**10 11 14.2**	**+2.4**
PBEJ				S		**Sb**	**10 11 38.1**	**-2.5**
	comp=E,14nm,0.6s							
PBEJ	**Beja**	**2.06**	**62**	*e*Pn		**Pn**	**10 11 14.2**	**+2.4**
PBEJ				*e*Sn		**Sb**	**10 11 38.1**	**-2.5**
PBEJ				A		A	10 11 40.5	
	comp=E,28nm,0.6s							
EGRO	**El Granado**	**2.20**	**78**	P		**Pn**	**10 11 15.5**	**+1.9**
	comp=E,3.8nm,0.1s,SNR=28							
EGRO				S		**Sn**	**10 11 40.5**	**+0.5**
	comp=E,63nm,0.1s							
EVO	**Evora**	**2.24**	**49**	P		**Pn**	**10 11 16.4**	**+2.2**
EVO				S		**Sb**	**10 11 42.7**	**-2.9**
	comp=E,82nm,0.1s							
EVO	**Evora**	**2.24**	**49**	*e*P		**Pn**	**10 11 16.9**	**+2.7**
EVO				*e*S		**Sb**	**10 11 42.4**	**-3.2**
EVO	**Evora**	**2.24**	**49**	*e*Pn		**Pn**	**10 11 16.4**	**+2.2**
EVO				*e*Sn		**Sb**	**10 11 42.7**	**-2.9**
EVO				A		A	10 11 44.5	
	comp=E,82nm,0.1s							
PMTG	**Montargil**	**2.50**	**37**	P		**Pn**	**10 11 19.7**	**+1.9**
PMTG				S		**Sn**	**10 11 48.4**	**+0.7**
	comp=E,18nm,0.2s							
PMTG	**Montargil**	**2.50**	**37**	⇓*e*Pn		**Pn**	**10 11 19.7**	**+1.9**
PMTG				*e*Sn		**Sn**	**10 11 48.4**	**+0.7**
PMTG				A		A	10 11 54.3	
	comp=E,18nm,0.2s							
PSBE	**So Bento**	**2.65**	**24**	*e*Pn		**Pn**	**10 11 22.5**	**+2.6**
PSBE				*e*Sn		**Sn**	**10 11 53.6**	**+2.3**
PSBE				A		A	10 11 57.3	
	comp=E,22nm,0.6s							
PESTR	**Estremoz**	**2.71**	**48**	P		**Pb**	**10 11 25.4**	**-0.9**
PESTR				S		**Sn**	**10 11 52.7**	**0.0**
PESTR	**Estremoz**	**2.71**	**48**	*e*Pn		**Pn**	**10 11 22.9**	**+2.2**
PESTR				*e*Sn		**Sb**	**10 11 54.1**	**-5.0**
PESTR				A		A	10 11 57.1	
	comp=E,13nm,0.2s							
PBAR	**Barrancos**	**2.72**	**66**	P		**Pn**	**10 11 23.5**	**+2.7**
PBAR				S		**Sn**	**10 11 53.7**	**+0.8**
	comp=E,30nm,0.2s							
PBAR	**Barrancos**	**2.72**	**66**	*e*Pn		**Pn**	**10 11 23.5**	**+2.7**
PBAR				*e*Sn		**Sn**	**10 11 53.7**	**+0.8**
PBAR				A		A	10 11 55.7	
	comp=E,30nm,0.2s							
EMIN	**Mina Concepcio**	**2.88**	**75**	P		**Pn**	**10 11 24.6**	**+1.7**
	comp=E,2.7nm,0.3s,SNR=51							
EMIN				S		**Sn**	**10 11 57.0**	**+0.2**
	comp=E,41nm,0.2s							
EBAD	**Badajoz**	**3.01**	**56**	P		**Pn**	**10 11 26.4**	**+1.7**
	comp=E,1.5nm,0.4s,SNR=11							
EBAD				S		**Sn**	**10 12 00.7**	**+0.6**
	comp=E,28nm,0.1s							
PMRV	**Marv??o**	**3.20**	**42**	P		**Pn**	**10 11 29.3**	**+1.8**
PMRV				S		**Sn**	**10 12 04.9**	**0.0**
	comp=E,22nm,0.2s							
PMRV	**Marv??o**	**3.20**	**42**	*e*Pn		**Pn**	**10 11 29.3**	**+1.8**
PMRV				*e*Sn		**Sn**	**10 12 04.9**	**0.0**
PMRV				A		A	10 12 07.7	
	comp=E,22nm,0.2s							
PCAS	**Casmilo, Conde**	**3.24**	**24**	P		**Pn**	**10 11 31.3**	**+3.4**
PCAS				S		**Sn**	**10 12 06.9**	**+1.2**
	comp=E,9.8nm,0.3s							
PCAS	**Casmilo, Conde**	**3.24**	**24**	*e*Pn		**Pn**	**10 11 31.3**	**+3.4**
PCAS				*e*Sn		**Sn**	**10 12 06.9**	**+1.2**
PCAS				A		A	10 12 11.0	
	comp=E,9.8nm,0.3s							
COI	**Coimbra**	**3.40**	**23**	S		**Sn**	**10 12 11.1**	**+1.3**
COI	**Coimbra**	**3.40**	**23**	*e*Sn		**Sn**	**10 12 11.1**	**+1.3**
PCBR	**Castelo Branco**	**3.47**	**37**	P		**Pn**	**10 11 33.4**	**+2.3**
PCBR				S		**Sn**	**10 12 11.8**	**+0.4**
	comp=E,3.7nm,0.3s							
PCBR	**Castelo Branco**	**3.47**	**37**	*e*Pn		**Pn**	**10 11 33.4**	**+2.3**
PCBR				*e*Sn		**Sn**	**10 12 11.8**	**+0.4**
PCBR				A		A	10 12 17.0	
	comp=E,7.4nm,0.3s							
ESPR	**Espera**	**3.47**	**92**	P		**Pn**	**10 11 32.9**	**+1.8**
	comp=E,8.2nm,0.3s,SNR=14							
ESPR				S		**Sn**	**10 12 11.3**	**-0.2**
	comp=E,62nm,0.3s							
MTE	**Manteigas**	**3.89**	**31**	S		**Sn**	**10 12 22.7**	**+0.7**
	comp=E,4.5nm,0.1s							
MTE	**Manteigas**	**3.89**	**31**	*e*Sn		**Sn**	**10 12 22.7**	**+0.7**
MTE				A		A	10 12 24.4	
	comp=E,9.0nm,0.1s							
ECAB	**El Cabril**	**3.91**	**74**	⇑P		**Pn**	**10 11 38.8**	**+1.6**
	comp=E,6.9nm,0.3s,SNR=18							
ECAB				S		**Sn**	**10 12 21.9**	**-0.4**
	comp=E,18nm,0.2s							
HORN	**Hornachuelos**	**3.99**	**78**	P		**Pn**	**10 11 40.1**	**+1.9**
HORN				S		**Sn**	**10 12 24.6**	**+0.3**
PVIS	**Viseu**	**4.03**	**26**	S		**Sn**	**10 12 25.4**	**0.0**
	comp=E,6.1nm,0.2s							
PVIS	**Viseu**	**4.03**	**26**	*e*Sn		**Sn**	**10 12 25.4**	**0.0**
PVIS				A		A	10 12 27.6	
	comp=E,12nm,0.2s							
CEU	**Ceuta**	**4.05**	**106**	P		**Pn**	**10 11 41.3**	**+2.2**
CEU				S		**Sn**	**10 12 26.1**	**+0.2**
CEU	**Ceuta**	**4.05**	**106**	*e*P		**Pn**	**10 11 41.3**	**+2.2**
CEU				*e*S		**Sn**	**10 12 26.1**	**+0.2**
SMIR	**Smir Dam**	**4.12**	**109**	P		**Pn**	**10 11 40.6**	**+0.5**
RSA	**Sarsar**	**4.17**	**121**	P		**Pn**	**10 11 39.9**	**-0.9**
EMIJ	**Mijas**	**4.37**	**95**	P		**Pn**	**10 11 45.1**	**+1.5**
	comp=E,0.5nm,0.1s,SNR=7.9							
EMIJ				S		**Sn**	**10 12 33.6**	**-0.1**
	comp=E,6.7nm,0.3s,SNR=7.9							
EPLA	**Plasencia**	**4.37**	**46**	P		**Pn**	**10 11 45.3**	**+1.7**
	comp=E,0.0nm,0.1s,SNR=7.9							
EPLA				S		**Sn**	**10 12 34.3**	**+0.5**
	comp=E,13nm,0.2s,SNR=14							
CHEFC	**Chefchaouen**	**4.39**	**115**	P		**Pn**	**10 11 43.8**	**-0.2**
EADA	**Adamuz**	**4.58**	**75**	P		**Pn**	**10 11 48.3**	**+1.9**
	comp=E,2.3nm,0.3s,SNR=17							
EADA				S		**Sn**	**10 12 38.3**	**-0.5**
	comp=E,32nm,0.1s,SNR=13							
PVRL	**Vila Real**	**4.59**	**24**	S		**Sn**	**10 12 38.7**	**-0.6**
	comp=E,7.8nm,0.3s							
PVRL	**Vila Real**	**4.59**	**24**	*e*Sn		**Sn**	**10 12 38.7**	**-0.6**
PVRL				A		A	10 12 40.6	
	comp=E,16nm,0.3s							
ZHG	**ZHG**	**4.65**	**140**	P		Pn	10 11 46.1	-1.4
ZHG				S		Sn	10 12 34.0	-6.7
MVO	**Moncorvo**	**4.75**	**30**	P		**Pn**	**10 11 50.5**	**+1.7**
	comp=E,0.1nm,0.2s,SNR=7.9							
MVO				S		**Sn**	**10 12 41.3**	**-1.7**
	comp=E,5.6nm,0.1s,SNR=7.3							
MVO	**Moncorvo**	**4.75**	**30**	*e*Pn		**Pn**	**10 11 51.0**	**+2.3**
MVO				*e*Sn		**Sn**	**10 12 42.4**	**-0.7**
MVO				A		A	10 12 45.7	
	comp=E,9.0nm,0.3s							
EGOR	**Sierra Gorda,**	**4.86**	**88**	S		**Sn**	**10 12 45.5**	**-0.3**
	comp=E,5.1nm,0.2s,SNR=7.9							
PCAB	**Cabril**	**4.90**	**19**	S		**Sn**	**10 12 46.3**	**-0.5**
PCAB	**Cabril**	**4.90**	**19**	*e*Sn		**Sn**	**10 12 46.3**	**-0.5**
SRHM	**Skhour des Reh**	**4.98**	**157**	P		Pn	10 11 51.8	-0.2
ELOB	**Lobios**	**5.04**	**18**	P		**Pn**	**10 11 54.8**	**+2.0**
	comp=E,0.5nm,0.1s,SNR=7.9							
ELOB				S		**Sn**	**10 12 48.6**	**-1.8**
	comp=E,5.0nm,0.1s,SNR=4.6							
PGAV	**Gavieira, Arco**	**5.08**	**16**	P		**Pn**	**10 11 55.4**	**+2.0**
PGAV				S		**Sn**	**10 12 50.5**	**-0.9**
	comp=E,4.6nm,0.3s							
PGAV	**Gavieira, Arco**	**5.08**	**16**	*e*Pn		**Pn**	**10 11 55.4**	**+2.0**
PGAV				*e*Sn		**Sn**	**10 12 50.5**	**-0.9**
PGAV				A		A	10 12 53.8	
	comp=E,4.6nm,0.3s							
EZAM	**Zamans**	**5.18**	**12**	P		**Pn**	**10 11 56.1**	**+1.5**
	comp=E,3.1nm,0.2s,SNR=7.9							
EZAM				S		**Sn**	**10 12 51.4**	**-2.2**
	comp=E,1.1nm,0.0s,SNR=7.9							
PAB	**San Pablo**	**5.20**	**60**	P		**Pn**	**10 11 57.0**	**+2.0**
	comp=E,0.2nm,0.1s,SNR=7.9							
PAB				S		**Sn**	**10 12 52.4**	**-1.9**
	comp=E,6.4nm,0.2s,SNR=7.9							
ELGU	**Los Guajares,**	**5.25**	**90**	P		**Pn**	**10 11 58.2**	**+2.5**
	comp=E,0.3nm,0.1s,SNR=7.9							
ELGU				S		**Sn**	**10 12 55.1**	**-0.5**
	comp=E,6.2nm,0.1s,SNR=7.9							
EQUE	**Quentar**	**5.39**	**87**	S		**Sn**	**10 12 58.6**	**-0.4**
	comp=E,5.0nm,0.3s,SNR=4.5							
PBRG	**Braganca**	**5.41**	**28**	S		**Sn**	**10 12 57.2**	**-2.1**
	comp=E,2.3nm,0.2s							
PBRG	**Braganca**	**5.41**	**28**	*e*Sn		**Sn**	**10 12 57.2**	**-2.1**
PBRG				A		A	10 13 00.9	
	comp=E,4.7nm,0.2s							
ESDC	**Sonseca Array**	**5.52**	**60**	P		**Pn**	**10 12 01.3**	**+1.9**
	comp=E,0.7nm,0.3s,baz=243,slow=13,SNR=7.3							
ESDC				S		**Sn**	**10 13 02.0**	**-0.2**
	comp=E,3.2nm,0.2s,baz=244,slow=23,SNR=19							
ECAL	**Calabor**	**5.53**	**28**	P		**Pn**	**10 12 01.4**	**+2.0**
	comp=E,1.0nm,0.2s,SNR=7.9							
ECAL				S		**Sn**	**10 13 00.9**	**-1.4**
	comp=E,6.1nm,0.2s,SNR=5.5							
EQES	**Quesada**	**5.70**	**81**	P		**Pn**	**10 12 03.2**	**+1.3**
	comp=E,0.3nm,0.1s,SNR=7.9							
EQES				S		**Sn**	**10 13 05.6**	**-1.1**
	comp=E,10nm,0.2s,SNR=9.4							
AKLM	**AKL**	**5.75**	**115**	S		**Sn**	**10 13 05.6**	**-2.1**
EBER	**Berja**	**5.84**	**90**	P		**Pn**	**10 12 05.3**	**+1.5**
	comp=E,0.0nm,0.1s,SNR=7.9							
EBER				S		**Sn**	**10 13 09.0**	**-1.2**
	comp=E,3.4nm,0.3s,SNR=7.9							
CZD	**Col de Zad**	**5.85**	**132**	P		**Pn**	**10 12 03.1**	**-1.0**
CZD				S		Sn	10 13 03.5	-7.1
GUD	**Guadarrama**	**5.89**	**51**	P		**Pn**	**10 12 04.7**	**+0.2**
	comp=E,0.7nm,0.3s,SNR=7.9							
GUD				S		**Sn**	**10 13 10.1**	**-1.2**
	comp=E,5.2nm,0.3s,SNR=7.7							
EMAZ	**Mazaricos**	**5.92**	**9**	S		**Sn**	**10 13 08.5**	**-3.3**
	comp=E,7.6nm,0.2s,SNR=7.9							
EAGO	**Agolada(Pontev**	**5.92**	**15**	P		**Pn**	**10 12 07.2**	**+2.3**
	comp=E,0.6nm,0.1s,SNR=7.9							
EAGO				S		**Sn**	**10 13 09.1**	**-2.8**
	comp=E,2.9nm,0.1s,SNR=7.9							
MD31	**MD31**	**6.13**	**132**	P		Pn	10 12 06.5	-1.3
MD31				S		Sn	10 13 09.5	-7.8
SESP	**Santiago Espad**	**6.15**	**78**	S		**Sn**	**10 13 16.4**	**-1.4**
	comp=E,6.1nm,0.1s,SNR=7.9							
SESP	**Santiago Espad**	**6.15**	**78**	P		**Pn**	**10 12 10.2**	**+2.1**
OUK	**Oukaimeden**	**6.18**	**161**	P		Pn	10 12 06.0	-2.7
MDT	**Midelt**	**6.26**	**131**	P		**Pn**	**10 12 08.5**	**-1.1**
MDT				S		Sn	10 13 14.0	-6.5
ETOB	**Tobarra**	**7.00**	**75**	P		**Pn**	**10 12 20.9**	**+1.2**
	comp=E,0.2nm,0.2s,SNR=7.9							
ETOB				S		**Sn**	**10 13 35.4**	**-3.3**
	comp=E,2.0nm,0.2s,SNR=7.9							
EARI	**Arriondas**	**7.27**	**30**	P		**Pn**	**10 12 24.2**	**+0.9**
	comp=E,0.6nm,0.3s,SNR=7.9							
EARI				S		**Sn**	**10 13 42.0**	**-3.2**
	comp=E,1.0nm,0.3s,SNR=7.9							
ETOR	**Torete**	**7.34**	**57**	P		**Pn**	**10 12 25.9**	**+1.5**
	comp=E,0.3nm,0.2s,SNR=7.9							
ETOR				S		**Sn**	**10 13 43.9**	**-3.1**
	comp=E,17nm,0.2s,SNR=7.9							

*IDC **07** 10:41:38.6±4.3,31°.92S×179°.86E,h316km±37km,mb3.5/4, mb1 3.7/5,mb1mx3.3/28,mbtmp4.3/5, Error ellipse: s-maj=40.3km s-min=20.7km az=41.0*
*NEIC **07** 10:41:39.0±0.7,32°.2S±0°.1×179°.9E±0°.1,h329km±11km, mb4.0/15, Error ellipse: s-maj=19.5km s-min=16.7km az=216.0*
*WEL **07** 10:41:46.6±0.3,33°S±5°×17°9W±1°.1,h334km±5km, M4.0/46,mB4.6/30,MLv5.0/46,Mw(mB)3.9/30*
ISC 07 10:41:43.0±0.8,32°22S±0°07×179°8E±0°.1,h363km, **n92,** **σ1§77**/109, **mb3.9**/12, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GLKZ	**Green Lake**	**3.54**	**34**	P		**Pn**	**10 42 50.5**	**+2.1**
GLKZ				S		**S**	**10 43 40.7**	**-0.3**
MXZ	**Matakaoa Point**	**5.47**	**193**	P		**Pn**	**10 43 10.3**	**+2.1**
MXZ				S		**S**	**10 44 16.6**	**-0.8**
MXZ	**Matakaoa Point**	**5.47**	**193**	Pn		**Pn**	**10 43 04.1**	**-4.2**
MXZ						**S**	**10 44 13.4**	**-3.9**
WMGZ	**Waiomatatini S**	**5.70**	**191**	P		**Pn**	**10 43 12.3**	**+1.5**
WMGZ				S		**S**	**10 44 21.6**	**-0.5**
HAZ	**Te Kaha**	**5.77**	**196**	P		**Pn**	**10 43 13.1**	**+1.6**
HAZ				S		**S**	**10 44 21.1**	**-2.3**
PKGZ	**Pakihiroa**	**5.83**	**194**	P		**Pn**	**10 43 14.4**	**+2.1**
PKGZ				S		**S**	**10 44 22.8**	**-2.0**
PUZ	**Puketiti**	**5.97**	**192**	P		**Pn**	**10 43 14.6**	**+0.7**
PUZ				S		**S**	**10 44 25.9**	**-1.8**
OUZ	**Omahuta**	**5.98**	**238**			**Pn**	**10 43 11.7**	**-2.2**
RUGZ	**Raukumara Rang**	**5.99**	**196**	P		**Pn**	**10 43 15.6**	**+1.4**
RUGZ				S		**S**	**10 44 24.5**	**-3.8**
OPRZ	**Ohinepanea**	**6.21**	**205**	P		**Pn**	**10 43 20.1**	**+3.6**
OPRZ				S		**S**	**10 44 34.7**	**+2.1**
MWZ	**Matawai**	**6.38**	**196**	P		**Pn**	**10 43 18.8**	**+0.3**
MWZ				S		**S**	**10 44 34.2**	**-1.9**
CNGZ	**Carnagh Statio**	**6.38**	**191**	P		**Pn**	**10 43 20.7**	**+2.2**
TKGZ	**Te Karaka**	**6.41**	**194**	P		**Pn**	**10 43 18.9**	**+0.1**
TKGZ				S		**S**	**10 44 34.5**	**-2.1**
URZ	**Urewera**	**6.42**	**199**	P		**Pn**	**10 43 18.4**	**-0.5**
	12nm,0.3s,baz=18,slow=3.2,SNR=54							
URZ				S		**S**	**10 44 34.3**	**-2.5**
	28nm,0.3s,baz=263,slow=23,SNR=26							
URZ	**Urewera**	**6.42**	**199**	P		**Pn**	**10 43 18.4**	**-0.5**
URZ				S		**S**	**10 44 34.3**	**-2.5**
URZ	**Urewera**	**6.42**	**199**			**Pn**	**10 43 19.7**	**+0.9**
KARZ	**Kaharoa**	**6.48**	**206**	P		**P**	**10 43 24.1**	**+4.4**
TOZ	**Tahuroa Road**	**6.54**	**212**	P		**P**	**10 43 25.7**	**+4.2**
RAGZ	**Rawiri**	**6.56**	**197**	P		**Pn**	**10 43 20.6**	**0.0**
RAGZ				S		**S**	**10 44 39.3**	**-0.6**
HLRZ	**Highlands Stat**	**6.65**	**204**	P		**P**	**10 43 25.8**	**+3.0**
RRRZ	**Republican Roa**	**6.67**	**203**	P		**P**	**10 43 25.6**	**+2.6**
RIGZ	**Rimuhau**	**6.68**	**194**	P		**P**	**10 43 24.2**	**+1.0**
RIGZ				S		**S**	**10 44 41.2**	**-1.3**
MUGZ	**Murupara**	**6.72**	**201**	P		**Pn**	**10 43 22.8**	**+0.5**
MUGZ				S		**S**	**10 44 39.8**	**-3.4**
HSRZ	**Hossack Road**	**6.74**	**205**	P		**P**	**10 43 27.6**	**+3.8**
RTZ	**Ruatahuna**	**6.78**	**199**	P		**P**	**10 43 25.2**	**+0.8**
HRRZ	**Handcock Road**	**6.79**	**204**	P		**Pn**	**10 43 24.3**	**+1.1**
GRRZ	**Galatos Road**	**6.82**	**205**	P		**P**	**10 43 28.0**	**+3.3**
SNGZ	**Shannon Statio**	**6.85**	**196**	P		**P**	**10 43 26.2**	**+1.2**
PRRZ	**Plateau Road**	**6.86**	**203**	P		**P**	**10 43 26.7**	**+1.5**
PRGZ	**Paritu Road**	**6.87**	**193**	P		**P**	**10 43 27.1**	**+1.8**
ALRZ	**Allen Road**	**6.93**	**203**	P		**P**	**10 43 27.7**	**+1.7**
WPRZ	**Whakapapatarin**	**6.95**	**204**	P		**P**	**10 43 28.9**	**+2.6**
KNZ	**Kokohu**	**7.00**	**194**	P		**Pn**	**10 43 24.7**	**-0.9**
TLZ	**Tolley Road**	**7.02**	**209**	P		**P**	**10 43 31.2**	**+4.1**
RAHZ	**Arahi**	**7.04**	**198**	P		**P**	**10 43 27.6**	**+0.3**
MTHZ	**Maungataniwha**	**7.04**	**199**	P		**P**	**10 43 27.9**	**+0.5**
KUTZ	**Kaahu Road**	**7.05**	**206**	P		**P**	**10 43 30.2**	**+2.8**
MHGZ	**Mahia Peninsul**	**7.09**	**192**	P		**P**	**10 43 28.4**	**+0.6**
MRHZ	**Matea Rd**	**7.15**	**202**	P		**P**	**10 43 29.2**	**+0.5**
WHHZ	**Waihua**	**7.15**	**196**	P		**P**	**10 43 29.4**	**+0.9**
NMHZ	**Naumai**	**7.28**	**199**	P		**P**	**10 43 30.3**	**+0.1**
ARHZ	**Aropaoanui**	**7.39**	**197**	P		**P**	**10 43 31.2**	**-0.1**
RATZ	**Rangitukua**	**7.40**	**205**	P		**P**	**10 43 33.1**	**+1.7**
BKZ	**Black Stump Fm**	**

Ms1 2.8/7, ms1mx2.6/38, Error ellipse: s-maj=20.5km s-min=15.7km az=127.0
*JMA **07** 11:09:49.7±0.3, 40.83N×145.28E, h64km±4km, M4.3*
*NEIC **07** 11:09:50.4±1.8, 40.84N±0.07×145.1E±0.1, h10km±1km, mb4.5/13, Error ellipse: s-maj=13.7km s-min=11.1km az=73.0*

ISC 07 11:09:49.9±4.0, **40.82N**±0.05×**145.16E**±0.06, **h11**km±25km, **n71**, σ1§**84**/80, **mb4.2**/22, **MS2.9**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERM	**Erimo**	**1.92**	**309**		**Pn**	**11 10 22.1**	**-0.4**
ERM				Sn	**Sn**	**11 10 44.9**	**-1.8**
JEM	**Erimo**	**1.92**	**309**	P	**Pn**	**11 10 21.9**	**-0.7**
JEM				*e*S	**Sn**	**11 10 43.9**	**-2.8**
JTHR	**Tokachihiroo**	**2.03**	**317**	P	**Pn**	**11 10 23.3**	**-0.7**
JTHR				*e*S	**Sn**	**11 10 46.8**	**-2.5**
JAK	**Akkeshi**	**2.20**	**351**	P	**Pn**	**11 10 24.6**	**-1.8**
JCH	**Churui**	**2.24**	**324**	P	**Pn**	**11 10 26.1**	**-0.9**
JCH				*e*S	**Sn**	**11 10 51.4**	**-3.2**
JKHN	**Kushirohamanak**	**2.26**	**360**	P	**Pn**	**11 10 25.7**	**-1.5**
JKHN				*e*S	**Sn**	**11 10 51.4**	**-3.7**
JOB	**Onbets**	**2.30**	**335**	P	**Pn**	**11 10 26.9**	**-0.9**
JNBK	**Urakawa-nobuka**	**2.32**	**310**	P	**Pn**	**11 10 28.0**	**-0.1**
NEM2	**Nemuro 2**	**2.58**	**9**	P	**Pn**	**11 10 29.8**	**-1.8**
JAR	**Ashorobuto**	**2.68**	**338**	P	**Pn**	**11 10 31.3**	**-1.7**
JAR				*e*S	**Sn**	**11 11 01.5**	**-4.0**
JNK	**Nakash**	**2.78**	**353**	P	**Pn**	**11 10 32.2**	**-2.2**
JNK				*e*S	**Sn**	**11 11 02.4**	**-5.6**
JANG	**Nango**	**2.81**	**262**	P	**Pn**	**11 10 33.3**	**-1.5**
JBT2	**Biratori 2**	**2.86**	**314**	P	**Pn**	**11 10 35.0**	**-0.5**
JBT2				*e*S	**Sn**	**11 11 09.3**	**-0.7**
JIAM	**Iburiatsuma**	**3.02**	**308**	P	**Pn**	**11 10 39.1**	**+1.4**
JIAM				*e*S	**Sn**	**11 11 14.8**	**+1.0**
JFR	**Furan**	**3.02**	**322**	P	**Pn**	**11 10 36.9**	**-0.8**
JOT	**Ohata**	**3.16**	**282**	P	**Pn**	**11 10 38.8**	**-0.8**
JOT				*e*S	**Sn**	**11 11 13.3**	**-3.9**
JOM	**Ohasama**	**3.26**	**247**	P	**Pn**	**11 10 40.0**	**-1.0**
JOM				*e*S	**Sn**	**11 11 15.0**	**-4.7**
JTKR	**Abashiri--Toko**	**3.28**	**344**	P	**Pn**	**11 10 40.8**	**-0.4**
JTKR				*e*S	**Sn**	**11 11 17.6**	**-2.6**
JKB	**Kayabe**	**3.29**	**290**	P	**Pn**	**11 10 40.5**	**-0.8**
JEW	**Eniwo**	**3.43**	**307**	P	**Pn**	**11 10 43.9**	**+0.6**
JEW				*e*S	**Sn**	**11 11 21.9**	**-2.0**
JKK2	**Kamakawa 2**	**3.53**	**330**	P	**Pn**	**11 10 44.9**	**+0.1**
JMK	**Ichinoseki**	**3.56**	**240**	P	**Pn**	**11 10 44.0**	**-1.1**
JMK				*e*S	**Sn**	**11 11 22.0**	**-5.2**
JKA	**Kamikawa-asahi**	**3.80**	**331**		**Pn**	**11 10 48.2**	**-0.2**
JKA					**Sn**	**11 11 32.4**	**-0.6**
ASAJ	**Asahikawa**	**3.80**	**331**	Pn	**Pn**	**11 10 48.2**	**-0.2**
	4.1nm,0.3s,baz=203,slow=18,SNR=34						
ASAJ				Sn	**Sn**	**11 11 32.4**	**-0.7**
	5.3nm,0.3s,baz=49,slow=28,SNR=7.0						
ASAJ				LR	LR	11 12 11.2	
	comp=Z,34nm,21.5s,baz=195,slow=37						
YSS	**Yuzh-Sakhalins**	**6.37**	**345**	Pn	**Pn**	**11 11 25.9**	**+2.2**
YSS				Sn	**Sn**	**11 12 34.4**	**-2.0**
MJAR	**Matsushiro Arr**	**6.92**	**234**	Pn	**Pn**	**11 11 30.6**	**-0.6**
	0.3nm,0.3s,baz=37,slow=14,SNR=7.0						
MAJO	**Matsushiro**	**6.92**	**234**	Pn	**Pn**	**11 11 31.7**	**+0.5**
INU	**Inuyama**	**8.43**	**232**	Pn	**Pn**	**11 11 53.2**	**+1.2**
JHJ2	**Mitsune**	**8.80**	**211**	Pn	**Pn**	**11 11 58.4**	**+1.2**
USRK	**Ussuriysk Ar.**	**10.29**	**293**	Pn	**Pn**	**11 12 18.9**	**+1.4**
	baz=107,slow=13,SNR=30						
MDJ	**Mudanjiang**	**12.06**	**293**	Pn	**Pn**	**11 12 41.9**	**+0.2**
JNU	**Nakatsue**	**13.75**	**241**	Pn	**Pn**	**11 13 03.0**	**-1.9**
	0.3nm,0.3s,baz=8.6,slow=6.1,SNR=4.5						
JNU				LR	LR	11 18 39.9	
	comp=Z,65nm,18.8s,baz=6.5,slow=39						
JNU	**Nakatsue**	**13.75**	**241**		**Pn**	**11 13 03.7**	**-1.2**
KSRS	**Korea Array**	**13.80**	**261**	LR	LR	11 18 05.0	
	comp=Z,27nm,21.7s,baz=88,slow=36						
PETK	**Petropavlovsk-**	**14.95**	**30**	Pn	**Pn**	**11 13 18.9**	**-2.2**
	0.1nm,0.3s,baz=208,slow=18,SNR=2.0						
PETK				LR	LR	11 18 36.4	
	comp=Z,27nm,19.4s,baz=239,slow=35						
ULN	**Ulaanbaatar**	**27.93**	**297**	P	**P**	**11 15 40.9**	**+0.7**
ULN				IAmb	IAmb	11 15 47.5	
	comp=Z,10.0nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**28.04**	**132**	T	T	11 45 16.8	
	baz=324,slow=74,SNR=8.2						
H11N1	**WAKE ISLAND Hy**	**28.05**	**132**	T	T	11 45 17.7	
	baz=324,slow=74,SNR=5.4						
H11N3	**WAKE ISLAND Hy**	**28.06**	**132**	T	T	11 45 18.0	
	baz=324,slow=74,SNR=9.2						
SONM	**Songino Array**	**28.37**	**297**	P	**P**	**11 15 47.4**	**+3.3**
	comp=Z,3.3nm,0.9s,baz=90,slow=10,SNR=10						
H11S1	**WAKE ISLAND Hy**	**28.92**	**134**	T	T	11 46 25.7	
	baz=325,slow=76,SNR=4.2						
H11S3	**WAKE ISLAND Hy**	**28.92**	**134**	T	T	11 46 24.2	
	baz=325,slow=76,SNR=3.8						
H11S2	**WAKE ISLAND Hy**	**28.93**	**134**	T	T	11 46 24.3	
	baz=325,slow=76,SNR=5.1						
BILL	**Bilibino**	**29.58**	**16**	P	**P**	**11 15 55.1**	**+0.6**
ZALV	**Zalesovo Beam**	**41.65**	**309**	P	**P**	**11 17 36.1**	**-1.9**
	comp=Z,0.8nm,0.3s,baz=116,slow=9.8,SNR=1.7						
ZALV				PcP	**PcP**	**11 19 34.9**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=80,slow=3.2,SNR=2.9						
ZALV				LR	LR	11 37 48.6	
	comp=Z,15nm,18.4s,baz=268,slow=40						
KDAK	**Kodiak Island**	**42.34**	**45**	P	**P**	**11 17 43.6**	**0.0**
	comp=Z,3.6nm,0.6s,baz=294,slow=5.8,SNR=4.6						
PMR	**Palmer**	**43.84**	**39**	P	**P**	**11 17 56.7**	**+1.0**
PMR				IAmb	IAmb	11 18 12.1	
	comp=Z,14nm,1.4s						
SML	**Sawmill**	**44.21**	**39**	P	**P**	**11 18 00.1**	**+1.3**
MKAR	**Makanchi Array**	**44.69**	**300**	P	**P**	**11 18 03.7**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=76,slow=10,SNR=4.0						
HDA	**Harding Lake**	**44.71**	**35**	P	**P**	**11 18 03.4**	**+0.7**
ILAR	**Eielson Array**	**44.73**	**34**	P	**P**	**11 18 03.6**	**+0.8**
	comp=Z,1.1nm,0.9s,baz=258,slow=6.5,SNR=10						
CMAR	**Chiang Mai Arr**	**45.30**	**255**	LR	LR	11 39 20.8	
	comp=Z,7.7nm,18.0s,baz=185,slow=39						
KURK	**Kurchatov**	**45.99**	**306**	P	**P**	**11 18 15.5**	**+2.5**
KURK				IAmb	IAmb	11 18 22.5	
	comp=Z,4.5nm,0.9s						
DOT	**Dot Lake**	**46.03**	**36**	P	**P**	**11 18 13.9**	**+0.7**
DOT				IAmb	IAmb	11 18 30.1	
	comp=Z,5.4nm,1.5s						
VRDI	**Verde Repeater**	**46.60**	**39**	P	**P**	**11 18 19.4**	**+1.5**
INK	**Inuvik**	**49.67**	**29**	P	**P**	**11 18 42.7**	**+1.4**
	comp=Z,1.3nm,0.5s,baz=289,slow=7.1,SNR=15						
INK	**Inuvik**	**49.67**	**29**	P	**P**	**11 18 42.8**	**+1.5**
RES	**Resolute Bay**	**58.19**	**16**	P	**P**	**11 19 44.3**	**+0.9**
RES				IAmb	IAmb	11 19 45.3	
	comp=Z,3.5nm,0.9s						
AKTO	**Aktyubinsk**	**58.34**	**311**	LR	LR	11 47 41.4	
	comp=Z,10nm,18.9s,baz=75,slow=39						
YKA	**Yellowknife Ar**	**59.06**	**32**	P	**P**	**11 19 49.7**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=297,slow=6.7,SNR=6.4						
WB0	**Warramunga Arr**	**61.10**	**192**	P	**P**	**11 20 03.4**	**-0.7**
WR0	**Warramunga Arr**	**61.27**	**191**	P	**P**	**11 20 04.8**	**-0.4**
WR0				IAmb	IAmb	11 20 16.1	
	comp=Z,5.0nm,1.0s						
WB2	**Warramunga Arr**	**61.28**	**192**	P	**P**	**11 20 05.2**	**-0.1**
WB2				IAmb	IAmb	11 20 16.7	
	comp=Z,4.4nm,0.9s						
WRA	**Warramunga Arr**	**61.28**	**192**	P	**P**	**11 20 04.8**	**-0.5**
	comp=Z,3.0nm,0.9s,baz=9.4,slow=6.6,SNR=11						
ASAR	**Alice Springs**	**65.01**	**191**	P	**P**	**11 20 30.1**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=12,slow=6.4,SNR=9.8						
FINES	**FINESS Array B**	**66.81**	**333**	P	**P**	**11 20 41.4**	**+0.2**
	comp=Z,1.8nm,0.6s,baz=47,slow=8.4,SNR=3.0						
NVAR	**Mina Array Bea**	**70.41**	**56**	P	**P**	**11 21 05.6**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=284,slow=4.5,SNR=2.1						
NOA	**NORSAR Array B**	**71.79**	**338**	P	**P**	**11 21 12.1**	**0.0**
	comp=Z,0.3nm,0.6s,baz=38,slow=4.6,SNR=2.3						
PDAR	**Pinedale Array**	**72.94**	**48**	P	**P**	**11 21 19.4**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=34,slow=2.3,SNR=2.0						
AKASG	**Malin Array Be**	**73.05**	**323**	P	**P**	**11 21 19.5**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=45,slow=5.0,SNR=4.3						
TXAR	**Lajitas Array**	**85.52**	**55**	P	**P**	**11 22 29.0**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=284,slow=3.5,SNR=5.2						

*IDC **07** 11:35:38.8±1.1, 34.72N×25.33E, h0km, mb3.7/8, mb1 3.8/11, mb1mx3.6/58, mbtmp3.7/11, ML3.6/3, MS2.2/1, Ms1 2.2/1, ms1mx2.0/37, Error ellipse: s-maj=19.4km s-min=9.8km az=44.0*
*ISK **07** 11:35:40.6, 34.78N×25.29E, h6km, ML3.6/17*
*DDA **07** 11:35:41.2, 34.86N×25.45E, h13km±4km, MW3.6*
*THE **07** 11:35:41.4, 34.86N×25.28E, h0km±1km, ML3.4/10, Error ellipse: s-maj=2.1km s-min=0.9km az=172.0*
*ATH **07** 11:35:41.1, 34.86N×25.27E, h20km±1km, ML3.5/11, Error ellipse: s-maj=2.4km s-min=0.8km az=351.0*

ISC 07 11:35:41.2±1.1, **34.84N**±0.04×**25.29E**±0.02, **h11**km±7km, **n85**, σ1§**05**/115, **mb3.7**/8, **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAST	**Lasithi**	**0.36**	**26**	P	**Pg**	**11 35 48.6**	**+0.2**
LAST				S	**Sb**	**11 35 54.3**	**-1.1**
	3μm,0.6s						
LAST	**Lasithi**	**0.36**	**26**	P	**Pg**	**11 35 48.7**	**+0.2**
LAST				S	**Sb**	**11 35 54.8**	**-0.6**
LAST				AML	AML	11 35 55.1	
	comp=E,4840μm,0.5s						
LAST				AML	AML	11 36 01.7	
	comp=N,5926μm,0.4s						
SIVA	**Sivas**	**0.43**	**295**	P	**Pg**	**11 35 50.1**	**+0.4**
SIVA				S	**Sb**	**11 35 56.9**	**-0.5**
	comp=N,15μm,0.9s						
SIVA	**Sivas**	**0.43**	**295**	P	**Pg**	**11 35 50.1**	**+0.4**
SIVA				S	**Sg**	**11 35 54.9**	**-0.5**
SIVA				AML	AML	11 35 58.4	
	comp=E,30956μm,0.4s						
SIVA				AML	AML	11 35 59.7	
	comp=N,20940μm,0.4s						
HRKL	**Herakleio**	**0.50**	**342**	PG	**Pb**	**11 35 51.7**	**-0.3**
HRKL				SG	**Sb**	**11 36 00.3**	**+1.0**
IACM	**Heraklion**	**0.50**	**339**	P	**Pb**	**11 35 52.0**	**0.0**
IACM				S	**Sb**	**11 35 59.6**	**+0.3**
	comp=N,17μm,1.1s						
IACM	**Heraklion**	**0.50**	**339**	P	**Pb**	**11 35 51.6**	**-0.4**
NPS	**Neapolis**	**0.50**	**32**	P	**Pg**	**11 35 50.8**	**-0.2**
NPS				S	**Sb**	**11 35 58.5**	**-0.9**
	comp=N,4μm,0.6s						
NPS	**Neapolis**	**0.50**	**32**	P	**Pg**	**11 35 50.8**	**-0.2**
NPS				S	**Sg**	**11 35 57.3**	**-0.3**
NPS				AML	AML	11 36 00.9	
	comp=E,10146μm,0.4s						
NPS				AML	AML	11 36 04.5	
	comp=N,5753μm,0.3s						
IDI	**Anoyia**	**0.55**	**324**	P	**Pg**	**11 35 51.8**	**-0.3**
IDI				S	**Sb**	**11 36 00.6**	**-0.4**
	comp=N,2μm,0.4s						
IDI	**Anoyia**	**0.55**	**324**	Pg	**Pg**	**11 35 52.0**	**-0.1**
	comp=N,50nm,0.3s,baz=310,slow=22,SNR=207						
IDI				Lg	Lg	11 36 00.7	
	comp=N,271nm,0.3s,baz=230,slow=22,SNR=27						
IDI				LR	LR	11 36 21.2	
	comp=N,140nm,18.9s,baz=276,slow=63						
IDI	**Anoyia**	**0.55**	**324**	P	**Pg**	**11 35 52.0**	**-0.1**
IDI				S	**Sg**	**11 35 59.5**	**+0.1**
IDI				AML	AML	11 36 05.3	
	comp=N,3594μm,0.3s						
IDI				AML	AML	11 36 09.6	
	comp=E,4655μm,0.4s						
IDI	**Anoyia**	**0.55**	**324**	PG	**Pb**	**11 35 52.5**	**-0.5**
IDI				SG	**Sb**	**11 36 01.5**	**+0.5**
ZKR	**Zakros**	**0.81**	**70**	P	**Pg**	**11 35 56.1**	**-0.8**
ZKR				S	**Sb**	**11 36 09.1**	**+0.7**
	comp=E,5μm,0.3s						
ZKR	**Zakros**	**0.81**	**70**	P	**Pg**	**11 35 56.2**	**-0.8**
ZKR				S	**Sb**	**11 36 09.3**	**+1.0**
ZKR				AML	AML	11 36 10.7	
	comp=N,8212μm,0.3s						
ZKR				AML	AML	11 36 12.5	
	comp=E,13008μm,0.3s						
ZKR	**Zakros**	**0.81**	**70**	PG	**Pg**	**11 35 56.7**	**-0.2**
ZKR				SG	**Sb**	**11 36 09.3**	**+1.0**
GVD	**Gavdhos**	**0.99**	**270**	P	**Pg**	**11 36 00.0**	**-0.2**
GVD				S	**Sn**	**11 36 15.4**	**+0.4**
	comp=E,4μm,0.3s						
GVD	**Gavdhos**	**0.99**	**270**	P	**Pg**	**11 36 00.0**	**-0.2**
GVD				S	**Sg**	**11 36 13.0**	**-0.1**
GVD				AML	AML	11 36 21.8	
	comp=E,9885μm,0.4s						
GVD				AML	AML	11 36 23.4	
	comp=N,6962μm,0.3s						
GVD	**Gavdhos**	**0.99**	**270**	PG	**Pg**	**11 36 00.1**	**-0.2**
GVD				SG	**Sb**	**11 36 14.5**	**+1.1**
VAM	**Vamos**	**1.06**	**303**	P	**Pg**	**11 36 01.1**	**-0.5**
VAM				S	**Sb**	**11 36 16.6**	**+1.2**
	comp=N,2μm,0.8s						
VAM	**Vamos**	**1.06**	**303**	P	**Pg**	**11 36 00.9**	**-0.7**
VAM				S	**Sg**	**11 36 14.8**	**-0.5**
VAM				AML	AML	11 36 24.3	
	comp=E,4127μm,0.9s						
VAM				AML	AML	11 36 31.4	
	comp=N,4289μm,0.4s						
IMMV	**Iera Moni Meta**	**1.24**	**300**	P	**Pg**	**11 36 04.0**	**-1.0**
IMMV	**Iera Moni Meta**	**1.24**	**300**	P	**Pg**	**11 36 04.0**	**-1.0**
IMMV				S	**Sn**	**11 36 21.8**	**+0.6**
IMMV				AML	AML	11 36 31.0	
	comp=N,2936μm,0.4s						
IMMV				AML	AML	11 36 33.0	
	comp=E,3472μm,0.9s						
IMMV	**Iera Moni Meta**	**1.24**	**300**	PN	**Pb**	**11 36 04.9**	**+0.3**
RODP	**Rodopos**	**1.45**	**300**	PN	**Pg**	**11 36 08.9**	**-0.1**
THR6	**Thira Island,**	**1.52**	**3**	P	**Pb**	**11 36 09.2**	**-0.2**
THR6	**Thira Island,**	**1.52**	**3**	P	**Pb**	**11 36 09.2**	**-0.2**
SAP1	**Santorini-Akro**	**1.52**	**3**	P	**Pb**	**11 36 09.2**	**-0.3**
SANT	**Santorini**	**1.54**	**5**	P	**Pn**	**11 36 09.2**	**+0.6**
SANT				S	**Sg**	**11 36 29.8**	**-0.9**
	comp=E,500nm,0.8s						
SANT	**Santorini**	**1.54**	**5**	P	**Pg**	**11 36 10.1**	**-0.6**
SANT	**Santorini**	**1.54**	**5**	PN	**Pg**	**11 36 10.3**	**-0.4**
SANT	**Santorini**	**1.54**	**5**	*i*P	**Pb**	**11 36 09.8**	**0.0**
SANT				*i*S	**Sg**	**11 36 30.7**	**+0.1**
ANAF	**Anafi Island**	**1.56**	**14**	P	**Pb**	**11 36 10.0**	**-0.3**
ANAF				AML	AML	11 36 36.9	
	comp=N,4993μm,0.5s						
ANAF				AML	AML	11 36 37.3	
	comp=E,3494μm,0.4s						
THR3	**Thira Island,**	**1.57**	**3**	P	**Pn**	**11 36 09.2**	**+0.1**
THR3	**Thira Island,**	**1.57**	**3**	P	**Pn**	**11 36 09.0**	**-0.1**
THR5	**Thira Island,**	**1.58**	**2**	P	**Pb**	**11 36 10.1**	**-0.3**
THR5	**Thira Island,**	**1.58**	**2**	P	**Pb**	**11 36 10.2**	**-0.2**
THT2	**Imerovigli**	**1.60**	**4**	PN	**Pg**	**11 36 11.2**	**-0.7**
KARP	**Karpathos**	**1.69**	**65**	P	**Pb**	**11 36 12.1**	**-0.3**
KARP				S	**Sg**	**11 36 35.4**	**-0.2**
	comp=E,648nm,0.8s						
KARP	**Karpathos**	**1.69**	**65**	P	**Pb**	**11 36 12.5**	**+0.2**
KARP				AML	AML	11 36 48.1	
	comp=E,1375μm,0.7s						
KARP				AML	AML	11 36 53.1	
	comp=N,1215μm,0.5s						
KARP	**Karpathos**	**1.69**	**65**	PN	**Pb**	**11 36 11.9**	**-0.5**
IOSP	**Ios island**	**1.88**	**0**	P	**Pn**	**11 36 13.5**	**+0.1**
MHLO	**Agia Marina, M**	**1.98**	**339**	P	**Pn**	**11 36 15.4**	**+0.7**
MHLO				AML	AML	11 36 46.2	
	comp=E,2033μm,0.7s						
MHLO				AML	AML	11 36 53.0	
	comp=N,3265μm,0.6s						
AMGA	**Amorgos Island**	**2.05**	**14**	P	**Pn**	**11 36 16.3**	**+0.7**
APE	**Apeiranthos**	**2.23**	**5**	P	**Pn**	**11 36 18.5**	**+0.2**
APE	**Apeiranthos**	**2.23**	**5**	PN	**Pb**	**11 36 20.1**	**-1.6**
APE	**Apeiranthos**	**2.23**	**5**	*i*P	**Pn**	**11 36 19.5**	**+1.3**
APE				*i*S	**Sg**	**11 36 54.5**	**+1.4**
DAT	**Datca**	**2.65**	**44**	PN	**Pn**	**11 36 25.7**	**+1.7**
VLI	**Veliai**	**2.68**	**315**	P	**Pn**	**11 36 25.1**	**+0.7**
ARG	**Arkhangelos**	**2.69**	**58**	PN	**Pn**	**11 36 26.3**	**+1.8**
KRND	**KRANIDI**	**3.07**	**326**	P	**Pn**	**11 36 31.7**	**+2.0**
DID	**Didima**	**3.14**	**329**	P	**Pn**	**11 36 31.5**	**+0.9**
VLY	**Voula,Athens**	**3.24**	**339**	P	**Pn**	**11 36 32.9**	**+0.9**
YER	**Yerkesik**	**3.34**	**46**	PN	**Pn**	**11 36 35.3**	**+1.8**
TURN	**Turunc**	**3.37**	**52**	PN	**Pn**	**11 36 31.7**	**-2.1**
TURN	**Turunc**	**3.37**	**52**	*i*P	**Pn**	**11 36 31.7**	**-2.1**
TURN				*i*S	**Sn**	**11 37 13.0**	**-0.9**
DALY	**Dalyan (Mula)**	**3.37**	**53**	PN	**Pn**	**11 36 35.7**	**+1.9**
AYDN	**Tasoluk**	**3.51**	**36**	*i*P	**Pn**	**11 36 38.3**	**+2.5**
AYDN				*i*S	**Sn**	**11 37 18.9**	**+1.5**
PYL	**PYLOS**	**3.54**	**306**	P	**Pn**	**11 36 36.7**	**+0.5**
FETY	**Fethiye**	**3.57**	**59**	PN	**Pn**	**11 36 38.4**	**+1.8**
ITM	**Ithomi**	**3.59**	**312**	P	**Pn**	**11 36 38.1**	**+1.2**
CHOS	**Chios island**	**3.59**	**10**	PN	**Pn**	**11 36 39.0**	**+2.0**
TRIP	**Tripoli**	**3.63**	**319**	P	**Pn**	**11 36 39.5**	**+2.1**
URLA	**Izmir**	**3.67**	**16**	PN	**Pn**	**11 36 40.2**	**+2.2**
VIL2	**Platees**	**3.74**	**335**	P	**Pn**	**11 36 38.9**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**3.75**	**33**	PN	**Pn**	**11 36 40.9**	**+1.8**
AKAS	**Kas**	**3.79**	**67**	PN	**Pn**	**11 36 41.3**	**+1.6**
AKAS	**Kas**	**3.79**	**67**	*i*P	**Pn**	**11 36 38.7**	**-1.0**
AKAS				*i*S	**Sn**	**11 37 24.8**	**+0.5**
TAVA	**DENIZLI_Tavas**	**3.93**	**47**	*i*P	**Pn**	**11 36 44.0**	**+2.3**
TAVA				*i*S	**Sb**	**11 37 37.5**	**-0.8**
KLV	**Kalavryta, Ach**	**4.08**	**323**	P	**Pn**	**11 36 44.8**	**+1.2**
GOLH	**Golhisar**	**4.21**	**54**	*i*P	**Pn**	**11 36 47.4**	**+1.9**
GOLH				*i*S	**Sn**	**11 37 36.5**	**+1.8**
ANX	**Ano Chora**	**4.62**	**325**	P	**Pn**	**11 36 53.2**	**+2.1**
KORT	**Korkueli**	**4.64**	**61**	PN	**Pn**	**11 36 53.6**	**+2.2**
KHAL	**Karahalli**	**4.88**	**43**	*i*P	**Pn**	**11 36 56.1**	**+1.4**
KHAL				*i*S	**Sn**	**11 37 51.9**	**+0.5**
BRTR	**Keskin Array B**	**8.25**	**51**	Pn	**Pn**	**11 37 41.7**	**+0.7**
	comp=N,0.2nm,0.3s,baz=234,slow=12,SNR=2.3						
BRTR				LR	LR	11 41 47.9	
	comp=N,17nm,20.6s,baz=173,slow=44						
AKASG	**Malin Array Be**	**16.11**	**9**	Pn	**Pn**	**11 39 28.9**	**+1.3**
	comp=N,0.7nm,0.3s,baz=202,slow=11,SNR=4.5						
KBZ	**Khabaz**	**16.25**	**52**	Pn	**P**	**11 39 33.6**	**+1.2**
	comp=N,0.2nm,0.3s,baz=269,slow=8.3,SNR=8.1						
ESDC	**Sonseca Array**	**23.72**	**290**	P	**P**	**11 40 52.5**	**-0.9**
	comp=N,0.4nm,0.7s,baz=71,slow=9.9,SNR=2.6						
TORD	**Torodi Ar. Bea**	**30.36**	**230**	P	**P**	**11 41 52.5**	**-0.8**
	comp=N,0.3nm,0.3s,baz=35,slow=8.5,SNR=7.3						
ARCES	**ARCESS Array B**	**34.75**	**0**	P	**P**	**11 42 30.9**	**-0.3**
	comp=N,0.8nm,0.6s,baz=182,slow=10,SNR=1.3						
BVAR	**Borovoye Array**	**36.49**	**46**	P	**P**	**11 42 45.9**	**-0.4**
	comp=N,0.6nm,0.6s,baz=233,slow=8.4,SNR=2.3						
KURBB	**Kurchatov Arra**	**41.24**	**51**	P	**P**	**11 43 25.5**	**-0.6**
	comp=N,1.4nm,0.6s,baz=274,slow=8.5,SNR=8.6						
MKAR	**Makanchi Array**	**43.86**	**56**	P	**P**	**11 43 47.0**	**-0.5**
	comp=N,0.7nm,0.6s,baz=267,slow=8.4,SNR=6.7						
ZALV	**Zalesovo Beam**	**45.15**	**46**	P	**P**	**11 43 56.3**	**-1.4**
	comp=N,1.2nm,0.4s,baz=264,slow=8.5,SNR=4.6						
SONM	**Songino Array**	**59.61**	**51**	P	**P**	**11 45 44.6**	**-0.6**
	comp=N,0.5nm,0.3s,baz=322,slow=9.4,SNR=1.9						

*IDC **07** 11:37:02.2±21.0, 24.84S×178.71E, h480km±232km, mb3.2/2, mb1 3.4/3, mb1mx2.9/37, mbtmp4.1/3, Error ellipse: s-maj=230.7km s-min=41.0km az=16.0*
*NEIC **07** 11:37:14.4±1.6, 26.25±0.1×178.4E±0.2, h622km±14km, mb4.2/13, Error ellipse: s-maj=25.3km s-min=10.5km az=124.0*

ISC 07 11:37:13.3±0.9, **26.11S**±0.09×**178.5E**±0.2, **h600**km, **n21**, σ1§**11**/20, **mb4.2**/9, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.35**	**357**	P	**P**	**11 39 16.9**	**+0.8**
OUZ	**Omahuta**	**10.00**	**204**	P	P	11 39 38.0	+6.2
URZ	**Urewera**	**12.17**	**185**	P	**P**	**11 39 55.7**	**+2.2**
	0.9nm,0.3s,baz=286,slow=4.1,SNR=9.0						
URZ				S	**S**	**11 42 04.1**	**-1.0**
	0.2nm,0.3s,baz=184,slow=19,SNR=1.0						
EIDS	**Eidsvold**	**24.66**	**266**	P	**P**	**11 41 49.3**	**+0.8**
EIDS				IAmb	IAmb	11 41 52.6	
	comp=Z,5.1nm,1.2s						
KNTN	**Kanton**	**25.05**	**24**	P	**P**	**11 41 53.0**	**+0.9**
TOO	**Toolangi**	**30.10**	**240**	P	**P**	**11 42 37.2**	**+1.4**
TOO				IAmb	IAmb	11 42 52.2	
	comp=Z,14nm,1.4s						
CTAO	**Charters Tower**	**30.17**	**275**	P	**P**	**11 42 37.0**	**+0.3**
CTAO				IAmb	IAmb	11 42 46.2	
	comp=Z,14nm,1.4s						
COEN	**Coen**	**35.17**	**283**	P	**P**	**11 43 18.8**	**0.0**
COEN				IAmb	IAmb	11 43 19.4	
	comp=Z,12nm,1.1s						
BBOO	**Buckleboo**	**37.33**	**249**	P	**P**	**11 43 35.8**	**-0.5**
ASAR	**Alice Springs**	**40.35**	**264**	P	**P**	**11 44 00.1**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=93,slow=7.2,SNR=45						
WR0	**Warramunga Arr**	**40.73**	**269**	P	**P

LUWI	**Luwuk**	**8.14**	**212**			**Pn**	**12 28 16.6**	**+1.8**
LUWI					Sn	**Sn**	**12 29 50.5**	**+5.1**
APSI	**Ampana**	**8.68**	**219**	P		**Pn**	**12 28 21.0**	**-1.2**
	699nm91nm,0.9s							
MPSI	**Mapaga**	**9.05**	**232**	P		**Pn**	**12 28 25.9**	**-1.4**
	18nm,0.8s							
TTSI	**Tana Toraja**	**11.48**	**219**	P		**Pn**	**12 28 59.1**	**-1.4**
	1um38nm,1.2s							
SMPI	**Sarmi**	**14.04**	**124**	P		**P**	**12 29 38.9**	**-2.2**
	23nm,1.6s							
SBUM	**Sibu**	**15.20**	**257**			**Pn**	**12 29 51.5**	**+1.2**
EDFI	**Ende, Flores**	**15.53**	**200**	P		**Pn**	**12 29 53.8**	**-0.8**
	12nm,0.8s							
GENI	**Genyem**	**15.58**	**123**	P		**P**	**12 29 59.0**	**+0.7**
	32nm,1.2s							
JAY	**Jayapura**	**15.99**	**121**	LR		LR	12 35 19.5	
	comp=Z,150nm,19.3s,baz=280,slow=34							
BATI	**Baumata**	**16.38**	**192**	LR		LR	12 37 21.5	
	comp=Z,145nm,19.0s,baz=24,slow=40							
KSM	**Kuching**	**17.29**	**256**	P		**P**	**12 30 17.6**	**+0.4**
MTN	**Manton Dam**	**19.08**	**168**	P		**P**	**12 30 35.9**	**-0.9**
JAGI	**Jajag, Banyuwa**	**19.24**	**222**	P		**Pn**	**12 30 40.4**	**+0.2**
JAGI				IAmb		IAmb	12 30 45.0	
	comp=Z,26nm,1.0s							
DLV	**T Lat**	**19.29**	**289**	P		**P**	**12 30 39.7**	**+0.3**
DLV				IAmb		IAmb	12 30 46.1	
	comp=Z,26nm,0.9s							
JOW	**Kunigami**	**20.83**	**3**	P		**P**	**12 30 52.9**	**-2.8**
JOW				IAmb		IAmb	12 31 11.2	
	comp=Z,47nm,1.3s							
KNRA	**Kununurra**	**21.53**	**176**	P		**P**	**12 31 03.2**	**-0.1**
MYKOM	**Kota Tinggi**	**23.52**	**261**	P		**P**	**12 31 23.9**	**0.0**
MYKOM				IAmb		IAmb	12 31 34.0	
	comp=Z,16nm,0.9s							
FITZ	**Fitzroy Crossi**	**23.91**	**183**	P		**P**	**12 31 28.0**	**+0.6**
	comp=Z,2.5nm,0.6s,baz=1.6,slow=4.6,SNR=10							
FITZ	**Fitzroy Crossi**	**23.91**	**183**	P		**P**	**12 31 28.5**	**+1.1**
FITZ				IAmb		IAmb	12 31 37.5	
	comp=Z,22nm,1.5s							
PMG	**Port Moresby**	**25.16**	**127**	LR		LR	12 41 45.9	
	comp=Z,72nm,20.9s,baz=282,slow=37							
RGRI	**Rengat**	**25.46**	**257**	P		P	12 31 29.8	-12
WB0	**Warramunga Arr**	**26.53**	**164**	P		**P**	**12 31 52.5**	**+1.4**
WB0				IAmb		IAmb	12 31 56.8	
	comp=Z,15nm,0.9s							
WRAB	**Tennant Creek**	**26.68**	**165**	P		**P**	**12 31 49.6**	**-2.9**
WRAB				IAmb		IAmb	12 31 56.5	
	comp=Z,17nm,1.2s							
WRA	**Warramunga Arr**	**26.68**	**165**	P		**P**	**12 31 50.4**	**-2.2**
	comp=Z,4.0nm,0.7s,baz=344,slow=9.7,SNR=14							
WRA				PcP		**PcP**	**12 35 16.7**	**+1.6**
	comp=Z,0.5nm,0.7s,baz=331,slow=1.9,SNR=2.4							
WRA				ScP		**ScP**	**12 38 53.3**	**+3.6**
	comp=Z,1.4nm,0.7s,baz=339,slow=3.3,SNR=11							
WB2	**Warramunga Arr**	**26.68**	**165**	P		**P**	**12 31 50.9**	**-1.6**
WB2				IAmb		IAmb	12 31 58.4	
	comp=Z,11nm,0.9s							
WR0	**Warramunga Arr**	**26.75**	**164**	P		**P**	**12 31 54.3**	**+1.1**
PSA00	**Pilbara Seismi**	**28.23**	**194**	P		**P**	**12 32 06.5**	**+0.2**
PSA00				IAmb		IAmb	12 32 16.5	
	comp=Z,8.1nm,0.7s							
JHJ	**Hachijo jima 2**	**29.54**	**22**	LR		LR	12 43 14.7	
	comp=Z,64nm,19.7s,baz=265,slow=35							
CMAR	**Chiang Mai Arr**	**30.12**	**297**	P		**P**	**12 32 24.7**	**+1.5**
	comp=Z,0.4nm,0.4s,baz=110,slow=6.8,SNR=1.6							
CMAR				ScP		**ScP**	**12 39 04.9**	**+4.4**
	comp=Z,1.1nm,0.4s,baz=134,slow=1.9,SNR=4.9							
CMAR				LR		LR	12 45 19.8	
	comp=Z,79nm,19.4s,baz=105,slow=38							
ASAR	**Alice Springs**	**30.16**	**167**	P		**P**	**12 32 22.8**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=347,slow=8.2,SNR=11							
ASAR				PcP		**PcP**	**12 35 25.3**	**+1.7**
	comp=Z,1.2nm,0.7s,baz=342,slow=2.4,SNR=7.5							
ASAR				ScP		**ScP**	**12 39 04.0**	**+3.5**
	comp=Z,1.2nm,0.7s,baz=344,slow=2.6,SNR=10							
KSRS	**Korea Array**	**31.39**	**1**	LR		LR	12 49 01.0	
	comp=Z,65nm,18.5s,baz=180,slow=44							
MJAR	**Matsushiro Arr**	**32.14**	**17**	LR		LR	12 46 54.6	
	comp=Z,83nm,19.2s,baz=185,slow=39							
XAN	**Xi'an**	**32.64**	**331**	P		**P**	**12 32 48.8**	**+3.5**
XAN				pP		pwP	12 33 01.4	-2.9
XAN				sP		sP	12 33 08.0	+0.8
XAN				pmax		pmax		
	comp=Z,9.0nm,0.9s							
XAN				LR		LR		
	comp=N,190nm,18.4s							
XAN				LR		LR		
	comp=Z,160nm,16.3s							
FORT	**Forrest**	**36.51**	**179**	P		**P**	**12 33 19.5**	**+1.0**
USRK	**Ussuriysk Ar.**	**38.37**	**6**	LR		LR	12 54 36.3	
	comp=Z,50nm,18.1s,baz=185,slow=44							
NWAO	**Narrogin (SRO)**	**39.75**	**193**	P		**P**	**12 33 45.7**	**-0.2**
NWAO	**Narrogin (SRO)**	**39.75**	**193**	P		**P**	**12 33 45.8**	**-0.1**
NWAO				IAmb		IAmb	12 33 49.7	
	comp=Z,43nm,1.4s							
STKA	**Stephens Creek**	**40.06**	**161**	P		**P**	**12 33 48.8**	**+0.3**
	comp=Z,5.0nm,0.6s,baz=338,slow=7.7,SNR=7.3							
ARMA	**Armidale**	**43.12**	**148**	P		**P**	**12 34 11.7**	**-2.0**
ARMA				IAmb		IAmb	12 34 26.9	
	comp=Z,18nm,1.4s							
SONM	**Songino Array**	**45.35**	**340**	P		**P**	**12 34 31.6**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=163,slow=5.6,SNR=2.7							
PETK	**Petropavlovsk-**	**53.29**	**23**	P		**P**	**12 35 30.9**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=204,slow=3.2,SNR=1.1							
MKAR	**Makanchi Array**	**55.97**	**324**	P		**P**	**12 35 50.0**	**-1.2**
	comp=Z,1.9nm,0.6s,baz=118,slow=7.4,SNR=14							
MKAR				ScP		**ScP**	**12 40 45.7**	**+3.0**
	comp=Z,0.3nm,0.7s,baz=118,slow=5.2,SNR=2.5							
KSH	**Kashi**	**56.75**	**314**	P		**P**	**12 35 56.9**	**-0.1**
KSH				pP		pP	12 36 12.3	-0.4
KSH				PP		**PP**	**12 38 08.4**	**+4.6**
KSH				S		**S**	**12 43 39.4**	**-6.0**
KSH	**Kashi**	**56.75**	**314**	SS		**SS**	**12 47 29.1**	**-5.1**
KSH				pmax		pmax		
	comp=Z,34nm,1.3s							
KSH				pmax		pmax		
	comp=Z,220nm,4.5s							
KSH				LR		LR		
	comp=N,96nm,14.2s							
KSH				LR		LR		
	comp=E,87nm,6.8s							
KSH				LR		LR		
	comp=Z,260nm,6.2s							
NIL	**Nilore**	**56.88**	**306**	P		**P**	**12 35 58.0**	**+0.1**
ZALV	**Zalesovo Beam**	**58.80**	**332**	P		**P**	**12 36 09.2**	**-1.7**
	comp=Z,1.7nm,0.6s,baz=152,slow=6.5,SNR=7.8							
KURK	**Kurchatov**	**60.09**	**327**	P		**P**	**12 36 18.7**	**-1.1**
KKAR	**Karatay Array**	**61.88**	**316**	P		**P**	**12 36 31.5**	**-0.7**
KKAR				IAmb		IAmb	12 36 35.6	
	comp=Z,3.4nm,0.8s							
BRVK	**Borovoye**	**65.75**	**326**	P		**P**	**12 36 56.1**	**-1.3**
BRVK				IAmb		IAmb	12 37 01.5	
	comp=Z,9.7nm,1.2s							
GEYT	**Alibeck**	**69.80**	**308**	P		**P**	**12 37 22.5**	**-0.7**
	comp=Z,1.4nm,0.5s,baz=123,slow=5.3,SNR=1.9							
GEYT				LR		LR	13 12 44.4	
	comp=Z,34nm,18.7s,baz=60,slow=40							
AKTO	**Aktyubinsk**	**72.17**	**321**	LR		LR	13 12 02.4	
	comp=Z,76nm,19.7s,baz=108,slow=38							
RAYN	**Ar Rayn**	**79.94**	**293**	P		**P**	**12 38 21.2**	**-0.9**
ILAR	**Eielson Array**	**82.99**	**26**	P		**P**	**12 38 35.7**	**-1.6**
	comp=Z,0.6nm,0.5s,baz=249,slow=5.6,SNR=9.5							
KLMR	**Klimovskoe**	**83.67**	**331**	*eP*		**P**	**12 38 42.1**	**+1.3**
KLMR				AMP			12 38 48.9	
	comp=Z,16nm,1.2s							
VNDA	**Vanda**	**85.55**	**173**	P		**P**	**12 38 49.8**	**-0.2**
	comp=Z,0.8nm,1.0s,baz=359,slow=6.2,SNR=2.9							
ASF	**Jabal al Asfar**	**87.03**	**302**	LR		LR	13 23 27.4	
	comp=Z,89nm,18.7s,baz=156,slow=39							
ARCES	**ARCESS Array B**	**88.52**	**340**	P		**P**	**12 39 03.7**	**-0.9**
	comp=Z,2.9nm,0.8s,baz=86,slow=7.8,SNR=4.5							
BRTR	**Keskin Array B**	**88.89**	**310**	P		**P**	**12 39 06.3**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=76,slow=6.1,SNR=2.8							
BRTR				LR		LR	13 25 15.4	
	comp=Z,9.1nm,18.7s,baz=75,slow=40							
FINES	**FINESS Array B**	**90.07**	**332**	P		**P**	**12 39 12.4**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=57,slow=7.0,SNR=4.6							
FINES				LR		LR	13 21 48.1	
	comp=Z,34nm,19.4s,baz=156,slow=37							
NOA	**NORSAR Array B**	**96.98**	**334**	LR		LR	13 28 07.1	
	comp=Z,41nm,18.3s,baz=75,slow=38							
YKA	**Yellowknife Ar**	**97.38**	**24**	P		Pdif	12 39 46.2	+0.6
	comp=Z,0.1nm,0.7s,baz=292,slow=3.7,SNR=1.8							
TORD	**Torodi Ar. Bea**	**122.53**	**290**	PKP		**PKPdf**	**12 45 07.1**	**-1.4**
	comp=Z,1.0nm,0.7s,baz=76,slow=1.6,SNR=2.4							

*KRNET **07** 12:26:57.7±0.1,40.59N×77.25E,mb3.2*
*SOME **07** 12:26:57.4,40.57N×77.07E,h5km*
*NNC **07** 12:26:58.2±0.8,40.54N×77.09E,h0km,mb3.9,mpv3.5,*
Error ellipse: s-maj=5.5km s-min=3.8km az=172.0

ISC 07 12:27:02.6±2.2,40.76N±0.08×77.10E±0.03,h3km±14km, n62,σ1§22/93,31C-10D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.38**	**3**	⇑*iP*		**Pn**	**12 27 26.8**	**-2.1**
	baz=58							
KDJ				⇑*iS*		**Sg**	**12 27 48.0**	**+1.1**
	baz=58							
ULHL	**Ulahol**	**1.62**	**337**	⇑*iP*		**Pn**	**12 27 31.4**	**-0.9**
	baz=36							
ULHL				⇑*iS*		**Sg**	**12 27 56.4**	**+1.7**
	baz=36							
ULHL	**Ulahol**	**1.62**	**337**	P		**Pn**	**12 27 31.6**	**-0.7**
	SNR=20							
KZA	**Kyzart**	**1.92**	**314**	⇑*iP*		**Pn**	**12 27 36.8**	**+0.3**
	baz=15							
KZA				⇑*iS*		**Sg**	**12 28 05.6**	**+1.4**
	baz=15							
KZA	**Kyzart**	**1.92**	**314**	P		**Pn**	**12 27 36.8**	**+0.3**
	SNR=19							
BOOM	**Boomskoye usch**	**1.94**	**334**	⇓*iP*		**Pn**	**12 27 36.8**	**+0.2**
	baz=33							
BOOM				⇓*iS*		**Sg**	**12 28 05.7**	**+0.8**
	baz=33							
PRZ	**Przheval'sk**	**1.98**	**29**	⇑*iP*		**Pn**	**12 27 36.2**	**-1.1**
	baz=24							
PRZ				⇑*iS*		**Sb**	**12 28 04.4**	**-0.3**
	baz=24							
ANVS	**Anan'yevo**	**2.07**	**12**	⇑*iP*		**Pn**	**12 27 38.2**	**-0.2**
	baz=8.0							
ANVS				⇑*iS*		**Sb**	**12 28 07.4**	**+0.2**
	baz=8.0							
TNSS	**Tian-Shan**	**2.28**	**357**	⇓*eP*		**Pb**	**12 27 42.8**	**-1.9**
	22nm,0.6s							
TNSS				*eS*		**Sg**	**12 28 15.2**	**-0.9**
	58nm,0.5s							
IZV	**Izvestkoviy**	**2.31**	**351**	*eP*		**Pb**	**12 27 44.8**	**-0.2**
	12nm,0.4s							
IZV				*eS*		**Sg**	**12 28 18.3**	**+1.5**
	42nm,0.3s							
IZV	**Izvestkoviy**	**2.31**	**351**	Pg		**Pb**	**12 27 44.8**	**-0.2**
	12nm,0.4s							
IZV				Lg		Lg	12 28 18.3	
	42nm,0.3s							
MDOK	**Medeo**	**2.41**	**359**	*eP*		**Pb**	**12 27 47.1**	**+0.4**
	14nm,0.5s							
MDOK				*eS*		**Sg**	**12 28 22.6**	**+2.6**
	53nm,0.6s							
MDOK	**Medeo**	**2.41**	**359**	⇑Pg		**Pb**	**12 27 45.8**	**-0.8**
	24nm,1.0s							
MDOK				⇓Lg		Lg	12 28 23.4	
	60nm,0.7s							
MDOK	**Medeo**	**2.41**	**359**	Pg		**Pb**	**12 27 47.1**	**+0.4**
	14nm,0.5s							
MDOK				Lg		Lg	12 28 22.5	
	53nm,0.6s							
MTBS	**Maitube**	**2.42**	**348**	*eP*		**Pb**	**12 27 46.8**	**-0.1**
	8.9nm,0.4s							
MTBS				*eS*		**Sg**	**12 28 21.9**	**+1.4**
	34nm,0.4s							
MTBS	**Maitube**	**2.42**	**348**	Pg		**Pb**	**12 27 46.8**	**-0.1**
	8.9nm,0.4s							
MTBS				Lg		Lg	12 28 22.4	
	34nm,0.4s							
UCH	**Uchtor**	**2.43**	**308**	⇑*iP*		**Pn**	**12 27 43.7**	**0.0**
	baz=9.0							
UCH				⇑*iS*		**Sb**	**12 28 16.9**	**-0.9**
	baz=9.0							
UCH	**Uchtor**	**2.43**	**308**	P		**Pb**	**12 27 45.1**	**-2.2**
	SNR=15							
KST	**Kastek**	**2.44**	**340**	*eP*		**Pb**	**12 27 46.8**	**-0.4**
	8.7nm,0.5s							
KST				*eS*		**Sg**	**12 28 22.0**	**+1.1**
	35nm,0.6s							
KST	**Kastek**	**2.44**	**340**	Pg		**Pb**	**12 27 46.8**	**-0.4**
	8.7nm,0.5s							
KST				Lg		Lg	12 28 22.6	
	35nm,0.6s							
TKM2	**Tokmak 2**	**2.44**	**333**	⇑*iP*		**Pn**	**12 27 43.8**	**+0.3**
	baz=32							
TKM2				⇑*iS*		**Sb**	**12 28 17.9**	**+0.2**
	baz=32							
TKM2	**Tokmak 2**	**2.44**	**333**	P		**Pb**	**12 27 46.4**	**-0.8**
	SNR=11							
TKM2	**Tokmak 2**	**2.44**	**333**	⇑Pg		**Pb**	**12 27 46.1**	**-1.1**
	3.2nm,0.4s							
TKM2				⇑Lg		Lg	12 28 22.9	
	25nm,0.8s							
KOTS	**Kotyrbulak**	**2.48**	**0**	*eP*		**Pb**	**12 27 48.0**	**+0.2**
	35nm,0.3s							
KOTS				*eS*		**Sg**	**12 28 24.0**	**+1.8**
	266nm,0.4s							
KOTS	**Kotyrbulak**	**2.48**	**0**	Pg		**Pb**	**12 27 48.0**	**+0.2**
	35nm,0.3s							
KOTS				Lg		Lg	12 28 24.5	
	266nm,0.4s							
KBK	**Karagaybulak**	**2.49**	**320**	⇑*iP*		**Pn**	**12 27 44.4**	**+0.2**
	baz=21							
KBK				⇑*iS*		**Sb**	**12 28 18.6**	**-0.6**
	baz=21							
KBK	**Karagaybulak**	**2.49**	**320**	P		**Pb**	**12 27 47.5**	**-0.6**
	SNR=7.4							
SATY	**Saty**	**2.50**	**23**	*eP*		**Pb**	**12 27 48.5**	**+0.3**
	20nm,0.5s							
SATY				*eS*		**Sg**	**12 28 24.9**	**+1.9**
	56nm,0.7s							
SATY	**Saty**	**2.50**	**23**	Pg		**Pb**	**12 27 48.6**	**+0.3**
	20nm,0.5s							
SATY				Lg		Lg	12 28 24.9	
	56nm,0.7s							
AAK	**Ala-Archa**	**2.71**	**315**	⇑*iP*		**Pn**	**12 27 47.6**	**+0.4**
	baz=16							
AAK				⇑*iS*		**Sb**	**12 28 24.5**	**-0.9**
	baz=16							
AAK	**Ala-Archa**	**2.71**	**315**	P		**Pb**	**12 27 50.9**	**-0.9**
	SNR=16							
AAK	**Ala-Archa**	**2.71**	**315**	⇓Pg		**Pb**	**12 27 50.4**	**-1.4**
	18nm,0.8s							
AAK				⇑Lg		Lg	12 28 29.0	
	38nm,1.1s							
UZB	**Uzynbulak**	**2.79**	**30**	*eP*		**Pb**	**12 27 52.5**	**-0.6**
	8.8nm,0.4s							
UZB				*eS*		**Sg**	**12 28 31.9**	**-0.3**
	22nm,0.7s							
UZB	**Uzynbulak**	**2.79**	**30**	Pg		**Pb**	**12 27 52.5**	**-0.6**
	8.8nm,0.4s							
UZB				Lg		Lg	12 28 31.9	
	22nm,0.7s							
CHMS	**Chumysh**	**2.84**	**323**	⇑*iP*		**Pn**	**12 27 49.2**	**+0.3**
	baz=23							
CHMS				⇑*iS*		**Sb**	**12 28 26.9**	**-2.3**
	baz=23							
CHMS	**Chumysh**	**2.84**	**323**	P		**Pn**	**12 27 50.2**	**+1.3**
	SNR=6.5							
KURS	**Kuram**	**2.85**	**16**	*eP*		**Pb**	**12 27 53.6**	**-0.5**
	17nm,0.6s							
KURS				*eS*		**Sg**	**12 28 33.6**	**-0.4**
	16nm,0.5s							
AML	**Almayashu**	**2.90**	**299**	⇑*iP*		**Pn**	**12 27 50.7**	**+0.6**
	baz=1.0							
AML				⇑*iS*		**Sb**	**12 28 28.7**	**-2.6**
	baz=1.0							
AML	**Almayashu**	**2.90**	**299**	P		**Pn**	**12 27 51.4**	**+1.4**
	SNR=4							
KTBS	**Karatobe**	**2.97**	**354**	⇓*eP*		**Pb**	**12 27 56.0**	**-0.1**
	8.0nm,0.6s							
KTBS				*eS*		**Sg**	**12 28 38.0**	**-0.1**
	58nm,0.6s							
KTBS	**Karatobe**	**2.97**	**354**	Pg		**Pb**	**12 27 56.1**	**-0.1**
	8.0nm,0.6s							
KTBS				Lg		Lg	12 28 38.3	
	58nm,0.6s							
SHLS	**Shalkode**	**2.98**	**36**	*eP*		**Pg**	**12 27 59.2**	**-0.5**
	18nm,0.4s							
SHLS				*eS*		**Sg**	**12 28 43.6**	**+5.3**
	53nm,0.6s							
SHLS	**Shalkode**	**2.98**	**36**	Pg		**Pg**	**12 27 59.3**	**-0.5**
	18nm,0.4s							
SHLS				Lg		Lg	12 28 43.6	
	53nm,0.6s							
CHKK	**Chushkaly**	**3.10**	**359**	*eP*		**Pb**	**12 27 58.2**	**-0.1**
	6.4nm,0.3s							
CHKK				*eS*		**Sg**	**12 28 41.7**	**-0.5**
	32nm,0.4s							
CHKK	**Chushkaly**	**3.10**	**359**	Pg		**Pb**	**12 27 58.2**	**-0.1**
	6.4nm,0.3s							
CHKK				Lg		Lg	12 28 41.9	
	32nm,0.4s							
KRBS	**Karabastau**	**3.12**	**341**	⇓*eP*		**Pb**	**12 27 58.7**	**-0.1**
	7.3nm,0.4s							
KRBS				*eS*		**Sg**	**12 28 42.5**	**-0.4**
	22nm,0.5s							
KRBS	**Karabastau**	**3.12**	**341**	Pg		**Pb**	**12 27 58.8**	**0.0**
	7.3nm,0.4s							
KRBS				Lg		Lg	12 28 44.0	
	22nm,0.5s							
EKS2	**Erkin-Say**	**3.13**	**309**	⇑*iP*		**Pn**	**12 27 53.7**	**+0.8**
	baz=10.0							
EKS2				⇑*iS*		**Sb**	**12 28 34.5**	**-3.1**
	baz=10.0							
PDGK	**Podgornoye**	**3.13**	**34**	Pg		**Pb**	**12 27 58.1**	**-0.9**
	5.8nm,0.4s							
PDGK				Lg		Lg	12 28 41.1	
	15nm,0.9s							
PDGK	**Podgornoye**	**3.13**	**34**	⇑Pg		**Pb**	**12 27 58.4**	**-0.6**
	8.9nm,0.5s							
PDGK				⇓Lg		Lg	12 28 43.3	
	33nm,0.7s							
ARSB	**Arslanbob**	**3.16**	**282**	⇑*iP*		**Pn**	**12 27 53.2**	**-0.2**
	baz=84							
ARSB				⇑*iS*		**Sn**	**12 28 33.8**	**+2.1**
	baz=84							
USP	**Ospenovka**	**3.17**	**323**	P		**Pb**	**12 28 00.3**	**+0.7**
	SNR=7.9							
KUU	**Kurty**	**3.19**	**350**	Pg		**Pb**	**12 28 00.1**	**+0.2**
	2.9nm,0.4s							
KUU				Lg		Lg	12 28 45.3	
	9.4nm,0.6s							
MNBS	**Baschi**	**3.46**	**16**	*eP*		**Pb**	**12 28 04.9**	**+0.3**
	0.1nm,0.5s							
MNBS				*eS*		**Sg**	**12 28 52.9**	**-0.8**
	0.3nm,0.3s							
MNBS	**Baschi**	**3.46**	**16**	Pg		**Pb**	**12 28 05.0**	**+0.5**
	7.1nm,0.3s							
MNBS				Lg		Lg	12 28 54.4	
	17nm,0.3s							
ARXS	**Arharly**	**3.50**	**9**	*eP*		**Pb**	**12 28 05.5**	**+0.3**
	8.8nm,0.4s							
ARXS				*eS*		**Sg**	**12 28 54.0**	**-1.0**
	16nm,0.7s							
ARXS	**Arharly**	**3.50**	**9**	Pg		**Pb**	**12 28 05.5**	**+0.3**
	8.8nm,0.4s							
ARXS				Lg		Lg	12 28 54.7	
	16nm,0.7s							
MRKS	**Merke**	**3.51**	**306**	*eP*		**Pb**	**12 28 04.0**	**-1.5**
	6.0nm,0.4s							
MRKS				*eS*		**Sb**	**12 28 51.2**	**+2.7**
	9.0nm,0.6s							
MRKS	**Merke**	**3.51**	**306**	Pg		**Pb**	**12 28 04.0**	**-1.5**
	6.0nm,0.4s							
MRKS				Lg		Lg	12 28 51.2	
	9.0nm,0.6s							
DJR	**Jarkent**	**4.09**	**28**	*eP*		**Pb**	**12 28 15.9**	**+0.6**
	4.2nm,0.4s							
DJR				*eS*		**Sg**	**12 29 11.9**	**-2.1**
	8.2nm,0.4s							
DJR	**Jarkent**	**4.09**	**28**	Pg		**Pb**	**12 28 15.9**	**+0.6**
	4.2nm,0.4s							
DJR				Lg		Lg	12 29 11.9	
	8.2nm,0.4s							
KK31	**Karatay Array**	**5.44**	**298**	⇓Pg		**Pb**	**12 28 39.0**	**+0.7**
	0.7nm,0.5s,baz=135,slow=16,SNR=7.2							
KK31				⇓Lg		Lg	12 29 53.8	
	2.0nm,0.6s,baz=119,slow=28,SNR=4.3							

*IDC **07** 12:48:05.9±0.5,7.00S×154.96E,h0km,mb4.4/17,*
mb1 4.6/20,mb1mx4.4/38,mbtmp4.4/20,ML3.2/3,MS3.5/12,
Ms1 3.5/12,ms1mx3.2/34,Error ellipse: s-maj=17.7km
s-min=14.7km az=105.0
*DJA **07** 12:48:10.6±2.1,7.5S×15.5E±.°,h11km±15km,M4.9/13,*
mb4.8/13,mB5.3/3,MLv5.0/1,Mw(mB)4.7/3
*BJI **07** 12:48:11.4±0.0,6.55S×155.27E,h45km,mB4.8/10,*
mb4.6/12
*NEIC **07** 12:48:11.4±2.0,6.97S±0.08×154.82E±0.07,h35km±1km,*
mb4.7/31,Error ellipse: s-maj=14.6km s-min=9.5km
az=217.0

ISC 07 12:48:12.2±0.4,6.99S±0.06×154.95E±0.06,h41km,n73, σ1§40/72,mb4.6/35,MS3.5/9,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.92**	**315**			**Pn**	**12 49 09.5**	**-0.6**
KRVT	**Keravat (AS076**	**3.94**	**312**		Pn	**Pn**	**12 49 09.1**	**-1.2**
	10nm,0.3s,baz=0.5,slow=6.6,SNR=12							
KRVT					Sn	**Sn**	**12 49 55.5**	**+0.2**
	16nm,0.3s,baz=97,slow=19,SNR=3.7							
HNR	**Honiara**	**5.51**	**116**		Pn	**Pn**	**12 49 33.6**	**+1.8**
	9.8nm,0.3s,baz=215,slow=7.9,SNR=1.4							
HNR					Sn	Sn	12 50 45.8	+12
	18nm,0.3s,baz=76,slow=19,SNR=1.3							
HNR					LR	LR	12 51 48.4	
	comp=Z,985nm,18.5s,baz=273,slow=40							
HNR	**Honiara**	**5.51**	**116**			Pn	12 49 37.5	+5.6
PMG	**Port Moresby**	**8.08**	**252**		Pn	**Pn**	**12 50 05.6**	**-1.5**
	2.9nm,0.3s,baz=90,slow=9.1,SNR=8.8							
PMG					Sn	**Sn**	**12 51 40.1**	**+2.9**
	baz=94,slow=19,SNR=1.9							
PMG					LR	LR	12 53 09.5	
	comp=Z,516nm,18.3s,baz=68,slow=38							
PMG	**Port Moresby**	**8.08**	**252**		

comp=Z,8.0nm,0.7s
EDFI Ende, Flores 32.98 265 P P 12 54 47.3 +3.6
FORT Forrest 34.56 223 P P 12 54 55.9 -1.2
PSA00 Pilbara Seismi 36.86 243 P P 12 55 14.3 -2.7
RPZ Rata Peaks 39.22 161 P P 12 55 36.1 -0.4
RPZ IAmb IAmb 12 55 48.3
comp=Z,29nm,1.4s
MORW Morawa 42.72 234 P P 12 56 04.5 -1.1
MORW IAmb IAmb 12 56 10.5
comp=Z,37nm,1.4s
NWAO Narrogin (SRO) 43.46 228 LR LR 13 13 23.8
comp=Z,69nm,20.0s,baz=109,slow=35
LEM Lembang 46.97 267 LR LR 13 17 52.4
comp=Z,17nm,20.6s,baz=74,slow=38
KSRS Korea Array 50.91 332 P P 12 57 09.1 -0.3
KSRS LR LR 13 16 10.0
comp=Z,21nm,21.1s,baz=146,slow=33
XAN Xi'an 59.67 316 P P 12 58 13.9 +1.2
XAN pP pP 12 58 22.4 -1.0
XAN pmax pmax
comp=Z,6.0nm,1.0s
PETK Petropavlovsk- 59.91 2 P P 12 58 15.1 +1.2
comp=Z,7.7nm,0.9s,baz=174,slow=7.4,SNR=8.0
PETK LR LR 13 19 45.9
comp=Z,29nm,21.8s,baz=242,slow=32
KMI Kunming 59.97 304 P P 12 58 21.8 +6.6
KMI pP pP 12 58 25.6 0.0
KMI pmax pmax
comp=Z,10.0nm,0.7s
KMI pmax pmax
comp=Z,240nm,4.2s
CMAR Chiang Mai Arr 60.74 296 P P 12 58 20.6 +0.3
comp=Z,2.7nm,0.7s,baz=126,slow=5.3,SNR=9.4
CMAR LR LR 13 23 44.6
comp=Z,13nm,20.4s,baz=205,slow=35
CASY Casey 66.59 198 P P 12 58 58.1 +0.1
CASY IAmb IAmb 12 58 58.2
comp=Z,4.8nm,0.9s
GTA Gaotai 68.70 317 *eP* **P 12 59 12.9 +0.9**
GTA pmax pmax
comp=Z,3.0nm,1.1s
SONM Songino Array 69.30 327 P P 12 59 17.1 +1.6
comp=Z,0.7nm,0.5s,baz=138,slow=8.9,SNR=2.1
VNDA Vanda 70.59 178 P P 12 59 23.4 +0.6
comp=Z,2.4nm,0.8s,baz=335,slow=6.6,SNR=14
CNPM China Poot 78.77 25 P P 13 00 10.8 +0.4
TTA Tatalina 79.03 21 P P 13 00 12.6 +0.7
PPLA Purkeypile 80.38 22 P P 13 00 19.2 -0.1
PPLA IAmb IAmb 13 00 23.8
comp=Z,6.2nm,1.1s
PMR Palmer 80.80 24 P P 13 00 21.2 -0.1
PMR IAmb IAmb 13 00 26.0
comp=Z,13nm,1.3s
SML Sawmill 81.24 24 P P 13 00 24.1 +0.3
NEA Nenana 82.48 21 P P 13 00 29.8 -0.4
NEA IAmb IAmb 13 00 34.8
comp=Z,4.1nm,0.9s
QSPA South Pole Qui 82.99 180 P P 13 00 33.7 +0.7
MKAR Makanchi Array 83.37 319 P P 13 00 34.8 -0.4
comp=Z,0.9nm,0.7s,baz=101,slow=6.3,SNR=8.2
ILAR Eielson Array 83.38 22 P P 13 00 33.2 -1.7
comp=Z,1.4nm,0.9s,baz=216,slow=5.0,SNR=13
ILAR LR LR 13 35 01.2
comp=Z,63nm,19.5s,baz=264,slow=34
BARN Barnard Glacie 83.64 26 P P 13 00 37.6 +1.1
CTGM Chitina Glacie 83.75 26 P P 13 00 37.7 +0.7
ZALV Zalesovo Beam 84.15 326 P P 13 00 37.6 -1.3
comp=Z,1.0nm,0.6s,baz=122,slow=5.9,SNR=4.7
MAW Mawson 84.39 203 P P 13 00 39.2 -0.8
comp=Z,3.7nm,0.7s,baz=107,slow=11,SNR=3.7
HYT Haines Junctio 85.39 27 P P 13 00 46.5 +1.2
MOBC Moresby Island 85.55 35 P P 13 00 47.0 +0.9
NRIK Noril'sk 88.71 341 P P 13 01 00.8 -0.2
comp=Z,1.6nm,0.5s,baz=79,slow=5.2,SNR=2.1
INK Inuvik 89.73 21 P P 13 01 06.2 +0.5
INK IAmb IAmb 13 01 14.8
comp=Z,5.9nm,1.4s
NVAR Mina Array Bea 91.75 52 P P 13 01 16.6 +0.4
comp=Z,2.6nm,0.8s,baz=248,slow=6.4,SNR=14
KVN Kaiserville 91.99 51 P P 13 01 18.3 +1.1
KVN IAmb IAmb 13 01 20.4
comp=Z,3.0nm,0.9s
YKA Yellowknife Ar 96.35 28 P P 13 01 36.0 -0.4
comp=Z,3.8nm,0.8s,baz=261,slow=4.3,SNR=42
YKA LR LR 13 45 02.1
comp=Z,15nm,18.1s,baz=0.0,slow=36
PDAR Pinedale Array 98.73 48 P P 13 01 47.1 -0.9
comp=Z,1.0nm,0.8s,baz=230,slow=3.7,SNR=7.2
AKASG Malin Array Be 117.50 324 PKP PKPdf 13 06 52.6 -1.1
comp=Z,0.3nm,0.3s,baz=53,slow=2.6,SNR=1.5
GERES GERESS Array B 127.02 329 PKP PKPdf 13 07 12.1 0.0
comp=Z,0.7nm,0.6s,baz=53,slow=2.0,SNR=5.3
LPAZ La Paz 131.50 119 PKP PKiKP 13 07 22.9 -0.3
comp=Z,0.8nm,0.5s,baz=3.6,slow=5.5,SNR=3.8
CPUP Villa Florida 134.42 138 PKP PKPdf 13 07 27.0 +0.3
comp=Z,1.1nm,0.6s,baz=358,slow=2.8,SNR=4.5
BDFB Brasilia 148.02 135 PKPbc PKPbc 13 07 54.7 +0.2
comp=Z,9.0nm,0.7s,baz=238,slow=1.9,SNR=9.1
TORD Torodi Ar. Bea 152.98 285 PKPbc PKPbc 13 08 04.6 -1.7
comp=Z,1.2nm,0.6s,baz=51,slow=1.8,SNR=8.0

IDC ***07*** *13:07:46.5±3.0, 36°.42N×70°.08E, h193km±31km, mb3.1/4, mb1 3.0/10, mb1mx2.9/55, mbtmp3.5/10, MS3.1/1, Ms1 3.1/1, ms1mx2.3/23, Error ellipse: s-maj=26.5km s-min=20.0km az=169.0*
NNC ***07*** *13:08:16.9±5.3, 38°.81N×70°.79E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=47.9km s-min=37.5km az=11.0*
ISC 07 13:07:47.9±0.8, 36°.46N±0°.08×70°.08E±0°.09, h213km, n26, σ1§05/26, mb3.3/3, 3C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KK31	**Karatay Array**	**6.65**	**3**	Pn		**Pn**	**13 09 22.8**	**-0.7**
	0.7nm,0.4s,baz=181,slow=12,SNR=13							
KK31				⇑Lg		Lg	13 10 33.6	
	2.1nm,0.5s,baz=194,slow=24,SNR=5.2							
AAK	**Ala-Archa**	**7.05**	**28**	P		**Pn**	**13 09 28.9**	**0.0**
	0.4nm,0.3s,baz=176,slow=15,SNR=3.0							
AAK				S		**S**	**13 10 46.5**	**-2.8**
AAK	**Ala-Archa**	**7.05**	**28**	⇓Pn		**Pn**	**13 09 29.5**	**+0.7**
	1.4nm,0.5s							
AAK				Lg		Lg	13 10 45.6	
	7.2nm,0.8s							
TKM2	**Tokmak 2**	**7.73**	**32**	⇑Pn		**Pn**	**13 09 40.5**	**+2.9**
	1.3nm,0.5s							
TKM2				⇑Lg		Lg	13 11 07.6	
	3.6nm,0.9s							
GEYT	**Alibeck**	**9.66**	**282**	P		**Pn**	**13 10 01.7**	**-0.7**
	0.4nm,0.3s,baz=91,slow=8.2,SNR=5.7							
MKAR	**Makanchi Array**	**13.77**	**38**	P		**Pn**	**13 10 54.9**	**+0.6**
	0.1nm,0.3s,baz=222,slow=14,SNR=2.3							
DANN	**Dangsing**	**14.10**	**121**	*eP*		**Pn**	**13 10 58.3**	**-0.5**
	19nm,0.4s							
KOLN	**Koldanda**	**14.35**	**123**	*eP*		**Pn**	**13 11 00.7**	**-1.2**
	5.4nm,0.3s							
GKN	**Gorkha**	**14.92**	**120**	*eP*		**Pn**	**13 11 08.4**	**-0.3**
KURBB	**Kurchatov Arra**	**15.41**	**21**	P		**P**	**13 11 13.2**	**-1.1**
	0.0nm,0.3s,baz=211,slow=10,SNR=3.5							
DMN	**Daman**	**15.49**	**120**	*eP*		**Pn**	**13 11 15.8**	**+0.1**
	8.0nm,0.4s							
KKN	**Kakani**	**15.50**	**120**	*eP*		**P**	**13 11 14.9**	**-0.7**
PKIN	**Phulchoki**	**15.71**	**120**	*eP*		**P**	**13 11 17.7**	**-0.3**
	12nm,0.3s							
PKI	**Pulchoki**	**15.72**	**120**	*eP*		**P**	**13 11 17.8**	**-0.4**
GUN	**Gumba**	**15.85**	**118**	*eP*		**Pn**	**13 11 20.7**	**+0.6**
JIRN	**Jiri**	**16.22**	**118**	*eP*		**Pn**	**13 11 24.5**	**-0.1**
AKTO	**Aktyubinsk**	**16.46**	**332**	P		**Pn**	**13 11 27.0**	**+0.2**
	0.3nm,0.3s,baz=157,slow=7.7,SNR=4.2							
BVAR	**Borovoye Array**	**16.57**	**1**	P		**Pn**	**13 11 29.3**	**+1.2**
	0.2nm,0.3s,baz=169,slow=8.5,SNR=4.8							
RAMN	**Ramite**	**16.94**	**119**	*eP*		**Pn**	**13 11 32.6**	**-0.4**
	7.6nm,0.3s							
TAPN	**Taplejung**	**17.49**	**116**	*eP*		**Pn**	**13 11 38.8**	**-0.7**
ODAN	**Odare**	**17.55**	**118**	*eP*		**P**	**13 11 38.6**	**+0.4**
ZALV	**Zalesovo Beam**	**20.27**	**26**	P		**P**	**13 12 07.8**	**+0.8**
	0.9nm,0.5s,baz=222,slow=11,SNR=5.2							
EIL	**Elat**	**30.09**	**267**	LR		LR	13 26 17.8	
	comp=Z,34nm,18.9s,baz=97,slow=37							
CMAR	**Chiang Mai Arr**	**31.09**	**117**	P		**P**	**13 13 46.7**	**+0.3**
	0.2nm,0.3s,baz=307,slow=8.9,SNR=1.8							
ARCES	**ARCESS Array B**	**40.90**	**338**	P		**P**	**13 15 09.5**	**+0.7**
	0.7nm,0.7s,baz=124,slow=9.0,SNR=4.4							
TORD	**Torodi Ar. Bea**	**64.97**	**268**	P		**P**	**13 18 05.2**	**0.0**
	0.7nm,0.9s,baz=51,slow=4.9,SNR=2.6							

ATA ***07*** *13:17:16.3±2.5, 39°.54N×40°.09E, h18km±113km, ML2.1, MW3.1*
ISK ***07*** *13:17:18.8, 39°.58N×39°.94E, h3km, ML2.0/3*
DDA ***07*** *13:17:19.5, 39°.52N×39°.90E, h7km±1km, ML1.9*
ISC 07 13:17:17.4±1.2, 39°.62N±0°.04×40°.06E±0°.03, h9km±10km, n19, σ1§03/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ERZN	**Erzincan**	**0.26**	**263**	PG		**Pg**	**13 17 23.1**	**+0.4**
ERZN				SG		**Sg**	**13 17 26.2**	**0.0**
EUZM	**Uzumlu**	**0.29**	**288**	*eP*		**Pb**	**13 17 24.7**	**-0.2**
EUZM				*eS*		**Sb**	**13 17 29.3**	**-0.7**
EUZM				IAML			13 17 31.4	
	comp=Z,128nm,0.3s							
EUZM	**Uzumlu**	**0.29**	**288**	*i* P		**Pb**	**13 17 24.6**	**-0.3**
EUZM				*i* S		**Sg**	**13 17 28.9**	**+1.8**
EUZM				IAML			13 17 31.0	
	comp=N,192nm,0.4s							
EUZM				IAML			13 17 31.0	
	comp=E,182nm,0.8s							
YEDI	**Yedisu-Bingol**	**0.42**	**115**	PG		**Pn**	**13 17 29.1**	**-0.7**
YEDI				SG		**Sb**	**13 17 36.7**	**+3.1**
TNCL	**Tunceli-Merkez**	**0.64**	**219**	*eP*		**Pg**	**13 17 29.5**	**-0.3**
TNCL				*eS*		**Sg**	**13 17 36.9**	**-1.3**
TNCL				IAML			13 17 39.4	
	comp=Z,65nm,0.6s							
TNCL	**Tunceli-Merkez**	**0.64**	**219**	*i* P		**Pg**	**13 17 29.6**	**-0.1**
TNCL				*i* S		**Sg**	**13 17 37.0**	**-1.2**
TNCL				IAML			13 17 38.0	
	comp=N,131nm,0.6s							
TNCL				IAML			13 17 40.0	
	comp=E,102nm,0.3s							
BAYT	**Aydıntepe-Bayb**	**0.78**	**5**	PG		**Pn**	**13 17 35.5**	**+0.7**
BNGB	**Bingl**	**0.79**	**142**	PG		**Pn**	**13 17 35.1**	**+0.2**
KELT	**Kelkit**	**0.81**	**311**	*eP*		**Pn**	**13 17 34.7**	**-0.7**
KELT				IAML			13 17 49.8	
	comp=Z,16nm,1.3s							
KELT	**Kelkit**	**0.81**	**311**	*i* P		**Pn**	**13 17 34.6**	**-0.7**
KELT				IAML			13 17 55.0	
	comp=N,22nm,0.4s							
KELT				IAML			13 17 55.0	
	comp=E,19nm,0.6s							
PTK	**Pertek**	**0.89**	**216**	PG		**Pb**	**13 17 35.2**	**+0.1**
KRIK	**Erzurum-spir**	**0.98**	**43**	*eP*		**Pb**	**13 17 34.7**	**-2.1**
KRIK				IAML			13 17 47.2	
	comp=Z,319nm,0.4s							
KRIK	**Erzurum-spir**	**0.98**	**43**	*i* P		Pn	13 17 41.4	+3.8
REFA	**Refahiye_ERZN**	**1.02**	**258**	*eP*		**Pg**	**13 17 36.5**	**-0.6**
REFA				*eS*		**Sn**	**13 17 53.2**	**+0.4**
REFA				IAML			13 18 02.0	
	comp=Z,11nm,0.6s							
KEMA	**Kemaliye**	**1.26**	**254**	*eP*		**Pb**	**13 17 41.5**	**+0.1**
KEMA				*eS*		**Sg**	**13 17 58.0**	**0.0**
KEMA				IAML			13 18 02.5	
	comp=Z,8.2nm,1.0s							
KEMA	**Kemaliye**	**1.26**	**254**	*i* P		**Pn**	**13 17 40.5**	**-0.8**
KEMA				*i* S		**Sg**	**13 17 57.6**	**-0.3**
KEMA				IAML			13 18 00.0	
	comp=E,33nm,0.5s							
KEMA				IAML			13 18 03.0	
	comp=N,33nm,0.5s							
ELZG	**Elazig**	**1.40**	**217**	*i* P		**Pn**	**13 17 42.7**	**-0.5**
ARPR	**Arapgir-MALATY**	**1.43**	**249**	PN		**Pg**	**13 17 45.3**	**+0.4**
ARPR				SN		**Sg**	**13 18 04.4**	**+0.9**
SUSE	**Susehri**	**1.54**	**293**	*i* P		**Pg**	**13 17 47.4**	**+0.4**
SUSE				IAML			13 18 14.0	
	comp=E,19nm,0.7s							
SUSE				IAML			13 18 18.0	
	comp=N,22nm,1.0s							

SJA ***07*** *13:27:05.1±1.1, 19°.97S×70°.98W, h15km±4km, ML4.7, MW4.6*
IDC ***07*** *13:27:05.3±0.7, 19°.90S×70°.70W, h0km, mb4.2/12, mb1 4.4/14, mb1mx4.3/31, mbtmp4.3/14, ML4.3/2, MS3.8/19, Ms1 3.8/19, ms1mx3.7/33, Error ellipse: s-maj=21.7km s-min=18.4km az=35.0*
NEIC ***07*** *13:27:06.1±1.5, 19.97°S±0°.04×70°.98W±0°.05, h11km±3km, mb4.9/47, Mwr4.6/51, Error ellipse: s-maj=7.1km s-min=4.5km az=63.0*
NEIC ***07*** *13:27:06.3, 19°.97S×70°.95W, h19km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}6.63; $M_{\theta\theta}$-0.21; $M_{\phi\phi}$-6.42; $M_{r\theta}$2.53; $M_{r\phi}$1.61; $M_{\theta\phi}$-5.77; Fault plane solution: $M_0$9.22000×10^{15} NP1:ϕ_s353.25000°, δ23.96000°, λ102.65000°. NP2:ϕ_s159.46000°, δ66.66000°, λ84.44000°. Principal axes: T 9.1738, Plg68.0000°, Azm59.0000°; N 0.0823, Plg5.0000°, Azm162.0000°; P -9.2561, Plg21.0000°, Azm254.0000°;*
GUC ***07*** *13:27:08.4±0.8, 19°.96S×70°.98W, h34km±2km, ML4.8*
VAO ***07*** *13:27:11.0±1.5, 19°.91S×70°.79W, h49km±11km, mb4.5*
ISC 07 13:27:05.7±1.3, 19°.98S±0°.02×70°.89W±0°.04, h8km±8km, n230, σ1§28/244, mb4.8/31, MS4.0/14, 11C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TA02	**Huaiquique**	**0.77**	**112**	⇑*iP*		**Pn**	**13 27 22.9**	**0.0**
TA02				*i* S		**Sn**	**13 27 34.1**	**-0.5**
PSGC	**Pisagua**	**0.81**	**62**	⇓*iP*		**Pn**	**13 27 23.2**	**-0.3**
PSGC				*i* S		**Sn**	**13 27 34.9**	**-0.9**
PSGCX	**Pisagua**	**0.81**	**62**			**Pn**	**13 27 22.9**	**-0.6**
PSGCX	**Pisagua**	**0.81**	**62**	*eP*		**Pn**	**13 27 23.3**	**-0.3**
PSGCX				*eS*		**Sn**	**13 27 34.8**	**-1.1**
PSGCX				IAML			13 27 35.7	
	comp=Z,9μm,1.1s							
TA01	**Diego Aracena**	**0.89**	**131**	⇑*iP*		**Pn**	**13 27 24.7**	**+0.3**
TA01				*i* S		**Sn**	**13 27 37.5**	**0.0**
TA01	**Diego Aracena**	**0.89**	**131**			**Pn**	**13 27 24.7**	**+0.3**
PATCX	**Punta Patache**	**1.09**	**141**	⇑*iP*		**Pn**	**13 27 27.7**	**+0.4**
PATCX				*i* S		**Sn**	**13 27 43.3**	**+0.7**
PATCX				IAML			13 27 49.2	
	comp=E,37μm,0.5s							
PATCX	**Punta Patache**	**1.09**	**141**			**Pn**	**13 27 27.8**	**+0.4**
PATCX	**Punta Patache**	**1.09**	**141**	*eP*		**Pn**	**13 27 27.8**	**+0.4**
PATCX				*eS*		**Sn**	**13 27 42.5**	**-0.1**
PATCX				IAML			13 27 49.7	
	comp=Z,9μm,0.5s							
PB11	**IPOC Station P**	**1.18**	**80**	⇑*iP*		**Pn**	**13 27 29.6**	**+1.0**
PB11				*i* S		**Sn**	**13 27 45.8**	**+0.8**
PB11	**IPOC Station P**	**1.18**	**80**			**Pn**	**13 27 29.4**	**+0.7**
PB11	**IPOC Station P**	**1.18**	**80**	*eP*		**Pn**	**13 27 29.8**	**+1.1**
PB11				*eS*		**Sn**	**13 27 45.2**	**+0.2**
PB11				IAML			13 27 47.5	
	comp=Z,18μm,0.4s							
PB12	**IPOC Station P**	**1.46**	**21**	⇑*iP*		**Pb**	**13 27 33.0**	**-0.1**
PB12				*i* S		**Sn**	**13 27 52.0**	**+0.3**
PB12	**IPOC Station P**	**1.46**	**21**			**Pb**	**13 27 32.9**	**-0.3**
PB12	**IPOC Station P**	**1.46**	**21**	*eP*		**Pb**	**13 27 33.1**	**-0.1**
PB12				*eS*		**Sn**	**13 27 53.2**	**+1.5**
PB12				IAML			13 28 01.2	
	comp=Z,6μm,0.9s							
MNMC	**Minye Minye**	**1.48**	**56**	⇑*iP*		**Pb**	**13 27 34.4**	**+0.8**
MNMC				*eS*		**Sn**	**13 27 54.8**	**+2.2**
MNMC				IAML			13 27 59.8	
	comp=N,56μm,0.6s							
MNMC	**Minye Minye**	**1.48**	**56**			**Pb**	**13 27 34.3**	**+0.6**
MNMCX	**Minye Minye**	**1.48**	**56**	*eP*		**Pb**	**13 27 34.5**	**+0.8**
MNMCX				*eS*		**Sn**	**13 27 56.5**	**+3.9**
MNMCX				IAML			13 27 59.7	
	comp=Z,13μm,0.3s							
GO01	**Chusmiza**	**1.62**	**79**	⇑*iP*		**Pg**	**13 27 36.5**	**-0.4**
GO01				*eS*		**Sb**	**13 27 58.6**	**+1.6**
GO01	**Chusmiza**	**1.62**	**79**			**Pg**	**13 27 36.6**	**-0.4**
PB02	**IPOC Station P**	**1.63**	**145**	⇑*iP*		**Pb**	**13 27 35.5**	**-0.6**
PB02				*i* S		**Sg**	**13 27 57.5**	**-0.6**
PB02	**IPOC Station P**	**1.63**	**145**	*eP*		**Pb**	**13 27 35.5**	**-0.6**
PB02				*eS*		**Sg**	**13 27 59.4**	**+1.3**
PB02				IAML			13 28 06.0	
	comp=Z,24μm,0.6s							
PB08	**IPOC Station P**	**1.64**	**96**	⇑*iP*		**Pg**	**13 27 36.6**	**-0.6**
PB08				*i* S		**Sg**	**13 27 59.2**	**+0.6**
PB08				IAML			13 28 06.2	
	comp=N,11μm,0.7s							
PB08	**IPOC Station P**	**1.64**	**96**			**Pg**	**13 27 36.5**	**-0.6**
PB08	**IPOC Station P**	**1.64**	**96**	*eP*		**Pg**	**13 27 36.6**	**-0.6**
PB08				*eS*		**Sg**	**13 27 59.2**	**+0.6**
PB08				IAML			13 28 00.8	
	comp=Z,9μm,0.8s							
AP01	**Chacalluta**	**1.68**	**18**	*eP*		**Pb**	**13 27 36.1**	**-0.7**
AP01	**Chacalluta**	**1.68**	**18**			**Pb**	**13 27 36.0**	**-0.9**
PB01	**IPOC Station P**	**1.69**	**129**	⇑*iP*		**Pg**	**13 27 37.2**	**-1.0**
PB01				*i* S		**Sg**	**13 27 59.1**	**-1.0**
PB01				IAML			13 28 06.1	
	comp=E,16μm,0.5s							
PB01	**IPOC Station P**	**1.69**	**129**			**Pb**	**13 27 36.6**	**-0.5**
PB07	**IPOC Station P**	**1.98**	**152**	*eP*		**Pn**	**13 27 40.3**	**+0.6**
PB07				IAML			13 28 17.6	
	comp=E,7μm,0.6s							
PB07	**IPOC Station P**	**1.98**	**152**			**Pn**	**13 27 39.8**	**+0.1**
PB07	**IPOC Station P**	**1.98**	**152**	*eP*		**Pn**	**13 27 40.6**	**+0.9**
PB07				IAML			13 28 20.4	
	comp=Z,9μm,0.6s							
PB16	**IPOC Station P**	**2.09**	**39**	*eP*		**Pb**	**13 27 43.0**	**-1.3**
PB16				*eS*		**Sb**	**13 28 10.3**	**-0.3**
PB16	**IPOC Station P**	**2.09**	**39**			**Pb**	**13 27 42.8**	**-1.5**
PB16	**IPOC Station P**	**2.09**	**39**	*eP*		**Pb**	**13 27 43.4**	**-0.9**
PB16				*eS*		**Sg**	**13 28 11.6**	**-1.5**
PB16				IAML			13 28 15.8	
	comp=Z,5μm,1.1s							
PB03	**IPOC Station P**	**2.32**	**153**	*eP*		**Pn**	**13 27 45.0**	**+0.6**
PB03				IAML			13 28 28.1	
	comp=E,4μm,0.6s							
PB03	**IPOC Station P**	**2.32**	**153**	*eP*		**Pn**	**13 27 44.9**	**+0.6**
PB03				*eS*		**Sg**	**13 28 21.5**	**+1.2**
PB03				IAML			13 28 29.7	
	comp=Z,4μm,0.8s							
PB09	**IPOC Station P**	**2.38**	**140**	*eP*		**Pb**	**13 27 46.9**	**-1.9**
PB09				*eS*		**Sb**	**13 28 16.5**	**-1.9**
PB09				IAML			13 28 28.7	
	comp=E,10μm,0.6s							
PB09	**IPOC Station P**	**2.38**	**140**			**Pb**	**13 27 47.0**	**-1.9**
PB09	**IPOC Station P**	**2.38**	**140**	*i* P		**Pb**	**13 27 47.1**	**-1.8**
PB09				*eS*		**Sg**	**13 28 22.9**	**+0.7**
PB09				IAML			13 28 31.3	
	comp=Z,12μm,0.6s							
PB04	**IPOC Station P**	**2.44**	**164**	⇑*iP*		**Pn**	**13 27 46.0**	**-0.1**
PB04				IAML			13 28 38.9	
	comp=N,6μm,0.5s							
PB04	**IPOC Station P**	**2.44**	**164**			**Pn**	**13 27 45.7**	**-0.4**
PB04	**IPOC Station P**	**2.44**	**164**	*i* P		**Pn**	**13 27 46.0**	**-0.1**
PB04				*eS*		**Sg**	**13 28 25.6**	**+1.2**
PB04				IAML			13 28 38.4	
	comp=Z,5μm,1.1s							
PB05	**IPOC Station P**	**2.93**	**168**	IAML			13 28 53.6	
	comp=N,3μm,0.7s							
PB05	**IPOC Station P**	**2.93**	**168**	*i* P		**Pn**	**13 27 52.0**	**-0.7**
PB05				*eS*		**Sg**	**13 28 42.8**	**+2.8**
PB05				IAML			13 28 50.8	
	comp=Z,2μm,0.5s							
PB06	**IPOC Station P**	**2.98**	**156**			**Pn**	**13 27 53.3**	**-0.1**
PB06	**IPOC Station P**	**2.98**	**156**	*i* P		**Pn**	**13 27 53.4**	**0.0**
PB06				*eS*		**Sg**	**13 28 41.1**	**-0.4**
PB06				IAML			13 28 45.9	
	comp=Z,3μm,1.0s							
LVC	**Limon Verde**	**3.20**	**145**	Pn		**Pn**	**13 27 58.7**	**+2.0**
	comp=Z,32nm,0.3s,baz=313,slow=8.4,SNR=74							
LVC				Sn		**Sb**	**13 28 44.3**	**+1.9**
	comp=Z,157nm,0.3s,baz=68,slow=19,SNR=6.6							
LVC				LR		LR	13 29 24.3	
	comp=Z,2μm,18.0s,baz=318,slow=44							
PB15	**IPOC Station P**	**3.48**	**158**	⇓*iP*		**Pn**	**13 28 00.4**	**0.0**
PB15	**IPOC Station P**	**3.48**	**158**			**Pn**	**13 28 00.0**	**-0.3**
PB15	**IPOC Station P**	**3.48**	**158**	*i* P		**Pn**	**13 28 00.3**	**0.0**
PB15				*eS*		**Sg**	**13 28 57.7**	**+0.3**
PB15				IAML			13 29 00.8	
	comp=Z,3μm,0.6s							
PB10	**IPOC Station P**	**3.53**	**175**			**Pn**	**13 27 59.6**	**-1.2**
PB10	**IPOC Station P**	**3.53**	**175**	*i* P		**Pn**	**13 27 59.8**	**-1.1**
PB10				*eS*		**Sg**	**13 29 06.8**	**+7.5**
PB10				IAML			13 29 22.0	
	comp=Z,500nm,0.5s							
LPAZ	**La Paz**	**4.51**	**36**	Pn		**Pn**	**13 28 19.2**	**+4.3**
	comp=Z,7.8nm,0.3s,baz=172,slow=2.9,SNR=66							
LPAZ				LR		LR	13 30 10.9	
	comp=Z,1μm,19.3s,baz=242,slow=43							
PB14	**IPOC Station P**	**4.65**	**175**	*eP*		**Pn**	**13 28 14.8**	**-1.7**
PB14	**IPOC Station P**	**4.65**	**175**			**Pn**	**13 28 14.6**	**-1.9**
GO02	**Mina Guanaco**	**5.30**	**167**			**Pn**	**13 28 24.9**	**-0.5**
YJA	**Yavi**	**5.47**	**114**	*i* P		Pn	13 28 32.7	+4.7
AZAP	**Zapla**	**6.86**	**129**	*i* P		Pn	13 28 51.7	+4.9
AC02	**Maricunga**	**7.01**	**167**			**Pn**	**13 28 49.2**	**0.0**
ASTB	**Santa Barbara**	**7.16**	**125**	*eP*		**Pn**	**13 28 53.4**	**+2.5**
GO03	**Copiap**	**7.61**	**176**	Pn		**Pn**	**13 28 56.1**	**-0.9**
NNA	**Nana**	**9.79**	**323**	LR		LR	13 33 04.9	
	comp=Z,198nm,21.0s,baz=150,slow=37							
SIV	**San Ignacio**	**10.15**	**69**	Pn		**Pn**	**13 29 31.6**	**-0.2**
	comp=Z,2.7nm,0.3s,baz=267,slow=11,SNR=33							
SIV				Sn		**Sn**	**13 31 28.8**	**+2.9**
	baz=360,slow=21,SNR=3.7							
SIV				LR		LR	13 32 50.5	
	comp=Z,120nm,21.0s,baz=272,slow=35							
CFA	**Coronel Fontan**	**11.82**	**169**	LR		LR	13 34 48.2	
	comp=Z,475nm,20.9s,baz=338,slow=39							
PTLB	**Pontes e Lacer**	**12.07**	**70**	*eP*		**Pn**	**13 29 58.4**	**+0.3**
PTLB				*eS*		**Sn**	**13 32 12.0**	**-0.9**
VILB	**Vilhena**	**12.40**	**57**	*eP*		**Pn**	**13 30 03.0**	**+0.4**
SAML	**Samuel**	**13.26**	**35**			**Pn**	**13 30 13.2**	**-1.1**
CPUP	**Villa Florida**	**13.98**	**119**	Pn		**Pn**	**13 30 28.0**	**+3.9**
	comp=Z,0.3nm,0.3s,baz=308,slow=12,SNR=8.5							
CPUP				LR		LR	13 36 48.4	
	comp=Z,415nm,18.0s,baz=298,slow=42							

baz=172
V58A Windy Hill, Pi 56.01 352 P P 13 36 45.8 +1.0
baz=171
T59A Double "B" Far 56.99 354 P P 13 36 52.7 +0.9
baz=173
T59A Double "B" Far 56.99 354 P P 13 36 52.1 +0.3
T59A IAmb IAmb 13 36 54.0
comp=Z,22nm,1.3s
T58A Grand View Acr 57.07 353 P P 13 36 53.0 +0.7
baz=172
U54A Nelsons Funny 57.13 350 P P 13 36 51.7 -1.2
V48A Smith Brothers 57.43 345 P P 13 36 54.4 -0.5
V48A IAmb IAmb 13 36 55.0
comp=Z,14nm,1.4s
R58B Mineral 58.01 353 P P 13 37 00.1 +1.2
baz=172
WVT Waverly 58.06 344 P P 13 36 58.6 -0.8
baz=161
TXAR Lajitas Array 58.33 326 P P 13 37 02.2 +0.6
comp=Z,0.6nm,0.8s,baz=141,slow=8.1,SNR=5.8
R58A Rapidan 58.35 353 P P 13 37 02.4 +1.1
baz=172
MIAR Mount Ida 58.36 338 P P 13 37 01.8 +0.3
baz=155
MIAR Mount Ida 58.36 338 P P 13 37 01.1 -0.4
MIAR IAmb IAmb 13 37 03.7
comp=Z,8.2nm,1.2s
R57A Stanardsville 58.41 353 P P 13 37 02.7 +1.0
baz=172
T47A Sharon Grove 58.69 345 P P 13 37 02.8 -0.9
T47A IAmb IAmb 13 37 05.7
comp=Z,28nm,1.6s
W39A Magazine 59.02 338 P P 13 37 07.4 +1.3
baz=155
X37A Clayton 59.05 337 P P 13 37 06.3 0.0
Q57A Strasburg 59.12 353 P P 13 37 08.0 +1.3
baz=172
P56A Dayton Farm, R 59.64 353 P P 13 37 11.4 +1.2
baz=171
U40A Yellville 59.76 340 P P 13 37 11.5 +0.3
baz=156
U40A Yellville 59.76 340 P P 13 37 10.7 -0.5
O57A Amberson 60.20 354 P P 13 37 15.1 +0.9
baz=173
O56A Blue Knob Stat 60.36 353 P P 13 37 16.3 +1.0
baz=172
O56A Blue Knob Stat 60.36 353 P P 13 37 15.6 +0.4
O56A IAmb IAmb 13 37 17.4
comp=Z,15nm,1.1s
O55A Ligonier 60.38 353 P P 13 37 16.2 +0.8
baz=171
N55A Marion Center 60.91 353 P P 13 37 20.0 +1.0
baz=171
MNTX Cornudas Mount 61.11 327 P P 13 37 21.4 +0.9
baz=143
MNTX Cornudas Mount 61.11 327 P P 13 37 20.9 +0.4
M58A Price's Panora 61.26 355 P P 13 37 22.6 +1.3
baz=174
M56A Emporium 61.52 354 P P 13 37 23.8 +0.7
baz=172
M56A Emporium 61.52 354 P P 13 37 23.4 +0.3
M56A IAmb IAmb 13 37 24.9
comp=Z,13nm,1.1s
T35A Sooner Cattle 61.54 337 P P 13 37 23.4 +0.1
T35A IAmb IAmb 13 37 25.4
comp=Z,9.2nm,1.1s
M55A Ridgway 61.57 353 P P 13 37 24.1 +0.7
baz=172
M55A Ridgway 61.57 353 P P 13 37 23.7 +0.3
M55A IAmb IAmb 13 37 24.7
comp=Z,13nm,0.9s
BRYW Bryant College 61.58 359 P P 13 37 24.0 +0.5
MSTX Muleshoe 61.65 330 P P 13 37 23.5 -0.8
MSTX IAmb IAmb 13 37 26.2
comp=Z,7.1nm,1.0s
M54A Oil Creek Stat 61.71 353 P P 13 37 25.0 +0.6
baz=171
M54A Oil Creek Stat 61.71 353 P P 13 37 23.9 -0.4
L58A Harry Jones Me 61.88 356 P P 13 37 26.3 +0.8
baz=175
L59A Walton 61.97 357 P P 13 37 27.5 +1.3
baz=176
L59A Walton 61.97 357 P P 13 37 26.4 +0.3
L59A IAmb IAmb 13 37 28.2
comp=Z,13nm,0.9s
BINY Binghamton 62.04 356 P P 13 37 25.9 -0.7
WES Weston 62.05 360 P P 13 37 26.6 +0.1
L56A Greenwood 62.11 354 P P 13 37 28.0 +0.9
baz=173
L56A Greenwood 62.11 354 P P 13 37 26.6 -0.5
L56A IAmb IAmb 13 37 28.9
comp=Z,18nm,1.1s
WVNY West Valley, N 62.48 354 P P 13 37 29.5 0.0
K59A Cooperstown 62.55 357 P P 13 37 31.4 +1.4
baz=176
K58A Earlville 62.58 356 P P 13 37 31.1 +1.0
baz=175
K58A Earlville 62.58 356 P P 13 37 30.4 +0.2
K58A IAmb IAmb 13 37 32.5
comp=Z,16nm,1.2s
VNA2 Neumayer--Watz 62.69 161 P P 13 37 31.2 +0.6
MMNY Mt. Morris Dam 62.73 354 P P 13 37 31.8 +0.6
J56A Wolcott 63.18 355 P P 13 37 35.1 +1.0
baz=174
J56A Wolcott 63.18 355 P P 13 37 34.1 0.0
J56A IAmb IAmb 13 37 35.9
comp=Z,13nm,1.1s
J59A Piesco 63.22 357 P P 13 37 35.4 +1.0
baz=176
J59A Piesco 63.22 357 P P 13 37 32.8 -1.7
J59A IAmb IAmb 13 37 36.4
comp=Z,16nm,1.1s
J57A Williamstown 63.25 356 P P 13 37 33.7 -0.8
J57A IAmb IAmb 13 37 36.1
comp=Z,9.0nm,1.1s
I58A Old Forge 63.46 357 P P 13 37 37.2 +1.1
baz=176
J52A Paris 63.52 352 P P 13 37 36.6 +0.2
baz=170
I60A Shoreham 63.55 358 P P 13 37 37.8 +1.3
baz=178
I61A Oroboro, Fairl 63.61 359 P P 13 37 38.7 +1.7
baz=179
SNAA Sanae 64.31 161 P P 13 37 42.7 +1.3
SNAA Sanae 64.31 161 P P 13 37 42.4 +1.0
SNAA IAmb IAmb 13 37 44.7
comp=Z,6.3nm,1.0s
H59A Cadyville 64.36 358 P P 13 37 42.8 +0.9
baz=177
FRNY Flat Rock 64.54 358 P P 13 37 42.4 -0.6
H53A Bobcaygeon 64.62 354 P P 13 37 43.8 +0.2
baz=172
G60A Masonville 64.77 359 P P 13 37 45.5 +0.9
baz=179
SADO Sadowa 64.87 354 P P 13 37 44.9 -0.3
SADO IAmb IAmb 13 37 46.2
comp=Z,8.3nm,1.1s
G62A West of Eustis 64.88 0 P P 13 37 46.6 +1.3
baz=180
G62A West of Eustis 64.88 0 P P 13 37 45.5 +0.2
G65A Princeton 64.93 3 P P 13 37 46.2 +0.6
PKME Peaks-Kenny Pk 64.94 1 P P 13 37 46.4 +0.7
baz=182
F52A Sundridge 65.91 354 P P 13 37 52.3 +0.3
baz=171
SDCO Great Sand Dun 66.01 330 P P 13 37 54.5 +1.3
baz=144
SDCO Great Sand Dun 66.01 330 P P 13 37 53.2 +0.1
E56A St. Veronique 66.31 357 P P 13 37 55.1 +0.6
baz=176
E54A Lac Daplat, Po 66.34 355 P P 13 37 55.5 +0.9
baz=174
D57A Chemin Vers le 66.73 358 P P 13 37 57.8 +0.6
baz=177
D62A Allapoint, All 66.77 1 P P 13 37 58.3 +0.9
baz=182
D55A Sainte-Anne-du 66.81 357 P P 13 37 58.2 +0.6
baz=175
D50A G1974 Best Tow 67.32 353 P P 13 38 01.4 +0.5
baz=171
ECSD EROS Data Cent 67.65 340 P P 13 38 03.5 +0.4
baz=154
ECSD EROS Data Cent 67.65 340 P P 13 38 02.6 -0.5
PV09 Paradox Valley 68.34 328 P P 13 38 05.7 -2.2
U15A North Rim 68.40 325 P P 13 38 06.9 -1.4
GMRC Granite Mounta 69.10 322 P P 13 38 15.2 +2.6
baz=135
KNB Kanab 69.12 325 P P 13 38 12.3 -0.4
CCUT Cedar City 69.80 325 P P 13 38 16.2 -0.7
MSU Marysvale 69.89 327 P P 13 38 16.3 -1.2
DBIC Dimbokro 70.10 75 P P 13 38 18.0 -1.0
comp=Z,5.5nm,0.9s,baz=180,slow=7.4,SNR=4.5
DBIC LR LR 14 07 40.0
comp=Z,136nm,19.2s,baz=232,slow=35
QSPA South Pole Qui 70.20 180 P P 13 38 20.5 +1.5
QSPA IAmb IAmb 13 38 22.5
comp=Z,13nm,1.5s
RSSD Black Hills 70.64 335 P P 13 38 23.3 +1.4
baz=147
PDAR Pinedale Array 71.88 331 P P 13 38 31.1 +1.6
comp=Z,0.2nm,0.4s,baz=122,slow=5.4,SNR=4.1
HWUT Hardware Ranch 71.92 329 P P 13 38 29.1 -0.6
TPAW Teton Pass 73.08 331 P P 13 38 35.2 -1.5
NVAR Mina Array Bea 73.16 323 P P 13 38 38.9 +1.6
comp=Z,1.3nm,0.9s,baz=141,slow=5.7,SNR=5.8
ULM Lac du Bonnet 73.33 344 LR LR 14 12 45.3
comp=Z,61nm,20.9s,baz=43,slow=37
RLMT Red Lodge 73.61 333 P P 13 38 41.5 +1.8
baz=143
YNE Yellowstone No 73.84 332 P P 13 38 41.2 +0.1
PPT Papeete 73.86 257 LR LR 14 03 34.6
comp=Z,36nm,21.1s,baz=12,slow=30
YHL Hebgen Lake 74.24 331 P P 13 38 42.9 -0.6
GCMT Greycliff 74.31 333 P P 13 38 44.0 +0.3
SCHQ Schefferville 74.59 2 LR LR 14 13 53.4
comp=Z,32nm,18.9s,baz=316,slow=38
MCMT McKenzie Canyo 74.98 330 P P 13 38 47.7 0.0
MFID Camas Ranch 75.37 328 P P 13 38 49.5 -0.4
TORD Torodi Ar. Bea 78.61 71 P P 13 39 07.8 -0.8
comp=Z,11nm,0.8s,baz=256,slow=5.1,SNR=45
TORD LR LR 14 12 06.1
comp=Z,128nm,21.2s,baz=215,slow=34
PAB San Pablo 85.75 45 P P 13 39 45.6 0.0
PAB IAmb IAmb 13 39 47.5
comp=Z,9.6nm,1.2s
BOSA Boshof 85.80 119 LR LR 14 15 12.4
comp=Z,62nm,18.6s,baz=202,slow=34
ESDC Sonseca Array 86.07 45 P P 13 39 47.5 +0.4
comp=Z,2.0nm,1.0s,baz=249,slow=5.8,SNR=9.2
ESDC LR LR 14 14 11.3
comp=Z,35nm,20.7s,baz=205,slow=33
YKA Yellowknife Ar 89.15 341 P P **13 40 01.5 +0.2**
comp=Z,1.5nm,0.9s,baz=132,slow=5.2,SNR=19
ASAR Alice Springs 130.34 210 PKP **PKPdf 13 46 17.7 +0.2**
comp=Z,0.8nm,0.9s,baz=144,slow=1.6,SNR=4.4
WRA Warramunga Arr 133.26 213 PKP **PKPdf 13 46 23.4 +0.3**
comp=Z,0.4nm,0.5s,baz=150,slow=1.8,SNR=7.4
ZALV Zalesovo Beam 141.32 23 PKP **PKPdf 13 46 37.8 +0.9**
comp=Z,3.2nm,0.7s,baz=271,slow=1.8,SNR=8.3
MAKZ Makanchi 145.26 33 PKPbc PKPbc 13 46 43.5 -0.3
NIL Nilore 145.40 59 PKPab PKPab 13 46 45.2 +0.3
MKAR Makanchi Array 145.44 33 PKPbc **PKPbc 13 46 44.6 +0.3**
comp=Z,6.3nm,0.8s,baz=339,slow=3.0,SNR=38
KSH Kashi 145.53 48 PKPbc **PKPab 13 46 46.1 +0.8**
KSH PP **PP 13 50 07.8 +2.6**
KSH SKKS 13 56 58.6
KSH SS SS 14 08 59.1 +0.8
KSH AMB AMB
comp=Z,170nm,4.5s
KSH LR LR
comp=Z,62nm,6.7s
KSH LR LR
comp=Z,150nm,13.4s
KSH LR LR
comp=Z,140nm,17.8s
USRK Ussuriysk Ar. 149.23 327 PKPbc **PKPbc 13 46 55.8 +0.8**
comp=Z,3.6nm,0.8s,baz=228,slow=1.7,SNR=7.1
MJAR Matsshiro Arr 149.68 309 PKPbc **PKPbc 13 46 57.4 +1.0**
comp=Z,3.5nm,0.9s,baz=86,slow=1.6,SNR=9.0
WMQ Urumqi 150.24 32 *e*PKPbc **PKPdf 13 46 51.7 -0.8**
WMQ AMB AMB
comp=Z,66nm,5.3s
WMQ LR LR
comp=Z,290nm,20.3s
SONM Songino Array 152.12 4 PKPbc **PKiKP 13 47 02.8 +0.6**
comp=Z,4.4nm,0.9s,baz=314,slow=1.7,SNR=13
HHC Hu-ho-hao-te 159.09 355 *e*PKP **PKPdf 13 47 00.4 -4.4**
LZH Lanzhou 163.30 15 *e*PKP **PKPdf 13 47 04.7 -4.8**
LZH LR LR
comp=Z,98nm,18.0s
LZH LR LR
comp=Z,100nm,18.2s
LZH LR LR
comp=Z,120nm,20.1s
CD2 Chengdu 168.09 23 PKP **PKPdf 13 47 11.7 -1.7**
GYA Guiyang 173.17 19 *e*PKP **PKPdf 13 47 12.4 -4.0**

*MEX **07** 13:31:01.3±0.8, 31.07N×115.93W, h10km, MD3.5*
*ECX **07** 13:31:01.3±0.5, 31.23N×115.90W, h8km±7km, MD2.8, ML3.1, Fault plane solution: NP1:ϕ=30.00000°, δ=90.00000°, λ=0.00000°.*

ISC 07 13:31:00.1±0.9, 31.23N±0.03×115.91W±0.03, h13km±8km, n18, σ0°46/34, 6C-6D, Baja California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VTX	**Valle De La Tr**	**0.20**	**34**	⇑*i*P	**Pb**	**13 31 05.3**	**-0.3**
VTX				*e*S	**Sg**	**13 31 08.2**	**+0.6**
SVX	**San Vicente**	**0.31**	**289**	⇑*i*P	**Pb**	**13 31 07.2**	**-0.3**
SVX				*e*S	**Sg**	**13 31 11.4**	**+0.7**
SPIG	**San Pedro Mart**	**0.42**	**116**	*e*P	**Pg**	**13 31 08.8**	**+0.1**
SPIG				*e*S	**Sg**	**13 31 15.1**	**+0.6**
SPIG	**San Pedro Mart**	**0.42**	**116**	*e*P	**Pb**	**13 31 09.3**	**-0.4**
SPIG				*i* S	**Sg**	**13 31 15.0**	**+0.6**
SPX	**San Pedro Mart**	**0.43**	**117**	⇑*i*P	**Pg**	**13 31 08.3**	**-0.5**
SPX				*e*S	**Sg**	**13 31 14.2**	**-0.4**
SPX				IAML		13 31 14.5	
comp=E,2μm,0.1s							
SPX	**San Pedro Mart**	**0.43**	**117**	*e*P	**Pg**	**13 31 08.1**	**-0.7**
SPX				*e*S	**Sg**	**13 31 14.0**	**-0.6**
SQX	**San Quintin**	**0.65**	**177**	⇓*e*P	**Pg**	**13 31 12.9**	**0.0**
SQX				*e*S	**Sg**	**13 31 21.6**	**+0.2**
ECBX	**El Chinero**	**0.77**	**72**	*e*P	**Pb**	**13 31 15.7**	**+0.3**
ECBX				*e*S	**Sb**	**13 31 25.9**	**+0.1**
ESJX	**Sierra Juarez**	**0.77**	**358**	⇓*e*P	**Pg**	**13 31 14.2**	**-1.0**
ESJX				*e*S	**Sg**	**13 31 24.9**	**-0.6**
CCX	**Cicese**	**0.91**	**315**	⇓*e*P	**Pb**	**13 31 17.8**	**+0.1**
CCX				*e*S	**Sg**	**13 31 30.1**	**+0.6**
SFX	**San Felipe**	**0.93**	**102**	⇑*e*P	**Pn**	**13 31 18.6**	**-0.3**
SFX				*e*S	**Sg**	**13 31 30.6**	**+0.3**
CBX	**Cerro Bola**	**1.26**	**330**	⇓*e*P	**Pn**	**13 31 23.2**	**-0.3**
CBX				*e*S	**Sb**	**13 31 39.9**	**0.0**
CBX				IAML		13 31 43.7	
comp=E,326nm,0.2s							
CBX				⇑*e*		13 31 43.7	
CBX	**Cerro Bola**	**1.26**	**330**	*e*P	**Pn**	**13 31 23.3**	**-0.3**
CBX				*e*S	**Sb**	**13 31 39.9**	**0.0**
MBIG	**Mexicali**	**1.32**	**27**	*e*P	**Pn**	**13 31 24.6**	**+0.4**
MBIG				*i* S	**Sn**	**13 31 42.1**	**+0.4**
MBIG				*e*S	**Sb**	**13 31 42.4**	**+0.7**
ERMX	**Rumorosa**	**1.32**	**356**	⇓*e*P	**Pb**	**13 31 25.4**	**+0.5**
ERMX				IAML		13 31 45.4	
comp=E,270nm,0.3s							
ERMX				⇑*e*		13 31 45.4	
TJIG	**Tijuana**	**1.36**	**332**	*e*P	**Pn**	**13 31 24.9**	**0.0**
TJIG				*e*S	**Sn**	**13 31 42.8**	**-0.1**
IKP	**In-Ko-Pah, Jac**	**1.43**	**353**	⇓*e*P	**Pb**	**13 31 26.9**	**+0.2**
214A	**Organ Pipe Nat**	**2.74**	**74**	*e*P	**Pn**	**13 31 44.1**	**+0.2**

DJA 07 13:41:31.0±1.1, 10.5S±9.7×11.6E±, h40km±53km, M3.7/7, mb3.7/1, MLv3.7/7, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DNP	**Denpasar**	**1.38**	**328**	P	Pn	13 41 53.9	+0.1
DNP				S	Sn	13 42 11.0	+0.1
SRBI	**Singaraja**	**1.91**	**338**	P	Pn	13 42 01.6	+0.5
PLAI	**Plampang**	**2.07**	**61**	P	Pn	13 42 03.4	+0.1
PLAI				S	Sn	13 42 27.0	-1.0
JAGI	**Jajag, Banyuwa**	**2.25**	**308**	P	Pn	13 42 04.9	-0.9
PCJI	**Pacitan**	**5.00**	**289**	P	Pn	13 42 42.2	-1.3
EDFI	**Ende, Flores**	**5.77**	**79**	P	Pn	13 42 55.0	+0.7

MAN 07 13:43:57.2, 9.74N×121.89E, h29km, mb4.2, ML3.1, MS2.8, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**2.95**	**82**	*e*P	Pb	13 45 02.4	+13
MSLP				*e*S	Sn	13 45 19.7	+3.1
BUTP	**Butuan**	**3.76**	**101**	*e*P	Pn	13 44 54.6	+1.3
BUTP				*e*S	Sn	13 45 07.8	-29
BATP	**Bataraza**	**4.15**	**257**	*e*P	Pn	13 45 00.1	+1.5
PVCP	**Virac**	**4.43**	**30**	*e*P	Pn	13 45 04.2	+1.7

*IDC **07** 14:11:41.5±0.5, 25.58N×102.04E, h0km, mb4.5/26, mb1 4.6/27, mb1mx4.5/38, mbtmp4.5/27, ML4.1/1, MS3.8/28, Ms1 3.8/28, ms1mx3.7/51, Error ellipse: s-maj=13.4km s-min=10.1km az=76.0*

*MOS **07** 14:11:41.9±1.1, 25.58N×102.07E, h12km, mb5.0/61, MS4.2/8, Error ellipse: s-maj=6.2km s-min=4.0km az=114.3*

*BJI **07** 14:11:42.8±0.0, 25.49N×101.92E, h13km, mB4.8/39, mb4.9/55, ML4.9/13, Ms4.7/68, Ms7 4.4/62*

*GCMT **07** 14:11:42.7±0.4, 25.43N±0.02×102.01E±0.02, h21km±1km, MW4.8/82, Moment Tensor Solution. s6,c6; s82,c105; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.17±.10; Mθθ=0.16±.08; Mφφ=0.01±.08; Mrθ=-0.54±.15; Mrφ=-1.62±.07; Mθφ=-0.45±.15; Best double couple: M0=1.76900×10^16 NP1:ϕs=356.00000°, δ72.00000°, λ-15.00000°. NP2: ϕs=91.00000°, δ76.00000°, λ-162.00000°. Principal axes: T 1.7110, Plg2.0000°, Azm223.0000°; N 0.1180, Plg67.0000°, Azm127.0000°; P -1.8280, Plg23.0000°, Azm314.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **07** 14:11:45.7±1.3, 25.55N±0.06×102.07E±0.05, h28km±4km, mb4.9/84 Error ellipse: s-maj=9.4km s-min=6.0km az=200.0*

ISC 07 14:11:43.9±0.3, 25.48N±0.03×102.13E±0.04, h10km, n337, σ1°89/287, mb4.9/129, MS3.9/41, 23C-1D, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**0.66**	**122**	P	**Pg**	**14 11 58.0**	**+1.3**
KMI	**Kunming**	**0.66**	**122**		**Pg**	**14 11 58.0**	**+1.3**
GYA	**Guiyang**	**4.20**	**76**	⇑*i*Pn	**Pn**	**14 12 50.6**	**+2.4**
GYA				Sn	**Sn**	**14 13 41.1**	**+3.7**
GYA				Sg	**Sg**	**14 14 04.2**	**+5.3**
GYA				smax	smax		
comp=N,530nm,1.5s							
GYA				smax	smax		
comp=E,600nm,1.3s							
GYA				LR	LR		
comp=N,2μm,4.0s							
GYA				LR	LR		
comp=E,2μm,4.6s							
GYA				LR	LR		
comp=Z,1μm,4.7s							
SLVN	**Son La**	**4.43**	**158**		**Pn**	**14 12 52.1**	**+0.8**
CD2	**Chengdu**	**5.60**	**15**	Pn	**Pn**	**14 13 09.0**	**+1.6**
CD2				Sn	**Sn**	**14 14 15.5**	**+3.6**
CD2				Sg	**Sg**	**14 14 41.7**	**-2.1**
CD2				smax	smax		
comp=N,2μm,0.8s							
CD2				smax	smax		
comp=E,3μm,0.9s							
CD2				LR	LR		
comp=N,14μm,6.5s							
CD2				LR	LR		
comp=E,30μm,10.1s							
CD2				LR	LR		
comp=Z,6μm,10.8s							
PHRA	**Phrae**	**7.16**	**195**	P	**Pn**	**14 13 31.7**	**+2.9**
CHTO	**Chiang Mai**	**7.25**	**205**	P	**Pn**	**14 13 30.7**	**+0.7**
CHTO	**Chiang Mai**	**7.25**	**205**		**Pn**	**14 13 30.7**	**+0.7**
LAMP	**Lampang**	**7.29**	**199**	P	**Pn**	**14 13 32.6**	**+2.0**
LAMP				S	**Sb**	**14 15 16.3**	**-1.5**
CM09	**Chiang Mai Arr**	**7.58**	**203**	P	**Pn**	**14 13 38.1**	**+3.7**
CM31	**Chiang Mai Arr**	**7.58**	**204**	P	**Pn**	**14 13 35.6**	**+1.1**
CMAR	**Chiang Mai Arr**	**7.58**	**204**	Pn	**Pn**	**14 13 35.5**	**+1.0**
0.8nm,0.3s,baz=11,slow=12,SNR=29							
CMAR				Pg	Pb	14 14 02.6	+7.1
2.8nm,0.3s,baz=26,slow=16,SNR=28							
CMAR				Lg	Lg	14 15 43.4	
2.8nm,0.3s,baz=14,slow=30,SNR=5.2							
CMAR				LR	LR	14 16 52.4	
comp=Z,757nm,18.7s,baz=15,slow=41							
CM15	**Chiang Mai Arr**	**7.59**	**204**	P	**Pn**	**14 13 37.9**	**+3.2**
UTTA	**Uttaradit**	**7.83**	**191**	P	**Pn**	**14 13 40.7**	**+2.7**
ENH	**Enshi**	**8.08**	**52**		**Pn**	**14 13 42.0**	**+0.6**
MHMT	**Maesarieng**	**8.24**	**209**	P	**Pn**	**14 13 47.7**	**+4.2**
PBKT	**Sadao Pong**	**8.93**	**187**		**Pn**	**14 13 54.4**	**+1.4**
SHL	**Shillong**	**9.25**	**273**	P	Pn	14 13 55.4	-2.2
SHL	**Shillong**	**9.25**	**273**		Pn	14 13 55.4	-2.3
QIZ	**Qiongzhong**	**9.60**	**130**	P	**Pn**	**14 14 03.1**	**+0.9**
QIZ				S	**Sn**	**14 15 52.1**	**+1.8**
QIZ				LR	LR		
comp=N,2μm,9.2s							
QIZ				LR	LR		
comp=E,2μm,9.7s							
QIZ				LR	LR		
comp=Z,2μm,8.4s							
QIZ	**Qiongzhong**	**9.60**	**130**		**Pn**	**14 14 02.0**	**-0.2**
UMPA	**Umpang Tak**	**9.71**	**199**	P	**Pn**	**14 14 03.6**	**-0.3**
XAN	**Xi'an**	**10.38**	**33**	P	**Pn**	**14 14 12.4**	**-0.4**
XAN				LR	LR		
comp=N,3μm,7.2s							
XAN				LR	LR		
comp=E,3μm,8.0s							
XAN				LR	LR		
comp=Z,2μm,6.3s							
XAN	**Xi'an**	**10.38**	**33**	P	**Pn**	**14 14 11.5**	**-1.3**
XAN	**Xi'an**	**10.38**	**33**		**Pn**	**14 14 11.5**	**-1.3**
LSA	**Lhasa**	**10.61**	**296**	P	Pn	14 14 14.3	-2.1
LSA	**Lhasa**	**10.61**	**296**	P	Pn	14 14 13.4	-3.0
LSA	**Lhasa**	**10.61**	**296**		Pn	14 14 13.4	-3.0
LZH	**Lanzhou**	**10.68**	**8**	*e*P	**Pn**	**14 14 18.7**	**+1.6**
LZH				pP		14 14 22.2	
LZH				sP		14 14 30.8	
LZH				S	**Sn**	**14 16 16.7**	**-0.2**
LZH				sS		14 16 25.4	
LZH				pmax	pmax		
comp=Z,15nm,1.1s							
LZH				pmax	pmax		
comp=Z,91nm,4.9s							
LZH				LR	LR		
comp=N,2μm,7.1s							
LZH				LR	LR		
comp=E,4μm,8.0s							
LZH				LR	LR		
comp=Z,4μm,7.0s							
WHN	**Wuhan**	**11.92**	**62**	⇑P	**Pn**	**14 14 35.7**	**+1.8**
WHN				LR	LR		
comp=N,7μm,12.0s							
WHN				LR	LR		
comp=E,4μm,9.5s							
TAPN	**Taplejung** 64nm,0.8s	**13.05**	**281**	*e*P	Pn	14 14 46.3	-3.5
ODAN	**Odare** 137nm,0.9s	**13.31**	**279**	*e*P	Pn	14 14 50.5	-2.6
RAMN	**Ramite** 51nm,0.8s	**14.02**	**279**	*e*P	Pn	14 14 58.4	-4.4
GTA	**Gaotai**	**14.03**	**353**	*e*P	**Pn**	**14 15 03.1**	**+0.2**
GTA				pP	P	14 15 07.8	-3.1
GTA				sP		14 15 10.4	
GTA				S	**Sn**	**14 17 44.2**	**+5.4**
GTA				sS	S	14 17 51.5	-8.9
GTA				SS	**SnSn**	**14 17 58.2**	**+6.7**
GTA				pmax	pmax		
comp=Z,3.0nm,0.9s							
GTA				pmax	pmax		
comp=Z,70nm,7.0s							
GTA				LR	LR		
comp=N,950nm,13.0s							
GTA				LR	LR		
comp=E,2μm,13.3s							
GTA				LR	LR		
comp=Z,900nm,10.5s							
JIRN	**Jiri** 233nm,1.2s	**14.43**	**282**	*e*P	Pn	14 15 04.3	-4.3
GUN	**Gumba**	**14.72**	**283**	*e*P	Pn	14 15 09.5	-3.1
PKI	**Pulchoki**	**15.11**	**282**	*e*P	**Pn**	**14 15 14.7**	**-3.1**
PKIN	**Phulchoki**	**15.12**	**282**	*e*P	**Pn**	**14 15 14.8**	**-3.1**
KKN	**Kakani** 57nm,0.6s	**15.24**	**282**	*e*P	**Pn**	**14 15 15.8**	**-3.7**

DMN	**Daman**	**15.38**	**282**	*eP*		**Pn**	**14 15 18.2**	**-3.1**
GKN	**Gorkha**	**15.83**	**283**	*eP*		**Pn**	**14 15 24.0**	**-3.1**
NJ2	**Nanjing**	**16.06**	**62**	*eP*		**Pn**	**14 15 28.5**	**-1.3**
NJ2				pmax	pmax			
	comp=Z,9.0nm,0.5s							
NJ2				LR	LR			
	comp=N,2μm,11.8s							
NJ2				LR	LR			
	comp=E,2μm,9.9s							
NJ2				LR	LR			
	comp=Z,1μm,8.5s							
BTO	**Baotou**	**16.46**	**22**	*eP*		**Pn**	**14 15 33.3**	**-1.8**
DANN	**Dangsing**	**16.63**	**284**	*eP*		**Pn**	**14 15 35.3**	**-2.2**
KOLN	**Koldanda**	**16.72**	**282**	*eP*		**Pn**	**14 15 37.5**	**-1.1**
TIA	**Tai'an**	**16.72**	**47**	P		**Pn**	**14 15 38.1**	**-0.2**
TIA				pmax	pmax			
	comp=Z,160nm,1.6s							
TIA				LR	LR			
	comp=N,570nm,9.8s							
TIA				LR	LR			
	comp=E,550nm,10.3s							
TIA				LR	LR			
	comp=Z,910nm,10.4s							
HHC	**Hu-ho-hao-te**	**17.23**	**25**	P		**Pn**	**14 15 42.9**	**-1.9**
HHC				S		**Sn**	**14 18 52.8**	**-3.7**
HHC				sS		S	14 19 05.8	+0.1
HHC				pmax	pmax			
	comp=Z,19nm,1.0s							
HHC				pmax	pmax			
	comp=Z,94nm,4.9s							
HHC				LR	LR			
	comp=N,770nm,8.5s							
HHC				LR	LR			
	comp=E,560nm,7.2s							
HHC				LR	LR			
	comp=Z,520nm,8.5s							
SSE	**Sheshan**	**17.69**	**67**	P		**Pn**	**14 15 46.5**	**-3.9**
SSE				S		**Sn**	**14 19 00.8**	**-6.8**
SSE				pmax	pmax			
	comp=Z,16nm,0.7s							
SSE				pmax	pmax			
	comp=Z,51nm,3.5s							
SSE				LR	LR			
	comp=N,2μm,10.3s							
SSE				LR	LR			
	comp=E,780nm,9.2s							
BJT	**Baijiatuau**	**18.67**	**36**	P		**P**	**14 15 59.4**	**-2.7**
BJT				pmax	pmax			
	comp=Z,31nm,0.8s							
BJT	**Baijiatuau**	**18.67**	**36**	P		**P**	**14 15 59.4**	**-2.7**
BJI	**Beijing**	**18.69**	**36**	P		**P**	**14 16 03.3**	**+1.1**
BJI				pP		**sP**	**14 16 10.8**	**+3.5**
BJI				S		**Sn**	**14 19 35.0**	**+3.4**
BJI				pmax	pmax			
	comp=Z,40nm,0.9s							
BJI				LR	LR			
	comp=Z,810nm,9.6s							
BJI				LR	LR			
	comp=Z,680nm,9.8s							
KULM	**Kulim**	**20.12**	**184**	P		**P**	**14 16 19.2**	**+1.1**
IPM	**Ipoh**	**20.90**	**183**	P		**P**	**14 16 25.9**	**-0.7**
TGY	**Tagaytay City**	**20.98**	**119**	LR		LR	14 24 18.5	
	comp=Z,196nm,18.2s,baz=310,slow=36							
DL2	**Dalian**	**21.20**	**46**	P		**P**	**14 16 34.4**	**+4.8**
DL2				pmax	pmax			
	comp=Z,94nm,0.8s							
DL2				pmax	pmax			
	comp=Z,290nm,3.8s							
DL2				LR	LR			
	comp=Z,390nm,12.8s							
DL2				LR	LR			
	comp=Z,440nm,10.1s							
DL2				LR	LR			
	comp=Z,450nm,8.4s							
WMQ	**Urumqi**	**21.76**	**331**	*eP*		**P**	**14 16 36.2**	**+0.5**
WMQ				pP		sP	14 16 44.8	+4.1
WMQ				sP		pP	14 16 49.8	+11
WMQ				PP		**PnPn**	**14 17 01.4**	**+4.7**
WMQ				S		S	14 20 28.8	-7.6
WMQ				SS		**SnSn**	**14 21 07.2**	**+6.2**
WMQ				LR	LR			
	comp=Z,600nm,15.7s							
WMQ				LR	LR			
	comp=Z,490nm,14.3s							
WMQ	**Urumqi**	**21.76**	**331**	P		**P**	**14 16 34.2**	**-1.5**
WMQ				pmax	pmax			
	comp=Z,42nm,0.6s							
WMQ	**Urumqi**	**21.76**	**331**	P		**P**	**14 16 34.1**	**-1.5**
WMQ				IAmb	IAmb		14 16 38.8	
	comp=Z,42nm,0.6s							
SONM	**Songino Array**	**22.57**	**8**	P		**P**	**14 16 42.7**	**-1.7**
	comp=Z,7.4nm,0.5s,baz=188,slow=11,SNR=28							
SONM				S		**S**	**14 20 52.2**	**+0.3**
	comp=Z,1.8nm,1.0s,baz=187,slow=22,SNR=3.0							
SONM				LR	LR		14 26 55.3	
	comp=Z,232nm,19.3s,baz=202,slow=41							
ULN	**Ulaanbaatar**	**22.68**	**9**	*ceP*		**P**	**14 16 43.5**	**-2.2**
ULN				pmax	pmax			
	comp=Z,11nm,0.8s							
ULN	**Ulaanbaatar**	**22.68**	**9**	P		**P**	**14 16 43.3**	**-2.4**
ULN				IAmb	IAmb		14 16 53.7	
	comp=Z,27nm,0.8s							
PSI	**Prapat**	**22.75**	**188**	P		**P**	**14 16 48.6**	**+2.0**
	comp=Z,16nm,0.8s,baz=0.1,slow=8.1,SNR=9.9							
PSI	**Prapat**	**22.75**	**188**	P		**P**	**14 16 48.6**	**+2.0**
PSI				pmax	pmax			
	comp=Z,29nm,1.0s							
RPSI	**Rantau Prapat**	**22.86**	**188**	P		**P**	**14 16 45.8**	**-1.7**
RPSI				IAmb	IAmb		14 16 51.3	
	comp=Z,29nm,1.0s							
RPSI	**Rantau Prapat**	**22.86**	**188**	P		**P**	**14 16 48.6**	**+1.0**
HYB	**Hyderabad**	**23.33**	**255**	*i* P		**P**	**14 16 53.5**	**+1.0**
BHK	**Bhakra**	**23.34**	**291**	*ex*		**P**	**14 16 54.2**	**+1.7**
TJN	**Taejon**	**24.16**	**57**	*ceP*		**P**	**14 16 59.4**	**-0.9**
GSI	**Gunungsitoli**	**24.43**	**191**	P		**P**	**14 17 00.8**	**-2.0**
GSI				IAmb	IAmb		14 17 05.0	
	comp=Z,20nm,0.6s							
SBUM	**Sibu**	**24.87**	**155**	P		**P**	**14 17 06.7**	**-0.2**
ZAK	**Zakamensk**	**24.88**	**2**	*eP*		**P**	**14 17 06.4**	**-0.5**
ZAK				pmax	pmax			
	comp=Z,10.0nm,1.4s							
KSRS	**Korea Array**	**24.95**	**55**	P		**P**	**14 17 06.1**	**-1.4**
	comp=Z,5.0nm,0.5s,baz=244,slow=9.0,SNR=35							
KSRS				LR	LR		14 27 03.1	
	comp=Z,314nm,20.0s,baz=250,slow=37							
PDGK	**Podgornoye**	**25.68**	**320**	P		**P**	**14 17 12.7**	**-1.5**
PRZ	**Przheval'sk**	**25.85**	**317**	P		**P**	**14 17 14.9**	**-0.9**
PRZ				pmax	pmax			
	comp=Z,42nm,1.2s							
PRZ	**Przheval'sk**	**25.85**	**317**	P		**P**	**14 17 14.9**	**-0.9**
PRZ				IAmb	IAmb		14 18 04.7	
	comp=Z,42nm,1.1s							
KSH	**Kashi**	**26.01**	**309**	P		**P**	**14 17 19.6**	**+2.4**
KSH				PP		**PnPn**	**14 18 01.4**	**+6.5**
KSH				S		**S**	**14 21 48.0**	**-0.1**
KSH				SS		**SnSn**	**14 22 53.3**	**+8.1**
KSH				pmax	pmax			
	comp=Z,100nm,1.3s							
KSH				pmax	pmax			
	comp=Z,310nm,4.1s							
KSH				LR	LR			
	comp=Z,890nm,11.3s							
KSH				LR	LR			
	comp=Z,620nm,13.1s							
KSH				LR	LR			
	comp=Z,710nm,10.3s							
JNU	**Nakatsue**	**26.15**	**66**	P		**P**	**14 17 19.4**	**+0.9**
	comp=Z,21nm,0.8s,baz=183,slow=2.4,SNR=13							
JNU	**Nakatsue**	**26.15**	**66**	P		**P**	**14 17 17.6**	**-0.9**
JNU				IAmb	IAmb		14 17 35.3	
	comp=Z,34nm,1.1s							
MOY	**Mondy**	**26.17**	**358**	*eP*		**P**	**14 17 20.5**	**+2.0**
MOY				pmax	pmax			
	comp=Z,21nm,1.6s							
TLY	**Talaya**	**26.19**	**2**	*eP*		**P**	**14 17 22.0**	**+3.4**
TLY				*e*SS			14 22 59.5	
TLY				pmax	pmax			
	comp=Z,20nm,1.0s							
TLY				MLR	MLR			
	comp=Z,945nm,15.0s							
TLY	**Talaya**	**26.19**	**2**	P		**P**	**14 17 16.6**	**-2.0**
NIL	**Nilore**	**26.34**	**295**	P		**P**	**14 17 17.8**	**-2.4**
NIL				pmax	pmax			
	comp=Z,257nm,0.9s							
NIL	**Nilore**	**26.34**	**295**	P		**P**	**14 17 17.8**	**-2.4**

CN2	**Changchun**	**26.36**	**40**	*eP*		**P**	**14 17 19.3**	**-0.9**
CN2				*ep*P		sP	14 17 31.1	+5.6
CN2				pmax	pmax			
	comp=Z,60nm,0.6s							
CN2				LR	LR			
	comp=Z,390nm,15.0s							
CN2				LR	LR			
	comp=Z,460nm,15.0s							
CN2				LR	LR			
	comp=Z,480nm,12.0s							
KDJ	**Kajisay**	**26.42**	**315**	P		**P**	**14 17 18.1**	**-2.9**
KDJ				pmax	pmax			
	comp=Z,62nm,0.9s							
KDJ	**Kajisay**	**26.42**	**315**	P		**P**	**14 17 18.1**	**-2.9**
MK31	**Makanchi Array**	**26.49**	**328**	*i* P		**P**	**14 17 20.3**	**-1.1**
MKAR	**Makanchi Array**	**26.49**	**328**	P		**P**	**14 17 20.3**	**-1.1**
	comp=Z,4.4nm,0.5s,baz=134,slow=11,SNR=33							
MKAR				ScP		**ScP**	**14 24 25.8**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=116,slow=2.8,SNR=4.1							
DGZ	**Jazzator, Alta**	**26.74**	**339**	*i* P		**P**	**14 17 23.0**	**-0.8**
DGZ				pmax	pmax			
	comp=Z,10.0nm,0.6s							
BOOM	**Boomskoye usch**	**27.40**	**315**	P		**P**	**14 17 28.5**	**-1.3**
BOOM				pmax	pmax			
	comp=Z,60nm,1.3s							
BOOM	**Boomskoye usch**	**27.40**	**315**	P		**P**	**14 17 28.4**	**-1.3**
BOOM				IAmb	IAmb		14 17 38.4	
	comp=Z,60nm,1.3s							
HIA	**Hailar**	**27.43**	**25**	P		**P**	**14 17 29.1**	**-0.8**
HIA				pmax	pmax			
	comp=Z,56nm,0.8s							
HIA	**Hailar**	**27.43**	**25**	P		**P**	**14 17 29.1**	**-0.8**
TKM2	**Tokmak 2**	**27.83**	**315**	P		**P**	**14 17 37.3**	**+3.6**
	SNR=5.4							
TKM2	**Tokmak 2**	**27.83**	**315**	P		**P**	**14 17 34.6**	**+0.9**
KBK	**Karagaybulak**	**28.12**	**314**	P		**P**	**14 17 35.1**	**-1.1**
	SNR=12							
UCH	**Uchtor**	**28.20**	**313**	P		**P**	**14 17 39.3**	**+2.0**
	SNR=7.5							
AAK	**Ala-Archa**	**28.40**	**314**	P		**P**	**14 17 37.9**	**-0.8**
	comp=Z,19nm,0.8s,baz=121,slow=6.8,SNR=19							
AAK				LR	LR		14 29 51.2	
	comp=Z,189nm,19.7s,baz=96,slow=38							
AAK	**Ala-Archa**	**28.40**	**314**	P		**P**	**14 17 38.0**	**-0.8**
	SNR=9.8							
AAK	**Ala-Archa**	**28.40**	**314**	P		**P**	**14 17 37.9**	**-0.8**
AAK				pmax	pmax			
	comp=Z,18nm,0.8s							
AAK	**Ala-Archa**	**28.40**	**314**	IAmb		IAmb	14 17 42.3	
	comp=Z,18nm,0.8s							
AML	**Almayashu**	**28.70**	**312**	P		**P**	**14 17 40.7**	**-0.9**
	SNR=23							
USP	**Ospenovka**	**28.70**	**315**	P		**P**	**14 17 43.0**	**+1.7**
	SNR=15							
ARSB	**Arslanbob**	**28.84**	**310**	P		P	14 17 40.1	-2.5
ARSB				pmax	pmax			
	comp=Z,9.0nm,0.7s							
ARSB	**Arslanbob**	**28.84**	**310**	P		P	14 17 40.1	-2.5
EKS2	**Erkin-Say**	**28.88**	**314**	P		**P**	**14 17 44.9**	**+1.9**
	SNR=7.9							
USRK	**Usurirysk Ar.**	**30.57**	**45**	P		**P**	**14 17 57.2**	**-0.6**
	comp=Z,21nm,0.7s,baz=251,slow=9.1,SNR=42							
USRK				LR		LR	14 30 36.3	
	comp=Z,138nm,18.9s,baz=223,slow=37							
KURBB	**Kurchatov Arra**	**30.98**	**330**	P		**P**	**14 17 59.9**	**-1.3**
KURK	**Kurchatov**	**31.00**	**331**	*ceP*		**P**	**14 18 00.4**	**-1.1**
KURK				pmax	pmax			
	comp=Z,11nm,0.9s							
KURK	**Kurchatov**	**31.00**	**331**	P		P	14 17 59.7	-1.8
ZALV	**Zalesovo Beam**	**31.23**	**340**	P		**P**	**14 18 02.0**	**-1.3**
	comp=Z,6.3nm,0.6s,baz=151,slow=10,SNR=17							
ZALV				LR		LR	14 29 23.0	
	comp=Z,169nm,18.2s,baz=162,slow=34							
KK31	**Karatay Array**	**31.24**	**312**	P		**P**	**14 18 02.8**	**-0.9**
KKAR	**Karatay Array**	**31.24**	**312**	P		P	14 18 01.2	-2.5
KKAR				pmax	pmax			
	comp=Z,5.0nm,0.9s							
KKAR	**Karatay Array**	**31.24**	**312**	P		P	14 18 01.2	-2.5
OTUK	**Ortayu**	**32.59**	**322**	P		**P**	**14 18 14.0**	**-1.5**
MAT	**Matsushiro**	**32.66**	**62**	P		**P**	**14 18 16.0**	**-0.3**
MAT				*e*S		**S**	**14 23 30.4**	**-2.0**
MJAR	**Matsushiro Arr**	**32.66**	**62**	P		**P**	**14 18 16.4**	**+0.1**
	comp=Z,4.7nm,1.0s,baz=265,slow=9.6,SNR=10							
MJAR				LR		LR	14 32 02.3	
	comp=Z,204nm,19.8s,baz=250,slow=37							
KLR	**Kul'dur**	**33.06**	**36**	*ceP*		**P**	**14 18 18.3**	**-1.3**
BOD	**Bodaibo**	**33.41**	**12**	*eP*		**P**	**14 18 21.7**	**-0.8**
BOD				pmax	pmax			
	comp=Z,11nm,1.4s							
ZEA	**Zeya**	**33.87**	**27**	*eP*		**P**	**14 18 26.2**	**-0.4**
ZEA				pmax	pmax			
	comp=N,21nm,0.8s							
ZEA				pmax	pmax			
	comp=E,24nm,1.0s							
ZEA				pmax	pmax			
	comp=Z,29nm,1.0s							
ZEA				MLR	MLR			
	comp=E,200nm,14.0s							
ZEA				MLR	MLR			
	comp=Z,400nm,14.0s							
ZEA				MLR	MLR			
	comp=N,200nm,13.0s							
BRVK	**Borovoye**	**36.44**	**328**	P		**P**	**14 18 47.5**	**-1.2**
BRVK	**Borovoye**	**36.44**	**328**	P		**P**	**14 18 47.5**	**-1.2**
ERM	**Erimo**	**37.50**	**53**	P		**P**	**14 18 57.7**	**-0.2**
ERM				pmax	pmax			
	comp=Z,59nm,1.0s							
ERM	**Erimo**	**37.50**	**53**	P		**P**	**14 18 57.7**	**-0.2**
YSS	**Yuzh-Sakhalins**	**38.60**	**46**	*ep*		**P**	**14 19 07.1**	**+0.1**
YSS				*e*S		**S**	**14 25 05.2**	**+2.0**
YSS				pmax	pmax			
	comp=Z,30nm,0.8s							
YSS				MLR	MLR			
	comp=Z,300nm,14.0s							
YSS				MLR	MLR			
	comp=E,200nm,15.0s							
YSS	**Yuzh-Sakhalins**	**38.60**	**46**	P		**P**	**14 19 06.8**	**-0.3**
YSS				IAmb	IAmb		14 19 09.1	
	comp=Z,26nm,0.9s							
GEYT	**Alibeck**	**39.11**	**299**	P		P	14 19 09.6	-2.0
	comp=Z,14nm,0.8s,baz=116,slow=6.8,SNR=20							
GEYT				LR		LR	14 37 27.8	
	comp=Z,126nm,18.0s,baz=125,slow=40							
GYA0	**ALIBECK ARRAY**	**39.11**	**299**	P		**P**	**14 19 13.4**	**+1.8**
TYV	**Tymovskoe**	**39.98**	**40**	*eP*		**P**	**14 19 19.7**	**+1.1**
TYV				pmax	pmax			
	comp=Z,200nm,6.3s							
TYV				pmax	pmax			
	comp=Z,17nm,1.1s							
YAK	**Yakutsk**	**40.97**	**19**	*eP*		**P**	**14 19 24.9**	**-1.7**
YAK				*e**PP		**pP**	**14 19 29.0**	**-1.4**
YAK				*e*S		**S**	**14 25 36.7**	**-1.7**
YAK				*e*SS		**SS**	**14 28 38.3**	**-1.7**
YAK				*e*SSS		SSS	14 29 13.1	
YAK				pmax	pmax			
	comp=Z,31nm,1.1s							
YAK				pmax	pmax			
	comp=N,4.0nm,0.9s							
YAK				pmax	pmax			
	comp=E,4.0nm,1.2s							
YAK				smax	smax			
	comp=E,37nm,2.5s							
YAK				smax	smax			
	comp=N,42nm,4.1s							
YAK				MLR	MLR			
	comp=Z,143nm,14.0s							
YAK				MLR	MLR			
	comp=N,59nm,15.0s							
YAK				MLR	MLR			
	comp=E,68nm,14.0s							
YAK	**Yakutsk**	**40.97**	**19**	P		P	14 19 24.8	-1.8
YAK				IAmb	IAmb		14 19 27.3	
	comp=Z,25nm,0.9s							
SOEI	**Soe**	**41.12**	**146**	P		P	14 19 26.4	-2.2
SOEI				IAmb	IAmb		14 19 39.5	
	comp=Z,22nm,0.8s							
AKTO	**Aktyubinsk**	**41.94**	**318**	P		**P**	**14 19 34.8**	**+0.1**
SVE	**Sverdlovsk**	**43.15**	**328**	*eP*		**P**	**14 19 46.3**	**+1.8**
SVE				pmax	pmax			
	comp=Z,23nm,0.9s							
ARU	**Arti**	**43.98**	**327**	*ceP*		**P**	**14 19 49.9**	**-1.3**
ARU				pmax	pmax			
	comp=Z,37nm,1.7s							
ARU	**Arti**	**43.98**	**327**	P		P	14 19 48.6	-2.5
ARU				IAmb	IAmb		14 19 53.8	
	comp=Z,17nm,0.9s							

NRIK	**Noril'sk**	**44.73**	**353**	P		P	14 19 55.3	-1.7
	comp=Z,3.2nm,0.4s,baz=166,slow=7.2,SNR=6.6							
NRIK				LR		LR	14 38 16.5	
	comp=Z,179nm,18.7s,baz=216,slow=36							
LKRN	**Lenkeran, Azer**	**46.48**	**300**	P		**P**	**14 20 11.9**	**+0.6**
JAY	**Jayapura**	**46.58**	**121**	LR		LR	14 38 32.6	
	comp=Z,72nm,21.7s,baz=330,slow=34							
SEKA	**Sheki**	**47.73**	**303**	P		**P**	**14 20 21.1**	**0.0**
MA2	**Magadan**	**47.76**	**31**	*ceP*		**P**	**14 20 19.6**	**-1.4**
MA2				pmax	pmax			
	comp=Z,21nm,1.3s							
MNGR	**Mingechevir, A**	**47.81**	**303**	P		**P**	**14 20 22.4**	**+0.8**
GANJ	**Ganja**	**48.38**	**303**	P		**P**	**14 20 25.6**	**-0.6**
KNRA	**Kununurra**	**48.44**	**145**	P		**P**	**14 20 26.7**	**0.0**
LGD	**Lagodekhi**	**48.46**	**304**	P		**P**	**14 20 29.1**	**+2.4**
TIXI	**Tiksi**	**48.59**	**11**	*ceP*		P	14 20 25.1	-2.1
TIXI				pmax	pmax			
	comp=Z,23nm,2.5s							
TIXI	**Tiksi**	**48.59**	**11**	P		P	14 20 24.9	-2.3
TIXI				IAmb	IAmb		14 20 31.0	
	comp=Z,6.7nm,0.6s							
FITZ	**Fitzroy Crossi**	**48.99**	**150**	P		**P**	**14 20 30.7**	**-0.1**
	comp=Z,4.1nm,0.8s,baz=349,slow=7.0,SNR=8.4							
FITZ	**Fitzroy Crossi**	**48.99**	**150**	P		**P**	**14 20 30.1**	**-0.7**
NAX	**Nakhchivan**	**49.04**	**301**	P		**P**	**14 20 31.8**	**+0.6**
PETK	**Petropavlovsk-**	**49.51**	**41**	P		**P**	**14 20 32.8**	**-1.7**
	comp=Z,2.4nm,1.0s,baz=255,slow=11,SNR=1.7							
GUDG	**Gudauri**	**49.79**	**305**	P		**P**	**14 20 40.5**	**+3.4**
SEY	**Seymchan**	**49.85**	**27**	*i* P		**P**	**14 20 35.8**	**-1.2**
ZEI	**Tsey**	**50.21**	**305**	*eP*		**P**	**14 20 40.3**	**0.0**
ZEI				pmax	pmax			
	comp=Z,5.0nm,0.5s							
AKH	**Akhalkalaki**	**50.52**	**304**	P		**P**	**14 20 46.5**	**+3.9**
ONI	**Oni**	**50.54**	**305**	P		**P**	**14 20 46.7**	**+4.0**
KBZ	**Khabaz**	**50.96**	**307**	LR		LR	14 44 49.2	
	comp=Z,121nm,21.1s,baz=86,slow=39							
KIV	**Kislovodsk**	**51.11**	**307**	*eP*		**P**	**14 20 46.8**	**-0.1**
KIV				pmax	pmax			
	comp=Z,48nm,1.1s							
KIV				MLR	MLR			
	comp=Z,175nm,16.0s							
KIV	**Kislovodsk**	**51.11**	**307**	P		**P**	**14 20 46.4**	**-0.5**
KIV				IAmb	IAmb		14 20 49.9	
	comp=Z,24nm,1.3s							
VORD	**Divnogorie**	**53.67**	**316**	*eP*		**P**	**14 21 05.6**	**-0.1**
VORD				pmax	pmax			
	comp=Z,2.0nm,0.4s							
VSR	**Storozhevoye**	**53.77**	**316**	*eP*		**P**	**14 21 05.8**	**-0.6**
VSR				pmax	pmax			
	comp=Z,10.0nm,1.2s							
KLMR	**Klimovskoe**	**54.79**	**328**	*eP*		P	14 21 11.3	-2.4
KLMR				pmax	pmax			
	comp=Z,42nm,1.5s							
KLMR	**Klimovskoe**	**54.79**	**328**	*eP*		P	14 21 11.4	-2.3
KLMR				AMP			14 21 16.4	
	comp=Z,42nm,1.5s							
WRAB	**Tennant Creek**	**54.94**	**142**	*ceP*		**P**	**14 21 14.5**	**-0.8**
WRAB				pmax	pmax			
	comp=Z,23nm,1.7s							
WRAB	**Tennant Creek**	**54.94**	**142**	P		**P**	**14 21 14.8**	**-0.5**
WRAB				IAmb	IAmb		14 21 20.8	
	comp=Z,22nm,1.4s							
WRA	**Warramunga Arr**	**54.94**	**142**	P		**P**	**14 21 14.7**	**-0.6**
	comp=Z,3.9nm,0.6s,baz=330,slow=8.0,SNR=26							
MOS	**Moscow**	**55.05**	**321**	*eP*		**P**	**14 21 14.8**	**-0.8**
MOS				*e*S		**S**	**14 28 59.1**	**+1.2**
MOS				pmax	pmax			
	comp=Z,35nm,0.7s							
OBN	**Obninsk**	**55.60**	**321**	*i* P		**P**	**14 21 20.4**	**+0.8**
OBN				*i*			14 22 19.9	
OBN				pmax	pmax			
	comp=Z,11nm,1.3s							
OBN				MLR	MLR			
	comp=Z,82nm,17.0s							
BILL	**Bilibino**	**57.00**	**24**	*c i* P		**P**	**14 21 27.8**	**-1.6**
BILL				*i*			14 21 35.7	
BILL				*i*			14 22 21.4	
BILL				pmax	pmax			
	comp=Z,8.0nm,1.0s							
BILL				MLR	MLR			
	comp=Z,247nm,14.0s							
BILL	**Bilibino**	**57.00**	**24**	P		P	14 21 26.7	-2.7
BILL				IAmb	IAmb		14 21 37.1	
	comp=Z,7.6nm,0.7s							
ASAR	**Alice Springs**	**57.74**	**145**	P		**P**	**14 21 35.2**	**0.0**
	comp=Z,3.6nm,0.5s,baz=326,slow=7.0,SNR=41							
ASAR				LR		LR	14 49 21.5	
	comp=Z,51nm,19.3s,baz=306,slow=39							
BRTR	**Keskin Array B**	**58.13**	**302**	P		**P**	**14 21 37.3**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=112,slow=8.1,SNR=6.4							
BRTR				LR		LR	14 48 20.1	
	comp=Z,33nm,21.8s,baz=72,slow=38							
JOF	**Joensuu**	**58.92**	**330**	P		P	14 21 40.6	-2.3
JOF				pmax	pmax			
	comp=Z,8.0nm,0.8s							
CSS	**Mathiatis**	**59.17**	**297**	P		**P**	**14 21 43.9**	**-1.3**
CSS				IAmb	IAmb		14 21 50.3	
	comp=Z,12nm,0.8s							
NWAO	**Narrogin (SRO)**	**59.84**	**165**	P		**P**	**14 21 52.8**	**+3.2**
NWAO				pmax	pmax			
	comp=Z,32nm,1.5s							
AKASG	**Malin Array Be**	**60.06**	**315**	P		P	14 21 47.8	-3.2
	comp=Z,2.2nm,0.5s,baz=73,slow=7.1,SNR=1.8							
AKASG				LR		LR	14 52 04.2	
	comp=Z,73nm,18.1s,baz=20,slow=40							
VSU	**Vasula**	**61.07**	**324**	P		P	14 21 55.7	-2.1
VSU				pmax	pmax			
	comp=Z,54nm,0.9s							
SGF	**Sodankyl**	**61.23**	**335**	P		P	14 21 56.4	-2.3
SGF				pmax	pmax			
	comp=Z,17nm,0.8s							
SUF	**Sumiainen**	**61.28**	**329**	P		**P**	**14 21 57.5**	**-1.6**
SUF				pmax	pmax			
	comp=Z,20nm,0.8s							
FINES	**FINESS Array B**	**61.32**	**328**	P		P	14 21 56.7	-2.7
	comp=Z,5.6nm,0.7s,baz=96,slow=8.4,SNR=12							
FINES				LR		LR	14 49 14.3	
	comp=Z,137nm,20.0s,baz=154,slow=37							
ISK	**Istanbul-Kandi**	**61.38**	**305**	P		**P**	**14 21 59.1**	**-1.1**
ISK				pmax	pmax			
	comp=Z,25nm,1.3s							
CFR	**Carcaliu**	**61.40**	**309**	⇑P		P	14 21 58.2	-2.1
CFR	**Carcaliu**	**61.40**	**309**	P		P	14 21 57.5	-2.7
CFR				pmax	pmax			
	comp=Z,5.0nm,0.9s							
OUL	**Oulu**	**61.40**	**332**	P		P	14 21 57.6	-2.3
OUL				pmax	pmax			
	comp=Z,19nm,1.0s							
ELL	**Elmali**	**61.54**	**300**	P		P	14 21 58.6	-2.9

APE	**Apeiranthos**	**64.89**	**301**	P	**P**	**14 22 22.8**	**-0.9**	
APE				pmax	pmax			
	comp=Z,89nm,2.5s							
VTS	**Vitosha**	**65.34**	**307**	⇑P	**P**	**14 22 26.5**	**-0.1**	
VTS	**Vitosha**	**65.34**	**307**	⇑P	**P**	**14 22 26.5**	**-0.1**	
VTS	**Vitosha**	**65.34**	**307**	P	**P**	**14 22 25.4**	**-1.2**	
GAMB	**Gambell**	**65.79**	**29**	P	**P**	**14 22 28.8**	**-0.1**	
IDI	**Anoyia**	**65.83**	**299**	P	**P**	**14 22 28.6**	**-1.2**	
KNT	**Kendrikon**	**65.92**	**306**	P	**P**	**14 22 28.8**	**-1.4**	
KNT				pmax	pmax			
	comp=Z,5.0nm,1.5s							
NIE	**Niedzica**	**65.93**	**315**	P	**P**	**14 22 31.5**	**+1.4**	
NIE				pmax	pmax			
	comp=Z,2.0nm,1.0s							
HNR	**Honiara**	**66.09**	**114**	LR	LR	14 52 02.0		
	comp=Z,20nm,18.0s,baz=273,slow=37							
BBOO	**Buckleboo**	**66.37**	**149**	P	**P**	**14 22 32.5**	**-0.5**	
LIT	**Litokhoron**	**66.47**	**305**	P	**P**	**14 22 32.6**	**-1.2**	
LIT				pmax	pmax			
	comp=Z,7.0nm,0.9s							
LIT	**Litokhoron**	**66.47**	**305**	P	**P**	**14 22 32.6**	**-1.2**	
LIT				IAmb	IAmb	14 22 34.5		
	comp=Z,6.8nm,0.9s							
PSZ	**Piszkesteto**	**66.50**	**313**	P	**P**	**14 22 32.9**	**-1.0**	
PSZ				pmax	pmax			
	comp=Z,20nm,1.1s							
MORC	**Moravsky Berou**	**67.60**	**316**	*e*P	**P**	**14 22 42.6**	**+1.8**	
MORC	**Moravsky Berou**	**67.60**	**316**	P	**P**	**14 22 40.0**	**-0.8**	
MORC				pmax	pmax			
	comp=Z,6.0nm,1.1s							
JAVC	**Velka Javorina**	**67.73**	**315**	*e*P	**P**	**14 22 44.8**	**+3.1**	
KMBO	**Kilima Mbogo**	**67.95**	**258**	LR	LR	14 50 45.0		
	comp=Z,46nm,20.8s,baz=93,slow=34							
KRLC	**Kraliky**	**68.01**	**316**	*e*P	**P**	**14 22 42.4**	**-1.0**	
KRLC	**Kraliky**	**68.01**	**316**	*e*P	**P**	**14 22 42.4**	**-1.0**	
KRLC				*ex*	x	14 22 45.7		
DPC	**Dobruska-Polom**	**68.23**	**317**	*e*P	**P**	**14 22 43.4**	**-1.4**	
DPC	**Dobruska-Polom**	**68.23**	**317**	*e*P	**P**	**14 22 43.4**	**-1.4**	
VRAC	**Vranov**	**68.31**	**315**	*e*P	**P**	**14 22 47.6**	**+2.3**	
VRAC	**Vranov**	**68.31**	**315**	P	**P**	**14 22 45.2**	**-0.1**	
VRAC				pmax	pmax			
	comp=Z,6.0nm,0.6s							
STKA	**Stephens Creek**	**68.36**	**144**	P	**P**	**14 22 45.6**	**0.0**	
	comp=Z,1.9nm,0.6s,baz=304,slow=7.3,SNR=6.0							
STKA				LR	LR	14 55 55.9		
	comp=Z,96nm,18.9s,baz=285,slow=39							
STKA	**Stephens Creek**	**68.36**	**144**	P	**P**	**14 22 45.6**	**0.0**	
STKA				pmax	pmax			
	comp=Z,7.0nm,2.0s							
STKA	**Stephens Creek**	**68.36**	**144**	IAmb	IAmb	14 22 49.3		
	comp=Z,7.2nm,1.9s							
NORES	**NORESS Array B**	**68.41**	**328**	P	**P**	**14 22 45.2**	**-0.4**	
NORES				pmax	pmax			
	comp=Z,1.0nm,0.4s							
NB2	**NORSAR Subarra**	**68.49**	**328**	P	P	14 22 43.6	-2.6	
	comp=Z,5.9nm,0.8s,baz=77,slow=6.5							
NOA	**NORSAR Array B**	**68.49**	**328**	P	P	14 22 43.4	-2.8	
	comp=Z,2.9nm,0.7s,baz=77,slow=6.3,SNR=15							
NOA				LR	LR	14 52 54.8		
	comp=Z,81nm,18.9s,baz=75,slow=36							
KRUC	**Moravsky**	**68.50**	**315**	*e*P	**P**	**14 22 48.6**	**+2.2**	
KRUC	**Moravsky**	**68.50**	**315**	P	**P**	**14 22 46.2**	**-0.2**	
KRUC				pmax	pmax			
	comp=Z,7.0nm,1.8s							
CONA	**Conrad Observa**	**69.13**	**314**	*i* P	**P**	**14 22 51.7**	**+1.2**	
	comp=Z,7.6nm,1.2s							
PRU	**Pruhonice**	**69.43**	**316**	AMS	AMS	14 54 40.0		
	comp=Z,100nm,16.4s							
SCTE	**Santa Cesarea**	**69.46**	**305**	P	**P**	**14 22 51.2**	**-1.3**	
BRG	**Berggiesshubel**	**69.57**	**317**	*e*P	**P**	**14 22 53.1**	**+0.1**	
	comp=Z,5.7nm,0.5s							
BRG	**Berggiesshubel**	**69.57**	**317**	*e*P	**P**	**14 22 53.1**	**+0.1**	
BRG				pmax	pmax			
	comp=Z,6.0nm,0.5s							
SOKA	**Soboth**	**70.01**	**313**	*i* pP	**P**	**14 22 57.7**	**+1.7**	
	comp=Z,4.1nm,0.7s							
CLL	**Collm**	**70.02**	**318**	*i* P	**P**	**14 22 56.6**	**+0.8**	
	comp=Z,7.0nm,0.8s							
CLL				L	L	14 54 00.0		
	comp=Z,100nm,19.4s							
CLL	**Collm**	**70.02**	**318**	*i* P	**P**	**14 22 56.6**	**+0.8**	
CLL				pmax	pmax			
	comp=Z,7.0nm,0.8s							
CLL	**Collm**	**70.02**	**318**	P	**P**	**14 22 55.3**	**-0.4**	
CLL				IAmb	IAmb	14 22 59.6		
	comp=Z,5.0nm,0.6s							
MOA	**Molln**	**70.19**	**314**	*e*P	**P**	**14 22 58.0**	**+1.1**	
	comp=Z,7.8nm,1.1s							
KHC	**Kasperske Hory**	**70.27**	**316**	*e*P	P	14 22 55.2	-2.2	
KHC				MLR	MLR			
	comp=Z,200nm,19.5s							
KHC	**Kasperske Hory**	**70.27**	**316**	*e*P	P	14 22 55.2	-2.2	
KHC				AMS	AMS	14 55 10.0		
	comp=Z,200nm,19.5s							
GEC2	**GERESS Array S**	**70.27**	**315**	P	**P**	**14 22 56.2**	**-1.3**	
GEC2				pmax	pmax			
	comp=Z,7.0nm,1.3s							
GERES	**GERESS Array B**	**70.27**	**315**	P	**P**	**14 22 55.9**	**-1.6**	
	comp=Z,2.2nm,0.5s,baz=62,slow=5.8,SNR=12							
KBA	**Koelnbreinsper**	**71.01**	**314**	*e*P	P	14 22 59.7	-2.4	
	comp=Z,4.6nm,0.6s							
KBA	**Koelnbreinsper**	**71.01**	**314**	P	P	14 23 00.1	-2.1	
KBA				pmax	pmax			
	comp=Z,6.0nm,0.6s							
GRF	**Grafenberg Arr**	**71.58**	**317**	*e*P	**P**	**14 23 07.8**	**+2.5**	
	comp=Z,10nm,1.0s,baz=72,slow=5.5							
DAG	**Danmarks Havn**	**71.96**	**348**	*i* P	**P**	**14 23 07.9**	**+0.8**	
DAG	**Danmarks Havn**	**71.96**	**348**	*i* P	**P**	**14 23 07.9**	**+0.8**	
WTTA	**Wattenberg**	**72.06**	**314**	*i* P	**P**	**14 23 06.9**	**-1.6**	
	comp=Z,7.1nm,0.7s							
WATA	**Walderalm**	**72.08**	**314**	*e*P	**P**	**14 23 09.0**	**+0.4**	
	comp=Z,3.6nm,0.5s							
SQTA	**Sankt Quirin**	**72.35**	**314**	*i* P	P	14 23 08.3	-1.9	
	comp=Z,7.1nm,0.5s							
MOTA	**Moosalm**	**72.38**	**314**	*i* P	P	14 23 08.4	-2.0	
	comp=Z,13nm,0.9s							
NRCA	**Norcia**	**72.47**	**310**	P	**P**	**14 23 09.8**	**-1.1**	
NRCA				IAmb	IAmb	14 23 13.2		
	comp=Z,20nm,1.5s							
RETA	**Reutte**	**72.56**	**315**	*i* P	**P**	**14 23 11.0**	**-0.3**	
	comp=Z,9.6nm,0.9s							
JMIC	**Jan Mayen**	**72.56**	**341**	LR	LR	14 57 47.3		
	comp=Z,62nm,19.5s,baz=74,slow=38							
FETA	**Feichten**	**72.73**	**314**	*i* P	P	14 23 10.2	-2.3	
	comp=Z,11nm,0.9s							
TTA	**Tatalina**	**72.82**	**28**	P	**P**	**14 23 11.9**	**-0.7**	
TTA	**Tatalina**	**72.82**	**28**	P	**P**	**14 23 11.9**	**-0.7**	
TOLK	**Toolik Lake Re**	**72.90**	**28**	P	**P**	**14 23 11.6**	**-1.4**	
FUORN	**Ofenpass-Fuorn**	**73.16**	**314**	P	P	14 23 13.3	-1.8	
FUORN				IAmb	IAmb	14 23 17.3		
	comp=Z,6.3nm,0.7s							
COLD	**Coldfoot**	**73.31**	**23**	P	**P**	**14 23 14.7**	**-0.6**	
TUE	**Stuetta**	**73.81**	**314**	P	**P**	**14 23 17.5**	**-1.4**	
TUE				IAmb	IAmb	14 23 20.5		
	comp=Z,7.9nm,0.9s							
BFO	**Black Forest**	**73.82**	**316**	P	**P**	**14 23 17.4**	**-1.3**	
BFO				pmax	pmax			
	comp=Z,15nm,1.3s							
BFO	**Black Forest**	**73.82**	**316**	P	**P**	**14 23 17.4**	**-1.3**	
BFO				IAmb	IAmb	14 23 20.9		
	comp=Z,15nm,1.3s							
SLE	**Schleitheim**	**73.91**	**316**	P	**P**	**14 23 18.4**	**-0.9**	
SLE				pmax	pmax			
	comp=Z,8.0nm,0.5s							
MLY	**Manley**	**74.08**	**25**	P	**P**	**14 23 19.0**	**-0.9**	
MLY				IAmb	IAmb	14 23 29.1		
	comp=Z,9.8nm,0.7s							
BPAW	**Bear Paw Mtn.**	**74.40**	**26**	P	**P**	**14 23 20.9**	**-0.9**	
PPLA	**Purkeypile**	**74.44**	**27**	P	**P**	**14 23 21.1**	**-1.1**	
PPLA				IAmb	IAmb	14 23 29.2		
	comp=Z,13nm,0.9s							
KTH	**Kantishna Hill**	**74.67**	**26**	P	**P**	**14 23 22.4**	**-1.0**	
KTH				IAmb	IAmb	14 25 12.6		
	comp=Z,22nm,1.5s							
WLF	**Walferdange**	**74.69**	**318**	P	P	14 23 21.8	-1.9	
NEA	**Nenana**	**74.92**	**25**	P	**P**	**14 23 24.1**	**-0.7**	
NEA				IAmb	IAmb	14 23 31.3		
	comp=Z,6.7nm,0.7s							
TRF	**Thorofare Moun**	**74.97**	**26**	P	**P**	**14 23 24.6**	**-0.7**	
MDM	**Murphy Dome**	**75.06**	**25**	P	**P**	**14 23 24.8**	**-0.8**	
MDM				IAmb	IAmb	14 23 30.8		
	comp=Z,10nm,0.6s							
RSO	**Redoubt South**	**75.24**	**30**	P	**P**	**14 23 25.8**	**-1.2**	
COLA	**College**	**75.25**	**25**	P	**P**	**14 23 26.5**	**-0.1**	
COLA				pmax	pmax			
	comp=Z,10.0nm,0.7s							
BMRD	**Maredsous**	**75.29**	**319**	P	**P**	**14 23 26.0**	**-1.1**	
CCB	**Clear Creek Bu**	**75.37**	**25**	P	**P**	**14 23 26.0**	**-1.3**	
MCK	**McKinley**	**75.37**	**26**	P	**P**	**14 23 26.3**	**-1.1**	
MCK				pmax	pmax			
	comp=Z,7.0nm,0.7s							
MCK	**McKinley**	**75.37**	**26**	P	**P**	**14 23 26.3**	**-1.1**	
MCK				IAmb	IAmb	14 23 38.1		
	comp=Z,6.9nm,0.7s							
RND	**Reindeer**	**75.56**	**26**	P	**P**	**14 23 26.9**	**-1.7**	
RND				pmax	pmax			
	comp=Z,6.0nm,0.6s							
RND	**Reindeer**	**75.56**	**26**	P	**P**	**14 23 26.9**	**-1.7**	
RND				IAmb	IAmb	14 23 32.4		
	comp=Z,6.4nm,0.6s							
ILAR	**Eielson Array**	**75.66**	**24**	P	P	14 23 26.6	-2.5	
	comp=Z,1.4nm,0.4s,baz=279,slow=4.0,SNR=22							
ILAR				LR	LR	14 58 03.7		
	comp=Z,66nm,18.7s,baz=288,slow=37							
PRP	**Porcupine Dome**	**75.78**	**23**	P	**P**	**14 23 28.2**	**-1.7**	
BNI	**Bardonecchia**	**76.06**	**313**	P	P	14 23 30.1	-1.8	
BNI				pmax	pmax			
	comp=Z,7.0nm,0.8s							
BNI	**Bardonecchia**	**76.06**	**313**	P	P	14 23 30.1	-1.8	
RC01	**Rabbit Creek A**	**76.28**	**28**	P	**P**	**14 23 31.0**	**-1.7**	
RC01				IAmb	IAmb	14 23 54.6		
	comp=Z,16nm,1.0s							
DHY	**Denali Highway**	**76.30**	**26**	P	**P**	**14 23 31.4**	**-1.5**	
DHY				IAmb	IAmb	14 23 54.6		
	comp=Z,33nm,2.0s							
PMR	**Palmer**	**76.30**	**28**	P	**P**	**14 23 31.1**	**-1.6**	
PMR				pmax	pmax			
	comp=Z,72nm,2.0s							
PMR	**Palmer**	**76.30**	**28**	P	**P**	**14 23 31.1**	**-1.6**	
CNPM	**China Poot**	**76.34**	**30**	P	**P**	**14 23 32.7**	**-0.4**	
BRLK	**Bradley Lake**	**76.39**	**30**	P	**P**	**14 23 33.4**	**0.0**	
OHAK	**Old Harbor**	**76.40**	**33**	P	**P**	**14 23 32.5**	**-0.9**	
KDAK	**Kodiak Island**	**76.50**	**32**	P	**P**	**14 23 33.0**	**-0.9**	
KDAK	**Kodiak Island**	**76.50**	**32**	P	**P**	**14 23 33.0**	**-0.9**	
SML	**Sawmill**	**76.53**	**27**	P	**P**	**14 23 32.8**	**-1.3**	
SML				pmax	pmax			
	comp=Z,16nm,0.7s							
SML	**Sawmill**	**76.53**	**27**	P	**P**	**14 23 32.8**	**-1.3**	
SCM	**Sheep Creek Mo**	**76.94**	**27**	P	P	14 23 33.9	-2.5	
SCM				pmax	pmax			
	comp=Z,93nm,1.8s							
SCM	**Sheep Creek Mo**	**76.94**	**27**	P	P	14 23 33.9	-2.6	
DOT	**Dot Lake**	**77.30**	**25**	P	**P**	**14 23 36.9**	**-1.5**	
DOT				IAmb	IAmb	14 25 02.3		
	comp=Z,14nm,1.8s							
EGAK	**Eagle**	**77.74**	**23**	P	**P**	**14 23 39.3**	**-1.5**	
EGAK				IAmb	IAmb	14 25 39.2		
	comp=Z,20nm,1.9s							
FID	**Port Fidalgo**	**77.84**	**28**	P	P	14 23 39.5	-1.9	
INK	**Inuvik**	**78.03**	**18**	P	**P**	**14 23 40.9**	**-1.4**	
INK				pmax	pmax			
	comp=Z,5.0nm,0.8s							
INK	**Inuvik**	**78.03**	**18**	P	**P**	**14 23 40.9**	**-1.4**	
EYAK	**Cordova Ski Ar**	**78.25**	**28**	P	**P**	**14 23 43.0**	**-0.6**	
EPYK	**Eagle Plains**	**78.29**	**21**	P	**P**	**14 23 42.3**	**-1.6**	
EPYK				IAmb	IAmb	14 24 07.8		
	comp=Z,30nm,1.9s							
GLB	**Gilahina Butte**	**78.58**	**27**	P	**P**	**14 23 44.1**	**-1.4**	
GLB				IAmb	IAmb	14 24 00.2		
	comp=Z,11nm,1.2s							
SUMG	**Summit**	**78.61**	**349**	*i* P	P	14 23 43.8	-2.2	
SUMG	**Summit**	**78.61**	**349**	P	P	14 23 43.3	-2.6	
SUMG				IAmb	IAmb	14 23 51.0		
	comp=Z,11nm,0.9s							
SUMG	**Summit**	**78.61**	**349**	*i* P	P	14 23 43.8	-2.2	
DAWY	**Dawson**	**78.78**	**23**	P	**P**	**14 23 45.0**	**-1.6**	
KULLO	**Kullorsuaq**	**79.29**	**354**	*i* P	P	14 23 46.8	-2.3	
KULLO				pmax	pmax			
	comp=Z,13nm,0.7s							
KULLO	**Kullorsuaq**	**79.29**	**354**	*i* P	P	14 23 46.8	-2.3	
	comp=Z,13nm,0.7s							
TGL	**Tana Glacier**	**79.35**	**27**	P	**P**	**14 23 48.9**	**-1.0**	
BALM	**Baldy**	**79.39**	**27**	P	**P**	**14 23 49.2**	**-0.9**	
BALM				pmax	pmax			
	comp=Z,10.0nm,1.1s							
BALM	**Baldy**	**79.39**	**27**	P	**P**	**14 23 49.2**	**-0.9**	
BALM				IAmb	IAmb	14 24 15.0		
	comp=Z,10nm,1.1s							
RES	**Resolute Bay**	**79.47**	**5**	P	**P**	**14 23 49.0**	**-1.1**	
RES				pmax	pmax			
	comp=Z,4.0nm,0.9s							
RES	**Resolute Bay**	**79.47**	**5**	P	**P**	**14 23 49.0**	**-1.1**	
BARN	**Barnard Glacie**	**79.66**	**26**	P	**P**	**14 23 51.7**	**0.0**	
BARN				IAmb	IAmb	14 23 60.0		
	comp=Z,9.4nm,0.7s							
C36M	**Paulatuk**	**79.75**	**15**	P	**P**	**14 23 50.3**	**-1.4**	
C36M				IAmb	IAmb	14 23 54.0		
	comp=Z,13nm,1.0s							
CTGM	**Chitina Glacie**	**79.84**	**26**	P	**P**	**14 23 51.5**	**-1.1**	
CTGM				IAmb	IAmb	14 23 58.4		
	comp=Z,37nm,1.6s							
BORG	**Borgarnes**	**80.06**	**339**	LR	LR	15 00 49.0		
	comp=Z,43nm,19.6s,baz=50,slow=37							
ESDC	**Sonseca Array**	**85.49**	**312**	P	**P**	**14 24 20.9**	**-1.4**	
	comp=Z,2.6nm,0.9s,baz=47,slow=5.3,SNR=12							
ESDC				LR	LR	15 07 10.2		
	comp=Z,41nm,19.2s,baz=40,slow=39							
YKA	**Yellowknife Ar**	**87.56**	**16**	P	P	14 24 30.0	-1.9	
	comp=Z,1.1nm,0.6s,baz=331,slow=4.4,SNR=12							
YKA				LR	LR	15 09 38.8		
	comp=Z,43nm,18.7s,baz=0.0,slow=40							
YKA	**Yellowknife Ar**	**87.56**	**16**	P	P	14 24 30.0	-1.9	
BOSA	**Boshof**	**91.33**	**239**	LR	LR	15 01 33.8		
	comp=Z,37nm,19.3s,baz=162,slow=33							
TORD	**Torodi Ar. Bea**	**93.60**	**286**	P	**P**	**14 25 00.9**	**-0.1**	
	comp=Z,0.6nm,0.8s,baz=72,slow=4.5,SNR=3.7							
TORD				LR	LR	15 12 22.0		
	comp=Z,48nm,18.9s,baz=230,slow=39							
SCHQ	**Schefferville**	**99.46**	**354**	LR	LR	15 13 03.0		
	comp=Z,44nm,18.5s,baz=326,slow=37							
SNAA	**Sanae**	**118.66**	**200**	PKIKP	**PKPdf**	**14 30 30.7**	**-0.7**	
SNAA	**Sanae**	**118.66**	**200**		**PKPdf**	**14 30 30.7**	**-0.7**	
TXAR	**Lajitas Array**	**120.14**	**26**	PKP	**PKPdf**	**14 30 35.9**	**+0.1**	
	comp=Z,0.2nm,0.3s,baz=315,slow=0.3,SNR=4.1							
RUSC	**La Rusia**	**148.47**	**351**		**PKPdf**	**14 31 29.4**	**+0.6**	

IDC 07 14:46:03.5±2.1, 11°.43S×118°.33E, h0km, mb3.5/1, mb1 3.7/5, mb1mx3.5/41, mbtmp3.6/5, ML3.4/4, Error ellipse: s-maj=68.5km s-min=25.9km az=44.0, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.38**	**77**	Pn	Pn	14 47 25.1	+0.1
	2.5nm,0.3s,baz=103,slow=24,SNR=1.9						
BATI				Sn	Sn	14 48 19.4	-8.4
	4.9nm,0.3s,baz=72,slow=20,SNR=2.2						
FITZ	**Fitzroy Crossi**	**9.69**	**134**	Pn	Pn	14 48 23.8	-0.5
	0.3nm,0.3s,baz=320,slow=13,SNR=12						
FITZ				Sn	Sn	14 50 05.0	-8.9
	0.3nm,0.3s,baz=172,slow=19,SNR=1.9						
WRA	**Warramunga Arr**	**17.57**	**121**	P	Pn	14 50 08.3	-1.7
	0.1nm,0.3s,baz=288,slow=14,SNR=6.3						
ASAR	**Alice Springs**	**19.17**	**131**	P	Pn	14 50 30.5	+0.8
	0.2nm,0.3s,baz=310,slow=13,SNR=14						
MKAR	**Makanchi Array**	**66.32**	**334**	P	P	14 56 53.8	-0.1
	0.2nm,0.4s,baz=153,slow=7.5,SNR=4.5						

*JMA **07** 14:46:45.8±0.3, 23°.94N×122°.41E, h15km±5km, M2.3*
*TAP **07** 14:46:46.6, 23°.96N×122°.42E, h28km, ML2.9, D*
ISC 07 14:46:46.0±1.2, 23°.92N±0°.02×122°.41E±0°.02, h21km±4km, **n74**, σ0°.64/136, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.68**	**338**	P	**Pb**	**14 46 58.9**	**-0.4**
	baz=329						
EOS1				S	**Sn**	**14 47 09.2**	**-1.1**
	baz=329						
JYNG	**Yonagunijimaku**	**0.72**	**42**	P	**Pb**	**14 46 59.3**	**-0.6**
JYNG				S	**Sb**	**14 47 07.8**	**-1.5**
HWA	**Hwalien**	**0.74**	**275**	*e*S	**Sn**	**14 47 11.4**	**-0.4**
	baz=258						
TWD	**Chiawan**	**0.77**	**283**	P	**Pb**	**14 47 00.8**	**+0.2**
	baz=279						
TWD				S	**Sb**	**14 47 11.1**	**+0.5**
	baz=279						
YOJ	**Yonaguni jima**	**0.77**	**45**	*e*P	**Pb**	**14 47 00.3**	**-0.4**
	baz=46						
YOJ	**Yonaguni jima**	**0.77**	**45**	P	**Pb**	**14 47 00.2**	**-0.4**
YOJ				S	**Sb**	**14 47 09.4**	**-1.3**
NACB	**Ninganchiao**	**0.79**	**289**	P	**Pb**	**14 47 01.0**	**-0.1**
	baz=272						
NACB				S	**Sb**	**14 47 11.5**	**+0.1**
	baz=272						
ENA	**Nanau**	**0.80**	**310**	P	**Pb**	**14 47 00.9**	**-0.3**
	baz=314						
ENA				*e*S	**Sn**	**14 47 12.4**	**-0.8**
	baz=314						
TWC	**Suao**	**0.86**	**323**	*e*P	**Pb**	**14 47 01.4**	**-0.9**
	baz=321						
TWC				*e*S	**Sb**	**14 47 12.8**	**-0.5**
	baz=321						
ETLH	**Xiulin Townshi**	**0.90**	**289**	*e*P	**Pb**	**14 47 02.3**	**-0.6**
	baz=275						
ETLH				*e*S	**Sn**	**14 47 15.2**	**-0.7**
	baz=275						
ESL	**Shilin**	**0.90**	**264**	P	**Pb**	**14 47 02.7**	**-0.2**
	baz=260						
ESL				S	**Sb**	**14 47 14.8**	**+0.3**
	baz=260						
EGFH	**Guangfu**	**0.94**	**255**	*e*P	**Pb**	**14 47 03.1**	**-0.5**
	baz=252						
EGFH				*e*S	**Sb**	**14 47 15.6**	**+0.1**
	baz=252						
HGSD	**Ruisui**	**1.00**	**245**	*e*P	**Pb**	**14 47 03.9**	**-0.7**
	baz=243						
HGSD				S	**Sb**	**14 47 17.4**	**+0.1**
	baz=243						
TWE	**Neicheng**	**1.05**	**320**	*e*P	**Pb**	**14 47 05.3**	**-0.2**
	baz=318						
TWE				S	**Sn**	**14 47 19.5**	**0.0**
	baz=318						
ENTT	**Nioudou**	**1.06**	**313**	P	**Pn**	**14 47 05.7**	**+0.1**
	baz=296						
ENTT				S	**Sn**	**14 47 19.4**	**-0.3**
	baz=296						
NDT	**Datong Townshi**	**1.07**	**310**	*e*P	**Pb**	**14 47 05.8**	**0.0**
	baz=307						
NDT				S	**Sb**	**14 47 19.3**	**-0.1**
	baz=307						
NNSB	**Datong**	**1.07**	**299**	*e*P	**Pn**	**14 47 05.5**	**-0.4**
	baz=284						
NNSB				*e*S	**Sb**	**14 47 19.5**	**0.0**
	baz=284						
NNSH	**Datong**	**1.07**	**299**	P	Pn	**14 47 05.6**	**-0.2**
	baz=285						
NNSH				S	**Sn**	**14 47 20.0**	**-0.2**
	baz=285						
NTC	**Toucheng**	**1.08**	**330**	*e*S	**Sn**	**14 47 19.4**	**-0.7**
	baz=328						
WHF	**Hehuan Shan**	**1.08**	**283**	P	**Pb**	**14 47 05.7**	**-0.5**
	baz=279						
WHF				S	**Sb**	**14 47 19.9**	**0.0**
	baz=279						
EHY	**Hungye**	**1.08**	**248**	*e*P	**Pn**	**14 47 05.2**	**-0.7**
	baz=245						
EHY				S	**Sb**	**14 47 20.2**	**+0.5**
	baz=245						
NNS	**Nan Shan**	**1.08**	**299**	P	**Pn**	**14 47 05.6**	**-0.4**
	baz=284						
NNS				S	**Sb**	**14 47 19.7**	**-0.2**
	baz=284						
SLBB	**Yuanshan**	**1.10**	**320**	*e*P	**Pb**	**14 47 06.5**	**+0.2**
	baz=318						
OWD	**Renai**	**1.13**	**272**	*e*P	**Pn**	**14 47 06.3**	**-0.4**
	baz=269						
OWD				S	**Sb**	**14 47 20.7**	**-0.7**
	baz=269						
CHGB	**Renai**	**1.14**	**278**	*e*P	**Pn**	**14 47 06.7**	**-0.2**
	baz=263						
CHGB				S	**Sb**	**14 47 21.6**	**-0.1**
	baz=263						
YULB	**Yu-li**	**1.15**	**243**	P	**Pn**	**14 47 06.6**	**-0.2**
	baz=241						
YULB				S	**Sb**	**14 47 21.6**	**0.0**
	baz=241						
TWB1	**Santiao Chiao**	**1.16**	**340**	P	**Pb**	**14 47 07.4**	**+0.2**
	baz=356						
TWB1				S	**Sn**	**14 47 22.4**	**+0.4**
	baz=356						
TWF1	**Yuli**	**1.17**	**242**	P	**Pn**	**14 47 06.6**	**-0.5**
	baz=239						
TWF1				S	**Sb**	**14 47 22.1**	**-0.1**
	baz=239						
VWDT	**VWDT**	**1.18**	**262**	P	**Pn**	**14 47 07.3**	**+0.2**
	baz=260						
VWDT				S	**Sb**	**14 47 22.1**	**-0.3**
	baz=260						
TIPB	**Shuangxi**	**1.18**	**333**	P	**Pb**	**14 47 07.7**	**0.0**
	baz=331						
TIPB				S	**Sn**	**14 47 22.3**	**-0.4**
	baz=331						
NWLT	**Wulai**	**1.20**	**316**	P	**Pb**	**14 47 08.2**	**+0.3**
	baz=313						
NWLT				S	**Sn**	**14 47 24.7**	**+1.6**
	baz=313						
YHNB	**Yeheng**	**1.21**	**309**	P	**Pn**	**14 47 07.8**	**+0.1**
	baz=306						
YHNB				S	**Sn**	**14 47 23.5**	**0.0**
	baz=306						
NSK	**Sanguang**	**1.23**	**308**	P	**Pn**	**14 47 08.1**	**+0.1**
	baz=306						
NSK				S	**Sn**	**14 47 25.3**	**+1.4**
	baz=306						
FULB	**Fuli**	**1.25**	**235**	*e*P	**Pn**	**14 47 08.2**	**0.0**
	baz=223						
FULB				*e*S	**Sn**	**14 47 24.5**	**+0.1**
	baz=223						
CHKT	**Chengkung**	**1.26**	**230**	S	**Sn**	**14 47 22.9**	**-1.7**

	baz=284							
TWH	**Lutao**	**1.48**	**216**	P		**Pn**	**14 47 11.0**	**-0.3**
	baz=214							
TWH				*e*S		**Sn**	**14 47 29.0**	**-0.9**
	baz=214							
JKRS	**Kuro-shima**	**1.49**	**77**	P		**Pb**	**14 47 12.5**	**-0.5**
JKRS				S		**Sb**	**14 47 31.8**	**+0.3**
ALS	**Alishan**	**1.53**	**255**	*e*P		**Pb**	**14 47 14.0**	**+0.2**
	baz=253							
ALS				S		**Sn**	**14 47 32.2**	**+0.6**
	baz=253							
WJS	**Zhushan**	**1.55**	**267**	*e*S		**Sb**	**14 47 34.5**	**+1.4**
	baz=264							
WNT	**Mingjian**	**1.58**	**269**	P		**Pb**	**14 47 15.3**	**+0.8**
	baz=266							
WNT				S		**Sb**	**14 47 34.4**	**+0.2**
	baz=266							
CHN5	**Tsauling**	**1.62**	**259**	*e*P		**Pb**	**14 47 15.3**	**+0.1**
	baz=247							
CHN5				*e*S		**Sb**	**14 47 36.3**	**+1.0**
	baz=247							
JIJ	**Ishigaki jima**	**1.64**	**74**	P		**Pn**	**14 47 13.8**	**+0.2**
JIJ				S		**Sn**	**14 47 33.8**	**-0.2**
TPUB	**Ta-pu**	**1.75**	**250**	*e*P		**Pb**	**14 47 17.9**	**+0.5**
	baz=238							
TPUB				*e*S		**Sb**	**14 47 39.7**	**+0.8**
	baz=238							
CHN4	**Tsaushan**	**1.76**	**252**	P		**Pb**	**14 47 17.6**	**0.0**
	baz=250							
CHN4				*e*S		**Sb**	**14 47 40.3**	**+1.0**
	baz=250							
WTP	**Ta-pu**	**1.78**	**248**	*e*P		**Pb**	**14 47 18.4**	**+0.4**
	baz=237							
WTP				S		**Sb**	**14 47 40.6**	**+0.8**
	baz=237							
JISG	**Ishigakijimahi**	**1.86**	**68**	P		**Pn**	**14 47 16.7**	**+0.2**
JISG				*e*S		**Sn**	**14 47 39.4**	**+0.1**
SLGT	**Liugui**	**1.86**	**241**	*e*P		**Pb**	**14 47 19.2**	**-0.2**
	baz=230							
SGST	**Jiashian**	**1.88**	**244**	P		**Pb**	**14 47 18.9**	**-0.7**
	baz=234							
SGST				S		**Sb**	**14 47 42.7**	**+0.2**
	baz=234							
CHN1	**Nanshi**	**1.88**	**248**	*e*P		**Pb**	**14 47 20.2**	**+0.6**
	baz=237							
CHN1				S		**Sb**	**14 47 43.3**	**+0.6**
	baz=237							
ECL	**Taimali**	**1.88**	**226**	P		**Pn**	**14 47 16.9**	**+0.1**
	baz=225							
ECL				S		**Sn**	**14 47 38.9**	**-1.0**
	baz=225							
RLNB	**Erlin**	**1.88**	**270**	S		**Sb**	**14 47 43.5**	**+0.9**
	baz=267							
TWK	**Hsinying**	**1.88**	**250**	*e*P		**Pb**	**14 47 19.4**	**-0.3**
	baz=248							
TWK				S		**Sb**	**14 47 42.7**	**0.0**
	baz=248							
SNST	**Tainan City**	**1.89**	**249**	S		**Sb**	**14 47 42.9**	**-0.1**
	baz=247							
LAY	**Lan-yu**	**2.03**	**203**	*e*P		**Pn**	**14 47 18.2**	**-0.7**
	baz=203							
LAY				*e*S		**Sn**	**14 47 43.1**	**-0.6**
	baz=203							
MASBT	**Mashibuluo**	**2.09**	**232**	*e*P		**Pn**	**14 47 20.2**	**+0.4**
	baz=226							
MASBT				S		**Sn**	**14 47 46.0**	**+0.9**
	baz=226							
CHN8	**Yiju**	**2.10**	**255**	S		**Sb**	**14 47 49.4**	**+0.4**
	baz=253							
EAST	**Anshou**	**2.10**	**224**	P		**Pn**	**14 47 20.0**	**+0.1**
	baz=223							
EAST				*e*S		**Sn**	**14 47 44.8**	**-0.6**
	baz=223							
JTJ	**Tarama**	**2.21**	**70**	P		**Pn**	**14 47 23.0**	**+1.6**
JTJ				*e*S		**Sn**	**14 47 48.5**	**+0.5**

IDC ***07*** *14:48:07.5±1.5, 36°.09N×31°.19E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.5/34, mbtmp3.7/7, ML3.4/1, Error ellipse: s-maj=37.8km s-min=22.5km az=135.0*
ISK ***07*** *14:48:11.4, 35°.97N×31°.29E, h18km, ML3.8/47*
DDA ***07*** *14:48:12.3, 36°.00N×31°.38E, h41km±1km, MW3.7*
HLW ***07*** *14:48:13.7, 35°.88N×31°.05E, h7km±13km, Ml4.1*
NIC ***07*** *14:48:13.8±0.0, 36°.22N×31°.63E, h31km±2km, Ml4.0/9*
GII ***07*** *14:48:14.1±0.7, 36°.01N×31°.37E, h40km, MD2.7/4, Mm3.3/3*
NEIC ***07*** *14:48:14.4±1.8, 36°.02N±0°.07×31°.35E±0°.02, h57km±12km, mb4.2/3, ML3.8(ISK), Error ellipse: s-maj=10.9km s-min=1.8km az=172.0*

ISC 07 14:48:13.9±1.0, 36°.00N±0°.03×31°.32E±0°.02, h44km±13km, n153, σ1°63/206, mb3.7/9, 1C-3D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ALAN	**Alanya-ANTALYA**	**0.80**	**46**	PG		**Pn**	**14 48 28.3**	**-0.5**
GAZI	**Gazipasa**	**0.84**	**74**	PG		**Pn**	**14 48 28.9**	**-0.5**
GAZI				SG		**Sn**	**14 48 39.9**	**-0.6**
GAZI	**Gazipasa**	**0.84**	**74**	*i* P		**Pn**	**14 48 28.8**	**-0.5**
GAZI				*i* S		**Sn**	**14 48 39.2**	**-1.3**
GAZI				IAML			14 48 41.0	
	comp=N,923nm,0.4s							
GAZI				IAML			14 48 42.0	
	comp=E,1μm,0.3s							
AKUM	**Antalya-Kumluc**	**0.85**	**292**	*i* P		**Pn**	**14 48 30.3**	**+0.7**
AKUM				*i* S		**Sn**	**14 48 43.3**	**+2.3**
AKUM				IAML			14 48 47.0	
	comp=E,2μm,0.8s							
AKUM				IAML			14 48 52.0	
	comp=N,1μm,0.6s							
KEMT	**Kemer-ANTALYA**	**0.86**	**314**	PG		**Pn**	**14 48 29.0**	**-0.7**
KEPZ	**Antalya-Kepez**	**0.93**	**14**	*i* P		**Pn**	**14 48 30.1**	**-0.4**
KEPZ				*i* S		**Sn**	**14 48 40.8**	**-2.0**
KEPZ				IAML			14 48 43.0	
	comp=N,637nm,0.8s							
KEPZ				IAML			14 48 44.0	
	comp=E,849nm,0.3s							
ANTB	**Antalya**	**1.05**	**329**	PG		**Pn**	**14 48 31.7**	**-0.4**
KORT	**Korkueli**	**1.27**	**322**	PN		**Pn**	**14 48 35.4**	**+0.1**
KORT	**Korkueli**	**1.27**	**322**	*i* P		**Pn**	**14 48 36.8**	**+1.4**
KORT				IAML			14 49 02.0	
	comp=E,511nm,0.9s							
KORT				IAML			14 49 04.0	
	comp=N,386nm,0.4s							
AKMS	**Akamas**	**1.28**	**140**	⇓P		**Pn**	**14 48 35.9**	**+0.5**
AKMS				S		**Sn**	**14 48 53.9**	**+2.5**
AKMS				AML		AML	14 49 03.0	
	comp=N,8.3nm,0.3s							
AKMS				AML		AML	14 49 03.0	
	comp=N,8.3nm,0.3s							
AKMS				AML		AML	14 49 03.2	
	comp=N,8.0nm,0.3s							
AKMS				AML		AML	14 49 03.2	
	comp=N,8.0nm,0.3s							
ALFC	**Alefka**	**1.34**	**129**	⇓*i* P		**Pn**	**14 48 35.7**	**-0.5**
ALFC				S		**Sn**	**14 48 53.0**	**+0.1**
ALFC				AML		AML	14 49 00.3	
	comp=N,5.5nm,0.3s							
ALFC				AML		AML	14 49 00.3	
	comp=N,5.5nm,0.3s							
ALFC				AML		AML	14 49 04.2	
	comp=N,5.6nm,0.3s							
ALFC				AML		AML	14 49 04.2	
	comp=N,5.6nm,0.3s							
BOZY	**Bozyazi-Mersin**	**1.34**	**85**	PN		**Pn**	**14 48 35.9**	**-0.3**
ELL	**Elmali**	**1.36**	**304**	PN		**Pn**	**14 48 36.3**	**-0.3**
ELL	**Elmali**	**1.36**	**304**	P		**Pn**	**14 48 38.2**	**+1.6**
ELL				S		**Sn**	**14 48 57.1**	**+3.5**
ELL	**Elmali**	**1.36**	**304**			**Pn**	**14 48 37.9**	**+1.3**
AKAS	**Kas**	**1.41**	**280**	PN		**Pn**	**14 48 36.9**	**-0.4**
AKAS	**Kas**	**1.41**	**280**	*i* P		**Pn**	**14 48 37.3**	**0.0**
AKAS				IAML			14 49 10.0	
	comp=E,288nm,0.9s							
AKAS				IAML			14 49 14.0	
	comp=N,452nm,0.6s							
ERMK	**Ermenek**	**1.43**	**63**	*i* P		**Pn**	**14 48 38.2**	**+0.6**
ERMK				IAML			14 49 03.0	
	comp=N,1μm,0.7s							
ERMK				IAML			14 49 03.0	
	comp=E,953nm,0.4s							
TEKE	**Tekeli-Mersin**	**1.46**	**84**	PN		**Pn**	**14 48 38.1**	**+0.3**
SEYD	**Seydisehir-KON**	**1.46**	**16**	PN		**Pn**	**14 48 38.6**	**+0.7**
AKDN	**Akdeniz- Kıbrı**	**1.51**	**117**	PN		**Pn**	**14 48 38.9**	**+0.4**
LEF	**Lefka**	**1.55**	**124**	PN		**Pn**	**14 48 38.2**	**-0.8**
LEF	**Lefka**	**1.55**	**124**	*i* P		**Pn**	**14 48 38.3**	**-0.8**
LEF				*i* S		**Sn**	**14 48 55.7**	**-2.3**
LEF				IAML			14 49 07.0	
	comp=N,426nm,0.7s							
LEF				IAML			14 49 09.0	
	comp=E,461nm,0.4s							
BCK	**Bucak**	**1.57**	**338**	PN		**Pn**	**14 48 38.8**	**-0.6**
BERE	**Bereket-Mersin**	**1.57**	**77**	PN		**Pn**	**14 48 39.9**	**+0.4**
NATA	**Nata**	**1.59**	**140**	P		**Pn**	**14 48 41.8**	**+2.2**
NATA				S		**Sn**	**14 49 06.2**	**+7.2**
NATA				AML		AML	14 49 15.6	
	comp=E,13nm,0.7s							
NATA				AML		AML	14 49 15.6	
	comp=E,13nm,0.7s							
NATA				AML		AML	14 49 16.1	
	comp=E,11nm,0.6s							
NATA				AML		AML	14 49 16.1	
	comp=E,11nm,0.6s							
YORU	**Yoruktepe-Mers**	**1.69**	**84**	PN		**Pn**	**14 48 41.6**	**+0.6**
OREN	**Orenkoy-Mersin**	**1.74**	**83**	PN		**Pn**	**14 48 42.2**	**+0.5**
TEVE	**Tevekalti-Mers**	**1.77**	**75**	PN		**Pn**	**14 48 42.9**	**+0.8**
SZAC	**Souni**	**1.78**	**134**	P		**Pn**	**14 48 45.0**	**+2.7**
SZAC				S		**Sn**	**14 49 06.0**	**+2.3**
SZAC				AML		AML	14 49 17.4	
	comp=E,3.5nm,1.0s							
SZAC				AML		AML	14 49 17.4	
	comp=E,3.5nm,1.0s							
SZAC				AML		AML	14 49 23.1	
	comp=E,4.8nm,0.5s							
SZAC				AML		AML	14 49 23.1	
	comp=E,4.8nm,0.5s							
AKK1	**Akkuyu-Mersin**	**1.80**	**85**	PN		**Pn**	**14 48 42.9**	**+0.4**
GULN	**MERSIN_Gulnar**	**1.81**	**84**	*i* P		**Pn**	**14 48 43.6**	**+1.0**
GULN				*i* S		**Sn**	**14 49 05.6**	**+1.3**
GULN				IAML			14 49 08.0	
	comp=E,440nm,0.7s							
GULN				IAML			14 49 10.0	
	comp=N,322nm,0.6s							
AKK2	**Akkuyu-Mersin**	**1.81**	**85**	PN		**Pn**	**14 48 43.2**	**+0.6**
AKKU	**Akkuyu-Mersin**	**1.81**	**84**	PN		**Pn**	**14 48 43.2**	**+0.6**
TEPK	**Tepekoy-MERSIN**	**1.81**	**82**	PN		**Pn**	**14 48 42.8**	**+0.1**
GOLH	**Golhisar**	**1.88**	**312**	*i* P		**Pn**	**14 48 46.2**	**+2.6**
GOLH				IAML			14 49 19.0	
	comp=N,210nm,1.0s							
YESI	**Yesilovacik-Me**	**1.89**	**83**	PN		**Pn**	**14 48 44.1**	**+0.4**
ATHAL	**Athalassa**	**1.90**	**116**	P		**Pn**	**14 48 43.5**	**-0.3**
ATHAL				S		**Sn**	**14 49 04.7**	**-1.8**
ATHAL				AML		AML	14 49 14.1	
	comp=N,4.8nm,0.5s							
ATHAL				AML		AML	14 49 14.1	
	comp=N,4.8nm,0.5s							
ATHAL				AML		AML	14 49 31.6	
	comp=N,4.6nm,0.9s							
ATHAL				AML		AML	14 49 31.6	
	comp=N,4.6nm,0.9s							
TISA	**Tisan-Mersin**	**1.91**	**85**	PN		**Pn**	**14 48 44.2**	**+0.2**
FETY	**Fethiye**	**1.92**	**290**	PN		**Pn**	**14 48 44.3**	**+0.2**
FETY	**Fethiye**	**1.92**	**290**	*i* P		**Pn**	**14 48 44.9**	**+0.8**
FETY				IAML			14 49 13.0	
	comp=E,70nm,0.3s							
FETY				IAML			14 49 14.0	
	comp=N,76nm,0.5s							
IKL	**Isikli**	**1.93**	**82**	PN		**Pn**	**14 48 45.1**	**+0.9**
ISP	**Isparta**	**1.93**	**341**	PN		**Pn**	**14 48 44.8**	**+0.5**
ISP	**Isparta**	**1.93**	**341**	Pn		**Pn**	**14 48 44.5**	**+0.2**
ISP				Sn		**Sn**	**14 49 08.0**	**+0.6**
ISP	**Isparta**	**1.93**	**341**	Pn		**Pn**	**14 48 45.1**	**+0.8**
CSS	**Mathiatis**	**1.94**	**122**	PN		**Pn**	**14 48 43.6**	**-0.8**
CSS	**Mathiatis**	**1.94**	**122**	Pn		**Pn**	**14 48 43.4**	**-1.0**
CSS	**Mathiatis**	**1.94**	**122**	⇑*i* P		**Pn**	**14 48 43.8**	**-0.6**
CSS				S		**Sn**	**14 49 07.2**	**-0.3**
CSS				AML		AML	14 49 19.7	
	comp=N,0.6nm,0.5s							
CSS				AML		AML	14 49 19.7	
	comp=N,0.6nm,0.5s							
CSS				AML		AML	14 49 23.0	
	comp=N,0.7nm,0.4s							
CSS				AML		AML	14 49 23.0	
	comp=N,0.7nm,0.4s							
CSS	**Mathiatis**	**1.94**	**122**			**Pn**	**14 48 43.7**	**-0.8**
KRMN	**Karaman**	**1.95**	**53**	PN		**Pn**	**14 48 45.2**	**+0.5**
KMER	**Konya-Meram**	**1.95**	**25**	*i* P		**Pn**	**14 48 46.2**	**+1.5**
KMER				*i* S		**Sn**	**14 49 08.6**	**+0.5**
KMER				IAML			14 49 12.0	
	comp=N,193nm,0.4s							
KMER				IAML			14 49 19.0	
	comp=E,269nm,0.5s							
BRDR	**BURDUR-Merkez**	**1.97**	**329**	*i* P		**Pn**	**14 48 45.5**	**+0.5**
BRDR				IAML			14 49 16.0	
	comp=E,103nm,0.5s							
BRDR				IAML			14 49 25.0	
	comp=N,93nm,0.7s							
KEBE	**Keben-Mersin**	**1.98**	**76**	PN		**Pn**	**14 48 45.7**	**+0.6**
ASGA	**Asgata**	**1.99**	**127**	P		**Pn**	**14 48 45.8**	**+0.8**
ASGA				S		**Sn**	**14 49 10.4**	**+1.7**
ASGA				AML		AML	14 49 23.4	
	comp=N,2.6nm,0.4s							
ASGA				AML		AML	14 49 23.4	
	comp=N,2.6nm,0.4s							
ASGA				AML		AML	14 49 23.7	
	comp=N,2.5nm,0.6s							
ASGA				AML		AML	14 49 23.7	
	comp=N,2.5nm,0.6s							
BAGO	**Egridir - ISPA**	**2.03**	**348**	*i* P		**Pn**	**14 48 45.8**	**+0.1**
BAGO				*i* S		**Sn**	**14 49 09.5**	**-0.4**
BAGO				IAML			14 49 17.0	
	comp=E,68nm,0.6s							
KONT	**Konya--Tatoy**	**2.11**	**23**	PN		**Pn**	**14 48 47.5**	**+0.7**
KONT	**Konya--Tatoy**	**2.11**	**23**	*i* P		**Pn**	**14 48 48.1**	**+1.4**
KONT				*i* S		**Sn**	**14 49 13.6**	**+1.8**
KONT				IAML			14 49 17.0	
	comp=N,118nm,0.4s							
KONT				IAML			14 49 28.0	
	comp=E,114nm,0.4s							
DOGA	**KONYA_Doganhis**	**2.12**	**7**	*i* P		**Pn**	**14 48 48.5**	**+1.5**
DOGA				*i* S		**Sn**	**14 49 13.3**	**+1.2**
DOGA				IAML			14 49 15.0	
	comp=N,252nm,0.6s							
DOGA				IAML			14 49 15.0	
	comp=E,198nm,0.8s							
MVOU	**Mavrovouni**	**2.12**	**117**	⇓*i* P		**Pn**	**14 48 45.9**	**-1.0**
MVOU				S		**Sn**	**14 49 10.4**	**-1.7**
MVOU				AML		AML	14 49 23.9	
	comp=E,2.0nm,0.5s							
MVOU				AML		AML	14 49 23.9	
	comp=E,2.0nm,0.5s							
MVOU				AML		AML	14 49 27.6	
	comp=E,2.8nm,0.7s							
MVOU				AML		AML	14 49 27.6	
	comp=E,2.8nm,0.7s							
SILI	**Silifke-Mersin**	**2.13**	**79**	PN		**Pn**	**14 48 47.9**	**+0.8**
BASM	**Basmaki-Afyon**	**2.17**	**332**	PN		**Pn**	**14 48 47.9**	**+0.3**
DALY	**Dalyan (Mula)**	**2.30**	**291**	PN		**Pn**	**14 48 49.6**	**+0.3**
DALY	**Dalyan (Mula)**	**2.30**	**291**	*i* P		**Pn**	**14 48 50.1**	**+0.8**
DALY				IAML			14 49 37.0	
	comp=E,97nm,0.8s							
DALY				IAML			14 49 42.0	
	comp=N,109nm,0.7s							
KIZK	**Mersin**	**2.33**	**77**	PN		**Pn**	**14 48 50.8**	**+1.1**
KIZK	**Mersin**	**2.33**	**77**	*i* P		**Pn**	**14 48 52.1**	**+2.3**
KIZK				*i* S		**Sn**	**14 49 19.4**	**+2.3**
KIZK				IAML			14 49 26.0	
	comp=N,182nm,0.3s							
KIZK				IAML			14 49 26.0	
	comp=E,240nm,0.5s							
LADK	**Ladik-KONYA**	**2.35**	**20**	PN		**Pn**	**14 48 50.6**	**+0.5**
TURN	**Turunc**	**2.36**	**292**	PN		**Pn**	**14 48 53.9**	**+3.8**
TURN	**Turunc**	**2.36**	**292**	*i* P		**Pn**	**14 48 54.2**	**+4.1**
TURN				*i* S		**Sn**	**14 49 23.3**	**+5.4**
TURN				IAML			14 49 30.0	
	comp=N,96nm,0.2s							
TURN				IAML			14 49 30.0	
	comp=E,73nm,0.3s							
EREN	**Erenkoy**	**2.36**	**101**	PN		**Pn**	**14 48 50.6**	**+0.4**
EREN	**Erenkoy**	**2.36**	**101**	*i* P		**Pn**	**14 48 50.8**	**+0.6**
EREN				*i* S		**Sn**	**14 49 16.7**	**-1.3**
EREN				IAML			14 49 32.0	
	comp=E,329nm,0.5s							
TAVA	**DENIZLI_Tavas**	**2.42**	**308**	*i* P		**Pn**	**14 48 52.5**	**+1.4**
TAVA				*i* S		**Sn**	**14 49 20.2**	**+0.5**
TAVA				IAML			14 49 32.0	
	comp=N,114nm,0.4s							
TAVA				IAML			14 49 38.0	
	comp=E,142nm,0.6s							
PARAL	**Paralimni**	**2.43**	**114**	P		**Pn**	**14 48 52.7**	**+1.5**
PARAL				S		**Sn**	**14 49 18.2**	**-1.6**
PARAL				AML		AML	14 49 37.1	
	comp=E,3.4nm,0.6s							
PARAL				AML		AML	14 49 37.1	
	comp=E,3.4nm,0.6s							
PARAL				AML		AML	14 49 37.8	
	comp=E,2.3nm,0.7s							
PARAL				AML		AML	14 49 37.8	
	comp=E,2.3nm,0.7s							
KZIL	**AFYON_Kizioren**	**2.44**	**338**	*i* P		**Pn**	**14 48 51.8**	**+0.4**
KZIL				*i* S		**Sn**	**14 49 18.7**	**-1.4**
KZIL				IAML			14 49 27.0	
	comp=E,71nm,0.7s							
KZIL				IAML			14 49 29.0	
	comp=N,71nm,0.5s							
OSC1	**CSNet OBS 1**	**2.50**	**181**	P		**Pn**	**14 48 53.5**	**+1.4**
OSC1				S		**Sn**	**14 49 28.1**	**+6.8**
KDHN	**Kadinhani**	**2.59**	**14**	*i* P		**Pn**	**14 48 53.9**	**+0.4**
KDHN				*i* S		**Sn**	**14 49 24.4**	**+0.6**
KDHN				IAML			14 49 27.0	
	comp=E,66nm,0.3s							
KDHN				IAML			14 49 31.0	
	comp=N,40nm,0.5s							
ARG	**Arkhangelos**	**2.60**	**276**	PN		**Pn**	**14 48 53.4**	**0.0**
KERG	**Konya-Eregli**	**2.66**	**57**	*i* P		**Pn**	**14 48 56.6**	**+2.2**
KERG				IAML			14 49 32.0	
	comp=E,220nm,0.4s							
KERG				IAML			14 49 35.0	
	comp=N,216nm,0.5s							
YER	**Yerkesik**	**2.70**	**296**	PN		**Pn**	**14 48 55.0**	**+0.2**
MERS	**Mersin**	**2.72**	**71**	PN		**Pn**	**14 48 56.4**	**+1.2**
BOLV	**Bolvadin**	**2.73**	**354**	*i* P		**Pn**	**14 48 56.9**	**+1.5**
BOLV				*i* S		**Sn**	**14 49 26.3**	**-0.8**
BOLV				IAML			14 49 30.0	
	comp=N,73nm,0.7s							
BOLV				IAML			14 49 34.0	
	comp=E,82nm,0.5s							
KHAL	**Karahalli**	**2.78**	**329**	*i* P		**Pn**	**14 48 58.0**	**+2.0**
KHAL				*i* S		**Sn**	**14 49 29.0**	**+0.6**
KHAL				IAML			14 49 36.0	
	comp=N,52nm,0.4s							
KHAL				IAML			14 49 38.0	
	comp=E,55nm,0.3s							
DED	**Mersin**	**2.96**	**70**	*i* P		**Pn**	**14 49 00.8**	**+2.4**
DED				*i* S		**Sn**	**14 49 37.7**	**+5.0**
DED				IAML			14 49 44.0	
	comp=E,100nm,0.5s							
DED				IAML			14 49 48.0	
	comp=N,92nm,0.3s							
OSC2	**CSNet OBS 4**	**3.02**	**165**	P		**Pn**	**14 49 03.0**	**+3.7**
OSC2				S		**Sn**	**14 49 35.7**	**+1.5**
GULE	**Gulek**	**3.06**	**64**	*i* P		**Pn**	**14 49 03.7**	**+3.8**
DAT	**Datca**	**3.11**	**285**	PN		**Pn**	**14 49 00.7**	**+0.1**
DAT	**Datca**	**3.11**	**285**	*i* P		**Pn**	**14 49 00.1**	**-0.4**
DAT				*i* S		**Sn**	**14 49 33.0**	**-3.5**
DAT				IAML			14 49 44.0	
	comp=E,28nm,0.3s							
DAT				IAML			14 49 45.0	
	comp=N,29nm,0.4s							
KARA	**Karaisali**	**3.25**	**66**	PN		**Pn**	**14 49 03.7**	**+1.3**
USAK	**Uak-Merkez**	**3.27**	**327**	*i* P		**Pn**	**14 49 03.7**	**+1.0**
USAK				*i* S		**Sn**	**14 49 40.7**	**+0.3**
USAK				IAML			14 49 42.0	
	comp=E,30nm,0.8s							
USAK				IAML			14 49 44.0	
	comp=N,35nm,0.5s							
AKSY	**AKSARAY - Alti**	**3.28**	**36**	*i* P		**Pn**	**14 49 04.4**	**+1.5**
AKSY				IAML			14 50 19.0	
	comp=N,22nm,1.7s							
BDRM	**Kayabasi**	**3.30**	**290**	*i* P		**Pn**	**14 49 03.5**	**+0.4**
BDRM				IAML			14 49 43.0	
	comp=N,128nm,0.3s							
BDRM				IAML			14 49 43.0	
	comp=E,115nm,0.4s							
KRTS	**Karatas**	**3.32**	**79**	PN		**Pn**	**14 49 04.7**	**+1.3**
MANT	**Manisa**	**3.32**	**319**	*i* P		**Pn**	**14 49 03.8**	**+0.2**
MANT				*i* S		**Sn**	**14 49 40.3**	**-1.6**
MANT				IAML			14 49 51.0	
	comp=N,53nm,0.7s							
MANT				IAML			14 49 51.0	
	comp=E,69nm,0.4s							
MANT	**Manisa**	**3.32**	**319**			**Pn**	**14 49 04.0**	**+0.4**
CMRD	**Camardi-Nigde**	**3.38**	**60**	PN		**Pn**	**14 49 05.6**	**+1.4**
BODT	**Bodrum**	**3.40**	**289**	PN		**Pn**	**14 49 04.9**	**+0.4**
KKUL	**Konya-Kulu**	**3.41**	**21**	*i* P		**Pn**	**14 49 05.7**	**+1.0**
KKUL				IAML			14 49 48.0	
	comp=N,34nm,0.4s							
KKUL				IAML			14 49 53.0	
	comp=E,26nm,0.7s							
GDZ	**Gediz**	**3.41**	**335**	*i* P		**Pn**	**14 49 05.5**	**+0.7**
GDZ				*i* S		**Sn**	**14 49 42.9**	**-1.1**
KARP	**Karpathos**	**3.42**	**264**	PN		**Pn**	**14 49 05.1**	**+0.4**
KARP	**Karpathos**	**3.42**	**264**			**Pn**	**14 49 05.3**	**+0.6**
YKAV	**Yalikavak-Bodr**	**3.44**	**290**	PN		**Pn**	**14 49 05.4**	**+0.4**
YURE	**YUREGIR**	**3.57**	**75**	PN		**Pn**	**14 49 08.1**	**+1.3**
DEMI	**Demirci**	**3.67**	**326**	*i* P		**Pn**	**14 49 08.8**	**+0.5**
DEMI				*i* S		**Sn**	**14 49 49.3**	**-1.1**
DEMI				IAML			14 49 57.0	
	comp=N,23nm,0.3s							
DEMI				IAML			14 49 59.0	
	comp=E,29nm,0.5s							
GCAM	**G?zelcaml?**	**3.69**	**299**	PN		**Pn**	**14 49 08.6**	**+0.2**
GCAM	**G?zelcaml?**	**3.69**	**299**	*i* P		**Pn**	**14 49 08.4**	**0.0**
GCAM				IAML			14 49 52.0	
	comp=E,37nm,0.2s							
GCAM				IAML			14 49 59.0	
	comp=N,58nm,0.9s							
CEYT	**Ceyhan**	**3.70**	**73**	PN		**Pn**	**14 49 09.7**	**+1.1**
BBAL	**Bala**	**3.81**	**21**	*i* P		**Pn**	**14 49 11.0**	**+0.8**
BBAL				IAML			14 51 01.0	
	comp=E,54nm,0.1s							
BBAL				IAML			14 51 02.0	
	comp=N,39nm,0.1s							
TAHT	**Tahtakopru-Hat**	**3.95**	**83**	PN		**Pn**	**14 49 13.6**	**+1.6**
DGB	**zmir**	**4.10**	**301**	*i* P		**Pn**	**14 49 13.3**	**-0.7**
DGB				*i* S		**Sn**	**14 49 57.1**	**-3.6**
DGB				IAML			14 50 01.0	
	comp=N,27nm,0.3s							
DGB				IAML			14 50 01.0	
	comp=E,34nm,0.5s			

MMLI				Sn	**Sn**	**14 50 20.7**	**-0.2**	
IDI	**Anoyia**	**5.29**	**264**		**Pn**	**14 49 30.4**	**0.0**	
RSH		**5.41**	**158**	P	**Pn**	**14 49 34.6**	**+2.5**	
	baz=154							
HBRG	**Burj al `Arab**	**5.55**	**193**	P	**Pn**	**14 49 35.8**	**+1.7**	
	baz=192							
HBRG				S	**Sn**	**14 50 33.5**	**-3.1**	
	baz=192							
DSI	**Dead Sea**	**5.56**	**141**	Sn	**Sn**	**14 50 36.7**	**-0.1**	
YTIR	**Yattir**	**5.60**	**145**	Pn	**Pn**	**14 49 35.6**	**+0.8**	
MATC	**Matruh**	**5.76**	**217**	P	**Pn**	**14 49 37.2**	**+0.3**	
	baz=217							
KOT	**Kottamia**	**6.07**	**176**	P	**Pn**	**14 49 42.7**	**+1.5**	
	baz=173							
KOT				AMP		14 50 00.0		
	baz=173							
KOT				S	**Sn**	**14 50 46.5**	**-2.9**	
	baz=173							
HSAF	**As Saff**	**6.37**	**178**	P	**Pn**	**14 49 46.6**	**+1.4**	
	baz=175							
HNAT	**Natroun**	**6.38**	**186**	P	**Pn**	**14 49 46.6**	**+1.3**	
	baz=184							
HNAT				AMP		14 50 00.0		
	baz=184							
HNAT				S	**Sn**	**14 50 54.0**	**-2.9**	
	baz=184							
ALN	**Alexandroupoli**	**6.41**	**321**	Pn	**Pn**	**14 49 44.6**	**-1.0**	
GLL	**Jalalah**	**6.42**	**177**	P	**Pn**	**14 49 47.0**	**+1.1**	
	baz=174							
PRNI	**Paran**	**6.42**	**150**	Pn	**Pn**	**14 49 47.1**	**+1.1**	
MBRI	**Mt Berech**	**6.89**	**153**	Pn	**Pn**	**14 49 53.3**	**+0.9**	
MBRI				Sn	**Sn**	**14 51 09.5**	**0.0**	
ITM	**Ithomi**	**7.65**	**282**	Pn	**Pn**	**14 50 03.7**	**+0.9**	
SWA2		**8.36**	**218**	P	**Pn**	**14 50 11.9**	**-0.6**	
	baz=217							
SWA2				AMP		14 51 00.0		
	baz=217							
SWA2				S	**Sn**	**14 51 39.6**	**-6.0**	
	baz=217							
HFRF	**Wahat Farafira**	**9.19**	**197**	P	**Pn**	**14 50 24.0**	**+0.1**	
	baz=196							
GEYT	**Alibeck**	**21.47**	**77**	P	**P**	**14 52 58.4**	**-0.3**	
	comp=E,1.1nm,0.4s,baz=259,slow=12,SNR=2.8							
WLF	**Walferdange**	**22.82**	**315**	P	**P**	**14 53 14.0**	**+1.0**	
WLF				IAmb	IAmb	14 53 20.6		
	comp=Z,36nm,1.8s							
UOSS	**Minazif**	**24.04**	**110**	P	**P**	**14 53 25.0**	**0.0**	
UOSS				IAmb	IAmb	14 54 05.7		
	comp=Z,9.6nm,1.1s							
FINES	**FINESS Array B**	**25.68**	**354**	P	**P**	**14 53 37.0**	**-2.4**	
	comp=Z,2.0nm,0.8s,baz=168,slow=9.8,SNR=4.1							
ARCES	**ARCESS Array B**	**33.74**	**356**	P	**P**	**14 54 49.0**	**-1.8**	
	comp=Z,2.3nm,1.0s,baz=173,slow=7.9,SNR=1.7							
TORD	**Torodi Ar. Bea**	**35.03**	**237**	P	**P**	**14 55 02.3**	**-0.3**	
	comp=Z,0.5nm,0.8s,baz=42,slow=9.4,SNR=3.7							
KURK	**Kurchatov**	**36.74**	**51**	P	**P**	**14 55 17.1**	**+0.3**	
KURK				IAmb	IAmb	14 55 17.7		
	comp=Z,4.2nm,1.4s							
MKAR	**Makanchi Array**	**39.10**	**58**	P	**P**	**14 55 36.6**	**-0.2**	
	comp=Z,0.3nm,0.6s,baz=284,slow=7.3,SNR=3.5							
ZALV	**Zalesovo Beam**	**40.78**	**47**	P	**P**	**14 55 49.5**	**-1.1**	
	comp=Z,0.5nm,0.3s,baz=264,slow=9.5,SNR=3.4							

*THR **07** 15:04:21.0±0.3,26°.54N×53°.80E,h14$^{km}_{\pm}$4km, ML3.5*
*OMAN **07** 15:04:25.1±0.8,27°.92N×55°.65E,h20km, ml4.0/13,Error ellipse: s-maj=73.2km s-min=36.8km az=49.0*
*IDC **07** 15:04:26.1±1.2,26°.73N×53°.73E, h0km, mb3.7/12, mb1 3.8/13,mb1mx3.6/64,mbtmp3.7/13,ML3.9/1,MS2.8/4, Ms1 2.8/4,ms1mx2.5/46,Error ellipse: s-maj=25.4km s-min=19.9km az=176.0*
*TEH **07** 15:04:27.5,26.67N×53.83E,h10km, ML3.7*
*DSN **07** 15:04:27.3±1.4,27.00N×53.88E,h10km,ML4.0/7,Error ellipse: s-maj=24.0km s-min=6.5km az=6.0*

ISC 07 15:04:28.6±1.4,26.76N±0.03×53.78E±0.04,h17km±10km, n67,σ1°53/70,mb3.6/12,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.80**	**317**	*e*Pg		**Pn**	**Pn**	**15 04 45.0**	**-0.1**
LMD1				*e*				15 05 07.9	
LAR1	**LAR**	**1.05**	**30**	*e*Pg		**Pn**	**Pn**	**15 04 48.7**	**+0.1**
JHRM	**Jahrom**	**1.75**	**354**	*e*Pn		**Pg**	**Pg**	**15 04 52.4**	**+0.1**
JHRM				*e*				15 05 42.7	
JRN	**Qarnain Island**	**1.99**	**205**	*e*Pn		**Pn**	**Pn**	**15 05 02.6**	**+1.1**
UMQ	**Umm Al-Quwin**	**2.09**	**126**	P		**Pn**	**Pn**	**15 05 03.3**	**+0.6**
UMQ				S		**Sg**	**Sg**	**15 05 37.3**	**+1.5**
UMQ	**Umm Al-Quwin**	**2.09**	**126**	*e*Pn		**Pb**	**Pb**	**15 05 04.6**	**-1.4**
BNDS	**Bandar-Abbas**	**2.22**	**73**	*e*Pn		**Pn**	**Pn**	**15 05 00.4**	**-4.4**
BNDS				*e*Sg		**Sn**	**Sn**	**15 05 32.8**	**+0.8**
BNDS				IAML				15 05 40.0	
	comp=N,166nm,0.3s								
BNDS				IAML				15 05 49.2	
	comp=E,229nm,0.4s								
GENO	**Geno**	**2.22**	**73**	*e*				15 05 54.7	
GENO				*e*Pn		**Pn**	**Pn**	**15 05 06.0**	**+1.2**
SHME	**Shamm**	**2.23**	**108**	*e*P		**Pn**	**Pn**	**15 05 04.2**	**-0.6**
	SNR=8.1								
SHME				S		**Sn**	**Sn**	**15 05 32.4**	**+0.5**
SHME	**Shamm**	**2.23**	**108**	*e*Pn		**Pn**	**Pn**	**15 05 04.2**	**-0.6**
BANOM	**Banah**	**2.41**	**110**	*e*P		**Pn**	**Pn**	**15 05 07.0**	**-0.2**
	SNR=27								
BANOM				S		**Sn**	**Sn**	**15 05 38.2**	**+1.9**
BANOM	**Banah**	**2.41**	**110**	*e*Pn		**Pn**	**Pn**	**15 05 07.1**	**-0.1**
AJN	**Ajban**	**2.44**	**153**	S		**Sg**	Sg	15 05 56.2	+9.1
AJN	**Ajban**	**2.44**	**153**	*e*Pn		**Pb**	**Pb**	**15 05 09.5**	**-2.5**
NAZ	**Nazwa, Dubai**	**2.44**	**136**	*e*P		**Pn**	**Pn**	**15 05 09.2**	**+1.5**
	SNR=9.8								
NAZ	**Nazwa, Dubai**	**2.44**	**136**	P		**Pb**	**Pb**	**15 05 10.1**	**-1.9**
	SNR=9.8								
NAZ	**Nazwa, Dubai**	**2.44**	**136**	*e*Pn		**Pb**	**Pb**	**15 05 09.7**	**-2.3**
MSFE	**Esma-Masafi**	**2.55**	**123**	P		**Pn**	**Pn**	**15 05 10.4**	**+1.2**
MSFE	**Esma-Masafi**	**2.55**	**123**	*e*Pn		**Pn**	**Pn**	**15 05 10.5**	**+1.3**
IBND	**Bandar-abas**	**2.55**	**74**	*e*Pn		**Pn**	**Pn**	**15 05 10.3**	**+1.2**
FAQ	**Al Faqa, Dubai**	**2.58**	**140**	P		**Pb**	**Pb**	**15 05 12.4**	**-2.1**
MDH	**Madha**	**2.69**	**122**	P		**Pn**	**Pn**	**15 05 11.7**	**+0.7**
MDH	**Madha**	**2.69**	**122**	*e*Pn		**Pn**	**Pn**	**15 05 11.9**	**+0.9**
UOSS	**Minazif**	**2.83**	**129**	P		**Pn**	**Pn**	**15 05 13.4**	**+0.4**
UOSS	**Minazif**	**2.83**	**129**	P		**Pn**	**Pn**	**15 05 12.8**	**-0.2**
NIAN	**Nian**	**2.83**	**73**	*e*Pn		**Pn**	**Pn**	**15 05 14.3**	**+1.3**
NIAN				*e*				15 06 14.3	
HATD	**Hatta, Dubai**	**2.86**	**132**	*e*P		**Pn**	**Pn**	**15 05 14.7**	**+1.2**
	SNR=7.4								
HATD	**Hatta, Dubai**	**2.86**	**132**	P		**Pn**	**Pn**	**15 05 15.0**	**+1.6**
	SNR=7.0								
HATD				S		**Sn**	**Sn**	**15 05 50.0**	**+2.6**
HATD	**Hatta, Dubai**	**2.86**	**132**	*e*Pn		**Pn**	**Pn**	**15 05 14.6**	**+1.2**
ASHO	**Ashiyiah**	**2.91**	**135**	*i* P		**Pn**	**Pn**	**15 05 15.2**	**+1.1**
	SNR=13								
ASHO	**Ashiyiah**	**2.91**	**135**	P		**Pn**	**Pn**	**15 05 16.0**	**+1.8**
	SNR=13								
ASHO	**Ashiyiah**	**2.91**	**135**	*e*Pn		**Pn**	**Pn**	**15 05 15.4**	**+1.3**
ALNE	**Al Ain**	**3.23**	**146**	*e*Pn		**Pn**	**Pn**	**15 05 19.5**	**+1.1**
SLWR	**Sila**	**3.28**	**216**	*e*Pn		**Pn**	**Pn**	**15 05 19.0**	**-0.1**
SOHO	**SOHO**	**3.61**	**136**	P		**Pn**	**Pn**	**15 05 25.0**	**+1.3**
	SNR=6.9								
SOHO	**SOHO**	**3.61**	**136**	*e*Pn		**Pn**	**Pn**	**15 05 24.0**	**+0.3**
NGRK	**Negar Kerman**	**3.88**	**41**	*e*Pn		**Pn**	**Pn**	**15 05 30.2**	**+2.5**
NGRK				*e*				15 06 31.6	
KRBR	**Kerman**	**4.15**	**39**	*e*Pn		**Pn**	**Pn**	**15 05 28.4**	**-3.0**
KRBR				*e*S		**Sn**	**Sn**	**15 06 17.8**	**-1.8**
KRBR				IAML				15 06 29.4	
	comp=N,38nm,0.4s								
KRBR				IAML				15 06 36.4	
	comp=E,39nm,0.4s								
TVBK	**TV Kerman**	**4.15**	**39**	*e*		**Sg**	**Sg**	**15 06 42.6**	**+0.6**
ARQ	**Araqi**	**4.21**	**143**	P		**Pn**	**Pn**	**15 05 33.0**	**+0.9**
	SNR=22								
KHGB	**Koh Gabri**	**4.31**	**33**	*e*Pn		**Pn**	**Pn**	**15 05 36.2**	**+2.6**
KHGB				*e*				15 07 05.0	
HOQ	**Hoqain**	**4.50**	**134**	P		**Pn**	**Pn**	**15 05 34.4**	**-1.5**
HOQ				S		**Sn**	**Sn**	**15 06 24.8**	**-3.0**
CHMN	**Cheshme madani**	**4.53**	**46**	*e*Pn		**Pn**	**Pn**	**15 05 38.6**	**+1.9**
CHMN				*e*				15 05 42.3	
IMEH	**Mehriz**	**4.67**	**9**	*e*Pn		**Pn**	**Pn**	**15 05 41.5**	**+2.9**
BSY	**Bisya**	**5.06**	**141**	P		**Pn**	**Pn**	**15 05 45.0**	**+1.3**
	SNR=19								
BIDO	**Bidbid**	**5.09**	**128**	P		Pn	**Pn**	15 05 37.6	-6.5
SMDO	**Samad**	**5.34**	**133**	P		Pn	**Pn**	15 05 42.7	-4.9
	SNR=18								
WSAR	**Wadi Sarin**	**5.62**	**127**	Pn		**Pn**	**Pn**	**15 05 51.5**	**0.0**
	comp=E,3.2nm,0.3s,baz=309,slow=12,SNR=38								
WSAR				Sn		**Sn**	**Sn**	**15 06 54.2**	**-1.4**
	comp=E,1.8nm,0.3s,baz=102,slow=17,SNR=6.9								
WSAR				LR		LR		15 07 55.9	
	comp=E,34nm,18.9s,baz=315,slow=37								
YZKH	**Yazd**	**5.66**	**7**	*e*Pn		**Pn**	**Pn**	**15 05 50.0**	**-1.9**
JMDO	**Jabal Madar**	**5.88**	**137**	P		**Pn**	**Pn**	**15 05 54.5**	**-0.5**
ANAR	**Anarak**	**6.41**	**360**	*e*Pn		**Pn**	**Pn**	**15 06 04.0**	**+1.7**
MHTO	**MHTO**	**6.90**	**145**	P		**Pn**	**Pn**	**15 06 10.0**	**+1.0**
	SNR=9.5								
BSRN	**Basiran**	**6.97**	**41**	*e*Pn		**Pn**	**Pn**	**15 06 07.3**	**-2.7**
GEYT	**Alibeck**	**11.72**	**17**	LR		LR	LR	15 12 41.9	
	comp=E,81nm,19.5s,baz=160,slow=42								
BRTR	**Keskin Array B**	**21.18**	**313**	P		**P**	**P**	**15 09 13.3**	**+0.1**
	comp=E,0.7nm,0.7s,baz=129,slow=11,SNR=2.4								
AKTO	**Aktyubinsk**	**23.86**	**7**	P		**P**	**P**	**15 09 41.5**	**+0.5**
	comp=E,0.9nm,0.5s,baz=124,slow=7.3,SNR=2.6								
AKTO				LR		LR	LR	15 21 38.2	
	comp=E,16nm,21.0s,baz=214,slow=43								
BVAR	**Borovoye Array**	**29.02**	**21**	P		**P**	**P**	**15 10 28.4**	**+0.9**
	comp=E,0.4nm,0.4s,baz=205,slow=5.8,SNR=4.5								
MKAR	**Makanchi Array**	**30.09**	**41**	P		**P**	**P**	**15 10 37.7**	**+0.6**
	comp=E,0.2nm,0.4s,baz=53,slow=4.7,SNR=3.5								
AKASG	**Malin Array Be**	**30.37**	**328**	P		**P**	**P**	**15 10 38.5**	**-0.9**
	comp=E,0.2nm,0.3s,baz=140,slow=8.5,SNR=1.6								
KURBB	**Kurchatov Arra**	**30.41**	**32**	P		**P**	**P**	**15 10 40.5**	**+0.7**
	comp=E,0.3nm,0.5s,baz=231,slow=8.5,SNR=3.8								
ZALV	**Zalesovo Beam**	**35.51**	**32**	P		**P**	**P**	**15 11 24.6**	**+0.4**
	comp=E,2.8nm,0.5s,baz=236,slow=10.0,SNR=14								
FINES	**FINESS Array B**	**39.37**	**339**	P		**P**	**P**	**15 11 57.2**	**+0.3**
	comp=E,0.5nm,0.4s,baz=125,slow=10.0,SNR=5.1								
CMAR	**Chiang Mai Arr**	**42.32**	**92**	P		**P**	**P**	**15 12 22.0**	**+0.2**
	comp=E,0.2nm,0.4s,baz=284,slow=11,SNR=1.7								
NOA	**NORSAR Array B**	**44.63**	**332**	LR		LR	LR	15 33 15.1	
	comp=E,15nm,18.5s,baz=250,slow=39								
ARCES	**ARCESS Array B**	**45.88**	**347**	P		**P**	**P**	**15 12 49.7**	**+0.1**
	comp=E,2.5nm,0.9s,baz=138,slow=7.7,SNR=5.0								
TORD	**Torodi Ar. Bea**	**50.48**	**265**	P		**P**	**P**	**15 13 25.8**	**-0.1**
	comp=E,0.7nm,0.6s,baz=60,slow=7.6,SNR=4.6								
DBIC	**Dimbokro**	**59.08**	**261**	P		**P**	**P**	**15 14 28.2**	**-0.1**
	comp=E,3.4nm,0.8s,baz=304,slow=22,SNR=3.0								

IDC 07 15:09:53.9±1.6,6°.12S×129°.65E,h402km±27km, mb2.9/1, mb1 3.1/5,mb1mx2.7/47,mbtmp3.9/5,Error ellipse: s-maj=47.7km s-min=14.3km az=81.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.46**	**17**	P		P	P	15 11 21.5	+0.8
	0.3nm,0.3s,baz=184,slow=23,SNR=7.2								
SIJI				S		S	S	15 12 32.1	+0.4
	1.0nm,0.3s,baz=230,slow=23,SNR=10								
FITZ	**Fitzroy Crossi**	**12.53**	**198**	P		P	P	15 12 37.7	-1.8
	0.1nm,0.3s,baz=22,slow=8.2,SNR=7.2								
FITZ				S		S	S	15 14 59.0	+2.8
	0.5nm,0.3s,baz=229,slow=16,SNR=7.7								
WRA	**Warramunga Arr**	**14.48**	**162**	P		P	P	15 13 00.8	+0.1
	0.7nm,0.3s,baz=341,slow=11,SNR=59								
ASAR	**Alice Springs**	**17.92**	**167**	P		P	P	15 13 37.2	-0.3
	0.7nm,0.3s,baz=346,slow=11,SNR=121								
ASAR				S		S	S	15 16 44.0	+1.4
	0.1nm,0.3s,baz=347,slow=19,SNR=6.1								
MKAR	**Makanchi Array**	**67.30**	**327**	P		P	P	15 20 06.9	-0.1
	0.4nm,0.6s,baz=117,slow=7.4,SNR=3.8								

*VAO **07** 15:45:19.0±4.1,21°.40S×68°.73W,h102km±24km, mb4.1*
*IDC **07** 15:45:20.9±0.8,21°.61S×68°.19W,h107km±10km, mb3.8/4, mb1 3.7/8,mb1mx3.5/22,mbtmp4.0/8,Error ellipse: s-maj=31.2km s-min=13.4km az=120.0*
*NEIC **07** 15:45:20.9±1.7,21°.55S±0°.05×68°.50W±0°.06,h114km±8km, mb4.0/1,ML4.0(GUC),Error ellipse: s-maj=9.7km s-min=5.7km az=57.0*
*GUC **07** 15:45:22.3±0.7,21°.56S×68°.62W,h118km±4km,ML4.1*

ISC 07 15:45:20.8±0.7,21°.54S±0°.04×68°.55W±0°.06,h121km±7km, n61,σ1°47/80,mb3.9/4,11C-7D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.69**	**249**	⇑	*i*P	**Pn**	**Pn**	**15 45 41.0**	**+0.7**
PB09					*i* S	**Sn**	**Sn**	**15 45 54.7**	**-0.4**
PB09	**IPOC Station P**	**0.69**	**249**		*i* P	**Pn**	**Pn**	**15 45 40.9**	**+0.5**
PB01	**IPOC Station P**	**1.00**	**300**	⇓	*i*P	**Pn**	**Pn**	**15 45 43.2**	**+0.1**
PB01					*i* S	**Sn**	**Sn**	**15 45 59.1**	**-0.7**
PB01				IAML				15 46 00.3	
	comp=N,5μm,0.3s								
PB01	**IPOC Station P**	**1.00**	**300**			**Pn**		**15 45 43.0**	**0.0**
LVC	**Limon Verde**	**1.11**	**197**	P		**Pn**		**15 45 44.9**	**+0.5**
	comp=N,152nm,0.3s,baz=18,slow=7.5,SNR=730								
LVC				S		**Sn**		**15 46 02.1**	**-0.2**
	comp=N,138nm,0.3s,baz=200,slow=16,SNR=65								
PB03	**IPOC Station P**	**1.22**	**246**	⇑	*i*P	**Pn**		**15 45 45.6**	**+0.2**
PB03					*i* S	**Sn**		**15 46 03.4**	**-0.6**
PB07	**IPOC Station P**	**1.25**	**261**	⇑	*i*P	**Pn**		**15 45 45.9**	**+0.3**
PB07					*i* S	**Sn**		**15 46 04.1**	**-0.5**
PB07				IAML				15 46 06.0	
	comp=E,4μm,0.5s								
PB07	**IPOC Station P**	**1.25**	**261**			**Pn**		**15 45 45.4**	**-0.2**
PB02	**IPOC Station P**	**1.27**	**280**	⇑	*i*P	**Pn**		**15 45 45.9**	**+0.1**
PB02					*i* S	**Sn**		**15 46 03.7**	**-1.1**
PB02				IAML				15 46 06.4	
	comp=E,6μm,0.2s								
PB06	**IPOC Station P**	**1.49**	**219**	⇑	*i*P	**Pn**		**15 45 48.9**	**+0.5**
PB06					*i* S	**Sn**		**15 46 09.3**	**0.0**
PB06				IAML				15 46 11.0	
	comp=E,2μm,0.5s								
PB06	**IPOC Station P**	**1.49**	**219**			**Pn**		**15 45 48.7**	**+0.3**
PB08	**IPOC Station P**	**1.50**	**338**	⇓	*i*P	**Pn**		**15 45 49.9**	**+1.2**
PB08					*i* S	**Sn**		**15 46 11.0**	**+1.0**
PB08				IAML				15 46 13.6	
	comp=E,1μm,0.2s								
PB08	**IPOC Station P**	**1.50**	**338**			**Pn**		**15 45 49.8**	**+1.1**
PATCX	**Punta Patache**	**1.66**	**295**	⇓	*i*P	**Pn**		**15 45 50.6**	**+0.4**
PATCX					*i* S	**Sn**		**15 46 11.7**	**-0.9**
PATCX				IAML				15 46 13.4	
	comp=E,3μm,0.3s								
PATCX	**Punta Patache**	**1.66**	**295**			**Pn**		**15 45 50.5**	**+0.3**
PB04	**IPOC Station P**	**1.68**	**242**	⇑	*i*P	**Pn**		**15 45 50.5**	**0.0**
PB04					*i* S	**Sn**		**15 46 12.4**	**-0.8**
PB04	**IPOC Station P**	**1.68**	**242**			**Pn**		**15 45 50.4**	**0.0**
TA01	**Diego Aracena**	**1.81**	**302**	⇑	*i*P	**Pn**		**15 45 51.8**	**-0.1**
TA01					*i* S	**Sn**		**15 46 14.4**	**-1.3**
TA01				IAML				15 46 16.3	
	comp=E,2μm,0.5s								
TA01	**Diego Aracena**	**1.81**	**302**			**Pn**		**15 45 51.7**	**-0.1**
PB15	**IPOC Station P**	**1.86**	**207**	⇑	*i*P	**Pn**		**15 45 53.5**	**+0.7**
PB15					*i* S	**Sn**		**15 46 18.1**	**+0.9**
PB15				IAML				15 46 22.0	
	comp=N,4μm,0.3s								
PB15	**IPOC Station P**	**1.86**	**207**			**Pn**		**15 45 53.4**	**+0.7**
GO01	**Chusmiza**	**1.96**	**342**	⇓	*i*P	**Pn**		**15 45 55.1**	**+0.8**
GO01					*i* S	**Sn**		**15 46 20.9**	**+1.1**
GO01				IAML				15 46 26.4	
	comp=N,2μm,0.1s								
GO01	**Chusmiza**	**1.96**	**342**			**Pn**		**15 45 55.1**	**+0.8**
PB05	**IPOC Station P**	**2.01**	**229**	⇑	*i*P	**Pn**		**15 45 54.4**	**-0.1**
PB05					*i* S	**Sn**		**15 46 19.0**	**-1.3**
PB11	**IPOC Station P**	**2.05**	**330**	⇓	*i*P	**Pn**		**15 45 55.3**	**+0.2**
PB11					*i* S	**Sn**		**15 46 20.9**	**-0.4**
PB11				IAML				15 46 22.9	
	comp=N,3μm,0.3s								
PB11	**IPOC Station P**	**2.05**	**330**			**Pn**		**15 45 55.2**	**0.0**
PSGC	**Pisagua**	**2.43**	**322**	⇓	*i*P	**Pn**		**15 45 59.2**	**-0.7**
PSGC					*i* S	**Sn**		**15 46 28.8**	**-1.0**
PSGCX	**Pisagua**	**2.43**	**322**			**Pn**		**15 45 58.6**	**-1.2**
MNMC	**Minye Minye**	**2.59**	**338**	⇑	*i*P	**Pn**		**15 46 03.0**	**+0.9**
MNMC					*i* S	**Sn**		**15 46 34.5**	**+0.7**
MNMC				IAML				15 46 37.8	
	comp=N,1μm,0.1s								
MNMC	**Minye Minye**	**2.59**	**338**			**Pn**		**15 46 02.6**	**+0.5**
PB10	**IPOC Station P**	**2.70**	**223**	⇑	*i*P	**Pn**		**15 46 02.9**	**-0.2**
PB10					*i* S	**Sn**		**15 46 31.8**	**-3.9**
PB10	**IPOC Station P**	**2.70**	**223**			**Pn**		**15 46 04.8**	**+1.7**
PB16	**IPOC Station P**	**3.32**	**344**			**Pn**		**15 46 12.3**	**+0.5**
PB12	**IPOC Station P**	**3.36**	**330**			**Pn**		**15 46 11.0**	**-0.9**
PB14	**IPOC Station P**	**3.51**	**209**			**Pn**		**15 46 13.5**	**-0.6**
GO02	**Mina Guanaco**	**3.73**	**195**	⇓	*i*P	**Pn**		**15 46 16.9**	**-0.1**
GO02					*e*S	**Sn**		**15 46 59.6**	**-0.8**
GO02				IAML				15 47 02.0	
	comp=N,198nm,0.3s								
GO02	**Mina Guanaco**	**3.73**	**195**			**Pn**		**15 46 16.5**	**-0.5**
LPAZ	**La Paz**	**5.24**	**4**	P		**Pn**		**15 46 39.8**	**+2.2**
	comp=N,1.0nm,0.3s,baz=170,slow=5.0,SNR=24								
GO04	**Tololo Observa**	**8.83**	**193**	Pn		**Pn**		**15 47 22.4**	**-3.2**
SIV	**San Ignacio**	**8.98**	**53**	P		**Pn**		**15 47 24.7**	**-2.8**
	comp=N,2.1nm,0.3s,baz=251,slow=13,SNR=48								
SIV				S		**Sn**		**15 49 00.8**	**-6.2**
	comp=N,0.1nm,0.3s,baz=143,slow=23,SNR=1.5								
CO03	**El Pedregal**	**9.45**	**191**	Pn		**Pn**		**15 47 30.1**	**-3.8**
CO02	**Combarbal**	**9.87**	**192**	Pn		**Pn**		**15 47 35.0**	**-4.5**
CFA	**Coronel Fontan**	**10.02**	**178**	P		**Pn**		**15 47 39.7**	**-1.8**
	comp=N,0.4nm,0.3s,baz=348,slow=8.7,SNR=1.6								
PTLB	**Pontes e Lacer**	**10.79**	**57**	*e*P		**Pn**		**15 47 50.5**	**-1.4**
VILB	**Vilhena**	**11.69**	**44**	*e*P		**Pn**		**15 48 03.3**	**-0.6**
ITAB	**Concordia**	**15.99**	**114**	*e*P		**P**		**15 49 00.9**	**+1.0**
CLDB	**Colider**	**16.19**	**51**	*e*P		**Pn**		**15 49 01.6**	**+0.2**
ARAG	**Araguaiana, MT**	**16.89**	**73**	*e*P		**P**		**15 49 11.1**	**+1.1**
FRTB	**Fartura**	**17.65**	**99**	*e*P		**Pn**		**15 49 19.9**	**+0.8**
PLCA	**Paso Flores**	**19.20**	**185**	P		**P**		**15 49 36.2**	**+1.0**
	comp=N,0.1nm,0.3s,baz=355,slow=5.6,SNR=5.2								
PTGA	**Pitinga**	**22.32**	**23**	P		**P**		**15 50 07.4**	**-1.2**
	comp=N,1.3nm,0.3s,baz=60,slow=23,SNR=3.7								
PTGA	**Pitinga**	**22.32**	**23**	IAmb		IAmb		15 50 44.8	
	comp=Z,9.2nm,1.4s								
JANB	**Januaria**	**23.88**	**78**	*e*P		**P**		**15 50 24.2**	**+0.8**
BOAV	**Boa Vista**	**25.06**	**19**	*e*P		**P**		**15 50 33.2**	**-0.8**
DBIC	**Dimbokro**	**68.43**	**73**	P		**P**		**15 56 10.2**	**+0.1**
	comp=Z,4.7nm,0.9s,baz=101,slow=22,SNR=3.5								
TORD	**Torodi Ar. Bea**	**77.06**	**70**	P		**P**		**15 57 01.4**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=257,slow=5.2,SNR=13								
YKA	**Yellowknife Ar**	**91.34**	**340**	P		**P**		**15 58 13.8**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=131,slow=5.5,SNR=7.3								
WRA	**Warramunga Arr**	**133.08**	**210**	PKP		**PKiKP**		**16 04 24.8**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=168,slow=1.9,SNR=8.3								
KSH	**Kashi**	**144.87**	**51**	PKP		**PKPab**		**16 04 40.6**	**-2.6**
MKAR	**Makanchi Array**	**145.47**	**36**	PKPbc		**PKPab**		**16 04 46.1**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=342,slow=3.1,SNR=4.7								
LZH	**Lanzhou**	**164.06**	**23**	*e*PKP		**PKPdf**		**16 05 11.3**	**+1.1**
LZH				pPKP		pPKPdf		16 05 39.0	-5.5
LZH				sPKP				16 05 52.3	

*VAO **07** 15:55:55.0±1.5,22°.48S×70°.93W,h10km, mb4.4*
*SJA **07** 15:56:23.8±1.0,22°.31S×68°.84W,h119km±6km, ML4.2, MW4.1*
*NEIC **07** 15:56:23.7±1.6,22°.35S±0°.05×68

comp=Z,2.1nm,0.3s,baz=168,slow=1.9,SNR=25
CO01 Juntas del Tor 7.75 189 Pn **Pn 15 58 12.7 -1.7**
GO04 Tololo Observa 8.06 193 Pn **Pn 15 58 14.7 -3.9**
CO03 El Pedregal 8.69 191 Pn Pn 15 58 22.8 -4.2
CO02 Combarbal 9.10 193 Pn Pn 15 58 27.9 -4.8
CFA Coronel Fontan 9.27 178 P **Pn 15 58 32.0 -2.9**
comp=Z,1.4nm,0.3s,baz=336,slow=15,SNR=32
CFA S Sn 16 00 08.5 -9.0
comp=Z,2.1nm,0.3s,baz=266,slow=21,SNR=2.3
SIV San Ignacio 9.55 50 P **Pn 15 58 36.9 -1.9**
comp=Z,2.0nm,0.3s,baz=247,slow=11,SNR=32
SIV S **Sn 16 00 17.0 -7.4**
comp=Z,0.2nm,0.3s,baz=271,slow=13,SNR=0.9
CO04 Los Peladeros 9.91 191 Pn Pn 15 58 38.6 -5.3
ROC1 El Roble 10.83 190 Pn **Pn 15 58 57.2 +0.9**
PEL Peldehue 10.94 189 Pn **Pn 15 58 56.3 -1.3**
CPUP Villa Florida 11.11 113 P **Pn 15 58 59.4 -0.5**
comp=Z,0.2nm,0.3s,baz=301,slow=10,SNR=11
MT02 Curacav 11.13 191 Pn **Pn 15 58 56.8 -3.2**
PTLB Pontes e Lacer 11.32 55 *eP* **Pn 15 59 03.0 +0.3**
AQDB Aquidauana 12.24 84 *eP* **Pn 15 59 17.7 +2.8**
VILB Vilhena 12.32 42 *eP* **Pn 15 59 13.1 -3.1**
BO02 Sierra Bellavi 12.58 188 Pn **Pn 15 59 18.7 -0.7**
SALV Santo Antonio 13.83 65 *eP* **Pn 15 59 38.0 +2.1**
SAML Samuel 14.29 23 *eP* Pn 15 59 31.8 -10
BI02 San Fabin de 14.48 188 Pn **Pn 15 59 43.4 -0.8**
TRCB Terra Rica 14.84 95 *eP* **P 15 59 51.9 -0.1**
C2SB Chapadao do Su 15.26 80 *eP* **P 15 59 57.5 +0.8**
PTGB Pitanga 15.44 102 *eP* **Pn 15 59 58.0 +1.6**
ITAB Concordia 15.82 111 *eP* **P 16 00 03.2 +0.4**
CPSB Cacapava Do Su 15.86 124 *eP* **Pn 16 00 00.3 -1.2**
PCMB Pacaembu 16.18 91 *eP* **P 16 00 08.3 +1.4**
PLTB Pedras Altas 16.40 128 *eP* **Pn 16 00 06.5 -1.7**
CLDB Colider 16.77 49 *eP* **Pn 16 00 11.8 -1.1**
ARAG Araguaiana, MT 17.25 71 *eP* **Pn 16 00 20.4 +1.6**
CNLB Canela 17.50 117 *eP* **P 16 00 19.6 -1.9**
FRTB Fartura 17.66 97 *eP* **P 16 00 24.2 +1.0**
TIJ01 Guaruva-PR 18.26 103 *eP* **P 16 00 30.4 +0.5**
PLCA Paso Flores 18.44 184 P **P 16 00 31.5 -0.2**
comp=Z,0.1nm,0.3s,baz=324,slow=16,SNR=2.3
BB19B Bebedouro 18.78 90 *eP* **P 16 00 36.8 +1.3**
RCLB Rio Claro- Sao 19.57 94 *eP* **P 16 00 44.4 +0.2**
SPB Sao Paulo 19.62 98 *eP* **P 16 00 45.3 +0.7**
IPMB Ipameri, GO 19.70 81 *eP* **P 16 00 45.5 0.0**
PET01 Itanhaem-SP 19.77 100 *eP* **P 16 00 46.8 +0.6**
VAO Valinhos 20.06 96 *eP* **P 16 00 49.2 -0.2**
BDFB Brasilia 20.63 75 P **P 16 00 54.7 -1.1**
comp=Z,2.3nm,0.4s,baz=263,slow=13,SNR=4.8
BDFB Brasilia 20.63 75 IAmb IAmb 16 00 58.2
comp=Z,6.8nm,1.2s
PARB Paraibuna 21.29 97 *eP* **P 16 01 03.5 +0.8**
BSCB Bom Sucesso 22.26 91 *eP* **P 16 01 11.6 -1.4**
PTGA Pitinga 23.06 23 P **P 16 01 19.7 -1.3**
comp=Z,1.3nm,0.3s,baz=49,slow=23,SNR=2.4
PTGA Pitinga 23.06 23 IAmb IAmb 16 01 39.1
comp=Z,20nm,2.0s
VAS01 Vassouras-RJ 23.35 95 *eP* **P 16 01 24.0 +0.3**
JANB Januaria 24.17 77 *eP* **P 16 01 30.8 -0.4**
SMTB Santa Maria do 24.28 60 *eP* **P 16 01 30.6 -1.5**
ROSC El Rosal 27.53 348 LR LR 16 15 13.0
comp=Z,86nm,21.2s,baz=50,slow=41
TXAR Lajitas Array 61.40 325 P **P 16 06 31.0 +1.2**
comp=Z,0.2nm,0.6s,baz=136,slow=7,SNR=2.2
TXAR pP **pP 16 06 56.0 0.0**
comp=Z,0.4nm,0.6s,baz=147,slow=8.5,SNR=2.5
SNAA Sanae 61.46 161 P **P 16 06 30.7 +1.1**
SNAA Sanae 61.46 161 P **P 16 06 30.7 +1.1**
SNAA IAmb IAmb 16 07 59.9
comp=Z,10nm,1.6s
PDAR Pinedale Array 74.91 330 P **P 16 07 55.5 +1.4**
comp=Z,0.2nm,0.4s,baz=129,slow=8.8,SNR=3.6
PDAR pP **pP 16 08 21.4 0.0**
comp=Z,0.2nm,0.5s,baz=120,slow=5.3,SNR=1.2
PPT Papeete 75.34 257 P **P 16 07 58.4 +1.5**
comp=Z,18nm,0.5s,baz=84,slow=17,SNR=1.5
NVAR Mina Array Bea 76.25 322 P **P 16 08 02.8 +1.0**
comp=Z,0.2nm,0.5s,baz=157,slow=4.9,SNR=2.2
TORD Torodi Ar. Bea 77.43 70 P **P 16 08 08.9 +0.2**
comp=Z,2.2nm,0.4s,baz=254,slow=5.3,SNR=18
TORD pP **pP 16 08 34.5 -1.3**
comp=Z,3.1nm,0.7s,baz=250,slow=5.4,SNR=7.3
BOSA Boshof 82.89 118 P **P 16 08 37.4 -0.7**
comp=Z,2.9nm,1.0s,baz=174,slow=2.2,SNR=3.8
YKA Yellowknife Ar 92.01 341 P **P 16 09 22.1 +1.1**
comp=Z,0.7nm,0.7s,baz=137,slow=4.9,SNR=16
YKA pP **pP 16 09 48.6 -0.4**
comp=Z,0.5nm,0.6s,baz=136,slow=4.8,SNR=4.6
ASAR Alice Springs 129.30 207 PKP **PKiKP 16 15 21.7 -0.4**
comp=Z,0.4nm,0.7s,baz=129,slow=2.6,SNR=3.7
WRA Warramunga Arr 132.37 210 PKP **PKiKP 16 15 28.2 -0.1**
comp=Z,0.5nm,0.5s,baz=150,slow=1.6,SNR=6.1
WRA pPKP **pPKPdf 16 15 55.5 -0.5**
comp=Z,0.3nm,0.8s,baz=160,slow=1.5,SNR=1.9
MKAR Makanchi Array 146.16 37 PKPbc **PKPbc 16 15 52.5 -0.1**
comp=Z,0.8nm,0.8s,baz=305,slow=4.3,SNR=5.2
MKAR pPKPbc **pPKPdf 16 16 18.8 -1.5**
comp=Z,0.4nm,0.7s,baz=310,slow=2.7,SNR=2.1

*RSPR **07** 16:00:04.5, 19.°02N×68.°48W, h116km±1km, MD3.2/11*
*OSPL **07** 16:00:07.0±1.5, 17.°99N×68.°40W, h137km±49km, ML2.7*
*NEIC **07** 16:00:08±4.2, 18.°9N±0.°2×68.°4W±0.°1, h83km±20km, Error ellipse: s-maj=25.9km s-min=17.0km az=177.0*
ISC 07 16:00:07.7±1.5,**18.°9N**±0.°1×**68.°36W**±0.°05,**h100**km,**n48,**
σ1s31/55,11C-1D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.42**	**183**		*eP*	**Pn**		**16 00 21.5**	**-1.4**
PCDR	**Punta Cana, DR**	**0.42**	**183**		*eS*	**Sn**		**16 00 35.1**	**+0.8**
PCDR	**Punta Cana, DR**	**0.42**	**183**			**Pn**		**16 00 21.5**	**-1.4**
PCDR							**Sn**	**16 00 35.1**	**+0.8**
DR12	**Loma Pena Alta**	**0.97**	**262**	Pn		**Pn**	**Pn**	**16 00 26.1**	**-1.8**
IDE	**Isla Desecheo**	**1.00**	**123**		*eP*	**Pn**		**16 00 27.6**	**-0.6**
IDE	**Isla Desecheo**	**1.00**	**123**		*eS*	**Sn**		**16 00 45.0**	**+1.5**
IDE	**Isla Desecheo**	**1.00**	**123**			**Pn**		**16 00 27.6**	**-0.6**
IDE							**Sn**	**16 00 45.0**	**+1.5**
AGPR	**Aguadilla, PR**	**1.27**	**111**		*eP*	**Pn**		**16 00 30.5**	**-0.7**
AGPR	**Aguadilla, PR**	**1.27**	**111**		*eS*	**Sn**		**16 00 50.6**	**+1.6**
AGPR	**Aguadilla, PR**	**1.27**	**111**			**Sn**		**16 00 50.6**	**+1.6**
AGPR	**Aguadilla, PR**	**1.27**	**111**			**Pn**		**16 00 31.2**	**0.0**
AGPR	**Aguadilla, PR**	**1.27**	**111**		*i* P	**Pn**		**16 00 31.5**	**+0.3**
AGPR					*eS*	**Sn**		**16 00 51.6**	**+2.6**
AGPR					IAML			16 00 53.5	
	comp=Z,77nm,0.2s								
MPR	**Mayaguez**	**1.36**	**122**		*i* P	**Pn**		**16 00 32.2**	**-0.1**
MPR					*eS*	**Sn**		**16 00 49.0**	**-1.9**
MPR					IAML			16 00 50.2	
	comp=Z,133nm,0.3s								
LSP	**Las Mesas**	**1.43**	**122**		*eP*	**Pn**		**16 00 32.0**	**-1.1**
LSP	**Las Mesas**	**1.43**	**122**		*eS*	**Sn**		**16 00 53.6**	**+1.3**
LSP	**Las Mesas**	**1.43**	**122**			**Pn**		**16 00 32.0**	**-1.1**
LSP							**Sn**	**16 00 53.6**	**+1.3**
CRPR	**Cabo Rojo, PR**	**1.50**	**128**		*eP*	**Pn**		**16 00 33.3**	**-0.7**
CRPR	**Cabo Rojo, PR**	**1.50**	**128**		*eS*	**Sn**		**16 00 55.2**	**+1.3**
CRPR	**Cabo Rojo, PR**	**1.50**	**128**			**Sn**		**16 00 55.2**	**+1.3**
CRPR	**Cabo Rojo, PR**	**1.50**	**128**			Pn		16 00 30.3	-3.7
MLPR	**Magueyes Islan**	**1.57**	**127**		*eP*	**Pn**		**16 00 33.5**	**-1.3**
MLPR	**Magueyes Islan**	**1.57**	**127**		*eS*	**Sn**		**16 00 57.0**	**+1.5**
MLPR	**Magueyes Islan**	**1.57**	**127**			Pn		16 00 30.9	-4.0
MLPR	**Magueyes Islan**	**1.57**	**127**			**Sn**		**16 00 57.0**	**+1.5**
AOPR	**Arecibo Observ**	**1.63**	**111**		*eP*	**Pn**		**16 00 34.4**	**-1.2**
AOPR	**Arecibo Observ**	**1.63**	**111**		*eS*	**Sn**		**16 00 58.2**	**+1.3**
AOPR	**Arecibo Observ**	**1.63**	**111**			**Pn**		**16 00 34.4**	**-1.2**
AOPR							**Sn**	**16 00 58.2**	**+1.3**
EMPR	**Esperanza - Ma**	**1.79**	**104**		*eP*	**Pn**		**16 00 36.6**	**-1.0**
EMPR	**Esperanza - Ma**	**1.79**	**104**		*eS*	**Sn**		**16 01 01.5**	**+1.0**
EMPR	**Esperanza - Ma**	**1.79**	**104**			**Pn**		**16 00 36.6**	**-1.0**
EMPR							**Sn**	**16 01 01.5**	**+1.0**
OBIP	**Obispado Ponce**	**1.89**	**118**	Pn		**Pn**		**16 00 37.4**	**-1.4**
ICMP	**Isla Caja de M**	**2.03**	**121**	Pn		**Pn**		**16 00 39.7**	**-0.9**
PDPR	**Patillas Dam,**	**2.40**	**112**		*eP*	**Pn**		**16 00 43.9**	**-1.5**
PDPR	**Patillas Dam,**	**2.40**	**112**		*eS*	**Sn**		**16 01 15.2**	**+0.7**
PDPR	**Patillas Dam,**	**2.40**	**112**			**Pn**		**16 00 43.9**	**-1.5**
PDPR							**Sn**	**16 01 15.2**	**+0.7**
CBYP	**Canovanas**	**2.46**	**105**		*eP*	**Pn**		**16 00 44.9**	**-1.5**
CBYP	**Canovanas**	**2.46**	**105**		*eS*	**Sn**		**16 01 17.2**	**+1.1**
CBYP	**Canovanas**	**2.46**	**105**			**Sn**		**16 01 17.2**	**+1.1**
CBYP	**Canovanas**	**2.46**	**105**			**Pn**		**16 00 43.9**	**-2.5**
HUMP	**Col San Antoni**	**2.51**	**108**	Pn		**Pn**		**16 00 45.7**	**-1.3**
SDDR	**Presa de Saban**	**2.77**	**271**		*i* P	**Pn**		**16 00 51.1**	**+0.6**
SDDR					IAML			16 01 32.5	
	comp=Z,11nm,0.3s								
MTP	**Monte Pirata**	**2.79**	**107**		*eP*	**Pn**		**16 00 49.6**	**-1.1**
MTP	**Monte Pirata**	**2.79**	**107**		*eS*	**Sn**		**16 01 25.0**	**+1.2**
MTP	**Monte Pirata**	**2.79**	**107**			**Pn**		**16 00 49.6**	**-1.1**
MTP							**Sn**	**16 01 25.0**	**+1.2**
CUPR	**Culebra, Puert**	**2.99**	**102**		*eP*	**Pn**		**16 00 52.4**	**-0.9**
CUPR	**Culebra, Puert**	**2.99**	**102**		*eS*	**Sn**		**16 01 29.1**	**+0.7**
CUPR	**Culebra, Puert**	**2.99**	**102**			**Pn**		**16 00 51.1**	**-2.1**
CUPR	**Culebra, Puert**	**2.99**	**102**			**Sn**		**16 01 29.1**	**+0.7**

*IDC **07** 16:00:52.9±1.3,21.°05S×179.°03W, h624km±15km, mb4.0/25, mb1 4.1/27, mb1mx4.0/32, mbtmp5.0/27, Error ellipse: s-maj=12.1km s-min=10.4km az=177.0*
*NEIC **07** 16:00:53.5±1.6,21.°07S±0.°10×179.°04W±0.°09, h634km±5km, mb4.7/102, Error ellipse: s-maj=14.3km s-min=12.5km az=159.0*
ISC 07 16:00:52.1±0.3,**21.°17S**±0.°05×**179.°04W**±0.°06,**h619**km,
n314,σ1s12/360,mb4.8/79,34C-4D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.39**	**321**			P	**P**	**16 02 25.4**	**+3.5**
RAO	**Raoul Island**	**8.11**	**173**			P	**P**	**16 02 54.3**	**+1.3**
	71nm,0.3s,baz=142,slow=20,SNR=1.7								
RAO						S	**S**	**16 04 31.1**	**-1.1**
	62nm,0.3s,baz=102,slow=23,SNR=6.7								
NIUE	**Niue**	**8.81**	**78**			P	**P**	**16 03 01.8**	**+2.0**
AFI	**Afiamalu**	**10.00**	**45**			P	**P**	**16 03 10.8**	**-0.8**
FUNA	**Funafuti**	**12.68**	**352**			P	**P**	**16 03 37.5**	**-0.2**
DZM	**Mont Dzumac**	**13.54**	**264**			P	**P**	**16 03 47.1**	**+1.0**
	2.1nm,0.3s,baz=80,slow=18,SNR=25								
DZM						S	**S**	**16 06 08.3**	**-0.1**
	0.1nm,0.3s,baz=16,slow=12,SNR=2.8								
OUZ	**Omahuta**	**15.42**	**203**			P	**P**	**16 04 07.2**	**+3.9**
OUZ						IAmb	IAmb	16 04 08.4	
	comp=Z,97nm,1.4s								
MXZ	**Matakaoa Point**	**16.50**	**187**			P	**P**	**16 04 14.3**	**+1.2**
MXZ						IAmb	IAmb	16 04 20.3	
	comp=Z,63nm,1.2s								
WMGZ	**Waiomatatini S**	**16.74**	**187**			P	**P**	**16 04 15.4**	**+0.1**
HAZ	**Te Kaha**	**16.76**	**189**			P	**P**	**16 04 16.6**	**+1.3**
PKGZ	**Pakihiroa**	**16.85**	**188**			P	**P**	**16 04 16.6**	**+0.3**
RUGZ	**Raukumara Rang**	**16.98**	**189**			P	**P**	**16 04 10.8**	**-6.8**
PUZ	**Puketiti**	**17.01**	**187**			P	**P**	**16 04 18.4**	**+0.7**
URZ	**Urewera**	**17.36**	**190**			P	**P**	**16 04 19.2**	**-1.7**
	comp=Z,3.1nm,0.3s,baz=256,slow=2.5,SNR=20								
URZ						S	**S**	**16 07 06.7**	**-3.7**
	comp=Z,0.2nm,0.3s,baz=199,slow=22,SNR=2.0								
URZ	**Urewera**	**17.36**	**190**			P	**P**	**16 04 19.5**	**-1.3**
URZ	**Urewera**	**17.36**	**190**			P	**P**	**16 04 19.1**	**-1.7**
URZ						IAmb	IAmb	16 04 21.6	
	comp=Z,17nm,0.6s								
MWZ	**Matawai**	**17.36**	**189**			P	**P**	**16 04 20.4**	**-0.6**
CNGZ	**Carnagh Statio**	**17.42**	**187**			P	**P**	**16 04 22.3**	**+0.9**
TKGZ	**Te Karaka**	**17.42**	**188**			P	**P**	**16 04 22.6**	**+1.1**
RAGZ	**Rawiri**	**17.54**	**189**			P	**P**	**16 04 22.9**	**+0.3**
MUGZ	**Murupara**	**17.63**	**191**			P	**P**	**16 04 23.6**	**+0.3**
RIGZ	**Rimuhau**	**17.70**	**188**			P	**P**	**16 04 25.2**	**+1.2**
SNGZ	**Shannon Statio**	**17.83**	**189**			P	**P**	**16 04 25.1**	**-0.1**
PRGZ	**Paritu Road**	**17.89**	**188**			P	**P**	**16 04 27.7**	**+2.0**
KNZ	**Kokohu**	**18.02**	**188**			P	**P**	**16 04 26.9**	**0.0**
BKZ	**Black Stump Fm**	**18.34**	**191**			P	**P**	**16 04 28.8**	**-1.2**
BKZ						IAmb	IAmb	16 04 34.2	
	comp=Z,41nm,1.6s								
BFZ	**Birch Farm**	**19.86**	**191**			P	**P**	**16 04 43.6**	**0.0**
BFZ						IAmb	IAmb	16 05 25.3	
	comp=Z,47nm,1.4s								
MSWZ	**Moikau Station**	**20.76**	**192**			P	**P**	**16 04 52.2**	**+0.6**
BHW	**Baring Head**	**20.83**	**193**			P	**P**	**16 04 52.3**	**+0.1**
QRZ	**Quartz Range**	**20.87**	**198**			P	**P**	**16 04 53.5**	**+1.0**
PLWZ	**Palliser**	**20.91**	**192**			P	**P**	**16 04 52.5**	**-0.5**
NNZ	**Nelson**	**21.00**	**196**			P	**P**	**16 04 53.0**	**-0.7**
NNZ						IAmb	IAmb	16 05 34.5	
	comp=Z,44nm,1.0s								
TUWZ	**Tuamarina**	**21.06**	**195**			P	**P**	**16 04 53.4**	**-0.8**
BSWZ	**Blackbirch Sta**	**21.34**	**195**			P	**P**	**16 04 57.8**	**+1.0**
THZ	**Tophouse**	**21.63**	**197**			P	**P**	**16 04 59.9**	**+0.4**
KHZ	**Kahutara**	**22.09**	**195**			P	**P**	**16 05 02.9**	**-0.5**
LHI	**Lord Howe Isla**	**22.13**	**238**			P	**P**	**16 05 03.6**	**-0.4**
LTZ	**Lake Taylor**	**22.75**	**197**			P	**P**	**16 05 08.5**	**-0.9**
OXZ	**Oxford**	**23.32**	**197**			P	**P**	**16 05 14.1**	**-0.3**
MQZ	**McQueen's Vall**	**23.52**	**195**			P	**P**	**16 05 15.9**	**-0.1**
FOZ	**Fox Glacier**	**24.16**	**200**			P	**P**	**16 05 22.9**	**+1.1**
WKZ	**Wanaka**	**25.58**	**200**			P	**P**	**16 05 34.6**	**+0.3**
MLZ	**Mavora Lakes**	**26.35**	**201**			P	**P**	**16 05 42.2**	**+1.1**
MLZ						IAmb	IAmb	16 05 46.1	
	comp=Z,42nm,1.5s								
EIDS	**Eidsvold**	**27.74**	**256**			P	**P**	**16 05 54.0**	**+0.5**
EIDS						IAmb	IAmb	16 05 55.4	
	comp=Z,13nm,0.6s								
ARMA	**Armidale**	**27.91**	**245**			P	**P**	**16 05 56.7**	**+1.7**
ARMA						IAmb	IAmb	16 06 59.3	
	comp=Z,41nm,1.3s								
PPT	**Papeete**	**28.00**	**88**			P	**P**	**16 05 57.0**	**+1.1**
	comp=Z,28nm,0.7s,baz=65,slow=19,SNR=1.7								
PPTF	**Pamatai, Papee**	**28.01**	**88**			P	**P**	**16 05 57.0**	**+1.1**
CTA	**Charters Tower**	**32.47**	**266**			P	**P**	**16 06 35.0**	**+1.0**
	comp=Z,24nm,0.4s,baz=90,slow=11,SNR=96								
CTAO	**Charters Tower**	**32.47**	**266**			P	**P**	**16 06 34.6**	**+0.7**
KRVT	**Keravat (AS076**	**32.72**	**297**			P	**P**	**16 06 36.5**	**+0.3**
	comp=Z,19nm,0.7s,baz=270,slow=2.8,SNR=4.8								
PMG	**Port Moresby**	**34.56**	**285**			P	**P**	**16 06 52.1**	**+0.6**
	comp=Z,66nm,0.9s,baz=89,slow=5.4,SNR=13								
PMG	**Port Moresby**	**34.56**	**285**			P	**P**	**16 06 52.1**	**+0.6**
TOO	**Toolangi**	**34.72**	**234**			P	**P**	**16 06 54.0**	**+1.4**
TOO						IAmb	IAmb	16 06 55.0	
	comp=Z,18nm,0.8s								
BBOO	**Buckleboo**	**41.38**	**244**			P	**P**	**16 07 46.8**	**+0.4**
BBOO						IAmb	IAmb	16 07 48.0	
	comp=Z,27nm,0.8s								
JAY	**Jayapura**	**43.35**	**290**			P	**P**	**16 08 02.6**	**+0.7**
	comp=Z,53nm,0.6s,baz=151,slow=4.4,SNR=48								
JAY	**Jayapura**	**43.35**	**290**			P	**P**	**16 08 02.9**	**+0.9**
	comp=Z,654nmcomp=Z,61nm,1.0s								
ASAR	**Alice Springs**	**43.43**	**258**			P	**P**	**16 08 02.9**	**+0.4**
	comp=Z,52nm,0.8s,baz=96,slow=7.4,SNR=402								
ASAR						PcP	**PcP**	**16 09 36.6**	**+0.2**
	comp=Z,4.1nm,0.7s,baz=104,slow=4.1,SNR=6.6								
ASAR						ScP	**ScP**	**16 12 30.4**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=103,slow=4.4,SNR=6.1								
ASAR						S	**S**	**16 13 43.9**	**-3.7**
	comp=Z,7.0nm,0.9s,baz=95,slow=15,SNR=25								
WRAB	**Tennant Creek**	**43.55**	**263**			P	**P**	**16 08 03.0**	**-0.4**
WRA	**Warramunga Arr**	**43.55**	**263**			P	**P**	**16 08 03.3**	**-0.2**
	comp=Z,18nm,0.3s,baz=96,slow=8.2,SNR=426								
WRA						PcP	**PcP**	**16 09 37.2**	**+0.3**
	comp=Z,4.0nm,1.0s,baz=102,slow=3.8,SNR=5.0								
WRA						S	**S**	**16 13 45.9**	**-3.5**
	comp=Z,1.4nm,0.9s,baz=98,slow=13,SNR=5.5								
GENI	**Genyem**	**43.78**	**289**			P	**P**	**16 08 06.3**	**+1.0**
	comp=Z,116nm,1.0s								
SMPI	**Sarmi**	**45.35**	**289**			P	**P**	**16 08 18.1**	**+0.9**
	comp=Z,36nm,1.1s								
BYL	**Byron's Ledge**	**46.56**	**32**			P	**P**	**16 08 25.6**	**-0.8**
FORT	**Forrest**	**48.14**	**247**			P	**P**	**16 08 37.9**	**0.0**
MTN	**Manton Dam**	**48.21**	**272**			P	**P**	**16 08 38.1**	**-0.5**
MTN						IAmb	IAmb	16 08 39.6	
	comp=Z,34nm,0.7s								
KNRA	**Kununurra**	**49.65**	**267**			P	**P**	**16 08 49.2**	**0.0**
KNRA						IAmb	IAmb	16 08 50.6	
	comp=Z,74nm,1.2s								
FAKI	**Fak Fak**	**50.72**	**284**			P	**P**	**16 08 56.8**	**-0.2**
FAKI						IAmb	IAmb	16 08 58.0	
	comp=Z,67nm,1.2s								
FITZ	**Fitzroy Crossi**	**51.98**	**263**			P	**P**	**16 09 06.3**	**+0.3**
	comp=Z,10nm,0.5s,baz=78,slow=4.7,SNR=67								
FITZ	**Fitzroy Crossi**	**51.98**	**263**			P	**P**	**16 09 06.3**	**+0.3**
FITZ						IAmb	IAmb	16 09 07.6	
	comp=Z,50nm,1.4s								
SIJI	**Sorong**	**52.48**	**286**			P	**P**	**16 09 09.9**	**+0.2**
	comp=Z,115nm,0.8s,baz=79,slow=5.7,SNR=44								
NLAI	**Namlea**	**55.27**	**281**			P	**P**	**16 09 30.3**	**+1.1**
	comp=Z,40nm,1.3s								
SOEI	**Soe**	**55.56**	**273**			P	**P**	**16 09 33.3**	**+2.0**
	comp=Z,1μmcomp=Z,151nm,0.9s								
SOEI	**Soe**	**55.56**	**273**			P	**P**	**16 09 32.5**	**+1.2**
LBMI	**Labuha**	**55.97**	**284**			P	**P**	**16 09 35.0**	**+0.9**
	comp=Z,688nmcomp=Z,53nm,1.2s								
BATI	**Baumata**	**55.98**	**272**			P	**P**	**16 09 35.4**	**+1.2**
	comp=Z,42nm,0.7s,baz=131,slow=3.4,SNR=7.0								
PSA00	**Pilbara Seismi**	**56.58**	**258**			P	**P**	**16 09 37.8**	**-0.3**
PSA00						IAmb	IAmb	16 09 39.0	
	comp=Z,40nm,0.8s								
TNTI	**Ternate**	**56.70**	**286**			P	**P**	**16 09 39.5**	**+0.5**
	comp=Z,707nmcomp=Z,68nm,1.0s								
TNTI	**Ternate**	**56.70**	**286**			P	**P**	**16 09 38.7**	**-0.3**
TNTI						IAmb	IAmb	16 09 40.3	
	comp=Z,50nm,0.9s								
MBWA	**Marble Bar**	**56.77**	**258**			P	**P**	**16 09 39.5**	**+0.1**
MBWA						IAmb	IAmb	16 09 40.2	
	comp=Z,40nm,0.8s								
SANI	**Sanana**	**56.77**	**282**			P	**P**	**16 09 40.5**	**+1.0**
	comp=Z,664nmcomp=Z,44nm,1.1s								
VNDA	**Vanda**	**57.16**	**185**			P	**P**	**16 09 42.8**	**+1.7**
	comp=Z,1.1nm,0.5s,baz=354,slow=6.7,SNR=11								
NWAO	**Narrogin (SRO)**	**57.20**	**244**			P	**P**	**16 09 42.3**	**+0.1**
	comp=Z,25nm,0.9s,baz=135,slow=8.3,SNR=5.8								
NWAO	**Narrogin (SRO)**	**57.20**	**244**			P	**P**	**16 09 42.7**	**+0.5**
NWAO						IAmb	IAmb	16 09 44.7	
	comp=Z,40nm,1.1s								
NWAO	**Narrogin (SRO)**	**57.20**	**244**			P	**P**	**16 09 42.8**	**+0.5**
NWAO						IAmb	IAmb	16 09 44.7	
	comp=Z,32nm,1.1s								
MMRI	**Maumere**	**57.82**	**273**			P	**P**	**16 09 46.1**	**-0.5**
MMRI						IAmb	IAmb	16 09 47.3	
	comp=Z,56nm,1.0s								
EDFI	**Ende, Flores**	**58.29**	**273**			P	**P**	**16 09 49.8**	**-0.1**
	comp=Z,342nmcomp=Z,23nm,1.1s								
MORW	**Morawa**	**58.68**	**248**			P	**P**	**16 09 52.7**	**+0.5**
LUWI	**Luwuk**	**60.11**	**281**			P	**P**	**16 10 03.4**	**+1.5**
LUWI	**Luwuk**	**60.11**	**281**			P	**P**	**16 10 01.6**	**-0.2**
LUWI						IAmb	IAmb	16 10 03.6	
	comp=Z,55nm,0.9s								
GIRL	**Giralia**	**61.44**	**255**			P	**P**	**16 10 11.2**	**+0.8**
CASY	**Casey**	**62.95**	**205**			P	**P**	**16 10 20.0**	**+0.7**
JAGI	**Jajag, Banyuwa**	**65.41**	**270**			P	**P**	**16 10 34.6**	**-1.3**
JAGI						IAmb	IAmb	16 10 35.7	
	comp=Z,37nm,1.0s								
JHJ2	**Mitsune**	**66.75**	**323**			P	**P**	**16 10 43.1**	**-0.6**
QSPA	**South Pole Qui**	**68.90**	**180**			P	**P**	**16 10 57.5**	**+1.1**
	comp=Z,3.2nm,0.7s,baz=57,slow=2.2,SNR=4.9								
QSPA	**South Pole Qui**	**68.90**	**180**			P	**P**	**16 10 57.5**	**+1.1**
UGM	**Wanagama**	**68.98**	**269**			P	**P**	**16 10 57.0**	**-0.7**
MJAR	**Matsushiro Arr**	**70.18**	**324**			P	**P**	**16 11 03.4**	**-0.8**
	comp=Z,11nm,0.9s,baz=151,slow=5.7,SNR=20								
MAJO	**Matsushiro**	**70.18**	**324**			P	**P**	**16 11 03.6**	**-0.6**
MAT	**Matsushiro**	**70.18**	**324**			P	**P**	**16 11 04.1**	**-0.1**
CISI	**Cisompet, Garu**	**71.63**	**269**			P	**P**	**16 11 12.7**	**-0.6**
CISI						IAmb	IAmb	16 11 47.2	
	comp=Z,37nm,1.1s								
KSM	**Kuching**	**72.55**	**279**			P	**P**	**16 11 18.9**	**+0.4**
KSM						IAmb	IAmb	16 11 20.2	
	comp=Z,25nm,0.8s								
ADK	**Adak**	**72.76**	**2**			P	**P**	**16 11 18.6**	**-0.2**
ADK			

KMI				pP	pP	16 14 55.9	+2.3	
KMI				pmax	pmax			
	comp=Z,21nm,1.1s							
KMI				pmax	pmax			
	comp=Z,140nm,3.9s							
HDA	**Harding Lake**	**88.85**	**13**	P	**P**	**16 12 40.7**	**-0.5**	
DOT	**Dot Lake**	**88.85**	**15**	P	**P**	**16 12 41.3**	**+0.1**	
DOT				IAmb	IAmb	16 12 42.4		
	comp=Z,7.8nm,1.0s							
CCB	**Clear Creek Bu**	**88.88**	**13**	P	**P**	**16 12 40.6**	**-0.7**	
CCB				IAmb	IAmb	16 12 41.6		
	comp=Z,12nm,1.0s							
HHC	**Hu-ho-hao-te**	**89.13**	**315**	P	**P**	**16 12 41.7**	**-1.5**	
HHC				pmax	pmax			
	comp=Z,14nm,1.0s							
HHC				pmax	pmax			
	comp=Z,47nm,5.1s							
ILAR	**Eielson Array**	**89.18**	**13**	P	**P**	**16 12 41.6**	**-1.1**	
	comp=Z,3.6nm,1.0s,baz=230,slow=5.4,SNR=22							
CMAR	**Chiang Mai Arr**	**89.43**	**290**	P	**P**	**16 12 46.5**	**+1.6**	
	comp=Z,9.9nm,0.9s,baz=127,slow=3.1,SNR=64							
PLCA	**Paso Flores**	**89.51**	**134**	P	**P**	**16 12 45.8**	**+0.6**	
	comp=Z,1.4nm,0.7s,baz=230,slow=4.3,SNR=6.2							
IMW	**Indian Meadow**	**89.79**	**42**	P	**P**	**16 12 47.5**	**+1.1**	
BW06	**Boulder Array**	**90.11**	**44**	P	**P**	**16 12 48.1**	**+0.3**	
PDAR	**Pinedale Array**	**90.11**	**44**	P	**P**	**16 12 47.2**	**-0.6**	
	comp=Z,1.4nm,0.7s,baz=207,slow=4.3,SNR=15							
DAWY	**Dawson**	**90.37**	**16**	P	**P**	**16 12 48.6**	**+0.3**	
DAWY				IAmb	IAmb	16 12 49.7		
	comp=Z,9.2nm,1.1s							
EGAK	**Eagle**	**90.50**	**15**	P	**P**	**16 12 48.9**	**+0.1**	
EGAK				IAmb	IAmb	16 12 50.0		
	comp=Z,6.7nm,1.1s							
LZH	**Lanzhou**	**92.41**	**308**	*e*P	**P**	**16 13 02.0**	**+3.5**	
LZH				PP	PP	16 16 59.7	+8.5	
LZH				pmax	pmax			
	comp=Z,24nm,1.3s							
LZH				pmax	pmax			
	comp=Z,100nm,5.0s							
GTA	**Gaotai**	**96.65**	**310**	*e*P	**P**	**16 13 18.5**	**+0.9**	
GTA				pP	pwP	16 15 38.5	+3.7	
GTA				pmax	pmax			
	comp=Z,4.0nm,0.8s							
YKA	**Yellowknife Ar**	**97.52**	**25**	P	Pdif	16 13 19.5	-1.2	
	comp=Z,0.4nm,0.7s,baz=248,slow=4.2,SNR=5.9							
ZALV	**Zalesovo Beam**	**110.40**	**321**	PKiKP	**PKiKP**	**16 18 13.8**	**-1.1**	
	comp=Z,0.7nm,0.6s,baz=45,slow=0.2,SNR=3.6							
MKAR	**Makanchi Array**	**110.95**	**313**	PKiKP	**PKiKP**	**16 18 14.9**	**-1.4**	
	comp=Z,0.8nm,0.8s,baz=92,slow=1.8,SNR=7.1							
KSH	**Kashi**	**114.47**	**305**	PKP	PKPdf	16 18 20.2	-3.2	
BRVK	**Borovoye**	**119.03**	**320**		**PKPdf**	**16 18 30.5**	**-1.0**	
SUMG	**Summit**	**124.02**	**13**		**PKPdf**	**16 18 40.8**	**-0.3**	
GEYT	**Alibeck**	**128.32**	**302**	PKP	**PKiKP**	**16 18 50.5**	**-0.1**	
	comp=Z,2.6nm,0.8s,baz=124,slow=2.1,SNR=6.4							
ARCES	**ARCESS Array B**	**129.40**	**349**	PKP	**PKPdf**	**16 18 51.1**	**+0.2**	
	comp=Z,3.3nm,0.7s,baz=22,slow=2.1,SNR=13							
FINES	**FINESS Array B**	**136.13**	**343**	PKP	**PKiKP**	**16 19 04.8**	**-0.7**	
	comp=Z,3.9nm,0.9s,baz=31,slow=3.2,SNR=5.2							
FINES				SKPbc	**SKPbc**	**16 21 37.7**	**-0.9**	
	comp=Z,1.9nm,0.8s,baz=70,slow=2.2,SNR=4.8							
NB2	**NORSAR Subarra**	**139.52**	**352**	PKPdf	**PKPdf**	**16 19 02.8**	**-7.2**	
	comp=Z,7.6nm,1.7s,baz=14,slow=1.8							
NOA	**NORSAR Array B**	**139.52**	**352**	PKhKP	**PKPdf**	**16 19 02.4**	**-7.6**	
	comp=Z,0.6nm,0.7s,baz=5.8,slow=4.2,SNR=3.9							
SUW	**Suwalki**	**143.11**	**338**	PKPpre	PKPab	16 19 14.2	-0.5	
AKASG	**Malin Array Be**	**143.12**	**330**	PKP	PKPab	16 19 13.8	-0.9	
	comp=Z,12nm,0.7s,baz=42,slow=4.6,SNR=78							
MBAR	**Mbarara**	**143.74**	**237**		**PKPdf**	**16 19 19.3**	**+0.2**	
GAZ	**Gaziantep**	**144.81**	**305**	PKPbc	PKPbc	16 19 21.2	+0.3	
SORM	**Soroca**	**145.25**	**327**	⇑P	**PKPbc**	**16 19 21.4**	**-0.3**	
GKP	**Gorka Klasztor**	**145.60**	**343**	*e*PKP	**PKPbc**	**16 19 23.0**	**+0.5**	
ILGA	**Ilgaz**	**145.95**	**313**		**PKPdf**	**16 19 22.9**	**+0.7**	
BSEG	**Bad Segeberg**	**146.52**	**350**	*e*PKPbc	**PKPbc**	**16 19 25.2**	**+0.2**	
	baz=17,slow=2.3							
BRTR	**Keskin Array B**	**146.56**	**311**	PKPbc	**PKPbc**	**16 19 24.7**	**-1.1**	
	comp=Z,4.0nm,0.7s,baz=132,slow=4.0,SNR=20							
KWP	**Kalwaria Pacla**	**146.77**	**334**	*e*PKP	**PKPbc**	**16 19 25.9**	**0.0**	
KWP	**Kalwaria Pacla**	**146.77**	**334**		**PKPbc**	**16 19 24.5**	**-1.4**	
TLCR		**146.87**	**323**	⇑P	**PKPbc**	**16 19 26.3**	**0.0**	
ANTO	**Ankara**	**147.09**	**312**	⇓P	**PKPbc**	**16 19 27.3**	**+0.2**	
BURAR	**Bucovina Array**	**147.15**	**329**	⇑P	**PKPbc**	**16 19 27.6**	**+0.5**	
BIZ	**Bicaz**	**147.19**	**328**	⇑P	**PKPbc**	**16 19 27.4**	**+0.3**	
TESR	**Tescani**	**147.20**	**326**	⇑P	**PKPbc**	**16 19 27.2**	**0.0**	
RUE	**Ruedersdorf**	**147.21**	**345**	*e*PKPbc	**PKiKP**	**16 19 28.2**	**-0.3**	
	baz=17,slow=2.3							
CFR	**Carcaliu**	**147.25**	**323**	⇑P	**PKPbc**	**16 19 27.7**	**+0.4**	
OJC	**Ojcow**	**147.41**	**337**	*e*PKP	**PKPbc**	**16 19 27.2**	**-0.3**	
OJC	**Ojcow**	**147.41**	**337**		**PKPbc**	**16 19 27.0**	**-0.6**	
VRI	**Vrincioaia**	**147.58**	**325**	⇑P	**PKPbc**	**16 19 28.1**	**0.0**	
PLOR	**Plostina**	**147.63**	**326**	⇑P	**PKPbc**	**16 19 28.0**	**-0.3**	
HARR	**Harsova**	**147.67**	**323**	⇑P	**PKPbc**	**16 19 28.6**	**+0.2**	
RETH	**Rethem/Aller,**	**147.83**	**350**	*e*PKPbc	**PKPbc**	**16 19 28.5**	**0.0**	
	baz=17,slow=2.3							
RETH				*e*PKPab	**PKPab**	**16 19 33.2**	**-0.1**	
	baz=16,slow=4.3							
NIE	**Niedzica**	**147.89**	**336**	*e*PKP	**PKiKP**	**16 19 29.7**	**-0.4**	
OZUR		**147.92**	**327**	⇑P	**PKPdf**	**16 19 25.9**	**+0.9**	
NRDL	**Niedersach Rie**	**147.94**	**349**	*e*PKPbc	**PKPbc**	**16 19 28.8**	**+0.2**	
	baz=17,slow=2.3							
TRPA	**Tarpa**	**147.99**	**332**	⇓P	**PKPbc**	**16 19 29.0**	**-0.1**	
KSP	**Ksiaz**	**148.03**	**342**	*e*PKP	**PKiKP**	**16 19 29.8**	**-0.6**	
ISR	**Istrita**	**148.17**	**325**	⇑P	**PKiKP**	**16 19 32.6**	**+1.7**	
ASSE	**Asse, Remlinge**	**148.19**	**349**	*e*PKPbc	**PKPbc**	**16 19 29.6**	**+0.2**	
	baz=17,slow=2.3							
MLR	**Muntele Rosu**	**148.24**	**326**	⇑P	**PKPbc**	**16 19 29.8**	**-0.1**	
MLR	**Muntele Rosu**	**148.24**	**326**		**PKPbc**	**16 19 29.1**	**-0.9**	
OSTC	**Ostas**	**148.31**	**341**	⇑*e*PKP	**PKiKP**	**16 19 30.8**	**-0.1**	
OSTC				*e*PKPAB	**PKPab**	**16 19 36.6**	**+1.2**	
CHVC	**Chvalec**	**148.32**	**342**	⇑*e*PKP	**PKPbc**	**16 19 30.2**	**+0.3**	
UPC	**Upice**	**148.41**	**342**	⇑*e*PKP	**PKPbc**	**16 19 30.5**	**+0.5**	
LANS	**Liptovska Anna**	**148.42**	**337**	*e*PKP	**PKiKP**	**16 19 31.7**	**+0.4**	
DPC	**Dobruska-Polom**	**148.46**	**341**	⇑*e*PKP	**PKiKP**	**16 19 30.9**	**-0.4**	
DPC				*e*PKPAB	**PKPab**	**16 19 37.3**	**+1.2**	
CSS	**Mathiatis**	**148.46**	**303**		**PKPbc**	**16 19 29.8**	**-0.9**	
IBBN	**Ibbenburen**	**148.47**	**352**	*e*PKPbc	**PKPbc**	**16 19 30.3**	**+0.2**	
	baz=17,slow=2.3							
CLL	**Collm**	**148.48**	**346**	*e*PKPdf	**PKPdf**	**16 19 27.0**	**+1.3**	
CLL				*i* PKPbc	**PKiKP**	**16 19 31.0**	**-0.2**	
	comp=Z,27nm,1.0s							
CLL				*i* PKPab	**PKPab**	**16 19 36.7**	**+0.7**	
	comp=Z,11nm,1.1s							
CLL				*i* SKPdf	**SKPdf**	**16 21 59.3**	**-2.5**	
CLL	**Collm**	**148.48**	**346**		**PKPbc**	**16 19 30.1**	**-0.1**	
CLZ	**Clausthal**	**148.52**	**349**	*e*PKPbc	**PKPbc**	**16 19 30.6**	**+0.2**	
	baz=17,slow=2.3							
KRLC	**Kraliky**	**148.56**	**340**	⇑*e*PKP	**PKPbc**	**16 19 30.7**	**+0.2**	
KRLC				*e*PKPAB	**PKPab**	**16 19 36.5**	**0.0**	
CJR	**Cluj-Napoca**	**148.57**	**329**	⇑P	**PKPbc**	**16 19 30.6**	**0.0**	
MORC	**Moravsky Berou**	**148.57**	**339**	*e*PKP	**PKPbc**	**16 19 30.9**	**+0.4**	
MORC				*e*		16 19 37.0		
MORC	**Moravsky Berou**	**148.57**	**339**	⇑P	**PKiKP**	**16 19 31.1**	**-0.4**	
MORC	**Moravsky Berou**	**148.57**	**339**		**PKPbc**	**16 19 30.5**	**0.0**	
BRG	**Berggiesshubel**	**148.65**	**344**	*e*PKP	**PKPdf**	**16 19 27.1**	**+1.1**	
	comp=Z,8.4nm,1.6s							
BRG	**Berggiesshubel**	**148.65**	**344**	*i* PKP	**PKPbc**	**16 19 30.7**	**+0.1**	
	comp=Z,22nm,1.2s							
BRG	**Berggiesshubel**	**148.65**	**344**	*i* PKP	**PKPab**	**16 19 37.0**	**+0.2**	
	comp=Z,9.0nm,0.9s							
BRG				*e*pPKP	**pPKPab**	**16 21 53.9**	**+2.0**	
	comp=Z,2.5nm,0.7s							
BRG				*e*SKP		16 22 03.3		
	comp=Z,5.3nm,1.0s							
BRG	**Berggiesshubel**	**148.65**	**344**	*e*PKPbc	**PKPbc**	**16 19 30.8**	**+0.2**	
	baz=17,slow=2.3							
BRG				*e*PKPab	**PKPab**	**16 19 36.8**	**0.0**	
	baz=16,slow=4.3							
VOIR		**148.75**	**326**	⇑P	**PKiKP**	**16 19 32.1**	**0.0**	
FBE	**Freiberg**	**148.75**	**345**	*e*PKPbc	**PKPbc**	**16 19 31.3**	**+0.4**	
	baz=17,slow=2.3							
FBE				*e*PKPab	**PKPab**	**16 19 37.7**	**+0.5**	
	baz=16,slow=4.3							
PVCC	**Panska Ves**	**148.80**	**343**	⇑*e*PKP	**PKiKP**	**16 19 31.5**	**-0.4**	
NEUB	**Neuenburg**	**148.84**	**347**	*e*PKPbc	**PKPbc**	**16 19 31.3**	**+0.3**	
	baz=17,slow=2.3							
NEUB				*e*PKPab	**PKPab**	**16 19 37.6**	**0.0**	
	baz=16,slow=4.3							
GTTG	**Gottingen**	**148.88**	**349**	*e*PKPbc	**PKPbc**	**16 19 31.4**	**+0.3**	
	baz=17,slow=2.3							
ARR	**Arges**	**149.01**	**327**	⇑P	**PKiKP**	**16 19 32.8**	**+0.1**	
RAZG	**Razgrad**	**149.17**	**322**	⇑P	**PKPbc**	**16 19 32.1**	**-0.1**	
VYHS	**Vyhne**	**149.20**	**337**	*e*PKP	**PKiKP**	**16 19 32.6**	**-0.2**	
VYHS				*e*		16 19 39.9		
PSZ	**Piszkesteto**	**149.26**	**335**	⇓P	**PKPbc**	**16 19 32.5**	**+0.2**	
PSZ	**Piszkesteto**	**149.26**	**335**		**PKPbc**	**16 19 32.0**	**-0.3**	
VRAC	**Vranov**	**149.28**	**340**	*e*PKP	**PKPbc**	**16 19 32.5**	**+0.3**	
VRAC				*e*		16 19 40.4		
VRAC	**Vranov**	**149.28**	**340**	⇑P	**PKiKP**	**16 19 32.8**	**-0.2**	
GOPC	**GO Pecny, Ondr**	**149.29**	**342**	⇑*e*PKP	**PKPbc**	**16 19 32.5**	**+0.3**	
PRU	**Pruhonice**	**149.29**	**343**	⇑*e*PKP	**PKPbc**	**16 19 32.5**	**+0.3**	
JAVC	**Velka Javorina**	**149.31**	**338**	*e*PKP	**PKiKP**	**16 19 33.8**	**+0.7**	
JAVC				*e*		16 19 41.3		
BUG	**Bochum--Univer**	**149.39**	**352**	*e*PKPbc	**PKPbc**	**16 19 32.4**	**+0.1**	
	baz=17,slow=2.3							
MOX	**Moxa**	**149.41**	**347**	*e*PKPbc	**PKPbc**	**16 19 32.3**	**-0.1**	
	baz=17,slow=2.3							
MOX				*e*PKPab	**PKPab**	**16 19 40.0**	**0.0**	
	baz=16,slow=4.3							
TANN	**Tannenbergstha**	**149.44**	**345**	*e*PKPbc	**PKPbc**	**16 19 32.7**	**+0.1**	
	baz=17,slow=2.3							
TANN				*e*PKPab	**PKPab**	**16 19 40.5**	**+0.4**	
	baz=16,slow=4.3							
PLN	**Plauen**	**149.44**	**346**	*e*PKPbc	**PKPbc**	**16 19 32.8**	**+0.2**	
	baz=17,slow=2.3							
PLN				*e*PKPab	**PKPab**	**16 19 40.3**	**+0.2**	
	baz=16,slow=4.3							
GUNZ	**Gunzen**	**149.51**	**346**	*e*PKPbc	**PKPbc**	**16 19 33.0**	**+0.2**	
	baz=17,slow=2.3							
GUNZ				*e*PKPab	**PKPab**	**16 19 40.8**	**+0.3**	
	baz=16,slow=4.3							
KRUC	**Moravsky**	**149.56**	**340**	*e*PKP	**PKPbc**	**16 19 33.1**	**+0.2**	
KRUC				*e*		16 19 41.2		
UBBA	**Unterbreizbach**	**149.57**	**349**	*e*PKPbc	**PKPbc**	**16 19 32.7**	**0.0**	
	baz=17,slow=2.3							
WERN	**Wernitzgruen**	**149.57**	**345**	*e*PKPbc	**PKPbc**	**16 19 33.1**	**+0.2**	
	baz=17,slow=2.3							
WERN				*e*PKPab	**PKPab**	**16 19 41.0**	**+0.3**	
	baz=16,slow=4.3							
NKC	**Novy Kostel**	**149.61**	**345**	⇑*e*PKP	**PKPbc**	**16 19 33.2**	**+0.2**	
PBCC	**Pribram**	**149.72**	**343**	⇑*e*PKP	**PKPbc**	**16 19 33.4**	**+0.2**	
PBCC				*e*PKPAB	**PKPab**	**16 19 41.5**	**+0.2**	
SIRR	**Siria**	**149.80**	**331**	⇑P	**PKPbc**	**16 19 31.7**	**-1.9**	
MODS	**Modra-Piesok**	**149.86**	**338**	*e*PKP	**PKPbc**	**16 19 33.6**	**0.0**	
MODS				*e*		16 19 42.2		
MANZ	**Manzenberg**	**149.92**	**346**	*e*PKPbc	**PKPbc**	**16 19 33.8**	**+0.1**	
	baz=17,slow=2.3							
GZR	**Gura Zlata**	**149.92**	**329**	⇓P	**PKPbc**	**16 19 33.2**	**-0.7**	
ZST	**Bratislava**	**150.07**	**338**	*e*PKP	**PKPbc**	**16 19 33.5**	**-0.6**	
ROTZ	**Rotzenmuhle**	**150.10**	**345**	*e*PKPbc	**PKPbc**	**16 19 34.3**	**+0.1**	
	baz=17,slow=2.3							
AHRW	**Bad Neuenahr-A**	**150.29**	**352**	*e*PKPbc	**PKPbc**	**16 19 34.4**	**-0.1**	
	baz=17,slow=2.3							
AHRW				*e*PKPab	**PKPab**	**16 19 43.4**	**-0.2**	
	baz=16,slow=4.3							
BZS	**Buzias**	**150.31**	**330**	⇑P	**PKPbc**	**16 19 34.6**	**-0.1**	
KHC	**Kasperske Hory**	**150.34**	**343**	⇑*e*PKP	**PKPbc**	**16 19 34.7**	**0.0**	
KHC				*e*PKPAB	**PKPab**	**16 19 44.9**	**+1.0**	
KHC	**Kasperske Hory**	**150.34**	**343**		**PKPbc**	**16 19 34.5**	**-0.3**	
KHC					**PKPab**	**16 19 43.6**	**-0.3**	
PLVB	**Pleven**	**150.34**	**324**	⇑P	**PKPbc**	**16 19 35.0**	**+0.2**	
MEM	**Membach**	**150.35**	**354**	PKiKP	**PKPbc**	**16 19 34.5**	**-0.1**	
GRF	**Grafenberg Arr**	**150.39**	**346**	*e*PKPbc	**PKPbc**	**16 19 34.9**	**+0.1**	
	baz=17,slow=2.3							
GRF				*e*PKPab	**PKPab**	**16 19 44.5**	**+0.4**	
	baz=16,slow=4.3							
TNS	**Taunus Mts**	**150.41**	**350**	*e*PKPbc	**PKPbc**	**16 19 35.0**	**+0.2**	
	baz=17,slow=2.3							
BSTI	**Sart Tilman**	**150.42**	**354**	PKiKP	**PKiKP**	**16 19 35.1**	**-0.2**	
WET	**Wettzell**	**150.51**	**344**	*e*PKPbc	**PKPbc**	**16 19 35.2**	**0.0**	
	baz=17,slow=2.3							
WET				*e*PKPab	**PKPab**	**16 19 45.3**	**+0.6**	
	baz=16,slow=4.3							
GEC2	**GERESS Array S**	**150.56**	**343**	*e*PKPbc	**PKPbc**	**16 19 35.2**	**-0.1**	
	baz=17,slow=2.3							
GERES	**GERESS Array B**	**150.56**	**343**	PKPbc	**PKPbc**	**16 19 35.5**	**+0.1**	
	comp=Z,6.3nm,0.8s,baz=45,slow=2.1,SNR=34							
CONA	**Conrad Observa**	**150.73**	**339**	*i* PKiKP	**PKiKP**	**16 19 36.0**	**-0.1**	
	comp=Z,13nm,0.8s,SNR=7.2							
CONA				*i* PKPab	**PKPab**	**16 19 46.8**	**+1.1**	
	comp=Z,16nm,1.5s							
BMRD	**Maredsous**	**150.77**	**355**	PKiKP	**PKPbc**	**16 19 35.8**	**+0.2**	
DOU	**Dourbes**	**150.99**	**355**	PKiKP	**PKPbc**	**16 19 36.0**	**-0.1**	
WLF	**Walferdange**	**151.27**	**353**	*e*PKPbc	**PKiKP**	**16 19 37.2**	**+0.2**	
	baz=17,slow=2.3							
WLF	**Walferdange**	**151.27**	**353**		**PKPbc**	**16 19 36.7**	**-0.1**	
MOA	**Molln**	**151.30**	**341**	*i* PKPdf	**PKPdf**	**16 19 26.8**	**-3.4**	
	comp=Z,3.0nm,1.0s							
MOA				*i* PKiKP	**PKPbc**	**16 19 37.0**	**0.0**	
	comp=Z,9.8nm,1.6s							
MOA				*i* PKPab	**PKPab**	**16 19 46.7**	**-1.3**	
	comp=Z,9.2nm,1.2s							
ARSA	**Arzberg**	**151.43**	**339**	*e*PKPdf	**PKPdf**	**16 19 28.0**	**-2.5**	
	comp=Z,3.7nm,1.4s							
ARSA				*i* PKPbc	**PKPbc**	**16 19 36.3**	**-0.9**	
	comp=Z,3.1nm,1.0s							
VTS	**Vitosha**	**151.61**	**324**	⇑P	**PKPbc**	**16 19 38.0**	**0.0**	
VTS	**Vitosha**	**151.61**	**324**		**PKPbc**	**16 19 36.9**	**-1.0**	
VTS				PKPab	**PKPab**	**16 19 50.3**	**+0.6**	
STU	**Stuttgart**	**151.68**	**348**	*e*PKPbc	**PKiKP**	**16 19 37.9**	**-0.1**	
	baz=17,slow=2.3							
FUR	**Furstenfeldbru**	**151.81**	**345**	*e*PKPab	**PKPab**	**16 19 50.8**	**+0.6**	
	baz=16,slow=4.3							
RJOB	**Jochberg**	**151.82**	**343**	*e*PKPab	**PKPab**	**16 19 51.2**	**+0.9**	
	baz=16,slow=4.3							
SOKA	**Soboth**	**152.09**	**339**	*i* PKPdf	**PKPdf**	**16 19 31.1**	**-0.4**	
	comp=Z,3.4nm,1.2s							
SOKA				*i* PKiKP	**PKPbc**	**16 19 38.3**	**-0.5**	
	comp=Z,9.9nm,1.1s,SNR=5.5							
SOKA				*i* PKPab	**PKPab**	**16 19 51.4**	**-0.1**	
BFO	**Black Forest**	**152.26**	**349**	*e*PKPbc	**PKPbc**	**16 19 38.8**	**-0.3**	
	baz=17,slow=2.3							
BFO				*e*PKPab	**PKPab**	**16 19 52.0**	**0.0**	
	baz=16,slow=4.3							
BFO	**Black Forest**	**152.26**	**349**		**PKPbc**	**16 19 38.3**	**-0.7**	
BFO				PKPab	**PKPab**	**16 19 51.7**	**-0.3**	
KBA	**Koelnbreinsper**	**152.27**	**342**	*i* PKPbc	**PKPbc**	**16 19 38.6**	**-0.7**	
	comp=Z,8.2nm,0.9s							
OBKA	**Obir**	**152.40**	**340**	*i* PKPab	**PKPab**	**16 19 51.4**	**-1.4**	
	comp=Z,7.8nm,1.1s							
WATA	**Walderalm**	**152.51**	**344**	*i* PKiKP	**PKiKP**	**16 19 40.0**	**+0.1**	
	comp=Z,4.3nm,0.7s							
WATA				*i* PKPab	**PKPab**	**16 19 54.2**	**+0.9**	
	comp=Z,11nm,1.2s							
UBR	**Ueberruh**	**152.54**	**347**	*e*PKPbc	**PKPbc**	**16 19 39.3**	**-0.5**	
	baz=17,slow=2.3							
WTTA	**Wattenberg**	**152.57**	**344**	*i* PKiKP	**PKPbc**	**16 19 39.8**	**-0.2**	
	comp=Z,14nm,1.2s							
RETA	**Reutte**	**152.57**	**345**	*i* PKiKP	**PKiKP**	**16 19 40.4**	**+0.5**	
	comp=Z,1.7nm,0.4s							
RETA				*i* PKPab	**PKPab**	**16 19 54.1**	**+0.7**	
	comp=Z,9.0nm,1.1s							
MYKA	**Terra Mystica**	**152.58**	**341**	*i* PKPbc	**PKPbc**	**16 19 39.1**	**-0.7**	
	comp=Z,4.5nm,0.9s							
MOTA	**Moosalm**	**152.62**	**345**	*i* PKiKP	**PKPbc**	**16 19 39.9**	**-0.2**	
	comp=Z,11nm,1.0s							
MOTA				*i* PKPab	**PKPab**	**16 19 54.4**	**+0.6**	
	comp=Z,11nm,1.3s							
PDKS	**Podkum**	**152.64**	**338**	*i* PKPbc	**PKPbc**	**16 19 39.9**	**-0.1**	
SQTA	**Sankt Quirin**	**152.71**	**345**	*i* PKPdf	**PKPdf**	**16 19 29.9**	**-2.6**	
	comp=Z,1.0nm,0.5s							
SQTA				*i* PKiKP	**PKPbc**	**16 19 40.3**	**+0.1**	
	comp=Z,8.9nm,0.8s							
SQTA				*i* PKPab	**PKPab**	**16 19 55.0**	**+0.8**	
	comp=Z,5.8nm,1.0s							
ABTA	**Abfaltersbach**	**152.81**	**342**	*e*PKPdf	**PKPdf**	**16 19 31.8**	**-0.8**	
	comp=Z,4.3nm,1.2s							
ABTA				*i* PKPbc	**PKPbc**	**16 19 39.7**	**-0.7**	
	comp=Z,8.4nm,0.8s							
ABTA				*i* PKPab	**PKPab**	**16 19 54.7**	**+0.1**	
	comp=Z,9.6nm,1.2s							
CRNS	**Crni Vrh**	**152.87**	**339**	*i* PKPbc	**PKPbc**	**16 19 40.0**	**-0.5**	
DAVA	**Damuels**	**152.96**	**347**	*i* PKiKP	**PKiKP**	**16 19 41.3**	**+0.4**	
	comp=Z,11nm,1.1s							
DAVA				*i* PKPab	**PKPab**	**16 19 55.1**	**-0.1**	
	comp=Z,9.8nm,1.5s							
FETA	**Feichten**	**153.02**	**345**	*i* PKPdf	**PKPdf**	**16 19 33.1**	**+0.2**	
	comp=Z,3.1nm,1.0s							
FETA				*i* PKiKP	**PKPbc**	**16 19 40.8**	**-0.2**	
	comp=Z,5.5nm,1.0s							
FETA				*i* PKPab	**PKPab**	**16 19 56.2**	**+0.7**	
	comp=Z,7.6nm,1.5s							
FUORN	**Ofenpass-Fuorn**	**153.50**	**346**		**PKPbc**	**16 19 41.2**	**-0.9**	
FUORN					**PKPab**	**16 19 57.9**	**+0.2**	
LIT	**Litokhoron**	**153.68**	**321**		**PKPab**	**16 19 57.7**	**-0.7**	
FNA	**Florina**	**153.87**	**323**		**PKPbc**	**16 19 41.8**	**-1.0**	
ESDC	**Sonseca Array**	**161.08**	**12**	PKPab	**PKPab**	**16 20 29.3**	**-1.2**	
	comp=Z,3.4nm,1.1s,baz=345,slow=4.4,SNR=12							
TORD	**Torodi Ar. Bea**	**171.99**	**185**	PKP	**PKPdf**	**16 19 50.6**	**-1.2**	
	comp=Z,1.4nm,0.9s,baz=194,slow=0.7,SNR=6.2							
TORD				PKPab	**PKPab**	**16 21 19.4**	**+0.3**	
	comp=Z,0.5nm,0.7s,baz=172,slow=4.1,SNR=2.1							

*SOME **07** 16:15:38.7, 40.47N×77.13E, h5km*
*NNC **07** 16:15:40.3±0.8, 40.51N×77.12E, h0km, mb3.7, mpv3.3,*
Error ellipse: s-maj=5.1km s-min=3.7km az=174.0
*KRNET **07** 16:15:42.9±0.1, 40.64N×76.98E, h13km, mb2.9*
ISC 07 16:15:39.0±2.2, 40.47N±0.08×76.94E±0.04, h6km±17km,
n49, σ1.953/77, 19C-16D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.66**	**6**	⇑*i*P		**Pb**		**16 16 11.0**	**+0.8**
KDJ	baz=6.0			⇑*i*S		**Sg**		**16 16 31.6**	**-0.9**
ULHL	**Ulahol**	**1.85**	**344**	⇑*i*P		**Pb**		**16 16 14.6**	**+1.3**
ULHL	baz=41			⇑*i*S		**Sg**		**16 16 37.8**	**-0.6**
KZA	**Kyzart**	**2.05**	**322**	⇑*i*P		**Pb**		**16 16 19.2**	**+2.3**
KZA	baz=18			⇑*i*S		**Sg**		**16 16 45.0**	**+0.1**
PRZ	**Przheval'sk**	**2.29**	**28**	⇑*i*P		**Pb**		**16 16 21.5**	**+0.7**
PRZ	baz=30			⇑*i*S		**Sg**		**16 16 50.1**	**-2.4**
ANVS	**Anan'yevo**	**2.37**	**13**	⇑*i*P		**Pb**		**16 16 22.6**	**+0.4**
ANVS	baz=13			⇑*i*S		**Sg**		**16 16 52.0**	**-3.2**
UCH	**Uchtor**	**2.53**	**315**	⇑*i*P		**Pb**		**16 16 26.1**	**+1.0**
UCH	baz=11			⇑*i*S		**Sb**		**16 16 57.8**	**+1.1**
TNSS	**Tian-Shan**	**2.56**	**0**	*e*P		**Pb**		**16 16 26.5**	**+0.9**
TNSS	25nm,0.4s			*e*S		**Sg**		**16 17 01.2**	**-0.2**
TNSS	28nm,0.6s **Tian-Shan**	**2.56**	**0**	Pg		**Pb**		**16 16 27.1**	**+1.5**
TNSS	25nm,0.4s			Lg		Lg		16 17 02.2	
IZV

	27nm,0.1s							
PDGK	**Podgornoye**	**3.43**	**33**	Pg	**Pb**	**16 16 40.8**	**+0.7**
	2.6nm,0.4s							
PDGK				Lg	Lg	16 17 25.0		
	8.1nm,0.8s							
PDGK	**Podgornoye**	**3.43**	**33**	⇓Pg	**Pb**	**16 16 40.9**	**+0.7**
	2.8nm,0.5s							
PDGK				⇑Lg	Lg	16 17 25.3		
	20nm,0.9s							
KUU	**Kurty**	**3.45**	**353**	*e*P	**Pb**	**16 16 42.2**	**+1.7**
	1.5nm,0.3s							
KUU				*e*S	**Sg**	**16 17 28.0**	**-1.7**
	16nm,0.7s							
KUU	**Kurty**	**3.45**	**353**	Pg	**Pb**	**16 16 42.2**	**+1.7**
	1.7nm,0.5s							
KUU				Lg	Lg	16 17 27.8		
	16nm,0.7s							
MNBS	**Baschi**	**3.76**	**16**	*e*P	**Pb**	**16 16 47.4**	**+1.5**
	3.1nm,0.3s							
MNBS				*e*S	**Sg**	**16 17 37.1**	**-2.7**
	16nm,0.3s							
MNBS	**Baschi**	**3.76**	**16**	Pg	**Pb**	**16 16 47.6**	**+1.7**
	3.1nm,0.3s							
MNBS				Lg	Lg	16 17 36.9		
	16nm,0.3s							
ARXS	**Arharly**	**3.79**	**10**	*e*P	**Pb**	**16 16 47.9**	**+1.5**
	5.9nm,0.4s							
ARXS				*e*S	**Sg**	**16 17 37.6**	**-3.2**
	7.3nm,0.7s							
ARXS	**Arharly**	**3.79**	**10**	Pg	**Pb**	**16 16 48.2**	**+1.8**
	5.9nm,0.4s							
ARXS				Lg	Lg	16 17 37.5		
	7.3nm,0.7s							
KK31	**Karatay Array**	**5.48**	**301**	⇑Pg	Pb	16 17 21.8	+6.7	
	1.4nm,0.8s,baz=0.0,slow=0.1,SNR=6.6							
KK31				⇑Lg	Lg	16 18 37.7		
	1.3nm,0.7s,baz=0.0,slow=0.1,SNR=6.5							

IDC 07 16:17:33.7±3.2, 1.79N×94.69E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.3/40, mbtmp3.5/4, ML2.6/1, Error ellipse: s-maj=124.9km s-min=31.7km az=61.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.08**	**14**	Pn	Pn	16 21 33.8	-0.4
	0.0nm,0.3s,baz=206,slow=10.0,SNR=5.8						
H08S2	**Diego Garcia H**	**24.05**	**247**	T	T	16 48 52.8	
	baz=66,slow=75,SNR=20						
H08S3	**Diego Garcia H**	**24.05**	**247**	T	T	16 48 55.6	
	baz=66,slow=75,SNR=25						
H08S1	**Diego Carcia H**	**24.06**	**247**	T	T	16 49 10.7	
	baz=66,slow=75,SNR=24						
ASAR	**Alice Springs**	**45.76**	**126**	P	P	16 25 57.2	-0.1
	0.2nm,0.7s,baz=292,slow=7.2,SNR=1.8						
MKAR	**Makanchi Array**	**46.12**	**348**	P	P	16 26 00.2	+0.4
	0.7nm,0.5s,baz=165,slow=8.4,SNR=9.0						
ZALV	**Zalesovo Beam**	**52.62**	**353**	P	P	16 26 48.6	-0.7
	0.8nm,0.5s,baz=183,slow=8.2,SNR=3.7						

*ATH **07** 16:24:18.3, 38.19N×20.37E, h14km, ML2.8/14, Error ellipse: s-maj=1.5km s-min=0.9km az=48.0*
*THE **07** 16:24:19.1, 38.20N×20.41E, h11km, ML2.8/6, Error ellipse: s-maj=0.7km s-min=0.3km az=248.0*
ISC 07 16:24:18.1±0.8, 38.20N±0.03×20.36E±0.03, h15km±3km, n70, σ0972/108, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.01**	**284**	P	**Pg**	**16 24 21.2**	**+0.4**
KEF3				S	**Sg**	**16 24 23.0**	**+0.4**
CHV1	**Chavriata, Kef**	**0.02**	**135**	P	**Pg**	**16 24 21.1**	**+0.3**
CHV1				S	**Sg**	**16 24 22.4**	**-0.2**
AGT1	**Agia Thekli**	**0.05**	**21**	P	**Pg**	**16 24 21.3**	**+0.3**
AGT1				S	**Sg**	**16 24 22.9**	**0.0**
LXRA	**Lixouri, Kepha**	**0.06**	**91**	P	**Pg**	**16 24 21.2**	**+0.1**
LXRA				S	**Sg**	**16 24 22.8**	**-0.2**
KEF4	**Livadi, Kephal**	**0.08**	**42**	P	**Pg**	**16 24 21.4**	**+0.2**
KEF4				S	**Sg**	**16 24 23.6**	**+0.4**
ARGA	**Argostoli. Kep**	**0.10**	**104**	P	**Pg**	**16 24 21.4**	**0.0**
ARGA				S	**Sg**	**16 24 23.1**	**-0.4**
ARG2	**Argostoli**	**0.10**	**102**	P	**Pg**	**16 24 21.4**	**-0.1**
ARG2				S	**Sg**	**16 24 23.0**	**-0.7**
KEF2	**Argostoli. Kep**	**0.11**	**109**	P	**Pg**	**16 24 21.5**	**-0.1**
KEF2				S	**Sg**	**16 24 23.4**	**-0.4**
KEF1	**Kardakata, Kep**	**0.12**	**49**	P	**Pg**	**16 24 21.7**	**+0.1**
KEF1				S	**Sg**	**16 24 23.4**	**-0.5**
VLS	**Valsamata**	**0.18**	**97**	P	**Pg**	**16 24 22.4**	**-0.2**
VLS				S	**Sg**	**16 24 24.9**	**-0.6**
VLS	**Valsamata**	**0.18**	**97**	P	**Pg**	**16 24 22.4**	**-0.2**
VLS				S	**Sg**	**16 24 25.0**	**-0.5**
VLS				AML	AML	16 24 25.1	
	comp=E,35856μm,0.2s						
VLS				AML	AML	16 24 25.2	
	comp=N,35417μm,0.2s						
VSK1	**VASILIKIADES**	**0.26**	**38**	P	**Pg**	**16 24 24.1**	**+0.2**
VSK1				S	**Sg**	**16 24 28.0**	**+0.2**
FSK	**Fiskardo**	**0.30**	**32**	P	**Pg**	**16 24 24.8**	**+0.3**
FSK				S	**Sg**	**16 24 29.3**	**+0.4**
	comp=N,8μm,0.2s						
FSK	**Fiskardo**	**0.30**	**32**	P	**Pg**	**16 24 24.8**	**+0.3**
FSK				S	**Sb**	**16 24 29.8**	**-0.3**
FSK				AML	AML	16 24 29.9	
	comp=N,12062μm,0.2s						
FSK				AML	AML	16 24 30.1	
	comp=E,20500μm,0.2s						
KFL	**Anninata**	**0.35**	**105**	P	**Pg**	**16 24 25.3**	**0.0**
KFL				S	**Sg**	**16 24 30.1**	**-0.1**
KFL	**Anninata**	**0.35**	**105**	P	**Pg**	**16 24 25.3**	**0.0**
KFL				S	**Sg**	**16 24 30.6**	**+0.3**
KFL				AML	AML	16 24 30.9	
	comp=E,28174μm,0.4s						
KFL				AML	AML	16 24 32.8	
	comp=N,12861μm,0.3s						
EVGI	**Lefkada island**	**0.48**	**29**	P	**Pg**	**16 24 27.8**	**+0.1**
EVGI				S	**Sb**	**16 24 35.3**	**+0.2**
EVGI	**Lefkada island**	**0.48**	**29**	P	**Pg**	**16 24 28.1**	**+0.4**
EVGI				S	**Sb**	**16 24 35.4**	**+0.3**
MGNA	**Meganis**	**0.57**	**37**	P	**Pg**	**16 24 29.4**	**0.0**
MGNA				S	**Sb**	**16 24 37.7**	**+0.1**
MGNA				AML	AML	16 24 38.2	
	comp=E,3421μm,0.1s						
MGNA				AML	AML	16 24 45.9	
	comp=N,1882μm,0.3s						
LKD2	**Lefkada island**	**0.63**	**22**	P	**Pg**	**16 24 30.6**	**0.0**
LKD2	**Lefkada island**	**0.63**	**22**	P	**Pg**	**16 24 30.6**	**0.0**
KRI1	**kERI**	**0.65**	**146**	P	**Pg**	**16 24 30.6**	**-0.2**
TSLK	**Tsoukalades, L**	**0.67**	**20**	P	**Pg**	**16 24 31.3**	**+0.1**
VTN	**Vitineika**	**0.71**	**113**	P	**Pg**	**16 24 32.1**	**+0.1**
VTN				S	**Sb**	**16 24 42.1**	**+0.3**
RLS	**Riolos of Patr**	**0.88**	**99**	P	**Pb**	**16 24 34.6**	**-0.5**
RLS	**Riolos of Patr**	**0.88**	**99**	P	**Pb**	**16 24 34.7**	**-0.5**
RLS				S	**Sg**	**16 24 47.3**	**+0.4**
RLS				AML	AML	16 24 50.3	
	comp=E,865μm,0.6s						
RLS				AML	AML	16 24 52.8	
	comp=N,1028μm,0.4s						
DRO	**Drossia**	**1.09**	**103**	P	**Pb**	**16 24 38.7**	**0.0**
DRO	**Drossia**	**1.09**	**103**	P	**Pb**	**16 24 38.5**	**-0.2**
DRO				S	**Sn**	**16 24 54.9**	**+1.1**
EFP	**Efpalio**	**1.24**	**79**	P	**Pn**	**16 24 40.9**	**0.0**
EFP				AML	AML	16 25 06.4	
	comp=N,733μm,0.3s						
EFP				AML	AML	16 25 06.9	
	comp=E,1141μm,0.4s						
AMT	**Artemida-Makis**	**1.26**	**122**	P	**Pn**	**16 24 41.5**	**+0.3**
AMT				S	**Sg**	**16 24 59.2**	**+0.4**
	comp=E,608nm,0.6s						
AMT	**Artemida-Makis**	**1.26**	**122**	P	**Pg**	**16 24 43.0**	**+0.6**
LAKA	**Lakka**	**1.27**	**88**	P	**Pn**	**16 24 41.4**	**0.0**
LAKA				S	**Sb**	**16 24 58.1**	**+0.1**
LAKA	**Lakka**	**1.27**	**88**	P	**Pn**	**16 24 41.6**	**+0.2**
LAKA				S	**Sg**	**16 24 59.6**	**+0.2**
LAKA				AML	AML	16 25 05.1	
	comp=E,398μm,0.4s						
LAKA				AML	AML	16 25 09.0	
	comp=N,528μm,0.6s						
ANX	**Ano Chora**	**1.29**	**72**	P	**Pb**	**16 24 42.1**	**0.0**
ANX	**Ano Chora**	**1.29**	**72**	P	**Pb**	**16 24 42.2**	**0.0**
IGT	**Igoumenitsa**	**1.33**	**359**	P	**Pb**	**16 24 43.3**	**+0.5**
IGT				S	**Sg**	**16 25 01.2**	**+0.1**
	comp=N,218nm,0.3s						

IGT	**Igoumenitsa**	**1.33**	**359**	P	**Pg**	**16 24 43.6**	**-0.2**
EVR	**Evrytania**	**1.34**	**57**	P	**Pn**	**16 24 42.7**	**+0.3**
EVR				S	**Sg**	**16 25 01.1**	**-0.4**
	comp=N,198nm,0.6s						
EVR	**Evrytania**	**1.34**	**57**	P	**Pn**	**16 24 42.8**	**+0.4**
SERG	**Sergoula**	**1.35**	**80**	P	**Pn**	**16 24 42.5**	**+0.1**
SERG				S	**Sb**	**16 25 01.1**	**+0.9**
	comp=N,410nm,0.5s						
SERG	**Sergoula**	**1.35**	**80**	P	**Pn**	**16 24 42.7**	**+0.2**
SERG				AML	AML	16 25 08.2	
	comp=E,764μm,0.5s						
SERG				AML	AML	16 25 08.9	
	comp=N,855μm,0.6s						
TRIZ	**Trizonia**	**1.36**	**83**	P	**Pn**	**16 24 42.5**	**0.0**
TRIZ				S	**Sb**	**16 25 00.7**	**+0.3**
	comp=N,340nm,0.4s						
TRIZ	**Trizonia**	**1.36**	**83**	P	**Pn**	**16 24 42.7**	**+0.2**
TRIZ				S	**Sg**	**16 25 03.8**	**+1.9**
ALIK	**Aliki, Aigiali**	**1.38**	**87**	P	**Pn**	**16 24 43.1**	**+0.3**
ALIK				S	**Sb**	**16 25 01.3**	**+0.3**
KALE	**Kalithea**	**1.41**	**82**	P	**Pn**	**16 24 43.5**	**+0.2**
KALE	**Kalithea**	**1.41**	**82**	P	**Pn**	**16 24 43.4**	**+0.1**
KALE				AML	AML	16 25 11.4	
	comp=N,818μm,0.5s						
KALE				AML	AML	16 25 13.5	
	comp=E,526μm,0.5s						
KLV	**Kalavryta, Ach**	**1.42**	**96**	P	**Pn**	**16 24 43.4**	**0.0**
KLV				S	**Sb**	**16 25 02.3**	**0.0**
KLV	**Kalavryta, Ach**	**1.42**	**96**	P	**Pb**	**16 24 44.2**	**-0.2**
KLV				S	**Sg**	**16 25 04.0**	**0.0**
KLV				AML	AML	16 25 14.4	
	comp=N,276μm,0.9s						
KLV				AML	AML	16 25 17.6	
	comp=E,313μm,0.8s						
KEK	**Kerkira**	**1.57**	**344**	P	**Pb**	**16 24 47.2**	**+0.3**
KASA	**Kassiopi**	**1.58**	**348**	P	**Pg**	**16 24 48.1**	**-0.4**
ITM	**Ithomi**	**1.61**	**129**	P	**Pb**	**16 24 47.7**	**+0.2**
ITM				S	**Sg**	**16 25 10.4**	**+0.5**
MAKR	**Makrakomi, Fth**	**1.61**	**59**	P	**Pb**	**16 24 48.4**	**+0.9**
MAKR				AML	AML	16 25 22.2	
	comp=N,483μm,0.4s						
MAKR				AML	AML	16 25 22.5	
	comp=E,628μm,0.4s						
TRIP	**Tripoli**	**1.66**	**113**	P	**Pg**	**16 24 49.8**	**-0.1**
TRIP				AML	AML	16 25 29.7	
	comp=N,415μm,0.9s						
TRIP				AML	AML	16 25 30.6	
	comp=E,293μm,0.6s						
PYL	**PYLOS**	**1.70**	**139**	P	**Pb**	**16 24 48.5**	**-0.6**
AGG	**Agios Georgios**	**1.75**	**61**	P	**Pb**	**16 24 50.4**	**+0.5**
AGG				AML	AML	16 25 20.8	
	comp=N,227μm,0.4s						
AGG				AML	AML	16 25 22.1	
	comp=E,309μm,0.6s						
THL	**Klokotos Trika**	**1.88**	**43**	P	**Pg**	**16 24 53.3**	**-0.8**
THL				AML	AML	16 25 25.9	
	comp=N,198μm,0.5s						
THL				AML	AML	16 25 26.2	
	comp=E,202μm,0.7s						
PROD	**Prodromos**	**2.00**	**88**	P	**Pb**	**16 24 53.9**	**-0.3**
VIL2	**Platees**	**2.29**	**89**	P	**Pb**	**16 24 58.6**	**-0.6**
DID	**Didima**	**2.38**	**106**	P	**Pb**	**16 24 59.8**	**-0.9**
SKIA	**Skiathos**	**2.62**	**67**	P	**Pn**	**16 25 02.4**	**+2.6**
STIP	**Stip**	**3.76**	**21**	*i* Pn	**Pb**	**16 25 23.0**	**-1.2**
STIP	**Stip**	**3.76**	**21**	*i* Pn	**Pb**	**16 25 23.0**	**-1.2**
SG1	**Sgolgore (BA)**	**3.88**	**314**	*e*Pn	**Pn**	**16 25 19.3**	**+2.1**
DBRK	**Dubrovnik**	**4.77**	**340**	*e*Pn	**Pn**	**16 25 30.0**	**+0.6**
DBRK				Sn	**Sn**	**16 26 23.1**	**-1.4**
STON	**Ston**	**5.09**	**337**	*e*Pn	**Pn**	**16 25 34.3**	**+0.6**
MAKA	**Makarska**	**5.68**	**335**	*e*Pn	**Pn**	**16 25 43.1**	**+1.2**
MAKA				Sn	**Sn**	**16 26 44.3**	**-2.5**
ZIRJ	**Zirje**	**6.51**	**328**	*e*Pn	**Pn**	**16 25 54.0**	**+0.7**
ZIRJ				Sn	**Sn**	**16 27 05.3**	**-2.0**
KIJV	**Kijevo**	**6.52**	**334**	*e*Pn	**Pn**	**16 25 54.7**	**+1.2**
MORI	**Morici**	**6.66**	**330**	*i* Pn	**Pn**	**16 25 57.1**	**+1.7**
DUGI	**Dugi Otok**	**7.03**	**327**	*e*Pn	**Pn**	**16 26 01.8**	**+1.3**
DUGI				Sn	**Sn**	**16 27 18.3**	**-1.8**

KRSC 07 16:47:18.0±2.0, 55.28N×166.58E, h40km±11km, ML3.5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.35**	**259**	*e*P	Pn	16 47 27.5	+0.7
BKI				*e*S	Sn	16 47 33.1	+0.1
KBTR	**Krutoberegovo**	**2.32**	**295**	*e*P	Pn	16 47 54.6	+0.9
KBTR				*e*S	Sn	16 48 22.6	+1.7
KBG	**Krutoberegovo**	**2.40**	**296**	*e*P	Pn	16 47 56.1	+1.4
KBG				*e*S	Sn	16 48 25.1	+2.3
BDR	**Baidarnaya**	**3.29**	**295**	*e*P	Pn	16 48 10.5	+3.5
SRKR	**Sorokina**	**3.34**	**297**	*e*P	Pn	16 48 10.6	+2.9
ZLN	**Zelenaya**	**3.35**	**285**	*e*P	Pn	16 48 12.3	+4.3
BZGR	**Bezymyannyi-Gr**	**3.40**	**284**	*e*P	Pn	16 48 13.1	+4.5
BZGR				*e*S	Sn	16 48 53.7	+6.0
KLY	**Klyuchi**	**3.50**	**290**	*e*S	Sn	16 48 53.0	+3.0
KRSR	**Krestovskiy**	**3.53**	**288**	*e*P	Pn	16 48 14.0	+3.7
KRSR				*e*S	Sn	16 48 55.4	+4.6
TUMD	**Tumrok D**	**3.54**	**271**	*e*P	Pn	16 48 14.7	+4.3
TUMD				*e*S	Sn	16 48 57.0	+6.1
KIRR	**Kirishev**	**3.60**	**283**	*e*P	Pn	16 48 15.5	+4.1
KIRR				*e*S	Sn	16 48 57.4	+4.7
KZV	**Kizimen**	**3.60**	**270**	*e*P	Pn	16 48 15.4	+4.0
KZV				*e*S	Sn	16 48 58.3	+5.5
KMNR	**Kamenistaya**	**3.64**	**280**	*e*P	Pn	16 48 16.4	+4.6
KMNR				*e*S	Sn	16 48 59.8	+6.3
KPT	**Kopyto**	**3.67**	**283**	*e*P	Pn	16 48 16.6	+4.3
TUMR	**Tumrok**	**3.68**	**273**	*e*P	Pn	16 48 17.0	+4.6
TUMR				*e*S	Sn	16 49 01.0	+6.5
SRDR	**Sredinnyy**	**4.01**	**288**	*e*P	Pn	16 48 20.9	+4.0
SPN	**Mys Shipunski**	**4.42**	**243**	*e*P	Pn	16 48 24.8	+2.3
SPN				*e*S	Sn	16 49 14.7	+2.0
NLC	**Nalytchevo**	**4.74**	**247**	*e*S	Sn	16 49 24.2	+3.8
SDLR	**Sedlovina**	**4.93**	**249**	*e*P	Pn	16 48 34.4	+4.8
SMAR	**Somma**	**4.98**	**249**	*e*P	Pn	16 48 35.3	+4.9
KRER	**Koryakskii**	**4.99**	**250**	*e*P	Pn	16 48 35.9	+5.4
UGLR	**Uglovaya**	**5.00**	**249**	*e*P	Pn	16 48 35.8	+5.3
AVH	**Avacha**	**5.01**	**250**	*e*P	Pn	16 48 36.0	+5.3
AVH				*e*S	Sn	16 49 32.2	+4.8
KRX	**Arik**	**5.02**	**251**	*e*P	Pn	16 48 35.8	+4.9
KRX				*e*S	Sn	16 49 32.7	+5.0
KOK	**Koryaka**	**5.06**	**250**	*e*P	Pn	16 48 36.4	+5.1
DALK	**Dalny**	**5.12**	**247**	*e*P	Pn	16 48 36.8	+4.8
DALK				*e*S	Sn	16 49 32.7	+2.9
KRMR	**Karymshinskiy**	**5.54**	**247**	*e*S	Sn	16 49 44.6	+4.3
MTVR	**Mutnovka**	**5.70**	**244**	*e*P	Pn	16 48 44.2	+4.0
ASAK	**Asacha**	**5.90**	**244**	*e*P	Pn	16 48 48.3	+5.5

IDC 07 16:53:44.1±2.2, 4.83S×144.81E, h84km±24km, mb3.3/2, mb1 3.7/5, mb1mx3.2/41, mbtmp3.8/5, MS4.0/2, Ms1 4.0/2, ms1mx2.9/22, Error ellipse: s-maj=31.6km s-min=12.5km az=50.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**4.70**	**299**	P	Pn	16 54 53.7	+1.1
	0.8nm,0.3s,baz=108,slow=20,SNR=8.5						
JAY				S	Sn	16 55 46.2	+0.3
	0.5nm,0.3s,baz=190,slow=11,SNR=5.2						
PMG	**Port Moresby**	**5.11**	**153**	P	Pn	16 54 59.4	+1.2
	1.5nm,0.3s,baz=359,slow=7.4,SNR=6.9						
PMG				S	Sn	16 55 55.0	-0.9
	0.7nm,0.3s,baz=193,slow=21,SNR=1.0						
WRA	**Warramunga Arr**	**18.15**	**213**	P	P	16 57 49.8	-0.2
	0.5nm,0.3s,baz=32,slow=10,SNR=48						
ASAR	**Alice Springs**	**21.47**	**208**	P	P	16 58 26.1	+0.2
	1.3nm,0.8s,baz=33,slow=10,SNR=15						
JNU	**Nakatsue**	**39.99**	**342**	LR	LR	17 16 43.4	
	comp=Z,231nm,19.9s,baz=201,slow=34						
USRK	**Ussuriysk Ar.**	**50.16**	**348**	LR	LR	17 20 52.2	
	comp=Z,182nm,21.3s,baz=178,slow=32						
ILAR	**Eielson Array**	**85.28**	**24**	P	P	17 06 11.3	0.0
	0.6nm,0.7s,baz=251,slow=4.8,SNR=5.3						

*IDC **07** 16:58:50.4±6.5, 17.46S×178.54W, h537km±76km, mb3.2/6, mb1 3.5/7, mb1mx3.1/42, mbtmp4.2/7, Error ellipse: s-maj=80.3km s-min=29.6km az=149.0*
*NEIC **07** 16:58:52.1±0.8, 17.7S±0.3×178.5W±0.2, h565km±11km, mb4.4/15, Error ellipse: s-maj=53.7km s-min=18.2km az=151.0*

ISC 07 16:58:49.8±0.7, 17.9S±0.2×178.2W±0.1, h550km, n27, σ0893/27, mb4.4/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.55**	**272**	P	**P**	**17 00 10.8**	**+2.2**
AFI	**Afiamalu**	**7.37**	**58**	P	**P**	**17 00 40.1**	**-1.5**
NIUE	**Niue**	**7.96**	**100**	P	**P**	**17 00 46.9**	**-0.3**
DZM	**Mont Dzumac**	**14.99**	**251**	P	**P**	**17 01 58.3**	**-1.1**
	1.2nm,0.3s,baz=88,slow=17,SNR=15						
EIDS	**Eidsvold**	**29.43**	**250**	P	**P**	**17 04 09.2**	**-0.3**
EIDS				IAmb	IAmb	17 05 32.0	
	comp=Z,14nm,1.4s						
ARMA	**Armidale**	**30.09**	**240**	P	**P**	**17 04 15.7**	**+0.5**
CTA	**Charters Tower**	**33.61**	**261**	P	**P**	**17 04 45.2**	**0.0**
	comp=Z,4.9nm,0.6s,baz=82,slow=10,SNR=17						
CTAO	**Charters Tower**	**33.61**	**261**	P	**P**	**17 04 45.1**	**-0.2**
CTAO				IAmb	IAmb	17 04 47.1	
	comp=Z,12nm,1.1s						
CAN	**Canberra**	**33.84**	**233**	P	**P**	**17 04 47.5**	**+0.5**
COEN	**Coen**	**37.27**	**270**	P	**P**	**17 05 16.4**	**+0.7**
TOO	**Toolangi**	**37.30**	**231**	P	**P**	**17 05 16.3**	**+0.7**
TOO				IAmb	IAmb	17 05 17.7	
	comp=Z,28nm,1.4s						
STKA	**Stephens Creek**	**38.78**	**241**	P	**P**	**17 05 28.4**	**+0.7**
	comp=Z,5.6nm,0.5s,baz=90,slow=10,SNR=27						
STKA	**Stephens Creek**	**38.78**	**241**	P	**P**	**17 05 28.0**	**+0.3**
BBOO	**Buckleboo**	**43.56**	**241**	P	**P**	**17 06 05.6**	**+0.1**
WR0	**Warramunga Arr**	**44.61**	**260**	P	**P**	**17 06 13.2**	**-0.6**
WR0				IAmb	IAmb	17 06 28.2	
	comp=Z,17nm,1.6s						
WB0	**Warramunga Arr**	**44.77**	**260**	P	**P**	**17 06 14.3**	**-0.7**
WB0				IAmb	IAmb	17 06 16.0	
	comp=Z,30nm,1.9s						
WB2	**Warramunga Arr**	**44.79**	**260**	P	**P**	**17 06 14.4**	**-0.8**
WRAB	**Tennant Creek**	**44.79**	**260**	P	**P**	**17 06 13.7**	**-1.6**
WRAB				IAmb	IAmb	17 07 13.3	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**44.80**	**260**	P	**P**	**17 06 14.7**	**-0.7**
	comp=Z,3.7nm,0.5s,baz=94,slow=6.7,SNR=154						
AS31	**Alice Springs**	**44.95**	**254**	P	**P**	**17 06 16.3**	**-0.2**
AS31				IAmb	IAmb	17 06 17.4	
	comp=Z,8.9nm,0.6s						
ASAR	**Alice Springs**	**44.95**	**254**	P	**P**	**17 06 16.4**	**-0.1**
	comp=Z,30nm,0.6s,baz=88,slow=8.3,SNR=905						
FORT	**Forrest**	**50.16**	**245**	P	**P**	**17 06 54.7**	**-0.6**
UGM	**Wanagama**	**69.82**	**268**	P	**P**	**17 09 05.4**	**-0.6**
NVAR	**Mina Array Bea**	**79.30**	**44**	P	**P**	**17 10 00.9**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=216,slow=7.5,SNR=2.0						
ILAR	**Eielson Array**	**85.85**	**13**	P	**P**	**17 10 30.1**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=221,slow=5.1,SNR=9.4						
PDAR	**Pinedale Array**	**87.23**	**43**	P	**P**	**17 10 39.3**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=211,slow=4.7,SNR=2.4						
GERES	**GERESS Array B**	**147.65**	**345**	PKPbc	**PKPbc**	**17 17 33.4**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=0.0,slow=1.4,SNR=2.7						

*JMA **07** 17:02:05.4±0.1, 24.66N×122.34E, h16km±4km*
*TAP **07** 17:02:08.3, 24.94N×122.37E, h18km, ML2.8, C*
ISC 07 17:02:03.1±1.4, 25.07N±0.05×122.54E±0.03, h4km±10km, n67, σ1917/100, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.50**	**263**	P	**Pn**	**17 02 16.1**	**-1.0**
	baz=281						
TWB1				*e*S	**Sb**	**17 02 21.0**	**-1.1**
	baz=281						
EOS1	**EOS1**	**0.63**	**216**	P	**Pb**	**17 02 17.7**	**+0.9**
	baz=221						
EOS1				*e*S	**Sg**	**17 02 24.4**	**+0.9**
	baz=221						
TIPB	**Shuangxi**	**0.65**	**262**	P	**Pn**	**17 02 18.9**	**-0.3**
	baz=273						
TIPB				*e*S	**Sb**	**17 02 26.1**	**-0.4**
	baz=273						
NTC	**Toucheng**	**0.67**	**252**	P	**Pn**	**17 02 18.9**	**-0.6**
	baz=270						
NTC				*e*S	**Sb**	**17 02 26.4**	**-0.8**
	baz=270						
NWF	**Wu-fen Shan**	**0.68**	**271**	*i* P	**Pn**	**17 02 20.1**	**+0.4**
	baz=284						
NWF				*e*S	**Sb**	**17 02 27.9**	**+0.4**
	baz=284						
WFSB	**Wu-fen Shan**	**0.68**	**271**	P	**Pn**	**17 02 20.1**	**+0.5**
	baz=284						
WFSB				S	**Sb**	**17 02 28.3**	**+0.8**
	baz=284						
JYNG	**Yonagunijimaku**	**0.72**	**149**	P	**Pg**	**17 02 16.8**	**-0.1**
JYNG				*e*S	**Sg**	**17 02 24.2**	**-2.0**
YOJ	**Yonaguni jima**	**0.74**	**144**	P	**Pg**	**17 02 17.7**	**+0.3**
YOJ				*e*S	**Sg**	**17 02 25.8**	**-1.2**
TWC	**Suao**	**0.77**	**234**	*i* P	**Pb**	**17 02 19.6**	**+0.5**
	baz=234						
TWC				*e*S	**Sg**	**17 02 27.5**	**-0.5**
	baz=234						
TWE	**Neicheng**	**0.86**	**247**	P	**Pn**	**17 02 21.7**	**-0.3**
	baz=242						
YM08	**YM08**	**0.87**	**278**	*e*P	**Pn**	**17 02 23.7**	**+1.6**
	baz=289						
YM08				*e*S	**Sn**	**17 02 33.5**	**-1.7**

YHNB				*e*S		**Sg**	**17 02 39.2**	**-0.2**
	baz=261							
NSK	**Sanguang**	**1.14**	**250**	P		**Pn**	**17 02 26.8**	**+0.9**
	baz=266							
NSK				*e*S		**Sg**	**17 02 39.1**	**-0.7**
	baz=266							
NNSB	**Datong**	**1.23**	**239**	P		**Pn**	**17 02 27.9**	**+0.7**
	baz=226							
NNSB				*e*S		**Sg**	**17 02 41.6**	**-0.9**
	baz=226							
NNSH	**Datong**	**1.23**	**239**	P		**Pn**	**17 02 27.9**	**+0.7**
	baz=235							
NNS	**Nan Shan**	**1.23**	**240**	P		**Pn**	**17 02 27.9**	**+0.7**
	baz=233							
NACB	**Ninganchiao**	**1.23**	**224**	*e*P		**Pb**	**17 02 27.7**	**+0.7**
	baz=222							
NACB				*e*S		**Sg**	**17 02 40.3**	**-2.5**
	baz=222							
ETLH	**Xiulin Townshi**	**1.28**	**228**	*e*P		**Pn**	**17 02 29.0**	**+1.1**
	baz=227							
ETLH				*e*S		**Sg**	**17 02 43.2**	**-1.3**
	baz=227							
TWD	**Chiawan**	**1.30**	**221**	*e*P		**Pb**	**17 02 29.1**	**+1.0**
	baz=227							
IRIF	**Iriomote-Funau**	**1.31**	**124**	P		**Pn**	**17 02 28.7**	**+0.5**
WHF	**Hehuan Shan**	**1.48**	**232**	*e*P		**Pb**	**17 02 32.6**	**+1.2**
	baz=230							
WHF				*e*S		**Sg**	**17 02 49.7**	**-1.0**
	baz=230							
TDCB	**Techi**	**1.49**	**237**	*e*P		**Pg**	**17 02 33.2**	**+1.5**
	baz=237							
TDCB				*e*S		**Sb**	**17 02 49.4**	**-1.5**
	baz=237							
HATJ	**Hateruma jima**	**1.53**	**131**	P		**Pn**	**17 02 31.4**	**+0.1**
JKRS	**Kuro-shima**	**1.57**	**121**	P		**Pn**	**17 02 33.2**	**+1.4**
CHGB	**Renai**	**1.59**	**231**	P		**Pg**	**17 02 34.3**	**+0.6**
	baz=230							
ESL	**Shilin**	**1.60**	**219**	*e*P		**Pn**	**17 02 33.1**	**+0.9**
	baz=232							
JIJ	**Ishigaki jima**	**1.62**	**115**	P		**Pn**	**17 02 34.0**	**+1.5**
OWD	**Renai**	**1.66**	**228**	P		**Pb**	**17 02 34.8**	**+0.4**
	baz=239							
OWD				*e*S		**Sn**	**17 02 55.2**	**+0.2**
	baz=239							
DPDB	**Guoxing**	**1.79**	**235**	P		**Pg**	**17 02 37.5**	**+0.1**
	baz=235							
VWDT	**VWDT**	**1.82**	**224**	P		**Pb**	**17 02 37.1**	**0.0**
	baz=222							
VWDT				*e*S		**Sn**	**17 02 58.4**	**-0.4**
	baz=222							
HGSD	**Ruisui**	**1.87**	**213**	*e*P		**Pn**	**17 02 36.7**	**+0.8**
	baz=195							
SMLT	**Sun Moon Lake**	**1.90**	**232**	*e*P		**Pg**	**17 02 39.7**	**+0.1**
	baz=218							
TYC	**Yuchr**	**1.92**	**233**	*e*P		**Pb**	**17 02 39.0**	**+0.4**
	baz=232							
SSLB	**Suanglung**	**1.92**	**229**	*e*P		**Pb**	**17 02 39.0**	**+0.2**
	baz=227							
YULB	**Yu-li**	**2.01**	**214**	P		**Pn**	**17 02 38.4**	**+0.5**
	baz=212							
ALS	**Alishan**	**2.21**	**226**	*e*P		**Pb**	**17 02 43.5**	**-0.4**
	baz=208							
CHN5	**Tsauling**	**2.24**	**230**	*e*P		**Pb**	**17 02 44.0**	**-0.3**
	baz=228							
ELDTW	**Lidau**	**2.33**	**217**	*e*P		**Pn**	**17 02 42.7**	**+0.4**
	baz=201							
CHN4	**Tsaushan**	**2.46**	**226**	*e*P		**Pb**	**17 02 47.4**	**-0.6**
	baz=225							
TPUB	**Ta-pu**	**2.47**	**225**	*e*P		**Pb**	**17 02 46.9**	**-1.3**
	baz=208							
WTP	**Ta-pu**	**2.52**	**224**	*e*P		**Pn**	**17 02 47.0**	**+2.1**
	baz=208							
MATB	**Ma-tsu**	**2.58**	**295**	*e*P		**Pb**	**17 02 49.4**	**-0.5**
	baz=296							
TWK	**Hsinying**	**2.59**	**227**	*e*P		**Pb**	**17 02 48.7**	**-1.5**
	baz=225							
CHN1	**Nanshi**	**2.62**	**225**	*e*P		**Pb**	**17 02 49.3**	**-1.4**
	baz=223							
SLGT	**Liugui**	**2.69**	**220**	*e*P		**Pn**	**17 02 49.8**	**+2.6**
	baz=218							
SLGT				*e*S		**Sn**	**17 03 21.4**	**+1.1**
	baz=218							
SSD	**Sandimen**	**2.89**	**217**	*e*P		**Pn**	**17 02 53.2**	**+3.2**
	baz=202							
MASBT	**Mashibuluo**	**3.00**	**216**	*e*P		**Pn**	**17 02 54.0**	**+2.5**
	baz=202							
EAST	**Anshuo**	**3.09**	**210**	*e*P		**Pn**	**17 02 55.4**	**+2.7**
	baz=208							

*IDC **07** 17:02:39.3±1.8, 1.°58N×124.°59E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.5/36, mbtmp3.7/4, ML3.4/1, MS3.5/3, Ms1 3.6/3, ms1mx2.8/32, Error ellipse: s-maj=150.6km s-min=23.6km az=66.0*
*NEIC **07** 17:02:57±0.4, 0.°4N±0.°2×122.°8E±0.°2, h149km±12km, mb4.2/6, Error ellipse: s-maj=27.5km s-min=19.7km az=222.0*

ISC 07 17:02:57.7±1.2, 0.°6N±0.°1×122.°9E±0.°2, h150km, n17, σ1§96/14, mb4.0/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**4.51**	**88**		**Pn**	**17 04 05.2**	**+0.4**
KNRA	**Kununurra**	**17.19**	**160**	P	**Pn**	**17 06 51.9**	**+2.9**
FITZ	**Fitzroy Crossi**	**18.78**	**172**	P	**Pn**	**17 07 09.0**	**+1.3**
	0.1nm,0.3s,baz=357,slow=9.3,SNR=2.7						
FITZ	**Fitzroy Crossi**	**18.78**	**172**	P	**Pn**	**17 07 09.1**	**+1.3**
FITZ				IAmb	IAmb	17 07 47.2	
	comp=Z,31nm,1.9s						
WB0	**Warramunga Arr**	**23.19**	**151**	P	**P**	**17 07 49.1**	**-2.2**
WRA	**Warramunga Arr**	**23.31**	**152**	P	**P**	**17 07 50.4**	**-2.2**
	comp=Z,1.8nm,0.3s,baz=336,slow=9.6,SNR=12						
WRA	**Warramunga Arr**	**23.31**	**152**	P	**P**	**17 07 50.4**	**-2.2**
WB2	**Warramunga Arr**	**23.32**	**152**	P	**P**	**17 07 50.4**	**-2.1**
WB2				IAmb	IAmb	17 07 52.8	
	comp=Z,12nm,1.2s						
WR0	**Warramunga Arr**	**23.42**	**151**	P	**P**	**17 07 50.8**	**-2.7**
WR0				IAmb	IAmb	17 07 52.3	
	comp=Z,22nm,1.9s						
ASAR	**Alice Springs**	**26.40**	**157**	P	**P**	**17 08 19.0**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=335,slow=10,SNR=2.2						
ASAR	**Alice Springs**	**26.40**	**157**	P	**P**	**17 08 19.1**	**-1.4**
CMAR	**Chiang Mai Arr**	**29.43**	**308**	LR	LR	17 22 31.0	
	comp=Z,54nm,18.4s,baz=90,slow=39						
MKAR	**Makanchi Array**	**58.03**	**328**	P	**P**	**17 12 35.4**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=127,slow=7.2,SNR=7.9						
MKAR	**Makanchi Array**	**58.03**	**328**	P	**P**	**17 12 35.4**	**+0.4**
KURK	**Kurchatov**	**62.39**	**330**	P	**P**	**17 13 04.3**	**-0.2**
KURK				IAmb	IAmb	17 13 28.5	
	comp=Z,3.0nm,1.2s						
GEYT	**Alibeck**	**69.89**	**310**	LR	LR	17 46 40.3	
	comp=Z,68nm,19.8s,baz=90,slow=37						
BRTR	**Keskin Array B**	**89.02**	**310**	LR	LR	18 00 28.0	
	comp=Z,16nm,20.2s,baz=142,slow=39						

TAP 07 17:10:06.6, 23.°21N×120.°54E, h7km, ML1.6, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHN1	**Nanshi**	**0.02**	**199**	*i* P	Pg	17 10 08.3	+0.3
	baz=196						
CHN1				*e*S	Sg	17 10 09.7	+0.8
	baz=196						
SNST	**Tainan City**	**0.04**	**290**	*i* P	Pg	17 10 08.4	+0.4
	baz=289						
SNST				S	Sg	17 10 09.8	+0.7
	baz=289						
TWK	**Hsinying**	**0.07**	**323**	*i* P	Pg	17 10 09.0	+0.4
	baz=330						
TWK				*e*S	Sg	17 10 10.8	+0.9
	baz=330						
WTP	**Ta-pu**	**0.08**	**62**	*i* P	Pg	17 10 09.3	+0.6
	baz=65						
WTP				*e*S	Sg	17 10 11.3	+1.2
	baz=65						
TPUB	**Ta-pu**	**0.13**	**43**	P	Pg	17 10 10.0	+0.7
	baz=42						
TPUB				*e*S	Sg	17 10 12.4	+1.1
	baz=42						
SGST	**Jiashian**	**0.13**	**161**	*i* P	Pg	17 10 09.4	0.0
	baz=158						
SGST				*e*S	Sg	17 10 12.3	+1.0
	baz=158						
CHN4	**Tsaushan**	**0.15**	**20**	*i* P	Pg	17 10 10.6	+0.7
	baz=20						
CHN4				*e*S	Sg	17 10 14.2	+2.2
	baz=20						
STYT	**Tauyuan**	**0.21**	**102**	P	Pg	17 10 12.1	+1.3
	baz=102						
STYT				*e*S	Sg	17 10 16.2	+2.6
	baz=102						
SLGT	**Liugui**	**0.24**	**154**	P	Pg	17 10 12.8	+1.5
	baz=154						
SLGT				*e*S	Sg	17 10 17.4	+2.9
	baz=154						
CHY	**Chiayi**	**0.31**	**340**	*e*P	Pb	17 10 13.8	-0.6
	baz=341						
CHY				*e*S	Sb	17 10 20.0	+0.2
	baz=341						
ALS	**Alishan**	**0.39**	**39**	*e*P	Pb	17 10 15.8	-0.3
	baz=40						
ALS				*e*S	Sb	17 10 21.8	-0.6
	baz=40						
CHN5	**Tsauling**	**0.41**	**19**	P	Pb	17 10 15.8	-0.5
	baz=18						
CHN5				*e*S	Sb	17 10 22.9	+0.1
	baz=18						
MASBT	**Mashibuluo**	**0.60**	**171**	*e*P	Pb	17 10 19.6	+0.2
	baz=171						
WNT	**Mingjian**	**0.68**	**11**	*e*S	Sb	17 10 30.6	+0.1
	baz=12						
SMLT	**Sun Moon Lake**	**0.75**	**26**	*e*P	Pb	17 10 22.2	+0.1
	baz=26						
TYC	**Yuchr**	**0.75**	**23**	*e*P	Pb	17 10 22.2	+0.1
	baz=23						
WDGT	**Dungji**	**0.81**	**274**	*e*P	Pb	17 10 23.5	+0.5
	baz=273						
PHUB	**P'eng-hu**	**0.94**	**289**	*e*P	Pg	17 10 24.8	+0.1
	baz=289						
OWD	**Renai**	**0.95**	**38**	*e*P	Pb	17 10 25.7	+0.2
	baz=38						

*IDC **07** 17:23:27.6±2.3, 9.°97S×160.°83E, h116km±10km, mb3.4/4, mb1 3.5/6, mb1mx3.3/24, mbtmp3.9/6, Error ellipse: s-maj=37.3km s-min=26.3km az=68.0*

ISC 07 17:23:24.6±1.6, 10.°1S±0.°2×161.°1E±0.°2, h100km, n7, σ0§89/9, mb3.4/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.28**	**299**	P	**Pn**	**17 23 49.1**	**+1.0**
	84nm,0.3s,baz=191,slow=5.7,SNR=44						
HNR				S	**Sn**	**17 24 06.3**	**+0.3**
	170nm,0.3s,baz=53,slow=16,SNR=9.4						
DZM	**Mont Dzumac**	**13.00**	**157**	P	**P**	**17 26 31.5**	**-0.8**
	0.6nm,0.3s,baz=143,slow=23,SNR=12						
DZM				S	**Sn**	**17 28 50.1**	**+1.3**
	0.2nm,0.3s,baz=113,slow=20,SNR=2.2						
CTA	**Charters Tower**	**17.42**	**233**	P	**Pn**	**17 27 21.1**	**-0.4**
	0.1nm,0.3s,baz=63,slow=9.0,SNR=1.8						
JAY	**Jayapura**	**21.58**	**289**	P	**P**	**17 28 05.6**	**-0.9**
	7.5nm,0.7s,baz=284,slow=2.2,SNR=2.3						
WRA	**Warramunga Arr**	**27.59**	**246**	P	**P**	**17 29 03.1**	**+0.5**
	0.4nm,0.5s,baz=76,slow=9.0,SNR=11						
ASAR	**Alice Springs**	**29.24**	**239**	P	**P**	**17 29 16.9**	**-0.4**
	0.3nm,0.4s,baz=64,slow=10.0,SNR=15						
SONM	**Songino Array**	**75.21**	**325**	P	**P**	**17 34 56.4**	**0.0**
	0.5nm,0.5s,baz=144,slow=4.7,SNR=3.7						

IDC 07 17:35:03.1±1.8, 7.°15S×128.°61E, h0km, mb3.6/1, mb1 3.5/3, mb1mx3.3/29, mbtmp3.3/3, ML3.5/2, Error ellipse: s-maj=62.4km s-min=29.2km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.78**	**23**	Pn	Pn	17 36 45.5	+1.6
	baz=198,slow=16						
SIJI				Sn	Sn	17 37 54.5	-7.4
	1.3nm,0.3s,baz=207,slow=23,SNR=1.4						
WRA	**Warramunga Arr**	**13.88**	**157**	Pn	Pn	17 38 21.1	-0.2
	0.3nm,0.3s,baz=343,slow=13,SNR=21						
WRA				Sn	Sn	17 40 43.2	-13
	1.3nm,0.3s,baz=339,slow=21,SNR=13						
ASAR	**Alice Springs**	**17.19**	**163**	P	Pn	17 39 05.5	+0.5
	0.1nm,0.3s,baz=339,slow=10,SNR=13						
ASAR				S	Sn	17 42 07.4	-9.5
	0.3nm,0.3s,baz=327,slow=17,SNR=7.7						
MKAR	**Makanchi Array**	**67.60**	**327**	P	P	17 46 01.3	-0.4
	0.3nm,0.4s,baz=122,slow=7.4,SNR=6.8						

*IDC **07** 18:28:54.0±1.1, 34.°27N×87.°24E, h0km, mb3.4/6, mb1 3.6/11, mb1mx3.5/50, mbtmp3.4/11, ML3.0/5, MS3.1/4, Ms1 3.1/4, ms1mx2.7/33, Error ellipse: s-maj=37.6km s-min=20.7km az=61.0*

ISC 07 18:28:59.0±0.8, 34.°34N±0.°08×87.°1E±0.°1, h35km, n26, σ1§16/24, mb3.4/6, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUN	**Gumba**	**6.50**	**190**	*e*P	**Pn**	**18 30 32.1**	**-0.3**
	43nm,0.4s						
DANN	**Dangsing**	**6.63**	**207**	*e*P	**Pn**	**18 30 33.6**	**-0.5**
	34nm,0.4s						
GKN	**Gorkha**	**6.67**	**199**	*e*P	**Pn**	**18 30 34.1**	**-0.5**
JIRN	**Jiri**	**6.71**	**187**	*e*P	**Pn**	**18 30 35.4**	**+0.1**
	24nm,0.4s						
KKN	**Kakani**	**6.72**	**194**	*e*P	**Pn**	**18 30 35.3**	**0.0**
	18nm,0.5s						
PKIN	**Phulchoki**	**6.90**	**193**	*e*P	**Pn**	**18 30 37.1**	**-0.8**
	36nm,0.5s						
PKI	**Pulchoki**	**6.91**	**193**	*e*P	**Pn**	**18 30 37.4**	**-0.6**
	24nm,0.5s						
DMN	**Daman**	**6.93**	**195**	*e*P	**Pn**	**18 30 37.8**	**-0.5**
	22nm,0.4s						
TAPN	**Taplejung**	**6.99**	**176**	*e*P	**Pn**	**18 30 39.7**	**+0.6**
	21nm,0.5s						
PYUN	**Piuthan**	**7.15**	**211**	*e*P	**Pn**	**18 30 39.9**	**-1.4**
KOLN	**Koldanda**	**7.21**	**206**	*e*P	**Pn**	**18 30 41.4**	**-0.7**
	14nm,0.5s						
RAMN	**Ramite**	**7.38**	**184**	*e*P	**Pn**	**18 30 43.8**	**-0.7**
	16nm,0.4s						
ODAN	**Odare**	**7.46**	**178**	*e*P	**Pn**	**18 30 44.7**	**-0.9**
	20nm,0.4s						
AAK	**Ala-Archa**	**12.88**	**314**	Pn	**Pn**	**18 31 58.5**	**-1.2**
	0.1nm,0.3s,baz=134,slow=8.9,SNR=5.8						
MKAR	**Makanchi Array**	**12.96**	**345**	Pn	**Pn**	**18 31 59.3**	**-1.3**
	0.1nm,0.3s,baz=160,slow=15,SNR=7.4						
MKAR				LR	LR	18 37 58.0	
	comp=Z,44nm,18.6s,baz=151,slow=42						
KURBB	**Kurchatov Arra**	**17.44**	**342**	Pn	**Pn**	**18 32 57.0**	**-2.2**
	0.0nm,0.3s,baz=157,slow=12,SNR=7.7						
ZALV	**Zalesovo Beam**	**19.67**	**356**	P	**Pn**	**18 33 25.4**	**-0.9**
	0.1nm,0.3s,baz=188,slow=10,SNR=3.8						
SONM	**Songino Array**	**19.75**	**41**	P	**Pn**	**18 33 26.1**	**-1.3**
	0.1nm,0.3s,baz=215,slow=12,SNR=1.3						
SONM				LR	LR	18 42 05.4	
	comp=Z,111nm,20.6s,baz=92,slow=40						
BVAR	**Borovoye Array**	**22.15**	**333**	P	**P**	**18 33 53.5**	**+2.0**
	0.4nm,0.5s,baz=123,slow=10,SNR=3.2						
GEYT	**Alibeck**	**23.65**	**287**	LR	LR	18 44 54.6	
	comp=Z,26nm,18.6s,baz=105,slow=40						
AKASG	**Malin Array Be**	**44.51**	**310**	LR	LR	18 58 23.1	
	comp=Z,30nm,19.7s,baz=150,slow=40						
WRA	**Warramunga Arr**	**70.23**	**133**	P	**P**	**18 40 08.7**	**+0.1**
	0.7nm,1.0s,baz=325,slow=6.5,SNR=4.6						
ILAR	**Eielson Array**	**72.61**	**21**	P	**P**	**18 40 23.6**	**+1.3**
	0.3nm,0.6s,baz=321,slow=5.1,SNR=2.1						
ASAR	**Alice Springs**	**72.83**	**136**	P	**P**	**18 40 22.9**	**-1.3**
	0.3nm,0.9s,baz=326,slow=7.8,SNR=2.3						
TORD	**Torodi Ar. Bea**	**78.97**	**278**	P	**P**	**18 41 01.6**	**+2.1**
	0.2nm,0.5s,baz=52,slow=4.9,SNR=2.1						
YKA	**Yellowknife Ar**	**81.92**	**10**	P	**P**	**18 41 14.5**	**-0.1**
	0.6nm,0.9s,baz=344,slow=4.1,SNR=7.0						

IDC 07 18:33:56.1±5.6, 2.°40S×133.°48E, h0km, mb3.4/2, mb1 3.5/4, mb1mx3.3/31, mbtmp3.3/4, ML2.9/2, Error ellipse: s-maj=150.9km s-min=23.2km az=53.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**2.68**	**304**	Pn	Pn	18 34 41.4	+0.8
	2.1nm,0.3s,baz=255,slow=22,SNR=44						
SIJI				Sn	Sn	18 35 13.2	-0.6
	0.9nm,0.3s,baz=211,slow=23,SNR=9.7						
WRA	**Warramunga Arr**	**17.46**	**177**	P	P	18 38 02.4	-0.1
	0.0nm,0.3s,baz=350,slow=12,SNR=4.8						
ASAR	**Alice Springs**	**21.15**	**179**	P	P	18 38 43.5	+0.6
	0.2nm,0.4s,baz=348,slow=11,SNR=10.0						
STKA	**Stephens Creek**	**30.30**	**166**	P	P	18 40 08.2	-1.1
	2.1nm,0.8s,baz=340,slow=12,SNR=3.5						

*TUL **07** 18:57:02.7±1.6, 36.°39N±0.°03×97.°15W±0.°06, h2km±7km, ML3.2, Error ellipse: s-maj=6.7km s-min=4.3km az=109.0*
*ANF **07** 18:57:03.9±0.8, 36.°28N×97.°11W, h2km±5km, ML4.0/15, Error ellipse: s-maj=3.9km s-min=2.0km az=153.0*
*NEIC **07** 18:57:03.3±1.1, 36.°36N±0.°04×97.°15W±0.°06, h4km±7km, Error ellipse: s-maj=6.9km s-min=5.2km az=104.0*

ISC 07 18:57:04.1±0.8, 36.°36N±0.°03×97.°13W±0.°03, h10km, n50, σ1§43/58, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADOK	**Arcadia Dam**	**0.73**	**196**		**Pg**	**18 57 17.7**	**-0.6**
T35A	**Sooner Cattle**	**0.74**	**41**		**Pg**	**18 57 16.9**	**-1.6**
OKCSW	**OKLAHOMA CITY**	**0.98**	**195**		**Pg**	**18 57 22.1**	**-1.0**
FNO	**Franklin**	**1.12**	**192**		**Pb**	**18 57 24.5**	**-1.1**
TUL1	**Leonard**	**1.17**	**112**	P	**Pb**	**18 57 25.3**	**-1.1**
	baz=294,SNR=66						
TUL1				S	**Sb**	**18 57 41.2**	**-0.4**
	baz=294						
TUL1	**Leonard**	**1.17**	**112**		**Pb**	**18 57 25.1**	**-1.3**
W35A	**Tecumseh**	**1.22**	**170**		**Pn**	**18 57 25.9**	**-1.4**
U32A	**Winter Ranch,**	**1.52**	**271**		**Pn**	**18 57 30.3**	**-1.0**
X34A	**Smith Ranch, M**	**1.85**	**198**		**Pn**	**18 57 36.7**	**+0.8**
WMOK	**Wichita Mounta**	**2.11**	**220**	P	**Pn**	**18 57 39.6**	**+0.1**
	baz=38,SNR=118						
WMOK				S	**Sb**	**18 58 07.2**	**-1.5**
	baz=38						
WMOK	**Wichita Mounta**	**2.11**	**220**		**Pn**	**18 57 39.5**	**0.0**
U38A	**Gravette**	**2.21**	**87**		**Pn**	**18 57 41.5**	**+0.6**
X37A	**Clayton**	**2.27**	**140**		**Pn**	**18 57 42.9**	**+1.2**
HHAR	**Hobbs**	**2.57**	**91**		**Pn**	**18 57 46.2**	**+0.3**
KSU1	**Kansas State U**	**2.77**	**8**	P	**Pb**	**18 57 51.0**	**-2.7**
	baz=189,SNR=16						
KSU1				S	**Sb**	**18 58 26.1**	**-1.6**
	baz=189						
KSU1	**Kansas State U**	**2.77**	**8**		**Pn**	**18 57 48.2**	**-0.3**
W39A	**Magazine**	**2.95**	**112**	P	**Pn**	**18 57 51.5**	**+0.4**
	baz=295,SNR=31						
W39A				Sb	**Sb**	**18 58 34.6**	**+1.6**
	baz=295						
W39A	**Magazine**	**2.95**	**112**		**Pn**	**18 57 51.5**	**+0.4**
Z35A	**Perchaven, San**	**3.02**	**182**		**Pn**	**18 57 52.1**	**+0.1**
CBKS	**Cedar Bluff**	**3.21**	**321**	P	**Pn**	**18 57 55.0**	**+0.3**
	baz=139,SNR=20						
CBKS	**Cedar Bluff**	**3.21**	**321**		**Pn**	**18 57 55.0**	**+0.3**
MIAR	**Mount Ida**	**3.42**	**121**	P	**Pn**	**18 57 57.6**	**+0.2**
	baz=303,SNR=6.8						
MIAR				S	**Sn**	**18 58 40.4**	**+2.4**
	baz=303						
MIAR	**Mount Ida**	**3.42**	**121**		**Pn**	**18 57 57.4**	**-0.1**
U40A	**Yellville**	**3.45**	**89**	P	**Pn**	**18 57 58.1**	**+0.1**
	baz=272,SNR=15						
U40A	**Yellville**	**3.45**	**89**		**Pn**	**18 57 58.0**	**0.0**
Z38A	**Mt. Pleasant**	**3.56**	**150**		**Pn**	**18 57 59.1**	**-0.3**
X40A	**Basin Creek Fa**	**3.97**	**117**	P	**Pn**	**18 58 04.8**	**-0.3**
	baz=300,SNR=10						
X40A	**Basin Creek Fa**	**3.97**	**117**		**Pn**	**18 58 05.5**	**+0.4**
AMTX	**Amarillo**	**3.99**	**250**	P	**Pn**	**18 58 06.2**	**+0.7**
	baz=66						
AMTX				Sb	**Sb**	**18 59 06.2**	**+3.2**
	baz=66						
AMTX	**Amarillo**	**3.99**	**250**		**Pn**	**18 58 05.4**	**-0.1**
WHAR	**Wooly Hollow**	**4.07**	**104**		**Pn**	**18 58 06.5**	**0.0**
W41B	**Gary Mavity, V**	**4.14**	**105**	P	**Pn**	**18 58 07.3**	**-0.1**
	baz=288						
W41B				S	**Sn**	**18 58 56.2**	**+0.4**
	baz=288						
ABTX	**Abilene, Hawle**	**4.27**	**210**	Pb	**Pb**	**18 58 18.5**	**-0.8**
	baz=28						
ABTX				Sb	**Sb**	**18 59 13.6**	**+2.7**
	baz=28						
ABTX	**Abilene, Hawle**	**4.27**	**210**		**Pn**	**18 58 08.6**	**-0.6**
P38A	**Dawn**	**4.32**	**40**		**Pb**	**18 58 20.0**	**-0.2**
R40A	**Maddies Statio**	**4.32**	**62**		**Pn**	**18 58 08.6**	**-1.3**
WHTX	**Lake Whitney,**	**4.37**	**184**	Sb	**Sb**	**18 59 16.9**	**+3.2**
	baz=3.2						
WHTX	**Lake Whitney,**	**4.37**	**184**		**Pn**	**18 58 10.1**	**-0.5**
Z41A	**Richland Creek**	**4.71**	**130**	S	**Sn**	**18 59 09.6**	**-0.4**
	baz=312						
CCM	**Cathedral Cave**	**4.99**	**68**	Sb	**Sb**	**18 59 36.7**	**+5.1**
	baz=252						
CCM	**Cathedral Cave**	**4.99**	**68**		**Pn**	**18 58 19.3**	**+0.2**
BGNE	**Belgrade**	**5.11**	**351**	Pb	**Pb**	**18 58 35.9**	**+2.4**
	baz=171						
BGNE	**Belgrade**	**5.11**	**351**		**Pn**	**18 58 19.3**	**-1.4**
OGNE	**Ogallala**	**5.98**	**321**		**Pn**	**18 58 31.2**	**-1.5**
JCT	**Junction City**	**6.28**	**202**		**Pn**	**18 58 35.4**	**-1.4**
SCIA	**State Center**	**6.32**	**28**		**Pn**	**18 58 38.4**	**+1.1**
SDCO	**Great Sand Dun**	**6.84**	**284**	P	**Pn**	**18 58 45.9**	**+1.1**
	baz=99,SNR=6.3						
SDCO	**Great Sand Dun**	**6.84**	**284**		**Pn**	**18 58 45.9**	**+1.1**
ECSD	**EROS Data Cent**	**7.38**	**3**		**Pn**	**18 58 50.4**	**-1.4**
ISCO	**Idaho Springs**	**7.52**	**300**	Pn	**Pn**	**18 58 52.6**	**-1.6**

DJA 07 19:09:01.2±0.4, 11.°5S±4.°×12.°4E±.°, h44km±7km, M3.8/9, mb4.0/4, mb3.3/1, MLv3.9/9, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**0.39**	**321**	P	Pn	19 09 12.9	+2.1
BATI				S	Sn	19 09 19.6	+2.1
SOEI	**Soe**	**0.83**	**25**	P	Pn	19 09 19.0	+2.4
MMRI	**Maumere**	**2.49**	**318**	P	Pn	19 09 38.4	-0.8
EDFI	**Ende, Flores**	**2.80**	**308**	P	Pn	19 09 42.7	-0.9
WBSI	**Waikabubak, Su**	**4.53**	**281**	P	Pn	19 10 07.9	+0.5
BBSI	**Bau Bau**	**5.16**	**345**	P	Pn	19 10 16.6	+0

11nm,0.3s
KAPS Kapalarasan 4.58 326 *e*P **Pb 19 31 39.7 +0.1**
1.9nm,0.2s
KAPS *e*S **Sg 19 32 45.9 -0.3**
5.3nm,0.5s
MK31 Makanchi Array 5.29 355 Pn **Pn 19 31 36.9 -1.3**
0.3nm,0.2s,baz=172,slow=15,SNR=22
MK31 ⇑Pg **Pb 19 31 53.0 +1.3**
0.6nm,0.3s,baz=166,slow=15,SNR=4.7
MK31 ⇓Lg Lg 19 33 09.6
1.9nm,0.5s,baz=166,slow=27,SNR=2.6

*ISK **07** 19:47:58.9, 39.°08N×25.°96E, h16km, ML2.6/21*
*DDA **07** 19:47:58.9, 39.°08N×25.°99E, h27km±1km, ML2.4*
*ATH **07** 19:47:59.0, 39.°10N×25.°99E, h28km±1km, ML2.5/4, Error ellipse: s-maj=2.1km s-min=1.1km az=90.0*
*THE **07** 19:48:00.1, 39.°09N×25.°94E, h10km±2km, ML2.4/5, Error ellipse: s-maj=2.3km s-min=0.5km az=358.0*

ISC 07 19:47:59.2±0.9, 39.°06N±0.°02×25.°97E±0.°02, h17km±6km, n66, σ0s47/93, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	**SIGRI**	**0.17**	**330**	P	**Pg**	**19 48 03.7**	**+0.1**
SIGR				S	**Sb**	**19 48 05.8**	**-1.4**
	3μm,0.3s						
SIGR	**SIGRI**	**0.17**	**330**	P	**Pg**	**19 48 03.7**	**+0.1**
SIGR				AML	AML	19 48 06.7	
	comp=N,5117μm,0.2s						
SIGR				AML	AML	19 48 06.7	
	comp=E,5358μm,0.3s						
SIGR	**SIGRI**	**0.17**	**330**	PG	**Pg**	**19 48 03.7**	**+0.1**
SIGR				SG	**Sg**	**19 48 06.3**	**-0.3**
PRK	**Paraskevi**	**0.30**	**52**	P	**Pb**	**19 48 06.4**	**+0.2**
PRK				S	**Sb**	**19 48 10.6**	**-0.2**
	comp=E,1μm,0.3s						
PRK	**Paraskevi**	**0.30**	**52**	P	**Pb**	**19 48 06.3**	**+0.2**
PRK				S	**Sb**	**19 48 10.6**	**-0.2**
PRK				AML	AML	19 48 12.1	
	comp=N,3379μm,0.3s						
PRK				AML	AML	19 48 13.2	
	comp=E,1192μm,0.4s						
PSRA	**Psara**	**0.61**	**212**	P	**Pn**	**19 48 12.6**	**-0.4**
PSRA				S	**Sn**	**19 48 22.3**	**-0.1**
AYVA	**Ayvalik**	**0.61**	**66**	*i* P	**Pb**	**19 48 11.1**	**-0.4**
AYVA				*i* S	**Sb**	**19 48 18.9**	**-0.9**
AYVA				IAML		19 48 23.0	
	comp=N,186nm,0.6s						
KRBN	**Karaburun**	**0.65**	**135**	PG	**Pg**	**19 48 12.4**	**+0.4**
KRBN				SG	**Sn**	**19 48 22.4**	**-1.2**
CHOS	**Chios island**	**0.68**	**174**	P	**Pg**	**19 48 12.9**	**+0.4**
CHOS				S	**Sn**	**19 48 24.1**	**-0.2**
	comp=N,305nm,0.3s						
CHOS	**Chios island**	**0.68**	**174**	P	**Pg**	**19 48 12.9**	**+0.4**
CHOS				S	**Sn**	**19 48 23.2**	**-1.1**
CHOS				AML	AML	19 48 25.3	
	comp=N,518μm,0.3s						
CHOS				AML	AML	19 48 27.0	
	comp=E,680μm,0.2s						
CHOS	**Chios island**	**0.68**	**174**	PG	**Pg**	**19 48 12.9**	**+0.4**
CHOS				SG	**Sn**	**19 48 23.2**	**-1.1**
DKL	**Dikili**	**0.73**	**89**	PG	**Pg**	**19 48 13.6**	**+0.2**
BOZC	**Bozcaada**	**0.78**	**5**	PG	**Pb**	**19 48 14.1**	**-0.3**
BOZC				SG	**Sg**	**19 48 25.2**	**+0.4**
BOZC	**Bozcaada**	**0.78**	**5**	*i* P	**Pb**	**19 48 13.8**	**-0.6**
BOZC				*i* P	**Pb**	**19 48 14.1**	**-0.3**
BOZC				*i* S	**Sg**	**19 48 24.8**	**0.0**
BOZC				IAML		19 48 27.0	
	comp=N,124nm,0.4s						
BOZC				IAML		19 48 27.0	
	comp=E,123nm,0.2s						
BOZC				IAML		19 48 27.0	
	comp=E,194nm,0.3s						
EZN	**Ezine**	**0.81**	**20**	PG	**Pb**	**19 48 14.6**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**0.81**	**33**	*i* P	**Pb**	**19 48 14.6**	**-0.4**
BAYC				*i* S	**Sg**	**19 48 25.7**	**-0.2**
BAYC				IAML		19 48 28.0	
	comp=N,141nm,0.3s						
BAYC				IAML		19 48 29.0	
	comp=E,187nm,0.2s						
URLA	**Izmir**	**0.85**	**145**	PG	**Pg**	**19 48 16.2**	**+0.4**
URLA	**Izmir**	**0.85**	**145**	*i* P	**Pg**	**19 48 16.0**	**+0.2**
URLA				*i* S	**Sg**	**19 48 27.2**	**+0.1**
ZEDA	**zmir-Bergama**	**0.87**	**96**	*i* P	**Pb**	**19 48 15.9**	**+0.1**
ZEDA				*i* S	**Sn**	**19 48 29.0**	**0.0**
LIA	**Limnos Island**	**1.03**	**324**	P	**Pg**	**19 48 19.2**	**0.0**
LIA				S	**Sg**	**19 48 32.9**	**+0.1**
	comp=E,230nm,0.3s						
LIA	**Limnos Island**	**1.03**	**324**	P	**Pg**	**19 48 19.2**	**0.0**
LIA				S	**Sg**	**19 48 33.2**	**+0.4**
LIA				AML	AML	19 48 34.0	
	comp=E,509μm,0.3s						
LIA				AML	AML	19 48 34.4	
	comp=N,402μm,0.3s						
GADA	**Gvkgeada**	**1.13**	**357**	PN	**Pn**	**19 48 20.1**	**-0.2**
DGB	**zmir**	**1.24**	**144**	*i* P	**Pb**	**19 48 22.0**	**0.0**
DGB				*i* S	**Sn**	**19 48 37.7**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.39**	**16**	PN	**Pn**	**19 48 24.1**	**+0.3**
STEP	**BALIKESIR_Sava**	**1.40**	**76**	*i* P	**Pn**	**19 48 24.0**	**+0.1**
STEP				*i* S	**Sg**	**19 48 44.3**	**+0.1**
STEP				IAML		19 48 46.0	
	comp=N,41nm,0.7s						
STEP				IAML		19 48 49.0	
	comp=E,57nm,0.6s						
LPK	**Lapseki**	**1.45**	**25**	PN	**Pn**	**19 48 24.7**	**+0.1**
BALY	**Balya**	**1.45**	**62**	*i* P	**Pb**	**19 48 25.4**	**-0.3**
BALY				*i* S	**Sb**	**19 48 43.5**	**-0.4**
BALY				IAML		19 48 47.0	
	comp=N,48nm,0.8s						
BALY				IAML		19 48 50.0	
	comp=E,35nm,0.6s						
SMTH	**Samothraki Isl**	**1.45**	**347**	P	**Pn**	**19 48 24.9**	**+0.2**
SMTH				S	**Sb**	**19 48 44.4**	**+0.5**
SMTH	**Samothraki Isl**	**1.45**	**347**	P	**Pn**	**19 48 24.9**	**+0.2**
SMTH				S	**Sn**	**19 48 43.3**	**0.0**
SMG	**Samos**	**1.51**	**153**	P	**Pb**	**19 48 26.2**	**-0.6**
SMG				S	**Sb**	**19 48 46.7**	**+1.0**
	comp=E,88nm,0.5s						
SMG	**Samos**	**1.51**	**153**	P	**Pb**	**19 48 26.2**	**-0.6**
KYMI	**Kymi, Euboea I**	**1.52**	**254**	P	**Pn**	**19 48 25.8**	**+0.2**
KYMI	**Kymi, Euboea I**	**1.52**	**254**	P	**Pn**	**19 48 25.8**	**+0.2**
BALB	**Balikesir**	**1.59**	**68**	PN	**Pn**	**19 48 26.9**	**+0.3**
GONE	**Gonen-Balikesi**	**1.65**	**53**	PN	**Pn**	**19 48 27.8**	**+0.4**
ERIK	**Erikli-Kesan**	**1.66**	**14**	PN	**Pn**	**19 48 27.9**	**+0.3**
ENEZ	**Enez**	**1.68**	**5**	PN	**Pn**	**19 48 27.9**	**+0.1**
KRBG	**Karabiga-Canak**	**1.68**	**37**	PN	**Pn**	**19 48 27.8**	**0.0**
GCAM	**G?zelcaml?**	**1.68**	**143**	PN	**Pn**	**19 48 28.5**	**+0.7**
KNL	**Balıkesir**	**1.71**	**44**	*i* P	**Pb**	**19 48 30.3**	**+0.2**
KNL				IAML		19 48 56.0	
	comp=E,35nm,0.3s						
KNL				IAML		19 48 58.0	
	comp=N,44nm,0.5s						
THAS	**Thassos island**	**1.82**	**328**	P	**Pn**	**19 48 30.7**	**+1.0**
THAS				S	**Sn**	**19 48 53.1**	**+0.7**
THAS	**Thassos island**	**1.82**	**328**	P	**Pn**	**19 48 30.0**	**+0.3**
ALN	**Alexandroupoli**	**1.83**	**2**	P	**Pn**	**19 48 30.5**	**+0.6**
ALN				S	**Sn**	**19 48 53.1**	**+0.3**
ALN	**Alexandroupoli**	**1.83**	**2**	P	**Pn**	**19 48 30.5**	**+0.6**
ALN	**Alexandroupoli**	**1.83**	**2**	PN	**Pn**	**19 48 30.2**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.87**	**29**	PN	**Pn**	**19 48 30.5**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.87**	**126**	PN	**Pn**	**19 48 31.1**	**+0.5**
MRKA	**Markates**	**1.89**	**260**	P	**Pn**	**19 48 31.0**	**+0.3**
EDC	**Edincik**	**1.95**	**48**	PN	**Pn**	**19 48 31.5**	**0.0**
SKIA	**Skiathos**	**1.95**	**274**	P	**Pn**	**19 48 32.4**	**+0.9**
SKIA				S	**Sn**	**19 48 56.3**	**+0.7**
PAIG	**Paliouri**	**1.97**	**297**	P	**Pn**	**19 48 32.6**	**+0.8**
PAIG	**Paliouri**	**1.97**	**297**	P	**Pn**	**19 48 32.4**	**+0.6**
MRMT	**Marmara Adasi**	**1.99**	**39**	PN	**Pn**	**19 48 32.2**	**+0.1**
OUR	**Ouranopolis**	**1.99**	**310**	P	**Pn**	**19 48 31.9**	**-0.2**
OUR	**Ouranopolis**	**1.99**	**310**	P	**Pn**	**19 48 31.9**	**-0.2**
OUR	**Ouranopolis**	**1.99**	**310**	PN	**Pn**	**19 48 31.9**	**-0.2**
DURS	**Dursunbey**	**2.02**	**74**	P	**Pn**	**19 48 32.8**	**+0.2**
APE	**Apeiranthos**	**2.02**	**190**	PN	**Pn**	**19 48 32.5**	**0.0**
RDO	**Rodhopi**	**2.11**	**351**	P	**Pn**	**19 48 34.8**	**+1.1**
RDO	**Rodhopi**	**2.11**	**351**	P	**Pn**	**19 48 34.5**	**+0.8**
RDO	**Rodhopi**	**2.11**	**351**	PN	**Pn**	**19 48 34.0**	**+0.3**
UKOP	**Uzunkopru-Edir**	**2.13**	**14**	PN	**Pn**	**19 48 34.1**	**+0.1**
KAVA	**Kavala**	**2.23**	**330**	P	**Pn**	**19 48 35.3**	**-0.1**
KAVA	**Kavala**	**2.23**	**330**	P	**Pn**	**19 48 35.1**	**-0.4**
KDZ	**Kurdzhali**	**2.62**	**351**	PN	**Pn**	**19 48 40.4**	**-0.4**
NVR	**Nevrokopi**	**2.80**	**325**	P	**Pn**	**19 48 43.2**	**0.0**

*NEIC **07** 19:53:42.9±1.9, 2.°43N±0.°10×128.°51E±0.°09, h229km±8km, mb4.3/20, Error ellipse: s-maj=15.9km s-min=10.2km az=214.0*
*IDC **07** 19:53:44.1±1.5, 2.°46N×128.°71E, h240km±15km, mb3.5/14, mb1 3.6/15, mb1mx3.3/56, mbtmp4.1/15, Error ellipse: s-maj=25.0km s-min=8.5km az=73.0*
*DJA **07** 19:53:44.1±0.5, 2.°N±4.×12.°8E±.°, h219km±4km, M4.2/13, mB4.5/3, mb4.2/6, MLv4.2/13, Mw(mB)3.7/3*

ISC 07 19:53:44.8±0.5, 2.°36N±0.°06×128.°45E±0.°08, h250km, n49, σ1s32/52, mb4.1/25, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.91**	**215**	P	**Pn**	**19 54 24.7**	**-1.8**
TNTI				S	**S**	**19 54 56.1**	**-3.3**
TNTI	**Ternate**	**1.91**	**215**		**Pn**	**19 54 24.6**	**-1.8**
LBMI	**Labuha**	**3.12**	**198**	P	**Pn**	**19 54 37.7**	**-0.9**
SIJI	**Sorong**	**4.26**	**139**	P	**Pn**	**19 54 50.6**	**-1.1**
	11nm,0.3s,baz=331,slow=18,SNR=51						
KMSI	**Cibinong**	**4.81**	**248**	P	**Pn**	**19 54 57.5**	**-0.8**
KMSI				S	**S**	**19 55 55.6**	**-1.2**
SANI	**Sanana**	**5.02**	**209**	P	**Pn**	**19 54 58.0**	**-2.9**
	0.4nm3μm56nm,0.4s						
NLAI	**Namlea**	**5.72**	**194**	P	**Pn**	**19 55 09.5**	**0.0**
	0.2nm699nm33nm,0.5s						
FAKI	**Fak Fak**	**6.47**	**144**	P	**Pn**	**19 55 18.3**	**-0.6**
	0.1nm50nm,1.1s						
FAKI	**Fak Fak**	**6.47**	**144**	Pn	**Pn**	**19 55 18.1**	**-0.7**
MRSI	**Marisa**	**6.77**	**254**	P	**Pn**	**19 55 22.2**	**-0.4**
	0.1nm419nm32nm,0.5s						
APSI	**Ampana**	**7.54**	**245**	P	**Pn**	**19 55 31.8**	**-0.5**
JAY	**Jayapura**	**13.17**	**111**	P	**Pn**	**19 56 43.0**	**0.0**
	0.8nm,0.3s,baz=247,slow=5.9,SNR=5.8						
SZP	**Santa**	**17.02**	**333**	Pn	**Pn**	**19 57 27.6**	**-1.3**
FITZ	**Fitzroy Crossi**	**20.51**	**188**	P	**P**	**19 58 06.2**	**+1.8**
	1.0nm,0.6s,baz=6.1,slow=11,SNR=1.5						
FITZ	**Fitzroy Crossi**	**20.51**	**188**	P	**P**	**19 58 04.3**	**-0.1**
FITZ				IAmb	IAmb	19 58 06.1	
	comp=Z,23nm,1.9s						
COEN	**Coen**	**21.81**	**138**	P	**P**	**19 58 16.2**	**-1.0**
YULB	**Yu-li**	**22.03**	**342**	P	**P**	**19 58 16.7**	**-2.5**
YULB				IAmb	IAmb	19 59 13.1	
	comp=Z,20nm,1.4s						
TPUB	**Ta-pu**	**22.16**	**341**	P	**P**	**19 58 18.6**	**-1.7**
SSLB	**Suanglung**	**22.51**	**342**	P	**P**	**19 58 22.2**	**-1.3**
SSLB				IAmb	IAmb	19 58 24.9	
	comp=Z,7.4nm,0.7s						
WB0	**Warramunga Arr**	**22.75**	**165**	P	**P**	**19 58 25.7**	**-0.1**
WB0				IAmb	IAmb	19 58 27.0	
	comp=Z,9.5nm,0.9s						
WRAB	**Tennant Creek**	**22.89**	**166**	P	**P**	**19 58 27.4**	**+0.3**
WRAB				IAmb	IAmb	19 58 34.9	
	comp=Z,27nm,1.7s						
WRA	**Warramunga Arr**	**22.90**	**166**	P	**P**	**19 58 27.2**	**0.0**
	comp=Z,1.7nm,0.4s,baz=344,slow=10.0,SNR=51						
WRA				ScP	**ScP**	**20 05 25.5**	**+1.9**
	comp=Z,0.4nm,0.5s,baz=345,slow=2.9,SNR=2.2						
WB2	**Warramunga Arr**	**22.90**	**166**	P	**P**	**19 58 27.2**	**0.0**
WB2				IAmb	IAmb	19 58 28.9	
	comp=Z,4.6nm,0.5s						
WR0	**Warramunga Arr**	**22.97**	**165**	P	**P**	**19 58 26.9**	**-0.9**
WR0				IAmb	IAmb	19 58 30.0	
	comp=Z,6.6nm,0.9s						
YHNB	**Yeheng**	**23.21**	**343**	P	**P**	**19 58 28.0**	**-2.0**
AS31	**Alice Springs**	**26.40**	**169**	P	**P**	**19 58 59.0**	**+0.2**
ASAR	**Alice Springs**	**26.40**	**169**	P	**P**	**19 58 59.0**	**+0.3**
	comp=Z,1.8nm,0.5s,baz=353,slow=7.4,SNR=70						
ASAR				PcP	**PcP**	**20 02 18.3**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=352,slow=2.1,SNR=17						
ASAR				ScP	**ScP**	**20 05 35.5**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=349,slow=3.1,SNR=7.3						
CMAR	**Chiang Mai Arr**	**33.05**	**301**	P	**P**	**19 59 59.5**	**+2.3**
	comp=Z,1.9nm,0.7s,baz=116,slow=7.4,SNR=19						
ENH	**Enshi**	**33.08**	**329**	P	**P**	**19 59 57.9**	**+0.5**
ENH				IAmb	IAmb	19 59 58.5	
	comp=Z,4.6nm,0.8s						
CHTO	**Chiang Mai**	**33.20**	**302**	P	**P**	**20 00 00.4**	**+1.9**
KMI	**Kunming**	**33.56**	**315**	P	**P**	19 59 53.7	-8.1
KMI				pP	pP	19 59 56.4	-55
KMI				sP	pwP	20 00 06.5	-48
KMI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,87nm,4.9s						
KSRS	**Korea Array**	**34.93**	**359**	P	**P**	**20 00 12.8**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=176,slow=9.5,SNR=8.2						
MJAR	**Matsushiro Arr**	**35.19**	**14**	P	**P**	**20 00 13.7**	**-1.7**
	comp=Z,1.6nm,0.8s,baz=179,slow=9.2,SNR=5.6						
STKA	**Stephens Creek**	**36.26**	**161**	P	**P**	**20 00 24.8**	**+0.3**
	comp=Z,2.9nm,0.3s,baz=337,slow=6.9,SNR=29						
STKA	**Stephens Creek**	**36.26**	**161**	P	**P**	**20 00 24.9**	**+0.4**
XAN	**Xi'an**	**36.42**	**332**	P	**P**	**20 00 25.8**	**-0.1**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**41.78**	**4**	P	**P**	**20 01 09.9**	**0.0**
	comp=Z,0.9nm,0.5s,baz=189,slow=7.5,SNR=2.4						
SHL	**Shillong**	**42.07**	**307**	P	**P**	**20 01 13.8**	**+1.0**
LSA	**Lhasa**	**44.63**	**311**	P	**P**	**20 01 35.7**	**+2.2**
ULN	**Ulaanbaatar**	**48.96**	**341**	P	**P**	**20 02 04.2**	**-2.1**
SONM	**Songino Array**	**49.15**	**340**	P	**P**	**20 02 08.0**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=152,slow=7.1,SNR=6.2						
MKAR	**Makanchi Array**	**59.66**	**325**	P	**P**	**20 03 23.4**	**+0.5**
	comp=Z,2.3nm,0.5s,baz=115,slow=8.1,SNR=39						
KSH	**Kashi**	**60.22**	**315**	P	P	20 03 39.3	+12
KSH				pP	pwP	20 04 28.3	+2.3
KSH				pmax	pmax		
	comp=Z,21nm,1.2s						
KSH				pmax	pmax		
	comp=Z,110nm,4.0s						
ZALV	**Zalesovo Beam**	**62.59**	**333**	P	**P**	**20 03 42.1**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=122,slow=7.7,SNR=2.9						
KURBB	**Kurchatov Arra**	**63.82**	**327**	P	**P**	**20 03 50.6**	**+0.1**
	comp=Z,4.8nm,0.6s,baz=127,slow=6.0,SNR=34						
KURK	**Kurchatov**	**63.82**	**327**	P	**P**	**20 03 50.6**	**+0.1**
KURK				IAmb	IAmb	20 03 51.3	
	comp=Z,4.5nm,0.7s						
KKAR	**Karatay Array**	**65.40**	**317**	P	**P**	**20 04 01.3**	**+0.3**
KKAR				IAmb	IAmb	20 06 14.6	
	comp=Z,6.5nm,1.9s						
BVAR	**Borovoye Array**	**69.40**	**327**	P	**P**	**20 04 26.0**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=128,slow=9.6,SNR=5.6						
VNDA	**Vanda**	**81.86**	**173**	P	**P**	**20 05 36.7**	**+1.0**
	comp=Z,1.1nm,0.4s,baz=317,slow=5.9,SNR=15						

*IDC **07** 19:58:19.4±5.0, 17.°82S×178.°71W, h565km±59km, mb3.3/14, mb1 3.5/15, mb1mx3.4/31, mbtmp4.2/15, Error ellipse: s-maj=25.3km s-min=20.5km az=117.0*
*NEIC **07** 19:58:19.5±1.5, 17.°7S±0.°2×178.°8W±0.°2, h570km±11km, mb4.5/26, Error ellipse: s-maj=34.5km s-min=16.6km az=147.0*

ISC 07 19:58:19.7±0.6, 17.°8S±0.°1×178.°6W±0.°1, h579km, n65, σ0s86/65, mb4.3/28, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.16**	**271**	P	**P**	**19 59 37.4**	**-0.8**
AFI	**Afiamalu**	**7.67**	**60**	P	**P**	**20 00 12.1**	**-3.1**
DZM	**Mont Dzumac**	**14.65**	**251**	P	**P**	**20 01 23.6**	**-1.6**
	1.6nm,0.3s,baz=96,slow=18,SNR=15						
KNTN	**Kanton**	**16.43**	**25**	P	**P**	**20 01 40.8**	**-1.3**
EIDS	**Eidsvold**	**29.09**	**250**	P	**P**	**20 03 34.3**	**-0.4**
	baz=35,SNR=3.5						
EIDS	**Eidsvold**	**29.09**	**250**	P	**P**	**20 03 34.4**	**-0.4**
EIDS				IAmb	IAmb	20 03 35.0	
	comp=Z,9.0nm,0.7s						
ARMA	**Armidale**	**29.79**	**240**	P	**P**	**20 03 41.4**	**+0.5**
	baz=35,SNR=13						
RMQ	**Roma**	**31.33**	**248**	P	**P**	**20 03 54.5**	**+0.5**
	baz=37,SNR=6.7						
CTA	**Charters Tower**	**33.25**	**260**	P	**P**	**20 04 10.2**	**-0.1**
	comp=Z,5.5nm,0.6s,baz=91,slow=10,SNR=10						
CNB	**Canberra Magne**	**33.30**	**232**	P	**P**	**20 04 11.2**	**+0.6**
	baz=39,SNR=14						
CMSA	**Cobar Meteorol**	**35.00**	**240**	P	**P**	**20 04 24.9**	**+0.1**
	baz=41,SNR=36						
MTSU	**Mount Surprise**	**35.20**	**264**	P	**P**	**20 04 26.3**	**-0.3**
	baz=41,SNR=7.2						
QLP	**Quilpie**	**35.36**	**249**	P	**P**	**20 04 27.6**	**-0.2**
	baz=41,SNR=6.1						
COEN	**Coen**	**36.89**	**270**	P	**P**	**20 04 41.1**	**+0.6**
	baz=42						
TOO	**Toolangi**	**37.05**	**231**	P	**P**	**20 04 42.1**	**+0.5**
	baz=42,SNR=15						
TOO	**Toolangi**	**37.05**	**231**	P	**P**	**20 04 42.3**	**+0.7**
STKA	**Stephens Creek**	**38.48**	**241**	P	**P**	**20 04 53.8**	**+0.5**
	baz=44,SNR=36						
STKA	**Stephens Creek**	**38.48**	**241**	P	**P**	**20 04 53.8**	**+0.5**
	comp=Z,12nm,0.5s,baz=90,slow=9.8,SNR=43						
STKA	**Stephens Creek**	**38.48**	**241**	P	**P**	**20 04 53.7**	**+0.5**
HTT	**Hallett**	**41.00**	**239**	P	**P**	**20 05 13.8**	**+0.4**
	baz=46,SNR=29						
JAY	**Jayapura**	**42.68**	**286**	P	**P**	**20 05 27.7**	**+0.8**
	comp=Z,4.5nm,0.4s,baz=168,slow=8.9,SNR=8.3						
BBOO	**Buckleboo**	**43.25**	**241**	P	**P**	**20 05 31.1**	**+0.1**
	baz=49,SNR=72						
BBOO	**Buckleboo**	**43.25**	**241**	P	**P**	**20 05 31.1**	**+0.1**
WB0	**Warramunga Arr**	**44.40**	**260**	P	**P**	**20 05 38.7**	**-1.4**
WB2	**Warramunga Arr**	**44.42**	**259**	P	**P**	**20 05 39.6**	**-0.7**
	baz=50						
WB2	**Warramunga Arr**	**44.42**	**259**	P	**P**	**20 05 39.6**	**-0.7**
WB2				IAmb	IAmb	20 05 40.3	
	comp=Z,8.0nm,0.7s						
WRAB	**Tennant Creek**	**44.42**	**260**	P	**P**	**20 05 39.1**	**-1.2**
WRAB				IAmb	IAmb	20 05 40.2	
	comp=Z,7.4nm,0.7s						
WRA	**Warramunga Arr**	**44.43**	**259**	P	**P**	**20 05 39.4**	**-1.0**
	comp=Z,4.0nm,0.5s,baz=91,slow=6.9,SNR=108						
AS31	**Alice Springs**	**44.60**	**254**	P	**P**	**20 05 41.2**	**-0.4**
AS31				IAmb	IAmb	20 05 42.1	
	comp=Z,17nm,0.7s						
ASAR	**Alice Springs**	**44.60**	**254**	P	**P**	**20 05 41.6**	**-0.1**
	comp=Z,63nm,0.6s,baz=89,slow=8.1,SNR=425						
KDU	**Kakadu**	**47.34**	**269**	P	**P**	**20 06 02.3**	**-0.2**
	baz=53,SNR=4.2						
WRKA	**Warakurna**	**49.66**	**252**	P	**P**	**20 06 19.3**	**-0.3**
	baz=55,SNR=15						
FORT	**Forrest**	**49.84**	**245**	P	**P**	**20 06 20.2**	**-0.5**
	baz=55						
FORT	**Forrest**	**49.84**	**245**	P	**P**	**20 06 20.4**	**-0.3**
KNRA	**Kununurra**	**50.28**	**264**	P	**P**	**20 06 23.7**	**-0.4**
	baz=56,SNR=4.5						
KNRA	**Kununurra**	**50.28**	**264**	P	**P**	**20 06 24.1**	**0.0**
FITZ	**Fitzroy Crossi**	**52.83**	**261**	P	**P**	**20 06 42.7**	**+0.3**
	baz=58,SNR=7.3						
PSA00	**Pilbara Seismi**	**57.72**	**255**	P	**P**	**20 07 16.0**	**-0.3**
PSA00				IAmb	IAmb	20 07 16.3	
	comp=Z,9.9nm,0.7s						
MEEK	**Meekatharra**	**58.26**	**249**	P	**P**	**20 07 19.4**	**-0.6**
	baz=64,SNR=3.6						
VNDA	**Vanda**	**60.50**	**185**	P	**P**	**20 07 34.7**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=37,slow=12,SNR=2.1						
JAGI	**Jajag, Banyuwa**	**65.83**	**269**	P	**P**	**20 08 08.2**	**-1.0**
JAGI				IAmb	IAmb	20 08 11.3	
	comp=Z,53nm,1.7s						
MJAR	**Matsushiro Arr**	**67.72**	**323**	P	**P**	**20 08 20.9**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=112,slow=6.9,SNR=2.2						
PETK	**Petropavlovsk-**	**73.55**	**345**	P	**P**	**20 08 54.9**	**+0.7**
	comp=Z,2.0nm,0.6s,baz=142,slow=7.4,SNR=6.7						
YBH	**Yreka Blue Hor**	**78.60**	**39**	P	**P**	**20 09 24.1**	**+1.7**
	comp=Z,0.9nm,0.4s,baz=211,slow=5.9,SNR=3.8						
NVAR	**Mina Array Bea**	**79.52**	**44**	P	**P**	**20 09 29.0**	**+1.6**
	comp=Z,0.4nm,0.5s,baz=218,slow=8.7,SNR=1.4						
MOD	**Modoc Plateau**	**80.17**	**40**	P	**P**	**20 09 31.5**	**+0.8**
H04A	**Detroit Lake**	**80.66**	**37**	P	**P**	**20 09 33.4**	**+0.4**
H04A				IAmb	IAmb	20 11 25.4	
	comp=Z,18nm,1.7s						
PINE	**Pine Mountain**	**80.87**	**38**	P	**P**	**20 09 35.5**	**+1.2**
I07A	**Izee**	**81.88**	**39**	P	**P**	**20 09 40.4**	**+1.1**
PSUT	**Pine Spring**	**82.56**	**46**	P	**P**	**20 09 43.8**	**+0.8**
G08A	**Pilot Rock**	**82.88**	**38**	P	**P**	**20 09 45.5**	**+1.1**
SCM	**Sheep Creek Mo**	**83.21**	**14**	P	**P**	**20 09 45.9**	**+0.3**
GLB	**Gilahina Butte**	**83.75**	**16**	P	**P**	**20 09 48.4**	**+0.2**
GLB				IAmb	IAmb	20 11 23.6	
	comp=Z,31nm,1.9s						
MAW	**Mawson**	**83.86**	**200**	P	**P**	**20 09 49.4**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=125,slow=12,SNR=1.4						
TRF	**Thorofare Moun**	**83.98**	**12**	P	**P**	**20 09 48.8**	**-0.6**
TRF				IAmb	IAmb	20 10 26.2	
	comp=Z,34nm,1.9s						
RND	**Reindeer**	**84.25**	**13**	P	**P**	**20 09 50.5**	**-0.2**
RND				IAmb	IAmb	20 10 18.1	
	comp=Z,29nm,2.0s						
DHY	**Denali Highway**	**84.28**	**14**	P	**P**	**20 09 50.4**	**-0.5**
DHY				IAmb	IAmb	20 11 49.6	
	comp=Z

JIKH	**Ishinomakikobu**	**2.49 266**	P		Pn	20 21 24.3	+1.3
JIKH			S		Sn	20 21 53.2	+1.1
JMK	**Ichinoseki**	**2.70 280**	P		Pn	20 21 27.8	+1.9
JOM	**Ohasama**	**2.77 291**	P		Pn	20 21 28.8	+1.9
JOM			S		Sn	20 22 01.1	+2.1
JANG	**Nango**	**3.04 309**	P		Pn	20 21 31.5	+0.8
JYK	**Kaneyama**	**3.36 278**	P		Pn	20 21 37.5	+2.5
JYK			*e*S		Sn	20 22 17.3	+3.6
JFT	**Otama**	**3.52 255**	P		Pn	20 21 39.6	+2.3
JFT			S		Sn	20 22 19.9	+2.1
JOT	**Ohata**	**3.97 317**	P		Pn	20 21 46.1	+2.7
JCH	**Churui**	**4.21 347**	P		Pn	20 21 46.4	-0.3
JCH			*e*S		Sn	20 22 33.2	-1.4
JKB	**Kayabe**	**4.35 322**	P		Pn	20 21 50.5	+1.9
JKB			*e*S		Sn	20 22 37.8	-0.2
NEM2	**Nemuro 2**	**4.92 10**	P		Pn	20 21 53.9	-2.6
NEM2			*e*S		Sn	20 22 46.1	-6.1
JRY	**Ryogami san**	**5.20 243**	P		Pn	20 22 01.7	+1.4
JRY			S		Sn	20 22 58.5	-0.5
JOSM	**Okushiri--Mats**	**5.31 314**	P		Pn	20 22 04.6	+2.8
MAT	**Matsushiro**	**5.46 251**	P		Pn	20 22 06.9	+2.9
MAT			S		Sn	20 23 06.9	+1.4
JTKR	**Abashiri--Toko**	**5.48 355**	P		Pn	20 22 03.5	-0.7
JTKR			S		Sn	20 23 04.1	-1.8

IDC ***07*** *20:44:01.8±1.8, 6.˚48S×153.˚13E, h0km, mb3.6/4, mb1 4.0/6, mb1mx3.6/41, mbtmp3.8/6, ML1.9/1, MS2.8/3, Ms1 2.8/3, ms1mx2.5/32, Error ellipse: s-maj=52.1km s-min=24.1km az=120.0*

ISC 07 20:44:06.9±1.6, 6.˚42S±0.˚09×153.˚0E±0.˚2, h31km, n9, σ0.26/8, mb3.5/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.30**	**336**	Pn		**Pn**		**20 44 42.8**	**+0.1**
	100nm,0.3s,baz=164,slow=1.5,SNR=95								
KRVT				Sn		**Sn**		**20 45 09.8**	**0.0**
	99nm,0.3s,baz=277,slow=20,SNR=17								
KRVT				LR		LR		20 45 40.2	
	comp=Z,80nm,19.9s,baz=346,slow=41								
PMG	**Port Moresby**	**6.48**	**242**	Pn		**Pn**		**20 45 40.2**	**+0.1**
	1.5nm,0.3s,baz=54,slow=15,SNR=1.6								
HNR	**Honiara**	**7.53**	**114**	LR		LR		20 48 10.4	
	comp=Z,75nm,18.7s,baz=330,slow=34								
WRA	**Warramunga Arr**	**22.54**	**232**	P		**P**		**20 49 04.7**	**+0.1**
	0.8nm,1.0s,baz=66,slow=10.0,SNR=2.1								
ASAR	**Alice Springs**	**25.11**	**225**	P		**P**		**20 49 29.5**	**+0.4**
	0.7nm,0.7s,baz=57,slow=9.1,SNR=7.4								
STKA	**Stephens Creek**	**27.47**	**201**	LR		LR		21 00 28.5	
	comp=Z,50nm,18.2s,baz=209,slow=36								
FITZ	**Fitzroy Crossi**	**29.07**	**244**	P		**P**		**20 50 04.5**	**-0.3**
	2.8nm,0.9s,baz=82,slow=7.1,SNR=1.3								
ILAR	**Eielson Array**	**83.58**	**22**	P		**P**		**20 56 31.8**	**0.0**
	0.5nm,0.9s,baz=243,slow=4.8,SNR=5.3								
TORD	**Torodi Ar. Bea**	**150.93**	**285**	PKPbc		**PKPbc**		**21 03 57.4**	**-0.2**
	0.9nm,0.8s,baz=60,slow=2.4,SNR=5.3								

IDC ***07*** *21:06:39.7±2.3, 6.˚88S×154.˚52E, h63km±21km, mb3.8/6, mb1 4.0/10, mb1mx3.6/47, mbtmp4.1/10, MS3.1/2, Ms1 3.1/2, ms1mx2.7/25, Error ellipse: s-maj=21.1km s-min=17.1km az=77.0*

ISC 07 21:06:37.8±0.8, 6.˚93S±0.˚09×154.˚56E±0.˚10, h39km, n11, σ1.98/13, mb4.0/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.62**	**316**	P		**Pn**		**21 07 33.7**	**+2.4**
	16nm,0.3s,baz=202,slow=19,SNR=1.8								
KRVT				S		**Sn**		**21 08 13.2**	**+0.3**
	26nm,0.3s,baz=323,slow=12,SNR=1.9								
HNR	**Honiara**	**5.89**	**115**	P		**Pn**		**21 08 05.5**	**+3.1**
	5.2nm,0.3s,baz=270,slow=11,SNR=1.4								
PMG	**Port Moresby**	**7.73**	**251**	P		**Pn**		**21 08 30.9**	**+3.2**
	0.3nm,0.3s,baz=49,slow=9.3,SNR=1.2								
PMG				LR		LR		21 11 35.6	
	comp=Z,72nm,18.1s,baz=325,slow=38								
CTA	**Charters Tower**	**15.37**	**211**	P		**P**		**21 10 14.2**	**-1.9**
	0.2nm,0.3s,baz=32,slow=16,SNR=2.1								
WRA	**Warramunga Arr**	**23.50**	**235**	P		**P**		**21 11 44.3**	**-0.1**
	3.3nm,0.8s,baz=57,slow=9.4,SNR=15								
WRA				PcP		**PcP**		**21 15 29.5**	**0.0**
	0.5nm,1.0s,baz=59,slow=2.7,SNR=4.8								
ASAR	**Alice Springs**	**25.90**	**228**	P		**P**		**21 12 05.8**	**-0.6**
	2.0nm,0.8s,baz=62,slow=8.6,SNR=19								
STKA	**Stephens Creek**	**27.62**	**204**	P		**P**		**21 12 19.6**	**-2.0**
	2.6nm,0.8s,baz=0.9,slow=10,SNR=4.7								
FITZ	**Fitzroy Crossi**	**30.28**	**246**	P		**P**		**21 12 44.9**	**-0.6**
	2.9nm,0.8s,baz=76,slow=7.7,SNR=5.1								
FITZ				LR		LR		21 24 30.5	
	comp=Z,49nm,18.5s,baz=210,slow=35								
NVAR	**Mina Array Bea**	**92.02**	**52**	P		**P**		**21 19 41.8**	**-1.4**
	0.8nm,0.8s,baz=251,slow=8.2,SNR=2.4								
YKA	**Yellowknife Ar**	**96.48**	**28**	P		**P**		**21 20 00.7**	**-2.0**
	0.5nm,0.7s,baz=257,slow=4.2,SNR=8.0								
TORD	**Torodi Ar. Bea**	**152.59**	**285**	PKPbc		**PKiKP**		**21 26 31.6**	**+0.1**
	0.5nm,0.7s,baz=54,slow=2.5,SNR=3.2								

IDC ***07*** *21:10:24.5±0.7, 23.˚54S×175.˚52W, h0km, mb4.3/20, mb1 4.5/21, mb1mx4.4/37, mbtmp4.3/21, ML4.9/2, MS4.1/20, Ms1 4.1/20, ms1mx3.9/33, Error ellipse: s-maj=23.7km s-min=16.3km az=124.0*

NEIC ***07*** *21:10:24.2±2.5, 23.˚95S±0.˚09×175.˚2W±0.˚1, h10km±1km, mb4.2/13, Error ellipse: s-maj=26.5km s-min=6.1km az=121.0*

GCMT ***07*** *21:10:27.2±0.5, 23.˚94S±0.˚04×174.˚91W±0.˚03, h28km, MW4.9/74, Moment Tensor Solution. s25,c28; s74,c93; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.69±.18; Mθθ-0.57±.12; Mφφ-2.12±.12; Mrθ0.88±.20; Mrφ-0.59±.07; Mθφ0.88±.17; Best double couple: M=2.78900×10^16 NP1:φs191.00000°, δ33.00000°, λ75.00000°. NP2: φs29.00000°, δ58.00000°, λ100.00000°. Principal axes: T 3.0140, Plg75.0000°, Azm327.0000°; N -0.4470, Plg8.0000°, Azm204.0000°; P -2.5640, Plg12.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 21:10:26.1±0.5, 23.˚97S±0.˚07×175.˚4W±0.˚1, h10km, n76, σ2.970/57, mb4.4/21, MS4.1/24, 1C, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.72**	**202**	Pn		Pn		21 11 56.8	+5.7
	86nm,0.3s,baz=72,slow=20,SNR=2.4								
RAO				Sn		**Sn**		**21 12 57.2**	**+0.5**
	103nm,0.3s,baz=68,slow=19,SNR=2.3								
RAO	**Raoul Island**	**5.72**	**202**			**Pn**		**21 11 51.1**	**0.0**
NIUE	**Niue**	**7.06**	**48**			Pn		21 11 59.7	-10
AFI	**Afiamalu**	**10.58**	**20**			Pn		21 12 49.7	-8.2
RAR	**Rarotonga**	**14.72**	**82**	Pn		Pn		21 13 44.9	-9.5
	4.0nm,0.3s,baz=232,slow=7.0,SNR=5.6								
RAR	**Rarotonga**	**14.72**	**82**			Pn		21 13 45.3	-9.1
URZ	**Urewera**	**15.61**	**202**	Pn		**P**		**21 14 11.7**	**+1.3**
	1.9nm,0.3s,baz=333,slow=4.5,SNR=2.5								
URZ				Sn		**Sn**		**21 16 55.0**	**-4.1**
	1.1nm,0.3s,baz=144,slow=19,SNR=1.6								
URZ	**Urewera**	**15.61**	**202**	IAmb		IAmb		21 14 17.8	
	comp=Z,9.8nm,0.7s								
BKZ	**Black Stump Fm**	**16.63**	**202**	Pn		**Pn**		**21 14 16.5**	**-2.9**
DZM	**Mont Dzumac**	**16.80**	**273**	*e*P		**P**		**21 14 27.0**	**+3.2**
	comp=Z,72nm,1.4s								
DZM				*e*LR		LR		21 18 22.9	
	comp=Z,690nm,25.1s								
DZM	**Mont Dzumac**	**16.80**	**273**	Pn		**P**		**21 14 26.2**	**+2.4**
	comp=Z,0.5nm,0.3s,baz=80,slow=21,SNR=8.5								
BFZ	**Birch Farm**	**18.08**	**201**	P		**Pn**		**21 14 34.4**	**-2.9**
BFZ				IAmb		IAmb		21 14 35.3	
	comp=Z,17nm,1.0s								
MSWZ	**Moikau Station**	**19.07**	**202**	P		**P**		**21 14 47.4**	**-1.3**
TUWZ	**Tuamarina**	**19.55**	**204**	P		**P**		**21 14 51.9**	**-2.0**
QRZ	**Quartz Range**	**19.61**	**208**	P		**P**		**21 14 53.8**	**-0.8**
QRZ				IAmb		IAmb		21 15 01.0	
	comp=Z,12nm,1.1s								
THZ	**Tophouse**	**20.24**	**206**	P		**P**		**21 15 00.0**	**-1.5**
THZ				IAmb		IAmb		21 15 02.2	
	comp=Z,19nm,1.1s								
KHZ	**Kahutara**	**20.55**	**204**	P		**P**		**21 15 01.8**	**-3.0**
KHZ				IAmb		IAmb		21 15 04.5	
	comp=Z,12nm,1.0s								
LTZ	**Lake Taylor**	**21.35**	**206**	P		**P**		**21 15 14.8**	**+1.3**
LTZ				IAmb		IAmb		21 15 16.5	
	comp=Z,13nm,1.2s								
KNTN	**Kanton**	**21.37**	**10**	P		**P**		**21 15 09.7**	**-4.1**
RPZ	**Rata Peaks**	**22.62**	**206**	P		**P**		**21 15 31.7**	**+4.7**
	comp=Z,19nm,1.1s,baz=103,slow=12,SNR=3.4								
TBI	**Tubuai**	**23.79**	**94**	*e*LR		LR		21 21 13.6	
	comp=Z,680nm,22.5s								
PPT2	**Papeete2**	**24.97**	**80**	*e*LR		LR		21 21 38.6	
	comp=Z,679nm,22.0s								
PPT	**Papeete**	**24.97**	**80**	LR		LR		21 23 29.8	
	comp=Z,550nm,20.0s,baz=191,slow=31								
CTA	**Charters Tower**	**35.66**	**269**	P		**P**		**21 17 24.3**	**-0.4**
	comp=Z,3.6nm,0.3s,baz=92,slow=10,SNR=11								
TAOE	**Nuku Hiva Isla**	**36.89**	**72**	*e*LR		LR		21 27 19.6	
	comp=Z,358nm,23.0s								
RKT	**Rikitea**	**37.01**	**97**	*e*LR		LR		21 27 23.2	
	comp=Z,481nm,22.2s								
PMG	**Port Moresby**	**38.51**	**286**	P		**P**		**21 17 47.8**	**-1.1**
	comp=Z,22nm,0.9s,baz=68,slow=16,SNR=3.2								
PMG	**Port Moresby**	**38.51**	**286**	IAmb		IAmb		21 17 51.5	
	comp=Z,22nm,0.9s								
STKA	**Stephens Creek**	**38.59**	**248**	P		**P**		**21 17 49.6**	**+0.3**
	comp=Z,1.0nm,0.4s,baz=86,slow=12,SNR=5.5								
STKA				LR		LR		21 32 12.3	
	comp=Z,481nm,20.7s,baz=59,slow=34								
STKA	**Stephens Creek**	**38.59**	**248**	IAmb		IAmb		21 17 50.1	
	comp=Z,0.7nm,1.1s								
ASAR	**Alice Springs**	**46.15**	**260**	P		**P**		**21 18 50.0**	**-1.1**
	comp=Z,3.9nm,0.9s,baz=96,slow=7.4,SNR=23								
ASAR				LR		LR		21 38 25.6	
	comp=Z,540nm,18.1s,baz=124,slow=36								
WRA	**Warramunga Arr**	**46.57**	**265**	P		**P**		**21 18 52.6**	**-1.8**
	comp=Z,4.2nm,0.7s,baz=106,slow=7.0,SNR=42								
VNDA	**Vanda**	**54.70**	**186**	P		**P**		**21 19 57.9**	**+2.9**
	comp=Z,1.3nm,1.1s,baz=51,slow=5.5,SNR=4.1								
VNDA				LR		LR		21 38 31.3	
	comp=Z,91nm,21.7s,baz=346,slow=31								
FITZ	**Fitzroy Crossi**	**54.99**	**264**	P		**P**		**21 19 57.5**	**-0.5**
	comp=Z,4.5nm,0.8s,baz=127,slow=6.3,SNR=8.7								
FITZ	**Fitzroy Crossi**	**54.99**	**264**	P		**P**		**21 19 57.5**	**-0.5**
FITZ				IAmb		IAmb		21 20 00.9	
	comp=Z,7.1nm,1.0s								
DAV	**Davao City (W)**	**65.27**	**291**	LR		LR		21 47 18.3	
	comp=Z,60nm,20.8s,baz=112,slow=34								
TGY	**Tagaytay City**	**72.76**	**294**	LR		LR		21 51 02.7	
	comp=Z,80nm,20.8s,baz=4.0,slow=34								
MJAR	**Matsushiro Arr**	**74.40**	**323**	P		P		21 22 01.4	-2.9
	comp=Z,0.5nm,0.3s,baz=145,slow=6.8,SNR=5.2								
MJAR				LR		LR		21 54 52.1	
	comp=Z,44nm,18.2s,baz=205,slow=36								
LEM	**Lembang**	**75.36**	**269**	LR		LR		21 57 01.0	
	comp=Z,94nm,18.7s,baz=158,slow=37								
JNU	**Nakatsue**	**76.42**	**316**	LR		LR		21 51 05.2	
	comp=Z,71nm,21.4s,baz=106,slow=32								
MAW	**Mawson**	**79.11**	**199**	P		**P**		**21 22 32.7**	**+2.2**
	comp=Z,3.7nm,1.0s,baz=136,slow=9.0,SNR=3.1								
MAW				LR		LR		21 56 50.8	
	comp=Z,298nm,19.7s,baz=69,slow=35								
MAW	**Mawson**	**79.11**	**199**	P		**P**		**21 22 29.9**	**-0.6**
PETK	**Petropavlovsk-**	**80.23**	**344**	P		**P**		**21 22 34.7**	**-1.8**
	comp=Z,3.8nm,0.9s,baz=327,slow=28,SNR=5.4								
PETK				LR		LR		21 51 46.1	
	comp=Z,165nm,21.9s,baz=207,slow=31								
KSRS	**Korea Array**	**81.05**	**318**	P		**P**		**21 22 39.5**	**-1.8**
	comp=Z,1.3nm,0.7s,baz=125,slow=5.9,SNR=5.6								
KSRS				LR		LR		21 52 09.1	
	comp=Z,83nm,21.9s,baz=133,slow=31								
NVAR	**Mina Array Bea**	**81.95**	**42**	LR		LR		21 51 12.0	
	comp=Z,132nm,21.4s,baz=245,slow=30								
USRK	**Ussuriysk Ar.**	**83.16**	**325**	P		**P**		**21 22 51.5**	**-0.7**
	comp=Z,4.8nm,0.8s,baz=124,slow=3.7,SNR=14								
USRK				LR		LR		21 57 16.5	
	comp=Z,66nm,18.4s,baz=137,slow=34								
SYO	**Syowa Base**	**83.87**	**192**	P		P		21 23 09.5	+14
SNAA	**Sanae**	**84.48**	**178**	Pdiff		**P**		**21 23 00.1**	**+1.3**
PLCA	**Paso Flores**	**85.18**	**133**	LR		LR		21 54 37.2	
	comp=Z,67nm,18.2s,baz=225,slow=31								
KLR	**Kul'dur**	**86.71**	**328**	P		**P**		**21 23 08.6**	**-1.4**
	comp=Z,2.0nm,0.9s,baz=100,slow=7.4,SNR=5.7								
TXAR	**Lajitas Array**	**86.95**	**56**	P		**P**		**21 23 10.0**	**-1.8**
	comp=Z,1.3nm,1.0s,baz=235,slow=3.2,SNR=7.3								
TXAR				LR		LR		21 56 00.6	
	comp=Z,134nm,19.4s,baz=0.0,slow=32								
RPSI	**Rantau Prapat**	**87.11**	**274**	P		**P**		**21 23 12.2**	**-0.6**
PSI	**Prapat**	**87.15**	**274**	P		**P**		**21 23 12.2**	**-1.0**
	comp=Z,3.4nm,0.4s,baz=180,slow=7.6,SNR=3.8								
PSI				LR		LR		22 04 18.7	
	comp=Z,117nm,18.5s,baz=266,slow=37								
PPLA	**Purkeypile**	**88.51**	**10**	P		P		21 23 14.8	-3.7
PDAR	**Pinedale Array**	**89.88**	**42**	P		**P**		**21 23 23.6**	**-2.0**
	comp=Z,0.4nm,0.9s,baz=184,slow=2.7,SNR=3.1								
ENH	**Enshi**	**89.94**	**303**	P		**P**		**21 23 26.0**	**+0.1**
ILAR	**Eielson Array**	**91.17**	**12**	P		**P**		**21 23 28.6**	**-2.2**
	comp=Z,1.2nm,1.1s,baz=214,slow=6.2,SNR=2.6								
CMAR	**Chiang Mai Arr**	**93.49**	**289**	P		**P**		**21 23 43.2**	**+0.6**
	comp=Z,4.7nm,1.1s,baz=129,slow=2.9,SNR=21								
CMAR				LR		LR		22 05 45.7	
	comp=Z,36nm,19.3s,baz=186,slow=36								
LPAZ	**La Paz**	**98.55**	**112**	LR		LR		22 01 41.6	
	comp=Z,56nm,18.1s,baz=212,slow=31								
YKA	**Yellowknife Ar**	**98.67**	**24**	P		**P**		**21 24 04.4**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=246,slow=3.8,SNR=3.2								
YKA				LR		LR		22 02 24.1	
	comp=Z,73nm,21.0s,baz=0.0,slow=32								
AKASG	**Malin Array Be**	**147.19**	**331**	PKPbc		**PKPdf**		**21 30 07.6**	**+0.5**
	comp=Z,2.2nm,0.5s,baz=42,slow=4.2,SNR=11								
BSEG	**Bad Segeberg**	**149.76**	**353**	*e*PKPbc		**PKPab**		**21 30 27.9**	**+6.8**
	baz=4.4,slow=2.2								
RUE	**Ruedersdorf**	**150.67**	**348**	*e*PKPbc		**PKPab**		**21 30 31.1**	**+6.1**
	baz=4.4,slow=2.2								
BRTR	**Keskin Array B**	**150.90**	**310**	PKPbc		**PKPdf**		**21 30 16.9**	**+3.2**
	comp=Z,1.2nm,0.8s,baz=134,slow=4.2,SNR=4.3								
RETH	**Rethem/Aller.**	**151.04**	**354**	*e*PKPbc		**PKPab**		**21 30 30.9**	**+4.4**
	baz=4.4,slow=2.2								
NRDL	**Niedersach Rie**	**151.20**	**353**	*e*PKPbc		**PKPab**		**21 30 31.5**	**+4.4**
	baz=4.4,slow=2.2								
ASSE	**Asse, Remlinge**	**151.49**	**352**	*e*PKPbc		**PKPab**		**21 30 32.1**	**+3.8**
	baz=4.4,slow=2.2								
CLZ	**Clausthal**	**151.81**	**352**	*e*PKPbc		**PKPab**		**21 30 33.3**	**+3.5**
	baz=4.4,slow=2.2								
CLL	**Collm**	**151.94**	**349**	*e*PKPbc		**PKPbc**		**21 30 21.0**	**-0.1**
	comp=Z,5.0nm,0.9s								
CLL				*i* PKPab		**sPKPbc**		**21 30 28.4**	**+5.3**
	comp=Z,10.0nm,1.2s								
CLL				*i*				21 30 34.1	
CLL	**Collm**	**151.94**	**349**	*e*PKPbc		**PKPab**		**21 30 34.0**	**+3.7**
	baz=4.4,slow=2.2								
OSTC	**Ostas**	**151.96**	**344**	*e*PKP		**PKPbc**		**21 30 20.8**	**-0.5**
OSTC				*ex*		x		21 30 34.3	
DPC	**Dobruska-Polom**	**152.12**	**344**	*e*PKP		**PKPbc**		**21 30 21.5**	**-0.2**
DPC				*ex*		x		21 30 34.9	
FBE	**Freiberg**	**152.24**	**348**	*e*PKPbc		**PKPab**		**21 30 34.1**	**+2.5**
	baz=4.4,slow=2.2								
KRLC	**Kraliky**	**152.25**	**343**	*e*PKP		**PKPbc**		**21 30 21.6**	**-0.4**
KRLC				*ex*		x		21 30 34.6	
KHC	**Kasperske Hory**	**153.90**	**346**	*e*PKP		**PKiKP**		**21 30 31.0**	**+5.3**
KHC				*ex*		x		21 30 51.0	
KHC				*ex*		x		21 31 14.0	
GERES	**GERESS Array B**	**154.14**	**346**	PKPbc		**PKPbc**		**21 30 26.4**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=46,slow=4.2,SNR=2.2								
GERES				PKPab		**PKPab**		**21 30 38.0**	**-1.9**
	comp=Z,1.6nm,0.9s,baz=45,slow=2.1,SNR=7.7								

JMA ***07*** *21:17:13.9, 23.˚78N×121.˚59E, h28km±1km, M2.7*
TAP ***07*** *21:17:14.7, 23.˚84N×121.˚57E, h20km, ML2.9, C*

ISC 07 21:17:14.0±1.0, 23.˚80N±0.˚02×121.˚62E±0.˚02, h17km±8km, n68, σ0.56/119, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ESL	**Shilin**	**0.17**	**273**	*i* P		**Pb**		**21 17 19.7**	**+0.9**
	baz=257								
ESL				*e*S		**Sb**		**21 17 24.1**	**+2.1**
	baz=257								
HWA	**Hwalien**	**0.17**	**357**	P		**Pb**		**21 17 20.4**	**+1.6**
	baz=15								
HWA				S		**Sb**		**21 17 23.1**	**+1.0**
	baz=15								
EGFH	**Guangfu**	**0.22**	**232**	P		**Pb**		**21 17 20.4**	**+0.7**
	baz=218								
EGFH				S		**Sb**		**21 17 24.9**	**+1.5**
	baz=218								
HGSD	**Ruisui**	**0.36**	**210**	P		**Pb**		**21 17 23.1**	**+1.1**
	baz=201								
HGSD				S		**Sn**		**21 17 30.2**	**-1.0**
	baz=201								

NACB	**Ninganchiao**	**0.37**	**357**	P		**Pb**		**21 17 22.6**	**+0.4**
	baz=3.0								
NACB				S		**Sb**		**21 17 28.9**	**+1.2**
	baz=3.0								
EHY	**Hungye**	**0.40**	**222**	P		**Pg**		**21 17 22.3**	**0.0**
	baz=213								
ETLH	**Xiulin Townshi**	**0.42**	**343**	P		**Pb**		**21 17 23.3**	**+0.2**
	baz=347								
ETLH				S		**Sb**		**21 17 29.2**	**0.0**
	baz=347								
OWD	**Renai**	**0.43**	**290**	*i* P		**Pb**		**21 17 23.4**	**+0.1**
	baz=287								
OWD				S		**Sb**		**21 17 29.3**	**-0.3**
	baz=287								
VWDT	**VWDT**	**0.44**	**263**	P		**Pb**		**21 17 23.6**	**+0.2**
	baz=257								
VWDT				S		**Sb**		**21 17 29.8**	**+0.1**
	baz=257								
WHF	**Hehuan Shan**	**0.47**	**317**	*i* P		**Pb**		**21 17 23.8**	**-0.3**
	baz=317								
WHF				*e*S		**Sg**		**21 17 30.4**	**+0.3**
	baz=317								
CHGB	**Renai**	**0.48**	**302**	*i* P		**Pb**		**21 17 24.3**	**+0.1**
	baz=301								
CHGB				S		**Sb**		**21 17 31.0**	**-0.1**
	baz=301								
YULB	**Yu-li**	**0.50**	**216**	P		**Pg**		**21 17 23.9**	**-0.3**
	baz=209								
TWT	**Tachien**	**0.60**	**318**	P		**Pb**		**21 17 26.7**	**+0.4**
	baz=317								
TWT				*e*S		**Sb**		**21 17 34.4**	**-0.2**
	baz=317								
SSLB	**Suanglung**	**0.61**	**269**	*i* P		**Pg**		**21 17 25.8**	**-0.2**
	baz=264								
TDCB	**Techi**	**0.61**	**317**	P		**Pb**		**21 17 26.3**	**-0.2**
	baz=317								
TDCB				*e*S		**Sg**		**21 17 34.2**	**-0.2**
	baz=317								
ENA	**Nanau**	**0.63**	**10**	P		**Pb**		**21 17 26.6**	**0.0**
	baz=15								
ENA				*e*S		**Sb**		**21 17 35.9**	**+0.7**
	baz=15								
NNSB	**Datong**	**0.66**	**341**	P		**Pb**		**21 17 27.2**	**0.0**
	baz=343								
NNSB				S		**Sg**		**21 17 35.5**	**-0.3**
	baz=343								
NNSH	**Datong**	**0.66**	**341**	P		**Pb**		**21 17 27.4**	**+0.2**
	baz=343								
NNSH				*e*S		**Sg**		**21 17 35.8**	**0.0**
	baz=343								
SMLT	**Sun Moon Lake**	**0.66**	**277**	P		**Pg**		**21 17 27.1**	**0.0**
	baz=274								
SMLT				S		**Sg**		**21 17 35.8**	**-0.1**
	baz=274								
DPDB	**Guoxing**	**0.67**	**290**	*e*P		**Pg**		**21 17 27.1**	**-0.1**
	baz=288								
DPDB				*e*S		**Sb**		**21 17 36.4**	**-0.1**
	baz=288								
NNS	**Nan Shan**	**0.67**	**341**	P		**Pb**		**21 17 27.3**	**-0.1**
	baz=343								
NNS				*e*S		**Sb**		**21 17 36.3**	**-0.2**
	baz=343								
FULB	**Fuli**	**0.67**	**206**	*e*P		**Pg**		**21 17 26.7**	**-0.5**
	baz=201								
YUS	**Yu-Shan**	**0.69**	**243**	P		**Pg**		**21 17 27.6**	**-0.1**
	baz=238								
YUS				S		**Sg**		**21 17 36.3**	**-0.5**
	baz=238								
WHP	**Taichung City**	**0.77**	**308**	P		**Pg**		**21 17 29.2**	**+0.1**
	baz=307								
WHP				S		**Sb**		**21 17 39.4**	**-0.1**
	baz=307								
ALS	**Alishan**	**0.80**	**249**	P		**Pg**		**21 17 29.6**	**-0.1**
	baz=244								
ALS				*e*S		**Sg**		**21 17 40.1**	**-0.2**
	baz=244								
NDT	**Datong Townshi**	**0.80**	**353**	*e*P		**Pb**		**21 17 29.3**	**-0.3**
	baz=355								
NDT				*e*S		**Sg**		**21 17 40.3**	**0.0**
	baz=355								
WJS	**

baz=230
SGST S **Sn** 21 17 51.8 0.0
baz=230
SLGT Liugui 1.20 228 P **Pn** 21 17 36.2 0.0
baz=225
WSF Szhu 1.29 263 *e*S **Sg** 21 17 55.7 -0.1
baz=260
JYNG Yonagunijimaku 1.37 62 P **Pn** 21 17 38.8 +0.3
JYNG *e*S **Sb** 21 17 56.6 0.0
SSD Sandimen 1.39 221 *e*P **Pn** 21 17 39.0 +0.3
baz=218
YOJ Yonaguni jima 1.43 63 P **Pn** 21 17 39.0 -0.3
baz=64
YOJ *e*S **Sn** 21 17 57.9 +0.2
baz=64
YOJ Yonaguni jima 1.43 63 P **Pn** 21 17 39.3 0.0
YOJ S **Sn** 21 17 57.8 0.0
PHUB P'eng-hu 1.90 262 *e*P **Pn** 21 17 45.3 -0.4
baz=259
PHUB *e*S **Sn** 21 18 07.9 -1.3
baz=259
PNG Penghu 1.90 263 *e*S **Sn** 21 18 08.6 -0.8
baz=261
IRIF Iriomote-Funau 2.00 74 P **Pn** 21 17 47.2 +0.1
IRIF *e*S **Sn** 21 18 11.9 0.0
HATJ Hateruma jima 2.02 82 P **Pn** 21 17 46.9 -0.5
HATJ *e*S **Sn** 21 18 11.7 -0.5
JKRS Kuro-shima 2.23 78 P **Pn** 21 17 50.5 +0.2
JKRS *e*S **Sn** 21 18 17.6 +0.1
VWUC VWUC 2.30 301 *e*P **Pn** 21 17 50.7 -0.5
baz=300
JIJ Ishigaki jima 2.38 76 P **Pn** 21 17 52.1 -0.2
JIJ S **Sn** 21 18 19.5 -1.6
JISG Ishigakijimahi 2.58 72 P **Pn** 21 17 54.8 -0.3
JISG *e*S **Sn** 21 18 24.7 -1.4
JTJ Tarama 2.94 73 P **Pn** 21 18 00.1 +0.1
JTJ *e*S **Sn** 21 18 34.8 -0.1

*IDC **07** 21:17:28.4±0.7, 6°.92S×154°.89E, h0km, mb4.2/12, mb1 4.4/15, mb1mx4.2/34, mbtmp4.1/15, ML3.1/3, Error ellipse: s-maj=21.1km s-min=17.4km az=131.0*
*NEIC **07** 21:17:33.8±2.2, 6°.9S±0°.1×154°.88E±0°.10, h35km±1km, mb4.4/10, Error ellipse: s-maj=23.1km s-min=15.8km az=161.0*

ISC 07 21:17:34.8±0.5, **6°.90S**±0°.08×**154°.87E**±0°.07, **h41km, n35, σ1§45/36, mb4.1/17, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.81**	**315**		Pn	21 18 36.3	+5.3
KRVT	**Keravat (AS076**	**3.83**	**312**	Pn	**Pn**	**21 18 30.0**	**-1.3**
	9.5nm,0.3s,baz=28,slow=8.4,SNR=5.8						
KRVT				Sn	**Sn**	**21 19 17.1**	**+2.1**
	24nm,0.3s,baz=189,slow=19,SNR=9.3						
HNR	**Honiara**	**5.62**	**117**	Pn	**Pn**	**21 18 57.6**	**+1.7**
	8.7nm,0.3s,baz=243,slow=4.5,SNR=1.8						
HNR				Sn	Sn	21 20 14.2	+15
	7.3nm,0.3s,baz=296,slow=12,SNR=1.4						
HNR	**Honiara**	**5.62**	**117**		Pn	21 19 04.8	+8.9
PMG	**Port Moresby**	**8.03**	**251**		**Pn**	**21 19 28.5**	**-0.5**
	2.4nm,0.3s,baz=62,slow=11,SNR=2.8						
PMG				Sn	**Sn**	**21 21 00.5**	**+1.9**
	1.0nm,0.3s,baz=283,slow=20,SNR=6.9						
PMG	**Port Moresby**	**8.03**	**251**		**Sn**	**21 21 01.4**	**+2.8**
CTA	**Charters Tower**	**15.55**	**212**	Pn	**P**	**21 21 14.3**	**-0.7**
	0.1nm,0.3s,baz=30,slow=13,SNR=6.3						
DZM	**Mont Dzumac**	**18.77**	**145**	P	**P**	**21 21 50.5**	**-0.2**
	0.1nm,0.3s,baz=317,slow=19,SNR=1.8						
WR0	**Warramunga Arr**	**23.62**	**235**	P	**P**	**21 22 39.6**	**-2.8**
WR0				IAmb	IAmb	21 22 46.0	
	comp=Z,11nm,0.8s						
WB0	**Warramunga Arr**	**23.64**	**235**	P	**P**	**21 22 41.2**	**-1.4**
WB0				IAmb	IAmb	21 22 48.5	
	comp=Z,6.5nm,1.0s						
WB2	**Warramunga Arr**	**23.76**	**235**	P	**P**	**21 22 42.8**	**-0.9**
WB2				IAmb	IAmb	21 22 47.3	
	comp=Z,9.7nm,0.8s						
WRA	**Warramunga Arr**	**23.77**	**235**	P	**P**	**21 22 41.6**	**-2.2**
	comp=Z,5.7nm,0.8s,baz=59,slow=9.6,SNR=14						
WRA				PcP	**PcP**	**21 26 27.5**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=58,slow=2.4,SNR=2.4						
AS31	**Alice Springs**	**26.14**	**228**	P	**P**	**21 23 03.3**	**-2.2**
ASAR	**Alice Springs**	**26.14**	**228**	P	**P**	**21 23 04.3**	**-1.1**
	comp=Z,3.3nm,0.8s,baz=61,slow=8.8,SNR=19						
ASAR				ScP	**ScP**	**21 30 12.2**	**+3.3**
	comp=Z,0.6nm,0.7s,baz=90,slow=4.6,SNR=3.9						
KNRA	**Kununurra**	**27.02**	**249**	P	**P**	**21 23 11.9**	**-1.5**
KNRA				IAmb	IAmb	21 23 16.3	
	comp=Z,12nm,0.9s						
STKA	**Stephens Creek**	**27.77**	**205**	P	**P**	**21 23 18.8**	**-1.1**
	comp=Z,1.7nm,0.8s,baz=27,slow=13,SNR=4.2						
STKA	**Stephens Creek**	**27.77**	**205**	IAmb	IAmb	21 23 26.1	
	comp=Z,0.9nm,1.1s						
FITZ	**Fitzroy Crossi**	**30.58**	**246**	P	**P**	**21 23 43.5**	**-1.6**
	comp=Z,2.9nm,0.6s,baz=72,slow=9.4,SNR=6.0						
FITZ	**Fitzroy Crossi**	**30.58**	**246**	IAmb	IAmb	21 23 44.8	
	comp=Z,3.4nm,0.7s						
ENH	**Enshi**	**57.08**	**313**	P	**P**	**21 27 18.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**60.63**	**296**	P	**P**	**21 27 43.5**	**+1.4**
	comp=Z,3.2nm,0.9s,baz=114,slow=4.9,SNR=12						
SONM	**Songino Array**	**69.19**	**327**	P	**P**	**21 28 37.0**	**-0.4**
	comp=Z,1.2nm,0.9s,baz=132,slow=6.8,SNR=5.4						
LSA	**Lhasa**	**71.12**	**304**	P	**P**	**21 28 50.3**	**+0.3**
LSA				IAmb	IAmb	21 28 52.5	
	comp=Z,4.5nm,0.9s						
MKAR	**Makanchi Array**	**83.25**	**319**	P	**P**	**21 29 57.2**	**0.0**
	comp=Z,0.6nm,0.7s,baz=101,slow=6.6,SNR=2.5						
ILAR	**Eielson Array**	**83.33**	**22**	P	**P**	**21 29 55.6**	**-1.5**
	comp=Z,2.2nm,1.2s,baz=244,slow=5.6,SNR=4.2						
ZALV	**Zalesovo Beam**	**84.03**	**326**	P	**P**	**21 29 59.5**	**-1.4**
	comp=Z,0.7nm,0.4s,baz=118,slow=5.7,SNR=3.7						
HYT	**Haines Junctio**	**85.34**	**27**	P	**P**	**21 30 08.8**	**+1.2**
NVAR	**Mina Array Bea**	**91.76**	**52**	P	**P**	**21 30 39.4**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=251,slow=5.6,SNR=3.2						
YKA	**Yellowknife Ar**	**96.31**	**28**	P	**P**	**21 30 58.4**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=262,slow=4.4,SNR=15						
PDAR	**Pinedale Array**	**98.73**	**48**	P	**P**	**21 31 10.0**	**-0.5**
	comp=Z,0.5nm,1.0s,baz=222,slow=1.2,SNR=2.6						
GERES	**GERESS Array B**	**126.91**	**329**	PKP	**PKPdf**	**21 36 34.2**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=52,slow=3.8,SNR=3.7						
ESDC	**Sonseca Array**	**142.23**	**333**	PKP	**PKPdf**	**21 37 03.9**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=302,slow=2.9,SNR=1.9						
TAM	**Tamanrasset**	**146.53**	**301**		**PKPab**	**21 37 13.1**	**-0.8**
BDFB	**Brasilia**	**148.14**	**135**	PKPbc	**PKPbc**	**21 37 17.6**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=96,slow=1.9,SNR=4.5						
TORD	**Torodi Ar. Bea**	**152.88**	**285**	PKP	**PKPdf**	**21 37 20.9**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=5.2,slow=2.9,SNR=2.4						
TORD				PKPbc	**PKiKP**	**21 37 28.6**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=51,slow=2.7,SNR=8.7						

MAN 07 21:38:30.1, 10°.05N×124°.06E, h23km, mb3.9, ML2.7, MS2.2, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.28**	**340**	↓*e*P	Pb	21 38 37.2	+0.5
LLP				*e*S	Sn	21 38 44.0	-0.3
TBP	**Tagbilaran**	**0.41**	**209**	*e*P	Pb	21 38 39.5	+0.8
TBP				*i* S	Sn	21 38 46.2	-1.3
MSLP	**Maasin**	**0.79**	**84**	*e*P	Pn	21 38 45.5	-0.3
MSLP				*e*S	Sn	21 38 56.9	+0.1
OCLP	**Ormoc**	**1.13**	**28**	*e*P	Pb	21 38 51.4	+0.5
OCLP				*e*S	Sn	21 39 10.9	+5.6
PAGZ	**Pagadian**	**2.29**	**197**	*e*P	Pb	21 39 08.7	-2.0
PAGZ				*e*S	Sn	21 39 34.7	+0.7

*IDC **07** 21:55:56.4±6.2, 1°.04N×17°.80W, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.5/29, mbtmp4.0/3, ML4.4/1, Error ellipse: s-maj=176.9km s-min=38.7km az=165.0*

ISC 07 21:56:03.5±4.1, **1°.8N**±0°.7×**17°.7W**±0°.2, **h10km, n6, σ3§12/8, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIC	**Lamto**	**13.39**	**70**	*e*P	**Pn**	**21 59 16.3**	**+2.5**
	4.1nm,0.5s						
TIC	**Toumodi**	**13.53**	**69**	*e*P	**Pn**	**21 59 16.1**	**+0.3**
DBIC	**Dimbokro**	**13.70**	**69**	Pn	**Pn**	**21 59 17.8**	**-0.2**
	1.6nm,0.3s,baz=244,slow=12,SNR=22						
DBIC				Sn	**Sn**	**22 01 46.6**	**-3.7**
	0.4nm,0.3s,baz=146,slow=17,SNR=2.2						
KIC	**Kosan Boka**	**13.70**	**70**	*e*P	**Pn**	**21 59 18.7**	**+0.7**
	7.7nm,0.5s						
TORD	**Torodi Ar. Bea**	**22.27**	**59**	P	**P**	**22 01 00.5**	**-0.6**
	3.1nm,0.9s,baz=238,slow=9.4,SNR=14						
TORD				S	**S**	**22 05 11.6**	**+5.2**
	0.8nm,0.8s,baz=236,slow=22,SNR=2.1						
FINES	**FINESS Array B**	**68.05**	**21**	P	**P**	**22 07 02.0**	**-1.0**
	1.1nm,0.9s,baz=197,slow=4.4,SNR=3.4						

*GCG **07** 22:08:20.7±1.3, 13°.68N×91°.44W, h59km±103km, MD4.0*
*SNET **07** 22:08:22.4±0.8, 13°.84N×91°.31W, h21km±9km, ML3.1*

ISC 07 22:08:21.8±2.6, **13°.8N**±0°.2×**91°.5W**±0°.1, **h61km, n15, σ0§70/16, 1C-3D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERG	**Entre ros, C**	**0.66**	**349**	*e*P	**Pn**	**22 08 36.4**	**+0.7**
RTAL	**Retalhuleu**	**0.77**	**342**	↓*i*P	**Pn**	**22 08 36.5**	**-0.5**
RTAL				*e*S	**Sn**	**22 08 47.8**	**-0.4**
RTAL				IAML		22 08 51.3	
	comp=Z,697nm,0.3s						
FUG	**Fuego 3**	**0.88**	**42**	*e*P	**Pn**	**22 08 38.4**	**-0.1**
STG3	**Santiaguito 3,**	**0.93**	**352**	*e*P	**Pn**	**22 08 39.2**	**+0.1**
PCG	**Pacaya**	**1.01**	**53**	*e*P	**Pn**	**22 08 40.6**	**+0.4**
IXG	**Ixpaco**	**1.05**	**68**	*e*P	**Pn**	**22 08 40.1**	**-0.6**
IXG	**Ixpaco**	**1.05**	**68**	↓*i*P	**Pn**	**22 08 39.2**	**-1.5**
NBG	**Las Nubes**	**1.33**	**53**	*e*P	**Pn**	**22 08 45.9**	**+1.4**
RTR	**El Retiro**	**1.75**	**86**	*e*P	**Pn**	**22 08 50.7**	**+0.7**
SBLS	**San Blas**	**1.77**	**88**	*e*P	**Pn**	**22 08 50.5**	**+0.1**
BOQS	**Boqueron**	**2.10**	**91**	*e*P	**Pn**	**22 08 55.1**	**+0.2**
MTO3	**Montecristo**	**2.11**	**73**	↑*i*P	**Pn**	**22 08 54.6**	**-0.4**
MRL	**Marmol**	**2.14**	**53**	↓*e*P	**Pn**	**22 08 55.5**	**+0.2**
ESQI	**Esquipulas**	**2.18**	**69**	*e*P	**Pn**	**22 08 55.8**	**0.0**
ESQI				IAML		22 09 17.1	
	comp=Z,138nm,0.5s						
LFRS	**El Faro**	**2.32**	**94**	*e*P	**Pn**	**22 08 58.3**	**+0.5**

*IDC **07** 22:22:42.2±7.0, 36°.33N×71°.48E, h55km±45km, mb3.1/2, mb1 3.4/5, mb1mx3.1/37, mbtmp3.6/5, ML3.5/3, Error ellipse: s-maj=88.8km s-min=24.7km az=138.0*

ISC 07 22:22:49.3±1.8, **36°.8N**±0°.1×**71°.0E**±0°.1, **h100km, n7, σ1§49/11, 1C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.31**	**357**	P	**Pn**	**22 24 20.7**	**+1.0**
	3.8nm,0.4s,baz=181,slow=12,SNR=53						
KK31				↓↓S	**Sn**	**22 25 30.2**	**0.0**
	1.1nm,0.3s,baz=187,slow=23,SNR=5.6						
AAK	**Ala-Archa**	**6.42**	**24**	P	**Pn**	**22 24 20.3**	**-1.1**
	0.9nm,0.3s,baz=199,slow=6.6,SNR=15						
AAK				S	**Sn**	**22 25 32.4**	**-0.8**
	0.3nm,0.3s,baz=334,slow=14,SNR=6.5						
AAK	**Ala-Archa**	**6.42**	**24**	↓↓P	**Pn**	**22 24 21.3**	**-0.1**
	1.5nm,0.5s						
AAK				↑↑S	**Sn**	**22 25 32.7**	**-0.5**
	3.0nm,0.6s						
GEYT	**Alibeck**	**10.32**	**280**	P	**Pn**	**22 25 13.5**	**-0.8**
	1.4nm,0.3s,baz=107,slow=11,SNR=14						
GEYT				S	**Sn**	**22 27 06.2**	**-1.8**
	0.2nm,0.3s,baz=107,slow=27,SNR=1.8						
ZALV	**Zalesovo Beam**	**19.64**	**25**	P	**P**	**22 27 08.8**	**-1.0**
	0.2nm,0.3s,baz=210,slow=12,SNR=2.7						
NOA	**NORSAR Array B**	**44.15**	**323**	P	**P**	**22 30 50.7**	**+3.1**
	0.2nm,0.6s,baz=99,slow=8.1,SNR=1.6						
TORD	**Torodi Ar. Bea**	**65.73**	**269**	P	**P**	**22 33 23.4**	**-0.2**
	0.4nm,0.6s,baz=53,slow=5.8,SNR=7.8						

*IDC **07** 22:33:31.7±2.0, 39°.92N×77°.42E, h0km, mb3.4/2, mb1 3.4/6, mb1mx3.2/58, mbtmp3.3/6, ML3.0/4, Error ellipse: s-maj=32.6km s-min=24.3km az=131.0*
*BJI **07** 22:33:35.3±0.0, 40°.42N×77°.29E, h8km, ML3.6/9*
*KRNET **07** 22:33:36.1±0.1, 40°.41N×77°.34E, h17km, mb3.8*
*SOME **07** 22:33:37.1, 40°.45N×77°.20E, h10km*
*NNC **07** 22:33:38.3±0.7, 40°.48N×77°.24E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=5.1km s-min=3.9km az=0.0*

ISC 07 22:33:39.7±1.4, **40°.50N**±0°.05×**77°.35E**±0°.04, **h5km**±10km, **n86, σ1§73/125, 35C-17D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.45**	**228**	Pg	**Pg**	**22 34 09.1**	**+1.7**
KSH				Sg	Sg	22 34 35.4	+9.3
KSH				smax	smax		
	comp=N,350nm,0.4s						
KSH				smax	smax		
	comp=E,880nm,0.4s						
KDJ	**Kajisay**	**1.64**	**355**	↑*i*P	**Pn**	**22 34 08.3**	**-0.9**
	baz=56						
KDJ				↑*i*S	**Sn**	**22 34 30.4**	**-0.3**
	baz=56						
ULHL	**Ulahol**	**1.94**	**335**	↑*i*P	**Pn**	**22 34 13.2**	**-0.2**
	baz=36						
ULHL				↑*i*S	**Sn**	**22 34 39.2**	**+1.0**
	baz=36						
ULHL	**Ulahol**	**1.94**	**335**	P	**Pn**	**22 34 13.1**	**-0.2**
	SNR=43						
PRZ	**Przheval'sk**	**2.13**	**21**	↑*i*P	**Pn**	**22 34 16.7**	**+0.6**
	baz=21						
PRZ				↑*i*S	**Sb**	**22 34 45.0**	**-0.7**
	baz=21						
KZA	**Kyzart**	**2.24**	**316**	↑*i*P	**Pn**	**22 34 17.8**	**+0.1**
	baz=17						
KZA				↑*i*S	**Sn**	**22 34 46.6**	**+0.7**
	baz=17						
KZA	**Kyzart**	**2.24**	**316**	P	**Pn**	**22 34 18.1**	**+0.4**
	SNR=58						
BOOM	**Boomskoye usch**	**2.25**	**332**	↑*i*P	**Pn**	**22 34 17.9**	**+0.1**
	baz=34						
BOOM				↑*i*S	**Sn**	**22 34 47.2**	**+1.2**
	baz=34						
ANVS	**Anan'yevo**	**2.29**	**6**	↓*i*P	**Pn**	**22 34 18.8**	**+0.5**
	baz=6.0						
ANVS				↓*i*S	**Sb**	**22 34 48.7**	**-1.7**
	baz=6.0						
TNSS	**Tian-Shan**	**2.55**	**353**	*e*P	**Pb**	**22 34 25.5**	**-0.7**
	51nm,0.3s						
TNSS				*e*S	**Sb**	**22 35 00.4**	**+2.4**
	295nm,0.5s						
TNSS	**Tian-Shan**	**2.55**	**353**	Pg	**Pb**	**22 34 25.5**	**-0.7**
	51nm,0.3s						
TNSS				Lg	Lg	22 35 00.4	
	295nm,0.5s						
IZV	**Izvestkoviy**	**2.59**	**348**	↓*e*P	**Pb**	**22 34 26.4**	**-0.4**
	58nm,0.6s						
IZV				*e*S	**Sb**	**22 35 01.9**	**+2.9**
	196nm,0.6s						
IZV	**Izvestkoviy**	**2.59**	**348**	Pg	**Pb**	**22 34 26.3**	**-0.5**
	58nm,0.6s						
IZV				Lg	Lg	22 35 01.8	
	196nm,0.6s						
MDOK	**Medeo**	**2.67**	**355**	↓*e*P	**Pb**	**22 34 27.4**	**-0.6**
	37nm,0.5s						
MDOK				*e*S	**Sb**	**22 35 03.6**	**+2.4**
	382nm,0.7s						
MDOK	**Medeo**	**2.67**	**355**	↑Pg	**Pb**	**22 34 26.9**	**-1.1**
	67nm,0.8s						
MDOK				↓↓Lg	Lg	22 35 04.1	
	348nm,0.6s						
MDOK	**Medeo**	**2.67**	**355**	Pg	**Pb**	**22 34 27.9**	**-0.2**
	37nm,0.5s						
MDOK				Lg	Lg	22 35 04.2	
	382nm,0.7s						
SATY	**Saty**	**2.68**	**17**	*e*P	**Pb**	**22 34 28.6**	**+0.5**
	18nm,0.5s						
SATY				*e*S	**Sg**	**22 35 05.5**	**-0.2**
	205nm,0.5s						
SATY	**Saty**	**2.68**	**17**	Pg	**Pb**	**22 34 28.6**	**+0.5**
	18nm,0.5s						
SATY				Lg	Lg	22 35 05.5	
	205nm,0.5s						
MTBS	**Maitube**	**2.72**	**346**	*e*P	**Pb**	**22 34 28.1**	**-0.7**
	27nm,0.2s						
MTBS				*e*S	**Sb**	**22 35 04.8**	**+2.4**
	77nm,0.5s						
MTBS	**Maitube**	**2.72**	**346**	Pg	**Pb**	**22 34 28.1**	**-0.7**
	27nm,0.2s						
MTBS				Lg	Lg	22 35 04.8	
	77nm,0.5s						
AAA	**Alma-Ata**	**2.73**	**353**	*e*P	**Pb**	**22 34 29.0**	**0.0**
	31nm,0.2s						
AAA				*e*S	**Sb**	**22 35 06.4**	**+3.7**
	218nm,0.4s						
AAA	**Alma-Ata**	**2.73**	**353**	Pg	**Pb**	**22 34 28.0**	**-1.0**
	31nm,0.2s						
AAA				Lg	Lg	22 35 06.4	
	19nm,0.3s						
KNDC	**Almaty**	**2.73**	**354**	↓Pg	**Pb**	**22 34 29.9**	**+0.9**
	73nm,0.8s						
KNDC				↑↑Lg	Lg	22 35 06.6	
	365nm,0.6s						
KOTS	**Kotyrbulak**	**2.74**	**356**	*e*P	**Pb**	**22 34 29.1**	**-0.1**
	112nm,0.5s						
KOTS				*e*S	**Sb**	**22 35 06.8**	**+3.6**
	585nm,0.5s						
KOTS	**Kotyrbulak**	**2.74**	**356**	Pg	**Pb**	**22 34 29.1**	**-0.1**
	75nm,0.5s						
KOTS				Lg	Lg	22 35 06.7	
	585nm,0.5s						
KST	**Kastek**	**2.75**	**338**	↑↑*e*P	**Pb**	**22 34 28.0**	**-1.3**
	33nm,0.5s						
KST				*e*S	**Sb**	**22 35 04.7**	**+1.3**
	64nm,0.7s						
KST	**Kastek**	**2.75**	**338**	Pg	**Pb**	**22 34 28.0**	**-1.3**
	33nm,0.5s						
KST				Lg	Lg	22 35 04.7	
	64nm,0.7s						
UCH	**Uchtor**	**2.75**	**310**	↑↑*i*P	**Pn**	**22 34 24.8**	**0.0**
	baz=11						
UCH				↑↑*i*S	**Sn**	**22 34 58.9**	**+0.3**
	baz=11						
UCH	**Uchtor**	**2.75**	**310**	P	**Pn**	**22 34 25.4**	**+0.6**
	SNR=26						
TKM2	**Tokmak 2**	**2.75**	**332**	↑*i*P	**Pn**	**22 34 24.9**	**+0.2**
	baz=33						
TKM2				↑↑*i*S	**Sn**	**22 34 59.1**	**+0.7**
	baz=33						
TKM2	**Tokmak 2**	**2.75**	**332**	P	**Pn**	**22 34 25.4**	**+0.7**
	SNR=31						
TKM2	**Tokmak 2**	**2.75**	**332**	↓Pg	**Pb**	**22 34 27.4**	**-2.1**
	23nm,0.6s						
TKM2				↑↑Lg	Lg	22 35 05.6	
	62nm,0.7s						
KBK	**Karagaybulak**	**2.81**	**321**	↑↑*i*P	**Pn**	**22 34 25.5**	**+0.1**
	baz=22						
KBK				↑↑*i*S	**Sn**	**22 35 00.2**	**+0.5**
	baz=22						
KBK	**Karagaybulak**	**2.81**	**321**	P	**Pb**	**22 34 28.4**	**-2.0**
	SNR=28						
AAK	**Ala-Archa**	**3.03**	**316**	Pn	**Pn**	**22 34 29.4**	**+1.1**
	9.1nm,0.3s,baz=145,slow=10,SNR=41						
AAK					Sn	**Sb**	**22 35 12.7**	**+1.3**
	5.2nm,0.3s,baz=359,slow=22,SNR=10						
AAK	**Ala-Archa**	**3.03**	**316**	↑↑*i*P	**Pn**	**22 34 28.5**	**+0.1**
	baz=17						
AAK				↑↑*i*S	**Sn**	**22 35 05.4**	**+0.3**
	baz=17						
AAK	**Ala-Archa**	**3.03**	**316**	P	**Pn**	**22 34 28.8**	**+0.5**
	SNR=25						
AAK	**Ala-Archa**	**3.03**	**316**	↑Pg	**Pn**	**22 34 31.1**	**+2.7**
	36nm,0.7s						
AAK				↑↑Lg	Lg	22 35 12.2	
	95nm,0.9s						
KURS	**Kuram**	**3.05**	**11**	*e*P	**Pb**	**22 34 34.9**	**+0.5**
	19nm,0.4s						
KURS				*e*S	**Sg**	**22 35 16.1**	**-1.5**
	69nm,0.7s						
SHLS	**Shalkode**	**3.09**	**30**	*e*P	**Pg**	**22 34 38.6**	**-0.3**
	24nm,0.4s						
SHLS				*e*S	**Sg**	**22 35 22.8**	**+3.9**
	116nm,0.6s						
SHLS	**Shalkode**	**3.09**	**30**	Pg	**Pg**	**22 34 38.6**	**-0.3**
	24nm,0.4s						
SHLS				Lg	Lg	22 35 22.8	
	116nm,0.6s						
CHMS	**Chumysh**	**3.17**	**323**	↓↓*i*P	**Pn**	**22 34 30.4**	**+0.2**
	baz=24						
CHMS				↓↓*i*S	**Sn**	**22 35 08.7**	**+0.4**
	baz=24						
CHMS	**Chumysh**	**3.17**	**323**	P	**Pn**	**22 34 30.9**	**+0.7**
	SNR=9.3						
AML	**Almayashu**	**3.20**	**302**	↑↑*i*P	**Pn**	**22 34 31.1**	**+0.1**
	baz=3.0						
AML				↑↑*i*S	**Sn**	**22 35 09.8**	**+0.1**
	baz=3.0						
AML	**Almayashu**	**3.20**	**302**	P	**Pn**	**22 34 31.8**	**+0.8**
	SNR=27						
PDGK	**Podgornoye**	**3.25**	**29**	Pg	**Pb**	**22 34 38.2**	**+0.4**
	6.8nm,0.6s						
PDGK				Lg	Lg	22 35 22.2	
	79nm,0.8s						
PDGK	**Podgornoye**	**3.25**	**29**	↑Pn	**Pn**	**22 34 32.2**	**+0.8**
	3.9nm,0.8s						
PDGK				↓↓Pg	**Pb**	**22 34 37.3**	**-0.6**
	19nm,0.5s						
PDGK				↓↓Lg	Lg	22 35 22.4	
	170nm,0.7s						
KTBS	**Karatobe**	**3.25**	**351**	*e*P	**Pb**	**22 34 37.6**	**-0.2**
	67nm,0.6s						
KTBS				*e*S	**Sb**	**22 35 21.2**	**+3.5**
	188nm,0.5s						
KTBS	**Karatobe**	**3.25**	**351**	Pg	**Pb**	**22 34 37.6**	**-0.2**
	67nm,0.6s						
KTBS				Lg	Lg	22 35 21.2	
	188nm,0.5s						
CHKK	**Chushkaly**	**3.36**	**355**	*e*P	**Pb**	**22 34 40.1**	**+0.4**
	40nm,0.5s						
CHKK				*e*S	**Sb**	**22 35 25.3**	**+4.3**
	188nm,0.6s						
CHKK	**Chushkaly**	**3.36**	**355**	Pg	**Pb**	**22 34 40.1**	**+0.4**
	40nm,0.6s						
CHKK				Lg	Lg	22 35 25.3	
	188nm,0.5s						
ARSB	**Arslanbob**	**3.41**	**285**	↑↑*i*P	**Pn**	**22 34 33.6**	**-0.1**
	baz=87						
ARSB				↑↑*i*S	**Sn**	**22 35 14.4**	**-0.2**
	baz=87						
KRBS	**Karabastau**	**3.43**	**339**	↓↓*e*P	**Pb**	**22 34 40.3**	**-0.6**
	28nm,0.5s						
KRBS				*e*S	**Sb**	**22 35 25.4**	**+2.5**
	33nm,0.6s						
KRBS	**Karabastau**	**3.43**	**339**	Pg	**Pb**	**22 34 40.3**	**-0.6**
	28nm,0.5s						
KRBS				Lg	Lg	22 35 25.4	
	33nm,0.6s						
EKS2	**Erkin-Say**	**3.44**	**310**	↓↓*i*P	**Pn**	**22 34 34.1**	**0.0**
	baz=11						
EKS2				↓↓*i*S	**S

MRKS	**Merke**	**3.82**	**307**	Pg	**Pb**	**22 34 47.5**	**-0.1**
	23nm,0.4s							
MRKS				Lg	Lg	22 35 38.3		
	24nm,0.5s							
DJR	**Jarkent**	**4.23**	**24**	*eP*	**Pb**	**22 34 55.9**	**+1.2**
	4.5nm,0.3s							
DJR				*eS*	**Sg**	**22 35 52.5**	**-3.1**
	24nm,0.5s							
DJR	**Jarkent**	**4.23**	**24**	Pg	**Pb**	**22 34 55.9**	**+1.2**
	4.5nm,0.3s							
DJR				Lg	Lg	22 35 52.5		
	24nm,0.5s							
ARK	**Arkit**	**4.27**	**289**	⇓*i*	**Pn**	**22 34 44.7**	**-0.7**
	baz=90							
ARK				⇓*i*	**Sn**	**22 35 34.2**	**-1.5**
	baz=90							
TDK	**Taldyqorghan**	**4.57**	**9**	*eP*	**Pb**	**22 35 01.8**	**+1.5**
	20nm,0.4s							
TDK				*eS*	**Sg**	**22 36 02.4**	**-3.9**
	92nm,0.5s							
TDK	**Taldyqorghan**	**4.57**	**9**	Pg	**Pb**	**22 35 01.8**	**+1.5**
	20nm,0.4s							
TDK				Lg	Lg	22 36 02.4		
	92nm,0.5s							
KAPS	**Kapalarasan**	**5.00**	**16**	*eP*	**Pb**	**22 35 09.4**	**+1.7**
	3.9nm,0.4s							
KAPS				*eS*	**Sg**	**22 36 15.8**	**-4.5**
	19nm,0.7s							
KAPS	**Kapalarasan**	**5.00**	**16**	Pg	**Pb**	**22 35 09.5**	**+1.7**
	3.9nm,0.4s							
KAPS				Lg	Lg	22 36 15.8		
	19nm,0.7s							
BTK	**Batken**	**5.02**	**267**	⇑*i*	**Pn**	**22 34 55.5**	**-0.2**
	baz=68							
BTK				⇑*i*	**Sn**	**22 35 52.2**	**-1.8**
	baz=68							
BTLS	**Baital**	**5.15**	**333**	*eP*	**Pb**	**22 35 11.3**	**+1.1**
	18nm,0.7s							
BTLS				*eS*	**Sb**	**22 36 19.3**	**+7.0**
	5.8nm,0.5s							
BTLS	**Baital**	**5.15**	**333**	Pg	**Pb**	**22 35 11.3**	**+1.1**
	18nm,0.7s							
BTLS				Lg	Lg	22 36 19.3		
	5.8nm,0.5s							
KK31	**Karatay Array**	**5.74**	**299**	⇑Pg	**Pb**	**22 35 21.4**	**+1.2**
	4.0nm,0.6s,baz=114,slow=17,SNR=21							
KK31				⇑Lg	Lg	22 36 36.0		
	4.6nm,0.6s,baz=116,slow=29,SNR=3.8							
MK31	**Makanchi Array**	**7.24**	**28**	⇓Pn	**Pn**	**22 35 26.9**	**+0.8**
	6.7nm,1.3s,baz=207,slow=16,SNR=8.4							
MK31				⇑Lg	Lg	22 37 30.0		
	4.1nm,0.8s,baz=215,slow=28,SNR=3.8							
MKAR	**Makanchi Array**	**7.24**	**28**	Pn	**Pn**	**22 35 26.9**	**+0.8**
	0.3nm,0.3s,baz=208,slow=16,SNR=12							
MKAR				Sn	**Sn**	**22 36 49.8**	**+1.2**
	0.1nm,0.3s,baz=208,slow=27,SNR=2.0							
MKAR				Lg	Lg	22 37 26.9		
	0.2nm,0.3s,baz=199,slow=17,SNR=2.2							
WMQ	**Urumqi**	**8.37**	**63**	*eP*	**Pn**	**22 35 40.2**	**-1.4**
WMQ				smax	smax			
	comp=N,13nm,0.7s							
WMQ				smax	smax			
	comp=E,13nm,0.7s							
KURBB	**Kurchatov Arra**	**10.16**	**4**	Pn	**Pn**	**22 36 05.3**	**-0.7**
	0.0nm,0.3s,baz=189,slow=11,SNR=2.3							
KURBB				Lg	Lg	22 39 01.0		
	0.0nm,0.3s,baz=198,slow=30,SNR=5.1							
KURBB	**Kurchatov Arra**	**10.16**	**4**	⇑Lg	Lg	22 39 01.9		
	12nm,0.8s							
ZALV	**Zalesovo Beam**	**14.37**	**18**	Pn	**Pn**	**22 37 03.9**	**+0.3**
	0.2nm,0.3s,baz=200,slow=12,SNR=1.4							
TORD	**Torodi Ar. Bea**	**70.72**	**271**	P	P	22 44 50.4	-6.5	
	0.2nm,0.4s,baz=46,slow=6.3,SNR=9.9							
YKA	**Yellowknife Ar**	**76.90**	**6**	P	**P**	**22 45 28.4**	**-4.0**
	0.1nm,0.3s,baz=347,slow=5.6,SNR=3.8							

IDC 07 23:27:53.8±4.3, 4°.07S×150°.03E, h137$^{km}_{\pm 66km}$, mb3.3/3, mb1 3.5/4, mb1mx3.2/41, mbtmp3.7/4, Error ellipse: s-maj=79.6km s-min=25.0km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.01**	**97**	P	Pn	23 28 27.2	-1.0
	23nm,0.3s,baz=256,slow=2.1,SNR=12						
KRVT				S	Sn	23 28 55.5	+0.9
	baz=216,slow=19,SNR=1.1						
WRA	**Warramunga Arr**	**21.98**	**223**	P	P	23 32 37.8	+0.9
	2.6nm,0.4s,baz=50,slow=10,SNR=30						
ASAR	**Alice Springs**	**24.94**	**217**	P	P	23 33 04.1	-0.4
	0.4nm,0.4s,baz=53,slow=8.6,SNR=6.9						
SONM	**Songino Array**	**64.25**	**329**	P	P	23 38 14.2	-0.2
	0.4nm,0.6s,baz=111,slow=7.9,SNR=2.5						

UPP 07 23:32:14.0±0.1, 67°.84N×20°.18E, h0^{km}, ML2.0, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**27**	P	Pg	23 32 16.7	+0.2
KOVU	**Salmi**	**0.39**	**359**	P	Pg	23 32 21.5	+0.2
KOVU				S	Sg	23 32 26.6	+0.2
LANU	**Lannavaara**	**0.71**	**72**	P	Pg	23 32 27.6	-0.1
DUNU	**Dundret**	**0.74**	**168**	P	Pg	23 32 27.9	-0.2
SALU	**Saltoluokta**	**0.79**	**235**	*eP*	Pn	23 32 32.2	-0.2
MASU	**Masugnsbyn**	**0.79**	**118**	P	Pg	23 32 28.9	-0.3
PAJU	**Pajala**	**1.40**	**125**	P	Pg	23 32 39.6	-1.1
HEF	**Hetta**	**1.42**	**65**	*eP*	Pn	23 32 40.4	-0.6

*HEL **07** 23:32:17.9, 67°.69N×20°.96E, h0^{km}, ML1.5, Explosion*
UPP 07 23:32:20.2±0.1, 67°.82N×20°.19E, h0^{km}, ML2.4, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**23**	P	Pg	23 32 23.1	+0.2
KUA				S	Sg	23 32 25.1	+0.2
KUA	**Kurravaara**	**0.14**	**23**	*i* P	Pg	23 32 23.1	+0.2
KUA				*i* S	Sg	23 32 25.1	+0.2
KOVU	**Salmi**	**0.40**	**359**	P	Pg	23 32 27.9	0.0
KOVU				S	Sg	23 32 33.4	+0.3
KOVU	**Salmi**	**0.40**	**359**	*i* P	Pg	23 32 27.9	0.0
KOVU				*i* S	Sg	23 32 33.4	+0.3
LANU	**Lannavaara**	**0.72**	**71**	P	Pg	23 32 33.7	-0.2
DUNU	**Dundret**	**0.72**	**168**	P	Pg	23 32 33.6	-0.3
DUNU	**Dundret**	**0.72**	**168**	*i* P	Pg	23 32 33.6	-0.3
MASU	**Masugnsbyn**	**0.79**	**117**	P	Pg	23 32 35.0	-0.2
MASU	**Masugnsbyn**	**0.79**	**117**	*i* P	Pg	23 32 35.0	-0.2
KIF	**Kilpisjarvi**	**1.21**	**11**	*e*PN	Pn	23 32 45.0	+0.7
KIF				*e*S	Sg	23 32 59.0	0.0
PAJU	**Pajala**	**1.39**	**124**	P	Pg	23 32 45.4	-1.3
PAJU	**Pajala**	**1.39**	**124**	*e*P	Pg	23 32 45.4	-1.3
HEF	**Hetta**	**1.43**	**64**	MSG		23 32 55.8	
	comp=Z,2.5nm,0.2s						
TOF	**Tornio**	**2.39**	**135**	MSG		23 33 19.8	
	comp=Z,0.8nm,0.2s						
ARE0	**ARCESS Array S**	**2.60**	**46**	*e*SB	Sn	23 33 37.6	+2.0

*HEL **07** 23:34:43.9, 67°.84N×20°.13E, h0^{km}, ML1.7, Explosion*
UPP 07 23:34:43.6±0.1, 67°.84N×20°.20E, h0^{km}, ML1.5, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**23**	P	Pg	23 34 46.3	+0.2
KUA				S	Sg	23 34 48.2	+0.5
KUA	**Kurravaara**	**0.13**	**23**	*i* P	Pg	23 34 46.3	+0.2
KUA				*i* S	Sg	23 34 48.2	+0.5
KOVU	**Salmi**	**0.39**	**358**	P	Pg	23 34 51.1	+0.1
KOVU	**Salmi**	**0.39**	**358**	*i* P	Pg	23 34 51.1	+0.1
LANU	**Lannavaara**	**0.71**	**72**	P	Pg	23 34 56.9	-0.2
LANU	**Lannavaara**	**0.71**	**72**	*e*P	Pg	23 34 56.8	-0.3
LANU				*e*S	Sg	23 35 06.8	+0.6
DUNU	**Dundret**	**0.73**	**169**	P	Pg	23 34 57.4	-0.2
DUNU				S	Sg	23 35 07.3	+0.3
DUNU	**Dundret**	**0.73**	**169**	*i* P	Pg	23 34 57.4	-0.2
DUNU				*i* S	Sg	23 35 07.3	+0.3
MASU	**Masugnsbyn**	**0.79**	**118**	P	Pg	23 34 58.4	-0.2
MASU	**Masugnsbyn**	**0.79**	**118**	*i* P	Pg	23 34 58.4	-0.2
SALU	**Saltoluokta**	**0.80**	**236**	*e*P	Pn	23 35 01.5	-0.5
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*PN	Pn	23 35 08.2	+0.7
KIF				MSG		23 35 21.2	
	comp=Z,6.7nm,0.2s						
KIF				*e*SB	Sb	23 35 22.6	-0.4
PAJU	**Pajala**	**1.39**	**125**	P	Pg	23 35 08.9	-1.3
PAJU	**Pajala**	**1.39**	**125**	*e*P	Pg	23 35 08.9	-1.3
HEF	**Hetta**	**1.42**	**64**	*e*PG	Pn	23 35 09.6	-1.0
HEF				MSG		23 35 27.2	
	comp=Z,5.9nm,0.2s						
HEF				*e*SN	Sn	23 35 32.2	+2.3
HEF	**Hetta**	**1.42**	**64**	*e*P	Pn	23 35 09.6	-1.0
HEF	**Hetta**	**1.42**	**64**	*e*P	Pn	23 35 09.5	-1.1
ERTU	**Ertsjaerv**	**1.50**	**148**	P	Pn	23 35 11.2	-0.5
ERTU	**Ertsjaerv**	**1.50**	**148**	*e*PG	Pn	23 35 11.4	-0.3
	baz=330						
ERTU				*e*SB	Sg	23 35 31.5	-0.2
HARU	**Harads**	**1.71**	**169**	P	Pn	23 35 14.6	0.0
HARU	**Harads**	**1.71**	**169**	*e*P	Pn	23 35 14.6	0.0
STEI	**Steigen**	**1.88**	**275**	*e*P	Pb	23 35 18.1	-0.6
KALU	**Kalix**	**2.34**	**146**	*e*P	Pn	23 35 24.4	+1.2
KALU				*e*SB	Sb	23 35 55.0	-1.0
TOF	**Tornio**	**2.40**	**135**	*e*PB	Pn	23 35 25.5	+1.5
TOF				MSG		23 35 55.4	
	comp=Z,2.4nm,0.2s						
TOF				*e*SB	Sb	23 35 57.1	-0.4
SGF	**Sodankyl**	**2.45**	**96**	*e*PB	Pn	23 35 26.6	+1.8
SGF				*e*SG	Sg	23 36 01.3	-0.9
RNF	**Rovaniemi**	**2.58**	**116**	*e*PB	Pn	23 35 28.5	+2.0
	baz=299						
RNF				*e*SG	Sb	23 36 03.0	+0.3
KU6	**Riekki**	**4.22**	**111**	*e*S	Sn	23 36 39.0	0.0

UPP 07 23:35:22.9±0.1, 67°.84N×20°.13E, h0^{km}, ML1.8, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOVU	**Salmi**	**0.39**	**2**	P	Pg	23 35 30.3	+0.1
KOVU				S	Sg	23 35 35.5	+0.3
LANU	**Lannavaara**	**0.73**	**72**	P	Pg	23 35 36.7	-0.2
DUNU	**Dundret**	**0.74**	**167**	P	Pg	23 35 36.9	-0.2
MASU	**Masugnsbyn**	**0.81**	**117**	P	Pg	23 35 38.2	-0.2
PAJU	**Pajala**	**1.41**	**124**	P	Pn	23 35 48.6	-1.2
PAJU				S	Sg	23 36 07.6	-0.6

PGC 08 00:19:58.3±1.9, 50°.84N×138°.89W, h10^{km}, MLSn3.2/5, Mw3.8/5, 553km Wsw of Sandspit, Bc West Of Vancouver Island, West of Vancouver Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIB	**Van Inlet**	**4.60**	**56**	Pn	Pn	00 21 07.0	-1.0
VIB				Sn	Sn	00 21 58.4	-3.1
DIB	**Dawson Inlet,**	**4.61**	**57**	Pn	Pn	00 21 07.1	-0.8
DIB				Sn	Sn	00 21 58.1	-3.4
BNB	**Barry Inlet**	**4.77**	**66**	Pn	Pn	00 21 09.8	-0.4
BNB				Sn	Sn	00 22 02.5	-3.0
MOBC	**Moresby Island**	**4.86**	**59**	Pn	Pn	00 21 11.0	-0.4
MOBC				Sn	Sn	00 22 05.1	-2.6
LIB	**Langara Island**	**4.93**	**44**	Pn	Pn	00 21 12.5	+0.2
LIB				Sn	Sn	00 22 07.7	-1.7
HG3B	**Hotspring**	**4.95**	**67**	Pn	Pn	00 21 11.8	-0.7
HG3B				Sn	Sn	00 22 07.0	-2.7
PLBC	**Pleasant Camp**	**8.75**	**9**	Pn	Pn	00 22 07.1	+2.3
PNL	**Peninsula**	**8.85**	**358**	Pn	Pn	00 22 07.7	+1.6
YUK7	**Dusty Glacier**	**9.72**	**2**	Pn	Pn	00 22 20.8	+2.6
HYT	**Haines Junctio**	**10.04**	**4**	Pn	Pn	00 22 25.0	+2.5
WHY	**Whitehorse**	**10.09**	**11**	Pn	Pn	00 22 26.4	+3.1
YUK6	**Outpost Mounta**	**10.13**	**1**	Pn	Pn	00 22 26.1	+2.3
CTGM	**Chitina Glacie**	**10.24**	**353**	Pn	Pn	00 22 26.1	+0.9
KIAG	**Kiagna River**	**10.29**	**350**	Pn	Pn	00 22 26.1	+0.2
BALM	**Baldy**	**10.40**	**351**	Pn	Pn	00 22 28.1	+0.7
YUK4	**Talbot Arm**	**10.53**	**1**	Pn	Pn	00 22 33.5	+4.2
PTPK	**Patty Peak**	**10.56**	**351**	Pn	Pn	00 22 30.7	+1.0
YUK3	**Moose Creek**	**10.99**	**356**	Pn	Pn	00 22 38.0	+2.4
YUK2	**White River**	**11.02**	**355**	Pn	Pn	00 22 38.2	+2.2
YUK1	**Sand Pete Hill**	**11.37**	**356**	Pn	Pn	00 22 42.9	+2.1
DAWY	**Dawson**	**13.26**	**359**	Pn	Pn	00 23 09.2	+2.8

*NIED **08** 00:56:00, 39°.70N×144°.60E, h5^{km}, Mw4.0 Best double couple: M0 1.14000×10^{15} NP1:φs159.00000°, δ49.00000°, λ-106.00000°. NP2:φs2.00000°, δ44.00000°, λ-73.00000°.*
*IDC **08** 00:56:26.2±0.6, 39°.43N×144°.83E, h0^{km}, mb4.0/18, mb1 4.2/24, mb1mx4.1/44, mbtmp4.0/24, ML3.6/6, MS2.9/7, Ms1 2.9/7, ms1mx2.7/40, Error ellipse: s-maj=17.8km s-min=14.1km az=121.0*
*NEIC **08** 00:56:27.4±2.4, 39°.40N±0°.02×144°.9E±0°.1, h10$^{km}_{\pm 1km}$, mb4.3/5, Error ellipse: s-maj=16.8km s-min=2.8km az=101.0*
*JMA **08** 00:56:30.4±0.2, 39°.66N×144°.57E, h46^{km}, M4.5*
ISC 08 00:56:28.5±3.8, 39°.52N±0°.04×144°.72E±0°.06, h16$^{km}_{\pm 24km}$, n69, σ1°.96/85, mb4.1/21, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**2.25**	**282**	P	**Pn**	**00 57 04.2**	**-0.8**
JTH				*e*S	**Sn**	**00 57 29.3**	**-3.1**
MIYJ	**Miyakonagasawa**	**2.25**	**272**	P	**Pn**	**00 57 04.7**	**-0.3**
MIYJ				S	**Sn**	**00 57 29.9**	**-2.5**
JKEN	**Kujiedanarisaw**	**2.42**	**288**	P	**Pn**	**00 57 06.5**	**-0.9**
JKEN				*e*S	**Sn**	**00 57 33.0**	**-3.6**
JANG	**Nango**	**2.61**	**290**	P	**Pn**	**00 57 09.0**	**-1.0**
JANG				S	**Sn**	**00 57 37.4**	**-4.0**
JOM	**Ohasama**	**2.66**	**270**	P	**Pn**	**00 57 10.8**	**+0.2**
JOM				S	**Sn**	**00 57 40.4**	**-2.1**
ERM	**Erimo**	**2.77**	**335**		**Pn**	**00 57 11.9**	**-0.2**
ERM					**Sn**	**00 57 42.8**	**-2.3**
JMK	**Ichinoseki**	**2.78**	**259**	P	**Pn**	**00 57 12.3**	**0.0**
JMK				S	**Sn**	**00 57 43.0**	**-2.5**
JNBK	**Urakawa-nobuka**	**3.14**	**332**	P	**Pn**	**00 57 16.9**	**-0.4**
JNBK				S	**Sn**	**00 57 52.0**	**-2.4**
JCH	**Churui**	**3.26**	**342**	P	**Pn**	**00 57 17.8**	**-1.2**
JCH				*e*S	**Sn**	**00 57 53.5**	**-3.9**
JOT	**Ohata**	**3.37**	**305**	P	**Pn**	**00 57 20.3**	**-0.1**
JOT				*e*S	**Sn**	**00 57 57.4**	**-2.6**
JYK	**Kaneyama**	**3.44**	**261**	*e*S	**Sn**	**00 58 01.2**	**-0.7**
JAK	**Akkeshi**	**3.48**	**360**	P	**Pn**	**00 57 20.4**	**-1.5**
JKB	**Kayabe**	**3.67**	**311**	P	**Pn**	**00 57 24.3**	**-0.3**
JKB				*e*S	**Sn**	**00 58 04.2**	**-3.3**
JAR	**Ashorobuto**	**3.85**	**350**	P	**Pn**	**00 57 25.3**	**-1.7**
JAR				*e*S	**Sn**	**00 58 06.9**	**-4.9**
NEM2	**Nemuro 2**	**3.92**	**11**	P	**Pn**	**00 57 26.8**	**-2.1**
NEM2				S	**Sn**	**00 58 08.2**	**-5.0**
JFR	**Furan**	**3.98**	**337**	P	**Pn**	**00 57 28.2**	**-0.7**
JTKR	**Abashiri--Toko**	**4.49**	**352**	P	**Pn**	**00 57 35.2**	**-0.7**
JTKR				S	**Sn**	**00 58 23.7**	**-4.1**
JOSM	**Okushiri--Mats**	**4.74**	**304**	*e*S	**Sn**	**00 58 30.4**	**-3.4**
JHR	**Hokuryu**	**4.79**	**333**	P	**Pn**	**00 57 41.7**	**+1.8**
JKA	**Kamikawa-asahi**	**4.86**	**342**		**Pn**	**00 57 41.2**	**+0.3**
JKA					**Sn**	**00 58 35.2**	**-1.7**
ASAJ	**Asahikawa**	**4.87**	**342**	Pn	**Pn**	**00 57 41.2**	**+0.2**
	4.7nm,0.3s,baz=204,slow=14,SNR=7.5						
ASAJ				Sn	**Sn**	**00 58 35.2**	**-1.8**
	4.3nm,0.3s,baz=1.9,slow=20,SNR=5.9						
BSO1	**Boso 1**	**5.70**	**213**	P	**Pn**	**00 57 50.1**	**-1.9**
BSO1				S	**Sn**	**00 58 52.5**	**-4.3**
JRY	**Ryogami san**	**5.78**	**235**	P	**Pn**	**00 57 53.2**	**-0.5**
JRY				*e*S	**Sn**	**00 58 55.2**	**-4.5**
MJAR	**Matsushiro Arr**	**5.94**	**242**	Pn	**Pn**	**00 57 57.0**	**+1.2**
	1.0nm,0.3s,baz=69,slow=13,SNR=26						
MJAR				Sn	**Sn**	**00 59 03.2**	**-0.2**
	0.8nm,0.3s,baz=66,slow=27,SNR=4.0						
MJAR				LR	LR	01 00 27.2	
	comp=Z,162nm,19.0s,baz=75,slow=40						
MAJO	**Matsushiro**	**5.94**	**242**		**Pn**	**00 57 56.3**	**+0.5**
MAT	**Matsushiro**	**5.94**	**242**	P	**Pn**	**00 57 56.7**	**+0.9**
MAT				S	**Sn**	**00 59 02.4**	**-1.1**
JWK2	**Keihoku**	**6.16**	**341**	P	**Pn**	**00 58 00.7**	**+1.9**
JOD2	**Odawara 2**	**6.17**	**228**	P	**Pn**	**00 57 58.8**	**-0.2**
JOD2				S	Sn	00 59 03.6	-5.7
INU	**Inuyama**	**7.41**	**238**	Pn	**Pn**	**00 58 14.8**	**-1.1**
JHJ2	**Mitsune**	**7.52**	**213**	Pn	**Pn**	**00 58 15.4**	**-2.1**
JHJ	**Hachijo jima 2**	**7.52**	**213**	Pn	**Pn**	**00 58 15.2**	**-2.4**
	28nm,0.3s,baz=40,slow=22,SNR=6.2						
JHJ				Sn	Sn	00 59 32.8	-10
	35nm,0.3s,baz=56,slow=22,SNR=10						
USRK	**Ussuriysk Ar.**	**10.59**	**300**	Pn	**Pn**	**00 59 01.9**	**+2.4**
	baz=90,slow=14,SNR=8.6						
USRK				LR	LR	01 03 33.8	
	comp=Z,66nm,19.0s,baz=49,slow=40						
JCJ	**Chichijima**	**12.57**	**190**	Pn	Pn	00 59 21.5	-5.2
	1.6nm,0.3s,baz=283,slow=23,SNR=1.6						
JCJ				Sn	Sn	01 01 31.8	-14
	6.7nm,0.3s,baz=284,slow=22,SNR=5.7						
JNU	**Nakatsue**	**12.85**	**245**	LR	LR	01 04 26.2	
	comp=Z,109nm,21.1s,baz=359,slow=37						
KSRS	**Korea Array**	**13.32**	**266**	Pn	**Pn**	**00 59 39.8**	**+2.9**
	0.3nm,0.3s,baz=89,slow=13,SNR=6.7						
KSRS				LR	LR	01 04 14.0	
	comp=Z,55nm,18.5s,baz=116,slow=35						
KLR	**Kul'dur**	**13.41**	**321**	Pn	**Pn**	**00 59 38.0**	**-0.1**
	0.1nm,0.3s,baz=116,slow=14,SNR=4.0						
KLR				LR	LR	01 04 25.6	
	comp=Z,34nm,19.4s,baz=147,slow=35						
PETK	**Petropavlovsk-**	**16.25**	**29**	LR	LR	01 06 29.9	
	comp=Z,19nm,21.4s,baz=239,slow=37						
SEY	**Seymchan**	**23.90**	**9**	P	**P**	**01 01 41.9**	**+0.7**
	1.1nm,0.3s,baz=188,slow=8.1,SNR=7.0						
GUMO	**Guam**	**25.82**	**180**	P	**P**	**01 01 57.2**	**-1.9**
SONM	**Songino Array**	**28.70**	**300**	P	**P**	**01 02 27.0**	**+2.1**
	0.5nm,0.4s,baz=99,slow=9.1,SNR=2.2						
ZALV	**Zalesovo Beam**	**42.23**	**310**	P	**P**	**01 04 21.6**	**+1.1**
	0.6nm,0.4s,baz=85,slow=9.1,SNR=5.3						
ZALV				PcP	**PcP**	**01 06 15.1**	**+0.7**
	1.2nm,0.4s,baz=102,slow=3.9,SNR=4.5						
CMAR	**Chiang Mai Arr**	**44.64**	**255**	P	**P**	**01 04 41.7**	**+1.3**
	0.3nm,0.3s,baz=44,slow=7.8,SNR=1.3						
CMAR				LR	LR	01 26 26.0	
	comp=Z,12nm,19.0s,baz=195,slow=40						
MKAR	**Makanchi Array**	**45.05**	**301**	P	**P**	**01 04 44.2**	**+0.7**
	1.1nm,0.6s,baz=86,slow=9.9,SNR=6.8						
ILAR	**Eielson Array**	**46.00**	**34**	P	**P**	**01 04 51.1**	**+0.5**
	0.9nm,0.7s,baz=266,slow=6.7,SNR=11						
KURK	**Kurchatov**	**46.50**	**307**	P	**P**	**01 04 55.5**	**+0.8**
KURK				IAmb	IAmb	01 04 55.6	
	comp=Z,2.2nm,0.8s						
INK	**Inuvik**	**50.98**	**28**	P	**P**	**01 05 29.3**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=336,slow=5.0,SNR=4.0						
INK	**Inuvik**	**50.98**	**28**	IAmb	IAmb	01 05 31.3	
	comp=Z,1.6nm,1.0s						
RES	**Resolute Bay**	**59.54**	**15**	P	**P**	**01 06 31.0**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=66,slow=6.5,SNR=3.9						
RES	**Resolute Bay**	**59.54**	**15**	IAmb	IAmb	01 06 31.8	
	comp=Z,2.1nm,0.8s						
WRA	**Warramunga Arr**	**59.94**	**191**	P	**P**	**01 06 33.4**	**-0.5**
	comp=Z,3.2nm,0.8s,baz=10.0,slow=7.0,SNR=14						
YKA	**Yellowknife Ar**	**60.34**	**32**	P	**P**	**01 06 36.5**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=299,slow=5.9,SNR=7.0						
ASAR	**Alice Springs**	**63.66**	**191**	P	**P**	**01 06 58.6**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=9.7,slow=6.4,SNR=11						
PINE	**Pine Mountain**	**66.75**	**52**	P	**P**	**01 07 18.3**	**-0.9**
FINES	**FINESS Array B**	**67.82**	**333**	P	**P**	**01 07 26.1**	**+0.8**
	comp=Z,2.5nm,0.6s,baz=49,slow=8.8,SNR=12						
KBZ	**Khabaz**	**71.24**	**311**	P	**P**	**01 07 48.0**	**+1.3**
	comp=Z,4.1nm,0.9s,baz=40,slow=7.6,SNR=6.3						
NVAR	**Mina Array Bea**	**71.43**	**55**	P	**P**	**01 07 49.8**	**+1.5**
	comp=Z,1.0nm,0.7s,baz=289,slow=5.6,SNR=7.3						
NB2	**NORSAR Subarra**	**72.88**	**338**	P	**P**	**01 07 56.5**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=36,slow=6.2						
NOA	**NORSAR Array B**	**72.88**	**338**	P	**P**	**01 07 56.9**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=36,slow=5.9,SNR=8.2						
AKASG	**Malin Array Be**	**73.90**	**323**	P	**P**	**01 08 03.1**	**+0.6**
	comp=Z,2.7nm,0.5s,baz=44,slow=6.1,SNR=10						
KOLS	**Kolonicke sedl**	**78.31**	**325**	*e*P	**P**	**01 08 27.5**	**-0.1**
KRLC	**Kraliky**	**79.73**	**329**	*e*P	**P**	**01 08 36.1**	**+0.6**
KRLC				*ex*	x	01 08 47.6	
CLL	**Collm**	**80.20**	**332**	*i* P	**P**	**01 08 39.4**	**+1.5**
GOPC	**GO Pecny, Ondr**	**80.65**	**330**	*e*P	**P**	**01 08 40.9**	**+0.5**
KHC	**Kasperske Hory**	**81.75**	**330**	*e*P	**P**	**01 08 47.9**	**+1.6**
KHC				*ex*	x	01 08 57.9	
GERES	**GERESS Array B**	**81.93**	**330**	P	**P**	**01 08 48.1**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=19,slow=3.3,SNR=2.9						
SOKA	**Soboth**	**83.14**	**328**	*i* P	**P**	**01 08 54.0**	**+0.3**
	comp=Z,5.8nm,1.3s						
RETA	**Reutte**	**84.17**	**331**	*i* pP	**P**	**01 09 00.6**	**+1.7**
	comp=Z,8.3nm,1.3s						
TXAR	**Lajitas Array**	**86.55**	**54**	P	**P**	**01 09 11.1**	**0.0**
	comp=Z,0.5nm,0.7s,baz=303,slow=3.6,SNR=6.4						
TORD	**Torodi Ar. Bea**	**117.31**	**319**	PKP	**PKPd

GUMO				Sn	**Sn**	**01 35 52.8**	**+0.6**
USRK	**Ussuriysk Ar.**	**32.53**	**344**	P	**P**	**01 41 24.3**	**+1.0**
	0.6nm,0.6s,baz=153,slow=10,SNR=1.8						
WB0	**Warramunga Arr**	**34.02**	**196**	P	**P**	**01 41 36.5**	**0.0**
WB0				IAmb	IAmb	01 41 37.4	
	comp=Z,4.4nm,0.6s						
WR0	**Warramunga Arr**	**34.17**	**196**	P	**P**	**01 41 37.5**	**-0.2**
WB2	**Warramunga Arr**	**34.20**	**196**	P	**P**	**01 41 37.5**	**-0.6**
WB2				IAmb	IAmb	01 41 39.2	
	comp=Z,7.2nm,0.8s						
WRA	**Warramunga Arr**	**34.21**	**196**	P	**P**	**01 41 38.6**	**+0.5**
	comp=Z,3.9nm,0.7s,baz=18,slow=9.4,SNR=30						
ASAR	**Alice Springs**	**37.88**	**195**	P	**P**	**01 42 10.6**	**+1.3**
	comp=Z,1.1nm,0.4s,baz=18,slow=12,SNR=20						
ASAR				LR	LR	01 58 50.4	
	comp=Z,55nm,18.0s,baz=256,slow=37						
FORT	**Forrest**	**46.25**	**199**	P	**P**	**01 43 17.5**	**+0.5**
BBOO	**Buckleboo**	**46.33**	**189**	P	**P**	**01 43 17.5**	**-0.1**
BBOO				IAmb	IAmb	01 43 18.4	
	comp=Z,9.9nm,0.9s						
MORW	**Morawa**	**49.83**	**212**	P	**P**	**01 43 44.2**	**-0.4**
MORW				IAmb	IAmb	01 43 46.1	
	comp=Z,12nm,1.1s						
GAMB	**Gambell**	**59.23**	**21**	P	**P**	**01 44 49.8**	**-2.0**
MKAR	**Makanchi Array**	**61.06**	**316**	P	**P**	**01 45 05.3**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=90,slow=8.3,SNR=8.4						
RPZ	**Rata Peaks**	**61.85**	**158**	LR	LR	02 10 26.2	
	comp=Z,105nm,19.8s,baz=190,slow=34						
KURK	**Kurchatov**	**64.23**	**320**	P	**P**	**01 45 25.4**	**-0.2**
BVAR	**Borovoye Array**	**69.60**	**322**	P	**P**	**01 45 59.6**	**0.0**
	comp=Z,1.1nm,0.3s,baz=109,slow=8.1,SNR=11						
YKA	**Yellowknife Ar**	**83.70**	**27**	P	**P**	**01 47 17.8**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=282,slow=4.7,SNR=2.7						

*ATA **08** 01:38:03.0±0.4,40.03N×41.26E,h46km±4km,ML2.1, MW3.4*
*ISK **08** 01:38:28.7,38.97N×43.01E,h8km,ML1.9/7*
*DDA **08** 01:38:28.8,38.96N×42.96E,h7km±4km,ML1.6*
ISC 08 01:38:28.8±1.1,38.99N±0.03×42.95E±0.03,h8km±12km, n18,σ0°42/28,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLAZ	**Malazgirt-MUS**	**0.35**	**297**	PG	**Pb**	**01 38 36.9**	**-0.5**
MLAZ				SG	**Sb**	**01 38 43.2**	**+0.1**
VMUR	**Van-Muradiye**	**0.48**	**89**	*i* P	**Pg**	**01 38 38.7**	**+0.4**
VMUR				*i* S	**Sg**	**01 38 44.8**	**+0.1**
VMUR				IAML		01 38 45.0	
	comp=N,20nm,0.5s						
VANB	**Van**	**0.52**	**139**	PG	**Pb**	**01 38 39.9**	**-0.4**
VANB				SG	**Sb**	**01 38 48.5**	**+0.5**
TVAN	**Van**	**0.58**	**142**	*e*P	**Pg**	**01 38 40.2**	**+0.1**
TVAN	**Van**	**0.58**	**142**	*i* P	**Pg**	**01 38 40.4**	**+0.3**
TVAN				*i* S	**Sg**	**01 38 48.2**	**+0.5**
TVAN				IAML		01 38 50.0	
	comp=N,47nm,0.5s						
TVAN				IAML		01 38 50.0	
	comp=E,62nm,0.3s						
AGRB	**Hanur-Agry**	**0.59**	**3**	PG	**Pg**	**01 38 40.8**	**+0.5**
AGRB				SG	**Sb**	**01 38 49.6**	**-0.5**
AKDM	**Akdamar-Van**	**0.66**	**178**	PG	**Pg**	**01 38 41.6**	**0.0**
AKDM				SG	**Sg**	**01 38 50.4**	**+0.2**
GEVA	**Gevas**	**0.68**	**173**	*e*P	**Pg**	**01 38 41.5**	**-0.5**
GEVA	**Gevas**	**0.68**	**173**	*i* P	**Pb**	**01 38 42.5**	**-0.5**
GEVA				*i* S	**Sg**	**01 38 50.9**	**+0.1**
GEVA				IAML		01 38 54.0	
	comp=N,16nm,0.3s						
CLDR	**Caldiran**	**0.77**	**78**	PG	**Pg**	**01 38 43.2**	**-0.5**
CLDR	**Caldiran**	**0.77**	**78**	*i* P	**Pg**	**01 38 43.4**	**-0.3**
CLDR				*i* S	**Sg**	**01 38 53.2**	**-0.5**
GURO	**Guroymak-BITLI**	**0.84**	**239**	PG	**Pg**	**01 38 44.9**	**-0.1**
BLIS	**Bitlis-Merkez**	**0.87**	**229**	*e*P	P*g*	01 38 33.5	-12
BLIS				*e*S	**Sg**	**01 38 56.3**	**-0.5**
BLIS				IAML		01 38 59.1	
	comp=Z,8.6nm,0.4s						
BLIS	**Bitlis-Merkez**	**0.87**	**229**	*i* P	**Pg**	**01 38 45.6**	**+0.1**
BLIS				*i* S	**Sb**	**01 38 57.9**	**-0.2**
BLIS				IAML		01 38 59.0	
	comp=N,25nm,0.4s						
BLIS				IAML		01 38 59.0	
	comp=E,18nm,0.5s						
EATA	**Eleskirt**	**0.94**	**338**	*i* P	**Pn**	**01 38 48.9**	**+0.2**
EATA				*i* S	**Sb**	**01 39 01.0**	**+0.5**
EATA				IAML		01 39 02.0	
	comp=E,50nm,0.3s						
EATA				IAML		01 39 03.0	
	comp=N,23nm,0.4s						
MUSM	**Mu-Merkez**	**1.15**	**257**	*i* P	**Pn**	**01 38 51.8**	**+0.4**
VRTB	**Varto-Mus**	**1.18**	**279**	PN	**Pn**	**01 38 52.5**	**+0.8**
TASB	**TASBURUN-IGDIR**	**1.41**	**45**	PN	**Pn**	**01 38 54.9**	**0.0**

*IDC **08** 01:56:57.7±1.2,26.98S×177.20W,h0km,mb3.9/5, mb1 4.2/6,mb1mx3.9/40,mbtmp4.0/6,ML4.5/1,MS3.4/2, Ms1 3.5/2,ms1mx2.9/28,Error ellipse: s-maj=46.5km s-min=28.3km az=132.0*
*NEIC **08** 01:57:05.9±0.9,27.3S±0.1×177.2W±0.2,h66km±9km, mb4.2/2,Error ellipse: s-maj=30.1km s-min=14.2km az=103.0*
ISC 08 01:57:02.6±1.0,27.23S±0.09×177.0W±0.2,h35km,n16, σ1°35/15,mb4.2/7,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.18**	**202**	Pn	**Pn**	**01 57 38.2**	**+1.8**
	112nm,0.3s,baz=79,slow=22,SNR=3.1						
RAO				Sn	**Sn**	**01 58 02.2**	**+0.1**
	251nm,0.3s,baz=78,slow=22,SNR=8.8						
MSVF	**Nonsavu**	**10.51**	**333**	Pn	**Pn**	**01 59 33.2**	**+2.2**
PPT	**Papeete**	**27.04**	**75**	LR	LR	02 11 54.0	
	comp=Z,23nm,18.4s,baz=190,slow=33						
ASAR	**Alice Springs**	**44.28**	**263**	P	**P**	**02 05 08.0**	**-1.2**
	0.4nm,0.6s,baz=90,slow=7.1,SNR=5.6						
WB2	**Warramunga Arr**	**44.98**	**268**	P	**P**	**02 05 12.9**	**-1.8**
WB2				IAmb	IAmb	02 05 16.9	
	comp=Z,4.1nm,1.0s						
WRA	**Warramunga Arr**	**44.99**	**268**	P	**P**	**02 05 13.7**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=109,slow=7.7,SNR=6.5						
WB0	**Warramunga Arr**	**45.00**	**269**	P	**P**	**02 05 13.3**	**-1.6**
WB0				IAmb	IAmb	02 05 23.3	
	comp=Z,5.3nm,1.1s						
PETK	**Petropavlovsk-**	**82.99**	**345**	P	**P**	**02 09 23.2**	**-0.5**
	comp=Z,2.9nm,0.8s,baz=155,slow=7.5,SNR=2.9						
NVAR	**Mina Array Bea**	**85.30**	**42**	P	**P**	**02 09 37.2**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=227,slow=8.1,SNR=3.9						
KLR	**Kul'dur**	**88.78**	**329**	P	**P**	**02 09 52.4**	**0.0**
	comp=Z,1.1nm,0.8s,baz=173,slow=3.5,SNR=3.8						
ILAR	**Eielson Array**	**94.65**	**12**	LR	LR	02 45 36.4	
	comp=Z,57nm,20.9s,baz=142,slow=31						
KURBB	**Kurchatov Arra**	**119.53**	**315**	PKP	**PKiKP**	**02 15 47.8**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=112,slow=2.5,SNR=5.6						
BVAR	**Borovoye Array**	**124.74**	**317**	PKP	**PKPdf**	**02 15 57.1**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=101,slow=2.9,SNR=2.9						
NB2	**NORSAR Subarra**	**145.75**	**353**	PKP	**PKPab**	**02 16 37.1**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=9.8,slow=3.6						
NOA	**NORSAR Array B**	**145.75**	**353**	PKPbc	**PKPdf**	**02 16 35.9**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=12,slow=4.8,SNR=5.4						
AKASG	**Malin Array Be**	**149.25**	**327**	PKPbc	**PKPbc**	**02 16 46.5**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=43,slow=3.5,SNR=8.2						

*IDC **08** 02:02:14.0±1.2,7.02S×154.82E,h0km,mb4.3/7, mb1 4.5/7,mb1mx3.9/45,mbtmp4.3/7,MS3.1/3,Ms1 3.1/3, ms1mx2.6/29,Error ellipse: s-maj=40.3km s-min=24.0km az=124.0*
*NEIC **08** 02:02:19.3±1.8,7.1S±0.1×154.7E±0.2,h35km±1km, mb4.4/12,Error ellipse: s-maj=30.4km s-min=20.0km az=79.0*
ISC 08 02:02:19.7±0.8,7.0S±0.1×154.7E±0.2,h39km,n23, σ0°83/22,mb4.3/11,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.67**	**115**	LR	LR	02 05 53.6	
	comp=Z,65nm,21.0s,baz=304,slow=39						
PMG	**Port Moresby**	**7.86**	**252**	LR	LR	02 07 29.6	
	comp=Z,176nm,19.4s,baz=90,slow=40						
CTAO	**Charters Tower**	**15.36**	**212**	P	**Pn**	**02 05 54.1**	**+0.2**
CTAO				IAmb	IAmb	02 06 00.6	
	comp=Z,16nm,0.9s						
EIDS	**Eidsvold**	**18.56**	**190**	P	**P**	**02 06 33.2**	**-0.1**

WR0	**Warramunga Arr**	**23.43**	**235**	P	**P**	**02 07 24.4**	**-1.2**
WR0				IAmb	IAmb	02 07 37.2	
	comp=Z,12nm,0.9s						
WB0	**Warramunga Arr**	**23.45**	**235**	P	**P**	**02 07 25.2**	**-0.6**
WB0				PcP	**PcP**	**02 11 09.3**	**-2.0**
WB2	**Warramunga Arr**	**23.57**	**235**	P	**P**	**02 07 26.9**	**-0.1**
WB2				IAmb	IAmb	02 07 38.7	
	comp=Z,16nm,1.0s						
WRA	**Warramunga Arr**	**23.58**	**235**	P	**P**	**02 07 26.8**	**-0.4**
	comp=Z,9.1nm,0.9s,baz=59,slow=9.6,SNR=21						
MTN	**Manton Dam**	**23.95**	**254**	P	**P**	**02 07 29.2**	**-1.4**
ASAR	**Alice Springs**	**25.95**	**228**	P	**P**	**02 07 48.7**	**-0.1**
	comp=Z,3.2nm,0.7s,baz=60,slow=8.8,SNR=25						
STKA	**Stephens Creek**	**27.59**	**205**	P	**P**	**02 08 04.4**	**+1.0**
	comp=Z,3.6nm,0.8s,baz=42,slow=15,SNR=5.4						
STKA				LR	LR	02 18 45.9	
	comp=Z,82nm,18.7s,baz=31,slow=36						
STKA	**Stephens Creek**	**27.59**	**205**	P	**P**	**02 08 03.4**	**0.0**
FITZ	**Fitzroy Crossi**	**30.40**	**246**	P	**P**	**02 08 28.8**	**+0.3**
	comp=Z,4.9nm,0.9s,baz=72,slow=8.2,SNR=8.9						
FITZ	**Fitzroy Crossi**	**30.40**	**246**	P	**P**	**02 08 28.5**	**0.0**
FITZ				IAmb	IAmb	02 08 29.1	
	comp=Z,3.8nm,0.7s						
MMRI	**Maumere**	**32.23**	**265**	P	**P**	**02 08 44.0**	**-0.7**
CMAR	**Chiang Mai Arr**	**60.58**	**296**	P	**P**	**02 12 28.2**	**+1.3**
	comp=Z,1.6nm,0.7s,baz=122,slow=5.5,SNR=7.1						
TRF	**Thorofare Moun**	**81.53**	**22**	P	**P**	**02 14 32.4**	**-0.8**
BPAW	**Bear Paw Mtn.**	**81.65**	**21**	P	**P**	**02 14 34.2**	**+0.6**
BPAW				IAmb	IAmb	02 14 52.1	
	comp=Z,4.7nm,0.7s						
QSPA	**South Pole Qui**	**82.94**	**180**	P	**P**	**02 14 41.0**	**+0.5**
QSPA				IAmb	IAmb	02 14 52.3	
	comp=Z,2.6nm,0.9s						
MKAR	**Makanchi Array**	**83.27**	**319**	P	**P**	**02 14 43.0**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=91,slow=6.0,SNR=5.3						
YKA	**Yellowknife Ar**	**96.49**	**28**	P	**P**	**02 15 44.3**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=261,slow=4.2,SNR=11						
BDFB	**Brasilia**	**148.13**	**135**	PKPbc	**PKPbc**	**02 22 02.7**	**+0.2**
	comp=Z,2.7nm,0.8s,baz=251,slow=2.1,SNR=3.9						
TORD	**Torodi Ar. Bea**	**152.79**	**285**	PKPbc	**PKPbc**	**02 22 13.6**	**0.0**
	comp=Z,3.2nm,0.7s,baz=61,slow=2.5,SNR=19						

*IDC **08** 02:03:23.0±3.8,19.06N×66.97W,h21km±25km,mb4.1/17, mb1 4.3/19,mb1mx4.1/39,mbtmp4.3/19,ML4.4/2,MS3.5/13, Ms1 3.5/13,ms1mx3.3/27,Error ellipse: s-maj=14.8km s-min=10.9km az=50.0*
*NEIC **08** 02:03:24.1±1.1,19.06N±0.04×66.96W±0.04,h36km±6km, Error ellipse: s-maj=6.3km s-min=5.3km az=162.0*
*RSPR **08** 02:03:24.8,19.12N×66.97W,h35km±17km,MD4.1/18*
*OSPL **08** 02:03:25.7±0.9,18.97N×66.83W,h30km±77km,ML4.1*
ISC 08 02:03:24.6±0.6,19.02N±0.04×66.97W±0.03,h37km±1km, n461,σ1°14/477,mb4.4/60,MS3.5/11,15C-8D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.56**	**194**	*i* P	**Pn**	**02 03 35.8**	**-0.5**
AGPR	**Aguadilla, PR**	**0.56**	**194**		**Pn**	**02 03 35.7**	**-0.5**
AGPR	**Aguadilla, PR**	**0.56**	**194**		**Pn**	**02 03 35.4**	**-0.9**
AGPR	**Aguadilla, PR**	**0.56**	**194**		**Sn**	**02 03 44.1**	**-0.2**
AGPR	**Aguadilla, PR**	**0.56**	**194**	*i* P	**Pn**	**02 03 36.5**	**+0.3**
AGPR				*e*S	**Sn**	**02 03 44.3**	**0.0**
AGPR				IAML		02 03 50.3	
	comp=Z,12µm,0.5s						
EMPR	**Esperanza - Ma**	**0.68**	**142**	*e*P	**Pn**	**02 03 37.8**	**-0.1**
EMPR	**Esperanza - Ma**	**0.68**	**142**	*e*S	**Sn**	**02 03 49.0**	**+1.9**
EMPR	**Esperanza - Ma**	**0.68**	**142**		**Sn**	**02 03 49.0**	**+1.9**
EMPR	**Esperanza - Ma**	**0.68**	**142**		**Pn**	**02 03 37.6**	**-0.1**
AOPR	**Arecibo Observ**	**0.70**	**163**	*i* P	**Pn**	**02 03 37.8**	**-0.3**
AOPR				*e*S	**Sn**	**02 03 47.5**	**-0.1**
AOPR	**Arecibo Observ**	**0.70**	**163**	*e*P	**Pn**	**02 03 37.7**	**-0.3**
AOPR	**Arecibo Observ**	**0.70**	**163**	*e*P	**Pn**	**02 03 37.8**	**-0.3**
AOPR				*e*S	**Sn**	**02 03 49.5**	**+1.9**
AOPR	**Arecibo Observ**	**0.70**	**163**	*e*S	**Sn**	**02 03 50.7**	**+3.1**
AOPR	**Arecibo Observ**	**0.70**	**163**		**Pn**	**02 03 37.8**	**-0.3**
AOPR	**Arecibo Observ**	**0.70**	**163**		**Sn**	**02 03 50.7**	**+3.1**
UUPR	**Utuado, UPR, P**	**0.80**	**162**		**Pn**	**02 03 39.0**	**-0.3**
UUPR					**Sn**	**02 03 53.0**	**+3.0**
MPR	**Mayaguez**	**0.82**	**191**	*e*P	**Pn**	**02 03 39.4**	**-0.2**
MPR	**Mayaguez**	**0.82**	**191**	*e*S	**Sn**	**02 03 50.9**	**+0.4**
MPR	**Mayaguez**	**0.82**	**191**		**Sn**	**02 03 39.4**	**-0.2**
MPR	**Mayaguez**	**0.82**	**191**		**Sn**	**02 03 50.9**	**+0.4**
MPR	**Mayaguez**	**0.82**	**191**	*i* P	**Pn**	**02 03 39.5**	**-0.2**
MPR				IAML		02 04 06.0	
	comp=Z,4µm,0.4s						
CRPR	**Cabo Rojo, PR**	**1.01**	**187**	*i* P	**Pn**	**02 03 42.4**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.01**	**187**	*e*S	**Sn**	**02 03 54.9**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.01**	**187**		**Pn**	**02 03 42.1**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.01**	**187**		**Sn**	**02 03 54.9**	**-0.3**
OBIP	**Obispado Ponce**	**1.03**	**160**	*e*P	**Pn**	**02 03 43.0**	**+0.4**
OBIP	**Obispado Ponce**	**1.03**	**160**	*e*S	**Sn**	**02 03 57.3**	**+1.6**
OBIP	**Obispado Ponce**	**1.03**	**160**		**Pn**	**02 03 42.7**	**+0.2**
OBIP	**Obispado Ponce**	**1.03**	**160**		**Sn**	**02 03 57.3**	**+1.6**
GBPR	**Guanica, Bosqu**	**1.04**	**175**	*e*P	**Pn**	**02 03 43.0**	**+0.4**
GBPR	**Guanica, Bosqu**	**1.04**	**175**	*e*S	**Sn**	**02 03 59.1**	**+3.2**
GBPR	**Guanica, Bosqu**	**1.04**	**175**		**Sn**	**02 03 59.1**	**+3.2**
GBPR					**Sn**	**02 03 59.1**	**+3.2**
MLPR	**Magueyes Islan**	**1.04**	**184**	*e*P	**Pn**	**02 03 42.8**	**+0.1**
MLPR	**Magueyes Islan**	**1.04**	**184**	*e*S	**Sn**	**02 03 57.1**	**+1.1**
MLPR	**Magueyes Islan**	**1.04**	**184**		**Pn**	**02 03 42.8**	**+0.1**
MLPR					**Sn**	**02 03 57.1**	**+1.1**
GCPR	**Guaynabo City**	**1.10**	**130**	*e*P	**Pn**	**02 03 42.8**	**-0.6**
GCPR	**Guaynabo City**	**1.10**	**130**	*e*S	**Sn**	**02 03 58.9**	**+1.6**
GCPR	**Guaynabo City**	**1.10**	**130**		**Pn**	**02 03 42.8**	**-0.6**
GCPR					**Sn**	**02 03 58.9**	**+1.6**
SJG	**San Juan**	**1.19**	**139**	Pn	**Pn**	**02 03 44.3**	**-0.5**
	comp=Z,212nm,0.3s,baz=320,slow=9.8,SNR=149						
SJG				Sn	**Sn**	**02 04 02.1**	**+2.4**
	comp=Z,982nm,0.3s,baz=318,slow=16,SNR=13						
SJG				LR	LR	02 04 13.2	
	comp=Z,540nm,20.2s,baz=296,slow=41						
SJG	**San Juan**	**1.19**	**139**	*e*P	**Pn**	**02 03 44.3**	**-0.5**
SJG				*e*S	**Sn**	**02 04 01.1**	**+1.5**
SJG	**San Juan**	**1.19**	**139**	*e*P	**Pn**	**02 03 44.2**	**-0.5**
SJG	**San Juan**	**1.19**	**139**		**Pn**	**02 03 44.7**	**0.0**
SJG					**Sn**	**02 04 01.6**	**+1.9**
ICMP	**Isla Caja de M**	**1.20**	**159**	*e*P	**Pn**	**02 03 45.9**	**+1.0**
ICMP	**Isla Caja de M**	**1.20**	**159**	*e*S	**Sn**	**02 04 01.5**	**+1.6**
ICMP	**Isla Caja de M**	**1.20**	**159**		**Pn**	**02 03 45.9**	**+1.0**
ICMP					**Sn**	**02 04 01.5**	**+1.6**
CBYP	**Canovanas**	**1.29**	**125**	*e*P	**Pn**	**02 03 45.7**	**-0.4**
CBYP	**Canovanas**	**1.29**	**125**	*e*P	**Pn**	**02 03 45.9**	**-0.3**
CBYP				*e*S	**Sn**	**02 04 04.2**	**+1.9**
CBYP	**Canovanas**	**1.29**	**125**	*e*S	**Sn**	**02 04 03.8**	**+1.6**
CBYP	**Canovanas**	**1.29**	**125**		**Pn**	**02 03 45.9**	**-0.3**
CBYP					**Sn**	**02 04 03.8**	**+1.6**
IGPR	**InterUniversit**	**1.33**	**142**	*e*P	**Pn**	**02 03 46.1**	**-0.5**
IGPR	**InterUniversit**	**1.33**	**142**	*e*S	**Sn**	**02 04 05.2**	**+2.1**
IGPR	**InterUniversit**	**1.33**	**142**		**Pn**	**02 03 46.9**	**+0.3**
PDPR	**Patillas Dam,**	**1.34**	**138**	*e*P	**Pn**	**02 03 46.8**	**+0.1**
PDPR	**Patillas Dam,**	**1.34**	**138**	*e*S	**Sn**	**02 04 03.5**	**+0.2**
PDPR	**Patillas Dam,**	**1.34**	**138**		**Pn**	**02 03 46.8**	**+0.1**
PDPR					**Sn**	**02 04 03.5**	**+0.2**
HUMP	**Col San Antoni**	**1.38**	**129**	*e*P	**Pn**	**02 03 47.1**	**-0.2**
HUMP	**Col San Antoni**	**1.38**	**129**	*e*P	**Pn**	**02 03 47.0**	**-0.2**
HUMP				*e*S	**Sn**	**02 04 05.0**	**+0.8**
HUMP	**Col San Antoni**	**1.38**	**129**		**Pn**	**02 03 47.0**	**-0.2**
HUMP					**Sn**	**02 04 05.0**	**+0.8**
PCDR	**Punta Cana, DR**	**1.43**	**250**	*i* P	**Pn**	**02 03 49.3**	**+1.3**
PCDR	**Punta Cana, DR**	**1.43**	**250**		**Pn**	**02 03 49.3**	**+1.3**
PCDR	**Punta Cana, DR**	**1.43**	**250**	*i* P	**Pn**	**02 03 49.2**	**+1.3**
MTP	**Monte Pirata**	**1.63**	**124**	*e*P	**Pn**	**02 03 50.1**	**-0.6**
MTP	**Monte Pirata**	**1.63**	**124**	*e*S	**Sn**	**02 04 09.8**	**-0.7**
MTP	**Monte Pirata**	**1.63**	**124**		**Pn**	**02 03 50.1**	**-0.6**
MTP					**Sn**	**02 04 09.8**	**-0.7**
CUPR	**Culebra, Puert**	**1.75**	**113**	*e*P	**Pn**	**02 03 51.6**	**-0.9**
CUPR	**Culebra, Puert**	**1.75**	**113**	*e*S	**Sn**	**02 04 11.8**	**-1.7**
CUPR	**Culebra, Puert**	**1.75**	**113**		**Pn**	**02 03 51.6**	**-0.9**
CUPR					**Sn**	**02 04 11.8**	**-1.7**
STVI	**Saint Thomas**	**2.02**	**109**	*e*P	**Pn**	**02 03 55.2**	**-1.0**
STVI	**Saint Thomas**	**2.02**	**109**	*e*P	**Pn**	**02 03 55.5**	**-0.7**
STVI	**Saint Thomas**	**2.02**	**109**	*e*S	**Sn**	**02 04 21.5**	**+1.3**
STVI	**Saint Thomas**	**2.02**	**109**		**Pn**	**02 03 55.5**	**-0.7**
STVI					**Sn**	**02 04 21.5**	**+1.3**
DR12	**Loma Pena Alta**	**2.29**	**265**		**Pn**	**02 04 00.1**	**+0.2**
TBVI	**Tortola**	**2.31**	**105**	*e*P	**Pn**	**02 03 59.8**	**-0.3**
TBVI	**Tortola**	**2.31**	**105**		**Pn**	**02 03 59.8**	**-0.3**
CDVI	**St. Croix**	**2.44**	**121**	*e*P	**Pn**	**02 04 02.8**	**+0.9**
CDVI				*e*S	**Sn**	**02 04 24.9**	**-5.6**
CDVI	**St. Croix**	**2.44**	**121**		**Pn**	**02 04 03.0**	**+1.0**

SDD	**Santo Domingo**	**2.84**	**259**		**Pn**	**02 04 08.0**	**+0.6**
BANI	**BANI**	**3.27**	**260**		**Pn**	**02 04 14.2**	**+0.8**
SC01	**Santiago de lo**	**3.57**	**277**		**Pn**	**02 04 18.2**	**+0.7**
SABA	**Saba**	**3.81**	**111**	*e*P	**Pn**	**02 04 20.5**	**-0.2**
SABA	**Saba**	**3.81**	**111**		**Pn**	**02 04 21.2**	**+0.5**
SMRT	**St. Maarten**	**3.82**	**104**	*e*P	**Pn**	**02 04 20.8**	**-0.2**
SMRT	**St. Maarten**	**3.82**	**104**		**Pn**	**02 04 20.4**	**-0.5**
SDDR	**Presa de Saban**	**4.08**	**270**	*e*P	**Pn**	**02 04 25.9**	**+1.3**
SDDR	**Presa de Saban**	**4.08**	**270**	*e*S	Sn	02 05 27.5	+16
SDDR	**Presa de Saban**	**4.08**	**270**		**Pn**	**02 04 24.8**	**+0.2**
SDDR	**Presa de Saban**	**4.08**	**270**	*i* P	**Pn**	**02 04 26.4**	**+1.8**
SDDR				IAML		02 05 35.2	
	comp=Z,975nm,0.5s						
SKI	**Saint Kitts**	**4.36**	**112**	*e*P	**Pn**	**02 04 28.7**	**+0.4**
SKI	**Saint Kitts**	**4.36**	**112**	*e*S	Sn	02 05 28.1	+10
SKI	**Saint Kitts**	**4.36**	**112**		**Pn**	**02 04 28.9**	**+0.5**
GRTK	**Grand Turk**	**4.63**	**303**		**Pn**	**02 04 29.9**	**-2.0**
PAPH	**Port-au-Prince**	**5.07**	**265**		**Pn**	**02 04 38.7**	**+0.6**
MLYT	**Lee's Yard**	**5.09**	**116**	*e*P	**Pn**	**02 04 40.0**	**+1.5**
ANWB	**Willy Bob**	**5.11**	**104**	*e*P	**Pn**	**02 04 37.8**	**-0.8**
ANWB	**Willy Bob**	**5.11**	**104**	*e*S	**Sn**	**02 05 37.7**	**+1.4**
ANWB	**Willy Bob**	**5.11**	**104**		**Pn**	**02 04 38.4**	**-0.2**
JAKH	**Jacmel**	**5.32**	**263**		**Pn**	**02 04 42.3**	**+0.8**
JAKH	**Jacmel**	**5.32**	**263**	*i* P	**Pn**	**02 04 43.8**	**+2.3**
JAKH				IAML		02 05 56.9	
	comp=Z,81nm,0.6s						
LGNH	**Logne**	**5.36**	**266**		**Pn**	**02 04 43.6**	**+1.5**
LGNH	**Logne**	**5.36**	**266**	*i* P	**Pn**	**02 04 43.9**	**+1.8**
LGNH				IAML		02 06 03.7	
	comp=Z,69nm,0.5s						
ABD	**La Joyeuse, An**	**5.80**	**115**	*e*P	**Pn**	**02 04 49.2**	**+1.0**
ABD	**La Joyeuse, An**	**5.80**	**115**	*e*S	**Sn**	**02 05 52.2**	**-1.3**
CBE	**Ff, Capester**	**5.90**	**119**	*e*P	**Pn**	**02 04 50.7**	**+1.2**
TDBA	**Terre de Bas,**	**5.99**	**121**	*e*P	Pn	02 05 02.5	+12
MAGL	**Barre de l'ile**	**6.23**	**118**	*e*P	**Pn**	**02 04 56.0**	**+2.0**
MAGL	**Barre de l'ile**	**6.23**	**118**	*e*S	**Sn**	**02 06 07.5**	**+3.6**
H05N1	**Guadeloupe/Mar**	**6.25**	**115**	Pn	**Pn**	**02 04 55.9**	**+1.6**
MDN	**Morne-Daniel**	**6.48**	**124**	*e*P	**Pn**	**02 04 56.6**	**-0.8**
FDF	**Fort de France**	**7.01**	**127**	*e*P	**Pn**	**02 05 04.8**	**-0.1**
FDF	**Fort de France**	**7.01**	**127**	*e*S	**Sn**	**02 06 21.6**	**-1.9**
ILAM	**Ilet Lapin Mar**	**7.20**	**125**	*e*P	**Pn**	**02 05 09.2**	**+1.8**
ILAM	**Ilet Lapin Mar**	**7.20**	**125**	*e*S	**Sn**	**02 06 27.8**	**-0.2**
BIM	**Bigot**	**7.21**	**127**	*e*P	**Pn**	**02 05 07.0**	**-0.6**
BIM	**Bigot**	**7.21**	**127**	*e*S	**Sn**	**02 06 27.4**	**-0.8**
MPOM	**Morne Pois Mar**	**7.41**	**127**	*e*P	**Pn**

BIRD IAmb IAmb 02 08 08.6
comp=Z,23nm,0.7s
BBAC Balboa, Cauca 19.66 212 *e*P **P** **02 07 51.2 +0.5**
U59A Littleton 19.72 333 P **Pn** **02 07 52.7 +0.1**
baz=148
U59A Littleton 19.72 333 P **P** **02 07 50.1 -0.8**
U59A IAmb IAmb 02 08 07.4
comp=Z,8.0nm,0.5s
W57A Gilead 19.78 327 P **Pn** **02 07 53.4 0.0**
baz=141
W57A Gilead 19.78 327 P **P** **02 07 49.4 -2.3**
W57A IAmb IAmb 02 08 04.1
comp=Z,14nm,0.5s
154A Montrose 19.82 316 P **P** **02 07 50.6 -1.5**
X56A White Oak 19.84 324 P **Pn** **02 07 53.3 -0.8**
baz=137
V58A Windy Hill, Pi 19.86 330 P **P** **02 07 53.2 +0.7**
baz=144
V58A Windy Hill, Pi 19.86 330 P **P** **02 07 51.3 -1.1**
V58A IAmb IAmb 02 08 09.3
comp=Z,17nm,0.6s
CRUC La Cruz 19.91 211 *e*P **P** **02 07 54.4 +0.9**
Y55A Saluda 19.92 321 P **P** **02 07 53.9 +0.7**
baz=134,SNR=16
T60A Surry 19.98 337 P **Pn** **02 07 55.9 +0.3**
baz=152
W56A Indian Trail 20.08 326 P Pn 02 07 56.4 -0.5
baz=140
U58A Oxford 20.09 332 P **P** **02 07 55.4 +0.5**
baz=146
TEIG Tepich 20.11 277 P **P** **02 07 55.8 +0.5**
comp=Z,14nm,0.5s,baz=76,slow=0.0,SNR=24
TEIG Tepich 20.11 277 P **P** **02 07 54.5 -0.8**
TEIG IAmb IAmb 02 08 09.1
comp=Z,22nm,0.9s
T59A Double "B" Far 20.15 335 P Pn 02 07 57.0 -0.7
baz=150
T59A Double "B" Far 20.15 335 P **P** **02 07 54.3 -1.3**
X55A Gracelyn & Ava 20.17 323 P **P** **02 07 55.9 0.0**
baz=136,SNR=7.7
V57A Coltrane Farms 20.25 329 P **P** **02 07 57.7 +1.0**
baz=143
GCUF Volcan Galeras 20.40 211 *e*P **P** **02 07 59.0 0.0**
352A Blakely 20.40 311 P **P** **02 07 57.9 -0.6**
352A IAmb IAmb 02 08 04.0
comp=Z,16nm,0.6s
S60A Water View 20.45 338 P **P** **02 07 59.4 +0.6**
baz=153
KMSC Kings Mountain 20.49 325 P **P** **02 08 00.3 +1.0**
baz=138,SNR=11
PAULI Pauline 20.52 323 P **P** **02 07 58.8 -0.9**
V56A Mocksville 20.55 327 P **P** **02 08 00.5 +0.5**
baz=141
GOGA Godfrey 20.56 317 P **P** **02 08 00.6 +0.5**
baz=130
X54A Belton 20.65 322 P **P** **02 08 01.8 +0.7**
baz=134
PTGA Pitinga 20.80 160 P **P** **02 08 03.1 +0.3**
comp=Z,1.5nm,0.3s,baz=357,slow=14,SNR=6.4
T57A Hurt 20.90 331 P **P** **02 08 04.4 +0.6**
baz=146
T57A Hurt 20.90 331 P **P** **02 08 02.8 -1.0**
S58A Poland Farm, P 20.91 335 P **P** **02 08 05.1 +1.3**
baz=149
S58A Poland Farm, P 20.91 335 P **P** **02 08 02.6 -1.2**
S58A IAmb IAmb 02 08 16.6
comp=Z,14nm,0.8s
U56A King 20.91 328 P **P** **02 08 04.8 +0.8**
baz=142
U56A King 20.91 328 P **P** **02 08 02.9 -1.1**
W54A Cherokee Point 20.93 323 P **P** **02 08 05.2 +1.2**
baz=136,SNR=15
152A Waverly Hall 20.93 314 P **P** **02 08 03.3 -0.9**
152A IAmb IAmb 02 08 07.1
comp=Z,12nm,0.5s
V55A Taylorsville 20.96 326 P Pn 02 08 05.8 -1.4
baz=139,SNR=7.1
V55A Taylorsville 20.96 326 P **P** **02 08 03.7 -0.7**
R58B Mineral 21.14 336 P **P** **02 08 07.0 +0.7**
baz=150
R58B Mineral 21.14 336 P **P** **02 08 05.0 -1.4**
R58B IAmb IAmb 02 08 18.0
comp=Z,11nm,0.7s
CBN Corbin Frederi 21.16 337 P **P** **02 08 07.0 +0.6**
baz=152
Y52A Lilburn 21.23 318 P **P** **02 08 07.6 +0.2**
baz=130
BG3 Lake Jocassee 21.29 322 P **P** **02 08 06.5 -1.6**
BG3 IAmb IAmb 02 08 22.3
comp=Z,9.0nm,0.6s
V54A Nebo 21.30 325 P **P** **02 08 08.6 +0.6**
baz=138
U55A TA2, Sparta 21.37 327 P **P** **02 08 09.5 +0.6**
baz=141
R58A Rapidan 21.48 336 P **P** **02 08 11.2 +1.2**
baz=150
BLA Blacksburg 21.62 330 P **P** **02 08 11.9 +0.4**
baz=143
250A Grady 21.63 310 P **P** **02 08 10.6 -1.1**
V53A Saluda 21.70 323 P **P** **02 08 11.5 -1.0**
V53A IAmb IAmb 02 08 30.5
comp=Z,12nm,0.7s
U54A Nelsons Funny 21.78 326 P **P** **02 08 14.5 +1.2**
baz=139
Q58A Fox Den Farm, 21.92 337 P **P** **02 08 14.8 +0.1**
baz=152
O61A Allentown 22.00 344 P **P** **02 08 16.3 +0.8**
baz=160
Z50A Ashland 22.09 314 P **P** **02 08 16.6 0.0**
baz=125,SNR=5.7
Z50A Ashland 22.09 314 P **P** **02 08 15.9 -0.7**
X51A Calhoun 22.19 318 P **P** **02 08 17.3 -0.3**
X51A IAmb IAmb 02 08 32.9
comp=Z,9.5nm,0.6s
TKL Tuckaleechee C 22.25 322 P **P** **02 08 18.5 +0.2**
comp=Z,1.8nm,0.6s,baz=142,slow=8.7,SNR=4.2
TKL Tuckaleechee C 22.25 322 P **P** **02 08 17.4 -0.9**
V52A Sevierville 22.27 322 P **P** **02 08 18.0 -0.5**
V52A IAmb IAmb 02 08 37.0
comp=Z,16nm,0.9s
R55A Marlinton 22.35 332 P **P** **02 08 20.5 +1.0**
baz=146
T53A Wise 22.51 326 P **P** **02 08 22.1 +1.0**
baz=138
S54A Dingess, Beckl 22.52 329 P **P** **02 08 22.6 +1.4**
baz=142
S54A Dingess, Beckl 22.52 329 P **P** **02 08 19.9 -1.2**
S54A IAmb IAmb 02 08 37.5
comp=Z,7.5nm,0.7s
S54A **S** **02 12 30.6 +4.8**
CPCT Cooper Cave 22.55 320 P **P** **02 08 20.9 -0.7**
Q56A Snyder Ridge, 22.59 335 P **P** **02 08 23.5 +1.6**
baz=149
O59A Robesonia 22.66 341 P **P** **02 08 25.1 +2.6**
baz=157
V51A Loudon 22.69 321 P **P** **02 08 21.9 -1.1**
V51A IAmb IAmb 02 08 40.6
comp=Z,13nm,0.5s
V51A **S** **02 12 27.5 -1.4**
LRAL Lakeview Retre 22.72 312 P **P** **02 08 23.7 +0.4**
baz=123,SNR=9.2
LRAL Lakeview Retre 22.72 312 P **P** **02 08 22.5 -0.8**
M64A Tiverton 22.75 352 P **P** **02 08 25.1 +1.5**
baz=170
Y49A Blount Mountai 22.78 314 P **P** **02 08 23.2 -0.7**
YLE Yale 22.80 348 P **P** **02 08 22.8 -1.3**
APG El Apazote 22.81 264 P **P** **02 08 25.5 +0.9**
comp=Z,15nm,0.9s,baz=38,slow=7.3,SNR=9.4
N60A Cedar Hill Far 22.87 344 P **P** **02 08 26.5 +1.7**
baz=160
W50A Signal Mountai 22.88 318 P **P** **02 08 23.9 -1.1**
M62A Hamden 22.92 349 P **P** **02 08 25.9 +0.7**
baz=166
Q55A Buckhannon 22.92 333 P **P** **02 08 26.2 +0.8**
baz=147
N59A State Game Lan 23.09 343 P **P** **02 08 27.9 +0.8**
baz=158
N59A State Game Lan 23.09 343 P **P** **02 08 26.0 -1.1**
N59A IAmb IAmb 02 08 43.6
comp=Z,12nm,0.6s
BRYW Bryant College 23.16 351 P **P** **02 08 26.4 -1.3**
BRYW IAmb IAmb 02 08 44.2
comp=Z,10.0nm,0.9s
R53A Hurricane 23.24 329 P **P** **02 08 28.9 +0.3**
baz=142
R53A Hurricane 23.24 329 P **P** **02 08 28.0 -0.6**
R53A IAmb IAmb 02 08 32.7
comp=Z,8.7nm,0.8s
P55A Reedsville 23.25 334 P **P** **02 08 29.3 +0.7**
baz=148
N58A Sunbury 23.30 341 P **P** **02 08 30.0 +0.9**
baz=156
KSCT Kent School, K 23.31 348 P **P** **02 08 28.4 -0.7**
KSCT **S** **02 12 37.1 -1.9**
O56A Blue Knob Stat 23.41 337 P **P** **02 08 31.3 +1.0**
baz=151
Q53A Leroy 23.46 330 P **P** **02 08 30.5 -0.2**
baz=143
N57A Milroy 23.49 340 P **P** **02 08 31.6 +0.7**
baz=154
Z47A Carrollton 23.57 311 P **P** **02 08 31.2 -0.6**
Z47A IAmb IAmb 02 08 49.7
comp=Z,12nm,0.8s
M59A Waymart 23.59 344 P **P** **02 08 32.5 +0.6**
baz=160
WES Weston 23.59 352 P **P** **02 08 31.0 -0.8**
WES IAmb IAmb 02 08 48.7
comp=Z,11nm,1.1s
WES **S** **02 12 42.3 -1.2**
P54A Burton 23.60 333 P **P** **02 08 32.9 +0.8**
baz=146
QUA2 Belchertown 23.64 350 P **P** **02 08 31.5 -0.9**
QUA2 **S** **02 12 42.9 -1.4**
O55A Ligonier 23.64 336 P **P** **02 08 33.2 +0.8**
baz=150
HRV Adam Dziewonsk 23.74 352 P **P** **02 08 34.5 +1.2**
baz=169
T50A Nancy 23.81 323 P **P** **02 08 33.4 -0.7**
M57A Sunshine Farm, 23.88 341 P **P** **02 08 36.7 +2.0**
baz=156
P53A Whipple 23.90 332 P **P** **02 08 36.6 +1.7**
baz=144
U49A Red Boiling Sp 24.02 320 P **P** **02 08 35.4 -0.7**
CCIG Comitan 24.13 267 P **P** **02 08 37.3 -0.1**
M56A Emporium 24.35 339 P **P** **02 08 40.4 +1.3**
baz=154
R50A Paris 24.43 325 P **P** **02 08 39.3 -0.4**
PLAL Pickwick Lake 24.55 315 P **P** **02 08 40.3 -0.5**
PLAL IAmb IAmb 02 08 56.2
comp=Z,7.7nm,0.7s
344A Westbrook Farm 24.74 305 P **P** **02 08 41.9 -0.7**
M54A Oil Creek Stat 24.90 337 P **P** **02 08 44.7 +0.7**
baz=150
Y45A Yeager Farm, C 24.96 311 P **P** **02 08 44.2 -0.5**
WVT Waverly 25.06 317 P **P** **02 08 45.9 +0.4**
baz=127
WVT Waverly 25.06 317 P **P** **02 08 44.8 -0.7**
WVT IAmb IAmb 02 09 04.1
comp=Z,7.8nm,0.8s
OXF Oxford 25.20 312 P **P** **02 08 47.1 +0.3**
baz=122
OXF Oxford 25.20 312 P **P** **02 08 46.4 -0.5**
OXF IAmb IAmb 02 08 53.3
comp=Z,19nm,1.1s
342A Flagon Creek P 25.96 303 P **P** **02 08 53.3 -0.4**
CMIG Matias Romero 26.60 270 P **P** **02 09 00.5 +0.9**
comp=Z,3.0nm,0.8s,baz=121,slow=12,SNR=3.9
W41B Gary Mavity, V 27.55 311 P **P** **02 09 08.3 +0.3**
baz=119,SNR=5.2
WHAR Wooly Hollow 27.64 311 P **P** **02 09 07.8 -1.0**
WHAR IAmb IAmb 02 09 10.3
comp=Z,7.7nm,0.8s
X40A Basin Creek Fa 27.65 309 P **P** **02 09 09.1 +0.2**
baz=117,SNR=8.0
X40A Basin Creek Fa 27.65 309 P **P** **02 09 08.4 -0.5**
X40A IAmb IAmb 02 09 10.6
comp=Z,7.6nm,0.7s
FCAR Ozark Folk Cen 27.82 312 P **P** **02 09 09.6 -0.8**
ATAH Atahualpa 28.32 204 P **P** **02 09 16.9 +1.5**
comp=Z,20nm,0.9s,baz=5.9,slow=6.9,SNR=9.3
CCM Cathedral Cave 28.40 317 P **P** **02 09 15.1 -0.4**
baz=125
U40A Yellville 28.56 313 P **P** **02 09 17.1 0.0**
baz=120,SNR=5.0
U40A Yellville 28.56 313 P **P** **02 09 16.5 -0.5**
W39A Magazine 28.67 310 P **P** **02 09 18.2 +0.2**
baz=117
W39A Magazine 28.67 310 P **P** **02 09 17.9 -0.1**
HHAR Hobbs 29.29 311 P **P** **02 09 22.5 -1.0**
E51A G1948 Merrick 29.32 342 P **P** **02 09 24.2 +0.6**
baz=155
D53A Lac Vacive, Po 29.34 345 P **P** **02 09 24.6 +0.8**
baz=159
TLIG Tlapa 30.01 272 P **P** **02 09 30.0 -0.2**
435B Jarrell 30.04 299 P **P** **02 09 30.8 +0.6**
baz=106
WHTX Lake Whitney, 30.28 301 P **P** **02 09 32.9 +0.6**
baz=108
TUL1 Leonard 30.45 309 P **P** **02 09 34.0 +0.2**
baz=116,SNR=5.2
TUL1 Leonard 30.45 309 P **P** **02 09 33.5 -0.4**
TUL1 IAmb IAmb 02 09 34.9
comp=Z,8.8nm,0.8s
Z35A Perchaven, San 30.55 304 P **P** **02 09 34.3 -0.4**
F45A CMU Biological 30.71 334 P **P** **02 09 36.6 +0.7**
baz=144
833A Chaparral WMA, 31.02 293 P **P** **02 09 39.1 +0.2**
baz=100
T35A Sooner Cattle 31.42 311 P **P** **02 09 41.8 -0.5**
JCT Junction City 31.81 297 P **P** **02 09 46.3 +0.4**
baz=103
ABTX Abilene, Hawle 32.24 301 P **P** **02 09 50.0 +0.4**
baz=107,SNR=10
ABTX Abilene, Hawle 32.24 301 P **P** **02 09 49.2 -0.4**
KSU1 Kansas State U 32.51 314 P **P** **02 09 51.7 -0.2**
baz=119
AMTX Amarillo 34.53 304 P **P** **02 10 09.4 -0.3**
baz=108
CBKS Cedar Bluff 34.54 312 P **P** **02 10 09.6 -0.1**
baz=115
TXAR Lajitas Array 34.89 294 P **P** **02 10 13.2 +0.4**
comp=Z,14nm,0.7s,baz=111,slow=9.5,SNR=147
TXAR PcP **PcP** **02 12 46.0 +0.8**
comp=Z,1.5nm,0.8s,baz=123,slow=4.6,SNR=5.2
TXAR ScP **ScP** **02 16 29.9 +1.9**
comp=Z,0.4nm,0.7s,baz=126,slow=6.3,SNR=4.5
TXAR LR LR 02 29 17.3
comp=Z,40nm,19.0s,baz=0.0,slow=45
ECSD EROS Data Cent 35.00 321 P **P** **02 10 14.0 +0.6**
baz=125
ECSD EROS Data Cent 35.00 321 P **P** **02 10 12.4 -1.0**
ECSD IAmb IAmb 02 10 30.4
comp=Z,4.2nm,0.7s
MSTX Muleshoe 35.13 302 P **P** **02 10 15.2 +0.3**
baz=106
MSTX Muleshoe 35.13 302 P **P** **02 10 14.2 -0.7**
SCHQ Schefferville 35.75 0 P **P** **02 10 20.0 +0.3**
comp=Z,1.1nm,0.5s,baz=228,slow=5.9,SNR=4.6
SCHQ Schefferville 35.75 0 P **P** **02 10 19.0 -0.8**
SCHQ IAmb IAmb 02 10 36.9
comp=Z,2.6nm,0.6s
GDL2 Guadalupe Moun 36.00 299 P **P** **02 10 21.8 -0.6**
MNTX Cornudas Mount 36.75 298 P **P** **02 10 29.1 +0.4**
baz=101,SNR=8.3
MNTX Cornudas Mount 36.75 298 P **P** **02 10 28.3 -0.3**
T25A Trinidad 37.34 307 P **P** **02 10 34.1 +0.2**
baz=108
ANMO Albuquerque 38.32 303 P **P** **02 10 43.0 +0.8**
baz=104
ANMO Albuquerque 38.32 303 P **P** **02 10 41.3 -0.8**
ANMO IAmb IAmb 02 10 43.8
comp=Z,4.8nm,0.9s
SDCO Great Sand Dun 38.36 307 P **P** **02 10 42.9 +0.4**
baz=108,SNR=13
SDCO Great Sand Dun 38.36 307 P **P** **02 10 42.2 -0.3**
SDCO IAmb IAmb 02 10 44.4
comp=Z,6.2nm,0.8s
Q24A Divide 38.50 309 P **P** **02 10 44.2 +0.5**
baz=110
GO01 Chusmiza 38.51 183 P **P** **02 10 41.6 -2.5**
GO01 IAmb IAmb 02 10 42.7
comp=Z,9.9nm,0.9s
LENM Lemitar 38.56 301 P **P** **02 10 40.7 -3.4**
ULM Lac du Bonnet 38.73 330 LR LR 02 27 50.7
comp=Z,64nm,19.2s,baz=146,slow=38
121A Cookes Peak, D 38.90 298 P **P** **02 10 47.1 +0.1**
baz=100
ISCO Idaho Springs 39.12 310 P **P** **02 10 49.3 +0.4**
baz=110,SNR=5.8
ISCO Idaho Springs 39.12 310 P **P** **02 10 47.6 -1.3**
BDFB Brasilia 39.17 150 LR LR 02 27 29.7
comp=Z,90nm,18.9s,baz=40,slow=37
S22A 4UR Ranch, Cre 39.36 307 P **P** **02 10 51.4 +0.4**
baz=107
N23A Red Feather La 39.75 312 P **P** **02 10 54.0 -0.1**
baz=111
RSSD Black Hills 39.79 317 P **P** **02 10 54.7 +0.4**
baz=117
PB01 IPOC Station P 39.89 184 P **P** **02 10 53.1 -2.0**
319A Douglas 39.98 296 P **P** **02 10 55.6 -0.3**
319A IAmb IAmb 02 10 58.8
comp=Z,8.0nm,0.8s
MVCO Mesa Verde 40.49 305 P **P** **02 10 59.8 -0.5**
baz=105
K22A Casper 40.81 314 P **P** **02 11 02.8 0.0**
baz=113
K22A Casper 40.81 314 P **P** **02 11 01.8 -1.0**
K22A IAmb IAmb 02 11 05.0
comp=Z,5.5nm,0.8s
PV13 Radium Mtn., P 40.99 307 P **P** **02 11 03.6 -0.7**
PV13 IAmb IAmb 02 11 06.2
comp=Z,8.0nm,1.0s
PV12 Saucer Basin, 41.02 307 P **P** **02 11 02.4 -2.2**
PV12 IAmb IAmb 02 11 06.3
comp=Z,9.7nm,1.0s
PV03 Paradox Valley 41.03 307 P **P** **02 11 03.8 -0.9**
PV03 IAmb IAmb 02 11 06.4
comp=Z,5.8nm,1.0s
X18A Snowflake 41.04 301 P **P** **02 11 03.9 -0.9**
TUC Tucson 41.38 298 P **P** **02 11 08.2 +0.8**
baz=98
TUC Tucson 41.38 298 P **P** **02 11 08.2 +0.8**
X16A Lo Mia Camp, P 42.23 301 P **P** **02 11 15.0 +0.4**
LAO LASA Array 42.33 320 P **P** **02 11 15.6 +0.6**
baz=117
LAO LASA Array 42.33 320 P **P** **02 11 14.5 -0.5**
LAO IAmb IAmb 02 11 16.5
comp=Z,7.1nm,0.8s
WUAZ Wupatki 42.38 302 P **P** **02 11 16.7 +1.1**
baz=101,SNR=14
WUAZ Wupatki 42.38 302 P **P** **02 11 15.5 -0.2**
BW06 Boulder Array 42.94 313 P **P** **02 11 20.4 +0.2**
baz=110
BW06 Boulder Array 42.94 313 P **P** **02 11 19.6 -0.6**
PDAR Pinedale Array 42.94 313 P **P** **02 11 19.5 -0.7**
comp=Z,1.6nm,0.7s,baz=87,slow=6.6,SNR=10.0
PDAR PcP **PcP** **02 13 10.2 -0.1**
comp=Z,1.1nm,0.7s,baz=117,slow=5.9,SNR=6.3
U15A North Rim 43.28 303 P **P** **02 11 21.8 -1.2**
MTPU Mount Pierson 43.53 306 P **P** **02 11 24.6 -0.6**
RLMT Red Lodge 43.60 316 P **P** **02 11 25.7 +0.2**
baz=112,SNR=25
RLMT Red Lodge 43.60 316 P **P** **02 11 24.9 -0.6**
YMP Mirror Lake Pl 44.04 315 P **P** **02 11 28.4 -0.8**
YNE Yellowstone No 44.04 316 P **P** **02 11 28.5 -0.6**
GCMT Greycliff 44.12 317 P **P** **02 11 29.1 -0.4**
TPAW Teton Pass 44.14 313 P **P** **02 11 29.5 -0.4**
FLWY Flagg Ranch 44.17 314 P **P** **02 11 29.2 -0.8**
FLWY IAmb IAmb 02 11 32.2
comp=Z,4.0nm,0.7s
H17A Grant Village 44.20 315 P **P** **02 11 30.9 +0.6**
baz=111
FXWY Fox Creek 44.24 314 P **P** **02 11 30.4 -0.3**
IMW Indian Meadow 44.27 314 P **P** **02 11 30.7 -0.2**
IMW IAmb IAmb 02 11 33.6
comp=Z,6.2nm,0.6s
Y12C Blythe 44.67 299 P **P** **02 11 35.2 +1.2**
baz=97
YHB Horse Butte 44.74 315 P **P** **02 11 33.9 -0.7**
YHL Hebgen Lake 44.76 315 P **P** **02 11 33.9 -1.0**
BGU Big Grassy Mou 44.86 309 P **P** **02 11 34.7 -0.8**
PSUT Pine Spring 44.92 306 P **P** **02 11 35.2 -0.9**
IRM Iron Mountain 45.23 300 P **P** **02 11 39.6 +1.1**
baz=97,SNR=6.2
BC3 Big Chuckawall 45.43 299 P **P** **02 11 40.8 +0.7**
baz=96
GMRC Granite Mounta 45.73 300 P **P** **02 11 43.7 +1.2**
baz=97,SNR=8.4
MCMT McKenzie Canyo 45.87 315 P **P** **02 11 43.0 -0.6**
DLMT Dillon 45.88 315 P **P** **02 11 43.2 -0.4**
BELC Belle Mtn. Jos 45.92 299 P **P** **02 11 44.3 +0.3**
baz=96
LRM Limekiln Ridge 45.94 316 P **P** **02 11 43.5 -0.6**
TUQ Turquoise Moun 46.03 301 P **P** **02 11 45.5 +0.7**
baz=97,SNR=6.9
CPUP Villa Florida 46.04 168 P **P** **02 11 45.9 +1.2**
comp=Z,3.9nm,0.7s,baz=344,slow=11,SNR=8.1
CPUP Villa Florida 46.04 168 P **P** **02 11 42.9 -1.8**
CPUP IAmb IAmb 02 11 46.7
comp=Z,4.0nm,0.7s
MONP2 Monument Peak 46.17 298 P **P** **02 11 47.0 +0.9**
baz=95
R11A Troy Canyon, C 46.22 305 P **P** **02 11 47.1 +0.7**
baz=100
PFO Pinyon Flats O 46.26 299 P **P** **02 11 46.8 +0.1**
baz=95
SHOC Shoshone, Teco 46.37 302 P **P** **02 11 48.7 +1.3**
baz=98
TPNV Topopah Spring 46.50 303 P **P** **02 11 49.5 +0.9**
baz=99,SNR=8.8
TPNV Topopah Spring 46.50 303 P **P** **02 11 48.0 -0.6**
GSC Goldstone, Bar 46.73 301 P **P** **02 11 51.4 +1.1**
baz=97
MSO Missoula 47.25 317 P **P** **02 11 54.6 +0.4**
baz=110
MSO Missoula 47.25 317 P **P** **02 11 54.0 -0.2**
MSO IAmb IAmb 02 11 55.4
comp=Z,2.3nm,0.7s
BFSC Mount Baldy Ra 47.31 299 P **P** **02 11 55.7 +0.7**
baz=95
MPMC Manual Prospec 47.37 302 P **P** **02 11 55.9 +0.5**
baz=97
GRAC Grapevine Rang 47.39 303 P **P** **02 11 56.8 +1.3**
baz=98,SNR=5.4
EDW2 Edwards Air Fo 47.65 300 P **P** **02 11 58.6 +1.1**
baz=96,SNR=5.4
WALA Waterton Lakes 48.02 320 P **P** **02 11 59.8 -0.4**
WALA IAmb IAmb 02 12 01.2
comp=Z,2.8nm,0.6s
NVAR Mina Array Bea 48.34 305 P **P** **02 12 03.7 +0.8**
comp=Z,4.1nm,0.9s,baz=105,slow=7.0,SNR=19
NVAR PcP **PcP** **02 13 30.8 +1.6**
comp=Z,1.0nm,0.6s,baz=119,slow=4.1,SNR=3.5
NVAR LR LR 02 35 15.4
comp=Z,48nm,18.6s,baz=249,slow=40
BMO Blue Mountains 48.91 313 P **P** **02 12 06.5 -0.5**
NEW Newport 49.76 318 P **P** **02 12 13.2 -0.2**
baz=108,SNR=13
NEW Newport 49.76 318 P **P** **02 12 12.5 -0.9**
LTY Liberty 51.78 316 P **P** **02 12 27.9 -0.8**
LTY IAmb IAmb 02 12 29.5
comp=Z,2.6nm,0.7s
B05A Bryant 52.95 317 P **P** **02 12 36.0 -1.3**
baz=103
YKA Yellowknife Ar 54.35 335 P **P** **02 12 46.4 -0.9**
comp=Z,0.9nm,0.6s,baz=114,slow=8.0,SNR=25
SUMG Summit 55.99 10 P **P** **02 12 59.8 +0.3**
SUMG IAmb IAmb 02 13 15.2
comp=Z,5.6nm,0.8s
SUMG Summit 55.99 10 *i*P **P** **02 13 00.3 +0.8**
ESDC Sonseca Array 57.50 55 P **P** **02 13 11.6 +1.4**
comp=Z,9.3nm,0.8s,baz=273,slow=7.2,SNR=81
ESDC LR LR 02 33 22.9
comp=Z,70nm,21.6s,baz=105,slow=31
PLCA Paso Flores 59.53 183 P **P** **02 13 23.3 -1.0**
comp=Z,5.3nm,1.4s,baz=21,slow=6.7,SNR=3.0
CART Cartagena 59.82 57 P **P** **02 13 25.4 -0.9**
DBIC Dimboko 61.52 93 LR LR 02 35 44.5
comp=Z,28nm,19.8s,baz=188,slow=32
A36M Sachs Harbour 62.45 343 P **P** **02 13 43.6 0.0**
baz=115
INK Inuvik 63.86 338 P **P** **02 13 52.4 -0.6**
INK IAmb IAmb 02 14 09.9
comp=Z,5.8nm,1.1s
DAWY Dawson 65.38 333 P **P** **02 14 03.1 0.0**
DAWY IAmb IAmb 02 14 19.1
comp=Z,2.8nm,1.1s
TORD Torodi Ar. Bea 65.89 84 P **P** **02 14 07.1 -0.1**
comp=Z,2.0nm,0.7s,baz=291,slow=6.3,SNR=11
TORD LR LR 02 40 00.5
comp=Z,86nm,21.6s,baz=195,slow=33
EGAK Eagle 66.23 333 P **P** **02 14 08.4 -0.1**
EGAK IAmb IAmb 02 14 26.4
comp=Z,5.1nm,0.9s
TAM Tamanrasset 67.21 73 P **P** **02 14 15.8 +0.2**
TAM IAmb IAmb 02 14 18.8
comp=Z,3.9nm,0.8s
DAVA Damuels 67.43 46 *e*P **P** **02 14 18.4 +1.7**

comp=Z,1.1nm,0.4s
NB2 NORSAR Subarra 67.84 31 P **P** 02 14 20.0 +1.2
comp=Z,0.5nm,0.8s,baz=269,slow=6.5
NOA NORSAR Array B 67.84 31 P **P** 02 14 20.0 +1.2
comp=Z,0.3nm,0.7s,baz=270,slow=6.2,SNR=3.9
NOA LR LR 02 40 33.8
comp=Z,15nm,20.8s,baz=280,slow=33
RETA Reutte 68.02 46 *i* P **P** 02 14 21.1 +0.9
comp=Z,1.2nm,0.5s
FETA Feichten 68.03 46 *i* P **P** 02 14 21.6 +1.1
comp=Z,2.9nm,0.7s
KEST Kesra 68.26 58 LR LR 02 41 39.6
comp=Z,33nm,19.1s,baz=304,slow=34
SQTA Sankt Quirin 68.34 46 *eP* **P** 02 14 23.5 +1.2
comp=Z,0.7nm,0.3s
ILAR Eielson Array 68.68 333 P **P** 02 14 23.6 -0.3
comp=Z,1.9nm,0.7s,baz=107,slow=3.9,SNR=24
HDA Harding Lake 68.70 333 P **P** 02 14 24.4 +0.3
baz=90
CCB Clear Creek Bu 69.07 333 P **P** 02 14 25.3 -1.1
GERES GERESS Array B 69.85 44 LR LR 02 39 53.0
comp=Z,14nm,21.5s,baz=285,slow=31
MLY Manley 70.31 333 P **P** 02 14 34.0 -0.1
KTH Kantishna Hill 70.47 332 P **P** 02 14 34.0 -1.1
KTH IAmb IAmb 02 14 53.0
comp=Z,5.1nm,0.8s
ARCES ARCESS Array B 73.21 22 P **P** 02 14 52.0 +0.6
comp=Z,2.1nm,0.8s,baz=289,slow=3.7,SNR=11
FINES FINESS Array B 74.94 30 LR LR 02 43 28.5
comp=Z,26nm,21.9s,baz=304,slow=32
FNA Florina 76.62 51 P **P** 02 15 11.2 -0.5
FNA IAmb IAmb 02 15 22.1
comp=Z,3.9nm,0.9s
LZH Lanzhou 124.51 9 *e*PKP **PKPdf** 02 22 19.6 -1.0
LZH pPKP pPKPdf 02 22 30.5 -0.6
LZH sPKP 02 22 34.8

DJA 08 02:05:57.2±0.4, 1°N±7°×12°1E±°, h18km±9km, M4.2/9, mB5.2/1, mb4.2/2, MLv4.1/9, Mw(mB)4.6/1, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**1.04**	**113**	P	Pb	02 06 15.4	-1.4
MRSI				S	Sb	02 06 29.8	-0.3
MPSI	**Mapaga**	**1.21**	**243**	P	Pn	02 06 17.6	-1.7
MPSI				S	Sb	02 06 33.6	-1.4
APSI	**Ampana**	**1.91**	**160**	P	Pn	02 06 28.8	-0.1
LUWI	**Luwuk**	**2.62**	**137**	P	Pn	02 06 39.5	+0.8
KMSI	**Cibinong**	**3.02**	**96**	P	Pn	02 06 45.0	+0.9
TTSI	**Tana Toraja**	**4.08**	**197**	P	Pn	02 07 00.8	+2.1
SPSI	**Sidrap Palu**	**4.97**	**194**	P	Pn	02 07 12.1	+1.1
BNSI	**Bone**	**5.33**	**189**	P	Pn	02 07 17.7	+1.8
	0.1nm24nm,0.7s						
SANI	**Sanana**	**5.80**	**120**	P	Pn	02 07 21.1	-1.3

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*NEIC **08** 02:17:34.2±1.6,4.°59S±0.°06×129.°4E±0.°1, h139km±7km, mb4.4/17, Error ellipse: s-maj=14.8km s-min=8.8km az=89.0*
*IDC **08** 02:17:36.6±2.3,4.°37S×129.°50E, h150km±22km, mb4.0/7, mb1 4.0/9, mb1mx3.7/29, mbtmp4.4/9, Error ellipse: s-maj=30.2km s-min=13.0km az=70.0*
*DJA **08** 02:17:36.2±0.2,5.°5S±3.°×12.°9E±°, h143km±4km, M4.5/12, mb4.5/12, mB5.1/4, MLv4.4/12, Mw(mB)4.4/4*
ISC 08 02:17:34.9±0.5, 4.°56S±0.°04×129.°48E±0.°06, h150km, n65, σ1s70/74, mb4.3/15, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**0.43**	**86**	P	**Pn**	**02 17 58.2**	**+2.3**
BNDI				S	**Sn**	**02 18 15.2**	**+3.4**
MSAI	**Masohi**	**1.32**	**336**	P	**Pn**	**02 18 02.7**	**+0.1**
MSAI				S	**Sn**	**02 18 21.5**	**-2.4**
AAI	**Ambon**	**1.54**	**304**	P	**Pn**	**02 18 05.0**	**+0.1**
NLAI	**Namlea**	**2.71**	**299**	P	**Pn**	**02 18 18.7**	**+0.1**
FAKI	**Fak Fak**	**3.21**	**60**	P	**Pn**	**02 18 26.5**	**+1.6**
FAKI	**Fak Fak**	**3.21**	**60**		**Pn**	**02 18 25.7**	**+0.8**
FAKI				Sn	**Sn**	**02 19 03.0**	**-0.7**
SAUI	**Saumlaki**	**3.86**	**152**	P	**Pn**	**02 18 36.5**	**+3.2**
SAUI	**Saumlaki**	**3.86**	**152**	Pn	**Pn**	**02 18 33.1**	**-0.2**
SAUI				Sn	**Sn**	**02 19 17.6**	**-1.1**
SIJI	**Sorong**	**4.08**	**26**	P	**Pn**	**02 18 36.3**	**+0.2**
	31nm,0.3s,baz=165,slow=22,SNR=39						
SIJI				S	**Sn**	**02 19 21.2**	**-2.6**
	88nm,0.3s,baz=66,slow=20,SNR=46						
SANI	**Sanana**	**4.28**	**305**	P	**Pn**	**02 18 38.5**	**-0.3**
LBMI	**Labuha**	**4.36**	**333**	P	**Pn**	**02 18 40.8**	**+0.9**
RKPI	**Ransiki, Papua**	**5.58**	**57**	P	**Pn**	**02 18 58.0**	**+1.9**
	9μm184nm,0.7s						
TNTI	**Ternate**	**5.70**	**338**	P	**Pn**	**02 18 57.4**	**-0.2**
	0.2nm66nm,0.8s						
TNTI	**Ternate**	**5.70**	**338**		**Pn**	**02 18 57.2**	**-0.4**
BBSI	**Bau Bau**	**6.94**	**262**	P	**Pn**	**02 19 17.3**	**+3.1**
	14nm,1.0s						
MTN	**Manton Dam**	**8.40**	**169**		**Pn**	**02 19 32.9**	**-0.7**
MTN				Sn	**Sn**	**02 21 04.7**	**-2.4**
APSI	**Ampana**	**8.61**	**295**	P	**Pn**	**02 19 37.5**	**+1.0**
	613nm35nm,0.9s						
MRSI	**Marisa**	**9.04**	**303**	P	**Pn**	**02 19 42.2**	**0.0**
	1μm152nm,0.7s						
BNSI	**Bone**	**9.34**	**271**	P	**Pn**	**02 19 47.1**	**+0.9**
	32nm,0.8s						
BKSI	**Bulukumba**	**9.35**	**265**	P	**Pn**	**02 19 49.0**	**+2.7**
	34nm,0.7s						
MPSI	**Mapaga**	**10.73**	**297**	P	**Pn**	**02 20 04.9**	**+0.3**
	27nm,0.9s						
KNRA	**Kununurra**	**11.07**	**184**	Pn	**Pn**	**02 20 08.8**	**-0.3**
WBSI	**Waikabubak, Su**	**11.21**	**243**	P	**Pn**	**02 20 12.9**	**+2.0**
	34nm,1.0s						
PLAI	**Plampang**	**12.37**	**249**	P	**Pn**	**02 20 27.0**	**+1.0**
	59nm,0.7s						
FITZ	**Fitzroy Crossi**	**13.97**	**195**	P	**Pn**	**02 20 47.4**	**+0.9**
	0.1nm,0.3s,baz=24,slow=10,SNR=1.2						
FITZ	**Fitzroy Crossi**	**13.97**	**195**	P	**Pn**	**02 20 45.5**	**-1.1**
JAGI	**Jajag, Banyuwa**	**15.71**	**255**	P	**Pn**	**02 21 07.4**	**-0.8**
JAGI				IAmb	IAmb	02 21 25.4	
	comp=Z,17nm,0.8s						
WB0	**Warramunga Arr**	**15.86**	**163**		**Pn**	**02 21 09.5**	**-0.5**
WB0				IAmb	IAmb	02 21 27.3	
	comp=Z,8.3nm,0.8s						
WRA	**Warramunga Arr**	**16.01**	**163**	P	**Pn**	**02 21 11.3**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=339,slow=12,SNR=36						
WRA				S	**S**	**02 24 01.4**	**-8.9**
	comp=Z,1.3nm,0.3s,baz=356,slow=23,SNR=6.6						
WB2	**Warramunga Arr**	**16.02**	**163**	P	**P**	**02 21 12.1**	**-0.4**
WR0	**Warramunga Arr**	**16.09**	**163**	P	**P**	**02 21 13.4**	**+0.2**
COEN	**Coen**	**16.42**	**126**	P	**P**	**02 21 17.6**	**+0.6**
AS31	**Alice Springs**	**19.47**	**168**	P	**Pn**	**02 21 52.5**	**-0.5**
ASAR	**Alice Springs**	**19.47**	**168**	P	**Pn**	**02 21 52.9**	**-0.2**
	comp=Z,1.5nm,0.3s,baz=349,slow=11,SNR=76						
ASAR				S	**S**	**02 25 21.2**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=342,slow=16,SNR=6.1						
ASAR				ScP	**ScP**	**02 29 27.5**	**+0.2**
	baz=313,slow=2.2,SNR=5.0						
CTA	**Charters Tower**	**22.48**	**135**	P	**P**	**02 22 26.3**	**+4.3**
	comp=Z,6.6nm,0.8s,baz=308,slow=13,SNR=6.7						
BBOO	**Buckleboo**	**28.78**	**168**	P	**P**	**02 23 19.5**	**+0.9**
STKA	**Stephens Creek**	**29.46**	**159**	P	**P**	**02 23 27.8**	**+3.1**
	comp=Z,2.4nm,0.5s,baz=340,slow=2.5,SNR=4.9						
STKA	**Stephens Creek**	**29.46**	**159**	P	**P**	**02 23 25.4**	**+0.7**
NWAO	**Narrogin (SRO)**	**30.45**	**201**	P	**P**	**02 23 32.7**	**-0.8**
NWAO				IAmb	IAmb	02 23 35.0	
	comp=Z,12nm,0.9s						
CMAR	**Chiang Mai Arr**	**37.80**	**308**	P	**P**	**02 24 37.7**	**+0.8**
	comp=Z,3.4nm,0.5s,baz=135,slow=8.0,SNR=13						
CHTO	**Chiang Mai**	**37.99**	**309**	P	**P**	**02 24 38.0**	**-0.6**
CHTO				IAmb	IAmb	02 24 40.3	
	comp=Z,7.2nm,0.7s						
XAN	**Xi'an**	**43.02**	**335**	P	**P**	**02 25 17.9**	**-1.8**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ODAN	**Odare**	**51.28**	**310**	*eP*	**P**	**02 26 24.2**	**+0.1**
TAPN	**Taplejung**	**51.30**	**311**	*eP*	**P**	**02 26 24.2**	**0.0**
RAMN	**Ramite**	**51.94**	**310**	*eP*	**P**	**02 26 29.3**	**+0.4**
	comp=Z,43nm,0.5s						
JIRN	**Jiri**	**52.61**	**310**	*eP*	**P**	**02 26 34.1**	**0.0**
	comp=Z,19nm,0.5s						
GUN	**Gumba**	**52.97**	**310**	*eP*	**P**	**02 26 36.6**	**-0.1**
	comp=Z,30nm,0.7s						
PKI	**Pulchoki**	**53.16**	**310**	*eP*	**P**	**02 26 37.7**	**-0.4**
	comp=Z,14nm,0.9s						
DMN	**Daman**	**53.42**	**309**	*eP*	**P**	**02 26 39.8**	**0.0**
	comp=Z,21nm,0.9s						
GKN	**Gorkha**	**53.97**	**310**	*eP*	**P**	**02 26 44.0**	**+0.3**
	comp=Z,14nm,0.2s						
KOLN	**Koldanda**	**54.66**	**309**	*eP*	**P**	**02 26 48.9**	**+0.1**
	comp=Z,29nm,0.5s						
DANN	**Dangsing**	**54.81**	**309**	*eP*	**P**	**02 26 50.0**	**0.0**
	comp=Z,20nm,0.5s						
PYUN	**Piuthan**	**55.29**	**309**	*eP*	**P**	**02 26 53.5**	**+0.2**
ULN	**Ulaanbaatar**	**55.79**	**342**	P	**P**	**02 26 56.6**	**+0.1**
ULN				IAmb	IAmb	02 26 59.5	
	comp=Z,2.3nm,0.6s						
SONM	**Songino Array**	**55.97**	**341**	P	**P**	**02 26 59.3**	**+1.6**
	comp=Z,1.2nm,0.6s,baz=161,slow=9.2,SNR=4.4						
MKAR	**Makanchi Array**	**55.91**	**326**	P	**P**	**02 28 05.6**	**+0.9**
	comp=Z,4.7nm,0.4s,baz=113,slow=7.9,SNR=85						
MAKZ	**Makanchi**	**66.09**	**326**	P	**P**	**02 28 06.5**	**+0.6**
KDJ	**Kajisay**	**66.37**	**320**	P	**P**	**02 28 08.6**	**+0.6**
KDJ				IAmb	IAmb	02 28 09.4	
	comp=Z,4.6nm,0.8s						
ZALV	**Zalesovo Beam**	**69.17**	**334**	P	**P**	**02 28 25.4**	**+0.4**
	comp=Z,2.7nm,0.6s,baz=113,slow=4.5,SNR=6.3						
GAR	**Garm**	**69.59**	**314**	P	**P**	**02 28 27.4**	**-0.7**
KURK	**Kurchatov**	**70.17**	**328**	P	**P**	**02 28 31.5**	**+0.4**
KURK				IAmb	IAmb	02 28 33.0	
	comp=Z,8.9nm,0.8s						
KKAR	**Karatay Array**	**71.17**	**318**	P	**P**	**02 28 36.9**	**-0.6**
KKAR				IAmb	IAmb	02 28 38.9	
	comp=Z,2.4nm,0.8s						
GEYT	**Ailbeck**	**78.25**	**310**	P	**P**	**02 29 19.7**	**+1.4**
	comp=Z,2.1nm,0.6s,baz=163,slow=5.7,SNR=4.2						
RAYN	**Ar Rayn**	**86.29**	**294**	P	**P**	**02 30 00.1**	**-0.3**
RAYN				IAmb	IAmb	02 30 01.4	
	comp=Z,2.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**127.79**	**283**	PKP	**PKiKP**	**02 36 24.8**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=102,slow=2.2,SNR=6.7						

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*IDC **08** 02:47:32.2±2.0,21.°62N×143.°10E, h290km±19km, mb3.2/9, mb1 3.4/11, mb1mx3.1/40, mbtmp3.9/11, Error ellipse: s-maj=39.4km s-min=12.1km az=96.0*
ISC 08 02:47:33.9±0.8, 21.°69N±0.°08×142.°9E±0.°3, h311km, n13, σ0s80/14, mb3.4/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.42**	**353**	P	**Pn**	**02 48 55.9**	**-0.8**
	11nm,0.3s,baz=235,slow=12,SNR=6.9						
JCJ				S	**S**	**02 50 01.9**	**-1.4**
	12nm,0.3s,baz=280,slow=22,SNR=12						
MJAR	**Matsushiro Arr**	**15.35**	**346**	P	**Pn**	**02 50 56.2**	**+0.2**
	0.3nm,0.3s,baz=162,slow=11,SNR=6.0						
KLR	**Kul'dur**	**28.88**	**345**	P	**P**	**02 53 05.6**	**+1.2**
	1.9nm,0.6s,baz=167,slow=8.4,SNR=9.3						
WRA	**Warramunga Arr**	**42.22**	**192**	P	**P**	**02 54 57.1**	**-0.3**
	1.6nm,0.6s,baz=11,slow=8.1,SNR=3.7						
FITZ	**Fitzroy Crossi**	**43.01**	**204**	P	**P**	**02 55 03.7**	**0.0**
	1.1nm,0.5s,baz=8.5,slow=7.3						
ASAR	**Alice Springs**	**45.93**	**192**	P	**P**	**02 55 26.3**	**-0.3**
	0.5nm,0.6s,baz=16,slow=12,SNR=8.5						
STKA	**Stephens Creek**	**53.28**	**181**	P	**P**	**02 56 20.7**	**-0.8**
	2.3nm,0.8s,baz=22,slow=5.9,SNR=4.0						
YKA	**Yellowknife Ar**	**76.58**	**28**	P	**P**	**02 58 49.9**	**-0.3**
	0.4nm,0.5s,baz=290,slow=5.4,SNR=9.1						
ARCES	**ARCESS Array B**	**78.85**	**341**	P	**P**	**02 59 03.8**	**+1.3**
	1.1nm,0.8s,baz=80,slow=8.7,SNR=5.1						
FINES	**FINESS Array B**	**83.08**	**334**	P	**P**	**02 59 25.0**	**+0.1**
	0.7nm,0.6s,baz=44,slow=6.6,SNR=5.0						
NVAR	**Mina Array Bea**	**83.34**	**51**	P	**P**	**02 59 27.4**	**+0.4**
	0.1nm,0.3s,baz=282,slow=4.5,SNR=3.0						
TORD	**Torodi Ar. Bea**	**128.55**	**309**	PKP	**PKiKP**	**03 06 06.0**	**+0.3**
	0.2nm,0.4s,baz=19,slow=1.1,SNR=4.4						
PLCA	**Paso Flores**	**145.94**	**132**	PKPbc	**PKPbc**	**03 06 37.6**	**+0.2**
	1.3nm,0.6s,baz=244,slow=2.5,SNR=4.1						

JMA 08 02:50:07.9±0.3, 26.°42N×126.°49E, h16km±3km, M2.8, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKE	**Kume jima 2**	**0.28**	**109**	P	Pg	02 50 13.9	-0.1
JKE				S	Sg	02 50 18.1	0.0
JAGN	**Aguni-jima**	**0.69**	**76**	P	Pg	02 50 21.0	-0.5
JAGN				*e*S	Sg	02 50 30.5	-0.2
JJT3	**Tamagusuku3**	**1.19**	**103**	P	Pg	02 50 31.0	0.0
JJT3				S	Sg	02 50 46.8	+0.2
JNTH	**Nagotoyohara**	**1.38**	**86**	P	Pn	02 50 32.8	+0.3
JNTH				*e*S	Sn	02 50 50.2	-0.1
JIH	**Iheya**	**1.46**	**65**	P	Pb	02 50 34.7	+0.1
JIH				*e*S	Sb	02 50 52.7	-0.2
JOW	**Kunigami**	**1.65**	**75**	P	Pb	02 50 37.6	-0.4
	1.7nm,0.3s,baz=79,slow=12,SNR=17						
JOW	**Kunigami**	**1.65**	**75**	P	Pb	02 50 37.4	-0.5

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*IDC **08** 02:56:13.5±0.9,2.°27S×138.°32E, h0km, mb4.1/7, mb1 4.4/9, mb1mx4.0/37, mbtmp4.2/9, ML3.9/2, MS3.5/14, Ms1 3.5/14, ms1mx3.2/48, Error ellipse: s-maj=34.1km s-min=18.7km az=83.0*
*DJA **08** 02:56:16.4±0.6,2.°S±10.°×13.°8E±°, h14km±5km, M4.5/6, mB4.8/1, mb4.8/2, MLv4.3/6, Mw(mB)4.0/1*
*NEIC **08** 02:56:19.2±1.1,2.°40S±0.°07×138.°13E±0.°09, h41km±7km, mb4.3/14, Error ellipse: s-maj=13.5km s-min=8.9km az=112.0*
ISC 08 02:56:18.7±0.5, 2.°38S±0.°06×138.°17E±0.°04, h35km, n45, σ1s61/43, mb4.3/13, MS3.5/8, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.66**	**54**	P	**Pn**	**02 56 27.4**	**-4.2**
SRPI	**Serui, Papua**	**2.00**	**285**	P	**Pn**	**02 56 48.5**	**-1.5**
SRPI				S	**Sn**	**02 57 13.8**	**0.0**
GENI	**Genyem**	**2.01**	**96**	P	**Pn**	**02 56 50.8**	**+0.7**
GENI				S	**Sn**	**02 57 17.1**	**+3.1**
BAKI	**Biak**	**2.38**	**300**	P	**Pn**	**02 56 52.9**	**-2.3**
RKPI	**Ransiki, Papua**	**4.08**	**282**	P	**Pn**	**02 57 18.0**	**-0.7**
FAKI	**Fak Fak**	**5.94**	**265**	P	**Pn**	**02 57 44.4**	**+0.1**
	0.3nm736nm80nm,0.7s						
FAKI				S	**Sn**	**02 58 49.3**	**-1.9**
	0.3nm736nm80nm,0.7s						
FAKI	**Fak Fak**	**5.94**	**265**		**Pn**	**02 57 44.0**	**-0.3**
FAKI				Sn	**Sn**	**02 58 50.4**	**-0.8**
SIJI	**Sorong**	**7.06**	**282**	Pn	**Pn**	**02 57 59.9**	**+0.2**
	1.6nm,0.3s,baz=86,slow=10,SNR=4.4						
PMG	**Port Moresby**	**11.34**	**128**	LR	LR	03 04 52.6	
	comp=Z,167nm,19.4s,baz=67,slow=46						
MTN	**Manton Dam**	**12.52**	**213**	Pn	**Pn**	**02 59 15.3**	**+0.8**
MTN				Sn	**Sn**	**03 01 30.0**	**-2.8**
COEN	**Coen**	**12.52**	**157**	Pn	**Pn**	**02 59 14.7**	**+0.1**
KRVT	**Keravat (AS076**	**13.96**	**98**	LR	LR	03 04 15.9	
	comp=Z,124nm,19.7s,baz=264,slow=35						
DAV	**Davao City (W)**	**15.69**	**307**	LR	LR	03 06 59.3	
	comp=Z,49nm,18.4s,baz=162,slow=41						
KNRA	**Kununurra**	**16.14**	**214**	Pn	**Pn**	**03 00 03.0**	**-0.1**
KNRA				IAmb	IAmb	03 00 15.8	
	comp=Z,28nm,1.1s						
WB0	**Warramunga Arr**	**17.67**	**192**		**Pn**	**03 00 22.1**	**-0.2**
WR0	**Warramunga Arr**	**17.83**	**191**		**P**	**03 00 24.9**	**+0.2**
WR0				IAmb	IAmb	03 00 40.9	
	comp=Z,11nm,0.9s						
WB2	**Warramunga Arr**	**17.85**	**192**		**P**	**03 00 24.4**	**-0.5**
WB2				IAmb	IAmb	03 00 41.1	
	comp=Z,14nm,1.1s						
WRA	**Warramunga Arr**	**17.86**	**192**	P	**Pn**	**03 00 24.3**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=15,slow=12,SNR=12						
WRA				LR	LR	03 08 33.5	
	comp=Z,501nm,18.6s,baz=25,slow=41						
KAPI	**Kappang**	**18.57**	**261**	LR	LR	03 09 52.0	
	comp=Z,103nm,18.1s,baz=106,slow=44						
CTA	**Charters Tower**	**19.29**	**156**	LR	LR	03 09 41.3	
	comp=Z,312nm,18.2s,baz=352,slow=42						
FITZ	**Fitzroy Crossi**	**19.88**	**217**	LR	LR	03 10 24.4	
	comp=Z,254nm,19.6s,baz=36,slow=42						
FITZ	**Fitzroy Crossi**	**19.88**	**217**	P	**P**	**03 00 45.9**	**-1.3**
AS31	**Alice Springs**	**21.56**	**191**	P	**P**	**03 01 05.3**	**-0.1**
ASAR	**Alice Springs**	**21.56**	**191**	P	**P**	**03 01 06.0**	**+0.6**
	comp=Z,4.0nm,0.7s,baz=22,slow=11,SNR=43						
ASAR				S	**S**	**03 05 01.9**	**-0.8**
	comp=Z,5.1nm,0.8s,baz=12,slow=23,SNR=12						
ASAR				LR	LR	03 10 07.4	
	comp=Z,165nm,20.3s,baz=17,slow=38						
EIDS	**Eidsvold**	**26.02**	**153**	P	**P**	**03 01 49.3**	**+0.6**
EIDS				IAmb	IAmb	03 01 58.5	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**29.52**	**174**	LR	LR	03 15 49.3	
	comp=Z,210nm,18.1s,baz=9.2,slow=40						
JNU	**Nakatsue**	**35.97**	**350**	LR	LR	03 18 52.5	
	comp=Z,75nm,18.0s,baz=171,slow=38						
NWAO	**Narrogin (SRO)**	**36.19**	**211**	P	**P**	**03 03 17.2**	**-0.9**
KSRS	**Korea Array**	**40.76**	**347**	P	**P**	**03 03 56.0**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=161,slow=9.6,SNR=6.5						
KSRS				LR	LR	03 20 22.4	
	comp=Z,46nm,18.2s,baz=186,slow=36						
CMAR	**Chiang Mai Arr**	**43.81**	**300**	P	**P**	**03 04 22.1**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=118,slow=6.4,SNR=6.9						
KLR	**Kul'dur**	**51.70**	**355**	P	**P**	**03 05 22.2**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=176,slow=5.6,SNR=7.3						
KLR				LR	LR	03 24 18.1	
	comp=Z,57nm,19.4s,baz=168,slow=33						
SONM	**Songino Array**	**57.19**	**335**	LR	LR	03 30 55.4	
	comp=Z,37nm,19.1s,baz=48,slow=36						
MKAR	**Makanchi Array**	**69.20**	**323**	P	**P**	**03 07 21.9**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=112,slow=8.0,SNR=19						
MAKZ	**Makanchi**	**69.40**	**322**	P	**P**	**03 07 21.9**	**-1.3**
MAKZ				IAmb	IAmb	03 07 27.3	
	comp=Z,5.0nm,0.9s						
KSH	**Kashi**	**70.47**	**313**	P	**P**	**03 07 31.2**	**+1.2**
KSH				sP	pP	03 07 41.4	+0.4
KSH				PP	**PP**	**03 10 12.9**	**+6.4**
KSH				S	**S**	**03 16 41.8**	**+0.8**
KSH				pmax	pmax		
	comp=Z,15nm,1.0s						
KSH				pmax	pmax		
	comp=Z,250nm,4.5s						
KSH				LR	LR		
	comp=N,150nm,6.3s						
KSH				LR	LR		
	comp=E,90nm,12.9s						
KSH				LR	LR		
	comp=Z,88nm,8.6s						
VNDA	**Vanda**	**76.16**	**175**	P	**P**	**03 08 03.8**	**+1.1**
	comp=Z,0.8nm,0.9s,baz=317,slow=7.5,SNR=4.1						
BRVK	**Borovoye**	**78.81**	**325**	P	**P**	**03 08 17.4**	**-0.5**
DHY	**Denali Highway**	**85.11**	**26**	P	**P**	**03 08 50.6**	**-0.4**
DHY				IAmb	IAmb	03 08 54.5	
	comp=Z,3.0nm,0.8s						
MDM	**Murphy Dome**	**85.25**	**24**	P	**P**	**03 08 52.0**	**+0.4**
MDM				IAmb	IAmb	03 08 53.3	
	comp=Z,2.3nm,0.9s						
CCB	**Clear Creek Bu**	**85.34**	**25**	P	**P**	**03 08 51.9**	**-0.1**
CCB				IAmb	IAmb	03 08 52.6	
	comp=Z,2.0nm,1.0s						
ILAR	**Eielson Array**	**85.75**	**25**	P	**P**	**03 08 52.5**	**-1.6**
	comp=Z,1.5nm,0.7s,baz=264,slow=3.9,SNR=21						
DAWY	**Dawson**	**88.81**	**26**	P	**P**	**03 09 08.9**	**0.0**
BBB	**Bella Bella**	**94.15**	**38**	LR	LR	03 44 31.4	
	comp=Z,14nm,19.4s,baz=338,slow=31						
TORD	**Torodi Ar. Bea**	**135.65**	**286**	PKP	**PKPdf**	**03 15 37.0**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=47,slow=1.8,SNR=5.7						
CPUP	**Villa Florida**	**147.77**	**153**	PKPbc	**PKiKP**	**03 16 01.7**	**-1.0**
	comp=Z,2.1nm,0.9s,baz=220,slow=2.8,SNR=5.7						

KRSC 08 03:01:35.4±2.4, 50.°65N×160.°23E, h81km±27km, ML3.5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**2.08**	**330**	*eP*	Pn	03 02 09.0	+0.7
RUS				*eS*	Sn	03 02 35.3	+1.8
MTVR	**Mutnovka**	**2.24**	**326**	*eP*	Pn	03 02 12.2	+1.7
MTVR				*eS*	Sn	03 02 39.8	+2.4
ASAK	**Asacha**	**2.27**	**321**	*eP*	Pn	03 02 13.0	+2.1
ASAK				*eS*	Sn	03 02 40.2	+2.2
PAU	**Pauzhetka**	**2.31**	**292**	*eS*	Sn	03 02 40.3	+1.4
GRL	**Gorelyy**	**2.33**	**326**	*eP*	Pn	03 02 14.4	+2.6
GRL				*eS*	Sn	03 02 43.0	+3.4
SPN	**Mys Shipunski**	**2.45**	**357**	*eP*	Pn	03 02 14.8	+1.5
SPN				*eS*	Sn	03 02 43.3	+0.9
KRMR	**Karymshinskiy**	**2.54**	**330**	*eP*	Pn	03 02 16.5	+2.0
KRMR				*eS*	Sn	03 02 46.4	+1.9
DALK	**Dalny**	**2.55**	**340**	*eP*	Pn	03 02 16.8	+2.2
NLC	**Nalytchevo**	**2.58**	**348**	*eP*	Pn	03 02 17.9	+2.9
NLC				*eS*	Sn	03 02 48.8	+3.3
UGLR	**Uglovaya**	**2.71**	**342**	*eP*	Pn	03 02 19.4	+2.6
MIPR	**Malaya Ipel'ka**	**2.71**	**308**	*eP*	Pn	03 02 19.5	+2.7
MIPR				*eS*	Sn	03 02 50.9	+2.2
SDLR	**Sedlovina**	**2.76**	**343**	*eP*	Pn	03 02 19.8	+2.2
SMAR	**Somma**	**2.76**	**342**	*eP*	Pn	03 02 20.0	+2.3
AVH	**Avacha**	**2.78**	**341**	*eP*	Pn	03 02 20.5	+2.8
KRER	**Koryakskii**	**2.81**	**342**	*eP*	Pn	03 02 21.9	+3.6
KOK	**Koryaka**	**2.82**	**340**	*eP*	Pn	03 02 21.2	+2.8
KRX	**Arik**	**2.88**	**341**	*eP*	Pn	03 02 21.8	+2.6
APC	**Apacha**	**

FAKI IAmb IAmb 03 28 40.3
comp=Z,31nm,1.0s
WRAB Tennant Creek 23.64 234 P **P** **03 28 32.2 -1.3**
WRAB IAmb IAmb 03 28 34.2
comp=Z,48nm,1.1s
WRA Warramunga Arr 23.65 234 P **P** **03 28 32.2 -1.4**
comp=Z,32nm,1.0s,baz=60,slow=9.6,SNR=29
WRA LR LR 03 38 02.7
comp=Z,661nm,18.0s,baz=45,slow=37
MTN Manton Dam 23.91 254 P **P** **03 28 34.1 -2.0**
MTN IAmb IAmb 03 28 39.7
comp=Z,29nm,1.0s
SIJI Sorong 24.02 283 P **P** **03 28 38.3 +1.2**
comp=Z,12nm,0.6s,baz=64,slow=8.7,SNR=14
MSVF Nonsavu 25.32 118 P **P** **03 28 47.3 -1.7**
MSVF IAmb IAmb 03 29 02.7
comp=Z,35nm,1.1s
MSAI Masohi 25.82 276 P **P** **03 28 47.2 -6.3**
ASAR Alice Springs 26.06 228 P **P** **03 28 54.5 -1.1**
comp=Z,11nm,1.0s,baz=62,slow=8.8,SNR=41
ASAR ScP **ScP** **03 36 04.4 +4.6**
comp=Z,4.9nm,1.1s,baz=62,slow=3.3,SNR=12
ASAR LR LR 03 39 15.5
comp=Z,429nm,18.6s,baz=74,slow=37
KNRA Kununurra 26.84 249 P **P** **03 29 00.9 -1.8**
STKA Stephens Creek 27.79 204 P **P** **03 29 10.0 -1.1**
comp=Z,11nm,1.0s,baz=32,slow=12,SNR=8.0
STKA LR LR 03 40 59.6
comp=Z,594nm,18.1s,baz=24,slow=38
TNTI Ternate 28.21 284 P **P** **03 29 13.6 -1.4**
FITZ Fitzroy Crossi 30.41 246 P **P** **03 29 33.3 -1.2**
comp=Z,18nm,0.8s,baz=101,slow=7.0,SNR=28
FITZ Fitzroy Crossi 30.41 246 P **P** **03 29 33.8 -0.7**
FITZ IAmb IAmb 03 29 34.7
comp=Z,18nm,0.8s
KAPI Kappang 34.73 271 LR LR 03 47 09.4
comp=Z,73nm,18.2s,baz=88,slow=41
TGY Tagaytay City 39.34 302 LR LR 03 46 06.3
comp=Z,231nm,20.0s,baz=172,slow=35
YULB Yu-li 44.26 314 P **P** **03 31 30.4 -1.2**
YULB IAmb IAmb 03 31 33.8
comp=Z,13nm,0.8s
NACB Ninganchiao 44.53 315 P **P** **03 31 32.7 -1.0**
SSLB Suanglung 44.75 314 IAmb IAmb 03 31 36.8
comp=Z,24nm,1.1s
JNU Nakatsue 45.63 332 P **P** **03 31 41.5 -0.9**
comp=Z,16nm,0.8s,baz=319,slow=6.7,SNR=7.9
JNU Nakatsue 45.63 332 P **P** **03 31 41.6 -0.8**
JNU IAmb IAmb 03 31 42.3
comp=Z,16nm,0.8s
MJAR Matsushiro Arr 45.74 341 LR LR 03 50 31.2
comp=Z,44nm,18.7s,baz=230,slow=36
MAT Matsushiro 45.75 341 P **P** **03 31 41.5 -1.7**
LEM Lembang 46.66 267 LR LR 03 56 50.4
comp=Z,63nm,18.3s,baz=84,slow=43
DLV T Lat 49.50 292 P **P** **03 32 11.3 -1.6**
KSRS Korea Array 50.56 332 P **P** **03 32 19.3 -1.1**
comp=Z,4.4nm,0.8s,baz=151,slow=8.2,SNR=12
KSRS LR LR 03 50 55.2
comp=Z,61nm,21.4s,baz=152,slow=38
NJ2 Nanjing 51.50 321 *e*P P 03 32 35.2 +7.7
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
WHN Wuhan 53.52 316 ⇓P **P** **03 32 43.6 +1.1**
WHN S **S** **03 40 18.3 +5.4**
WHN pmax pmax
comp=Z,60nm,1.0s
WHN LR LR
comp=Z,300nm,19.0s
USRK Ussuriysk Ar. 54.69 340 P **P** **03 32 50.0 -0.8**
comp=Z,2.3nm,0.7s,baz=182,slow=9.2,SNR=5.1
PPT Papeete 55.41 107 LR LR 03 53 43.0
comp=Z,56nm,18.8s,baz=249,slow=33
PPT2 Papeete2 55.41 107 *e*LR LR 03 49 09.8
comp=Z,76nm,22.0s
TBI Tubuai 56.11 114 *e*LQ LQ 03 47 06.6
comp=Z,411nm,29.8s
TBI *e*LR LR 03 49 27.8
comp=Z,132nm,31.2s
GYA Guiyang 57.02 307 ⇓*i*P **P** **03 33 09.6 +1.6**
GYA S **S** **03 41 03.8 +3.6**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,70nm,5.3s
GYA LR LR
comp=Z,100nm,14.9s
GYA LR LR
comp=Z,140nm,17.3s
GYA LR LR
comp=Z,210nm,16.4s
XAN Xi'an 59.29 316 P **P** **03 33 23.5 -0.1**
XAN pP sP 03 33 35.5 -1.4
XAN sP pwP 03 33 41.4 +0.8
XAN S **S** **03 41 33.5 +4.1**
XAN pmax pmax
comp=Z,26nm,0.7s
XAN LR LR
comp=Z,130nm,20.6s
XAN LR LR
comp=Z,160nm,19.5s
XAN Xi'an 59.29 316 P **P** **03 33 23.6 -0.1**
KMI Kunming 59.58 304 P **P** **03 33 24.6 -1.5**
KMI pP pP 03 33 33.5 -1.9
KMI sP sP 03 33 36.8 -2.7
KMI PcP **PcP** **03 34 13.2 +0.1**
KMI S **S** **03 41 28.6 -5.3**
KMI SS **SS** **03 45 25.4 -4.6**
KMI pmax pmax
comp=Z,12nm,1.3s
KMI pmax pmax
comp=Z,150nm,3.9s
KMI LR LR
comp=Z,200nm,20.4s
KMI LR LR
comp=Z,150nm,22.0s
KMI LR LR
comp=Z,220nm,17.4s
PETK Petropavlovsk- 59.70 2 P **P** **03 33 25.7 -0.3**
comp=Z,2.3nm,0.7s,baz=187,slow=11,SNR=3.4
PETK LR LR 03 57 21.2
comp=Z,70nm,20.7s,baz=240,slow=34
CMAR Chiang Mai Arr 60.35 296 P **P** **03 33 32.6 +1.4**
comp=Z,6.1nm,0.8s,baz=115,slow=4.8,SNR=21
CMAR LR LR 04 00 24.7
comp=Z,47nm,18.8s,baz=143,slow=37
CHTO Chiang Mai 60.47 296 P **P** **03 33 30.7 -1.3**
CHTO IAmb IAmb 03 33 48.8
comp=Z,11nm,1.1s
CD2 Chengdu 61.38 311 ⇑*i*P **P** **03 33 38.9 +0.9**
CD2 S **S** **03 41 58.9 +2.5**
CD2 pmax pmax
comp=Z,70nm,0.5s
CD2 pmax pmax
comp=Z,110nm,6.6s
CD2 LR LR
comp=Z,160nm,17.6s
CD2 LR LR
comp=Z,190nm,20.9s
CD2 LR LR
comp=Z,220nm,14.7s
HIA Hailar 63.56 335 **P** **03 33 50.3 -1.8**
LZH Lanzhou 63.89 316 *e*P **P** **03 33 56.5 +1.7**
LZH pP pP 03 34 03.2 -1.5
LZH sP sP 03 34 05.9 -2.3
LZH *e*PP **PP** **03 36 19.3 +3.5**
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,100nm,5.8s
LZH LR LR
comp=Z,320nm,15.2s
LZH LR LR
comp=Z,340nm,15.4s
LZH LR LR
comp=Z,510nm,18.3s
TAOE Nuku Hiva Isla 64.58 97 *e*LR LR 03 53 08.0
comp=Z,80nm,21.1s
GTA Gaotai 68.32 317 *e*P **P** **03 34 24.6 +1.5**
GTA pP pP 03 34 31.7 -1.4
GTA sP sP 03 34 34.9 -1.6
GTA S **S** **03 43 26.0 +4.3**
GTA pmax pmax
comp=Z,18nm,1.2s
GTA pmax pmax
comp=Z,69nm,6.4s
GTA LR LR
comp=Z,88nm,21.3s
GTA LR LR
comp=Z,360nm,21.0s
GTA LR LR
comp=Z,120nm,20.6s
ULN Ulaanbaatar 68.61 328 P **P** **03 34 22.4 -2.5**
SHL Shillong 68.86 301 P **P** **03 34 25.0 -1.9**
SONM Songino Array 68.94 327 P **P** **03 34 27.1 +0.2**
comp=Z,5.3nm,1.0s,baz=140,slow=5.9,SNR=13
VNDA Vanda 70.82 178 P **P** **03 34 41.2 +3.4**
comp=Z,1.8nm,0.9s,baz=337,slow=7.2,SNR=7.0
LSA Lhasa 70.84 304 P **P** **03 34 35.4 -3.9**
TAPN Taplejung 72.97 301 *e*P **P** **03 34 52.3 +0.4**
comp=Z,35nm,0.9s
ODAN Odare 73.10 301 *e*P **P** **03 34 53.2 +0.6**
comp=Z,73nm,0.7s
RAMN Ramite 73.80 300 *e*P **P** **03 34 57.1 +0.3**
JIRN Jiri 74.35 301 *e*P **P** **03 35 00.4 +0.3**
comp=Z,36nm,0.7s
GUN Gumba 74.69 301 *e*P **P** **03 35 02.4 +0.4**
comp=Z,65nm,0.7s
PKI Pulchoki 74.99 301 *e*P **P** **03 35 04.3 +0.5**
comp=Z,35nm,1.0s
PKIN Phulchoki 75.00 301 *e*P **P** **03 35 04.6 +0.8**
comp=Z,42nm,0.9s
BILL Bilibino 75.08 5 P **P** **03 35 02.6 -0.4**
BILL IAmb IAmb 03 35 03.7
comp=Z,7.8nm,0.9s
KKN Kakani 75.16 301 *e*P **P** **03 35 05.6 +1.0**
DMN Daman 75.26 301 *e*P **P** **03 35 05.8 +0.6**
comp=Z,54nm,0.7s
GKN Gorkha 75.77 301 *e*P **P** **03 35 08.6 +0.6**
KOLN Koldanda 76.59 301 *e*P **P** **03 35 12.9 +0.1**
comp=Z,58nm,0.8s
DANN Dangsing 76.61 301 *e*P **P** **03 35 13.1 +0.1**
comp=Z,44nm,0.7s
PYUN Piuthan 77.20 301 *e*P **P** **03 35 16.5 +0.3**
comp=Z,67nm,1.0s
WMQ Urumqi 78.41 317 *e*P **P** **03 35 24.1 +1.7**
WMQ pP PcP 03 35 31.4 -0.1
WMQ pmax pmax
comp=Z,20nm,1.1s
WMQ pmax pmax
comp=Z,130nm,4.5s
TIXI Tiksi 80.08 352 P **P** **03 35 30.0 -0.8**
comp=Z,0.9nm,0.3s,baz=105,slow=5.6,SNR=4.9
SML Sawmill 81.16 24 IAmb IAmb 03 35 54.7
comp=Z,12nm,1.0s
RND Reindeer 81.83 22 P **P** **03 35 39.5 -1.0**
MCK McKinley 81.98 22 P **P** **03 35 41.5 +0.4**
MCK IAmb IAmb 03 35 57.6
comp=Z,11nm,1.0s
MLY Manley 82.06 20 P **P** **03 35 41.5 -0.1**
MKAR Makanchi Array 82.99 319 P **P** **03 35 46.9 +0.1**
comp=Z,9.3nm,0.7s,baz=105,slow=5.4,SNR=55
TCOL CIGO, UAF Yank 82.99 21 P **P** **03 35 45.9 -0.4**
baz=238
HDA Harding Lake 83.08 22 P **P** **03 35 46.3 -0.6**
baz=238
MAKZ Makanchi 83.20 319 P **P** **03 35 47.0 -0.9**
QSPA South Pole Qui 83.21 180 P **P** **03 35 47.8 0.0**
QSPA IAmb IAmb 03 36 01.8
comp=Z,17nm,1.1s
POKR Poker Plat Res 83.28 21 P **P** **03 35 48.2 +0.3**
baz=238
ILAR Eielson Array 83.29 22 P **P** **03 35 46.5 -1.4**
comp=Z,2.9nm,0.9s,baz=254,slow=4.7,SNR=25
ILAR LR LR 04 09 53.4
comp=Z,172nm,20.4s,baz=248,slow=34
ZALV Zalesovo Beam 83.78 326 P **P** **03 35 49.1 -1.6**
comp=Z,3.7nm,0.6s,baz=121,slow=5.6,SNR=14
DOT Dot Lake 83.80 23 IAmb IAmb 03 35 52.6
comp=Z,8.3nm,0.9s
PRZ Przheval'sk 84.48 314 P **P** **03 35 52.9 -1.9**
TOLK Toolik Lake Re 84.51 18 P **P** **03 35 54.7 +0.5**
baz=236
KDJ Kajisay 85.27 313 P **P** **03 35 57.3 -1.5**
EGAK Eagle 85.44 23 IAmb IAmb 03 36 01.6
comp=Z,8.2nm,0.9s
KSH Kashi 85.58 310 P **P** **03 36 02.7 +2.4**
KSH sP sP 03 36 14.2 +0.3
KSH PP **PP** **03 39 22.4 +2.9**
KSH SKS **SKSac** **03 46 23.3 +0.4**
KSH S **S** **03 46 31.6 +1.9**
KSH SS **SS** **03 52 15.1 +8.7**
KSH pmax pmax
comp=Z,69nm,1.2s
KSH pmax pmax
comp=Z,170nm,5.4s
KSH LR LR
comp=Z,190nm,10.1s
KSH LR LR
comp=Z,89nm,8.9s
KSH LR LR
comp=Z,260nm,5.1s
BOOM Boomskoye usch 86.25 313 P **P** **03 36 00.5 -3.1**
KURK Kurchatov 86.42 322 P **P** **03 36 03.2 -0.7**
KURBB Kurchatov Arra 86.45 322 P **P** **03 36 03.2 -1.0**
comp=Z,1.6nm,0.6s,baz=99,slow=4.7,SNR=19
NIL Nilore 86.58 304 P **P** **03 36 04.3 -0.9**
EPYK Eagle Plains 87.78 22 P **P** **03 36 10.3 0.0**
baz=248
DLBC Dease Lake 88.13 31 P **P** **03 36 13.3 +1.1**
comp=Z,7.4nm,1.1s,baz=122,slow=0.5,SNR=5.5
DLBC Dease Lake 88.13 31 IAmb IAmb 03 36 15.0
comp=Z,8.3nm,1.1s
NRIK Noril'sk 88.40 341 P **P** **03 36 11.7 -1.4**
comp=Z,5.6nm,0.9s,baz=116,slow=4.6,SNR=10
NRIK LR LR 04 15 16.8
comp=Z,52nm,20.3s,baz=58,slow=35
K02D Willamette Mer 88.48 47 P **P** **03 36 13.3 -0.8**
baz=260
O02D Mt. Diablo Mer 88.68 49 P **P** **03 36 16.3 +1.1**
baz=260
M02C Callahan 88.84 48 P **P** **03 36 17.4 +1.5**
baz=260
N02D Trinity Center 88.88 49 P **P** **03 36 17.4 +1.3**
baz=260
O03E Paynes Creek 89.44 49 P **P** **03 36 19.9 +1.1**
baz=261
H04D Lebanon 89.47 45 P **P** **03 36 19.9 +1.2**
baz=260
BTK Batken 89.59 310 P **P** **03 36 18.1 -1.3**
INK Inuvik 89.63 21 P **P** **03 36 18.5 -0.3**
comp=Z,2.9nm,1.1s,baz=250,slow=6.4,SNR=4.6
J04D Umpqua Nationa 89.70 47 P **P** **03 36 20.9 +0.8**
baz=260
SMMC Simmler 90.11 55 P **P** **03 36 22.1 +0.1**
baz=262
KKAR Karatay Array 90.29 313 P **P** **03 36 21.6 -1.0**
KKAR IAmb IAmb 03 36 24.4
comp=Z,4.0nm,1.1s
J05D Fort Rock, OR 90.33 47 P **P** **03 36 23.2 +0.2**
baz=261,SNR=6.2
I05D Terrebonne, OR 90.42 46 P **P** **03 36 23.3 +0.1**
baz=261
BEKR Beckworth 90.47 50 IAmb IAmb 03 36 25.5
comp=Z,6.9nm,1.1s
K05A Summer Lake 90.50 47 IAmb IAmb 03 36 28.9
comp=Z,6.7nm,1.0s
B05A Bryant 90.53 42 P **P** **03 36 23.8 +0.3**
baz=261
G05D Wamic, OR 90.58 45 P **P** **03 36 24.2 +0.3**
baz=261
PINE Pine Mountain 90.62 46 P **P** **03 36 23.2 -1.2**
PINE IAmb IAmb 03 36 26.5
comp=Z,4.3nm,1.0s
VES Vestal, Richgr 90.91 54 P **P** **03 36 26.5 +0.9**
baz=262
VCNR Virginia City 90.93 51 IAmb IAmb 03 36 28.1
comp=Z,5.7nm,0.9s
PNTR Pine Nut 90.94 51 P **P** **03 36 24.6 -1.4**
CIS Catalina Islan 91.15 57 P **P** **03 36 27.7 +0.9**
baz=263
PAHR Pah Rah Range 91.19 50 IAmb IAmb 03 36 29.0
comp=Z,8.4nm,1.1s
YERR Yerington 91.21 51 IAmb IAmb 03 36 29.1
comp=Z,7.4nm,1.1s
FMP Fort Macarthur 91.29 56 P **P** **03 36 27.8 +0.4**
baz=263
ISA Isabella, Lake 91.38 54 P **P** **03 36 29.1 +1.2**
baz=263
EDW2 Edwards Air Fo 91.68 55 P **P** **03 36 30.8 +1.5**
baz=263
I07A Izee 91.69 46 IAmb IAmb 03 36 30.1
comp=Z,4.8nm,1.1s
RYN Ryan 91.72 51 P **P** **03 36 28.6 -0.9**
CWC Cottonwood Cre 91.80 54 P **P** **03 36 31.4 +1.4**
baz=263
NVAR Mina Array Bea 91.86 52 P **P** **03 36 31.1 +0.8**
comp=Z,7.6nm,0.8s,baz=255,slow=6.8,SNR=47
NVAR LR LR 04 17 39.5
comp=Z,78nm,18.4s,baz=261,slow=36
BFSC Mount Baldy Ra 91.87 56 P **P** **03 36 31.5 +1.2**
baz=263
LRMC Laurel Mtn Rad 92.00 55 P **P** **03 36 32.1 +1.2**
baz=263
KVN Kaiserville 92.10 51 P **P** **03 36 30.5 -0.8**
MPMC Manual Prospec 92.23 54 P **P** **03 36 33.1 +1.1**
baz=263,SNR=5.8
G08A Pilot Rock 92.23 45 IAmb IAmb 03 36 33.4
comp=Z,4.1nm,1.1s
GSC Goldstone, Bar 92.69 55 P **P** **03 36 35.1 +1.1**
baz=264
MONP2 Monument Peak 92.75 57 P **P** **03 36 35.3 +0.8**
baz=264
FURC Furnace Creek, 92.77 54 P **P** **03 36 34.9 +0.7**
baz=264,SNR=9.8
PFO Pinyon Flats O 92.79 57 P **P** **03 36 35.8 +1.3**
baz=264
HEC Hector,Ludlow 93.03 55 P **P** **03 36 36.7 +1.1**
baz=264
SHOC Shoshone, Teco 93.19 54 P **P** **03 36 37.1 +0.9**
baz=264,SNR=7.7
BELC Belle Mtn. Jos 93.22 56 P **P** **03 36 37.8 +1.3**
baz=264,SNR=6.9
TPNV Topopah Spring 93.32 53 P **P** **03 36 37.7 +0.7**
baz=264,SNR=6.8
A36M Sachs Harbour 93.33 18 P **P** **03 36 36.3 +0.3**
baz=259
F10A Beach Ranch, E 93.52 44 IAmb IAmb 03 36 38.4
comp=Z,4.7nm,1.0s
GMRC Granite Mounta 93.57 56 P **P** **03 36 39.2 +1.0**
baz=264,SNR=6.3
BC3 Big Chuckawall 93.63 57 P **P** **03 36 39.8 +1.4**
baz=264
NEW Newport 93.83 42 P **P** **03 36 38.3 -0.6**
baz=264
IRM Iron Mountain 93.94 56 P **P** **03 36 41.0 +1.3**
baz=265,SNR=5.1
R11A Troy Canyon, C 93.98 52 P **P** **03 36 40.7 +0.8**
baz=265,SNR=11
R11A Troy Canyon, C 93.98 52 IAmb IAmb 03 36 42.1
comp=Z,5.9nm,1.0s
SHPR Sheep Range 94.14 54 P **P** **03 36 40.1 -0.7**
SHPR IAmb IAmb 03 36 43.3
comp=Z,6.7nm,0.9s
ELK Elko 94.46 50 IAmb IAmb 03 36 44.1
comp=Z,3.5nm,1.1s
W13A Hualapai Mount 95.05 55 P **P** **03 36 43.6 -1.5**
W13A IAmb IAmb 03 36 47.5
comp=Z,4.9nm,0.9s
WALA Waterton Lakes 96.01 41 IAmb IAmb 03 36 50.3
comp=Z,6.2nm,1.0s
YKA Yellowknife Ar 96.30 28 P **P** **03 36 49.3 -0.4**
comp=Z,2.4nm,1.0s,baz=263,slow=4.2,SNR=18
YKA LR LR 04 16 27.1
comp=Z,43nm,19.9s,baz=0.0,slow=33
U15A North Rim 96.44 54 IAmb IAmb 03 36 54.1
comp=Z,5.5nm,1.0s
FXWY Fox Creek 97.76 47 P **P** **03 36 55.9 -1.3**
EGMT Eagleton 98.74 43 P **P** **03 37 00.9 -0.3**
baz=270
BW06 Boulder Array 98.81 48 P **P** **03 37 02.0 +0.1**
baz=269
PDAR Pinedale Array 98.81 48 P **P** **03 37 01.1 -0.8**
comp=Z,0.9nm,0.8s,baz=260,slow=2.7,SNR=7.0
LAO LASA Array 101.16 44 P **Pdif** **03 37 12.5 +0.5**
baz=272
N23A Red Feather La 101.52 50 P **Pdif** **03 37 14.5 +0.4**
baz=271
DGMT Dagmar 102.44 42 P **Pdif** **03 37 17.3 -0.4**
baz=274
D47A Chapleau 116.61 40 P **PKiKP** **03 42 05.9 +0.2**
baz=290
AKASG Malin Array Be 117.14 324 PKP **PKPdf** **03 42 06.0 -0.5**
comp=Z,2.5nm,0.7s,baz=62,slow=2.2,SNR=8.3
LRAL Lakeview Retre 117.38 56 P **PKPdf** **03 42 07.1 -0.5**
baz=280
BRTR Keskin Array B 117.96 312 PKP **PKPdf** **03 42 08.0 -0.6**
comp=Z,1.9nm,0.7s,baz=166,slow=1.8,SNR=6.8
E50A Wahnapitae 118.36 40 P **PKPdf** **03 42 08.8 -0.2**
baz=292
ACSO Alum Creek Sta 118.85 48 P **PKPdf** **03 42 09.6 -0.6**
baz=287
HFS Hagfors 119.16 339 PKP **PKiKP** **03 42 10.3 +0.1**
comp=Z,0.7nm,0.6s,baz=53,slow=9.8,SNR=4.4
Y52A Lilburn 119.62 55 P **PKPdf** **03 42 11.5 -0.4**
baz=283
G53A Haliburton 120.22 41 P **PKPdf** **03 42 12.5 -0.1**
baz=293
N53A Lisbon 120.23 46 P **PKPdf** **03 42 12.0 -0.8**
baz=289
P53A Whipple 120.24 48 P **PKPdf** **03 42 12.6 -0.3**
baz=288
Q53A Leroy 120.33 49 P **PKPdf** **03 42 12.7 -0.4**
baz=287
H53A Bobcaygeon 120.46 42 P **PKPdf** **03 42 13.3 +0.2**
baz=293
O54A Avella 120.77 47 P **PKPdf** **03 42 13.6 -0.3**
baz=289
N54A Moraine State 120.79 46 P **PKPdf** **03 42 13.6 -0.3**
baz=290
T54A Tazewell 120.80 51 P **PKiKP** **03 42 14.4 +0.1**
baz=286
Q54A Coxs Mills 120.81 48 P **PKPdf** **03 42 14.0 +0.1**
baz=288
X54A Belton 120.83 54 P **PKPdf** **03 42 14.2 +0.1**
baz=284
M54A Oil Creek Stat 120.84 45 P **PKPdf** **03 42 13.7 -0.3**
baz=290
W54A Cherokee Point 120.85 53 P **PKiKP** **03 42 14.6 +0.3**
baz=285
V54A Nebo 120.86 52 P **PKPdf** **03 42 14.3 +0.1**
baz=285
Q55A Buckhannon 121.36 48 P **PKPdf** **03 42 15.3 +0.2**
baz=288
U55A TA2, Sparta 121.37 51 P **PKPdf** **03 42 15.1 -0.1**
baz=286
Y55A Saluda 121.39 54 P **PKPdf** **03 42 15.4 +0.2**
baz=284
T55A Pulaski 121.40 50 P **PKPdf** **03 42 15.0 -0.2**
baz=287
G55A Calabogie 121.40 40 P **PKiKP** **03 42 15.3 +0.3**
baz=295
D55A Sainte-Anne-du 121.41 38 P **PKPdf** **03 42 15.0 +0.1**
baz=297
V55A Taylorsville 121.41 52 P **PKPdf** **03 42 15.3 +0.1**
baz=286
X55A Gracelyn & Ava 121.44 54 P **PKiKP** **03 42 15.8 +0.4**
baz=285
L55A Hinsdale 121.45 44 P **PKPdf** **03 42 14.9 -0.3**
baz=292
KMSC Kings Mountain 121.51 53 P **PKPdf** **03 42 15.5 +0.1**
baz=285
O55A Ligonier 121.53 47 P **PKPdf** **03 42 15.4 0.0**
baz=290
R55A Marlinton 121.55 49 P **PKPdf** **03 42 15.7 +0.1**
baz=288
BLA Blacksburg 121.65 50 P **PKPdf** **03 42 15.5 -0.2**
baz=287
D56A ZEC Mazanza, M 121.83 38 P **PKPdf** **03 42 15.4 -0.4**
baz=298
M56A Emporium 121.89 45 P **PKPdf** **03 42 16.1 +0.1**
baz=291
X56A White Oak 121.92 53 P **PKPdf** **03 42 16.2 -0.1**
baz=285
KOLS Kolonicke sedl 121.95 325 *e*PKP **PKiKP** **03 42 16.9 +0.9**
V56A Mocksville 121.99 52 P **PKiKP** **03 42 16.6 +0.1**
baz=286
T56A Rocky Mt 122.00 50 P **PKPdf** **03 42 16.5 +0.2**
baz=287
N56A West Decatur 122.01 45 P **PKiKP** **03 42 16.6 +0.2**
baz=291
O56A Blue Knob Stat 122.05 46 P **PKPdf** **03 42 16.1 -0.2**
baz=290
L56A Greenwood 122.08 44 P **PKPdf** **03 42 15.9 -0.5**
baz=292
W56A Indian Trail 122.10 53 P **PKPdf** **03 42 16.5 -0.1**
baz=286
P56A Dayton Farm, R 122.11 47 P **PKPdf** **03 42 15.9 -0.5**
baz=290
V57A Coltrane Farms 122.53 52 P **PKPdf** **03 42 17.2 -0.2**
baz=287

W57A	**Gilead**	**122.56**	**52**	P		**PKPdf**	**03 42 17.4**	**0.0**
	baz=286								
G57A	**Newington**	**122.57**	**40**	P		**PKPdf**	**03 42 17.1**	**0.0**
	baz=296								
Q57A	**Strasburg**	**122.58**	**48**	P		**PKPdf**	**03 42 17.2**	**-0.2**
	baz=290								
L57A	**Andrews Acres**	**122.62**	**44**	P		**PKPdf**	**03 42 17.5**	**0.0**
	baz=293								
I57A	**Carthage**	**122.64**	**41**	P		**PKPdf**	**03 42 17.0**	**-0.3**
	baz=295								
M57A	**Sunshine Farm,**	**122.68**	**45**	P		**PKPdf**	**03 42 17.3**	**-0.2**
	baz=292								
U57A	**Blanch**	**122.71**	**51**	P		**PKPdf**	**03 42 17.9**	**+0.2**
	baz=288								
P57A	**Homestead Farm**	**122.72**	**47**	P		**PKPdf**	**03 42 17.8**	**+0.1**
	baz=290								
O57A	**Amberson**	**122.73**	**46**	P		**PKPdf**	**03 42 17.7**	**0.0**
	baz=291								
J58A	**Remsen**	**123.12**	**42**	P		**PKPdf**	**03 42 18.5**	**+0.2**
	baz=295								
M58A	**Price's Panora**	**123.13**	**44**	P		**PKiKP**	**03 42 18.8**	**+0.1**
	baz=293								
K58A	**Earlville**	**123.13**	**43**	P		**PKPdf**	**03 42 18.2**	**-0.2**
	baz=294								
Q58A	**Fox Den Farm,**	**123.14**	**47**	P		**PKPdf**	**03 42 18.5**	**0.0**
	baz=290								
N58A	**Sunbury**	**123.15**	**45**	P		**PKPdf**	**03 42 18.1**	**-0.3**
	baz=292								
Y58A	**Scranton**	**123.16**	**54**	P		**PKPdf**	**03 42 18.7**	**0.0**
	baz=286								
T58A	**Grand View Acr**	**123.17**	**50**	P		**PKPdf**	**03 42 18.5**	**0.0**
	baz=288								
I58A	**Old Forge**	**123.19**	**41**	P		**PKPdf**	**03 42 18.2**	**-0.3**
	baz=296								
W58A	**Raeford**	**123.20**	**52**	P		**PKPdf**	**03 42 18.6**	**-0.1**
	baz=287								
O58A	**Lewisberry**	**123.27**	**46**	P		**PKPdf**	**03 42 18.9**	**+0.2**
	baz=292								
L58A	**Harry Jones Me**	**123.28**	**43**	P		**PKiKP**	**03 42 19.3**	**+0.4**
	baz=294								
S58A	**Poland Farm, P**	**123.32**	**49**	P		**PKiKP**	**03 42 19.5**	**+0.4**
	baz=289								
U58A	**Oxford**	**123.32**	**51**	P		**PKiKP**	**03 42 19.2**	**+0.1**
	baz=288								
R58B	**Mineral**	**123.33**	**49**	P		**PKiKP**	**03 42 19.3**	**+0.2**
	baz=290								
H58A	**Gabriels**	**123.39**	**40**	P		**PKiKP**	**03 42 19.3**	**+0.3**
	baz=297								
LANS	**Liptovska Anna**	**123.41**	**326**	*e*PKP		**PKiKP**	**03 42 20.1**	**+1.1**
J59A	**Piesco**	**123.60**	**41**	P		**PKPdf**	**03 42 19.4**	**+0.2**
	baz=296								
K59A	**Cooperstown**	**123.66**	**42**	P		**PKPdf**	**03 42 19.1**	**-0.3**
	baz=295								
O59A	**Robesonia**	**123.73**	**45**	P		**PKPdf**	**03 42 19.3**	**-0.2**
	baz=292								
V59A	**Middlesex**	**123.76**	**51**	P		**PKPdf**	**03 42 19.1**	**-0.6**
	baz=288								
M59A	**Waymart**	**123.77**	**44**	P		**PKPdf**	**03 42 19.9**	**+0.2**
	baz=294								
L59A	**Walton**	**123.78**	**43**	P		**PKPdf**	**03 42 19.6**	**0.0**
	baz=294								
N59A	**State Game Lan**	**123.79**	**45**	P		**PKPdf**	**03 42 19.6**	**-0.1**
	baz=293								
P59A	**Jarrettsville**	**123.81**	**46**	P		**PKPdf**	**03 42 19.6**	**-0.1**
	baz=292								
I59A	**Olmsteadville**	**123.86**	**41**	P		**PKiKP**	**03 42 20.1**	**+0.2**
	baz=297								
T59A	**Double "B" Far**	**123.90**	**50**	P		**PKiKP**	**03 42 20.3**	**0.0**
	baz=289								
F60A	**Warwick**	**124.05**	**38**	P		**PKPdf**	**03 42 19.8**	**-0.2**
	baz=300								
VYHS	**Vyhne**	**124.12**	**326**	*e*PKP		**PKPdf**	**03 42 19.9**	**-0.2**
I60A	**Shoreham**	**124.22**	**40**	P		**PKiKP**	**03 42 21.0**	**+0.4**
	baz=297								
O60A	**Telford**	**124.28**	**45**	P		**PKPdf**	**03 42 20.8**	**+0.3**
	baz=293								
P60A	**Greenville**	**124.31**	**46**	P		**PKPdf**	**03 42 20.7**	**0.0**
	baz=293								
VTS	**Vitosha**	**124.31**	**318**			**PKPdf**	**03 42 19.1**	**-1.7**
KRLC	**Kraliky**	**124.32**	**328**	*e*PKPDF		**PKiKP**	**03 42 20.8**	**+0.1**
PSUB	**Penn St. - Bra**	**124.39**	**46**			**PKPdf**	**03 42 19.9**	**-0.9**
Q60A	**Greensboro**	**124.46**	**47**	P		**PKiKP**	**03 42 21.3**	**+0.1**
	baz=292								
T60A	**Surry**	**124.46**	**49**	P		**PKiKP**	**03 42 21.8**	**+0.5**
	baz=290								
E61A	**Lac Etchemin**	**124.69**	**37**	P		**PKiKP**	**03 42 21.9**	**+0.3**
	baz=301								
N61A	**South Mountain**	**124.88**	**44**	P		**PKiKP**	**03 42 22.2**	**+0.2**
	baz=294								
W61A	**Ground Anchor**	**124.91**	**52**	P		**PKiKP**	**03 42 22.4**	**+0.2**
	baz=288								
J61A	**Chester**	**124.92**	**41**	P		**PKiKP**	**03 42 22.1**	**+0.1**
	baz=298								
M61A	**Granite Spring**	**125.01**	**43**	P		**PKPdf**	**03 42 22.1**	**+0.1**
	baz=295								
PAL	**Palisades**	**125.04**	**44**	P		**PKPdf**	**03 42 22.2**	**+0.2**
	baz=295								
L61B	**Northampton**	**125.25**	**42**	P		**PKPdf**	**03 42 22.2**	**-0.2**
	baz=297								
BRG	**Berggiesshubel**	**125.26**	**331**	*e*PKP		**PKPdf**	**03 42 22.4**	**+0.2**
	comp=Z,8.1nm,1.1s								
BRG	**Berggiesshubel**	**125.26**	**331**	*e*PKPdf		**PKiKP**	**03 42 23.0**	**+0.4**
	baz=49,slow=1.9								
CLL	**Collm**	**125.43**	**331**	*e*PKPdf		**PKiKP**	**03 42 23.0**	**+0.2**
	comp=Z,5.0nm,0.9s								
FBE	**Freiberg**	**125.52**	**331**	*e*PKPdf		**PKiKP**	**03 42 23.6**	**+0.6**
	baz=49,slow=1.9								
G63A	**Kingsbury**	**125.90**	**38**	P		**PKPdf**	**03 42 23.8**	**+0.2**
	baz=301								
NRDL	**Niedersach Rie**	**125.95**	**334**	*e*PKPdf		**PKiKP**	**03 42 24.3**	**+0.6**
	baz=49,slow=1.9								
HRV	**Adam Dziewonsk**	**125.96**	**41**	P		**PKiKP**	**03 42 24.3**	**+0.2**
	baz=298								
CONA	**Conrad Observa**	**126.08**	**327**	*i* PKiKP		**PKiKP**	**03 42 24.7**	**+0.3**
	comp=Z,4.6nm,1.2s								
L63A	**North Scituate**	**126.22**	**42**	P		**PKPdf**	**03 42 24.4**	**+0.1**
	baz=297								
TANN	**Tannenbergstha**	**126.28**	**331**	*e*PKPdf		**PKiKP**	**03 42 25.0**	**+0.3**
	baz=49,slow=1.9								
CLZ	**Clausthal**	**126.28**	**333**	*e*PKPdf		**PKiKP**	**03 42 25.3**	**+0.7**
	baz=49,slow=1.9								
G64A	**Maxfield**	**126.34**	**37**	P		**PKPdf**	**03 42 24.6**	**+0.2**
	baz=302								
FNA	**Florina**	**126.36**	**317**			**PKPdf**	**03 42 23.4**	**-1.2**
GUNZ	**Gunzen**	**126.37**	**331**	*e*PKPdf		**PKiKP**	**03 42 25.1**	**+0.3**
	baz=49,slow=1.9								
MOX	**Moxa**	**126.53**	**332**	*e*PKPdf		**PKiKP**	**03 42 25.4**	**+0.4**
	baz=49,slow=1.9								
MOX				*e*L		L	04 40 18.7		
	comp=Z,63nm,19.4s								
KHC	**Kasperske Hory**	**126.55**	**329**	*e*PKPDF		**PKiKP**	**03 42 25.1**	**-0.1**
KHC				*ex*		x	03 42 38.9		
KHC	**Kasperske Hory**	**126.55**	**329**			**PKPdf**	**03 42 23.9**	**-0.9**
GEC2	**GERESS Array S**	**126.67**	**329**	*e*PKPdf		**PKiKP**	**03 42 25.6**	**+0.1**
	baz=49,slow=1.9								
GERES	**GERESS Array B**	**126.67**	**329**	PKP		**PKPdf**	**03 42 25.3**	**+0.3**
	comp=Z,3.1nm,0.9s,baz=50,slow=2.3,SNR=20								
GTTG	**Gottingen**	**126.67**	**333**	*e*PKPdf		**PKiKP**	**03 42 26.1**	**+0.8**
	baz=49,slow=1.9								
MANZ	**Manzenberg**	**126.73**	**331**	*e*PKPdf		**PKiKP**	**03 42 25.8**	**+0.2**
	baz=49,slow=1.9								
WET	**Wettzell**	**126.90**	**329**	*e*PKPdf		**PKiKP**	**03 42 26.2**	**+0.3**
	baz=49,slow=1.9								
MOA	**Molln**	**126.98**	**327**	*e*PKiKP		**PKiKP**	**03 42 26.0**	**-0.1**
	comp=Z,7.7nm,1.1s								
SOKA	**Soboth**	**127.27**	**326**	*i* PKiKP		**PKiKP**	**03 42 26.7**	**-0.1**
	comp=Z,9.6nm,1.7s								
GRF	**Grafenberg Arr**	**127.36**	**331**	*e*PKPdf		**PKiKP**	**03 42 27.0**	**+0.3**
	baz=49,slow=1.9								
TNS	**Taunus Mts**	**128.29**	**333**	*e*PKPdf		**PKiKP**	**03 42 28.8**	**+0.1**
	baz=49,slow=1.9								
ABTA	**Abfaltersbach**	**128.60**	**327**	*i* PKiKP		**PKPdf**	**03 42 29.1**	**+0.3**
	comp=Z,9.6nm,1.7s								
WATA	**Walderalm**	**128.72**	**328**	*i* PKiKP		**PKiKP**	**03 42 29.8**	**+0.1**
	comp=Z,3.3nm,0.6s								
WTTA	**Wattenberg**	**128.74**	**328**	*i* PKiKP		**PKiKP**	**03 42 30.0**	**+0.2**
	comp=Z,11nm,1.1s								
MOTA	**Moosalm**	**128.96**	**329**	*i* PKiKP		**PKiKP**	**03 42 30.0**	**-0.2**
	comp=Z,5.0nm,0.8s								
SQTA	**Sankt Quirin**	**128.99**	**328**	*i* PKiKP		**PKiKP**	**03 42 30.3**	**+0.1**
	comp=Z,4.9nm,0.9s								
DAVA	**Damuels**	**129.63**	**329**	*i* PKiKP		**PKiKP**	**03 42 31.7**	**+0.1**
	comp=Z,8.4nm,1.4s								
CPUP	**Villa Florida**	**134.80**	**138**	PKP		**PKPdf**	**03 42 41.3**	**+0.3**
	comp=Z,1.6nm,0.9s,baz=304,slow=1.8,SNR=5.8								
BDFB	**Brasilia**	**148.40**	**135**	PKPbc		**PKPdf**	**03 43 07.1**	**+1.5**
	comp=Z,3.5nm,0.8s,baz=60,slow=3.6,SNR=4.7								
TORD	**Torodi Ar. Bea**	**152.61**	**286**	PKP		**PKPdf**	**03 43 11.8**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=2.8,slow=1.3,SNR=9.8								
TORD				PKPbc		**PKPbc**	**03 43 18.9**	**-0.2**
	comp=Z,9.2nm,0.9s,baz=32,slow=2.7,SNR=33								

*IDC **08** 03:46:49.0±1.0, 7°.13S×128°.23E, h0km, mb4.3/6, mb1 4.3/11, mb1mx3.9/43, mbtmp4.2/11, ML3.9/5, MS3.2/5, Ms1 3.2/5, ms1mx2.9/33, Error ellipse: s-maj=27.7km s-min=18.1km az=77.0*

*DJA **08** 03:46:51.7±1.9, 7°.5S×3°×12°.8E±°, h12km±15km, M4.4/12, mB4.7/1, mb4.6/8, MLv4.3/12, Mw(mB)4.0/1*

*NEIC **08** 03:46:53.4±1.5, 7°.28S±0°.06×128°.40E±0°.04, h48km±9km, mb4.7/6, Error ellipse: s-maj=10.0km s-min=2.3km az=148.0*

ISC 08 03:46:52.7±0.6, 7°.27S±0°.05×128°.39E±0°.05, h35km, n41, σ1s82/48, mb4.3/10, MS3.1/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
SAUI	**Saumlaki**	**2.97**	**104**	Pn	**Pn**	**03 47 37.8**	**+0.5**
SAUI				Sn	**Sn**	**03 48 12.4**	**+0.7**
BNDI	**Bandanaira**	**3.12**	**29**	P	**Pn**	**03 47 36.5**	**-2.9**
BNDI				S	**Sn**	**03 48 15.5**	**+0.1**
AAI	**Ambon**	**3.56**	**357**	P	**Pn**	**03 47 43.3**	**-2.3**
NLAI	**Namlea**	**4.21**	**342**	P	**Pn**	**03 47 53.5**	**-0.9**
SOEI	**Soe**	**4.77**	**239**	P	**Pn**	**03 48 04.0**	**+1.7**
SOEI	**Soe**	**4.77**	**239**		**Pn**	**03 48 02.9**	**+0.7**
SOEI				Sn	**Sn**	**03 48 57.5**	**+1.1**
BATI	**Baumata**	**5.51**	**238**	Pn	**Pn**	**03 48 13.3**	**+0.9**
	5.3nm,0.3s,baz=338,slow=1.2,SNR=11						
BATI				Sn	**Sn**	**03 49 14.8**	**+0.2**
	3.2nm,0.3s,baz=1.4,slow=22,SNR=2.1						
BATI	**Baumata**	**5.51**	**238**	P	**Pn**	**03 48 12.9**	**+0.5**
	0.2nm68nm,0.9s						
FAKI	**Fak Fak**	**5.78**	**42**	P	**Pn**	**03 48 16.8**	**+0.7**
	0.1nm35nm,0.7s						
FAKI	**Fak Fak**	**5.78**	**42**		**Pn**	**03 48 16.4**	**+0.3**
FAKI				Sn	**Sn**	**03 49 23.4**	**+2.2**
MMRI	**Maumere**	**6.25**	**257**	P	**Pn**	**03 48 22.3**	**-0.2**
	0.4nm119nm,0.9s						
EDFI	**Ende, Flores**	**6.80**	**257**	P	**Pn**	**03 48 31.3**	**+1.1**
	0.1nm33nm,0.9s						
SIJI	**Sorong**	**6.97**	**24**	Pn	**Pn**	**03 48 32.6**	**+0.2**
	2.2nm,0.3s,baz=237,slow=22,SNR=8.9						
KNRA	**Kununurra**	**8.36**	**178**		**Pn**	**03 48 52.7**	**+1.2**
KNRA				Sn	**Sn**	**03 50 25.3**	**+0.5**
BNSI	**Bone**	**8.72**	**289**	P	**Pn**	**03 48 54.2**	**-2.3**
KAPI	**Kappang**	**8.88**	**284**	Pn	**Pn**	**03 48 57.7**	**-0.9**
SPSI	**Sidrap Palu**	**9.19**	**290**	P	**Pn**	**03 49 01.7**	**-1.2**
FITZ	**Fitzroy Crossi**	**11.09**	**194**	Pn	**Pn**	**03 49 29.3**	**+0.3**
	0.5nm,0.3s,baz=6.8,slow=10,SNR=13						
FITZ				Sn	**Sn**	**03 51 27.6**	**-4.3**
	0.7nm,0.3s,baz=100,slow=21,SNR=4.1						
FITZ				LR	LR	03 53 56.2	
	comp=Z,185nm,18.2s,baz=30,slow=38						
FITZ	**Fitzroy Crossi**	**11.09**	**194**		**Pn**	**03 49 29.3**	**+0.3**
FITZ					**Sn**	**03 51 32.0**	**+0.1**
WRAB	**Tennant Creek**	**13.85**	**156**	Pn	**Pn**	**03 50 08.8**	**+2.1**
WRAB				Sn	**Sn**	**03 52 35.5**	**-3.9**
WRA	**Warramunga Arr**	**13.86**	**156**	Pn	**Pn**	**03 50 08.0**	**+1.2**
	0.8nm,0.3s,baz=328,slow=13,SNR=8.4						
WRA				Sn	**Sn**	**03 52 36.5**	**-3.0**
	2.3nm,0.3s,baz=333,slow=21,SNR=10						
COEN	**Coen**	**15.97**	**116**	Pn	**Pn**	**03 50 34.8**	**-0.1**
PSA00	**Pilbara Seismi**	**16.44**	**209**	Pn	**Pn**	**03 50 39.9**	**-1.0**
PSA00				IAmb	IAmb	03 50 57.5	
	comp=Z,9.5nm,0.9s						
ASAR	**Alice Springs**	**17.14**	**163**	P	**P**	**03 50 51.4**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=330,slow=9.4,SNR=13						
ASAR				S	**Sn**	**03 53 55.0**	**-4.4**
	comp=Z,0.4nm,0.3s,baz=321,slow=16,SNR=3.9						
PMG	**Port Moresby**	**18.69**	**98**	LR	LR	03 59 33.0	
	comp=Z,74nm,18.1s,baz=308,slow=40						
STKA	**Stephens Creek**	**27.41**	**155**	P	**P**	**03 52 39.1**	**+4.0**
	comp=Z,2.1nm,0.6s,baz=329,slow=9.9,SNR=4.9						
RPSI	**Rantau Prapat**	**31.03**	**288**	P	**P**	**03 53 07.2**	**-0.4**
PSI	**Prapat**	**31.06**	**288**	P	**P**	**03 53 07.2**	**-0.8**
	comp=Z,9.7nm,0.9s,baz=177,slow=1.0,SNR=9.0						
GSI	**Gunungsitoli**	**31.91**	**284**	P	**P**	**03 53 14.0**	**-1.2**
GSI				IAmb	IAmb	03 53 17.0	
	comp=Z,31nm,0.9s						
CMAR	**Chiang Mai Arr**	**38.70**	**312**	P	**P**	**03 54 13.4**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=134,slow=7.7,SNR=4.4						
DZM	**Mont Dzumac**	**39.50**	**116**	LR	LR	04 11 31.2	
	comp=Z,62nm,18.8s,baz=37,slow=37						
USRK	**Ussuriysk Ar.**	**51.33**	**3**	LR	LR	04 16 23.3	
	comp=Z,22nm,21.6s,baz=203,slow=35						
PETK	**Petropavlovsk-**	**65.08**	**19**	LR	LR	04 23 01.0	
	comp=Z,9.0nm,21.9s,baz=241,slow=33						
KSH	**Kashi**	**67.15**	**318**	P	**P**	**03 57 47.8**	**+4.5**
KSH				pP	pP	03 57 53.4	+0.1
KSH				sP	pwP	03 57 56.1	-0.6
KSH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,130nm,4.3s						
MKAR	**Makanchi Array**	**67.59**	**328**	P	**P**	**03 57 45.9**	**0.0**
	comp=Z,1.7nm,0.7s,baz=127,slow=7.7,SNR=15						
ZALV	**Zalesovo Beam**	**71.13**	**334**	P	**P**	**03 58 07.5**	**0.0**
	comp=Z,1.0nm,0.3s,baz=126,slow=5.7,SNR=5.8						
KURK	**Kurchatov**	**71.92**	**329**	P	**P**	**03 58 11.6**	**-0.8**
KURK				IAmb	IAmb	03 58 22.7	
	comp=Z,4.0nm,1.1s						
QSPA	**South Pole Qui**	**82.71**	**180**	P	**P**	**03 59 12.3**	**-0.5**
AKTO	**Aktyubinsk**	**83.31**	**323**	P	**P**	**03 59 16.8**	**+0.8**
	comp=Z,1.3nm,0.8s,baz=74,slow=4.6,SNR=2.1						
BARN	**Barnard Glacie**	**96.28**	**29**	P	**P**	**04 00 16.0**	**-1.6**
CTGM	**Chitina Glacie**	**96.43**	**29**	P	**P**	**04 00 17.1**	**-1.1**
CTGM				IAmb	IAmb	04 00 18.5	
	comp=Z,13nm,1.2s						

*LDG **08** 03:54:30.2±0.1, 50°.17N×19°.15E, h1km, Ml3.7/13, Error ellipse: s-maj=5.2km s-min=2.4km az=6.0, Suspected Mining induced.*

*IPEC **08** 03:54:30.7±0.2, 50°.18N×19°.07E, h2km±1km, MS3.0/2, Error ellipse: s-maj=2.5km s-min=1.1km az=167.0*

*IDC **08** 03:54:31.2±0.7, 50°.11N×19°.04E, h0km, mb3.8/4, mb1 3.8/10, mb1mx3.6/46, mbtmp3.8/10, ML3.5/7, Error ellipse: s-maj=14.4km s-min=6.7km az=139.0*

*VIE **08** 03:54:32.7, 50°.16N×18°.98E, h6km, mb3.7/3, ML3.5/5 11 km S of Katowice Suspected Mining induced.*

*BGR **08** 03:54:32.0±0.2, 50°.15N×19°.02E, h1km, ML3.6/34, Error ellipse: s-maj=4.4km s-min=2.2km az=178.0*

ISC 08 03:54:30.1±0.6, 50°.18N±0°.02×18°.94E±0°.02, h0km, n120, σ2s22/194, mb3.8/4, 8C-7D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
OJC	**Ojcow**	**0.55**	**86**	*e*Pg	**Pg**	**03 54 39.8**	**-0.9**
OJC				*e*Sg	**Sg**	**03 54 46.3**	**-1.6**
OKC	**Ostrava-Krasne**	**0.62**	**236**	*e*Pg	**Pb**	**03 54 44.9**	**+1.2**
OKC	**Ostrava-Krasne**	**0.62**	**236**	*e*PG	**Pb**	**03 54 44.5**	**+0.8**
OKC				*e*SG	**Sb**	**03 54 52.4**	**-0.5**
	comp=Z,404nm,0.9s						
MORC	**Moravsky Berou**	**0.99**	**246**	*e*PG	**Pb**	**03 54 51.1**	**+0.9**
MORC				*e*SG	**Sb**	**03 55 04.0**	**+0.3**
MORC	**Moravsky Berou**	**0.99**	**246**	*e*Pg	**Pn**	**03 54 51.3**	**0.0**
MORC				*e*Sg	**Sn**	**03 55 06.1**	**+0.1**
MORC	**Moravsky Berou**	**0.99**	**246**	||P	**Pn**	**03 54 51.2**	**0.0**
MORC				||S	**Sn**	**03 55 06.1**	**+0.1**
MORC	**Moravsky Berou**	**0.99**	**246**	*e*Pg	**Pb**	**03 54 51.0**	**+0.9**
	baz=67						
MORC				*e*Sg	**Sb**	**03 55 04.0**	**+0.3**
	175nm,0.3s,baz=67						
LANS	**Liptovska Anna**	**1.09**	**161**	*e*PG	**Pb**	**03 54 51.8**	**0.0**
LANS				*e*SG	**Sb**	**03 55 06.6**	**0.0**
LANS				*e*LG	Lg	03 55 14.1	
NIE	**Niedzica**	**1.17**	**130**	*e*Pg	**Pg**	**03 54 51.9**	**-0.5**
NIE				*e*Sg	**Sb**	**03 55 07.7**	**-1.2**
KRLC	**Kraliky**	**1.39**	**266**	*e*PG	**Pb**	**03 54 57.5**	**+0.5**
KRLC				*e*SG	**Sn**	**03 55 16.8**	**+0.9**
	comp=Z,230nm,0.6s						
JAVC	**Velka Javorina**	**1.56**	**212**	*e*PN	**Pg**	**03 55 00.5**	**+0.5**
JAVC	**Velka Javorina**	**1.56**	**212**	*e*Pn	**Pg**	**03 55 00.7**	**+0.7**
JAVC				*e*Sn	**Sg**	**03 55 21.1**	**+0.9**
JAVC	**Velka Javorina**	**1.56**	**212**	*e*Pn	**Pg**	**03 55 00.4**	**+0.5**
	baz=34						
STHS	**Stebnicka Huta**	**1.68**	**116**	*e*PN	**Pn**	**03 55 00.9**	**+0.2**
STHS				*e*SN	**Sg**	**03 55 23.1**	**-0.9**
STHS				*e*LG	Lg	03 55 28.0	
DPC	**Dobruska-Polom**	**1.69**	**277**	*e*Pn	**Pb**	**03 55 02.3**	**+0.3**
DPC				*e*Sg	**Sg**	**03 55 26.3**	**+2.0**
DPC	**Dobruska-Polom**	**1.69**	**277**	*e*PG	**Pb**	**03 55 02.2**	**+0.2**
DPC				*e*SG	**Sg**	**03 55 26.0**	**+1.7**
	comp=Z,205nm,0.6s						
VYHS	**Vyhne**	**1.69**	**182**	*e*PN	**Pn**	**03 55 01.2**	**+0.3**
VYHS				*e*SN	**Sb**	**03 55 23.9**	**0.0**
VRAC	**Vranov**	**1.75**	**241**	Pn	**Pn**	**03 55 02.8**	**+1.1**
	29nm,0.3s,baz=59,slow=14,SNR=202						
VRAC				Pg	**Pg**	**03 55 04.5**	**+0.9**
	29nm,0.3s,baz=62,slow=15,SNR=136						
VRAC				Lg	Lg	03 55 28.8	
	9.7nm,0.3s,baz=304,slow=23,SNR=5.5						
VRAC	**Vranov**	**1.75**	**241**	*e*PN	**Pb**	**03 55 03.0**	**-0.1**
VRAC				*e*SG	**Sg**	**03 55 27.7**	**+1.3**
VRAC	**Vranov**	**1.75**	**241**	*e*Pn	**Pn**	**03 55 02.9**	**+1.1**
VRAC				*e*Pg	**Pg**	**03 55 04.6**	**+0.9**
VRAC				*e*Sg	**Sg**	**03 55 28.9**	**+2.5**
VRAC	**Vranov**	**1.75**	**241**	||P	**Pb**	**03 55 03.2**	**0.0**
VRAC				||S	**Sg**	**03 55 28.2**	**+1.8**
VRAC	**Vranov**	**1.75**	**241**	*e*Pn	**Pn**	**03 55 02.9**	**+1.1**
	baz=61						
VRAC				*e*Sg	**Sg**	**03 55 27.7**	**+1.3**
	baz=61						
OSTC	**Ostas**	**1.78**	**283**	*e*PG	**Pn**	**03 55 03.0**	**+0.8**
OSTC				*e*SG	**Sg**	**03 55 29.6**	**+2.3**
	comp=Z,87nm,0.6s						
KSP	**Ksiaz**	**1.81**	**292**	*e*Pn	**Pn**	**03 55 03.5**	**+0.9**
KSP				*e*Pg	**Pg**	**03 55 06.7**	**+1.9**
KSP				*e*Sg	**Sg**	**03 55 31.8**	**+3.5**
CHVC	**Chvalec**	**1.89**	**284**	*e*PG	**Pn**	**03 55 04.8**	**+1.2**
CHVC				*e*SG	**Sg**	**03 55 32.8**	**+2.0**
	comp=Z,147nm,0.8s						
UPC	**Upice**	**1.90**	**281**	*e*PG	**Pb**	**03 55 05.2**	**-0.5**
UPC				*e*SG	**Sg**	**03 55 33.5**	**+2.3**
	comp=Z,78nm,0.6s						
SMOL	**Smolenice**	**1.94**	**211**	*e*PN	**Pn**	**03 55 05.4**	**+1.1**
SMOL				*e*		03 55 13.0	
SMOL				*e*LG	Lg	03 55 39.1	
KECS	**Kecovo**	**1.98**	**149**	*e*PN	**Pn**	**03 55 04.3**	**-0.5**
KECS				*e*SN	**Sn**	**03 55 29.7**	**-0.6**
KECS				*e*LG	Lg	03 55 36.7	
KRUC	**Moravsky**	**2.00**	**237**	*e*PN	**Pn**	**03 55 06.3**	**+1.2**
KRUC				*e*SG	**Sg**	**03 55 35.0**	**+0.8**
KRUC	**Moravsky**	**2.00**	**237**	*e*Pn	**Pn**	**03 55 05.8**	**+0.7**
KRUC				*e*Pg	**Pg**	**03 55 10.1**	**+1.8**
KRUC	**Moravsky**	**2.00**	**237**	*e*Pn	**Pn**	**03 55 06.2**	**+1.2**
	baz=56						
KRUC				*e*Sg	**Sg**	**03 55 35.0**	**+0.8**
	88nm,0.6s,baz=56						
BEL	**Belsk**	**2.03**	**35**	*e*Pn	**Pn**	**03 55 06.1**	**+0.6**
BEL				*e*Pg	**Pg**	**03 55 12.5**	**+3.6**
BEL				*e*Sg	**Sg**	**03 55 34.1**	**-1.1**
MODS	**Modra-Piesok**	**2.11**	**212**	*e*PN	**Pn**	**03 55 06.8**	**+0.1**
ZST	**Bratislava**	**2.33**	**212**	*e*PN	**Pn**	**03 55 09.6**	**0.0**
ZST				*e*		03 55 18.8	
PSZ	**Piszkesteto**	**2.35**	**164**	*e*Pn	**Pn**	**03 55 09.5**	**-0.6**
PSZ	**Piszkesteto**	**2.35**	**164**	||P	**Pn**	**03 55 09.4**	**-0.6**
SRO	**Srobarova**	**2.41**	**190**	*e*SG	**Sg**	**03 55 48.9**	**+1.5**
SRO				*e*LG	Lg	03 55 58.6	
TREC	**Trest**	**2.41**	**250**	*e*Pn	**Pn**	**03 55 12.2**	**+1.4**
TREC	**Trest**	**2.41**	**250**	*e*PN	**Pn**	**03 55 12.0**	**+1.2**
TREC				*e*SG	**Sg**	**03 55 49.0**	**+1.6**
	comp=Z,101nm,0.8s						
KOLS	**Kolonicke sedl**	**2.51**	**119**	*e*PN	**Pn**	**03 55 11.1**	**-1.0**
GOPC	**GO Pecny, Ondr**	**2.69**	**266**	*e*PN	**Pn**	**03 55 15.3**	**

WTTA				*i* Sn		**Sn**	**03 57 07.2**	**+6.2**
	comp=Z,8.6nm,0.7s								
WTTA				Sg		**Sg**	**03 57 35.2**	**+3.9**
	comp=Z,32nm,0.9s								
CLZ	**Clausthal**	**5.66**	**290**	*e*Pn		**Pn**	**03 55 57.5**	**+2.1**
CLZ				*e*Sg		**Sg**	**03 57 35.6**	**+3.9**
BIZ	**Bicaz**	**5.76**	**122**	⇑P		**Pn**	**03 55 56.9**	**+0.2**
RETA	**Reutte**	**6.03**	**247**	Pn		**Pn**	**03 56 03.1**	**+2.5**
	comp=Z,3.0nm,0.4s,SNR=5.4								
RETA				*i* Sg		**Sg**	**03 57 52.0**	**+8.2**
	comp=Z,33nm,0.7s								
UBR	**Ueberruh**	**6.33**	**250**	*e*Pn		**Pn**	**03 56 06.7**	**+2.0**
UBR				*e*Sg		**Sg**	**03 57 53.3**	**-0.1**
AKASG	**Malin Array Be**	**6.59**	**82**	Pn		**Pn**	**03 56 06.4**	**-1.8**
	comp=Z,1.1nm,0.3s,baz=265,slow=12,SNR=4.6								
AKASG				Lg		Lg	03 57 51.8		
	comp=Z,3.9nm,0.3s,baz=264,slow=25,SNR=6.3								
MLR	**Muntele Rosu**	**6.65**	**132**	⇑P		**Pn**	**03 56 08.3**	**-0.8**
DAVA	**Damuels**	**6.65**	**248**	*i* Pn		**Pn**	**03 56 10.8**	**+1.6**
NACGM	**Naroch**	**6.72**	**42**	*e*P		**Pg**	**03 56 36.0**	**-2.8**
NACGM				*e*S		**Sg**	**03 58 11.0**	**+5.1**
TNS	**Taunus Mts**	**6.74**	**274**	*e*Pn		**Pn**	**03 56 13.5**	**+3.3**
TNS				*e*Sg		**Sg**	**03 58 05.8**	**-0.5**
DAVOX	**Davos/Dischmat**	**6.92**	**244**	Pn		**Pn**	**03 56 15.7**	**+2.9**
	comp=Z,2.5nm,0.3s,baz=78,slow=8.9,SNR=28								
CDF	**Champ du Feu**	**7.83**	**261**	*e*Pn		**Pn**	**03 56 24.9**	**-0.3**
CDF	**Champ du Feu**	**7.83**	**261**	*e*Pg		**Pg**	**03 56 58.3**	**-1.7**
CDF				*e*Sg		**Sg**	**03 58 39.3**	**-2.0**
	comp=Z,21nm,0.8s								
HINF	**Hinteralfeld**	**8.29**	**258**	*e*Pn		**Pn**	**03 56 31.2**	**-0.4**
HINF	**Hinteralfeld**	**8.29**	**258**	*e*Pg		**Pg**	**03 57 06.9**	**-2.0**
HINF				*e*Sn		**Sn**	**03 58 00.0**	**-5.9**
HINF				*e*Sg		**Sg**	**03 58 54.2**	**-2.0**
	comp=Z,6.6nm,0.5s								
HAU	**Haudompre**	**8.55**	**260**	*e*Pn		**Pn**	**03 56 34.2**	**-0.8**
HAU	**Haudompre**	**8.55**	**260**	*e*Pg		**Pg**	**03 57 11.4**	**-2.3**
HAU				*e*Sg		**Sg**	**03 59 01.6**	**-2.7**
	comp=Z,10nm,0.6s								
PAGF	**Fort de Pagny**	**8.78**	**264**	*e*Pg		**Pg**	**03 57 15.9**	**-2.2**
PAGF				*e*Sg		**Sg**	**03 59 10.0**	**-1.7**
	comp=Z,9.7nm,0.7s								
GIVF	**Givet**	**9.07**	**275**	*e*Pn		**Pn**	**03 56 41.3**	**-0.8**
GIVF	**Givet**	**9.07**	**275**	*e*Pg		Pn	03 57 20.3	+38
GIVF				*e*Sg		Sn	03 59 18.5	+54
	comp=Z,2.0nm,0.3s								
MEZF	**Maizieres J'vi**	**9.22**	**265**	*e*Pg		Pn	03 57 24.9	+41
MEZF				*e*Sg		Sn	03 59 22.5	+54
	comp=Z,13nm,0.8s								
CABF	**La Chapelle**	**9.27**	**252**	*e*Pn		**Pn**	**03 56 44.4**	**-0.5**
CABF	**La Chapelle**	**9.27**	**252**	*e*Pg		Pn	03 57 24.9	+40
CABF				*e*Sg		Sn	03 59 24.6	+55
	comp=Z,115nm,1.5s								
SFTF	**Sexfontaines**	**9.32**	**263**	*e*Pn		**Pn**	**03 56 44.0**	**-1.6**
SFTF	**Sexfontaines**	**9.32**	**263**	*e*Pg		Pn	03 57 25.8	+40
SFTF				*e*Sn		**Sn**	**03 58 25.9**	**-5.1**
SFTF				*e*Sg			03 59 25.6		
	comp=Z,6.7nm,0.6s								
LPG	**La Plagne**	**9.44**	**245**	*e*P		**Pn**	**03 56 51.1**	**+3.6**
LPG				*e*Sn		**Sn**	**03 58 27.7**	**-6.7**
LPG				*e*Sg			03 59 29.5		
	comp=Z,19nm,1.2s								
LPL	**La Plagne**	**9.44**	**245**	*e*P		**Pn**	**03 56 50.9**	**+3.5**
LPL				*e*Sg		Sn	03 59 29.3	+55
	comp=Z,0.8nm,0.3s								
BAIF	**Baives**	**9.47**	**275**	*e*Pn		**Pn**	**03 56 50.0**	**+2.4**
BAIF				*e*Sg		Sn	03 59 31.6	+57
	comp=Z,1.0nm,0.4s								
MBDF	**Montbardon**	**9.88**	**241**	*e*P		Pn	03 56 58.4	+5.0
ORIF	**Oris-en-Rattie**	**10.27**	**244**	*e*P		**Pn**	**03 57 02.4**	**+3.6**
HFS	**Hagfors**	**10.41**	**345**	Pn		**Pn**	**03 56 58.2**	**-2.2**
	comp=Z,0.4nm,0.3s,baz=164,slow=12,SNR=11								
SMF	**Signal de Mont**	**10.64**	**256**	*e*Sg			04 00 07.5		
	comp=Z,10nm,1.0s								
SSF	**Saint Saulge**	**10.68**	**259**	*e*Pn		**Pn**	**03 57 03.6**	**-0.7**
SSF				*e*Sn		Sn	03 58 55.2	-9.3
SSF				*e*Sg			04 00 08.4		
	comp=Z,3.7nm,0.6s								
NOA	**NORSAR Array B**	**11.71**	**341**	Pn		**Pn**	**03 57 15.0**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=151,slow=12,SNR=16								
FINES	**FINESS Array B**	**11.97**	**17**	Pn		**Pn**	**03 57 18.1**	**-3.6**
	comp=Z,1.2nm,0.3s,baz=190,slow=12,SNR=37								
FINES				Sn		Sn	03 59 24.5	-11	
	comp=Z,0.6nm,0.3s,baz=199,slow=20,SNR=4.4								
ARCES	**ARCESS Array B**	**19.67**	**7**	Pn		**P**	**03 58 57.1**	**-3.1**
	comp=Z,0.8nm,0.3s,baz=192,slow=12,SNR=25								
AKTO	**Aktyubinsk**	**24.77**	**74**	P		**P**	**03 59 53.0**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=282,slow=11,SNR=5.7								
TORD	**Torodi Ar. Bea**	**39.54**	**207**	P		**P**	**04 02 03.6**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=11,slow=8.7,SNR=12								
SONM	**Songino Array**	**54.18**	**56**	P		**P**	**04 03 58.5**	**+1.4**
	comp=Z,1.6nm,0.8s,baz=297,slow=9.8,SNR=5.0								
YKA	**Yellowknife Ar**	**61.78**	**338**	P		**P**	**04 04 50.7**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=28,slow=6.4,SNR=6.4								

GCG ***08*** *04:12:13.8±1.3, 13.°36N×92.°12W, h50km±19km, MD4.1*
UCR ***08*** *04:12:14.8±1.1, 13.°59N×92.°02W, h26km±51km, ML3.5*
SNET ***08*** *04:12:14.7±0.9, 13.°58N×92.°00W, h24km±46km, ML3.6*
IDC ***08*** *04:12:17.0±6.4, 13.°05N×91.°17W, h62km±41km, mb3.4/5, mb1 3.8/8, mb1mx3.5/33, mbtmp3.7/8, ML3.9/3, MS1.9/1, Ms1 1.9/1, ms1mx1.9/16, Error ellipse: s-maj=56.9km s-min=37.4km az=147.0*

ISC 08 04:12:19.7±1.2, 13°58N±0.°09×91°36W±0.°06, h37km, n32, σ1°87/37, mb3.7/5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ERG	**Entre ros, C**	**0.90**	**18**	*e*P		**Pn**	**04 12 34.6**	**-1.2**
RTAL	**Retalhuleu**	**0.95**	**10**	*e*S		**Sn**	**04 12 46.1**	**-2.8**
STG3	**Santiaguito 3,**	**1.16**	**14**	*e*P		**Pn**	**04 12 37.7**	**-1.8**
FUG	**Fuego 3**	**1.31**	**49**	*e*P		**Pn**	**04 12 40.2**	**-1.4**
PCG	**Pacaya**	**1.46**	**56**	*e*P		**Pn**	**04 12 43.4**	**-0.3**
IXG	**Ixpaco**	**1.50**	**67**	*e*P		**Pn**	**04 12 41.7**	**-2.5**
IXG	**Ixpaco**	**1.50**	**67**	*e*P		**Pn**	**04 12 42.5**	**-1.7**
IXG	**Ixpaco**	**1.50**	**67**	*e*P		**Pn**	**04 12 41.7**	**-2.5**
NBG	**Las Nubes**	**1.78**	**56**	*e*P		**Pn**	**04 12 48.6**	**+0.5**
APG	**El Apazote**	**1.96**	**44**	P		**Pn**	**04 12 49.6**	**-0.9**
	34nm,0.3s,baz=204,slow=5.3,SNR=273								
APG				LR		LR	04 13 08.0		
	comp=Z,30nm,20.4s,baz=198,slow=25								
APG				S		**Sn**	**04 13 14.9**	**+0.8**
	32nm,0.3s,baz=345,slow=16,SNR=10								
CEVE	**Cerro Verde**	**2.19**	**83**	*e*P		**Pn**	**04 12 52.0**	**-1.7**
CEVE				*e*S		**Sn**	**04 13 21.9**	**+2.2**
CEVE				IAML			04 13 27.2		
	comp=Z,360nm,0.6s								
CEVE	**Cerro Verde**	**2.19**	**83**	*e*P		**Pn**	**04 12 52.0**	**-1.7**
CEVE				*e*S		**Sn**	**04 13 21.9**	**+2.2**
CEVE				IAML			04 13 27.2		
	comp=Z,360nm,0.6s								
SBLS	**San Blas**	**2.19**	**83**	*e*P		**Pn**	**04 12 51.8**	**-2.0**
SBLS	**San Blas**	**2.19**	**83**	*e*P		**Pn**	**04 12 51.8**	**-2.0**
SNJE	**San Jose**	**2.21**	**82**	*e*S		**Sn**	**04 13 21.9**	**+1.7**
SNJE	**San Jose**	**2.21**	**82**	*e*S		**Sn**	**04 13 21.9**	**+1.7**
UNIC	**Universidad Ca**	**2.28**	**80**	*e*S		**Sn**	**04 13 22.4**	**+0.6**
UNIC	**Universidad Ca**	**2.28**	**80**	*e*S		**Sn**	**04 13 22.4**	**+0.6**
BOQS	**Boqueron**	**2.52**	**86**	*e*P		**Pn**	**04 12 57.1**	**-1.0**
BOQS	**Boqueron**	**2.52**	**86**	*e*P		**Pn**	**04 12 57.1**	**-1.0**
MTO3	**Montecristo**	**2.56**	**71**	*e*P		**Pn**	**04 12 57.5**	**-1.3**
MTO3	**Montecristo**	**2.56**	**71**	*e*P		**Pn**	**04 12 57.5**	**-1.3**
MRL	**Marmol**	**2.59**	**54**	*e*P		**Pn**	**04 12 59.2**	**0.0**
MRL				*e*S		**Sn**	**04 13 33.7**	**+4.2**
ESQI	**Esquipulas**	**2.63**	**68**	*e*P		**Pn**	**04 12 58.4**	**-1.4**
CMIG	**Matias Romero**	**4.55**	**321**	P		**Pn**	**04 13 25.2**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=136,slow=8.6,SNR=22								
CMIG				S		**Sn**	**04 14 19.2**	**+1.6**
	comp=Z,3.1nm,0.3s,baz=93,slow=11,SNR=5.7								
TEIG	**Tepich**	**7.45**	**27**	P		**Pn**	**04 14 05.8**	**0.0**
	comp=Z,4.2nm,0.3s,SNR=8.3								
TXAR	**Lajitas Array**	**19.12**	**327**	P		**Pn**	**04 16 42.1**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=156,slow=12,SNR=9.5								
PDAR	**Pinedale Array**	**32.86**	**336**	P		**P**	**04 18 52.3**	**+2.0**
	comp=Z,0.4nm,0.7s,baz=119,slow=7.3,SNR=1.9								
NVAR	**Mina Array Bea**	**34.08**	**321**	P		**P**	**04 19 04.0**	**+3.1**
	comp=Z,0.8nm,0.7s,baz=123,slow=6.6,SNR=8.3								
SCHQ	**Schefferville**	**45.57**	**20**	P		**P**	**04 20 32.4**	**-3.4**
	comp=Z,1.6nm,0.6s,baz=212,slow=7.2,SNR=6.6								
YKA	**Yellowknife Ar**	**51.47**	**347**	P		**P**	**04 21 19.9**	**-1.2**
	comp=Z,0.2nm,0.6s,baz=148,slow=7.6,SNR=6.0								
ILAR	**Eielson Array**	**63.28**	**337**	P		**P**	**04 22 44.5**	**+0.1**
	comp=Z,0.7nm,1.0s,baz=128,slow=3.1,SNR=4.9								

IDC ***08*** *04:30:17.5±0.7, 50.°15S×128.°15E, h0km, mb4.4/8, mb1 4.6/8, mb1mx4.3/35, mbtmp4.5/8, MS4.0/20, Ms1 4.0/20, ms1mx3.9/32, Error ellipse: s-maj=40.7km s-min=15.2km az=100.0*
NEIC ***08*** *04:30:19.0±1.3, 50.°16S±0.°09×128.°3E±0.°2, h15km±2km, mb4.7/17, Error ellipse: s-maj=23.3km s-min=11.9km az=108.0*

ISC 08 04:30:18.3±0.5, 50°15S±0.°08×128°4E±0.°1, h10km, n72, σ1°10/45, mb4.6/12, MS4.1/23, 2C, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TAU	**Tasmania Unive**	**14.85**	**68**	Pn		**Pn**	**04 33 47.0**	**-1.1**
TOO	**Toolangi**	**17.53**	**51**			**P**	**04 34 24.1**	**+0.3**
TOO				IAmb		IAmb	04 34 31.2	
	comp=Z,63nm,1.4s							
BBOO	**Buckleboo**	**18.22**	**21**	Pn		**Pn**	**04 34 28.3**	**-2.9**
BBOO				IAmb		IAmb	04 34 36.4	
	comp=Z,72nm,1.2s							
H01W1	**Cape Leeuwin H**	**18.48**	**320**	T		T	04 53 17.5	
	baz=149,slow=75,SNR=18							
H01W2	**Cape Leeuwin H**	**18.48**	**320**	T		T	04 53 09.4	
	baz=149,slow=75,SNR=20							
H01W3	**Cape Leeuwin H**	**18.49**	**320**	T		T	04 53 10.8	
	baz=149,slow=75,SNR=21							
CASY	**Casey**	**18.60**	**203**	P		**P**	**04 34 31.6**	**-3.7**
NWAO	**Narrogin (SRO)**	**19.10**	**330**	LR		LR	04 40 05.0	
	comp=Z,416nm,21.0s,baz=138,slow=31							
FORT	**Forrest**	**19.35**	**359**	P		**P**	**04 34 43.1**	**-0.7**
FORT				IAmb		IAmb	04 34 53.6	
	comp=Z,64nm,0.9s							
STKA	**Stephens Creek**	**20.72**	**33**	P		Pn	04 35 01.7	+0.6
	comp=Z,18nm,0.8s,baz=200,slow=10,SNR=26							
STKA				LR		LR	04 41 55.2	
	comp=Z,935nm,20.1s,baz=204,slow=34							
STKA	**Stephens Creek**	**20.72**	**33**	P		**P**	**04 34 59.6**	**+0.8**
ASAR	**Alice Springs**	**26.77**	**11**	P		**P**	**04 35 58.9**	**+0.6**
	comp=Z,9.4nm,0.7s,baz=185,slow=8.9,SNR=68							
ASAR				LR		LR	04 45 32.7	
	comp=Z,528nm,21.2s,baz=184,slow=34							
AS31	**Alice Springs**	**26.77**	**11**	P		**P**	**04 35 58.3**	**0.0**
RPZ	**Rata Peaks**	**29.48**	**94**	LR		LR	04 46 07.9	
	comp=Z,243nm,19.3s,baz=227,slow=32							
VNDA	**Vanda**	**30.23**	**166**	P		**P**	**04 36 29.8**	**+1.2**
	comp=Z,3.7nm,0.8s,baz=323,slow=8.5,SNR=21							
VNDA				LR		LR	04 47 36.9	
	comp=Z,584nm,19.9s,baz=324,slow=34							
VNDA	**Vanda**	**30.23**	**166**	P		**P**	**04 36 28.0**	**-0.6**
VNDA				IAmb		IAmb	04 36 36.6	
	comp=Z,6.6nm,0.8s							
WRA	**Warramunga Arr**	**30.50**	**11**	P		**P**	**04 36 31.6**	**+0.1**
	comp=Z,3.7nm,0.8s,baz=193,slow=8.0,SNR=7.4							
WRA				LR		LR	04 47 48.7	
	comp=Z,668nm,20.9s,baz=190,slow=34							
WB2	**Warramunga Arr**	**30.50**	**11**	P		**P**	**04 36 31.9**	**+0.4**
WB2				IAmb		IAmb	04 36 36.1	
	comp=Z,24nm,1.5s							
WR0	**Warramunga Arr**	**30.51**	**11**	P		**P**	**04 36 32.1**	**+0.6**
WR0				IAmb		IAmb	04 36 32.6	
	comp=Z,7.8nm,0.9s							
WRAB	**Tennant Creek**	**30.51**	**11**	P		**P**	**04 36 32.1**	**+0.6**
WRAB				IAmb		IAmb	04 36 35.0	
	comp=Z,24nm,1.4s							
WB0	**Warramunga Arr**	**30.68**	**11**	P		**P**	**04 36 33.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**32.05**	**355**	LR		LR	04 49 07.7	
	comp=Z,390nm,18.1s,baz=180,slow=35							
FITZ	**Fitzroy Crossi**	**32.05**	**355**	P		**P**	**04 36 44.8**	**-0.3**
FITZ				IAmb		IAmb	04 36 46.6	
	comp=Z,7.7nm,1.0s							
MAW	**Mawson**	**35.99**	**216**	P		**P**	**04 37 18.2**	**-0.7**
	comp=Z,3.4nm,0.7s,baz=121,slow=8.8,SNR=6.1							
MAW				LR		LR	04 49 12.7	
	comp=Z,285nm,19.6s,baz=68,slow=32							
MAW	**Mawson**	**35.99**	**216**	P		**P**	**04 37 18.1**	**-0.8**
QSPA	**South Pole Qui**	**39.97**	**180**	P		**P**	**04 37 53.5**	**+0.8**
	comp=Z,9.9nm,1.1s,baz=350,slow=4.5,SNR=12							
QSPA	**South Pole Qui**	**39.97**	**180**	P		**P**	**04 37 53.5**	**+0.8**
QSPA				IAmb		IAmb	04 37 54.6	
	comp=Z,18nm,1.1s							
BATI	**Baumata**	**40.01**	**353**	LR		LR	04 54 41.8	
	comp=Z,494nm,18.7s,baz=211,slow=37							
SOEI	**Soe**	**40.41**	**354**	P		**P**	**04 37 55.8**	**-1.0**
DZM	**Mont Dzumac**	**40.87**	**61**	*e*LR		LR	04 49 29.4	
	comp=Z,267nm,21.5s							
PMG	**Port Moresby**	**43.48**	**27**	LR		LR	04 55 48.1	
	comp=Z,538nm,20.0s,baz=216,slow=35							
SYO	**Syowa Base**	**44.05**	**211**	*e*P		P	04 38 19.6	-6.0
SYO	**Syowa Base**	**44.05**	**211**	⇑*i*P		**P**	**04 38 24.6**	**-1.0**
LEM	**Lembang**	**46.56**	**331**	LR		LR	04 58 31.8	
	comp=Z,67nm,19.6s,baz=73,slow=36							
HNR	**Honiara**	**48.25**	**44**	LR		LR	04 58 15.6	
	comp=Z,227nm,19.1s,baz=167,slow=35							
JAY	**Jayapura**	**48.59**	**16**	LR		LR	04 59 13.8	
	comp=Z,319nm,21.9s,baz=184,slow=36							
KRVT	**Keravat (AS076**	**49.83**	**31**	LR		LR	04 58 37.4	
	comp=Z,117nm,21.3s,baz=201,slow=34							
SNAA	**Sanae**	**53.70**	**197**	P		**P**	**04 39 40.1**	**+0.3**
SNAA	**Sanae**	**53.70**	**197**	P		**P**	**04 39 40.1**	**+0.3**
	comp=Z,6.8nm,0.6s,baz=169,slow=11,SNR=92							
SNAA	**Sanae**	**53.70**	**197**	P		**P**	**04 39 40.2**	**+0.4**
VNA2	**Neumayer--Watz**	**55.16**	**196**	P		**P**	**04 39 50.9**	**+0.6**
VNA3	**Neumayer Olymp**	**55.29**	**195**	P		**P**	**04 39 51.3**	**0.0**
VNA1	**Neumayer--Stat**	**55.55**	**196**	P		**P**	**04 39 53.8**	**+0.7**
H08S2	**Diego Garcia H**	**62.72**	**292**	T		T	05 48 23.6	
	baz=144,slow=74,SNR=4.2							
H08S1	**Diego Carcia H**	**62.73**	**292**	T		T	05 48 24.6	
	baz=144							
H08S3	**Diego Garcia H**	**62.74**	**292**	T		T	05 48 25.6	
	baz=144,slow=74,SNR=4.0							
TBI	**Tubuai**	**67.48**	**100**	*e*LR		LR	05 01 44.0	
	comp=Z,86nm,32.5s							
PPT2	**Papeete2**	**71.61**	**96**	*e*LR		LR	05 03 23.9	
	comp=Z,80nm,24.2s							
PPT	**Papeete**	**71.62**	**96**	LR		LR	05 05 27.6	
	comp=Z,54nm,21.8s,baz=124,slow=29							
CMAR	**Chiang Mai Arr**	**73.11**	**331**	P		**P**	**04 41 49.8**	**+1.2**
	comp=Z,0.8nm,0.4s,baz=186,slow=6.1,SNR=8.3							
CMAR				LR		LR	05 15 33.1	
	comp=Z,22nm,18.5s,baz=174,slow=37							
JHJ2	**Mitsune**	**83.50**	**10**	P		**P**	**04 42 46.5**	**+0.7**
TAOE	**Nuku Hiva Isla**	**84.18**	**97**	*e*LR		LR	05 09 21.7	
	comp=Z,120nm,26.2s							
MJAR	**Matsushiro Arr**	**86.75**	**8**	LR		LR	05 19 52.1	
	comp=Z,45nm,20.8s,baz=215,slow=34							
KSRS	**Korea Array**	**87.23**	**360**	LR		LR	05 23 40.2	
	comp=Z,26nm,20.8s,baz=158,slow=37							
PLCA	**Paso Flores**	**87.98**	**166**	LR		LR	05 20 46.8	
	comp=Z,79nm,18.1s,baz=176,slow=34							
GTA	**Gaotai**	**92.67**	**338**	*e*P		P	04 43 35.9	+5.9
GTA				pP		pwP	04 43 39.3	+2.6
GTA				sP		sP	04 43 41.9	+8.9
GTA				pmax		pmax		
	comp=Z,3.0nm,1.0s							
KLR	**Kul'dur**	**99.04**	**2**	LR		LR	05 27 08.7	
	comp=Z,15nm,20.4s,baz=188,slow=34							
KSH	**Kashi**	**100.48**	**321**	P		**Pdif**	**04 44 06.7**	**+1.3**
KSH				pP		pwP	04 44 13.5	+1.3
KSH				pmax		pmax		
	comp=Z,44nm,1.8s							
KSH				pmax		pmax		
	comp=Z,65nm,3.9s							
TORD	**Torodi Ar. Bea**	**123.23**	**249**	PKP		**PKPdf**	**04 49 15.4**	**0.0**
	comp=Z,0.5nm,0.8s,baz=92,slow=2.1,SNR=2.4							
NOA	**NORSAR Array B**	**144.29**	**312**	PKP		**PKPdf**	**04 49 53.2**	**0.0**
	comp=Z,0.8nm,1.1s,baz=97,slow=4.2,SNR=2.6							
YKA	**Yellowknife Ar**	**144.43**	**45**	PKP		**PKPdf**	**04 49 53.5**	**+0.2**
	comp=Z,2.3nm,0.9s,baz=256,slow=3.4,SNR=21							
TUL1	**Leonard**	**145.21**	**97**			**PKPdf**	**04 49 56.0**	**+0.3**
ESDC	**Sonseca Array**	**145.25**	**271**	PKPbc		**PKPbc**	**04 49 55.0**	**-0.4**
	comp=Z,2.6nm,0.9s,baz=102,slow=2.4,SNR=15							
T35A	**Sooner Cattle**	**145.36**	**95**			**PKPbc**	**04 49 55.6**	**-0.2**
U38A	**Gravette**	**146.43**	**98**			**PKPdf**	**04 49 58.4**	**+0.7**
U40A	**Yellville**	**147.36**	**99**	PKPdf		**PKPdf**	**04 50 00.5**	**+1.2**
656A	**Willston**	**148.76**	**120**	PKPdf		**PKPdf**	**04 50 02.0**	**+0.3**
T42A	**Van Buren**	**148.89**	**100**			**PKPdf**	**04 50 01.6**	**-0.1**
ECSD	**EROS Data Cent**	**148.96**	**84**			**PKPdf**	**04 50 01.6**	**-0.1**
FFC	**Flin Flon**	**149.47**	**62**			**PKPdf**	**04 50 03.2**	**+1.1**
RES	**Resolute Bay**	**149.58**	**21**			**PKPdf**	**04 50 03.4**	**+1.7**
WCI	**Wyandotte Cave**	**152.64**	**102**	PKPdf		**PKPdf**	**04 50 10.4**	**+2.9**

TUL ***08*** *04:32:45.3±1.1, 36.°63N±0.°02×97.°83W±0.°06, h5km±7km, ML3.2, Error ellipse: s-maj=6.7km s-min=3.1km az=88.0*

NEIC ***08*** *04:32:45.0±1.1, 36.°64N±0.°03×97.°84W±0.°02, h5km±7km, Error ellipse: s-maj=5.6km s-min=0.8km az=209.0*
ANF ***08*** *04:32:46.2±1.1, 36.°64N×97.°86W, h11km±8km, ML3.8/8, Error ellipse: s-maj=4.2km s-min=2.4km az=41.0*

ISC 08 04:32:45.5±0.9, 36°62N±0.°04×97°85W±0.°05, h10km, n52, σ0°93/57, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ADOK	**Arcadia Dam**	**1.04**	**158**	Pg		**Pg**	**04 33 04.6**	**-0.9**
T35A	**Sooner Cattle**	**1.12**	**74**			**Pb**	**04 33 06.1**	**-0.8**
OKCSW	**OKLAHOMA CITY**	**1.26**	**164**			**Pn**	**04 33 09.0**	**-0.2**
FNO	**Franklin**	**1.41**	**165**			**Pn**	**04 33 11.7**	**+0.5**
W35A	**Tecumseh**	**1.67**	**151**			**Pn**	**04 33 15.2**	**+0.4**
W35A				Sn		**Sn**	**04 33 37.0**	**+0.8**
TUL1	**Leonard**	**1.81**	**112**	P		**Pn**	**04 33 17.3**	**+0.6**
	baz=295							
TUL1				S		**Sb**	**04 33 41.9**	**+0.5**
	baz=295							
TUL1	**Leonard**	**1.81**	**112**			**Pn**	**04 33 16.9**	**+0.2**
R32A	**Long Quarter,**	**1.93**	**339**	Pn		**Pn**	**04 33 18.6**	**+0.3**
X34A	**Smith Ranch, M**	**2.01**	**180**			**Pn**	**04 33 20.2**	**+0.7**
WMOK	**Wichita Mounta**	**2.02**	**202**	P		**Pn**	**04 33 20.6**	**+0.9**
	baz=24							
CBKS	**Cedar Bluff**	**2.65**	**326**	Sb		**Sb**	**04 34 07.6**	**+1.8**
	baz=144							
CBKS	**Cedar Bluff**	**2.65**	**326**			**Pn**	**04 33 27.4**	**-1.0**
KSU1	**Kansas State U**	**2.67**	**21**	P		**Pn**	**04 33 29.5**	**+0.9**
	baz=200							
KSU1				S		**Sn**	**04 34 01.9**	**+1.0**
	baz=200							
KSU1	**Kansas State U**	**2.67**	**21**	Pn		**Pn**	**04 33 28.4**	**-0.1**
KSU1				Sn		**Sn**	**04 34 01.1**	**+0.3**
U38A	**Gravette**	**2.80**	**93**			**Pn**	**04 33 30.2**	**-0.1**
Z35A	**Perchaven, San**	**3.32**	**171**	Pn		**Pn**	**04 33 38.5**	**+1.0**
AMTX	**Amarillo**	**3.56**	**242**			**Pn**	**04 33 40.8**	**-0.2**
W39A	**Magazine**	**3.59**	**112**	P		**Pn**	**04 33 41.9**	**+0.6**
	baz=295							
U40A	**Yellville**	**4.04**	**92**	P		**Pn**	**04 33 47.7**	**+0.4**
	baz=275							
U40A	**Yellville**	**4.04**	**92**			**Pn**	**04 33 47.6**	**+0.2**
MIAR	**Mount Ida**	**4.05**	**119**	P		**Pn**	**04 33 49.2**	**+1.6**
	baz=303							
Z38A	**Mt. Pleasant**	**4.10**	**144**	Pn		**Pn**	**04 33 48.6**	**+0.4**
N33A	**J Bar K, Exete**	**4.12**	**4**	Pn		**Pn**	**04 33 47.0**	**-1.6**
ABTX	**Abilene, Hawle**	**4.25**	**201**			**Pn**	**04 33 50.1**	**-0.3**
KSCO	**Kaye Shedlock'**	**4.47**	**304**	P		**Pn**	**04 33 54.9**	**+1.4**
	baz=120							
KSCO				S		**Sn**	**04 34 46.0**	**+0.4**
	baz=120							
KSCO	**Kaye Shed

	baz=203						
GRB	**Gharib**	**2.81**	**315**	P	**Pn**	**04 53 58.0**	**-0.7**
	baz=313						
EIL	**Elat**	**3.35**	**359**	Pn	**Pn**	**04 54 05.5**	**-0.6**
	0.9nm,0.3s,baz=127,slow=5.5,SNR=8.2						
EIL				Lg	Lg	04 54 45.2	
	1.6nm,0.3s,baz=149,slow=14,SNR=2.5						
EIL				LR	LR	04 55 27.9	
	comp=Z,358nm,18.6s,baz=176,slow=42						
EIL	**Elat**	**3.35**	**359**	Pn	**Pn**	**04 54 05.3**	**-0.8**
EIL				Sn	**Sn**	**04 54 42.0**	**-4.0**
MBRI	**Mt Berech**	**3.48**	**358**	Pn	**Pn**	**04 54 07.2**	**-0.7**
MBRI				Sn	**Sn**	**04 54 44.4**	**-4.8**
KRMI	**Paran Flat**	**3.81**	**356**	Pn	**Pn**	**04 54 11.2**	**-1.2**
PRNI	**Paran**	**4.03**	**359**	Pn	**Pn**	**04 54 15.0**	**-0.5**
GTR	**Jabal at Tayr**	**4.12**	**260**	P	**Pn**	**04 54 17.2**	**+0.6**
	baz=260						
AKRG	**Al Kharijah**	**4.17**	**260**	P	**Pn**	**04 54 17.8**	**+0.3**
	baz=261						
ZFRI	**Zfri**	**4.23**	**2**	Pn	**Pn**	**04 54 18.8**	**+0.6**
HMSM	**Jabal Masmas**	**4.46**	**221**	P	**Pn**	**04 54 22.4**	**+1.0**
	baz=223						
HMSM				AMP		04 55 00.0	
	baz=223						
YTIR	**Yattir**	**5.04**	**1**	Pn	**Pn**	**04 54 29.2**	**-0.2**
HDK1	**Dakhla**	**5.14**	**263**	P	**Pn**	**04 54 31.3**	**+0.5**
	baz=263						
ASF	**Jabal al Asfar**	**6.06**	**15**	Pn	**Pn**	**04 54 42.6**	**-0.9**
	0.3nm,0.3s,baz=131,slow=4.8,SNR=8.7						
ASF				Lg	Lg	04 56 18.0	
	0.7nm,0.3s,baz=344,slow=22,SNR=2.1						
HFRF	**Wahat Farafira**	**6.08**	**279**	P	**Pn**	**04 54 43.5**	**-0.1**
	baz=280						
MMAI	**Mount Meron Ar**	**6.69**	**3**	LR	LR	04 57 25.5	
	comp=Z,204nm,19.4s,baz=180,slow=38						
BRTR	**Keskin Array B**	**13.43**	**355**	LR	LR	05 00 50.0	
	comp=Z,43nm,21.3s,baz=168,slow=34						
KBZ	**Khabaz**	**18.52**	**18**	LR	LR	05 05 32.5	
	comp=Z,66nm,21.0s,baz=198,slow=40						
GEYT	**Alibeck**	**22.65**	**54**	LR	LR	05 08 39.2	
	comp=Z,36nm,18.5s,baz=25,slow=41						
AKASG	**Malin Array Be**	**24.76**	**351**	P	**P**	**04 58 36.4**	**+1.0**
	1.9nm,0.6s,baz=173,slow=7.4,SNR=7.5						
AKTO	**Aktyubinsk**	**29.84**	**30**	LR	LR	05 12 33.8	
	comp=Z,33nm,21.9s,baz=285,slow=39						
TORD	**Torodi Ar. Bea**	**33.90**	**254**	P	**P**	**04 59 58.8**	**+1.8**
	0.3nm,0.5s,baz=55,slow=9.0,SNR=2.6						
FINES	**FINESS Array B**	**35.65**	**353**	P	**P**	**05 00 12.2**	**+0.7**
	1.6nm,0.6s,baz=131,slow=15,SNR=2.1						
FINES				LR	LR	05 15 10.0	
	comp=Z,36nm,18.5s,baz=172,slow=37						
KURBB	**Kurchatov Arra**	**41.01**	**42**	P	**P**	**05 00 58.1**	**+1.3**
	0.9nm,0.6s,baz=254,slow=8.1,SNR=6.2						
MKAR	**Makanchi Array**	**42.36**	**48**	P	**P**	**05 01 09.2**	**+1.2**
	1.6nm,0.8s,baz=253,slow=6.0,SNR=10						
DBIC	**Dimbokro**	**42.71**	**250**	P	**P**	**05 01 12.6**	**+1.5**
	2.3nm,0.8s,baz=49,slow=11,SNR=1.7						
ARCES	**ARCESS Array B**	**43.62**	**355**	P	**P**	**05 01 18.9**	**+1.1**
	1.5nm,0.8s,baz=161,slow=9.5,SNR=2.2						

*TIR **08** 05:26:03.6, 43°.31N×19°.69E, h10km, Md4.0/4*
*PDG **08** 05:26:08.4±0.1, 43°.27N×19°.29E, h10km, MD3.5/14, ML3.5/13, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*
*THE **08** 05:26:08.2, 43.57N×19.10E, h18km±14km, ML3.7/3, Error ellipse: s-maj=17.9km s-min=2.8km az=330.0*
*RHSSO **08** 05:26:09.1±0.2, 43°.29N×19°.30E, h3km±1km, ML3.8/17*
*BEO **08** 05:26:09.6±0.2, 43°.30N×19°.30E, h4km±2km, ML3.8/19*
*SKO **08** 05:26:10.2, 43°.23N×19°.28E, h8km*
*LDG **08** 05:26:10.5±0.1, 43°.31N×19°.40E, h10km, Ml3.5/23, Error ellipse: s-maj=4.7km s-min=2.7km az=7.0*
*PRU **08** 05:26:11.6±0.0, 43°.46N×19°.53E, h0km*

ISC 08 05:26:08.9±0.8, **43°.30N**±0°.01×**19°.27E**±0°.01, **h12**km±5km, **n190**, σ2**9**18/286, **25C-25D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLE	**Pljevlja**	**0.10**	**69**	⇓*i* Pg	**Pg**	**05 26 10.9**	**-0.9**
PLE				*i* Sg	**Sg**	**05 26 12.9**	**-1.0**
UPM	**Unac-Piva**	**0.28**	**251**	⇑*i* Pg	**Pg**	**05 26 14.8**	**+0.1**
UPM				*e*Sg	**Sg**	**05 26 18.9**	**+0.3**
UPM	**Unac-Piva**	**0.28**	**251**	⇓*i* Pg	**Pg**	**05 26 14.3**	**-0.4**
UPM				*i* Sg	**Sg**	**05 26 18.8**	**+0.2**
RUDO	**Rudo**	**0.33**	**13**	⇓*i* Pg	**Pg**	**05 26 14.9**	**-0.7**
RUDO				*e*Sg	**Sg**	**05 26 19.7**	**-0.4**
KOME	**Kolasin**	**0.48**	**158**	⇓*i* Pg	**Pg**	**05 26 17.0**	**-1.3**
KOME				*i* Sg	**Sg**	**05 26 24.1**	**-0.6**
SJES	**Sjenica**	**0.52**	**94**	*e*Pg	**Pg**	**05 26 18.8**	**-0.2**
SJES				*e*Sg	**Sg**	**05 26 25.2**	**-0.7**
NKY	**Niksic**	**0.52**	**203**	⇓*i* Pg	**Pg**	**05 26 18.0**	**-1.1**
NKY				*i* Sg	**Sg**	**05 26 25.8**	**-0.2**
NKME	**Niksic**	**0.58**	**204**	⇓*i* Pg	**Pg**	**05 26 18.9**	**-1.2**
NKME				*i* Sg	**Sg**	**05 26 27.6**	**-0.1**
BBLS	**Lazi?i**	**0.58**	**10**	*e*Pg	**Pg**	**05 26 20.5**	**+0.3**
BBLS				*e*Sg	**Sg**	**05 26 28.3**	**+0.4**
BBLS	**Lazi?i**	**0.58**	**10**	⇓*i* Pg	**Pg**	**05 26 20.3**	**+0.1**
BBLS				*e*Sg	**Sg**	**05 26 28.0**	**+0.1**
IVA	**Berane**	**0.62**	**132**	⇓*i* Pg	**Pg**	**05 26 19.7**	**-1.3**
IVA				*i* Sg	**Sg**	**05 26 28.8**	**-0.5**
BRY	**Bratogost**	**0.66**	**234**	⇓*i* Pg	**Pg**	**05 26 20.8**	**-1.0**
BRY				*e*Sg	**Sg**	**05 26 31.1**	**+0.6**
BRY	**Bratogost**	**0.66**	**234**	⇓*i* Pg	**Pg**	**05 26 20.7**	**-1.0**
BRY				*i* Sg	**Sg**	**05 26 31.2**	**+0.7**
IVAS	**Ivanjica**	**0.70**	**66**	*e*Pg	**Pg**	**05 26 21.9**	**-0.6**
IVAS				*e*Sg	**Sg**	**05 26 30.7**	**-1.1**
CEME	**Cevo**	**0.79**	**199**	⇓*i* Pg	**Pg**	**05 26 22.6**	**-1.6**
CEME				*i* Sg	**Sg**	**05 26 35.0**	**+0.5**
HAPS	**Han Pijesak,BI**	**0.82**	**344**	*e*Pg	**Pg**	**05 26 23.9**	**-0.9**
HAPS				*e*Sg	**Sg**	**05 26 35.4**	**-0.2**
HAPS	**Han Pijesak,BI**	**0.82**	**344**	*e*Pg	**Pg**	**05 26 23.8**	**-1.0**
HAPS				*e*Sg	**Sg**	**05 26 36.4**	**+0.8**
PDG	**Podgorica**	**0.86**	**180**	⇓*i* Pg	**Pg**	**05 26 23.9**	**-1.7**
PDG				*e*Sg	**Sg**	**05 26 37.0**	**+0.2**
TTG	**Podgorica**	**0.86**	**180**	⇑*i* Pg	**Pg**	**05 26 23.9**	**-1.7**
TTG				*i* Sg	**Sg**	**05 26 37.5**	**+0.7**
PVY	**Plav**	**0.87**	**144**	⇓*i* Pg	**Pg**	**05 26 24.0**	**-1.6**
PVY				*i* Sg	**Sg**	**05 26 36.9**	**0.0**
TREB	**Trebinje**	**0.89**	**230**	*e*Pg	**Pg**	**05 26 24.9**	**-1.1**
TREB				*e*Sg	**Sg**	**05 26 38.2**	**+0.7**
TREB	**Trebinje**	**0.89**	**230**	*e*Pg	**Pg**	**05 26 24.6**	**-1.4**
TREB				*e*Sg	**Sg**	**05 26 38.6**	**+1.1**
DIVS	**Divibare**	**0.96**	**33**	*e*Pg	**Pg**	**05 26 27.2**	**-0.2**
DIVS	**Divibare**	**0.96**	**33**	⇓*i* Pg	**Pg**	**05 26 27.2**	**-0.2**
DIVS				*e*Sg	**Sg**	**05 26 38.8**	**-1.1**
HCY	**Herceg Novi**	**1.02**	**214**	*e*Pg	**Pg**	**05 26 26.9**	**-1.6**
HCY				*e*Sg	**Sg**	**05 26 41.7**	**-0.1**
HCY	**Herceg Novi**	**1.02**	**214**	⇑*i* Pg	**Pg**	**05 26 27.1**	**-1.4**
HCY				*i* Sg	**Sg**	**05 26 43.3**	**+1.5**
BUM	**Brajici-Budva**	**1.03**	**196**	⇑*i* Pg	**Pg**	**05 26 27.4**	**-1.3**
BUM				*i* Sg	**Sg**	**05 26 43.4**	**+1.2**
DBRK	**Dubrovnik**	**1.03**	**233**	*i* Pg	**Pg**	**05 26 27.4**	**-1.3**
DBRK				Sg	**Sg**	**05 26 43.2**	**+1.0**
BCI	**Bajram Curri**	**1.10**	**147**	*i* PG	**Pb**	**05 26 28.7**	**-1.1**
BCI				*i* SG	**Sg**	**05 26 43.2**	**-1.2**
DRME	**Dracevica, Mon**	**1.11**	**183**	*e*Pg	**Pb**	**05 26 28.3**	**-1.7**
DRME				*e*Sg	**Sb**	**05 26 44.0**	**-0.4**
DRME	**Dracevica, Mon**	**1.11**	**183**	⇑*i* Pg	**Pb**	**05 26 28.7**	**-1.3**
DRME				*i* Sg	**Sb**	**05 26 45.7**	**+1.3**
GRUS	**Gruza**	**1.21**	**60**	*e*Pg	**Pb**	**05 26 31.6**	**-0.1**
GRUS				*e*Sg	**Sb**	**05 26 47.2**	**-0.1**
STON	**Ston**	**1.22**	**250**	*e*Pg	**Pn**	**05 26 31.2**	**-0.5**
STON				*e*Sg	**Sn**	**05 26 50.1**	**+1.9**
STON	**Ston**	**1.22**	**250**	*e*Pg	**Pn**	**05 26 30.5**	**-1.3**
STON				*e*Sg	**Sb**	**05 26 48.7**	**+1.1**
STON	**Ston**	**1.22**	**250**	*i* Pg	**Pn**	**05 26 31.2**	**-0.5**
STON				Sg	**Sb**	**05 26 49.6**	**+2.0**
TRUS	**Trudelj**	**1.24**	**41**	*e*Pg	**Pb**	**05 26 32.7**	**+0.4**
TRUS				*e*Sg	**Sb**	**05 26 48.1**	**-0.1**
TEKS	**Tekeris**	**1.27**	**9**	*e*Pg	**Pg**	**05 26 33.5**	**+0.3**
TEKS				*e*Sg	**Sg**	**05 26 49.9**	**+0.2**
TEKS	**Tekeris**	**1.27**	**9**	*e*Pg	**Pn**	**05 26 32.5**	**+0.1**
TEKS				*e*Sg	**Sn**	**05 26 50.2**	**+0.8**
ULC	**Ulcinj**	**1.33**	**181**	⇑*i* Pg	**Pg**	**05 26 32.8**	**-0.5**
ULC				*i* Sg	**Sg**	**05 26 53.1**	**+1.4**
PUK	**Puka**	**1.33**	**160**	*i* PN	**Pn**	**05 26 33.4**	**0.0**
PUK				*i* SN	**Sn**	**05 26 52.5**	**+1.4**
SELS	**Selova**	**1.36**	**93**	*e*Pg	**Pn**	**05 26 33.7**	**0.0**
SELS				*e*Sg	**Sg**	**05 26 52.4**	**-0.1**
MAKA	**Makarska**	**1.64**	**270**	*i* Pg	**Pn**	**05 26 39.3**	**+1.8**
MAKA				Sn	**Sg**	**05 27 03.5**	**+1.9**
DOB	**Doboj**	**1.67**	**330**	*e*Pn	**Pn**	**05 26 39.3**	**+1.4**
DOB				*e*Sg	**Sg**	**05 27 02.3**	**-0.1**
SVIS	**Svilajnac**	**1.71**	**55**	*e*Pg	**Pb**	**05 26 40.0**	**-0.3**
SVIS				*e*Sg	**Sg**	**05 27 03.3**	**-0.6**
BEO	**Beograd**	**1.75**	**29**	*e*Pn	**Pb**	**05 26 40.9**	**+0.1**
BOVS	**Bovan**	**1.81**	**78**	*e*Pn	**Pb**	**05 26 41.7**	**-0.2**
BOVS				*e*Sg	**Sg**	**05 27 07.0**	**0.0**
PHP	**Peshkopia**	**1.83**	**151**	P	**Pn**	**05 26 42.1**	**+2.0**
PHP				S	**Sg**	**05 27 09.8**	**+2.1**
PHP	**Peshkopia**	**1.83**	**151**	*i* PN	**Pn**	**05 26 42.2**	**+2.0**
PHP				*i* SN	**Sb**	**05 27 06.3**	**+1.1**
FRGS	**Fruska Gora**	**1.90**	**12**	*e*Pn	**Pn**	**05 26 41.6**	**+0.4**
FRGS	**Fruska Gora**	**1.90**	**12**	*e*Pn	**Pb**	**05 26 41.5**	**+0.4**
FRGS				*e*Sn	**Sb**	**05 27 07.5**	**-0.1**
BARS	**Barje**	**1.93**	**104**	*e*Pn	**Pn**	**05 26 42.5**	**+1.0**
BARS	**Barje**	**1.93**	**104**	*e*Pn	**Pb**	**05 26 43.9**	**-0.1**
BARS				*e*Sg	**Sg**	**05 27 15.4**	**+4.5**
MGRS	**Mrkonjic Grad**	**1.94**	**306**	*e*Pn	**Pn**	**05 26 43.5**	**+1.9**
MGRS				*e*Sn	**Sn**	**05 27 07.9**	**+2.0**
TIR	**Tirane**	**2.00**	**167**	*e*Pg	**Pb**	**05 26 46.7**	**+1.6**
TIR				*e*Sg	**Sg**	**05 27 12.6**	**-0.4**
TIR	**Tirane**	**2.00**	**167**	P	**Pb**	**05 26 45.9**	**+0.8**
TIR				S	**Sg**	**05 27 13.3**	**+0.3**
	1μm,0.7s						
TIR	**Tirane**	**2.00**	**167**	*i* PN	**Pb**	**05 26 46.4**	**+1.3**
TIR				*i* SN	**Sg**	**05 27 14.1**	**+1.1**
TIR	**Tirane**	**2.00**	**167**	⇑P	**Pb**	**05 26 45.8**	**+0.7**
TIR				⇓S	**Sg**	**05 27 13.0**	**0.0**
KUBS	**Kucevo**	**2.07**	**57**	*e*Pg	**Pg**	**05 26 47.8**	**-0.7**
KUBS				*e*Sg	**Sg**	**05 27 14.4**	**-1.4**
SKO	**Skopje**	**2.08**	**129**	*i* Pn	**Pn**	**05 26 45.0**	**+1.4**
SKO	**Skopje**	**2.08**	**129**	*i* Pn	**Pn**	**05 26 45.0**	**+1.4**
BLY	**Banja Luka**	**2.09**	**315**	*e*Pn	**Pn**	**05 26 46.0**	**+2.3**
BLY	**Banja Luka**	**2.09**	**315**	⇓P	**Pb**	**05 26 46.3**	**-0.4**
BLY				⇓S	**Sn**	**05 27 11.8**	**+2.1**
BLY	**Banja Luka**	**2.09**	**315**	*e*Pn	**Pn**	**05 26 45.4**	**+1.7**
BLY				*e*Sn	**Sn**	**05 27 11.7**	**+2.1**
KIJV	**Kijevo**	**2.19**	**290**	*i* Pn	**Pb**	**05 26 48.3**	**-0.2**
ZAGS	**Zajecar**	**2.22**	**76**	*e*Pn	**Pn**	**05 26 45.9**	**+0.4**
MDVR	**Moldovita**	**2.31**	**49**	⇓P	**Pn**	**05 26 47.5**	**+0.7**
MDVR				⇑S	**Sn**	**05 27 16.2**	**+1.1**
ZAPS	**Zavoj**	**2.46**	**89**	*e*Pn	**Pn**	**05 26 50.5**	**+1.7**
OHR	**Ohrid**	**2.46**	**152**	*i* Pn	**Pn**	**05 26 48.0**	**-0.9**
OHR				*i* Sn	**Sg**	**05 27 27.1**	**-0.8**
OHR				*e*Lg	Lg	05 27 33.0	
	comp=N,288nm,0.7s						
OHR	**Ohrid**	**2.46**	**152**	*i* Pn	**Pn**	**05 26 48.0**	**-0.9**
OHR				*i* Sn	**Sg**	**05 27 27.1**	**-0.8**
OHR				*e*Lg	Lg	05 27 33.0	
	comp=N,288nm,0.7s						
BANR	**Banloc**	**2.48**	**32**	⇑P	**Pn**	**05 26 50.1**	**+1.0**
BOSS	**Bosilegrad**	**2.49**	**108**	*e*Pn	**Pn**	**05 26 50.3**	**+1.0**
MORI	**Morici**	**2.65**	**284**	*e*Pn	**Pn**	**05 26 54.5**	**+3.1**
ZIRJ	**Zirje**	**2.66**	**279**	*e*Pn	**Pn**	**05 26 55.0**	**+3.4**
ZIRJ				Sn	**Sb**	**05 27 30.3**	**+1.3**
STIP	**Stip**	**2.69**	**126**	*i* Pn	**Pn**	**05 26 54.1**	**+2.1**
STIP	**Stip**	**2.69**	**126**	*i* Pn	**Pn**	**05 26 54.1**	**+2.1**
DJES	**Djerdap**	**2.72**	**59**	*e*Pn	**Pn**	**05 26 53.4**	**+1.0**
HERR	**Herculane**	**2.77**	**54**	⇓P	**Pn**	**05 26 54.1**	**+1.0**
BAI	**Bari**	**2.81**	**220**	*e*Pn	**Pn**	**05 26 54.9**	**+1.2**
BAI				Sn	**Sn**	**05 27 28.2**	**+0.7**
BZS	**Buzias**	**2.87**	**35**	*e*Pn	**Pn**	**05 26 56.2**	**+1.6**
BZS	**Buzias**	**2.87**	**35**	⇑P	**Pn**	**05 26 54.9**	**+0.6**
MOSL	**Moslavina**	**2.93**	**323**	*e*Pn	**Pn**	**05 26 57.0**	**+1.6**
FNA	**Florina**	**2.96**	**147**	P	**Pn**	**05 26 58.1**	**+2.3**
FNA				S	**Sb**	**05 27 35.5**	**-2.3**
	comp=N,362nm,0.5s						
VTS	**Vitosha**	**2.99**	**102**	*e*Pn	**Pn**	**05 26 57.6**	**+1.3**
VTS	**Vitosha**	**2.99**	**102**	P	**Pn**	**05 26 57.2**	**+0.9**
VTS	**Vitosha**	**2.99**	**102**	⇑P	**Pn**	**05 26 57.8**	**+1.6**
VTS	**Vitosha**	**2.99**	**102**	*i* P	**Pn**	**05 26 57.1**	**+0.8**
TPE	**Tepelena**	**3.05**	**169**	P	**Pn**	**05 26 59.8**	**+2.9**
SG1	**Sgolgore (BA)**	**3.12**	**219**	*e*Pn	**Pn**	**05 26 59.2**	**+1.3**
SG1				Sn	**Sn**	**05 27 36.6**	**+1.5**
DUGI	**Dugi Otok**	**3.13**	**284**	*e*Pn	**Pn**	**05 27 00.8**	**+2.8**
TAR1	**Taranto**	**3.14**	**209**	*e*Pn	**Pn**	**05 26 59.6**	**+1.5**
TAR1				Sn	**Sn**	**05 27 38.1**	**+2.6**
VAY	**Valandovo**	**3.15**	**128**	*e*Pn	**Pn**	**05 27 00.6**	**+2.4**
VAY	**Valandovo**	**3.15**	**128**	⇑*i* Pn	**Pn**	**05 27 00.2**	**+2.0**
VAY				*i* Sn	**Sg**	**05 27 48.6**	**-1.3**
VAY				*e*Lg	Lg	05 27 54.3	
	comp=N,77nm,0.7s						
VAY	**Valandovo**	**3.15**	**128**	⇑*i* Pn	**Pn**	**05 27 00.2**	**+2.0**
VAY				*i* Sn	**Sg**	**05 27 48.6**	**-1.3**
VAY				*e*Lg	Lg	05 27 54.3	
	comp=N,77nm,0.7s						
SRE	**Strehaia**	**3.15**	**63**	⇓P	**Pn**	**05 26 60.0**	**+1.6**
KKB	**Krupnik**	**3.16**	**116**	*i* P	**Pn**	**05 27 00.3**	**+1.9**
GZR	**Gura Zlata**	**3.28**	**49**	⇓P	**Pn**	**05 27 00.9**	**+0.8**
NVLJ	**Novalja**	**3.42**	**293**	*e*Pn	**Pn**	**05 27 04.6**	**+2.7**
SIRR	**Siria**	**3.43**	**29**	⇓P	**Pn**	**05 27 02.3**	**+0.2**
KNT	**Kendrikon**	**3.44**	**127**	P	**Pn**	**05 27 03.4**	**+1.1**
KALN	**Kalnik**	**3.47**	**326**	*e*Pn	**Pn**	**05 27 03.8**	**+1.1**
PTJ	**Puntijarka**	**3.52**	**319**	*e*Pn	**Pn**	**05 27 05.0**	**+1.6**
OZLJ	**Ozalj**	**3.57**	**312**	*e*Pn	**Pn**	**05 27 05.9**	**+1.9**
KEK	**Kerkira**	**3.60**	**173**	P	**Pn**	**05 27 06.4**	**+1.9**
KEK				S	**Sn**	**05 27 50.1**	**+3.1**
	comp=N,175nm,0.8s						
KPRO	**Kipourio**	**3.69**	**154**	P	**Pn**	**05 27 08.6**	**+2.8**
CRES	**Cresnjev**	**3.72**	**314**	*e*Pn	**Pn**	**05 27 07.9**	**+1.8**
CRES	**Cresnjev**	**3.72**	**314**	*e*Pn	**Pn**	**05 27 07.6**	**+1.5**
CRES				*e*Sn	**Sn**	**05 27 51.1**	**+1.3**
MMB	**Musomiste**	**3.72**	**116**	*i* P	**Pg**	**05 27 19.0**	**-1.0**
RIY	**Rijeka**	**3.99**	**302**	*e*Pn	**Pn**	**05 27 11.8**	**+2.0**
LIT	**Litokhoron**	**4.00**	**142**	P	**Pn**	**05 27 11.8**	**+1.8**
PDKS	**Podkum**	**4.11**	**314**	*i* Pn	**Pn**	**05 27 13.3**	**+1.7**
CEY	**Cerknica**	**4.24**	**307**	*e*Pn	**Pn**	**05 27 15.4**	**+2.2**
CEY				*e*Sn	**Sn**	**05 28 03.2**	**+0.6**
THL	**Klokotos Trika**	**4.26**	**150**	P	**Pn**	**05 27 15.9**	**+2.3**
DRGR		**4.26**	**34**	⇑P	**Pn**	**05 27 14.1**	**+0.4**
DRGR		**4.26**	**34**	*i* P	**Pn**	**05 27 13.5**	**-0.2**
RZN	**Rozhen**	**4.34**	**110**	*i* P	**Pb**	**05 27 27.6**	**+2.5**
LJU	**Ljubljana**	**4.36**	**311**	*e*Pn	**Pn**	**05 27 15.5**	**+0.6**
LJU				*e*Sn	**Sn**	**05 28 07.2**	**+1.7**
ARR	**Arges**	**4.37**	**60**	⇑P	**Pn**	**05 27 16.1**	**+0.9**
AQU	**L'Aquila**	**4.41**	**260**	*e*Pn	**Pn**	**05 27 17.3**	**+1.6**
AQU				*e*Sn	**Sn**	**05 28 07.8**	**+0.7**
SOKA	**Soboth**	**4.52**	**320**	*i* Pn	**Pn**	**05 27 18.8**	**+1.6**
	comp=N,6.2nm,0.2s,SNR=6.1						
TIP	**Timpagrande**	**4.53**	**206**	P	**Pn**	**05 27 18.9**	**+1.6**
TIP	**Timpagrande**	**4.53**	**206**	⇑P	**Pn**	**05 27 19.0**	**+1.8**
MTUR	**Matau**	**4.59**	**63**	⇓P	**Pn**	**05 27 20.7**	**+2.5**
LKD2	**Lefkada island**	**4.62**	**166**	P	**Pn**	**05 27 19.8**	**+1.2**
OBKA	**Obir**	**4.64**	**315**	Pn	**Pn**	**05 27 21.6**	**+2.7**
	comp=N,4.8nm,0.2s,SNR=8.8						
PSZ	**Piszkesteto**	**4.64**	**5**	⇑P	**Pn**	**05 27 19.5**	**+0.6**
VOIR		**4.67**	**61**	⇑P	**Pn**	**05 27 21.3**	**+2.1**
ARSA	**Arzberg**	**4.75**	**328**	Pn	**Pn**	**05 27 22.0**	**+1.6**
	comp=N,15nm,0.3s,SNR=8.2						
ARSA				*i* Sn	**Sn**	**05 28 14.4**	**-1.0**
	comp=N,18nm,0.5s						
EVR	**Evrytania**	**4.78**	**155**	P	**Pn**	**05 27 23.3**	**+2.5**
EVGI	**Lefkada island**	**4.79**	**167**	P	**Pn**	**05 27 22.4**	**+1.6**
ELND	**Elena**	**4.85**	**92**	⇑P	**Pn**	**05 27 23.7**	**+2.0**
FSK	**Fiskardo**	**4.93**	**168**	P	**Pn**	**05 27 24.5**	**+1.8**
ANX	**Ano Chora**	**5.11**	**156**	P	**Pn**	**05 27 27.8**	**+2.5**
DOPR	**Dopca**	**5.12**	**56**	⇑P	**Pn**	**05 27 27.3**	**+1.9**
ZST	**Bratislava**	**5.13**	**344**	*e*SN	**Sn**	**05 28 20.4**	**-4.2**
VYHS	**Vyhne**	**5.21**	**357**	*e*PN	**Pn**	**05 27 27.7**	**+1.1**
VYHS				*e*SN	**Sn**	**05 28 25.1**	**-1.4**
CONA	**Conrad Observa**	**5.21**	**334**	*i* Pn	**Pn**	**05 27 30.3**	**+3.6**
	comp=N,2.5nm,0.2s						
CONA				*i* Sn	**Sn**	**05 28 26.7**	**-0.1**
	comp=N,20nm,0.5s						
ARCR	**ARCALIA**	**5.22**	**42**	⇓P	**Pn**	**05 27 27.8**	**+1.1**
KECS	**Kecovo**	**5.26**	**9**	*e*PN	**Pn**	**05 27 28.9**	**+1.7**
KECS				*e*SN	**Sn**	**05 28 26.8**	**-0.9**
KECS				*e*LG	Lg	05 28 33.4	
MLR	**Muntele Rosu**	**5.26**	**63**	⇑P	**Pn**	**05 27 29.8**	**+2.3**
MODS	**Modra-Piesok**	**5.26**	**345**	*e*PN	**Pn**	**05 27 28.3**	**+0.9**
MODS				*e*SN	**Sn**	**05 28 28.1**	**+0.1**
MODS				*e*LG	Lg	05 28 43.2	
TRPA	**Tarpa**	**5.35**	**24**	⇓P	**Pn**	**05 27 28.9**	**+0.4**
KALE	**Kalithea**	**5.36**	**155**	P	**Pn**	**05 27 31.6**	**+2.8**
SMOL	**Smolenice**	**5.37**	**347**	*e*PN	**Pn**	**05 27 32.3**	**+3.5**
SMOL				*e*LG	Lg	05 28 33.6	
KBA	**Koelnbreinsper**	**5.64**	**314**	*i* Pn	**Pn**	**05 27 35.9**	**+3.3**
	comp=N,3.9nm,0.3s						
JAVC	**Velka Javorina**	**5.67**	**349**	*e*PN	**Pn**	**05 27 34.8**	**+1.8**
JAVC				*e*SN	**Sn**	**05 28 38.9**	**+0.8**
MOA	**Molln**	**5.75**	**324**	Pn	**Pn**	**05 27 36.4**	**+2.4**
	comp=N,2.4nm,0.1s,SNR=12						
MOA				*i* Sn	**Sn**	**05 28 38.5**	**-1.3**
	comp=N,13nm,0.5s						
ABTA	**Abfaltersbach**	**5.90**	**308**	*e*Pn	**Pn**	**05 27 39.8**	**+3.7**
	comp=N,11nm,0.5s						
VRI	**Vrincioaia**	**5.92**	**62**	⇑P	**Pn**	**05 27 37.8**	**+1.5**
KOLS	**Kolonicke sedl**	**6.01**	**19**	*e*PN	**Pn**	**05 27 39.5**	**+1.9**
BURAR	**Bucovina Array**	**6.01**	**42**	⇑P	**Pn**	**05 27 39.5**	**+1.8**
KRUC	**Moravsky**	**6.10**	**342**	*e*SN	**Sn**	**05 28 46.9**	**-1.6**
VRAC	**Vranov**	**6.29**	**344**	*e*SN	**Sn**	**05 28 53.3**	**+0.1**
VRAC	**Vranov**	**6.29**	**344**	⇑P	**Pn**	**05 27 42.5**	**+1.1**
OKC	**Ostrava-Krasne**	**6.59**	**354**	*e*PN	**Pn**	**05 27 47.6**	**+2.1**
MORC	**Moravsky Berou**	**6.59**	**350**	*e*PN	**Pn**	**05 27 45.8**	**+0.2**
MORC				*e*SN	**Sn**	**05 28 57.7**	**-2.9**
MORC	**Moravsky Berou**	**6.59**	**350**	⇑P	**Pn**	**05 27 45.8**	**+0.2**
WTTA	**Wattenberg**	**6.69**	**309**	*i* Pn	**Pn**	**05 27 51.0**	**+4.0**
	comp=N,9.1nm,0.4s						
WATA	**Walderalm**	**6.76**	**309**	*i* Pn	Pn	05 27 52.8	+4.8
	comp=N,30nm,0.6s,SNR=7.1						
SQTA	**Sankt Quirin**	**6.91**	**307**	*i* Pn	**Pn**	**05 27 53.7**	**+3.7**
	comp=N,8.9nm,0.5s						
MOTA	**Moosalm**	**7.03**	**308**	Pn	**Pn**	**05 27 55.3**	**+3.5**
	comp=N,14nm,0.5s,SNR=12						
KHC	**Kasperske Hory**	**7.04**	**328**	*e*PN	**Pn**	**05 27 56.3**	**+4.5**
KHC				*e*SN	**Sn**	**05 29 14.1**	**+2.3**
FETA	**Feichten**	**7.09**	**305**	*i* Pn	**Pn**	**05

2.2nm70nm,0.9s
MNAI Manna 7.35 303 Pn **Pn** 05 50 15.4 +2.8
KSI Kapahiang 8.05 305 P **Pn** 05 50 24.7 +2.4
10µm116nm,0.4s
PLAI Plampang 8.53 94 P **Pn** 05 50 29.4 +0.6
60nm,0.7s
KAPI Kappang 11.04 73 LR LR 05 55 33.6
comp=Z,186nm,21.9s,baz=241,slow=39
EDFI Ende, Flores 12.40 93 P **Pn** 05 51 22.5 +0.8
SOEI Soe 14.98 96 Pn **Pn** 05 51 54.3 -1.6
SOEI IAmb IAmb 05 52 08.8
comp=Z,26nm,0.8s
GIRL Giralia 14.99 162 **Pn** 05 51 55.2 -0.6
RPSI Rantau Prapat 15.01 317 Pn **Pn** 05 51 53.5 -2.6
GSI Gunungsitoli 15.03 309 **Pn** 05 51 52.0 -4.4
GSI IAmb IAmb 05 51 52.7
comp=Z,20nm,0.6s
PSI Prapat 15.09 317 LR LR 05 58 08.8
comp=Z,406nm,21.0s,baz=94,slow=39
PSA00 Pilbara Seismi 16.67 143 **Pn** 05 52 15.5 -1.5
FITZ Fitzroy Crossi 18.71 123 P **Pn** 05 52 44.8 +2.9
comp=Z,0.4nm,0.3s,baz=294,slow=5.8,SNR=12
FITZ S **S** 05 56 08.4 -1.3
comp=Z,0.5nm,0.3s,baz=118,slow=19,SNR=5.8
FITZ LR LR 05 59 25.3
comp=Z,146nm,21.5s,baz=296,slow=35
FITZ Fitzroy Crossi 18.71 123 P **Pn** 05 52 45.0 +3.2
DLV T Lat 20.21 358 P **P** 05 52 56.4 -0.8
DLV IAmb IAmb 05 53 02.6
comp=Z,16nm,0.9s
KNRA Kununurra 20.48 113 P Pn 05 53 02.2 -0.6
KNRA IAmb IAmb 05 53 04.0
comp=Z,14nm,0.7s
TGY Tagaytay City 25.21 28 LR LR 06 04 04.3
comp=Z,112nm,18.4s,baz=61,slow=38
NWAO Narrogin (SRO) 25.54 164 LR LR 06 03 15.6
comp=Z,158nm,20.6s,baz=12,slow=34
NWAO Narrogin (SRO) 25.54 164 P **P** 05 53 47.3 -2.6
WRA Warramunga Arr 26.94 118 P **P** 05 54 05.3 +2.7
comp=Z,3.1nm,0.8s,baz=289,slow=12,SNR=18
WRA LR LR 06 05 14.3
comp=Z,95nm,20.4s,baz=200,slow=37
WRAB Tennant Creek 26.94 118 P **P** 05 54 05.1 +2.4
QIZ Qiongzhong 27.25 1 P **P** 05 54 05.8 +0.5
QIZ S **S** 05 58 41.7 +2.4
ASAR Alice Springs 28.15 126 P **P** 05 54 16.1 +2.6
comp=Z,4.2nm,0.7s,baz=304,slow=9.2,SNR=34
ASAR PcP **PcP** 05 57 27.9 +1.9
comp=Z,0.6nm,0.5s,baz=318,slow=2.6,SNR=5.1
ASAR LR LR 06 05 53.7
comp=Z,116nm,20.5s,baz=296,slow=37
CMAR Chiang Mai Arr 28.51 339 P **P** 05 54 15.6 -1.0
comp=Z,0.7nm,0.3s,baz=178,slow=6.2,SNR=5.2
CMAR LR LR 06 06 59.4
comp=Z,183nm,18.9s,baz=179,slow=39
COEN Coen 33.80 103 P **P** 05 55 01.4 -1.9
BBOO Buckleboo 34.79 138 P **P** 05 55 14.1 +2.4
H08S2 Diego Garcia H 36.31 268 T T 06 33 51.7
baz=93,slow=75,SNR=54
H08S3 Diego Garcia H 36.32 269 T T 06 33 55.4
baz=93,slow=75,SNR=117
H08S1 Diego Garcia H 36.33 268 T T 06 33 56.0
baz=93,slow=75,SNR=104
PMG Port Moresby 37.54 95 LR LR 06 12 45.8
comp=Z,58nm,18.3s,baz=286,slow=39
STKA Stephens Creek 38.13 132 P **P** 05 55 44.0 +3.8
comp=Z,6.8nm,0.6s,baz=309,slow=8.6,SNR=21
STKA LR LR 06 13 42.0
comp=Z,78nm,20.1s,baz=288,slow=39
STKA Stephens Creek 38.13 132 IAmb IAmb 05 55 44.6
comp=Z,1.8nm,0.9s
CD2 Chengdu 39.41 353 P **P** 05 55 50.8 0.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s
LZH Lanzhou 44.52 354 *e*P **P** 05 56 33.2 +0.8
LZH pP pP 05 56 53.9 +3.2
LZH sP sP 05 57 04.1 +5.0
LZH *e*PP **PP** 05 58 20.3 +2.6
LZH pmax pmax
comp=Z,18nm,1.3s
LZH pmax pmax
comp=Z,56nm,5.2s
LZH LR LR
comp=Z,75nm,13.5s
LZH LR LR
comp=Z,83nm,13.7s
JNU Nakatsue 46.16 26 LR LR 06 17 46.2
comp=Z,21nm,19.9s,baz=168,slow=38
KSRS Korea Array 48.86 20 LR LR 06 18 37.7
comp=Z,22nm,18.8s,baz=204,slow=37
HHC Hu-ho-hao-te 49.04 2 P **P** 05 57 06.5 -1.1
HHC pmax pmax
comp=Z,12nm,0.9s
HHC pmax pmax
comp=Z,19nm,5.7s
MJAR Matsushiro Arr 52.36 30 LR LR 06 19 00.1
comp=Z,20nm,21.4s,baz=240,slow=35
WMQ Urumqi 55.49 341 *e*P **P** 05 57 56.1 +0.8
SONM Songino Array 56.03 358 P **P** 05 57 58.2 -0.9
comp=Z,0.7nm,0.5s,baz=187,slow=10,SNR=4.1
SONM LR LR 06 25 17.5
comp=Z,73nm,18.2s,baz=108,slow=40
DZM Mont Dzumac 56.62 111 *e*LR LR 06 14 44.8
comp=Z,172nm,25.8s
KSH Kashi 56.72 330 P **P** 05 58 07.0 +2.7
KSH pP pP 05 58 26.8 +3.6
KSH sP sP 05 58 34.4 +3.0
KSH pmax pmax
comp=Z,16nm,1.1s
KSH pmax pmax
comp=Z,170nm,4.0s
MKAR Makanchi Array 59.92 339 P **P** 05 58 24.0 -2.3
comp=Z,0.6nm,0.3s,baz=153,slow=7.0,SNR=22
MKAR LR LR 06 28 04.3
comp=Z,24nm,21.1s,baz=158,slow=40
TLY Talaya 60.01 356 LR LR 06 25 38.9
comp=Z,88nm,21.6s,baz=145,slow=37
KLR Kul'dur 60.69 17 P **P** 05 58 29.1 -2.4
comp=Z,1.7nm,0.7s,baz=231,slow=3.4,SNR=7.4
KURK Kurchatov 64.54 339 P **P** 05 58 55.9 -1.1
KURK IAmb IAmb 05 58 56.6
comp=Z,5.7nm,1.2s
ZALV Zalesovo Beam 65.42 344 P **P** 05 59 00.4 -2.3
comp=Z,0.7nm,0.3s,baz=101,slow=4.7,SNR=4.3
ZALV LR LR 06 31 11.8
comp=Z,20nm,21.1s,baz=162,slow=39
GEYT Alibeck 66.22 318 P **P** 05 59 07.5 -0.8
comp=Z,1.5nm,0.4s,baz=194,slow=9.9,SNR=6.3
GEYT LR LR 06 29 24.1
comp=Z,33nm,21.8s,baz=350,slow=37
MAW Mawson 66.68 198 P **P** 05 59 13.9 +3.3
comp=Z,1.7nm,0.5s,baz=36,slow=4.8,SNR=6.4
BRVK Borovoye 69.55 336 P **P** 05 59 26.8 -1.9
BRVK IAmb IAmb 05 59 28.8
comp=Z,3.8nm,0.9s
RAYN Ar Rayn 69.79 299 P **P** 05 59 30.1 -0.8
RAYN IAmb IAmb 05 59 33.2
comp=Z,3.4nm,0.9s
KMBO Kilima Mbogo 71.94 272 LR LR 06 29 16.5
comp=Z,50nm,19.2s,baz=94,slow=34
PETK Petropavlovsk- 73.78 28 P **P** 05 59 53.0 -1.2
comp=Z,1.7nm,0.8s,baz=193,slow=3.7,SNR=2.5
PETK LR LR 06 33 08.2
comp=Z,10nm,20.4s,baz=239,slow=36
PET Petropavlovsk 74.17 29 P **P** 05 59 55.0 -1.4
VNDA Vanda 74.23 170 P **P** 05 59 59.9 +3.5
comp=Z,0.9nm,0.7s,baz=317,slow=4.4,SNR=6.3
VNDA LR LR 06 31 29.4
comp=Z,56nm,19.6s,baz=254,slow=34
TBLG Delisi 77.07 316 P **P** 06 00 11.3 -2.1
NRIK Noril'sk 78.98 352 LR LR 06 37 53.3
comp=Z,62nm,19.2s,baz=190,slow=38
KBZ Khabaz 79.11 317 P **P** 06 00 25.0 +0.5
comp=Z,5.5nm,1.0s,baz=105,slow=4.3,SNR=7.8
BOSA Boshof 80.71 242 P **P** 06 00 37.3 +3.5
comp=Z,1.2nm,0.6s,baz=122,slow=6.4,SNR=3.9
BOSA LR LR 06 34 13.1
comp=Z,84nm,18.5s,baz=178,slow=34
BOSA Boshof 80.71 242 IAmb IAmb 06 00 44.9
comp=Z,7.0nm,1.3s
TIXI Tiksi 80.93 6 P **P** 06 00 31.9 -1.9
TIXI IAmb IAmb 06 00 32.5
comp=Z,3.0nm,0.7s
KIRV Kirov 82.08 333 LR LR 06 39 53.7
comp=Z,381nm,19.8s,baz=261,slow=38
BRTR Keskin Array B 84.34 311 P **P** 06 00 52.3 -0.1
comp=Z,5.7nm,0.9s,baz=132,slow=6.8,SNR=20
BRTR LR LR 06 43 50.3
comp=Z,16nm,18.1s,baz=178,slow=39
KLMR Klimovskoe 87.58 333 *e*P **P** 06 01 05.2 -2.4
KLMR AMP 06 01 08.2
comp=Z,23nm,1.3s
SNAA Sanae 88.84 197 P **P** 06 01 10.9 -2.8
SNAA IAmb IAmb 06 01 21.8
comp=Z,4.8nm,1.4s
AKASG Malin Array Be 90.11 321 P **P** 06 01 19.1 -0.6
comp=Z,0.8nm,0.4s,baz=85,slow=4.5,SNR=6.9
FINES FINESS Array B 94.00 331 LR LR 06 48 18.8
comp=Z,52nm,18.9s,baz=194,slow=38
ARCES ARCESS Array B 95.57 339 P **P** 06 01 45.0 +0.4
comp=Z,1.5nm,0.8s,baz=83,slow=12,SNR=4.3
ARCES LR LR 06 49 58.6
comp=Z,41nm,18.4s,baz=165,slow=39
TBI Tubuai 97.03 115 *e*LR LR 06 33 27.9
comp=Z,62nm,25.5s
PPT2 Papeete2 98.10 109 *e*LR LR 06 33 57.4
comp=Z,54nm,23.2s
POKR Poker Plat Res 103.20 25 P **Pdif** 06 02 18.7 -0.1
baz=279
YKA Yellowknife Ar 117.39 21 PKP **PKiKP** 06 07 05.2 +0.4
comp=Z,0.3nm,0.8s,baz=308,slow=0.3,SNR=11
FMP Fort Macarthur 129.62 53 P **PKPdf** 06 07 27.4 -1.7
baz=289
D47A Chapleau 140.07 13 P **PKPdf** 06 07 47.4 -0.8
baz=341
D63A Stockholm 141.41 357 P **PKPdf** 06 07 51.0 +0.4
baz=4.3
I45A Fountain 142.03 18 P **PKPdf** 06 07 51.5 -0.3
baz=335
E61A Lac Etchemin 142.09 360 P **PKPdf** 06 07 51.3 -0.6
baz=0.6
H48A Harrisville 142.23 15 P **PKPdf** 06 07 52.2 +0.1
baz=340
G54A Lake Saint Pet 142.59 8 P **PKPdf** 06 07 52.8 0.0
baz=348
TXAR Lajitas Array 142.81 52 PKP **PKPdf** 06 07 52.3 -1.4
comp=Z,0.2nm,0.4s,baz=243,slow=0.8,SNR=2.3
I49A Point Hope 143.07 14 P **PKPdf** 06 07 53.8 +0.1
baz=340
G64A Maxfield 143.22 358 P **PKPdf** 06 07 54.0 +0.2
baz=3.4
WMOK Wichita Mounta 143.33 40 P **PKPdf** 06 07 54.1 -0.4
baz=309
H64A Troy 143.85 358 P **PKPdf** 06 07 55.7 +0.7
baz=2.7
H62A Milan 143.95 0 P **PKPdf** 06 07 55.6 +0.5
baz=360
I63A Otisfield 144.47 360 P **PKPdf** 06 07 55.9 -0.2
baz=0.4
R40A Maddies Statio 144.50 30 PKPbc 06 07 55.1 +0.1
I60A Shoreham 144.61 3 P PKPbc 06 07 55.5 +0.4
baz=356
I59A Olmsteadville 144.63 4 P **PKPdf** 06 07 56.0 -0.4
baz=355
I62A Tamworth 144.64 1 P **PKPdf** 06 07 56.1 -0.3
baz=359
J57A Williamstown 144.82 7 P **PKPdf** 06 07 56.3 -0.4
baz=351
J59A Piesco 144.91 5 P **PKPdf** 06 07 56.9 -0.1
baz=354
J58A Remsen 144.94 6 P **PKPdf** 06 07 56.6 -0.3
baz=352
SFIN Lafayette 145.00 22 P **PKPdf** 06 07 57.0 -0.1
baz=331
N47A Urbana 145.05 20 P **PKPdf** 06 07 56.9 -0.3
baz=334
JCT Junction City 145.13 47 P **PKPdf** 06 07 58.6 +0.8
baz=303
J61A Chester 145.14 2 P **PKPdf** 06 07 57.6 +0.3
baz=357
CCM Cathedral Cave 145.19 29 P **PKPdf** 06 07 57.4 -0.1
baz=323
J60A Lant Hill Farm 145.20 3 P **PKPdf** 06 07 57.7 +0.3
baz=356
K55A Perry 145.21 9 P **PKPdf** 06 07 57.6 +0.2
baz=347
K54A Basiliko Farm, 145.22 10 P **PKPdf** 06 07 57.5 +0.1
baz=346
J62A Henniker 145.28 1 P **PKPdf** 06 07 57.8 +0.3
baz=358
N48A Decatur 145.28 19 P **PKPbc** 06 07 57.1 -0.3
baz=335,SNR=5.6
K56A Middlesex 145.35 8 P **PKPdf** 06 07 58.2 +0.5
baz=349
K57A Scipio Center 145.43 7 P **PKPab** 06 07 58.5 +0.5
baz=350
L54A Sinclairville 145.47 11 P **PKPab** 06 07 58.3 +0.1
baz=345
N49A Columbus Grove 145.49 18 P **PKPab** 06 07 58.3 0.0
baz=336
K58A Earlville 145.50 6 P **PKPab** 06 07 58.3 0.0
baz=352
L53A Girard 145.54 12 P **PKPab** 06 07 58.5 -0.1
baz=343
L55A Hinsdale 145.68 10 P **PKPbc** 06 07 58.6 -0.1
baz=347
M51A Elyria 145.68 15 P **PKPab** 06 07 58.9 -0.1
baz=340
U40A Yellville 145.69 32 P **PKPab** 06 07 59.0 -0.3
baz=319
K61A Williamstown 145.78 3 P **PKPab** 06 07 59.2 -0.2
baz=356
O48A Farmland 145.79 20 P **PKPab** 06 07 59.2 -0.2
baz=334
K60A Five Rivers En 145.80 4 P **PKPab** 06 07 59.2 -0.1
baz=355
K63A Dunstable 145.83 1 P **PKPab** 06 07 59.2 -0.3
baz=359
K62A Royalston 145.83 2 P **PKPab** 06 07 59.4 -0.1
baz=358
L56A Greenwood 145.86 9 P **PKPbc** 06 07 59.2 0.0
baz=348
WHTX Lake Whitney, 145.90 43 P **PKPab** 06 08 00.4 +0.2
baz=308
N50A Nevada 145.94 17 P **PKPbc** 06 07 59.2 -0.3
baz=338
M53A WI Miller and 145.94 13 P **PKPbc** 06 07 59.3 -0.2
baz=342
HRV Adam Dziewonsk 146.01 1 P **PKPbc** 06 07 59.4 -0.2
baz=359
BINY Binghamton 146.02 7 P **PKPdf** 06 07 58.8 0.0
baz=351,SNR=6.0
N51A Ashland 146.02 16 P **PKPbc** 06 07 59.5 -0.2
baz=339
L61B Northampton 146.03 2 P **PKPbc** 06 07 59.6 -0.1
baz=357
W39A Magazine 146.03 35 P **PKPbc** 06 07 59.6 -0.3
baz=316
M54A Oil Creek Stat 146.10 12 P **PKPbc** 06 07 59.5 -0.4
baz=344
L57A Andrews Acres 146.10 8 P **PKPdf** 06 07 59.1 +0.1
baz=349,SNR=5.3
O49A Covington 146.12 19 P **PKPbc** 06 07 59.9 -0.1
baz=336,SNR=6.0
L59A Walton 146.13 6 P **PKPbc** 06 07 59.6 -0.5
baz=352,SNR=5.9
L58A Harry Jones Me 146.18 7 P **PKPbc** 06 08 00.2 0.0
baz=351,SNR=8.3
L61A Hillsdale 1, H 146.24 4 P **PKPbc** 06 08 00.3 0.0
baz=355
M55A Ridgway 146.31 11 P **PKPbc** 06 08 00.8 +0.2
baz=346
O50A Cable 146.38 18 P **PKPbc** 06 08 00.8 0.0
baz=337
M56A Emporium 146.40 10 P **PKPbc** 06 08 00.4 -0.5
baz=347,SNR=5.3
ACSO Alum Creek Sta 146.49 17 P **PKPbc** 06 08 00.6 -0.5
baz=338
N53A Lisbon 146.51 14 P **PKPbc** 06 08 00.8 -0.4
baz=342
N54A Moraine State 146.55 13 P **PKPbc** 06 08 01.2 -0.1
baz=343
P49A Miami Univ. Ec 146.58 20 P **PKPbc** 06 08 01.7 +0.3
baz=334
MIAR Mount Ida 146.62 35 P **PKPbc** 06 08 01.9 +0.2
baz=316
O51A Pataskala 146.67 17 P **PKPbc** 06 08 01.6 0.0
baz=338
M57A Sunshine Farm, 146.71 9 P **PKPbc** 06 08 01.7 -0.1
baz=349
M59A Waymart 146.73 6 P **PKPbc** 06 08 01.7 -0.1
baz=352
M58A Price's Panora 146.77 8 P **PKPbc** 06 08 01.8 -0.2
baz=350
P50A Jamestown 146.81 18 P **PKPbc** 06 08 01.9 -0.2
baz=336
W41B Gary Mavity, V 146.90 33 P **PKPbc** 06 08 02.3 -0.2
baz=319
O52A Adamsville 146.91 16 P **PKPbc** 06 08 02.1 -0.2
baz=340
N56A West Decatur 146.93 10 P **PKPbc** 06 08 02.7 +0.3
baz=346
N55A Marion Center 146.93 11 P **PKPbc** 06 08 02.6 +0.2
baz=345
M64A Tiverton 146.97 1 P **PKPbc** 06 08 02.7 +0.3
baz=359
M60A Port Jervis 147.02 5 P **PKPbc** 06 08 02.7 0.0
baz=353
M63A Gales Ferry 147.10 2 P **PKPbc** 06 08 02.4 -0.3
baz=358
M61A Granite Spring 147.11 4 P **PKPbc** 06 08 02.5 -0.4
baz=355
P51A Williamsport 147.16 18 P **PKPbc** 06 08 02.4 -0.6
baz=337
WCI Wyandotte Cave 147.18 23 P **PKPbc** 06 08 03.1 -0.1
baz=331
O54A Avella 147.21 14 P **PKPbc** 06 08 03.2 0.0
baz=342
N57A Milroy 147.21 9 P **PKPbc** 06 08 03.4 +0.3
baz=348
N58A Sunbury 147.26 8 P **PKPbc** 06 08 02.9 -0.3
baz=349,SNR=6.1
P52A Corning 147.28 16 P **PKPbc** 06 08 03.2 -0.2
baz=339
N59A State Game Lan 147.31 7 P **PKPbc** 06 08 02.9 -0.6
baz=351,SNR=11
PAL Palisades 147.40 4 P **PKPbc** 06 08 03.4 -0.2
baz=354
O55A Ligonier 147.42 12 P **PKPbc** 06 08 03.3 -0.5
baz=344
N60A Cedar Hill Far 147.43 6 P **PKPbc** 06 08 03.7 -0.1
baz=352
Q51A Peebles 147.49 18 P **PKPbc** 06 08 03.7 -0.3
baz=336
O56A Blue Knob Stat 147.51 11 P **PKPbc** 06 08 03.9 -0.2
baz=346
P53A Whipple 147.62 15 P **PKPbc** 06 08 04.6 +0.2
baz=340
O57A Amberson 147.73 10 P **PKPbc** 06 08 04.2 -0.5
baz=347
P54A Burton 147.74 14 P **PKPbc** 06 08 04.0 -0.7
baz=342
MCWV Mont Chateau 147.83 13 P **PKPbc** 06 08 04.5 -0.4
baz=343
O59A Robesonia 147.85 8 P **PKPbc** 06 08 05.2 +0.2
baz=350
Q52A Bidwell 147.87 17 P **PKPbc** 06 08 05.0 0.0
baz=338
O58A Lewisberry 147.93 9 P **PKPbc** 06 08 05.4 +0.2
baz=349
O60A Telford 147.94 7 P **PKPbc** 06 08 05.4 +0.3
baz=352
P55A Reedsville 147.98 13 P **PKPbc** 06 08 05.5 +0.1
baz=343
P56A Dayton Farm, R 148.19 12 P **PKPbc** 06 08 06.2 +0.3
baz=345
Q54A Coxs Mills 148.24 15 P **PKPbc** 06 08 05.9 -0.1
baz=341
WVT Waverly 148.33 27 P **PKPbc** 06 08 06.5 +0.2
baz=327
P57A Homestead Farm 148.37 11 P **PKPbc** 06 08 06.5 +0.1
baz=346
Q55A Buckhannon 148.41 14 P **PKPbc** 06 08 06.8 +0.2
baz=342
P60A Greenville 148.41 7 P **PKPbc** 06 08 06.6 +0.2
baz=351
P58A Pank, Wackersv 148.49 10 P **PKPbc** 06 08 06.5 -0.1
baz=348
R53A Hurricane 148.54 17 P **PKPbc** 06 08 07.0 +0.2
baz=339
Q57A Strasburg 148.73 11 P **PKPbc** 06 08 07.6 +0.3
baz=346
R54A Victor 148.95 16 P **PKPbc** 06 08 08.3 +0.4
baz=340
Q58A Fox Den Farm, 148.96 10 P **PKiKP** 06 08 08.7 -0.5
baz=347
R55A Marlinton 149.08 14 P **PKPbc** 06 08 08.7 +0.5
baz=342
Q61A Milford 149.37 7 P **PKiKP** 06 08 10.1 +0.1
baz=351
R57A Stanardsville 149.42 12 P **PKiKP** 06 08 10.1 -0.1
baz=345
R58A Rapidan 149.52 11 P **PKiKP** 06 08 10.2 -0.1
baz=346
T55A Pulaski 150.01 16 P **PKiKP** 06 08 11.1 -0.3
baz=340
S59A Mechanicsville 150.18 10 P **PKiKP** 06 08 11.7 0.0
baz=347
S58A Poland Farm, P 150.18 12 P **PKiKP** 06 08 11.7 0.0
baz=346
T57A Hurt 150.51 14 P **PKiKP** 06 08 12.4 -0.1
baz=343
U55A TA2, Sparta 150.51 17 P **PKiKP** 06 08 12.4 -0.2
baz=339
T58A Grand View Acr 150.72 13 P **PKiKP** 06 08 13.1 +0.3
baz=344
U56A King 150.84 16 P **PKiKP** 06 08 13.4 +0.3
baz=340
T59A Double "B" Far 150.90 11 P **PKiKP** 06 08 13.5 +0.3
baz=346
V54A Nebo 150.91 19 P **PKiKP** 06 08 13.5 +0.2
baz=337
U57A Blanch 151.03 14 P **PKiKP** 06 08 13.4 -0.1
baz=342
V55A Taylorsville 151.06 18 P **PKiKP** 06 08 13.8 +0.2
baz=338
U58A Oxford 151.25 13 P **PKiKP** 06 08 14.4 +0.5
baz=344
V56A Mocksville 151.31 16 P **PKiKP** 06 08 14.5 +0.4
baz=340
V57A Coltrane Farms 151.43 15 P **PKiKP** 06 08 14.7 +0.3
baz=341
KMSC Kings Mountain 151.68 18 P **PKiKP** 06 08 15.3 +0.4
baz=338
X54A Belton 151.88 21 P **PKiKP** 06 08 15.9 +0.6
baz=335
X55A Gracelyn & Ava 152.21 19 P **PKiKP** 06 08 16.2 +0.2
baz=337
X56A White Oak 152.38 18 P **PKiKP** 06 08 16.4 +0.1
baz=338

IDC ***08*** *05:57:52.7±1.1,52°.40S×13°.06E,h0km,mb3.8/3, mb1 4.0/3,mb1mx3.7/25,mbtmp3.8/3,MS3.4/1,Ms1 3.3/1, ms1mx2.9/20,Error ellipse: s-maj=56.2km s-min=37.0km az=55.0*

NEIC ***08*** *05:57:55.0±0.7,52°.4S±0°.1×12°.9E±0°.3,h10km±1km, mb4.1/5,Error ellipse: s-maj=29.8km s-min=19.2km az=73.0*

ISC 08 05:57:54.6±0.8,52°.4S±0°.2×12°.9E±0°.2,h10km,n13, σ0$66/11,mb4.0/4,Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**20.57**	**194**	P	**P**	**06 02 32.8**	**-0.4**
BOSA	**Boshof**	**25.47**	**26**	LR	LR	06 12 12.7	
comp=Z,81nm,18.4s,baz=174,slow=34							
QSPA	**South Pole Qui**	**37.84**	**180**	P	**P**	**06 05 11.8**	**+0.6**
QSPA				IAmb	IAmb	06 05 13.2	
comp=Z,6.1nm,1.1s							
RER	**Riviere de l'E**	**45.34**	**63**	P	**P**	**06 06 13.4**	**+0.5**
VNDA	**Vanda**	**48.92**	**171**	P	**P**	**06 06 39.3**	**-0.8**
comp=Z,0.5nm,0.7s,baz=269,slow=5.0,SNR=2.7							
VNDA	**Vanda**	**48.92**	**171**	P	**P**	**06 06 40.4**	**+0.3**
VNDA				IAmb	IAmb	06 06 48.3	
comp=Z,1.4nm,0.9s							
LPAZ	**La Paz**	**71.82**	**267**	P	**P**	**06 09 18.6**	**+0.4**
comp=Z,1.0nm,0.8s,baz=152,slow=6.3,SNR=2.9							
LPAZ	**La Paz**	**71.82**	**267**	IAmb	IAmb	06 09 23.9	
comp=Z,6.4nm,1.5s							
ASAR	**Alice Springs**	**88.51**	**128**	P	**P**	**06 10 47.4**	**0.0**
comp=Z,0.7nm,0.8s,baz=202,slow=5.4,SNR=4.7							
TIXI	**Tiksi**	**146.57**	**31**	PKPbc	**PKPdf**	**06 17 32.8**	**-0.3**
comp=Z,1.1nm,0.4s,baz=324,slow=0.8,SNR=5.5							
TIXI	**Tiksi**	**146.57**	**31**		**PKPbc**	**06 17 33.6**	**-1.0**
YKA	**Yellowknife Ar**	**150.82**	**311**	PKPbc	**PKPbc**	**06 17 45.1**	**-0.7**
comp=Z,1.7nm,0.8s,baz=100,slow=2.6,SNR=24							
ILAR	**Eielson Array**	**163.83**	**328**	PKPab	**PKPab**	**06 18 49.6**	**+0.5**
comp=Z,0.2nm,0.5s,baz=35,slow=3.3,SNR=5.2							

IDC 08 06:00:28.4±2.4,16°.68S×177°.68W,h0km,mb3.8/6,

mb1 4.2/6, mb1mx3.8/39, mbtmp3.8/6, Error ellipse: s-maj=201.1km s-min=22.7km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.55**	**258**	P	P	06 08 50.7	+0.4
	0.5nm,0.3s,baz=97,slow=7.2,SNR=9.0						
ASAR	**Alice Springs**	**45.80**	**253**	P	P	06 08 52.0	-0.4
	0.9nm,0.4s,baz=90,slow=7.8,SNR=17						
NVAR	**Mina Array Bea**	**78.06**	**44**	P	P	06 12 31.4	+2.0
	0.6nm,0.6s,baz=224,slow=8.1,SNR=5.8						
TXAR	**Lajitas Array**	**84.75**	**57**	P	P	06 13 04.5	-0.5
	1.2nm,0.7s,baz=216,slow=6.0,SNR=10						
PDAR	**Pinedale Array**	**85.98**	**43**	P	P	06 13 10.3	-0.7
	0.5nm,0.7s,baz=221,slow=4.3,SNR=4.4						
YKA	**Yellowknife Ar**	**92.93**	**24**	P	P	06 13 41.1	-1.9
	0.1nm,0.6s,baz=237,slow=4.5,SNR=2.8						

*NNC **08** 06:17:09.8±5.0,54.°19N×86.°85E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=41.1km s-min=33.0km az=173.0, Suspected Mining explosion.*
*KRAR **08** 06:17:22.7±0.1,54.°29N×87.°31E, M2.3, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
ASRS 08 06:17:04.3,54.°50N×87.°01E, M1.7, 4C-5D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**6.36**	**237**	⇓Pn	Pn	06 18 41.0	+1.8
	1.9nm,0.9s						
KURK				⇑Sn	Sn	06 19 53.5	+1.0
	1.9nm,0.8s						
KURK				⇑Lg	Lg	06 20 30.6	
	5.6nm,0.9s						
KURBB	**Kurchatov Arra**	**6.46**	**237**	⇓Pn	Pn	06 18 42.5	+1.9
	2.6nm,0.6s						
KURBB				⇓Sn	Sn	06 19 53.8	-1.2
	2.5nm,0.6s						
KURBB				⇓Lg	Lg	06 20 31.5	
	18nm,0.9s						
MK31	**Makanchi Array**	**8.27**	**203**	⇑Pn	Pn	06 19 08.5	+3.0
	0.4nm,0.4s,baz=26,slow=13,SNR=33						
MK31				⇓Sn	Sn	06 20 37.8	-1.7
	1.4nm,0.7s						
MK31				⇑Lg	Lg	06 21 21.0	
	7.7nm,1.3s,baz=28,slow=34,SNR=4.5						

*SJA **08** 06:22:44.6±0.7,24.°32S×67.°29W, h187km±8km, ML3.6, MW3.6*
*GUC **08** 06:22:46.6±0.8,24.°23S×67.°67W, h200km±13km, ML4.1*
*IDC **08** 06:22:49.9±1.0,23.°57S×67.°37W, h212km±23km, mb1 3.2/4, mb1mx3.0/21, mbtmp3.7/4, Error ellipse: s-maj=33.7km s-min=20.4km az=140.0*
ISC 08 06:22:45.3±1.1,24.°25S±0.°06×67.°34W±0.°04, h184km±11km, n30, σ1s22/45, 2C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AZAP	**Zapla**	**2.07**	**90**	*i* P	**Pn**	**06 23 23.8**	**+0.1**
AZAP				*e*S	**Sn**	**06 23 52.5**	**-1.0**
LVC	**Limon Verde**	**2.18**	**318**	P	**Pn**	**06 23 26.2**	**+1.2**
	7.1nm,0.3s,baz=142,slow=8.3,SNR=78						
LVC				S	**Sn**	**06 23 55.9**	**+0.2**
	34nm,0.3s,baz=318,slow=23,SNR=68						
PB15	**IPOC Station P**	**2.21**	**298**	*e*P	**Pn**	**06 23 26.4**	**+1.2**
PB15				*i* S	**Sn**	**06 23 56.0**	**-0.1**
PB15	**IPOC Station P**	**2.21**	**298**	*i* P	**Pn**	**06 23 26.4**	**+1.2**
PB15				*e*S	**Sn**	**06 23 56.8**	**+0.7**
GO02	**Mina Guanaco**	**2.24**	**246**	*e*P	**Pn**	**06 23 26.6**	**+1.0**
GO02				*i* S	**Sn**	**06 23 57.0**	**+0.1**
GO02				IAML		06 23 58.9	
	comp=N,602nm,0.3s						
PB06	**IPOC Station P**	**2.56**	**306**	*e*P	**Pn**	**06 23 30.2**	**+1.0**
PB06				*i* S	**Sn**	**06 24 02.4**	**-0.8**
PB06				IAML		06 24 04.7	
	comp=N,646nm,0.1s						
PB06	**IPOC Station P**	**2.56**	**306**	*i* P	**Pn**	**06 23 30.2**	**+1.0**
PB06				*e*S	**Sn**	**06 24 03.4**	**+0.2**
PB06				IAML		06 24 05.1	
	comp=Z,286nm,0.1s						
YJA	**Yavi**	**2.66**	**39**	*i* P	**Pn**	**06 23 31.7**	**+1.1**
YJA				*e*S	**Sn**	**06 24 06.1**	**+0.4**
PB14	**IPOC Station P**	**2.82**	**262**	⇓*i* P	**Pn**	**06 23 32.9**	**+0.6**
PB14				*e*S	**Sn**	**06 24 07.6**	**-1.2**
PB14	**IPOC Station P**	**2.82**	**262**	*i* P	**Pn**	**06 23 32.9**	**+0.6**
PB14				IAML		06 24 11.2	
	comp=Z,46nm,0.2s						
PB05	**IPOC Station P**	**2.97**	**297**	*e*P	**Pn**	**06 23 34.5**	**+0.5**
PB05				*i* S	**Sn**	**06 24 09.7**	**-2.1**
PB05	**IPOC Station P**	**2.97**	**297**	*i* P	**Pn**	**06 23 34.8**	**+0.8**
PB05				IAML		06 24 16.3	
	comp=Z,73nm,0.3s						
PB09	**IPOC Station P**	**3.01**	**324**	⇓*i* P	**Pn**	**06 23 36.1**	**+1.6**
PB09				*i* S	**Sn**	**06 24 12.5**	**-0.2**
PB09				IAML		06 24 14.2	
	comp=N,117nm,0.2s						
PB09	**IPOC Station P**	**3.01**	**324**	*i* P	**Pn**	**06 23 36.0**	**+1.6**
PB09				IAML		06 24 18.6	
	comp=Z,97nm,0.5s						
PB10	**IPOC Station P**	**3.03**	**283**	*e*P	**Pn**	**06 23 35.2**	**+0.7**
PB10				*i* S	**Sn**	**06 24 11.4**	**-1.6**
PB10	**IPOC Station P**	**3.03**	**283**	*i* P	**Pn**	**06 23 35.5**	**+1.0**
PB10				IAML		06 24 18.6	
	comp=Z,88nm,0.4s						
PB03	**IPOC Station P**	**3.12**	**314**	⇑*i* P	**Pn**	**06 23 36.5**	**+0.7**
PB03				*i* S	**Sn**	**06 24 13.8**	**-1.4**
PB03				IAML		06 24 15.2	
	comp=E,291nm,0.2s						
PB03	**IPOC Station P**	**3.12**	**314**	*i* P	**Pn**	**06 23 36.5**	**+0.7**
PB03				IAML		06 24 19.3	
	comp=Z,258nm,0.2s						
PB04	**IPOC Station P**	**3.21**	**306**	⇓*i* P	**Pn**	**06 23 37.8**	**+0.8**
PB04				*i* S	**Sn**	**06 24 15.3**	**-1.9**
PB04				IAML		06 24 17.1	
	comp=E,350nm,0.2s						
PB04	**IPOC Station P**	**3.21**	**306**	*i* P	**Pn**	**06 23 37.8**	**+0.8**
PB04				IAML		06 24 22.1	
	comp=Z,125nm,0.3s						
PB07	**IPOC Station P**	**3.44**	**316**	⇑*i* P	**Pn**	**06 23 40.4**	**+0.7**
PB07				*i* S	**Sn**	**06 24 20.2**	**-2.0**
PB07				IAML		06 24 25.7	
	comp=E,228nm,0.3s						
PB07	**IPOC Station P**	**3.44**	**316**	*i* P	**Pn**	**06 23 40.5**	**+0.7**
PB07				IAML		06 24 25.2	
	comp=Z,157nm,0.1s						
PB02	**IPOC Station P**	**3.75**	**321**	⇓*i* P	**Pn**	**06 23 43.9**	**+0.3**
PB02				*e*S	**Sn**	**06 24 27.1**	**-2.0**
PB02				IAML		06 24 29.9	
	comp=E,186nm,0.3s						
PB01	**IPOC Station P**	**3.76**	**328**	*e*P	**Pn**	**06 23 44.3**	**+0.6**
PB01				*e*S	**Sn**	**06 24 27.4**	**-1.9**
PB01				IAML		06 24 30.6	
	comp=E,115nm,0.3s						
GO03	**Copiap**	**4.23**	**217**	*i* P	**Pn**	**06 23 48.8**	**-0.7**
CPUP	**Villa Florida**	**9.29**	**105**	P	Pn	06 25 03.6	+8.0
	comp=E,0.1nm,0.3s,baz=282,slow=15,SNR=5.2						
SIV	**San Ignacio**	**10.11**	**37**	P	**Pn**	**06 25 03.9**	**-2.4**
	comp=E,0.7nm,0.3s,baz=228,slow=13,SNR=17						
PLCA	**Paso Flores**	**16.66**	**189**	P	Pn	06 26 37.1	+8.8
	comp=E,0.1nm,0.3s,baz=358,slow=9.0,SNR=6.3						
BDFB	**Brasilia**	**20.07**	**68**	P	**P**	**06 27 04.6**	**-0.2**
	comp=E,0.4nm,0.3s,baz=253,slow=9.6,SNR=5.6						
WRA	**Warramunga Arr**	**131.26**	**208**	PKP	**PKiKP**	**06 41 39.8**	**+2.5**
	comp=E,0.5nm,0.8s,baz=150,slow=1.8,SNR=2.0						

*ANF **08** 06:39:23.9±0.2,33.°95N×118.°17W, h20km±2km, ML3.4/25, Error ellipse: s-maj=1.5km s-min=1.3km az=107.0*
*NEIC **08** 06:39:24.4±1.4,33.°98N±0.°02×118.°17W±0.°02, h20km±2km, Error ellipse: s-maj=2.9km s-min=2.4km az=205.0*
*SCEDC **08** 06:39:25.0,33.°96N×118.°19W, h16km*
*PAS **08** 06:39:24.9±1.6,33.°957N±0.°007×118.°188W±0.°009, h14km±1km, ML3.3/171, Error ellipse: s-maj=1.0km s-min=1.0km az=138.0*
ISC 08 06:39:24.6±0.8,33.°95N±0.°01×118.°18W±0.°01, h18km±2km, n135, σ0s72/180, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WTT2	**Watts, South G**	**0.06**	**269**		**Pg**	**06 39 28.0**	**+0.1**
WTT2					**Sg**	**06 39 30.7**	**+0.5**
USC	**University of**	**0.11**	**309**		**Pg**	**06 39 28.3**	**-0.1**
USC					**Sg**	**06 39 31.2**	**+0.3**
GVRC	**Garvey Reservo**	**0.11**	**28**		**Pg**	**06 39 28.3**	**-0.1**
GVRC					**Sg**	**06 39 31.4**	**+0.4**
DLAC	**Del Amo**	**0.12**	**145**		**Pg**	**06 39 29.2**	**+0.7**
DLAC					**Sg**	**06 39 33.2**	**+2.1**
RHC	**Rose Hills Cem**	**0.15**	**70**		**Pg**	**06 39 28.9**	**+0.1**
RHC					**Sg**	**06 39 32.2**	**+0.4**
BHPC	**Baldwin Hills**	**0.15**	**285**		**Pg**	**06 39 29.0**	**+0.1**
BHPC					**Sg**	**06 39 32.6**	**+0.7**
LCGC	**La Cienega, Cu**	**0.17**	**287**		**Pg**	**06 39 29.2**	**+0.1**
GSA	**Caltech--GSA**	**0.19**	**14**		**Pg**	**06 39 29.0**	**-0.2**
GSA					**Sb**	**06 39 32.2**	**+0.1**
CACC	**Caltech Cellar**	**0.19**	**15**		**Pb**	**06 39 29.0**	**-0.2**
CACC					**Sb**	**06 39 32.4**	**+0.2**
GR2C	**Griffith Obs.**	**0.19**	**330**		**Pb**	**06 39 28.8**	**-0.5**
CBCC	**Caltech Broad**	**0.20**	**14**		**Pb**	**06 39 29.1**	**-0.2**
CBCC					**Sb**	**06 39 32.4**	**+0.1**
BREC	**Barre Substati**	**0.22**	**130**		**Pb**	**06 39 30.4**	**+0.6**
PASC	**Pasadena Art C**	**0.22**	**359**	Pg	**Pg**	**06 39 29.1**	**-0.7**
PASC				Sg	**Sb**	**06 39 32.4**	**-0.9**
FULC	**Fullerton**	**0.23**	**110**		**Pb**	**06 39 31.1**	**+1.1**
FMP	**Fort Macarthur**	**0.25**	**201**	P	**Pg**	**06 39 30.2**	**-0.2**
	baz=19,SNR=34						
FMP				S	**Sg**	**06 39 33.9**	**-0.4**
	baz=19						
FMP	**Fort Macarthur**	**0.25**	**201**		**Pg**	**06 39 30.2**	**-0.2**
HLLC	**North Hollywoo**	**0.27**	**327**		**Pg**	**06 39 30.2**	**-0.5**
HLLC					**Sg**	**06 39 33.8**	**-1.0**
DJJ	**Donna J Jenkin**	**0.28**	**305**		**Pg**	**06 39 29.9**	**-0.8**
RPV	**Rancho Palos V**	**0.28**	**222**		**Sg**	**06 39 34.8**	**-0.2**
DECC	**Green Verdugo**	**0.33**	**338**	P	**Pg**	**06 39 31.0**	**-0.6**
	baz=158,SNR=117						
DECC				S	**Sg**	**06 39 35.6**	**-0.8**
	baz=158						
DECC	**Green Verdugo**	**0.33**	**338**		**Pg**	**06 39 31.0**	**-0.6**
PEM	**Pine Mountain**	**0.34**	**50**		**Pg**	**06 39 31.4**	**-0.4**
PSRC	**Puddingstone R**	**0.34**	**66**		**Pg**	**06 39 31.7**	**-0.2**
PSRC					**Sg**	**06 39 36.8**	**-0.1**
SANC	**Santa Ana**	**0.35**	**135**		**Pg**	**06 39 31.9**	**0.0**
CHFC	**Chilao Flat St**	**0.40**	**19**		**Pg**	**06 39 32.4**	**-0.6**
CHNC	**Chino**	**0.42**	**83**		**Pg**	**06 39 33.2**	**0.0**
CHNC					**Sb**	**06 39 40.0**	**+0.4**
XTL	**Crystal Lake,**	**0.44**	**38**		**Pg**	**06 39 33.0**	**-0.6**
IR2C	**Iron Canyon**	**0.47**	**338**		**Pg**	**06 39 33.5**	**-0.7**
SSK	**Sunset Peak**	**0.48**	**57**		**Pg**	**06 39 34.0**	**-0.4**
MLSC	**Mira Loma**	**0.52**	**84**		**Pg**	**06 39 34.5**	**-0.5**
MLSC					**Sg**	**06 39 41.6**	**-0.4**
PT2	**Point Dume**	**0.52**	**276**		**Pg**	**06 39 34.7**	**-0.4**
BFSC	**Mount Baldy Ra**	**0.52**	**56**	P	**Pg**	**06 39 34.4**	**-0.7**
	baz=238,SNR=58						
BFSC				S	**Sg**	**06 39 41.4**	**-0.9**
	baz=238						
BFSC	**Mount Baldy Ra**	**0.52**	**56**		**Pg**	**06 39 34.2**	**-1.0**
AGOC	**Agoura**	**0.52**	**292**		**Pg**	**06 39 34.6**	**-0.6**
JNH	**Juniper Hills**	**0.53**	**21**		**Pg**	**06 39 34.6**	**-0.7**
JNH					**Sg**	**06 39 41.8**	**-0.8**
HOLC	**Holcomb Ridge**	**0.58**	**29**		**Pg**	**06 39 35.5**	**-0.7**
CIAC	**Catalina I. Ai**	**0.58**	**199**		**Pg**	**06 39 35.9**	**-0.2**
CIAC					**Sb**	**06 39 45.3**	**+1.2**
CIS	**Catalina Islan**	**0.58**	**200**	P	**Pg**	**06 39 35.9**	**-0.2**
	baz=19,SNR=91						
CIS				S	**Sb**	**06 39 44.9**	**+0.8**
	baz=19						
CJV	**Casa Juvan**	**0.58**	**3**		**Pg**	**06 39 35.5**	**-0.7**
LRRC	**Littlerock Res**	**0.59**	**13**		**Pg**	**06 39 35.7**	**-0.6**
SSZ	**San Sevaine**	**0.62**	**65**		**Pb**	**06 39 36.5**	**-0.4**
RVR	**Riverside**	**0.67**	**86**		**Pb**	**06 39 37.1**	**-0.7**
RVR					**Sb**	**06 39 46.6**	**-0.1**
LEOC	**Leona Valley**	**0.69**	**352**		**Pb**	**06 39 37.2**	**-0.8**
SME	**Santa Rosa Min**	**0.70**	**100**		**Pb**	**06 39 37.5**	**-0.8**
RSBC	**Riverside Bore**	**0.71**	**88**		**Pb**	**06 39 38.0**	**-0.4**
RSBC					**Sb**	**06 39 47.7**	**-0.1**
RSBC	**Riverside Bore**	**0.71**	**88**		**Pb**	**06 39 38.0**	**-0.4**
RSBC					**Sb**	**06 39 47.8**	**-0.1**
ALPC	**Antelope**	**0.74**	**353**		**Pb**	**06 39 38.3**	**-0.7**
ALPC					**Sb**	**06 39 48.0**	**-0.9**
CFSC	**Central Fire S**	**0.76**	**78**		**Pb**	**06 39 39.4**	**+0.1**
CSP	**Cedar Springs**	**0.77**	**63**		**Pb**	**06 39 38.9**	**-0.5**
PYR	**Pyramid**	**0.77**	**323**		**Pb**	**06 39 39.4**	**-0.2**
FOXC	**Fox Airport**	**0.79**	**357**		**Pb**	**06 39 39.3**	**-0.6**
SBB	**Saddle Back Bu**	**0.79**	**22**		**Pb**	**06 39 39.1**	**-0.8**
BTPC	**Burnt Peak**	**0.80**	**336**		**Pb**	**06 39 39.3**	**-0.8**
BTPC					**Sb**	**06 39 50.0**	**-0.6**
OSI	**Osito Audit: C**	**0.80**	**326**	P	**Pb**	**06 39 39.8**	**-0.2**
	baz=146,SNR=34						
OSI				S	**Sb**	**06 39 50.8**	**+0.3**
	baz=146						
OSI	**Osito Audit: C**	**0.80**	**326**		**Pb**	**06 39 39.8**	**-0.2**
OSI	**Osito Audit: C**	**0.80**	**326**		**Sb**	**06 39 50.8**	**+0.3**
SBI	**Santa Barbara**	**0.85**	**237**		**Pb**	**06 39 40.9**	**+0.2**
SBI					**Sb**	**06 39 51.7**	**0.0**
PEC	**Perris**	**0.85**	**94**		**Pb**	**06 39 40.3**	**-0.6**
ADO	**Adelanto Recei**	**0.86**	**46**		**Pb**	**06 39 41.0**	**-0.1**
ADO					**Sb**	**06 39 52.0**	**-0.3**
MURC	**Murrieta**	**0.89**	**113**	P	**Pb**	**06 39 40.7**	**-0.9**
	baz=294,SNR=74						
MURC				S	**Sb**	**06 39 52.8**	**-0.3**
	baz=294						
MURC	**Murrieta**	**0.89**	**113**		**Pb**	**06 39 40.7**	**-0.9**
MURC					**Sb**	**06 39 53.2**	**0.0**
CFT	**Crafton Hills**	**0.89**	**84**		**Pb**	**06 39 41.2**	**-0.4**
STCC	**Santa Clara**	**0.90**	**293**		**Pg**	**06 39 42.3**	**+0.1**
SVD	**Seven Oaks Dam**	**0.91**	**80**		**Pb**	**06 39 41.2**	**-0.8**
TPO	**Tropico Hills**	**0.93**	**358**		**Pb**	**06 39 41.6**	**-0.6**
VTV	**Victorville**	**0.93**	**49**		**Pb**	**06 39 41.9**	**-0.4**
VTV					**Sb**	**06 39 54.0**	**-0.4**
EDW2	**Edwards Air Fo**	**0.94**	**9**	P	**Pb**	**06 39 41.9**	**-0.5**
	baz=190,SNR=142						
EDW2				S	**Sb**	**06 39 54.8**	**+0.2**
	baz=190						
EDW2	**Edwards Air Fo**	**0.94**	**9**		**Pb**	**06 39 41.9**	**-0.5**
BACC	**Bachelor Mtn.**	**1.01**	**109**		**Pb**	**06 39 42.4**	**-1.1**
HMTC	**Hemet**	**1.01**	**103**		**Pb**	**06 39 42.8**	**-0.8**
HMTC					**Sb**	**06 39 56.5**	**-0.1**
SCI2	**San Clemente I**	**1.01**	**198**	P	**Pb**	**06 39 43.1**	**-0.5**
	baz=17,SNR=9.1						
SCI2				S	**Sb**	**06 39 56.8**	**+0.2**
	baz=17						
DGR	**Domenigoni Val**	**1.02**	**107**		**Pb**	**06 39 42.9**	**-0.9**
DGR					**Sb**	**06 39 56.6**	**-0.3**
BTL	**Butler Peak**	**1.03**	**72**		**Pb**	**06 39 43.4**	**-0.6**
THC	**Tehachapi Micr**	**1.03**	**338**		**Pb**	**06 39 43.7**	**-0.4**
HYS	**Haystack Butte**	**1.04**	**29**		**Pb**	**06 39 43.8**	**-0.4**
BBRC	**Big Bear Solar**	**1.09**	**73**	Pb	**Pb**	**06 39 44.6**	**-0.5**
	baz=254,SNR=42						
BBRC	**Big Bear Solar**	**1.09**	**73**		**Pb**	**06 39 44.5**	**-0.6**
GORC	**Green Oak Ranc**	**1.12**	**135**		**Pn**	**06 39 44.0**	**-1.4**
GORC					**Sb**	**06 39 59.5**	**-0.2**
TJR	**Tejon Ranch**	**1.17**	**337**		**Pn**	**06 39 46.1**	**0.0**
MPI	**Mount Pinos, F**	**1.17**	**317**		**Pn**	**06 39 45.7**	**-0.7**
RYS	**Reyes Peak**	**1.19**	**306**		**Pn**	**06 39 46.7**	**+0.2**
CCAC	**Calif City Air**	**1.21**	**6**		**Pn**	**06 39 46.9**	**+0.2**
SCZ2	**Santa Cruz Isl**	**1.21**	**273**	Pb	**Pn**	**06 39 46.7**	**+0.1**
	baz=91,SNR=6.1						
SCZ2				S	**Sb**	**06 40 02.2**	**0.0**
	baz=91						
PLM	**Palomar**	**1.25**	**118**		**Pn**	**06 39 46.7**	**-0.6**
CRY	**Cary Ranch**	**1.26**	**107**		**Pn**	**06 39 47.2**	**-0.3**
ARVC	**Arvin**	**1.29**	**336**	Pb	**Pn**	**06 39 48.1**	**+0.4**
	baz=155,SNR=66						
ARVC	**Arvin**	**1.29**	**336**		**Pn**	**06 39 48.1**	**+0.4**
SNCC	**San Nicolas Is**	**1.32**	**238**	P	**Pn**	**06 39 47.2**	**-0.9**
	baz=57						
SNCC				S	**Sn**	**06 40 03.6**	**-1.7**
	baz=57						
SNCC	**San Nicolas Is**	**1.32**	**238**		**Pn**	**06 39 48.3**	**+0.1**
TEJ	**El Tejon**	**1.34**	**342**		**Pn**	**06 39 49.0**	**+0.5**
BZNA	**Buzz No.'s Pla**	**1.34**	**109**		**Pn**	**06 39 48.1**	**-0.4**
RRX	**Edison Barstow**	**1.35**	**46**		**Pb**	**06 39 49.8**	**+0.5**
SBC	**Santa Barbara**	**1.36**	**292**	P	**Pn**	**06 39 48.1**	**-0.6**
	baz=110						
SBC				S	**Sn**	**06 40 06.5**	**+0.2**
	baz=110						
SNDA	**J Saunders Pla**	**1.37**	**106**		**Pn**	**06 39 48.9**	**0.0**
HWB	**Hans Werner Br**	**1.38**	**132**		**Pn**	**06 39 48.1**	**-0.9**
109C	**Camp Elliot, M**	**1.39**	**139**	P	**Pn**	**06 39 47.9**	**-1.1**
	baz=320,SNR=46						
109C				S	**Sn**	**06 40 06.3**	**-0.7**
	baz=320						
109C	**Camp Elliot, M**	**1.39**	**139**		**Pn**	**06 39 48.3**	**-0.8**
CPE	**Camp Elliot**	**1.39**	**139**		**Pn**	**06 39 48.1**	**-1.0**
FRD	**Ford Ranch, An**	**1.39**	**109**		**Pn**	**06 39 49.1**	**-0.2**
FRD	**Ford Ranch, An**	**1.39**	**109**		**Pn**	**06 39 49.0**	**-0.2**
DPP	**Dos Picos Cty**	**1.41**	**132**		**Pn**	**06 39 48.4**	**-1.0**
BCW	**Bitter Crk WRg**	**1.42**	**315**		**Pn**	**06 39 50.2**	**+0.7**
JFS	**Joseph F. Stat**	**1.46**	**17**		**Pn**	**06 39 52.2**	**+0.9**
PFO	**Pinyon Flats O**	**1.47**	**103**	Pb	**Pn**	**06 39 50.4**	**0.0**
	baz=284,SNR=32						
PFO				S	**Sn**	**06 40 09.1**	**-0.1**
	baz=284						
PFO	**Pinyon Flats O**	**1.47**	**103**		**Pn**	**06 39 50.8**	**+0.4**
PFO				Sn	**Sn**	**06 40 09.8**	**+0.6**
EW2	**E Wide Canyon**	**1.48**	**90**		**Pn**	**06 39 50.8**	**+0.5**
XPFO	**Pion Flat**	**1.48**	**103**		**Pn**	**06 39 50.5**	**+0.1**
XPFO				Sn	**Sb**	**06 40 10.5**	**+0.4**
BLAC	**Blackrock camp**	**1.50**	**85**		**Pb**	**06 39 51.8**	**-0.1**
EML	**El Monte Cty P**	**1.54**	**133**		**Pn**	**06 39 50.5**	**-0.6**
LRMC	**Laurel Mtn Rad**	**1.58**	**15**	S	**Sn**	**06 40 12.0**	**+0.1**
	baz=196						
SDRC	**San Diego Road**	**1.59**	**139**		**Pn**	**06 39 51.5**	**-0.4**
PKM	**Mcpherson Peak**	**1.64**	**305**	Pb	**Pn**	**06 39 53.2**	**+0.5**
	baz=124,SNR=20						
PKM				Sb	**Sb**	**06 40 15.5**	**+0.7**
	baz=124						
FIGC	**Figueroa Mtn.**	**1.68**	**298**		**Pn**	**06 39 53.8**	**+0.6**
ISA	**Isabella, Lake**	**1.73**	**352**	Pb	**Pn**	**06 39 54.6**	**+0.8**
	baz=172,SNR=56						
ISA	**Isabella, Lake**	**1.73**	**352**		**Pn**	**06 39 54.3**	**+0.6**
WHFM	**Hanning Flat**	**1.75**	**356**		**Pn**	**06 39 54.8**	**+0.7**
GSC	**Goldstone, Bar**	**1.76**	**40**	P	**Pn**	**06 39 54.2**	**-0.1**
	baz=221,SNR=95						
GSC	**Goldstone, Bar**	**1.76**	**40**		**Pn**	**06 39 55.0**	**+0.7**
BAR	**Barrett**	**1.79**	**135**		**Pn**	**06 39 54.3**	**-0.3**
MONP2	**Monument Peak**	**1.81**	**125**	P	**Pn**	**06 39 54.5**	**-0.5**
	baz=306,SNR=12						
MONP2				Sb	**Sb**	**06 40 19.6**	**-0.2**
	baz=306						
BELC	**Belle Mtn. Jos**	**1.82**	**88**	Sb	**Sb**	**06 40 19.7**	**-0.2**
	baz=269						
SMMC	**Simmler**	**2.02**	**313**	S	**Sn**	**06 40 22.9**	**+0.2**
	baz=132						
MPMC	**Manual Prospec**	**2.18**	**15**	P	**Pn**	**06 39 59.3**	**-0.8**
	baz=196,SNR=87						
TUQ	**Turquoise Moun**	**2.38**	**51**	Sb	**Sb**	**06 40 37.7**	**+1.6**
	baz=232						
CWC	**Cottonwood Cre**	**2.49**	**2**	Sb	**Sb**	**06 40 41.8**	**+2.7**
	baz=182						
GLA	**Glamis**	**2.94**	**107**		**Pn**	**06 40 11.9**	**+1.4**
Y12C	**Blythe**	**3.05**	**93**		**Pn**	**06 40 13.0**	**+1.0**
TPNV	**Topopah Spring**	**3.38**	**27**		**Pn**	**06 40 19.0**	**+2.3**
SHPR	**Sheep Range**	**3.55**	**43**		**Pn**	**06 40 20.6**	**+1.7**
OMMB	**Old Mammoth Mi**	**3.71**	**350**		**Pn**	**06 40 24.0**	**+2.7**
W13A	**Hualapai Mount**	**3.73**	**71**		**Pn**	**06 40 21.8**	**+0.4**
SAO	**San Andreas Ge**	**3.87**	**317**	Pn	**Pn**	**06 40 23.6**	**+0.4**
LCMT	**Little Creek M**	**5.06**	**51**	Pn	**Pn**	**06 40 40.6**	**+0.9**
U15A	**North Rim**	**5.42**	**61**	Pn	**Pn**	**06 40 44.9**	**+0.2**
VCNR	**Virginia City**	**5.46**	**348**	Pn	**Pn**	**06 40 47.7**	**+2.4**

*IDC **08** 06:41:00.9±2.2,21.°62N×143.°06E, h309km±19km, mb3.3/9, mb1 3.4/10, mb1mx3.0/59, mbtmp4.0/10, Error ellipse: s-maj=34.2km s-min=16.3km az=84.0*
ISC 08 06:41:01.0±1.3,21.°6N±0.°1×143.°0E±0.°3, h311km, n10, σ0s41/11, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.51**	**352**	P	**Pn**	**06 42 24.7**	**-0.2**
	6.2nm,0.3s,baz=191,slow=19,SNR=1.3						
JCJ				S	**S**	**06 43 32.3**	**-0.2**
	5.2nm,0.3s,baz=260,slow=21,SNR=1.3						
KSRS	**Korea Array**	**20.50**	**324**	P	**P**	**06 45 16.6**	**+0.4**
	1.9nm,0.6s,baz=142,slow=8.9,SNR=7.0						
KLR	**Kul'dur**	**28.99**	**345**	P	**P**	**06 46 32.8**	**+0.3**
	1.5nm,0.5s,baz=166,slow=9.4,SNR=7.4						
WRA	**Warramunga Arr**	**42.16**	**192**	P	**P**	**06 48 24.0**	**0.0**
	0.6nm,0.7s,baz=17,slow=9.0,SNR=12						
MKAR	**Makanchi Array**	**54.65**	**313**	P	**P**	**06 49 58.5**	**+0.1**
	0.3nm,0.5s,baz=79,slow=10,SNR

21nm,0.2s
DJR Lg Lg 06 44 57.8
124nm,0.4s
MNBS Baschi 2.09 313 *e*P **Pn 06 44 37.0 +1.2**
0.9nm,0.3s
MNBS *e*S **Sg 06 45 07.7 +1.1**
1.1nm,0.3s
MNBS Baschi 2.09 313 Pg **Pn 06 44 37.0 +1.2**
0.9nm,0.3s
MNBS Lg Lg 06 45 07.7
1.1nm,0.3s
ANVS Anan'yevo 2.10 274 ⇓*i*P **Pn 06 44 35.7 -0.2**
baz=78
ANVS ⇓*i*S **Sb 06 45 04.8 -0.2**
baz=78
ARXS Arharly 2.49 309 *e*P **Pb 06 44 43.8 -1.3**
48nm,0.3s
ARXS *e*S **Sg 06 45 20.1 +0.5**
60nm,0.4s
ARXS Arharly 2.49 309 Pg **Pb 06 44 43.8 -1.3**
48nm,0.3s
ARXS Lg Lg 06 45 20.1
60nm,0.4s
KDJ Kajisay 2.52 259 ⇑*i*P **Pn 06 44 40.9 -0.9**
baz=64
KDJ ⇑*i*S **Sn 06 45 14.0 +0.8**
baz=64
KOTS Kotyrbulak 2.56 284 *e*P **Pb 06 44 44.8 -1.5**
50nm,0.2s
KOTS *e*S **Sg 06 45 21.3 -0.4**
440nm,0.4s
KOTS Kotyrbulak 2.56 284 Pg **Pb 06 44 44.8 -1.5**
50nm,0.2s
KOTS Lg Lg 06 45 21.3
440nm,0.4s
MDOK Medeo 2.59 282 ⇑Pg **Pn 06 44 44.5 +1.8**
12nm,0.4s
MDOK ⇓Lg Lg 06 45 22.6
72nm,0.5s
KNDC Almaty 2.66 283 ⇓Pg **Pb 06 44 46.8 -1.2**
28nm,0.7s
KNDC ⇓Lg Lg 06 45 26.3
172nm,0.9s
AAA Alma-Ata 2.69 283 *e*P **Pb 06 44 47.6 -0.9**
39nm,0.2s
AAA *e*S **Sg 06 45 25.9 -0.1**
96nm,0.4s
AAA Alma-Ata 2.69 283 Pg **Pb 06 44 47.6 -0.9**
39nm,0.2s
AAA Lg Lg 06 45 25.9
96nm,0.4s
KAPS Kapalarasan 2.75 343 *e*P **Pb 06 44 48.9 -0.6**
7.4nm,0.2s
KAPS *e*S **Sg 06 45 28.1 +0.3**
124nm,0.5s
KAPS Kapalarasan 2.75 343 Pg **Pb 06 44 48.9 -0.6**
7.4nm,0.2s
KAPS Lg Lg 06 45 28.1
124nm,0.5s
CHKK Chushkaly 2.83 296 *e*P **Pb 06 44 49.4 -1.5**
13nm,0.3s
CHKK *e*S **Sg 06 45 28.9 -1.6**
49nm,0.2s
CHKK Chushkaly 2.83 296 Pg **Pb 06 44 49.4 -1.5**
13nm,0.3s
CHKK Lg Lg 06 45 28.9
49nm,0.2s
IZV Izvestkoviy 2.89 279 *e*P **Pb 06 44 50.4 -1.5**
14nm,0.5s
IZV *e*S **Sg 06 45 31.3 -1.0**
187nm,0.6s
IZV Izvestkoviy 2.89 279 Pg **Pb 06 44 50.4 -1.5**
14nm,0.5s
IZV Lg Lg 06 45 31.3
187nm,0.6s
KTBS Karatobe 2.99 292 *e*P **Pb 06 44 53.3 -0.2**
13nm,0.3s
KTBS *e*S **Sg 06 45 36.2 +0.7**
115nm,0.4s
KTBS Karatobe 2.99 292 Pg **Pb 06 44 53.3 -0.2**
13nm,0.3s
KTBS Lg Lg 06 45 36.2
115nm,0.4s
KUU Kurty 3.28 293 *e*P **Pb 06 44 57.9 -0.7**
5.7nm,0.3s
KUU *e*S **Sg 06 45 43.5 -1.5**
51nm,0.4s
KUU Kurty 3.28 293 Pg **Pb 06 44 57.9 -0.7**
5.7nm,0.3s
KUU Lg Lg 06 45 43.5
51nm,0.4s
BOOM Boomskoye usch 3.38 269 ⇑*i*P **Pn 06 44 53.7 +0.2**
baz=72
BOOM ⇑*i*S **Sn 06 45 35.3 +1.0**
baz=72
DGS Degeres 3.52 281 *e*P **Pb 06 45 01.5 -1.3**
14nm,0.6s
DGS *e*S **Sg 06 45 50.2 -2.5**
87nm,0.6s
DGS Degeres 3.52 281 Pg **Pb 06 45 01.5 -1.3**
14nm,0.6s
DGS Lg Lg 06 45 50.2
87nm,0.6s
TKM2 Tokmak 2 3.62 276 ⇓Pn **Pn 06 44 59.5 +2.6**
5.3nm,0.7s
TKM2 ⇑Lg Lg 06 45 54.1
24nm,0.5s
MAKZ Makanchi 4.27 14 ⇓Pn **Pb 06 45 05.8 +0.1**
2.0nm,0.6s
MAKZ ⇑Pg **Pb 06 45 14.5 -0.9**
1.1nm,0.3s
MAKZ ⇑Lg Lg 06 46 11.6
5.9nm,0.5s
MK31 Makanchi Array 4.32 17 ⇓Pn **Pn 06 45 05.4 -1.0**
0.1nm,0.2s,baz=202,slow=11,SNR=30
MK31 ⇑Pg **Pb 06 45 14.9 -1.3**
0.8nm,0.3s,baz=195,slow=13,SNR=20
MK31 Lg Lg 06 46 14.3
21nm,0.8s,baz=191,slow=29,SNR=14
AAK Ala-Archa 4.43 272 ⇑Pg **Pb 06 45 18.7 +0.4**
3.6nm,0.5s
AAK ⇑Lg Lg 06 46 18.8
20nm,0.6s
ZSN Zaisan 5.69 31 *e*P **Pb 06 45 38.4 -1.2**
2.7nm,0.3s
ZSN *e*S **Sb 06 46 52.9 +4.6**
11nm,0.7s
ZSN Zaisan 5.69 31 Pg **Pb 06 45 38.4 -1.2**
2.7nm,0.3s
ZSN Lg Lg 06 46 52.9
11nm,0.7s
OTUK Ortayu 8.00 317 ⇑Lg Lg 06 48 14.9
6.2nm,1.1s
KURK Kurchatov 8.15 352 ⇑Lg Lg 06 48 17.7
7.5nm,0.7s

*IDC **08** 06:48:23.2±1.1,9°.24S×157°.95E,h0km,mb3.9/6, mb1 4.1/6,mb1mx3.8/29,mbtmp3.9/6,MS3.2/7,Ms1 3.2/7, ms1mx2.9/34,Error ellipse: s-maj=33.6km s-min=20.3km az=166.0*

ISC 08 06:48:27.3±0.9,9°.3S±0°.2×157°.94E±0°.09,h27km,n13, σ0=81/8,mb3.8/6,MS3.2/5,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.99**	**95**	Pn	**Pn**	**06 48 58.1**	**-1.1**
	58nm,0.3s,baz=202,slow=8.3,SNR=5.0						
HNR				Sn	**Sn**	**06 49 24.5**	**+1.2**
	36nm,0.3s,baz=256,slow=17,SNR=5.6						
HNR				LR	LR	06 49 52.2	
	comp=Z,441nm,19.6s,baz=287,slow=45						
KRVT	**Keravat (AS076**	**7.67**	**310**	LR	LR	06 53 13.1	
	comp=Z,92nm,20.4s,baz=175,slow=38						
DZM	**Mont Dzumac**	**15.12**	**148**	LR	LR	06 57 04.0	
	comp=Z,288nm,18.1s,baz=338,slow=34						
WRA	**Warramunga Arr**	**25.14**	**242**	P	**P**	**06 53 51.0**	**+0.6**
	4.3nm,0.8s,baz=67,slow=9.4,SNR=19						
ASAR	**Alice Springs**	**27.06**	**235**	P	**P**	**06 54 07.8**	**0.0**
	1.2nm,0.3s,baz=53,slow=10,SNR=7.4						
STKA	**Stephens Creek**	**27.12**	**212**	P	**P**	**06 54 08.2**	**0.0**
	1.5nm,0.6s,baz=69,slow=12,SNR=3.4						
STKA				LR	LR	07 03 35.1	
	comp=Z,73nm,18.5s,baz=31,slow=34						
FITZ	**Fitzroy Crossi**	**32.53**	**251**	LR	LR	07 06 10.5	
	comp=Z,34nm,19.5s,baz=94,slow=33						
LEM	**Lembang**	**49.85**	**269**	LR	LR	07 19 41.3	
	comp=Z,26nm,18.9s,baz=208,slow=38						
KSRS	**Korea Array**	**54.32**	**331**	LR	LR	07 20 22.0	
	comp=Z,9.1nm,18.2s,baz=185,slow=35						
PETK	**Petropavlovsk-**	**62.14**	**360**	LR	LR	07 21 25.8	
	comp=Z,20nm,21.9s,baz=242,slow=32						
CMAR	**Chiang Mai Arr**	**64.39**	**296**	P	**P**	**06 59 01.5**	**0.0**
	0.7nm,0.4s,baz=120,slow=6.3,SNR=4.4						
ILAR	**Eielson Array**	**84.44**	**21**	P	**P**	**07 00 57.5**	**+0.4**
	0.2nm,0.5s,baz=249,slow=5.9,SNR=2.8						
MKAR	**Makanchi Array**	**87.03**	**318**	P	**P**	**07 01 10.2**	**-0.3**
	0.4nm,0.6s,baz=110,slow=6.6,SNR=3.2						

*IDC **08** 06:58:50.1±1.2,29°.27S×178°.31W,h197km±14km,mb3.4/4, mb1 3.5/4,mb1mx3.2/33,mbtmp3.9/4,MS2.9/1,Ms1 2.9/1, ms1mx2.6/15,Error ellipse: s-maj=114.6km s-min=26.6km az=154.0*

ISC 08 06:58:50.4±1.3,29°.3S±0°.5×178°.3W±0°.2,h200km,n9, σ0=92/8,mb3.6/4,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.32**	**82**	P	**Pn**	**06 59 17.2**	**+0.2**
	289nm,0.3s,baz=115,slow=4.7,SNR=13						
RAO				S	**Sn**	**06 59 37.3**	**-0.1**
	228nm,0.3s,baz=81,slow=19,SNR=8.1						
PPT	**Papeete**	**28.73**	**72**	LR	LR	07 13 30.5	
	comp=Z,26nm,20.2s,baz=234,slow=31						
STKA	**Stephens Creek**	**34.50**	**255**	P	**P**	**07 05 20.6**	**+0.9**
	1.5nm,0.6s,baz=90,slow=17,SNR=3.0						
ASAR	**Alice Springs**	**42.93**	**266**	P	**P**	**07 06 29.4**	**-0.5**
	0.8nm,0.6s,baz=101,slow=6.2,SNR=17						
WRA	**Warramunga Arr**	**43.82**	**271**	P	**P**	**07 06 35.9**	**-1.0**
	0.3nm,0.4s,baz=110,slow=7.7,SNR=7.6						
PETK	**Petropavlovsk-**	**84.69**	**346**	P	**P**	**07 11 02.2**	**+0.9**
	1.2nm,0.6s,baz=120,slow=8.5,SNR=2.1						
FINES	**FINESS Array B**	**144.03**	**340**	PKP	PKPab	07 17 58.7	-0.6
	1.3nm,0.6s,baz=73,slow=4.8,SNR=7.1						
NOA	**NORAR Array B**	**147.62**	**351**	PKPbc	**PKPbc**	**07 18 09.6**	**-1.0**
	0.3nm,0.6s,baz=13,slow=4.4,SNR=3.6						
AKASG	**Malin Array Be**	**150.27**	**324**	PKPbc	**PKPbc**	**07 18 16.9**	**-0.6**
	0.4nm,0.3s,baz=46,slow=3.5,SNR=2.1						

*IDC **08** 07:15:04.9±2.1,8°.90S×79°.08W,h73km±19km,mb3.4/7, mb1 3.6/9,mb1mx3.5/28,mbtmp3.7/9,MS3.1/5,Ms1 3.1/5, ms1mx2.9/19,Error ellipse: s-maj=30.8km s-min=8.2km az=78.0*

ISC 08 07:15:04.1±0.9,8°.92S±0°.06×79°.1W±0°.1,h64km,n17, σ0=79/12,mb3.7/6,Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**1.91**	**22**	P	**Pn**	**07 15 35.2**	**+0.3**
	18nm,0.3s,baz=182,slow=4.8,SNR=145						
ATAH				S	**Sn**	**07 15 59.0**	**+0.9**
	82nm,0.3s,baz=323,slow=14,SNR=7.1						
NNA	**Nana**	**3.79**	**144**	P	**Pn**	**07 16 00.2**	**0.0**
	21nm,0.3s,baz=313,slow=14,SNR=66						
NNA				S	**Sn**	**07 16 44.8**	**+1.1**
	42nm,0.3s,baz=207,slow=18,SNR=12						
LVC	**Limon Verde**	**16.78**	**145**	LR	LR	07 24 38.1	
	comp=Z,66nm,20.8s,baz=314,slow=34						
SIV	**San Ignacio**	**18.97**	**114**	P	**P**	**07 19 19.7**	**-0.9**
	0.1nm,0.3s,baz=269,slow=18,SNR=3.0						
SIV				LR	LR	07 28 04.9	
	comp=Z,24nm,21.4s,baz=273,slow=41						
PTGA	**Pitinga**	**20.74**	**68**	P	**P**	**07 19 38.9**	**-0.9**
	2.2nm,0.5s,baz=309,slow=20,SNR=7.4						
H03N2	**Juan Fernandez**	**24.41**	**180**	T	T	07 45 20.1	
	baz=359,slow=76,SNR=9.7						
H03N1	**Juan Fernandez**	**24.41**	**180**	T	T	07 45 20.9	
	baz=359,slow=76,SNR=17						
H03N3	**Juan Fernandez**	**24.42**	**180**	T	T	07 45 19.6	
	baz=359,slow=76,SNR=12						
CFA	**Coronel Fontan**	**24.75**	**157**	P	**P**	**07 20 19.4**	**-0.4**
	1.2nm,0.4s,baz=324,slow=13,SNR=4.0						
APG	**El Apazote**	**26.29**	**335**	LR	LR	07 29 41.1	
	comp=Z,45nm,21.7s,baz=282,slow=33						
CMIG	**Matias Romero**	**30.17**	**329**	LR	LR	07 30 47.9	
	comp=Z,46nm,19.1s,baz=126,slow=31						
BDFB	**Brasilia**	**31.10**	**105**	LR	LR	07 34 46.3	
	comp=Z,72nm,19.1s,baz=304,slow=38						
PLCA	**Paso Flores**	**32.59**	**168**	P	**P**	**07 21 30.3**	**+0.7**
	2.0nm,1.0s,baz=347,slow=12,SNR=3.8						
TXAR	**Lajitas Array**	**44.78**	**329**	P	**P**	**07 23 12.3**	**+0.6**
	0.2nm,0.6s,baz=167,slow=8.3,SNR=2.2						
NVAR	**Mina Array Bea**	**59.58**	**325**	P	**P**	**07 25 01.5**	**-0.1**
	0.5nm,0.8s,baz=152,slow=5.8,SNR=4.9						
YKA	**Yellowknife Ar**	**76.28**	**344**	P	**P**	**07 26 44.7**	**-0.9**
	0.6nm,0.9s,baz=138,slow=6.3,SNR=6.9						
TORD	**Torodi Ar. Bea**	**83.18**	**76**	P	**P**	**07 27 24.3**	**+0.2**
	0.7nm,1.0s,baz=264,slow=2.9,SNR=3.1						

NNC 08 07:26:22.2±5.1,54°.39N×86°.52E,h0km,mb3.5,mpv3.2, 6C-3D,Error ellipse: s-maj=52.3km s-min=34.4km az=153.0,Suspected Mining explosion.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**6.06**	**236**	⇑Pn	Pn	07 27 54.3	+1.4
	1.7nm,0.6s						
KURK				⇓Sn	Sn	07 29 03.3	+0.3
	0.5nm,0.5s						
KURK				⇑Lg	Lg	07 29 42.5	
	0.8nm,0.6s						
KURBB	**Kurchatov Arra**	**6.16**	**236**	⇑Pn	Pn	07 27 54.4	0.0
	4.1nm,0.6s						
KURBB				⇓Sn	Sn	07 29 05.1	-0.4
	1.1nm,0.5s						
KURBB				⇑Lg	Lg	07 29 40.4	
	2.1nm,0.7s						
MK31	**Makanchi Array**	**8.06**	**201**	⇑Pn	Pn	07 28 20.0	-0.5
	0.1nm,0.3s,baz=27,slow=13,SNR=8.0						
MK31				⇑Sn	Sn	07 29 53.0	+0.7
	0.5nm,0.6s,baz=24,slow=25,SNR=4.5						
MK31				⇓Lg	Lg	07 30 41.9	
	0.2nm,0.5s						

*NIED **08** 07:28:00,37°.20N×142°.10E,h26km,Mw3.5 Best double couple: M0 2.34000×10^14 NP1:φ=150.00000°,δ=87.00000°, λ=-77.00000°. NP2:φ=253.00000°,δ=14.00000°, λ=-167.00000°.*

*IDC **08** 07:28:08.0±1.4,37°.04N×142°.47E,h0km,mb3.5/3, mb1 3.8/5,mb1mx3.5/37,mbtmp3.6/5,ML3.0/2,MS2.6/3, Ms1 2.6/3,ms1mx2.2/41,Error ellipse: s-maj=39.6km s-min=24.7km az=134.0*

*JMA **08** 07:28:10.7±0.2,37°.23N×142°.10E,h32km,M3.5*

ISC 08 07:28:09.8±1.9,37°.18N±0°.05×141°.99E±0°.07,h16km±10km, n23,σ=97/24,mb3.6/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.91**	**282**	P	**Pn**	**07 28 28.5**	**+0.5**
JFK				S	**Sn**	**07 28 41.1**	**+0.3**
ONAJ	**Iwakimizuishiy**	**0.96**	**266**	P	**Pn**	**07 28 28.7**	**0.0**
JMST	**Minamisoumatoc**	**1.03**	**302**	P	**Pg**	**07 28 29.8**	**-0.1**
JMST				*e*S	**Sg**	**07 28 43.5**	**0.0**
JFFD	**Fukushimafurud**	**1.15**	**266**	P	**Pg**	**07 28 32.3**	**+0.3**
JFFD				*e*S	**Sg**	**07 28 47.7**	**+0.7**
JMM	**Marumori**	**1.18**	**306**	P	**Pb**	**07 28 31.8**	**0.0**
JMM				*e*S	**Sn**	**07 28 47.6**	**+0.3**
JHO	**Hitachi**	**1.27**	**244**	P	**Pb**	**07 28 33.5**	**+0.1**
JFT	**Otama**	**1.36**	**285**	P	**Pg**	**07 28 36.0**	**-0.1**
JFT				*e*S	**Sg**	**07 28 53.8**	**-0.1**
JIO	**Ouri**	**1.37**	**338**	P	**Pn**	**07 28 33.6**	**-0.7**
JOU	**Okura**	**1.59**	**319**	P	**Pb**	**07 28 38.7**	**-0.1**
JOU				*e*S	**Sn**	**07 28 58.3**	**+0.8**
MJAR	**Matsushiro Arr**	**3.10**	**259**	Pn	**Pb**	**07 29 03.1**	**-1.4**
	0.7nm,0.3s,baz=92,slow=15,SNR=16						
MJAR				Sn	**Sb**	**07 29 43.4**	**+1.2**
	0.4nm,0.3s,baz=72,slow=23,SNR=5.3						
MJAR				LR	LR	07 30 23.0	
	comp=Z,71nm,19.8s,baz=70,slow=39						
MAT	**Matsushiro**	**3.10**	**259**	P	**Pb**	**07 29 02.0**	**-2.6**
MAT				S	**Sb**	**07 29 41.8**	**-0.4**
JHJ	**Hachijo jima 2**	**4.44**	**205**	Pn	**Pn**	**07 29 18.3**	**+1.8**
	5.0nm,0.3s,baz=338,slow=22,SNR=8.7						
JHJ				Sn	**Sn**	**07 30 06.2**	**-1.5**
	5.1nm,0.3s,baz=65,slow=20,SNR=0.9						
KSRS	**Korea Array**	**11.21**	**276**	LR	LR	07 35 22.1	
	comp=Z,25nm,18.2s,baz=80,slow=37						
MA2	**Magadan**	**23.12**	**11**	LR	LR	07 43 32.2	
	comp=Z,22nm,19.7s,baz=282,slow=40						
H11N2	**WAKE ISLAND Hy**	**27.83**	**122**	T	T	08 03 28.1	
	baz=315,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**27.84**	**122**	T	T	08 03 22.0	
	baz=315,slow=75,SNR=7.9						
H11N3	**WAKE ISLAND Hy**	**27.84**	**122**	T	T	08 03 08.6	
	baz=315,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**28.55**	**124**	T	T	08 04 22.7	
	baz=317,slow=76,SNR=28						
H11S3	**WAKE ISLAND Hy**	**28.55**	**124**	T	T	08 04 15.5	
	baz=317,slow=76,SNR=27						
H11S2	**WAKE ISLAND Hy**	**28.57**	**124**	T	T	08 04 04.5	
	baz=317,slow=76,SNR=27						
ILAR	**Eielson Array**	**49.12**	**32**	P	**P**	**07 36 56.4**	**+0.1**
	0.5nm,0.8s,baz=260,slow=6.6,SNR=6.5						
WRA	**Warramunga Arr**	**57.27**	**189**	P	**P**	**07 37 56.8**	**+0.1**
	0.7nm,0.9s,baz=6.1,slow=7.1,SNR=1.0						
ASAR	**Alice Springs**	**61.00**	**188**	P	**P**	**07 38 22.1**	**-0.3**
	0.3nm,0.7s,baz=9.9,slow=5.9,SNR=2.0						

*NEIC **08** 07:34:07.5±1.5,18°.18N±0°.09×145°.4E±0°.1,h448km±7km, mb4.3/133,Error ellipse: s-maj=18.3km s-min=12.2km az=97.0*

*IDC **08** 07:34:08.8±1.6,18°.26N×145°.36E,h462km±18km, mb3.8/26,mb1 3.9/30,mb1mx3.8/41,mbtmp4.6/30,Error ellipse: s-maj=14.2km s-min=8.5km az=102.0*

ISC 08 07:34:07.5±0.4,18°.18N±0°.05×145°.37E±0°.09,h450km, n171,σ=91/176,mb4.3/95,1C-1D,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.59**	**186**	P	**P**	**07 35 26.6**	**-1.5**
GUMO					**S**	**07 36 31.9**	**-1.7**
JCJ	**Chichijima**	**9.35**	**342**	P	**P**	**07 36 17.6**	**+0.2**
	9.0nm,0.3s,baz=296,slow=18,SNR=6.3						
JCJ				S	**S**	**07 38 06.5**	**+2.1**
	15nm,0.3s,baz=313,slow=22,SNR=5.3						
JHJ2	**Mitsune**	**15.69**	**343**	P	**P**	**07 37 23.8**	**-2.0**
JHJ	**Hachijo jima 2**	**15.70**	**342**	P	**P**	**07 37 25.3**	**-0.7**
	6.0nm,0.3s,baz=267,slow=18,SNR=1.6						
JOW	**Kunigami**	**17.97**	**302**	P	**P**	**07 37 49.8**	**-0.3**
	0.2nm,0.3s,baz=98,slow=12,SNR=4.5						
JOW	**Kunigami**	**17.97**	**302**	P	**P**	**07 37 49.7**	**-0.3**
INU	**Inuyama**	**18.64**	**338**	P	**P**	**07 37 55.8**	**-0.6**
MJAR	**Matsushiro Arr**	**19.36**	**342**	P	**P**	**07 38 00.8**	**-2.1**
	0.3nm,0.3s,baz=158,slow=9.2,SNR=35						
MAJO	**Matsushiro**	**19.36**	**342**	P	**P**	**07 38 01.4**	**-1.5**
MAT	**Matsushiro**	**19.36**	**342**	P	**P**	**07 38 01.0**	**-1.9**
JNU	**Nakatsue**	**19.77**	**322**	P	**P**	**07 38 07.0**	**+0.2**
	0.5nm,0.3s,baz=61,slow=13,SNR=2.1						
JNU	**Nakatsue**	**19.77**	**322**	P	**P**	**07 38 06.4**	**-0.4**
YULB	**Yu-li**	**23.08**	**287**	P	**P**	**07 38 36.9**	**-0.1**
YULB				IAmb	IAmb	07 38 53.1	
	comp=Z,7.3nm,1.1s						
YHNB	**Yeheng**	**23.23**	**290**	P	**P**	**07 38 37.6**	**-0.7**
SSLB	**Suanglung**	**23.45**	**288**	P	**P**	**07 38 40.9**	**+0.6**
SSLB				IAmb	IAmb	07 38 43.6	
	comp=Z,8.3nm,0.7s						
SIJI	**Sorong**	**23.46**	**218**	P	**P**	**07 38 41.4**	**+0.9**
	comp=Z,7.3nm,0.3s,baz=48,slow=8.9,SNR=3.6						
ERM	**Erimo**	**23.84**	**356**	P	**P**	**07 38 43.0**	**-0.4**
ERM				IAmb	IAmb	07 38 52.8	
	comp=Z,14nm,1.2s						
KSRS	**Korea Array**	**24.56**	**325**	P	**P**	**07 38 49.4**	**-0.5**
	comp=Z,13nm,0.7s,baz=145,slow=8.9,SNR=28						
FAKI	**Fak Fak**	**24.63**	**213**	P	**P**	**07 38 50.6**	**-0.2**
ASAJ	**Asahikawa**	**25.97**	**355**	P	**P**	**07 39 02.4**	**+0.1**
	comp=Z,4.6nm,0.5s,baz=220,slow=9.4,SNR=6.9						
USRK	**Ussuriysk Ar.**	**28.28**	**339**	P	**P**	**07 39 22.7**	**0.0**
	comp=Z,6.9nm,0.7s,baz=159,slow=8.6,SNR=22						
COEN	**Coen**	**32.00**	**184**	P	**P**	**07 39 56.4**	**+1.0**
KLR	**Kul'dur**	**32.88**	**343**	P	**P**	**07 40 02.0**	**-0.4**
	comp=Z,30nm,0.6s,baz=151,slow=6.8,SNR=119						
MTN	**Manton Dam**	**33.87**	**205**	P	**P**	**07 40 09.0**	**-2.3**
SOEI	**Soe**	**34.70**	**219**	P	**P**	**07 40 17.4**	**-1.2**
SOEI				IAmb	IAmb	07 40 35.0	
	comp=Z,14nm,0.9s						
SBUM	**Sibu**	**36.05**	**248**	P	**P**	**07 40 30.5**	**+0.8**
SBUM				IAmb	IAmb	07 40 31.2	
	comp=Z,8.9nm,0.6s						
PETK	**Petropavlovsk-**	**36.17**	**13**	P	**P**	**07 40 30.6**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=159,slow=9.0,SNR=10						
PETK				PcP	**PcP**	**07 42 43.5**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=160,slow=4.6,SNR=4.2						
HHC	**Hu-ho-hao-te**	**36.74**	**315**	P	**P**	**07 40 36.2**	**+0.9**
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,36nm,5.7s						
KNRA	**Kununurra**	**37.41**	**207**	P	**P**	**07 40 42.1**	**+1.2**
KNRA				IAmb	IAmb	07 40 42.9	
	comp=Z,24nm,1.3s						
WB0	**Warramunga Arr**	**39.22**	**196**	P	**P**	**07 40 56.5**	**+0.9**
WR0	**Warramunga Arr**	**39.36**	**196**	P	**P**	**07 40 57.5**	**+0.7**
WRAB	**Tennant Creek**	**39.38**	**196**	P	**P**	**07 40 57.9**	**+0.8**
WRAB				IAmb	IAmb	07 40 58.8	
	comp=Z,9.1nm,0.5s						
WB2	**Warramunga Arr**	**39.39**	**196**	P	**P**	**07 40 58.1**	**+1.0**
WB2				IAmb	IAmb	07 40 58.9	
	comp=Z,7.4nm,0.6s						
WRA	**Warramunga Arr**	**39.40**	**196**	P	**P**	**07 40 58.1**	**+1.0**
	comp=Z,4.5nm,0.4s,baz=11,slow=8.6,SNR=80						
CD2	**Chengdu**	**39.69**	**297**	P	**P**	**07 40 58.4**	**-1.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KMI	**Kunming**	**40.09**	**288**	P	P	07 41 13.2	+10
KMI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LZH	**Lanzhou**	**40.68**	**305**	⇑P	**P**	**07 41 08.7**	**+1.2**
LZH				pP	pP	07 42 29.5	-0.7
LZH				PP	**PP**	**07 42 53.9**	**+0.4**
LZH				sP	sP	07 43 18.0	-3.0
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH				pmax	pmax		
	comp=Z,65nm,5.4s						
FITZ	**Fitzroy Crossi**	**40.93**	**209**	P	**P**	**07 41 10.8**	**+1.3**
FITZ				IAmb	IAmb	07 41 11.5	
	comp=Z,24nm,1.4s						
MA2	**Magadan**	**41.53**	**4**	P	**P**	**07 41 13.9**	**+0.2**
	comp=Z,11nm,0.6s,baz=191,slow=11,SNR=8.2						
MA2	**Magadan**	**41.53**	**4**	P	**P**	**07 41 14.1**	**+0.3**
MA2	**Magadan**	**41.53**	**4**	P	**P**	**07 41 13.7**	**0.0**
MA2				IAmb	IAmb	07 41 14.9	
	comp=Z,12nm,0.6s						
AS31	**Alice Springs**	**43.06**	**195**	P	**P**	**07 41 26.9**	**+0.5**
ASAR	**Alice Springs**	**43.07**	**195**	P	**P**	**07 41 27.1**	**+0.7**
	comp=Z,2.4nm,0.4s,baz=12,slow=7.0,SNR=103						
ASAR				ScP	**ScP**	**07 46 13.8**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=21,slow=6.0,SNR=2.9						
SONM	**Songino Array**	**43.35**	**322**	P	**P**	**07 41 28.7**	**+0.2**
	comp=Z,3.7nm,0.6s,baz=141,slow=8.5,SNR=13						
SONM				PcP	**PcP**	**07 43 07.5**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=92,slow=3.6,SNR=4.2						
CMAR	**Chiang Mai Arr**	**43.98**	**278**	P	**P**	**07 41 34.8**	**+1.1**
	comp=Z,5.0nm,0.7s,baz=68,slow=6.6,SNR=22						
SEY	**Seymchan**	**44.98**	**5**	P	**P**	**07 41 41.1**	**+0.4**
	comp=Z,4.4nm,0.6s,baz=186,slow=7.3,SNR=24						
YAK	**Yakutsk**	**45.17**	**350**	P	**P**	**07 41 41.7**	**-0.6**
	comp=Z,28nm,0.4s,baz=357,slow=1.0,SNR=15						
YAK	**Yakutsk**	**45.17**	**350**	P	**P**	**07 41 41.6**	**-0.6**
ATKA	**Atka Island**	**46.39**	**33**	P	**P**	**07 41 52.3**	**+0.5**
PSA00	**Pilbara Seismi**	**46.74**	**213**	P	**P**	**07 41 55.6**	**+0.7**
PSA00				IAmb	IAmb	07 41 56.5	
	comp=Z,17nm,1.2s						
NIKH	**Nikolski High**	**49.62**	**35**	P	**P**	**07 42 15.9**	**-0.1**
STKA	**Steph

ANM					IAmb	IAmb	07 43 09.1		
	comp=Z,8.2nm,1.0s								
MKAR	**Makanchi Array**	**58.60**	**314**		P	**P**	**07 43 20.2**	**+0.3**	
	comp=Z,3.1nm,0.6s,baz=90,slow=8.3,SNR=26								
MAKZ	**Makanchi**	**58.81**	**314**		P	**P**	**07 43 21.2**	**-0.2**	
MAKZ					IAmb	IAmb	07 43 22.3		
	comp=Z,5.7nm,0.7s								
RDOG	**Red Dog Mine**	**59.42**	**20**		P	**P**	**07 43 25.6**	**+0.5**	
RDOG					IAmb	IAmb	07 43 26.8		
	comp=Z,8.6nm,0.8s								
KDAK	**Kodiak Island**	**59.97**	**33**		P	**P**	**07 43 29.3**	**+0.5**	
	comp=Z,3.5nm,0.3s,baz=249,slow=1.7,SNR=19								
KDAK	**Kodiak Island**	**59.97**	**33**		P	**P**	**07 43 29.7**	**+0.8**	
KDAK					IAmb	IAmb	07 43 32.7		
	comp=Z,13nm,1.0s								
CNPM	**China Poot**	**61.07**	**31**		P	**P**	**07 43 36.4**	**+0.1**	
KURK	**Kurchatov**	**61.45**	**318**		P	**P**	**07 43 38.9**	**0.0**	
KURBB	**Kurchatov Arra**	**61.49**	**318**		P	**P**	**07 43 39.2**	**+0.1**	
	baz=96,slow=7.3								
PPLA	**Purkeypile**	**61.51**	**28**		P	**P**	**07 43 40.1**	**+0.8**	
PPLA					IAmb	IAmb	07 43 47.5		
	comp=Z,9.3nm,1.3s								
KDJ	**Kajisay**	**61.97**	**309**		P	**P**	**07 43 43.1**	**+0.4**	
NRIK	**Noril'sk**	**61.99**	**340**		P	**P**	**07 43 41.8**	**-0.3**	
	comp=Z,23nm,0.6s,baz=111,slow=8.2,SNR=46								
SEW	**Seward**	**62.08**	**31**		P	**P**	**07 43 43.0**	**+0.2**	
RC01	**Rabbit Creek A**	**62.16**	**30**		P	**P**	**07 43 43.4**	**0.0**	
RC01					IAmb	IAmb	07 43 44.1		
	comp=Z,7.9nm,0.8s								
KTH	**Kantishna Hill**	**62.24**	**27**		P	**P**	**07 43 44.0**	**+0.1**	
KTH					IAmb	IAmb	07 43 45.1		
	comp=Z,6.6nm,0.9s								
BPAW	**Bear Paw Mtn.**	**62.36**	**26**		P	**P**	**07 43 45.2**	**+0.6**	
BPAW					IAmb	IAmb	07 43 46.1		
	comp=Z,8.6nm,1.0s								
TRF	**Thorofare Moun**	**62.49**	**27**		P	**P**	**07 43 45.5**	**-0.2**	
PMR	**Palmer**	**62.56**	**29**		P	**P**	**07 43 45.7**	**-0.2**	
PMR					IAmb	IAmb	07 43 46.5		
	comp=Z,6.6nm,1.0s								
GHO	**Glory Hole Cre**	**62.70**	**29**		P	**P**	**07 43 46.8**	**-0.1**	
GHO					IAmb	IAmb	07 43 48.1		
	comp=Z,5.7nm,0.8s								
MLY	**Manley**	**62.72**	**25**		P	**P**	**07 43 47.5**	**+0.5**	
MLY					IAmb	IAmb	07 43 48.5		
	comp=Z,6.7nm,0.7s								
KNK	**Knik Glacier**	**62.84**	**30**		P	**P**	**07 43 48.4**	**+0.6**	
KNK					IAmb	IAmb	07 43 48.9		
	comp=Z,8.7nm,0.8s								
BOOM	**Boomskoye usch**	**62.88**	**309**		P	**P**	**07 43 48.7**	**0.0**	
BOOM					IAmb	IAmb	07 43 50.1		
	comp=Z,5.8nm,0.7s								
KSH	**Kashi**	**62.91**	**306**		P	**P**	**07 43 52.6**	**+3.8**	
KSH					pP	pP	07 45 21.4	-0.2	
KSH					pmax	pmax			
	comp=Z,16nm,0.8s								
KSH					pmax	pmax			
	comp=Z,240nm,5.7s								
SML	**Sawmill**	**62.98**	**29**		P	**P**	**07 43 49.0**	**+0.2**	
SML					IAmb	IAmb	07 43 49.8		
	comp=Z,13nm,0.9s								
RND	**Reindeer**	**63.10**	**27**		P	**P**	**07 43 49.5**	**-0.1**	
MCK	**McKinley**	**63.14**	**27**		P	**P**	**07 43 49.1**	**-0.7**	
MCK					IAmb	IAmb	07 43 50.4		
	comp=Z,9.0nm,1.2s								
NEA	**Nenana**	**63.29**	**26**		P	**P**	**07 43 51.0**	**+0.3**	
GLI	**Glacier Island**	**63.38**	**30**		P	**P**	**07 43 51.0**	**-0.3**	
GLI					IAmb	IAmb	07 43 54.2		
	comp=Z,8.6nm,1.1s								
SCM	**Sheep Creek Mo**	**63.45**	**29**		P	**P**	**07 43 52.0**	**+0.2**	
SCM					IAmb	IAmb	07 43 52.8		
	comp=Z,12nm,1.0s								
FID	**Port Fidalgo**	**63.65**	**31**		P	**P**	**07 43 53.3**	**+0.3**	
WRH	**Wood River Hil**	**63.68**	**26**		P	**P**	**07 43 52.8**	**-0.4**	
WRH					IAmb	IAmb	07 43 53.5		
	comp=Z,5.1nm,0.9s								
DHY	**Denali Highway**	**63.68**	**28**		P	**P**	**07 43 53.3**	**-0.1**	
MDM	**Murphy Dome**	**63.73**	**26**		P	**P**	**07 43 54.0**	**+0.4**	
CCB	**Clear Creek Bu**	**63.84**	**26**		P	**P**	**07 43 53.4**	**-0.8**	
EYAK	**Cordova Ski Ar**	**63.97**	**31**		P	**P**	**07 43 56.1**	**+1.0**	
EYAK					IAmb	IAmb	07 43 56.3		
	comp=Z,6.9nm,0.7s								
HDA	**Harding Lake**	**64.15**	**27**		P	**P**	**07 43 55.4**	**-0.7**	
TOLK	**Toolik Lake Re**	**64.19**	**22**		P	**P**	**07 43 57.7**	**+1.2**	
TOLK					IAmb	IAmb	07 43 57.9		
	comp=Z,5.7nm,0.7s								
ILAR	**Eielson Array**	**64.25**	**26**		P	**P**	**07 43 55.6**	**-1.2**	
	comp=Z,2.7nm,0.5s,baz=243,slow=6.2,SNR=46								
PRP	**Porcupine Dome**	**64.97**	**25**		P	**P**	**07 44 00.2**	**-1.4**	
GLB	**Gilahina Butte**	**65.04**	**30**		P	**P**	**07 44 02.5**	**+0.6**	
GLB					IAmb	IAmb	07 44 04.1		
	comp=Z,7.9nm,1.1s								
VRDI	**Verde Repeater**	**65.18**	**30**		P	**P**	**07 44 03.6**	**+0.5**	
VRDI					IAmb	IAmb	07 44 04.3		
	comp=Z,8.1nm,1.0s								
DOT	**Dot Lake**	**65.25**	**28**		P	**P**	**07 44 02.2**	**-1.0**	
DOT					IAmb	IAmb	07 44 04.2		
	comp=Z,8.3nm,0.9s								
CRQM	**Cirque**	**65.28**	**31**		P	**P**	**07 44 03.7**	**+0.1**	
CRQM					IAmb	IAmb	07 44 05.3		
	comp=Z,11nm,1.1s								
FYU	**Fort Yukon**	**65.30**	**24**		P	**P**	**07 44 04.0**	**+0.6**	
FYU					IAmb	IAmb	07 44 04.8		
	comp=Z,7.7nm,0.9s								
MENT	**Mentasta**	**65.30**	**28**		P	**P**	**07 44 02.8**	**-0.8**	
BALM	**Baldy**	**65.69**	**31**		P	**P**	**07 44 05.8**	**-0.3**	
BALM					IAmb	IAmb	07 44 07.0		
	comp=Z,4.5nm,0.9s								
EGAK	**Eagle**	**66.67**	**27**		P	**P**	**07 44 10.6**	**-1.4**	
BRVK	**Borovoye**	**66.74**	**321**		P	**P**	**07 44 12.1**	**-0.6**	
KKAR	**Karatay Array**	**66.86**	**310**		P	**P**	**07 44 13.0**	**-0.6**	
KKAR					IAmb	IAmb	07 44 14.8		
	comp=Z,7.2nm,0.8s								
GAR	**Garm**	**67.33**	**305**		P	**P**	**07 44 17.0**	**+0.2**	
DAWY	**Dawson**	**67.36**	**27**		P	**P**	**07 44 17.1**	**+0.7**	
HYT	**Haines Junctio**	**68.03**	**31**		P	**P**	**07 44 20.7**	**0.0**	
HYT					IAmb	IAmb	07 44 23.1		
	comp=Z,9.1nm,1.0s								
EPYK	**Eagle Plains**	**68.66**	**25**		P	**P**	**07 44 25.1**	**+0.8**	
EPYK					IAmb	IAmb	07 44 25.3		
	comp=Z,5.3nm,0.9s								
JIS	**Juneau Island**	**69.62**	**34**		P	**P**	**07 44 31.3**	**+1.2**	
JIS					IAmb	IAmb	07 44 31.9		
	comp=Z,4.4nm,0.6s								
INK	**Inuvik**	**69.97**	**23**		P	**P**	**07 44 31.9**	**-0.2**	
INK					IAmb	IAmb	07 44 33.1		
	comp=Z,6.0nm,1.0s								
DLBC	**Dease Lake**	**71.90**	**33**		P	**P**	**07 44 44.8**	**+1.0**	
DLBC					IAmb	IAmb	07 44 46.0		
	comp=Z,9.1nm,1.2s								
ARU	**Arti**	**73.31**	**325**		P	**P**	**07 44 51.8**	**-0.1**	
C36M	**Paulatuk**	**73.35**	**22**		P	**P**	**07 44 51.8**	**-0.1**	
C36M					IAmb	IAmb	07 44 52.7		
	comp=Z,8.2nm,1.1s								
NLWA	**Neilton Lookou**	**77.36**	**44**		P	**P**	**07 45 16.9**	**+2.0**	
NLWA					IAmb	IAmb	07 45 17.1		
	comp=Z,4.5nm,0.6s								
E03A	**Lebam**	**77.76**	**45**		P	**P**	**07 45 18.8**	**+1.8**	
YKA	**Yellowknife Ar**	**78.60**	**28**		P	**P**	**07 45 21.1**	**0.0**	
	comp=Z,1.9nm,0.5s,baz=285,slow=4.7,SNR=48								
LTY	**Liberty**	**79.50**	**44**		P	**P**	**07 45 26.6**	**+0.1**	
LTY					IAmb	IAmb	07 45 27.5		
	comp=Z,2.7nm,0.6s								
YBH	**Yreka Blue Hor**	**79.53**	**50**		P	**P**	**07 45 28.0**	**+1.3**	
KBS	**Kingsbay**	**79.75**	**352**		P	**P**	**07 45 26.6**	**-0.5**	
RES	**Resolute Bay**	**80.00**	**14**		P	**P**	**07 45 29.0**	**+0.5**	
RES					IAmb	IAmb	07 45 29.2		
	comp=Z,4.6nm,0.8s								
B08A	**Colville Reser**	**80.07**	**42**		P	**P**	**07 45 30.1**	**+0.7**	
B08A					IAmb	IAmb	07 45 30.5		
	comp=Z,4.3nm,0.5s								
PINE	**Pine Mountain**	**80.24**	**47**		P	**P**	**07 45 31.9**	**+1.3**	
PINE					IAmb	IAmb	07 45 33.0		
	comp=Z,5.9nm,0.8s								
K05A	**Summer Lake**	**80.57**	**48**		P	**P**	**07 45 33.0**	**+0.6**	
ORV	**Oroville**	**81.00**	**51**		P	**P**	**07 45 35.3**	**+0.9**	
ORV					IAmb	IAmb	07 45 36.0		
	comp=Z,6.8nm,1.2s								
NEW	**Newport**	**81.51**	**42**		P	**P**	**07 45 37.8**	**+0.9**	
BEKR	**Beckworth**	**81.75**	**51**		P	**P**	**07 45 39.0**	**+0.5**	
BEKR					IAmb	IAmb	07 45 40.1		
	comp=Z,6.3nm,0.8s								
KLMR	**Klimovskoe**	**81.76**	**332**		*e*P	**P**	**07 45 35.8**	**-2.0**	
KLMR					AMP		07 45 37.9		
	comp=Z,19nm,1.2s								
J08A	**Circle Bar Ran**	**82.09**	**47**		P	**P**	**07 45 37.9**	**-2.2**	

RUBR	**Rubicon Trail**	**82.14**	**52**		P	**P**	**07 45 40.6**	**+0.1**	
WVOR	**Wild Horse Val**	**82.25**	**48**		P	**P**	**07 45 40.8**	**-0.2**	
CMB	**Columbia Colle**	**82.26**	**53**		P	**P**	**07 45 41.7**	**+0.7**	
CMB					IAmb	IAmb	07 45 42.4		
	comp=Z,4.3nm,0.6s								
BMO	**Blue Mountains**	**82.43**	**45**		P	**P**	**07 45 42.2**	**+0.5**	
VCNR	**Virginia City**	**82.44**	**51**		P	**P**	**07 45 42.0**	**-0.1**	
PNTR	**Pine Nut**	**82.54**	**51**		P	**P**	**07 45 42.5**	**-0.1**	
PNTR					IAmb	IAmb	07 45 44.7		
	comp=Z,7.1nm,0.9s								
WAKR	**Walker**	**82.84**	**52**		P	**P**	**07 45 45.0**	**+0.9**	
WAKR					IAmb	IAmb	07 45 46.2		
	comp=Z,3.6nm,0.6s								
YERR	**Yerington**	**82.84**	**51**		P	**P**	**07 45 44.7**	**+0.6**	
YERR					IAmb	IAmb	07 45 45.9		
	comp=Z,4.5nm,0.6s								
ARCES	**ARCESS Array B**	**82.89**	**342**		P	**P**	**07 45 43.1**	**-0.4**	
	comp=Z,6.3nm,0.7s,baz=84,slow=8.5,SNR=31								
TULEG	**Thule**	**83.27**	**8**		P	**P**	**07 45 45.6**	**+0.4**	
RYN	**Ryan**	**83.48**	**52**		P	**P**	**07 45 46.9**	**-0.4**	
RYN					IAmb	IAmb	07 45 49.1		
	comp=Z,5.3nm,1.0s								
KVN	**Kaiserville**	**83.67**	**51**		P	**P**	**07 45 48.3**	**0.0**	
KVN					IAmb	IAmb	07 45 49.6		
	comp=Z,4.1nm,0.6s								
NVAR	**Mina Array Bea**	**83.71**	**52**		P	**P**	**07 45 49.6**	**+1.1**	
	comp=Z,4.9nm,0.6s,baz=264,slow=6.1,SNR=52								
MFID	**Camas Ranch**	**83.90**	**46**		P	**P**	**07 45 49.6**	**+0.3**	
MFID					IAmb	IAmb	07 45 51.0		
	comp=Z,5.3nm,0.8s								
DAG	**Danmarks Havn**	**84.77**	**356**	⇓	*i*P	**P**	**07 45 52.0**	**-0.7**	
	comp=Z,11nm,0.9s								
ELK	**Elko**	**85.20**	**49**		P	**P**	**07 45 56.9**	**+1.0**	
LRM	**Limekiln Ridge**	**85.33**	**43**		P	**P**	**07 45 54.2**	**-2.2**	
TPNV	**Topopah Spring**	**85.73**	**53**		P	**P**	**07 45 59.6**	**+1.2**	
TPNV					IAmb	IAmb	07 45 59.7		
	comp=Z,4.8nm,0.6s								
R11A	**Troy Canyon, C**	**85.76**	**51**		P	**P**	**07 45 58.2**	**-0.3**	
KBZ	**Khabaz**	**86.29**	**315**		P	**P**	**07 45 59.7**	**-0.9**	
	comp=Z,2.1nm,0.8s,baz=52,slow=15,SNR=4.7								
YHL	**Hebgen Lake**	**86.53**	**44**		P	**P**	**07 46 01.5**	**-0.7**	
DUG	**Dugway, Tooele**	**87.13**	**49**		P	**P**	**07 46 05.2**	**+0.2**	
DUG					IAmb	IAmb	07 46 06.8		
	comp=Z,6.2nm,1.2s								
FINES	**FINESS Array B**	**87.22**	**335**		P	**P**	**07 46 03.0**	**-1.7**	
	comp=Z,4.1nm,0.7s,baz=65,slow=6.4,SNR=9.7								
CCUT	**Cedar City**	**87.68**	**51**		P	**P**	**07 46 08.2**	**+0.5**	
FFC	**Flin Flon**	**87.70**	**32**		P	**P**	**07 46 07.0**	**-0.1**	
FFC					IAmb	IAmb	07 46 08.3		
	comp=Z,7.3nm,1.1s								
W13A	**Hualapai Mount**	**88.16**	**54**		P	**P**	**07 46 10.6**	**+0.6**	
W13A					IAmb	IAmb	07 46 11.9		
	comp=Z,3.6nm,0.9s								
KNB	**Kanab**	**88.28**	**52**		P	**P**	**07 46 09.8**	**-0.7**	
PDAR	**Pinedale Array**	**88.42**	**45**		P	**P**	**07 46 09.3**	**-1.7**	
	comp=Z,0.3nm,0.5s,baz=306,slow=5.1,SNR=4.4								
U15A	**North Rim**	**88.89**	**52**		P	**P**	**07 46 13.6**	**+0.2**	
SRU	**San Rafael Swe**	**89.17**	**49**		P	**P**	**07 46 14.2**	**-0.4**	
Y14A	**Wickenburg**	**89.26**	**55**		P	**P**	**07 46 14.8**	**-0.2**	
Y14A					IAmb	IAmb	07 46 17.0		
	comp=Z,4.7nm,1.0s								
PV21	**Cone Mtn., Par**	**90.50**	**49**		P	**P**	**07 46 20.4**	**-0.5**	
PV16	**Nyswonger Mesa**	**90.64**	**49**		P	**P**	**07 46 21.1**	**-0.4**	
PV01	**Paradox Valley**	**90.96**	**49**		P	**P**	**07 46 23.3**	**+0.3**	
NOA	**NORSAR Array B**	**92.95**	**340**		P	**P**	**07 46 29.5**	**-1.9**	
	comp=Z,0.4nm,0.5s,baz=42,slow=4.7,SNR=2.5								
BRTR	**Keskin Array B**	**94.25**	**314**		P	**P**	**07 46 36.1**	**-1.8**	
	comp=Z,1.9nm,1.0s,baz=282,slow=2.4,SNR=3.8								
TORD	**Torodi Ar. Bea**	**132.53**	**308**		PKP	**PKPdf**	**07 52 31.4**	**+0.5**	
	comp=Z,0.2nm,0.5s,baz=7.3,slow=2.6,SNR=4.1								

*IDC **08** 07:57:40.4±2.7, 19°.44S×175°.05W, h0km, mb4.3/4, mb1 4.5/4, mb1mx3.7/48, mbtmp4.3/4, Error ellipse: s-maj=90.3km s-min=41.0km az=142.0*
*NEIC **08** 07:57:43.9±2.1, 22°.51S±0°.07×174°.9W±0°.1, h10km±1km, mb4.8/8, Error ellipse: s-maj=18.4km s-min=9.1km az=115.0*

ISC 08 07:57:47.0±1.0, 22°.5S±0°.1×174°.9W±0°.1, h33km, n22, σ1°37/20, mb4.7/7, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.77**	**55**	Pn	Pn	**Pn**	**07 59 11.4**	**+1.1**
RAO	**Raoul Island**	**7.28**	**201**	Pn	Pn	**Pn**	**07 59 29.2**	**-1.8**
MSVF	**Nonsavu**	**8.09**	**304**	Pn	Pn	**Pn**	**07 59 42.7**	**+0.4**
AFI	**Afiamalu**	**9.02**	**20**	Pn	Pn	**Pn**	**07 59 52.8**	**-2.2**
CTA	**Charters Tower**	**36.18**	**266**	P	P	**P**	**08 04 47.6**	**+0.9**
	3.5nm,0.5s,baz=94,slow=13,SNR=5.8							
CTA	**Charters Tower**	**36.18**	**266**	P	P	**P**	**08 04 47.6**	**+0.9**
CTAO	**Charters Tower**	**36.18**	**266**	P	P	**P**	**08 04 47.9**	**+1.1**
CTAO					IAmb	IAmb	08 04 55.6	
	comp=Z,19nm,1.4s							
RABL	**Rabaul**	**36.66**	**295**	P	P	**P**	**08 04 51.3**	**+0.4**
AS31	**Alice Springs**	**46.88**	**258**	P	P	**P**	**08 06 14.8**	**+0.3**
ASAR	**Alice Springs**	**46.88**	**258**	P	P	**P**	**08 06 17.4**	**+2.9**
	comp=Z,4.9nm,0.6s,baz=91,slow=8.3,SNR=66							
ASAR					PcP	**PcP**	**08 07 46.9**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=90,slow=3.7,SNR=2.3							
ASAR	**Alice Springs**	**46.88**	**258**	P	P	**P**	**08 06 17.4**	**+2.9**
ASAR						**PcP**	**08 07 46.9**	**-0.2**
WR0	**Warramunga Arr**	**46.99**	**263**	P	P	**P**	**08 06 15.5**	**+0.2**
WB0	**Warramunga Arr**	**47.17**	**263**	P	P	**P**	**08 06 16.9**	**+0.2**
WB0					IAmb	IAmb	08 06 32.5	
	comp=Z,11nm,1.4s							
WB2	**Warramunga Arr**	**47.17**	**263**	P	P	**P**	**08 06 16.6**	**-0.1**
WB2					IAmb	IAmb	08 06 30.5	
	comp=Z,10nm,1.4s							
WRA	**Warramunga Arr**	**47.18**	**263**	P	P	**P**	**08 06 17.0**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=97,slow=8.5,SNR=15							
WRA	**Warramunga Arr**	**47.18**	**263**	P	P	**P**	**08 06 17.0**	**+0.2**
KNRA	**Kununurra**	**53.39**	**267**	P	P	**P**	**08 07 02.9**	**-0.9**
FITZ	**Fitzroy Crossi**	**55.61**	**263**	P	P	**P**	**08 07 19.0**	**-1.0**
FITZ					IAmb	IAmb	08 07 34.0	
	comp=Z,12nm,1.4s							
MJAR	**Matsushiro Arr**	**73.48**	**322**	P	P		08 09 00.1	-16
	comp=Z,1.1nm,0.5s,baz=140,slow=6.8,SNR=4.2							
MJAR	**Matsushiro Arr**	**73.48**	**322**	P	P		08 09 00.1	-16
ARCES	**ARCESS Array B**	**131.33**	**351**	PKP	PKPpre		08 16 48.6	
	comp=Z,1.5nm,0.8s,baz=5.7,slow=2.7,SNR=4.8							
ARCES	**ARCESS Array B**	**131.33**	**351**		PKPpre		08 16 48.6	

*NEIC **08** 08:03:46.0±1.0, 6°.9S±0°.1×155°.1E±0°.1, h45km±6km, mb4.4/21, Error ellipse: s-maj=16.5km s-min=14.2km az=135.0*
*IDC **08** 08:03:46.6±3.9, 6°.82S×155°.12E, h46km±34km, mb3.8/9, mb1 4.0/12, mb1mx3.6/57, mbtmp4.0/12, ML3.0/3, MS3.2/4, Ms1 3.2/4, ms1mx2.7/36, Error ellipse: s-maj=35.7km s-min=20.5km az=113.0*

ISC 08 08:03:45.8±0.6, 6°.90S±0°.08×155°.22E±0°.09, h41km, n44, σ1°.06/42, mb4.3/20, MS3.2/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**4.06**	**311**	Pn	Pn	**Pn**	**08 04 43.8**	**-1.6**
KRVT	**Keravat (AS076**	**4.09**	**309**	P	P	**Pn**	**08 04 45.0**	**-0.8**
	3.7nm,0.3s,baz=248,slow=18,SNR=1.4							
KRVT				S		**Sn**	**08 05 34.5**	**+2.0**
	11nm,0.3s,baz=286,slow=17,SNR=2.1							
HNR	**Honiara**	**5.32**	**119**	LR	LR		08 06 52.5	
	comp=Z,124nm,19.3s,baz=267,slow=34							
PMG	**Port Moresby**	**8.36**	**252**	P	P	**Pn**	**08 05 44.4**	**0.0**
	1.3nm,0.3s,baz=139,slow=19,SNR=1.5							
PMG	**Port Moresby**	**8.36**	**252**			**Pn**	**08 05 43.6**	**-0.9**
PATS	**Pohnpei**	**13.99**	**13**	Pn	Pn	**Pn**	**08 07 01.9**	**+0.3**
CTA	**Charters Tower**	**15.73**	**213**	P	P	**Pn**	**08 07 24.9**	**+0.3**
	0.1nm,0.3s,baz=239,slow=22,SNR=2.0							
WR0	**Warramunga Arr**	**23.90**	**235**	P	P	**P**	**08 08 53.8**	**-2.1**
WB0	**Warramunga Arr**	**23.92**	**236**	P	P	**P**	**08 08 55.9**	**-0.3**
WB2	**Warramunga Arr**	**24.04**	**235**	P	P	**P**	**08 08 56.6**	**-0.7**
WRA	**Warramunga Arr**	**24.05**	**235**	P	P	**P**	**08 08 56.4**	**-1.0**
	1.3nm,0.4s,baz=59,slow=9.1,SNR=14							
MSVF	**Nonsavu**	**24.74**	**118**	P	P	**P**	**08 09 04.3**	**+0.6**
MSVF					IAmb	IAmb	08 09 21.3	
	comp=Z,14nm,1.1s							
ASAR	**Alice Springs**	**26.40**	**229**	P	P	**P**	**08 09 17.9**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=59,slow=9.4,SNR=8.2							
H11S3	**WAKE ISLAND Hy**	**27.66**	**24**	T	T		08 37 58.4	
	baz=203,slow=75,SNR=41							
H11S2	**WAKE ISLAND Hy**	**27.66**	**24**	T	T		08 37 58.6	
	baz=203,slow=75,SNR=40							

H11S1	**WAKE ISLAND Hy**	**27.67**	**24**		T	T	08 37 59.7		
	baz=203,slow=75,SNR=25								
STKA	**Stephens Creek**	**27.91**	**205**		P	**P**	**08 09 34.7**	**+2.6**	
	comp=Z,2.5nm,1.1s,baz=335,slow=18,SNR=3.2								
STKA					LR	LR	08 20 25.9		
	comp=Z,71nm,18.1s,baz=23,slow=36								
STKA	**Stephens Creek**	**27.91**	**205**		P	**P**	**08 09 32.3**	**+0.2**	
FITZ	**Fitzroy Crossi**	**30.89**	**246**		LR	LR	08 21 43.1		
	comp=Z,54nm,18.5s,baz=132,slow=35								
CMAR	**Chiang Mai Arr**	**60.94**	**295**		P	**P**	**08 13 56.2**	**+1.0**	
	comp=Z,1.3nm,0.3s,baz=117,slow=5.2,SNR=8.7								
CMAR					LR	LR	08 40 12.6		
	comp=Z,11nm,19.1s,baz=225,slow=36								
RC01	**Rabbit Creek A**	**80.09**	**24**		P	**P**	**08 15 51.2**	**+0.1**	
PPLA	**Purkeypile**	**80.20**	**22**		P	**P**	**08 15 51.3**	**-0.5**	
PPLA					IAmb	IAmb	08 15 59.9		
	comp=Z,7.5nm,1.3s								
PMR	**Palmer**	**80.61**	**24**		P	**P**	**08 15 53.9**	**+0.1**	
PMR					IAmb	IAmb	08 15 54.9		
	comp=Z,4.2nm,1.0s								
GHO	**Glory Hole Cre**	**80.80**	**23**		P	**P**	**08 15 54.7**	**-0.2**	
GHO					IAmb	IAmb	08 15 55.0		
	comp=Z,6.1nm,1.1s								
SML	**Sawmill**	**81.05**	**24**		P	**P**	**08 15 56.2**	**0.0**	
SML					IAmb	IAmb	08 16 04.2		
	comp=Z,5.2nm,0.8s								
GLI	**Glacier Island**	**81.05**	**25**		P	**P**	**08 15 56.7**	**+0.4**	
TRF	**Thorofare Moun**	**81.23**	**22**		P	**P**	**08 15 57.3**	**0.0**	
TRF					IAmb	IAmb	08 15 58.8		
	comp=Z,2.4nm,0.8s								
SCM	**Sheep Creek Mo**	**81.47**	**24**		P	**P**	**08 15 59.4**	**+0.9**	
RND	**Reindeer**	**81.73**	**22**		P	**P**	**08 15 59.4**	**-0.5**	
RND					IAmb	IAmb	08 16 00.2		
	comp=Z,2.5nm,0.8s								
DHY	**Denali Highway**	**82.11**	**23**		P	**P**	**08 16 02.2**	**+0.2**	
DHY					IAmb	IAmb	08 16 11.2		
	comp=Z,3.7nm,1.3s								
WRH	**Wood River Hil**	**82.61**	**21**		P	**P**	**08 16 04.5**	**+0.2**	
WRH					IAmb	IAmb	08 16 19.3		
	comp=Z,5.8nm,1.4s								
HDA	**Harding Lake**	**82.99**	**22**		P	**P**	**08 16 06.6**	**+0.2**	
QSPA	**South Pole Qui**	**83.07**	**180**		P	**P**	**08 16 08.1**	**+1.1**	
QSPA					IAmb	IAmb	08 16 26.1		
	comp=Z,3.5nm,1.2s								
ILAR	**Eielson Array**	**83.20**	**21**		P	**P**	**08 16 06.5**	**-1.0**	
	comp=Z,0.4nm,0.4s,baz=243,slow=5.4,SNR=10								
MKAR	**Makanchi Array**	**83.48**	**319**		P	**P**	**08 16 08.4**	**-0.9**	
	comp=Z,0.4nm,0.6s,baz=98,slow=8.2,SNR=5.4								
EGAK	**Eagle**	**85.34**	**23**		P	**P**	**08 16 19.3**	**+1.0**	
EGAK					IAmb	IAmb	08 16 20.6		
	comp=Z,2.6nm,0.9s								
EPYK	**Eagle Plains**	**87.69**	**22**		P	**P**	**08 16 29.6**	**-0.2**	
INK	**Inuvik**	**89.55**	**21**		P	**P**	**08 16 37.9**	**-0.6**	
	comp=Z,0.5nm,0.5s,baz=296,slow=3.7,SNR=5.6								
INK	**Inuvik**	**89.55**	**21**		P	**P**	**08 16 38.3**	**-0.1**	
NVAR	**Mina Array Bea**	**91.49**	**52**		P	**P**	**08 16 50.0**	**+1.5**	
	comp=Z,0.1nm,0.2s,baz=299,slow=23,SNR=4

KURK				⇑Sn		Sn	08 31 49.7	+0.2	
	0.4nm,0.4s								
KURK				⇑Lg		Lg	08 32 20.5		
	6.8nm,0.9s								
KURBB	**Kurchatov Arra**	**5.80**	**237**	⇑Pn		Pn	08 30 44.9	+0.2	
	3.1nm,0.6s								
KURBB				⇓Sn		Sn	08 31 53.5	+1.5	
	2.1nm,0.6s								
KURBB				⇑Lg		Lg	08 32 23.0		
	11nm,0.8s								
MK31	**Makanchi Array**	**7.64**	**201**	⇑Pn		Pn	08 31 10.7	+0.7	
	0.7nm,0.6s,baz=24,slow=13,SNR=13								
MK31				⇓Sn		Sn	08 32 38.3	+1.0	
	1.8nm,0.9s								
MK31				⇓Lg		Lg	08 33 20.8		
	11nm,1.3s,baz=25,slow=28,SNR=5.1								

IDC ***08*** *08:29:46.3±0.5, 8˚.06N×38˚.03W, h0km, mb4.1/21, mb1 4.3/22, mb1mx4.1/56, mbtmp4.1/22, ML4.1/1, MS4.0/26, Ms1 4.0/26, ms1mx3.9/32, Error ellipse: s-maj=18.5km s-min=12.8km az=135.0*

NEIC ***08*** *08:29:47.6±1.4, 8˚.0N±0˚.1×38˚.0W±0˚.1, h10km±1km, mb4.7/75, Error ellipse: s-maj=19.2km s-min=17.0km az=120.0*

GCMT ***08*** *08:29:50.6±0.3, 8˚.01N±0˚.03×37˚.98W±0˚.01, h12km, MW4.9/101, Moment Tensor Solution. s29,c32; s101,c153; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.84±.08; Mθθ-0.23±.09; Mϕϕ3.07±.07; Mrθ-0.83±.37; Mθϕ0.03±.07; Mϕr-0.27±.25; Best double couple: Mo3.08700×10¹⁶ NP1:ϕs165.00000°, δ44.00000°, λ-113.00000°. NP2:ϕs16.00000°, δ50.00000°, λ-69.00000°. Principal axes: T 3.0840, Plg3.0000°, Azm91.0000°; N 0.0030, Plg16.0000°, Azm182.0000°; P -3.0900, Plg74.0000°, Azm352.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 08:29:48.7±0.4, 8˚.04N±0˚.07×38˚.04W±0˚.08, h16km, n130, σ1§19/115, mb4.6/48, MS4.0/24, 1C, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSB	**Rosrio**	**12.44**	**209**	*eP*	**Pn**	**08 32 42.8**	**-2.5**
ROSB				*eS*	Sn	08 34 53.5	-10
RCBR	**Riachuelo**	**13.94**	**171**	Pn	**Pn**	**08 33 04.3**	**-1.5**
	0.9nm,0.3s,baz=93,slow=16,SNR=2.1						
RCBR				Sn	Sn	08 35 30.0	-10
	0.7nm,0.3s,baz=144,slow=12,SNR=2.3						
RCBR				LR	LR	08 37 08.4	
	comp=Z,424nm,20.6s,baz=355,slow=32						
RCBR	**Riachuelo**	**13.94**	**171**		**Pn**	**08 33 04.0**	**-1.8**
MDP	**Montagnes des**	**14.79**	**260**	LR	LR	08 37 58.4	
	comp=Z,973nm,20.9s,baz=72,slow=33						
MALB	**Monte Alegre**	**18.93**	**239**	*eP*	**P**	**08 34 05.9**	**-3.3**
PTGA	**Pitinga**	**23.53**	**249**	P	**P**	**08 34 58.6**	**+0.1**
	2.6nm,0.5s,baz=306,slow=22,SNR=4.6						
PTGA				LR	LR	08 43 27.7	
	comp=Z,752nm,21.8s,baz=62,slow=35						
PTGA	**Pitinga**	**23.53**	**249**	P	**P**	**08 34 57.3**	**-1.2**
PTGA				IAmb	IAmb	08 35 08.9	
	comp=Z,35nm,1.4s						
JANB	**Januaria**	**23.77**	**195**	*eP*	**P**	**08 35 03.1**	**+2.2**
MACA	**Manacapuru-AM**	**25.18**	**245**	*eP*	**P**	**08 35 13.8**	**+0.1**
BDFB	**Brasilia**	**25.52**	**203**	P	**P**	**08 35 17.3**	**+0.4**
	comp=Z,6.1nm,0.6s,baz=24,slow=12,SNR=9.5						
BDFB				LR	LR	08 44 47.8	
	comp=Z,185nm,19.7s,baz=336,slow=35						
BDFB	**Brasilia**	**25.52**	**203**	P	**P**	**08 35 16.3**	**-0.5**
CLDB	**Colider**	**25.79**	**224**	*eP*	**P**	**08 35 19.3**	**+0.1**
SJMB	**Sao Joao De Ma**	**26.75**	**187**	*eP*	**P**	**08 35 32.1**	**+4.2**
ARAG	**Araguaiana, MT**	**27.25**	**210**	*eP*	**P**	**08 35 33.6**	**+1.2**
IPMB	**Ipameri, GO**	**27.74**	**201**	*eP*	**P**	**08 35 39.9**	**+3.1**
H10N3	**ASCENSION HYDR**	**28.28**	**123**	T	T	09 05 19.5	
	baz=303,slow=75,SNR=91						
H10N2	**ASCENSION HYDR**	**28.28**	**123**	T	T	09 05 18.6	
	baz=303,slow=75,SNR=96						
H10N1	**ASCENSION HYDR**	**28.30**	**123**	T	T	09 05 21.0	
	baz=303,slow=75,SNR=86						
SJG	**San Juan**	**29.11**	**293**	LR	LR	08 44 57.7	
	comp=Z,654nm,21.8s,baz=95,slow=31						
SALV	**Santo Antonio**	**29.52**	**216**	*eP*	**P**	**08 35 53.6**	**+1.0**
SAML	**Samuel**	**30.20**	**237**	P	**P**	**08 35 59.7**	**+0.9**
SAML				IAmb	IAmb	08 36 08.1	
	comp=Z,17nm,1.1s						
VILB	**Vilhena**	**30.32**	**227**	*eP*	**P**	**08 36 00.3**	**+0.5**
PTLB	**Pontes e Lacer**	**31.33**	**222**	*eP*	**P**	**08 36 09.4**	**+0.8**
PCMB	**Pacaembu**	**32.19**	**204**	*eP*	**P**	**08 36 18.5**	**+2.3**
DBIC	**Dimbokro**	**32.94**	**90**	P	**P**	**08 36 21.4**	**-1.5**
	comp=Z,2.0nm,0.6s,baz=221,slow=14,SNR=1.8						
DBIC				LR	LR	08 47 18.2	
	comp=Z,398nm,19.0s,baz=255,slow=32						
SIV	**San Ignacio**	**33.02**	**224**	P	**P**	**08 36 24.6**	**+1.1**
	comp=Z,2.5nm,0.7s,baz=78,slow=9.4,SNR=12						
FRTB	**Fartura**	**33.16**	**200**	*eP*	**P**	**08 36 27.5**	**+2.8**
PET01	**Itanhaem-SP**	**33.37**	**195**	*eP*	**P**	**08 36 30.2**	**+3.8**
RUSC	**La Rusia**	**34.84**	**269**	P	**P**	**08 36 39.4**	**-0.6**
ROSC	**El Rosal**	**36.18**	**267**	P	**P**	**08 36 52.4**	**+1.1**
	comp=Z,4.0nm,0.7s,baz=115,slow=22,SNR=1.6						
ROSC				LR	LR	08 51 20.5	
	comp=Z,494nm,21.5s,baz=84,slow=36						
ROSC	**El Rosal**	**36.18**	**267**	P	**P**	**08 36 51.3**	**-0.1**
ROSC				IAmb	IAmb	08 36 55.7	
	comp=Z,8.1nm,0.9s						
ITAB	**Concordia**	**37.63**	**201**	*eP*	**P**	**08 37 05.7**	**+2.7**
CPUP	**Villa Florida**	**38.96**	**208**	P	**P**	**08 37 13.2**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=24,slow=10.0,SNR=2.2						
CPUP				LR	LR	08 53 43.0	
	comp=Z,223nm,18.7s,baz=29,slow=37						
CPUP	**Villa Florida**	**38.96**	**208**	P	**P**	**08 37 12.6**	**-1.7**
TORD	**Torodi Ar. Bea**	**39.36**	**79**	P	**P**	**08 37 16.3**	**-1.5**
	comp=Z,3.3nm,0.8s,baz=272,slow=8.9,SNR=13						
TORD				LR	LR	08 51 46.3	
	comp=Z,757nm,19.7s,baz=265,slow=34						
MDT	**Midelt**	**39.57**	**47**	P	**P**	**08 37 19.6**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=0.0,slow=5.1,SNR=1.7						
MDT				LR	LR	08 50 57.5	
	comp=Z,158nm,21.8s,baz=244,slow=32						
ESDC	**Sonseca Array**	**43.83**	**39**	LR	LR	08 52 39.2	
	comp=Z,204nm,20.6s,baz=230,slow=31						
GO02	**Mina Guanaco**	**45.09**	**222**	P	**P**	**08 38 04.3**	**-0.4**
GO02				IAmb	IAmb	08 38 12.8	
	comp=Z,12nm,0.8s						
AC02	**Maricunga**	**45.94**	**220**	P	**P**	**08 38 12.2**	**+0.5**
AC05	**El Transito**	**48.06**	**219**	P	**P**	**08 38 26.8**	**-1.0**
AC05				IAmb	IAmb	08 38 38.9	
	comp=Z,6.5nm,0.8s						
CFA	**Coronel Fontan**	**48.86**	**215**	P	**P**	**08 38 34.1**	**+0.2**
	comp=Z,4.8nm,0.6s,baz=27,slow=5.0,SNR=14						
GO04	**Tololo Observa**	**49.33**	**218**	P	**P**	**08 38 35.2**	**-2.5**
N54A	**Moraine State**	**49.57**	**318**	P	**P**	**08 38 40.5**	**+1.4**
N54A				IAmb	IAmb	08 38 54.3	
	comp=Z,10nm,1.1s						
M54A	**Oil Creek Stat**	**49.63**	**319**	P	**P**	**08 38 40.1**	**+0.5**
M54A				IAmb	IAmb	08 38 50.1	
	comp=Z,11nm,1.1s						
CO03	**El Pedregal**	**49.73**	**217**	P	**P**	**08 38 40.6**	**0.0**
P53A	**Whipple**	**49.81**	**316**	P	**P**	**08 38 41.4**	**+0.3**
P53A				IAmb	IAmb	08 38 56.4	
	comp=Z,7.8nm,1.1s						
CO02	**Combarbal**	**50.18**	**217**	P	**P**	**08 38 43.3**	**-0.8**
CO04	**Los Peladeros**	**50.76**	**217**	P	**P**	**08 38 48.0**	**-0.6**
W50A	**Signal Mountai**	**50.95**	**309**	P	**P**	**08 38 51.6**	**+1.9**
VA03	**San Esteban**	**51.04**	**216**	P	**P**	**08 38 49.7**	**-0.7**
VA03				IAmb	IAmb	08 38 58.6	
	comp=Z,13nm,0.8s						
KEST	**Kesra**	**51.23**	**50**	LR	LR	09 00 48.7	
	comp=Z,224nm,19.1s,baz=180,slow=36						
MT02	**Curacav**	**51.73**	**216**	P	**P**	**08 38 55.2**	**-0.3**
SCHQ	**Schefferville**	**52.02**	**339**	LR	LR	08 57 18.7	
	comp=Z,103nm,21.7s,baz=21,slow=32						
BO02	**Sierra Bellavi**	**52.65**	**214**	P	**P**	**08 39 02.5**	**0.0**
BO02				IAmb	IAmb	08 39 05.1	
	comp=Z,13nm,0.8s						
WVT	**Waverly**	**53.19**	**309**	P	**P**	**08 39 06.8**	**+0.4**
BI02	**San Fabin de**	**54.30**	**213**	P	**P**	**08 39 14.5**	**-0.1**
PLCA	**Paso Flores**	**57.02**	**209**	P	**P**	**08 39 34.3**	**+0.3**
	comp=Z,1.9nm,1.0s,baz=40,slow=6.3,SNR=2.5						
PLCA				LR	LR	09 04 51.5	
	comp=Z,133nm,18.6s,baz=18,slow=37						
JFWS	**Jewell Farm**	**57.31**	**316**	P	**P**	**08 39 36.1**	**+0.1**
JFWS				IAmb	IAmb	08 39 36.4	
	comp=Z,6.8nm,0.8s						
P40A	**Paris**	**57.44**	**312**	P	**P**	**08 39 36.9**	**0.0**
P40A				IAmb	IAmb	08 39 37.5	
	comp=Z,4.9nm,0.8s						
W39A	**Magazine**	**57.57**	**307**	P	**P**	**08 39 38.5**	**+0.6**
W39A				IAmb	IAmb	08 39 46.0	
	comp=Z,9.7nm,1.5s						
GERES	**GERESS Array B**	**59.38**	**37**	LR	LR	09 02 11.5	
	comp=Z,39nm,21.8s,baz=277,slow=33						
SPMN	**Marine on St.**	**59.86**	**319**	P	**P**	**08 39 53.5**	**-0.2**
ECSD	**ERDS Data Cent**	**61.96**	**316**	P	**P**	**08 40 08.1**	**0.0**
ULM	**Lac du Bonnet**	**63.58**	**323**	P	**P**	**08 40 17.1**	**-1.6**
	comp=Z,4.2nm,0.8s,baz=109,slow=7.0,SNR=6.6						
ULM				LR	LR	09 04 11.4	
	comp=Z,114nm,19.7s,baz=122,slow=32						
ULM	**Lac du Bonnet**	**63.58**	**323**	P	**P**	**08 40 18.4**	**-0.3**
ULM				IAmb	IAmb	08 40 21.0	
	comp=Z,4.2nm,0.8s						
SANT	**Santorini**	**63.98**	**53**	P	**P**	**08 40 20.7**	**-1.0**
NOA	**NORSAR Array B**	**64.16**	**24**	P	**P**	**08 40 22.3**	**-0.1**
	comp=Z,2.4nm,1.0s,baz=236,slow=6.6,SNR=3.7						
NOA				LR	LR	09 03 23.4	
	comp=Z,46nm,21.8s,baz=230,slow=32						
SUMG	**Summit**	**64.48**	**360**	P	**P**	**08 40 25.4**	**+0.7**
SUMG				IAmb	IAmb	08 40 35.0	
	comp=Z,7.3nm,0.9s						
TXAR	**Lajitas Array**	**64.87**	**299**	P	**P**	**08 40 27.6**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=108,slow=6.4,SNR=5.5						
TXAR				LR	LR	09 08 49.2	
	comp=Z,28nm,20.8s,baz=0.0,slow=36						
FCC	**Fort Churchill**	**65.99**	**332**	P	**P**	**08 40 32.9**	**-1.4**
FCC				IAmb	IAmb	08 40 36.1	
	comp=Z,8.5nm,1.1s						
MLR	**Muntele Rosu**	**66.16**	**44**	P	**P**	**08 40 36.4**	**+0.7**
	comp=Z,3.8nm,1.0s,baz=284,slow=4.3,SNR=4.2						
SDCO	**Great Sand Dun**	**67.32**	**307**	P	**P**	**08 40 43.7**	**+0.1**
ISCO	**Idaho Springs**	**67.69**	**310**	P	**P**	**08 40 47.0**	**+1.1**
FFC	**Flin Flon**	**68.56**	**326**	P	**P**	**08 40 50.9**	**+0.2**
LAO	**LASA Array**	**69.26**	**317**	P	**P**	**08 40 55.8**	**+0.6**
LAO				IAmb	IAmb	08 41 10.1	
	comp=Z,11nm,1.3s						
AKASG	**Malin Array Be**	**69.48**	**39**	P	**P**	**08 40 56.9**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=258,slow=6.1,SNR=6.0						
AKASG				LR	LR	09 09 15.1	
	comp=Z,73nm,20.9s,baz=255,slow=34						
FINES	**FINESS Array B**	**70.76**	**27**	LR	LR	09 08 38.0	
	comp=Z,54nm,21.3s,baz=186,slow=33						
BRTR	**Keskin Array B**	**70.81**	**51**	LR	LR	09 12 22.3	
	comp=Z,53nm,21.2s,baz=204,slow=36						
PDAR	**Pinedale Array**	**71.02**	**312**	P	**P**	**08 41 07.6**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=101,slow=4.7,SNR=3.5						
BOSA	**Boshof**	**71.03**	**124**	LR	LR	09 06 03.0	
	comp=Z,242nm,21.0s,baz=270,slow=31						
RLMT	**Red Lodge**	**71.11**	**315**	P	**P**	**08 41 07.5**	**+0.6**
RLMT				IAmb	IAmb	08 41 21.5	
	comp=Z,4.8nm,1.1s						
GCMT	**Greycliff**	**71.48**	**316**	P	**P**	**08 41 09.0**	**+0.1**
YNE	**Yellowstone No**	**71.61**	**315**	P	**P**	**08 41 10.5**	**+0.6**
YMP	**Mirror Lake PI**	**71.69**	**314**	P	**P**	**08 41 10.4**	**0.0**
WUAZ	**Wupatki**	**71.81**	**305**	P	**P**	**08 41 10.4**	**-0.8**
WUAZ				IAmb	IAmb	08 41 26.7	
	comp=Z,5.2nm,1.1s						
X16A	**Lo Mia Camp, P**	**71.81**	**304**	P	**P**	**08 41 11.5**	**+0.3**
X16A				IAmb	IAmb	08 41 20.2	
	comp=Z,6.7nm,1.4s						
LKWY	**Lake**	**71.84**	**314**	P	**P**	**08 41 11.2**	**-0.1**
LKWY				IAmb	IAmb	08 41 21.3	
	comp=Z,8.6nm,1.4s						
EGMT	**Eagleton**	**71.84**	**318**	P	**P**	**08 41 11.0**	**0.0**
EGMT				IAmb	IAmb	08 41 21.7	
	comp=Z,7.3nm,1.2s						
TMUT	**Trail Mountain**	**71.93**	**309**	P	**P**	**08 41 11.8**	**-0.2**
H17A	**Grant Village**	**71.94**	**314**	P	**P**	**08 41 11.3**	**-0.6**
SNOW	**Snow King Moun**	**71.97**	**313**	P	**P**	**08 41 12.1**	**0.0**
FLWY	**Flagg Ranch**	**72.00**	**314**	P	**P**	**08 41 10.9**	**-1.3**
TPAW	**Teton Pass**	**72.11**	**313**	P	**P**	**08 41 13.7**	**+0.7**
TPAW				IAmb	IAmb	08 41 22.1	
	comp=Z,10nm,1.3s						
IMW	**Indian Meadow**	**72.15**	**313**	P	**P**	**08 41 14.0**	**+0.8**
IMW				IAmb	IAmb	08 41 16.2	
	comp=Z,4.7nm,0.7s						
YHH	**Holmes Hill**	**72.18**	**314**	P	**P**	**08 41 13.8**	**+0.4**
FXWY	**Fox Creek**	**72.18**	**313**	P	**P**	**08 41 13.8**	**+0.5**
FXWY				IAmb	IAmb	08 41 27.9	
	comp=Z,8.8nm,1.3s						
JLU	**Jordanelle**	**72.22**	**310**	P	**P**	**08 41 12.9**	**-0.7**
TCUT	**Toone Canyon**	**72.23**	**311**	P	**P**	**08 41 14.5**	**+0.8**
YMR	**Madison River**	**72.25**	**314**	P	**P**	**08 41 14.4**	**+0.7**
HWUT	**Hardware Ranch**	**72.39**	**311**	P	**P**	**08 41 14.2**	**-0.3**
HWUT				IAmb	IAmb	08 41 29.1	
	comp=Z,8.7nm,0.9s						
YHB	**Horse Butte**	**72.42**	**314**	P	**P**	**08 41 14.7**	**0.0**
YHL	**Hebgen Lake**	**72.42**	**314**	P	**P**	**08 41 15.7**	**+0.9**
MTPU	**Mount Pierson**	**72.61**	**307**	P	**P**	**08 41 15.5**	**-0.6**
DUG	**Dugway, Tooele**	**73.23**	**309**	P	**P**	**08 41 18.0**	**-1.5**
LRM	**Limekiln Ridge**	**73.41**	**315**	P	**P**	**08 41 21.4**	**+0.8**
BGU	**Big Grassy Mou**	**73.44**	**310**	P	**P**	**08 41 20.6**	**-0.2**
DLMT	**Dillon**	**73.47**	**315**	P	**P**	**08 41 21.8**	**+0.9**
CCUT	**Cedar City**	**73.51**	**307**	P	**P**	**08 41 21.3**	**-0.1**
MCMT	**McKenzie Canyo**	**73.60**	**314**	P	**P**	**08 41 22.2**	**+0.5**
JTMT	**Jette**	**74.84**	**317**	P	**P**	**08 41 28.9**	**+0.2**
ELK	**Elko**	**75.10**	**310**	P	**P**	**08 41 30.0**	**-0.6**
R11A	**Troy Canyon, C**	**75.30**	**307**	P	**P**	**08 41 31.9**	**+0.3**
KMBO	**Kilima Mbogo**	**75.61**	**93**	LR	LR	09 12 52.7	
	comp=Z,112nm,18.9s,baz=270,slow=34						
YKA	**Yellowknife Ar**	**76.71**	**332**	P	**P**	**08 41 38.0**	**-0.9**
	comp=Z,1.6nm,0.8s,baz=104,slow=6.1,SNR=26						
YKA				LR	LR	09 14 30.9	
	comp=Z,103nm,18.0s,baz=0.0,slow=35						
KLMR	**Klimovskoe**	**76.97**	**29**	*e*	**P**	**08 41 38.7**	**-1.7**
KLMR				AMP		08 41 50.0	
	comp=Z,24nm,1.5s						
KVN	**Kaiserville**	**77.27**	**308**	P	**P**	**08 41 42.6**	**-0.3**
NVAR	**Mina Aray Bea**	**77.43**	**308**	P	**P**	**08 41 44.9**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=97,slow=5.6,SNR=4.5						
NVAR				LR	LR	09 12 31.7	
	comp=Z,86nm,21.7s,baz=126,slow=33						
J08A	**Circle Bar Ran**	**77.58**	**313**	P	**P**	**08 41 44.6**	**+0.2**
J08A				IAmb	IAmb	08 42 02.0	
	comp=Z,7.6nm,1.4s						
WVOR	**Wild Horse Val**	**77.69**	**312**	P	**P**	**08 41 45.4**	**+0.3**
WVOR				IAmb	IAmb	08 41 59.6	
	comp=Z,8.5nm,1.4s						
KBZ	**Khabaz**	**77.95**	**47**	P	**P**	**08 41 48.4**	**+2.1**
	comp=Z,2.8nm,0.8s,baz=242,slow=1.3,SNR=4.9						
MOD	**Modoc Plateau**	**78.93**	**311**	P	**P**	**08 41 51.8**	**-0.2**
VNA3	**Neumayer Olymp**	**81.35**	**171**	P	**P**	**08 42 04.5**	**+0.4**
SNAA	**Sanae**	**82.86**	**169**	P	**P**	**08 42 12.1**	**0.0**
SNAA	**Sanae**	**82.86**	**169**	P	**P**	**08 42 12.4**	**+0.2**
SNAA				IAmb	IAmb	08 42 20.7	
	comp=Z,8.4nm,0.9s						
INK	**Inuvik**	**84.62**	**338**	P	**P**	**08 42 20.7**	**-0.5**
INK				IAmb	IAmb	08 42 30.3	
	comp=Z,3.9nm,0.9s						
AKTO	**Aktyubinsk**	**87.71**	**40**	P	**P**	**08 42 38.3**	**+1.4**
	comp=Z,2.0nm,0.9s,baz=357,slow=4.5,SNR=4.3						
GEYT	**Alibeck**	**89.94**	**52**	LR	LR	09 25 21.4	
	comp=Z,30nm,21.0s,baz=175,slow=37						
ILAR	**Eielson Array**	**90.66**	**336**	P	**P**	**08 42 50.3**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=70,slow=3.9,SNR=5.8						
SYO	**Syowa Base**	**93.05**	**159**	*es*	sP	08 43 05.8	-1.1
ASAR	**Alice Springs**	**162.65**	**154**	PKPab	**PKPab**	**08 50 40.0**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=196,slow=4.0,SNR=2.4						

NSSP ***08*** *08:30:15.0, 38˚.43N×46˚.78E, h10km, Ms3.6*

DDA ***08*** *08:30:15.7, 38˚.09N×47˚.03E, h7km±6km, MW3.6*

THR ***08*** *08:30:15.1±0.6, 38˚.44N×46˚.82E, h14km±9km, ML3.9*

TEH ***08*** *08:30:15.2, 38˚.42N×46˚.83E, h10km, ML3.9*

IDC ***08*** *08:30:16.4±1.7, 38˚.31N×46˚.81E, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.4/41, mbtmp3.6/5, ML3.9/2, Error ellipse: s-maj=35.6km s-min=21.6km az=13.0*

ISC 08 08:30:16.2±0.6, 38˚.50N±0˚.02×46˚.84E±0˚.02, h10km, n76, σ1§50/85, mb3.6/3, 4C-6D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVRZ	**Varzaqan**	**0.13**	**274**	*eP*	**Pg**	**08 30 18.9**	**-0.6**
TVRZ				*eSg*	**Sg**	**08 30 22.0**	**+0.3**
AHAR	**Ahar**	**0.17**	**92**	*eP*	**Pg**	**08 30 19.8**	**-0.2**
IHRS	**Heris**	**0.24**	**138**	*eP*	**Pg**	**08 30 19.4**	**-1.9**
IHRS				*eSg*	**Sg**	**08 30 22.5**	**-2.2**
IHSH	**Hashtrud**	**0.39**	**119**	*eP*	Pn	08 30 36.9	+8.7
IHSH				*e*		08 30 55.5	
TABZ	**Tabriz**	**0.59**	**223**	*eP*	**Pg**	**08 30 26.1**	**-1.7**
ITBZ	**Tabriz**	**0.60**	**244**	*eP*	**Pg**	**08 30 25.9**	**-2.0**
ORD	**Ordubad**	**0.79**	**303**	*eP*	**Pg**	**08 30 30.6**	**-0.8**
GRMI	**Germi**	**0.89**	**69**	*eP*	**Pb**	**08 30 32.5**	**-1.3**
GRMI				*eSg*	**Sb**	**08 30 45.2**	**-0.5**
GRMI				IAML		08 30 45.9	
	comp=N,4μm,0.2s						
GRMI				IAML		08 30 46.8	
	comp=E,5μm,0.2s						
GRMI	**Germi**	**0.89**	**69**	*eP*	**Pb**	**08 30 32.5**	**-1.3**
IMRD	**Marand**	**0.91**	**284**	*eP*	**Pg**	**08 30 32.5**	**-1.4**
ISRB	**Sarab**	**0.94**	**135**	*eP*	**Pg**	**08 30 31.5**	**-2.8**
ISHB	**Shabestar**	**0.98**	**258**	*eP*	**Pg**	**08 30 33.3**	**-1.8**
QRD	**Qoradiz**	**1.03**	**21**	*eP*	**Pn**	**08 30 36.6**	**-0.2**
IAZR	**Azarshahr**	**1.06**	**220**	*eP*	**Pg**	**08 30 34.1**	**-2.5**
YRD	**Yardimli**	**1.18**	**69**	*ePn*	**Pn**	**08 30 38.2**	**-0.8**
LRK	**Lerik**	**1.19**	**82**	*eP*	**Pb**	**08 30 37.7**	**-1.3**
NAX	**Nakhchivan**	**1.25**	**303**	*eP*	**Pb**	**08 30 39.0**	**-0.9**
SBZ	**Shahbuz**	**1.34**	**312**	*ePn*	**Pg**	**08 30 41.1**	**-1.0**
BLQ	**Beylaqan**	**1.35**	**24**	*ePn*	**Pg**	**08 30 42.3**	**+0.2**
GLBA	**Clilabad**	**1.43**	**58**	*ePn*	**Pg**	**08 30 43.5**	**-0.1**
ASTR	**Astara**	**1.54**	**87**	*ePn*	**Pg**	**08 30 44.3**	**-1.4**
LKRN	**Lenkeran, Azer**	**1.54**	**81**	*ePn*	**Pb**	**08 30 44.2**	**-0.6**
BRDA	**Brd**	**1.79**	**8**	*ePn*	**Pg**	**08 30 48.8**	**-1.7**
SAAT	**Saatly**	**1.84**	**42**	*ePn*	**Pb**	**08 30 49.4**	**-0.5**
MAKU	**Maku**	**1.89**	**298**	*ePn*	**Pb**	**08 30 49.3**	**-1.6**
MAKU				*eSg*	**Sg**	**08 31 15.0**	**-1.8**
MAKU	**Maku**	**1.89**	**298**	*ePn*	**Pb**	**08 30 49.3**	**-1.6**
ZRD	**Zardab**	**1.90**	**20**	*ePn*	**Pb**	**08 30 50.4**	**-0.5**
MAHB	**Mahabad**	**1.95**	**208**	*ePn*	**Pn**	**08 30 49.4**	**-0.1**
MAHB				*e*		08 31 26.2	
HYR	**Heyderabad**	**1.97**	**309**	*ePn*	**Pb**	**08 30 50.7**	**-1.5**
KDMR	**Kurdemir**	**2.15**	**29**	*ePn*	**Pb**	**08 30 53.4**	**-1.8**
GANJ	**Ganja**	**2.18**	**350**	*ePn*	**Pb**	**08 30 54.3**	**-1.6**
YOVA	**Hakkari_Yksek**	**2.21**	**246**	*i P*	**Pb**	**08 30 56.5**	**+0.2**
YOVA				IAML		08 31 42.0	
	comp=E,118nm,0.9s						
YOVA				IAML		08 31 47.0	
	comp=N,114nm,0.8s						
ALIB	**Äli-Bayra**	**2.23**	**48**	*ePn*	**Pb**	**08 30 54.9**	**-1.7**
NRKZ	**NAREK**	**2.26**	**312**	*i P*	**Pb**	**08 30 56.7**	**-0.5**
NRKZ				⇑*i*S	**Sg**	**08 31 27.1**	**-1.8**
BASK	**Baskale_VAN**	**2.27**	**260**	*i P*	**Pg**	**08 30 58.3**	**-1.5**
BASK				*i* S	**Sg**	**08 31 28.8**	**-0.5**
BASK				IAML		08 31 46.0	
	comp=N,142nm,1.1s						
BASK				IAML		08 31 58.0	
	comp=E,101nm,1.1s						
ZNJK	**Zanjan**	**2.34**	**141**	*ePn*	**Pn**	**08 30 54.5**	**-0.5**
ZNJK	**Zanjan**	**2.34**	**141**	*ePn*	**Pn**	**08 30 54.5**	**-0.5**
GDB	**GEDABAY**	**2.37**	**340**	*ePn*	**Pb**	**08 30 56.5**	**-2.7**
KAPZ	**Kaputan**	**2.46**	**318**	⇓*i* P	**Pg**	**08 31 01.5**	**-1.9**
KAPZ				⇑*i* S	**Sg**	**08 31 35.3**	**-0.1**
IML	**Ismayilli**	**2.52**	**24**	*ePn*	**Pb**	**08 30 58.5**	**-3.1**
QBL	**Gabala**	**2.57**	**17**	*ePn*	**Pb**	**08 31 00.9**	**-1.5**
VMUR	**Van-Muradiye**	**2.60**	**282**	*i P*	**Pg**	**08 31 03.8**	**-2.2**
VMUR				IAML		08 31 48.0	
	comp=N,99nm,0.9s						
VMUR				IAML		08 31 50.0	
	comp=E,156nm,1.0s						
HAKT	**HAKKARI**	**2.64**	**250**	*i P*	**Pb**	**08 31 03.6**	**-0.2**
HAKT				IAML		08 31 58.0	
	comp=E,52nm,0.8s						
HAKT				IAML		08 31 59.0	
	comp=N,54nm,1.5s

0.7nm,0.3s,baz=337,slow=11,SNR=14
ASAR Alice Springs 25.39 163 P P 09 03 27.4 0.0
2.0nm,0.9s,baz=344,slow=11,SNR=24
MKAR Makanchi Array 59.66 327 P P 09 08 04.2 0.0
0.2nm,0.4s,baz=115,slow=8.8,SNR=2.8

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*IDC **08** 09:00:18.8±6.0, 67.99N×164.18W, h0km, mb3.4/3, mb1 4.0/4, mb1mx3.5/36, mbtmp3.6/4, ML4.1/1, Error ellipse: s-maj=97.1km s-min=91.0km az=169.0*
*AEIC **08** 09:00:24±1.7, 67.66N±0.05×162.6W±0.2, h16km±6km, ML3.2/29, Error ellipse: s-maj=11.0km s-min=6.2km az=109.0*
*NEIC **08** 09:00:26.4±2.1, 67.66N±0.02×162.7W±0.2, h22km±7km, Error ellipse: s-maj=10.1km s-min=2.1km az=91.0*

ISC 08 09:00:25.6±0.9, 67.67N±0.05×162.43W±0.06, h10km, n38, σ0§90/43, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
RDOG	**Red Dog Mine**	**0.42**	**335**			**Pg**	**09 00 33.3**	**-0.6**
RDOG						**Sg**	**09 00 39.6**	**+0.1**
ANM	**Nome**	**3.34**	**202**			**Pn**	**09 01 17.4**	**-0.4**
ANM						**Sn**	**09 01 56.5**	**-1.0**
IM03		**3.83**	**112**			**Pn**	**09 01 23.9**	**-0.5**
IM03						**Sn**	**09 02 08.8**	**-0.6**
COLD	**Coldfoot**	**4.73**	**90**			**Pn**	**09 01 37.7**	**+0.9**
TOLK	**Toolik Lake Re**	**4.90**	**73**			**Pn**	**09 01 40.2**	**+1.0**
TOLK						**Sn**	**09 02 35.5**	**-0.4**
MLY	**Manley**	**5.40**	**114**			**Pn**	**09 01 46.3**	**+0.3**
TTA	**Tatalina**	**5.47**	**148**			**Pn**	**09 01 47.2**	**+0.2**
TT01	**Tatalina**	**5.49**	**148**			**Pn**	**09 01 47.4**	**+0.2**
PS01	**TAPS Pump Stn**	**5.61**	**56**			**Pn**	**09 01 48.1**	**-0.7**
BPAW	**Bear Paw Mtn.**	**5.90**	**122**			**Pn**	**09 01 53.3**	**+0.4**
NEA	**Nenana**	**6.24**	**114**			**Pn**	**09 01 57.6**	**0.0**
KTH	**Kantishna Hill**	**6.30**	**126**			**Pn**	**09 01 58.9**	**+0.5**
KTH	**Kantishna Hill**	**6.30**	**126**			**Sn**	**09 03 09.5**	**-0.9**
MDM	**Murphy Dome**	**6.33**	**109**			**Pn**	**09 01 59.5**	**+0.7**
PPLA	**Purkeypile**	**6.43**	**133**			**Pn**	**09 02 01.1**	**+0.8**
TCOL	**CIGO, UAF Yank**	**6.51**	**109**			**Pn**	**09 02 01.6**	**+0.4**
COLA	**College**	**6.51**	**109**			**Pn**	**09 02 01.9**	**+0.7**
COLA	**College**	**6.51**	**109**			**Pn**	**09 02 02.1**	**+0.9**
TRF	**Thorofare Moun**	**6.57**	**124**			**Pn**	**09 02 02.7**	**+0.4**
WRH	**Wood River Hil**	**6.65**	**112**			**Pn**	**09 02 03.3**	**+0.1**
CCB	**Clear Creek Bu**	**6.65**	**110**			**Pn**	**09 02 03.2**	**+0.1**
MCK	**McKinley**	**6.82**	**119**			**Pn**	**09 02 06.1**	**+0.5**
BM03	**Burnt Mountain**	**6.83**	**84**			**Pn**	**09 02 05.8**	**+0.1**
ILAR	**Eielson Array**	**6.92**	**108**	Pn		**Pn**	**09 02 06.7**	**-0.1**
	2.8nm,0.3s,baz=302,slow=14,SNR=119							
ILAR				Sn		**Sn**	**09 03 22.6**	**-2.8**
	0.9nm,0.3s,baz=300,slow=22,SNR=12							
PRP	**Porcupine Dome**	**7.06**	**100**	Pn		**Pn**	**09 02 09.5**	**+0.5**
RND	**Reindeer**	**7.07**	**121**			**Pn**	**09 02 09.2**	**+0.3**
HDA	**Harding Lake**	**7.09**	**110**			**Pn**	**09 02 09.4**	**+0.2**
DHY	**Denali Highway**	**7.78**	**119**			**Pn**	**09 02 19.8**	**+0.9**
GHO	**Glory Hole Cre**	**8.26**	**129**	Pn		**Pn**	**09 02 27.1**	**+1.9**
PMR	**Palmer**	**8.34**	**131**	Pn		**Pn**	**09 02 28.6**	**+2.4**
SML	**Sawmill**	**8.41**	**128**	Pn		**Pn**	**09 02 28.2**	**+1.0**
SCM	**Sheep Creek Mo**	**8.69**	**125**	Pn		**Pn**	**09 02 31.9**	**+0.7**
EPYK	**Eagle Plains**	**10.10**	**85**			**Pn**	**09 02 50.6**	**+0.1**
INK	**Inuvik**	**10.81**	**73**			**Pn**	**09 02 58.4**	**-1.7**
CRQM	**Cirque**	**10.85**	**120**	Pn		**Pn**	**09 03 01.0**	**+0.2**
YKA	**Yellowknife Ar**	**20.35**	**82**	P		**P**	**09 05 01.9**	**+0.3**
	0.7nm,0.6s,baz=304,slow=9.8,SNR=12							
PDAR	**Pinedale Array**	**37.34**	**105**	P		**P**	**09 07 38.6**	**+0.7**
	0.4nm,0.5s,baz=350,slow=6.8,SNR=5.7							
TXAR	**Lajitas Array**	**51.43**	**107**	P		**P**	**09 09 31.1**	**+0.6**
	0.6nm,0.6s,baz=330,slow=5.4,SNR=9.2							

IDC 08 09:19:36.0±2.8, 6.80S×128.48E, h0km, mb3.9/1, mb1 3.9/3, mb1mx3.5/36, mbtmp3.8/3, ML3.8/2, Error ellipse: s-maj=320.3km s-min=31.2km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
WRA	**Warramunga Arr**	**14.25**	**157**	Pn		Pn	09 22 57.9	-1.3
	0.3nm,0.3s,baz=335,slow=12,SNR=11							
WRA				Sn		Sn	09 25 24.6	-14
	0.4nm,0.3s,baz=335,slow=22,SNR=7.2							
ASAR	**Alice Springs**	**17.56**	**163**	P		P	09 23 43.3	-0.3
	0.5nm,0.3s,baz=338,slow=9.3,SNR=50							
ASAR				S		Sn	09 26 44.8	-14
	0.1nm,0.3s,baz=348,slow=26,SNR=1.6							
MKAR	**Makanchi Array**	**67.24**	**327**	P		P	09 30 32.3	0.0
	0.5nm,0.4s,baz=119,slow=6.9,SNR=6.4							

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*ISK **08** 09:26:35.9, 36.85N×38.69E, h5km, ML2.2/6*
*DDA **08** 09:26:36.0, 36.80N×38.70E, h7km±3km, ML2.5*

ISC 08 09:26:36.0±1.7, 36.79N±0.07×38.68E±0.04, h7km±12km, n14, σ1§14/25, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
SANL	**SANLIURFA_Merk**	**0.45**	**33**	*i* P		**Pg**	**09 26 44.6**	**-0.2**
SANL				*i* S		**Sb**	**09 26 57.0**	**+3.6**
URFA	**Urfa**	**0.66**	**10**	PG		**Pg**	**09 26 48.6**	**-0.2**
URFA				SG		**Sb**	**09 26 57.9**	**-1.5**
ATAB	**Bozova**	**0.75**	**336**	*i* P		**Pb**	**09 26 50.7**	**-0.7**
ATAB				*i* S		**Sb**	**09 27 01.2**	**-0.5**
GZT	**Gaziantep**	**1.06**	**303**	*i* P		**Pb**	**09 26 56.8**	**+0.1**
GZT				*i* S		**Sn**	**09 27 11.6**	**-0.9**
GAZ	**Gaziantep**	**1.24**	**288**	PN		**Pn**	**09 27 00.3**	**+0.5**
GAZ				SN		**Sn**	**09 27 18.3**	**+1.5**
HCB	**Kahramanmara**	**1.52**	**292**	*i* P		**Pn**	**09 27 02.9**	**-0.8**
HCB				*i* S		**Sg**	**09 27 25.0**	**0.0**
MALT	**Malatya**	**1.54**	**352**	PN		**Pg**	**09 27 04.7**	**-0.8**
MALT				SN		**Sg**	**09 27 25.5**	**+0.1**
MAZI	**Mazidag**	**1.56**	**64**	PN		**Pg**	**09 27 05.3**	**-0.7**
AKCD	**Akcadag**	**1.62**	**338**	*i* P		**Pg**	**09 27 07.1**	**0.0**
AKCD				*i* S		**Sg**	**09 27 29.8**	**+1.7**
AKCD				IAML			09 27 31.0	
	comp=N,111nm,0.4s							
AYKD	**Aykdinkavak**	**1.62**	**293**	*i* P		**Pn**	**09 27 03.8**	**-1.3**
AYKD				*i* S		**Sb**	**09 27 27.4**	**+0.3**
DYBB	**Diyarbakir**	**1.64**	**45**	PN		**Pb**	**09 27 06.4**	**-0.3**
KAMA	**Osmaniye**	**1.66**	**284**	*i* P		**Pn**	**09 27 05.3**	**-0.3**
KAMA				*i* S		**Sg**	**09 27 30.1**	**+0.7**
SVRC	**Sivrice-ELAZID**	**1.66**	**17**	PN		**Pb**	**09 27 06.4**	**-0.7**
ANDN	**Andirin**	**2.03**	**294**	*i* P		**Pn**	**09 27 10.7**	**0.0**
ANDN				*i* S		**Sg**	**09 27 42.2**	**+1.0**

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*IDC **08** 09:30:11.4±0.9, 8.94S×157.91E, h0km, mb4.0/9, mb1 4.2/10, mb1mx3.9/32, mbtmp4.0/10, ML4.3/1, MS3.6/8, Ms1 3.6/8, ms1mx3.3/35, Error ellipse: s-maj=26.6km s-min=18.7km az=161.0*
*NEIC **08** 09:30:16.5±1.5, 9.02S±0.03×157.90E±0.09, h32km±6km, mb4.6/12, Error ellipse: s-maj=13.5km s-min=3.9km az=92.0*

ISC 08 09:30:15.3±0.7, 9.0S±0.1×157.89E±0.08, h23km, n28, σ1§23/22, mb4.4/15, MS3.5/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
HNR	**Honiara**	**2.07**	**102**	Pn		**Pn**	**09 30 48.5**	**-0.2**
	110nm,0.3s,baz=224,slow=2.9,SNR=20							
HNR				Sn		**Sn**	**09 31 14.0**	**+0.2**
	96nm,0.3s,baz=156,slow=5.0,SNR=5.1							
HNR				LR		LR	09 31 43.1	
	comp=Z,2µm,20.1s,baz=338,slow=44							
KRVT	**Keravat (AS076**	**7.47**	**308**	LR		LR	09 35 03.7	
	comp=Z,526nm,21.0s,baz=143,slow=39							
JAY	**Jayapura**	**18.27**	**290**	LR		LR	09 41 15.9	
	comp=Z,136nm,18.9s,baz=98,slow=36							
ARMA	**Armidale**	**22.09**	**195**	P		**P**	**09 35 09.4**	**+0.4**
ARMA						IAmb	IAmb	09 35 10.9
	comp=Z,29nm,1.4s							
WR0	**Warramunga Arr**	**25.06**	**242**	P		**P**	**09 35 37.6**	**-0.5**
WR0						IAmb	IAmb	09 35 43.4
	comp=Z,23nm,1.1s							
WB0	**Warramunga Arr**	**25.11**	**242**	P		**P**	**09 35 39.1**	**+0.5**
WB0						IAmb	IAmb	09 35 47.9
	comp=Z,13nm,1.1s							
WRAB	**Tennant Creek**	**25.21**	**242**	P		**P**	**09 35 39.7**	**+0.1**
WRAB						IAmb	IAmb	09 35 48.3
	comp=Z,14nm,1.1s							
WB2	**Warramunga Arr**	**25.21**	**242**	P		**P**	**09 35 40.3**	**+0.7**
WB2						IAmb	IAmb	09 35 48.5
	comp=Z,20nm,1.2s							
WRA	**Warramunga Arr**	**25.23**	**242**	P		**P**	**09 35 39.8**	**+0.2**
	comp=Z,7.0nm,0.7s,baz=68,slow=9.7,SNR=48							
AS31	**Alice Springs**	**27.18**	**235**	P		**P**	**09 35 57.8**	**+0.5**
ASAR	**Alice Springs**	**27.18**	**235**	P		**P**	**09 35 57.1**	**-0.2**
	comp=Z,2.8nm,0.9s,baz=67,slow=8.9,SNR=16							
STKA	**Stephens Creek**	**27.33**	**211**	P		**P**	**09 35 58.6**	**+0.1**
	comp=Z,7.8nm,0.9s,baz=42,slow=14,SNR=8.4							
STKA	**Stephens Creek**	**27.33**	**211**	IAmb		IAmb	09 36 01.1	
	comp=Z,2.8nm,1.1s							
BBOO	**Buckleboo**	**31.12**	**217**	P		**P**	**09 36 31.8**	**-0.4**
TGY	**Tagaytay City**	**43.26**	**302**	LR		LR	09 55 02.0	
	comp=Z,57nm,19.4s,baz=226,slow=34							
ASAJ	**Asahikawa**	**54.66**	**347**	LR		LR	10 00 17.1	
	comp=Z,74nm,21.2s,baz=164,slow=33							
KLR	**Kul'dur**	**62.37**	**341**	LR		LR	10 04 26.5	
	comp=Z,35nm,21.0s,baz=153,slow=33							
CMAR	**Chiang Mai Arr**	**64.23**	**295**	P		**P**	**09 40 49.0**	**0.0**
	comp=Z,0.8nm,0.3s,baz=160,slow=30,SNR=2.3							
SONM	**Songino Array**	**72.58**	**326**	P		**P**	**09 41 42.3**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=26,slow=44,SNR=2.1							
RDOG	**Red Dog Mine**	**81.74**	**14**	P		**P**	**09 42 30.7**	**-1.0**
GLI	**Glacier Island**	**81.87**	**24**	P		**P**	**09 42 34.3**	**+1.8**
GLI				IAmb		IAmb	09 42 46.4	
	comp=Z,4.6nm,0.7s							
TIXI	**Tiksi**	**82.76**	**351**	LR		LR	10 22 22.9	
	comp=Z,16nm,18.0s,baz=212,slow=38							
MLY	**Manley**	**83.06**	**20**	P		**P**	**09 42 41.6**	**+2.9**
TGL	**Tana Glacier**	**83.55**	**25**	P		**P**	**09 42 41.5**	**+0.1**
ILAR	**Eielson Array**	**84.21**	**21**	P		**P**	**09 42 42.3**	**-2.3**
	comp=Z,0.2nm,0.5s,baz=100,slow=8.8,SNR=2.7							
ILAR				LR		LR	10 15 57.4	
	comp=Z,44nm,19.5s,baz=225,slow=33							
MKAR	**Makanchi Array**	**86.81**	**318**	P		**P**	**09 42 56.6**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=214,slow=48,SNR=3.3							
NVAR	**Mina Array Bea**	**90.72**	**51**	P		**P**	**09 43 18.1**	**+1.2**
	comp=Z,0.3nm,0.8s,baz=119,slow=36,SNR=2.4							
YKA	**Yellowknife Ar**	**96.77**	**28**	P		**P**	**09 43 41.9**	**-1.9**
	comp=Z,0.2nm,0.9s,baz=342,slow=38,SNR=1.9							

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*HEL **08** 09:35:23.1±0.3, 67.80N×34.52E, h0km, ML2.2, Explosion*
*IDC **08** 09:35:29.8±2.3, 67.60N×33.43E, h0km, mb1 3.0/2, mb1mx2.8/43, mbtmp3.0/2, ML2.2/2, Error ellipse: s-maj=21.9km s-min=10.1km az=87.0*

ISC 08 09:35:22.2±2.6, 67.75N±0.06×34.6E±0.1, h0km, n14, σ1§96/21, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
VRF	**Varrio**	**1.90**	**272**	PG		**Pb**	**09 35 56.6**	**-1.0**
VRF	baz=86			MSG			09 36 18.6	
	comp=Z,24nm,0.2s							
VRF				SG		**Sn**	**09 36 20.5**	**+0.2**
KU6	**Riekki**	**2.54**	**229**	PB		**Pn**	**09 36 06.3**	**+1.7**
KU6	baz=52			MSG			09 36 38.2	
	comp=Z,8.1nm,0.2s							
KU6				SG		**Sb**	**09 36 41.2**	**+1.0**
SGF	**Sodankyl**	**3.10**	**268**	PB		**Pn**	**09 36 13.6**	**+1.3**
SGF				SG		**Sb**	**09 36 56.0**	**-0.5**
RNF	**Rovaniemi**	**3.53**	**255**	PN		**Pn**	**09 36 18.9**	**+0.7**
	baz=75							
RNF				SN		**Sn**	**09 37 00.6**	**0.0**
ARCES	**ARCESS Array B**	**3.77**	**302**	Pn		**Pn**	**09 36 23.7**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=120,slow=14,SNR=26							
ARCES				Pg		**Pg**	**09 36 33.0**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=123,slow=14,SNR=9.5							
ARCES				Sn		**Sn**	**09 37 07.8**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=110,slow=32,SNR=6.1							
ARCES				Lg		Lg	09 37 18.1	
	comp=Z,3.1nm,0.3s,baz=118,slow=26,SNR=14							
ARE0	**ARCESS Array S**	**3.77**	**302**	PB		**Pn**	**09 36 23.6**	**+2.1**
	baz=118							
ARE0				SN		**Sn**	**09 37 01.5**	**-5.1**
HEF	**Hetta**	**4.15**	**284**	PN		**Pn**	**09 36 28.2**	**+1.5**
	baz=82							
HEF				SG		**Sb**	**09 37 29.4**	**+2.8**
HEF	**Hetta**	**4.15**	**284**	*e*P		**Pn**	**09 36 28.6**	**+1.9**
TOF	**Tornio**	**4.38**	**252**	PG		**Pb**	**09 36 40.3**	**+0.5**
OUL	**Oulu**	**4.40**	**237**	PB		**Pb**	**09 36 38.0**	**-2.2**
	baz=40							
LANU	**Lannavaara**	**4.77**	**279**	PN		**Pn**	**09 36 35.5**	**+0.3**
	baz=100							
KIF	**Kilpisjarvi**	**5.25**	**290**	*e*P		**Pn**	**09 36 43.5**	**+1.8**
I37NO	**I37NO**	**6.04**	**290**	*i*			10 11 30.0	
	baz=98,slow=325,SNR=1.7							
FINES	**FINESS Array B**	**7.31**	**214**	Pn		**Pn**	**09 37 11.1**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=31,slow=13,SNR=1.7							
FINES				Lg		Lg	09 39 07.5	
	comp=Z,0.2nm,0.3s,baz=12,slow=28,SNR=1.7							

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*BGR **08** 09:42:14.1±0.0, 22.02S×173.03E, h33km*
*IDC **08** 09:42:25.9±1.2, 21.92S×170.74E, h11±9km, mb4.2/20, mb1 4.4/23, mb1mx4.2/38, mbtmp4.6/23, MS3.7/19, Ms1 3.7/19, ms1mx3.6/28, Error ellipse: s-maj=12.9km s-min=9.9km az=171.0*
*GCMT **08** 09:42:26.8±0.2, 21.99S±0.02×170.86E±0.01, h122km±1km, MW5.2/101, Moment Tensor Solution. s73,c90; s101,c153; Duration: 1§0 Moment tensor: Scale 10^16 Nm; Mrr-3.85±.21; Mθθ2.95±.27; Mϕϕ0.89±.26; Mrθ 1.54±.18; Mθϕ4.70±.20; Mϕr6.18±.14; Best double couple: M=8.63000×10^16 NP1:ϕs85.00000°, δ33.00000°, λ-30.00000°. NP2:ϕs201.00000°, δ74.00000°, λ-119.00000°. Principal axes: T 8.9610, Plg23.0000°, Azm313.0000°; N -0.6660, Plg28.0000°, Azm210.0000°; P -8.3000, Plg52.0000°, Azm77.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **08** 09:42:27.8±2.3, 21.87S±0.08×170.80E±0.07, h132km±4km, mb4.8/74 Error ellipse: s-maj=11.7km s-min=9.5km az=171.0*

ISC 08 09:42:25.6±0.3, 21.89S±0.06×170.84E±0.05, h112km, n227, σ1§15/213, mb4.8/62, 8C-5D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
DZM	**Mont Dzumac**	**4.08**	**267**	*e*Pn		**Pn**	**09 43 25.8**	**-0.4**
	345nm,0.4s							
DZM				*e*Sn		**Sn**	**09 44 11.2**	**-2.0**
	9µm,1.1s							
DZM	**Mont Dzumac**	**4.08**	**267**	P		**Pn**	**09 43 25.8**	**-0.4**
	57nm,0.3s,baz=109,slow=21,SNR=450							
DZM				S		**Sn**	**09 44 10.6**	**-2.6**
	263nm,0.3s,baz=293,slow=23,SNR=33							
NFK	**Norfolk Island**	**7.59**	**200**	P		**Pn**	**09 44 13.7**	**+0.3**
	baz=7.7,SNR=16							
MSVF	**Nonsavu**	**7.95**	**60**			**Pn**	**09 44 20.9**	**+2.3**
RAO	**Raoul Island**	**12.51**	**128**	LR		LR	09 48 04.8	
	comp=Z,352nm,19.1s,baz=325,slow=27							
OUZ	**Omahuta**	**13.50**	**170**	P		**P**	**09 45 37.4**	**-0.3**
HNR	**Honiara**	**16.22**	**318**	P		**Pn**	**09 46 06.5**	**-0.5**
	12nm,0.3s,baz=159,slow=3.1,SNR=6.6							
HNR				LR		LR	09 51 25.5	
	comp=Z,227nm,21.7s,baz=146,slow=33							
HNR	**Honiara**	**16.22**	**318**	IAmb		IAmb	09 46 13.3	
	comp=Z,863nm,1.5s							
URZ	**Urewera**	**17.18**	**163**	P		**Pn**	**09 46 19.2**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=322,slow=11,SNR=6.2							
URZ				LR		LR	09 51 43.6	
	comp=Z,224nm,19.6s,baz=357,slow=32							
URZ	**Urewera**	**17.18**	**163**			**Pn**	**09 46 21.0**	**+2.3**
BKZ	**Black Stump Fm**	**17.89**	**166**			**Pn**	**09 46 28.6**	**+1.4**
NIUE	**Niue**	**18.24**	**85**	P		**Pn**	**09 46 30.5**	**-1.1**
	baz=18,SNR=3.4							
NIUE	**Niue**	**18.24**	**85**	P		**Pn**	**09 46 30.5**	**-1.1**
AFI	**Afiamalu**	**18.34**	**67**	P		**P**	**09 46 30.2**	**-1.4**
EIDS	**Eidsvold**	**18.43**	**255**	P		**P**	**09 46 33.0**	**+0.6**
	baz=18,SNR=23							
EIDS	**Eidsvold**	**18.43**	**255**			**Pn**	**09 46 34.7**	**+0.9**
ARMA	**Armidale**	**19.20**	**240**	P		**P**	**09 46 41.7**	**+0.8**
	baz=19,SNR=7.1							
ARMA	**Armidale**	**19.20**	**240**			**Pn**	**09 46 44.3**	**+1.4**
ARMA						IAmb	IAmb	09 46 48.6
	comp=Z,49nm,1.4s							
BFZ	**Birch Farm**	**19.29**	**167**	P		**P**	**09 46 42.2**	**+0.6**
SNZO	**South Karori**	**19.63**	**171**	P		**Pn**	**09 46 48.9**	**+1.1**
THZ	**Tophouse**	**19.89**	**175**	P		**Pn**	**09 46 50.9**	**+0.1**
PLWZ	**Palliser**	**19.97**	**170**	P		**Pn**	**09 46 52.4**	**+0.6**
RMQ	**Roma**	**20.65**	**253**	P		**P**	**09 46 57.2**	**+0.7**
	baz=21,SNR=72							
LTZ	**Lake Taylor**	**20.86**	**177**	P		Pn	09 47 00.5	-1.7
RPZ	**Rata Peaks**	**21.76**	**180**	P		**P**	**09 47 08.3**	**+0.1**
	comp=Z,13nm,0.9s,baz=122,slow=16,SNR=4.0							
RPZ	**Rata Peaks**	**21.76**	**180**	IAmb		IAmb	09 47 11.3	
	comp=Z,57nm,1.3s							
LBZ	**Lake Benmore**	**22.44**	**181**	P		**P**	**09 47 17.4**	**+2.2**
CTA	**Charters Tower**	**23.02**	**270**	P		**P**	**09 47 21.7**	**+0.6**
	comp=Z,32nm,0.5s,baz=88,slow=11,SNR=56							
CTA				LR		LR	09 56 31.9	
	comp=Z,596nm,18.8s,baz=50,slow=37							
CNB	**Canberra Magne**	**23.05**	**230**	P		**P**	**09 47 22.7**	**+1.3**
	baz=23,SNR=17							
YNG	**Young**	**23.28**	**233**	P		**P**	**09 47 25.0**	**+1.6**
	baz=23,SNR=6.9							
CMSA	**Cobar Meteorol**	**24.38**	**242**	P		**P**	**09 47 34.8**	**+1.4**
	baz=24,SNR=28							
QLP	**Quilpie**	**24.68**	**254**	P		**P**	**09 47 37.5**	**+1.3**
	baz=25,SNR=25							
MTSU	**Mount Surprise**	**25.18**	**274**	P		**P**	**09 47 42.5**	**+1.5**
	baz=25,SNR=154							
KRVT	**Keravat (AS076**	**25.27**	**311**	P		**P**	**09 47 41.7**	**+0.1**
	comp=Z,33nm,0.6s,baz=44,slow=14,SNR=6.9							
KNTN	**Kanton**	**25.47**	**44**	P		**P**	**09 47 44.1**	**+0.7**
PMG	**Port Moresby**	**25.91**	**295**	P		**P**	**09 47 47.8**	**+0.3**
	comp=Z,20nm,0.7s,baz=225,slow=9.2,SNR=6.6							
PMG				LR		LR	09 56 05.4	
	comp=Z,125nm,20.9s,baz=152,slow=32							
PMG	**Port Moresby**	**25.91**	**295**	P		**P**	**09 47 48.5**	**+1.0**
COEN	**Coen**	**27.44**	**282**	P		**P**	**09 48 03.0**	**+1.7**
	baz=28,SNR=14							
COEN	**Coen**	**27.44**	**282**	P		**P**	**09 48 02.9**	**+1.6**
COEN						IAmb	IAmb	09 48 03.4
	comp=Z,15nm,0.8s							
STKA	**Stephens Creek**	**27.84**	**243**	P		**P**	**09 48 05.9**	**+1.3**
	baz=28,SNR=11							
STKA	**Stephens Creek**	**27.84**	**243**	P		**P**	**09 48 05.3**	**+0.7**
	comp=Z,5.7nm,0.7s,baz=95,slow=11,SNR=21							
STKA				PcP		**PcP**	**09 51 18.8**	**+0.8**
	comp=Z,2.5nm,0.9s,baz=93,slow=8.3,SNR=3.5							
STKA				ScP		**ScP**	**09 54 51.1**	**+2.5**
	comp=Z,6.5nm,0.8s,baz=6.6,slow=5.8,SNR=6.8							
STKA				LR		LR	09 59 30.9	
	comp=Z,148nm,18.0s,baz=62,slow=37							
QIS	**Mount Isa**	**29.12**	**267**	P		**P**	**09 48 16.5**	**+0.4**
	baz=29,SNR=7.1							
HTT	**Hallett**	**30.40**	**241**	P		**P**	**09 48 28.5**	**+1.2**
	baz=30,SNR=6.1							
BBOO	**Buckleboo**	**32.61**	**243**	P		**P**	**09 48 47.7**	**+0.9**
BBOO						IAmb	IAmb	09 48 48.4
	comp=Z,42nm,1.4s							
ASAR	**Alice Springs**	**34.04**	**260**	P		**P**	**09 48 59.2**	**-0.1**
	comp=Z,15nm,0.6s,baz=90,slow=9.1,SNR=255							
ASAR				S		**S**	**09 54 14.9**	**-1.8**
	comp=Z,1.4nm,0.4s,baz=90,slow=17,SNR=18							
ASAR				ScP		**ScP**	**09 55 11.3**	**+1.9**
	comp=Z,8.2nm,0.9s,baz=100,slow=3.8,SNR=32							
ASAR				LR		LR	10 02 23.4	
	comp=Z,265nm,20.1s,baz=100,slow=35							
WRAB	**Tennant Creek**	**34.09**	**266**	P		**P**	**09 48 58.8**	**-1.0**
WRAB						IAmb	IAmb	09 49 01.2
	comp=Z,41nm,1.4s							
WRA	**Warramunga Arr**	**34.10**	**266**	P		**P**	**09 48 59.0**	**-0.8**
	comp=Z,3.8nm,0.4s,baz=99,slow=8.6,SNR=102							
WRA				S		**S**	**09 54 15.8**	**-1.9**
	comp=Z,1.4nm,0.9s,baz=120,slow=21,SNR=3.7							
WRA				ScP		**ScP**	**09 55 10.5**	**+0.9**
	comp=Z,6.2nm,1.0s,baz=89,slow=3.9,SNR=13							
WRA				PKiKP		**PKiKP**	**09 58 57.1**	**-1.7**
	comp=Z,0.5nm,0.7s,baz=171,slow=0.1,SNR=5.2							
WRA				LR		LR	10 01 58.4	
	comp=Z,304nm,21.6s,baz=90,slow=34							
JAY	**Jayapura**	**35.05**	**299**	P		**P**	**09 49 08.2**	**+0.1**
	comp=Z,23nm,0.6s,baz=144,slow=13,SNR=9.1							
JAY				LR		LR	10 03 01.0	
	comp=Z,165nm,18.7s,baz=164,slow=35							
TBI	**Tubuai**	**36.60**	**100**	*e*LQ		LQ	09 57 50.5	
	comp=Z,516nm,30.5s							
TBI				*e*LR		LR	09 59 22.7	
	comp=Z,530nm,30.8s							
PPT2	**Papeete2**	**37.43**	**91**	*e*LQ		LQ	09 58 02.1	
	comp=Z,679nm,26.5s							
PPT2				*e*LR		LR	09 59 44.6	
	comp=Z,785nm,30.2s							
PPT	**Papeete**	**37.44**	**91**	LR

GYA LR LR
comp=Z,80nm,5.3s
KMI Kunming 80.94 302 P **P** 09 54 26.0 -2.2
KMI S **S** 10 04 25.4 -2.9
KMI pmax pmax
comp=Z,7.0nm,1.4s
KMI pmax pmax
comp=Z,130nm,8.3s
CMAR Chiang Mai Arr 80.95 294 P **P** 09 54 29.0 +0.8
comp=Z,1.1nm,0.5s,baz=134,slow=4.5,SNR=7.7
CMAR Chiang Mai Arr 80.95 294 P **P** 09 54 29.0 +0.8
SYO Syowa Base 82.81 196⇑ *e*P **P** 09 54 34.9 -2.1
SYO Syowa Base 82.81 196⇑ *e*PcP **PcP** 09 54 41.0 -0.6
CD2 Chengdu 83.03 307 P **P** 09 54 38.4 -0.4
CD2 pmax pmax
comp=Z,10.0nm,0.5s
HHC Hu-ho-hao-te 83.20 319 P **P** 09 54 39.8 +0.3
HHC pmax pmax
comp=Z,11nm,0.8s
HHC pmax pmax
comp=Z,27nm,5.7s
LZH Lanzhou 85.61 312 ⇓P **P** 09 54 52.6 +0.7
LZH pP sP 09 55 28.6 -3.2
LZH sP pwP 09 55 43.5 +21
LZH PP **PP** **09 58 15.8 +3.3**
LZH pmax pmax
comp=Z,21nm,1.4s
LZH pmax pmax
comp=Z,89nm,4.7s
SEY Seymchan 85.79 352 P **P** 09 54 52.2 +0.3
comp=Z,4.0nm,0.8s,baz=167,slow=6.8,SNR=14
SNAA Sanae 86.58 182 P **P** 09 54 55.0 -1.1
SNAA Sanae 86.58 182 P **P** 09 54 54.5 -1.6
VNA3 Neumayer Olymp 87.11 180 P **P** 09 54 57.4 -1.2
VNA2 Neumayer--Watz 87.42 181 P **P** 09 54 59.2 -0.8
baz=178,slow=4.2
VNA1 Neumayer--Stat 87.71 180 P **P** 09 55 00.6 -0.7
CMB Columbia Colle 87.82 47 IAmb IAmb 09 55 04.1
comp=Z,14nm,1.4s
ISA Isabella, Lake 88.00 50 IAmb IAmb 09 55 05.9
comp=Z,13nm,1.2s
YBH Yreka Blue Hor 88.17 43 IAmb IAmb 09 55 07.0
comp=Z,12nm,1.4s
HUMO Hull Mountain 88.48 43 IAmb IAmb 09 55 07.8
comp=Z,18nm,1.4s
OMMB Old Mammoth Mi 88.57 48 IAmb IAmb 09 55 08.9
comp=Z,10nm,1.3s
WAKR Walker 88.70 47 IAmb IAmb 09 55 09.0
comp=Z,17nm,1.3s
PNTR Pine Nut 88.88 47 IAmb IAmb 09 55 09.5
comp=Z,11nm,1.1s
YERR Yerington 89.07 47 IAmb IAmb 09 55 10.3
comp=Z,14nm,1.4s
PAHR Pah Rah Range 89.33 46 IAmb IAmb 09 55 11.4
comp=Z,11nm,1.2s
NVAR Mina Array Bea 89.44 48 P **P** **09 55 10.3 0.0**
comp=Z,2.6nm,0.8s,baz=228,slow=7.1,SNR=22
NVAR LR LR 10 32 36.1
comp=Z,47nm,18.0s,baz=324,slow=34
BILL Bilibino 89.73 358 P **P** **09 55 10.5 -0.1**
BILL IAmb IAmb 09 55 12.0
comp=Z,13nm,1.5s
MOD Modoc Plateau 89.81 44 IAmb IAmb 09 55 13.5
comp=Z,8.2nm,1.2s
KVN Kaiserville 89.88 47 IAmb IAmb 09 55 13.9
comp=Z,18nm,1.4s
Y12C Blythe 90.00 53 IAmb IAmb 09 55 15.3
comp=Z,6.7nm,1.0s
GTA Gaotai 90.03 313 *e*P **P** **09 55 15.6 +2.7**
GTA pP sP 09 55 51.5 -1.4
GTA sP pwP 09 56 05.8 +22
GTA pmax pmax
comp=Z,3.0nm,0.9s
TPNV Topopah Spring 90.19 50 P **P** **09 55 12.9 -0.9**
TPNV IAmb IAmb 09 55 15.5
comp=Z,8.5nm,1.2s
SONM Songino Array 90.23 323 P **P** **09 55 13.9 +0.3**
comp=Z,0.9nm,0.6s,baz=149,slow=4.3,SNR=4.4
SONM LR LR 10 32 41.8
comp=Z,32nm,21.8s,baz=82,slow=33
PINE Pine Mountain 90.35 42 P **P** **09 55 12.4 -2.0**
PINE IAmb IAmb 09 55 16.2
comp=Z,6.1nm,0.9s
W13A Hualapai Mount 91.07 52 P **P** **09 55 17.7 -0.3**
BARN Barnard Glacie 91.07 21 P **P** **09 55 16.7 -0.6**
BARN IAmb IAmb 09 55 18.0
comp=Z,16nm,1.3s
WVOR Wild Horse Val 91.15 44 IAmb IAmb 09 55 19.7
comp=Z,9.0nm,1.4s
HDA Harding Lake 92.02 17 P **P** **09 55 20.0 -1.4**
HDA IAmb IAmb 09 55 20.6
comp=Z,8.0nm,1.5s
TUC Tucson 92.22 56 P **P** **09 55 20.6 -2.6**
DOT Dot Lake 92.25 18 IAmb IAmb 09 55 25.0
comp=Z,8.6nm,1.1s
ILAR Eielson Array 92.32 17 P **P** **09 55 21.4 -1.4**
comp=Z,0.8nm,0.7s,baz=240,slow=5.7,SNR=9.6
ILAR LR LR 10 41 22.5
comp=Z,36nm,18.0s,baz=215,slow=38
G08A Pilot Rock 92.32 42 P **P** **09 55 23.3 -0.1**
X16A Lo Mia Camp, P 92.60 54 IAmb IAmb 09 55 27.0
comp=Z,4.9nm,1.1s
U15A North Rim 92.81 52 IAmb IAmb 09 55 28.1
comp=Z,6.7nm,1.1s
WUAZ Wupatki 93.10 53 IAmb IAmb 09 55 29.1
comp=Z,5.6nm,1.1s
X18A Snowflake 93.77 54 IAmb IAmb 09 55 32.0
comp=Z,8.3nm,1.4s
EGAK Eagle 93.94 19 IAmb IAmb 09 55 30.7
comp=Z,7.3nm,1.2s
DAWY Dawson 93.97 20 P **P** **09 55 29.5 -0.9**
DAWY IAmb IAmb 09 55 31.1
comp=Z,5.0nm,1.4s
TOLK Toolik Lake Re 94.75 14 P **P** **09 55 33.5 -0.4**
TOLK IAmb IAmb 09 55 35.9
comp=Z,6.6nm,1.5s
PLCA Paso Flores 95.57 138 P **P** **09 55 37.5 -1.0**
comp=Z,3.2nm,1.0s,baz=243,slow=8.4,SNR=5.4
PLCA PP **PP** **09 59 29.4 -1.0**
comp=Z,1.0nm,0.8s,baz=240,slow=10,SNR=2.9
PLCA LR LR 10 28 53.6
comp=Z,36nm,19.7s,baz=202,slow=29
PLCA Paso Flores 95.57 138 IAmb IAmb 09 55 39.9
comp=Z,9.3nm,1.4s
LC01 Cunco 95.76 136 P **P** **09 55 39.5 +0.1**
TXAR Lajitas Array 96.72 61 P **P** **09 55 43.9 0.0**
comp=Z,0.1nm,0.6s,baz=48,slow=34,SNR=2.5
TXAR LR LR 10 31 00.7
comp=Z,68nm,20.6s,baz=0.0,slow=30
PDAR Pinedale Array 97.32 47 P Pdif 09 55 48.4 +1.9
comp=Z,0.2nm,0.6s,baz=272,slow=4.4,SNR=2.0
PDAR PP **PP** **09 59 42.6 -2.3**
comp=Z,0.8nm,1.1s,baz=223,slow=5.9,SNR=4.7
WMQ Urumqi 100.11 313 *e*P **Pdif** **09 55 59.9 +1.2**
WMQ pmax pmax
comp=Z,63nm,4.9s
MKAR Makanchi Array 104.67 315 PKKPbc PKKPbc 10 12 02.0 -2.4
comp=Z,0.8nm,0.6s,baz=282,slow=3.3,SNR=8.1
KSH Kashi 107.21 306 Pdif **Pdif** **09 56 34.5 +4.1**
KSH PP **PP** **10 01 01.7 +2.7**
KSH S **Sdif** **10 08 17.7 -6.1**
KURBB Kurchatov Arra 108.03 318 PKKPbc PKKPbc 10 11 51.7 -2.3
comp=Z,0.6nm,0.7s,baz=272,slow=4.2,SNR=6.0
BOSA Boshof 119.80 215 PKP **PKPdf** **10 01 03.0 -0.4**
comp=Z,1.6nm,0.5s,baz=71,slow=2.6,SNR=4.5
AKTO Aktyubinsk 121.02 317 PKP **PKPdf** **10 01 04.3 -0.6**
comp=Z,0.6nm,0.4s,baz=94,slow=6.6,SNR=4.0
SPB Sao Paulo 121.43 138 **PKPdf** **10 01 05.3 -1.2**
ARCES ARCESS Array B 128.00 345 PKP **PKPdf** **10 01 16.9 -0.8**
comp=Z,2.2nm,0.4s,baz=65,slow=1.5,SNR=45
FINES FINESS Array B 133.60 337 PKP **PKiKP** **10 01 29.1 -0.6**
comp=Z,1.0nm,0.4s,baz=158,slow=2.1,SNR=7.6
FINES SKPbc **SKPbc** **10 04 45.2 -1.7**
comp=Z,3.6nm,0.5s,baz=62,slow=4.5,SNR=15
NOA NORSAR Array B 138.38 345 PKP **PKPdf** **10 01 37.9 +0.5**
comp=Z,0.3nm,0.5s,baz=64,slow=1.9,SNR=2.8
NOA SKPbc **SKPbc** **10 05 00.3 -1.4**
comp=Z,0.4nm,0.7s,baz=18,slow=4.2,SNR=4.3
AKASG Malin Array Be 138.51 323 SKPbc **SKPbc** **10 05 02.0 -0.2**
comp=Z,4.5nm,0.8s,baz=45,slow=3.1,SNR=7.1
ARR Arges 143.81 318 ⇑P **PKPdf** **10 01 46.5 -1.2**
HUMR Humele 143.99 317 ⇓P PKPbc 10 01 46.1 -0.1
PLVB Pleven 144.74 315 ⇑P **PKPdf** **10 01 49.6 +0.3**
BSEG Bad Segeberg 144.75 340 *e*PKPbc **PKPdf** **10 01 48.5 -0.5**
baz=34,slow=2.7
GZR Gura Zlata 144.93 320 ⇓P PKPbc 10 01 48.4 -0.7

MORC Moravsky Berou 145.10 329 *e*PKP **PKPdf** **10 01 49.9 +0.1**
MORC Moravsky Berou 145.10 329 ⇓P **PKPdf** **10 01 49.8 0.0**
PSZ Piszkesteto 145.13 325 ⇑P **PKPbc** **10 01 47.6 -2.1**
OSTC Ostas 145.16 331 *e*PKP **PKPdf** **10 01 50.1 +0.3**
CHVC Chvalec 145.21 332 *e*PKP **PKPab** **10 01 49.8 -0.2**
DPC Dobruska-Polom 145.26 331 *e*PKP **PKPab** **10 01 50.5 +0.3**
DPC *ex* x 10 02 19.1
UPC Upice 145.29 332 *e*PKP **PKPab** **10 01 50.6 +0.4**
UPC *e*pPKP **pPKPdf** **10 02 19.6 -0.2**
VYHS Vyhne 145.31 327 *e*PKP **PKPab** **10 01 51.1 +0.7**
HERR Herculane 145.41 319 ⇓P **PKPdf** **10 01 48.3 -2.0**
JAVC Velka Javorina 145.66 328 *e*PKP **PKiKP** **10 01 53.1 -1.8**
VRAC Vranov 145.87 330 PKPbc **PKPbc** **10 01 51.8 -0.1**
comp=Z,7.1nm,0.9s,baz=27,slow=2.1,SNR=19
VRAC Vranov 145.87 330 *e*PKP **PKPab** **10 01 52.5 0.0**
VRAC Vranov 145.87 330 ⇑P **PKPab** **10 01 52.3 -0.2**
MDVR Moldovita 145.89 319 ⇑P **PKPab** **10 01 52.5 -0.3**
BRG Berggiesshubel 145.90 334 *i* PKP **PKPab** **10 01 52.3 -0.2**
comp=Z,39nm,1.5s
BRG *e* 10 02 09.3
comp=Z,9.9nm,1.0s
BRG Berggiesshubel 145.90 334 *e*PKPbc **PKPab** **10 01 52.1 -0.4**
baz=34,slow=2.7
CLL Collm 145.94 335 *i* PKPbc **PKPab** **10 01 53.3 +0.7**
comp=Z,22nm,1.2s
CLL Collm 145.94 335 *e*PKPbc **PKPab** **10 01 53.0 +0.4**
baz=34,slow=2.7
SMOL Smolenice 146.01 328 *e*PKP **PKiKP** **10 01 54.0 -1.5**
NRDL Niedersach Rie 146.04 339 *e*PKPbc **PKPab** **10 01 52.5 -0.4**
baz=34,slow=2.7
RETH Rethem/Aller, 146.08 340 *e*PKPbc **PKPab** **10 01 52.4 -0.7**
baz=34,slow=2.7
FBE Freiberg 146.10 334 *e*PKPbc **PKPab** **10 01 52.9 -0.3**
baz=34,slow=2.7
KRUC Moravsky 146.13 329 *e*PKP **PKPab** **10 01 53.2 -0.3**
ASSE Asse, Remlinge 146.15 338 *e*PKPbc **PKPab** **10 01 52.7 -0.6**
baz=34,slow=2.7
MODS Modra-Piesok 146.18 328 *e*PKP **PKPab** **10 01 53.1 -0.6**
GOPC GO Pecny, Ondr 146.26 332 *e*PKP **PKPab** **10 01 53.6 -0.3**
EKA Eskdalemuir Ar 146.31 354 PKPbc **PKPbc** **10 01 52.1 -0.8**
PRU Pruhonice 146.31 332 *e*PKP **PKPbc** **10 01 53.1 0.0**
ZST Bratislava 146.38 328 *e*PKP **PKPab** **10 01 54.0 -0.4**
CLZ Clausthal 146.49 338 *e*PKPbc **PKPab** **10 01 53.9 -0.9**
baz=34,slow=2.7
PBCC Pribram 146.77 332 *e*PKP **PKPbc** **10 01 54.2 -0.3**
TANN Tannenbergstha 146.85 334 *e*PKPbc **PKPbc** **10 01 55.0 +0.3**
baz=34,slow=2.7
PLN Plauen 146.92 335 *e*PKPbc **PKPbc** **10 01 55.1 +0.2**
baz=34,slow=2.7
GUNZ Gunzen 146.95 335 *e*PKPbc **PKPbc** **10 01 55.4 +0.4**
baz=34,slow=2.7
IBBN Ibbenburen 146.95 341 *e*PKPbc **PKPbc** **10 01 55.0 +0.2**
baz=34,slow=2.7
WERN Wernitzgruen 146.99 334 *e*PKPbc **PKPab** **10 01 55.7 -1.1**
baz=34,slow=2.7
NKC Novy Kostel 147.00 334 *e*PKP **PKPbc** **10 01 55.3 +0.2**
MOX Moxa 147.01 335 *e*PKPbc **PKPbc** **10 01 55.2 +0.1**
baz=34,slow=2.7
CONA Conrad Observa 147.18 328 *i* PKPab **PKPab** **10 01 56.9 -0.8**
comp=Z,16nm,1.2s,SNR=6.6
MANZ Manzenberg 147.33 334 *e*PKPbc **PKPbc** **10 01 56.3 +0.2**
baz=34,slow=2.7
KHC Kasperske Hory 147.37 332 *e*PKP **PKPbc** **10 01 56.3 +0.1**
KHC *ex* x 10 02 17.1
ROTZ Rotzenmuhle 147.46 334 *e*PKPbc **PKPbc** **10 01 56.7 +0.3**
baz=34,slow=2.7
GEC2 GERESS Array S 147.53 331 *e*PKPbc **PKPbc** **10 01 56.7 0.0**
baz=34,slow=2.7
GERES GERESS Array B 147.53 331 PKPbc **PKPbc** **10 01 56.5 -0.3**
comp=Z,7.1nm,0.9s,baz=37,slow=3.3,SNR=31
WET Wettzell 147.66 333 *e*PKPbc **PKPbc** **10 01 57.3 +0.3**
baz=34,slow=2.7
ARSA Arzberg 147.81 328 *e*PKiKP **PKPbc** **10 01 57.8 +0.4**
comp=Z,5.3nm,1.1s
GRF Grafenberg Arr 147.92 335 *e*PKPbc **PKPbc** **10 01 58.1 +0.4**
baz=34,slow=2.7
MOA Molln 148.00 330 *i* PKiKP **PKiKP** **10 01 58.5 -1.1**
comp=Z,3.2nm,0.6s
FNA Florina 148.06 313 **PKPbc** **10 01 58.0 -0.4**
SOKA Soboth 148.45 327 *i* PKPbc **PKPdf** **10 01 56.4 +0.9**
comp=Z,5.8nm,0.7s
TNS Taunus Mts 148.51 338 *e*PKPbc **PKPbc** **10 01 59.5 +0.3**
baz=34,slow=2.7
MEM Membach 148.97 341 PKiKP **PKPbc** **10 01 60.0 -0.3**
KBA Koelnbreinsper 148.98 329 *i* PKPbc **PKPbc** **10 02 00.0 -0.7**
comp=Z,14nm,1.2s
STU Stuttgart 149.45 336 *e*PKPbc **PKPbc** **10 02 01.7 +0.2**
baz=34,slow=2.7
BMRD Maredsous 149.60 342 PKiKP **PKPbc** **10 02 01.7 -0.2**
WATA Walderalm 149.60 332 *e*PKiKP **PKPbc** **10 02 02.3 +0.1**
comp=Z,21nm,1.1s,SNR=5.3
ABTA Abfaltersbach 149.62 330 *i* PKPbc **PKPbc** **10 02 01.5 -0.6**
comp=Z,25nm,1.7s
WTTA Wattenberg 149.63 331 *i* PKiKP **PKPbc** **10 02 02.1 -0.1**
comp=Z,34nm,1.3s,SNR=9.2
WLF Walferdange 149.75 340 PKiKP **PKiKP** **10 02 02.7 -0.5**
WLF Walferdange 149.75 340 *e*PKPbc **PKiKP** **10 02 03.0 -0.2**
baz=34,slow=2.7
MOTA Moosalm 149.80 332 *i* PKiKP **PKPbc** **10 02 02.4 -0.2**
comp=Z,21nm,0.9s,SNR=8.0
DOU Dourbes 149.84 342 PKiKP **PKPbc** **10 02 02.2 -0.3**
RETA Reutte 149.84 333 *i* PKiKP **PKPbc** **10 02 02.7 0.0**
comp=Z,3.5nm,0.7s
SQTA Sankt Quirin 149.85 332 *i* PKiKP **PKPbc** **10 02 02.5 -0.2**
comp=Z,34nm,1.3s,SNR=6.7
UBR Ueberruh 149.96 334 *e*PKPbc **PKPbc** **10 02 02.7 -0.2**
baz=34,slow=2.7
BFO Black Forest 150.14 336 *e*PKPbc **PKPbc** **10 02 03.0 -0.3**
baz=34,slow=2.7
FETA Feichten 150.21 332 *i* PKiKP **PKPbc** **10 02 03.6 0.0**
comp=Z,21nm,1.1s,SNR=9.2
DAVA Damuels 150.37 333 *i* PKPbc **PKPbc** **10 02 03.1 -0.9**
comp=Z,21nm,1.4s,SNR=6.6
CTI Castel Tesino 150.53 330 **PKPbc** **10 02 04.3 -0.1**
FUORN Ofenpass-Fuorn 150.73 332 **PKiKP** **10 02 05.4 -0.2**
DAVOX Davos/Dischmat 150.77 333 PKPbc **PKiKP** **10 02 05.0 -0.6**
comp=Z,8.7nm,0.5s,baz=325,slow=0.7,SNR=6.1
TUE Stuetta 151.24 333 **PKiKP** **10 02 06.3 -0.3**
ESDC Sonseca Array 161.73 347 PKPab **PKPab** **10 02 58.5 -0.9**
comp=Z,0.9nm,0.9s,baz=321,slow=2.1,SNR=4.4
TORD Torodi Ar. Bea 166.48 232 PKP **PKPdf** **10 02 18.0 -0.6**
comp=Z,1.6nm,0.8s,baz=79,slow=0.1,SNR=9.9

*SOME **08** 09:46:21.8, 40.00N×78.07E, h15km*
*KRNET **08** 09:46:22.1±0.1, 40.07N×78.37E, mb3.0*
*NNC **08** 09:46:23.0±2.5, 40.11N×78.21E, h0km, mb3.5, mpv3.1,*
Error ellipse: s-maj=16.7km s-min=15.6km az=15.0
ISC 08 09:46:19.9±2.9, 40.0N±0.1×77.9E±0.06, h10km, n35,
σ1s29/56, 20C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**2.22**	**344**	⇑*i*P		**Pg**		**09 47 02.6**	**+0.1**
	baz=37								
KDJ				⇑*i*S		**Sg**		09 47 32.5	+1.1
	baz=37								
PRZ	**Przheval'sk**	**2.51**	**7**	⇑*i*P		**Pb**		**09 47 05.3**	**+0.1**
	baz=1.0								
PRZ				⇑*i*S		**Sb**		09 47 36.6	+0.4
	baz=1.0								
ULHL	**Ulahol**	**2.61**	**330**	⇑*i*P		**Pg**		**09 47 09.3**	**-0.6**
	baz=24								
ULHL				⇑*i*S		**Sg**		09 47 43.8	0.0
	baz=24								
ANVS	**Anan'yevo**	**2.80**	**355**	⇑*i*P		**Pb**		**09 47 10.2**	**0.0**
	baz=49								
ANVS				⇑*i*S		**Sb**		09 47 45.1	+0.5
	baz=49								
BOOM	**Boomskoye usch**	**2.94**	**329**	⇑*i*P		**Pb**		**09 47 13.6**	**+1.2**
	baz=24								
BOOM				⇑*i*S		**Sg**		09 47 51.9	-2.3
	baz=24								
KZA	**Kyzart**	**2.94**	**316**	⇑*i*P		**Pg**		**09 47 15.0**	**-1.2**
	baz=11								
KZA				⇑*i*S		**Sg**		09 47 53.8	-0.5
	baz=11								
SATY	**Saty**	**3.08**	**6**	*e*P		**Pg**		**09 47 19.1**	**+0.1**
	6.6nm,0.8s								
SATY				*e*S		**Sg**		09 48 00.3	+1.3
	16nm,0.7s								
SATY	**Saty**	**3.08**	**6**	Pg		**Pg**		**09 47 19.1**	**+0.1**
	6.6nm,0.8s								
SATY				Lg		Lg		09 48 00.3	
	16nm,0.7s								
TNSS	**Tian-Shan**	**3.14**	**346**	*e*P		**Pg**		**09 47 19.8**	**-0.3**
	8.3nm,0.7s								
TNSS				*e*S		**Sg**		09 48 01.4	+0.5
	8.6nm,0.4s								
TNSS	**Tian-Shan**	**3.14**	**346**	Pg		**Pg**		**09 47 19.8**	**-0.3**
	8.3nm,0.7s								
TNSS				Lg		Lg		09 48 01.4	
	8.6nm,0.4s								
IZV	**Izvestkoviy**	**3.21**	**342**	*e*P		**Pg**		**09 47 21.1**	**-0.4**
	9.7nm,0.7s								
IZV				*e*S		**Sg**		**09 48 03.7**	**+0.6**
	14nm,0.5s								
IZV	**Izvestkoviy**	**3.21**	**342**	Pg		**Pg**		**09 47 21.1**	**-0.4**
	9.7nm,0.7s								
IZV				Lg		Lg		09 48 03.7	
	14nm,0.5s								
MDOK	**Medeo**	**3.25**	**348**	*e*P		**Pg**		**09 47 20.6**	**-1.5**
	3.7nm,0.4s								
MDOK				*e*S		**Sg**		**09 48 02.4**	**-1.8**
	15nm,0.6s								
MDOK	**Medeo**	**3.25**	**348**	Pg		**Pg**		**09 47 20.6**	**-1.5**
	3.7nm,0.4s								
MDOK				Lg		Lg		09 48 03.2	
	15nm,0.6s								
UZB	**Uzynbulak**	**3.25**	**14**	*e*P		**Pb**		**09 47 19.1**	**+1.3**
	4.2nm,1.1s								
UZB				*e*S		**Sb**		**09 48 00.2**	**+2.8**
	13nm,1.0s								
UZB	**Uzynbulak**	**3.25**	**14**	Pg		**Pb**		**09 47 19.1**	**+1.3**
	4.2nm,1.1s								
UZB				Lg		Lg		09 48 00.2	
	13nm,1.0s								
KOTS	**Kotyrbulak**	**3.31**	**349**	*e*P		**Pg**		**09 47 22.6**	**-0.7**
	6.4nm,0.3s								
KOTS				*e*S		**Sg**		**09 48 06.4**	**+0.2**
	21nm,0.6s								
KOTS	**Kotyrbulak**	**3.31**	**349**	Pg		**Pg**		**09 47 22.6**	**-0.7**
	6.4nm,0.3s								
KOTS				Lg		Lg		09 48 06.4	
	21nm,0.6s								
KST	**Kastek**	**3.41**	**334**	*e*P		**Pg**		**09 47 24.4**	**-0.8**
	5.4nm,0.7s								
KST				*e*S		**Sg**		**09 48 09.1**	**-0.2**
	8.8nm,0.4s								
KST	**Kastek**	**3.41**	**334**	Pg		**Pg**		**09 47 24.4**	**-0.8**
	5.4nm,0.7s								
KST				Lg		Lg		09 48 09.8	
	8.8nm,0.4s								
TKM2	**Tokmak 2**	**3.44**	**329**	⇑*i*P		**Pb**		**09 47 20.7**	**-0.3**
	baz=25								
TKM2				⇑*i*S		**Sb**		**09 48 03.7**	**+0.8**
	baz=25								
TKM2	**Tokmak 2**	**3.44**	**329**	⇓Pg		**Pg**		**09 47 24.8**	**-0.9**
	1.8nm,0.5s								
TKM2				⇑Lg		Lg		09 48 12.6	
	4.4nm,0.5s								
UCH	**Uchtor**	**3.45**	**312**	⇑*i*P		**Pb**		**09 47 22.2**	**+0.9**
	baz=8.0								
UCH				⇑*i*S		**Sb**		**09 48 06.4**	**+3.0**
	baz=8.0								
PDGK	**Podgornoye**	**3.52**	**18**	⇓Pg		**Pb**		**09 47 21.4**	**-1.0**
	1.5nm,0.7s								
PDGK				⇑Lg		Lg		09 48 03.7	
	7.3nm,0.7s								
DGS	**Degeres**	**3.65**	**334**	*e*P		**Pg**		**09 47 28.7**	**-1.1**
	4.1nm,0.4s								
DGS				*e*S		**Sg**		**09 48 16.7**	**-0.4**
	12nm,0.7s								
DGS	**Degeres**	**3.65**	**334**	Pg		**Pg**		**09 47 28.7**	**-1.1**
	4.1nm,0.4s								
DGS				Lg		Lg		09 48 17.3	
	12nm,0.7s								
KTBS	**Karatobe**	**3.85**	**346**	*e*P		**Pg**		**09 47 31.5**	**-2.0**
	2.5nm,0.5s								
KTBS				*e*S		**Sg**		**09 48 21.7**	**-1.7**
	16nm,0.6s								
KTBS	**Karatobe**	**3.85**	**346**	Pg		**Pg**		**09 47 31.5**	**-2.0**
	2.5nm,0.5s								
KTBS				Lg		Lg		09 48 21.7	
	16nm,0.6s								
AML	**Almayashu**	**3.89**	**305**	⇑*i*P		**Pb**		**09 47 28.6**	**-0.2**
	baz=2.0								
AML				⇑*i*S		**Sb**		**09 48 17.7**	**+1.7**
	baz=2.0								
KRBS	**Karabastau**	**4.09**	**336**	*e*P		**Pg**		**09 47 36.2**	**-1.9**
	2.1nm,0.5s								
KRBS				*e*S		**Sg**		**09 48 29.6**	**-1.5**
	3.6nm,0.7s								
KRBS	**Karabastau**	**4.09**	**336**	Pg		**Pg**		**09 47 36.2**	**-1.9**
	2.1nm,0.5s								
KRBS				Lg		Lg		09 48 30.2	
	3.6nm,0.7s								
MNBS	**Baschi**	**4.10**	**4**	*e*P		**Pg**		**09 47 36.4**	**-2.0**
	3.3nm,0.7s								
MNBS				*e*S		**Sg**		**09 48 29.8**	**-1.7**
	7.0nm,0.9s								
MNBS	**Baschi**	**4.10**	**4**	Pg		**Pg**		**09 47 36.4**	**-2.0**
	3.3nm,0.7s								
MNBS				Lg		Lg		09 48 30.3	
	7.0nm,0.9s								
ARXS	**Arharly**	**4.22**	**358**	*e*P		**Pg**		**09 47 39.4**	**-1.3**
	4.2nm,0.6s								
ARXS				*e*S		**Sg**		**09 48 34.9**	**-0.6**
	4.2nm,0.6s								
ARXS	**Arharly**	**4.22**	**358**	Pg		**Pg**		**09 47 39.4**	**-1.3**
	4.2nm,0.6s								
ARXS				Lg		Lg		09 48 35.4	
	4.2nm,0.6s								

IDC 08 09:55:19.2±4.5, 20.80N×122.71E, h0km, mb3.6/3,
mb1 3.9/3, mb1mx3.4/58, mbtmp3.6/3, MS3.1/1, Ms1 3.1/1,
ms1mx2.4/56, Error ellipse: s-maj=304.1km
s-min=33.1km az=89.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**25.82**	**187**				LR	10 12 27.3	
	comp=Z,45nm,19.3s,baz=109,slow=40								
WRA	**Warramunga Arr**	**42.06**	**164**			P		10 03 12.3	-0.6
	0.9nm,0.6s,baz=343,slow=9.1,SNR=14								
ASAR	**Alice Springs**	**45.53**	**166**			P	P	10 03 41.2	+0.4
	0.3nm,0.4s,baz=349,slow=7.3,SNR=10.0								
YKA	**Yellowknife Ar**	**85.52**	**23**			P	P	10 07 58.8	-0.1
	0.4nm,0.7s,baz=312,slow=4.3,SNR=5.7								

*HEL **08** 10:05:28.9±0.4, 67.58N×33.95E, h0km, ML2.4, Explosion*
*NAO **08** 10:05:29.6±1.1, 67.64N×33.83E, ML3.1*
*IDC **08** 10:05:31.6±1.7, 67.57N×33.27E, h0km, mb1 3.4/4,*
mb1mx3.1/54, mbtmp3.5/4, ML3.1/4, Error ellipse:
s-maj=18.0km s-min=8.0km az=92.0
ISC 08 10:05:26.6±1.5, 67.60N±0.04×34.04E±0.07, h0km, n35,
σ2s12/64, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
APZ9	**Apatity**	**0.24**	**264**	Pg		Pg	**Pb**	**10 05 33.2**	**+1.9**
APZ9				Lg		Lg	Lg	10 05 36.0	
APZ9	**Apatity**	**0.24**	**264**	Pg		Pg	**Pb**	**10 05 33.2**	**+1.9**
APZ9				Sg		**Sg**	**Sg**	**10 05 36.0**	**+1.6**
APA0	**Apatity Array**	**0.40**	**272**	Pg		Pg	**Pb**	**10 05 35.9**	**-0.7**
	baz=83,slow=16								
APA0				Lg		Lg	Lg	10 05 40.4	
	baz=70,slow=28								
APA0				Rg		Rg	Rg	10 05 42.4	
	baz=77,slow=56								
APA0	**Apatity Array**	**0.40**	**272**	Pg		Pg	**Pb**	**10 05 35.9**	**-0.7**
	baz=83,slow=16								
APA0				Sg		**Sg**	**Sg**	**10 05 40.4**	**+1.0**
	baz=70,slow=28								
VRF	**Varrio**	**1.70**	**277**	PG		**Pg**	**Pb**	**10 05 58.8**	**+0.1**
	baz=93								
VRF				MSG				10 06 18.7	
	comp=Z,37nm,0.2s								
VRF				SN		**Sn**	**Sn**	**10 06 19.9**	**0.0**
KU6	**Riekki**	**2.28**	**228**	PG		**Pg**	**Pb**	**10 06 08.6**	**+0.1**
	baz=43								
KU6				MSG				10 06 35.2	
	comp=Z,17nm,0.2s								
KU6				SG		**Sg**	**Sb**	**10 06 38.5**	**+1.3**
SGF	**Sodankyl**	**2.89**	**270**	PN		**Pn**	**Pn**	**10 06 15.6**	**+1.8**
	baz=79								
SGF				SG		**Sg**	**Sb**	**10 06 55.2**	**+0.4**
RNF	**Rovaniemi**	**3.29**	**256**

baz=122,slow=16
ARA0 Sn **Sn** **10 07 08.1 -0.8**
baz=120,slow=28
ARA0 Lg Lg 10 07 18.9
baz=120,slow=37
ARA0 ARCESS Array S 3.69 306 Pn **Pn** **10 06 26.3 +1.5**
baz=122,slow=16
ARA0 Sn **Sn** **10 07 08.1 -0.8**
baz=120,slow=28
ARA0 Sg **Sb** **10 07 18.9 +1.2**
baz=120,slow=37
ARCES ARCESS Array B 3.69 306 Pn **Pn** **10 06 26.4 +1.6**
comp=Z,8.5nm,0.3s,baz=122,slow=15,SNR=174
ARCES Sn **Sn** **10 07 08.2 -0.6**
comp=Z,4.4nm,0.3s,baz=121,slow=25,SNR=16
ARCES Lg Lg 10 07 19.5
comp=Z,13nm,0.3s,baz=120,slow=36,SNR=8.2
ARE0 ARCESS Array S 3.69 306 PN **Pn** **10 06 26.2 +1.4**
baz=118
ARE0 SN **Sn** **10 07 08.1 -0.8**
ARE0 ARCESS Array S 3.69 306 *eP* **Pn** **10 06 26.5 +1.7**
ARE0 *eS* **Sn** **10 07 08.9 0.0**
ARE0 IAML 10 07 24.1
comp=Z,38nm,0.3s
HEF Hetta 3.99 287 Pn **Pn** **10 06 30.8 +1.9**
HEF Pg **Pb** **10 06 38.6 +0.9**
HEF Sn **Sn** **10 07 16.9 +0.6**
HEF Lg Lg 10 07 29.1
HEF Hetta 3.99 287 PN **Pn** **10 06 30.3 +1.4**
HEF SN **Sn** **10 07 16.7 +0.4**
HEF Hetta 3.99 287 Pn **Pn** **10 06 30.8 +1.9**
HEF Pg **Pb** **10 06 38.6 +0.9**
HEF Sn **Sn** **10 07 16.9 +0.6**
HEF Sg **Sb** **10 07 29.1 +2.7**
TOF Tornio 4.13 253 PN **Pn** **10 06 32.8 +2.0**
TOF SG **Sb** **10 07 31.4 +1.0**
OUL Oulu 4.14 236 PB **Pb** **10 06 38.9 -1.3**
OUL SG **Sg** **10 07 36.1 -3.2**
KTK1 Kautokeino 4.25 294 Pn **Pn** **10 06 33.7 +1.2**
KTK1 Sn **Sn** **10 07 21.9 -0.9**
KTK1 Lg Lg 10 07 38.2
KTK1 Kautokeino 4.25 294 *eP* **Pn** **10 06 33.7 +1.2**
KTK1 *eS* **Sn** **10 07 21.6 -1.3**
KALU Kalix 4.58 253 PG **Pb** **10 06 50.2 +2.5**
baz=63
KALU SG **Sg** **10 07 49.7 -3.9**
LANU Lannavaara 4.59 281 PN **Pn** **10 06 38.0 +0.9**
LANU SN **Sn** **10 07 29.5 -1.6**
ERTU Ertsjaerv 4.75 263 PN **Pn** **10 06 40.6 +1.3**
baz=74
ERTU SN **Sn** **10 07 34.7 -0.4**
KIF Kilpisjarvi 5.11 292 Pn **Pn** **10 06 46.0 +1.7**
KIF Sn **Sn** **10 07 41.3 -2.6**
KIF Kilpisjarvi 5.11 292 Pn **Pn** **10 06 46.0 +1.7**
KIF Sn **Sn** **10 07 41.3 -2.6**
I37NO I37NO 5.90 292 *i* 10 41 20.0
baz=99,slow=326,SNR=11
FIA0 FINESS Array S 7.06 213 Pn **Pn** **10 07 12.9 +1.9**
baz=38,slow=14
FIA0 Lg Lg 10 09 03.1
baz=25,slow=28
FIA0 FINESS Array S 7.06 213 Pn **Pn** **10 07 12.9 +1.9**
baz=38,slow=14
FIA0 Sg **Sb** **10 09 03.1 +8.4**
baz=25,slow=28
FINES FINESS Array B 7.06 213 Pn **Pn** **10 07 12.2 +1.1**
comp=Z,0.3nm,0.3s,baz=45,slow=13,SNR=6.1
FINES Sn **Sn** **10 08 28.3 -3.6**
comp=Z,0.4nm,0.3s,baz=28,slow=17,SNR=4.0
FINES Lg Lg 10 09 05.0
comp=Z,1.1nm,0.3s,baz=30,slow=25,SNR=6.3
HFS Hagfors 11.62 240 Pn **Pn** **10 08 12.7 -0.8**
baz=76,slow=22
HFS Hagfors 11.62 240 Pn **Pn** **10 08 12.4 -1.1**
comp=Z,0.2nm,0.3s,baz=11,slow=15,SNR=1.6
HFS Sn **Sn** **10 10 16.5 -7.3**
comp=Z,0.2nm,0.3s,baz=59,slow=14,SNR=1.5
HFS Hagfors 11.62 240 Pn **Pn** **10 08 12.7 -0.8**
baz=76,slow=22
SPA0 Spitsbergen Ar 11.74 342 Pn **Pn** **10 08 13.9 -1.1**
baz=144,slow=16
SPA0 Spitsbergen Ar 11.74 342 Pn **Pn** **10 08 13.9 -1.1**
baz=144,slow=16
SPITS Spitsbergen Ar 11.74 342 Pn **Pn** **10 08 13.9 -1.1**
baz=144,slow=17,SNR=8.0

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*IDC **08** 10:31:41.0±2.8,30°.21N×67°.82E,h0km,mb3.6/4, mb1 3.8/6,mb1mx3.4/54,mbtmp3.7/6,ML3.6/1,MS3.1/1, Ms1 3.1/1,ms1mx2.4/44,Error ellipse: s-maj=82.4km s-min=30.8km az=130.0*
ISC 08 10:31:44.7±1.2,30°.2N±0°.2×67°.8E±0°.1,h24km,n8,σ0≤28/7, mb3.7/3,Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMLA	**Simla**	**8.15**	**81**	*eS*	**Sn**	**10 35 12.8**	**0.0**
WSAR	**Wadi Sarin**	**10.72**	**232**	Pn	**Pn**	**10 34 16.9**	**+0.2**
baz=60,slow=8.1							
AAK	**Ala-Archa**	**13.52**	**22**	Pn	**Pn**	**10 34 55.5**	**+0.3**
0.3nm,0.3s,baz=199,slow=18,SNR=2.0							
MKAR	**Makanchi Array**	**20.02**	**30**	P	**P**	**10 36 15.7**	**-0.1**
0.6nm,0.5s,baz=205,slow=9.6,SNR=4.9							
AKTO	**Aktyubinsk**	**21.48**	**343**	P	**P**	**10 36 31.4**	**-0.1**
1.3nm,0.6s,baz=105,slow=20,SNR=3.6							
ZALV	**Zalesovo Beam**	**26.74**	**23**	P	**P**	**10 37 22.4**	**+0.1**
1.1nm,0.5s,baz=225,slow=15,SNR=4.2							
PSI	**Prapat**	**40.17**	**127**	LR		10 56 22.8	
comp=Z,26nm,20.1s,baz=242,slow=37							
YKA	**Yellowknife Ar**	**87.60**	**1**	P	**P**	**10 44 30.1**	**-0.4**
0.3nm,0.5s,baz=353,slow=5.2,SNR=7.1							

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*IDC **08** 10:51:40.3±2.2,6°.79S×127°.13E,h0km,mb4.3/1, mb1 4.0/3,mb1mx3.5/40,mbtmp3.9/3,ML3.8/2,Error ellipse: s-maj=304.2km s-min=29.7km az=64.0*
ISC 08 10:51:59.0±4.8,8°.2S±0°.1×127°.4E±0.5,h10km,n3,σ0≤56/5, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**7.12**	**43**	P	**Pb**	**10 54 02.7**	**-0.1**
WRA	**Warramunga Arr**	**13.51**	**151**	Pn	**Pn**	**10 55 11.5**	**+0.6**
0.4nm,0.3s,baz=331,slow=13,SNR=8.3							
WRA				Sn	**Sn**	**10 57 41.0**	**-0.3**
0.6nm,0.3s,baz=325,slow=23,SNR=6.7							
ASAR	**Alice Springs**	**16.64**	**159**	P	**Pn**	**10 55 52.0**	**-0.5**
0.4nm,0.3s,baz=337,slow=9.6,SNR=35							
ASAR				S	**Sn**	**10 58 57.4**	**-0.1**
0.1nm,0.3s,baz=341,slow=26,SNR=1.7							

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*VAO **08** 11:03:02.7±0.8,23°.98S×67°.03W,h197km±6km,mb4.4*
*SJA **08** 11:03:05.8±0.4,23°.98S×66°.77W,h214km±16km,ML5.0*
*IDC **08** 11:03:06.3±0.9,23°.85S×66°.58W,h196km±8km,mb3.9/14, mb1 4.1/20,mb1mx4.0/31,mbtmp4.4/20,MS2.6/1, Ms1 2.6/1,ms1mx2.5/18,Error ellipse: s-maj=11.7km s-min=10.1km az=61.0*
*NEIC **08** 11:03:06.2±1.9,23°.90S±0°.07×66°.65W±0°.08,h195km±5km, mb4.4/92,Error ellipse: s-maj=11.4km s-min=9.5km az=76.0*
*GUC **08** 11:03:07.6±0.6,23°.92S×67°.34W,h246km±11km,ML5.3*
ISC 08 11:03:06.3±0.6,23°.90S±0°.04×66°.73W±0°.04,h200km±6km, n197,σ1≤19/187,mb4.4/50,16C-19D,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AZAP	**Zapla**	**1.56**	**102**	*eP*	**Pn**	**11 03 42.4**	**+1.7**
YJA	**Yavi**	**2.05**	**33**	⇓*eP*	**Pn**	**11 03 48.0**	**+2.2**
YJA				⇓*eS*	**Sn**	**11 04 20.0**	**+3.5**
LVC	**Limon Verde**	**2.38**	**302**	P	**Pn**	**11 03 50.9**	**+1.7**
LVC				S	**Sn**	**11 04 23.8**	**+1.2**
266nm,0.3s,baz=265,slow=20,SNR=8.6							
LVC				LR	LR	11 05 01.9	
comp=Z,131nm,20.3s,baz=164,slow=47							
PB15	**IPOC Station P**	**2.61**	**285**	⇑*iP*	**Pn**	**11 03 52.9**	**+1.3**
PB15				*i* S	**Sn**	**11 04 26.9**	**+0.1**
PB15	**IPOC Station P**	**2.61**	**285**		**Pn**	**11 03 53.0**	**+1.5**
PB15	**IPOC Station P**	**2.61**	**285**	⇓*eP*	**Pn**	**11 03 53.0**	**+1.5**
PB15				⇓*eS*	**Sn**	**11 04 26.6**	**-0.2**
PB15				IAML		11 04 30.4	
comp=Z,13μm,0.2s							
PB06	**IPOC Station P**	**2.87**	**294**	⇑*iP*	**Pn**	**11 03 55.9**	**+1.3**
PB06				*i* S	**Sn**	**11 04 31.9**	**-0.3**
PB06				IAML		11 04 33.1	
comp=N,5μm,0.4s							
PB06	**IPOC Station P**	**2.87**	**294**		**Pn**	**11 03 55.8**	**+1.3**
PB06	**IPOC Station P**	**2.87**	**294**	⇓*eP*	**Pn**	**11 03 55.9**	**+1.3**
PB06				⇓*eS*	**Sn**	**11 04 32.3**	**+0.1**
PB06				IAML		11 04 34.5	
comp=Z,3μm,0.4s							
GO02	**Mina Guanaco**	**2.89**	**244**	⇑*iP*	**Pn**	**11 03 55.7**	**+0.9**
GO02				*i* S	**Sn**	**11 04 32.6**	**-0.3**
GO02				IAML		11 04 33.5	
comp=N,8μm,0.3s							
GO02	**Mina Guanaco**	**2.89**	**244**		**Pn**	**11 03 55.8**	**+0.9**
PB09	**IPOC Station P**	**3.12**	**312**	⇑*iP*	**Pn**	**11 03 59.2**	**+1.7**
PB09				*i* S	**Sn**	**11 04 38.7**	**+1.1**
PB09				IAML		11 04 41.0	
comp=N,2μm,0.5s							
PB09	**IPOC Station P**	**3.12**	**312**		**Pn**	**11 03 59.2**	**+1.7**
PB09	**IPOC Station P**	**3.12**	**312**	⇓*eP*	**Pn**	**11 03 59.3**	**+1.7**
PB09				⇓*eS*	**Sn**	**11 04 38.6**	**+1.0**
PB09				IAML		11 04 41.3	
comp=Z,2μm,0.3s							
PB03	**IPOC Station P**	**3.34**	**303**	⇑*iP*	**Pn**	**11 04 01.0**	**+0.9**
PB03				*i* S	**Sn**	**11 04 40.9**	**-1.4**
PB03	**IPOC Station P**	**3.34**	**303**	⇓*eP*	**Pn**	**11 04 01.1**	**+0.9**
PB03				⇓*eS*	**Sn**	**11 04 41.1**	**-1.1**
PB03				IAML		11 04 46.8	
comp=Z,3μm,0.2s							
PB05	**IPOC Station P**	**3.36**	**287**	⇑*iP*	**Pn**	**11 04 00.7**	**+0.4**
PB05				*i* S	**Sn**	**11 04 40.5**	**-1.9**
PB05				IAML		11 04 45.3	
comp=E,1μm,0.4s							
PB05	**IPOC Station P**	**3.36**	**287**	⇓*eP*	**Pn**	**11 04 00.9**	**+0.6**
PB05				*eS*	**Sn**	**11 04 40.5**	**-1.9**
PB05				IAML		11 04 44.4	
comp=Z,1μm,0.3s							
PB14	**IPOC Station P**	**3.43**	**257**	⇑*iP*	**Pn**	**11 04 01.6**	**+0.3**
PB14				*eS*	**Sn**	**11 04 42.1**	**-2.3**
PB14	**IPOC Station P**	**3.43**	**257**		**Pn**	**11 04 01.2**	**-0.1**
PB14	**IPOC Station P**	**3.43**	**257**	⇓*eP*	**Pn**	**11 04 01.7**	**+0.4**
PB14				IAML		11 04 50.6	
comp=Z,1μm,0.3s							
PB04	**IPOC Station P**	**3.51**	**296**	⇑*iP*	**Pn**	**11 04 02.9**	**+0.6**
PB04				*i* S	**Sn**	**11 04 44.6**	**-1.4**
PB04				IAML		11 04 46.4	
comp=N,4μm,0.5s							
PB04	**IPOC Station P**	**3.51**	**296**		**Pn**	**11 04 02.9**	**+0.6**
PB04	**IPOC Station P**	**3.51**	**296**	⇓*eP*	**Pn**	**11 04 02.9**	**+0.6**
PB04				⇓*eS*	**Sn**	**11 04 44.6**	**-1.4**
PB04				IAML		11 04 48.5	
comp=Z,3μm,0.3s							
PB10	**IPOC Station P**	**3.52**	**276**	⇑*iP*	**Pn**	**11 04 02.8**	**+0.7**
PB10				*eS*	**Sn**	**11 04 43.9**	**-2.1**
PB10				IAML		11 04 48.2	
comp=E,2μm,0.3s							
PB10	**IPOC Station P**	**3.52**	**276**		**Pn**	**11 04 02.9**	**+0.7**
PB10	**IPOC Station P**	**3.52**	**276**	⇓*eP*	**Pn**	**11 04 02.8**	**+0.7**
PB10				IAML		11 04 49.0	
comp=Z,778nm,0.4s							
PB07	**IPOC Station P**	**3.63**	**306**	⇑*iP*	**Pn**	**11 04 04.3**	**+0.7**
PB07				*eS*	**Sn**	**11 04 46.9**	**-1.6**
PB07				IAML		11 04 48.2	
comp=N,5μm,0.2s							
PB07	**IPOC Station P**	**3.63**	**306**		**Pn**	**11 04 04.3**	**+0.7**
PB07	**IPOC Station P**	**3.63**	**306**	⇓*eP*	**Pn**	**11 04 04.4**	**+0.7**
PB07				IAML		11 04 55.5	
comp=Z,2μm,0.4s							
AC02	**Maricunga**	**3.64**	**216**		**Pn**	**11 04 04.7**	**+0.7**
PB01	**IPOC Station P**	**3.82**	**318**	⇑*iP*	**Pn**	**11 04 06.4**	**+0.4**
PB01				*eS*	**Sn**	**11 04 51.6**	**-1.2**
PB01	**IPOC Station P**	**3.82**	**318**		**Pn**	**11 04 06.6**	**+0.7**
PB02	**IPOC Station P**	**3.89**	**311**	⇑*iP*	**Pn**	**11 04 07.1**	**+0.3**
PB02				*eS*	**Sn**	**11 04 52.2**	**-2.2**
PB02	**IPOC Station P**	**3.89**	**311**	⇓*eP*	**Pn**	**11 04 07.2**	**+0.3**
PB02				⇓*eS*	**Sn**	**11 04 52.7**	**-1.6**
PB02				IAML		11 04 58.9	
comp=Z,3μm,0.2s							
PB08	**IPOC Station P**	**4.37**	**329**	⇑*iP*	**Pn**	**11 04 14.2**	**+1.2**
PB08				*i* S	**Sn**	**11 05 05.5**	**0.0**
PB08	**IPOC Station P**	**4.37**	**329**		**Pn**	**11 04 14.3**	**+1.2**
PB08	**IPOC Station P**	**4.37**	**329**	*eP*	**Pn**	**11 04 14.4**	**+1.4**
PB08				IAML		11 05 11.8	
comp=Z,777nm,0.5s							
PATCX	**Punta Patache**	**4.41**	**313**	*eP*	**Pn**	**11 04 12.8**	**-0.4**
PATCX	**Punta Patache**	**4.41**	**313**		**Pn**	**11 04 11.2**	**-2.0**
PATCX					Pn	11 04 12.8	-0.4
CYA	**Choya**	**4.60**	**170**	⇑*iP*	Pn	11 04 33.9	+18
TA01	**Diego Aracena**	**4.61**	**315**	⇓*iP*	**Pn**	**11 04 15.7**	**0.0**
TA01				*i* S	**Sn**	**11 05 07.3**	**-3.0**
TA01				IAML		11 05 12.4	
comp=E,1μm,0.5s							
TA01	**Diego Aracena**	**4.61**	**315**		**Pn**	**11 04 15.0**	**-0.7**
GO01	**Chusmiza**	**4.79**	**331**	*eP*	**Pn**	**11 04 19.1**	**+0.6**
GO01	**Chusmiza**	**4.79**	**331**		**Pn**	**11 04 19.2**	**+0.6**
GO03	**Copiap**	**4.85**	**220**		**Pn**	**11 04 17.6**	**-1.2**
PB11	**IPOC Station P**	**4.94**	**326**	⇑*iP*	**Pn**	**11 04 19.5**	**-0.5**
PB11				*i* S	**Sn**	**11 05 15.2**	**-3.0**
PB11	**IPOC Station P**	**4.94**	**326**		**Pn**	**11 04 19.2**	**-0.9**
PB11	**IPOC Station P**	**4.94**	**326**	*eP*	**Pn**	**11 04 19.7**	**-0.3**
PB11				IAML		11 05 20.6	
comp=Z,728nm,0.2s							
PSGC	**Pisagua**		**5.32**	**323**	*eP*	**Pn**	**11 04 23.3**	**-1.6**
MNMC	**Minye Minye**		**5.45**	**330**	*eP*	**Pn**	**11 04 26.8**	**+0.1**
MNMC	**Minye Minye**		**5.45**	**330**		**Pn**	**11 04 26.1**	**-0.6**
AC05	**El Transito**		**5.85**	**212**		**Pn**	**11 04 30.8**	**-0.9**
PB16	**IPOC Station P**		**6.12**	**334**		**Pn**	**11 04 35.5**	**-0.1**
PB12	**IPOC Station P**		**6.24**	**327**	*eP*	**Pn**	**11 04 36.3**	**-0.5**
PB12					IAML		11 06 05.3	
comp=Z,256nm,0.3s							
GO04	**Tololo Observa**		**7.22**	**209**		**Pn**	**11 04 47.4**	**-2.2**
LPAZ	**La Paz**		**7.69**	**350**	P	**Pn**	**11 04 57.1**	**+0.9**
comp=Z,2.4nm,0.3s,baz=168,slow=8.3,SNR=19								
LPAZ					S	**Sn**	**11 06 22.1**	**-1.2**
comp=Z,0.4nm,0.3s,baz=278,slow=18,SNR=3.0								
CPUP	**Villa Florida**		**8.86**	**108**	P	**Pn**	**11 05 09.8**	**-0.8**
comp=Z,1.8nm,0.3s,baz=288,slow=11,SNR=88								
SIV	**San Ignacio**		**9.50**	**35**	P	**Pn**	**11 05 18.1**	**-1.1**
comp=Z,1.2nm,0.3s,baz=225,slow=14,SNR=46								
SIV					S	**Sn**	**11 07 00.6**	**-5.0**
comp=Z,0.2nm,0.3s,baz=223,slow=9.6,SNR=3.5								
ITQB	**Itaqui**		**10.70**	**125**	*eP*	**Pn**	**11 05 33.3**	**-1.2**
AQDB	**Aquidauana**		**10.78**	**74**	*eP*	**Pn**	**11 05 34.7**	**-0.9**
PTLB	**Pontes e Lacer**		**11.04**	**42**	*eP*	**Pn**	**11 05 38.1**	**-0.9**
VILB	**Vilhena**		**12.53**	**31**	*eP*	**Pn**	**11 05 55.5**	**-2.4**
TRCB	**Terra Rica**		**13.00**	**88**	*eP*	**Pn**	**11 06 04.3**	**+0.5**
SALV	**Santo Antonio**		**13.08**	**55**	*eP*	**Pn**	**11 06 03.5**	**-1.3**
PTGB	**Pitanga**		**13.40**	**96**	*eP*	**Pn**	**11 06 10.1**	**+1.2**
CPSB	**Cacapava Do Su**		**13.48**	**122**	*eP*	**Pn**	**11 06 08.9**	**-0.9**
ITAB	**Concordia**		**13.59**	**107**	*eP*	**Pn**	**11 06 10.4**	**-0.7**
C2SB	**Chapadao do Su**		**13.91**	**71**	*eP*	**Pn**	**11 06 16.2**	**+0.9**
PLTB	**Pedras Altas**		**14.00**	**127**	*eP*	**Pn**	**11 06 14.5**	**-1.7**
PCMB	**Pacaembu**		**14.46**	**84**	*eP*	**Pn**	**11 06 22.5**	**+0.6**
CNLB	**Canela**		**15.19**	**114**	*eP*	**Pn**	**11 06 29.9**	**-0.9**
SAML	**Samuel**		**15.25**	**13**	P	**P**	**11 06 32.4**	**+0.3**
SAML	**Samuel**		**15.25**	**13**	*eP*	**Pn**	**11 06 31.1**	**-0.6**
FRTB	**Fartura**		**15.75**	**91**	*eP*	**P**	**11 06 37.2**	**-0.3**
ITRB	**Iturama**		**15.77**	**78**	*eP*	**P**	**11 06 37.6**	**-0.2**
TIJ01	**Guaruva-PR**		**16.18**	**99**	*eP*	**P**	**11 06 41.3**	**-1.1**
ARAG	**Araguaiana, MT**		**16.23**	**63**	*eP*	**P**	**11 06 42.7**	**-0.1**
CLDB	**Colider**		**16.62**	**41**	*eP*	**P**	**11 06 46.5**	**-0.7**
CLDB					*eS*	**S**	**11 09 53.0**	**+2.0**
BB19B	**Bebedouro**		**17.06**	**84**	*eP*	**P**	**11 06 51.7**	**-0.3**
PLCA	**Paso Flores**		**17.09**	**190**	P	**P**	**11 06 52.2**	**+0.1**
comp=Z,0.5nm,0.3s,baz=11,slow=12,SNR=13								
PLCA	**Paso Flores**		**17.09**	**190**	IAmb	IAmb	11 06 59.8	
comp=Z,16nm,0.8s								
SPB	**Sao Paulo**		**17.67**	**93**	P	**P**	**11 06 58.7**	**+0.1**
SPB	**Sao Paulo**		**17.67**	**93**	*eP*	**P**	**11 06 58.6**	**0.0**
RCLB	**Rio Claro- Sao**		**17.72**	**89**	*eP*	**P**	**11 06 58.7**	**-0.5**
PET01	**Itanhaem-SP**		**17.77**	**95**	*eP*	**P**	**11 06 59.3**	**-0.4**
VAO	**Valinhos**		**18.16**	**91**	*eP*	**P**	**11 07 03.5**	**-0.5**
IPMB	**Ipameri, GO**		**18.27**	**75**	*eP*	**P**	**11 07 05.1**	**-0.1**
LL01	**San Ignacio de**		**19.02**	**193**	P	**P**	**11 07 13.2**	**+0.2**
PARB	**Paraibuna**		**19.35**	**93**	*eP*	**P**	**11 07 15.3**	**-1.6**
BDFB	**Brasilia**		**19.42**	**68**	P	**P**	**11 07 17.3**	**-0.4**
comp=Z,2.4nm,0.3s,baz=239,slow=12,SNR=46								
BDFB	**Brasilia**		**19.42**	**68**	IAmb	IAmb	11 07 19.1	
comp=Z,40nm,0.8s								
NPGB	**Novo Progresso**		**20.00**	**35**	*eP*	**P**	**11 07 21.8**	**-2.1**
BSCB	**Bom Sucesso**		**20.50**	**86**	*eP*	**P**	**11 07 28.2**	**-1.0**
MACA	**Manacapuru-AM**		**21.43**	**17**	*eP*	**P**	**11 07 37.5**	**-1.5**
VAS01	**Vassouras-RJ**		**21.48**	**90**	*eP*	**P**	**11 07 39.4**	**0.0**
JANB	**Januaria**		**22.87**	**71**	*eP*	**P**	**11 07 51.3**	**-1.3**
SMTB	**Santa Maria do**		**23.64**	**54**	*eP*	**P**	**11 07 59.0**	**-0.6**
PTGA	**Pitinga**		**23.95**	**17**	P	**P**	**11 08 01.2**	**-1.2**
comp=Z,1.8nm,0.3s,baz=187,slow=16,SNR=7.0								
PTGA	**Pitinga**		**23.95**	**17**	IAmb	IAmb	11 08 05.0	
comp=Z,2.7nm,0.8s								
SJMB	**Sao Joao De Ma**		**24.34**	**83**	*eP*	**P**	**11 08 05.1**	**-0.9**
BSFB	**Barra de Sao F**		**24.61**	**83**	*eP*	**P**	**11 08 07.0**	**-1.4**
MALB	**Monte Alegre**		**25.02**	**31**	*eP*	**P**	**11 08 11.3**	**-0.9**
BOAV	**Boa Vista**		**26.83**	**14**	*eP*	**P**	**11 08 27.8**	**-0.5**
NBIT	**Itapeh - BA**		**27.21**	**76**	*eP*	**P**	**11 08 31.0**	**-0.7**
NBPN	**Ponto Novo - B**		**28.39**	**67**	*eP*	**P**	**11 08 41.1**	**-1.2**
ROSB	**Rosario**		**30.22**	**50**	*eP*	**P**	**11 08 57.7**	**-0.7**
NBLA	**Lagarto - SE**		**30.37**	**70**	*eP*	**P**	**11 08 58.1**	**-1.7**
NBTA	**Tacaratu-PE**		**31.08**	**67**	*eP*	**P**	**11 09 04.4**	**-1.6**
NBPS	**Pedro II - PI**		**31.15**	**55**	*eP*	**P**	**11 09 05.5**	**-1.2**
NBMA	**Muriti-CE**		**31.45**	**63**	*eP*	**P**	**11 09 08.6**	**-0.7**
NBPB	**Pedra_Branca-C**		**31.86**	**59**	*eP*	**P**	**11 09 12.1**	**-0.8**
NBAN	**Anadia - AL**		**32.32**	**69**	*eP*	**P**	**11 09 15.7**	**-1.1**
NBMO	**Morrinhos-CE**		**32.91**	**56**	*eP*	**P**	**11 09 21.2**	**-0.8**
NBPV	**Pedro Velho**		**34.84**	**65**	*eP*	**P**	**11 09 38.0**	**-0.5**
JTS	**Las Juntas de**		**38.37**	**330**	P	**P**	**11 10 10.6**	**+2.2**
comp=Z,4.1nm,0.7s,baz=157,slow=11,SNR=3.6								
JTS	**Las Juntas de**		**38.37**	**330**	IAmb	IAmb	11 10 14.8	
comp=Z,8.9nm,1.1s								
VNA3	**Neumayer Olymp**		**57.16**	**161**	P	**P**	**11 12 32.5**	**+0.6**
VNA1	**Neumayer--Stat**		**57.36**	**160**	P	**P**	**11 12 34.4**	**+1.3**
VNA2	**Neumayer--Watz**		**57.73**	**160**	P	**P**	**11 12 36.7**	**+1.0**
ZAIG	**Zacatecas**		**58.01**	**320**	P	**P**	**11 12 40.9**	**+2.2**
ZAIG					IAmb	IAmb	11 12 41.7	
comp=Z,7.5nm,1.0s								
SNAA	**Sanae**		**59.36**	**161**	P	**P**	**11 12 47.5**	**+0.4**
SNAA	**Sanae**		**59.36**	**161**	P	**P**	**11 12 47.3**	**+0.2**
comp=Z,3.7nm,0.6s,baz=279,slow=8.5,SNR=40								
SNAA					PcP	**PcP**	**11 13 32.6**	**-0.3**
comp=Z,0.9nm,0.4s,baz=258,slow=8.7,SNR=5.7								
SNAA	**Sanae**		**59.36**	**161**	P	**P**	**11 12 47.5**	**+0.4**
SNAA					IAmb	IAmb	11 12 48.6	
comp=Z,5.0nm,0.8s								
Z50A	**Ashland**		**59.71**	**341**	P	**P**	**11 12 49.6**	**-0.2**
LRAL	**Lakeview Retre**		**59.83**	**340**	P	**P**	**11 12 50.2**	**-0.4**
LRAL					IAmb	IAmb	11 12 50.6	
comp=Z,5.8nm,0.6s								
W50A	**Signal Mountai**		**61.36**	**343**	IAmb	IAmb	11 13 01.7	
comp=Z,7.1nm,0.9s								
SWET	**Sewanee**		**61.55**	**342**	IAmb	IAmb	11 13 02.8	
comp=Z,7.0nm,0.8s								
PLAL	**Pickwick Lake**		**61.96**	**340**	IAmb	IAmb	11 13 04.7	
comp=Z,5.1nm,0.6s								
WVT	**Waverly**		**62.95**	**341**	P	**P**	**11 13 10.3**	**-1.2**
MIAR	**Mount Ida**		**63.47**	**335**	IAmb	IAmb	11 13 16.1	
comp=Z,11nm,1.2s								
TXAR	**Lajitas Array**		**63.74**	**324**	P	**P**	**11 13 17.7**	**+0.7**
comp=Z,1.4nm,0.8s,baz=150,slow=8.6,SNR=19								
FCAR	**Ozark Folk Cen**		**64.14**	**337**	P	**P**	**11 13 18.5**	**-0.8**
FCAR					IAmb	IAmb	11 13 19.5	
comp=Z,4.1nm,0.6s								
T42A	**Van Buren**		**64.81**	**339**	P	**P**	**11 13 22.8**	**-0.8**
U40A	**Yellville**		**64.81**	**337**	IAmb	IAmb	11 13 24.4	
comp=Z,5.7nm,0.7s								
HHAR	**Hobbs**		**65.15**	**336**	IAmb	IAmb	11 13 26.8	
comp=Z,7.9nm,0.9s								
U38A	**Gravette**		**65.45**	**336**	IAmb	IAmb	11 13 28.6	
comp=Z,4.4nm,0.8s								
CCM	**Cathedral Cave**		**65.79**	**339**	P	**P**	**11 13 29.5**	**-0.4**
L59A	**Walton**		**66.21**	**353**	IAmb	IAmb	11 13 34.3	
comp=Z,9.6nm,0.8s								
QSPA	**South Pole Qui**		**66.30**	**180**	P	**P**	**11 13 33.7**	**+0.7**
R40A	**Maddies Statio**		**66.35**	**338**	IAmb	IAmb	11 13 34.0	
comp=Z,5.9nm,0.6s								
MSTX	**Muleshoe**		**66.99**	**328**	IAmb	IAmb	11 13 39.0	
comp=Z,11nm,1.0s								
P40A	**Paris**		**67.39**	**339**	IAmb	IAmb	11 13 40.7	
comp=Z,8.2nm,0.8s								
J59A	**Piesco**		**67.41**	**354**	IAmb	IAmb	11 13 41.8	
comp=Z,7.4nm,0.8s								
DBIC	**Dimbokro**		**67.54**	**71**	P	**P**	**11 13 40.4**	**-1.1**
comp=Z,2.3nm,0.5s,baz=211,slow=8.6,SNR=6.3								
319A	**Douglas**		**68.41**	**322**	P	**P**	**11 13 48.8**	**+2.1**
319A					IAmb	IAmb	11 13

MKAR	**Makanchi Array**	**146.29**	**40**	PKPbc	**PKPdf**	**11 22 22.5**	**+0.7**		
	comp=Z,7.9nm,0.6s,baz=316,slow=2.4,SNR=71								
CISI	**Cisompet, Garu**	**148.28**	**170**		**PKPbc**	**11 22 28.7**	**-1.1**		
USRK	**Ussuriysk Ar.**	**154.61**	**327**	PKPbc	**PKPbc**	**11 22 42.7**	**-0.6**		
	comp=Z,1.3nm,0.7s,baz=5.7,slow=5.2,SNR=3.4								
USRK				SKPbc		11 26 03.4			
	comp=Z,2.3nm,0.6s,baz=150,slow=40,SNR=2.8								
MJAR	**Matsushiro Arr**	**155.12**	**306**	PKPbc	PKPbc	11 22 46.0			
	comp=Z,0.8nm,0.6s,baz=102,slow=0.7,SNR=4.3								
SONM	**Songino Array**	**155.50**	**11**	PKPab	**PKPab**	**11 23 02.6**	**-0.1**		
	comp=Z,1.0nm,0.4s,baz=273,slow=2.6,SNR=4.3								
LZH	**Lanzhou**	**165.38**	**32**	⇑PKP	**PKPdf**	**11 22 46.1**	**-1.1**		
LZH				pPKP	pPKPdf	11 23 36.5	-4.1		
LZH				PKP	**PKPab**	**11 23 46.3**	**+0.1**		
LZH				sPKP		11 23 55.9			
CMAR	**Chiang Mai Arr**	**165.59**	**109**	PKPab	**PKPab**	**11 23 47.1**	**-0.4**		
	comp=Z,1.0nm,0.3s,baz=294,slow=31,SNR=5.3								
CD2	**Chengdu**	**169.04**	**48**	PKP	**PKPdf**	**11 22 49.6**	**-0.3**		

IDC ***08*** *11:04:17.0±0.7, 31°.37S×68°.41W, h112km±9km, mb3.2/4, mb1 3.5/5, mb1mx3.4/26, mbtmp3.6/5, MS3.0/1, Ms1 3.0/1, ms1mx2.6/9, Error ellipse: s-maj=42.4km s-min=36.6km az=53.0*

ISC 08 11:04:16.9±0.8, 31°.19S±0'.09×68°.56W±0'.09, h101km, n28, σ1§46/18, mb3.2/4, 3D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AMOG	**MOGNA**	**0.25**	**12**	IAML			11 05 44.1	
	comp=Z,140nm,0.4s							
AMOG	**MOGNA**	**0.25**	**12**	⇓*i*P		**Pn**	**11 04 33.1**	**+1.5**
SJA	**San Juan**	**0.34**	**181**	IAML			11 06 49.3	
	comp=Z,181nm,1.4s							
SJA	**San Juan**	**0.34**	**181**	⇓*e*P		**Pn**	**11 04 33.6**	**+1.6**
CFA	**Coronel Fontan**	**0.50**	**147**	P		**Pn**	**11 04 33.5**	**+0.6**
	comp=Z,403nm,0.3s,baz=309,slow=6.6							
CFA				LR		LR	11 04 43.4	
	comp=Z,71nm,21.7s,baz=350,slow=96							
CFA				S		**Sn**	**11 04 46.3**	**+1.5**
	comp=Z,615nm,0.3s,baz=123,slow=19,SNR=68							
CFA	**Coronel Fontan**	**0.50**	**147**	*e*S		**Sn**	**11 04 46.6**	**+1.8**
CFA	**Coronel Fontan**	**0.50**	**147**	*e*P		**Pn**	**11 04 33.9**	**+1.0**
RTCV	**Cerro Valdivia**	**0.67**	**179**	IAML			11 05 49.2	
	comp=Z,75nm,0.4s							
RTCV	**Cerro Valdivia**	**0.67**	**179**	*e*P		**Pn**	**11 04 35.5**	**+1.2**
RTLS	**Leoncito**	**0.88**	**226**	IAML			11 05 56.9	
	comp=Z,74nm,0.5s							
RTLS	**Leoncito**	**0.88**	**226**	*e*P		**Pn**	**11 04 38.5**	**+2.0**
ACAN	**Cantantal**	**1.59**	**133**	*e*S		**Sn**	**11 05 05.9**	**+0.7**
ACAN	**Cantantal**	**1.59**	**133**	IAML			11 05 07.2	
	comp=Z,549nm,0.3s							
ACAN	**Cantantal**	**1.59**	**133**	⇓*i*P		**Pn**	**11 04 45.6**	**+1.3**
ROC1	**El Roble**	**2.75**	**229**	*e*P		**Pn**	**11 05 00.1**	**+0.6**
PLCA	**Paso Flores**	**9.66**	**189**	P		**Pn**	**11 06 30.6**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=358,slow=12,SNR=8.4							
PLCA				LR		LR	11 09 47.0	
	comp=Z,90nm,20.2s,baz=178,slow=35							
TXAR	**Lajitas Array**	**68.84**	**327**	P		**P**	**11 15 10.6**	**0.0**
	comp=Z,0.3nm,0.6s,baz=159,slow=8.1,SNR=4.7							
TORD	**Torodi Ar. Bea**	**80.47**	**68**	P		**P**	**11 16 16.6**	**-1.4**
	comp=Z,1.3nm,0.6s,baz=262,slow=5.1,SNR=4.0							
PDAR	**Pinedale Array**	**82.67**	**331**	P		**P**	**11 16 28.9**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=108,slow=2.9,SNR=1.6							
NVAR	**Mina Array Bea**	**83.34**	**323**	P		**P**	**11 16 33.7**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=195,slow=6.3,SNR=1.7							
H11S2	**WAKE ISLAND Hyl**	**28.75**	**269**	T		T	13 43 08.8	
	SNR=12							
H11S1	**WAKE ISLAND Hyl**	**28.76**	**269**	T		T	13 42 59.1	
	baz=324,slow=74,SNR=12							
H11S3	**WAKE ISLAND Hyl**	**28.77**	**269**	T		T	13 43 05.3	
	baz=122,slow=74,SNR=14							
H11N3	**WAKE ISLAND Hyl**	**29.09**	**271**	T		T	13 43 22.1	
	baz=168,slow=74,SNR=4.2							
H11N1	**WAKE ISLAND Hyl**	**29.10**	**271**	T		T	13 43 25.0	
H11N2	**WAKE ISLAND Hyl**	**29.11**	**271**	T		T	13 43 25.4	
	baz=106,slow=74,SNR=3.8							
ZALV	**Zalesovo Beam**	**150.28**	**32**	PKPbc	**PKPbc**	**11 23 54.3**	**-1.4**		
	comp=Z,1.4nm,0.5s,baz=298,slow=3.5,SNR=5.2								
MKAR	**Makanchi Array**	**152.70**	**47**	PKPbc	**PKPbc**	**11 24 00.6**	**-1.1**		
	comp=Z,0.9nm,0.8s,baz=46,slow=3.5,SNR=2.8								

JMA 08 11:14:41.4, 36°.77N×141°.04E, h20km±1km, M2.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.38**	**330**	P		Pb	11 14 49.2	-0.3
ONAJ				S		Sb	11 14 55.2	+0.1
JHO	**Hitachi**	**0.41**	**247**	P		Pb	11 14 49.5	-0.5
JFFD	**Fukushimafurud**	**0.50**	**310**	P		Pb	11 14 51.0	-0.5
JFFD				S		Sb	11 14 58.1	-0.3
JFK	**Kawauchi**	**0.61**	**348**	P		Pb	11 14 53.1	-0.3
JFK				S		Sb	11 15 02.0	+0.4
JFT	**Otama**	**0.94**	**323**	P		Pn	11 14 59.2	-0.2
JFT				S		Sn	11 15 11.9	-0.3
JMST	**Minamisoumatoc**	**0.96**	**353**	P		Pb	11 14 58.5	-0.9
JMST				S		Sb	11 15 11.5	-0.1
JMM	**Marumori**	**1.11**	**350**	P		Pn	11 15 01.1	-0.7
JMM				*e*S		Sb	11 15 15.6	-0.4
MAT	**Matsushiro**	**2.29**	**265**	P		Pb	11 15 21.7	-0.3
MAT				S		Sb	11 15 51.1	+1.2

BJI ***08*** *11:46:03.2±0.0, 5°.09S×152°.23E, h72km, mB4.9/40, mb4.8/53, Ms4.7/24, Ms7 4.3/20*

IDC ***08*** *11:46:03.6±0.8, 4°.88S×152°.30E, h56km±5km, mb4.7/27, mb1 4.8/30, mb1mx4.6/47, mbtmp4.9/30, MS3.9/25, Ms1 3.9/25, ms1mx3.9/28, Error ellipse: s-maj=12.6km s-min=8.0km az=109.0*

NEIC ***08*** *11:46:04.2±1.9, 4°.86S±0°.06×152°.31E±0°.08, h65km±4km, mb5.2/172, Error ellipse: s-maj=11.7km s-min=8.8km az=89.0*

GCMT ***08*** *11:46:07.2±0.3, 5°.05S±0°.02×152°.32E±0°.02, h47km±1km, MW5.0/66, Moment Tensor Solution. s51,c62; s66,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.03±.18; $M_{\theta\theta}$-2.41±.12; $M_{\phi\phi}$-0.61±.12; $M_{r\theta}$-0.55±.09; $M_{\theta\phi}$-1.89±.09; $M_{\phi r}$1.13±.10; Best double couple: M_o3.58300×10^{16} NP1:ϕs259.00000°, δ48.00000°, λ121.00000°. NP2: ϕs37.00000°, δ50.00000°, λ60.00000°. Principal axes: T 3.5570, Plg67.0000°, Azm240.0000°; N 0.0550, Plg23.0000°, Azm57.0000°; P -3.6080, Plg1.0000°, Azm147.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***08*** *11:46:11.2±0.8, 5°.3S×15°.2E±°, h119km±6km, M5.1/57, mb5.2/57, mB5.5/19, MLv5.7/1, Mw(mB)5.0/19*

ISC 08 11:46:03.3±0.2, 4°.91S±0°.04×152°.35E±0°.05, h55km, n647, σ1§11/591, mb5.2/132, MS4.0/37, 3C-1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KRVT	**Keravat (AS076**	**0.68**	**331**	P		**Pn**	**11 46 17.1**	**0.0**
	8μm,0.3s,baz=167,slow=1.0,SNR=7686							
KRVT				S		**Sn**	**11 46 28.3**	**+1.2**
	9μm,0.3s,baz=332,slow=14,SNR=13							
RABL	**Rabaul**	**0.74**	**345**			**Pn**	**11 46 18.4**	**+0.6**
PMG	**Port Moresby**	**6.82**	**229**	P		**Pn**	**11 47 41.8**	**+1.0**
	41nm,0.3s,baz=68,slow=5.6,SNR=85							
PMG				S		**Sn**	**11 48 57.5**	**+0.4**
	60nm,0.3s,baz=179,slow=22,SNR=8.3							
PMG	**Port Moresby**	**6.82**	**229**			**Pn**	**11 47 43.1**	**+2.3**
PMG					Sn	**Sn**	**11 48 58.5**	**+1.4**
HNR	**Honiara**	**8.77**	**121**	P		**Pn**	**11 48 09.9**	**+2.4**
	25nm,0.3s,baz=189,slow=14,SNR=5.1							
HNR				LR		LR	11 51 39.8	
	comp=Z,1μm,21.6s,baz=292,slow=38							
JAY	**Jayapura**	**11.86**	**281**	P		**Pn**	**11 48 52.4**	**+2.5**
	0.5nm,0.3s,baz=28,slow=2.9,SNR=3.6							
JAY				LR		LR	11 52 36.1	
	comp=Z,822nm,21.6s,baz=42,slow=33							
JAY	**Jayapura**	**11.86**	**281**	P		Pn	11 48 58.3	+8.4
	463nm48nm,1.1s							
GENI	**Genyem**	**12.37**	**280**	P		P	11 49 02.0	-5.2
	3μm167nm,1.3s							
COEN	**Coen**	**12.75**	**225**	P		**Pn**	**11 49 04.4**	**+2.4**
	baz=13,SNR=19							
COEN	**Coen**	**12.75**	**225**			**Pn**	**11 49 03.2**	**+1.2**
PATS	**Pohnpei**	**13.10**	**27**	Pn		**Pn**	**11 49 07.1**	**+0.4**
SMPI	**Sarmi**	**13.92**	**282**	P		**P**	**11 49 22.2**	**-2.2**
	1μm72nm,0.7s							
MTSU	**Mount Surprise**	**15.31**	**210**	P		**P**	**11 49 39.1**	**-0.8**
	baz=15,SNR=9.2							
CTA	**Charters Tower**	**16.21**	**201**	P		**Pn**	**11 49 48.7**	**+1.1**
	0.6nm,0.3s,baz=23,slow=13,SNR=13							
CTAO	**Charters Tower**	**16.21**	**201**			**Pn**	**11 49 48.5**	**+0.9**
GUMO	**Guam**	**19.82**	**338**	P		**Pn**	**11 50 32.5**	**+1.0**
QIS	**Mount Isa**	**19.89**	**217**	P		**Pn**	**11 50 31.6**	**-0.8**
	baz=20,SNR=66							
FAKI	**Fak Fak**	**20.15**	**275**	P		Pn	11 50 35.3	-0.2
	1μm113nm,0.9s							
FAKI	**Fak Fak**	**20.15**	**275**	P		**P**	**11 50 34.1**	**+0.8**
FAKI					IAmb	IAmb	11 50 39.0	
	comp=Z,91nm,0.9s							
EIDS	**Eidsvold**	**20.38**	**183**	P		**P**	**11 50 36.7**	**+1.1**
	baz=20,SNR=19							
EIDS	**Eidsvold**	**20.38**	**183**	P		**P**	**11 50 36.7**	**+1.1**
KDU	**Kakadu**	**21.10**	**247**	P		**P**	**11 50 43.0**	**-0.4**
	baz=21,SNR=241							
SIJI	**Sorong**	**21.43**	**280**	P		**P**	**11 50 47.0**	**-0.1**
	comp=Z,118nm,0.6s,baz=121,slow=6.7,SNR=76							
RMQ	**Roma**	**21.73**	**189**	P		**P**	**11 50 51.1**	**+1.0**
	baz=22,SNR=28							
DZM	**Mont Dzumac**	**21.85**	**143**	*e*Pn		**P**	**11 50 52.9**	**+1.4**
	comp=Z,160nm,1.0s							
DZM				*e*S		**S**	**11 54 42.0**	**-8.1**
	comp=Z,995nm,24.6s							
DZM				*e*LR		LR	11 56 01.1	
	comp=Z,1μm,26.7s							
DZM	**Mont Dzumac**	**21.85**	**143**	P		**P**	**11 50 52.9**	**+1.4**
	comp=Z,23nm,0.6s,baz=239,slow=4.5,SNR=34							
MTN	**Manton Dam**	**22.38**	**248**	P		**P**	**11 50 56.2**	**-1.0**
	baz=22,SNR=44							
MTN	**Manton Dam**	**22.38**	**248**	P		**P**	**11 50 56.2**	**-1.0**
MTN					IAmb	IAmb	11 50 59.1	
	comp=Z,70nm,0.5s							
QLP	**Quilpie**	**22.91**	**199**	P		**P**	**11 51 01.1**	**-1.5**
	baz=23,SNR=25							
WRAB	**Tennant Creek**	**23.03**	**228**	P		**P**	**11 51 03.6**	**-0.3**
WRA	**Warramunga Arr**	**23.04**	**228**	P		**P**	**11 51 03.5**	**-0.5**
	comp=Z,139nm,0.6s,baz=53,slow=10,SNR=186							
WRA					S	**S**	**11 55 10.7**	**-0.2**
	comp=Z,18nm,1.2s,baz=55,slow=18,SNR=6.0							
WRA					LR	LR	12 00 42.5	
	comp=Z,287nm,19.0s,baz=75,slow=38							
LBMI	**Labuha**	**25.18**	**279**	P		**P**	**11 51 24.9**	**+1.0**
	comp=Z,2μmcomp=Z,217nm,0.9s							
ARMA	**Armidale**	**25.38**	**181**	P		**P**	**11 51 27.4**	**+1.7**
	baz=25,SNR=7.0							
ARMA	**Armidale**	**25.38**	**181**	P		**P**	**11 51 26.6**	**+1.0**
KNRA	**Kununurra**	**25.52**	**243**	P		**P**	**11 51 26.7**	**-0.2**
	baz=25,SNR=88							
KNRA	**Kununurra**	**25.52**	**243**	P		**P**	**11 51 26.8**	**-0.2**
TNTI	**Ternate**	**25.59**	**282**	P		**P**	**11 51 28.5**	**+0.9**
	comp=Z,37nm,0.9s							
ASAR	**Alice Springs**	**25.77**	**222**	P		**P**	**11 51 29.1**	**-0.1**
	comp=Z,57nm,0.7s,baz=56,slow=8.3,SNR=134							
ASAR					S	**S**	**11 55 58.2**	**+3.5**
	comp=Z,2.0nm,0.9s,baz=50,slow=20,SNR=1.0							
ASAR					LR	LR	12 01 41.9	
	comp=Z,264nm,21.3s,baz=45,slow=36							
SANI	**Sanana**	**26.47**	**275**	P		**P**	**11 51 35.5**	**0.0**
	comp=Z,768nmcomp=Z,52nm,0.8s							
CMSA	**Cobar Meteorol**	**27.22**	**193**	P		**P**	**11 51 41.9**	**-0.2**
	baz=27,SNR=15							
SOEI	**Soe**	**28.26**	**259**	P		**P**	**11 51 52.5**	**+0.7**
	comp=Z,58nm,0.9s							
SOEI	**Soe**	**28.26**	**259**	P		**P**	**11 51 50.1**	**-1.7**
SOEI					IAmb	IAmb	11 52 27.5	
	comp=Z,56nm,0.9s							
STKA	**Stephens Creek**	**28.66**	**199**	P		**P**	**11 51 54.7**	**-0.3**
	baz=29,SNR=20							
STKA	**Stephens Creek**	**28.66**	**199**	P		**P**	**11 51 54.1**	**-0.9**
	comp=Z,11nm,0.7s,baz=12,slow=9.3,SNR=30							
STKA					LR	LR	12 03 13.7	
	comp=Z,344nm,20.4s,baz=17,slow=36							
KMSI	**Cibinong**	**28.86**	**280**	P		**P**	**11 51 55.1**	**-1.9**
	comp=Z,4μmcomp=Z,160nm,0.7s							
BATI	**Baumata**	**28.91**	**258**	P		**P**	**11 51 58.1**	**+0.7**
	comp=Z,40nm,0.7s,baz=214,slow=1.8,SNR=7.5							
BATI	**Baumata**	**28.91**	**258**	P		P	11 52 09.5	+12
FITZ	**Fitzroy Crossi**	**29.21**	**241**	P		**P**	**11 51 59.5**	**-0.6**
	baz=29,SNR=96							
FITZ	**Fitzroy Crossi**	**29.21**	**241**	P		**P**	**11 51 59.4**	**-0.6**
	comp=Z,114nm,0.7s,baz=64,slow=7.0,SNR=318							
LUWI	**Luwuk**	**29.78**	**276**	P		**P**	**11 52 05.4**	**+0.2**
	comp=Z,3μmcomp=Z,66nm,1.0s							
MMRI	**Maumere**	**30.13**	**261**	P		**P**	**11 52 07.5**	**-0.7**
	comp=Z,52nm,0.6s							
MMRI	**Maumere**	**30.13**	**261**	P		**P**	**11 52 07.7**	**-0.5**
MMRI					IAmb	IAmb	11 52 10.3	
	comp=Z,36nm,0.6s							
CAN	**Canberra**	**30.42**	**185**	P		**P**	**11 52 10.5**	**0.0**
CAN					IAmb	IAmb	11 53 07.4	
	comp=Z,52nm,1.5s							
WRKA	**Warakurna**	**30.56**	**227**	P		**P**	**11 52 11.2**	**-0.7**
	baz=30,SNR=57							
EDFI	**Ende, Flores**	**30.68**	**261**	P		**P**	**11 52 12.0**	**-1.2**
	comp=Z,36nm,0.6s							
MRSI	**Marisa**	**30.85**	**279**	P		**P**	**11 52 14.8**	**+0.3**
	comp=Z,25nm,0.7s							
HTT	**Hallett**	**31.01**	**202**	P		**P**	**11 52 15.8**	**0.0**
	baz=31,SNR=13							
BBOO	**Buckleboo**	**31.66**	**207**	P		**P**	**11 52 21.2**	**-0.2**
	baz=32,SNR=41							
BNSI	**Bone**	**32.14**	**270**	P		**P**	**11 52 26.4**	**+0.4**
	comp=Z,23nm,0.7s							
KAPI	**Kappang**	**32.48**	**268**	P		**P**	**11 52 29.1**	**+0.2**
SPSI	**Sidrap Palu**	**32.50**	**270**	P		**P**	**11 52 28.9**	**-0.2**
	comp=Z,17nm,1.2s							
PCI	**Palu**	**32.71**	**276**	P		P	11 52 46.7	+16
MPSI	**Mapaga**	**32.83**	**278**	P		**P**	**11 52 31.2**	**-0.8**
	comp=Z,39nm,0.8s							
WBSI	**Waikabubak, Su**	**33.02**	**260**	P		**P**	**11 52 32.7**	**-1.0**
	comp=Z,125nm,0.8s							
TOO	**Toolangi**	**33.11**	**190**	P		**P**	**11 52 34.8**	**+0.6**
	baz=33,SNR=3.7							
ARPS	**Mount Arapiles**	**33.15**	**196**	P		**P**	**11 52 35.0**	**+0.6**
	baz=33,SNR=20							
FORT	**Forrest**	**34.42**	**219**	P		**P**	**11 52 45.2**	**-0.4**
	baz=34,SNR=58							
FORT	**Forrest**	**34.42**	**219**	P		**P**	**11 52 45.3**	**-0.3**
PLAI	**Plampang**	**34.54**	**262**	P		**P**	**11 52 45.6**	**-1.2**
	comp=Z,819nmcomp=Z,61nm,0.7s							
MBWA	**Mole Bar**	**35.53**	**240**	P		**P**	**11 52 54.4**	**-0.9**
TGY	**Tagaytay City**	**36.44**	**302**	LR		LR	12 05 29.8	
	comp=Z,223nm,21.6s,baz=189,slow=32							
MOO	**Moorlands**	**37.66**	**186**	P		**P**	**11 53 14.7**	**+1.6**
	baz=38,SNR=7.3							
KKM	**Kota Kinabalu**	**37.69**	**286**	P		**P**	**11 53 13.2**	**-0.7**
KKM					IAmb	IAmb	11 53 15.4	
	comp=Z,24nm,0.9s							
MEEK	**Meekatharra**	**38.78**	**233**	P		**P**	**11 53 22.4**	**-0.5**
	baz=39,SNR=15							
KMBL	**Kambalda**	**38.87**	**224**	P		**P**	**11 53 22.7**	**-0.7**
	baz=39,SNR=14							
PWJI	**Pagerwojo**	**40.40**	**263**	P		**P**	**11 53 35.1**	**-1.3**
	comp=Z,39nm,1.0s							
SBUM	**Sibu**	**40.76**	**279**	P		**P**	**11 53 40.8**	**+1.4**
SBUM	**Sibu**	**40.76**	**279**	P		**P**	**11 53 41.0**	**+1.6**
GIRL	**Giralia**	**40.83**	**241**	P		**P**	**11 53 40.2**	**+0.4**
	baz=41,SNR=9.7							
PCJI	**Pacitan**	**41.02**	**263**	P		**P**	**11 53 40.7**	**-0.9**
	comp=Z,117nm,0.8s							
TUWZ	**Tuamarina**	**41.17**	**155**	P		**P**	**11 53 43.7**	**+1.3**
YULB	**Yuli**	**41.35**	**314**	IAmb		IAmb	11 53 48.1	
	comp=Z,20nm,0.7s							
MSWZ	**Moikau Station**	**41.72**	**154**	P		**P**	**11 53 47.6**	**+0.6**
KLBR	**Kellerberrin**	**41.91**	**227**	P		**P**	**11 53 47.5**	**-1.1**
	baz=42,SNR=18							
MORW	**Morawa**	**41.93**	**231**	P		**P**	**11 53 48.1**	**-0.7**
	baz=42,SNR=13							
MORW	**Morawa**	**41.93**	**231**	P		**P**	**11 53 48.4**	**-0.4**
MORW					IAmb	IAmb	11 53 49.0	
	comp=Z,41nm,0.8s							
YHNB	**Yeheng**	**42.10**	**316**	IAmb		IAmb	11 54 19.4	
	comp=Z,31nm,0.9s							
BLDU	**Ballidu**	**42.17**	**228**	P		**P**	**11 53 49.8**	**-1.0**
	baz=42,SNR=14							
KSM	**Kuching**	**42.48**	**278**	P		**P**	**11 53 53.8**	**+0.2**
KSM					IAmb	IAmb	11 53 55.0	
	comp=Z,32nm,0.8s							
KSM	**Kuching**	**42.48**	**278**	P		**P**	**11 53 54.0**	**+0.5**
JNU	**Nakatsue**	**42.96**	**333**	P		**P**	**11 53 58.2**	**+1.1**
	comp=Z,12nm,0.8s,baz=212,slow=6.3,SNR=7.0							
JNU	**Nakatsue**	**42.96**	**333**	P		**P**	**11 53 59.3**	**+2.2**
JNU						**pP**	**11 54 12.3**	**+0.7**
JNU					IAmb	IAmb	11 54 30.3	
	comp=Z,34nm,1.0s							
MUN	**Mundaring**	**43.23**	**227**	P		**P**	**11 53 58.8**	**-0.6**
	baz=43,SNR=4.4							
MJAR	**Matsushiro Arr**	**43.31**	**343**	LR		LR	12 10 16.4	
	comp=Z,106nm,21.7s,baz=175,slow=34							
CISI	**Cisompet, Garu**	**44.34**	**264**	P		**P**	**11 54 07.2**	**-1.4**
	comp=Z,1μmcomp=Z,117nm,0.6s							
DLV	**T Lat**	**46.72**	**291**	P		**P**	**11 54 28.5**	**+1.0**
DLV					IAmb	IAmb	11 54 45.6	
	comp=Z,43nm,1.0s							
KASI	**Kota Agung**	**47.65**	**267**	P		**P**	**11 54 33.1**	**-1.5**
KSRS	**Korea Array**	**47.90**	**334**	P		**P**	**11 54 36.5**	**+0.4**
	comp=Z,2.9nm,0.8s,baz=154,slow=8.4,SNR=9.2							
KSRS					LR	LR	12 13 12.2	
	comp=Z,50nm,20.0s,baz=172,slow=34							
MDSI	**Maura Dua**	**48.01**	**268**	P		**P**	**11 54 35.5**	**-1.8**
	comp=Z,28nm,1.2s							
NJ2	**Nanjing**	**48.65**	**321**	*e*P		**P**	**11 54 42.5**	**+0.5**
NJ2					pmax	pmax		
	comp=Z,12nm,0.5s							
MYKOM	**Kota Tinggi**	**48.91**	**277**		IAmb	IAmb	11 54 46.1	
	comp=Z,26nm,0.9s							
ASAJ	**Asahikawa**	**49.59**	**351**	P		**P**	**11 54 49.2**	**+0.3**
	comp=Z,9.0nm,0.9s,baz=89,slow=12,SNR=4.9							
WHN	**Wuhan**	**50.63**	**317**	P		P	11 55 11.5	+14
SDSI	**Sungai Dareh**	**51.00**	**273**	P		**P**	**11 54 59.5**	**-0.6**
	comp=Z,3μmcomp=Z,44nm,0.9s							
IPM	**Ipoh**	**52.11**	**280**	P		**P**	**11 55 07.8**	**-0.7**
IPM					IAmb	IAmb	11 55 09.2	
	comp=Z,16nm,0.9s							
IPM	**Ipoh**	**52.11**	**280**	P		**P**	**11 55 08.0**	**-0.5**
USRK	**Ussuriysk Ar.**	**52.21**	**342**	P		**P**	**11 55 08.8**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=180,slow=7.3,SNR=4.6							
KULM	**Kulim**	**52.62**	**280**	P		**P**	**11 55 11.1**	**-1.2**
KULM					IAmb	IAmb	11 55 13.4	
	comp=Z,20nm,1.2s							
KULM	**Kulim**	**52.62**	**280**	P		**P**	**11 55 12.0**	**-0.2**
MNSI	**Mandailing Nat**	**53.02**	**275**	P		**P**	**11 55 14.2**	**-1.0**
	comp=Z,2μmcomp=Z,40nm,0.8s							
MDJ	**Mudanjiang**	**53.37**	**340**	P		**P**	**11 55 21.1**	**+3.9**
MDJ					pmax	pmax		
	comp=Z,11nm,1.4s							
MDJ					pmax	pmax		
	comp=Z,120nm,3.5s							
ENH	**Enshi**	**53.90**	**313**		IAmb	IAmb	11 55 44.1	
	comp=Z,29nm,1.1s							
GYA	**Guiyang**	**54.11**	**308**	⇑*i*P		**P**	**11 55 24.4**	**+1.3**
GYA					pP	sP	11 55 41.8	-2.8
GYA					S	**S**	**12 02 57.2**	**+1.1**
GYA					sS	sS	12 03 20.5	+0.7
GYA					SS	**SKiKP**	**12 06 31.5**	**+0.9**
GYA					pmax	pmax		
	comp=Z,10.0nm,0.6s							
GYA					pmax	pmax		
	comp=Z,100nm,4.0s							
GYA					LR	LR		
	comp=Z,90nm,9.6s							
GYA					LR	LR		
	comp=Z,200nm,17.6s							
CN2	**Changchun**	**54.22**	**336**	*e*P		**P**	**11 55 27.4**	**+4.0**
CN2				*e*S		**S**	**12 02 58.6**	**+1.9**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.9s							
CN2					pmax	pmax		
	comp=Z,100nm,3.0s							
CN2					LR	LR		
	comp=Z,100nm,15.0s							
CN2					LR	LR		
	comp=Z,100nm,15.0s							
KCSI	**Kotacane, Aceh**	**55.17**	**278**	P		**P**	**11 55 28.8**	**-2.1**
	comp=Z,3μmcomp=Z,14nm,0.9s							
XAN	**Xi'an**	**56.39**	**317**	P		**P**	**11 55 39.4**	**+0.1**
XAN					pP	pP	11 55 55.7	+1.3
XAN					sP	sP	11 56 02.7	+2.0
XAN					pmax	pmax		
	comp=Z,12nm,0.6s							
XAN					pmax	pmax		
	comp=Z,82nm,5.3s							
XAN					LR	LR		
	comp=Z,150nm,22.8s							
XAN					LR	LR		
	comp=Z,140nm,21.7s							
KMI	**Kunming**	**56.68**

GTA LR LR
comp=Z,80nm,19.7s
GTA LR LR
comp=Z,330nm,21.6s
GTA LR LR
comp=Z,140nm,18.1s
SHL Shillong 65.98 301 lAmb lAmb 11 56 45.4
comp=Z,27nm,0.9s
SONM Songino Array 66.18 328 LR LR 12 23 48.4
comp=Z,104nm,21.8s,baz=80,slow=34
SEY Seymchan 67.65 0 P **P 11 56 55.1 +0.9**
comp=Z,1.4nm,0.7s,baz=198,slow=13,SNR=5.7
TLY Talaya 69.95 330 LR LR 12 29 39.7
comp=Z,46nm,18.9s,baz=109,slow=37
TAPN Taplejung 70.08 301 *eP* **P 11 57 10.4 -0.1**
comp=Z,26nm,0.7s
ODAN Odare 70.22 301 *eP* **P 11 57 11.4 +0.2**
comp=Z,59nm,0.7s
RAMN Ramite 70.92 301 *eP* **P 11 57 16.1 +0.6**
comp=Z,16nm,0.6s
JIRN Jiri 71.46 301 *eP* **P 11 57 18.8 -0.1**
comp=Z,28nm,0.8s
GUN Gumba 71.80 301 *eP* **P 11 57 20.9 0.0**
comp=Z,41nm,0.7s
PKI Pulchoki 72.11 301 *eP* **P 11 57 22.6 -0.2**
comp=Z,35nm,1.0s
PKIN Phulchoki 72.12 301 *eP* **P 11 57 22.2 -0.6**
comp=Z,37nm,1.1s
RKT Rikitea 72.16 113 *e*LR LR 12 19 28.2
comp=Z,325nm,27.0s
KKN Kakani 72.28 301 *eP* **P 11 57 23.6 0.0**
comp=Z,27nm,0.7s
DMN Daman 72.38 301 *eP* **P 11 57 24.6 +0.3**
comp=Z,76nm,1.0s
VNDA Vanda 72.74 178 P **P 11 57 25.9 +0.7**
comp=Z,9.6nm,0.8s,baz=332,slow=6.9,SNR=49
VNDA LR LR 12 24 58.2
comp=Z,52nm,21.1s,baz=308,slow=32
GKN Gorkha 72.88 301 *eP* **P 11 57 27.1 0.0**
BILL Bilibino 73.44 5 P **P 11 57 29.6 +0.2**
KOLN Koldanda 73.71 301 *eP* **P 11 57 31.8 -0.3**
comp=Z,20nm,0.6s
DANN Dangsing 73.72 301 *eP* **P 11 57 31.7 -0.5**
comp=Z,21nm,0.6s
WMQ Urumqi 75.52 317 *eP* **P 11 57 44.2 +2.1**
WMQ pmax pmax
comp=Z,17nm,1.1s
WMQ pmax pmax
comp=Z,43nm,5.1s
WMQ LR LR
comp=Z,210nm,19.3s
WMQ LR LR
comp=Z,120nm,21.7s
WMQ LR LR
comp=Z,98nm,20.5s
ANM Nome 76.01 17 lAmb lAmb 11 57 47.1
comp=Z,36nm,1.6s
KDAK Kodiak Island 76.47 27 LR LR 12 26 07.1
comp=Z,77nm,21.7s,baz=288,slow=31
TIXI Tiksi 77.95 353 LR LR 12 27 43.7
comp=Z,24nm,21.9s,baz=242,slow=32
SEW Seward 79.08 26 lAmb lAmb 11 58 02.8
comp=Z,38nm,0.9s
RDOG Red Dog Mine 79.21 16 lAmb lAmb 11 58 04.2
comp=Z,30nm,0.8s
RC01 Rabbit Creek A 79.46 25 lAmb lAmb 11 58 04.7
comp=Z,34nm,0.8s
PMR Palmer 79.97 24 lAmb lAmb 11 58 07.2
comp=Z,22nm,0.8s
MKAR Makanchi Array 80.11 319 P **P 11 58 07.7 +0.1**
comp=Z,7.2nm,0.8s,baz=105,slow=5.3,SNR=40
MKAR LR LR 12 32 13.8
comp=Z,94nm,21.8s,baz=84,slow=35
GHO Glory Hole Cre 80.14 24 lAmb lAmb 11 58 08.5
comp=Z,25nm,0.8s
KNK Knik Glacier 80.16 25 lAmb lAmb 11 58 08.8
comp=Z,38nm,1.2s
KTH Kantishna Hill 80.28 22 lAmb lAmb 11 58 08.5
comp=Z,22nm,0.8s
MAKZ Makanchi 80.32 319 P **P 11 58 08.9 +0.3**
TRF Thorofare Moun 80.47 23 lAmb lAmb 11 58 11.4
comp=Z,17nm,0.7s
FID Port Fidalgo 80.68 26 lAmb lAmb 11 58 11.4
comp=Z,35nm,0.9s
SCM Sheep Creek Mo 80.83 25 lAmb lAmb 11 58 13.1
comp=Z,38nm,0.9s
ZALV Zalesovo Beam 81.00 326 P **P 11 58 11.1 -0.9**
comp=Z,12nm,0.7s,baz=117,slow=5.6,SNR=47
ZALV LR LR 12 33 43.6
comp=Z,45nm,21.0s,baz=96,slow=35
MLY Manley 81.14 21 P **P 11 58 12.5 -0.2**
MLY lAmb lAmb 11 58 14.0
comp=Z,33nm,0.8s
DHY Denali Highway 81.42 24 lAmb lAmb 11 58 15.5
comp=Z,24nm,0.9s
NEA Nenana 81.51 22 lAmb lAmb 11 58 15.1
comp=Z,29nm,0.8s
WRH Wood River Hil 81.83 22 lAmb lAmb 11 58 17.2
comp=Z,39nm,1.1s
CCB Clear Creek Bu 82.02 22 lAmb lAmb 11 58 17.4
comp=Z,25nm,0.8s
TCOL CIGO, UAF Yank 82.11 22 P **P 11 58 16.9 -0.8**
baz=240,SNR=20
COLA College 82.12 22 P **P 11 58 16.8 -0.8**
VRDI Verde Repeater 82.22 26 lAmb lAmb 11 58 20.1
comp=Z,31nm,0.9s
HDA Harding Lake 82.23 22 P **P 11 58 17.6 -0.7**
baz=241,SNR=14
TGL Tana Glacier 82.29 27 P **P 11 58 18.7 -0.2**
TGL lAmb lAmb 11 58 20.5
comp=Z,28nm,0.8s
POKR Poker Plat Res 82.39 22 P **P 11 58 18.4 -0.8**
baz=241
ILAR Eielson Array 82.43 22 P **P 11 58 18.4 -1.0**
comp=Z,21nm,0.8s,baz=251,slow=5.4,SNR=194
ILAR LR LR 12 31 56.1
comp=Z,65nm,20.0s,baz=248,slow=33
MCARA McCarthy VSAT 82.47 26 lAmb lAmb 11 58 21.9
comp=Z,31nm,1.0s
KSH Kashi 82.67 311 P **P 11 58 23.7 +2.4**
KSH sP sP 11 58 52.5 +9.0
KSH PP **PP 12 01 33.4 +1.6**
KSH SKS **S 12 08 29.2 -5.8**
KSH S **SKSac 12 08 32.7 -5.7**
KSH pmax pmax
comp=Z,93nm,1.9s
KSH pmax pmax
comp=Z,180nm,5.1s
KSH LR LR
comp=Z,250nm,6.9s
KSH LR LR
comp=Z,220nm,9.1s
KSH LR LR
comp=Z,160nm,9.5s
MENT Mentasta 82.84 24 P **P 11 58 22.1 +0.5**
MENT lAmb lAmb 11 58 23.2
comp=Z,18nm,0.8s
ULHL Ulahol 83.07 313 P **P 11 58 21.6 -1.8**
SNR=6.7
TOLK Toolik Lake Re 83.46 18 P **P 11 58 25.0 +0.3**
baz=238
TOLK Toolik Lake Re 83.46 18 lAmb lAmb 11 58 26.5
comp=Z,17nm,0.8s
KURK Kurchatov 83.58 322 P **P 11 58 24.7 -0.8**
KURBB Kurchatov Arra 83.61 322 P **P 11 58 25.4 -0.4**
comp=Z,6.0nm,0.8s,baz=110,slow=4.2,SNR=34
NIL Nilore 83.67 304 P **P 11 58 26.7 +0.2**
NIL lAmb lAmb 11 58 27.3
comp=Z,22nm,0.9s
TKM2 Tokmak 2 83.69 314 P **P 11 58 29.2 +2.6**
SNR=18
KZA Kyzart 83.75 313 P **P 11 58 28.8 +1.5**
SNR=18
FYU Fort Yukon 83.88 21 lAmb lAmb 11 58 28.5
comp=Z,20nm,0.8s
KBK Karagaybulak 84.09 314 P **P 11 58 31.3 +2.6**
SNR=6.4
CHMS Chumysh 84.31 314 P **P 11 58 30.2 +0.6**
SNR=5.8
UCH Uchtor 84.32 313 P **P 11 58 31.5 +1.3**
SNR=23
AAK Ala-Archa 84.42 314 P **P 11 58 30.6 +0.3**
comp=Z,11nm,1.1s,baz=105,slow=6.0,SNR=12
AAK Ala-Archa 84.42 314 P **P 11 58 31.3 +1.0**
SNR=8.5
AAK Ala-Archa 84.42 314 P **P 11 58 29.9 -0.3**
EGAK Eagle 84.63 23 lAmb lAmb 11 58 32.5
comp=Z,28nm,0.9s

AML Almayashu 84.90 313 P **P 11 58 34.3 +1.3**
SNR=43
EKS2 Erkin-Say 84.94 313 P **P 11 58 34.1 +1.2**
SNR=9.9
QSPA South Pole Qui 85.05 180 P **P 11 58 32.3 -0.7**
QSPA lAmb lAmb 11 58 35.7
comp=Z,18nm,0.9s
DAWY Dawson 85.07 24 lAmb lAmb 11 58 35.8
comp=Z,18nm,1.0s
BESE Bessie Mountai 85.30 30 lAmb lAmb 11 58 36.4
comp=Z,27nm,1.0s
MAW Mawson 85.30 203 P **P 11 58 34.3 +0.3**
baz=85,SNR=23
MAW Mawson 85.30 203 P **P 11 58 34.2 +0.3**
comp=Z,26nm,0.7s,baz=92,slow=5.9,SNR=71
MAW LR LR 12 33 25.2
comp=Z,150nm,20.4s,baz=62,slow=33
SKAG Skagway 85.33 29 lAmb lAmb 11 58 36.5
comp=Z,20nm,1.2s
JIS Juneau Island 85.44 31 lAmb lAmb 11 58 37.0
comp=Z,15nm,0.8s
WHY Whitehorse 85.91 28 lAmb lAmb 11 58 39.4
comp=Z,22nm,1.1s
NRIK Noril'sk 85.92 341 P **P 11 58 37.0 0.0**
comp=Z,3.2nm,0.4s,baz=128,slow=5.0,SNR=7.5
NRIK LR LR 12 34 40.9
comp=Z,62nm,21.6s,baz=105,slow=34
WRAK Wrangell Islan 86.00 33 lAmb lAmb 11 58 39.9
comp=Z,32nm,1.1s
EPYK Eagle Plains 86.94 22 P **P 11 58 42.7 +0.6**
baz=251,SNR=64
INK Inuvik 88.71 21 P **P 11 58 50.0 -0.4**
comp=Z,16nm,1.0s,baz=220,slow=4.0,SNR=39
J01E Myrtle Point 88.75 47 P **P 11 58 52.2 +1.0**
baz=262
K02D Willamette Mer 88.88 47 P **P 11 58 52.4 +0.4**
baz=262
I02D Swisshome 88.94 46 P **P 11 58 53.0 +0.9**
baz=262
BVAR Borovoye Array 89.06 323 P **P 11 58 51.6 -0.8**
comp=Z,4.9nm,0.6s,baz=113,slow=6.9,SNR=26
BRVK Borovoye 89.13 323 P **P 11 58 52.5 -0.3**
O02D Mt. Diablo Mer 89.21 50 P **P 11 58 54.8 +1.2**
baz=263,SNR=7.6
I03D Drain, OR 89.24 46 P **P 11 58 54.3 +0.8**
baz=263
M02C Callahan 89.31 49 P **P 11 58 55.2 +1.2**
baz=263,SNR=9.0
N02D Trinity Center 89.37 49 P **P 11 58 55.4 +1.2**
baz=263,SNR=9.8
HUMO Hull Mountain 89.39 47 lAmb lAmb 11 58 57.0
comp=Z,14nm,0.8s
YBH Yreka Blue Hor 89.46 48 lAmb lAmb 11 58 57.6
comp=Z,12nm,1.1s
H04D Lebanon 89.78 45 P **P 11 58 56.9 +0.9**
baz=263
L04D Klamath Falls 89.82 48 P **P 11 58 57.1 +0.7**
baz=263
D03D Eldon 89.91 42 P **P 11 58 57.1 +0.5**
baz=263
I04A Tendick Farm, 89.92 46 P **P 11 58 57.0 +0.3**
baz=263,SNR=5.3
O03E Paynes Creek 89.97 50 P **P 11 58 57.5 +0.3**
baz=264
J04D Umpqua Nationa 90.08 47 P **P 11 58 58.5 +0.8**
baz=263,SNR=7.8
M04C Macdoel 90.11 48 P **P 11 58 58.4 +0.6**
baz=264,SNR=6.0
E04D Cinebar 90.15 43 P **P 11 58 58.6 +1.0**
baz=263
H04A Detroit Lake 90.19 45 lAmb lAmb 11 58 58.9
comp=Z,11nm,1.0s
A04D Lummi Island 90.31 41 P **P 11 58 59.0 +0.7**
baz=263
B05A Bryant 90.66 42 P **P 11 59 00.4 +0.4**
baz=264
J05D Fort Rock, OR 90.72 47 P **P 11 59 01.4 +0.8**
baz=264,SNR=28
I05D Terrebonne, OR 90.75 46 P **P 11 59 01.2 +0.5**
baz=264,SNR=8.6
F05D White Salmon 90.83 44 P **P 11 59 01.9 +1.0**
baz=264
G05D Wamic, OR 90.86 45 P **P 11 59 02.2 +1.1**
baz=264
K05A Summer Lake 90.91 47 P **P 11 59 02.1 +0.5**
PINE Pine Mountain 90.98 46 P **P 11 59 02.4 +0.5**
BEKR Beckworth 91.03 50 lAmb lAmb 11 59 04.6
comp=Z,26nm,1.7s
LLLB Lillooet 91.07 39 lAmb lAmb 11 59 03.4
comp=Z,9.1nm,1.1s
MOD Modoc Plateau 91.27 48 lAmb lAmb 11 59 05.1
comp=Z,13nm,1.0s
LTY Liberty 91.52 43 lAmb lAmb 11 59 05.2
comp=Z,7.8nm,0.8s
PNTR Pine Nut 91.55 51 P **P 11 59 06.3 +1.6**
PNTR lAmb lAmb 11 59 07.3
comp=Z,11nm,0.8s
WAKR Walker 91.62 52 lAmb lAmb 11 59 07.3
comp=Z,6.0nm,0.7s
VES Vestal, Richgr 91.67 54 P **P 11 59 05.8 +0.8**
baz=265
YERR Yerington 91.81 51 lAmb lAmb 11 59 07.8
comp=Z,6.7nm,0.8s
ARVC Arvin 91.82 55 P **P 11 59 06.3 +0.6**
baz=265
ISA Isabella, Lake 92.16 55 P **P 11 59 08.1 +0.7**
baz=266
HAWA Hanford 92.22 44 lAmb lAmb 11 59 09.1
comp=Z,12nm,1.0s
A36M Sachs Harbour 92.28 18 P **P 11 59 07.3 +0.3**
baz=261
C36M Paulatuk 92.29 21 P **P 11 59 06.9 -0.1**
baz=262
RYN Ryan 92.34 52 lAmb lAmb 11 59 10.3
comp=Z,6.9nm,0.8s
TIN Tinemaha, Big 92.46 53 P **P 11 59 10.1 +1.3**
baz=266
EDW2 Edwards Air Fo 92.49 55 P **P 11 59 10.2 +1.3**
baz=266
NVAR Mina Array Bea 92.50 52 P **P 11 59 10.4 +1.3**
comp=Z,7.5nm,0.7s,baz=253,slow=6.4,SNR=82
NVAR LR LR 12 35 32.1
comp=Z,95nm,19.7s,baz=203,slow=32
B08A Colville Reser 92.51 42 lAmb lAmb 11 59 09.7
comp=Z,5.7nm,0.7s
CWC Cottonwood Cre 92.53 54 P **P 11 59 10.0 +0.8**
baz=266
WVOR Wild Horse Val 92.55 48 lAmb lAmb 11 59 10.9
comp=Z,13nm,0.9s
E08A Dider Farm, El 92.55 44 P **P 11 59 09.9 +1.1**
KVN Kaiserville 92.70 51 P **P 11 59 09.8 -0.2**
KVN lAmb lAmb 11 59 11.8
comp=Z,6.9nm,0.8s
LRMC Laurel Mtn Rad 92.79 55 P **P 11 59 11.4 +1.0**
baz=266
MPMC Manual Prospec 92.98 54 P **P 11 59 12.4 +1.1**
baz=266,SNR=7.1
BBRC Big Bear Solar 93.33 56 P **P 11 59 14.5 +1.5**
baz=266
SYO Syowa Base 93.42 199 *eP* **P 11 59 09.8 -2.5**
SYO Syowa Base 93.42 199 *ep*P pP 11 59 32.0 +4.7
GSC Goldstone, Bar 93.49 55 P **P 11 59 14.7 +1.1**
baz=266
FURC Furnace Creek, 93.51 54 P **P 11 59 14.5 +1.0**
baz=267
MONP2 Monument Peak 93.66 57 P **P 11 59 15.6 +1.1**
baz=267
PFO Pinyon Flats O 93.67 57 P **P 11 59 15.5 +1.0**
baz=267
HEC Hector,Ludlow 93.85 56 P **P 11 59 16.4 +1.2**
baz=267
SHOC Shoshone, Teco 93.96 54 P **P 11 59 16.7 +1.1**
baz=267
NEW Newport 93.98 42 P **P 11 59 15.6 +0.2**
baz=267
NEW Newport 93.98 42 lAmb lAmb 11 59 16.7
comp=Z,11nm,0.9s
TPNV Topopah Spring 94.03 53 P **P 11 59 16.8 +0.7**
baz=267,SNR=14
TPNV Topopah Spring 94.03 53 lAmb lAmb 11 59 18.2
comp=Z,11nm,0.9s
BELC Belle Mtn. Jos 94.08 56 P **P 11 59 17.5 +1.1**
baz=267
SWSC Sam W. Stewart 94.19 57 P **P 11 59 16.8 +0.2**
baz=267
TUQ Turquoise Moun 94.22 55 P **P 11 59 17.6 +0.7**
baz=267,SNR=5.2
GMRC Granite Mounta 94.40 56 P **P 11 59 18.7 +0.9**
baz=267

BC3 Big Chuckawall 94.51 57 P **P 11 59 19.6 +1.2**
baz=267
R11A Troy Canyon, C 94.63 52 P **P 11 59 19.7 +0.9**
baz=268,SNR=9.0
R11A Troy Canyon, C 94.63 52 P **P 11 59 17.5 -1.3**
MFID Camas Ranch 94.66 47 P **P 11 59 19.2 +0.4**
MFID lAmb lAmb 11 59 21.2
comp=Z,13nm,1.4s
IRM Iron Mountain 94.79 56 P **P 11 59 20.6 +1.1**
baz=267
Y12C Blythe 95.29 57 P **P 11 59 23.2 +1.5**
baz=268
PDMCI Parker Dam,Lak 95.63 56 P **P 11 59 25.2 +1.9**
baz=268
YKA Yellowknife Ar 95.73 28 P **P 11 59 23.4 +0.4**
comp=Z,4.5nm,0.7s,baz=268,slow=4.6,SNR=84
YKA PKiKP **PKiKP 12 04 02.8 +0.5**
comp=Z,0.4nm,0.7s,baz=251,slow=1.2,SNR=6.3
YKA PKKP **PKKPbc 12 16 12.1 -3.5**
comp=Z,0.6nm,0.7s,baz=90,slow=3.1,SNR=11
YKA LR LR 12 38 43.0
comp=Z,91nm,20.2s,baz=0.0,slow=33
PSUT Pine Spring 95.99 52 P **P 11 59 25.9 +0.8**
MSO Missoula 96.09 44 P **P 11 59 26.5 +1.3**
baz=269
ARU Arti 96.16 326 P **P 11 59 24.0 -1.1**
comp=Z,1.2nm,0.2s,baz=2.9,slow=4.7,SNR=4.3
ARU LR LR 12 43 31.9
comp=Z,111nm,20.3s,baz=122,slow=36
ARU Arti 96.16 326 lAmb lAmb 12 00 30.2
comp=Z,6.1nm,0.7s
AKTO Aktyubinsk 96.52 320 LR LR 12 42 51.2
comp=Z,40nm,21.4s,baz=114,slow=35
DUG Dugway, Tooele 96.83 50 P **P 11 59 29.6 +0.8**
baz=269
U15A North Rim 97.20 54 P Pdif 11 59 31.9 +1.1
MTPU Mount Pierson 97.30 52 P **P 11 59 31.0 -0.2**
WUAZ Wupatki 97.93 55 P Pdif 11 59 35.0 +1.1
baz=270
AHID Auburn Hatcher 98.11 48 lAmb lAmb 11 59 35.7
comp=Z,4.8nm,0.8s
TPAW Teton Pass 98.21 47 P **P 11 59 35.0 -0.1**
TPAW lAmb lAmb 11 59 37.1
comp=Z,5.6nm,1.0s
SNOW Snow King Moun 98.36 47 lAmb lAmb 11 59 37.2
comp=Z,4.9nm,0.9s
FLWY Flagg Ranch 98.38 46 P **P 11 59 35.8 0.0**
FLWY lAmb lAmb 11 59 37.5
comp=Z,5.2nm,0.8s
TUC Tucson 98.40 58 P Pdif 11 59 37.5 +1.6
baz=270
H17A Grant Village 98.46 46 P Pdif 11 59 36.9 +0.7
baz=272,SNR=8.6
H17A Grant Village 98.46 46 P Pdif 11 59 37.5 +1.3
H17A lAmb lAmb 11 59 39.4
comp=Z,6.3nm,0.9s
YMP Mirror Lake Pl 98.75 46 P Pdif 11 59 39.3 +1.8
YNE Yellowstone No 98.85 45 P **P 11 59 37.0 -0.9**
EGMT Eagleton 98.91 42 P Pdif 11 59 38.1 +0.3
baz=273,SNR=6.1
EGMT Eagleton 98.91 42 P **P 11 59 37.3 -0.6**
EGMT lAmb lAmb 11 59 39.1
comp=Z,5.9nm,0.7s
BW06 Boulder Array 99.25 48 P **Pdif 11 59 39.4 -0.3**
baz=272,SNR=11
BW06 Boulder Array 99.25 48 lAmb lAmb 11 59 40.4
comp=Z,4.9nm,0.8s
PDAR Pinedale Array 99.25 48 P **Pdif 11 59 39.8 0.0**
comp=Z,4.3nm,0.7s,baz=252,slow=2.4,SNR=41
W18A Petrified Fore 99.27 55 P **Pdif 11 59 41.4 +1.5**
baz=271
RLMT Red Lodge 99.37 45 P **Pdif 11 59 41.1 +1.0**
baz=272
RLMT Red Lodge 99.37 45 lAmb lAmb 11 59 42.5
comp=Z,13nm,1.7s
MVCO Mesa Verde 100.23 53 P **Pdif 11 59 45.1 +0.9**
baz=272
O20A White River Ci 100.33 50 P **Pdif 11 59 45.5 +1.0**
baz=272
LAO Lasa Array 101.39 43 P **Pdif 11 59 50.0 +1.0**
baz=275
S22A 4UR Ranch, Cre 101.54 53 P **Pdif 11 59 50.6 +0.5**
baz=273
SNAA Sanae 101.86 188 Pdiff **Pdif 11 59 49.9 -0.6**
ANMO Albuquerque 101.97 55 P **Pdif 11 59 53.7 +1.8**
baz=272
N23A Red Feather La 102.04 49 P **Pdif 11 59 52.6 +0.4**
baz=274
ISCO Idaho Springs 102.37 50 P **Pdif 11 59 54.2 +0.5**
baz=274
DGMT Dagmar 102.57 42 P **Pdif 11 59 54.9 +0.8**
baz=277
SDCO Great Sand Dun 102.59 53 P **Pdif 11 59 55.2 +0.4**
baz=274
VNA3 Neumayer Olymp 103.07 186 Pdiff **Pdif 11 59 55.3 -0.5**
RSSD Black Hills 103.17 46 P **Pdif 11 59 57.2 +0.1**
baz=276
TXAR Lajitas Array 104.57 61 PP **PKiKP 12 04 19.6 +0.3**
comp=Z,0.2nm,0.7s,baz=267,slow=2.5,SNR=3.5
ARCES ARCESS Array B 106.84 343 PKiKP **PKiKP 12 04 21.8 -0.4**
comp=Z,1.9nm,0.6s,baz=48,slow=1.3,SNR=10
ECSD EROS Data Cent 108.53 46 P **PKiKP 12 04 26.0 -0.2**
baz=281
FINES FINESS Array B 110.97 335 PKiKP **PKiKP 12 04 30.3 +0.1**
comp=Z,3.2nm,0.8s,baz=134,slow=8.2,SNR=5.1
W39A Magazine 112.27 54 P **PKiKP 12 04 33.3 -0.2**
baz=280
U40A Yellville 112.80 53 P **PKiKP 12 04 34.1 -0.3**
baz=281
W41B Gary Mavity, V 113.51 54 P **PKiKP 12 04 35.3 -0.5**
baz=281
CCM Cathedral Cave 113.70 51 P **PKiKP 12 04 35.4 -0.7**
baz=283
AKASG Malin Array Be 114.32 324 PKP PKPdf 12 04 36.3 -0.6
comp=Z,1.0nm,0.4s,baz=55,slow=2.7,SNR=4.9
BRTR Keskin Array B 115.04 312 PKP **PKiKP 12 04 37.4 -1.4**
comp=Z,0.7nm,0.5s,baz=132,slow=1.8,SNR=3.6
OXF Oxford 115.93 54 P **PKPdf 12 04 40.0 -0.4**
baz=283
D46A Sault St. Mari 116.11 40 P **PKPdf 12 04 40.0 -0.5**
baz=293
SFIN Lafayette 116.22 47 P **PKPdf 12 04 40.3 -0.5**
baz=287
D47A Chapleau 116.64 39 P **PKiKP 12 04 41.6 +0.1**
baz=294
E47A Iron Bridge 116.76 40 P **PKPdf 12 04 41.5 -0.2**
baz=293
WVT Waverly 116.81 52 P **PKPdf 12 04 41.9 -0.2**
baz=284
NB2 NORSAR Subarra 116.86 340 PKPdf **PKPdf 12 04 40.6 -0.9**
comp=Z,2.8nm,0.8s,baz=44,slow=1.9
NOA NORSAR Array B 116.86 340 PKP **PKPdf 12 04 41.3 -0.2**
comp=Z,2.0nm,0.7s,baz=47,slow=1.9,SNR=15
G47A Hillman 116.88 41 P **PKiKP 12 04 42.2 +0.2**
baz=292
K47A Vermontville 116.99 44 P **PKPdf 12 04 42.2 0.0**
baz=290
N47A Urbana 117.08 46 P **PKPdf 12 04 42.4 -0.1**
baz=288
I48A Sherman Twp 117.34 42 P **PKPdf 12 04 42.2 -0.7**
baz=292
D48A Paudash Townsh 117.40 39 P **PKPdf 12 04 42.6 -0.3**
baz=295
F48A Evansville 117.43 40 P **PKiKP 12 04 43.1 +0.1**
baz=293
WCI Wyandotte Cave 117.43 49 P **PKiKP 12 04 43.4 +0.2**
baz=287
E48A Lockeyer 117.46 39 P **PKiKP 12 04 43.3 +0.2**
baz=294
K48A Perry 117.55 44 P **PKPdf 12 04 43.3 -0.1**
baz=291
N48A Decatur 117.57 46 P **PKPdf 12 04 43.3 -0.1**
baz=289
L48A N Adams 117.63 45 P **PKPdf 12 04 43.5 -0.1**
baz=290
D49A Beulah Townshi 117.64 38 P **PKiKP 12 04 43.5 +0.1**
baz=295
O48A Farmland 117.67 47 P **PKPdf 12 04 43.5 -0.2**
baz=288
F49A Sandfield 117.83 40 P **PKPdf 12 04 43.7 -0.1**
baz=294
I49A Point Hope 118.02 42 P **PKPdf 12 04 44.1 -0.1**
baz=292
AAM Ann Arbor 118.05 44 P **PKPdf 12 04 44.0 -0.3**
baz=291
M49A Liberty Center 118.11 45 P **PKiKP 12 04 44.7 +0.2**
baz=290

N49A	Columbus Grove	118.15	46	P		PKiKP	12 04 44.7	+0.1	
	baz=290								
P49A	Miami Univ. Ec	118.21	47	P		PKPdf	12 04 44.7	-0.1	
	baz=288								
LRAL	Lakeview Retre	118.22	55	P		PKPdf	12 04 44.4	-0.5	
	baz=284								
O49A	Covington	118.28	47	P		PKPdf	12 04 44.5	-0.4	
	baz=289								
E50A	Wahnapitae	118.38	39	P		PKPdf	12 04 44.7	-0.1	
	baz=295								
D50A	G1974 Best Tow	118.61	38	P		PKPdf	12 04 45.1	-0.1	
	baz=296								
MATQ	Matagami	118.69	34	P		PKPdf	12 04 45.3	0.0	
	baz=300								
L50A	Kingsville	118.73	44	P		PKPdf	12 04 45.4	-0.2	
	baz=291								
M50A	Fremont	118.80	45	P		PKPdf	12 04 45.4	-0.4	
	baz=291								
O50A	Cable	118.81	46	P		PKPdf	12 04 45.8	-0.1	
	baz=290								
N50A	Nevada	118.94	46	P		PKPdf	12 04 46.1	0.0	
	baz=290								
Z50A	Ashland	119.04	55	P		PKPdf	12 04 46.4	-0.1	
	baz=284								
E51A	G1948 Merrick	119.11	38	P		PKPdf	12 04 46.2	0.0	
	baz=296								
F51A	Arnstein	119.11	39	P		PKPdf	12 04 46.0	-0.2	
	baz=296								
KOLS	Kolonicke sedl	119.14	325	*e*PKP		PKiKP	12 04 47.0	+0.7	
BOSA	Boshof	119.20	233	PKP		PKPdf	12 04 46.6	-0.5	
	comp=Z,2.5nm,0.7s,baz=63,slow=2.6,SNR=5.9								
ACSO	Alum Creek Sta	119.25	46	P		PKPdf	12 04 46.7	0.0	
	baz=290								
I51A	Listowel	119.28	42	P		PKPdf	12 04 46.4	-0.2	
	baz=294								
Q51A	Peebles	119.39	48	P		PKPdf	12 04 46.7	-0.4	
	baz=289								
LSQQ	Lebel-sur-Quev	119.42	35	P		PKPdf	12 04 46.5	-0.3	
	baz=300								
N51A	Ashland	119.44	45	P		PKPdf	12 04 46.8	-0.3	
	baz=291								
P51A	Williamsport	119.44	47	P		PKPdf	12 04 46.7	-0.4	
	baz=290								
F52A	Sundridge	119.54	39	P		PKPdf	12 04 46.6	-0.5	
	baz=296								
O51A	Pataskala	119.55	46	P		PKiKP	12 04 47.3	0.0	
	baz=290								
D53A	Lac Vacive, Po	119.95	37	P		PKPdf	12 04 47.7	-0.2	
	baz=298								
D53A	Lac Vacive, Po	119.95	37			PKPdf	12 04 47.0	-0.8	
PLCA	Paso Flores	119.96	143	PKP		PKPdf	12 04 48.2	0.0	
	comp=Z,2.5nm,0.6s,baz=254,slow=1.7,SNR=14								
PLCA	Paso Flores	119.96	143			PKPdf	12 04 47.3	-0.9	
N52A	McGinn's Farm,	119.96	45	P		PKPdf	12 04 48.0	-0.1	
	baz=292								
P52A	Corning	120.06	47	P		PKPdf	12 04 48.0	-0.3	
	baz=291								
O52A	Adamsville	120.11	46	P		PKPdf	12 04 48.1	-0.3	
	baz=291								
Q52A	Bidwell	120.20	47	P		PKPdf	12 04 48.0	-0.6	
	baz=290								
ALGO	Algonquin Park	120.26	38	P		PKPdf	12 04 48.2	-0.2	
	baz=297								
G53A	Haliburton	120.28	40	P		PKiKP	12 04 48.7	+0.1	
	baz=296								
E53A	Dumoine, Ponti	120.30	38	P		PKPdf	12 04 48.4	-0.2	
	baz=298								
Y52A	Lilburn	120.38	53	P		PKPdf	12 04 48.8	-0.3	
	baz=286								
CHGQ	Chibougamau	120.42	33	P		PKPdf	12 04 48.4	-0.3	
	baz=303								
M53A	WI Miller and	120.44	44	P		PKPdf	12 04 48.6	-0.4	
	baz=293								
G54A	Lake Saint Pet	120.49	39	P		PKPdf	12 04 48.9	-0.1	
	baz=297								
O53A	New Philadelph	120.50	46	P		PKPdf	12 04 49.1	0.0	
	baz=292								
D54A	Lac Fusel, La	120.54	37	P		PKPdf	12 04 48.5	-0.5	
	baz=299								
H53A	Bobcaygeon	120.55	40	P		PKPdf	12 04 49.0	-0.1	
	baz=296								
N53A	Lisbon	120.56	45	P		PKiKP	12 04 49.5	+0.1	
	baz=292								
N53A	Lisbon	120.56	45			PKiKP	12 04 49.4	+0.1	
E54A	Lac Daplat, Po	120.57	38	P		PKPdf	12 04 48.5	-0.6	
	baz=298								
R53A	Hurricane	120.64	48	P		PKPdf	12 04 49.5	0.0	
	baz=290								
T53A	Wise	120.65	50	P		PKPdf	12 04 49.3	-0.3	
	baz=289								
P53A	Whipple	120.65	47	P		PKPdf	12 04 49.4	-0.1	
	baz=291								
Q53A	Leroy	120.78	47	P		PKPdf	12 04 49.6	-0.1	
	baz=291								
GOGA	Godfrey	120.98	54	P		PKPdf	12 04 50.0	-0.3	
	baz=286								
L54A	Sinclairville	121.05	43	P		PKPdf	12 04 50.1	0.0	
	baz=294								
J54A	Appleton	121.07	42	P		PKiKP	12 04 50.2	0.0	
	baz=296								
SCHQ	Schefferville	121.07	25	PKP		PKiKP	12 04 49.9	0.0	
	comp=Z,1.3nm,0.5s,baz=287,slow=1.0,SNR=4.2								
N54A	Moraine State	121.10	44	P		PKPdf	12 04 50.3	0.0	
	baz=293								
M54A	Oil Creek Stat	121.11	44	P		PKPdf	12 04 50.2	-0.1	
	baz=294								
O54A	Avella	121.12	45	P		PKiKP	12 04 50.8	+0.3	
	baz=292								
Q54A	Coxs Mills	121.24	47	P		PKPdf	12 04 50.6	0.0	
	baz=291,SNR=11								
P54A	Burton	121.27	46	P		PKiKP	12 04 50.8	0.0	
	baz=292								
I55A	Frankford	121.28	40	P		PKPdf	12 04 50.2	-0.3	
	baz=297								
PLVO	Plevna	121.29	39			PKPdf	12 04 50.2	-0.3	
S54A	Dingess, Beckl	121.30	48	P		PKPdf	12 04 50.5	-0.3	
	baz=290								
D55A	Sainte-Anne-du	121.31	36	P		PKPdf	12 04 50.0	-0.5	
	baz=300								
K54A	Basiliko Farm,	121.32	42	P		PKPdf	12 04 50.0	-0.6	
	baz=295								
VYHS	Vyhne	121.32	326	*e*PKP		PKPdf	12 04 50.5	0.0	
MORC	Moravsky Berou	121.33	327	*e*PKP		PKiKP	12 04 51.1	+0.5	
T54A	Tazewell	121.35	49	P		PKPdf	12 04 50.4	-0.5	
	baz=290								
R54A	Victor	121.41	48	P		PKPdf	12 04 50.6	-0.4	
	baz=291								
G55A	Calabogie	121.42	39	P		PKPdf	12 04 50.3	-0.4	
	baz=298,SNR=6.6								
VTS	Vitosha	121.42	318			PKPdf	12 04 49.9	-1.1	
H55A	Tweed	121.45	40	P		PKPdf	12 04 50.8	0.0	
	baz=297								
V54A	Nebo	121.48	51	P		PKiKP	12 04 51.5	+0.2	
	baz=288								
W54A	Cherokee Point	121.51	52	P		PKiKP	12 04 51.4	+0.1	
	baz=288								
X54A	Belton	121.53	52	P		PKPdf	12 04 51.2	0.0	
	baz=288								
J55A	Hilton	121.62	41	P		PKiKP	12 04 51.3	0.0	
	baz=296								
DPC	Dobruska-Polom	121.65	329	*e*PKPDF		PKiKP	12 04 51.6	+0.4	
L55A	Hinsdale	121.67	43	P		PKPdf	12 04 51.4	0.0	
	baz=295								
K55A	Perry	121.68	42	P		PKPdf	12 04 50.9	-0.4	
	baz=296								
D56A	ZEC Mazanza, M	121.72	36	P		PKPdf	12 04 51.0	-0.2	
	baz=301,SNR=6.4								
M55A	Ridgway	121.74	43	P		PKPdf	12 04 51.4	-0.1	
	baz=294								
P55A	Reedsville	121.77	46	P		PKPdf	12 04 51.5	-0.2	
	baz=292								
JAVC	Velka Javorina	121.77	326	*e*PKP		PKiKP	12 04 52.5	+1.0	
Q55A	Buckhannon	121.78	47	P		PKiKP	12 04 51.8	0.0	
	baz=292,SNR=5.2								
E56A	St. Veronique	121.81	37	P		PKPdf	12 04 51.2	-0.3	
	baz=300								
N55A	Marion Center	121.87	44	P		PKPdf	12 04 51.7	-0.1	
	baz=294								
O55A	Ligonier	121.87	45	P		PKiKP	12 04 52.0	+0.1	
	baz=293								
S55A	Lewisburg	121.91	48	P		PKPdf	12 04 51.5	-0.5	
	baz=291								
T55A	Pulaski	121.93	49	P		PKPdf	12 04 51.8	-0.2	
	baz=290								
U55A	TA2, Sparta	121.94	50	P		PKiKP	12 04 52.2	0.0	
	baz=290								
R55A	Marlinton	122.01	47	P		PKPdf	12 04 52.0	-0.2	
	baz=291,SNR=10								
H56A	Elgin	122.01	39	P		PKiKP	12 04 52.0	0.0	
	baz=298								
V55A	Taylorsville	122.02	50	P		PKiKP	12 04 52.3	0.0	
	baz=289								
V55A	Taylorsville	122.02	50			PKPdf	12 04 51.6	-0.6	
VRAC	Vranov	122.11	327	*e*PKP		PKiKP	12 04 52.8	+0.7	
Y55A	Saluda	122.12	53	P		PKiKP	12 04 52.7	+0.2	
	baz=288								
X55A	Gracelyn & Ava	122.13	52	P		PKiKP	12 04 53.0	+0.4	
	baz=288								
M56A	Emporium	122.14	43	P		PKPdf	12 04 52.0	-0.2	
	baz=295,SNR=6.2								
M56A	Emporium	122.14	43			PKPdf	12 04 51.5	-0.8	
KMSC	Kings Mountain	122.16	51	P		PKPdf	12 04 52.5	0.0	
	baz=289								
BLA	Blacksburg	122.17	49	P		PKPdf	12 04 52.5	0.0	
	baz=290								
K56A	Middlesex	122.19	42	P		PKiKP	12 04 52.5	0.0	
	baz=296								
J56A	Wolcott	122.24	41	P		PKPdf	12 04 52.3	0.0	
	baz=297								
D57A	Chemin Vers le	122.24	36	P		PKPdf	12 04 52.3	0.0	
	baz=302								
L56A	Greenwood	122.28	42	P		PKPdf	12 04 52.3	-0.2	
	baz=296,SNR=7.3								
L56A	Greenwood	122.28	42			PKPdf	12 04 51.7	-0.9	
N56A	West Decatur	122.29	44	P		PKiKP	12 04 52.8	0.0	
	baz=294								
KRUC	Mcravsky	122.35	327	*e*PKP		PKiKP	12 04 52.5	-0.1	
O56A	Blue Knob Stat	122.37	45	P		PKPdf	12 04 52.6	-0.2	
	baz=294,SNR=7.6								
O56A	Blue Knob Stat	122.37	45			PKPdf	12 04 52.5	-0.2	
E57A	Chemin Saint G	122.41	36	P		PKPdf	12 04 52.3	-0.3	
	baz=301,SNR=5.5								
P56A	Dayton Farm, R	122.48	46	P		PKPdf	12 04 52.7	-0.2	
	baz=293								
U56A	King	122.50	50	P		PKiKP	12 04 53.3	0.0	
	baz=290								
T56A	Rocky Mt	122.52	49	P		PKPdf	12 04 53.0	-0.2	
	baz=291								
BRG	Berggiesshubel	122.54	330	*i* PKP		PKiKP	12 04 52.9	0.0	
	comp=Z,6.7nm,0.8s								
G57A	Newington	122.56	38	P		PKPdf	12 04 52.7	-0.2	
	baz=300								
V56A	Mocksville	122.59	50	P		PKPdf	12 04 53.2	-0.1	
	baz=290								
X56A	White Oak	122.60	52	P		PKPdf	12 04 53.3	0.0	
	baz=288								
SSPA	Standing Stone	122.69	44			PKiKP	12 04 53.6	+0.1	
GOPC	GO Pecny, Ondr	122.70	329	*e*PKPDF		PKiKP	12 04 53.4	+0.1	
I57A	Carthage	122.70	40	P		PKPdf	12 04 53.1	-0.1	
	baz=298								
K57A	Scipio Center	122.71	41	P		PKPdf	12 04 53.2	-0.1	
	baz=297								
CLL	Collm	122.73	331	*i* PKPdf		PKiKP	12 04 54.3	+1.1	
	comp=Z,9.0nm,0.8s								
CLL				*i* (pPKPdf)		pPKPdf	12 05 14.6	+5.1	
	comp=Z,7.0nm,0.7s								
CLL				L		L	12 59 00.0		
	comp=Z,100nm,19.8s								
J57A	Williamstown	122.74	40	P		PKPdf	12 04 53.1	-0.2	
	baz=298								
W56A	Indian Trail	122.75	51	P		PKiKP	12 04 53.7	-0.1	
	baz=289								
PRU	Pruhonice	122.78	329	*e*PKPDF		PKiKP	12 04 53.3	-0.1	
D58A	Chemin du LacG	122.78	35	P		PKPdf	12 04 52.9	-0.4	
	baz=303								
L57A	Andrews Acres	122.81	42	P		PKPdf	12 04 53.2	-0.3	
	baz=296,SNR=6.4								
N57A	Milroy	122.87	44	P		PKPdf	12 04 53.7	0.0	
	baz=295,SNR=5.6								
M57A	Sunshine Farm,	122.92	43	P		PKPdf	12 04 53.7	0.0	
	baz=296,SNR=6.2								
E58A	La Victoria	122.94	36	P		PKiKP	12 04 54.0	+0.2	
	baz=302								
Q57A	Strasburg	122.97	46	P		PKPdf	12 04 53.8	-0.1	
	baz=293								
O57A	Amberson	123.04	44	P		PKPdf	12 04 53.9	-0.1	
	baz=295,SNR=5.2								
LONY	Lake Ozonia	123.05	38	P		PKiKP	12 04 54.1	0.0	
	baz=300								
S57A	Dark Hollow, R	123.06	48	P		PKPdf	12 04 54.2	+0.1	
	baz=292								
P57A	Homestead Farm	123.07	45	P		PKPdf	12 04 54.1	0.0	
	baz=294								
P57A	Homestead Farm	123.07	45			PKPdf	12 04 53.1	-1.0	
V57A	Coltrane Farms	123.11	50	P		PKiKP	12 04 54.4	-0.1	
	baz=290								
T57A	Hurt	123.12	49	P		PKPdf	12 04 54.1	-0.2	
	baz=291								
T57A	Hurt	123.12	49			PKPdf	12 04 53.7	-0.6	
R57A	Stanardsville	123.17	47	P		PKPdf	12 04 54.3	0.0	
	baz=293								
157A	Early Branch	123.18	54	P		PKPdf	12 04 53.3	-1.1	
	baz=287								
W57A	Gilead	123.19	51	P		PKPdf	12 04 54.3	-0.1	
	baz=290								
J58A	Remsen	123.22	40	P		PKPdf	12 04 54.3	0.0	
	baz=298,SNR=9.0								
Z57A	Bowman	123.23	53	P		PKiKP	12 04 54.8	0.0	
	baz=288								
U57A	Blanch	123.26	49	P		PKiKP	12 04 54.8	0.0	
	baz=291								
I58A	Old Forge	123.26	40	P		PKPdf	12 04 54.4	0.0	
	baz=299								
K58A	Earlville	123.26	41	P		PKPdf	12 04 54.5	+0.1	
	baz=298								
BINY	Binghamton	123.30	42	P		PKPdf	12 04 54.5	+0.1	
	baz=297								
M58A	Price's Panora	123.35	43	P		PKPdf	12 04 54.7	+0.1	
	baz=296,SNR=5.5								
H58A	Gabriels	123.40	39	P		PKPdf	12 04 54.5	-0.1	
	baz=300,SNR=5.5								
N58A	Sunbury	123.41	43	P		PKiKP	12 04 54.8	-0.1	
	baz=296,SNR=7.2								
N58A	Sunbury	123.41	43			PKPdf	12 04 52.0	-2.6	
L58A	Harry Jones Me	123.46	42	P		PKPdf	12 04 54.8	0.0	
	baz=297								
FNA	Florina	123.47	317			PKPdf	12 04 53.4	-1.4	
Q58A	Fox Den Farm,	123.53	46	P		PKPdf	12 04 54.8	-0.1	
	baz=294,SNR=5.6								
R58A	Rapidan	123.55	47	P		PKPdf	12 04 55.0	0.0	
	baz=293								
O58A	Lewisberry	123.57	44	P		PKPdf	12 04 54.9	-0.1	
	baz=295								
P58A	Pank, Wackersv	123.57	45	P		PKiKP	12 04 55.2	0.0	
	baz=294								
H59A	Cadyville	123.59	38	P		PKiKP	12 04 55.1	-0.1	
	baz=301								
NCB	Newcomb	123.59	39			PKPdf	12 04 53.7	-1.3	
V58A	Windy Hill, Pi	123.65	50	P		PKPdf	12 04 55.1	-0.2	
	baz=291								
J59A	Piesco	123.67	40	P		PKPdf	12 04 55.2	0.0	
	baz=299,SNR=7.7								
J59A	Piesco	123.67	40			PKPdf	12 04 53.6	-1.5	
T58A	Grand View Acr	123.67	48	P		PKiKP	12 04 55.4	-0.1	
	baz=292								
NKC	Novy Kostel	123.69	330	*e*PKPDF		PKiKP	12 04 55.6	+0.4	
R58B	Mineral	123.77	47	P		PKPdf	12 04 55.4	0.0	
	baz=293								
R58B	Mineral	123.77	47			PKPdf	12 04 54.8	-0.7	
K59A	Cooperstown	123.77	41	P		PKPdf	12 04 55.3	-0.1	
	baz=299								
S58A	Poland Farm, P	123.78	47	P		PKPdf	12 04 55.3	-0.2	
	baz=293								
KHC	Kasperske Hory	123.80	329	*e*PKPDF		PKiKP	12 04 55.4	-0.1	
KHC	Kasperske Hory	123.80	329			PKPdf	12 04 54.5	-0.7	
W58A	Raeford	123.83	51	P		PKPdf	12 04 55.7	+0.1	
	baz=290								
U58A	Oxford	123.86	49	P		PKPdf	12 04 55.8	+0.1	
	baz=292								
I59A	Olmsteadville	123.90	39	P		PKiKP	12 04 55.7	-0.1	
	baz=300,SNR=5.2								
GERES	GERESS Array B	123.91	328	PKP		PKPdf	12 04 55.6	0.0	
	comp=Z,4.6nm,0.6s,baz=72,slow=1.7,SNR=18								
L59A	Walton	123.93	41	P		PKPdf	12 04 55.8	+0.1	
	baz=298								
F60A	Warwick	123.93	36	P		PKPdf	12 04 55.5	0.0	
	baz=303								
M59A	Waymart	123.97	42	P		PKiKP	12 04 56.0	-0.1	
	baz=297,SNR=7.1								
E60A	Ste Agathe de	124.01	35	P		PKPdf	12 04 55.8	+0.1	
	baz=304								
N59A	State Game Lan	124.02	43	P		PKiKP	12 04 56.2	0.0	
	baz=297								
MVL	Millersville	124.02	44			PKPdf	12 04 55.2	-0.6	
P59A	Jarrettsville	124.13	45	P		PKPdf	12 04 56.0	-0.1	
	baz=295								
G60A	Masonville	124.18	37	P		PKPdf	12 04 56.0	0.0	
	baz=302								
H60A	Morristown	124.24	38	P		PKiKP	12 04 56.3	-0.1	
	baz=302								
I60A	Shoreham	124.24	39	P		PKiKP	12 04 56.6	+0.1	
	baz=301,SNR=9.1								
D61A	St Aubert, Com	124.25	34	P		PKPdf	12 04 56.1	0.0	
	baz=306								
T59A	Double "B" Far	124.39	48	P		PKiKP	12 04 57.0	+0.1	
	baz=293								
T59A	Double "B" Far	124.39	48			PKPdf	12 04 56.4	-0.3	
J60A	Lant Hill Farm	124.46	39	P		PKPdf	12 04 56.8	+0.2	
	baz=300								
SOKA	Soboth	124.47	326	*i* PKiKP		PKPdf	12 04 56.5	-0.2	
	comp=Z,3.0nm,0.7s								
N60A	Cedar Hill Far	124.50	43	P		PKPdf	12 04 56.8	0.0	
	baz=297,SNR=5.6								
E61A	Lac Etchemin	124.52	35	P		PKPdf	12 04 56.8	+0.1	
	baz=305,SNR=9.3								
O60A	Telford	124.54	43	P		PKiKP	12 04 57.1	-0.1	
	baz=297,SNR=5.3								
G61A	St-Isidore-de-	124.56	36	P		PKiKP	12 04 56.9	-0.1	
	baz=303								
L60A	Shokan	124.56	41	P		PKiKP	12 04 57.1	-0.1	
	baz=299								
P60A	Greenville	124.60	44	P		PKPdf	12 04 57.0	0.0	
	baz=296								
M60A	Port Jervis	124.61	42	P		PKPdf	12 04 56.9	-0.1	
	baz=298								
PSUB	Penn St. - Bra	124.68	44			PKPdf	12 04 56.8	-0.3	
H61A	Lyndonville	124.72	37	P		PKiKP	12 04 57.6	+0.2	
	baz=302								
S60A	Water View	124.76	47	P		PKiKP	12 04 57.8	+0.1	
	baz=294								
K61A	Williamstown	124.85	40	P		PKiKP	12 04 57.9	+0.1	
	baz=300,SNR=7.6								
I61A	Oroboro, Fairl	124.87	38	P		PKiKP	12 04 58.2	+0.5	
	baz=302								
LBNH	Lisbon	124.88	38	P		PKiKP	12 04 57.9	+0.1	
	baz=302								
T60A	Surry	124.93	47	P		PKPdf	12 04 57.7	+0.1	
	baz=293								
D62A	Allapoint, All	124.95	33	P		PKPdf	12 04 57.2	-0.2	
	baz=307								
D62A	Allapoint, All	124.95	33			PKPdf	12 04 56.3	-1.1	
J61A	Chester	124.96	39	P		PKiKP	12 04 58.1	+0.2	
	baz=301,SNR=5.2								
N61A	South Mountain	125.09	42	P		PKiKP	12 04 58.1	-0.1	
	baz=298								
H62A	Milan	125.16	37	P		PKiKP	12 04 58.4	+0.1	
	baz=303								
H62A	Milan	125.16	37			PKPdf	12 04 57.6	-0.4	
G62A	West of Eustis	125.18	36	P		PKPdf	12 04 58.0	0.0	
	baz=304								
M61A	Granite Spring	125.18	42	P		PKiKP	12 04 58.3	-0.1	
	baz=299,SNR=6.3								
PAL	Palisades	125.23	42	P		PKPdf	12 04 58.3	+0.1	
	baz=298								
MYKA	Terra Mystica	125.28	326	*i* PKiKP		PKPdf	12 04 57.5	-0.7	
	comp=Z,3.0nm,0.6s								
L61B	Northampton	125.33	40	P		PKiKP	12 04 58.7	0.0	
	baz=300								
I62A	Tamworth	125.43	38	P		PKiKP	12 04 58.9	+0.1	
	baz=302								
J62A	Henniker	125.48	39	P		PKiKP	12 04 59.2	+0.2	
	baz=302								
D63A	Stockholm	125.49	33	P		PKPdf	12 04 58.3	-0.1	
	baz=308								
K62A	Royalston	125.51	39	P		PKiKP	12 04 59.2	+0.2	
	baz=301								
E63A	Oxbow	125.69	34	P		PKPdf	12 04 59.0	+0.1	
	baz=307								
F63A	Nahmakanta, Br	125.73	35	P		PKiKP	12 04 59.3	-0.1	
	baz=306								
PQI	Presque Isle	125.76	33			PKPdf	12 04 57.8	-1.1	
G63A	Kingsbury	125.77	36	P		PKiKP	12 04 59.4	-0.1	
	baz=305								
I63A	Otisfield	125.80	37	P		PKiKP	12 04 59.6	+0.1	
	baz=303								
ABTA	Abfaltersbach	125.83	327	*e*PKiKP		PKPdf	12 04 58.8	-0.5	
	comp=Z,3.6nm,0.7s								
PKME	Peaks-Kenny Pk	125.88	35	P		PKiKP	12 04 59.8	+0.1	
	baz=305								
J63A	Strafford	125.91	38	P		PKiKP	12 04 59.9	+0.1	
	baz=302								
K63A	Dunstable	125.94	39	P		PKiKP	12 04 59.8	-0.1	
	baz=302								
WATA	Walderalm	125.97	328	*i* PKiKP		PKPdf	12 04 59.4	-0.2	
	comp=Z,4.6nm,0.5s								
WTTA	Wattenberg	125.98	328	*i* PKiKP		PKPdf	12 04 59.7	0.0	
	comp=Z,10.0nm,0.8s								
E64A	Bridgwater	126.02	33	P		PKiKP	12 04 59.9	0.0	
	baz=308								
HRV	Adam Dziewonsk	126.02	39	P		PKiKP	12 05 00.2	+0.1	
	baz=302								
F64A	Sherman	126.06	34	P		PKPdf	12 04 59.7	+0.1	
	baz=307								
G64A	Maxfield	126.19	35	P		PKiKP	12 05 00.3	0.0	
	baz=306								
MOTA	Moosalm	126.21	328	*i* PKiKP		PKPdf	12 05 00.0	-0.1	
	comp=Z,3.3nm,0.7s								
SQTA	Sankt Quirin	126.23	328	*i* PKiKP		PKiKP	12 05 00.3	-0.2	
	comp=Z,6.6nm,0.8s								
M63A	Gales Ferry	126.27	41	P		PKPdf	12 05 00.1	0.0	
	baz=300								
H64A	Troy	126.27	36	P		PKPdf	12 05 00.1	0.0	
	baz=305								
RETA	Reutte	126.30	328	*i* PKiKP		PKiKP	12 05 00.4	-0.2	
	comp=Z,1.9nm,0.5s								
L63A	North Scituate	126.31	40	P		PKPdf	12 05 00.4	+0.2	
	baz=301								
BATG	Bathurst New B	126.43	32			PKPdf	12 04

TOSP	**Speyside**	**146.85**	**77**			**PKPdf**	**12 05 39.5**	**+0.9**
TORD	**Torodi Ar. Bea**	**149.92**	**288**	PKPbc		**PKPbc**	**12 05 47.8**	**-0.7**
	comp=Z,47nm,0.7s,baz=17,slow=2.0,SNR=100							
BDFB	**Brasilia**	**151.30**	**136**	PKP		**PKPdf**	**12 05 45.2**	**-0.7**
	comp=Z,5.5nm,0.8s,baz=229,slow=2.6,SNR=6.4							
BDFB				PKPbc		**PKiKP**	**12 05 52.3**	**-0.2**
	comp=Z,35nm,0.7s,baz=213,slow=1.6,SNR=39							
DBIC	**Dimbokro**	**157.26**	**276**	PKPbc		**PKPdf**	**12 06 00.6**	**+6.4**
	comp=Z,1.9nm,0.7s,baz=324,slow=7.8,SNR=3.6							

NIED ***08*** *11:50:00.36˝80N×141˝40E,h8km,Mw4.0 Best double couple: M₀1.06000×10¹⁵ NP1:φs196.00000°,δ50.00000°, λ-94.00000°. NP2:φs23.00000°,δ41.00000°,λ-85.00000°.*
IDC ***08*** *11:50:45.7±0.8,36˝91N×141˝53E,h0km,mb4.0/12, mb1 4.0/18,mb1mx3.9/50,mbtmp3.9/18,ML3.1/4,MS3.0/5, Ms1 3.0/5,ms1mx2.7/49,Error ellipse: s-maj=19.5km s-min=17.0km az=100.0*
JMA ***08*** *11:50:48.5±0.1,36˝87N×141˝33E,h31km±1km,M4.2*
JMA Felt II J1.
NEIC ***08*** *11:50:49.3±2.5,36˝93N±0˝07×141˝48E±0˝08,h23km±3km, mb4.6/4,Error ellipse: s-maj=10.3km s-min=8.9km az=150.0*

ISC 08 11:50:47.2±2.1,36˚89N±0˝05×141˚39E±0˝07,h8km±12km, n48,σ1§15/47,mb4.1/14,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.52**	**294**	P	**Pb**	**11 50 58.5**	**-0.1**
ONAJ				S	**Sb**	**11 51 05.8**	**-0.5**
JFK	**Kawauchi**	**0.63**	**319**	P	**Pb**	**11 51 00.6**	**+0.1**
JFK				S	**Sb**	**11 51 09.0**	**-0.5**
JFFD	**Fukushimafurud**	**0.69**	**287**	P	**Pb**	**11 51 00.8**	**-0.7**
JFFD				S	**Sb**	**11 51 09.7**	**-1.5**
JHO	**Hitachi**	**0.71**	**247**	P	**Pb**	**11 51 01.1**	**-0.8**
JHO				S	**Sb**	**11 51 10.2**	**-1.6**
JHYU	**Hitachinakayam**	**0.85**	**230**	S	**Sb**	**11 51 14.9**	**-0.7**
JFT	**Otama**	**1.05**	**307**	P	**Pb**	**11 51 07.6**	**0.0**
JFT				S	**Sb**	**11 51 21.0**	**-0.5**
JMM	**Marumori**	**1.08**	**334**	P	**Pg**	**11 51 08.1**	**+0.1**
JMM				S	**Sg**	**11 51 22.3**	**+0.2**
JSB	**Shiboa**	**1.18**	**274**	P	**Pb**	**11 51 09.6**	**-0.2**
JSB				S	**Sb**	**11 51 25.0**	**-0.3**
MJAR	**Matsushiro Arr**	**2.58**	**263**	Pn	**Pn**	**11 51 29.4**	**+0.2**
	0.7nm,0.3s,baz=93,slow=14,SNR=48						
MJAR				Sn	**Sb**	**11 52 04.0**	**-1.5**
	4.2nm,0.3s,baz=124,slow=24,SNR=2.5						
MJAR				LR	LR	11 52 28.3	
	comp=Z,140nm,18.3s,baz=90,slow=38						
MAJO	**Matsushiro**	**2.58**	**263**		**Pn**	**11 51 29.9**	**+0.7**
MAT	**Matsushiro**	**2.58**	**263**	P	**Pn**	**11 51 29.8**	**+0.6**
MAT				S	**Sb**	**11 52 02.5**	**-3.1**
INU	**Inuyama**	**3.86**	**248**		**Pn**	**11 51 47.4**	**+0.6**
JHJ2	**Mitsune**	**3.98**	**199**	Pn	**Pn**	**11 51 51.3**	**+2.8**
JHJ	**Hachijo jima 2**	**3.98**	**200**	Pn	**Pn**	**11 51 50.1**	**+1.6**
	9.3nm,0.3s,baz=146,slow=23,SNR=8.7						
JHJ				Sn	**Sn**	**11 52 35.1**	**-0.3**
	28nm,0.3s,baz=129,slow=23,SNR=7.2						
ERM	**Erimo**	**5.30**	**14**	Pn	**Pn**	**11 52 07.5**	**+1.0**
ASAJ	**Asahikawa**	**7.28**	**7**	Pn	**Pn**	**11 52 32.3**	**-1.5**
	0.3nm,0.3s,baz=26,slow=33,SNR=1.6						
JKA	**Kamikawa-asahi**	**7.28**			**Pn**	**11 52 32.3**	**-1.5**
JNU	**Nakatsue**	**9.40**	**250**	Pn	**Pn**	**11 53 02.6**	**-0.4**
	0.3nm,0.3s,baz=315,slow=21,SNR=1.0						
JNU				LR	LR	11 56 00.7	
	comp=Z,6.1nm,21.6s,baz=64,slow=33						
USRK	**Ussuriysk Ar.**	**10.22**	**319**	Pn	**Pn**	**11 53 13.8**	**-0.3**
	baz=104,slow=34,SNR=2.0						
USRK				LR	LR	11 56 50.0	
	comp=Z,71nm,18.0s,baz=133,slow=35						
KSRS	**Korea Array**	**10.76**	**277**	Pn	**Pn**	**11 53 25.1**	**+3.6**
	0.0nm,0.3s,baz=90,slow=13,SNR=4.5						
KSRS				LR	LR	11 57 08.8	
	comp=Z,64nm,21.6s,baz=98,slow=35						
KLR	**Kul'dur**	**14.19**	**333**	LR	LR	11 59 17.7	
	comp=Z,56nm,18.0s,baz=154,slow=36						
SEY	**Seymchan**	**26.94**	**11**	P	**P**	**11 56 28.9**	**+0.2**
	1.1nm,0.8s,baz=171,slow=24,SNR=2.2						
SONM	**Songino Array**	**27.85**	**304**	P	**P**	**11 56 36.5**	**-0.7**
	1.2nm,0.6s,baz=114,slow=11,SNR=3.6						
H11N2	**WAKE ISLAND Hy**	**28.09**	**121**	T	T	12 26 05.7	
	baz=313,slow=75,SNR=46						
H11N1	**WAKE ISLAND Hy**	**28.10**	**121**	T	T	12 26 08.9	
	baz=313,slow=75,SNR=603						
H11N3	**WAKE ISLAND Hy**	**28.11**	**121**	T	T	12 26 09.6	
	baz=313,slow=75,SNR=367						
H11S1	**WAKE ISLAND Hy**	**28.80**	**123**	T	T	12 27 34.0	
	baz=317,slow=74,SNR=259						
H11S3	**WAKE ISLAND Hy**	**28.80**	**123**	T	T	12 26 58.6	
	SNR=138						
H11S2	**WAKE ISLAND Hy**	**28.81**	**123**	T	T	12 27 35.2	
	baz=13,slow=74,SNR=113						
MKAR	**Makanchi Array**	**44.18**	**302**	P	**P**	**11 58 56.5**	**+0.1**
	3.2nm,0.7s,baz=99,slow=7.9,SNR=4.5						
KURBB	**Kurchatov Arra**	**46.08**	**308**	P	**P**	**11 59 11.7**	**+0.4**
	3.8nm,0.8s,baz=85,slow=8.4,SNR=8.5						
PSI	**Prapat**	**51.70**	**239**	LR	LR	12 23 25.9	
	comp=Z,62nm,18.8s,baz=91,slow=38						
ARU	**Arti**	**56.46**	**319**	P	**P**	**12 00 29.3**	**+0.1**
	1.5nm,0.5s,baz=32,slow=1.6,SNR=6.3						
WB0	**Warramunga Arr**	**56.73**	**188**	P	**P**	**12 00 31.6**	**+0.1**
WB0				IAmb	IAmb	12 00 32.3	
	comp=Z,6.0nm,1.1s						
WRAB	**Tennant Creek**	**56.90**	**188**	P	**P**	**12 00 32.0**	**-0.7**
WRAB				IAmb	IAmb	12 00 33.3	
	comp=Z,7.3nm,1.1s						
WR0	**Warramunga Arr**	**56.91**	**188**	P	**P**	**12 00 33.1**	**+0.4**
WB2	**Warramunga Arr**	**56.91**	**188**	P	**P**	**12 00 33.1**	**+0.4**
WRA	**Warramunga Arr**	**56.91**	**188**	P	**P**	**12 00 32.1**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=4.7,slow=7.1,SNR=7.2						
AKTO	**Aktyubinsk**	**58.76**	**312**	P	**P**	**12 00 46.2**	**+0.7**
	comp=Z,0.4nm,0.2s,baz=116,slow=1.7,SNR=3.7						
ASAR	**Alice Springs**	**60.64**	**188**	P	**P**	**12 00 59.2**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=1.1,slow=6.4,SNR=6.0						
KBZ	**Khabaz**	**70.98**	**311**	P	**P**	**12 02 06.3**	**+1.1**
	comp=Z,1.4nm,0.6s,baz=360,slow=5.1,SNR=3.6						
NB2	**NORSAR Subarra**	**74.31**	**337**	P	**P**	**12 02 24.8**	**0.0**
	comp=Z,2.4nm,1.0s,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**74.31**	**337**	P	**P**	**12 02 25.1**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=39,slow=5.8,SNR=4.3						
NVAR	**Mina Array Bea**	**75.09**	**53**	P	**P**	**12 02 28.2**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=268,slow=6.0,SNR=1.6						
PDAR	**Pinedale Array**	**77.78**	**45**	P	**P**	**12 02 44.8**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=311,slow=12,SNR=1.7						
H03N2	**Juan Fernandez**	**147.03**	**96**	T	T	14 54 55.6	
	baz=291,slow=76,SNR=5.8						
H03N3	**Juan Fernandez**	**147.04**	**96**	T	T	14 55 02.2	
	baz=291,slow=76,SNR=12						
H03N1	**Juan Fernandez**	**147.04**	**96**	T	T	14 55 03.5	
	baz=291,slow=76,SNR=12						

IDC ***08*** *12:04:13.5±4.4,68˚12N×163˚57W,h0km,mb3.2/2, mb1 3.9/4,mb1mx3.4/48,mbtmp3.6/4,ML3.8/2,Error ellipse: s-maj=76.2km s-min=55.5km az=21.0*
AEIC ***08*** *12:04:18±1.6,67˚68N±0˝02×162˚2W±0˝1,h11km±6km, ML3.0/27,Error ellipse: s-maj=8.0km s-min=2.9km az=78.0*
NEIC ***08*** *12:04:20.0±1.7,67˚74N±0˝07×162˚6W±0˝2,h32km±8km, Error ellipse: s-maj=14.3km s-min=7.1km az=126.0*

ISC 08 12:04:18.2±0.9,67˚72N±0˝06×162˚37W±0˝06,h10km,n34, σ1§29/39,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.39**	**329**		**Pb**	**12 04 27.1**	**-0.1**
RDOG	**Red Dog Mine**	**0.39**	**329**		**Sb**	**12 04 34.0**	**+0.7**
ANM	**Nome**	**3.40**	**202**		**Pn**	**12 05 11.8**	**+0.6**
ANM					**Sn**	**12 05 50.5**	**-0.9**
IM03		**3.83**	**113**		**Pn**	**12 05 16.9**	**-0.2**
IM03					**Sn**	**12 06 01.6**	**-0.4**
COLD	**Coldfoot**	**4.71**	**90**		**Pn**	**12 05 30.3**	**+1.1**
TOLK	**Toolik Lake Re**	**4.86**	**73**		**Pn**	**12 05 32.1**	**+0.8**
TOLK					**Sn**	**12 06 27.4**	**-0.2**
MLY	**Manley**	**5.40**	**115**		**Pn**	**12 05 38.2**	**-0.5**
TTA	**Tatalina**	**5.50**	**148**		**Pn**	**12 05 40.4**	**+0.3**
TT01	**Tatalina**	**5.52**	**148**		**Pn**	**12 05 40.2**	**0.0**
BPAW	**Bear Paw Mtn.**	**5.91**	**123**		**Pn**	**12 05 46.0**	**+0.3**
KTH	**Kantishna Hill**	**6.32**	**126**		**Pn**	**12 05 51.7**	**+0.4**
MDM	**Murphy Dome**	**6.33**	**109**	Pn	**Pn**	**12 05 51.9**	**+0.5**
PPLA	**Purkeypile**	**6.45**	**134**		**Pn**	**12 05 53.8**	**+0.7**
TCOL	**CIGO, UAF Yank**	**6.51**	**109**		**Pn**	**12 05 54.7**	**+0.9**
COLA	**College**	**6.51**	**109**		**Pn**	**12 05 54.6**	**+0.8**
TRF	**Thorofare Moun**	**6.59**	**125**		**Pn**	**12 05 55.7**	**+0.6**
CCB	**Clear Creek Bu**	**6.65**	**111**		**Pn**	**12 05 56.0**	**+0.2**
WRH	**Wood River Hil**	**6.65**	**113**		**Pn**	**12 05 56.2**	**+0.4**
BM03	**Burnt Mountain**	**6.80**	**84**		**Pn**	**12 05 58.8**	**+0.8**
MCK	**McKinley**	**6.83**	**120**		**Pn**	**12 05 58.4**	**+0.2**
ILAR	**Eielson Array**	**6.91**	**108**	Pn	**Pn**	**12 05 59.6**	**+0.2**
	3.6nm,0.3s,baz=303,slow=14,SNR=234						
ILAR				Sn	**Sn**	**12 07 19.2**	**+1.2**
	0.5nm,0.3s,baz=294,slow=24,SNR=6.6						
PRP	**Porcupine Dome**	**7.05**	**100**		**Pn**	**12 06 01.0**	**-0.5**
RND	**Reindeer**	**7.08**	**121**		**Pn**	**12 06 01.6**	**-0.1**
DHY	**Denali Highway**	**7.79**	**120**		**Pn**	**12 06 12.7**	**+1.1**
GHO	**Glory Hole Cre**	**8.27**	**130**	Pn	**Pn**	**12 06 19.4**	**+1.3**
PMR	**Palmer**	**8.36**	**131**	Pn	**Pn**	**12 06 21.1**	**+1.9**
SML	**Sawmill**	**8.42**	**128**	Pn	**Pn**	**12 06 21.0**	**+0.9**
DOT	**Dot Lake**	**8.57**	**110**	Pn	**Pn**	**12 06 22.5**	**+0.4**
SCM	**Sheep Creek Mo**	**8.71**	**126**	Pn	**Pn**	**12 06 25.1**	**+1.0**
EGAK	**Eagle**	**9.03**	**99**	Pn	**Pn**	**12 06 29.5**	**+1.1**
EPYK	**Eagle Plains**	**10.08**	**86**		**Pn**	**12 06 43.6**	**+0.8**
INK	**Inuvik**	**10.78**	**74**	Pn	**Pn**	**12 06 51.9**	**-0.4**
	0.2nm,0.3s,baz=301,slow=9.8,SNR=20						
INK				Sn	**Sn**	**12 08 46.5**	**-6.3**
	0.5nm,0.3s,baz=142,slow=26,SNR=7.9						
YKA	**Yellowknife Ar**	**20.32**	**82**	P	**P**	**12 08 54.5**	**+0.5**
	0.2nm,0.4s,baz=303,slow=10.0,SNR=6.9						
TXAR	**Lajitas Array**	**51.43**	**107**	P	**P**	**12 13 23.9**	**+0.7**
	0.4nm,0.6s,baz=332,slow=4.9,SNR=7.8						

DJA 08 12:06:38.9±0.8,8˚S±10˚×10˚9E±˚,h10km,M3.4/5, MLv3.4/5,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**1.36**	**75**	P	Pn	12 07 03.9	-0.1
UGM				S	Sb	12 07 20.5	-1.5
CISI	**Cisompet, Garu**	**1.55**	**298**	P	Pn	12 07 06.5	-0.1
CISI				S	Sn	12 07 25.1	-1.7
WOJI	**Wonogiri, Jawa**	**1.76**	**76**	P	Pg	12 07 15.0	+2.3
PCJI	**Pacitan**	**1.96**	**88**	P	Pn	12 07 12.6	+0.4
PCJI				S	Sn	12 07 35.5	-1.4
PWJI	**Pagerwojo**	**2.59**	**85**	P	Pn	12 07 22.7	+1.8

MAN 08 12:13:38.2,7˚40N×126˚83E,h5km,mb4.7,ML3.6,MS3.5, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.72**	**232**	*e*P	Pb	12 13 52.8	-0.6
MATI				*e*S	Sn	12 14 05.8	-0.8
DDMP	**Don Marcelino,**	**1.70**	**221**	*e*P	Pn	12 14 08.0	-0.5
DDMP				*e*S	Sb	12 14 31.8	+0.2
KCP	**Kidapawan**	**1.77**	**257**	*e*P	Pg	12 14 12.3	+0.2
SKMP	**Bagumbayan, Su**	**2.43**	**249**	*e*P	Pn	12 14 19.2	+0.6
SKMP				*e*S	Sn	12 14 50.0	+1.3

IDC ***08*** *12:15:35.0±0.8,35˚76N×65˚76E,h0km,mb3.9/16, mb1 4.1/21,mb1mx3.9/52,mbtmp4.0/21,ML3.8/5,MS3.1/6, Ms1 3.1/6,ms1mx2.8/46,Error ellipse: s-maj=16.7km s-min=13.7km az=0.0*
MOS ***08*** *12:15:37.2±1.1,35˚97N×65˚82E,h19km,mb4.4/16,Error ellipse: s-maj=8.9km s-min=5.9km az=74.3*
NNC ***08*** *12:15:40.1±4.2,35˚95N×65˚78E,h38km±121km,mb4.5, mpv4.3,Error ellipse: s-maj=65.0km s-min=20.0km az=159.0*
NEIC ***08*** *12:15:40.2±2.6,36˚01N±0˝07×65˚74E±0˝07,h30km±4km, mb4.3/10,Error ellipse: s-maj=11.9km s-min=5.8km az=143.0*

ISC 08 12:15:37.5±0.6,36˚06N±0˝06×65˚75E±0˝05,h10km,n91, σ1§77/94,mb4.2/23,9C-10D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRA	**Herat**	**3.32**	**241**		**Pn**	**12 16 30.5**	**+0.9**
CHGR	**Chuyangaron**	**3.76**	**45**	Pn	**Pn**	**12 16 37.7**	**+2.1**
GAR	**Garm**	**4.67**	**50**		**Pn**	**12 16 49.8**	**+1.6**
BTK	**Batken**	**5.66**	**44**	PN	**Pn**	**12 17 04.5**	**+2.9**
BTK	**Batken**	**5.66**	**44**		**Pn**	**12 17 04.5**	**+2.9**
GEYT	**Alibeck**	**6.39**	**289**	Pn	**Pn**	**12 17 12.5**	**+0.8**
	5.2nm,0.3s,baz=121,slow=13,SNR=30						
GEYT				Sn	**Sn**	**12 18 24.4**	**-0.2**
	1.6nm,0.3s,baz=142,slow=12,SNR=1.7						
GEYT				Lg	Lg	12 19 01.4	
	0.5nm,0.3s,baz=30,slow=18,SNR=1.6						
GEYT				LR	LR	12 20 30.0	
	comp=Z,232nm,18.6s,baz=135,slow=45						
GYA0B	**ALIBECK ARRAY**	**6.39**	**289**	⇑Pn	**Pn**	**12 17 12.0**	**+0.3**
GYA0B				⇑Pg	**Pg**	**12 17 39.3**	**-0.4**
GYA0B				⇑Lg	Lg	12 19 15.5	
NIL	**Nilore**	**6.62**	**109**	PN	**Pn**	**12 17 14.7**	**-0.1**
NIL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KK31	**Karatay Array**	**7.94**	**26**	⇑Pn	**Pn**	**12 17 34.0**	**+1.1**
	comp=Z,5.4nm,0.3s,baz=215,slow=14,SNR=172						
KK31				⇓Sn	**Sn**	**12 19 02.8**	**0.0**
	comp=Z,4.3nm,0.3s,baz=213,slow=23,SNR=6.1						
KK31	**Karatay Array**	**7.94**	**26**	*e*P	**Pn**	**12 17 34.0**	**+1.1**
KK31						12 19 02.8	
KKAR	**Karatay Array**	**7.94**	**26**	P	**Pn**	**12 17 34.0**	**+1.1**
KKAR	**Karatay Array**	**7.94**	**26**		**Pn**	**12 17 34.0**	**+1.1**
AML	**Almayashu**	**8.66**	**43**	P	**Pn**	**12 17 44.3**	**+1.2**
	SNR=17						
UCH	**Uchtor**	**9.18**	**45**	P	**Pn**	**12 17 51.0**	**+0.7**
	SNR=22						
AAK	**Ala-Archa**	**9.44**	**43**	Pn	**Pn**	**12 17 54.6**	**+1.0**
	comp=Z,1.9nm,0.3s,baz=211,slow=6.8,SNR=12						
AAK				Sn	**Sn**	**12 19 40.6**	**+0.8**
	comp=Z,2.6nm,0.3s,baz=172,slow=23,SNR=6.0						
AAK				LR	LR	12 22 15.0	
	comp=Z,207nm,18.8s,baz=221,slow=42						
AAK	**Ala-Archa**	**9.44**	**43**	P	**Pn**	**12 17 54.4**	**+0.9**
	SNR=11						
AAK	**Ala-Archa**	**9.44**	**43**	⇑Pn	**Pn**	**12 17 53.9**	**+0.3**
	comp=Z,3.9nm,0.3s						
AAK				⇓Sn	**Sn**	**12 19 42.9**	**+3.1**
	comp=Z,21nm,0.9s						
AAK	**Ala-Archa**	**9.44**	**43**	*de*P	**Pn**	**12 17 54.7**	**+1.1**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KZA	**Kyzart**	**9.52**	**48**	P	**Pn**	**12 17 55.6**	**+0.5**
	SNR=17						
KBK	**Karagaybulak**	**9.70**	**44**	P	**Pn**	**12 17 57.9**	**+0.6**
	SNR=15						
BOOM	**Boomskoye usch**	**10.18**	**48**	P	**Pn**	**12 18 04.7**	**+0.9**
BOOM	**Boomskoye usch**	**10.18**	**48**		**Pn**	**12 18 04.7**	**+0.9**
TKM2	**Tokmak 2**	**10.24**	**45**	P	**Pn**	**12 18 05.2**	**+0.5**
	SNR=11						
TKM2	**Tokmak 2**	**10.24**	**45**	⇓Pn	**Pn**	**12 18 03.6**	**-1.0**
	comp=Z,6.4nm,0.5s						
TKM2				⇑Sn	**Sn**	**12 19 58.0**	**-1.6**
	comp=Z,14nm,0.7s						
TKM2	**Tokmak 2**	**10.24**	**45**	P	**Pn**	**12 18 03.6**	**-1.0**
TKM2						12 19 58.0	
KDJ	**Kajisay**	**10.75**	**52**	P	**Pn**	**12 18 11.8**	**+0.2**
KDJ	**Kajisay**	**10.75**	**52**		**Pn**	**12 18 11.8**	**+0.2**
PDGK	**Podgornoye**	**12.83**	**51**	P	**Pn**	**12 18 38.1**	**-1.9**
OTUK	**Ortayu**	**13.12**	**20**	⇑P	**Pn**	**12 18 43.6**	**-0.2**
	comp=Z,8.7nm,1.1s						
OTUK	**Ortayu**	**13.12**	**20**	P	**Pn**	**12 18 43.6**	**-0.2**
AB31	**Akbulak array**	**13.86**	**344**	P	**Pn**	**12 18 52.2**	**-1.7**
AKTO	**Aktyubinsk**	**15.42**	**341**	Pn	**Pn**	**12 19 15.5**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=112,slow=8.2,SNR=3.3						
AKTO				Sn	**Sn**	**12 21 57.3**	**-8.5**
	comp=Z,0.2nm,0.3s,baz=138,slow=19,SNR=2.1						
AKTO				Lg	Lg	12 23 47.1	
	comp=Z,0.1nm,0.3s,baz=146,slow=19,SNR=2.0						
AKTO				LR	LR	12 26 39.0	
	comp=Z,21nm,19.5s,baz=154,slow=42						
MAKZ	**Makanchi**	**16.20**	**43**	P	**P**	**12 19 27.8**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,28nm,1.1s						
MAKZ	**Makanchi**	**16.20**	**43**	P	**P**	**12 19 27.8**	**-0.5**
MAKZ				IAmb	IAmb	12 19 34.5	
	comp=Z,28nm,1.1s						
MK31	**Makanchi Array**	**16.37**	**44**	P	**Pn**	**12 19 28.9**	**+1.6**
MKAR	**Makanchi Array**	**16.37**	**44**	Pn	**Pn**	**12 19 25.5**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=235,slow=12,SNR=4.3						
KURBB	**Kurchatov Arra**	**17.24**	**28**	P	**Pn**	**12 19 36.9**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=220,slow=10,SNR=13						
KURBB				Lg	Lg	12 24 43.2	
	baz=334,slow=33,SNR=2.0						
BVAR	**Borovoye Array**	**17.28**	**9**	P	**Pn**	**12 19 38.4**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=180,slow=12,SNR=11						
BVAR				S	**Sn**	**12 22 44.1**	**-6.8**
	comp=Z,0.4nm,0.3s,baz=170,slow=27,SNR=3.8						
BRVK	**Borovoye**	**17.30**	**9**	⇑P	**Pn**	**12 19 39.6**	**+0.7**
	comp=Z,11nm,1.1s						
BRVK	**Borovoye**	**17.30**	**9**	⇓*e*P	**P**	**12 19 40.2**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRVK	**Borovoye**	**17.30**	**9**	P	**Pn**	**12 19 39.1**	**+0.2**
KURK	**Kurchatov**	**17.35**	**28**	⇑*e*P	**P**	**12 19 41.3**	**+0.4**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KURK	**Kurchatov**	**17.35**	**28**	P	**P**	**12 19 41.2**	**+0.4**
ZEI	**Tsey**	**18.14**	**298**	*e*P	**Pn**	**12 19 50.4**	**+0.7**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KBZ	**Khabaz**	**19.10**	**301**	P	**P**	**12 19 59.9**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=129,slow=9.4,SNR=4.7						
KBZ	**Khabaz**	**19.10**	**301**	*e*P	**Pn**	**12 20 01.9**	**+0.9**
KIV	**Kislovodsk**	**19.31**	**301**	*e*P	**P**	**12 20 03.2**	**+0.6**
KIV				pmax	pmax		
	comp=Z,25nm,0.9s						
KIV				MLR	MLR		
	comp=Z,74nm,14.0s						
DGZ	**Jazzator, Alta**	**20.84**	**42**	*d i*P	Pn	12 20 21.1	-0.7
DGZ				pmax	pmax		
	comp=Z,20nm,1.2s						
ARU	**Arti**	**20.95**	**349**	P	**P**	**12 20 21.1**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=184,slow=7.9,SNR=7.0						
ARU	**Arti**	**20.95**	**349**	⇓*e*P	Pn	12 20 22.5	-0.4
ARU				pmax	pmax		
	comp=Z,17nm,1.3s						
ARU	**Arti**	**20.95**	**349**	P	**P**	**12 20 20.7**	**+0.3**
ARU				IAmb	IAmb	12 20 26.3	
	comp=Z,19nm,1.3s						
RAYN	**Ar Rayn**	**21.50**	**240**	P	**P**	**12 20 25.9**	**-0.7**
RAYN				pmax	pmax		
	comp=Z,17nm,1.1s						
RAYN	**Ar Rayn**	**21.50**	**240**	P	**P**	**12 20 25.9**	**-0.7**
RAYN				IAmb	IAmb	12 20 31.7	
	comp=Z,18nm,1.1s						
ZALV	**Zalesovo Beam**	**22.28**	**31**	P	**P**	**12 20 35.6**	**+1.0**
	comp=Z,2.7nm,0.6s,baz=231,slow=9.9,SNR=11						
VRH	**Novokhopyorsk**	**22.91**	**319**	*e*P	**P**	**12 20 45.7**	**+4.4**
VRH				pmax	pmax		
	comp=Z,20nm,1.5s						
VSR	**Storozhevoye**	**24.31**	**317**	*e*P	**P**	**12 20 55.7**	**+0.7**
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SHL	**Shillong**	**24.69**	**108**	P	**P**	**12 20 57.5**	**-1.5**
SHL				pmax	pmax		
	comp=Z,21nm,1.2s						
SHL	**Shillong**	**24.69**	**108**	P	**P**	**12 20 57.5**	**-1.5**
KIRV	**Kirov**	**24.98**	**340**	P	**P**	**12 21 02.5**	**+1.6**
	comp=Z,6.3nm,0.3s,baz=170,slow=11,SNR=5.5						
LPSR	**Galich'ya Gora**	**25.12**	**320**	*e*P	**P**	**12 21 03.0**	**+0.7**
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
MMAI	**Mount Meron Ar**	**25.13**	**272**	LR	LR	12 32 26.6	
	comp=Z,31nm,20.4s,baz=235,slow=40						
BRTR	**Keskin Array B**	**25.53**	**288**	P	**P**	**12 21 07.2**	**+0.8**
	comp=Z,2.4nm,0.9s,baz=111,slow=6.9,SNR=7.9						
BRTR				LR	LR	12 33 53.2	
	comp=Z,43nm,21.3s,baz=268,slow=43						
BRTR	**Keskin Array B**	**25.53**	**288**	*e*P	**P**	**12 21 08.4**	**+2.0**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKASG	**Malin Array Be**	**29.96**	**311**	P	**P**	**12 21 46.2**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=98,slow=6.7,SNR=3.1						
MLR	**Muntele Rosu**	**31.31**	**300**	P	**P**	**12 22 01.7**	**+3.8**
LIT	**Litokhoron**	**34.04**	**290**		**S**	**12 27 47.1**	**-0.1**
CMAR	**Chiang Mai Arr**	**34.10**	**112**	P	**P**	**12 22 19.6**	**-2.8**
	comp=Z,0.6nm,0.5s,baz=306,slow=8.9,SNR=7.3						
CMAR	**Chiang Mai Arr**	**34.10**	**112**	*e*P	**P**	**12 22 21.5**	**-0.9**
CMAR				pmax	pmax

ITM				S	Sn	12 27 21.7	+0.3		
ITM				AML	AML	12 27 25.8			
	comp=E,4930µm,0.6s								
ITM				AML	AML	12 27 25.9			
	comp=N,4046µm,0.5s								
VLI	**Velíai**	**1.56**	**60**	P	**Pn**	**12 27 07.8**	**+0.7**		
VLI				S	**Sn**	**12 27 25.2**	**-1.6**		
	comp=N,2µm,0.7s								
VLI	**Velíai**	**1.56**	**60**	P	**Pn**	**12 27 08.2**	**+1.1**		
VLI				AML	AML	12 27 29.8			
	comp=E,3757µm,0.7s								
VLI				AML	AML	12 27 35.7			
	comp=N,2932µm,0.5s								
MNVA	**Monemvasia**	**1.62**	**62**	P	**Pn**	**12 27 09.6**	**+1.7**		
AMT	**Artemida-Makis**	**1.62**	**13**	P	**Pg**	**12 27 12.0**	**+0.3**		
AMT				S	**Sn**	**12 27 30.7**	**+2.4**		
	comp=N,3µm,0.5s								
AMT	**Artemida-Makis**	**1.62**	**13**	P	**Pg**	**12 27 11.9**	**+0.3**		
AMT				AML	AML	12 27 44.3			
	comp=N,4794µm,0.4s								
AMT				AML	AML	12 27 47.2			
	comp=E,5437µm,1.0s								
VLX	**Vlachokerasia**	**1.68**	**32**	P	**Pn**	**12 27 10.6**	**+1.8**		
VLX				S	**Sn**	**12 27 29.2**	**-0.7**		
	comp=E,3µm,0.8s								
VLX	**Vlachokerasia**	**1.68**	**32**	P	**Pn**	**12 27 10.7**	**+1.8**		
VLX				AML	AML	12 27 34.8			
	comp=N,7210µm,0.6s								
VLX				AML	AML	12 27 39.7			
	comp=E,4424µm,0.5s								
TRIP	**Tripoli**	**1.77**	**27**	P	**Pn**	**12 27 12.8**	**+2.7**		
TRIP				S	**Sn**	**12 27 32.5**	**+0.4**		
	comp=E,1µm,0.9s								
TRIP	**Tripoli**	**1.77**	**27**	P	**Pn**	**12 27 12.6**	**+2.5**		
TRIP				AML	AML	12 27 38.8			
	comp=N,2871µm,0.9s								
TRIP				AML	AML	12 27 42.4			
	comp=E,2110µm,0.6s								
DRO	**Drossia**	**2.03**	**10**	P	**Pb**	**12 27 17.9**	**+1.2**		
DRO				S	**Sn**	**12 27 41.9**	**+3.5**		
	comp=E,1µm,0.7s								
DRO	**Drossia**	**2.03**	**10**	P	**Pb**	**12 27 17.1**	**+0.4**		
DRO				AML	AML	12 27 58.6			
	comp=N,2099µm,0.8s								
DRO				AML	AML	12 28 07.0			
	comp=E,3582µm,0.6s								
RODP	**Rodopos**	**2.07**	**100**	P	**Pn**	**12 27 17.3**	**+3.2**		
KRND	**KRANIDI**	**2.09**	**46**	P	**Pn**	**12 27 16.3**	**+1.9**		
KRND	**KRANIDI**	**2.09**	**46**	P	**Pn**	**12 27 16.1**	**+1.7**		
RLS	**Riolos of Patr**	**2.11**	**5**	P	**Pb**	**12 27 19.4**	**+1.4**		
RLS	**Riolos of Patr**	**2.11**	**5**	P	**Pb**	**12 27 19.5**	**+1.4**		
RLS				AML	AML	12 28 01.4			
	comp=N,911µm,1.2s								
RLS				AML	AML	12 28 05.4			
	comp=E,1011µm,0.8s								
KLV	**Kalavryta, Ach**	**2.21**	**19**	P	**Pn**	**12 27 19.3**	**+3.2**		
KLV	**Kalavryta, Ach**	**2.21**	**19**	P	**Pn**	**12 27 18.8**	**+2.8**		
DID	**Didima**	**2.23**	**45**	P	**Pn**	**12 27 17.0**	**+0.7**		
DID	**Didima**	**2.23**	**45**	P	**Pn**	**12 27 16.9**	**+0.6**		
IMMV	**Iera Moni Meta**	**2.27**	**102**	P	**Pn**	**12 27 19.2**	**+2.3**		
IMMV	**Iera Moni Meta**	**2.27**	**102**	P	**Pn**	**12 27 19.6**	**+2.7**		
VLS	**Valsamata**	**2.29**	**347**	P	**Pg**	**12 27 22.8**	**-1.5**		
VLS	**Valsamata**	**2.29**	**347**	P	**Pb**	**12 27 22.1**	**+1.1**		
LAKA	**Lakka**	**2.36**	**14**	P	**Pb**	**12 27 21.7**	**-0.6**		
LAKA	**Lakka**	**2.36**	**14**	P	**Pb**	**12 27 21.6**	**-0.6**		
KEF3	**Kipouria, Keph**	**2.36**	**342**	P	**Pb**	**12 27 23.4**	**+1.1**		
VAM	**Vamos**	**2.46**	**102**	P	**Pn**	**12 27 22.0**	**+2.6**		
TRIZ	**Trizonia**	**2.50**	**15**	P	**Pn**	**12 27 24.1**	**-0.5**		
KALE	**Kalithea**	**2.54**	**16**	P	**Pn**	**12 27 24.1**	**+3.5**		
KALE	**Kalithea**	**2.54**	**16**	P	**Pn**	**12 27 23.7**	**+3.1**		
KALE				AML	AML	12 28 15.4			
	comp=N,809µm,0.6s								
KALE				AML	AML	12 28 18.6			
	comp=E,804µm,0.7s								
SERG	**Sergoula**	**2.54**	**14**	P	**Pb**	**12 27 24.8**	**-0.6**		
SERG	**Sergoula**	**2.54**	**14**	P	**Pb**	**12 27 24.5**	**-0.9**		
FSK	**Fiskardo**	**2.56**	**348**	P	**Pb**	**12 27 26.7**	**+0.9**		
GVD	**Gavdhos**	**2.57**	**115**	P	**Pb**	**12 27 24.9**	**-0.9**		
PDO	**Prodromos**	**2.64**	**359**	P	**Pb**	**12 27 27.2**	**+0.1**		
MHLO	**Agia Marina, M**	**2.65**	**73**	P	**Pn**	**12 27 22.3**	**+0.3**		
PROD	**Prodromos**	**2.65**	**29**	P	**Pn**	**12 27 25.1**	**+2.9**		
PROD				AML	AML	12 28 08.5			
	comp=E,812µm,1.0s								
PROD				AML	AML	12 28 11.9			
	comp=N,586µm,0.6s								
MHLA	**Plaka, Milos I**	**2.68**	**72**	P	**Pn**	**12 27 23.0**	**+0.5**		
ANX	**Ano Chora**	**2.69**	**11**	P	**Pb**	**12 27 27.2**	**-0.8**		
ANX	**Ano Chora**	**2.69**	**11**	P	**Pb**	**12 27 27.3**	**-0.8**		
VIL2	**Platees**	**2.77**	**35**	P	**Pn**	**12 27 26.8**	**+3.0**		
VIL2				AML	AML	12 28 19.4			
	comp=N,653µm,0.7s								
VIL2				AML	AML	12 28 22.2			
	comp=E,785µm,0.7s								
VLY	**Voula,Athens**	**2.78**	**46**	P	**Pn**	**12 27 26.6**	**+2.7**		
LKD2	**Lefkada island**	**2.87**	**351**	P	**Pb**	**12 27 30.9**	**-0.1**		
LKD2	**Lefkada island**	**2.87**	**351**	P	**Pb**	**12 27 30.9**	**-0.1**		
EVR	**Evrytania**	**2.99**	**8**	P	**Pb**	**12 27 31.7**	**-1.4**		
LKR	**Lokris**	**3.03**	**27**	P	**Pn**	**12 27 29.8**	**+2.5**		
IDI	**Anoyia**	**3.04**	**102**	P	**Pn**	**12 27 29.0**	**+1.6**		
MAKR	**Makrakomi, Fth**	**3.14**	**13**	P	**Pn**	**12 27 33.0**	**+4.2**		
MAKR	**Makrakomi, Fth**	**3.14**	**13**	P	**Pn**	**12 27 33.1**	**+4.2**		
AGG	**Agios Georgios**	**3.18**	**15**	P	**Pn**	**12 27 33.5**	**+4.1**		
AGG	**Agios Georgios**	**3.18**	**15**	P	**Pn**	**12 27 33.9**	**+4.4**		
LAST	**Lasithi**	**3.53**	**102**	P	**Pn**	**12 27 36.1**	**+1.8**		
APE	**Apeiranthos**	**3.62**	**71**	P	**Pn**	**12 27 36.0**	**+0.5**		
THL	**Klokotos Trika**	**3.66**	**9**	P	**Pn**	**12 27 39.2**	**+3.3**		
MEV	**Metsovon**	**3.83**	**360**	P	Pn	12 27 43.3	+4.9		
OHR	**Ohrid**	**5.17**	**356**	*i* Pn	Pn	12 28 02.3	+5.6		
OHR	**Ohrid**	**5.17**	**356**	*i* Pn	Pn	12 28 02.3	+5.6		
VAY	**Valandovo**	**5.46**	**10**	*e*Pn	**Pn**	**12 28 02.9**	**+2.2**		
VAY	**Valandovo**	**5.46**	**10**	*i* Pn	**Pn**	**12 28 04.3**	**+3.7**		
VAY	**Valandovo**	**5.46**	**10**	*i* Pn	**Pn**	**12 28 04.3**	**+3.7**		
TAR1	**Taranto**	**5.53**	**327**	*e*Pn	**Pn**	**12 28 04.5**	**+2.8**		
STIP	**Stip**	**5.78**	**7**	*i* Pn	**Pn**	**12 28 09.2**	**+4.1**		
STIP	**Stip**	**5.78**	**7**	*i* Pn	**Pn**	**12 28 09.2**	**+4.1**		
SG1	**Sgolgore (BA)**	**6.06**	**325**	*e*Pn	Pn	12 28 14.6	+5.6		
SG1					Sn	**12 29 17.8**	**0.0**		
BAI	**Bari**	**6.18**	**328**	*e*Pn	Pn	12 28 16.8	+6.2		
BAI					Sn	**12 29 21.5**	**+0.7**		
ULC	**Ulcinj**	**6.21**	**346**	⇑*i* Pn	**Pn**	**12 28 12.8**	**+1.9**		
ULC				*i* Sn	**Sn**	**12 29 19.1**	**-2.2**		
DRME	**Dracevica, Mon**	**6.43**	**346**	⇓*i* Pn	**Pn**	**12 28 15.6**	**+1.6**		
DRME				*i* Sn	**Sn**	**12 29 24.4**	**-2.5**		
BUM	**Brajici-Budva**	**6.60**	**345**	⇑*i* Pn	**Pn**	**12 28 18.2**	**+1.8**		
BUM				*i* Sn	**Sn**	**12 29 28.4**	**-2.7**		
BOSS	**Bosilegrad**	**6.61**	**8**	*e*Pn	**Pn**	**12 28 20.6**	**+4.2**		
TTG	**Podgorica**	**6.65**	**347**	⇑*i* Pn	**Pn**	**12 28 18.5**	**+1.4**		
TTG				*i* Sn	**Sn**	**12 29 29.6**	**-2.7**		
PVY	**Plav**	**6.71**	**352**	⇑*i* Pn	**Pn**	**12 28 19.2**	**+1.2**		
PVY				*i* Sn	**Sn**	**12 29 30.9**	**-3.0**		
CEME	**Cevo**	**6.83**	**345**	⇑*i* Pn	**Pn**	**12 28 20.9**	**+1.3**		
CEME				*i* Sn	**Sn**	**12 29 33.9**	**-2.9**		
HCY	**Herceg Novi**	**6.83**	**343**	⇓*i* Pn	**Pn**	**12 28 20.7**	**+1.2**		
HCY				*i* Sn	**Sn**	**12 29 34.1**	**-2.6**		
VTS	**Vitosha**	**6.83**	**12**	*e*Pn	**Pn**	**12 28 23.0**	**+3.3**		
BARS	**Barje**	**6.87**	**3**	*e*Pn	**Pn**	**12 28 22.6**	**+2.5**		
IVA	**Berane**	**6.99**	**352**	⇓*i* Pn	**Pn**	**12 28 23.1**	**+1.3**		
IVA				*i* Sn	**Sn**	**12 29 37.6**	**-3.2**		
KOME	**Kolasin**	**7.02**	**349**	⇓*i* Pn	**Pn**	**12 28 23.6**	**+1.4**		
KOME				*i* Sn	**Sn**	**12 29 38.3**	**-3.2**		
NKME	**Niksic**	**7.04**	**346**	⇓*i* Pn	**Pn**	**12 28 23.8**	**+1.4**		
NKME				*i* Sn	**Sn**	**12 29 38.9**	**-2.9**		
TREB	**Trebinje**	**7.12**	**342**	*e*Pn	**Pn**	**12 28 27.3**	**+3.8**		
DBRK	**Dubrovnik**	**7.13**	**341**	*e*Pn	**Pn**	**12 28 25.5**	**+2.3**		
DBRK				Sn	**Sn**	**12 29 39.5**	**-4.5**		
BRY	**Bratogost**	**7.25**	**344**	⇓*i* Pn	**Pn**	**12 28 26.5**	**+1.1**		
BRY				*i* Sn	**Sn**	**12 29 44.1**	**-3.2**		
SELS	**Selova**	**7.26**	**359**	*e*Pn	**Pn**	**12 28 26.9**	**+1.5**		
SJES	**Sjenica**	**7.37**	**353**	*e*Sn	Sn	12 29 43.1	-7.0		
ZAPS	**Zavoj**	**7.39**	**8**	*e*Pn	**Pn**	**12 28 30.5**	**+3.3**		
STON	**Ston**	**7.44**	**339**	*e*Pn	**Pn**	**12 28 31.1**	**+3.3**		
STON	**Ston**	**7.44**	**339**	*e*Pn	**Pn**	**12 28 29.9**	**+2.1**		
UPM	**Unac-Piva**	**7.47**	**347**	⇓*i* Pn	**Pn**	**12 28 29.6**	**+1.2**		
UPM				*i* Sn	**Sn**	**12 29 49.3**	**-3.3**		
PLE	**Pljevlja**	**7.51**	**350**	⇑*i* Pn	**Pn**	**12 28 30.3**	**+1.4**		
PLE				*i* Sn	**Sn**	**12 29 49.9**	**-3.6**		
IVAS	**Ivanjica**	**7.66**	**354**	*e*Pn	**Pn**	**12 28 32.5**	**+1.5**		
IVAS				*e*Sn	Sn	12 29 49.5	-7.8		
GRUS	**Gruza**	**7.94**	**357**	*e*Pn	**Pn**	**12 28 36.5**	**+1.8**		
GRUS				*e*Sn	**Sn**	**12 29 57.7**	**-6.3**		
MAKA	**Makarska**	**8.02**	**337**	Sn	**Sn**	**12 30 01.8**	**-4.2**		
DIVS	**Divibare**	**8.20**	**354**	*e*Pn	**Pn**	**12 28 39.6**	**+1.3**		
DIVS				*e*Sn	Sn	12 30 03.7	-6.7		
ZIRJ	**Zirje**	**8.82**	**332**	*e*Pn	**Pn**	**12 28 50.8**	**+4.1**		
ZIRJ				Sn	**Sn**	**12 30 20.3**	**-5.3**		
KIJV	**Kijevo**	**8.86**	**337**	*e*Pn	**Pn**	**12 28 51.4**	**+4.0**		
KIJV				Sn	**Sn**	**12 30 22.9**	**-3.8**		
MORI	**Morici**	**8.98**	**333**	*e*Pn	Pn	12 28 54.2	+5.2		
MORI				Sn	**Sn**	**12 30 26.9**	**-2.6**		
DUGI	**Dugi Otok**	**9.33**	**331**	*e*Pn	**Pn**	**12 28 57.3**	**+3.5**		
DUGI				Sn	**Sn**	**12 30 34.3**	**-3.8**		
MMAI	**Mount Meron Ar**	**12.04**	**100**	Pn	Pn	12 29 27.7	-3.2		
	comp=E,0.8nm,0.3s,baz=283,slow=15,SNR=1.7								
TORD	**Toroci Ar. Bea**	**28.73**	**223**	P	P	12 32 46.9	+10		
	comp=E,0.4nm,0.9s,baz=23,slow=8.9,SNR=1.8								
ARCES	**ARCESS Array B**	**33.72**	**3**	P	**P**	**12 33 21.6**	**+1.5**		
	comp=E,1.9nm,0.9s,baz=180,slow=9.6,SNR=6.3								
MKAR	**Makanchi Array**	**46.00**	**57**	P	**P**	**12 35 02.2**	**-0.1**		
	comp=E,0.7nm,0.4s,baz=268,slow=7.7,SNR=15								
ZALV	**Zalesovo Beam**	**46.77**	**47**	P	**P**	**12 35 07.5**	**-0.7**		
	comp=E,0.9nm,0.5s,baz=280,slow=8.9,SNR=4.3								

*IDC **08** 12:42:04.7±3.6, 8°.27N×103°.05W, h0km, mb3.2/5, mb1 3.8/6, mb1mx3.7/23, mbtmp3.5/6, ML4.0/1, MS3.6/12, Ms1 3.6/12, ms1mx3.6/14, Error ellipse: s-maj=69.4km s-min=57.1km az=165.0*

ISC 08 12:42:06.0±2.9, 8°.3N±0°.4×103°.1W±0°.2, h10km, n22, σ0§60°/7, mb3.4/4, MS3.6/11, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
CMIG	**Matias Romero**	**11.86**	**41**	LR		LR	12 48 26.6	
	comp=Z,620nm,21.6s,baz=172,slow=32							
H06E1	**SOCORRO T-PHASE**	**12.96**	**325**	T		T	12 58 05.5	
	SNR=5.3							
APG	**El Apazote**	**14.04**	**60**	Pn		**Pn**	**12 45 25.5**	**+0.2**
	0.6nm,0.3s,baz=257,slow=7.4,SNR=11							
APG				LR		LR	12 49 44.8	
	comp=Z,410nm,21.1s,baz=252,slow=33							
LPIG	**La Paz**	**17.22**	**337**	LR		LR	12 51 03.0	
	comp=Z,205nm,20.1s,baz=164,slow=31							
TEIG	**Tepich**	**18.61**	**49**	LR		LR	12 52 40.7	
	comp=Z,262nm,21.7s,baz=324,slow=34							
TXAR	**Lajitas Array**	**20.98**	**359**	P		**P**	**12 46 48.8**	**-0.8**
	0.6nm,0.8s,baz=179,slow=11,SNR=7.5							
TXAR				LR		LR	12 54 21.4	
	comp=Z,276nm,18.5s,baz=0.0,slow=35							
PFO	**Pinyon Flats O**	**28.11**	**336**	LR		LR	12 56 55.5	
	comp=Z,115nm,18.4s,baz=146,slow=32							
ROSC	**El Rosal**	**28.74**	**95**	LR		LR	12 57 10.9	
	comp=Z,87nm,20.1s,baz=330,slow=32							
ATAH	**Atahualpa**	**28.95**	**121**	LR		LR	12 57 37.2	
	comp=Z,148nm,20.1s,baz=286,slow=32							
NVAR	**Mina Array Bea**	**33.04**	**338**	P		**P**	**12 48 42.6**	**+0.6**
	0.3nm,0.7s,baz=155,slow=11,SNR=1.4							
NVAR				LR		LR	12 59 50.6	
	comp=Z,61nm,21.3s,baz=206,slow=32							
PDAR	**Pinedale Array**	**34.85**	**352**	P		**P**	**12 48 57.9**	**+0.2**
	0.8nm,1.0s,baz=153,slow=7.6,SNR=4.1							
TAOE	**Nuku Hiva Isla**	**40.67**	**246**	*e*LR		LR	13 00 26.8	
	comp=Z,102nm,25.3s							
ULM	**Lac du Bonnet**	**42.29**	**7**	LR		LR	13 07 01.5	
	comp=Z,35nm,18.2s,baz=146,slow=35							
H03N2	**Juan Fernandez**	**47.38**	**152**	T		T	13 41 53.0	
	baz=329,slow=77,SNR=13							
H03N1	**Juan Fernandez**	**47.39**	**152**	T		T	13 41 54.4	
	baz=329,slow=77,SNR=24							
H03N3	**Juan Fernandez**	**47.40**	**152**	T		T	13 41 46.1	
	baz=329,slow=77,SNR=18							
PPT	**Papeete**	**52.63**	**241**	LR		LR	13 08 09.4	
	comp=Z,57nm,18.1s,baz=14,slow=30							
PPT2	**Papeete2**	**52.64**	**241**	*e*LR		LR	13 05 59.5	
	comp=Z,130nm,25.2s							
YKA	**Yellowknife Ar**	**54.79**	**353**	P		**P**	**12 51 35.8**	**0.0**
	0.1nm,0.6s,baz=164,slow=8.3,SNR=3.1							
YKA				LR		LR	13 15 24.3	
	comp=Z,89nm,18.7s,baz=0.0,slow=36							
TBI	**Tubuai**	**55.17**	**234**	*e*LR		LR	13 07 13.0	
	comp=Z,120nm,29.2s							
ILAR	**Eielson Array**	**64.22**	**341**	P		**P**	**12 52 41.2**	**+0.3**
	0.3nm,0.8s,baz=129,slow=2.4,SNR=3.0							
CMAR	**Chiang Mai Arr**	**145.71**	**321**	PKPbc		**PKPdf**	**13 01 45.4**	**-0.5**
	0.4nm,0.4s,baz=137,slow=25,SNR=1.2							

*IDC **08** 13:19:17.5±7.6, 22°.95S×178°.12W, h335km±79km, mb3.3/7, mb1 3.6/9, mb1mx3.4/24, mbtmp4.0/9, Error ellipse: s-maj=46.1km s-min=25.8km az=172.0*

ISC 08 13:19:14.0±0.8, 22°.9S±0°.2×178°.0W±0°.2, h300km, n13, σ1§09°/13, mb3.6/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
DZM	**Mont Dzumac**	**14.41**	**270**	P		**Pn**	**13 22 27.1**	**+1.4**
	0.7nm,0.3s,baz=83,slow=18,SNR=7.2							
URZ	**Urewera**	**15.85**	**194**	P		**P**	**13 22 39.8**	**-0.4**
	0.5nm,0.3s,baz=258,slow=6.4,SNR=6.3							
ASAR	**Alice Springs**	**44.02**	**259**	P		**P**	**13 26 52.5**	**-0.3**
	2.7nm,0.6s,baz=97,slow=6.7,SNR=54							
WRA	**Warramunga Arr**	**44.33**	**264**	P		**P**	**13 26 54.5**	**-0.7**
	1.4nm,0.3s,baz=90,slow=5.8,SNR=116							
PETK	**Petropavlovsk-**	**78.61**	**345**	P		**P**	**13 30 41.6**	**-0.9**
	1.1nm,0.7s,baz=131,slow=8.5,SNR=4.5							
NVAR	**Mina Array Bea**	**82.78**	**43**	P		**P**	**13 31 05.9**	**+0.8**
	0.4nm,0.6s,baz=230,slow=9.0,SNR=3.7							
TXAR	**Lajitas Array**	**88.35**	**57**	P		**P**	**13 31 34.0**	**+1.6**
	0.5nm,1.0s,baz=193,slow=3.5,SNR=3.5							
ILAR	**Eielson Array**	**90.67**	**13**	P		**P**	**13 31 41.4**	**-0.9**
	0.3nm,0.4s,baz=216,slow=5.2,SNR=8.6							
PDAR	**Pinedale Array**	**90.72**	**43**	P		**P**	**13 31 43.9**	**+0.6**
	0.3nm,0.6s,baz=256,slow=3.1,SNR=3.8							
ARCES	**ARCESS Array B**	**131.30**	**349**	PKP		**PKPdf**	**13 37 48.8**	**-1.0**
	0.9nm,0.5s,baz=342,slow=4.4,SNR=8.5							
FINES	**FINESS Array B**	**138.09**	**343**	PKP		**PKiKP**	**13 38 03.7**	**-1.0**
	2.0nm,0.8s,baz=50,slow=2.2,SNR=3.6							
NOA	**NORSAR Array B**	**141.38**	**353**	PKP		**PKPdf**	**13 38 09.7**	**+1.0**
	0.3nm,0.5s,baz=20,slow=3.9,SNR=1.6							
GERES	**GERESS Array B**	**152.52**	**343**	PKPbc		**PKPbc**	**13 38 33.9**	**-0.9**
	0.7nm,0.6s,baz=344,slow=1.9,SNR=4.2							

IDC 08 13:35:11.3±4.0, 18°.89S×178°.73W, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/31, mbtmp3.5/3, Error ellipse: s-maj=295.7km s-min=36.3km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
WRA	**Warramunga Arr**	**44.17**	**261**	P		P	13 43 22.1	-0.1
	0.2nm,0.3s,baz=96,slow=7.5,SNR=6.7							
ASAR	**Alice Springs**	**44.24**	**255**	P		P	13 43 22.6	-0.2
	0.4nm,0.5s,baz=91,slow=7.9,SNR=6.9							
PDAR	**Pinedale Array**	**88.27**	**44**	P		P	13 48 04.9	0.0
	0.6nm,0.8s,baz=236,slow=4.2,SNR=3.9							

*IDC **08** 14:04:41.2±2.9, 19°.21S×168°.99E, h115km±27km, mb3.8/9, mb1 4.1/11, mb1mx3.8/24, mbtmp4.3/11, MS3.3/2, Ms1 3.3/2, ms1mx2.7/38, Error ellipse: s-maj=23.7km s-min=21.3km az=152.0*

*NEIC **08** 14:04:42.7±2.0, 19°.38S±0°.04×169°.0E±0°.1, h132km±7km, mb4.1/14, Error ellipse: s-maj=16.8km s-min=5.3km az=98.0*

ISC 08 14:04:39.4±0.6, 19°.26S±0°.08×169°.04E±0°.10, h104km, n49, σ1§55°/45, mb4.0/13, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
DZM	**Mont Dzumac**	**3.70**	**221**	P		**Pn**	**14 05 37.2**	**+2.4**
	9.1nm,0.3s,baz=68,slow=11,SNR=196							
DZM				S		**Sn**	**14 06 19.7**	**+2.1**
	74nm,0.3s,baz=320,slow=23,SNR=27							
HNR	**Honiara**	**13.15**	**317**	P		**Pn**	**14 07 44.3**	**+2.1**
	8.5nm,0.3s,baz=176,slow=8.5,SNR=2.6							
HNR				LR		LR	14 12 40.1	
	comp=Z,48nm,19.2s,baz=150,slow=37							
HNR	**Honiara**	**13.15**	**317**	P		**P**	**14 07 47.9**	**-0.5**
FUNA	**Funafuti**	**14.52**	**44**	P		**P**	**14 08 03.2**	**-0.4**
OUZ	**Omahuta**	**16.40**	**167**	Pn		**Pn**	**14 08 23.0**	**-0.4**
OUZ				IAmb		IAmb	14 08 28.7	
	comp=Z,24nm,1.1s							
ARMA	**Armidale**	**19.29**	**231**	P		**P**	**14 08 52.5**	**-3.7**
ARMA				IAmb		IAmb	14 09 07.5	
	comp=Z,9.4nm,1.1s							
URZ	**Urewera**	**20.19**	**161**	P		Pn	14 09 08.0	-0.5
	comp=Z,3.9nm,0.4s,baz=315,slow=3.0,SNR=11							
URZ	**Urewera**	**20.19**	**161**	IAmb		IAmb	14 09 20.3	
	comp=Z,15nm,1.0s							
COEN	**Coen**	**25.32**	**278**	P		**P**	**14 09 51.0**	**-5.7**
COEN				IAmb		IAmb	14 09 57.5	
	comp=Z,3.6nm,0.8s							
STKA	**Stephens Creek**	**27.67**	**238**	P		**P**	**14 10 19.9**	**+2.3**
	comp=Z,2.4nm,0.8s,baz=92,slow=8.6,SNR=5.6							
STKA	**Stephens Creek**	**27.67**	**238**	P		**P**	**14 10 15.7**	**-1.9**
RAR	**Rarotonga**	**29.30**	**99**	LR		LR	14 19 06.1	
	comp=Z,154nm,20.0s,baz=270,slow=30							
BBOO	**Buckleboo**	**32.41**	**239**	P		**P**	**14 10 58.5**	**-1.0**
WR0	**Warramunga Arr**	**32.47**	**263**	P		**P**	**14 10 56.9**	**-3.2**
WB0	**Warramunga Arr**	**32.63**	**263**	P		**P**	**14 11 01.9**	**+0.3**
WB0				IAmb		IAmb	14 11 07.4	
	comp=Z,1.1nm,0.5s							
WB2	**Warramunga Arr**	**32.65**	**263**	P		**P**	**14 11 02.3**	**+0.6**
WRAB	**Tennant Creek**	**32.65**	**263**	P		**P**	**14 11 01.6**	**-0.1**
WRAB				IAmb		IAmb	14 11 02.0	
	comp=Z,1.5nm,0.8s							
WRA	**Warramunga Arr**	**32.66**	**263**	P		**P**	**14 11 00.8**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=81,slow=6.1,SNR=15							
AS31	**Alice Springs**	**32.94**	**256**	P		**P**	**14 11 05.5**	**+1.3**
AS31				IAmb		IAmb	14 11 05.8	
	comp=Z,2.9nm,0.5s							
ASAR	**Alice Springs**	**32.94**	**256**	P		**P**	**14 11 05.2**	**+1.0**
	comp=Z,4.2nm,0.5s,baz=82,slow=8.6,SNR=120							
MTN	**Manton Dam**	**36.93**	**274**	P		**P**	**14 11 39.2**	**+0.6**
KNRA	**Kununurra**	**38.52**	**269**	P		**P**	**14 11 52.2**	**+0.2**
TBI	**Tubuai**	**38.78**	**104**	*e*LR		LR	14 11 02.7	
	comp=Z,112nm,27.2s							
FITZ	**Fitzroy Crossi**	**41.05**	**264**	P		**P**	**14 12 14.4**	**+1.5**
FITZ				IAmb		IAmb	14 12 16.4	
	comp=Z,4.2nm,0.8s							
PSA00	**Pilbara Seismi**	**46.01**	**258**	P		**P**	**14 12 52.6**	**-0.1**
PETK	**Petropavlovsk-**	**72.73**	**353**	P		**P**	**14 15 56.8**	**+0.9**
	comp=Z,4.5nm,0.8s,baz=154,slow=7.0,SNR=15							
SONM	**Songino Array**	**87.12**	**323**	P		**P**	**14 17 14.2**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=151,slow=6.4,SNR=6.9							
NVAR	**Mina Array Bea**	**88.96**	**49**	P		**P**	**14 17 23.6**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=224,slow=7.3,SNR=6.2							
SNAA	**Sanae**	**89.13**	**183**	P		**P**	**14 17 22.5**	**-0.4**
VNA3	**Neumayer Olymp**	**89.73**	**180**	P		**P**	**14 17 24.4**	**-1.2**
ILAR	**Eielson Array**	**90.31**	**17**	P		**P**	**14 17 26.6**	**-1.5**
	comp=Z,0.7nm,0.5s,baz=240,slow=5.1,SNR=16							
TXAR	**Lajitas Array**	**96.94**	**61**	P		**P**	**14 18 00.0**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=215,slow=6.2,SNR=3.9							
YKA	**Yellowknife Ar**	**100.78**	**27**	P		**Pdif**

comp=Z,3.4nm,0.5s,baz=32,slow=12,SNR=13
FITZ Fitzroy Crossi 30.39 239 P **P** **14 22 31.1 -1.1**
comp=Z,0.6nm,0.3s,baz=63,slow=4.6,SNR=10.0
FITZ Fitzroy Crossi 30.39 239 IAmb IAmb 14 22 40.1
comp=Z,1.2nm,1.1s
BBOO Buckleboo 33.29 206 P **P** **14 22 56.8 -0.5**
FORT Forrest 35.95 218 P **P** **14 23 20.3 +0.2**
VNDA Vanda 74.33 179 P **P** **14 27 52.6 -0.1**
comp=Z,1.1nm,0.6s,baz=327,slow=7.2,SNR=13
TORD Torodi Ar. Bea 149.79 291 PKPbc **PKPbc** **14 36 04.0 -0.4**
comp=Z,0.4nm,0.6s,baz=61,slow=3.2,SNR=2.8

*IDC **08** 14:33:38.7±1.6,6.87S×154.51E,h0km,mb3.7/5,*
mb1 4.0/6,mb1mx3.6/44,mbtmp3.8/6,ML4.3/1,MS2.9/1,
Ms1 2.9/1,ms1mx2.2/33,Error ellipse: s-maj=44.4km
s-min=27.0km az=123.0
*NEIC **08** 14:33:43.5±2.3,7.1S±0.2×154.6E±0.1,h35km±2km,*
mb4.0/5,Error ellipse: s-maj=44.8km s-min=7.2km
az=152.0
ISC 08 14:33:44.1±1.3,6.9S±0.1×154.5E±0.2,h39km,n15,
σ1§13/14,mb3.6/7,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.53**	**316**	Pn	**Pn**	**14 34 35.7**	**-0.7**
	26nm,0.3s,baz=222,slow=1.6,SNR=15						
WR0	**Warramunga Arr**	**23.31**	**234**	P	**P**	**14 38 48.5**	**-0.3**
WB0	**Warramunga Arr**	**23.33**	**235**	P	**P**	**14 38 50.0**	**+1.0**
WB0				IAmb	IAmb	14 38 56.5	
	comp=Z,19nm,1.4s						
WRAB	**Tennant Creek**	**23.45**	**234**	P	**P**	**14 38 51.0**	**+0.9**
WB2	**Warramunga Arr**	**23.45**	**234**	P	**P**	**14 38 50.7**	**+0.5**
WRA	**Warramunga Arr**	**23.46**	**234**	P	**P**	**14 38 48.8**	**-1.5**
	comp=Z,1.1nm,0.6s,baz=55,slow=9.5,SNR=10.0						
AS31	**Alice Springs**	**25.86**	**228**	P	**P**	**14 39 12.8**	**+0.5**
ASAR	**Alice Springs**	**25.87**	**228**	P	**P**	**14 39 13.0**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=57,slow=9.9,SNR=13						
KNRA	**Kununurra**	**26.66**	**249**	P	**P**	**14 39 18.4**	**-1.1**
STKA	**Stephens Creek**	**27.62**	**204**	P	**P**	**14 39 26.9**	**-1.1**
STKA				IAmb	IAmb	14 39 36.4	
	comp=Z,0.8nm,0.9s						
FITZ	**Fitzroy Crossi**	**30.23**	**246**	P	**P**	**14 39 51.8**	**+0.5**
	comp=Z,3.7nm,1.1s,baz=73,slow=8.1,SNR=5.9						
FITZ				LR	LR	14 51 16.2	
	comp=Z,23nm,19.0s,baz=133,slow=35						
FITZ	**Fitzroy Crossi**	**30.23**	**246**	IAmb	IAmb	14 40 03.7	
	comp=Z,4.6nm,1.1s						
MKAR	**Makanchi Array**	**82.98**	**319**	P	**P**	**14 46 06.5**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=101,slow=5.9,SNR=7.2						
NVAR	**Mina Array Bea**	**92.06**	**52**	P	**P**	**14 46 48.7**	**-0.9**
	comp=Z,0.1nm,0.4s,baz=243,slow=4.0,SNR=1.9						
TORD	**Torodi Ar. Bea**	**152.50**	**285**	PKPbc	**PKiKP**	**14 53 39.3**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=72,slow=1.8,SNR=2.3						

*UPA **08** 14:34:43.2±0.7,9.02N×78.38W,h2km±5km,MW3.7*
ISC 08 14:34:40.7±1.6,9.3N±0.1×78.29W±0.04,h19km±3km,n14,
σ0§93/26,1D,Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNTA3	**Canitas, Panam**	**0.59**	**264**	*i* P	**Pn**	**14 34 55.0**	**+1.0**
CNTA3				*e*S	**Sn**	**14 35 03.4**	**+0.2**
UPD2	**Meteti**	**0.78**	**160**	*e*P	**Pb**	**14 34 55.8**	**+0.2**
UPD2				*e*S	**Sb**	**14 35 04.4**	**-1.4**
UPD2	**Meteti**	**0.78**	**160**	⇓*i*P	**Pb**	**14 34 55.9**	**+0.2**
UPD2				*e*S	**Sb**	**14 35 04.9**	**-0.9**
CHPO	**Chepo, Panama**	**0.82**	**262**	*e*P	**Pn**	**14 34 58.3**	**+1.1**
CHPO				*e*S	**Sn**	**14 35 09.0**	**+0.2**
CAP2	**Capurgana**	**1.11**	**124**	*e*P	**Pg**	**14 35 03.6**	**+1.3**
CAP2				*e*S	**Sb**	**14 35 13.8**	**-1.7**
CAPC	**Capurgana**	**1.13**	**125**	*e*P	**Pn**	**14 35 01.5**	**+0.1**
CAPC				*e*S	**Sb**	**14 35 15.0**	**-0.9**
CAPC				*i*		14 35 17.0	
	comp=Z,106nm,0.1s						
UPA	**Univ. de Panam**	**1.26**	**256**	*e*P	**Pg**	**14 35 04.9**	**-0.2**
UPA				*e*S	**Sb**	**14 35 20.2**	**+0.4**
UPA				*i*		14 35 23.6	
	comp=Z,33nm,0.2s						
FLAM	**Flamenco Islan**	**1.28**	**253**	*e*P	**Pg**	**14 35 05.2**	**-0.3**
FLAM				*e*S	**Sg**	**14 35 21.4**	**-1.0**
FRIJ	**El Hiral**	**1.42**	**268**	*e*P	**Pg**	**14 35 07.8**	**-0.3**
CHOR3	**La Chorrera**	**1.50**	**255**	*e*S	**Sb**	**14 35 27.8**	**+1.1**
BCIP	**Isla Barro Col**	**1.53**	**266**	*e*P	**Pg**	**14 35 09.2**	**-1.1**
BCIP				*e*S	**Sg**	**14 35 28.6**	**-1.6**
BCIP				*i*		14 35 37.1	
	comp=Z,44nm,0.2s						
BCIP	**Isla Barro Col**	**1.53**	**266**	*e*P	**Pg**	**14 35 09.6**	**-0.6**
BCIP				*e*S	**Sg**	**14 35 30.0**	**-0.2**
ZANG	**Zanguenga, Cho**	**1.59**	**258**	*e*P	**Pg**	**14 35 10.5**	**-0.8**
ZANG				*e*S	**Sg**	**14 35 31.6**	**-0.5**
AZU	**Azuero**	**2.46**	**233**	*e*P	**Pg**	**14 35 28.9**	**+1.0**
AZU				*e*S	**Sn**	**14 35 49.4**	**+0.2**

IDC 08 14:57:53.1±1.9,14.83S×176.12W,h0km,mb3.8/6,
mb1 4.2/6,mb1mx3.8/22,mbtmp3.8/6,MS3.5/7,Ms1 3.5/7,
ms1mx3.3/22,Error ellipse: s-maj=126.0km
s-min=23.0km az=151.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	**16.79**	**115**	LR	LR	15 06 36.8	
	comp=Z,166nm,21.7s,baz=313,slow=31						
DZM	**Mont Dzumac**	**18.03**	**244**	*e*LR	LR	15 06 51.9	
	comp=Z,171nm,25.4s						
HNR	**Honiara**	**23.99**	**280**	LR	LR	15 11 26.3	
	comp=Z,119nm,18.7s,baz=127,slow=34						
PPT	**Papeete**	**25.63**	**100**	LR	LR	15 11 46.0	
	comp=Z,40nm,19.0s,baz=285,slow=32						
PPT2	**Papeete2**	**25.63**	**100**	*e*LQ	LQ	15 08 37.3	
PPT2				*e*LR	LR	15 09 39.4	
	comp=Z,228nm,27.2s						
TBI	**Tubuai**	**26.55**	**113**	*e*LR	LR	15 10 01.2	
	comp=Z,312nm,27.5s						
KRVT	**Keravat (AS076**	**33.05**	**285**	LR	LR	15 16 50.5	
	comp=Z,51nm,18.1s,baz=123,slow=34						
H11N3	**WAKE ISLAND Hy**	**38.17**	**334**	T	T	15 45 41.7	
	baz=152,slow=77,SNR=14						
H11N1	**WAKE ISLAND Hy**	**38.18**	**334**	T	T	15 45 41.9	
	baz=152,slow=77,SNR=32						
H11N2	**WAKE ISLAND Hy**	**38.19**	**334**	T	T	15 45 43.4	
	baz=152,slow=77,SNR=19						
WRA	**Warramunga Arr**	**47.42**	**256**	P	P	15 06 29.1	-0.6
	3.1nm,1.1s,baz=89,slow=7.9,SNR=7.7						
ASAR	**Alice Springs**	**47.79**	**251**	P	P	15 06 33.0	+0.3
	1.5nm,0.7s,baz=84,slow=8.7,SNR=23						
ASAR				LR	LR	15 24 22.3	
	comp=Z,51nm,20.4s,baz=100,slow=33						
NVAR	**Mina Array Bea**	**75.69**	**43**	P	P	15 09 40.9	0.0
	0.2nm,0.5s,baz=229,slow=8.2,SNR=4.6						
ILAR	**Eielson Array**	**82.42**	**12**	P	P	15 10 16.9	+0.1
	0.4nm,1.0s,baz=218,slow=5.5,SNR=2.9						
TXAR	**Lajitas Array**	**82.50**	**57**	P	P	15 10 18.2	+0.1
	0.9nm,1.0s,baz=235,slow=4.4,SNR=6.6						
TXAR				LR	LR	15 36 56.7	
	comp=Z,100nm,21.9s,baz=0.0,slow=28						
PDAR	**Pinedale Array**	**83.62**	**43**	P	P	15 10 23.8	-0.1
	0.7nm,1.0s,baz=230,slow=3.7,SNR=3.7						
PLCA	**Paso Flores**	**91.83**	**133**	LR	LR	15 43 54.5	
	comp=Z,28nm,19.7s,baz=172,slow=30						
BRTR	**Keskin Array B**	**144.03**	**319**	PKP	PKPbc	15 17 29.8	+0.6
	2.2nm,1.1s,baz=126,slow=2.1,SNR=7.8						
GERES	**GERESS Array B**	**145.13**	**349**	PKPbc	PKPbc	15 17 31.6	-0.6
	0.2nm,0.4s,baz=36,slow=1.8,SNR=3.5						

*ANF **08** 15:08:57.5±1.0,36.48N×96.98W,h11km±7km,ML3.5/4,*
Error ellipse: s-maj=3.0km s-min=2.2km az=50.0
*TUL **08** 15:08:57±2.4,36.453N±0.009×97.04W±0.04,h5km±7km,*
ML3.0,Error ellipse: s-maj=5.0km s-min=1.1km az=81.0
*NEIC **08** 15:08:57.1±2.7,36.45N±0.01×97.08W±0.05,h8km±7km,*
Error ellipse: s-maj=5.7km s-min=2.0km az=92.0
ISC 08 15:08:56.3±0.8,36.46N±0.03×96.88W±0.03,h10km,n56,
σ1§78/60,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	**0.55**	**33**		**Pn**	**15 09 09.4**	**-0.7**
T35A				Sg	**Sb**	**15 09 17.9**	**+2.0**
ADOK	**Arcadia Dam**	**0.90**	**206**	Pg	**Pb**	**15 09 13.3**	**-0.6**
TUL1	**Leonard**	**1.04**	**121**	P	**Pn**	**15 09 18.9**	**+2.0**
	baz=299						
TUL1				S	**Sn**	**15 09 34.5**	**+3.1**
	baz=299						
TUL1	**Leonard**	**1.04**	**121**		**Pn**	**15 09 18.7**	**+1.8**
OKCSW	**OKLAHOMA CITY**	**1.14**	**203**	Pg	**Pb**	**15 09 17.4**	**-0.8**
FNO	**Franklin**	**1.27**	**199**		**Pg**	**15 09 20.0**	**-0.7**
W35A	**Tecumseh**	**1.30**	**180**		**Pg**	**15 09 20.7**	**-0.6**
U32A	**Winter Ranch,**	**1.71**	**268**		**Pn**	**15 09 26.1**	**-0.1**
X34A	**Smith Ranch, M**	**2.01**	**203**		**Pb**	**15 09 32.2**	**-0.7**
U38A	**Gravette**	**2.01**	**90**		**Pg**	**15 09 35.0**	**+0.1**
X37A	**Clayton**	**2.24**	**146**		**Pb**	**15 09 36.6**	**-0.2**
WMOK	**Wichita Mounta**	**2.31**	**223**	P	**Pn**	**15 09 35.4**	**+1.0**
	baz=39						
WMOK				S	**Sn**	**15 10 03.9**	**+1.0**
	baz=39						
WMOK	**Wichita Mounta**	**2.31**	**223**		**Pn**	**15 09 35.2**	**+0.8**
HHAR	**Hobbs**	**2.38**	**93**		**Pg**	**15 09 40.9**	**-1.0**
R32A	**Long Quarter,**	**2.44**	**324**		**Pn**	**15 09 37.5**	**+1.3**
KSU1	**Kansas State U**	**2.65**	**5**	Pb	**Pb**	**15 09 44.4**	**+0.7**
	baz=188						
KSU1				Sb	**Sg**	**15 10 19.7**	**-1.6**
	baz=188						
KSU1	**Kansas State U**	**2.65**	**5**	Pn	**Pn**	**15 09 38.5**	**-0.5**
W39A	**Magazine**	**2.82**	**116**	Sb	**Sg**	**15 10 26.6**	**-0.1**
	baz=296						
W39A	**Magazine**	**2.82**	**116**		**Pb**	**15 09 45.4**	**-1.2**
Z35A	**Perchaven, San**	**3.13**	**186**	Pn	**Pn**	**15 09 47.4**	**+1.7**
U40A	**Yellville**	**3.25**	**91**		**Pb**	**15 09 51.5**	**-2.6**
CBKS	**Cedar Bluff**	**3.27**	**317**		**Pn**	**15 09 48.5**	**+0.9**
MIAR	**Mount Ida**	**3.31**	**124**	Pn	**Pb**	**15 09 51.6**	**-3.4**
X40A	**Basin Creek Fa**	**3.85**	**120**		**Pn**	**15 09 56.4**	**+0.9**
FCAR	**Ozark Folk Cen**	**3.89**	**97**	Pn	**Pb**	**15 10 01.0**	**-4.0**
WHAR	**Wooly Hollow**	**3.91**	**106**		**Pn**	**15 10 00.5**	**+4.1**
UALR	**University of**	**4.06**	**113**	Pn	**Pn**	**15 10 02.9**	**+4.4**
R40A	**Maddies Statio**	**4.11**	**62**		**Pn**	**15 10 02.0**	**+3.0**
P38A	**Dawn**	**4.12**	**39**		**Pn**	**15 10 02.8**	**+3.5**
WLAR	**White Oak Lake**	**4.15**	**131**	Pn	**Pn**	**15 10 00.4**	**+0.7**
AMTX	**Amarillo**	**4.21**	**249**		**Pn**	**15 09 59.0**	**-1.6**
N33A	**J Bar K, Exete**	**4.30**	**354**	Pn	**Pn**	**15 10 02.7**	**+1.0**
ABTX	**Abilene, Hawle**	**4.45**	**212**	Pn	**Pn**	**15 10 03.2**	**-0.7**
WHTX	**Lake Whitney,**	**4.48**	**186**	Pn	**Pn**	**15 10 03.0**	**-1.3**
N35A	**Tabor**	**4.50**	**12**	Pn	**Pn**	**15 10 07.0**	**+2.4**
237A	**Washetta, Mont**	**4.53**	**168**	Pn	**Pn**	**15 10 04.5**	**-0.4**
LCAR	**Lake Charles**	**4.65**	**93**	Pn	**Pn**	**15 10 05.1**	**-1.4**
T42A	**Van Buren**	**4.69**	**81**		**Pn**	**15 10 07.7**	**+0.7**
CCM	**Cathedral Cave**	**4.77**	**69**		**Pn**	**15 10 08.2**	**0.0**
P40A	**Paris**	**4.90**	**50**		**Pn**	**15 10 11.7**	**+1.7**
BGNE	**Belgrade**	**5.04**	**349**	Pn	**Pn**	**15 10 11.7**	**-0.2**
N38A	**Joes South For**	**5.18**	**32**	Pn	**Pn**	**15 10 14.2**	**+0.3**
PBMO	**Poplar Bluff**	**5.20**	**85**	Pn	**Pn**	**15 10 15.8**	**+1.7**
KSCO	**Kaye Shedlock'**	**5.22**	**301**	Pn	**Pn**	**15 10 13.6**	**-0.9**
MSTX	**Muleshoe**	**5.42**	**244**	Pn	**Pn**	**15 10 16.2**	**-1.1**
L34A	**Svendsen Farm,**	**5.51**	**4**		**Pn**	**15 10 18.4**	**-0.1**
OGNE	**Ogallala**	**6.02**	**320**	Pn	**Pn**	**15 10 22.9**	**-2.6**
S44A	**Carbondale**	**6.22**	**76**		**Pn**	**15 10 28.1**	**0.0**
K31A	**O'Neill**	**6.32**	**347**	Pn	**Pn**	**15 10 28.3**	**-1.2**
N41A	**Harden Midland**	**6.35**	**46**	Pn	**Pn**	**15 10 31.2**	**+1.2**
OXF	**Oxford**	**6.40**	**105**	Pn	**Pn**	**15 10 32.0**	**+1.5**
JCT	**Junction City**	**6.44**	**203**		**Pn**	**15 10 28.7**	**-2.5**
SDCO	**Great Sand Dun**	**7.01**	**283**		**Pn**	**15 10 38.4**	**-0.8**
L40A	**Anamosa**	**7.11**	**36**	Pn	**Pn**	**15 10 41.3**	**+0.9**
ISCO	**Idaho Springs**	**7.64**	**298**	Pn	**Pn**	**15 10 49.4**	**+1.4**
L42A	**Oliver, Polo**	**7.87**	**43**	Pn	**Pn**	**15 10 53.4**	**+2.6**

*BGR **08** 15:26:20.0±0.2,49.96N×7.86E,h10km,ML2.3/10,Error*
ellipse: s-maj=2.2km s-min=2.2km az=93.0
*LDG **08** 15:26:20.1±0.1,49.92N×7.87E,h12km,Md2.4/2,Ml2.7/28,*
Error ellipse: s-maj=1.2km s-min=1.0km az=64.0
*STR **08** 15:26:20.3±0.8,50°N±4°×±°,h8km±3km,MLv2.4/7,*
smi:scs/0.6/LOCSAT earthModelID
smi:scs/0.6/haslach_taup-2.11 preliminary
*BNS **08** 15:26:21.4±0.3,49.98N×7.85E,h13km±8km,ML2.2*
*PRU **08** 15:26:24.6±0.0,49.88N×8.19E,h24km,Bad Kreuznach*
ISC 08 15:26:18.7±0.8,49.91N±0.01×7.83E±0.01,h17km±2km,
n106,σ1§14/184,11C-2D,Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABH	**Alteburg**	**0.19**	**262**	⇑Pg	**Pb**	**15 26 24.8**	**+1.0**
ABH				Sg	**Sb**	**15 26 27.9**	**+0.8**
ABH	**Alteburg**	**0.19**	**262**	Pg	**Pb**	**15 26 24.6**	**+0.9**
ABH				Sg	**Sb**	**15 26 27.6**	**+0.6**
IMS	**Imsbach**	**0.32**	**172**	⇑Pg	**Pb**	**15 26 27.1**	**+1.3**
IMS				Sg	**Sb**	**15 26 31.9**	**+1.2**
BGG	**Burgeitz**	**0.44**	**313**	*e*Pg	**Pb**	**15 26 29.0**	**+1.0**
FACH	**Fachingen**	**0.46**	**13**	⇑*i*Pg	**Pg**	**15 26 28.4**	**+0.4**
FACH				Sg	**Sg**	**15 26 33.7**	**-0.7**
TNS	**Taunus Mts**	**0.51**	**51**	⇑*e*Pg	**Pg**	**15 26 29.1**	**+0.2**
TNS				Sg	**Sg**	**15 26 35.0**	**-0.8**
KOE	**Koeppel**	**0.52**	**353**	*e*Pg	**Pb**	**15 26 30.0**	**+0.6**
WBB	**Darmstadt**	**0.54**	**96**	⇓Pg	**Pg**	**15 26 29.8**	**+0.3**
GWBC	**Aumenau**	**0.56**	**30**	⇑Pg	**Pb**	**15 26 30.4**	**+0.3**
KTD	**Kalmit**	**0.61**	**164**	*e*Pg	**Pn**	**15 26 32.8**	**+0.2**
KTD				PmP		15 26 34.0	
KTD				Sg	**Sb**	**15 26 40.6**	**+1.4**
KTD				SmS		15 26 43.8	
KTD	**Kalmit**	**0.61**	**164**	Pg	**Pn**	**15 26 32.5**	**-0.1**
BHE	**Schloss Buerre**	**0.61**	**317**	⇑*e*Pg	**Pb**	**15 26 32.1**	**+1.1**
BHE				*e*Sg	**Sb**	**15 26 40.6**	**+1.3**
	162nm,0.1s						
LAGB	**Langenfeld Gru**	**0.66**	**314**	⇓Pg	**Pb**	**15 26 32.8**	**+1.1**
LAGB				P*	**Pn**	**15 26 33.2**	**0.0**
LAGB				Sg	**Sg**	**15 26 40.5**	**+0.1**
LAGB				SmS		15 26 42.8	
WBA	**Furth**	**0.69**	**111**	Pg	**Pb**	**15 26 32.8**	**+0.6**
WBA				PmP		15 26 33.9	
TOD	**Tromm**	**0.70**	**115**	Pg	**Pg**	**15 26 32.6**	**+0.2**
TOD				PmP		15 26 33.9	
TOD				SmS		15 26 43.7	
SWS	**Schriesheim-Wi**	**0.70**	**127**	⇑Pg	**Pb**	**15 26 33.3**	**+0.8**
SWS				Sg	**Sb**	**15 26 42.5**	**+0.7**
SWS				S*	**Sn**	**15 26 44.0**	**-0.2**
RIVT	**Riveris**	**0.72**	**254**	Pg	**Pb**	**15 26 34.1**	**+1.3**
RIVT				PmP		15 26 35.1	
RIVT				*e*Sg	**Sg**	**15 26 43.0**	**+0.6**
RIVT				SmS		15 26 45.8	
AHRW	**Bad Neuenahr-A**	**0.80**	**323**	Pg	**Pn**	**15 26 35.3**	**+0.2**
AHRW				*e*Sg	**Sg**	**15 26 44.7**	**-0.3**
BIW	**Bindweide**	**0.82**	**0**	Pg	**Pb**	**15 26 35.1**	**+0.6**
BIW				Sg	**Sg**	**15 26 45.5**	**-0.3**
HILG	**Hillesheim**	**0.84**	**298**	*e*Pg	**Pn**	**15 26 36.5**	**+0.7**
DUP	**Duppenweiler**	**0.84**	**234**	Pg	**Pn**	**15 26 36.5**	**+0.8**
DUP				PmP		15 26 37.6	
DUP				SmS		15 26 49.6	
PEB	**Petersbachel**	**0.84**	**185**	Pg	**Pn**	**15 26 36.4**	**+0.6**
PEB				PmP		15 26 37.1	
PEB				Sg	**Sb**	**15 26 47.7**	**+1.8**
TDN	**Todenfeld**	**0.88**	**320**	*e*Pg	**Pn**	**15 26 36.9**	**+0.6**
TDN				*e*Sg	**Sb**	**15 26 48.4**	**+1.4**
	85nm,0.2s						
LOH	**Wallersheim-Lo**	**0.88**	**289**	*e*Pg	**Pn**	**15 26 37.5**	**+1.2**
LOH				*e*Sg	**Sn**	**15 26 49.3**	**+0.5**
	42nm,0.2s						
LANF	**Langenberg**	**0.93**	**181**	Sg	**Sn**	**15 26 50.3**	**+0.5**
LANF	**Langenberg**	**0.93**	**181**	Pg	**Pb**	**15 26 37.0**	**+0.7**
LANF				Pn	**Pn**	**15 26 38.5**	**+1.6**
LANF	**Langenberg**	**0.93**	**181**	Sg	**Sn**	**15 26 50.3**	**+0.5**
STB	**Steinbach**	**0.94**	**318**	*e*Pg	**Pn**	**15 26 37.8**	**+0.7**
WBS	**Wahnbachtalspe**	**0.97**	**339**	*e*Pg	**Pn**	**15 26 38.0**	**+0.5**
WBS				*e*Sg	**Sg**	**15 26 50.4**	**+0.2**
	75nm,0.2s						
BLI	**Bleialf**	**1.05**	**289**	P*	**Pn**	**15 26 39.6**	**+1.0**
BLI				PmP		15 26 40.2	
BRET	**Bretten**	**1.05**	**148**	SmS		15 26 54.9	
LVIA	**Vianden**	**1.05**	**272**	P	**Pg**	**15 26 40.0**	**+0.9**
LVIA				S	**Sb**	**15 26 52.7**	**+0.8**
	comp=E,41nm,0.1s						
OLFT	**Oleftalsperre**	**1.08**	**303**	*e*Pg	**Pg**	**15 26 40.6**	**+0.9**
OLFT				*e*Sg	**Sn**	**15 26 54.8**	**+1.2**
WLF	**Walferdange**	**1.12**	**258**	P	**Pg**	**15 26 40.7**	**+0.4**
WLF				S	**Sb**	**15 26 54.9**	**+1.2**
	comp=E,25nm,0.2s						
WLF	**Walferdange**	**1.12**	**258**	*e*Pn	**Pg**	**15 26 41.2**	**+0.9**
WLF				PmP		15 26 41.9	
WLF				SmS		15 26 56.7	
HOBG	**Hohbusch**	**1.12**	**344**	*e*Pg	**Pg**	**15 26 40.7**	**+0.2**
LKLB	**Kalborn**	**1.13**	**281**	⇑P	**Pg**	**15 26 40.9**	**+0.3**
LKLB				S	**Sb**	**15 26 55.0**	**+0.8**
	comp=N,22nm,0.3s						
KLL	**Kalltalsperre**	**1.23**	**308**	*e*Pg	**Pb**	**15 26 42.2**	**+0.8**
GSH	**Grosshau**	**1.25**	**312**	*e*Pg	**Pg**	**15 26 43.0**	**+0.2**
GSH				*e*Sg	**Sg**	**15 26 59.0**	**-0.1**
	comp=N,30nm,0.2s						
BHOU	**Houvegnez**	**1.26**	**292**	P	**Pn**	**15 26 41.6**	**+0.1**
BHOU				S	**Sb**	**15 26 57.9**	**+0.1**
	comp=E,24nm,0.1s						
PLH	**Pulheim**	**1.28**	**330**	*e*Sg	**Sn**	**15 26 59.2**	**+0.8**
SIND	**Sindeldorf**	**1.28**	**115**	Pn	**Pn**	**15 26 42.6**	**+0.8**
SIND				PmP		15 26 44.6	
BTNL	**Ternell**	**1.29**	**303**	P	**Pb**	**15 26 43.2**	**+0.8**
BTNL				S	**Sb**	**15 26 58.6**	**-0.2**
ENTS	**Ennepetalsperr**	**1.36**	**349**	*e*Pg	**Pb**	**15 26 44.3**	**+0.5**
ENTS				*e*Sg	**Sn**	**15 27 01.1**	**+0.5**
MEM	**Membach**	**1.37**	**302**	⇑P	**Pb**	**15 26 44.3**	**+0.5**
MEM				S	**Sn**	**15 27 01.4**	**+0.7**
	comp=E,11nm,0.2s						
MEM	**Membach**	**1.37**	**302**	Pn	**Pb**	**15 26 44.3**	**+0.5**
MEM				*e*Sg	**Sg**	**15 27 03.4**	**+0.5**
LBG	**Lerchenberg**	**1.39**	**153**	Sn	**Sn**	**15 27 02.1**	**+0.7**
OPP	**Oppenau**	**1.43**	**171**	Pg	**Pg**	**15 26 48.0**	**+1.7**
OPP	**Oppenau**	**1.43**	**171**	Pg	**Pg**	**15 26 47.4**	**+1.1**
SORT	**Sorpetalsperre**	**1.45**	**3**	*e*Sg	**Sn**	**15 27 02.9**	**+0.3**
	comp=E,37nm,0.2s						
HGN	**Heimansgroeve**	**1.49**	**306**	*e*Pn	**Pb**	**15 26 46.1**	**+0.2**
HGN				*e*Pg	**Pg**	**15 26 47.4**	**0.0**
HGN				*e*Sn	**Sb**	**15 27 05.1**	**+0.6**
WLS	**Welschbruch**	**1.53**	**192**	Pg	**Pg**	**15 26 48.1**	**0.0**
CDF	**Champ du Feu**	**1.54**	**194**	*e*Pn	**Pn**	**15 26 46.4**	**+1.0**
CDF	**Champ du Feu**	**1.54**	**194**	*e*Pg	**Pg**	**15 26 48.7**	**+0.3**
CDF				*e*Sg	**Sg**	**15 27 09.5**	**+1.1**
	comp=E,16nm,0.3s						
BUG	**Bochum--Univer**	**1.58**	**347**	*e*Pn	**Pn**	**15 26 45.7**	**-0.1**
BUG				*e*Sg	**Sb**	**15 27 08.2**	**+1.2**
BFO	**Black Forest**	**1.61**	**168**	Pn	**Pn**	**15 26 47.9**	**+1.5**
BFO				Sn	**Sn**	**15 27 06.5**	**-0.3**
UBBA	**Unterbreizbach**	**1.66**	**56**	*e*Pg	**Pg**	**15 26 50.6**	**0.0**
UBBA				*e*Sg	**Sb**	**15 27 10.9**	**+1.6**
BCLA	**Clavier**	**1.71**	**288**	P	**Pn**	**15 26 49.1**	**+1.5**
BCLA				S	**Sn**	**15 27 08.5**	**-0.5**
	comp=N,8.3nm,0.2s						
ECH	**Echery**	**1.75**	**195**	Pn	**Pn**	**15 26 49.3**	**+1.1**
ECH				Pg	**Pg**	**15 26 52.8**	**+0.5**
ECH				*e*Sg	**Sg**	**15 27 15.0**	**-0.1**
ECH	**Echery**	**1.75**	**195**	Pn	**Pn**	**15 26 49.1**	**+0.8**
ECH				Pg	**Pg**	**15 26 52.3**	**0.0**
ECH				Sn	**Sb**	**15 27 14.0**	**+2.0**
BUCH	**Bad Urach**	**1.77**	**145**	Pg	**Pg**	**15 26 53.9**	**+1.2**
BUCH				Sg	**Sg**	**15 27 16.5**	**+0.9**
BGES	**Gesves**	**1.83**	**286**	⇑P	**Pn**	**15 26 50.9**	**+1.5**
BGES				S	**Sn**	**15 27 13.6**	**+1.5**
	comp=N,8.1nm,0.2s						
PAGF	**Fort de Pagny**	**1.93**	**226**	*e*Pn	**Pn**	**15 26 51.1**	**+0.3**
	baz=47						
PAGF	**Fort de Pagny**	**1.93**	**226**	*e*Pg	**Pb**	**15 26 55.0**	**+1.5**
PAGF				*e*Sn	**Sn**	**15 27 14.3**	**-0.3**
	comp=N,7.4nm,0.3s						
PAGF				*e*Sg	**Sg**	**15 27 22.0**	**+1.0**
	comp=N,18nm,0.3s,baz=49						
GIVF	**Givet**	**1.95**	**277**	*e*Pn	**Pn**	**15 26 52.5**	**+1.5**
GIVF	**Givet**	**1.95**	**277**	*e*Pg	**Pg**	**15 26 56.8**	**+0.6**
GIVF				*e*Sn	**Sn**	**15 27 15.6**	**+0.5**
GIVF				*e*Sg	**Sg**	**15 27 21.4**	**-0.1**
	comp=N,20nm,0.2s						
KIZ	**Kirchzarten**	**1.95**	**178**	Pn	**Pb**	**15

GRR Gorron 5.90 258 *e*Sn **Sn** 15 28 48.6 -3.8
comp=N,2.0nm,0.3s

MAN 08 15:33:24.5, 6˚.16N×125˚.87E, h130km, mb4.4, ML3.2, MS3.0, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.17**	**252**	*e*P	Pn	15 33 43.0	+0.8
DDMP				*e*S	Sn	15 33 57.4	+1.7
MATI	**Mati**	**0.87**	**26**	*e*P	Pn	15 33 46.6	+0.4
MATI				*e*S	Sn	15 34 04.5	+1.7
KCP	**Kidapawan**	**1.15**	**317↓**	*e*P	Pn	15 33 53.7	+4.8
KCP				*i* S	Sn	15 34 20.2	+13
SKMP	**Bagumbayan, Su**	**1.37**	**285**	*e*P	Pn	15 33 52.5	+1.4
SKMP				*e*S	Sn	15 34 12.4	+1.0

IDC 08 15:42:29.1±1.6, 6˚.93S×129˚.79E, h0km, mb3.9/2, mb1 3.9/4, mb1mx3.5/26, mbtmp3.8/4, ML3.8/2, Error ellipse: s-maj=119.6km s-min=24.6km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.67**	**162**	Pn	Pn	15 45 43.9	-0.5
	0.5nm,0.3s,baz=346,slow=13,SNR=38						
WRA				Sn	Sn	15 48 07.3	-10
	1.0nm,0.3s,baz=336,slow=23,SNR=11						
ASAR	**Alice Springs**	**17.11**	**167**	P	Pn	15 46 30.2	+0.4
	0.3nm,0.3s,baz=351,slow=14,SNR=28						
ASAR				S	Sn	15 49 33.1	-7.7
	0.3nm,0.3s,baz=356,slow=26,SNR=7.0						
STKA	**Stephens Creek**	**27.16**	**158**	P	P	15 48 14.2	0.0
	0.8nm,0.4s,baz=347,slow=14,SNR=6.1						
MKAR	**Makanchi Array**	**68.05**	**327**	P	P	15 53 30.6	0.0
	0.7nm,0.6s,baz=121,slow=7.8,SNR=11						

MAN 08 15:46:44.7, 6˚.47N×123˚.76E, h9km, mb4.5, ML3.4, MS3.2, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKMP	**Bagumbayan, Su**	**0.78**	**86**	*e*P	Pg	15 46 58.6	-1.1
SKMP				*e*S	Sg	15 47 06.5	-3.4
CTBH	**Cotabato--PC H**	**0.89**	**33↓**	*e*P	Pb	15 47 02.4	+0.1
GSPH	**General Santos**	**1.24**	**108↓**	*e*P	Pg	15 47 10.2	+1.7
GSPH				*i* S	Sn	15 47 29.0	+3.7
PAGZ	**Pagadian**	**1.42**	**345**	*e*P	Pn	15 47 10.3	-0.5
PAGZ				*e*S	Sn	15 47 29.3	-0.3
KCP	**Kidapawan**	**1.43**	**68↑**	*e*P	Pn	15 47 10.6	-0.2
KCP				*i* S	Sn	15 47 29.6	-0.1
DDMP	**Don Marcelino,**	**1.97**	**100**	*e*P	Pn	15 47 19.0	+0.7
DDMP				*e*S	Sb	15 47 44.4	-1.1

*KRSC **08** 15:52:44.5±2.4, 49˚.46N×156˚.56E, h66km±22km, ML5.4, FELT [III-IV] at Severo-Kurilsk; [III] at RNS Podgornay, cape Vasilyeva, lighthouse Chibuiny.*
*BJI **08** 15:52:45.8±0.0, 49˚.75N×156˚.05E, h59km, mB4.9/52, mb4.9/71, Ms4.5/67, Ms7 4.3/63*
*NEIC **08** 15:52:47.8±1.5, 49˚.63N±0˚.08×156˚.2E±0˚.1, h57km±4km, mb5.2/408, Error ellipse: s-maj=12.4km s-min=9.2km az=139.0*
*IDC **08** 15:52:47.7±0.6, 49˚.75N×155˚.99E, h51km±5km, mb4.5/42, mb1 4.7/48, mb1mx4.6/52, mbtmp4.8/48, MS4.1/31, Ms1 4.1/31, ms1mx4.0/45, Error ellipse: s-maj=10.6km s-min=8.1km az=162.0*
*MOS **08** 15:52:47.8±0.9, 49˚.67N×156˚.06E, h77km, mb5.3/120, Error ellipse: s-maj=5.8km s-min=2.7km az=76.2*
MOS Felt (III-IV) at Severo-Kuril'sk.
*GCMT **08** 15:52:48.8±0.2, 49˚.62N±0˚.02×156˚.43E±0˚.02, h51km±1km, MW5.0/105, Moment Tensor Solution. s61,c77; s105,c156; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.79±.14; $M_{\theta\theta}$-0.93±.12; $M_{\phi\phi}$-1.86±.12; $M_{r\theta}$-1.10±.10; $M_{\theta\phi}$-2.21±.07; $M_{\phi r}$-2.33±.09; Best double couple: M_o4.14100×10^{16} NP1:ϕ_s53.00000°, δ27.00000°, λ112.00000°. NP2:ϕ_s209.00000°, δ65.00000°, λ79.00000°. Principal axes: T 3.7640, Plg68.0000°, Azm97.0000°; N 0.7580, Plg10.0000°, Azm213.0000°; P -4.5170, Plg19.0000°, Azm307.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **08** 15:52:54.1±0.0, 50˚.96N×156˚.16E, h33km, mb4.9*

ISC 08 15:52:48.0±0.4, 49˚.61N±0˚.04×156˚.18E±0˚.03, h62km±2km, h61km:pP-P, n1351, s1908/1393, mb5.1/359, 33C-38D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.08**	**358**	*e*P	**Pn**	**15 53 07.3**	**+0.1**
SKR				*e*S	**Sn**	**15 53 22.6**	**+1.2**
SKR	**Severo-Kuril's**	**1.08**	**358↓**	*i*PN	**Pn**	**15 53 07.4**	**+0.2**
SKR				*e*S	**Sn**	**15 53 22.4**	**+1.0**
SKR				pmax	pmax		
	comp=Z,7μm,0.6s						
SKR				smax	smax		
	comp=N,16μm,0.5s						
SKR				smax	smax		
	comp=E,13μm,0.6s						
ALID	**Alaid**	**1.33**	**342**	*e*P	**Pn**	**15 53 12.1**	**+1.5**
ALID	**Alaid**	**1.33**	**342**	PN	**Pn**	**15 53 12.1**	**+1.5**
PAU	**Pauzhetka**	**1.91**	**12**	*e*P	**Pn**	**15 53 18.6**	**+0.4**
PAU				*e*S	**Sn**	**15 53 42.7**	**+1.5**
PAU	**Pauzhetka**	**1.91**	**12**	PN	**Pn**	**15 53 18.6**	**+0.4**
PAU				S	**Sn**	**15 53 42.7**	**+1.5**
KDTR	**Khodutka, Kamc**	**2.52**	**28**	*e*P	**Pn**	**15 53 26.0**	**-0.5**
KDTR				*e*S	**Sn**	**15 53 55.2**	**-0.7**
KDTR	**Khodutka, Kamc**	**2.52**	**28**	PN	**Pn**	**15 53 26.0**	**-0.5**
KDTR				S	**Sn**	**15 53 55.2**	**-0.7**
MIPR	**Malaya Ipel'ka**	**2.70**	**8**	*e*P	**Pn**	**15 53 30.2**	**+1.2**
MIPR	**Malaya Ipel'ka**	**2.70**	**8**	PN	**Pn**	**15 53 30.2**	**+1.2**
ASAK	**Asacha**	**2.99**	**21**	*e*P	**Pn**	**15 53 34.0**	**+1.0**
ASAK	**Asacha**	**2.99**	**21**	PN	**Pn**	**15 53 34.0**	**+1.0**
MTVR	**Mutnovka**	**3.15**	**23**	*e*P	**Pn**	**15 53 35.6**	**+0.4**
MTVR				*e*S	**Sn**	**15 54 12.3**	**+0.7**
MTVR	**Mutnovka**	**3.15**	**23**	PN	**Pn**	**15 53 35.6**	**+0.4**
MTVR				S	**Sn**	**15 54 12.3**	**+0.7**
GRL	**Gorelyy**	**3.18**	**21**	*e*P	**Pn**	**15 53 36.5**	**+0.8**
GRL				*e*S	**Sn**	**15 54 13.5**	**+1.0**
GRL	**Gorelyy**	**3.18**	**21**	PN	**Pn**	**15 53 36.5**	**+0.8**
GRL				S	**Sn**	**15 54 13.5**	**+1.0**
RUS	**Russkaya**	**3.19**	**27**	*e*P	**Pn**	**15 53 35.2**	**-0.5**
RUS				*e*S	**Sn**	**15 54 11.4**	**-1.1**
RUS	**Russkaya**	**3.19**	**27**	PN	**Pn**	**15 53 35.2**	**-0.5**
RUS				S	**Sn**	**15 54 11.4**	**-1.1**
APC	**Apacha**	**3.38**	**10**	*e*P	**Pn**	**15 53 38.9**	**+0.6**
APC	**Apacha**	**3.38**	**10**	PN	**Pn**	**15 53 38.9**	**+0.6**
KRMR	**Karymshinskiy**	**3.45**	**20**	*e*P	**Pn**	**15 53 40.7**	**+1.4**
KRMR				*e*S	**Sn**	**15 54 21.5**	**+2.6**
KRMR	**Karymshinskiy**	**3.45**	**20**	PN	**Pn**	**15 53 40.7**	**+1.4**
KRMR				S	**Sn**	**15 54 21.5**	**+2.6**
PETK	**Petropavlovsk-**	**3.63**	**15**	P	**Pn**	**15 53 42.7**	**+0.9**
	comp=E,40nm,0.3s,baz=180,slow=13,SNR=737						
PETK				LR	LR	15 55 28.1	
	comp=E,4μm,20.1s,baz=184,slow=46						
PET	**Petropavlovsk**	**3.76**	**23**	*e*P	**Pn**	**15 53 44.0**	**+0.6**
PET				*e*S	**Sn**	**15 54 27.8**	**+1.4**
PET	**Petropavlovsk**	**3.76**	**23↑**	*i*PN	**Pn**	**15 53 44.0**	**+0.6**
PET				*i* S	**Sn**	**15 54 28.0**	**+1.6**
PET				pmax	pmax		
	comp=Z,700nm,2.7s						
PET				pmax	pmax		
	comp=Z,200nm,5.5s						
PET				pmax	pmax		
	comp=Z,389nm,0.4s						
PET				smax	smax		
	comp=E,2μm,0.5s						
PET				smax	smax		
	comp=N,2μm,0.7s						
PET				MLR	MLR		
	comp=Z,2μm,13.0s						
PET	**Petropavlovsk**	**3.76**	**23**		**Pn**	**15 53 43.7**	**+0.3**
DALK	**Dalny**	**3.79**	**24**	*e*P	**Pn**	**15 53 44.4**	**+0.5**
DALK				*e*S	**Sn**	**15 54 27.6**	**+0.4**
DALK	**Dalny**	**3.79**	**24**	PN	**Pn**	**15 53 44.4**	**+0.5**
DALK				S	**Sn**	**15 54 27.6**	**+0.4**
UGLR	**Uglovaya**	**3.97**	**24**	*e*P	**Pn**	**15 53 47.6**	**+1.1**
UGLR				*e*S	**Sn**	**15 54 33.3**	**+1.6**
UGLR	**Uglovaya**	**3.97**	**24**	PN	**Pn**	**15 53 47.6**	**+1.1**
UGLR				S	**Sn**	**15 54 33.3**	**+1.6**
AVH	**Avacha**	**4.00**	**23**	*e*P	**Pn**	**15 53 48.5**	**+1.7**
AVH				*e*S	**Sn**	**15 54 35.3**	**+2.9**
AVH	**Avacha**	**4.00**	**23**	PN	**Pn**	**15 53 48.5**	**+1.7**
AVH				S	**Sn**	**15 54 35.3**	**+2.9**
KOK	**Koryaka**	**4.00**	**22**	*e*P	**Pn**	**15 53 48.9**	**+2.1**
KOK	**Koryaka**	**4.00**	**22**	PN	**Pn**	**15 53 48.9**	**+2.1**
SMAR	**Somma**	**4.01**	**23**	*e*P	**Pn**	**15 53 48.0**	**+0.9**
SMAR	**Somma**	**4.01**	**23**	PN	**Pn**	**15 53 48.0**	**+0.9**
KRER	**Koryakskii**	**4.04**	**22**	*e*P	**Pn**	**15 53 48.9**	**+1.4**
KRER	**Koryakskii**	**4.04**	**22**	PN	**Pn**	**15 53 48.9**	**+1.4**
SDLR	**Sedlovina**	**4.05**	**24**	*e*P	**Pn**	**15 53 48.0**	**+0.5**
SDLR	**Sedlovina**	**4.05**	**24**	PN	**Pn**	**15 53 48.0**	**+0.5**
KRX	**Arik**	**4.06**	**21**	*e*P	**Pn**	**15 53 49.4**	**+1.6**
KRX				*e*S	**Sn**	**15 54 36.6**	**+2.5**
KRX	**Arik**	**4.06**	**21**	PN	**Pn**	**15 53 49.4**	**+1.6**
KRX				S	**Sn**	**15 54 36.6**	**+2.5**
NLC	**Nalytchevo**	**4.08**	**28**	*e*P	**Pn**	**15 53 46.9**	**-1.0**
NLC				*e*S	**Sn**	**15 54 31.5**	**-2.8**
NLC	**Nalytchevo**	**4.08**	**28**	PN	**Pn**	**15 53 46.9**	**-1.0**
NLC				S	**Sn**	**15 54 31.5**	**-2.8**
SPN	**Mys Shipunski**	**4.25**	**33**	*e*P	**Pn**	**15 53 49.5**	**-0.6**
SPN				*e*S	**Sn**	**15 54 37.0**	**-1.3**
SPN	**Mys Shipunski**	**4.25**	**33**	PN	**Pn**	**15 53 49.5**	**-0.6**
SPN				S	**Sn**	**15 54 37.0**	**-1.3**
KII	**Karymskiy**	**4.88**	**23**	*e*P	**Pn**	**15 54 00.3**	**+1.5**
KII	**Karymskiy**	**4.88**	**23**	PN	**Pn**	**15 54 00.3**	**+1.5**
KZV	**Kizimen**	**6.06**	**23**	*e*P	**Pn**	**15 54 15.9**	**+0.8**
KZV	**Kizimen**	**6.06**	**23**	PN	**Pn**	**15 54 15.9**	**+0.8**
TUMD	**Tumrok D**	**6.17**	**23**	*e*P	**Pn**	**15 54 18.6**	**+1.9**
TUMR	**Tumrok**	**6.18**	**22**	*e*P	**Pn**	**15 54 18.6**	**+1.9**
TUMR	**Tumrok**	**6.18**	**22**	PN	**Pn**	**15 54 18.6**	**+1.9**
ESO	**Esso**	**6.51**	**13**	*e*P	**Pn**	**15 54 22.8**	**+1.7**
ESO				*e*S	**Sn**	**15 55 34.3**	**+0.4**
ESO	**Esso**	**6.51**	**13**	PN	**Pn**	**15 54 22.8**	**+1.7**
ESO				S	**Sn**	**15 55 34.3**	**+0.4**
KMNR	**Kamenistaya**	**6.64**	**20**	*e*P	**Pn**	**15 54 24.7**	**+1.8**
KMNR	**Kamenistaya**	**6.64**	**20**	PN	**Pn**	**15 54 24.7**	**+1.8**
KPT	**Kopyto**	**6.83**	**19**	*e*P	**Pn**	**15 54 26.8**	**+1.3**
KPT	**Kopyto**	**6.83**	**19**	PN	**Pn**	**15 54 26.8**	**+1.3**
KOZ	**Kozyrevsk**	**6.84**	**18**	*e*P	**Pn**	**15 54 26.5**	**+0.9**
KOZ	**Kozyrevsk**	**6.84**	**18**	PN	**Pn**	**15 54 26.5**	**+0.9**
KIRR	**Kirishev**	**6.84**	**20**	*e*P	**Pn**	**15 54 27.1**	**+1.4**
KIRR	**Kirishev**	**6.84**	**20**	PN	**Pn**	**15 54 27.1**	**+1.4**
BZGR	**Bezymyannyi-Gr**	**6.91**	**22**	*e*P	**Pn**	**15 54 25.6**	**-1.1**
BZGR	**Bezymyannyi-Gr**	**6.91**	**22**	PN	**Pn**	**15 54 25.6**	**-1.1**
ZLN	**Zelenaya**	**7.01**	**22**	*e*P	**Pn**	**15 54 29.9**	**+1.9**
ZLN	**Zelenaya**	**7.01**	**22**	PN	**Pn**	**15 54 29.9**	**+1.9**
LGNR	**Loginova**	**7.04**	**21**	*e*P	**Pn**	**15 54 30.9**	**+2.3**
LGNR	**Loginova**	**7.04**	**21**	PN	**Pn**	**15 54 30.9**	**+2.3**
SRDR	**Sredinnyy**	**7.05**	**16**	*e*P	**Pn**	**15 54 31.8**	**+3.2**
SRDR	**Sredinnyy**	**7.05**	**16**	PN	**Pn**	**15 54 31.8**	**+3.2**
CIRR	**Tsirk**	**7.08**	**21**	*e*P	**Pn**	**15 54 31.1**	**+2.1**
CIRR	**Tsirk**	**7.08**	**21**	PN	**Pn**	**15 54 31.1**	**+2.1**
KRSR	**Krestovskiy**	**7.13**	**20**	*e*P	**Pn**	**15 54 30.8**	**+1.1**
KRSR	**Krestovskiy**	**7.13**	**20**	PN	**Pn**	**15 54 30.8**	**+1.1**
KUR	**Kuril'sk**	**7.13**	**235**	*i*PN	**Pn**	**15 54 31.0**	**+1.3**
KUR				*i* S	**Sn**	**15 55 52.1**	**+2.9**
KUR				pmax	pmax		
	comp=Z,1μm,2.8s						
KUR				pmax	pmax		
	comp=Z,628nm,0.6s						
KUR				pmax	pmax		
	comp=N,188nm,0.5s						
KUR				pmax	pmax		
	comp=E,87nm,0.4s						
KUR				smax	smax		
	comp=N,473nm,0.4s						
KUR				smax	smax		
	comp=E,161nm,0.3s						
KUR				smax	smax		
	comp=E,3μm,2.6s						
KUR				smax	smax		
	comp=N,2μm,2.7s						
KUR				MLR	MLR		
	comp=Z,1μm,11.0s						
KLY	**Klyuchi**	**7.24**	**20**	*e*P	**Pn**	**15 54 33.2**	**+2.2**
KLY	**Klyuchi**	**7.24**	**20**	PN	**Pn**	**15 54 33.2**	**+2.2**
BDR	**Baidarnaya**	**7.60**	**22**	*e*P	**Pn**	**15 54 37.2**	**+1.1**
BDR	**Baidarnaya**	**7.60**	**22**	PN	**Pn**	**15 54 37.2**	**+1.1**
SRKR	**Sorokina**	**7.67**	**21**	*e*P	**Pn**	**15 54 38.2**	**+1.2**
SRKR	**Sorokina**	**7.67**	**21**	PN	**Pn**	**15 54 38.2**	**+1.2**
KBTR	**Krutoberegovo**	**7.73**	**29**	*e*P	**Pn**	**15 54 37.1**	**-0.7**
KBTR	**Krutoberegovo**	**7.73**	**29**	PN	**Pn**	**15 54 16.8**	**-0.3**
KBG	**Krutoberegovo**	**7.74**	**28**	*e*P	**Pn**	**15 54 37.5**	**-0.3**
KBG	**Krutoberegovo**	**7.74**	**28**	PN	**Pn**	**15 54 37.5**	**-0.3**
BKI	**Bering**	**8.20**	**43**	*e*P	**Pn**	**15 54 41.8**	**-2.3**
BKI				*e*S	Sn	15 56 05.5	-10
BKI	**Bering**	**8.20**	**43**	PN	**Pn**	**15 54 41.8**	**-2.3**
TYV	**Tymovskoe**	**8.76**	**283**	*e*PN	**Pn**	**15 54 55.4**	**+3.5**
TYV				*e*S	**Sn**	**15 56 29.9**	**+0.8**
TYV				pmax	pmax		
	comp=Z,2μm,2.1s						
TYV				pmax	pmax		
	comp=Z,256nm,0.9s						
TYV				smax	smax		
	comp=E,49nm,1.1s						
TYV				smax	smax		
	comp=N,300nm,3.6s						
TYV				MLR	MLR		
	comp=Z,2μm,16.0s						
YUK	**Yuzh-Kuril'sk**	**9.00**	**236**	*d i*PN	**Pn**	**15 54 53.9**	**-1.3**
YUK				pmax	pmax		
	comp=Z,1μm,0.4s						
YUK				pmax	pmax		
	comp=N,85nm,0.3s						
YUK				pmax	pmax		
	comp=E,473nm,0.5s						
YUK				MLR	MLR		
	comp=E,1μm,18.0s						
YUK				MLR	MLR		
	comp=Z,207nm,18.0s						
YUK				MLR	MLR		
	comp=N,370nm,8.0s						
LAGR	**Lagunnoye**	**9.03**	**236**	*d i*PN	**Pn**	**15 54 55.0**	**-0.5**
LAGR				pmax	pmax		
	comp=Z,1μm,0.4s						
LAGR				pmax	pmax		
	comp=N,2μm,0.5s						
LAGR				pmax	pmax		
	comp=E,1μm,0.4s						
GRPR	**Tuman**	**9.08**	**236**	*c i*PN	**Pn**	**15 54 55.5**	**-0.7**
GRPR				pmax	pmax		
	comp=E,182nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,622nm,0.3s						
GRPR				pmax	pmax		
	comp=N,309nm,0.2s						
OKH	**Okha**	**9.14**	**301**	*d i*PN	**Pn**	**15 55 01.2**	**+4.1**
OKH				pmax	pmax		
	comp=Z,300nm,6.5s						
OKH				MLR	MLR		
	comp=N,1μm,16.0s						
OKH				MLR	MLR		
	comp=Z,2μm,15.0s						
UGL	**Uglegorsk**	**9.23**	**272↑**	*i*PN	**Pn**	**15 55 03.1**	**+4.8**
UGL				*i* S	**Sn**	**15 56 43.0**	**+2.4**
UGL				pmax	pmax		
	comp=Z,1μm,0.9s						
UGL				smax	smax		
	comp=N,275nm,0.8s						
UGL				smax	smax		
	comp=E,2μm,7.8s						
UGL				MLR	MLR		
	comp=Z,3μm,16.0s						
UGL				MLR	MLR		
	comp=E,2μm,13.0s						
YSS	**Yuzh-Sakhalins**	**9.34**	**259↓**	*i*PN	**Pn**	**15 55 02.7**	**+2.9**
YSS				*e*S	**Sn**	**15 56 44.0**	**+0.8**
YSS				pmax	pmax		
	comp=Z,210nm,0.6s						
YSS				pmax	pmax		
	comp=N,900nm,1.8s						
YSS				pmax	pmax		
	comp=E,500nm,1.8s						
YSS				pmax	pmax		
	comp=Z,800nm,1.8s						
YSS				smax	smax		
	comp=N,70μm,0.9s						
YSS	**Yuzh-Sakhalins**	**9.34**	**259**		**Pn**	**15 55 02.2**	**+2.4**
GLVR	**Golovnino**	**9.38**	**235↑**	*i*PN	**Pn**	**15 54 58.5**	**-1.9**
GLVR				pmax	pmax		
	comp=Z,554nm,0.5s						
GLVR				pmax	pmax		
	comp=N,369nm,0.4s						
GLVR				pmax	pmax		
	comp=E,310nm,0.4s						
NMR	**Nemuro--Hokkai**	**9.53**	**233**	*c i*PN	**Pn**	**15 54 58.2**	**-4.2**
PALN	**Palana**	**9.76**	**12**	*e*P	**Pn**	**15 55 07.5**	**+2.1**
PALN	**Palana**	**9.76**	**12**	PN	**Pn**	**15 55 07.5**	**+2.1**
NKL	**Nikolayevsk**	**10.32**	**296**	*e*PN	**Pn**	**15 55 14.4**	**+1.3**
NKL				pmax	pmax		
	comp=Z,299nm,1.2s						
NKL				pmax	pmax		
	comp=E,20nm,1.1s						
NKL				pmax	pmax		
	comp=N,4.0nm,1.2s						
OSSR	**Ossora**	**10.46**	**20**	*e*P	**Pn**	**15 55 16.7**	**+1.8**
OSSR	**Ossora**	**10.46**	**20**	PN	**Pn**	**15 55 16.7**	**+1.8**
MA2	**Magadan**	**10.47**	**345**	P	**Pn**	**15 55 14.2**	**-1.0**
	comp=N,26nm,0.3s,baz=156,slow=11,SNR=165						
MA2				LR	LR	16 00 06.4	
	comp=N,1μm,18.2s,baz=170,slow=43						
MA2	**Magadan**	**10.47**	**345**	*de*PN	**Pn**	**15 55 16.1**	**+1.0**
MA2				pmax	pmax		
	comp=Z,80nm,0.5s						
MA2	**Magadan**	**10.47**	**345**		**Pn**	**15 55 16.3**	**+1.1**
JKA	**Kamikawa-asahi**	**10.79**	**245**		**Pn**	**15 55 20.5**	**+0.8**
ASAJ	**Asahikawa**	**10.79**	**245**	P	**Pn**	**15 55 20.5**	**+0.8**
	comp=Z,9.8nm,0.3s,baz=67,slow=11,SNR=179						
ASAJ				LR	LR	15 59 04.2	
	comp=Z,1μm,21.2s,baz=56,slow=35						
SMY	**Shemya**	**11.67**	**68**	PN	**Pn**	**15 55 30.7**	**-0.9**
SMY	**Shemya**	**11.67**	**68**		**Pn**	**15 55 29.9**	**-1.7**
SMY					Sn	15 57 30.0	-10
ERM	**Erimo**	**11.83**	**235**	*de*PN	**Pn**	**15 55 31.4**	**-2.4**
ERM	**Erimo**	**11.83**	**235**		**Pn**	**15 55 31.4**	**-2.4**
GRNR	**Gornyy**	**12.72**	**283↓**	*i*PN	**Pn**	**15 55 48.9**	**+3.0**
GRNR				*e*S	**Sn**	**15 58 12.9**	**+7.3**
GRNR				pmax	pmax		
	comp=Z,20nm,0.6s						
GRNR				smax	smax		
	comp=E,4.0nm,0.9s						
SEY	**Seymchan**	**13.52**	**353**	P	**Pn**	**15 55 56.0**	**-0.7**
	comp=E,4.2nm,0.3s,baz=179,slow=10,SNR=113						
SEY	**Seymchan**	**13.52**	**353↑**	*e*PN	**Pn**	**15 55 58.4**	**+1.7**
KMSK	**Kamenskaya**	**14.03**	**19**	*e*P	**Pn**	**15 56 03.7**	**+0.3**
KMSK	**Kamenskaya**	**14.03**	**19**	P	**Pn**	**15 56 03.7**	**+0.3**
TEY	**Ternei**	**14.04**	**258↑**	*e*P	**Pn**	**15 56 03.5**	**-0.1**
TEY				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=N,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.7s						
TEY				pmax	pmax		
	comp=E,160nm,0.9s						
TEY				pmax	pmax		
	comp=Z,160nm,0.9s						
KLR	**Kul'dur**	**15.89**	**278**	P	**Pn**	**15 56 27.5**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=78,slow=13,SNR=26						
KLR				LR	LR	16 03 08.6	
	comp=Z,1μm,18.8s,baz=82,slow=39						
KLR	**Kul'dur**	**15.89**	**278**	*d i*P	**P**	**15 56 29.4**	**-0.8**
ADK	**Adak**	**17.29**	**72**	P	**Pn**	**15 56 44.4**	**-0.5**
ADK				pmax	pmax		
	comp=Z,94nm,1.2s						
ADK	**Adak**	**17.29**	**72**		**Pn**	**15 56 44.4**	**-0.5**
USRK	**Ussuriysk Ar.**	**17.36**	**261**	P	**Pn**	**15 56 44.4**	**-1.6**
	baz=63,slow=11,SNR=45						
USRK				LR	LR	16 03 15.0	
	comp=Z,586nm,20.7s,baz=60,slow=36						
GSTR	**Great Sitkin T**	**17.66**	**71**	P	**Pn**	**15 56 48.8**	**-0.8**
VLA	**Vladivostok**	**17.93**	**258↓**	*e*P	**P**	**15 56 52.4**	**-0.4**
VLA				pmax	pmax		
	comp=Z,143nm,2.2s						
ZEA	**Zeya**	**18.35**	**294**	*e*P	**Pn**	**15 56 58.0**	**+0.1**
ZEA				pmax	pmax		
	comp=Z,39nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,300nm,4.0s						
MAJO	**Matsushiro**	**18.45**	**232**	P	**P**	**15 56 57.1**	**-1.5**
MAJO				pmax	pmax		
	comp=Z,60nm,0.7s						
MAJO	**Matsushiro**	**18.45**	**232**	P	**P**	**15 56 57.0**	**-1.5**
MAT	**Matsushiro**	**18.45**	**232**	P	**P**	**15 56 57.0**	**-1.6**
MSHR	**Mys Shultsa**	**18.67**	**257**	*de*P	**Pn**	**15 57 01.7**	**-0.1**
MDJ	**Mudanjiang**	**18.73**	**265**	P	**P**	**15 57 00.8**	**-0.7**
MDJ				pP	Pn	15 57 08.4	+5.9
MDJ				pmax	pmax		
	comp=Z,19nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,160nm,3.7s						
MDJ				LR	LR		
	comp=Z,470nm,15.1s						
MDJ				LR	LR		
	comp=Z,790nm,17.5s						
MDJ				LR	LR		
	comp=Z,1μm,17.9s						
MDJ	**Mudanjiang**	**18.73**	**265**	P	**P**	**15 56 59.6**	**-1.8**
BILL	**Bilibino**	**19.16**	**12**	*de*P	**P**	**15 57 05.6**	**-0.5**
BILL				pmax	pmax		
	comp=Z,50nm,1.7s						
BILL				MLR	MLR		
	comp=Z,266nm,20.0s						
BILL	**Bilibino**	**19.16**	**12**	P	**P**	**15 57 05.4**	**-0.7**
YAK	**Yakutsk**	**19.23**	**320**	P	**P**	**15 57 05.7**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=112,slow=1.6,SNR=31						
YAK				LR	LR	16 04 46.9	
	comp=Z,724nm,21.1s,baz=98,slow=38						
YAK	**Yakutsk**	**19.23**	**320**	*d i*P	**P**	**15 57 05.9**	**-0.9**
YAK				*e*S	**S**	**16 00 37.4**	**-3.6**
YAK				pmax	pmax		
	comp=Z,149nm,1.1s						
YAK				pmax	pmax		
	comp=N,42nm,1.3s						
YAK				pmax	pmax		
	comp=E,69nm,1.1s						
YAK				smax	smax		
	comp=N,232nm,3.1s						
YAK				smax	smax		
	comp=E,250nm,3.5s						
YAK				MLR	MLR		
	comp=Z,993nm,24.0s						
YAK				MLR	MLR		
	comp=N,460nm,22.0s						
YAK				MLR

INCN Inchon 24.44 251 P **P** 15 58 00.2 -0.6
INCN IAmb IAmb 15 58 02.1
comp=Z,144nm,1.6s
TJN Taejon 24.70 249*d i*P **P** 15 58 03.9 +0.7
JNU Nakatsue 24.96 238 P **P** 15 58 07.2 +1.6
comp=Z,75nm,0.9s,baz=46,slow=7.6,SNR=32
JNU Nakatsue 24.96 238 P **P** 15 58 06.2 +0.6
JNU IAmb IAmb 15 58 08.3
comp=Z,72nm,0.8s
FALS False Pass 25.03 62 P **P** 15 58 06.5 +0.6
FALS IAmb IAmb 15 58 09.7
comp=Z,75nm,0.6s
ANM Nome 25.18 39 P **P** 15 58 08.1 +0.9
ANM pmax pmax
comp=Z,262nm,1.6s
ANM Nome 25.18 39 P **P** 15 58 08.1 +0.9
TIXI Tiksi 25.39 340 P **P** 15 58 07.6 -1.5
comp=Z,43nm,0.8s,baz=129,slow=9.7,SNR=100
TIXI LR LR 16 09 04.8
comp=Z,488nm,20.3s,baz=134,slow=39
TIXI Tiksi 25.39 340*d i*P **P** 15 58 07.4 -1.7
TIXI pmax pmax
comp=Z,39nm,0.8s
TIXI Tiksi 25.39 340 P **P** 15 58 07.5 -1.5
BOD Bodaibo 25.90 305 *e*P **P** 15 58 12.2 -1.7
BOD pmax pmax
comp=Z,31nm,1.6s
SDPT Sand Point 26.67 61 P **P** 15 58 21.3 +0.5
SDPT IAmb IAmb 15 58 53.2
comp=Z,50nm,0.8s
DL2 Dalian 26.74 260 P **P** 15 58 21.2 -0.4
DL2 sP **sP** 15 58 42.4 -1.4
DL2 S **S** 16 02 51.7 -1.0
DL2 pmax pmax
comp=Z,15nm,0.6s
DL2 LR LR
comp=Z,360nm,19.4s
DL2 LR LR
comp=Z,370nm,22.7s
DL2 LR LR
comp=Z,540nm,26.0s
CNBA Chernabura Isl 27.24 62 P **P** 15 58 25.9 0.0
CNBA IAmb IAmb 15 58 50.1
comp=Z,115nm,1.6s
RDOG Red Dog Mine 27.31 32 P **P** 15 58 26.6 +0.2
CHGN Chignik 27.73 59 P **P** 15 58 30.0 -0.3
CHGN IAmb IAmb 15 59 17.8
comp=Z,75nm,1.3s
SVW2 Sparrevohn 29.04 48 P **P** 15 58 40.9 -1.0
BJI Beijing 29.63 267 P **P** 15 58 47.2 -0.1
BJI S **S** 16 03 41.9 +3.7
BJI LR LR
comp=Z,350nm,18.4s
BJI LR LR
comp=Z,380nm,18.0s
BJI LR LR
comp=Z,480nm,23.5s
RSO Redoubt South 30.43 50 P **P** 15 58 55.2 +0.7
OHAK Old Harbor 30.43 56 P **P** 15 58 53.6 -0.6
OHAK IAmb IAmb 15 59 32.5
comp=Z,108nm,1.6s
PPLA Purkeypile 30.68 45 P **P** 15 58 58.0 +1.5
KDAK Kodiak Island 30.74 55 P **P** 15 58 56.5 -0.4
KDAK pmax pmax
comp=Z,139nm,1.8s
KDAK Kodiak Island 30.74 55 P **P** 15 58 56.5 -0.4
H11N2 WAKE ISLAND Hy 31.02 160 T T 16 32 03.0
baz=347,slow=76,SNR=177
H11N1 WAKE ISLAND Hy 31.03 160 T T 16 32 02.2
baz=347,slow=76,SNR=386
H11N3 WAKE ISLAND Hy 31.03 160 T T 16 32 03.4
baz=347,slow=76,SNR=419
BPAW Bear Paw Mtn. 31.25 42 P **P** 15 59 02.3 +0.8
BPAW IAmb IAmb 15 59 03.8
comp=Z,68nm,1.5s
CNPM China Poot 31.25 51 P **P** 15 59 01.9 +0.4
CNPM IAmb IAmb 15 59 03.8
comp=Z,112nm,1.7s
KTH Kantishna Hill 31.26 43 P **P** 15 59 02.8 +1.1
MLY Manley 31.40 41 P **P** 15 59 03.8 +1.0
MLY IAmb IAmb 15 59 05.3
comp=Z,73nm,1.6s
BRLK Bradley Lake 31.41 51 P **P** 15 59 00.7 -2.2
BRLK IAmb IAmb 15 59 17.8
comp=Z,67nm,1.9s
TRF Thorofare Moun 31.55 44 P **P** 15 59 05.0 +0.8
TRF IAmb IAmb 15 59 07.5
comp=Z,38nm,1.2s
COLD Coldfoot 31.81 36 P **P** 15 59 07.2 +0.9
RC01 Rabbit Creek A 31.88 48 P **P** 15 59 06.5 -0.4
BWN Browne 31.92 42 P **P** 15 59 09.3 +2.0
ULN Ulaanbaatar 31.99 286*de*P **P** 15 59 07.9 -0.4
ULN pmax pmax
comp=Z,2.0nm,0.7s
ULN Ulaanbaatar 31.99 286 P **P** 15 59 07.7 -0.6
NEA Nenana 32.10 42 P **P** 15 59 09.6 +0.8
SEW Seward 32.10 50 P **P** 15 59 07.5 -1.3
SEW IAmb IAmb 15 59 42.5
comp=Z,58nm,1.6s
PMR Palmer 32.13 47 P **P** 15 59 09.4 +0.3
PMR pmax pmax
comp=Z,19nm,1.4s
PMR Palmer 32.13 47 P **P** 15 59 09.4 +0.3
MCK McKinley 32.15 43 P **P** 15 59 09.4 +0.1
MCK pmax pmax
comp=Z,118nm,1.6s
MCK McKinley 32.15 43 P **P** 15 59 09.4 +0.1
H11S1 WAKE ISLAND Hy 32.16 161 T T 16 33 19.6
baz=347,slow=76,SNR=1235
H11S3 WAKE ISLAND Hy 32.17 161 T T 16 33 27.1
baz=347,slow=76,SNR=2169
H11S2 WAKE ISLAND Hy 32.17 161 T T 16 33 14.2
baz=347,slow=76,SNR=1069
RND Reindeer 32.19 44 P **P** 15 59 09.9 +0.1
RND pmax pmax
comp=Z,184nm,1.7s
RND Reindeer 32.19 44 P **P** 15 59 09.9 +0.1
HHC Hu-ho-hao-te 32.21 271 P **P** 15 59 12.6 +2.4
HHC pP sP 15 59 30.1 -2.4
HHC S **S** 16 04 21.7 +2.9
HHC pmax pmax
comp=Z,10.0nm,0.9s
HHC pmax pmax
comp=Z,57nm,4.8s
HHC LR LR
comp=Z,370nm,18.2s
HHC LR LR
comp=Z,290nm,18.6s
HHC LR LR
comp=Z,330nm,18.4s
GHO Glory Hole Cre 32.22 47 P **P** 15 59 10.5 +0.4
GHO IAmb IAmb 15 59 11.5
comp=Z,44nm,1.5s
TOLK Toolik Lake Re 32.23 34 P **P** 15 59 11.0 +1.0
baz=262,SNR=34
TOLK Toolik Lake Re 32.23 34 P **P** 15 59 10.8 +0.8
SONM Songino Array 32.41 286 P **P** 15 59 11.0 -0.9
comp=Z,1.4nm,0.6s,baz=83,slow=10,SNR=4.3
SONM PcP **PcP** 16 01 58.6 +0.7
comp=Z,1.4nm,0.6s,baz=5.2,slow=1.6,SNR=3.7
SONM LR LR 16 13 43.8
comp=Z,499nm,19.0s,baz=74,slow=39
MDM Murphy Dome 32.47 41 P **P** 15 59 12.7 +0.6
MDM IAmb IAmb 15 59 14.3
comp=Z,26nm,0.5s
KNK Knik Glacier 32.47 47 P **P** 15 59 12.6 +0.4
KNK IAmb IAmb 15 59 14.3
comp=Z,44nm,0.9s
SML Sawmill 32.50 47 P **P** 15 59 12.3 -0.2
SML pmax pmax
comp=Z,247nm,1.6s
SML Sawmill 32.50 47 P **P** 15 59 12.3 -0.2
WRH Wood River Hil 32.52 42 P **P** 15 59 13.1 +0.6
WRH IAmb IAmb 15 59 14.8
comp=Z,69nm,1.2s
TCOL CIGO, UAF Yank 32.62 41 P **P** 15 59 14.6 +1.2
baz=270,SNR=14
COLA College 32.63 41*c i*P **P** 15 59 14.6 +1.2
COLA pmax pmax
comp=Z,131nm,1.5s
COLA College 32.63 41 P **P** 15 59 14.2 +0.8
CCB Clear Creek Bu 32.65 41 P **P** 15 59 13.6 0.0
TLY Talaya 32.79 294 P **P** 15 59 14.9 -0.1
comp=Z,5.8nm,0.7s,baz=78,slow=5.0,SNR=6.8
TLY Talaya 32.79 294 P **P** 15 59 15.3 +0.2
comp=Z,21nm,1.4s
TLY Talaya 32.79 294*d i*P **P** 15 59 14.5 -0.6
TLY pmax pmax
comp=Z,21nm,1.4s
TLY Talaya 32.79 294 P **P** 15 59 13.9 -1.1
POKR Poker Flat Res 32.81 41 P **P** 15 59 16.3 +1.3
baz=270,SNR=35
NJ2 Nanjing 32.82 252 *e*P **P** 15 59 15.7 +0.2
NJ2 pmax pmax
comp=Z,16nm,0.7s
NJ2 LR LR
comp=Z,360nm,21.3s
NJ2 LR LR
comp=Z,530nm,20.8s
NJ2 LR LR
comp=Z,550nm,20.8s
DHY Denali Highway 32.87 44 P **P** 15 59 15.7 -0.1
DHY IAmb IAmb 15 59 17.4
comp=Z,60nm,1.2s
SCM Sheep Creek Mo 32.97 47 P **P** 15 59 16.8 +0.2
SCM pmax pmax
comp=Z,77nm,1.3s
SCM Sheep Creek Mo 32.97 47 P **P** 15 59 16.8 +0.2
HDA Harding Lake 33.02 42 P **P** 15 59 17.7 +0.8
baz=271,SNR=98
HDA Harding Lake 33.02 42 P **P** 15 59 16.7 -0.1
ILAR Eielson Array 33.04 41 P **P** 15 59 17.4 +0.3
comp=Z,9.7nm,0.5s,baz=258,slow=7.8,SNR=169
ILAR LR LR 16 13 49.6
comp=Z,185nm,19.9s,baz=262,slow=38
GLI Glacier Island 33.18 48 P **P** 15 59 17.8 -0.5
GLI IAmb IAmb 15 59 19.4
comp=Z,75nm,1.6s
ZAK Zakamensk 33.42 292 *e*P **P** 15 59 19.9 -0.8
ZAK pmax pmax
comp=Z,11nm,1.0s
FID Port Fidalgo 33.49 49 P **P** 15 59 19.9 -1.2
FID IAmb IAmb 15 59 22.2
comp=Z,41nm,1.3s
PRP Porcupine Dome 33.61 40 P **P** 15 59 22.4 +0.2
FYU Fort Yukon 33.73 38 P **P** 15 59 24.0 +1.0
MID Middleton Isla 33.75 51 P **P** 15 59 23.3 +0.1
MID pmax pmax
comp=Z,180nm,1.0s
MID Middleton Isla 33.75 51 P **P** 15 59 23.2 +0.1
EYAK Cordova Ski Ar 33.87 49 P **P** 15 59 24.2 -0.1
EYAK IAmb IAmb 15 59 33.8
comp=Z,66nm,1.8s
DOT Dot Lake 34.33 43 P **P** 15 59 27.7 -0.5
DOT IAmb IAmb 15 59 30.4
comp=Z,18nm,0.8s
MOY Mondy 34.36 295 *e*P **P** 15 59 28.6 -0.2
MOY pmax pmax
comp=Z,15nm,1.5s
MENT Mentasta 34.55 44 P **P** 15 59 31.0 +0.8
MENT IAmb IAmb 15 59 34.5
comp=Z,18nm,0.5s
GLB Gilahina Butte 34.69 47 P **P** 15 59 32.1 +0.6
GLB IAmb IAmb 15 59 33.9
comp=Z,48nm,1.5s
VRDI Verde Repeater 34.89 47 P **P** 15 59 34.0 +0.6
VRDI IAmb IAmb 15 59 35.6
comp=Z,38nm,1.5s
MCARA McCarthy VSAT 35.07 47 P **P** 15 59 35.9 +1.3
MCARA IAmb IAmb 15 59 56.6
comp=Z,17nm,0.8s
CRQM Cirque 35.11 48 P **P** 15 59 35.8 +0.6
TGL Tana Glacier 35.26 48 P **P** 15 59 37.1 +0.6
BALM Baldy 35.45 48 P **P** 15 59 39.5 +1.4
BALM pmax pmax
comp=Z,46nm,1.4s
BALM Baldy 35.45 48 P **P** 15 59 38.9 +0.9
BALM IAmb IAmb 15 59 40.4
comp=Z,46nm,1.4s
EGAK Eagle 35.49 41 P **P** 15 59 38.6 +0.3
BARN Barnard Glacie 35.77 47 P **P** 15 59 42.0 +1.0
CTGM Chitina Glacie 35.95 47 P **P** 15 59 43.3 +0.9
DAWY Dawson 36.34 42 P **P** 15 59 46.2 +0.7
DAWY IAmb IAmb 15 59 47.9
comp=Z,46nm,1.4s
WHN Wuhan 36.66 255 ⇑P **P** 15 59 48.5 0.0
WHN S S 16 05 17.9 -9.3
WHN pmax pmax
comp=Z,56nm,0.6s
WHN LR LR
comp=Z,330nm,10.4s
WHN LR LR
comp=Z,470nm,13.6s
WHN LR LR
comp=Z,510nm,20.0s
YHNB Yeheng 36.75 240 P **P** 15 59 49.4 -0.1
YHNB IAmb IAmb 15 59 52.8
comp=Z,18nm,0.7s
EPYK Eagle Plains 37.15 38 P **P** 15 59 53.8 +1.4
baz=277,SNR=28
EPYK Eagle Plains 37.15 38 P **P** 15 59 53.8 +1.4
NRIK Noril'sk 37.42 327 P **P** 15 59 53.5 -1.1
comp=Z,6.6nm,0.8s,baz=80,slow=15,SNR=13
NRIK LR LR 16 17 17.7
comp=Z,485nm,18.4s,baz=76,slow=40
YULB Yu-li 37.80 239 P **P** 15 59 59.1 +0.8
HYT Haines Junctio 37.81 47 P **P** 15 59 59.3 +1.1
HYT IAmb IAmb 16 00 01.2
comp=Z,38nm,1.3s
XAN Xi'an 37.83 264 P P 16 00 12.2 +14
XAN pP sP 16 00 30.8 +10
XAN pmax pmax
comp=Z,6.0nm,0.9s
XAN LR LR
comp=N,350nm,19.5s
XAN LR LR
comp=E,360nm,18.4s
XAN LR LR
comp=Z,490nm,21.7s
INK Inuvik 38.13 35 P **P** 16 00 02.1 +1.5
INK pmax pmax
comp=Z,39nm,1.3s
INK Inuvik 38.13 35 P **P** 16 00 02.1 +1.5
INK IAmb IAmb 16 00 03.5
comp=Z,39nm,1.2s
TPUB Ta-pu 38.25 240 P **P** 16 00 02.3 +0.2
WHY Whitehorse 39.09 47 P **P** 16 00 09.9 +1.0
WHY IAmb IAmb 16 00 12.5
comp=Z,27nm,1.1s
SKAG Skagway 39.22 49 P **P** 16 00 11.6 +1.8
SKAG IAmb IAmb 16 00 13.5
comp=Z,56nm,1.4s
LZH Lanzhou 39.88 271 *e*P **P** 16 00 16.2 +0.4
LZH pP pP 16 00 30.6 -0.6
LZH sP sP 16 00 36.5 -1.9
LZH PP **PnPn** 16 01 54.9 +2.8
LZH SS SS 16 09 08.1 -6.3
LZH pmax pmax
comp=Z,31nm,1.1s
LZH pmax pmax
comp=Z,160nm,5.4s
LZH LR LR
comp=Z,430nm,13.3s
LZH LR LR
comp=Z,540nm,13.8s
LZH LR LR
comp=Z,680nm,16.5s
ENH Enshi 39.92 259 P **P** 16 00 15.5 -0.5
JIS Juneau Island 40.05 50 P **P** 16 00 17.9 +1.3
A36M Sachs Harbour 40.37 28 P **P** 16 00 20.5 +1.3
baz=280,SNR=14
GTA Gaotai 40.59 278 ⇑P **P** 16 00 21.2 -0.4
GTA pP pP 16 00 33.3 -3.8
GTA sP sP 16 00 39.0 -5.2
GTA SS SS 16 09 22.2 -6.1
GTA pmax pmax
comp=Z,8.0nm,1.2s
GTA pmax pmax
comp=Z,87nm,8.4s
GTA LR LR
comp=Z,320nm,17.1s
GTA LR LR
comp=Z,670nm,17.8s
GTA LR LR
comp=Z,730nm,17.1s
C36M Paulatuk 41.31 32 P **P** 16 00 28.1 +1.1
baz=284,SNR=19
C36M Paulatuk 41.31 32 P **P** 16 00 28.1 +1.1
C36M IAmb IAmb 16 00 29.5
comp=Z,64nm,1.2s
DLBC Dease Lake 42.15 49 P **P** 16 00 35.9 +1.8
comp=Z,4.1nm,0.5s,baz=348,slow=7.1
DLBC Dease Lake 42.15 49 P **P** 16 00 35.8 +1.7
ZAA0 Zalesovo Array 42.65 304 P **P** 16 00 36.8 -1.3
ZALV Zalesovo Beam 42.65 304 P **P** 16 00 37.0 -1.1
comp=Z,5.9nm,0.4s,baz=65,slow=6.8,SNR=41
ZALV PcP **PcP** 16 02 30.3 +1.4
comp=Z,3.2nm,0.6s,baz=70,slow=4.9,SNR=5.5
ZALV LR LR 16 19 27.7
comp=Z,204nm,18.2s,baz=54,slow=38
SZP Santa 42.99 235 P **P** 16 00 42.3 +1.1
DGZ Jazzator, Alta 43.06 298*de*P **P** 16 00 41.6 0.0
DGZ pmax pmax
comp=Z,21nm,1.0s
CD2 Chengdu 43.18 265 ⇑*i*P **P** 16 00 42.3 -0.4
CD2 pP pP 16 00 57.3 -1.1
CD2 sP sP 16 01 04.5 -1.0
CD2 PP **PP** 16 02 26.5 +2.6
CD2 S **S** 16 07 04.0 -0.9
CD2 sS sS 16 07 29.8 -1.5
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,90nm,4.9s
CD2 LR LR
comp=Z,350nm,22.6s
CD2 LR LR
comp=Z,430nm,25.2s
CD2 LR LR
comp=Z,490nm,24.0s
GYA Guiyang 44.34 257 ⇑*i*P **P** 16 00 52.4 +0.2
GYA pP pP 16 01 09.1 +1.2
GYA sP sP 16 01 15.6 +0.6
GYA PcP **PcP** 16 02 33.3 -2.0
GYA PP **PP** 16 02 39.0 +2.6
GYA S **S** 16 07 21.6 -0.4
GYA sS sS 16 07 45.5 -3.0
GYA SS **SS** 16 10 33.5 -8.8
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,150nm,5.6s
GYA LR LR
comp=Z,280nm,18.7s
GYA LR LR
comp=Z,200nm,17.8s
GYA LR LR
comp=Z,180nm,18.5s
WMQ Urumqi 45.84 290 *e*P **P** 16 01 07.1 +3.3
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ LR LR
comp=Z,240nm,19.3s
WMQ LR LR
comp=Z,300nm,23.3s
WMQ LR LR
comp=Z,350nm,25.1s
YKA Yellowknife Ar 47.41 39 P **P** 16 01 16.8 +1.1
comp=Z,16nm,1.0s,baz=297,slow=7.2,SNR=86
YKA PcP **PcP** 16 02 46.1 +0.9
comp=Z,2.7nm,0.8s,baz=295,slow=3.0,SNR=5.9
RES Resolute Bay 47.46 20 P **P** 16 01 16.6 +0.7
RES pmax pmax
comp=Z,3nm,1.1s
RES Resolute Bay 47.46 20 P **P** 16 01 16.6 +0.7
MK31 Makanchi Array 47.48 296 *i* P **P** 16 01 15.1 -1.4
MK31 Makanchi Array 47.48 296 P P 16 01 15.3 -1.2
MKAR Makanchi Array 47.48 296 P P 16 01 15.3 -1.2
comp=Z,7.6nm,0.4s,baz=308,slow=8.5,SNR=3.8
KURK Kurchatov 47.52 303 P **P** 16 01 16.3 -0.4
KURK Kurchatov 47.52 303*d i*P **P** 16 01 15.4 -1.3
KURK pmax pmax
comp=Z,79nm,1.0s
KURK Kurchatov 47.52 303 P P 16 01 15.6 -1.1
KURK Kurchatov 47.52 303 **ScP** 16 06 36.0 +1.6
KURBB Kurchatov Arra 47.62 303 P **P** 16 01 16.5 -1.0
comp=Z,25nm,0.5s,baz=62,slow=7.7,SNR=162
KURBB PcP **PcP** 16 02 47.0 +0.8
comp=Z,9.2nm,1.1s,baz=59,slow=3.4,SNR=4.3
KURBB ScP **ScP** 16 06 36.0 +1.2
comp=Z,0.9nm,0.9s,baz=69,slow=3.9,SNR=3.9
MAKZ Makanchi 47.66 297 P **P** 16 01 16.3 -1.6
MAKZ Makanchi 47.66 297 P **P** 16 01 16.2 -1.7
QIZ Qiongzhong 47.85 247 P **P** 16 01 20.5 +0.9
QIZ S **S** 16 08 14.5 +2.3
QIZ LR LR
comp=Z,110nm,13.4s
QIZ LR LR
comp=Z,210nm,15.6s
QIZ LR LR
comp=Z,220nm,23.5s
DAV Davao City (W) 49.56 222 LR LR 16 21 40.2
comp=Z,67nm,21.6s,baz=46,slow=35
SLVN Son La 49.77 255 P **P** 16 01 35.2 +0.8
KCP Kidapawan 49.83 222⇓*e*P **P** 16 01 33.2 -1.6
CTBH Cotabato--PC H 50.01 223 ⇑*i*P **P** 16 01 38.5 +2.3
SPITS Spitsbergen Ar 50.16 350 P **P** 16 01 35.0 -1.6
comp=Z,2.0nm,0.4s,baz=50,slow=7.8,SNR=26
SPITS Spitsbergen Ar 50.16 350 P **P** 16 01 35.0 -1.6
A04D Lummi Island 50.53 58 P **P** 16 01 40.5 +0.7
baz=304
BVAR Borovoye Array 50.65 309 P **P** 16 01 39.9 -0.7
comp=Z,12nm,0.3s,baz=57,slow=8.8,SNR=146
BVAR PcP **PcP** 16 02 58.6 +1.4
comp=Z,3.8nm,0.5s,baz=83,slow=4.1,SNR=5.4
BVAR S **S** 16 08 49.1 -1.5
comp=Z,1.1nm,0.8s,baz=64,slow=12,SNR=3.9
BRVK Borovoye 50.69 309 P **P** 16 01 40.2 -0.6
BRVK Borovoye 50.69 309 P **P** 16 01 40.1 -0.8
BRVK pmax pmax
comp=Z,39nm,0.9s
BRVK Borovoye 50.69 309 P **P** 16 01 40.1 -0.8
D03D Eldon 50.98 59 P **P** 16 01 44.5 +1.3
baz=304
PDGK Podgornoye 51.06 294 P **P** 16 01 42.4 -1.6
B05A Bryant 51.13 58 P **P** 16 01 45.4 +1.2
baz=304
E04D Cinebar 51.84 60 P **P** 16 01 51.0 +1.5
baz=305,SNR=5.4
LSA Lhasa 52.17 273 P **P** 16 01 54.1 +1.3
LSA pmax pmax
comp=Z,51nm,0.7s
LSA Lhasa 52.17 273 P **P** 16 01 53.9 +1.1
LSA Lhasa 52.17 273 P **P** 16 01 52.9 +0.1
LSA pmax pmax
comp=Z,10.0nm,0.8s
LSA Lhasa 52.17 273 P **P** 16 01 52.9 +0.1
G03D McMinnville, O 52.22 62 P **P** 16 01 53.6 +1.2
baz=306
LTY Liberty 52.49 58 P **P** 16 01 55.1 +0.6
LTY IAmb IAmb 16 01 56.4
comp=Z,45nm,1.8s
I02D Swisshome 52.53 63 P **P** 16 01 56.1 +1.4
baz=306
B08A Colville Reser 52.59 57 P **P** 16 01 55.6 +0.5
B08A IAmb IAmb 16 01 57.2
comp=Z,16nm,1.0s
J01E Myrtle Point 53.04 64 P **P** 16 02 00.4 +1.8
baz=307
I03D Drain, OR 53.06 63 P **P** 16 02 00.1 +1.5
baz=307
KDJ Kajisay 53.14 294 P **P** 16 01 58.8 -0.7
KDJ pmax pmax
comp=Z,22nm,1.0s
KDJ Kajisay 53.14 294 P **P** 16 01 58.8 -0.7
KDJ IAmb IAmb 16 02 00.7
comp=Z,22nm,1.0s
SVE Sverdlovsk 53.14 317⇓*e*P **P** 16 01 58.7 -0.4
SVE pmax pmax
comp=Z,27nm,1.0s
H04A Detroit Lake 53.15 62 P **P** 16 01 59.5 +0.2
H04A IAmb IAmb 16 02 01.1
comp=Z,18nm,1.1s
K02D Willamette Mer 53.48 65 P **P** 16 02 03.6 +1.7
baz=307
C09A Chrisman Ranch 53.49 57 P **P** 16 02 02.3 +0.5
I04A Tendick Farm, 53.55 63 P **P** 16 02 03.7 +1.4
baz=307
TKM2 Tokmak 2 53.60 296 P **P** 16 02 03.4 +0.6
SNR=17
TKM2 Tokmak 2 53.60 296 P **P** 16 02 01.7 -1.2
JAY Jayapura 53.61 199 LR LR 16 22 23.7
comp=Z,90nm,21.2s,baz=13,slow=33
HAWA Hanford 53.63 59 P **P** 16 02 03.1 +0.3
HAWA IAmb IAmb 16 02 05.1
comp=Z,34nm,1.4s

KRVT Keravat (AS076 53.81 185 LR LR 16 24 43.8
comp=Z,140nm,18.6s,baz=10,slow=36
NEW Newport 53.84 56 P **P 16 02 05.6 +1.3**
comp=Z,5.2nm,1.0s,baz=311,slow=7.8,SNR=10
NEW Newport 53.84 56 P **P 16 02 04.7 +0.3**
NEW pmax pmax
comp=Z,25nm,1.4s
NEW Newport 53.84 56 P **P 16 02 05.1 +0.8**
baz=307
NEW Newport 53.84 56 P **P 16 02 04.7 +0.3**
NEW IAmb IAmb 16 02 06.4
comp=Z,25nm,1.4s
I05D Terrebonne, OR 53.84 62 P **P 16 02 05.6 +1.1**
baz=307
DAG Danmarks Havn 53.86 359 *i* P **P 16 02 03.7 -0.3**
DAG pmax pmax
comp=Z,6.0nm,0.9s
DAG Danmarks Havn 53.86 359 *i* P **P 16 02 03.7 -0.3**
comp=Z,5.8nm,0.9s
HUMO Hull Mountain 53.95 64 P **P 16 02 05.8 +0.5**
USP Ospenovka 54.03 297 P **P 16 02 05.6 -0.2**
SNR=5.7
CHMS Chumysh 54.04 296 P **P 16 02 05.8 -0.1**
SNR=10
J04D Umpqua Nationa 54.06 63 P **P 16 02 07.7 +1.4**
baz=308
KULLO Kullorsuaq 54.09 10 *i* P **P 16 02 05.9 +0.1**
KULLO pmax pmax
comp=Z,10.0nm,0.6s
KULLO Kullorsuaq 54.09 10 *i* P **P 16 02 05.9 +0.1**
comp=Z,10nm,0.6s
KBK Karagaybulak 54.14 296 P **P 16 02 07.4 +0.6**
SNR=9.2
DLV T Lat 54.22 243 P **P 16 02 07.6 0.0**
ARU Arti 54.30 317 P **P 16 02 06.3 -1.2**
comp=Z,7.1nm,0.3s,baz=38,slow=3.6,SNR=29
ARU Arti 54.30 317 *d i* P **P 16 02 06.0 -1.5**
ARU *PP **pP 16 02 23.6 0.0**
ARU 16 03 09.1
ARU 16 04 05.9
ARU S **S 16 09 40.0 -0.3**
ARU SS **SS 16 13 20.9 -1.4**
ARU pmax pmax
comp=Z,29nm,0.9s
ARU MLR MLR
comp=Z,262nm,20.0s
ARU Arti 54.30 317 P **P 16 02 06.1 -1.5**
KZA Kyzart 54.31 295 P **P 16 02 08.4 0.0**
SNR=7.5
E09A Wood Farm, Sta 54.33 58 P **P 16 02 08.1 +0.2**
E09A IAmb IAmb 16 02 10.0
comp=Z,16nm,0.9s
PINE Pine Mountain 54.40 62 P **P 16 02 09.2 +0.5**
PINE IAmb IAmb 16 02 11.9
comp=Z,44nm,1.4s
AAK Ala-Archa 54.41 296 P **P 16 02 08.7 -0.1**
comp=Z,10nm,0.7s,baz=109,slow=3.8,SNR=36
AAK Ala-Archa 54.41 296 P **P 16 02 09.3 +0.6**
SNR=14
AAK Ala-Archa 54.41 296 *i* P **P 16 02 08.5 -0.2**
SNR=18
AAK Ala-Archa 54.41 296 P **P 16 02 08.5 -0.2**
AAK Ala-Archa 54.41 296 *d i* P **P 16 02 08.2 -0.6**
AAK pmax pmax
comp=Z,13nm,0.8s
AAK Ala-Archa 54.41 296 P **P 16 02 08.0 -0.8**
SHL Shillong 54.49 269 P **P 16 02 10.3 +0.7**
SNR=5.1
SHL Shillong 54.49 269 P **P 16 02 09.6 0.0**
SHL pmax pmax
comp=Z,19nm,0.7s
SHL Shillong 54.49 269 P **P 16 02 09.6 0.0**
SHL IAmb IAmb 16 02 10.5
comp=Z,19nm,0.7s
J05D Fort Rock, OR 54.54 63 P **P 16 02 11.6 +1.9**
baz=308,SNR=9.8
L04D Klamath Falls 54.57 64 P **P 16 02 11.5 +1.7**
baz=308,SNR=16
YBH Yreka Blue Hor 54.63 65 P **P 16 02 11.6 +1.3**
comp=Z,10.0nm,0.6s,baz=342,slow=6.0,SNR=33
YBH Yreka Blue Hor 54.63 65 P **P 16 02 11.8 +1.5**
K04D Chiloquin, OR 54.64 64 P **P 16 02 11.8 +1.4**
baz=308
SIJI Sorong 54.65 211 LR LR 16 21 04.3
comp=Z,105nm,21.8s,baz=314,slow=31
M02C Callahan 54.75 65 P **P 16 02 13.3 +2.2**
baz=308,SNR=8.2
CHTO Chiang Mai 54.77 257 P **P 16 02 12.9 +1.5**
CHTO Chiang Mai 54.77 257 P **P 16 02 12.3 +0.9**
CHTO pmax pmax
comp=Z,81nm,0.8s
CHTO Chiang Mai 54.77 257 P **P 16 02 12.3 +0.9**
EKS2 Erkin-Say 54.82 297 P **P 16 02 11.3 -0.3**
SNR=20
CM31 Chiang Mai Arr 55.03 257 P **P 16 02 15.2 +1.9**
SNR=34
CM31 Chiang Mai Arr 55.03 257 P **P 16 02 14.4 +1.1**
CMAR Chiang Mai Arr 55.03 257 P **P 16 02 14.8 +1.5**
comp=Z,46nm,0.8s,baz=30,slow=7.1,SNR=325
CMAR LR LR 16 26 43.0
comp=Z,154nm,19.4s,baz=46,slow=37
I07A Izee 55.04 61 P **P 16 02 14.4 +1.2**
I07A IAmb IAmb 16 02 16.0
comp=Z,27nm,1.4s
WALA Waterton Lakes 55.06 53 P **P 16 02 14.2 +0.8**
WALA IAmb IAmb 16 02 15.6
comp=Z,18nm,1.0s
K05A Summer Lake 55.08 63 P **P 16 02 15.3 +1.7**
N02D Trinity Center 55.10 66 P **P 16 02 15.6 +2.0**
baz=309,SNR=14
M04C Macdoel 55.11 65 P **P 16 02 15.5 +1.7**
baz=308,SNR=12
F10A Beach Ranch, E 55.16 58 P **P 16 02 14.9 +0.9**
PBKT Sadao Pong 55.16 254 P **P 16 02 15.2 +1.0**
PBKT IAmb IAmb 16 02 16.7
comp=Z,18nm,0.7s
AML Almayashu 55.19 296 P **P 16 02 14.5 -0.2**
SNR=8.4
WDC Whiskeytown Da 55.44 66 P **P 16 02 17.4 +1.4**
WDC pmax pmax
comp=Z,22nm,1.2s
WDC Whiskeytown Da 55.44 66 P **P 16 02 17.4 +1.4**
WDC IAmb IAmb 16 02 18.8
comp=Z,22nm,1.1s
KSH Kashi 55.47 292 P **P 16 02 18.7 +2.3**
KSH sP sP 16 02 44.2 +4.7
KSH PP **PP 16 04 23.4 +2.9**
KSH PcS **PcS 16 07 15.3 -0.8**
KSH S **S 16 09 55.6 -1.1**
KSH SS **SS 16 13 45.7 +4.1**
KSH pmax pmax
comp=Z,44nm,1.1s
KSH pmax pmax
comp=Z,230nm,5.4s
KSH LR LR
comp=Z,440nm,11.6s
KSH LR LR
comp=Z,440nm,8.5s
KSH LR LR
comp=Z,880nm,12.2s
APA Apatity 55.52 337 ⇑ *i* P **P 16 02 15.0 -1.1**
APA *i* 16 03 12.0
APA *i* 16 04 26.0
APA pmax pmax
comp=Z,5.0nm,1.2s
APA MLR MLR
comp=Z,800nm,13.0s
O02D Mt. Diablo Mer 55.55 67 P **P 16 02 18.7 +1.8**
baz=309,SNR=9.4
JTMT Jette 55.67 55 P **P 16 02 18.7 +1.0**
JTMT IAmb IAmb 16 02 20.4
comp=Z,51nm,1.6s
BMO Blue Mountains 55.81 59 P **P 16 02 19.5 +0.8**
BMO pmax pmax
comp=Z,26nm,1.4s
BMO Blue Mountains 55.81 59 P **P 16 02 19.5 +0.8**
BMO IAmb IAmb 16 02 21.3
comp=Z,26nm,1.4s
ARCES ARCESS Array B 55.82 341 P **P 16 02 16.2 -2.1**
comp=Z,0.7nm,0.3s,baz=43,slow=7.3,SNR=23
ARCES PcP **PcP 16 03 18.2 +1.7**
comp=Z,1.6nm,0.6s,baz=39,slow=4.7,SNR=5.0
ARCES LR LR 16 31 14.3
comp=Z,236nm,18.9s,baz=1.0,slow=42
MOD Modoc Plateau 55.93 64 P **P 16 02 20.8 +1.1**
TAPN Taplejung 55.98 273 *eP* **P 16 02 20.7 +0.3**
comp=Z,16nm,0.6s
O03E Paynes Creek 56.06 66 P **P 16 02 21.4 +0.8**
baz=309,SNR=10
PRGR Permogore 56.07 327 *eP* **P 16 02 17.9 -2.3**
PRGR pmax pmax
comp=Z,11nm,0.9s
MSO Missoula 56.42 56 P **P 16 02 24.0 +0.9**
baz=309,SNR=10
MSO Missoula 56.42 56 P **P 16 02 23.5 +0.5**
MSO IAmb IAmb 16 02 25.4
comp=Z,36nm,1.4s
KK31 Karatay Array 56.42 299 P **P 16 02 21.9 -1.1**
KKAR Karatay Array 56.42 299 P **P 16 02 22.2 -0.9**
KKAR pmax pmax
comp=Z,12nm,1.0s
KKAR Karatay Array 56.42 299 P **P 16 02 22.1 -0.9**
WVOR Wild Horse Val 56.56 62 P **P 16 02 25.1 +0.9**
WVOR pmax pmax
comp=Z,28nm,1.1s
WVOR Wild Horse Val 56.56 62 P **P 16 02 25.1 +0.9**
WVOR IAmb IAmb 16 02 27.0
comp=Z,28nm,1.1s
ORV Oroville 56.71 66 P **P 16 02 25.3 +0.2**
ORV pmax pmax
comp=Z,33nm,1.5s
ORV Oroville 56.71 66 P **P 16 02 25.3 +0.2**
ORV IAmb IAmb 16 02 26.9
comp=Z,33nm,1.5s
KIRV Kirov 56.73 323 P **P 16 02 23.1 -1.7**
comp=Z,8.1nm,0.6s,baz=22,slow=3.3,SNR=4.6
TMCR Tamitsa 56.76 332 *eP* **P 16 02 23.9 -1.1**
TMCR pmax pmax
comp=Z,29nm,1.0s
JIRN Jiri 56.76 275 *eP* **P 16 02 26.5 +0.5**
GUN Gumba 56.79 275 *eP* **P 16 02 26.3 +0.1**
comp=Z,22nm,0.5s
RAMN Ramite 56.98 274 *eP* **P 16 02 27.7 +0.3**
comp=Z,61nm,0.7s
BEKR Beckworth 57.19 65 P **P 16 02 29.6 +0.9**
BEKR IAmb IAmb 16 02 31.0
comp=Z,21nm,1.1s
FFC Flin Flon 57.24 42 P **P 16 02 29.4 +0.8**
FFC pmax pmax
comp=Z,38nm,1.4s
FFC Flin Flon 57.24 42 P **P 16 02 29.4 +0.8**
FFC IAmb IAmb 16 02 31.0
comp=Z,38nm,1.4s
KKN Kakani 57.26 276 *eP* **P 16 02 29.8 +0.4**
comp=Z,24nm,0.5s
PKI Pulchoki 57.33 275 *eP* **P 16 02 30.3 +0.3**
PKIN Phulchoki 57.33 275 *eP* **P 16 02 30.2 +0.2**
DMN Daman 57.50 276 *eP* **P 16 02 31.6 +0.5**
comp=Z,65nm,0.9s
GKN Gorkha 57.53 276 *eP* **P 16 02 31.4 +0.2**
comp=Z,21nm,0.4s
MFID Camas Ranch 57.54 60 P **P 16 02 32.1 +1.1**
MFID IAmb IAmb 16 02 33.8
comp=Z,24nm,1.2s
SANI Sanana 57.66 217 P **P 16 02 31.2 -0.7**
comp=Z,868nmcomp=Z,26nm,0.9s
SUMG Summit 57.69 5 P **P 16 02 32.1 +0.1**
SUMG pmax pmax
comp=Z,30nm,0.9s
SUMG Summit 57.69 5 P **P 16 02 32.1 +0.1**
SUMG Summit 57.69 5 *i* P **P 16 02 32.0 +0.1**
comp=Z,86nm,1.0s
FCC Fort Churchill 57.74 35 P **P 16 02 32.9 +0.9**
FCC pmax pmax
comp=Z,12nm,0.9s
FCC Fort Churchill 57.74 35 P **P 16 02 32.9 +0.9**
LRM Limekiln Ridge 57.86 56 P **P 16 02 33.5 +0.1**
DANN Dangsing 57.86 277 *eP* **P 16 02 33.9 +0.2**
comp=Z,66nm,0.7s
EGMT Eagleton 57.86 52 P **P 16 02 33.9 +0.8**
baz=310,SNR=9.5
EGMT Eagleton 57.86 52 P **P 16 02 34.2 +1.0**
PAHR Pah Rah Range 57.87 65 P **P 16 02 34.3 +0.9**
PAHR IAmb IAmb 16 02 35.9
comp=Z,14nm,0.9s
VCNR Virginia City 57.97 66 P **P 16 02 35.6 +1.4**
PNTR Pine Nut 58.14 66 P **P 16 02 36.2 +0.8**
BTK Batken 58.19 296 P **P 16 02 34.4 -1.2**
BTK pmax pmax
comp=Z,29nm,0.9s
BTK Batken 58.19 296 P **P 16 02 34.4 -1.2**
MCMT McKenzie Canyo 58.28 57 P **P 16 02 37.0 +0.6**
AKTO Aktyubinsk 58.35 312 P **P 16 02 35.5 -1.0**
comp=Z,4.1nm,0.3s,baz=58,slow=8.6,SNR=16
CMB Columbia Colle 58.35 67 P **P 16 02 37.4 +0.7**
CMB pmax pmax
comp=Z,32nm,1.4s
CMB Columbia Colle 58.35 67 P **P 16 02 37.4 +0.7**
CMB IAmb IAmb 16 02 39.2
comp=Z,32nm,1.4s
KOLN Koldanda 58.36 277 *eP* **P 16 02 37.2 +0.1**
comp=Z,28nm,0.6s
YERR Yengton 58.42 66 P **P 16 02 38.2 +0.9**
PYUN Piuthan 58.53 277 *eP* **P 16 02 38.5 +0.2**
comp=Z,100nm,0.8s
WAKR Walker 58.61 66 P **P 16 02 40.0 +1.3**
KLMR Klimovskoe 58.72 329 *eP* **P 16 02 35.4 -3.4**
KLMR pmax pmax
comp=Z,29nm,1.3s
KLMR MLR MLR
comp=Z,392nm,19.0s
KLMR Klimovskoe 58.72 329 *eP* **P 16 02 35.4 -3.4**
KLMR AMP 16 02 39.2
comp=Z,29nm,1.3s
KLMR LR LR 16 23 29.1
KLMR AMP 16 31 46.1
comp=Z,392nm,19.3s
HNR Honiara 58.88 176 LR LR 16 23 31.9
comp=Z,206nm,21.0s,baz=23,slow=31
KVN Kaiserville 59.05 65 P **P 16 02 42.9 +1.2**
KVN pmax pmax
comp=Z,17nm,0.7s
KVN Kaiserville 59.05 65 P **P 16 02 42.9 +1.2**
KVN IAmb IAmb 16 02 44.4
comp=Z,17nm,0.7s
QLMT Earthquake Lak 59.05 56 P **P 16 02 43.1 +1.5**
RYN Ryan 59.07 66 P **P 16 02 42.7 +0.9**
RYN IAmb IAmb 16 02 44.4
comp=Z,31nm,1.4s
GAR Garm 59.17 295 P **P 16 02 41.7 -0.7**
YHL Hebgen Lake 59.17 56 P **P 16 02 43.7 +1.1**
NVAR Mina Array Bea 59.33 66 P **P 16 02 45.1 +1.4**
comp=Z,8.0nm,0.5s,baz=298,slow=7.6,SNR=57
NVAR LR LR 16 24 59.5
comp=Z,85nm,21.9s,baz=289,slow=32
GCMT Greycliff 59.36 54 P **P 16 02 44.2 +0.5**
YHH Holmes Hill 59.39 56 P **P 16 02 44.9 +0.8**
YMR Madison River 59.41 56 P **P 16 02 45.6 +1.4**
YNR Norris Junctio 59.53 56 P **P 16 02 46.5 +1.5**
MLAC Mammoth, Mammo 59.54 67 P **P 16 02 46.7 +1.5**
baz=312
ELK Elko 59.60 62 P **P 16 02 46.9 +1.3**
ELK pmax pmax
comp=Z,5.0nm,0.7s
ELK Elko 59.60 62 P **P 16 02 46.9 +1.3**
YNE Yellowstone No 59.70 55 P **P 16 02 46.7 +0.5**
YPP Pitchstone Pla 59.75 56 P **P 16 02 49.0 +2.3**
LKWY Lake 59.78 56 P **P 16 02 48.8 +2.1**
LKWY pmax pmax
comp=Z,38nm,1.5s
LKWY Lake 59.78 56 P **P 16 02 48.8 +2.1**
LKWY IAmb IAmb 16 02 52.3
comp=Z,38nm,1.4s
YMP Mirror Lake Pl 59.79 55 P **P 16 02 48.2 +1.3**
H17A Grant Village 59.80 56 P **P 16 02 50.0 +3.2**
baz=312,SNR=12
H17A Grant Village 59.80 56 P **P 16 02 48.4 +1.5**
ILULI Ilulissat 59.80 11 P **P 16 02 48.5 +2.3**
ILULI pmax pmax
comp=Z,18nm,0.8s
ILULI Ilulissat 59.80 11 P **P 16 02 48.5 +2.3**
ILULI IAmb IAmb 16 02 50.5
comp=Z,18nm,0.8s
IMW Indian Meadow 59.93 57 P **P 16 02 49.0 +1.2**
IMW IAmb IAmb 16 02 51.2
comp=Z,16nm,0.9s
FLWY Flagg Ranch 59.93 56 P **P 16 02 49.0 +1.3**
FLWY IAmb IAmb 16 02 51.5
comp=Z,25nm,1.2s
SBUM Sibu 59.99 233 P **P 16 02 49.5 +1.3**
SBUM Sibu 59.99 233 P **P 16 02 50.0 +1.8**
RLMT Red Lodge 60.01 55 P **P 16 02 50.1 +1.8**
baz=312,SNR=19
RLMT Red Lodge 60.01 55 P **P 16 02 49.7 +1.4**
FXWY Fox Creek 60.05 57 P **P 16 02 49.5 +0.9**
CHGR Chuyangaron 60.07 296 P **P 16 02 48.2 -0.4**
TPAW Teton Pass 60.19 57 P **P 16 02 50.4 +0.8**
TIN Tinemaha, Big 60.28 67 P **P 16 02 51.6 +1.4**
baz=312
DGMT Dagmar 60.37 49 P **P 16 02 51.3 +0.9**
baz=313
SMMC Simmler 60.38 69 P **P 16 02 52.0 +1.3**
baz=312
LAO LASA Array 60.55 52 P **P 16 02 53.3 +1.5**
baz=312,SNR=12
LAO LASA Array 60.55 52 P **P 16 02 52.7 +1.0**
AHID Auburn Hatcher 60.59 58 P **P 16 02 53.3 +1.1**
AHID IAmb IAmb 16 02 55.1
comp=Z,20nm,1.1s
BGU Big Grassy Mou 60.74 60 P **P 16 02 54.1 +0.8**
PKM Mcpherson Peak 60.77 70 P **P 16 02 54.6 +1.0**
baz=312
GRAC Grapevine Rang 60.84 66 P **P 16 02 55.2 +1.4**
baz=312,SNR=7.8
NIL Nilore 60.95 289 P **P 16 02 54.6 0.0**
NIL pmax pmax
comp=Z,36nm,0.9s
NIL Nilore 60.95 289 P **P 16 02 54.6 0.0**
R11A Troy Canyon, C 60.99 64 P **P 16 02 56.0 +1.0**
baz=312,SNR=23
R11A Troy Canyon, C 60.99 64 P **P 16 02 55.7 +0.7**
R11A IAmb IAmb 16 02 57.3
comp=Z,15nm,1.1s
ISA Isabella, Lake 61.07 68 P **P 16 02 55.0 -0.4**
ISA pmax pmax
comp=Z,18nm,1.5s
ISA Isabella, Lake 61.07 68 P **P 16 02 55.4 0.0**
baz=312
ISA Isabella, Lake 61.07 68 P **P 16 02 55.0 -0.4**
HWUT Hardware Ranch 61.10 59 P **P 16 02 56.5 +0.7**
HWUT IAmb IAmb 16 02 58.7
comp=Z,11nm,0.7s
DUG Dugway, Tooele 61.35 61 P **P 16 02 58.4 +1.0**
DUG pmax pmax
comp=Z,19nm,1.0s
DUG Dugway, Tooele 61.35 61 P **P 16 02 58.8 +1.4**
baz=312,SNR=19
DUG Dugway, Tooele 61.35 61 P **P 16 02 58.4 +1.0**
DUG IAmb IAmb 16 03 00.2
comp=Z,19nm,0.9s
MPMC Manual Prospec 61.39 67 P **P 16 02 58.7 +0.9**
baz=312,SNR=17
BW06 Boulder Array 61.43 57 P **P 16 02 59.2 +1.2**
baz=313,SNR=21
BW06 Boulder Array 61.43 57 P **P 16 02 59.0 +1.0**
BW06 IAmb IAmb 16 03 00.5
comp=Z,32nm,1.2s
PDAR Pinedale Array 61.43 57 P **P 16 02 58.8 +0.8**
comp=Z,8.8nm,0.9s,baz=307,slow=3.0,SNR=64
PDAR pP **pP 16 03 13.7 -0.3**
comp=Z,8.0nm,1.0s,baz=336,slow=3.3,SNR=8.1
TPNV Topopah Spring 61.53 66 P **P 16 02 59.5 +0.8**
TPNV pmax pmax
comp=Z,28nm,1.1s
TPNV Topopah Spring 61.53 66 P **P 16 02 59.7 +1.1**
baz=312,SNR=17
TPNV Topopah Spring 61.53 66 P **P 16 02 59.5 +0.8**
TPNV IAmb IAmb 16 03 01.1
comp=Z,28nm,1.1s
OSI Osito Audit: C 61.62 69 P **P 16 02 60.0 +0.8**
baz=313
FRB Frobisher Bay 61.66 21 P **P 16 02 58.8 -0.1**
FRB pmax pmax
comp=Z,16nm,0.9s
LRMC Laurel Mtn Rad 61.67 68 P **P 16 03 00.1 +0.5**
baz=313,SNR=9.7
KSM Kuching 61.82 234 P **P 16 03 02.3 +1.7**
KSM IAmb IAmb 16 03 16.5
comp=Z,19nm,1.1s
KSM Kuching 61.82 234 P **P 16 03 02.0 +1.4**
JLU Jordanelle 61.84 60 P **P 16 03 01.7 +0.9**
PSUT Pine Spring 61.87 63 P **P 16 03 02.0 +1.1**
EDW2 Edwards Air Fo 61.88 68 P **P 16 03 01.7 +0.8**
baz=313,SNR=12
NLU North Lily Min 61.93 61 P **P 16 03 02.5 +1.1**
MPU Maple Canyon 62.14 60 P **P 16 03 03.9 +1.1**
SHOC Shoshone, Teco 62.23 66 P **P 16 03 04.2 +1.0**
baz=313
MWC Mount Wilson 62.29 69 P **P 16 03 04.6 +0.8**
MWC pmax pmax
comp=Z,24nm,1.0s
MWC Mount Wilson 62.29 69 P **P 16 03 04.6 +0.8**
MWC IAmb IAmb 16 03 05.9
comp=Z,24nm,0.9s
FINES FINESS Array B 62.31 335 P **P 16 03 01.9 -1.3**
comp=Z,1.8nm,0.3s,baz=33,slow=6.8,SNR=36
FINES PcP **PcP 16 03 42.0 -0.4**
comp=Z,2.3nm,0.5s,baz=38,slow=5.5,SNR=3.8
FINES LR LR 16 33 03.3
comp=Z,391nm,20.2s,baz=9.5,slow=39
GSC Goldstone, Bar 62.31 67 P **P 16 03 04.4 +0.6**
GSC pmax pmax
comp=Z,28nm,1.4s
GSC Goldstone, Bar 62.31 67 P **P 16 03 04.8 +1.0**
baz=313,SNR=9.8
GSC Goldstone, Bar 62.31 67 P **P 16 03 04.4 +0.6**
GSC IAmb IAmb 16 03 05.9
comp=Z,28nm,1.4s
SHPR Sheep Range 62.48 65 P **P 16 03 05.5 +0.5**
SHPR IAmb IAmb 16 03 07.6
comp=Z,22nm,1.3s
RRX Edison Barstow 62.49 68 P **P 16 03 06.1 +1.2**
baz=313
BFSC Mount Baldy Ra 62.52 69 P **P 16 03 05.8 +0.5**
baz=313,SNR=5.2
TUQ Turquoise Moun 62.75 67 P **P 16 03 07.6 +0.8**
baz=313,SNR=18
CCUT Cedar City 62.82 63 P **P 16 03 08.5 +1.1**
MSU Marysvale 62.85 62 P **P 16 03 08.5 +1.0**
MSU Marysvale 62.85 62 P **P 16 03 08.5 +1.0**
TMUT Trail Mountain 62.87 61 P **P 16 03 08.0 +0.3**
KAPI Kappang 62.90 222 LR LR 16 30 37.1
comp=Z,27nm,21.4s,baz=68,slow=36
KBL Kabul 62.91 292 P **P 16 03 06.4 -1.6**
KBL pmax pmax
comp=Z,10.0nm,0.9s
KBL Kabul 62.91 292 P **P 16 03 06.4 -1.6**
RDMU Red Mountain 62.92 59 P **P 16 03 08.9 +1.0**
HEC Hector,Ludlow 62.92 67 P **P 16 03 08.7 +0.9**
baz=313,SNR=12
SZCU Shurtz Canyon 62.95 63 P **P 16 03 09.0 +0.8**
P17A Butcher Ranch, 63.01 60 P **P 16 03 09.5 +1.0**
MDND Maddock 63.02 47 P **P 16 03 09.4 +1.2**
baz=315
MDND Maddock 63.02 47 P **P 16 03 09.5 +1.2**
ULM Lac du Bonnet 63.02 43 P **P 16 03 08.7 +0.5**
comp=Z,3.7nm,0.5s,baz=329,slow=6.0,SNR=8.3
ULM LR LR 16 32 26.5
comp=Z,111nm,19.1s,baz=318,slow=38
ULM Lac du Bonnet 63.02 43 P **P 16 03 08.1 -0.1**
ULM IAmb IAmb 16 03 09.3
comp=Z,20nm,1.4s
K22A Casper 63.15 55 P **P 16 03 10.0 +0.7**
baz=314
Q16A Castle Valley 63.15 61 P **P 16 03 09.9 +0.4**
MTPU Mount Pierson 63.17 62 P **P 16 03 10.6 +0.8**
MURC Murrieta 63.24 69 P **P 16 03 10.5 +0.5**
baz=314
LCMT Little Creek M 63.26 64 P **P 16 03 11.0 +0.9**
GMRC Granite Mounta 63.35 67 P **P 16 03 11.7 +0.9**
baz=314,SNR=16
SRU San Rafael Swe 63.38 60 P **P 16 03 12.2 +1.2**
SRU pmax pmax
comp=Z,68nm,1.5s
SRU San Rafael Swe 63.38 60 P **P 16 03 12.2 +1.2**
E28A Huff 63.39 49 P **P 16 03 11.1 +0.4**
E28A IAmb IAmb 16 03 13.1
comp=Z,25nm,0.8s
RSSD Black Hills 63.43 53 P **P 16 03 12.6 +1.3**
RSSD pmax pmax
comp=Z,46nm,1.3s
RSSD Black Hills 63.43 53 P **P 16 03 12.3 +1.0**
baz=314
RWWY Rawlins 63.44 56 P **P 16 03 12.1 +0.7**
KNB Kanab 63.50 63 P **P 16 03 12.5 +0.7**
KNB pmax pmax
comp=Z,36nm,1.2s

KNB **Kanab** 63.50 63 P P 16 03 12.5 +0.7
PKCU **Pink Cliffs** 63.50 63 P P 16 03 12.9 +1.0
PFO **Pinyon Flats O** 63.68 68 P P 16 03 13.3 +0.4
comp=Z,2.4nm,0.7s,baz=323,slow=3.7,SNR=3.8
PFO **Pinyon Flats O** 63.68 68 P P 16 03 13.4 +0.5
baz=314
PFO **Pinyon Flats O** 63.68 68 P P 16 03 13.2 +0.3
XPFO **Pion Flat** 63.68 68 P P 16 03 13.3 +0.4
BELC **Belle Mtn. Jos** 63.69 68 P P 16 03 13.3 +0.3
baz=314,SNR=7.1
109C **Camp Elliot, M** 63.78 69 P P 16 03 14.1 +0.6
baz=314
O20A **White River Ci** 63.95 58 P P 16 03 15.6 +0.8
baz=314,SNR=7.6
O20A **White River Ci** 63.95 58 P P 16 03 15.3 +0.6
O20A IAmb IAmb 16 03 17.0
comp=Z,30nm,1.2s
IRM **Iron Mountain** 64.09 67 P P 16 03 16.5 +1.0
baz=314,SNR=18
OBN **Obninsk** 64.09 326⇑ eP P 16 03 15.1 0.0
OBN *PP pP 16 03 31.0 -0.6
OBN 16 03 52.0
OBN SS SS 16 16 02.0 +6.4
OBN pmax pmax
comp=Z,11nm,0.8s
OBN MLR MLR
comp=Z,182nm,19.0s
KULM **Kulim** 64.14 246 P P 16 03 16.7 +0.7
KULM **Kulim** 64.14 246 P P 16 03 16.0 0.0
MONP2 **Monument Peak** 64.19 69 P P 16 03 16.9 +0.4
baz=314
W13A **Hualapai Mount** 64.19 66 P P 16 03 17.1 +0.7
U15A **North Rim** 64.21 64 P P 16 03 17.6 +1.0
U15A IAmb IAmb 16 03 19.4
comp=Z,33nm,1.4s
BC3 **Big Chuckawall** 64.25 68 P P 16 03 17.2 +0.5
baz=314,SNR=6.9
COEN **Coen** 64.32 194 P P 16 03 17.5 +0.5
COEN IAmb IAmb 16 03 18.7
comp=Z,22nm,0.9s
AGMN **Agassiz Nation** 64.44 45 P P 16 03 18.0 +0.4
baz=317,SNR=6.6
AGMN **Agassiz Nation** 64.44 45 P P 16 03 17.8 +0.2
SWSC **Sam W. Stewart** 64.53 69 P P 16 03 18.5 +0.1
baz=314
IKP **In-Ko-Pah, Jac** 64.55 69 P P 16 03 19.1 +0.5
baz=314
IPM **Ipoh** 64.56 245 P P 16 03 18.5 -0.3
IPM **Ipoh** 64.56 245 P P 16 03 20.0 +1.2
PV09 **Paradox Valley** 64.59 60 P P 16 03 19.9 +0.8
PDMCI **Parker Dam,Lak** 64.59 66 P P 16 03 19.6 +0.9
baz=314,SNR=7.7
VSU **Vasula** 64.61 333⇑ eP P 16 03 17.8 -0.6
VSU pmax pmax
comp=Z,71nm,1.6s
PV21 **Cone Mtn., Par** 64.64 60 P P 16 03 19.8 +0.5
PV21 IAmb IAmb 16 03 21.6
comp=Z,52nm,1.4s
PHWY **Pilot Hill** 64.66 56 P P 16 03 19.6 +0.2
N23A **Red Feather La** 64.68 56 P P 16 03 21.0 +1.5
baz=315,SNR=11
PV23 **Carpenter Ridg** 64.69 60 P P 16 03 20.1 +0.5
PV23 IAmb IAmb 16 03 22.1
comp=Z,23nm,0.8s
PV10 **Paradox Valley** 64.73 60 P P 16 03 20.5 +0.6
PV14 **Lion Creek, Pa** 64.74 60 P P 16 03 20.7 +0.7
PV14 IAmb IAmb 16 03 22.3
comp=Z,48nm,1.4s
Y12C **Blythe** 64.75 67 P P 16 03 20.5 +0.8
baz=314
Y12C **Blythe** 64.75 67 P P 16 03 20.8 +1.1
Y12C IAmb IAmb 16 03 22.1
comp=Z,41nm,1.4s
D32A **Dogwood Acres,** 64.75 46 P P 16 03 20.1 +0.5
PV22 **Blue Mesa, Par** 64.76 60 P P 16 03 20.9 +0.8
PV22 IAmb IAmb 16 03 22.4
comp=Z,48nm,1.4s
PV04 **Paradox Valley** 64.79 60 P P 16 03 20.7 +0.5
PV20 **West Nyswonger** 64.79 60 P P 16 03 20.8 +0.5
PV19 **Morning Glory** 64.81 60 P P 16 03 21.1 +0.8
PV19 IAmb IAmb 16 03 22.8
comp=Z,28nm,0.9s
PV17 **East Wray Mesa** 64.84 60 P P 16 03 21.5 +0.9
PV16 **Nyswonger Mesa** 64.84 60 P P 16 03 21.0 +0.4
PV16 IAmb IAmb 16 03 23.0
comp=Z,23nm,0.7s
PV11 **David Mesa, Pa** 64.88 60 P P 16 03 21.5 +0.7
PV18 **Skein Mesa, Pa** 64.89 60 P P 16 03 21.9 +1.0
PV18 IAmb IAmb 16 03 23.3
comp=Z,29nm,0.9s
PV05 **Paradox Valley** 64.90 60 P P 16 03 21.9 +0.9
PV12 **Saucer Basin,** 64.90 60 P P 16 03 21.6 +0.6
PV07 **Paradox Valley** 64.91 60 P P 16 03 21.8 +0.7
PV07 IAmb IAmb 16 03 23.4
comp=Z,26nm,1.2s
PV03 **Paradox Valley** 64.92 60 P P 16 03 21.9 +0.8
PV03 IAmb IAmb 16 03 23.5
comp=Z,34nm,1.1s
PV13 **Radium Mtn., P** 65.00 60 P P 16 03 22.4 +0.7
PV02 **Paradox Valley** 65.02 60 P P 16 03 22.7 +1.0
PV02 IAmb IAmb 16 03 24.2
comp=Z,18nm,1.0s
GLA **Glamis** 65.05 68 P P 16 03 22.8 +1.0
GLA pmax pmax
comp=Z,48nm,1.4s
GLA **Glamis** 65.05 68 P P 16 03 22.9 +1.0
baz=314,SNR=6.1
GLA **Glamis** 65.05 68 P P 16 03 22.8 +1.0
GLA IAmb IAmb 16 03 24.1
comp=Z,48nm,1.4s
PV15 **Paradox Valley** 65.06 60 P P 16 03 22.2 +0.1
PV15 IAmb IAmb 16 03 24.4
comp=Z,16nm,0.9s
MYKOM **Kota Tinggi** 65.11 241 P P 16 03 23.0 +0.7
VRH **Novokhopyorsk** 65.11 321 eP P 16 03 19.0 -2.8
VRH pmax pmax
comp=Z,10.0nm,0.6s
LPSR **Galich'ya Gora** 65.16 323 eP P 16 03 20.5 -1.6
LPSR pmax pmax
comp=Z,10.0nm,0.7s
PV01 **Paradox Valley** 65.16 60 P P 16 03 23.4 +0.7
PV01 IAmb IAmb 16 03 25.1
comp=Z,50nm,1.6s
SMCO **Snowmass** 65.32 58 P P 16 03 24.9 +1.0
SMCO IAmb IAmb 16 03 26.4
comp=Z,34nm,1.5s
B35A **Bob, Littlefor** 65.37 44 P P 16 03 23.6 0.0
B35A IAmb IAmb 16 03 25.1
comp=Z,28nm,1.4s
WUAZ **Wupatki** 65.38 64 P P 16 03 25.4 +1.3
baz=315,SNR=9.8
WUAZ **Wupatki** 65.38 64 P P 16 03 25.2 +1.1
WUAZ IAmb IAmb 16 03 26.8
comp=Z,42nm,1.4s
SOEI **Soe** 65.39 215 P P 16 03 24.2 +0.1
SOEI IAmb IAmb 16 03 48.6
comp=Z,29nm,0.9s
Y14A **Wickenburg** 65.52 66 P P 16 03 25.8 +1.0
ISCO **Idaho Springs** 65.63 57 P P 16 03 26.9 +1.1
ISCO pmax pmax
comp=Z,35nm,1.2s
ISCO **Idaho Springs** 65.63 57 P P 16 03 27.3 +1.5
baz=315,SNR=17
ISCO **Idaho Springs** 65.63 57 P P 16 03 26.9 +1.1
ISCO IAmb IAmb 16 03 28.7
comp=Z,35nm,1.2s
SUSD **Miller** 65.77 49 P P 16 03 26.6 +0.3
baz=317
MVCO **Mesa Verde** 65.85 61 P P 16 03 28.2 +1.1
baz=315,SNR=6.0
MVCO **Mesa Verde** 65.85 61 P P 16 03 27.9 +0.7
MVCO IAmb IAmb 16 03 29.6
comp=Z,29nm,1.2s
MTN **Manton Dam** 65.98 207 P P 16 03 28.1 +0.3
MTN IAmb IAmb 16 03 48.7
comp=Z,40nm,1.4s
F33A **5 Mile Ranch,** 66.04 47 P P 16 03 28.3 +0.3
F33A IAmb IAmb 16 03 29.8
comp=Z,38nm,1.2s
X16A **Lo Mia Camp, P** 66.11 65 P P 16 03 29.0 +0.1
X16A IAmb IAmb 16 03 31.6
comp=Z,33nm,1.4s
VSR **Storozhevoye** 66.14 322 eP P 16 03 26.8 -1.6
VSR pmax pmax
comp=Z,10.0nm,0.9s

NB2 **NORSAR Subarra** 66.16 342 P P 16 03 27.3 -1.2
comp=Z,5.1nm,0.9s,baz=26,slow=6.5
NOA **NORSAR Array B** 66.16 342 P P 16 03 26.9 -1.7
comp=Z,3.7nm,0.9s,baz=25,slow=6.4,SNR=11
NOA LR LR 16 37 07.3
comp=Z,300nm,19.6s,baz=30,slow=40
VORD **Divnogorie** 66.28 322 eP P 16 03 27.7 -1.6
VORD pmax pmax
comp=Z,10.0nm,1.0s
NORES **NORESS Array B** 66.38 342 P P 16 03 30.0 +0.2
NORES pmax pmax
comp=Z,1.0nm,0.3s
S22A **4UR Ranch, Cre** 66.41 59 P P 16 03 32.4 +1.6
baz=315,SNR=8.3
W18A **Petrified Fore** 66.61 63 P P 16 03 33.3 +1.2
baz=315
EYMN **Ely** 66.67 43 P P 16 03 32.3 +0.3
baz=319
OGNE **Ogallala** 66.73 54 P P 16 03 33.6 +1.0
baz=316
OGNE **Ogallala** 66.73 54 P P 16 03 33.3 +0.8
GEYT **Alibeck** 66.88 302 P P 16 03 33.7 +0.2
comp=Z,12nm,0.8s,baz=29,slow=3.4,SNR=31
GEYT LR LR 16 36 37.5
comp=Z,229nm,18.2s,baz=30,slow=39
GYA0B **ALIBECK ARRAY** 66.88 302 P P 16 03 33.7 +0.2
GYA0B IAmb IAmb 16 03 39.1
comp=Z,20nm,0.8s
X18A **Snowflake** 66.90 64 P P 16 03 34.3 +0.4
214A **Organ Pipe Nat** 67.03 67 P P 16 03 35.5 +1.0
baz=315,SNR=7.2
214A **Organ Pipe Nat** 67.03 67 P P 16 03 34.9 +0.4
214A IAmb IAmb 16 03 36.8
comp=Z,17nm,0.9s
HRA **Herat** 67.05 296 P P 16 03 34.1 -0.7
HRA IAmb IAmb 16 03 35.9
comp=Z,39nm,1.8s
SDCO **Great Sand Dun** 67.15 58 P P 16 03 36.8 +1.3
baz=316,SNR=11
SDCO **Great Sand Dun** 67.15 58 P P 16 03 36.2 +0.6
SDCO IAmb IAmb 16 03 38.3
comp=Z,27nm,1.4s
PSI **Prapat** 67.15 246 P P 16 03 36.1 +0.6
PSI pmax pmax
comp=Z,11nm,0.9s
K31A **O'Neill** 67.19 51 P P 16 03 36.2 +0.8
RPSI **Rantau Prapat** 67.23 246 P P 16 03 36.1 +0.2
ECSD **EROS Data Cent** 67.44 49 P P 16 03 37.2 +0.3
baz=318,SNR=16
ECSD **EROS Data Cent** 67.44 49 P P 16 03 37.2 +0.3
E38A **The Farm, Brul** 67.66 44 P P 16 03 37.8 -0.4
E38A IAmb IAmb 16 03 39.5
comp=Z,22nm,0.7s
KSCO **Kaye Shedlock'** 67.81 56 P P 16 03 39.9 +0.5
baz=317
TUC **Tucson** 67.99 66 P P 16 03 40.9 +0.3
TUC pmax pmax
comp=Z,16nm,1.2s
TUC **Tucson** 67.99 66 P P 16 03 41.6 +1.0
baz=316
TUC **Tucson** 67.99 66 P P 16 03 40.9 +0.3
SPMN **Marine on St.** 68.14 45 P P 16 03 41.9 +0.7
baz=319
SPMN **Marine on St.** 68.14 45 P P 16 03 41.4 +0.2
SPMN IAmb IAmb 16 03 42.8
comp=Z,33nm,1.2s
T25A **Trinidad** 68.19 58 P P 16 03 43.0 +1.0
baz=316,SNR=14
ANMO **Albuquerque** 68.62 61 P P 16 03 45.9 +1.3
comp=Z,3.4nm,0.6s,baz=308,slow=7.8,SNR=15
ANMO **Albuquerque** 68.62 61⇑ P P 16 03 45.6 +1.0
ANMO pmax pmax
comp=Z,13nm,1.3s
ANMO **Albuquerque** 68.62 61 P P 16 03 45.7 +1.0
baz=316
ANMO **Albuquerque** 68.62 61 P P 16 03 44.9 +0.2
D41A **Chassel** 68.62 42 P P 16 03 44.6 +0.3
D41A IAmb IAmb 16 03 46.0
comp=Z,28nm,0.9s
I37A **Lemond, Waseca** 68.77 47 P P 16 03 45.9 +0.7
LENM **Lemitar** 68.89 62 P P 16 03 47.9 +1.6
HYB **Hyderabad** 68.96 272 iP P 16 03 48.0 +1.2
comp=Z,62nm,0.8s
HYB esP sP 16 04 09.0 -1.3
TVZX **PASSCAL Wareho** 68.98 62 P P 16 03 47.8 +1.2
baz=316
GOF **Gofitskoye** 69.23 316⇑ eP P 16 03 48.1 0.0
GOF pmax pmax
comp=Z,58nm,0.8s
KNRA **Kununurra** 69.37 208 P P 16 03 49.6 +0.5
KNRA IAmb IAmb 16 04 05.1
comp=Z,29nm,1.2s
CBKS **Cedar Bluff** 69.49 54 P P 16 03 49.2 -0.6
CBKS pmax pmax
comp=Z,53nm,1.3s
CBKS **Cedar Bluff** 69.49 54 P P 16 03 49.7 -0.1
baz=318
CBKS **Cedar Bluff** 69.49 54 P P 16 03 49.2 -0.6
CBKS IAmb IAmb 16 03 51.0
comp=Z,53nm,1.2s
319A **Douglas** 69.55 66 P P 16 03 50.6 +0.3
319A IAmb IAmb 16 03 52.8
comp=Z,49nm,1.1s
121A **Cookes Peak, D** 69.59 64 P P 16 03 52.3 +1.5
baz=317,SNR=7.3
121A **Cookes Peak, D** 69.59 64 P P 16 03 51.7 +1.0
121A IAmb IAmb 16 03 53.6
comp=Z,30nm,1.3s
AKT **Akhty** 69.73 311 eP P 16 03 51.1 -0.3
AKT e*PP pP 16 04 08.8 +0.7
AKT e 16 04 11.4
AKT e*SP sP 16 04 16.0 +1.1
AKT pmax pmax
comp=Z,11nm,0.7s
MSVF **Nonsavu** 69.79 158 P P 16 03 53.2 +1.5
MSVF pmax pmax
comp=Z,73nm,1.7s
MSVF **Nonsavu** 69.79 158 P P 16 03 53.1 +1.5
MSVF IAmb IAmb 16 03 55.9
comp=Z,73nm,1.6s
SCHQ **Schefferville** 69.87 25 P P 16 03 52.5 +0.6
comp=Z,7.3nm,0.7s,baz=300,slow=6.1,SNR=13
SCHQ **Schefferville** 69.87 25 P P 16 03 52.3 +0.5
CTA **Charters Tower** 69.94 190 P P 16 03 53.2 +0.7
CTA pmax pmax
comp=Z,25nm,1.3s
CTAO **Charters Tower** 69.94 190 P P 16 03 52.7 +0.2
CTAO pmax pmax
comp=Z,28nm,1.2s
CTAO **Charters Tower** 69.94 190 P P 16 03 52.7 +0.2
CTAO IAmb IAmb 16 04 09.2
comp=Z,28nm,1.2s
E44A **Grand Marais A** 70.10 40 P P 16 03 53.5 +0.1
baz=322
I40A **Norwalk** 70.16 45 P P 16 03 53.7 -0.1
SEKA **Sheki** 70.20 311 P P 16 03 53.3 -0.9
KIV **Kislovodsk** 70.25 315 eP P 16 03 54.9 +0.5
KIV pmax pmax
comp=Z,25nm,1.0s
KIV MLR MLR
comp=Z,241nm,18.0s
LEM **Lembang** 70.25 232 LR LR 16 37 52.2
comp=Z,35nm,19.2s,baz=5.5,slow=38
LEM **Lembang** 70.25 232 P P 16 03 47.9 -6.9
AKASG **Malin Array Be** 70.28 327 P P 16 03 52.9 -1.5
comp=Z,2.1nm,0.3s,baz=33,slow=6.2,SNR=19
AKASG LR LR 16 37 08.9
comp=Z,288nm,21.7s,baz=15,slow=38
AKBB **Malin Array Si** 70.28 327 P P 16 03 52.9 -1.5
AKBB pmax pmax
comp=Z,6.0nm,0.8s
AKBB **Malin Array Si** 70.28 327 P P 16 03 52.9 -1.5
KBZ **Khabaz** 70.33 315 P P 16 03 55.0 +0.3
comp=Z,11nm,0.7s,baz=56,slow=5.6,SNR=26
KBZ LR LR 16 39 07.3
comp=Z,186nm,18.4s,baz=30,slow=40
SCIA **State Center** 70.46 48 P P 16 03 56.1 +0.5
baz=320
SCIA **State Center** 70.46 48 P P 16 03 56.0 +0.3
ZEI **Tsey** 70.58 314 eP P 16 03 55.1 -1.6
ZEI pmax pmax
comp=Z,4.0nm,0.4s
MNGR **Mingechevir, A** 70.59 310 P P 16 03 55.4 -1.0
MATQ **Matagami** 70.79 34 P P 16 03 57.3 -0.2
baz=326,SNR=7.4
KSU1 **Kansas State U** 70.90 52 P P 16 03 57.6 -0.8
baz=319
D47A **Chapleau** 70.91 38 P P 16 03 57.7 -0.6
baz=324,SNR=5.5
TBLG **Delisi** 71.00 313 PcP 16 04 20.9 +1.9
F45A **CMU Biological** 71.01 41 P P 16 03 58.4 -0.5
baz=323
GANJ **Ganja** 71.06 311 P P 16 03 58.9 -0.5
JFWS **Jewell Farm** 71.09 45 P P 16 03 58.8 -0.7
baz=321
LKRN **Lenkeran, Azer** 71.29 308 P P 16 03 59.8 -0.9
N38A **Joes South For** 71.30 49 P P 16 04 00.2 -0.5
N38A IAmb IAmb 16 04 02.0
comp=Z,50nm,1.3s
E47A **Iron Bridge** 71.33 39 P P 16 04 00.0 -0.8
baz=324
D48A **Paudash Townsh** 71.34 38 P P 16 03 59.8 -1.0
baz=325
AMTX **Amarillo** 71.34 58 P P 16 04 01.9 +0.6
baz=318
AMTX **Amarillo** 71.34 58 P P 16 04 01.7 +0.5
AMTX IAmb IAmb 16 04 03.5
comp=Z,41nm,1.4s
MSTX **Muleshoe** 71.41 59 P P 16 04 02.2 +0.5
baz=318,SNR=8.6
MSTX **Muleshoe** 71.41 59 P P 16 04 02.1 +0.4
MSTX IAmb IAmb 16 04 03.7
comp=Z,42nm,1.3s
D49A **Beulah Townshi** 71.44 37 P P 16 04 01.0 -0.5
baz=325
G45A **Suttons Bay** 71.47 41 P P 16 04 01.8 +0.2
baz=323
MNTX **Cornudas Mount** 71.59 63 P P 16 04 03.6 +0.9
baz=318,SNR=12
MNTX **Cornudas Mount** 71.59 63 P P 16 04 03.6 +0.9
LSQQ **Lebel-sur-Quev** 71.61 34 P P 16 04 02.2 -0.3
baz=327
E48A **Lockeyer** 71.76 38 P P 16 04 02.6 -0.8
baz=324
CHGQ **Chibougamau** 71.81 32 P P 16 04 03.5 -0.2
baz=328,SNR=5.8
GDL2 **Guadalupe Moun** 71.81 62 P P 16 04 04.6 +0.5
AKH **Akhalkalaki** 71.84 313 ⇓P P 16 04 05.1 +0.8
AKH **Akhalkalaki** 71.84 313 P P 16 04 04.7 +0.5
AKH pmax pmax
comp=Z,10.0nm,0.7s
AKH **Akhalkalaki** 71.84 313 P P 16 04 04.7 +0.5
SOC **Sochi** 71.88 317 eP P 16 04 13.6 +9.4
SOC e 16 06 40.3
SOC ePPP PPP 16 08 25.5
SOC eSS SS 16 17 58.0 +1.7
SOC pmax pmax
comp=Z,12nm,0.7s
SOC MLR MLR
comp=Z,168nm,14.0s
WRAB **Tennant Creek** 71.89 202 ceP P 16 04 04.5 +0.1
WRAB pmax pmax
comp=Z,30nm,1.0s
WRAB **Tennant Creek** 71.89 202 P P 16 04 04.5 +0.1
WRAB IAmb IAmb 16 04 05.7
comp=Z,26nm,1.0s
WRA **Warramunga Arr** 71.90 202 P P 16 04 04.5 +0.1
comp=Z,17nm,0.9s,baz=19,slow=6.7,SNR=40
WRA pP pP 16 04 19.8 -1.2
comp=Z,16nm,0.9s,baz=16,slow=6.1,SNR=12
ANN **Anapa** 71.91 319 eP P 16 03 59.9 -4.4
ANN e*PP pP 16 04 19.6 -1.5
ANN e 16 06 41.8
ANN eS S 16 13 13.5 -6.8
ANN e*SS sS 16 13 45.3 -3.4
ANN eSS SS 16 17 53.2 -3.4
ANN pmax pmax
comp=Z,12nm,0.8s
DZM **Mont Dzumac** 71.94 170 eP P 16 04 05.8 +1.1
comp=Z,76nm,1.1s
DZM **Mont Dzumac** 71.94 170 eLR LR 16 25 54.7
comp=Z,287nm,27.4s
I45A **Fountain** 72.01 42 P P 16 04 05.4 +0.4
baz=323
P38A **Dawn** 72.05 50 P P 16 04 05.2 -0.1
H46A **Fife Lake** 72.06 41 P P 16 04 05.5 +0.3
baz=323
F48A **Evansville** 72.11 39 P P 16 04 04.7 -0.8
baz=324
D50A **G1974 Best Tow** 72.11 36 P P 16 04 04.8 -0.7
baz=326
G47A **Hillman** 72.12 40 P P 16 04 05.3 -0.3
baz=324
VLDQ **Val d'Or** 72.23 35 P P 16 04 04.8 -1.4
VLDQ IAmb IAmb 16 04 06.3
comp=Z,32nm,1.2s
D51A **Lot 18 Range I** 72.36 36 P P 16 04 06.3 -0.7
baz=326
E50A **Wahnapitae** 72.38 37 P P 16 04 06.5 -0.6
baz=325
F49A **Sandfield** 72.39 39 P P 16 04 06.6 -0.7
baz=325
I46A **Reed City** 72.43 42 P P 16 04 07.7 +0.2
baz=323
H47A **Mio** 72.44 41 P P 16 04 07.8 +0.3
baz=324
N41A **Harden Midland** 72.52 47 P P 16 04 07.9 -0.2
NAX **Nakhchivan** 72.59 310 P P 16 04 08.0 -0.6
FITZ **Fitzroy Crossi** 72.64 210 P P 16 04 09.8 +1.0
H48A **Harrisville** 72.73 40 P P 16 04 09.0 -0.2
baz=324
E51A **G1948 Merrick** 72.77 37 P P 16 04 08.6 -0.9
baz=326
P40A **Paris** 72.85 49 P P 16 04 09.8 -0.3
P40A IAmb IAmb 16 04 11.6
comp=Z,40nm,1.1s
D53A **Lac Vacive, Po** 73.00 35 P P 16 04 10.6 -0.2
baz=327,SNR=6.2
D53A **Lac Vacive, Po** 73.00 35 P P 16 04 10.8 0.0
WMOK **Wichita Mounta** 73.04 56 P P 16 04 11.6 +0.4
WMOK pmax pmax
comp=Z,15nm,0.9s
WMOK **Wichita Mounta** 73.04 56 P P 16 04 11.9 +0.6
baz=319,SNR=16
WMOK **Wichita Mounta** 73.04 56 P P 16 04 11.6 +0.4
F51A **Arnstein** 73.11 37 P P 16 04 10.7 -0.8
baz=326
J47A **Sunmer** 73.27 42 P P 16 04 12.9 +0.5
baz=324
J47A **Sunmer** 73.27 42 P P 16 04 12.9 +0.5
K46A **Dorr** 73.29 43 P P 16 04 12.6 0.0
baz=323
E52A **Mattawa** 73.30 36 P P 16 04 11.7 -0.9
baz=326
D54A **Lac Fusel, La** 73.33 35 P P 16 04 12.4 -0.4
baz=327
HDIL **Hopedale** 73.38 46 P P 16 04 12.8 -0.3
baz=322
FNO **Franklin** 73.39 55 P P 16 04 14.4 +1.1
KWP **Kalwaria Pacla** 73.39 331 P P 16 04 12.8 -0.2
KWP pmax pmax
comp=Z,30nm,1.2s
KWP **Kalwaria Pacla** 73.39 331 P P 16 04 12.8 -0.2
KWP IAmb IAmb 16 04 15.0
comp=Z,30nm,1.2s
F52A **Sundridge** 73.45 37 P P 16 04 13.0 -0.5
baz=326
E53A **Dumoine, Ponti** 73.60 36 P P 16 04 14.0 -0.4
baz=327
K47A **Vermontville** 73.65 42 P P 16 04 14.7 0.0
baz=324
X34A **Smith Ranch, M** 73.65 56 P P 16 04 15.8 +0.9
X34A IAmb IAmb 16 04 17.1
comp=Z,27nm,1.1s
R40A **Maddies Statio** 73.70 50 P P 16 04 14.5 -0.6
R40A IAmb IAmb 16 04 16.3
comp=Z,61nm,1.4s
E54A **Lac Daplat, Po** 73.74 35 P P 16 04 14.2 -0.9
baz=327
TUL1 **Leonard** 73.74 54 P P 16 04 15.7 +0.4
baz=320,SNR=5.0
TUL1 **Leonard** 73.74 54 P P 16 04 15.4 +0.1
TUL1 IAmb IAmb 16 04 17.0
comp=Z,66nm,1.4s
W35A **Tecumseh** 73.74 55 P P 16 04 15.3 -0.1
OJC **Ojcow** 73.77 333 eP P 16 04 15.4 +0.1
D55A **Sainte-Anne-du** 73.88 34 P P 16 04 16.0 +0.1
baz=328
J49A **Marlette** 73.89 41 P P 16 04 16.3 +0.2
baz=325
K48A **Perry** 73.92 42 P P 16 04 17.0 +0.7
baz=324,SNR=8.1

EKA Eskdalemuir Ar 74.01 348 P P 16 04 16.1 -0.5
EKA pmax pmax
comp=Z,1.0nm,0.3s
U38A Gravette 74.06 52 P P 16 04 17.1 -0.2
U38A IAmb IAmb 16 04 18.5
comp=Z,59nm,1.9s
D56A ZEC Mazanza, M 74.11 34 P P 16 04 17.4 +0.1
baz=328,SNR=5.6
KOLS Kolonicke sedl 74.14 330 eP P 16 04 17.4 0.0
KOLS pmax pmax
comp=Z,7.0nm,1.3s
KOLS Kolonicke sedl 74.14 330 eP P 16 04 17.4 0.0
ABTX Abilene, Hawle 74.16 58 P P 16 04 18.6 +0.8
baz=319,SNR=5.3
ABTX Abilene, Hawle 74.16 58 P P 16 04 18.4 +0.5
ABTX IAmb IAmb 16 04 19.9
comp=Z,38nm,1.1s
K49A Clarkson 74.22 41 P P 16 04 18.6 +0.5
baz=324
KSP Ksiaz 74.23 335 eP P 16 04 18.7 +0.8
G54A Lake Saint Pet 74.26 36 P P 16 04 17.9 -0.4
baz=327
G53A Haliburton 74.28 37 P P 16 04 18.1 -0.3
baz=327,SNR=6.3
BURAR Bucovina Array 74.30 328 ⇑P P 16 04 18.2 -0.3
BURAR Bucovina Array 74.30 328 P P 16 04 18.2 -0.3
NIE Niedzica 74.33 332 eP P 16 04 19.4 +0.8
NIE Niedzica 74.33 332 P P 16 04 18.8 +0.2
NIE pmax pmax
comp=Z,4.0nm,0.9s
TXAR Lajitas Array 74.33 63 P P 16 04 20.0 +1.0
comp=Z,1.1nm,0.5s,baz=299,slow=4.8,SNR=189
CCM Cathedral Cave 74.39 49 P P 16 04 18.7 -0.4
CCM Cathedral Cave 74.39 49 P P 16 04 18.9 -0.2
baz=322
CCM Cathedral Cave 74.39 49 P P 16 04 18.7 -0.4
CCM IAmb IAmb 16 04 20.4
comp=Z,22nm,1.1s
HHAR Hobbs 74.41 52 P P 16 04 18.8 -0.5
HHAR IAmb IAmb 16 04 20.5
comp=Z,46nm,1.5s
I51A Listowel 74.41 39 P P 16 04 19.5 +0.4
baz=326
M47A Cromwell 74.42 44 P P 16 04 19.3 0.0
baz=324
E56A St. Veronique 74.44 34 P P 16 04 19.1 -0.1
baz=328
D57A Chemin Vers le 74.45 33 P P 16 04 19.8 +0.5
baz=329,SNR=9.5
L48A N Adams 74.48 42 P P 16 04 19.8 +0.2
baz=324
OSTC Ostas 74.50 335 AMS AMS 16 39 50.0
comp=Z,400nm,22.3s
CHVC Chvalec 74.52 335 AMS AMS 16 40 10.0
comp=Z,500nm,18.9s
AAM Ann Arbor 74.53 42 P P 16 04 19.8 0.0
baz=324
SFIN Lafayette 74.54 45 P P 16 04 19.9 0.0
baz=323
F55A Otter Lake 74.56 35 P P 16 04 19.2 -0.7
baz=328
BIZ Bicaz 74.57 327 ⇓P P 16 04 20.1 +0.1
OKC Ostrava-Krasne 74.60 333 P P 16 04 20.2 +0.1
OKC pmax pmax
comp=Z,5.0nm,1.2s
OKC Ostrava-Krasne 74.60 333 AMS AMS 16 40 30.0
comp=Z,400nm,16.3s
UPC Upice 74.61 335 AMS AMS 16 40 00.0
comp=Z,500nm,22.9s
DPC Dobruska-Polom 74.66 335 eP P 16 04 21.6 +1.1
DPC MLR MLR
comp=Z,300nm,16.1s
DPC Dobruska-Polom 74.66 335 eP P 16 04 21.6 +1.1
DPC AMS AMS 16 40 20.0
comp=Z,300nm,16.1s
CLL Collm 74.67 337 i P P 16 04 21.8 +1.3
comp=Z,9.0nm,1.0s
CLL e PS PnS 16 14 30.0 -2.7
CLL e (SS) 16 19 18.0
CLL LmV 16 41 00.0
comp=Z,300nm,18.4s
CLL Collm 74.67 337 eP P 16 04 21.8 +1.3
comp=Z,17nm,1.5s,baz=22,slow=5.8
CLL Collm 74.67 337 i P P 16 04 21.8 +1.3
CLL pmax pmax
comp=Z,9.0nm,1.0s
CLL MLR MLR
comp=Z,300nm,18.4s
CLL Collm 74.67 337 P P 16 04 19.6 -0.9
M48A Edgerton 74.73 43 P P 16 04 21.2 +0.2
baz=324
D58A Chemin du LacG 74.73 32 P P 16 04 20.7 -0.3
baz=330
TESR Tescani 74.74 326 ⇓P P 16 04 20.6 -0.4
TRPA Tarpa 74.75 330 ⇑P P 16 04 21.3 +0.4
H53A Bobcaygeon 74.76 37 P P 16 04 21.0 -0.1
baz=327
EIDS Eidsvold 74.77 185 P P 16 04 22.3 +1.1
EIDS IAmb IAmb 16 04 23.6
comp=Z,47nm,1.4s
N47A Urbana 74.78 44 P P 16 04 20.9 -0.4
baz=324
N47A Urbana 74.78 44 P P 16 04 20.9 -0.4
N47A IAmb IAmb 16 04 22.3
comp=Z,29nm,1.3s
KRLC Kraliky 74.78 334 AMS AMS 16 40 40.0
comp=Z,400nm,20.6s
Q44A Meyer Farm, Va 74.81 47 P P 16 04 21.5 0.0
LANS Liptovska Anna 74.82 332 eP P 16 04 23.2 +1.7
LANS pmax pmax
comp=Z,6.0nm,0.8s
LANS Liptovska Anna 74.82 332 eP P 16 04 23.2 +1.7
CLZ Clausthal 74.83 339 eP P 16 04 22.5 +1.0
comp=Z,16nm,1.3s,baz=22,slow=5.8
BRG Berggiesshubel 74.83 336 eP P 16 04 21.7 +0.3
comp=Z,3.0nm,0.9s,baz=22,slow=5.8
MORC Moravsky Berou 74.83 334 eP P 16 04 22.0 +0.5
MORC Moravsky Berou 74.83 334 ⇑P P 16 04 21.8 +0.2
MORC Moravsky Berou 74.83 334 P P 16 04 20.7 -0.8
MORC pmax pmax
comp=Z,13nm,1.1s
MORC Moravsky Berou 74.83 334 P P 16 04 20.7 -0.8
E57A Chemin Saint G 74.87 33 P P 16 04 22.0 +0.2
baz=329,SNR=6.5
G55A Calabogie 74.91 36 P P 16 04 21.6 -0.3
baz=326
U40A Yellville 74.91 51 P P 16 04 22.2 0.0
baz=321,SNR=13
U40A Yellville 74.91 51 P P 16 04 21.9 -0.2
HPIG 74.94 66 P P 16 04 22.7 0.0
PVCC Panska Ves 74.98 336 AMS AMS 16 41 00.0
comp=Z,400nm,16.5s
M49A Liberty Center 75.06 42 P P 16 04 23.0 +0.1
baz=324
N48A Decatur 75.09 43 P P 16 04 23.1 0.0
baz=324,SNR=5.3
P46A Rosedale 75.09 46 P P 16 04 22.9 -0.2
J52A Paris 75.10 39 P P 16 04 23.1 0.0
baz=326
L50A Kingsville 75.11 41 P P 16 04 23.1 0.0
baz=325
ORIO Orleans, Innes 75.19 35 P P 16 04 23.0 -0.5
baz=328
E58A La Victoria 75.22 33 P P 16 04 24.1 +0.4
baz=329,SNR=5.4
T42A Van Buren 75.27 50 P P 16 04 23.7 -0.4
H55A Tweed 75.32 36 P P 16 04 24.0 -0.3
baz=328
CFR Carcaliu 75.33 325 ⇑P P 16 04 23.8 -0.6
CFR Carcaliu 75.33 325 P P 16 04 23.7 -0.6
W39A Magazine 75.33 53 P P 16 04 24.8 +0.3
baz=321,SNR=10
W39A Magazine 75.33 53 P P 16 04 24.1 -0.5
W39A IAmb IAmb 16 04 26.1
comp=Z,32nm,1.3s
DIKM Dikmen 75.39 318 ⇑P P 16 04 25.7 +0.9
I55A Frankford 75.41 37 P P 16 04 24.6 -0.3
baz=327
N49A Columbus Grove 75.42 43 P P 16 04 25.2 +0.3
baz=324
PRU Pruhonice 75.48 336 P P 16 04 24.2 -0.9
PRU pmax pmax
comp=Z,3.0nm,1.4s
PRU Pruhonice 75.48 336 AMS AMS 16 40 50.0
comp=Z,400nm,20.6s
GOPC GO Pecny, Ondr 75.48 335 eP P 16 04 25.6 +0.4
GOPC MLR MLR
comp=Z,500nm,18.7s
GOPC GO Pecny, Ondr 75.48 335 eP P 16 04 25.6 +0.4
GOPC AMS AMS 16 40 40.0
comp=Z,500nm,18.7s
O48A Farmland 75.52 44 P P 16 04 25.0 -0.5
baz=324
VRAC Vranov 75.52 334 eP P 16 04 26.3 +0.8
VRAC Vranov 75.52 334 ⇑P P 16 04 26.6 +1.1
VRAC Vranov 75.52 334 P P 16 04 26.5 +1.1
VRAC pmax pmax
comp=Z,15nm,1.3s
D61A St Aubert, Com 75.56 31 P P 16 04 25.9 +0.3
baz=331
D60A Saint Jean D'O 75.56 31 P P 16 04 25.8 +0.1
baz=331
ASAR Alice Springs 75.59 201 P P 16 04 27.0 +1.0
comp=Z,5.2nm,0.8s,baz=17,slow=5.0,SNR=56
ASAR pP **pP 16 04 41.9 -0.7**
comp=Z,10.0nm,0.8s,baz=13,slow=5.3,SNR=16
VYHS Vyhne 75.59 332 eP P 16 04 26.7 +0.8
VYHS pmax pmax
comp=Z,11nm,1.2s
VYHS Vyhne 75.59 332 eP P 16 04 26.7 +0.8
JAVC Velka Javorina 75.62 333 eP P 16 04 27.6 +1.5
TANN Tannenbergstha 75.63 337 eP P 16 04 26.7 +0.6
comp=Z,45nm,2.1s,baz=22,slow=5.8
MOX Moxa 75.63 338 eP P 16 04 26.6 +0.6
comp=Z,11nm,1.4s,baz=22,slow=5.8
MOX Moxa 75.63 338 P P 16 04 26.7 +0.6
MOX pmax pmax
comp=Z,8.0nm,1.7s
H56A Elgin 75.64 36 P P 16 04 25.6 -0.5
baz=328
PLN Plauen 75.64 337 eP P 16 04 26.8 +0.7
comp=Z,11nm,1.3s,baz=22,slow=5.8
S44A Carbondale 75.65 48 P P 16 04 26.4 +0.1
SIUC Southern Illin 75.65 48 P P 16 04 26.2 -0.1
JCT Junction City 75.68 60 P P 16 04 26.8 +0.1
JCT pmax pmax
comp=Z,31nm,1.1s
JCT Junction City 75.68 60 P P 16 04 27.2 +0.5
baz=320,SNR=6.2
JCT Junction City 75.68 60 P P 16 04 26.8 +0.1
JCT IAmb IAmb 16 04 28.5
comp=Z,31nm,1.1s
G57A Newington 75.69 35 P P 16 04 25.9 -0.5
baz=329
GUNZ Gunzen 75.71 337 eP P 16 04 27.3 +0.7
comp=Z,7.9nm,1.2s,baz=22,slow=5.8
WERN Wernitzgruen 75.77 337 eP P 16 04 27.6 +0.7
comp=Z,8.1nm,1.1s,baz=22,slow=5.8
PBMO Poplar Bluff 75.80 49 P P 16 04 27.3 +0.1
PBMO IAmb IAmb 16 04 28.9
comp=Z,26nm,1.0s
NKC Novy Kostel 75.80 337 AMS AMS 16 42 50.0
comp=Z,300nm,16.5s
KRUC Moravsky 75.80 334 eP P 16 04 27.7 +0.7
KRUC Moravsky 75.80 334 P P 16 04 28.0 +1.0
KRUC pmax pmax
comp=Z,13nm,1.2s
J54A Appleton 75.82 38 P P 16 04 27.2 0.0
baz=327
WHTX Lake Whitney, 75.84 57 P P 16 04 27.8 +0.2
baz=320
WHTX Lake Whitney, 75.84 57 P P 16 04 27.4 -0.1
WHTX IAmb IAmb 16 04 29.4
comp=Z,54nm,1.4s
F59A Saint Guilaume 75.84 33 P P 16 04 27.7 +0.4
baz=330,SNR=5.0
TREC Trest 75.85 335 AMS AMS 16 40 50.0
comp=Z,500nm,18.7s
E60A Ste Agathe de 75.86 32 P P 16 04 27.1 -0.2
baz=330
UBBA Unterbreizbach 75.86 339 eP P 16 04 27.7 +0.5
comp=Z,19nm,1.6s,baz=22,slow=5.8
MLR Muntele Rosu 75.87 326 ⇓P P 16 04 28.1 +0.5
MLR Muntele Rosu 75.87 326 P P 16 04 27.5 -0.1
MLR pmax pmax
comp=Z,10.0nm,0.7s
MLR Muntele Rosu 75.87 326 P P 16 04 27.5 -0.1
BUG Bochum-Univer 75.90 341 eP P 16 04 28.1 +0.6
comp=Z,94nm,2.3s,baz=22,slow=5.8
PECO Prince Edward 75.92 37 P P 16 04 26.9 -0.8
MIAR Mount Ida 75.94 53 P P 16 04 28.0 -0.1
MIAR pmax pmax
comp=Z,54nm,1.5s
MIAR Mount Ida 75.94 53 P P 16 04 28.5 +0.5
baz=321,SNR=12
MIAR Mount Ida 75.94 53 P P 16 04 28.0 -0.1
MIAR IAmb IAmb 16 04 29.9
comp=Z,54nm,1.4s
M51A Elyria 75.96 41 P P 16 04 28.0 0.0
baz=325
MEDO Medina 75.99 38 P P 16 04 27.9 -0.3
MEDO IAmb IAmb 16 04 29.6
comp=Z,38nm,1.1s
LCAR Lake Charles 75.99 50 P P 16 04 27.5 -0.8
N50A Nevada 76.00 42 P P 16 04 28.6 +0.4
baz=325
SMOL Smolenice 76.00 333 eP P 16 04 29.5 +1.3
SMOL pmax pmax
comp=Z,4.0nm,0.9s
SMOL Smolenice 76.00 333 eP P 16 04 29.5 +1.3
WHAR Wooly Hollow 76.03 52 P P 16 04 28.3 -0.2
WHAR IAmb IAmb 16 04 29.9
comp=Z,51nm,1.3s
F60A Warwick 76.03 32 P P 16 04 28.4 0.0
baz=330
D62A Allapoint, All 76.04 30 P P 16 04 29.0 +0.6
baz=332,SNR=5.7
D62A Allapoint, All 76.04 30 P P 16 04 28.6 +0.2
MANZ Manzenberg 76.12 337 eP P 16 04 29.4 +0.5
comp=Z,14nm,1.6s,baz=22,slow=5.8
E61A Lac Etchemin 76.13 31 P P 16 04 29.5 +0.5
baz=331
M52A Chesterland 76.14 41 P P 16 04 29.3 +0.2
baz=326
W41B Gary Mavity, V 76.14 52 P P 16 04 29.4 +0.2
baz=322,SNR=16
J55A Hilton 76.16 37 P P 16 04 29.0 -0.1
baz=327
MODS Modra-Piesok 76.17 333 eP P 16 04 29.2 +0.1
MODS pmax pmax
comp=Z,10.0nm,1.2s
MODS Modra-Piesok 76.17 333 eP P 16 04 29.2 +0.1
N51A Ashland 76.21 42 P P 16 04 29.5 0.0
baz=325
N51A Ashland 76.21 42 P P 16 04 28.9 -0.7
VOIR 76.23 327 ⇑P P 16 04 30.0 +0.3
VOIR 76.23 327 P P 16 04 30.2 +0.6
VOIR pmax pmax
comp=Z,14nm,1.0s
ERPA Erie 76.23 40 P P 16 04 29.8 +0.2
baz=326
ERPA Erie 76.23 40 P P 16 04 29.0 -0.6
ERPA IAmb IAmb 16 04 31.3
comp=Z,27nm,0.8s
LONY Lake Ozonia 76.25 35 P P 16 04 29.3 -0.4
baz=329
L53A Girard 76.26 40 P P 16 04 30.1 +0.3
baz=326
ROTZ Rotzenmuhle 76.29 337 eP P 16 04 30.8 +1.0
comp=Z,22nm,1.8s,baz=22,slow=5.8
P49A Miami Univ. Ec 76.30 44 P P 16 04 30.1 +0.1
baz=324
K54A Basiliko Farm, 76.36 38 P P 16 04 30.2 -0.1
baz=327
F61A St Evariste 76.36 32 P P 16 04 31.0 +0.8
baz=331,SNR=5.7
X40A Basin Creek Fa 76.37 53 P P 16 04 30.8 +0.3
baz=322,SNR=6.3
X40A Basin Creek Fa 76.37 53 P P 16 04 30.3 -0.2
ZST Bratislava 76.38 333 eP P 16 04 30.8 +0.5
ZST pmax pmax
comp=Z,13nm,1.0s
ZST Bratislava 76.38 333 eP P 16 04 30.8 +0.5
D63A Stockholm 76.38 29 P P 16 04 30.5 +0.2
baz=332
L54A Sinclairville 76.41 39 P P 16 04 30.7 +0.1
baz=327
I57A Carthage 76.42 36 P P 16 04 30.2 -0.4
baz=328
ARR Arges 76.44 327 ⇓P P 16 04 32.7 +1.9
K55A Perry 76.51 38 P P 16 04 31.2 0.0
baz=327,SNR=6.2
ACSO Alum Creek Sta 76.51 43 P P 16 04 31.6 +0.4
baz=325
M53A WI Miller and 76.51 40 P P 16 04 31.6 +0.4
baz=326
KHC Kasperske Hory 76.52 336 i P P 16 04 32.1 +0.9
KHC pmax pmax
comp=Z,25nm,1.1s
KHC Kasperske Hory 76.52 336 eP P 16 04 32.0 +0.9
KHC epP **pP 16 04 50.1 +2.0**
KHC AMS AMS 16 41 50.0
comp=Z,400nm,17.0s
KHC Kasperske Hory 76.52 336 P P 16 04 30.9 -0.2
J56A Wolcott 76.52 37 P P 16 04 30.8 -0.4
baz=328
ILGA Ilgaz 76.54 319 P P 16 04 31.6 -0.1
ILGA IAmb IAmb 16 04 34.4
comp=Z,21nm,0.8s
H59A Cadyville 76.55 34 P P 16 04 31.0 -0.3
baz=329
ALLY Allegheny Colle 76.56 40 P P 16 04 31.0 -0.4
WVNY West Valley, N 76.56 38 P P 16 04 31.0 -0.5
WVNY IAmb IAmb 16 04 32.9
comp=Z,42nm,1.2s
MMNY Mt. Morris Dam 76.57 38 P P 16 04 31.3 -0.2
H58A Gabriels 76.57 35 P P 16 04 31.1 -0.4
baz=329
GRF Grafenberg Arr 76.61 337 eP P 16 04 32.6 +1.0
comp=Z,38nm,1.6s,baz=22,slow=5.8
WCI Wyandotte Cave 76.63 46 P P 16 04 32.0 +0.1
WCI pmax pmax
comp=Z,65nm,1.3s
WCI Wyandotte Cave 76.63 46 P P 16 04 32.5 +0.6
baz=324
WCI Wyandotte Cave 76.63 46 P P 16 04 32.0 +0.1
G60A Masonville 76.65 33 P P 16 04 32.4 +0.4
baz=330
P50A Jamestown 76.66 43 P P 16 04 32.1 0.0
baz=325
SIRR Siria 76.67 329 ⇑P P 16 04 32.2 +0.2
435B Jarrell 76.69 58 P P 16 04 32.9 +0.5
baz=320
WET Wettzell 76.69 336 eP P 16 04 33.2 +1.1
comp=Z,13nm,1.2s,baz=22,slow=5.8
WET Wettzell 76.69 336 P P 16 04 33.1 +1.0
WET pmax pmax
comp=Z,9.0nm,1.3s
BANOM Banah 76.72 294 i P P 16 04 32.9 +0.2
SNR=12
BANOM Banah 76.72 294 P P 16 04 33.3 +0.6
SNR=7.7
SHME Shamm 76.72 294 i P P 16 04 32.6 -0.1
SNR=16
J57A Williamstown 76.74 36 P P 16 04 32.2 -0.3
baz=328
O51A Pataskala 76.74 42 P P 16 04 32.6 0.0
baz=325
GEC2 GERESS Array S 76.75 336 eP P 16 04 33.1 +0.6
comp=Z,26nm,2.0s,baz=22,slow=5.8
GEC2 GERESS Array S 76.75 336 P P 16 04 33.1 +0.6
GEC2 pmax pmax
comp=Z,4.0nm,0.9s
GERES GERESS Array B 76.75 336 P P 16 04 32.5 0.0
comp=Z,0.9nm,0.3s,baz=49,slow=4.1,SNR=11
GERES LR LR 16 42 33.8
comp=Z,536nm,19.4s,baz=31,slow=39
G61A St-Isidore-de- 76.78 32 P P 16 04 33.5 +0.9
baz=330,SNR=8.7
TNS Taunus Mts 76.78 339 eP P 16 04 33.4 +0.8
comp=Z,14nm,1.2s,baz=22,slow=5.8
AHRW Bad Nenahr-A 76.79 340 eP P 16 04 33.5 +0.9
comp=Z,26nm,1.4s,baz=22,slow=5.8
BATG Bathurst New B 76.81 28 P P 16 04 32.9 +0.1
L55A Hinsdale 76.81 38 P P 16 04 33.1 +0.1
baz=327
E63A Oxbow 76.82 30 P P 16 04 32.8 0.0
baz=332
K56A Middlesex 76.83 37 P P 16 04 33.1 +0.1
baz=328
M54A Oil Creek Stat 76.88 40 P P 16 04 33.4 +0.1
baz=327,SNR=5.4
M54A Oil Creek Stat 76.88 40 P P 16 04 33.4 +0.1
M54A IAmb IAmb 16 07 25.0
comp=Z,50nm,1.4s
I58A Old Forge 76.89 35 P P 16 04 33.1 -0.2
baz=329
MEM Membach 76.95 341 P P 16 04 34.1 +0.6
comp=Z,18nm,1.2s
MEM PcP **PcP 16 04 43.7 -0.6**
MEM Membach 76.95 341 P P 16 04 34.8 +1.3
MEM pmax pmax
comp=Z,28nm,1.1s
N53A Lisbon 76.96 41 P P 16 04 33.9 +0.1
baz=326
N53A Lisbon 76.96 41 P P 16 04 34.0 +0.3
N53A IAmb IAmb 16 04 35.4
comp=Z,25nm,1.1s
CONA Conrad Observa 76.98 334 i P P 16 04 35.1 +1.2
comp=Z,11nm,0.9s,SNR=7.8
H60A Morristown 76.98 34 P P 16 04 34.0 +0.2
baz=330
SOP Sopron 77.00 333 P P 16 04 34.3 +0.5
SOP pmax pmax
comp=Z,22nm,1.3s
E64A Bridgewater 77.02 30 P P 16 04 33.9 0.0
baz=332
J58A Remsen 77.06 36 P P 16 04 33.7 -0.6
baz=329
J58A Remsen 77.06 36 P P 16 04 34.0 -0.2
GZR Gura Zlata 77.06 328 ⇑P P 16 04 34.5 +0.2
R49A Shelbyville 77.10 45 P P 16 04 34.7 +0.1
R49A IAmb IAmb 16 04 36.6
comp=Z,51nm,1.8s
O52A Adamsville 77.11 42 P P 16 04 34.6 0.0
baz=326
O52A Adamsville 77.11 42 P P 16 04 34.5 0.0
O52A IAmb IAmb 16 04 36.0
comp=Z,31nm,1.1s
K57A Scipio Center 77.12 37 P P 16 04 34.2 -0.4
baz=328
G62A West of Eustis 77.17 32 P P 16 04 35.7 +0.8
baz=331,SNR=6.4
G62A West of Eustis 77.17 32 P P 16 04 35.1 +0.2
G62A IAmb IAmb 16 04 37.2
comp=Z,47nm,1.3s
MDH Madha 77.19 294 P P 16 04 34.7 -0.6
N54A Moraine State 77.19 40 P P 16 04 35.3 +0.2
baz=326
N54A Moraine State 77.19 40 P P 16 04 35.0 0.0
N54A IAmb IAmb 16 04 36.8
comp=Z,30nm,1.1s
L56A Greenwood 77.21 38 P P 16 04 35.2 +0.1
baz=328,SNR=7.0
L56A Greenwood 77.21 38 P P 16 04 35.1 -0.1
L56A IAmb IAmb 16 04 36.5
comp=Z,46nm,1.4s
I59A Olmsteadville 77.22 35 P P 16 04 34.9 -0.2
baz=329
MSFE Esma-Masafi 77.23 294 i P P 16 04 35.7 +0.2
SNR=9.8
F63A Nahmakanta, Br 77.23 31 P P 16 04 35.2 +0.1
baz=332
T47A Sharon Grove 77.24 47 P P 16 04 35.6 +0.3
T47A IAmb IAmb 16 04 37.4
comp=Z,40nm,1.2s
BZS Buzias 77.26 329 ⇑P P 16 04 35.4 0.0
BZS Buzias 77.26 329 P P 16 04 35.3 0.0
BZS pmax pmax
comp=Z,21nm,1.1s
J59A Piesco 77.26 35 P P 16 04 35.0 -0.5
baz=329
O53A New Philadelph 77.27 41 P P 16 04 35.6 +0.1
baz=326,SNR=5.2
M55A Ridgway 77.28 39 P P 16 04 35.9 +0.4
baz=327,SNR=5.8
M55A Ridgway 77.28 39 P P 16 04 35.6 +0.1
M55A IAmb IAmb 16 04 37.3
comp=Z,22nm,1.0s
BCLA Clavier 77.28 341 P P 16 04 35.9 +0.5
BCLA PcP **PcP 16 04 44.2 -1.6**
NEF NEVSHA 77.28 324 P P 16 04 36.2 +0.7
H61A Lyndonville 77.28 33 P P 16 04 36.2 +0.7
baz=330,SNR=6.0
WSAR Wadi Sarin 77.33 291 P P 16 04 37.2 +1.2
SNR=7.7
Q51A Peebles 77.33 43 P P 16 04 36.2 +0.4
baz=325,SNR=18

F64A **Sherman** 77.34 30 P P 16 04 35.9 +0.2
baz=332
F64A **Sherman** 77.34 30 P P 16 04 36.1 +0.4
F64A IAmb IAmb 16 04 37.4
comp=Z,28nm,1.4s
Z41A **Richland Creek** 77.35 53 P P 16 04 36.5 +0.5
baz=322
P52A **Corning** 77.37 42 P P 16 04 35.9 -0.2
baz=326
I60A **Shoreham** 77.39 34 P P 16 04 35.7 -0.3
baz=330
BIDO **Bidbid** 77.43 291 P P 16 04 37.9 +1.4
SNR=6.8
K58A **Earlville** 77.43 36 P P 16 04 36.5 +0.1
baz=329
R50A **Paris** 77.50 45 P P 16 04 36.7 0.0
R50A IAmb IAmb 16 05 04.5
comp=Z,32nm,1.0s
MOA **Molln** 77.50 335 *i* P P 16 04 37.6 +0.9
comp=Z,5.9nm,1.0s
BMRD **Maredsous** 77.50 342 P P 16 04 37.2 +0.6
M56A **Emporium** 77.50 39 P P 16 04 36.9 +0.1
baz=327
M56A **Emporium** 77.50 39 P P 16 04 36.6 -0.2
M56A IAmb IAmb 16 04 38.3
comp=Z,26nm,1.4s
UOSS **Minazif** 77.51 294 *i* P P 16 04 37.2 +0.1
SNR=18
UOSS **Minazif** 77.51 294 P P 16 04 37.2 +0.1
UOSS **Minazif** 77.51 294 P P 16 04 36.5 -0.5
H62A **Milan** 77.52 33 P P 16 04 37.7 +0.9
baz=331,SNR=6.7
H62A **Milan** 77.52 33 P P 16 04 37.1 +0.2
H62A IAmb IAmb 16 04 38.9
comp=Z,49nm,1.3s
NATX **Nacogdoches** 77.53 55 P P 16 04 37.7 +0.7
baz=321
NATX **Nacogdoches** 77.53 55 P P 16 04 37.7 +0.7
LBNH **Lisbon** 77.54 33 P P 16 04 36.0 -0.9
baz=330
833A **Chaparral WMA,** 77.55 61 P P 16 04 38.0 +0.8
baz=320
PKME **Peaks-Kenny Pk** 77.56 31 P P 16 04 37.1 +0.1
baz=332
G63A **Kingsbury** 77.58 31 P P 16 04 37.9 +0.8
baz=332
WVT **Waverly** 77.58 48 P P 16 04 37.3 0.0
WVT pmax pmax
comp=Z,12nm,1.0s
WVT **Waverly** 77.58 48 P P 16 04 37.8 +0.5
baz=323
WVT **Waverly** 77.58 48 P P 16 04 37.3 0.0
WBK **Wadi Bani Khal** 77.59 290 P P 16 04 38.9 +1.4
SNR=8.1
L57A **Andrews Acres** 77.61 38 P P 16 04 37.3 -0.1
baz=328
HERR **Herculane** 77.64 328 ⇑P P 16 04 37.4 0.0
ACCN **Adirondack Com** 77.65 35 P P 16 04 37.4 -0.1
HATD **Hatta, Dubai** 77.65 294 *i* P P 16 04 38.1 +0.3
SNR=39
HATD **Hatta, Dubai** 77.65 294 P P 16 04 38.5 +0.7
SNR=16
BR131 **Keskin Array S** 77.67 318 P P 16 04 38.2 +0.3
SNR=7.7
BR131 **Keskin Array S** 77.67 318 P P 16 04 37.7 -0.2
BR131 pmax pmax
comp=Z,18nm,1.2s
BR131 **Keskin Array S** 77.67 318 P P 16 04 37.7 -0.2
BRTR **Keskin Array B** 77.67 318 P P 16 04 37.9 0.0
comp=Z,6.8nm,0.9s,baz=64,slow=2.9,SNR=38
BRTR LR LR 16 43 20.8
comp=Z,59nm,20.5s,baz=357,slow=39
O54A **Avella** 77.68 41 P P 16 04 38.1 +0.3
baz=326
ARSA **Arzberg** 77.69 334 *i* P P 16 04 39.7 +2.0
comp=Z,8.2nm,1.1s
I61A **Oroboro, Fairl** 77.70 34 P P 16 04 38.4 +0.6
baz=330
K59A **Cooperstown** 77.72 36 P P 16 04 37.9 -0.1
baz=329
G64A **Maxfield** 77.75 31 P P 16 04 38.1 +0.1
baz=332
N55A **Marion Center** 77.76 40 P P 16 04 38.6 +0.3
baz=327,SNR=5.5
BINY **Binghamton** 77.78 37 P P 16 04 38.1 -0.2
baz=328
ASHO **Ashiyiah** 77.80 294 *i* P P 16 04 38.8 +0.1
SNR=26
ASHO **Ashiyiah** 77.80 294 P P 16 04 39.3 +0.6
SNR=14
NAZ **Nazwa, Dubai** 77.80 294 *i* P P 16 04 39.0 +0.3
SNR=12
NAZ **Nazwa, Dubai** 77.80 294 P P 16 04 39.3 +0.6
SNR=11
P53A **Whipple** 77.82 42 P P 16 04 38.8 +0.3
baz=326
SMDO **Samad** 77.82 291 P P 16 04 39.6 +0.6
SNR=8.1
H63A **New Sharon** 77.83 32 P P 16 04 38.9 +0.4
baz=331
J60A **Lant Hill Farm** 77.86 35 P P 16 04 38.7 0.0
baz=330
Q52A **Bidwell** 77.87 43 P P 16 04 39.1 +0.3
baz=326
HOQ **Hoqain** 77.87 292 P P 16 04 39.7 +0.6
SNR=11
ANTO **Ankara** 77.92 319 ⇓P P 16 04 40.6 +1.4
ANTO **Ankara** 77.92 319 P P 16 04 38.9 -0.3
ANTO pmax pmax
comp=Z,33nm,1.3s
ANTO **Ankara** 77.92 319 P P 16 04 38.9 -0.3
ANTO IAmb IAmb 16 04 41.5
comp=Z,33nm,1.3s
SOHO **SOHO** 77.93 293 P P 16 04 39.7 +0.4
SNR=8.3
N56A **West Decatur** 77.93 39 P P 16 04 39.7 +0.5
baz=327
L58A **Harry Jones Me** 77.96 37 P P 16 04 39.2 -0.1
baz=329
MDVR **Moldovita** 77.96 329 ⇑P P 16 04 39.3 -0.1
RJOB **Jochberg** 78.00 336 *eP* P 16 04 40.9 +1.3
comp=Z,5.7nm,0.9s,baz=22,slow=5.8
FAQ **Al Faqa, Dubai** 78.03 294 P P 16 04 40.2 +0.3
M57A **Sunshine Farm,** 78.05 38 P P 16 04 40.0 +0.2
baz=328,SNR=5.6
M57A **Sunshine Farm,** 78.05 38 P P 16 04 39.8 0.0
M57A IAmb IAmb 16 04 41.4
comp=Z,31nm,1.3s
I62A **Tamworth** 78.07 33 P P 16 04 40.2 +0.4
baz=331
J61A **Chester** 78.09 34 P P 16 04 40.3 +0.4
baz=330
OXF **Oxford** 78.09 50 P P 16 04 40.4 +0.2
baz=323
O55A **Ligonier** 78.11 40 P P 16 04 40.4 +0.2
baz=327
P54A **Burton** 78.12 41 P P 16 04 40.7 +0.4
baz=326,SNR=5.5
H64A **Troy** 78.13 31 P P 16 04 40.4 +0.2
baz=332
L59A **Walton** 78.15 36 P P 16 04 39.9 -0.5
baz=329
GAZ **Gaziantep** 78.16 314 P P 16 04 40.8 +0.2
GAZ IAmb IAmb 16 04 42.7
comp=Z,33nm,1.2s
PLVB **Pleven** 78.16 326 ⇓P P 16 04 40.5 +0.1
I63A **Otisfield** 78.18 32 P P 16 04 41.4 +0.9
baz=331
I63A **Otisfield** 78.18 32 P P 16 04 40.5 0.0
I63A IAmb IAmb 16 04 42.2
comp=Z,28nm,1.3s
G65A **Princeton** 78.18 30 P P 16 04 40.5 +0.1
baz=333
G65A **Princeton** 78.18 30 P P 16 04 40.3 -0.1
U49A **Red Boiling Sp** 78.26 47 P P 16 04 41.2 +0.2
U49A IAmb IAmb 16 04 42.8
comp=Z,34nm,1.4s
Q53A **Leroy** 78.28 42 P P 16 04 41.6 +0.5
baz=326,SNR=9.4
T50A **Nancy** 78.29 46 P P 16 04 41.3 +0.1
T50A IAmb IAmb 16 04 42.9
comp=Z,51nm,1.4s
M58A **Price's Panora** 78.29 38 P P 16 04 41.1 -0.1
baz=328
JMDO **Jabal Madar** 78.30 291 P P 16 04 42.4 +0.9
SNR=17
CLTN **Cedars of Leba** 78.33 47 P P 16 04 41.9 +0.4
CLTN IAmb IAmb 16 04 43.3
comp=Z,42nm,1.4s
SSPA **Standing Stone** 78.34 39 P P 16 04 41.2 -0.2
SSPA IAmb IAmb 16 04 43.1
comp=Z,40nm,1.6s
MCWV **Mont Chateau** 78.34 41 P P 16 04 41.8 +0.4
baz=327
SOKA **Soboth** 78.35 334 *i* P P 16 04 42.4 +0.9
comp=Z,22nm,1.0s,SNR=15
S51A **Beattyville** 78.36 44 P P 16 04 41.6 +0.1
O56A **Blue Knob Stat** 78.37 40 P P 16 04 41.7 +0.1
baz=327
O56A **Blue Knob Stat** 78.37 40 P P 16 04 41.8 +0.1
O56A IAmb IAmb 16 06 24.3
comp=Z,26nm,0.8s
N57A **Milroy** 78.38 39 P P 16 04 41.8 +0.2
baz=328
PLAL **Pickwick Lake** 78.38 49 P P 16 04 41.2 -0.5
V48A **Smith Brothers** 78.38 48 P P 16 04 41.9 +0.1
H65A **Eastbrook** 78.41 31 P P 16 04 41.1 -0.6
baz=332
K61A **Williamstown** 78.41 35 P P 16 04 41.8 0.0
baz=330
GROS **Grobnik** 78.41 333 *eP* P 16 04 42.0 +0.2
KALN **Kalnik** 78.43 333 *i* P P 16 04 41.8 0.0
ALNE **Al Ain** 78.45 293 *i* P P 16 04 42.8 +0.5
SNR=16
KBA **Koelnbreinsper** 78.46 335 *i* P P 16 04 43.4 +1.2
comp=Z,28nm,0.7s,SNR=23
KBA **Koelnbreinsper** 78.46 335 P P 16 04 43.5 +1.3
KBA pmax pmax
comp=Z,48nm,1.1s
J62A **Henniker** 78.46 34 P P 16 04 42.5 +0.5
baz=331
P55A **Reedsville** 78.47 41 P P 16 04 42.8 +0.6
baz=327,SNR=5.7
Q54A **Coxs Mills** 78.48 42 P P 16 04 42.3 +0.2
baz=326
Q54A **Coxs Mills** 78.48 42 P P 16 04 42.2 0.0
Q54A IAmb IAmb 16 04 44.0
comp=Z,25nm,1.2s
MPEP **Malo Peshtene** 78.50 327 P P 16 04 42.7 +0.4
AJN **Ajban** 78.53 294 *i* P P 16 04 42.6 0.0
SNR=6.5
AJN **Ajban** 78.53 294 P P 16 04 42.8 +0.1
SNR=8.5
R53A **Hurricane** 78.53 43 P P 16 04 42.9 +0.4
baz=326
ARQ **Araqi** 78.53 292 P P 16 04 43.4 +0.6
SNR=11
M59A **Waymart** 78.55 37 P P 16 04 42.3 -0.3
baz=329
BSY **Bisya** 78.57 292 P P 16 04 43.8 +0.8
SNR=21
BFO **Black Forest** 78.58 339 *eP* P 16 04 43.3 +0.7
comp=Z,17nm,1.3s,baz=22,slow=5.8
BFO **Black Forest** 78.58 339 P P 16 04 42.1 -0.6
BFO pmax pmax
comp=Z,10.0nm,1.0s
BFO **Black Forest** 78.58 339 P P 16 04 42.1 -0.6
I64A **Boothbay** 78.62 32 P P 16 04 43.2 +0.4
baz=332
H66A **Whiting** 78.63 30 P P 16 04 43.4 +0.5
baz=333
L60A **Shokan** 78.64 36 P P 16 04 42.7 -0.3
baz=329
N58A **Sunbury** 78.64 38 P P 16 04 43.0 0.0
baz=328
OBKA **Obir** 78.64 334 *i* P P 16 04 43.6 +0.5
comp=Z,7.8nm,0.7s
J63A **Strafford** 78.68 33 P P 16 04 43.5 +0.3
baz=331
WATA **Walderalm** 78.70 336 *i* P P 16 04 44.6 +1.1
comp=Z,27nm,1.3s,SNR=6.2
DOBS **Dobrina** 78.71 333 *i* P P 16 04 43.4 +0.1
L61A **Hillsdale 1, H** 78.71 35 P P 16 04 43.5 0.0
baz=330
WTTA **Wattenberg** 78.75 336 *i* P P 16 04 45.1 +1.4
comp=Z,33nm,1.0s,SNR=11
UBR **Ueberruh** 78.75 337 *eP* P 16 04 44.4 +0.8
comp=Z,14nm,1.3s,baz=22,slow=5.8
RETA **Reutte** 78.77 337 *i* P P 16 04 44.7 +1.0
comp=Z,7.7nm,0.9s
PTJ **Puntijarka** 78.78 333 P P 16 04 44.0 +0.2
MYKA **Terra Mystica** 78.79 335 *i* P P 16 04 44.4 +0.5
comp=Z,14nm,1.1s,SNR=5.2
Q55A **Buckhannon** 78.79 41 P P 16 04 44.2 +0.2
baz=327
K62A **Royalston** 78.80 34 P P 16 04 43.9 0.0
baz=330
O57A **Amberson** 78.80 39 P P 16 04 44.4 +0.4
baz=328,SNR=7.0
MOTA **Moosalm** 78.81 337 *i* P P 16 04 45.1 +1.1
comp=Z,24nm,1.0s,SNR=11
L61B **Northampton** 78.82 35 P P 16 04 44.0 0.0
baz=330
P56A **Dayton Farm, R** 78.89 40 P P 16 04 44.7 +0.2
baz=327
SQTA **Sankt Quirin** 78.90 337 *i* P P 16 04 45.9 +1.3
comp=Z,27nm,1.2s,SNR=11
N59A **State Game Lan** 78.95 37 P P 16 04 44.7 -0.1
baz=329
ECH **Echery** 78.96 339 P P 16 04 44.4 -0.3
ECH pmax pmax
comp=Z,15nm,1.0s
ECH **Echery** 78.96 339 P P 16 04 44.4 -0.3
DIM **Dimitrovgrad** 78.98 325 P P 16 04 45.4 +0.5
S53A **Williamson** 78.98 43 P P 16 04 45.3 +0.3
baz=326
ABTA **Abfaltersbach** 78.99 335 *i* P P 16 04 45.8 +0.8
comp=Z,13nm,0.9s,SNR=6.2
K63A **Dunstable** 79.03 34 P P 16 04 45.0 -0.2
baz=331
M60A **Port Jervis** 79.05 36 P P 16 04 45.0 -0.3
baz=329
PGB **Panagyurishte** 79.05 326 P P 16 04 45.6 +0.2
SLE **Schleitheim** 79.07 338 P P 16 04 45.9 +0.6
SLE pmax pmax
comp=Z,12nm,0.9s
R54A **Victor** 79.07 42 P P 16 04 46.0 +0.5
baz=326,SNR=6.2
Q56A **Snyder Ridge,** 79.14 41 P P 16 04 45.9 +0.1
baz=327
Q56A **Snyder Ridge,** 79.14 41 P P 16 04 46.1 +0.3
O58A **Lewisberry** 79.17 39 P P 16 04 46.1 +0.1
baz=328
DAVA **Damuels** 79.18 337 *i* P P 16 04 47.0 +0.9
comp=Z,19nm,0.9s,SNR=8.0
HRV **Adam Dziewonsk** 79.18 34 P P 16 04 44.4 -1.6
HRV pmax pmax
comp=Z,12nm,1.4s
HRV **Adam Dziewonsk** 79.18 34 P P 16 04 46.5 +0.5
baz=331
OZLJ **Ozalj** 79.19 333 *i* P P 16 04 46.4 +0.4
FETA **Feichten** 79.21 337 *i* P P 16 04 47.5 +1.3
comp=Z,18nm,1.2s,SNR=8.4
SWET **Sewanee** 79.23 47 P P 16 04 46.4 -0.1
SWET IAmb IAmb 16 04 47.7
comp=Z,48nm,1.4s
PLD **Plovdiv** 79.24 325 P P 16 04 46.6 +0.3
PLD pmax pmax
comp=Z,4.0nm,1.2s
S54A **Dingess, Beckl** 79.25 43 P P 16 04 46.4 -0.1
baz=326
N60A **Cedar Hill Far** 79.26 37 P P 16 04 46.1 -0.4
baz=329
O59A **Robesonia** 79.30 38 P P 16 04 46.2 -0.5
baz=329
VTS **Vitosha** 79.33 327 ⇓P P 16 04 46.9 -0.1
VTS **Vitosha** 79.33 327 P P 16 04 47.2 +0.2
VTS **Vitosha** 79.33 327 P P 16 04 46.6 -0.4
VTS pmax pmax
comp=Z,22nm,0.9s
VTS **Vitosha** 79.33 327 P P 16 04 46.6 -0.4
VTS IAmb IAmb 16 04 48.2
comp=Z,22nm,0.9s
R55A **Marlinton** 79.37 42 P P 16 04 47.7 +0.5
baz=327,SNR=6.6
R55A **Marlinton** 79.37 42 P P 16 04 47.7 +0.5
R55A IAmb IAmb 16 04 49.0
comp=Z,39nm,1.2s
T53A **Wise** 79.38 44 P P 16 04 47.6 +0.3
baz=326
CEY **Cerknica** 79.38 334 *i* P P 16 04 46.9 -0.2
M61A **Granite Spring** 79.39 36 P P 16 04 46.9 -0.3
baz=330
MHTO **MHTO** 79.42 290 P P 16 04 48.7 +1.1
SNR=32
Q57A **Strasburg** 79.47 40 P P 16 04 47.9 +0.2
baz=328
V51A **Loudon** 79.50 46 P P 16 04 47.6 -0.3
W50A **Signal Mountai** 79.54 47 P P 16 04 48.3 +0.1
P58A **Pank, Wackersv** 79.55 39 P P 16 04 48.4 +0.4
baz=328
PAL **Palisades** 79.60 36 P P 16 04 48.0 -0.2
baz=330
FUORN **Ofenpass-Fuorn** 79.70 337 P P 16 04 49.7 +0.6
CPCT **Cooper Cave** 79.71 46 P P 16 04 49.1 +0.1
L63A **North Scituate** 79.72 34 P P 16 04 49.2 +0.3
baz=331
T54A **Tazewell** 79.74 43 P P 16 04 49.7 +0.5
baz=326,SNR=7.9
ALN **Alexandroupoli** 79.78 324 P P 16 04 49.5 +0.2
ALN pmax pmax
comp=Z,21nm,1.1s
ALN **Alexandroupoli** 79.78 324 P P 16 04 49.5 +0.2
P59A **Jarrettsville** 79.80 39 P P 16 04 49.7 +0.4
baz=328
V52A **Sevierville** 79.83 46 P P 16 04 49.4 -0.2
Q58A **Fox Den Farm,** 79.85 40 P P 16 04 50.1 +0.4
baz=328,SNR=6.4
CTI **Castel Tesino** 79.87 336 P P 16 04 49.7 -0.1
CTI pmax pmax
comp=Z,12nm,0.8s
CTI **Castel Tesino** 79.87 336 P P 16 04 49.7 -0.1
FPAL **Fort Paine** 79.93 48 P P 16 04 50.3 0.0
FPAL IAmb IAmb 16 04 51.7
comp=Z,24nm,1.1s
L64A **Middleborough** 79.94 34 P P 16 04 50.6 +0.5
baz=331
P60A **Greenville** 79.95 38 P P 16 04 50.3 +0.1
baz=329
M63A **Gales Ferry** 79.96 35 P P 16 04 50.1 -0.1
baz=331
R57A **Stanardsville** 80.04 41 P P 16 04 51.4 +0.6
baz=328,SNR=6.8
T55A **Pulaski** 80.05 43 P P 16 04 51.4 +0.6
baz=327
MMB **Musomiste** 80.05 326 P P 16 04 51.3 +0.5
TUE **Stuetta** 80.07 337 P P 16 04 51.7 +0.7
TUE IAmb IAmb 16 04 53.3
comp=Z,27nm,0.9s
Y49A **Blount Mountai** 80.10 49 P P 16 04 50.7 -0.5
BLA **Blacksburg** 80.13 43 P P 16 04 51.1 -0.2
BLA pmax pmax
comp=Z,31nm,1.3s
BLA **Blacksburg** 80.13 43 P P 16 04 51.5 +0.2
baz=327
BLA **Blacksburg** 80.13 43 P P 16 04 51.1 -0.2
BLA IAmb IAmb 16 04 53.0
comp=Z,31nm,1.2s
M64A **Tiverton** 80.14 34 P P 16 04 51.2 +0.1
baz=331
R58A **Rapidan** 80.26 40 P P 16 04 51.9 0.0
baz=328
TAOE **Nuku Hiva Isla** 80.27 116 *e*LR LR 16 29 40.1
comp=Z,601nm,23.8s
TAOE **Nuku Hiva Isla** 80.27 116 *e*T T 17 32 51.4
comp=Z,83nm,0.2s
S57A **Dark Hollow, R** 80.31 41 P P 16 04 52.6 +0.4
baz=327
S57A **Dark Hollow, R** 80.31 41 P P 16 04 52.8 +0.6
V53A **Saluda** 80.33 45 P P 16 04 52.8 +0.4
KIJV **Kijevo** 80.37 332 *i* P P 16 04 52.4 0.0
U55A **TA2, Sparta** 80.44 43 P P 16 04 53.2 +0.2
baz=326
SRS **Serrai** 80.51 326 P P 16 04 53.5 +0.3
SRS pmax pmax
comp=Z,33nm,1.0s
STIP **Stip** 80.51 327 *i* P P 16 04 49.6 -3.6
STIP **Stip** 80.51 327 *i* P P 16 04 49.6 -3.6
SKO **Skopje** 80.53 328 *i* P P 16 04 53.8 +0.5
SKO **Skopje** 80.53 328 *i* P P 16 04 53.8 +0.5
SALO **Salr** 80.56 336 P P 16 04 53.2 -0.3
R58B **Mineral** 80.59 40 P P 16 04 54.0 +0.3
baz=328
R58B **Mineral** 80.59 40 P P 16 04 53.9 +0.3
R58B IAmb IAmb 16 04 55.5
comp=Z,31nm,1.4s
V54A **Nebo** 80.64 44 P P 16 04 54.5 +0.5
baz=326
VAY **Valandovo** 80.70 326 *i* P P 16 04 54.4 +0.2
VAY **Valandovo** 80.70 326 *i* P P 16 04 54.4 +0.2
MORI **Morici** 80.71 332 *i* P P 16 04 53.7 -0.5
KNT **Kendrikon** 80.72 326 P P 16 04 54.9 +0.5
KNT pmax pmax
comp=Z,27nm,1.1s
DUGI **Dugi Otok** 80.79 333 *i* P P 16 04 53.5 -1.2
S58A **Poland Farm, P** 80.82 41 P P 16 04 55.0 +0.1
baz=328
S58A **Poland Farm, P** 80.82 41 P P 16 04 55.0 +0.1
T57A **Hurt** 80.82 42 P P 16 04 55.1 +0.2
baz=327
Z50A **Ashland** 80.83 49 P P 16 04 55.2 +0.2
baz=325,SNR=11
Z50A **Ashland** 80.83 49 P P 16 04 55.1 0.0
Z50A IAmb IAmb 16 04 56.4
comp=Z,44nm,1.2s
BG3 **Lake Jocassee** 80.83 46 P P 16 04 54.8 -0.3
MANT **Manisa** 80.85 321 P P 16 04 54.8 -0.6
PDG **Podgorica** 80.87 329 ⇓P P 16 04 54.8 -0.3
PDG **Podgorica** 80.87 329 P P 16 04 54.3 -0.8
PDG IAmb IAmb 16 04 55.6
comp=Z,28nm,0.9s
V55A **Taylorsville** 80.91 44 P P 16 04 55.5 +0.1
baz=326
ZIRJ **Zirje** 80.92 332 *i* P P 16 04 54.0 -1.3
PMOR **Pomariorio Ree** 80.97 126 *e*T T 17 33 37.8
comp=Z,7.2nm,0.2s
W54A **Cherokee Point** 81.10 45 P P 16 04 56.8 +0.3
baz=326
Y52A **Lilburn** 81.22 47 P P 16 04 57.9 +0.7
baz=325
U57A **Blanch** 81.26 42 P P 16 04 57.9 +0.7
baz=327
V56A **Mocksville** 81.26 43 P P 16 04 57.8 +0.4
baz=327
S60A **Water View** 81.33 40 P P 16 04 58.0 +0.4
baz=329
KMSC **Kings Mountain** 81.44 44 P P 16 04 58.4 +0.1
baz=326
X54A **Belton** 81.46 45 P P 16 04 58.8 +0.5
baz=326
RSL **Roselend** 81.46 339 P P 16 04 59.4 +1.0
OHR **Ohrid** 81.52 328 *i* P P 16 04 50.1 -8.5
OHR **Ohrid** 81.52 328 *i* P P 16 04 50.1 -8.5
PAIG **Paliouri** 81.52 325 P P 16 04 58.4 -0.2
V57A **Coltrane Farms** 81.52 43 P P 16 04 59.0 +0.3
baz=327
T59A **Double "B" Far** 81.57 41 P P 16 04 59.5 +0.7
baz=328
FNA **Florina** 81.60 327 P P 16 04 58.5 -0.6
FNA pmax pmax
comp=Z,15nm,0.9s
FNA **Florina** 81.60 327 P P 16 04 58.5 -0.6
ZCCA **Zocca** 81.62 336 P P 16 04 59.0 -0.1
ZCCA IAmb IAmb 16 05 12.8
comp=Z,50nm,1.4s
TIR **Tirane** 81.63 328 ⇓P P 16 04 59.0 -0.2
TIR **Tirane** 81.63 328 P P 16 04 58.5 -0.7
TIR pmax pmax
comp=Z,41nm,0.8s
TIR **Tirane** 81.63 328 P P 16 04 58.5 -0.7
U58A **Oxford** 81.63 42 P P 16 04 59.4 +0.2
baz=328
S61A **Accomac** 81.75 39 P P 16 05 00.7 +0.9
baz=329
CSS **Mathiatis** 81.76 316 P P 16 04 59.5 -0.4
CSS IAmb IAmb 16 05 01.1
comp=Z,29nm,0.8s
ELL **Elmali** 81.76 319 P P 16 04 59.4 -0.7
ELL pmax pmax
comp=Z,94nm,1.0s
ELL **Elmali** 81.76 319 P P 16 04 59.4 -0.7
HODGE **Hodges** 81.77 46 P P 16 05 00.1 +0.1
T60A **Surry** 81.77 40 P P 16 05 00.0 +0.1
baz=329
W56A **Indian Trail** 81.79 44 P P 16 05 00.3 +0.2
baz=327
LIT **Litokhoron** 81.81 326 P P 16 04 59.3 -0.8
LIT pmax pmax
comp=Z,17nm,1.1s

LIT	**Litokhoron**	**81.81**	**326**	P	**P**	**16 04 59.3**	**-0.8**
LEF	**Lefka**	**81.83**	**316**	⇓P	**P**	**16 04 60.0**	**-0.3**
X55A	**Gracelyn & Ava**	**81.86**	**45**	P	**P**	**16 05 00.9**	**+0.4**
	baz=326						
GOGA	**Godfrey**	**81.88**	**47**	P	**P**	**16 04 59.9**	**-0.7**
GOGA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GOGA	**Godfrey**	**81.88**	**47**	P	**P**	**16 05 00.7**	**+0.1**
	baz=326						
GOGA	**Godfrey**	**81.88**	**47**	P	**P**	**16 04 59.9**	**-0.7**
152A	**Waverly Hall**	**81.89**	**48**	P	**P**	**16 05 00.5**	**-0.2**
V58A	**Windy Hill, Pi**	**81.89**	**42**	P	**P**	**16 05 00.7**	**+0.1**
	baz=328						
V58A	**Windy Hill, Pi**	**81.89**	**42**	P	**P**	**16 05 00.9**	**+0.3**
V58A				IAmb	IAmb	16 05 42.8	
	comp=Z,18nm,0.8s						
MSSA	**Maissana**	**82.04**	**337**	P	**P**	**16 05 00.9**	**-0.4**
MSSA				IAmb	IAmb	16 05 02.7	
	comp=Z,40nm,1.1s						
W57A	**Gilead**	**82.04**	**43**	P	**P**	**16 05 01.5**	**+0.1**
	baz=327						
W57A	**Gilead**	**82.04**	**43**	P	**P**	**16 05 01.5**	**+0.1**
BNI	**Bardonecchia**	**82.05**	**339**	P	**P**	**16 05 01.8**	**+0.3**
BNI				pmax	pmax		
	comp=Z,15nm,1.0s						
BNI	**Bardonecchia**	**82.05**	**339**	P	**P**	**16 05 01.8**	**+0.3**
X56A	**White Oak**	**82.12**	**45**	P	**P**	**16 05 02.0**	**+0.1**
	baz=327						
STKA	**Stephens Creek**	**82.15**	**192**	P	**P**	**16 05 02.1**	**+0.4**
	comp=Z,7.3nm,1.1s,baz=333,slow=13,SNR=4.3						
STKA	**Stephens Creek**	**82.15**	**192**	P	**P**	**16 05 01.8**	**0.0**
U60A	**Pendleton**	**82.16**	**41**	P	**P**	**16 05 02.3**	**+0.3**
	baz=328						
MURB	**Monte Urbino**	**82.19**	**334**	P	**P**	**16 05 02.0**	**-0.2**
Y55A	**Saluda**	**82.20**	**45**	P	**P**	**16 05 03.0**	**+0.7**
	baz=326						
BIRD	**Birdtown, Kers**	**82.25**	**44**	P	**P**	**16 05 02.6**	**+0.1**
BIRD				IAmb	IAmb	16 05 04.2	
	comp=Z,20nm,1.2s						
PPT2	**Papeete2**	**82.27**	**129**	*e*S	**S**	**16 15 11.2**	**-2.2**
	comp=Z,52nm,27.2s						
PPT2	**Papeete2**	**82.27**	**129**	*e*LR	LR	16 30 26.7	
	comp=Z,98nm,22.0s						
PPT2	**Papeete2**	**82.27**	**129**	*e*T	T	17 35 14.0	
	comp=Z,3.4nm,0.3s						
OSSC	**Osservatorio P**	**82.31**	**335**	P	**P**	**16 05 02.5**	**-0.3**
OSSC				IAmb	IAmb	16 05 04.3	
	comp=Z,21nm,1.0s						
SSB	**Saint Sauveur**	**82.32**	**340**	P	**P**	**16 05 02.9**	**+0.1**
SSB				pmax	pmax		
	comp=Z,17nm,0.9s						
SSB	**Saint Sauveur**	**82.32**	**340**	P	**P**	**16 05 02.9**	**+0.1**
SSB				IAmb	IAmb	16 05 05.1	
	comp=Z,17nm,0.9s						
TIAR	**Tiarei**	**82.36**	**128**	*e*T	T	17 35 19.0	
	comp=Z,1.7nm,0.2s						
NRCA	**Norcia**	**82.42**	**334**	P	**P**	**16 05 03.9**	**+0.5**
NRCA				IAmb	IAmb	16 05 05.2	
	comp=Z,38nm,1.0s						
W58A	**Raeford**	**82.49**	**43**	P	**P**	**16 05 04.4**	**+0.7**
	baz=328						
ISO	**Isola**	**82.78**	**338**	P	**P**	**16 05 06.3**	**+1.1**
ISO				pmax	pmax		
	comp=Z,16nm,1.1s						
SAOF	**Saorge**	**82.84**	**338**	P	**P**	**16 05 06.1**	**+0.6**
SAOF				pmax	pmax		
	comp=Z,23nm,1.0s						
INTR	**Introdacqua**	**82.94**	**333**	P	**P**	**16 05 05.8**	**-0.3**
INTR				IAmb	IAmb	16 05 09.5	
	comp=Z,24nm,0.9s						
IGT	**Igoumenitsa**	**83.08**	**327**	P	**P**	**16 05 07.0**	**+0.2**
IGT				pmax	pmax		
	comp=Z,22nm,1.0s						
SHAO	**Shalim**	**83.10**	**290**	P	**P**	**16 05 08.3**	**+1.1**
SCTE	**Santa Cesarea**	**83.24**	**329**	P	**P**	**16 05 07.0**	**-0.6**
Z57A	**Bowman**	**83.26**	**45**	P	**P**	**16 05 08.9**	**+1.1**
	baz=327						
MEH	**Mehetia**	**83.28**	**128**	*e*T	T	17 36 29.6	
	comp=Z,6.3nm,0.3s						
MATE	**Matera**	**83.31**	**330**	⇓P	**P**	**16 05 07.8**	**0.0**
TIGA	**Tifton**	**83.44**	**48**	P	**P**	**16 05 09.6**	**+0.9**
	baz=326						
V62A	**Hyde County Ai**	**83.45**	**40**	P	**P**	**16 05 09.4**	**+0.8**
	baz=329						
Z58A	**St. Stephen**	**83.64**	**44**	P	**P**	**16 05 10.2**	**+0.5**
	baz=327						
DMTO	**DMTO**	**83.75**	**290**	P	**P**	**16 05 11.2**	**+0.7**
WHFO	**Wadi Hawf**	**84.31**	**291**	P	**P**	**16 05 13.7**	**+0.3**
RBK	**Rabkut**	**84.37**	**290**	P	**P**	**16 05 14.2**	**+0.5**
TIP	**Timpagrande**	**84.62**	**329**	⇓P	**P**	**16 05 14.3**	**-0.4**
TIP	**Timpagrande**	**84.62**	**329**	P	**P**	**16 05 14.0**	**-0.7**
TIP				IAmb	IAmb	16 05 16.7	
	comp=Z,36nm,1.2s						
RAYN	**Ar Rayn**	**84.81**	**300**	*i* P	**P**	**16 05 16.1**	**+0.3**
	SNR=59						
RAYN	**Ar Rayn**	**84.81**	**300**	P	**P**	**16 05 15.3**	**-0.5**
RAYN				pmax	pmax		
	comp=Z,42nm,0.9s						
RAYN	**Ar Rayn**	**84.81**	**300**	P	**P**	**16 05 15.3**	**-0.5**
ABTO	**Aybut**	**85.03**	**291**	P	**P**	**16 05 17.2**	**+0.1**
VSL	**Villasalto**	**86.57**	**335**	P	**P**	**16 05 24.4**	**+0.1**
TBI	**Tubuai**	**87.18**	**132**	*e*S	**S**	**16 15 59.2**	**-2.6**
	comp=Z,43nm,26.5s						
TBI	**Tubuai**	**87.18**	**132**	*e*LR	LR	16 32 47.4	
	comp=Z,356nm,30.2s,baz=321						
TBI	**Tubuai**	**87.18**	**132**	*e*T	T	17 41 19.3	
	comp=Z,4.7nm,0.3s						
SOCY	**Socotra**	**88.57**	**287**	P	**P**	**16 05 33.4**	**-0.9**
SOCY	**Socotra**	**88.57**	**287**	P	**P**	**16 05 32.4**	**-1.9**
NWAO	**Narrogin (SRO)**	**89.16**	**212**	LR	LR	16 43 13.9	
	comp=Z,44nm,22.0s,baz=120,slow=34						
ESDC	**Sonseca Array**	**89.39**	**345**	P	**P**	**16 05 38.0**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=3.0,slow=4.5,SNR=5.2						
KEST	**Kesra**	**90.09**	**334**	P	**P**	**16 05 42.7**	**+1.5**
	comp=Z,9.3nm,0.8s,baz=271,slow=1.8,SNR=10						
KEST	**Kesra**	**90.09**	**334**	P	**P**	**16 05 42.4**	**+1.3**
KEST				IAmb	IAmb	16 05 43.6	
	comp=Z,11nm,0.9s						
BKZ	**Black Stump Fm**	**90.19**	**164**	P	**P**	**16 05 40.2**	**-0.9**
TORD	**Torodi Ar. Bea**	**113.60**	**333**	PKKPbc	PKKPbc	16 22 04.0	+3.0
	comp=Z,0.4nm,0.5s,baz=243,slow=2.9,SNR=5.8						
VNDA	**Vanda**	**126.90**	**178**	PKP	**PKiKP**	**16 11 44.0**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=297,slow=4.7,SNR=4.3						
VNDA	**Vanda**	**126.90**	**178**	PKIKP	**PKiKP**	**16 11 44.0**	**+0.4**
QSPA	**South Pole Qui**	**139.34**	**180**		PKPpre	16 11 58.4	
QSPA				PKPdf	**PKiKP**	**16 12 08.8**	**-0.3**
SYO	**Syowa Base**	**144.42**	**214**	⇓*i*X	**PKPab**	**16 12 12.9**	**-1.2**
SYO	**Syowa Base**	**144.42**	**214**	⇓*i*X	PKiKP	16 12 38.8	+20
CPUP	**Villa Florida**	**145.27**	**60**	PKPbc	**PKPab**	**16 12 18.7**	**+0.2**
	comp=Z,19nm,1.1s,baz=328,slow=3.7,SNR=24						
CPUP	**Villa Florida**	**145.27**	**60**	PKIKP	**PKPab**	**16 12 18.5**	**0.0**
CPUP	**Villa Florida**	**145.27**	**60**		**PKPab**	**16 12 18.5**	**0.0**
LL01	**San Ignacio de**	**145.98**	**97**		**PKPbc**	**16 12 19.7**	**-0.4**
PLCA	**Paso Flores**	**146.36**	**93**	PKPbc	**PKPbc**	**16 12 21.8**	**+0.4**
	comp=Z,7.2nm,0.9s,baz=288,slow=3.0,SNR=17						
PLCA	**Paso Flores**	**146.36**	**93**	PKP2	**PKPbc**	**16 12 21.3**	**-0.1**
PLCA	**Paso Flores**	**146.36**	**93**		**PKPbc**	**16 12 21.2**	**-0.1**
SNAA	**Sanae**	**155.87**	**196**	PKPab	**PKPab**	**16 13 01.0**	**+0.2**
SNAA	**Sanae**	**155.87**	**196**	PKP2	**PKPab**	**16 13 00.1**	**-0.7**
SNAA						17 12 32.9	
SNAA	**Sanae**	**155.87**	**196**	PKPdf	**PKPdf**	**16 12 32.9**	**-0.6**
SNAA					**PKPab**	**16 13 00.1**	**-0.7**
VNA2	**Neumayer--Watz**	**157.28**	**194**	PKPab	**PKPab**	**16 13 07.1**	**+0.3**
	baz=136,slow=3.3						
VNA3	**Neumayer Olymp**	**157.32**	**192**	PKPab	**PKPab**	**16 13 06.0**	**-1.0**

ROM 08 16:02:07.8±0.1, **42.755N**×0.004×**13.09E**±0.01, **h6**km, **ML1.2/4, Error ellipse: s-maj=1.1km s-min=0.3km az=100.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.08**	**12**	P	Pg	16 02 10.2	+0.5
NRCA				S	Sg	16 02 11.8	+0.7
NRCA				AML	AML		
	comp=N,558μm,0.1s						
NRCA				AML	AML		
	comp=E,816μm,0.5s						
LNSS	**Leonessa**	**0.16**	**194**	P	Pg	16 02 11.6	+0.6
LNSS				S	Sg	16 02 14.2	+1.0
LNSS				AML	AML		
	comp=E,136μm,2.9s						
LNSS				AML	AML		
	comp=E,136μm,2.9s						
LNSS				AML	AML		
	comp=N,170μm,0.9s						
FDMO	**Fiordimonte**	**0.28**	**359**	P	Pg	16 02 14.1	+0.8
FDMO				S	Sb	16 02 18.7	-1.6
FDMO				AML	AML		
	comp=E,83μm,0.2s						
FDMO				AML	AML		
	comp=N,53μm,0.4s						
CESI	**CESI - Serrava**	**0.28**	**331**	P	Pg	16 02 14.2	+0.8
CESI				S	Sb	16 02 19.1	-1.3
CESI				AML	AML		
	comp=N,25μm,0.9s						
CESI				AML	AML		
	comp=E,21μm,0.2s						
CESI				AML	AML		
	comp=N,33μm,3.5s						
CSP1	**Cessapalombo**	**0.35**	**14**	P	Pg	16 02 15.3	+0.8
CSP1				S	Sb	16 02 20.9	-1.4
ASSB	**Assisi San Ben**	**0.43**	**312**	P	Pg	16 02 16.7	+0.6
ASSB				S	Sb	16 02 23.9	-0.7
ASSB				AML	AML		
	comp=E,34μm,0.7s						
ASSB				AML	AML		
	comp=N,48μm,0.2s						
SNTG	**Esanatoglia**	**0.51**	**348**	P	Pb	16 02 18.9	-0.3
SNTG				S	Sb	16 02 26.6	-0.3
EL6	**Elcito**	**0.57**	**1**	P	Pb	16 02 19.6	-0.7
EL6				S	Sb	16 02 28.8	0.0
MURB	**Monte Urbino**	**0.66**	**321**	P	Pg	16 02 20.6	+0.2
MURB				S	Sb	16 02 31.2	+0.1

*SNET **08** 16:08:41.9±0.6, 13.63N×87.88W, h121km±8km, ML3.7*
*UCR **08** 16:08:42.0±0.4, 13.62N×87.88W, h122km±5km, ML3.7*
ISC 08 16:08:45.6±2.2, **13.7N**±0.2×**87.9W**±0.2, **h100**km, **n12, s1§26/16, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAHU	**Cacacuatique**	**0.31**	**292**	*e*P	**Pn**	**16 08 59.9**	**-0.6**
CAHU	**Cacacuatique**	**0.31**	**292**	*e*P	**Pn**	**16 08 59.9**	**-0.6**
BLLM	**Bellamira**	**0.38**	**236**	*e*P	**Pn**	**16 08 60.0**	**-0.8**
BLLM	**Bellamira**	**0.38**	**236**	*e*P	**Pn**	**16 08 60.0**	**-0.8**
LCY	**Lacayo**	**0.44**	**238**	*e*P	**Pn**	**16 08 59.7**	**-1.4**
LCY	**Lacayo**	**0.44**	**238**	*e*P	**Pn**	**16 08 59.7**	**-1.4**
PACA	**Pacayal**	**0.44**	**245**	*e*P	**Pn**	**16 09 00.4**	**-0.8**
PACA				*e*S	**Sn**	**16 09 14.6**	**+1.9**
PACA				IAML		16 09 16.2	
	comp=Z,2μm,0.3s						
PACA	**Pacayal**	**0.44**	**245**	*e*P	**Pn**	**16 09 00.4**	**-0.8**
PACA				*e*S	**Sn**	**16 09 14.6**	**+1.9**
PACA				IAML		16 09 16.2	
	comp=Z,2μm,0.3s						
TECA	**Tecapa**	**0.59**	**254**	*e*P	**Pn**	**16 09 01.3**	**-1.0**
TECA	**Tecapa**	**0.59**	**254**	*e*P	**Pn**	**16 09 01.3**	**-1.0**
LFRS	**El Faro**	**1.12**	**268**	*e*P	**Pn**	**16 09 06.3**	**-1.2**
LFRS				*e*S	**Sn**	**16 09 24.9**	**+0.9**
LFRS	**El Faro**	**1.12**	**268**	*e*P	**Pn**	**16 09 06.3**	**-1.2**
LFRS				*e*S	**Sn**	**16 09 24.9**	**+0.9**

IDC 08 16:11:20.6±2.2, **0.76N**×**127.12E**, **h0**km, **mb3.4/3, mb1 3.6/3, mb1mx3.3/30, mbtmp3.4/3, Error ellipse: s-maj=189.4km s-min=25.3km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.76**	**161**	P	P	16 16 13.6	-0.4
	0.5nm,0.5s,baz=340,slow=11,SNR=8.9						
ASAR	**Alice Springs**	**25.16**	**165**	P	P	16 16 48.0	+0.2
	0.6nm,0.5s,baz=345,slow=11,SNR=32						
MKAR	**Makanchi Array**	**60.21**	**326**	P	P	16 21 30.5	-0.1
	0.3nm,0.4s,baz=116,slow=8.6,SNR=6.5						

*IDC **08** 16:19:09.9±1.1, 5.84S×146.97E, h0km, mb3.9/6, mb1 4.3/11, mb1mx3.9/37, mbtmp4.1/11, ML3.9/4, MS3.0/1, Ms1 3.0/1, ms1mx2.5/43, Error ellipse: s-maj=25.1km s-min=15.7km az=114.0*
*NEIC **08** 16:19:15.0±2.6, 5.87S±0.07×147.01E±0.09, h48km±8km, mb4.5/22, Error ellipse: s-maj=12.9km s-min=10.1km az=115.0*
*DJA **08** 16:19:20.2±1.3, 6.5±9.9×14.7E±1.3, h64km±7km, M4.8/15, mb4.6/15, mB5.0/4, MLv5.1/3, Mw(mB)4.3/4*
ISC 08 16:19:17.6±0.6, **5.93S**±0.06×**147.04E**±0.07, **h78**km, **n67, s1§33/58, mb4.6/15, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.45**	**178**	Pn	**Pn**	**16 20 08.1**	**-1.0**
	13nm,0.3s,baz=30,slow=5.6,SNR=54						
PMG				Sn	**Sn**	**16 20 50.1**	**+1.1**
	23nm,0.3s,baz=160,slow=20,SNR=7.6						
PMG	**Port Moresby**	**3.45**	**178**		**Pn**	**16 20 08.7**	**-0.4**
KRVT	**Keravat (AS076**	**5.22**	**72**	Pn	**Pn**	**16 20 31.8**	**-1.4**
	3.8nm,0.3s,baz=108,slow=1.5,SNR=5.0						
RABL	**Rabaul**	**5.39**	**72**		**Pn**	**16 20 34.7**	**-0.8**
JAY	**Jayapura**	**7.17**	**298**	Pn	**Pn**	**16 21 01.6**	**+1.7**
	0.7nm,0.3s,baz=161,slow=11,SNR=4.3						
GENI	**Genyem**	**7.61**	**296**	P	**Pn**	**16 21 06.4**	**+0.5**
	0.3nm42nm,0.9s						
COEN	**Coen**	**8.84**	**205**	P	**Pn**	**16 21 21.3**	**-1.4**
	baz=8.4,SNR=27						
COEN	**Coen**	**8.84**	**205**		**Pn**	**16 21 21.2**	**-1.4**
MTSU	**Mount Surprise**	**12.42**	**192**	P	**Pn**	**16 22 10.8**	**-0.6**
	baz=12,SNR=10						
CTA	**Charters Tower**	**14.09**	**183**	Pn	**Pn**	**16 22 33.4**	**-0.3**
	0.5nm,0.3s,baz=356,slow=15,SNR=5.5						
CTAO	**Charters Tower**	**14.09**	**183**	Pn	**Pn**	**16 22 35.4**	**+1.7**
FAKI	**Fak Fak**	**15.05**	**281**		**P**	**16 22 48.7**	**-0.9**
FAKI				IAmb	IAmb	16 22 52.0	
	comp=Z,14nm,0.8s						
KDU	**Kakadu**	**15.86**	**244**	P	**Pn**	**16 22 55.6**	**-0.8**
	baz=15,SNR=13						
QIS	**Mount Isa**	**16.23**	**206**	P	**P**	**16 23 01.7**	**-1.0**
	baz=16,SNR=19						
SIJI	**Sorong**	**16.53**	**287**	Pn	**Pn**	**16 23 03.2**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=63,slow=9.4,SNR=3.8						
MTN	**Manton Dam**	**17.12**	**245**	P	**Pn**	**16 23 11.1**	**-1.0**
	baz=17,SNR=3.2						
MTN	**Manton Dam**	**17.12**	**245**		**Pn**	**16 23 11.0**	**-1.0**
MTN				IAmb	IAmb	16 23 14.4	
	comp=Z,35nm,1.4s						
WB0	**Warramunga Arr**	**18.45**	**221**	P	**P**	**16 23 26.8**	**-0.5**
WB9	**Warramunga Arr**	**18.47**	**221**	P	**P**	**16 23 27.3**	**-0.1**
	baz=18						
WR0	**Warramunga Arr**	**18.50**	**220**	P	**P**	**16 23 27.5**	**-0.2**
WRAB	**Tennant Creek**	**18.60**	**220**	P	**P**	**16 23 27.6**	**-1.3**
WRAB				IAmb	IAmb	16 23 38.0	
	comp=Z,8.5nm,0.8s						
WB2	**Warramunga Arr**	**18.61**	**220**	P	**P**	**16 23 28.2**	**-0.7**
WRA	**Warramunga Arr**	**18.61**	**220**	P	**P**	**16 23 28.8**	**-0.2**
	comp=Z,3nm,0.3s,baz=38,slow=11,SNR=24						
AAI	**Ambon**	**18.91**	**276**	P	**P**	**16 23 31.6**	**-0.7**
	comp=Z,78nm,0.8s						
GUMO	**Guam**	**19.51**	**354**	P	**P**	**16 23 37.1**	**-1.7**
EIDS	**Eidsvold**	**19.71**	**169**		**P**	**16 23 37.8**	**-3.1**
EIDS				IAmb	IAmb	16 23 55.5	
	comp=Z,19nm,1.1s						
LBMI	**Labuha**	**20.20**	**284**	P	**P**	**16 23 48.0**	**+1.7**
	comp=Z,722nmcomp=Z,40nm,1.0s						
KNRA	**Kununurra**	**20.38**	**240**	P	**P**	**16 23 47.3**	**-0.9**
	baz=20,SNR=7.0						
KNRA	**Kununurra**	**20.38**	**240**	P	**P**	**16 23 46.8**	**-1.4**
KNRA				IAmb	IAmb	16 24 11.9	
	comp=Z,30nm,1.2s						
RMQ	**Roma**	**20.51**	**176**	P	Pn	16 23 54.2	+1.8
	baz=20,SNR=14						
QLP	**Quilpie**	**20.71**	**187**	P	Pn	16 23 54.1	-0.6
	baz=20,SNR=4.5						
SANI	**Sanana**	**21.35**	**280**	P	**P**	**16 23 58.8**	**+0.1**
	comp=Z,18nm,1.6s						
AS31	**Alice Springs**	**21.70**	**214**	P	**P**	**16 24 03.1**	**+0.8**
ASAR	**Alice Springs**	**21.70**	**214**	P	**P**	**16 24 02.8**	**+0.4**
	comp=Z,3.5nm,0.7s,baz=54,slow=9.0,SNR=53						
ASAR				S	Sn	16 28 05.9	-6.1
	comp=Z,1.4nm,0.9s,baz=32,slow=21,SNR=5.1						
SOEI	**Soe**	**22.87**	**259**	P	**P**	**16 24 17.1**	**+2.1**
SOEI				IAmb	IAmb	16 24 51.3	
	comp=Z,23nm,0.8s						
KMSI	**Cibinong**	**23.91**	**285**	P	**P**	**16 24 25.5**	**+0.9**
	comp=Z,690nmcomp=Z,38nm,0.8s						
FITZ	**Fitzroy Crossi**	**24.14**	**238**	P	**P**	**16 24 27.3**	**+0.8**
	baz=24,SNR=13						
FITZ	**Fitzroy Crossi**	**24.14**	**238**	P	**P**	**16 24 27.6**	**+1.1**
	comp=Z,9.8nm,0.8s,baz=66,slow=10.0,SNR=20						
FITZ	**Fitzroy Crossi**	**24.14**	**238**	P	**P**	**16 24 26.4**	**-0.2**
FITZ				IAmb	IAmb	16 24 43.1	
	comp=Z,13nm,1.0s						
LUWI	**Luwuk**	**24.70**	**280**	P	**P**	**16 24 31.6**	**-0.1**
	comp=Z,73nm,1.2s						
LUWI	**Luwuk**	**24.70**	**280**	P	**P**	**16 24 33.5**	**+1.8**
ARMA	**Armidale**	**24.74**	**170**	P	**P**	**16 24 31.7**	**-0.3**
ARMA				IAmb	IAmb	16 25 21.9	
	comp=Z,53nm,1.6s						
MMRI	**Maumere**	**24.75**	**262**	P	**P**	**16 24 32.2**	**+0.1**
MMRI				IAmb	IAmb	16 25 04.5	
	comp=Z,18nm,0.7s						
EDFI	**Ende, Flores**	**25.30**	**262**	P	**P**	**16 24 37.7**	**+0.4**
WRKA	**Warakurna**	**26.15**	**221**	P	**P**	**16 24 45.3**	**+0.5**
	baz=26,SNR=5.9						
STKA	**Stephens Creek**	**26.31**	**190**	P	**P**	**16 24 49.0**	**+2.8**
	baz=26						
STKA	**Stephens Creek**	**26.31**	**190**	P	**P**	**16 24 46.9**	**+0.8**
	comp=Z,6.0nm,1.0s,baz=336,slow=7.6,SNR=6.4						
STKA	**Stephens Creek**	**26.31**	**190**	P	**P**	**16 24 45.8**	**-0.3**
TARA	**Tarawa**	**26.84**	**75**	P	**P**	**16 24 50.7**	**-0.4**
BBOO	**Buckleboo**	**28.64**	**200**	P	**P**	**16 25 07.6**	**+0.7**
H11S3	**WAKE ISLAND Hy**	**31.06**	**38**	T	T	16 58 15.5	
	baz=220,slow=76,SNR=22						
H11S2	**WAKE ISLAND Hy**	**31.07**	**38**	T	T	16 58 14.9	
	baz=220,slow=76,SNR=32						
H11S1	**WAKE ISLAND Hy**	**31.07**	**38**	T	T	16 58 19.0	
	baz=220,slow=76,SNR=26						
H11N1	**WAKE ISLAND Hy**	**32.11**	**37**	T	T	16 59 32.7	
	baz=218,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**32.12**	**37**	T	T	16 59 34.8	
	baz=218,slow=76,SNR=17						
H11N2	**WAKE ISLAND Hy**	**32.13**	**37**	T	T	16 59 34.8	
	baz=218,slow=76,SNR=26						
KKM	**Kota Kinabalu**	**32.99**	**291**	P	**P**	**16 25 44.1**	**-1.6**
KKM				IAmb	IAmb	16 26 56.0	
	comp=Z,9.5nm,1.0s						
MEEK	**Meekatharra**	**34.03**	**230**	P	**P**	**16 25 55.6**	**+1.1**
	baz=34,SNR=4.7						
BFZ	**Birch Farm**	**43.37**	**147**	P	**P**	**16 27 11.4**	**-0.9**
BFZ				IAmb	IAmb	16 28 05.0	
	comp=Z,22nm,1.2s						
KSRS	**Korea Array**	**46.70**	**339**	LR	LR	16 45 25.1	
	comp=Z,16nm,20.5s,baz=280,slow=34						
KULM	**Kulim**	**47.64**	**283**	P	**P**	**16 27 46.3**	**-0.1**
CMAR	**Chiang Mai Arr**	**53.25**	**298**	P	**P**	**16 28 30.7**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=120,slow=5.9,SNR=4.3						
VNDA	**Vanda**	**71.98**	**177**	P	**P**	**16 30 35.5**	**+3.1**
	comp=Z,0.9nm,0.7s,baz=304,slow=5.4,SNR=6.1						
VNDA	**Vanda**	**71.98**	**177**	P	**P**	**16 30 35.5**	**+3.1**
VNDA				IAmb	IAmb	16 30 40.0	
	comp=Z,3.5nm,1.2s						
KSH	**Kashi**	**79.36**	**312**	P	P	16 31 20.9	+5.5
KSH				pP	pP	16 31 36.6	+0.4
KSH				sP	sP	16 31 45.7	+1.1
KSH				pmax	pmax		
	comp=Z,35nm,1.4s						
KSH				pmax	pmax		
	comp=Z,110nm,4.4s						
ILAR	**Eielson Array**	**85.40**	**23**	P	**P**	**16 31 47.5**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=259,slow=4.7,SNR=4.7						
TORD	**Torodi Ar. Bea**	**145.11**	**284**	PKPbc	**PKiKP**	**16 38 49.3**	**-1.8**
	comp=Z,0.7nm,0.6s,baz=87,slow=3.4,SNR=4.5						

IDC 08 16:28:05.5±5.7, **8.54S**×**121.64E**, **h206**km±24km, **mb3.7/1, mb1 3.3/4, mb1mx2.8/37, mbtmp3.7/4, Error ellipse: s-maj=147.1km s-min=56.0km az=39.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.59**	**130**	P	Pn	16 28 50.9	+0.1
	3.4nm,0.3s,baz=300,slow=3.8,SNR=3.7						
BATI				S	S	16 29 26.6	+0.9
	8.9nm,0.3s,baz=117,slow=20,SNR=12						
WRA	**Warramunga Arr**	**16.72**	**134**	P	P	16 31 46.6	-0.5
	0.3nm,0.3s,baz=310,slow=12,SNR=22						
WRA				S	S	16 34 51.8	+0.5
	0.1nm,0.3s,baz=312,slow=22,SNR=3.3						
ASAR	**Alice Springs**	**19.08**	**143**	P	P	16 32 13.2	+0.4
	0.2nm,0.3s,baz=318,slow=9.7,SNR=22						
STKA	**Stephens Creek**	**29.72**	**144**	P	P	16 33 52.2	-0.3
	1.2nm,0.3s,baz=317,slow=11,SNR=5.7						

*IDC **08** 16:33:04.7±1.3, 49.75N×127.76W, h0km, mb3.5/3, mb1 3.9/9, mb1mx3.5/52, mbtmp3.6/9, ML3.4/7, MS2.7/3, Ms1 2.7/3, ms1mx2.4/50, Error ellipse: s-maj=33.6km s-min=8.4km az=71.0*
*PGC **08** 16:33:04.3±0.3, 49.67N×127.83W, h10km, MLSn3.3/43, Mw3.9/43, 117km Ssw of Pt. Hardy, Bc Vancouver Island, Canada Region*
*ANF **08** 16:33:14.9±2.9, 49.35N×126.74W, h0km, ML3.4/3, Error ellipse: s-maj=31.6km s-min=13.6km az=124.0*
ISC 08 16:33:05.5±1.6, **49.81N**±0.04×**127.66W**±0.05, **h9**km±11km, **n119, s1§61/122, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPBC	**Brooks Peninsu**	**0.35**	**348**	P	**P

STW	Striped Peak	3.11 121	Pn	Pn	16 33 53.3	-1.4
SNB	Saturna Island	3.11 108	Pn	Pn	16 33 54.5	-0.3
HNBB	Haney	3.35 97	Pn	Pn	16 33 57.0	-1.0
A04D	Lummi Island	3.42 107	P	Pn	16 33 59.8	+0.9
	baz=288,SNR=6.2					
A04D			Sb	Sn	16 34 40.6	+1.0
	baz=288					
BLN	Blyn Mountain	3.58 119	Pn	Pn	16 33 58.9	-2.3
HG3B	Hotspring	3.65 321	Pn	Pn	16 33 59.4	-2.7
VDB	Vedder Mountai	3.71 100	Pn	Pn	16 34 01.7	-1.2
HDW	Hoodsport	3.74 124	Pn	Pn	16 34 02.3	-1.1
BNB	Barry Inlet	3.78 319	Pn	Pn	16 34 01.6	-2.4
D03D	Eldon	3.79 125	P	Pn	16 34 03.9	-0.1
	baz=306					
LLLB	Lillooet	3.79 76	Pn	Pn	16 34 03.5	-0.6
UBRB	Upper Baezaeko	3.81 35	Pn	Pn	16 34 04.6	+0.2
CMW	Cultus Mountai	3.89 109	Pn	Pn	16 34 04.6	-1.0
B05A	Bryant	3.97 111	P	Pn	16 34 06.9	+0.4
	baz=293,SNR=16					
B06A	Marblemount	4.25 105	Pn	Pn	16 34 10.3	-0.1
E03A	Lebam	4.26 138	Pn	Pn	16 34 09.1	-1.4
MOBC	Moresby Island	4.29 323	Pn	Pn	16 34 10.1	-0.8
DIB	Dawson Inlet,	4.54 320	Pn	Pn	16 34 12.6	-1.7
VIB	Van Inlet	4.60 320	Pn	Pn	16 34 13.4	-1.9
GPW	Glacier Peak	4.62 109	Pn	Pn	16 34 15.3	-0.4
E04D	Cinebar	4.71 132	P	Pn	16 34 16.8	+0.1
	baz=314					
RUBB	Prince Rupert	4.80 342	Pn	Pn	16 34 17.4	-0.4
FMW	Mount Fremont	4.92 124	Pn	Pn	16 34 19.0	-0.7
LON	Longmire	4.96 126	Pn	Pn	16 34 20.2	0.0
LTY	Liberty	5.30 116	Pn	Pn	16 34 24.1	-0.7
G03D	McMinnville, O	5.48 145	P	Pn	16 34 27.6	+0.3
	baz=327,SNR=20					
BLBC	Blue River	5.77 64	Pn	Pn	16 34 31.9	+0.4
G05D	Wamic, OR	6.27 134	P	Pn	16 34 38.4	+0.2
	baz=318					
MNB	Mounoet Dainar	6.32 64	Pn	Pn	16 34 39.5	+0.4
I03D	Drain, OR	6.79 153	P	Pn	16 34 46.7	+1.4
	baz=334					
I05D	Terrebonne, OR	6.97 139	P	Pn	16 34 48.0	+0.3
	baz=323					
I04A	Tendick Farm,	7.01 147	P	Pn	16 34 49.2	+0.8
	baz=330,SNR=9.2					
NEW	Newport	7.10 99	LR	LR	16 37 35.1	
	comp=Z,74nm,18.4s,baz=300,slow=38					
J01E	Myrtle Point	7.13 157	P	Pn	16 34 52.3	+2.4
	baz=339					
K02D	Willamette Mer	7.63 157	P	Pn	16 34 58.4	+1.4
	baz=339,SNR=7.0					
NBC5	NorthernBC 5	8.27 19	Pn	Pn	16 35 06.6	+1.0
L04D	Klamath Falls	8.46 152	P	Pn	16 35 10.1	+1.9
	baz=335					
DLBC	Dease Lake	8.76 352	Pn	Pn	16 35 14.6	+2.3
	0.1nm,0.3s,baz=143,slow=20,SNR=0.7					
YBH	Yreka Blue Hor	8.79 155	Pn	Pn	16 35 14.8	+2.1
	1.0nm,0.3s,baz=346,slow=11,SNR=26					
YBH			LR	LR	16 38 23.0	
	comp=Z,45nm,19.2s,baz=352,slow=36					
M04C	Macdoel	9.00 151	P	Pn	16 35 17.7	+2.1
	baz=334,SNR=7.0					
M02C	Callahan	9.06 156	P	Pn	16 35 19.6	+3.1
	baz=339,SNR=5.9					
N02D	Trinity Center	9.50 157	P	Pn	16 35 26.2	+3.7
	baz=339,SNR=13					
NVAR	Mina Array Bea	13.20 146	Pn	Pn	16 36 16.3	+3.0
	0.1nm,0.3s,baz=322,slow=12,SNR=18					
PDAR	Pinedale Array	14.34 113	Pn	Pn	16 36 30.9	+2.1
	0.1nm,0.3s,baz=318,slow=10,SNR=8.3					
YKA	Yellowknife Ar	14.60 25	Pn	Pn	16 36 29.9	-2.0
	0.1nm,0.3s,baz=210,slow=13,SNR=13					
CWC	Cottonwood Cre	15.06 149	P	Pn	16 36 40.3	+1.7
	baz=335					
TPNV	Topopah Spring	15.27 143	P	Pn	16 36 43.4	+2.0
	baz=330					
FURC	Furnace Creek,	15.47 146	P	Pn	16 36 46.0	+2.2
	baz=332					
MPMC	Manual Prospec	15.61 148	P	Pn	16 36 48.1	+2.3
	baz=334					
ISA	Isabella, Lake	15.65 151	P	Pn	16 36 48.8	+2.6
	baz=337					
K22A	Casper	16.25 108	P	Pn	16 36 55.7	+1.7
	baz=303					
TUQ	Turquoise Moun	16.73 145	P	Pn	16 37 02.0	+1.9
	baz=332					
O20A	White River Ci	16.76 118	P	Pn	16 37 01.3	+0.8
	baz=311					
DECC	Green Verdugo	17.00 153	P	Pn	16 37 05.3	+1.9
	baz=338					
BELC	Belle Mtn. Jos	17.99 147	P	Pn	16 37 17.3	+1.5
	baz=334					
ILAR	Eielson Array	18.12 333	P	P	16 37 19.1	+1.7
	0.0nm,0.3s,baz=192,slow=13,SNR=4.5					
IRM	Iron Mountain	18.16 145	P	Pn	16 37 19.1	+1.3
	baz=333					
PFO	Pinyon Flats O	18.18 149	P	P	16 37 19.7	+1.3
	baz=336					
ISCO	Idaho Springs	18.51 114	P	P	16 37 22.0	-0.3
	baz=310					
MVCO	Mesa Verde	18.69 125	P	Pn	16 37 25.3	+0.8
	baz=318					
MONP2	Monument Peak	18.85 150	P	Pn	16 37 27.9	+1.5
	baz=327					
S22A	4UR Ranch, Cre	19.20 121	P	Pn	16 37 31.5	+0.8
	baz=315					
SDCO	Great Sand Dun	19.95 119	P	P	16 37 39.0	+1.0
	baz=314					
ULM	Lac du Bonnet	20.35 77	P	Pn	16 37 44.9	+1.0
	1.1nm,0.5s,baz=288,slow=6.4,SNR=1.5					
T25A	Trinidad	20.99 118	P	P	16 37 50.4	+1.2
	baz=314					
ANMO	Albuquerque	21.48 126	P	P	16 37 55.8	+1.3
	1.5nm,0.8s,baz=340,slow=7.7,SNR=4.1					
MNTX	Cornudas Mount	24.59 129	P	P	16 38 27.0	+1.2
	baz=324					
TXAR	Lajitas Array	27.36 129	P	P	16 38 51.2	+0.3
	0.6nm,0.7s,baz=318,slow=8.9,SNR=5.1					
H11N2	WAKE ISLAND Hy	59.39 265	T	T	17 47 34.9	
	baz=43,slow=76,SNR=325					
H11N3	WAKE ISLAND Hy	59.39 265	T	T	17 47 33.9	
	baz=43,slow=76,SNR=342					
H11N1	WAKE ISLAND Hy	59.40 265	T	T	17 47 35.1	
	baz=43,slow=76,SNR=315					
H11S1	WAKE ISLAND Hy	60.40 264	T	T	17 48 51.3	
	baz=39,slow=74,SNR=27					
H11S2	WAKE ISLAND Hy	60.41 264	T	T	17 48 50.6	
	baz=39,slow=74,SNR=33					
H11S3	WAKE ISLAND Hy	60.42 264	T	T	17 48 52.6	
	baz=39,slow=74,SNR=17					

IDC ***08*** *16:36:05.4±1.8, 11°.53S×117°.32E, h0km, mb3.5/3, mb1 3.5/7, mb1mx3.3/45, mbtmp3.4/7, ML3.3/3, Error ellipse: s-maj=70.1km s-min=21.7km az=41.0*

ISC 08 16:36:12.5±1.4, 10°.9S±0°.1×118°.5E±0°.2, h34km, n7, σ2§17/9, mb3.5/3, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.14	83	Pn	Pb	16 37 41.6	-0.1
	baz=321,slow=6.5						
FITZ	Fitzroy Crossi	9.99	137	Pn	Pn	16 38 33.5	-0.1
	0.2nm,0.3s,baz=294,slow=10.0,SNR=20						
FITZ				Sn	Sn	16 40 22.2	-2.3
	1.4nm,0.3s,baz=206,slow=22,SNR=9.9						
WRA	Warramunga Arr	17.74	122	P	P	16 40 20.5	+2.9
	0.1nm,0.3s,baz=306,slow=15,SNR=1.6						
WRA				S	S	16 43 38.0	-2.0
	0.3nm,0.3s,baz=280,slow=22,SNR=3.7						
ASAR	Alice Springs	19.44	133	P	Pn	16 40 39.9	+2.2
	0.1nm,0.3s,baz=302,slow=12,SNR=5.2						
MKAR	Makanchi Array	65.88	334	P	P	16 46 52.6	-2.1
	0.2nm,0.4s,baz=142,slow=8.1,SNR=4.2						
KURBB	Kurchatov Arra	70.41	334	P	P	16 47 22.3	-0.7
	0.1nm,0.2s,baz=148,slow=5.5,SNR=1.3						
ZALV	Zalesovo Beam	70.60	340	P	P	16 47 24.5	+0.3
	0.2nm,0.3s,baz=163,slow=5.6,SNR=2.0						

IDC ***08*** *16:37:41.4±0.7, 32°.94N×91°.93E, h0km, mb3.9/16, mb1 4.0/20, mb1mx3.8/60, mbtmp3.9/20, ML3.4/4, MS3.2/5, Ms1 3.2/5, ms1mx2.9/56, Error ellipse: s-maj=22.8km s-min=14.4km az=55.0*

NEIC ***08*** *16:37:42.2±2.4, 32°.98N±0°.04×91°.9E±0°.1, h10km±1km, mb4.0/17, Error ellipse: s-maj=16.6km s-min=5.3km az=75.0*

BJI ***08*** *16:37:44.0±0.0, 33°.10N×92°.01E, h6km, mB4.6/14, mb4.3/20, ML4.2/6, Ms4.1/22, Ms7 3.8/21*

ISC 08 16:37:43.2±0.5, 32°.91N±0°.05×91°.87E±0°.05, h14km, n52, σ1§92/56, mb4.0/16, MS3.0/3, 1C, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	3.25	191	Pn	Pb	16 38 42.6	+1.6
LSA				smax	smax		
	comp=N,870nm,0.9s						
LSA				smax	smax		
	comp=E,1μm,0.8s						
LSA	Lhasa	3.25	191		Pb	16 38 41.8	+0.8
SHL	Shillong	7.31	180		Pn	16 39 37.7	+8.0
GTA	Gaotai	9.13	42	*e*P	Pn	16 39 55.3	+0.7
GTA				pP		16 39 59.6	
GTA				sP		16 40 02.8	
GTA				S	Sn	16 41 38.8	+1.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,34nm,6.0s						
GTA				LR	LR		
	comp=N,210nm,10.2s						
GTA				LR	LR		
	comp=E,270nm,8.9s						
GTA				LR	LR		
	comp=Z,280nm,10.8s						
BRDH	Bariadhala	10.19	181	Pn	Pn	16 40 08.9	-0.2
	40nm,0.3s,baz=68,slow=21,SNR=2.0						
LZH	Lanzhou	10.38	69	*e*P	Pn	16 40 09.5	-2.2
LZH				pmax	pmax		
	comp=Z,29nm,1.2s						
LZH				pmax	pmax		
	comp=Z,110nm,4.8s						
LZH				LR	LR		
	comp=N,1μm,11.4s						
LZH				LR	LR		
	comp=E,880nm,11.4s						
LZH				LR	LR		
	comp=Z,960nm,13.6s						
WMQ	Urumqi	11.38	345	*e*P	Pn	16 40 24.5	-0.8
XAN	Xi'an	14.28	81	P	Pn	16 41 05.4	+0.4
XAN				pP	P	16 41 15.1	+2.9
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
XAN				LR	LR		
	comp=N,490nm,9.8s						
XAN				LR	LR		
	comp=E,570nm,8.8s						
XAN				LR	LR		
	comp=Z,500nm,8.4s						
PRZ	Przheval'sk	14.31	316	Pn	Pn	16 41 04.5	-1.0
GYA	Guiyang	14.37	113	⇑*i*P	Pn	16 41 04.1	-2.2
GYA				PP	PnPn	16 41 18.7	+4.5
GYA				S	Sn	16 43 41.5	-4.0
GYA				SS	SnSn	16 44 00.0	+2.0
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,5.3s						
GYA				LR	LR		
	comp=N,200nm,8.5s						
GYA				LR	LR		
	comp=E,290nm,8.8s						
GYA				LR	LR		
	comp=Z,220nm,10.2s						
KSH	Kashi	14.42	302	P	Pn	16 41 09.8	+2.8
KSH				pP	P	16 41 15.9	+2.1
KSH				sP		16 41 17.6	
KSH				pmax	pmax		
	comp=Z,33nm,1.2s						
KSH				pmax	pmax		
	comp=Z,110nm,3.9s						
KDJ	Kajisay	14.84	313		Pn	16 41 11.4	-1.3
ENH	Enshi	15.24	95		Pn	16 41 15.6	-2.4
CHTO	Chiang Mai	15.40	154		Pn	16 41 19.0	-1.2
NIL	Nilore	15.59	278		Pn	16 41 21.6	-1.0
MKAR	Makanchi Array	15.68	335	Pn	Pn	16 41 21.4	-2.2
	comp=Z,0.1nm,0.3s,baz=138,slow=13,SNR=15						
SLVN	Son La	15.72	134		Pn	16 41 24.3	0.0
SLVN				IAmb	IAmb	16 41 31.5	
	comp=Z,4.7nm,0.9s						
CMAR	Chiang Mai Arr	15.73	154	Pn	Pn	16 41 23.9	-0.5
	comp=Z,0.1nm,0.3s,baz=334,slow=12,SNR=30						
BOOM	Boomskoye usch	15.80	312	Pn	Pn	16 41 24.7	-0.8
BOOM				IAmb	IAmb	16 41 34.3	
	comp=Z,14nm,0.8s						
MAKZ	Makanchi	15.81	334		Pn	16 41 22.4	-2.9
MAKZ				IAmb	IAmb	16 41 29.8	
	comp=Z,13nm,1.4s						
FRU1	Bishkek	16.80	311		Pn	16 41 38.5	+0.6
FRU1				IAmb	IAmb	16 42 34.1	
	comp=Z,13nm,0.5s						
AAK	Ala-Archa	16.80	310	Pn	Pn	16 41 38.2	+0.1
	comp=Z,0.2nm,0.3s,baz=202,slow=10,SNR=1.9						
AAK				LR	LR	16 48 44.8	
	comp=Z,110nm,20.1s,baz=102,slow=40						
AAK	Ala-Archa	16.80	310	P	Pn	16 41 37.8	-0.3
AAK				IAmb	IAmb	16 41 45.3	
	comp=Z,13nm,1.4s						
HHC	Hu-ho-hao-te	17.61	58	P	P	16 41 51.1	+1.9
HHC				sP	sP	16 42 02.1	+5.0
HHC				S	Sn	16 45 05.5	+1.2
HHC				SS	SnSn	16 45 25.5	+7.8
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,56nm,5.0s						
HHC				LR	LR		
	comp=Z,150nm,11.2s						
HHC				LR	LR		
	comp=Z,140nm,10.4s						
HHC				LR	LR		
	comp=Z,180nm,9.8s						
PBKT	Sadao Pong	18.23	151	P	P	16 41 56.6	+0.7
SONM	Songino Array	18.52	32	Pn	P	16 41 58.3	-0.9
	comp=Z,0.2nm,0.3s,baz=209,slow=15,SNR=8.3						
SONM				LR	LR	16 48 47.2	
	comp=Z,32nm,18.7s,baz=249,slow=36						
ULN	Ulaanbaatar	18.84	33	P	P	16 42 00.7	-2.0
WHN	Wuhan	19.26	91	P	Pn	16 42 09.2	+0.9
WHN				S	Sn	16 45 41.4	-2.7
WHN				LR	LR		
	comp=Z,620nm,6.9s						
WHN				LR	LR		
	comp=Z,310nm,7.5s						
WHN				LR	LR		
	comp=Z,590nm,9.1s						
KKAR	Karatay Array	19.62	307	P	P	16 42 11.7	+0.5
KKAR				IAmb	IAmb	16 42 14.9	
	comp=Z,3.9nm,0.8s						
KURBB	Kurchatov Arra	20.25	335	P	P	16 42 18.0	+0.1
	comp=Z,1.7nm,0.6s,baz=142,slow=12,SNR=16						
KURK	Kurchatov	20.30	335	P	P	16 42 16.9	-1.5
ZALV	Zalesovo Beam	21.63	349	P	P	16 42 32.7	0.0
	comp=Z,3.0nm,0.8s,baz=171,slow=12,SNR=13						
ZALV				LR	LR	16 51 37.0	
	comp=Z,55nm,19.7s,baz=244,slow=39						
BVAR	Borovoye Array	25.35	329	P	P	16 43 09.4	-0.1
	comp=Z,2.1nm,0.7s,baz=120,slow=7.3,SNR=4.6						
BRVK	Borovoye	25.41	329	P	P	16 43 08.5	-1.6
BRVK				IAmb	IAmb	16 43 14.3	
	comp=Z,3.8nm,0.9s						
DLV	T Lat	25.84	140	P	P	16 43 12.4	-2.0
GEYT	Alibeck	27.86	290	P	P	16 43 33.4	+0.9
	comp=Z,2.0nm,0.7s,baz=111,slow=10,SNR=7.1						
KSRS	Korea Array	29.70	71	LR	LR	16 56 50.7	
	comp=Z,41nm,21.8s,baz=279,slow=39						
KLR	Kul'dur	33.75	49	P	P	16 44 23.5	-0.7
	comp=Z,1.6nm,0.8s,baz=270,slow=14,SNR=3.4						
AKH	Akhalkalaki	39.05	297	P	P	16 45 10.1	+0.4
LEM	Lembang	42.26	156	LR	LR	17 05 07.2	
	comp=Z,72nm,20.0s,baz=342,slow=39						
TIXI	Tiksi	43.48	16	P	P	16 45 46.1	+0.7
	comp=Z,1.0nm,0.3s,baz=180,slow=6.1,SNR=1.7						
TIXI	Tiksi	43.48	16	P	P	16 45 44.4	-1.0
TIXI				IAmb	IAmb	16 46 25.3	
	comp=Z,1.4nm,0.8s						
BRTR	Keskin Array B	46.70	296	P	P	16 46 11.6	-0.2
	comp=Z,1.4nm,0.8s,baz=108,slow=8.0,SNR=5.8						
FINES	FINESS Array B	50.21	325	P	P	16 46 40.5	+2.2
	comp=Z,2.6nm,1.1s,baz=101,slow=10,SNR=4.8						
ARCES	ARCESS Array B	51.34	336	P	P	16 46 47.2	+0.6
	comp=Z,1.2nm,0.8s,baz=99,slow=7.9,SNR=3.7						
NOA	NORSAR Array B	57.40	325	P	P	16 47 30.0	-0.9
	comp=Z,0.3nm,0.7s,baz=80,slow=6.9,SNR=1.9						
GERES	GERESS Array B	58.68	311	P	P	16 47 41.6	+1.5
	comp=Z,0.4nm,0.7s,baz=292,slow=3.6,SNR=3.8						
WRA	Warramunga Arr	66.39	136	P	P	16 48 32.7	+0.8
	comp=Z,2.0nm,0.8s,baz=327,slow=6.4,SNR=7.3						
ASAR	Alice Springs	69.08	139	P	P	16 48 49.9	+1.0
	comp=Z,3.0nm,0.8s,baz=325,slow=6.4,SNR=25						
ILAR	Eielson Array	72.45	23	P	P	16 49 07.7	-1.1
	comp=Z,0.7nm,0.8s,baz=301,slow=4.7,SNR=5.1						
YKA	Yellowknife Ar	82.57	12	P	P	16 50 05.6	+0.3
	comp=Z,0.7nm,0.9s,baz=333,slow=4.5,SNR=5.5						
TORD	Torodi Ar. Bea	83.12	281	P	P	16 50 08.2	-0.9
	comp=Z,0.9nm,0.7s,baz=50,slow=5.3,SNR=3.6						

IDC 08 16:38:40.9±1.1, 0°.38N×126°.31E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.3/45, mbtmp3.5/5, Error ellipse: s-maj=64.2km s-min=21.5km az=73.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.67	159	P	P	16 43 32.5	-1.0
	0.5nm,0.5s,baz=344,slow=9.8,SNR=7.3						
ASAR	Alice Springs	25.01	163	P	P	16 44 07.3	+0.6
	0.4nm,0.4s,baz=345,slow=12,SNR=14						
PETK	Petropavlovsk-	58.68	22	P	P	16 48 40.9	+0.8
	0.5nm,0.6s,baz=166,slow=4.4,SNR=5.9						
MKAR	Makanchi Array	60.08	327	P	P	16 48 49.1	-0.8
	0.3nm,0.6s,baz=131,slow=6.9,SNR=3.6						
KURBB	Kurchatov Arra	64.34	328	P	P	16 49 18.1	-0.3
	0.3nm,0.4s,baz=128,slow=6.3,SNR=2.4						

IDC ***08*** *16:40:22.1±1.0, 0°.40N×126°.23E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/45, mbtmp3.7/5, Error ellipse: s-maj=56.6km s-min=20.4km az=72.0*

NEIC ***08*** *16:40:26.6±1.8, 0°.5N±0°.1×126°.40E±0°.07, h33km±8km, mb4.1/4, Error ellipse: s-maj=18.2km s-min=9.0km az=164.0*

ISC 08 16:40:27.8±0.9, 0°.4N±0°.1×126°.41E±0°.09, h47km, n12, σ1§34/12, mb3.9/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.03	68		Pn	16 40 45.0	-0.9
LUWI	Luwuk	3.90	249	Pn	Pn	16 41 24.5	-0.8
FAKI	Fak Fak	6.69	119	Pn	Pn	16 42 04.1	+0.4
WB0	Warramunga Arr	21.49	159	P	P	16 45 11.2	-1.6
WB0				IAmb	IAmb	16 45 14.1	
	comp=Z,17nm,1.6s						
WRA	Warramunga Arr	21.64	159	P	P	16 45 14.5	+0.2
	comp=Z,0.8nm,0.6s,baz=340,slow=9.6,SNR=6.3						
WR0	Warramunga Arr	21.72	159	P	P	16 45 12.9	-2.3
WR0				IAmb	IAmb	16 45 31.0	
	comp=Z,9.0nm,1.4s						
AS31	Alice Springs	24.98	164	P	P	16 45 48.4	+1.0
ASAR	Alice Springs	24.98	164	P	P	16 45 48.6	+1.3
	comp=Z,1.1nm,0.5s,baz=344,slow=11,SNR=13						
PETK	Petropavlovsk-	58.64	22	P	P	16 50 21.6	+1.4
	comp=Z,0.8nm,0.5s,baz=186,slow=5.2,SNR=10						
MKAR	Makanchi Array	60.14	327	P	P	16 50 30.9	+0.2
	comp=Z,0.4nm,0.4s,baz=119,slow=8.0,SNR=8.7						
KURBB	Kurchatov Arra	64.39	328	P	P	16 50 58.6	-0.4
	comp=Z,0.6nm,0.6s,baz=129,slow=6.3,SNR=7.7						
KURK	Kurchatov	64.40	329	P	P	16 50 57.9	-1.2

UCR ***08*** *17:00:11.0±1.7, 17°.87N×100°.90W, h0km±614km, mb6.4(NEIC)*

UPA ***08*** *17:00:13.3±2.5, 18°.12N×100°.77W, h10km±23km, MW7.0*

BJI ***08*** *17:00:14.4±0.0, 17°.38N×100°.67W, h20km, mB6.8/58, mb5.8/6, Ms6.9/71, Ms7 6.9/65*

MEX ***08*** *17:00:14.6±1.9, 16°.99N×100°.92W, h10km, MD6.5*

NEIC ***08*** *17:00:14.8±2.3, 17°.24N±0°.04×100°.75W±0°.04, h17km±3km, mb6.1/677, Ms_20 6.5/635, Mwb6.3/70, Mww6.4, Md6.5/68(MEX), Mwc6.5(GCMT), Error ellipse: s-maj=6.7km s-min=4.0km az=220.0*

NEIC ***08*** *17:00:14.8, 17°.24N×100°.75W, h20km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr3.06; Mθθ-1.88; Mφφ-1.18; Mrθ2.29; Mrφ0.62; Mθφ-0.75; Fault plane solution: M₀3.65000×10¹⁸ NP1:φ302.35000°, δ24.21000°, λ98.98000°. NP2:φ112.51000°, δ66.10000°, λ85.98000°. Principal axes: T 3.9995, Plg69.0000°, Azm15.0000°; N -0.8459, Plg4.0000°, Azm114.0000°; P -3.1536, Plg21.0000°, Azm206.0000°;*

MOS ***08*** *17:00:17.8±1.0, 17°.39N×100°.62W, h44km, mb6.4/30, MS6.5/156 Error ellipse: s-maj=5.7km s-min=3.4km az=89.3*

IDC ***08*** *17:00:17.9±2.9, 17°.34N×100°.69W, h33km±21km, mb5.4/46, mb1 5.4/52, mb1mx5.4/56, mbtmp5.5/52, ML4.7/6, MS6.4/43, Ms1 6.4/43, ms1mx6.4/50, Error ellipse: s-maj=14.3km s-min=7.5km az=49.0*

INET ***08*** *17:00:19.2, 17°.38N×100°.70W, h37km, mb6.3*

GCMT ***08*** *17:00:19.8±0.0, 17°.36N×100°.74W, h21km, MW6.5/169, Moment Tensor Solution. s169,c435; s165,c713; Duration: 4§2 Moment tensor: Scale 10¹⁸Nm; Mrr4.24±.02; Mθθ-3.51±.02; Mφφ-0.73±.02; Mrθ3.87±.05; Mθφ 1.61±.01; Mrφ-2.40±.04; Best double couple: M₀6.22400×10¹⁸ NP1:φ289.00000°, δ22.00000°, λ80.00000°. NP2:φ120.00000°, δ69.00000°, λ94.00000°. Principal axes: T 6.2390, Plg66.0000°, Azm37.0000°; N -0.0300, Plg4.0000°, Azm298.0000°; P -6.2100, Plg23.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***08*** *17:00:22, 17°.30N×100°.69W, h23km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr4.30; Mθθ-3.73; Mφφ-0.57; Mrθ4.42; Mrφ1.69; Mθφ-2.40; Fault plane solution: M₀6.67000×10¹⁸ NP1:φ117.00000°, δ70.00000°, λ93.00000°. NP2:φ289.00000°, δ21.00000°, λ83.00000°. Principal axes: T 6.5990, Plg65.0000°, Azm32.0000°; N 0.1437, Plg3.0000°, Azm296.0000°; P -6.7427, Plg24.0000°, Azm205.0000°;*

NEIC ***08*** *17:00:23, 17°.28N×100°.76W, h18km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr3.55; Mθθ-2.02; Mφφ-1.53; Mrθ2.33; Mrφ1.57; Mθφ-1.42; Fault plane solution: M₀4.41000×10¹⁸ NP1:φ125.00000°, δ64.00000°, λ85.00000°. NP2:φ315.00000°, δ26.00000°, λ99.00000°. Principal axes: T 4.5148, Plg70.0000°, Azm25.0000°; N -0.2164, Plg4.0000°, Azm127.0000°; P -4.2984, Plg19.0000°, Azm218.0000°;*

BGR ***08*** *17:00:24.5±0.0, 17°.93N×99°.20W, h33km, mb6.3, mB_BB6.8, Ms6.4*

ISC 08 17:00:15.9±0.4, 17°.15N±0°.02×100°.81W±0°.02, h25km±2km, n2618, σ2§02/2884, mb6.1/464, MS6.6/488, 184C-21D, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.53	101	⇓*e*P	Pb	17 00 24.7	-1.9
	baz=264,slow=14						
CAIG				*i* S	Sb	17 00 33.4	-0.5
CAIG	El Cayaco	0.53	101		Pb	17 00 24.7	-1.9
CAIG					Sb	17 00 33.4	-0.5
ZIIG	Zihuatanejo	0.77	306	*i* P	Pb	17 00 28.3	-2.5
ZIIG				*e*S	Sb	17 00 37.3	-3.6
ZIIG	Zihuatanejo	0.77	306		Pb	17 00 28.3	-2.5
ZIIG					Sb	17 00 37.3	-3.6

PLIG Sb 17 01 10.0 +0.7
TLIG Tlapa 2.18 79 *e*P **Pn 17 00 50.4 -0.4**
TLIG eS **Sb 17 01 25.4 +3.8**
TLIG Tlapa 2.18 79 Pn 17 00 49.9 -0.9
HMTT Tlapaneco 2.24 73 *e*P **Pn 17 00 51.6 0.0**
HMTT eS **Sb 17 01 24.6 +1.3**
HMTT Tlapaneco 2.24 73 Pn 17 00 51.6 0.0
HMTT Lg 17 01 24.6
YAIG Yautepec 2.38 44 *e*P **Pn 17 00 52.8 -0.7**
YAIG Yautepec 2.38 44 Pn 17 00 52.8 -0.7
MOIG Morelia 2.54 352 *e*P **Pn 17 00 56.6 +0.8**
MOIG Morelia 2.54 352 Pn 17 00 54.9 -0.9
FTIG Fresnillo de T 2.67 73 *e*P **Pn 17 00 57.2 -0.2**
FTIG eS **Sb 17 01 36.5 +1.1**
UNM Universidad Na 2.67 35 P **Pn 17 00 56.9 -0.7**
UNM Universidad Na 2.67 35 *e*P **Pn 17 00 58.0 +0.4**
UNM eP Pb 17 00 58.2 -5.0
UNM Universidad Na 2.67 35 Pn 17 00 56.9 -0.7
MMIG Aquila 2.67 296 *e*P **Pn 17 00 56.3 -1.0**
MMIG eS **Sb 17 01 38.7 +3.4**
MMIG Aquila 2.67 296 Pn 17 00 56.3 -1.0
MMIG LR 17 01 38.7
PNIG Pinotepa 2.68 106 *e*P **Pn 17 00 56.9 -0.7**
PNIG Pinotepa 2.68 106 Pn 17 00 56.9 -0.7
PPM Popocatepetl 2.82 47 *e*P **Pn 17 01 00.1 +0.2**
TXIG Tlaxiaco 2.91 88 *e*P **Pn 17 01 00.5 -0.4**
TXIG eS **Sb 17 01 43.0 +0.3**
HLIG Huajuapan de L 2.95 76 *e*P **Pn 17 01 01.7 +0.3**
HLIG eS **Sb 17 01 44.7 +1.0**
DEIG Demacu 3.56 28 *e*P **Pn 17 01 08.5 -1.3**
DEIG eP Pb 17 01 11.6 -6.8
R15V 3.62 304 *e*P **Pn 17 01 11.4 +0.8**
R15V 3.62 304 Pn 17 01 11.4 +0.8
TOIG Toxpalan 3.69 75 *e*P **Pn 17 01 11.1 -0.5**
TOIG eS **Sb 17 02 05.6 +0.6**
VHO Vista Hermosa 3.90 91 *e*P **Pn 17 01 14.7 +0.2**
HUIG Huatulco 4.72 106 *e*P **Pn 17 01 25.0 -0.5**
HUIG Huatulco 4.72 106 Pn 17 01 25.0 -0.5
LVIG Laguna Verde 4.89 58 *e*P Pb 17 01 34.9 -6.0
LVIG Laguna Verde 4.89 58 Pb 17 01 34.9 -6.0
AAIG Aguscalientes 5.02 343 *i*P **Pn 17 01 30.6 +0.7**
CMIG Matias Romero 5.67 90 Pn **Pn 17 01 37.8 -0.8**
5.6nm,0.3s,baz=258,slow=12,SNR=120
CMIG Sn **Sn 17 02 41.8 -1.1**
337nm,0.3s,baz=240,slow=15,SNR=5.6
CMIG Lg Lg 17 03 10.6
721nm,0.3s,baz=354,slow=19,SNR=6.9
CMIG LR LR 17 04 09.5
comp=Z,615µm,19.2s,baz=254,slow=42
CMIG Matias Romero 5.67 90 *i*P **Pn 17 01 39.0 +0.4**
CMIG Matias Romero 5.67 90 Pn 17 01 39.0 +0.4
ZAIG Zacatecas 5.83 344 *e*P **Pb 17 01 52.9 -4.2**
ZAIG Zacatecas 5.83 344 Pn 17 01 40.5 -0.6
TGIG 7.37 92 *e*P **Pn 17 02 02.6 +0.6**
TGIG 7.37 92 Pn 17 02 02.6 +0.6
LNIG Linares 7.81 9 *e*P **Pn 17 02 08.6 +0.5**
LNIG *i*P **Pn 17 02 08.6 +0.5**
LNIG Linares 7.81 9 Pn 17 02 08.6 +0.5
CCIG Comitan 8.36 95 *e*P **Pn 17 02 16.3 +0.5**
CCIG Comitan 8.36 95 Pn 17 02 15.9 +0.2
PDIG Papasquiaro 8.94 332 *e*P **Pn 17 02 25.4 +1.7**
ERG Entre ros, C 9.29 106 *e*P Pn 17 02 33.6 +5.1
SSIG Sanalona 9.65 323 *e*P **Pn 17 02 35.6 +2.3**
H06E1 SOCORRO T-PHAS 9.76 281 Pn Pn 17 02 41.6 +6.8
SNR=21
H06E1 T T 17 12 15.0
SNR=157
H06S1 SOCORRO T 9.79 281 Pn Pn 17 02 42.5 +7.4
SNR=14
H06S1 T T 17 12 23.3
SNR=347
H06N1 SOCORRO T-PHAS 9.83 282 Pn Pn 17 02 42.8 +7.1
SNR=10
H06N1 T T 17 12 19.6
SNR=24
FUG Fuego 3 9.96 104 *e*P Pn 17 02 43.5 +5.7
APG El Apazote 10.17 101 Pn **Pn 17 02 40.5 -0.1**
18nm,0.3s,baz=308,slow=13,SNR=97
APG LR LR 17 07 08.6
comp=Z,177µm,18.2s,baz=288,slow=41
PCG Pacaya 10.20 104 *e*P **Pn 17 02 44.9 +3.8**
NBG Las Nubes 10.39 103 *e*P Pn 17 02 49.4 +5.7
IXG Ixpaco 10.42 105 *e*P **Pn 17 02 46.7 +2.7**
KVTX Kingsville 10.69 14 Pn 17 02 46.6 -1.0
HPIG 10.73 336 Pn 17 02 49.4 +1.1
MRL Marmol 10.89 99 *e*P **Pn 17 02 52.0 +1.5**
MYIG Mrida 11.13 68 *e*P **Pn 17 02 51.1 -2.5**
MYIG Mrida 11.13 68 Pn 17 02 51.1 -2.5
833A Chaparral WMA, 11.20 6 P **Pn 17 02 56.4 +1.9**
baz=186,SNR=84
LPIG La Paz 11.26 309 Pn **Pn 17 02 57.7 +2.3**
22nm,0.3s,baz=134,slow=21,SNR=8.7
LPIG Sn **Sn 17 05 01.3 +0.8**
28nm,0.3s,baz=225,slow=2.9,SNR=1.3
LPIG LR LR 17 06 51.1
comp=Z,258µm,21.9s,baz=128,slow=35
LPIG La Paz 11.26 309 *e*P **Pn 17 02 56.1 +0.7**
LPIG La Paz 11.26 309 Pn 17 02 56.1 +0.7
TSIG Topolobambo 11.38 319 *i*P **Pn 17 02 59.4 +2.6**
SNET Serv Nac Est T 11.68 106 Pn 17 03 03.2 +2.0
735A Kenedy 11.97 13 Pn 17 03 05.8 +0.7
TEIG Tepich 12.27 74 Pn **Pn 17 03 06.4 -2.7**
TEIG LR LR 17 08 39.8
comp=Z,175µm,20.9s,baz=70,slow=42
TXAR Lajitas Array 12.41 348 Pn **Pn 17 03 12.3 +1.2**
0.4nm,0.3s,baz=162,slow=12,SNR=74
TXAR Lg Lg 17 06 43.9
1.1nm,0.3s,baz=164,slow=30,SNR=1.9
TXAR LR LR 17 08 33.7
comp=Z,553µm,18.9s,baz=0.0,slow=40
JCT Junction City 13.30 4 P **Pn 17 03 23.9 +0.6**
JCT Junction City 13.30 4 P **Pn 17 03 24.6 +1.3**
baz=184,SNR=52
JCT Junction City 13.30 4 Pn 17 03 23.9 +0.6
TGUH Tegucigalpa,Un 13.40 101 *e*P **Pn 17 03 26.1 +1.4**
TGUH Tegucigalpa,Un 13.40 101 Pn 17 03 25.9 +1.1
CSGN Cosiguina Volc 13.45 106 Pn 17 03 28.1 +2.7
HKT Hockley 13.53 19 P **Pn 17 03 25.5 -0.8**
HKT Hockley 13.53 19 Pn 17 03 25.5 -0.8
435B Jarrell 13.89 12 P **Pn 17 03 30.8 -0.5**
baz=192,SNR=12
CRIN San Cristobal 14.01 107 Pn 17 03 35.2 +2.1
SRIG Santa Rosalia 14.63 316 *i*P **Pn 17 03 40.7 -0.8**
SRIG Santa Rosalia 14.63 316 P **Pn 17 03 42.0 +0.6**
MATN Matagalpa 14.97 104 Pn 17 03 46.6 +0.4
HSIG 15.04 324 Pn 17 03 49.1 +2.2
HSIG IAmb IAmb 17 03 58.4
comp=Z,1µm,1.0s
MNTX Cornudas Mount 15.07 345 P **Pn 17 03 48.4 +1.1**
baz=162,SNR=370
MNTX S **S 17 06 48.3 -2.2**
baz=162
MNTX Cornudas Mount 15.07 345 Pn 17 03 47.9 +0.6
MNTX IAmb IAmb 17 04 05.8
comp=Z,1µm,1.0s
WHTX Lake Whitney, 15.09 11 P **Pn 17 03 46.5 -1.0**
baz=192,SNR=315
WHTX S **S 17 06 49.9 -0.8**
baz=192
WHTX Lake Whitney, 15.09 11 Pn 17 03 46.3 -1.2
441A DeRidder 15.22 26 Pn 17 03 47.2 -2.1
GDL2 Guadalupe Moun 15.33 349 Pn 17 03 51.5 +0.7
ABTX Abilene, Hawle 15.45 4 P **Pn 17 03 51.6 -0.7**
baz=184,SNR=146
ABTX S **S 17 06 55.9 -2.3**
baz=184
ABTX Abilene, Hawle 15.45 4 Pn 17 03 50.9 -1.4
ABTX IAmb IAmb 17 03 59.6
comp=Z,1µm,0.9s
237A Washetta, Mont 15.47 16 Pn 17 03 49.9 -2.6
NATX Nacogdoches 15.58 20 P **Pn 17 03 52.6 -1.3**
baz=202,SNR=142
NATX Nacogdoches 15.58 20 Pn 17 03 52.7 -1.3
545A Edgard 15.93 34 Pn 17 03 55.7 -2.8
545A IAmb IAmb 17 04 12.4
comp=Z,3µm,1.1s
ACON Acoyapa 15.98 107 P **Pn 17 03 59.8 +0.5**
ACON IAmb IAmb 17 04 09.1
comp=Z,2µm,1.3s
319A Douglas 16.12 333 P **Pn 17 04 01.8 +0.8**
319A IAmb IAmb 17 04 19.2
comp=Z,1µm,1.2s
342A Flagon Creek P 16.13 27 Pn 17 04 00.1 -0.8

NY14 Universidad de 16.17 112 *e*P **P 17 04 04.9 +0.2**
GBS3 Finca Las Img 16.18 111 *e*P **P 17 04 04.0 -0.8**
LAPC Finca la Perla 16.21 111 *e*P **P 17 04 03.9 -1.3**
BUEV Buena Vista 16.22 111 *e*P **P 17 04 04.0 -1.3**
GB1A Borinquen Arri 16.22 111 *e*P **P 17 04 04.0 -1.3**
BUAI Buenos Aires 16.26 111⇑ *i*P **P 17 04 06.2 +0.5**
GPS3 Bodega del ICE 16.28 111 *e*P **P 17 04 06.2 +0.2**
GPS1 Guardaparques 16.28 111 *e*P **P 17 04 06.0 0.0**
GPS2 Hotel Rincn d 16.29 111 *e*P **P 17 04 05.8 -0.3**
GUAI GUAI 16.36 113 *e*P **P 17 04 07.0 +0.3**
LIM1 Limonal 16.40 111 *e*P **P 17 04 07.0 -0.3**
GUAB Guayabo de Bag 16.42 111 *e*P **P 17 04 07.6 +0.1**
Z35A Perchaven, San 16.43 11 Pn 17 04 02.6 -2.2
Z35A IAmb IAmb 17 04 40.4
comp=Z,3µm,1.2s
COLC Colonia 16.46 111 *e*P **P 17 04 07.6 -0.3**
PLVR Palo Verde 16.46 112 *e*P **P 17 04 08.3 +0.2**
CUI Cuipilapa 16.50 111 *e*P **P 17 04 08.1 -0.3**
121A Cookes Peak, D 16.56 339 P **P 17 04 08.4 -0.7**
baz=155,SNR=162
121A Cookes Peak, D 16.56 339 P **Pn 17 04 07.5 +0.8**
ACAL Aguas Claras 16.62 111 *e*P **P 17 04 10.1 +0.3**
PTEN Parque Tenorio 16.63 111 *e*P **P 17 04 10.1 +0.2**
ESPN Las Esperanzas 16.71 105 *e*P **P 17 04 10.2 -0.5**
JTS Las Juntas de 16.84 112 Pn **P 17 04 12.8 +0.7**
comp=Z,2.5nm,0.3s,baz=5.9,slow=10,SNR=59
JTS LR LR 17 10 04.0
comp=Z,88µm,21.1s,baz=13,slow=35
JTS Las Juntas de 16.84 112 *e*P **P 17 04 13.0 +0.8**
JTS Las Juntas de 16.84 112⇑ *i*P **P 17 04 13.6 +1.4**
JTS *i*S S 17 07 42.4 +16
JTS Las Juntas de 16.84 112 *c i*P **P 17 04 12.8 +0.7**
JTS pmax pmax
comp=Z,2µm,1.6s
JTS Las Juntas de 16.84 112 *e*P **P 17 04 12.8 +0.7**
JTS Las Juntas de 16.84 112 P **P 17 04 12.8 +0.7**
JTS IAmb IAmb 17 04 26.8
comp=Z,3µm,1.6s
MSTX Muleshoe 16.84 354 P **Pn 17 04 08.6 -1.6**
baz=173,SNR=541
MSTX Muleshoe 16.84 354 Pn 17 04 08.9 -1.3
MSTX IAmb IAmb 17 04 14.8
comp=Z,1µm,0.8s
Z38A Mt. Pleasant 16.88 17 Pn 17 04 08.4 -2.1
344A Westbrook Farm 16.93 31 P **Pn 17 04 08.6 -2.6**
ARE1 Arenal 1 16.98 111 *e*P **P 17 04 14.6 +0.9**
CEDE Laguna Cedeo 16.98 111⇑ *e*P **P 17 04 14.7 +0.9**
SRA1 San Ramn 17.35 112 *e*P **P 17 04 19.9 +2.0**
346A Big Creek Wild 17.53 34 P **Pn 17 04 15.5 -3.2**
346A IAmb IAmb 17 04 41.6
comp=Z,1µm,1.1s
X34A Smith Ranch, M 17.58 8 Pn 17 04 17.1 -2.2
TUC Tucson 17.59 331 P **P 17 04 20.4 0.0**
TUC pmax pmax
comp=Z,888nm,1.5s
TUC Tucson 17.59 331 P **P 17 04 20.7 +0.3**
baz=146
TUC S **S 17 07 44.8 +2.7**
baz=146
TUC Tucson 17.59 331 P **P 17 04 20.4 0.0**
Z41A Richland Creek 17.59 23 P **Pn 17 04 17.8 -1.6**
baz=206,SNR=73
WMOK Wichita Mounta 17.61 6 P **Pn 17 04 17.0 -2.7**
WMOK pmax pmax
comp=Z,2µm,1.5s
WMOK Wichita Mounta 17.61 6 P **Pn 17 04 17.3 -2.4**
baz=186,SNR=276
WMOK S **S 17 07 44.6 +2.2**
baz=186
WMOK Wichita Mounta 17.61 6 P **Pn 17 04 17.0 -2.7**
VBMS Vicksburg 17.66 30 P **Pn 17 04 18.9 -1.4**
baz=214,SNR=31
VBMS Vicksburg 17.66 30 P **Pn 17 04 17.9 -2.4**
VBMS IAmb IAmb 17 04 29.5
comp=Z,3µm,1.4s
AMTX Amarillo 17.68 358 P **Pn 17 04 20.0 -0.6**
baz=177
AMTX Amarillo 17.68 358 Pn 17 04 18.9 -1.7
AMTX IAmb IAmb 17 04 24.1
comp=Z,1µm,0.8s
HDC Heredia 17.71 112⇑ *i*P **P 17 04 25.0 +3.1**
HDC ⇓ *e*S S 17 07 55.8 +11
HDC Heredia 17.71 112 *e*P **P 17 04 24.1 +2.2**
Y22D IRIS PASSCAL I 17.72 343 P **P 17 04 22.9 +0.9**
baz=160
Y22D IRIS PASSCAL I 17.72 343 P **P 17 04 22.6 +0.6**
Y22D IAmb IAmb 17 04 37.8
comp=Z,2µm,1.1s
ICCO Coco Island 17.73 129 *e*P **P 17 04 25.2 +3.3**
WLAR White Oak Lake 17.86 21 P **Pn 17 04 21.2 -1.5**
LCR2 La Lucha 2 17.92 112 *e*P **P 17 04 26.3 +2.0**
CVTR Volcan Turrial 18.02 111 *e*P **P 17 04 27.8 +2.3**
X37A Clayton 18.04 15 P **P 17 04 30.7 +5.4**
X37A IAmb IAmb 17 04 32.3
comp=Z,2µm,0.9s
EDDO Dominical 18.26 113 *e*P **P 17 04 30.6 +2.8**
W35A Tecumseh 18.27 10 P **Pn 17 04 25.9 -1.9**
FNO Franklin 18.29 9 P **Pn 17 04 25.7 -2.3**
214A Organ Pipe Nat 18.32 326 P **Pn 17 04 30.1 +1.7**
baz=140,SNR=250
214A S **S 17 08 02.7 +6.0**
baz=140
214A Organ Pipe Nat 18.32 326 P **Pn 17 04 29.4 +1.0**
ANMO Albuquerque 18.43 345 P **P 17 04 29.7 0.0**
comp=Z,2.8nm,0.3s,baz=151,slow=12,SNR=158
ANMO Lg Lg 17 09 56.6
comp=Z,0.2nm,0.3s,baz=48,slow=22,SNR=3.5
ANMO Albuquerque 18.43 345 *c i*P **Pn 17 04 30.7 +0.8**
ANMO pmax pmax
comp=Z,5µm,3.7s
ANMO Albuquerque 18.43 345 P **Pn 17 04 31.2 +1.3**
baz=162
ANMO S **S 17 08 01.8 +2.8**
baz=162
ANMO Albuquerque 18.43 345 P **Pn 17 04 30.2 +0.3**
ANMO IAmb IAmb 17 04 45.8
comp=Z,2µm,1.5s
OKCSW OKLAHOMA CITY 18.43 9 P **P 17 04 27.7 -1.9**
EDLM Las Mercedes 18.49 113 *e*P **Pn 17 04 33.9 +3.3**
MIAR Mount Ida 18.50 19 P **P 17 04 28.2 -2.1**
MIAR pmax pmax
comp=Z,1µm,1.2s
MIAR Mount Ida 18.50 19 P **P 17 04 28.8 -1.4**
baz=202,SNR=504
MIAR S **Sn 17 07 57.9 +1.3**
baz=202
MIAR Mount Ida 18.50 19 P **P 17 04 28.2 -2.1**
CCAR Cane Creek 18.57 24 P **P 17 04 30.1 -0.9**
X40A Basin Creek Fa 18.69 21 P **P 17 04 30.9 -1.5**
baz=204,SNR=147
X40A S **Sn 17 08 00.2 -1.0**
baz=204
X40A Basin Creek Fa 18.69 21 P **P 17 04 30.2 -2.1**
X40A IAmb IAmb 17 05 02.4
comp=Z,4µm,1.9s
146A Union 18.72 32 P **P 17 04 30.9 -1.9**
146A IAmb IAmb 17 04 42.4
comp=Z,2µm,1.1s
EDPN Palmar Norte 18.75 114 *e*P **Pn 17 04 35.9 +2.2**
FSCY Frank Sound, G 18.77 80 P **P 17 04 32.7 -0.7**
W39A Magazine 19.04 18 P **P 17 04 36.0 -0.2**
baz=201,SNR=453
W39A S **S 17 08 11.7 +1.0**
baz=201
W39A Magazine 19.04 18 P **P 17 04 35.0 -1.2**
PTJ1 Puerto Jimnez 19.08 114 *e*P Pn 17 04 51.1 +13
PTJ1 *e*S S 17 08 39.3 +27
UALR University of 19.12 22 P **P 17 04 35.8 -1.2**
UALR IAmb IAmb 17 04 52.1
comp=Z,2µm,1.3s
PRVC Isla de Provid 19.13 99 *e*P **P 17 04 36.3 -1.1**
X18A Snowflake 19.14 336 Pn 17 04 38.8 +0.3
451A Vernon 19.19 43 P **P 17 04 36.4 -1.6**
TUL1 Leonard 19.21 12 P **P 17 04 37.4 -0.7**
baz=194,SNR=259
TUL1 Leonard 19.21 12 P **P 17 04 36.1 -2.0**
TUL1 IAmb IAmb 17 04 56.3
comp=Z,2µm,1.0s
U32A Winter Ranch, 19.22 4 P **P 17 04 36.5 -1.8**
RGM0 Gandoca 19.23 111⇑ *i*P **Pn 17 04 42.0 +2.5**
RGM0 *e*S **S 17 08 22.5 +7.7**
RGM0 Gandoca 19.23 111 *e*P **Pn 17 04 41.0 +1.5**
X43A Marvell 19.45 25 P **P 17 04 40.7 0.0**
baz=210,SNR=18

113A Mohawk Valley, 19.46 325 P **Pn 17 04 42.0 -0.2**
Y45A Yeager Farm, C 19.48 29 P **P 17 04 39.6 -1.5**
Y45A IAmb IAmb 17 04 51.5
comp=Z,2µm,0.9s
BRU2 Volcan 19.50 113⇑ *i*P **Pn 17 04 44.6 +1.7**
BRU2 *e*S **Sn 17 08 30.1 +8.8**
BRU2 Volcan 19.50 113 *e*P **Pn 17 04 43.6 +0.6**
W41B Gary Mavity, V 19.51 21 P **P 17 04 40.6 -0.8**
baz=205,SNR=212
W41B S **S 17 08 18.7 -1.7**
baz=205
W18A Petrified Fore 19.59 338 P **Pn 17 04 44.2 +0.4**
baz=153,SNR=89
W18A S **Sn 17 08 31.4 +8.1**
baz=153
W18A Petrified Fore 19.59 338 Pn 17 04 44.0 +0.2
W18A IAmb IAmb 17 04 59.3
comp=Z,1µm,1.2s
WHAR Wooly Hollow 19.60 21 P **P 17 04 40.8 -1.5**
X16A Lo Mia Camp, P 19.66 333 P **Pn 17 04 44.2 -0.5**
Z47A Carrollton 19.68 33 P **P 17 04 41.3 -1.9**
Z47A IAmb IAmb 17 05 31.4
comp=Z,3µm,1.7s
553A Crawfordville 19.81 46 P **P 17 04 43.9 -0.8**
553A IAmb IAmb 17 05 31.1
comp=Z,1µm,1.4s
CHGR2 Aguacate 19.92 112⇑ *i*P **Pn 17 04 48.9 +1.2**
CHGR2 *i*S **Sn 17 08 35.1 +3.9**
Y14A Wickenburg 19.98 329 P **Pn 17 04 47.8 -0.6**
Y14A IAmb IAmb 17 05 01.2
comp=Z,1µm,1.4s
HHAR Hobbs 20.01 16 P **P 17 04 44.6 -2.3**
HHAR IAmb IAmb 17 04 58.5
comp=Z,969nm,1.2s
U38A Gravette 20.04 15 P **P 17 04 44.9 -2.3**
U38A IAmb IAmb 17 04 58.3
comp=Z,778nm,0.9s
T35A Sooner Cattle 20.05 10 P **P 17 04 44.6 -2.7**
OXF Oxford 20.08 28 P **P 17 04 45.4 -2.2**
OXF pmax pmax
comp=Z,2µm,1.3s
OXF Oxford 20.08 28 P **P 17 04 46.1 -1.5**
baz=213,SNR=32
OXF Oxford 20.08 28 P **P 17 04 45.4 -2.2**
OXF IAmb IAmb 17 04 58.7
comp=Z,2µm,1.2s
LRAL Lakeview Retre 20.13 36 P **P 17 04 46.8 -1.3**
baz=222,SNR=147
LRAL S Sn 17 08 37.5 +1.5
baz=222
LRAL Lakeview Retre 20.13 36 P **P 17 04 46.1 -2.1**
LRAL IAmb IAmb 17 04 56.9
comp=Z,866nm,1.1s
CBCY The Bluff, Cay 20.14 79 P **P 17 04 48.3 0.0**
T25A Trinidad 20.16 352 P **P 17 04 48.5 -0.3**
baz=170,SNR=268
FCAR Ozark Folk Cen 20.20 21 P **P 17 04 47.3 -1.6**
FCAR IAmb IAmb 17 04 57.0
comp=Z,1µm,1.0s
GLA Glamis 20.26 324 P Pn 17 04 50.7 -1.0
GLA pmax pmax
comp=Z,826nm,1.1s
GLA MLR MLR
comp=Z,102µm,19.0s
GLA Glamis 20.26 324 P Pn 17 04 51.0 -0.7
baz=137,SNR=116
GLA S Sn 17 08 41.0 +1.8
baz=137
GLA Glamis 20.26 324 P Pn 17 04 50.6 -1.0
GLA IAmb IAmb 17 04 59.6
comp=Z,826nm,1.1s
352A Blakely 20.29 42 P **P 17 04 48.8 -1.1**
MET Memphis--Engin 20.36 26 P **P 17 04 49.4 -1.2**
U40A Yellville 20.39 19 P **P 17 04 49.6 -1.4**
baz=202,SNR=432
U40A S **S 17 08 37.3 -1.0**
baz=202
U40A Yellville 20.39 19 P **P 17 04 49.0 -2.0**
U40A IAmb IAmb 17 04 58.8
comp=Z,1µm,1.0s
061Z Ochoppi 20.43 61 P **P 17 04 51.4 -0.1**
061Z IAMs_20 IAMs_20 17 14 00.7
comp=Z,198µm,18.0s
HBAR Harrisburg 20.44 24 P **P 17 04 50.3 -1.2**
PAYG Puerto Ayora 20.52 149 *e*P **P 17 04 46.3 -6.3**
PAYG Puerto Ayora 20.52 149 IAMs_20 IAMs_20 17 10 40.6
comp=Z,176µm,20.0s
WUAZ Wupatki 20.57 335 P Pn 17 04 55.0 -0.4
baz=150,SNR=485
WUAZ S Sn 17 08 53.7 +6.8
baz=150
WUAZ Wupatki 20.57 335 Pn 17 04 54.8 -0.6
WUAZ IAmb IAmb 17 04 59.7
comp=Z,1µm,1.1s
Y12C Blythe 20.62 326 P Pn 17 04 54.7 -1.1
baz=139,SNR=113
Y12C S Sn 17 08 55.7 +8.0
baz=139
Y12C Blythe 20.62 326 P **P 17 04 54.6 +1.1**
Y12C IAmb IAmb 17 04 59.1
comp=Z,723nm,0.9s
Y12C IAMs_20 IAMs_20 17 12 25.8
comp=Z,131µm,19.0s
LPAR Lepanto 20.62 25 P **P 17 04 52.4 -1.1**
656A Willston 20.70 51 P **P 17 04 53.7 -0.7**
LCAR Lake Charles 20.70 23 P **P 17 04 51.9 -2.4**
IKP In-Ko-Pah, Jac 20.71 321 P Pn 17 04 56.6 -0.5
baz=134,SNR=40
IKP S Sn 17 08 59.7 +9.4
baz=134
W45A Hickory Valley 20.72 28 P **P 17 04 53.2 -1.4**
W45A IAmb IAmb 17 05 02.1
comp=Z,1µm,0.9s
SWSC Sam W. Stewart 20.74 322 P Pn 17 04 56.6 -0.7
baz=135,SNR=89
SWSC S Sn 17 09 00.6 +10
baz=135
PDMCI Parker Dam,Lak 20.84 328 P Pn 17 04 57.5 -1.0
baz=141,SNR=228
PDMCI S Sn 17 08 59.2 +6.0
baz=141
Z50A Ashland 20.90 37 P **P 17 04 55.5 -1.1**
baz=223,SNR=236
Z50A S Sn 17 08 52.7 -2.0
baz=223
Z50A Ashland 20.90 37 P **P 17 04 54.5 -2.1**
Z50A IAmb IAmb 17 05 07.7
comp=Z,584nm,0.9s
DWPF Disney Wildern 20.92 55 P **P 17 04 55.6 -1.2**
baz=243
SDCO Great Sand Dun 20.93 350 P **P 17 04 57.4 +0.3**
baz=167,SNR=600
SDCO S Sn 17 08 59.7 +4.0
baz=167
SDCO Great Sand Dun 20.93 350 P **P 17 04 57.0 -0.1**
SDCO IAmb IAmb 17 05 10.3
comp=Z,980nm,1.2s
SDCO IAMs_20 IAMs_20 17 13 39.4
comp=Z,339µm,20.0s
GNAR Gosnell 21.05 25 P **P 17 04 56.7 -1.4**
BC3 Big Chuckawall 21.06 324 P **P 17 04 59.3 +1.0**
baz=137,SNR=175
BC3 S Sn 17 09 05.4 +6.9
baz=137
MONP2 Monument Peak 21.07 321 P **P 17 04 59.8 +1.2**
baz=134,SNR=92
MONP2 S Sn 17 09 05.7 +6.7
baz=134
Y49A Blount Mountai 21.07 35 P **P 17 04 55.7 -2.7**
Y49A IAmb IAmb 17 05 12.4
comp=Z,1µm,1.0s
BAR Barrett 21.08 320 P **P 17 04 59.6 +1.1**
BAR IAMs_20 IAMs_20 17 12 34.7
comp=Z,179µm,19.0s
PLAL Pickwick Lake 21.09 30 P **P 17 04 55.7 -2.8**
PLAL IAmb IAmb 17 05 12.4
comp=Z,1µm,0.9s
MVCO Mesa Verde 21.11 343 P **P 17 04 59.5 +0.6**
baz=159,SNR=192
MVCO S Sn 17 09 04.3 +4.6
baz=159
MVCO Mesa Verde 21.11 343 P **P 17 04 58.8 -0.2**
MVCO IAmb IAmb 17 05 34.1
comp=Z,1µm,1.2s
MVCO IAMs_20 IAMs_20 17 13 26.7
comp=Z,204µm,19.0s

TIGA Tifton 21.14 45 P **P** **17 04 57.6 -1.5**
baz=232,SNR=94
TIGA Tifton 21.14 45 P **P** **17 04 57.6 -1.5**
X48A Hartselle 21.18 33 P **P** **17 04 56.6 -2.9**
X48A IAmb IAmb 17 05 10.9
comp=Z,1μm,1.2s
S22A 4UR Ranch, Cre 21.19 347 P **P** **17 05 00.5 +0.6**
baz=163,SNR=292
S22A S Sn 17 09 07.1 +5.1
baz=163
152A Waverly Hall 21.21 40 P **P** **17 04 57.7 -2.2**
GMAL Guarumal, Vera 21.25 114⇑*iP* **P** **17 05 03.5 +3.1**
GMAL *e*S Sn 17 09 02.6 -0.6
GMAL Guarumal, Vera 21.25 114 *e*P **P** **17 05 02.8 +2.4**
IRM Iron Mountain 21.26 326 P **P** **17 05 01.7 +1.2**
baz=139,SNR=328
IRM S Sn 17 09 08.4 +5.1
baz=139
R32A Long Quarter, 21.27 5 P **P** **17 04 58.5 -2.1**
R32A IAmb IAmb 17 05 12.2
comp=Z,2μm,1.7s
060A Indiantown 21.32 59 P **P** **17 05 00.5 -0.6**
W13A Hualapai Mount 21.35 329 P **P** **17 05 02.8 +1.2**
W13A IAMs_20 IAMs_20 17 13 26.4
comp=Z,218μm,18.0s
LNXT Lenox 21.39 26 P **P** **17 05 00.6 -1.1**
NEE2 Needles Airpor 21.45 328 P **P** **17 05 03.8 +1.3**
baz=141,SNR=19
NEE2 S Sn 17 09 11.1 +3.3
baz=141
109C Camp Elliot, M 21.49 320 P **P** **17 05 03.8 +1.0**
baz=132,SNR=7.1
109C S Sn 17 09 11.4 +2.8
baz=132
109C Camp Elliot, M 21.49 320 P **P** **17 05 03.8 +1.0**
109C IAmb IAmb 17 05 18.4
comp=Z,2μm,1.9s
109C IAMs_20 IAMs_20 17 12 54.5
comp=Z,139μm,18.0s
S39A Bolivar 21.50 16 IAMs_20 IAMs_20 17 14 14.7
comp=Z,204μm,21.0s
XPFO Pion Flat 21.60 322 P **P** **17 05 05.2 +1.0**
XPFO IAmb IAmb 17 05 23.1
comp=Z,2μm,1.9s
XPFO Pion Flat 21.60 322 IAMs_20 IAMs_20 17 14 47.3
comp=Z,124μm,18.0s
PFO Pinyon Flats O 21.60 322 P **P** **17 05 05.6 +1.4**
comp=Z,121nm,1.0s,baz=132,slow=12,SNR=59
PFO LR LR 17 13 23.7
comp=Z,86μm,18.5s,baz=144,slow=36
PFO Pinyon Flats O 21.60 322 P **P** **17 05 05.2 +1.0**
PFO pmax pmax
comp=Z,2μm,1.9s
PFO Pinyon Flats O 21.60 322 P **P** **17 05 05.2 +1.0**
baz=135,SNR=76
PFO S Sn 17 09 14.9 +3.4
baz=135
PFO Pinyon Flats O 21.60 322 P **P** **17 05 05.2 +1.0**
PFO IAmb IAmb 17 05 23.1
comp=Z,2μm,1.9s
PBMO Poplar Bluff 21.60 23 P **P** **17 05 01.9 -2.1**
CBKS Cedar Bluff 21.61 2 P **P** **17 05 02.3 -1.8**
CBKS pmax pmax
comp=Z,3μm,1.4s
CBKS MLR MLR
comp=Z,232μm,18.0s
CBKS Cedar Bluff 21.61 2 P **P** **17 05 02.5 -1.6**
baz=182,SNR=67
CBKS S Sn 17 09 09.0 -2.5
baz=182
CBKS Cedar Bluff 21.61 2 P **P** **17 05 02.3 -1.8**
CBKS IAMs_20 IAMs_20 17 14 18.3
comp=Z,232μm,18.0s
GLAT Glass 21.61 26 P **P** **17 05 03.0 -1.2**
BELC Belle Mtn. Jos 21.62 324 P **P** **17 05 05.1 +0.7**
baz=137,SNR=110
BELC S Sn 17 09 13.8 +1.8
baz=137
PENMO Penman 21.63 25 P **P** **17 05 03.1 -1.2**
PNME Penonome 21.73 111 *e*P **P** **17 05 06.4 +0.8**
PNME Penonome 21.73 111⇑*iP* **P** **17 05 08.4 +2.8**
PNME *e*S Sn 17 09 14.4 -0.4
U15A North Rim 21.73 334 P **P** **17 05 06.7 +1.0**
U15A IAmb IAmb 17 05 54.7
comp=Z,2μm,1.6s
U15A IAMs_20 IAMs_20 17 13 30.1
comp=Z,202μm,22.0s
PARMO Parma 21.76 25 P **P** **17 05 04.7 -1.0**
CACAO El Cacao, Vera 21.77 114⇑*iP* **P** **17 05 09.3 +3.3**
CACAO *i* S Sn 17 09 15.4 -0.3
456A Hilliard 21.81 48 P **P** **17 05 04.7 -1.6**
456A IAmb IAmb 17 05 11.8
comp=Z,1μm,0.9s
KSCO Kaye Shedlock' 21.84 356 P **P** **17 05 05.8 -0.9**
baz=175,SNR=136
KSCO Kaye Shedlock' 21.84 356 P **P** **17 05 05.7 -1.0**
HICK Hickman 21.87 26 P **P** **17 05 05.2 -1.7**
BCIP Isla Barro Col 21.89 109 *e*P **P** **17 05 08.9 +1.6**
BCIP Isla Barro Col 21.89 109⇑*iP* **P** **17 05 09.1 +1.8**
BCIP *e*S Sn 17 09 14.8 -3.8
BCIP Isla Barro Col 21.89 109 P **P** **17 05 08.0 +0.6**
BCIP pmax pmax
comp=Z,2μm,1.9s
BCIP MLR MLR
comp=Z,65μm,19.0s
BCIP Isla Barro Col 21.89 109 *e*P **P** **17 05 08.3 +1.0**
BCIP Isla Barro Col 21.89 109 P **P** **17 05 08.0 +0.6**
BCIP IAmb IAmb 17 05 12.5
comp=Z,2μm,1.9s
HENM Henderson Moun 21.92 25 P **P** **17 05 05.3 -2.2**
ZANG Zanguenga, Cho 21.95 109 *e*P **P** **17 05 09.2 +1.2**
PV01 Paradox Valley 21.99 343 P **P** **17 05 08.4 0.0**
GMRC Granite Mounta 22.01 326 P **P** **17 05 10.0 +1.4**
baz=139,SNR=257
GMRC S Sn 17 09 18.8 -2.6
baz=139
FPAL Fort Paine 22.02 35 P **P** **17 05 05.7 -2.9**
FPAL IAmb IAmb 17 05 16.4
comp=Z,858nm,1.0s
MURC Murrieta 22.03 321 P **P** **17 05 09.5 +0.8**
baz=134,SNR=51
MURC S Sn 17 09 20.0 -1.7
baz=134
MCJ Malvern 22.06 85⇑*iP* **P** **17 05 09.9 +0.7**
Q24A Divide 22.06 351 S **S** **17 09 14.4 +2.7**
baz=168
PV13 Radium Mtn., P 22.08 343 P **P** **17 05 09.2 -0.3**
PV13 IAmb IAmb 17 05 56.0
comp=Z,693nm,1.2s
AZU Azuero 22.08 112 *e*P **P** **17 05 11.9 +2.5**
AZU Azuero 22.08 112⇑*iP* **P** **17 05 12.3 +2.9**
AZU ⇑*iS* Sn 17 09 21.3 -1.9
AZU Azuero 22.08 112 *e*P **P** **17 05 11.8 +2.4**
PV05 Paradox Valley 22.09 342 P **P** **17 05 09.3 -0.1**
PV05 IAmb IAmb 17 05 57.6
comp=Z,2μm,1.9s
PV02 Paradox Valley 22.10 343 P **P** **17 05 09.4 -0.3**
PV02 IAmb IAmb 17 05 56.4
comp=Z,801nm,1.2s
WVT Waverly 22.14 29 P **P** **17 05 07.1 -2.7**
WVT pmax pmax
comp=Z,753nm,1.1s
WVT Waverly 22.14 29 P **P** **17 05 07.0 -2.7**
baz=215
WVT S **S** **17 09 16.1 +3.6**
baz=215
WVT Waverly 22.14 29 P **P** **17 05 07.1 -2.7**
WVT IAmb IAmb 17 05 44.3
comp=Z,753nm,1.1s
PV15 Paradox Valley 22.16 344 P **P** **17 05 10.3 0.0**
PV15 IAMs_20 IAMs_20 17 13 50.5
comp=Z,158μm,21.0s
PV03 Paradox Valley 22.18 343 P **P** **17 05 10.2 -0.3**
KSU1 Kansas State U 22.18 9 P **P** **17 05 08.0 -2.2**
baz=190,SNR=127
KSU1 S **S** **17 09 15.3 +2.1**
baz=190
KSU1 Kansas State U 22.18 9 P **P** **17 05 08.6 -1.6**
KSU1 IAmb IAmb 17 05 17.6
comp=Z,1μm,0.9s
PV18 Skein Mesa, Pa 22.19 343 P **P** **17 05 10.3 -0.3**
PV18 IAmb IAmb 17 05 58.7
comp=Z,747nm,1.3s
255A Hazlehurst 22.19 45 P **P** **17 05 08.2 -2.2**
154A Montrose 22.20 43 P **P** **17 05 08.3 -2.2**

MTDJ Mount Denham 22.20 84 *e*P **P** **17 05 12.4 +1.7**
MTDJ Mount Denham 22.20 84 P **P** **17 05 10.8 0.0**
PV12 Saucer Basin, 22.22 343 P **P** **17 05 10.4 -0.6**
PV12 IAmb IAmb 17 06 02.3
comp=Z,870nm,1.3s
PV11 David Mesa, Pa 22.23 343 P **P** **17 05 10.7 -0.3**
PV11 IAmb IAmb 17 05 59.4
comp=Z,2μm,1.7s
PV17 East Wray Mesa 22.23 343 P **P** **17 05 10.7 -0.3**
PV17 IAmb IAmb 17 05 51.8
comp=Z,2μm,1.8s
UPA Univ. de Panam 22.24 109 *e*P **P** **17 05 13.1 +2.0**
UPA Univ. de Panam 22.24 109 *i* P **P** **17 05 12.7 +1.6**
UPA ⇑*iS* **S** **17 09 20.4 +5.6**
UPA Univ. de Panam 22.24 109 *e*P **P** **17 05 11.8 +0.7**
PV16 Nyswonger Mesa 22.25 343 P **P** **17 05 10.9 -0.3**
PV19 Morning Glory 22.27 343 P **P** **17 05 11.6 +0.2**
PV19 IAmb IAmb 17 05 52.3
comp=Z,2μm,1.8s
PV20 West Nyswonger 22.29 343 P **P** **17 05 11.3 -0.3**
PV07 Paradox Valley 22.29 344 P **P** **17 05 11.6 -0.1**
PV07 IAMs_20 IAMs_20 17 14 54.2
comp=Z,206μm,20.0s
V48A Smith Brothers 22.31 31 P **P** **17 05 08.3 -3.3**
V48A IAmb IAmb 17 05 40.8
comp=Z,1μm,1.6s
PV04 Paradox Valley 22.32 343 P **P** **17 05 11.9 -0.1**
PV04 IAmb IAmb 17 05 25.2
comp=Z,1μm,1.5s
BBRC Big Bear Solar 22.33 323 P **P** **17 05 13.5 +1.3**
baz=135
BBRC S Sn 17 09 24.7 -4.6
baz=135
PV14 Lion Creek, Pa 22.34 343 P **P** **17 05 11.5 -0.7**
PV14 IAmb IAmb 17 05 25.2
comp=Z,1μm,1.6s
PV14 IAMs_20 IAMs_20 17 14 13.3
comp=Z,264μm,18.0s
PV10 Paradox Valley 22.34 343 P **P** **17 05 11.3 -1.0**
PV10 IAmb IAmb 17 05 24.4
comp=Z,781nm,1.1s
PV10 IAMs_20 IAMs_20 17 14 10.3
comp=Z,237μm,18.0s
R40A Maddies Statio 22.36 18 P **P** **17 05 10.0 -2.1**
R40A IAmb IAmb 17 05 19.5
comp=Z,902nm,0.9s
R40A IAMs_20 IAMs_20 17 14 53.3
comp=Z,233μm,21.0s
SWET Sewanee 22.36 34 P **P** **17 05 09.3 -2.9**
SWET IAmb IAmb 17 05 52.8
comp=Z,722nm,1.1s
PV23 Carpenter Ridg 22.41 343 P **P** **17 05 12.6 -0.4**
PV23 IAmb IAmb 17 05 51.5
comp=Z,1μm,1.4s
PV23 IAMs_20 IAMs_20 17 14 17.1
comp=Z,250μm,18.0s
HEC Hector,Ludlow 22.41 325 P **P** **17 05 14.0 +1.1**
baz=137,SNR=114
HEC S Sn 17 09 26.3 -4.7
baz=137
PV22 Blue Mesa, Par 22.42 343 P **P** **17 05 12.5 -0.6**
PV22 IAmb IAmb 17 05 52.7
comp=Z,864nm,1.4s
Y52A Lilburn 22.43 39 P **P** **17 05 10.9 -2.1**
baz=226,SNR=60
Y52A S **S** **17 09 19.7 +1.7**
baz=226
SCI2 San Clemente I 22.45 318 P **P** **17 05 14.9 +1.7**
baz=130,SNR=16
SCI2 S Sn 17 09 26.5 -5.3
baz=130
BBJ Bamboo Saint A 22.45 83⇑*iP* **P** **17 05 13.8 +0.3**
KNB Kanab 22.45 334 P **P** **17 05 13.9 +0.5**
KNB pmax pmax
comp=Z,936nm,1.3s
KNB Kanab 22.45 334 P **P** **17 05 13.9 +0.5**
CCM Cathedral Cave 22.46 20 P **P** **17 05 10.8 -2.4**
CCM pmax pmax
comp=Z,1μm,1.3s
CCM Cathedral Cave 22.46 20 P **P** **17 05 11.5 -1.7**
baz=204
CCM S **S** **17 09 18.9 +0.5**
baz=204
CCM Cathedral Cave 22.46 20 P **P** **17 05 10.8 -2.4**
CCM IAmb IAmb 17 05 30.4
comp=Z,1μm,1.2s
X51A Calhoun 22.46 36 P **P** **17 05 10.7 -2.6**
PV09 Paradox Valley 22.48 343 P **P** **17 05 13.5 -0.4**
GOGA Godfrey 22.49 41 P **P** **17 05 10.6 -3.0**
GOGA pmax pmax
comp=Z,3μm,1.8s
GOGA Godfrey 22.49 41 P **P** **17 05 11.5 -2.1**
baz=228,SNR=126
GOGA S **S** **17 09 21.0 +1.9**
baz=228
GOGA Godfrey 22.49 41 P **P** **17 05 10.6 -3.0**
PV21 Cone Mtn., Par 22.50 343 P **P** **17 05 13.8 -0.1**
T45A Paducah 22.52 26 P **P** **17 05 11.2 -2.7**
PCJ Portland Cotta 22.57 85 *i* P **P** **17 05 15.3 +0.7**
SMCO Snowmass 22.60 347 P **P** **17 05 14.7 -0.5**
SMCO IAmb IAmb 17 05 39.3
comp=Z,803nm,1.1s
PKCU Pink Cliffs 22.61 336 P **P** **17 05 16.1 +0.8**
LCMT Little Creek M 22.63 333 P **P** **17 05 15.4 +0.2**
CIS Catalina Islan 22.64 319 P **P** **17 05 16.3 +1.0**
baz=131,SNR=14
CIS S **S** **17 09 28.5 +6.6**
baz=131
TUQ Turquoise Moun 22.65 326 P **P** **17 05 17.1 +1.7**
baz=139,SNR=379
TUQ S **S** **17 09 27.7 +5.5**
baz=139
W50A Signal Mountai 22.68 35 P **P** **17 05 12.4 -3.3**
BFSC Mount Baldy Ra 22.75 322 P **P** **17 05 17.5 +1.0**
baz=134,SNR=36
BFSC S **S** **17 09 31.0 +7.1**
baz=134
BNJ Bonny Gate 22.75 83⇓*iP* **P** **17 05 10.7 -5.9**
FMP Fort Macarthur 22.77 320 P **P** **17 05 18.1 +1.5**
baz=132
FMP S **S** **17 09 30.9 +6.8**
baz=132
RRX Edison Barstow 22.82 324 P **P** **17 05 18.7 +1.6**
baz=136
RRX S **S** **17 09 32.6 +7.6**
baz=136
CLTN Cedars of Leba 22.83 31 P **P** **17 05 14.2 -3.0**
S44A Carbondale 22.85 24 P **P** **17 05 14.8 -2.6**
SIUC Southern Illin 22.89 24 P **P** **17 05 15.1 -2.6**
STH Stony Hill 22.89 84⇓*iP* **P** **17 05 18.8 +0.8**
HOJ Hope 22.95 84 *i* P **P** **17 05 19.1 +0.5**
ISCO Idaho Springs 22.95 350 P **P** **17 05 17.4 -1.4**
ISCO pmax pmax
comp=Z,306nm,0.9s
ISCO MLR MLR
comp=Z,354μm,18.0s
ISCO Idaho Springs 22.95 350 P **P** **17 05 18.1 -0.7**
baz=168,SNR=255
ISCO S **S** **17 09 30.5 +2.7**
baz=168
ISCO Idaho Springs 22.95 350 P **P** **17 05 17.4 -1.4**
GWJ Greenwich 22.97 84⇑*iP* **P** **17 05 22.4 +3.4**
MWC Mount Wilson 22.98 321 P **P** **17 05 19.4 +0.5**
MWC pmax pmax
comp=Z,741nm,1.6s
MWC MLR MLR
comp=Z,94μm,18.0s
MWC Mount Wilson 22.98 321 P **P** **17 05 19.4 +0.5**
MWC IAmb IAmb 17 05 56.5
comp=Z,741nm,1.6s
PASC Pasadena Art C 23.02 321 P **P** **17 05 20.3 +1.1**
PASC IAmb IAmb 17 06 04.3
comp=Z,1μm,1.9s
GSC Goldstone, Bar 23.02 325 P **P** **17 05 20.0 +0.7**
GSC pmax pmax
comp=Z,717nm,1.5s
GSC MLR MLR
comp=Z,163μm,19.0s
GSC Goldstone, Bar 23.02 325 P **P** **17 05 21.0 +1.7**
baz=137,SNR=124
GSC S **S** **17 09 33.6 +5.0**
baz=137
GSC Goldstone, Bar 23.02 325 P **P** **17 05 20.0 +0.7**
GSC IAmb IAmb 17 06 12.3
comp=Z,717nm,1.5s
GSC IAMs_20 IAMs_20 17 14 05.5
comp=Z,163μm,19.0s
SZCU Shurtz Canyon 23.06 334 P **P** **17 05 20.4 +0.6**
MTPU Mount Pierson 23.09 337 P **P** **17 05 20.6 +0.3**
SHPR Sheep Range 23.09 329 P **P** **17 05 20.4 +0.4**
SHPR IAMs_20 IAMs_20 17 14 20.5
comp=Z,126μm,18.0s
CCUT Cedar City 23.14 334 P **P** **17 05 20.8 +0.2**
DECC Green Verdugo 23.16 321 P **P** **17 05 21.9 +1.2**
baz=132
DECC S **S** **17 09 38.2 +7.3**
baz=132
T47A Sharon Grove 23.18 29 P **P** **17 05 17.5 -3.2**
T47A IAmb IAmb 17 06 12.7
comp=Z,1μm,1.1s
SHOC Shoshone, Teco 23.18 327 P **P** **17 05 21.8 +1.0**
baz=139,SNR=19
SHOC S **S** **17 09 38.9 +7.7**
baz=139
257A Skidaway Islan 23.22 47 P **P** **17 05 19.8 -1.3**
SNCC San Nicolas Is 23.25 317 P **P** **17 05 22.0 +0.4**
baz=128
SNCC S **S** **17 09 39.7 +7.3**
baz=128
SNCC San Nicolas Is 23.25 317 P **P** **17 05 22.1 +0.5**
P38A Dawn 23.27 14 P **P** **17 05 18.7 -3.0**
P38A IAmb IAmb 17 06 11.7
comp=Z,462nm,1.0s
CPCT Cooper Cave 23.29 35 P **P** **17 05 18.4 -3.6**
CPCT IAmb IAmb 17 05 49.1
comp=Z,576nm,1.0s
CMJ Castle Mountai 23.31 84⇓*iP* **P** **17 05 23.6 +1.4**
SLM Saint Louis 23.32 21 P **P** **17 05 19.5 -2.7**
SLM pmax pmax
comp=Z,1μm,1.3s
SLM Saint Louis 23.32 21 P **P** **17 05 19.5 -2.7**
SLM IAmb IAmb 17 05 31.7
comp=Z,1μm,1.2s
W52A Murphy 23.37 37 P **P** **17 05 20.1 -2.7**
W52A IAmb IAmb 17 05 34.4
comp=Z,440nm,0.8s
EDW2 Edwards Air Fo 23.39 322 P **P** **17 05 23.7 +0.7**
baz=134,SNR=68
EDW2 S **S** **17 09 40.6 +5.9**
baz=134
U49A Red Boiling Sp 23.43 32 P **P** **17 05 19.7 -3.6**
U49A IAmb IAmb 17 05 55.1
comp=Z,1μm,1.8s
SRU San Rafael Swe 23.47 341 P **P** **17 05 23.4 -0.4**
SRU pmax pmax
comp=Z,581nm,1.4s
SRU San Rafael Swe 23.47 341 P **P** **17 05 23.4 -0.4**
MSU Marysvale 23.50 337 P **P** **17 05 24.5 +0.3**
MSU Marysvale 23.50 337 P **P** **17 05 24.5 +0.3**
Q16A Castle Valley 23.50 339 P **P** **17 05 24.3 +0.1**
P40A Paris 23.57 17 P **P** **17 05 21.7 -2.8**
P40A IAMs_20 IAMs_20 17 15 29.4
comp=Z,180μm,21.0s
LRMC Laurel Mtn Rad 23.64 324 P **P** **17 05 27.0 +1.6**
baz=136,SNR=130
LRMC S **S** **17 09 45.1 +6.3**
baz=136
157A Early Branch 23.64 45 P **P** **17 05 24.7 -0.6**
baz=234,SNR=118
157A S **S** **17 09 42.1 +3.5**
baz=234
OSI Osito Audit: C 23.64 321 P **P** **17 05 26.7 +1.3**
baz=132,SNR=6.8
OSI S **S** **17 09 46.9 +8.2**
baz=132
OSI Osito Audit: C 23.64 321 P **P** **17 05 26.5 +1.1**
V51A Loudon 23.65 35 P **P** **17 05 22.4 -2.9**
V51A IAmb IAmb 17 05 52.6
comp=Z,510nm,0.9s
N33A J Bar K, Exete 23.69 6 P **P** **17 05 23.9 -1.8**
N33A IAMs_20 IAMs_20 17 15 09.9
comp=Z,140μm,22.0s
USIN University of 23.74 27 P **P** **17 05 24.5 -1.7**
OGNE Ogallala 23.74 358 P **P** **17 05 25.1 -1.2**
baz=177,SNR=66
OGNE Ogallala 23.74 358 P **P** **17 05 24.8 -1.5**
OGNE IAmb IAmb 17 05 30.7
comp=Z,788nm,0.8s
Z56A Williston 23.78 44 P **P** **17 05 25.3 -1.4**
baz=232
Z56A Williston 23.78 44 P **P** **17 05 24.6 -2.0**
HODGE Hodges 23.78 41 P **P** **17 05 24.1 -2.6**
HODGE IAmb IAmb 17 06 07.6
comp=Z,1μm,1.4s
UPD2 Meteti 23.79 108 *e*P **P** **17 05 21.4 -5.5**
UPD2 Meteti 23.79 108 *i* P **P** **17 05 29.0 +2.1**
UPD2 *i* S Sn 17 09 54.0 -10
O20A White River Ci 23.80 346 P **P** **17 05 27.4 +0.5**
baz=162,SNR=170
O20A S **S** **17 09 50.7 +9.3**
baz=162
O20A White River Ci 23.80 346 P **P** **17 05 27.2 +0.3**
SCZ2 Santa Cruz Isl 23.80 318 P **P** **17 05 28.2 +1.3**
baz=130
Y55A Saluda 23.85 42 P **P** **17 05 25.7 -1.6**
baz=230,SNR=143
Y55A S **S** **17 09 44.0 +2.2**
baz=230
TMUT Trail Mountain 23.86 340 P **P** **17 05 27.6 -0.1**
TKL Tuckaleechee C 23.86 36 P **P** **17 05 25.2 -2.2**
comp=Z,144nm,0.8s,baz=210,slow=9.5,SNR=69
TKL Tuckaleechee C 23.86 36 IAmb IAmb 17 06 18.5
comp=Z,733nm,1.1s
P17A Butcher Ranch, 23.86 341 P **P** **17 05 27.5 -0.1**
BG3 Lake Jocassee 23.88 39 P **P** **17 05 25.3 -2.4**
BG3 IAmb IAmb 17 05 41.0
comp=Z,463nm,0.9s
X54A Belton 23.92 40 P **P** **17 05 26.4 -1.6**
baz=228,SNR=131
X54A S **S** **17 09 45.6 +2.5**
baz=228
FURC Furnace Creek, 23.92 327 P **P** **17 05 29.4 +1.4**
baz=139,SNR=86
MPMC Manual Prospec 23.95 325 P **P** **17 05 29.4 +0.9**
baz=137,SNR=352
MPMC S **S** **17 09 51.6 +7.6**
baz=137
TPNV Topopah Spring 23.98 328 P **P** **17 05 29.9 +1.2**
TPNV pmax pmax
comp=Z,836nm,1.0s
TPNV MLR MLR
comp=Z,95μm,19.0s
TPNV Topopah Spring 23.98 328 P **P** **17 05 30.4 +1.7**
baz=141,SNR=915
TPNV S **S** **17 09 53.6 +9.3**
baz=141
TPNV Topopah Spring 23.98 328 P **P** **17 05 29.9 +1.2**
TPNV IAmb IAmb 17 05 35.0
comp=Z,836nm,0.9s
Q44A Meyer Farm, Va 24.00 23 P **P** **17 05 26.5 -2.2**
N35A Tabor 24.05 10 P **P** **17 05 27.1 -2.0**
ARVC Arvin 24.06 322 P **P** **17 05 30.5 +1.2**
baz=133,SNR=16
ARVC S **S** **17 09 54.3 +9.0**
baz=133
N23A Red Feather La 24.07 350 P **P** **17 05 30.2 +0.5**
baz=168
N23A S **S** **17 09 50.1 +4.2**
baz=168
V52A Sevierville 24.10 36 P **P** **17 05 26.8 -2.8**
V52A IAmb IAmb 17 05 41.5
comp=Z,691nm,1.1s
Y56A Pelion 24.11 43 P **P** **17 05 28.4 -1.4**
baz=231,SNR=6.3
Y56A S **S** **17 09 47.9 +1.8**
baz=231
SBC Santa Barbara 24.14 319 P **P** **17 05 31.3 +1.3**
baz=130
PSUT Pine Spring 24.17 334 P **P** **17 05 31.1 +0.5**
Z57A Bowman 24.21 45 P **P** **17 05 29.9 -0.8**
baz=233,SNR=101
OLIL Olney 24.21 25 P **P** **17 05 28.4 -2.2**
ISA Isabella, Lake 24.22 323 P **P** **17 05 31.6 +0.7**
ISA pmax pmax
comp=Z,323nm,1.1s
ISA MLR MLR
comp=Z,108μm,19.0s
ISA Isabella, Lake 24.22 323 P **P** **17 05 32.4 +1.5**
baz=134,SNR=143
ISA S **S** **17 09 56.0 +7.9**
baz=134

ISA **Isabella, Lake** **24.22** **323** P **P** **17 05 31.6 +0.7**
ISA IAMs_20 IAMs_20 17 14 25.8
comp=Z,108µm,19.0s
158A **Hollywood** **24.23** **46** P **P** **17 05 30.0 -0.8**
baz=235,SNR=39
BGNE **Belgrade** **24.29** **5** P **P** **17 05 30.1 -1.2**
baz=186,SNR=15
BGNE **Belgrade** **24.29** **5** P **P** **17 05 30.1 -1.2**
BGNE IAmb IAmb 17 05 59.5
comp=Z,1µm,1.1s
T50A **Nancy** **24.30** **32** P **P** **17 05 28.5 -3.0**
T50A IAmb IAmb 17 06 11.2
comp=Z,734nm,1.2s
RGRS **Roger Stewart** **24.32** **46** P **P** **17 05 30.7 -1.0**
X55A **Gracelyn & Ava** **24.33** **41** P **P** **17 05 30.7 -1.0**
baz=230,SNR=149
X55A S **S** **17 09 51.7 +2.0**
baz=230
CAP2 **Capurgana** **24.35** **107** ⇑*i*P **P** **17 05 34.3 +2.2**
CAP2 ⇑*i*S **S** **17 09 56.2 +6.0**
CAPC **Capurgana** **24.36** **107** *e*P **P** **17 05 33.8 +1.6**
W54A **Cherokee Point** **24.39** **39** P **P** **17 05 31.7 -0.7**
baz=228,SNR=229
W54A S **S** **17 09 52.9 +2.2**
baz=228
PHWY **Pilot Hill** **24.40** **352** P **P** **17 05 31.6 -1.1**
PHWY IAMs_20 IAMs_20 17 15 43.1
comp=Z,200µm,18.0s
V53A **Saluda** **24.42** **37** P **P** **17 05 31.1 -1.6**
V53A IAmb IAmb 17 06 20.7
comp=Z,1µm,1.4s
PAULI **Pauline** **24.45** **40** P **P** **17 05 31.3 -1.6**
PAULI IAmb IAmb 17 05 41.1
comp=Z,656nm,1.1s
NHSC **New Hope** **24.45** **46** P **P** **17 05 32.4 -0.5**
baz=234,SNR=58
NHSC **New Hope** **24.45** **46** P **P** **17 05 32.2 -0.7**
CSU **Charleston Sou** **24.45** **46** P **P** **17 05 32.1 -0.8**
N38A **Joes South For** **24.45** **14** P **P** **17 05 31.2 -1.7**
N38A IAMs_20 IAMs_20 17 16 07.9
comp=Z,93µm,18.0s
P43A **Skaggs, Pamnee** **24.47** **21** P **P** **17 05 31.3 -1.7**
PKM **Mcpherson Peak** **24.49** **320** P **P** **17 05 34.5 +1.0**
baz=131,SNR=37
PKM S **S** **17 09 59.2 +6.5**
baz=131
GTBY **Guantanamo Bay** **24.52** **80** *e*P **P** **17 05 33.1 -0.5**
GTBY **Guantanamo Bay** **24.52** **80** P **P** **17 05 33.7 +0.1**
GTBY **Guantanamo Bay** **24.52** **80** *i* P **P** **17 05 33.9 +0.3**
GTBY *e*S S 17 10 05.0 +12
GTBY IAML 17 11 25.0
comp=Z,107nm,1.1s
RDMU **Red Mountain** **24.54** **344** P **P** **17 05 33.5 -0.4**
PTAC **Punta Ardita,** **24.56** **111** *e*P P 17 05 26.4 -7.6
CWC **Cottonwood Cre** **24.56** **325** P **P** **17 05 35.6 +1.6**
baz=136
CWC S **S** **17 10 01.3 +7.7**
baz=136
WCI **Wyandotte Cave** **24.56** **28** P **P** **17 05 31.5 -2.3**
WCI pmax pmax
comp=Z,1µm,1.5s
WCI **Wyandotte Cave** **24.56** **28** P **P** **17 05 32.5 -1.3**
baz=215
WCI **Wyandotte Cave** **24.56** **28** P **P** **17 05 31.5 -2.3**
WCI IAmb IAmb 17 06 29.0
comp=Z,1µm,1.5s
GRAC **Grapevine Rang** **24.59** **327** P **P** **17 05 35.7 +1.5**
baz=139,SNR=59
MPU **Maple Canyon** **24.65** **340** P **P** **17 05 35.0 +0.2**
VES **Vestal, Richgr** **24.70** **322** P **P** **17 05 36.4 +1.3**
baz=134,SNR=56
VES S **S** **17 10 04.8 +9.2**
baz=134
X56A **White Oak** **24.73** **42** P **P** **17 05 34.6 -0.7**
baz=231,SNR=117
X56A S **S** **17 09 58.9 +2.9**
baz=231
NLU **North Lily Min** **24.74** **339** P **P** **17 05 35.9 +0.2**
R11A **Troy Canyon, C** **24.77** **331** P **P** **17 05 37.2 +1.2**
baz=144,SNR=462
R11A **Troy Canyon, C** **24.77** **331** P **P** **17 05 36.6 +0.6**
R11A IAMs_20 IAMs_20 17 15 40.9
comp=Z,158µm,18.0s
Z58A **St. Stephen** **24.83** **46** P **P** **17 05 35.9 -0.5**
baz=235,SNR=52
Y57A **Sumter** **24.85** **44** P **P** **17 05 35.4 -1.1**
baz=233,SNR=13
Y57A **Sumter** **24.85** **44** P **P** **17 05 35.3 -1.2**
Y57A IAmb IAmb 17 05 46.0
comp=Z,1µm,1.4s
SMMC **Simmler** **24.89** **320** P **P** **17 05 38.4 +1.5**
baz=131,SNR=34
SMMC S **S** **17 10 06.6 +7.9**
baz=131
KMSC **Kings Mountain** **24.95** **40** P **P** **17 05 36.7 -0.7**
baz=229,SNR=102
KMSC **Kings Mountain** **24.95** **40** P **P** **17 05 36.1 -1.3**
N41A **Harden Midland** **25.00** **18** P **P** **17 05 35.4 -2.4**
N41A IAMs_20 IAMs_20 17 16 24.5
comp=Z,183µm,20.0s
V54A **Nebo** **25.01** **38** P **P** **17 05 36.9 -1.0**
baz=227,SNR=176
V54A S **S** **17 10 04.7 +4.1**
baz=227
L34A **Svendsen Farm,** **25.03** **8** P **P** **17 05 37.0 -1.0**
L34A IAMs_20 IAMs_20 17 16 01.2
comp=Z,183µm,21.0s
RWWY **Rawlins** **25.07** **349** P **P** **17 05 39.1 +0.4**
RWWY IAMs_20 IAMs_20 17 16 27.0
comp=Z,151µm,19.0s
TIN **Tinemaha, Big** **25.09** **326** P **P** **17 05 40.6 +1.8**
baz=137,SNR=66
JLU **Jordanelle** **25.12** **341** P **P** **17 05 39.3 +0.2**
R49A **Shelbyville** **25.13** **30** P **P** **17 05 36.8 -2.2**
Z59A **Georgetown, SC** **25.15** **46** P **P** **17 05 39.0 -0.1**
baz=236,SNR=17
LCBC **Los crdobas,** **25.18** **106** *e*P **P** **17 05 42.9 +3.3**
BIRD **Birdtown, Kers** **25.19** **42** P **P** **17 05 38.3 -1.3**
VOG **Valley Oaks Go** **25.21** **323** P **P** **17 05 40.9 +1.2**
baz=134
DUG **Dugway, Tooele** **25.21** **338** P **P** **17 05 40.1 +0.2**
DUG pmax pmax
comp=Z,212nm,1.1s
DUG MLR MLR
comp=Z,348µm,21.0s
DUG **Dugway, Tooele** **25.21** **338** P **P** **17 05 40.6 +0.7**
baz=152,SNR=106
DUG **Dugway, Tooele** **25.21** **338** P **P** **17 05 40.1 +0.2**
BLO **Bloomington** **25.23** **27** P **P** **17 05 38.3 -1.6**
BLO pmax pmax
comp=Z,3µm,2.0s
BLO **Bloomington** **25.23** **27** P **P** **17 05 38.3 -1.6**
Y58A **Scranton** **25.26** **45** P **P** **17 05 39.5 -0.7**
baz=234,SNR=35
Y58A **Scranton** **25.26** **45** P **P** **17 05 39.6 -0.7**
CTU **Camp Tracy** **25.30** **340** P **P** **17 05 40.4 -0.3**
O44A **Mansfield** **25.30** **23** P **P** **17 05 38.4 -2.1**
X57A **Johnson Farm,** **25.32** **43** P **P** **17 05 40.6 -0.1**
baz=232,SNR=25
P46A **Rosedale** **25.32** **25** P **P** **17 05 38.9 -1.8**
HDIL **Hopedale** **25.36** **21** P **P** **17 05 39.5 -1.6**
baz=206,SNR=39
HDIL S **S** **17 10 12.5 +6.4**
baz=206
HDIL **Hopedale** **25.36** **21** P **P** **17 05 39.2 -1.9**
HDIL IAMs_20 IAMs_20 17 16 51.9
comp=Z,195µm,22.0s
S51A **Beattyville** **25.42** **33** P **P** **17 05 39.4 -2.2**
S51A IAmb IAmb 17 06 22.1
comp=Z,610nm,1.0s
W56A **Indian Trail** **25.42** **41** P **P** **17 05 40.3 -1.3**
baz=230,SNR=64
K31A **O'Neill** **25.45** **4** P **P** **17 05 41.4 -0.5**
K31A IAmb IAmb 17 06 29.7
comp=Z,754nm,0.9s
K31A IAMs_20 IAMs_20 17 16 47.6
comp=Z,153µm,22.0s
V55A **Taylorsville** **25.50** **39** P **P** **17 05 41.7 -0.7**
baz=228,SNR=172
V55A **Taylorsville** **25.50** **39** P **P** **17 05 40.8 -1.5**
V55A IAmb IAmb 17 06 00.1
comp=Z,860nm,1.1s
T53A **Wise** **25.51** **36** P **P** **17 05 41.5 -1.0**
baz=224,SNR=72
SCIA **State Center** **25.52** **13** P **P** **17 05 41.0 -1.5**
baz=197,SNR=33
SCIA S **S** **17 10 17.9 +9.3**
baz=197
SCIA **State Center** **25.52** **13** P **P** **17 05 41.1 -1.4**
SCIA IAMs_20 IAMs_20 17 16 25.2
comp=Z,154µm,20.0s
R50A **Paris** **25.54** **31** P **P** **17 05 40.3 -2.4**
R50A IAmb IAmb 17 06 33.4
comp=Z,1µm,1.6s
TCUT **Toone Canyon** **25.57** **341** P **P** **17 05 43.5 +0.2**
U54A **Nelsons Funny** **25.59** **37** P **P** **17 05 41.9 -1.3**
baz=226,SNR=174
U54A **Nelsons Funny** **25.59** **37** P **P** **17 05 41.7 -1.6**
U54A IAmb IAmb 17 05 45.1
comp=Z,834nm,1.1s
W57A **Gilead** **25.81** **42** P **P** **17 05 44.1 -1.0**
baz=231,SNR=250
W57A **Gilead** **25.81** **42** P **P** **17 05 43.4 -1.8**
MLAC **Mammoth, Mammo** **25.84** **326** P **P** **17 05 47.4 +1.7**
baz=137,SNR=41
Y59A **Loris** **25.85** **45** P **P** **17 05 44.8 -0.8**
baz=235,SNR=32
Y59A **Loris** **25.85** **45** P **P** **17 05 44.4 -1.1**
X58A **Rowland** **25.87** **44** P **P** **17 05 44.7 -1.0**
baz=233,SNR=20
X58A **Rowland** **25.87** **44** P **P** **17 05 45.1 -0.6**
K22A **Casper** **25.88** **350** P **P** **17 05 45.9 -0.1**
baz=167,SNR=210
K22A **Casper** **25.88** **350** P **P** **17 05 45.3 -0.6**
V56A **Mocksville** **25.91** **40** P **P** **17 05 45.1 -1.0**
baz=229,SNR=102
SJCC **San Jacinto, C** **25.92** **103** *e*P **P** **17 05 46.5 0.0**
SJCC **San Jacinto, C** **25.92** **103** ⇑*i*P **P** **17 05 48.4 +2.0**
SJCC *e*S **S** **17 10 21.1 +5.6**
BGU **Big Grassy Mou** **25.93** **338** P **P** **17 05 46.8 +0.3**
PIZC **Pizarro, Choco** **25.96** **115** *e*P **P** **17 05 41.5 -5.3**
SFIN **Lafayette** **26.02** **24** P **P** **17 05 45.7 -1.3**
baz=211,SNR=104
SFIN **Lafayette** **26.02** **24** P **P** **17 05 45.2 -1.8**
SFIN IAmb IAmb 17 05 50.4
comp=Z,690nm,1.0s
U55A **TA2, Sparta** **26.03** **38** P **P** **17 05 46.5 -0.7**
baz=227,SNR=117
DBBC **Dabeiba** **26.05** **110** *e*P **P** **17 05 49.0 +1.3**
HWUT **Hardware Ranch** **26.07** **341** P **P** **17 05 47.5 -0.2**
SPUT **South Promonto** **26.08** **340** P **P** **17 05 47.9 +0.1**
T54A **Tazewell** **26.11** **37** P **P** **17 05 46.6 -1.3**
baz=226,SNR=287
L40A **Anamosa** **26.16** **16** P **P** **17 05 46.3 -1.9**
L40A IAmb IAmb 17 05 57.6
comp=Z,490nm,0.9s
L40A IAMs_20 IAMs_20 17 16 57.0
comp=Z,163µm,21.0s
NVAR **Mina Array Bea** **26.16** **328** P **P** **17 05 50.1 +1.5**
comp=Z,461nm,0.9s,baz=150,slow=8.1,SNR=255
NVAR LR LR 17 16 22.6
comp=Z,143µm,18.5s,baz=138,slow=37
W58A **Raeford** **26.22** **43** P **P** **17 05 48.1 -0.7**
baz=233,SNR=41
S53A **Williamson** **26.24** **35** P **P** **17 05 47.8 -1.3**
baz=224,SNR=54
Y60A **Bolivia** **26.31** **46** P **P** **17 05 48.9 -0.8**
baz=236,SNR=8.9
Y60A **Bolivia** **26.31** **46** P **P** **17 05 49.2 -0.4**
Y60A IAmb IAmb 17 06 02.2
comp=Z,447nm,1.0s
K38A **Parkersburg** **26.33** **13** P **P** **17 05 48.0 -1.7**
K38A IAmb IAmb 17 06 43.1
comp=Z,800nm,1.1s
K38A IAMs_20 IAMs_20 17 16 52.4
comp=Z,128µm,22.0s
U56A **King** **26.33** **39** P **P** **17 05 49.2 -0.7**
baz=229,SNR=25
U56A **King** **26.33** **39** P **P** **17 05 48.7 -1.2**
P49A **Miami Univ. Ec** **26.34** **29** P **P** **17 05 47.6 -2.3**
baz=216,SNR=101
UREC **San Jose de Ur** **26.36** **108** *e*P **P** **17 05 46.5 -3.9**
X59A **McDuffie Farm,** **26.37** **45** P **P** **17 05 49.5 -0.7**
baz=234,SNR=19
V57A **Coltrane Farms** **26.41** **41** P **P** **17 05 49.6 -1.0**
baz=230,SNR=160
RYN **Ryan** **26.42** **328** P **P** **17 05 52.1 +1.2**
RYN IAMs_20 IAMs_20 17 16 30.9
comp=Z,146µm,18.0s
SMRC **Santa Marta, M** **26.44** **99** *e*P **P** **17 05 46.5 -4.6**
TUMC **Tumaco** **26.52** **123** *e*P **P** **17 05 51.5 -0.3**
KVN **Kaiserville** **26.53** **329** P **P** **17 05 53.1 +1.2**
KVN pmax pmax
comp=Z,356nm,1.0s
KVN MLR MLR
comp=Z,108µm,18.0s
KVN **Kaiserville** **26.53** **329** P **P** **17 05 53.0 +1.2**
KVN IAmb IAmb 17 05 57.9
comp=Z,356nm,1.0s
KVN IAMs_20 IAMs_20 17 18 04.6
comp=Z,108µm,18.0s
M44A **Midewin, Midew** **26.54** **22** P **P** **17 05 49.6 -2.1**
M44A IAmb IAmb 17 06 32.8
comp=Z,714nm,1.1s
L42A **Oliver, Polo** **26.55** **19** P **P** **17 05 49.3 -2.5**
L42A IAMs_20 IAMs_20 17 17 22.4
comp=Z,150µm,18.0s
Q51A **Peebles** **26.60** **31** P **P** **17 05 50.8 -1.5**
baz=220,SNR=89
BW06 **Boulder Array** **26.60** **346** P **P** **17 05 52.2 -0.3**
baz=161
BW06 **Boulder Array** **26.60** **346** P **P** **17 05 51.9 -0.7**
BW06 IAmb IAmb 17 06 35.4
comp=Z,826nm,1.4s
PDAR **Pinedale Array** **26.60** **346** P **P** **17 05 51.8 -0.8**
comp=Z,88nm,0.8s,baz=147,slow=8.8,SNR=144
PDAR PcP **PcP** **17 09 16.9 +0.5**
comp=Z,19nm,0.8s,baz=130,slow=1.4,SNR=3.2
T55A **Pulaski** **26.60** **38** P **P** **17 05 51.4 -1.0**
baz=227,SNR=53
HVU **Hansel Valley** **26.61** **340** P **P** **17 05 52.8 +0.3**
HVU pmax pmax
comp=Z,268nm,1.2s
HVU **Hansel Valley** **26.61** **340** P **P** **17 05 52.8 +0.3**
ELK **Elko** **26.61** **335** P **P** **17 05 53.1 +0.4**
ELK pmax pmax
comp=Z,151nm,1.4s
ELK MLR MLR
comp=Z,209µm,19.0s
ELK **Elko** **26.61** **335** P **P** **17 05 53.1 +0.4**
ELK IAMs_20 IAMs_20 17 17 16.2
comp=Z,209µm,19.0s
CBOC **Ciudad Bolivar** **26.72** **112** *e*P **P** **17 05 55.8 +1.9**
O48A **Farmland** **26.73** **27** P **P** **17 05 51.4 -2.0**
baz=215,SNR=128
SAO **San Andreas Ge** **26.73** **321** P **P** **17 05 54.1 +0.6**
SAO pmax pmax
comp=Z,182nm,1.1s
SAO MLR MLR
comp=Z,96µm,20.0s
SAO **San Andreas Ge** **26.73** **321** P **P** **17 05 54.1 +0.6**
SAO IAMs_20 IAMs_20 17 15 41.2
comp=Z,96µm,20.0s
ECSD **EROS Data Cent** **26.74** **7** P **P** **17 05 52.2 -1.3**
baz=189
ECSD **EROS Data Cent** **26.74** **7** P **P** **17 05 51.6 -1.9**
ECSD IAmb IAmb 17 06 39.7
comp=Z,992nm,1.4s
ECSD **EROS Data Cent** **26.74** **7** IAMs_20 IAMs_20 17 17 04.7
comp=Z,220µm,22.0s
V58A **Windy Hill, Pi** **26.77** **42** P **P** **17 05 52.8 -1.0**
baz=232,SNR=85
V58A **Windy Hill, Pi** **26.77** **42** P **P** **17 05 52.4 -1.4**
V58A IAmb IAmb 17 06 15.1
comp=Z,405nm,0.9s
S54A **Dingess, Beckl** **26.77** **36** P **P** **17 05 52.7 -1.3**
baz=225,SNR=79
S54A **Dingess, Beckl** **26.77** **36** P **P** **17 05 52.2 -1.8**
S54A IAmb IAmb 17 06 06.8
comp=Z,859nm,1.3s
X60A **Albert Glenn T** **26.79** **45** P **P** **17 05 53.0 -1.1**
baz=235,SNR=12
R53A **Hurricane** **26.80** **34** P **P** **17 05 52.9 -1.2**
baz=223,SNR=103
R53A **Hurricane** **26.80** **34** P **P** **17 05 52.4 -1.8**
WAKR **Walker** **26.80** **326** P **P** **17 05 56.0 +1.6**
ARGC **Ariguani, Magd** **26.81** **102** *e*P **P** **17 05 55.0 +0.6**
W59A **Clinton** **26.82** **44** P **P** **17 05 53.6 -0.8**
baz=234
P50A **Jamestown** **26.83** **30** P **P** **17 05 52.9 -1.4**
baz=218,SNR=38
LGNH **Logne** **26.88** **83** P **P** **17 05 55.4 +0.4**
LGNH **Logne** **26.88** **83** *i* P **P** **17 05 56.1 +1.1**
BLA **Blacksburg** **26.88** **38** P **P** **17 05 53.4 -1.5**
BLA pmax pmax
comp=Z,719nm,1.1s
BLA **Blacksburg** **26.88** **38** P **P** **17 05 53.9 -1.0**
baz=227,SNR=80
BLA **Blacksburg** **26.88** **38** P **P** **17 05 53.4 -1.5**
BLA IAmb IAmb 17 06 07.8
comp=Z,719nm,1.1s
JAKH **Jacmel** **26.97** **83** P **P** **17 05 57.5 +1.7**
JAKH **Jacmel** **26.97** **83** *i* P **P** **17 05 56.9 +1.1**
CMB **Columbia Colle** **26.98** **324** P **P** **17 05 56.2 +0.4**
CMB pmax pmax
comp=Z,87nm,1.0s
CMB MLR MLR
comp=Z,56µm,18.0s
CMB **Columbia Colle** **26.98** **324** P **P** **17 05 56.2 +0.4**
T56A **Rocky Mt** **26.99** **39** P **P** **17 05 55.2 -0.7**
baz=228,SNR=72
AHID **Auburn Hatcher** **27.00** **343** P **P** **17 05 55.8 -0.3**
HELC **Santa Helena** **27.01** **111** *e*P **P** **17 06 00.3 +3.6**
N47A **Urbana** **27.01** **26** P **P** **17 05 53.4 -2.6**
baz=213,SNR=145
RSSD **Black Hills** **27.03** **355** P **P** **17 05 55.2 -1.2**
RSSD pmax pmax
comp=Z,138nm,0.9s
RSSD MLR MLR
comp=Z,422µm,18.0s
RSSD **Black Hills** **27.03** **355** P **P** **17 05 55.9 -0.5**
baz=173
RSSD **Black Hills** **27.03** **355** P **P** **17 05 55.1 -1.2**
U57A **Blanch** **27.03** **41** P **P** **17 05 55.5 -0.7**
baz=230,SNR=77
YERR **Yerington** **27.06** **327** P **P** **17 05 57.8 +1.1**
YERR IAMs_20 IAMs_20 17 17 06.8
comp=Z,119µm,18.0s
ZARC **Zaragoza, Cauc** **27.08** **108** *e*P **P** **17 05 57.8 +0.9**
P51A **Williamsport** **27.09** **31** P **P** **17 05 54.6 -2.1**
baz=220,SNR=42
P51A **Williamsport** **27.09** **31** P **P** **17 05 54.3 -2.4**
P51A IAmb IAmb 17 06 36.5
comp=Z,1µm,1.4s
Q52A **Bidwell** **27.10** **33** P **P** **17 05 55.3 -1.5**
baz=222,SNR=198
JFWS **Jewell Farm** **27.21** **17** P **P** **17 05 56.1 -1.7**
JFWS pmax pmax
comp=Z,309nm,0.9s
JFWS MLR MLR
comp=Z,163µm,18.0s
JFWS **Jewell Farm** **27.21** **17** P **P** **17 05 55.6 -2.2**
baz=202,SNR=32
JFWS **Jewell Farm** **27.21** **17** P **P** **17 05 56.1 -1.7**
JFWS IAmb IAmb 17 06 07.6
comp=Z,309nm,0.9s
JFWS **Jewell Farm** **27.21** **17** IAMs_20 IAMs_20 17 17 39.9
comp=Z,163µm,18.0s
S55A **Lewisburg** **27.22** **37** P **P** **17 05 56.9 -1.0**
baz=226,SNR=134
R54A **Victor** **27.22** **36** P **P** **17 05 56.8 -1.2**
baz=225,SNR=106
CNNC **Cliffs of the** **27.23** **44** P **P** **17 05 57.4 -0.6**
baz=234
W60A **Pink Hill** **27.24** **45** P **P** **17 05 57.0 -1.1**
baz=235,SNR=10.0
SUSD **Miller** **27.25** **3** P **P** **17 05 57.0 -1.1**
baz=184,SNR=7.2
SUSD **Miller** **27.25** **3** P **P** **17 05 56.6 -1.5**
SUSD IAmb IAmb 17 06 39.8
comp=Z,346nm,0.8s
SUSD IAMs_20 IAMs_20 17 17 53.7
comp=Z,146µm,19.0s
N48A **Decatur** **27.27** **27** P **P** **17 05 56.4 -2.0**
baz=214,SNR=154
L44A **Lake County Fo** **27.28** **21** P **P** **17 05 57.1 -1.3**
baz=208
L44A S S 17 10 49.8 +13
baz=208
L44A **Lake County Fo** **27.28** **21** P **P** **17 05 57.3 -1.1**
L44A IAMs_20 IAMs_20 17 18 00.8
comp=Z,203µm,22.0s
V59A **Middlesex** **27.31** **43** P **P** **17 05 58.0 -0.7**
baz=233,SNR=69
SMLC **San Martn de** **27.32** **104** *e*P **P** **17 06 01.5 +2.5**
PNTR **Pine Nut** **27.32** **327** P **P** **17 06 00.3 +1.2**
PNTR IAmb IAmb 17 06 05.6
comp=Z,608nm,1.3s
PNTR IAMs_20 IAMs_20 17 18 23.8
comp=Z,103µm,18.0s
YOTC **Yotoco, Valle** **27.33** **116** *e*P P 17 06 06.5 +7.3
O50A **Cable** **27.34** **30** P **P** **17 05 57.2 -1.7**
baz=218,SNR=38
Q53A **Leroy** **27.42** **34** P **P** **17 05 58.5 -1.2**
baz=223,SNR=53
T57A **Hurt** **27.44** **40** P **P** **17 05 58.9 -1.0**
baz=230,SNR=81
T57A **Hurt** **27.44** **40** P **P** **17 05 58.7 -1.2**
T57A IAmb IAmb 17 06 51.8
comp=Z,593nm,1.2s
M47A **Cromwell** **27.44** **25** P **P** **17 05 58.2 -1.6**
baz=213,SNR=17
REDW **Red Top Meadow** **27.49** **344** P **P** **17 06 00.0 -0.5**
U58A **Oxford** **27.50** **41** P **P** **17 05 59.7 -0.7**
baz=232,SNR=98
VCNR **Virginia City** **27.50** **327** P **P** **17 06 02.1 +1.5**
VCNR IAMs_20 IAMs_20 17 18 36.5
comp=Z,90µm,18.0s
I37A **Lemond, Waseca** **27.51** **12** P **P** **17 05 58.3 -2.0**
I37A IAmb IAmb 17 06 36.6
comp=Z,521nm,0.9s
SNOW **Snow King Moun** **27.55** **344** P **P** **17 06 01.0 -0.1**
SNOW IAmb IAmb 17 06 46.3
comp=Z,576nm,1.2s
RUBR **Rubicon Trail** **27.59** **326** P **P** **17 06 03.4 +2.0**
RUBR IAmb IAmb 17 06 07.5
comp=Z,668nm,0.9s
RUBR IAMs_20 IAMs_20 17 17 44.9
comp=Z,106µm,18.0s
K43A **Burlington** **27.61** **20** P **P** **17 05 59.4 -1.9**
K43A IAmb IAmb 17 06 32.1
comp=Z,691nm,1.1s
BBAC **Balboa, Cauca** **27.61** **120** *e*P **P** **17 06 03.1 +1.2**
TPAW **Teton Pass** **27.63** **344** P **P** **17 06 02.7 +0.9**
TPAW IAmb IAmb 17 06 25.8
comp=Z,475nm,1.1s
P52A **Corning** **27.67** **32** P **P** **17 05 59.8 -2.1**
baz=221,SNR=68
PAHR **Pah Rah Range** **27.67** **328** P **P** **17 06 03.4 +1.3**
PAHR IAMs_20 IAMs_20 17 17 21.1
comp=Z,105µm,19.0s
N49A **Columbus Grove** **27.70** **28** P **P** **17 06 00.4 -1.7**
baz=216,SNR=98
N49A **Columbus Grove** **27.70** **28** P **P** **17 05 59.7 -2.4**
N49A IAmb IAmb 17 06 57.0
comp=Z,625nm,1.3s
CUSE **Cuicocha Este** **27.70** **125** *e*P **P** **17 06 05.2 +2.4**
S56A **Natural Bridge** **27.70** **38** P **P** **17 06 01.2 -1.0**
baz=228,SNR=24
ACSO **Alum Creek Sta** **27.71** **30** P **P** **17 06 00.8 -1.4**
baz=219
ACSO **Alum Creek Sta** **27.71** **30** P **P** **17 06 00.0 -2.2**
ACSO IAmb IAmb 17 06 47.1
comp=Z,694nm,1.4s
L46A **Eue Claire** **27.73** **24** P **P** **17 06 01.1 -1.3**
baz=211
L46A S **S** **17 10 53.5 +10**
baz=211
RREF **El Recreo** **27.75** **113** *e*P **P** **17 06 01.5 -2.1**
R55A **Marlinton** **27.79** **37** P **P** **17 06 02.0 -1.0**
baz=226,SNR=150
R55A **Marlinton** **27.79** **37** P **P** **17 06 01.2 -1.8**
R55A IAmb IAmb 17 06 54.5
comp=Z,714nm,1.2s
FXWY **Fox Creek** **27.79** **344** P **P** **17 06 02.7 -0.5**
POPC **Popayan, Colom** **27.80** **119** *e*P **P** **17 06 01.5 -2.1**
W61A **Ground Anchor** **27.80** **45** P **P** **17 06 03.0 -0.1**
baz=236
O51A **Pataskala** **27.82** **31** P **P** **17 06 01.2 -2.1**
baz=220,SNR=62
PTBC **PUERTO BERRIO,** **27.82** **109** *e*P **P** **17 05 56.5 -7.1**
T58A **Grand View Acr** **27.85** **41** P **P** **17 06 02.9 -0.7**
baz=231,SNR=66
NORC **Norcasia** **27.87** **111** *e*P **P** **17 06 04.8 +0.8**
Q54A **Coxs Mills** **27.88** **35** P **P** **17 06 02.9 -0.9**
baz=224,SNR=34
Q54A **Coxs Mills** **27.88** **35** P **P** **17 06 01.9 -1.9**
Q54A IAmb IAmb 17 06 54.2

comp=Z,756nm,1.4s
ANIL Santa Ana 27.90 114 *e*P P **17 06 07.4 +2.8**
M48A Edgerton 27.92 26 P P **17 06 02.5 -1.7**
baz=214,SNR=8.1
M48A Edgerton 27.92 26 P P **17 06 01.6 -2.5**
M48A IAmb IAmb 17 06 37.5
comp=Z,368nm,1.0s
P53A Whipple 27.95 33 P P **17 06 02.9 -1.5**
baz=223,SNR=24
P53A Whipple 27.95 33 P P **17 06 02.3 -2.1**
P53A IAmb IAmb 17 07 00.8
comp=Z,994nm,1.6s
U59A Littleton 27.95 42 P P **17 06 03.8 -0.7**
baz=233,SNR=26
U59A Littleton 27.95 42 P P **17 06 03.5 -0.9**
U59A IAmb IAmb 17 06 08.1
comp=Z,400nm,1.4s
V60A Jim Taylor Roa 27.95 44 P P **17 06 03.4 -1.0**
baz=235,SNR=12
V60A Jim Taylor Roa 27.95 44 P P **17 06 03.5 -1.0**
V60A IAmb IAmb 17 06 17.5
comp=Z,406nm,1.1s
GCUF Volcan Galeras 27.99 122 *e*P P **17 06 07.4 +1.9**
IMW Indian Meadow 28.01 344 P P **17 06 04.6 -0.7**
I40A Norwalk 28.02 16 P P **17 06 03.6 -1.4**
N50A Nevada 28.05 29 P P **17 06 03.3 -2.0**
baz=218,SNR=39
SOTA Rioblanco 28.08 119 *e*P P **17 06 06.5 +0.1**
CRUC La Cruz 28.11 121 *e*P P **17 06 06.1 -0.4**
SDDR Presa de Saban 28.11 82 P P **17 06 06.9 +0.7**
SDDR Presa de Saban 28.11 82 *i*P P **17 06 05.4 -0.8**
S57A Dark Hollow, R 28.12 39 P P **17 06 04.6 -1.3**
baz=229,SNR=86
S57A Dark Hollow, R 28.12 39 P P **17 06 04.2 -1.7**
S57A IAmb IAmb 17 06 16.3
comp=Z,384nm,1.1s
FLWY Flagg Ranch 28.12 345 P P **17 06 06.3 +0.1**
FLWY IAmb IAmb 17 06 50.8
comp=Z,520nm,1.3s
PCON Cinco Dias 28.15 119 *e*P P **17 06 06.5 -0.6**
O52A Adamsville 28.18 32 P P **17 06 03.8 -2.7**
baz=221,SNR=91
O52A Adamsville 28.18 32 P P **17 06 03.9 -2.6**
O52A IAmb IAmb 17 06 08.0
comp=Z,551nm,1.1s
OCAC Ocana 28.21 105 *e*P P **17 06 07.1 -0.1**
M49A Liberty Center 28.23 27 P P **17 06 05.3 -1.7**
baz=216,SNR=79
BEKR Beckworth 28.29 327 P P **17 06 09.0 +1.3**
BEKR IAMs_20 IAMs_20 17 18 36.5
comp=Z,89µm,18.0s
Q55A Buckhannon 28.30 36 P P **17 06 06.0 -1.6**
baz=226,SNR=64
ORTC Ortega, Tolima 28.32 115 *e*P P **17 06 08.6 +0.6**
GRTK Grand Turk 28.32 76 P P **17 06 09.6 +1.7**
YPP Pitchstone Pla 28.32 345 P P **17 06 08.4 +0.4**
H17A Grant Village 28.38 345 P P **17 06 09.8 +1.3**
baz=160,SNR=49
H17A Grant Village 28.38 345 P P **17 06 08.9 +0.4**
URIC Uribia, Colomb 28.41 97 *e*P P **17 06 06.5 -2.3**
URIC Uribia, Colomb 28.41 97 P P **17 06 08.1 -0.7**
L48A N Adams 28.42 26 P P **17 06 06.3 -2.3**
baz=214,SNR=30
V61A Roper 28.42 45 P P **17 06 08.9 +0.2**
baz=236,SNR=7.3
V61A Roper 28.42 45 P P **17 06 09.7 +1.0**
U60A Pendleton 28.43 43 P P **17 06 08.3 -0.4**
baz=234,SNR=22
U60A S S **17 10 57.2 +2.6**
baz=234
T59A Double "B" Far 28.48 42 P P **17 06 08.5 -0.7**
baz=232,SNR=54
T59A Double "B" Far 28.48 42 P P **17 06 07.8 -1.3**
T59A IAmb IAmb 17 06 21.1
comp=Z,619nm,1.4s
MCCM Marconi Confer 28.49 322 P P **17 06 10.2 +0.9**
MCCM IAMs_20 IAMs_20 17 17 12.9
comp=Z,93µm,18.0s
I42A Draeger Farm, 28.50 18 P P **17 06 07.9 -1.3**
I42A IAmb IAmb 17 07 05.2
comp=Z,394nm,1.2s
I42A IAMs_20 IAMs_20 17 18 30.8
comp=Z,142µm,18.0s
K46A Dorr 28.50 24 P P **17 06 07.0 -2.2**
baz=211,SNR=5.9
LKWY Lake 28.50 346 P P **17 06 11.0 +1.4**
LKWY pmax pmax
comp=Z,177nm,1.2s
LKWY MLR MLR
comp=Z,294µm,19.0s
LKWY Lake 28.50 346 P P **17 06 10.9 +1.4**
P54A Burton 28.51 34 P P **17 06 08.3 -1.2**
baz=224,SNR=34
N51A Ashland 28.53 30 P P **17 06 07.2 -2.4**
baz=219,SNR=34
N51A Ashland 28.53 30 P P **17 06 07.0 -2.6**
N51A IAmb IAmb 17 06 56.4
comp=Z,385nm,1.1s
SPBC San Pablo de B 28.55 110 *e*P P **17 06 06.5 -3.6**
S58A Poland Farm, P 28.57 40 P P **17 06 08.7 -1.3**
baz=231,SNR=27
S58A Poland Farm, P 28.57 40 P P **17 06 08.4 -1.6**
S58A IAmb IAmb 17 06 59.2
comp=Z,1µm,1.9s
M50A Fremont 28.60 29 P P **17 06 08.5 -1.7**
baz=217,SNR=22
O53A New Philadelph 28.60 32 P P **17 06 07.8 -2.4**
baz=222,SNR=15
YMP Mirror Lake Pl 28.61 346 P P **17 06 11.1 +0.5**
SC01 Santiago de lo 28.64 81 P P **17 06 11.7 +1.0**
YUF Upper Falls 28.67 345 P P **17 06 11.6 +0.6**
ORV Oroville 28.67 325 P P **17 06 12.2 +1.3**
ORV pmax pmax
comp=Z,395nm,1.5s
ORV MLR MLR
comp=Z,51µm,19.0s
ORV Oroville 28.67 325 P P **17 06 12.2 +1.3**
ROSC El Rosal 28.69 112 P P **17 06 13.5 +1.9**
comp=Z,58nm,1.0s,baz=318,slow=7.1,SNR=54
ROSC LR LR 17 18 26.8
comp=Z,28µm,18.2s,baz=356,slow=38
ROSC El Rosal 28.69 112 P P **17 06 13.2 +1.5**
ROSC IAmb IAmb 17 06 25.1
comp=Z,886nm,1.6s
YNR Norris Junctio 28.71 345 P P **17 06 12.4 +0.9**
V62A Hyde County Ai 28.72 46 P P **17 06 11.7 +0.5**
baz=237
V62A Hyde County Ai 28.72 46 P P **17 06 09.6 -1.6**
PRAC Prado 28.72 115 *e*P P **17 06 11.5 -0.1**
R57A Stanardsville 28.72 38 P P **17 06 10.4 -1.0**
baz=229,SNR=36
YMR Madison River 28.74 345 P P **17 06 12.1 +0.5**
BETC Betania 28.77 117 *e*P P **17 06 14.3 +2.3**
RLMT Red Lodge 28.78 348 P P **17 06 12.2 +0.2**
baz=163
RLMT Red Lodge 28.78 348 P P **17 06 11.6 -0.4**
RLMT IAmb IAmb 17 07 05.2
comp=Z,423nm,1.4s
N52A McGinn's Farm, 28.78 31 P P **17 06 09.5 -2.4**
baz=220,SNR=7.0
SPMN Marine on St. 28.79 12 P P **17 06 10.0 -1.8**
baz=196,SNR=15
SPMN S S **17 11 01.3 +1.4**
baz=196
SPMN Marine on St. 28.79 12 P P **17 06 09.9 -1.8**
SPMN IAmb IAmb 17 06 23.0
comp=Z,1µm,1.9s
SPMN IAMs_20 IAMs_20 17 18 27.6
comp=Z,109µm,19.0s
K47A Vermontville 28.79 25 P P **17 06 10.3 -1.6**
baz=213,SNR=22
P55A Reedsville 28.80 35 P P **17 06 10.5 -1.6**
baz=225,SNR=76
U61A Possum Corner 28.82 44 P P **17 06 12.0 -0.2**
baz=235
U61A Possum Corner 28.82 44 P P **17 06 11.8 -0.4**
YHH Holmes Hill 28.82 345 P P **17 06 12.5 0.0**
YNE Yellowstone No 28.83 346 P P **17 06 12.1 -0.4**
Q56A Snyder Ridge, 28.84 37 P P **17 06 11.7 -0.6**
baz=227,SNR=55
F33A 5 Mile Ranch, 28.86 7 P P **17 06 09.6 -2.8**
YHB Horse Butte 28.87 345 P P **17 06 13.7 +0.9**
MCWV Mont Chateau 28.90 35 P P **17 06 11.7 -1.2**
baz=225
MCWV Mont Chateau 28.90 35 P P **17 06 11.1 -1.8**

R58B Mineral 28.90 40 P P **17 06 11.9 -1.0**
baz=230,SNR=27
R58B Mineral 28.90 40 P P **17 06 11.1 -1.7**
J45A Montague 28.92 22 P P **17 06 11.1 -1.9**
baz=209
J45A Montague 28.92 22 IAMs_20 IAMs_20 17 19 01.1
comp=Z,176µm,22.0s
M51A Elyria 28.94 30 P P **17 06 10.6 -2.6**
baz=219,SNR=18
YHL Hebgen Lake 28.96 345 P P **17 06 14.5 +0.8**
GARC Garzon, Huila 28.98 118 *e*P P **17 06 16.4 +2.3**
O54A Avella 28.99 34 P P **17 06 12.1 -1.5**
baz=223,SNR=28
O54A Avella 28.99 34 P P **17 06 11.3 -2.4**
O54A IAmb IAmb 17 07 04.9
comp=Z,448nm,1.3s
QLMT Earthquake Lak 29.01 344 P P **17 06 15.1 +1.1**
PUAC Puerto Asis, P 29.01 122 *e*P P **17 06 16.3 +2.2**
R58A Rapidan 29.04 39 P P **17 06 13.1 -1.0**
baz=230,SNR=48
AAM Ann Arbor 29.05 27 P P **17 06 12.2 -1.9**
AAM pmax pmax
comp=Z,465nm,0.9s
AAM MLR MLR
comp=Z,18µm,21.0s
AAM Ann Arbor 29.05 27 P P **17 06 13.0 -1.1**
baz=215
AAM Ann Arbor 29.05 27 P P **17 06 12.2 -1.9**
AAM IAmb IAmb 17 06 17.0
comp=Z,465nm,0.8s
CVER Cruz Verde, Cu 29.05 113 *e*P P **17 06 18.5 +3.5**
T60A Surry 29.10 42 P P **17 06 14.0 -0.7**
baz=233,SNR=10
T60A Surry 29.10 42 P P **17 06 14.1 -0.7**
T60A IAmb IAmb 17 07 11.2
comp=Z,396nm,0.9s
PAMC Pamplona, Colo 29.11 106 *e*P P **17 06 16.6 +1.1**
MFID Camas Ranch 29.12 337 P P **17 06 15.1 +0.2**
MFID IAMs_20 IAMs_20 17 18 47.4
comp=Z,123µm,18.0s
S59A Mechanicsville 29.13 41 P P **17 06 14.5 -0.5**
baz=232
HOPS Hopland Field 29.17 323 P P **17 06 16.3 +1.1**
HOPS IAMs_20 IAMs_20 17 17 29.7
comp=Z,142µm,18.0s
N53A Lisbon 29.20 32 P P **17 06 13.5 -2.1**
baz=222,SNR=54
N53A Lisbon 29.20 32 P P **17 06 13.0 -2.6**
L50A Kingsville 29.21 28 P P **17 06 13.3 -2.3**
baz=217,SNR=34
K48A Perry 29.26 26 P P **17 06 14.1 -1.9**
baz=214,SNR=16
F36A Milaca 29.27 10 P P **17 06 13.8 -2.3**
F36A IAMs_20 IAMs_20 17 18 08.4
comp=Z,84µm,21.0s
Q57A Strasburg 29.28 37 P P **17 06 15.9 -0.3**
baz=228,SNR=63
CHIC Chingaza 29.30 112 *e*P P **17 06 19.9 +2.8**
RUSC La Rusia 29.33 109 *e*P P 17 06 11.5 -6.0
RUSC La Rusia 29.33 109 P P **17 06 17.4 -0.1**
J47A Sunmer 29.34 24 P P **17 06 15.1 -1.6**
baz=212,SNR=19
J47A Sunmer 29.34 24 P P **17 06 15.0 -1.8**
J47A IAmb IAmb 17 07 13.7
comp=Z,581nm,1.1s
E28A Huff 29.34 0 P P **17 06 15.3 -1.4**
E28A IAmb IAmb 17 06 21.5
comp=Z,308nm,0.8s
P56A Dayton Farm, R 29.35 36 P P **17 06 16.4 -0.5**
baz=227
CBN Corbin Frederi 29.36 40 P P **17 06 16.6 -0.3**
baz=231
CBN Corbin Frederi 29.36 40 P P **17 06 16.0 -1.0**
CBN IAmb IAmb 17 07 08.1
comp=Z,299nm,1.1s
O03E Paynes Creek 29.36 326 P P **17 06 17.8 +0.7**
baz=135
O03E S S **17 11 14.5 +5.2**
baz=135
H43A Windswept, Lux 29.37 19 P P **17 06 15.7 -1.2**
H43A IAmb IAmb 17 07 18.6
comp=Z,906nm,1.8s
H43A IAMs_20 IAMs_20 17 19 08.1
comp=Z,131µm,18.0s
MCMT McKenzie Canyo 29.39 342 P P **17 06 18.0 +0.5**
G40A Rib Lake 29.41 15 P P **17 06 15.5 -1.9**
G40A IAmb IAmb 17 07 12.0
comp=Z,755nm,1.9s
SDD Santo Domingo 29.43 83 P P **17 06 17.0 -0.8**
WVOR Wild Horse Val 29.44 333 P P **17 06 18.1 +0.3**
WVOR pmax pmax
comp=Z,262nm,1.5s
WVOR MLR MLR
comp=Z,94µm,20.0s
WVOR Wild Horse Val 29.44 333 P P **17 06 18.1 +0.3**
WVOR IAMs_20 IAMs_20 17 19 49.4
comp=Z,94µm,20.0s
S60A Water View 29.50 41 P P **17 06 17.8 -0.4**
baz=233,SNR=11
I45A Fountain 29.50 22 P P **17 06 17.0 -1.1**
baz=209
I45A Fountain 29.50 22 P P **17 06 16.7 -1.4**
I45A IAmb IAmb 17 07 19.8
comp=Z,345nm,0.9s
I45A IAMs_20 IAMs_20 17 19 18.4
comp=Z,162µm,22.0s
M52A Chesterland 29.50 31 P P **17 06 16.4 -1.7**
baz=220,SNR=29
M52A Chesterland 29.50 31 P P **17 06 15.4 -2.8**
M52A IAmb IAmb 17 07 21.8
comp=Z,737nm,1.2s
GCMT Greycliff 29.50 347 P P **17 06 16.9 -1.4**
R59A King George, V 29.51 40 P P **17 06 18.3 0.0**
baz=231,SNR=8.3
K49A Clarkson 29.52 26 P P **17 06 17.0 -1.4**
baz=215
VILC Villavicencio, 29.57 113 *e*P P **17 06 21.5 +2.3**
O55A Ligonier 29.58 35 P P **17 06 18.0 -1.0**
baz=225
Q58A Fox Den Farm, 29.64 38 P P **17 06 19.0 -0.4**
baz=229
I46A Reed City 29.70 23 P P **17 06 18.2 -1.8**
baz=211
N54A Moraine State 29.75 33 P P **17 06 18.7 -1.7**
baz=223
N54A Moraine State 29.75 33 P P **17 06 17.9 -2.5**
N54A IAmb IAmb 17 07 12.9
comp=Z,616nm,1.5s
M53A WI Miller and 29.76 31 P P **17 06 18.3 -2.1**
baz=221
MOD Modoc Plateau 29.79 330 P P **17 06 21.7 +0.7**
MOD IAmb IAmb 17 06 26.5
comp=Z,294nm,1.0s
MOD IAMs_20 IAMs_20 17 19 01.5
comp=Z,84µm,18.0s
LAO LASA Array 29.80 352 P P **17 06 20.3 -0.5**
baz=169
LAO LASA Array 29.80 352 P P **17 06 19.6 -1.2**
P57A Homestead Farm 29.81 37 P P **17 06 21.0 0.0**
baz=228
P57A Homestead Farm 29.81 37 P P **17 06 19.7 -1.2**
P57A IAmb IAmb 17 07 15.7
comp=Z,715nm,1.6s
J48A Bridge Port 29.81 25 P P **17 06 19.3 -1.5**
baz=214
J48A Bridge Port 29.81 25 P P **17 06 18.7 -2.2**
J48A IAmb IAmb 17 07 14.1
comp=Z,729nm,1.4s
J48A IAMs_20 IAMs_20 17 20 20.6
comp=Z,129µm,21.0s
DLMT Dillon 29.81 343 P P **17 06 21.4 +0.3**
DLMT IAmb IAmb 17 06 24.7
comp=Z,248nm,1.1s
DLMT IAMs_20 IAMs_20 17 19 02.0
comp=Z,119µm,19.0s
O02D Mt. Diablo Mer 29.82 325 P P **17 06 21.4 +0.3**
baz=134
K50A Casco 29.88 27 P P **17 06 19.6 -1.9**
baz=217
K50A Casco 29.88 27 P P **17 06 18.7 -2.8**
K50A IAmb IAmb 17 06 24.1
comp=Z,454nm,0.8s
R60A Leonardtown, M 29.89 40 P P **17 06 21.5 -0.1**
baz=232
DR12 Loma Pena Alta 29.92 82 P P **17 06 21.4 -0.8**
WDC Whiskeytown Da 29.96 326 P P **17 06 21.4 -0.9**

WDC pmax pmax
comp=Z,193nm,2.0s
WDC MLR MLR
comp=Z,41µm,21.0s
WDC Whiskeytown Da 29.96 326 P P **17 06 21.4 -0.9**
O56A Blue Knob Stat 30.03 35 P P **17 06 21.7 -1.2**
baz=226
O56A Blue Knob Stat 30.03 35 P P **17 06 21.0 -1.9**
O56A IAmb IAmb 17 06 26.2
comp=Z,398nm,1.1s
D32A Dogwood Acres, 30.07 5 P P **17 06 20.9 -2.2**
D32A IAMs_20 IAMs_20 17 19 30.0
comp=Z,119µm,18.0s
H45A Beulah 30.08 21 P P **17 06 21.7 -1.6**
baz=209
S61A Accomac 30.11 42 P P **17 06 23.9 +0.3**
baz=234
I47A Gladwin 30.12 24 P P **17 06 22.2 -1.4**
baz=212
I47A Gladwin 30.12 24 P P **17 06 21.5 -2.2**
I47A IAmb IAmb 17 07 23.6
comp=Z,533nm,1.1s
I47A IAMs_20 IAMs_20 17 20 08.8
comp=Z,146µm,18.0s
J08A Circle Bar Ran 30.12 334 P P **17 06 24.6 +0.7**
J08A IAmb IAmb 17 06 27.9
comp=Z,233nm,1.0s
J08A IAMs_20 IAMs_20 17 19 25.2
comp=Z,129µm,18.0s
J49A Marlette 30.13 26 P P **17 06 21.9 -1.8**
baz=215
N55A Marion Center 30.16 34 P P **17 06 22.6 -1.4**
baz=225
ALLY Alegheny Colle 30.18 32 P P **17 06 22.2 -2.0**
ALLY IAmb IAmb 17 06 35.5
comp=Z,313nm,1.1s
LRM Limekiln Ridge 30.20 344 P P **17 06 24.6 +0.1**
Q59A Harwood 30.21 39 P P **17 06 23.6 -0.9**
baz=231
P58A Pank, Wackersv 30.23 38 P P **17 06 24.2 -0.4**
baz=229
TAMC Tame, Arauca 30.29 107 *e*P P **17 06 27.3 +1.8**
TAMC Tame, Arauca 30.29 107 *e*P P 17 06 31.6 +6.1
H46A Fife Lake 30.30 22 P P **17 06 23.5 -1.7**
baz=210
M54A Oil Creek Stat 30.32 32 P P **17 06 23.7 -1.7**
baz=223
M54A Oil Creek Stat 30.32 32 P P **17 06 23.3 -2.1**
M54A IAmb IAmb 17 06 28.2
comp=Z,340nm,1.1s
N02D Trinity Center 30.33 326 P P **17 06 25.0 -0.7**
baz=135
N02D S S 17 11 36.2 +12
baz=135
K51A Iona Station 30.34 29 P P **17 06 23.2 -2.4**
baz=219
L53A Girard 30.35 31 P P **17 06 23.9 -1.8**
baz=222
E38A The Farm, Brul 30.36 13 P P **17 06 23.7 -2.0**
E38A IAmb IAmb 17 07 30.1
comp=Z,224nm,0.9s
E38A IAMs_20 IAMs_20 17 19 26.3
comp=Z,124µm,19.0s
F42A Maple Grove Fa 30.43 18 IAMs_20 IAMs_20 17 19 38.0
comp=Z,115µm,18.0s
SDMD Soldier's Deli 30.45 38 P P **17 06 25.4 -1.2**
M04C Macdoel 30.46 328 P P **17 06 27.8 +0.9**
baz=137
M04C S S **17 11 32.2 +5.6**
baz=137
SDV Santo Domingo 30.49 102 P P **17 06 27.9 +0.4**
comp=Z,61nm,0.8s,baz=300,slow=4.2,SNR=90
SDV LR LR 17 18 34.6
comp=Z,53µm,20.4s,baz=324,slow=36
O57A Amberson 30.51 36 P P **17 06 26.7 -0.4**
baz=228
G45A Suttons Bay 30.58 21 P P **17 06 26.0 -1.6**
baz=209
G45A Suttons Bay 30.58 21 P P **17 06 25.8 -1.9**
G45A IAmb IAmb 17 06 33.1
comp=Z,214nm,0.7s
G45A IAMs_20 IAMs_20 17 19 59.0
comp=Z,145µm,19.0s
I48A Sherman Twp 30.58 25 P P **17 06 26.1 -1.5**
baz=213
ERPA Erie 30.61 31 P P **17 06 25.9 -2.1**
baz=222
ERPA Erie 30.61 31 P P **17 06 25.9 -2.1**
ERPA IAMs_20 IAMs_20 17 20 53.6
comp=Z,83µm,21.0s
N56A West Decatur 30.62 35 P P **17 06 27.5 -0.7**
baz=226
MDND Maddock 30.63 2 P P **17 06 27.1 -1.0**
baz=182
MDND Maddock 30.63 2 P P **17 06 26.7 -1.5**
PTLC Puerto Leguiza 30.67 121 *e*P P **17 06 26.6 -2.3**
R61A Willards 30.70 41 P P **17 06 28.4 -0.4**
baz=234
M02C Callahan 30.70 326 P P **17 06 29.3 +0.4**
baz=135
M02C S S **17 11 34.0 +3.6**
baz=135
K05A Summer Lake 30.71 330 P P **17 06 29.9 +0.9**
K05A IAMs_20 IAMs_20 17 21 08.0
comp=Z,97µm,20.0s
H47A Mio 30.73 24 P P **17 06 27.4 -1.7**
baz=212
I49A Point Hope 30.73 26 P P **17 06 29.5 +0.5**
I49A IAmb IAmb 17 07 26.2
comp=Z,706nm,1.6s
K52A Tillsonburg 30.75 30 P P **17 06 26.9 -2.3**
baz=220
M55A Ridgway 30.76 33 P P **17 06 27.7 -1.6**
baz=224
GLMI Grayling 30.77 23 P P **17 06 28.0 -1.3**
baz=211
GLMI Grayling 30.77 23 P P **17 06 27.9 -1.5**
Q60A Greensboro 30.79 40 P P **17 06 29.3 -0.3**
baz=232
P59A Jarrettsville 30.82 38 P P **17 06 29.2 -0.7**
baz=230
O58A Lewisberry 30.86 37 P P **17 06 29.2 -1.0**
baz=229
YBH Yreka Blue Hor 30.87 327 P P **17 06 30.2 -0.3**
comp=Z,38nm,0.8s,baz=109,slow=5.2,SNR=64
YBH LR LR 17 18 28.7
comp=Z,44µm,21.0s,baz=160,slow=35
YBH Yreka Blue Hor 30.87 327 P P **17 06 29.7 -0.7**
PCDR Punta Cana, DR 30.88 82 *i*P P **17 06 28.7 -1.9**
BMO Blue Mountains 30.90 337 P P **17 06 29.9 -0.7**
BMO pmax pmax
comp=Z,232nm,1.4s
BMO MLR MLR
comp=Z,224µm,18.0s
BMO Blue Mountains 30.90 337 P P **17 06 29.9 -0.7**
PTGC Puerto Gaitan, 30.92 111 *e*P P 17 06 36.6 +5.6
N57A Milroy 30.92 36 P P **17 06 29.8 -1.0**
baz=227
JCC Jacoby Creek, 30.94 324 P P **17 06 31.7 +0.8**
JCC IAMs_20 IAMs_20 17 18 22.2
comp=Z,89µm,19.0s
L04D Klamath Falls 31.02 328 P P **17 06 31.9 +0.1**
baz=137
L54A Sinclairville 31.03 32 P P **17 06 29.4 -2.3**
baz=223
Q61A Milford 31.04 41 P P **17 06 31.6 -0.1**
baz=233
K04D Chiloquin, OR 31.04 329 P P **17 06 32.7 +0.7**
baz=138
PAGS Pennsylvania G 31.04 37 P P **17 06 29.9 -1.9**
PAGS IAmb IAmb 17 06 33.5
comp=Z,219nm,1.0s
M56A Emporium 31.08 34 P P **17 06 31.2 -1.0**
baz=225
M56A Emporium 31.08 34 P P **17 06 30.9 -1.3**
M56A IAmb IAmb 17 06 35.0
comp=Z,270nm,0.9s
G46A Petoskey 31.10 22 P P **17 06 30.4 -1.8**
baz=210
MVL Millersville 31.11 38 P P **17 06 31.2 -1.2**
I07A Izee 31.15 333 P P **17 06 32.5 -0.4**
I07A IAMs_20 IAMs_20 17 19 49.4
comp=Z,87µm,19.0s
H48A Harrisville 31.16 24 P P **17 06 31.0 -1.8**
baz=214
H48A Harrisville 31.16 24 P P **17 06 31.5 -1.2**
H48A IAmb IAmb 17 06 44.4

comp=Z,189nm,0.6s
F45A CMU Biological 31.19 21 P P 17 06 31.0 -2.0
baz=209
J52A Paris 31.22 29 P P 17 06 30.8 -2.6
baz=220
J05D Fort Rock, OR 31.30 331 P P 17 06 35.1 +0.9
baz=140
J05D S S 17 11 47.4 +7.7
baz=140
E43A Lone Tree Farm 31.32 19 P P 17 06 32.2 -2.0
E43A IAMs_20 IAMs_20 17 20 17.6
comp=Z,127µm,18.0s
AGMN Agassiz Nation 31.33 6 P P 17 06 33.4 -0.9
baz=189
AGMN Agassiz Nation 31.33 6 P P 17 06 32.2 -2.1
AGMN IAmb IAmb 17 06 37.6
comp=Z,252nm,0.8s
G47A Hillman 31.35 23 P P 17 06 32.9 -1.5
baz=212
DGMT Dagmar 31.36 356 P P 17 06 34.5 -0.1
baz=174
DGMT Dagmar 31.36 356 P P 17 06 33.7 -0.9
DGMT IAmb IAmb 17 06 40.0
comp=Z,247nm,0.8s
DGMT Dagmar 31.36 356 IAMs_20 IAMs_20 17 21 07.9
comp=Z,83µm,21.0s
I51A Listowel 31.41 28 P P 17 06 33.2 -1.7
baz=218
O59A Robesonia 31.41 38 P P 17 06 34.5 -0.6
baz=230
P60A Greenville 31.42 39 P P 17 06 34.1 -1.0
baz=231
P60A Greenville 31.42 39 P P 17 06 34.0 -1.2
L55A Hinsdale 31.44 33 P P 17 06 34.0 -1.4
baz=224
N58A Sunbury 31.45 36 P P 17 06 34.4 -1.0
baz=228
N58A Sunbury 31.45 36 P P 17 06 33.4 -2.0
N58A IAmb IAmb 17 06 37.1
comp=Z,261nm,1.1s
D41A Chassel 31.50 16 P P 17 06 34.2 -1.6
D41A IAMs_20 IAMs_20 17 20 01.4
comp=Z,95µm,20.0s
WVNY West Valley, N 31.52 32 P P 17 06 33.5 -2.5
WVNY IAmb IAmb 17 06 38.6
comp=Z,298nm,0.9s
WVNY IAMs_20 IAMs_20 17 21 35.7
comp=Z,95µm,21.0s
MSO Missoula 31.53 343 P P 17 06 36.3 +0.1
baz=155
MSO Missoula 31.53 343 P P 17 06 35.8 -0.4
MSO IAmb IAmb 17 06 38.1
comp=Z,634nm,1.8s
PINE Pine Mountain 31.55 332 P P 17 06 36.1 -0.4
PINE IAMs_20 IAMs_20 17 20 55.3
comp=Z,142µm,21.0s
M57A Sunshine Farm, 31.55 35 P P 17 06 35.5 -0.9
baz=227
M57A Sunshine Farm, 31.55 35 P P 17 06 34.3 -2.0
M57A IAmb IAmb 17 06 38.9
comp=Z,312nm,0.9s
PSUB Penn St. - Bra 31.60 39 P P 17 06 36.0 -0.8
K54A Basiliko Farm, 31.62 32 P P 17 06 35.1 -1.8
baz=223
HUMO Hull Mountain 31.63 328 P P 17 06 37.0 0.0
EYMN Ely 31.65 12 P P 17 06 35.6 -1.5
baz=197
EYMN S S 17 11 45.8 +0.9
baz=197
EYMN Ely 31.65 12 P P 17 06 35.4 -1.8
EYMN Ely 31.65 12 IAMs_20 IAMs_20 17 19 45.5
comp=Z,92µm,20.0s
EGMT Eagleton 31.66 349 P P 17 06 37.7 +0.5
baz=163
EGMT Eagleton 31.66 349 P P 17 06 37.2 0.0
EGMT IAmb IAmb 17 07 20.7
comp=Z,458nm,1.4s
EGMT IAMs_20 IAMs_20 17 20 24.3
comp=Z,150µm,21.0s
J04D Umpqua Nationa 31.68 330 P P 17 06 38.6 +1.0
baz=138
F10A Beach Ranch, E 31.83 338 P P 17 06 38.5 -0.3
F10A IAMs_20 IAMs_20 17 18 35.9
comp=Z,80µm,20.0s
P61A Hammonton 31.85 40 P P 17 06 38.4 -0.5
baz=233
L56A Greenwood 31.87 34 P P 17 06 37.9 -1.2
baz=226
O60A Telford 31.87 38 P P 17 06 38.8 -0.3
baz=231
E44A Grand Marais A 31.88 20 P P 17 06 37.5 -1.6
baz=208
E44A Grand Marais A 31.88 20 P P 17 06 37.1 -2.0
E44A IAmb IAmb 17 07 44.9
comp=Z,501nm,1.4s
E44A IAMs_20 IAMs_20 17 20 36.4
comp=Z,131µm,19.0s
G08A Pilot Rock 31.91 335 P P 17 06 39.4 -0.2
G08A IAmb IAmb 17 06 44.2
comp=Z,276nm,1.0s
M58A Price's Panora 31.95 36 P P 17 06 38.1 -1.7
baz=228
I52A Shelburne 32.00 29 P P 17 06 38.1 -2.1
baz=219
K55A Perry 32.02 32 P P 17 06 38.7 -1.8
baz=224
N59A State Game Lan 32.04 37 P P 17 06 39.9 -0.7
baz=230
N59A State Game Lan 32.04 37 P P 17 06 39.0 -1.6
K02D Willamette Mer 32.06 327 P P 17 06 40.9 0.0
baz=135
K02D S S 17 11 55.2 +3.7
baz=135
LUPA Lehigh Univers 32.07 38 P P 17 06 39.9 -1.0
MPR Mayaguez 32.07 83 *i* P P 17 06 38.7 -2.5
I53A Kortright Cn E 32.08 30 P P 17 06 38.6 -2.3
baz=220
AGPR Aguadilla, PR 32.09 82 P P 17 06 40.9 -0.3
AGPR Aguadilla, PR 32.09 82 *i* P P 17 06 41.2 -0.1
MMNY Mt. Morris Dam 32.11 33 P P 17 06 39.4 -1.8
MMNY IAmb IAmb 17 06 42.2
comp=Z,233nm,1.0s
MMNY IAMs_20 IAMs_20 17 22 04.4
comp=Z,119µm,20.0s
J54A Appleton 32.13 31 P P 17 06 39.2 -2.1
baz=223
J54A Appleton 32.13 31 P P 17 06 38.4 -2.9
J54A IAmb IAmb 17 06 43.6
comp=Z,161nm,0.8s
J54A IAMs_20 IAMs_20 17 21 51.0
comp=Z,86µm,21.0s
MEDO Medina 32.14 32 P P 17 06 39.4 -2.1
MEDO IAmb IAmb 17 06 43.8
comp=Z,249nm,0.9s
MEDO IAMs_20 IAMs_20 17 22 00.3
comp=Z,88µm,18.0s
I05D Terrebonne, OR 32.16 332 P P 17 06 41.7 0.0
baz=141
L57A Andrews Acres 32.16 35 P P 17 06 40.1 -1.6
baz=227
E46A Sault Ste Mari 32.20 22 P P 17 06 40.2 -1.7
E46A IAMs_20 IAMs_20 17 20 59.9
comp=Z,138µm,18.0s
I04A Tendick Farm, 32.24 330 P P 17 06 42.1 -0.2
baz=138
I04A S S 17 11 56.8 +2.5
baz=138
O61A Allentown 32.25 39 P P 17 06 41.7 -0.7
baz=232
F48A Evansville 32.37 24 P P 17 06 42.1 -1.3
baz=214
F48A S S 17 11 55.0 -1.1
baz=214
K56A Middlesex 32.39 33 P P 17 06 42.3 -1.3
baz=225
N60A Cedar Hill Far 32.40 38 P P 17 06 43.1 -0.7
baz=231
N60A S S 17 11 58.3 +1.5
baz=231
AOPR Arecibo Observ 32.43 83 P P 17 06 43.7 -0.7
KSPA Keystone Colle 32.46 36 P P 17 06 42.5 -1.8
JTMT Jette 32.46 343 P P 17 06 44.0 -0.4
JTMT IAmb IAmb 17 06 46.0
comp=Z,429nm,1.7s
J01E Myrtle Point 32.53 328 P P 17 06 45.8 +1.0
baz=135
J01E S S 17 12 03.6 +5.0
baz=135
J55A Hilton 32.54 32 P P 17 06 42.6 -2.3
baz=224
J55A Hilton 32.54 32 P P 17 06 42.4 -2.5
J55A IAMs_20 IAMs_20 17 22 15.7
comp=Z,96µm,19.0s
F49A Sandfield 32.54 25 P P 17 06 43.2 -1.8
baz=215
G06A Carlson Farm, 32.55 334 P P 17 06 45.5 +0.4
G06A IAmb IAmb 17 07 47.9
comp=Z,351nm,1.8s
G06A IAMs_20 IAMs_20 17 20 44.6
comp=Z,88µm,20.0s
H52A Wyevale 32.57 28 P P 17 06 43.1 -2.1
baz=219
OBIP Obispado Ponce 32.59 83 P P 17 06 45.2 -0.5
BRNJ Basking Ridge 32.60 39 P P 17 06 44.2 -1.3
BRNJ IAmb IAmb 17 06 57.8
comp=Z,237nm,1.1s
E09A Wood Farm, Sta 32.62 338 P P 17 06 44.7 -0.9
I03D Drain, OR 32.62 329 P P 17 06 46.3 +0.6
baz=137
I03D S S 17 12 01.8 +1.8
baz=137
M59A Waymart 32.64 37 P P 17 06 45.2 -0.7
baz=229
E47A Iron Bridge 32.65 23 P P 17 06 44.7 -1.1
baz=212
ICMP Isla Caja de M 32.68 83 P P 17 06 45.8 -0.6
ICMP IAmb IAmb 17 07 14.3
comp=Z,558nm,1.4s
L58A Harry Jones Me 32.74 36 P P 17 06 45.6 -1.1
baz=228
D46A Sault St. Mari 32.74 21 P P 17 06 45.0 -1.8
baz=210
ATAH Atahualpa 32.76 136 P P 17 06 49.6 +1.9
comp=Z,60nm,1.0s,baz=318,slow=6.5,SNR=22
ATAH LR LR 17 17 25.0
comp=Z,47µm,20.5s,baz=321,slow=31
BINY Binghamton 32.77 35 P P 17 06 45.7 -1.3
baz=228
BINY Binghamton 32.77 35 P P 17 06 45.2 -1.8
F07A Phinny Hill Vi 32.79 335 P P 17 06 47.2 +0.1
F07A IAMs_20 IAMs_20 17 21 26.7
comp=Z,144µm,18.0s
N61A South Mountain 32.80 39 P P 17 06 46.8 -0.5
baz=232
H04A Detroit Lake 32.81 331 P P 17 06 47.7 +0.3
H04A IAmb IAmb 17 06 52.2
comp=Z,295nm,1.0s
H04A IAMs_20 IAMs_20 17 20 08.5
comp=Z,87µm,22.0s
ODNJ Ogdensburg 32.83 38 P P 17 06 46.3 -1.2
K57A Scipio Center 32.84 34 P P 17 06 46.4 -1.2
baz=226
G05D Wamic, OR 32.85 333 P P 17 06 48.8 +1.1
baz=142
BAUV El Baul 32.91 100 *e*P P 17 06 49.1 +0.6
H04D Lebanon 32.94 331 P P 17 06 48.2 -0.3
baz=139
E08A Dider Farm, El 32.94 337 P P 17 06 48.0 -0.5
M60A Port Jervis 32.97 38 P P 17 06 47.9 -0.8
baz=231
SADO Sadowa 33.01 29 P P 17 06 46.1 -2.9
SADO IAmb IAmb 17 06 51.0
comp=Z,188nm,0.9s
SADO IAMs_20 IAMs_20 17 21 41.3
comp=Z,71µm,20.0s
SJG San Juan 33.02 83 P P 17 06 47.4 -2.0
comp=Z,156nm,0.7s,baz=272,slow=5.7,SNR=49
SJG San Juan 33.02 83 *e*P P 17 06 41.6 -7.9
SJG San Juan 33.02 83 P P 17 06 48.2 -1.3
SJG pmax pmax
comp=Z,249nm,0.9s
SJG San Juan 33.02 83 P P 17 06 48.1 -1.3
SJG IAmb IAmb 17 06 52.3
comp=Z,249nm,0.9s
CPNY Central Park 33.03 39 P P 17 06 48.0 -1.2
CPNY IAmb IAmb 17 06 52.9
comp=Z,364nm,1.5s
J56A Wolcott 33.04 33 P P 17 06 48.0 -1.3
baz=225
J56A Wolcott 33.04 33 P P 17 06 47.1 -2.2
J56A IAmb IAmb 17 06 51.9
comp=Z,231nm,0.9s
J56A IAMs_20 IAMs_20 17 22 33.9
comp=Z,97µm,22.0s
HAWA Hanford 33.04 336 P P 17 06 48.5 -0.9
GCPR Guaynabo City 33.07 83 P P 17 06 49.7 -0.2
E48A Lockeyer 33.09 24 P P 17 06 48.5 -1.2
baz=214
H53A Bobcaygeon 33.12 30 P P 17 06 48.5 -1.6
baz=221
PDPR Patillas Dam, 33.15 83 P P 17 06 50.1 -0.4
I02D Swisshome 33.17 329 P P 17 06 51.2 +0.9
baz=136
I02D S S 17 12 13.8 +5.3
baz=136
PAL Palisades 33.19 39 P P 17 06 49.2 -1.5
PAL pmax pmax
comp=Z,1µm,1.9s
PAL MLR MLR
comp=Z,39µm,22.0s
PAL Palisades 33.19 39 P P 17 06 49.4 -1.3
baz=232
PAL Palisades 33.19 39 P P 17 06 49.2 -1.5
D47A Chapleau 33.22 22 P P 17 06 49.4 -1.5
baz=212
COR Corvallis 33.26 330 P P 17 06 52.5 +1.3
COR pmax pmax
comp=Z,299nm,1.2s
COR MLR MLR
comp=Z,135µm,18.0s
COR Corvallis 33.26 330 P P 17 06 52.5 +1.3
COR IAmb IAmb 17 06 57.0
comp=Z,299nm,1.1s
COR Corvallis 33.26 330 IAMs_20 IAMs_20 17 21 50.6
comp=Z,135µm,18.0s
ULM Lac du Bonnet 33.26 6 P P 17 06 48.6 -2.5
comp=Z,129nm,0.9s,baz=191,slow=9.4,SNR=94
ULM LR LR 17 23 05.7
comp=Z,41µm,18.1s,baz=188,slow=41
ULM Lac du Bonnet 33.26 6 P P 17 06 48.6 -2.5
ULM pmax pmax
comp=Z,145nm,0.9s
ULM Lac du Bonnet 33.26 6 P P 17 06 48.6 -2.5
L59A Walton 33.28 36 P P 17 06 50.9 -0.6
baz=229
L59A Walton 33.28 36 P P 17 06 50.0 -1.5
L59A IAmb IAmb 17 06 53.6
comp=Z,457nm,1.1s
CBYP Canovanas 33.29 83 P P 17 06 50.6 -1.3
I55A Frankford 33.29 31 P P 17 06 49.9 -1.6
baz=223
HUMP Col San Antoni 33.30 83 P P 17 06 50.9 -1.1
E07A Sunnyside 33.31 336 P P 17 06 51.5 -0.2
K58A Earlville 33.33 35 P P 17 06 50.6 -1.3
baz=228
K58A Earlville 33.33 35 P P 17 06 49.8 -2.1
K58A IAmb IAmb 17 06 55.0
comp=Z,320nm,0.9s
D08A Wollman Farm, 33.37 337 P P 17 06 51.1 -1.0
F05D White Salmon 33.42 333 P P 17 06 53.6 +1.0
baz=142
F05D S S 17 12 19.1 +6.6
baz=142
PECO Prince Edward 33.43 32 P P 17 06 50.3 -2.4
PECO IAmb IAmb 17 06 55.1
comp=Z,279nm,0.9s
PECO IAMs_20 IAMs_20 17 22 50.5
comp=Z,86µm,18.0s
M61A Granite Spring 33.47 38 P P 17 06 52.6 -0.5
baz=232
M61A S S 17 12 15.2 +1.9
baz=232
G53A Haliburton 33.52 29 P P 17 06 51.9 -1.6
baz=221
DELO Deloro Mine 33.54 31 P P 17 06 50.7 -3.0
DELO IAmb IAmb 17 06 56.0
comp=Z,187nm,0.9s
DELO IAMs_20 IAMs_20 17 22 11.4
comp=Z,85µm,22.0s
F51A Arnstein 33.56 27 P P 17 06 52.3 -1.5
baz=218
WALA Waterton Lakes 33.56 344 P P 17 06 54.0 0.0
J57A Williamstown 33.58 34 P P 17 06 52.6 -1.4
baz=226
J57A Williamstown 33.58 34 P P 17 06 51.5 -2.5
J57A IAmb IAmb 17 06 56.7
comp=Z,392nm,0.9s
J57A IAMs_20 IAMs_20 17 23 00.4
comp=Z,120µm,22.0s
MTP Monte Pirata 33.59 83 P P 17 06 53.5 -0.9
E50A Wahnapitae 33.61 25 P P 17 06 52.9 -1.4
baz=216
E50A S S 17 12 16.9 +1.5
baz=216
L60A Shokan 33.62 37 P P 17 06 53.5 -1.0
baz=231
L60A S S 17 12 17.4 +1.7
baz=231
WSPT Westport, CT 33.64 39 P P 17 06 53.1 -1.5
WSPT IAmb IAmb 17 06 56.5
comp=Z,343nm,1.0s
G03D McMinnville, O 33.71 331 P P 17 06 55.4 +0.3
baz=138
F52A Sundridge 33.72 27 P P 17 06 53.4 -1.8
baz=219
C09A Chrisman Ranch 33.77 339 P P 17 06 55.4 -0.2
C09A IAMs_20 IAMs_20 17 20 59.1
comp=Z,118µm,21.0s
K59A Cooperstown 33.77 35 P P 17 06 54.7 -1.1
baz=229
H55A Tweed 33.78 31 P P 17 06 54.2 -1.6
baz=224
NEW Newport 33.78 340 P P 17 06 55.8 0.0
comp=Z,36nm,0.8s,baz=149,slow=9.4,SNR=53
NEW Newport 33.78 340 P P 17 06 55.7 -0.1
NEW pmax pmax
comp=Z,294nm,1.8s
NEW MLR MLR
comp=Z,123µm,21.0s
NEW Newport 33.78 340 P P 17 06 55.5 -0.3
baz=151
NEW S S 17 12 18.1 0.0
baz=151
NEW Newport 33.78 340 P P 17 06 55.6 -0.1
NEW Newport 33.78 340 IAMs_20 IAMs_20 17 21 15.4
comp=Z,123µm,21.0s
D48A Paudash Townsh 33.80 24 P P 17 06 54.4 -1.5
baz=214
CUPR Culebra, Puert 33.83 83 P P 17 06 55.9 -0.6
CUPR IAmb IAmb 17 07 49.3
comp=Z,362nm,1.4s
F04A Amboy 33.88 333 P P 17 06 56.6 0.0
F04A IAMs_20 IAMs_20 17 21 02.7
comp=Z,70µm,22.0s
KSCT Kent School, K 33.89 38 P P 17 06 55.4 -1.4
KSCT IAmb IAmb 17 07 09.8
comp=Z,336nm,1.3s
J58A Remsen 33.93 34 P P 17 06 55.5 -1.6
baz=228
J58A Remsen 33.93 34 P P 17 06 55.0 -2.0
YLE Yale 33.96 39 P P 17 06 56.3 -1.1
YLE IAmb IAmb 17 07 02.3
comp=Z,195nm,0.9s
G54A Lake Saint Pet 33.97 29 P P 17 06 55.7 -1.7
baz=221
N63A Mattituck 34.02 40 P P 17 06 56.8 -1.1
baz=234
D49A Beulah Townshi 34.05 24 P P 17 06 56.6 -1.5
baz=214
M62A Hamden 34.07 39 P P 17 06 57.0 -1.3
baz=233
I57A Carthage 34.12 33 P P 17 06 57.5 -1.2
baz=226
L61A Hillsdale 1, H 34.14 37 P P 17 06 58.2 -0.7
baz=231
STVI Saint Thomas 34.14 82 P P 17 06 58.8 -0.4
STVI IAmb IAmb 17 07 02.5
comp=Z,302nm,1.1s
PLVO Plevna 34.19 31 P P 17 06 56.7 -2.6
PLVO IAmb IAmb 17 07 00.1
comp=Z,350nm,1.5s
PLVO IAMs_20 IAMs_20 17 23 08.4
comp=Z,67µm,18.0s
LTY Liberty 34.20 336 P P 17 06 59.7 +0.2
LTY IAmb IAmb 17 07 04.8
comp=Z,526nm,1.2s
K60A Five Rivers En 34.21 36 P P 17 06 58.5 -1.0
baz=230
E51A G1948 Merrick 34.22 27 P P 17 06 58.1 -1.4
baz=218
F04D Rainier, OR 34.25 332 P P 17 06 59.9 +0.1
baz=140
LON Longmire 34.26 334 P P 17 07 00.1 +0.1
LON pmax pmax
comp=Z,184nm,1.0s
LON MLR MLR
comp=Z,119µm,19.0s
LON Longmire 34.26 334 P P 17 07 00.1 +0.1
LON IAmb IAmb 17 07 05.2
comp=Z,184nm,1.0s
LON IAMs_20 IAMs_20 17 21 41.5
comp=Z,119µm,19.0s
H56A Elgin 34.27 32 P P 17 06 58.5 -1.5
baz=225
I58A Old Forge 34.32 34 P P 17 06 59.0 -1.5
baz=228
CDVI St. Croix 34.36 83 *e*P P 17 06 58.7 -2.4
CDVI St. Croix 34.36 83 *e* S 17 12 37.4 +10
CDVI St. Croix 34.36 83 P P 17 07 01.1 0.0
CDVI IAmb IAmb 17 07 59.2
comp=Z,352nm,0.9s
F03A Seaside 34.38 331 P P 17 07 03.0 +2.0
F03A IAmb IAmb 17 07 06.3
comp=Z,366nm,1.0s
F03A IAMs_20 IAMs_20 17 21 40.3
comp=Z,135µm,20.0s
E52A Mattawa 34.39 28 P P 17 06 59.4 -1.7
baz=220
ALGO Algonquin Park 34.41 29 P P 17 06 59.4 -1.8
baz=221
TRY Troy 34.41 37 P P 17 06 59.9 -1.4
J59A Piesco 34.42 35 P P 17 07 00.2 -1.2
baz=228
J59A Piesco 34.42 35 P P 17 06 59.5 -1.9
J59A IAmb IAmb 17 07 59.7
comp=Z,269nm,1.2s
E04D Cinebar 34.42 333 P P 17 07 01.8 +0.4
baz=141
E04D S S 17 12 32.7 +4.8
baz=141
G55A Calabogie 34.52 31 P P 17 07 00.4 -1.7
baz=223
M63A Gales Ferry 34.56 40 P P 17 07 01.5 -1.0
baz=234
M63A S S 17 12 31.2 +1.1
baz=234
L62A Suffield 34.56 38 P P 17 07 01.5 -1.1
baz=233
D50A G1974 Best Tow 34.57 25 P P 17 07 01.1 -1.5
baz=217
K61A Williamstown 34.60 37 P P 17 07 02.3 -0.6
baz=231
B08A Colville Reser 34.61 338 P P 17 07 02.5 -0.5
D05A Enumclaw 34.68 334 P P 17 07 04.2 +0.7
D05A IAmb IAmb 17 07 09.0
comp=Z,281nm,1.1s
D05A IAMs_20 IAMs_20 17 22 03.7
comp=Z,112µm,20.0s
D51A Lot 18 Range I 34.71 26 P P 17 07 02.4 -1.4
baz=218
L61B Northampton 34.80 38 P P 17 07 04.2 -0.5
baz=232
L61B S S 17 12 36.6 +2.6
baz=232
ACCN Adirondack Com 34.83 36 P P 17 07 03.0 -1.9
ACCN IAmb IAmb 17 07 07.4
comp=Z,178nm,0.8s
C06D Leavenworth 34.83 336 P P 17 07 05.4 +0.5
baz=145
C06D S S 17 12 38.9 +4.7
baz=145
E03A Lebam 34.85 332 P P 17 07 06.1 +1.1
E03A IAMs_20 IAMs_20 17 22 07.6
comp=Z,143µm,20.0s
J60A Lant Hill Farm 34.88 36 P P 17 07 04.2 -1.1
baz=230
J60A S S 17 12 36.8 +1.8
baz=230
QUA2 Belchertown 34.89 38 P P 17 07 03.8 -1.6
QUA2 IAmb IAmb 17 08 04.3

comp=Z,590nm,1.9s
E53A Dumoine, Ponti 34.91 28 P P 17 07 04.1 -1.4
baz=221
NCB Newcomb 34.91 34 P P 17 07 03.4 -2.2
I59A Olmsteadville 34.98 35 P P 17 07 04.9 -1.3
baz=229
D04E Lakebay 35.00 334 P P 17 07 07.3 +1.0
baz=141
L63A North Scituate 35.09 39 P P 17 07 06.6 -0.6
baz=234
L63A S S 17 12 39.7 +1.3
baz=234
F55A Otter Lake 35.12 30 P P 17 07 05.6 -1.7
baz=223
LONY Lake Ozonia 35.15 33 P P 17 07 06.4 -1.3
baz=227
LONY Lake Ozonia 35.15 33 P P 17 07 05.6 -2.1
LONY IAMs_20 IAMs_20 17 24 05.9
comp=Z,122µm,20.0s
M64A Tiverton 35.15 40 P P 17 07 07.1 -0.6
baz=235
M64A S S 17 12 40.2 +0.9
baz=235
E54A Lac Daplat, Po 35.16 29 P P 17 07 06.3 -1.5
baz=222
E54A S S 17 12 37.9 -1.5
baz=222
BRYW Bryant College 35.17 39 P P 17 07 06.3 -1.5
K62A Royalston 35.20 38 P P 17 07 07.5 -0.5
baz=232
K62A S S 17 12 40.8 +0.8
baz=232
K62A Royalston 35.20 38 P P 17 07 06.7 -1.3
H58A Gabriels 35.23 34 P P 17 07 07.1 -1.3
baz=228
H58A S S 17 12 40.5 0.0
baz=228
ORIO Orleans, Innes 35.25 31 P P 17 07 07.0 -1.5
baz=225
ORIO S S 17 12 38.8 -1.9
baz=225
ORIO Orleans, Innes 35.25 31 P P 17 07 05.8 -2.7
G57A Newington 35.28 32 P P 17 07 07.4 -1.3
baz=226
I60A Shoreham 35.33 35 P P 17 07 08.2 -1.0
baz=230
D03D Eldon 35.41 334 P P 17 07 10.6 +0.8
baz=141
D53A Lac Vacive, Po 35.42 28 P P 17 07 09.1 -0.8
baz=220
D53A Lac Vacive, Po 35.42 28 P P 17 07 07.8 -2.2
D53A IAmb IAmb 17 07 20.1
comp=Z,762nm,1.9s
J61A Chester 35.43 37 P P 17 07 09.9 -0.2
baz=231
J61A S S 17 12 48.2 +4.6
baz=231
GAC Glen Almond 35.45 31 P P 17 07 07.8 -2.4
HRV Adam Dziewonsk 35.50 38 P P 17 07 09.1 -1.6
HRV pmax pmax
comp=Z,270nm,1.3s
HRV MLR MLR
comp=Z,22µm,22.0s
HRV Adam Dziewonsk 35.50 38 P P 17 07 10.3 -0.3
baz=234
HRV S S 17 12 46.6 +2.0
baz=234
HRV Adam Dziewonsk 35.50 38 P P 17 07 09.1 -1.6
HRV IAmb IAmb 17 07 45.6
comp=Z,270nm,1.3s
M65A Busby, Falmout 35.51 40 P P 17 07 10.7 0.0
baz=236
B06A Marblemount 35.55 336 P P 17 07 10.7 -0.2
B06A IAmb IAmb 17 07 15.4
comp=Z,251nm,0.9s
WES Weston 35.57 39 P P 17 07 09.1 -2.1
WES pmax pmax
comp=Z,216nm,1.1s
WES MLR MLR
comp=Z,21µm,21.0s
WES Weston 35.57 39 P P 17 07 09.1 -2.1
WES IAmb IAmb 17 07 12.4
comp=Z,216nm,1.1s
B05A Bryant 35.58 335 P P 17 07 11.4 +0.1
baz=143
L64A Middleborough 35.60 40 P P 17 07 11.3 -0.2
baz=235
L64A S S 17 12 47.7 +1.5
baz=235
K63A Dunstable 35.63 38 P P 17 07 11.5 -0.2
baz=233
K63A S S 17 12 48.1 +1.6
baz=233
BCX Boston College 35.63 39 P P 17 07 10.5 -1.3
NLWA Neilton Lookou 35.64 333 P P 17 07 11.7 -0.1
NLWA IAmb IAmb 17 07 14.8
comp=Z,479nm,1.4s
NLWA IAMs_20 IAMs_20 17 22 35.2
comp=Z,125µm,21.0s
H59A Cadyville 35.64 34 P P 17 07 10.9 -0.9
baz=228
M66A Nantucket 35.66 41 P P 17 07 11.9 -0.1
baz=237
E55A Montcerf-Lytto 35.71 30 P P 17 07 11.0 -1.4
baz=223
PCRV Puerto La Cruz 35.78 96 P P 17 07 14.4 +0.9
comp=Z,30nm,0.8s,baz=320,slow=6.7,SNR=29
PCRV LR LR 17 25 00.8
comp=Z,25µm,18.5s,slow=42
J62A Henniker 35.78 37 P P 17 07 12.7 -0.4
baz=232
J62A S S 17 12 52.2 +3.3
baz=232
G58A Ormstown 35.79 33 S S 17 12 48.5 -0.4
baz=227
HNH Hanover 35.81 36 P P 17 07 12.3 -1.0
HNH IAmb IAmb 17 07 17.1
comp=Z,236nm,0.9s
SABA Saba 35.82 84 eP P 17 07 12.7 -1.0
SABA Saba 35.82 84 e S 17 13 09.8 +20
SABA Saba 35.82 84 P P 17 07 14.1 +0.4
SABA IAmb IAmb 17 07 35.4
comp=Z,263nm,0.8s
FRNY Flat Rock 35.82 34 P P 17 07 11.3 -2.1
F57A Harrington 35.92 32 P P 17 07 12.6 -1.5
baz=226
BBSR BB Station 35.93 58 P P 17 07 13.8 -0.7
BBSR BB Station 35.93 58 IAMs_20 IAMs_20 17 23 04.1
comp=Z,60µm,20.0s
SMRT St. Maarten 35.94 83 eP P 17 07 10.6 -4.2
SMRT St. Maarten 35.94 83 e S 17 13 02.3 +10
SMRT St. Maarten 35.94 83 P P 17 07 12.3 -2.5
SMRT IAmb IAmb 17 08 03.7
comp=Z,531nm,1.4s
D54A Lac Fusel, La 35.94 28 P P 17 07 12.8 -1.6
baz=222
D54A S S 17 12 52.9 +1.5
baz=222
VT1 Waterbury 35.95 35 P P 17 07 13.4 -1.1
VT1 IAMs_20 IAMs_20 17 24 36.8
comp=Z,82µm,18.0s
I61A Oroboro, Fairl 35.99 36 S S 17 12 54.3 +2.1
baz=231
SEUS St. Eustatius 36.08 84 eP P 17 07 13.8 -2.1
SEUS St. Eustatius 36.08 84 e S 17 13 21.7 +28
SEUS St. Eustatius 36.08 84 P P 17 07 15.7 -0.2
H60A Morristown 36.12 35 P P 17 07 14.7 -1.3
baz=230
H60A S S 17 12 55.8 +1.6
baz=230
L65A Cape Cod Natio 36.14 40 P P 17 07 15.8 -0.4
baz=236
A04D Lummi Island 36.19 335 P P 17 07 17.0 +0.6
baz=142
J63A Strafford 36.24 38 P P 17 07 17.0 0.0
baz=233
J63A S S 17 12 57.2 +1.2
baz=233
E56A St. Veronique 36.26 30 P P 17 07 16.0 -1.2
baz=225
VLDQ Val d'Or 36.32 27 P P 17 07 14.9 -2.7
VLDQ IAmb IAmb 17 07 27.0
comp=Z,543nm,1.9s
SKI Saint Kitts 36.32 84 eP P 17 07 17.0 -1.0
SKI Saint Kitts 36.32 84 e S 17 13 08.8 +11
SKI Saint Kitts 36.32 84 P P 17 07 17.4 -0.7
SKI pmax pmax
comp=Z,636nm,1.0s
SKI MLR MLR
comp=Z,68µm,21.0s
SKI Saint Kitts 36.32 84 P P 17 07 17.4 -0.7
SKI IAMs_20 IAMs_20 17 23 08.6
comp=Z,68µm,21.0s
LBNH Lisbon 36.35 36 P P 17 07 16.6 -1.3
LBNH pmax pmax
comp=Z,271nm,1.1s
LBNH MLR MLR
comp=Z,80µm,19.0s
LBNH Lisbon 36.35 36 P P 17 07 17.8 -0.1
baz=231
LBNH S S 17 12 59.8 +2.2
baz=231
LBNH Lisbon 36.35 36 P P 17 07 16.6 -1.3
LBNH IAmb IAmb 17 07 21.8
comp=Z,271nm,1.1s
LBNH IAMs_20 IAMs_20 17 24 51.6
comp=Z,80µm,19.0s
D55A Sainte-Anne-du 36.40 30 P P 17 07 17.2 -1.1
baz=224
F58A St-Lin Laurent 36.40 32 P P 17 07 17.1 -1.2
baz=227
PGC Sidney 36.44 335 P P 17 07 18.9 +0.4
PGC IAmb IAmb 17 07 23.8
comp=Z,338nm,1.1s
I62A Tamworth 36.45 37 P P 17 07 19.1 +0.3
baz=232
I62A S S 17 13 02.0 +2.8
baz=232
I62A Tamworth 36.45 37 P P 17 07 17.7 -1.1
I62A IAmb IAmb 17 07 22.8
comp=Z,470nm,0.9s
H61A Lyndonville 36.53 35 P P 17 07 19.6 +0.1
baz=231
H61A S S 17 13 02.9 +2.5
baz=231
E57A Chemin Saint G 36.61 31 P P 17 07 19.1 -1.0
baz=226
G60A Masonville 36.67 34 P P 17 07 20.1 -0.5
baz=230
G60A S S 17 13 04.3 +1.8
baz=230
D56A ZEC Mazanza, M 36.76 30 P P 17 07 19.9 -1.4
baz=224
MLYT Lee's Yard 36.91 85 eP P 17 07 22.9 -0.2
F59A Saint Guilaume 36.92 33 P P 17 07 21.9 -0.9
baz=228
H62A Milan 36.99 36 P P 17 07 23.3 -0.1
baz=232
H62A S S 17 13 10.4 +3.0
baz=232
H62A Milan 36.99 36 P P 17 07 22.6 -0.8
H62A IAMs_20 IAMs_20 17 25 21.5
comp=Z,81µm,18.0s
I63A Otisfield 36.99 37 P P 17 07 23.4 0.0
baz=233
I63A S S 17 13 09.1 +1.7
baz=233
I63A Otisfield 36.99 37 P P 17 07 22.4 -1.0
I63A IAmb IAmb 17 07 27.3
comp=Z,306nm,1.0s
I63A IAMs_20 IAMs_20 17 25 12.7
comp=Z,55µm,21.0s
E58A La Victoria 37.02 32 P P 17 07 22.7 -0.9
baz=227
D57A Chemin Vers le 37.16 31 P P 17 07 23.7 -1.1
baz=226
D57A S S 17 13 11.3 +1.4
baz=226
ANWB Willy Bob 37.20 83 eP P 17 07 23.5 -2.0
ANWB Willy Bob 37.20 83 e S 17 13 16.2 +5.1
ANWB Willy Bob 37.20 83 P P 17 07 24.5 -1.0
ANWB IAmb IAmb 17 07 44.6
comp=Z,836nm,1.5s
G61A St-Isidore-de- 37.22 35 P P 17 07 25.0 -0.4
baz=231
G61A S S 17 13 13.5 +2.5
baz=231
ORIV Oritupano 37.25 98 eP P 17 07 25.0 -0.9
ORIV Oritupano 37.25 98 e S 17 13 28.7 +17
LSQQ Lebel-sur-Quev 37.25 26 P P 17 07 24.4 -1.1
baz=220
NNA Nana 37.40 139 P P 17 07 29.3 +2.1
comp=Z,28nm,0.9s,baz=332,slow=10.0,SNR=4.3
NNA PcP PcP 17 09 45.9 0.0
comp=Z,37nm,0.9s,baz=312,slow=6.2,SNR=2.1
NNA LR LR 17 20 01.8
comp=Z,44µm,18.6s,baz=316,slow=32
NNA Nana 37.40 139 P P 17 07 29.4 +2.1
NNA pmax pmax
comp=Z,99nm,1.3s
NNA MLR MLR
comp=Z,46µm,19.0s
NNA Nana 37.40 139 P P 17 07 29.4 +2.1
LLLB Lillooet 37.41 338 P P 17 07 26.9 0.0
LLLB IAmb IAmb 17 07 29.1
comp=Z,544nm,1.6s
F60A Warwick 37.44 34 P P 17 07 26.4 -0.7
baz=229
I64A Boothbay 37.47 38 P P 17 07 27.4 0.0
baz=234
E59A St. Maurice 37.48 33 P P 17 07 26.8 -0.7
baz=228
FFC Flin Flon 37.51 359 P P 17 07 25.7 -2.0
FFC pmax pmax
comp=Z,158nm,0.9s
FFC MLR MLR
comp=Z,280µm,18.0s
FFC Flin Flon 37.51 359 P P 17 07 25.7 -2.0
MATQ Matagami 37.52 25 P P 17 07 26.6 -1.2
baz=218
CBE Ff, Capester 37.54 86 eP P 17 07 27.9 -0.5
CBE Ff, Capester 37.54 86 eP P 17 07 28.7 +0.3
TDBA Terre de Bas, 37.54 86 eP P 17 07 25.9 -2.5
TDBA Terre de Bas, 37.54 86 eP P 17 07 28.5 +0.1
TDBA Terre de Bas, 37.54 86 e S 17 13 04.0 -12
ABD La Joyeuse, An 37.60 85 eP P 17 07 24.4 -4.5
ABD La Joyeuse, An 37.60 85 eP P 17 07 28.1 -0.8
H63A New Sharon 37.67 37 P P 17 07 29.1 -0.1
baz=233
D58A Chemin du LacG 37.71 32 P P 17 07 28.3 -1.1
baz=227
G62A West of Eustis 37.73 36 P P 17 07 29.6 -0.1
baz=232
G62A West of Eustis 37.73 36 P P 17 07 28.5 -1.2
G62A IAmb IAmb 17 07 33.5
comp=Z,368nm,0.8s
WVL Waterville 37.83 37 P P 17 07 29.6 -0.9
WVL IAmb IAmb 17 07 34.4
comp=Z,267nm,1.0s
MAGL Barre de l'ile 37.87 86 eP P 17 07 29.9 -1.3
MAGL Barre de l'ile 37.87 86 eP P 17 07 30.7 -0.4
F61A St Evariste 37.95 34 P P 17 07 31.2 -0.3
baz=231
LATQ La Tuque 37.95 31 P P 17 07 30.7 -0.8
baz=227
LATQ La Tuque 37.95 31 P P 17 07 29.9 -1.6
GUIV Guiria 37.96 95 eP P 17 07 31.1 -0.9
GUIV Guiria 37.96 95 eP S 17 13 35.8 +13
E60A Ste Agathe de 37.96 34 P P 17 07 31.1 -0.5
baz=230
DLPL La Plaine 37.98 87 eP P 17 07 32.6 +0.4
DLPL La Plaine 37.98 87 IAMs_20 IAMs_20 17 24 25.8
comp=Z,47µm,19.0s
PCM Pelee Case Pet 38.10 88 eP P 17 07 33.1 0.0
PML Morne Lenard 38.13 88 eP P 17 07 34.0 +0.6
H64A Troy 38.13 37 P P 17 07 32.2 -0.8
baz=234
SVN Savane Anatole 38.13 88 eP P 17 07 33.8 +0.4
CXM Morne La Croix 38.14 88 eP P 17 07 33.9 +0.3
GBMF Grand Be 38.14 88 eP P 17 07 33.8 +0.2
BAMF Morne Balai 38.16 88 eP P 17 07 34.2 +0.5
GRGR Grenville 38.17 92 eP P 17 07 33.0 -0.8
GRGR Grenville 38.17 92 eP P 17 07 34.4 +0.7
GRGR Grenville 38.17 92 e S 17 13 27.3 +1.4
GRGR Grenville 38.17 92 P P 17 07 34.0 +0.3
FDF Fort de France 38.17 88 eP P 17 07 32.3 -1.5
FDF Fort de France 38.17 88 eP P 17 07 33.0 -0.8
FDF Fort de France 38.17 88 e S 17 13 26.2 +0.2
FDF Fort de France 38.17 88 P P 17 07 32.7 -1.1
FDF pmax pmax
comp=Z,284nm,0.8s
FDF Fort de France 38.17 88 P P 17 07 32.7 -1.1
FDF IAmb IAmb 17 07 40.9
comp=Z,284nm,0.8s
D59A Saint-Raymond 38.18 32 P P 17 07 32.6 -0.8
baz=228
D59A S S 17 13 25.6 +0.3
baz=228
G63A Kingsbury 38.18 36 P P 17 07 32.8 -0.7
baz=233
BIM Bigot 38.28 88 eP P 17 07 34.5 -0.2
BIM Bigot 38.28 88 eP P 17 07 34.8 +0.1
BIM Bigot 38.28 88 e S 17 13 21.7 -5.9
TRMF Trois Ilets 38.29 88 eP P 17 07 35.2 +0.4
ZAM Aeronautique 38.31 88 eP P 17 07 34.5 -0.4
GCMP Grenada, Carri 38.31 91 eP P 17 07 34.2 -0.7
GCMP Grenada, Carri 38.31 91 eP P 17 07 35.5 +0.6
GCMP Grenada, Carri 38.31 91 e S 17 13 30.9 +2.9
SVB Belmont 38.32 90 eP P 17 07 34.2 -0.8
SVB Belmont 38.32 90 eP P 17 07 35.6 +0.6
SVB Belmont 38.32 90 e S 17 13 30.2 +1.9
SVB Belmont 38.32 90 P P 17 07 34.6 -0.5
SVB IAmb IAmb 17 07 36.0
comp=Z,312nm,1.0s
LPMF Morne Lapointe 38.37 88 eP P 17 07 35.4 0.0
SVCV St. Vincent, C 38.42 90 eP P 17 07 34.3 -1.6
ILAM Ilet Lapin Mar 38.43 88 eP P 17 07 34.8 -1.1
ILAM Ilet Lapin Mar 38.43 88 eP P 17 07 35.6 -0.2
SLBI Saint Lucia, B 38.45 89 eP P 17 07 35.4 -0.7
SLBI Saint Lucia, B 38.45 89 e S 17 13 29.7 -0.5
PKME Peaks-Kenny Pk 38.46 36 P P 17 07 35.3 -0.4
baz=233
PKME Peaks-Kenny Pk 38.46 36 P P 17 07 34.8 -1.0
MPOM Morne Pois Mar 38.49 88 eP P 17 07 36.1 -0.3
E61A Lac Etchemin 38.51 34 P P 17 07 35.4 -0.9
baz=231
MCLT Moule a Chique 38.54 89 eP P 17 07 35.1 -1.7
MCLT Moule a Chique 38.54 89 eP P 17 07 36.5 -0.3
MCLT Moule a Chique 38.54 89 e S 17 13 29.0 -2.5
D60A Saint Jean D'O 38.59 33 P P 17 07 36.0 -0.8
baz=230
H65A Eastbrook 38.73 38 P P 17 07 37.8 -0.2
baz=235
TRN Trinidad (W) 38.74 94 eP P 17 07 37.0 -1.5
TRN Trinidad (W) 38.74 94 e S 17 13 28.9 -5.7
G64A Maxfield 38.76 37 P P 17 07 37.5 -0.8
baz=234
TPP Pointe-a-Pierr 38.78 95 eP P 17 07 39.4 +0.6
F63A Nahmakanta, Br 38.83 36 P P 17 07 38.2 -0.7
baz=233
F63A S S 17 13 37.8 +2.6
baz=233
F63A Nahmakanta, Br 38.83 36 P P 17 07 36.9 -2.0
CHGQ Chibougamau 39.01 27 P P 17 07 39.2 -1.2
baz=222
CHGQ S S 17 13 36.1 -1.8
baz=222
D61A St Aubert, Com 39.16 33 P P 17 07 40.8 -0.8
baz=230
EMMW East Machias 39.20 38 P P 17 07 41.1 -0.9
H66A Whiting 39.33 38 P P 17 07 42.3 -0.8
baz=236
F64A Sherman 39.34 36 P P 17 07 42.5 -0.7
baz=234
F64A Sherman 39.34 36 P P 17 07 42.0 -1.2
G65A Princeton 39.41 38 P P 17 07 43.4 -0.3
baz=236
G65A Princeton 39.41 38 P P 17 07 42.7 -1.1
G65A IAMs_20 IAMs_20 17 26 51.8
comp=Z,97µm,18.0s
TOSP Speyside 39.42 93 eP P 17 07 37.5 -6.7
TOSP Speyside 39.42 93 P P 17 07 43.4 -0.8
E63A Oxbow 39.63 36 P P 17 07 45.3 -0.3
baz=233
E63A Oxbow 39.63 36 P P 17 07 44.3 -1.3
E63A IAmb IAmb 17 07 49.1
comp=Z,330nm,0.9s
D62A Allapoint, All 39.69 34 P P 17 07 45.8 -0.3
baz=232
D62A Allapoint, All 39.69 34 P P 17 07 44.6 -1.4
D62A IAmb IAmb 17 07 49.6
comp=Z,288nm,0.8s
D62A IAMs_20 IAMs_20 17 26 37.1
comp=Z,98µm,20.0s
GGN Saint George 39.79 38 P P 17 07 45.6 -1.3
E64A Bridgewater 39.97 36 P P 17 07 47.9 -0.4
baz=234
BBGH Gun Hill 39.97 90 eP P 17 07 47.8 -0.9
BBGH Gun Hill 39.97 90 IAMs_20 IAMs_20 17 25 36.6
comp=Z,62µm,20.0s
PQI Presque Isle 40.01 35 P P 17 07 48.6 -0.1
PQI IAmb IAmb 17 08 49.7
comp=Z,517nm,1.6s
D63A Stockholm 40.18 35 P P 17 07 49.8 -0.3
baz=233
D63A S S 17 13 55.9 +0.5
baz=233
BBB Bella Bella 41.06 335 LR LR 17 26 14.5
comp=Z,68µm,18.4s,baz=148,slow=38
BBB Bella Bella 41.06 335 P P 17 07 57.5 +0.2
BBB IAMs_20 IAMs_20 17 26 02.6
comp=Z,77µm,20.0s
BATG Bathurst New B 41.45 36 P P 17 07 59.3 -1.3
FCC Fort Churchill 41.85 5 P P 17 08 01.8 -1.8
FCC pmax pmax
comp=Z,260nm,1.4s
FCC MLR MLR
comp=Z,78µm,21.0s
FCC Fort Churchill 41.85 5 P P 17 08 01.8 -1.8
FCC IAMs_20 IAMs_20 17 25 40.5
comp=Z,78µm,21.0s
GBN Guysborough 43.18 41 P P 17 08 14.2 -0.5
MOBC Moresby Island 43.38 333 P P 17 08 17.4 +1.0
MOBC IAmb IAmb 17 08 22.1
comp=Z,419nm,1.1s
DIB Dawson Inlet, 43.65 333 P P 17 08 19.6 +1.2
DIB IAMs_20 IAMs_20 17 27 28.1
comp=Z,84µm,19.0s
PTGA Pitinga 43.99 110 P P 17 08 21.0 -0.6
comp=Z,57nm,0.9s,baz=296,slow=9.1,SNR=68
PTGA LR LR 17 30 32.5
comp=Z,23µm,18.3s,baz=306,slow=41
PTGA Pitinga 43.99 110 P P 17 08 20.9 -0.8
MACA Manacapuru-AM 44.45 113 eP P 17 08 22.2 -3.1
RPN Rapa Nui 44.78 191 LR LR 17 22 51.7
comp=Z,66µm,21.0s,baz=10.0,slow=30
RPN Rapa Nui 44.78 191 IAMs_20 IAMs_20 17 22 38.9
comp=Z,60µm,20.0s
SAML Samuel 45.34 122 P P 17 08 30.0 -2.4
SAML pmax pmax
comp=Z,210nm,1.5s
SAML MLR MLR
comp=Z,20µm,20.0s
SAML Samuel 45.34 122 P P 17 08 30.0 -2.4
SAML Samuel 45.34 122 eP P 17 08 29.9 -2.6
CRAG Craig 45.49 335 P P 17 08 34.5 +1.5
SCHQ Schefferville 45.76 27 P P 17 08 34.3 -0.9
comp=Z,210nm,0.8s,baz=235,slow=6.3,SNR=67
SCHQ LR LR 17 29 44.5
comp=Z,73µm,19.0s,baz=231,slow=39
SCHQ Schefferville 45.76 27 IAmb IAmb 17 08 38.3
comp=Z,258nm,0.8s
WRAK Wrangell Islan 45.86 336 P P 17 08 36.9 +1.0
LPAZ La Paz 46.28 134 LR LR 17 26 17.2
comp=Z,44µm,19.2s,baz=328,slow=34
LPAZ La Paz 46.28 134 P P 17 08 39.8 -0.7
LPAZ pmax pmax
comp=Z,210nm,1.6s
LPAZ La Paz 46.28 134 P P 17 08 39.8 -0.7
LPAZ La Paz 46.28 134 eP P 17 08 40.1 -0.4
YKA Yellowknife Ar 46.32 351 P P 17 08 37.9 -1.6
comp=Z,149nm,0.8s,baz=158,slow=8.0,SNR=361
YKA PcP PcP 17 10 15.3 +1.0
comp=Z,66nm,1.1s,baz=152,slow=4.2,SNR=5.7
YKA LR LR 17 29 41.1
comp=Z,250µm,18.6s,baz=0.0,slow=38
YKA P4KPbc 17 46 25.4
comp=Z,0.8nm,0.9s,baz=151,slow=5.1,SNR=8.4
PB12 IPOC Station P 46.50 138 P P 17 08 43.1 +1.6
DLBC Dease Lake 46.52 339 LR LR 17 30 07.7
comp=Z,176µm,18.2s,baz=138,slow=39
DLBC Dease Lake 46.52 339 P P 17 08 42.8 +1.6
TAOE Nuku Hiva Isla 46.69 239 eS S 17 15 32.1 +0.5
comp=Z,24µm,24.7s
TAOE eLQ LQ 17 19 42.3
comp=Z,34µm,25.8s
TAOE eLR LR 17 21 44.3
comp=Z,81µm,25.7s,baz=54

TAOE Nuku Hiva Isla 46.69 239 *e*T T 17 58 22.4
comp=Z,807nm,0.2s
PB16 IPOC Station P 46.82 137 P **P** **17 08 45.1 +0.5**
PB16 IAmb IAmb 17 08 55.4
comp=Z,183nm,1.1s
MNMC Minye Minye 47.34 138 P **P** **17 08 48.5 +0.1**
MNMC IAmb IAmb 17 10 31.3
comp=Z,312nm,1.3s
PSGCX Pisagua 47.35 139 P **P** **17 08 50.0 +1.7**
DRLN Deer Lake 47.37 38 P **P** **17 08 46.8 -1.1**
DRLN IAMs_20 IAMs_20 17 31 43.3
comp=Z,58µm,18.0s
SIT Sitka 47.48 335 P **P** **17 08 50.0 +1.4**
SIT pmax pmax
comp=Z,75nm,1.0s
SIT MLR MLR
comp=Z,102µm,20.0s
SIT Sitka 47.48 335 P **P** **17 08 50.0 +1.4**
PB11 IPOC Station P 47.77 139 P **P** **17 08 51.7 +0.2**
PB11 IAmb IAmb 17 10 30.9
comp=Z,250nm,0.9s
JIS Juneau Island 47.95 337 P **P** **17 08 53.3 +1.1**
JIS IAmb IAmb 17 08 55.5
comp=Z,366nm,1.6s
GO01 Chusmiza 47.99 138 P **P** **17 08 53.8 +0.1**
TA01 Diego Aracena 48.04 140 P **P** **17 08 55.3 +1.8**
TA01 IAmb IAmb 17 09 03.8
comp=Z,248nm,1.2s
BESE Bessie Mountai 48.34 337 P **P** **17 08 56.2 +0.8**
BESE IAmb IAmb 17 08 58.4
comp=Z,244nm,1.4s
PB08 IPOC Station P 48.37 139 P **P** **17 08 58.3 +1.9**
PB08 IAmb IAmb 17 09 44.4
comp=Z,437nm,1.9s
MDP Montagnes des 48.62 98 P **P** **17 08 58.8 +0.7**
comp=Z,70nm,1.0s,baz=297,slow=8.1,SNR=23
PB01 IPOC Station P 48.83 140 P **P** **17 08 59.5 -0.1**
PB07 IPOC Station P 49.10 141 P **P** **17 09 03.1 +1.3**
SKAG Skagway 49.14 338 P **P** **17 09 01.9 +0.5**
SKAG IAmb IAmb 17 09 04.3
comp=Z,232nm,1.4s
ITTB Itaituba 49.38 112 *e*P **P** **17 09 02.1 -1.8**
PB04 IPOC Station P 49.40 142 P **P** **17 09 04.9 +0.8**
PB04 IAmb IAmb 17 09 52.5
comp=Z,362nm,1.7s
PB09 IPOC Station P 49.54 140 P **P** **17 09 06.5 +1.3**
MALB Monte Alegre 49.62 108 *e*P **P** **17 09 03.9 -1.8**
WHY Whitehorse 49.83 339 P **P** **17 09 07.1 +0.3**
WHY IAmb IAmb 17 09 09.7
comp=Z,336nm,1.6s
WHY IAMs_20 IAMs_20 17 31 26.9
comp=Z,81µm,20.0s
DHAK Deception Hill 49.98 336 P **P** **17 09 08.6 +0.7**
DHAK IAmb IAmb 17 09 20.5
comp=Z,240nm,1.0s
PB06 IPOC Station P 50.03 141 P **P** **17 09 09.7 +0.9**
VILB Vilhena 50.03 124 *e*P **P** **17 09 07.4 -1.5**
LVC Limon Verde 50.35 141 P **P** **17 09 12.5 +1.0**
comp=Z,25nm,1.1s,baz=317,slow=5.0,SNR=17
LVC LR LR 17 28 31.4
comp=Z,8µm,18.0s,baz=332,slow=34
LVC Limon Verde 50.35 141 P **P** **17 09 12.3 +0.8**
LVC pmax pmax
comp=Z,116nm,1.2s
LVC Limon Verde 50.35 141 P **P** **17 09 12.3 +0.8**
PB15 IPOC Station P 50.47 142 P **P** **17 09 13.0 +0.7**
HYT Haines Junctio 50.87 338 P **P** **17 09 16.0 +1.3**
NPGB Novo Progresso 50.95 114 *e*P **P** **17 09 13.9 -1.9**
PB14 IPOC Station P 51.02 144 P **P** **17 09 17.0 +0.5**
SIV San Ignacio 51.18 128 P4KPbc 17 46 48.9
comp=Z,1.1nm,0.8s,baz=318,slow=5.7,SNR=5.0
MLH Mauna Loa 51.68 282 P **P** **17 09 22.0 +0.5**
HMH Humu'ula Sheep 51.76 282 P **P** **17 09 23.8 +1.6**
HMH IAmb IAmb 17 10 14.8
comp=Z,451nm,1.2s
AIN Ainahou 51.76 281 P **P** **17 09 23.1 +1.0**
POHA Pohakuloa 51.79 282 P **P** **17 09 24.1 +1.7**
POHA IAmb IAmb 17 09 46.5
comp=Z,367nm,1.2s
MLOA Mauna Loa Obse 51.85 282 P **P** **17 09 25.7 +2.6**
GO02 Mina Guanaco 51.90 143 P **P** **17 09 23.8 +0.7**
GO02 IAmb IAmb 17 10 53.9
comp=Z,638nm,1.9s
HUH Hualalai 52.08 282 P **P** **17 09 25.4 +0.9**
PDRB Porto dos Gac 52.10 120 *e*P **P** **17 09 22.9 -1.5**
RKT Rikitea 52.13 221 *e*P **P** **17 09 25.5 +1.1**
comp=Z,278nm,1.4s
RKT *e*S **S** **17 16 48.2 +0.9**
comp=Z,28µm,27.2s
RKT *e*LR LR 17 24 31.5
comp=Z,46µm,26.0s
RKT Rikitea 52.13 221 *e*T T 18 05 12.7
comp=Z,87nm,0.3s
YAH Yahtse 52.17 336 P **P** **17 09 25.3 +0.7**
YAH IAmb IAmb 17 09 46.6
comp=Z,280nm,1.4s
PTLB Pontes e Lacer 52.33 126 *e*P **P** **17 09 24.4 -1.7**
CTGM Chitina Glacie 52.38 336 P **P** **17 09 27.1 +1.1**
CTGM IAmb IAmb 17 09 53.2
comp=Z,718nm,1.9s
CLDB Colider 52.48 119 *e*P **P** **17 09 24.1 -3.2**
BARN Barnard Glacie 52.57 336 P **P** **17 09 28.8 +1.3**
BARN IAmb IAmb 17 09 51.6
comp=Z,738nm,2.0s
BALM Baldy 52.82 336 P **P** **17 09 30.0 +0.8**
TGL Tana Glacier 52.84 336 P **P** **17 09 30.5 +1.1**
TGL IAmb IAmb 17 09 34.5
comp=Z,189nm,0.9s
CRQM Cirque 52.96 336 P **P** **17 09 31.3 +0.9**
CRQM IAmb IAmb 17 09 35.3
comp=Z,244nm,0.9s
MCARA McCarthy VSAT 53.29 336 P **P** **17 09 33.6 +1.1**
MCARA IAmb IAmb 17 09 54.2
comp=Z,353nm,1.2s
VRDI Verde Repeater 53.36 336 P **P** **17 09 33.9 +0.6**
GO03 Copiap 53.45 146 IAMs_20 IAMs_20 17 26 46.8
comp=Z,38µm,21.0s
AC02 Maricunga 53.46 144 P **P** **17 09 35.6 +0.8**
AC02 IAMs_20 IAMs_20 17 27 02.0
comp=Z,32µm,21.0s
MID Middleton Isla 53.54 333 IAMs_20 IAMs_20 17 36 18.7
comp=Z,31µm,18.0s
GLB Gilahina Butte 53.63 336 P **P** **17 09 36.0 +1.0**
GLB IAmb IAmb 17 09 40.3
comp=Z,186nm,0.8s
DAWY Dawson 53.71 340 P **P** **17 09 35.6 0.0**
DAWY IAmb IAmb 17 09 45.1
comp=Z,178nm,1.1s
OPA Opana 53.89 285 P **P** **17 09 39.3 +1.7**
OPA pmax pmax
comp=Z,127nm,1.1s
OPA MLR MLR
comp=Z,17µm,20.0s
OPA Opana 53.89 285 P **P** **17 09 39.2 +1.7**
EYAK Cordova Ski Ar 53.90 334 P **P** **17 09 37.9 +0.9**
EYAK IAmb IAmb 17 09 42.3
comp=Z,180nm,1.0s
EYAK IAMs_20 IAMs_20 17 31 35.0
comp=Z,70µm,20.0s
HON Honolulu 53.92 284 P **P** **17 09 39.6 +1.9**
HON pmax pmax
comp=Z,561nm,1.3s
HON MLR MLR
comp=Z,16µm,20.0s
HON Honolulu 53.92 284 P **P** **17 09 39.6 +1.9**
KIP Kipapa 53.92 284 ‖ *e*P **P** **17 09 40.7 +2.9**
KIP pmax pmax
comp=Z,170nm,1.0s
KIP MLR MLR
comp=Z,6µm,16.0s
KIP Kipapa 53.92 284 P **P** **17 09 39.3 +1.6**
KIP IAmb IAmb 17 09 48.8
comp=Z,142nm,0.9s
HIN Hinchinbrook I 54.13 334 P **P** **17 09 39.6 +0.9**
HIN IAmb IAmb 17 09 44.4
comp=Z,232nm,0.9s
HIN IAMs_20 IAMs_20 17 31 33.1
comp=Z,38µm,20.0s
C36M Paulatuk 54.15 350 P **P** **17 09 38.7 0.0**
baz=152
C36M Paulatuk 54.15 350 P **P** **17 09 38.1 -0.6**
C36M IAmb IAmb 17 09 41.8
comp=Z,149nm,1.0s
FID Port Fidalgo 54.31 334 P **P** **17 09 41.0 +1.0**
FID IAmb IAmb 17 09 45.9
comp=Z,278nm,1.0s
FID IAMs_20 IAMs_20 17 31 48.9
comp=Z,69µm,20.0s
AC05 El Transito 54.42 147 P **P** **17 09 40.9 -0.5**
AC05 IAMs_20 IAMs_20 17 27 25.5
comp=Z,49µm,20.0s
H03N2 Juan Fernandez 54.47 157 T T 18 08 26.1
baz=335,slow=77,SNR=1589
H03N1 Juan Fernandez 54.48 157 T T 18 08 21.9
baz=335,slow=77,SNR=5968
MENT Mentasta 54.49 338 P **P** **17 09 41.9 +0.5**
MENT IAmb IAmb 17 09 51.5
comp=Z,132nm,0.9s
H03N3 Juan Fernandez 54.49 157 T T 18 08 21.3
baz=335,slow=77,SNR=2805
EPYK Eagle Plains 54.53 343 P **P** **17 09 41.6 0.0**
baz=136
EPYK Eagle Plains 54.53 343 P **P** **17 09 41.5 0.0**
GLI Glacier Island 54.63 334 P **P** **17 09 42.9 +0.5**
GLI IAmb IAmb 17 09 48.3
comp=Z,209nm,1.0s
GLI IAMs_20 IAMs_20 17 31 57.5
comp=Z,46µm,20.0s
EGAK Eagle 54.76 340 P **P** **17 09 43.0 -0.2**
EGAK IAMs_20 IAMs_20 17 33 34.1
comp=Z,50µm,20.0s
DOT Dot Lake 55.04 338 P **P** **17 09 45.8 +0.5**
DOT IAMs_20 IAMs_20 17 35 21.8
comp=Z,74µm,22.0s
PAX Paxson 55.15 337 IAMs_20 IAMs_20 17 34 52.9
comp=Z,30µm,20.0s
INK Inuvik 55.17 346 P **P** **17 09 45.8 -0.3**
comp=Z,183nm,0.8s,baz=133,slow=8.2,SNR=194
INK LR LR 17 35 00.4
comp=Z,64µm,22.0s,baz=141,slow=38
INK PKPPKP **P'P'df** **17 40 02.0 +5.4**
comp=Z,3.8nm,1.1s,baz=44,slow=8.1,SNR=3.0
INK Inuvik 55.17 346 P **P** **17 09 45.6 -0.5**
GO04 Tololo Observa 55.22 148 P **P** **17 09 46.5 -0.8**
GO04 IAMs_20 IAMs_20 17 28 14.9
comp=Z,53µm,19.0s
SCM Sheep Creek Mo 55.24 335 P **P** **17 09 47.3 +0.5**
SCM pmax pmax
comp=Z,154nm,1.0s
SCM MLR MLR
comp=Z,57µm,20.0s
SCM Sheep Creek Mo 55.24 335 P **P** **17 09 47.3 +0.5**
SCM IAmb IAmb 17 10 13.1
comp=Z,154nm,1.0s
SCM IAMs_20 IAMs_20 17 35 13.4
comp=Z,57µm,20.0s
SEW Seward 55.24 333 P **P** **17 09 46.9 +0.2**
SEW IAMs_20 IAMs_20 17 33 28.7
comp=Z,38µm,20.0s
SALV Santo Antonio 55.29 124 *e*P **P** **17 09 46.1 -1.6**
CO01 Juntas del Tor 55.42 147 P **P** **17 09 50.2 +1.4**
CO01 IAMs_20 IAMs_20 17 28 33.2
comp=Z,61µm,19.0s
KEKH Kekaha 55.43 285 P **P** **17 09 48.5 -0.3**
KEKH IAmb IAmb 17 10 30.5
comp=Z,574nm,1.7s
KNK Knik Glacier 55.48 334 P **P** **17 09 48.9 +0.4**
KNK IAmb IAmb 17 10 01.0
comp=Z,158nm,1.0s
KNK IAMs_20 IAMs_20 17 36 56.8
comp=Z,57µm,18.0s
SML Sawmill 55.63 335 P **P** **17 09 49.6 0.0**
SML IAmb IAmb 17 09 55.4
comp=Z,252nm,0.9s
SML IAMs_20 IAMs_20 17 35 29.7
comp=Z,53µm,22.0s
KDAK Kodiak Island 55.64 329 P **P** **17 09 49.7 0.0**
comp=Z,43nm,0.8s,baz=101,slow=4.4,SNR=17
KDAK Kodiak Island 55.64 329 P **P** **17 09 50.2 +0.6**
KDAK IAmb IAmb 17 10 16.1
comp=Z,271nm,1.4s
KDAK Kodiak Island 55.64 329 IAMs_20 IAMs_20 17 33 38.7
comp=Z,43µm,20.0s
BRLK Bradley Lake 55.72 332 P **P** **17 09 50.2 0.0**
BRLK IAMs_20 IAMs_20 17 32 27.4
comp=Z,24µm,18.0s
OHAK Old Harbor 55.76 329 P **P** **17 09 51.0 +0.5**
OHAK IAmb IAmb 17 09 55.1
comp=Z,265nm,0.9s
OHAK IAMs_20 IAMs_20 17 33 32.9
comp=Z,30µm,19.0s
CNPM China Poot 55.77 332 P **P** **17 09 50.8 +0.3**
CNPM IAMs_20 IAMs_20 17 33 53.7
comp=Z,33µm,20.0s
CO03 El Pedregal 55.82 149 P **P** **17 09 53.1 +1.7**
CO03 IAmb IAmb 17 10 01.6
comp=Z,171nm,1.1s
CO03 IAMs_20 IAMs_20 17 28 33.7
comp=Z,58µm,19.0s
PMR Palmer 55.85 334 P **P** **17 09 51.1 +0.1**
PMR pmax pmax
comp=Z,203nm,0.9s
PMR Palmer 55.85 334 P **P** **17 09 51.1 +0.1**
PMR IAmb IAmb 17 09 56.8
comp=Z,203nm,0.9s
RC01 Rabbit Creek A 55.85 334 P **P** **17 09 50.9 -0.2**
RC01 IAmb IAmb 17 09 56.9
comp=Z,138nm,0.9s
RC01 IAMs_20 IAMs_20 17 36 27.5
comp=Z,33µm,20.0s
GHO Glory Hole Cre 55.85 335 P **P** **17 09 50.8 -0.4**
GHO IAMs_20 IAMs_20 17 35 37.7
comp=Z,53µm,19.0s
DHY Denali Highway 55.93 336 P **P** **17 09 51.8 -0.1**
CO02 Combarbal 55.96 149 P **P** **17 09 54.1 +1.7**
CO02 IAmb IAmb 17 11 14.4
comp=Z,206nm,1.4s
CO02 IAMs_20 IAMs_20 17 28 35.5
comp=Z,49µm,20.0s
HOM Homer 56.01 332 P **P** **17 09 52.9 +0.6**
HOM IAmb IAmb 17 09 56.9
comp=Z,252nm,0.9s
VAH Vaihoa 56.28 238 *e*P **P** **17 09 56.6 +1.8**
comp=Z,160nm,1.3s
VAH Vaihoa 56.28 238 *e*T T 18 10 21.8
comp=Z,22nm,0.3s
PMOR Pomariorio Ree 56.38 238 *e*P **P** **17 09 57.4 +1.9**
comp=Z,154nm,1.1s
PMOR Pomariorio Ree 56.38 238 *e*T T 18 10 28.2
comp=Z,86nm,0.2s
HDA Harding Lake 56.52 338 P **P** **17 09 55.7 -0.2**
baz=124
HDA S **S** **17 17 49.9 +4.3**
baz=124
HDA S **S** **17 17 49.9 +4.3**
baz=124
HDA Harding Lake 56.52 338 P **P** **17 09 55.5 -0.3**
HDA IAmb IAmb 17 10 05.2
comp=Z,200nm,1.0s
HDA IAMs_20 IAMs_20 17 34 45.8
comp=Z,53µm,22.0s
CO04 Los Peladeros 56.66 150 P **P** **17 09 59.0 +1.5**
CO04 IAMs_20 IAMs_20 17 28 08.0
comp=Z,39µm,20.0s
PRP Porcupine Dome 56.66 339 P **P** **17 09 57.2 +0.1**
PRP IAmb IAmb 17 10 02.1
comp=Z,264nm,0.9s
RND Reindeer 56.67 336 P **P** **17 09 57.3 +0.2**
RND pmax pmax
comp=Z,515nm,1.1s
RND MLR MLR
comp=Z,78µm,22.0s
RND Reindeer 56.67 336 P **P** **17 09 57.3 +0.2**
A36M Sachs Harbour 56.68 351 P **P** **17 09 56.2 -0.6**
baz=152
A36M S **S** **17 17 48.3 +0.8**
baz=152
ILAR Eielson Array 56.70 338 P **P** **17 09 57.0 -0.2**
comp=Z,143nm,0.9s,baz=147,slow=5.2,SNR=165
ILAR PKP2bc 17 39 59.9
comp=Z,1.1nm,1.0s,baz=299,slow=4.0,SNR=5.5
ILAR P4KPbc 17 47 10.8
comp=Z,0.7nm,0.9s,baz=128,slow=1.6,SNR=5.1
ILAR Eielson Array 56.70 338 P **P** **17 09 57.0 -0.2**
RSO Redoubt South 56.87 332 P **P** **17 09 58.4 -0.2**
MCK McKinley 56.88 337 P **P** **17 09 58.4 -0.1**
MCK pmax pmax
comp=Z,288nm,1.0s
MCK MLR MLR
comp=Z,86µm,21.0s
MCK McKinley 56.88 337 P **P** **17 09 58.4 -0.1**
comp=Z,288nm,1.0s
MCK IAmb IAmb 17 10 04.2
CCB Clear Creek Bu 56.96 338 P **P** **17 09 58.0 -0.9**
WRH Wood River Hil 56.96 338 P **P** **17 09 58.4 -0.6**
WRH IAmb IAmb 17 10 04.2
comp=Z,199nm,1.1s
POKR Poker Flat Res 57.09 339 P **P** **17 09 60.0 +0.1**
baz=124
POKR S **S** **17 17 57.0 +3.8**
baz=124
COLA College 57.10 338 *c i*P **P** **17 09 59.5 -0.4**
COLA pmax pmax
comp=Z,572nm,3.2s
COLA MLR MLR
comp=Z,34µm,15.0s
COLA College 57.10 338 P **P** **17 10 00.1 +0.2**
COLA College 57.10 338 IAMs_20 IAMs_20 17 35 50.3
comp=Z,57µm,21.0s
TCOL CIGO, UAF Yank 57.10 338 P **P** **17 09 59.9 0.0**
baz=123
FYU Fort Yukon 57.20 341 P **P** **17 10 01.1 +0.4**
FYU IAMs_20 IAMs_20 17 35 34.4
comp=Z,52µm,21.0s
TRF Thorofare Moun 57.25 336 P **P** **17 10 01.2 -0.1**
MDM Murphy Dome 57.28 338 P **P** **17 10 00.8 -0.5**
VA03 San Esteban 57.45 150 P **P** **17 10 05.0 +2.0**
VA03 IAmb IAmb 17 11 01.5
comp=Z,169nm,1.1s
VA03 IAMs_20 IAMs_20 17 28 52.1
comp=Z,36µm,20.0s
IVI Ivigtut 57.50 27 P **P** **17 10 00.8 -2.0**
IVI IAMs_20 IAMs_20 17 36 14.0
comp=Z,48µm,19.0s
KTH Kantishna Hill 57.55 336 P **P** **17 10 02.8 -0.5**
KTH IAmb IAmb 17 10 27.8
comp=Z,269nm,1.3s
MT02 Curacav 57.58 151 P **P** **17 10 06.3 +2.5**
MT02 IAMs_20 IAMs_20 17 28 54.5
comp=Z,33µm,20.0s
XMAS Kiritimati 57.59 261 IAMs_20 IAMs_20 17 28 54.7
comp=Z,38µm,19.0s
RES Resolute Bay 57.64 2 P **P** **17 10 02.3 -1.3**
RES pmax pmax
comp=Z,257nm,1.2s
RES MLR MLR
comp=Z,69µm,19.0s
RES Resolute Bay 57.64 2 P **P** **17 10 02.3 -1.3**
RES IAmb IAmb 17 10 04.4
comp=Z,257nm,1.2s
PEL Peldehue 57.70 150 P **P** **17 10 05.8 +1.1**
PEL pmax pmax
comp=Z,363nm,1.8s
PEL MLR MLR
comp=Z,34µm,20.0s
PEL Peldehue 57.70 150 P **P** **17 10 05.8 +1.1**
PEL IAmb IAmb 17 11 44.3
comp=Z,362nm,1.8s
PEL IAMs_20 IAMs_20 17 28 58.8
comp=Z,34µm,20.0s
PPLA Purkeypile 57.73 335 P **P** **17 10 04.4 -0.3**
PPLA IAmb IAmb 17 10 25.1
comp=Z,478nm,1.4s
BPAW Bear Paw Mtn. 57.85 337 P **P** **17 10 04.6 -0.7**
BPAW IAmb IAmb 17 10 15.3
comp=Z,154nm,1.0s
BPAW IAMs_20 IAMs_20 17 36 49.1
comp=Z,56µm,20.0s
MT05 Renca 57.88 150 IAMs_20 IAMs_20 17 29 23.4
comp=Z,32µm,20.0s
AQDB Aquidauana 57.95 128 *e*P **P** **17 10 04.8 -1.7**
MT01 Popeta 58.03 151 P **P** **17 10 08.4 +1.5**
CHGN Chignik 58.07 326 P **P** **17 10 06.7 -0.2**
MEH Mehetia 58.09 235 *e*T T 18 12 37.0
comp=Z,27nm,0.2s
MLY Manley 58.22 338 P **P** **17 10 07.6 -0.3**
MLY IAmb IAmb 17 10 13.6
comp=Z,245nm,1.0s
CNBA Chernabura Isl 58.28 324 P **P** **17 10 08.6 +0.2**
CNBA IAMs_20 IAMs_20 17 34 54.4
comp=Z,32µm,20.0s
ARAG Araguaiana, MT 58.31 121 *e*P **P** **17 10 08.1 -1.1**
SVW2 Sparrevohn 58.39 332 P **P** **17 10 07.9 -1.2**
SVW2 IAMs_20 IAMs_20 17 35 27.7
comp=Z,30µm,21.0s
SMTB Santa Maria do 58.61 112 *e*P **P** **17 10 10.8 -0.5**
GO05 Huala 58.68 152 P **P** **17 10 12.7 +1.3**
NRS Narsarsuaq 58.70 28 *i*P **P** **17 10 10.5 -0.7**
NRS MLR MLR
comp=Z,43µm,17.0s
NRS Narsarsuaq 58.70 28 IAMs_20 IAMs_20 17 38 23.6
comp=Z,44µm,18.0s
NRS Narsarsuaq 58.70 28 *i*P **P** **17 10 10.5 -0.7**
comp=Z,42µm,17.0s
SDPT Sand Point 58.91 325 P **P** **17 10 13.8 +1.0**
SDPT IAMs_20 IAMs_20 17 35 13.1
comp=Z,26µm,20.0s
TIAR Tiarei 58.93 237 *e*P **P** **17 10 14.7 +1.2**
comp=Z,18nm,0.9s
TIAR Tiarei 58.93 237 *e*T T 18 13 39.9
comp=Z,4.3nm,0.2s
TVO Taravao 58.98 236 *e*T T 18 13 43.9
comp=Z,1.1nm,0.3s
BO02 Sierra Bellavi 59.02 151 P **P** **17 10 14.0 +0.2**
PPT Papeete 59.12 237 LR LR 17 29 23.0
comp=Z,26µm,18.4s,baz=59,slow=29
PPTF Pamatai, Papee 59.12 237 IAMs_20 IAMs_20 17 28 44.0
comp=Z,26µm,20.0s
PPT2 Papeete2 59.13 237 *e*S **S** **17 18 21.9 +0.7**
comp=Z,45µm,27.5s
PPT2 *e*SS **SS** **17 22 17.6 +1.7**
comp=Z,15µm,25.5s
PPT2 *e*LQ LQ 17 25 15.3
comp=Z,40µm,28.2s
PPT2 *e*LR LR 17 27 43.3
comp=Z,71µm,24.8s,baz=52
C2SB Chapadao do Su 59.15 125 *e*P **P** **17 10 14.9 -0.1**
COLD Coldfoot 59.19 340 P **P** **17 10 15.0 +0.4**
COLD IAmb IAmb 17 10 34.5
comp=Z,267nm,1.6s
SFJD Kangerlussuaq 59.33 21 P **P** **17 10 15.6 +0.1**
comp=Z,201nm,1.0s,baz=233,slow=7.1,SNR=39
SFJD Kangerlussuaq 59.33 21 P **P** **17 10 15.3 -0.2**
SFJD pmax pmax
comp=Z,631nm,1.3s
SFJD Kangerlussuaq 59.33 21 P **P** **17 10 15.3 -0.2**
ROSB Rosrio 59.35 104 *e*P **P** **17 10 15.8 -0.7**
BI03 Tigo 59.76 154 P **P** **17 10 20.1 +1.3**
BI03 IAmb IAmb 17 10 30.4
comp=Z,138nm,1.1s
BI03 IAMs_20 IAMs_20 17 30 10.4
comp=Z,26µm,19.0s
TOLK Toolik Lake Re 59.76 341 P **P** **17 10 18.5 -0.1**
baz=124
TOLK S **S** **17 18 33.0 +5.0**
baz=124
BI02 San Fabin de 60.35 153 P **P** **17 10 22.8 -0.2**
ILULI Ilulissat 60.37 18 *i*P **P** **17 10 22.2 -0.4**
ILULI pmax pmax
comp=Z,260nm,1.1s
ILULI MLR MLR
comp=Z,42µm,14.0s
ILULI Ilulissat 60.37 18 P **P** **17 10 21.6 -1.0**
ILULI IAmb IAmb 17 10 26.4
comp=Z,284nm,1.1s
ILULI Ilulissat 60.37 18 *i*P **P** **17 10 22.2 -0.4**
comp=Z,257nm,1.1s
comp=Z,42µm,14.0s
FALS False Pass 60.43 324 P **P** **17 10 22.6 -0.7**
CPUP Villa Florida 60.44 135 P **P** **17 10 23.4 -0.3**
comp=Z,31nm,1.0s,baz=326,slow=7.4,SNR=37
CPUP LR LR 17 36 01.1
comp=Z,28µm,20.0s,baz=334,slow=35
CPUP PKPPKP **P'P'df** **17 39 48.4 +4.9**
comp=Z,2.4nm,1.0s,baz=171,slow=4.5,SNR=4.4
CPUP Villa Florida 60.44 135 P **P** **17 10 23.1 -0.7**
BDFB Brasilia 61.42 119 P **P** **17 10 31.4 +0.7**
comp=Z,33nm,0.9s,baz=291,slow=8.2,SNR=26
BDFB Brasilia 61.42 119 P **P** **17 10 30.0 -0.7**
BDFB pmax pmax
comp=Z,256nm,1.5s
BDFB Brasilia 61.42 119 P **P** **17 10 30.0 -0.7**
BDFB IAmb IAmb 17 10 32.7
comp=Z,256nm,1.5s
TRCB Terra Rica 61.61 129 *e*P **P** **17 10 32.0 +0.2**
ITRB Iturama 61.62 124 *e*P **P** **17 10 30.3 -1.6**
AKUT Akutan 61.64 323 P **P** **17 10 30.7 -0.8**

AKUT IAmb IAmb 17 10 34.6
comp=Z,184nm,0.9s
TULEG Thule 61.65 8 P **P** **17 10 30.3 -0.9**
PCMB Pacaembu 61.97 127 *e*P **P** **17 10 32.2 -2.0**
PCMB *e*S **S** **17 18 50.3 -7.0**
LC01 Cunco 61.99 155 IAMs_20 IAMs_20 17 31 29.2
comp=Z,22µm,19.0s
UNV Unalaska Valle 62.01 322 P **P** **17 10 34.0 0.0**
KULLO Kullorsuaq 62.12 12 *i* P **P** **17 10 33.8 -0.6**
KULLO MLR MLR
comp=Z,44µm,17.0s
KULLO Kullorsuaq 62.12 12 *i* P **P** **17 10 33.8 -0.6**
comp=Z,44µm,17.0s
TBI Tubuai 62.29 231 *e*S **S** **17 19 01.7 +0.5**
comp=Z,22µm,34.2s
TBI *e*SS **SS** **17 23 07.5 +2.3**
TBI comp=Z,11µm,26.8s *e*LQ LQ 17 26 31.0
comp=Z,14µm,40.5s
TBI *e*LR LR 17 29 07.6
comp=Z,64µm,26.8s,baz=57
TBI Tubuai 62.29 231 *e*T T 18 17 51.6
comp=Z,42nm,0.3s
NBPS Pedro II - PI 62.39 104 *e*P **P** **17 10 37.2 -0.1**
IPMB Ipameri, GO 62.43 121 *e*P **P** **17 10 36.4 -1.0**
IPMB *e*S **S** **17 18 56.5 -6.8**
ITQB Itaqui 63.11 137 *e*P **P** **17 10 40.1 -1.5**
PTGB Pitanga 63.16 130 *e*P **P** **17 10 41.4 -0.8**
NIKH Nikolski High 63.28 321 P **P** **17 10 41.9 -0.6**
NBMO Morrinhos-CE 63.30 103 *e*P **P** **17 10 42.8 -0.5**
H07S1 FLORES T-PHASE 63.68 54 *e*P **P** **17 10 47.2 +1.8**
ANM Nome 63.79 334 P **P** **17 10 45.6 0.0**
ANM pmax pmax
comp=Z,195nm,1.3s
ANM MLR MLR
comp=Z,81µm,20.0s
ANM Nome 63.79 334 P **P** **17 10 45.6 0.0**
ANM IAmb IAmb 17 11 04.9
comp=Z,195nm,1.3s
BB19B Bebedouro 63.80 125 *e*P **P** **17 10 44.5 -1.9**
RDOG Red Dog Mine 63.91 338 P **P** **17 10 46.0 -0.4**
RDOG IAmb IAmb 17 10 48.2
comp=Z,200nm,1.3s
RDOG IAMs_20 IAMs_20 17 42 10.2
comp=Z,53µm,20.0s
PLCA Paso Flores 64.08 155 P **P** **17 10 50.2 +2.3**
comp=Z,33nm,1.0s,baz=333,slow=7.7,SNR=31
PLCA LR LR 17 32 57.5
comp=Z,31µm,18.3s,baz=340,slow=30
PLCA Paso Flores 64.08 155 P **P** **17 10 47.7 -0.2**
PLCA pmax pmax
comp=Z,100nm,1.2s
PLCA Paso Flores 64.08 155 P **P** **17 10 47.7 -0.2**
FRTB Fartura 64.24 127 *e*P **P** **17 10 49.0 -0.3**
JANB Januaria 64.27 117 *e*P **P** **17 10 48.6 -1.0**
NBPB Pedra_Branca-C 64.53 105 *e*P **P** **17 10 51.3 -0.1**
ITAB Concordia 64.62 132 *e*P **P** **17 10 50.9 -0.7**
LL01 San Ignacio de 64.76 157 P **P** **17 10 52.2 0.0**
LL01 IAmb IAmb 17 11 59.6
comp=Z,204nm,1.6s
LL01 IAMs_20 IAMs_20 17 32 46.8
comp=Z,42nm,19.0s
NBCL Cascavel-CE 65.26 103 *e*P **P** **17 10 56.9 +0.8**
SUMG Summit 65.60 17 *i* P **P** **17 10 57.7 -0.1**
SUMG MLR MLR
comp=Z,70µm,16.0s
SUMG Summit 65.60 17 P **P** **17 10 57.0 -0.8**
SUMG Summit 65.60 17 *i* P **P** **17 10 57.7 -0.1**
comp=Z,70nm,16.0s
PCED Cedros 65.65 55 *e*P **P** **17 11 00.3 +2.0**
comp=Z,534nm,2.2s
CPSB Cacapava Do Su 65.68 136 *e*P **P** **17 10 58.6 +0.2**
PCAN Candelaria 65.83 55 *e*P **P** **17 11 01.1 +1.6**
comp=Z,500nm,1.2s
LPA La Plata 65.87 142 *i* P P 17 10 52.8 -6.7
LPA PCP **PcP** **17 11 30.2 -0.2**
LPA PKIKP **PKiKP** **17 17 30.9 -2.3**
LPA S **S** **17 19 39.4 -5.8**
LPA SCS **ScS** **17 20 56.1 +2.0**
LPA SKIKP 17 21 04.0
LPA SS **SS** **17 24 05.8 +5.1**
LPA SSS SSS 17 27 07.3
NBMA Muriti-CE 65.97 106 *e*P **P** **17 11 00.8 +0.1**
ROSA Rosais 66.01 55 *e*P **P** **17 11 02.3 +1.7**
comp=Z,512nm,1.4s
SPB Sao Paulo 66.01 126 P **P** **17 11 00.1 -0.6**
SPB IAMs_20 IAMs_20 17 38 24.0
comp=Z,25µm,21.0s
SPB Sao Paulo 66.01 126 *e*P **P** **17 10 59.7 -1.0**
NBPN Ponto Novo - B 66.04 110 *e*P **P** **17 11 00.7 -0.4**
VAO Valinhos 66.05 126 *e*P **P** **17 11 00.5 -0.7**
PMAN Manadas 66.13 55 *e*P **P** **17 11 03.0 +1.6**
comp=Z,496nm,1.4s
SRBC Serra Branca 66.15 54 *e*P **P** **17 11 03.5 +2.0**
comp=Z,2µm,1.9s
PGRA Graciosa 66.19 54 *e*P **P** **17 11 03.2 +1.4**
comp=Z,985nm,1.7s
GAMB Gambell 66.32 333 P **P** **17 11 02.0 -0.1**
PLTB Pedras Altas 66.44 137 *e*P **P** **17 11 02.2 -1.2**
ATKA Atka Island 66.47 320 P **P** **17 11 02.9 -0.3**
BSCB Bom Sucesso 66.75 122 *e*P **P** **17 11 06.1 +0.4**
CNLB Canela 66.77 133 *e*P **P** **17 11 05.7 +0.1**
PARB Paraibuna 67.28 125 *e*P **P** **17 11 08.8 -0.1**
NBTA Tacaratu-PE 67.28 108 *e*P **P** **17 11 09.2 +0.1**
GSTR Great Sitkin T 67.61 320 P **P** **17 11 11.0 +0.4**
ADK Adak 68.00 320 P **P** **17 11 12.1 -0.9**
ADK pmax pmax
comp=Z,381nm,1.1s
ADK MLR MLR
comp=Z,12µm,22.0s
ADK Adak 68.00 320 P **P** **17 11 12.1 -0.9**
RCBR Riachuelo 68.05 104 P **P** **17 11 15.5 +1.5**
comp=Z,102nm,0.8s,baz=279,slow=5.3,SNR=37
PSET Sete Cidades 68.05 56 *e*P **P** **17 11 15.4 +1.8**
comp=Z,1µm,2.2s
GRON Grota Negra 68.20 56 *e*P **P** **17 11 17.3 +2.7**
comp=Z,1µm,2.1s
CMLA Cha da Macela 68.21 56 *e*P **P** **17 11 16.1 +1.5**
comp=Z,1µm,2.2s
CMLA Cha da Macela 68.21 56 P **P** **17 11 14.8 +0.2**
CMLA pmax pmax
comp=Z,289nm,1.0s
CMLA MLR MLR
comp=Z,22µm,20.0s
CMLA Cha da Macela 68.21 56 P **P** **17 11 14.8 +0.2**
CMLA Cha da Macela 68.21 56 IAMs_20 IAMs_20 17 39 04.6
comp=Z,22µm,20.0s
NBLA Lagarto - SE 68.26 110 *e*P **P** **17 11 15.0 -0.2**
MAN01 Angra dos Reis 68.34 124 *e*P **P** **17 11 15.9 +0.2**
NBIT Itapeh - BA 68.42 114 *e*P **P** **17 11 16.3 +0.1**
VAS01 Vassouras-RJ 68.47 123 *e*P **P** **17 11 17.4 +1.1**
BART Pico Bartolome 68.49 56 *e*P **P** **17 11 18.2 +1.7**
comp=Z,1µm,1.7s
PSMA Santa Maria 68.60 56 *e*P **P** **17 11 18.2 +1.2**
comp=Z,615nm,1.8s
SJMB Sao Joao De Ma 68.60 119 *e*P **P** **17 11 17.2 -0.1**
PSMN Pico do Norte, 68.65 56 *e*P **P** **17 11 18.2 +0.8**
comp=Z,647nm,2.0s
NBPV Pedro Velho 68.83 104 *e*P **P** **17 11 19.2 +0.5**
BSFB Barra de Sao F 68.95 119 *e*P **P** **17 11 19.2 -0.1**
NBAN Anadia - AL 69.12 108 *e*P **P** **17 11 20.7 +0.1**
RAR Rarotonga 69.23 239 P **P** **17 11 24.3 +3.2**
comp=Z,11nm,0.8s,baz=258,slow=6.1,SNR=3.6
RAR LR LR 17 34 10.7
comp=Z,17µm,18.3s,baz=48,slow=29
BORG Borgarnes 70.15 27 P **P** **17 11 26.5 +0.5**
comp=Z,196nm,1.0s,baz=278,slow=4.0,SNR=19
BORG Borgarnes 70.15 27 P **P** **17 11 26.9 +0.8**
BORG Borgarnes 70.15 27 IAMs_20 IAMs_20 17 42 44.4
comp=Z,23µm,21.0s
SCO Scoresbysund 70.24 21 P **P** **17 11 25.6 -0.9**
SCO pmax pmax
comp=Z,376nm,1.6s
SCO MLR MLR
comp=Z,34µm,19.0s
SCO Scoresbysund 70.24 21 P **P** **17 11 25.6 -0.9**
SCO IAmb IAmb 17 11 31.5
comp=Z,376nm,1.6s
SCO IAMs_20 IAMs_20 17 43 41.6
comp=Z,34µm,19.0s
SCO Scoresbysund 70.24 21 *i* P **P** **17 11 26.0 -0.5**
comp=Z,36µm,15.0s
DAG Danmarks Havn 71.63 14⇑ *i*P **P** **17 11 33.4 -1.5**
DAG pmax pmax
comp=Z,290nm,1.1s

DAG MLR MLR
comp=Z,65µm,16.0s
DAG Danmarks Havn 71.63 14⇑ *i*P **P** **17 11 33.4 -1.5**
comp=Z,290nm,1.1s
comp=Z,65µm,16.0s
NOR Nord 72.29 9 *i* P **P** **17 11 38.0 -0.8**
NOR MLR MLR
comp=Z,73µm,15.0s
NOR Nord 72.29 9 *i* P **P** **17 11 38.0 -0.8**
comp=Z,73µm,15.0s
GO09 Cerro Castillo 72.55 162 IAMs_20 IAMs_20 17 36 18.8
comp=Z,33µm,19.0s
KNTN Kanton 72.65 261 IAMs_20 IAMs_20 17 35 40.6
comp=Z,19µm,20.0s
GO10 Punta Arenas 74.58 162 IAMs_20 IAMs_20 17 37 20.7
comp=Z,23µm,20.0s
JMIC Jan Mayen 74.68 20 P **P** **17 11 53.5 +0.5**
comp=Z,50nm,0.6s,baz=276,slow=10,SNR=5.0
JMIC Jan Mayen 74.68 20⇑ *i*P **P** **17 11 54.1 +1.1**
JMIC IVmB_BB 17 11 55.4
comp=Z,12µm,3.9s
JMIC *e*PP **PP** **17 14 40.1 +0.3**
JMIC *e*S **S** **17 21 23.4 -3.8**
JMIC IVMs_BB IVMs_BB 17 47 04.6
comp=Z,9µm,14.9s
BILL Bilibino 75.33 337 *c i*P **P** **17 11 56.8 0.0**
BILL *i* *SP **sP** **17 12 08.3 +0.6**
BILL *i* 17 12 09.9
BILL *i* 17 14 48.7
BILL *e*PPP PPP 17 16 36.4
BILL *i* S **S** **17 21 35.8 +1.2**
BILL *i* PS **PnS** **17 22 14.8 +2.8**
BILL SSS SSS 17 29 44.0
BILL pmax pmax
comp=Z,516nm,3.6s
BILL MLR MLR
comp=Z,94µm,16.0s
BILL Bilibino 75.33 337 P **P** **17 11 56.3 -0.5**
BILL IAmb IAmb 17 11 59.1
comp=Z,321nm,1.6s
PMOZ Porto Moniz, M 75.66 60 P **P** **17 12 01.3 +1.8**
SNR=8.1
PMOZ Porto Moniz, M 75.66 60 *e*P **P** **17 12 00.0 +0.5**
comp=Z,244nm,2.2s
PMOZ Porto Moniz, M 75.66 60 *e*PP PP 17 14 55.1 +5.9
PMOZ *e*S S 17 21 54.3 +15
PMOZ Porto Moniz, M 75.66 60 *e*LR LR 17 35 10.3
comp=Z,28µm,22.0s
PMAR Madeira 75.92 60 *e*P **P** **17 12 02.6 +1.5**
comp=Z,276nm,1.5s
FUL Funchal 75.95 60 *e*P **P** **17 12 02.3 +1.3**
comp=Z,189nm,0.8s
PMPST Porto Santo, M 76.32 59 *e*P **P** **17 12 03.4 +0.2**
comp=Z,516nm,1.8s
PMPST *e*S S 17 21 56.0 +9.2
PMPS Porto Santo 76.33 59 *e*P **P** **17 12 03.8 +0.6**
comp=Z,544nm,2.0s
AFI Afiamalu 76.54 251 IAMs_20 IAMs_20 17 39 26.2
comp=Z,15µm,18.0s
USHA Ushuaia 76.81 161 LR LR 17 40 17.1
comp=Z,26µm,18.0s,baz=328,slow=31
NIUE Niue 76.87 245 IAMs_20 IAMs_20 17 39 47.2
comp=Z,22µm,18.0s
MG01 Puerto William 77.14 161 IAMs_20 IAMs_20 17 39 33.5
comp=Z,28µm,19.0s
IGLA Glengowla, Co 77.27 38 *e*P **P** **17 12 06.4 -1.6**
IGLA IAMs_20 IAMs_20 17 46 55.4
comp=Z,41µm,18.7s
KBS Kingsbay 77.52 11 *c i*P **P** **17 12 10.1 +1.0**
KBS pmax pmax
comp=Z,318nm,1.1s
KBS MLR MLR
comp=Z,33µm,18.0s
KBS Kingsbay 77.52 11 P **P** **17 12 08.7 -0.4**
KBS IAmb IAmb 17 12 14.7
comp=Z,305nm,1.1s
KBS Kingsbay 77.52 11 IAMs_20 IAMs_20 17 47 38.0
comp=Z,35µm,19.0s
KBS Kingsbay 77.52 11⇑ *i*P **P** **17 12 11.3 +2.2**
KBS IVmBBB 17 12 12.2
comp=Z,11µm,3.5s
KBS *e*PP **PP** **17 15 04.0 +0.4**
KBS *e*S **S** **17 21 57.8 -0.6**
KBS IVMs_BB IVMs_BB 17 49 37.0
comp=Z,22µm,14.4s
LEWI Lewis, Hebride 77.67 33 *e*P **P** **17 12 08.6 -1.6**
LEWI IAMs_20 IAMs_20 17 43 31.1
comp=Z,28µm,27.6s
IDGL Inch Island, C 77.99 36 *e*P **P** **17 12 11.2 -0.9**
IDGL IAMs_20 IAMs_20 17 46 59.3
comp=Z,33µm,19.4s
EFI East Falkland 78.00 154 *c i*P **P** **17 12 13.0 +1.0**
EFI pmax pmax
comp=Z,89nm,1.7s
EFI MLR MLR
comp=Z,11µm,15.0s
EFI East Falkland 78.00 154 IAMs_20 IAMs_20 17 40 53.0
comp=Z,27µm,20.0s
KPL Plockton 78.49 33 *e*P **P** **17 12 13.7 -1.0**
KPL IAMs_20 IAMs_20 17 43 43.4
comp=Z,27µm,24.7s
KAC Achnashellach 78.63 33 *e*P **P** **17 12 14.7 -0.9**
SPA0 Spitsbergen Ar 78.66 11⇑ *i*P **P** **17 12 15.4 +1.0**
SPA0 *e*PP **PP** **17 15 12.2 -0.9**
SPA0 *e*S **S** **17 22 10.9 +0.3**
SPITS Spitsbergen Ar 78.66 11 P **P** **17 12 15.4 0.0**
comp=Z,77nm,0.7s,baz=202,slow=0.9,SNR=34
CLGH Cloghs, Cushen 78.77 36 *e*P **P** **17 12 15.6 -0.8**
CLGH IAMs_20 IAMs_20 17 47 25.7
comp=Z,31µm,19.7s
LAWE Loch Awe, Argy 78.88 34 *e*P **P** **17 12 15.0 -1.9**
LAWE IAMs_20 IAMs_20 17 46 36.5
comp=Z,30µm,22.3s
GMM Mts of Mourne 79.06 37 *e*P **P** **17 12 16.9 -1.1**
HSPB Hornsund (broa 79.08 12 *e*PP PP 17 15 17.0 +0.4
HSPB *e*S **S** **17 22 19.9 +4.8**
HSPB LMZ LR 17 47 27.5
comp=Z,27nm,23.9s
HSPB Hornsund (broa 79.08 12⇑ *i*P **P** **17 12 19.6 +1.9**
HSPB *e*PP **PP** **17 15 17.1 +0.5**
HSPB *e*S **S** **17 22 14.8 -0.3**
HSPB IVMs_BB IVMs_BB 17 53 08.1
comp=Z,11µm,15.8s
BIGH Upper Bighouse 79.10 32 *e*P **P** **17 12 17.9 -0.2**
BIGH IAMs_20 IAMs_20 17 50 56.4
comp=Z,23µm,18.3s
MDO Dochfour 79.14 33 *e*P **P** **17 12 17.7 -0.7**
MLA1 Latheron 79.43 32 *e*P **P** **17 12 19.1 -0.8**
EAB Aberfoyle 79.47 34 *e*P **P** **17 12 19.4 -0.8**
GAL1 Galloway 79.61 36 *e*P **P** **17 12 20.3 -0.7**
GAL1 IAMs_20 IAMs_20 17 48 01.2
comp=Z,26µm,19.0s
MCD Coleburn Disti 79.68 33 *e*P **P** **17 12 21.0 -0.3**
WAL1 Walls 79.76 30 *e*P **P** **17 12 21.4 -0.3**
NEWG New Galloway 79.81 35 *e*P **P** **17 12 21.1 -0.9**
NEWG IAMs_20 IAMs_20 17 47 56.3
comp=Z,31µm,20.3s
WIM Isle of Man 79.81 36 *e*P **P** **17 12 21.6 -0.5**
IOMK Kirk Michael 79.85 36 *e*P **P** **17 12 21.7 -0.5**
IOMK IAMs_20 IAMs_20 17 48 10.3
comp=Z,69µm,18.7s
YEL1 Yell 79.92 30 *e*P **P** **17 12 22.7 +0.1**
LRW Lerwick 80.00 30 *e*P **P** **17 12 23.4 +0.5**
LRW IAMs_20 IAMs_20 17 45 59.5
comp=Z,28µm,22.7s
EDU Dundee 80.09 34 *e*P **P** **17 12 23.3 -0.3**
YRC Rhoscolyn 80.11 37 *e*P **P** **17 12 22.5 -1.2**
WPS Cemaes, Angles 80.11 37 *e*P **P** **17 12 23.0 -0.7**
WPS IAMs_20 IAMs_20 17 48 02.0
comp=Z,33µm,21.0s
EDI Edinburgh 80.17 34 *e*P **P** **17 12 23.4 -0.5**
EDI IAMs_20 IAMs_20 17 47 36.2
comp=Z,29µm,21.6s
WLF1 Llynfaes 80.20 37 *e*P **P** **17 12 22.9 -1.2**
WLF1 IAMs_20 IAMs_20 17 48 25.5
comp=Z,65µm,19.4s
WME Myndd Eilian 80.22 37 *e*P **P** **17 12 23.6 -0.7**
DRUM Mains of Drumt 80.26 33 *e*P **P** **17 12 24.2 -0.3**
DRUM IAMs_20 IAMs_20 17 44 18.6
comp=Z,33µm,28.5s
EBL Broad Law 80.28 35 *e*P **P** **17 12 24.1 -0.5**
ESK Eskdalemuir 80.32 35 *e*P **P** **17 12 23.7 -1.1**
ESK IAMs_20 IAMs_20 17 47 51.1
comp=Z,34µm,20.9s
ESK Eskdalemuir 80.32 35 P **P** **17 12 24.4 -0.4**

ESK pmax pmax
comp=Z,829nm,1.8s
ESK MLR MLR
comp=Z,32µm,20.0s
ESK Eskdalemuir 80.32 35 P **P** **17 12 24.4 -0.4**
ESK Eskdalemuir 80.32 35 IAMs_20 IAMs_20 17 48 05.6
comp=Z,32µm,20.0s
EKA Eskdalemuir Ar 80.34 35 P **P** **17 12 24.4 -0.6**
comp=Z,110nm,1.0s,baz=281,slow=4.6,SNR=60
RSBS Rosebush, Pemb 80.35 39 *e*P **P** **17 12 24.1 -0.9**
RSBS IAMs_20 IAMs_20 17 49 21.1
comp=Z,22µm,16.8s
YLL Llanberis 80.37 37 *e*P **P** **17 12 24.8 -0.3**
ESY Stoneypath 80.48 34 *e*P **P** **17 12 25.3 -0.3**
KESW Keswick, Cumbr 80.58 36 *e*P **P** **17 12 25.6 -0.6**
KESW IAMs_20 IAMs_20 17 48 30.8
comp=Z,21µm,19.6s
PGAV Gavieira, Arco 80.58 49⇑ *i*P **P** **17 12 26.8 +0.1**
comp=Z,304nm,1.7s
PGAV Gavieira, Arco 80.58 49 *e*PP PP 17 15 32.6 +2.5
PGAV *e*S **S** **17 22 39.7 +7.3**
PGAV *e*SS SS 17 27 55.5 +11
PGAV Gavieira, Arco 80.58 49 *e*LR LR 17 38 34.6
comp=Z,19µm,20.0s
PMAFR Mafra 80.58 52⇑ *i*P **P** **17 12 27.2 +0.6**
comp=Z,491nm,1.9s
PMAFR Mafra 80.58 52 *e*PP PP 17 15 26.2 -3.9
PMAFR *e*S S 17 22 43.2 +11
PMAFR *e*SS **SS** **17 27 54.7 +10**
LLW Llanuwychllyn 80.74 38 *e*P **P** **17 12 26.2 -0.9**
LLW IAMs_20 IAMs_20 17 48 43.3
comp=Z,15µm,19.3s
LIS Lisbon 80.74 52 *e*P **P** **17 12 27.4 0.0**
LIS *e*SKSac **SKSac** **17 22 42.7 -1.9**
LIS AMS AMS 17 47 50.4
comp=Z,21µm,22.7s
LIS Lisbon 80.74 52 *e*P **P** **17 12 27.4 0.0**
LIS *e* 17 22 42.6
LIS Lisbon 80.74 52⇑ *i*P **P** **17 12 27.9 +0.5**
comp=Z,619nm,1.7s
HTL Hartland 80.76 40 *e*P **P** **17 12 25.1 -2.2**
HTL IAMs_20 IAMs_20 17 53 41.3
comp=Z,21µm,15.1s
PSBE So Bento 80.81 52⇑ *i*P **P** **17 12 28.2 +0.4**
comp=Z,484nm,2.0s
PSBE So Bento 80.81 52 *e*PP PP 17 15 27.8 -4.2
PSBE *e*S **S** **17 22 36.1 +1.4**
PSBE *e*SS **SS** **17 27 51.4 +3.3**
PCAB Cabril 80.82 49⇑ *i*P **P** **17 12 28.1 +0.2**
comp=Z,342nm,2.0s
PCAB Cabril 80.82 49 *e*PP PP 17 15 34.6 +2.6
PCAS Casmilo, Conde 80.90 51⇑ *i*P **P** **17 12 29.1 +0.8**
comp=Z,717nm,1.7s
PCAS Casmilo, Conde 80.90 51 *e*PP PP 17 15 30.7 -1.9
PCAS *e*S S 17 22 46.7 +11
PCAS *e*SS **SS** **17 27 56.0 +6.7**
COI Coimbra 80.92 51 P **P** **17 12 27.8 -0.5**
COI pmax pmax
comp=Z,392nm,1.5s
COI MLR MLR
comp=Z,22µm,22.0s
COI Coimbra 80.92 51⇑ *i*P **P** **17 12 28.8 +0.5**
comp=Z,446nm,2.2s
COI Coimbra 80.92 51 *e*S S 17 22 45.8 +10
COI *e*SS **SS** **17 27 54.2 +4.6**
COI Coimbra 80.92 51 P **P** **17 12 27.8 -0.5**
COI IAmb IAmb 17 12 32.5
comp=Z,392nm,1.4s
COI IAMs_20 IAMs_20 17 44 17.6
comp=Z,22µm,22.0s
FOEL Foel Wylfa 81.00 37 *e*P **P** **17 12 27.6 -0.9**
FOEL IAMs_20 IAMs_20 17 48 50.7
comp=Z,29nm,19.9s
BJO1 Bjornoya 81.11 14⇑ *i*P **P** **17 12 30.1 +1.4**
BJO1 IVmB_BB 17 12 31.2
comp=Z,13µm,3.1s
BJO1 *e*PP **PP** **17 15 33.5 +0.1**
BJO1 *e*S **S** **17 22 38.6 +2.1**
BJO1 IVMs_BB IVMs_BB 17 50 33.1
comp=Z,14µm,17.9s
EDMD Edmundbyers 81.14 35 *e*P **P** **17 12 29.1 -0.2**
EDMD IAMs_20 IAMs_20 17 47 40.8
comp=Z,27µm,23.0s
PVRL Vila Real 81.16 50⇑ *i*P **P** **17 12 29.9 +0.2**
comp=Z,299nm,1.6s
PVRL Vila Real 81.16 50 *e*PP PP 17 15 37.1 +2.3
HOPEN Hopen 81.17 11⇑ *i*P **P** **17 12 30.2 +1.2**
HOPEN IVmB_BB 17 12 31.1
comp=Z,13µm,3.4s
HOPEN *e*PP **PP** **17 15 33.1 -0.8**
HOPEN *e*S **S** **17 22 37.8 +0.7**
HOPEN IVMs_BB IVMs_BB 17 51 41.4
comp=Z,17µm,15.1s
PVIS Viseu 81.17 50⇑ *i*P **P** **17 12 29.9 +0.1**
comp=Z,315nm,1.4s
PVIS Viseu 81.17 50 *e*PP PP 17 15 40.2 +5.3
HLM1 Long Mynd 81.29 38 *e*P **P** **17 12 29.4 -0.7**
HLM1 IAMs_20 IAMs_20 17 49 11.7
comp=Z,38µm,18.8s
PMTG Montargil 81.35 52⇑ *i*P **P** **17 12 30.8 +0.1**
comp=Z,422nm,2.1s
PMTG Montargil 81.35 52 *e*PP PP 17 15 33.6 -2.8
PMTG *e*S S 17 22 50.9 +11
PMTG *e*SS **SS** **17 28 05.0 +8.9**
PTEO Sao Teotonio 81.36 53⇑ *i*P **P** **17 12 31.3 +0.5**
comp=Z,656nm,2.3s
PNCL Nicolau / Gran 81.37 53⇑ *i*P **P** **17 12 31.3 +0.5**
comp=Z,264nm,1.5s
PNCL Nicolau / Gran 81.37 53 *e*S **S** **17 22 42.0 +1.5**
PNCL *e*SS **SS** **17 27 59.5 +3.1**
MCH1 Michaelchurch 81.38 38 *e*P **P** **17 12 29.3 -1.2**
MCH1 IAMs_20 IAMs_20 17 49 43.5
comp=Z,39µm,18.1s
PFVI Vila Bisbo 81.39 54 P **P** **17 12 32.6 +1.6**
SNR=6.9
PFVI P **P** **17 12 32.6 +1.6**
SNR=6.9
PFVI Vila Bisbo 81.39 54⇑ *i*P **P** **17 12 31.6 +0.7**
comp=Z,480nm,1.8s
PFVI Vila Bisbo 81.39 54 *e*S **S** **17 22 39.7 -1.1**
PFVI *e*SS **SS** **17 28 03.4 +6.6**
PFVI Vila Bisbo 81.39 54 P **P** **17 12 30.5 -0.4**
PFVI IAMs_20 IAMs_20 17 46 06.3
comp=Z,27µm,20.0s
MORF Marmelete 81.48 54 *e*P **P** **17 12 31.5 0.0**
MORF *e*SKSac **SKSac** **17 22 47.8 -2.1**
MORF AMS AMS 17 47 42.5
comp=Z,25µm,20.4s
MORF Marmelete 81.48 54 *e*P **P** **17 12 31.5 0.0**
MORF *e* 17 22 47.7
MORF Marmelete 81.48 54⇑ *i*P **P** **17 12 31.7 +0.2**
comp=Z,384nm,2.0s
MORF Marmelete 81.48 54 *e*PP PP 17 15 23.6 -14
MORF *e*S S **17 22 47.0 +5.2**
MORF *e*SS **SS** **17 28 03.5 +5.2**
MTE Manteigas 81.51 50⇑ *i*P **P** **17 12 31.8 +0.2**
comp=Z,286nm,2.0s
MTE Manteigas 81.51 50 *e*S **S** **17 22 49.9 +7.8**
MTE *e*SS **SS** **17 28 01.2 +2.6**
MTE Manteigas 81.51 50 *e*LR LR 17 40 38.0
comp=Z,20µm,20.0s
MTE Manteigas 81.51 50 P **P** **17 12 30.7 -0.9**
MTE IAmb IAmb 17 12 34.5
comp=Z,224nm,1.1s
MTE IAMs_20 IAMs_20 17 50 06.3
comp=Z,20µm,19.0s
STNC Stoke 81.52 37 *e*P **P** **17 12 30.4 -0.8**
STNC IAMs_20 IAMs_20 17 48 53.9
comp=Z,28µm,20.8s
HPK Haverah Park 81.59 36 *e*P **P** **17 12 31.3 -0.4**
HPK IAMs_20 IAMs_20 17 50 06.5
comp=Z,23µm,17.6s
EVO Evora 81.65 52⇑ *i*P **P** **17 12 33.1 +0.8**
EVO *e*S **S** **17 22 42.8 -0.6**
EVO Evora 81.65 52⇑ *i*P **P** **17 12 32.5 +0.2**
comp=Z,417nm,1.9s
EVO Evora 81.65 52 *e*PP PP 17 15 34.6 -4.3
TANT Tantan 81.67 63 P **P** **17 12 36.0 +3.4**
SNR=5.4
MESJ Messejana 81.67 53 *e*P **P** **17 12 32.5 0.0**
MESJ *e*SKSac **SKSac** **17 22 49.0 -2.0**
MESJ AMS AMS 17 47 18.4
comp=Z,17µm,18.7s
MESJ Messejana 81.67 53 *e*P **P** **17 12 32.4 0.0**
MESJ *e* 17 22 49.0

MESJ Messejana 81.67 53⇑*iP* P 17 12 32.7 +0.3
comp=Z,338nm,1.9s
MVO Moncorvo 81.69 50⇑*iP* P 17 12 33.0 +0.5
comp=Z,363nm,1.8s
MVO Moncorvo 81.69 50 *e*PP PP 17 15 39.5 +0.3
MVO *e*S **S** **17 22 42.9 -1.0**
MVO *e*SS **SS** **17 28 07.2 +6.0**
MVO Moncorvo 81.69 50 *e*LR LR 17 39 16.5
comp=Z,23µm,18.0s
LBWR Ladybower, Pea 81.70 37 *e*P P 17 12 30.3 -2.0
LBWR IAMs_20 IAMs_20 17 50 12.2
comp=Z,26µm,16.4s
PCBR Castelo Branco 81.71 51⇑*iP* P 17 12 32.9 +0.4
comp=Z,305nm,1.8s
PCBR Castelo Branco 81.71 51 *e*PP PP 17 15 38.9 -0.4
PBRG Braganca 81.73 49⇑*iP* P 17 12 32.9 +0.2
comp=Z,276nm,1.7s
PBRG Braganca 81.73 49 *e*PP PP 17 15 40.2 +0.7
PBRG *e*S **S** **17 22 45.2 +1.0**
PCVE Castro Verde 81.87 53⇑*iP* P 17 12 34.0 +0.6
comp=Z,379nm,1.9s
PCVE Castro Verde 81.87 53 *e*PP PP 17 15 26.8 -14
PCVE *e*S **S** **17 22 47.9 +2.2**
PCVE *e*SS **SS** **17 28 07.5 +3.6**
PESTR Estremoz 81.88 52 P P 17 12 34.3 +0.8
SNR=18
PESTR Estremoz 81.88 52⇑*iP* P 17 12 33.7 +0.2
comp=Z,343nm,1.7s
PESTR Estremoz 81.88 52 *e*S **S** **17 22 47.8 +1.9**
PESTR *e*SS **SS** **17 28 07.9 +3.8**
PESTR Estremoz 81.88 52 P P 17 12 33.0 -0.5
PESTR IAmb IAmb 17 12 35.0
comp=Z,269nm,1.8s
PMRV Marv??o 81.88 51⇑*iP* P 17 12 33.5 0.0
comp=Z,487nm,1.6s
PMRV Marv??o 81.88 51 *e*PP PP 17 15 37.3 -3.5
PMRV *e*S **S** **17 22 47.6 +1.8**
PMRV *e*SS **SS** **17 28 08.7 +4.7**
PMRV Marv??o 81.88 51 *e*LR LR 17 40 10.1
comp=Z,15µm,20.0s
PBEJ Beja 81.89 53⇑*iP* P 17 12 34.0 +0.4
comp=Z,328nm,1.6s
PBDV Barranco-do-Ve 82.05 54⇑*iP* P 17 12 35.5 +1.0
comp=Z,563nm,2.0s
PBDV Barranco-do-Ve 82.05 54 *e*PP PP 17 15 28.4 -14
PBDV *e*S **S** **17 22 48.5 +0.8**
PBDV *e*SS **SS** **17 28 10.7 +4.0**
CWF Charnwood Fore 82.14 37 *e*P P 17 12 34.0 -0.6
CWF IAMs_20 IAMs_20 17 49 12.9
comp=Z,26µm,20.9s
PVAQ Vaqueiros 82.17 53 P P 17 12 36.6 +1.6
SNR=36
PVAQ P P 17 12 36.6 +1.6
SNR=36
PVAQ Vaqueiros 82.17 53⇑*iP* P 17 12 35.8 +0.8
comp=Z,356nm,2.0s
PVAQ Vaqueiros 82.17 53 *e*S S 17 22 58.4 +10
PVAQ *e*SS **SS** **17 28 12.4 +4.0**
PVAQ Vaqueiros 82.17 53 *e*LR LR 17 38 54.5
comp=Z,22µm,18.0s
PVAQ Vaqueiros 82.17 53 P P 17 12 34.7 -0.3
PVAQ IAMs_20 IAMs_20 17 48 49.0
comp=Z,25µm,20.0s
EAH EAH 82.21 59 P P 17 12 37.0 +1.6
SNR=21
EAH P P 17 12 37.0 +1.6
SNR=21
SWN1 Swindon 82.23 39 *e*P P 17 12 34.2 -0.8
SWN1 IAMs_20 IAMs_20 17 50 20.3
comp=Z,31µm,17.8s
SEY Seymchan 82.29 334*c iP* P 17 12 36.7 +1.6
FOO Floro 82.39 28⇑*iP* P 17 12 37.2 +1.6
FOO IVmB_BB 17 12 38.3
comp=Z,15µm,3.2s
FOO *e*PP **PP** **17 15 44.3 +0.1**
FOO *e*S **S** **17 22 52.0 +1.9**
FOO IVMs_BB IVMs_BB 17 54 04.8
comp=Z,6µm,15.5s
SUE Sulen 82.46 28⇑*iP* P 17 12 37.5 +1.5
SUE IVmB_BB 17 12 38.8
comp=Z,16µm,3.1s
SUE *e*PP **PP** **17 15 45.2 +0.4**
SUE *e*S **S** **17 22 51.0 +0.2**
SUE IVMs_BB IVMs_BB 17 52 27.4
comp=Z,8µm,16.5s
LMK Market Rasen 82.48 36 *e*P P 17 12 34.5 -1.8
LMK IAMs_20 IAMs_20 17 50 43.9
comp=Z,24µm,17.4s
PBAR Barrancos 82.48 52⇑*iP* P 17 12 37.4 +0.7
comp=Z,282nm,1.6s
WOL Wolverton 82.64 39 *e*P P 17 12 35.3 -1.8
WOL IAMs_20 IAMs_20 17 50 34.0
comp=Z,25µm,17.9s
PET Petropavlovsk 82.65 323*α iP* P 17 12 38.1 +0.9
PET *e* 17 15 42.7
PET *e*S **S** **17 22 49.5 -3.6**
PET *e*PPS PPS 17 23 57.6
PET *e*SS **SS** **17 28 20.2 +5.6**
PET pmax pmax
comp=Z,166nm,2.0s
PET pmax pmax
comp=Z,8µm,13.0s
PET MLR MLR
comp=Z,20µm,18.0s
PET Petropavlovsk 82.65 323 P P 17 12 37.6 +0.4
PET IAMs_20 IAMs_20 17 51 07.0
comp=Z,19µm,18.0s
JVM Valle D.L. Mar 82.68 41 *e*P P 17 12 36.7 -0.7
JLP Les Platons 82.73 41 *e*P P 17 12 37.5 -0.2
ASK Askoy 82.87 29⇑*iP* P 17 12 39.8 +1.6
ASK IVmB_BB 17 12 41.0
comp=Z,13µm,3.1s
ASK *e*S **S** **17 22 51.4 -3.7**
LOF Lofoten 82.88 20⇑*iP* P 17 12 39.3 +1.3
LOF IVmB_BB 17 12 40.2
comp=Z,16µm,3.1s
LOF *e*PP **PP** **17 15 47.4 -0.7**
LOF *e*S **S** **17 22 58.3 +3.5**
LOF IVMs_BB IVMs_BB 17 52 45.5
comp=Z,7µm,18.1s
BER Bergen 82.98 29⇑*iP* P 17 12 40.3 +1.6
BER IVmB_BB 17 12 41.3
comp=Z,14µm,3.3s
BER *e*PP **PP** **17 15 48.8 -0.3**
BER *e*S **S** **17 22 57.5 +1.3**
BER IVMs_BB IVMs_BB 17 48 12.3
comp=Z,8µm,24.1s
AKN Aaknes 83.02 27⇑*iP* P 17 12 40.8 +1.8
AKN IVmB_BB 17 12 41.5
comp=Z,11µm,3.0s
AKN *e*PP **PP** **17 15 49.6 +0.2**
AKN *e*S **S** **17 22 58.9 +2.3**
AKN IVMs_BB IVMs_BB 17 50 30.9
comp=Z,5µm,23.6s
HYA Hoyanger 83.06 28⇑*iP* P 17 12 40.7 +1.6
HYA *e*S **S** **17 22 56.8 -0.1**
MOL Molde 83.09 26⇑*iP* P 17 12 41.0 +1.8
MOL IVmB_BB 17 12 41.9
comp=Z,14µm,3.1s
MOL *e*PP **PP** **17 15 49.0 -1.0**
MOL *e*S **S** **17 23 00.8 +3.5**
MOL IVMs_BB IVMs_BB 17 50 23.2
comp=Z,8µm,17.1s
PETK Petropavlovsk- 83.17 323 P P 17 12 40.0 +0.2
comp=Z,106nm,1.0s,baz=72,slow=9.8,SNR=41
WACR West Acre 83.26 37 *e*P P 17 12 39.2 -1.2
WACR IAMs_20 IAMs_20 17 51 09.8
comp=Z,27µm,17.0s
SRHM Skhour des Reh 83.37 58 P P 17 12 43.0 +1.5
SNR=46
SRHM P P 17 12 43.0 +1.5
SNR=46
KMY Karmoy 83.38 30⇑*iP* P 17 12 41.6 +0.8
KMY *e*PP **PP** **17 15 52.9 +0.5**
KMY *e*S **S** **17 23 00.3 +0.1**
KONS Konsvik 83.52 22 *e*P P 17 12 42.3 +0.9
KONS *e*S **S** **17 23 01.5 +0.1**
AVE Averroes 83.53 57 P P 17 12 43.6 +1.5
SNR=34
AVE Averroes 83.53 57⇑*iP* P 17 12 43.0 +0.8
AVE *e*S **S** **17 23 03.3 +0.4**
STEI Steigen 83.53 20⇑*iP* P 17 12 42.8 +1.4
STEI IVmB_BB 17 12 43.9
comp=Z,13µm,3.2s
STEI *e*PP **PP** **17 15 52.9 -0.6**
STEI *e*S **S** **17 23 03.0 +1.5**
STEI IVMs_BB IVMs_BB 17 53 12.4
comp=Z,8µm,19.9s
STOK Stokkvaagen 83.56 22 *e*P P 17 12 42.4 +0.8
STOK *e*S **S** **17 23 03.3 +1.5**
SFS San Fernando 83.60 54⇑*iP* P 17 12 43.7 +1.3
SFS *e*S **S** **17 23 07.2 +3.8**
GIBL Gibalbin 83.68 54 *e*P P 17 12 45.0 +2.1
HMNX Herstmonceux 83.71 39 *e*P P 17 12 41.5 -1.1
HMNX IAMs_20 IAMs_20 17 51 09.6
comp=Z,39µm,18.0s
CNIL Conil 83.74 54 *e*P P 17 12 43.0 -0.2
OUK Oukaimeden 83.74 59 P P 17 12 45.0 +1.3
SNR=43
OUK P P 17 12 45.0 +1.3
SNR=43
ODD1 Odda 83.76 29⇑*iP* P 17 12 45.0 +2.2
ODD1 *e*PP **PP** **17 15 55.5 0.0**
ODD1 *e*S **S** **17 23 03.4 -0.8**
TRO Tromso 83.77 18⇑*iP* P 17 12 43.9 +1.3
TRO IVmB_BB 17 12 45.0
comp=Z,13µm,3.2s
TRO *e*PP **PP** **17 15 53.1 -2.3**
TRO *e*S **S** **17 23 00.7 -3.2**
TRO IVMs_BB IVMs_BB 17 52 09.3
comp=Z,7µm,16.3s
RTC Rabat Centre 83.78 56 P P 17 12 45.0 +1.5
SNR=26
RTC P P 17 12 45.0 +1.5
SNR=26
BLS5 Blasjo 83.87 29⇑*iP* P 17 12 45.4 +2.0
BLS5 *e*PP **PP** **17 15 56.5 0.0**
BLS5 *e*S **S** **17 23 06.5 +1.1**
BLS5 IVMs_BB IVMs_BB 17 48 24.0
comp=Z,8µm,22.0s
GUD Guadarrama 83.93 49 P P 17 12 45.3 +1.1
HORN Hornachuelos 83.93 52 P P 17 12 45.5 +1.4
SNR=62
TBLU Trondheim 83.93 25⇑*eP* P 17 12 44.8 +1.2
TBLU IVmB_BB 17 12 46.0
comp=Z,12µm,3.0s
TBLU *e*PP **PP** **17 15 56.3 -0.5**
TBLU *e*S **S** **17 23 07.8 +2.1**
TBLU IVMs_BB IVMs_BB 17 52 34.2
comp=Z,8µm,17.9s
DOMB Dombas 83.96 26⇑*iP* P 17 12 45.1 +1.3
DOMB IVmB_BB 17 12 46.3
comp=Z,12µm,3.0s
DOMB *e*PP **PP** **17 15 57.2 +0.1**
DOMB *e*S **S** **17 23 07.0 +0.8**
DOMB IVMs_BB IVMs_BB 17 50 18.1
comp=Z,7µm,21.8s
ALJ Aljibe 84.01 54 *e*P P 17 12 47.0 +2.4
NSS Namsos 84.02 24⇑*iP* P 17 12 45.1 +1.1
NSS IVmB_BB 17 12 46.2
comp=Z,10µm,3.3s
NSS *e*PP **PP** **17 15 54.2 -3.3**
NSS *e*S **S** **17 23 05.7 -0.9**
NSS IVMs_BB IVMs_BB 17 50 57.8
comp=Z,10µm,17.6s
ELSH Elham, Standar 84.09 38 *e*P P 17 12 44.3 -0.3
ELSH IAMs_20 IAMs_20 17 50 39.4
comp=Z,35µm,20.2s
ZHG ZHG 84.11 57 P P 17 12 46.2 +0.9
SNR=41
ZHG P P 17 12 46.2 +0.9
SNR=41
PAB San Pablo 84.11 51 P P 17 12 44.6 -0.5
PAB pmax pmax
comp=Z,989nm,2.0s
PAB MLR MLR
comp=Z,16µm,18.0s
PAB San Pablo 84.11 51 P P 17 12 44.6 -0.5
PAB San Pablo 84.11 51 IAMs_20 IAMs_20 17 51 55.0
comp=Z,16µm,18.0s
MOR8 Moi Rana 84.14 22⇑*iP* P 17 12 45.8 +1.2
MOR8 IVmB_BB 17 12 47.0
comp=Z,9µm,3.3s
MOR8 *e*PP **PP** **17 15 58.7 +0.2**
MOR8 *e*S **S** **17 23 05.1 -2.7**
MOR8 IVMs_BB IVMs_BB 17 49 39.5
comp=Z,10µm,21.0s
SKAR Skarslia 84.20 28⇑*iP* P 17 12 47.0 +1.8
SKAR IVmB_BB 17 12 47.7
comp=Z,11µm,3.3s
SKAR *e*PP **PP** **17 15 58.7 -0.5**
SKAR *e*S **S** **17 23 08.2 -0.4**
SKAR IVMs_BB IVMs_BB 17 49 05.2
comp=Z,7µm,21.8s
MA2 Magadan 84.35 331*c iP* P 17 12 45.9 +0.1
MA2 pmax pmax
comp=Z,469nm,2.7s
MA2 MLR MLR
comp=Z,18µm,18.0s
MA2 Magadan 84.35 331 P P 17 12 45.9 +0.1
RSA Sarsar 84.35 55 P P 17 12 48.0 +1.6
SNR=26
RSA P P 17 12 48.0 +1.6
SNR=26
ESDC Sonseca Array 84.36 50 P P 17 12 45.9 -0.5
comp=Z,47nm,1.0s,baz=297,slow=3.7,SNR=72
ESDC LR LR 17 50 10.6
comp=Z,8µm,18.3s,baz=280,slow=36
REAL Reales 84.36 54 *e*P P 17 12 48.0 +1.4
CEU Ceuta 84.41 54⇑*iP* P 17 12 48.1 +1.5
CEU *e*S **S** **17 23 11.5 0.0**
SMIR Smir Dam 84.46 55 P P 17 12 48.0 +1.1
SNR=29
SMIR P P 17 12 48.0 +1.1
SNR=29
HAMF Hammerfest 84.51 16⇑*iP* P 17 12 46.9 +0.5
HAMF IVmB_BB 17 12 47.8
comp=Z,7µm,3.4s
HAMF *e*PP **PP** **17 16 01.8 +0.5**
HAMF *e*S **S** **17 23 09.1 -2.1**
HAMF IVMs_BB IVMs_BB 17 55 01.6
comp=Z,8µm,17.2s
CHEFC Chefchaouen 84.66 55 P P 17 12 49.2 +1.1
SNR=37
CHEFC P P 17 12 49.2 +1.1
SNR=37
SNART Snartemo 84.67 30 *e*P P 17 12 48.4 +1.0
SNART *e*PP **PP** **17 16 02.2 -0.7**
SNART *e*S **S** **17 23 11.1 -2.2**
UCM Universidad Co 84.69 50⇑*iP* P 17 12 49.1 +1.1
UCM *e*S **S** **17 23 11.7 -2.6**
OUZM OUZ 84.74 59 P P 17 12 50.0 +1.4
SNR=30
OUZM P P 17 12 50.0 +1.4
SNR=30
EMAL Malaga-Limoner 84.88 53 *i* P P 17 12 49.1 +0.2
EMAL *e*S **S** **17 23 10.0 -6.2**
SKR Severo-Kuril's 84.92 322 *eP* P 17 12 49.5 +0.7
SKR *e* 17 16 02.0
SKR *e*S **S** **17 23 19.0 +3.0**
SKR *e*SS **SS** **17 28 56.0 +7.8**
SKR pmax pmax
comp=Z,4µm,4.9s
SKR pmax pmax
comp=Z,113nm,2.2s
SICH Sidi Chahed 84.97 56 P P 17 12 51.1 +1.5
SNR=54
SICH P P 17 12 51.1 +1.5
SNR=54
KONO Kongsberg 85.23 29*c iP* P 17 12 51.4 +1.2
KONO pmax pmax
comp=Z,692nm,2.5s
KONO MLR MLR
comp=Z,20µm,17.0s
KONO Kongsberg 85.23 29 P P 17 12 51.2 +0.9
KONO IAmb IAmb 17 13 27.3
comp=Z,239nm,1.1s
KONO Kongsberg 85.23 29 IAMs_20 IAMs_20 17 50 06.1
comp=Z,25µm,22.0s
KONO Kongsberg 85.23 29⇑*iP* P 17 12 51.6 +1.4
KONO IVmB_BB 17 12 52.8
comp=Z,10µm,3.1s
KONO *e*PP **PP** **17 16 06.6 -0.9**
KONO *e*S **S** **17 23 17.9 -0.8**
KONO IVMsBB 17 49 43.0
comp=Z,8µm,22.6s
TIXI Tiksi 85.30 346*c iP* P 17 12 49.4 -0.9
TIXI pmax pmax
comp=Z,353nm,1.1s
TIXI MLR MLR
comp=Z,33µm,20.0s
TIXI Tiksi 85.30 346 P P 17 12 49.5 -0.8
IFR Ifrane 85.30 57 *i* P P 17 12 52.0 +0.7
IFR *e*S **S** **17 23 14.4 -6.5**
HOMB Homborsund 85.32 30⇑*iP* P 17 12 51.9 +1.3
HOMB *e*PP **PP** **17 16 08.1 -0.1**
HOMB *e*S **S** **17 23 13.0 -6.7**
HOMB IVMs_BB IVMs_BB 17 55 46.1
comp=Z,9µm,16.6s
NB2 NORSAR Subarra 85.33 27 P P 17 12 50.2 -0.6
comp=Z,4µm,3.3s,baz=297,slow=4.8
NB2 NORSAR Subarra 85.33 27 P P 17 12 48.0 -2.8
NB2 NORSAR Subarra 85.33 27 P P 17 12 50.2 -0.6
baz=297,slow=4.8
NOA NORSAR Array B 85.33 27 P P 17 12 50.3 -0.4
comp=Z,14nm,0.7s,baz=300,slow=4.8,SNR=56
NOA LR LR 17 52 24.6
comp=Z,10µm,20.5s,baz=290,slow=37
KTK1 Kautokeino 85.38 17⇑*iP* P 17 12 50.7 -0.2
KTK1 *e*PP **PP** **17 16 08.0 -0.4**
KTK1 *e*S **S** **17 23 17.1 -2.9**
PVLZ Peæn de 85.45 55⇑*iP* P 17 12 52.1 +0.3
PVLZ *e*S **S** **17 23 13.0 -8.9**
CZD Col de Zad 85.51 57 P P 17 12 54.0 +1.4
SNR=31
NC602 NORSAR Array S 85.61 27⇑*iP* P 17 12 53.0 +0.9
NC602 IVmB_BB 17 12 54.4
comp=Z,8µm,3.7s
NC602 *e*PP **PP** **17 16 08.7 -1.8**
NC602 *e*S **S** **17 23 21.1 -1.4**
NC602 IVMs_BB IVMs_BB 17 50 35.7
comp=Z,5µm,21.2s
NORES NORESS Array B 85.61 27 P P 17 12 53.9 +1.8
NORES pmax pmax
comp=Z,26nm,0.9s
OSL Oslo 85.61 28⇑*iP* P 17 12 52.8 +0.7
OSL *e*PP **PP** **17 16 10.5 0.0**
OSL *e*S **S** **17 23 17.4 -5.1**
ARCES ARCESS Array B 85.69 17 P P 17 12 51.3 -1.1
comp=Z,27nm,0.8s,baz=305,slow=4.3,SNR=40
ARCES LR LR 17 53 57.1
comp=Z,22µm,19.2s,baz=318,slow=38
ARE0 ARCESS Array S 85.69 17⇑*iP* P 17 12 52.4 0.0
ARE0 IVmB_BB 17 12 53.8
comp=Z,6µm,3.8s
ARE0 *e*PP **PP** **17 16 09.6 -1.4**
ARE0 *e*S **S** **17 23 18.1 -4.9**
ARE0 IVMs_BB IVMs_BB 17 53 43.7
comp=Z,9µm,17.8s
PALE Palemas 85.72 55 P P 17 12 54.0 +0.7
SNR=63
PALE P P 17 12 54.0 +0.7
SNR=63
TZRR Tazzarine 85.75 59 P P 17 12 55.0 +1.4
SNR=52
TZRR P P 17 12 55.0 +1.4
SNR=52
CLF Chambon-Foret 85.87 41 P P 17 12 54.1 +0.4
CLF IAMs_20 IAMs_20 17 52 53.7
comp=Z,23µm,18.0s
SESP Santiago Espad 85.89 51 P P 17 12 54.5 +0.3
SNR=39
ZGR Zagora 85.91 60 P P 17 12 56.0 +1.6
SNR=21
ZGR P P 17 12 56.0 +1.6
SNR=21
MDT Midelt 85.93 57 P P 17 12 54.1 -0.3
comp=Z,75nm,0.9s,baz=290,slow=5.2,SNR=50
MDT Midelt 85.93 57 P P 17 12 55.9 +1.5
SNR=52
KEV Kevo 85.95 16 P P 17 12 53.5 -0.1
KEV pmax pmax
comp=Z,287nm,1.6s
KEV MLR MLR
comp=Z,29µm,20.0s
KEV Kevo 85.95 16 P P 17 12 53.5 -0.1
KEV IAmb IAmb 17 14 47.7
comp=Z,287nm,1.6s
KEV IAMs_20 IAMs_20 17 53 34.6
comp=Z,29µm,20.0s
GOLM Goulmima 85.98 58 P P 17 12 56.1 +1.3
SNR=43
GOLM P P 17 12 56.1 +1.3
SNR=43
AKLM AKL 86.00 55 P P 17 12 56.0 +1.3
SNR=83
AKLM P P 17 12 56.0 +1.3
SNR=83
GOET G??ttrup 86.20 31 *i* P P 17 12 55.4 +0.3
comp=Z,19µm,20.0s
PMSA Palmer Station 86.36 165 LR LR 17 42 49.2
comp=Z,18µm,18.8s,baz=320,slow=30
PMSA Palmer Station 86.36 165 IAMs_20 IAMs_20 17 42 28.3
comp=Z,19µm,20.0s
MUD Monsted U'grnd 86.43 32 *i* P P 17 12 53.1 -3.1
MUD *e* 17 16 14.9
MUD MLR MLR
comp=Z,19µm,21.0s
MUD Monsted U'grnd 86.43 32 *i* P P 17 12 53.1 -3.1
MUD *e* 17 16 14.9
comp=Z,19µm,21.0s
GOG Mont Gurugu 86.46 54 P P 17 12 58.0 +1.1
SNR=7.4
GOG P P 17 12 58.0 +1.1
SNR=7.4
ARF Arif 86.66 58 P P 17 12 60.0 +1.9
SNR=16
ARF P P 17 12 60.0 +1.9
SNR=16
WAKE Wake Island 86.78 289 IAMs_20 IAMs_20 17 42 40.9
comp=Z,15µm,20.0s
H11S1 WAKE ISLAND Hy 86.96 288 T T 18 49 28.3
baz=77,slow=74,SNR=12
H11S2 WAKE ISLAND Hy 86.96 288 T T 18 49 29.4
baz=77,slow=74,SNR=10.0
H11S3 WAKE ISLAND Hy 86.97 288 T T 18 49 29.7
baz=77,slow=74,SNR=8.6
TAF Taforalt 87.04 55 P P 17 13 01.0 +1.2
SNR=7.7
TAF P P 17 13 01.0 +1.2
SNR=7.7
MSVF Nonsavu 87.04 251*ceP* P 17 13 02.1 +2.1
MSVF MLR MLR
comp=Z,9µm,16.0s
MSVF Nonsavu 87.04 251 P P 17 13 01.0 +1.0
MSVF IAmb IAmb 17 13 13.2
comp=Z,133nm,1.0s
MSVF Nonsavu 87.04 251 IAMs_20 IAMs_20 17 42 20.5
comp=Z,16µm,21.0s
MEM Membach 87.16 38 P P 17 13 00.1 +0.2
CART Cartagena 87.22 52⇑*iP* P 17 12 59.6 -0.8
CART *e*S S 17 23 24.9 -14
CART Cartagena 87.22 52 IAMs_20 IAMs_20 17 54 53.3
comp=Z,16µm,20.0s
IBBN Ibbenburen 87.46 36 *e*P P 17 13 00.6 -0.7
comp=Z,2µm,3.2s,baz=297,slow=4.7
IBBN *e*PP **PP** **17 16 24.9 -0.8**
baz=297,slow=8.1
RAO Raoul Island 87.48 239 LR LR 17 46 25.6
comp=Z,9µm,18.0s,baz=66,slow=32
BUG Bochum--Univer 87.55 37 *eP* P 17 13 01.1 -0.7
comp=Z,3µm,4.0s,baz=297,slow=4.7
WLF Walferdange 87.62 38 *eP* P 17 13 01.5 -0.7
comp=Z,201nm,1.3s,baz=297,slow=4.7
WLF Walferdange 87.62 38 P P 17 13 01.2 -1.0
WLF pmax pmax
comp=Z,145nm,1.2s
WLF MLR MLR
comp=Z,38µm,20.0s
WLF Walferdange 87.62 38 P P 17 13 01.1 -1.0
WLF IAmb IAmb 17 13 07.0
comp=Z,145nm,1.2s
AHRW Bad Neuenahr-A 87.81 37 *eP* P 17 13 02.4 -0.6
comp=Z,149nm,1.4s,baz=297,slow=4.7
AHRW *e*PP **PP** **17 16 28.2 -0.3**
baz=297,slow=8.1
TDRA Tendrara 87.91 56 P P 17 13 06.0 +1.8
SNR=48
TDRA P P 17 13 06.0 +1.8
SNR=48
BSEG Bad Segeberg 88.13 33 *eP* P 17 13 03.6 -0.9
comp=Z,325nm,1.9s,baz=297,slow=4.7
BSEG *e*PP **PP** **17 16 30.6 -0.5**
baz=297,slow=8.1
RETH Rethem/Aller, 88.16 35 *eP* P 17 13 04.2 -0.5
comp=Z,294nm,1.8s,baz=297,slow=4.7

RETH *e*PP **PP** **17 16 30.9 -0.3**
baz=297,slow=8.1
SSB **Saint Sauveur** **88.35 43** P **P** **17 13 04.8 -1.0**
SSB pmax pmax
comp=Z,65nm,1.1s
SSB MLR MLR
comp=Z,18µm,20.0s
SSB **Saint Sauveur** **88.35 43** P **P** **17 13 04.8 -1.0**
SSB **Saint Sauveur** **88.35 43** IAMs_20 IAMs_20 17 54 08.5
comp=Z,18µm,20.0s
ODJA **Bouhanifia** **88.62 53** P **P** **17 13 05.0 -2.3**
NRDL **Niedersach Rie** **88.67 35** *e*P **P** **17 13 06.5 -0.5**
comp=Z,239nm,1.8s,baz=297,slow=4.7
NRDL *e*PP **PP** **17 16 35.1 -0.2**
baz=297,slow=8.1
TNS **Taunus Mts** **88.74 37** *e*P **P** **17 13 06.6 -1.0**
comp=Z,240nm,1.9s,baz=297,slow=4.7
TNS *e*PP **PP** **17 16 36.0 -0.1**
baz=297,slow=8.1
ECH **Echery** **88.82 40** P **P** **17 13 06.7 -1.3**
ECH pmax pmax
comp=Z,169nm,1.6s
ECH MLR MLR
comp=Z,26µm,18.0s
ECH **Echery** **88.82 40** P **P** **17 13 06.7 -1.3**
ECH IAmb IAmb 17 15 11.4
comp=Z,169nm,1.6s
ECH IAMs_20 IAMs_20 17 54 46.7
comp=Z,27µm,18.0s
LANF **Langenberg** **88.89 39** P **P** **17 13 09.2 +0.9**
KTD **Kalmit** **88.91 38** P **P** **17 13 08.3 -0.1**
ASCN **Ascension** **88.94 99** IAMs_20 IAMs_20 17 56 25.5
comp=Z,20µm,19.0s
GTTG **Gottingen** **89.02 36** *e*P **P** **17 13 08.3 -0.4**
comp=Z,230nm,1.8s,baz=297,slow=4.7
GTTG *e*PP **PP** **17 16 38.1 -0.1**
baz=297,slow=8.1
CLZ **Clausthal** **89.11 35** *e*P **P** **17 13 08.8 -0.5**
comp=Z,204nm,1.7s,baz=297,slow=4.7
CLZ *e*PP **PP** **17 16 38.9 -0.1**
baz=297,slow=8.1
ASSE **Asse, Remlinge** **89.15 35** *e*P **P** **17 13 08.9 -0.4**
comp=Z,312nm,1.7s,baz=297,slow=4.7
ASSE *e*PP **PP** **17 16 39.2 +0.1**
baz=297,slow=8.1
APA **Apatity** **89.16 16**⇑ *i*P **P** **17 13 09.3 +0.2**
APA *i* 17 16 34.0
APA *i* S **S** **17 23 48.0 -8.3**
APA *i* PS **PnS** **17 25 02.0 -0.6**
APA pmax pmax
comp=Z,16nm,1.0s
TOD **Tromm** **89.21 38** P **P** **17 13 09.2 -0.6**
LVZ **Lovozero** **89.23 15***c* *i*P **P** **17 13 09.0 -0.5**
LVZ pmax pmax
comp=Z,364nm,2.9s
LVZ MLR MLR
comp=Z,18µm,17.0s
LVZ **Lovozero** **89.23 15** P **P** **17 13 09.1 -0.4**
LVZ IAMs_20 IAMs_20 17 57 42.3
comp=Z,26µm,18.0s
EANR **'Ain N'Sour** **89.36 53** P **P** **17 13 10.6 -0.2**
UBBA **Unterbreizbach** **89.37 36** *e*P **P** **17 13 09.7 -0.6**
comp=Z,319nm,2.1s,baz=297,slow=4.7
RGN **Rugen** **89.40 32** *e*P **P** **17 13 10.4 0.0**
RGN **Rugen** **89.40 32** *e*PP PP 17 16 41.6 +0.5
baz=297,slow=8.1
RGN **Rugen** **89.40 32** IAMs_20 IAMs_20 17 54 27.6
comp=Z,20µm,21.0s
BFO **Black Forest** **89.48 39** *e*P **P** **17 13 09.7 -1.4**
comp=Z,96nm,1.6s,baz=297,slow=4.7
BFO *e*PP **PP** **17 16 40.9 -1.1**
baz=297,slow=8.1
BFO **Black Forest** **89.48 39** P **P** **17 13 09.3 -1.8**
BFO pmax pmax
comp=Z,79nm,1.4s
BFO MLR MLR
comp=Z,32µm,20.0s
BFO **Black Forest** **89.48 39** P **P** **17 13 09.3 -1.8**
ECHA **Ech Chlef** **89.49 52** P **P** **17 13 11.0 -0.3**
EBNR **Beni Rached** **89.56 52** P **P** **17 13 12.0 +0.3**
HOPE **Hope Point** **89.68 148** IAMs_20 IAMs_20 17 51 51.9
comp=Z,17µm,19.0s
ETRT **Tiaret** **89.71 53** P **P** **17 13 12.9 +0.4**
STU **Stuttgart** **89.81 38** *e*P **P** **17 13 11.6 -1.0**
comp=Z,178nm,1.8s,baz=297,slow=4.7
STU **Stuttgart** **89.81 38** P **P** **17 13 14.6 +2.1**
SLE **Schleitheim** **89.82 40** P **P** **17 13 11.9 -0.8**
BNI **Bardonecchia** **89.83 43** P **P** **17 13 12.5 -0.4**
BNI pmax pmax
comp=Z,154nm,1.5s
BNI MLR MLR
comp=Z,34µm,19.0s
BNI **Bardonecchia** **89.83 43** P **P** **17 13 12.5 -0.4**
BNI IAmb IAmb 17 15 16.6
comp=Z,154nm,1.5s
BSD **Bornholm Skovb** **89.92 31**⇑ *i*P **P** **17 13 12.5 -0.4**
BSD MLR MLR
comp=Z,22nm,18.0s
BSD **Bornholm Skovb** **89.92 31**⇑ *i*P **P** **17 13 12.5 -0.4**
BSD *e* 17 16 35.8
comp=Z,22nm,18.0s
NEUB **Neuenburg** **90.18 36** *e*P **P** **17 13 13.2 -1.0**
comp=Z,1µm,2.6s,baz=297,slow=4.7
NEUB *e*PP **PP** **17 16 47.6 +0.1**
baz=297,slow=8.1
MOX **Moxa** **90.36 36** *e*P **P** **17 13 14.4 -0.7**
comp=Z,622nm,2.5s,baz=297,slow=4.7
MOX *e*PP **PP** **17 16 48.8 -0.1**
baz=297,slow=8.1
MOX *e*L L 17 54 33.9
comp=Z,18µm,21.4s
MOX **Moxa** **90.36 36** P **P** **17 13 14.6 -0.5**
GRA1 **Grafenberg Arr** **90.58 37** P **P** **17 13 15.0 -1.1**
GRA1 IAmb IAmb 17 13 57.3
comp=Z,178nm,1.6s
GRA1 IAMs_20 IAMs_20 17 56 21.0
comp=Z,16µm,19.0s
GRF **Grafenberg Arr** **90.58 37** *e*P **P** **17 13 15.7 -0.5**
comp=Z,1µm,2.8s,baz=297,slow=4.7
GRF *e*PP **PP** **17 16 50.8 +0.2**
baz=297,slow=8.1
GRF *e*L L 17 53 34.1
comp=Z,16µm,21.9s
GRF **Grafenberg Arr** **90.58 37** P **P** **17 13 15.0 -1.1**
GRF pmax pmax
comp=Z,178nm,1.6s
GRF MLR MLR
comp=Z,16µm,19.0s
RUE **Ruedersdorf** **90.66 34** *e*P **P** **17 13 15.1 -1.3**
RUE **Ruedersdorf** **90.66 34** *e*PP PP 17 16 51.1 0.0
baz=297,slow=8.1
PLN **Plauen** **90.74 36** *e*P **P** **17 13 16.0 -0.8**
comp=Z,647nm,2.5s,baz=297,slow=4.7
PLN *e*PP **PP** **17 16 52.1 +0.2**
baz=297,slow=8.1
CLL **Collm** **90.81 35**⇑ *i*P **P** **17 13 18.0 +0.9**
comp=Z,387nm,2.3s
CLL *e*Pmax 17 13 19.0
CLL *e*Plp 17 13 19.0
comp=Z,6µm,16.3s
CLL *i*S **pP** **17 13 25.5 +0.2**
CLL *e*PP **PP** **17 16 52.0 -0.4**
CLL *e*PPlp 17 16 54.0
comp=Z,6µm,12.1s
CLL *e*SKKSac **SKKSac** **17 24 00.0 -2.0**
CLL *e*S **ScS** **17 24 15.0 -0.6**
CLL *e*SP **SPn** **17 25 26.0 +6.8**
CLL *e*PS **PnS** **17 25 33.0 +10**
CLL *e*SS SS 17 30 38.0 +24
CLL *e*(SSSS) 17 37 48.0
CLL Lmax 17 55 00.0
CLL Lm MLR 17 56 00.0
comp=N,9µm,20.5s
CLL Lm MLR 17 56 00.0
comp=E,15µm,19.2s
CLL Lm MLR 17 56 00.0
comp=Z,25µm,19.3s
CLL **Collm** **90.81 35** *e*P **P** **17 13 17.1 -0.1**
comp=Z,387nm,2.3s,baz=297,slow=4.7
CLL **Collm** **90.81 35** P **P** **17 13 16.9 -0.3**
CLL pmax pmax
comp=Z,86nm,1.4s
CLL MLR MLR
comp=Z,25µm,19.0s
CLL **Collm** **90.81 35** P **P** **17 13 16.9 -0.3**
CLL IAMs_20 IAMs_20 17 56 16.1
comp=Z,25µm,19.0s
UBR **Ueberruh** **90.84 39** *e*P **P** **17 13 16.5 -0.9**
comp=Z,671nm,2.9s,baz=297,slow=4.7
UBR *e*PP **PP** **17 16 52.5 -0.3**
baz=297,slow=8.1
DAVA **Damuels** **90.88 40** *i* PcP **P** **17 13 17.4 -0.3**
comp=Z,59nm,1.2s,SNR=29
GUNZ **Gunzen** **90.89 36** *e*P **P** **17 13 16.9 -0.7**
comp=Z,788nm,2.6s,baz=297,slow=4.7
GUNZ *e*PP **PP** **17 16 53.3 +0.1**
baz=297,slow=8.1
TUE **Stuetta** **90.91 40** P **P** **17 13 17.5 -0.5**
TUE IAmb IAmb 17 13 28.4
comp=Z,183nm,1.7s
TANN **Tannenbergstha** **90.94 36** *e*P **P** **17 13 17.2 -0.7**
comp=Z,1µm,2.5s,baz=297,slow=4.7
TANN *e*PP **PP** **17 16 53.7 +0.1**
baz=297,slow=8.1
MANZ **Manzenberg** **90.95 36** *e*P **P** **17 13 17.0 -0.8**
comp=Z,439nm,2.4s,baz=297,slow=4.7
MANZ *e*PP **PP** **17 16 53.5 -0.1**
baz=297,slow=8.1
WERN **Wernitzgruen** **90.95 36** *e*P **P** **17 13 17.3 -0.6**
comp=Z,927nm,2.5s,baz=297,slow=4.7
WERN *e*PP **PP** **17 16 53.7 0.0**
baz=297,slow=8.1
NKC **Novy Kostel** **91.02 36** *e*P **P** **17 13 18.1 -0.1**
NKC *e* 17 16 51.6
NKC *e* 17 23 45.5
NKC MLR MLR
comp=Z,23µm,17.5s
NKC **Novy Kostel** **91.02 36** *e*P **P** **17 13 18.1 -0.1**
NKC *e*PP **PP** **17 16 51.6 -2.6**
NKC *e*SKS **SKSac** **17 23 45.5 -3.3**
NKC AMS AMS 17 57 10.0
comp=Z,23µm,17.5s
FINES **FINESS Array B** **91.08 23** P **P** **17 13 16.3 -1.8**
comp=Z,23nm,1.0s,baz=305,slow=4.0,SNR=22
FINES PP **PP** **17 16 54.8 +0.7**
comp=Z,16nm,0.8s,baz=347,slow=7.8,SNR=4.4
FINES LR LR 17 54 20.1
comp=Z,40µm,21.8s,baz=316,slow=36
GRC1 **Grafenberg Arr** **91.08 38** P **P** **17 13 19.1 +0.6**
DAVOX **Davos/Dischmat** **91.11 40** P **P** **17 13 19.4 +0.5**
comp=Z,13nm,1.0s,baz=303,slow=2.9,SNR=31
DAVOX PP **PP** **17 16 55.4 +0.3**
comp=Z,16nm,1.0s,baz=322,slow=5.8,SNR=11
ROTZ **Rotzenmuhle** **91.11 37** *e*P **P** **17 13 18.0 -0.6**
comp=Z,591nm,2.6s,baz=297,slow=4.7
ROTZ *e*PP **PP** **17 16 55.2 +0.3**
baz=297,slow=8.1
FBE **Freiberg** **91.19 35** *e*P **P** **17 13 18.4 -0.6**
comp=Z,782nm,2.4s,baz=297,slow=4.7
FBE *e*PP **PP** **17 16 55.8 +0.3**
baz=297,slow=8.1
FUR **Furstenfeldbru** **91.32 38** *e*PP PP 17 16 56.3 -0.3
baz=297,slow=8.1
RETA **Reutte** **91.32 39** *i* PcP **P** **17 13 19.5 -0.3**
comp=Z,148nm,3.0s,SNR=20
RETA *i* PP **PP** **17 16 56.6 -0.2**
comp=Z,114nm,2.2s,SNR=5.7
FUORN **Ofenpass-Fuorn** **91.41 40** P **P** **17 13 19.5 -0.8**
FUORN IAmb IAmb 17 13 24.1
comp=Z,80nm,1.1s
FETA **Feichten** **91.52 40** *i* PcP **P** **17 13 20.5 -0.2**
comp=Z,43nm,1.3s,SNR=22
FETA *i* PP **PP** **17 16 58.5 +0.1**
comp=Z,114nm,1.3s,SNR=6.4
BRG **Berggiesshubel** **91.54 35** *i* P **P** **17 13 20.6 +0.1**
comp=Z,424nm,2.1s
BRG *i* 17 13 45.8
comp=Z,70nm,1.4s
BRG PP **PP** **17 16 54.0 -4.2**
BRG SKS **SKSac** **17 23 51.0 -0.6**
BRG S **ScS** **17 24 21.0 -0.7**
BRG SS **SS** **17 30 25.0 +0.4**
comp=N,13µm,19.3s
comp=E,14µm,18.6s
comp=Z,26µm,19.5s
BRG **Berggiesshubel** **91.54 35** *e*P **P** **17 13 19.6 -0.9**
comp=Z,424nm,2.1s,baz=297,slow=4.7
BRG *e*PP **PP** **17 16 58.4 +0.2**
baz=297,slow=8.1
BRG **Berggiesshubel** **91.54 35** *i* P **P** **17 13 20.6 +0.1**
BRG 17 16 54.0
BRG 17 23 51.0
BRG S **ScS** **17 24 21.0 -0.7**
BRG SS **SS** **17 30 25.0 +0.4**
BRG pmax pmax
comp=Z,424nm,2.1s
BRG MLR MLR
comp=N,13µm,19.3s
BRG MLR MLR
comp=E,14µm,18.6s
BRG MLR MLR
comp=Z,26µm,19.5s
MOTA **Moosalm** **91.59 39** *i* PcP **P** **17 13 20.6 -0.5**
comp=Z,59nm,1.2s,SNR=34
MOTA *i* PP **PP** **17 16 58.6 -0.3**
comp=Z,126nm,1.8s,SNR=5.3
YAK **Yakutsk** **91.62 339***c* *i*P **P** **17 13 21.3 +0.7**
YAK *e* 17 16 59.4
YAK *e*S **SKSac** **17 23 50.6 -1.0**
YAK *e**SS **ScS** **17 24 22.0 +0.1**
YAK *e*SP **SPn** **17 25 35.6 +7.6**
YAK *e*SS **SS** **17 30 27.1 +2.1**
YAK pmax pmax
comp=Z,141nm,0.9s
YAK pmax pmax
comp=N,24nm,1.1s
YAK pmax pmax
comp=E,28nm,1.1s
YAK pmax pmax
comp=Z,2µm,4.4s
YAK pmax pmax
comp=N,724nm,5.9s
YAK pmax pmax
comp=E,800nm,5.3s
YAK smax smax
comp=N,2µm,7.3s
YAK smax smax
comp=E,1µm,7.3s
YAK **Yakutsk** **91.62 339** P **P** **17 13 20.3 -0.4**
SQTA **Sankt Quirin** **91.72 39** *i* PcP **P** **17 13 21.6 0.0**
comp=E,64nm,1.6s,SNR=23
SQTA *i* PP **PP** **17 16 59.7 -0.2**
comp=E,105nm,1.6s,SNR=8.0
WET **Wettzell** **91.79 37** *e*P **P** **17 13 21.2 -0.6**
comp=E,856nm,2.7s,baz=297,slow=4.7
WET *e*PP **PP** **17 17 00.7 +0.4**
baz=297,slow=8.1
WET **Wettzell** **91.79 37** P **P** **17 13 22.2 +0.4**
WATA **Walderalm** **91.88 39** *i* PcP **P** **17 13 22.2 -0.2**
comp=E,49nm,1.3s,SNR=20
SLIT **Slitere, Latvi** **91.94 27** *e*P **P** **17 13 19.8 -2.4**
WTTA **Wattenberg** **91.95 39** *i* PcP **P** **17 13 22.7 -0.1**
comp=E,120nm,2.7s,SNR=23
WTTA *i* PP **PP** **17 17 01.7 -0.1**
comp=E,152nm,1.9s,SNR=7.8
MSSA **Maissana** **91.97 42** P **P** **17 13 21.2 -1.6**
SALO **Salr** **92.03 41** P **P** **17 13 22.5 -0.4**
GKP **Gorka Klasztor** **92.05 32** *i* P **P** **17 13 22.8 0.0**
GKP *e*PP **PP** **17 17 00.5 -1.6**
GKP LMZ LR 17 51 49.7
comp=E,33nm,26.1s
PVCC **Panska Ves** **92.06 35** *e*P **P** **17 13 23.5 +0.5**
PVCC *e* 17 16 58.6
PVCC *e* 17 23 50.8
PVCC MLR MLR
comp=Z,20µm,19.8s
PVCC **Panska Ves** **92.06 35** *e*P **P** **17 13 23.5 +0.5**
PVCC *e*PP **PP** **17 16 58.6 -3.7**
PVCC *e*SKS **SKSac** **17 23 50.8 -3.8**
PVCC AMS AMS 17 56 30.0
comp=Z,20µm,19.8s
PBCC **Pribram** **92.16 36** *e*P **P** **17 13 24.7 +1.2**
PBCC *ex* x 17 13 41.6
PBCC *e*PP PP 17 16 51.6 -12
PBCC *e*SKS **SKSac** **17 24 00.8 +5.6**
KUR **Kuril'sk** **92.19 319***c* *i*P **P** **17 13 24.1 +0.5**
KUR *i* 17 17 03.0
KUR pmax pmax
comp=Z,203nm,2.7s
KUR pmax pmax
comp=Z,4µm,4.8s
KHC **Kasperske Hory** **92.20 37***c* *i*P **P** **17 13 23.3 -0.4**
KHC pmax pmax
comp=Z,308nm,2.9s
KHC MLR MLR
comp=Z,10µm,13.0s
KHC **Kasperske Hory** **92.20 37** *e*P **P** **17 13 22.7 -1.0**
KHC *ex* x 17 13 32.5
KHC *ex* x 17 13 40.6
KHC *ex* x 17 16 56.3
KHC *e*PP **PP** **17 17 04.5 +1.0**
KHC *e*SKS **SKSac** **17 23 48.0 -7.5**
KHC AMS AMS 17 54 00.0
comp=Z,23µm,21.0s
KHC **Kasperske Hory** **92.20 37** P **P** **17 13 23.1 -0.6**
PRU **Pruhonice** **92.32 36** *e*P **P** **17 13 23.3 -0.9**
PRU *e* 17 13 32.0
PRU *e* 17 23 48.9
PRU MLR MLR
comp=Z,19µm,18.1s
PRU **Pruhonice** **92.32 36** *e*P **P** **17 13 23.3 -0.9**
PRU *ex* x 17 13 32.0
PRU *ex* x 17 13 55.8
PRU *e*PP **PP** **17 16 56.8 -7.6**
PRU *e*SKS **SKSac** **17 23 48.9 -7.1**
PRU AMS AMS 17 58 00.0
comp=Z,19µm,18.1s
NKL **Nikolayevsk** **92.34 328** *e*P **P** **17 13 24.7 +0.5**
NKL pmax pmax
comp=E,2.0nm,1.3s
NKL pmax pmax
comp=Z,110nm,1.3s
NKL pmax pmax
comp=N,5.0nm,0.7s
GEC2 **GERESS Array S** **92.41 37** *e*P **P** **17 13 23.5 -1.2**
comp=N,546nm,2.7s,baz=297,slow=4.7
GEC2 *e*PP **PP** **17 17 04.6 -0.7**
baz=297,slow=8.1
GERES **GERESS Array B** **92.41 37** P **P** **17 13 23.9 -0.8**
comp=N,7.2nm,0.9s,baz=318,slow=1.8,SNR=40
GERES PP **PP** **17 17 05.1 -0.2**
comp=N,11nm,1.0s,baz=305,slow=5.8,SNR=6.4
GERES PKKPbc **PKKPbc** **17 30 39.0 -0.6**
comp=N,0.7nm,0.7s,baz=309,slow=2.6,SNR=5.7
GERES LR LR 17 56 28.8
comp=N,22µm,18.8s,baz=301,slow=37
GERES **GERESS Array B** **92.41 37** P **P** **17 13 24.0 -0.8**
RJOB **Jochberg** **92.42 38** *e*P **P** **17 13 23.7 -1.0**
comp=N,157nm,1.7s,baz=297,slow=4.7
RJOB *e*PP **PP** **17 17 05.5 +0.2**
baz=297,slow=8.1
GOPC **GO Pecny, Ondr** **92.49 36** *e*P **P** **17 13 25.2 +0.2**
GOPC *e* 17 13 33.9
GOPC *e* 17 23 53.5
GOPC MLR MLR
comp=Z,19µm,17.7s
GOPC **GO Pecny, Ondr** **92.49 36** *e*P **P** **17 13 25.2 +0.2**
GOPC *ex* x 17 13 33.9
GOPC *ex* x 17 13 52.2
GOPC *e*PP **PP** **17 16 58.6 -7.2**
GOPC *e*SKS **SKSac** **17 23 53.5 -3.6**
GOPC AMS AMS 17 58 10.0
comp=Z,19µm,17.7s
TYV **Tymovskoe** **92.52 325** *e*P **P** **17 13 25.0 0.0**
TYV *e* 17 24 28.0
TYV pmax pmax
comp=Z,83nm,1.0s
TYV pmax pmax
comp=Z,2µm,2.6s
CTI **Castel Tesino** **92.53 40** P **P** **17 13 24.2 -1.2**
CTI pmax pmax
comp=Z,131nm,1.7s
CTI MLR MLR
comp=Z,26µm,18.0s
CTI **Castel Tesino** **92.53 40** P **P** **17 13 24.2 -1.2**
CTI IAmb IAmb 17 13 43.4
comp=Z,132nm,1.7s
CTI IAMs_20 IAMs_20 17 57 27.9
comp=Z,26µm,18.0s
DFRA **Djebel Bou Aff** **92.72 51** P **P** **17 13 25.9 -0.5**
ABTA **Abfaltersbach** **92.72 39** *i* PcP **P** **17 13 25.7 -0.5**
comp=Z,71nm,1.1s,SNR=30
ABTA *i* PP **PP** **17 17 07.9 +0.1**
comp=Z,95nm,1.6s,SNR=8.1
PBUR **Paburge** **92.74 28** *e*P **P** **17 13 23.3 -2.6**
KSP **Ksiaz** **92.84 34** *i* P **P** **17 13 26.9 +0.3**
KSP *e*PP **PP** **17 17 06.1 -2.3**
KSP *e*PS PnS 17 25 54.8 +8.4
KSP LMZ LR 17 58 30.2
comp=Z,29nm,19.0s
KSP **Ksiaz** **92.84 34** P **P** **17 13 26.8 +0.2**
CHVC **Chvalec** **92.84 35** *e*P **P** **17 13 26.4 -0.2**
CHVC *ex* x 17 13 42.4
CHVC *e*PP **PP** **17 17 00.9 -7.6**
CHVC AMS AMS 17 57 40.0
comp=Z,22µm,18.5s
UPC **Upice** **92.86 35** *e*P **P** **17 13 26.5 -0.2**
UPC *e* 17 13 44.9
UPC *e* 17 17 03.3
UPC *e* 17 23 52.7
UPC MLR MLR
comp=Z,24µm,19.1s
UPC **Upice** **92.86 35** *e*P **P** **17 13 26.5 -0.2**
UPC *ex* x 17 13 44.9
UPC *e*PP **PP** **17 17 03.3 -5.3**
UPC *e*SKS **SKSac** **17 23 52.7 -6.4**
UPC AMS AMS 17 57 20.0
comp=Z,24µm,19.1s
ZCCA **Zocca** **92.89 42** P **P** **17 13 26.7 -0.3**
ZCCA IAmb IAmb 17 13 59.0
comp=Z,138nm,1.1s
OSTC **Ostas** **92.95 35** *e*P **P** **17 13 26.8 -0.3**
OSTC *ex* x 17 13 41.1
OSTC *e*PP PP 17 16 56.3 -13
OSTC *e*SKS **SKSac** **17 24 06.7 +7.1**
OSTC AMS AMS 17 57 50.0
comp=Z,22µm,18.1s
TMCR **Tamitsa** **92.98 17** *e*P **P** **17 13 25.0 -1.9**
TMCR *e*S **SKSac** **17 23 57.4 -1.7**
TMCR pmax pmax
comp=Z,97nm,1.4s
KBA **Koelnbreinsper** **93.07 39** *i* PcP **P** **17 13 27.3 -0.7**
comp=Z,36nm,1.2s,SNR=26
KBA **Koelnbreinsper** **93.07 39** P **P** **17 13 27.2 -0.7**
DPC **Dobruska-Polom** **93.11 35** *e*P **P** **17 13 27.8 -0.1**
DPC *e* 17 13 41.2
DPC *e* 17 23 51.7
DPC MLR MLR
comp=Z,21µm,20.0s
DPC **Dobruska-Polom** **93.11 35** *e*P **P** **17 13 27.8 -0.1**
DPC *ex* x 17 13 41.2
DPC *ex* x 17 13 53.9
DPC *e*PP PP 17 17 01.0 -10
DPC *e*SKS **SKSac** **17 23 51.7 -8.9**
DPC AMS AMS 17 56 10.0
comp=Z,21µm,20.0s
TREC **Trest** **93.20 36** *e*P **P** **17 13 28.4 +0.1**
TREC *e* 17 17 08.0
TREC *e* 17 23 59.8
TREC MLR MLR
comp=Z,26µm,20.4s
TREC **Trest** **93.20 36** *e*P **P** **17 13 28.4 +0.1**
TREC *e*PP **PP** **17 17 08.0 -3.3**
TREC *e*SKS **SKSac** **17 23 59.8 -1.2**
TREC AMS AMS 17 55 40.0
comp=Z,26µm,20.4s
MOA **Molln** **93.23 38** *i* PcP **P** **17 13 27.9 -0.5**
comp=Z,44nm,1.4s,SNR=20
VSU **Vasula** **93.27 25** *e*P **P** **17 13 26.6 -1.7**
VSU **Vasula** **93.27 25***c* *i*P **P** **17 13 27.3 -1.0**
VSU pmax pmax
comp=Z,434nm,2.9s
VSU MLR MLR
comp=Z,28µm,17.0s
CASM **Ain Smara** **93.28 51** P **P** **17 13 28.2 -0.8**
MXZ **Matakaoa Point** **93.30 232** IAMs_20 IAMs_20 17 47 25.1
comp=Z,16µm,19.0s
CTEI **Djebel Teioual** **93.30 51** P **P** **17 13 28.6 -0.6**
CAEH **'Ain El Ouahch** **93.33 50** P **P** **17 13 27.9 -1.3**
CKFL **Kef-Lekhel** **93.39 50** P **P** **17 13 28.7 -0.9**
OSSC **Osservatorio P** **93.44 42** P **P** **17 13 27.7 -1.9**
OSSC IAMs_20 IAMs_20 17 58 15.3
comp=Z,25µm,18.0s
MYKA **Terra Mystica** **93.46 39** *i* PcP **P** **17 13 28.8 -0.8**
comp=Z,36nm,1.7s,SNR=12
KRLC **Kraliky** **93.51 35** *e*P **P** **17 13 29.6 -0.1**

KRLC e 17 17 08.0
KRLC e 17 23 51.7
KRLC MLR MLR
comp=Z,17µm,19.6s
KRLC Kraliky 93.51 35 eP **P 17 13 29.6 -0.1**
KRLC ePP **PP 17 17 08.0 -5.8**
KRLC eSKS SKSac 17 23 51.7 -11
KRLC AMS AMS 17 56 10.0
comp=Z,17µm,19.6s
NRIK Noril'sk 93.54 357 P **P 17 13 28.9 -0.5**
comp=Z,52nm,0.8s,baz=29,slow=3.8,SNR=68
NRIK LR LR 17 58 37.4
comp=Z,45µm,19.4s,baz=30,slow=38
TIC Toumodi 93.56 82 ePKIKP **P 17 13 30.1 -0.5**
LIC Lamto 93.68 82 ePKIKP **P 17 13 29.6 -1.5**
comp=Z,332nm,1.3s
DBIC Dimbokro 93.71 82 P **P 17 13 31.1 -0.2**
comp=Z,45nm,0.9s,baz=269,slow=3.7,SNR=20
DBIC PKKPbc **PKKPbc 17 30 40.9 +5.7**
comp=Z,6.9nm,1.1s,baz=169,slow=7.0,SNR=3.7
DBIC LR LR 17 54 15.0
comp=Z,14µm,19.1s,baz=274,slow=35
DBIC Dimbokro 93.71 82 P **P 17 13 30.8 -0.5**
DBIC pmax pmax
comp=Z,69nm,1.0s
DBIC Dimbokro 93.71 82 P **P 17 13 30.8 -0.5**
DBIC IAmb IAmb 17 13 34.5
comp=Z,69nm,1.0s
CADS Cadrg 93.72 39 eP **P 17 13 29.4 -1.4**
CADS ePS **PS 17 26 06.8 +12**
PUL Pulkovo 93.75 22⇓ eP **P 17 13 31.2 +0.7**
PUL pmax pmax
comp=Z,74nm,0.9s
PUL MLR MLR
comp=Z,8µm,17.0s
VRAC Vranov 93.81 36 P **P 17 13 30.5 -0.6**
comp=Z,7.0nm,0.7s,baz=296,slow=6.1,SNR=39
VRAC Vranov 93.81 36⇑ iP **P 17 13 31.2 +0.2**
VRAC ePP **PP 17 17 13.5 -2.6**
VRAC eS **SKSac 17 24 08.6 +4.2**
VRAC Vranov 93.81 36⇑ P **P 17 13 31.3 +0.2**
CMAH Djebel Manchou 93.82 50 P **P 17 13 28.8 -2.7**
KRUC Moravsky 93.83 36⇑ iP **P 17 13 31.1 -0.1**
KRUC ePP **PP 17 17 13.3 -2.9**
KRUC eS **SKSac 17 24 09.8 +5.4**
KIC Kosan Boka 93.91 82 ePKIKP **P 17 13 29.9 -2.3**
comp=Z,137nm,1.0s
PABE Paberze 93.97 28 eP **P 17 13 29.4 -2.2**
TRI Trieste 93.99 40 IAMs_20 IAMs_20 18 04 23.4
comp=Z,11µm,20.0s
VSL Villasalto 94.00 47 P **P 17 13 32.0 -0.1**
VSL IAmb IAmb 17 13 33.6
comp=Z,199nm,1.8s
VSL IAMs_20 IAMs_20 17 55 00.3
comp=Z,11µm,20.0s
ABSA Djebel Ababsia 94.00 50 P **P 17 13 31.2 -1.2**
YUK Yuzh-Kuril'sk 94.02 318*d* iP **P 17 13 29.5 -2.6**
YUK *i* 17 17 15.7
YUK *i* PPP PPP 17 19 17.8
YUK *i* S **S 17 24 39.1 -2.1**
YUK *i* SS **SS 17 31 03.7 +3.3**
YUK *i* SSS SSS 17 34 40.6
YUK pmax pmax
comp=Z,739nm,3.0s
YUK pmax pmax
comp=Z,213nm,1.3s
YUK pmax pmax
comp=E,59nm,1.2s
YUK pmax pmax
comp=N,59nm,0.9s
YUK MLR MLR
comp=Z,10µm,20.0s
YUK MLR MLR
comp=N,2µm,16.0s
YUK MLR MLR
comp=E,5µm,16.0s
OBKA Obir 94.07 39 *i* PcP **P 17 13 31.6 -0.9**
comp=E,40nm,1.4s,SNR=18
MORC Moravsky Berou 94.08 35⇑ iP **P 17 13 32.9 +0.5**
MORC ePP **PP 17 17 17.2 -1.1**
MORC eS SKSac 17 24 16.8 +11
MORC Moravsky Berou 94.08 35 ⇑P **P 17 13 32.7 +0.4**
MORC Moravsky Berou 94.08 35 P **P 17 13 31.5 -0.9**
MORC pmax pmax
comp=Z,230nm,1.8s
MORC MLR MLR
comp=Z,17µm,18.0s
MORC Moravsky Berou 94.08 35 P **P 17 13 31.5 -0.9**
MORC IAmb IAmb 17 13 33.9
comp=Z,230nm,1.8s
MORC IAMs_20 IAMs_20 17 59 25.6
comp=Z,17µm,18.0s
CONA Conrad Observa 94.12 37 *i* PcP **P 17 13 32.3 -0.4**
comp=Z,49nm,1.5s,SNR=23
CONA *i* PP **PP 17 17 18.2 -0.5**
comp=Z,90nm,2.4s,SNR=7.0
ARSA Arzberg 94.27 38 ePcP **P 17 13 32.8 -0.4**
comp=Z,26nm,1.8s,SNR=5.6
ARSA *i* PP **PP 17 17 19.3 -0.5**
comp=Z,70nm,1.6s,SNR=8.3
SOKA Soboth 94.27 38 *i* PcP **P 17 13 32.4 -0.9**
comp=Z,56nm,1.1s,SNR=34
SOKA *i* PP **PP 17 17 18.6 -1.2**
comp=Z,48nm,1.3s,SNR=6.1
LJU Ljubljana 94.29 39 eP **P 17 13 33.0 -0.4**
LJU ePP **PP 17 17 18.1 -1.8**
LJU *e* 17 25 07.0
LJU Ljubljana 94.29 39⇑ iP **P 17 13 33.3 0.0**
CEY Cerknica 94.38 39⇑ iP **P 17 13 32.3 -1.5**
OKC Ostrava-Krasne 94.38 35 eP **P 17 13 33.8 +0.1**
OKC *e* 17 24 03.3
OKC MLR MLR
comp=Z,16µm,17.5s
OKC Ostrava-Krasne 94.38 35 eP **P 17 13 33.8 +0.1**
OKC *ex* x 17 13 58.6
OKC *ex* x 17 17 08.0
OKC eSKS **SKSac 17 24 03.3 -4.1**
OKC AMS AMS 17 59 20.0
comp=Z,16µm,17.5s
MURB Monte Urbino 94.39 42 P **P 17 13 32.1 -1.8**
MURB IAmb IAmb 17 14 23.6
comp=Z,102nm,1.3s
URZ Urewera 94.41 231 LR LR 17 48 21.6
comp=Z,15µm,19.1s,baz=95,slow=30
URZ Urewera 94.41 231 IAMs_20 IAMs_20 17 48 00.7
comp=Z,16µm,19.0s
YSS Yuzh-Sakhalins 94.48 322⇑ eP **P 17 13 33.2 -0.9**
YSS *e**PP **pP 17 13 42.4 +0.1**
YSS *e* 17 17 23.2
YSS ePPP PPP 17 19 32.2
YSS eS **S 17 24 38.4 -6.7**
YSS ePS **PS 17 26 01.4 -1.8**
YSS ePPS PPS 17 26 47.2
YSS eSS SS 17 31 18.3 +12
YSS pmax pmax
comp=Z,3µm,4.7s
YSS pmax pmax
comp=N,500nm,5.0s
YSS pmax pmax
comp=E,500nm,3.3s
YSS pmax pmax
comp=Z,80nm,0.9s
YSS pmax pmax
comp=N,30nm,0.8s
YSS pmax pmax
comp=E,30nm,1.2s
YSS Yuzh-Sakhalins 94.48 322 P **P 17 13 33.0 -1.1**
YSS IAMs_20 IAMs_20 18 00 57.2
comp=Z,21µm,19.0s
SUW Suwalki 94.53 29 eP **P 17 13 33.0 -1.2**
SUW ePP **PP 17 17 20.8 -0.7**
SUW LMZ LR 17 51 48.9
comp=Z,14nm,26.7s
SUW Suwalki 94.53 29 P **P 17 13 33.0 -1.2**
SUW pmax pmax
comp=Z,135nm,1.2s
SUW MLR MLR
comp=Z,16µm,21.0s
SUW Suwalki 94.53 29 P **P 17 13 33.0 -1.2**
SUW IAmb IAmb 17 13 35.8
comp=Z,134nm,1.2s
SUW IAMs_20 IAMs_20 17 58 10.9
comp=Z,16µm,21.0s
PDKS Podkum 94.56 39 eP **P 17 13 34.0 -0.6**
PDKS *e* 17 24 10.7

RIY Rijeka 94.62 40⇑ iP **P 17 13 34.6 -0.2**
SOP Sopron 94.64 37 P **P 17 13 36.0 +1.1**
SOP pmax pmax
comp=Z,51nm,3.4s
BEL Belsk 94.65 32 *i* P **P 17 13 34.8 0.0**
BEL ePP **PP 17 17 22.6 +0.2**
BEL LMZ LR 17 53 41.9
comp=Z,35nm,25.3s
JAVC Velka Javorina 94.65 36⇑ iP **P 17 13 36.2 +1.2**
JAVC ePP **PP 17 17 21.9 -0.8**
ZST Bratislava 94.69 36 eP **P 17 13 34.2 -0.9**
ZST pmax pmax
comp=Z,2µm,2.8s
ZST Bratislava 94.69 36 eP **P 17 13 34.2 -0.9**
ZST ePP **PP 17 17 21.5 -1.4**
MODS Modra-Piesok 94.69 36 eP **P 17 13 33.8 -1.3**
MODS pmax pmax
comp=Z,1µm,2.8s
MODS Modra-Piesok 94.69 36 eP **P 17 13 33.8 -1.3**
MODS ePP **PP 17 17 20.8 -2.2**
SMOL Smolenice 94.70 36 eP **P 17 13 34.9 -0.3**
SMOL pmax pmax
comp=Z,482nm,2.7s
SMOL Smolenice 94.70 36 eP **P 17 13 34.9 -0.3**
SMOL ePP **PP 17 17 21.9 -1.1**
IZAR Zarasai 94.82 27 eP **P 17 13 34.4 -1.2**
ISAL Salakas 94.88 27 eP **P 17 13 34.4 -1.5**
CRES Cresnjev 94.96 39⇑ iP **P 17 13 36.2 -0.2**
NRCA Norcia 94.97 42 P **P 17 13 35.6 -1.0**
BOJS Bojanci 95.00 39 eP **P 17 13 36.4 -0.2**
BOJS ePP **PP 17 17 22.7 -2.8**
BOJS ePS **PS 17 26 10.8 +1.8**
OJC Ojcow 95.06 34 *i* P **P 17 13 36.7 0.0**
OJC ePP **PP 17 17 25.7 -0.1**
OJC ePS **PS 17 26 17.2 +7.8**
OJC LMZ LR 17 55 34.8
comp=Z,20nm,23.0s
OJC Ojcow 95.06 34 P **P 17 13 35.8 -1.0**
OJC pmax pmax
comp=Z,284nm,2.0s
OJC Ojcow 95.06 34 P **P 17 13 35.8 -1.0**
IIGN Ignalina 95.07 27 eP **P 17 13 35.0 -1.6**
BKZ Black Stump Fm 95.15 231 IAMs_20 IAMs_20 17 47 30.2
comp=Z,20µm,20.0s
ZAG Zagreb 95.27 39⇑ iP **P 17 13 38.0 +0.2**
AQU L'Aquila 95.39 43⇑ iP **P 17 13 38.2 -0.3**
AQU L'Aquila 95.39 43 P **P 17 13 36.4 -2.1**
AQU pmax pmax
comp=Z,120nm,1.6s
AQU MLR MLR
comp=Z,22µm,20.0s
AQU L'Aquila 95.39 43 P **P 17 13 36.4 -2.1**
AQU IAmb IAmb 17 13 52.2
comp=Z,120nm,1.6s
AQU IAMs_20 IAMs_20 17 58 42.9
comp=Z,22µm,20.0s
LANS Liptovska Anna 95.48 35 eP **P 17 13 39.4 +0.6**
LANS Liptovska Anna 95.48 35 eP **P 17 13 39.4 +0.6**
VYHS Vyhne 95.50 36 eP **P 17 13 38.2 -0.6**
VYHS pmax pmax
comp=Z,718nm,2.7s
VYHS Vyhne 95.50 36 eP **P 17 13 38.2 -0.6**
VYHS ePP **PP 17 17 27.8 -1.4**
NACGM Naroch 95.60 27 eP **P 17 13 37.0 -2.1**
NACGM eP **PcP 17 13 38.0 -1.3**
NACGM ePP **PP 17 17 24.0 -5.8**
NACGM ePPP PPP 17 19 09.0
NACGM eSKS **SKSac 17 24 04.0 -10**
NACGM eSKKS SKKSac 17 24 24.0 -13
NACGM eS **ScS 17 25 00.0 +4.7**
NACGM ePS **PS 17 26 12.0 -3.2**
NACGM eSS SS 17 31 44.0 +22
NACGM eSSS SSS 17 36 00.0
NACGM eLQ LQ 17 48 07.0
NACGM LQM 17 54 32.0
comp=E,37nm,24.0s
NACGM eLR LR 17 57 26.0
NACGM LRM MLR 17 59 50.0
comp=Z,49nm,20.0s
NACGM LRM MLR 18 00 07.0
comp=E,33nm,18.0s
KEST Kesra 95.61 50 P **P 17 13 40.4 +0.7**
comp=E,20nm,1.0s,baz=176,slow=3.0,SNR=18
KEST LR LR 17 57 00.8
comp=E,11µm,18.7s,baz=252,slow=36
KEST Kesra 95.61 50 P **P 17 13 39.0 -0.7**
NIE Niedzica 95.78 34 *i* P **P 17 13 40.8 +0.7**
NIE ePP **PP 17 17 32.1 +0.7**
NIE eS SKSac 17 24 28.1 +13
NIE ePS **PS 17 26 27.8 +10**
NIE LMZ LR 17 51 45.9
comp=E,8.9nm,26.8s
NIE Niedzica 95.78 34 P **P 17 13 40.3 +0.2**
BFZ Birch Farm 95.79 229 IAMs_20 IAMs_20 17 48 11.1
comp=Z,22µm,19.0s
INTR Introdacqua 95.88 43 P **P 17 13 39.1 -1.7**
INTR IAmb IAmb 17 14 17.1
comp=Z,70nm,1.3s
KLMR Klimovskoe 96.01 18*c* iP **P 17 13 39.9 -0.9**
KLMR 17 17 28.0
KLMR S **SKSac 17 24 14.1 -1.5**
KLMR pmax pmax
comp=Z,132nm,1.3s
KLMR pmax pmax
comp=Z,2µm,3.2s
KLMR Klimovskoe 96.01 18⇑ iP **P 17 13 39.9 -0.9**
KLMR ⇓ iP **P 17 13 39.9 -0.9**
KLMR ⇑ iP **P 17 13 39.9 -0.9**
KLMR AMP 17 13 41.9
comp=Z,2µm,3.2s
KLMR AMP 17 13 43.3
comp=Z,132nm,1.3s
KLMR PP **PP 17 17 28.1 -4.6**
KLMR S **SKSac 17 24 14.1 -1.5**
KLMR S **SKSac 17 24 14.1 -1.5**
KLMR LR LR 17 45 12.3
KLMR AMP 18 02 01.6
comp=Z,15µm,17.0s
HIZ Hauiti 96.18 232 IAMs_20 IAMs_20 17 48 08.4
comp=Z,18µm,20.0s
OUZ Omahuta 96.20 235 IAMs_20 IAMs_20 17 49 54.2
comp=Z,10µm,19.0s
MICGM Minsk 96.35 27⇑ eP **P 17 13 40.0 -2.5**
MICGM PM 17 13 43.0
comp=Z,0.4nm,2.0s
MICGM ePP **PP 17 17 30.0 -5.5**
MICGM ePPP PPP 17 19 24.0
MICGM eSKS **SKSac 17 24 16.0 -1.6**
MICGM eS **SKKSac 17 24 48.0 +5.2**
MICGM ePS **PS 17 26 20.0 -3.3**
MICGM eSS **SS 17 31 22.0 -11**
MICGM eSSS SSS 17 35 20.0
MICGM eLR LR 17 48 36.0
MICGM LRM MLR 18 00 26.0
comp=Z,52nm,18.0s
MICGM LRM MLR 18 00 26.0
comp=N,17nm,20.0s
MICGM LRM MLR 18 00 26.0
comp=E,18nm,18.0s
MICGM LRM MLR 18 00 32.0
comp=Z,58nm,20.0s
MNK Minsk 96.35 27⇑ eP **P 17 13 40.0 -2.5**
MNK *e* 17 17 30.0
MNK *e* 17 24 16.0
MNK eS S 17 24 48.0 -13
MNK *e* 17 26 20.0
MNK *e* 17 35 20.0
MNK pmax pmax
comp=Z,380nm,2.0s
MNK MLR MLR
comp=Z,58µm,20.0s
PSZ Piszkesteto 96.41 36⇑ P **P 17 13 44.0 +0.9**
PSZ Piszkesteto 96.41 36 P **P 17 13 43.1 0.0**
PSZ pmax pmax
comp=Z,238nm,1.8s
PSZ MLR MLR
comp=Z,21µm,22.0s
PSZ Piszkesteto 96.41 36 P **P 17 13 43.1 0.0**
PSZ IAMs_20 IAMs_20 17 57 18.0
comp=Z,21µm,22.0s
BLY Banja Luka 96.56 39⇑ P **P 17 13 44.1 +0.4**
BLY Banja Luka 96.56 39⇑ iP **P 17 13 44.0 +0.3**
BLY Banja Luka 96.56 39 P **P 17 13 43.3 -0.4**

BLY IAMs_20 IAMs_20 17 58 58.4
comp=Z,20µm,21.0s
MORH Mrgy, Hungar 96.64 37⇑ iP **P 17 13 43.4 -0.6**
ERM Erimo 96.73 318*c* iP **P 17 13 46.0 +1.5**
ERM pmax pmax
comp=Z,99nm,1.0s
ERM MLR MLR
comp=Z,8µm,19.0s
ERM Erimo 96.73 318 P **P 17 13 44.9 +0.3**
ERM IAmb IAmb 17 13 49.7
comp=Z,99nm,1.1s
PAOL Paolisi 96.80 44 P **P 17 13 44.3 -0.6**
PAOL IAmb IAmb 17 14 14.4
comp=Z,74nm,1.5s
PAOL IAMs_20 IAMs_20 18 00 39.2
comp=Z,13µm,19.0s
KWP Kalwaria Pacla 96.93 33 *i* P **P 17 13 45.7 +0.4**
KWP ePP **PP 17 17 39.8 -0.4**
KWP LMZ LR 17 52 08.5
comp=Z,17nm,28.9s
KWP Kalwaria Pacla 96.93 33 P **P 17 13 45.3 0.0**
KWP Kalwaria Pacla 96.93 33 IAMs_20 IAMs_20 18 03 46.7
comp=Z,17µm,20.0s
PRGR Permogore 97.06 15 eP **P 17 13 43.7 -1.9**
PRGR *e* 17 17 36.9
PRGR pmax pmax
comp=Z,92nm,1.0s
SNZO South Karori 97.09 229 IAMs_20 IAMs_20 17 50 57.5
comp=Z,21µm,18.0s
KOLS Kolonicke sedl 97.11 34 eP Pdif 17 13 46.2 -0.1
KOLS Kolonicke sedl 97.11 34 eP Pdif 17 13 46.2 -0.1
SGRT San Giovanni R 97.20 42 IAMs_20 IAMs_20 18 01 31.8
comp=Z,16µm,19.0s
UZH Uzhgorod 97.31 34 eP **P 17 13 45.2 -1.8**
UZH *i* 17 17 40.0
UZH eS **S 17 25 01.0 -8.5**
CORL Corleone 97.46 47 P **P 17 13 47.1 -0.9**
CORL IAmb IAmb 17 14 27.9
comp=Z,109nm,1.1s
CORL IAMs_20 IAMs_20 17 57 35.0
comp=Z,15µm,20.0s
LVV L'vov 97.50 32 eP **P 17 13 46.4 -1.5**
LVV eS S 17 25 02.1 -9.0
CLTB Caltabellotta 97.55 47 IAMs_20 IAMs_20 17 58 03.3
comp=Z,19µm,19.0s
TRPA Tarpa 97.73 34 ⇑P Pdif 17 13 49.3 +0.3
TAM Tamanrasset 97.78 63 P **P 17 13 48.9 -1.0**
TAM pmax pmax
comp=Z,92nm,1.8s
TAM MLR MLR
comp=Z,21µm,20.0s
TAM Tamanrasset 97.78 63 P **P 17 13 48.9 -1.0**
TAM IAmb IAmb 17 15 46.4
comp=Z,92nm,1.8s
TAM IAMs_20 IAMs_20 17 54 48.3
comp=Z,21µm,20.0s
TOA0 Torodi Ar. Sit 97.78 74 P **P 17 13 49.0 -0.8**
SNR=8.4
TOA0 Torodi Ar. Sit 97.78 74 P **P 17 13 49.0 -0.8**
SNR=8.4
TORD Torodi Ar. Bea 97.78 74 P **P 17 13 48.6 -1.2**
comp=Z,12nm,0.9s,baz=298,slow=4.7,SNR=24
TORD PP **PP 17 17 47.4 -0.7**
comp=Z,6.0nm,0.9s,baz=284,slow=5.0,SNR=4.7
TORD PKKPbc **PKKPdf 17 30 26.9 0.0**
comp=Z,3.0nm,0.8s,baz=98,slow=2.8,SNR=7.2
TORD PKPPKP PKPPKPdf 17 38 40.0
comp=Z,0.8nm,1.0s,baz=168,slow=1.9,SNR=3.9
TORD LR LR 17 56 42.5
comp=Z,18µm,19.2s,baz=280,slow=35
STON Ston 97.87 41⇑ iP **P 17 13 49.0 -0.6**
FRGS Fruska Gora 97.90 38⇑ iP Pdif 17 13 49.9 +0.1
HAPS Han Pijesak,BI 97.98 39⇑ iP Pdif 17 13 50.3 0.0
NNZ Nelson 98.03 229 IAMs_20 IAMs_20 17 49 23.2
comp=Z,17µm,20.0s
KHZ Kahutara 98.23 228 IAMs_20 IAMs_20 17 48 56.7
comp=Z,18µm,21.0s
BAI Bari 98.27 43 eP Pdif 17 13 52.5 +1.0
ZEA Zeya 98.27 333 eP **P 17 13 51.0 -0.2**
ZEA ePPP PPP 17 17 48.0
ZEA *e* 17 20 00.5
ZEA ePS **SKSac 17 24 22.0 -5.5**
ZEA *e* 17 25 18.0
ZEA pmax pmax
comp=Z,110nm,2.0s
ZEA pmax pmax
comp=Z,2µm,12.0s
ZEA pmax pmax
comp=N,800nm,13.0s
ZEA pmax pmax
comp=E,600nm,13.0s
SG1 Sgolgore (BA) 98.28 43 eP **P 17 13 51.5 -0.1**
SIRR Siria 98.34 36 ⇓P Pdif 17 13 51.8 0.0
BRY Bratogost 98.37 40⇑ iP **P 17 13 51.4 -0.7**
BBLS Lazići 98.38 39⇑ iP Pdif 17 13 52.1 +0.1
MATE Matera 98.39 43 ⇑P **P 17 13 51.4 -0.6**
VAE Valguarnera 98.43 47 P **P 17 13 50.5 -1.9**
comp=E,11nm,0.4s,baz=225,slow=9.7,SNR=5.3
THZ Tophouse 98.52 229 IAMs_20 IAMs_20 17 48 29.2
comp=Z,21µm,21.0s
BMR Baia Mare 98.52 34 ⇑P **P 17 13 52.0 -0.5**
BMR Baia Mare 98.52 34 P **P 17 13 52.0 -0.5**
QRZ Quartz Range 98.54 230 IAMs_20 IAMs_20 17 48 53.9
comp=Z,19µm,21.0s
BANR Banloc 98.55 37 ⇑P Pdif 17 13 53.2 +0.6
DIVS Divibare 98.60 39⇑ iP **P 17 13 53.0 0.0**
DRGR 98.62 35 ⇑P **P 17 13 52.7 -0.4**
DRGR 98.62 35 P **P 17 13 52.7 -0.4**
BZS Buzias 98.69 37 ⇑P Pdif 17 13 53.3 0.0
DZM Mont Dzumac 98.74 250 ePP **PP 17 17 55.2 -0.5**
comp=Z,2µm,26.1s
DZM eSKSac **SKSac 17 24 26.7 -4.4**
comp=Z,7µm,27.1s
DZM eS **S 17 25 18.3 -4.5**
comp=Z,5µm,29.8s
DZM Mont Dzumac 98.74 250 ePS PS 17 26 51.1 -0.1
comp=Z,8µm,26.7s
DZM eSS SS 17 32 10.9 +1.4
comp=Z,23µm,26.6s
DZM eLQ LQ 17 41 52.2
comp=Z,11µm,38.2s
DZM eLR LR 17 46 07.6
comp=Z,42µm,22.6s
DZM Mont Dzumac 98.74 250 LR LR 17 49 16.8
comp=Z,27µm,20.3s,baz=82,slow=30
TAR1 Taranto 98.83 43 eP Pdif 17 13 54.1 +0.1
CEL Celeste 99.06 45 IAMs_20 IAMs_20 18 02 42.3
comp=Z,12µm,18.0s
PDG Podgorica 99.07 40 ⇑P **Pdif 17 13 55.5 +0.4**
PDG Podgorica 99.07 40⇑ iP **Pdif 17 13 55.4 +0.4**
PDG Podgorica 99.07 40 IAMs_20 IAMs_20 18 00 20.1
comp=Z,16µm,21.0s
CJR Cluj-Napoca 99.16 35 ⇑P **Pdif 17 13 55.7 +0.3**
CJR Cluj-Napoca 99.16 35 P **Pdif 17 13 55.7 +0.3**
DRME Dracevica, Mon 99.16 41⇑ iP **Pdif 17 13 55.9 +0.4**
TIP Timpagrande 99.18 44 ⇑P **Pdif 17 13 54.5 -1.3**
TIP Timpagrande 99.18 44 P **Pdif 17 13 54.5 -1.3**
TIP IAMs_20 IAMs_20 18 02 33.3
comp=Z,21µm,19.0s
KLR Kul'dur 99.19 328*c* iP **Pdif 17 13 55.8 +0.4**
KLR pmax pmax
comp=Z,42nm,2.2s
MQZ McQueen's Vall 99.20 227 IAMs_20 IAMs_20 17 50 11.1
comp=Z,16µm,20.0s
MDVR Moldovita 99.23 37 ⇓P **Pdif 17 13 55.8 0.0**
LTZ Lake Taylor 99.23 228 IAMs_20 IAMs_20 17 52 26.1
comp=Z,20µm,18.0s
WDD Wied Dalam 99.30 48 IAMs_20 IAMs_20 17 58 20.9
comp=Z,13µm,20.0s
ARCR ARCALIA 99.34 34 ⇑P **Pdif 17 13 55.9 -0.3**
MOS Moscow 99.38 22 eP **Pdif 17 13 53.4 -2.7**
MOS *e* 17 17 55.9
MOS *e* 17 24 31.7
MOS ePS **PS 17 26 54.6 -1.4**
MOS ePPS PPS 17 27 38.2
MOS pmax pmax
comp=Z,122nm,1.7s
MOS pmax pmax
comp=Z,1µm,3.4s
MOS pmax pmax
comp=N,740nm,3.6s
MOS pmax pmax
comp=E,600nm,4.0s
MOS MLR MLR
comp=Z,28µm,24.0s

MOS MLR MLR
comp=E,16µm,22.0s
MOS MLR MLR
comp=N,17µm,23.0s
OBN Obninsk 99.46 23 P **Pdif 17 13 55.0 -1.4**
comp=N,3.8nm,0.5s,baz=1.2,slow=1.4,SNR=18
OBN Obninsk 99.46 23 ⇑P **Pdif 17 13 55.9 -0.6**
OBN Obninsk 99.46 23 *c* iP **Pdif 17 13 55.9 -0.6**
OBN *e**SP **sP 17 14 07.0 -0.6**
OBN *e* 17 14 17.5
OBN *i* S **SKSac 17 24 33.6 +0.2**
OBN *i* PS **PS 17 26 58.1 +1.2**
OBN SS **SS 17 32 09.0 -7.2**
OBN pmax pmax
comp=Z,224nm,2.5s
OBN MLR MLR
comp=Z,36µm,22.0s
OBN Obninsk 99.46 23 P **Pdif 17 13 55.0 -1.4**
BURAR Bucovina Array 99.48 34 ⇓P **Pdif 17 13 56.1 -0.9**
BURAR Bucovina Array 99.48 34 P **Pdif 17 13 56.0 -0.9**
GZR Gura Zlata 99.48 37 ⇓P **Pdif 17 13 57.1 +0.2**
AKASG Malin Array Be 99.49 30 P **Pdif 17 13 55.5 -1.3**
comp=Z,6.6nm,1.0s,baz=296,slow=3.5,SNR=28
AKASG PP **PP 17 18 00.3 +0.7**
comp=Z,20nm,0.9s,baz=317,slow=6.5,SNR=8.7
AKASG LR LR 18 01 13.8
comp=Z,9µm,18.7s,baz=325,slow=37
OXZ Oxford 99.54 228 IAMs_20 IAMs_20 17 53 55.1
comp=Z,14µm,18.0s
HERR Herculane 99.58 37 ⇑P **Pdif 17 13 57.3 0.0**
SCTE Santa Cesarea 99.84 43 IAMs_20 IAMs_20 18 01 54.6
comp=Z,21µm,20.0s
BOD Bodaibo 99.94 342 *e*P **Pdif 17 13 57.2 -1.4**
BOD *e* 17 18 00.9
BOD pmax pmax
comp=Z,31nm,2.4s
TIR Tirane 100.04 41 ⇑P **Pdif 17 13 59.9 +0.4**
TIR Tirane 100.04 41 P **Pdif 17 13 59.8 +0.4**
SRE Strehaia 100.16 37 ⇑P **Pdif 17 14 00.5 +0.6**
SRE Strehaia 100.16 37 P **Pdif 17 14 00.5 +0.6**
PUNG Punghina 100.23 37 ⇑P **Pdif 17 14 00.3 +0.2**
RPZ Rata Peaks 100.33 227 IAMs_20 IAMs_20 17 49 39.0
comp=Z,20µm,22.0s
BIZ Bicaz 100.37 34 ⇑P **Pdif 17 14 00.7 0.0**
ARR Arges 100.55 36 ⇑P **Pdif 17 14 01.7 0.0**
DOPR Dopca 100.59 35 ⇑P **Pdif 17 14 01.9 0.0**
KIRV Kirov 100.66 15 P **Pdif 17 14 01.1 -0.6**
comp=Z,37nm,0.8s,baz=307,slow=5.0,SNR=22
SKO Skopje 100.67 40 *i* P **Pdif 17 14 02.6 +0.4**
SKO Skopje 100.67 40 *i* P **Pdif 17 14 02.6 +0.4**
VOIR 100.73 36 ⇑P **Pdif 17 14 02.6 0.0**
VOIR 100.73 36 P **Pdif 17 14 02.5 0.0**
OHR Ohrid 100.76 41 *i* P **Pdif 17 14 02.1 -0.6**
OHR Ohrid 100.76 41 *i* P **Pdif 17 14 02.1 -0.6**
SORM Soroca 100.77 32 ⇓P **Pdif 17 14 01.5 -1.0**
SORM Soroca 100.77 32 P **Pdif 17 14 01.4 -1.0**
ODZ Otahua Downs 100.92 226 IAMs_20 IAMs_20 17 50 49.7
comp=Z,23µm,20.0s
TESR Tescani 100.93 34 ⇑P **Pdif 17 14 02.3 -1.0**
LBZ Lake Benmore 101.09 227 IAMs_20 IAMs_20 17 53 56.2
comp=Z,22µm,18.0s
FOZ Fox Glacier 101.16 228 IAMs_20 IAMs_20 17 50 08.0
comp=Z,11µm,21.0s
MLR Muntele Rosu 101.20 35 P **Pdif 17 14 04.6 0.0**
comp=Z,12nm,0.9s,baz=299,slow=5.8,SNR=12
MLR Muntele Rosu 101.20 35 ⇑P **Pdif 17 14 04.7 0.0**
MLR Muntele Rosu 101.20 35 P **Pdif 17 14 03.6 -1.1**
MLR MLR
comp=Z,25µm,21.0s
MLR Muntele Rosu 101.20 35 **Pdif 17 14 03.6 -1.1**
MLR IAMs_20 IAMs_20 18 00 35.7
comp=Z,25µm,21.0s
MPEP Malo Peshtene 101.25 38 P **Pdif 17 14 04.3 -0.4**
STIP Stip 101.29 40 *i* P **Pdif 17 14 06.1 +1.1**
STIP Stip 101.29 40 *i* P **Pdif 17 14 06.1 +1.1**
FNA Florina 101.31 41 IAMs_20 IAMs_20 18 04 31.4
comp=Z,23µm,19.0s
PLOR Plostina 101.35 34 ⇓P **Pdif 17 14 03.7 -1.6**
PLOR Plostina 101.35 34 P **Pdif 17 14 03.6 -1.6**
VRI Vrincioaia 101.39 34 ⇓P **Pdif 17 14 04.3 -1.1**
VRI Vrincioaia 101.39 34 P **Pdif 17 14 04.2 -1.1**
VTS Vitosha 101.39 39 ⇑P **Pdif 17 14 04.3 -1.3**
VTS Vitosha 101.39 39 P **Pdif 17 14 05.3 -0.3**
VTS Vitosha 101.39 39 P **Pdif 17 14 04.2 -1.3**
VTS Vitosha 101.39 39 IAMs_20 IAMs_20 18 03 16.1
comp=Z,20µm,20.0s
KKB Krupnik 101.74 39 P **Pdif 17 14 07.4 +0.4**
VAY Valandovo 101.74 40 *i* P **Pdif 17 14 07.4 +0.5**
VAY Valandovo 101.74 40 *i* P **Pdif 17 14 07.4 +0.5**
PLVB Pleven 101.74 37 ⇓P **Pdif 17 14 06.6 -0.3**
KIS Kishinev 101.76 33 ⇓*i* P **Pdif 17 14 07.0 +0.1**
comp=Z,450nm,3.0s
KIS Kishinev 101.76 33 *i* PP **PP 17 18 16.0 -0.9**
comp=Z,5µm,20.0s
KIS Kishinev 101.76 33 *e*PPP PPP 17 19 38.0
KIS *i* SKS **SKSac 17 24 43.0 -1.9**
KIS *i* SKKS SKKSac 17 24 58.0 -24
KIS *i* S **Sdif 17 25 38.0 -9.0**
KIS Kishinev 101.76 33 *i* PS PS 17 27 30.0 +8.1
KIS Kishinev 101.76 33 ⇓*i* P **Pdif 17 14 07.0 +0.1**
KIS *i* 17 18 16.0
KIS *i* 17 24 43.0
KIS *i* S **Sdif 17 25 38.0 -9.0**
KIS *i* PPS PPS 17 28 12.0
KIS pmax pmax
comp=Z,5µm,20.0s
LEOM Leova 101.80 33 ⇑P **Pdif 17 14 06.3 -0.8**
LEOM Leova 101.80 33 P **Pdif 17 14 06.3 -0.8**
MILM Milestii Mici 101.81 33 ⇑P **Pdif 17 14 06.2 -0.9**
WKZ Wanaka 102.00 227 IAMs_20 IAMs_20 17 54 22.3
comp=Z,13µm,19.0s
USRK Ussuriysk Ar. 102.25 324 P **Pdif 17 14 10.2 +1.1**
comp=Z,3.5nm,0.7s,baz=74,slow=8.5,SNR=4.7
PVL Pavlikeni 102.26 37 P **Pdif 17 14 08.9 -0.3**
LPSR Galich'ya Gora 102.29 24 *e*P **Pdif 17 14 08.0 -1.1**
LPSR *e* 17 24 45.7
LPSR *e*PS **PS 17 27 27.5 +0.3**
LPSR pmax pmax
comp=Z,50nm,1.0s
LPSR pmax pmax
comp=Z,480nm,2.3s
MMB Musomiste 102.29 39 P **Pdif 17 14 08.4 -1.1**
LIT Litokhoron 102.39 41 IAMs_20 IAMs_20 18 05 16.0
comp=Z,24µm,19.0s
PLD Plovdiv 102.56 38 P **Pdif 17 14 10.5 -0.1**
SZH Strazhica 102.57 37 P **Pdif 17 14 10.2 -0.4**
CFR Carcaliu 102.59 34 ⇑P **Pdif 17 14 09.6 -1.1**
CFR Carcaliu 102.59 34 P **Pdif 17 14 09.5 -1.1**
RZN Rozhen 102.82 39 P **Pdif 17 14 11.5 -0.5**
AGG Agios Georgios 102.91 42 IAMs_20 IAMs_20 18 04 22.9
comp=Z,15µm,19.0s
TOPG Topolog 102.91 34 ⇓P **Pdif 17 14 11.7 -0.4**
WHZ Wether Hill Ro 102.96 226 IAMs_20 IAMs_20 17 51 50.5
comp=Z,13µm,21.0s
VORR Voronezh 103.12 24 P **Pdif 17 14 11.0 -1.8**
VORR pmax pmax
comp=Z,300nm,2.2s
TIRR Tirgusor 103.20 35 ⇑P **Pdif 17 14 13.0 -0.4**
TIRR Tirgusor 103.20 35 ⇑P **Pdif 17 14 13.0 -0.4**
DCZ Deep Cove 103.42 226 IAMs_20 IAMs_20 17 51 37.8
comp=Z,13µm,20.0s
JMB Yambol 103.44 37 P **Pdif 17 14 14.6 +0.1**
PRD Provadia 103.45 36 P **Pdif 17 14 14.1 -0.4**
VSR Storozhevoye 103.45 25 *e*P **Pdif 17 14 13.3 -1.1**
VSR *e* 17 24 47.6
VSR *e*PS **PS 17 27 32.2 -7.3**
VSR pmax pmax
comp=Z,40nm,0.8s
VSR pmax pmax
comp=Z,400nm,2.2s
VSR MLR MLR
comp=Z,25µm,21.0s
ITM Ithomi 103.69 44 IAMs_20 IAMs_20 18 06 30.5
comp=Z,12µm,20.0s
VORD Divnogorie 103.70 25 *e*P **Pdif 17 14 14.2 -1.2**
VORD *e* 17 24 47.3
VORD pmax pmax
comp=Z,20nm,1.0s
VORD pmax pmax
comp=Z,60nm,1.2s
VORD MLR MLR
comp=Z,21µm,21.0s
MSHR Mys Shultsa 103.74 323 *c e*P **Pdif 17 14 17.5 +1.7**
PYZ Puysegur Point 103.87 226 IAMs_20 IAMs_20 17 53 09.8
comp=Z,12µm,19.0s
VRH Novokhopyorsk 104.45 23 *e*P **Pdif 17 14 18.0 -0.8**
VRH *e* 17 24 48.6
VRH *e*PS **PS 17 27 40.8 -9.2**
VRH pmax pmax
comp=Z,40nm,1.0s
VRH pmax pmax
comp=Z,300nm,2.0s
VRH MLR MLR
comp=Z,38µm,23.0s
ARU Arti 104.68 12 Pdiff **Pdif 17 14 18.2 -1.5**
comp=Z,4.1nm,0.9s,baz=320,slow=2.8,SNR=14
ARU Arti 104.68 12 P **Pdif 17 14 19.2 -0.5**
ARU S **SKSac 17 24 57.8 -0.4**
ARU SP **SP 17 27 43.9 -4.5**
ARU SS **SS 17 33 21.3 -6.8**
ARU Arti 104.68 12 IAMs_20 IAMs_20 18 05 17.6
comp=Z,22µm,20.0s
SIM Simferopol' 105.85 32 *c* iP **Pdif 17 14 24.6 -0.6**
SIM *e*PS **PS 17 28 04.0 -0.9**
SIM pmax pmax
comp=Z,3µm,12.6s
CN2 Changchun 106.05 327 Pdif **Pdif 17 14 26.6 +0.5**
CN2 PP **PP 17 18 49.3 +0.3**
CN2 *e*S **Sdif 17 26 21.8 -1.2**
CN2 AMB AMB
comp=Z,2µm,6.4s
CN2 LR LR
comp=Z,18µm,20.0s
CN2 LR LR
comp=Z,34µm,19.0s
SANT Santorini 106.47 43 IAMs_20 IAMs_20 18 05 54.1
comp=Z,11µm,20.0s
ANN Anapa 107.58 30 *e*P **Pdif 17 14 31.3 -1.5**
ANN *e* 17 18 55.8
ANN *e* 17 25 04.7
ANN *e* 17 25 48.8
ANN *e*SS SS 17 34 04.0 -4.2
ANN pmax pmax
comp=Z,28nm,1.2s
KARP Karpathos 108.07 43 IAMs_20 IAMs_20 18 06 31.3
comp=Z,11µm,21.0s
TLY Talaya 108.21 344 PP **PP 17 19 05.0 +0.6**
comp=Z,3.6nm,0.6s,baz=23,slow=8.1,SNR=3.3
TLY Talaya 108.21 344 *c* iP **Pdif 17 14 36.6 +1.0**
TLY *e* 17 19 02.1
TLY pmax pmax
comp=Z,25nm,1.1s
VNDA Vanda 108.22 193 PKKPbc PKKPbc 17 29 53.5 -1.9
comp=Z,1.6nm,0.8s,baz=284,slow=6.2,SNR=6.4
ILGA Ilgaz 108.38 35 IAMs_20 IAMs_20 18 05 38.9
comp=Z,14µm,22.0s
SNY Shenyang 108.42 327 Pdif **Pdif 17 14 37.0 +0.4**
SNY AMB AMB
comp=Z,3µm,7.7s
SNY LR LR
comp=Z,19µm,17.1s
SNY LR LR
comp=Z,13µm,16.7s
SNY LR LR
comp=Z,34µm,16.7s
SNAA Sanae 108.66 161 IAMs_20 IAMs_20 17 54 34.5
comp=Z,11µm,22.0s
ANTO Ankara 108.69 36 IAMs_20 IAMs_20 18 09 22.1
comp=Z,9µm,19.0s
ISP Isparta 108.73 39 IAMs_20 IAMs_20 18 05 53.9
comp=Z,11µm,22.0s
KSRS Korea Array 108.93 321 Pdiff **Pdif 17 14 40.9 +1.9**
comp=Z,1.3nm,0.9s,baz=55,slow=4.8,SNR=5.0
KSRS PKiKP **PKiKP 17 18 43.4 -0.2**
comp=Z,3.2nm,1.0s,baz=15,slow=1.1,SNR=7.5
KSRS PP **PP 17 19 12.8 +2.5**
comp=Z,2.9nm,1.0s,baz=48,slow=6.7,SNR=5.3
KSRS PKKPbc **PKKPab 17 30 03.5 -2.3**
comp=Z,1.4nm,0.9s,baz=230,slow=5.6,SNR=4.4
ZALV Zalesovo Beam 109.03 356 Pdiff **Pdif 17 14 40.1 +1.0**
comp=Z,1.7nm,0.7s,baz=347,slow=6.1,SNR=7.9
ZALV PKiKP **PKiKP 17 18 42.3 -1.1**
comp=Z,1.6nm,0.7s,baz=348,slow=2.8,SNR=3.6
ZALV PP **PP 17 19 08.4 -1.7**
comp=Z,21nm,1.0s,baz=348,slow=5.9,SNR=13
ZALV PKKPbc **PKKPbc 17 29 58.0 +5.8**
comp=Z,0.3nm,0.3s,baz=210,slow=5.1,SNR=3.7
BRTR Keskin Array B 109.26 36 PKiKP **PKiKP 17 18 44.0 -0.4**
comp=Z,2.3nm,0.8s,baz=143,slow=1.2,SNR=7.1
BRTR PP **PP 17 19 11.2 -1.5**
comp=Z,6.5nm,1.0s,baz=308,slow=4.1,SNR=10
BRTR PKKPbc **PKKPbc 17 29 51.3 +0.1**
comp=Z,2.7nm,1.0s,baz=132,slow=1.8,SNR=7.0
ZAK Zakamensk 109.49 344 *e*P **Pdif 17 14 42.6 +1.2**
ZAK pmax pmax
comp=Z,4.0nm,2.2s
SOC Sochi 109.57 29 *i* P **Pdif 17 14 36.7 -5.1**
SOC *e*PPP PPP 17 21 30.6
SOC *e* 17 25 18.4
SOC *e*PS **PS 17 28 39.6 -3.4**
SOC *e*SS SS 17 34 36.0 +0.8
BRVK Borovoye 109.66 6 *c* iP **Pdif 17 14 41.6 -0.4**
BRVK MLR MLR
comp=Z,14µm,23.0s
MCQ Macquarie Isla 109.70 218 IAMs_20 IAMs_20 17 56 15.4
comp=Z,15µm,19.0s
BVAR Borovoye Array 109.70 6 Pdiff **Pdif 17 14 42.6 +0.4**
comp=Z,1.4nm,0.6s,baz=356,slow=4.5,SNR=11
BVAR PKiKP **PKiKP 17 18 45.1 +0.5**
comp=Z,2.5nm,0.9s,baz=7.6,slow=4.5,SNR=4.0
BVAR PP **PP 17 19 12.9 -2.2**
comp=Z,15nm,1.0s,baz=351,slow=8.3,SNR=9.7
TJN Taejon 109.97 320 *c e*P **Pdif 17 14 45.1 +1.4**
AKTO Aktyubinsk 110.17 14 Pdiff **Pdif 17 14 44.2 -0.1**
comp=Z,1.6nm,0.9s,baz=14,slow=6.1,SNR=8.9
AKTO PKiKP **PKiKP 17 18 46.7 +1.1**
comp=Z,4.4nm,0.9s,baz=28,slow=2.4,SNR=4.4
KIV Kislovodsk 110.63 27 *e*P **Pdif 17 14 44.4 -2.2**
KIV *i* 17 18 45.1
KIV *e* 17 19 20.1
KIV *e* 17 25 22.4
KIV *e*PS **PS 17 28 51.7 -1.6**
KIV *e*SS SS 17 34 48.6 -0.9
KIV *e*SSS SSS 17 38 56.0
KIV pmax pmax
comp=Z,21nm,1.0s
KIV Kislovodsk 110.63 27 IAMs_20 IAMs_20 18 12 07.8
comp=Z,9µm,19.0s
ULN Ulaanbaatar 110.64 340 *c* iP **Pdif 17 14 48.2 +1.6**
ULN MLR MLR
comp=Z,23µm,20.0s
SONM Songino Array 110.88 341 Pdiff **Pdif 17 14 54.2 +6.6**
comp=Z,0.9nm,0.7s,baz=19,slow=4.2,SNR=6.4
SONM PKiKP **PKiKP 17 18 47.3 +0.1**
comp=Z,1.8nm,0.7s,baz=184,slow=2.4,SNR=4.6
SONM PP **PP 17 19 23.6 -0.3**
comp=Z,2.2nm,0.8s,baz=13,slow=8.4,SNR=4.7
SONM PKKPbc **PKKPbc 17 29 47.8 +1.5**
comp=Z,2.0nm,0.9s,baz=209,slow=3.9,SNR=5.4
KBZ Khabaz 110.90 27 Pdiff **Pdif 17 14 47.9 +0.2**
comp=Z,2.2nm,0.8s,baz=314,slow=3.3,SNR=4.7
KBZ PP **PP 17 19 22.6 -1.5**
comp=Z,11nm,1.2s,baz=312,slow=13,SNR=6.7
KBZ PKKPbc **PKKPab 17 29 59.4 +2.2**
comp=Z,5.7nm,1.1s,baz=188,slow=5.5,SNR=3.5
DL2 Dalian 111.55 326 Pdif **Pdif 17 14 51.5 +0.9**
DL2 PKP **PKiKP 17 18 49.9 +1.4**
DL2 AMB AMB
comp=Z,2µm,7.7s
DL2 LR LR
comp=Z,14µm,16.5s
DL2 LR LR
comp=Z,26µm,18.2s
ZEI Tsey 112.10 27 *i* PKIKP **PKiKP 17 18 51.2 +1.4**
ZEI pmax pmax
comp=Z,17nm,1.6s
KURK Kurchatov 112.43 0 *c* iP **Pdif 17 14 53.2 -1.1**
SEM Semipalatinsk 112.73 359 *e*Pdif **Pdif 17 14 54.4 -1.6**
SEM *e*PP **PP 17 19 32.6 -4.5**
SEM *e*PS **PS 17 29 10.0 -2.6**
SEM *e*LR LR 18 12 43.5
comp=Z,6µm,17.3s
SEM Semipalatinsk 112.73 359 *e*P **Pdif 17 14 54.4 -1.6**
SEM *e*PS **PS 17 29 09.9 -2.6**
BRZS Berezniki 112.92 5 *e*PP **PP 17 19 32.2 -6.0**
BRZS *e*PS **PS 17 29 12.1 -1.7**
BRZS *e*LR LR 18 11 00.2
comp=Z,8µm,18.0s
AKH Akhalkalaki 113.01 28 IAMs_20 IAMs_20 18 13 35.0
comp=Z,12µm,20.0s
GAZ Gaziantep 113.04 35 IAMs_20 IAMs_20 18 12 24.3
comp=Z,12µm,19.0s
DGZ Jazzator, Alta 113.05 354 *c* iP **Pdif 17 14 56.0 -1.3**
DGZ MLR MLR
comp=Z,28µm,21.0s
EIDS Eidsvold 113.18 249 IAMs_20 IAMs_20 17 56 47.1
comp=Z,9µm,21.0s
MAK Makhachkala 113.47 25 *e*P **Pdif 17 14 54.2 -4.9**
MAK *i* 17 18 48.8
MAK *e* 17 25 34.0
MAK *e*PS **PS 17 29 15.5 -3.6**
MAK *e*SSS SSS 17 39 37.9
MAK pmax pmax
comp=Z,162nm,1.0s
MAK pmax pmax
comp=Z,594nm,2.4s
PMG Port Moresby 113.67 267 IAMs_20 IAMs_20 18 02 05.5
comp=Z,10µm,18.0s
AKT Akhty 114.80 26 *e*PKIKP PKPdf 17 18 55.9 +1.0
AKT *e* 17 19 52.0
AKT pmax pmax
comp=Z,15nm,1.5s
HHC Hu-ho-hao-te 114.94 333 PKP **PKiKP 17 18 54.4 -0.7**
HHC SS SS 17 35 49.4 +2.8
HHC AMB AMB
comp=Z,3µm,10.0s
HHC LR LR
comp=Z,9µm,15.3s
HHC LR LR
comp=Z,10µm,16.4s
HHC LR LR
comp=Z,17µm,15.8s
ZSN Zaisan 115.50 356 *e*PP **PP 17 19 53.5 -2.9**
ZSN *e*PS **PS 17 29 35.2 -2.3**
TIA Tai'an 115.94 326 Pdif **Pdif 17 15 12.2 +1.9**
TIA AMB AMB
comp=Z,310nm,3.5s
TIA LR LR
comp=Z,10µm,15.9s
TIA LR LR
comp=Z,27µm,17.8s
MAKZ Makanchi 116.29 358 PKIKP **PKiKP 17 18 56.3 -1.2**
MAKZ MLR MLR
comp=Z,30µm,20.0s
MAKZ Makanchi 116.29 358 **PKiKP 17 18 56.2 -1.2**
MKAR Makanchi Array 116.30 358 Pdiff **Pdif 17 15 12.6 +0.9**
comp=Z,0.9nm,0.7s,baz=354,slow=3.8,SNR=9.2
MKAR PKP **PKiKP 17 18 57.5 0.0**
comp=Z,5.6nm,0.7s,baz=24,slow=2.9,SNR=18
MKAR PP **PP 17 20 02.2 +0.1**
comp=Z,4.2nm,0.8s,baz=28,slow=5.5,SNR=5.6
MKAR PKKPbc **PKKPbc 17 29 29.9 +2.0**
comp=Z,3.4nm,1.1s,baz=139,slow=5.9,SNR=5.0
CTAO Charters Tower 116.76 256 IAMs_20 IAMs_20 18 02 20.8
comp=Z,10µm,18.0s
TIY Taiyuan 117.11 331 *e*Pdif **Pdif 17 15 18.3 +2.8**
TIY PKP **PKiKP 17 19 00.8 +1.4**
TIY PP **PP 17 20 08.6 +0.3**
TIY AMB AMB
comp=Z,3µm,6.0s
TIY LR LR
comp=Z,36µm,16.7s
TIY LR LR
comp=Z,9µm,14.8s
TIY LR LR
comp=Z,42µm,17.3s
SSE Sheshan 117.32 320 PKP **PKiKP 17 19 02.0 +2.2**
SSE LR LR
comp=Z,8µm,16.9s
SSE LR LR
comp=Z,6µm,18.2s
SSE Sheshan 117.32 320 IAMs_20 IAMs_20 18 18 49.2
comp=Z,18µm,18.0s
BTLS Baital 117.93 4 *e*PKP **PKPdf 17 19 00.3 -0.3**
BTLS *i* PP **PP 17 20 13.6 +0.1**
BTLS *e*PS **PS 17 29 55.2 -4.4**
BTLS *e*LR LR 18 14 49.8
comp=Z,8µm,16.6s
BTLS Baital 117.93 4 *e*PKIKP **PKPdf 17 19 00.3 -0.3**
BTLS *i* 17 20 13.5
BTLS *e*PS **PS 17 29 55.2 -4.4**
NJ2 Nanjing 118.05 322 *e*Pdif **Pdif 17 15 20.9 +1.2**
NJ2 PKP **PKiKP 17 19 01.2 0.0**
NJ2 SKS **SKSdf 17 26 05.9 -6.1**
NJ2 AMB AMB
comp=Z,2µm,5.7s
NJ2 LR LR
comp=Z,8µm,15.6s
NJ2 LR LR
comp=Z,17µm,20.4s
TDK Taldyqorghan 118.15 1 *e*Pdif **Pdif 17 15 18.7 -1.2**
TDK *e*PKP **PKPdf 17 18 59.4 -1.7**
TDK *e*PP **PP 17 20 09.4 -5.6**
TDK *e*PS **PKKPdf 17 29 53.5 +4.3**
TDK *e*LR LR 18 17 17.1
comp=Z,15µm,16.3s
TDK Taldyqorghan 118.15 1 *e*P **Pdif 17 15 18.6 -1.3**
TDK *e* 17 18 59.3
TDK *e*PS **PKKPdf 17 29 53.5 +4.3**
WMQ Urumqi 118.83 353 *e*PKP **PKPdf 17 19 00.8 -1.7**
WMQ SKS **SKSdf 17 26 11.0 -2.2**
WMQ AMB AMB
comp=Z,470nm,7.3s
WMQ LR LR
comp=Z,18µm,24.7s
WMQ LR LR
comp=Z,8µm,23.3s
WMQ LR LR
comp=Z,33µm,24.7s
TOO Toolangi 118.90 236 IAMs_20 IAMs_20 18 02 20.0
comp=Z,13µm,19.0s
KUU Kurty 119.20 2 *e*PP PP 17 20 21.9 -0.3
KUU *e*LR LR 18 14 09.4
comp=Z,4µm,15.7s
BRLS Borolday 119.51 8 *e*SKS **SKSdf 17 26 12.2 -2.3**
BRLS *e*PS PS 17 30 12.9 -0.9
KKAR Karatay Array 119.52 7 PKIKP **PKPdf 17 19 02.7 -1.1**
KKAR Karatay Array 119.52 7 **PKPdf 17 19 02.7 -1.1**
SGDS Sogindy 119.55 4 *e*PKP **PKPdf 17 19 02.6 -1.3**
SGDS *e*PP **PP 17 20 24.0 -0.7**
SGDS *e*LR LR 18 17 10.9
comp=Z,11µm,15.4s
DZA Taraz 119.82 7 *e*PKP **PKPdf 17 19 03.9 -0.5**
DZA *e*PP **PP 17 20 24.5 -2.1**
DZA Taraz 119.82 7 *e*PKIKP **PKPdf 17 19 03.8 -0.5**
DZA *e* 17 20 24.4
AAA Alma-Ata 119.91 2 *e*PKP **PKPdf 17 19 03.6 -1.0**
AAA *e*PP **PP 17 20 25.7 -1.5**
AAA *e*LR LR 18 15 41.9
comp=Z,12µm,17.0s
AAA Alma-Ata 119.91 2 *e*PKIKP **PKPdf 17 19 03.6 -1.0**
AAA *e* 17 20 25.6
MDOK Medeo 119.96 2 *e*Pdif **Pdif 17 15 27.3 -1.0**
MDOK *e*PKP **PKPdf 17 19 02.4 -2.4**
MDOK *e*PP **PP 17 20 25.7 -1.9**
MDOK *e*PS **PS 17 30 16.4 -1.7**
MDOK *e*SS SS 17 36 57.6 +6.4
MDOK *e*LR LR 18 15 41.4
comp=Z,12µm,18.5s
MDOK Medeo 119.96 2 *e*P **Pdif 17 15 27.2 -1.0**
MDOK *e* 17 19 02.4
MDOK *e* 17 20 25.7
MDOK *e*PS **PS 17 30 16.3 -1.8**
SHLS Shalkode 119.99 360 *e*Pdif **Pdif 17 15 28.2 -0.1**
SHLS *i* PKP **PKPdf 17 19 03.8 -1.0**
SHLS *e*PP **PP 17 20 21.8 -6.1**
SHLS *e*PS **PS 17 30 22.5 +4.1**
SHLS *e*LR LR 18 16 20.5
comp=Z,6µm,16.1s
SHLS Shalkode 119.99 360 *e*P **Pdif 17 15 28.1 -0.2**
SHLS *i* 17 19 03.7
SHLS *e*PS **PS 17 30 22.5 +4.1**
UZB Uzunbulak 120.00 0 *e*PKP **PKPdf 17 19 03.6 -1.3**
UZB *e*PP **PP 17 20 26.0 -2.0**
UZB *e*PS **PS 17 30 21.5 +3.0**
UZB *e*LR LR 18 17 05.4
comp=Z,7µm,17.3s
UZB Uzunbulak 120.00 0 *e*PKIKP **PKPdf 17 19 03.6 -1.3**
UZB *e* 17 20 25.9
UZB *e*PS **PS 17 30 21.5 +3.0**
SATY Saty 120.09 1 *e*PKP **PKPdf 17 19 03.9 -1.2**
SATY *e*PP **PP 17 20 24.9 -3.6**
SATY *e*PS **PS 17 30 24.5 +5.2**
SATY *e*LR LR 18 18 18.8

comp=Z,2µm,13.9s
SATY Saty 120.09 1 *e*PKIKP **PKPdf 17 19 03.8 -1.2**
SATY *e* 17 20 24.8
SATY *e*PS **PS 17 30 24.4 +5.2**
CHM Chimkent 120.17 8 *e*LR LR 18 14 39.4
AAK Ala-Archa 120.36 4 *i* PKPdf **PKiKP 17 19 07.0 +1.3**
SNR=8.1
AAK Ala-Archa 120.36 4 *i* P **PKiKP 17 19 07.0 +1.3**
SNR=8.1
AAK Ala-Archa 120.36 4 PKIKP **PKPdf 17 19 04.6 -1.0**
AAK Ala-Archa 120.36 4 **PKPdf 17 19 04.6 -1.0**
IUG luzhnay 120.40 8 *e*PKP **PKPdf 17 19 04.8 -0.8**
IUG *e*PP **PP 17 20 32.1 +1.4**
IUG *e*LR LR 18 14 50.0
IUG luzhnay 120.40 8 *e*PKIKP **PKPdf 17 19 04.8 -0.8**
IUG *e* 17 20 32.0
GTA Gaotai 120.53 342 ⇑PKP **PKPdf 17 19 05.9 -0.1**
GTA sPKP 17 19 16.0
GTA PP **PP 17 20 34.5 +2.8**
GTA SKS **SKSdf 17 26 16.5 -0.3**
GTA SKKS **SKKSac 17 27 25.6 -5.8**
GTA SS **SS 17 37 00.1 +1.2**
GTA AMB AMB
comp=Z,4µm,8.6s
GTA LR LR
comp=Z,16µm,17.5s
GTA LR LR
comp=Z,29µm,19.0s
YOJ Yonaguni jima 120.53 313 IAMs_20 IAMs_20 18 22 31.3
comp=Z,15µm,19.0s
PRZ Przheval'sk 120.66 1 PKIKP **PKPdf 17 19 05.7 -0.5**
PRZ MLR MLR
comp=Z,22µm,18.0s
PRZ Przheval'sk 120.66 1 **PKPdf 17 19 05.7 -0.5**
KDJ Kajisay 120.99 2 PKIKP **PKPdf 17 19 05.4 -1.4**
KDJ MLR MLR
comp=Z,24µm,20.0s
KDJ Kajisay 120.99 2 **PKPdf 17 19 05.4 -1.4**
TATO Taipei 121.25 314 IAMs_20 IAMs_20 18 16 54.1
comp=Z,9µm,18.0s
YHNB Yeheng 121.53 314 IAMs_20 IAMs_20 18 20 47.7
comp=Z,11µm,18.0s
ARSB Arslanbob 121.54 5 PKIKP **PKiKP 17 19 08.1 +0.1**
ARSB MLR MLR
comp=Z,28µm,18.0s
ARSB Arslanbob 121.54 5 **PKiKP 17 19 08.1 +0.1**
NACB Ninganchiao 121.70 314 IAMs_20 IAMs_20 18 16 55.3
comp=Z,9µm,19.0s
TSUM Tsumeb 121.70 102 PKKPbc PKKPbc 17 29 09.5 +2.1
comp=Z,2.5nm,0.7s,baz=97,slow=4.7,SNR=4.4
TSUM Tsumeb 121.70 102 PKPdf **PKiKP 17 19 09.9 +1.1**
GEYT Alibeck 121.74 20 PKP **PKPdf 17 19 06.3 -1.9**
comp=Z,16nm,0.8s,baz=271,slow=6.8,SNR=33
GEYT PP **PP 17 20 40.5 +0.6**
comp=Z,7.4nm,0.8s,baz=340,slow=13,SNR=6.1
XAN Xi'an 121.74 331 Pdif **Pdif 17 15 34.4 -1.8**
XAN PKP **PKiKP 17 19 08.8 +0.3**
XAN AMB AMB
comp=Z,5µm,7.3s
XAN LR LR
comp=Z,28µm,17.6s
XAN LR LR
comp=Z,10µm,16.7s
XAN LR LR
comp=Z,39µm,17.7s
XAN Xi'an 121.74 331 PKIKP **PKPdf 17 19 06.9 -1.4**
XAN MLR MLR
comp=Z,40µm,19.0s
XAN Xi'an 121.74 331 **PKPdf 17 19 06.9 -1.4**
WHN Wuhan 121.75 324 Pdif **Pdif 17 15 36.1 -0.1**
WHN PKP **PKPdf 17 19 07.6 -0.7**
WHN PP **PP 17 20 42.3 +1.9**
WHN SKS **SKSdf 17 26 19.8 +0.7**
WHN SS **SS 17 37 20.8 +5.7**
WHN AMB AMB
comp=Z,3µm,5.8s
WHN LR LR
comp=Z,33µm,15.7s
WHN LR LR
comp=Z,9µm,14.8s
WHN LR LR
comp=Z,45µm,18.7s
ASHT Ashkhabad 121.82 19 IAMs_20 IAMs_20 18 18 49.4
comp=Z,15µm,20.0s
BAKI Biak 121.86 279 PKP **PKiKP 17 19 09.8 +0.7**
STKA Stephens Creek 122.06 243 PKP **PKiKP 17 19 09.9 +0.9**
comp=Z,21nm,0.9s,baz=30,slow=3.0,SNR=21
STKA PKKPbc **PKKPbc 17 29 07.8 +1.7**
comp=Z,5.9nm,0.9s,baz=296,slow=6.0,SNR=6.3
STKA SKKPbc SKKPbc 17 32 52.5 -1.9
comp=Z,3.8nm,0.9s,baz=352,slow=4.0,SNR=3.0
STKA Stephens Creek 122.06 243 PKIKP **PKiKP 17 19 09.7 +0.7**
STKA Stephens Creek 122.06 243 **PKiKP 17 19 09.7 +0.7**
LZH Lanzhou 122.14 336 ⇑Pdif **Pdif 17 15 38.9 +0.8**
LZH PKP **PKPdf 17 19 09.2 0.0**
LZH PP **PP 17 20 46.3 +3.4**
LZH AMB AMB
comp=Z,5µm,9.2s
LZH LR LR
comp=Z,12µm,18.2s
LZH LR LR
comp=Z,25µm,18.4s
LZH LR LR
comp=Z,19µm,19.8s
SSLB Suanglung 122.39 314 **PKPdf 17 19 09.0 -0.9**
SSLB IAMs_20 IAMs_20 18 23 42.7
comp=Z,15µm,18.0s
BTK Batken 122.56 8 PKIKP **PKPdf 17 19 08.9 -0.9**
BTK MLR MLR
comp=Z,30µm,20.0s
BTK Batken 122.56 8 **PKPdf 17 19 08.9 -0.9**
SYO Syowa Base 122.60 164⇑*e*X **Pdif 17 15 30.8 -8.1**
TPUB Ta-pu 122.94 314 IAMs_20 IAMs_20 18 23 53.1
comp=Z,12µm,18.0s
GAR Garm 123.53 8 **PKPdf 17 19 11.0 -0.8**
KSH Kashi 123.55 3 PKP **PKiKP 17 19 12.6 +0.6**
KSH sPKP 17 19 24.6
KSH SKS **SKSdf 17 26 16.9 -5.6**
KSH SS **SS 17 37 40.7 +3.7**
KSH AMB AMB
comp=Z,2µm,7.0s
KSH LR LR
comp=Z,7µm,21.1s
KSH LR LR
comp=Z,4µm,12.3s
KSH LR LR
comp=Z,9µm,15.5s
CHGR Chuyangaron 123.70 9 **PKPdf 17 19 11.2 -0.8**
ENH Enshi 124.55 328 **PKPdf 17 19 12.9 -1.0**
SUR Sutherland 125.48 118 **PKiKP 17 19 15.9 -0.1**
SUR Sutherland 125.48 118 IAMs_20 IAMs_20 18 07 58.5
comp=Z,12µm,22.0s
FAKI Fak Fak 126.06 279 PKP **PKiKP 17 19 18.1 +0.6**
FAKI Fak Fak 126.06 279 **PKiKP 17 19 17.9 +0.4**
FAKI IAMs_20 IAMs_20 18 04 24.1
comp=Z,10µm,20.0s
PVCP Virac 126.11 302 *e*P **PKiKP 17 19 17.7 +0.2**
HRA Herat 126.27 17 **PKPdf 17 19 16.7 -0.5**
CD2 Chengdu 126.69 334 Pdif **Pdif 17 15 58.7 +0.4**
CD2 PKP **PKiKP 17 19 18.4 0.0**
CD2 SKS **SKSdf 17 26 24.7 -3.8**
CD2 SKKS **SKKSac 17 28 06.7 -4.5**
CD2 SS **SS 17 38 15.5 -1.7**
CD2 AMB AMB
comp=Z,2µm,5.4s
CD2 LR LR
comp=Z,11µm,29.7s
CD2 LR LR
comp=Z,14µm,27.4s
CD2 LR LR
comp=Z,10µm,19.3s
BBOO Buckleboo 126.73 242 IAMs_20 IAMs_20 18 10 10.7
comp=Z,8µm,19.0s
CASY Casey 126.75 195 **PKiKP 17 19 17.9 +0.7**
CASY Casey 126.75 195 IAMs_20 IAMs_20 18 05 38.4
comp=Z,10µm,19.0s
SMPP San Manuel, Pa 127.39 307 *e*P **PKPdf 17 19 18.2 -1.3**
MATI Mati 127.68 293 *e*P **PKPdf 17 19 20.0 -0.1**
WRAB Tennant Creek 127.82 258 PKIKP **PKPdf 17 19 19.5 -0.7**
WRAB MLR MLR
comp=Z,11µm,18.0s
WRAB Tennant Creek 127.82 258 **PKPdf 17 19 19.5 -0.7**
WRAB Tennant Creek 127.82 258 IAMs_20 IAMs_20 18 13 15.6
comp=Z,11µm,18.0s
WRA Warramunga Arr 127.83 258 PKhKP PKPpre 17 19 12.6
comp=Z,1.0nm,0.8s,baz=76,slow=4.1,SNR=5.6
WRA PKP **PKPdf 17 19 19.8 -0.4**
comp=Z,38nm,0.9s,baz=79,slow=1.8,SNR=64
WRA PP **PP 17 21 26.1 +3.4**
comp=Z,1.8nm,0.5s,baz=96,slow=8.3,SNR=12
WRA SKKPbc SKKPbc 17 32 35.7 +1.6
comp=Z,2.4nm,0.9s,baz=277,slow=2.3,SNR=7.4
RAYN Ar Rayn 127.87 40 *i* PKPdf **PKPdf 17 19 20.3 -0.1**
SNR=16
RAYN Ar Rayn 127.87 40 *i* P **PKPdf 17 19 20.3 -0.1**
SNR=16
RAYN Ar Rayn 127.87 40 PKIKP **PKPdf 17 19 19.6 -0.8**
RAYN MLR MLR
comp=Z,7µm,22.0s
RAYN Ar Rayn 127.87 40 **PKPdf 17 19 19.6 -0.8**
RAYN IAMs_20 IAMs_20 18 14 22.6
comp=Z,7µm,22.0s
GZH Guangzhou 127.90 319 Pdif **Pdif 17 15 59.9 -3.8**
GZH PKP **PKPdf 17 19 19.7 -0.6**
GZH PP **PP 17 21 17.2 -4.6**
GZH SS SS 17 38 23.1 -10
GZH LR LR
comp=Z,11µm,17.9s
GZH LR LR
comp=Z,14µm,19.5s
SAUI Saumlaki 128.46 273 IAMs_20 IAMs_20 18 07 38.2
comp=Z,8µm,20.0s
MAW Mawson 128.48 172 PKP **PKPdf 17 19 20.2 +0.2**
comp=Z,39nm,1.0s,baz=223,slow=3.0,SNR=31
DDMP Don Marcelino, 128.55 293 *e*P **PKPdf 17 19 20.9 -0.9**
ASAR Alice Springs 128.56 253 PKhKP PKPpre 17 19 07.0
comp=Z,1.2nm,0.8s,baz=105,slow=4.1,SNR=7.8
ASAR PKP **PKPdf 17 19 21.0 -0.6**
comp=Z,24nm,0.9s,baz=97,slow=1.7,SNR=52
ASAR PKKPbc PKKPbc 17 28 42.4
comp=Z,1.5nm,0.9s,baz=264,slow=2.7,SNR=5.1
ASAR SKKPbc SKKPbc 17 32 30.2 -1.6
comp=Z,5.8nm,0.9s,baz=262,slow=2.7,SNR=10
KCP Kidapawan 128.68 294⇑*i*P **PKPdf 17 19 22.3 +0.2**
PGP Puerto Galera 128.73 304⇑*e*P **PKPdf 17 19 21.4 -0.7**
GUIM Jordan 128.99 300 *e*P **PKPdf 17 19 22.0 -0.6**
GYA Guiyang 129.09 328 Pdif **Pdif 17 16 09.0 -0.1**
GYA ⇑*i*PKP **PKPdf 17 19 22.4 -0.3**
GYA PP **PP 17 21 32.2 +2.8**
GYA SS SS 17 38 50.2 +2.7
GYA LR LR
comp=Z,7µm,18.5s
GYA LR LR
comp=Z,7µm,18.0s
GYA LR LR
comp=Z,13µm,24.2s
NIL Nilore 129.17 6 PKIKP **PKPdf 17 19 21.5 -1.1**
NIL MLR MLR
comp=Z,27µm,20.0s
NIL Nilore 129.17 6 **PKPdf 17 19 21.4 -1.1**
CTBH Cotabato--PC H 129.31 295⇓*i*P **PKPdf 17 19 22.7 -0.5**
TNTI Ternate 129.31 286 PKP **PKPdf 17 19 22.4 -0.8**
TNTI PKP **PKiKP 17 19 22.9 -1.1**
MSAI Masohi 129.33 280 PKP **PKiKP 17 19 24.5 +0.5**
MSAI PKP **PKPdf 17 19 24.8 +1.5**
CNOP Candoni, Negro 129.37 299 *e*P **PKPdf 17 19 21.6 -1.8**
BOSA Boshof 129.38 113 PKP **PKPdf 17 19 22.8 -0.3**
comp=Z,48nm,1.0s,baz=276,slow=1.9,SNR=28
BOSA Boshof 129.38 113 **PKPdf 17 19 22.7 -0.4**
SKMP Bagumbayan, Su 129.38 294 *e*P PKiKP 17 19 32.3 +8.2
MBAR Mbarara 129.58 76 PKIKP **PKPdf 17 19 24.0 0.0**
MBAR MLR MLR
comp=Z,12µm,19.0s
MBAR Mbarara 129.58 76 **PKPdf 17 19 24.0 0.0**
MBAR IAMs_20 IAMs_20 18 20 41.1
comp=Z,12µm,19.0s
LBMI Labuha 129.72 284 PKP **PKPdf 17 19 23.8 -0.2**
PAGZ Pagadian 129.75 296 *e*P **PKiKP 17 19 24.8 -0.1**
MTN Manton Dam 129.76 267 PKP **PKPdf 17 19 24.2 +0.2**
MTN IAMs_20 IAMs_20 18 13 45.9
comp=Z,10µm,18.0s
AAI Ambon 130.14 280 PKP **PKPdf 17 19 24.9 +0.1**
CUYO Cuyo Island 130.17 301 *e*P **PKiKP 17 19 25.8 +0.2**
NLAI Namlea 131.02 281 PKP **PKPdf 17 19 26.0 -0.5**
ENPP El Nido 131.27 303 *e*P **PKPdf 17 19 26.0 -0.9**
SHME Shamm 131.56 28 *i* PKPdf **PKiKP 17 19 27.9 -0.4**
SNR=23
SHME Shamm 131.56 28 *i* P **PKiKP 17 19 27.9 -0.4**
SNR=23
BHK Bhakra 131.64 3 *ex* **PKiKP 17 19 30.2 +1.9**
SANI Sanana 131.64 283 PKP **PKPdf 17 19 27.9 +0.2**
BANOM Banah 131.74 28 *i* PKPdf **PKPdf 17 19 27.8 +0.2**
SNR=16
BANOM Banah 131.74 28 *i* P **PKPdf 17 19 27.8 +0.2**
SNR=16
BANOM Banah 131.74 28 pPKPdf **PKiKP 17 19 30.1 +1.5**
SNR=6.8
BANOM Banah 131.74 28 P **PKiKP 17 19 30.1 +1.5**
SNR=6.8
UMQ Umm Al-Quwin 131.79 29 *i* PKPdf **PKiKP 17 19 28.6 -0.1**
SNR=6.4
UMQ Umm Al-Quwin 131.79 29 *i* P **PKiKP 17 19 28.6 -0.1**
SNR=6.4
DESE Dese 131.87 57 *e*P **PKPdf 17 19 28.7 +0.2**
DESE *e*S **SKiKP 17 23 03.7 -0.4**
LSA Lhasa 132.02 346 PKP **PKiKP 17 19 29.6 -0.1**
LSA LR LR
comp=Z,80µm,19.9s
LSA Lhasa 132.02 346 *i* PKPdf **PKiKP 17 19 30.2 +0.5**
SNR=26
LSA Lhasa 132.02 346 *i* P **PKiKP 17 19 30.2 +0.5**
SNR=26
LSA Lhasa 132.02 346 PKIKP **PKPdf 17 19 28.3 -0.3**
LSA MLR MLR
comp=Z,24µm,21.0s
LSA Lhasa 132.02 346 **PKPdf 17 19 28.3 -0.3**
KMI Kunming 132.13 331 Pdif **Pdif 17 16 32.9 +10**
KMI PKP **PKPdf 17 19 25.7 -2.9**
KMI PP PP 17 22 02.8 +14
KMI PKS **PKSdf 17 22 59.7 -5.8**
KMI Kunming 132.13 331 SS SS 17 40 01.1 +36
KMI AMB AMB
comp=Z,7µm,15.6s
KMI LR LR
comp=N,16µm,17.6s
KMI LR LR
comp=E,43µm,19.7s
KMI LR LR
comp=Z,36µm,19.7s
LODK Lodwar 132.16 69 PKPdf **PKPdf 17 19 23.3 -5.4**
SNR=20
MSFE Esma-Masafi 132.16 29 *i* PKPdf **PKPdf 17 19 28.4 -0.1**
SNR=26
MSFE Esma-Masafi 132.16 29 *i* P **PKPdf 17 19 28.4 -0.1**
SNR=26
NAZ Nazwa, Dubai 132.25 29 *i* PKPdf **PKPdf 17 19 28.8 +0.2**
SNR=35
NAZ Nazwa, Dubai 132.25 29 *i* P **PKPdf 17 19 28.8 +0.2**
SNR=35
NAZ Nazwa, Dubai 132.25 29 PKiKP **PKiKP 17 19 30.4 +0.7**
SNR=19
NAZ Nazwa, Dubai 132.25 29 P **PKiKP 17 19 30.4 +0.7**
SNR=19
MDH Madha 132.28 28 *i* PKPdf **PKPdf 17 19 28.4 -0.2**
SNR=29
MDH Madha 132.28 28 *i* P **PKPdf 17 19 28.4 -0.2**
SNR=29
MDH Madha 132.28 28 PKiKP **PKiKP 17 19 29.3 -0.3**
SNR=12
MDH Madha 132.28 28 P **PKiKP 17 19 29.3 -0.3**
SNR=12
AJN Ajban 132.29 30 *i* PKPdf **PKPdf 17 19 28.8 +0.2**
SNR=27
AJN Ajban 132.29 30 *i* P **PKPdf 17 19 28.8 +0.2**
SNR=27
AJN Ajban 132.29 30 PKiKP **PKiKP 17 19 30.6 +0.9**
SNR=10
AJN Ajban 132.29 30 P **PKiKP 17 19 30.6 +0.9**
SNR=10
AAE Adis Abeba 132.32 60 *e*P **PKiKP 17 19 32.0 +1.6**
AAE *i*S **SKiKP 17 23 03.8 -1.3**
AAE Adis Abeba 132.32 60 *e*P **PKiKP 17 19 32.0 +1.6**
AAE *i*S **SKiKP 17 23 03.8 -1.3**
FURI Furi 132.32 60 *e*P **PKiKP 17 19 31.9 +1.4**
FURI *i*S **SKiKP 17 23 05.2 +0.2**
FURI Furi 132.32 60 *e*P **PKiKP 17 19 31.9 +1.4**
FURI *i*S **SKiKP 17 23 05.2 +0.2**
FURI Furi 132.32 60 IAMs_20 IAMs_20 18 18 09.1
comp=Z,11µm,20.0s
FAQ Al Faqa, Dubai 132.43 30 *i* PKPdf **PKPdf 17 19 27.8 -1.1**
SNR=14
FAQ Al Faqa, Dubai 132.43 30 *i* P **PKPdf 17 19 27.8 -1.1**
SNR=14
FAQ Al Faqa, Dubai 132.43 30 pPKPdf **PKiKP 17 19 32.0 +2.0**
SNR=5.8
FAQ Al Faqa, Dubai 132.43 30 P **PKiKP 17 19 32.0 +2.0**
SNR=5.8
KMSI Cibinong 132.50 287 PKP **PKPdf 17 19 29.2 -0.1**
KNRA Kununurra 132.53 264 PKPpre PKPpre 17 19 17.1
KNRA IAMs_20 IAMs_20 18 12 56.4
comp=Z,9µm,18.0s
UOSS Minazif 132.54 29 *i* PKPdf **PKPdf 17 19 28.8 -0.4**
SNR=6.5
UOSS Minazif 132.54 29 *i* P **PKPdf 17 19 28.8 -0.4**
SNR=6.5
UOSS Minazif 132.54 29 **PKPdf 17 19 28.4 -0.7**
UOSS Minazif 132.54 29 IAMs_20 IAMs_20 18 23 29.0
comp=Z,6µm,19.0s
HATD Hatta, Dubai 132.61 29 *i* PKPdf **PKPdf 17 19 29.0 -0.3**
SNR=24
HATD Hatta, Dubai 132.61 29 *i* P **PKPdf 17 19 29.0 -0.3**
SNR=24
HATD Hatta, Dubai 132.61 29 PKiKP **PKiKP 17 19 30.0 -0.4**
SNR=15
HATD Hatta, Dubai 132.61 29 P **PKiKP 17 19 30.0 -0.4**
SNR=15
ASHO Ashiyiah 132.70 29 *i* PKPdf **PKPdf 17 19 30.0 +0.5**
SNR=7.8
ASHO Ashiyiah 132.70 29 *i* P **PKPdf 17 19 30.0 +0.5**
SNR=7.8
ASHO Ashiyiah 132.70 29 PKiKP **PKPdf 17 19 30.0 +0.5**
SNR=12
ASHO Ashiyiah 132.70 29 P **PKPdf 17 19 30.0 +0.5**
SNR=12
DDI Dehra Dun 132.79 1 *e*P **PKPdf 17 19 29.2 -0.3**
DDI IAmb IAmb 17 19 32.8
comp=Z,98nm,0.2s
DDI *i* x x 17 21 23.4
ANKE Ethiopia-Afar 132.81 59 *e*P **PKiKP 17 19 31.7 +0.2**
ANKE *e*S **SKiKP 17 23 03.7 -2.4**
ALNE Al Ain 133.09 30 *i* PKPdf **PKPdf 17 19 29.5 -0.7**
SNR=24
ALNE Al Ain 133.09 30 *i* P **PKPdf 17 19 29.5 -0.7**
SNR=24
QIZ Qiongzhong 133.09 319 PKP **PKPdf 17 19 30.4 +0.1**
QIZ SS SS 17 39 35.8 -1.0
QIZ AMB AMB
comp=Z,2µm,10.0s
QIZ LR LR
comp=Z,14µm,19.1s
QIZ LR LR
comp=Z,11µm,19.1s
QIZ LR LR
comp=Z,19µm,17.7s
DAMY Dhamar 133.39 49 pPKPdf **PKiKP 17 19 34.1 +1.6**
SNR=10
DAMY Dhamar 133.39 49 P **PKiKP 17 19 34.1 +1.6**
SNR=10
DAMY Dhamar 133.39 49 IAMs_20 IAMs_20 18 17 18.9
comp=Z,12µm,22.0s
SOHO SOHO 133.39 29 PKPdf **PKPdf 17 19 31.0 +0.3**
SNR=18
SOHO SOHO 133.39 29 P **PKPdf 17 19 31.0 +0.3**
SNR=18
BATP Bataraza 133.94 301 *e*P **PKPdf 17 19 30.9 -1.0**
ARQ Araqi 134.07 30 PKiKP **PKPdf 17 19 32.6 +0.6**
SNR=13
ARQ Araqi 134.07 30 P **PKPdf 17 19 32.6 +0.6**
SNR=13
ATD Arta Tunnel 134.16 54 *i* P **PKiKP 17 19 34.8 +1.0**
ATD *i* S **SKiKP 17 23 11.4 +2.9**
ATD Arta Tunnel 134.16 54 *i* P **PKiKP 17 19 34.8 +1.0**
ATD *i* S **SKiKP 17 23 11.4 +2.9**
ATD Arta Tunnel 134.16 54 IAMs_20 IAMs_20 18 15 00.9
comp=Z,11µm,21.0s
HOQ Hoqain 134.22 28 PKiKP **PKiKP 17 19 33.6 -0.1**
SNR=13
HOQ Hoqain 134.22 28 P **PKiKP 17 19 33.6 -0.1**
SNR=13
LUWI Luwuk 134.25 286 PKP **PKPdf 17 19 31.8 -0.8**
MRSI Marisa 134.40 288 PKP **PKPdf 17 19 30.5 -2.3**
BIDO Bidbid 134.64 28 PKiKP **PKiKP 17 19 34.4 -0.1**
SNR=20
BIDO Bidbid 134.64 28 P **PKiKP 17 19 34.4 -0.1**
SNR=20
SLVN Son La 134.73 327 **PKiKP 17 19 34.1 -0.7**
BSY Bisya 134.89 29 PKPdf **PKPdf 17 19 33.8 +0.1**
SNR=24
BSY Bisya 134.89 29 P **PKPdf 17 19 33.8 +0.1**
SNR=24
SMDO Samad 135.01 28 PKPdf **PKPdf 17 19 34.4 +0.4**
SNR=33
SMDO Samad 135.01 28 P **PKPdf 17 19 34.4 +0.4**
SNR=33
WSAR Wadi Sarin 135.11 27 PKiKP **PKiKP 17 19 34.8 -0.7**
SNR=29
WSAR Wadi Sarin 135.11 27 P **PKiKP 17 19 34.8 -0.7**
SNR=29
SOEI Soe 135.63 274 **PKPdf 17 19 34.9 -0.3**
SOEI IAMs_20 IAMs_20 18 12 37.2
comp=Z,9µm,21.0s
JMDO Jabal Madar 135.63 28 PKPdf **PKPdf 17 19 35.0 +0.1**
SNR=15
JMDO Jabal Madar 135.63 28 P **PKPdf 17 19 35.0 +0.1**
SNR=15
SHL Shillong 135.78 343 *e*P **PKPdf 17 19 34.0 -1.4**
SHL IAmb IAmb 17 19 39.4
comp=Z,30nm,0.7s
SHL *i* x x 17 22 21.2
SHL Shillong 135.78 343 PKPdf **PKPdf 17 19 35.4 0.0**
SNR=21
SHL Shillong 135.78 343 P **PKPdf 17 19 35.4 0.0**
SNR=21
SHL Shillong 135.78 343 PKIKP **PKPdf 17 19 35.6 +0.2**
SHL MLR MLR
comp=Z,31µm,20.0s
SHL Shillong 135.78 343 **PKPdf 17 19 35.6 +0.2**
KMBO Kilima Mbogo 135.79 73 PKP **PKiKP 17 19 37.0 -0.4**
comp=Z,4.9nm,0.9s,baz=280,slow=1.8,SNR=17
KMBO Kilima Mbogo 135.79 73 PKPdf **PKPdf 17 19 35.3 -0.5**
KMBO Kilima Mbogo 135.79 73 P **PKPdf 17 19 35.3 -0.5**
FITZ Fitzroy Crossi 135.81 261 PKPdf **PKPdf 17 19 35.7 +0.4**
FITZ IAMs_20 IAMs_20 18 10 14.5
comp=Z,9µm,20.0s
WBK Wadi Bani Khal 135.81 27 PKiKP **PKiKP 17 19 36.2 -0.7**
SNR=13
WBK Wadi Bani Khal 135.81 27 P **PKiKP 17 19 36.2 -0.7**
SNR=13
BBSI Bau Bau 136.02 280 PKP **PKPdf 17 19 33.5 -2.4**
MPSI Mapaga 136.31 289 PKP **PKPdf 17 19 36.2 -0.2**
BATI Baumata 136.32 273 PKP **PKiKP 17 19 38.4 +0.3**
KKM Kota Kinabalu 136.76 299 IAMs_20 IAMs_20 18 33 45.9
comp=Z,6µm,20.0s
MHTO MHTO 136.76 30 PKPdf PKPdf 17 19 27.5 -10
SNR=12
KIBK Kibwezi 137.00 75 *i* P PKPdf 17 19 22.8 -15
KIBK Kibwezi 137.00 75 PKPdf **PKPdf 17 19 31.3 -6.5**
SNR=6.8
WHFO Wadi Hawf 137.10 37 PKPdf **PKPdf 17 19 34.7 -3.2**
SNR=7.7
ABTO Aybut 137.27 38 PKPdf **PKPdf 17 19 38.0 -0.2**
SNR=6.7
ABTO Aybut 137.27 38 P **PKPdf 17 19 38.0 -0.2**
SNR=6.7
MMRI Maumere 137.27 276 PKP **PKPdf 17 19 34.5 -3.7**
MMRI Maumere 137.27 276 **PKPdf 17 19 38.8 +0.6**
TTSI Tana Toraja 137.74 285 PKP **PKPdf 17 19 39.6 +0.5**
EDFI Ende, Flores 137.82 276 PKP **PKPdf 17 19 36.4 -2.9**
BNSI Bone 137.96 283 PKP **PKPdf 17 19 40.3 +0.8**
SPSI Sidrap Palu 138.12 284 PKP **PKPdf 17 19 40.2 +0.4**
BKSI Bulukumba 138.26 281 PKP **PKPdf 17 19 37.5 -2.5**
BOK Bokaro 138.78 351 *ex* **PKPdf 17 19 41.3 +0.5**
BOK IAmb IAmb 17 19 44.0
comp=Z,56nm,0.8s
BOK *i* PP **PP 17 22 30.3 -0.1**
SMKI Samarinda 139.06 290 PKP **PKiKP 17 19 43.0 -0.8**
BASI Baing, Sumba 139.26 274 PKP **PKPdf 17 19 42.6 +0.8**
CMAR Chiang Mai Arr 139.63 330 PKP **PKPdf 17 19 43.5 +1.0**
comp=Z,24nm,1.0s,baz=59,slow=22,SNR=6.7
BKB Balikpapan 139.70 289 PKP **PKiKP 17 19 44.6 -0.4**
BKB Balikpapan 139.70 289 IAMs_20 IAMs_20 18 18 10.3
comp=Z,6µm,20.0s
BHPL Bhopal 139.82 3 *e*P **PKPdf 17 19 41.3 -1.4**
BHPL IAmb IAmb 17 19 44.4
comp=Z,61nm,1.3s
BHPL *i* x x 17 22 35.2

BHPL				*ex*		x		17 25 37.6	
WBSI	**Waikabubak, Su**	**140.25**	**276**	PKP		**PKPdf**	**17 19 43.4**	**-0.3**	
KBKI	**Kotabaru**	**141.20**	**287**	PKP		**PKPdf**	**17 19 39.3**	**-6.1**	
PSAD2	**Pilbara Seismi**	**141.36**	**257**	IAMs_20	IAMs_20		18 16 25.6		
	comp=Z,12µm,19.0s								
PSAC2	**Pilbara Seismi**	**141.41**	**257**	IAMs_20	IAMs_20		18 16 36.1		
	comp=Z,13µm,19.0s								
PSAB2	**Pilbara Seismi**	**141.45**	**257**	IAMs_20	IAMs_20		18 16 37.0		
	comp=Z,13µm,20.0s								
PSAA3	**Pilbara Seismi**	**141.46**	**257**	IAMs_20	IAMs_20		18 16 08.2		
	comp=Z,11µm,20.0s								
PSAB3	**Pilbara Seismi**	**141.46**	**257**	IAMs_20	IAMs_20		18 16 08.2		
	comp=Z,11µm,20.0s								
PSAA2	**Pilbara Seismi**	**141.47**	**257**	IAMs_20	IAMs_20		18 16 37.4		
	comp=Z,12µm,19.0s								
PSA00	**Pilbara Seismi**	**141.47**	**257**	IAMs_20	IAMs_20		18 16 47.4		
	comp=Z,12µm,19.0s								
PSAA1	**Pilbara Seismi**	**141.47**	**257**	IAMs_20	IAMs_20		18 16 19.7		
	comp=Z,12µm,20.0s								
PSAD1	**Pilbara Seismi**	**141.48**	**257**	IAMs_20	IAMs_20		18 16 28.8		
	comp=Z,12µm,19.0s								
PSAC3	**Pilbara Seismi**	**141.48**	**257**	IAMs_20	IAMs_20		18 16 46.9		
	comp=Z,11µm,20.0s								
PSAB1	**Pilbara Seismi**	**141.49**	**257**	IAMs_20	IAMs_20		18 16 19.0		
	comp=Z,12µm,19.0s								
PSAC1	**Pilbara Seismi**	**141.50**	**257**	IAMs_20	IAMs_20		18 16 10.3		
	comp=Z,12µm,19.0s								
PSAD3	**Pilbara Seismi**	**141.53**	**257**	IAMs_20	IAMs_20		18 16 30.1		
	comp=Z,12µm,19.0s								
PLAI	**Plampang**	**141.56**	**277**	PKP		**PKPdf**	**17 19 45.4**	**-0.6**	
MBWA	**Marble Bar**	**141.57**	**257**	IAMs_20	IAMs_20		18 15 37.1		
	comp=Z,9µm,19.0s								
SOCY	**Socotra**	**141.66**	**42**	PKPdf		**PKPdf**	**17 19 45.4**	**-0.9**	
	SNR=6.6								
SOCY	**Socotra**	**141.66**	**42**	P		**PKPdf**	**17 19 45.4**	**-0.9**	
	SNR=6.6								
SOCY	**Socotra**	**141.66**	**42**			**PKPdf**	**17 19 45.0**	**-1.3**	
SOCY				IAMs_20	IAMs_20		18 29 26.6		
	comp=Z,6µm,20.0s								
NGP	**Nagpur**	**141.94**	**0**	*e*P		**PKPdf**	**17 19 44.8**	**-1.8**	
NGP				IAmb	IAmb		17 19 56.4		
	comp=Z,72nm,1.0s								
NGP				*i* x		x	17 22 40.1		
BWNR	**Bhubaneshwar**	**142.23**	**350**	*e*P		**PKPdf**	**17 19 45.6**	**-1.4**	
BWNR				*i* PP		**PP**	**17 22 51.8**	**+0.3**	
NWAO	**Narrogin (SRO)**	**142.35**	**238**	IAMs_20	IAMs_20		18 18 10.1		
	comp=Z,6µm,20.0s								
CRZF	**Crozet Islands**	**143.05**	**148**	IAMs_20	IAMs_20		18 21 32.0		
	comp=Z,7µm,20.0s								
BOM	**Bombay**	**143.64**	**10**	AMP			17 19 53.2		
	comp=Z,801nm,13.3s								
BOM				AMS	AMS		18 32 45.5		
	comp=Z,2µm,16.5s								
DNP	**Denpasar**	**143.95**	**279**	PKP	PKPab		17 19 47.2	-0.3	
SRSP	**Sriramsagar**	**144.14**	**1**	*e*PKPdf	**PKPab**		**17 19 46.3**	**-1.7**	
SRSP				IVMs_BB	IVMs_BB		18 34 50.5		
	comp=Z,2µm,16.2s								
POO	**Poona**	**144.16**	**9**	*e*P	PKPbc		17 19 48.6	0.0	
POO				IAmb	IAmb		17 19 56.8		
	comp=Z,78nm,1.0s								
POO				*i* PP		**PP**	**17 22 59.0**	**-4.2**	
RPR	**Rampur**	**144.22**	**360**	*e*PKPdf	**PKPab**		**17 19 48.3**	**0.0**	
RPR				IVMs_BB	IVMs_BB		18 29 35.7		
	comp=Z,2µm,21.8s								
MORW	**Morawa**	**144.23**	**244**	IAMs_20	IAMs_20		18 13 42.3		
	comp=Z,11µm,22.0s								
KMMI	**Kalianget**	**144.60**	**282**	PKP	**PKPab**		**17 19 48.2**	**-1.7**	
JAGI	**Jajag, Banyuwa**	**144.88**	**280**	PKP	**PKPab**		**17 19 46.9**	**-4.1**	
KLRI	**Killari**	**144.91**	**4**	*e*PKPab	**PKPab**		**17 19 49.2**	**-1.8**	
KLRI				IVMs_BB	IVMs_BB		18 32 01.9		
	comp=Z,5µm,19.2s								
HYBB	**Hyderabad (bro**	**145.65**	**1**	*e*PKPab	**PKPdf**		**17 19 51.8**	**-1.4**	
HYBB				IVMs_BB	IVMs_BB		18 32 19.5		
	comp=Z,3µm,23.7s								
HYB	**Hyderabad**	**145.65**	**1**	*i* PKP		**PKPdf**	**17 19 51.5**	**-1.6**	
	comp=Z,380nm,1.0s								
HYB				*es*PKP			17 19 59.0		
HYB				*e*PP		**PP**	**17 23 14.0**	**+2.0**	
HYB				*e*PPP		PPP	17 26 26.0		
HYB				*e*LR		LR			
	comp=Z,8.5nm,20.0s								
HYB	**Hyderabad**	**145.65**	**1**	*i* P		**PKPdf**	**17 19 52.1**	**-1.1**	
HYB				IAmb	IAmb		17 19 56.5		
	comp=Z,440nm,0.9s								
HYB				*e*PP		**PP**	**17 23 12.7**	**+0.6**	
PVM	**Polavaram**	**145.74**	**356**	*e*PKPab	**PKPdf**		**17 19 52.4**	**-0.8**	
PVM				IVMs_BB	IVMs_BB		18 33 41.7		
	comp=Z,3µm,20.0s								
GRJI	**Gresik**	**145.95**	**283**	PKP	**PKPdf**		**17 19 53.9**	**+0.2**	
MYLAV	**Mylavaram**	**146.29**	**358**	*e*PKPab	**PKPdf**		**17 19 54.3**	**+0.2**	
MYLAV				IVMs_BB	IVMs_BB		18 32 04.3		
	comp=Z,3µm,20.3s								
NJS	**Nagarjunasagar**	**146.51**	**360**	*e*PKPab	**PKPdf**		**17 19 54.5**	**-0.1**	
NJS				IVMs_BB	IVMs_BB		18 35 55.2		
	comp=Z,2µm,16.0s								
GIRL	**Giralia**	**146.65**	**255**		**PKiKP**		**17 19 58.5**	**-0.5**	
PWJI	**Pagerwojo**	**146.95**	**282**	PKP	**PKPdf**		**17 19 55.1**	**-0.3**	
SRLM	**Srisailam**	**146.96**	**1**	*e*PKPbc	**PKPdf**		**17 19 55.2**	**-0.1**	
SRLM				IVMs_BB	IVMs_BB		18 32 58.6		
	comp=Z,2µm,17.0s								
GOA	**Goa**	**147.14**	**10**	*e*P		**PKPdf**	**17 19 53.5**	**-2.2**	
GOA				IAmb	IAmb		17 20 04.9		
ADKI	**Addanki**	**147.21**	**359**	*e*PKPbc	**PKPdf**		**17 19 56.0**	**+0.3**	
ADKI				IVMs_BB	IVMs_BB		18 36 41.2		
	comp=Z,2µm,17.3s								
PCJI	**Pacitan**	**147.59**	**282**	PKP	**PKPdf**		**17 19 56.5**	**+0.1**	
WOJI	**Wonogiri, Jawa**	**147.71**	**283**	PKP	**PKPdf**		**17 19 56.7**	**+0.1**	
SMRI	**Semarang**	**147.89**	**284**	PKP	**PKPdf**		**17 19 56.5**	**-0.4**	
SMRI	**Semarang**	**147.89**	**284**		**PKPdf**		**17 19 56.6**	**-0.4**	
URV	**Uravakonda**	**148.05**	**4**	*e*PKPbc	**PKPdf**		**17 19 57.3**	**+0.1**	
URV				IVMs_BB	IVMs_BB		18 33 44.1		
	comp=Z,7µm,20.6s								
UGM	**Wanagama**	**148.11**	**283**	PKP	**PKPbc**		**17 19 59.1**	**-1.5**	
UGM	**Wanagama**	**148.11**	**283**		**PKPdf**		**17 19 58.2**	**+0.9**	
PBA	**Port Blair**	**148.40**	**334**	*e*P	PKPdf		17 19 55.8	-1.9	
PBA				IAmb	IAmb		17 20 09.3		
	comp=Z,271nm,0.7s								
PBA	**Port Blair**	**148.40**	**334**	PKPdf	PKPdf		17 19 58.3	+0.6	
	SNR=63								
PBA	**Port Blair**	**148.40**	**334**	P	PKPdf		17 19 58.3	+0.6	
	SNR=63								
PBA	**Port Blair**	**148.40**	**334**		PKPdf		17 19 58.1	+0.3	
KULM	**Kulim**	**149.23**	**315**		**PKPdf**		**17 19 59.4**	**+0.3**	
TPRI	**Tanjung Pinang**	**149.24**	**303**	PKP	**PKPdf**		**17 19 59.5**	**+0.3**	
MYKOM	**Kota Tinggi**	**149.25**	**305**		**PKPdf**		**17 19 59.3**	**+0.1**	
SKHT	**Srikalahasti**	**149.30**	**359**	*e*PKPbc	**PKPdf**		**17 20 00.4**	**+1.2**	
SKHT				IVMs_BB	IVMs_BB		18 33 50.1		
	comp=Z,3µm,20.8s								
OPO	**Ambohidratompo**	**149.53**	**98**	PKP		**PKPdf**	**17 20 00.6**	**+0.9**	
	comp=Z,22nm,1.0s,baz=249,slow=2.2,SNR=30								
OPO				PKPbc		**PKPbc**	**17 20 04.2**	**0.0**	
	comp=Z,105nm,1.0s,baz=285,slow=3.7,SNR=50								
IPM	**Ipoh**	**149.55**	**313**			**PKPdf**	**17 19 58.8**	**-0.9**	
ABPO	**Ambohimpanom**	**149.58**	**98**	PKHKP		PKPpre	17 20 00.3		
ABPO				MLR		MLR			
	comp=Z,10µm,21.0s								
ABPO	**Ambohimpanom**	**149.58**	**98**			**PKPdf**	**17 20 00.3**	**+0.5**	
ABPO	**Ambohimpanom**	**149.58**	**98**	IAMs_20	IAMs_20		18 26 52.3		
	comp=Z,10µm,21.0s								
MDRS	**Chennai**	**149.96**	**358**	*e*P		**PKPdf**	**17 20 00.4**	**+0.1**	
MDRS				IAmb	IAmb		17 20 10.9		
MDRS				*i* x		x	17 23 35.2		
LEM	**Lembang**	**150.40**	**287**	PKPbc		**PKPbc**	**17 20 05.0**	**-1.4**	
	comp=Z,29nm,0.8s,baz=297,slow=19,SNR=1.3								
LEM	**Lembang**	**150.40**	**287**	PKP		**PKPdf**	**17 20 01.2**	**0.0**	
CISI	**Cisompet, Garu**	**150.50**	**285**	PKP		**PKPdf**	**17 20 00.7**	**-0.5**	
CISI	**Cisompet, Garu**	**150.50**	**285**			**PKPdf**	**17 20 01.5**	**+0.3**	
CNJI	**Cibinong**	**151.03**	**286**	PKP		**PKPdf**	**17 19 57.9**	**-4.1**	
DBJI	**Dramaga**	**151.09**	**288**	PKP		**PKPdf**	**17 19 59.2**	**-2.9**	
PMBI	**Palembang**	**151.18**	**297**	PKP		**PKPdf**	**17 20 03.0**	**+0.8**	
PMBI	**Palembang**	**151.18**	**297**	IAMs_20	IAMs_20		18 39 42.7		
	comp=Z,10µm,21.0s								
SBV	**Sambava**	**151.55**	**87**	PKiKP		**PKiKP**	**17 20 11.1**	**+1.8**	
	SNR=12								
SBV	**Sambava**	**151.55**	**87**	P		**PKiKP**	**17 20 11.1**	**+1.8**	
	SNR=12								
LHMI	**Lhok Sumawe**	**151.68**	**320**	PKP		**PKPdf**	**17 20 01.1**	**-1.9**	
LHMI	**Lhok Sumawe**	**151.68**	**320**			**PKPdf**	**17 20 02.3**	**-0.7**	
LHMI				IAMs_20	IAMs_20		18 36 33.5		
	comp=Z,11µm,22.0s								
RGRI	**Rengat**	**151.75**	**304**	PKP		**PKPdf**	**17 20 04.1**	**+1.0**	
BLSI	**Bandar Lampung**	**151.94**	**292**	PKP		**PKPdf**	**17 20 02.6**	**-0.8**	
PSI	**Prapat**	**152.21**	**314**	PKP		**PKPdf**	**17 20 04.1**	**+0.2**	
	comp=Z,16nm,1.0s,baz=112,slow=0.0,SNR=37								
PSI				PKPbc		**PKPbc**	**17 20 10.5**	**-0.2**	
	comp=Z,52nm,0.9s,baz=0.5,slow=3.9,SNR=20								
RPSI	**Rantau Prapat**	**152.28**	**314**			**PKPbc**	**17 20 10.5**	**-0.2**	
RPSI	**Rantau Prapat**	**152.28**	**314**			**PKPdf**	**17 20 02.9**	**-1.0**	
RPSI				IAMs_20	IAMs_20		18 36 02.9		
	comp=Z,14µm,22.0s								
BKNI	**Bangkinang**	**152.34**	**307**	PKP		**PKPdf**	**17 20 03.0**	**-1.0**	
BKNI	**Bangkinang**	**152.34**	**307**	IAMs_20	IAMs_20		18 41 00.6		
	comp=Z,12µm,21.0s								
KCSI	**Kotacane, Aceh**	**152.46**	**317**	PKP		**PKPdf**	**17 20 03.7**	**-0.5**	
MDSI	**Maura Dua**	**152.47**	**294**	PKP		**PKPdf**	**17 20 02.1**	**-2.0**	
KASI	**Kota Agung**	**152.67**	**292**	PKP		**PKPdf**	**17 20 03.4**	**-1.0**	
MLSI	**Meulaboh, Aceh**	**152.76**	**320**	PKP		**PKPdf**	**17 20 03.6**	**-1.0**	
LWLI	**Liwa**	**152.82**	**293**	PKP		**PKPdf**	**17 20 06.4**	**+1.6**	
TPTI		**153.04**	**317**	PKP		**PKPdf**	**17 20 06.5**	**+1.5**	
KSI	**Kapahiang**	**153.41**	**298**	PKP		**PKPdf**	**17 20 07.5**	**+1.9**	
MNAI	**Manna**	**153.46**	**296**	IAMs_20	IAMs_20		18 44 02.1		
	comp=Z,9µm,21.0s								
KRJI	**Kerinci**	**153.48**	**302**	PKP		**PKPdf**	**17 20 06.8**	**+1.0**	
MSEY	**Mahe Island**	**153.67**	**65**	PKIKP		**PKPdf**	**17 20 06.1**	**+0.2**	
MSEY				MLR		MLR			
	comp=Z,7µm,20.0s								
MSEY	**Mahe Island**	**153.67**	**65**			**PKPdf**	**17 20 06.1**	**+0.2**	
MSEY	**Mahe Island**	**153.67**	**65**	IAMs_20	IAMs_20		18 35 22.6		
	comp=Z,7µm,20.0s								
GSI	**Gunungsitoli**	**154.22**	**314**	PKP		**PKPdf**	**17 20 08.5**	**+1.8**	
GSI	**Gunungsitoli**	**154.22**	**314**			**PKPdf**	**17 20 07.1**	**+0.4**	
TRD	**Trivandrum**	**154.41**	**5**	*e*P		**PKPdf**	**17 20 04.8**	**-2.1**	
TRD				*i* x		x	17 20 27.9		
TRD				*ex*		x	17 23 57.2		

*IDC **08** 17:01:09.7±0.9,67.°10N×20.°77E,h0km,mb1 2.8/4, mb1mx2.7/63,mbtmp2.7/4,ML2.1/4,Error ellipse: s-maj=10.4km s-min=3.9km az=153.0*
*UPP **08** 17:01:09.2±0.1,67.°08N×20.°94E,h0km,ML2.3,Explosion*
*HEL **08** 17:01:10.0±0.1,67.°09N×20.°91E,h0km,ML2.1, ML2.2(UPP),Explosion*

ISC 08 17:01:09.4±0.8,**67.°10N**±0.°03×**20.°91E**±0.°03,**h0**km,**n43,** σ0**92**/55,**Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.14**	**281**	P	**Pg**	**17 01 12.3**	**+0.3**
DUNU	**Dundret**	**0.14**	**281**	*i* P	**Pg**	**17 01 12.3**	**+0.3**
MASU	**Masugnsbyn**	**0.56**	**49**	P	**Pg**	**17 01 19.9**	**-0.2**
MASU	**Masugnsbyn**	**0.56**	**49**	*i* P	**Pg**	**17 01 19.9**	**-0.2**
ERTU	**Ertsjaerv**	**0.74**	**137**	P	**Pg**	**17 01 22.8**	**-0.9**
ERTU	**Ertsjaerv**	**0.74**	**137**	*e*P	**Pg**	**17 01 22.6**	**-1.0**
PAJU	**Pajala**	**0.86**	**94**	P	**Pg**	**17 01 25.1**	**-0.8**
PAJU				S	**Sg**	**17 01 37.1**	**0.0**
PAJU	**Pajala**	**0.86**	**94**	*i* P	**Pg**	**17 01 25.1**	**-0.8**
PAJU				*i* S	**Sg**	**17 01 37.1**	**0.0**
KUA	**Kurravaara**	**0.89**	**346**	P	**Pg**	**17 01 25.9**	**-0.6**
KUA	**Kurravaara**	**0.89**	**346**	*e*P	**Pg**	**17 01 25.9**	**-0.6**
LANU	**Lannavaara**	**1.04**	**23**	P	**Pg**	**17 01 28.5**	**-0.9**
LANU	**Lannavaara** baz=200	**1.04**	**23**	*e*P	**Pg**	**17 01 28.5**	**-0.9**
LANU				*e*SB	**Sb**	**17 01 44.3**	**-0.2**
NIKU	**Nikkaluokta**	**1.06**	**318**	P	**Pg**	**17 01 29.0**	**-0.7**
NIKU	**Nikkaluokta**	**1.06**	**318**	*e*P	**Pg**	**17 01 29.0**	**-0.7**
KOVU	**Salmi**	**1.17**	**346**	P	**Pg**	**17 01 31.0**	**-0.8**
KOVU	**Salmi**	**1.17**	**346**	*e*P	**Pg**	**17 01 31.0**	**-0.8**
SJUU	**Sjulsmark**	**1.62**	**170**	P	**Pn**	**17 01 38.4**	**-0.7**
SJUU	**Sjulsmark**	**1.62**	**170**	*e*P	**Pn**	**17 01 38.4**	**-0.7**
HEF	**Hetta** baz=218	**1.68**	**37**	*e*P	**Pn**	**17 01 39.5**	**-0.5**
HEF				MSG		17 01 59.5	
	comp=Z,12nm,0.2s						
HEF				*e*SN	**Sn**	**17 02 02.4**	**+0.1**
HEF	**Hetta**	**1.68**	**37**	*e*P	**Pn**	**17 01 39.8**	**-0.3**
TOF	**Tornio**	**1.70**	**125**	*e*P	**Pn**	**17 01 40.0**	**-0.3**
TOF				MSG		17 01 59.7	
	comp=Z,17nm,0.2s						
TOF				*e*SN	**Sg**	**17 02 05.1**	**+1.1**
LILU	**Lilltraesk**	**1.87**	**194**	P	**Pn**	**17 01 42.4**	**-0.2**
LILU	**Lilltraesk**	**1.87**	**194**	*e*P	**Pn**	**17 01 42.4**	**-0.2**
KIF	**Kilpisjarvi**	**1.92**	**359**	*e*PB	**Pb**	**17 01 44.5**	**-0.7**
KIF				MSG		17 02 08.0	
	comp=Z,24nm,0.2s						
KIF				*e*SG	**Sg**	**17 02 11.8**	**+0.9**
KIF	**Kilpisjarvi**	**1.92**	**359**	*e*P	**Pb**	**17 01 44.7**	**-0.5**
RNF	**Rovaniemi**	**2.07**	**101**	*e*P	**Pn**	**17 01 45.9**	**+0.5**
RNF				*e*SG	**Sb**	**17 02 14.3**	**+0.2**
I37NO	**I37NO** baz=157,slow=328,SNR=6.1	**2.17**	**338**	*i*		17 14 56.4	
SGF	**Sodankyl**	**2.21**	**78**	*e*P	**Pn**	**17 01 47.8**	**+0.6**
SGF				*e*SG	**Sb**	**17 02 18.2**	**+0.3**
BURU	**Burvik**	**2.53**	**175**	P	**Pn**	**17 01 52.2**	**+0.6**
BURU	**Burvik**	**2.53**	**175**	*e*P	**Pn**	**17 01 52.3**	**+0.6**
OUL	**Oulu** baz=313	**2.86**	**133**	*e*PB	**Pn**	**17 01 58.1**	**+1.9**
ARCES	**ARCESS Array B**	**2.98**	**33**	Pn	**Pn**	**17 01 58.3**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=214,slow=14,SNR=26						
ARCES				Sn	**Sn**	**17 02 36.4**	**+2.0**
	comp=Z,0.9nm,0.3s,baz=214,slow=19,SNR=9.1						
ARE0	**ARCESS Array S** baz=219	**2.98**	**33**	*e*P	**Pn**	**17 01 58.4**	**+0.5**
ARE0				*e*		17 02 29.9	
OUF	**Merijarvi** baz=337	**3.16**	**148**	*e*P	**Pn**	**17 02 02.0**	**+1.7**
OUF				MSG		17 02 41.7	
	comp=Z,2.9nm,0.2s						
UMAU	**Umeaa**	**3.23**	**182**	*e*P	**Pn**	**17 02 02.4**	**+1.1**
VRF	**Varrio** baz=266	**3.42**	**75**	*e*P	**Pn**	**17 02 04.8**	**+0.9**
VRF				*e*SG	**Sb**	**17 02 54.6**	**+1.8**
KU6	**Riekki**	**3.75**	**103**	*e*P	**Pn**	**17 02 09.6**	**+1.2**
HUSU	**Husum**	**3.84**	**192**	*e*P	**Pn**	**17 02 11.0**	**+1.4**
HUSU				*e*S	**Sn**	**17 02 56.0**	**+0.7**
VAF	**Ylistaro** baz=348	**4.14**	**169**	*e*P	**Pn**	**17 02 14.5**	**+0.8**
HEMU	**Hemsoen** baz=15	**4.60**	**197**	*e*P	**Pn**	**17 02 21.5**	**+1.3**
FINES	**FINESS Array B**	**6.10**	**156**	Pn	**Pn**	**17 02 40.1**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=343,slow=12,SNR=5.3						
FINES				Sn	**Sn**	**17 03 51.6**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=346,slow=22,SNR=6.1						
FINES				Lg	Lg	17 04 21.1	
	comp=Z,0.3nm,0.3s,baz=345,slow=26,SNR=1.8						
NOA	**NORSAR Array B**	**7.41**	**219**	Pn	**Pn**	**17 02 58.3**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=26,slow=11,SNR=1.7						
HFS	**Hagfors**	**7.69**	**208**	Pn	**Pn**	**17 03 01.4**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=19,slow=12,SNR=6.1						
HFS				Sn	**Sn**	**17 04 27.6**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=26,slow=30,SNR=2.2						

*IDC **08** 17:02:00.3±2.6,4.°98S×152.°50E,h42km±19km,mb3.9/9, mb1 4.2/10,mb1mx3.8/40,mbtmp4.2/10,ML2.2/1,MS2.9/2, Ms1 2.9/2,ms1mx2.7/31,Error ellipse: s-maj=32.7km s-min=15.3km az=94.0*
*NEIC **08** 17:02:01.2±1.4,4.°96S±0.°08×152.°5E±0.°1,h53km±8km, mb4.7/16,Error ellipse: s-maj=18.6km s-min=11.8km az=96.0*

ISC 08 17:02:01.8±0.8,**4.°95S**±0.°07×**152.°5E**±0.°1,**h55**km,**n31,** σ0**76**/31,**mb4.4**/16,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076** 2µm,0.3s,baz=165,slow=1.6,SNR=4899	**0.77**	**325**	P	**Pn**	**17 02 16.4**	**-0.3**
KRVT				S	**Sn**	**17 02 27.1**	**-0.4**
	2µm,0.3s,baz=97,slow=8.7,SNR=14						
RABL	**Rabaul**	**0.81**	**338**		**Pn**	**17 02 17.2**	**+0.1**
PMG	**Port Moresby** 2.8nm,0.3s,baz=88,slow=2.1,SNR=13	**6.88**	**230**	P	**Pn**	**17 03 40.2**	**+0.2**
PMG				LR	LR	17 05 48.9	
	comp=Z,82nm,18.4s,baz=97,slow=33						
PMG	**Port Moresby**	**6.88**	**230**		**Pn**	**17 03 39.9**	**-0.2**
JAY	**Jayapura** comp=Z,53nm,20.1s,baz=196,slow=34	**11.98**	**281**	LR	LR	17 08 48.3	
SIJI	**Sorong** 11nm,0.6s,baz=169,slow=23,SNR=5.4	**21.55**	**280**	P	**P**	**17 06 47.6**	**+0.8**
MTN	**Manton Dam**	**22.47**	**248**	P	**P**	**17 06 56.7**	**0.0**
MTN				IAmb	IAmb	17 07 02.5	
	comp=Z,26nm,1.3s						
WB0	**Warramunga Arr**	**22.95**	**229**	P	**P**	**17 07 01.0**	**-0.7**
WB0				IAmb	IAmb	17 07 02.1	
	comp=Z,11nm,0.7s						
WR0	**Warramunga Arr**	**22.96**	**228**	P	**P**	**17 07 01.5**	**-0.2**
WR0				IAmb	IAmb	17 07 03.5	
	comp=Z,31nm,1.4s						
WRAB	**Tennant Creek**	**23.09**	**228**	P	**P**	**17 07 02.5**	**-0.5**
WB2	**Warramunga Arr**	**23.09**	**228**	P	**P**	**17 07 02.8**	**-0.3**
WB2				IAmb	IAmb	17 07 03.2	
	comp=Z,10nm,0.5s						
WRA	**Warramunga Arr**	**23.10**	**228**	P	**P**	**17 07 02.0**	**-1.1**
	comp=Z,8.5nm,0.5s,baz=54,slow=10,SNR=82						
KNRA	**Kununurra**	**25.61**	**244**	P	**P**	**17 07 26.0**	**-0.2**
KNRA				IAmb	IAmb	17 07 41.0	
	comp=Z,68nm,1.9s						
AS31	**Alice Springs**	**25.82**	**222**	P	**P**	**17 07 28.1**	**0.0**
ASAR	**Alice Springs**	**25.82**	**222**	P	**P**	**17 07 28.1**	**-0.1**
	comp=Z,2.5nm,0.4s,baz=54,slow=9.0,SNR=31						
STKA	**Stephens Creek**	**28.67**	**200**	P	**P**	**17 07 52.0**	**-1.5**
	comp=Z,2.6nm,0.9s,baz=37,slow=13,SNR=4.2						
STKA	**Stephens Creek**	**28.67**	**200**	P	**P**	**17 07 52.1**	**-1.4**
FITZ	**Fitzroy Crossi**	**29.30**	**241**	P	**P**	**17 07 58.5**	**-0.8**
	comp=Z,9.6nm,0.9s,baz=63,slow=7.3,SNR=28						
FITZ	**Fitzroy Crossi**	**29.30**	**241**	P	**P**	**17 07 58.3**	**-0.9**
FITZ				IAmb	IAmb	17 07 59.3	
	comp=Z,8.4nm,0.8s						
BBOO	**Buckleboo**	**31.68**	**207**	P	**P**	**17 08 20.5**	**+0.4**
FORT	**Forrest**	**34.47**	**219**	P	**P**	**17 08 44.4**	**-0.1**
PSA00	**Pilbara Seismi**	**35.67**	**239**	P	**P**	**17 08 54.4**	**-0.6**
PSA00				IAmb	IAmb	17 09 23.4	
	comp=Z,70nm,1.9s						
CMAR	**Chiang Mai Arr**	**57.64**	**295**	P	**P**	**17 11 47.8**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=121,slow=5.6,SNR=9.4						
VNDA	**Vanda**	**72.70**	**178**	P	**P**	**17 13 23.6**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=348,slow=4.6,SNR=3.5						
CNPM	**China Poot**	**77.99**	**26**	P	**P**	**17 13 54.4**	**+0.4**
SCM	**Sheep Creek Mo**	**80.82**	**25**	P	**P**	**17 14 07.5**	**-2.0**
ILAR	**Eielson Array**	**82.42**	**22**	P	**P**	**17 14 17.7**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=231,slow=5.7,SNR=2.2						
KURBB	**Kurchatov Arra**	**83.71**	**322**	P	**P**	**17 14 24.6**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=110,slow=4.4,SNR=4.1						
QSPA	**South Pole Qui**	**85.02**	**180**	P	**P**	**17 14 32.0**	**+0.7**
QSPA				IAmb	IAmb	17 17 37.0	
	comp=Z,41nm,2.0s						
MAW	**Mawson**	**85.31**	**203**	P	**P**	**17 14 33.6**	**+1.2**
TORD	**Torodi Ar. Bea**	**150.03**	**288**	PKPbc	**PKPbc**	**17 21 47.3**	**0.0**
	comp=Z,1.9nm,0.4s,baz=83,slow=2.7,SNR=15						

*IDC **08** 17:02:12.7±4.7,22.°77N×12.°15W,h0km,mb4.0/7, mb1 3.9/10,mb1mx3.6/65,mbtmp3.9/10,ML3.7/3,Error ellipse: s-maj=129.3km s-min=30.6km az=78.0*

ISC 08 17:02:16.1±2.1,**22.°8N**±0.°2×**11.°7W**±0.°3,**h10**km,**n11,** σ1**04**/11,**mb4.0**/7,**Mauritania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDT	**Midelt**	**11.78**	**31**	Lg	Lg	17 08 32.8	
	1.0nm,0.3

TIXI	**Tiksi**	**85.41**	**346**	P	**P**	**17**	**29**	**04.4**	**-1.5**
	comp=Z,0.6nm,0.3s,baz=22,slow=4.3,SNR=6.0								
TIXI	**Tiksi**	**85.41**	**346**	P	**P**	**17**	**29**	**05.2**	**-0.6**
TIXI				IAmb	IAmb	17	29	06.5	
	comp=Z,2.4nm,0.8s								
CMAR	**Chiang Mai Arr**	**139.72**	**330**	PKP	**PKPdf**	**17**	**35**	**58.7**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=5.7,slow=2.7,SNR=2.6								

*IDC **08** 17:26:00.3±1.7, 17°.12N×100°.82W, h0km, mb3.9/6, mb1 4.1/9, mb1mx3.8/43, mbtmp3.7/9, ML3.2/3, Error ellipse: s-maj=42.1km s-min=19.3km az=34.0*
*MEX **08** 17:26:02.9±0.5, 17°.04N×100°.88W, h10km, MD4.9*
*NEIC **08** 17:26:02.7±2.9, 17°.06N±0°.06×100°.86W±0°.04, h20km±6km, Error ellipse: s-maj=9.2km s-min=3.5km az=207.0*
ISC 08 17:26:01.1±1.4,**17°.10N**±0°.05×**100°.84W**±0°.03,**h7**km±10km, **n44**,σ1$**19**/55,**mb4.0**/9,**1D**,**Guerrero**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.55**	**96**	⇓*iP*			**Pb**	**17 26 13.2**	**0.0**
	baz=270,slow=16								
CAIG				*i* S			**Sb**	**17 26 21.3**	**0.0**
CAIG	**El Cayaco**	**0.55**	**96**				**Pb**	**17 26 13.2**	**0.0**
CAIG							**Sb**	**17 26 21.3**	**0.0**
ZIIG	**Zihuatanejo**	**0.78**	**310**	*eP*			**Pg**	**17 26 16.0**	**-0.2**
ZIIG				*i* S			**Sb**	**17 26 27.1**	**-0.7**
ZIIG	**Zihuatanejo**	**0.78**	**310**				**Pg**	**17 26 16.0**	**-0.2**
ZIIG							**Sb**	**17 26 27.1**	**-0.7**
ACP2	**Acapulco**	**0.94**	**104**	*eP*			**Pg**	**17 26 18.5**	**-0.7**
ACP2				*eS*			**Sb**	**17 26 32.8**	**+0.3**
ACP2	**Acapulco**	**0.94**	**104**				**Pg**	**17 26 18.5**	**-0.7**
ACP2							**Sb**	**17 26 32.8**	**+0.3**
ARIG	**Puente Sto Nin**	**1.26**	**22**	*eP*			**Pn**	**17 26 24.6**	**-0.6**
ARIG				*eS*			**Sb**	**17 26 41.0**	**-0.8**
ARIG	**Puente Sto Nin**	**1.26**	**22**				**Pn**	**17 26 24.6**	**-0.6**
ARIG							**Sb**	**17 26 41.0**	**-0.8**
UON	**La Union**	**1.27**	**313**	*eP*			**Pn**	**17 26 24.0**	**-1.2**
UON				*eS*			**Sb**	**17 26 41.4**	**-0.5**
CRIG	**Cruz Grande**	**1.68**	**102**	*eP*			**Pn**	**17 26 30.0**	**-0.9**
CRIG				*eS*			**Sg**	**17 26 55.1**	**0.0**
PLIG	**Platanillo**	**1.81**	**45**	*eP*			**Pn**	**17 26 32.8**	**0.0**
PLIG	**Platanillo**	**1.81**	**45**				**Pn**	**17 26 32.8**	**0.0**
TLIG	**Tlapa**	**2.22**	**78**	*eP*			**Pn**	**17 26 38.6**	**+0.1**
TLIG	**Tlapa**	**2.22**	**78**				**Pn**	**17 26 38.5**	**0.0**
YAIG	**Yautepec**	**2.43**	**44**	*eP*			**Pn**	**17 26 40.8**	**-0.6**
YAIG	**Yautepec**	**2.43**	**44**				**Pn**	**17 26 40.8**	**-0.6**
MOIG	**Morelia**	**2.58**	**353**	*eP*			**Pb**	**17 26 46.1**	**-1.8**
MOIG	**Morelia**	**2.58**	**353**				**Pn**	**17 26 44.9**	**+1.3**
MMIG	**Aquila**	**2.66**	**297**	*eP*			**Pn**	**17 26 45.0**	**+0.5**
MMIG	**Aquila**	**2.66**	**297**				**Pn**	**17 26 45.0**	**+0.5**
PNIG	**Pinotepa**	**2.69**	**105**	*eP*			**Pn**	**17 26 44.1**	**-0.9**
PNIG	**Pinotepa**	**2.69**	**105**				**Pn**	**17 26 44.1**	**-0.9**
FTIG	**Fresnillo de T**	**2.71**	**72**	*i* P			**Pn**	**17 26 45.9**	**+0.7**
UNM	**Universidad Na**	**2.72**	**35**	*eP*			**Pb**	**17 26 50.1**	**-0.2**
UNM	**Universidad Na**	**2.72**	**35**				**Pn**	**17 26 47.0**	**+1.5**
PPM	**Popocatepetl**	**2.87**	**47**	*eP*			**Pn**	**17 26 48.3**	**+0.4**
HLIG	**Huajuapan de L**	**2.99**	**76**	*eP*			**Pn**	**17 26 49.4**	**+0.3**
HLIG				*eS*			**Sb**	**17 27 33.2**	**+1.5**
YOIG	**Yosondua**	**3.16**	**94**	*eP*			**Pn**	**17 26 52.8**	**+1.1**
CMIG	**Matias Romero**	**5.70**	**89**	Pn			**Pn**	**17 27 26.8**	**+0.6**
	0.8nm,0.3s,baz=281,slow=12,SNR=8.5								
CMIG				Sn			**Sn**	**17 28 27.2**	**-4.8**
	2.7nm,0.3s,baz=267,slow=16,SNR=5.1								
CMIG				Lg			Lg	17 29 01.2	
	6.4nm,0.3s,baz=23,slow=22,SNR=8.1								
ZAIG	**Zacatecas**	**5.87**	**344**				**Pn**	**17 27 30.6**	**+1.8**
TXAR	**Lajitas Array**	**12.45**	**348**	Pn			**Pn**	**17 29 00.1**	**+1.3**
	0.0nm,0.3s,baz=164,slow=7.5,SNR=2.1								
ANMO	**Albuquerque**	**18.47**	**345**	P			**Pn**	**17 30 19.2**	**+1.4**
	0.1nm,0.3s,baz=144,slow=15,SNR=2.3								
X16A	**Lo Mia Camp, P**	**19.68**	**333**	P			**Pn**	**17 30 31.9**	**-0.6**
WUAZ	**Wupatki**	**20.60**	**335**	P			Pn	17 30 42.9	-0.3
WUAZ				IAmb			IAmb	17 30 53.9	
	comp=Z,9.6nm,1.1s								
Y49A	**Blount Mountai**	**21.13**	**35**	P			**P**	**17 30 48.0**	**+1.5**
PLAL	**Pickwick Lake**	**21.14**	**30**	P			**P**	**17 30 48.9**	**+2.2**
PLAL				IAmb			IAmb	17 30 56.5	
	comp=Z,5.7nm,0.8s								
T42A	**Van Buren**	**21.64**	**22**	P			**P**	**17 30 54.6**	**+2.5**
T42A				IAmb			IAmb	17 31 00.9	
	comp=Z,5.1nm,1.1s								
TPNV	**Topopah Spring**	**24.00**	**328**	P			**P**	**17 31 18.2**	**+1.5**
TPNV				IAmb			IAmb	17 31 27.3	
	comp=Z,3.8nm,0.9s								
NVAR	**Mina Array Bea**	**26.18**	**328**	P			**P**	**17 31 38.5**	**+2.0**
	comp=Z,1.7nm,0.8s,baz=156,slow=10,SNR=7.0								
PDAR	**Pinedale Array**	**26.64**	**346**	P			**P**	**17 31 40.1**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=139,slow=10,SNR=6.8								
YKA	**Yellowknife Ar**	**46.36**	**351**	P			**P**	**17 34 26.9**	**-0.7**
	comp=Z,1.6nm,0.7s,baz=159,slow=7.8,SNR=20								
INK	**Inuvik**	**55.21**	**346**	P			**P**	**17 35 33.7**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=151,slow=13,SNR=3.6								
ILAR	**Eielson Array**	**56.73**	**338**	P			**P**	**17 35 45.2**	**-0.1**
	comp=Z,1.2nm,1.0s,baz=154,slow=6.4,SNR=6.5								
CPUP	**Villa Florida**	**60.43**	**135**	P			**P**	**17 36 11.7**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=355,slow=11,SNR=3.0								

*JMA **08** 18:02:46.5±0.1, 22°.36N×121°.63E, h0km±2km, M3.8*
*TAP **08** 18:02:47.9, 22°.24N×121°.43E, h23km, ML3.8, C*
ISC 08 18:02:47.2±0.9,**22°.21N**±0°.03×**121°.49E**±0°.02,**h27**km±8km, **n129**,σ1$**29**/212,**2C-15D**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.18**	**161**	⇓*iP*			**Pb**	**18 02 53.4**	**+0.6**
	baz=143								
LAY				S			**Sb**	**18 02 57.7**	**+1.0**
	baz=143								
TWH	**Lutao**	**0.49**	**359**	P			**Pb**	**18 02 56.9**	**-0.5**
	baz=16								
TWH				*eS*			**Sb**	**18 03 03.6**	**-0.7**
	baz=16								
TAW	**Tawu**	**0.57**	**285**	⇓*iP*			**Pb**	**18 02 57.8**	**-0.7**
	baz=284								
TAW				*eS*			**Sb**	**18 03 04.1**	**-2.2**
	baz=284								
EAST	**Anshuo**	**0.61**	**286**	⇓*iP*			**Pb**	**18 02 58.6**	**-0.8**
	baz=285								
EAST				S			**Sb**	**18 03 06.4**	**-1.4**
	baz=285								
TTN	**Taitung**	**0.62**	**330**	P			**Pn**	**18 03 00.4**	**+0.1**
	baz=342								
TTN				*eS*			**Sn**	**18 03 08.7**	**-0.7**
	baz=342								
ECL	**Taimali**	**0.62**	**308**	⇓*iP*			**Pb**	**18 02 58.7**	**-0.9**
	baz=296								
ECL				*eS*			**Sb**	**18 03 06.3**	**-1.7**
	baz=296								
TSEB	**Hengchuen, Pin**	**0.63**	**240**	P			**Pb**	**18 02 59.7**	**+0.1**
	baz=249								
TSEB				*eS*			**Sn**	**18 03 08.7**	**-0.8**
	baz=249								
TWKBT	**Hengchun**	**0.68**	**247**	⇑*iP*			**Pb**	**18 02 59.8**	**-0.7**
	baz=251								
TWKBT				S			**Sb**	**18 03 08.0**	**-1.6**
	baz=251								
TWK1	**Hengchun**	**0.69**	**247**	⇑*iP*			**Pb**	**18 02 59.9**	**-0.7**
	baz=251								
TWK1				S			**Sb**	**18 03 08.3**	**-1.4**
	baz=251								
TWGBT	**Beinan**	**0.71**	**328**	*eP*			**Pb**	**18 03 00.3**	**-0.7**
	baz=317								
TWG	**Pinlang**	**0.72**	**328**	⇓*iP*			**Pb**	**18 03 00.3**	**-0.7**
	baz=317								
TWG				*eS*			**Sb**	**18 03 09.5**	**-1.0**
	baz=317								
HEN	**Hengchun**	**0.72**	**254**	P			**Pb**	**18 03 00.8**	**-0.4**
	baz=250								
HEN				S			**Sb**	**18 03 10.1**	**-0.6**
	baz=250								
SCZT	**Fangliau**	**0.82**	**281**	⇓*iP*			**Pb**	**18 03 01.9**	**-0.9**
	baz=280								
SCZT				*eS*			**Sb**	**18 03 11.2**	**-2.3**
	baz=280								
MASBT	**Mashibuluo**	**0.88**	**297**	⇓*iP*			**Pb**	**18 03 02.9**	**-1.1**
	baz=297								
MASBT				*eS*			**Sb**	**18 03 12.9**	**-2.4**
	baz=297								
CHKT	**Chengkung**	**0.89**	**353**	*eP*			**Pb**	**18 03 03.5**	**-0.5**
	baz=4.0								
SSPT	**Xinbi**	**0.89**	**288**	⇓*iP*			**Pb**	**18 03 03.8**	**-0.2**
	baz=293								
SSPT				*eS*			**Sn**	**18 03 15.5**	**-0.5**
	baz=293								
SSD	**Sandimen**	**0.95**	**304**	⇓*iP*			**Pb**	**18 03 03.9**	**-1.2**
	baz=300								
SSD				*eS*			**Sb**	**18 03 14.5**	**-2.8**
	baz=300								
FULB	**Fuli**	**1.00**	**350**	P			**Pb**	**18 03 05.2**	**-0.6**
	baz=338								
FULB				*eS*			**Sn**	**18 03 19.3**	**+0.7**
	baz=338								
WLCH	**Liuqiu**	**1.04**	**278**	*eP*			**Pn**	**18 03 08.2**	**+2.2**
	baz=277								
WLCH				*eS*			**Sn**	**18 03 21.9**	**+2.3**
	baz=277								
TWP	**Hsiaoliuchiu**	**1.05**	**277**	⇓*iP*			**Pb**	**18 03 08.2**	**+1.6**
	baz=276								
TWP				*eS*			**Sn**	**18 03 20.8**	**+0.9**
	baz=276								
SGLT	**Jiouru**	**1.05**	**299**	*eP*			**Pb**	**18 03 07.8**	**+1.0**
	baz=299								
SGLT				*eS*			**Sn**	**18 03 21.4**	**+1.5**
	baz=299								
ELDTW	**Lidau**	**1.06**	**336**	P			**Pn**	**18 03 05.2**	**-1.2**
	baz=339								
SLGT	**Liugui**	**1.10**	**315**	*eP*			**Pn**	**18 03 06.6**	**-0.2**
	baz=321								
KAU	**Kaohsiung**	**1.15**	**288**	*eP*			**Pb**	**18 03 08.2**	**-0.2**
	baz=287								
TWF1	**Yuli**	**1.15**	**351**	*eP*			**Pn**	**18 03 07.4**	**-0.1**
	baz=341								
TWM1	**Shoushan**	**1.16**	**302**	*i* P			**Pb**	**18 03 09.2**	**+0.7**
	baz=302								
TWM1				*eS*			**Sn**	**18 03 23.5**	**+0.9**
	baz=302								
STYT	**Tauyuan**	**1.16**	**325**	⇓*iP*			**Pn**	**18 03 07.5**	**-0.2**
	baz=335								
YULB	**Yu-li**	**1.19**	**352**	*eP*			**Pn**	**18 03 07.5**	**-0.5**
	baz=343								
SNJT	**Kaohsiung City**	**1.19**	**297**	P			**Pb**	**18 03 09.7**	**+0.6**
	baz=297								
SNJT				*eS*			**Sn**	**18 03 26.8**	**+3.3**
	baz=297								
SGST	**Jiashian**	**1.20**	**316**	P			**Pn**	**18 03 08.4**	**+0.1**
	baz=320								
SGST				S			**Sn**	**18 03 23.8**	**+0.1**
	baz=320								
HGSD	**Ruisui**	**1.27**	**357**	*eP*			**Pn**	**18 03 09.2**	**-0.1**
	baz=7.0								
HGSD				*eS*			**Sn**	**18 03 25.3**	**-0.2**
	baz=7.0								
WTP	**Ta-pu**	**1.31**	**322**	⇓*iP*			**Pb**	**18 03 10.8**	**-0.3**
	baz=324								
WTP				*eS*			**Sb**	**18 03 28.4**	**+1.0**
	baz=324								
CHN1	**Nanshi**	**1.31**	**318**	⇓*iP*			**Pb**	**18 03 11.3**	**+0.1**
	baz=319								
CHN1				*eS*			**Sb**	**18 03 28.6**	**+1.0**
	baz=319								
TPUB	**Ta-pu**	**1.34**	**324**	⇓*iP*			**Pb**	**18 03 11.3**	**-0.4**
	baz=325								
TPUB				*eS*			**Sb**	**18 03 28.9**	**+0.5**
	baz=325								
CHN3	**Shinhua**	**1.35**	**310**	P			**Pb**	**18 03 12.7**	**+0.9**
	baz=310								
CHN3				*eS*			**Sb**	**18 03 30.0**	**+1.5**
	baz=310								
SNST	**Tainan City**	**1.36**	**318**	*eP*			**Pb**	**18 03 12.0**	**+0.1**
	baz=319								
SNST				*eS*			**Sb**	**18 03 30.2**	**+1.3**
	baz=319								
YUS	**Yu-Shan**	**1.36**	**339**	*eP*			**Pn**	**18 03 11.4**	**+0.5**
	baz=341								
YUS				*eS*			**Sn**	**18 03 27.5**	**-0.9**
	baz=341								
TWK	**Hsinying**	**1.40**	**319**	P			**Pb**	**18 03 12.6**	**-0.1**
	baz=320								
TWK				*eS*			**Sb**	**18 03 31.8**	**+1.8**
	baz=320								
CHN4	**Tsaushan**	**1.40**	**324**	P			**Pb**	**18 03 12.6**	**-0.1**
	baz=325								
CHN4				*eS*			**Sb**	**18 03 30.8**	**+0.6**
	baz=325								
ALS	**Alishan**	**1.44**	**334**	P			**Pn**	**18 03 12.6**	**+0.8**
	baz=336								
ALS				*eS*			**Sb**	**18 03 33.9**	**+2.5**
	baz=336								
EGFH	**Guangfu**	**1.45**	**358**	*eP*			**Pn**	**18 03 12.6**	**+0.9**
	baz=348								
SCLT	**Jiali**	**1.53**	**309**	*eP*			**Pb**	**18 03 15.8**	**+0.9**
	baz=309								
SCLT				*eS*			**Sb**	**18 03 33.9**	**0.0**
	baz=309								
CHN5	**Tsauling**	**1.57**	**332**	P			**Pb**	**18 03 15.0**	**-0.6**
	baz=333								
CHN5				*eS*			**Sb**	**18 03 35.9**	**+0.9**
	baz=333								
VWDT	**VWDT**	**1.57**	**348**	*eP*			**Pn**	**18 03 14.3**	**+1.1**
	baz=2.0								
WHYT	**Xinyi Township**	**1.59**	**339**	*eP*			**Pb**	**18 03 15.4**	**-0.4**
	baz=340								
WHYT				*eS*			**Sb**	**18 03 35.9**	**+0.4**
	baz=340								
ESL	**Shilin**	**1.59**	**358**	P			**Pn**	**18 03 14.4**	**+0.7**
	baz=349								
CHN2	**Minshiung**	**1.61**	**325**	*eP*			**Pb**	**18 03 16.1**	**-0.1**
	baz=326								
CHN2				*eS*			**Sb**	**18 03 35.4**	**-0.8**
	baz=326								
CHY	**Chiayi**	**1.61**	**323**	*eP*			**Pn**	**18 03 15.1**	**+1.3**
	baz=324								
CHY				*eS*			**Sb**	**18 03 35.6**	**-0.6**
	baz=324								
CHN8	**Yiju**	**1.63**	**314**	*eP*			**Pn**	**18 03 15.1**	**+1.0**
	baz=314								
SSLB	**Suanglung**	**1.64**	**343**	*eP*			**Pn**	**18 03 15.7**	**+1.4**
	baz=354								
SSLB				*eS*			**Sb**	**18 03 36.9**	**-0.3**
	baz=354								
WLGB	**Puzi**	**1.67**	**319**	*eP*			**Pb**	**18 03 16.4**	**-0.9**
	baz=320								
WLGB				*eS*			**Sb**	**18 03 37.0**	**-0.9**
	baz=320								
WGK	**Gukeng**	**1.69**	**330**	P			**Pb**	**18 03 17.0**	**-0.7**
	baz=332								
WGK				*eS*			**Sb**	**18 03 38.7**	**+0.1**
	baz=332								
WDLH	**Douliu**	**1.71**	**329**	P			**Pb**	**18 03 16.9**	**-1.0**
	baz=312								
WDLH				*eS*			**Sb**	**18 03 37.8**	**-1.2**
	baz=312								
SMLT	**Sun Moon Lake**	**1.75**	**342**	*eP*			**Pb**	**18 03 17.7**	**-1.0**
	baz=327								
SMLT				*eS*			**Sb**	**18 03 41.1**	**+0.9**
	baz=327								
WJS	**Zhushan**	**1.75**	**337**	P			**Pb**	**18 03 18.0**	**-0.5**
	baz=338								
WJS				*eS*			**Sb**	**18 03 41.2**	**+1.1**
	baz=338								
OWD	**Renai**	**1.76**	**351**	P			**Pn**	**18 03 17.2**	**+1.1**
	baz=4.0								
HWA	**Hwalien**	**1.76**	**4**	*eP*			**Pn**	**18 03 15.3**	**-0.6**
	baz=17								
TYC	**Yuchr**	**1.78**	**341**	*eP*			**Pb**	**18 03 18.6**	**-0.6**
	baz=326								
TYC				*eS*			**Sb**	**18 03 41.0**	**0.0**
	baz=326								
WNT	**Mingjian**	**1.81**	**336**	P			**Pb**	**18 03 19.1**	**-0.6**
	baz=338								
WNT				*eS*			**Sn**	**18 03 40.2**	**+1.4**
	baz=338								
WSF	**Szhu**	**1.84**	**321**	P			**Pn**	**18 03 17.7**	**+0.7**
	baz=322								
WSF				*eS*			**Sb**	**18 03 42.0**	**-0.7**
	baz=322								
CHGB	**Renai**	**1.86**	**351**	P			**Pn**	**18 03 18.7**	**+1.2**
	baz=5.0								
CHGB				*eS*			**Sn**	**18 03 40.4**	**+0.1**
	baz=5.0								
TWD	**Chiawan**	**1.86**	**3**	*eP*			**Pn**	**18 03 17.6**	**+0.3**
	baz=354								
TWD				*eS*			**Sn**	**18 03 40.0**	**+0.1**
	baz=354								
DPDB	**Guoxing**	**1.88**	**344**	P			**Pb**	**18 03 19.7**	**-1.2**
	baz=330								
WHF	**Hehuan Shan**	**1.93**	**354**	P			**Pn**	**18 03 19.8**	**+1.1**
	baz=7.0								
NACB	**Ninganchiao**	**1.95**	**3**	*eP*			**Pn**	**18 03 18.8**	**+0.2**
	baz=354								
NACB				*eS*			**Sn**	**18 03 42.0**	**-0.3**
	baz=354								
WDGT	**Dungji**	**1.98**	**302**	⇓*iP*			**Pn**	**18 03 18.9**	**-0.1**
	baz=302								
WDGT				*eS*			**Sn**	**18 03 42.2**	**-0.7**
	baz=302								
ETLH	**Xiulin Townshi**	**1.98**	**360**	*eP*			**Pn**	**18 03 19.2**	**+0.1**
	baz=2.0								
ETLH				*eS*			**Sn**	**18 03 45.4**	**+2.3**
	baz=2.0								
WCHH	**Zhanghua**	**2.04**	**335**	P			**Pb**	**18 03 22.4**	**-1.3**
	baz=321								
WCHH				*eS*			**Sb**	**18 03 47.5**	**-1.1**
	baz=321								
TWT	**Tachien**	**2.05**	**352**	*eP*			**Pb**	**18 03 22.6**	**-1.3**
	baz=4.0								
TWT				*eS*			**Sn**	**18 03 46.0**	**+1.1**
	baz=4.0								
TDCB	**Techi**	**2.05**	**352**	*eP*			**Pb**	**18 03 22.4**	**-1.4**
	baz=3.0								
TCU	**Taichung**	**2.06**	**339**	*eP*			**Pb**	**18 03 22.5**	**-1.5**
	baz=324								
TCU				*eS*			**Sb**	**18 03 47.4**	**-1.9**
	baz=324								
WHP	**Taichung City**	**2.11**	**346**	*eP*			**Pb**	**18 03 23.9**	**-1.0**
	baz=358								
WHP				*eS*			**Sb**	**18 03 51.0**	**+0.3**
	baz=358								
PHUB	**P'eng-hu**	**2.19**	**307**	P			**Pn**	**18 03 21.6**	**-0.2**
	baz=306								
PHUB				*eS*			**Sn**	**18 03 46.4**	**-1.6**
	baz=306								
NNSB	**Datong**	**2.21**	**358**	*eP*			**Pn**	**18 03 23.9**	**+1.7**
	baz=359								
NNSB				*eS*			**Sn**	**18 03 49.5**	**+0.8**
	baz=359								
NNSH	**Datong**	**2.21**	**358**	P			**Pn**	**18 03 23.7**	**+1.5**
	baz=11								
ENA	**Nanau**	**2.22**	**6**	P			**Pn**	**18 03 23.1**	**+0.9**
	baz=17								
ENA				*eS*			**Sn**	**18 03 50.6**	**+1.9**
	baz=17								
NNS	**Nan Shan**	**2.22**	**357**	*eP*			**Pn**	**18 03 24.9**	**+2.5**
	baz=359								
PNG	**Penghu**	**2.23**	**307**	*eP*			**Pn**	**18 03 22.2**	**-0.3**
	baz=307								
PNG				*eS*			**Sn**	**18 03 48.1**	**-1.1**
	baz=307								
WDJ	**Dajia District**	**2.26**	**340**	*eP*			**Pn**	**18 03 25.3**	**+2.5**
	baz=342								
WDJ				*eS*			**Sb**	**18 03 54.4**	**-0.6**
	baz=342								
NSY	**Sanyi**	**2.29**	**343**	*eP*			**Pb**	**18 03 26.4**	**-1.4**
	baz=329								
NSY				*eS*			**Sb**	**18 03 55.4**	**-0.4**
	baz=329								
PTSB	**Yuanli**	**2.34**	**342**	*eP*			**Pb**	**18 03 26.9**	**-1.8**
	baz=327								
PTSB				*eS*			**Sb**	**18 03 55.5**	**-1.6**
	baz=327								
NDT	**Datong Townshi**	**2.38**	**1**	*eP*			**Pn**	**18 03 25.9**	**+1.5**
	baz=3.0								
NDT				*eS*			**Sn**	**18 03 54.5**	**+1.8**
	baz=3.0								
EOS1	**EOS1**	**2.40**	**14**	*eP*			**Pn**	**18 03 26.2**	**+1.6**
	baz=26								
EOS1				*eS*			**Sn**	**18 03 55.0**	**+1.8**
	baz=26								
NMLH	**Miaoli**	**2.40**	**345**	*eP*			**Pn**	**18 03 27.5**	**+2.8**
	baz=329								
NMLH				*eS*			**Sb**	**18 03 58.6**	**-0.2**
	baz=329								
TWC	**Suao**	**2.41**	**8**	*eP*			**Pn**	**18 03 26.0**	**+1.1**
	baz=19								
TWC				*eS*			**Sn**	**18 03 54.4**	**+1.0**
	baz=19								
ENTT	**Nioudou**	**2.42**	**2**	P			**Pn**	**18 03 26.5**	**+1.5**
	baz=4.0								
NSTT	**Nanjuang**	**2.45**	**350**	P			**Pb**	**18 03 29.0**	**-1.5**
	baz=336								
NSTT				*eS*			**Sb**	**18 03 58.4**	**-1.8**
	baz=336								
YHNB	**Yeheng**	**2.45**	**358**	*eP*			**Pn**	**18 03 27.8**	**+2.4**
	baz=10.0								
NSK	**Sanguang**	**2.45**	**357**	*eP*			**Pn**	**18 03 27.9**	**+2.4**
	baz=10.0								
NSK				*eS*			**Sn**	**18 03 56.0**	**+1.3**
	baz=10.0								
LIOB	**Emei**	**2.46**	**350**	*eP*			**Pn**	**18 03 27.6**	**+2.1**
	baz=336								
LIOB				*eS*			**Sn**	**18 03 56.3**	**+1.5**
	baz=336								
TWE	**Neicheng**	**2.50**	**4**	*eP*			**Pn**	**18 03 28.1**	**+2.0**
	baz=356								
TWE				*eS*			**Sn**	**18 03 58.9**	**+3.1**
	baz=356								
SLBB	**Yuanshan**	**2.53**	**3**	*eP*			**Pn**	**18 03 28.3**	**+1.8**
	baz=5.0								
NWLT	**Wulai**	**2.55**	**0**	P			**Pn**	**18 03 29.6**	**+2.7**
	baz=2.0								
NWLT				*eS*			**Sn**	**18 03 59.6**	**+2.5**
	baz=2.0								
JYNG	**Yonagunijimaku**	**2.60**	**31**	P			**Pn**	**18 03 28.5**	**+1.0**
JYNG				*eS*			**Sn**	**18 03 58.5**	**+0.3**
WLTB	**Daxi**	**2.64**	**355**	*eS*			**Sb**	**18 04 03.6**	**-2.0**
	baz=340								
YOJ	**Yonaguni jima**	**2.64**	**32**	P			**Pn**	**18 03 29.3**	**+1.3**
YOJ				*eS*			**Sn**	**18 03 59.4**	**+0.2**
NTC	**Toucheng**	**2.65**	**7**	*eP*			**Pn**	**18 03 30.4**	**+2.3**
	baz=357								
NTC				*eS*			**Sn**	**18

MHZQ	**Yeshan**	**4.47 330**	*e*P	**Pn**	**18 03 53.5**	**+0.3**
	baz=329						
LYJJ	**Jianjiangzhen**	**4.59 340**	*e*P	**Pn**	**18 03 55.5**	**+0.6**
	baz=327						
VDOS	**Pratas Island**	**4.68 252**	*e*P	**Pn**	**18 03 57.2**	**+1.2**
	baz=251						
XPSS	**Dashiqiu**	**4.84 346**	*e*P	**Pn**	**18 03 59.0**	**+0.8**
	baz=347						

IDC 08 18:33:54.6±3.2, 6°.85S×155°.06E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.3/23, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=61.8km s-min=36.8km az=75.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.93**	**310**	Pn	Pn	18 34 56.6	+0.3
	2.7nm,0.3s,baz=64,slow=23,SNR=1.8						
KRVT				Sn	Sn	18 35 44.2	+1.0
	2.3nm,0.3s,baz=184,slow=24,SNR=1.8						
WRA	**Warramunga Arr**	**23.95**	**235**	P	P	18 39 10.9	0.0
	0.8nm,0.7s,baz=57,slow=9.4,SNR=4.3						
ASAR	**Alice Springs**	**26.32**	**228**	P	P	18 39 32.2	-0.2
	0.5nm,0.7s,baz=62,slow=8.8,SNR=5.6						
TORD	**Torodi Ar. Bea**	**153.05**	**286**	PKPbc	PKPbc	18 53 55.3	0.0
	0.4nm,0.8s,baz=91,slow=3.1,SNR=2.7						

IDC 08 18:43:54.8±2.1, 62°.05S×147°.65W, h0km, mb3.7/1, mb1 3.7/1, mb1mx3.4/19, mbtmp3.7/1, Error ellipse: s-maj=136.9km s-min=74.6km az=6.0, Southwestern Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**84.28**	**48**	P	P	18 56 28.1	0.0
	0.5nm,0.8s,baz=209,slow=4.5,SNR=2.8						
ILAR	**Eielson Array**	**146.03**	**311**	PKPbc	PKPdf	19 03 34.0	0.0
	0.8nm,0.7s,baz=134,slow=2.6,SNR=7.7						
BVAR	**Borovoye Array**	**146.79**	**77**	PKPbc	PKPdf	19 03 36.5	+0.9
	0.6nm,0.5s,baz=204,slow=2.8,SNR=8.1						
MKAR	**Makanchi Array**	**148.07**	**95**	PKPbc	PKPbc	19 03 40.5	-0.6
	0.3nm,0.4s,baz=240,slow=1.7,SNR=5.1						

*DDA **08** 18:49:51.4, 37°.04N×27°.53E, h3km±2km, ML2.2*
*ISK **08** 18:49:51.1, 37°.03N×27°.47E, h1km, ML2.7/9*
ISC 08 18:49:51.1±0.9, 37°.07N±0°.03×27°.56E±0°.02, h7km±9km, n19, σ1°81/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.09**	**269**	*i* P	**Pg**	**18 49 53.8**	**+0.5**
BDRM				*i* P		18 49 53.9	
BDRM				*i* S	**Sg**	**18 49 54.5**	**-0.4**
BDRM				*i* S		18 49 54.6	
BDRM				IAML		18 49 55.0	
	comp=N,7μm,0.4s						
BDRM				IAML		18 49 56.0	
	comp=E,2μm,0.1s						
BDRM				IAML		18 49 56.0	
	comp=E,2μm,0.1s						
YKAV	**Yalikavak-Bodr**	**0.23**	**284**	PG	**Pg**	**18 49 55.5**	**-0.3**
YKAV				SG	**Sg**	**18 49 58.7**	**-0.2**
DAT	**Datca**	**0.34**	**178**	PG	**Pg**	**18 49 58.1**	**+0.3**
DAT				SG	**Sb**	**18 50 03.9**	**-1.3**
DAT	**Datca**	**0.34**	**178**	*i* P	**Pg**	**18 49 58.2**	**+0.4**
DAT				*i* S	**Sg**	**18 50 02.1**	**-0.2**
KOSK	**Kos Island**	**0.56**	**236**	PG	**Pg**	**18 50 01.8**	**-0.2**
KOSK				SG	**Sb**	**18 50 09.6**	**-1.9**
YER	**Yerkesik**	**0.58**	**83**	PG	**Pb**	**18 50 04.8**	**+1.1**
MRSB	**Marmaris-Mugla**	**0.62**	**124**	PG	**Pb**	**18 50 04.9**	**+0.6**
GCAM	**G?zelcaml?**	**0.68**	**338**	*i* P	**Pb**	**18 50 05.4**	**0.0**
GCAM				*i* S	**Sg**	**18 50 11.9**	**-1.4**
GCAM				IAML		18 50 19.0	
	comp=N,135nm,0.2s						
GCAM				IAML		18 50 19.0	
	comp=E,183nm,0.4s						
TURN	**Turunc**	**0.86**	**103**	PG	**Pg**	**18 50 05.2**	**-2.4**
TURN				SG	**Sg**	**18 50 15.5**	**-3.2**
TURN	**Turunc**	**0.86**	**103**	*i* P	**Pg**	**18 50 04.4**	**-3.2**
TURN				*i* S	**Sg**	**18 50 13.1**	**-5.6**
TURN				IAML		18 50 19.0	
	comp=N,219nm,0.4s						
TURN				IAML		18 50 19.0	
	comp=E,307nm,0.3s						
DALY	**Dalyan (Mula)**	**0.91**	**106**	PG	**Pb**	**18 50 10.8**	**+1.6**
DALY	**Dalyan (Mula)**	**0.91**	**106**	*i* P	**Pn**	**18 50 11.0**	**+0.7**
DALY				*i* S	**Sb**	**18 50 22.6**	**+1.1**
DALY				IAML		18 50 30.0	
	comp=N,57nm,0.7s						
AYDB	**Zeytinkoy-Aydi**	**0.92**	**16**	PG	**Pb**	**18 50 10.9**	**+1.5**
ARG	**Arkhangelos**	**0.96**	**152**	PG	**Pb**	**18 50 10.9**	**+0.8**
DGB	**zmir**	**1.12**	**331**	*i* P	**Pg**	**18 50 12.6**	**-0.1**
DGB				*i* S	**Sg**	**18 50 25.5**	**-1.7**
DGB				IAML		18 50 33.0	
	comp=N,31nm,0.8s						
TAVA	**DENIZLI_Tavas**	**1.15**	**69**	*i* P	**Pn**	**18 50 15.5**	**+1.8**
TAVA				*i* S	**Sg**	**18 50 29.5**	**+1.4**
FETY	**Fethiye**	**1.29**	**109**	PN	**Pb**	**18 50 17.9**	**+2.1**
FETY	**Fethiye**	**1.29**	**109**	*i* P	**Pg**	**18 50 16.7**	**+0.8**
FETY				*i* S	**Sg**	**18 50 33.7**	**+1.0**
FETY				IAML		18 50 41.0	
	comp=E,26nm,0.3s						
APE	**Apeiranthos**	**1.62**	**271**	PN	**Pb**	**18 50 20.8**	**-0.7**

*IDC **08** 19:20:14.3±0.7, 0°.32N×126°.32E, h0km, mb4.1/12, mb1 4.1/15, mb1mx3.9/52, mbtmp4.1/15, ML3.3/3, Error ellipse: s-maj=26.7km s-min=13.5km az=71.0*
*NEIC **08** 19:20:17.4±1.1, 0°.32N±0°.08×126°.33E±0°.05, h22km±6km, mb4.6/15, Error ellipse: s-maj=12.9km s-min=4.3km az=149.0*
*DJA **08** 19:20:17.5±0.3, 0°N±3°×126°E±°, h10km, M4.1/12, mb4.3/3, MLv3.9/12*
ISC 08 19:20:15.9±0.5, 0°.32N±0°.05×126°.40E±0°.04, h10km, n41, σ1°13/45, mb4.4/19, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.07**	**65**	P	**Pn**	**19 20 37.7**	**+0.8**
TNTI				S	**Sn**	**19 20 53.1**	**+1.3**
TNTI	**Ternate**	**1.07**	**65**		**Pn**	**19 20 37.3**	**+0.4**
LBMI	**Labuha**	**1.46**	**131**	P	**Pb**	**19 20 42.8**	**-0.4**
LBMI				S	**Sb**	**19 21 01.9**	**+0.1**
SANI	**Sanana**	**2.39**	**190**	P	**Pn**	**19 20 55.5**	**+0.3**
SANI				S	**Sn**	**19 21 23.8**	**-0.8**
KMSI	**Cibinong**	**2.43**	**276**	P	**Pn**	**19 20 56.8**	**+1.1**
NLAI	**Namlea**	**3.61**	**169**	P	**Pn**	**19 21 13.6**	**+1.7**
LUWI	**Luwuk**	**3.87**	**249**	P	**Pn**	**19 21 18.5**	**+3.0**
LUWI	**Luwuk**	**3.87**	**249**	Pn	**Pn**	**19 21 15.2**	**-0.3**
SIJI	**Sorong**	**5.01**	**104**	Pn	**Pn**	**19 21 30.4**	**-0.8**
	0.4nm,0.3s,baz=190,slow=22,SNR=1.3						
SIJI				Sn	**Sn**	**19 22 31.7**	**+2.4**
	0.0nm,0.3s,baz=319,slow=19,SNR=1.4						
TTSI	**Tana Toraja**	**7.38**	**243**	P	**Pn**	**19 22 05.3**	**+1.5**
	0.1nm18nm,1.0s						
BNSI	**Bone**	**7.84**	**233**	P	**Pn**	**19 22 13.0**	**+2.8**
	0.1nm20nm,1.1s						
SPSI	**Sidrap Palu**	**7.88**	**237**	P	**Pn**	**19 22 13.2**	**+2.6**
BATI	**Baumata**	**10.81**	**195**	Pn	**Pn**	**19 22 50.5**	**-0.4**
	0.8nm,0.3s,baz=104,slow=20,SNR=1.7						
KSM	**Kuching**	**16.13**	**274**	P	**P**	**19 24 06.1**	**-0.1**
SZP	**Santa**	**18.09**	**341**		**Pn**	**19 24 27.2**	**-0.3**
FITZ	**Fitzroy Crossi**	**18.32**	**182**	P	**Pn**	**19 24 29.5**	**-0.8**
	0.1nm,0.3s,baz=10,slow=10,SNR=1.2						
WB0	**Warramunga Arr**	**21.45**	**159**	P	**P**	**19 25 04.9**	**+0.3**
WB0				IAmb	IAmb	19 25 35.4	
	comp=Z,24nm,1.5s						
WRAB	**Tennant Creek**	**21.59**	**159**	P	**P**	**19 25 06.9**	**+0.8**
WRAB				IAmb	IAmb	19 25 12.2	
	comp=Z,83nm,2.0s						
WRA	**Warramunga Arr**	**21.59**	**159**	P	**P**	**19 25 06.4**	**+0.3**
	comp=Z,1.8nm,0.5s,baz=336,slow=10,SNR=38						
WB2	**Warramunga Arr**	**21.60**	**159**	P	**P**	**19 25 06.3**	**+0.1**
WB2				IAmb	IAmb	19 25 12.2	
	comp=Z,9.6nm,1.0s						
WR0	**Warramunga Arr**	**21.68**	**159**	P	**P**	**19 25 06.8**	**-0.3**
WR0				IAmb	IAmb	19 25 11.7	
	comp=Z,18nm,1.6s						
PMG	**Port Moresby**	**22.82**	**116**	P	**P**	**19 25 19.6**	**+0.4**
	comp=Z,10nm,0.8s,baz=290,slow=15,SNR=2.3						
AS31	**Alice Springs**	**24.94**	**163**	P	**P**	**19 25 41.5**	**+1.9**
ASAR	**Alice Springs**	**24.94**	**163**	P	**P**	**19 25 40.1**	**+0.6**
	comp=Z,2.9nm,0.5s,baz=346,slow=12,SNR=52						
STKA	**Stephens Creek**	**35.11**	**157**	P	**P**	**19 27 09.7**	**0.0**
	comp=Z,3.9nm,0.9s,baz=336,slow=12,SNR=2.2						
STKA	**Stephens Creek**	**35.11**	**157**	P	**P**	**19 27 09.6**	**-0.1**
STKA				IAmb	IAmb	19 27 26.5	
	comp=Z,12nm,1.9s						
KSRS	**Korea Array**	**36.97**	**2**	P	**P**	**19 27 25.1**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=181,slow=9.1,SNR=2.0						
USRK	**Ussuriysk Ar.**	**43.97**	**6**	P	**P**	**19 28 23.8**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=187,slow=5.8,SNR=2.6						
KLR	**Kul'dur**	**48.94**	**5**	P	**P**	**19 29 02.5**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=166,slow=12,SNR=2.0						
PETK	**Petropavlovsk-**	**58.69**	**22**	P	**P**	**19 30 14.4**	**+0.8**
	comp=Z,1.8nm,0.6s,baz=178,slow=4.4,SNR=9.7						
MK31	**Makanchi Array**	**60.17**	**327**	P	**P**	**19 30 22.9**	**-1.1**
MK31				IAmb	IAmb	19 31 21.8	
	comp=Z,6.0nm,0.8s						
MKAR	**Makanchi Array**	**60.17**	**327**	P	**P**	**19 30 23.3**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=120,slow=7.8,SNR=29						
MAKZ	**Makanchi**	**60.35**	**326**	P	**P**	**19 30 24.3**	**-0.9**
MAKZ				IAmb	IAmb	19 31 20.9	
	comp=Z,6.0nm,0.9s						
YAK	**Yakutsk**	**61.60**	**2**	P	**P**	**19 30 32.5**	**-0.8**
	comp=Z,3.3nm,0.5s,baz=163,slow=2.3,SNR=2.0						
YAK	**Yakutsk**	**61.60**	**2**	P	**P**	**19 30 32.7**	**-0.6**
YAK				IAmb	IAmb	19 30 34.0	
	comp=Z,6.1nm,0.5s						
ZALV	**Zalesovo Beam**	**63.47**	**334**	P	**P**	**19 30 45.8**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=140,slow=7.2,SNR=4.5						
KURK	**Kurchatov**	**64.44**	**329**	P	**P**	**19 30 51.7**	**-0.7**
BRVK	**Borovoye**	**70.06**	**328**	P	**P**	**19 31 27.1**	**-1.0**
BRVK				IAmb	IAmb	19 32 17.9	
	comp=Z,5.2nm,0.8s						
AKTO	**Aktyubinsk**	**76.12**	**322**	P	**P**	**19 32 03.9**	**-0.1**
	comp=Z,3.2nm,0.7s,baz=116,slow=13,SNR=6.7						
RAYN	**Ar Rayn**	**81.52**	**294**	P	**P**	**19 32 33.5**	**-0.9**
TORD	**Torodi Ar. Bea**	**123.59**	**286**	PKP	**PKPdf**	**19 39 14.2**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=70,slow=1.1,SNR=3.8						

*NIED **08** 19:22:00, 34°.60N×141°.80E, h26km, Mw4.9 Best double couple: M0 2.34000×10^16 NP1:φs208.00000°, δ71.00000°, λ-31.00000°. NP2:φs309.00000°, δ61.00000°, λ-159.00000°.*
*BJI **08** 19:22:45.2±0.0, 34°.59N×141°.94E, h11km, mB5.0/17, mb4.6/26, Ms5.0/14, Ms7 4.7/14*
*IDC **08** 19:22:47.8±0.4, 34°.59N×141°.56E, h0km, mb4.3/41, mb1 4.4/46, mb1mx4.3/70, mbtmp4.3/46, ML3.3/4, MS4.5/12, Ms1 4.5/12, ms1mx4.1/54, Error ellipse: s-maj=13.2km s-min=9.5km az=112.0*
*JMA **08** 19:22:48.1±0.4, 34°.57N×141°.76E, h17km±3km, M4.9*
*MOS **08** 19:22:49.4±1.0, 34°.60N×141°.57E, h21km, mb4.8/34, MS4.5/5, Error ellipse: s-maj=8.6km s-min=5.4km az=110.3*
*NEIC **08** 19:22:51.9±1.7, 34°.60N±0°.06×141°.58E±0°.09, h25km±4km, mb4.8/105, Error ellipse: s-maj=11.1km s-min=7.9km az=113.0*
ISC 08 19:22:48.9±0.7, 34°.58N±0°.04×141°.72E±0°.04, h10km±3km, n278, σ1°65/282, mb4.7/114, MS4.6/15, 5C-13D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.62**	**277**	P	**Pg**	**19 23 00.5**	**-0.2**
BSO3	**Boso 3**	**1.02**	**283**	P	**Pg**	**19 23 07.3**	**-1.2**
BSO3				S	**Sg**	**19 23 21.0**	**-0.8**
BSO4	**Boso 4**	**1.21**	**290**	P	**Pn**	**19 23 11.0**	**-0.8**
BSO4				*e*S	**Sb**	**19 23 27.6**	**+0.1**
KTR	**Katsuura**	**1.29**	**296**	P	**Pb**	**19 23 13.1**	**-0.1**
KTR				*e*S	**Sg**	**19 23 30.6**	**+0.3**
CHOJ	**Chosi**	**1.32**	**328**	P	**Pn**	**19 23 12.1**	**-1.3**
CHOJ				S	**Sb**	**19 23 29.4**	**-1.4**
JKUC	**kamogawauchiur**	**1.38**	**295**	P	**Pn**	**19 23 12.8**	**-1.4**
JKUC				*e*S	**Sb**	**19 23 31.4**	**-1.0**
JSMT	**Sammumatsuo**	**1.49**	**316**	P	**Pn**	**19 23 15.4**	**-0.3**
JSMT				*e*S	**Sn**	**19 23 34.8**	**-0.4**
JHJ2	**Mitsune**	**2.16**	**228**		**Pn**	**19 23 24.1**	**-0.9**
JHJ	**Hachijo jima 2**	**2.18**	**228**	Pn	**Pn**	**19 23 24.0**	**-1.2**
	90nm,0.3s,baz=328,slow=16,SNR=57						
JHJ				Sn	**Sn**	**19 23 50.5**	**-1.7**
	224nm,0.3s,baz=97,slow=23,SNR=8.9						
MAJO	**Matsushiro**	**3.47**	**305**	P	**Pn**	**19 23 42.7**	**-0.3**
MAJO	**Matsushiro**	**3.47**	**305**		**Pn**	**19 23 42.7**	**-0.3**
MAT	**Matsushiro**	**3.47**	**305**	P	**Pn**	**19 23 42.6**	**-0.4**
MAT				S	**Sn**	**19 24 24.0**	**-0.2**
INU	**Inuyama**	**3.94**	**283**		**Pn**	**19 23 50.2**	**+0.8**
JCJ	**Chichijima**	**7.47**	**177**	Pn	**Pn**	**19 24 38.3**	**+0.3**
	28nm,0.3s,baz=279,slow=22,SNR=27						
JCJ				Sn	**Sn**	**19 25 55.8**	**-7.1**
	4.4nm,0.3s,baz=284,slow=22,SNR=1.3						
ERM	**Erimo**	**7.50**	**8**	*e*P	**Pn**	**19 24 35.7**	**-2.6**
ERM	**Erimo**	**7.50**	**8**	Pn	**Pn**	**19 24 35.8**	**-2.5**
JNU	**Nakatsue**	**9.14**	**264**	Pn	**Pn**	**19 24 59.9**	**-1.0**
	0.4nm,0.3s,baz=71,slow=7.3,SNR=2.7						
JNU	**Nakatsue**	**9.14**	**264**		**Pn**	**19 25 02.9**	**+2.0**
NMR	**Nemuro--Hokkai**	**9.31**	**18**	*i* P	**Pn**	**19 24 59.5**	**-3.6**
ASAJ	**Asahikawa**	**9.54**	**4**	Pn	**Pn**	**19 25 03.2**	**-3.1**
	4.2nm,0.3s,baz=226,slow=11,SNR=30						
ASAJ				Sn	**Sn**	**19 26 47.8**	**-5.8**
	2.6nm,0.3s,baz=250,slow=30,SNR=1.9						
ASAJ				LR	LR	19 29 56.9	
	comp=Z,3μm,18.2s,baz=179,slow=45						
JKA	**Kamikawa-asahi**	**9.54**	**4**		**Pn**	**19 25 03.2**	**-3.1**
GLVR	**Golovnino**	**9.60**	**17**	*e*P	**Pn**	**19 25 03.5**	**-3.6**
GRPR	**Tuman**	**9.90**	**17**	*e*P	**Pn**	**19 25 10.3**	**-0.9**
YUK	**Yuzh-Kuril'sk**	**9.97**	**17**	*i* P	**Pn**	**19 25 08.9**	**-3.2**
YUK				pmax	pmax		
	comp=Z,60nm,0.5s						
YUK				pmax	pmax		
	comp=E,21nm,0.3s						
YUK				pmax	pmax		
	comp=N,46nm,0.4s						
YUK				pmax	pmax		
	comp=Z,117nm,2.2s						
LAGR	**Lagunnoye**	**9.97**	**17**	*e*P	**Pn**	**19 25 08.9**	**-3.2**
LAGR				pmax	pmax		
	comp=N,58nm,0.4s						
LAGR				pmax	pmax		
	comp=Z,148nm,0.4s						
LAGR				pmax	pmax		
	comp=E,58nm,0.1s						
TEY	**Ternei**	**11.15**	**341**	*e*P	Pn	19 25 33.6	+5.3
KSRS	**Korea Array**	**11.54**	**288**	Pn	**Pn**	**19 25 33.6**	**0.0**
	comp=E,0.2nm,0.3s,baz=99,slow=15,SNR=13						
KSRS				LR	LR	19 30 40.4	
	comp=E,3μm,18.2s,baz=98,slow=41						
KUR	**Kuril'sk**	**11.63**	**22**	*e*P	**Pn**	**19 25 31.4**	**-3.4**
KUR				pmax	pmax		
	comp=E,10.0nm,0.8s						
KUR				pmax	pmax		
	comp=Z,25nm,0.8s						
KUR				pmax	pmax		
	comp=N,23nm,0.5s						
USA0B	**Ussuriysk Arra**	**12.19**	**325**	P	**Pn**	**19 25 43.4**	**+0.8**
USA0B	**Ussuriysk Arra**	**12.19**	**325**	Pn	**Pn**	**19 25 43.4**	**+0.8**
USRK	**Ussuriysk Ar.**	**12.19**	**325**	Pn	**Pn**	**19 25 42.3**	**-0.3**
	baz=140,slow=11,SNR=9.2						
USRK				LR	LR	19 30 12.9	
	comp=N,2μm,18.7s,baz=112,slow=37						
YSS	**Yuzh-Sakhalins**	**12.38**	**3**	*e*P	**Pn**	**19 25 42.4**	**-2.7**
YSS				*e*S	**Sn**	**19 27 56.2**	**-6.9**
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
YSS				MLR	MLR		
	comp=N,3μm,16.0s						
YSS	**Yuzh-Sakhalins**	**12.38**	**3**		**Pn**	**19 25 42.9**	**-2.3**
UGL	**Uglegorsk**	**14.49**	**1**	*e*P	Pn	19 26 08.5	-5.3
UGL				*e*S	**Sn**	**19 28 47.9**	**-6.5**
UGL				MLR	MLR		
	comp=Z,3μm,15.0s						
UGL				MLR	MLR		
	comp=N,3μm,15.0s						
TYV	**Tymovskoe**	**16.29**	**2**	*e*P	**P**	**19 26 42.0**	**+1.4**
TYV				pmax	pmax		
	comp=Z,23nm,1.1s						
TYV				MLR	MLR		
	comp=Z,2μm,16.0s						
KLR	**Kul'dur**	**16.39**	**336**	Pn	**Pn**	**19 26 34.2**	**-4.7**
	comp=Z,0.2nm,0.3s,baz=139,slow=14,SNR=3.2						
KLR	**Kul'dur**	**16.39**	**336**	*e*P	**Pn**	**19 26 37.1**	**-1.8**
KLR				pmax	pmax		
	comp=Z,9.0nm,2.7s						
GRNR	**Gornyy**	**16.63**	**348**	*e*P	**Pn**	**19 26 38.6**	**-3.4**
ZEA	**Zeya**	**21.70**	**336**	*e*P	**P**	**19 27 39.9**	**0.0**
ZEA				pmax	pmax		
	comp=N,35nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,61nm,1.0s						
PETK	**Petropavlovsk-**	**21.72**	**27**	P	**P**	**19 27 40.8**	**+0.7**
	comp=Z,1.9nm,0.9s,baz=221,slow=4.4,SNR=6.7						
WHN	**Wuhan**	**23.39**	**268**	P	**P**	**19 27 57.4**	**-0.4**
WHN				S	**S**	**19 32 14.2**	**+3.2**
WHN				LR	LR		
	comp=Z,10μm,13.7s						
WHN				LR	LR		
	comp=Z,4μm,15.8s						
WHN				LR	LR		
	comp=Z,5μm,12.6s						
MA2	**Magadan**	**25.70**	**11**	P	**P**	**19 28 20.0**	**+1.0**
	comp=Z,6.9nm,0.7s,baz=179,slow=13,SNR=4.0						
MA2	**Magadan**	**25.70**	**11**	*e*P	**P**	**19 28 18.3**	**-0.7**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MA2	**Magadan**	**25.70**	**11**	P	**P**	**19 28 19.6**	**+0.6**
MA2				IAmb	IAmb	19 28 32.9	
	comp=Z,26nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**26.74**	**117**	T	T	19 56 31.7	
	baz=309,slow=75,SNR=53						
H11N1	**WAKE ISLAND Hy**	**26.75**	**117**	T	T	19 56 44.7	
	baz=309,slow=75,SNR=73						
H11N3	**WAKE ISLAND Hy**	**26.76**	**117**	T	T	19 56 35.8	
	baz=309,slow=75,SNR=51						
XAN	**Xi'an**	**27.04**	**278**	P	P	19 28 40.0	+8.6
XAN				pP	pwP	19 28 50.1	+9.3
XAN				sP	sP	19 28 55.5	+23
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
XAN				LR	LR		
	comp=N,2μm,16.3s						
XAN				LR	LR		
	comp=E,1μm,18.4s						
XAN				LR	LR		
	comp=Z,1μm,18.1s						
H11S3	**WAKE ISLAND Hy**	**27.38**	**119**	T	T	19 57 31.6	
	baz=312,slow=75,SNR=52						
H11S1	**WAKE ISLAND Hy**	**27.38**	**119**	T	T	19 57 32.6	
	baz=312,slow=75,SNR=53						
H11S2	**WAKE ISLAND Hy**	**27.39**	**119**	T	T	19 57 33.3	
	baz=312,slow=75,SNR=38						
ENH	**Enshi**	**27.48**	**270**	P	**P**	**19 28 34.1**	**-1.3**
YAK	**Yakutsk**	**28.51**	**348**	P	**P**	**19 28 43.8**	**-0.4**
	comp=Z,2.9nm,0.4s,baz=125,slow=1.8,SNR=1.2						
YAK	**Yakutsk**	**28.51**	**348**	*e*P	**P**	**19 28 43.6**	**-0.6**
YAK				*e**PP	**pwP**	**19 28 54.7**	**+1.3**
YAK				*e*S	**S**	**19 33 32.2**	**+0.5**
YAK				*e**SS	sS	19 33 47.2	+13
YAK				*e*SS	**SnSn**	**19 35 01.4**	**+11**
YAK				pmax	pmax		
	comp=Z,12nm,1.5s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.7s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.4s						
YAK				smax	smax		
	comp=N,124nm,4.9s						
YAK				smax	smax		
	comp=E,151nm,6.2s						
YAK				MLR	MLR		
	comp=Z,1μm,16.0s						
YAK				MLR	MLR		
	comp=N,1μm,15.0s						
YAK				MLR	MLR		
	comp=E,631nm,18.0s						
YAK	**Yakutsk**	**28.51**	**348**	P	**P**	**19 28 43.9**	**-0.3**
YAK				IAmb	IAmb	19 28 59.5	
	comp=Z,20nm,1.0s						
ULN	**Ulaanbaatar**	**29.00**	**308**	*e*P	**P**	**19 28 51.0**	**+2.1**
ULN				pmax	pmax		
	comp=Z,10.0nm,2.5s						
ULN	**Ulaanbaatar**	**29.00**	**308**	P	**P**	**19 28 50.0**	**+1.1**
SEY	**Seymchan**	**29.15**	**10**	P	**P**	**19 28 50.9**	**+1.1**
	comp=Z,2.0nm,0.8s,baz=208,slow=5.6,SNR=6.5						
SEY	**Seymchan**	**29.15**	**10**	*e*P	**P**	**19 28 51.4**	**+1.6**
SONM	**Songino Array**	**29.42**	**308**	P	**P**	**19 28 52.7**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=118,slow=9.8,SNR=7.9						
SONM				PcP	**PcP**	**19 31 58.8**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=119,slow=1.8,SNR=2.3						
SONM	**Songino Array**	**29.42**	**308**	*e*P	**P**	**19 28 54.3**	**+1.7**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BOD	**Bodaibo**	**29.75**	**330**	*e*P	**P**	**19 28 56.0**	**+0.7**
BOD				pmax	pmax		
	comp=Z,15nm,1.5s						
DAV	**Davao City (W)**	**31.17**	**212**	LR	LR	19 42 20.2	
	comp=Z,478nm,18.7s,baz=22,slow=38						
TLY	**Talaya**	**32.17**	**314**	LR	LR	19 43 16.0	
	comp=Z,433nm,18.7s,baz=108,slow=38						
TLY	**Talaya**	**32.17**	**314**	*e*P	**P**	**19 29 18.8**	**+2.1**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA	**Gaotai**	**33.60**	**291**	*e*P	**P**	**19 29 28.8**	**-0.7**
GTA				pP	pwP	19 29 36.0	-2.8
GTA				sP	sP	19 29 39.1	+8.1
GTA				pmax	pmax		
	comp=Z,200nm,8.1s						
GTA				LR	LR		
	comp=Z,1μm,17.5s						
GTA				LR	LR		
	comp=Z,1μm,17.5s						
GTA				LR	LR		
	comp=Z,2μm,17.8s						
BILL	**Bilibino**	**36.31**	**15**	*e*P	**P**	**19 29 52.9**	**+0.6**
BILL				*e**PP	**sP**	**19 29 55.2**	**+1.2**
BILL				*e**SP	**pwP**	**19 30 01.0**	**-0.4**
BILL				S	**S**	**19 35 33.0**	**+0.1**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.5s						
BILL				MLR	MLR		
	comp=Z,752nm,16.0

KURK Kurchatov 47.67 310 P P 19 31 24.7 -0.6
KURK IAmb IAmb 19 31 40.9
comp=Z,21nm,1.1s
GUN Gumba 47.70 278 *e*P P 19 31 25.6 -0.7
comp=Z,44nm,0.9s
BATI Baumata 47.72 204 P P 19 31 26.1 0.0
comp=Z,16nm,0.5s,baz=16,slow=5.8,SNR=6.0
PKI Pulchoki 48.21 278 *e*P P 19 31 29.0 -1.2
PKIN Phulchoki 48.22 278 *e*P P 19 31 28.9 -1.3
MTN Manton Dam 48.23 194 P P 19 31 30.3 +0.4
KKN Kakani 48.23 278 *e*P P 19 31 28.8 -1.5
GKN Gorkha 48.68 279 *e*P P 19 31 33.0 -0.6
KDAK Kodiak Island 48.77 40 P P 19 31 34.4 +0.7
comp=Z,7.6nm,0.8s,baz=14,slow=6.2,SNR=2.6
PRZ Przheval'sk 49.14 299 P P 19 31 37.5 +0.5
PRZ pmax pmax
comp=Z,8.0nm,0.8s
PRZ Przheval'sk 49.14 299 P P 19 31 37.5 +0.5
PRZ IAmb IAmb 19 31 55.3
comp=Z,7.7nm,0.8s
DANN Dangsing 49.26 280 *e*P P 19 31 37.9 -0.3
comp=Z,42nm,0.7s
KTH Kantishna Hill 49.65 33 P P 19 31 41.6 +1.2
KTH IAmb IAmb 19 31 55.7
comp=Z,10nm,1.2s
MLY Manley 49.80 31 P P 19 31 43.6 +2.0
MLY IAmb IAmb 19 31 57.0
comp=Z,9.8nm,1.0s
TRF Thorofare Moun 49.93 33 P P 19 31 43.4 +0.7
PYUN Piuthan 49.98 280 *e*P P 19 31 43.6 0.0
comp=Z,18nm,0.4s
KDJ Kajisay 50.10 299 P P 19 31 43.9 -0.5
KDJ pmax pmax
comp=Z,3.0nm,0.6s
KDJ Kajisay 50.10 299 P P 19 31 43.9 -0.5
NEA Nenana 50.49 32 IAmb IAmb 19 32 01.9
comp=Z,18nm,1.0s
RND Reindeer 50.57 33 P P 19 31 48.4 +0.9
RND pmax pmax
comp=Z,9.0nm,1.0s
RND Reindeer 50.57 33 P P 19 31 48.4 +0.9
RND IAmb IAmb 19 32 03.9
comp=Z,9.2nm,1.0s
PSI Prapat 50.80 241 P P 19 31 49.0 -0.8
comp=Z,1.9nm,0.3s,baz=358,slow=4.8,SNR=3.6
PSI Prapat 50.80 241 P P 19 31 49.0 -0.8
SML Sawmill 50.83 35 P P 19 31 50.4 +1.0
SML IAmb IAmb 19 32 03.9
comp=Z,9.0nm,0.8s
MDM Murphy Dome 50.87 31 P P 19 31 50.4 +0.8
MDM IAmb IAmb 19 32 04.7
comp=Z,11nm,1.0s
WRH Wood River Hil 50.92 32 P P 19 31 50.5 +0.5
WRH IAmb IAmb 19 32 05.7
comp=Z,9.5nm,1.1s
COLA College 51.03 31⇑ *e*P P 19 31 52.4 +1.7
COLA pmax pmax
comp=Z,4.0nm,0.7s
CCB Clear Creek Bu 51.04 31 P P 19 31 51.3 +0.5
SCM Sheep Creek Mo 51.31 35 P P 19 31 54.2 +1.2
SCM pmax pmax
comp=Z,24nm,1.2s
SCM Sheep Creek Mo 51.31 35 P P 19 31 54.1 +1.2
SCM IAmb IAmb 19 32 10.1
comp=Z,24nm,1.2s
HDA Harding Lake 51.41 32 P P 19 31 53.7 0.0
HDA IAmb IAmb 19 32 07.5
comp=Z,10nm,0.9s
IL31 51.44 31 P P 19 31 53.5 -0.3
IL31 IAmb IAmb 19 32 07.9
comp=Z,9.5nm,0.9s
ILAR Eielson Array 51.44 31 P P 19 31 55.0 +1.2
comp=Z,3.5nm,0.8s,baz=269,slow=6.3,SNR=31
KNRA Kununurra 51.48 196 P P 19 31 54.5 -0.1
KNRA IAmb IAmb 19 32 12.1
comp=Z,14nm,0.8s
UGM Wanagama 51.55 221 P P 19 31 54.8 -0.5
KSH Kashi 51.67 296 P P 19 32 01.7 +5.6
KSH pP pwP 19 32 03.9 -1.6
KSH sP sP 19 32 06.3 +8.6
KSH pmax pmax
comp=Z,67nm,2.0s
KSH pmax pmax
comp=Z,400nm,5.3s
AAK Ala-Archa 51.91 300 P P 19 31 57.1 -0.8
comp=Z,1.3nm,0.6s,baz=125,slow=7.6
AAK Ala-Archa 51.91 300⇑ *e*P P 19 32 00.4 +2.5
AAK pmax pmax
comp=Z,5.0nm,1.7s
AAK Ala-Archa 51.91 300 P P 19 31 56.8 -1.1
PRP Porcupine Dome 52.01 30 P P 19 32 00.4 +2.2
FYU Fort Yukon 52.11 29 P P 19 32 01.2 +2.4
FYU IAmb IAmb 19 32 14.8
comp=Z,23nm,1.2s
LEM Lembang 52.29 225 P P 19 32 00.8 -0.2
comp=Z,8.4nm,0.5s,baz=325,slow=23,SNR=1.7
BRVK Borovoye 52.48 314⇑ *e*P P 19 32 02.0 +0.2
BRVK pmax pmax
comp=Z,12nm,1.7s
BRVK Borovoye 52.48 314 P P 19 32 02.5 +0.7
DOT Dot Lake 52.71 33 P P 19 32 04.4 +1.0
GSI Gunungsitoli 52.80 241 P P 19 32 03.7 -0.9
GSI IAmb IAmb 19 32 22.3
comp=Z,25nm,1.1s
ARSB Arslanbob 53.35 299 P P 19 32 06.6 -2.0
ARSB pmax pmax
comp=Z,10.0nm,1.1s
ARSB Arslanbob 53.35 299 P P 19 32 06.6 -2.0
ARSB IAmb IAmb 19 32 21.7
comp=Z,10nm,1.1s
EGAK Eagle 53.89 31 P P 19 32 13.1 +1.1
WB0 Warramunga Arr 54.50 188 P P 19 32 17.4 +0.6
WB0 IAmb IAmb 19 32 18.7
comp=Z,16nm,1.2s
CTAO Charters Tower 54.54 175 P P 19 32 15.6 -1.6
CTAO pmax pmax
comp=Z,13nm,1.4s
FITZ Fitzroy Crossi 54.58 199 P P 19 32 17.9 +0.5
comp=Z,3.8nm,0.6s,baz=9.8,slow=5.7,SNR=23
FITZ Fitzroy Crossi 54.58 199 P P 19 32 19.8 +2.3
FITZ IAmb IAmb 19 32 38.7
comp=Z,9.9nm,1.1s
KK31 Karatay Array 54.60 302 P P 19 32 17.6 +0.1
KK31 pmax pmax
comp=Z,10.0nm,1.0s
KK31 Karatay Array 54.60 302 P P 19 32 17.6 +0.1
KK31 IAmb IAmb 19 32 33.3
comp=Z,9.8nm,0.9s
KKAR Karatay Array 54.60 302 P P 19 32 17.6 +0.1
KKAR pmax pmax
comp=Z,10.0nm,1.0s
KKAR Karatay Array 54.60 302 P P 19 32 17.6 +0.1
KKAR IAmb IAmb 19 32 33.3
comp=Z,9.8nm,0.9s
WRAB Tennant Creek 54.67 189⇓ *e*P P 19 32 20.2 +2.1
WR0 Warramunga Arr 54.67 188 P P 19 32 18.2 +0.1
WR0 IAmb IAmb 19 32 28.1
comp=Z,11nm,1.1s
WB2 Warramunga Arr 54.68 189 P P 19 32 17.9 -0.3
WB2 IAmb IAmb 19 32 37.4
comp=Z,11nm,0.9s
WRA Warramunga Arr 54.68 189 P P 19 32 18.1 -0.1
comp=Z,4.3nm,0.6s,baz=4.7,slow=7.6,SNR=71
WRA Warramunga Arr 54.68 189 *e*P P 19 32 18.7 +0.5
WRA pmax pmax
comp=Z,5.0nm,0.5s
BTK Batken 55.30 298 P P 19 32 20.9 -1.8
BTK pmax pmax
comp=Z,3.0nm,0.9s
BTK Batken 55.30 298 P P 19 32 20.9 -1.8
EPYK Eagle Plains 55.53 29 P P 19 32 25.8 +1.8
NIL Nilore 55.66 290 P P 19 32 25.6 +0.3
NIL pmax pmax
comp=Z,11nm,0.9s
NIL Nilore 55.66 290 P P 19 32 25.6 +0.3
NIL IAmb IAmb 19 32 37.2
comp=Z,11nm,0.9s
GAR Garm 56.01 297 P P 19 32 27.9 0.0
GAR IAmb IAmb 19 32 31.0
comp=Z,8.5nm,0.7s
HYT Haines Junctio 56.12 36 P P 19 32 30.0 +1.7
HYT IAmb IAmb 19 32 45.3
comp=Z,10nm,1.0s
INK Inuvik 56.45 26 P P 19 32 31.6 +1.2
comp=Z,3.0nm,0.5s,baz=294,slow=6.2,SNR=22

INK Inuvik 56.45 26 P P 19 32 31.8 +1.4
INK IAmb IAmb 19 32 44.9
comp=Z,8.0nm,0.8s
CHGR Chuyangaron 56.97 297 P P 19 32 34.0 -0.7
SVE Sverdlovsk 57.16 320 *e*P P 19 32 35.8 +0.2
SVE pmax pmax
comp=Z,12nm,1.0s
WHY Whitehorse 57.42 35 P P 19 32 39.4 +1.8
WHY IAmb IAmb 19 32 53.0
comp=Z,10nm,1.0s
ARU Arti 58.37 320 P P 19 32 43.7 -0.4
comp=Z,2.5nm,0.6s,baz=70,slow=0.8,SNR=13
ARU Arti 58.37 320⇓ *e*P P 19 32 43.6 -0.5
ARU pmax pmax
comp=Z,11nm,1.0s
ARU Arti 58.37 320 P P 19 32 43.4 -0.8
ARU IAmb IAmb 19 32 52.1
comp=Z,12nm,0.9s
AS31 Alice Springs 58.40 188 P P 19 32 45.5 +0.9
ASAR Alice Springs 58.40 188 P P 19 32 44.9 +0.2
comp=Z,1.3nm,0.5s,baz=1.6,slow=7.2,SNR=22
C36M Paulatuk 59.55 24 P P 19 32 53.3 +1.3
DLBC Dease Lake 60.41 37 P P 19 32 59.8 +1.6
DLBC IAmb IAmb 19 33 07.9
comp=Z,14nm,1.1s
AKTO Aktyubinsk 60.51 313 P P 19 32 58.5 -0.5
comp=Z,4.8nm,0.6s,baz=66,slow=15,SNR=7.6
KIRV Kirov 62.36 324 P P 19 33 10.7 -0.6
comp=Z,4.3nm,0.6s,baz=303,slow=1.0,SNR=2.1
SPITS Spitsbergen Ar 62.97 349 LR LR 20 01 49.4
comp=Z,446nm,20.5s,baz=50,slow=37
RES Resolute Bay 64.91 14 P P 19 33 28.6 +0.7
comp=Z,3.4nm,0.6s,baz=326,slow=5.4,SNR=5.3
RES Resolute Bay 64.91 14 P P 19 33 28.6 +0.7
RES pmax pmax
comp=Z,16nm,1.3s
RES Resolute Bay 64.91 14 P P 19 33 28.6 +0.7
RES IAmb IAmb 19 33 41.7
comp=Z,16nm,1.2s
GEYT Alibeck 65.26 300 P P 19 33 31.5 +0.5
comp=Z,4.4nm,0.8s,baz=81,slow=9.2,SNR=5.8
YKA Yellowknife Ar 65.80 30 P P 19 33 34.9 +1.0
comp=Z,1.8nm,0.9s,baz=294,slow=5.9,SNR=11
KLMR Klimovskoe 65.97 328 *e*P P 19 33 23.9 -11
KLMR pmax pmax
comp=Z,30nm,2.3s
KLMR Klimovskoe 65.97 328 *e*P P 19 33 24.0 -11
KLMR AMP 19 33 40.8
comp=Z,30nm,2.3s
STKA Stephens Creek 66.11 180 P P 19 33 36.9 +0.7
comp=Z,5.4nm,1.1s,baz=309,slow=20,SNR=1.8
FORT Forrest 66.28 193 P P 19 33 38.1 +0.8
ARCES ARCESS Array B 66.38 340 P P 19 33 37.7 +0.1
comp=Z,1.0nm,0.7s,baz=67,slow=7.9,SNR=4.2
ARCES LR LR 20 08 18.4
comp=Z,369nm,18.4s,baz=26,slow=41
DAG Danmarks Havn 68.23 355 P P 19 33 49.7 +0.6
DAG pmax pmax
comp=Z,6.0nm,1.1s
OUL Oulu 68.93 336 P P 19 33 54.9 +1.3
OBN Obninsk 70.21 324⇓ *e*P P 19 34 03.0 +1.3
OBN *e* 19 34 07.2
OBN *e* 19 34 16.0
OBN 19 34 22.0
OBN pmax pmax
comp=Z,5.0nm,0.5s
OBN MLR MLR
comp=Z,455nm,17.0s
LPSR Galich'ya Gora 70.35 321 *e*P P 19 34 01.7 -0.9
LPSR pmax pmax
comp=Z,9.0nm,0.8s
AKT Akhty 70.75 307 *e*P P 19 34 05.1 -0.4
AKT *e* 19 34 25.1
AKT pmax pmax
comp=Z,16nm,0.9s
VSR Storozhevoye 70.95 319 *e*P P 19 34 04.7 -1.6
VSR pmax pmax
comp=Z,9.0nm,1.1s
VORD Divnogorie 71.01 319 *e*P P 19 34 05.8 -0.9
VORD pmax pmax
comp=Z,7.0nm,1.0s
FINES FINESS Array B 71.10 333 P P 19 34 07.2 +0.1
comp=Z,4.2nm,0.9s,baz=48,slow=2.8,SNR=9.2
NEW Newport 71.72 44 P P 19 34 12.0 +0.9
NEW pmax pmax
comp=Z,14nm,1.1s
KBZ Khabaz 72.70 311 P P 19 34 16.8 -0.1
comp=Z,2.8nm,0.8s,baz=109,slow=4.8,SNR=5.8
KBZ Khabaz 72.70 311 *e*P P 19 34 18.5 +1.6
KBZ pmax pmax
comp=Z,3.0nm,0.8s
KIV Kislovodsk 72.71 312 *e*P P 19 34 18.7 +1.5
KIV pmax pmax
comp=Z,39nm,1.1s
KIV Kislovodsk 72.71 312 P P 19 34 18.0 +0.8
KIV IAmb IAmb 19 34 24.3
comp=Z,11nm,0.9s
SUMG Summit 73.13 0 P P 19 34 18.9 -0.7
SUMG pmax pmax
comp=Z,5.0nm,0.8s
SUMG Summit 73.13 0 P P 19 34 18.9 -0.7
BMO Blue Mountains 73.41 47 P P 19 34 22.0 +0.7
BMO pmax pmax
comp=Z,6.0nm,1.1s
BMO Blue Mountains 73.41 47 P P 19 34 22.0 +0.7
J08A Circle Bar Ran 73.50 49 P P 19 34 22.4 +0.5
J08A IAmb IAmb 19 34 37.4
comp=Z,12nm,1.3s
JTMT Jette 73.60 43 P P 19 34 21.3 -1.1
JTMT IAmb IAmb 19 34 37.4
comp=Z,12nm,0.9s
MFID Camas Ranch 75.09 47 P P 19 34 33.6 +2.5
MFID IAmb IAmb 19 34 46.3
comp=Z,6.3nm,0.9s
CMB Columbia Colle 75.09 54 P P 19 34 32.1 +0.9
CMB pmax pmax
comp=Z,8.0nm,1.1s
CMB Columbia Colle 75.09 54 P P 19 34 32.1 +0.9
CMB IAmb IAmb 19 34 46.2
comp=Z,8.0nm,1.1s
YERR Yerington 75.34 53 P P 19 34 35.1 +2.2
YERR IAmb IAmb 19 34 48.0
comp=Z,12nm,1.0s
FFC Flin Flon 75.63 32 P P 19 34 34.6 +0.7
FFC pmax pmax
comp=Z,13nm,0.9s
FFC Flin Flon 75.63 32 P P 19 34 34.6 +0.7
FFC IAmb IAmb 19 34 47.9
comp=Z,13nm,0.8s
LRM Limekiln Ridge 75.73 44 P P 19 34 35.8 +0.8
EGMT Eagleton 75.94 41 P P 19 34 36.0 +0.1
EGMT IAmb IAmb 19 34 50.6
comp=Z,15nm,0.9s
KVN Kaiserville 76.05 52 P P 19 34 37.8 +0.9
KVN pmax pmax
comp=Z,7.0nm,0.9s
KVN Kaiserville 76.05 52 P P 19 34 37.8 +0.9
KVN IAmb IAmb 19 34 52.0
comp=Z,6.7nm,0.9s
NVAR Mina Array Bea 76.26 53 P P 19 34 39.8 +1.7
comp=Z,1.7nm,0.9s,baz=282,slow=5.8,SNR=7.2
BOZ Bozeman (W) 76.33 44 P P 19 34 39.6 +1.3
BOZ pmax pmax
comp=Z,6.0nm,0.9s
BOZ Bozeman (W) 76.33 44 P P 19 34 39.6 +1.3
AKASG Malin Array Be 76.39 323 P P 19 34 37.2 -1.1
comp=Z,3.2nm,0.5s,baz=46,slow=6.0,SNR=13
AKASG Malin Array Be 76.39 323 *e*P P 19 34 39.1 +0.8
AKASG pmax pmax
comp=Z,3.0nm,0.5s
HFS Hagfors 76.42 336 P P 19 34 39.4 +1.1
comp=Z,1.9nm,0.6s,baz=150,slow=3.3,SNR=9.2
NB2 NORSAR Subarra 76.54 338 P P 19 34 38.7 -0.3
comp=Z,6.6nm,0.8s,baz=40,slow=5.9
NOA NORSAR Array B 76.54 338 P P 19 34 39.0 -0.1
comp=Z,1.8nm,0.8s,baz=39,slow=5.7,SNR=8.9
NOA LR LR 20 12 33.9
comp=Z,306nm,18.8s,baz=40,slow=39
ELK Elko 76.94 49 P P 19 34 41.5 -0.4
ELK pmax pmax
comp=Z,4.0nm,0.9s
ELK Elko 76.94 49 P P 19 34 41.5 -0.4
IMW Indian Meadow 77.72 45 P P 19 34 46.1 -0.3
IMW IAmb IAmb 19 35 02.2
comp=Z,11nm,1.2s

FLWY Flagg Ranch 77.75 45 P P 19 34 46.5 +0.2
FLWY IAmb IAmb 19 35 02.6
comp=Z,14nm,1.2s
FXWY Fox Creek 77.82 45 P P 19 34 48.9 +2.0
HVU Hansel Valley 77.87 47 P P 19 34 48.9 +1.9
HVU pmax pmax
comp=Z,10.0nm,0.6s
HVU Hansel Valley 77.87 47 P P 19 34 48.9 +1.9
HWUT Hardware Ranch 78.70 47 P P 19 34 52.6 +0.9
HWUT IAmb IAmb 19 35 07.2
comp=Z,18nm,1.2s
DUG Dugway, Tooele 78.77 49 P P 19 34 51.8 -0.2
DUG pmax pmax
comp=Z,12nm,1.0s
DUG Dugway, Tooele 78.77 49 P P 19 34 51.8 -0.2
DUG IAmb IAmb 19 35 07.4
comp=Z,12nm,0.9s
PSUT Pine Spring 79.08 51 P P 19 34 55.6 +1.8
FRB Frobisher Bay 79.10 13 P P 19 34 53.6 +0.5
FRB pmax pmax
comp=Z,12nm,0.6s
PDAR Pinedale Array 79.20 45 P P 19 34 55.9 +1.4
comp=Z,0.4nm,0.6s,baz=299,slow=6.6,SNR=4.8
CCUT Cedar City 79.97 51 P P 19 34 59.6 +0.9
LCMT Little Creek M 80.36 52 P P 19 35 01.5 +0.8
MTPU Mount Pierson 80.44 50 P P 19 35 02.8 +1.4
P17A Butcher Ranch, 80.48 48 P P 19 35 01.9 +0.5
RDMU Red Mountain 80.53 47 P P 19 35 03.7 +2.0
KNB Kanab 80.63 51 P P 19 35 04.3 +2.1
KNB pmax pmax
comp=Z,24nm,1.1s
KNB Kanab 80.63 51 P P 19 35 04.3 +2.1
BRTR Keskin Array B 80.67 312 P P 19 35 02.9 +0.6
comp=Z,1.5nm,0.7s,baz=119,slow=4.2,SNR=8.7
BRTR Keskin Array B 80.67 312 *e*P P 19 35 04.0 +1.7
BRTR pmax pmax
comp=Z,2.0nm,0.7s
SRU San Rafael Swe 80.83 49 P P 19 35 05.1 +1.8
SRU pmax pmax
comp=Z,19nm,0.9s
SRU San Rafael Swe 80.83 49 P P 19 35 05.1 +1.8
U15A North Rim 81.33 52 P P 19 35 06.9 +0.8
U15A IAmb IAmb 19 35 21.4
comp=Z,7.7nm,0.9s
ULM Lac du Bonnet 81.41 33 P P 19 35 06.4 +0.6
comp=Z,2.4nm,0.9s,baz=319,slow=5.7,SNR=3.2
ULM Lac du Bonnet 81.41 33 *e*P P 19 35 07.4 +1.5
ULM pmax pmax
comp=Z,2.0nm,0.9s
RAYN Ar Rayn 81.83 293 P P 19 35 09.6 +1.0
RAYN pmax pmax
comp=Z,12nm,1.2s
RAYN Ar Rayn 81.83 293 P P 19 35 09.6 +1.0
RAYN IAmb IAmb 19 35 21.3
comp=Z,12nm,1.2s
PV21 Cone Mtn., Par 82.13 48 P P 19 35 11.8 +1.6
PV23 Carpenter Ridg 82.17 48 P P 19 35 12.4 +1.9
PV10 Paradox Valley 82.20 49 P P 19 35 12.1 +1.4
PV14 Lion Creek, Pa 82.21 48 P P 19 35 12.7 +2.0
PV20 West Nyswonger 82.27 48 P P 19 35 11.8 +0.9
PV17 East Wray Mesa 82.31 49 P P 19 35 12.2 +1.1
PV16 Nyswonger Mesa 82.32 48 P P 19 35 12.3 +1.1
PV05 Paradox Valley 82.35 49 P P 19 35 13.2 +1.9
PV11 David Mesa, Pa 82.35 48 P P 19 35 12.9 +1.6
PV18 Skein Mesa, Pa 82.36 49 P P 19 35 12.4 +1.0
PV03 Paradox Valley 82.40 49 P P 19 35 12.6 +1.0
PV13 Radium Mtn., P 82.47 49 P P 19 35 13.9 +1.9
PV01 Paradox Valley 82.64 48 P P 19 35 13.3 +0.4
ISCO Idaho Springs 83.38 46 P P 19 35 15.3 -1.5
ISCO pmax pmax
comp=Z,6.0nm,1.3s
MMAI Mount Meron Ar 83.59 306 P P 19 35 17.6 -0.1
comp=Z,0.8nm,0.5s,baz=38,slow=7.3,SNR=2.5
F33A 5 Mile Ranch, 84.35 37 P P 19 35 22.2 +1.0
SDCO Great Sand Dun 84.77 47 P P 19 35 25.5 +1.7
SDCO IAmb IAmb 19 35 42.2
comp=Z,6.8nm,1.1s
GERES GERESS Array B 84.92 329 P P 19 35 24.9 +0.8
comp=Z,1.0nm,0.9s,baz=60,slow=5.9,SNR=3.6
GERES GERESS Array B 84.92 329 P P 19 35 25.0 +0.8
ANMO Albuquerque 85.97 50 P P 19 35 30.9 +1.1
comp=Z,0.6nm,0.5s,baz=229,slow=11,SNR=1.8
ANMO Albuquerque 85.97 50 P P 19 35 30.6 +0.8
ANMO pmax pmax
comp=Z,5.0nm,1.5s
ANMO Albuquerque 85.97 50 P P 19 35 30.6 +0.8
TXAR Lajitas Array 91.41 53 P P 19 35 57.1 +1.5
comp=Z,0.4nm,0.7s,baz=274,slow=2.2,SNR=4.4
CCM Cathedral Cave 92.60 39 P P 19 36 00.4 -0.4
CCM pmax pmax
comp=Z,9.0nm,1.6s
U40A Yellville 93.01 41 P P 19 36 03.0 +0.2
ESDC Sonseca Array 99.59 334 LR LR 20 25 47.3
comp=Z,179nm,18.3s,baz=350,slow=38
TORD Torodi Ar. Bea 119.23 314 PKP **PKiKP** 19 41 39.2 +0.2
comp=Z,0.6nm,0.9s,baz=71,slow=2.6,SNR=2.7
LPAZ La Paz 147.64 63 PKPbc **PKPbc** 19 42 34.9 0.0
baz=329,slow=5.9
PB11 IPOC Station P 148.57 70 **PKPdf** 19 42 33.0 -0.1
AC05 El Transito 152.25 87 **PKiKP** 19 42 46.6 +1.0

SOF ***08*** *19:31:04.4, 45.65N×21.43E, h2km, MD3.8*
PRU ***08*** *19:31:06.9±0.0, 45.64N×21.29E, h0km*
IDC ***08*** *19:31:06.8±0.9, 45.79N×21.42E, h0km, mb3.4/1, mb1 3.4/7, mb1mx3.2/51, mbtmp3.3/7, ML3.1/6, Error ellipse: s-maj=20.2km s-min=6.9km az=20.0*
BUC ***08*** *19:31:07.4±0.2, 45.65N×21.43E, h7km±2km, ml3.6/34, Error ellipse: s-maj=2.5km s-min=1.9km az=30.0*
BUD ***08*** *19:31:07.5, 45.65N×21.46E, h10km±2km, ML3.5/18*
KRSZO ***08*** *19:31:07.0±0.7, 45.66N×21.46E, h14km±4km, mb3.5/6, Error ellipse: s-maj=2.3km s-min=2.0km az=70.0*
BEO ***08*** *19:31:07.2±0.4, 45.65N×21.43E, h12km±2km, ML3.5/18*
ISC 08 19:31:07.4±0.7, 45.66N±0.01×21.45E±0.01, h14km±4km, n341,σ1832/611, 45C-56D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
BZS	**Buzias**	**0.13**	**110**	*e*Pg	**Pg**	**19 31 10.6**	**-0.2**
BZS				*e*Sg	**Sg**	**19 31 13.0**	**-0.2**
BZS	**Buzias**	**0.13**	**110**	*i*Pg	**Pg**	**19 31 10.7**	**-0.2**
BZS	**Buzias**	**0.13**	**110**	⇓P	**Pg**	**19 31 10.7**	**-0.2**
BZS				⇓S	**Sg**	**19 31 12.7**	**-0.4**
BZS	**Buzias**	**0.13**	**110**	⇓P	**Pg**	**19 31 10.7**	**-0.2**
BZS				⇓S	**Sg**	**19 31 12.7**	**-0.4**
BZS	**Buzias**	**0.13**	**110**	Pg	**Pg**	**19 31 10.6**	**-0.2**
BZS				Pg	**Pg**	**19 31 10.7**	**-0.2**
BZS				Pg	**Pg**	**19 31 10.7**	**-0.2**
BZS				Pg	**Pg**	**19 31 10.7**	**-0.2**
BZS				Pg	**Pg**	**19 31 10.7**	**-0.2**
BZS				Pg	**Pg**	**19 31 10.7**	**-0.2**
BZS				Lg	Lg	19 31 12.7	
BZS				Lg	Lg	19 31 12.7	
BZS				Sg	**Sg**	**19 31 13.0**	**-0.2**
TIM	**Timisoara**	**0.18**	**296**	*i*Pg	**Pg**	**19 31 11.7**	**+0.1**
TIM	**Timisoara**	**0.18**	**296**	⇑P	**Pg**	**19 31 11.7**	**+0.1**
TIM				⇓S	**Sg**	**19 31 13.9**	**-0.5**
TIM	**Timisoara**	**0.18**	**296**	⇑P	**Pg**	**19 31 11.7**	**+0.1**
TIM				⇓S	**Sg**	**19 31 13.9**	**-0.5**
TIM	**Timisoara**	**0.18**	**296**	Pg	**Pg**	**19 31 11.7**	**+0.1**
TIM				Pg	**Pg**	**19 31 11.7**	**+0.1**
TIM				Pg	**Pg**	**19 31 11.7**	**+0.1**
TIM				Pg	**Pg**	**19 31 11.7**	**+0.1**
TIM				Lg	Lg	19 31 13.9	
TIM				Lg	Lg	19 31 13.9	
BANR	**Banloc**	**0.35**	**218**	*i*Pg	**Pg**	**19 31 14.9**	**+0.4**
BANR	**Banloc**	**0.35**	**218**	⇑P	**Pg**	**19 31 14.9**	**+0.4**
BANR	**Banloc**	**0.35**	**218**	⇑P	**Pg**	**19 31 14.9**	**+0.4**
BANR	**Banloc**	**0.35**	**218**	Pg	**Pg**	**19 31 14.9**	**+0.4**
BANR				Pg	**Pg**	**19 31 14.9**	**+0.4**
BANR				Pg	**Pg**	**19 31 14.9**	**+0.4**
BANR				Pg	**Pg**	**19 31 14.9**	**+0.4**
SIRR	**Siria**	**0.63**	**14**	*i*Pg	**Pg**	**19 31 19.6**	**0.0**
SIRR	**Siria**	**0.63**	**14**	⇑P	**Pg**	**19 31 19.7**	**0.0**
SIRR				⇓S	**Sg**	**19 31 28.1**	**+0.1**
SIRR	**Siria**	**0.63**	**14**	⇑P	**Pg**	**19 31 19.7**	**0.0**
SIRR				⇓S	**Sg**	**19 31 28.1**	**+0.1**
SIRR	**Siria**	**0.63**	**14**	Pg	**Pg**	**19 31 19.6**	**0.0**
SIRR				Pg	**Pg**	**19 31 19.6**	**0.0**
SIRR				Pg	**Pg**	**19 31 19.7**	**0.0**
SIRR				Pg	**Pg**	**19 31 19.7**	**0.0**

SIRR			Lg	Lg	19 31 28.6
SIRR			Lg	Lg	19 31 28.6
MDVR	**Moldovita**	**0.90 168**	⇓iPg	**Pb**	**19 31 24.2 -0.5**
MDVR	**Moldovita**	**0.90 168**	⇑P	**Pb**	**19 31 24.2 -0.5**
MDVR	**Moldovita**	**0.90 168**	⇑P	**Pb**	**19 31 24.2 -0.5**
MDVR	**Moldovita**	**0.90 168**	Pn	**Pb**	**19 31 24.2 -0.5**
MDVR			Pn	**Pb**	**19 31 24.2 -0.5**
MDVR			Pn	**Pb**	**19 31 24.2 -0.5**
MDVR			Pn	**Pb**	**19 31 24.2 -0.5**
GZR	**Gura Zlata**	**0.97 105**	⇓iP*	**Pb**	**19 31 25.6 -0.4**
GZR	**Gura Zlata**	**0.97 105**	⇓P	**Pb**	**19 31 25.6 -0.4**
GZR			⇑S	**Sn**	**19 31 39.6 -0.6**
GZR	**Gura Zlata**	**0.97 105**	⇓P	**Pb**	**19 31 25.6 -0.4**
GZR			⇑S	**Sn**	**19 31 39.6 -0.6**
GZR	**Gura Zlata**	**0.97 105**	Pn	**Pb**	**19 31 25.6 -0.4**
GZR			Pn	**Pb**	**19 31 25.6 -0.4**
GZR			Pn	**Pb**	**19 31 25.6 -0.4**
GZR			Pn	**Pb**	**19 31 25.6 -0.4**
GZR			Lg	Lg	19 31 39.6
GZR			Lg	Lg	19 31 39.6
HERR	**Herculane**	**1.04 138**	⇓iPn	**Pg**	**19 31 27.3 0.0**
HERR	**Herculane**	**1.04 138**	⇓P	**Pg**	**19 31 27.3 0.0**
HERR	**Herculane**	**1.04 138**	⇓P	**Pg**	**19 31 27.3 0.0**
HERR	**Herculane**	**1.04 138**	Pg	**Pg**	**19 31 27.3 0.0**
HERR			Pg	**Pg**	**19 31 27.3 0.0**
HERR			Pg	**Pg**	**19 31 27.3 0.0**
HERR			Pg	**Pg**	**19 31 27.3 0.0**
DEV	**Deva**	**1.04 77**	i Pn	**Pb**	**19 31 26.8 -0.4**
DEV	**Deva**	**1.04 77**	⇓P	**Pb**	**19 31 26.8 -0.4**
DEV			⇓S	**Sn**	**19 31 42.0 0.0**
DEV	**Deva**	**1.04 77**	⇓P	**Pb**	**19 31 26.8 -0.4**
DEV			⇓S	**Sn**	**19 31 42.0 0.0**
DEV	**Deva**	**1.04 77**	Pn	**Pb**	**19 31 26.8 -0.4**
DEV			Pn	**Pb**	**19 31 26.8 -0.4**
DEV			Pn	**Pb**	**19 31 26.8 -0.4**
DEV			Pn	**Pb**	**19 31 26.8 -0.4**
DEV			x	x	19 31 27.0
DEV			Sn	**Sn**	**19 31 42.0 0.0**
DEV			Sn	**Sn**	**19 31 42.0 0.0**
BEO	**Beograd**	**1.09 219**	ePg	**Pb**	**19 31 26.0 -2.0**
BEO			eSg	**Sb**	**19 31 41.1 -1.1**
BEO	**Beograd**	**1.09 219**	Pn	**Pb**	**19 31 26.0 -2.0**
BEO			Sn	**Sb**	**19 31 41.1 -1.1**
DJES	**Djerdap**	**1.25 142**	ePg	**Pb**	**19 31 31.1 +0.4**
DJES			eSg	**Sg**	**19 31 47.7 0.0**
DJES	**Djerdap**	**1.25 142**	Pg	**Pb**	**19 31 31.1 +0.4**
DJES			Lg	Lg	19 31 47.7
KUBS	**Kucevo**	**1.26 173**	ePg	**Pn**	**19 31 29.4 -1.1**
KUBS			eSg	**Sb**	**19 31 46.7 -0.2**
KUBS	**Kucevo**	**1.26 173**	Pn	**Pn**	**19 31 29.4 -1.1**
KUBS			Sn	**Sb**	**19 31 46.7 -0.2**
FRGS	**Fruska Gora**	**1.26 247**	ePg	**Pn**	**19 31 29.7 -0.8**
FRGS			eSg	**Sb**	**19 31 46.2 -0.7**
FRGS	**Fruska Gora**	**1.26 247**	ePn	**Pn**	**19 31 29.6 -0.9**
FRGS	**Fruska Gora**	**1.26 247**	Pn	**Pn**	**19 31 29.6 -0.9**
FRGS			Pb	**Pn**	**19 31 29.7 -0.8**
FRGS			Sn	**Sb**	**19 31 46.2 -0.7**
SVIS	**Svilajnac**	**1.40 187**	ePg	**Pb**	**19 31 33.5 +0.2**
SVIS			eSg	**Sg**	**19 31 51.9 -0.7**
SVIS	**Svilajnac**	**1.40 187**	Pg	**Pb**	**19 31 33.5 +0.2**
SVIS			Lg	Lg	19 31 51.9
DRGR		**1.43 37**	i Pn	**Pn**	**19 31 33.1 +0.1**
DRGR		**1.43 37**	⇓P	**Pn**	**19 31 33.1 +0.1**
DRGR		**1.43 37**	⇓P	**Pn**	**19 31 33.1 +0.1**
DRGR		**1.43 37**	Pn	**Pn**	**19 31 33.1 +0.1**
DRGR			Pn	**Pn**	**19 31 33.1 +0.1**
DRGR			Pn	**Pn**	**19 31 33.1 +0.1**
DRGR			Pn	**Pn**	**19 31 33.1 +0.1**
DRGR			x	x	19 31 33.4
SRE	**Strehaia**	**1.59 128**	i Pn	**Pb**	**19 31 37.2 +0.6**
SRE	**Strehaia**	**1.59 128**	⇓P	**Pb**	**19 31 37.2 +0.6**
SRE	**Strehaia**	**1.59 128**	⇓P	**Pb**	**19 31 37.2 +0.6**
SRE	**Strehaia**	**1.59 128**	Pg	**Pb**	**19 31 37.2 +0.6**
SRE			Pg	**Pb**	**19 31 37.2 +0.6**
SRE			Pg	**Pb**	**19 31 37.2 +0.6**
SRE			Pg	**Pb**	**19 31 37.2 +0.6**
TRUS	**Trudelj**	**1.61 208**	ePg	**Pn**	**19 31 36.0 +0.6**
TRUS			eSg	**Sb**	**19 31 57.7 +0.5**
TRUS	**Trudelj**	**1.61 208**	Pn	**Pn**	**19 31 36.0 +0.6**
TRUS			Lg	Lg	19 31 57.7
PUNG	**Punghina**	**1.74 142**	⇑P	**Pn**	**19 31 38.0 +0.9**
PUNG	**Punghina**	**1.74 142**	⇑P	**Pn**	**19 31 38.0 +0.9**
PUNG	**Punghina**	**1.74 142**	Pn	**Pb**	**19 31 38.1 -0.9**
PUNG			Pn	**Pb**	**19 31 38.1 -0.9**
LTVH	**Ltavrtes, Hu**	**1.75 10**	x	**Pn**	**19 31 38.3 +1.0**
TEKS	**Tekeris**	**1.75 231**	ePg	**Pn**	**19 31 38.3 +0.9**
TEKS			eSg	**Sb**	**19 32 01.8 +0.6**
TEKS	**Tekeris**	**1.75 231**	ePn	**Pn**	**19 31 36.0 -1.4**
TEKS	**Tekeris**	**1.75 231**	Pn	**Pn**	**19 31 36.0 -1.4**
TEKS			Pb	**Pn**	**19 31 38.3 +0.9**
TEKS			Sn	**Sb**	**19 32 01.8 +0.6**
CJR	**Cluj-Napoca**	**1.83 54**	⇓iPn	**Pn**	**19 31 39.0 +0.6**
CJR	**Cluj-Napoca**	**1.83 54**	⇓P	**Pn**	**19 31 39.0 +0.6**
CJR	**Cluj-Napoca**	**1.83 54**	⇓P	**Pn**	**19 31 39.0 +0.6**
CJR	**Cluj-Napoca**	**1.83 54**	Pn	**Pn**	**19 31 39.0 +0.6**
CJR			Pn	**Pn**	**19 31 39.0 +0.6**
CJR			Pb	**Pb**	**19 31 39.3 -1.3**
CJR			Pb	**Pb**	**19 31 39.3 -1.3**
BSZH	**Besenyszg**	**1.83 334**	ePn	**Pn**	**19 31 39.3 +0.9**
BSZH			eSn	**Sg**	**19 32 09.7 +3.4**
BSZH	**Besenyszg**	**1.83 334**	Pn	**Pn**	**19 31 39.3 +0.9**
BSZH			ePn	**Pn**	**19 31 39.3 +0.9**
BSZH			Lg	Lg	19 32 09.7
BSZH			eLg	Lg	19 32 09.7
GRUS	**Gruza**	**1.85 197**	ePn	**Pn**	**19 31 38.3 -0.3**
GRUS			eSg	**Sb**	**19 32 04.4 +0.6**
GRUS	**Gruza**	**1.85 197**	Pn	**Pn**	**19 31 38.3 -0.3**
GRUS			Lg	Lg	19 32 04.4
DIVS	**Divibare**	**1.87 214**	ePg	**Pb**	**19 31 41.1 -0.3**
DIVS			eSg	**Sg**	**19 32 07.1 -0.5**
DIVS	**Divibare**	**1.87 214**	ePn	**Pn**	**19 31 38.2 -0.9**
DIVS	**Divibare**	**1.87 214**	Pn	**Pn**	**19 31 38.2 -0.9**
DIVS			x	x	19 31 38.6
DIVS			Pb	**Pb**	**19 31 41.1 -0.3**
DIVS			Lg	Lg	19 32 07.1
ZAGS	**Zajecar**	**1.93 163**	ePn	**Pn**	**19 31 39.5 -0.2**
ZAGS			eSg	**Sg**	**19 32 07.9 -1.5**
ZAGS	**Zajecar**	**1.93 163**	Pn	**Pn**	**19 31 39.5 -0.2**
ZAGS			Lg	Lg	19 32 07.9
BOVS	**Bovan**	**2.03 175**	ePg	**Pb**	**19 31 44.7 +0.7**
BOVS	**Bovan**	**2.03 175**	Pg	**Pb**	**19 31 44.7 +0.7**
MORH	**Mrgy, Hungar**	**2.03 287**	⇓ePn	**Pn**	**19 31 40.7 -0.5**
MORH			⇓eSn	**Sg**	**19 32 13.0 +0.3**
MORH	**Mrgy, Hungar**	**2.03 287**	ePn	**Pn**	**19 31 40.4 -0.8**
MORH	**Mrgy, Hungar**	**2.03 287**	Pn	**Pn**	**19 31 40.4 -0.8**
MORH			Pn	**Pn**	**19 31 40.7 -0.5**
MORH			Pn	**Pn**	**19 31 40.7 -0.5**
MORH			ePn	**Pn**	**19 31 40.7 -0.5**
MORH			Sg	**Sg**	**19 32 13.0 +0.3**
MORH			eSg	**Sg**	**19 32 13.0 +0.3**
MDB	**Medias**	**2.10 76**	i Pn	**Pb**	**19 31 44.2 -1.1**
MDB	**Medias**	**2.10 76**	⇑P	**Pb**	**19 31 44.2 -1.1**
MDB	**Medias**	**2.10 76**	⇑P	**Pb**	**19 31 44.2 -1.1**
MDB	**Medias**	**2.10 76**	Pn	**Pb**	**19 31 44.2 -1.1**
MDB			Pn	**Pb**	**19 31 44.2 -1.1**
MDB			Pn	**Pb**	**19 31 44.2 -1.1**
MDB			Pn	**Pb**	**19 31 44.2 -1.1**
BAIL	**Bailesti**	**2.12 140**	⇓P	**Pn**	**19 31 43.5 +1.1**
BAIL	**Bailesti**	**2.12 140**	⇓P	**Pn**	**19 31 43.5 +1.1**
BAIL	**Bailesti**	**2.12 140**	Pn	**Pn**	**19 31 43.5 +1.1**
BAIL			Pn	**Pn**	**19 31 43.5 +1.1**
ARR	**Arges**	**2.26 96**	i Pn	**Pn**	**19 31 45.8 +1.5**
ARR	**Arges**	**2.26 96**	⇑P	**Pn**	**19 31 45.8 +1.5**
ARR	**Arges**	**2.26 96**	⇑P	**Pn**	**19 31 45.8 +1.5**
ARR	**Arges**	**2.26 96**	Pn	**Pn**	**19 31 45.8 +1.5**
ARR			Pg	**Pn**	**19 31 45.8 +1.5**
ARR			Pn	**Pn**	**19 31 45.8 +1.5**
ARR			Pn	**Pn**	**19 31 45.8 +1.5**
ARR			x	x	19 31 46.4
IVAS	**Ivanjica**	**2.28 204**	ePg	**Pb**	**19 31 48.9 +0.6**
IVAS	**Ivanjica**	**2.28 204**	Pg	**Pb**	**19 31 48.9 +0.6**
BBLS	**Lazići**	**2.31 220**	ePn	**Pn**	**19 31 44.7 -0.3**
BBLS			eSg	**Sg**	**19 32 20.8 -0.8**
BBLS	**Lazići**	**2.31 220**	ePn	**Pn**	**19 31 44.3 -0.7**
BBLS	**Lazići**	**2.31 220**	Pn	**Pn**	**19 31 44.3 -0.7**
BBLS			Pb	**Pn**	**19 31 44.7 -0.3**
BBLS			Lg	Lg	19 32 20.8
HAPS	**Han Pijesak,BI**	**2.37 229**	ePn	**Pn**	**19 31 44.3 -1.6**
HAPS	**Han Pijesak,BI**	**2.37 229**	ePn	**Pn**	**19 31 44.1 -1.8**
HAPS	**Han Pijesak,BI**	**2.37 229**	Pn	**Pn**	**19 31 44.1 -1.8**
HAPS			Pb	Pb	19 31 44.3 -5.6
SELS	**Selova**	**2.45 186**	ePn	**Pn**	**19 31 46.3 -0.6**
SELS			eSg	**Sg**	**19 32 24.0 -2.1**
SELS	**Selova**	**2.45 186**	Pn	**Pn**	**19 31 46.3 -0.6**
SELS			Lg	Lg	19 32 24.0
BMR	**Baia Mare**	**2.46 34**	i Pn	**Pn**	**19 31 48.6 +1.6**
BMR	**Baia Mare**	**2.46 34**	⇓P	**Pn**	**19 31 48.6 +1.6**
BMR	**Baia Mare**	**2.46 34**	⇓P	**Pn**	**19 31 48.6 +1.6**
BMR	**Baia Mare**	**2.46 34**	Pn	**Pn**	**19 31 48.6 +1.6**
BMR			Pn	**Pn**	**19 31 48.6 +1.6**
BMR			Pn	**Pn**	**19 31 48.6 +1.6**
BMR			Pn	**Pn**	**19 31 48.6 +1.6**
ARCR	**ARCALIA**	**2.47 54**	i Pn	**Pn**	**19 31 48.3 +1.1**
ARCR	**ARCALIA**	**2.47 54**	⇑P	**Pn**	**19 31 48.3 +1.1**
ARCR	**ARCALIA**	**2.47 54**	⇑P	**Pn**	**19 31 48.3 +1.1**
ARCR	**ARCALIA**	**2.47 54**	Pn	**Pn**	**19 31 48.3 +1.1**
ARCR			Pn	**Pn**	**19 31 48.3 +1.1**
ARCR			Pg	**Pn**	**19 31 48.3 +1.1**
ARCR			Pn	**Pn**	**19 31 48.3 +1.1**
ARCR			x	x	19 31 48.6
BUD	**Budapest**	**2.48 318**	⇓ePn	**Pn**	**19 31 47.5 +0.3**
BUD			⇓eSn	**Sg**	**19 32 33.7 +6.8**
BUD	**Budapest**	**2.48 318**	Pn	**Pn**	**19 31 47.5 +0.3**
BUD			Pn	**Pn**	**19 31 47.5 +0.3**
BUD			ePn	**Pn**	**19 31 47.5 +0.3**
BUD			Lg	Lg	19 32 33.7
BUD			eLg	Lg	19 32 33.7
PSZ	**Piszkesteto**	**2.50 335**	⇑ePn	**Pn**	**19 31 47.5 -0.1**
PSZ			⇑eSn	**Sn**	**19 32 17.6 -0.4**
PSZ	**Piszkesteto**	**2.50 335**	⇑P	**Pn**	**19 31 47.6 -0.1**
PSZ	**Piszkesteto**	**2.50 335**	⇑P	**Pn**	**19 31 47.6 -0.1**
PSZ	**Piszkesteto**	**2.50 335**	Pn	**Pn**	**19 31 47.5 -0.1**
PSZ			ePg	**Pn**	**19 31 47.5 -0.1**
PSZ			Pb	**Pn**	**19 31 47.6 -0.1**
PSZ			Pb	**Pn**	**19 31 47.6 -0.1**
PSZ			x	x	19 31 47.6
PSZ			Sn	**Sn**	**19 32 17.6 -0.4**
PSZ			eSn	**Sn**	**19 32 17.6 -0.4**
RUDO	**Rudo**	**2.52 217**	ePn	**Pn**	**19 31 46.5 -1.4**
RUDO	**Rudo**	**2.52 217**	Pn	**Pn**	**19 31 46.5 -1.4**
ZAPS	**Zavoj**	**2.53 160**	ePg	**Pb**	**19 31 53.7 +1.1**
ZAPS			eSg	**Sg**	**19 32 26.5 -2.2**
ZAPS	**Zavoj**	**2.53 160**	Pg	**Pb**	**19 31 53.7 +1.1**
ZAPS			Lg	Lg	19 32 26.5
DOB	**Doboj**	**2.54 250**	ePn	**Pn**	**19 31 49.2 +1.1**
DOB	**Doboj**	**2.54 250**	Pn	**Pn**	**19 31 49.2 +1.1**
VOIR		**2.54 94**	⇓iPn	**Pn**	**19 31 49.2 +0.9**
VOIR		**2.54 94**	⇓P	**Pn**	**19 31 49.2 +0.9**
VOIR		**2.54 94**	⇓P	**Pn**	**19 31 49.2 +0.9**
VOIR		**2.54 94**	Pn	**Pn**	**19 31 49.2 +0.9**
VOIR			Pn	**Pn**	**19 31 49.2 +0.9**
VOIR			Pn	**Pn**	**19 31 49.2 +0.9**
VOIR			Pg	**Pn**	**19 31 49.2 +0.9**
VOIR			x	x	19 31 50.8
TRPA	**Tarpa**	**2.58 16**	i Pn	**Pn**	**19 31 48.6 -0.1**
TRPA	**Tarpa**	**2.58 16**	Pn	**Pn**	**19 31 48.6 -0.1**
TRPA			Pb	**Pn**	**19 31 48.6 -0.1**
TRPA			x	x	19 31 48.7
SJES	**Sjenica**	**2.62 204**	ePn	**Pn**	**19 31 49.6 +0.3**
SJES	**Sjenica**	**2.62 204**	Pn	**Pn**	**19 31 49.6 +0.3**
VLAD	**Vladila**	**2.68 127**	⇓P	**Pn**	**19 31 50.8 +0.7**
VLAD	**Vladila**	**2.68 127**	⇓P	**Pn**	**19 31 50.8 +0.7**
VLAD	**Vladila**	**2.68 127**	Pn	**Pn**	**19 31 50.8 +0.7**
VLAD			Pn	**Pn**	**19 31 50.8 +0.7**
HUMR	**Humele**	**2.75 113**	i Pn	**Pn**	**19 31 52.4 +1.4**
HUMR	**Humele**	**2.75 113**	⇓P	**Pn**	**19 31 52.4 +1.4**
HUMR	**Humele**	**2.75 113**	⇓P	**Pn**	**19 31 52.4 +1.4**
HUMR	**Humele**	**2.75 113**	Pn	**Pn**	**19 31 52.4 +1.4**
HUMR			Pn	**Pn**	**19 31 52.4 +1.4**
HUMR			Pn	**Pn**	**19 31 52.4 +1.4**
HUMR			Pn	**Pn**	**19 31 52.4 +1.4**
TIH	**Tihany**	**2.76 298**	⇓ePn	**Pn**	**19 31 51.6 +0.5**
TIH			⇓eSn	**Sn**	**19 32 25.1 +0.8**
TIH	**Tihany**	**2.76 298**	Pn	**Pn**	**19 31 51.6 +0.5**
TIH			ePb	**Pn**	**19 31 51.6 +0.5**
TIH			Sn	**Sn**	**19 32 25.1 +0.8**
TIH			eSn	**Sn**	**19 32 25.1 +0.8**
DOPR	**Dopca**	**2.77 82**	i Pn	**Pn**	**19 31 52.9 +1.5**
DOPR	**Dopca**	**2.77 82**	⇑P	**Pn**	**19 31 52.9 +1.5**
DOPR	**Dopca**	**2.77 82**	⇑P	**Pn**	**19 31 52.9 +1.5**
DOPR	**Dopca**	**2.77 82**	Pn	**Pn**	**19 31 52.9 +1.5**
DOPR			Pn	**Pn**	**19 31 52.9 +1.5**
DOPR			Pn	**Pn**	**19 31 52.9 +1.5**
DOPR			Pn	**Pn**	**19 31 52.9 +1.5**
CSKK	**Cskako**	**2.78 309**	⇓ePn	**Pn**	**19 31 51.6 +0.1**
CSKK			⇓eSn	**Sg**	**19 32 38.1 +1.4**
CSKK	**Cskako**	**2.78 309**	Pn	**Pn**	**19 31 51.6 +0.1**
CSKK			ePb	**Pn**	**19 31 51.6 +0.1**
CSKK			eSg	**Sg**	**19 32 38.1 +1.4**
CSKK			Sg	**Sg**	**19 32 38.1 +1.4**
MPEP	**Malo Peshtene**	**2.83 144**	P	**Pn**	**19 31 52.3 +0.2**
MPEP	**Malo Peshtene**	**2.83 144**	Pn	**Pn**	**19 31 52.3 +0.2**
MPEP			Pg	**Pg**	**19 32 01.3 -0.2**
BARS	**Barje**	**2.85 175**	ePn	**Pn**	**19 31 52.2 -0.3**
BARS			eSg	**Pb**	**19 31 57.4 -0.7**
BARS			eSg	**Sg**	**19 32 37.9 -1.1**
BARS	**Barje**	**2.85 175**	Pb	**Pn**	**19 31 52.2 -0.3**
BARS			Sn	**Pb**	**19 31 57.4 -0.7**
BARS			Sg	**Sg**	**19 32 37.9 -1.1**
KECS	**Kecovo**	**2.90 347**	ePn	**Pn**	**19 31 54.0 +0.9**
KECS	**Kecovo**	**2.90 347**	Pn	**Pn**	**19 31 54.0 +0.9**
KECS			ePb	**Pn**	**19 31 54.0 +0.9**
KECS			x	x	19 31 54.3
KECS	**Kecovo**	**2.90 347**	ePN	**Pn**	**19 31 54.0 +0.9**
JOSR	**Joseni**	**3.01 68**	⇑P	**Pn**	**19 31 56.9 +2.2**
JOSR	**Joseni**	**3.01 68**	⇑P	**Pn**	**19 31 56.9 +2.2**
JOSR	**Joseni**	**3.01 68**	Pn	**Pn**	**19 31 56.9 +2.2**
JOSR			Pn	**Pn**	**19 31 56.9 +2.2**
UPM	**Unac-Piva**	**3.06 217**	ePn	**Pn**	**19 31 54.8 -0.6**
UPM	**Unac-Piva**	**3.06 217**	Pn	**Pn**	**19 31 54.8 -0.6**
OZUR		**3.06 80**	i Pn	**Pn**	**19 31 57.0 +1.7**
OZUR		**3.06 80**	⇑P	**Pn**	**19 31 57.0 +1.7**
OZUR		**3.06 80**	⇑P	**Pn**	**19 31 57.0 +1.7**
OZUR		**3.06 80**	Pn	**Pn**	**19 31 57.0 +1.7**
OZUR			Pn	**Pn**	**19 31 57.0 +1.7**
OZUR			Pb	**Pb**	**19 31 57.4 -4.2**
OZUR			Pb	**Pb**	**19 31 57.4 -4.2**
COPA	**Copaceanca**	**3.08 118**	⇓P	**Pn**	**19 31 56.8 +1.2**
COPA	**Copaceanca**	**3.08 118**	⇓P	**Pn**	**19 31 56.8 +1.2**
COPA	**Copaceanca**	**3.08 118**	Pn	**Pn**	**19 31 56.8 +1.2**
COPA			Pn	**Pn**	**19 31 56.8 +1.2**
MPLH	**Magyarpolny**	**3.10 301**	ePn	**Pn**	**19 31 56.4 +0.6**
MPLH			eSn	**Sn**	**19 32 32.3 -0.3**
MPLH	**Magyarpolny**	**3.10 301**	Pb	**Pn**	**19 31 56.4 +0.6**
MPLH			ePn	**Pn**	**19 31 56.4 +0.6**
MPLH			Sn	**Sn**	**19 32 32.3 -0.3**
MPLH			eSn	**Sn**	**19 32 32.3 -0.3**
BLY	**Banja Luka**	**3.15 255**	⇑P	**Pn**	**19 31 56.1 -0.4**
BLY	**Banja Luka**	**3.15 255**	⇑P	**Pn**	**19 31 56.1 -0.4**
BLY	**Banja Luka**	**3.15 255**	ePn	**Pn**	**19 31 55.8 -0.7**
BLY	**Banja Luka**	**3.15 255**	Pn	**Pn**	**19 31 55.8 -0.7**
BLY			Pb	Pb	19 31 56.1 -6.9
BLY			Pb	Pb	19 31 56.1 -6.9
MLR	**Muntele Rosu**	**3.16 91**	i Pn	**Pn**	**19 31 58.7 +1.9**
MLR	**Muntele Rosu**	**3.16 91**	Pn	**Pn**	**19 31 58.8 +2.0**
	0.9nm,0.3s,baz=288,slow=6.4,SNR=20				
MLR			Pg	**Pg**	**19 32 06.1 -1.9**
	7.5nm,0.3s,baz=280,slow=6.1,SNR=41				
MLR			Sn	**Sn**	**19 32 35.9 +1.5**
	3.1nm,0.3s,baz=213,slow=12,SNR=4.2				
MLR			Lg	Lg	19 32 48.3
	4.8nm,0.3s,baz=319,slow=23,SNR=7.8				
MLR	**Muntele Rosu**	**3.16 91**	⇑P	**Pn**	**19 31 58.7 +1.9**
MLR	**Muntele Rosu**	**3.16 91**	⇑P	**Pn**	**19 31 58.7 +1.9**
MLR	**Muntele Rosu**	**3.16 91**	Pb	**Pn**	**19 31 58.7 +1.9**
MLR			Pb	**Pn**	**19 31 58.7 +1.9**
MLR			Pg	**Pn**	**19 31 58.7 +1.9**
MLR			Pn	**Pn**	**19 31 58.7 +1.9**
MLR			Pn	**Pn**	**19 31 58.8 +2.0**
	0.9nm,0.3s				
MLR			Pg	**Pg**	**19 32 06.7 -1.3**
	7.5nm,0.3s				
MLR			Sn	**Sn**	**19 32 35.9 +1.5**
	3.1nm,0.3s				
MLR			Sg	**Sg**	**19 32 48.3 -0.6**
	4.8nm,0.3s				
PLVB	**Pleven**	**3.21 134**	⇑P	**Pn**	**19 31 57.3 0.0**
PLVB	**Pleven**	**3.21 134**	⇑P	**Pn**	**19 31 57.3 0.0**
PLVB	**Pleven**	**3.21 134**	Pn	**Pn**	**19 31 57.3 0.0**
PLVB			Pn	**Pn**	**19 31 57.3 0.0**
BOSS	**Bosilegrad**	**3.25 166**	ePn	**Pn**	**19 31 57.9 0.0**
BOSS			eSg	**Sg**	**19 32 50.1 -1.6**
BOSS	**Bosilegrad**	**3.25 166**	Pn	**Pn**	**19 31 57.9 0.0**
BOSS			Lg	Lg	19 32 50.1
BURAR	**Bucovina Array**	**3.25 52**	⇓P	**Pn**	**19 31 59.8 +1.8**
BURAR	**Bucovina Array**	**3.25 52**	⇓P	**Pn**	**19 31 59.8 +1.8**
BURAR	**Bucovina Array**	**3.25 52**	Pn	**Pn**	**19 31 59.8 +1.8**
BURAR			Pn	**Pn**	**19 31 59.8 +1.8**
MOSL	**Moslavina**	**3.29 271**	Pn	**Pn**	**19 31 58.4 -0.1**
MOSL	**Moslavina**	**3.29 271**	ePn	**Pn**	**19 31 58.4 -0.1**
VTS	**Vitosha**	**3.30 156**	ePn	**Pn**	**19 31 59.0 +0.3**
VTS	**Vitosha**	**3.30 156**	i Pn	**Pn**	**19 31 59.0 +0.3**
VTS	**Vitosha**	**3.30 156**	⇑P	**Pn**	**19 31 59.0 +0.3**
VTS	**Vitosha**	**3.30 156**	⇑P	**Pn**	**19 31 59.0 +0.3**
VTS	**Vitosha**	**3.30 156**	P	**Pn**	**19 31 59.1 +0.3**
VTS	**Vitosha**	**3.30 156**	Pn	**Pn**	**19 31 59.0 +0.3**
VTS			Pn	**Pn**	**19 31 59.0 +0.3**
VTS			Pn	**Pn**	**19 31 59.0 +0.3**
VTS			Pn	**Pn**	**19 31 59.1 +0.3**
VTS			x	**Pn**	**19 31 59.1 +0.3**
VTS			Pb	**Pn**	**19 31 59.6 +0.8**
VTS			Pb	**Pn**	**19 31 59.6 +0.8**
VTS			Pg	**Pg**	**19 32 09.6 -1.0**
KOLS	**Kolonicke sedl**	**3.32 9**	ePn	**Pn**	**19 31 59.8 +0.9**
KOLS			eSn	**Sg**	**19 32 52.4 -1.7**
KOLS	**Kolonicke sedl**	**3.32 9**	Pn	**Pn**	**19 31 59.8 +0.9**
KOLS			ePn	**Pn**	**19 31 59.8 +0.9**
KOLS			x	x	19 32 00.1
KOLS			Lg	Lg	19 32 52.4
KOLS			eLg	Lg	19 32 52.4
KOLS	**Kolonicke sedl**	**3.32 9**	ePN	**Pn**	**19 31 59.8 +0.9**
KOLS			eSG	**Sg**	**19 32 52.4 -1.7**
MGRS	**Mrkonjic Grad**	**3.33 250**	ePn	**Pg**	**19 32 08.7 -2.5**
MGRS	**Mrkonjic Grad**	**3.33 250**	Pg	**Pg**	**19 32 08.7 -2.5**
VYHS	**Vyhne**	**3.35 329**	ePn	**Pn**	**19 31 59.8 +0.5**
VYHS	**Vyhne**	**3.35 329**	Pn	**Pn**	**19 31 59.8 +0.5**
VYHS			ePb	**Pn**	**19 31 59.8 +0.5**
VYHS			x	x	19 31 59.9
VYHS	**Vyhne**	**3.35 329**	ePN	**Pn**	**19 31 59.8 +0.5**
BRY	**Bratogost**	**3.46 218**	ePn	**Pn**	**19 32 02.1 +1.2**
BRY	**Bratogost**	**3.46 218**	Pn	**Pn**	**19 32 02.1 +1.2**
KALN	**Kalnik**	**3.52 279**	Pn	**Pn**	**19 31 59.9 -1.7**
KALN	**Kalnik**	**3.52 279**	ePn	**Pn**	**19 31 59.9 -1.7**
PDG	**Podgorica**	**3.59 207**	ePn	**Pn**	**19 32 03.4 +0.8**
PDG	**Podgorica**	**3.59 207**	ePn	**Pn**	**19 32 03.8 +1.2**
PDG	**Podgorica**	**3.59 207**	Pn	**Pn**	**19 32 03.4 +0.8**
PDG			Pb	**Pn**	**19 32 03.8 +1.2**
PLOR	**Plostina**	**3.65 85**	⇑P	**Pn**	**19 32 06.7 +3.4**
PLOR	**Plostina**	**3.65 85**	Pn	**Pn**	**19 32 06.7 +3.4**
SKO	**Skopje**	**3.69 180**	i Pn	**Pb**	**19 32 14.2 +1.9**
SKO	**Skopje**	**3.69 180**	i Pn	**Pb**	**19 32 14.2 +1.9**
TREB	**Trebinje**	**3.69 218**	ePn	**Pn**	**19 32 03.0 -0.9**
TREB	**Trebinje**	**3.69 218**	ePn	**Pn**	**19 32 04.1 +0.2**
TREB	**Trebinje**	**3.69 218**	Pn	**Pn**	**19 32 03.0 -0.9**
TREB			Pb	**Pn**	**19 32 04.1 +0.2**
VRI	**Vrincioaia**	**3.70 85**	⇓iPn	**Pn**	**19 32 06.4 +2.3**
VRI	**Vrincioaia**	**3.70 85**	⇑P	**Pn**	**19 32 06.4 +2.3**
VRI	**Vrincioaia**	**3.70 85**	Pn	**Pn**	**19 32 06.4 +2.3**
VRI			Pn	**Pn**	**19 32 06.4 +2.3**
VRI			Pb	**Pn**	**19 32 06.4 +2.3**
VRI			x	x	19 32 07.5
TESR	**Tescani**	**3.72 75**	⇑P	**Pn**	**19 32 06.8 +2.4**
TESR	**Tescani**	**3.72 75**	Pn	**Pn**	**19 32 06.8 +2.4**
TESR			x	x	19 32 07.2
GIRR	**Girov**	**3.73 68**	⇑P	**Pn**	**19 32 06.0 +1.5**
GIRR	**Girov**	**3.73 68**	⇑P	**Pn**	**19 32 06.0 +1.5**
GIRR	**Girov**	**3.73 68**	Pn	**Pn**	**19 32 06.1 +1.5**
GIRR			Pn	**Pn**	**19 32 06.1 +1.5**
LANS	**Liptovska Anna**	**3.74 340**	ePn	**Pn**	**19 32 06.6 +1.9**
LANS	**Liptovska Anna**	**3.74 340**	Pn	**Pn**	**19 32 06.6 +1.9**
LANS			ePn	**Pn**	**19 32 06.6 +1.9**
LANS	**Liptovska Anna**	**3.74 340**	ePN	**Pn**	**19 32 06.6 +1.9**
DBRK	**Dubrovnik**	**3.82 220**	Pn	**Pn**	**19 32 06.5 +0.8**
DBRK			Sn	**Sn**	**19 32 52.1 +1.7**
DBRK	**Dubrovnik**	**3.82 220**	ePn	**Pn**	**19 32 06.5 +0.8**
DBRK			Sn	**Sn**	**19 32 52.1 +1.7**
ZAG	**Zagreb**	**3.83 274**	x	**Pn**	**19 32 08.1 +2.3**
DRME	**Dracevica, Mon**	**3.84 206**	ePn	**Pn**	**19 32 08.3 +2.3**
DRME	**Dracevica, Mon**	**3.84 206**	Pn	**Pn**	**19 32 08.3 +2.3**
NIE	**Niedzica**	**3.84 349**	x	**Pn**	**19 32 08.6 +2.6**
PTJ	**Puntijarka**	**3.84 276**	Pn	**Pn**	**19 32 04.1 -2.0**
PTJ	**Puntijarka**	**3.84 276**	ePn	**Pn**	**19 32 04.1 -2.0**
HCY	**Herceg Novi**	**3.85 215**	ePn	**Pn**	**19 32 05.6 -0.6**
HCY	**Herceg Novi**	**3.85 215**	Pn	**Pn**	**19 32 05.6 -0.6**
STON	**Ston**	**3.87 225**	ePn	**Pn**	**19 32 07.8 +1.4**
STON	**Ston**	**3.87 225**	Pn	**Pn**	**19 32 07.8 +1.4**
STON			Pb	**Pn**	**19 32 08.0 +1.5**
STON			Sn	**Sn**	**19 32 54.3 +2.6**
STON	**Ston**	**3.87 225**	ePn	**Pn**	**19 32 08.0 +1.5**
STON			Sn	**Sn**	**19 32 54.0 +2.3**
ZST	**Bratislava**	**3.91 312**	ePn	**Pn**	**19 32 06.2 -0.8**
ZST			eSn	**Sn**	**19 32 50.5 -2.2**
ZST	**Bratislava**	**3.91 312**	Pn	**Pn**	**19 32 06.2 -0.8**
ZST			ePb	**Pn**	**19 32 06.2 -0.8**
ZST			Sn	**Sn**	**19 32 50.5 -2.2**
ZST			eSb	**Sn**	**19 32 50.5 -2.2**
ZST	**Bratislava**	**3.91 312**	ePN	**Pn**	**19 32 06.2 -0.8**
ZST			eSN	**Sn**	**19 32 50.5 -2.2**
SOP	**Sopron**	**3.93 303**	ePn	**Pn**	**19 32 08.8 +1.6**
SOP			eSn	**Sn**	**19 32 50.4 -2.7**
SOP	**Sopron**	**3.93 303**	Pb	**Pn**	**19 32 08.8 +1.6**
SOP			ePn	**Pn**	**19 32 08.8 +1.6**
SOP			Sb	**Sn**	**19 32 50.4 -2.7**
SOP			eSn	**Sn**	**19 32 50.4 -2.7**
MODS	**Modra-Piesok**	**3.94 315**	ePn	**Pn**	**19 32 06.4 -1.0**
MODS			eSn	**Sn**	**19 32 49.9 -3.5**
MODS	**Modra-Piesok**	**3.94 315**	Pn	**Pn**	**19 32 06.4 -1.0**
MODS			ePb	**Pn**	**19 32 06.4 -1.0**
MODS			Sn	**Sn**	**19 32 49.9 -3.5**
MODS			eSb	**Sn**	**19 32 49.9 -3.5**
MODS	**Modra-Piesok**	**3.94 315**	ePN	**Pn**	**19 32 06.4 -1.0**
MODS			eSN	**Sn**	**19 32 49.9 -3.5**
KIJV	**Kijevo**	**3.95 247**	Pn	**Pn**	**19 32 07.4 -0.2**
KIJV	**Kijevo**	**3.95 247**	ePn	**Pn**	**19 32 07.4 -0.2**
MAKA	**Makarska**	**3.96 235**	Pn	**Pn**	**19 32 07.2 -0.4**
MAKA			Sn	**Sn**	**19 32 55.0 +1.2**
MAKA	**Makarska**	**3.96 235**	ePn	**Pn**	**19 32 07.2 -0.4**
MAKA			Sn	**Sn**	**19 32 55.0 +1.2**
SMOL	**Smolenice**	**3.96 318**	ePn	**Pn**	**19 32 07.9 +0.2**
SMOL			eSn	**Sn**	**19 32 51.9 -2.0**
SMOL	**Smolenice**	**3.96 318**	Pn	**Pn**	**19 32 07.9 +0.2**
SMOL			ePb	**Pn**	**19 32 07.9 +0.2**
SMOL			Sn	**Sn**	**19 32 51.9 -2.0**
SMOL			eSb	**Sn**	**19 32 51.9 -2.0**
SMOL	**Smolenice**	**3.96 318**	ePN	**Pn**	**19 32 07.8 +0.1**
SMOL			eSN	**Sn**	**19 32 51.9 -2.0**
KKB	**Krupnik**	**3.97 162**	P	**Pn**	**19 32 09.1 +1.3**
KKB	**Krupnik**	**3.97 162**	Pn	**Pn**	**19 32 09.1 +1.3**
STIP	**Stip**	**4.00 172**	i Pn	**Pn**	**19 32 07.3 -1.0**
STIP	**Stip**	**4.00 172**	i Pn	**Pn**	**19 32 07.3 -1.0**
SZH	**Strazhica**	**4.00 125**	P	**Pn**	**19 32 08.7 +0.4**
SZH	**Strazhica**	**4.00 125**	Pn	**Pn**	**19 32 08.7 +0.4**
JAVC	**Velka Javorina**	**4.11 323**	x	**Pn**	**19 32 09.7 0.0**
JAVC			Pn	**Pn**	**19 32 10.1 +0.4**
ELND	**Elena**	**4.19 129**	⇑P	**Pn**	**19 32 10.9 +0.1**
ELND	**Elena**	**4.19 129**	⇑P	**Pn**	**19 32 10.9 +0.1**
ELND	**Elena**	**4.19 129**	Pn	**Pn**	**19 32 10.9 +0.1**
ELND			Pn	**Pn**	**19 32 10.9 +0.1**
CRES	**Cresnjev**	**4.20 274**	ePn	**Pn**	**19 32 10.2 -0.7**
CRES	**Cresnjev**	**4.20 274**	Pn	**Pn**	**19 32 10.2 -0.7**
MMB	**Musomiste**	**4.39 157**	P	**Pn**	**19 32 15.6 +2.0**
MMB	**Musomiste**	**4.39 157**	Pn	**Pn**	**19 32 15.6 +2.0**
ARSA	**Arzberg**	**4.39 293**	Pn	**Pn**	**19 32 14.9 +1.3**
ARSA			Sn	**Sn**	**19 33 02.9 -1.7**
ARSA	**Arzberg**	**4.39 293**	i Pn	**Pn**	**19 32 14.9 +1.3**
	4.0nm,0.3s				
ARSA			i Sn	**Sn**	**19 33 02.9 -1.7**
	15nm,0.5s				
ARSA	**Arzberg**	**4.39 293**	Pn	**Pn**	**19 32 14.9 +1.3**
ARSA			Pb	**Pn**	**19 32 14.9 +1.3**
ARSA			Sn	**Sn**	**19 33 02.9 -1.7**
ARSA			Sb	**Sn**	**19 33 02.9 -1.7**
VAY	**Valandovo**	**4.41 169**	i Pn	**Pn**	**19 32 14.4 +0.5**
VAY	**Valandovo**	**4.41 169**	i Pn	**Pn**	**19 32 14.4 +0.5**
CONA	**Conrad Observa**	**4.46 303**	Pn	**Pn**	**19 32 16.1 +1.6**
CONA			Sn	**Sn**	**19 33 04.7 -1.5**
CONA	**Conrad Observa**	**4.46 303**	i Pn	**Pn**	**19 32 16.2 +1.6**
	0.9nm,0.2s				

CONA *i* Sn **Sn** **19 33 04.7 -1.5**
9.0nm,0.5s
CONA Conrad Observa 4.46 303 Pb **Pn** **19 32 16.1 +1.6**
CONA Pn **Pn** **19 32 16.1 +1.6**
CONA Sb **Sn** **19 33 04.7 -1.5**
CONA Sn **Sn** **19 33 04.7 -1.5**
MORI Morici 4.46 248 Pn **Pn** **19 32 16.1 +1.5**
MORI Sn **Sn** **19 33 08.2 +1.9**
MORI Morici 4.46 248 *i* Pn **Pn** **19 32 16.0 +1.5**
MORI Sn **Sn** **19 33 08.2 +1.9**
SOKA Soboth 4.57 285 Pn **Pn** **19 32 15.9 -0.2**
SOKA Sn **Sn** **19 33 07.3 -1.8**
SOKA Soboth 4.57 285 *i* Pn **Pn** **19 32 15.9 -0.2**
0.5nm,0.2s
SOKA *i* Sn **Sn** **19 33 07.3 -1.8**
4.0nm,0.3s
SOKA Soboth 4.57 285 Pn **Pn** **19 32 15.9 -0.2**
SOKA Pb **Pn** **19 32 15.9 -0.2**
SOKA Sn **Sn** **19 33 07.3 -1.8**
SOKA Sb **Sn** **19 33 07.3 -1.8**
ZIRJ Zirje 4.60 246 Pn **Pn** **19 32 17.5 +1.0**
ZIRJ Sn **Sn** **19 33 10.6 +0.9**
ZIRJ Zirje 4.60 246 *e*Pn **Pn** **19 32 17.5 +1.0**
ZIRJ Sn **Sn** **19 33 10.6 +0.9**
DIM Dimitrovgrad 4.66 139 P **Pn** **19 32 17.8 +0.5**
DIM Dimitrovgrad 4.66 139 Pn **Pn** **19 32 17.8 +0.5**
OJC Ojcow 4.70 347 x **Pn** **19 32 19.4 +1.6**
CFR Carcaliu 4.73 93 *i* Pn **Pn** **19 32 19.0 +0.7**
CFR Carcaliu 4.73 93 ⇑P **Pn** **19 32 19.0 +0.7**
CFR Carcaliu 4.73 93 ⇑P **Pn** **19 32 19.0 +0.7**
CFR Carcaliu 4.73 93 Pn **Pn** **19 32 19.0 +0.7**
CFR Pn **Pn** **19 32 19.0 +0.7**
CFR Pb **Pn** **19 32 19.2 +1.0**
CFR Pb **Pn** **19 32 19.2 +1.0**
OKC Ostrava-Krasne 4.74 333 *e*Pn **Pn** **19 32 19.8 +1.5**
OKC *e*Sn **Sn** **19 33 13.9 +0.9**
OKC Ostrava-Krasne 4.74 333 x **Pn** **19 32 19.6 +1.3**
OKC Pb **Pn** **19 32 19.8 +1.5**
OKC Pb **Pn** **19 32 19.8 +1.5**
OKC *e*Pn **Pn** **19 32 19.8 +1.5**
OKC Sb **Sn** **19 33 13.9 +0.9**
OKC Sb **Sn** **19 33 13.9 +0.9**
OKC *e*Sn **Sn** **19 33 13.9 +0.9**
OKC Ostrava-Krasne 4.74 333 *e*PN **Pn** **19 32 19.8 +1.5**
OKC *e*SN **Sn** **19 33 13.9 +0.9**
NVLJ Novalja 4.78 259 Pn **Pn** **19 32 19.9 +1.0**
NVLJ Sn **Sn** **19 33 13.6 -0.5**
NVLJ Novalja 4.78 259 *e*Pn **Pn** **19 32 19.9 +1.0**
NVLJ Sn **Sn** **19 33 13.6 -0.5**
SRS Serrai 4.80 160 x **Pn** **19 32 19.1 -0.1**
KRUC Moravsky 4.83 317 *e*PN **Pn** **19 32 19.0 -0.7**
KRUC *e*SN **Sn** **19 33 13.3 -2.1**
KRUC Moravsky 4.83 317 Pn **Pn** **19 32 19.0 -0.7**
KRUC x x 19 32 19.5
KRUC Sn **Sn** **19 33 13.3 -2.1**
DUGI Dugi Otok 4.84 252 Pn **Pn** **19 32 21.4 +1.6**
DUGI Dugi Otok 4.84 252 *e*Pn **Pn** **19 32 21.4 +1.6**
OBKA Obir 4.87 283 Pn **Pn** **19 32 21.5 +1.2**
OBKA Obir 4.87 283 *i* Pn **Pn** **19 32 21.6 +1.2**
2.3nm,0.3s
OBKA Obir 4.87 283 Pn **Pn** **19 32 21.5 +1.2**
OBKA Pn **Pn** **19 32 21.5 +1.2**
MORC Moravsky Berou 4.89 329 *i* Pn **Pn** **19 32 20.7 +0.2**
MORC Moravsky Berou 4.89 329 ⇓P **Pn** **19 32 20.7 +0.2**
MORC Moravsky Berou 4.89 329 *e*PN **Pn** **19 32 20.7 +0.2**
MORC *e*SN **Sn** **19 33 18.9 +2.0**
MORC Moravsky Berou 4.89 329 ⇓P **Pn** **19 32 20.7 +0.2**
MORC Moravsky Berou 4.89 329 Pn **Pn** **19 32 20.7 +0.2**
MORC Pn **Pn** **19 32 20.7 +0.2**
MORC Pg **Pn** **19 32 20.7 +0.2**
MORC Pb **Pn** **19 32 20.7 +0.2**
MORC Pb **Pn** **19 32 20.7 +0.2**
MORC x **Pn** **19 32 20.9 +0.4**
MORC Sn **Sn** **19 33 18.9 +2.0**
VRAC Vranov 4.91 320 ⇓ *i* Pn **Pn** **19 32 20.9 +0.1**
VRAC Vranov 4.91 320 Pn **Pn** **19 32 20.6 -0.2**
1.5nm,0.3s,baz=141,slow=12,SNR=12
VRAC Sn **Sn** **19 33 14.4 -3.0**
1.4nm,0.3s,baz=236,slow=19,SNR=1.7
VRAC Vranov 4.91 320 ⇓P **Pn** **19 32 20.9 +0.1**
VRAC Vranov 4.91 320 *e*PN **Pn** **19 32 20.9 +0.1**
VRAC Vranov 4.91 320 ⇓P **Pn** **19 32 20.9 +0.1**
VRAC Vranov 4.91 320 Pb **Pn** **19 32 20.6 -0.2**
1.5nm,0.3s
VRAC Pg **Pn** **19 32 20.9 +0.1**
VRAC Pg **Pn** **19 32 20.9 +0.1**
VRAC Pn **Pn** **19 32 20.9 +0.1**
VRAC Pn **Pn** **19 32 20.9 +0.1**
VRAC Pn **Pn** **19 32 20.9 +0.1**
VRAC x x 19 32 21.1
VRAC Sn **Sn** **19 33 14.4 -3.0**
1.4nm,0.3s
MOA Molln 5.40 297 *i* Sn **Sn** **19 33 31.6 +2.2**
13nm,0.6s
KRLC Kraliky 5.42 326 *e*Pn **Pn** **19 32 28.0 +0.3**
KRLC *e*Sn **Sn** **19 33 29.6 -0.3**
KRLC Kraliky 5.42 326 Pn **Pn** **19 32 28.0 +0.3**
KRLC Pn **Pn** **19 32 28.0 +0.3**
KRLC *e*Pb **Pn** **19 32 28.0 +0.3**
KRLC Sn **Sn** **19 33 29.6 -0.3**
KRLC Sn **Sn** **19 33 29.6 -0.3**
KRLC *e*Sb **Sn** **19 33 29.6 -0.3**
KRLC Kraliky 5.42 326 *e*PN **Pn** **19 32 28.0 +0.3**
KRLC *e*SN **Sn** **19 33 29.6 -0.3**
KBA Koelnbreinsper 5.78 287 *i* Sn **Sn** **19 33 39.8 +0.7**
4.1nm,0.4s
DPC Dobruska-Polom 5.82 326 *e*Pn **Pn** **19 32 34.2 +1.0**
DPC Dobruska-Polom 5.82 326 Pn **Pn** **19 32 34.2 +1.0**
DPC Pn **Pn** **19 32 34.2 +1.0**
DPC *e*Pn **Pn** **19 32 34.2 +1.0**
DPC Dobruska-Polom 5.82 326 *e*PN **Pn** **19 32 34.2 +1.0**
ALN Alexandroupoli 5.82 143 x **Pn** **19 32 36.0 +2.8**
20nm,0.5s
OSTC Ostas 6.02 326 Pn **Pn** **19 32 36.9 +0.9**
OSTC Ostas 6.02 326 *e*PN **Pn** **19 32 36.9 +0.9**
CHVC Chvalec 6.11 326 Pn **Pn** **19 32 37.6 +0.4**
CHVC Chvalec 6.11 326 *e*PN **Pn** **19 32 37.6 +0.4**
GERES GERESS Array B 6.16 304 Pn **Pn** **19 32 38.6 +0.7**
0.8nm,0.3s,baz=114,slow=14,SNR=18
GERES Sn **Sn** **19 33 43.2 -5.1**
1.2nm,0.3s,baz=115,slow=25,SNR=9.3
GERES GERESS Array B 6.16 304 Pn **Pn** **19 32 38.6 +0.7**
0.8nm,0.3s
GERES Sn **Sn** **19 33 43.2 -5.1**
1.2nm,0.3s
PRU Pruhonice 6.35 315 *e*Pn **Pn** **19 32 39.6 -0.9**
PRU *e*Sn **Sn** **19 33 49.9 -2.9**
PRU Pruhonice 6.35 315 Pb **Pn** **19 32 39.6 -0.9**
PRU Pb **Pn** **19 32 39.6 -0.9**
PRU *e*Pn **Pn** **19 32 39.6 -0.9**
PRU Sb **Sn** **19 33 49.9 -2.9**
PRU Sb **Sn** **19 33 49.9 -2.9**
PRU *e*Sn **Sn** **19 33 49.9 -2.9**
PRU Pruhonice 6.35 315 *e*PN **Pn** **19 32 39.6 -0.9**
PRU *e*SN **Sn** **19 33 49.9 -2.9**
KHC Kasperske Hory 6.37 306 *e*Pn **Pn** **19 32 41.1 +0.3**
KHC *e*Sn **Sn** **19 33 50.3 -3.0**
KHC Kasperske Hory 6.37 306 Pn **Pn** **19 32 41.1 +0.3**
KHC Pn **Pn** **19 32 41.1 +0.3**
KHC *e*Pb **Pn** **19 32 41.1 +0.3**
KHC Sn **Sn** **19 33 50.3 -3.0**
KHC Sn **Sn** **19 33 50.3 -3.0**
KHC *e*Sb **Sn** **19 33 50.3 -3.0**
KHC Kasperske Hory 6.37 306 *e*PN **Pn** **19 32 41.1 +0.3**
KHC *e*SN **Sn** **19 33 50.3 -3.0**
AKASG Malin Array Be 7.24 43 Pn **Pn** **19 32 52.0 -0.7**
0.5nm,0.3s,baz=227,slow=30,SNR=1.3
AKASG Pg **Pb** **19 33 14.2 +1.4**
1.0nm,0.3s,baz=228,slow=16,SNR=3.6
AKASG Malin Array Be 7.24 43 Pn **Pn** **19 32 52.8 +0.1**
0.5nm,0.3s
AKASG Pb **Pb** **19 33 14.2 +1.4**
1.0nm,0.3s
DAVOX Davos/Dischmat 8.10 282 Pn **Pn** **19 33 05.3 +0.6**
0.1nm,0.3s,baz=95,slow=11,SNR=2.0
DAVOX Sn **Sn** **19 34 38.3 +2.2**
0.1nm,0.3s,baz=129,slow=19,SNR=1.9
DAVOX Davos/Dischmat 8.10 282 Pn **Pn** **19 33 05.3 +0.6**
0.1nm,0.3s
DAVOX Sn **Sn** **19 34 38.3 +2.2**
0.1nm,0.3s
BRTR Keskin Array B 10.75 119 Pn **Pn** **19 33 44.0 +3.0**
0.1nm,0.3s,baz=304,slow=12,SNR=2.6
BRTR Keskin Array B 10.75 119 Pn **Pn** **19 33 44.0 +3.0**
0.1nm,0.3s
FINES FINESS Array B 16.04 8 Pn **Pn** **19 34 51.0 -1.3**
0.1nm,0.3s,baz=178,slow=12,SNR=1.8
FINES FINESS Array B 16.04 8 Pn **Pn** **19 34 51.0 -1.3**
0.1nm,0.3s
TORD Torodi Ar. Bea 36.48 214 P **P** **19 38 13.8 +1.8**
0.3nm,0.6s,baz=17,slow=8.8,SNR=2.5
TORD Torodi Ar. Bea 36.48 214 P **P** **19 38 13.8 +1.8**
0.3nm,0.6s

*IDC **08** 19:35:01.4±0.6,0.°34N×126.°19E,h0km,mb4.2/19, mb1 4.2/23,mb1mx4.1/48,mbtmp4.2/23,ML3.6/4, Error ellipse: s-maj=20.7km s-min=12.6km az=77.0*
*NEIC **08** 19:35:03.5±1.9,0.°36N±0.°08×126.°34E±0.°06,h14km±2km, mb4.3/19,Error ellipse: s-maj=12.0km s-min=7.1km az=157.0*
*DJA **08** 19:35:05.7±1.0,0.°N±2.°×12.°6E±.°,h22km±9km,M4.2/15, mb4.3/13,mB4.9/3,MLv4.1/15,Mw(mB)4.2/3*
ISC 08 19:35:02.9±0.4,0.°35N±0.°05×126.°37E±0.°04,h10km,n66, σ1°35/72,mb4.3/30,1C,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
						h m s	ISC
TNTI	**Ternate**	**1.08**	**67**	P	**Pb**	**19 35 24.3**	**+0.6**
TNTI				S	**Sb**	**19 35 39.0**	**+1.1**
TNTI	**Ternate**	**1.08**	**67**	Pn	**Pb**	**19 35 24.4**	**+0.7**
LBMI	**Labuha**	**1.50**	**131**	P	**Pn**	**19 35 29.6**	**-0.3**
LBMI				S	**Sb**	**19 35 49.5**	**-0.5**
KMSI	**Cibinong**	**2.40**	**275**	P	**Pn**	**19 35 45.0**	**+2.7**
SANI	**Sanana**	**2.42**	**189**	P	**Pn**	**19 35 43.0**	**+0.5**
NLAI	**Namlea**	**3.64**	**168**	P	**Pn**	**19 36 00.9**	**+1.5**
LUWI	**Luwuk**	**3.85**	**249**	P	**Pn**	**19 36 03.5**	**+1.2**
LUWI	**Luwuk**	**3.85**	**249**		**Pn**	**19 36 03.1**	**+0.8**
AAI	**Ambon**	**4.41**	**156**	P	**Pn**	**19 36 11.9**	**+1.9**
MSAI	**Masohi**	**4.48**	**145**	P	**Pn**	**19 36 12.8**	**+1.9**
SIJI	**Sorong**	**5.05**	**104**	Pn	**Pn**	**19 36 20.4**	**+1.6**
	1.5nm,0.3s,baz=107,slow=6.0,SNR=8.2						
SIJI				S	**Sn**	**19 37 18.4**	**+1.3**
	0.4nm,0.3s,baz=304,slow=16,SNR=1.5						
SKMP	**Bagumbayan, Su**	**6.39**	**343**	*e*P	**Pn**	**19 36 40.7**	**+3.5**
MPSI	**Mapaga**	**6.47**	**270**	P	**Pn**	**19 36 41.7**	**+3.4**
	0.2nm2µm17nm,1.0s						
FAKI	**Fak Fak**	**6.72**	**119**	Pn	**Pn**	**19 36 43.5**	**+1.8**
KCP	**Kidapawan**	**6.73**	**349⇑**	*e*P	**Pn**	**19 36 40.6**	**-1.3**
BBSI	**Bau Bau**	**6.93**	**213**	P	**Pn**	**19 36 46.1**	**+1.4**
	577nm0.0nm8.3nm,1.0s						
TTSI	**Tana Toraja**	**7.37**	**243**	P	**Pn**	**19 36 52.9**	**+2.3**
	0.2nm42nm,0.5s						
BNSI	**Bone**	**7.84**	**233**	P	**Pn**	**19 36 59.4**	**+2.3**
	0.1nm27nm,1.1s						
SPSI	**Sidrap Palu**	**7.87**	**237**	P	**Pn**	**19 37 00.3**	**+2.8**
	0.1nm568nm21nm,0.6s						
BKSI	**Bulukumba**	**8.41**	**228**	P	**Pn**	**19 37 08.8**	**+3.9**
	24nm,0.8s						
KAPI	**Kappang**	**8.49**	**231**	Pn	**Pn**	**19 37 04.8**	**-1.3**
	0.5nm,0.3s,baz=35,slow=7.2,SNR=4.1						
KAPI				Sn	**Sn**	**19 38 40.3**	**-1.8**
	0.3nm,0.3s,baz=127,slow=22,SNR=1.1						
KAPI	**Kappang**	**8.49**	**231**		**Pn**	**19 37 06.8**	**+0.8**
BATI	**Baumata**	**10.83**	**194**	Pn	**Pn**	**19 37 38.1**	**0.0**
	0.6nm,0.3s,baz=135,slow=20,SNR=1.2						
KSM	**Kuching**	**16.10**	**274**	P	**P**	**19 38 53.1**	**+0.2**
KSM				IAmb	IAmb	19 38 54.8	
	comp=Z,54nm,1.5s						
KNRA	**Kununurra**	**16.10**	**172**	P	**Pn**	**19 38 50.9**	**+1.3**
FITZ	**Fitzroy Crossi**	**18.35**	**182**	P	**Pn**	**19 39 17.1**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=2.6,slow=7.9,SNR=6.9						
FITZ	**Fitzroy Crossi**	**18.35**	**182**	P	**P**	**19 39 18.6**	**+0.8**
DLV	**T Lat**	**21.16**	**304**	P	**P**	**19 39 48.6**	**-0.1**
DLV				IAmb	IAmb	19 40 02.0	
	comp=Z,12nm,1.1s						
WRAB	**Tennant Creek**	**21.62**	**159**	P	**P**	**19 39 53.5**	**+0.1**
WRAB				IAmb	IAmb	19 40 18.8	
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**21.63**	**159**	P	**P**	**19 39 53.1**	**-0.4**
	comp=Z,3.6nm,0.6s,baz=337,slow=11,SNR=35						
AS31	**Alice Springs**	**24.97**	**163**	P	**P**	**19 40 27.6**	**+0.7**
ASAR	**Alice Springs**	**24.97**	**163**	P	**P**	**19 40 27.8**	**+0.8**
	comp=Z,5.3nm,0.6s,baz=345,slow=12,SNR=59						
ASAR				PcP	**PcP**	**19 44 02.4**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=340,slow=2.5,SNR=2.0						
RPSI	**Rantau Prapat**	**27.53**	**275**	P	**P**	**19 40 49.2**	**-0.9**
PSI	**Prapat**	**27.54**	**275**	P	**P**	**19 40 49.2**	**-1.1**
	comp=Z,1.2nm,0.2s,baz=180,slow=16,SNR=1.6						
CMAR	**Chiang Mai Arr**	**32.39**	**305**	P	**P**	**19 41 32.0**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=116,slow=6.5,SNR=7.1						
STKA	**Stephens Creek**	**35.15**	**157**	P	**P**	**19 41 57.4**	**+0.4**
	comp=Z,4.6nm,0.9s,baz=332,slow=12,SNR=3.1						
STKA	**Stephens Creek**	**35.15**	**157**	P	**P**	**19 41 57.0**	**0.0**
KSRS	**Korea Array**	**36.95**		P	**P**	**19 42 12.7**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=178,slow=9.1,SNR=7.5						
USRK	**Ussuriysk Ar.**	**43.94**	**6**	P	**P**	**19 43 10.8**	**+0.7**
	comp=Z,3.0nm,0.7s,baz=195,slow=6.5,SNR=5.8						
LSA	**Lhasa**	**44.45**	**314**	P	**P**	**19 43 13.4**	**-1.7**
LSA				IAmb	IAmb	19 43 18.3	
	comp=Z,2.3nm,0.7s						
GTA	**Gaotai**	**45.83**	**331**	*e*P	**P**	**19 43 25.5**	**+0.1**
GTA				pP	sP	19 43 30.1	+1.4
GTA				sP	pwP	19 43 32.6	+1.6
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KLR	**Kul'dur**	**48.91**	**5**	P	**P**	**19 43 48.9**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=212,slow=6.2,SNR=5.5						
ULN	**Ulaanbaatar**	**50.21**	**343**	P	**P**	**19 43 59.8**	**+0.6**
ULN				IAmb	IAmb	19 44 13.8	
	comp=Z,3.5nm,0.9s						
SONM	**Songino Array**	**50.38**	**343**	P	**P**	**19 44 00.9**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=149,slow=6.7,SNR=4.9						
SONM				PcP	**PcP**	**19 45 18.9**	**0.0**
	comp=Z,1.1nm,0.7s,baz=153,slow=1.0,SNR=2.0						
PETK	**Petropavlovsk-**	**58.68**	**22**	P	**P**	**19 45 01.6**	**+1.0**
	comp=Z,2.9nm,0.6s,baz=208,slow=4.2,SNR=13						
MK31	**Makanchi Array**	**60.13**	**327**	P	**P**	**19 45 10.2**	**-0.6**
MK31				IAmb	IAmb	19 45 12.6	
	comp=Z,3.2nm,1.0s						
MKAR	**Makanchi Array**	**60.13**	**327**	P	**P**	**19 45 10.6**	**-0.2**
	comp=Z,2.4nm,0.6s,baz=128,slow=8.3,SNR=27						
MKAR				PcP	**PcP**	**19 45 55.9**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=123,slow=4.5,SNR=3.9						
KSH	**Kashi**	**60.20**	**317**	P	**P**	**19 45 14.6**	**+3.1**
KSH				pP	pwP	19 45 27.0	+10
KSH				sP	sP	19 45 33.2	+18
KSH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,280nm,5.3s						
MAKZ	**Makanchi**	**60.31**	**326**	P	**P**	**19 45 11.1**	**-0.9**
MAKZ				IAmb	IAmb	19 45 16.5	
	comp=Z,2.1nm,0.7s						
KDJ	**Kajisay**	**60.64**	**320**	P	**P**	**19 45 14.1**	**-0.4**
KDJ				IAmb	IAmb	19 45 19.3	
	comp=Z,2.5nm,0.9s						
ZALV	**Zalesovo Beam**	**63.43**	**334**	P	**P**	**19 45 31.8**	**-0.9**
	comp=Z,1.6nm,0.7s,baz=123,slow=7.3,SNR=8.6						
GAR	**Garm**	**63.96**	**314**	P	**P**	**19 45 36.3**	**-0.4**
KURK	**Kurchatov**	**64.39**	**329**	P	**P**	**19 45 38.8**	**-0.4**
KK31	**Karatay Array**	**65.47**	**318**	P	**P**	**19 45 46.2**	**-0.2**
KK31				IAmb	IAmb	19 45 48.0	
	comp=Z,1.9nm,0.9s						
KKAR	**Karatay Array**	**65.47**	**318**	P	**P**	**19 45 46.2**	**-0.2**
KKAR				IAmb	IAmb	19 45 48.0	
	comp=Z,1.9nm,0.9s						
BVAR	**Borovoye Array**	**69.95**	**328**	P	**P**	**19 46 13.5**	**-0.9**
	comp=Z,4.1nm,0.9s,baz=124,slow=8.0,SNR=19						
BRVK	**Borovoye**	**70.02**	**328**	P	**P**	**19 46 15.6**	**+0.7**
NRIK	**Noril'sk**	**73.61**	**347**	P	**P**	**19 46 36.7**	**+0.6**
	comp=Z,2.6nm,0.7s,baz=107,slow=6.9,SNR=4.6						
AKTO	**Aktyubinsk**	**76.08**	**322**	P	**P**	**19 46 50.8**	**-0.1**
	comp=Z,7.3nm,0.8s,baz=108,slow=6.3,SNR=26						
ARU	**Arti**	**77.59**	**328**	P	**P**	**19 46 58.7**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=83,slow=5.4,SNR=6.1						
ARU	**Arti**	**77.59**	**328**	IAmb	IAmb	19 46 59.3	
	comp=Z,5.2nm,0.9s						
RAYN	**Ar Rayn**	**81.48**	**294**	P	**P**	**19 47 20.6**	**-0.5**
KIRV	**Kirov**	**82.91**	**329**	P	**P**	**19 47 27.1**	**-0.6**
	comp=Z,5.0nm,0.8s,baz=247,slow=1.2,SNR=3.7						
KBZ	**Khabaz**	**85.03**	**314**	P	**P**	**19 47 38.4**	**-0.5**
	comp=Z,4.2nm,1.0s,baz=122,slow=0.7,SNR=5.3						
BRTR	**Keskin Array B**	**91.88**	**310**	P	**P**	**19 48 10.7**	**-1.3**
	comp=Z,1.0nm,0.9s,baz=122,slow=4.2,SNR=5.7						
TORD	**Torodi Ar. Bea**	**123.56**	**286**	PKP	**PKPdf**	**19 54 01.3**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=77,slow=1.5,SNR=5.5						

*IDC **08** 19:35:56.1±5.1,35.°70N×71.°46E,h85km±32km,mb3.4/7, mb1 3.4/13,mb1mx3.1/58,mbtmp3.7/13,Error ellipse: s-maj=57.9km s-min=24.8km az=151.0*
*NNC **08** 19:36:10.3±7.5,37.°25N×70.°71E,h0km,mb4.0,mpv3.7, Error ellipse: s-maj=76.2km s-min=37.3km az=156.0*
ISC 08 19:35:59.8±0.7,36.°13N±0.°06×71.°23E±0.°06,h102km,n30, σ2°68/35,mb3.6/6,2C-5D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
						h m s	ISC
JMU	**Jammu**	**4.56**	**137**	*e*P	**Sn**	**19 37 54.0**	**-4.5**
THN	**Thein Dam**	**5.24**	**133**	*e*P	Pn	19 37 21.5	+5.8
THN				*e*S	**Sn**	**19 38 19.2**	**+4.4**
AAK	**Ala-Archa**	**6.97**	**20**	P	**Pn**	**19 37 41.2**	**+1.8**
	1.5nm,0.3s,baz=196,slow=4.9,SNR=12						
AAK				S	**Sn**	**19 38 53.5**	**-3.7**
	1.4nm,0.3s,baz=304,slow=23,SNR=8.2						
AAK	**Ala-Archa**	**6.97**	**20**	⇓P	**Pn**	**19 37 41.0**	**+1.6**
	2.7nm,0.4s						
AAK				⇓S	**Sn**	**19 38 53.7**	**-3.5**
	6.6nm,0.6s						
KK31	**Karatay Array**	**6.99**	**356**	P	**Pn**	**19 37 40.3**	**+0.9**
	2.0nm,0.3s,baz=182,slow=13,SNR=74						
KK31				⇑S	**Sn**	**19 38 52.2**	**-5.1**
	2.3nm,0.3s,baz=181,slow=24,SNR=4.2						
TKM2	**Tokmak 2**	**7.58**	**25**	⇓P	**Pn**	**19 37 52.4**	**+4.7**
	4.6nm,0.5s						
TKM2				⇓S	**Sn**	**19 39 07.9**	**-4.0**
	1.3nm,0.6s						
GEYT	**Alibeck**	**10.63**	**284**	P	**Pn**	**19 38 29.5**	**+0.4**
	0.3nm,0.3s,baz=106,slow=11,SNR=2.6						
GEYT				S	**Sn**	**19 40 21.6**	**-4.6**
	0.4nm,0.3s,baz=276,slow=39,SNR=1.4						
PYUN	**Piuthan**	**12.78**	**125**	*e*P	**Pn**	**19 38 59.2**	**+1.3**
	12nm,0.3s						
DANN	**Dangsing**	**13.13**	**123**	*e*P	**Pn**	**19 39 03.8**	**+1.1**
KOLN	**Koldanda**	**13.40**	**125**	*e*P	**Pn**	**19 39 07.1**	**+1.0**
	4.8nm,0.3s						
MKAR	**Makanchi Array**	**13.49**	**34**	P	**Pn**	**19 39 07.0**	**+0.1**
	0.0nm,0.3s,baz=224,slow=12,SNR=2.5						
GKN	**Gorkha**	**13.95**	**122**	*e*P	**P**	**19 39 14.3**	**-3.6**
	11nm,0.2s						
DMN	**Daman**	**14.52**	**122**	*e*P	**Pn**	**19 39 17.6**	**-3.0**
KKN	**Kakani**	**14.53**	**121**	*e*P	**P**	**19 39 21.6**	**-2.8**
PKIN	**Phulchoki**	**14.74**	**121**	*e*P	**P**	**19 39 24.5**	**-2.3**
	9.6nm,0.4s						
JIRN	**Jiri**	**15.25**	**119**	*e*P	**P**	**19 39 31.1**	**-1.4**
	14nm,0.3s						
KURBB	**Kurchatov Arra**	**15.42**	**18**	P	**Pn**	**19 39 32.6**	**+1.1**
	0.0nm,0.3s,baz=202,slow=11,SNR=3.6						
AB31	**Akbulak array**	**15.49**	**331**	⇓P	**Pn**	**19 39 32.8**	**+0.4**
	0.5nm,0.4s						
TAPN	**Taplejung**	**16.51**	**117**	*e*P	**P**	**19 39 48.0**	**+1.5**
	13nm,0.6s						
BVAR	**Borovoye Array**	**16.90**	**358**	P	**P**	**19 39 51.5**	**+1.2**
	0.2nm,0.3s,baz=172,slow=11,SNR=10						
AKTO	**Aktyubinsk**	**17.19**	**330**	P	**Pn**	**19 39 55.7**	**+2.3**
	0.5nm,0.3s,baz=127,slow=11,SNR=17						
AKTO	**Aktyubinsk**	**17.19**	**330**	⇑P	**Pn**	**19 39 54.8**	**+1.4**
	3.2nm,0.8s						
ZALV	**Zalesovo Beam**	**20.18**	**24**	P	**P**	**19 40 26.8**	**+0.9**
	2.3nm,0.3s,baz=209,slow=11,SNR=16						
FINES	**FINESS Array B**	**37.89**	**326**	P	**P**	**19 43 08.6**	**+2.0**
	1.1nm,0.8s,baz=99,slow=12,SNR=3.9						
ARCES	**ARCESS Array B**	**41.55**	**338**	P	**P**	**19 43 39.0**	**+2.2**
	2.3nm,1.1s,baz=96,slow=6.5,SNR=6.2						
HFS	**Hagfors**	**43.47**	**322**	P	**P**	**19 43 54.1**	**+1.6**
	1.2nm,0.8s,baz=104,slow=11,SNR=7.4						
NB2	**NORSAR Subarra**	**44.78**	**323**	P	**P**	**19 44 04.8**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.78**	**323**	P	**P**	**19 44 04.4**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=97,slow=7.7,SNR=4.5						
TORD	**Torodi Ar. Bea**	**65.89**	**269**	P	**P**	**19 46 34.3**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=47,slow=6.7,SNR=4.3						
YKA	**Yellowknife Ar**	**81.61**	**3**	P	**P**	**19 48 06.5**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=353,slow=5.1,SNR=6.0						

*JMA **08** 19:36:40.6±0.2,23.°96N×122.°44E,h15km±4km,M3.4*
*TAP **08** 19:36:41.1,24.°00N×122.°44E,h24km,ML3.6,D*
ISC 08 19:36:40.3±1.1,23.°94N±0.°02×122.°44E±0.°02,h16km±9km, n110,σ0°69/213,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
						h m s	ISC
EOS1	**EOS1**	**0.67**	**335**	P	**Pg**	**19 36 53.4**	**0.0**
	baz=326						
EOS1				S	**Sg**	**19 37 02.8**	**+0.5**
	baz=326						
JYNG	**Yonagunijimaku**	**0.69**	**42**	P	**Pb**	**19 36 53.5**	**-0.4**
JYNG				S	**Sb**	**19 37 01.8**	**-1.4**
YOJ	**Yonaguni jima**	**0.74**	**45**	P	**Pb**	**19 36 54.5**	**-0.2**
	baz=56						
YOJ				S	**Sb**	**19 37 02.9**	**-1.7**
	baz=56						
YOJ	**Yonaguni jima**	**0.74**	**45**	P	**Pb**	**19 36 54.5**	**-0.2**
YOJ				S	**Sb**	**19 37 03.3**	**-1.3**
HWA	**Hwalien**	**0.76**	**273**	*e*P	**Pn**	**19 36 56.3**	**0.0**
	baz=254						
TWD	**Chiawan**	**0.78**	**280**	*e*P	**Pb**	**19 36 55.7**	**+0.2**
	baz=276						
TWD				*e*S	**Sb**	**19 37 05.8**	**0.0**
	baz=276						
ENA	**Nanau**	**0.80**	**307**	P	**Pb**	**19 36 55.7**	**-0.1**
	baz=304						
ENA				*e*S	**Sb**	**19 37 05.9**	**-0.5**
	baz=304						
NACB	**Ninganchiao**	**0.80**	**

NNS				eS	Sn	19 37 15.3	-0.5		
	baz=281								
EHY	**Hungye**	**1.11**	**247**	*eP*	**Pn**	**19 37 00.8**	**-0.4**		
	baz=243								
EHY				eS	**Sb**	**19 37 15.4**	**+0.1**		
	baz=243								
TWB1	**Santiao Chiao**	**1.14**	**339**	*eP*	**Pb**	**19 37 01.5**	**-0.1**		
	baz=356								
TWB1				eS	**Sg**	**19 37 16.4**	**-0.7**		
	baz=356								
OWD	**Renai**	**1.15**	**271**	*eP*	**Pn**	**19 37 01.5**	**-0.4**		
	baz=267								
OWD				eS	**Sb**	**19 37 15.4**	**-1.3**		
	baz=267								
CHGB	**Renai**	**1.16**	**276**	P	**Pn**	**19 37 02.0**	**-0.1**		
	baz=260								
CHGB				S	**Sb**	**19 37 16.6**	**-0.4**		
	baz=260								
TIPB	**Shuangxi**	**1.17**	**332**	P	**Pb**	**19 37 02.1**	**0.0**		
	baz=330								
TIPB				eS	**Sb**	**19 37 16.0**	**-1.0**		
	baz=330								
YULB	**Yu-li**	**1.18**	**243**	P	**Pn**	**19 37 01.9**	**-0.2**		
	baz=239								
YULB				eS	**Sb**	**19 37 17.2**	**-0.2**		
	baz=239								
NWLT	**Wulai**	**1.19**	**315**	P	**Pb**	**19 37 02.9**	**+0.4**		
	baz=312								
NWLT				eS	**Sb**	**19 37 17.1**	**-0.6**		
	baz=312								
TWT	**Tachien**	**1.19**	**285**	*eP*	**Pb**	**19 37 03.2**	**+0.6**		
	baz=268								
TWT				eS	**Sn**	**19 37 18.5**	**0.0**		
	baz=268								
TWF1	**Yuli**	**1.20**	**241**	*eP*	**Pn**	**19 37 02.3**	**-0.1**		
	baz=237								
TWF1				eS	**Sb**	**19 37 18.4**	**+0.5**		
	baz=237								
VWDT	**VWDT**	**1.20**	**261**	*eP*	**Pn**	**19 37 02.4**	**0.0**		
	baz=258								
VWDT				eS	**Sb**	**19 37 17.4**	**-0.5**		
	baz=258								
TDCB	**Techi**	**1.21**	**285**	*eP*	**Pb**	**19 37 03.1**	**+0.3**		
	baz=269								
TDCB				eS	**Sn**	**19 37 19.0**	**+0.2**		
	baz=269								
YHNB	**Yeheng**	**1.21**	**307**	P	**Pb**	**19 37 03.0**	**+0.2**		
	baz=304								
YHNB				eS	**Sb**	**19 37 17.9**	**-0.4**		
	baz=304								
NSK	**Sanguang**	**1.23**	**307**	*eP*	**Pb**	**19 37 03.1**	**0.0**		
	baz=304								
NSK				eS	**Sn**	**19 37 19.0**	**-0.1**		
	baz=304								
IRIF	**Iriomote-Funau**	**1.25**	**71**	P	**Pb**	**19 37 03.3**	**-0.1**		
IRIF				eS	**Sn**	**19 37 19.9**	**+0.4**		
HATJ	**Hateruma jima**	**1.26**	**85**	P	**Pb**	**19 37 03.8**	**+0.2**		
HATJ				eS	**Sn**	**19 37 20.1**	**+0.3**		
NWF	**Wu-fen Shan**	**1.27**	**332**	*eP*	**Pb**	**19 37 03.7**	**-0.2**		
	baz=331								
NWF				eS	**Sn**	**19 37 20.2**	**-0.1**		
	baz=331								
WFSB	**Wu-fen Shan**	**1.27**	**332**	*i P*	**Pb**	**19 37 03.7**	**-0.2**		
	baz=331								
WFSB				eS	**Sn**	**19 37 20.2**	**0.0**		
	baz=331								
FULB	**Fuli**	**1.28**	**235**	*eP*	**Pn**	**19 37 03.0**	**-0.6**		
	baz=220								
FULB				eS	**Sn**	**19 37 19.0**	**-1.4**		
	baz=220								
CHKT	**Chengkung**	**1.29**	**230**	*eP*	**Pn**	**19 37 02.6**	**-1.0**		
	baz=227								
CHKT				eS	**Sn**	**19 37 18.9**	**-1.7**		
	baz=227								
TWA	**Mucha**	**1.29**	**323**	*eP*	**Pb**	**19 37 04.7**	**+0.4**		
	baz=321								
TWA				eS	**Sg**	**19 37 21.3**	**-0.8**		
	baz=321								
NHDH	**Xindian Distri**	**1.31**	**321**	*eP*	**Pg**	**19 37 05.2**	**-0.4**		
	baz=319								
NHDH				eS	**Sg**	**19 37 22.8**	**+0.1**		
	baz=319								
TATO	**Taipei**	**1.34**	**320**	*eP*	**Pb**	**19 37 05.2**	**+0.2**		
	baz=302								
TATO				eS	**Sg**	**19 37 22.9**	**-0.8**		
	baz=302								
SSLB	**Suanglung**	**1.36**	**264**	*eP*	**Pn**	**19 37 05.0**	**+0.3**		
	baz=260								
SSLB				eS	**Sn**	**19 37 22.3**	**-0.2**		
	baz=260								
TAP1	**Taipei**	**1.37**	**323**	*eP*	**Pb**	**19 37 06.1**	**+0.6**		
	baz=320								
TAP1				eS	**Sb**	**19 37 22.9**	**0.0**		
	baz=320								
TAP	**Taipei**	**1.38**	**322**	*eS*	**Sg**	**19 37 25.1**	**+0.1**		
	baz=320								
DPDB	**Guoxing**	**1.38**	**274**	*eP*	**Pn**	**19 37 05.5**	**+0.5**		
	baz=262								
DPDB				eS	**Sn**	**19 37 22.2**	**-0.8**		
	baz=262								
WHP	**Taichung City**	**1.40**	**284**	P	**Pg**	**19 37 07.5**	**+0.2**		
	baz=269								
WHP				eS	**Sb**	**19 37 23.6**	**-0.2**		
	baz=269								
SMLT	**Sun Moon Lake**	**1.41**	**268**	*eP*	**Pn**	**19 37 05.8**	**+0.4**		
	baz=255								
SMLT				eS	**Sn**	**19 37 23.9**	**+0.2**		
	baz=255								
WLTB	**Daxi**	**1.41**	**310**	*eP*	**Pb**	**19 37 06.4**	**+0.2**		
	baz=294								
WLTB				eS	**Sg**	**19 37 25.4**	**-0.5**		
	baz=294								
YUS	**Yu-Shan**	**1.43**	**252**	*eP*	**Pn**	**19 37 06.3**	**+0.3**		
	baz=248								
YUS				eS	**Sn**	**19 37 24.5**	**-0.3**		
	baz=248								
YM01	**YM01**	**1.44**	**327**	*eP*	**Pb**	**19 37 06.5**	**-0.2**		
	baz=325								
YM01				eS	**Sb**	**19 37 24.1**	**-0.7**		
	baz=325								
TYC	**Yuchr**	**1.45**	**269**	*eP*	**Pn**	**19 37 06.3**	**+0.6**		
	baz=265								
TYC				eS	**Sn**	**19 37 24.6**	**+0.2**		
	baz=265								
YM10	**YM10**	**1.45**	**327**	*eP*	**Pn**	**19 37 06.1**	**+0.2**		
	baz=325								
YM10				eS	**Sg**	**19 37 26.3**	**-0.7**		
	baz=325								
YM11	**YM11**	**1.45**	**327**	*eP*	**Pb**	**19 37 06.3**	**-0.6**		
	baz=326								
YM11				eS	**Sg**	**19 37 25.8**	**-1.3**		
	baz=326								
YM05	**YM05**	**1.45**	**327**	*eP*	**Pn**	**19 37 06.1**	**+0.2**		
	baz=325								
YM05				eS	**Sb**	**19 37 24.8**	**-0.5**		
	baz=325								
YM04	**YM04**	**1.46**	**326**	*eP*	**Pn**	**19 37 06.3**	**+0.3**		
	baz=324								
YM04				eS	**Sb**	**19 37 24.8**	**-0.6**		
	baz=324								
YM08	**YM08**	**1.46**	**328**	*eP*	**Pb**	**19 37 06.5**	**-0.6**		
	baz=326								
JKRS	**Kuro-shima**	**1.47**	**78**	P	**Pb**	**19 37 07.4**	**+0.2**		
JKRS				eS	**Sb**	**19 37 25.8**	**+0.2**		
WHYT	**Xinyi Township**	**1.47**	**261**	*eP*	**Pn**	**19 37 07.0**	**+0.9**		
	baz=244								
WHYT				eS	**Sb**	**19 37 27.3**	**+1.6**		
	baz=244								
LIOB	**Emei**	**1.47**	**299**	P	**Pb**	**19 37 07.8**	**+0.5**		
	baz=296								
LIOB				eS	**Sg**	**19 37 26.9**	**-0.9**		
	baz=296								
YM03	**YM03**	**1.48**	**327**	*eP*	**Pg**	**19 37 08.6**	**-0.2**		
	baz=325								
YM03				eS	**Sb**	**19 37 25.8**	**-0.2**		
	baz=325								
NSTT	**Nanjuang**	**1.48**	**298**	*eP*	**Pb**	**19 37 07.8**	**+0.4**		
	baz=295								
NSTT				eS	**Sn**	**19 37 25.1**	**-0.2**		
	baz=295								
TWS1	**Kuangyinshan**	**1.48**	**321**	*eP*	**Pb**	**19 37 07.4**	**0.0**		
	baz=337								
TWS1				eS	**Sb**	**19 37 26.4**	**+0.4**		
	baz=337								
ANP	**Anpu**	**1.49**	**326**	*eP*	**Pb**	**19 37 07.7**	**-0.1**		
	baz=325								
ANP				eS	**Sb**	**19 37 26.6**	**+0.2**		
	baz=325								
ELDTW	**Lidau**	**1.50**	**240**	P	**Pn**	**19 37 06.3**	**-0.3**		
	baz=237								
ELDTW				eS	**Sn**	**19 37 24.3**	**-1.7**		
	baz=237								
TWH	**Lutao**	**1.51**	**216**	P	**Pn**	**19 37 06.3**	**-0.4**		
	baz=213								
TWH				S	**Sn**	**19 37 24.0**	**-2.0**		
	baz=213								
NTST	**Danshui**	**1.51**	**324**	*eP*	**Pb**	**19 37 08.0**	**+0.1**		
	baz=339								
NTST				eS	**Sg**	**19 37 28.2**	**-0.9**		
	baz=339								
NCUH	**Zhongli**	**1.53**	**312**	*eP*	**Pg**	**19 37 09.9**	**+0.2**		
	baz=310								
NCUH				eS	**Sb**	**19 37 28.2**	**+0.7**		
	baz=310								
TWY	**Chenhua**	**1.53**	**330**	*eP*	**Pb**	**19 37 07.9**	**-0.4**		
	baz=329								
TWY				S	**Sb**	**19 37 28.0**	**+0.6**		
	baz=329								
ALS	**Alishan**	**1.56**	**254**	P	**Pn**	**19 37 08.4**	**+0.8**		
	baz=251								
ALS				eS	**Sn**	**19 37 27.1**	**-0.5**		
	baz=251								
WJS	**Zhushan**	**1.57**	**266**	*eP*	**Pb**	**19 37 09.4**	**+0.5**		
	baz=262								
WJS				eS	**Sg**	**19 37 31.5**	**+0.7**		
	baz=262								
SBCB	**Hsinchu**	**1.57**	**303**	*eP*	**Pb**	**19 37 09.0**	**0.0**		
	baz=300								
SBCB				eS	**Sb**	**19 37 29.0**	**+0.4**		
	baz=300								
TWQ1	**Liyutan**	**1.57**	**285**	P	**Pb**	**19 37 09.2**	**+0.1**		
	baz=282								
TWQ1				eS	**Sb**	**19 37 29.9**	**+1.2**		
	baz=282								
NSY	**Sanyi**	**1.60**	**287**	*eP*	**Pb**	**19 37 10.0**	**+0.5**		
	baz=284								
NSY				eS	**Sb**	**19 37 30.9**	**+1.4**		
	baz=284								
WNT	**Mingjian**	**1.60**	**268**	*eP*	**Pb**	**19 37 09.9**	**+0.3**		
	baz=264								
WNT				eS	**Sb**	**19 37 30.5**	**+0.9**		
	baz=264								
NMLH	**Miaoli**	**1.61**	**292**	*eP*	**Pb**	**19 37 10.1**	**+0.4**		
	baz=288								
NMLH				eS	**Sb**	**19 37 30.5**	**+0.6**		
	baz=288								
JIJ	**Ishigaki jima**	**1.61**	**75**	P	**Pn**	**19 37 08.3**	**+0.2**		
JIJ				S	**Sb**	**19 37 29.0**	**-0.9**		
TCU	**Taichung**	**1.62**	**278**	*eP*	**Pb**	**19 37 10.3**	**+0.5**		
	baz=274								
TCU				eS	**Sb**	**19 37 31.5**	**+1.4**		
	baz=274								
CHN5	**Tsauling**	**1.65**	**258**	*eP*	**Pb**	**19 37 09.9**	**-0.4**		
	baz=244								
CHN5				eS	**Sb**	**19 37 31.0**	**+0.1**		
	baz=244								
PTSB	**Yuanli**	**1.66**	**288**	*eP*	**Pb**	**19 37 10.7**	**+0.2**		
	baz=284								
PTSB				eS	**Sb**	**19 37 31.7**	**+0.5**		
	baz=284								
TTN	**Taitung**	**1.67**	**225**	*eS*	**Sn**	**19 37 30.0**	**-0.1**		
	baz=223								
TWGBT	**Beinan**	**1.68**	**228**	*eP*	**Pn**	**19 37 08.5**	**-0.5**		
	baz=239								
TWGBT				S	**Sn**	**19 37 28.4**	**-1.7**		
	baz=239								
TWG	**Pinlang**	**1.68**	**229**	P	**Pn**	**19 37 08.6**	**-0.5**		
	baz=239								
TWG				S	**Sn**	**19 37 29.3**	**-0.9**		
	baz=239								
WDJ	**Dajia District**	**1.69**	**284**	*eS*	**Sb**	**19 37 32.6**	**+0.6**		
	baz=281								
PCYT	**Pengchaiyu**	**1.71**	**349**	*eP*	**Pn**	**19 37 09.2**	**-0.3**		
	baz=349								
PCYT				eS	**Sn**	**19 37 30.8**	**-0.2**		
	baz=349								
WCHH	**Zhanghua**	**1.72**	**275**	*eP*	**Pb**	**19 37 11.8**	**+0.2**		
	baz=271								
WCHH				eS	**Sb**	**19 37 33.9**	**+1.0**		
	baz=271								
STYT	**Tauyuan**	**1.73**	**244**	*eP*	**Pn**	**19 37 10.5**	**+0.8**		
	baz=231								
STYT				eS	**Sn**	**19 37 31.6**	**+0.2**		
	baz=231								
WGK	**Gukeng**	**1.73**	**262**	*eP*	**Pb**	**19 37 11.6**	**-0.1**		
	baz=258								
WGK				eS	**Sb**	**19 37 34.1**	**+0.8**		
	baz=258								
WDLH	**Douliu**	**1.76**	**262**	P	**Pb**	**19 37 11.7**	**-0.4**		
	baz=259								
WDLH				eS	**Sb**	**19 37 35.0**	**+1.1**		
	baz=259								
TPUB	**Ta-pu**	**1.77**	**249**	P	**Pb**	**19 37 12.1**	**-0.4**		
	baz=247								
TPUB				S	**Sb**	**19 37 34.7**	**+0.2**		
	baz=247								
CHN4	**Tsaushan**	**1.79**	**251**	*eP*	**Pb**	**19 37 12.4**	**-0.3**		
	baz=248								
CHN4				eS	**Sb**	**19 37 35.7**	**+0.8**		
	baz=248								
WTP	**Ta-pu**	**1.81**	**248**	*eP*	**Pb**	**19 37 12.5**	**-0.5**		
	baz=234								
WTP				eS	**Sb**	**19 37 35.5**	**-0.1**		
	baz=234								
JISG	**Ishigakijimahi**	**1.83**	**69**	P	**Pn**	**19 37 11.2**	**+0.2**		
JISG				S	**Sn**	**19 37 33.4**	**-0.5**		
SLGT	**Liugui**	**1.90**	**240**	*eP*	**Pn**	**19 37 13.4**	**+1.4**		
	baz=229								
SLGT				eS	**Sn**	**19 37 36.5**	**+1.0**		
	baz=229								
CHY	**Chiayi**	**1.90**	**257**	*eP*	**Pb**	**19 37 14.0**	**-0.5**		
	baz=253								
CHY				S	**Sb**	**19 37 38.2**	**+0.3**		
	baz=253								
RLNB	**Erlin**	**1.90**	**269**	*eP*	**Pb**	**19 37 14.6**	**0.0**		
	baz=280								
RLNB				eS	**Sb**	**19 37 38.8**	**+0.7**		
	baz=280								
SGST	**Jiashian**	**1.90**	**244**	*eP*	**Pn**	**19 37 13.0**	**+0.9**		
	baz=231								
SGST				eS	**Sn**	**19 37 37.0**	**+1.2**		
	baz=231								
CHN1	**Nanshi**	**1.91**	**247**	*eP*	**Pb**	**19 37 14.1**	**-0.6**		
	baz=244								
CHN1				eS	**Sb**	**19 37 39.2**	**+0.9**		
	baz=244								
TWK	**Hsinying**	**1.91**	**250**	P	**Pb**	**19 37 14.0**	**-0.7**		
	baz=246								
TWK				eS	**Sb**	**19 37 38.6**	**+0.2**		
	baz=246								
ECL	**Taimali**	**1.91**	**226**	*eP*	**Pn**	**19 37 11.5**	**-0.7**		
	baz=223								
ECL				eS	**Sn**	**19 37 34.2**	**-1.7**		
	baz=223								
SNST	**Tainan City**	**1.92**	**248**	*eP*	**Pn**	**19 37 13.7**	**+1.4**		
	baz=245								
SNST				eS	**Sb**	**19 37 38.7**	**+0.1**		
	baz=245								
WLGB	**Puzi**	**2.01**	**257**	*eP*	**Pb**	**19 37 15.6**	**-0.9**		
	baz=254								
WLGB				eS	**Sb**	**19 37 41.6**	**+0.3**		
	baz=254								
WSF	**Szhu**	**2.05**	**262**	*eP*	**Pn**	**19 37 16.0**	**+1.9**		
	baz=258								
WSF				eS	**Sb**	**19 37 42.8**	**+0.4**		
	baz=258								
JTJ	**Tarama**	**2.18**	**71**	P	**Pn**	**19 37 17.2**	**+1.3**		
JTJ				eS	**Sn**	**19 37 43.1**	**+0.5**		
JIRB	**Irabujima**	**2.65**	**70**	P	**Pn**	**19 37 23.7**	**+1.4**		
JIRB				S	**Sn**	**19 37 55.0**	**+0.9**		
JIKM	**Ikemajima**	**2.74**	**69**	P	**Pn**	**19 37 25.0**	**+1.4**		
JIKM				S	**Sn**	**19 37 57.2**	**+0.7**		
JMJ2	**Miyako jima3**	**2.75**	**73**	P	**Pn**	**19 37 25.1**	**+1.3**		
JMJ2				eS	**Sn**	**19 37 58.4**	**+1.6**		

*HEL **08** 19:54:39.1±0.7, 67°.66N±0°.05×33°.37E±0°.08, h0km, ML2.0, Explosion*
*IDC **08** 19:54:42.7±2.1, 67°.73N×33°.45E, h0km, mb1 3.4/4, mb1mx3.0/54, mbtmp3.3/4, ML2.6/4, Error ellipse: s-maj=23.3km s-min=10.3km az=76.0*

ISC 08 19:54:39.7±1.6, **67°.66N**±0°.05×**33°.37E**±0°.08, **h0km, n14, σ1§58/23, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	**Varrio**	**1.44**	**275**	PG	**Pb**	**19 55 08.4**	**+1.0**
	baz=96						
VRF				MSG		19 55 27.8	
	comp=Z,14nm,0.2s						
VRF				SN	**Sn**	**19 55 28.7**	**+2.1**
KU6	**Riekki**	**2.14**	**222**	PG	**Pb**	**19 55 19.0**	**-0.2**
	baz=46						
KU6				MSG		19 55 45.7	
	comp=Z,6.5nm,0.2s						
KU6				SG	**Sg**	**19 55 49.8**	**+1.5**
SGF	**Sodankyl**	**2.64**	**269**	PG	**Pg**	**19 55 29.2**	**-0.9**
SGF				SG	**Sg**	**19 56 04.4**	**+0.1**
RNF	**Rovaniemi**	**3.06**	**253**	PN	**Pn**	**19 55 30.6**	**+1.4**
	baz=70						
RNF				SN	**Sb**	**19 56 10.3**	**-2.4**
ARCES	**ARCESS Array B**	**3.45**	**307**	Pn	**Pn**	**19 55 36.4**	**+1.8**
	comp=Z,2.0nm,0.3s,baz=119,slow=15,SNR=72						
ARCES				Pg	**Pg**	**19 55 44.5**	**-1.2**
	comp=Z,1.9nm,0.3s,baz=118,slow=13,SNR=15						
ARCES				Sn	**Sn**	**19 56 17.8**	**+1.7**
	comp=Z,2.1nm,0.3s,baz=119,slow=24,SNR=17						
ARCES				Lg	Lg	19 56 28.9	
	comp=Z,3.8nm,0.3s,baz=112,slow=33,SNR=11						
ARE0	**ARCESS Array S**	**3.45**	**307**	PN	**Pn**	**19 55 36.3**	**+1.7**
	baz=120						
ARE0				SN	**Sn**	**19 56 17.5**	**+1.5**
HEF	**Hetta**	**3.73**	**286**	PN	**Pn**	**19 55 40.3**	**+1.9**
HEF				SG	**Sg**	**19 56 39.9**	**+0.6**
TOF	**Tornio**	**3.90**	**250**	PG	**Pg**	**19 55 53.7**	**-0.7**
OUL	**Oulu**	**3.96**	**233**	PB	**Pb**	**19 55 49.4**	**-0.9**
	baz=44						
LANU	**Lannavaara**	**4.33**	**280**	SG	**Sg**	**19 56 56.2**	**-2.3**
ERTU	**Ertsjaerv**	**4.51**	**261**	SN	**Sn**	**19 56 43.9**	**+1.8**
FINES	**FINESS Array B**	**6.98**	**210**	Pn	**Pn**	**19 56 24.8**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=36,slow=12,SNR=1.7						
FINES				Sn	**Sn**	**19 57 43.8**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=16,slow=22,SNR=5.3						
FINES				Lg	Lg	19 58 13.5	
	comp=Z,0.3nm,0.3s,baz=21,slow=22,SNR=3.3						
SPITS	**Spitsbergen Ar**	**11.61**	**343**	Pn	**Pn**	**19 57 24.8**	**-1.5**
	baz=142,slow=13,SNR=1.4						
NOA	**NORSAR Array B**	**11.61**	**246**	Pn	**Pn**	**19 57 25.4**	**-1.0**
	comp=Z,0.0nm,0.3s,baz=46,slow=11,SNR=2.3						

IDC 08 20:00:56.7±3.2, **10°.63S**×**166°.38E, h0km, mb3.8**/6, **mb1 4.0**/6, **mb1mx3.7**/34, **mbtmp3.7**/6, **Error ellipse: s-maj=114.3km s-min=30.2km az=138.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S2	**WAKE ISLAND Hy**	**28.94**	**1**	T	T	20 38 03.6	
	baz=184,slow=76,SNR=4.8						
H11S3	**WAKE ISLAND Hy**	**28.95**	**1**	T	T	20 38 05.8	
	baz=184,slow=76,SNR=5.2						
H11S1	**WAKE ISLAND Hy**	**28.96**	**1**	T	T	20 38 02.3	
	baz=184,slow=76,SNR=4.5						
H11N1	**WAKE ISLAND Hy**	**30.16**	**1**	T	T	20 39 24.6	
	baz=181,slow=74						
H11N3	**WAKE ISLAND Hy**	**30.16**	**1**	T	T	20 39 20.6	
	baz=181,slow=74						
H11N2	**WAKE ISLAND Hy**	**30.18**	**1**	T	T	20 39 36.3	
	baz=181						
WRA	**Warramunga Arr**	**32.21**	**249**	P	P	20 07 26.4	-0.6
	0.3nm,0.5s,baz=81,slow=8.9,SNR=2.2						
ASAR	**Alice Springs**	**33.53**	**243**	P	P	20 07 39.4	+0.9
	0.4nm,0.7s,baz=74,slow=9.8,SNR=2.7						
FITZ	**Fitzroy Crossi**	**40.09**	**255**	P	P	20 08 34.0	-0.3
	1.6nm,0.6s,baz=102,slow=6.9,SNR=2.9						
CMAR	**Chiang Mai Arr**	**72.52**	**293**	P	P	20 12 26.1	+0.1
	0.7nm,0.8s,baz=123,slow=5.1,SNR=6.7						
ILAR	**Eielson Array**	**82.93**	**18**	P	P	20 13 23.4	+0.2
	0.5nm,0.6s,baz=233,slow=5.6,SNR=9.2						
MKAR	**Makanchi Array**	**93.65**	**317**	P	P	20 14 14.6	-0.6
	0.5nm,0.6s,baz=91,slow=5.1,SNR=6.5						

*IDC **08** 20:05:35.8±2.1, 23°.90N×45°.65W, h0km, mb4.0/14, mb1 4.1/14, mb1mx3.9/39, mbtmp4.0/14, Error ellipse: s-maj=57.2km s-min=19.8km az=12.0*
*NEIC **08** 20:05:36.7±1.2, 23°.8N±0°.1×45°.66W±0°.07, h10km±1km, mb4.6/7, Error ellipse: s-maj=25.8km s-min=6.8km az=159.0*

ISC 08 20:05:36.6±0.8, **23°.7N**±0°.2×**45°.7W**±0°.1, **h10km, n26, σ0§71/21, mb4.2**/16, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBIP	**Obispado Ponce**	**20.32**	**258**	P	**P**	**20 10 13.7**	**+0.7**
OBIP				IAmb	IAmb	20 10 16.8	
	comp=Z,35nm,1.1s						
ESDC	**Sonseca Array**	**38.53**	**56**	P	**P**	**20 12 58.8**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=258,slow=11,SNR=2.3						
H10N2	**ASCENSION HYDR**	**43.76**	**132**	T	T	21 00 10.3	
	baz=317,slow=75,SNR=180						
H10N3	**ASCENSION HYDR**	**43.76**	**132**	T	T	21 00 10.2	
	baz=317,slow=75,SNR=194						
H10N1	**ASCENSION HYDR**	**43.78**	**132**	T	T	21 00 11.6	
	baz=317,slow=75,SNR=173						
H10S3	**ASCENSION HYDR**	**44.46**	**133**	T	T	21 01 01.4	
	baz=316,slow=74,SNR=247						
H10S2	**ASCENSION HYDR**	**44.48**	**133**	T	T	21 01 05.8	
	baz=264,slow=74,SNR=76						
TOA0	**Torodi Ar. Sit**	**46.00**	**95**	P	**P**	**20 14 00.4**	**-0.2**
TOA0				IAmb	IAmb	20 14 01.5	
	comp=Z,6.4nm,1.1s						
TORD	**Torodi Ar. Bea**	**46.00**	**95**	P	**P**	**20 14 00.3**	**-0.2**
	comp=Z,4.2nm,0.9s,baz=296,slow=8.4,SNR=19						
ULM	**Lac du Bonnet**	**46.86**	**317**	P	**P**	**20 14 06.6**	**-0.1**
	comp=Z,1.0nm,0.4s,baz=334,slow=4.6,SNR=2.0						
ULM	**Lac du Bonnet**	**46.86**	**317**	P	**P**	**20 14 07.0**	**+0.2**
ULM				IAmb	IAmb	20 14 17.1	
	comp=Z,4.1nm,1.1s						
KEST	**Kesra**	**48.71**	**63**	P	**P**	**20 14 22.9**	**+1.4**
	comp=Z,3.9nm,0.8s,baz=32,slow=3.1,SNR=4.4						
PB11	**IPOC Station P**	**49.14**	**210**	P	**P**	**20 14 24.5**	**-0.4**
GERES	**GERESS Array B**	**52.51**	**46**	P	**P**	**20 14 49.5**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=254,slow=7.0,SNR=4.4						
NB2	**NORSAR Subarra**	**53.62**	**30**	P	**P**	**20 14 58.7**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=251,slow=7.9						
NOA	**NORSAR Array B**	**53.62**	**30**	P	**P**	**20 14 57.5**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=252,slow=7.7,SNR=4.5						
BW06	**Boulder Array**	**55.37**	**307**	P	**P**	**20 15 09.7**	**-1.5**
PDAR	**Pinedale Array**	**55.37**	**307**	P	**P**	**20 15 12.1**	**+0.9**
	comp=Z,1.3nm,1.0s,baz=79,slow=7.7,SNR=7.2						
YKA	**Yellowknife Ar**	**59.48**	**330**	P	**P**	**20 15 39.0**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=98,slow=7.7,SNR=8.3						
FINES	**FINESS Array B**	**60.74**	**32**	P	**P**	**20 15 47.5**	**-0.6**
	comp=Z,3.2nm,1.0s,baz=256,slow=5.6,SNR=4.0						
MLR	**Mu

ADOK	**Arcadia Dam**	**0.95**	**168**		**Pg**	**20 40 50.8**	**-0.2**
U32A	**Winter Ranch,**	**1.14**	**260**		**Pb**	**20 40 54.0**	**-0.6**
OKCSW	**OKLAHOMA CITY**	**1.18**	**173**		**Pb**	**20 40 54.7**	**-0.5**
FNO	**Franklin**	**1.33**	**173**		**Pn**	**20 40 57.7**	**+0.3**
W35A	**Tecumseh**	**1.55**	**157**		**Pn**	**20 41 01.0**	**+0.7**
TUL1	**Leonard**	**1.61**	**114**	P	**Pn**	**20 41 02.3**	**+1.1**
	baz=295						
TUL1				S	**Sb**	**20 41 24.3**	**+1.3**
	baz=295						
TUL1	**Leonard**	**1.61**	**114**		**Pn**	**20 41 02.2**	**+1.0**
X34A	**Smith Ranch, M**	**1.98**	**185**		**Pn**	**20 41 08.0**	**+1.6**
R32A	**Long Quarter,**	**2.04**	**335**		**Pb**	**20 41 09.2**	**-0.6**
WMOK	**Wichita Mounta**	**2.07**	**208**	P	**Pn**	**20 41 08.6**	**+1.1**
	baz=27,SNR=241						
WMOK	**Wichita Mounta**	**2.07**	**208**		**Pn**	**20 41 08.5**	**+1.0**
U38A	**Gravette**	**2.60**	**92**		**Pn**	**20 41 16.6**	**+1.8**
KSU1	**Kansas State U**	**2.64**	**17**		**Pn**	**20 41 17.2**	**+1.9**
X37A	**Clayton**	**2.70**	**137**		**Pn**	**20 41 17.5**	**+1.4**
CBKS	**Cedar Bluff**	**2.80**	**323**	Sb	**Sb**	**20 41 59.3**	**+2.2**
	baz=143						
CBKS	**Cedar Bluff**	**2.80**	**323**		**Pn**	**20 41 19.7**	**+2.2**
HHAR	**Hobbs**	**2.97**	**95**		**Pn**	**20 41 21.3**	**+1.4**
Z35A	**Perchaven, San**	**3.26**	**175**		**Pn**	**20 41 25.3**	**+1.4**
W39A	**Magazine**	**3.40**	**113**	P	**Pn**	**20 41 26.5**	**+0.7**
	baz=295,SNR=51						
W39A				S	**Sn**	**20 42 08.5**	**+2.3**
	baz=295						
W39A	**Magazine**	**3.40**	**113**		**Pn**	**20 41 27.0**	**+1.3**
AMTX	**Amarillo**	**3.72**	**244**	S	**Sn**	**20 42 12.8**	**-1.5**
	baz=62						
AMTX	**Amarillo**	**3.72**	**244**		**Pn**	**20 41 32.0**	**+1.7**
U40A	**Yellville**	**3.84**	**92**	P	**Pn**	**20 41 33.0**	**+1.2**
	baz=275,SNR=6.2						
U40A				S	**Sn**	**20 42 18.2**	**+1.1**
	baz=275						
U40A	**Yellville**	**3.84**	**92**		**Pn**	**20 41 32.8**	**+1.0**
MIAR	**Mount Ida**	**3.86**	**121**	P	**Pn**	**20 41 33.2**	**+1.0**
	baz=303,SNR=16						
MIAR				S	**Sn**	**20 42 19.3**	**+1.7**
	baz=303						
MIAR	**Mount Ida**	**3.86**	**121**		**Pn**	**20 41 34.0**	**+1.8**
Z38A	**Mt. Pleasant**	**3.95**	**146**		**Pn**	**20 41 34.4**	**+1.0**
ABTX	**Abilene, Hawle**	**4.29**	**204**	P	**Pn**	**20 41 38.1**	**0.0**
	baz=22,SNR=12						
ABTX				S	**Sn**	**20 42 28.3**	**+0.1**
	baz=22						
ABTX	**Abilene, Hawle**	**4.29**	**204**		**Pn**	**20 41 37.8**	**-0.2**
X40A	**Basin Creek Fa**	**4.42**	**117**	P	**Pn**	**20 41 41.0**	**+1.3**
	baz=300,SNR=13						
X40A	**Basin Creek Fa**	**4.42**	**117**		**Pn**	**20 41 41.4**	**+1.6**
P38A	**Dawn**	**4.42**	**45**		**Pn**	**20 41 40.5**	**+0.6**
N35A	**Tabor**	**4.54**	**19**		**Pn**	**20 41 43.4**	**+1.9**
W41B	**Gary Mavity, V**	**4.57**	**106**	P	**Pn**	**20 41 43.1**	**+1.2**
	baz=289,SNR=10						
W41B				S	**Sn**	**20 42 36.2**	**+1.0**
	baz=289						
R40A	**Maddies Statio**	**4.58**	**67**		**Pn**	**20 41 43.2**	**+1.2**
WHTX	**Lake Whitney,**	**4.58**	**178**	P	**Pn**	**20 41 42.5**	**+0.5**
	baz=358						
WHTX				S	**Sn**	**20 42 35.1**	**-0.2**
	baz=358						
WHTX	**Lake Whitney,**	**4.58**	**178**		**Pn**	**20 41 43.0**	**+0.9**
KSCO	**Kaye Shedlock'**	**4.66**	**303**	P	**Pn**	**20 41 43.6**	**+0.4**
	baz=120						
KSCO	**Kaye Shedlock'**	**4.66**	**303**		**Pn**	**20 41 44.5**	**+1.3**
WLAR	**White Oak Lake**	**4.68**	**127**	Pn	**Pn**	**20 41 44.0**	**+0.6**
BGNE	**Belgrade**	**4.84**	**355**	P	**Pn**	**20 41 46.3**	**+0.7**
	baz=175						
BGNE				S	**Sn**	**20 42 40.7**	**-1.0**
	baz=175						
BGNE	**Belgrade**	**4.84**	**355**	Pn	**Pn**	**20 41 46.6**	**+1.0**
MSTX	**Muleshoe**	**4.96**	**240**	P	**Pn**	**20 41 46.7**	**-0.7**
	baz=57						
MSTX				S	**Sn**	**20 42 43.8**	**-1.1**
	baz=57						
MSTX	**Muleshoe**	**4.96**	**240**	Pn	**Pn**	**20 41 46.4**	**-1.0**
Z41A	**Richland Creek**	**5.16**	**129**	S	**Sn**	**20 42 48.3**	**-1.1**
	baz=311						
T42A	**Van Buren**	**5.25**	**83**	Pn	**Pn**	**20 41 52.6**	**+1.5**
CCM	**Cathedral Cave**	**5.28**	**72**	P	**Pn**	**20 41 52.6**	**+0.9**
	baz=256						
CCM				S	**Sn**	**20 42 53.1**	**+0.6**
	baz=256						
CCM	**Cathedral Cave**	**5.28**	**72**		**Pn**	**20 41 52.8**	**+1.1**
P40A	**Paris**	**5.28**	**54**		**Pn**	**20 41 53.2**	**+1.5**
N38A	**Joes South For**	**5.42**	**38**	Pn	**Pn**	**20 41 54.7**	**+1.2**
L34A	**Svendsen Farm,**	**5.46**	**10**	Pn	**Pn**	**20 41 55.9**	**+1.7**
T25A	**Trinidad**	**5.48**	**278**	S	**Sn**	**20 42 55.3**	**-2.6**
	baz=94						
OGNE	**Ogallala**	**5.56**	**323**	Pn	**Pn**	**20 41 57.3**	**+1.7**
PBMO	**Poplar Bluff**	**5.77**	**86**	Pn	**Pn**	**20 41 58.9**	**+0.5**
435B	**Jarrell**	**5.78**	**180**	S	**Sn**	**20 43 03.9**	**-1.1**
	baz=360						
K31A	**O'Neill**	**6.10**	**352**	Pn	**Pn**	**20 42 04.0**	**+1.1**
SCIA	**State Center**	**6.32**	**31**	P	**Pn**	**20 42 07.0**	**+1.1**
	baz=214						
SCIA				S	**Sn**	**20 43 17.1**	**-1.0**
	baz=214						
SCIA	**State Center**	**6.32**	**31**	Pn	**Pn**	**20 42 06.5**	**+0.6**
JCT	**Junction City**	**6.36**	**197**	S	**Sn**	**20 43 17.7**	**-1.5**
	baz=16						
JCT	**Junction City**	**6.36**	**197**	Pn	**Pn**	**20 42 05.2**	**-1.3**
SDCO	**Great Sand Dun**	**6.41**	**283**		**Pn**	**20 42 07.4**	**0.0**
N41A	**Harden Midland**	**6.70**	**50**	Pn	**Pn**	**20 42 11.9**	**+0.8**
OXF	**Oxford**	**7.00**	**105**	S	**Sn**	**20 43 35.8**	**+1.0**
	baz=290						
ISCO	**Idaho Springs**	**7.08**	**299**	P	**Pn**	**20 42 16.5**	**-0.1**
	baz=115						
ISCO	**Idaho Springs**	**7.08**	**299**		**Pn**	**20 42 17.4**	**+0.9**
GDL2	**Guadalupe Moun**	**7.09**	**234**	Pn	**Pn**	**20 42 16.3**	**-0.3**
ECSD	**EROS Data Cent**	**7.18**	**6**	P	**Pn**	**20 42 17.5**	**-0.3**
	baz=186						
ECSD				S	**Sn**	**20 43 37.4**	**-2.0**
	baz=186						
VBMS	**Vicksburg**	**7.30**	**125**	S	**Sn**	**20 43 43.1**	**+0.9**
	baz=309						
ANMO	**Albuquerque**	**7.38**	**260**	Pn	**Pn**	**20 42 19.9**	**-0.7**
	0.1nm,0.3s,baz=76,slow=14,SNR=1.8						
ANMO				Pg	**Pb**	**20 42 45.0**	**+4.1**
	0.3nm,0.3s,baz=74,slow=18,SNR=2.8						
ANMO				Lg	Lg	20 44 19.2	
	2.3nm,0.3s,baz=339,slow=16,SNR=10						
ANMO	**Albuquerque**	**7.38**	**260**		**Pn**	**20 42 21.3**	**+0.7**
L40A	**Anamosa**	**7.38**	**40**		**Pn**	**20 42 20.2**	**-0.2**
HDIL	**Hopedale**	**7.63**	**56**	S	**Sn**	**20 43 47.8**	**-2.5**
	baz=241						
WVT	**Waverly**	**7.90**	**90**	S	**Sn**	**20 43 55.5**	**-1.7**
	baz=276						
SUSD	**Miller**	**7.92**	**353**	S	**Sn**	**20 43 53.5**	**-4.0**
	baz=172						
MNTX	**Cornudas Mount**	**8.07**	**235**	S	**Sn**	**20 43 59.8**	**-1.6**
	baz=51						
MNTX	**Cornudas Mount**	**8.07**	**235**		**Pn**	**20 42 29.1**	**-1.0**
L42A	**Oliver, Polo**	**8.20**	**46**		**Pn**	**20 42 32.0**	**+0.3**
JFWS	**Jewell Farm**	**8.49**	**40**	S	**Sn**	**20 44 09.6**	**-2.0**
	baz=224						
JFWS	**Jewell Farm**	**8.49**	**40**	Pn	**Pn**	**20 42 36.2**	**+0.5**
TX31	**Lajitas Ar. Si**	**8.84**	**217**	Pn	**Pn**	**20 42 39.6**	**-1.0**
TXAR	**Lajitas Array**	**8.84**	**217**	Pn	**Pn**	**20 42 39.6**	**-0.9**
	0.4nm,0.3s,baz=35,slow=10,SNR=16						
TXAR				Pg	Pg	20 43 06.9	-15
	0.5nm,0.3s,baz=39,slow=14,SNR=5.7						
TXAR				Lg	Lg	20 45 05.8	
	0.5nm,0.3s,baz=60,slow=25,SNR=1.7						
WCI	**Wyandotte Cave**	**9.15**	**76**	P	**Pn**	**20 42 44.5**	**-0.3**
	baz=263						
WCI	**Wyandotte Cave**	**9.15**	**76**		**Pn**	**20 42 44.5**	**-0.3**
PDAR	**Pinedale Array**	**11.08**	**308**	Pn	**Pn**	**20 43 12.3**	**+0.9**
	baz=118,slow=17,SNR=0.7						
PDAR				Pg		20 43 52.8	
	baz=116,slow=16,SNR=1.3						
PDAR				Lg	Lg	20 46 11.8	
	0.3nm,0.3s,baz=99,slow=34,SNR=3.2						
ILAR	**Eielson Array**	**40.43**	**330**	P	**P**	**20 48 13.0**	**+2.2**
	0.4nm,0.5s,baz=98,slow=6.7,SNR=3.2						

*JMA **08** 20:42:56.7±0.2,23.°47N×121.°77E,h13km±4km,M2.3*
*TAP **08** 20:42:58.1,23.°52N×121.°73E,h15km,ML2.9,D*
ISC 08 20:42:57.6±1.0,**23.°51N**±0.°02×**121.°71E**±0.°02,**h18**km±5km,
n63,σ0°**59**/111**,1D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HGSD	**Ruisui**	**0.26**	**267**	P	**Pg**	**20 43 03.7**	**+0.2**
HGSD				S	**Sg**	**20 43 07.6**	**+0.1**
	baz=264						
EGFH	**Guangfu**	**0.30**	**302**	P	**Pb**	**20 43 04.6**	**+0.1**
	baz=298						
EGFH				S	**Sb**	**20 43 09.6**	**+0.4**
	baz=298						
EHY	**Hungye**	**0.36**	**270**	P	**Pg**	**20 43 05.3**	**+0.2**
	baz=267						
EHY				S	**Sb**	**20 43 11.1**	**+0.3**
	baz=267						
YULB	**Yu-li**	**0.40**	**253**	P	**Pg**	**20 43 05.9**	**+0.2**
	baz=252						
YULB				S	**Sb**	**20 43 12.6**	**+0.7**
	baz=252						
ESL	**Shilin**	**0.40**	**320**	P	**Pg**	**20 43 05.8**	**-0.1**
	baz=317						
ESL				S	**Sb**	**20 43 12.2**	**+0.3**
	baz=317						
TWF1	**Yuli**	**0.41**	**248**	P	**Pb**	**20 43 06.5**	**+0.2**
	baz=246						
TWF1				S	**Sb**	**20 43 13.1**	**+0.8**
	baz=246						
HWA	**Hwalien**	**0.48**	**348**	*eP*	**Pb**	**20 43 08.1**	**+0.6**
	baz=346						
FULB	**Fuli**	**0.49**	**231**	P	**Pg**	**20 43 07.5**	**0.0**
	baz=231						
FULB				*eS*	**Sb**	**20 43 16.0**	**+1.4**
	baz=231						
CHKT	**Chengkung**	**0.51**	**218**	P	**Pb**	**20 43 08.6**	**+0.5**
	baz=218						
CHKT				S	**Sb**	**20 43 16.4**	**+1.2**
	baz=218						
VWDT	**VWDT**	**0.58**	**295**	*eP*	**Pg**	**20 43 09.1**	**0.0**
	baz=293						
VWDT				*eS*	**Sg**	**20 43 16.8**	**0.0**
	baz=293						
TWD	**Chiawan**	**0.58**	**350**	P	**Pg**	**20 43 09.2**	**0.0**
	baz=348						
TWD				*eS*	**Sb**	**20 43 18.3**	**+1.2**
	baz=348						
OWD	**Renai**	**0.66**	**312**	*eP*	**Pb**	**20 43 10.2**	**-0.5**
	baz=310						
OWD				*eS*	**Sb**	**20 43 18.5**	**-1.2**
	baz=310						
NACB	**Ninganchiao**	**0.67**	**351**	P	**Pb**	**20 43 10.5**	**-0.3**
	baz=349						
NACB				S	**Sg**	**20 43 20.2**	**+0.3**
	baz=349						
ELDTW	**Lidau**	**0.71**	**244**	P	**Pb**	**20 43 10.8**	**-0.7**
	baz=243						
ELDTW				*eS*	**Sb**	**20 43 19.4**	**-1.6**
	baz=243						
ETLH	**Xiulin Townshi**	**0.73**	**343**	*eP*	**Pb**	**20 43 11.7**	**-0.1**
	baz=341						
ETLH				*eS*	**Sb**	**20 43 21.2**	**-0.3**
	baz=341						
CHGB	**Renai**	**0.74**	**318**	*eP*	**Pb**	**20 43 11.9**	**-0.2**
	baz=316						
CHGB				*eS*	**Sb**	**20 43 21.6**	**-0.4**
	baz=316						
SSLB	**Suanglung**	**0.75**	**292**	*eP*	**Pb**	**20 43 11.4**	**-0.7**
	baz=290						
SSLB				*eS*	**Sb**	**20 43 20.6**	**-1.4**
	baz=290						
WHF	**Hehuan Shan**	**0.76**	**327**	*eP*	**Pb**	**20 43 11.9**	**-0.5**
	baz=326						
WHF				*eS*	**Sb**	**20 43 21.7**	**-0.9**
	baz=326						
WHYT	**Xinyi Township**	**0.81**	**284**	*eP*	**Pb**	**20 43 13.0**	**-0.1**
	baz=282						
TWH	**Lutao**	**0.82**	**195**	*eP*	**Pb**	**20 43 12.3**	**-1.0**
	baz=195						
ALS	**Alishan**	**0.83**	**270**	||P	**Pb**	**20 43 13.6**	**-0.1**
	baz=269						
SMLT	**Sun Moon Lake**	**0.83**	**297**	*eP*	**Pb**	**20 43 13.1**	**-0.5**
	baz=295						
SMLT				*eS*	**Sb**	**20 43 23.5**	**-1.0**
	baz=295						
TYC	**Yuchr**	**0.88**	**297**	*eP*	**Pb**	**20 43 13.8**	**-0.5**
	baz=296						
TYC				*eS*	**Sb**	**20 43 25.9**	**+0.3**
	baz=296						
DPDB	**Guoxing**	**0.89**	**306**	*eP*	**Pb**	**20 43 14.3**	**-0.2**
	baz=304						
DPDB				*eS*	**Sb**	**20 43 25.1**	**-1.0**
	baz=304						
TDCB	**Techi**	**0.90**	**326**	*eP*	**Pb**	**20 43 14.7**	**-0.1**
	baz=324						
TDCB				*eS*	**Sb**	**20 43 25.6**	**-0.9**
	baz=324						
TWGBT	**Beinan**	**0.90**	**220**	*eP*	**Pb**	**20 43 13.5**	**-1.2**
	baz=220						
TWGBT				*eS*	**Sb**	**20 43 25.5**	**-0.8**
	baz=220						
TWG	**Pinlang**	**0.90**	**221**	*eP*	**Pb**	**20 43 13.7**	**-1.0**
	baz=220						
TWG				*eS*	**Sb**	**20 43 25.5**	**-0.9**
	baz=220						
ENA	**Nanau**	**0.92**	**2**	*eP*	**Pb**	**20 43 15.0**	**0.0**
	baz=1.0						
STYT	**Tauyuan**	**0.94**	**249**	*eP*	**Pb**	**20 43 15.1**	**-0.3**
	baz=248						
STYT				*eS*	**Sb**	**20 43 26.9**	**-0.7**
	baz=248						
CHN5	**Tsauling**	**0.95**	**276**	*eP*	**Pb**	**20 43 15.9**	**+0.3**
	baz=274						
CHN5				*eS*	**Sn**	**20 43 29.6**	**+0.2**
	baz=274						
WJS	**Zhushan**	**0.95**	**289**	*eP*	**Pg**	**20 43 16.2**	**+0.1**
	baz=288						
WJS				*eS*	**Sg**	**20 43 29.2**	**+0.5**
	baz=288						
NNSB	**Datong**	**0.96**	**342**	*eP*	**Pb**	**20 43 15.7**	**-0.2**
	baz=340						
NNSB				*eS*	**Sb**	**20 43 27.7**	**-0.7**
	baz=340						
NNSH	**Datong**	**0.96**	**342**	*eP*	**Pb**	**20 43 15.6**	**-0.3**
	baz=340						
NNSH				*eS*	**Sb**	**20 43 27.5**	**-0.9**
	baz=340						
NNS	**Nan Shan**	**0.98**	**342**	*eP*	**Pb**	**20 43 15.9**	**-0.2**
	baz=340						
NNS				*eS*	**Sb**	**20 43 27.9**	**-0.8**
	baz=340						
WNT	**Mingjian**	**1.01**	**292**	*eP*	**Pg**	**20 43 17.2**	**0.0**
	baz=290						
WNT				*eS*	**Sg**	**20 43 30.7**	**+0.2**
	baz=290						
TPUB	**Ta-pu**	**1.01**	**259**	*eP*	**Pb**	**20 43 16.6**	**0.0**
	baz=257						
TPUB				*eS*	**Sb**	**20 43 29.8**	**+0.1**
	baz=257						
CHN4	**Tsaushan**	**1.04**	**262**	*eP*	**Pn**	**20 43 17.4**	**+0.2**
	baz=260						
CHN4				*eS*	**Sg**	**20 43 31.9**	**+0.5**
	baz=260						
WHP	**Taichung City**	**1.04**	**318**	*eP*	**Pg**	**20 43 17.8**	**+0.1**
	baz=316						
WHP				*eS*	**Sb**	**20 43 30.2**	**-0.2**
	baz=316						
WTP	**Ta-pu**	**1.04**	**256**	*eP*	**Pb**	**20 43 17.2**	**+0.1**
	baz=254						
WTP				*eS*	**Sb**	**20 43 30.8**	**+0.3**
	baz=254						
WGK	**Gukeng**	**1.07**	**280**	*eP*	**Pn**	**20 43 17.7**	**+0.1**
	baz=278						
WGK				*eS*	**Sg**	**20 43 32.6**	**+0.3**
	baz=278						
WDLH	**Douliu**	**1.09**	**280**	*eP*	**Pn**	**20 43 18.1**	**+0.2**
	baz=278						
SLGT	**Liugui**	**1.10**	**243**	*eP*	**Pn**	**20 43 18.1**	**-0.1**
	baz=242						
NDT	**Datong Townshi**	**1.11**	**351**	*eP*	**Pn**	**20 43 17.7**	**-0.5**
	baz=349						
SGST	**Jiashian**	**1.12**	**248**	*eP*	**Pn**	**20 43 17.9**	**-0.4**
	baz=247						
SGST				*eS*	**Sn**	**20 43 33.2**	**-0.2**
	baz=247						
CHN1	**Nanshi**	**1.13**	**254**	*eP*	**Pg**	**20 43 19.3**	**-0.2**
	baz=253						
CHN1				*eS*	**Sg**	**20 43 34.7**	**+0.3**
	baz=253						
ENTT	**Nioudou**	**1.14**	**353**	*eP*	**Pn**	**20 43 18.4**	**-0.3**
	baz=352						
ECL	**Taimali**	**1.14**	**218**	*eP*	**Pn**	**20 43 18.1**	**-0.5**
	baz=217						
TWK	**Hsinying**	**1.15**	**258**	*eP*	**Pb**	**20 43 19.1**	**+0.2**
	baz=257						
TWK				*eS*	**Sn**	**20 43 34.6**	**+0.5**
	baz=257						
SNST	**Tainan City**	**1.15**	**256**	*eP*	**Pb**	**20 43 19.2**	**+0.3**
	baz=255						
SNST				*eS*	**Sg**	**20 43 35.1**	**+0.2**
	baz=255						
YHNB	**Yeheng**	**1.20**	**345**	*eP*	**Pn**	**20 43 19.4**	**-0.1**
	baz=344						
NSK	**Sanguang**	**1.21**	**345**	*eP*	**Pn**	**20 43 19.7**	**0.0**
	baz=343						
NSK				*eS*	**Sb**	**20 43 35.0**	**-0.3**
	baz=343						
SSD	**Sandimen**	**1.25**	**233**	*eP*	**Pb**	**20 43 20.9**	**+0.3**
	baz=232						
NSTT	**Nanjuang**	**1.29**	**330**	*eP*	**Pb**	**20 43 21.9**	**+0.5**
	baz=329						
LIOB	**Emei**	**1.30**	**331**	*eP*	**Pb**	**20 43 21.9**	**+0.4**
	baz=329						
MASBT	**Mashibuluo**	**1.33**	**228**	*eP*	**Pn**	**20 43 20.8**	**-0.5**
	baz=228						
JYNG	**Yonagunijimaku**	**1.47**	**50**	P	**Pb**	**20 43 23.8**	**-0.6**
JYNG				S	**Sb**	**20 43 42.2**	**-0.6**
YOJ	**Yonaguni jima**	**1.52**	**51**	P	**Pb**	**20 43 24.9**	**-0.4**
YOJ				S	**Sb**	**20 43 43.7**	**-0.6**
HATJ	**Hateruma jima**	**2.00**	**74**	P	**Pn**	**20 43 30.9**	**+0.5**
HATJ				S	**Sn**	**20 43 55.3**	**+0.3**
IRIF	**Iriomote-Funau**	**2.02**	**66**	P	**Pn**	**20 43 31.5**	**+0.7**
IRIF				S	**Sn**	**20 43 56.4**	**+0.7**
JKRS	**Kuro-shima**	**2.23**	**70**	P	**Pn**	**20 43 34.3**	**+0.7**
JKRS				S	**Sn**	**20 44 01.9**	**+1.2**
JIJ	**Ishigaki jima**	**2.38**	**69**	P	**Pn**	**20 43 36.1**	**+0.3**
JIJ				S	**Sn**	**20 44 03.7**	**-0.9**
JISG	**Ishigakijimahi**	**2.61**	**65**	P	**Pn**	**20 43 38.9**	**0.0**
JISG				S	**Sn**	**20 44 09.4**	**-0.7**
JTJ	**Tarama**	**2.96**	**67**	P	**Pn**	**20 43 44.8**	**+1.1**
JTJ				*eS*	**Sn**	**20 44 18.7**	**0.0**

*BJI **08** 20:43:31.7±0.0,19.°18N×99.°74E,h10km,mB4.5/13,*
mb4.3/20,ML4.7/2,Ms4.1/6,Ms7.3.9/7
*IDC **08** 20:43:35.5±0.7,19.°76N×99.°75E,h0km,mb3.9/12,*
mb1 4.0/13,mb1mx3.8/45,mbtmp3.9/13,ML4.0/1,MS3.5/1,
Ms1 3.5/1,ms1mx3.0/47,Error ellipse: s-maj=21.8km
s-min=11.5km az=101.0
*NEIC **08** 20:43:36.8±1.9,19.°72N±0.°05×99.°69E±0.°06,h10km±1km,*
mb4.1/6,Error ellipse: s-maj=11.2km s-min=7.6km
az=127.0
ISC 08 20:43:37.8±0.5,**19.°71N**±0.°05×**99.°64E**±0.°06,**h10**km,**n44,**
σ1°79/46,mb4.0/17,Thailand

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMMT	**Chiang Mai**	**1.11**	**216**	P	**Pb**	**20 43 58.7**	**-0.5**
CHTO	**Chiang Mai**	**1.11**	**217**		**Pb**	**20 43 58.2**	**-1.0**
CHTO				Sg	**Sb**	**20 44 12.5**	**-1.2**
LAMP	**Lampang**	**1.18**	**181**	P	**Pn**	**20 44 00.1**	**-0.2**
PHRA	**Phrae**	**1.33**	**155**	P	**Pn**	**20 44 03.3**	**+0.9**
NANT	**Nan**	**1.35**	**132**	P	**Pn**	**20 44 01.3**	**-1.4**
CM09	**Chiang Mai Arr**	**1.40**	**206**	P	**Pn**	**20 44 04.2**	**+0.7**
CM31	**Chiang Mai Arr**	**1.41**	**208**	P	**Pn**	**20 44 03.5**	**-0.1**
CM31	**Chiang Mai Arr**	**1.41**	**208**		**Pn**	**20 44 02.9**	**-0.7**
CM31				Sn	**Sn**	**20 44 22.4**	**+0.2**
CMAR	**Chiang Mai Arr**	**1.41**	**208**	Pg	**Pn**	**20 44 03.9**	**+0.3**
	592nm,0.3s,baz=18,slow=16,SNR=1527						
CMAR				Lg	Lg	20 44 22.4	
	604nm,0.3s,baz=18,slow=7.7,SNR=7.7						
CM15	**Chiang Mai Arr**	**1.42**	**209**	P	**Pn**	**20 44 03.5**	**-0.3**
CM02	**Chiang Mai Arr**	**1.43**	**208**	P	**Pn**	**20 44 03.6**	**-0.3**
CM01	**Chiang Mai Arr**	**1.44**	**207**	P	**Pn**	**20 44 03.9**	**-0.1**
CM03	**Chiang Mai Arr**	**1.45**	**206**	P	**Pn**	**20 44 04.0**	**-0.1**
CM05	**Chiang Mai Arr**	**1.46**	**207**	P	**Pn**	**20 44 04.1**	**-0.2**
CM13	**Chiang Mai Arr**	**1.46**	**209**	P	**Pn**	**20 44 04.1**	**-0.2**
MHMT	**Maesarieng**	**2.23**	**227**	P	**Pn**	**20 44 18.3**	**+3.4**
SLVN	**Son La**	**4.31**	**67**		**Pn**	**20 44 41.9**	**-1.6**
SHL	**Shillong**	**9.23**	**311**		**Pn**	**20 45 50.7**	**-0.6**
XAN	**Xi'an**	**16.48**	**28**	P	**Pn**	**20 47 31.8**	**+2.5**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,120nm,5.3s						
XAN				LR	LR		
	comp=N,250nm,12.3s						
XAN				LR	LR		
	comp=E,310nm,13.0s						
XAN				LR	LR		
	comp=Z,260nm,10.8s						
PSI	**Prapat**	**16.82**	**182**	Pn	**Pn**	**20 47 36.8**	**+3.1**
	0.6nm,0.3s,baz=180,slow=19,SNR=1.3						
RPSI	**Rantau Prapat**	**16.93**	**182**	P	**Pn**	**20 47 36.8**	**+1.9**
WHN	**Wuhan**	**17.12**	**48**	P	**P**	**20 47 45.9**	**+7.0**
WHN				S	**Sn**	**20 50 52.6**	**+4.9**
WHN				LR	LR		
	comp=N,320nm,8.0s						
WHN				LR	LR		
	comp=E,380nm,6.0s						
WHN				LR	LR		
	comp=Z,570nm,7.9s						
GTA	**Gaotai**	**19.63**	**0**	*eP*	**P**	**20 48 08.0**	**+1.3**
GTA				pP	pP	20 48 12.1	+2.3
GTA				sP	sP	20 48 15.1	+3.9
GTA				pmax	pmax		
	comp=Z,140nm,7.5s						
KSH	**Kashi**	**28.37**	**319**	P	**P**	**20 49 32.9**	**+0.5**
KSH				pP	pP	20 49 37.5	+1.9
KSH				sP	sP	20 49 40.5	+3.6
KSH				pmax	pmax		
	comp=Z,13nm,1.1s						
KSH				pmax	pmax		
	comp=Z,170nm,4.4s						
SONM	**Songino Array**	**28.59**	**10**	P	**P**	**20 49 32.7**	**-1.5**
	comp=Z,1.3nm,0.7s,baz=186,slow=9.4,SNR=5.0						
ULN	**Ulaanbaatar**	**28.72**	**10**	P	**P**	**20 49 36.0**	**+0.6**
ULN				IAmb	IAmb	20 49 36.9	
	comp=Z,4.2nm,1.1s						
KDJ	**Kajisay**	**29.34**	**325**	P	P	20 49 39.1	-1.9
KSRS	**Korea Array**	**30.31**	**48**	LR	LR	21 02 02.2	
	comp=Z,91nm,18.5s,baz=30,slow=37						
MK31	**Makanchi Array**	**30.52**	**336**	P	**P**

89nm,0.3s,baz=164,slow=7.5,SNR=15
HNR Sn **Sn** **20 51 54.6 -1.9**
72nm,0.3s,baz=164,slow=14,SNR=3.2
DZM **Mont Dzumac 11.12 160** Pn **Pn** **20 53 06.0 -1.0**
1.0nm,0.3s,baz=34,slow=9.2,SNR=22
CTA **Charters Tower 17.73 239** P **P** **20 54 35.5 +0.6**
0.3nm,0.3s,baz=52,slow=12,SNR=2.4
WRA **Warramunga Arr 28.27 249** P **P** **20 56 20.6 +0.2**
0.3nm,0.6s,baz=79,slow=8.8,SNR=6.6
ASAR **Alice Springs 29.68 242** P **P** **20 56 33.2 +0.3**
0.9nm,0.7s,baz=65,slow=9.9,SNR=12
H11S2 **WAKE ISLAND Hy 30.16 8** T T 21 27 38.3
baz=190
H11S3 **WAKE ISLAND Hy 30.16 8** T T 21 27 35.8
baz=190,slow=74
H11S1 **WAKE ISLAND Hy 30.18 8** T T 21 27 39.5
baz=190,slow=74
H11N1 **WAKE ISLAND Hy 31.39 8** T T 21 28 59.6
baz=188,slow=76,SNR=22
H11N3 **WAKE ISLAND Hy 31.40 8** T T 21 28 59.9
baz=188,slow=76,SNR=27
H11N2 **WAKE ISLAND Hy 31.41 8** T T 21 29 01.2
baz=188,slow=76,SNR=12
SONM **Songino Array 77.21 325** P **P** **21 02 20.9 +0.4**
0.6nm,0.4s,baz=126,slow=7.3,SNR=2.0
MKAR **Makanchi Array 91.70 317** P **P** **21 03 34.2 +0.3**
0.8nm,0.6s,baz=96,slow=6.2,SNR=10

*IDC **08** 20:58:23.9±0.8, 52°.87S×27°.14E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.8/24, mbtmp3.8/7, MS3.6/1, Ms1 3.4/1, ms1mx3.0/25, Error ellipse: s-maj=36.2km s-min=20.5km az=81.0*
ISC 08 20:58:25.6±0.9, 52°.8S±0°.1×27°.3E±0°.3, h10km, n13, σ1s07/13, mb3.8/7, South of Africa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SNAA	**Sanae**	**23.08**	**204**	P		**P**	**21 03 32.9**	**+1.9**
SNAA	**Sanae**	**23.08**	**204**	**P**		**P**	**21 03 29.7**	**-1.3**
	3.8nm,0.9s,baz=87,slow=7.7,SNR=14							
VNA2	**Neumayer--Watz**	**23.85**	**208**	P		**P**	**21 03 39.4**	**+0.7**
	baz=42,slow=12							
VNA1	**Neumayer--Stat**	**23.96**	**209**	P		**P**	**21 03 41.3**	**+1.7**
BOSA	**Boshof**	**24.22**	**356**	**P**		**P**	**21 03 43.0**	**+0.5**
	1.4nm,0.7s,baz=174,slow=12,SNR=4.1							
BOSA				LR		LR	21 12 54.7	
	comp=Z,120nm,18.7s,baz=266,slow=36							
VNA3	**Neumayer Olymp**	**24.66**	**208**	P		**P**	**21 03 46.2**	**+0.2**
QSPA	**South Pole Qui**	**37.47**	**180**	P		**P**	**21 05 37.8**	**-0.7**
	4.0nm,0.9s,baz=250,slow=1.7,SNR=18							
VNDA	**Vanda**	**46.92**	**168**	**P**		**P**	**21 06 55.5**	**0.0**
	0.6nm,0.7s,baz=199,slow=4.9,SNR=2.6							
TORD	**Torodi Ar. Bea**	**69.30**	**333**	P		**P**	**21 09 32.8**	**-0.1**
	0.4nm,0.7s,baz=168,slow=6.8,SNR=2.4							
ASAR	**Alice Springs**	**80.89**	**117**	P		**P**	**21 10 40.6**	**+0.7**
	0.6nm,0.6s,baz=214,slow=4.8,SNR=12							
WRA	**Warramunga Arr**	**84.13**	**115**	P		**P**	**21 10 56.8**	**-0.1**
	0.5nm,0.8s,baz=210,slow=3.5,SNR=8.6							
PDAR	**Pinedale Array**	**149.76**	**268**	PKPbc		**PKPbc**	**21 18 14.0**	**-1.2**
	0.2nm,0.6s,baz=126,slow=4.6,SNR=3.3							
YKA	**Yellowknife Ar**	**157.77**	**311**	PKPab		**PKPab**	**21 18 53.6**	**-0.1**
	0.4nm,0.8s,baz=88,slow=5.6,SNR=7.1							

*GCG **08** 20:59:13.8±0.8, 14°.21N×91°.49W, h63km±19km, MD3.7*
*SNET **08** 20:59:13.0±1.1, 14°.02N×91°.46W, h20km±10km, ML3.0*
ISC 08 20:59:09.4±3.0, 13°.9N±0°.1×91°.6W±0°.1, h7km±15km, n15, σ0s91/21, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ERG	**Entre ros, C**	**0.51**	**5**	*eP*		**Pn**	**20 59 23.9**	**+0.8**
RTAL	**Retalhuleu**	**0.59**	**352**	*eP*		**Pn**	**20 59 23.6**	**-0.7**
RTAL				*eS*		**Sb**	**20 59 32.0**	**+1.3**
STG3	**Santiaguito 3,**	**0.78**	**3**	*eP*		**Pn**	**20 59 26.5**	**-0.4**
FUG	**Fuego 3**	**0.91**	**56**	*eP*		**Pn**	**20 59 28.8**	**0.0**
PCG	**Pacaya**	**1.08**	**65**	*eP*		**Pn**	**20 59 31.6**	**+0.4**
PCG				*eS*		**Sn**	**20 59 44.7**	**-1.9**
IXG	**Ixpaco**	**1.16**	**78**	*eP*		**Pb**	**20 59 32.2**	**+0.3**
IXG	**Ixpaco**	**1.16**	**78**	*eP*		**Pg**	**20 59 31.3**	**-0.4**
NBG	**Las Nubes**	**1.39**	**62**	*eS*		**Sn**	**20 59 55.8**	**+1.4**
RTR	**El Retiro**	**1.91**	**91**	*eP*		**Pn**	**20 59 43.0**	**+0.4**
RTR				*eS*		**Sn**	**21 00 06.6**	**-0.4**
CEVE	**Cerro Verde**	**1.94**	**93**	*eP*		**Pn**	**20 59 43.0**	**0.0**
CEVE				IAML			21 00 13.8	
	comp=Z,825nm,0.2s							
SBLS	**San Blas**	**1.94**	**93**	*eP*		**Pn**	**20 59 43.0**	**0.0**
SBLS				*eS*		**Sn**	**21 00 06.3**	**-1.4**
SNJE	**San Jose**	**1.95**	**92**	*eP*		**Pn**	**20 59 44.1**	**+0.9**
SNJE				*eS*		**Sn**	**21 00 07.8**	**-0.3**
MRL	**Marmol**	**2.19**	**58**	*eP*		**Pn**	**20 59 45.9**	**-0.6**
MTO3	**Montecristo**	**2.23**	**78**	*eP*		**Pn**	**20 59 47.4**	**+0.3**
MTO3				IAML			21 00 32.7	
	comp=Z,18nm,0.4s							
LFRS	**El Faro**	**2.50**	**97**	*eP*		**Pn**	**20 59 51.4**	**+0.7**
LFRS				*eS*		**Sn**	**21 00 20.6**	**-0.9**

IDC 08 21:42:14.9±1.6, 3°.14S×151°.81E, h332km±21km, mb3.0/4, mb1 3.2/4, mb1mx2.8/45, mbtmp3.6/4, Error ellipse: s-maj=89.5km s-min=22.5km az=123.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.18**	**169**	P		Pn	21 42 59.6	+0.1
	44nm,0.3s,baz=56,slow=3.2,SNR=7.0							
WRA	**Warramunga Arr**	**23.86**	**224**	P		P	21 46 59.6	+0.1
	0.6nm,0.5s,baz=47,slow=9.3,SNR=14							
WRA				PcP		PcP	21 50 31.9	-0.6
	0.1nm,0.5s,baz=51,slow=2.2,SNR=1.3							
ASAR	**Alice Springs**	**26.76**	**219**	P		P	21 47 24.9	-0.5
	0.5nm,0.5s,baz=48,slow=7.4,SNR=7.4							
ILAR	**Eielson Array**	**81.01**	**22**	P		P	21 53 52.2	-0.7
	0.1nm,0.5s,baz=247,slow=4.6,SNR=2.9							
BVAR	**Borovoye Array**	**87.33**	**323**	P		P	21 54 25.3	+0.5
	0.2nm,0.5s,baz=122,slow=7.3,SNR=2.2							
TORD	**Torodi Ar. Bea**	**148.83**	**290**	PKPbc		PKPbc	22 01 24.5	-0.2
	0.2nm,0.3s,baz=92,slow=2.4,SNR=8.8							

*TAP **08** 22:02:51.3, 23°.93N×122°.72E, h30km, ML2.7, D*
*JMA **08** 22:02:52.6±0.2, 24°.04N×122°.60E, h23km±5km, M1.9*
ISC 08 22:02:51.7±1.2, 23°.93N±0°.04×122°.64E±0°.02, h23km±14km, n44, σ0s78/74, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.59**	**28**	P		**Pb**	**22 03 02.9**	**-0.4**
JYNG				S		**Sb**	**22 03 09.8**	**-1.4**
YOJ	**Yonaguni jima**	**0.62**	**33**	P		**Pb**	**22 03 03.5**	**-0.5**
	baz=25							
YOJ				*eS*		**Sb**	**22 03 10.9**	**-1.4**
	baz=25							
YOJ	**Yonaguni jima**	**0.62**	**33**	P		**Pb**	**22 03 03.5**	**-0.5**
YOJ				S		**Sb**	**22 03 11.2**	**-1.1**
EOS1	**EOS1**	**0.77**	**323**	*i* P		**Pn**	**22 03 07.0**	**-0.1**
	baz=322							
EOS1				*eS*		**Sn**	**22 03 17.9**	**-0.1**
	baz=322							
TWD	**Chiawan**	**0.97**	**279**	*eP*		**Pn**	**22 03 09.3**	**-0.5**
	baz=278							
TWD				*eS*		**Sb**	**22 03 22.0**	**-0.1**
	baz=278							
NACB	**Ninganchiao**	**0.99**	**284**	P		**Pn**	**22 03 09.8**	**-0.3**
	baz=269							
NACB				*eS*		**Sn**	**22 03 23.5**	**+0.2**
	baz=269							
TWC	**Suao**	**0.99**	**313**	P		**Pb**	**22 03 10.2**	**+0.1**
	baz=310							
TWC				*eS*		**Sb**	**22 03 22.5**	**-0.2**
	baz=310							
HATJ	**Hateruma jima**	**1.07**	**83**	P		**Pb**	**22 03 12.5**	**+1.0**
HATJ				*eS*		**Sb**	**22 03 26.3**	**+1.2**
IRIF	**Iriomote-Funau**	**1.07**	**68**	P		**Pb**	**22 03 12.8**	**+1.3**
IRIF				S		**Sb**	**22 03 26.1**	**+1.0**
ETLH	**Xiulin Townshi**	**1.09**	**285**	*i* P		**Pn**	**22 03 11.4**	**-0.3**
	baz=271							
ETLH				*eS*		**Sn**	**22 03 25.4**	**-0.7**
	baz=271							
EGFH	**Guangfu**	**1.14**	**257**	*eP*		**Pn**	**22 03 11.8**	**-0.4**
	baz=258							
NTC	**Toucheng**	**1.18**	**321**	*eP*		**Pb**	**22 03 13.8**	**+0.5**
	baz=318							
NTC				*eS*		**Sb**	**22 03 30.2**	**+2.0**
	baz=318							
TWE	**Neicheng**	**1.19**	**312**	*eP*		**Pb**	**22 03 13.4**	**-0.1**
	baz=309							
TWE				*eS*		**Sb**	**22 03 29.5**	**+1.1**
	baz=309							
HGSD	**Ruisui**	**1.20**	**249**	*eP*		**Pn**	**22 03 12.2**	**-0.8**
	baz=250							
ENTT	**Nioudou**	**1.21**	**306**	*eP*		**Pb**	**22 03 13.8**	**-0.1**
	baz=289							
ENTT				*eS*		**Sb**	**22 03 30.1**	**+1.1**
	baz=289							
NDT	**Datong Townshi**	**1.23**	**303**	P		**Pb**	**22 03 14.2**	**0.0**
	baz=288							
NDT				*eS*		**Sb**	**22 03 30.6**	**+0.9**
	baz=288							
SLBB	**Yuanshan**	**1.23**	**312**	*eP*		**Pb**	**22 03 14.7**	**+0.4**
	baz=309							
NNSB	**Datong**	**1.25**	**293**	P		**Pn**	**22 03 14.2**	**+0.4**
	baz=280							
NNSB				*eS*		**Sb**	**22 03 30.4**	**-0.1**
	baz=280							
NNSH	**Datong**	**1.25**	**293**	P		**Pn**	**22 03 14.3**	**+0.4**
	baz=281							
NNSH				*eS*		**Sb**	**22 03 30.6**	**+0.2**
	baz=281							
NNS	**Nan Shan**	**1.26**	**294**	*eP*		**Pn**	**22 03 14.3**	**+0.3**
	baz=292							
TIPB	**Shuangxi**	**1.27**	**324**	*eP*		**Pn**	**22 03 14.1**	**0.0**
	baz=336							
TIPB				*eS*		**Sb**	**22 03 32.1**	**+1.1**
	baz=336							
WHF	**Hehuan Shan**	**1.28**	**280**	P		**Pn**	**22 03 14.6**	**+0.1**
	baz=279							
WHF				*eS*		**Sn**	**22 03 31.5**	**+0.4**
	baz=279							
EHY	**Hungye**	**1.28**	**251**	*eS*		**Sn**	**22 03 30.4**	**-0.2**
	baz=251							
JKRS	**Kuro-shima**	**1.29**	**76**	S		**Sb**	**22 03 31.2**	**-0.1**
NWLT	**Wulai**	**1.34**	**309**	*eP*		**Pb**	**22 03 15.9**	**-0.2**
	baz=307							
OWD	**Renai**	**1.34**	**271**	*eP*		**Pn**	**22 03 15.3**	**+0.2**
	baz=271							
OWD				*eS*		**Sn**	**22 03 31.9**	**-0.4**
	baz=271							
YULB	**Yu-li**	**1.34**	**247**	*eP*		**Pn**	**22 03 15.2**	**+0.2**
	baz=236							
YULB				*eS*		**Sn**	**22 03 31.7**	**-0.5**
	baz=236							
CHGB	**Renai**	**1.35**	**276**	P		**Pn**	**22 03 15.1**	**-0.1**
	baz=275							
CHGB				*eS*		**Sn**	**22 03 32.9**	**+0.3**
	baz=275							
TWF1	**Yuli**	**1.36**	**245**	*eP*		**Pn**	**22 03 15.2**	**0.0**
	baz=234							
TWF1				*eS*		**Sn**	**22 03 32.5**	**-0.1**
	baz=234							
YHNB	**Yeheng**	**1.37**	**303**	P		**Pb**	**22 03 16.2**	**-0.5**
	baz=288							
NWF	**Wu-fen Shan**	**1.38**	**326**	*eP*		**Pb**	**22 03 15.9**	**-0.9**
	baz=323							
NWF				*eS*		**Sb**	**22 03 35.2**	**+1.1**
	baz=323							
WFSB	**Wu-fen Shan**	**1.38**	**326**	*eP*		**Pb**	**22 03 16.1**	**-0.6**
	baz=323							
VWDT	**VWDT**	**1.39**	**263**	*eP*		**Pn**	**22 03 13.8**	**-1.8**
	baz=263							
VWDT				*eS*		**Sn**	**22 03 31.5**	**-1.6**
	baz=263							
TDCB	**Techi**	**1.39**	**284**	*eP*		**Pn**	**22 03 16.4**	**+0.6**
	baz=283							
CHKT	**Chengkung**	**1.44**	**235**	*eS*		**Sn**	**22 03 33.1**	**-1.3**
	baz=225							
FULB	**Fuli**	**1.44**	**240**	*eP*		**Pn**	**22 03 15.4**	**-0.9**
	baz=230							
FULB				*eS*		**Sn**	**22 03 34.0**	**-0.4**
	baz=230							
JIJ	**Ishigaki jima**	**1.44**	**72**	P		**Pb**	**22 03 17.3**	**-0.5**
JIJ				S		**Sn**	**22 03 34.1**	**-0.3**
SSLB	**Suanglung**	**1.55**	**265**	*eP*		**Pn**	**22 03 19.0**	**+1.1**
	baz=265							
SSLB				*eS*		**Sn**	**22 03 37.6**	**+0.3**
	baz=265							
YM01	**YM01**	**1.55**	**321**	*eP*		**Pn**	**22 03 18.2**	**+0.2**
	baz=319							
YM10	**YM10**	**1.57**	**321**	*eP*		**Pb**	**22 03 19.8**	**-0.2**
	baz=319							
YM11	**YM11**	**1.57**	**322**	*eP*		**Pb**	**22 03 20.5**	**+0.5**
	baz=320							
TWH	**Lutao**	**1.62**	**222**	*eP*		**Pn**	**22 03 19.9**	**+1.1**
	baz=222							
TWH				*eS*		**Sn**	**22 03 37.4**	**-1.6**
	baz=222							
JISG	**Ishigakijimahi**	**1.66**	**66**	P		**Pn**	**22 03 18.4**	**-0.9**
JISG				S		**Sn**	**22 03 39.3**	**-0.6**
JTJ	**Tarama**	**2.01**	**69**	P		**Pn**	**22 03 25.1**	**+1.0**
JTJ				*eS*		**Sn**	**22 03 48.7**	**+0.2**

*INET **08** 22:04:25.5, 12°.65N×88°.94W, h10km, ML3.7*
*SNET **08** 22:04:27.0±1.4, 12°.73N×88°.95W, h19km±8km, ML3.7*
*UCR **08** 22:04:27.2±1.4, 12°.73N×88°.95W, h20km±7km, ML3.7*
ISC 08 22:04:24.9±2.6, 12°.6N±0°.1×88°.96W±0°.04, h17km±9km, n38, σ0s35/56, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LALI	**Alcalda de L**	**0.92**	**337**	*eP*		**Pg**	**22 04 43.2**	**+0.4**
LALI				*eS*		**Sg**	**22 04 54.8**	**-0.1**
LALI				IAML			22 04 56.1	
	comp=Z,775nm,0.2s							
LALI	**Alcalda de L**	**0.92**	**337**	*eP*		**Pg**	**22 04 43.2**	**+0.4**
LALI				*eS*		**Sg**	**22 04 54.8**	**-0.1**
LALI				IAML			22 04 56.1	
	comp=Z,775nm,0.2s							
JUCU	**Jucuarįn**	**0.93**	**48**	*eP*		**Pn**	**22 04 43.1**	**-0.1**
JUCU				*eS*		**Sg**	**22 04 55.4**	**+0.2**
JUCU				IAML			22 04 57.8	
	comp=Z,3μm,0.2s							
JUCU	**Jucuarįn**	**0.93**	**48**	*eP*		**Pn**	**22 04 43.1**	**-0.1**
JUCU				*eS*		**Sg**	**22 04 55.4**	**+0.2**
JUCU				IAML			22 04 57.8	
	comp=Z,3μm,0.2s							
COEB	**Comit de Eme**	**0.95**	**26**	*eP*		**Pn**	**22 04 43.3**	**-0.4**
COEB				*eS*		**Sg**	**22 04 55.9**	**-0.2**
COEB				IAML			22 05 06.9	
	comp=Z,2μm,0.4s							
COEB	**Comit de Eme**	**0.95**	**26**	*eP*		**Pn**	**22 04 43.3**	**-0.4**
COEB				*eS*		**Sg**	**22 04 55.9**	**-0.2**
COEB				IAML			22 05 06.9	
	comp=Z,2μm,0.4s							
TECA	**Tecapa**	**0.96**	**27**	*eP*		**Pn**	**22 04 43.5**	**-0.4**
TECA	**Tecapa**	**0.96**	**27**	*eP*		**Pn**	**22 04 43.5**	**-0.4**
LFRS	**El Faro**	**0.99**	**354**	*eP*		**Pb**	**22 04 43.7**	**0.0**
LFRS	**El Faro**	**0.99**	**354**	*eP*		**Pb**	**22 04 43.7**	**0.0**
LCY	**Lacayo**	**1.02**	**40**	*eP*		**Pn**	**22 04 44.5**	**-0.1**
LCY	**Lacayo**	**1.02**	**40**	*eP*		**Pn**	**22 04 44.5**	**-0.1**
VSM	**San Miguel**	**1.03**	**40**	*eP*		**Pg**	**22 04 45.0**	**-0.1**
VSM	**San Miguel**	**1.03**	**40**	*eP*		**Pg**	**22 04 45.0**	**-0.1**
PACA	**Pacayal**	**1.03**	**37**	*eP*		**Pn**	**22 04 44.5**	**-0.3**
PACA	**Pacayal**	**1.03**	**37**	*eP*		**Pn**	**22 04 44.5**	**-0.3**
BLLM	**Bellamira**	**1.07**	**41**	*eP*		**Pn**	**22 04 45.1**	**-0.1**
BLLM	**Bellamira**	**1.07**	**41**	*eP*		**Pn**	**22 04 45.1**	**-0.1**
SNET	**Serv Nac Est T**	**1.08**	**346**	*eP*		**Pg**	**22 04 45.7**	**-0.2**
SNET	**Serv Nac Est T**	**1.08**	**346**	*eP*		**Pg**	**22 04 45.7**	**-0.2**
LBRS	**Las Brisas**	**1.10**	**356**	*eP*		**Pb**	**22 04 45.6**	**+0.1**
LBRS	**Las Brisas**	**1.10**	**356**	*eP*		**Pb**	**22 04 45.6**	**+0.1**
UEES	**Universidad Ev**	**1.11**	**346**	*eP*		**Pg**	**22 04 46.2**	**-0.2**
UEES				*eS*		**Sb**	**22 05 00.1**	**+0.2**
UEES	**Universidad Ev**	**1.11**	**346**	*eP*		**Pg**	**22 04 46.2**	**-0.2**
UEES				*eS*		**Sb**	**22 05 00.1**	**+0.2**
BOQS	**Boqueron**	**1.14**	**344**	*eP*		**Pb**	**22 04 46.5**	**+0.3**
BOQS				*eS*		**Sb**	**22 05 01.0**	**+0.2**
BOQS	**Boqueron**	**1.14**	**344**	*eP*		**Pb**	**22 04 46.5**	**+0.3**
BOQS				*eS*		**Sb**	**22 05 01.0**	**+0.2**
LCND	**La Caada**	**1.24**	**57**	*eP*		**Pn**	**22 04 47.4**	**-0.1**
LCND				*eS*		**Sn**	**22 05 03.4**	**-0.4**
LCND				IAML			22 05 09.1	
	comp=Z,2μm,0.3s							
LCND	**La Caada**	**1.24**	**57**	*eP*		**Pn**	**22 04 47.4**	**-0.1**
LCND				*eS*		**Sn**	**22 05 03.4**	**-0.4**
LCND				IAML			22 05 09.1	
	comp=Z,2μm,0.3s							
FAGO	**Alcalda de S**	**1.34**	**38**	*eP*		**Pb**	**22 04 49.9**	**+0.2**
FAGO				*eS*		**Sb**	**22 05 07.4**	**+0.8**
FAGO	**Alcalda de S**	**1.34**	**38**	*eP*		**Pb**	**22 04 49.9**	**+0.2**
FAGO				*eS*		**Sb**	**22 05 07.4**	**+0.8**
CEVE	**Cerro Verde**	**1.35**	**331**	*eP*		**Pb**	**22 04 49.7**	**-0.3**
CEVE				*eS*		**Sn**	**22 05 06.9**	**-0.1**
CEVE				IAML			22 05 10.7	
	comp=Z,5μm,0.4s							
CEVE	**Cerro Verde**	**1.35**	**331**	*eP*		**Pb**	**22 04 49.7**	**-0.3**
CEVE				*eS*		**Sn**	**22 05 06.9**	**-0.1**
CEVE				IAML			22 05 10.7	
	comp=Z,5μm,0.4s							
SBLS	**San Blas**	**1.36**	**332**	*eP*		**Pb**	**22 04 49.9**	**-0.2**
SBLS	**San Blas**	**1.36**	**332**	*eP*		**Pb**	**22 04 49.9**	**-0.2**
RTR	**El Retiro**	**1.42**	**332**	*eP*		**Pb**	**22 04 50.8**	**-0.3**
RTR	**El Retiro**	**1.42**	**332**	*eP*		**Pb**	**22 04 50.8**	**-0.3**
MTO3	**Montecristo**	**1.80**	**347**	*eP*		**Pn**	**22 04 56.3**	**+0.9**
MTO3				*eS*		**Sb**	**22 05 19.3**	**-0.6**
MTO3	**Montecristo**	**1.80**	**347**	*eP*		**Pn**	**22 04 56.3**	**+0.9**
MTO3				*eS*		**Sb**	**22 05 19.3**	**-0.6**

WEL 08 22:08:53.7, 37°.5S±50°×17°.8E±4°.2, h134km±44km, M2.5/9, ML2.6/7, MLv2.5/9, Error ellipse: s-maj=0.1km s-min=0.1km az=146.8, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HAZ	**Te Kaha**	**0.83**	**201**	P		Pn	22 09 16.0	+0.5
WMGZ	**Waiomatatini S**	**0.86**	**167**	P		Pn	22 09 15.8	+0.1
RUGZ	**Raukumara Rang**	**1.06**	**201**	P		Pn	22 09 18.0	+0.4
URZ	**Urewera**	**1.53**	**213**	P		Pn	22 09 22.6	+0.2
RAGZ	**Rawiri**	**1.62**	**201**	P		Pn	22 09 25.0	+1.4
RTZ	**Ruatahuna**	**1.88**	**210**	P		Pn	22 09 27.6	+1.0
SNGZ	**Shannon Statio**	**1.91**	**200**	P		Pn	22 09 28.1	+1.3
KNZ	**Kokohu**	**2.08**	**191**	P		Pn	22 09 27.4	-1.3
MTHZ	**Maungataniwha**	**2.14**	**209**	P		Pn	22 09 30.9	+1.3
MRHZ	**Matea Rd**	**2.31**	**216**	P		Pn	22 09 32.7	+1.0
BKZ	**Black Stump Fm**	**2.55**	**211**	P		Pn	22 09 35.1	+0.4
BHHZ	**Black Hill Sta**	**3.00**	**213**	P		Pn	22 09 40.6	+0.1

WEL 08 22:09:20.0, 39°S±40°×17°6E±1°3, h137km±32km, M2.8/18, ML2.7/15, MLv2.8/18, Error ellipse: s-maj=0.1km s-min=0.0km az=175.9, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWVZ	**Taurewa**	**0.39**	**244**	P		Pn	22 09 39.4	-0.1
TUVZ	**Tukino**	**0.41**	**207**	P		Pn	22 09 40.2	+0.6
MTVZ	**Mangateitei**	**0.58**	**214**	P		Pn	22 09 40.3	-0.1
PNHZ	**Pukenui**	**1.04**	**167**	P		Pn	22 09 41.1	-2.9
TSZ	**Takapari Road**	**1.16**	**177**	P		Pn	22 09 46.1	+1.1
DVHZ	**Dannevirke**	**1.41**	**172**	P		Pn	22 09 47.9	+0.2
PKE	**Pukeiti**	**1.51**	**258**	P		Pn	22 09 50.4	+1.7
PRWZ	**Pori Road**	**1.65**	**178**	P		Pn	22 09 51.9	+1.6
MRZ	**Mangatainoka R**	**1.77**	**188**	P		Pn	22 09 53.0	+1.3
BFZ	**Birch Farm**	**1.80**	**171**	P		Pn	22 09 50.3	-1.7
TIWZ	**Tintock**	**1.87**	**180**	P		Pn	22 09 53.9	+1.1
OGWZ	**Otaki Gorge**	**1.99**	**196**	P		Pn	22 09 54.6	+0.3
HOWZ	**Holdsworth Sta**	**2.02**	**188**	P		Pn	22 09 55.6	+1.1
CPWZ	**Castlepoint**	**2.02**	**173**	P		Pn	22 09 55.2	+0.7
KIW	**Kapiti Island**	**2.10**	**201**	P		Pn	22 09 51.9	-3.7
TMWZ	**Te Maipa**	**2.20**	**180**	P		Pn	22 09 57.7	+0.9
WMGZ	**Waiomatatini S**	**2.26**	**62**	P		Sn	22 10 17.5	-8.7
MTW	**Mount Morrison**	**2.27**	**187**	P		Pn	22 09 56.8	-0.9
CAW	**Cannon Point**	**2.29**	**196**	P		Pn	22 09 53.0	-4.9
DUWZ	**D'Urville Isla**	**2.43**	**218**	P		Pn	22 09 54.3	-5.4
MSWZ	**Moikau Station**	**2.56**	**191**	P		Pn	22 10 03.0	+1.7
PLWZ	**Palliser**	**2.71**	**190**	P		Pn	22 10 04.1	+1.0
NNZ	**Nelson**	**3.01**	**219**	P		Pn	22 10 08.6	+1.7
BSWZ	**Blackbirch Sta**	**3.21**	**208**	P		Pn	22 10 12.0	+2.5
QRZ	**Quartz Range**	**3.23**	**232**	P		Pn	22 10 08.0	-1.7
THZ	**Tophouse**	**3.66**	**218**	P		Pn	22 10 14.9	-0.5
INZ	**Inchbonnie**	**5.10**	**220**	P		Pn	22 10 32.8	-1.6
OKCZ	**Okains Bay**	**5.27**	**203**	P		Pn	22 10 36.4	-0.3
OXZ	**Oxford**	**5.29**	**212**	P		Pn	22 10 35.6	-1.4

*IDC **08** 22:21:22.2±1.2, 10°.57S×123°.28E, h0km, mb4.0/3, mb1 3.9/4, mb1mx3.6/23, mbtmp3.9/4, ML3.3/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/33, Error ellipse: s-maj=25.0km s-min=10.1km az=136.0*
*NEIC **08** 22:21:23.9±3.0, 10°.63S±0°.04×123°.63E±0°.06, h27km±7km, mb4.4/10, Error ellipse: s-maj=9.3km s-min=4.2km az=68.0*
*DJA **08** 22:21:26.1±0.4, 11°.S±.3°×12°.4E±°, h10km, M4.1/10, mB4.1/1, mb4.4/4, MLv3.9/10, Mw(mB)3.1/1*
ISC 08 22:21:24.5±0.5, 10°.63S±0°.04×123°.65E±0°.05, h29km, n39, σ2s24/45, mb4.1/7, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BATI	**Baumata**	**0.42**	**3**	Pg		**Pb**	**22 21 31.3**	**-2.3**
	686nm,0.3s,baz=214,slow=3.5,SNR=502							
BATI				LR		LR	22 21 38.6	
	comp=Z,508nm,19.6s,baz=88,slow=32

comp=Z,0.7nm,0.5s,baz=144,slow=7.1,SNR=15
ZALV Zalesovo Beam 72.25 337 P **P** **22 32 48.9 +2.0**
comp=Z,1.4nm,0.7s,baz=158,slow=3.9,SNR=2.1
SOCY Socotra 72.80 286 P **P** **22 32 51.2 +0.1**
SOCY IAmb IAmb 22 33 07.1
comp=Z,8.3nm,1.0s

ATA ***08*** *22:26:55.1±1.6, 38.°70N×43.°21E, h36km±23km, ML1.5, MW3.7*
DDA ***08*** *22:26:58.4, 38.°63N×43.°12E, h7km±2km, ML1.4*
ISC 08 22:26:57.3±1.0, 38.°66N±0.°05×43.°18E±0.°04, h27km±9km, n9, σ1°48/19, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TVAN	**Van**	**0.22**	**126**	*eP*		**Pb**	**22 27 03.9**	**+0.2**
TVAN				*eS*		**Sb**	**22 27 09.1**	**+1.2**
TVAN				IAML			22 27 09.7	
	comp=Z,38nm,0.3s							
TVAN	**Van**	**0.22**	**126**	*i* P		**Pb**	**22 27 04.0**	**+0.4**
TVAN				*i* S		**Sb**	**22 27 07.3**	**-0.6**
TVAN				IAML			22 27 09.0	
	comp=N,69nm,0.4s							
TVAN				IAML			22 27 10.0	
	comp=E,66nm,0.4s							
GEVA	**Gevas**	**0.36**	**196**	*eP*		**Pb**	**22 27 05.6**	**+0.1**
GEVA				*eS*		**Sn**	**22 27 12.9**	**-0.2**
GEVA				IAML			22 27 16.2	
	comp=Z,22nm,0.5s							
GEVA	**Gevas**	**0.36**	**196**	*i* P		**Pb**	**22 27 05.7**	**+0.1**
GEVA				*i* S		**Sb**	**22 27 10.6**	**-0.4**
GEVA				IAML			22 27 13.0	
	comp=E,28nm,0.3s							
ADCV	**BITLIS_Adilcev**	**0.39**	**293**	*i* P		**Pn**	**22 27 06.3**	**-1.1**
ADCV				*i* S		**Sb**	**22 27 10.9**	**-1.0**
ADCV				IAML			22 27 12.0	
	comp=E,46nm,0.5s							
ADCV				IAML			22 27 21.0	
	comp=N,56nm,0.8s							
VMUR	**Van-Muradiye**	**0.45**	**42**	*i* P		**Pn**	**22 27 08.4**	**+0.2**
VMUR				*i* S		**Sn**	**22 27 14.3**	**-1.3**
VMUR				IAML			22 27 18.0	
	comp=E,33nm,0.3s							
VMUR				IAML			22 27 19.0	
	comp=N,41nm,0.6s							
BLIS	**Bitlis-Merkez**	**0.87**	**254**	*i* P		**Pn**	**22 27 14.3**	**+0.4**
BLIS				*i* S		**Sb**	**22 27 22.1**	**-3.1**
BLIS				IAML			22 27 26.0	
	comp=E,12nm,0.7s							
BLIS				IAML			22 27 27.0	
	comp=N,16nm,0.3s							
MUSM	**Mu-Merkez**	**1.31**	**274**	*eP*		**Pn**	**22 27 18.9**	**-1.0**
MUSM				*eS*		**Sb**	**22 27 39.1**	**+1.3**
MUSM				*eS*		**Sn**	**22 27 40.3**	**+3.7**
MUSM				IAML			22 28 05.9	
	comp=Z,3.7nm,2.2s							
MUSM	**Mu-Merkez**	**1.31**	**274**	*i* P		**Pb**	**22 27 22.2**	**+0.9**
MUSM				*i* S		**Sn**	**22 27 36.3**	**-0.3**

IDC 08 22:31:31.9±3.7, 6.°63S×147.°79E, h0km, mb3.7/2, mb1 3.8/3, mb1mx3.5/28, mbtmp3.6/3, ML3.6/1, Error ellipse: s-maj=106.1km s-min=48.2km az=117.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**18.59**	**223**	P		P	22 35 50.4	-0.5
	0.2nm,0.3s,baz=49,slow=11,SNR=1.8							
ASAR	**Alice Springs**	**21.56**	**217**	P		P	22 36 23.4	+0.1
	0.7nm,0.4s,baz=50,slow=9.3,SNR=14							
FITZ	**Fitzroy Crossi**	**24.41**	**240**	P		P	22 36 52.4	-0.1
	2.0nm,0.4s,baz=54,slow=8.6,SNR=14							
TORD	**Torodi Ar. Bea**	**146.00**	**284**	PKPbc		PKPdf	22 51 14.2	+0.1
	0.2nm,0.5s,baz=73,slow=4.2,SNR=2.0							

DJA ***08*** *22:33:29.7±0.4, 8.°S±4.°×10.°9E±.°, h10km, M4.3/10, MLv4.3/10*
NEIC ***08*** *22:33:32.8±2.5, 8.°24S±0.°06×109.°24E±0.°04, h83km±7km, mb4.0/13, Error ellipse: s-maj=8.8km s-min=5.9km az=170.0*
IDC ***08*** *22:33:36.0±1.5, 7.°82S×109.°36E, h108km±15km, mb3.8/8, mb1 3.9/9, mb1mx3.6/31, mbtmp4.1/9, MS3.0/3, Ms1 3.1/3, ms1mx2.7/40, Error ellipse: s-maj=33.1km s-min=12.3km az=46.0*
ISC 08 22:33:31.6±1.0, 8.°33S±0.°07×109.°17E±0.°04, h67km±11km, n49, σ1°81/51, mb4.0/11, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
UGM	**Wanagama**	**1.40**	**73**	P		**Pn**	**22 33 55.6**	**+0.4**
UGM				S		**Sn**	**22 34 13.1**	**+0.1**
UGM	**Wanagama**	**1.40**	**73**	Pn		**Pn**	**22 33 55.9**	**+0.7**
UGM				Sn		**Sn**	**22 34 12.7**	**-0.2**
CISI	**Cisompet, Garu**	**1.54**	**300**	P		**Pn**	**22 33 57.9**	**+0.8**
CISI				S		**Sn**	**22 34 16.5**	**+0.1**
CISI	**Cisompet, Garu**	**1.54**	**300**	Pn		**Pn**	**22 33 58.3**	**+1.2**
SMRI	**Semarang**	**1.79**	**45**	P		**Pn**	**22 34 01.9**	**+1.5**
SMRI				S		**Sn**	**22 34 24.8**	**+2.6**
SMRI	**Semarang**	**1.79**	**45**			**Pn**	**22 34 02.5**	**+2.1**
WOJI	**Wonogiri, Jawa**	**1.81**	**74**	P		**Pn**	**22 34 00.3**	**-0.2**
PCJI	**Pacitan**	**1.99**	**86**	P		**Pn**	**22 34 04.2**	**+1.1**
PCJI				S		**Sn**	**22 34 27.2**	**+0.2**
LEM	**Lembang**	**2.14**	**314**	P		**Pn**	**22 34 08.6**	**+3.3**
	37nm,0.3s,baz=83,slow=12,SNR=19							
LEM				S		**Sn**	**22 34 34.8**	**+3.8**
	38nm,0.3s,baz=181,slow=15,SNR=8.4							
CNJI	**Cibinong**	**2.26**	**296**	P		**Pn**	**22 34 07.3**	**+0.6**
CNJI				S		**Sn**	**22 34 32.7**	**-0.9**
DBJI	**Dramaga**	**2.98**	**306**	P		**Pn**	**22 34 16.4**	**-0.1**
GRJI	**Gresik**	**3.57**	**67**	P		**Pn**	**22 34 26.3**	**+1.7**
XMIS	**Christmas Isla**	**4.08**	**238**	Pn		**Pn**	**22 34 31.1**	**-0.4**
JAGI	**Jajag, Banyuwa**	**4.93**	**92**	P		**Pn**	**22 34 45.2**	**+2.0**
JAGI	**Jajag, Banyuwa**	**4.93**	**92**			**Pn**	**22 34 44.1**	**+0.9**
BKB	**Balikpapan**	**10.42**	**48**	Pn		**Pn**	**22 35 55.9**	**-2.4**
KAPI	**Kappang**	**11.01**	**73**	LR		LR	22 40 54.0	
	comp=Z,55nm,18.4s,baz=298,slow=41							
KAPI	**Kappang**	**11.01**	**73**	Pn		**Pn**	**22 36 05.7**	**-0.7**
SBUM	**Sibu**	**11.13**	**16**	Pn		**Pn**	**22 36 05.3**	**-2.7**
MYKOM	**Kota Tinggi**	**11.37**	**332**	Pn		**Pn**	**22 36 11.3**	**+0.1**
GSI	**Gunungsitoli**	**15.01**	**309**			**Pn**	**22 36 55.5**	**-4.5**
GSI				IAmb		IAmb	22 36 59.3	
	comp=Z,5.5nm,0.6s							
IPM	**Ipoh**	**15.10**	**327**	Pn		**Pn**	**22 37 01.3**	**+0.1**
IPM				IAmb		IAmb	22 37 10.9	
	comp=Z,4.4nm,0.5s							
FITZ	**Fitzroy Crossi**	**18.73**	**123**	P		**Pn**	**22 37 47.7**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=327,slow=11,SNR=9.1							
FITZ	**Fitzroy Crossi**	**18.73**	**123**	P		**Pn**	**22 37 45.6**	**-0.5**
KNRA	**Kununurra**	**20.50**	**113**	P		**Pn**	**22 38 03.9**	**-0.4**
KNRA				IAmb		IAmb	22 38 09.7	
	comp=Z,8.7nm,0.9s							
NWAO	**Narrogin (SRO)**	**25.59**	**164**	LR		LR	22 49 19.0	
	comp=Z,32nm,21.4s,baz=316,slow=36							
WB0	**Warramunga Arr**	**26.94**	**118**	P		**P**	**22 39 05.9**	**-1.0**
WB0				IAmb		IAmb	22 39 19.2	
	comp=Z,4.7nm,1.1s							
WRA	**Warramunga Arr**	**26.95**	**118**	P		**P**	**22 39 08.3**	**+1.2**
	comp=Z,3.6nm,1.0s,baz=290,slow=11,SNR=8.4							
WRA				PcP		**PcP**	**22 42 28.4**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=288,slow=4.4,SNR=1.7							
WB2	**Warramunga Arr**	**26.96**	**118**	P		**P**	**22 39 06.5**	**-0.7**
WB2				IAmb		IAmb	22 39 09.4	
	comp=Z,5.5nm,0.9s							
WR0	**Warramunga Arr**	**27.14**	**118**	P		**P**	**22 39 07.7**	**-1.0**
ASAR	**Alice Springs**	**28.17**	**126**	P		**P**	**22 39 19.6**	**+1.7**
	comp=Z,2.4nm,0.6s,baz=304,slow=9.4,SNR=23							
ASAR				PcP		**PcP**	**22 42 31.9**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=291,slow=2.1,SNR=5.2							
CMAR	**Chiang Mai Arr**	**28.46**	**339**	LR		LR	22 50 50.2	
	comp=Z,39nm,18.6s,baz=186,slow=37							
COEN	**Coen**	**33.81**	**103**	P		**P**	**22 40 05.2**	**-2.4**
BBOO	**Buckleboo**	**34.83**	**138**	P		**P**	**22 40 15.5**	**-0.8**
H08S2	**Diego Garcia H**	**36.32**	**268**	T		T	23 18 54.3	
	baz=93,slow=75,SNR=37							
H08S3	**Diego Garcia H**	**36.33**	**268**	T		T	23 18 56.0	
	baz=93,slow=75,SNR=30							
H08S1	**Diego Garcia H**	**36.34**	**268**	T		T	23 18 55.8	
	baz=93,slow=75,SNR=28							
STKA	**Stephens Creek**	**38.16**	**132**	P		**P**	**22 40 46.6**	**+2.0**
	comp=Z,5.4nm,0.6s,baz=314,slow=8.8,SNR=17							
STKA	**Stephens Creek**	**38.16**	**132**	P		**P**	**22 40 44.9**	**+0.2**
STKA				IAmb		IAmb	22 40 47.9	
	comp=Z,0.9nm,0.5s							
SOCY	**Socotra**	**58.52**	**290**	P		**P**	**22 43 20.6**	**-1.1**
MK31	**Makanchi Array**	**59.87**	**339**	P		**P**	**22 43 29.4**	**-0.9**
MK31				IAmb		IAmb	22 43 37.1	
	comp=Z,0.6nm,0.6s							
MKAR	**Makanchi Array**	**59.87**	**339**	P		**P**	**22 43 25.7**	**-4.7**
	comp=Z,0.5nm,0.3s,baz=152,slow=7.4,SNR=22							
ZALV	**Zalesovo Beam**	**65.36**	**344**	P		**P**	**22 44 04.8**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=155,slow=6.5,SNR=6.6							
MAW	**Mawson**	**66.74**	**198**	P		**P**	**22 44 17.6**	**+2.2**
	comp=Z,2.0nm,0.6s,baz=83,slow=11,SNR=3.0							
MAW	**Mawson**	**66.74**	**198**	IAmb		IAmb	22 44 19.7	
	comp=Z,0.4nm,0.7s							
VNDA	**Vanda**	**74.28**	**170**	P		**P**	**22 45 03.4**	**+2.2**
	comp=Z,0.7nm,0.6s,baz=312,slow=5.6,SNR=6.8							
BRTR	**Keskin Array B**	**84.31**	**311**	P		**P**	**22 45 56.1**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=134,slow=7.7,SNR=6.8							
SNAA	**Sanae**	**88.90**	**197**	P		**P**	**22 46 21.3**	**+2.9**
SNAA	**Sanae**	**88.90**	**197**	P		**P**	**22 46 18.4**	**0.0**

IDC ***08*** *22:51:13.1±0.7, 26.°24N×68.°39E, h0km, mb4.1/25, mb1 4.2/26, mb1mx4.1/54, mbtmp4.1/26, ML3.7/1, MS4.4/32, Ms1 4.4/32, ms1mx4.3/43, Error ellipse: s-maj=17.5km s-min=13.3km az=12.0*
GCMT ***08*** *22:51:14.8±0.2, 26.°20N±0.°02×68.°39E±0.°02, h12km, MW5.0/104, Moment Tensor Solution. s38,c43; s104,c165; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.67±.10; $M_{\theta\theta}$-1.79±.10; $M_{\phi\phi}$-1.88±.09; $M_{r\theta}$0.18±.34; $M_{\theta\phi}$2.08±.08; $M_{\phi r}$1.14±.32; Best double couple: M_o3.97000×10^{16} NP1:ϕ_s122.00000°, δ42.00000°, λ69.00000°. NP2:ϕ_s329.00000°, δ52.00000°, λ108.00000°. Principal axes: T 3.9620, Plg75.0000°, Azm296.0000°; N 0.0170, Plg14.0000°, Azm138.0000°; P -3.9790, Plg5.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BJI ***08*** *22:51:15.9±0.0, 26.°46N×68.°70E, h10km, mB4.9/39, mb4.6/45, Ms5.0/48, Ms7 4.7/44*
MOS ***08*** *22:51:15.9±1.1, 26.°42N×68.°45E, h23km, mb4.7/25, MS4.7/4, Error ellipse: s-maj=7.2km s-min=4.8km az=88.9*
NEIC ***08*** *22:51:15.8±1.6, 26.°4N±0.°1×68.°36E±0.°09, h15km±3km, mb4.5/48, Error ellipse: s-maj=14.8km s-min=11.0km az=162.0*
ISC 08 22:51:14.9±0.3, 26.°23N±0.°05×68.°33E±0.°03, h10km, n262, σ2°55/265, mb4.4/94, MS4.5/56, 5C-21D, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AJM	**Ajmer**	**5.67**	**86**	*ex*		**Pb**	**22 58.0**	**+4.0**
AJM				*i* x		**Sg**	**22 54 11.0**	**-6.1**
THW	**Thamme Wali**	**7.19**	**24**	P		**Pn**	**22 52 57.9**	**-2.2**
NDI	**New Delhi**	**8.27**	**71**	*ex*		Pn	22 53 09.5	-5.4
NDI				*ex*		**Sn**	**22 54 40.5**	**-7.9**
BOM	**Bombay**	**8.39**	**150**	AMS		AMS	22 56 02.5	
	comp=Z,4µm,1.8s							
NIL	**Nilore**	**8.54**	**29**	P		**Pn**	**22 53 17.3**	**-1.3**
NIL	**Nilore**	**8.54**	**29**			**Pn**	**22 53 17.3**	**-1.3**
CHCP	**Chirah Chowk**	**8.55**	**29**	P		**Pn**	**22 53 15.7**	**-3.1**
BHK	**Bhakra**	**8.78**	**52**	*ex*		Pg	22 53 51.2	-12
BHK				*ex*		x	22 54 08.6	
BHK				*ex*		x	22 56 21.6	
BHPL	**Bhopal**	**8.79**	**108**	*eP*		**Pn**	**22 53 24.4**	**+2.3**
BHPL				*ex*		x	22 55 11.4	
BHPL				IAML			22 55 58.4	
	comp=N,392nm,0.3s							
BHPL				*i* x		x	22 56 54.2	
BHPL				IAMs_20		IAMs_20	22 57 22.0	
	comp=Z,6µm,7.2s							
SMLA	**Simla**	**9.17**	**56**	*eP*		**Pn**	**22 53 22.8**	**-4.5**
SMLA				*eS*		**Sn**	**22 55 05.8**	**-4.7**
SMLA				IAML			22 56 16.6	
	comp=E,603nm,0.6s							
POO	**Poona**	**9.21**	**145**	*ex*		Pn	22 53 21.4	-6.5
POO				IAmb		IAmb	22 53 29.3	
	comp=Z,19nm,0.5s							
POO				*ex*		x	22 53 38.4	
POO				*ex*		x	22 53 45.6	
POO				*eP*			22 53 55.5	
	comp=Z,20nm,1.0s							
POO				*i* x		x	22 56 03.5	
POO				*ex*		x	22 56 19.3	
POO				*ex*		x	22 56 31.6	
WBK	**Wadi Bani Khal**	**9.26**	**249**	P		**Pn**	**22 53 28.0**	**-0.5**
	SNR=35							
WBK				S		**Sn**	**22 55 04.6**	**-8.1**
WSAR	**Wadi Sarin**	**9.30**	**253**	Pn		**Pn**	**22 53 29.7**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=164,slow=1.3,SNR=21							
WSAR				Sn		Sn	22 55 04.0	-10
	comp=Z,1.0nm,0.3s,baz=304,slow=6.0,SNR=3.7							
WSAR				LR		LR	22 57 27.0	
	comp=Z,3µm,21.7s,baz=78,slow=40							
WSAR	**Wadi Sarin**	**9.30**	**253**	P		**Pn**	**22 53 29.7**	**+0.6**
WSAR				S		Sn	22 55 04.6	-9.2
DDI	**Dehra Dun**	**9.50**	**62**	*eP*		**Pn**	**22 53 30.0**	**-1.8**
DDI				*eS*		**Sn**	**22 55 14.3**	**-4.4**
DDI				*i* x		x	22 56 25.9	
DDI				*i* x		x	22 56 39.7	
DDI				IAML			22 56 48.4	
	comp=N,495nm,0.5s							
BIDO	**Bidbid**	**9.64**	**256**	P		**Pn**	**22 53 35.2**	**+1.4**
BIDO				S		**Sn**	**22 55 14.0**	**-8.2**
SMDO	**Samad**	**9.87**	**254**	P		**Pn**	**22 53 38.1**	**+1.2**
SMDO				S		**Sn**	**22 55 20.8**	**-7.0**
JMDO	**Jabal Madar**	**10.08**	**250**	P		**Pn**	**22 53 40.6**	**+0.8**
	SNR=36							
JMDO				S		**Sn**	**22 55 26.4**	**-6.6**
HOQ	**Hoqain**	**10.34**	**258**	P		**Pn**	**22 53 46.2**	**+2.9**
BSY	**Bisya**	**10.71**	**253**	P		**Pn**	**22 53 49.0**	**+0.6**
	SNR=6.2							
BSY				S		**Sn**	**22 55 41.8**	**-6.7**
MDH	**Madha**	**10.88**	**268**	P		**Pn**	**22 53 50.1**	**-0.7**
SOHO	**SOHO**	**10.88**	**261**	P		**Pn**	**22 53 50.5**	**-0.2**
UOSS	**Minazif**	**11.02**	**266**	Pn		**Pn**	**22 53 51.1**	**-1.5**
NGP	**Nagpur**	**11.05**	**115**	*eS*		**Sn**	**22 56 03.5**	**+6.8**
ARQ	**Araqi**	**11.10**	**257**	P		**Pn**	**22 53 57.4**	**+3.6**
	SNR=7.9							
ASHO	**Ashiyiah**	**11.19**	**265**	P		**Pn**	**22 53 56.6**	**+1.6**
ASHO				S		**Sn**	**22 55 56.2**	**-4.1**
GOA	**Goa**	**11.85**	**153**	*ex*		**Pn**	**22 54 04.2**	**+0.1**
CHGR	**Chuyangaron**	**12.41**	**3**			**Pn**	**22 54 08.5**	**-3.2**
GAR	**Garm**	**12.84**	**7**			**Pn**	**22 54 15.7**	**-1.9**
HYB	**Hyderabad**	**12.92**	**131**	*i* P		**Pn**	**22 54 20.0**	**+1.3**
HYB				*eS*		**Sn**	**22 56 47.0**	**+4.4**
HYB	**Hyderabad**	**12.92**	**131**	*ex*		**Pn**	**22 54 16.6**	**-2.1**
HYB				IAmb		IAmb	22 54 44.2	
	comp=Z,10nm,0.6s							
KOLN	**Koldanda**	**13.71**	**80**	*eP*		**Pn**	**22 54 25.5**	**-4.0**
	comp=Z,9.6nm,0.3s							
DANN	**Dangsing**	**13.89**	**78**	*eP*		**Pn**	**22 54 27.6**	**-4.5**
	comp=Z,52nm,0.7s							
BTK	**Batken**	**13.95**	**8**	P		**Pn**	**22 54 32.0**	**-0.7**
BTK	**Batken**	**13.95**	**8**			**Pn**	**22 54 32.0**	**-0.7**
GEYT	**Alibeck**	**14.51**	**326**	Pn		**P**	**22 54 44.6**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=134,slow=8.5,SNR=7.0							
GEYT				LR		LR	23 00 28.2	
	comp=Z,902nm,18.6s,baz=170,slow=38							
GYA0B	**ALIBECK ARRAY**	**14.51**	**326**			**Pn**	**22 54 40.3**	**-0.1**
GKN	**Gorkha**	**14.63**	**79**	*eP*		Pn	22 54 34.4	-7.8
KSH	**Kashi**	**14.72**	**24**	P		Pn	22 54 36.1	-7.1
KSH				pP		P	22 54 43.2	-6.2
KSH				sP			22 54 46.3	
KSH				S		Sn	22 57 15.1	-11
KSH				pmax		pmax		
	comp=Z,64nm,1.0s							
KSH				pmax		pmax		
	comp=Z,490nm,4.2s							
KSH				LR		LR		
	comp=Z,650nm,5.8s							
KSH				LR		LR		
	comp=Z,2µm,7.0s							
KSH				LR		LR		
	comp=Z,1µm,6.8s							
DMN	**Daman**	**15.03**	**81**	*eP*		**Pn**	**22 54 42.0**	**-5.7**
	comp=Z,127nm,1.4s							
TAS	**Tashkent**	**15.08**	**3**	P		**Pn**	**22 54 47.0**	**-1.0**
TAS	**Tashkent**	**15.08**	**3**	Pn		**Pn**	**22 54 47.0**	**-1.0**
KKN	**Kakani**	**15.19**	**80**	*eP*		**Pn**	**22 54 44.5**	**-5.3**
PKIN	**Phulchoki**	**15.29**	**81**	*eP*		**Pn**	**22 54 45.3**	**-5.8**
PKI	**Pulchoki**	**15.30**	**81**	*eP*		**Pn**	**22 54 45.3**	**-6.0**
	comp=Z,38nm,0.7s							
ARSB	**Arslanbob**	**15.54**	**13**	P		**Pn**	**22 54 51.8**	**-2.4**
ARSB				pmax		pmax		
	comp=Z,17nm,1.0s							
ARSB	**Arslanbob**	**15.54**	**13**			**Pn**	**22 54 51.8**	**-2.4**
ARSB				IAmb		IAmb	22 55 04.9	
	comp=Z,17nm,0.9s							
WHFO	**Wadi Hawf**	**15.81**	**241**	P		**Pn**	**22 54 58.9**	**+1.1**
JIRN	**Jiri**	**16.00**	**81**	*eP*		**Pn**	**22 54 54.8**	**-5.6**
BOK	**Bokaro**	**16.10**	**95**	*ex*		**P**	**22 55 05.0**	**+0.3**
BOK				*ex*		**S**	**22 58 14.9**	**+1.2**
BOK				IAML			22 59 49.2	
	comp=N,107nm,0.4s							
BOK				*i* x		x	23 01 00.7	
RAMN	**Ramite**	**16.36**	**83**	*eP*		**Pn**	**22 54 59.3**	**-5.7**
AML	**Almayashu**	**16.47**	**14**	P		**Pn**	**22 55 02.6**	**-3.8**
	SNR=7.1							
UCH	**Uchtor**	**16.75**	**16**	P		**Pn**	**22 55 05.2**	**-4.8**
	SNR=19							
KZA	**Kyzart**	**16.80**	**18**	P		**Pn**	**22 55 11.1**	**+0.4**
	SNR=12							
KK31	**Karatay Array**	**16.93**	**6**	P		**Pn**	**22 55 09.3**	**-2.5**
KK31				pmax		pmax		
	comp=Z,10.0nm,0.9s							
KK31	**Karatay Array**	**16.93**	**6**			**Pn**	**22 55 09.3**	**-2.5**
KKAR	**Karatay Array**	**16.93**	**6**	P		**Pn**	**22 55 08.5**	**-3.3**
KKAR				pmax		pmax		
	comp=Z,10.0nm,0.9s							
KKAR	**Karatay Array**	**16.93**	**6**			**Pn**	**22 55 08.5**	**-3.3**
EKS2	**Erkin-Say**	**16.99**	**14**	P		**Pn**	**22 55 12.4**	**-0.3**
	SNR=14							
ODAN	**Odare**	**17.07**	**84**	*eP*		**Pn**	**22 55 09.0**	**-5.0**
	comp=Z,249nm,1.2s							
BWNR	**Bhubaneshwar**	**17.11**	**107**	*ex*		**S**	**22 58 36.7**	**+2.6**
BWNR				*i* x		x	23 00 08.3	
AAK	**Ala-Archa**	**17.13**	**16**	P		**Pn**	**22 55 11.3**	**-3.3**
	comp=Z,1.4nm,0.3s,baz=194,slow=8.1,SNR=29							
AAK	**Ala-Archa**	**17.13**	**16**	P		**Pn**	**22 55 11.8**	**-2.8**
	SNR=15							
AAK	**Ala-Archa**	**17.13**	**16**			**Pn**	**22 55 10.9**	**-3.6**
ULHL	**Ulahol**	**17.25**	**20**	P		**P**	**22 55 19.8**	**+2.1**
	SNR=9.5							
KBK	**Karagaybulak**	**17.26**	**17**	P		**Pn**	**22 55 16.6**	**+0.4**
	SNR=7.3							
FRU1	**Bishkek**	**17.33**	**16**	P		**Pn**	**22 55 13.5**	**-3.4**
FRU1				pmax		pmax		
	comp=Z,10.0nm,0.8s							
FRU1	**Bishkek**	**17.33**	**16**	Pn		**Pn**	**22 55 13.5**	**-3.4**
TAPN	**Taplejung**	**17.35**	**82**	*eP*		Pn	22 55 08.9	-8.6
	comp=Z,186nm,1.1s							
KDJ	**Kajisay**	**17.45**	**22**	P		**Pn**	**22 55 17.1**	**-1.5**
KDJ				pmax		pmax		
	comp=Z,17nm,0.9s							
KDJ	**Kajisay**	**17.45**	**22**	P		**Pn**	**22 55 17.1**	**-1.5**
CHMS	**Chumysh**	**17.54**	**16**	P		**Pn**	**22 55 15.4**	**-4.0**
	SNR=7.7							
TKM2	**Tokmak 2**	**17.68**	**18**	P		**P**	**22 55 22.2**	**-0.2**
	SNR=16							
PRZ	**Przheval'sk**	**18.20**	**24**	P		**Pn**	**22 55 26.2**	**-1.6**
PRZ				pmax		pmax		
	comp=Z,24nm,1.1s							
PRZ	**Przheval'sk**	**18.20**	**24**	P		**Pn**	**22 55 26.2**	**-1.6**
PDGK	**Podgornoye**	**19.34**	**25**	*i* P		**P**	**22 55 37.8**	**-2.7**
PDGK				pmax		pmax		
	comp=Z,41nm,1.2s							
SOCY	**Socotra**	**19.43**	**227**	P		**P**	**22 55 40.9**	**-0.7**
LSA	**Lhasa**	**20.45**	**75**	P		Pn	22 55 54.5	-0.7
LSA				S		**S**	**22 59 39.1**	**-3.3**
LSA				pmax		pmax		
	comp=Z,100nm,1.4s							
LSA				LR		LR		
	comp=Z,10µm,10.7s							
LSA				LR		LR		
	comp=Z,5µm,15.0s							
LSA				LR		LR		
	comp=Z,7µm,12.1s							
LSA	**Lhasa**	**20.45**	**75**	P		**P**	**22 55 53.0**	**-0.1**
LSA				pmax		pmax		
	comp=Z,27nm,1.0s							
LSA	**Lhasa**	**20.45**	**75**	P		**P**	**22 55 53.0**	**-0.1**
LSA				IAmb		IAmb	22 56 10.0	
	comp=Z,27nm,1.0s							
RAYN	**Ar Rayn**	**20.88**	**268**	P		**P**	**22 55 58.3**	**+1.0**
RAYN				pmax		pmax		
	comp=Z,15nm,1.2s							
RAYN	**Ar Rayn**	**20.88**	**268**	P		**P**	**22 55 58.3**	**+1.0**
RAYN				IAmb		IAmb	22 56 09.2	
	comp=Z,15nm,1.1s							
SHL	**Shillong**	**21.20**	**87**	*eP*		**P**	**22 56 01.0**	**+0.1**
SHL				IAmb		IAmb	22 56 10.7	
	comp=Z,58nm,1.0s							
SHL	**Shillong**	**21.20**	**87**	P		**P**	**22 56 01.3**	**+0.3**
SHL				pmax		pmax		
	comp=Z,119nm,1.2s							
SHL	**Shillong**	**21.20**	**87**	P		**P**	**22 56 01.2**	**+0.3**
OTUK	**Ortayu**	**22.20**	**7**	*i* P		**P**	**22 56 10.5**	**-0.8**
OTUK				pmax		pmax		
	comp=

comp=Z,19nm,1.3s
BRVK Borovoye 26.84 3 P **P** **22 56 54.1 -1.3**
BRVK IAmb IAmb 22 57 02.5
comp=Z,17nm,1.1s
KBZ Khabaz 27.02 317 P **P** **22 56 57.7 +0.6**
comp=Z,1.2nm,0.6s,baz=75,slow=11,SNR=5.0
PBA Port Blair 27.20 118 P P 22 56 59.8 +0.9
KIV Kislovodsk 27.27 317 *eP* **P** **22 57 03.1 +3.6**
KIV pmax pmax
comp=Z,17nm,1.0s
KIV Kislovodsk 27.27 317 P **P** **22 56 58.6 -0.9**
KIV IAmb IAmb 22 57 05.8
comp=Z,8.0nm,1.1s
DGZ Jazzator, Alta 27.70 27‖ *eP* **P** **22 57 02.8 -0.5**
DGZ pmax pmax
comp=Z,12nm,1.6s
ATD Arta Tunnel 28.12 243 LR LR 23 09 47.7
comp=Z,237nm,18.5s,baz=70,slow=40
CHTO Chiang Mai 29.18 98 P **P** **22 57 17.5 +0.8**
CMAR Chiang Mai Arr 29.30 99 P **P** **22 57 17.9 +0.1**
comp=Z,3.1nm,0.9s,baz=334,slow=33,SNR=2.9
CMAR LR LR 23 10 02.0
comp=Z,923nm,19.3s,baz=284,slow=39
MMAI Mount Meron Ar 29.33 291 P **P** **22 57 19.6 +1.7**
MMAI LR LR 23 11 56.0
comp=Z,793nm,18.7s,baz=75,slow=42
GTA Gaotai 29.39 56 *eP* **P** **22 57 18.6 +0.1**
GTA pP sP 22 57 23.2 +0.4
GTA sP pP 22 57 25.8 +4.3
GTA S **S** **23 02 14.5 +2.2**
GTA sS sS 23 02 22.1 +4.7
GTA pmax pmax
comp=Z,4.0nm,1.1s
GTA pmax pmax
comp=Z,66nm,6.8s
GTA LR LR
comp=Z,3µm,16.5s
GTA LR LR
comp=Z,1µm,16.5s
GTA LR LR
comp=Z,2µm,19.7s
EIL Elat 29.62 284 LR LR 23 11 21.9
comp=Z,1µm,20.8s,baz=100,slow=41
ZAA0 Zalesovo Array 30.27 19 P **P** **22 57 25.2 -0.7**
ZAA0 IAmb IAmb 22 57 28.9
comp=Z,6.2nm,1.1s
ZALV Zalesovo Beam 30.27 19 P **P** **22 57 24.7 -1.2**
comp=Z,2.6nm,0.5s,baz=220,slow=8.7,SNR=19
ANN Anapa 30.97 315 *eP* **P** **22 57 33.0 +0.8**
ANN *e**PP **pP** **22 57 35.8 +0.5**
ANN *e*S **S** **23 02 39.9 +3.2**
ANN *e*SS **SnSn** **23 04 24.7 +8.0**
ANN pmax pmax
comp=Z,26nm,1.3s
KMI Kunming 30.98 84 P **P** **22 57 28.8 -4.0**
KMI pP pP 22 57 36.4 +0.5
KMI sP sP 22 57 38.7 +1.5
KMI PP **PnPn** **22 58 34.0 +0.4**
KMI S **S** **23 02 39.3 +1.5**
KMI SS **ScP** **23 04 13.6 +1.6**
KMI pmax pmax
comp=Z,15nm,1.5s
KMI pmax pmax
comp=Z,260nm,4.6s
KMI LR LR
comp=Z,2µm,17.0s
KMI LR LR
comp=Z,2µm,15.1s
KMI LR LR
comp=Z,1µm,11.0s
ARU Arti 30.99 349 P **P** **22 57 33.5 +1.2**
comp=Z,0.4nm,0.3s,baz=142,slow=8.9,SNR=4.0
ARU Arti 30.99 349 *d iP* **P** **22 57 33.1 +0.9**
ARU 22 58 33.3
ARU S **S** **23 02 40.6 +3.9**
ARU SS **SnSn** **23 04 20.4 +3.4**
ARU pmax pmax
comp=Z,12nm,1.6s
ARU MLR MLR
comp=Z,793nm,14.0s
ARU Arti 30.99 349 P **P** **22 57 31.1 -1.1**
ARU IAmb IAmb 22 57 46.5
comp=Z,4.3nm,1.0s
CD2 Chengdu 31.38 73 P **P** **22 57 34.1 -2.0**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
LZH Lanzhou 31.79 63 *eP* **P** **22 57 39.6 -0.2**
LZH pP sP 22 57 44.1 0.0
LZH sP pP 22 57 46.7 +3.8
LZH *e*PP **PnPn** **22 58 44.3 +0.3**
LZH pmax pmax
comp=Z,20nm,1.2s
LZH pmax pmax
comp=Z,100nm,5.0s
LZH LR LR
comp=Z,230nm,13.1s
LZH LR LR
comp=Z,240nm,13.0s
LZH LR LR
comp=Z,360nm,16.3s
BRTR Keskin Array B 31.85 304 P **P** **22 57 41.8 +1.5**
comp=Z,0.5nm,0.6s,baz=96,slow=5.1,SNR=4.9
GYA Guiyang 34.27 81 *eP* **P** **22 58 01.7 +0.2**
GYA pmax pmax
comp=Z,10.0nm,0.9s
LHMI Lhok Sumawe 34.41 122 P **P** **22 58 03.4 +0.8**
MOY Mondy 35.43 35 *eP* **P** **22 58 15.0 +3.8**
XAN Xi'an 35.78 68 P **P** **22 58 13.6 -0.8**
XAN pP sP 22 58 24.5 +5.8
XAN S **S** **23 03 47.1 -4.6**
XAN ScS **ScS** **23 08 34.4 +0.9**
XAN pmax pmax
comp=Z,15nm,0.8s
XAN pmax pmax
comp=Z,120nm,4.5s
XAN LR LR
comp=Z,3µm,18.6s
XAN LR LR
comp=Z,810nm,18.4s
XAN LR LR
comp=Z,2µm,19.6s
XAN Xi'an 35.78 68 P **P** **22 58 14.0 -0.3**
XAN pmax pmax
comp=Z,11nm,0.7s
XAN Xi'an 35.78 68 P **P** **22 58 14.0 -0.3**
ZAK Zakamensk 36.00 39 *eP* **P** **22 58 13.6 -2.5**
ZAK pmax pmax
comp=Z,4.0nm,1.6s
SONM Songino Array 36.75 44 P **P** **22 58 23.0 +0.4**
comp=Z,3.6nm,0.7s,baz=247,slow=8.4,SNR=9.6
SONM LR LR 23 16 54.6
comp=Z,1µm,18.5s,baz=255,slow=42
SONM Songino Array 36.75 44 P **P** **22 58 23.0 +0.4**
TLY Talaya 36.84 37 *eP* **P** **22 58 26.8 +3.6**
TLY *e* 23 00 02.4
TLY *e*S **S** **23 04 12.4 +4.9**
TLY *e*SS **SS** **23 06 55.8 +7.3**
TLY pmax pmax
comp=Z,26nm,1.6s
TLY MLR MLR
comp=Z,3µm,19.0s
TLY Talaya 36.84 37 P **P** **22 58 23.4 +0.2**
TLY IAmb IAmb 22 58 29.1
comp=Z,7.1nm,1.0s
TIRR Tirgusor 36.85 310 P **P** **22 58 22.0 -1.3**
TIRR pmax pmax
comp=Z,22nm,1.0s
TIRR Tirgusor 36.85 310 P **P** **22 58 22.0 -1.3**
MOS Moscow 36.94 331 *eP* **P** **22 58 24.1 +0.3**
MOS MLR MLR
comp=N,700nm,18.0s
MOS MLR MLR
comp=E,500nm,18.0s
MOS MLR MLR
comp=Z,500nm,18.0s
OBN Obninsk 37.01 330‖ *eP* **P** **22 58 26.8 +2.4**
OBN *e**SP **sP** **22 58 30.7 +1.9**
OBN *e* 22 58 39.6
OBN PPP PPP 23 00 07.0
OBN 23 00 43.0
OBN SS SS 23 06 43.0 -8.6
OBN SSS SSS 23 07 13.0
OBN pmax pmax
comp=Z,24nm,1.5s
OBN Obninsk 37.01 330 P **P** **22 58 23.7 -0.7**
ULN Ulaanbaatar 37.17 44 *ceP* **P** **22 58 26.5 +0.3**
ULN pmax pmax
comp=Z,10.0nm,1.4s
KULM Kulim 37.24 118 P **P** **22 58 27.4 +0.5**
BTO Baotou 37.29 57 *eP* **P** **22 58 27.2 0.0**
PSI Prapat 37.48 123 P **P** **22 58 29.8 +0.7**
PSI pmax pmax
comp=Z,15nm,1.0s
GSI Gunungsitoli 37.49 127 P **P** **22 58 29.9 +0.8**
GSI IAmb IAmb 22 58 42.3
comp=Z,5.8nm,0.9s
RPSI Rantau Prapat 37.55 123 P **P** **22 58 29.8 +0.3**
RPSI IAmb IAmb 22 58 34.2
comp=Z,16nm,1.0s
IPM Ipoh 38.03 119 P **P** **22 58 33.3 -0.4**
IPM IAmb IAmb 22 58 36.8
comp=Z,9.6nm,1.1s
SORM Soroca 38.05 316 ‖P **P** **22 58 34.5 +1.1**
SORM Soroca 38.05 316 ‖P **P** **22 58 34.5 +1.1**
VRI Vrincioaia 38.39 312 ‖P **P** **22 58 37.4 +1.1**
VRI Vrincioaia 38.39 312 ‖P **P** **22 58 37.4 +1.1**
PLOR Plostina 38.44 312 ‖P **P** **22 58 37.3 +0.5**
PLOR Plostina 38.44 312 ‖P **P** **22 58 37.3 +0.5**
HHC Hu-ho-hao-te 38.48 57 P **P** **22 58 37.6 +0.3**
HHC sP sP 22 58 45.3 +3.6
HHC S **S** **23 04 34.6 +1.8**
HHC pmax pmax
comp=Z,7.0nm,0.8s
HHC pmax pmax
comp=Z,45nm,5.6s
HHC LR LR
comp=Z,820nm,15.4s
HHC LR LR
comp=Z,630nm,16.9s
HHC LR LR
comp=Z,370nm,17.3s
AKASG Malin Array Be 38.51 320 P **P** **22 58 35.4 -1.8**
comp=Z,0.7nm,0.4s,baz=110,slow=7.8,SNR=3.9
AKASG Malin Array Be 38.51 320 *i* P **P** **22 58 40.9 +3.7**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
MLR Muntele Rosu 38.82 311 ‖P **P** **22 58 41.7 +1.6**
MLR Muntele Rosu 38.82 311 P **P** **22 58 40.2 +0.1**
MLR pmax pmax
comp=Z,7.0nm,1.0s
MLR Muntele Rosu 38.82 311 P **P** **22 58 40.2 +0.1**
MLR IAmb IAmb 22 58 58.4
comp=Z,7.1nm,1.0s
QIZ Qiongzhong 38.86 92 P **P** **22 58 39.8 -0.8**
QIZ S **S** **23 04 38.4 -0.3**
QIZ LR LR
comp=Z,920nm,19.6s
QIZ LR LR
comp=Z,500nm,17.7s
QIZ LR LR
comp=Z,430nm,13.7s
MNSI Mandailing Nat 39.30 125 P **P** **22 58 45.2 +0.9**
comp=Z,17nm,1.3s
VOIR 39.41 311 P **P** **22 58 47.6 +2.6**
VOIR pmax pmax
comp=Z,4.0nm,1.1s
ARR Arges 39.68 310 ‖P **P** **22 58 46.9 -0.3**
BURAR Bucovina Array 39.88 314 ‖P **P** **22 58 49.2 +0.3**
BURAR Bucovina Array 39.88 314 ‖P **P** **22 58 49.2 +0.3**
BUR08 Bucovina Ar. S 39.90 314 P **P** **22 58 49.3 +0.2**
VTS Vitosha 40.12 306 P **P** **22 58 50.9 -0.2**
VTS pmax pmax
comp=Z,3.0nm,1.0s
VTS Vitosha 40.12 306 P **P** **22 58 50.9 -0.2**
KMBO Kilima Mbogo 40.48 233 LR LR 23 14 50.0
comp=Z,748nm,21.0s,baz=60,slow=35
WHN Wuhan 40.51 73 P P 22 59 00.0 +5.8
WHN PP **PnPn** **23 00 37.7 +6.5**
WHN S **S** **23 05 03.1 -0.1**
WHN LR LR
comp=N,3µm,11.5s
WHN LR LR
comp=E,2µm,14.8s
WHN LR LR
comp=Z,2µm,15.4s
ITM Ithomi 40.60 297 P **P** **22 58 54.1 -0.9**
ITM IAmb IAmb 22 59 01.7
comp=Z,23nm,1.2s
PDSI Padang 41.10 126 P **P** **22 59 00.1 +0.9**
comp=Z,12nm,0.9s
FNA Florina 41.27 303 P **P** **22 58 59.8 -0.6**
FNA pmax pmax
comp=Z,9.0nm,1.0s
FNA Florina 41.27 303 P **P** **22 58 59.8 -0.6**
FNA IAmb IAmb 22 59 05.5
comp=Z,8.8nm,1.0s
MDVR Moldovita 41.58 309 ‖P **P** **22 59 03.2 +0.3**
BZS Buzias 41.81 310 ‖P **P** **22 59 05.1 +0.4**
BZS Buzias 41.81 310 ‖P **P** **22 59 05.1 +0.4**
BJT Baijiatuau 41.88 59 P **P** **22 59 05.4 0.0**
BJT pmax pmax
comp=Z,7.0nm,0.9s
BJT Baijiatuau 41.88 59 P **P** **22 59 05.4 0.0**
BJT IAmb IAmb 22 59 10.5
comp=Z,6.7nm,0.9s
BJI Beijing 41.89 58 P **P** **22 59 05.4 0.0**
BJI S **S** **23 05 21.4 -2.1**
BJI pmax pmax
comp=Z,8.0nm,1.2s
BJI LR LR
comp=Z,600nm,12.7s
BJI LR LR
comp=Z,500nm,13.7s
MYKOM Kota Tinggi 41.90 120 P **P** **22 59 06.7 +0.9**
KWP Kalwaria Pacla 42.06 316 P **P** **22 59 06.5 -0.2**
KWP pmax pmax
comp=Z,5.0nm,0.7s
KWP Kalwaria Pacla 42.06 316 P **P** **22 59 06.5 -0.2**
KWP IAmb IAmb 22 59 20.6
comp=Z,4.8nm,0.7s
KOLS Kolonicke sedl 42.14 315 *eP* **P** **22 59 10.8 +3.4**
KOLS Kolonicke sedl 42.14 315 *eP* **P** **22 59 10.8 +3.4**
TIA Tai'an 42.52 64 P **P** **22 59 11.0 +0.3**
TIA pmax pmax
comp=Z,7.0nm,1.3s
TIA pmax pmax
comp=Z,120nm,5.6s
TIA LR LR
comp=Z,240nm,10.2s
TIA LR LR
comp=Z,1µm,21.5s
TIA LR LR
comp=Z,2µm,23.0s
NJ2 Nanjing 44.19 70 *eP* **P** **22 59 24.9 +0.7**
NJ2 pmax pmax
comp=Z,14nm,0.5s
NJ2 LR LR
comp=Z,2µm,18.9s
NJ2 LR LR
comp=Z,450nm,15.6s
NJ2 LR LR
comp=Z,560nm,19.4s
NRIK Noril'sk 44.60 10 P **P** **22 59 26.7 -0.3**
comp=Z,6.1nm,1.0s,baz=200,slow=7.5,SNR=10
NRIK LR LR 23 21 25.8
comp=Z,1µm,19.3s,baz=204,slow=41
BOD Bodaibo 44.99 33 *eP* **P** **22 59 29.7 -0.5**
BOD pmax pmax
comp=Z,6.0nm,1.7s
MBAR Mbarara 45.00 240 LR LR 23 20 37.4
comp=Z,222nm,18.5s,baz=48,slow=39
FINES FINESS Array B 45.17 333 P **P** **22 59 29.9 -1.6**
comp=Z,0.8nm,0.4s,baz=159,slow=5.7,SNR=11
FINES LR LR 23 21 36.8
comp=Z,730nm,19.8s,baz=122,slow=40
DPC Dobruska-Polom 46.23 316 AMS AMS 23 26 20.0
comp=Z,200nm,13.5s
ARSA Arzberg 46.23 311 *i* pP **P** **22 59 41.5 +1.2**
comp=Z,3.9nm,1.1s
SSE Sheshan 46.28 71 P P 22 59 31.2 -10
SSE pmax pmax
comp=Z,14nm,0.7s
SSE pmax pmax
comp=Z,42nm,5.5s
SSE LR LR
comp=N,810nm,16.0s
SSE LR LR
comp=E,300nm,17.1s
OSTC Ostas 46.34 316 AMS AMS 23 24 00.0
comp=E,300nm,20.6s
UPC Upice 46.45 316 AMS AMS 23 26 30.0
comp=E,300nm,8.7s
TREC Trest 46.57 314 P **P** **22 59 40.3 -2.5**
TREC pmax pmax
comp=Z,3.0nm,1.2s
TREC Trest 46.57 314 AMS AMS 23 25 00.0
comp=Z,200nm,18.4s
GOPC GO Pecny, Ondr 47.12 315 AMS AMS 23 27 10.0
comp=Z,200nm,13.6s
MOA Molln 47.16 312 *i* pP pP 22 59 50.3 -0.4
comp=Z,3.3nm,1.0s
KSM Kuching 47.26 114 P **P** **22 59 49.4 +0.8**
PRU Pruhonice 47.29 315 AMS AMS 23 26 20.0
comp=Z,300nm,14.6s
PVCC Panska Ves 47.36 316 AMS AMS 23 24 50.0
comp=Z,200nm,23.9s
GERES GERESS Array B 47.66 313 P **P** **22 59 50.6 -0.8**
comp=Z,0.7nm,0.6s,baz=55,slow=10.0,SNR=4.1
GERES PcP **PcP** **23 01 20.9 0.0**
comp=Z,0.7nm,0.6s,baz=117,slow=4.7,SNR=3.8
GERES LR LR 23 24 24.0
comp=Z,129nm,20.0s,baz=101,slow=42
KBA Koelnbreinsper 47.69 311 *i* pP pP 22 59 54.0 -0.9
comp=Z,4.0nm,0.9s
KBA Koelnbreinsper 47.69 311 P **P** **22 59 53.7 +1.9**
KBA pmax pmax
comp=Z,5.0nm,1.8s
KHC Kasperske Hory 47.78 314 *ceP* **P** **22 59 54.4 +2.1**
KHC pmax pmax
comp=Z,16nm,2.1s
KHC Kasperske Hory 47.78 314 *eP* **P** **22 59 51.3 -1.0**
KHC AMS AMS 23 26 10.0
comp=Z,300nm,18.5s
KHC Kasperske Hory 47.78 314 P **P** **22 59 51.8 -0.5**
BRG Berggiesshubel 47.82 316 *eP* **P** **22 59 56.7 +4.2**
comp=Z,44nm,2.2s
BRG Berggiesshubel 47.82 316 *eP* **P** **22 59 56.7 +4.2**
BRG pmax pmax
comp=Z,44nm,2.2s
MURB Monte Urbino 48.01 306 P **P** **22 59 54.4 +0.2**
ABTA Abfaltersbach 48.23 310 *ep* P **P** **22 59 56.9 +1.0**
comp=Z,6.1nm,1.1s
NKC Novy Kostel 48.66 315 AMS AMS 23 27 10.0
comp=Z,200nm,15.8s
WTTA Wattenberg 48.87 311 *i* pP **P** **23 00 02.3 +1.4**
comp=Z,9.8nm,1.4s
WATA Walderalm 48.91 311 *eP* **P** **22 59 59.5 -1.7**
comp=Z,4.3nm,1.0s
SQTA Sankt Quirin 49.15 311 *eP* **P** **23 00 03.4 +0.4**
comp=Z,2.1nm,0.6s
MOTA Moosalm 49.23 311 *eP* **P** **23 00 02.3 -1.4**
comp=Z,3.5nm,0.9s
FETA Feichten 49.47 311 *i* P **P** **23 00 05.6 +0.1**
comp=Z,4.6nm,1.3s
ARCES ARCESS Array B 49.97 342 P **P** **23 00 08.3 -0.4**
comp=Z,1.2nm,0.6s,baz=128,slow=7.9,SNR=11
ARCES LR LR 23 23 02.8
comp=Z,523nm,19.9s,baz=135,slow=38
DAVA Damuels 50.06 311 *i* P **P** **23 00 07.8 -2.2**
comp=Z,6.5nm,1.0s
HFS Hagfors 50.15 328 LR LR 23 24 18.5
comp=Z,507nm,19.0s,baz=98,slow=40
KEST Kesra 50.79 296 P **P** **23 00 16.4 +0.8**
comp=Z,5.1nm,1.1s,baz=344,slow=20,SNR=5.1
KEST LR LR 23 26 47.5
comp=Z,180nm,18.8s,baz=208,slow=42
KEST Kesra 50.79 296 P **P** **23 00 15.4 -0.2**
KEST IAmb IAmb 23 00 22.6
comp=Z,7.7nm,0.9s
KSRS Korea Array 51.10 62 P **P** **23 00 17.4 -0.3**
comp=Z,2.3nm,0.8s,baz=266,slow=7.8,SNR=10.0
KSRS LR LR 23 23 36.4
comp=Z,503nm,18.0s,baz=270,slow=38
NB2 NORSAR Subarra 51.58 329 P **P** **23 00 19.8 -1.3**
comp=Z,6.1nm,1.4s,baz=104,slow=7.4
NOA NORSAR Array B 51.58 329 P **P** **23 00 19.2 -1.9**
comp=Z,0.9nm,0.9s,baz=106,slow=7.3,SNR=4.0
NOA LR LR 23 26 59.2
comp=Z,365nm,18.1s,baz=105,slow=42
KLR Kul'dur 53.46 47 P **P** **23 00 34.2 -0.9**
comp=Z,3.6nm,0.8s,baz=278,slow=6.6,SNR=7.6
KLR Kul'dur 53.46 47‖ *eP* **P** **23 00 33.9 -1.2**
KLR pmax pmax
comp=Z,12nm,1.7s
USRK Ussuriysk Ar. 53.70 53 LR LR 23 26 01.9
comp=Z,558nm,18.3s,baz=270,slow=39
YAK Yakutsk 53.80 31‖ *eP* **P** **23 00 38.5 +1.1**
YAK pmax pmax
comp=Z,20nm,1.8s
MPSI Mapaga 55.89 109 P **P** **23 00 53.7 +0.5**
comp=Z,636nmcomp=Z,20nm,1.5s
TIXI Tiksi 56.16 19 LR LR 23 27 49.9
comp=Z,1µm,18.8s,baz=248,slow=39
TIXI Tiksi 56.16 19‖ *eP* **P** **23 00 53.0 -1.3**
TIXI pmax pmax
comp=Z,10.0nm,1.9s
TAM Tamanrasset 56.76 281 P **P** **23 01 02.5 +2.9**
TAM pmax pmax
comp=Z,3.0nm,2.0s
ESDC Sonseca Array 60.63 302 LR LR 23 29 38.1
comp=Z,102nm,21.1s,baz=130,slow=38
YSS Yuzh-Sakhalins 60.96 49 *eP* **P** **23 01 30.7 +2.5**
YSS pmax pmax
comp=Z,10.0nm,1.1s
YSS MLR MLR
comp=E,300nm,14.0s
YSS MLR MLR
comp=Z,500nm,14.0s
TOA0 Torodi Ar. Sit 63.49 272 P **P** **23 01 45.7 0.0**
TOA0 IAmb IAmb 23 01 50.8
comp=Z,7.3nm,1.1s
TORD Torodi Ar. Bea 63.49 272 P **P** **23 01 45.2 -0.4**
comp=Z,2.1nm,0.6s,baz=73,slow=5.5,SNR=23
TORD LR LR 23 31 15.3
comp=Z,337nm,21.5s,baz=85,slow=38
SEY Seymchan 64.31 30‖ *eP* **P** **23 01 50.9 +0.6**
BOSA Boshof 68.44 220 LR LR 23 28 47.6
comp=Z,446nm,22.0s,baz=32,slow=33
BILL Bilibino 68.86 24‖ *eP* **P** **23 02 20.2 +0.9**
BILL *e**PP **pP** **23 02 22.6 0.0**
BILL *e* 23 02 32.8
BILL *e* 23 02 44.8
BILL SSS SSS 23 18 47.0
BILL pmax pmax
comp=Z,5.0nm,1.2s
BILL MLR MLR
comp=Z,1µm,17.0s
PETK Petropavlovsk- 69.11 40 LR LR 23 35 12.2
comp=Z,258nm,20.0s,baz=246,slow=38
DBIC Dimbokro 72.01 269 LR LR 23 38 48.8
comp=Z,179nm,18.7s,baz=54,slow=40
WB0 Warramunga Arr 78.73 119 P **P** **23 03 17.8 -0.2**
WB0 IAmb IAmb 23 03 19.6
comp=Z,8.6nm,1.0s
WRA Warramunga Ar 78.79 119 P **P** **23 03 17.6 -0.6**
comp=Z,8.0nm,1.0s,baz=319,slow=4.8,SNR=15
WRAB Tennant Creek 78.79 119‖ *iP* **P** **23 03 17.1 -1.2**
WRAB pmax pmax
comp=Z,25nm,1.2s
WB2 Warramunga Arr 78.80 119 P **P** **23 03 18.2 -0.1**
WR0 Warramunga Arr 78.95 119 P **P** **23 03 19.8 +0.7**
AS31 Alice Springs 80.50 122 P **P** **23 03 26.5 -1.0**
ASAR Alice Springs 80.50 122 P **P** **23 03 26.9 -0.7**
comp=Z,3.4nm,0.9s,baz=312,slow=5.1,SNR=15
FRB Frobisher Bay 84.14 342 LR LR 23 45 06.0
comp=Z,74nm,18.4s,baz=22,slow=38
INK Inuvik 84.37 8 P **P** **23 03 47.0 0.0**
INK pmax pmax
comp=Z,5.0nm,1.1s
INK Inuvik 84.37 8 P **P** **23 03 47.0 0.0**
INK IAmb IAmb 23 03 51.3
comp=Z,4.8nm,1.1s
ILAR Eielson Array 85.26 14 P **P** **23 03 51.8 +0.2**
comp=Z,0.6nm,1.1s,baz=352,slow=6.3,SNR=4.9
ILAR LR LR 23 48 13.1
comp=Z,468nm,18.4s,baz=326,slow=40
SCHQ Schefferville 90.57 336 LR LR 23 47 59.3
comp=Z,124nm,18.4s,baz=357,slow=38
STKA Stephens Creek 90.63 125 LR LR 23 49 25.5
comp=Z,197nm,18.5s,baz=267,slow=39
YKA Yellowknife Ar 91.56 1 P **P** **23 04 20.6 -1.0**
comp=Z,0.2nm,0.5s,baz=347,slow=3.3,SNR=5.6
YKA LR LR 23 51 50.5
comp=Z,126nm,18.2s,baz=0.0,slow=40
MAW Mawson 93.64 182 LR LR 23 39 39.8
comp=Z,207nm,19.6s,baz=50,slow=31

TXAR Lajitas Array 124.22 352 PKP **PKPdf 23 10 14.3 -0.2**
comp=Z,0.3nm,0.7s,baz=157,slow=5.9,SNR=2.4

*IDC **08** 22:51:28.0±1.5, 7°.23S×154°.94E, h0km, mb4.0/6, mb1 4.2/7, mb1mx3.9/42, mbtmp4.0/7, ML3.7/1, MS3.1/3, Ms1 3.1/3, ms1mx2.9/27, Error ellipse: s-maj=48.2km s-min=24.4km az=122.0*

ISC 08 22:51:34.7±1.1, 7°.1S±0°.2×154°.7E±0°.2, h39km, n15, σ1s45/10, mb4.1/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.81**	**316**	Pn	**Pn**	**22 52 30.3**	**-0.5**
	4.2nm,0.3s,baz=46,slow=3.5,SNR=2.5						
KRVT				Sn	**Sn**	**22 53 13.8**	**-0.6**
	19nm,0.3s,baz=344,slow=1.2,SNR=4.0						
HNR	**Honiara**	**5.71**	**115**	LR	LR	22 54 51.2	
	comp=Z,78nm,18.8s,baz=282,slow=38						
PMG	**Port Moresby**	**7.81**	**252**	LR	LR	22 56 21.4	
	comp=Z,96nm,19.6s,baz=318,slow=37						
WRA	**Warramunga Arr**	**23.53**	**235**	P	**P**	**22 56 40.7**	**-0.8**
	3.1nm,0.9s,baz=60,slow=9.7,SNR=9.0						
ASAR	**Alice Springs**	**25.90**	**228**	P	**P**	**22 57 03.8**	**+0.6**
	1.0nm,0.7s,baz=60,slow=8.5,SNR=9.9						
H11S3	**WAKE ISLAND Hy**	**28.02**	**25**	T	T	23 25 46.4	
	baz=202,slow=75,SNR=10.0						
H11S2	**WAKE ISLAND Hy**	**28.02**	**25**	T	T	23 25 47.2	
	baz=202,slow=75,SNR=7.4						
H11S1	**WAKE ISLAND Hy**	**28.04**	**25**	T	T	23 25 54.5	
	baz=202,slow=75,SNR=4.0						
PETK	**Petropavlovsk-**	**59.99**	**2**	P	**P**	**23 01 39.2**	**+2.1**
	3.4nm,0.8s,baz=142,slow=7.3,SNR=6.5						
CMAR	**Chiang Mai Arr**	**60.53**	**296**	P	**P**	**23 01 43.6**	**+2.1**
	1.1nm,0.7s,baz=123,slow=4.5,SNR=4.2						
MKAR	**Makanchi Array**	**83.25**	**319**	P	**P**	**23 03 56.4**	**-0.8**
	2.0nm,1.0s,baz=108,slow=6.5,SNR=1.3						
YBH	**Yreka Blue Hor**	**89.16**	**48**	LR	LR	23 37 21.8	
	comp=Z,23nm,19.4s,baz=320,slow=31						
YKA	**Yellowknife Ar**	**96.54**	**28**	P	**P**	**23 04 58.2**	**-1.7**
	0.4nm,0.7s,baz=256,slow=4.3,SNR=4.7						
GERES	**GERESS Array B**	**126.95**	**329**	PKP	**PKPdf**	**23 10 34.2**	**-0.5**
	0.5nm,0.6s,baz=183,slow=2.0,SNR=3.0						
TORD	**Torodi Ar. Bea**	**152.75**	**285**	PKPbc	**PKPbc**	**23 11 27.6**	**-0.8**
	2.0nm,0.9s,baz=76,slow=1.5,SNR=7.6						

*IDC **08** 23:07:44.7±0.6, 26°.26N×68°.36E, h0km, mb4.2/28, mb1 4.3/29, mb1mx4.1/57, mbtmp4.2/29, ML3.6/1, MS3.4/2, Ms1 3.5/2, ms1mx3.0/34, Error ellipse: s-maj=15.2km s-min=12.7km az=11.0*

*NEIC **08** 23:07:46.9±1.5, 26°.36N±0°.07×68°.40E±0°.06, h16km±4km, mb4.3/45, Error ellipse: s-maj=12.1km s-min=1.7km az=216.0*

ISC 08 23:07:46.6±0.4, 26°.49N±0°.05×68°.38E±0°.04, h10km, n139, σ1s98/145, mb4.3/62, 3C-7D, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AJM	**Ajmer**	**5.61**	**89**	*ex*	**Pb**	**23 09 22.0**	**-2.7**
AJM				*i* x	**Sg**	**23 10 44.0**	**-2.8**
THW	**Thamme Wali**	**6.93**	**24**	P	**Pn**	**23 09 29.8**	**+1.5**
NDI	**New Delhi**	**8.14**	**72**	*ex*	**Sn**	**23 11 09.5**	**-7.4**
NDI				*ex*	**Sg**	**23 12 16.0**	**+8.2**
NIL	**Nilore**	**8.29**	**29**		**Pn**	**23 09 48.4**	**+1.4**
BHK	**Bhakra**	**8.58**	**53**	*ex*	Pg	23 10 38.2	+7.3
BHPL	**Bhopal**	**8.82**	**110**	*eP*	**Pn**	**23 09 58.8**	**+4.5**
BHPL				*eS*	**Sn**	**23 11 40.1**	**+6.3**
BHPL				IAML		23 12 40.4	
	comp=E,108nm,0.8s						
SMLA	**Simla**	**8.98**	**57**	*eP*	**Pn**	**23 09 57.8**	**+1.4**
SMLA				*ex*	x	23 11 34.2	
SMLA				*eS*	**Sn**	**23 11 36.3**	**-1.4**
SMLA				IAML		23 11 39.3	
	comp=N,94nm,0.6s						
POO	**Poona**	**9.39**	**146**	*eS*	**Sn**	**23 11 51.6**	**+3.7**
WSAR	**Wadi Sarin**	**9.43**	**252**	Pn	**Pn**	**23 09 59.6**	**-3.0**
	comp=N,0.6nm,0.3s,baz=48,slow=2.2,SNR=9.1						
WSAR				Sn	Sn	23 11 35.3	-13
	comp=N,0.7nm,0.3s,baz=79,slow=8.8,SNR=8.2						
UOSS	**Minazif**	**11.09**	**265**	Pn	**Pn**	**23 10 22.7**	**-2.7**
CHGR	**Chuyangaron**	**12.15**	**3**		**Pn**	**23 10 40.3**	**+0.4**
GAR	**Garm**	**12.58**	**7**		**Pn**	**23 10 46.4**	**+0.6**
PYUN	**Piuthan**	**13.09**	**80**	*eP*	**Pn**	**23 10 51.3**	**-1.6**
KOLN	**Koldanda**	**13.61**	**81**	*eP*	**Pn**	**23 10 59.1**	**-0.9**
	comp=N,15nm,0.4s						
BTK	**Batken**	**13.69**	**8**		**Pn**	**23 11 02.2**	**+1.4**
DANN	**Dangsing**	**13.78**	**79**	*eP*	**Pn**	**23 11 00.4**	**-2.0**
	comp=N,42nm,0.7s						
GEYT	**Alibeck**	**14.33**	**325**	Pn	**P**	**23 11 17.2**	**+0.4**
	comp=N,0.2nm,0.3s,baz=156,slow=11,SNR=8.2						
KSH	**Kashi**	**14.46**	**24**	P	**Pn**	**23 11 07.5**	**-4.0**
KSH				pP	P	23 11 11.3	-7.0
KSH				sP		23 11 17.3	
KSH				PP	**PgPg**	**23 12 21.7**	**-1.9**
KSH				S	**Sn**	**23 13 44.2**	**-7.7**
KSH				SS	**SnSn**	**23 14 01.5**	**-3.2**
KSH				pmax	pmax		
	comp=Z,74nm,0.6s						
KSH				pmax	pmax		
	comp=Z,870nm,6.4s						
KSH				LR	LR		
	comp=N,490nm,10.7s						
KSH				LR	LR		
	comp=E,800nm,9.4s						
KSH				LR	LR		
	comp=Z,690nm,9.5s						
GKN	**Gorkha**	**14.54**	**80**	*eP*	**Pn**	**23 11 09.2**	**-3.5**
TAS	**Tashkent**	**14.82**	**3**	Pn	**Pn**	**23 11 17.4**	**+1.1**
DMN	**Daman**	**14.94**	**82**	*eP*	**Pn**	**23 11 15.2**	**-3.1**
	comp=Z,25nm,0.7s						
PKIN	**Phulchoki**	**15.20**	**82**	*eP*	**Pn**	**23 11 18.0**	**-3.7**
PKI	**Pulchoki**	**15.21**	**82**	*eP*	**Pn**	**23 11 17.8**	**-4.1**
	comp=Z,16nm,0.6s						
ARSB	**Arslanbob**	**15.28**	**13**		**Pn**	**23 11 21.6**	**-1.0**
ARSB				IAmb	IAmb	23 11 35.3	
	comp=Z,13nm,1.1s						
GUN	**Gumba**	**15.63**	**81**	*eP*	**Pn**	**23 11 23.9**	**-3.6**
	comp=Z,67nm,0.8s						
JIRN	**Jiri**	**15.91**	**82**	*eP*	**Pn**	**23 11 28.8**	**-2.2**
	comp=Z,120nm,0.7s						
BOK	**Bokaro**	**16.07**	**96**	*eS*	**S**	**23 14 45.8**	**+0.9**
AML	**Almayashu**	**16.20**	**14**	P	**Pn**	**23 11 34.0**	**-0.8**
	SNR=20						
UCH	**Uchtor**	**16.49**	**16**	P	**Pn**	**23 11 36.7**	**-1.8**
	SNR=16						
KZA	**Kyzart**	**16.54**	**18**	P	**Pn**	**23 11 39.9**	**+0.8**
	SNR=12						
KKAR	**Karatay Array**	**16.67**	**5**		**Pn**	**23 11 40.8**	**+0.4**
EKS2	**Erkin-Say**	**16.73**	**14**	P	**Pn**	**23 11 41.2**	**0.0**
	SNR=13						
AAK	**Ala-Archa**	**16.87**	**16**	P	**Pn**	**23 11 42.3**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=179,slow=4.5,SNR=32						
AAK	**Ala-Archa**	**16.87**	**16**	P	**Pn**	**23 11 42.2**	**-0.8**
	SNR=9.8						
AAK	**Ala-Archa**	**16.87**	**16**		**Pn**	**23 11 42.1**	**-0.9**
ULHL	**Ulahol**	**16.99**	**20**	P	**Pn**	**23 11 44.6**	**0.0**
	SNR=11						
FRU1	**Bishkek**	**17.07**	**16**	Pn	**Pn**	**23 11 44.6**	**-0.8**
KDJ	**Kajisay**	**17.20**	**23**	P	**Pn**	**23 11 47.2**	**0.0**
TAPN	**Taplejung**	**17.26**	**83**	*eP*	**Pn**	**23 11 45.3**	**-2.9**
	comp=Z,53nm,0.9s						
CHMS	**Chumysh**	**17.27**	**16**	P	**Pn**	**23 11 46.6**	**-1.4**
	SNR=9.8						
TKM2	**Tokmak 2**	**17.42**	**18**	P	**Pn**	**23 11 49.0**	**-1.0**
	SNR=15						
PRZ	**Przheval'sk**	**17.94**	**25**	P	**P**	**23 11 56.9**	**-0.1**
LSA	**Lhasa**	**20.33**	**76**	P	**P**	**23 12 23.5**	**-0.1**
LSA				IAmb	IAmb	23 12 35.3	
	comp=Z,9.5nm,0.7s						
RAYN	**Ar Rayn**	**20.94**	**267**	P	**P**	**23 12 29.1**	**-0.7**
SHL	**Shillong**	**21.13**	**87**	P	**P**	**23 12 30.8**	**-1.2**
MAKZ	**Makanchi**	**22.96**	**24**	P	**P**	**23 12 51.1**	**0.0**
MAKZ				IAmb	IAmb	23 12 54.4	
	comp=Z,8.5nm,1.1s						
MK31	**Makanchi Array**	**23.07**	**25**	P	**P**	**23 12 53.2**	**+0.9**
MKAR	**Makanchi Array**	**23.07**	**25**	P	**P**	**23 12 53.8**	**+1.5**
	comp=Z,1.5nm,0.5s,baz=208,slow=12,SNR=27						
WMQ	**Urumqi**	**23.32**	**37**	*eP*	**P**	**23 12 56.1**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,70nm,5.1s						
AKTO	**Aktyubinsk**	**25.20**	**344**	P	**P**	**23 13 13.7**	**+1.4**
	comp=Z,3.2nm,0.8s,baz=161,slow=9.8,SNR=8.8						
KURBB	**Kurchatov Arra**	**25.32**	**15**	P	**P**	**23 13 14.8**	**+1.4**
	comp=Z,4.3nm,0.9s,baz=208,slow=9.1,SNR=22						
AKH	**Akhalkalaki**	**25.34**	**312**	P	**P**	**23 13 14.2**	**+0.3**
AKH				IAmb	IAmb	23 13 21.8	
	comp=Z,6.5nm,1.1s						
DAMY	**Dhamar**	**25.35**	**247**	P	**P**	**23 13 12.9**	**-1.5**
DAMY				IAmb	IAmb	23 13 19.4	
	comp=Z,13nm,1.1s						
KURK	**Kurchatov**	**25.43**	**15**	P	**P**	**23 13 15.0**	**+0.6**
KURK				IAmb	IAmb	23 13 16.9	
	comp=Z,5.4nm,0.8s						
BVAR	**Borovoye Array**	**26.55**	**3**	P	**P**	**23 13 27.2**	**+2.7**
	comp=Z,6.8nm,0.7s,baz=176,slow=8.9,SNR=38						
BRVK	**Borovoye**	**26.58**	**3**	P	**P**	**23 13 26.1**	**+1.4**
BRVK				IAmb	IAmb	23 13 30.2	
	comp=Z,9.4nm,0.8s						
KBZ	**Khabaz**	**26.87**	**316**	P	**P**	**23 13 29.8**	**+2.3**
	comp=Z,1.4nm,0.6s,baz=116,slow=4.9,SNR=2.8						
CHTO	**Chiang Mai**	**29.17**	**99**	P	**P**	**23 13 46.5**	**-1.8**
GTA	**Gaotai**	**29.20**	**56**	*eP*	**P**	**23 13 53.3**	**+4.8**
GTA				pP	sP	23 13 56.7	+3.8
GTA				sP	pP	23 13 59.4	+7.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MMAI	**Mount Meron Ar**	**29.28**	**291**	P	**P**	**23 13 49.7**	**+0.4**
	comp=Z,2.2nm,0.7s,baz=79,slow=8.6,SNR=4.7						
CMAR	**Chiang Mai Arr**	**29.29**	**99**	P	**P**	**23 13 49.8**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=288,slow=9.1,SNR=9.7						
CMAR				PcP	**PcP**	**23 16 56.4**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=286,slow=3.7,SNR=4.6						
CMAR				LR	LR	23 28 40.8	
	comp=Z,70nm,19.6s,baz=325,slow=43						
ZALV	**Zalesovo Beam**	**30.01**	**20**	P	**P**	**23 13 56.5**	**+1.1**
	comp=Z,5.2nm,0.5s,baz=215,slow=8.5,SNR=30						
ZALV				LR	LR	23 26 09.8	
	comp=Z,73nm,18.4s,baz=245,slow=36						
ARU	**Arti**	**30.75**	**349**	P	**P**	**23 14 02.5**	**+0.7**
ARU				IAmb	IAmb	23 14 05.3	
	comp=Z,2.4nm,0.6s						
KMI	**Kunming**	**30.91**	**85**	P	**P**	**23 14 01.8**	**-2.1**
KMI				pP	sP	23 14 09.7	+1.4
KMI				sP	pP	23 14 14.0	+7.0
KMI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
LZH	**Lanzhou**	**31.63**	**64**	*eP*	**P**	**23 14 09.2**	**-0.9**
LZH				pP	pP	23 14 13.8	+0.6
LZH				sP	sP	23 14 16.5	+2.0
LZH				*e*PP	**PnPn**	**23 15 13.9**	**+0.3**
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
LZH				pmax	pmax		
	comp=Z,54nm,5.2s						
BR131	**Keskin Array S**	**31.75**	**303**	P	**P**	**23 14 10.0**	**-1.1**
BR131				IAmb	IAmb	23 14 12.0	
	comp=Z,3.3nm,1.1s						
XAN	**Xi'an**	**35.63**	**68**	P	**P**	**23 14 45.4**	**+0.5**
XAN				pP	sP	23 14 53.6	+4.4
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
XAN				LR	LR		
	comp=N,190nm,11.9s						
XAN				LR	LR		
	comp=E,140nm,11.9s						
XAN				LR	LR		
	comp=Z,190nm,15.2s						
XAN	**Xi'an**	**35.63**	**68**	P	**P**	**23 14 44.4**	**-0.4**
SONM	**Songino Array**	**36.53**	**44**	P	**P**	**23 14 55.0**	**+2.6**
	comp=Z,3.7nm,0.6s,baz=248,slow=9.1,SNR=14						
KULM	**Kulim**	**37.32**	**119**	P	**P**	**23 14 58.8**	**-0.6**
KULM				IAmb	IAmb	23 15 03.5	
	comp=Z,9.5nm,1.0s						
RPSI	**Rantau Prapat**	**37.65**	**124**	P	**P**	**23 15 00.3**	**-1.8**
RPSI				IAmb	IAmb	23 15 01.9	
	comp=Z,5.8nm,0.8s						
SORM	**Soroca**	**37.90**	**315**	⇑P	**P**	**23 15 03.7**	**-0.2**
HHC	**Hu-ho-hao-te**	**38.30**	**57**	P	**P**	**23 15 08.8**	**+1.3**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,6.6s						
PLOR	**Plostina**	**38.31**	**311**	⇓P	**P**	**23 15 09.1**	**+1.6**
AKASG	**Malin Array Be**	**38.35**	**320**	P	**P**	**23 15 08.1**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=111,slow=7.6,SNR=2.1						
TESR	**Tescani**	**38.49**	**312**	⇓P	**P**	**23 15 10.5**	**+1.6**
MLR	**Muntele Rosu**	**38.69**	**311**	↑P	**P**	**23 15 12.4**	**+1.6**
MLR	**Muntele Rosu**	**38.69**	**311**	P	**P**	**23 15 11.8**	**+1.0**
MLR				IAmb	IAmb	23 15 14.2	
	comp=Z,7.7nm,1.1s						
DOPR	**Dopca**	**39.19**	**311**	⇓P	**P**	**23 15 15.9**	**+1.1**
VOIR		**39.29**	**310**	⇓P	**P**	**23 15 16.2**	**+0.5**
ARR	**Arges**	**39.55**	**310**	⇓P	**P**	**23 15 19.5**	**+1.6**
BURAR	**Bucovina Array**	**39.74**	**314**	⇓P	**P**	**23 15 20.8**	**+1.3**
BUR08	**Bucovina Ar. S**	**39.76**	**314**	P	**P**	**23 15 20.5**	**+0.8**
WHN	**Wuhan**	**40.38**	**73**	P	**P**	**23 15 27.2**	**+2.3**
ITM	**Ithomi**	**40.53**	**297**	P	**P**	**23 15 25.5**	**-0.6**
ITM				IAmb	IAmb	23 15 34.2	
	comp=Z,10nm,0.8s						
MDVR	**Moldovita**	**41.46**	**309**	↑P	**P**	**23 15 34.1**	**+0.4**
NACGM	**Naroch**	**41.48**	**325**	*e*LQ	LQ	23 16 38.0	
NACGM				*e*LR	LR	23 20 46.0	
BZS	**Buzias**	**41.68**	**310**	⇓P	**P**	**23 15 36.7**	**+1.3**
NRIK	**Noril'sk**	**44.34**	**10**	P	**P**	**23 15 58.9**	**+2.2**
	comp=Z,3.5nm,0.8s,baz=183,slow=4.9,SNR=9.6						
FINES	**FINESS Array B**	**44.97**	**333**	P	**P**	**23 16 02.6**	**+0.9**
	comp=Z,2.7nm,0.8s,baz=120,slow=7.8,SNR=7.5						
GEC2	**GERESS Array S**	**47.52**	**313**	P	**P**	**23 16 22.4**	**+0.3**
GERES	**GERESS Array B**	**47.52**	**313**	P	**P**	**23 16 22.9**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=81,slow=8.2,SNR=7.7						
GERES				PcP	**PcP**	**23 17 52.8**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=42,slow=4.3,SNR=5.7						
BRG	**Berggiesshubel**	**47.67**	**316**	*eP*	P	23 16 28.2	+5.1
	comp=Z,5.1nm,1.3s						
	comp=N,398nm,11.6s						
	comp=E,158nm,19.7s						
	comp=Z,225nm,16.5s						
ABTA	**Abfaltersbach**	**48.10**	**310**	*i* pP	pP	23 16 28.3	-1.5
	comp=Z,1.1nm,0.4s						
WTTA	**Wattenberg**	**48.74**	**311**	*i* P	**P**	**23 16 31.9**	**+0.2**
	comp=Z,2.2nm,0.6s						
SQTA	**Sankt Quirin**	**49.02**	**311**	*i* P	**P**	**23 16 34.7**	**+0.9**
	comp=Z,2.2nm,0.6s						
MOTA	**Moosalm**	**49.10**	**311**	*i* P	**P**	**23 16 34.1**	**-0.3**
	comp=Z,2.3nm,0.6s						
FETA	**Feichten**	**49.34**	**310**	*i* P	**P**	**23 16 36.6**	**+0.3**
	comp=Z,1.1nm,0.5s						
RETA	**Reutte**	**49.35**	**311**	*i* P	**P**	**23 16 36.2**	**-0.1**
	comp=Z,2.5nm,0.6s						
ARCES	**ARCESS Array B**	**49.74**	**342**	P	**P**	**23 16 40.2**	**+1.4**
	comp=Z,3.7nm,0.7s,baz=136,slow=7.8,SNR=24						
DAVA	**Damuels**	**49.93**	**311**	*i* P	**P**	**23 16 40.7**	**-0.1**
	comp=Z,1.5nm,0.4s						
HFS	**Hagfors**	**49.96**	**328**	P	**P**	**23 16 41.4**	**+0.8**
	comp=Z,3.4nm,0.9s,baz=120,slow=8.6,SNR=6.4						
MSSA	**Maissana**	**50.10**	**307**	P	**P**	**23 16 41.7**	**-0.3**
KEST	**Kesra**	**50.72**	**296**	P	**P**	**23 16 48.0**	**+1.2**
	comp=Z,3.9nm,0.8s,baz=276,slow=6.4,SNR=4.9						
KSRS	**Korea Array**	**50.94**	**62**	P	**P**	**23 16 48.2**	**0.0**
	comp=Z,1.7nm,0.7s,baz=269,slow=7.0,SNR=6.1						
NB2	**NORSAR Subarra**	**51.39**	**328**	P	**P**	**23 16 51.3**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=107,slow=7.4						
NOA	**NORSAR Array B**	**51.39**	**328**	P	**P**	**23 16 51.4**	**-0.1**
	comp=Z,1.6nm,0.9s,baz=112,slow=7.2,SNR=9.1						
BNI	**Bardonecchia**	**52.12**	**308**	P	**P**	**23 16 56.6**	**-0.6**
BNI				IAmb	IAmb	23 16 57.6	
	comp=Z,2.4nm,0.8s						
WLF	**Wiferdange**	**52.52**	**314**	P	**P**	**23 17 00.6**	**+0.7**
TIXI	**Tiksi**	**55.90**	**19**	P	**P**	**23 17 24.4**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=246,slow=3.0,SNR=1.8						
EKA	**Eskdalemuir Ar**	**58.25**	**320**	P	**P**	**23 17 41.4**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=101,slow=7.7,SNR=4.3						
ESDC	**Sonseca Array**	**60.54**	**302**	P	**P**	**23 17 57.0**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=67,slow=6.4,SNR=8.4						
PAB	**San Pablo**	**60.86**	**302**	P	**P**	**23 17 58.4**	**-1.2**
PAB				IAmb	IAmb	23 18 05.5	
	comp=Z,4.6nm,1.1s						
TOA0	**Torodi Ar. Sit**	**63.53**	**272**	P	**P**	**23 18 17.5**	**-0.2**
TORD	**Torodi Ar. Bea**	**63.53**	**272**	P	**P**	**23 18 17.2**	**-0.5**
	comp=Z,3.2nm,0.7s,baz=62,slow=6.1,SNR=21						
SEY	**Seymchan**	**64.07**	**30**	P	**P**	**23 18 21.9**	**+1.4**
	comp=Z,2.9nm,0.5s,baz=256,slow=7.9,SNR=10						
LBTB	**Lobatse**	**65.78**	**223**	P	**P**	**23 18 31.2**	**-1.0**
BOSA	**Boshof**	**68.67**	**220**	P	**P**	**23 18 50.5**	**0.0**
	comp=Z,2.1nm,0.8s,baz=45,slow=6.4,SNR=4.6						
BOSA	**Boshof**	**68.67**	**220**	P	**P**	**23 18 50.5**	**0.0**
BOSA				IAmb	IAmb	23 18 55.6	
	comp=Z,1.2nm,0.8s						
SUMG	**Summit**	**69.83**	**342**	P	**P**	**23 18 58.7**	**+1.2**
SUMG				IAmb	IAmb	23 19 13.8	
	comp=Z,4.5nm,1.1s						
FITZ	**Fitzroy Crossi**	**71.09**	**122**	P	**P**	**23 19 04.3**	**-1.1**
FITZ				IAmb	IAmb	23 19 16.6	
	comp=Z,2.2nm,1.1s						
DBIC	**Dimbokro**	**72.07**	**269**	P	**P**	**23 19 10.3**	**-1.2**
DBIC				IAmb	IAmb	23 19 14.3	
	comp=Z,3.1nm,0.9s						
WRA	**Warramunga Arr**	**78.86**	**119**	P	**P**	**23 19 48.4**	**-2.1**
	comp=Z,5.7nm,0.8s,baz=315,slow=5.2,SNR=28						
ANM	**Nome**	**80.14**	**21**	P	**P**	**23 19 56.6**	**0.0**
FORT	**Forrest**	**80.59**	**131**	P	**P**	**23 19 57.9**	**-1.7**
ASAR	**Alice Springs**	**80.59**	**122**	P	**P**	**23 19 58.5**	**-1.2**
	comp=Z,2.2nm,0.8s,baz=307,slow=5.4,SNR=15						
MLY	**Manley**	**83.88**	**16**	P	**P**	**23 20 16.8**	**+0.3**
MLY				IAmb	IAmb	23 20 17.4	
	comp=Z,2.2nm,1.0s						
C36M	**Paulatuk**	**84.02**	**4**	P	**P**	**23 20 17.3**	**+0.4**
INK	**Inuvik**	**84.11**	**8**	P	**P**	**23 20 18.1**	**+0.7**
	comp=Z,4.3nm,0.9s,baz=352,slow=5.2,SNR=15						
INK	**Inuvik**	**84.11**	**8**	P	**P**	**23 20 18.3**	**+0.9**
BPAW	**Bear Paw Mtn.**	**84.59**	**16**	P	**P**	**23 20 19.8**	**-0.2**
BPAW				IAmb	IAmb	23 20 21.8	
	comp=Z,1.3nm,0.8s						
WRH	**Wood River Hil**	**84.98**	**15**	P	**P**	**23 20 21.3**	**-0.6**
ILAR	**Eielson Array**	**85.00**	**14**	P	**P**	**23 20 21.4**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=313,slow=4.1,SNR=4.2						
KTH	**Kantishna Hill**	**85.06**	**17**	P	**P**	**23 20 22.7**	**+0.3**
PPLA	**Purkeypile**	**85.27**	**17**	P	**P**	**23 20 23.9**	**+0.3**
EPYK	**Eagle Plains**	**85.48**	**10**	P	**P**	**23 20 24.7**	**+0.2**
EPYK				IAmb	IAmb	23 20 25.6	
	comp=Z,2.6nm,0.8s						
RND	**Reindeer**	**85.70**	**16**	P	**P**	**23 20 25.6**	**0.0**
RND				IAmb	IAmb	23 20 26.1	
	comp=Z,2.8nm,0.9s						
NVAR	**Mina Array Bea**	**115.12**	**6**	PKP	**PKPdf**	**23 26 30.0**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=8.6,slow=1.0,SNR=5.0						
TXAR	**Lajitas Array**	**123.97**	**352**	PKP	**PKiKP**	**23 26 46.4**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=128,slow=2.2,SNR=4.6						

*REY **08** 23:14:01.4, 64°.00N×20°.48W, h7km*

*IDC **08** 23:14:02.2±1.3, 64°.03N×20°.90W, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.3/41, mbtmp3.7/4, MS3.0/1, Ms1 3.0/1, ms1mx2.5/47, Error ellipse: s-maj=30.4km s-min=10.3km az=69.0*

ISC 08 23:14:00.4±0.8, 64°.02N±0°.04×20°.50W±0°.02, h14km±5km, n49, σ1s54/68, mb3.5/4, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISAU	**Saurbar**	**0.05**	**122**	P	**Pg**	**23 14 02.8**	**-0.1**
	baz=113						
ISAU				S	**Sg**	**23 14 04.1**	**-0.5**
	baz=113						
ISOL	**Solvholt**	**0.21**	**246**	P	**Pb**	**23 14 05.7**	**-0.4**
	baz=251						
ISOL				S	**Sg**	**23 14 09.0**	**+0.8**
	baz=251						
IHAU	**Haukadalur**	**0.24**	**101**	P	**Pb**	**23 14 05.7**	**-0.9**
	baz=98						
IHAU				S	**Sg**	**23 14 09.3**	**+0.3**
	baz=98						
IKRO	**Krokur**	**0.28**	**287**	P	**Pn**	**23 14 07.1**	**-3.1**
	baz=289						
IKRO				S	**Sb**	**23 14 11.8**	**-0.2**
	baz=289						
IGYG	**Gygjarholskot**	**0.30**	**25**	P	Pg	23 14 07.2	+0.6
	baz=22						
IGYG				S	**Sg**	**23 14 12.0**	**+1.3**
	baz=22						
IBJA	**Bjarnastaoir**	**0.36**	**259**	P	**Pb**	**23 14 08.3**	**-0.3**
	baz=262						
IBJA				S	**Sb**	**23 14 13.7**	**-0.4**
	baz=262						
IHEI	**Heioarbar**	**0.37**	**300**	P	**Pn**	**23 14 08.6**	**-2.8**
	baz=301						
IHEI				S	**Sb**	**23 14 14.6**	**+0.1**
	baz=301						
IMID	**Miomork**	**0.45**	**142**	P	**Pg**	**23 14 09.2**	**-0.1**
	baz=142						
IMID				S	**Sg**	**23 14 15.3**	**-0.1**
	baz=142						
ISAN	**Sandskeio**	**0.47**	**276**	P	**Pn**	**23 14 10.2**	**-2.6**
	baz=277						
ISAN

comp=Z,12nm,0.3s
BIGH Upper Bighouse 9.70 117 *e*P Pn 23 16 20.7 +1.3
BIGH IAML 23 16 25.1
comp=Z,7.5nm,0.6s
KPL Plockton 9.87 126 *e*P Pn 23 16 22.6 +0.8
KPL IAML 23 16 24.4
comp=Z,4.8nm,0.5s
KAC Achnashellach 9.88 124 *e*P Pn 23 16 22.9 +1.0
MDO Dochfour 10.27 122 *e*P Pn 23 16 28.4 +1.2
MCD Coleburn Disti 10.58 120 *e*P Pn 23 16 32.7 +1.2
MCD IAML 23 16 37.5
comp=Z,15nm,0.5s
LAWE Loch Awe, Argy 10.80 129 *e*P Pn 23 16 35.5 +1.1
INVG Invergeldie, C 11.14 125 *e*P Pn 23 16 40.3 +1.2
INVG IAML 23 16 42.9
comp=Z,4.5nm,0.4s
EAB Aberfoyle 11.22 127 *e*P Pn 23 16 42.1 +1.9
DRUM Mains of Drumt 11.36 120 *e*P Pn 23 16 42.9 +0.8
DRUM IAML 23 16 46.5
comp=Z,4.5nm,0.6s
CLGH Cloghs, Cushen 11.52 134 *e*P Pn 23 16 45.4 +1.0
CLGH IAML 23 16 47.3
comp=Z,4.1nm,0.5s
ESY Stoneypath 12.05 124 *e*P Pn 23 16 53.1 +1.6
EKA Eskdalemuir Ar 12.31 127 Pn Pn 23 16 57.4 +2.3
baz=324,slow=14,SNR=19
SFJD Kangerlussuaq 12.77 297 LR LR 23 21 24.5
comp=Z,75nm,21.2s,baz=83,slow=35
FINES FINESS Array B 21.12 76 P P 23 18 49.1 +4.8
comp=Z,2.0nm,0.8s,baz=282,slow=9.5,SNR=3.7
BRTR Keskin Array B 39.60 101 P P 23 21 37.9 +6.6
comp=Z,0.7nm,0.8s,baz=308,slow=6.1,SNR=4.7
PDAR Pinedale Array 52.21 291 P P 23 23 13.8 +3.1
comp=Z,1.5nm,0.8s,baz=61,slow=7.0,SNR=8.9
TORD Torodi Ar. Bea 53.11 153 P P 23 23 20.6 +3.2
comp=Z,0.5nm,0.9s,baz=331,slow=4.7,SNR=2.3

PRU 08 23:22:58.5±0.0, 49°86N×18°50E, *h*0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.23**	**265**	*e*PG	Pg	23 23 03.2	+0.3
OKC				*e*SG	Sg	23 23 06.8	+1.0
	comp=Z,30nm,0.9s						
MORC	**Moravsky Berou**	**0.63**	**263**	*e*PG	Pg	23 23 10.5	0.0
MORC				*e*SG	Sg	23 23 18.9	+0.3
LANS	**Liptovska Anna**	**0.95**	**138**	*e*PG	Pg	23 23 16.7	0.0
LANS				*e*SG	Sg	23 23 29.7	+0.7
LANS				eLG	Lg	23 23 36.0	
KRLC	**Kraliky**	**1.13**	**282**	*e*PG	Pg	23 23 18.9	-1.2
KRLC				*e*SG	Sg	23 23 35.1	+0.3
	comp=Z,3.0nm,0.5s						
JAVC	**Velka Javorina**	**1.14**	**209**	*e*PG	Pg	23 23 20.3	0.0
VRAC	**Vranov**	**1.36**	**247**	*e*PG	Pg	23 23 23.6	-0.9
VRAC				*e*SG	Sg	23 23 41.5	-0.6
VYHS	**Vyhne**	**1.39**	**171**	*e*PG	Pg	23 23 23.5	-1.5
VYHS				*e*SG	Sg	23 23 42.1	-0.8
DPC	**Dobruska-Polom**	**1.49**	**290**	*e*PG	Pn	23 23 26.6	+0.1
DPC				*e*SG	Sg	23 23 46.0	-0.2
	comp=Z,2.1nm,0.5s						
KRUC	**Moravsky**	**1.59**	**241**	*e*PG	Pn	23 23 27.0	-0.9
KRUC				*e*SG	Sn	23 23 48.1	-1.0
OSTC	**Ostas**	**1.62**	**296**	*e*PG	Pn	23 23 28.2	-0.2
OSTC				*e*SG	Sg	23 23 51.0	+0.3
CHVC	**Chvalec**	**1.73**	**296**	*e*PG	Pn	23 23 29.7	-0.2
CHVC				*e*SG	Sb	23 23 53.3	-0.2

WEL 08 23:28:14.6, 38°S±1°×17°7E±°, *h*90km±2km, M3.4/53, ML3.5/53, MLv3.4/53, Error ellipse: s-maj=0.0km s-min=0.0km az=140.4, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHRZ	**Whale Island**	**0.08**	**300**	P	Pn	23 28 27.5	+0.3
MARZ	**Manawahe**	**0.32**	**253**	P	Pn	23 28 28.3	+0.2
EDRZ	**Edgecumbe**	**0.33**	**230**	P	Pn	23 28 28.3	+0.1
URZ	**Urewera**	**0.37**	**174**	P	Pn	23 28 28.3	-0.1
URZ				S	Sn	23 28 39.0	+0.5
WIZ	**White Island**	**0.38**	**16**	P	Pn	23 28 28.6	+0.2
RUGZ	**Raukumara Rang**	**0.49**	**98**	P	Pn	23 28 28.8	-0.6
RUGZ				S	Sn	23 28 39.6	-0.8
MKRZ	**Makatiti**	**0.53**	**242**	P	Pn	23 28 30.5	+0.9
LIRZ	**Lichensteins R**	**0.55**	**258**	P	Pn	23 28 30.0	+0.3
TARZ	**Mount Tarawera**	**0.55**	**232**	P	Pn	23 28 30.3	+0.4
MWZ	**Matawai**	**0.57**	**140**	P	Pn	23 28 30.1	+0.2
MWZ				S	Sn	23 28 42.3	+0.9
OMRZ	**Omania**	**0.58**	**249**	P	Pn	23 28 30.3	+0.3
HAZ	**Te Kaha**	**0.59**	**77**	P	Pn	23 28 29.9	-0.1
HAZ				S	Sn	23 28 41.6	+0.1
RRRZ	**Republican Roa**	**0.62**	**224**	P	Pn	23 28 30.6	+0.2
MUGZ	**Murupara**	**0.62**	**201**	P	Pn	23 28 30.5	+0.1
TGRZ	**Tauranga**	**0.65**	**284**	P	Pn	23 28 30.7	+0.1
KARZ	**Kaharoa**	**0.66**	**259**	P	Pn	23 28 30.8	+0.2
RAGZ	**Rawiri**	**0.66**	**155**	P	Pn	23 28 31.2	+0.4
RAGZ				S	Sn	23 28 44.3	+1.4
HLRZ	**Highlands Stat**	**0.66**	**237**	P	Pn	23 28 31.3	+0.5
RTZ	**Ruatahuna**	**0.72**	**185**	P	Pn	23 28 31.5	+0.2
RTZ				S	Sn	23 28 44.4	+0.5
UTU	**Utuhina**	**0.74**	**247**	P	Pn	23 28 32.5	+1.0
HSRZ	**Hossack Road**	**0.77**	**237**	P	Pn	23 28 32.4	+0.7
HRRZ	**Handcock Road**	**0.79**	**231**	P	Pn	23 28 32.4	+0.4
PRRZ	**Plateau Road**	**0.80**	**221**	P	Pn	23 28 32.3	+0.2
PKGZ	**Pakihiroa**	**0.81**	**90**	P	Pn	23 28 32.5	+0.4
PKGZ				S	Sn	23 28 46.0	+0.7
TKGZ	**Te Karaka**	**0.83**	**131**	P	Pn	23 28 32.6	+0.3
TKGZ				S	Sn	23 28 46.3	+0.8
ALRZ	**Allen Road**	**0.87**	**220**	P	Pn	23 28 33.2	+0.3
ALRZ				S	Sn	23 28 47.3	+0.8
GRRZ	**Galatos Road**	**0.88**	**238**	P	Pn	23 28 33.6	+0.7
KMRZ	**Kaimai**	**0.89**	**273**	P	Pn	23 28 33.2	+0.2
SNGZ	**Shannon Statio**	**0.91**	**166**	P	Pn	23 28 33.6	+0.3
PUZ	**Puketiti**	**0.96**	**101**	P	Pn	23 28 34.0	+0.1
PUZ				S	Sn	23 28 48.3	0.0
MTHZ	**Maungataniwha**	**0.97**	**190**	P	Pn	23 28 34.3	+0.3
MTHZ				S	Sn	23 28 49.5	+1.0
RIGZ	**Rimuhau**	**0.98**	**146**	P	Pn	23 28 34.7	+0.7
RIGZ				S	Sn	23 28 49.8	+1.2
RAHZ	**Arahi**	**1.02**	**179**	P	Pn	23 28 35.1	+0.6
MXZ	**Matakaoa Point**	**1.04**	**72**	P	Pn	23 28 35.8	+1.1
MRHZ	**Matea Rd**	**1.06**	**208**	P	Pn	23 28 35.1	+0.1
WMGZ	**Waiomatatini S**	**1.07**	**86**	P	Pn	23 28 35.5	+0.4
CNGZ	**Carnagh Statio**	**1.08**	**123**	P	Pn	23 28 35.9	+0.8
KUTZ	**Kaahu Road**	**1.14**	**238**	P	Pn	23 28 36.5	+0.6
WHTZ	**Whakaora**	**1.16**	**228**	P	Pn	23 28 37.5	+1.4
WHHZ	**Waihua**	**1.19**	**173**	P	Pn	23 28 36.6	+0.2
PRGZ	**Paritu Road**	**1.21**	**148**	P	Pn	23 28 37.4	+0.6
NMHZ	**Naumai**	**1.22**	**189**	P	Pn	23 28 37.8	+0.9
KNZ	**Kokohu**	**1.22**	**157**	P	Pn	23 28 35.8	-1.1
TOZ	**Tahuroa Road**	**1.25**	**277**	P	Pn	23 28 37.6	+0.5
HATZ	**Hinemaiaia**	**1.25**	**217**	P	Pn	23 28 37.6	+0.4
TLZ	**Tolley Road**	**1.28**	**250**	P	Pn	23 28 38.0	+0.5
WATZ	**Wairara**	**1.32**	**232**	P	Pn	23 28 38.7	+0.6
BKZ	**Black Stump Fm**	**1.34**	**199**	P	Pn	23 28 38.3	-0.1
ARHZ	**Arapaoanui**	**1.37**	**182**	P	Pn	23 28 38.8	+0.1
RATZ	**Rangitukua**	**1.40**	**226**	P	Pn	23 28 39.8	+0.7
MHGZ	**Mahia Peninsul**	**1.42**	**152**	P	Pn	23 28 39.1	-0.2
RITZ	**Rihia Road**	**1.43**	**221**	P	Pn	23 28 40.6	+1.1
KUZ	**Kuaotunu**	**1.57**	**317**	P	Pn	23 28 41.1	0.0
MCHZ	**McNeill Hill**	**1.57**	**190**	P	Pn	23 28 41.2	-0.1
KWHZ	**Kaweka Forest**	**1.61**	**198**	P	Pn	23 28 41.5	-0.2
KRVZ	**Karewarewa**	**1.64**	**222**	P	Pn	23 28 43.1	+1.0
WTVZ	**West Tongariro**	**1.68**	**223**	P	Pn	23 28 43.4	+0.8
MKAZ	**Moumakai**	**1.70**	**297**	P	Pn	23 28 43.4	+0.5
NGZ	**Ngauruhoe**	**1.72**	**221**	P	Pn	23 28 44.1	+0.9
TWVZ	**Taurewa**	**1.73**	**227**	P	Pn	23 28 44.2	+0.8
TUVZ	**Tukino**	**1.76**	**218**	P	Pn	23 28 44.2	+0.4
CKHZ	**Cape Kidnapper**	**1.76**	**180**	P	Pn	23 28 42.7	-0.9
BHHZ	**Black Hill Sta**	**1.77**	**206**	P	Pn	23 28 43.4	-0.5
FWVZ	**Far West T-bar**	**1.80**	**221**	P	Pn	23 28 44.8	+0.4
WHVZ	**Whangaehu Hut**	**1.80**	**219**	P	Pn	23 28 44.7	+0.3
DRZ	**Dome Shelter**	**1.81**	**220**	P	Pn	23 28 45.2	+0.6
MOVZ	**Moawhango**	**1.82**	**214**	P	Pn	23 28 44.2	-0.3
KRHZ	**Kereru**	**1.83**	**197**	P	Pn	23 28 43.7	-0.9
TRVZ	**Turoa**	**1.83**	**220**	P	Pn	23 28 45.1	+0.3
HIZ	**Hauiti**	**1.84**	**250**	P	Pn	23 28 45.6	+0.9
WIAZ	**Waiheke Island**	**1.89**	**305**	P	Pn	23 28 45.9	+0.6
KAHZ	**Kahuranaki**	**1.90**	**184**	P	Pn	23 28 44.6	-1.0
KBAZ	**Karaka Road Bo**	**1.90**	**294**	P	Pn	23 28 46.7	+1.3
PKVZ	**Pokaka**	**1.93**	**223**	P	Pn	23 28 46.7	+0.8
ETAZ	**East Tamaki Re**	**1.94**	**298**	P	Pn	23 28 47.0	+1.1
MTVZ	**Mangateitei**	**1.94**	**219**	P	Pn	23 28 46.3	+0.3
MBAZ	**Motutapu North**	**2.06**	**302**	P	Pn	23 28 48.4	+0.9
GRZ	**Great Barrier**	**2.08**	**322**	P	Pn	23 28 48.2	+0.4
AWAZ	**Awhitu Peninsu**	**2.09**	**293**	P	Pn	23 28 48.8	+0.9
PNHZ	**Pukenui**	**2.12**	**198**	P	Pn	23 28 46.9	-1.5
PXZ	**Pawanui**	**2.14**	**184**	P	Pn	23 28 46.8	-1.8
VRZ	**Vera Road**	**2.18**	**235**	P	Pn	23 28 50.3	+1.2
ABAZ	**Army Bay**	**2.20**	**305**	P	Pn	23 28 50.4	+1.0
WPHZ	**Waipukurau**	**2.22**	**192**	P	Pn	23 28 47.9	-1.8
TSZ	**Takapari Road**	**2.32**	**201**	P	Pn	23 28 49.4	-1.7
PRHZ	**Porangahau**	**2.39**	**188**	P	Pn	23 28 49.9	-2.0
WAZ	**Wanganui**	**2.46**	**220**	P	Pn	23 28 53.1	+0.2
LREZ	**Lake Rotokare**	**2.60**	**232**	P	Pn	23 28 55.9	+1.2
OHWZ	**Ohakea**	**2.68**	**210**	P	Pn	23 28 56.7	+1.0
POWZ	**Post Office Ro**	**2.69**	**202**	P	Pn	23 28 54.2	-1.7
PKE	**Pukeiti**	**2.74**	**241**	P	Pn	23 28 58.2	+1.6
KHEZ	**Kahui Hut**	**2.77**	**239**	P	Pn	23 28 58.5	+1.5
PRWZ	**Pori Road**	**2.79**	**197**	P	Pn	23 28 55.6	-1.6
WCZ	**Waipu Caves**	**2.92**	**311**	P	Pn	23 29 00.1	+1.1
OUZ	**Omahuta**	**3.86**	**313**	P	Pn	23 29 13.2	+1.6
CTZ	**Chatham Island**	**7.55**	**143**	P	Pn	23 30 02.3	+0.5

*IDC **08** 23:50:08.9±0.5, 26°.24N×68°.38E, h0km, mb4.4/27, mb1 4.5/29, mb1mx4.4/39, mbtmp4.4/29, ML3.2/2, MS3.9/14, Ms1 3.9/14, ms1mx3.6/37, Error ellipse: s-maj=14.7km s-min=11.9km az=15.0*
*MOS **08** 23:50:09.9±1.2, 26°.37N×68°.43E, h16km, mb4.8/46, Error ellipse: s-maj=6.1km s-min=3.8km az=109.8*
*NEIC **08** 23:50:11.2±1.6, 26°.37N±0°.09×68°.39E±0°.09, h15km±4km, mb4.6/79, Error ellipse: s-maj=13.3km s-min=10.8km az=150.0*
*BJI **08** 23:50:12.8±0.0, 26°.55N×68°.82E, h10km, mB4.7/32, mb4.7/40, Ms4.3/27, Ms7 4.2/26*

ISC 08 23:50:10.1±0.8, 26°.36N±0°.05×68°.41E±0°.04, h8km±4km, n350, σ1°65/363, mb4.6/139, MS3.9/23, 29C-14D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AJM	**Ajmer**	**5.59**	**87**	*e*P	Pn	23 51 31.0	-2.7
AJM				*i* x	x	23 52 51.0	
SARP	**Sargodha**	**6.68**	**33**	P	Pn	23 51 48.4	-0.1
THW	**Thamme Wali**	**7.04**	**24**	P	Pn	23 51 53.4	-0.1
THW	**Thamme Wali**	**7.04**	**24**	P	Pn	23 51 53.2	-0.3
NDI	**New Delhi**	**8.15**	**72**	*ex*	Pn	23 52 07.0	-1.8
NDI				*e*S	Sn	23 53 33.5	-7.7
NIL	**Nilore**	**8.39**	**29**	P	Pn	23 52 12.3	+0.2
NIL	**Nilore**	**8.39**	**29**		Pn	23 52 12.3	+0.2
CHCP	**Chirah Chowk**	**8.40**	**29**	P	Pn	23 52 12.1	-0.1
CHCP	**Chirah Chowk**	**8.40**	**29**	P	Pn	23 52 12.2	0.0
BOM	**Bombay**	**8.47**	**150**	*e*P	Pn	23 51 57.8	-15
BOM				AMP		23 51 58.5	
	comp=Z,104nm,1.2s						
BOM				*e*S	Sb	23 54 22.6	+4.5
BOM				AMb	AMB	23 55 16.9	
	comp=Z,653nm,2.5s						
JMU	**Jammu**	**8.49**	**40**	*ex*	Pn	23 52 05.0	-8.3
BHK	**Bhakra**	**8.64**	**52**	*ex*	Pg	23 53 01.2	+5.7
BHK				*ex*	x	23 55 07.0	
BHPL	**Bhopal**	**8.76**	**109**	*e*P	Pn	23 52 16.9	-0.4
BHPL				*e*S	Sn	23 53 45.2	-11
BHPL				IAML		23 55 04.2	
	comp=E,56nm,0.2s						
BHPL				IAML		23 55 05.0	
	comp=N,58nm,0.5s						
BHPL				IAMs_20	IAMs_20	23 56 08.8	
	comp=Z,2μm,9.3s						
SMLA	**Simla**	**9.03**	**56**	*e*P	Pn	23 52 21.4	+0.5
SMLA				IAML		23 54 05.8	
	comp=N,168nm,0.7s						
SMLA				IAML		23 54 05.9	
	comp=E,218nm,0.5s						
POO	**Poona**	**9.28**	**146**	*e*P	Pn	23 52 30.0	+5.7
	comp=E,15nm,1.0s						
POO				*i* S	Sn	23 54 54.0	+45
DDI	**Dehra Dun**	**9.37**	**63**	*e*P	Pn	23 52 26.9	+1.3
DDI				*e*S	Sn	23 54 03.3	-7.8
DDI				IAML		23 55 24.6	
	comp=N,139nm,0.3s						
DDI				IAML		23 55 24.6	
	comp=E,153nm,0.2s						
DDI				IAMs_20	IAMs_20	23 57 38.9	
	comp=Z,4μm,6.2s						
WBK	**Wadi Bani Khal**	**9.37**	**249**	P	Pn	23 52 26.1	+0.5
	SNR=31						
WBK				S	Sn	23 53 59.9	-11
WSAR	**Wadi Sarin**	**9.41**	**253**	Pn	Pn	23 52 23.4	-2.6
	comp=Z,0.7nm,0.3s,baz=114,slow=11,SNR=16						
WSAR				Sn	Sn	23 54 01.2	-11
	comp=Z,0.7nm,0.3s,baz=34,slow=5.7,SNR=6.3						
WSAR				LR	LR	23 56 22.0	
	comp=Z,850nm,21.4s,baz=62,slow=40						
JMDO	**Jabal Madar**	**10.20**	**249**	P	Pn	23 52 36.7	-0.2
	SNR=16						
JMDO				S	Sn	23 54 21.4	-10
BANOM	**Banah**	**10.89**	**270**	P	Pn	23 52 44.2	-2.1
BANOM				S	Sn	23 54 36.4	-12
BANOM	**Banah**	**10.89**	**270**	P	Pn	23 52 47.5	+1.1
	SNR=6.0						
MDH	**Madha**	**10.96**	**267**	P	Pn	23 52 43.3	-4.0
SHME	**Shamm**	**11.02**	**271**	P	Pn	23 52 46.3	-1.8
SHME				S	Sn	23 54 40.7	-11
MSFE	**Esma-Masafi**	**11.08**	**268**	P	Pn	23 52 46.5	-2.4
UOSS	**Minazif**	**11.10**	**265**	P	Pn	23 52 45.9	-3.3
UOSS	**Minazif**	**11.10**	**265**	Pn	Pn	23 52 49.3	0.0
HATD	**Hatta, Dubai**	**11.19**	**265**	P	Pn	23 52 47.1	-3.3
ARQ	**Araqi**	**11.21**	**257**	P	Pn	23 52 56.4	+5.7
	SNR=8.0						
ARQ				S	Sn	23 54 48.0	-8.2
CHGR	**Chuyangaron**	**12.28**	**3**		Pn	23 53 04.3	-1.0
GAR	**Garm**	**12.70**	**7**		Pn	23 53 11.1	-0.1
HYB	**Hyderabad**	**12.95**	**131**	*i* P	Pn	23 53 17.5	+2.9
HYB				*e*S	Sn	23 55 51.0	+12
PYUN	**Piuthan**	**13.09**	**79**	*e*P	Pn	23 53 19.3	+2.6
KOLN	**Koldanda**	**13.61**	**81**	*e*P	Pn	23 53 23.2	-0.5
	comp=Z,21nm,0.5s						
DANN	**Dangsing**	**13.79**	**78**	*e*P	Pn	23 53 24.2	-2.0
	comp=Z,46nm,0.7s						
BTK	**Batken**	**13.80**	**8**	P	Pn	23 53 26.1	-0.1
BTK	**Batken**	**13.80**	**8**		Pn	23 53 26.1	-0.1
GEYT	**Alibeck**	**14.44**	**326**	Pn	Pn	23 53 35.8	+0.9
	comp=Z,0.0nm,0.3s,baz=134,slow=8.3,SNR=5.7						
GYA0B	**ALIBECK ARRAY**	**14.44**	**326**		Pn	23 53 36.3	+1.4
GKN	**Gorkha**	**14.54**	**80**	*e*P	Pn	23 53 36.0	-0.4
KSH	**Kashi**	**14.56**	**24**	P	Pn	23 53 30.6	-6.1
KSH				pP	P	23 53 34.3	-9.0
KSH				sP		23 53 39.4	
KSH				S	Sn	23 56 04.5	-14
KSH				pmax	pmax		
	comp=Z,290nm,6.4s						
KSH				LR	LR		
	comp=Z,1μm,16.4s						
KSH				LR	LR		
	comp=Z,1μm,10.9s						
DMN	**Daman**	**14.94**	**81**	*e*P	Pn	23 53 39.3	-2.7
	comp=Z,39nm,1.0s						
TAS	**Tashkent**	**14.94**	**3**	P	Pn	23 53 40.6	-1.0
TAS	**Tashkent**	**14.94**	**3**		Pn	23 53 40.6	-1.0
PKIN	**Phulchoki**	**15.20**	**82**	*e*P	Pn	23 53 42.2	-3.2
PKI	**Pulchoki**	**15.21**	**82**	*e*P	Pn	23 53 41.9	-3.7
	comp=Z,34nm,0.7s						
ARSB	**Arslanbob**	**15.39**	**13**	P	Pn	23 53 45.5	-2.3
ARSB				pmax	pmax		
	comp=Z,30nm,1.1s						
ARSB	**Arslanbob**	**15.39**	**13**		Pn	23 53 45.5	-2.3
ARSB				IAmb	IAmb	23 53 59.6	
	comp=Z,30nm,1.1s						
GUN	**Gumba**	**15.63**	**80**	*e*P	Pn	23 53 47.6	-3.6
	comp=Z,159nm,1.0s						
RBK	**Rabkut**	**15.84**	**239**	P	P	23 53 57.3	-0.2
	SNR=8.0						
JIRN	**Jiri**	**15.90**	**81**	*e*P	Pn	23 53 53.0	-1.7
	comp=Z,215nm,0.8s						
BOK	**Bokaro**	**16.04**	**95**	*e*P	Pn	23 53 56.6	+0.5
BOK				*ex*	x	23 56 42.2	
BOK				IAML		23 56 49.7	
	comp=N,9.2nm,0.2s						
BOK				IAML		23 56 50.3	
	comp=E,9.8nm,0.2s						
BOK				IAMs_20	IAMs_20	00 00 10.7	
	comp=Z,1μm,7.2s						
RAMN	**Ramite**	**16.28**	**84**	*e*P	Pn	23 53 54.9	-4.5
	comp=Z,34nm,0.6s						
AML	**Almayashu**	**16.32**	**14**	P	Pn	23 53 57.7	-2.3
	SNR=48						
UCH	**Uchtor**	**16.60**	**16**	P	Pn	23 54 01.4	-2.3
	SNR=31						
KZA	**Kyzart**	**16.66**	**18**	P	Pn	23 54 01.6	-2.7
	SNR=18						
KK31	**Karatay Array**	**16.79**	**5**	P	Pn	23 54 04.3	-1.3
KK31				pmax	pmax		
	comp=Z,16nm,0.9s						
KK31	**Karatay Array**	**16.79**	**5**		Pn	23 54 04.2	-1.3
KKAR	**Karatay Array**	**16.79**	**5**	P	Pn	23 54 04.3	-1.3
KKAR				pmax	pmax		
	comp=Z,16nm,0.9s						
KKAR	**Karatay Array**	**16.79**	**5**		Pn	23 54 04.2	-1.3
EKS2	**Erkin-Say**	**16.84**	**14**	P	Pn	23 54 04.5	-1.9
	SNR=25						
AAK	**Ala-Archa**	**16.98**	**16**	P	Pn	23 54 06.5	-1.7
	comp=Z,1.5nm,0.3s,baz=239,slow=5.6,SNR=72						
AAK				S	Sn	23 57 08.4	-8.8
	comp=Z,0.2nm,0.3s,baz=314,slow=21,SNR=2.4						
AAK	**Ala-Archa**	**16.98**	**16**	P	Pn	23 54 06.0	-2.2
	SNR=24						
AAK	**Ala-Archa**	**16.98**	**16**	P	Pn	23 54 05.4	-2.8
AAK	**Ala-Archa**	**16.98**	**16**	*ce*P	Pn	23 54 06.0	-2.2
AAK	**Ala-Archa**	**16.98**	**16**		Pn	23 54 06.4	-1.7
ULHL	**Ulahol**	**17.10**	**20**	P	P	23 54 11.9	+0.5
	SNR=17						
KBK	**Karagaybulak**	**17.11**	**17**	P	Pn	23 54 09.0	-0.8
	SNR=6.2						
FRU1	**Bishkek**	**17.18**	**16**	P	Pn	23 54 08.9	-1.7
FRU1				pmax	pmax		
	comp=Z,30nm,1.1s						
FRU1	**Bishkek**	**17.18**	**16**	Pn	Pn	23 54 08.9	-1.7
TAPN	**Taplejung**	**17.25**	**82**	*e*P	Pn	23 54 06.2	-5.7
	comp=Z,86nm,0.9s						
KDJ	**Kajisay**	**17.30**	**22**	P	Pn	23 54 12.2	0.0
KDJ				pmax	pmax		
	comp=Z,16nm,0.9s						
KDJ	**Kajisay**	**17.30**	**22**	P	Pn	23 54 12.2	0.0
CHMS	**Chumysh**	**17.39**	**16**	P	Pn	23 54 11.3	-1.8
	SNR=16						
TKM2	**Tokmak 2**	**17.53**	**18**	P	Pn	23 54 13.3	-1.8
	SNR=24						
USP	**Ospenovka**	**17.58**	**15**	P	Pn	23 54 12.8	-2.7
	SNR=12						
PRZ	**Przheval'sk**	**18.05**	**24**	P	Pn	23 54 21.4	-0.1
PRZ				pmax	pmax		
	comp=Z,17nm,0.8s						
PRZ	**Przheval'sk**	**18.05**	**24**	P	Pn	23 54 21.4	-0.1
SOCY	**Socotra**	**19.57**	**227**	P	P	23 54 37.3	-1.4
LKRN	**Lenkeran, Azer**	**20.57**	**312**	P	P	23 54 49.9	+0.5
RAYN	**Ar Rayn**	**20.96**	**267**	P	P	23 54 53.7	0.0
RAYN				pmax	pmax		
	comp=Z,12nm,1.0s						
RAYN	**Ar Rayn**	**20.96**	**267**	P	P	23 54 53.7	0.0
SHL	**Shillong**	**21.12**	**87**	P	P	23 54 56.5	+0.9
SHL				pmax	pmax		
	comp=Z,45nm,1.0s						
SHL	**Shillong**	**21.12**	**87**	P	P	23 54 56.5	+0.9
AKT	**Akhty**	**22.76**	**317**	*e*P	P	23 55 13.3	+0.3
AKT				*e*		23 55 38.6	
AKT				pmax	pmax		
	comp=Z,33nm,0.9s						
MNGR	**Mingechevir, A**	**22.77**	**314**	P	P	23 55 13.7	+0.7
SEKA	**Sheki**	**22.94**	**316**	P	P	23 55 14.9	+0.1
NAX	**Nakhchivan**	**23.04**	**309**	P	P	23 55 16.2	+0.3
MAKZ	**Makanchi**	**23.07**	**24**	P	P	23 55 16.4	+0.4
MAKZ				pmax	pmax		
	comp=Z,15nm,1.0s						
MAKZ	**Makanchi**	**23.07**	**24**	P	P	23 55 16.4	+0.4
MAKZ				IAmb	IAmb	23 55 18.8	
	comp=Z,15nm,1.0s						
MK31	**Makanchi Array**	**23.17**	**25**	P	P	23 55 17.3	+0.2
MK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK31	**Makanchi Array**	**23.17**	**25**	P	P	23 55 17.2	+0.2
MKAR	**Makanchi Array**	**23.17**	**25**	P	P	23 55 18.0	+0.9
	comp=Z,3.7nm,0.6s,baz=207,slow=12,SNR=46						
MKAR				LR	LR	00 06 21.0	
	comp=Z,334nm,19.1s,baz=212,slow=42						
GANJ	**Ganja**	**23.20**	**313**	P	P	23 55 18.1	+0.7
WMQ	**Urumqi**	**23.41**	**37**	*e*P	P	23 55 20.2	+0.6
WMQ				pP	sP	23 55 25.0	+1.9
WMQ				PP	PnPn	23 55 51.8	+6.1
WMQ				S	S	23 59 30.2	-2.8
WMQ				PcS	PcS	00 02 46.5	+1.2
WMQ				pmax	pmax		
	comp=Z,18nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,74nm,4.1s						
WMQ				LR	LR		
	comp=Z,350nm,17.7s						
WMQ				LR	LR		

CHTO Chiang Mai 29.13 99 P **P** **23 56 11.5 -0.2**
GTA Gaotai 29.25 56 ⇑P **P** **23 56 14.3 +1.5**
GTA pP sP 23 56 18.0 +1.7
GTA sP pP 23 56 20.9 +5.6
GTA S **S** **00 01 07.7 +1.8**
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,67nm,7.1s
GTA LR LR
comp=Z,310nm,18.1s
GTA LR LR
comp=Z,340nm,16.5s
GTA LR LR
comp=Z,420nm,17.1s
CMAR Chiang Mai Arr 29.25 99 P **P** **23 56 13.8 +0.9**
comp=Z,2.0nm,0.7s,baz=288,slow=8.7,SNR=13
CMAR PcP **PcP** **23 59 20.8 +0.9**
comp=Z,2.0nm,0.7s,baz=286,slow=4.2,SNR=7.2
CMAR LR LR 00 10 00.7
comp=Z,188nm,19.3s,baz=274,slow=41
MMAI Mount Meron Ar 29.35 291 P **P** **23 56 16.5 +2.9**
comp=Z,2.8nm,0.6s,baz=91,slow=9.4,SNR=6.6
MMAI LR LR 00 10 39.6
EIL Elat 29.66 284 LR LR 00 11 04.0
comp=Z,298nm,19.9s,baz=106,slow=42
ZAA0 Zalesovo Array 30.12 19 P **P** **23 56 19.9 -0.2**
ZAA0 IAmb IAmb 23 56 22.1
comp=Z,8.1nm,0.6s
ZALV Zalesovo Beam 30.12 19 P **P** **23 56 20.6 +0.4**
comp=Z,9.1nm,0.5s,baz=214,slow=8.5,SNR=52
ZALV LR LR 00 10 35.9
comp=Z,222nm,18.8s,baz=213,slow=41
ARU Arti 30.87 349*d iP* **P** **23 56 27.7 +1.0**
ARU 23 57 25.3
ARU 23 59 18.8
ARU S **S** **00 01 34.2 +3.6**
ARU SS **SnSn** **00 03 13.1 +3.4**
ARU pmax pmax
comp=Z,14nm,1.4s
ARU Arti 30.87 349 P **P** **23 56 27.4 +0.6**
ARU IAmb IAmb 23 56 29.6
comp=Z,6.5nm,0.7s
KMI Kunming 30.90 85 P **P** **23 56 25.9 -1.7**
KMI pmax pmax
comp=Z,15nm,1.0s
ANN Anapa 30.93 315 *eP* **P** **23 56 26.7 -0.7**
ANN *e**PP **pP** **23 56 29.3 -0.6**
ANN *e* 23 57 27.2
ANN *e*S **S** **00 01 32.3 +0.5**
ANN *e*SS **SnSn** **00 03 15.7 +4.4**
ANN pmax pmax
comp=Z,23nm,0.9s
SVE Sverdlovsk 30.95 352⇑*eP* **P** **23 56 28.6 +1.2**
SVE pmax pmax
comp=Z,14nm,1.2s
CSS Mathiatis 31.24 294 P **P** **23 56 29.6 -0.7**
CSS IAmb IAmb 23 56 32.9
comp=Z,14nm,1.1s
CD2 Chengdu 31.27 73 P **P** **23 56 29.9 -0.8**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
LZH Lanzhou 31.67 63 *eP* **P** **23 56 35.0 +0.8**
LZH pP sP 23 56 39.5 +1.7
LZH sP pP 23 56 42.3 +5.5
LZH *e*PP **PnPn** **23 57 39.6 +1.7**
LZH pmax pmax
comp=Z,21nm,1.2s
LZH pmax pmax
comp=Z,70nm,4.9s
LZH LR LR
comp=Z,250nm,13.0s
LZH LR LR
comp=Z,260nm,13.2s
LZH LR LR
comp=Z,380nm,16.5s
BRTR Keskin Array B 31.84 304 P **P** **23 56 36.1 +0.4**
comp=Z,1.3nm,1.0s,baz=106,slow=4.0,SNR=6.8
BRTR PcP **PcP** **23 59 26.9 +0.4**
comp=Z,0.9nm,0.8s,baz=150,slow=3.7,SNR=4.3
BRTR Keskin Array B 31.84 304*ceP* **P** **23 56 39.4 +3.7**
BRTR pmax pmax
comp=Z,1.0nm,1.0s
SLVN Son La 32.78 91 P **P** **23 56 44.8 +0.8**
VSR Storozhevoye 33.31 326⇑*eP* **P** **23 56 48.5 +0.3**
VSR pmax pmax
comp=Z,18nm,2.0s
ISP Isparta 33.85 299 P **P** **23 56 53.5 +0.2**
ISP pmax pmax
comp=Z,25nm,0.7s
ISP Isparta 33.85 299 P **P** **23 56 53.5 +0.2**
GYA Guiyang 34.18 81 *eP* **P** **23 56 56.2 -0.1**
GYA pmax pmax
comp=Z,10.0nm,0.7s
ELL Elmali 34.20 297 P **P** **23 56 56.4 +0.1**
ELL pmax pmax
comp=Z,36nm,1.1s
ELL Elmali 34.20 297 P **P** **23 56 56.4 +0.1**
MOY Mondy 35.28 36 *eP* **P** **23 57 07.6 +2.2**
MOY pmax pmax
comp=Z,19nm,2.8s
XAN Xi'an 35.66 68 P **P** **23 57 09.2 +0.3**
XAN pP sP 23 57 21.6 +9.2
XAN pmax pmax
comp=Z,13nm,0.8s
XAN pmax pmax
comp=Z,91nm,4.5s
XAN LR LR
comp=Z,350nm,20.6s
XAN LR LR
comp=Z,410nm,20.6s
ZAK Zakamensk 35.85 39 *eP* **P** **23 57 11.2 +0.8**
ZAK pmax pmax
comp=Z,4.0nm,0.9s
SONM Songino Array 36.60 44 P **P** **23 57 19.3 +2.4**
comp=Z,5.8nm,0.6s,baz=246,slow=8.8,SNR=21
SONM LR LR 00 15 16.7
comp=Z,176nm,20.3s,baz=254,slow=41
TLY Talaya 36.69 37 *eP* **P** **23 57 19.4 +2.0**
TLY pmax pmax
comp=Z,20nm,1.0s
TLY MLR MLR
comp=Z,423nm,14.0s
TLY Talaya 36.69 37 P **P** **23 57 18.1 +0.7**
TLY IAmb IAmb 23 57 20.9
comp=Z,6.8nm,0.9s
MOS Moscow 36.85 331 *eP* **P** **23 57 18.5 -0.2**
OBN Obninsk 36.93 330⇓*eP* **P** **23 57 20.4 +1.1**
OBN *e**PP **sP** **23 57 22.4 -0.5**
OBN pmax pmax
comp=Z,6.0nm,0.9s
OBN MLR MLR
comp=Z,89nm,18.0s
ULN Ulaanbaatar 37.03 44*c iP* **P** **23 57 22.1 +1.6**
ULN pmax pmax
comp=Z,9.0nm,1.0s
KULM Kulim 37.24 119 P **P** **23 57 23.4 +0.9**
KULM IAmb IAmb 23 57 27.2
comp=Z,9.7nm,0.7s
MILM Milestii Mici 37.30 314 ⇑P **P** **23 57 22.7 0.0**
PSI Prapat 37.49 124 P **P** **23 57 25.5 +0.8**
PSI pmax pmax
comp=Z,9.0nm,0.9s
RPSI Rantau Prapat 37.56 124 P **P** **23 57 25.5 +0.3**
RPSI IAmb IAmb 23 57 26.1
comp=Z,9.1nm,0.9s
SORM Soroca 38.01 316 ⇓P **P** **23 57 28.6 0.0**
IDI Anoyia 38.16 294 LR LR 00 17 44.3
comp=Z,45nm,19.1s,baz=84,slow=43
HHC Hu-ho-hao-te 38.35 57 P **P** **23 57 33.6 +1.9**
HHC sP sP 23 57 42.5 +7.2
HHC pmax pmax
comp=Z,7.0nm,0.9s
HHC pmax pmax
comp=Z,44nm,5.6s
HHC LR LR
comp=Z,150nm,14.9s
HHC LR LR
comp=Z,110nm,13.5s
HHC LR LR
comp=Z,150nm,16.3s
VRI Vrincioaia 38.36 312 ⇑P **P** **23 57 33.3 +1.7**
PLOR Plostina 38.40 311 ⇑P **P** **23 57 33.8 +1.7**
AKASG Malin Array Be 38.45 320 P **P** **23 57 32.4 0.0**
comp=Z,1.2nm,0.4s,baz=104,slow=7.0,SNR=5.1
AKASG Malin Array Be 38.45 320*ceP* **P** **23 57 34.9 +2.6**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
PRGR Permogore 38.46 343 *eP* **P** **23 57 30.2 -2.0**
PRGR pmax pmax
comp=Z,5.0nm,0.8s
TESR Tescani 38.59 312 ⇓P **P** **23 57 34.3 +0.7**
MLR Muntele Rosu 38.78 311 ⇑P **P** **23 57 37.6 +2.2**
MLR Muntele Rosu 38.78 311 P **P** **23 57 36.7 +1.3**
MLR pmax pmax
comp=Z,10.0nm,0.8s
MLR Muntele Rosu 38.78 311 P **P** **23 57 36.7 +1.3**
MLR IAmb IAmb 23 57 41.3
comp=Z,9.9nm,0.8s
COPA Copaceanca 38.97 308 ⇑P **P** **23 57 38.4 +1.7**
BIZ Bicaz 39.07 313 ⇓P **P** **23 57 38.7 +1.1**
DOPR Dopca 39.28 311 ⇓P **P** **23 57 40.8 +1.4**
VOIR 39.38 310 ⇓P **P** **23 57 41.6 +1.3**
VOIR 39.38 310 P **P** **23 57 41.3 +1.0**
VOIR pmax pmax
comp=Z,5.0nm,0.8s
SRS Serrai 39.63 303 P **P** **23 57 44.1 +1.8**
SRS pmax pmax
comp=Z,8.0nm,1.7s
ARR Arges 39.65 310 ⇑P **P** **23 57 43.6 +1.1**
KLMR Klimovskoe 39.67 338 *eP* **P** **23 57 40.6 -1.8**
KLMR *e* 23 59 15.9
KLMR pmax pmax
comp=Z,11nm,1.1s
KLMR Klimovskoe 39.67 338 *eP* **P** **23 57 40.6 -1.8**
KLMR AMP 23 57 42.9
comp=Z,11nm,1.1s
KLMR *e*PP **PnPn** **23 59 15.9 -0.5**
BURAR Bucovina Array 39.84 314 ⇑P **P** **23 57 45.1 +1.0**
BURAR Bucovina Array 39.84 314 P **P** **23 57 45.3 +1.2**
BUR08 Bucovina Ar. S 39.86 314 P **P** **23 57 44.0 -0.3**
VTS Vitosha 40.11 306 ⇑P **P** **23 57 47.4 +0.9**
VTS Vitosha 40.11 306 P **P** **23 57 47.6 +1.1**
VTS pmax pmax
comp=Z,5.0nm,2.1s
LIT Litokhoron 40.35 302 P **P** **23 57 46.8 -1.5**
LIT pmax pmax
comp=Z,8.0nm,1.2s
LIT Litokhoron 40.35 302 P **P** **23 57 46.8 -1.5**
WHN Wuhan 40.40 73 P **P** **23 57 52.2 +3.4**
WHN LR LR
comp=Z,650nm,20.3s
KMBO Kilima Mbogo 40.62 233 LR LR 00 14 15.5
comp=Z,162nm,19.2s,baz=70,slow=36
GZR Gura Zlata 40.93 310 ⇓P **P** **23 57 54.1 +0.9**
FNA Florina 41.26 303 P **P** **23 57 56.8 +0.9**
FNA pmax pmax
comp=Z,12nm,1.0s
FNA Florina 41.26 303 IAmb IAmb 23 57 57.2
comp=Z,12nm,1.1s
DRGR 41.28 312 ⇑P **P** **23 57 56.9 +0.8**
MDVR Moldovita 41.56 309 ⇑P **P** **23 57 59.0 +0.7**
TRPA Tarpa 41.72 314 ⇓P **P** **23 58 00.9 +1.4**
BJI Beijing 41.76 59 P **P** **23 58 00.7 +0.8**
BJI pmax pmax
comp=Z,8.0nm,0.7s
BZS Buzias 41.78 310 ⇑P **P** **23 58 01.0 +1.1**
BZS Buzias 41.78 310 P **P** **23 58 01.4 +1.4**
BZS pmax pmax
comp=Z,12nm,0.9s
SIRR Siria 41.88 311 ⇑P **P** **23 57 59.6 -1.2**
KWP Kalwaria Pacla 42.01 316 P **P** **23 58 02.4 +0.5**
KWP pmax pmax
comp=Z,8.0nm,0.8s
KWP Kalwaria Pacla 42.01 316 P **P** **23 58 02.4 +0.5**
KWP IAmb IAmb 23 58 03.9
comp=Z,7.8nm,0.8s
KOLS Kolonicke sedl 42.10 315 *eP* **P** **23 58 04.0 +1.4**
KOLS Kolonicke sedl 42.10 315 *eP* **P** **23 58 04.0 +1.4**
TIA Tai'an 42.40 64 P **P** **23 58 06.8 +1.6**
TIA pmax pmax
comp=Z,14nm,0.8s
PSZ Piszkesteto 43.40 313 P **P** **23 58 13.5 +0.3**
PSZ pmax pmax
comp=Z,4.0nm,0.8s
PSZ Piszkesteto 43.40 313 P **P** **23 58 13.5 +0.3**
NIE Niedzica 43.47 315 P **P** **23 58 15.7 +1.9**
NIE pmax pmax
comp=Z,2.0nm,1.1s
LANS Liptovska Anna 43.94 314 *eP* **P** **23 58 19.1 +1.6**
LANS Liptovska Anna 43.94 314 *eP* **P** **23 58 19.1 +1.6**
OJC Ojcow 43.98 316 P **P** **23 58 17.7 -0.1**
OJC pmax pmax
comp=Z,5.0nm,0.9s
OJC Ojcow 43.98 316 P **P** **23 58 17.7 -0.1**
NJ2 Nanjing 44.08 70 *eP* **P** **23 58 19.4 +0.6**
NJ2 pmax pmax
comp=Z,12nm,0.5s
NJ2 LR LR
comp=Z,440nm,18.0s
NJ2 LR LR
comp=Z,550nm,20.8s
NJ2 LR LR
comp=Z,310nm,22.3s
VYHS Vyhne 44.21 313 *eP* **P** **23 58 20.7 +1.0**
VYHS Vyhne 44.21 313 *eP* **P** **23 58 20.7 +1.0**
NRIK Noril'sk 44.46 10 P **P** **23 58 22.8 +1.4**
comp=Z,6.5nm,0.7s,baz=196,slow=4.6,SNR=21
NRIK LR LR 00 20 20.4
comp=Z,152nm,18.8s,baz=204,slow=41
OKC Ostrava-Krasne 44.93 315 *eP* **P** **23 58 25.1 -0.3**
OKC Ostrava-Krasne 44.93 315 *eP* **P** **23 58 25.1 -0.3**
FINES FINESS Array B 45.09 333 P **P** **23 58 27.0 +0.6**
comp=Z,6.1nm,0.9s,baz=119,slow=7.9,SNR=15
FINES FINESS Array B 45.09 333 *i* P **P** **23 58 27.0 +0.6**
FINES pmax pmax
comp=Z,6.0nm,0.9s
MORC Moravsky Berou 45.30 315 ⇑P **P** **23 58 29.2 +0.8**
MORC Moravsky Berou 45.30 315 P **P** **23 58 27.7 -0.7**
MORC pmax pmax
comp=Z,3.0nm,1.1s
MORC Moravsky Berou 45.30 315 P **P** **23 58 27.6 -0.7**
KRLC Kraliky 45.84 315 *e*PCP **PcP** **00 00 10.8 +0.8**
KRLC *ex* x 00 00 13.8
CONA Conrad Observa 46.07 312 *eP* **P** **23 58 35.1 +0.6**
comp=Z,3.8nm,1.4s
DPC Dobruska-Polom 46.19 316 *eP* **P** **23 58 36.4 +1.0**
DPC Dobruska-Polom 46.19 316 *eP* **P** **23 58 36.4 +1.0**
OSTC Ostas 46.29 316 *eP* **P** **23 58 37.3 +1.1**
SOKA Soboth 46.46 310 *i* P **P** **23 58 38.3 +0.6**
comp=Z,5.6nm,1.4s
TREC Trest 46.53 314 *eP* **P** **23 58 38.4 +0.3**
TREC Trest 46.53 314 *eP* **P** **23 58 38.4 +0.3**
OBKA Obir 46.77 310 *eP* **P** **23 58 40.2 0.0**
comp=Z,2.9nm,0.8s
MOA Molln 47.12 312 *i* P **P** **23 58 43.2 +0.5**
comp=Z,8.2nm,1.7s
PRU Pruhonice 47.25 315 *eP* **P** **23 58 44.0 +0.3**
PRU Pruhonice 47.25 315 *eP* **P** **23 58 44.0 +0.3**
PRU *e*PCP **PcP** **00 00 14.7 -0.1**
NRCA Norcia 47.55 305 P **P** **23 58 46.2 0.0**
NRCA IAmb IAmb 23 58 47.5
comp=Z,3.7nm,0.8s
GEC2 GERESS Array S 47.62 313 *eP* **P** **23 58 47.2 +0.5**
comp=Z,4.9nm,0.8s,baz=96,slow=7.8
GERES GERESS Array B 47.62 313 P **P** **23 58 47.4 +0.7**
comp=Z,2.1nm,0.6s,baz=92,slow=7.6,SNR=16
GERES PcP **PcP** **00 00 16.7 +0.3**
comp=Z,2.6nm,0.7s,baz=108,slow=3.5,SNR=9.8
KBA Koelnbreinsper 47.66 311 *i* P **P** **23 58 47.5 +0.4**
comp=Z,4.1nm,0.7s,SNR=6.6
KBA Koelnbreinsper 47.66 311 P **P** **23 58 50.1 +3.0**
KBA pmax pmax
comp=Z,7.0nm,1.1s
KHC Kasperske Hory 47.74 313*ceP* **P** **23 58 47.4 -0.2**
KHC pmax pmax
comp=Z,4.0nm,0.8s
KHC Kasperske Hory 47.74 313 *eP* **P** **23 58 47.6 0.0**
KHC *e*PCP **PcP** **00 00 17.2 +0.5**
KHC *ex* x 00 00 22.7
BRG Berggiesshubel 47.77 316 *eP* **P** **23 58 49.0 +1.3**
comp=Z,6.1nm,1.0s
BRG Berggiesshubel 47.77 316 *eP* **P** **23 58 49.1 +1.3**
comp=Z,1.1nm,1.4s,baz=96,slow=7.8
BRG Berggiesshubel 47.77 316 *eP* **P** **23 58 49.0 +1.3**
STAL STALIGIAL 48.02 310 P **P** **23 58 49.1 -0.7**
STAL IAmb IAmb 23 58 53.9
comp=Z,5.8nm,1.2s
FBE Freiberg 48.15 316 *eP* **P** **23 58 52.2 +1.6**
comp=Z,9.6nm,1.3s,baz=96,slow=7.8
ABTA Abfaltersbach 48.20 310 *i* P **P** **23 58 51.2 0.0**
comp=Z,8.8nm,1.2s
SBUM Sibu 48.27 112 P **P** **23 58 51.5 -0.6**
SBUM IAmb IAmb 23 58 54.1
comp=Z,4.3nm,1.1s
CTI Castel Tesino 48.74 309 P **P** **23 58 54.7 -0.7**
CTI pmax pmax
comp=Z,7.0nm,1.1s
CTI Castel Tesino 48.74 309 P **P** **23 58 54.7 -0.7**
CTI IAmb IAmb 23 58 59.2
comp=Z,7.0nm,1.1s
MANZ Manzenberg 48.80 314 *eP* **P** **23 58 57.0 +1.3**
comp=Z,5.7nm,1.3s,baz=96,slow=7.8
WTTA Wattenberg 48.83 311 *i* P **P** **23 58 55.4 -0.8**
comp=Z,5.7nm,0.6s,SNR=5.2
SQTA Sankt Quirin 49.12 311 *i* P **P** **23 58 58.0 -0.4**
comp=Z,3.8nm,0.7s
MOX Moxa 49.20 315 *eP* **P** **23 59 00.1 +1.4**
comp=Z,11nm,1.4s,baz=96,slow=7.8
MOX *eL* L 00 38 05.4
comp=Z,72nm,19.9s
MOX Moxa 49.20 315 P **P** **23 59 01.6 +2.9**
MOX pmax pmax
comp=Z,8.0nm,1.1s
MOTA Moosalm 49.20 311 *i* P **P** **23 58 58.3 -0.7**
comp=Z,4.8nm,0.6s,SNR=7.3
MOTA *i* PcP **PcP** **00 00 22.9 +0.8**
comp=Z,2.1nm,0.6s
GRF Grafenberg Arr 49.34 314 *eP* **P** **23 59 00.7 +0.9**
comp=Z,13nm,1.6s,baz=96,slow=7.8
GRF *eL* L 00 37 29.6
comp=Z,79nm,21.9s
FETA Feichten 49.43 310 *i* P **P** **23 59 00.3 -0.5**
comp=Z,4.7nm,0.7s,SNR=9.6
FETA *i* PcP **PcP** **00 00 24.0 +1.0**
comp=Z,2.5nm,0.8s
RETA Reutte 49.44 311 *i* P **P** **23 59 00.2 -0.5**
comp=Z,3.3nm,0.5s,SNR=6.0
FUORN Ofenpass-Fuorn 49.73 310 P **P** **23 59 03.9 +0.7**
FUORN IAmb IAmb 23 59 06.9
comp=Z,5.9nm,0.8s
ARCES ARCESS Array B 49.87 342 P **P** **23 59 04.5 +1.0**
comp=Z,5.7nm,0.6s,baz=133,slow=7.8,SNR=49
ARE0 ARCESS Array S 49.87 342 *eP* **P** **23 59 04.4 +0.8**
DAVA Damuels 50.03 311 *i* P **P** **23 59 05.0 -0.3**
comp=Z,7.1nm,0.6s,SNR=9.2
MSSA Maissana 50.19 307 P **P** **23 59 05.3 -1.1**
KTK1 Kautokeino 50.22 341 *eP* **P** **23 59 06.8 +0.6**
TUE Stuetta 50.36 310 P **P** **23 59 08.3 +0.4**
TUE IAmb IAmb 23 59 12.4
comp=Z,6.7nm,0.8s
KEST Kesra 50.80 296 P **P** **23 59 12.6 +1.4**
comp=Z,9.0nm,0.8s,baz=112,slow=2.2,SNR=11
KEST Kesra 50.80 296 P **P** **23 59 11.9 +0.7**
KEST IAmb IAmb 23 59 17.1
comp=Z,10nm,0.9s
KS19 Wonju Array Si 50.93 62 P **P** **23 59 12.3 +0.2**
KS19 IAmb IAmb 23 59 21.6
comp=Z,9.1nm,1.1s
KSRS Korea Array 50.98 62 P **P** **23 59 12.6 +0.2**
comp=Z,2.0nm,0.7s,baz=267,slow=7.8,SNR=9.2
KSRS LR LR 00 23 58.4
comp=Z,107nm,18.8s,baz=278,slow=40
HAMF Hammerfest 51.03 342 *eP* **P** **23 59 13.4 +1.1**
NC602 NORSAR Array S 51.27 328 *eP* **P** **23 59 14.1 -0.2**
NORES NORESS Array B 51.27 328 P **P** **23 59 13.8 -0.5**
NORES pmax pmax
comp=Z,1.0nm,0.4s
NB2 NORSAR Subarra 51.51 328 P **P** **23 59 15.3 -0.8**
comp=Z,1.7nm,0.6s,baz=107,slow=7.4
NB2 NORSAR Subarra 51.51 328 P **P** **23 59 15.3 -0.8**
baz=107,slow=7.4
NOA NORSAR Array B 51.51 328 P **P** **23 59 15.6 -0.5**
comp=Z,3.1nm,0.7s,baz=106,slow=7.3,SNR=18
MOR8 Moi Rana 51.83 335 *eP* **P** **23 59 18.2 -0.1**
TRO Tromso 51.84 340 *eP* **P** **23 59 19.0 +0.6**
ECH Echery 51.90 312 P **P** **23 59 18.5 -0.8**
ECH pmax pmax
comp=Z,4.0nm,0.9s
ECH Echery 51.90 312 P **P** **23 59 18.5 -0.8**
BNI Bardonecchia 52.21 308 P **P** **23 59 20.9 -0.8**
BNI pmax pmax
comp=Z,5.0nm,0.8s
BNI Bardonecchia 52.21 308 P **P** **23 59 20.9 -0.8**
BNI IAmb IAmb 23 59 21.9
comp=Z,4.8nm,0.8s
NSS Namsos 52.22 333 *eP* **P** **23 59 21.1 -0.1**
RSL Roselend 52.24 309 P **P** **23 59 21.9 -0.1**
STEI Steigen 52.25 338 *eP* **P** **23 59 21.8 +0.4**
KONS Konsvik 52.45 335 *eP* **P** **23 59 23.3 +0.4**
WLF Walferdange 52.62 314 P **P** **23 59 24.1 -0.4**
WLF pmax pmax
comp=Z,12nm,1.0s
WLF Walferdange 52.62 314 P **P** **23 59 24.1 -0.4**
WLF IAmb IAmb 23 59 29.5
comp=Z,12nm,1.0s
KLR Kul'dur 53.32 47*ceP* **P** **23 59 30.2 +0.6**
USRK Ussuriysk Ar. 53.56 53 LR LR 00 25 06.8
comp=Z,132nm,18.6s,baz=238,slow=39
YAK Yakutsk 53.64 31 *eP* **P** **23 59 32.4 +0.6**
YAK pmax pmax
comp=Z,19nm,1.4s
SSB Saint Sauveur 53.72 308 P **P** **23 59 32.0 -0.7**
SSB pmax pmax
comp=Z,5.0nm,0.7s
SSB Saint Sauveur 53.72 308 P **P** **23 59 32.0 -0.7**
SSB IAmb IAmb 23 59 33.3
comp=Z,5.2nm,0.7s
TIXI Tiksi 56.01 19*ceP* **P** **23 59 48.6 -0.2**
TIXI pmax pmax
comp=Z,7.0nm,1.7s
KBS Kingsbay 58.05 349 P **P** **00 00 03.0 -0.2**
KBS pmax pmax
comp=Z,10.0nm,1.1s
KBS Kingsbay 58.05 349 P **P** **00 00 03.0 -0.2**
KBS IAmb IAmb 00 00 08.0
comp=Z,10nm,1.1s
ESK Eskdalemuir 58.39 320 P **P** **00 00 06.4 +0.5**
ESK pmax pmax
comp=Z,7.0nm,1.1s
ESK Eskdalemuir 58.39 320 P **P** **00 00 06.4 +0.5**
ESK IAmb IAmb 00 00 11.9
comp=Z,7.4nm,1.1s
KAPI Kappang 58.67 114 P **P** **00 00 08.1 -0.4**
KAPI pmax pmax
comp=Z,16nm,1.1s
KAPI Kappang 58.67 114 P **P** **00 00 08.1 -0.4**
MJAR Matsushiro Arr 59.25 62 LR LR 00 28 08.3
comp=Z,86nm,19.2s,baz=280,slow=38
ESDC Sonseca Array 60.62 302 P **P** **00 00 21.3 -0.4**
comp=Z,1.4nm,0.7s,baz=73,slow=6.4,SNR=14
YSS Yuzh-Sakhalins 60.82 49⇓*eP* **P** **00 00 23.4 +0.6**
YSS pmax pmax
comp=Z,8.0nm,0.7s
PAB San Pablo 60.94 302 P **P** **00 00 23.2 -0.7**
PAB pmax pmax
comp=Z,3.0nm,0.7s
PAB San Pablo 60.94 302 P **P** **00 00 23.2 -0.7**
PAB IAmb IAmb 00 00 24.2
comp=Z,3.1nm,0.7s
TORD Torodi Ar. Bea 63.55 272 P **P** **00 00 41.4 -0.2**
comp=Z,6.8nm,0.7s,baz=64,slow=6.0,SNR=38
DAG Danmarks Havn 63.87 345 *iP* **P** **00 00 43.3 +0.5**
DAG pmax pmax
comp=Z,4.0nm,0.7s
DAG Danmarks Havn 63.87 345⇑*iP* **P** **00 00 43.3 +0.5**
comp=Z,4.1nm,0.7s
SEY Seymchan 64.16 30⇓*iP* **P** **00 00 46.5 +1.6**
SCO Scoresbysund 65.54 338 P **P** **00 00 54.9 +1.2**
SCO pmax pmax
comp=Z,3.0nm,1.0s
SCO Scoresbysund 65.54 338 P **P** **00 00 54.9 +1.2**
SCO IAmb IAmb 00 01 13.8
comp=Z,3.1nm,1.0s
LBTB Lobatse 65.71 223 P **P** **00 00 55.6 +0.1**
LBTB pmax pmax
comp=Z,6.0nm,0.9s
LBTB Lobatse 65.71 223 P **P** **00 00 55.6 +0.1**
TSUM Tsumeb 66.97 233 P **P** **00 01 05.0 +1.2**
TSUM IAmb IAmb 00 01 08.5
comp=Z,4.6nm,0.8s
BOSA Boshof 68.59 220 P **P** **00 01 13.2 -0.7**
comp=Z,4.1nm,0.8s,baz=358,slow=1.4,SNR=3.3
BOSA Boshof 68.59 220 P **P** **00 01 14.3 +0.5**

BILL	**Bilibino**	**68.71**	**24**	*e*P		**P**	**00 01 15.4**	**+1.5**
BILL				*e*PPP		PPP	00 05 26.1	
BILL				pmax		pmax		
	comp=Z,4.0nm,0.6s							
BILL	**Bilibino**	**68.71**	**24**	P		**P**	**00 01 14.6**	**+0.6**
PETK	**Petropavlovsk-**	**68.96**	**40**	P		**P**	**00 01 15.0**	**-0.8**
	comp=Z,2.8nm,0.9s,baz=217,slow=0.7,SNR=5.3							
PETK				LR		LR	00 33 30.5	
	comp=Z,59nm,18.7s,baz=242,slow=38							
PETK	**Petropavlovsk-**	**68.96**	**40**	P		**P**	**00 01 15.0**	**-0.8**
PET	**Petropavlovsk**	**69.53**	**40**	⇑*i*P		**P**	**00 01 18.8**	**-0.5**
PET				pmax		pmax		
	comp=Z,18nm,1.6s							
SUMG	**Summit**	**69.95**	**342**	P		**P**	**00 01 22.4**	**+0.3**
SUMG				pmax		pmax		
	comp=Z,5.0nm,0.9s							
SUMG	**Summit**	**69.95**	**342**	P		**P**	**00 01 22.4**	**+0.3**
SUMG				IAmb		IAmb	00 01 26.5	
	comp=Z,5.0nm,0.9s							
SUMG	**Summit**	**69.95**	**342**	*i* P		**P**	**00 01 23.1**	**+1.0**
	comp=Z,10nm,0.8s							
FITZ	**Fitzroy Crossi**	**71.01**	**122**	P		**P**	**00 01 28.7**	**-0.1**
MORW	**Morawa**	**71.59**	**137**	P		**P**	**00 01 31.5**	**-0.6**
MORW				IAmb		IAmb	00 01 33.7	
	comp=Z,7.0nm,1.0s							
DBIC	**Dimbokro**	**72.08**	**269**	P		**P**	**00 01 35.2**	**-0.2**
	comp=Z,4.2nm,0.8s,baz=61,slow=4.9,SNR=4.4							
DBIC	**Dimbokro**	**72.08**	**269**	P		**P**	**00 01 33.8**	**-1.7**
DBIC				pmax		pmax		
	comp=Z,15nm,1.2s							
DBIC	**Dimbokro**	**72.08**	**269**	P		**P**	**00 01 33.8**	**-1.7**
WRA	**Warramunga Arr**	**78.79**	**119**	P		**P**	**00 02 13.6**	**-0.2**
	comp=Z,8.2nm,0.8s,baz=314,slow=5.3,SNR=39							
WRA	**Warramunga Arr**	**78.79**	**119**	*i* P		**P**	**00 02 13.6**	**-0.2**
WRA				pmax		pmax		
	comp=Z,9.0nm,0.8s							
WRAB	**Tennant Creek**	**78.79**	**119**⇑	*e*P		**P**	**00 02 13.5**	**-0.3**
WRAB				pmax		pmax		
	comp=Z,17nm,1.0s							
ASAR	**Alice Springs**	**80.51**	**122**	P		**P**	**00 02 22.9**	**-0.3**
	comp=Z,4.2nm,0.9s,baz=307,slow=5.4,SNR=25							
TOLK	**Toolik Lake Re**	**81.26**	**13**	P		**P**	**00 02 26.4**	**-0.1**
TOLK				IAmb		IAmb	00 02 28.4	
	comp=Z,4.7nm,0.8s							
C36M	**Paulatuk**	**84.14**	**4**	P		**P**	**00 02 40.9**	**-0.4**
INK	**Inuvik**	**84.23**	**8**	P		**P**	**00 02 42.1**	**+0.3**
INK	**Inuvik**	**84.23**	**8**	P		**P**	**00 02 42.1**	**+0.3**
BPAW	**Bear Paw Mtn.**	**84.70**	**16**	P		**P**	**00 02 45.1**	**+0.7**
BPAW				IAmb		IAmb	00 02 46.0	
	comp=Z,2.6nm,0.8s							
NEA	**Nenana**	**84.77**	**15**	P		**P**	**00 02 44.5**	**-0.1**
NEA				IAmb		IAmb	00 02 45.9	
	comp=Z,5.5nm,1.1s							
DHY	**Denali Highway**	**86.45**	**15**	P		**P**	**00 02 53.2**	**-0.1**
DHY				IAmb		IAmb	00 02 55.0	
	comp=Z,2.2nm,0.6s							
SML	**Sawmill**	**87.29**	**17**	P		**P**	**00 02 56.8**	**-0.5**
SML				pmax		pmax		
	comp=Z,9.0nm,1.0s							
SML	**Sawmill**	**87.29**	**17**	P		**P**	**00 02 56.8**	**-0.5**
CTAO	**Charters Tower**	**88.47**	**113**	P		**P**	**00 03 02.9**	**-0.6**
CTAO				pmax		pmax		
	comp=Z,13nm,1.1s							
CTAO	**Charters Tower**	**88.47**	**113**	P		**P**	**00 03 02.9**	**-0.6**
VRDI	**Verde Repeater**	**88.98**	**15**	P		**P**	**00 03 05.4**	**-0.1**
VRDI				IAmb		IAmb	00 03 21.2	
	comp=Z,4.3nm,1.0s							
BALM	**Baldy**	**89.40**	**14**	P		**P**	**00 03 08.0**	**+0.7**
BALM				pmax		pmax		
	comp=Z,4.0nm,0.9s							
BALM	**Baldy**	**89.40**	**14**	P		**P**	**00 03 08.0**	**+0.7**
BALM				IAmb		IAmb	00 03 12.7	
	comp=Z,3.8nm,0.9s							
STKA	**Stephens Creek**	**90.65**	**125**	P		**P**	**00 03 13.0**	**-0.4**
	comp=Z,3.6nm,0.9s,baz=297,slow=3.3,SNR=3.1							
STKA	**Stephens Creek**	**90.65**	**125**	P		**P**	**00 03 13.0**	**-0.4**
YKA	**Yellowknife Ar**	**91.42**	**1**	P		**P**	**00 03 17.2**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=348,slow=4.3,SNR=18							
PDAR	**Pinedale Array**	**111.19**	**358**	PKiKP		**PKiKP**	**00 08 44.6**	**-0.3**
	comp=Z,0.2nm,0.7s,baz=44,slow=4.0,SNR=3.5							
NVAR	**Mina Array Bea**	**115.24**	**6**	PKP		**PKPdf**	**00 08 53.2**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=342,slow=1.3,SNR=5.0							
TXAR	**Lajitas Array**	**124.10**	**352**	PKP		**PKiKP**	**00 09 10.5**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=169,slow=1.3,SNR=6.1							

IDC ***09*** *00:08:41.0±0.5,27°.87N×57°.55E, h0km, mb4.5/28, mb1 4.6/32, mb1mx4.5/41, mbtmp4.5/32, ML4.7/3, MS3.9/23, Ms1 3.9/23, ms1mx3.8/30, Error ellipse: s-maj=13.2km s-min=11.2km az=159.0*

BJI ***09*** *00:08:41.0±0.0, 27°.80N×57°.60E, h10km, mB4.8/30, mb4.7/38, Ms4.3/18, Ms7 4.1/19*

DSN ***09*** *00:08:42.5±2.1, 28°.16N×57°.26E, h10km, ML5.4/10, Error ellipse: s-maj=27.0km s-min=15.4km az=76.0*

THR ***09*** *00:08:43.7±0.5, 27°.85N×57°.48E, h14km±5km, ML4.9*

MOS ***09*** *00:08:44.5±1.1, 27°.86N×57°.52E, h33km, mb4.9/55, Error ellipse: s-maj=5.8km s-min=3.6km az=111.7*

TEH ***09*** *00:08:45.1, 27°.90N×57°.52E, h20km, ML4.8*

NEIC ***09*** *00:08:47.2±2.2, 27°.79N±0°.07×57°.52E±0°.09, h50km±2km, Error ellipse: s-maj=11.8km s-min=9.5km az=100.0*

OMAN ***09*** *00:08:54.8±0.6, 27°.14N×57°.22E, h10km, ml4.7/21, ms3.6/4, Error ellipse: s-maj=31.5km s-min=20.8km az=17.0*

ISC 09 00:08:45.1±0.6, 27°.81N±0°.03×57°.48E±0°.03, h29km±4km, h29km:pP-P, n541, σ1°78/539, mb4.6/142, MS3.9/31, 23C-16D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.24**	**54**	*e*Pg		**Pb**	**00 08 49.5**	**-2.2**
NIAN	**Nian**	**0.62**	**247**	*e*Pg		**Pn**	**00 08 59.5**	**+1.5**
NIAN				*e*			00 09 22.4	
IBND	**Bandar-abas**	**0.91**	**247**	*e*			00 09 28.8	
IBND				*e*Pg		**Pb**	**00 09 04.4**	**+2.1**
GENO	**Geno**	**1.23**	**251**	*e*			00 09 33.3	
GENO				*e*Pn		**Pb**	**00 09 09.7**	**+1.9**
BNDS	**Bandar-Abbas**	**1.23**	**251**	*e*Pg		**Pn**	**00 09 06.8**	**+0.3**
BNDS				IAML			00 09 31.6	
	comp=N,14μm,0.3s							
BNDS	**Bandar-Abbas**	**1.23**	**251**	*e*Pg		**Pn**	**00 09 06.8**	**+0.3**
NGRK	**Negar Kerman**	**1.95**	**340**	*e*Pn		**Pn**	**00 09 17.1**	**+0.5**
NGRK				*e*			00 09 48.0	
CHMN	**Cheshme madani**	**2.05**	**1**	*e*Pn		**Pn**	**00 09 18.2**	**+0.3**
CHMN				*e*			00 09 23.7	
SHME	**Shamm**	**2.12**	**215**	*e*P		**Pb**	**00 09 21.9**	**-1.0**
	SNR=93							
SHME	**Shamm**	**2.12**	**215**	*e*Pn		**Pb**	**00 09 22.0**	**-0.9**
BANOM	**Banah**	**2.15**	**210**	*e*P		**Pb**	**00 09 22.2**	**-1.2**
	SNR=466							
BANOM				S		**Sb**	**00 09 52.0**	**+2.3**
BANOM	**Banah**	**2.15**	**210**	P		**Pb**	**00 09 24.3**	**+0.9**
	SNR=129							
BANOM	**Banah**	**2.15**	**210**	*e*Pn		**Pb**	**00 09 23.0**	**-0.4**
JSK1	**Jask**	**2.17**	**173**	*e*Pn		**Pb**	**00 09 22.9**	**-0.8**
KRBR	**Kerman**	**2.26**	**344**	IAML			00 09 57.4	
	comp=N,9μm,0.4s							
KRBR				IAML			00 09 57.7	
	comp=E,7μm,0.4s							
TVBK	**TV Kerman**	**2.26**	**344**	*e*Pn		**Pb**	**00 09 23.1**	**-2.4**
MSFE	**Esma-Masafi**	**2.71**	**206**	*e*P		**Pn**	**00 09 29.9**	**+3.1**
	SNR=45							
MSFE	**Esma-Masafi**	**2.71**	**206**	*e*Pn		**Pn**	**00 09 29.7**	**+3.0**
KHGB	**Koh Gabri**	**2.71**	**341**	*e*Pn		**Pn**	**00 09 29.5**	**+2.6**
KHGB				*e*			00 10 18.7	
MDH	**Madha**	**2.71**	**203**	*e*P		**Pn**	**00 09 28.2**	**+1.5**
	SNR=57							
MDH	**Madha**	**2.71**	**203**	P		**Pn**	**00 09 28.4**	**+1.7**
	SNR=56							
MDH	**Madha**	**2.71**	**203**	*e*Pn		**Pn**	**00 09 28.3**	**+1.5**
LAR1	**LAR**	**2.76**	**268**	*e*Pn		**Pn**	**00 09 29.8**	**+2.4**
UMQ	**Umm Al-Quwin**	**2.79**	**216**	*e*P		**Pb**	**00 09 32.1**	**-2.2**
	SNR=15							
UMQ	**Umm Al-Quwin**	**2.79**	**216**	P		**Pb**	**00 09 33.0**	**-1.3**
	SNR=14							
UMQ	**Umm Al-Quwin**	**2.79**	**216**	*e*Pn		**Pb**	**00 09 33.2**	**-1.1**
UOSS	**Minazif**	**3.07**	**202**	*i* P		**Pn**	**00 09 33.2**	**+1.5**
	SNR=38							
UOSS	**Minazif**	**3.07**	**202**	*e*Pn		**Pn**	**00 09 33.4**	**+1.7**
UOSS	**Minazif**	**3.07**	**202**			**Pn**	**00 09 33.6**	**+1.9**
HATD	**Hatta, Dubai**	**3.21**	**203**	*i* P		**Pn**	**00 09 35.0**	**+1.5**
	SNR=19							
HATD	**Hatta, Dubai**	**3.21**	**203**	P		**Pn**	**00 09 35.8**	**+2.2**
	SNR=19							
HATD	**Hatta, Dubai**	**3.21**	**203**	*e*Pn		**Pn**	**00 09 35.2**	**+1.7**
NAZ	**Nazwa, Dubai**	**3.25**	**211**	*i* P		**Pn**	**00 09 38.4**	**+4.4**
	SNR=14							
NAZ	**Nazwa, Dubai**	**3.25**	**211**	P		**Pb**	**00 09 38.7**	**-3.3**
	SNR=14							
NAZ	**Nazwa, Dubai**	**3.25**	**211**	*e*Pn		**Pb**	**00 09 38.8**	**-3.3**
ASHO	**Ashiyiah**	**3.36**	**203**	*i* P		**Pn**	**00 09 38.1**	**+2.4**
	SNR=77							
ASHO	**Ashiyiah**	**3.36**	**203**	P		**Pn**	**00 09 38.7**	**+3.0**
	SNR=73							
ASHO	**Ashiyiah**	**3.36**	**203**	*e*Pn		**Pn**	**00 09 38.3**	**+2.6**
ZHSF	**Zahedan**	**3.41**	**57**	*e*Pn		**Pn**	**00 09 38.2**	**+1.8**
ZHSF	**Zahedan**	**3.41**	**57**	*e*Pn		**Pn**	**00 09 38.2**	**+1.8**
SZD1	**Zahaedan-tmp**	**3.41**	**60**	*e*Pn		**Pn**	**00 09 38.4**	**+1.9**
CHBR	**Chabahar**	**3.47**	**129**	*e*Pn		**Pn**	**00 09 39.6**	**+2.5**
CHBR	**Chabahar**	**3.47**	**129**	*e*Pn		**Pn**	**00 09 39.6**	**+2.5**
FAQ	**Al Faqa, Dubai**	**3.49**	**210**	*i* P		**Pn**	**00 09 41.4**	**+4.0**
	SNR=7.4							
FAQ	**Al Faqa, Dubai**	**3.49**	**210**	P		**Pb**	**00 09 42.6**	**-3.5**
	SNR=7.6							
FAQ	**Al Faqa, Dubai**	**3.49**	**210**	*e*Pn		**Pn**	**00 09 41.7**	**+4.3**
JHRM	**Jahrom**	**3.52**	**282**	*e*Pn		**Pn**	**00 09 40.8**	**+2.9**
SOHO	**SOHO**	**3.75**	**193**	P		**Pn**	**00 09 42.4**	**+1.3**
	SNR=126							
SOHO				P		**Pn**	**00 09 45.0**	**+4.0**
	SNR=27							
SOHO	**SOHO**	**3.75**	**193**	*e*Pn		**Pn**	**00 09 41.6**	**+0.5**
LMD1	**Lamerd**	**3.86**	**264**	*e*Pn		**Pn**	**00 09 45.1**	**+2.5**
AJN	**Ajban**	**3.93**	**215**	*i* P		**Pn**	**00 09 47.0**	**+3.5**
	SNR=53							
AJN	**Ajban**	**3.93**	**215**	P		**Pn**	**00 09 47.4**	**+3.8**
	SNR=53							
AJN	**Ajban**	**3.93**	**215**	*e*Pn		**Pn**	**00 09 47.3**	**+3.8**
ALNE	**Al Ain**	**4.05**	**203**	*i* P		**Pn**	**00 09 49.3**	**+4.2**
	SNR=130							
ALNE	**Al Ain**	**4.05**	**203**	*e*Pn		**Pn**	**00 09 49.5**	**+4.4**
IBAF	**Bafgh**	**4.12**	**337**	*e*Pn		**Pn**	**00 09 48.4**	**+2.1**
HOQ	**Hoqain**	**4.21**	**182**	P		**Pn**	**00 09 48.6**	**+1.2**
	SNR=40							
NHDN	**Nehbandan**	**4.22**	**31**	*e*Pn		**Pn**	**00 09 48.7**	**+1.2**
BIDO	**Bidbid**	**4.30**	**172**	P		**Pn**	**00 09 50.6**	**+1.9**
	SNR=79							
BIDO				S		**Sn**	**00 10 36.5**	**-1.4**
BIDO	**Bidbid**	**4.30**	**172**	*e*Pn		**Pn**	**00 09 49.8**	**+1.1**
IMEH	**Mehriz**	**4.36**	**326**	*e*Pn		**Pn**	**00 09 51.8**	**+2.2**
BSRN	**Basiran**	**4.38**	**19**	*e*Pn		**Pn**	**00 09 51.5**	**+1.6**
BSRN				*e*Sg		**Sb**	**00 10 58.3**	**+4.3**
BSRN	**Basiran**	**4.38**	**19**	*e*Pn		**Pn**	**00 09 51.5**	**+1.6**
ARQ	**Araqi**	**4.53**	**191**	P		**Pn**	**00 09 56.0**	**+4.2**
	SNR=593							
WSAR	**Wadi Sarin**	**4.66**	**167**	Pn		**Pn**	**00 09 55.2**	**+1.6**
	comp=E,43nm,0.3s,baz=349,slow=6.4,SNR=562							
WSAR				Sn		**Sn**	**00 10 45.9**	**-0.9**
	comp=E,134nm,0.3s,baz=76,slow=18,SNR=9.8							
WSAR				LR		LR	00 12 32.9	
	comp=E,872nm,20.5s,baz=56,slow=49							
WSAR	**Wadi Sarin**	**4.66**	**167**	P		**Pn**	**00 09 56.3**	**+2.7**
	SNR=1345							
SMDO	**Samad**	**4.75**	**174**	P		**Pn**	**00 09 57.5**	**+2.6**
	SNR=77							
SMDO				S		**Sn**	**00 10 48.2**	**-0.9**
	SNR=102							
IKOO	**Kooshah**	**4.79**	**16**	*e*Pn		**Pn**	**00 09 56.8**	**+1.3**
BSY	**Bisya**	**5.04**	**183**	P		**Pn**	**00 10 03.2**	**+4.4**
	SNR=22							
BSY				S		**Sn**	**00 10 55.7**	**-0.5**
ICHK	**Chekchek**	**5.17**	**330**	*e*Pn		**Pn**	**00 10 03.0**	**+2.3**
ITEG	**Tejag**	**5.19**	**12**	*e*Pn		**Pn**	**00 10 03.1**	**+2.1**
YZKH	**Yazd**	**5.21**	**332**	*e*Pn		**Pn**	**00 10 03.5**	**+2.3**
YZKH	**Yazd**	**5.21**	**332**	*e*Pn		**Pn**	**00 10 03.5**	**+2.3**
TPRV	**Parvadeh(Tabas**	**5.25**	**353**	*e*Pn		**Pn**	**00 10 05.0**	**+3.3**
ISAD	**Sadrabad**	**5.26**	**322**	*e*Pn		**Pn**	**00 10 04.3**	**+2.3**
IDAH	**Dahanechah**	**5.33**	**22**	*e*Pn		**Pn**	**00 10 04.1**	**+1.1**
WBK	**Wadi Bani Khal**	**5.34**	**165**	P		**Pn**	**00 10 05.1**	**+2.1**
	SNR=392							
JMDO	**Jabal Madar**	**5.44**	**174**	P		**Pn**	**00 10 07.7**	**+3.4**
	SNR=70							
JMDO				S		**Sn**	**00 11 07.5**	**+1.5**
	SNR=51							
AHBU	**AHRAM**	**5.56**	**282**	*e*Pn		**Pn**	**00 10 07.5**	**+1.7**
GHWR	**Ruwais**	**5.64**	**228**	*e*Pn		**Pn**	**00 10 08.8**	**+1.8**
TKDS	**Koohdasht(Taba**	**5.80**	**357**	*e*Pn		**Pn**	**00 10 12.5**	**+3.2**
TABS	**Tabas**	**5.83**	**357**	*e*Pn		**Pn**	**00 10 11.8**	**+2.1**
TABS	**Tabas**	**5.83**	**357**	*e*Pn		**Pn**	**00 10 11.8**	**+2.1**
JLN	**Jalan Bani Buh**	**5.89**	**162**	P		**Pn**	**00 10 13.6**	**+3.1**
	SNR=13							
JLN				S		**Sn**	**00 11 15.6**	**-1.5**
IRAM	**Ramesheh**	**5.96**	**313**	*e*Pn		**Pn**	**00 10 13.0**	**+1.4**
KLNJ	**Kolanjah**	**6.05**	**303**	*e*Pn		**Pn**	**00 10 13.0**	**+2.1**
TNSJ	**Nasanj**	**6.18**	**353**	*e*Pn		**Pn**	**00 10 18.3**	**+3.7**
ANAR	**Anarak**	**6.27**	**330**	*e*Pn		**Pn**	**00 10 17.5**	**+1.8**
SHRT	**Shahrakht**	**6.30**	**22**	*e*Pn		**Pn**	**00 10 18.0**	**+1.8**
SHRT	**Shahrakht**	**6.30**	**22**	*e*Pn		**Pn**	**00 10 18.0**	**+1.8**
SLWR	**Sila**	**6.40**	**236**	*e*Pn		**Pn**	**00 10 18.3**	**+0.8**
IGAR	**Gharneh**	**6.57**	**316**	*e*Pn		**Pn**	**00 10 21.3**	**+1.3**
IZEF	**Zefreh**	**6.75**	**320**	*e*Pn		**Pn**	**00 10 23.4**	**+0.9**
IBRJ	**Brojen**	**6.78**	**309**	*e*Pn		**Pn**	**00 10 25.4**	**+2.6**
MHTO	**MHTO**	**6.80**	**176**	P		**Pn**	**00 10 26.8**	**+3.8**
	SNR=87							
MHTO				S		**Sn**	**00 11 41.7**	**+2.2**
ROKH	**ROKH**	**7.19**	**311**	*e*Pn		**Pn**	**00 10 29.8**	**+1.3**
JHBN	**Jahan bin**	**7.37**	**308**	*e*Pn		**Pn**	**00 10 32.3**	**+1.2**
IKLH	**Kolahrood**	**7.49**	**319**	*e*Pn		**Pn**	**00 10 33.0**	**+0.4**
IPIR	**Pirpir**	**7.49**	**312**	*e*Pn		**Pn**	**00 10 33.7**	**+1.0**
ILAS	**Lasjerd**	**8.48**	**334**	*e*Pn		**Pn**	**00 10 50.2**	**+4.0**
IVRN	**Varamin**	**8.69**	**327**	*e*Pn		Pn	00 10 53.8	+4.9
IPAY	**Payeh**	**8.71**	**8**	*e*Pn		**Pn**	**00 10 52.8**	**+3.4**
ISHM	**Shahmirzad**	**8.74**	**337**	*e*Pn		Pn	00 10 54.6	+4.8
IALA	**Alasht**	**9.16**	**335**	*e*Pn		**Pn**	**00 11 00.0**	**+4.5**
ISFR	**Sfrayin**	**9.23**	**3**	*e*Pn		**Pn**	**00 11 00.1**	**+3.6**
BMDN	**Meydan**	**9.47**	**310**	*e*Pn		**Pn**	**00 11 00.7**	**+1.0**
IPRN	**Peran**	**9.48**	**334**	*e*Pn		Pn	00 11 05.1	+5.4
IKMR	**Kamar-syah**	**9.69**	**308**	*e*Pn		**Pn**	**00 11 02.6**	**+0.1**
SHAO	**Shalim**	**9.88**	**190**	P		**Pn**	**00 11 06.5**	**+1.2**
	SNR=40							
SHAO				S		**Sn**	**00 12 52.0**	**-3.4**
HSAM	**Samen**	**9.94**	**312**	*e*Pn		**Pn**	**00 11 06.6**	**+0.4**
IRAZ	**Razeghan**	**9.94**	**322**	*e*Pn		**Pn**	**00 11 08.1**	**+1.9**
IDOB	**Doab**	**9.98**	**309**	*e*Pn		**Pn**	**00 11 06.3**	**-0.4**
HAGD	**Aghdareh**	**9.99**	**317**	*e*Pn		**Pn**	**00 11 08.3**	**+1.4**
IKFM	**Kafarnosalman**	**10.06**	**307**	*e*Pn		**Pn**	**00 11 07.7**	**0.0**
GEYT	**Alibeck**	**10.11**	**3**	Pn		**Pn**	**00 11 12.6**	**+4.3**
	comp=E,1.2nm,0.3s,baz=173,slow=13,SNR=20							
GEYT				LR		LR	00 15 31.7	
	comp=E,2μm,19.4s,baz=180,slow=41							
GYA0B	**ALIBECK ARRAY**	**10.11**	**3**			**Pn**	**00 11 09.4**	**+1.1**
ASHT	**Ashkhabad**	**10.14**	**4**	P		**Pn**	**00 11 08.5**	**-0.2**
ASHT	**Ashkhabad**	**10.14**	**4**	Pn		**Pn**	**00 11 08.5**	**-0.2**
DMTO	**DMTO**	**10.31**	**194**	P		**Pn**	**00 11 11.6**	**+0.5**
	SNR=49							
DMTO				S		**Sn**	**00 13 01.7**	**-4.1**
QABG	**Abgarm-Qazvin**	**10.36**	**322**	*e*Pn		**Pn**	**00 11 12.2**	**+0.3**
QALM	**Alamut, Qazvin**	**10.37**	**328**	*e*Pn		Pn	00 11 18.0	+5.9
WHFO	**Wadi Hawf**	**10.42**	**200**	P		**Pn**	**00 11 12.8**	**+0.2**
	SNR=52							
IBZA	**Bozab**	**10.58**	**311**	*e*Pn		**Pn**	**00 11 15.8**	**+0.7**
IALM	**Almabolaq**	**10.62**	**314**	*e*Pn		**Pn**	**00 11 15.4**	**-0.2**
IKOM	**Komasi**	**10.65**	**309**	*e*Pn		**Pn**	**00 11 15.8**	**-0.1**
RBK	**Rabkut**	**10.69**	**197**	P		**Pn**	**00 11 17.9**	**+1.5**
RBK				S		**Sn**	**00 13 07.6**	**-7.5**
KER	**Kermanshah**	**11.03**	**309**	*e*Pn		**Pn**	**00 11 21.3**	**+0.3**
KCHF	**Cheshme Sefid,**	**11.03**	**308**	*e*Pn		**Pn**	**00 11 20.8**	**-0.3**
ABTO	**Aybut**	**11.10**	**201**	P		**Pn**	**00 11 22.0**	**0.0**
	SNR=46							
IVIS	**Veis**	**11.30**	**309**	*e*Pn		**Pn**	**00 11 24.1**	**-0.6**
IGHG	**Ghaleghazi**	**11.39**	**307**	*e*Pn		**Pn**	**00 11 26.5**	**+0.4**
ILIN	**Lian**	**11.45**	**311**	*e*Pn		**Pn**	**00 11 24.9**	**-1.9**
RAYN	**Ar Rayn**	**11.62**	**251**	P		**Pn**	**00 11 26.7**	**-2.3**
RAYN	**Ar Rayn**	**11.62**	**251**	P		**Pn**	**00 11 26.7**	**-2.3**
RAYN	**Ar Rayn**	**11.62**	**251**			**Pn**	**00 11 26.7**	**-2.3**
IDHR	**Dehrash**	**11.72**	**309**	*e*Pn		**Pn**	**00 11 29.7**	**-0.8**
THW	**Thamme Wali**	**13.28**	**65**	P		**Pn**	**00 11 52.8**	**+1.1**
IHRS	**Heris**	**13.65**	**323**	*e*Pn		**P**	**00 12 01.4**	**-4.0**
CHGR	**Chuyangaron**	**14.56**	**39**			**Pn**	**00 12 08.1**	**-1.2**
NIL	**Nilore**	**14.75**	**63**	P		**Pn**	**00 12 11.7**	**-0.1**
NIL	**Nilore**	**14.75**	**63**			**Pn**	**00 12 11.7**	**-0.1**
CHCP	**Chirah Chowk**	**14.77**	**63**	P		**Pn**	**00 12 13.4**	**+1.4**
CUKT	**Cukurca**	**15.01**	**312**	*e*P		**Pn**	**00 12 14.9**	**-0.4**
NAX	**Nakhchivan**	**15.10**	**322**	P		**P**	**00 12 19.9**	**-1.5**
GAR	**Garm**	**15.46**	**40**			**Pn**	**00 12 21.4**	**+0.2**
GAR				IAmb		IAmb	00 12 33.7	
	comp=Z,18nm,0.7s							
MNGR	**Mingechevir, A**	**15.51**	**329**	P		**Pn**	**00 12 26.1**	**+0.3**
GANJ	**Ganja**	**15.77**	**327**	P		**P**	**00 12 29.0**	**+0.2**
AKT	**Akhty**	**15.81**	**332**	*e*P		**P**	**00 12 28.0**	**-1.3**
AKT				*e*S		**Sn**	**00 15 25.1**	**+5.0**
AKT				pmax		pmax		
	comp=Z,49nm,0.6s							
SEKA	**Sheki**	**15.81**	**330**	P		**P**	**00 12 29.4**	**+0.1**
SOCY	**Socotra**	**15.88**	**193**	P		**Pn**	**00 12 23.4**	**-3.3**
SOCY				IAmb		IAmb	00 12 34.7	
	comp=Z,42nm,1.1s							
SIRT	**Sirnak**	**15.92**	**311**	*e*P		**Pn**	**00 12 27.2**	**+0.1**
VANB	**Van**	**15.95**	**316**	*e*P		**P**	**00 12 29.9**	**-0.9**
CLDR	**Caldiran**	**15.98**	**318**	*e*P		**P**	**00 12 30.2**	**-1.1**
AKDM	**Akdamar-Van**	**16.04**	**315**	*e*P		**Pn**	**00 12 29.9**	**+1.2**
BTK	**Batken**	**16.46**	**39**	P		**P**	**00 12 36.2**	**-0.3**
BTK				pmax		pmax		
	comp=Z,22nm,1.0s							
BTK	**Batken**	**16.46**	**39**	P		**P**	**00 12 36.2**	**-0.3**
TAS	**Tashkent**	**16.61**	**33**	P		**Pn**	**00 12 35.5**	**-0.3**
TAS				pmax		pmax		
	comp=Z,47nm,0.9s							
TAS	**Tashkent**	**16.61**	**33**	Pn		**Pn**	**00 12 35.5**	**-0.3**
TAS				IAmb		IAmb	00 12 46.7	
	comp=Z,47nm,0.9s							
LGD	**Lagodekhi**	**16.74**	**330**	P		**P**	**00 12 40.4**	**+0.9**
GURO	**Guroymak-BITLI**	**16.77**	**314**	*e*P		**P**	**00 12 39.2**	**-0.8**
AGRB	**Hanur-Agry**	**16.80**	**318**	*e*P		**P**	**00 12 41.9**	**+1.5**
SVAN	**Silvan-Diyarba**	**17.10**	**311**	*e*P		**Pn**	**00 12 42.8**	**+0.8**
MAK	**Makhachkala**	**17.15**	**334**	*e*P		**Pn**	**00 12 39.4**	**-3.1**
MAK				*e*S		**Sn**	**00 15 51.0**	**-1.4**
MAK				pmax		pmax		
	comp=Z,141nm,1.1s							
MAZI	**Mazidag**	**17.26**	**308**	*e*P		**P**	**00 12 45.0**	**-0.4**
TBLG	**Delisi**	**17.37**	**326**	P		**Pn**	**00 12 45.4**	**+0.1**
TBLG				pmax		pmax		
	comp=Z,15nm,1.0s							
TBLG	**Delisi**	**17.37**	**326**	P		**Pn**	**00 12 45.4**	**+0.1**
KARS	**Kars**	**17.45**	**321**	P		**P**	**00 12 50.8**	**+3.3**
VRTB	**Varto-Mus**	**17.49**	**314**	*e*P		**P**	**00 12 53.0**	**+5.0**
AKH	**Akhalkalaki**	**17.77**	**323**	⇑P		**P**	**00 12 53.3**	**+2.3**
AKH	**Akhalkalaki**	**17.77**	**323**	P		**Pn**	**00 12 50.3**	**-0.1**

comp=Z,31nm,0.9s
KDJ Kajisay 21.49 43 P **P** **00 13 33.9 +2.3**
KDJ IAmb IAmb 00 13 40.7
comp=Z,31nm,0.9s
AB31 Akbulak array 21.50 4 *e*P **P** **00 13 31.5 0.0**
ABKAR Akbulak array 21.50 4 P **P** **00 13 31.8 +0.3**
ABKAR IAmb IAmb 00 13 44.2
comp=Z,29nm,0.9s
CSS Mathiatis 21.79 295 P **P** **00 13 35.0 +0.3**
CSS IAmb IAmb 00 13 50.6
comp=Z,24nm,0.8s
HYB Hyderabad 21.99 114 *i* P **P** **00 13 38.0 +0.9**
PRZ Przheval'sk 22.43 44 P **P** **00 13 42.3 +0.6**
PRZ pmax pmax
comp=Z,17nm,1.1s
PRZ Przheval'sk 22.43 44 P **P** **00 13 42.3 +0.6**
PRZ IAmb IAmb 00 13 51.3
comp=Z,16nm,1.1s
AKTO Aktyubinsk 22.60 1 P **P** **00 13 42.7 -0.6**
comp=Z,6.8nm,0.4s,baz=159,slow=8.2,SNR=21
AKTO Aktyubinsk 22.60 1 P **P** **00 13 43.3 0.0**
DIKM Dikmen 22.82 313 ⇓P **P** **00 13 47.6 +2.0**
BRTR Keskin Array B 23.04 307 P **P** **00 13 48.4 +0.2**
comp=Z,43nm,0.8s,baz=119,slow=8.9,SNR=228
BRTR PcP **PcP** **00 17 37.8 +0.9**
comp=Z,0.7nm,0.7s,baz=142,slow=4.8,SNR=2.8
BRTR LR LR 00 24 31.9
comp=Z,449nm,21.1s,baz=94,slow=41
KOLN Koldanda 23.09 84 *e*P **P** **00 13 50.7 +1.9**
comp=Z,11nm,0.4s
DANN Dangsing 23.18 82 *e*P **P** **00 13 51.2 +1.4**
comp=Z,52nm,0.6s
OTUK Ortayu 23.44 26 P **P** **00 13 52.1 +0.2**
PDGK Podgornoye 23.57 43 P **P** **00 13 53.6 +0.3**
ANTO Ankara 23.69 307 ⇓P **P** **00 13 55.4 +0.9**
ANTO Ankara 23.69 307 P **P** **00 13 55.7 +1.2**
ANTO pmax pmax
comp=Z,31nm,0.8s
ANTO Ankara 23.69 307 P **P** **00 13 55.7 +1.2**
GKN Gorkha 23.98 83 *e*P **P** **00 13 58.8 +1.4**
DMN Daman 24.44 84 *e*P **P** **00 14 02.8 +1.1**
KKN Kakani 24.57 83 *e*P **P** **00 14 03.4 +0.5**
comp=Z,19nm,0.4s
PKIN Phulchoki 24.70 84 *e*P **P** **00 14 04.8 +0.7**
comp=Z,42nm,0.8s
PKI Pulchoki 24.71 84 *e*P **P** **00 14 05.0 +0.7**
comp=Z,55nm,0.9s
ELL Elmali 24.89 298 P **P** **00 14 06.2 +0.6**
ELL Elmali 24.89 298 P **P** **00 14 06.2 +0.6**
ELL ScP 00 21 06.6 -11
GUN Gumba 25.09 83 *e*P **P** **00 14 08.7 +1.0**
comp=Z,66nm,0.7s
SIM Simferopol' 25.29 319 *e*P **P** **00 14 09.4 +0.4**
SIM pmax pmax
comp=Z,19nm,0.8s
JIRN Jiri 25.39 84 *e*P **P** **00 14 11.3 +0.9**
comp=Z,28nm,0.5s
RAMN Ramite 25.85 85 *e*P **P** **00 14 15.0 +0.5**
comp=Z,18nm,0.7s
VRH Novokhopyorsk 26.23 337 *e*P **P** **00 14 17.0 -0.4**
VRH pmax pmax
comp=Z,30nm,0.7s
MANT Manisa 26.36 301 P **P** **00 14 19.1 +0.1**
ODAN Odare 26.56 85 *e*P **P** **00 14 21.5 +0.6**
TAPN Taplejung 26.77 84 *e*Pn **P** **00 14 23.2 +0.3**
VORD Divnogorie 26.92 334 *e*P **P** **00 14 23.5 -0.1**
VORD pmax pmax
comp=Z,10.0nm,1.0s
BVAR Borovoye Array 26.95 17 P **P** **00 14 23.7 -0.2**
comp=Z,6.3nm,0.6s,baz=199,slow=9.1,SNR=58
BVAR PcP **PcP** **00 17 45.2 +0.1**
comp=Z,1.1nm,0.5s,baz=214,slow=3.5,SNR=7.0
BRVK Borovoye 26.96 17 *ce*P **P** **00 14 23.6 -0.3**
BRVK pmax pmax
comp=Z,11nm,1.0s
BRVK Borovoye 26.96 17 P **P** **00 14 23.5 -0.4**
MAKZ Makanchi 27.01 39 P **P** **00 14 24.4 -0.1**
MAKZ pmax pmax
comp=Z,14nm,1.1s
MAKZ Makanchi 27.01 39 P **P** **00 14 24.4 -0.1**
MAKZ IAmb IAmb 00 14 31.4
comp=Z,14nm,1.1s
VSR Storozhevoye 27.17 334 ⇓*e*P **P** **00 14 25.6 -0.2**
VSR pmax pmax
comp=Z,16nm,0.5s
MK31 Makanchi Array 27.18 39 *i* P **P** **00 14 25.7 -0.3**
MKAR Makanchi Array 27.18 39 P **P** **00 14 25.5 -0.6**
comp=Z,3.3nm,0.7s,baz=222,slow=8.5,SNR=17
MKAR LR LR 00 26 23.4
comp=Z,217nm,20.5s,baz=224,slow=39
KURBB Kurchatov Arra 27.83 29 P **P** **00 14 31.6 -0.3**
comp=Z,1.5nm,0.5s,baz=226,slow=8.5,SNR=23
KURK Kurchatov 27.94 29 *de*P **P** **00 14 32.7 -0.1**
KURK pmax pmax
comp=Z,5.0nm,1.3s
KURK Kurchatov 27.94 29 P **P** **00 14 32.9 +0.2**
SANT Santorini 28.34 296 P **P** **00 14 35.3 -1.3**
LPSR Galich'ya Gora 28.37 336 *e*P **P** **00 14 36.2 -0.3**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
ARU Arti 28.62 1 *c i*P P 00 14 44.9 +6.2
ARU 00 15 35.2
ARU SS SS 00 21 04.9 -22
ARU pmax pmax
comp=Z,5.0nm,1.5s
IDI Anoyia 28.67 293 P **P** **00 14 40.1 +0.6**
comp=Z,9.6nm,0.6s,baz=310,slow=4.3,SNR=12
IDI Anoyia 28.67 293 P **P** **00 14 38.6 -0.9**
ALN Alexandroupoli 28.89 305 P **P** **00 14 40.5 -0.8**
ALN pmax pmax
comp=Z,4.0nm,0.9s
ALN Alexandroupoli 28.89 305 P **P** **00 14 40.5 -0.8**
WMQ Urumqi 29.04 49 *e*P **P** **00 14 45.1 +2.3**
WMQ pP pP 00 14 49.4 -2.0
WMQ pmax pmax
comp=Z,12nm,0.7s
WMQ pmax pmax
comp=Z,51nm,4.1s
WMQ LR LR
comp=Z,190nm,18.5s
WMQ LR LR
comp=Z,320nm,18.5s
WMQ LR LR
comp=Z,510nm,22.7s
MILM Milestii Mici 29.47 318 ⇑P **P** **00 14 46.4 0.0**
ELND Elena 29.66 309 ⇑P **P** **00 14 48.5 +0.4**
PLD Plovdiv 30.21 307 P **P** **00 14 54.1 +1.1**
PLD pmax pmax
comp=Z,1.0nm,1.7s
VRI Vrincioaia 30.25 315 ⇑P **P** **00 14 54.4 +1.1**
VRI Vrincioaia 30.25 315 P **P** **00 14 54.4 +1.1**
PLOR Plostina 30.29 315 ⇓P **P** **00 14 55.6 +1.8**
PLOR Plostina 30.29 315 P **P** **00 14 55.5 +1.8**
SORM Soroca 30.36 320 ⇑P **P** **00 14 53.7 -0.6**
SORM Soroca 30.36 320 P **P** **00 14 53.7 -0.6**
TESR Tescani 30.58 316 ⇓P **P** **00 14 57.1 +0.8**
MLR Muntele Rosu 30.59 314 ⇑P **P** **00 14 58.1 +1.6**
MLR Muntele Rosu 30.59 314 P **P** **00 14 55.1 -1.4**
MLR pmax pmax
comp=Z,4.0nm,0.8s
MLR Muntele Rosu 30.59 314 P **P** **00 14 55.0 -1.4**
PLVB Pleven 30.68 309 ⇑P **P** **00 14 58.0 +0.9**
SRS Serrai 30.73 304 P **P** **00 14 59.2 +1.5**
SRS pmax pmax
comp=Z,11nm,1.3s
BIZ Bicaz 31.11 316 ⇑P **P** **00 15 01.9 +0.9**
DOPR Dopca 31.14 314 ⇓P **P** **00 15 02.6 +1.4**
VOIR 31.14 313 ⇑P **P** **00 15 03.3 +2.0**
VOIR 31.14 313 P **P** **00 15 03.3 +2.0**
OBN Obninsk 31.22 337 ⇑P **P** **00 15 02.0 +0.3**
OBN Obninsk 31.22 337 *i* P **P** **00 15 02.3 +0.6**
OBN *e* 00 16 05.0
OBN pmax pmax
comp=Z,9.0nm,0.8s
OBN Obninsk 31.22 337 P **P** **00 15 02.1 +0.3**
AGG Agios Georgios 31.22 300 P **P** **00 15 01.1 -1.0**
AGG pmax pmax
comp=Z,8.0nm,1.2s
AGG Agios Georgios 31.22 300 P **P** **00 15 01.1 -1.0**
AGG IAmb IAmb 00 15 14.8
comp=Z,7.7nm,1.2s
ITM Ithomi 31.26 296 P **P** **00 15 02.5 +0.1**
ITM IAmb IAmb 00 15 05.1
comp=Z,8.4nm,0.7s

LIT Litokhoron 31.31 302 P **P** **00 15 02.8 0.0**
LIT pmax pmax
comp=Z,5.0nm,0.9s
LIT Litokhoron 31.31 302 P **P** **00 15 02.8 0.0**
AKASG Malin Array Be 31.32 325 P **P** **00 15 02.5 -0.1**
comp=Z,0.4nm,0.2s,baz=120,slow=8.0,SNR=8.4
AKASG PcP **PcP** **00 17 56.0 -0.2**
comp=Z,1.6nm,0.5s,baz=103,slow=1.9,SNR=6.0
ARR Arges 31.38 313 ⇑P **P** **00 15 04.3 +0.9**
VTS Vitosha 31.40 307 ⇑P **P** **00 15 05.0 +1.2**
VTS Vitosha 31.40 307 P **P** **00 15 05.1 +1.4**
VTS pmax pmax
comp=Z,14nm,1.1s
VTS Vitosha 31.40 307 IAmb IAmb 00 15 06.3
comp=Z,10nm,0.9s
DGZ Jazzator, Alta 31.65 38 ⇓*i*P **P** **00 15 06.0 +0.2**
DGZ pmax pmax
comp=Z,3.0nm,0.6s
BURAR Bucovina Array 31.95 317 ⇑P **P** **00 15 09.6 +1.1**
BURAR Bucovina Array 31.95 317 P **P** **00 15 09.5 +1.1**
FNA Florina 32.29 303 P **P** **00 15 15.4 +4.0**
FNA Florina 32.29 303 IAmb IAmb 00 15 13.5
comp=Z,7.8nm,1.0s
ZALV Zalesovo Beam 32.92 30 P **P** **00 15 15.9 -0.8**
comp=Z,4.0nm,0.3s,baz=247,slow=9.8,SNR=18
ZALV PcP **PcP** **00 18 00.2 -0.3**
comp=Z,0.7nm,0.5s,baz=228,slow=3.3,SNR=2.1
ZALV LR LR 00 30 16.3
comp=Z,131nm,19.9s,baz=226,slow=39
MDVR Moldovita 33.11 310 ⇓P **P** **00 15 19.9 +1.3**
DRGR 33.16 314 ⇓P **P** **00 15 19.1 0.0**
DRGR 33.16 314 P **P** **00 15 21.0 +1.9**
DRGR pmax pmax
comp=Z,35nm,0.9s
BZS Buzias 33.45 312 ⇑P **P** **00 15 22.8 +1.3**
BZS Buzias 33.45 312 P **P** **00 15 22.8 +1.3**
SIRR Siria 33.65 313 ⇓P **P** **00 15 23.8 +0.7**
KOLS Kolonicke sedl 34.30 318 *e*P **P** **00 15 30.1 +1.3**
KOLS pmax pmax
comp=Z,19nm,1.0s
KOLS Kolonicke sedl 34.30 318 *e*P **P** **00 15 30.1 +1.3**
KWP Kalwaria Pacla 34.35 319 P **P** **00 15 30.0 +0.8**
PRGR Permogore 34.75 350 *e*P **P** **00 15 31.2 -1.2**
PRGR pmax pmax
comp=Z,7.0nm,1.0s
KLMR Klimovskoe 35.20 345 *e*P **P** **00 15 33.2 -3.2**
KLMR pmax pmax
comp=Z,28nm,1.5s
KLMR Klimovskoe 35.20 345 *e*P **P** **00 15 33.3 -3.2**
KLMR AMP 00 15 37.2
comp=Z,28nm,1.5s
TIP Timpagrande 35.54 299 ⇓P **P** **00 15 39.1 -0.6**
TIP Timpagrande 35.54 299 P **P** **00 15 40.1 +0.5**
TIP IAmb IAmb 00 15 42.6
comp=Z,9.8nm,0.9s
VYHS Vyhne 36.23 315 *e*P **P** **00 15 46.1 +0.7**
VYHS Vyhne 36.23 315 *e*P **P** **00 15 46.1 +0.7**
SUW Suwalki 36.25 326 sP 00 16 07.5 +10
SUW **ScP** **00 21 47.8 -6.8**
SRO2 Moca 36.26 314 *e*P **P** **00 15 46.1 +0.5**
SRO2 pmax pmax
comp=Z,7.0nm,0.9s
SRO2 Moca 36.26 314 *e*P **P** **00 15 46.1 +0.5**
OJC Ojcow 36.30 318 *e*P **P** **00 15 46.6 +0.6**
OJC Ojcow 36.30 318 P **P** **00 15 47.4 +1.4**
OJC pmax pmax
comp=Z,25nm,1.0s
SRO Srobarova 36.33 314 *e*P **P** **00 15 47.3 +1.1**
SRO pmax pmax
comp=Z,9.0nm,1.2s
SRO Srobarova 36.33 314 *e*P **P** **00 15 47.3 +1.1**
KIJV Kijevo 36.57 307 *i* P **P** **00 15 48.2 -0.2**
SGRT San Giovanni R 36.64 303 P **P** **00 15 49.3 +0.2**
SGRT IAmb IAmb 00 15 57.1
comp=Z,17nm,1.0s
MOSL Moslavina 36.71 310 *i* P **P** **00 15 49.8 +0.2**
GTA Gaotai 36.80 61 *e*P **P** **00 15 51.4 +0.8**
GTA pP pP 00 15 56.2 -3.1
GTA sP sP 00 15 58.5 -4.4
GTA sS sS 00 21 42.8 -4.6
GTA pmax pmax
comp=Z,6.0nm,0.8s
GTA pmax pmax
comp=Z,75nm,7.3s
GTA LR LR
comp=Z,160nm,15.2s
GTA LR LR
comp=Z,140nm,16.2s
GTA LR LR
comp=Z,210nm,18.7s
MORI Morici 37.04 307 *i* P **P** **00 15 52.4 0.0**
ZIRJ Zirje 37.04 307 *i* P **P** **00 15 52.1 -0.3**
JAVC Velka Javorina 37.08 315 *e*P **P** **00 15 53.9 +1.2**
OKC Ostrava-Krasne 37.13 317 *e*P **P** **00 15 53.5 +0.4**
OKC *e* 00 16 01.5
OKC Ostrava-Krasne 37.13 317 *e*P **P** **00 15 53.5 +0.4**
OKC *ep*P **pP** **00 16 01.5 -0.3**
VSU Vasula 37.35 334 *d i*P **P** **00 15 54.4 -0.4**
VSU pmax pmax
comp=Z,84nm,0.6s
SOP Sopron 37.41 313 P **P** **00 15 56.7 +1.2**
SOP pmax pmax
comp=Z,14nm,1.7s
PAOL Paolisi 37.42 302 IAmb IAmb 00 16 11.1
comp=Z,6.9nm,0.8s
MORC Moravsky Berou 37.48 317 *e*P **P** **00 15 55.7 -0.4**
MORC Moravsky Berou 37.48 317 P **P** **00 15 56.2 +0.1**
MORC pmax pmax
comp=Z,21nm,1.4s
NVLJ Novalja 37.77 308 *i* P **P** **00 15 57.8 -0.7**
VRAC Vranov 37.90 316 *e*P **P** **00 15 59.7 +0.1**
CONA Conrad Observa 37.93 313 *i* P **P** **00 15 57.5 -2.5**
comp=Z,2.7nm,0.8s
KRUC Moravsky 37.94 315 *e*P **P** **00 16 00.2 +0.3**
ARSA Arzberg 37.96 312 *i* P **P** **00 16 01.1 +0.9**
comp=Z,3.4nm,0.7s
INTR Introdacqua 38.03 304 IAmb IAmb 00 16 04.3
comp=Z,15nm,1.0s
KRLC Kraliky 38.04 317 *e*P **P** **00 16 00.7 -0.1**
KRLC Kraliky 38.04 317 *e*P **P** **00 16 00.7 -0.1**
CORL Corleone 38.15 297 P **P** **00 16 02.8 +0.9**
CORL IAmb IAmb 00 16 09.1
comp=Z,12nm,0.9s
CLTB Caltabellotta 38.21 296 P **P** **00 16 03.5 +1.0**
DPC Dobruska-Polom 38.41 317 *e*P **P** **00 16 04.4 +0.4**
DPC Dobruska-Polom 38.41 317 *e*P **P** **00 16 04.4 +0.4**
AQU L'Aquila 38.45 304 P **P** **00 16 06.4 +2.0**
AQU pmax pmax
comp=Z,25nm,1.0s
AQU L'Aquila 38.45 304 IAmb IAmb 00 16 23.7
comp=Z,14nm,0.8s
OSTC Ostas 38.55 318 *e*P **P** **00 16 05.2 +0.1**
OSTC *ex* x 00 16 10.4
TREC Trest 38.58 315 *e*P **P** **00 16 06.0 +0.7**
TREC *e* 00 16 12.5
TREC Trest 38.58 315 *e*P **P** **00 16 06.0 +0.7**
TREC *ep*P **pP** **00 16 12.5 -1.6**
KSP Ksiaz 38.60 318 P **P** **00 16 07.7 +2.2**
KSP pmax pmax
comp=Z,6.0nm,2.2s
CHVC Chvalec 38.66 318 *e*P **P** **00 16 06.1 +0.1**
CHVC *ex* x 00 16 11.0
CHVC *ex* x 00 16 14.9
NRCA Norcia 38.73 305 IAmb IAmb 00 16 16.4
comp=Z,6.8nm,0.7s
TRI Trieste 38.77 309 P **P** **00 16 07.9 +0.9**
TRI pmax pmax
comp=Z,8.0nm,0.9s
TRI Trieste 38.77 309 P **P** **00 16 07.8 +0.9**
TRI IAmb IAmb 00 16 09.6
comp=Z,7.9nm,0.9s
MOA Molln 38.94 313 *i* P **P** **00 16 09.1 +0.7**
comp=Z,3.4nm,0.7s,SNR=5.8
CMAR Chiang Mai Arr 39.09 95 P **P** **00 16 10.0 0.0**
comp=Z,0.9nm,0.3s,baz=290,slow=5.3,SNR=1.4
CMAR PcP **PcP** **00 18 21.1 +1.5**
comp=Z,1.1nm,0.5s,baz=296,slow=5.0,SNR=5.2
CMAR LR LR 00 34 58.3
comp=Z,106nm,19.1s,baz=306,slow=40
KBA Koelnbreinsper 39.36 311 *i* P **P** **00 16 12.6 +0.6**
comp=Z,4.5nm,0.8s
GERES GERESS Array B 39.57 314 P **P** **00 16 13.2 -0.5**
comp=Z,1.1nm,0.5s,baz=116,slow=9.1,SNR=13
GERES LR LR 00 35 43.2

comp=Z,66nm,18.6s,baz=113,slow=41
STAL STALIGIAL 39.60 310 P **P** **00 16 14.4 +0.4**
FIA1 FINESS Array S 39.63 337 P **P** **00 16 14.3 +0.5**
FINES FINESS Array B 39.63 337 P **P** **00 16 14.1 +0.2**
comp=Z,16nm,0.5s,baz=138,slow=9.6,SNR=166
FINES LR LR 00 35 02.4
comp=Z,94nm,21.1s,baz=174,slow=40
KHC Kasperske Hory 39.73 315 *d* iP **P** **00 16 14.6 -0.4**
KHC pmax pmax
comp=Z,31nm,1.7s
KHC Kasperske Hory 39.73 315 *e*P **P** **00 16 14.9 -0.1**
KHC *ep*P **pP** **00 16 20.8 -2.9**
KHC *ex* x 00 16 30.6
ABTA Abfaltersbach 39.84 311 *i* P **P** **00 16 15.3 -0.7**
comp=Z,2.6nm,0.6s
LZH Lanzhou 39.89 66 *e*P **P** **00 16 15.7 -0.9**
LZH pP pP 00 16 18.9 -6.5
LZH *ep*P **PnPn** **00 17 51.8 -0.1**
LZH pmax pmax
comp=Z,22nm,1.3s
LZH pmax pmax
comp=Z,75nm,5.2s
LZH LR LR
comp=Z,260nm,13.2s
LZH LR LR
comp=Z,270nm,13.4s
LZH LR LR
comp=Z,430nm,16.5s
BRG Berggiesshubel 40.02 317 *e*P **P** **00 16 17.1 -0.2**
comp=Z,2.2nm,0.8s
comp=N,107nm,14.9s
comp=E,100nm,22.5s
comp=Z,177nm,16.7s
BRG Berggiesshubel 40.02 317 *e*P **P** **00 16 17.1 -0.2**
BRG pmax pmax
comp=Z,2.0nm,0.8s
BRG MLR MLR
comp=N,107nm,14.9s
BRG MLR MLR
comp=E,100nm,22.5s
BRG MLR MLR
comp=Z,177nm,16.7s
OSSC Osservatorio P 40.17 305 P **P** **00 16 19.6 +0.9**
CD2 Chengdu 40.23 74 P **P** **00 16 18.1 -1.3**
CD2 pmax pmax
comp=Z,20nm,0.5s
MOY Mondy 40.26 42 *e*P **P** **00 16 21.8 +2.4**
MOY pmax pmax
comp=Z,15nm,2.3s
CTI Castel Tesino 40.29 309 P **P** **00 16 20.2 +0.5**
CTI pmax pmax
comp=Z,4.0nm,1.1s
CTI Castel Tesino 40.29 309 P **P** **00 16 20.2 +0.5**
CASP Castiglione de 40.36 304 P **P** **00 16 19.6 -0.7**
CASP IAmb IAmb 00 16 21.7
comp=Z,9.1nm,1.0s
KMI Kunming 40.43 83 P **P** **00 16 22.2 +0.9**
KMI pP pP 00 16 28.8 -1.4
KMI sP sP 00 16 32.4 -1.4
KMI pmax pmax
comp=Z,14nm,1.1s
KMI pmax pmax
comp=Z,100nm,4.6s
KMI LR LR
comp=Z,140nm,36.8s
KMI LR LR
comp=Z,210nm,18.1s
KMI LR LR
comp=Z,200nm,25.6s
ZCCA Zocca 40.48 307 IAmb IAmb 00 16 36.9
comp=Z,10nm,0.7s
WTTA Wattenberg 40.53 311 *i* P **P** **00 16 22.0 +0.2**
comp=Z,13nm,1.3s
WATA Walderalm 40.59 311 *i* P **P** **00 16 22.3 0.0**
comp=Z,10nm,1.3s
CLL Collm 40.72 318 *i* P **P** **00 16 24.7 +1.6**
comp=Z,14nm,1.1s
CLL *i* sP **pP** **00 16 32.5 +0.6**
CLL *e*PP **PP** **00 17 57.0 0.0**
CLL *e*PPP PPP 00 18 25.0
CLL LmV 00 37 00.0
comp=Z,200nm,18.7s
CLL Collm 40.72 318 *i* P **P** **00 16 24.7 +1.6**
CLL *i* 00 16 32.5
CLL pmax pmax
comp=Z,14nm,1.1s
CLL Collm 40.72 318 IAmb IAmb 00 16 25.7
comp=Z,9.4nm,0.9s
SQTA Sankt Quirin 40.81 311 *i* P **P** **00 16 24.0 -0.1**
comp=Z,3.4nm,0.5s
MOTA Moosalm 40.91 311 *i* P **P** **00 16 24.8 -0.1**
comp=Z,5.2nm,0.9s,SNR=4.0
BSD Bornholm Skovb 41.01 324 *i* P **P** **00 16 24.2 -1.2**
BSD pmax pmax
comp=Z,23nm,0.5s
BSD Bornholm Skovb 41.01 324 *i* P **P** **00 16 24.2 -1.2**
comp=Z,23nm,0.5s
FETA Feichten 41.09 311 *i* P **P** **00 16 26.5 +0.1**
comp=Z,6.3nm,0.7s,SNR=9.3
RETA Reutte 41.16 311 *i* P **P** **00 16 26.3 -0.6**
comp=Z,2.1nm,0.8s
ZAK Zakamensk 41.25 44 *e*P **P** **00 16 31.2 +3.6**
ZAK pmax pmax
comp=Z,3.0nm,1.4s
VSL Villasalto 41.27 299 P **P** **00 16 29.0 +1.2**
VSL IAmb IAmb 00 16 44.3
comp=Z,7.6nm,0.9s
FUORN Ofenpass-Fuorn 41.33 310 P **P** **00 16 28.7 +0.2**
KEST Kesra 41.34 293 P **P** **00 16 30.4 +1.8**
comp=Z,7.3nm,0.8s,baz=261,slow=1.5,SNR=12
KEST Kesra 41.34 293 P **P** **00 16 30.4 +1.8**
KEST IAmb IAmb 00 16 32.7
comp=Z,9.8nm,0.9s
MSSA Maissana 41.51 306 P **P** **00 16 29.2 -0.6**
DAVA Damuels 41.71 311 *i* P **P** **00 16 31.3 -0.2**
comp=Z,7.4nm,0.8s
STU Stuttgart 42.45 313 P **P** **00 16 39.2 +1.9**
STU pmax pmax
comp=Z,14nm,0.6s
SONM Songino Array 42.68 49 P **P** **00 16 39.3 0.0**
comp=Z,2.3nm,0.9s,baz=250,slow=8.7,SNR=6.5
SONM LR LR 00 36 21.3
comp=Z,553nm,21.9s,baz=260,slow=39
SAOF Saorge 42.88 306 P **P** **00 16 43.1 +2.2**
SAOF pmax pmax
comp=Z,10.0nm,1.3s
ULN Ulaanbaatar 43.12 49 ⇑*e*P **P** **00 16 42.7 -0.3**
ULN pmax pmax
comp=Z,1.0nm,0.5s
GYA Guiyang 43.55 80 *e*P **P** **00 16 48.3 +1.6**
GYA pmax pmax
comp=Z,10.0nm,0.8s
BNI Bardonecchia 43.60 307 P **P** **00 16 48.1 +1.2**
BNI pmax pmax
comp=Z,9.0nm,0.9s
BNI Bardonecchia 43.60 307 IAmb IAmb 00 16 47.9
comp=Z,9.2nm,1.0s
RSL Roselend 43.71 308 P **P** **00 16 48.4 +0.7**
RSL pmax pmax
comp=Z,10.0nm,1.1s
SGF Sodankyl 43.85 343 P **P** **00 16 50.3 +2.0**
SGF pmax pmax
comp=Z,44nm,0.9s
XAN Xi'an 44.19 69 P **P** **00 16 55.5 +3.9**
XAN pmax pmax
comp=Z,8.0nm,0.9s
XAN LR LR
comp=Z,120nm,19.5s
XAN LR LR
comp=Z,220nm,20.6s
XAN LR LR
comp=Z,230nm,22.8s
WLF Walferdange 44.57 314 P **P** **00 16 53.7 -0.7**
WLF pmax pmax
comp=Z,8.0nm,0.9s
WLF Walferdange 44.57 314 P **P** **00 16 53.7 -0.7**
WLF IAmb IAmb 00 17 09.4
comp=Z,7.7nm,0.9s
NC602 NORSAR Array S 45.02 330 P **P** **00 16 57.1 -0.7**
NC602 NORSAR Array S 45.02 330 *e*P **P** **00 16 57.0 -0.8**
NORES NORESS Array B 45.02 330 P **P** **00 16 57.5 -0.3**
NORES pmax pmax
comp=Z,7.0nm,0.6s
NRIK Noril'sk 45.10 15 P **P** **00 16 58.6 +0.4**
comp=Z,1.4nm,0.4s,baz=187,slow=5.9,SNR=1.8
SSB Saint Sauveur 45.13 307 P **P** **00 16 59.2 +0.2**

SSB				pmax	pmax			
	comp=Z,7.0nm,0.9s							
SSB	**Saint Sauveur**	**45.13**	**307**	IAmb	IAmb	00 16 59.9		
	comp=Z,7.1nm,0.9s							
NB201	**NORSAR Array S**	**45.27**	**330**	P	**P**	**00 16 58.6**	**-1.2**	
NB2	**NORSAR Subarra**	**45.30**	**330**	P	**P**	**00 16 58.7**	**-1.4**	
	comp=Z,4.8nm,0.7s,baz=114,slow=7.9							
NB2	**NORSAR Subarra**	**45.30**	**330**	P	**P**	**00 16 58.7**	**-1.4**	
	baz=114,slow=7.9							
NOA	**NORSAR Array B**	**45.30**	**330**	P	**P**	**00 16 58.7**	**-1.4**	
	comp=Z,4.7nm,0.7s,baz=115,slow=7.9,SNR=48							
NOA				PP	**PP**	**00 18 47.5**	**+1.4**	
	comp=Z,0.7nm,0.8s,baz=114,slow=8.8,SNR=3.4							
NOA				LR	LR	00 38 43.6		
	comp=Z,65nm,20.0s,baz=135,slow=40							
NC303	**NORSAR Array S**	**45.32**	**331**	P	**P**	**00 17 00.7**	**+0.5**	
KONO	**Kongsberg**	**45.46**	**328**	*ceP*	**P**	**00 17 03.3**	**+2.0**	
KONO				pmax	pmax			
	comp=Z,83nm,2.5s							
KONO	**Kongsberg**	**45.46**	**328**	P	**P**	**00 17 00.4**	**-0.8**	
NBO00	**NORSAR Array S**	**45.49**	**330**	P	**P**	**00 17 00.5**	**-1.0**	
KEV	**Kevo**	**45.51**	**346**	P	**P**	**00 17 01.0**	**-0.6**	
KEV				pmax	pmax			
	comp=Z,24nm,0.9s							
KEV	**Kevo**	**45.51**	**346**	P	**P**	**00 17 01.0**	**-0.6**	
NC204	**NORSAR Array S**	**45.60**	**331**	P	**P**	**00 17 01.7**	**-0.8**	
ARCES	**ARCESS Array B**	**45.68**	**345**	P	**P**	**00 17 02.4**	**-0.5**	
	comp=Z,9.2nm,0.7s,baz=133,slow=8.4,SNR=39							
ARCES				LR	LR	00 40 20.6		
	comp=Z,71nm,19.5s,baz=152,slow=42							
ARE0	**ARCESS Array S**	**45.68**	**345**	*eP*	**P**	**00 17 03.1**	**+0.1**	
KTK1	**Kautokeino**	**45.84**	**344**	*eP*	**P**	**00 17 03.9**	**-0.3**	
HHC	**Hu-ho-hao-te**	**45.85**	**59**	P	**P**	**00 17 04.1**	**-0.7**	
HHC				sP	pP	00 17 12.8	-0.9	
HHC				S	**S**	**00 23 45.4**	**-1.8**	
HHC				pmax	pmax			
	comp=Z,8.0nm,0.8s							
HHC				pmax	pmax			
	comp=Z,47nm,5.1s							
HHC				LR	LR			
	comp=Z,130nm,16.5s							
HHC				LR	LR			
	comp=Z,130nm,17.1s							
HHC				LR	LR			
	comp=Z,78nm,18.0s							
SKAR	**Skarslia**	**46.45**	**329**	*eP*	**P**	**00 17 09.0**	**-0.2**	
MOR8	**Moi Rana**	**46.61**	**338**	*eP*	**P**	**00 17 09.2**	**-1.1**	
NSS	**Namsos**	**46.62**	**335**	*eP*	**P**	**00 17 10.3**	**0.0**	
DOMB	**Dombas**	**46.66**	**331**	*eP*	**P**	**00 17 10.9**	**+0.1**	
HAMF	**Hammerfest**	**46.93**	**345**	*eP*	**P**	**00 17 13.0**	**+0.3**	
KONS	**Konsvik**	**47.23**	**338**	*eP*	**P**	**00 17 14.4**	**-0.7**	
STEI	**Steigen**	**47.36**	**340**	*eP*	**P**	**00 17 16.9**	**+0.9**	
TRO	**Tromso**	**47.38**	**343**	*eP*	**P**	**00 17 15.8**	**-0.4**	
HYA	**Hoyanger**	**47.60**	**329**	*eP*	**P**	**00 17 18.6**	**+0.6**	
AKN	**Aaknes**	**47.61**	**331**	*eP*	**P**	**00 17 18.0**	**-0.1**	
ASK	**Askoy**	**47.82**	**328**	*eP*	**P**	**00 17 17.7**	**-2.0**	
BOD	**Bodaibo**	**49.20**	**36**	*eP*	**P**	**00 17 29.6**	**-0.8**	
BOD				pmax	pmax			
	comp=Z,21nm,0.8s							
WHN	**Wuhan**	**49.28**	**72**	P	P	00 17 38.5	+7.1	
BKNI	**Bangkinang**	**49.87**	**116**		pP	00 17 54.2	+9.1	
SESP	**Santiago Espad**	**50.63**	**298**	P	**P**	**00 17 43.2**	**+1.4**	
	SNR=21							
TDRA	**Tendrara**	**51.00**	**291**	P	**P**	**00 17 47.0**	**+2.3**	
	SNR=8.6							
EKA	**Eskdalemuir Ar**	**51.03**	**320**	P	**P**	**00 17 43.5**	**-0.8**	
ESK	**Eskdalemuir**	**51.05**	**320**	P	**P**	**00 17 43.0**	**-1.5**	
ESK				pmax	pmax			
	comp=Z,9.0nm,1.0s							
ESK	**Eskdalemuir**	**51.05**	**320**	P	**P**	**00 17 43.0**	**-1.5**	
ESK				IAmb	IAmb	00 17 46.3		
	comp=Z,9.0nm,1.0s							
ESDC	**Sonseca Array**	**51.55**	**300**	P	**P**	**00 17 49.1**	**+0.5**	
	comp=Z,4.0nm,0.6s,baz=72,slow=7.3,SNR=59							
GUD	**Guadarrama**	**51.59**	**301**	P	**P**	**00 17 50.3**	**+1.3**	
GUD				pmax	pmax			
	comp=Z,14nm,1.4s							
PAB	**San Pablo**	**51.86**	**300**	P	**P**	**00 17 51.9**	**+1.0**	
PAB				pmax	pmax			
	comp=Z,7.0nm,0.8s							
PAB	**San Pablo**	**51.86**	**300**	P	**P**	**00 17 51.9**	**+1.0**	
PAB				IAmb	IAmb	00 17 52.6		
	comp=Z,7.5nm,0.8s							
NJ2	**Nanjing**	**52.74**	**69**	*eP*	**P**	**00 17 53.3**	**-4.1**	
NJ2				pmax	pmax			
	comp=Z,17nm,0.5s							
HORN	**Hornachuelos**	**52.79**	**298**	P	**P**	**00 17 58.4**	**+0.6**	
	SNR=8.2							
PBRG	**Bragança**	**53.41**	**303**	*eP*	**P**	**00 18 03.7**	**+1.4**	
	comp=Z,24nm,1.8s							
MVO	**Moncorvo**	**53.70**	**302**	*eP*	**P**	**00 18 05.2**	**+0.7**	
	comp=Z,28nm,1.0s							
RSA	**Sarsar**	**53.75**	**294**	P	**P**	**00 18 07.0**	**+2.1**	
	SNR=7.7							
TOA0	**Torodi Ar. Sit**	**53.84**	**266**	P	**P**	**00 18 05.6**	**-0.1**	
TORD	**Torodi Ar. Bea**	**53.84**	**266**	P	**P**	**00 18 05.6**	**-0.1**	
	comp=Z,34nm,0.7s,baz=65,slow=7.4,SNR=302							
TORD				LR	LR	00 44 12.6		
	comp=Z,284nm,18.6s,baz=90,slow=40							
MTE	**Manteigas**	**54.19**	**301**	*eP*	**P**	**00 18 10.6**	**+2.6**	
	comp=Z,49nm,1.6s							
MTE	**Manteigas**	**54.19**	**301**	P	**P**	**00 18 08.8**	**+0.8**	
PVRL	**Vila Real**	**54.20**	**302**	*eP*	**P**	**00 18 09.1**	**+1.0**	
	comp=Z,30nm,1.8s							
PMRV	**Marv??o**	**54.21**	**300**	*eP*	**P**	**00 18 08.6**	**+0.4**	
	comp=Z,34nm,1.5s							
PCBR	**Castelo Branco**	**54.21**	**301**	*eP*	**P**	**00 18 10.4**	**+2.2**	
	comp=Z,36nm,1.0s							
PVIS	**Viseu**	**54.41**	**302**	*eP*	**P**	**00 18 11.7**	**+2.1**	
	comp=Z,32nm,1.2s							
TZRR	**Tazzarine**	**54.42**	**289**	P	**P**	**00 18 12.0**	**+2.1**	
	SNR=15							
PGAV	**Gavieira, Arco**	**54.52**	**303**	*eP*	**P**	**00 18 12.0**	**+1.5**	
PVAQ	**Vaqueiros**	**54.79**	**298**	P	**P**	**00 18 11.8**	**-0.6**	
PVAQ				IAmb	IAmb	00 18 15.2		
	comp=Z,10nm,1.0s							
PBEJ	**Beja**	**54.80**	**299**	*eP*	**P**	**00 18 13.8**	**+1.3**	
COI	**Coimbra**	**54.87**	**301**	P	**P**	**00 18 13.4**	**+0.5**	
COI				pmax	pmax			
	comp=Z,31nm,0.8s							
COI	**Coimbra**	**54.87**	**301**	*eP*	**P**	**00 18 14.3**	**+1.4**	
	comp=Z,58nm,0.9s							
COI	**Coimbra**	**54.87**	**301**	P	**P**	**00 18 13.4**	**+0.5**	
KBS	**Kingsbay**	**54.89**	**350**	P	**P**	**00 18 12.5**	**+0.1**	
KBS				pmax	pmax			
	comp=Z,10.0nm,0.8s							
KBS	**Kingsbay**	**54.89**	**350**	P	**P**	**00 18 12.5**	**+0.1**	
KBS	**Kingsbay**	**54.89**	**350**	*eP*	**P**	**00 18 13.0**	**+0.5**	
PCAS	**Casmilo, Conde**	**54.96**	**301**	*eP*	**P**	**00 18 15.9**	**+2.3**	
PSBE	**So Bento**	**55.27**	**300**	*eP*	**P**	**00 18 17.6**	**+1.7**	
PNCL	**Nicolau / Gran**	**55.30**	**299**	*eP*	**P**	**00 18 16.7**	**+0.7**	
ZEA	**Zeya**	**56.27**	**42**	*eP*	P	00 18 29.7	+6.9	
TIXI	**Tiksi**	**58.02**	**21**	↓*eP*	**P**	**00 18 35.2**	**+0.4**	
TIXI				pmax	pmax			
	comp=Z,1.0nm,0.7s							
TIXI	**Tiksi**	**58.02**	**21**	P	**P**	**00 18 34.3**	**-0.5**	
TIXI				IAmb	IAmb	00 18 49.8		
	comp=Z,3.2nm,0.7s							
KSRS	**Korea Array**	**58.87**	**61**	P	**P**	**00 18 39.8**	**-1.5**	
	comp=Z,1.5nm,0.6s,baz=282,slow=6.7,SNR=6.0							
KSRS				LR	LR	00 47 44.3		
	comp=Z,120nm,19.8s,baz=294,slow=40							
KLR	**Kul'dur**	**59.48**	**47**	↑*eP*	**P**	**00 18 44.6**	**-0.7**	
DAG	**Danmarks Havn**	**59.97**	**345**	*i* P	**P**	**00 18 47.4**	**-0.9**	
DAG				pmax	pmax			
	comp=Z,6.0nm,1.0s							
DAG	**Danmarks Havn**	**59.97**	**345**	*i* P	**P**	**00 18 47.4**	**-0.9**	
	comp=Z,6.1nm,1.0s							
USRK	**Ussuriysk Ar.**	**60.49**	**53**	LR	LR	00 47 57.5		
	comp=Z,202nm,20.2s,baz=275,slow=39							
SCO	**Scoresbysund**	**60.55**	**338**	P	**P**	**00 18 52.6**	**+0.3**	
SCO				pmax	pmax			
	comp=Z,5.0nm,1.0s							
SCO	**Scoresbysund**	**60.55**	**338**	P	**P**	**00 18 52.6**	**+0.3**	
SCO				IAmb	IAmb	00 18 54.4		
	comp=Z,5.2nm,1.0s							
LBTB	**Lobatse**	**60.84**	**213**	P	**P**	**00 18 56.2**	**+1.2**	
LBTB				pmax	pmax			
	comp=Z,4.0nm,0.7s							
LBTB	**Lobatse**	**60.84**	**213**	P	**P**	**00 18 56.2**	**+1.2**	
LBTB				IAmb	IAmb	00 18 57.9		
	comp=Z,4.0nm,0.7s							
DBIC	**Dimbokro**	**62.48**	**263**	P	**P**	**00 19 06.6**	**+0.4**	
	comp=Z,6.7nm,0.7s,baz=43,slow=7.1,SNR=13							
DBIC				LR	LR	00 46 18.9		
	comp=Z,163nm,19.2s,baz=80,slow=36							
DBIC	**Dimbokro**	**62.48**	**263**	P	**P**	**00 19 06.2**	**-0.1**	
KIC	**Kosan Boka**	**62.52**	**262**	*eP*	**P**	**00 19 06.7**	**+0.1**	
	comp=Z,20nm,0.8s							
TIC	**Toumodi**	**62.64**	**263**	*eP*	**P**	**00 19 07.0**	**-0.3**	
LIC	**Lamto**	**62.84**	**262**	*eP*	**P**	**00 19 08.6**	**0.0**	
	comp=Z,25nm,0.8s							
BOSA	**Boshof**	**64.04**	**211**	P	**P**	**00 19 17.1**	**+0.8**	
	comp=Z,3.2nm,0.5s,baz=12,slow=6.3,SNR=19							
BOSA				LR	LR	00 51 41.7		
	comp=Z,59nm,18.9s,baz=344,slow=40							
BOSA	**Boshof**	**64.04**	**211**	P	**P**	**00 19 16.9**	**+0.5**	
BOSA				IAmb	IAmb	00 19 34.7		
	comp=Z,3.1nm,0.8s							
SUMG	**Summit**	**65.49**	**341**	*i* P	**P**	**00 19 26.1**	**+0.5**	
SUMG				pmax	pmax			
	comp=Z,10.0nm,0.6s							
SUMG	**Summit**	**65.49**	**341**	*i* P	**P**	**00 19 26.1**	**+0.5**	
	comp=Z,10nm,0.6s							
MJAR	**Mashiro Arr**	**67.04**	**60**	LR	LR	00 52 54.0		
	comp=Z,28nm,18.1s,baz=280,slow=40							
YSS	**Yuzh-Sakhalins**	**67.17**	**48**	*eP*	**P**	**00 19 39.1**	**+2.8**	
YSS				pmax	pmax			
	comp=Z,20nm,1.2s							
YSS				MLR	MLR			
	comp=Z,100nm,16.0s							
SEY	**Seymchan**	**67.79**	**29**	↓*eP*	**P**	**00 19 40.3**	**+0.4**	
ERM	**Erimo**	**68.95**	**53**	P	**P**	**00 19 48.1**	**+0.6**	
ERM				pmax	pmax			
	comp=Z,20nm,1.0s							
ERM	**Erimo**	**68.95**	**53**	P	**P**	**00 19 48.1**	**+0.6**	
SUR	**Sutherland**	**69.28**	**213**	P	**P**	**00 19 51.3**	**+1.5**	
SUR				IAmb	IAmb	00 19 58.8		
	comp=Z,5.7nm,1.0s							
TULEG	**Thule**	**70.84**	**348**	P	**P**	**00 19 58.0**	**-0.6**	
TULEG				IAmb	IAmb	00 20 07.0		
	comp=Z,6.2nm,0.8s							
BILL	**Bilibino**	**71.18**	**22**	*eP*	**P**	**00 20 01.1**	**+0.3**	
BILL				pmax	pmax			
	comp=Z,1.0nm,0.9s							
PETK	**Petropavlovsk-**	**74.01**	**38**	LR	LR	00 55 11.2		
	comp=Z,77nm,19.8s,baz=246,slow=38							
C36M	**Paulatuk**	**83.13**	**1**	P	**P**	**00 21 07.2**	**-0.6**	
C36M				IAmb	IAmb	00 21 17.3		
	comp=Z,4.1nm,0.7s							
DRLN	**Deer Lake**	**83.95**	**323**	P	**P**	**00 21 12.3**	**-0.1**	
DRLN				IAmb	IAmb	00 21 13.1		
	comp=Z,4.3nm,0.8s							
SCHQ	**Schefferville**	**84.86**	**331**	P	**P**	**00 21 16.5**	**-0.5**	
	comp=Z,1.7nm,0.6s,baz=277,slow=1.1,SNR=4.2							
SCHQ	**Schefferville**	**84.86**	**331**	IAmb	IAmb	00 21 30.8		
	comp=Z,2.2nm,0.8s							
BPAW	**Bear Paw Mtn.**	**85.71**	**12**	P	**P**	**00 21 21.3**	**+0.2**	
BPAW				IAmb	IAmb	00 21 35.0		
	comp=Z,3.6nm,1.0s							
ILAR	**Eielson Array**	**85.79**	**10**	P	**P**	**00 21 20.1**	**-1.3**	
	comp=Z,0.5nm,0.6s,baz=313,slow=3.4,SNR=4.7							
ILAR				LR	LR	01 05 34.4		
	comp=Z,65nm,19.4s,baz=333,slow=40							
EGAK	**Eagle**	**86.58**	**8**		pP	00 21 32.7	-2.1	
DAWY	**Dawson**	**87.48**	**7**	P	**P**	**00 21 30.0**	**+0.3**	
DAWY				IAmb	IAmb	00 21 31.0		
	comp=Z,2.9nm,0.9s							
WRA	**Warramunga Arr**	**88.16**	**114**	P	**P**	**00 21 34.6**	**+1.0**	
	comp=Z,1.2nm,0.5s,baz=312,slow=4.1,SNR=7.6							
WRAB	**Tennant Creek**	**88.16**	**114**	‖*eP*	**P**	**00 21 34.2**	**+0.6**	
MCARA	**McCarthy VSAT**	**89.58**	**10**		pP	00 21 57.3	+8.1	
ASAR	**Alice Springs**	**89.69**	**117**	P	**P**	**00 21 41.1**	**+0.3**	
	comp=Z,0.7nm,0.5s,baz=302,slow=4.8,SNR=12							
ASAR				LR	LR	01 04 45.9		
	comp=Z,33nm,18.6s,baz=317,slow=38							
YKA	**Yellowknife Ar**	**89.79**	**356**	P	**P**	**00 21 40.6**	**+0.1**	
	comp=Z,1.4nm,0.7s,baz=3.8,slow=4.7,SNR=22							
YKA				LR	LR	01 05 29.3		
	comp=Z,53nm,21.8s,baz=0.0,slow=38							
ULM	**Lac du Bonnet**	**98.77**	**343**	LR	LR	01 10 29.6		
	comp=Z,35nm,20.0s,baz=72,slow=38							
STKA	**Stephens Creek**	**99.59**	**121**	LR	LR	01 06 45.6		
	comp=Z,48nm,20.4s,baz=228,slow=35							
TXAR	**Lajitas Array**	**120.39**	**341**	PKP	**PKPdf**	**00 27 33.8**	**-0.5**	
	comp=Z,0.6nm,0.6s,baz=162,slow=1.1,SNR=10							
LPAZ	**La Paz**	**128.66**	**271**	PKP	**PKiKP**	**00 27 52.1**	**+0.5**	
	baz=146,slow=3.6							

*SKO **09** 00:21:22.2, 40.69N×20.50E, h4km*
ATH 09 00:21:23.2, 40.68N×20.66E, h25km±5km, ML1.7/2, 2D, Error ellipse: s-maj=7.2km s-min=2.1km az=131.0, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEST	**Nestorio**	**0.39**	**132**	P	Pb	00 21 31.5	-0.2
NEST				S	Sb	00 21 38.0	+0.5
NEST				AML	AML	00 21 42.2	
	comp=N,125μm,0.4s						
NEST				AML	AML	00 21 45.2	
	comp=E,132μm,0.6s						
OHR	**Ohrid**	**0.45**	**13**	↓*i* Pg	Pb	00 21 31.3	-1.3
OHR				*i* Sg	Sb	00 21 38.9	0.0
OHR				*e*Lg	Lg	00 21 40.0	
	comp=E,62nm,0.5s						
OHR	**Ohrid**	**0.45**	**13**	↓*i* Pg	Pb	00 21 31.3	-1.3
OHR				*i* Sg	Sb	00 21 38.9	0.0
OHR				*e*Lg	Lg	00 21 40.0	
	comp=E,62nm,0.5s						
FNA	**Florina**	**0.55**	**79**	P	Pb	00 21 34.1	-0.2
FNA				S	Sn	00 21 43.5	-0.5
FNA				AML	AML	00 21 44.4	
	comp=N,321μm,0.3s						
FNA				AML	AML	00 21 44.6	
	comp=E,378μm,0.4s						
FNA	**Florina**	**0.55**	**79**		Pb	00 21 34.2	-0.1
KPRO	**Kipourio**	**0.90**	**143**	P	Pn	00 21 40.5	+0.2
KZN	**Kozani**	**0.92**	**113**	P	Pn	00 21 40.9	+0.2
IGT	**Igoumenitsa**	**1.17**	**193**	P	Pb	00 21 45.8	+1.1
STIP	**Stip**	**1.54**	**48**	*i* Pn	Pb	00 21 54.1	+3.2
STIP	**Stip**	**1.54**	**48**	*i* Pn	Pb	00 21 54.1	+3.2
KNT	**Kendrikon**	**1.76**	**73**	P	Pb	00 21 54.5	-0.3

*IDC **09** 01:06:06.4±1.3, 34.67N×23.87E, h0km, mb3.7/6, mb1 3.6/11, mb1mx3.4/39, mbtmp3.6/11, ML3.2/5, Error ellipse: s-maj=24.0km s-min=18.4km az=166.0*
*THE **09** 01:06:11.5, 34.64N×23.92E, h22km±1km, ML3.1/5, Error ellipse: s-maj=2.0km s-min=1.3km az=200.0*
*ATH **09** 01:06:11.4, 34.74N×23.88E, h29km±1km, ML3.3/4, Error ellipse: s-maj=7.8km s-min=1.7km az=41.0*
ISC 09 01:06:10.0±1.2, 34.66N±0.06×23.81E±0.05, h32km±7km, n51, σ2.9 18/64, mb3.6/6, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.29**	**52**	P	**Pb**	**01 06 17.4**	**-0.2**
GVD				S	**Sb**	**01 06 22.1**	**-0.6**
	28μm,0.3s						
GVD	**Gavdhos**	**0.29**	**52**	P	**Pb**	**01 06 17.5**	**-0.1**
GVD				S	**Sb**	**01 06 22.4**	**-0.4**
GVD				AML	AML	01 06 23.3	
	comp=N,71348μm,0.3s						
GVD				AML	AML	01 06 24.3	
	comp=E,40908μm,0.4s						
IMMV	**Iera Moni Meta**	**0.81**	**10**	P	**Pb**	**01 06 26.0**	**+0.3**
IMMV				S	**Sn**	**01 06 39.0**	**+2.8**
	comp=E,2μm,0.4s						
IMMV	**Iera Moni Meta**	**0.81**	**10**	P	**Pb**	**01 06 26.1**	**+0.3**
IMMV				AML	AML	01 06 43.2	
	comp=E,5141μm,0.4s						
IMMV				AML	AML	01 06 45.7	
	comp=N,4742μm,0.5s						
VAM	**Vamos**	**0.81**	**23**	P	**Pb**	**01 06 25.6**	**-0.1**
VAM	**Vamos**	**0.81**	**23**	P	**Pb**	**01 06 25.6**	**-0.1**
VAM				AML	AML	01 06 43.9	
	comp=N,2706μm,0.4s						
VAM				AML	AML	01 06 44.4	
	comp=E,3076μm,0.5s						
CHAN	**Chania**	**0.88**	**13**	P	**Pb**	**01 06 27.5**	**+0.7**
CHAN				S	**Sn**	**01 06 39.6**	**+1.8**
	comp=E,692nm,0.7s						
TMBK	**Timbaki Herakl**	**0.89**	**62**	P	**Pb**	**01 06 26.5**	**-0.5**
TMBK				S	**Sb**	**01 06 38.0**	**-0.6**
RODP	**Rodopos**	**0.90**	**358**	P	**Pn**	**01 06 28.8**	**+2.3**
SIVA	**Sivas**	**0.90**	**66**	P	**Pb**	**01 06 28.6**	**-0.3**
SIVA				S	**Sb**	**01 06 38.5**	**-0.3**
	comp=E,2μm,0.6s						
SIVA	**Sivas**	**0.90**	**66**	P	**Pb**	**01 06 27.0**	**-0.2**
SIVA				AML	AML	01 06 46.3	
	comp=N,3599μm,0.5s						
SIVA				AML	AML	01 06 46.6	
	comp=E,5224μm,0.5s						
PRNS	**Prines Rethymn**	**0.91**	**39**	P	**Pb**	**01 06 26.4**	**-0.9**
PRNS				S	**Sb**	**01 06 37.5**	**-1.5**
IDI	**Anoyia**	**1.09**	**54**	P	**Pn**	**01 06 29.3**	**+0.2**
IDI				S	**Sb**	**01 06 44.0**	**-0.3**
	comp=E,358nm,0.3s						
IDI	**Anoyia**	**1.09**	**54**	Pn	**Pn**	**01 06 29.4**	**+0.2**
	comp=E,22nm,0.3s,baz=237,slow=13,SNR=161						
IDI				Sn	**Sn**	**01 06 45.7**	**+2.6**
	comp=E,48nm,0.3s,baz=338,slow=16,SNR=14						
IDI				LR	LR	01 07 13.0	
	comp=E,45nm,19.5s,baz=259,slow=64						
LAST	**Lasithi**	**1.47**	**69**	P	**Pn**	**01 06 35.6**	**+1.4**
LAST	**Lasithi**	**1.47**	**69**	P	**Pb**	**01 06 36.6**	**-0.1**
NPS	**Neapolis**	**1.60**	**67**	P	**Pn**	**01 06 38.0**	**+1.9**
NPS	**Neapolis**	**1.60**	**67**	P	**Pb**	**01 06 38.8**	**-0.2**
THR6	**Thira Island,**	**2.14**	**37**	P	**Pn**	**01 06 45.5**	**+2.1**
THR5	**Thira Island,**	**2.16**	**35**	P	**Pn**	**01 06 45.7**	**+2.0**
VLI	**Veliai**	**2.17**	**341**	P	**Pn**	**01 06 47.3**	**+3.4**
VLI	**Veliai**	**2.17**	**341**	P	**Pn**	**01 06 47.1**	**+3.2**
DID	**Didima**	**2.88**	**351**	P	**Pn**	**01 06 55.6**	**+1.9**
VLY	**Voula,Athens**	**3.19**	**360**	P	**Pn**	**01 06 59.5**	**+1.6**
AMT	**Artemida-Makis**	**3.33**	**330**	P	**Pn**	**01 07 03.5**	**+3.6**
ARG	**Arkhangelos**	**3.86**	**65**	P	**Pn**	**01 07 08.4**	**+1.4**
LKR	**Lokris**	**4.04**	**351**	P	**Pn**	**01 07 11.8**	**+2.3**
ANX	**Ano Chora**	**4.21**	**339**	P	**Pn**	**01 07 15.1**	**+3.1**
AGG	**Agios Georgios**	**4.51**	**345**	P	**Pn**	**01 07 18.8**	**+2.7**
EVR	**Evrytania**	**4.54**	**340**	P	**Pn**	**01 07 20.0**	**+3.4**
VAE	**Valguarnera**	**8.11**	**293**	Sn	**Sn**	**01 09 32.2**	**-3.9**
	comp=E,0.4nm,0.3s,baz=307,slow=20,SNR=1.4						
DBRK	**Dubrovnik**	**9.14**	**333**	*e*Pn	**Pn**	**01 08 18.6**	**-0.9**
DBRK				Sn	**Sn**	**01 09 55.5**	**-5.7**
BRTR	**Keskin Array B**	**9.33**	**54**	Pn	**Pn**	**01 08 24.2**	**+1.8**
	comp=E,0.0nm,0.3s,baz=244,slow=12,SNR=2.9						
STON	**Ston**	**9.48**	**332**	*e*Pn	**Pn**	**01 08 23.2**	**-1.1**
MMAI	**Mount Meron Ar**	**9.79**	**96**	Pn	**Pn**	**01 08 27.8**	**-0.8**
	comp=E,0.5nm,0.3s,baz=293,slow=11,SNR=9.5						
MMAI				Sn	**Sn**	**01 10 11.8**	**-5.5**
	comp=E,1.1nm,0.3s,baz=297,slow=18,SNR=5.5						
MAKA	**Makarska**	**10.10**	**331**	*e*Pn	**Pn**	**01 08 32.1**	**-0.7**
MAKA				Sn	Sn	01 10 18.8	-6.1
EIL	**Elat**	**10.67**	**115**	Pn	**Pn**	**01 08 39.8**	**-0.9**
	comp=E,0.2nm,0.3s,baz=266,slow=2.7,SNR=6.7						
EIL				Sn	Sn	01 10 30.1	-9.0
	comp=E,0.4nm,0.3s,baz=252,slow=2.1,SNR=7.5						
KIJV	**Kijevo**	**10.95**	**331**	*e*Pn	**Pn**	**01 08 44.1**	**-0.2**
ZIRJ	**Zirje**	**10.99**	**327**	*e*Pn	**Pn**	**01 08 44.5**	**-0.3**
MORI	**Morici**	**11.13**	**328**	*e*Pn	**Pn**	**01 08 46.6**	**-0.2**
MORI				Sn	**Sn**	**01 10 44.5**	**-5.5**
DUGI	**Dugi Otok**	**11.51**	**327**	*i* Pn	**Pn**	**01 08 52.6**	**+0.6**
DUGI				Sn	**Sn**	**01 10 54.8**	**-4.7**
NVLJ	**Novalja**	**12.05**	**328**	*e*Pn	**Pn**	**01 08 59.6**	**+0.3**
MOSL	**Moslavina**	**12.19**	**336**	*e*Pn	**Pn**	**01 08 59.6**	**-1.7**
GERES	**GERESS Array B**	**16.03**	**335**	Pn	**Pn**	**01 09 57.1**	**+4.0**
	comp=E,0.0nm,0.3s,baz=152,slow=12,SNR=5.9						
AKASG	**Malin Array Be**	**16.51**	**12**	Pn	**Pn**	**01 10 00.1**	**+1.0**
	comp=E,0.6nm,0.3s,baz=210,slow=10,SNR=1.8						
HFS	**Hagfors**	**26.33**	**349**	P	**P**	**01 11 43.4**	**+0.8**
	comp=E,0.9nm,0.5s,baz=144,slow=11,SNR=8.4						
NOA	**NORSAR Array B**	**27.62**	**347**	P	**P**	**01 11 54.8**	**+0.5**
	comp=E,0.2nm,0.5s,baz=154,slow=10,SNR=2.2						
TORD	**Torodi Ar. Bea**	**29.32**	**228**	P	**P**	**01 12 12.4**	**+2.7**
	comp=E,0.4nm,0.6s,baz=41,slow=8.2,SNR=3.3						
ARCES	**ARCESS Array B**	**34.94**	**1**	P	**P**	**01 12 57.9**	**-0.7**
	comp=E,1.0nm,0.7s,baz=184,slow=10,SNR=2.6						
MKAR	**Makanchi Array**	**44.38**	**56**	P	**P**	**01 14 22.4**	**+0.2**
	comp=E,0.3nm,0.3s,baz=273,slow=8.4,SNR=12						
ZALV	**Zalesovo Beam**	**46.15**	**46**	P	**P**	**01 14 30.9**	**-0.3**
	comp=E,0.6nm,0.3s,baz=264,slow=8.7,SNR=4.4						

*DJA **09** 01:39:14.8±1.0, 0.7

Mw3.7,1D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARGC	**Ariguani, Magd**	**1.21**	**274**	⇓*i*P	Pn	01 54 41.7	0.0
ARGC				*e*S	Sn	01 55 00.2	-0.1
ARGC				*i*		01 55 02.5	
	comp=Z,785nm,0.2s						
SMLC	**San Martn de**	**1.42**	**227**	*e*P	Pn	01 54 43.1	-0.9
SMLC				*e*S	Sn	01 55 03.9	-0.5
OCAC	**Ocana**	**1.55**	**191**	*e*P	Pn	01 54 45.1	-0.5
OCAC				*e*S	Sn	01 55 06.4	-1.0
SMRC	**Santa Marta, M**	**1.82**	**319**	*e*P	Pn	01 54 47.6	-1.0
SMRC				*e*S	Sn	01 55 11.9	-0.8
SMRC				*i*		01 55 21.1	
	comp=Z,200nm,0.2s						
URIC	**Uribia, Colomb**	**2.17**	**28**	*e*P	Pn	01 54 52.2	-0.6
URIC				*e*S	Sn	01 55 20.3	0.0
URIC				*i*		01 55 23.5	
	comp=Z,324nm,0.2s						
PAMC	**Pamplona, Colo**	**2.44**	**173**	*e*P	Pn	01 54 55.9	-0.9
PAMC				*e*S	Sn	01 55 27.6	+0.4
PAMC				*i*		01 55 35.4	
	comp=Z,329nm,0.2s						
SDV	**Santo Domingo**	**2.51**	**110**	*e*P	Pn	01 54 55.4	-2.1
SDV				*e*S	Sn	01 55 25.9	-2.5
SDV				*i*		01 55 31.8	
	comp=Z,178nm,0.7s						
ZARC	**Zaragoza, Cauc**	**2.91**	**219**	*e*P	Pn	01 55 04.0	+1.6
ZARC				*e*S	Sn	01 55 37.7	+0.4
ZARC				*i*		01 55 51.4	
	comp=Z,144nm,0.7s						
UREC	**San Jos de Ur**	**3.19**	**231**	*e*P	Pn	01 55 09.8	+3.6
UREC				*e*S	Sn	01 55 50.6	+6.6
UREC				*i*		01 56 05.5	
	comp=Z,52nm,0.5s						
LCBC	**Los crdobas,**	**3.43**	**255**	*e*P	Pn	01 55 13.3	+4.1
LCBC				*e*S	Sn	01 55 51.2	+1.8
LCBC				*i*		01 56 05.5	
	comp=Z,114nm,0.9s						
SPBC	**San Pablo de B**	**4.22**	**194**	*e*P	Pn	01 55 23.5	+3.6
SPBC				*e*S	Sn	01 56 07.6	-1.0
SPBC				*i*		01 56 22.1	
	comp=Z,31nm,0.6s						
HELC	**Santa Helena**	**4.34**	**215**	*e*P	Pn	01 55 26.4	+4.7
HELC				*e*S	Sn	01 56 18.2	+6.5
HELC				*i*		01 56 35.4	
	comp=Z,26nm,0.4s						
NORC	**Norcasia**	**4.57**	**204**	*e*P	Pn	01 55 28.8	+4.4
NORC				*e*S	Sn	01 56 19.1	+2.3
CBOC	**Ciudad Bolivar**	**4.89**	**218**	*e*P	Pn	01 55 33.6	+4.8
ORTC	**Ortega, Tolima**	**6.23**	**201**	*e*P	Pn	01 55 49.2	+2.4
ORTC				*i*		01 57 11.1	
	comp=Z,8.1nm,0.9s						
PRAC	**Prado**	**6.30**	**197**	*e*P	Pn	01 55 47.7	0.0
PRAC				*e*S	Sn	01 57 06.2	+7.7
PRAC				*i*		01 57 16.8	
	comp=Z,8.9nm,0.9s						

*ASRS **09** 02:14:02.1±0.2,52°.2N±1°.0×91°.6E±0°.9, h5km, MLh4.1/23, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
*MOS **09** 02:14:05.8±2.5,52°.25N×91°.74E, h10km, mb3.9/2, Error ellipse: s-maj=14.8km s-min=11.3km az=55.6*
*NNC **09** 02:14:07.7±2.8,52°.29N×91°.45E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=23.5km s-min=19.5km az=68.0*

ISC 09 02:14:04.4±1.2,52°.28N±0°.02×92°.01E±0°.02,h2km±9km, n64,σ2s01/94,8C-11D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJOS	**Djoyskaya Sosn**	**0.63**	**324**	Pg	**Pg**	**02 14 17.5**	**+1.0**
DJOS				Sg	**Sg**	**02 14 25.7**	**+1.0**
DJO	**Djoy, Khakassi**	**0.69**	**316**	Pg	**Pg**	**02 14 18.1**	**+0.4**
DJO				Sg	**Sg**	**02 14 27.0**	**+0.3**
ARDR	**Aradan**	**0.92**	**71**	Pg	**Pn**	**02 14 24.7**	**+0.3**
ARDR				Sg	**Sn**	**02 14 38.0**	**-0.2**
ARDR	**Aradan**	**0.92**	**71**	PG	**Pn**	**02 14 24.8**	**+0.4**
ARDR						02 14 38.0	
VEH	**Verkhnyaya Baz**	**1.41**	**314**	Pg	**Pn**	**02 14 31.2**	**-0.1**
VEH				Sg	**Sn**	**02 14 49.0**	**-1.4**
ABNR	**Abakan**	**1.49**	**347**	Pg	**Pg**	**02 14 33.7**	**+0.9**
ABNR				Sg	**Sg**	**02 14 54.0**	**+1.9**
ABNR	**Abakan**	**1.49**	**347**	*d*iPG	**Pg**	**02 14 33.7**	**+0.9**
KZLR	**Kyzyl**	**1.62**	**110**	Pg	**Pg**	**02 14 36.9**	**+1.6**
KZLR				Sg	**Sg**	**02 14 59.3**	**+3.0**
KZLR	**Kyzyl**	**1.62**	**110**	*de*PN	**Pg**	**02 14 36.2**	**+0.8**
LUZB	**Luzhba, Kemero**	**2.33**	**308**	Pg	**Pn**	**02 14 44.5**	**+0.7**
LUZB				Sg	**Sb**	**02 15 15.0**	**-1.4**
TDJR	**Todzha**	**2.51**	**86**	Pg	**Pg**	**02 14 51.7**	**-0.8**
TDJR				Sg	**Sg**	**02 15 25.4**	**+0.4**
TDJR	**Todzha**	**2.51**	**86**	PN	**Pb**	**02 14 49.1**	**-1.1**
TDJR						02 15 25.3	
TASR	**Tashtagol**	**2.57**	**282**	Pn	**Pn**	**02 14 47.1**	**+0.2**
TASR				Pg	**Pb**	**02 14 49.3**	**-1.8**
TASR				Sg	**Sb**	**02 15 21.3**	**-1.8**
TASR	**Tashtagol**	**2.57**	**282**	PN	**Pn**	**02 14 47.5**	**+0.5**
TASR						02 15 21.2	
MINR	**Mina**	**2.93**	**26**	Pn	**Pb**	**02 14 55.4**	**-1.8**
MINR				Pg	**Pg**	**02 15 00.0**	**-0.4**
MINR				Sg	**Sg**	**02 15 40.4**	**+2.0**
MINR	**Mina**	**2.93**	**26**	PN	**Pg**	**02 14 59.1**	**-1.4**
MINR						02 15 40.3	
ULGR	**Ulagan, Altay**	**3.03**	**238**	Pn	**Pn**	**02 14 53.3**	**-0.1**
ULGR				Pg	**Pb**	**02 14 58.1**	**-0.9**
ULGR				Sg	**Sb**	**02 15 34.9**	**-1.5**
ULGR	**Ulagan, Altay**	**3.03**	**238**	PN	**Pb**	**02 14 58.2**	**-0.8**
ULGR						02 15 34.9	
CUR	**Chagan-Uzun**	**3.17**	**228**	Pg	**Pb**	**02 15 00.1**	**-1.4**
CUR				Sg	**Sb**	**02 15 38.5**	**-2.2**
ORY	**Orie**	**3.29**	**33**	Pg	**Pg**	**02 15 09.5**	**+2.1**
ORY				Sg	**Sg**	**02 15 49.5**	**-0.5**
ORY	**Orie**	**3.29**	**33**	⇓*e*PN	**Pb**	**02 14 59.9**	**-3.5**
SLNR	**Muhor-Tarhata,**	**3.36**	**223**	Sg	**Sb**	**02 15 46.2**	**+0.1**
AKAR	**Aktash**	**3.38**	**236**	Pg	**Pb**	**02 15 04.5**	**-0.6**
AKAR				Sg	**Sb**	**02 15 44.8**	**-1.8**
AKAR	**Aktash**	**3.38**	**236**	PN	**Pn**	**02 14 58.4**	**+0.1**
AKAR						02 15 44.8	
CHBI	**Chibit, Altay**	**3.45**	**237**	Sg	**Sb**	**02 15 48.3**	**-0.2**
ELT	**Eltsovka**	**3.64**	**288**	Pg	**Pb**	**02 15 07.5**	**-1.9**
ELT				Sg	**Sb**	**02 15 52.2**	**-1.7**
GALT	**Gorno-Altaysk,**	**3.75**	**267**	Pg	**Pb**	**02 15 10.0**	**-1.3**
GALT				Sg	**Sb**	**02 15 54.6**	**-2.5**
ELDR	**Elanda**	**3.83**	**256**	Pg	**Pb**	**02 15 11.3**	**-1.3**
ELDR				Sg	**Sb**	**02 15 57.9**	**-1.5**
DGZ	**Jazzator, Alta**	**3.88**	**230**	Pg	**Pb**	**02 15 14.3**	**+0.8**
DGZ				Sg	**Sb**	**02 16 00.1**	**-0.8**
DGZ	**Jazzator, Alta**	**3.88**	**230**	*de*PN	**Pn**	**02 15 05.5**	**+0.4**
GZL	**Zheleznogorsk**	**4.09**	**12**	Sg	**Sg**	**02 16 16.0**	**+0.4**
TUNR	**Tungur**	**4.15**	**241**	Pg	**Pb**	**02 15 19.7**	**+1.5**
TUNR				Sg	**Sb**	**02 16 09.5**	**+0.8**
SHTK	**Zheleznogorsk-**	**4.17**	**12**	Pg	**Pb**	**02 15 14.9**	**-3.4**
SHTK				Sg	**Sb**	**02 16 10.6**	**+1.6**
GZLN	**Zheleznogorsk**	**4.23**	**13**	Pg	**Pg**	**02 15 23.1**	**-2.3**
GZLN				Sg	**Sg**	**02 16 19.2**	**-1.0**
SALR	**Pechorkino, Sa**	**4.34**	**302**	Pg	**Pb**	**02 15 20.5**	**-0.8**
SALR				Sg	**Sb**	**02 16 15.7**	**+1.7**
ZAA0	**Zalesovo Array**	**4.64**	**294**	⇓Pn	**Pn**	**02 15 15.8**	**+0.4**
ZAA0				⇑Pg	**Pb**	**02 15 25.0**	**-1.4**
	1.1nm,0.5s						
ZAA0				⇑Lg	Lg	02 16 25.6	
	6.5nm,0.5s						
ZALV	**Zalesovo Beam**	**4.64**	**294**	*i* PN pmax	**Pn** pmax	**02 15 16.1**	**+0.7**
ZALV							
	comp=Z,4.0nm,0.3s						
KEM	**Kemerovo**	**4.66**	**314**	Pg	**Pb**	**02 15 27.3**	**+0.6**
KEM				Sg	**Sb**	**02 16 26.6**	**+3.4**
UKR	**Ust'-Kan**	**4.71**	**256**	Pg	**Pb**	**02 15 28.6**	**+1.0**
UKR				Sg	**Sb**	**02 16 27.2**	**+2.5**
MOY	**Mondy**	**5.59**	**93**	Pg	**Pb**	**02 15 45.7**	**+3.1**
MOY				Sg	**Sg**	**02 17 01.1**	**-2.7**
NVSII	**Novosibirsk**	**5.82**	**300**	Pg	**Pb**	**02 15 49.7**	**+3.2**
NVSII				Sg	**Sb**	**02 16 59.6**	**+3.0**
NVS	**Novosibirsk**	**5.82**	**300**	Sg	**Sb**	**02 17 00.1**	**+3.5**
NHES	**Novosibirsk, N**	**5.96**	**299**	Sg	**Sg**	**02 17 09.9**	**-5.7**
BSTK	**Bystrovka, Nov**	**6.04**	**296**	Pg	**Pb**	**02 15 50.7**	**+0.4**
BSTK				Sg	**Sb**	**02 17 10.7**	**+7.8**
ALXA	**Alekseevka, NS**	**6.21**	**299**	Sg	**Sg**	**02 17 24.2**	**+0.7**
ZSN	**Zaisan**	**6.68**	**226**	Pg	Pg	02 16 07.2	-5.1
	comp=Z,7.3nm,0.4s						
ZSN				Lg	Lg	02 17 30.9	
	comp=Z,29nm,0.7s						
TLY	**Talaya**	**7.21**	**90**	Sg	**Sg**	**02 17 52.1**	**-3.8**
ZAK	**Zakamensk**	**7.32**	**101**	Sg	**Sg**	**02 17 55.8**	**-3.3**
SEM	**Semipalatinsk**	**7.60**	**260**	Pg	Pb	02 16 23.4	+6.5
	comp=Z,6.5nm,0.4s						
SEM				Lg	Lg	02 17 58.5	
	comp=Z,34nm,0.8s						
MK31	**Makanchi Array**	**8.37**	**233**	Pn	**Pn**	**02 16 06.1**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=60,slow=13,SNR=12						
MK31				⇑Lg	Lg	02 18 25.8	
	comp=Z,10nm,0.8s,baz=53,slow=26,SNR=5.7						
MK31	**Makanchi Array**	**8.37**	**233**	P	**Pn**	**02 16 06.1**	**-0.5**
MKAR	**Makanchi Array**	**8.37**	**233**	Sg	Sg	02 18 22.9	-10
MKAR	**Makanchi Array**	**8.37**	**233**	*i* P	**Pn**	**02 16 06.4**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	**Kurchatov**	**8.50**	**265**	Pn	**Pn**	**02 16 07.3**	**-1.1**
KURK				Sg	Sg	02 18 23.7	-13
KURK	**Kurchatov**	**8.50**	**265**	⇑Pn	**Pn**	**02 16 05.9**	**-2.5**
	comp=Z,1.6nm,0.4s						
KURK				⇑Sn	**Sn**	**02 17 41.2**	**-3.6**
	comp=Z,10nm,0.9s						
KURK				⇓Lg	Lg	02 18 25.3	
	comp=Z,21nm,0.8s						
KURK	**Kurchatov**	**8.50**	**265**	*de*P	**Pn**	**02 16 08.5**	**+0.1**
MAKZ	**Makanchi**	**8.51**	**234**	Sg	Sg	02 18 23.4	-14
MAKZ	**Makanchi**	**8.51**	**234**	⇓Pn	**Pn**	**02 16 09.6**	**+1.0**
	comp=Z,2.9nm,0.9s						
MAKZ				⇓Lg	Lg	02 18 27.1	
	comp=Z,42nm,1.4s						
MAKZ	**Makanchi**	**8.51**	**234**	P	**Pn**	**02 16 09.6**	**+1.0**
KURBB	**Kurchatov Arra**	**8.58**	**264**	⇑Pn	**Pn**	**02 16 07.8**	**-1.7**
	comp=Z,3.5nm,0.5s						
KURBB				⇑Sn	**Sn**	**02 17 45.0**	**-1.8**
	comp=Z,26nm,0.6s						
KURBB				⇓Lg	Lg	02 18 26.7	
	comp=Z,53nm,0.8s						
KURBB	**Kurchatov Arra**	**8.58**	**264**	P	**Pn**	**02 16 07.8**	**-1.7**
KURBB				S	**Sn**	**02 17 45.0**	**-1.8**
BRVK	**Borovoye**	**13.20**	**282**	*i*P	**Pn**	**02 17 09.7**	**-3.0**
TIXI	**Tiksi**	**25.30**	**26**	⇓*e*P	**P**	**02 19 32.4**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BILL	**Bilibino**	**37.46**	**37**	*e*P	**P**	**02 21 21.7**	**+3.0**
BILL				pmax	pmax		
	comp=Z,1.6nm,1.6s						

*NEIC **09** 02:15:00.2±1.6,59°.25N±0°.04×138°.92W±0°.06, h16km±6km, Error ellipse: s-maj=7.3km s-min=2.2km az=215.0*

AEIC 09 02:15:00±2.0,59°.31N±0°.04×138°.82W±0°.05,h15km±6km, ML2.7,Error ellipse: s-maj=7.0km s-min=1.7km az=209.0,Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHAK	**Deception Hill**	**0.38**	**124**		Pg	02 15 07.3	-0.3
DHAK					Sb	02 15 14.1	0.0
PNL	**Peninsula**	**0.47**	**321**		Pg	02 15 08.5	-0.9
PNL					Sg	02 15 16.1	+0.3
YKU2	**Yakutat**	**0.48**	**296**		Pg	02 15 09.7	+0.2
YKU2					Sb	02 15 18.5	+1.4
PLBC	**Pleasant Camp**	**1.26**	**82**		Pn	02 15 22.0	-1.1
PLBC					Sb	02 15 38.9	-0.7
YUK7	**Dusty Glacier**	**1.28**	**15**		Pn	02 15 22.6	-0.9
YUK7					Sg	02 15 41.1	-0.2
CHX	**Chaix Hills**	**1.39**	**304**		Pn	02 15 24.5	-0.5
RKAV	**Rock Avalanche**	**1.62**	**309**		Pn	02 15 28.3	+0.1
YUK6	**Outpost Mounta**	**1.66**	**8**		Pn	02 15 29.2	+0.4
HYT	**Haines Junctio**	**1.66**	**23**		Pn	02 15 29.4	+0.7
HYT					Sb	02 15 52.2	+1.1
SKAG	**Skagway**	**1.79**	**84**		Pn	02 15 31.4	+1.0
MESA	**MESA**	**1.81**	**300**		Sb	02 15 55.7	+0.1
MESA	**MESA**	**1.81**	**300**	Pn	Pn	02 15 29.8	-1.1
YAH	**Yahtse**	**1.82**	**307**		Pn	02 15 30.3	-0.7
YUK5	**Granite Creek**	**1.89**	**14**		Pb	02 15 33.2	-1.1
YUK4	**Talbot Arm**	**2.05**	**2**		Pb	02 15 36.1	-0.9
GRNC	**Granite Creek**	**2.06**	**315**		Pn	02 15 34.0	-0.2
CTGM	**Chitina Glacie**	**2.09**	**324**		Pn	02 15 34.6	0.0
BESE	**Bessie Mountai**	**2.18**	**108**		Pn	02 15 36.7	+0.9
KULT	**Kultieth River**	**2.19**	**297**		Pn	02 15 35.2	-0.7
BARN	**Barnard Glacie**	**2.26**	**322**		Pn	02 15 37.5	+0.5
WAX	**Waxell Ridge**	**2.34**	**301**		Pn	02 15 37.3	-0.6
WHY	**Whitehorse**	**2.40**	**54**		Pn	02 15 40.2	+1.3
KIAG	**Kiagna River**	**2.41**	**314**		Pn	02 15 39.5	+0.5
BGLC	**Bering Glacier**	**2.41**	**292**		Pn	02 15 39.4	+0.6
BALM	**Baldy**	**2.48**	**316**		Pn	02 15 40.2	+0.3
GRIN	**Grindle Hills**	**2.48**	**295**		Pn	02 15 39.6	-0.3
TGL	**Tana Glacier**	**2.48**	**308**		Pn	02 15 40.7	+0.7
KHIT	**Khitrov Hills**	**2.51**	**299**		Pn	02 15 39.7	-0.6
JIS	**Juneau Island**	**2.53**	**112**		Pn	02 15 40.1	-0.3
YUK3	**Moose Creek**	**2.61**	**343**		Pn	02 15 42.5	+0.7
CRQM	**Cirque**	**2.61**	**306**		Pn	02 15 41.8	-0.1
PTPK	**Patty Peak**	**2.62**	**318**		Pn	02 15 42.7	+0.7
SUCK	**Suckling Hills**	**2.63**	**289**		Pn	02 15 43.0	+1.1
BERG	**Berg Lake**	**2.70**	**296**		Pn	02 15 42.6	-0.2
NICHA	**Nichawak Mount**	**2.77**	**292**		Pn	02 15 43.8	0.0
SIT	**Sitka**	**2.92**	**139**		Pn	02 15 46.4	+0.6
MCARA	**McCarthy VSAT**	**2.95**	**317**		Pn	02 15 46.4	+0.1
VRDI	**Verde Repeater**	**3.01**	**312**		Pn	02 15 47.5	+0.2
RAGM	**Ragged Mountai**	**3.15**	**293**		Pn	02 15 47.7	-1.4
GLB	**Gilahina Butte**	**3.28**	**313**		Pn	02 15 51.2	+0.3
FID	**Port Fidalgo**	**4.11**	**294**	Pn	Pn	02 16 02.7	+0.5
DLBC	**Dease Lake**	**4.64**	**97**	Pn	Pn	02 16 09.2	-0.4
DAWY	**Dawson**	**4.79**	**357**		Pn	02 16 11.9	+0.4
TRF	**Thorofare Moun**	**6.90**	**312**		Pn	02 16 42.4	+1.7
KTH	**Kantishna Hill**	**7.20**	**311**		Pn	02 16 45.4	+0.8

*KRNET **09** 02:18:34.7±0.1,40°.92N×71°.52E, h16km, mb2.5*
*SOME **09** 02:18:34.2,41°.02N×71°.57E, h0km*
*NNC **09** 02:18:35.8±1.9,40°.96N×71°.57E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=15.8km s-min=5.8km az=9.0*

ISC 09 02:18:33.0±1.2,40°.94N±0°.04×71°.59E±0°.03,h8km±12km, n16,σ1s04/27,9C-8D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.90**	**18**	⇓*i*P	**Pn**	**02 18 52.1**	**0.0**
	baz=22						
ARK				⇓*i*S	**Sn**	**02 19 04.5**	**-0.9**
	baz=22						
BTK	**Batken**	**1.06**	**214**	⇑*i*P	**Pb**	**02 18 53.7**	**+0.1**
	baz=12						
BTK				⇑*i*S	**Sg**	**02 19 07.2**	**+0.1**
	baz=12						
ARSB	**Arslanbob**	**1.12**	**70**	⇑*i*P	**Pn**	**02 18 56.4**	**+1.2**
	baz=70						
ARSB				⇑*i*S	**Sn**	**02 19 12.3**	**+1.5**
	baz=70						
IUG	**Iuzhnay**	**1.68**	**316**	*e*P	**Pg**	**02 19 05.0**	**-0.2**
	4.8nm,0.3s						
IUG				*e*S	**Sg**	**02 19 27.1**	**+0.2**
	19nm,0.2s						
IUG	**Iuzhnay**	**1.68**	**316**	P	**Pg**	**02 19 05.6**	**+0.4**
	4.8nm,0.3s						
IUG				S	**Sg**	**02 19 26.7**	**-0.2**
	48nm,0.3s						
AML	**Almayashu**	**1.98**	**52**	⇑*i*P	**Pb**	**02 19 10.5**	**+1.0**
	baz=53						
AML				⇑*i*S	**Sg**	**02 19 36.9**	**+0.2**
	baz=53						
MRKS	**Merke**	**2.18**	**34**	*e*P	**Pg**	**02 19 15.1**	**+0.3**
	2.4nm,0.1s						
MRKS				*e*S	**Sg**	**02 19 44.5**	**+1.4**
	21nm,0.2s						
MRKS	**Merke**	**2.18**	**34**	Pg	**Pg**	**02 19 15.9**	**+1.1**
	4.5nm,0.2s						
MRKS				Lg	Lg	02 19 44.2	
	21nm,0.2s						
KK31	**Karatay Array**	**2.30**	**340**	Pn	**Pb**	**02 19 15.6**	**+0.8**
	0.7nm,0.3s,baz=159,slow=14,SNR=11						
KK31				⇓Sn	**Sg**	**02 19 45.2**	**-1.8**
	3.6nm,0.3s,baz=167,slow=31,SNR=18						
UCH	**Uchtor**	**2.54**	**59**	⇑*i*P	**Pb**	**02 19 18.7**	**-0.5**
	baz=59						
UCH				⇑*i*S	**Sb**	**02 19 50.6**	**-0.2**
	baz=59						
AAK	**Ala-Archa**	**2.76**	**51**	⇓Pg	**Pg**	**02 19 25.1**	**-0.7**
	0.6nm,0.4s						
AAK				⇑Lg	Lg	02 20 02.5	
	3.6nm,0.7s						
KZA	**Kyzart**	**2.98**	**66**	⇓*i*P	**Pb**	**02 19 24.7**	**-1.8**
	baz=66						
KZA				⇓*i*S	**Sb**	**02 20 01.0**	**-2.2**
	baz=66						
TKM2	**Tokmak 2**	**3.59**	**55**	⇓Pg	**Pg**	**02 19 40.9**	**-0.9**
	2.6nm,1.1s						
TKM2				⇓Lg	Lg	02 20 28.5	
	1.5nm,0.5s						
DGS	**Degeres**	**3.87**	**52**	Pg	**Pg**	**02 19 47.0**	**-0.2**
	1.0nm,0.3s						
DGS				Lg	Lg	02 20 37.2	
	2.5nm,0.6s						
KST	**Kastek**	**3.88**	**56**	*e*P	**Pg**	**02 19 46.6**	**-0.8**
	1.4nm,0.2s						
KST				*e*S	**Sg**	**02 20 38.9**	**+1.3**
	1.8nm,0.2s						
KST	**Kastek**	**3.88**	**56**	Pg	**Pg**	**02 19 47.5**	**+0.1**
	1.4nm,0.3s						
KST				Lg	Lg	02 20 38.1	
	2.9nm,0.4s						

*AEIC **09** 02:40:35.1±1.6,67°.69N±0°.05×162°.6W±0°.2, h19km±5km, ML3.0, Error ellipse: s-maj=10.1km s-min=6.6km az=84.0*
*NEIC **09** 02:40:35.8±1.4,67°.66N±0°.02×162°.5W±0°.2, h9km±5km, Error ellipse: s-maj=8.6km s-min=2.0km az=78.0*
*IDC **09** 02:40:36.4±2.1,67°.81N×162°.12W, h0km, mb3.3/5, mb1 3.7/6, mb1mx3.4/39, mbtmp3.4/6, ML3.5/1, Error ellipse: s-maj=52.1km s-min=32.1km az=31.0*

ISC 09 02:40:35.9±0.8,67°.71N±0°.06×162°.38W±0°.06,h10km,n40, σ1s53/44,mb3.3/4,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.40**	**330**		**Pg**	**02 40 43.0**	**-0.7**
RDOG					**Sg**	**02 40 49.4**	**+0.3**
ANM	**Nome**	**3.38**	**202**		**Pn**	**02 41 27.3**	**-1.4**
ANM					**Sn**	**02 42 06.0**	**-2.9**
IM03		**3.82**	**113**		**Pn**	**02 41 34.7**	**0.0**
COLD	**Coldfoot**	**4.71**	**90**	Pn	**Pn**	**02 41 46.2**	**-0.7**
TOLK	**Toolik Lake Re**	**4.87**	**73**		**Pn**	**02 41 50.1**	**+1.0**
MLY	**Manley**	**5.40**	**114**		**Pn**	**02 41 56.0**	**-0.3**
TTA	**Tatalina**	**5.49**	**148**		**Pn**	**02 41 57.5**	**-0.2**
GAMB	**Gambell**	**5.51**	**229**		**Pn**	**02 41 56.7**	**-1.1**
TT01	**Tatalina**	**5.51**	**148**		**Pn**	**02 41 57.8**	**0.0**
PS01	**TAPS Pump Stn**	**5.57**	**56**		**Pn**	**02 41 59.5**	**+0.9**
CHUM	**Lake Minchumin**	**5.64**	**128**		**Pn**	**02 41 60.0**	**+0.3**
BPAW	**Bear Paw Mtn.**	**5.90**	**122**		**Pn**	**02 42 03.9**	**+0.7**
NEA	**Nenana**	**6.24**	**114**		**Pn**	**02 42 08.5**	**+0.6**
KTH	**Kantishna Hill**	**6.31**	**126**		**Pn**	**02 42 08.8**	**-0.1**
MDM	**Murphy Dome**	**6.33**	**109**		**Pn**	**02 42 09.2**	**+0.1**
PPLA	**Purkeypile**	**6.44**	**134**		**Pn**	**02 42 10.9**	**+0.2**
TCOL	**CIGO, UAF Yank**	**6.50**	**109**		**Pn**	**02 42 12.6**	**+1.1**
COLA	**College**	**6.51**	**109**	Pn	**Pn**	**02 42 12.1**	**+0.6**
TRF	**Thorofare Moun**	**6.58**	**125**		**Pn**	**02 42 12.7**	**0.0**
CCB	**Clear Creek Bu**	**6.65**	**111**		**Pn**	**02 42 14.1**	**+0.6**
WRH	**Wood River Hil**	**6.65**	**113**		**Pn**	**02 42 14.3**	**+0.9**
BM03	**Burnt Mountain**	**6.80**	**84**		**Pn**	**02 42 16.6**	**+0.9**
MCK	**McKinley**	**6.82**	**119**	Pn	**Pn**	**02 42 17.0**	**+1.1**
IL31		**6.91**	**108**		**Pn**	**02 42 18.1**	**+1.0**
ILAR	**Eielson Array**	**6.91**	**108**	Pn	**Pn**	**02 42 18.3**	**+1.2**
	3.1nm,0.3s,baz=302,slow=14,SNR=177						
ILAR				Sn	**Sn**	**02 43 34.9**	**-0.7**
	0.5nm,0.3s,baz=300,slow=24,SNR=7.4						
PRP	**Porcupine Dome**	**7.05**	**100**	Pn	**Pn**	**02 42 19.6**	**+0.4**
RND	**Reindeer**	**7.07**	**121**		**Pn**	**02 42 20.0**	**+0.6**
HDA	**Harding Lake**	**7.09**	**111**		**Pn**	**02 42 20.4**	**+0.9**
SVW2	**Sparrevohn**	**7.26**	**153**		**Pn**	**02 42 21.8**	**-0.1**
WAT2	**Susitna Watana**	**7.47**	**123**		**Pn**	**02 42 25.6**	**+0.7**
DHY	**Denali Highway**	**7.79**	**120**		**Pn**	**02 42 29.6**	**+0.4**
BC03		**8.74**	**109**		**Pn**	**02 42 55.2**	**-0.5**
INK	**Inuvik**	**10.78**	**74**	Pn	**Pn**	**02 43 07.7**	**-2.4**
	0.2nm,0.3s,baz=250,slow=5.1,SNR=15						
INK				Sn	**Sn**	**02 45 03.5**	**-7.1**
	0.1nm,0.3s,baz=108,slow=19,SNR=1.8						
INK	**Inuvik**	**10.78**	**74**		**Pn**	**02 43 09.2**	**-0.8**
C36M	**Paulatuk**	**13.96**	**66**	Pn	**Pn**	**02 43 52.8**	**-0.6**
YKA	**Yellowknife Ar**	**20.32**	**82**	P	**P**	**02 45 12.4**	**+0.7**
	0.6nm,0.7s,baz=304,slow=9.6,SNR=8.5						
PDAR	**Pinedale Array**	**37.33**	**105**	P	**P**	**02 47 50.3**	**+2.1**
	0.2nm,

WRA	Warramunga Arr	33.95	266	P	P	02 53 21.6	-1.5	
	comp=Z,1.1nm,0.5s,baz=100,slow=8.5,SNR=12							
FITZ	Fitzroy Crossi	42.37	267	P	P	02 54 33.3	-0.3	
FITZ				IAmb	IAmb	02 54 34.3		
	comp=Z,5.2nm,0.8s							
KSM	Kuching	63.20	283	P	P	02 57 06.2	-0.5	
MJAR	Matsushiro Arr	65.46	332	P	P	02 57 20.8	-0.2	
	comp=Z,0.6nm,0.3s,baz=156,slow=7.9,SNR=2.0							
PETK	Petropavlovsk-	75.25	352	P	P	02 58 20.7	+0.6	
	comp=Z,1.4nm,0.9s,baz=128,slow=9.3,SNR=2.6							
MAW	Mawson	76.74	202	P	P	02 58 29.0	+0.5	
	comp=Z,1.3nm,0.5s,baz=87,slow=7.2,SNR=3.8							
MAW	Mawson	76.74	202	IAmb	IAmb	03 01 05.9		
	comp=Z,8.9nm,1.9s							
CMAR	Chiang Mai Arr	80.68	294	P	P	02 58 50.8	-0.1	
	comp=Z,1.3nm,0.3s,baz=135,slow=3.5,SNR=4.5							
SONM	Songino Array	89.90	323	P	P	02 59 36.6	+0.4	
	comp=Z,0.7nm,0.6s,baz=145,slow=5.3,SNR=1.8							
ARCES	ARCESS Array B	127.69	345	PKP	PKPdf	03 05 40.7	-0.3	
	comp=Z,0.7nm,0.4s,baz=58,slow=2.7,SNR=10							
FINES	FINESS Array B	133.28	338	PKP	PKPdf	03 05 52.3	+0.5	
	comp=Z,2.3nm,1.0s,baz=29,slow=3.2,SNR=2.1							
OSTC	Ostas	144.83	331	*e*PKP	PKPdf	03 06 13.5	+0.3	
DPC	Dobruska-Polom	144.93	331	*e*PKP	PKPdf	03 06 13.4	0.0	
JAVC	Velka Javorina	145.33	328	*e*PKP	PKPab	03 06 16.0	+1.4	
VRAC	Vranov	145.54	330	*e*PKP	PKPab	03 06 15.4	+0.1	
BRG	Berggiesshubel	145.57	334	*i* PKP	PKPab	03 06 15.1	-0.2	
	comp=Z,6.9nm,0.8s							
CLL	Collm	145.62	335	*i* PKPbc	PKPab	03 06 15.4	0.0	
	comp=Z,8.0nm,0.9s							
KRUC	Moravsky	145.81	329	*e*PKP	PKPab	03 06 16.2	-0.1	
CONA	Conrad Observa	146.85	328	*i* PKPab	PKPbc	03 06 19.4	+0.6	
	comp=Z,2.0nm,0.7s							
KHC	Kasperske Hory	147.04	332	*e*PKP	PKPbc	03 06 19.1	-0.2	
GERES	GERESS Array B	147.20	331	PKPbc	PKPbc	03 06 20.1	+0.2	
	comp=Z,3.3nm,0.6s,baz=26,slow=2.8,SNR=13							
MOA	Molln	147.67	330	*i* PKPbc	PKPbc	03 06 21.2	+0.1	
	comp=Z,1.5nm,0.5s							
SOKA	Soboth	148.12	327	*i* PKPbc	PKPbc	03 06 22.1	-0.3	
	comp=Z,4.4nm,1.3s							
MYKA	Terra Mystica	148.84	329	*i* PKPbc	PKPbc	03 06 23.6	-0.6	
	comp=Z,2.7nm,0.4s							
ABTA	Abfaltersbach	149.29	330	*i* PKPbc	PKPbc	03 06 24.4	-0.9	
	comp=Z,3.1nm,0.7s,SNR=4.5							
WTTA	Wattenberg	149.30	331	*i* PKPbc	PKPbc	03 06 25.3	-0.2	
	comp=Z,1.8nm,0.4s							
MOTA	Moosalm	149.47	332	*i* PKPbc	PKPbc	03 06 25.6	-0.2	
	comp=Z,3.0nm,0.5s,SNR=5.5							
SQTA	Sankt Quirin	149.53	332	*i* PKPbc	PKPbc	03 06 25.9	0.0	
	comp=Z,5.1nm,0.5s,SNR=4.1							
FETA	Feichten	149.89	332	*i* PKPbc	PKPbc	03 06 26.5	-0.4	
	comp=Z,6.3nm,1.1s							

UCR 09 02:53:07.3±1.3, 9.58N×85.89W, h25km±5km, MD4.0, 1C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUAI	GUAI	0.78	28	⇑*i*P	Pb	02 53 21.6	-0.7
GUAI				*i* S	Sn	02 53 33.5	-0.2
PLVR	Palo Verde	0.93	34	*e*P	Pb	02 53 23.8	-1.1
PLVR				*e*S	Sn	02 53 37.7	0.0
NY14	Universidad de	1.12	18	*i* P	Pn	02 53 27.3	-0.1
JTS	Las Juntas de	1.16	52	*e*P	Pn	02 53 27.7	-0.4
COLC	Colonia	1.27	32	*i* P	Pn	02 53 28.8	-0.8
LIM1	Limonal	1.28	29	*i* P	Pn	02 53 29.3	-0.4
GPS3	Bodega del ICE	1.28	24	*i* P	Pn	02 53 29.3	-0.4
GPS3				*i* S	Sn	02 53 46.0	-0.1
CUI	Cuipilapa	1.29	33	*i* P	Pn	02 53 29.4	-0.4
GB1A	Borinquen Arri	1.32	21	*e*P	Pn	02 53 30.1	-0.3
GB1A				*e*S	Sb	02 53 48.0	-0.2
ACAL	Aguas Claras	1.34	38	*i* P	Pn	02 53 29.7	-0.9
ARE1	Arenal 1	1.45	52	*e*P	Pn	02 53 32.7	+0.7
CEDE	Laguna Cedeo	1.48	52	*e*P	Pn	02 53 33.2	+0.8
SRA1	San Ramn	1.48	70	*e*P	Pn	02 53 32.9	+0.5
LCR2	La Lucha 2	1.86	85	*e*P	Pn	02 53 37.3	-0.6
CVTR	Volcan Turrial	2.14	78	*e*P	Pn	02 53 43.5	+1.7
ACON	Acoyapa	2.48	16	*e*P	Pn	02 53 46.6	+0.5

*MEX **09** 03:00:05.6±0.8, 30.15N×114.64W, h5km±999km, MD3.6*
*ECX **09** 03:00:06.5±0.4, 30.66N×114.27W, h10km±5km, MD2.6, ML2.8*

ISC 09 03:00:03.9±2.4, 30.7N±0.1×114.28W±0.07, h5km±13km, n9, σ0.88/17, 3C-1D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFX	San Felipe	0.58	302	*e*P	Pn	03 00 17.7	-1.1
SFX				*e*S	Sb	03 00 25.9	+0.7
SFX				⇑*e*		03 00 26.4	
SFX				IAML		03 00 26.4	
	comp=E,394nm,0.3s						
SFX				⇓*e*		03 00 26.5	
SFX				IAML		03 00 26.5	
	comp=N,404nm,0.2s						
ECBX	El Chinero	1.00	319	*e*P	Pn	03 00 25.5	+0.9
ECBX				*e*S	Sn	03 00 39.1	0.0
SPX	San Pedro Mart	1.06	287	*e*P	Pg	03 00 24.4	0.0
SPX				*e*S	Sb	03 00 39.4	-0.1
SPX				⇑*e*		03 00 40.2	
SPX				IAML		03 00 40.2	
	comp=E,221nm,0.7s						
SPX	San Pedro Mart	1.06	287	*e*P	Pg	03 00 24.1	-0.3
SPX				*e*S	Sg	03 00 38.7	+0.5
SPIG	San Pedro Mart	1.07	288	*e*P	Pb	03 00 25.3	+0.2
SPIG				*e*S	Sb	03 00 39.8	+0.2
PIX	Pinacate	1.09	40	*e*P	Pn	03 00 26.0	+0.1
VTX	Valle De La Tr	1.45	298	*e*P	Pg	03 00 32.1	+0.4
VTX				*e*S	Sg	03 00 51.9	+1.3
VTX				⇑*e*		03 00 53.2	
VTX				IAML		03 00 53.2	
	comp=N,156nm,0.2s						
ESJX	Sierra Juarez	1.91	312	*e*P	Pg	03 00 40.2	-0.4
ESJX				*e*S	Sg	03 01 06.3	+0.8
CBX	Cerro Bola	2.58	308	*e*P	Pb	03 00 50.2	-0.6
CBX				*e*S	Sg	03 01 24.8	-2.0

*IDC **09** 03:02:54.3±2.1, 21.60N×143.12E, h312km±19km, mb3.1/9, mb1 3.2/11, mb1mx3.0/43, mbtmp3.8/11, Error ellipse: s-maj=28.4km s-min=16.5km az=93.0*

ISC 09 03:02:54.3±1.1, 21.6N±0.1×143.1E±0.3, h311km, n11, σ0.78/12, mb3.3/8, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	5.55	351	P	Pn	03 04 19.4	+0.9
	5.5nm,0.3s,baz=293,slow=22,SNR=15						
JCJ				S	S	03 05 25.1	-1.3
	1.8nm,0.3s,baz=270,slow=20,SNR=1.3						
MJAR	Matsushiro Arr	15.50	345	P	P	03 06 16.4	+0.2
	0.0nm,0.3s,baz=156,slow=13,SNR=2.9						
KSRS	Korea Array	20.56	324	P	P	03 07 10.6	+0.6
	0.9nm,0.4s,baz=150,slow=9.9,SNR=4.8						
KLR	Kul'dur	29.03	345	P	P	03 08 26.9	+0.8
	0.4nm,0.3s,baz=156,slow=10.0,SNR=4.2						
WRA	Warramunga Arr	42.16	192	P	P	03 10 17.1	-0.1
	0.3nm,0.3s,baz=14,slow=9.2,SNR=10						
ZALV	Zalesovo Beam	54.25	322	P	P	03 11 48.8	+0.2
	0.5nm,0.4s,baz=127,slow=7.3,SNR=2.9						
MKAR	Makanchi Array	54.72	313	P	P	03 11 51.5	-0.7
	0.3nm,0.6s,baz=99,slow=6.0,SNR=3.7						
ILAR	Eielson Array	62.17	27	P	P	03 12 42.4	-0.5
	0.3nm,0.6s,baz=257,slow=5.1,SNR=7.7						
YKA	Yellowknife Ar	76.59	28	P	P	03 14 10.9	+0.3
	0.7nm,0.6s,baz=289,slow=5.3,SNR=9.7						
ARCES	ARCESS Array B	79.00	341	P	P	03 14 23.8	0.0
	0.5nm,0.4s,baz=71,slow=9.6,SNR=7.3						
FINES	FINESS Array B	83.25	334	P	P	03 14 45.0	-1.1
	2.2nm,1.0s,baz=66,slow=5.0,SNR=9.7						

*IDC **09** 03:20:50.5±1.9, 47.31S×165.40E, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.7/22, mbtmp3.8/3, ML4.0/1, MS2.8/1, Ms1 2.8/1, ms1mx2.5/20, Error ellipse: s-maj=67.4km s-min=34.8km az=178.0*

ISC 09 03:20:52.9±1.8, 47.2S±0.1×165.5E±0.2, h15km, n14, σ0.48/9, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	Rata Peaks	5.22	51	Pn	Pn	03 22 11.0	+0.6
	4.5nm,0.3s,baz=222,slow=4.0,SNR=13						
RPZ				Sn	Sn	03 23 09.7	-0.6
	3.8nm,0.3s,baz=18,slow=16,SNR=1.8						
RPZ				LR	LR	03 24 14.7	
	comp=Z,88nm,18.8s,baz=170,slow=38						
ASAR	Alice Springs	34.42	302	P	P	03 27 40.0	+0.4
	1.2nm,0.7s,baz=138,slow=9.0,SNR=11						
WRA	Warramunga Arr	37.11	306	P	P	03 28 02.6	-0.2
	0.5nm,0.7s,baz=142,slow=8.0,SNR=5.5						
H01W1	Cape Leeuwin H	39.92	269	T	T	04 10 47.5	
	baz=124,slow=75,SNR=42						
H01W2	Cape Leeuwin H	39.94	269	T	T	04 10 54.6	
	baz=124,slow=75,SNR=40						
H01W3	Cape Leeuwin H	39.94	269	T	T	04 10 48.1	
	baz=124,slow=75,SNR=38						
H08S2	Diego Garcia H	86.47	263	T	T	05 08 52.8	
	baz=138,slow=76,SNR=5.0						
H08S1	Diego Garcia H	86.49	263	T	T	05 08 54.1	
	baz=138,slow=76,SNR=5.7						
H08S3	Diego Garcia H	86.49	263	T	T	05 08 52.1	
	baz=138,slow=76,SNR=5.5						
BRTR	Keskin Array B	144.71	276	PKP	PKPab	03 40 27.2	-0.3
	1.1nm,0.8s,baz=135,slow=1.7,SNR=7.2						
SPITS	Spitsbergen Ar	146.71	349	PKPbc	PKPbc	03 40 33.0	+0.4
	3.3nm,0.7s,baz=77,slow=7.6,SNR=7.7						
ARCES	ARCESS Array B	150.22	333	PKPbc	PKiKP	03 40 42.6	-0.1
	1.8nm,0.9s,baz=93,slow=1.8,SNR=3.8						
AKASG	Malin Array Be	151.35	293	PKPbc	PKPbc	03 40 44.6	-0.4
	0.5nm,0.4s,baz=74,slow=2.4,SNR=4.1						
FINES	FINESS Array B	152.87	317	PKPbc	PKPbc	03 40 48.0	-0.1
	0.9nm,0.7s,baz=140,slow=4.9,SNR=1.7						

IDC 09 03:40:05.0±2.4, 6.78S×129.85E, h0km, mb3.5/1, mb1 3.6/3, mb1mx3.4/35, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=151.9km s-min=32.9km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.80	162	Pn	Pn	03 43 22.7	+0.6
	0.4nm,0.3s,baz=346,slow=12,SNR=11						
WRA				Sn	Sn	03 45 44.5	-12
	0.2nm,0.3s,baz=332,slow=23,SNR=1.8						
ASAR	Alice Springs	17.24	167	P	Pn	03 44 07.0	-0.5
	0.2nm,0.3s,baz=338,slow=9.7,SNR=7.1						
MKAR	Makanchi Array	67.95	327	P	P	03 51 05.9	0.0
	0.2nm,0.5s,baz=127,slow=7.7,SNR=3.8						

*NEIC **09** 03:45:08.7±1.2, 5.10S±0.04×153.7E±0.1, h35km±5km, mb4.4/6, Error ellipse: s-maj=15.5km s-min=5.5km az=77.0*
*IDC **09** 03:45:12.1±2.9, 5.12S×153.68E, h63km±24km, mb3.8/11, mb1 4.0/12, mb1mx3.8/35, mbtmp4.1/12, ML2.6/1, MS2.8/1, Ms1 2.8/1, ms1mx2.4/21, Error ellipse: s-maj=27.9km s-min=16.1km az=78.0*

ISC 09 03:45:08.7±0.7, 5.14S±0.08×153.82E±0.10, h35km, n22, σ1.51/25, mb4.1/12, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.90	300		Pn	03 45 36.9	-1.8
KRVT	Keravat (AS076	1.97	295	P	Pn	03 45 40.5	+0.9
	32nm,0.3s,baz=12,slow=4.3,SNR=6.1						
KRVT				S	Sn	03 46 06.7	+3.5
	98nm,0.3s,baz=200,slow=16,SNR=12						
KRVT				LR	LR	03 46 41.7	
	comp=Z,302nm,21.3s,baz=156,slow=49						
PMG	Port Moresby	7.85	237	P	Pn	03 47 03.7	+3.3
	4.6nm,0.3s,baz=43,slow=14,SNR=4.1						
PMG				S	Sn	03 48 25.9	-2.2
	3.7nm,0.3s,baz=114,slow=18,SNR=2.0						
PMG				LR	LR	03 50 28.5	
	comp=Z,64nm,18.0s,baz=247,slow=41						
PMG	Port Moresby	7.85	237		Pn	03 46 59.2	-1.3
DZM	Mont Dzumac	20.80	145	P	P	03 49 49.9	+2.7
	8.1nm,0.5s,baz=184,slow=16,SNR=16						
WRA	Warramunga Arr	24.00	230	P	P	03 50 19.3	-1.1
	1.0nm,0.7s,baz=53,slow=9.9,SNR=5.1						
ASAR	Alice Springs	26.60	224	P	P	03 50 43.5	-0.6
	0.5nm,0.6s,baz=55,slow=8.6,SNR=5.2						
ASAR				PcP	PcP	03 54 07.8	0.0
	1.0nm,0.7s,baz=58,slow=4.2,SNR=6.8						
KSRS	Korea Array	48.76	332	P	P	03 53 50.6	+0.4
	0.5nm,0.4s,baz=150,slow=10,SNR=4.7						
PETK	Petropavlovsk-	58.12	3	P	P	03 54 59.5	+0.8
	1.5nm,0.8s,baz=188,slow=8.6,SNR=2.3						
CMAR	Chiang Mai Arr	58.94	295	P	P	03 55 05.6	+0.6
	2.8nm,0.3s,baz=113,slow=5.8,SNR=8.1						
VNDA	Vanda	72.46	178	P	P	03 56 32.0	+0.8
	1.9nm,0.8s,baz=321,slow=5.5,SNR=9.3						
MK31	Makanchi Array	81.25	319	P	P	03 57 20.6	-0.7
MKAR	Makanchi Array	81.25	319	P	P	03 57 21.1	-0.3
	0.8nm,0.5s,baz=99,slow=6.9,SNR=14						
MAKZ	Makanchi	81.46	319	P	P	03 57 22.1	-0.3
ZAA0	Zalesovo Array	82.00	326	P	P	03 57 24.3	-0.7
ZAA0				IAmb	IAmb	03 57 25.2	
	comp=Z,1.9nm,0.5s						
ZALV	Zalesovo Beam	82.00	326	P	P	03 57 23.9	-1.1
	comp=Z,1.1nm,0.5s,baz=127,slow=6.4,SNR=5.1						
ILAR	Eielson Array	82.09	22	P	P	03 57 24.3	-1.1
	comp=Z,0.3nm,0.8s,baz=251,slow=5.6,SNR=3.3						
KURK	Kurchatov	84.66	322	P	P	03 57 38.4	-0.4
KURK				IAmb	IAmb	03 57 39.0	
	comp=Z,2.2nm,0.8s						
QSPA	South Pole Qui	84.82	180	P	P	03 57 39.4	-0.2
NIL	Nilore	85.00	304	P	P	03 57 40.0	-1.0
MAW	Mawson	85.65	203	P	P	03 57 42.9	-0.6
	comp=Z,3.0nm,0.5s,baz=112,slow=6.4,SNR=15						
TORD	Torodi Ar. Bea	151.38	288	PKPbc	PKPbc	04 04 58.9	-1.0
	comp=Z,3.2nm,0.4s,baz=40,slow=2.9,SNR=26						

*BER **09** 03:50:00.7±2.5, 80.13N×1.85W, h10km, ML1.6, ML2.5(DNK), Confirmed Earthquake*
*IEPN **09** 03:50:02.0, 80.28N×0.36W, h15km*

ISC 09 03:49:59.5±1.5, 79.4N±0.2×0.00E±0.05, h10km, n11, σ1.18/19, 1C-1D, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	2.30	95	⇓*i*P	Pb	03 50 42.0	+1.1
KBS				*e*S	Sg	03 51 13.0	-0.2
KBS	Kingsbay	2.30	95	*e*P	Pg	03 50 42.4	-1.1
KBS				*e*S	Sg	03 51 13.3	+0.1
KBS				IAML		03 51 14.4	
	comp=Z,2.5nm,0.1s						
BRBA	Barentsburg A	3.08	108	*e*P	Pg	03 50 57.3	-1.1
BRBA				*e*S	Sg	03 51 38.0	-0.3
SPA0	Spitsbergen Ar	3.41	102	⇑*i*P	Pb	03 50 59.1	-0.8
SPA0				*e*S	Sb	03 51 42.2	+1.0
SPA0	Spitsbergen Ar	3.41	102	*e*P	Pb	03 50 59.1	-0.8
SPA0				*e*S	Sb	03 51 42.4	+1.2
HSPB	Hornsund (broa	3.97	119	*e*P	Pb	03 51 08.7	-0.6
HSPB				*e*S	Sb	03 51 57.8	+0.6
HSPB	Hornsund (broa	3.97	119	*e*P	Pb	03 51 10.0	+0.7
DAG	Danmarks Havn	4.64	245	*i* P	Pn	03 51 09.6	+0.1
DAG				*i* S	Sn	03 52 02.8	-0.5
DAG	Danmarks Havn	4.64	245	*i* P	Pn	03 51 09.7	+0.1
DAG				*i* S	Sn	03 52 02.9	-0.5
DAG				IAML		03 52 09.4	
	comp=Z,4.6nm,0.3s						
DBG	Daneborg	6.81	233	*e*P	Pn	03 51 42.1	+3.0
DBG				*i* S	Sn	03 52 54.5	-2.1
DBG				IAML		03 53 07.8	
	comp=Z,1.2nm,0.3s						
ZFI2	Zemlya Franca-	8.14	57	*e*P	Pn	03 51 51.6	-5.8
ZFI2				*e*S	Sn	03 53 14.2	-15
	comp=Z,3.5nm,1.4s						

*IDC **09** 04:00:14.6±1.5, 24.23S×26.67E, h0km, mb3.8/3, mb1 4.0/8, mb1mx3.7/30, mbtmp3.9/8, ML4.1/3, MS2.8/1, Ms1 2.7/1, ms1mx2.4/26, Error ellipse: s-maj=26.4km s-min=12.0km az=127.0*
*PRE **09** 04:00:14.7±1.9, 24.42S×26.60E, h5km, ML3.8*

ISC 09 04:00:16.7±1.4, 24.40S±0.04×26.62E±0.04, h25km±12km, n29, σ1.84/52, mb3.9/3, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	Lobatse	1.11	236	Pg	Pb	04 00 38.5	+1.1
	92nm,0.3s,baz=52,slow=18,SNR=4367						
LBTB				Lg	Lg	04 00 52.9	
	1μm,0.3s,baz=327,slow=17,SNR=202						
LBTB				LR	LR	04 01 18.6	
	comp=Z,241nm,21.4s,baz=132,slow=54						
LBTB	Lobatse	1.11	236	*e*P	Pb	04 00 37.4	+0.1
LBTB				*e*S	Sn	04 00 51.1	-0.2
LBTB				AML	AML	04 00 53.5	
	comp=Z,4μm,0.7s						
KSR	Koster	1.47	170	*e*P	Pb	04 00 43.2	-0.2
KSR				*e*S	Sb	04 01 02.1	+0.4
KSR				AML	AML	04 01 04.8	
	comp=Z,537nm,0.5s						
SLR	Silverton	2.01	132	*e*P	Pb	04 00 51.9	-0.8
SLR				*e*S	Sb	04 01 16.3	-1.1
SLR				AML	AML	04 01 19.6	
	comp=Z,669nm,0.4s						
KLOF	Kloof	2.14	155	*e*P	Pn	04 00 51.7	+0.7
KLOF				*e*S	Sn	04 01 18.5	+1.7
KLOF				AML	AML	04 01 30.7	
	comp=Z,1μm,0.2s						
WDLM	Western Deep L	2.14	160	*e*P	Pb	04 00 53.5	-1.5
WDLM				*e*S	Sn	04 01 18.7	+1.8
WDLM				AML	AML	04 01 30.8	
	comp=Z,688nm,0.4s						
ERPM	east rand prop	2.43	143	*e*P	Pn	04 00 55.1	+0.2
ERPM				*e*S	Sn	04 01 23.4	-0.6
ERPM				AML	AML	04 01 29.4	
	comp=Z,459nm,0.6s						
MSNA	Messina	3.74	57	*e*P	Pn	04 01 13.8	+0.9
MSNA				*e*S	Sn	04 01 56.8	+0.7
MSNA				AML	AML	04 02 15.7	
	comp=Z,549nm,0.4s						
MATP	Matopo	4.32	24	Pn	Pn	04 01 19.1	-1.9
	comp=Z,2.1nm,0.3s,baz=201,slow=14,SNR=54						
MATP				Sn	Sn	04 02 07.7	-3.0
	comp=Z,11nm,0.3s,baz=200,slow=15,SNR=3.8						
MATP				Lg	Lg	04 02 24.8	
	comp=Z,28nm,0.3s,baz=126,slow=19,SNR=17						
BOSA	Boshof	4.37	196	Pn	Pn	04 01 22.4	+0.8
	comp=Z,8.3nm,0.3s,baz=12,slow=13,SNR=172						
BOSA				Sn	Sn	04 02 12.1	+0.3
	comp=Z,16nm,0.3s,baz=77,slow=10,SNR=5.5						
BOSA				Lg	Lg	04 02 30.1	
	comp=Z,88nm,0.3s,baz=103,slow=20,SNR=22						
BOSA				LR	LR	04 03 08.1	
	comp=Z,115nm,19.7s,baz=21,slow=39						
BOSA	Boshof	4.37	196	*e*P	Pn	04 01 22.0	+0.3
BOSA				*e*S	Sn	04 02 12.1	+0.3
BOSA				AML	AML	04 02 35.7	
	comp=Z,412nm,0.8s						
MOPA	Mopani	4.46	80	*e*P	Pn	04 01 22.8	+0.1
MOPA				*e*S	Sn	04 02 14.8	+0.9
MOPA				AML	AML	04 02 36.7	
	comp=Z,298nm,0.6s						
MMAL	MMAL	4.47	113	*e*P	Pn	04 01 23.2	+0.3
MMAL				*e*S	Sn	04 02 15.0	+0.8
MMAL				AML	AML	04 02 41.9	
	comp=Z,394nm,0.6s						
HAGI	HAGI	4.48	113	*e*P	Pn	04 01 23.6	+0.5
HAGI				*e*S	Sn	04 02 13.2	-1.3
HAGI				AML	AML	04 02 42.9	
	comp=Z,579nm,0.6s						
UPI	Upington	6.22	229	*e*P	Pn	04 01 47.8	+0.8
UPI				*e*S	Sn	04 02 55.6	-1.8
UPI				AML	AML	04 03 31.8	
	comp=Z,233nm,0.4s						
HVD	Gariep Dam	6.26	189	*e*P	Pn	04 01 48.1	+0.4
HVD				*e*S	Sn	04 02 56.1	-2.4
HVD				AML	AML	04 03 35.1	
	comp=Z,264nm,0.6s						
PKA	Prieska	6.28	212	*e*P	Pn	04 01 48.6	+0.9
PKA				*e*S	Sn	04 02 56.3	-2.4
PKA				AML	AML	04 03 40.3	
	comp=Z,69nm,0.5s						
KSD	Kokstad	6.60	159	*e*P	Pn	04 01 52.8	+0.5
KSD				*e*S	Sn	04 03 04.4	-2.4
KSD				AML	AML	04 03 45.0	
	comp=Z,68nm,0.7s						
KEIM	Keimoes	6.63	229	*e*P	Pn	04 01 53.8	+1.2
KEIM				*e*S	Sn	04 03 05.3	-2.2
KEIM				AML	AML	04 04 12.2	
	comp=Z,246nm,0.6s						
GRAN	Grantham	8.79	205	*e*P	Pn	04 02 23.4	+1.1
LSZ	Lusaka	9.20	10	Pn	Pn	04 02 27.7	-0.3
	comp=Z,1.6nm,0.3s,baz=189,slow=13,SNR=19						
LSZ				Sn	Sn	04 04 06.5	-4.3
	comp=Z,2.3nm,0.3s,baz=176,slow=15,SNR=3.1						
LSZ				Lg	Lg	04 04 57.5	
	comp=Z,3.4nm,0.3s,baz=296,slow=23,SNR=6.6						
LSZ	Lusaka	9.20	10	*e*P	Pn	04 02 28.4	+0.4
CVNA	Calvinia	9.30	219	*e*P	Pn	04 02 29.7	+0.4
CVNA				*e*S	Sn	04 04 09.0	-4.1
CVNA				AML	AML	04 05 12.7	
	comp=Z,116nm,0.5s						
SUR	Sutherland	9.45	211	Pn	Pn	04 02 32.9	+1.5
	comp=Z,2.7nm,0.3s,baz=44,slow=13,SNR=27						
SUR				Sn	Sn	04 04 13.3	-3.6
	comp=Z,2.2nm,0.3s,baz=133,slow=19,SNR=2.4						
SUR				Lg	Lg	04 05 07.7	
	comp=Z,17nm,0.3s,baz=307,slow=24,SNR=16						
SUR	Sutherland	9.45	211	*e*P	Pn	04 02 32.5	+1.1
SUR				*e*S	Sn	04 04 11.6	-5.4
SUR				AML	AML	04 04 40.5	
	comp=Z,18nm,0.3s						
TSUM	Tsumeb	9.86	300	Pn	Pn	04 02 38.3	+1.3
	comp=Z,0.5nm,0.3s,baz=118,slow=14,SNR=3.3						
TSUM				Sn	Sn	04 04 24.0	-3.0

FRD Sb 04 49 48.0 +0.3
FRD Ford Ranch, An 0.43 166 Sb 04 49 48.0 +0.3
HLNC Highland 0.46 297 Pg 04 49 41.9 +0.1
MURC Murrieta 0.50 232 P Pg 04 49 42.5 -0.1
baz=50,SNR=60
MURC S Sg 04 49 49.6 +0.2
baz=50
MURC Murrieta 0.50 232 Pg 04 49 42.5 -0.1
MURC Sg 04 49 49.6 +0.2
CFSC Central Fire S 0.50 293 Pg 04 49 42.7 +0.1
RSBC Riverside Bore 0.50 277 Pg 04 49 42.4 -0.2
RSBC Sg 04 49 49.4 -0.1
RSBC Riverside Bore 0.50 277 Pg 04 49 42.4 -0.2
RSBC Sg 04 49 49.2 -0.3
CLTC Calectric 0.52 290 Pg 04 49 43.4 +0.4
SME Santa Rosa Min 0.53 260 Pb 04 49 42.8 -0.3
RVR Riverside 0.55 279 Sb 04 49 50.5 -0.2
PLM Palomar 0.57 192 Sg 04 49 52.1 +0.5
TPC Twentynine Pal 0.59 71 Pb 04 49 44.1 0.0
BELC Belle Mtn. Jos 0.61 82 P Pb 04 49 44.6 +0.2
baz=263,SNR=289
BELC S Sb 04 49 53.0 +0.3
baz=263
BELC Belle Mtn. Jos 0.61 82 Sb 04 49 53.0 +0.3
FON Fontana 0.62 288 Pb 04 49 44.4 -0.2
CTCC Cactus City 0.66 113 Sg 04 49 54.9 +0.4
BORC Borrego Spring 0.69 158 Pb 04 49 46.2 +0.4
BORC Sb 04 49 55.2 +0.3
CRNC Corona 0.70 267 Pb 04 49 45.6 -0.2
CRNC Sb 04 49 54.8 -0.2
MLSC Mira Loma 0.70 278 Pb 04 49 45.6 -0.3
MLSC Sb 04 49 55.0 -0.2
CHNC Chino 0.80 276 Pb 04 49 47.4 -0.2
CHNC Sb 04 49 58.3 +0.3
VTV Victorville 0.82 322 Sb 04 49 58.4 -0.3
BFSC Mount Baldy Ra 0.84 293 P Pb 04 49 48.1 -0.3
baz=112,SNR=190
BFSC S Sb 04 49 59.1 -0.3
baz=112
BFSC Mount Baldy Ra 0.84 293 Sb 04 49 59.0 -0.3
BATC Bat Cave Butte 0.86 121 Pb 04 49 48.6 -0.2
ADO Adelanto Recei 0.87 317 Pb 04 49 49.1 +0.2
ADO Sb 04 50 00.6 +0.5
GORC Green Oak Ranc 0.87 209 Pb 04 49 48.3 -0.5
GORC Sb 04 50 00.0 0.0
SALN Salton City 0.88 135 Pb 04 49 49.4 +0.3
HAY Hayfield 0.89 103 Pb 04 49 49.4 +0.2
HWB Hans Werner Br 0.91 193 Pb 04 49 49.2 -0.3
HWB Sb 04 50 01.2 +0.1
DPP Dos Picos Cty 0.93 191 Sb 04 50 01.9 0.0
HEC Hector,Ludlow 0.97 19 P Pb 04 49 50.6 0.0
baz=200,SNR=98
HEC S Sb 04 50 03.7 +0.6
baz=200
HEC Hector,Ludlow 0.97 19 Pb 04 49 50.6 0.0
HEC Sb 04 50 03.5 +0.4
RRX Edison Barstow 0.99 347 P Pb 04 49 50.9 0.0
baz=167,SNR=6.1
RRX S Sb 04 50 04.3 +0.7
baz=167
RRX Edison Barstow 0.99 347 Sb 04 50 04.2 +0.7
XTL Crystal Lake, 1.02 292 Pb 04 49 51.1 -0.4
EML El Monte Cty P 1.02 186 Pb 04 49 51.3 -0.2
EML Sb 04 50 04.7 +0.1
FRK Frink 1.04 119 Pb 04 49 50.5 -1.3
MONP2 Monument Peak 1.05 166 P Pb 04 49 52.1 +0.1
baz=346,SNR=18
MONP2 S Sb 04 50 05.8 +0.3
baz=346
MONP2 Monument Peak 1.05 166 Pb 04 49 52.2 +0.1
MONP2 Sb 04 50 05.9 +0.4
109C Camp Elliot, M 1.07 197 P Pb 04 49 51.9 -0.4
baz=17,SNR=37
109C S Sb 04 50 05.8 0.0
baz=17
109C Camp Elliot, M 1.07 197 Pb 04 49 51.9 -0.4
CPE Camp Elliot 1.07 197 Sb 04 50 05.8 0.0
CBKC Canebrake 1.08 158 Pb 04 49 52.2 -0.4
BC3 Big Chuckawall 1.09 103 P Pb 04 49 51.8 -0.8
baz=285,SNR=145
BC3 S Sb 04 50 06.7 +0.1
baz=285
BC3 Big Chuckawall 1.09 103 Pb 04 49 51.9 -0.8
MWC Mount Wilson 1.15 286 Pn Pn 04 49 53.2 -0.4
CHFC Chilao Flat St 1.16 292 Pn 04 49 53.3 -0.4
GVRC Garvey Reservo 1.17 277 Pn 04 49 53.8 +0.1
BAR Barrett 1.23 178 Pn 04 49 54.6 0.0
BAR Barrett 1.23 178 Pn Pn 04 49 54.3 -0.3
SWSC Sam W. Stewart 1.24 141 P Pn 04 49 53.6 -1.0
baz=322,SNR=32
SWSC Sam W. Stewart 1.24 141 Pn 04 49 53.7 -1.0
GMRC Granite Mounta 1.24 45 P Pn 04 49 54.2 -0.6
baz=226,SNR=23
GMRC S Sb 04 50 09.4 -1.4
baz=226
PASC Pasadena Art C 1.24 282 Pn 04 49 54.4 -0.3
PASC Pasadena Art C 1.24 282 Pn Pn 04 49 54.2 -0.5
LRRC Littlerock Res 1.24 300 Pn 04 49 55.0 +0.3
FMP Fort Macarthur 1.32 262 Sb Sb 04 50 13.3 +0.2
baz=80
DSCC Desert Studies 1.33 23 Pn 04 49 55.4 -0.5
IRM Iron Mountain 1.33 79 P Pn 04 49 55.1 -1.0
baz=260,SNR=130
IRM Sb Sb 04 50 14.8 +1.2
baz=260
IKP In-Ko-Pah, Jac 1.36 158 P Pn 04 49 56.1 -0.3
baz=338,SNR=8.4
IKP Sb Sb 04 50 15.6 +1.2
baz=338
IKP In-Ko-Pah, Jac 1.36 158 Pn 04 49 56.1 -0.3
DECC Green Verdugo 1.38 285 Pb Pn 04 49 57.2 +0.6
baz=104,SNR=9.8
DECC Sb Sb 04 50 15.4 +0.6
baz=104
GSC Goldstone, Bar 1.39 357 P Pn 04 49 56.6 -0.2
baz=177,SNR=61
GSC Sb Sb 04 50 15.7 +0.6
baz=177
GSC Goldstone, Bar 1.39 357 Pn 04 49 56.3 -0.6
EDW2 Edwards Air Fo 1.43 313 P Pn 04 49 57.1 -0.2
baz=132,SNR=40
EDW2 Sb Sb 04 50 16.9 +0.7
baz=132
CIS Catalina Islan 1.50 251 P Pn 04 49 58.2 -0.1
baz=69,SNR=5.2
CIS Sb Sb 04 50 19.0 +0.7
baz=69
TUQ Turquoise Moun 1.66 23 P Pn 04 50 00.0 -0.5
baz=204
TUQ S Sn 04 50 19.5 -1.9
baz=204
OSI Osito Audit: C 1.80 293 Pb Pb 04 50 04.8 0.0
baz=112
OSI Osito Audit: C 1.80 293 Pn 04 50 03.2 +0.8
GLA Glamis 1.80 118 P Pn 04 50 02.0 -0.5
baz=299,SNR=21
GLA Sb Sg 04 50 29.8 -0.8
baz=299
GLA Glamis 1.80 118 Pn 04 50 02.3 -0.2
Y12C Blythe 1.84 94 P Pn 04 50 01.9 -1.0
baz=276,SNR=36
Y12C Blythe 1.84 94 Pn 04 50 02.0 -1.0
SHOC Shoshone, Teco 2.02 10 P Pn 04 50 05.3 -0.1
baz=191,SNR=14
MPMC Manual Prospec 2.23 344 P Pn 04 50 08.2 -0.3
baz=164,SNR=7.6
ISA Isabella, Lake 2.26 321 P Pn 04 50 08.4 -0.4
baz=140,SNR=13
ISA Isabella, Lake 2.26 321 Pn 04 50 08.9 +0.1
W13A Hualapai Mount 2.63 62 Pn 04 50 13.9 -0.1
CWC Cottonwood Cre 2.75 337 P Pn 04 50 16.0 +0.3
baz=156
SHPR Sheep Range 2.89 26 Pn 04 50 18.1 +0.6
SMMC Simmler 3.04 298 P Pn 04 50 19.8 +0.3
baz=116
TPNV Topopah Spring 3.05 7 P Pn 04 50 20.4 +0.6
baz=188,SNR=14
TPNV Topopah Spring 3.05 7 Pn 04 50 20.1 +0.3
Y14A Wickenburg 3.09 88 Pn 04 50 20.0 -0.2
GRAC Grapevine Rang 3.12 351 P Pn 04 50 21.5 +0.8
baz=170,SNR=9.6
214A Organ Pipe Nat 3.83 120 Pn Pn 04 50 29.9 -0.4
OMMB Old Mammoth Mi 4.13 334 Pn Pn 04 50 36.0 +1.3
LCMT Little Creek M 4.20 42 Pn 04 50 36.1 +0.6

X16A Lo Mia Camp, P 4.41 82 Pn 04 50 39.0 +0.5
U15A North Rim 4.41 54 Pn Pn 04 50 39.2 +0.6
KNB Kanab 4.44 45 Pn 04 50 39.6 +0.7
R11A Troy Canyon, C 4.52 11 P Pn 04 50 40.8 +0.8
baz=192
R11A Troy Canyon, C 4.52 11 Pn Pn 04 50 41.3 +1.3
CCUT Cedar City 4.54 36 Pn Pn 04 50 41.6 +1.2
NV11 Mina Array Sit 4.66 346 Pn Pn 04 50 43.0 +1.1
WUAZ Wupatki 4.69 69 P Pn 04 50 43.7 +1.4
baz=252
WUAZ Wupatki 4.69 69 Pn Pn 04 50 43.0 +0.8
SZCU Shurtz Canyon 4.72 38 Pn Pn 04 50 41.6 -1.1
RYN Ryan 4.92 343 Pn Pn 04 50 46.8 +1.3
PSUT Pine Spring 5.16 26 Pn Pn 04 50 48.5 -0.3
KVN Kaiserville 5.25 348 Pn Pn 04 50 49.6 -0.4
X18A Snowflake 5.65 82 Pn Pn 04 50 56.5 +1.1

*SJA **09** 04:58:46.1±1.1,20.3°30S×70.3°94W,h28km±3km, ML4.2, MW4.5*
*NEIC **09** 04:58:47.4±1.6,20.3°36S±0.3°03×70.3°88W±0.3°03,h7km±3km, mb4.6/41,Mwr4.2/47,ML4.3(GUC),Error ellipse: s-maj=4.6km s-min=4.0km az=61.0*
*GUC **09** 04:58:47.8±0.7,20.3°30S×70.3°93W,h19km±4km, ML4.3*
*IDC **09** 04:58:47.1±0.8,20.3°32S×70.3°74W,h0km, mb4.0/10, mb1 4.1/15,mb1mx4.0/30,mbtmp4.0/15,ML3.6/5,MS3.1/7, Ms1 3.1/7,ms1mx3.0/30,Error ellipse: s-maj=24.0km s-min=12.5km az=57.0*
*NEIC **09** 04:58:47.8,20.3°35S×70.3°85W,h8km,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.08; $M_{\theta\theta}$-1.06; $M_{\phi\phi}$-0.02; $M_{r\theta}$-1.80; $M_{\theta\phi}$0.12; $M_{\phi r}$1.88; Fault plane solution: M_o2.82000×10^{15} NP1:ϕ_s311.94000°, δ80.34000°,λ100.99000°. NP2:ϕ_s82.76000°,δ14.60000°, λ41.76000°. Principal axes: T 2.9893, Plg53.0000°, Azm235.0000°; N -0.3824, Plg11.0000°, Azm130.0000°; P -2.6069, Plg34.0000°, Azm33.0000°;*
*VAO **09** 04:58:51.1±1.3,20.3°15S×70.3°91W,h34km±9km, mb4.4*

ISC 09 04:58:47.6±2.1,20.3°34S±0.3°02×70.3°84W±0.3°04,h5km±13km, n147,σ1°09/155,mb4.5/20,MS3.3/4,2C-7D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TA01	**Diego Aracena**	**0.66**	**110**	*i*P	eP		**Pb**	**04 59 01.1**	**-0.6**
TA01					eS		**Sb**	**04 59 10.0**	**-1.1**
TA01	**Diego Aracena**	**0.66**	**110**				**Pb**	**04 59 00.8**	**-0.8**
TA01							**Sb**	**04 59 10.0**	**-1.1**
TA02	**Huaiquique**	**0.67**	**85**	*i*P			**Pb**	**04 59 01.5**	**-0.3**
TA02					eS		**Sb**	**04 59 11.2**	**-0.2**
TA02					IAML			04 59 15.8	
	comp=N,34μm,0.5s								
PATCX	**Punta Patache**	**0.81**	**127**	eP			**Pb**	**04 59 03.5**	**-0.7**
PATCX					eS		**Sb**	**04 59 15.6**	**+0.2**
PATCX					IAML			04 59 19.2	
	comp=E,17μm,0.6s								
PATCX	**Punta Patache**	**0.81**	**127**				**Pb**	**04 59 03.4**	**-0.7**
PATCX							**Sn**	**04 59 17.4**	**-0.7**
PATCX	**Punta Patache**	**0.81**	**127**	*i*P			**Pb**	**04 59 03.6**	**-0.7**
PATCX				*i*S			**Sn**	**04 59 17.3**	**-0.7**
PATCX					IAML			04 59 19.2	
	comp=Z,6μm,0.5s								
PSGC	**Pisagua**	**1.00**	**43**	eP			**Pb**	**04 59 06.7**	**-0.7**
PSGC					eS		**Sb**	**04 59 19.9**	**-1.0**
PSGC					IAML			04 59 26.8	
	comp=N,9μm,0.6s								
PSGCX	**Pisagua**	**1.00**	**43**				**Pb**	**04 59 06.7**	**-0.7**
PSGCX							**Sb**	**04 59 20.6**	**-0.3**
PSGCX	**Pisagua**	**1.00**	**43**	*i*P			**Pb**	**04 59 06.9**	**-0.5**
PSGCX					eS		**Sb**	**04 59 20.6**	**-0.3**
PSGCX					IAML			04 59 24.1	
	comp=Z,3μm,0.4s								
PB11	**IPOC Station P**	**1.25**	**63**	eP			**Pn**	**04 59 10.9**	**-1.1**
PB11					eS		**Sb**	**04 59 28.3**	**0.0**
PB11	**IPOC Station P**	**1.25**	**63**				**Pn**	**04 59 10.8**	**-1.1**
PB11	**IPOC Station P**	**1.25**	**63**	*i*P			**Pn**	**04 59 10.9**	**-1.1**
PB11				*i*S			**Sb**	**04 59 28.5**	**+0.2**
PB11					IAML			04 59 35.5	
	comp=Z,4μm,1.0s								
PB02	**IPOC Station P**	**1.32**	**138**	eP			**Pn**	**04 59 12.1**	**-0.7**
PB02					eS		**Sb**	**04 59 31.0**	**+0.8**
PB02					IAML			04 59 38.9	
	comp=Z,6μm,0.7s								
PB01	**IPOC Station P**	**1.45**	**119**	*i*P			**Pn**	**04 59 14.1**	**-0.5**
PB01					eS		**Sb**	**04 59 34.8**	**+0.8**
PB01					IAML			04 59 37.6	
	comp=N,6μm,0.5s								
PB01	**IPOC Station P**	**1.45**	**119**		Pn		**Pn**	**04 59 13.9**	**-0.7**
PB01	**IPOC Station P**	**1.45**	**119**	eP			**Pn**	**04 59 13.9**	**-0.7**
PB01					eS		**Sb**	**04 59 34.7**	**+0.7**
PB01					IAML			04 59 36.2	
	comp=Z,3μm,0.8s								
PB08	**IPOC Station P**	**1.60**	**83**	eP			**Pn**	**04 59 16.8**	**0.0**
PB08					eS		**Sb**	**04 59 39.3**	**+0.9**
PB08					IAML			04 59 41.2	
	comp=N,4μm,0.7s								
PB08	**IPOC Station P**	**1.60**	**83**				**Pn**	**04 59 16.9**	**0.0**
PB08	**IPOC Station P**	**1.60**	**83**	*i*P			**Pn**	**04 59 17.0**	**+0.1**
PB08					eS		**Sb**	**04 59 39.1**	**+0.6**
PB08					IAML			04 59 43.4	
	comp=Z,2μm,0.7s								
PB07	**IPOC Station P**	**1.65**	**147**				**Pn**	**04 59 17.0**	**-0.4**
PB07	**IPOC Station P**	**1.65**	**147**	*i*P			**Pn**	**04 59 17.1**	**-0.4**
PB07					eS		**Sb**	**04 59 41.5**	**+1.8**
PB07					IAML			04 59 54.8	
	comp=Z,1μm,0.7s								
MNMC	**Minye Minye**	**1.68**	**45**	eP			**Pn**	**04 59 18.2**	**+0.4**
MNMC					eS		**Sn**	**04 59 40.2**	**+0.3**
MNMC	**Minye Minye**	**1.68**	**45**				**Pn**	**04 59 18.1**	**+0.3**
MNMCX	**Minye Minye**	**1.68**	**45**	*i*P			**Pn**	**04 59 18.4**	**+0.6**
MNMCX					eS		**Sb**	**04 59 40.6**	**-0.1**
MNMCX					IAML			04 59 49.3	
	comp=Z,5μm,0.5s								
GO01	**Chusmiza**	**1.69**	**67**	eP			**Pn**	**04 59 18.4**	**+0.2**
GO01					eS		**Sb**	**04 59 41.0**	**-0.1**
GO01					IAML			04 59 43.7	
	comp=N,7μm,0.2s								
GO01	**Chusmiza**	**1.69**	**67**				**Pn**	**04 59 18.4**	**+0.2**
PB12	**IPOC Station P**	**1.78**	**16**	eP			**Pn**	**04 59 18.9**	**-0.2**
PB12					eS		**Sn**	**04 59 41.9**	**-0.3**
PB12					IAML			04 59 53.2	
	comp=E,2μm,0.6s								
PB12	**IPOC Station P**	**1.78**	**16**				**Pn**	**04 59 19.4**	**+0.3**
PB12	**IPOC Station P**	**1.78**	**16**	eP			**Pn**	**04 59 19.0**	**-0.1**
PB12				*i*S			**Sb**	**04 59 44.3**	**+0.9**
PB12					IAML			04 59 48.2	
	comp=Z,2μm,0.7s								
PB03	**IPOC Station P**	**1.98**	**149**	eP			**Pn**	**04 59 21.5**	**-0.5**
AP01	**Chacalluta**	**2.01**	**14**				**Pn**	**04 59 22.3**	**+0.1**
PB09	**IPOC Station P**	**2.08**	**134**				**Pn**	**04 59 24.3**	**+0.9**
PB09	**IPOC Station P**	**2.08**	**134**	*i*P			**Pn**	**04 59 24.8**	**+1.4**
PB09					eS		**Sg**	**04 59 55.2**	**+0.5**
PB09					IAML			05 00 07.6	
	comp=Z,2μm,0.6s								
PB04	**IPOC Station P**	**2.09**	**162**				**Pn**	**04 59 22.4**	**-1.1**
PB04	**IPOC Station P**	**2.09**	**162**	*i*P			**Pn**	**04 59 22.5**	**-0.9**
PB04					eS		**Sb**	**04 59 54.4**	**+1.9**
PB04					IAML			05 00 05.0	
	comp=Z,957nm,0.5s								
PB16	**IPOC Station P**	**2.35**	**33**				**Pn**	**04 59 28.0**	**+0.6**
PB16	**IPOC Station P**	**2.35**	**33**	eP			**Pn**	**04 59 29.3**	**+1.9**
PB16					eS		**Sb**	**05 00 00.7**	**+0.2**
PB16					IAML			05 00 05.0	
	comp=Z,1μm,1.5s								
PB05	**IPOC Station P**	**2.58**	**167**	*i*P			**Pn**	**04 59 28.6**	**-1.5**
PB05					IAML			05 00 37.4	
	comp=Z,368nm,0.6s								
PB06	**IPOC Station P**	**2.64**	**154**				**Pn**	**04 59 30.1**	**-0.9**
PB06	**IPOC Station P**	**2.64**	**154**	*i*P			**Pn**	**04 59 30.3**	**-0.7**
PB06					eS		**Sb**	**05 00 09.9**	**+1.7**
PB06					IAML			05 00 18.2	
	comp=Z,691nm,1.0s								
LVC	**Limon Verde**	**2.89**	**142**		Pn		**Pn**	**04 59 36.0**	**+1.4**
	comp=Z,13nm,0.3s,baz=323,slow=8.8,SNR=97								
LVC					Sn		**Sn**	**05 00 10.3**	**+0.3**
	comp=Z,24nm,0.3s,baz=289,slow=2.2,SNR=3.8								
LVC					Lg		Lg	05 00 18.0	
	comp=Z,27nm,0.3s,baz=233,slow=21,SNR=7.2								
LVC	**Limon Verde**	**2.89**	**142**				**Pn**	**04 59 35.9**	**+1.3**
LVC	**Limon Verde**	**2.89**	**142**	*i*P			**Pn**	**04 59 36.1**	**+1.4**
LVC				*i*S			**Sb**	**05 00 17.4**	**+1.6**

LVC Limon Verde 2.89 142 eP Pn 04 59 36.1 +1.4
PB15 IPOC Station P 3.13 156 *i*P Pn 04 59 37.1 -0.8
PB15 IAML 05 00 38.4
comp=Z,1μm,0.7s
PB10 IPOC Station P 3.17 175 Pn 04 59 35.9 -2.3
PB10 IPOC Station P 3.17 175 *i*P Pn 04 59 36.3 -1.9
PB10 *e*S Sn **05 00 13.4 -3.1**
PB14 IPOC Station P 4.29 175 Pn 04 59 51.5 -2.3
PB14 IPOC Station P 4.29 175 *i*P Pn 04 59 51.5 -2.3
LPAZ La Paz 4.78 33 Pn 05 00 03.3 +2.5
YJA Yavi 5.30 111 *i*P Pn 05 00 14.8 +7.0
AC05 El Transito 8.48 177 Pn Pn 05 00 49.4 -1.8
NNA Nana 10.10 324 Pn Pn 05 01 15.3 +1.8
comp=Z,1.0nm,0.3s,baz=112,slow=19,SNR=1.2
SIV San Ignacio 10.24 67 Pn Pn 05 01 14.6 -0.8
comp=Z,2.3nm,0.3s,baz=264,slow=10,SNR=36
SIV LR LR 05 04 34.9
comp=Z,42nm,21.4s,baz=266,slow=34
CFA Coronel Fontan 11.46 169 Pn Pn 05 01 30.1 -2.0
comp=Z,0.1nm,0.3s,baz=335,slow=14,SNR=1.3
CFA LR LR 05 06 13.9
comp=Z,154nm,20.7s,baz=346,slow=39
PTLB Pontes e Lacer 12.15 68 eP Pn 05 01 42.0 +0.5
VILB Vilhena 12.56 56 eP Pn 05 01 48.0 +0.9
SAML Samuel 13.52 34 Pn 05 01 58.9 -1.4
SAML Samuel 13.52 34 eP Pn 05 01 59.0 -1.2
CPUP Villa Florida 13.77 118 Pn Pn 05 02 02.4 -1.1
comp=Z,0.1nm,0.3s,baz=38,slow=12,SNR=1.8
CPUP LR LR 05 07 00.1
comp=Z,25nm,21.6s,baz=310,slow=36
CPUP Villa Florida 13.77 118 eP Pn 05 02 06.6 +3.1
BO02 Sierra Bellavi 14.40 180 Pn Pn 05 02 12.9 +0.6
H03N1 Juan Fernandez 14.90 207 T T 05 18 05.5
baz=33,slow=72,SNR=160
H03N2 Juan Fernandez 14.90 207 T T 05 17 51.5
baz=33,slow=72,SNR=96
H03N3 Juan Fernandez 14.91 207 T T 05 17 55.7
baz=33,slow=72,SNR=96
SALV Santo Antonio 15.06 75 eP Pn 05 02 21.6 +0.4
BI02 San Fabin de 16.27 181 Pn 05 02 36.0 -1.0
C2SB Chapadao do Su 17.04 88 eP Pn 05 02 47.7 +0.9
TRCB Terra Rica 17.11 102 eP P 05 02 49.1 -0.3
CLDB Colider 17.26 59 eP Pn 05 02 48.2 -1.4
PTGB Pitanga 17.88 108 eP P 05 02 59.7 +1.7
PCMB Pacaembu 18.33 97 eP P 05 03 04.3 +1.4
ITAB Concordia 18.44 115 eP Pn 05 03 05.4 +1.3
LC01 Lunco 18.52 183 P P 05 03 04.5 -0.4
CPSB Cacapava Do Su 18.63 126 eP Pn 05 03 07.9 +1.6
ARAG Araguaiana, MT 18.67 79 eP P 05 03 05.5 -1.2
PLTB Pedras Altas 19.19 130 eP Pn 05 03 13.9 +0.7
ITRB Iturama 19.26 92 eP P 05 03 13.5 +0.4
MACA Manacapuru-AM 19.74 31 eP P 05 03 16.7 -1.7
FRTB Fartura 19.98 102 eP Pn 05 03 22.3 -0.3
NPGB Novo Progresso 19.99 51 eP P 05 03 18.8 -2.4
PLCA Paso Flores 20.33 179 P P 05 03 25.8 +1.0
comp=Z,6.9nm,0.9s,baz=357,slow=12,SNR=12
PLCA LR LR 05 11 04.1
comp=Z,57nm,18.4s,baz=360,slow=36
PLCA Paso Flores 20.33 179 P 05 03 25.9 +1.1
PLCA Paso Flores 20.33 179 eP Pn 05 03 26.4 -0.4
BB19B Bebedouro 20.89 96 eP P 05 03 31.4 +0.5
IPMB Ipameri, GO 21.50 88 eP P 05 03 36.9 -0.7
ITTB Itaituba 21.64 45 eP P 05 03 37.6 -1.4
RCLB Rio Claro- Sao 21.80 100 eP P 05 03 40.8 0.0
SPB Sao Paulo 21.95 103 eP P 05 03 43.0 +0.8
LL01 San Ignacio de 22.02 183 P P 05 03 43.0 +0.2
LL01 IAmb IAmb 05 03 46.6
comp=Z,42nm,1.4s
PTGA Pitinga 22.20 30 P P 05 03 43.9 -1.1
comp=Z,10nm,0.6s,baz=206,slow=8.8,SNR=15
PTGA Pitinga 22.20 30 P P 05 03 44.2 -0.7
PTGA IAmb IAmb 05 03 47.0
comp=Z,13nm,0.8s
PTGA Pitinga 22.20 30 eP P 05 03 43.9 -1.1
BDFB Brasilia 22.20 82 P P 05 03 45.2 0.0
comp=Z,6.2nm,0.9s,baz=250,slow=12,SNR=5.9
BDFB Brasilia 22.20 82 P P 05 03 44.6 -0.5
VAO Valinhos 22.34 101 eP P 05 03 47.3 +0.7
BSCB Bom Sucesso 24.39 96 eP P 05 04 07.0 -0.1
MAN01 Angra dos Reis 25.11 101 eP P 05 04 13.8 +0.3
SMTB Santa Maria do 25.19 66 eP P 05 04 13.8 -0.5
ROSC El Rosal 25.25 352 P P 05 04 16.6 +1.4
comp=Z,4.2nm,0.5s,baz=137,slow=19,SNR=3.1
ROSC El Rosal 25.25 352 IAmb IAmb 05 05 07.4
comp=Z,13nm,1.2s
RUSC La Rusia 26.16 355 P P 05 04 24.3 +0.7
BSFB Barra de Sao F 28.28 92 eP P 05 04 42.9 +0.7
SDV Santo Domingo 29.04 0 eP P 05 04 46.6 -2.4
RCBR Riachuelo 36.85 72 eP P 05 05 56.9 -0.3
Z50A Ashland 55.20 345 P P 05 08 22.2 +0.7
Z50A IAmb IAmb 05 08 23.9
comp=Z,8.9nm,1.2s
V52A Sevierville 57.16 348 IAmb IAmb 05 08 36.5
comp=Z,7.1nm,1.1s
WVT Waverly 58.41 344 P P 05 08 44.4 +0.2
WVT IAmb IAmb 05 08 50.4
comp=Z,6.6nm,1.2s
TXAR Lajitas Array 58.65 326 P P 05 08 46.8 +0.7
comp=Z,0.6nm,0.8s,baz=149,slow=8.5,SNR=7.3
TX32 Lajitas Array 58.66 326 P P 05 08 47.6 +1.4
MIAR Mount Ida 58.71 338 P P 05 08 47.3 +1.0
MIAR IAmb IAmb 05 08 53.8
comp=Z,4.7nm,0.8s
W39A Magazine 59.37 338 IAmb IAmb 05 08 58.9
comp=Z,5.4nm,0.8s
SIUC Southern Illin 60.28 343 P P 05 08 57.4 +0.3
MNTX Cornudas Mount 61.43 327 IAmb IAmb 05 09 12.4
comp=Z,3.7nm,0.9s
P40A Paris 62.77 342 IAmb IAmb 05 09 20.8
comp=Z,4.6nm,0.9s
SNAA Sanae 63.97 161 P P 05 09 22.7 +1.1
SADO Sadowa 65.23 353 LR LR 05 37 28.0
comp=Z,16nm,21.4s,baz=266,slow=36
G62A West of Eustis 65.24 0 P P 05 09 31.2 +1.2
PFO Pinyon Flats O 69.06 320 LR LR 05 37 51.3
comp=Z,33nm,18.5s,baz=180,slow=34
QSPA South Pole Qui 69.85 180 P P 05 09 59.8 +0.6
TPNV Topopah Spring 71.28 323 IAmb IAmb 05 10 18.1
comp=Z,5.2nm,1.0s
PDAR Pinedale Array 72.21 331 P P 05 10 13.4 -0.5
comp=Z,0.4nm,0.7s,baz=177,slow=7.1,SNR=2.4
HWUT Hardware Ranch 72.25 329 P P 05 10 14.6 +0.4
HWUT IAmb IAmb 05 10 22.6
comp=Z,4.3nm,0.9s
AHID Auburn Hatcher 72.92 330 IAmb IAmb 05 10 21.0
comp=Z,3.5nm,0.8s
NVAR Mina Array Bea 73.47 323 P P 05 10 23.4 +2.0
comp=Z,0.3nm,0.5s,baz=16,slow=32,SNR=2.0
FXWY Fox Creek 73.56 331 P P 05 10 23.5 +1.5
ULM Lac du Bonnet 73.68 344 P P 05 10 22.8 +0.7
comp=Z,1.3nm,0.6s,baz=128,slow=5.9,SNR=4.0
ULM Lac du Bonnet 73.68 344 IAmb IAmb 05 10 35.1
comp=Z,11nm,1.8s
MCMT McKenzie Canyo 75.32 331 P P 05 10 32.4 +0.3
VNDA Vanda 77.67 190 P P 05 10 44.5 -0.3
YBH Yreka Blue Hor 78.19 323 LR LR 05 42 10.0
comp=Z,23nm,20.8s,baz=193,slow=33
TORD Torodi Ar. Bea 78.68 71 P P 05 10 50.2 -1.2
comp=Z,2.2nm,0.6s,baz=250,slow=4.9,SNR=17
PFVI Vila Bisbo 81.70 45 P P 05 11 06.8 -0.4
YKA Yellowknife Ar 89.50 341 P P 05 11 45.4 0.0
comp=Z,0.6nm,0.8s,baz=133,slow=5.4,SNR=14
H11S2 WAKE ISLAND Hyl 25.93 279 T T 07 36 37.6
baz=102,slow=74,SNR=58
H11S1 WAKE ISLAND Hyl 25.94 279 T T 07 36 37.3
baz=102,slow=74,SNR=29
H11S3 WAKE ISLAND Hyl 25.95 279 T T 07 36 36.6
baz=102,slow=74,SNR=29
H11N3 WAKE ISLAND Hyl 25.99 280 T T 07 37 16.7
baz=102,slow=74
H11N2 WAKE ISLAND Hyl 26.00 280 T T 07 37 15.6
baz=102,slow=74
H11N1 WAKE ISLAND Hyl 26.00 280 T T 07 36 37.0
baz=102
ASAR Alice Springs 130.06 210 PKP PKPdf 05 17 58.2 -1.2
comp=Z,0.7nm,0.7s,baz=195,slow=2.5,SNR=5.9
ZALV Zalesovo Beam 141.63 23 PKP PKPdf 05 18 19.7 -0.1
comp=Z,0.4nm,0.4s,baz=341,slow=3.1,SNR=1.9
MK31 Makanchi Array 145.71 33 PKPbc 05 18 27.7 +0.1
MKAR Makanchi Array 145.71 33 PKPbc PKPab 05 18 28.2 +0.2
comp=Z,0.9nm,0.5s,baz=304,slow=3.9,SNR=12
SONM Songino Array 152.48 4 PKPbc PKiKP 05 18 45.3 -0.1
comp=Z,0.2nm,0.3s,baz=90,slow=4.3,SNR=1.4
LZH Lanzhou 163.63 15 *e*PKP PKPdf 05 18 50.6 -1.6
LZH pPKP pPKPdf 05 18 53.2 +0.4

LZH				sPKP		05 18 54.3			
LZH				PKP	**PKPab**	**05 19 44.5**	**+0.8**		
LZH				LR	LR				
	comp=N,65nm,18.0s								
LZH				LR	LR				
	comp=E,69nm,18.1s								
LZH				LR	LR				
	comp=Z,78nm,20.3s								
CD2	**Chengdu**	**168.40**	**24**	PKP	**PKPdf**	**05 18 54.7**	**-1.4**		

NEIC ***09*** *05:24:11.7±1.2, 7°.26S±0°.09×120°.4E±0°.1, h544km±3km, mb4.1/17, Error ellipse: s-maj=16.6km s-min=11.9km az=65.0*
DJA ***09*** *05:24:11.5±0.4, 7°.S±4°×12°.0E±°, h554km±5km, M4.4/17, mB4.8/5, mb4.4/10, MLv4.4/17, MLv4.6/2, Mw(mB)4.0/5*
IDC ***09*** *05:24:12.7±0.7, 7°.23S×120°.51E, h554km±7km, mb3.3/11, mb1 3.5/15, mb1mx3.3/36, mbtmp4.3/15, Error ellipse: s-maj=19.7km s-min=7.9km az=65.0*
ISC 09 05:24:11.9±0.5, 7°.38S±0°.05×120°.38E±0°.07, h545km±6km, n79, σ1§19/93, mb4.0/19, 1C, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**1.89**	**136**	P	**P**	**05 25 19.9**	**-0.9**
BKSI	**Bulukumba**	**2.06**	**353**	P	**P**	**05 25 22.4**	**+0.9**
MMRI	**Maumere**	**2.23**	**124**	P	**P**	**05 25 21.7**	**-0.5**
MMRI				S	**S**	**05 26 20.0**	**+0.6**
MMRI	**Maumere**	**2.23**	**124**	P	**P**	**05 25 22.1**	**-0.2**
KAPI	**Kappang**	**2.43**	**345**	P	**P**	**05 25 25.0**	**+1.7**
	70nm,0.3s,baz=169,slow=3.0,SNR=128						
KAPI				S	**S**	**05 26 22.7**	**+1.4**
	baz=281,slow=19,SNR=0.8						
KAPI	**Kappang**	**2.43**	**345**	P	**P**	**05 25 25.0**	**+1.7**
WBSI	**Waikabubak, Su**	**2.45**	**203**	P	**P**	**05 25 23.3**	**-0.2**
WBSI				S	**S**	**05 26 21.6**	**0.0**
BASI	**Baing, Sumba**	**2.83**	**176**	P	**P**	**05 25 27.0**	**+1.5**
BASI				S	**S**	**05 26 25.6**	**+0.2**
BBSI	**Bau Bau**	**2.88**	**49**	P	**P**	**05 25 27.8**	**+1.9**
PLAI	**Plampang**	**2.95**	**241**	P	**P**	**05 25 26.7**	**+0.4**
PLAI				S	**S**	**05 26 25.9**	**-0.9**
BNSI	**Bone**	**2.97**	**355**	P	**P**	**05 25 28.0**	**+1.6**
SPSI	**Sidrap Palu**	**3.44**	**350**	P	**P**	**05 25 30.7**	**+1.2**
BATI	**Baumata**	**4.30**	**131**	P	**P**	**05 25 36.7**	**+0.9**
	123nm,0.3s,baz=317,slow=0.8,SNR=63						
BATI				S	**S**	**05 26 41.7**	**-2.4**
	42nm,0.3s,baz=123,slow=18,SNR=6.3						
BATI	**Baumata**	**4.30**	**131**	P	**P**	**05 25 36.5**	**+0.7**
TTSI	**Tana Toraja**	**4.34**	**353**	P	**P**	**05 25 37.0**	**+0.9**
SOEI	**Soe**	**4.51**	**122**	P	**P**	**05 25 38.2**	**+0.6**
SOEI	**Soe**	**4.51**	**122**	P	**P**	**05 25 38.1**	**+0.6**
SRBI	**Singaraja**	**5.17**	**262**	P	**P**	**05 25 43.2**	**+0.3**
	0.3nm0.3nm54nm,0.8s						
DNP	**Denpasar**	**5.28**	**255**	P	**P**	**05 25 42.5**	**-1.4**
	285nm,0.5s						
JAGI	**Jajag, Banyuwa**	**6.26**	**260**	P	**P**	**05 25 51.5**	**-1.3**
	0.5nm0.5nm2µm77nm,0.5s						
JAGI	**Jajag, Banyuwa**	**6.26**	**260**	P	**P**	**05 25 51.4**	**-1.3**
NLAI	**Namlea**	**7.85**	**59**	P	**P**	**05 26 09.7**	**+1.6**
	1.0nm2µm72nm,0.5s						
MRSI	**Marisa**	**7.96**	**11**	P	**P**	**05 26 09.1**	**0.0**
	767nm46nm,0.9s						
PWJI	**Pagerwojo**	**8.52**	**265**	P	**P**	**05 26 13.2**	**-1.6**
	29nm,0.4s						
PCJI	**Pacitan**	**9.15**	**264**	P	**P**	**05 26 19.5**	**-1.7**
	55nm,0.7s						
UGM	**Wanagama**	**9.78**	**266**	P	**P**	**05 26 26.2**	**-1.4**
	74nm,1.8s						
UGM	**Wanagama**	**9.78**	**266**	P	**P**	**05 26 27.7**	**0.0**
FITZ	**Fitzroy Crossi**	**11.83**	**155**	P	**P**	**05 26 49.7**	**+1.0**
	0.8nm,0.3s,baz=340,slow=6.9,SNR=36						
FITZ				S	**S**	**05 28 56.1**	**-1.4**
	0.2nm,0.3s,baz=110,slow=12,SNR=1.7						
FITZ	**Fitzroy Crossi**	**11.83**	**155**	P	**P**	**05 26 49.8**	**+1.2**
MTN	**Manton Dam**	**11.90**	**118**	P	**P**	**05 26 49.8**	**+0.3**
CISI	**Cisompet, Garu**	**12.46**	**268**	P	**P**	**05 26 53.2**	**-2.1**
FAKI	**Fak Fak**	**12.62**	**70**	P	**P**	**05 26 54.7**	**-2.3**
SIJI	**Sorong**	**12.63**	**60**	P	**P**	**05 26 55.7**	**-1.5**
	2.6nm,0.3s,baz=271,slow=5.9,SNR=6.3						
CNJI	**Cibinong**	**13.14**	**269**	P	**P**	**05 27 00.0**	**-2.3**
KKM	**Kota Kinabalu**	**13.96**	**343**	P	**P**	**05 27 09.7**	**-1.3**
PSA00	**Pilbara Seismi**	**14.12**	**182**	P	**P**	**05 27 13.2**	**+0.8**
WB0	**Warramunga Arr**	**18.35**	**134**	P	**P**	**05 27 53.8**	**+0.6**
WB0				IAmb	IAmb	05 27 54.8	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	**18.42**	**134**	P	**P**	**05 27 54.8**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=313,slow=9.9,SNR=9.0						
WRA				S	**S**	**05 30 54.8**	**+0.2**
	baz=305,slow=17,SNR=2.4						
WRAB	**Tennant Creek**	**18.42**	**134**	P	**P**	**05 27 54.9**	**+0.9**
WRAB				IAmb	IAmb	05 28 03.5	
	comp=Z,3.4nm,0.9s						
WB2	**Warramunga Arr**	**18.43**	**134**	P	**P**	**05 27 54.3**	**+0.3**
WR0	**Warramunga Arr**	**18.58**	**134**	P	**P**	**05 27 55.9**	**+0.5**
WR0				IAmb	IAmb	05 27 57.2	
	comp=Z,3.0nm,0.6s						
ASAR	**Alice Springs**	**20.76**	**143**	P	**P**	**05 28 16.0**	**+0.8**
	comp=Z,1.6nm,0.4s,baz=318,slow=8.4,SNR=22						
ASAR				S	**S**	**05 31 31.4**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=319,slow=11,SNR=1.8						
ASAR				PcP	**PcP**	**05 32 00.2**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=337,slow=1.1,SNR=9.2						
ASAR				ScP	**ScP**	**05 34 44.7**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=338,slow=2.1,SNR=7.7						
RPSI	**Rantau Prapat**	**23.63**	**294**	P	**P**	**05 28 41.3**	**+0.4**
PSI	**Prapat**	**23.68**	**295**	P	**P**	**05 28 41.3**	**-0.2**
	comp=Z,1.7nm,0.4s,baz=179,slow=13,SNR=4.1						
BBOO	**Buckleboo**	**29.20**	**152**	P	**P**	**05 29 30.4**	**+0.7**
TPUB	**Ta-pu**	**30.49**	**0**	P	**P**	**05 29 41.1**	**+0.2**
STKA	**Stephens Creek**	**31.39**	**144**	P	**P**	**05 29 49.9**	**+1.3**
	comp=Z,3.1nm,0.3s,baz=331,slow=9.2,SNR=11						
STKA				PcP	**PcP**	**05 32 25.3**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=311,slow=12,SNR=3.4						
STKA	**Stephens Creek**	**31.39**	**144**	P	**P**	**05 29 49.8**	**+1.3**
STKA				PcP	**PcP**	**05 32 25.1**	**-0.4**
KSRS	**Korea Array**	**45.15**	**8**	P	**P**	**05 31 39.2**	**-0.8**
	comp=Z,1.6nm,0.5s,baz=188,slow=8.7,SNR=10						
LZH	**Lanzhou**	**45.94**	**341**	⇑P	**P**	**05 31 48.8**	**+2.5**
LZH				pP	pP	05 33 31.2	+5.1
LZH				PP	**PP**	**05 33 45.7**	**+3.0**
LZH				sP	sP	05 34 29.0	+2.1
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,52nm,6.2s						
MJAR	**Matsushiro Arr**	**46.78**	**20**	P	**P**	**05 31 50.1**	**-2.4**
	comp=Z,4.0nm,0.7s,baz=195,slow=8.6,SNR=6.8						
HHC	**Hu-ho-hao-te**	**48.67**	**351**	P	**P**	**05 32 07.0**	**+0.4**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,33nm,5.2s						
GTA	**Gaotai**	**50.30**	**339**	*e*P	**P**	**05 32 21.0**	**+2.3**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
USA0B	**Ussuriysk Arra**	**52.40**	**11**	P	**P**	**05 32 32.4**	**-1.2**
USA0B				IAmb	IAmb	05 32 32.8	
	comp=Z,5.4nm,0.7s						
USRK	**Ussuriysk Ar.**	**52.40**	**11**	P	**P**	**05 32 32.3**	**-1.3**
	comp=Z,3.5nm,0.5s,baz=189,slow=6.6,SNR=14						
SONM	**Songino Array**	**56.34**	**349**	P	**P**	**05 33 00.9**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=164,slow=8.1,SNR=7.1						
RPZ	**Rata Peaks**	**57.07**	**138**	P	**P**	**05 33 07.7**	**+1.2**
TUWZ	**Tuamarina**	**58.20**	**135**	P	**P**	**05 33 14.9**	**+0.8**
WMQ	**Urumqi**	**58.92**	**333**	*e*P	**P**	**05 33 20.0**	**+1.1**
BKZ	**Black Stump Fm**	**59.33**	**131**	P	**P**	**05 33 22.3**	**+0.5**
BKZ				IAmb	IAmb	05 33 24.7	
	comp=Z,12nm,1.3s						
URZ	**Urewera**	**59.54**	**130**	P	**P**	**05 33 23.7**	**+0.6**
URZ				IAmb	IAmb	05 33 42.1	
	comp=Z,12nm,1.1s						
KSH	**Kashi**	**62.14**	**322**	P	**P**	**05 33 42.5**	**+2.1**
KSH				pP	pP	05 35 31.0	+2.4
KSH				sP	sP	05 36 27.3	+1.1
KSH				pmax	pmax		
	comp=Z,14nm,0.8s						
KSH				pmax	pmax		
	comp=Z,160nm,6.0s						
MK31	**Makanchi Array**	**63.66**	**332**	P	**P**	**05 33 49.4**	**-0.4**
MKAR	**Makanchi Array**	**63.66**	**332**	P	**P**	**05 33 49.5**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=140,slow=7.6,SNR=22						
ZALV	**Zalesovo Beam**	**68.03**	**338**	P	**P**	**05 34 15.4**	**-1.4**
	comp=Z,1.3nm,0.4s,baz=161,slow=4.5,SNR=6.0						
PETK	**Petropavlovsk-**	**68.05**	**23**	P	**P**	**05 34 17.0**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=209,slow=5.4,SNR=4.9						
KURK	**Kurchatov**	**68.17**	**333**	P	**P**	**05 34 17.5**	**-0.2**
SOCY	**Socotra**	**68.80**	**286**	P	**P**	**05 34 21.4**	**-1.0**
SOCY				IAmb	IAmb	05 34 25.0	
	comp=Z,5.3nm,0.9s						
VNDA	**Vanda**	**73.37**	**171**	P	**P**	**05 34 49.0**	**+1.0**
	comp=Z,2.0nm,0.6s,baz=316,slow=7.1,SNR=15						
VNDA	**Vanda**	**73.37**	**171**	P	**P**	**05 34 49.0**	**+1.0**
VNDA				IAmb	IAmb	05 35 05.4	
	comp=Z,5.9nm,1.5s						
RAYN	**Ar Rayn**	**79.23**	**296**	P	**P**	**05 35 21.5**	**+0.2**
QSPA	**South Pole Qui**	**82.61**	**180**	P	**P**	**05 35 38.3**	**+0.3**
QSPA				IAmb	IAmb	05 35 41.1	
	comp=Z,2.8nm,0.7s						
SNAA	**Sanae**	**92.92**	**195**	P	**P**	**05 36 27.1**	**+0.5**
YKA	**Yellowknife Ar**	**112.16**	**24**	PKiKP	**PKiKP**	**05 41 44.3**	**-1.0**
	comp=Z,0.1nm,0.4s,baz=300,slow=1.8,SNR=7.3						
NVAR	**Mina Array Bea**	**118.94**	**50**	PKP	**PKiKP**	**05 42 00.3**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=318,slow=1.2,SNR=2.2						
TORD	**Torodi Ar. Bea**	**119.51**	**281**	PKP	**PKPdf**	**05 42 00.0**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=71,slow=2.1,SNR=5.9						
AC02	**Maricunga**	**144.76**	**165**		**PKPab**	**05 42 49.3**	**+0.1**
GO02	**Mina Guanaco**	**146.23**	**164**		**PKPbc**	**05 42 52.8**	**+0.1**
CPUP	**Villa Florida**	**146.42**	**184**	PKPbc	**PKPbc**	**05 42 53.1**	**+0.3**
	comp=Z,2.9nm,0.7s,baz=198,slow=0.5,SNR=7.2						

IDC ***09*** *05:26:51.5±1.5, 20°.79S×70°.79W, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.4/33, mbtmp3.6/2, MS2.7/1, Ms1 2.8/1, ms1mx2.5/20, Error ellipse: s-maj=67.8km s-min=32.2km az=101.0*
GUC ***09*** *05:26:58.7±0.5, 20°.16S×70°.51W, h37km±3km, ML3.5*
ISC 09 05:26:56.2±1.4, 20°.11S±0°.04×70°.69W±0°.10, h20km±9km, n15, σ1§01/24, mb3.6/3, 8D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.55**	**107**	⇓*e*P	**Pb**	**05 27 07.4**	**+0.3**
TA02				*e*S	**Sb**	**05 27 13.2**	**-1.4**
TA01	**Diego Aracena**	**0.66**	**134**	⇓*e*P	**Pb**	**05 27 09.1**	**+0.1**
TA01				*e*S	**Sb**	**05 27 16.8**	**-0.9**
TA01				IAML		05 27 17.4	
	comp=E,4µm,0.4s						
PSGC	**Pisagua**	**0.74**	**46**	*e*P	**Pn**	**05 27 11.4**	**-0.2**
PSGC				*e*S	**Sb**	**05 27 21.2**	**+1.1**
PSGC				IAML		05 27 24.9	
	comp=N,2µm,0.3s						
PATCX	**Punta Patache**	**0.87**	**145**	⇓*e*P	**Pb**	**05 27 12.6**	**0.0**
PATCX				*e*S	**Sb**	**05 27 23.1**	**-0.7**
PATCX				IAML		05 27 24.9	
	comp=E,6µm,0.3s						
PB11	**IPOC Station P**	**1.03**	**70**	⇓*e*P	**Pb**	**05 27 15.4**	**-0.1**
PB11				*e*S	**Sb**	**05 27 27.7**	**-1.0**
PB02	**IPOC Station P**	**1.41**	**148**	⇓*e*P	**Pn**	**05 27 21.2**	**+0.3**
PB02				*e*S	**Sn**	**05 27 38.0**	**-0.9**
PB02				IAML		05 27 43.6	
	comp=E,3µm,0.4s						
MNMC	**Minye Minye**	**1.42**	**47**	⇓*e*P	**Pb**	**05 27 22.4**	**+0.3**
MNMC				*e*S	**Sb**	**05 27 40.8**	**+0.9**
PB08	**IPOC Station P**	**1.44**	**91**	⇓*e*P	**Pn**	**05 27 21.7**	**+0.2**
PB08				*e*S	**Sn**	**05 27 39.2**	**-0.9**
PB01	**IPOC Station P**	**1.46**	**130**	*e*P	**Pn**	**05 27 21.5**	**0.0**
PB01				*e*S	**Sn**	**05 27 38.6**	**-1.4**
PB01				IAML		05 27 42.3	
	comp=E,1µm,0.2s						
GO01	**Chusmiza**	**1.47**	**73**	⇓*e*P	**Pb**	**05 27 22.6**	**-0.6**
GO01				*e*S	**Sn**	**05 27 41.0**	**0.0**
LPAZ	**La Paz**	**4.51**	**33**	Pn	**Pb**	**05 28 12.3**	**-2.8**
	baz=211,slow=8.3						
LPAZ				LR	LR	05 30 16.3	
	comp=E,78nm,20.6s,baz=28,slow=40						
USHA	**Ushuaia**	**34.71**	**178**	P	P	05 33 37.8	-6.7
	comp=E,12nm,0.4s,baz=323,slow=6.1,SNR=1.7						
TORD	**Torodi Ar. Bea**	**78.47**	**71**	P	**P**	**05 38 55.4**	**-1.0**
	comp=E,0.3nm,0.5s,baz=239,slow=4.7,SNR=2.7						
YKA	**Yellowknife Ar**	**89.34**	**341**	P	**P**	**05 39 51.5**	**+0.8**
	comp=E,0.2nm,0.7s,baz=134,slow=4.6,SNR=5.2						
MKAR	**Makanchi Array**	**145.44**	**33**	PKPbc	**PKPab**	**05 46 33.6**	**+0.6**
	comp=E,0.4nm,0.5s,baz=324,slow=3.9,SNR=4.4						

SOME ***09*** *05:31:20.8, 38°.27N×72°.32E, h5km*
NNC ***09*** *05:31:44.5±4.6, 39°.15N×72°.10E, h0km, mb3.5, mpv3.0, Error ellipse: s-maj=45.6km s-min=31.5km az=166.0*
ISC 09 05:31:40.4±3.8, 38°.5N±0°.2×72°.1E±0°.1, h25km, n10, σ1§19/12, 2C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.80**	**18**	P	**Pn**	**05 32 39.0**	**+1.3**
	SNR=15						
IUG	**Iuzhnay**	**3.94**	**337**	*e*P	**Pn**	**05 32 39.8**	**+0.4**
	8.2nm,0.2s						
IUG				*e*S	**Sb**	**05 33 35.9**	**-0.6**
	49nm,0.2s						
UCH	**Uchtor**	**4.13**	**26**	P	**Pn**	**05 32 42.9**	**+0.6**
	SNR=19						
MRKS	**Merke**	**4.30**	**11**	*e*P	**Pn**	**05 32 45.9**	**+1.6**
	6.5nm,0.2s						
MRKS				*e*S	**Sb**	**05 33 46.3**	**-0.4**
	11nm,0.3s						
EKS2	**Erkin-Say**	**4.32**	**17**	P	**Pn**	**05 32 45.9**	**+1.2**
	SNR=5.3						
AAK	**Ala-Archa**	**4.49**	**23**	P	**Pn**	**05 32 47.9**	**+0.9**
	SNR=7.1						
AAK	**Ala-Archa**	**4.49**	**23**	Pn	**Pn**	**05 32 47.1**	**+0.1**
	3.7nm,0.4s						
AAK				⇓Lg	Lg	05 33 50.7	
	9.2nm,0.7s						
KK31	**Karatay Array**	**4.72**	**346**	⇑Pn	**Pn**	**05 32 49.5**	**-0.6**
	0.4nm,0.3s,baz=160,slow=12,SNR=18						
KK31				⇓Lg	Lg	05 33 53.7	
	1.6nm,0.4s,baz=165,slow=21,SNR=14						
TKM2	**Tokmak 2**	**5.13**	**30**	P	**Pn**	**05 32 55.5**	**-0.3**
	SNR=6.2						
TKM2	**Tokmak 2**	**5.13**	**30**	⇓Pn	**Pn**	**05 32 53.7**	**-2.2**
	2.1nm,0.5s						
TKM2				⇑Lg	Lg	05 34 09.1	
	2.3nm,0.8s						

IDC ***09*** *05:34:13.8±0.5, 6°.97S×154°.86E, h0km, mb4.3/22, mb1 4.5/25, mb1mx4.4/47, mbtmp4.3/25, ML3.4/3, MS3.8/4, Ms1 3.8/4, ms1mx3.3/41, Error ellipse: s-maj=17.9km s-min=13.4km az=107.0*
NEIC ***09*** *05:34:19.7±2.1, 6°.98S±0°.08×154°.67E±0°.07, h35km±1km, mb4.7/38, Error ellipse: s-maj=13.3km s-min=11.4km az=32.0*
DJA ***09*** *05:34:21.9±3.3, 7°.S±14°×15°.5E±2°.2, h93km±17km, M4.7/10, mb4.7/10, mB4.9/1, Mw(mB)4.2/1*
BJI ***09*** *05:34:22.7±0.0, 7°.12S×154°.51E, h71km, mB4.9/23, mb4.8/27, Ms5.1/7, Ms7 4.8/7*
ISC 09 05:34:22.5±0.4, 6°.94S±0°.05×154°.69E±0°.06, h39km, n86, σ1§48/92, mb4.6/47, 1C, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.71**	**317**		**Pn**	**05 35 16.7**	**+1.3**
KRVT	**Keravat (AS076**	**3.72**	**315**	Pn	**Pn**	**05 35 15.8**	**+0.4**
	12nm,0.3s,baz=170,slow=3.9,SNR=9.1						
KRVT				Sn	**Sn**	**05 35 55.4**	**-2.6**
	45nm,0.3s,baz=160,slow=20,SNR=5.6						
HNR	**Honiara**	**5.77**	**116**	LR	LR	05 37 58.5	
	comp=Z,569nm,19.2s,baz=282,slow=40						
HNR	**Honiara**	**5.77**	**116**	Pn	**Pn**	**05 35 47.4**	**+3.7**
PMG	**Port Moresby**	**7.84**	**251**	Pn	**Pn**	**05 36 12.7**	**+0.6**
	3.7nm,0.3s,baz=8.9,slow=8.8,SNR=7.6						
PMG				Sn	**Sn**	**05 37 42.6**	**+2.9**
	1.1nm,0.3s,baz=281,slow=16,SNR=1.2						
PMG				LR	LR	05 39 07.9	
	comp=Z,404nm,19.0s,baz=56,slow=37						
PMG	**Port Moresby**	**7.84**	**251**		**Pn**	**05 36 12.0**	**-0.1**
PATS	**Pohnpei**	**14.15**	**15**	Pn	**Pn**	**05 37 39.7**	**+1.2**
CTA	**Charters Tower**	**15.42**	**211**	Pn	**P**	**05 38 00.7**	**+1.2**
	0.4nm,0.3s,baz=33,slow=12,SNR=14						
CTAO	**Charters Tower**	**15.42**	**211**	P	**P**	**05 38 00.3**	**+0.8**
EIDS	**Eidsvold**	**18.65**	**190**	P	**Pn**	**05 38 37.7**	**+2.0**
DZM	**Mont Dzumac**	**18.85**	**144**	P	**P**	**05 38 34.6**	**-2.8**
	0.5nm,0.3s,baz=95,slow=21,SNR=4.7						
DZM				LR	LR	05 44 14.3	
	comp=Z,322nm,21.7s,baz=198,slow=32						
WR0	**Warramunga Arr**	**23.44**	**235**	P	**P**	**05 39 25.4**	**-1.2**
WR0				IAmb	IAmb	05 39 27.2	
	comp=Z,19nm,0.8s						
WB0	**Warramunga Arr**	**23.46**	**235**	P	**P**	**05 39 26.0**	**-0.8**
WB0				IAmb	IAmb	05 39 30.1	
	comp=Z,30nm,1.3s						
WRAB	**Tennant Creek**	**23.58**	**235**	P	**P**	**05 39 27.1**	**-0.9**
WRAB				IAmb	IAmb	05 39 28.9	
	comp=Z,22nm,0.9s						
WB2	**Warramunga Arr**	**23.59**	**235**	P	**P**	**05 39 27.0**	**-0.9**
WB2				IAmb	IAmb	05 39 29.0	
	comp=Z,21nm,0.9s						
WRA	**Warramunga Arr**	**23.60**	**235**	P	**P**	**05 39 27.2**	**-0.9**
	comp=Z,15nm,0.8s,baz=60,slow=9.7,SNR=29						
WRA				PcP	**PcP**	**05 43 12.1**	**-0.4**
	comp=Z,1.3nm,0.4s,baz=61,slow=2.3,SNR=5.4						
MTN	**Manton Dam**	**23.92**	**254**	P	**P**	**05 39 32.5**	**+1.4**
MTN				IAmb	IAmb	05 39 32.9	
	comp=Z,33nm,1.2s						
SIJI	**Sorong**	**24.12**	**283**	P	**P**	**05 39 34.1**	**+1.1**
	comp=Z,9.6nm,0.4s,baz=80,slow=9.2,SNR=8.3						
MSVF	**Nonsavu**	**25.19**	**117**	P	**P**	**05 39 41.5**	**-1.2**
MSVF				IAmb	IAmb	05 39 56.9	
	comp=Z,21nm,1.1s						
AS31	**Alice Springs**	**25.98**	**228**	P	**P**	**05 39 49.1**	**-0.8**
ASAR	**Alice Springs**	**25.98**	**228**	P	**P**	**05 39 49.3**	**-0.6**
	comp=Z,7.1nm,0.7s,baz=61,slow=8.6,SNR=64						
ASAR				ScP	**ScP**	**05 46 58.2**	**+3.8**
	comp=Z,0.5nm,0.8s,baz=69,slow=2.6,SNR=7.8						
KNRA	**Kununurra**	**26.83**	**249**	P	**P**	**05 39 56.9**	**-0.6**
KNRA				IAmb	IAmb	05 39 59.8	
	comp=Z,19nm,0.9s						
STKA	**Stephens Creek**	**27.66**	**205**	P	**P**	**05 40 03.0**	**-1.7**
	comp=Z,4.8nm,0.8s,baz=11,slow=10,SNR=7.0						
STKA	**Stephens Creek**	**27.66**	**205**	P	**P**	**05 40 03.2**	**-1.6**
FITZ	**Fitzroy Crossi**	**30.39**	**246**	P	**P**	**05 40 28.5**	**-0.8**
	comp=Z,7.6nm,0.6s,baz=74,slow=7.3,SNR=39						
FITZ	**Fitzroy Crossi**	**30.39**	**246**	P	**P**	**05 40 28.8**	**-0.5**
FITZ				IAmb	IAmb	05 40 29.4	
	comp=Z,8.1nm,0.6s						
BBOO	**Buckleboo**	**31.02**	**211**	P	**P**	**05 40 33.1**	**-1.5**
FORT	**Forrest**	**34.42**	**223**	P	**P**	**05 41 03.7**	**-0.7**
NIUE	**Niue**	**36.44**	**113**	P	**P**	**05 41 23.6**	**+1.6**
PSA00	**Pilbara Seismi**	**36.65**	**243**	P	**P**	**05 41 23.8**	**+0.1**
TUWZ	**Tuamarina**	**38.38**	**156**	P	**P**	**05 41 37.2**	**-0.9**
BFZ	**Birch Farm**	**38.73**	**153**	P	**P**	**05 41 39.2**	**-1.8**
MORW	**Morawa**	**42.54**	**234**	P	**P**	**05 42 12.3**	**-0.4**
MORW				IAmb	IAmb	05 42 28.0	
	comp=Z,27nm,1.4s						
YULB	**Yu-li**	**44.42**	**314**	P	**P**	**05 42 28.2**	**+0.4**
YULB				IAmb	IAmb	05 42 37.8	
	comp=Z,7.0nm,0.8s						
KSRS	**Korea Array**	**50.74**	**332**	P	**P**	**05 43 17.1**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=146,slow=8.8,SNR=1.8						
KSRS				LR	LR	06 00 13.1	
	comp=Z,220nm,21.2s,baz=182,slow=31						
NJ2	**Nanjing**	**51.67**	**321**	*e*P	**P**	**05 43 24.8**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
WHN	**Wuhan**	**53.69**	**316**	P	P	05 43 29.1	-10
XAN	**Xi'an**	**59.45**	**316**	P	**P**	**05 44 19.4**	**-0.3**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,86nm,4.1s						
KMI	**Kunming**	**59.73**	**304**	P	**P**	**05 44 20.2**	**-1.8**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.8s						
KMI				pmax	pmax		
	comp=Z,80nm,5.5s						
PETK	**Petropavlovsk-**	**59.87**	**2**	P	**P**	**05 44 21.1**	**-1.1**
	comp=Z,1.2nm,0.8s,baz=182,slow=8.7,SNR=2.2						
CMAR	**Chiang Mai Arr**	**60.48**	**296**	P	**P**	**05 44 28.2**	**+1.2**
	comp=Z,2.2nm,0.7s,baz=121,slow=5.6,SNR=9.7						
CD2	**Chengdu**	**61.54**	**311**	⇑P	**P**	**05 44 34.5**	**+0.4**
HHC	**Hu-ho-hao-te**	**61.87**	**324**	P	**P**	**05 44 38.2**	**+2.1**
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,34nm,6.0s						
LZH	**Lanzhou**	**64.06**	**316**	*e*P	**P**	**05 44 52.5**	**+1.6**
LZH				pP	pwP	05 45 09.8	+0.7
LZH				sP	PcP	05 45 18.5	-7.4
LZH				*e*PP	**PP**	**05 47 16.2**	**+4.0**
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,78nm,4.6s						
LZH				LR	LR		
	comp

HYT	**Haines Junctio**	**85.46**	**27**	P	**P**	**05 46 53.5**	**-0.6**
EGAK	**Eagle**	**85.58**	**23**	P	**P**	**05 46 55.7**	**+1.2**
EGAK				IAmb	IAmb	05 47 08.9	
	comp=Z,4.5nm,0.9s						
KSH	**Kashi**	**85.74**	**310**	P	**P**	**05 46 57.8**	**+1.8**
KSH				S	**S**	**05 57 21.4**	**-4.8**
KSH				SS	**SS**	**06 03 03.5**	**-0.2**
KSH				pmax	pmax		
	comp=Z,12nm,0.7s						
KSH				pmax	pmax		
	comp=Z,150nm,4.3s						
KSH				LR	LR		
	comp=Z,99nm,12.1s						
KSH				LR	LR		
	comp=Z,65nm,7.4s						
KSH				LR	LR		
	comp=Z,410nm,15.5s						
DAWY	**Dawson**	**85.97**	**24**	P	**P**	**05 46 56.8**	**+0.3**
EPYK	**Eagle Plains**	**87.92**	**22**	P	**P**	**05 47 06.2**	**+0.3**
DLBC	**Dease Lake**	**88.25**	**31**	P	**P**	**05 47 07.4**	**-0.2**
	comp=Z,3.1nm,1.0s,baz=257,slow=7.5,SNR=4.4						
DLBC	**Dease Lake**	**88.25**	**31**	P	**P**	**05 47 08.5**	**+0.8**
DLBC				IAmb	IAmb	05 47 10.2	
	comp=Z,5.8nm,1.1s						
INK	**Inuvik**	**89.77**	**21**	P	**P**	**05 47 13.7**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=156,slow=11,SNR=4.0						
INK	**Inuvik**	**89.77**	**21**	P	**P**	**05 47 13.9**	**-0.5**
NVAR	**Mina Array Bea**	**91.93**	**52**	P	**P**	**05 47 24.8**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=252,slow=6.7,SNR=5.8						
YKA	**Yellowknife Ar**	**96.43**	**28**	P	**P**	**05 47 43.9**	**-1.4**
	comp=Z,1.6nm,0.9s,baz=263,slow=4.3,SNR=16						
PDAR	**Pinedale Array**	**98.89**	**48**	P	**P**	**05 47 55.1**	**-2.0**
	comp=Z,0.4nm,0.8s,baz=126,slow=2.0,SNR=3.7						
AKASG	**Malin Array Be**	**117.31**	**324**	PKP	**PKPdf**	**05 52 59.8**	**-2.0**
	comp=Z,0.4nm,0.5s,baz=61,slow=2.2,SNR=2.4						
GERES	**GERESS Array B**	**126.84**	**329**	PKP	**PKPdf**	**05 53 20.1**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=85,slow=2.8,SNR=5.6						
BDFB	**Brasilia**	**148.24**	**135**	PKPbc	**PKPbc**	**05 54 02.5**	**-1.1**
	comp=Z,4.2nm,0.8s,baz=218,slow=2.4,SNR=6.4						
BDFB	**Brasilia**	**148.24**	**135**		**PKPdf**	**05 54 01.3**	**+1.0**
TORD	**Torodi Ar. Bea**	**152.71**	**285**	PKPbc	**PKPbc**	**05 54 13.1**	**-1.2**
	comp=Z,5.6nm,0.8s,baz=58,slow=2.3,SNR=26						

*IDC **09** 05:43:43.5±0.9,60.˚46S×48.˚04W,h0km,mb4.2/8, mb1 4.2/8,mb1mx4.0/22,mbtmp4.2/8,Error ellipse: s-maj=39.4km s-min=18.8km az=65.0*

*NEIC **09** 05:43:44.7±2.3,60.˚2S±0.˚1×47.˚2W±0.˚2,h10km±1km, mb4.4/14,Error ellipse: s-maj=20.6km s-min=15.3km az=231.0*

ISC 09 05:43:44.6±0.5,60.˚29S±0.˚08×47.˚64W±0.˚10,h10km,n34, σ1§66/29,mb4.4/13,Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**8.52**	**50**	Pn	**Pn**	**05 45 43.5**	**-4.4**
EFI	**East Falkland**	**10.41**	**321**	Pn	**Pn**	**05 46 13.3**	**-0.4**
GO10	**Punta Arenas**	**14.64**	**289**	Pn	**Pn**	**05 47 09.8**	**-1.8**
VNA3	**Neumayer Olymp**	**18.65**	**141**	P	**Pn**	**05 48 02.8**	**+0.4**
SNAA	**Sanae**	**20.87**	**141**	P	**P**	**05 48 26.9**	**+0.5**
	7.1nm,0.9s,baz=291,slow=9.4,SNR=18						
SNAA	**Sanae**	**20.87**	**141**	P	Pn	05 48 27.4	-1.5
PLCA	**Paso Flores**	**24.17**	**314**	P	**P**	**05 49 01.7**	**+0.8**
	1.8nm,0.9s,baz=190,slow=7.0,SNR=4.0						
PLCA	**Paso Flores**	**24.17**	**314**	P	**P**	**05 49 01.2**	**+0.3**
QSPA	**South Pole Qui**	**29.95**	**180**	P	**P**	**05 49 51.7**	**-0.9**
	4.2nm,0.9s,baz=190,slow=5.0,SNR=5.1						
QSPA	**South Pole Qui**	**29.95**	**180**	P	**P**	**05 49 52.2**	**-0.4**
QSPA				IAmb	IAmb	05 49 58.4	
	comp=Z,6.6nm,1.0s						
CO01	**Juntas del Tor**	**33.85**	**323**		**P**	**05 50 27.6**	**+0.4**
CO01				IAmb	IAmb	05 50 35.6	
	comp=Z,6.5nm,0.9s						
CPUP	**Villa Florida**	**34.59**	**345**	P	**P**	**05 50 34.3**	**+0.9**
CPUP				IAmb	IAmb	05 50 39.6	
	comp=Z,3.4nm,0.9s						
GO02	**Mina Guanaco**	**38.25**	**327**	P	**P**	**05 51 06.5**	**+1.5**
GO02				IAmb	IAmb	05 51 25.6	
	comp=Z,7.0nm,1.0s						
MAW	**Mawson**	**42.77**	**148**	P	**P**	**05 51 42.4**	**+0.8**
	comp=Z,3.3nm,0.9s,baz=106,slow=9.1,SNR=3.7						
MAW	**Mawson**	**42.77**	**148**	P	**P**	**05 51 43.3**	**+1.7**
BDFB	**Brasilia**	**44.58**	**359**	P	**P**	**05 51 59.0**	**+2.1**
	comp=Z,3.0nm,0.7s,baz=59,slow=21,SNR=3.4						
BDFB	**Brasilia**	**44.58**	**359**	P	**P**	**05 51 55.8**	**-1.0**
BDFB				IAmb	IAmb	05 52 03.0	
	comp=Z,3.5nm,0.8s						
SIV	**San Ignacio**	**45.30**	**342**	P	**P**	**05 52 02.9**	**+0.5**
	comp=Z,2.1nm,0.7s,baz=165,slow=8.9,SNR=6.2						
SAML	**Samuel**	**52.54**	**341**	P	**P**	**05 52 58.4**	**+0.4**
CASY	**Casey**	**52.71**	**169**	P	**P**	**05 52 59.2**	**+0.6**
BOSA	**Boshof**	**57.19**	**91**	P	**P**	**05 53 33.0**	**+1.3**
	comp=Z,4.4nm,1.0s,baz=341,slow=6.6,SNR=3.0						
H10N3	**ASCENSION HYDR**	**57.94**	**40**	T	T	06 56 35.3	
	baz=203,slow=74						
H10N1	**ASCENSION HYDR**	**57.95**	**40**	T	T	06 56 35.4	
	baz=203						
H10N2	**ASCENSION HYDR**	**57.96**	**40**	T	T	06 56 37.0	
	baz=203,slow=74						
PTGA	**Pitinga**	**60.16**	**346**	P	**P**	**05 53 51.1**	**-1.1**
PTGA				IAmb	IAmb	05 53 58.3	
	comp=Z,3.9nm,0.8s						
LBTB	**Lobatse**	**60.33**	**89**	P	**P**	**05 53 51.7**	**-1.9**
LBTB				IAmb	IAmb	05 54 01.1	
	comp=Z,3.3nm,1.1s						
TSUM	**Tsumeb**	**61.27**	**78**	P	**P**	**05 54 01.0**	**+1.0**
TSUM				IAmb	IAmb	05 54 17.2	
	comp=Z,3.0nm,1.0s						
BHW	**Baring Head**	**72.83**	**212**	P	**P**	**05 55 09.8**	**-3.2**
AGPR	**Aguadilla, PR**	**80.05**	**341**	P	**P**	**05 55 54.9**	**+0.8**
TORD	**Torodi Ar. Bea**	**83.10**	**48**	P	**P**	**05 56 13.8**	**+3.6**
	comp=Z,2.5nm,0.8s,baz=211,slow=5.9,SNR=6.1						
AKASG	**Malin Array Be**	**126.67**	**51**	PKP	**PKPdf**	**06 02 45.7**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=243,slow=2.1,SNR=1.9						
ARCES	**ARCESS Array B**	**139.55**	**31**	PKhKP	PKPpre	06 03 06.2	
	comp=Z,1.5nm,0.8s,baz=204,slow=2.0,SNR=3.9						
ILAR	**Eielson Array**	**144.86**	**313**	PKP	**PKPdf**	**06 03 20.8**	**+0.8**
	comp=Z,3.3nm,0.7s,baz=172,slow=1.6,SNR=7.5						
MKAR	**Makanchi Array**	**148.18**	**92**	PKPbc	**PKPbc**	**06 03 28.9**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=228,slow=2.7,SNR=12						

*MAN **09** 05:44:23.7,5.˚63N×125.˚74E,h126km,mb6.1,ML5.2, MS5.7*

MAN Intensity IV - Davao City; Mati City Davao Oriental; Intensity III - Bislig Surigao del sur; Tagum City; General Santos City; Intensity II - Kidapawan City; Malita and Don Marcelino, Davao Occidental; Kiamba and Malapatan Sarangani; Intensity I - Gingoog Misamis Oriental.

*BJI **09** 05:44:25.5±0.0,5.˚63N×125.˚74E,h134km,mb5.3/64, mb5.3/83*

*NEIC **09** 05:44:27.8±2.2,5.˚68N±0.˚05×125.˚71E±0.˚07,h132km±3km, mb5.5/191,Mwb5.4/21,Mwc5.5(GCMT), Error ellipse: s-maj=10.3km s-min=6.7km az=82.0*

*NEIC **09** 05:44:27,5.˚74N×125.˚68E,h127km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.27; Mθθ0.77; Mθθ-1.04; Mrθ0.96; Mϕϕ1.49; Mθr0.03; Fault plane solution: M₀2.00000×10¹⁷ NP1:ϕ₁108.00000°, δ81.00000°,λ28.00000°. NP2:ϕ₂13.00000°,δ62.00000°, λ169.00000°. Principal axes: T 2.0310, Plg26.0000°, Azm334.0000°; N -0.0560, Plg60.0000°, Azm125.0000°; P -1.9750, Plg12.0000°, Azm238.0000°;*

*DJA **09** 05:44:27.9±0.2,6.˚N±1.˚×12.˚6E±.˚,h128km±2km,M5.4/133, mB5.9/95, mb5.6/133,MLv6.2/13,Mw(mB)5.4/95, Mwp5.3/27*

*IDC **09** 05:44:28.0±0.6,5.˚68N×125.˚53E,h131km±4km,mb4.9/47, mb1 5.0/47,mb1mx5.0/48,mbtmp5.3/47,MS4.1/24, Ms1 4.1/24,ms1mx4.0/42, Error ellipse: s-maj=10.2km s-min=5.7km az=77.0*

*GCMT **09** 05:44:27.8±0.1,5.˚74N±0.˚01×125.˚66E±0.˚01,h128km, MW5.5/149,Moment Tensor Solution. s131,c209; s149,c280; Duration: 1§3 Moment tensor: Scale 10¹⁷ Nm; Mrr0.23±.02; Mθθ0.78±.02; Mϕϕ-1.01±.03; Mrθ0.95±.02; Mθr1.54±.02; Mϕr0.06±.02; Best double couple: M₀2.02800×10¹⁷ NP1:ϕ₁13.00000°,δ63.00000°, λ170.00000°. NP2:ϕ₂107.00000°,δ81.00000°,λ27.00000°. Principal axes: T 2.0730, Plg25.0000°, Azm333.0000°; N -0.0860, Plg62.0000°, Azm125.0000°; P -1.9820, Plg12.0000°, Azm237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **09** 05:44:27.7±1.2,5.˚73N×125.˚61E,h143km,mb5.4/63 Error ellipse: s-maj=7.7km s-min=4.2km az=105.6*

*KLM **09** 05:44:28.0,5.˚72N×125.˚92E,h130km,mb5.6*

*NEIC **09** 05:44:28.5,5.˚66N×125.˚73E,h116km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.37; Mθθ0.32; Mϕϕ-0.69; Mrθ0.84; Mϕθ1.01; Mϕr0.28; Fault plane solution: M₀1.47000×10¹⁷ NP1:ϕ₁6.84000°, δ59.04000°,λ158.60000°. NP2:ϕ₂108.24000°,δ71.77000°, λ32.79000°. Principal axes: T 1.5700, Plg36.0000°, Azm331.0000°; N -0.2237, Plg53.0000°, Azm134.0000°; P -1.3463, Plg8.0000°, Azm235.0000°;*

ISC 09 05:44:28.3±0.3,5.˚68N±0.˚02×125.˚66E±0.˚03,h138km±2km, h139km:pP-P,n901,σ1953/989,mb5.4/229,59C-18D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.43**	**7**	*e*P	**Pn**	**05 44 45.3**	**-2.6**
DDMP				*e*S	**Sn**	**05 44 57.8**	**-5.1**
GSPH	**General Santos**	**0.82**	**300**	⇓*e*P	**Pn**	**05 44 48.4**	**-2.2**
GSPH				*i* S	**Sn**	**05 45 04.3**	**-3.1**
DAV	**Davao City (W)**	**1.39**	**357**	P	**Pn**	**05 44 55.3**	**-0.5**
	960nm,0.3s,baz=243,slow=6.3,SNR=33						
DAV				S	**Sn**	**05 45 15.3**	**-1.5**
	8µm,0.3s,baz=288,slow=19,SNR=14						
DAV				LR	LR	05 45 29.8	
	comp=Z,14µm,20.1s,baz=147,slow=45						
DAV	**Davao City (W)**	**1.39**	**357**	P	**Pn**	**05 44 54.2**	**-1.6**
SKMP	**Bagumbayan, Su**	**1.39**	**307**	*e*P	**Pn**	**05 44 53.4**	**-2.5**
SKMP				*e*S	**Sn**	**05 45 15.5**	**-1.3**
MATI	**Mati**	**1.40**	**25**	*e*P	**Pn**	**05 44 53.6**	**-2.3**
MATI				*e*S	**Sn**	**05 45 17.7**	**+0.9**
DMPH	**Davao City--Mi**	**1.41**	**354**	⇑*i*P	**Pn**	**05 44 57.2**	**+1.2**
DMPH				*i* S	**Sn**	**05 45 18.4**	**+1.2**
KCP	**Kidapawan**	**1.44**	**337**	⇑*i*P	**Pn**	**05 44 58.8**	**+2.4**
KCP				*i* S	**Sn**	**05 45 18.0**	**+0.1**
CTBH	**Cotabato--PC H**	**2.08**	**318**	⇑*i*P	**Pn**	**05 45 03.2**	**-0.5**
BIPH	**Bislig**	**2.59**	**16**	⇑*i*P	**Pn**	**05 45 10.0**	**0.0**
BIPH				*i* S	**Sn**	**05 45 44.1**	**+2.0**
PAGZ	**Pagadian**	**3.13**	**314**	*e*P	**Pn**	**05 45 17.1**	**+0.2**
PAGZ				*e*S	**Sn**	**05 45 56.6**	**+2.1**
BUTP	**Butuan**	**3.27**	**359**	*e*P	**Pn**	**05 45 19.1**	**+0.3**
BUTP				*e*S	**Sn**	**05 46 03.4**	**+5.6**
DCPH	**Dipolog City**	**3.69**	**322**	⇓*e*P	**Pn**	**05 45 25.5**	**+1.3**
ZCP	**Zamboanga City**	**3.78**	**289**	⇑*i*P	**Pn**	**05 45 25.7**	**+0.3**
ZCP				*i* S	**Sn**	**05 46 08.7**	**-0.8**
SCPH	**Surigao**	**4.08**	**358**	*e*P	**Pn**	**05 45 30.1**	**+0.8**
SCPH				*e*S	**Sn**	**05 46 13.7**	**-3.1**
MNI	**Manado**	**4.28**	**191**	P	**Pn**	**05 45 32.2**	**+0.2**
SNPH	**Sibulan**	**4.37**	**327**	⇓*i*P	**Pn**	**05 45 34.4**	**+1.2**
TBP	**Tagbilaran**	**4.37**	**336**	*i* P	**Pn**	**05 45 37.2**	**+4.0**
MSLP	**Maasin**	**4.50**	**350**	*e*P	**Pn**	**05 45 33.9**	**-1.0**
MSLP				*e*S	**Sn**	**05 46 30.0**	**+3.3**
LLP	**Lapu-Lapu**	**4.91**	**340**	⇑*i*P	**Pn**	**05 45 41.1**	**+0.7**
LLP				*e*S	**Sn**	**05 46 42.8**	**+6.3**
CNOP	**Candoni, Negro**	**5.10**	**324**	*e*P	**Pn**	**05 45 43.7**	**+0.8**
CNOP				*e*S	**Sn**	**05 46 43.0**	**+2.0**
TNTI	**Ternate**	**5.16**	**161**	P	**Pn**	**05 45 41.0**	**-2.7**
	13nm5µm37µm3µm,0.9s						
TNTI	**Ternate**	**5.16**	**161**		**Pn**	**05 45 41.4**	**-2.3**
TNTI					Sn	**Sn**	**05 46 37.5**	**-4.9**
KMSI	**Cibinong**	**5.34**	**198**	P	**Pn**	**05 45 46.4**	**+0.3**
	30nm1µm32µm3µm,0.8s						
OCLP	**Ormoc**	**5.44**	**349**	*e*P	**Pn**	**05 45 47.5**	**+0.1**
OCLP				*e*S	Sn	05 47 02.4	+13
GUIM	**Jordan**	**5.78**	**328**	*e*P	**Pn**	**05 45 52.7**	**+0.7**
GUIM				*e*S	Sn	05 47 07.3	+10
JAP	**San Jose, Anti**	**6.24**	**324**	⇓*e*P	**Pn**	**05 46 00.4**	**+2.3**
MRSI	**Marisa**	**6.36**	**216**	P	**Pn**	**05 46 00.1**	**+0.3**
	8.9nm7µm20µm2µm,0.7s						
MRSI				S	**Sn**	**05 47 11.9**	**+0.6**
	8.9nm7µm20µm2µm,0.7s						
RCP	**Roxas**	**6.52**	**334**	⇑*e*P	**Pn**	**05 46 03.1**	**+1.2**
LBMI	**Labuha**	**6.53**	**164**	P	**Pn**	**05 45 59.7**	**-2.4**
	19nm23µm2µm,0.8s						
CNP	**Catarman**	**6.86**	**352**	*e*P	**Pn**	**05 46 07.2**	**+0.7**
LUWI	**Luwuk**	**7.27**	**203**	P	**Pn**	**05 46 13.5**	**+1.5**
	18nm7µm24µm2µm,0.8s						
LUWI	**Luwuk**	**7.27**	**203**		**Pn**	**05 46 14.4**	**+2.4**
LUWI					Sn	**Sn**	**05 47 37.5**	**+4.3**
APSI	**Ampana**	**7.67**	**212**	P	**Pn**	**05 46 18.9**	**+1.5**
	5.8nm13µm983nm,1.2s						
SANI	**Sanana**	**7.68**	**178**	P	**Pn**	**05 46 12.9**	**-4.6**
	8.3nm22µm1µm,0.7s						
MPSI	**Mapaga**	**7.82**	**228**	P	**Pn**	**05 46 18.8**	**-0.6**
	1.9nm6µm4µm178nm,0.7s						
SIJI	**Sorong**	**8.58**	**139**	P	**Pn**	**05 46 27.1**	**-2.4**
	69nm,0.3s,baz=333,slow=18,SNR=64						
SIJI				S	**Sn**	**05 47 59.0**	**-5.8**
	10nm,0.3s,baz=182,slow=22,SNR=7.4						
SIJI				ScP	**ScP**	**05 56 05.9**	**+0.9**
	1.0nm,0.3s,baz=17,slow=3.4,SNR=11						
GQP	**Guinayangan**	**8.77**	**339**	⇑*e*P	**Pn**	**05 46 34.9**	**+2.8**
NLAI	**Namlea**	**8.97**	**171**	P	**Pn**	**05 46 30.9**	**-3.9**
	27µm988nm,0.5s						
PGP	**Puerto Galera**	**9.06**	**330**	⇑*e*P	**Pn**	**05 46 37.6**	**+1.6**
SPMM	**Sapulut**	**9.21**	**264**	P	**Pn**	**05 46 42.0**	**+3.9**
LQP	**Lukban**	**9.31**	**334**	⇑*e*P	**Pn**	**05 46 41.9**	**+2.3**
KKM	**Kota Kinabalu**	**9.41**	**273**		**Pn**	**05 46 44.7**	**+4.0**
MSAI	**Masohi**	**9.54**	**160**	P	**Pn**	**05 46 39.7**	**-2.7**
	9µm2µm90nm,0.6s						
TGY	**Tagaytay City**	**9.58**	**331**	P	**Pn**	**05 46 46.0**	**+3.0**
	baz=255,slow=1.8,SNR=71						
AAI	**Ambon**	**9.64**	**165**	P	**Pn**	**05 46 41.2**	**-2.5**
	5µm12µm892nm,0.5s						
SMKI	**Samarinda**	**10.40**	**235**	P	**Pn**	**05 46 58.7**	**+4.7**
	9µm22µm2µm,1.5s						
TTSI	**Tana Toraja**	**10.44**	**214**	P	**Pn**	**05 46 57.7**	**+3.2**
	6µm10µm1µm,1.0s						
FAKI	**Fak Fak**	**10.78**	**142**	P	**Pn**	**05 46 56.9**	**-2.1**
	3µm6µm439nm,1.1s						
FAKI	**Fak Fak**	**10.78**	**142**		**Pn**	**05 46 57.5**	**-1.5**
PCPH	**Palayan**	**10.80**	**336**	⇓*e*P	**Pn**	**05 47 00.7**	**+1.5**
BNDI	**Bandanaira**	**10.98**	**157**	P	**Pn**	**05 47 00.8**	**-0.8**
	4µm10µm670nm,1.4s						
RKPI	**Ransiki, Papua**	**11.10**	**130**	P	**Pn**	**05 47 03.7**	**+0.4**
	8µm571nm,1.2s						
BKB	**Balikpapan**	**11.14**	**232**	P	**Pn**	**05 47 06.7**	**+2.9**
	9µm24µm3µm,1.0s						
BKB	**Balikpapan**	**11.14**	**232**		**Pn**	**05 47 06.7**	**+2.9**
SPSI	**Sidrap Palu**	**11.24**	**212**	P	**Pn**	**05 47 07.3**	**+2.2**
	5µm11µm913nm,0.7s						
BNSI	**Bone**	**11.44**	**209**	P	**Pn**	**05 47 10.5**	**+2.8**
	25µm2µm,1.4s						
BBSI	**Bau Bau**	**11.51**	**196**	P	**Pn**	**05 47 07.5**	**-1.1**
	631nm56nm,1.1s						
KAPI	**Kappang**	**12.15**	**209**	P	**Pn**	**05 47 19.5**	**+2.5**
	65nm,0.3s,baz=19,slow=5.8,SNR=184						
KAPI				LR	LR	05 51 48.9	
	comp=Z,2µm,21.3s,baz=37,slow=36						
KAPI				ScP	**ScP**	**05 56 10.6**	**+1.0**
	3.3nm,0.3s,baz=34,slow=1.0,SNR=4.8						
KAPI	**Kappang**	**12.15**	**209**	P	**Pn**	**05 47 18.4**	**+1.4**
KAPI	**Kappang**	**12.15**	**209**		**Pn**	**05 47 18.4**	**+1.4**
BKSI	**Bulukumba**	**12.24**	**207**	P	**Pn**	**05 47 19.5**	**+1.3**
	5µm9µm679nm,1.4s						
SZP	**Santa**	**12.86**	**337**		**P**	**05 47 28.9**	**-2.7**
SRPI	**Serui, Papua**	**12.95**	**125**	P	**P**	**05 47 30.3**	**-2.4**
	1.7nm,0.6s						
KBKI	**Kotabaru**	**13.02**	**227**	P	**P**	**05 47 31.4**	**-2.0**
	2µm197nm,1.2s						
SBUM	**Sibu**	**13.78**	**257**	P	**P**	**05 47 41.7**	**-0.3**
SBUM	**Sibu**	**13.78**	**257**	P	**P**	**05 47 42.0**	**0.0**
MMRI	**Maumere**	**14.62**	**194**	P	**Pn**	**05 47 48.8**	**+0.1**
	683nm,1.0s						
MMRI	**Maumere**	**14.62**	**194**		**Pn**	**05 47 48.7**	**0.0**
SAUI	**Saumlaki**	**14.69**	**157**	P	**Pn**	**05 47 50.2**	**+0.7**
	831nm,0.6s						
SAUI	**Saumlaki**	**14.69**	**157**	P	**P**	**05 47 52.6**	**+0.6**
EDFI	**Ende, Flores**	**14.87**	**195**	P	**Pn**	**05 47 51.7**	**-0.1**
	3µm397nm,0.8s						
SMPI	**Sarmi**	**15.09**	**120**	P	**P**	**05 47 56.3**	**-0.2**
	2µm73nm,1.3s						
SOEI	**Soe**	**15.39**	**185**	P	**P**	**05 47 59.7**	**-0.2**
	8µm863nm,0.7s						
SOEI	**Soe**	**15.39**	**185**	P	**P**	**05 47 59.9**	**-0.1**
KSM	**Kuching**	**15.88**	**255**	P	**P**	**05 48 07.2**	**+2.0**
KSM	**Kuching**	**15.88**	**255**	P	**P**	**05 48 08.0**	**+2.8**
BATI	**Baumata**	**15.90**	**187**	P	**P**	**05 48 05.8**	**+0.4**
	106nm,0.3s,baz=348,slow=2.3,SNR=38						
BATI				S	**Sn**	**05 51 02.4**	**+0.8**
	8.6nm,0.3s,baz=172,slow=12,SNR=1.5						
BATI				LR	LR	05 55 51.0	
	comp=Z,1µm,18.0s,baz=6.5,slow=43						
BATI				ScP	**ScP**	**05 56 18.9**	**+2.9**
	3.2nm,0.3s,baz=144,slow=15,SNR=3.7						
BATI	**Baumata**	**15.90**	**187**	P	**P**	**05 48 05.6**	**+0.1**
	2µm7µm836nm,0.6s						
PBKI	**Pangkalan Bun**	**16.27**	**240**	P	**P**	**05 48 10.7**	**+1.2**
	7µm515nm,1.1s						
PLAI	**Plampang**	**16.41**	**209**	P	**P**	**05 48 12.1**	**+1.0**
	3µm12µm1µm,1.1s						
WBSI	**Waikabubak, Su**	**16.45**	**202**	P	**Pn**	**05 48 10.6**	**-0.7**
	6µm729nm,0.8s						
BASI	**Baing, Sumba**	**16.58**	**198**	P	**Pn**	**05 48 11.0**	**-1.9**
	5µm555nm,1.0s						
GENI	**Genyem**	**16.65**	**119**	P	**Pn**	**05 48 16.0**	**+2.2**
	3µm5µm389nm,0.8s						
JAY	**Jayapura**	**17.09**	**118**	P	**P**	**05 48 17.1**	**-1.4**
	4.9nm,0.3s,baz=279,slow=1.7,SNR=15						
JAY	**Jayapura**	**17.09**	**118**	P	**P**	**05 48 16.3**	**-2.3**
	853nm44nm,0.9s						
SRBI	**Singaraja**	**17.19**	**217**	P	**Pn**	**05 48 20.6**	**+0.4**
	3µm5µm286nm,1.0s						
KMMI	**Kalianget**	**17.20**	**223**	P	**Pn**	**05 48 21.8**	**+1.4**
	5µm430nm,0.9s						
TWG	**Pinlang**	**17.61**	**346**	P	**P**	**05 48 22.5**	**-1.8**
DNP	**Denpasar**	**17.66**	**216**	P	**Pn**	**05 48 28.7**	**+2.8**
	2µm,1.4s						
DLV	**T Lat**	**18.07**	**291**	P	**Pn**	**05 48 33.1**	**+2.1**
YULB	**Yu-li**	**18.11**	**347**	P	**P**	**05 48 28.8**	**-1.0**
JAGI	**Jajag, Banyuwa**	**18.14**	**219**	P	**Pn**	**05 48 31.4**	**-0.3**
	4µm363nm,0.8s						
JAGI	**Jajag, Banyuwa**	**18.14**	**219**	P	**P**	**05 48 31.0**	**+0.8**
GRJI	**Gresik**	**18.15**	**227**	P	**Pn**	**05 48 33.5**	**+1.8**
	549nm8µm841nm,1.1s						
TPUB	**Ta-pu**	**18.18**	**345**	IAmb	IAmb	05 48 44.5	
	comp=Z,342nm,0.8s						
SSLB	**Suanglung**	**18.57**	**346**	IAmb	IAmb	05 48 40.4	
	comp=Z,133nm,0.9s						
YOJ	**Yonaguni jima**	**18.85**	**353**	P	**Pn**	**05 48 40.0**	**+0.1**
YOJ				pmax	pmax		
	comp=Z,335nm,1.0s						
YOJ	**Yonaguni jima**	**18.85**	**353**	IAmb	IAmb	05 48 53.1	
	comp=Z,293nm,1.0s						
UWJI	**Ujung Watu**	**18.98**	**231**	P	**Pn**	**05 48 42.4**	**+1.0**
	comp=Z,4µmcomp=Z,470nm,0.9s						
MTN	**Manton Dam**	**19.18**	**164**	P	**P**	**05 48 41.8**	**+0.3**
	baz=19,SNR=85						
MTN	**Manton Dam**	**19.18**	**164**	P	**P**	**05 48 41.6**	**+0.2**
MTN				IAmb	IAmb	05 48 44.0	
	comp=Z,254nm,0.8s						
YHNB	**Yeheng**	**19.33**	**348**	IAmb	IAmb	05 48 50.2	
	comp=Z,181nm,0.9s						
PWJI	**Pagerwojo**	**19.39**	**226**	P	**P**	**05 48 44.9**	**+1.1**
	comp=Z,5µmcomp=Z,360nm,1.0s						
KDU	**Kakadu**	**19.46**	**160**	P	**P**	**05 48 44.6**	**+0.2**
	baz=20,SNR=201						
SMRI	**Semarang**	**19.76**	**230**	P	**Pn**	**05 48 50.3**	**-0.3**
	comp=Z,8µmcomp=Z,383nm,1.6s						
WOJI	**Wonogiri, Jawa**	**19.91**	**228**	P	**P**	**05 48 50.9**	**+1.6**
	comp=Z,3µmcomp=Z,166nm,1.4s						
HKPS	**Hong Kong Po S**	**19.91**	**327**	P	**Pn**	**05 48 51.3**	**-1.0**
KNMB	**Chin-men Tao**	**19.95**	**340**	P	**Pn**	**05 48 51.9**	**-0.8**
KNMB				IAmb	IAmb	05 49 00.1	
	comp=Z,270nm,0.9s						
PCJI	**Pacitan**	**19.96**	**226**	P	**Pn**	**05 48 52.9**	**-0.1**
	comp=Z,4µmcomp=Z,306nm,0.6s						
UGM	**Wanagama**	**20.25**	**228**	P	Pn	05 48 55.3	-1.1
	comp=Z,6µmcomp=Z,309nm,1.2s						
UGM	**Wanagama**	**20.25**	**228**	P	Pn	05 48 55.2	-1.3
MMPI	**Merauke**	**20.32**	**134**	P	**P**	**05 48 51.2**	**-2.5**
	comp=Z,593nm,0.7s						
QZH	**Quanzhou**	**20.32**	**341**	⇑*i*P	**P**	**05 48 53.1**	**-0.6**
QZH				S	**S**	**05 52 37.2**	**+3.1**
QZH				pmax	pmax		
	comp=Z,260nm,1.0s						
QZH				pmax	pmax		
	comp=Z,2µm,3.5s						
QIZ	**Qiongzhong**	**20.34**	**312**	P	**P**	**05 48 54.3**	**+0.3**
QIZ				PP	**PnPn**	**05 49 19.7**	**-0.1**
QIZ				S	**S**	**05 52 35.8**	**+1.2**
QIZ				pmax	pmax		
	comp=Z,52nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,910nm,4.1s						
QIZ				LR	LR		
	comp=Z,430nm,12.2s						
QIZ				LR	LR		

SDSI Sungai Dareh 25.07 256 P **P** **05 49 42.2 +1.9**
comp=Z,4µmcomp=Z,219nm,1.1s
BKNI Bangkinang 25.15 259 P **P** **05 49 43.0 +2.1**
comp=Z,4µmcomp=Z,348nm,1.1s
KRJI Kerinci 25.37 253 P **P** **05 49 45.3 +2.2**
comp=Z,9µmcomp=Z,255nm,0.7s
XMIS Christmas Isla 25.59 231 P **P** **05 49 46.6 +1.7**
XMIS IAmb IAmb 05 49 51.3
comp=Z,205nm,1.1s
SSE Sheshan 25.64 351 P **P** **05 49 45.5 +0.4**
SSE S **S** **05 54 07.8 +4.6**
SSE pmax pmax
comp=Z,27nm,0.7s
SSE pmax pmax
comp=Z,260nm,3.8s
SSE LR LR
comp=Z,270nm,11.6s
SSE LR LR
comp=Z,190nm,11.2s
PDSI Padang 26.00 256 P **P** **05 49 49.7 +1.0**
comp=Z,3µmcomp=Z,193nm,1.0s
COEN Coen 26.12 138 P **P** **05 49 50.1 +0.4**
baz=26,SNR=32
COEN Coen 26.12 138 P **P** **05 49 49.5 -0.2**
COEN IAmb IAmb 05 49 55.0
comp=Z,75nm,0.7s
PMG Port Moresby 26.14 125 P **P** **05 49 50.2 +0.3**
comp=Z,83nm,0.8s,baz=1.5,slow=2.7,SNR=19
PMG ScP **ScP** **05 56 43.2 +2.2**
comp=Z,51nm,0.9s,baz=291,slow=4.5,SNR=5.8
PMG LR LR 06 00 27.5
comp=Z,655nm,20.3s,baz=282,slow=37
PMG Port Moresby 26.14 125*d iP* **P** **05 49 50.0 +0.1**
PMG pmax pmax
comp=Z,384nm,0.8s
PMG Port Moresby 26.14 125 P **P** **05 49 50.0 +0.1**
PMG IAmb IAmb 05 49 51.1
comp=Z,90nm,0.8s
SLVN Son La 26.20 308 P **P** **05 49 51.1 +0.6**
MNSI Mandailing Nat 26.48 260 P **P** **05 49 53.9 +0.9**
comp=Z,81nm,0.9s
JCJ Chichijima 26.49 35 P **P** **05 49 51.9 -1.0**
comp=Z,315nm,0.5s,baz=260,slow=5.8,SNR=40
JCJ S **S** **05 54 12.8 -4.0**
comp=Z,82nm,0.7s,baz=90,slow=20,SNR=1.6
WB0 Warramunga Arr 26.70 161 IAmb IAmb 05 50 24.1
comp=Z,138nm,0.7s
WB9 Warramunga Arr 26.72 161 P **P** **05 49 54.4 -0.6**
baz=27
PSI Prapat 26.81 265 P **P** **05 49 57.7 +1.6**
comp=Z,34nm,0.8s,baz=1.6,slow=1.9,SNR=34
PSI S **S** **05 54 25.1 +2.5**
comp=Z,4.6nm,0.7s,baz=180,slow=23,SNR=6.7
PSI ScP **ScP** **05 56 42.4 -0.8**
comp=Z,19nm,0.8s,baz=177,slow=2.7,SNR=10
PSI LR LR 06 02 02.6
comp=Z,455nm,20.0s,baz=90,slow=40
PSI Prapat 26.81 265 P **P** **05 49 58.7 +2.6**
WRAB Tennant Creek 26.84 162*d iP* **P** **05 49 55.7 -0.4**
WRAB pmax pmax
comp=Z,55nm,1.1s
WRAB Tennant Creek 26.84 162 P **P** **05 49 55.3 -0.8**
WRAB IAmb IAmb 05 50 50.2
comp=Z,166nm,0.9s
WRA Warramunga Arr 26.85 162 P **P** **05 49 55.7 -0.5**
comp=Z,34nm,0.4s,baz=329,slow=11,SNR=87
WRA S **S** **05 54 21.1 -1.6**
comp=Z,13nm,0.9s,baz=332,slow=18,SNR=1.9
WRA ScP **ScP** **05 56 43.9 +1.0**
comp=Z,21nm,0.8s,baz=340,slow=3.4,SNR=7.9
WB2 Warramunga Arr 26.85 162 IAmb IAmb 05 50 50.2
comp=Z,211nm,1.1s
WR0 Warramunga Arr 26.93 161 IAmb IAmb 05 50 46.8
comp=Z,85nm,0.8s
WHN Wuhan 26.93 338 ⇑P **P** **05 49 57.0 +0.2**
WHN pP **pP** **05 50 21.1 -4.9**
WHN S **S** **05 54 22.1 -1.6**
WHN ScP **ScP** **05 56 43.9 +0.9**
WHN pmax pmax
comp=Z,78nm,1.1s
WHN pmax pmax
comp=Z,410nm,3.4s
WHN LR LR
comp=Z,2µm,15.7s
PPSI Pulau Pagai 26.96 253 P **P** **05 49 59.0 +1.8**
comp=Z,163nm,1.1s
NJ2 Nanjing 27.00 347 *eP* **P** **05 49 58.2 +0.8**
NJ2 PcP **PcP** **05 53 13.3 -2.2**
NJ2 S **S** **05 54 30.0 +5.2**
NJ2 ScP **ScP** **05 56 44.7 +1.5**
NJ2 pmax pmax
comp=Z,28nm,0.8s
NJ2 pmax pmax
comp=Z,380nm,4.3s
MBWA Marble Bar 27.30 192 P **P** **05 49 59.8 -0.4**
GYA Guiyang 27.50 321 ⇓*iP* **P** **05 50 03.8 +1.8**
GYA sP sP 05 50 51.9 +4.2
GYA PP **PnPn** **05 50 54.2 -1.0**
GYA PcP **PcP** **05 53 21.3 +4.3**
GYA S **S** **05 54 34.3 +1.3**
GYA SS **SnSn** **05 56 02.7 +2.7**
GYA ScP **ScP** **05 56 45.5 +0.5**
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,400nm,5.5s
GYA LR LR
comp=Z,820nm,16.3s
GYA LR LR
comp=Z,620nm,13.1s
GYA LR LR
comp=Z,1µm,16.6s
JNU Nakatsue 27.74 9 P **P** **05 50 04.0 0.0**
comp=Z,181nm,1.0s,baz=196,slow=4.2,SNR=68
KCSI Kotacane, Aceh 27.88 267 P **P** **05 50 06.3 +0.8**
comp=Z,828nmcomp=Z,87nm,1.1s
PBSI Pulau Batu 27.92 259 P **P** **05 50 08.2 +2.4**
comp=Z,8µmcomp=Z,96nm,0.9s
KRVT Keravat (AS076 28.13 110 P **P** **05 50 09.1 +1.3**
comp=Z,368nm,1.0s,baz=112,slow=2.5,SNR=30
GSI Gunungsitoli 28.36 262 P **P** **05 50 10.0 +0.2**
comp=Z,56µmcomp=Z,1µm,0.7s
GSI Gunungsitoli 28.36 262 P **P** **05 50 10.3 +0.5**
TPTI 28.49 266 P **P** **05 50 11.6 +0.7**
comp=Z,8.9nm,0.9s
LHMI Lhok Sumawe 28.59 271 P **P** **05 50 14.0 +2.3**
comp=Z,91nm,1.0s
ENH Enshi 28.82 330 P **P** **05 50 13.8 +0.1**
ENH IAmb IAmb 05 50 52.7
comp=Z,82nm,1.0s
CM31 Chiang Mai Arr 29.00 298 P **P** **05 50 16.3 +1.0**
CM31 IAmb IAmb 05 50 35.0
comp=Z,104nm,1.4s
CMAR Chiang Mai Arr 29.00 298 P **P** **05 50 15.5 +0.2**
comp=Z,14nm,0.7s,baz=119,slow=7.4,SNR=51
CMAR ScP **ScP** **05 56 49.8 +0.1**
comp=Z,22nm,0.9s,baz=130,slow=1.7,SNR=25
CHTO Chiang Mai 29.13 299 P **P** **05 50 17.0 +0.5**
CHTO pmax pmax
comp=Z,89nm,1.4s
CHTO Chiang Mai 29.13 299 P **P** **05 50 17.0 +0.5**
CHTO IAmb IAmb 05 50 19.8
comp=Z,89nm,1.4s
MLSI Meulaboh, Aceh 29.18 269 P **P** **05 50 17.7 +0.7**
comp=Z,3µmcomp=Z,93nm,1.0s
KMI Kunming 29.27 314 P P 05 50 09.0 -8.9
KMI pP pP 05 50 42.6 -4.9
KMI sP sP 05 51 02.6 -0.9
KMI PP **PnPn** **05 51 16.4 -1.9**
KMI S S 05 54 45.4 -16
KMI sS sS 05 55 43.4 -8.6
KMI SS **SnSn** **05 56 43.5 -0.1**
KMI ScP **ScP** **05 56 48.2 -2.5**
KMI pmax pmax
comp=Z,71nm,1.0s
KMI pmax pmax
comp=Z,390nm,6.6s
KMI LR LR
comp=N,3µm,21.8s
KMI LR LR
comp=E,1µm,21.3s
KMI LR LR
comp=Z,1µm,17.3s
KMI Kunming 29.27 314 IAmb IAmb 05 50 22.1
comp=Z,112nm,1.4s
SNSI Sinabang, Aceh 29.44 265 P **P** **05 50 20.9 +1.6**
comp=Z,6µmcomp=Z,114nm,0.8s
QIS Mount Isa 29.45 153 P **P** **05 50 19.6 +0.3**
baz=30,SNR=36
MTSU Mount Surprise 29.98 142 P **P** **05 50 24.8 +0.8**
baz=30,SNR=63
ASAR Alice Springs 30.25 165 P **P** **05 50 26.4 +0.1**
comp=Z,19nm,0.4s,baz=342,slow=7.4,SNR=188
ASAR S **S** **05 55 15.8 -0.3**
comp=Z,6.3nm,0.8s,baz=355,slow=20,SNR=3.7
ASAR ScP **ScP** **05 56 54.1 +0.5**
comp=Z,19nm,0.6s,baz=345,slow=3.3,SNR=14
GIRL Giralia 30.28 201 P **P** **05 50 27.9 +1.3**
baz=30,SNR=18
JHJ Hachijo jima 2 30.31 24 P **P** **05 50 26.2 -0.5**
comp=Z,85nm,0.6s,baz=58,slow=13,SNR=2.5
TJN Taejon 30.60 3*c iP* **P** **05 50 29.4 +0.2**
WRKA Warakurna 30.63 175 P **P** **05 50 30.0 +0.3**
baz=31,SNR=303
TIA Tai'an 31.39 347 P **P** **05 50 36.0 -0.2**
TIA S **S** **05 55 34.9 +1.4**
TIA ScP **ScP** **05 56 58.6 +1.5**
TIA ScS **ScS** **06 00 56.9 +2.0**
TIA pmax pmax
comp=Z,15nm,0.9s
TIA LR LR
comp=Z,410nm,8.5s
TIA LR LR
comp=Z,740nm,11.4s
TIA LR LR
comp=Z,280nm,9.3s
INCN Inchon 31.67 1 P **P** **05 50 38.3 -0.4**
INCN pmax pmax
comp=Z,89nm,0.7s
INCN Inchon 31.67 1 P **P** **05 50 38.3 -0.4**
INCN IAmb IAmb 05 50 40.3
comp=Z,89nm,0.7s
KSRS Korea Array 31.70 3 P **P** **05 50 40.0 +1.1**
comp=Z,86nm,0.7s,baz=184,slow=10,SNR=364
KSRS ScP **ScP** **05 56 59.2 +1.1**
comp=Z,12nm,0.8s,baz=189,slow=3.4,SNR=21
KSRS Korea Array 31.70 3 P **P** **05 50 40.0 +1.1**
XAN Xi'an 32.21 333 P **P** **05 50 42.6 -0.9**
XAN PP **PnPn** **05 51 53.3 -2.0**
XAN S **S** **05 55 42.8 -3.7**
XAN pmax pmax
comp=Z,73nm,0.9s
XAN pmax pmax
comp=Z,390nm,4.4s
XAN LR LR
comp=Z,660nm,17.4s
XAN LR LR
comp=Z,710nm,17.1s
XAN Xi'an 32.21 333 P **P** **05 50 42.9 -0.6**
XAN pmax pmax
comp=Z,77nm,0.8s
XAN Xi'an 32.21 333 P **P** **05 50 42.9 -0.6**
XAN IAmb IAmb 05 51 12.2
comp=Z,77nm,0.8s
CD2 Chengdu 32.46 323⇑*iP* **P** **05 50 45.5 -0.2**
CD2 PP **PnPn** **05 52 00.0 +1.6**
CD2 S **S** **05 55 49.9 -0.5**
CD2 sS sS 05 56 43.9 +2.3
CD2 PcS **PcS** **05 57 14.0 -1.0**
CD2 ScS **ScS** **06 00 57.9 -2.7**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,380nm,6.3s
CD2 LR LR
comp=Z,1µm,18.8s
CD2 LR LR
comp=Z,920nm,12.0s
CD2 LR LR
comp=Z,1µm,14.7s
CTA Charters Tower 32.64 142 P **P** **05 50 48.6 +1.3**
comp=Z,17nm,0.9s,baz=320,slow=10,SNR=11
CTAO Charters Tower 32.64 142 P **P** **05 50 48.5 +1.1**
CTAO pmax pmax
comp=Z,59nm,0.7s
CTAO Charters Tower 32.64 142 P **P** **05 50 48.5 +1.1**
CTAO IAmb IAmb 05 50 55.3
comp=Z,59nm,0.7s
MJAR Matsushiro Arr 32.80 19 P **P** **05 50 47.9 -0.7**
comp=Z,28nm,0.7s,baz=194,slow=9.4,SNR=68
MJAR PP **PnPn** **05 51 57.2 -5.4**
comp=Z,21nm,0.8s,baz=196,slow=9.1,SNR=4.1
MJAR S **S** **05 55 54.3 -1.3**
comp=Z,2.6nm,0.9s,baz=196,slow=18,SNR=2.0
MJAR ScP **ScP** **05 57 02.7 +0.8**
comp=Z,5.8nm,0.8s,baz=198,slow=4.4,SNR=4.8
MJAR LR LR 06 04 04.5
comp=Z,336nm,20.0s,baz=205,slow=36
MAJO Matsushiro 32.80 19 P **P** **05 50 47.7 -0.9**
MAJO pmax pmax
comp=Z,429nm,2.0s
MAJO Matsushiro 32.80 19 P **P** **05 50 47.7 -0.9**
MAT Matsushiro 32.80 19 P **P** **05 50 47.9 -0.7**
MAT S **S** **05 55 52.7 -2.9**
MEEK Meekatharra 32.84 192 P **P** **05 50 48.9 -0.1**
baz=33,SNR=77
DL2 Dalian 33.28 354 P **P** **05 50 51.6 -1.1**
DL2 sP **sP** **05 51 36.3 -1.8**
DL2 S **S** **05 56 05.4 +2.6**
DL2 pmax pmax
comp=Z,94nm,0.7s
DL2 pmax pmax
comp=Z,220nm,7.0s
TIY Taiyuan 34.09 341 *eP* **P** **05 50 59.4 -0.4**
TIY PP **PP** **05 52 21.2 +1.3**
TIY S **S** **05 56 14.8 -0.8**
TIY pmax pmax
comp=Z,170nm,7.0s
TIY LR LR
comp=Z,350nm,11.4s
TIY LR LR
comp=Z,390nm,12.2s
TIY LR LR
comp=Z,370nm,17.2s
BJT Baijiatuao 35.24 347 P **P** **05 51 09.8 +0.2**
BJT pmax pmax
comp=Z,71nm,0.9s
BJT Baijiatuao 35.24 347 P **P** **05 51 09.8 +0.2**
BJT IAmb IAmb 05 51 12.3
comp=Z,71nm,0.9s
BJI Beijing 35.27 347 P **P** **05 51 09.5 -0.2**
BJI PcP **PcP** **05 53 37.4 0.0**
BJI S **S** **05 56 33.3 0.0**
BJI ScP **ScP** **05 57 12.0 +1.5**
BJI PcS **PcS** **05 57 25.3 +0.8**
BJI ScS **ScS** **06 01 15.0 +0.1**
BJI pmax pmax
comp=Z,77nm,0.7s
BJI LR LR
comp=Z,340nm,12.7s
MORW Morawa 35.76 194 P **P** **05 51 14.3 +0.2**
baz=36,SNR=134
SNY Shenyang 36.05 357⇑P **P** **05 51 16.8 +0.4**
SNY PP **PP** **05 52 38.8 -2.4**
SNY S S 05 56 34.8 -10
SNY pmax pmax
comp=Z,93nm,1.2s
SNY pmax pmax
comp=Z,250nm,2.8s
SNY LR LR
comp=Z,690nm,17.1s
SNY LR LR
comp=Z,580nm,14.2s
SNY LR LR
comp=Z,940nm,15.5s
LZH Lanzhou 36.30 329⇑P **P** **05 51 19.8 +0.9**
LZH pP pP 05 51 49.4 +0.3
LZH sP sP 05 52 05.7 +0.8
LZH S **S** **05 56 49.5 -0.1**
LZH ScP **ScP** **05 57 15.6 +0.9**
LZH sS sS 05 57 45.3 +4.0
LZH pmax pmax
comp=Z,130nm,1.3s
LZH pmax pmax
comp=Z,490nm,5.2s
LZH LR LR
comp=Z,910nm,13.1s
LZH LR LR
comp=Z,800nm,13.3s
LZH LR LR
comp=Z,1µm,16.2s
FORT Forrest 36.32 177 P **P** **05 51 19.5 +0.7**
baz=36,SNR=18
BRDH Bariadhala 36.92 301 P **P** **05 51 26.9 +2.8**
comp=Z,145nm,0.5s,baz=126,slow=8.8,SNR=6.1
KMBL Kambalda 37.01 185 P **P** **05 51 25.2 +0.5**
baz=37,SNR=141
MSHR Mys Shultsa 37.07 7*c iP* **P** **05 51 26.7 +1.6**
BLDU Ballidu 37.09 193 P **P** **05 51 25.5 +0.1**
baz=37,SNR=120
HHC Hu-ho-hao-te 37.23 342 P **P** **05 51 26.8 +0.2**
HHC pP pP 05 51 56.6 -0.3
HHC sP sP 05 52 14.0 +1.3
HHC S **S** **05 57 06.3 +2.8**
HHC sS sS 05 57 59.3 +3.9
HHC pmax pmax
comp=Z,28nm,1.0s
HHC pmax pmax
comp=Z,96nm,6.4s
HNR Honiara 37.32 114 P **P** **05 51 28.6 +1.1**
comp=Z,60nm,0.3s,baz=217,slow=10,SNR=1.8
HNR Honiara 37.32 114 P **P** **05 51 28.7 +1.1**
HNR pmax pmax
comp=Z,121nm,0.8s
HNR Honiara 37.32 114 IAmb IAmb 05 51 37.0
comp=Z,121nm,0.8s
BTO Baotou 37.51 340 *eP* **P** **05 51 28.9 0.0**
KLBR Kellerberrin 37.82 191 P **P** **05 51 31.8 +0.3**
baz=38,SNR=102
SHL Shillong 37.88 305 *eP* **P** **05 51 32.7 +0.3**
SHL IAmb IAmb 05 51 36.0
comp=Z,172nm,0.4s
SHL Shillong 37.88 305 P **P** **05 51 32.7 +0.3**
SHL pmax pmax
comp=Z,173nm,0.6s
SHL Shillong 37.88 305 P **P** **05 51 32.7 +0.3**
CN2 Changchun 37.97 360 *eP* **P** **05 51 32.3 -0.3**
CN2 PP **PP** **05 52 59.4 -2.9**
CN2 *eS* **S** **05 57 19.1 +4.7**
CN2 SS **SS** **06 00 02.0 -5.2**
CN2 pmax pmax
comp=Z,40nm,1.5s
CN2 pmax pmax
comp=Z,360nm,3.8s
CN2 LR LR
comp=Z,460nm,17.0s
CN2 LR LR
comp=Z,860nm,17.0s
CN2 LR LR
comp=Z,510nm,18.0s
GUWA GUWAHATI 38.31 306 *eP* **P** **05 51 35.7 0.0**
GUWA IAmb IAmb 05 51 38.2
comp=Z,39nm,0.6s
MUN Mundaring 38.51 193 P **P** **05 51 37.7 +0.4**
baz=39,SNR=34
USRK Ussuriysk Ar. 38.77 7 P **P** **05 51 40.5 +1.2**
comp=Z,137nm,0.7s,baz=193,slow=7.3,SNR=254
USRK ScP **ScP** **05 57 23.8 +0.2**
comp=Z,2.8nm,0.9s,baz=160,slow=4.6,SNR=2.0
USRK LR LR 06 07 49.4
comp=Z,108nm,19.3s,baz=171,slow=36
MDJ Mudanjiang 38.94 4 P **P** **05 51 42.0 +1.3**
MDJ pP pP 05 52 13.7 +2.9
MDJ sP sP 05 52 28.5 +2.2
MDJ PP **PP** **05 53 14.1 +1.3**
MDJ S **S** **05 57 30.3 +1.4**
MDJ PcS **PcS** **05 57 39.3 +1.2**
MDJ sS sS 05 58 26.1 +5.0
MDJ pmax pmax
comp=Z,940nm,4.2s
MDJ LR LR
comp=Z,510nm,25.6s
MDJ LR LR
comp=Z,390nm,15.7s
MDJ LR LR
comp=Z,520nm,20.6s
NWAO Narrogin (SRO) 39.22 191 P **P** **05 51 44.0 +0.8**
baz=39,SNR=160
NWAO Narrogin (SRO) 39.22 191 P **P** **05 51 44.0 +0.8**
comp=Z,104nm,0.4s,baz=20,slow=7.8,SNR=97
NWAO Narrogin (SRO) 39.22 191 P **P** **05 51 44.0 +0.8**
NWAO Narrogin (SRO) 39.22 191 P **P** **05 51 43.9 +0.8**
ERM Erimo 39.40 21*c iP* **P** **05 51 46.3 +1.8**
ERM pmax pmax
comp=Z,154nm,2.2s
ERM Erimo 39.40 21 P **P** **05 51 44.9 +0.3**
ERM IAmb IAmb 05 52 07.7
comp=Z,59nm,0.8s
BBOO Buckleboo 39.53 166 P **P** **05 51 46.7 +0.9**
baz=40,SNR=136
EIDS Eidsvold 39.53 142 P **P** **05 51 46.6 +0.7**
baz=40,SNR=6.2
EIDS Eidsvold 39.53 142 IAmb IAmb 05 52 18.5
comp=Z,139nm,1.6s
STKA Stephens Creek 40.31 159 P **P** **05 51 53.3 +1.0**
baz=40,SNR=118
STKA Stephens Creek 40.31 159 P **P** **05 51 53.3 +1.0**
comp=Z,86nm,0.7s,baz=334,slow=8.0,SNR=132
STKA ScP **ScP** **05 57 31.1 +1.3**
comp=Z,34nm,0.7s,baz=338,slow=6.5,SNR=11
STKA LR LR 06 12 57.8
comp=Z,326nm,18.4s,baz=342,slow=42
STKA Stephens Creek 40.31 159 P **P** **05 51 53.0 +0.7**
STKA **ScP** **05 57 31.1 +1.3**
TEY Ternei 40.35 12⇑*iP* **P** **05 51 53.5 +1.1**
TEY *eS* **S** **05 57 48.5 -1.5**
TEY pmax pmax
comp=E,30nm,1.4s
TEY pmax pmax
comp=N,110nm,1.2s
TEY pmax pmax
comp=Z,190nm,1.2s
TEY pmax pmax
comp=Z,1µm,4.2s
TEY pmax pmax
comp=N,100nm,1.2s
LSA Lhasa 40.37 310 P **P** **05 51 55.2 +1.8**
LSA Lhasa 40.37 310 IAmb IAmb 05 51 57.5
comp=Z,42nm,0.7s
HTT Hallett 40.87 163 P **P** **05 51 58.2 +1.3**
baz=41,SNR=64
GTA Gaotai 40.89 329⇑P **P** **05 51 57.1 0.0**
GTA sP sP 05 52 48.1 +4.5
GTA PP **PnPn** **05 53 37.3 -2.5**
GTA ScP **ScP** **05 57 32.1 -0.1**
GTA S **S** **05 57 58.2 -0.3**
GTA sS sS 05 58 53.9 +2.9
GTA SS **SS** **06 01 05.6 -0.1**
GTA ScS **ScS** **06 01 44.7 -3.0**
GTA pmax pmax
comp=Z,24nm,1.2s
GTA pmax pmax
comp=Z,290nm,9.0s
GTA LR LR
comp=Z,440nm,17.1s
GTA LR LR
comp=Z,470nm,17.8s
GTA LR LR
comp=Z,600nm,18.7s
RKGY Rocky Gully 40.90 191 P **P** **05 51 58.8 +1.8**
baz=41,SNR=131
ASAJ Asahikawa 41.08 19 P **P** **05 52 00.1 +1.7**
comp=Z,43nm,0.6s,baz=232,slow=14,SNR=24
ASAJ S **S** **05 58 03.8 +3.1**
comp=Z,9.4nm,0.8s,baz=342,slow=20,SNR=2.5
JKA Kamikawa-asahi 41.08 19 **S** **05 58 03.8 +3.1**
GTK Tadong 41.29 306 *eP* **P** **05 52 00.6 0.0**
BWNR Bhubaneshwar 41.33 294 *eP* **P** **05 52 02.3 +1.5**
BWNR IAmb IAmb 05 52 03.5
comp=Z,43nm,0.5s
CMSA Cobar Meteorol 41.65 154 P **P** **05 52 04.2 +1.0**
baz=42,SNR=32
H11S3 WAKE ISLAND Hy 41.97 69 T T 06 36 39.6
baz=253,slow=78,SNR=59
H11S1 WAKE ISLAND Hy 41.99 69 T T 06 36 33.0
baz=253,slow=78,SNR=60
H11S2 WAKE ISLAND Hy 41.99 69 T T 06 36 43.7
baz=253,slow=78,SNR=44
TAPN Taplejung 42.02 305 *eP* **P** **05 52 07.2 +0.5**
comp=Z,56nm,0.4s
ODAN Odare 42.09 304 *eP* **P** **05 52 07.7 +0.5**
comp=Z,180nm,0.8s
YUK Yuzh-Kuril'sk 42.13 22*c iP* **P** **05 52 07.8 +0.9**
YUK *i* *PP **pwP** **05 52 41.1 +1.4**
YUK *i* S **S** **05 58 16.6 +0.4**
YUK pmax pmax
comp=Z,501nm,1.6s
BOK Bokaro 42.27 299 *eP* **P** **05 52 09.7 +1.3**

BOK IAmb IAmb 05 52 12.0
comp=Z,29nm,0.6s
H11N1 WAKE ISLAND Hy 42.43 67 T T 06 37 29.1
baz=265,slow=75,SNR=88
H11N2 WAKE ISLAND Hy 42.44 67 T T 06 37 09.1
baz=265,slow=75,SNR=44
H11N3 WAKE ISLAND Hy 42.45 67 T T 06 37 06.2
baz=265,slow=75,SNR=70
RAMN Ramite 42.78 304 *e*P **P** **05 52 13.5 +0.7**
comp=Z,98nm,0.6s
JIRN Jiri 43.39 305 *e*P **P** **05 52 18.2 +0.4**
comp=Z,131nm,0.4s
ARMA Armidale 43.66 147 P **P** **05 52 21.2 +1.5**
baz=44,SNR=5.5
ARMA Armidale 43.66 147 P **P** **05 52 20.7 +1.0**
ARMA IAmb IAmb 05 52 32.0
comp=Z,40nm,0.6s
YSS Yuzh-Sakhalins 43.68 17⇑ *i*P **P** **05 52 20.2 +0.8**
YSS *e**PP **pP** **05 52 50.2 +0.4**
YSS *e* 05 54 03.4
YSS *i* S **S** **05 58 39.5 +0.6**
YSS *e*SS **SS** **06 01 59.2 -0.7**
YSS pmax pmax
comp=Z,40nm,1.1s
YSS pmax pmax
comp=Z,200nm,5.6s
YSS pmax pmax
comp=E,100nm,3.0s
YSS smax smax
comp=N,500nm,11.2s
YSS MLR MLR
comp=E,200nm,15.0s
YSS Yuzh-Sakhalins 43.68 17 P **P** **05 52 19.5 +0.2**
YSS IAmb IAmb 05 52 36.2
comp=Z,51nm,0.8s
KLR Kul'dur 43.71 6 P **P** **05 52 20.2 +0.7**
comp=Z,91nm,1.0s,baz=203,slow=5.7,SNR=190
KLR ScP **ScP** **05 57 43.6 +0.6**
comp=Z,3.5nm,0.6s,baz=199,slow=5.6,SNR=3.3
KLR S **S** **05 58 39.9 +0.7**
comp=Z,6.9nm,1.2s,baz=338,slow=19,SNR=6.0
KLR Kul'dur 43.71 6*ce*P **P** **05 52 20.2 +0.7**
KLR pmax pmax
comp=Z,201nm,1.5s
GUN Gumba 43.74 305 *e*P **P** **05 52 21.0 +0.4**
KUR Kuril'sk 43.90 23*c i*P **P** **05 52 22.2 +1.1**
KUR *e* 05 54 05.9
KUR *e*S **S** **05 58 38.3 -3.8**
KUR pmax pmax
comp=Z,464nm,3.9s
KUR pmax pmax
comp=Z,229nm,1.3s
PKI Pulchoki 43.99 304 *e*P **P** **05 52 23.1 +0.5**
PKIN Phulchoki 44.00 304 *e*P **P** **05 52 23.0 +0.4**
comp=Z,29nm,0.4s
KKN Kakani 44.18 305 *e*P **P** **05 52 24.4 +0.4**
comp=Z,90nm,0.8s
DMN Daman 44.26 304 *e*P **P** **05 52 24.7 +0.1**
PVM Polavaram 44.55 289 *e*P **P** **05 52 28.6 +1.8**
PVM IVmB_BB 05 52 29.9
comp=Z,385nm,0.6s
GKN Gorkha 44.79 305 *e*P **P** **05 52 29.3 +0.6**
comp=Z,38nm,0.4s
ARPS Mount Arapiles 44.85 162 P **P** **05 52 30.4 +1.5**
baz=45,SNR=18
ULN Ulaanbaatar 44.95 342*ce*P **P** **05 52 29.3 -0.4**
ULN pmax pmax
comp=Z,41nm,0.9s
ULN Ulaanbaatar 44.95 342 P **P** **05 52 29.3 -0.4**
SONM Songino Array 45.13 342 P **P** **05 52 30.8 -0.2**
comp=Z,12nm,0.6s,baz=162,slow=8.6,SNR=37
SONM PcP **PcP** **05 54 09.7 +0.5**
comp=Z,12nm,0.6s,baz=153,slow=3.2,SNR=4.8
SONM ScP **ScP** **05 57 49.3 +0.2**
comp=Z,18nm,1.0s,baz=156,slow=4.2,SNR=14
YNG Young 45.19 153 P **P** **05 52 27.9 -3.7**
baz=45,SNR=12
MYLAV Mylavaram 45.41 288 *e*P **P** **05 52 34.6 +1.0**
MYLAV IVmB_BB 05 52 36.9
comp=Z,446nm,0.7s
KOLN Koldanda 45.56 304 *e*P **P** **05 52 35.3 +0.4**
comp=Z,136nm,0.3s
DANN Dangsing 45.63 305 *e*P **P** **05 52 35.7 +0.1**
comp=Z,155nm,0.3s
GRNR Gornyy 45.84 10⇑ *i*P **P** **05 52 37.9 +1.5**
GRNR pmax pmax
comp=Z,70nm,1.1s
ADKI Addanki 45.92 286 *e*P **P** **05 52 38.8 +1.2**
ADKI IVmB_BB 05 52 40.8
comp=Z,314nm,0.7s
SKHT Srikalahasti 45.93 284 *e*P **P** **05 52 38.7 +1.0**
SKHT IVmB_BB 05 52 40.8
comp=Z,281nm,0.5s
PYUN Piuthan 46.18 304 *e*P **P** **05 52 40.3 +0.6**
comp=Z,209nm,0.4s
CAN Canberra 46.31 153 P **P** **05 52 42.5 +2.1**
CAN Canberra 46.31 153 IAmb IAmb 05 52 43.5
comp=Z,63nm,0.8s
CNB Canberra Magne 46.47 153 P **P** **05 52 43.6 +1.9**
baz=47,SNR=19
NJS Nagarjunasagar 46.64 287 *e*P **P** **05 52 44.3 +1.0**
NJS IVmB_BB 05 52 46.0
comp=Z,576nm,0.5s
TOO Toolangi 46.83 158 P **P** **05 52 46.7 +2.3**
baz=47,SNR=36
TOO Toolangi 46.83 158 P **P** **05 52 45.7 +1.3**
TOO pmax pmax
comp=Z,303nm,2.0s
TOO Toolangi 46.83 158 P **P** **05 52 45.7 +1.3**
TOO IAmb IAmb 05 52 47.6
comp=Z,303nm,1.9s
SRLM Srisailam 46.98 287 *e*P **P** **05 52 46.2 +0.3**
SRLM IVmB_BB 05 52 48.5
comp=Z,475nm,0.6s
RPR Rampur 47.01 290 *e*P **P** **05 52 46.6 +0.5**
RPR IVmB_BB 05 52 48.8
comp=Z,436nm,0.6s
TYV Tymovskoe 47.23 15 *e*P **P** **05 52 48.6 +1.4**
TYV *e*S **S** **05 59 32.0 +2.3**
TYV pmax pmax
comp=Z,30nm,1.6s
TYV pmax pmax
comp=Z,700nm,4.9s
TYV smax smax
comp=E,12nm,1.4s
TYV smax smax
comp=E,100nm,2.5s
HYB Hyderabad 47.48 288 *i* P **P** **05 52 50.5 +0.7**
comp=E,92nm,0.8s
HYB *e* 05 53 01.5
HYB *e*PcP **pP** **05 53 17.0 -4.5**
HYB Hyderabad 47.48 288 *e*P **P** **05 52 50.7 +0.9**
HYBB Hyderabad (bro 47.48 288 *e*P **P** **05 52 50.0 +0.2**
HYBB IVmB_BB 05 52 52.2
comp=Z,647nm,0.6s
NGP Nagpur 47.67 293 *e*P **P** **05 52 52.9 +1.7**
NGP IAmb IAmb 05 52 54.8
comp=Z,31nm,0.5s
MILA Mila 47.84 155 P **P** **05 52 54.3 +2.0**
baz=48,SNR=6.3
SRSP Sriramsagar 47.91 290 *e*P **P** **05 52 53.2 +0.2**
SRSP IVmB_BB 05 52 55.5
comp=Z,483nm,0.9s
ZEA Zeya 47.94 1 *e*P **P** **05 52 53.0 +0.3**
ZEA *e* 05 54 48.5
ZEA *e*S **S** **05 59 38.0 -1.6**
ZEA *e*SS **ScS** **06 02 32.0 +0.4**
ZEA pmax pmax
comp=N,120nm,1.0s
ZEA pmax pmax
comp=Z,210nm,1.0s
ZEA pmax pmax
comp=Z,700nm,5.0s
ZEA smax smax
comp=N,200nm,6.0s
ZAK Zakamensk 48.35 341 *e*P **P** **05 52 55.2 -0.9**
URV Uravakonda 48.41 285 *e*P **P** **05 52 57.8 +0.8**
DZM Mont Dzumac 48.53 126 *e*P **P** **05 52 58.8 +1.0**
comp=N,85nm,0.8s
DZM Mont Dzumac 48.53 126 *e*LR LR 06 07 01.6
comp=N,830nm,30.4s
DZM Mont Dzumac 48.53 126 P **P** **05 52 59.0 +1.2**
comp=N,44nm,0.7s,baz=191,slow=19,SNR=35
NKL Nikolayevsk 48.90 12 *e*P **P** **05 52 56.7 -3.3**
NKL *e* 05 53 43.0
NKL *e* 05 54 55.1
NKL *e*S S 06 00 02.6 +9.4
NKL pmax pmax
comp=Z,105nm,1.0s
NKL pmax pmax
comp=N,7.0nm,1.2s
NKL pmax pmax
comp=E,2.0nm,1.0s
TLY Talaya 49.36 342 P **P** **05 53 04.1 +0.5**
comp=E,5.9nm,0.4s,baz=175,slow=7.3,SNR=14
TLY ScP **ScP** **05 58 07.6 +0.9**
comp=E,7.2nm,0.5s,baz=194,slow=5.2,SNR=6.1
TLY Talaya 49.36 342 *e*P **P** **05 53 03.8 +0.1**
TLY *e* 05 55 03.0
TLY *e*PPP PPP 05 55 56.7
TLY *e*S **S** **06 00 04.1 +4.3**
TLY pmax pmax
comp=Z,77nm,1.0s
TLY MLR MLR
comp=Z,712nm,16.0s
TLY Talaya 49.36 342 P **P** **05 53 03.4 -0.2**
KLRI Killari 49.42 289 *e*P **P** **05 53 05.4 +0.7**
KLRI IVmB_BB 05 53 06.8
comp=Z,751nm,0.6s
BHPL Bhopal 49.59 296 *e*P **P** **05 53 06.6 +0.7**
BHPL IAmb IAmb 05 53 09.2
comp=Z,30nm,0.4s
IRK Irkutsk 49.67 343 *e*P **P** **05 53 04.1 -1.8**
IRK pmax pmax
comp=Z,91nm,1.9s
MOY Mondy 50.20 340 *e*P **P** **05 53 10.0 -0.1**
MOY pmax pmax
comp=Z,118nm,2.2s
WMQ Urumqi 50.53 325 *e*P **P** **05 53 13.3 +0.6**
WMQ pP pP 05 53 47.1 +2.5
WMQ PP **PP** **05 55 14.0 +4.2**
WMQ S **S** **06 00 16.0 -0.4**
WMQ sS sS 06 01 12.8 +2.3
WMQ SS **SS** **06 03 50.0 -2.3**
WMQ pmax pmax
comp=Z,20nm,1.5s
WMQ pmax pmax
comp=Z,150nm,4.7s
WMQ LR LR
comp=Z,510nm,16.9s
WMQ LR LR
comp=Z,350nm,21.1s
WMQ LR LR
comp=Z,520nm,19.7s
DDI Dehra Dun 50.99 305 *e*P **P** **05 53 17.4 +1.1**
DDI IAmb IAmb 05 53 18.0
comp=Z,92nm,0.8s
SKR Severo-Kuril's 51.57 24 *e*P P 05 53 14.5 -5.7
SKR *e* 05 53 45.6
SKR *e*PPP PPP 05 56 23.6
SKR *e*S **S** **06 00 29.2 -1.0**
SKR pmax pmax
comp=Z,100nm,5.3s
SKR pmax pmax
comp=Z,300nm,3.6s
SKR pmax pmax
comp=Z,64nm,1.3s
SKR MLR MLR
comp=Z,100nm,18.0s
GOA Goa 51.76 285 *e*P **P** **05 53 23.4 +1.1**
GOA IAmb IAmb 05 53 25.0
comp=Z,23nm,0.6s
SMLA Simla 51.97 305 *e*P **P** **05 53 23.8 +0.3**
SMLA IAmb IAmb 05 53 26.3
comp=Z,102nm,0.6s
POO Poona 52.06 289 *e*P **P** **05 53 24.6 +0.2**
POO *i* P **P** **05 53 26.6 +2.1**
TAU Tasmania Unive 52.20 160 P **P** **05 53 26.8 +1.9**
TAU pmax pmax
comp=Z,36nm,1.0s
TAU Tasmania Unive 52.20 160 P **P** **05 53 26.8 +1.9**
BHK Bhakra 52.67 305 *ex* **P** **05 53 30.8 +2.0**
BOD Bodaibo 52.80 352⇓ *i*P **P** **05 53 28.9 -0.3**
BOD pmax pmax
comp=Z,61nm,1.4s
PETK Petropavlovsk- 54.06 23 P **P** **05 53 39.9 +1.5**
comp=Z,25nm,0.5s,baz=196,slow=5.5,SNR=76
PET Petropavlovsk 54.37 24 *i* P **P** **05 53 41.8 +1.1**
PET pmax pmax
comp=Z,162nm,1.2s
DGZ Jazzator, Alta 54.39 330*c i*P **P** **05 53 41.0 -0.1**
DGZ pmax pmax
comp=Z,58nm,1.8s
FUNA Funafuti 55.21 104 P **P** **05 53 48.9 +1.5**
MK31 Makanchi Array 55.36 325 *e*P **P** **05 53 47.4 -0.6**
MKAR Makanchi Array 55.36 325 P **P** **05 53 47.8 -0.2**
comp=Z,30nm,0.7s,baz=124,slow=8.1,SNR=228
MKAR ScP **ScP** **05 58 32.7 -0.2**
comp=Z,24nm,0.8s,baz=122,slow=4.5,SNR=12
MKAR S **S** **06 01 20.4 -1.4**
comp=Z,1.0nm,0.9s,baz=139,slow=12,SNR=2.0
MKAR LR LR 06 19 23.2
comp=Z,206nm,19.1s,baz=120,slow=38
MAKZ Makanchi 55.55 325 P **P** **05 53 48.9 -0.4**
MAKZ pmax pmax
comp=Z,61nm,1.1s
MAKZ Makanchi 55.55 325 P **P** **05 53 48.9 -0.4**
MAKZ IAmb IAmb 05 53 50.3
comp=Z,61nm,1.1s
NIL Nilore 55.91 307 P **P** **05 53 53.0 +0.9**
NIL pmax pmax
comp=Z,105nm,1.0s
NIL Nilore 55.91 307 P **P** **05 53 53.0 +0.9**
KSH Kashi 55.93 315 P **P** **05 53 54.2 +1.9**
KSH sP PcP 05 54 45.2 -4.1
KSH PP **PP** **05 56 01.9 +3.4**
KSH S **S** **06 01 27.2 -2.5**
KSH ScS **ScS** **06 03 20.1 -8.1**
KSH SS **SS** **06 05 16.6 -1.1**
KSH pmax pmax
comp=Z,120nm,1.1s
KSH pmax pmax
comp=Z,270nm,4.4s
KSH LR LR
comp=Z,460nm,11.4s
KSH LR LR
comp=Z,620nm,13.7s
KSH LR LR
comp=Z,600nm,12.7s
KDJ Kajisay 56.20 318 IAmb IAmb 05 53 58.1
comp=Z,31nm,0.6s
YAK Yakutsk 56.31 2 P **P** **05 53 55.2 +0.8**
comp=Z,519nm,0.8s,baz=188,slow=2.3,SNR=235
YAK ScP **ScP** **05 58 36.7 +0.1**
comp=Z,9.0nm,0.7s,baz=354,slow=2.4,SNR=1.8
YAK Yakutsk 56.31 *2c i*P **P** **05 53 55.2 +0.8**
YAK *e* 05 54 49.6
YAK *e* 05 55 57.3
YAK *e*S **S** **06 01 32.2 -1.5**
YAK *e* 06 03 26.6
YAK *e*SS **SS** **06 05 20.2 -2.4**
YAK *e*SSS SSS 06 07 33.9
YAK pmax pmax
comp=Z,982nm,0.9s
YAK pmax pmax
comp=N,441nm,1.1s
YAK pmax pmax
comp=E,138nm,1.1s
YAK pmax pmax
comp=Z,27nm,0.6s
YAK smax smax
comp=E,112nm,1.6s
YAK smax smax
comp=N,167nm,1.4s
YAK Yakutsk 56.31 2 P **P** **05 53 55.1 +0.7**
MSVF Nonsavu 56.69 115 P **P** **05 53 59.4 +1.4**
MSVF pmax pmax
comp=Z,49nm,0.9s
MSVF Nonsavu 56.69 115 P **P** **05 53 59.4 +1.4**
MSVF IAmb IAmb 05 54 04.0
comp=Z,49nm,0.8s
ULHL Ulahol 56.88 318 P **P** **05 53 59.5 +0.4**
SNR=26
MA2 Magadan 57.10 15 P **P** **05 54 01.4 +1.4**
comp=Z,33nm,0.7s,baz=200,slow=6.9,SNR=21
MA2 ScP **ScP** **05 58 41.5 +1.3**
comp=Z,11nm,0.8s,baz=157,slow=4.3,SNR=5.0
MA2 LR LR 06 15 15.4
comp=Z,125nm,21.8s,baz=204,slow=32
MA2 Magadan 57.10 15*c i*P **P** **05 54 01.3 +1.3**
MA2 pmax pmax
comp=Z,166nm,2.2s
MA2 Magadan 57.10 15 P **P** **05 54 01.1 +1.0**
KZA Kyzart 57.47 317 P **P** **05 54 04.3 +0.7**
SNR=39
TKM2 Tokmak 2 57.59 318 P **P** **05 54 04.4 +0.3**
SNR=39
KBK Karagaybulak 57.92 318 P **P** **05 54 06.8 +0.5**
SNR=21
UCH Uchtor 58.03 317 P **P** **05 54 08.2 +0.7**
SNR=63
CHMS Chumysh 58.19 318 P **P** **05 54 08.0 -0.1**
SNR=11
AAK Ala-Archa 58.21 317 P **P** **05 54 08.8 +0.4**
comp=Z,12nm,0.5s,baz=110,slow=6.0,SNR=34
AAK ScP **ScP** **05 58 43.9 -1.8**
comp=Z,6.7nm,1.0s,baz=142,slow=4.9,SNR=4.0
AAK LR LR 06 22 16.0
comp=Z,113nm,21.2s,baz=101,slow=39
AAK Ala-Archa 58.21 317 P **P** **05 54 08.7 +0.4**
SNR=18
AAK Ala-Archa 58.21 317*c i*P **P** **05 54 08.4 0.0**
AAK pmax pmax
comp=Z,54nm,1.5s
AAK Ala-Archa 58.21 317 P **P** **05 54 07.8 -0.6**
ZALV Zalesovo Beam 58.38 333 P **P** **05 54 07.7 -1.5**
comp=Z,7.8nm,0.3s,baz=125,slow=6.3,SNR=39
ZALV ScP **ScP** **05 58 45.2 -0.8**
comp=Z,3.2nm,0.7s,baz=129,slow=2.8,SNR=3.3
ZALV S **S** **06 02 02.2 +1.1**
comp=Z,2.6nm,0.8s,baz=126,slow=15,SNR=4.8
USP Ospenovka 58.47 318 P **P** **05 54 10.0 0.0**
SNR=38
AML Almayashu 58.55 317 P **P** **05 54 11.5 +0.5**
SNR=48
EKS2 Erkin-Say 58.71 317 P **P** **05 54 12.3 +0.5**
SNR=45
ARSB Arslanbob 58.73 316 IAmb IAmb 05 54 15.2
comp=Z,37nm,0.7s
KBL Kabul 59.51 307 P **P** **05 54 16.6 -0.9**
KBL pmax pmax
comp=Z,38nm,0.7s
KBL Kabul 59.51 307 P **P** **05 54 16.6 -0.9**
KBL IAmb IAmb 05 54 20.5
comp=Z,38nm,0.7s
KURBB Kurchatov Arra 59.54 327 P **P** **05 54 16.5 -0.6**
comp=Z,43nm,0.8s,baz=124,slow=6.6,SNR=361
KURBB ScP **ScP** **05 58 50.9 -0.4**
comp=Z,4.1nm,0.9s,baz=115,slow=4.7,SNR=2.9
KURBB Kurchatov Arra 59.54 327 P **P** **05 54 15.6 -1.5**
KURK Kurchatov 59.54 327*c i*P **P** **05 54 16.4 -0.7**
KURK pmax pmax
comp=Z,180nm,1.7s
KURK Kurchatov 59.54 327 **ScP** **05 58 50.9 -0.4**
KURK Kurchatov 59.54 327 P **P** **05 54 16.5 -0.6**
GAR Garm 59.83 312 P **P** **05 54 19.4 -0.2**
SEY Seymchan 60.40 14 P **P** **05 54 24.8 +2.0**
comp=Z,41nm,0.9s,baz=224,slow=6.6,SNR=57
SEY ScP **ScP** **05 58 56.2 +1.4**
comp=Z,3.5nm,0.7s,baz=219,slow=6.5,SNR=2.3
SEY S **S** **06 02 30.9 +4.3**
comp=Z,0.6nm,0.3s,baz=66,slow=19,SNR=6.4
SEY Seymchan 60.40 14*ce*P **P** **05 54 24.9 +2.1**
CHGR Chuyangaron 60.59 311 P **P** **05 54 23.9 -0.8**
CHGR IAmb IAmb 05 55 08.1
comp=Z,75nm,1.0s
KK31 Karatay Array 61.09 317 *i* P **P** **05 54 26.9 -1.0**
KK31 Karatay Array 61.09 317 P **P** **05 54 27.6 -0.3**
KK31 IAmb IAmb 05 54 28.8
comp=Z,88nm,1.4s
KKAR Karatay Array 61.09 317 IAmb IAmb 05 54 28.8
comp=Z,88nm,1.4s
DCZ Deep Cove 62.95 148 IAmb IAmb 05 54 53.5
comp=Z,75nm,1.3s
THZ Tophouse 63.88 142 P **P** **05 54 46.8 +0.4**
THZ IAmb IAmb 05 55 28.9
comp=Z,32nm,0.8s
LBZ Lake Benmore 63.88 146 IAmb IAmb 05 55 10.8
comp=Z,48nm,0.8s
RPZ Rata Peaks 63.95 145 P **P** **05 54 47.7 +0.9**
RPZ IAmb IAmb 05 55 27.8
comp=Z,33nm,0.8s
JOHN Johnston Islan 64.28 74 P **P** **05 54 50.7 +1.3**
BKZ Black Stump Fm 64.73 138 P **P** **05 54 52.5 +0.5**
BKZ IAmb IAmb 05 55 31.0
comp=Z,37nm,1.0s
BVAR Borovoye Array 65.12 327 P **P** **05 54 53.8 -0.5**
comp=Z,27nm,0.8s,baz=122,slow=7.7,SNR=100
BRVK Borovoye 65.19 327*c i*P **P** **05 54 54.0 -0.7**
BRVK pmax pmax
comp=Z,92nm,1.3s
BRVK Borovoye 65.19 327 P **P** **05 54 53.9 -0.8**
BRVK IAmb IAmb 05 54 55.3
comp=Z,62nm,0.9s
KIWB Kanaga Island 65.70 35 P **P** **05 54 57.8 -0.2**
TIXI Tiksi 65.93 1 P **P** **05 54 58.8 -0.3**
comp=Z,94nm,0.4s,baz=187,slow=4.0,SNR=308
TIXI LR LR 06 25 17.8
comp=Z,169nm,20.0s,baz=194,slow=37
TIXI Tiksi 65.93 1*c i*P **P** **05 54 58.6 -0.5**
TIXI pmax pmax
comp=Z,208nm,0.9s
TIXI Tiksi 65.93 1 P **P** **05 54 58.8 -0.3**
ADK Adak 65.98 35 P **P** **05 55 01.0 +1.2**
ADK pmax pmax
comp=Z,91nm,1.3s
ADK Adak 65.98 35 P **P** **05 55 01.0 +1.2**
ADK IAmb IAmb 05 55 01.5
comp=Z,91nm,1.2s
WSAR Wadi Sarin 66.69 293 P **P** **05 55 04.6 -0.3**
comp=Z,5.8nm,0.6s,baz=134,slow=5.9,SNR=8.6
ATKA Atka Island 67.52 35 P **P** **05 55 09.5 0.0**
BILL Bilibino 67.96 15*c i*P **P** **05 55 12.5 +0.5**
BILL *e* 05 55 37.0
BILL *e* 05 57 47.3
BILL pmax pmax
comp=Z,56nm,1.5s
BILL Bilibino 67.96 15 P **P** **05 55 12.7 +0.7**
BILL IAmb IAmb 05 55 13.9
comp=Z,88nm,1.6s
GEYT Alibeck 68.86 308 P **P** **05 55 18.6 +0.4**
comp=Z,19nm,1.1s,baz=147,slow=3.5,SNR=30
NIKH Nikolski High 70.85 36 IAmb IAmb 05 55 47.9
comp=Z,47nm,0.7s
SOCY Socotra 70.94 281 P **P** **05 55 30.0 -1.4**
AKTO Aktyubinsk 71.48 321 P **P** **05 55 33.2 -0.7**
comp=Z,20nm,0.6s,baz=96,slow=8.7,SNR=63
SVE Sverdlovsk 71.76 328⇓ *e*P **P** **05 55 34.7 -0.7**
SVE *e*S **S** **06 04 40.1 -4.3**
SVE pmax pmax
comp=Z,49nm,0.8s
UNV Unalaska Valle 72.45 35 IAmb IAmb 05 55 41.3
comp=Z,149nm,1.4s
CASY Casey 72.61 186 P **P** **05 55 41.1 +0.8**
CASY IAmb IAmb 05 55 41.9
comp=Z,40nm,0.7s
ARU Arti 72.73 328*c i*P **P** **05 55 39.9 -1.4**
ARU pmax pmax
comp=Z,45nm,0.7s
ARU Arti 72.73 328 P **P** **05 55 39.6 -1.6**
ARU IAmb IAmb 05 55 42.3
comp=Z,45nm,0.7s
MAK Makhachkala 77.49 313 *e*P **P** **05 56 05.8 -3.0**
MAK *e**PP **pP** **05 56 43.0 -0.1**
MAK *e*SP **sP** **05 56 59.9 +2.1**
MAK *e*S **S** **06 05 43.5 -5.1**
MAK *e*SS **sS** **06 06 48.9 +1.1**
MAK *e*SS **SS** **06 10 49.1 -1.4**
MAK pmax pmax
comp=Z,25nm,0.3s
CHGN Chignik 77.50 34 IAmb IAmb 05 57 08.8
comp=Z,78nm,1.0s
MLH Mauna Loa 77.73 71 PcP 05 56 28.9 +8.5
RDOG Red Dog Mine 77.87 21 IAmb IAmb 05 56 13.2
comp=Z,114nm,1.6s
KIRV Kirov 78.02 329 LR LR 06 31 58.9
comp=Z,85nm,18.3s,baz=47,slow=37
LGD Lagodekhi 78.36 311 P **P** **05 56 15.4 +1.7**
RAYN Ar Rayn 78.75 293 P **P** **05 56 15.4 -0.8**
RAYN pmax pmax
comp=Z,22nm,0.9s
RAYN Ar Rayn 78.75 293 P **P** **05 56 15.4 -0.8**
GROC Groznyy 78.75 313 *e*P **P** **05 56 15.9 +0.1**
GROC *e* 05 56 24.2
GROC *e**PP **pP** **05 56 49.7 -0.5**
GROC *e*SP **sP** **05 57 04.7 -0.2**
GROC *e*S **S** **06 05 59.2 -2.9**

GROC pmax pmax
comp=Z,25nm,0.5s
TBLG Delisi 79.48 311 P **P** **05 56 21.7 +1.9**
GUDG Gudauri 79.69 312 P **P** **05 56 23.1 +1.9**
KZRT Kazreti 79.72 311 P **P** **05 56 22.9 +1.7**
ZEI Tsey 80.13 312 *eP* **P** **05 56 21.9 -1.6**
ZEI pmax pmax
comp=Z,16nm,0.8s
PRGR Permogore 80.30 332 *eP* **P** **05 56 21.9 -1.8**
PRGR *eS* S 06 06 07.5 -10
PRGR pmax pmax
comp=Z,35nm,0.6s
AKH Akhalkalaki 80.40 311 ⇑P **P** **05 56 25.6 +0.7**
AKH Akhalkalaki 80.40 311 P **P** **05 56 26.7 +1.7**
OHAK Old Harbor 80.41 33 IAmb IAmb 05 56 26.8
comp=Z,110nm,1.3s
ONI Oni 80.45 312 P **P** **05 56 28.6 +3.5**
KDAK Kodiak Island 80.83 32 P **P** **05 56 27.8 +1.2**
comp=Z,29nm,0.7s,baz=258,slow=3.6,SNR=41
KDAK Kodiak Island 80.83 32 P **P** **05 56 27.2 +0.6**
KDAK IAmb IAmb 05 56 38.7
comp=Z,46nm,0.8s
KBZ Khabaz 80.88 313 P **P** **05 56 27.6 +0.4**
comp=Z,4.3nm,0.9s,baz=52,slow=4.1,SNR=9.0
ABPO Ambohimpanom 80.97 250 P **P** **05 56 28.6 +0.2**
ABPO pmax pmax
comp=Z,22nm,1.3s
ABPO Ambohimpanom 80.97 250 P **P** **05 56 28.6 +0.2**
KIV Kislovodsk 81.03 313 *eP* **P** **05 56 27.3 -0.9**
KIV *eS* **S** **06 06 23.6 -2.7**
KIV pmax pmax
comp=Z,40nm,1.0s
KIV Kislovodsk 81.03 313 P **P** **05 56 27.2 -1.0**
PPLA Purkeypile 81.40 27 IAmb IAmb 05 56 32.3
comp=Z,112nm,1.5s
HOM Homer 81.44 31 IAmb IAmb 05 56 31.5
comp=Z,128nm,1.1s
CNPM China Poot 81.64 31 IAmb IAmb 05 57 17.2
comp=Z,131nm,1.4s
VRH Novokhopyorsk 81.81 321 *eP* **P** **05 56 30.4 -1.5**
VRH pmax pmax
comp=Z,30nm,0.6s
ATD Arta Tunnel 81.87 281 LR LR 06 31 32.1
comp=Z,136nm,21.5s,baz=68,slow=35
KTH Kantishna Hill 82.02 27 IAmb IAmb 05 56 35.9
comp=Z,78nm,1.2s
BPAW Bear Paw Mtn. 82.02 26 IAmb IAmb 05 56 35.4
comp=Z,142nm,1.2s
TRF Thorofare Moun 82.29 27 IAmb IAmb 05 56 36.4
comp=Z,86nm,1.1s
RC01 Rabbit Creek A 82.45 29 IAmb IAmb 05 56 36.8
comp=Z,59nm,1.0s
SEW Seward 82.56 30 IAmb IAmb 05 56 37.7
comp=Z,76nm,1.0s
BWN Browne 82.69 26 IAmb IAmb 05 56 39.4
comp=Z,92nm,1.0s
PMR Palmer 82.76 29 IAmb IAmb 05 56 38.4
comp=Z,95nm,1.2s
TOLK Toolik Lake Re 82.84 22 P **P** **05 56 38.8 +1.7**
baz=267
TOLK Toolik Lake Re 82.84 22 IAmb IAmb 05 56 40.3
comp=Z,152nm,1.6s
GHO Glory Hole Cre 82.86 29 IAmb IAmb 05 57 16.1
comp=Z,43nm,1.0s
NEA Nenana 82.87 26 IAmb IAmb 05 56 40.4
comp=Z,66nm,1.0s
RND Reindeer 82.94 27 IAmb IAmb 05 56 39.3
comp=Z,135nm,1.4s
SOC Sochi 83.19 313 *eP* **P** **05 56 35.3 -4.0**
SOC *e* 05 59 48.2
SOC *e*PPP PPP 06 01 47.7
SOC *eS* **S** **06 06 42.6 -5.5**
SOC *e*SS **SS** **06 12 10.8 -4.7**
KLMR Klimovskoe 83.20 331 *d iP* **P** **05 56 37.8 -1.1**
KLMR *eS* **S** **06 06 40.9 -6.5**
KLMR pmax pmax
comp=Z,100nm,1.2s
KLMR Klimovskoe 83.20 331 ⇓ *iP* **P** **05 56 37.8 -1.1**
KLMR *eP* **P** **05 56 37.8 -1.1**
KLMR *eP* **P** **05 56 37.8 -1.1**
KLMR AMP 05 56 39.7
comp=Z,100nm,1.2s
KLMR *eS* **S** **06 06 41.0 -6.5**
KLMR *eS* **S** **06 06 41.0 -6.5**
WRH Wood River Hil 83.30 26 IAmb IAmb 05 56 41.1
comp=Z,87nm,1.1s
VORD Divnogorie 83.34 321 *eP* **P** **05 56 38.6 -1.3**
VORD pmax pmax
comp=Z,10.0nm,0.6s
TCOL CIGO, UAF Yank 83.40 25 P **P** **05 56 39.9 0.0**
baz=269,SNR=8.4
COLA College 83.41 25 *c iP* **P** **05 56 40.1 +0.2**
COLA pmax pmax
comp=Z,32nm,0.9s
COLA College 83.41 25 P **P** **05 56 39.4 -0.5**
VSR Storozhevoye 83.42 321 *eP* **P** **05 56 38.6 -1.7**
VSR pmax pmax
comp=Z,60nm,1.6s
CCB Clear Creek Bu 83.42 26 IAmb IAmb 05 56 41.5
comp=Z,78nm,1.2s
LPSR Galich'ya Gora 83.55 322 *eP* **P** **05 56 39.6 -1.3**
LPSR pmax pmax
comp=Z,20nm,0.7s
POKR Poker Plat Res 83.58 25 P **P** **05 56 40.7 -0.2**
baz=270,SNR=5.8
SCM Sheep Creek Mo 83.62 28 IAmb IAmb 05 56 43.6
comp=Z,130nm,1.3s
GLI Glacier Island 83.74 29 IAmb IAmb 05 57 00.7
comp=Z,52nm,0.8s
HDA Harding Lake 83.79 26 P **P** **05 56 41.4 -0.5**
baz=270,SNR=37
HDA Harding Lake 83.79 26 IAmb IAmb 05 56 42.9
comp=Z,42nm,0.8s
IL31 83.82 26 P **P** **05 56 41.2 -0.7**
ILAR Eielson Array 83.82 26 P **P** **05 56 41.5 -0.6**
comp=Z,15nm,0.9s,baz=246,slow=4.6,SNR=66
ILAR PP **PP** **05 59 56.0 -1.0**
comp=Z,2.1nm,1.0s,baz=277,slow=9.0,SNR=4.0
ILAR PKKPbc **PKKPbc** **06 14 57.6 -2.6**
comp=Z,0.3nm,0.4s,baz=43,slow=1.0,SNR=8.2
ILAR LR LR 06 33 52.4
comp=Z,60nm,21.4s,baz=294,slow=35
TMCR Tamitsa 83.89 334 *eP* **P** **05 56 40.2 -2.2**
TMCR pmax pmax
comp=Z,81nm,1.0s
HIN Hinchinbrook 84.03 30 IAmb IAmb 05 56 45.7
comp=Z,156nm,1.4s
FID Port Fidalgo 84.04 30 IAmb IAmb 05 56 45.5
comp=Z,137nm,1.4s
MOS Moscow 84.24 325 *eP* **P** **05 56 42.2 -2.2**
MOS *eS* **S** **06 06 55.6 -2.5**
MOS pmax pmax
comp=Z,55nm,0.8s
MALT Malatya 84.35 308 P **P** **05 56 48.3 +2.8**
EYAK Cordova Ski Ar 84.40 30 IAmb IAmb 05 56 47.7
comp=Z,55nm,1.2s
FYU Fort Yukon 84.48 24 IAmb IAmb 05 56 48.6
comp=Z,135nm,1.4s
ANN Anapa 84.79 314 *eP* **P** **05 56 45.9 -1.4**
ANN *e**PP **pP** **05 57 24.3 +2.1**
ANN *eS* **S** **06 06 56.3 -7.7**
ANN pmax pmax
comp=Z,56nm,0.8s
OBN Obninsk 84.87 325 *c iP* **P** **05 56 46.0 -1.5**
OBN *e* 05 57 41.0
OBN *e*PPP PPP 06 01 57.3
OBN pmax pmax
comp=Z,86nm,1.3s
OBN Obninsk 84.87 325 P **P** **05 56 45.7 -1.8**
OBN IAmb IAmb 05 57 13.6
comp=Z,62nm,1.0s
LVZ Lovozero 85.17 338 *deP* **P** **05 56 47.6 -1.2**
LVZ pmax pmax
comp=Z,23nm,0.9s
LVZ Lovozero 85.17 338 P **P** **05 56 47.0 -1.8**
LVZ IAmb IAmb 05 57 52.5
comp=Z,67nm,1.5s
MAW Mawson 85.20 200 P **P** **05 56 49.6 +0.7**
baz=85,SNR=14
MAW Mawson 85.20 200 P **P** **05 56 49.5 +0.7**
comp=Z,9.8nm,0.7s,baz=64,slow=7.1,SNR=19
MAW LR LR 06 31 21.4
comp=Z,67nm,19.6s,baz=60,slow=33
MAW Mawson 85.20 200 P **P** **05 56 49.2 +0.4**
GLB Gilahina Butte 85.31 29 IAmb IAmb 05 57 09.8
comp=Z,50nm,0.9s

VNDA Vanda 85.48 173 P **P** **05 56 50.6 +0.5**
comp=Z,4.4nm,0.6s,baz=320,slow=5.8,SNR=17
VNDA PKKPbc **PKKPbc** **06 14 55.0 -2.1**
comp=Z,0.7nm,0.9s,baz=115,slow=1.1,SNR=3.9
VNDA LR LR 06 36 51.3
comp=Z,125nm,18.2s,baz=330,slow=37
VNDA Vanda 85.48 173 P **P** **05 56 50.6 +0.5**
VNDA pmax pmax
comp=Z,18nm,1.1s
VNDA Vanda 85.48 173 P **P** **05 56 50.6 +0.5**
CRQM Cirque 85.68 29 IAmb IAmb 05 57 12.4
comp=Z,42nm,0.9s
MCARA McCarthy VSAT 85.69 29 IAmb IAmb 05 57 28.2
comp=Z,44nm,1.0s
TGL Tana Glacier 85.83 29 IAmb IAmb 05 57 12.5
comp=Z,40nm,0.8s
WAX Waxell Ridge 85.84 30 IAmb IAmb 05 57 12.4
comp=Z,65nm,0.7s
KVT Kavak 86.02 311 P **P** **05 56 55.0 +1.3**
BARN Barnard Glacie 86.38 29 IAmb IAmb 05 57 42.2
comp=Z,52nm,1.0s
CTGM Chitina Glacie 86.54 29 IAmb IAmb 05 57 43.6
comp=Z,45nm,0.9s
PPT Papeete 86.72 108 LR LR 06 32 12.0
comp=Z,42nm,19.1s,baz=282,slow=33
PPT2 Papeete2 86.72 108 *e*PP PP 06 00 18.0 -3.9
comp=Z,1um,35.0s
PPT2 Papeete2 86.72 108 *e*LQ LQ 06 20 51.3
PPT2 *e*LR LR 06 24 33.2
comp=Z,762nm,33.0s
comp=Z,398nm,30.0s
SIM Simferopol' 87.13 315 *eP* P 05 57 09.1 +10
SIM pmax pmax
comp=Z,12nm,0.8s
TBI Tubuai 87.54 114 *e*PP PP 06 00 28.6 +0.4
comp=Z,96nm,35.5s
TBI Tubuai 87.54 114 *e*SS SS 06 13 20.0 -0.5
comp=Z,324nm,30.8s
TBI *e*LQ LQ 06 21 18.3
comp=Z,690nm,34.8s
TBI *e*LR LR 06 24 55.8
comp=Z,426nm,30.5s
EPYK Eagle Plains 87.90 24 P **P** **05 57 01.9 -0.3**
baz=279
EPYK Eagle Plains 87.90 24 IAmb IAmb 05 57 03.6
comp=Z,33nm,0.9s
BRTR Keskin Array B 87.97 310 P **P** **05 57 01.9 -1.2**
comp=Z,3.3nm,0.5s,baz=132,slow=3.5,SNR=16
BRTR Keskin Array B 87.97 310 *i* P **P** **05 57 02.0 -1.2**
BRTR pmax pmax
comp=Z,3.0nm,0.5s
PMOR Pomariorio Ree 88.03 105 *e*T T 07 34 04.8
comp=Z,2.8nm,0.2s
ARCES ARCESS Array B 88.27 340 P **P** **05 57 02.5 -1.3**
comp=Z,19nm,0.8s,baz=81,slow=6.3,SNR=64
ARCES LR LR 06 42 10.8
comp=Z,120nm,18.3s,baz=136,slow=39
ARE0 ARCESS Array S 88.27 340 *eP* **P** **05 57 02.9 -0.9**
SPA0 Spitsbergen Ar 88.38 349 *eP* **P** **05 57 03.5 -0.6**
SPITS Spitsbergen Ar 88.38 349 P **P** **05 57 03.6 -0.6**
SPITS pmax pmax
comp=Z,16nm,0.4s
HYT Haines Junctio 88.42 29 P **P** **05 57 05.5 +0.7**
KMBO Kilima Mbogo 88.53 269 P **P** **05 57 06.7 +0.2**
comp=Z,1.3nm,0.4s,baz=116,slow=4.2,SNR=3.6
KMBO LR LR 06 35 28.2
comp=Z,51nm,19.7s,baz=94,slow=35
KMBO Kilima Mbogo 88.53 269 P **P** **05 57 06.0 -0.4**
HAMF Hammerfest 88.64 341 *eP* **P** **05 57 04.1 -1.4**
INK Inuvik 88.75 21 P **P** **05 57 06.1 +0.1**
comp=Z,15nm,1.1s,baz=287,slow=5.8,SNR=30
KBS Kingsbay 88.91 350 P **P** **05 57 05.3 -1.3**
KBS pmax pmax
comp=Z,16nm,0.7s
KBS Kingsbay 88.91 350 P **P** **05 57 05.3 -1.3**
KBS Kingsbay 88.91 350 *eP* **P** **05 57 06.0 -0.7**
HSPB Hornsund (broa 88.96 348 *eP* **P** **05 57 06.6 -0.3**
BJO1 Bjornoya 88.97 345 *eP* **P** **05 57 08.0 +1.0**
KTK1 Kautokeino 89.17 339 *eP* **P** **05 57 06.2 -1.9**
FIA1 FINESS Array S 89.62 332 IAmb IAmb 05 57 10.0
comp=Z,21nm,1.4s
FINES FINESS Array B 89.63 332 P **P** **05 57 08.9 -1.4**
comp=Z,13nm,0.5s,baz=56,slow=5.3,SNR=100
FINES LR LR 06 43 11.3
comp=Z,108nm,19.1s,baz=78,slow=39
AKASG Malin Array Be 89.72 321 P **P** **05 57 09.6 -1.4**
comp=Z,1.7nm,0.5s,baz=69,slow=4.6,SNR=12
AKASG LR LR 06 40 29.8
comp=Z,93nm,18.1s,baz=95,slow=38
AKASG Malin Array Be 89.72 321 *i* P **P** **05 57 11.3 +0.3**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
VSU Vasula 89.86 329 ⇓ *eP* **P** **05 57 10.4 -1.0**
VSU pmax pmax
comp=Z,111nm,1.6s
MICGM Minsk 89.93 325 *e* **P** **05 57 11.0 -0.8**
MICGM *e* 06 07 03.0
MNK Minsk 89.93 325 *eP* **P** **05 57 11.0 -0.8**
MNK *e* 06 07 30.0
A36M Sachs Harbour 90.45 17 P **P** **05 57 14.1 +0.1**
baz=290
TRO Kromso 90.48 340 *eP* **P** **05 57 12.6 -1.5**
NOR Nord 91.07 355 ⇑ *iP* **P** **05 57 16.2 -0.5**
NOR pmax pmax
comp=Z,36nm,0.8s
NOR Nord 91.07 355 ⇑ *iP* **P** **05 57 16.2 -0.5**
comp=Z,36nm,0.8s
C36M Paulatuk 91.75 19 P **P** **05 57 20.0 0.0**
baz=291,SNR=15
KMPD K-Podol'skiy 91.85 319 P **P** **05 57 21.0 +0.1**
TESR Tescani 92.10 317 ⇑P **P** **05 57 21.0 -1.1**
VRI Vrincioaia 92.16 316 ⇑P **P** **05 57 22.3 -0.1**
VRI Vrincioaia 92.16 316 ⇑P **P** **05 57 22.3 -0.1**
PLOR Plostina 92.22 316 ⇑P **P** **05 57 23.7 +1.0**
PLOR Plostina 92.22 316 ⇑P **P** **05 57 23.7 +1.0**
BISRR Bisoca 92.23 316 ⇓P **P** **05 57 23.6 +0.7**
STEI Steigen 92.31 339 *eP* **P** **05 57 20.9 -1.7**
MLR Muntele Rosu 92.77 316 ⇑P **P** **05 57 24.7 -0.7**
MLR Muntele Rosu 92.77 316 ⇑P **P** **05 57 24.7 -0.7**
MLR Muntele Rosu 92.77 316 IAmb IAmb 05 58 43.5
comp=Z,23nm,1.1s
BURAR Bucovina Array 92.85 318 ⇑P **P** **05 57 25.3 -0.4**
BURAR Bucovina Array 92.85 318 ⇑P **P** **05 57 25.3 -0.4**
MOR8 Moi Rana 93.24 338 *eP* **P** **05 57 24.3 -2.7**
VOIR 93.40 316 ⇑P **P** **05 57 27.7 -0.6**
VOIR 93.40 316 ⇑P **P** **05 57 27.7 -0.6**
ARR Arges 93.70 316 ⇑P **P** **05 57 28.9 -0.7**
SYO Syowa Base 93.84 201 ⇓ *iP* **P** **05 57 29.2 -0.4**
SYO Syowa Base 93.84 201 ⇓ *e*PcP **PcP** **05 57 31.4 +1.4**
SYO Syowa Base 93.84 201 ⇓ *e*pP pP 05 58 04.4 0.0
UZH Uzhgorod 94.54 320 *eP* **P** **05 57 33.8 +0.5**
UZH *e* 05 58 13.0
GZR Gura Zlata 94.97 316 ⇑P **P** **05 57 36.2 +0.7**
GZR Gura Zlata 94.97 316 ⇑P **P** **05 57 36.2 +0.7**
TAOE Nuku Hiva Isla 94.98 98 *e*LR LR 06 28 25.7
comp=Z,348nm,22.5s
DAG Danmarks Havn 95.20 352 ⇑ *iP* **P** **05 57 34.9 -0.8**
DAG pmax pmax
comp=Z,44nm,0.8s
DAG Danmarks Havn 95.20 352 ⇑ *iP* **P** **05 57 34.9 -0.8**
comp=Z,44nm,0.8s
SIRR Siria 95.53 317 ⇑P **P** **05 57 37.4 -0.5**
QSPA South Pole Qui 95.57 180 P **P** **05 57 38.4 +0.8**
comp=Z,3.5nm,0.7s,baz=288,slow=2.0,SNR=12
QSPA South Pole Qui 95.57 180 P **P** **05 57 38.3 +0.6**
QSPA IAmb IAmb 05 58 27.3
comp=Z,15nm,0.9s
MDVR Moldovita 95.85 316 ⇑P **P** **05 57 38.2 -1.3**
RES Resolute Bay 96.10 10 P **P** **05 57 40.1 +0.3**
RES pmax pmax
comp=Z,21nm,1.2s
RES Resolute Bay 96.10 10 P **P** **05 57 40.1 +0.3**
RES IAmb IAmb 05 57 41.5
comp=Z,21nm,1.2s
NORES NORESS Array B 96.56 333 P **P** **05 57 40.6 -1.6**
NORES pmax pmax
comp=Z,1.0nm,0.4s
NB2 NORSAR Subarra 96.58 334 P **P** **05 57 40.5 -1.9**
comp=Z,2.5nm,0.6s,baz=65,slow=4.6
NB2 NORSAR Subarra 96.58 334 P **P** **05 57 40.5 -1.9**
baz=65,slow=4.6
NOA NORSAR Array B 96.58 334 P **P** **05 57 40.3 -2.1**
comp=Z,4.6nm,0.7s,baz=66,slow=4.5,SNR=21
NOA LR LR 06 45 59.7
comp=Z,176nm,19.6s,baz=60,slow=38

DOMB Dombas 97.09 335 *eP* Pdif 05 57 44.9 +0.2
AKN Aaknes 97.89 335 *eP* **P** **05 57 47.2 -1.0**
SKAR Skarslia 98.02 334 *eP* **P** **05 57 47.4 -1.5**
YKA Yellowknife Ar 98.17 24 P Pdif 05 57 49.7 +0.3
comp=Z,5.4nm,0.9s,baz=298,slow=4.3,SNR=54
YKA PP **PP** **06 01 50.4 +0.4**
comp=Z,3.1nm,1.1s,baz=299,slow=6.3,SNR=5.6
YKA PKKPbc **PKKPbc** **06 14 20.1 -3.6**
comp=Z,0.7nm,0.5s,baz=126,slow=4.0,SNR=17
YKA LR LR 06 43 52.2
comp=Z,55nm,20.2s,baz=0.0,slow=36
BRG Berggiesshubel 99.05 323 *e*PKP **Pdif** **05 57 53.9 +0.3**
comp=Z,5.3nm,0.8s
BRG Berggiesshubel 99.05 323 *eP* **Pdif** **05 57 53.9 +0.3**
BRG pmax pmax
comp=Z,5.0nm,0.8s
BLS5 Blasjo 99.43 333 *eP* **Pdif** **05 57 54.0 -1.2**
CLL Collm 99.45 324 *e*Pdif **Pdif** **05 57 56.0 +0.6**
CLL Collm 99.45 324 *eP* **Pdif** **05 57 56.0 +0.6**
KULLO Kullorsuaq 99.86 1 *i* P **Pdif** **05 57 56.2 -0.5**
KULLO pmax pmax
comp=Z,22nm,1.1s
KULLO Kullorsuaq 99.86 1 *i* P **Pdif** **05 57 56.2 -0.5**
comp=Z,22nm,1.1s
GERES GERESS Array B 99.91 322 P **Pdif** **05 57 57.0 -0.7**
comp=Z,0.8nm,0.7s,baz=89,slow=5.6,SNR=3.7
GERES LR LR 06 47 44.6
comp=Z,135nm,19.0s,baz=84,slow=38
GERES GERESS Array B 99.91 322 P **Pdif** **05 57 57.0 -0.7**
RKT Rikitea 100.80 112 *e*LR LR 06 31 14.8
comp=Z,243nm,26.5s
SUMG Summit 101.23 355 *i* P **Pdif** **05 58 03.0 -0.4**
SUMG pmax pmax
comp=Z,34nm,1.2s
SUMG Summit 101.23 355 **Pdif** **05 58 02.6 -0.8**
SUMG Summit 101.23 355 *i* P **Pdif** **05 58 03.0 -0.4**
comp=Z,34nm,1.2s
NVAR Mina Array Bea 106.39 47 Pdiff **Pdif** **05 58 25.7 -1.2**
comp=Z,0.4nm,0.5s,baz=306,slow=4.6,SNR=4.3
NVAR PKiKP **PKiKP** **06 02 39.3 +1.8**
comp=Z,0.5nm,0.5s,baz=290,slow=3.7,SNR=1.5
NVAR PKKPbc **PKKPbc** **06 14 01.0 +1.8**
comp=Z,0.3nm,0.5s,baz=107,slow=5.1,SNR=3.8
NVAR PKKP **PKKPab** **06 14 15.4 0.0**
comp=Z,1.1nm,0.7s,baz=125,slow=4.9,SNR=6.4
SNAA Sanae 106.81 195 Pdiff **Pdif** **05 58 30.2 +2.5**
comp=Z,2.9nm,1.2s,baz=168,slow=14,SNR=2.7
SNAA PP **PP** **06 02 50.8 -3.9**
comp=Z,2.7nm,1.1s,baz=173,slow=6.3,SNR=3.9
SNAA Sanae 106.81 195 P **Pdif** **05 58 29.8 +2.0**
SNAA Sanae 106.81 195 **Pdif** **05 58 29.8 +2.0**
KEST Kesra 107.57 310 PP **PP** **06 03 03.6 +2.4**
comp=Z,2.8nm,0.7s,baz=8.6,slow=1.9,SNR=4.0
PDAR Pinedale Array 110.58 40 Pdiff **Pdif** **05 58 47.4 +2.0**
comp=Z,0.1nm,0.6s,baz=329,slow=8.6,SNR=1.6
PDAR PKiKP **PKiKP** **06 02 46.9 +1.6**
comp=Z,0.3nm,0.6s,baz=279,slow=1.7,SNR=2.3
PDAR PP **PP** **06 03 21.1 -1.7**
comp=Z,0.6nm,0.6s,baz=328,slow=3.2,SNR=4.2
PDAR PKKPab **PKKPab** **06 13 53.7 -3.1**
comp=Z,0.8nm,0.7s,baz=123,slow=7.0,SNR=6.2
O20A White River Ci 112.73 42 P **PKiKP** **06 02 49.9 +0.6**
baz=299
ULM Lac du Bonnet 113.76 28 PKiKP **PKiKP** **06 02 50.0 -0.7**
comp=Z,1.9nm,0.5s,baz=257,slow=1.7,SNR=5.2
N23A Red Feather La 113.86 41 P **PKiKP** **06 02 51.7 +0.2**
baz=302
ESDC Sonseca Array 115.30 319 PP PP 06 03 56.3 +0.1
comp=Z,1.1nm,0.9s,baz=47,slow=7.5,SNR=4.6
ANMO Albuquerque 116.48 46 PKiKP **PKPdf** **06 02 56.0 -0.7**
ANMO Albuquerque 116.48 46 P **PKiKP** **06 02 57.1 +0.5**
baz=299
ANMO Albuquerque 116.48 46 **PKPdf** **06 02 56.0 -0.7**
121A Cookes Peak, D 116.62 49 P **PKPdf** **06 02 56.9 -0.1**
baz=297
PVRL Vila Real 116.78 322 *e*PKPdf **PKiKP** **06 02 59.3 +2.4**
PCBR Castelo Branco 117.47 321 *e*PKPdf **PKiKP** **06 02 58.4 +0.2**
ECSD EROS Data Cent 117.78 33 P **PKiKP** **06 02 58.8 +0.1**
baz=311
PCAS Casmilo, Conde 117.98 321 *e*PKPdf **PKPdf** **06 02 58.6 -0.5**
PSBE So Bento 118.48 321 *e*PKPdf **PKiKP** **06 03 02.9 +2.7**
MNTX Cornudas Mount 118.81 49 P **PKiKP** **06 03 01.7 +0.6**
baz=298,SNR=5.5
MNTX Cornudas Mount 118.81 49 **PKiKP** **06 03 01.9 +0.8**
SCHQ Schefferville 118.82 8 PKP **PKiKP** **06 03 00.8 +0.4**
comp=Z,3.5nm,0.6s,baz=18,slow=2.2,SNR=6.8
SCHQ PP **PP** **06 04 20.3 +0.6**
comp=Z,7.0nm,0.9s,baz=357,slow=9.4,SNR=4.2
CBKS Cedar Bluff 118.98 39 P **PKiKP** **06 03 01.7 +0.5**
baz=306
PFVI Vila Bisbo 119.89 319 *e*PKPdf **PKPdf** **06 02 58.8 -4.1**
MATQ Matagami 121.20 17 P **PKiKP** **06 03 05.2 +0.1**
baz=333
TXAR Lajitas Array 121.23 51 PKP **PKiKP** **06 03 06.8 +0.8**
comp=Z,1.3nm,0.6s,baz=172,slow=0.3,SNR=6.7
TXAR PKKPbc **PKKPab** **06 13 10.3 +0.6**
comp=Z,0.8nm,0.8s,baz=120,slow=7.4,SNR=3.6
TORD Torodi Ar. Bea 121.29 289 PKP **PKPdf** **06 03 05.5 -0.6**
comp=Z,3.0nm,0.6s,baz=66,slow=1.8,SNR=21
TORD PKKPbc **PKKPab** **06 13 09.0 -0.2**
comp=Z,1.2nm,0.7s,baz=270,slow=3.2,SNR=4.1
D46A Sault St. Mari 121.42 23 P **PKiKP** **06 03 06.2 +0.5**
baz=325
D47A Chapleau 121.65 23 P **PKiKP** **06 03 06.6 +0.4**
baz=326
JFWS Jewell Farm 121.70 30 P **PKPdf** **06 03 05.7 -0.5**
baz=317
WMOK Wichita Mounta 121.97 43 P **PKPdf** **06 03 06.6 -0.4**
baz=305
CHGQ Chibougamau 121.97 15 P **PKPdf** **06 03 06.6 0.0**
baz=336
LSQQ Lebel-sur-Quev 122.02 17 P **PKPdf** **06 03 06.6 -0.1**
baz=333
D48A Paudash Townsh 122.04 22 P **PKPdf** **06 03 06.5 -0.3**
baz=327
E47A Iron Bridge 122.08 23 P **PKPdf** **06 03 06.7 -0.1**
baz=325
D49A Beulah Townshi 122.13 21 P **PKPdf** **06 03 06.6 -0.3**
baz=328
E48A Lockeyer 122.49 22 P **PKiKP** **06 03 07.8 -0.1**
baz=327
ABTX Abilene, Hawle 122.54 45 P **PKPdf** **06 03 07.9 -0.3**
baz=303
VLDQ Val d'Or 122.72 18 **PKPdf** **06 03 06.1 -1.9**
D50A G1974 Best Tow 122.75 20 P **PKPdf** **06 03 08.2 +0.1**
baz=329
F48A Evansville 122.86 23 P **PKPdf** **06 03 08.0 -0.4**
baz=326
G47A Hillman 122.90 25 P **PKPdf** **06 03 08.4 0.0**
baz=324
E50A Wahnapitae 123.07 22 P **PKiKP** **06 03 08.9 0.0**
baz=328
F49A Sandfield 123.14 23 P **PKiKP** **06 03 09.1 0.0**
baz=326
H47A Mio 123.21 25 P **PKiKP** **06 03 09.2 -0.1**
baz=324
E51A G1948 Merrick 123.42 21 P **PKiKP** **06 03 09.7 0.0**
baz=330
H48A Harrisville 123.50 24 P **PKiKP** **06 03 10.0 +0.2**
baz=325
D53A Lac Vacive, Po 123.55 19 P **PKiKP** **06 03 09.9 0.0**
baz=332
JCT Junction City 123.57 48 PKIKP **PKiKP** **06 03 10.7 +0.2**
JCT Junction City 123.57 48 P **PKiKP** **06 03 10.5 0.0**
baz=302
JCT Junction City 123.57 48 **PKiKP** **06 03 10.7 +0.2**
F51A Arnstein 123.79 21 P **PKiKP** **06 03 10.6 +0.2**
baz=329
D54A Lac Fusel, La 123.82 18 P **PKPdf** **06 03 10.2 0.0**
baz=333
R40A Maddies Statio 123.85 36 **PKPdf** **06 03 09.4 -1.0**
E52A Mattawa 123.93 20 P **PKPdf** **06 03 10.3 0.0**
baz=330
K46A Dorr 124.03 28 P **PKPdf** **06 03 10.6 0.0**
baz=321
J47A Sunmer 124.03 27 P **PKiKP** **06 03 10.8 -0.1**
baz=322
F52A Sundridge 124.12 21 P **PKiKP** **06 03 11.2 +0.1**
baz=330
E53A Dumoine, Ponti 124.18 19 P **PKiKP** **06 03 11.1 -0.1**
baz=332
E54A Lac Daplat, Po 124.29 19 P **PKPdf** **06 03 11.1 +0.1**
baz=332
D55A Sainte-Anne-du 124.30 17 P **PKiKP** **06 03 11.2 -0.1**
baz=334
K47A Vermontville 124.40 27 P **PKiKP** **06 03 11.7 0.0**
baz=322

ALGO	Algonquin Park baz=331	124.42	20	P		PKPdf	06 03 11.4	+0.1
J48A	Bridge Port baz=324	124.44	26	P		PKiKP	06 03 11.9	+0.1
D56A	ZEC Mazanza, M baz=335	124.48	17	P		PKiKP	06 03 11.8	0.0
CCM	Cathedral Cave	124.60	35	PKIKP		PKPdf	06 03 11.3	-0.6
CCM	Cathedral Cave baz=314	124.60	35	P		PKPdf	06 03 12.0	+0.1
CCM	Cathedral Cave	124.60	35			PKPdf	06 03 11.3	-0.6
E55A	Montcerf-Lytto baz=333	124.63	18	P		PKiKP	06 03 11.9	-0.1
J49A	Marlette baz=324	124.67	25	P		PKiKP	06 03 12.7	+0.5
K48A	Perry baz=323	124.69	26	P		PKiKP	06 03 12.9	+0.6
LATQ	La Tuque baz=338	124.71	15	P		PKiKP	06 03 12.2	+0.1
D57A	Chemin Vers le baz=336	124.75	16	P		PKiKP	06 03 12.2	-0.1
U40A	Yellville baz=311,SNR=8.8	124.79	38	P		PKPdf	06 03 12.4	+0.1
E56A	St. Veronique baz=335	124.86	17	P		PKiKP	06 03 12.6	+0.1
G54A	Lake Saint Pet baz=331	124.89	20	P		PKiKP	06 03 12.7	+0.1
H52A	Wyevale baz=328	124.90	22	P		PKiKP	06 03 12.6	0.0
G53A	Haliburton baz=330	124.95	21	P		PKPdf	06 03 12.4	+0.1
D58A	Chemin du LacG baz=337	124.95	15	P		PKiKP	06 03 12.9	+0.2
W39A	Magazine baz=310	124.96	39	P		PKPdf	06 03 12.5	-0.1
833A	Chaparral WMA, baz=301	124.99	50	P		PKiKP	06 03 13.7	+0.5
SFIN	Lafayette baz=319	125.17	30	P		PKPdf	06 03 12.7	-0.2
I51A	Listowel baz=327	125.17	23	P		PKiKP	06 03 13.4	+0.2
E57A	Chemin Saint G baz=336	125.23	17	P		PKiKP	06 03 13.6	+0.3
L48A	N Adams baz=322	125.23	27	P		PKiKP	06 03 13.3	-0.1
H53A	Bobcaygeon baz=330	125.44	21	P		PKPdf	06 03 13.2	-0.1
N47A	Urbana baz=321	125.47	29	P		PKPdf	06 03 13.2	-0.3
G55A	Calabogie baz=332	125.48	19	P		PKPdf	06 03 13.2	-0.1
MIAR	Mount Ida baz=309,SNR=6.7	125.51	40	P		PKiKP	06 03 14.8	+0.7
E58A	La Victoria baz=337	125.51	16	P		PKiKP	06 03 14.0	+0.3
D61A	St Aubert, Com baz=340	125.52	13	P		PKiKP	06 03 14.3	+0.6
ORIO	Orleans, Innes baz=334	125.69	18	P		PKiKP	06 03 14.2	0.0
N48A	Decatur baz=321	125.81	29	P		PKPdf	06 03 14.2	+0.1
M49A	Liberty Center baz=323	125.82	27	P		PKPdf	06 03 13.6	-0.5
D62A	Allapoint, All baz=342	125.88	12	P		PKiKP	06 03 14.3	-0.2
D62A	Allapoint, All	125.88	12			PKPdf	06 03 13.1	-1.0
H55A	Tweed baz=332	125.95	20	P		PKiKP	06 03 15.1	+0.4
E60A	Ste Agathe de baz=339	126.00	15	P		PKiKP	06 03 15.3	+0.6
I55A	Frankford baz=331	126.07	21	P		PKiKP	06 03 14.7	-0.2
D63A	Stockholm baz=343	126.12	12	P		PKPdf	06 03 14.6	+0.1
N49A	Columbus Grove baz=322	126.16	28	P		PKPdf	06 03 14.8	0.0
G57A	Newington baz=334	126.17	18	P		PKiKP	06 03 15.1	0.0
E61A	Lac Etchemin baz=340,SNR=8.5	126.17	14	P		PKiKP	06 03 15.5	+0.4
O48A	Farmland baz=321	126.22	29	P		PKPdf	06 03 14.6	-0.3
H56A	Elgin baz=333	126.22	19	P		PKiKP	06 03 15.3	+0.1
F60A	Warwick baz=338	126.24	15	P		PKiKP	06 03 15.2	-0.1
F61A	St Evariste baz=339	126.48	14	P		PKiKP	06 03 16.3	+0.5
E63A	Oxbow baz=342	126.64	12	P		PKiKP	06 03 15.9	-0.1
LONY	Lake Ozonia baz=335	126.73	18	P		PKiKP	06 03 16.6	+0.3
N50A	Nevada baz=323	126.75	27	P		PKiKP	06 03 16.7	+0.2
E64A	Bridgewater baz=343	126.77	12	P		PKiKP	06 03 16.6	+0.4
J55A	Hilton baz=330	126.85	21	P		PKiKP	06 03 16.7	+0.2
G60A	Masonville baz=337	126.94	16	P		PKiKP	06 03 17.3	+0.6
H59A	Cadyville baz=336	126.97	17	P		PKiKP	06 03 17.3	+0.5
N51A	Ashland baz=324	126.98	26	P		PKPdf	06 03 16.6	+0.2
P49A	Miami Univ. Ec baz=321	126.99	29	P		PKiKP	06 03 17.2	+0.3
I57A	Carthage baz=333,SNR=5.9	127.00	19	P		PKiKP	06 03 17.2	+0.3
ERPA	Erie baz=327	127.00	24	P		PKiKP	06 03 16.7	-0.2
L53A	Girard baz=327	127.03	24	P		PKiKP	06 03 16.9	-0.1
O50A	Cable baz=322	127.03	28	P		PKiKP	06 03 17.0	0.0
H58A	Gabriels baz=335,SNR=6.4	127.03	18	P		PKiKP	06 03 17.1	+0.2
L54A	Sinclairville baz=328,SNR=7.3	127.17	23	P		PKiKP	06 03 17.2	0.0
F63A	Nahmakanta, Br baz=341	127.18	13	P		PKiKP	06 03 17.2	0.0
F64A	Sherman baz=342	127.19	12	P		PKiKP	06 03 17.4	+0.2
WCI	Wyandotte Cave	127.19	32	PKIKP		PKPdf	06 03 16.8	0.0
WCI	Wyandotte Cave baz=319	127.19	32	P		PKiKP	06 03 17.2	-0.2
WCI	Wyandotte Cave	127.19	32			PKPdf	06 03 16.8	0.0
K55A	Perry baz=330	127.22	22	P		PKPdf	06 03 16.5	-0.3
ACSO	Alum Creek Sta baz=323	127.26	27	P		PKiKP	06 03 17.3	-0.2
G62A	West of Eustis baz=340	127.30	14	P		PKiKP	06 03 17.8	+0.4
H60A	Morristown baz=337	127.34	16	P		PKiKP	06 03 17.7	+0.2
J57A	Williamstown baz=332	127.36	20	P		PKiKP	06 03 17.8	+0.3
N52A	McGinn's Farm, baz=325	127.37	26	P		PKiKP	06 03 17.6	-0.1
P50A	Jamestown baz=322	127.37	29	P		PKPdf	06 03 17.3	+0.1
I58A	Old Forge baz=334	127.44	19	P		PKiKP	06 03 17.8	0.0
O51A	Pataskala baz=324,SNR=5.6	127.50	27	P		PKiKP	06 03 18.0	0.0
K56A	Middlesex baz=331	127.52	21	P		PKPdf	06 03 17.7	+0.3
L55A	Hinsdale baz=329,SNR=5.2	127.55	23	P		PKiKP	06 03 17.9	-0.2
PKME	Peaks-Kenny Pk baz=341	127.55	13	P		PKiKP	06 03 18.3	+0.4
H61A	Lyndonville baz=338,SNR=5.1	127.58	16	P		PKiKP	06 03 18.6	+0.6
G63A	Kingsbury baz=341	127.62	14	P		PKiKP	06 03 18.4	+0.3
J58A	Remsen baz=333,SNR=8.1	127.64	19	P		PKiKP	06 03 18.5	+0.3
M54A	Oil Creek Stat baz=328,SNR=7.9	127.64	24	P		PKiKP	06 03 18.3	+0.1
G64A	Maxfield baz=342	127.68	13	P		PKiKP	06 03 18.2	0.0
I59A	Olmsteadville baz=335	127.69	18	P		PKiKP	06 03 18.0	-0.2
N53A	Lisbon baz=326	127.74	25	P		PKiKP	06 03 18.3	-0.1
K57A	Scipio Center baz=332	127.78	21	P		PKiKP	06 03 18.3	-0.1
J59A	Piesco baz=334,SNR=9.1	127.80	19	P		PKiKP	06 03 18.5	0.0
J59A	Piesco	127.80	19			PKPdf	06 03 17.6	-0.4
I60A	Shoreham baz=336,SNR=7.9	127.82	17	P		PKiKP	06 03 18.9	+0.4
P51A	Williamsport baz=323	127.82	28	P		PKPdf	06 03 18.1	+0.1
LBNH	Lisbon baz=338	127.85	16	P		PKiKP	06 03 18.8	+0.3
O52A	Adamsville baz=324	127.87	27	P		PKiKP	06 03 18.6	-0.1
WVT	Waverly	127.89	34	PKIKP		PKPdf	06 03 18.4	+0.2
WVT	Waverly baz=316	127.89	34	P		PKiKP	06 03 19.1	+0.2
WVT	Waverly	127.89	34			PKPdf	06 03 18.4	+0.2
L56A	Greenwood baz=330	127.92	22	P		PKiKP	06 03 18.5	-0.3
H63A	New Sharon baz=340	127.94	14	P		PKiKP	06 03 19.2	+0.5
N54A	Moraine State baz=327	127.97	25	P		PKPdf	06 03 18.0	-0.3
G65A	Princeton baz=343	127.99	12	P		PKiKP	06 03 19.5	+0.8
M55A	Ridgway baz=329	128.03	23	P		PKiKP	06 03 19.1	+0.1
O53A	New Philadelph baz=325	128.04	26	P		PKPdf	06 03 18.6	+0.2
K58A	Earlville baz=333,SNR=5.5	128.05	20	P		PKiKP	06 03 19.2	+0.2
I61A	Orboro, Fairl baz=337	128.05	16	P		PKiKP	06 03 19.5	+0.6
P52A	Corning baz=324	128.13	27	P		PKPdf	06 03 18.8	+0.2
H64A	Troy baz=341	128.16	13	P		PKiKP	06 03 19.5	+0.4
M56A	Emporium baz=329,SNR=5.1	128.25	23	P		PKiKP	06 03 19.4	0.0
L57A	Andrews Acres baz=331,SNR=5.1	128.30	21	P		PKiKP	06 03 19.4	-0.2
K59A	Coopertown baz=334	128.30	19	P		PKiKP	06 03 19.8	+0.2
H65A	Eastbrook baz=342	128.32	13	P		PKiKP	06 03 19.8	+0.4
J60A	Lant Hill Farm baz=336	128.33	18	P		PKiKP	06 03 19.8	+0.3
I62A	Tamworth baz=338	128.35	16	P		PKiKP	06 03 19.9	+0.4
I63A	Otisfield baz=339	128.38	15	P		PKPdf	06 03 19.1	+0.2
BINY	Binghamton baz=332	128.43	20	P		PKiKP	06 03 19.9	+0.1
H66A	Whiting baz=343	128.43	12	P		PKPdf	06 03 19.0	0.0
O54A	Avella baz=326,SNR=5.9	128.46	25	P		PKiKP	06 03 19.7	-0.2
N55A	Marion Center baz=328	128.53	24	P		PKiKP	06 03 20.0	-0.1
P53A	Whipple baz=325,SNR=5.9	128.58	27	P		PKiKP	06 03 20.1	-0.1
Q52A	Bidwell baz=323	128.61	28	P		PKiKP	06 03 20.3	+0.1
L58A	Harry Jones Me baz=332	128.62	20	P		PKiKP	06 03 19.9	-0.2
N56A	West Decatur baz=329	128.69	23	P		PKiKP	06 03 20.2	-0.1
V48A	Smith Brothers	128.74	34			PKPdf	06 03 18.5	-1.4
K60A	Five Rivers En baz=335	128.75	18	P		PKiKP	06 03 20.9	+0.6
L59A	Walton baz=333	128.76	20	P		PKiKP	06 03 20.3	-0.2
M57A	Sunshine Farm, baz=330,SNR=5.5	128.77	22	P		PKiKP	06 03 20.5	0.0
J62A	Henniker baz=338	128.81	16	P		PKiKP	06 03 21.2	+0.7
T50A	Nancy	128.86	31			PKiKP	06 03 20.8	+0.1
O55A	Ligonier baz=327	128.88	25	P		PKiKP	06 03 20.4	-0.4
P54A	Burton baz=326,SNR=5.4	128.89	26	P		PKiKP	06 03 20.6	-0.2
K61A	Williamstown baz=336	128.90	18	P		PKiKP	06 03 21.2	+0.5
M58A	Price's Panora baz=331	128.99	21	P		PKPdf	06 03 19.8	-0.5
Q53A	Leroy baz=324	129.03	27	P		PKPdf	06 03 20.5	+0.2
SSPA	Standing Stone	129.09	23			PKiKP	06 03 21.1	0.0
DBIC	Dimbokro comp=Z,2.9nm,0.7s,baz=91,slow=1.9,SNR=3.7	129.12	283	PKP		PKiKP	06 03 22.0	+0.1
MCWV	Mont Chateau baz=326	129.12	25	P		PKiKP	06 03 21.4	+0.2
N57A	Milroy baz=330,SNR=5.8	129.12	23	P		PKiKP	06 03 21.3	+0.1
O56A	Blue Knob Stat baz=328	129.13	24	P		PKiKP	06 03 21.4	+0.1
M59A	Waymart baz=327	129.21	20	P		PKiKP	06 03 21.4	0.0
K62A	Royalston baz=337	129.21	17	P		PKPdf	06 03 20.4	-0.2
L60A	Shokan baz=334	129.21	19	P		PKPdf	06 03 20.0	-0.6
Q54A	Coxs Mills baz=325,SNR=8.1	129.24	27	P		PKiKP	06 03 21.3	-0.2
P55A	Reedsville baz=326	129.25	25	P		PKiKP	06 03 21.4	-0.1
R53A	Hurricane baz=324	129.26	28	P		PKiKP	06 03 21.5	0.0
L61B	Northampton baz=336	129.28	18	P		PKiKP	06 03 21.5	+0.1
N58A	Sunbury baz=331	129.36	22	P		PKiKP	06 03 21.6	-0.1
K63A	Dunstable baz=338	129.39	16	P		PKiKP	06 03 22.1	+0.4
HRV	Adam Dziewonsk baz=336	129.55	16	P		PKiKP	06 03 22.4	+0.4
O57A	Amberson baz=329	129.55	23	P		PKiKP	06 03 22.2	+0.1
Q55A	Buckhannon baz=326,SNR=7.3	129.57	26	P		PKiKP	06 03 22.1	-0.1
N59A	State Game Lan baz=332	129.64	21	P		PKiKP	06 03 22.3	0.0
P56A	Dayton Farm, R baz=328	129.67	25	P		PKiKP	06 03 22.5	+0.1
M60A	Port Jervis baz=333	129.67	20	P		PKiKP	06 03 22.7	+0.4
R54A	Victor baz=324	129.83	27	P		PKiKP	06 03 22.6	-0.1
O58A	Lewisberry baz=330	129.91	23	P		PKiKP	06 03 22.6	-0.2
N60A	Cedar Hill Far baz=333	129.92	21	P		PKiKP	06 03 22.9	+0.1
M61A	Granite Spring baz=334	129.97	19	P		PKiKP	06 03 23.0	+0.1
S54A	Dingess, Beckl baz=324	129.99	28	P		PKiKP	06 03 22.9	-0.2
O59A	Robesonia baz=331	130.02	22	P		PKiKP	06 03 23.0	0.0
P57A	Homestead Farm baz=329	130.03	24	P		PKiKP	06 03 23.1	0.0
T53A	Wise baz=322	130.05	30	P		PKiKP	06 03 23.2	-0.1
L63A	North Scituate baz=337	130.13	17	P		PKiKP	06 03 23.6	+0.4
M62A	Hamden baz=336	130.13	18	P		PKiKP	06 03 23.4	+0.3
R55A	Marlinton baz=326	130.14	27	P		PKiKP	06 03 23.0	-0.4
PAL	Palisades baz=334	130.20	19	P		PKiKP	06 03 23.4	+0.1
Q57A	Strasburg baz=328	130.24	25	P		PKiKP	06 03 23.7	+0.2
L64A	Middleborough baz=338	130.28	16	P		PKiKP	06 03 24.2	+0.8
N61A	South Mountain baz=334	130.30	20	P		PKiKP	06 03 24.3	+0.8
O60A	Telford baz=332	130.30	21	P		PKiKP	06 03 23.5	0.0
P58A	Pank, Wackersv baz=329	130.31	23	P		PKiKP	06 03 23.6	+0.1
S55A	Lewisburg baz=325	130.38	27	P		PKiKP	06 03 23.5	-0.4
T54A	Tazewell baz=323	130.46	29	P		PKiKP	06 03 23.7	-0.4
M64A	Tiverton baz=338	130.53	17	P		PKiKP	06 03 24.5	+0.5
Q58A	Fox Den Farm, baz=329	130.62	24	P		PKiKP	06 03 24.5	+0.3
P60A	Greenville baz=332	130.66	22	P		PKiKP	06 03 24.2	-0.1
T55A	Pulaski baz=324	130.78	28	P		PKiKP	06 03 24.8	+0.1
R57A	Stanardsville baz=328	130.82	25	P		PKiKP	06 03 24.9	+0.2
BLA	Blacksburg baz=325	130.88	28	P		PKiKP	06 03 25.0	+0.1
R58A	Rapidan baz=328	131.04	25	P		PKiKP	06 03 24.7	-0.4
Z50A	Ashland baz=316	131.05	36	P		PKPdf	06 03 24.1	-0.3
S57A	Dark Hollow, R baz=327	131.08	26	P		PKiKP	06 03 25.1	-0.1
Q59A	Harwood baz=330	131.10	23	P		PKPdf	06 03 24.3	0.0
U55A	TA2, Sparta baz=324	131.16	29	P		PKPdf	06 03 24.9	+0.3
T56A	Rocky Mt baz=325	131.21	27	P		PKiKP	06 03 25.2	-0.3
V54A	Nebo baz=322	131.29	30	P		PKiKP	06 03 25.4	-0.3
R58B	Mineral baz=328	131.37	25	P		PKiKP	06 03 25.8	0.0
CBN	Corbin Frederi baz=329	131.38	24	P		PKiKP	06 03 26.0	+0.2
V55A	Taylorsville baz=323	131.59	29	P		PKiKP	06 03 26.1	-0.2
S58A	Poland Farm, P baz=328	131.60	25	P		PKiKP	06 03 26.6	+0.3
S58A	Poland Farm, P	131.60	25			PKiKP	06 03 25.9	-0.3
U56A	King baz=324	131.60	28	P		PKiKP	06 03 26.3	0.0
Y52A	Lilburn baz=319	131.65	34	P		PKiKP	06 03 26.8	+0.3
W54A	Cherokee Point baz=322	131.71	31	P		PKiKP	06 03 26.5	0.0
S59A	Mechanicsville baz=329	131.79	24	P		PKiKP	06 03 27.1	+0.5
T58A	Grand View Acr baz=327	131.95	26	P		PKiKP	06 03 26.9	0.0
V56A	Mocksville baz=324	131.98	29	P		PKiKP	06 03 26.9	-0.2
U57A	Blanch baz=326	132.01	27	P		PKiKP	06 03 26.9	-0.2
S60A	Water View baz=329	132.10	24	P		PKiKP	06 03 27.3	+0.1
KMSC	Kings Mountain baz=323	132.10	30	P		PKPdf	06 03 26.7	+0.5
V57A	Coltrane Farms baz=325	132.26	28	P		PKiKP	06 03 27.3	-0.3
GOGA	Godfrey baz=319	132.32	33	P		PKiKP	06 03 27.8	-0.1
T59A	Double "B" Far baz=328	132.35	25	P		PKiKP	06 03 27.4	-0.4
U58A	Oxford baz=326	132.40	27	P		PKiKP	06 03 27.7	-0.2
W56A	Indian Trail baz=323	132.48	29	P		PKPdf	06 03 27.1	+0.1
X55A	Gracelyn & Ava baz=322	132.48	31	P		PKiKP	06 03 28.1	0.0
T60A	Surry baz=329	132.55	24	P		PKiKP	06 03 28.4	+0.3
V58A	Windy Hill, Pi baz=326	132.64	28	P		PKiKP	06 03 28.7	+0.3
W57A	Gilead baz=324	132.75	29	P		PKiKP	06 03 28.9	+0.3
X56A	White Oak baz=323	132.77	30	P		PKiKP	06 03 28.6	-0.1
Y55A	Saluda baz=321	132.78	32	P		PKiKP	06 03 28.9	+0.1
U60A	Pendleton baz=328	132.94	25	P		PKiKP	06 03 29.2	+0.3
V59A	Middlesex baz=327	133.06	27	P		PKiKP	06 03 29.4	+0.1
W58A	Raeford baz=325	133.22	28	P		PKiKP	06 03 29.8	+0.2
U61A	Possum Corner baz=329	133.36	25	P		PKiKP	06 03 30.7	+0.9
V60A	Jim Taylor Roa baz=328	133.49	26	P		PKiKP	06 03 30.5	+0.4
V61A	Roper baz=329	133.76	25	P		PKiKP	06 03 30.9	+0.2
Z57A	Bowman baz=322	133.88	31	P		PKiKP	06 03 31.1	+0.1
X59A	McDuffie Farm, baz=326	133.88	28	P		PKiKP	06 03 30.7	-0.2
W60A	Pink Hill baz=327	133.89	27	P		PKiKP	06 03 30.9	0.0
X60A	Albert Glenn T baz=326	134.17	27	P		PKiKP	06 03 31.7	+0.2
PLCA	Paso Flores comp=Z,3.6nm,0.8s,baz=224,slow=2.9,SNR=9.6	142.19	160	PKhKP		PKPpre	06 03 41.5	
ACON	Acoyapa	144.68	60			PKPdf	06 03 49.6	-0.1
JTS	Las Juntas de	145.63	63	PKP2		PKPab	06 03 52.3	-0.1
JTS	Las Juntas de	145.63	63			PKPab	06 03 52.3	-0.1
PEL	Peldehue	148.72	153	PKP2		PKPbc	06 04 00.6	+0.5
PEL	Peldehue	148.72	153			PKPbc	06 04 00.6	+0.5
SDDR	Presa de Saban	150.35	34			PKiKP	06 04 04.9	-0.3
SDDR						PKPab	06 04 10.4	-0.6
ACAN	Cantantal	150.94	157	*i* P		PKiKP	06 04 06.3	+0.2
CFA	Coronel Fontan	151.10	155	*i* P		PKiKP	06 04 06.6	+0.2
GO04	Tololo Observa	151.11	149			PKPbc	06 04 06.2	0.0
DR12	Loma Pena Alta	151.53	31	PKPdf		PKPdf	06 04 00.3	-0.6
DR12						PKPbc	06 04 06.8	-0.4
TCA	Tanti	152.72	161	*i* P		PKiKP	06 04 10.7	+0.9
MTP	Monte Pirata	153.91	25			PKiKP	06 04 12.9	+0.4
ROSC	El Rosal comp=Z,3.0nm,0.4s,baz=320,slow=18,SNR=2.6	157.48	63	PKP		PKPdf	06 04 10.7	+0.9
ROSC	El Rosal	157.48	63			PKPdf	06 04 10.3	+0.5
RUSC	La Rusia	158.04	59	PKPdf		PKPdf	06 04 10.2	-0.4
RUSC						pPKPdf	06 04 45.8	-0.7
CPUP	Villa Florida comp=Z,1.3nm,0.7s,baz=194,slow=4.7,SNR=3.4	159.26	172	PKP		PKPdf	06 04 12.7	+1.6
CPUP				PKPab		PKPab	06 04 49.2	+0.5
CPUP	Villa Florida comp=Z,6.1nm,0.8s,baz=173,slow=4.5,SNR=8.6	159.26	172	PKiKP		PKPdf	06 04 11.8	+0.8
CPUP							06 04 48.1	
CPUP	Villa Florida	159.26	172			PKPdf	06 04 11.8	+0.8
CPUP						PKPab	06 04 48.1	-0.6
LPAZ	La Paz comp=Z,4.3nm,0.8s,baz=157,slow=2.8,SNR=2.2	162.85	129	PKPab		PKPab	06 05 08.6	+3.0
BDFB	Brasilia comp=Z,2.2nm,0.8s,baz=179,slow=3.1,SNR=4.2	168.31	212	PKP		PKPdf	06 04 20.4	+0.7
BDFB				PKPab		PKPab	06 05 28.1	-0.7
BDFB	Brasilia comp=Z,5.8nm,0.9s,baz=108,slow=7.6,SNR=4.5	168.31	212			PKPdf	06 04 19.0	-0.7
BDFB						PKPab	06 05 27.4	-1.4

IDC ***09*** *05:47:36.8±0.9, 60°.08S×47°.28W, h0km, mb4.1/6, mb1 4.1/6, mb1mx3.9/19, mbtmp4.1/6, MS3.4/2, Ms1 3.4/2, ms1mx3.0/22, Error ellipse: s-maj=44.6km s-min=20.3km az=70.0*

NEIC ***09*** *05:47:38.5±2.0, 60°.1S±0°.1×47°.0W±0°.3, h10km±1km, mb4.4/10, Error ellipse: s-maj=24.4km s-min=18.4km az=264.0*

ISC 09 05:47:38.7±0.7, 60°.1S±0°.1×47°.1W±0°.1, h10km, n26, σ1°54/22, mb4.2/8, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HOPE	Hope Point	8.19	49	Pn	Pn	Pn	05 49 36.1	-1.4
PMSA	Palmer Station comp=Z,302nm,18.3s,baz=65,slow=37	9.13	232	LR	LR	LR	05 53 13.2	
SNAA	Sanae 9.4nm,0.9s,baz=283,slow=9.4,SNR=17	20.86	142	P	P	P	05 52 20.8	+0.5
SNAA				LR	LR	LR	05 59 48.0	
SNAA	Sanae comp=Z,81nm,19.4s,baz=21,slow=35	20.86	142	P	P	P	05 52 21.2	+0.8
SNAA				IAmb	IAmb	IAmb	05 52 32.9	
PLCA	Paso Flores comp=Z,15nm,1.1s	24.23	313	P	P	P	05 52 53.7	-1.9
PLCA	Paso Flores comp=Z,2.3nm,1.0s,baz=135,slow=10.0,SNR=2.9	24.23	313	P	P	P	05 52 54.9	-0.7
PLCA				IAmb	IAmb	IAmb	05 53 03.2	
QSPA	South Pole Qui comp=Z,8.3nm,1.2s	30.14	180	P	P	P	05 53 48.5	0.0
QSPA	South Pole Qui comp=Z,5.5nm,0.9s,baz=166,slow=8.5,SNR=11	30.14	180	P	P	P	05 53 45.4	-3.0
QSPA				IAmb	IAmb	IAmb	05 53 51.9	
CPUP	Villa Florida comp=Z,6.6nm,0.9s	34.48	344	P	P	P	05 54 28.5	+1.9
AC02	Maricunga comp=Z,2.1nm,0.8s,baz=191,slow=4.7,SNR=3.8	36.52	326	P	P	P	05 54 45.0	+0.3
GO02	Mina Guanaco comp=Z,5.7nm,0.8s	38.23	326	P	P	P	05 54 58.8	-0.2
GO02				IAmb	IAmb	IAmb	05 55 04.6	
MAW	Mawson	42.80	148	P	P	P	05 55 36.6	+0.7
MNMC	Minye Minye	43.97	329	P	P	P	05 55 46.8	+0.5
BDFB	Brasilia	44.39	359	P	P	P	05 55 48.4	-1.0

comp=Z,0.8nm,0.4s,baz=191,slow=16,SNR=1.8
BDFB Brasilia 44.39 359 P **P** 05 55 48.9 -0.5
BDFB IAmb IAmb 05 55 55.8
comp=Z,4.2nm,0.9s
SIV San Ignacio 45.20 341 P **P** **05 55 55.5 -0.2**
comp=Z,1.4nm,0.8s,baz=161,slow=7.7,SNR=13
SAML Samuel 52.45 340 P **P** **05 56 50.8 -0.6**
SAML IAmb IAmb 05 56 57.3
comp=Z,4.8nm,0.7s
H10N3 ASCENSION HYDR 57.62 39 T T 07 00 33.0
baz=200,slow=74
H10N1 ASCENSION HYDR 57.62 39 T T 07 00 32.5
baz=200
H10N2 ASCENSION HYDR 57.64 39 T T 07 00 32.9
baz=200,slow=74
PTGA Pitinga 60.04 345 P **P** **05 57 46.1 +0.6**
TORD Torodi Ar. Bea 82.77 48 P **P** **06 00 03.1 +0.5**
comp=Z,2.1nm,0.8s,baz=214,slow=5.2,SNR=7.1
SCHQ Schefferville 115.66 347 PKP **PKiKP** **06 06 21.1 +1.4**
comp=Z,3.0nm,0.6s,baz=313,slow=2.1,SNR=5.0
SCHQ Schefferville 115.66 347 **PKiKP** **06 06 23.7 +4.0**
ILAR Eielson Array 144.92 313 PKP **PKPab** **06 07 11.7 -1.9**
comp=Z,2.0nm,1.0s,baz=123,slow=3.3,SNR=2.8
MKAR Makanchi Array 147.92 91 PKPbc **PKPdf** **06 07 20.1 +0.1**
comp=Z,1.3nm,0.8s,baz=251,slow=4.0,SNR=4.0

*AEIC **09** 06:02:07.2±2.0, 67.67N±0.05×162.2W±0.1, h10km±5km, ML3.6, mb4.1/8(NEIC), Error ellipse: s-maj=8.0km s-min=5.7km az=180.0*
*IDC **09** 06:02:08.7±1.3, 68.01N×162.08W, h0km, mb3.7/7, mb1 4.1/9, mb1mx3.7/47, mbtmp3.8/9, ML3.7/2, MS3.7/2, Ms1 3.7/2, ms1mx2.9/46, Error ellipse: s-maj=21.8km s-min=18.7km az=87.0*
*NEIC **09** 06:02:08.9±1.9, 67.67N±0.07×162.4W±0.2, h13km±5km, Error ellipse: s-maj=11.8km s-min=6.9km az=150.0*
ISC 09 06:02:08.3±0.7, 67.70N±0.05×162.27W±0.05, h10km, n80, σ1s74/88, mb3.9/10, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.43**	**327**		**Pg**	**06 02 16.9**	**+0.2**
RDOG				Sg	**Sg**	**06 02 23.6**	**+1.1**
ANM	**Nome**	**3.39**	**203**		**Pn**	**06 03 00.1**	**-1.0**
ANM				Sn	**Sn**	**06 03 39.2**	**-2.2**
IM03		**3.78**	**113**		**Pn**	**06 03 06.7**	**+0.2**
IM03					**Sn**	**06 03 52.6**	**+1.6**
PS05	**TAPS Pump Stn5**	**4.59**	**96**		**Pn**	**06 03 18.0**	**+0.3**
COLD	**Coldfoot**	**4.67**	**90**		**Pn**	**06 03 20.6**	**+1.9**
TOLK	**Toolik Lake Re**	**4.83**	**73**	P	**Pn**	**06 03 23.5**	**+2.4**
	baz=264						
TOLK				S	**Sn**	**06 04 18.2**	**+1.2**
	baz=264						
TOLK	**Toolik Lake Re**	**4.83**	**73**		**Pn**	**06 03 23.4**	**+2.3**
TOLK				Sn	**Sn**	**06 04 17.7**	**+0.7**
MLY	**Manley**	**5.36**	**115**		**Pn**	**06 03 27.9**	**-0.3**
TTA	**Tatalina**	**5.46**	**148**		**Pn**	**06 03 29.1**	**-0.5**
TT01	**Tatalina**	**5.48**	**148**		**Pn**	**06 03 30.1**	**+0.2**
GAMB	**Gambell**	**5.53**	**229**		**Pn**	**06 03 30.3**	**-0.2**
PS01	**TAPS Pump Stn**	**5.54**	**56**		**Pn**	**06 03 31.8**	**+1.1**
CHUM	**Lake Minchumin**	**5.61**	**128**		**Pn**	**06 03 31.9**	**+0.3**
BPAW	**Bear Paw Mtn.**	**5.86**	**123**		**Pn**	**06 03 35.8**	**+0.7**
PS07	**TAPS Pump Stn7**	**6.08**	**107**		**Pn**	**06 03 38.8**	**+0.6**
NEA	**Nenana**	**6.20**	**114**		**Pn**	**06 03 40.3**	**+0.6**
KTH	**Kantishna Hill**	**6.27**	**126**		**Pn**	**06 03 41.3**	**+0.5**
MDM	**Murphy Dome**	**6.28**	**109**		**Pn**	**06 03 41.9**	**+1.0**
BWN	**Browne**	**6.32**	**118**		**Pn**	**06 03 41.7**	**+0.4**
PPLA	**Purkeypile**	**6.40**	**134**		**Pn**	**06 03 43.6**	**+0.9**
TCOL	**CIGO, UAF Yank**	**6.46**	**109**	P	**Pn**	**06 03 44.7**	**+1.4**
	baz=302						
COLA	**College**	**6.47**	**109**		**Pn**	**06 03 44.8**	**+1.4**
POKR	**Poker Plat Res**	**6.49**	**107**	P	**Pn**	**06 03 44.8**	**+1.0**
	baz=300						
POKR				S	**Sn**	**06 04 58.7**	**+1.0**
	baz=300						
POKR	**Poker Plat Res**	**6.49**	**107**		**Pn**	**06 03 44.4**	**+0.6**
TRF	**Thorofare Moun**	**6.54**	**125**		**Pn**	**06 03 45.4**	**+0.8**
CCB	**Clear Creek Bu**	**6.61**	**111**		**Pn**	**06 03 46.2**	**+0.9**
WRH	**Wood River Hil**	**6.61**	**113**		**Pn**	**06 03 45.4**	**0.0**
FYU	**Fort Yukon**	**6.74**	**92**		**Pn**	**06 03 47.3**	**+0.2**
BM03	**Burnt Mountain**	**6.77**	**84**		**Pn**	**06 03 47.8**	**+0.3**
MCK	**McKinley**	**6.78**	**120**		**Pn**	**06 03 47.8**	**+0.1**
IL31		**6.87**	**108**		**Pn**	**06 03 49.8**	**+0.9**
ILAR	**Eielson Array**	**6.87**	**108**	Pn	**Pn**	**06 03 49.8**	**+0.9**
	13nm,0.3s,baz=302,slow=14,SNR=438						
ILAR				Sn	**Sn**	**06 05 06.2**	**-0.9**
	1.4nm,0.3s,baz=296,slow=24,SNR=9.1						
PRP	**Porcupine Dome**	**7.01**	**100**		**Pn**	**06 03 50.5**	**-0.5**
RND	**Reindeer**	**7.03**	**121**		**Pn**	**06 03 51.0**	**-0.2**
HDA	**Harding Lake**	**7.05**	**111**	P	**Pn**	**06 03 52.1**	**+0.7**
	baz=305						
HDA	**Harding Lake**	**7.05**	**111**		**Pn**	**06 03 51.2**	**-0.2**
SVW2	**Sparrevohn**	**7.23**	**153**		**Pn**	**06 03 54.2**	**+0.3**
STLK	**Strandline Lak**	**7.66**	**139**		**Pn**	**06 04 00.5**	**+0.7**
DHY	**Denali Highway**	**7.75**	**120**		**Pn**	**06 04 01.9**	**+0.8**
GHO	**Glory Hole Cre**	**8.23**	**130**		**Pn**	**06 04 08.8**	**+1.2**
DFR	**Drift River**	**8.26**	**145**		**Pn**	**06 04 08.6**	**+0.5**
PMR	**Palmer**	**8.31**	**131**		**Pn**	**06 04 09.5**	**+0.8**
RSO	**Redoubt South**	**8.36**	**146**	Pn	**Pn**	**06 04 07.0**	**-2.6**
SML	**Sawmill**	**8.38**	**128**		**Pn**	**06 04 09.8**	**+0.2**
DOT	**Dot Lake**	**8.53**	**110**		**Pn**	**06 04 12.2**	**+0.6**
RC01	**Rabbit Creek A**	**8.55**	**135**	Pn	**Pn**	**06 04 15.2**	**+3.2**
KNK	**Knik Glacier**	**8.65**	**130**	Pn	**Pn**	**06 04 14.5**	**+1.2**
SCM	**Sheep Creek Mo**	**8.66**	**126**	Pn	**Pn**	**06 04 15.1**	**+1.5**
EGAK	**Eagle**	**8.99**	**99**		**Pn**	**06 04 17.8**	**-0.2**
MENT	**Mentasta**	**9.09**	**113**		**Pn**	**06 04 21.0**	**+1.7**
GLI	**Glacier Island**	**9.47**	**129**		**Pn**	**06 04 26.6**	**+2.0**
CNPM	**China Poot**	**9.54**	**144**	Pn	**Pn**	**06 04 28.5**	**+2.9**
BC03		**9.70**	**109**		**Pn**	**06 04 27.4**	**-0.2**
FID	**Port Fidalgo**	**9.76**	**128**	Pn	**Pn**	**06 04 30.7**	**+2.1**
DAWY	**Dawson**	**10.01**	**100**	Pn	**Pn**	**06 04 32.4**	**+0.4**
EPYK	**Eagle Plains**	**10.04**	**86**	P	**Pn**	**06 04 33.6**	**+1.2**
	baz=289						
EPYK	**Eagle Plains**	**10.04**	**86**		**Pn**	**06 04 33.2**	**+0.8**
INK	**Inuvik**	**10.75**	**73**	Pn	**Pn**	**06 04 40.8**	**-1.2**
	0.6nm,0.3s,baz=294,slow=9.3,SNR=30						
INK				Sn	**Sn**	**06 06 33.6**	**-8.6**
	0.3nm,0.3s,baz=302,slow=17,SNR=3.4						
INK	**Inuvik**	**10.75**	**73**		**Pn**	**06 04 42.1**	**+0.1**
KDAK	**Kodiak Island**	**10.88**	**151**	Pn	**Pn**	**06 04 45.6**	**+1.9**
	0.2nm,0.3s,baz=335,slow=9.0,SNR=2.3						
TGL	**Tana Glacier**	**10.91**	**120**	Pn	**Pn**	**06 04 45.9**	**+1.5**
A36M	**Sachs Harbour**	**13.29**	**55**	P	**Pn**	**06 05 15.9**	**-0.8**
	baz=269						
WHY	**Whitehorse**	**13.75**	**108**	Pn	**Pn**	**06 05 25.3**	**+2.2**
DLBC	**Dease Lake**	**17.08**	**107**	P	**P**	**06 06 09.2**	**+0.6**
YKA	**Yellowknife Ar**	**20.29**	**82**	P	**P**	**06 06 44.5**	**+0.8**
	1.6nm,0.5s,baz=301,slow=9.9,SNR=17						
YKA				S	**S**	**06 10 22.9**	**-7.9**
	0.1nm,0.6s,baz=131,slow=12,SNR=3.0						
RES	**Resolute Bay**	**21.55**	**42**	P	**P**	**06 06 56.5**	**-0.7**
	2.9nm,0.9s,baz=309,slow=19,SNR=1.9						
RES				S	**S**	**06 10 54.1**	**-1.5**
	1.3nm,0.7s,baz=339,slow=14,SNR=1.2						
RES	**Resolute Bay**	**21.55**	**42**	P	**P**	**06 06 57.4**	**+0.2**
NEW	**Newport**	**29.83**	**108**	LR	LR	06 20 21.1	
	comp=Z,55nm,18.6s,baz=219,slow=37						
PAHR	**Pah Rah Range**	**36.50**	**118**	P	**P**	**06 09 11.9**	**-1.6**
PDAR	**Pinedale Array**	**37.29**	**105**	P	**P**	**06 09 22.0**	**+1.7**
	0.6nm,0.6s,baz=329,slow=9.2,SNR=6.3						
NVAR	**Mina Array Bea**	**38.01**	**118**	P	**P**	**06 09 28.2**	**+1.8**
	1.3nm,0.7s,baz=324,slow=7.4,SNR=7.6						
PV22	**Blue Mesa, Par**	**41.27**	**107**	P		**06 09 54.4**	**+0.8**
PV22				IAmb	IAmb	06 09 55.8	
	comp=Z,2.5nm,0.6s						
PV01	**Paradox Valley**	**41.71**	**107**	P	**P**	**06 09 58.6**	**+1.5**
PV01				IAmb	IAmb	06 09 59.7	
	comp=Z,3.3nm,0.9s						
TX31	**Lajitas Ar. Si**	**51.38**	**107**	P	**P**	**06 11 13.3**	**+0.3**
TX32	**Lajitas Array**	**51.38**	**107**	P	**P**	**06 11 13.7**	**+0.7**
TX32				IAmb	IAmb	06 11 15.4	
	comp=Z,2.5nm,0.8s						
TXAR	**Lajitas Array**	**51.38**	**107**	P	**P**	**06 11 14.5**	**+1.5**
	comp=Z,1.9nm,0.7s,baz=336,slow=5.6,SNR=14						
FPAL	**Fort Paine**	**53.53**	**87**	P	**P**	**06 11 29.6**	**+0.8**
FPAL				IAmb	IAmb	06 11 40.4	
	comp=Z,2.4nm,0.9s						
MKAR	**Makanchi Array**	**56.02**	**312**	P	**P**	**06 11 47.9**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=44,slow=9.3,SNR=3.8						
AKASG	**Malin Array Be**	**61.61**	**352**	P	**P**	**06 12 24.6**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=5.1,slow=6.7,SNR=2.2						
TORD	**Torodi Ar. Bea**	**98.54**	**16**	LR	LR	07 00 52.4	
	comp=Z,70nm,20.1s,baz=130,slow=36						

*UPA **09** 06:04:57.9±0.8, 7.31N×78.04W, h10km±10km, MW3.9*
*RSNC **09** 06:04:58.7±1.0, 7.31N×78.03W, h15km±3km, ML2.6*
ISC 09 06:04:56.8±1.7, 7.30N±0.04×78.03W±0.03, h12km±13km, n21, σ1s26/41, 1D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTAC	**Punta Ardita,**	**0.27**	**124**	*iP*	**Pb**	**06 05 04.3**	**+0.6**
PTAC				*eS*	**Sb**	**06 05 08.2**	**-0.1**
PTAC	**Punta Ardita,**	**0.27**	**124**	*eP*	**Pb**	**06 05 04.3**	**+0.6**
PTAC				*eS*	**Sb**	**06 05 08.1**	**-0.2**
UPD2	**Meteti**	**1.24**	**1**	*eP*	**Pg**	**06 05 20.4**	**-0.2**
UPD2				*eS*	**Sn**	**06 05 37.0**	**+0.4**
UPD2	**Meteti**	**1.24**	**1**	*eP*	**Pg**	**06 05 20.5**	**-0.2**
UPD2				*eS*	**Sn**	**06 05 36.6**	**0.0**
CAPC	**Capurgana**	**1.49**	**27**	*eP*	**Pn**	**06 05 23.2**	**-0.2**
CAPC				*eS*	**Sb**	**06 05 42.9**	**-0.4**
CAPC				*i*		06 05 46.5	
	comp=Z,98nm,0.2s						
CAP2	**Capurgana**	**1.50**	**26**	*eP*	**Pn**	**06 05 23.4**	**-0.1**
CAP2				*eS*	**Sn**	**06 05 42.3**	**-0.7**
DBBC	**Dabeiba**	**1.83**	**99**	*eP*	**Pb**	**06 05 29.1**	**-1.3**
DBBC				*eS*	**Sn**	**06 05 49.2**	**-2.2**
CHPO	**Chepo, Panama**	**2.14**	**330**	*eP*	**Pn**	**06 05 32.7**	**+0.2**
CHPO				*eS*	**Sn**	**06 05 60.0**	**+1.0**
UPA	**Univ. de Panam**	**2.23**	**318**	*eP*	**Pn**	**06 05 33.4**	**-0.3**
UPA				*eS*	**Sn**	**06 06 01.9**	**+0.6**
UPA	**Univ. de Panam**	**2.23**	**318**	*eP*	**Pn**	**06 05 34.3**	**+0.6**
UPA				*eS*	**Sn**	**06 06 02.2**	**+1.0**
AZU	**Azuero**	**2.27**	**283**	*eP*	**Pn**	**06 05 34.6**	**+0.4**
AZU				*eS*	**Sn**	**06 05 59.4**	**-2.8**
AZU	**Azuero**	**2.27**	**283**	*eP*	**Pn**	**06 05 34.4**	**+0.2**
AZU				*eS*	**Sn**	**06 05 59.7**	**-2.5**
CHOR3	**La Chorrera**	**2.34**	**313**	*eP*	**Pn**	**06 05 35.3**	**+0.2**
CHOR3				*eS*	**Sn**	**06 06 05.3**	**+1.6**
VTON	**El Valle, Cocl**	**2.44**	**302**	*eP*	**Pn**	**06 05 37.2**	**+0.7**
CBOC	**Ciudad Bolivar**	**2.46**	**125**	*eP*	**Pn**	**06 05 37.2**	**+0.2**
CBOC				*eS*	**Sn**	**06 06 07.6**	**+0.4**
CBOC				*i*		06 06 16.1	
	comp=Z,14nm,0.4s						
UREC	**San Jos de Ur**	**2.52**	**80**	*eP*	**Pn**	**06 05 38.5**	**+0.8**
UREC				*eS*	**Sn**	**06 06 08.9**	**+0.6**
UREC				*i*		06 06 23.6	
	comp=Z,28nm,0.7s						
BCIP	**Isla Barro Col**	**2.57**	**316**	*eP*	**Pn**	**06 05 38.0**	**-0.4**
BCIP				*eS*	**Sn**	**06 06 11.1**	**+1.4**
HELC	**Santa Helena**	**2.72**	**114**	*eP*	**Pn**	**06 05 41.7**	**+1.0**
HELC				*eS*	**Sn**	**06 06 15.0**	**+1.2**
HELC	**Santa Helena**	**2.72**	**114**	*eP*	**Pn**	**06 05 42.2**	**+1.5**
HELC				*eS*	**Sn**	**06 06 10.3**	**-3.4**
ZARC	**Zaragoza, Cauc**	**3.15**	**86**	*eP*	**Pn**	**06 05 48.2**	**+1.8**
ZARC				*eS*	**Sn**	**06 06 23.6**	**-0.4**
ZARC				*i*		06 06 28.0	
	comp=Z,30nm,0.4s						
GMAL	**Guarumal, Vera**	**3.21**	**278**	*eP*	**Pn**	**06 05 49.2**	**+2.2**
GMAL				*eS*	**Sn**	**06 06 23.7**	**-1.5**

*IDC **09** 06:16:34.4±1.1, 6.79S×147.30E, h0km, mb3.9/9, mb1 4.1/12, mb1mx3.9/41, mbtmp4.0/12, ML3.5/2, MS3.4/2, Ms1 3.4/2, ms1mx2.7/36, Error ellipse: s-maj=34.7km s-min=16.8km az=96.0*
*NEIC **09** 06:16:40.7±1.8, 6.85S±0.08×147.1E±0.1, h41km±2km, mb4.1/14, Error ellipse: s-maj=17.7km s-min=10.2km az=72.0*
ISC 09 06:16:39.7±0.7, 6.82S±0.06×147.2E±0.1, h33km, n35, σ0s78/35, mb4.2/13, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.57**	**181**	Pn	**Pn**	**06 17 19.6**	**+0.6**
	26nm,0.3s,baz=27,slow=10,SNR=18						
PMG				Sn	**Sn**	**06 17 50.4**	**+1.3**
	30nm,0.3s,baz=82,slow=10,SNR=4.8						
PMG				LR	LR	06 18 35.2	
	comp=Z,293nm,19.3s,baz=53,slow=46						
PMG	**Port Moresby**	**2.57**	**181**		**Pn**	**06 17 19.2**	**+0.2**
PMG				Sn	**Sn**	**06 17 49.5**	**+0.4**
JAY	**Jayapura**	**7.76**	**303**	Pn	**Pn**	**06 18 30.0**	**-0.4**
	0.4nm,0.3s,baz=83,slow=17,SNR=1.5						
COEN	**Coen**	**8.12**	**209**	Pn	**Pn**	**06 18 35.1**	**-0.3**
CTAO	**Charters Tower**	**13.22**	**184**	Pn	**Pn**	**06 19 45.4**	**+0.1**
MTN	**Manton Dam**	**16.92**	**248**	Pn	**Pn**	**06 20 33.9**	**-0.2**
MTN				IAmb	IAmb	06 20 47.6	
	comp=Z,10nm,1.1s						
WB0	**Warramunga Arr**	**17.90**	**223**		**Pn**	**06 20 45.3**	**-1.0**
WB0				IAmb	IAmb	06 20 53.8	
	comp=Z,7.0nm,0.9s						
WR0	**Warramunga Arr**	**17.93**	**222**		**Pn**	**06 20 45.4**	**-1.3**
WB2	**Warramunga Arr**	**18.05**	**222**		**Pn**	**06 20 47.0**	**-1.1**
WB2				IAmb	IAmb	06 20 52.5	
	comp=Z,6.4nm,0.9s						
WRA	**Warramunga Arr**	**18.06**	**223**	P	**Pn**	**06 20 46.8**	**-1.4**
	comp=Z,2nm,0.3s,baz=48,slow=12,SNR=13						
KNRA	**Kununurra**	**20.10**	**242**	P	Pn	06 21 12.6	-0.1
AS31	**Alice Springs**	**21.07**	**216**	P	**P**	**06 21 22.0**	**+0.8**
ASAR	**Alice Springs**	**21.07**	**216**	P	**P**	**06 21 21.4**	**+0.1**
	comp=Z,2.9nm,0.6s,baz=31,slow=13,SNR=39						
FITZ	**Fitzroy Crossi**	**23.82**	**240**	P	**P**	**06 21 49.3**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=28,slow=7.6,SNR=8.1						
FITZ	**Fitzroy Crossi**	**23.82**	**240**	P	**P**	**06 21 49.1**	**-0.8**
FITZ				IAmb	IAmb	06 22 04.4	
	comp=Z,5.8nm,1.1s						
NWAO	**Narrogin (SRO)**	**38.07**	**223**	P	**P**	**06 23 55.3**	**-0.1**
RAO	**Raoul Island**	**39.71**	**129**	LR	LR	06 38 01.1	
	comp=Z,130nm,19.1s,baz=332,slow=32						
KSRS	**Korea Array**	**47.59**	**339**	P	**P**	**06 25 12.9**	**+0.6**
	comp=Z,3.5nm,0.9s,baz=158,slow=8.9,SNR=12						
USA0B	**Ussuriysk Arra**	**52.61**	**346**	P	**P**	**06 25 51.5**	**+1.2**
USA0B				IAmb	IAmb	06 25 52.2	
	comp=Z,5.0nm,1.0s						
USRK	**Ussuriysk Ar.**	**52.61**	**346**	P	**P**	**06 25 49.4**	**-0.9**
	comp=Z,1.4nm,0.5s,baz=167,slow=8.6,SNR=6.4						
CMAR	**Chiang Mai Arr**	**53.82**	**299**	P	**P**	**06 26 00.6**	**+0.8**
	comp=Z,1.2nm,0.3s,baz=116,slow=5.1,SNR=2.6						
VNDA	**Vanda**	**71.09**	**177**	P	**P**	**06 27 54.5**	**+0.3**
MKAR	**Makanchi Array**	**78.25**	**321**	P	**P**	**06 28 36.8**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=101,slow=7.8,SNR=6.1						
ZALV	**Zalesovo Beam**	**79.81**	**328**	P	**P**	**06 28 44.0**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=119,slow=5.0,SNR=2.1						
NIL	**Nilore**	**80.57**	**306**	P	**P**	**06 28 50.8**	**+1.6**
KURK	**Kurchatov**	**81.98**	**323**	P	**P**	**06 28 56.9**	**+0.6**
KURK				IAmb	IAmb	06 29 02.3	
	comp=Z,3.8nm,1.4s						
KURBB	**Kurchatov Arra**	**82.00**	**323**	P	**P**	**06 28 56.4**	**0.0**
	comp=Z,0.2nm,0.4s,baz=103,slow=3.6,SNR=3.0						
QSPA	**South Pole Qui**	**83.15**	**180**	P	**P**	**06 29 01.6**	**-0.7**
QSPA				IAmb	IAmb	06 29 07.0	
	comp=Z,5.6nm,1.2s						
MCK	**McKinley**	**84.89**	**24**	P	**P**	**06 29 10.3**	**-0.7**
MCK				IAmb	IAmb	06 29 12.2	
	comp=Z,6.4nm,1.4s						
ILAR	**Eielson Array**	**86.15**	**23**	P	**P**	**06 29 16.1**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=255,slow=4.5,SNR=2.8						
TORD	**Torodi Ar. Bea**	**145.48**	**283**	PKPbc	**PKPab**	**06 36 16.0**	**+0.2**
	comp=Z,2.7nm,0.6s,baz=76,slow=4.2,SNR=21						
DBIC	**Dimbokro**	**152.25**	**271**	PKPbc	**PKPbc**	**06 36 33.0**	**-0.2**
	comp=Z,2.5nm,0.8s,baz=45,slow=1.4,SNR=1.2						
DBIC	**Dimbokro**	**152.25**	**271**		**PKPbc**	**06 36 32.9**	**-0.3**
BDFB	**Brasilia**	**153.07**	**146**	PKPbc	**PKPbc**	**06 36 34.9**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=180,slow=7.1,SNR=3.4						
BDFB	**Brasilia**	**153.07**	**146**		**PKiKP**	**06 36 35.2**	**-0.1**

*IDC **09** 06:17:22.7±0.7, 27.93N×57.43E, h0km, mb4.0/20, mb1 4.2/24, mb1mx4.0/49, mbtmp4.1/24, ML3.9/4, MS3.5/3, Ms1 3.6/3, ms1mx3.0/49, Error ellipse: s-maj=17.3km s-min=13.7km az=152.0*
*MOS **09** 06:17:23.5±1.2, 27.78N×57.24E, h14km, mb4.4/18, Error ellipse: s-maj=8.7km s-min=6.3km az=70.6*
*DSN **09** 06:17:26.0±1.6, 27.79N×57.80E, h10km, ML4.9/10, Error ellipse: s-maj=45.7km s-min=10.7km az=135.0*
*THR **09** 06:17:25.5±0.3, 27.92N×57.47E, h14km±3km, ML4.4*
*TEH **09** 06:17:26.6, 27.90N×57.52E, h20km, ML4.3*
*NEIC **09** 06:17:26.6±3.9, 27.89N±0.04×57.46E±0.05, h10km±1km, Error ellipse: s-maj=8.2km s-min=5.4km az=112.0*
*OMAN **09** 06:17:29.8±1.3, 27.70N×57.84E, h28km±13km, Error ellipse: s-maj=25.6km s-min=13.8km az=137.0*
ISC 09 06:17:27.2±0.9, 27.85N±0.04×57.54E±0.03, h24km±7km, n241, σ1s88/258, mb4.2/40, 11C-2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.17**	**56**	*ePg*	**Pb**	**06 17 31.0**	**-1.6**
KHNJ	**Kahnooj**	**0.17**	**56**	Pg	**Pb**	**06 17 30.9**	**-1.6**
NIAN	**Nian**	**0.69**	**245**	*ePg*	**Pb**	**06 17 41.2**	**+0.5**
NIAN				*e*		06 18 02.1	
NIAN	**Nian**	**0.69**	**245**		**Pb**	**06 17 41.1**	**+0.4**
IBND	**Bandar-abas**	**0.98**	**246**	*e*Pg	**Pn**	**06 17 46.5**	**+1.1**
IBND				*e*		06 18 14.3	
GENO	**Geno**	**1.30**	**250**	*e*Pn	**Pn**	**06 17 51.1**	**+1.1**
GENO				*e*		06 18 14.0	
GENO	**Geno**	**1.30**	**250**	Pn	**Pn**	**06 17 51.1**	**+1.1**
BNDS	**Bandar-Abbas**	**1.30**	**250**	*e*Pg	**Pn**	**06 17 48.9**	**-1.1**
BNDS				*e*Sg	**Sn**	**06 18 06.2**	**-0.5**
BNDS	**Bandar-Abbas**	**1.30**	**250**	*e*Pg	**Pn**	**06 17 48.9**	**-1.1**
BNDS	**Bandar-Abbas**	**1.30**	**250**		**Pn**	**06 17 48.9**	**-1.1**
BNDS	**Bandar-Abbas**	**1.30**	**250**		**Sn**	**06 18 06.0**	**-0.7**
NGRK	**Negar Kerman**	**1.93**	**338**	*e*Pn	**Pn**	**06 17 59.1**	**+0.2**
NGRK				*e*		06 18 31.8	
NGRK	**Negar Kerman**	**1.93**	**338**	Pn	**Pn**	**06 17 59.0**	**+0.2**
CHMN	**Cheshme madani**	**2.00**	**360**	*e*Pn	**Pn**	**06 17 59.7**	**-0.2**
CHMN				*e*		06 18 34.2	
CHMN	**Cheshme madani**	**2.00**	**360**	Pn	**Pn**	**06 17 59.6**	**-0.3**
SHME	**Shamm**	**2.19**	**215**	*e*P	**Pn**	**06 18 03.5**	**+1.3**
	SNR=162						
SHME				S	**Sn**	**06 18 32.4**	**+3.9**
SHME	**Shamm**	**2.19**	**215**	*e*Pn	**Pn**	**06 18 03.7**	**+1.6**
SHME	**Shamm**	**2.19**	**215**	Pn	**Pn**	**06 18 03.6**	**+1.5**
BANOM	**Banah**	**2.22**	**210**	*e*P	**Pn**	**06 18 04.1**	**+1.5**
	SNR=227						
BANOM				S	**Sn**	**06 18 33.6**	**+4.4**
BANOM	**Banah**	**2.22**	**210**	P	**Pn**	**06 18 05.0**	**+2.5**
	SNR=197						
BANOM				S	**Sb**	**06 18 34.4**	**+0.7**
BANOM	**Banah**	**2.22**	**210**	*e*Pn	**Pn**	**06 18 04.4**	**+1.9**
KRBR	**Kerman**	**2.23**	**342**	IAML		06 18 38.3	
	comp=N,3μm,0.4s						
KRBR				IAML		06 18 40.4	
	comp=E,2μm,0.5s						
TVBK	**TV Kerman**	**2.24**	**342**	*e*Pn	**Pn**	**06 18 03.9**	**+0.8**
TVBK	**TV Kerman**	**2.24**	**342**	Pn	**Pn**	**06 18 03.8**	**+0.7**
KHGB	**Koh Gabri**	**2.68**	**340**	*e*Pn	**Pn**	**06 18 10.4**	**+1.3**
KHGB				*e*		06 19 00.8	
KHGB	**Koh Gabri**	**2.68**	**340**	Pn	**Pn**	**06 18 10.3**	**+1.2**
MSFE	**Esma-Masafi**	**2.77**	**207**	*e*P	**Pn**	**06 18 11.9**	**+1.7**
	SNR=26						
MSFE	**Esma-Masafi**	**2.77**	**207**	*e*Pn	**Pn**	**06 18 12.9**	**+2.7**
MSFE	**Esma-Masafi**	**2.77**	**207**	Pn	**Pn**	**06 18 12.9**	**+2.7**
MDH	**Madha**	**2.77**	**204**	*e*P	**Pn**	**06 18 09.7**	**-0.5**
	SNR=13						
MDH	**Madha**	**2.77**	**204**	P	**Pn**	**06 18 10.0**	**-0.2**
	SNR=13						
MDH	**Madha**	**2.77**	**204**	*e*Pn	**Pn**	**06 18 10.0**	**-0.2**
LAR1	**LAR**	**2.81**	**267**	*e*Pn	**Pn**	**06 18 11.8**	**+1.0**
UMQ	**Umm Al-Quwin**	**2.86**	**216**	*e*P	**Pn**	**06 18 12.7**	**+1.3**
	SNR=7.8						
UMQ	**Umm Al-Quwin**	**2.86**	**216**	P	**Pn**	**06 18 15.1**	**+3.7**
	SNR=7.7						
UMQ				S	**Sn**	**06 18 50.9**	**+5.9**
UMQ	**Umm Al-Quwin**	**2.86**	**216**	*e*Pn	**Pn**	**06 18 14.8**	**+3.4**
UOSS	**Minazif**	**3.13**	**203**	*i* P	**Pn**	**06 18 14.4**	**-0.8**
	SNR=12						
UOSS	**Minazif**	**3.13**	**203**	P	**Pn**	**06 18 16.4**	**+1.3**
UOSS				S	**

TKDS Koohdasht(Taba 5.76 356 Pn **Pn 06 18 53.8 +2.5**
JLN Jalan Bani Buh 5.92 163 P **Pn 06 18 54.3 +0.9**
JLN S **Sn 06 19 57.9 -2.7**
IRAM Ramesheh 5.97 313 *e*Pn **Pn 06 18 54.9 +0.6**
IRAM Ramesheh 5.97 313 Pn **Pn 06 18 54.9 +0.6**
KLNJ Kolanjah 6.07 303 *e*Pn **Pn 06 18 56.4 +0.6**
KLNJ Kolanjah 6.07 303 Pn **Pn 06 18 56.3 +0.5**
ANAR Anarak 6.26 329 *e*Pn **Pn 06 19 00.0 +1.8**
ANAR Anarak 6.26 329 Pn **Pn 06 19 00.0 +1.8**
SLWR Sila 6.47 236 *e*Pn **Pn 06 19 02.0 +1.0**
IGAR Gharneh 6.58 315 *e*Pn **Pn 06 19 03.5 +0.8**
IGAR Gharneh 6.58 315 Pn **Pn 06 19 03.5 +0.8**
IZEF Zefreh 6.75 319 *e*Pn **Pn 06 19 05.3 +0.2**
IZEF Zefreh 6.75 319 Pn **Pn 06 19 05.2 +0.2**
MHTO MHTO 6.84 177 P **Pn 06 19 07.1 +0.9**
MHTO S **Sn 06 20 22.4 -0.9**
JHBN Jahan bin 7.39 308 *e*Pn **Pn 06 19 14.9 +1.0**
JHBN Jahan bin 7.39 308 Pn **Pn 06 19 14.9 +1.0**
IPIR Pirpir 7.50 312 *e*Pn **Pn 06 19 16.0 +0.5**
IPIR Pirpir 7.50 312 Pn **Pn 06 19 15.9 +0.5**
HRA Herat 7.66 31 **Pn 06 19 20.1 +2.6**
IKMR Kamar-syah 9.70 308 *e*Pn **Pn 06 19 46.7 +1.4**
IKMR Kamar-syah 9.70 308 Pn **Pn 06 19 46.6 +1.3**
HSAM Samen 9.95 312 *e*Pn **Pn 06 19 48.4 -0.5**
HSAM Samen 9.95 312 Pn **Pn 06 19 48.3 -0.6**
IDOB Doab 9.99 309 *e*Pn **Pn 06 19 49.1 -0.4**
IDOB Doab 9.99 309 Pn **Pn 06 19 49.0 -0.4**
GEYT Alibeck 10.06 3 Pn **Pn 06 19 48.3 -2.0**
comp=E,0.3nm,0.3s,baz=188,slow=18,SNR=1.7
GEYT LR LR 06 24 11.8
comp=E,370nm,19.0s,baz=70,slow=41
GYA0B ALIBECK ARRAY 10.06 3 **Pn 06 19 51.3 +1.0**
IKFM Kafar-mosalman 10.08 306 *e*Pn **Pn 06 19 51.9 +1.4**
IKFM Kafar-mosalman 10.08 306 Pn **Pn 06 19 51.9 +1.4**
DMTO DMTO 10.37 194 P **Pn 06 19 52.9 -1.6**
WHFO Wadi Hawf 10.48 200 P **Pn 06 19 55.0 -1.1**
SNR=26
IKOM Komasi 10.66 309 *e*Pn **Pn 06 19 57.8 -0.9**
IKOM Komasi 10.66 309 Pn **Pn 06 19 57.8 -0.9**
RBK Rabkut 10.75 197 P **Pn 06 19 58.3 -1.4**
ABTO Aybut 11.16 201 P **Pn 06 20 04.0 -1.4**
RAYN Ar Rayn 11.68 251 P Pn 06 20 08.9 -3.6
RAYN Ar Rayn 11.68 251 Pn 06 20 08.9 -3.6
KBL Kabul 11.89 53 P **Pn 06 20 19.7 +4.3**
KBL Kabul 11.89 53 Pn **Pn 06 20 19.7 +4.3**
CHGR Chuyangaron 14.50 39 P **Pn 06 20 51.1 +0.1**
NIL Nilore 14.69 63 P **Pn 06 20 54.6 +1.1**
NIL Nilore 14.69 63 Pn **Pn 06 20 54.6 +1.1**
GAR Garm 15.39 40 P **P 06 21 08.6 +1.3**
GAR IAmb IAmb 06 21 18.5
comp=Z,9.8nm,0.9s
SOCY Socotra 15.94 193 P **Pn 06 21 12.1 +2.0**
SOCY IAmb IAmb 06 21 16.0
comp=Z,17nm,1.2s
BTK Batken 16.39 39 P **P 06 21 19.6 +1.1**
BTK pmax pmax
comp=Z,10.0nm,1.1s
BTK Batken 16.39 39 P **P 06 21 19.6 +1.1**
AKH Akhalkalaki 17.76 323 P **P 06 21 34.1 +0.4**
AKH pmax pmax
comp=Z,7.0nm,1.0s
AKH Akhalkalaki 17.76 323 P **P 06 21 34.1 +0.4**
DAMY Dhamar 18.00 225 P **P 06 21 38.6 +2.0**
DAMY IAmb IAmb 06 21 49.3
comp=Z,20nm,1.0s
ASF Jabal al Asfar 18.39 289 P **P 06 21 37.8 -2.7**
comp=Z,0.7nm,0.3s,baz=69,slow=9.9,SNR=6.9
ASF S Sn 06 24 50.2 -15
comp=Z,0.2nm,0.3s,baz=1.7,slow=5.3,SNR=1.5
ARSB Arslanbob 18.46 39 P **Pn 06 21 45.2 +3.6**
ARSB pmax pmax
comp=Z,9.0nm,1.2s
ARSB Arslanbob 18.46 39 P **Pn 06 21 45.2 +3.6**
KK31 Karatay Array 18.49 31 P **Pn 06 21 44.0 +2.2**
KK31 pmax pmax
comp=Z,4.0nm,0.9s
KK31 Karatay Array 18.49 31 P **Pn 06 21 44.0 +2.2**
KKAR Karatay Array 18.49 31 P **Pn 06 21 44.1 +2.4**
KKAR pmax pmax
comp=Z,4.0nm,0.9s
KKAR Karatay Array 18.49 31 P **Pn 06 21 44.1 +2.4**
ZEI Tsey 18.57 327 *e*P **P 06 21 41.0 -1.5**
ZEI pmax pmax
comp=Z,5.0nm,0.6s
KSH Kashi 19.21 48 P **P 06 21 47.3 -2.3**
KSH sP pP 06 21 53.8 -2.6
KSH S Sn 06 25 13.9 -11
KSH SS **SnSn 06 25 38.5 -1.0**
KSH pmax pmax
comp=Z,82nm,1.7s
KSH pmax pmax
comp=Z,210nm,3.9s
KSH LR LR
comp=N,220nm,7.2s
KSH LR LR
comp=E,230nm,8.0s
KSH LR LR
comp=Z,380nm,10.4s
GAZ Gaziantep 19.47 304 P **P 06 21 52.7 +0.3**
GAZ IAmb IAmb 06 21 55.2
comp=Z,14nm,1.0s
EIL Elat 19.89 281 P **P 06 21 55.5 -1.5**
comp=Z,0.5nm,0.3s,baz=73,slow=3.8,SNR=19
KIV Kislovodsk 20.03 327 *e*P **P 06 21 59.2 +0.8**
KIV pmax pmax
comp=Z,29nm,1.1s
KIV Kislovodsk 20.03 327 P **P 06 21 59.0 +0.6**
KIV IAmb IAmb 06 22 16.6
comp=Z,8.5nm,0.8s
AAK Ala-Archa 20.18 39 P **P 06 22 00.3 +0.2**
comp=Z,3.3nm,0.6s,baz=198,slow=3.7,SNR=9.1
AAK Ala-Archa 20.18 39 *ce*P Pn 06 22 02.7 +0.6
AAK pmax pmax
comp=Z,6.0nm,1.0s
AAK Ala-Archa 20.18 39 P Pn 06 22 02.7 +0.7
ATD Arta Tunnel 21.30 223 P **P 06 22 12.8 +0.5**
comp=Z,4.2nm,0.2s,baz=65,slow=13,SNR=5.1
ATD Arta Tunnel 21.30 223 P **P 06 22 13.3 +1.0**
KDJ Kajisay 21.42 43 P **P 06 22 16.5 +2.9**
KDJ pmax pmax
comp=Z,13nm,1.0s
KDJ Kajisay 21.42 43 P **P 06 22 16.5 +2.9**
KDJ IAmb IAmb 06 22 28.0
comp=Z,13nm,0.9s
AKTO Aktyubinsk 22.56 1 P **P 06 22 23.7 -1.8**
comp=Z,1.8nm,0.5s,baz=190,slow=9.0,SNR=8.0
BR131 Keskin Array S 23.05 307 P **P 06 22 29.9 -1.1**
BR131 pmax pmax
comp=Z,14nm,0.9s
BR131 Keskin Array S 23.05 307 P **P 06 22 29.9 -1.1**
BR131 IAmb IAmb 06 22 31.8
comp=Z,14nm,0.9s
BRTR Keskin Array B 23.05 307 P **P 06 22 28.6 -2.3**
comp=Z,11nm,0.8s,baz=119,slow=10,SNR=41
BRTR Keskin Array B 23.05 307 *ce*P **P 06 22 30.1 -0.9**
BRTR pmax pmax
comp=Z,11nm,0.8s
BR231 Keskin MP Arra 23.71 307 P **P 06 22 37.2 -0.3**
ISP Isparta 24.71 301 P **P 06 22 44.3 -2.4**
ISP pmax pmax
comp=Z,15nm,0.7s
ISP Isparta 24.71 301 P **P 06 22 44.3 -2.4**
BVAR Borovoye Array 26.90 17 P **P 06 23 05.1 -1.1**
comp=Z,6.0nm,0.7s,baz=198,slow=7.5,SNR=26
BRVK Borovoye 26.90 17⇑ *e*P **P 06 23 07.7 +1.5**
BRVK pmax pmax
comp=Z,4.0nm,0.9s
BRVK Borovoye 26.90 17 P **P 06 23 09.1 +2.9**
BRVK IAmb IAmb 06 23 10.1
comp=Z,4.5nm,0.6s
MAKZ Makanchi 26.94 39 P **P 06 23 08.4 +1.7**
MAKZ pmax pmax
comp=Z,5.0nm,0.9s
MAKZ Makanchi 26.94 39 P **P 06 23 08.4 +1.7**
MAKZ IAmb IAmb 06 23 13.3
comp=Z,5.2nm,0.9s
MK31 Makanchi Array 27.11 39 P **P 06 23 08.4 +0.2**
MK31 pmax pmax
comp=Z,5.0nm,1.4s
MK31 Makanchi Array 27.11 39 P **P 06 23 08.4 +0.2**
MK31 IAmb IAmb 06 23 14.1
comp=Z,4.7nm,1.4s
MKAR Makanchi Array 27.11 39 P **P 06 23 07.2 -1.0**
comp=Z,1.5nm,0.8s,baz=220,slow=8.0,SNR=14

MKAR Makanchi Array 27.11 39*ce*P **P 06 23 09.0 +0.8**
MKAR pmax pmax
comp=Z,2.0nm,0.8s
KURBB Kurchatov Arra 27.77 29 P **P 06 23 12.8 -1.2**
comp=Z,1.1nm,0.8s,baz=228,slow=8.6,SNR=6.9
KURK Kurchatov 27.88 29⇑ *e*P **P 06 23 17.1 +2.2**
KURK pmax pmax
comp=Z,1.0nm,0.8s
KURK Kurchatov 27.88 29 P **P 06 23 17.8 +2.9**
KURK IAmb IAmb 06 23 30.3
comp=Z,4.5nm,1.4s
WMQ Urumqi 28.97 49 *e*P **P 06 23 29.1 +4.2**
WMQ Urumqi 28.97 49 P **P 06 23 27.8 +2.9**
WMQ pmax pmax
comp=Z,15nm,0.5s
WMQ Urumqi 28.97 49 P **P 06 23 27.8 +2.9**
OBN Obninsk 31.20 337 *e*P **P 06 23 42.7 -1.6**
OBN pmax pmax
comp=Z,6.0nm,0.7s
AKASG Malin Array Be 31.31 325 P **P 06 23 42.4 -3.0**
comp=Z,1.3nm,0.7s,baz=124,slow=8.2,SNR=2.7
DGZ Jazzator, Alta 31.58 38⇑ *e*P **P 06 23 50.3 +2.3**
DGZ pmax pmax
comp=Z,1.0nm,0.8s
ZAA0 Zalesovo Array 32.86 30 P **P 06 23 58.5 -0.4**
ZAA0 IAmb IAmb 06 24 05.2
comp=Z,6.3nm,0.9s
ZALV Zalesovo Beam 32.86 30 P **P 06 23 57.0 -1.9**
comp=Z,1.8nm,0.4s,baz=244,slow=10,SNR=12
KOLS Kolonicke sedl 34.30 317 *e*P **P 06 24 11.3 -0.3**
KOLS pmax pmax
comp=Z,7.0nm,1.0s
KOLS Kolonicke sedl 34.30 317 *e*P **P 06 24 11.3 -0.3**
GTA Gaotai 36.73 61 *e*P **P 06 24 35.0 +2.2**
GTA pP pP 06 24 39.8 -0.5
GTA sP sP 06 24 42.1 -1.3
GTA pmax pmax
comp=Z,3.0nm,1.0s
VSU Vasula 37.34 334⇓ *e*P **P 06 24 35.5 -1.9**
VSU pmax pmax
comp=Z,21nm,0.9s
CMAR Chiang Mai Arr 39.04 95 LR LR 06 44 00.9
comp=Z,34nm,21.2s,baz=238,slow=41
FINES FINESS Array B 39.61 337 P **P 06 24 54.7 -1.8**
comp=Z,3.4nm,0.5s,baz=138,slow=10,SNR=20
FINES FINESS Array B 39.61 337*ce*P **P 06 24 55.4 -1.1**
FINES pmax pmax
comp=Z,3.0nm,0.5s
KHC Kasperske Hory 39.73 314⇑ *e*P **P 06 24 55.5 -2.3**
KHC pmax pmax
comp=Z,10.0nm,1.7s
KHC Kasperske Hory 39.73 314 *e*P **P 06 24 55.0 -2.8**
LZH Lanzhou 39.82 66 *e*P **P 06 25 00.3 +1.4**
LZH pP pP 06 25 03.5 -2.9
LZH sP sP 06 25 05.1 -4.4
LZH *e*PP **PnPn 06 26 36.5 +2.7**
LZH pmax pmax
comp=Z,18nm,1.3s
LZH pmax pmax
comp=Z,53nm,5.4s
KMI Kunming 40.37 83 P P 06 25 11.8 +8.2
KMI pmax pmax
comp=Z,5.0nm,0.9s
SONM Songino Array 42.61 49 P **P 06 25 22.6 +1.0**
comp=Z,1.1nm,0.8s,baz=238,slow=10,SNR=5.3
SONM LR LR 06 44 39.6
comp=Z,95nm,21.5s,baz=239,slow=38
ULN Ulaanbaatar 43.05 49⇓ *e*P **P 06 25 27.1 +1.9**
ULN pmax pmax
comp=Z,1.0nm,0.9s
NB2 NORSAR Subarra 45.29 330 P **P 06 25 39.8 -3.0**
comp=Z,1.0nm,0.8s,baz=115,slow=8.6
NOA NORSAR Array B 45.29 330 P **P 06 25 40.2 -2.5**
comp=Z,1.2nm,0.7s,baz=115,slow=7.8,SNR=9.0
KONO Kongsberg 45.45 328 *e*P **P 06 25 43.4 -0.6**
KONO pmax pmax
comp=Z,7.0nm,1.1s
KEV Kevo 45.48 346 P **P 06 25 43.0 -1.1**
KEV pmax pmax
comp=Z,16nm,1.1s
KEV Kevo 45.48 346 P **P 06 25 43.0 -1.1**
ARCES ARCESS Array B 45.65 345 P **P 06 25 44.5 -1.0**
comp=Z,2.2nm,0.8s,baz=137,slow=8.4,SNR=10
HHC Hu-ho-hao-te 45.78 59 P **P 06 25 49.9 +2.8**
HHC pmax pmax
comp=Z,9.0nm,0.9s
HHC pmax pmax
comp=Z,50nm,7.3s
ESDC Sonseca Array 51.57 300 P **P 06 26 29.5 -2.1**
comp=Z,1.3nm,0.9s,baz=68,slow=7.8,SNR=6.3
TORD Torodi Ar. Bea 53.90 266 P **P 06 26 47.5 -1.5**
comp=Z,9.5nm,0.6s,baz=62,slow=7.2,SNR=64
KSRS Korea Array 58.80 61 P **P 06 27 22.0 -1.6**
comp=Z,0.5nm,0.4s,baz=264,slow=6.4,SNR=1.7
KSRS Korea Array 58.80 61 P **P 06 27 22.0 -1.6**
KSRS Korea Array 58.80 61 P **P 06 27 22.0 -1.6**
DBIC Dimbokro 62.54 263 P **P 06 27 47.2 -2.2**
comp=Z,6.5nm,1.0s,baz=99,slow=5.2,SNR=2.6
DBIC Dimbokro 62.54 263 P **P 06 27 48.6 -0.9**
DBIC pmax pmax
comp=Z,24nm,1.3s
DBIC Dimbokro 62.54 263 P **P 06 27 48.5 -0.9**
BOSA Boshof 64.10 211 P **P 06 27 58.6 -1.0**
BOSA Boshof 64.10 211 P **P 06 27 58.6 -1.0**
BILL Bilibino 71.12 22 *e*P **P 06 28 45.2 +2.0**
BILL pmax pmax
comp=Z,1.0nm,0.9s
WRA Warramunga Arr 88.12 114 P **P 06 30 15.6 -0.8**
comp=Z,0.8nm,0.8s,baz=315,slow=3.9,SNR=5.1
WRA Warramunga Arr 88.12 114*ce*P **P 06 30 17.3 +1.0**
WRA pmax pmax
comp=Z,1.0nm,0.8s
ASAR Alice Springs 89.66 117 P **P 06 30 23.0 -0.5**
comp=Z,0.2nm,0.4s,baz=292,slow=4.5,SNR=4.3
ASAR Alice Springs 89.66 117 P **P 06 30 23.0 -0.5**
YKA Yellowknife Ar 89.75 356 P **P 06 30 21.5 -1.7**
comp=Z,0.5nm,0.8s,baz=3.9,slow=5.0,SNR=10
YKA Yellowknife Ar 89.75 356 *e*P **P 06 30 21.1 -2.1**
YKA pmax pmax
comp=Z,1.0nm,0.7s

*BJI **09** 06:39:56.8±0.0, 25.°30N×123.°92E, h153km, mB4.6/21, mb4.6/31*
*IDC **09** 06:39:59.9±0.7, 25.°46N×123.°86E, h160km±6km, mb3.9/27, mb1 4.0/30, mb1mx3.9/50, mbtmp4.3/30, Error ellipse: s-maj=10.1km s-min=9.6km az=64.0*
*NEIC **09** 06:39:59.8±2.0, 25.°38N±0.°08×123.°85E±0.°07, h159km±5km, mb4.4/69, Error ellipse: s-maj=12.1km s-min=7.5km az=150.0*
*NIED **09** 06:40:00, 25.°30N×123.°80E, h165km, Mw4.4 Best double couple: M0 3.78000×10^15 NP1:φ=20.00000°, δ68.00000°, λ-90.00000°. NP2:φ=201.00000°, δ22.00000°, λ-89.00000°.*
*JMA **09** 06:40:01.1±0.1, 25.°29N×123.°77E, h152km±3km, M4.2*
ISC 09 06:40:00.1±0.5, 25.°35N±0.°05×123.°77E±0.°03, h161km±4km, h162km:pP-P, n142, σ1°11/185, mb4.3/62, 2C, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JISG	**Ishigakijimahi**	**0.90**	**147**	P		**Pn**	**06 40 25.0**	**-0.2**
JISG				S		**Sn**	**06 40 43.5**	**-0.9**
IRIF	**Iriomote-Funau**	**1.01**	**182**	P		**Pn**	**06 40 25.6**	**-0.5**
IRIF				S		**Sn**	**06 40 44.7**	**-1.3**
JIJ	**Ishigaki jima**	**1.04**	**161**	P		**Pn**	**06 40 25.9**	**-0.4**
JIJ				S		**Sn**	**06 40 44.7**	**-1.7**
JTJ	**Tarama**	**1.10**	**130**	P		**Pn**	**06 40 26.9**	**+0.1**
JTJ				S		**Sn**	**06 40 46.7**	**-0.5**
YOJ	**Yonaguni jima**	**1.12**	**218**	P		**Pn**	**06 40 27.0**	**0.0**
YOJ				S		**Sn**	**06 40 46.7**	**-0.9**
YOJ	**Yonaguni jima**	**1.12**	**218**			**Pn**	**06 40 26.8**	**-0.2**
YOJ				Sn		**Sn**	**06 40 46.4**	**-1.2**
JKRS	**Kuro-shima**	**1.13**	**169**	P		**Pn**	**06 40 27.1**	**+0.1**
JKRS				S		**Sn**	**06 40 47.1**	**-0.6**
JYNG	**Yonagunijimaku**	**1.17**	**220**	P		**Pn**	**06 40 27.3**	**-0.1**
JYNG				S		**Sn**	**06 40 47.6**	**-0.7**
HATJ	**Hateruma jima**	**1.29**	**179**	P		**Pn**	**06 40 28.4**	**-0.1**
HATJ				S		**Sn**	**06 40 49.6**	**-0.7**
JIRB	**Irabujima**	**1.37**	**112**	P		**Pn**	**06 40 29.2**	**-0.1**
JIRB				S		**Sn**	**06 40 50.9**	**-0.7**
JIKM	**Ikemajima**	**1.40**	**107**	P		**Pn**	**06 40 29.8**	**+0.3**
JIKM				S		**Sn**	**06 40 52.1**	**-0.1**

JMJ2 Miyako jima3 1.54 113 P **Pn 06 40 31.3 +0.4**
JMJ2 S **Sn 06 40 54.3 -0.2**
JOGS Gusukube 1.59 111 P **Pn 06 40 32.3 +0.8**
JOGS S **Sn 06 40 55.5 -0.1**
TATO Taipei 2.10 260 **Pn 06 40 38.1 +1.0**
TATO Sn **Sn 06 41 05.9 +0.3**
YHNB Yeheng 2.28 253 **Pn 06 40 39.8 +0.6**
YHNB Sn **Sn 06 41 08.5 -0.8**
NACB Ninganchiao 2.30 240 **Pn 06 40 38.9 -0.5**
NACB Sn **Sn 06 41 07.8 -1.9**
JKE Kume jima 2 2.88 70 P **Pn 06 40 46.1 -0.3**
JKE S **Sn 06 41 23.1 +0.7**
YULB Yu-li 2.98 230 **Pn 06 40 46.7 -1.0**
YULB Sn **Sn 06 41 20.8 -3.8**
SSLB Suanglung 3.00 239 **Pn 06 40 47.7 -0.3**
SSLB Sn **Sn 06 41 23.6 -1.4**
TPUB Ta-pu 3.52 235 **Pn 06 40 54.7 +0.2**
TPUB Sn **Sn 06 41 36.3 -0.5**
TWG Pinlang 3.52 225 **Pn 06 40 53.1 -1.4**
TWG Sn **Sn 06 41 33.8 -3.1**
JOW Kunigami 4.31 69 P **Pn 06 41 03.3 -1.4**
7.9nm,0.3s,baz=330,slow=16,SNR=114
JOW S **Sn 06 41 51.5 -3.5**
14nm,0.3s,baz=180,slow=13,SNR=11
KNMB Chin-men Tao 4.97 261 Pn **Pn 06 41 12.5 -0.7**
WHN Wuhan 9.80 304 P Pn 06 42 26.2 +8.9
JNU Nakatsue 9.92 37 P **Pn 06 42 18.4 -0.4**
1.4nm,0.3s,baz=184,slow=7.0,SNR=9.6
JNU Nakatsue 9.92 37 **Pn 06 42 19.8 +0.9**
INCN Inchon 12.34 11 P **P 06 42 56.3 +0.4**
KSRS Korea Array 12.57 15 P **Pn 06 42 54.8 +1.4**
0.3nm,0.3s,baz=199,slow=13,SNR=19
KS19 Wonju Array Si 12.61 15 **P 06 42 57.7 -1.1**
XAN Xi'an 15.53 307 P **P 06 43 32.7 +1.4**
XAN pmax pmax
comp=Z,20nm,0.8s
XAN pmax pmax
comp=Z,120nm,4.9s
XAN Xi'an 15.53 307 P **P 06 43 32.8 +1.4**
XAN IAmb IAmb 06 43 34.3
comp=Z,15nm,0.8s
MJAR Matsushiro Arr 16.65 45 pP pP 06 44 07.7 -3.1
comp=Z,0.0nm,0.3s,baz=229,slow=9.5,SNR=4.1
CD2 Chengdu 18.49 292 P **P 06 44 04.9 +0.9**
CD2 pmax pmax
comp=Z,30nm,0.5s
HHC Hu-ho-hao-te 18.50 330 *e*P **Pn 06 44 05.3 -0.8**
USRK Ussuriysk Ar. 19.96 18 P **P 06 44 18.2 -1.4**
baz=191,slow=9.9,SNR=4.1
LZH Lanzhou 20.16 307⇑ P **P 06 44 22.9 +0.8**
LZH PP **pP 06 44 50.7 +0.7**
LZH pP sP 06 44 52.5 -18
LZH sP Pn 06 45 10.2 +44
LZH pmax pmax
comp=Z,20nm,1.0s
LZH pmax pmax
comp=Z,96nm,4.8s
PBKT Sadao Pong 22.99 252 P **P 06 44 52.0 +1.2**
CHTO Chiang Mai 23.89 259 P **P 06 44 59.5 +0.5**
CHTO IAmb IAmb 06 45 00.7
comp=Z,7.0nm,0.7s
CMAR Chiang Mai Arr 24.01 258 P **P 06 45 00.1 -0.1**
comp=Z,1.9nm,0.7s,baz=63,slow=8.2,SNR=3.4
GTA Gaotai 24.52 311⇑ P **P 06 45 04.4 -0.3**
GTA pP pP 06 45 34.8 -2.5
GTA sP sP 06 45 54.5 -2.2
GTA pmax pmax
comp=Z,5.0nm,1.1s
KLR Kul'dur 24.64 13 P **P 06 45 05.5 0.0**
comp=Z,2.1nm,0.5s,baz=211,slow=8.2,SNR=14
ULN Ulaanbaatar 26.06 334 P **P 06 45 17.5 -1.1**
SONM Songino Array 26.30 333 P **P 06 45 19.4 -1.3**
comp=Z,4.7nm,0.7s,baz=151,slow=9.0,SNR=18
SONM PcP **PcP 06 48 43.7 +1.1**
comp=Z,0.5nm,0.5s,baz=80,slow=1.7,SNR=4.2
YSS Yuzh-Sakhalins 26.32 30 P **P 06 45 20.2 -0.5**
YSS IAmb IAmb 06 45 31.1
comp=Z,11nm,1.1s
IPM Ipoh 30.12 230 P **P 06 45 56.0 +1.1**
TLY Talaya 30.44 335 P **P 06 45 55.4 -1.9**
comp=Z,3.8nm,0.6s,baz=162,slow=3.4,SNR=3.8
TLY Talaya 30.44 335 P **P 06 45 56.8 -0.5**
TLY IAmb IAmb 06 45 58.6
comp=Z,4.7nm,0.8s
RPSI Rantau Prapat 32.85 231 P **P 06 46 19.9 +1.2**
RPSI IAmb IAmb 06 46 20.6
comp=Z,5.5nm,0.6s
WMQ Urumqi 34.60 311 *e*P **P 06 46 35.7 +2.1**
GSI Gunungsitoli 34.78 231 P P 06 46 41.5 +6.1
MDSI Maura Dua 35.24 215 P **P 06 46 42.1 +2.8**
comp=Z,1μmcomp=Z,6.8nm,1.2s
YAK Yakutsk 36.89 5 P **P 06 46 51.2 -1.5**
comp=Z,6.2nm,0.5s,baz=238,slow=0.6,SNR=5.5
YAK Yakutsk 36.89 5 P **P 06 46 51.6 -1.1**
PETK Petropavlovsk- 37.59 33 P **P 06 46 57.0 -1.8**
comp=Z,1.7nm,0.7s,baz=196,slow=4.4,SNR=6.8
MK31 Makanchi Array 39.18 314 P **P 06 47 11.8 -0.5**
MK31 IAmb IAmb 06 47 15.1
comp=Z,2.8nm,0.6s
MK31 **PcP 06 49 18.1 -0.2**
MK31 **PcP 06 49 18.5 +0.3**
MKAR Makanchi Array 39.18 314 P **P 06 47 11.8 -0.4**
comp=Z,3.4nm,0.4s,baz=100,slow=10,SNR=32
MKAR pP **pP 06 47 48.5 +1.3**
comp=Z,1.7nm,0.7s,baz=103,slow=10,SNR=3.3
MKAR PcP **PcP 06 49 18.0 -0.3**
comp=Z,1.7nm,0.7s,baz=84,slow=4.5,SNR=7.6
MAKZ Makanchi 39.39 314 P **P 06 47 13.7 -0.3**
MAKZ IAmb IAmb 06 47 15.0
comp=Z,7.2nm,0.6s
MAKZ PcP **PcP 06 49 19.4 +0.5**
ZAA0 Zalesovo Array 40.59 325 P **P 06 47 22.3 -1.3**
ZAA0 IAmb IAmb 06 47 23.8
comp=Z,7.3nm,0.7s
ZALV Zalesovo Beam 40.59 325 P **P 06 47 22.3 -1.4**
comp=Z,8.9nm,0.6s,baz=115,slow=8.4,SNR=38
ZALV PcP **PcP 06 49 21.7 -0.8**
comp=Z,0.9nm,0.5s,baz=194,slow=2.4,SNR=3.0
KDJ Kajisay 41.66 306 P **P 06 47 33.6 +0.7**
KDJ IAmb IAmb 06 47 34.2
comp=Z,3.6nm,0.6s
KSH Kashi 42.27 302 P **P 06 47 41.2 +3.5**
KSH sP sP 06 48 34.9 +3.6
KSH PP **PP 06 49 22.7 +3.8**
KSH S **S 06 53 50.6 +4.3**
KSH SS **SS 06 56 58.2 -2.8**
KSH pmax pmax
comp=Z,15nm,1.3s
KSH pmax pmax
comp=Z,89nm,4.6s
KSH LR LR
comp=Z,57nm,6.8s
KSH LR LR
comp=Z,94nm,7.4s
KSH LR LR
comp=Z,87nm,12.6s
KURK Kurchatov 42.75 318 P **P 06 47 39.9 -1.4**
KURK IAmb IAmb 06 47 41.9
comp=Z,14nm,1.2s
KURK PcP **PcP 06 49 29.3 -0.4**
KURBB Kurchatov Arra 42.77 318 P **P 06 47 40.7 -0.8**
comp=Z,5.7nm,0.7s,baz=111,slow=8.5,SNR=50
KURBB pP **pP 06 48 16.5 -0.4**
comp=Z,1.1nm,0.9s,baz=109,slow=8.2,SNR=1.6
KURBB PcP **PcP 06 49 28.8 -1.0**
comp=Z,0.5nm,0.5s,baz=111,slow=9.3,SNR=4.1
FITZ Fitzroy Crossi 43.23 177 P **P 06 47 45.4 0.0**
comp=Z,1.6nm,0.7s,baz=82,slow=6.7,SNR=4.0
FITZ Fitzroy Crossi 43.23 177 P **P 06 47 45.6 +0.2**
AAK Ala-Archa 43.70 306 P **P 06 47 49.5 +0.2**
comp=Z,0.7nm,0.3s,baz=139,slow=9.3,SNR=2.2
AAK PcP **PcP 06 49 32.6 -0.8**
comp=Z,1.1nm,0.6s,baz=91,slow=5.0,SNR=5.5
AAK Ala-Archa 43.70 306 P **P 06 47 48.9 -0.4**
NIL Nilore 44.38 293 P **P 06 47 54.5 -0.1**
WB0 Warramunga Arr 46.02 166 P **P 06 48 08.6 +1.0**
WRA Warramunga Arr 46.18 166 P **P 06 48 08.9 +0.1**
comp=Z,2.6nm,0.7s,baz=347,slow=8.6,SNR=11
WRA pP **pP 06 48 44.2 -0.6**
comp=Z,3.1nm,0.8s,baz=347,slow=8.3,SNR=7.1
WB2 Warramunga Arr 46.18 166 P **P 06 48 09.9 +1.1**
WR0 Warramunga Arr 46.24 166 P **P 06 48 09.8 +0.5**
TIXI Tiksi 46.42 2 P **P 06 48 07.9 -2.1**
TIXI IAmb IAmb 06 48 10.0
comp=Z,5.9nm,0.7s

TIXI				PcP	PcP	06 49 41.8	-0.2
GAR	**Garm**	**46.63**	**301**	P	P	06 48 12.6	+0.2
GAR				IAmb	IAmb	06 48 13.6	
	comp=Z,13nm,1.0s						
KK31	**Karatay Array**	**46.66**	**306**	P	P	06 48 13.3	+0.9
KK31				PcP	PcP	06 49 43.6	+0.1
KKAR	**Karatay Array**	**46.66**	**306**	P	P	06 48 13.3	+0.9
KKAR				PcP	PcP	06 49 43.7	+0.2
KBL	**Kabul**	**47.81**	**295**	P	P	06 48 22.5	+0.9
BVAR	**Borovoye Array**	**48.29**	**320**	P	P	06 48 24.3	-0.5
	comp=Z,4.7nm,0.5s,baz=103,slow=8.0,SNR=32						
BVAR				PcP	PcP	06 49 48.9	-0.2
	comp=Z,3.3nm,0.5s,baz=95,slow=3.1,SNR=11						
BRVK	**Borovoye**	**48.36**	**320**	P	P	06 48 24.7	-0.6
BRVK				IAmb	IAmb	06 48 26.5	
	comp=Z,6.7nm,0.6s						
ASAR	**Alice Springs**	**49.71**	**168**	P	P	06 48 36.9	+1.1
	comp=Z,0.7nm,0.5s,baz=355,slow=14,SNR=10						
ASAR				pP	pP	06 49 12.4	+0.2
	comp=Z,0.6nm,0.7s,baz=353,slow=7.6,SNR=3.3						
ASAR				PcP	PcP	06 49 55.4	+0.8
	comp=Z,0.4nm,0.7s,baz=345,slow=3.3,SNR=4.1						
ARU	**Arti**	**55.61**	**322**	P	P	06 49 18.1	-0.7
	comp=Z,2.4nm,0.5s,baz=107,slow=5.0,SNR=11						
ARU	**Arti**	**55.61**	**322**	P	P	06 49 18.4	-0.4
GEYT	**Alibeck**	**56.25**	**300**	P	P	06 49 24.8	+1.0
	comp=Z,8.4nm,0.8s,baz=90,slow=3.0,SNR=20						
GYA0B	**ALIBECK ARRAY**	**56.25**	**300**	P	P	06 49 24.8	+1.1
PPLA	**Purkeypile**	**65.07**	**30**	P	P	06 50 23.4	+0.3
PPLA				IAmb	IAmb	06 50 24.1	
	comp=Z,5.9nm,1.0s						
MLY	**Manley**	**65.43**	**28**	P	P	06 50 25.7	+0.4
MLY				IAmb	IAmb	06 50 26.6	
	comp=Z,2.6nm,0.9s						
KLMR	**Klimovskoe**	**65.44**	**328**	*e*P	P	06 50 23.5	-1.8
KLMR				AMP		06 50 25.7	
	comp=Z,15nm,1.4s						
TOLK	**Toolik Lake Re**	**65.45**	**24**	P	P	06 50 25.9	+0.6
BPAW	**Bear Paw Mtn.**	**65.45**	**29**	P	P	06 50 25.8	+0.4
KDAK	**Kodiak Island**	**65.59**	**36**	P	P	06 50 26.7	+0.3
CNPM	**China Poot**	**66.01**	**34**	P	P	06 50 30.6	+1.6
CNPM				IAmb	IAmb	06 50 35.7	
	comp=Z,11nm,1.2s						
NEA	**Nenana**	**66.20**	**28**	P	P	06 50 30.9	+0.7
NEA				IAmb	IAmb	06 50 31.3	
	comp=Z,3.0nm,0.5s						
RC01	**Rabbit Creek A**	**66.48**	**32**	P	P	06 50 32.5	+0.5
RC01				IAmb	IAmb	06 50 45.1	
	comp=Z,4.9nm,1.1s						
RND	**Reindeer**	**66.49**	**29**	P	P	06 50 31.8	-0.3
RND				IAmb	IAmb	06 50 32.5	
	comp=Z,4.3nm,0.6s						
KBZ	**Khabaz**	**66.59**	**309**	P	P	06 50 33.8	+0.8
	comp=Z,9.4nm,0.8s,baz=112,slow=3.8,SNR=20						
PMR	**Palmer**	**66.68**	**31**	P	P	06 50 33.5	+0.3
PMR				IAmb	IAmb	06 50 35.2	
	comp=Z,4.6nm,1.2s						
KIV	**Kislovodsk**	**66.69**	**309**	P	P	06 50 33.5	-0.2
AKH	**Akhalkalaki**	**66.70**	**306**	P	P	06 50 35.9	+1.9
SOCY	**Socotra**	**66.73**	**273**	P	P	06 50 33.6	-0.8
GHO	**Glory Hole Cre**	**66.75**	**31**	P	P	06 50 34.2	+0.5
GHO				IAmb	IAmb	06 50 42.4	
	comp=Z,4.6nm,0.9s						
KNK	**Knik Glacier**	**67.03**	**31**	P	P	06 50 35.5	0.0
KNK				IAmb	IAmb	06 50 48.4	
	comp=Z,13nm,1.5s						
IL31		**67.10**	**28**	P	P	06 50 34.9	-0.9
ILAR	**Eielson Array**	**67.10**	**28**	P	P	06 50 35.0	-0.9
	comp=Z,0.4nm,0.5s,baz=249,slow=4.6,SNR=12						
SCM	**Sheep Creek Mo**	**67.48**	**31**	P	P	06 50 39.1	+0.8
SCM				IAmb	IAmb	06 50 39.5	
	comp=Z,5.2nm,0.6s						
PRP	**Porcupine Dome**	**67.52**	**27**	P	P	06 50 39.3	+0.7
GLB	**Gilahina Butte**	**69.20**	**31**	P	P	06 50 49.9	+0.9
GLB				IAmb	IAmb	06 50 50.1	
	comp=Z,3.5nm,0.5s						
ARCES	**ARCESS Array B**	**69.34**	**338**	P	P	06 50 49.3	-0.4
	comp=Z,0.9nm,0.4s,baz=67,slow=6.7,SNR=7.5						
ARCES				PcP	PcP	06 51 12.1	0.0
	comp=Z,4.2nm,0.7s,baz=75,slow=5.3,SNR=12						
VRDI	**Verde Repeater**	**69.42**	**31**	P	P	06 50 51.3	+0.7
VRDI				IAmb	IAmb	06 51 07.3	
	comp=Z,5.3nm,1.2s						
EGAK	**Eagle**	**69.48**	**27**	P	P	06 50 51.3	+0.6
RAYN	**Ar Rayn**	**70.25**	**287**	P	P	06 50 56.6	+0.4
RAYN				IAmb	IAmb	06 50 56.8	
	comp=Z,5.7nm,1.0s						
DAWY	**Dawson**	**70.42**	**28**	P	P	06 50 56.9	+0.4
CTGM	**Chitina Glacie**	**70.49**	**31**	P	P	06 50 58.1	+1.1
CTGM				IAmb	IAmb	06 50 58.7	
	comp=Z,5.7nm,0.6s						
EPYK	**Eagle Plains**	**70.77**	**25**	P	P	06 50 58.4	0.0
INK	**Inuvik**	**71.26**	**23**	P	P	06 51 01.3	0.0
INK				PcP	PcP	06 51 20.4	+0.2
FIA1	**FINESS Array S**	**71.62**	**330**	P	P	06 51 04.2	+0.5
FIA1				IAmb	IAmb	06 51 05.3	
	comp=Z,5.2nm,0.7s						
FINES	**FINESS Array B**	**71.63**	**330**	P	P	06 51 03.3	-0.4
	comp=Z,4.4nm,0.6s,baz=69,slow=6.3,SNR=16						
AKASG	**Malin Array Be**	**73.56**	**319**	P	P	06 51 14.4	-0.9
	comp=Z,1.6nm,0.5s,baz=57,slow=6.4,SNR=13						
AKBB	**Malin Array Si**	**73.56**	**319**	P	P	06 51 14.3	-1.0
AKBB				IAmb	IAmb	06 51 15.4	
	comp=Z,8.3nm,1.2s						
BR131	**Keskin Array S**	**74.37**	**307**	P	P	06 51 20.7	+0.3
BR131				IAmb	IAmb	06 51 21.3	
	comp=Z,9.7nm,0.8s						
BRTR	**Keskin Array B**	**74.37**	**307**	P	P	06 51 20.7	+0.3
	comp=Z,8.7nm,0.8s,baz=91,slow=6.2,SNR=28						
ANTO	**Ankara**	**74.93**	**307**	P	P	06 51 23.6	+0.1
DIB	**Dawson Inlet,**	**77.83**	**37**	P	P	06 51 39.7	+0.2
KWP	**Kalwaria Pacla**	**77.84**	**319**	P	P	06 51 39.3	-0.4
KWP				IAmb	IAmb	06 51 41.0	
	comp=Z,11nm,1.0s						
ELL	**Elmali**	**78.19**	**305**	P	P	06 51 42.1	+0.1
NB2	**NORSAR Subarra**	**78.28**	**333**	P	P	06 51 40.9	-1.0
	comp=Z,4.4nm,0.9s,baz=53,slow=6.2						
NOA	**NORSAR Array B**	**78.28**	**333**	P	P	06 51 41.0	-1.0
	comp=Z,2.6nm,0.8s,baz=56,slow=5.7,SNR=12						
VTS	**Vitosha**	**80.49**	**313**	P	P	06 51 55.1	+0.7
VTS				IAmb	IAmb	06 51 55.8	
	comp=Z,7.7nm,0.8s						
VYHS	**Vyhne**	**80.63**	**319**	*e*P	P	06 51 55.4	+0.6
YKA	**Yellowknife Ar**	**80.98**	**24**	P	P	06 51 55.9	-0.4
	comp=Z,1.4nm,0.6s,baz=307,slow=4.4,SNR=39						
LIT	**Litokhoron**	**82.10**	**311**	P	P	06 52 01.8	-1.0
LIT				IAmb	IAmb	06 52 03.2	
	comp=Z,7.0nm,0.6s						
AGG	**Agios Georgios**	**82.69**	**310**	P	P	06 52 04.6	-1.2
GEC2	**GERESS Array S**	**83.42**	**321**	P	P	06 52 09.7	+0.2
GERES	**GERESS Array B**	**83.42**	**321**	P	P	06 52 09.3	-0.2
	comp=Z,1.5nm,0.8s,baz=45,slow=4.0,SNR=5.3						
ITM	**Ithomi**	**83.81**	**308**	P	P	06 52 10.3	-1.3
WALA	**Waterton Lakes**	**89.86**	**34**	P	P	06 52 42.6	+1.9
WALA				IAmb	IAmb	06 52 43.1	
	comp=Z,4.1nm,0.8s						
FCC	**Fort Churchill**	**90.51**	**19**	P	P	06 52 42.9	-0.5
FCC				IAmb	IAmb	06 52 43.7	
	comp=Z,5.2nm,0.8s						
FFC	**Flin Flon**	**91.11**	**25**	P	P	06 52 46.3	0.0
KEST	**Kesra**	**93.26**	**312**	P	P	06 52 56.5	-0.2
	comp=Z,2.6nm,0.7s,baz=298,slow=8.1,SNR=3.6						
KEST	**Kesra**	**93.26**	**312**	P	P	06 52 55.8	-0.9
NVAR	**Mina Array Bea**	**93.97**	**44**	P	P	06 53 00.8	+0.7
	comp=Z,0.4nm,0.6s,baz=329,slow=5.5,SNR=3.6						
RUSC	**La Rusia**	**144.89**	**30**		**PKPab**	06 59 18.3	-0.6
PTGA	**Pitinga**	**155.26**	**9**	PKPab	**PKPab**	06 59 59.4	-1.1

*IDC **09** 06:48:04.3±2.7,7.84S×119.62E,h0km,mb3.2/2, mb1 3.6/3,mb1mx3.4/27,mbtmp3.4/3,ML3.7/1,Error ellipse: s-maj=270.5km s-min=28.2km az=53.0*
*DJA **09** 06:48:21.8±1.1,8.3S±3.3×11.9E±.1,h21km±10km,M3.8/7, mb4.0/3,MLv3.6/7*

ISC 09 06:48:19.5±1.0,8.60S±0.08×119.34E±0.05,h170km,n10, σ1§42/14,Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.03**	**177**	P		**Pn**	**06 49 46.0**	**-0.5**
WBSI				S		**Sn**	**06 49 04.4**	**-3.0**
PLAI	**Plampang**	**1.56**	**262**	P		**Pn**	**06 48 51.5**	**+0.3**
PLAI				S		**Sn**	**06 49 13.3**	**-2.4**
BASI	**Baing, Sumba**	**2.02**	**143**	P		**Pn**	**06 48 56.3**	**+0.3**
BASI				S		**Sn**	**06 49 24.2**	**-0.2**
EDFI	**Ende, Flores**	**2.33**	**94**	P		**Pn**	**06 48 59.5**	**-0.2**
EDFI				S		**Sn**	**06 49 29.5**	**-1.3**
BKSI	**Bulukumba**	**3.35**	**13**	P		**Pn**	**06 49 11.1**	**-1.0**
SOEI	**Soe**	**5.00**	**104**	P		**Pn**	**06 49 34.7**	**+1.4**
	0.2nm21nm,0.4s							
JAGI	**Jajag, Banyuwa**	**5.13**	**271**	P		**Pn**	**06 49 35.8**	**+0.8**
	0.2nm22nm,1.2s							
JAGI				S		**Sn**	**06 50 34.2**	**0.0**
	0.2nm22nm,1.2s							
WRA	**Warramunga Arr**	**18.38**	**129**	P		**Pn**	**06 52 24.1**	**+0.5**
	0.3nm,0.3s,baz=310,slow=13,SNR=2.0							
ASAR	**Alice Springs**	**20.46**	**139**	P		Pn	06 52 48.0	-0.6
	0.4nm,0.5s,baz=314,slow=9.6,SNR=8.2							
MKAR	**Makanchi Array**	**64.26**	**333**	P		**P**	**06 58 37.7**	**+1.3**
	0.4nm,0.6s,baz=143,slow=7.1,SNR=4.7							

*SNET **09** 07:01:19.7±0.4, 13.31N×89.97W,h34km±127km,MD2.8*
*GCG **09** 07:01:20.5±0.6, 13.35N×90.22W,h23km±6km, MD3.5*

ISC 09 07:01:17.0±2.9,13.3N±0.1×90.01W±0.07,h14km±15km, n10,σ0§61/15,1C-1D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.68**	**34**	↓*i*P		**Pn**	**07 01 32.6**	**+0.2**
SBLS				*e*S		**Sn**	**07 01 43.1**	**+0.2**
SNJE	**San Jose**	**0.71**	**34**	*e*P		**Pn**	**07 01 33.0**	**+0.2**
SNJE				*e*S		**Sn**	**07 01 43.6**	**-0.1**
RTR	**El Retiro**	**0.72**	**30**	*e*P		**Pn**	**07 01 33.3**	**+0.4**
IXG	**Ixpaco**	**0.99**	**335**	↑*i*P		**Pn**	**07 01 36.5**	**-0.1**
LFRS	**El Faro**	**0.99**	**69**	*e*P		**Pn**	**07 01 36.7**	**+0.1**
LFRS				*e*S		**Sn**	**07 01 49.9**	**-0.5**
LBRS	**Las Brisas**	**1.05**	**64**	*e*P		**Pn**	**07 01 37.7**	**+0.3**
MTO3	**Montecristo**	**1.29**	**29**	*e*P		**Pb**	**07 01 41.2**	**+0.1**
NBG	**Las Nubes**	**1.35**	**346**	*e*P		**Pg**	**07 01 43.0**	**+0.1**
NBG				*e*S		**Sn**	**07 02 00.8**	**+1.3**
FUG	**Fuego 3**	**1.42**	**326**	*e*P		**Pn**	**07 01 42.4**	**-0.2**
FUG				*e*S		**Sb**	**07 02 00.2**	**-1.2**
STG3	**Santiaguito 3,**	**2.08**	**314**	*e*P		**Pn**	**07 01 52.2**	**+0.5**

*SNET **09** 07:09:08.2±0.5, 13.24N×90.03W,h57km±52km,MD2.9*
*GCG **09** 07:09:09.2±0.7, 13.36N×90.20W,h22km±6km,MD3.6*

ISC 09 07:09:08.5±2.5,13.3N±0.2×90.00W±0.07,h58km,n9, σ0§90/13,1C-1D,El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.64**	**34**	↓*i*P		**Pn**	**07 09 21.4**	**-0.8**
SBLS				*e*S		**Sn**	**07 09 32.3**	**+0.2**
SNJE	**San Jose**	**0.67**	**34**	*e*P		**Pn**	**07 09 21.8**	**-0.8**
SNJE				*e*S		**Sn**	**07 09 32.3**	**-0.5**
RTR	**El Retiro**	**0.68**	**30**	*e*P		**Pn**	**07 09 22.0**	**-0.6**
IXG	**Ixpaco**	**0.96**	**333**	↑*i*P		**Pn**	**07 09 25.3**	**-0.9**
LBRS	**Las Brisas**	**1.02**	**65**	*e*P		**Pn**	**07 09 26.6**	**-0.2**
NBG	**Las Nubes**	**1.32**	**345**	*e*P		**Pn**	**07 09 31.9**	**+0.9**
NBG				*e*S		**Sn**	**07 09 49.6**	**+1.9**
FUG	**Fuego 3**	**1.40**	**324**	*e*P		**Pn**	**07 09 31.2**	**-0.8**
FUG				*e*S		**Sn**	**07 09 49.3**	**-0.3**
PACA	**Pacayal**	**1.64**	**84**	*e*P		**Pn**	**07 09 35.6**	**+0.4**
STG3	**Santiaguito 3,**	**2.07**	**313**	*e*P		**Pn**	**07 09 41.2**	**+0.1**

*IDC **09** 07:11:44.3±0.8,59.6S×26.13W,h0km,mb4.0/6, mb1 4.2/7,mb1mx4.0/29,mbtmp4.1/7,ML4.5/1,MS3.5/4, Ms1 3.5/4,ms1mx3.0/23,Error ellipse: s-maj=32.8km s-min=21.6km az=54.0*
*NEIC **09** 07:11:56.0±2.3,59.9S±0.1×26.3W±0.1,h94km±6km, mb4.4/17,Error ellipse: s-maj=21.6km s-min=7.6km az=199.0*

ISC 09 07:11:55.2±0.6,60.1S±0.1×26.3W±0.1,h100km,n43, σ1§58/34,mb4.2/12,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**8.05**	**312**	Pn		**Pn**	**07 13 49.5**	**+0.3**
VNA1	**Neumayer--Stat**	**12.88**	**152**	P		**Pn**	**07 14 54.4**	**+0.3**
VNA3	**Neumayer Olymp**	**13.02**	**156**	P		**Pn**	**07 14 56.0**	**0.0**
VNA2	**Neumayer--Watz**	**13.28**	**152**	P		**Pn**	**07 15 00.5**	**+1.2**
SNAA	**Sanae**	**14.87**	**151**	P		**P**	**07 15 20.9**	**-2.3**
SNAA	**Sanae**	**14.87**	**151**	Pn		**Pn**	**07 15 20.2**	**+0.3**
	2.1nm,0.3s,baz=317,slow=17,SNR=48							
SNAA				Sn		Sn	07 17 53.9	-10
	0.1nm,0.3s,baz=324,slow=19,SNR=1.8							
SNAA	**Sanae**	**14.87**	**151**			**Pn**	**07 15 20.5**	**+0.6**
EFI	**East Falkland**	**19.54**	**282**	P		**P**	**07 16 14.1**	**-0.3**
EFI				IAmb		IAmb	07 16 33.3	
	comp=Z,50nm,1.2s							
QSPA	**South Pole Qui**	**30.10**	**180**	P		P	07 18 01.1	+6.1
	comp=Z,1.2nm,0.5s,baz=206,slow=1.3,SNR=18							
QSPA	**South Pole Qui**	**30.10**	**180**	P		P	07 18 01.3	+6.3
PLCA	**Paso Flores**	**33.36**	**285**	P		**P**	**07 18 23.9**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=158,slow=5.3,SNR=5.8							
PLCA	**Paso Flores**	**33.36**	**285**	P		**P**	**07 18 23.2**	**-0.4**
PLCA				IAmb		IAmb	07 18 29.0	
	comp=Z,8.0nm,1.4s							
LC01	**Cunco**	**35.43**	**286**	P		**P**	**07 18 40.6**	**-0.7**
LC01				IAmb		IAmb	07 18 43.6	
	comp=Z,5.6nm,1.3s							
MT02	**Curacav**	**39.65**	**292**	P		**P**	**07 19 17.3**	**+0.3**
MT02				IAmb		IAmb	07 19 18.6	
	comp=Z,9.3nm,1.1s							
CFA	**Coronel Fontan**	**39.72**	**297**	P		**P**	**07 19 16.6**	**-1.0**
	comp=Z,1.0nm,0.5s,baz=168,slow=10,SNR=4.5							
ROC1	**El Roble**	**39.82**	**293**	P		**P**	**07 19 21.5**	**+2.8**
CPUP	**Villa Florida**	**39.93**	**314**	P		**P**	**07 19 18.1**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=143,slow=4.2,SNR=4.4							
CPUP	**Villa Florida**	**39.93**	**314**	P		**P**	**07 19 19.3**	**0.0**
CPUP				IAmb		IAmb	07 19 32.6	
	comp=Z,7.0nm,1.4s							
CO04	**Los Peladeros**	**40.59**	**293**	P		**P**	**07 19 27.0**	**+2.0**
CO02	**Combarbal**	**41.30**	**294**	P		**P**	**07 19 31.4**	**+0.7**
CO01	**Juntas del Tor**	**41.93**	**296**	P		**P**	**07 19 37.3**	**+1.2**
AC05	**El Transito**	**42.99**	**297**	P		**P**	**07 19 45.0**	**+0.5**
AC05				IAmb		IAmb	07 20 02.1	
	comp=Z,3.6nm,0.7s							
CRZF	**Crozet Islands**	**45.88**	**109**	P		**P**	**07 20 09.8**	**+2.7**
BDFB	**Brasilia**	**47.16**	**331**	LR		LR	07 37 03.9	
	comp=Z,46nm,19.6s,baz=93,slow=32							
LVC	**Limon Verde**	**47.83**	**302**	P		**P**	**07 20 24.2**	**+1.3**
LVC				IAmb		IAmb	07 20 37.8	
	comp=Z,5.7nm,1.1s							
PB07	**IPOC Station P**	**49.02**	**302**	P		**P**	**07 20 31.0**	**-0.9**
PB07				IAmb		IAmb	07 20 36.8	
	comp=Z,4.8nm,0.8s							
PB01	**IPOC Station P**	**49.46**	**303**	P		**P**	**07 20 35.0**	**-0.2**
GO01	**Chusmiza**	**50.56**	**304**	P		**P**	**07 20 44.0**	**+0.1**
GO01				IAmb		IAmb	07 20 44.4	
	comp=Z,1.8nm,0.8s							
MNMC	**Minye Minye**	**51.21**	**304**	P		**P**	**07 20 48.8**	**+0.2**
H10N1	**ASCENSION HYDR**	**52.93**	**15**	T		T	08 17 55.7	
	baz=186							
H10N3	**ASCENSION HYDR**	**52.94**	**15**	T		T	08 17 52.4	
	baz=186,SNR=3.5							
H10N2	**ASCENSION HYDR**	**52.95**	**15**	T		T	08 17 53.0	
	baz=186							
PTGA	**Pitinga**	**64.69**	**322**	LR		LR	07 50 02.6	
	comp=Z,28nm,19.4s,baz=154,slow=36							
TORD	**Torodi Ar. Bea**	**76.42**	**28**	P		**P**	**07 23 33.8**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=199,slow=6.4,SNR=8.6							
ASAR	**Alice Springs**	**94.95**	**162**	P		**P**	**07 25 09.7**	**+3.5**
	comp=Z,0.4nm,0.6s,baz=177,slow=3.8,SNR=4.5							
ASAR				LR		LR	08 06 45.5	
	comp=Z,26nm,21.8s,baz=130,slow=35							
WRA	**Warramunga Arr**	**98.67**	**162**	LR		LR	08 09 33.9	
	comp=Z,24nm,19.2s,baz=50,slow=35							
ARCES	**ARCESS Array B**	**134.56**	**23**	PKP		**PKiKP**	**07 31 00.7**	**-0.6**
	comp=Z,15nm,1.4s,baz=198,slow=1.9,SNR=5.0							
YKA	**Yellowknife Ar**	**139.45**	**314**	PKP		**PKiKP**	**07 31 09.5**	**-1.9**
	comp=Z,0.2nm,0.6s,baz=130,slow=2.7,SNR=6.3							
ZALV	**Zalesovo Beam**	**143.61**	**68**	PKhKP		PKPpre	07 31 15.7	
	comp=Z,0.4nm,0.3s,baz=216,slow=4.6,SNR=2.9							
JNU	**Nakatsue**	**149.09**	**141**	PKPbc		**PKiKP**	**07 31 32.6**	**+0.3**
	comp=Z,7.0nm,0.9s,baz=202,slow=11,SNR=2.9							
JNU	**Nakatsue**	**149.09**	**141**			**PKPab**	**07 31 32.9**	**-2.8**
SONM	**Songino Array**	**150.28**	**93**	PKPbc		**PKPab**	**07 31 36.1**	**-4.2**
	comp=Z,1.4nm,0.6s,baz=236,slow=2.3,SNR=6.2							
ILAR	**Eielson Array**	**153.04**	**306**	PKPbc		**PKiKP**	**07 31 40.4**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=150,slow=2.2,SNR=6.5							

*IDC **09** 07:12:30.2±1.0, 19.64N×99.53E,h0km,mb3.9/6, mb1 3.9/6,mb1mx3.6/54,mbtmp3.9/6,MS3.2/6,Ms1 3.2/6, ms1mx2.8/40,Error ellipse: s-maj=14.5km s-min=11.6km az=81.0*
*NEIC **09** 07:12:32.5±2.0, 19.61N±0.04×99.42E±0.08,h10km±1km, mb4.1/9,Error ellipse: s-maj=14.1km s-min=3.3km az=115.0*

ISC 09 07:12:32.5±0.7,19.62N±0.04×99.54E±0.05,h10km,n45, σ1§35/41,mb4.0/11,MS3.2/6,Thailand

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PAYA	**Payao**	**0.41**	**130**	P		**Pg**	**07 12 39.5**	**-1.0**
CMMT	**Chiang Mai**	**0.98**	**215**	P		**Pg**	**07 12 50.0**	**-1.4**
CMMT				S		**Sb**	**07 13 06.8**	**+2.2**
CHTO	**Chiang Mai**	**0.98**	**215**			**Pg**	**07 12 50.0**	**-1.4**
CHTO				Sn		**Sg**	**07 13 04.9**	**+0.7**
LAMP	**Lampang**	**1.10**	**175**	P		**Pg**	**07 12 52.2**	**-1.4**
LAMP				S		**Sg**	**07 13 09.2**	**+1.3**
CM09	**Chiang Mai Arr**	**1.28**	**204**	P		**Pn**	**07 12 55.5**	**-1.0**
CM31	**Chiang Mai Arr**	**1.29**	**206**	P		**Pn**	**07 12 55.5**	**-1.1**
CM31	**Chiang Mai Arr**	**1.29**	**206**			**Pn**	**07 12 55.7**	**-0.9**
CM31						**Sb**	**07 13 13.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**1.29**	**206**	Pg		**Pn**	**07 12 55.6**	**-1.0**
	196nm,0.3s,baz=15,slow=17,SNR=598							
CMAR				Lg		Lg	07 13 11.4	
	196nm,0.3s,baz=24,slow=31,SNR=10							
PHRA	**Phrae**	**1.29**	**150**	P		**Pn**	**07 12 55.6**	**-1.1**
CM02	**Chiang Mai Arr**	**1.31**	**206**	P		**Pn**	**07 12 55.8**	**-1.1**
CM01	**Chiang Mai Arr**	**1.31**	**205**	P		**Pn**	**07 12 55.9**	**-1.1**
CM04	**Chiang Mai Arr**	**1.33**	**204**	P		**Pn**	**07 12 56.1**	**-1.0**
CM13	**Chiang Mai Arr**	**1.34**	**207**	P		**Pn**	**07 12 56.1**	**-1.2**
CM05	**Chiang Mai Arr**	**1.34**	**205**	P		**Pn**	**07 12 56.2**	**-1.1**
NANT	**Nan**	**1.37**	**127**	P		Pn	07 12 55.2	-2.5
MHMT	**Maesarieng**	**2.09**	**227**	P		**Pn**	**07 13 10.6**	**+3.0**
UTTA	**Uttaradit**	**2.10**	**153**	P		**Pn**	**07 13 06.6**	**-1.2**
PHIT	**Phitsanulok**	**2.56**	**161**	P		**Pn**	**07 13 13.2**	**-0.8**
UMPA	**Umpang Tak**	**3.46**	**191**	P		**Pg**	**07 13 39.5**	**+0.7**
NONG	**Nongkai**	**3.75**	**114**	P		**Pn**	**07 13 29.3**	**-1.1**
CHAI	**Chaiyaphum**	**4.37**	**147**	P		**Pn**	**07 13 41.1**	**+2.0**
SLVN	**Son La**	**4.43**	**67**			**Pn**	**07 13 43.0**	**+3.1**
SHL	**Shillong**	**9.22**	**311**			**Pn**	**07 14 44.8**	**-1.0**
KULM	**Kulim**	**14.29**	**176**	P		**P**	**07 16 03.8**	**+1.5**
RPSI	**Rantau Prapat**	**16.83**	**182**	P		**Pn**	**07 16 30.2**	**+1.8**
LEM	**Lembang**	**27.46**	**162**	LR		LR	07 29 21.3	
	comp=Z,82nm,19.9s,baz=138,slow=37							
DAV	**Davao City (W)**	**28.19**	**113**	LR		LR	07 29 46.7	
	comp=Z,47nm,20.5s,baz=221,slow=37							
SONM	**Songino Array**	**28.69**	**10**	P		**P**	**07 18 28.4**	**-1.4**
	0.7nm,0.4s,baz=187,slow=10,SNR=5.8							
KDJ	**Kajisay**	**29.36**	**325**	P		**P**	**07 18 37.4**	**+1.5**
KDJ				IAmb		IAmb	07 18 38.5	
	comp=Z,4.2nm,0.8s							
KS19	**Wonju Array Si**	**30.43**	**48**	P		**P**	**07 18 44.1**	**-1.1**
KSRS	**Korea Array**	**30.45**	**48**	LR		LR	07 32 52.0	
	comp=Z,1.1nm,18.3s,baz=170,slow=40							
MK31	**Makanchi Array**	**30.56**	**336**	P		**P**	**07 18 46.1**	**-0.2**
MK31				IAmb		IAmb	07 18 48.1	
	comp=Z,1.8nm,0.8s							
MKAR	**Makanchi Array**	**30.56**	**336**	P		**P**	**07 18 45.6**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=140,slow=8.6,SNR=17							
AAK	**Ala-Archa**	**31.19**	**323**	P		**P**	**07 18 52.6**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=122,slow=8.7,SNR=5.2							
AAK	**Ala-Archa**	**31.19**	**323**	P		**P**	**07 18 52.9**	**+0.8**
KKAR	**Karatay Array**	**33.80**	**320**	P		**P**	**07 19 14.9**	**+0.1**
KURBB	**Kurchatov Arra**	**35.13**	**337**

MDCM	Deadman Creek	0.28	326		Pg	07 25 21.2	-0.2
BENR	Benton	0.32	42		Pg	07 25 21.9	-0.3
MCDM	Chidago Canyon	0.33	77		Pg	07 25 22.5	+0.1
MRCM	Red Rock Canyo	0.33	54		Pg	07 25 22.3	-0.2
MFBM	Five Bridges	0.34	98		Pg	07 25 22.8	+0.4
KCC	Kaiser Creek	0.41	248		Pg	07 25 23.6	-0.1
KCC					Sg	07 25 28.9	-0.1
MLNR	Milner Canyon	0.42	74		Pg	07 25 23.9	-0.1
POCCA	Poleta Canyon	0.47	104		Pg	07 25 24.8	-0.1
BONR	Boundary Peak	0.65	42		Pg	07 25 28.0	-0.3
TIN	Tinemaha, Big baz=312,SNR=16	0.65	130	P	Pg	07 25 28.3	0.0
TIN				S	Sg	07 25 37.3	+0.6
	baz=312						
TIN	Tinemaha, Big	0.65	130		Pg	07 25 28.4	0.0
HELL	Mitchell Peak,	0.81	190		Pg	07 25 31.0	-0.4
LHV	Little Huntoon	0.82	19		Pg	07 25 31.3	-0.4
FRI	Friant	0.84	235		Pg	07 25 31.5	-0.5
WAKR	Walker	1.13	336		Pg	07 25 37.0	-0.6
RYN	Ryan	1.18	12		Pg	07 25 37.9	-0.7
CWC	Cottonwood Cre baz=330	1.20	149	P	Pg	07 25 38.2	-0.8
CWC				S	Sg	07 25 53.8	-0.8
	baz=330						
CWC	Cottonwood Cre	1.20	149		Pg	07 25 38.1	-0.8
MRHM	Rocky Hill	1.20	189		Pg	07 25 37.7	-1.3
RCTC	Rector, Farmer	1.21	195		Pg	07 25 38.1	-1.0
VOG	Valley Oaks Go baz=20	1.23	201	P	Pg	07 25 38.6	-0.9
VOG				S	Sg	07 25 55.4	0.0
	baz=20						
MYLM	Yosemite Lake	1.26	266		Pg	07 25 39.1	-1.0
GRAC	Grapevine Rang baz=293,SNR=46	1.27	112	P	Pn	07 25 39.9	-0.9
GRAC				S	Sg	07 25 56.9	0.0
	baz=293						
SPG2	Springville 2	1.27	177		Pn	07 25 39.2	-1.5
CMB	Columbia Colle	1.34	295		Pn	07 25 40.0	-1.7
CMB	Columbia Colle	1.34	295		Pn	07 25 39.7	-2.0
MCUB	Copperopolis B	1.49	290		Pn	07 25 42.8	-0.9
PWMM	Westland Maint	1.51	227		Pn	07 25 44.2	+0.3
BFC	Buffalo Canyon	1.54	337		Pn	07 25 44.2	-0.3
VES	Vestal, Richgr baz=6.5,SNR=60	1.64	187	Pb	Pn	07 25 45.7	+0.1
VES				Sb	Sn	07 26 07.8	+0.4
	baz=6.5						
VES	Vestal, Richgr	1.64	187		Pn	07 25 45.8	+0.1
KVN	Kaiserville	1.68	20	Pn	Pn	07 25 45.3	-1.1
BRMM	Rolling Bench	1.70	249		Pn	07 25 47.2	+0.6
WCHM	Chimney Peak	1.71	158		Pn	07 25 47.1	+0.2
PARM	Anticline Ridg	1.71	225		Pn	07 25 47.3	+0.5
PNTR	Pine Nut	1.72	340		Pn	07 25 46.7	-0.3
VPEM	Volcano Peak E	1.73	151		Pn	07 25 48.0	+0.9
PKEM	Kettleman Hill	1.74	216		Pn	07 25 47.9	+0.8
WASM	Alta Sierra Ca	1.75	172		Pn	07 25 48.0	+0.5
BMSM	Mercy Hot Spri	1.76	243		Pn	07 25 47.8	+0.4
MPMC	Manual Prospec baz=323	1.79	142	Pb	Pn	07 25 48.3	+0.4
MPMC				Sg	Sg	07 26 13.8	+0.4
	baz=323						
SCKWR	San Luis Creek	1.80	261		Pn	07 25 48.7	+0.8
ISA	Isabella, Lake baz=351,SNR=44	1.83	170	Pb	Pn	07 25 49.3	+0.8
ISA				Sb	Sb	07 26 13.5	-0.1
	baz=351						
ISA	Isabella, Lake	1.83	170	Pn	Pn	07 25 49.3	+0.8
WORM	Onyx Ranch	1.84	165		Pn	07 25 49.5	+0.9
TOW	Tower One	1.88	152		Pn	07 25 50.2	+1.2
RUBR	Rubicon Trail	1.88	327	Pn	Pn	07 25 50.4	+1.1
FURC	Furnace Creek, baz=303	1.88	122	Sg	Sg	07 26 17.1	+0.8
SFJWR	San Luis Fatjo	1.90	258		Pn	07 25 50.0	+0.6
VCNR	Virginia City	1.92	341		Pb	07 25 51.8	0.0
PHRM	Hernandez Vall	1.93	236		Pn	07 25 50.2	+0.5
BAVM	Antelope Valle	1.93	245		Pn	07 25 50.2	+0.4
SLD	San Luis Dam	1.94	259		Pn	07 25 50.1	+0.3
WOFM	Oak Flat	1.94	177		Pn	07 25 50.9	+0.9
CTM	Castle Mountai	1.95	218		Pn	07 25 50.9	+0.8
BBGB	Big Mountain B	1.97	244		Pn	07 25 51.1	+0.8
CMPM	Mikes Peak	1.97	267		Pn	07 25 50.6	+0.3
BEMM	Emmet	1.97	246		Pn	07 25 50.9	+0.6
HPCM	Pacheco Lake	1.98	259		Pn	07 25 50.8	+0.3
PSRM	Scobie Ranch	1.98	216		Pn	07 25 51.0	+0.5
PSMM	Smith Mountain	1.98	226		Pn	07 25 51.0	+0.4
PACP	Pacheco Peak	2.00	257		Pn	07 25 51.5	+0.7
PHFM	Heflinger Ranc	2.02	219		Pn	07 25 51.5	+0.5
AASM	Arroyo Seco	2.03	299		Pn	07 25 52.0	+1.0
BBNM	San Benito	2.03	242		Pn	07 25 52.4	+1.3
BEHM	Elkhorn Ranch	2.03	247		Pn	07 25 52.1	+1.0
LRV	Little Rabbit	2.03	240		Pn	07 25 52.0	+0.8
PBWM	Bitterwater Cr	2.03	236		Pn	07 25 52.3	+1.2
GHC	Gold Hill	2.04	217		Pn	07 25 51.2	-0.1
PSTM	Stockdale Moun	2.04	221		Pn	07 25 51.5	+0.3
PKD	Bear Valley Ra	2.05	222		Pn	07 25 51.5	+0.2
PSNM	Stone Corral	2.05	215		Pn	07 25 51.5	+0.1
HLTM	Lone Tree Road	2.05	254		Pn	07 25 52.0	+0.6
PHPM	Hope Ranch	2.06	224		Pn	07 25 51.7	+0.2
PVCM	Vineyard Canyo	2.06	222		Pn	07 25 51.8	+0.2
HJSM	John Smith Roa	2.07	252		Pn	07 25 52.4	+0.9
BHRM	Hodges Ranch	2.07	250		Pn	07 25 53.0	+1.4
THIS	South End of C	2.07	213		Pn	07 25 52.0	+0.3
PAGB	Antelope Grade	2.08	213		Pn	07 25 52.1	+0.4
BVL	Bear Valley	2.08	245		Pn	07 25 52.4	+0.7
PKLM	Kerr Lake	2.08	216		Pn	07 25 52.1	+0.3
PCMM	Cholame Hills	2.09	217		Pn	07 25 52.2	+0.2
HFEM	San Felipe	2.10	257		Pn	07 25 52.6	+0.6
BLRM	Lewis Ranch	2.10	248		Pn	07 25 53.4	+1.3
BPIM	Pinnacles	2.10	243		Pn	07 25 52.6	+0.5
CMMM	Mount Mocho	2.11	270		Pn	07 25 52.6	+0.4
GHS	Gilroy Hot Spr	2.11	260		Pn	07 25 52.9	+0.7
BSLM	Silva Ranch	2.12	251		Pn	07 25 53.3	+1.0
PTRM	Twissleman Ran	2.12	212		Pn	07 25 52.9	+0.5
TRAM	Private Proper	2.13	213		Pn	07 25 52.9	+0.4
PWKM	Work Ranch	2.13	219		Pn	07 25 52.8	+0.3
PMCM	McMillan Canyo	2.13	216		Pn	07 25 53.0	+0.4
BAKC	Calstate	2.14	186		Pn	07 25 54.2	+1.6
BCGM	Cienega Road	2.14	250		Pn	07 25 53.3	+0.7
TPNV	Topopah Spring baz=285,SNR=38	2.14	103	P	Pn	07 25 52.1	-0.6
TPNV				Sg	Sg	07 26 25.4	+0.7
	baz=285						
TPNV	Topopah Spring	2.14	103		Pn	07 25 52.1	-0.6
ARN	Arnold Ranch	2.14	267		Pn	07 25 53.2	+0.6
PPN	Portuguese Can	2.14	222		Pn	07 25 53.2	+0.4
CDC	Canada Road	2.15	259		Pn	07 25 53.7	+1.0
BVYM	Vineyard	2.18	251		Pn	07 25 53.9	+0.8
TCHL	Shandon	2.18	215		Pn	07 25 53.8	+0.7
PSAM	San Ardo	2.19	229		Pn	07 25 53.7	+0.5
OCR	O'Connell Ranc	2.20	256		Pn	07 25 53.9	+0.6
SAO	San Andreas Ge	2.20	252		Pn	07 25 54.0	+0.7
SAO	San Andreas Ge	2.20	252	Pn	Pn	07 25 53.6	+0.3
LRMC	Laurel Mtn Rad baz=335	2.20	154	Sb	Sb	07 26 24.9	+0.6
SCZ	Santa Cruz	2.23	248		Pn	07 25 54.4	+0.6
MHC	Mount Hamilton	2.23	267		Pn	07 25 54.7	+0.8
CMLM	Mount Lewis	2.23	271		Pn	07 25 54.8	+0.9
FRP	Fremont Peak	2.23	252		Pn	07 25 54.3	+0.4
BJCM	Johnson Can.	2.24	246		Pn	07 25 54.6	+0.7
CSR	Chase Ranch	2.25	258		Pn	07 25 54.5	+0.4
TEJ	El Tejon	2.25	177		Pn	07 25 55.9	+1.8
HLPM	Lions Peak	2.26	260		Pn	07 25 55.1	+0.8
TSCN	Private Proper	2.28	213		Pn	07 25 55.2	+0.8
HJGM	San Juan Grade	2.28	254		Pn	07 25 54.9	+0.3
BSRM	Salinas Radio	2.29	250		Pn	07 25 54.9	+0.3
CARC	Carrizo Plain	2.31	201		Pn	07 25 55.6	+0.6
CBC	Chamberlain	2.31	257		Pn	07 25 55.7	+0.7
WENL	Wente Vineyard	2.32	274		Pn	07 25 57.0	+2.0
PCCM	Crazy Canyon	2.32	234		Pn	07 25 55.7	+0.7
JLAB	Laurel Hill	2.32	263		Pn	07 25 56.4	+1.2
HTUM	Tustin Road	2.33	255		Pn	07 25 55.1	0.0
BSMM	Soledad Missio	2.34	243		Pn	07 25 56.1	+0.7
ARVC	Arvin baz=360,SNR=8.8	2.34	180	Pb	Pn	07 25 57.6	+2.2
ARVC				Sb	Sb	07 26 28.2	0.0
	baz=360						
ARVC	Arvin	2.34	180		Pb	07 25 57.9	-0.9
SMMC	Simmler baz=23,SNR=9.0	2.35	204	P	Pn	07 25 55.9	+0.4
SMMC				Sb	Sb	07 26 28.2	-0.1
	baz=23						
SMMC	Simmler	2.35	204		Pn	07 25 56.3	+0.8
HCOM	Corn Cob Canyo	2.36	256		Pn	07 25 56.6	+1.0
PANM	San Antonio Re	2.37	225		Pn	07 25 56.4	+0.6
CMOB	Morgan Territo	2.37	279		Pn	07 25 56.4	+0.6
CVLM	Vallecito	2.38	275		Pn	07 25 57.5	+1.6
BPCNC	Pine Canyon	2.40	249		Pn	07 25 56.7	+0.6
PHSB	Hesperia Broad	2.42	228		Pn	07 25 56.8	+0.3
HAST	Hastings Reser	2.42	244		Pn	07 25 57.1	+0.6
BDM	Black Diamond	2.44	282		Pn	07 25 58.1	+1.4
JELB	Ellicott, Sant	2.44	258		Pn	07 25 57.0	+0.3
JUMM	Mount Umunhum	2.45	264		Pn	07 25 57.6	+0.6
RAMR	Ramage Ranch	2.46	222		Pn	07 25 57.4	+0.5
BCWM	Chews Ridge	2.47	243		Pn	07 25 57.9	+0.6
BCH	Branch Mountai	2.50	204		Pn	07 25 58.1	+0.5
JRGM	Rodeo Gulch Ro	2.53	261		Pn	07 25 58.3	+0.4
BLDC	Black Mountain	2.55	221		Pn	07 25 58.6	+0.3
BLDC	Black Mountain	2.55	221		Pn	07 25 58.8	+0.5
PAPM	Alder Peak	2.55	233		Pn	07 25 58.8	+0.4
JSGM	Saratoga Golf	2.56	267		Pn	07 25 59.1	+0.8
PTAM	Tassajara Cree	2.56	216		Pn	07 25 59.0	+0.5
CLCB	Lake Chabot	2.57	277		Pn	07 25 59.5	+1.0
BCW	Bitter Crk WRg	2.57	190		Pn	07 25 59.6	+0.9
PHCM	Hearst Castle	2.58	227		Pn	07 25 59.2	+0.5
BAPM	Anderson Peak	2.59	241		Pn	07 25 59.2	+0.3
SHOC	Shoshone, Teco baz=308	2.60	127	Sg	Sg	07 26 39.8	+0.4
HMOM	Monterey	2.61	251		Pn	07 25 59.7	+0.7
EFD	Emergency Oper	2.63	216		Pn	07 25 59.7	+0.4
ARDC	Alexander Ranc	2.64	221		Pn	07 25 60.0	+0.5
PCBM	Cambria	2.65	223		Pn	07 26 00.0	+0.5
BPOM	Post Ranch	2.65	243		Pn	07 25 59.9	+0.3
NADM	Allendale	2.66	293		Pn	07 26 02.3	+2.6
BRIB	Briones	2.66	281		Pn	07 26 00.8	+1.1
JFP	Foothills Park	2.66	269		Pn	07 26 00.2	+0.4
JJRM	Joaquin Road	2.67	268		Pn	07 26 00.3	+0.4
EDW2	Edwards Air Fo baz=346	2.68	165	Sb	Sb	07 26 39.4	+1.5
PKM	Mcpherson Peak baz=16	2.70	197	Sb	Sb	07 26 37.8	-0.8
JRSC	Jasper Ridge	2.70	269		Pn	07 26 00.7	+0.5
R11A	Troy Canyon, C baz=252,SNR=19	2.72	70	P	Pn	07 25 59.8	-1.0
R11A				Sb	Sb	07 26 41.7	+2.4
	baz=252						
R11A	Troy Canyon, C	2.72	70		Pn	07 25 59.5	-1.3
OSI	Osito Audit: C baz=358	2.86	178	Sb	Sb	07 26 43.0	-0.1
SHPR	Sheep Range	3.11	107		Pn	07 26 05.6	-0.4
ELK	Elko	4.30	40	Pn	Pn	07 26 21.6	-1.0
PFO	Pinyon Flats O	4.32	153	Pn	Pn	07 26 23.1	+0.4
XPFO	Pion Flat	4.32	152	Pn	Pn	07 26 23.5	+0.8
CCUT	Cedar City	4.36	87		Pn	07 26 22.2	-1.1
LCMT	Little Creek M	4.50	94		Pn	07 26 23.9	-1.2
SZCU	Shurtz Canyon	4.58	87	Pn	Pn	07 26 26.2	-0.1
KNB	Kanab	4.83	94	Pn	Pn	07 26 28.8	-0.9

*NNC **09** 07:33:36.8±0.4, 43°.20N×78°.15E, h1km±4km, mb2.5, mpv2.8, Error ellipse: s-maj=5.6km s-min=2.3km az=176.0*
*KRNET **09** 07:33:37.5±0.1, 43°.19N×78°.12E, h20km, mb2.2*
*SOME **09** 07:33:37.4, 43°.27N×78°.12E, h5km*

ISC 09 07:33:37.7±0.9, 43°.20N±0°.02×78°.12E±0°.01, h8km±8km, n49, σ0s85/97, 14C-12D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SATY	Saty 34nm,0.1s	0.26	124	eP		Pg	Pg	07 33 42.8	0.0
SATY				eS		Sg	Sg	07 33 46.9	+0.6
	82nm,0.1s								
SATY	Saty 34nm,0.1s	0.26	124	P		Pg	Pg	07 33 42.8	0.0
SATY				S		Sg	Sg	07 33 46.9	+0.6
	82nm,0.1s								
KURS	Kuram baz=7.0	0.29	8	eP		Pg	Pg	07 33 43.7	+0.3
KURS				eS		Sg	Sg	07 33 48.2	+0.9
	baz=7.0								
KURS	Kuram 7.3nm,0.0s	0.29	8	eP		Pg	Pg	07 33 43.7	+0.3
KURS				eS		Sg	Sg	07 33 48.1	+0.9
	2.1nm,0.1s								
ANVS	Anan'yevo baz=19	0.54	218	⇑iP		Pg	Pg	07 33 47.9	-0.2
ANVS				⇑iS		Sg	Sg	07 33 54.6	-0.5
	baz=19								
UZB	Uzynbulak baz=94	0.66	95	eP		Pg	Pg	07 33 49.7	-0.8
UZB				eS		Sg	Sg	07 33 58.7	-0.5
	baz=94								
UZB	Uzynbulak 6.2nm,0.1s	0.66	95	eP		Pg	Pg	07 33 49.7	-0.8
UZB				eS		Sg	Sg	07 33 58.8	-0.5
	17nm,0.1s								
UZB	Uzynbulak 6.2nm,0.1s	0.66	95	P		Pg	Pg	07 33 49.7	-0.8
UZB				S		Sg	Sg	07 33 58.7	-0.5
	17nm,0.1s								
KOTS	Kotyrbulak 10nm,0.1s	0.74	273	eP		Pg	Pg	07 33 51.7	-0.1
KOTS				eS		Sg	Sg	07 34 02.1	+0.6
	5.4nm,0.3s								
KOTS	Kotyrbulak 28nm,0.1s	0.74	273	P		Pg	Pg	07 33 51.5	-0.4
KOTS				S		Sg	Sg	07 34 02.0	+0.5
	5.4nm,0.3s								
PRZ	Przheval'sk baz=63	0.75	164	⇓iP		Pg	Pg	07 33 52.3	+0.2
PRZ				⇓iS		Sb	Sb	07 34 02.6	-0.9
	baz=63								
MDOK	Medeo baz=68	0.78	267	eP		Pg	Pg	07 33 52.4	-0.4
MDOK				eS		Sg	Sg	07 34 03.2	+0.2
	baz=68								
MDOK	Medeo 2.1nm,0.1s	0.78	267	eP		Pg	Pg	07 33 52.4	-0.4
MDOK				eS		Sg	Sg	07 34 03.1	+0.2
	7.0nm,0.1s								
MDOK	Medeo 1.8nm,0.2s	0.78	267	Pg		Pg	Pg	07 33 52.4	-0.4
MDOK				Lg		Lg	Lg	07 34 03.1	
	5.0nm,0.2s								
TNSS	Tian-Shan baz=60	0.87	259	eP		Pg	Pg	07 33 53.9	-0.6
TNSS				eS		Sg	Sg	07 34 05.8	-0.1
	baz=60								
TNSS	Tian-Shan 1.5nm,0.1s	0.87	259	eP		Pg	Pg	07 33 53.9	-0.6
TNSS				eS		Sg	Sg	07 34 05.7	-0.1
	6.0nm,0.3s								
TNSS	Tian-Shan 1.5nm,0.1s	0.87	259	P		Pg	Pg	07 33 53.6	-0.9
TNSS				S		Sg	Sg	07 34 05.5	-0.4
	6.0nm,0.3s								
MNBS	Baschi 5.3nm,0.1s	0.90	13	eP		Pg	Pg	07 33 54.8	-0.2
MNBS				eS		Sb	Sb	07 34 07.2	-0.6
	6.3nm,0.2s								
MNBS	Baschi 5.3nm,0.1s	0.90	13	P		Pg	Pg	07 33 54.8	-0.2
MNBS				S		Sb	Sb	07 34 07.1	-0.6
	6.3nm,0.2s								
SHLS	Shalkode 7.8nm,0.3s	0.98	92	P		Pn	Pn	07 33 59.7	+1.9
SHLS				S		Sn	Sn	07 34 15.7	+3.6
	5.3nm,0.4s								
PDGK	Podgornoye 1.9nm,0.2s	1.01	82	P		Pg	Pg	07 33 55.8	-1.3
PDGK				S		Sg	Sg	07 34 09.2	-1.1
	3.6nm,0.2s								
PDGK	Podgornoye 0.8nm,0.3s	1.01	82	⇑P		Pg	Pg	07 33 55.4	-1.6
PDGK				⇓S		Sg	Sg	07 34 09.0	-1.2
	1.2nm,0.3s								
ARXS	Arharly 1.1nm,0.2s	1.03	348	eP		Pg	Pg	07 33 56.6	-0.9
ARXS				eS		Sg	Sg	07 34 10.6	-0.4
	11nm,0.1s								
ARXS	Arharly 1.1nm,0.2s	1.03	348	P		Pg	Pg	07 33 56.6	-0.9
ARXS				S		Sg	Sg	07 34 10.5	-0.4
	11nm,0.1s								
IZV	Izvestkoviy baz=62	1.11	262	eP		Pg	Pg	07 33 58.4	-0.7
IZV				eS		Sg	Sg	07 34 13.5	-0.1
	baz=62								
IZV	Izvestkoviy 2.5nm,0.1s	1.11	262	eP		Pg	Pg	07 33 58.4	-0.7
IZV				eS		Sg	Sg	07 34 13.4	-0.1
	6.3nm,0.1s								
IZV	Izvestkoviy 2.5nm,0.1s	1.11	262	P		Pg	Pg	07 33 57.9	-1.1
IZV				S		Sg	Sg	07 34 13.2	-0.4
	9.5nm,0.3s								
KTBS	Karatobe 4.8nm,0.2s	1.16	296	eP		Pg	Pg	07 33 58.9	-1.1
KTBS				eS		Sg	Sg	07 34 14.4	-0.7
	5.7nm,0.4s								
KTBS	Karatobe 4.8nm,0.2s	1.16	296	P		Pg	Pg	07 33 58.9	-1.1
KTBS				S		Sg	Sg	07 34 14.3	-0.8
	5.7nm,0.4s								
KDJ	Kajisay baz=13	1.28	213	⇓iP		Pg	Pg	07 34 00.8	-1.4
KDJ				⇓iS		Sg	Sg	07 34 17.1	-1.6
	baz=13								
KUU	Kurty 1.2nm,0.1s	1.47	299	eP		Pn	Pn	07 34 04.2	-0.3
KUU				eS		Sb	Sb	07 34 23.4	-0.6
	3.7nm,0.1s								
KUU	Kurty 1.2nm,0.1s	1.47	299	P		Pn	Pn	07 34 04.0	-0.4
KUU				S		Sb	Sb	07 34 23.1	-0.9
	3.7nm,0.2s								
KST	Kastek 1.2nm,0.1s	1.59	265	eP		Pb	Pb	07 34 07.4	+0.1
KST				eS		Sg	Sg	07 34 29.0	+0.3
	3.2nm,0.3s								
KST	Kastek 1.9nm,0.3s	1.59	265	P		Pb	Pb	07 34 07.2	-0.1
KST				S		Sg	Sg	07 34 28.6	0.0
	3.0nm,0.4s								
KTMS	Ketmen 1.1nm,0.1s	1.65	81	eP		Pn	Pn	07 34 07.3	+0.2
KTMS				eS		Sn	Sn	07 34 28.6	+0.1
	1.7nm,0.1s								
KTMS	Ketmen 1.5nm,0.1s	1.65	81	P		Pn	Pn	07 34 06.8	-0.2
KTMS				S		Sn	Sn	07 34 27.9	-0.5
	1.7nm,0.1s								
DJR	Jarkent 0.7nm,0.1s	1.66	46	eP		Pb	Pb	07 34 07.8	-0.6
DJR				eS		Sb	Sb	07 34 29.6	+0.1
	5.3nm,0.1s								
DJR	Jarkent 1.0nm,0.2s	1.66	46	P		Pn	Pn	07 34 07.6	+0.5
DJR				S		Sb	Sb	07 34 29.7	+0.1
	5.0nm,0.3s								
ULHL	Ulahol baz=36	1.68	236	⇑iP		Pn	Pn	07 34 08.2	+0.6
ULHL				⇑iS		Sn	Sn	07 34 29.8	+0.4
	baz=36								
DGS	Degeres 1.0nm,0.2s	1.71	272	eP		Pb	Pb	07 34 09.4	-0.1
DGS				eS		Sg	Sg	07 34 32.3	-0.5
	4.3nm,0.4s								
DGS	Degeres 1.0nm,0.2s	1.71	272	P		Pb	Pb	07 34 09.4	-0.1
DGS				S		Sg	Sg	07 34 32.3	-0.5
	4.3nm,0.4s								
BOOM	Boomskoye usch baz=47	1.75	247	⇑iP		Pb	Pb	07 34 09.5	-0.7
BOOM				⇑iS		Sb	Sb	07 34 32.1	-0.3
	baz=47								
TKM2	Tokmak 2 baz=63	1.87	262	⇓iP		Pb	Pb	07 34 11.5	-0.7
TKM2				⇓iS		Sb	Sb	07 34 35.7	-0.1
	baz=63								
TKM2	Tokmak 2 0.2nm,0.3s	1.87	262	⇓Pn		Pn	Pn	07 34 10.4	+0.3
TKM2				⇑Sn		Sg	Sg	07 34 37.3	-0.4
	1.5nm,0.5s								
KBK	Karagaybulak baz=58	2.39	258	⇑iP		Pn	Pn	07 34 18.6	+1.3
KBK				⇑iS		Sn	Sn	07 34 47.9	+1.0
	baz=58								
CHMS	Chumysh baz=67	2.47	266	⇑iP		Pn	Pn	07 34 19.7	+1.4
CHMS				⇑iS		Sn	Sn	07 34 49.9	+1.2
	baz=67								
USP	Ospenovka baz=73	2.65	273	⇑iP		Pn	Pn	07 34 22.4	+1.7
USP				⇑iS		Sn	Sn	07 34 54.1	+1.2
	baz=73								
AAK	Ala-Archa baz=59	2.72	259	⇓iP		Pn	Pn	07 34 23.4	+1.6
AAK				⇓iS		Sn	Sn	07 34 55.8	+0.8
	baz=59								
AML	Almayashu baz=54	3.43	253	⇓iP		Pn	Pn	07 34 33.5	+1.7
AML				⇓iS		Sn	Sn	07 35 13.2	+0.3
	baz=54								

*IDC **09** 07:38:27.0±1.9, 37°.34N×135°.00E, h378km±31km, mb2.5/2, mb1 2.8/5, mb1mx2.5/41, mbtmp3.4/5, Error ellipse: s-maj=63.6km s-min=28.9km az=73.0*
*JMA **09** 07:38:29.7±0.1, 37°.21N×135°.17E, h375km, M3.4*

ISC 09 07:38:26.6±1.2, 37°.3N±0°.1×134°.8E±0°.2, h378km, n9, σ0s84/9, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr 0.1nm,0.3s,baz=289,slow=10,SNR=8.1	2.85	104	P		Pn	Pn	07 39 26.4	-0.5
JTNC	Tanabenakahech	3.53	169	eS		S	S	07 40 25.5	-1.0
JMM	Marumori	4.81	81	P		Pn	Pn	07 39 45.8	+0.3
JMK	Ichinoseki	5.34	70	P		Pn	Pn	07 39 51.6	+0.5
BSO1	Boso 1	5.67	116	P		Pn	Pn	07 39 54.3	+0.1
USRK	Ussuriysk Ar. baz=150,slow=9.9,SNR=5.0	7.22	344	P		Pn	Pn	07 40 12.4	+0.4
ASAJ	Asahikawa 0.8nm,0.3s,baz=243,slow=6.8,SNR=1.7	9.04	39	P		Pn	Pn	07 40 31.9	-1.2
WRA	Warramunga Arr 0.4nm,1.0s,baz=356,slow=7.7,SNR=4.8	56.93	180	P		P	P	07 47 34.5	+0.7

SPBG	**Spurr Blockage**	**1.25**	**13**		Pn	07 57 06.9	0.0
SPBG					Sn	07 57 26.2	+0.3
SLKM	**Skilak Lake**	**1.43**	**70**		Pn	07 57 08.3	-0.5
SLKM					Sn	07 57 27.7	-1.5
STLK	**Strandline Lak**	**1.56**	**20**		Pn	07 57 10.0	-0.3
SVW2	**Sparrevohn**	**1.68**	**310**		Pn	07 57 10.8	-0.9
SVW2					Sn	07 57 32.8	-1.7
SEW	**Seward**	**1.75**	**86**		Pn	07 57 11.4	-1.0
KAHC	**Katmai Hardscr**	**1.76**	**218**		Pn	07 57 12.0	-0.8
KAHG	**Katmai Hook Gl**	**1.76**	**209**		Pn	07 57 12.2	-0.5
RC01	**Rabbit Creek A**	**1.90**	**55**		Pn	07 57 13.3	-1.0
RC01					Sn	07 57 37.2	-1.7
KCG	**Knife Ck. Glac**	**2.07**	**214**		Pn	07 57 15.8	-0.7
KABU	**Katmai Buttres**	**2.15**	**215**		Pn	07 57 17.1	-0.4
KABU					Sn	07 57 43.6	-1.2
ANCK	**Angle Creek**	**2.27**	**217**		Pn	07 57 18.6	-0.4
KDAK	**Kodiak Island**	**2.27**	**175**		Pn	07 57 16.8	-2.2
KDAK					Sn	07 57 45.5	-1.9
CAHL	**Cahill**	**2.34**	**213**		Pn	07 57 19.6	-0.4
KJL	**Kejulik**	**2.42**	**216**		Pn	07 57 20.5	-0.3
PWL	**Port Wells**	**2.42**	**68**		Pn	07 57 19.1	-1.8
PMR	**Palmer**	**2.43**	**48**		Pn	07 57 19.5	-1.3
PMR					Sn	07 57 47.6	-3.1
KNK	**Knik Glacier**	**2.59**	**56**		Pn	07 57 21.7	-1.3
GHO	**Glory Hole Cre**	**2.62**	**47**		Pn	07 57 22.2	-1.2
OHAK	**Old Harbor**	**2.83**	**184**		Pn	07 57 23.8	-2.3
SML	**Sawmill**	**2.86**	**50**		Pn	07 57 24.7	-1.9
PPLA	**Purkeypile**	**2.89**	**7**		Pn	07 57 26.4	-0.5
PLK3	**Peulik 3**	**2.93**	**218**		Pn	07 57 27.2	-0.2
GLI	**Glacier Island**	**3.01**	**71**		Pn	07 57 25.8	-2.6
HIN	**Hinchinbrook I**	**3.23**	**81**		Pn	07 57 29.9	-1.4
TTO1	**Tatalina**	**3.23**	**334**		Pn	07 57 30.6	-0.7
TTA	**Tatalina**	**3.25**	**334**		Pn	07 57 30.6	-1.1
SCM	**Sheep Creek Mo**	**3.27**	**54**		Pn	07 57 30.8	-1.1
FID	**Port Fidalgo**	**3.28**	**75**		Pn	07 57 29.4	-2.5
JPK	**Jack Peak**	**3.29**	**69**		Pn	07 57 30.1	-2.0
MID	**Middleton Isla**	**3.39**	**98**		Pn	07 57 32.2	-1.3
WAT1	**Susitna Watana**	**3.50**	**35**		Pn	07 57 33.8	-1.0
WAT2	**Susitna Watana**	**3.59**	**34**		Pn	07 57 35.1	-1.1
EYAK	**Cordova Ski Ar**	**3.61**	**79**		Pn	07 57 35.6	-0.7
TRF	**Thorofare Moun**	**3.64**	**19**		Pn	07 57 36.2	-0.7
KTH	**Kantishna Hill**	**3.65**	**14**		Pn	07 57 35.9	-1.0
CHUM	**Lake Minchumin**	**3.87**	**4**		Pn	07 57 38.9	-0.8
RND	**Reindeer**	**3.89**	**28**		Pn	07 57 39.2	-1.0
DHY	**Denali Highway**	**4.04**	**39**		Pn	07 57 41.3	-0.9
GOAT	**Goat Mountain**	**4.12**	**79**		Pn	07 57 42.4	-0.7
RAGM	**Ragged Mountai**	**4.13**	**82**		Pn	07 57 42.9	-0.4
MCK	**McKinley**	**4.16**	**25**		Pn	07 57 43.0	-0.6
BPAW	**Bear Paw Mtn.**	**4.17**	**12**		Pn	07 57 42.8	-1.0
BWN	**Browne**	**4.45**	**20**		Pn	07 57 46.7	-0.8
NICHA	**Nichawak Mount**	**4.49**	**84**		Pn	07 57 47.3	-0.7
SUCK	**Suckling Hills**	**4.59**	**86**		Pn	07 57 48.6	-0.7
BERG	**Berg Lake**	**4.62**	**82**		Pn	07 57 48.8	-0.9
GLB	**Gilahina Butte**	**4.69**	**69**		Pn	07 57 49.1	-1.7
VRDI	**Verde Repeater**	**4.82**	**72**		Pn	07 57 50.8	-1.8
KHIT	**Khitrov Hills**	**4.84**	**81**		Pn	07 57 51.6	-1.2
NEA	**Nenana**	**4.89**	**20**		Pn	07 57 52.0	-1.4
CRQM	**Cirque**	**4.91**	**77**		Pn	07 57 53.4	-0.4
WRH	**Wood River Hil**	**4.99**	**25**		Pn	07 57 53.6	-1.1
WAX	**Waxell Ridge**	**5.04**	**81**		Pn	07 57 54.5	-1.0
MCARA	**McCarthy VSAT**	**5.05**	**70**		Pn	07 57 55.5	0.0
TGL	**Tana Glacier**	**5.06**	**78**		Pn	07 57 55.3	-0.4
KULT	**Kultieth River**	**5.11**	**83**		Pn	07 57 55.5	-0.8
MLY	**Manley**	**5.11**	**11**		Pn	07 57 56.1	-0.2
HDA	**Harding Lake**	**5.20**	**30**		Pn	07 57 56.5	-1.0
CCB	**Clear Creek Bu**	**5.20**	**25**		Pn	07 57 56.1	-1.4
PTPK	**Patty Peak**	**5.28**	**73**		Pn	07 57 57.9	-1.0
KIAG	**Kiagna River**	**5.30**	**76**		Pn	07 57 58.5	-0.6
BALM	**Baldy**	**5.32**	**75**		Pn	07 57 59.0	-0.3
PS08	**TAPS Pump Stn8**	**5.34**	**30**		Pn	07 57 58.2	-1.2
TCOL	**CIGO, UAF Yank**	**5.39**	**24**		Pn	07 57 58.9	-1.1
COLA	**College**	**5.39**	**24**		Pn	07 57 59.3	-0.7
MDM	**Murphy Dome**	**5.39**	**22**		Pn	07 57 59.3	-0.8
MESA	**MESA**	**5.50**	**84**		Pn	07 58 02.1	+0.4
IL31		**5.51**	**28**		Pn	07 58 00.8	-0.9
GRNC	**Granite Creek**	**5.59**	**78**		Pn	07 58 02.5	-0.5
YAH	**Yahtse**	**5.59**	**82**		Pn	07 58 02.8	-0.2
BARN	**Barnard Glacie**	**5.66**	**75**		Pn	07 58 04.0	+0.2
POKR	**Poker Plat Res**	**5.69**	**24**		Pn	07 58 03.5	-0.7
RKAV	**Rock Avalanche**	**5.79**	**82**		Pn	07 58 05.6	0.0
CTGM	**Chitina Glacie**	**5.81**	**76**		Pn	07 58 05.9	+0.1
CHX	**Chaix Hills**	**5.92**	**85**		Pn	07 58 07.5	+0.2
IM03		**5.98**	**357**		Pn	07 58 07.6	-0.3
BC03		**6.13**	**56**		Pn	07 58 08.5	-1.5
YUK2	**White River**	**6.15**	**68**		Pn	07 58 10.6	-0.1
YUK3	**Moose Creek**	**6.33**	**69**		Pn	07 58 12.3	-0.6
PCA	**Pinnacle**	**6.35**	**84**		Pn	07 58 13.0	-0.1
PRP	**Porcupine Dome**	**6.46**	**29**		Pn	07 58 14.2	-0.4
PNL	**Peninsula**	**6.83**	**87**		Pn	07 58 18.6	-0.9
YUK4	**Talbot Arm**	**7.13**	**73**		Pn	07 58 24.4	+0.6
EGAK	**Eagle**	**7.24**	**44**		Pn	07 58 23.2	-1.7
COLD	**Coldfoot**	**7.31**	**8**		Pn	07 58 25.1	-0.8
YUK7	**Dusty Glacier**	**7.37**	**80**		Pn	07 58 26.8	-0.1
DHAK	**Deception Hill**	**7.54**	**91**		Pn	07 58 30.4	+1.3
HYT	**Haines Junctio**	**7.67**	**77**		Pn	07 58 31.7	+0.7
BM03	**Burnt Mountain**	**8.27**	**23**		Pn	07 58 37.0	-1.8
TOLK	**Toolik Lake Re**	**8.75**	**8**		Pn	07 58 45.5	+0.1
SKAG	**Skagway**	**8.90**	**86**		Pn	07 58 48.8	+1.4
WHY	**Whitehorse**	**8.97**	**78**		Pn	07 58 48.0	-0.4
BESE	**Bessie Mountai**	**9.36**	**91**		Pn	07 58 54.5	+0.9
GAMB	**Gambell**	**9.60**	**301**	Pn	Pn	07 58 58.6	+1.9
SIT	**Sitka**	**9.67**	**100**		Pn	07 58 57.7	-0.1
JIS	**Juneau Island**	**9.69**	**92**		Pn	07 58 58.6	+0.7
CRAG	**Craig**	**11.51**	**105**		Pn	07 59 22.8	+0.5

NIED ***09*** *08:09:00, 24.˚10N×123.˚50E, h20km, Mw3.5 Best double couple: M0 1.78000×10^14 NP1:φs=291.00000°, δ59.00000°, λ=-132.00000°. NP2:φs=171.00000°, δ51.00000°, λ=-42.00000°.*

JMA 09 08:09:50.0±0.1, 24.˚06N×123.˚48E, h24km±2km, M3.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.30**	**91**	P	Pb	08 09 56.6	-0.3
HATJ				S	Sb	08 10 01.6	0.0
IRIF	**Iriomote-Funau**	**0.36**	**40**	P	Pb	08 09 57.6	-0.2
IRIF				S	Sb	08 10 02.6	-0.3
JKRS	**Kuro-shima**	**0.52**	**70**	P	Pb	08 10 00.4	0.0
JKRS				S	Sb	08 10 08.3	+0.8
YOJ	**Yonaguni jima**	**0.59**	**313**	P	Pb	08 10 01.4	-0.2
YOJ				S	Sb	08 10 09.6	0.0
JYNG	**Yonagunijimaku**	**0.62**	**309**	P	Pb	08 10 02.0	-0.3
JYNG				S	Sb	08 10 10.3	-0.4
JIJ	**Ishigaki jima**	**0.68**	**63**	P	Pb	08 10 02.6	-0.6
JIJ				S	Sb	08 10 11.8	-0.3
JISG	**Ishigakijimahi**	**0.92**	**55**	P	Pb	08 10 06.3	-1.0
JISG				S	Sb	08 10 18.9	-0.3
JTJ	**Tarama**	**1.26**	**62**	P	Pn	08 10 12.4	+0.4
JTJ				S	Sb	08 10 29.0	+0.2

NEIC ***09*** *08:57:00.9±1.1, 17.˚8S±0.˚2×178.˚57W±0.˚10, h575km±8km, mb4.4/20, Error ellipse: s-maj=24.3km s-min=10.1km az=154.0*

IDC ***09*** *08:57:02.5±5.5, 17.˚75S×178.˚63W, h591km±68km, mb3.0/9, mb1 3.3/10, mb1mx3.1/30, mbtmp3.9/10, Error ellipse: s-maj=42.0km s-min=25.1km az=146.0*

ISC 09 08:57:01.5±0.7, 18.˚0S±0.˚2×178.˚4W±0.˚1, h600km, n34, σ1=15/32, mb4.3/20, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.43**	**273**	P	**P**	**08 58 21.0**	**-2.3**
NIUE	**Niue**	**8.08**	**99**	P	**P**	**08 58 59.5**	**-2.1**
DZM	**Mont Dzumac**	**14.86**	**252**	P	**P**	**09 00 09.5**	**+1.0**
	0.5nm,0.3s,baz=1.0,slow=13,SNR=1.8						
KNTN	**Kanton**	**16.43**	**24**	P	**P**	**09 00 23.5**	**+0.6**
ARMA	**Armidale**	**29.96**	**240**	P	**P**	**09 02 23.5**	**+0.4**
ARMA				IAmb	IAmb	09 02 36.1	
	comp=Z,8.3nm,1.2s						
CTAO	**Charters Tower**	**33.48**	**261**	P	**P**	**09 02 52.5**	**-0.5**
CTAO				IAmb	IAmb	09 03 09.1	
	comp=Z,25nm,1.4s						
CAN	**Canberra**	**33.71**	**233**	P	**P**	**09 02 55.1**	**+0.4**
CAN				IAmb	IAmb	09 02 56.1	
	comp=Z,12nm,1.3s						
COEN	**Coen**	**37.15**	**270**	P	**P**	**09 03 23.6**	**+0.3**
COEN				IAmb	IAmb	09 03 41.5	
	comp=Z,20nm,1.4s						
TOO	**Toolangi**	**37.17**	**231**	P	**P**	**09 03 24.2**	**+1.0**
TOO				IAmb	IAmb	09 03 34.3	
	comp=Z,9.4nm,1.1s						
STKA	**Stephens Creek**	**38.65**	**241**	P	**P**	**09 03 35.6**	**+0.4**
	comp=Z,3.9nm,0.6s,baz=88,slow=11,SNR=12						
STKA	**Stephens Creek**	**38.65**	**241**	P	**P**	**09 03 35.5**	**+0.3**
BBOO	**Buckleboo**	**43.42**	**241**	P	**P**	**09 04 13.0**	**+0.1**
BBOO				IAmb	IAmb	09 04 26.2	
	comp=Z,37nm,1.5s						
WR0	**Warramunga Arr**	**44.48**	**260**	P	**P**	**09 04 21.0**	**-0.2**
WB0	**Warramunga Arr**	**44.64**	**260**	P	**P**	**09 04 21.8**	**-0.7**
WB2	**Warramunga Arr**	**44.66**	**260**	P	**P**	**09 04 21.8**	**-0.8**
WB2				IAmb	IAmb	09 04 22.6	
	comp=Z,5.5nm,0.6s						
WRAB	**Tennant Creek**	**44.66**	**260**	P	**P**	**09 04 21.8**	**-0.8**
WRA	**Warramunga Arr**	**44.67**	**260**	P	**P**	**09 04 21.9**	**-0.8**
	comp=Z,2.6nm,0.5s,baz=96,slow=6.9,SNR=55						
AS31	**Alice Springs**	**44.82**	**254**	P	**P**	**09 04 23.9**	**+0.1**
AS31				IAmb	IAmb	09 04 24.3	
	comp=Z,6.9nm,0.7s						
ASAR	**Alice Springs**	**44.82**	**254**	P	**P**	**09 04 23.9**	**0.0**
	comp=Z,30nm,0.6s,baz=88,slow=8.4,SNR=512						
ASAR				PcP	**PcP**	**09 05 53.6**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=101,slow=4.8,SNR=3.1						
FORT	**Forrest**	**50.03**	**245**	P	**P**	**09 05 02.2**	**-0.3**
KNRA	**Kununurra**	**50.53**	**264**	P	**P**	**09 05 06.2**	**-0.2**
KNRA				IAmb	IAmb	09 05 06.7	
	comp=Z,10nm,0.8s						
PSA00	**Pilbara Seismi**	**57.94**	**255**	P	**P**	**09 05 58.0**	**-0.2**
GIRL	**Giralia**	**62.92**	**253**	P	**P**	**09 06 32.2**	**+1.3**
MJAR	**Matsushiro Arr**	**67.97**	**323**	P	**P**	**09 07 01.3**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=142,slow=5.4,SNR=5.7						
UGM	**Wanagama**	**69.69**	**268**	P	**P**	**09 07 13.1**	**+0.2**
PETK	**Petropavlovsk-**	**73.74**	**345**	P	P	09 07 36.2	+0.8
	comp=Z,1.0nm,0.6s,baz=140,slow=7.6,SNR=2.0						
NVAR	**Mina Array Bea**	**79.43**	**44**	P	**P**	**09 08 08.7**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=218,slow=8.9,SNR=5.4						
WAX	**Waxell Ridge**	**83.22**	**17**	P	**P**	**09 08 26.0**	**+0.3**
WAX				IAmb	IAmb	09 08 33.5	
	comp=Z,12nm,1.3s						
PMSA	**Palmer Station**	**83.75**	**157**	P	P	09 08 32.4	+4.2
ILAR	**Eielson Array**	**85.92**	**13**	P	**P**	**09 08 38.7**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=232,slow=5.6,SNR=1.7						
TXAR	**Lajitas Array**	**85.98**	**58**	P	**P**	**09 08 41.6**	**+1.7**
	comp=Z,1.1nm,1.0s,baz=210,slow=7.2,SNR=4.1						
PDAR	**Pinedale Array**	**87.36**	**43**	P	**P**	**09 08 47.6**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=217,slow=4.5,SNR=3.8						
YKA	**Yellowknife Ar**	**94.36**	**25**	P	P	09 09 20.8	+3.2
	comp=Z,0.1nm,0.4s,baz=264,slow=4.9,SNR=1.7						
GERES	**GERESS Array B**	**147.67**	**345**	PKPbc	**PKPab**	**09 15 40.8**	**-3.3**
	comp=Z,0.6nm,0.5s,baz=96,slow=5.4,SNR=3.9						

IDC 09 09:02:19.1±2.5, 7.˚12S×128.˚97E, h0km, mb3.6/1, mb1 3.5/3, mb1mx3.4/21, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=204.7km s-min=33.4km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.38**	**196**	Sn	Sn	09 07 09.2	-2.0
	0.4nm,0.3s,baz=48,slow=14,SNR=2.3						
WRA	**Warramunga Arr**	**13.77**	**158**	Pn	Pn	09 05 34.8	-1.0
	0.2nm,0.3s,baz=332,slow=14,SNR=4.7						
WRA				Sn	Sn	09 07 54.0	-16
	0.5nm,0.3s,baz=329,slow=23,SNR=8.1						
ASAR	**Alice Springs**	**17.12**	**164**	P	Pn	09 06 20.9	+0.9
	0.0nm,0.3s,baz=337,slow=10,SNR=1.8						
MKAR	**Makanchi Array**	**67.77**	**327**	P	P	09 13 18.8	0.0
	0.4nm,0.6s,baz=140,slow=7.0,SNR=4.4						

IDC ***09*** *09:08:48.0±1.7, 4.˚55S×128.˚31E, h0km, mb3.3/1, mb1 3.7/5, mb1mx3.5/31, mbtmp3.5/5, ML3.3/4, MS3.3/2, Ms1 3.3/2, ms1mx2.5/17, Error ellipse: s-maj=44.9km s-min=24.4km az=95.0*

DJA ***09*** *09:08:51.0±0.7, 5.˚5S±4.˚×12.˚8E±.˚, h12km±3km, M3.6/10, MLv3.6/10*

ISC 09 09:08:49.5±0.9, 4.˚56S±0.˚06×128.˚18E±0.˚05, h10km, n14, σ1=60/18, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.86**	**1**	P	**Pn**	**09 09 06.7**	**-1.1**
AAI				S	**Sn**	**09 09 18.2**	**-2.2**
MSAI	**Masohi**	**1.42**	**32**	P	**Pg**	**09 09 15.8**	**-0.9**
MSAI				S	**Sn**	**09 09 35.5**	**+1.4**
NLAI	**Namlea**	**1.69**	**320**	P	**Pn**	**09 09 19.5**	**+0.3**
BNDI	**Bandanaira**	**1.72**	**89**	P	**Pn**	**09 09 19.8**	**+0.3**
SANI	**Sanana**	**3.31**	**319**	P	**Pn**	**09 09 42.4**	**+0.9**
SANI				S	**Sn**	**09 10 20.2**	**-0.8**
LBMI	**Labuha**	**3.95**	**350**	P	**Pn**	**09 09 53.0**	**+2.7**
LBMI				S	**Sn**	**09 10 38.4**	**+1.7**
FAKI	**Fak Fak**	**4.37**	**68**	P	**Pn**	**09 09 58.4**	**+2.3**
FAKI				S	**Sn**	**09 10 47.3**	**+0.1**
SIJI	**Sorong**	**4.79**	**40**	Pn	**Pn**	**09 10 00.1**	**-1.7**
	0.7nm,0.3s,baz=143,slow=20,SNR=1.8						
SIJI				Sn	**Sn**	**09 10 58.6**	**+1.2**
	3.7nm,0.3s,baz=253,slow=19,SNR=2.0						
KAPI	**Kappang**	**8.41**	**267**	LR	LR	09 13 39.5	
	comp=Z,60nm,21.0s,baz=118,slow=34						
FITZ	**Fitzroy Crossi**	**13.69**	**190**	Pn	**Pn**	**09 12 04.0**	**+0.2**
	0.1nm,0.3s,baz=30,slow=16,SNR=1.5						
WRA	**Warramunga Arr**	**16.43**	**159**	Pn	**Pn**	**09 12 37.7**	**-2.7**
	0.1nm,0.3s,baz=340,slow=12,SNR=4.8						
ASAR	**Alice Springs**	**19.79**	**164**	P	**P**	**09 13 20.6**	**+0.4**
	0.4nm,0.3s,baz=343,slow=11,SNR=42						
CTA	**Charters Tower**	**23.41**	**133**	LR	LR	09 24 41.9	
	comp=Z,272nm,21.1s,baz=279,slow=41						
MKAR	**Makanchi Array**	**65.20**	**327**	P	**P**	**09 19 31.4**	**+0.3**
	0.2nm,0.6s,baz=131,slow=6.5,SNR=2.8						

IDC ***09*** *09:43:43.8±3.1, 31.˚71S×177.˚82W, h0km, mb4.1/2, mb1 4.2/3, mb1mx3.7/35, mbtmp4.0/3, ML2.4/1, Error ellipse: s-maj=71.0km s-min=37.2km az=116.0*

NEIC ***09*** *09:43:48.1±0.7, 31.˚77S±0.˚09×177.˚7W±0.˚4, h35km±16km, mb4.2/6, Error ellipse: s-maj=55.7km s-min=3.4km az=103.0*

ISC 09 09:43:45.9±2.5, 31.˚8S±0.˚1×177.˚4W±0.˚4, h35km, n13, σ0=68/14, mb4.2/6, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.60**	**349**	Pn	**Pn**	**09 44 26.2**	**+0.7**
URZ	**Urewera**	**7.87**	**214**	Pn	**Pn**	**09 45 37.9**	**+0.2**
	0.1nm,0.3s,baz=18,slow=16,SNR=1.8						
URZ				Sn	**Sn**	**09 47 05.9**	**+0.4**
	0.4nm,0.3s,baz=99,slow=23,SNR=1.2						
BKZ	**Black Stump Fm**	**8.88**	**213**	Pn	**Pn**	**09 45 51.3**	**-0.5**
BFZ	**Birch Farm**	**10.24**	**208**	Pn	**Pn**	**09 46 11.1**	**+0.8**
AS31	**Alice Springs**	**43.60**	**268**	P	**P**	**09 51 47.2**	**+0.2**
ASAR	**Alice Springs**	**43.60**	**268**	P	**P**	**09 51 47.0**	**+0.1**
	1.4nm,0.7s,baz=105,slow=7.3,SNR=26						
WR0	**Warramunga Arr**	**44.54**	**273**	P	**P**	**09 51 54.1**	**-0.4**
WR0				IAmb	IAmb	09 52 09.1	
	comp=Z,2.9nm,1.1s						
WB2	**Warramunga Arr**	**44.71**	**273**	P	**P**	**09 51 55.3**	**-0.6**
WB2				IAmb	IAmb	09 51 56.2	
	comp=Z,3.5nm,0.7s						
WRAB	**Tennant Creek**	**44.71**	**273**	P	**P**	**09 51 55.2**	**-0.7**
WRAB				IAmb	IAmb	09 52 13.3	
	comp=Z,5.6nm,1.4s						
WRA	**Warramunga Arr**	**44.72**	**273**	P	**P**	**09 51 55.4**	**-0.5**
	comp=Z,1.9nm,0.5s,baz=114,slow=7.8,SNR=27						
WB0	**Warramunga Arr**	**44.75**	**273**	P	**P**	**09 51 56.0**	**-0.2**
WB0				IAmb	IAmb	09 51 56.3	
	comp=Z,3.2nm,0.7s						
KNRA	**Kununurra**	**51.37**	**275**	P	**P**	**09 52 46.1**	**-1.2**
FINES	**FINESS Array B**	**146.66**	**340**	PKPbc	**PKiKP**	**10 03 25.1**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=33,slow=4.5,SNR=6.3						

IDC ***09*** *09:46:49.4±1.3, 60.˚31N×153.˚07W, h118km±22km, mb3.7/4, mb1 3.7/9, mb1mx3.2/49, mbtmp4.0/9, MS3.3/1, Ms1 3.2/1, ms1mx2.2/51, Error ellipse: s-maj=30.4km s-min=10.4km az=111.0*

NEIC ***09*** *09:46:50.9±1.2, 60.˚28N±0.˚03×153.˚00W±0.˚10, h140km±3km, Error ellipse: s-maj=7.1km s-min=4.6km az=107.0*

AEIC ***09*** *09:46:52.0±1.2, 60.˚30N±0.˚04×153.˚06W±0.˚10, h138km±4km, ML3.7, mb4.1/4(NEIC), Error ellipse: s-maj=7.2km s-min=5.4km az=105.0*

ISC 09 09:46:51.0±0.7, 60.˚30N±0.˚04×152.˚91W±0.˚04, h143km±5km, n161, σ1=9.03/185, mb3.9/5, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RED	**Redoubt Volcan**	**0.14**	**29**		**Pn**	**09 47 09.9**	**-0.5**
RED					**Sn**	**09 47 23.9**	**-1.4**
RSO	**Redoubt South**	**0.19**	**25**		**Pn**	**09 47 10.2**	**-0.4**
RDWB	**Redoubt West**	**0.20**	**11**		**Pn**	**09 47 10.2**	**-0.4**
RDWB					**Sn**	**09 47 24.1**	**-1.5**
IVE	**Iliamna Volcan**	**0.28**	**190**		**Pn**	**09 47 10.2**	**-0.6**
RDJH	**Redoubt Jeurge**	**0.30**	**10**		**Pn**	**09 47 10.4**	**-0.5**
RDJH					**Sn**	**09 47 25.0**	**-1.1**
DFR	**Drift River**	**0.32**	**21**		**Pn**	**09 47 10.3**	**-0.5**
DFR					**Sn**	**09 47 24.6**	**-1.4**
ILS	**Iliamna Low So**	**0.35**	**193**		**Pn**	**09 47 10.2**	**-0.8**
HOM	**Homer**	**0.90**	**134**		**Pn**	**09 47 14.4**	**+0.2**
HOM					**Sn**	**09 47 32.5**	**+0.6**
AUL	**Augustine Lava**	**0.95**	**196**		**Pn**	**09 47 14.4**	**-0.2**
AUL					**Sn**	**09 47 32.0**	**-0.7**
AU22	**Augustine Moun**	**0.95**	**194**		**Pn**	**09 47 14.3**	**-0.3**
AU22					**Sn**	**09 47 31.6**	**-1.0**
AU2	**Augustine Isla**	**0.96**	**194**		**Pn**	**09 47 14.4**	**-0.3**
AUP	**Augustine Pinn**	**0.97**	**196**		**Pn**	**09 47 14.6**	**-0.3**
AUW	**Augustine West**	**0.97**	**197**		**Pn**	**09 47 14.6**	**-0.2**
SPCR	**Spurr Chakacha**	**0.97**	**21**		**Pn**	**09 47 15.0**	**+0.1**
SPCR					**Sn**	**09 47 33.1**	**-0.1**
CKT	**Bend**	**0.97**	**21**		**Pn**	**09 47 15.2**	**+0.2**
AUJK	**Augustine Jueg**	**0.98**	**195**		**Pn**	**09 47 14.6**	**-0.3**
CAPN	**Captain Cook N**	**0.99**	**61**		**Pn**	**09 47 16.6**	**+1.7**
SPWE	**Spurr West**	**1.00**	**10**		**Pn**	**09 47 15.6**	**+0.5**
SPBG	**Spurr Blockage**	**1.00**	**15**		**Pn**	**09 47 15.6**	**+0.4**
SPBG					**Sn**	**09 47 34.3**	**+0.6**
BGL	**Barrier Glacie**	**1.00**	**15**		**Pn**	**09 47 15.7**	**+0.5**
CRP	**Crater Peak**	**1.04**	**21**		**Pn**	**09 47 16.0**	**+0.4**
CNPM	**China Poot**	**1.15**	**132**		**Pn**	**09 47 16.8**	**+0.3**
CNPM					**Sn**	**09 47 35.3**	**-0.5**
BRLK	**Bradley Lake**	**1.15**	**117**		**Pn**	**09 47 16.6**	**+0.1**
BRSE	**Bradley Lake S**	**1.22**	**116**		**Pn**	**09 47 17.5**	**+0.4**
BRSE					**Sn**	**09 47 36.7**	**-0.5**
STLK	**Strandline Lak**	**1.32**	**23**		**Pn**	**09 47 18.5**	**+0.3**
SLKM	**Skilak Lake**	**1.35**	**80**		**Pn**	**09 47 18.5**	**0.0**
SLKM					**Sn**	**09 47 38.9**	**-0.6**
SVW2	**Sparrevohn**	**1.54**	**303**		**Pn**	**09 47 19.4**	**-1.0**
FIS	**Fire Island**	**1.57**	**56**		**Pn**	**09 47 21.9**	**+1.2**
SEW	**Seward**	**1.74**	**95**		**Pn**	**09 47 22.5**	**-0.1**
SEW					**Sn**	**09 47 46.0**	**-0.8**
RC01	**Rabbit Creek A**	**1.75**	**62**		**Pn**	**09 47 22.7**	**-0.1**
RC01					**Sn**	**09 47 47.4**	**+0.2**
KAHC	**Katmai Hardscr**	**1.97**	**214**		**Pn**	**09 47 24.5**	**-0.9**
KAHG	**Katmai Hook Gl**	**1.99**	**206**		**Pn**	**09 47 24.8**	**-0.8**
PMR	**Palmer**	**2.26**	**53**		**Pn**	**09 47 27.9**	**-0.8**
PMR					**Sn**	**09 47 56.7**	**-1.0**
KCG	**Knife Ck. Glac**	**2.29**	**210**		**Pn**	**09 47 28.5**	**-0.7**
PWL	**Port Wells**	**2.33**	**74**		**Pn**	**09 47 28.9**	**-0.7**
KABU	**Katmai Buttres**	**2.37**	**212**		**Pn**	**09 47 29.7**	**-0.4**
ACHA	**Angle Creek He**	**2.43**	**212**		**Pn**	**09 47 30.2**	**-0.7**
GHO	**Glory Hole Cre**	**2.44**	**51**		**Pn**	**09 47 30.5**	**-0.5**
GHO					**Sn**	**09 48 01.0**	**-0.9**
KNK	**Knik Glacier**	**2.45**	**61**		**Pn**	**09 47 30.3

PS05	**TAPS Pump Stn5**	**6.62**	**8**		**Pn**	**09 48 26.8**	**+1.2**
PNL	**Peninsula**	**6.81**	**89**		**Pn**	**09 48 29.2**	**+0.8**
EGAK	**Eagle**	**7.05**	**45**		**Pn**	**09 48 31.7**	**+0.3**
YUK4	**Talbot Arm**	**7.06**	**75**		**Pn**	**09 48 33.5**	**+1.8**
COLD	**Coldfoot**	**7.06**	**9**		**Pn**	**09 48 32.4**	**+0.8**
FYU	**Fort Yukon**	**7.17**	**25**		**Pn**	**09 48 33.1**	**+0.1**
ANM	**Nome**	**7.19**	**312**		**Pn**	**09 48 33.7**	**+0.4**
YUK6	**Outpost Mounta**	**7.19**	**79**		**Pn**	**09 48 35.1**	**+1.5**
YUK7	**Dusty Glacier**	**7.32**	**82**		**Pn**	**09 48 36.2**	**+1.0**
DAWY	**Dawson**	**7.37**	**53**		**Pn**	**09 48 36.6**	**+0.9**
YUK5	**Granite Creek**	**7.43**	**77**		**Pn**	**09 48 37.1**	**+0.4**
DHAK	**Deception Hill**	**7.54**	**93**		**Pn**	**09 48 39.5**	**+1.5**
HYT	**Haines Junctio**	**7.61**	**79**		**Pn**	**09 48 39.6**	**+0.5**
BM03	**Burnt Mountain**	**8.03**	**24**		**Pn**	**09 48 43.6**	**-1.0**
TOLK	**Toolik Lake Re**	**8.50**	**8**	P	**Pn**	**09 48 52.4**	**+1.5**
	baz=192						
TOLK	**Toolik Lake Re**	**8.50**	**8**		**Pn**	**09 48 51.6**	**+0.8**
SKAG	**Skagway**	**8.88**	**88**		**Pn**	**09 48 58.8**	**+2.8**
WHY	**Whitehorse**	**8.91**	**80**		**Pn**	**09 48 56.6**	**+0.2**
AKSA	**Akutan Strait**	**9.27**	**234**		**Pn**	**09 48 59.8**	**-1.4**
BESE	**Bessie Mountai**	**9.36**	**93**		**Pn**	**09 49 04.4**	**+2.0**
EPYK	**Eagle Plains**	**9.47**	**43**		**Pn**	**09 49 04.6**	**+0.8**
JIS	**Juneau Island**	**9.69**	**94**		**Pn**	**09 49 08.4**	**+1.7**
SIT	**Sitka**	**9.71**	**102**		**Pn**	**09 49 08.1**	**+1.2**
UNV	**Unalaska Valle**	**9.81**	**235**	Pn	**Pn**	**09 49 07.9**	**-0.5**
WRAK	**Wrangell Islan**	**11.46**	**101**		**Pn**	**09 49 29.4**	**-0.7**
INK	**Inuvik**	**11.58**	**38**	P	**Pn**	**09 49 32.1**	**+0.5**
	0.7nm,0.3s,baz=229,slow=11,SNR=31						
INK				S	**Sn**	**09 51 33.6**	**-5.5**
	0.0nm,0.3s,baz=303,slow=17,SNR=1.1						
INK	**Inuvik**	**11.58**	**38**		**Pn**	**09 49 31.4**	**-0.1**
DLBC	**Dease Lake**	**11.81**	**89**	P	**Pn**	**09 49 36.3**	**+1.6**
	0.3nm,0.3s,baz=297,slow=6.8,SNR=2.1						
DLBC				S	**Sn**	**09 51 42.5**	**-2.4**
	0.1nm,0.3s,baz=253,slow=14,SNR=1.8						
DLBC	**Dease Lake**	**11.81**	**89**		**Pn**	**09 49 35.4**	**+0.7**
C36M	**Paulatuk**	**15.09**	**41**		**Pn**	**09 50 15.6**	**-0.8**
C36M				IAmb	IAmb	09 50 17.1	
	comp=Z,22nm,1.5s						
YKA	**Yellowknife Ar**	**18.29**	**66**	P	**Pn**	**09 50 55.8**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=277,slow=9.7,SNR=27						
SCHQ	**Schefferville**	**43.37**	**57**	LR	LR	10 15 08.7	
	comp=Z,34nm,19.5s,baz=14,slow=39						
SONM	**Songino Array**	**54.65**	**306**	P	**P**	**09 56 05.9**	**+1.4**
	comp=Z,1.2nm,0.7s,baz=40,slow=7.9,SNR=4.6						
ZALV	**Zalesovo Beam**	**57.16**	**323**	P	**P**	**09 56 23.0**	**+0.9**
	comp=Z,1.2nm,0.4s,baz=28,slow=6.5,SNR=5.4						
KURK	**Kurchatov**	**61.81**	**326**	P	**P**	**09 56 54.8**	**+0.8**
KURBB	**Kurchatov Arra**	**61.92**	**326**	P	**P**	**09 56 54.6**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=29,slow=6.6,SNR=8.0						
MKAR	**Makanchi Array**	**64.23**	**321**	P	**P**	**09 57 10.3**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=30,slow=5.9,SNR=7.5						
KK31	**Karatay Array**	**71.00**	**328**	P	**P**	**09 57 53.1**	**+0.5**
KKAR	**Karatay Array**	**71.00**	**328**	P	**P**	**09 57 53.1**	**+0.5**
KKAR				IAmb	IAmb	09 57 54.1	
	comp=Z,1.3nm,0.6s						

*IDC **09** 09:51:58.1±1.0,27.˙94N×101.˙66E,h0km,mb3.6/9, mb1 3.8/9,mb1mx3.5/42,mbtmp3.6/9,MS3.3/7,Ms1 3.3/7, ms1mx2.9/48,Error ellipse: s-maj=37.5km s-min=17.9km az=58.0*

*NEIC **09** 09:51:59.6±0.5,27.˙99N±0.˙08×101.˙72E±0.˙06,h10km±1km, mb4.3/9,Error ellipse: s-maj=15.0km s-min=7.4km az=334.0*

*BJI **09** 09:51:59.0±0.0,27.˙91N×101.˙44E,h7km,mb4.0/2, ML3.9/15,Ms3.7/5,Ms7 3.5/4*

ISC 09 09:51:59.7±0.8,27.˙95N±0.˙06×101.˙30E±0.˙06,h10km,n30, σ2ş07/26,mb3.9/13,MS3.0/7,1C,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**3.10**	**155**	Pn	**Pn**	**09 52 48.6**	**-0.3**
CD2	**Chengdu**	**3.65**	**35**	Pn	**Pn**	**09 52 55.5**	**-0.8**
CD2				Pg	**Pb**	**09 53 08.1**	**+3.7**
CD2				Sn	**Sn**	**09 53 41.6**	**+2.1**
CD2				Sg	**Sg**	**09 53 57.1**	**+0.1**
CD2				smax	smax		
	comp=N,660nm,0.9s						
CD2				smax	smax		
	comp=E,1μm,1.1s						
GYA	**Guiyang**	**5.00**	**106**	⇑Pn	**Pn**	**09 53 15.5**	**+0.5**
GYA				Sn	**Sn**	**09 54 14.0**	**+1.0**
GYA				Sg	**Sb**	**09 54 31.1**	**+3.3**
GYA				smax	smax		
	comp=N,60nm,0.8s						
GYA				smax	smax		
	comp=E,70nm,0.9s						
GYA				LR	LR		
	comp=N,150nm,4.1s						
GYA				LR	LR		
	comp=E,150nm,3.2s						
GYA				LR	LR		
	comp=Z,80nm,3.5s						
ENH	**Enshi**	**7.53**	**70**		Pn	09 53 44.5	-5.1
XAN	**Xi'an**	**8.92**	**45**	Pg	**Pg**	**09 54 47.8**	**-2.8**
XAN				Sn	Sn	09 56 05.5	+16
XAN				Sg	Sg	09 56 37.4	-8.7
XAN				smax	smax		
	comp=N,110nm,1.0s						
XAN				smax	smax		
	comp=E,120nm,1.2s						
XAN				LR	LR		
	comp=N,690nm,12.6s						
XAN				LR	LR		
	comp=E,490nm,14.7s						
XAN				LR	LR		
	comp=Z,130nm,10.3s						
XAN	**Xi'an**	**8.92**	**45**	Pn	Pn	09 54 04.6	-4.2
WHN	**Wuhan**	**11.69**	**74**	P	**Pn**	**09 54 48.0**	**+1.4**
WHN				S	**Sn**	**09 56 52.5**	**-4.6**
WHN				LR	LR		
	comp=Z,340nm,10.9s						
WMQ	**Urumqi**	**19.25**	**329**	*eP*	**P**	**09 56 24.6**	**+0.2**
SONM	**Songino Array**	**20.25**	**10**	P	**P**	**09 56 34.0**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=200,slow=12,SNR=1.7						
SONM				LR	LR	10 05 17.5	
	comp=Z,75nm,19.4s,baz=203,slow=40						
TLY	**Talaya**	**23.77**	**4**	LR	LR	10 07 30.2	
	comp=Z,58nm,19.8s,baz=167,slow=39						
MK31	**Makanchi Array**	**24.02**	**327**	P	**P**	**09 57 16.6**	**+1.9**
MK31				IAmb	IAmb	09 57 21.0	
	comp=Z,3.8nm,1.1s						
MKAR	**Makanchi Array**	**24.02**	**327**	P	**P**	**09 57 16.1**	**+1.4**
	comp=Z,2.1nm,0.6s,baz=131,slow=10,SNR=22						
MKAR				LR	LR	10 07 52.1	
	comp=Z,44nm,20.1s,baz=184,slow=39						
MAKZ	**Makanchi**	**24.18**	**326**	P	**P**	**09 57 18.9**	**+2.7**
MAKZ				IAmb	IAmb	09 57 22.5	
	comp=Z,3.5nm,1.0s						
KSRS	**Korea Array**	**24.26**	**60**	P	**P**	**09 57 14.3**	**-2.7**
	comp=Z,0.6nm,0.6s,baz=262,slow=9.2,SNR=2.3						
KSRS				LR	LR	10 07 30.4	
	comp=Z,40nm,18.8s,baz=250,slow=39						
AAK	**Ala-Archa**	**26.19**	**311**	P	**P**	**09 57 37.1**	**+2.4**
	comp=Z,0.8nm,0.4s,baz=95,slow=11,SNR=1.9						
AAK	**Ala-Archa**	**26.19**	**311**	P	**P**	**09 57 35.7**	**+0.9**
KURBB	**Kurchatov Arra**	**28.48**	**329**	P	**P**	**09 57 56.4**	**+1.5**
	comp=Z,1.0nm,0.8s,baz=139,slow=9.1,SNR=7.4						
KURK	**Kurchatov**	**28.50**	**329**	P	**P**	**09 57 56.4**	**+1.3**
DAV	**Davao City (W)**	**30.98**	**128**	LR	LR	10 10 10.7	
	comp=Z,39nm,18.9s,baz=346,slow=36						
GEYT	**Alibeck**	**37.30**	**297**	LR	LR	10 16 20.7	
	comp=Z,49nm,18.5s,baz=110,slow=39						
KVAR	**Kislovodsk Arr**	**49.06**	**305**	LR	LR	10 26 25.7	
	comp=Z,174nm,20.6s,baz=82,slow=42						
WB0	**Warramunga Arr**	**57.23**	**142**	P	P	10 01 46.0	-1.4
WB0				IAmb	IAmb	10 01 55.5	
	comp=Z,7.7nm,1.4s						
WRAB	**Tennant Creek**	**57.34**	**142**	P	P	10 01 46.6	-1.6
WRAB				IAmb	IAmb	10 01 53.0	
	comp=Z,3.2nm,0.8s						
WRA	**Warramunga Arr**	**57.34**	**142**	P	P	10 01 46.7	-1.5
	comp=Z,0.5nm,0.3s,baz=323,slow=6.1,SNR=29						
WB2	**Warramunga Arr**	**57.35**	**142**	P	**P**	**10 01 47.0**	**-1.3**
WR0	**Warramunga Arr**	**57.47**	**142**	P	P	10 01 46.8	-2.3
WR0				IAmb	IAmb	10 02 02.4	
	comp=Z,7.4nm,1.4s						
ASAR	**Alice Springs**	**60.18**	**145**	P	**P**	**10 02 06.7**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=327,slow=6.9,SNR=12						
PPLA	**Purkeypile**	**72.59**	**27**	P	**P**	**10 03 26.7**	**-0.4**
ILAR	**Eielson Array**	**73.72**	**24**	P	**P**	**10 03 32.8**	**-0.8**
	comp=Z,0.1nm,0.5s,baz=298,slow=4.7,SNR=1.8						
YKA	**Yellowknife Ar**	**85.40**	**16**	P	**P**	**10 04 37.3**	**+0.2**

comp=Z,0.2nm,0.7s,baz=328,slow=5.4,SNR=2.1

*IDC **09** 10:10:02.1±1.2,36.˙06N×69.˙66E,h0km,mb3.8/7, mb1 4.0/13,mb1mx3.7/53,mbtmp3.9/13,ML3.7/6,MS2.8/1, Ms1 2.9/1,ms1mx2.2/52,Error ellipse: s-maj=23.3km s-min=20.5km az=117.0*

*NEIC **09** 10:10:06.9±2.9,36.˙32N±0.˙04×69.˙42E±0.˙06,h23km±6km, mb4.2/9,Error ellipse: s-maj=7.1km s-min=4.9km az=112.0*

*NNC **09** 10:10:08.9±4.2,36.˙74N×69.˙01E,h0km,mb4.5,mpv4.1, Error ellipse: s-maj=34.7km s-min=24.0km az=173.0*

ISC 09 10:10:04.5±0.6,36.˙32N±0.˙05×69.˙29E±0.˙05,h10km,n53, σ2ş34/66,mb3.8/9,4C-6D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**1.78**	**187**		**Pn**	**10 10 37.0**	**+1.5**
KBL				Sn	**Sn**	**10 10 58.0**	**-0.3**
CHGR	**Chuyangaron**	**2.34**	**357**		**Pn**	**10 10 43.1**	**0.0**
CHGR				Sn	**Sn**	**10 11 12.8**	**+0.9**
GAR	**Garm**	**2.80**	**17**		**Pn**	**10 10 49.7**	**+0.3**
CEP	**Cherat**	**3.29**	**138**	P	Pn	10 11 01.3	+5.2
CEP				S	**Sb**	**10 11 42.0**	**-1.0**
BTK	**Batken**	**3.92**	**17**		**Pn**	**10 11 06.0**	**+1.2**
BTK				Sn	**Sn**	**10 11 53.1**	**+2.1**
THW	**Thamme Wali**	**4.05**	**149**	P	**Pn**	**10 11 10.4**	**+3.8**
NIL	**Nilore**	**4.20**	**128**		**Pn**	**10 11 10.4**	**+1.8**
NIL				Sn	**Sn**	**10 12 00.2**	**+2.5**
CHCP	**Chirah Chowk**	**4.20**	**128**	P	**Pn**	**10 11 12.5**	**+3.9**
ARSB	**Arslanbob**	**5.77**	**29**		**Pn**	**10 11 31.1**	**+0.9**
THN	**Thein Dam**	**6.57**	**124**	*eP*	Pb	10 12 05.0	+6.2
THN				*eS*	**Sn**	**10 12 58.5**	**+2.4**
AML	**Almayashu**	**6.74**	**29**	P	**Pn**	**10 11 45.7**	**+1.9**
	SNR=38						
KK31	**Karatay Array**	**6.84**	**8**	⇑P	**Pn**	**10 11 47.6**	**+2.8**
	5.3nm,0.4s,baz=200,slow=16,SNR=167						
KK31				⇓S	**Sn**	**10 13 01.6**	**-1.2**
	6.9nm,0.3s,baz=190,slow=22,SNR=7.3						
KK31	**Karatay Array**	**6.84**	**8**		**Pn**	**10 11 47.1**	**+2.3**
KKAR	**Karatay Array**	**6.84**	**8**		**Pn**	**10 11 47.9**	**+3.0**
UCH	**Uchtor**	**7.16**	**33**	P	**Pn**	**10 11 51.3**	**+1.7**
	SNR=23						
EKS2	**Erkin-Say**	**7.22**	**27**	P	**Pn**	**10 11 52.5**	**+2.3**
	SNR=8.5						
AAK	**Ala-Archa**	**7.48**	**31**	Pn	**Pn**	**10 11 55.6**	**+1.8**
	2.2nm,0.3s,baz=206,slow=8.4,SNR=26						
AAK				Sn	**Sn**	**10 13 20.8**	**+2.0**
	1.6nm,0.3s,baz=294,slow=20,SNR=7.1						
AAK	**Ala-Archa**	**7.48**	**31**	P	**Pn**	**10 11 55.9**	**+2.1**
	SNR=10						
AAK	**Ala-Archa**	**7.48**	**31**	⇑P	**Pn**	**10 11 55.3**	**+1.5**
	6.9nm,0.5s						
AAK				⇓S	**Sn**	**10 13 19.2**	**+0.4**
	16nm,0.7s						
AAK	**Ala-Archa**	**7.48**	**31**		**Pn**	**10 11 55.9**	**+2.1**
CHMS	**Chumysh**	**7.89**	**31**	P	**Pn**	**10 12 01.2**	**+2.0**
	SNR=6.2						
ULHL	**Ulahol**	**8.00**	**40**	P	**Pn**	**10 12 02.3**	**+1.3**
	SNR=6.1						
USP	**Ospenovka**	**8.01**	**28**	P	**Pn**	**10 12 02.6**	**+1.6**
	SNR=8.7						
TKM2	**Tokmak 2**	**8.19**	**34**	P	**Pn**	**10 12 05.4**	**+1.8**
	SNR=11						
TKM2	**Tokmak 2**	**8.19**	**34**	⇓P	**Pn**	**10 12 04.5**	**+0.9**
	4.8nm,0.6s						
TKM2				⇓S	**Sn**	**10 13 40.0**	**+3.7**
	4.5nm,0.8s						
SMLA	**Simla**	**8.35**	**126**	*eP*	**Pn**	**10 12 05.8**	**+0.3**
SMLA				*eS*	**Sn**	**10 13 37.6**	**-2.4**
KDJ	**Kajisay**	**8.43**	**44**		**Pn**	**10 12 05.6**	**-1.2**
GEYT	**Alibeck**	**9.07**	**284**	Pn	**Pn**	**10 12 17.8**	**+2.3**
	1.2nm,0.3s,baz=115,slow=11,SNR=8.9						
GEYT				Sn	**Sn**	**10 13 59.9**	**+2.2**
	2.4nm,0.3s,baz=115,slow=35,SNR=3.6						
GYA0B	**ALIBECK ARRAY**	**9.07**	**284**	Pn	**Pn**	**10 12 17.9**	**+2.5**
MK31	**Makanchi Array**	**14.27**	**39**	Pn	**Pn**	**10 13 25.1**	**-1.5**
MKAR	**Makanchi Array**	**14.27**	**39**	Pn	**Pn**	**10 13 24.7**	**-1.8**
	0.1nm,0.3s,baz=226,slow=16,SNR=9.8						
AB31	**Akbulak array**	**14.62**	**335**	⇓P	**Pn**	**10 13 31.1**	**-0.2**
	8.6nm,0.3s,baz=157,slow=12,SNR=66						
AB31				⇑S	**Sn**	**10 16 06.4**	**-6.9**
	3.5nm,0.3s,baz=155,slow=24,SNR=3.6						
KURBB	**Kurchatov Arra**	**15.77**	**22**	Pn	**Pn**	**10 13 44.7**	**-1.9**
	0.1nm,0.3s,baz=213,slow=10,SNR=1.8						
KURK	**Kurchatov**	**15.88**	**22**		**Pn**	**10 13 46.4**	**-1.6**
AKTO	**Aktyubinsk**	**16.29**	**334**	Pn	**Pn**	**10 13 55.0**	**+1.7**
	0.3nm,0.3s,baz=147,slow=15,SNR=9.5						
AKTO				Sn	**Sn**	**10 16 48.2**	**-5.7**
	0.1nm,0.3s,baz=20,slow=18,SNR=1.6						
AKTO	**Aktyubinsk**	**16.29**	**334**	⇑P	**Pn**	**10 13 54.6**	**+1.4**
	4.4nm,0.8s						
AKTO				⇓S	**Sn**	**10 16 46.5**	**-7.4**
	2.1nm,0.8s						
BVAR	**Borovoye Array**	**16.72**	**2**	Pn	**Pn**	**10 13 57.9**	**-0.8**
	0.9nm,0.3s,baz=163,slow=11,SNR=15						
BRVK	**Borovoye**	**16.75**	**2**	Pn	**Pn**	**10 14 00.1**	**+1.0**
ZAA0	**Zalesovo Array**	**20.67**	**27**	P	**P**	**10 14 44.1**	**-0.2**
ZAA0				IAmb	IAmb	10 14 44.6	
	comp=Z,4.4nm,0.9s						
ZALV	**Zalesovo Beam**	**20.67**	**27**	P	**P**	**10 14 43.5**	**-0.8**
	comp=Z,3.8nm,0.4s,baz=216,slow=10,SNR=17						
SHL	**Shillong**	**22.09**	**113**	P	**P**	**10 14 59.2**	**-0.8**
SHL				IAmb	IAmb	10 15 01.8	
	comp=Z,8.5nm,0.7s						
FINES	**FINESS Array B**	**36.87**	**327**	P	**P**	**10 17 15.2**	**+2.4**
	comp=Z,1.7nm,0.9s,baz=99,slow=12,SNR=3.6						
NB2	**NORSAR Subarra**	**43.70**	**323**	P	**P**	**10 18 11.0**	**+1.6**
	comp=Z,0.7nm,0.5s,baz=100,slow=8.6						
NOA	**NORSAR Array B**	**43.70**	**323**	P	**P**	**10 18 11.2**	**+1.8**
	comp=Z,0.5nm,0.4s,baz=99,slow=8.0,SNR=4.9						
NOA				LR	LR	10 39 26.4	
	comp=Z,11nm,19.8s,baz=190,slow=40						
YULB	**Yu-li**	**46.40**	**91**	P	**P**	**10 18 29.5**	**-1.8**
TIXI	**Tiksi**	**46.46**	**22**	P	**P**	**10 18 31.3**	**+0.2**
TOLK	**Toolik Lake Re**	**71.44**	**14**	P	**P**	**10 21 25.9**	**+1.3**
TOLK				IAmb	IAmb	10 21 34.6	
	comp=Z,3.2nm,1.2s						
C36M	**Paulatuk**	**74.19**	**5**	P	**P**	**10 21 41.2**	**+0.4**
C36M				IAmb	IAmb	10 21 41.9	
	comp=Z,1.9nm,0.6s						
INK	**Inuvik**	**74.30**	**9**	P	**P**	**10 21 42.0**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=27,slow=4.5,SNR=7.1						
INK	**Inuvik**	**74.30**	**9**	P	**P**	**10 21 40.8**	**-0.7**
INK				IAmb	IAmb	10 21 43.0	
	comp=Z,3.6nm,1.3s						
YKA	**Yellowknife Ar**	**81.48**	**2**	P	**P**	**10 22 22.2**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=350,slow=5.2,SNR=7.1						
WRA	**Warramunga Arr**	**83.07**	**121**	P	**P**	**10 22 27.7**	**-2.8**
	comp=Z,0.4nm,0.9s,baz=323,slow=4.9,SNR=1.6						
ASAR	**Alice Springs**	**85.29**	**124**	P	**P**	**10 22 39.6**	**-2.1**
	comp=Z,0.3nm,0.7s,baz=308,slow=4.6,SNR=1.9						

*BGR **09** 10:32:06.6±0.0,18.˙32S×174.˙46W,h33km,Ms4.9*

*BJI **09** 10:32:18.0±0.0,19.˙00S×175.˙60W,h160km,mB6.0/64, mb5.8/76*

*MOS **09** 10:32:21.0±1.1,18.˙90S×175.˙59W,h183km,mb5.7/53, Error ellipse: s-maj=6.7km s-min=6.0km az=58.1*

*NEIC **09** 10:32:22.2±2.0,18.˙96S±0.˙07×175.˙54W±0.˙07, h192km±3km,mb5.6/476,Mwc5.9/12,Mww5.9, Mwc6.0(GCMT),Error ellipse: s-maj=10.4km s-min=9.5km az=126.0*

*NEIC **09** 10:32:23,18.˙82S×175.˙50W,h200km,Moment Tenson Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.39; $M_{\theta\theta}$5.82; $M_{\phi\phi}$-4.43; $M_{r\theta}$-2.75; $M_{\theta\phi}$1.72; $M_{\phi r}$-7.66; Fault plane solution: $M_0$9.85000×10^{17} NP1:ϕ±34.00000°, δ85.00000°,λ-125.00000°. NP2:ϕ±297.00000°, δ35.00000°,λ-8.00000°. Principal axes: T 8.6207, Plg31.0000°, Azm152.0000°; N 2.1108, Plg35.0000°, Azm37.0000°; P -10.7315, Plg40.0000°, Azm272.0000°;*

*IDC **09** 10:32:24.1±0.8,18.˙97S×175.˙57W,h200km±6km,mb5.4/43, mb1 5.4/45,mb1mx5.4/46,mbtmp5.9/45 Error ellipse: s-maj=8.1km s-min=7.3km az=43.0*

*GCMT **09** 10:32:30.2±0.1,18.˙99S±0.˙01×175.˙15W,h228km, MW6.0/174,Moment Tensor Solution. s161,c329; s174,c567; Duration: 2ş3 Moment tensor: Scale 10^{18} Nm; M_{rr}0.01±.01; $M_{\theta\theta}$0.25±.01; $M_{\phi\phi}$-0.26±.01; $M_{r\theta}$-0.46±.01; $M_{\theta\phi}$0.24±.01; $M_{\phi r}$-0.92±.01; Best double couple: $M_0$1.08700×10^{18} NP1:ϕş295.00000°,δ19.00000°, λ0.00000°. NP2:ϕ±26.00000°,δ90.00000°,λ-109.00000°. Principal axes: T 1.1020, Plg42.0000°, Azm133.0000°; N -0.0300, Plg19.0000°, Azm26.0000°; P -1.0710, Plg42.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **09** 10:32:30,18.˙98S×175.˙11W,h228km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.00; $M_{\theta\theta}$0.23; $M_{\phi\phi}$-0.22; $M_{r\theta}$-0.48; $M_{\theta\phi}$0.24; $M_{\phi r}$-0.98; Fault plane solution: $M_0$1.14000×10^{18} NP1:ϕ±25.00000°, δ89.00000°,λ-106.00000°. NP2:ϕ±294.00000°, δ16.00000°,λ-2.00000°. Principal axes: T 1.1625, Plg42.0000°, Azm131.0000°; N -0.0463, Plg16.0000°, Azm26.0000°; P -1.1163, Plg43.0000°, Azm279.0000°;*

*NEIC **09** 10:32:40.8,18.˙93S×175.˙37W,h209km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.81; $M_{\theta\theta}$1.66; $M_{\phi\phi}$-0.85; $M_{r\theta}$-3.82; $M_{\theta\phi}$-1.04; $M_{\phi r}$-9.05; Fault plane solution: $M_0$9.82000×10^{17} NP1:ϕ±203.22000°, δ89.41000°,λ91.13000°. NP2:ϕ±320.76000°,δ1.27000°, λ27.55000°. Principal axes: T 8.8087, Plg46.0000°, Azm114.0000°; N 2.0253, Plg1.0000°, Azm23.0000°; P -10.8340, Plg44.0000°, Azm292.0000°;*

ISC 09 10:32:19.7±0.3,18.˙94S±0.˙03×175.˙58W±0.˙03, h172km,2km,h173km:pP-P,n1492,σ1ş65/1551,mb5.6/371, 63C-58D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.34**	**92**		**Pn**	**10 33 41.1**	**+3.0**
NIUE				Sn	**Sn**	**10 34 39.1**	**-0.4**
MSVF	**Nonsavu**	**6.17**	**280**		Pn	10 34 00.5	+11
AFI	**Afiamalu**	**6.18**	**37**	P	**Pn**	**10 33 49.8**	**+0.6**
AFI						10 34 53.9	
AFI	**Afiamalu**	**6.18**	**37**		**Pn**	**10 33 49.8**	**+0.6**
AFI				Sn	**Sn**	**10 34 53.9**	**-5.6**
RIZ	**Raoul Island**	**10.49**	**191**	P	**Pn**	**10 34 46.8**	**+1.1**
RIZ				S	**Sn**	**10 36 40.4**	**-1.7**
RAO	**Raoul Island**	**10.49**	**191**	P	**Pn**	**10 34 49.4**	**+3.7**
	56nm,0.3s,baz=97,slow=23,SNR=1.8						
RAO				S	**Sn**	**10 36 42.1**	**-0.2**
	424nm,0.3s,baz=265,slow=23,SNR=9.9						
RAO	**Raoul Island**	**10.49**	**191**	Pn	**Pn**	**10 34 46.4**	**+0.6**
RAO				Sn	**Sn**	**10 36 42.0**	**-0.2**
GLKZ	**Green Lake**	**10.50**	**191**	P	**Pn**	**10 34 47.9**	**+2.0**
GLKZ				S	**Sn**	**10 36 37.9**	**-4.7**
FUNA	**Funafuti**	**11.52**	**333**	Pn	**Pn**	**10 35 01.1**	**+1.8**
RAR	**Rarotonga**	**15.02**	**101**	P	**P**	**10 35 45.9**	**+1.2**
	7.7nm,0.3s,baz=248,slow=7.0,SNR=83						
RAR				S	**Sn**	**10 38 30.9**	**0.0**
	1.8nm,0.3s,baz=0.0,slow=18,SNR=0.9						
RAR	**Rarotonga**	**15.02**	**101**	P	**P**	**10 35 45.5**	**+0.8**
RAR	**Rarotonga**	**15.02**	**101**		**P**	**10 35 45.5**	**+0.8**
KNTN	**Kanton**	**16.50**	**14**	P	**P**	**10 35 59.6**	**-1.5**
DZM	**Mont Dzumac**	**17.13**	**256**	P	**Pn**	**10 36 14.0**	**+4.8**
	11nm,0.3s,baz=89,slow=14,SNR=73						
DZM				S	**Sn**	**10 39 21.7**	**+0.2**
	baz=248,slow=19,SNR=0.9						
OUZ	**Omahuta**	**18.85**	**208**	P	**Pn**	**10 36 32.1**	**+3.0**
OUZ	**Omahuta**	**18.85**	**208**	P	**Pn**	**10 36 28.2**	**-0.9**
OUZ				IAmb	IAmb	10 36 35.4	
	comp=Z,132nm,1.0s						
MXZ	**Matakaoa Point**	**19.32**	**195**	P	**Pn**	**10 36 36.5**	**+1.9**
MXZ				S	**S**	**10 39 53.6**	**-7.3**
MXZ	**Matakaoa Point**	**19.32**	**195**	P	**Pn**	**10 36 33.5**	**-1.2**
MXZ				IAmb	IAmb	10 36 39.9	
	comp=Z,163nm,0.7s						
TKGZ	**Te Karaka**	**20.26**	**195**	P	Pn	10 36 45.4	-0.5
TKGZ				S	**S**	**10 40 11.4**	**-8.1**
URZ	**Urewera**	**20.28**	**197**	P	**P**	**10 36 42.8**	**+0.8**
	comp=Z,318nm,0.5s,baz=37,slow=3.6,SNR=130						
URZ				S	**S**	**10 40 15.1**	**-4.8**
	comp=Z,26nm,0.3s,baz=60,slow=20,SNR=2.4						
URZ	**Urewera**	**20.28**	**197**	P	**P**	**10 36 41.9**	**-0.1**
KNZ	**Kokohu**	**20.86**	**195**	P	Pn	10 36 51.3	-1.9
KNZ				S	S	10 40 19.9	-11
MTHZ	**Maungataniwha**	**20.91**	**197**	P	**P**	**10 36 48.5**	**-0.3**
MTHZ				S	**S**	**10 40 23.3**	**-8.8**
NMHZ	**Naumai**	**21.15**	**197**	P	**P**	**10 36 50.6**	**-0.8**
NMHZ				S	**S**	**10 40 30.1**	**-6.

comp=Z,314nm,1.0s
RPZ Rata Peaks 27.14 202 P **P 10 37 48.5 +1.6**
comp=Z,64nm,0.4s,baz=340,slow=1.6,SNR=29
RPZ Rata Peaks 27.14 202 P **P 10 37 47.5 +0.6**
FOZ Fox Glacier 27.43 203 P **P 10 37 50.0 +0.6**
FOZ IAmb IAmb 10 37 58.1
comp=Z,110nm,0.6s
LBZ Lake Benmore 28.04 202 P **P 10 37 54.5 -0.2**
ODZ Otahua Downs 28.45 201 P **P 10 37 58.6 +0.2**
ODZ IAmb IAmb 10 38 08.5
comp=Z,61nm,0.8s
WKZ Wanaka 28.84 203 P **P 10 38 00.3 -1.6**
WKZ IAmb IAmb 10 38 10.4
comp=Z,72nm,0.6s
MLZ Mavora Lakes 29.63 204 P **P 10 38 09.4 +0.5**
MLZ IAmb IAmb 10 38 15.9
comp=Z,107nm,0.9s
DCZ Deep Cove 30.09 205 P **P 10 38 14.9 +2.0**
DCZ IAmb IAmb 10 38 17.4
comp=Z,100nm,0.9s
EIDS Eidsvold 31.48 252 P **P 10 38 27.1 +1.7**
baz=32,SNR=75
EIDS Eidsvold 31.48 252 P **P 10 38 26.6 +1.2**
ARMA Armidale 31.81 243 P **P 10 38 30.5 +2.2**
baz=32,SNR=73
ARMA Armidale 31.81 243 P **P 10 38 29.8 +1.4**
ARMA IAmb IAmb 10 38 35.3
comp=Z,121nm,0.7s
MGCD Mangrove Creek 32.97 238 P **P 10 38 40.7 +2.4**
baz=33,SNR=31
RMQ Roma 33.67 251 P **P 10 38 46.8 +2.4**
baz=34,SNR=265
RABL Rabaul 34.74 291 P **P 10 38 54.5 +0.7**
CNB Canberra Magne 34.99 235 P **P 10 38 57.3 +1.6**
baz=35,SNR=75
CAN Canberra 35.27 235 P **P 10 38 59.2 +1.0**
CAN pmax pmax
comp=Z,482nm,1.6s
CAN Canberra 35.27 235 P **P 10 38 59.2 +1.0**
YNG Young 35.45 237 P **P 10 39 01.6 +1.9**
baz=36,SNR=12
MILA Mila 35.73 232 P **P 10 39 04.2 +2.1**
baz=36,SNR=7.2
TAOE Nuku Hiva Isla 35.75 79 *e*P **P 10 39 03.5 +1.0**
comp=Z,1µm,1.0s
JOHN Johnston Islan 35.94 10 P **P 10 39 03.4 -0.4**
JOHN IAmb IAmb 10 39 09.1
comp=Z,161nm,0.8s
CTA Charters Tower 35.95 262 P **P 10 39 06.1 +2.0**
CTA pmax pmax
comp=Z,1µm,0.9s
CTAO Charters Tower 35.95 262 P **P 10 39 06.2 +2.2**
CTAO pmax pmax
comp=Z,758nm,0.9s
CTAO Charters Tower 35.95 262 P **P 10 39 06.2 +2.2**
PATS Pohnpei 36.31 312 P **P 10 39 09.3 +2.3**
baz=36,SNR=6.3
PATS Pohnpei 36.31 312 P **P 10 39 06.4 -0.7**
CMSA Cobar Meteorol 37.03 243 P **P 10 39 14.1 +1.1**
baz=37,SNR=151
PMG Port Moresby 37.28 279 S **S 10 44 46.3 -3.8**
comp=Z,11nm,0.8s,baz=180,slow=19,SNR=1.7
PMG Port Moresby 37.28 279 *d* *i*P **P 10 39 17.3 +1.9**
PMG Port Moresby 37.28 279 P **P 10 39 17.0 +1.6**
QLP Quilpie 37.72 251 P **P 10 39 20.2 +1.3**
baz=38,SNR=56
MTSU Mount Surprise 37.98 265 P **P 10 39 22.8 +1.5**
baz=38,SNR=208
RKT Rikitea 38.04 104 *e*P **P 10 39 23.0 +1.4**
comp=Z,1µm,1.0s
TOO Toolangi 38.66 233 P **P 10 39 27.8 +1.1**
baz=39,SNR=29
TOO Toolangi 38.66 233 P **P 10 39 27.6 +0.9**
TOO pmax pmax
comp=Z,411nm,1.6s
TOO Toolangi 38.66 233 P **P 10 39 27.6 +0.9**
TOO IAmb IAmb 10 39 30.6
comp=Z,410nm,1.6s
MOO Moorlands 39.22 225 P **P 10 39 31.7 +0.4**
baz=39,SNR=5.2
TAU Tasmania Unive 39.34 224 P **P 10 39 32.4 +0.2**
TAU pmax pmax
comp=Z,47nm,0.9s
TAU Tasmania Unive 39.34 224 P **P 10 39 32.4 +0.2**
COEN Coen 39.81 271 P **P 10 39 38.0 +1.6**
baz=40,SNR=77
COEN Coen 39.81 271 P **P 10 39 37.2 +0.8**
COEN IAmb IAmb 10 39 39.8
comp=Z,142nm,0.8s
STKA Stephens Creek 40.53 243 P **P 10 39 43.5 +1.4**
baz=41,SNR=109
STKA Stephens Creek 40.53 243 P **P 10 39 43.5 +1.4**
comp=Z,102nm,0.8s,baz=90,slow=9.8,SNR=82
STKA Stephens Creek 40.53 243 P **P 10 39 43.7 +1.5**
STKA pmax pmax
comp=Z,33nm,1.0s
STKA Stephens Creek 40.53 243 P **P 10 39 43.7 +1.5**
ARPS Mount Arapiles 41.25 235 P **P 10 39 48.8 +0.8**
baz=41,SNR=18
WAKE Wake Island 41.79 334 P **P 10 39 54.1 +1.6**
QIS Mount Isa 42.12 260 P **P 10 39 56.1 +0.8**
baz=42,SNR=59
PTCN Pitcairn Islan 42.45 107 P **P 10 39 58.3 +0.4**
KHU Kahuku 42.70 28 P **P 10 40 01.3 +1.2**
KHU pmax pmax
comp=Z,173nm,1.1s
KHU Kahuku 42.70 28 P **P 10 40 01.3 +1.2**
KHU IAmb IAmb 10 40 56.0
comp=Z,173nm,1.1s
KHLU Kahalu`u 42.88 28 P **P 10 40 02.4 +1.0**
HTT Hallett 42.98 241 P **P 10 40 02.9 +0.8**
baz=43,SNR=51
HUH Hualalai 42.99 28 P **P 10 40 04.4 +1.9**
HUH IAmb IAmb 10 40 54.9
comp=Z,114nm,0.9s
PUH Pauahi 42.99 29 P **P 10 40 03.2 +0.9**
PUH IAmb IAmb 10 40 05.3
comp=Z,118nm,0.6s
HMH Humu'ula Sheep 43.07 28 P **P 10 40 04.0 +0.8**
HMH IAmb IAmb 10 40 56.6
comp=Z,291nm,1.2s
HPAH Hawaii Prepara 43.35 28 P **P 10 40 06.7 +1.6**
KEKH Kekaha 43.53 22 P **P 10 40 08.7 +2.3**
HON Honolulu 43.55 24 P **P 10 40 08.5 +1.9**
HON Honolulu 43.55 24 P **P 10 40 08.5 +1.9**
KIP Kipapa 43.64 24 ‖ *e*P **P 10 40 08.6 +1.3**
KIP pmax pmax
comp=Z,142nm,1.1s
KIP Kipapa 43.64 24 P **P 10 40 08.9 +1.6**
HLK Haleakala 43.76 27 P **P 10 40 10.5 +1.9**
BBOO Buckleboo 45.29 242 P **P 10 40 21.1 +0.6**
baz=45,SNR=169
BBOO Buckleboo 45.29 242 P **P 10 40 20.8 +0.3**
BBOO IAmb IAmb 10 40 23.7
comp=Z,257nm,1.1s
JAY Jayapura 45.77 286 P **P 10 40 25.7 +1.2**
comp=Z,251nm,1.1s,baz=108,slow=3.0,SNR=33
JAY Jayapura 45.77 286 P **P 10 40 25.7 +1.2**
comp=Z,3µmcomp=Z,3µmcomp=Z,238nm,1.4s
GENI Genyem 46.23 285 P **P 10 40 30.0 +2.0**
comp=Z,9µmcomp=Z,20µmcomp=Z,1µm,1.7s
WR0 Warramunga Arr 46.91 260 P **P 10 40 33.8 +0.5**
WB0 Warramunga Arr 47.07 260 P **P 10 40 35.1 +0.6**
WB2 Warramunga Arr 47.09 260 P **P 10 40 35.4 +0.7**
WRAB Tennant Creek 47.09 260 *d* *i*P **P 10 40 35.1 +0.5**
WRAB pmax pmax
comp=Z,1µm,1.6s
WRAB Tennant Creek 47.09 260 P **P 10 40 35.2 +0.5**
WRA Warramunga Arr 47.10 260 P **P 10 40 35.1 +0.4**
comp=Z,130nm,0.3s,baz=98,slow=7.2,SNR=585
WRA PcP **PcP 10 42 04.7 +0.8**
comp=Z,60nm,0.7s,baz=92,slow=3.5,SNR=8.0
WRA ScP **ScP 10 45 41.4 -0.2**
comp=Z,6.8nm,1.0s,baz=95,slow=4.3,SNR=5.6
WRA S **S 10 47 08.3 -5.8**
comp=Z,15nm,0.8s,baz=95,slow=14,SNR=12
AS31 Alice Springs 47.11 255 P **P 10 40 35.8 +1.0**
AS31 IAmb IAmb 10 40 39.6
comp=Z,86nm,0.7s
ASAR Alice Springs 47.12 255 P **P 10 40 35.5 +0.7**
comp=Z,276nm,0.7s,baz=96,slow=7.9,SNR=2317
ASAR PcP **PcP 10 42 05.6 +1.7**
comp=Z,87nm,0.7s,baz=97,slow=4.9,SNR=12
ASAR ScP **ScP 10 45 39.0 -2.6**
comp=Z,16nm,1.2s,baz=106,slow=5.9,SNR=3.0
ASAR S **S 10 47 10.4 -3.8**
comp=Z,18nm,0.7s,baz=92,slow=15,SNR=15
ASAR ScS **ScS 10 50 10.4 -1.0**
comp=Z,2.0nm,0.8s,baz=88,slow=8.5,SNR=4.0
SMPI Sarmi 47.81 285 P **P 10 40 41.3 +1.1**
comp=Z,4µmcomp=Z,3µmcomp=Z,137nm,2.1s
SRPI Serui, Papua 50.12 284 P P 10 41 04.2 +6.4
KDU Kakadu 50.23 269 P **P 10 40 59.5 +0.9**
baz=50,SNR=167
GUMO Guam 50.63 307 P **P 10 41 01.0 -0.5**
GUMO pmax pmax
comp=Z,336nm,0.8s
GUMO Guam 50.63 307 P **P 10 41 01.0 -0.5**
MTN Manton Dam 51.46 268 P **P 10 41 08.4 +0.5**
baz=52,SNR=113
MTN Manton Dam 51.46 268 P **P 10 41 07.8 0.0**
FORT Forrest 52.02 245 P **P 10 41 12.1 +0.3**
baz=52,SNR=95
FORT Forrest 52.02 245 P **P 10 41 11.7 -0.1**
WRKA Warakuna 52.10 253 P **P 10 41 13.3 +0.8**
baz=52,SNR=153
RKPI Ransiki, Papua 52.16 283 P **P 10 41 15.2 +2.2**
comp=Z,25µmcomp=Z,300nm,1.3s
SAUI Saumlaki 52.62 274 P **P 10 41 17.6 +1.2**
comp=Z,14µmcomp=Z,954nm,1.4s
SAUI Saumlaki 52.62 274 P **P 10 41 17.1 +0.7**
KNRA Kununurra 53.06 264 P **P 10 41 20.6 +1.0**
baz=53,SNR=217
KNRA Kununurra 53.06 264 P **P 10 41 20.6 +1.0**
FAKI Fak Fak 53.41 281 P **P 10 41 22.3 +0.1**
comp=Z,4µmcomp=Z,4µmcomp=Z,162nm,1.7s
FAKI Fak Fak 53.41 281 P **P 10 41 21.3 -0.9**
FAKI IAmb IAmb 10 41 25.2
comp=Z,300nm,1.5s
BNDI Bandanaira 55.04 278 P **P 10 41 34.6 +0.6**
comp=Z,6µmcomp=Z,9µmcomp=Z,474nm,1.3s
SIJI Sorong 55.09 283 P **P 10 41 35.8 +1.4**
comp=Z,560nm,0.9s,baz=93,slow=5.1,SNR=116
FITZ Fitzroy Crossi 55.52 261 P **P 10 41 38.4 +1.1**
baz=56,SNR=121
FITZ Fitzroy Crossi 55.52 261 P **P 10 41 37.5 +0.2**
MSAI Masohi 56.36 279 P **P 10 41 44.2 +0.8**
comp=Z,825nmcomp=Z,41nm,0.7s
AAI Ambon 56.93 278 P **P 10 41 47.5 +0.1**
comp=Z,6µmcomp=Z,5µmcomp=Z,309nm,1.6s
AAI Ambon 56.93 278 P **P 10 41 48.6 +1.2**
AAI pmax pmax
comp=Z,314nm,1.4s
KMBL Kambalda 57.29 244 P **P 10 41 49.6 -0.1**
baz=57,SNR=26
NLAI Namlea 58.11 278 P **P 10 41 55.8 +0.2**
comp=Z,5µmcomp=Z,331nm,1.6s
LBMI Labuha 58.66 281 P **P 10 42 00.3 +0.8**
comp=Z,4µmcomp=Z,390nm,1.3s
SOEI Soe 58.76 270 P **P 10 42 01.8 +1.5**
comp=Z,5µmcomp=Z,13µmcomp=Z,1µm,1.1s
SOEI Soe 58.76 270 P **P 10 42 02.2 +1.9**
BATI Baumata 59.21 269 P **P 10 42 05.1 +1.7**
comp=Z,149nm,0.5s,baz=73,slow=1.7,SNR=22
BATI S **S 10 49 59.9 +2.0**
comp=Z,7.1nm,0.3s,baz=49,slow=19,SNR=8.0
BATI Baumata 59.21 269 P **P 10 42 05.0 +1.7**
comp=Z,3µmcomp=Z,3µmcomp=Z,162nm,1.0s
TNTI Ternate 59.31 283 P **P 10 42 05.1 +1.1**
comp=Z,3µmcomp=Z,7µmcomp=Z,410nm,1.5s
TNTI Ternate 59.31 283 P **P 10 42 04.6 +0.6**
SANI Sanana 59.56 279 P **P 10 42 05.3 -0.4**
comp=Z,5µmcomp=Z,376nm,1.4s
VNDA Vanda 59.67 186 P **P 10 42 08.1 +2.7**
comp=Z,39nm,0.8s,baz=2.8,slow=7.0,SNR=74
VNDA Vanda 59.67 186 P **P 10 42 07.8 +2.4**
VNDA pmax pmax
comp=Z,59nm,0.9s
VNDA Vanda 59.67 186 P **P 10 42 07.8 +2.4**
VNDA IAmb IAmb 10 42 10.7
comp=Z,59nm,0.8s
PSA00 Pilbara Seismi 60.26 256 P **P 10 42 10.3 0.0**
MBWA Marble Bar 60.44 256 P **P 10 42 11.7 +0.2**
MEEK Meekatharra 60.59 250 P **P 10 42 12.5 -0.1**
baz=61,SNR=53
KLBR Kellberrin 60.79 244 P **P 10 42 14.0 +0.2**
baz=61,SNR=52
MMRI Maumere 61.00 270 P **P 10 42 15.5 +0.1**
comp=Z,5µmcomp=Z,6µmcomp=Z,282nm,0.8s
MMRI Maumere 61.00 270 P **P 10 42 16.0 +0.6**
NWAO Narrogin (SRO) 61.11 242 P **P 10 42 16.8 +0.8**
baz=61,SNR=23
NWAO Narrogin (SRO) 61.11 242 P **P 10 42 16.3 +0.4**
NWAO Narrogin (SRO) 61.11 242 P **P 10 42 16.8 +0.8**
NWAO pmax pmax
comp=Z,337nm,1.6s
NWAO Narrogin (SRO) 61.11 242 P **P 10 42 16.7 +0.8**
NWAO Narrogin (SRO) 61.11 242 P **P 10 42 16.8 +0.8**
NWAO IAmb IAmb 10 42 19.0
comp=Z,337nm,1.6s
RKGY Rocky Gully 61.20 240 P **P 10 42 17.6 +1.1**
baz=61,SNR=17
JCJ Chichijima 61.41 317 P **P 10 42 18.9 +1.0**
comp=Z,251nm,0.8s,baz=183,slow=2.8,SNR=14
EDFI Ende, Flores 61.48 270 P **P 10 42 18.5 -0.3**
comp=Z,2µmcomp=Z,3µmcomp=Z,199nm,1.2s
BBSI Bau Bau 61.63 274 P **P 10 42 21.9 +2.2**
comp=Z,700nmcomp=Z,32nm,1.2s
BLDU Ballidu 61.78 245 P **P 10 42 20.6 +0.2**
baz=62,SNR=58
MNI Manado 61.90 282 P **P 10 42 23.0 +1.5**
MNI pmax pmax
comp=Z,180nm,1.6s
MUN Mundaring 62.06 243 P **P 10 42 22.9 +0.6**
baz=62,SNR=26
BASI Baing, Sumba 62.13 268 P **P 10 42 24.2 +1.2**
comp=Z,3µmcomp=Z,9µmcomp=Z,682nm,1.6s
KMSI Cibinong 62.38 281 P **P 10 42 25.0 +0.4**
comp=Z,5µmcomp=Z,353nm,1.2s
MORW Morawa 62.54 247 P **P 10 42 25.8 +0.2**
baz=63,SNR=32
MORW Morawa 62.54 247 P **P 10 42 25.6 +0.1**
MORW IAmb IAmb 10 42 28.3
comp=Z,173nm,1.0s
MATI Mati 62.81 289 *e*P **P 10 42 26.2 -1.3**
LUWI Luwuk 62.92 279 P **P 10 42 29.1 +0.8**
comp=Z,5µmcomp=Z,10µmcomp=Z,648nm,1.4s
LUWI Luwuk 62.92 279 P **P 10 42 28.8 +0.5**
DDMP Don Marcelino, 62.95 287 *e*P **P 10 42 28.4 0.0**
WBSI Waikabubak, Su 63.41 269 P **P 10 42 31.7 +0.2**
comp=Z,6µmcomp=Z,465nm,1.4s
DAV Davao City (W) 63.48 288 P **P 10 42 33.0 +1.1**
comp=Z,226nm,0.4s,baz=120,slow=6.5,SNR=8.4
DAV Davao City (W) 63.48 288 IAmb IAmb 10 42 35.1
comp=Z,337nm,1.0s
BKSI Bulukumba 64.00 273 P **P 10 42 34.9 -0.4**
comp=Z,3µmcomp=Z,2µmcomp=Z,104nm,1.6s
APSI Ampana 64.02 278 P **P 10 42 36.5 +1.0**
comp=Z,3µmcomp=Z,5µmcomp=Z,327nm,1.5s
SKMP Bagumbayan, Su 64.18 287 *e*P **P 10 42 36.4 -0.1**
MRSI Marisa 64.24 280 P **P 10 42 36.5 -0.4**
comp=Z,4µmcomp=Z,3µmcomp=Z,197nm,1.3s
BUTP Butuan 64.25 290 *e*P **P 10 42 38.4 +1.4**
BNSI Bone 64.30 274 P **P 10 42 37.7 +0.4**
comp=Z,4µmcomp=Z,289nm,1.4s
KAPI Kappang 64.44 274 P **P 10 42 39.0 +0.7**
comp=Z,47nm,0.9s,baz=112,slow=5.4,SNR=10
KAPI Kappang 64.44 274 P **P 10 42 39.1 +0.9**
KAPI Kappang 64.44 274 P **P 10 42 39.0 +0.7**
KAPI Kappang 64.44 274 P **P 10 42 38.8 +0.6**
KAPI IAmb IAmb 10 42 41.0
comp=Z,144nm,1.2s
CTBH Cotabato--PC H 64.74 288 ⇑ *i*P **P 10 42 39.6 -0.5**
SPSI Sidrap Palu 64.76 275 P **P 10 42 39.6 -0.7**
comp=Z,3µmcomp=Z,2µmcomp=Z,112nm,1.1s
TTSI Tana Toraja 65.02 276 P **P 10 42 42.2 +0.3**
comp=Z,4µmcomp=Z,2µmcomp=Z,66nm,1.1s
PLAI Playang 65.17 269 P **P 10 42 42.5 -0.4**
comp=Z,4µmcomp=Z,7µmcomp=Z,626nm,1.4s
GIRL Giralia 65.18 253 P **P 10 42 44.6 +1.8**
baz=65,SNR=23
GIRL Giralia 65.18 253 P **P 10 42 43.9 +1.1**
MSLP Maasin 65.44 291 *e*P **P 10 42 44.9 +0.3**
PAGZ Pagadian 65.78 288 *e*P **P 10 42 47.4 +0.6**
OCLP Ormoc 66.06 292 *e*P **P 10 42 49.3 +0.7**
MPSI Mapaga 66.10 279 P **P 10 42 48.6 -0.3**
comp=Z,4µmcomp=Z,3µmcomp=Z,170nm,1.6s
CASY Casey 66.34 205 P **P 10 42 50.2 +0.7**
CASY IAmb IAmb 10 42 53.1
comp=Z,66nm,1.0s
CNP Catarman 66.67 293 *e*P **P 10 42 53.6 +1.2**
JHJ2 Mitsune 67.03 320 P **P 10 42 56.1 +1.8**
JHJ Hachijo jima 2 67.06 320 P **P 10 42 56.0 +1.4**
comp=Z,1µm,0.9s,baz=96,slow=21,SNR=42
CNOP Candoni, Negro 67.27 290 *e*P **P 10 42 54.5 -1.8**
PVCP Virac 67.60 294 *e*P **P 10 42 59.8 +1.5**
DNP Denpasar 67.64 268 P **P 10 42 59.9 +1.3**
comp=Z,34µmcomp=Z,388nm,0.8s
DNP Denpasar 67.64 268 P **P 10 43 00.0 +1.3**
DNP pmax pmax
comp=Z,370nm,0.8s
GUIM Jordan 67.66 290 *e*P **P 10 42 56.0 -2.7**
SRBI Singaraja 67.81 269 P **P 10 42 59.6 -0.1**
comp=Z,4µmcomp=Z,5µmcomp=Z,351nm,1.4s
RCP Roxas 67.92 291 ‖ *e*P **P 10 43 01.4 +1.1**
SMKI Samarinda 68.34 277 P **P 10 43 03.9 +0.9**
comp=Z,6µmcomp=Z,117nm,0.6s
BKB Balikpapan 68.36 276 P **P 10 43 05.5 +2.4**
comp=Z,6µmcomp=Z,4µmcomp=Z,161nm,1.1s
KBKI Kotabaru 68.38 274 P **P 10 43 04.8 +1.6**
comp=Z,1µmcomp=Z,99nm,1.3s
JAGI Jajag, Banyuwa 68.70 268 P **P 10 43 04.6 -0.6**
comp=Z,3µmcomp=Z,4µmcomp=Z,390nm,1.2s
JAGI Jajag, Banyuwa 68.70 268 P **P 10 43 04.9 -0.4**
OTRP Odiongan 68.91 292 *e*P **P 10 43 06.4 -0.1**
CUYO Cuyo Island 69.15 290 *e*P **P 10 43 08.8 +0.9**
KMMI Kalianget 69.29 269 P **P 10 43 11.2 +2.3**
comp=Z,3µmcomp=Z,204nm,1.5s
BOAC Boac 69.55 293 *e*P **P 10 43 11.3 +1.0**
INU Inuyama 70.25 320 P **P 10 43 14.2 0.0**
PGP Puerto Galera 70.34 292 ‖ *e*P **P 10 43 14.8 -0.5**
MJAR Matsushiro Arr 70.35 322 P **P 10 43 16.1 +1.2**
comp=Z,197nm,1.0s,baz=139,slow=6.1,SNR=131
MJAR PKP2bc 11 11 12.6
comp=Z,9.4nm,1.2s,baz=320,slow=3.9,SNR=7.9
MAJO Matsushiro 70.35 322 P **P 10 43 16.5 +1.6**
MAJO pmax pmax
comp=Z,280nm,1.1s
MAJO Matsushiro 70.35 322 P **P 10 43 16.5 +1.6**
MAT Matsushiro 70.35 322 P **P 10 43 15.9 +1.0**
BUSP Coron 70.36 291 *e*P **P 10 43 16.1 +0.7**
ADK Adak 70.52 359 P **P 10 43 16.0 +0.5**
ADK pmax pmax
comp=Z,218nm,0.9s
ADK Adak 70.52 359 P **P 10 43 16.0 +0.5**
TGY Tagaytay City 70.62 293 P **P 10 43 18.8 +1.8**
comp=Z,93nm,0.3s,baz=223,slow=7.5,SNR=13
ENPP El Nido 70.72 290 *e*P **P 10 43 18.7 +1.2**
GRJI Gresik 70.74 269 P **P 10 43 18.6 +0.9**
comp=Z,2µmcomp=Z,183nm,1.6s
BALP Baler 70.79 295 *e*P **P 10 43 19.1 +1.2**
SPMM Sapulut 70.87 282 P **P 10 43 20.0 +1.5**
JOW Kunigami 70.96 308 P **P 10 43 21.0 +2.3**
comp=Z,23nm,1.2s,baz=143,slow=12,SNR=30
JOW Kunigami 70.96 308 IAmb IAmb 10 43 23.6
comp=Z,155nm,1.1s
PWJI Pagerwojo 71.05 268 P **P 10 43 20.1 +0.5**
comp=Z,4µmcomp=Z,241nm,1.1s
LUBP Lubang 71.06 292 *e*P **P 10 43 18.5 -1.0**
CAUP Cauayan 71.13 296 *e*P **P 10 43 21.6 +1.7**
QSPA South Pole Qui 71.13 180 P **P 10 43 20.4 +1.1**
BATP Bataraza 71.20 287 *e*P **P 10 43 21.8 +1.3**
PCJI Pacitan 71.59 267 P **P 10 43 23.2 +0.4**
comp=Z,9µmcomp=Z,869nm,1.6s
KKM Kota Kinabalu 71.60 283 P **P 10 43 23.9 +0.9**
ERM Erimo 71.63 329 *d* *i*P **P 10 43 25.9 +3.5**
ERM pmax pmax
comp=Z,196nm,1.2s
ERM Erimo 71.63 329 P **P 10 43 24.8 +2.4**
ERM IAmb IAmb 10 43 27.5
comp=Z,194nm,1.2s
SMPP San Manuel, Pa 71.75 295 *e*P **P 10 43 24.7 +1.0**
NIKH Nikolski High 71.84 4 P **P 10 43 23.7 +0.3**
YUK Yuzh-Kuril'sk 71.92 332 *d* *i*P **P 10 43 26.8 +2.8**
YUK *i* S **S 10 52 32.6 +1.7**
YUK pmax pmax
comp=Z,668nm,1.8s
YUK pmax pmax
comp=N,250nm,1.4s
YUK pmax pmax
comp=Z,477nm,1.4s
YUK pmax pmax
comp=E,181nm,1.6s
WOJI Wonogiri, Jawa 71.94 268 P **P 10 43 25.6 +0.7**
comp=E,5µmcomp=E,340nm,1.4s
KUR Kuril'sk 72.00 334 *e*P **P 10 43 25.3 +0.8**
KUR *e* 10 43 40.1
KUR *e* 10 46 09.2
KUR *e*S **S 10 52 33.0 +1.2**
KUR *e* 10 53 14.5
KUR pmax pmax
comp=Z,631nm,1.4s
KUR pmax pmax
comp=E,81nm,1.0s
KUR pmax pmax
comp=N,150nm,1.9s
KUR pmax pmax
comp=Z,2µm,5.6s
KUR MLR MLR
comp=Z,244nm,15.0s
APYP Conner 72.04 297 *e*P **P 10 43 26.9 +1.5**
UGM Wanagama 72.30 268 P **P 10 43 28.1 +1.0**
comp=Z,4µmcomp=Z,228nm,1.4s
UWJI Ujung Watu 72.34 269 P **P 10 43 29.0 +1.7**
comp=Z,2µmcomp=Z,130nm,0.9s
BOLP Bolinao 72.51 295 *e*P **P 10 43 28.9 +0.7**
SMRI Semarang 72.63 268 P **P 10 43 30.3 +1.3**
comp=Z,6µmcomp=Z,319nm,1.5s
JNU Nakatsue 72.75 315 P **P 10 43 30.9 +1.6**
comp=Z,257nm,1.0s,baz=92,slow=4.5,SNR=67
JNU Nakatsue 72.75 315 P **P 10 43 30.8 +1.4**
UNV Unalaska Valle 72.90 6 P **P 10 43 29.8 +0.2**
UNV IAmb IAmb 10 43 32.1
comp=Z,209nm,1.0s
AKUT Akutan 73.26 6 P **P 10 43 31.5 -0.2**
AKUT IAmb IAmb 10 43 40.5
comp=Z,388nm,1.8s
ASAJ Asahikawa 73.49 330 P **P 10 43 35.5 +2.2**
comp=Z,107nm,1.0s,baz=216,slow=7.3,SNR=36
SKR Severo-Kuril's 73.66 342 *e*P **P 10 43 34.7 +0.5**
SKR *e* 10 46 24.6
SKR *e*S **SKiKP 10 52 48.3 +2.0**
SKR *e*'SS **ScS 10 53 27.1 0.0**
SKR pmax pmax
comp=Z,700nm,5.6s
SKR pmax pmax
comp=Z,143nm,1.0s
SKR pmax pmax
comp=Z,300nm,8.9s
SKR MLR MLR
comp=Z,200nm,16.0s
SKR MLR MLR
comp=Z,200nm,17.0s
YOJ Yonaguni jima 73.75 304 P **P 10 43 35.0 -0.3**
YOJ pmax pmax
comp=Z,190nm,0.9s
YOJ Yonaguni jima 73.75 304 P **P 10 43 35.0 -0.3**
YOJ IAmb IAmb 10 43 38.3
comp=Z,190nm,0.9s
SBUM Sibu 74.02 278 P **P 10 43 37.8 +0.7**
SBUM IAmb IAmb 10 43 40.6
comp=Z,100nm,1.3s
SBUM Sibu 74.02 278 P **P 10 43 39.0 +1.9**
FALS False Pass 74.22 7 P **P 10 43 37.1 -0.2**
FALS IAmb IAmb 10 43 39.6
comp=Z,85nm,0.8s
TWG Pinlang 74.50 301 P **P 10 43 39.0 -0.7**
SNCC San Nicolas Is 74.52 46 P **P 10 43 41.0 +1.4**
baz=234
YULB Yu-li 74.59 302 P **P 10 43 40.2 0.0**
CNBA Chernabura Isl 74.72 10 IAmb IAmb 10 43 43.1
comp=Z,191nm,1.4s
NACB Ninganchiao 74.73 303 P **P 10 43 40.5 -0.5**
SCZ2 Santa Cruz Isl 74.88 45 P **P 10 43 42.9 +1.2**
baz=234
CISI Cisompet, Garu 74.96 267 P **P 10 43 42.0 -0.7**
comp=Z,3µmcomp=Z,4µmcomp=Z,329nm,1.6s
SCI2 San Clemente I 75.03 47 P **P 10 43 43.8 +1.2**
baz=235
SSLB Suanglung 75.05 302 IAmb IAmb 10 43 44.7
comp=Z,137nm,1.3s
PET Petropavlovsk 75.06 344 *i* P **P 10 43 43.5 +1.3**
PET pmax pmax
comp=Z,200nm,1.6s
PET Petropavlovsk 75.06 344 P **P 10 43 41.6 -0.6**
PET IAmb IAmb 10 43 45.6
comp=Z,312nm,1.6s

SBC	Santa Barbara	75.08	45	P	P	10 43 44.1	+1.4	QZH			LR	LR			
	baz=234								comp=Z,720nm,25.1s						
TPUB	Ta-pu	75.08	301	P	P	10 43 42.8	-0.3	MPMC	Manual Prospec	77.50	45	P	P	10 43 58.4	+1.7
SDPT	Sand Point	75.10	9	P	P	10 43 42.8	+0.5		baz=235,SNR=102						
SDPT				IAmb	IAmb	10 43 44.3		MLAC	Mammoth, Mammo	77.52	43	P	P	10 43 58.5	+1.7
	comp=Z,169nm,0.8s								baz=234,SNR=5.3						
YHNB	Yeheng	75.14	303	P	P	10 43 43.7	+0.3	GSC	Goldstone, Bar	77.53	46	P	P	10 43 57.3	+0.6
TATO	Taipei	75.20	303	P	P	10 43 45.1	+1.4	GSC				pmax	pmax		
PKM	Mcpherson Peak	75.28	45	P	P	10 43 46.1	+1.9		comp=Z,73nm,1.1s						
	baz=234,SNR=14							GSC	Goldstone, Bar	77.53	46	P	P	10 43 58.3	+1.6
SAO	San Andreas Ge	75.33	42	P	P	10 43 45.1	+0.9		baz=236,SNR=34						
SAO				pmax	pmax			GSC	Goldstone, Bar	77.53	46	P	P	10 43 57.3	+0.6
	comp=Z,49nm,0.9s							BC3	Big Chuckawall	77.56	48	P	P	10 43 58.7	+1.8
SAO	San Andreas Ge	75.33	42	P	P	10 43 45.1	+0.9		baz=237,SNR=20						
CIS	Catalina Islan	75.36	47	P	P	10 43 46.0	+1.5	TIN	Tinemaha, Big	77.58	44	P	P	10 43 58.8	+1.9
	baz=235								baz=235,SNR=21						
LEM	Lembang	75.37	268	P	P	10 43 46.8	+1.7	HEC	Hector,Ludlow	77.59	46	P	P	10 43 58.5	+1.5
LEM				pmax	pmax				baz=236,SNR=13						
	comp=Z,370nm,1.5s							YBH	Yreka Blue Hor	77.65	38	P	P	10 43 58.8	+1.6
PEA0B	Petropavlovsk-	75.38	344	P	P	10 43 45.6	+1.5	YBH				pmax	pmax		
PEA0B				pmax	pmax				comp=Z,108nm,1.4s						
	comp=Z,406nm,1.3s							YBH	Yreka Blue Hor	77.65	38	P	P	10 43 58.8	+1.6
PEA0B	Petropavlovsk-	75.38	344	P	P	10 43 45.6	+1.5	YBH				IAmb	IAmb	10 44 55.9	
PETK	Petropavlovsk-	75.38	344	P	P	10 43 45.4	+1.3		comp=Z,108nm,1.4s						
	comp=Z,141nm,0.9s,baz=120,slow=7.5,SNR=126							GLA	Glamis	77.68	49	P	P	10 43 59.3	+1.8
SMMC	Simmler	75.41	44	P	P	10 43 46.8	+2.1	GLA				pmax	pmax		
	baz=234,SNR=7.9								comp=Z,95nm,1.1s						
KSM	Kuching	75.48	277	P	P	10 43 46.8	+1.3	GLA	Glamis	77.68	49	P	P	10 43 59.4	+1.9
KSM	Kuching	75.48	277	P	P	10 43 47.0	+1.5		baz=238,SNR=32						
YSS	Yuzh-Sakhalins	75.56	332	⇓*i*P	P	10 43 47.5	+2.3	GLA	Glamis	77.68	49	P	P	10 43 59.3	+1.8
YSS				*e*		10 44 00.5		GLA				IAmb	IAmb	10 44 01.9	
YSS				*e*		10 46 38.8			comp=Z,95nm,1.1s						
YSS				*e*S	S	10 53 11.4	-0.2	K02D	Willamette Mer	77.73	36	P	P	10 43 59.6	+2.0
YSS				*e*		10 53 47.6			baz=230						
YSS				*e*SS	SS	10 58 02.2	-4.7	J01E	Myrtle Point	77.88	36	P	P	10 44 00.3	+2.0
YSS				pmax	pmax				baz=229						
	comp=N,500nm,3.9s							BEKR	Beckworth	77.90	40	P	P	10 43 60.0	+1.2
YSS				pmax	pmax			BEKR				IAmb	IAmb	10 44 56.9	
	comp=E,400nm,1.6s								comp=Z,116nm,1.6s						
YSS				pmax	pmax			PNTR	Pine Nut	77.90	41	IAmb	IAmb	10 44 02.7	
	comp=N,120nm,1.0s								comp=Z,93nm,0.8s						
YSS				pmax	pmax			VCNR	Virginia City	77.99	41	IAmb	IAmb	10 44 03.2	
	comp=E,130nm,1.3s								comp=Z,103nm,1.4s						
YSS				smax	smax			GMRC	Granite Mounta	78.03	47	P	P	10 44 01.1	+1.6
	comp=N,1μm,10.2s								baz=237,SNR=37						
YSS				smax	smax			IRM	Iron Mountain	78.05	47	P	P	10 44 01.4	+1.9
	comp=E,600nm,8.0s								baz=237,SNR=58						
YSS	Yuzh-Sakhalins	75.56	332	P	P	10 43 46.8	+1.6	BLSI	Bandar Lampung	78.06	268	P	P	10 44 01.3	+1.3
FMP	Fort Macarthur	75.62	46	P	P	10 43 47.5	+1.6	HUMO	Hull Mountain	78.07	37	IAmb	IAmb	10 44 58.3	
	baz=235								comp=Z,103nm,1.4s						
CNJI	Cibinong	75.69	267	P	P	10 43 46.8	+0.1	GRAC	Grapevine Rang	78.11	44	P	P	10 44 01.9	+2.1
	comp=E,4μmcomp=E,318nm,1.3s								baz=235,SNR=43						
HOPS	Hopland Field	75.71	40	P	P	10 43 48.0	+1.8	INCN	Inchon	78.12	317	P	P	10 44 03.2	+3.4
HOPS				IAmb	IAmb	10 43 50.3		INCN	Inchon	78.12	317	P	P	10 44 00.6	+0.8
	comp=Z,74nm,1.1s							INCN				pmax	pmax		
OSI	Osito Audit: C	75.85	45	P	P	10 43 48.8	+1.6		comp=Z,608nm,1.3s						
	baz=235							INCN	Inchon	78.12	317	P	P	10 44 00.6	+0.8
OSI	Osito Audit: C	75.85	45	P	P	10 43 48.7	+1.4	OHAK	Old Harbor	78.13	12	P	P	10 44 00.3	+1.0
DECC	Green Verdugo	75.91	46	P	P	10 43 48.8	+1.3	FURC	Furnace Creek,	78.15	45	P	P	10 44 01.6	+1.7
	baz=235								baz=236,SNR=24						
SPIA	Saint Paul Isl	75.95	3	P	P	10 43 48.6	+1.5	M04C	Macdoel	78.19	38	P	P	10 44 01.9	+1.6
PASC	Pasadena Art C	75.96	46	P	P	10 43 47.3	-0.5		baz=231,SNR=13						
109C	Camp Elliot, M	75.99	48	P	P	10 43 49.3	+1.3	L04D	Klamath Falls	78.20	37	P	P	10 44 01.8	+1.6
	baz=236								baz=231,SNR=7.9						
109C	Camp Elliot, M	75.99	48	P	P	10 43 49.3	+1.3	TUQ	Turquoise Moun	78.21	46	P	P	10 44 02.0	+1.5
ARVC	Arvin	76.07	45	P	P	10 43 50.1	+1.7		baz=236						
	baz=234,SNR=13							SHOC	Shoshone, Teco	78.22	45	P	P	10 44 02.0	+1.6
MWC	Mount Wilson	76.08	46	P	P	10 43 49.6	+0.9		baz=236,SNR=23						
MWC				pmax	pmax			Y12C	Blythe	78.27	48	P	P	10 44 02.6	+1.9
	comp=Z,38nm,0.8s								baz=238,SNR=29						
MWC	Mount Wilson	76.08	46	P	P	10 43 49.5	+0.9	113A	Mohawk Valley,	78.29	49	P	P	10 44 01.3	+0.5
XMIS	Christmas Isla	76.14	264	P	P	10 43 49.9	+0.6	RYN	Ryan	78.31	42	P	P	10 44 01.8	+0.8
XMIS				IAmb	IAmb	10 43 52.6		RYN				IAmb	IAmb	10 45 00.3	
	comp=Z,198nm,1.1s								comp=Z,148nm,1.7s						
BAR	Barrett	76.17	48	P	P	10 43 50.2	+1.2	NVAR	Mina Array Bea	78.33	42	P	P	10 44 02.8	+1.6
CBJI	Citeko	76.22	268	P	P	10 43 50.1	+0.4		comp=Z,88nm,1.1s,baz=226,slow=8.5,SNR=222						
	comp=Z,9μmcomp=Z,467nm,1.5s							PAHR	Pah Rah Range	78.40	41	P	P	10 44 02.2	+0.8
DBJI	Dramaga	76.27	268	P	P	10 43 49.8	-0.3	MSHR	Mys Shultsa	78.42	323	*d*iP	P	10 44 04.7	+3.4
	comp=Z,11μmcomp=Z,332nm,1.7s							NV11	Mina Array Sit	78.42	42	P	P	10 44 01.5	-0.1
VES	Vestal, Richgr	76.32	44	P	P	10 43 51.1	+1.3	NV11				IAmb	IAmb	10 44 05.4	
	baz=234,SNR=43								comp=Z,105nm,1.1s						
MURC	Murrieta	76.32	47	P	P	10 43 51.3	+1.5	SSE	Sheshan	78.47	309	P	P	10 44 03.4	+1.6
	baz=236,SNR=16							SSE				S	S	10 53 44.1	+0.3
CHGN	Chignik	76.33	10	IAmb	IAmb	10 43 54.0		SSE				pmax	pmax		
	comp=Z,101nm,0.8s								comp=Z,22nm,0.7s						
BFSC	Mount Baldy Ra	76.36	46	P	P	10 43 51.4	+1.2	SSE				pmax	pmax		
	baz=236,SNR=16								comp=Z,510nm,4.8s						
VOG	Valley Oaks Go	76.40	44	P	P	10 43 51.4	+1.2	SSE				LR	LR		
	baz=234								comp=Z,290nm,24.5s						
MONP2	Monument Peak	76.47	48	P	P	10 43 52.6	+1.6	SSE				LR	LR		
	baz=237,SNR=37								comp=Z,180nm,18.8s						
EDW2	Edwards Air Fo	76.49	46	P	P	10 43 52.6	+1.7	HSIG		78.49	54	IAmb	IAmb	10 44 05.5	
	baz=235,SNR=56								comp=Z,85nm,0.9s						
IKP	In-Ko-Pah, Jac	76.56	48	P	P	10 43 53.0	+1.7	I02D	Swisshome	78.54	35	P	P	10 44 03.6	+1.7
	baz=237,SNR=22								baz=229						
ISA	Isabella, Lake	76.62	45	P	P	10 43 53.3	+1.8	I03D	Drain, OR	78.55	36	P	P	10 44 03.5	+1.5
	baz=235,SNR=38								baz=230						
ISA	Isabella, Lake	76.62	45	IAmb	IAmb	10 43 55.6		214A	Organ Pipe Nat	78.56	50	P	P	10 44 04.1	+1.8
	comp=Z,84nm,1.1s								baz=239,SNR=60						
O02D	Mt. Diablo Mer	76.62	39	P	P	10 43 53.7	+2.2	214A	Organ Pipe Nat	78.56	50	IAmb	IAmb	10 44 06.6	
	baz=231,SNR=18								comp=Z,84nm,1.1s						
SRIG	Santa Rosalia	76.66	55	IAmb	IAmb	10 43 55.6		TYV	Tymovskoe	78.59	334	*e*P	P	10 44 03.6	+1.6
	comp=Z,132nm,0.9s							TYV				*e*S	S	10 53 46.0	+1.8
PFO	Pinyon Flats O	76.83	47	*ce*P	P	10 43 54.4	+1.5	TYV				pmax	pmax		
PFO				pmax	pmax				comp=Z,159nm,1.2s						
	comp=Z,101nm,1.4s							TYV				pmax	pmax		
PFO	Pinyon Flats O	76.83	47	P	P	10 43 54.4	+1.5		comp=Z,1μm,2.6s						
	baz=236,SNR=16							TYV				smax	smax		
PFO	Pinyon Flats O	76.83	47	P	P	10 43 54.2	+1.3		comp=N,300nm,3.2s						
PFO				IAmb	IAmb	10 43 56.8		KASI	Kota Agung	78.72	268	P	P	10 44 02.3	-1.3
	comp=Z,100nm,1.4s								comp=N,3μmcomp=N,304nm,1.1s						
XPFO	Pion Flat	76.84	47	P	P	10 43 54.2	+1.3	NEE2	Needles Airpor	78.74	47	P	P	10 44 05.2	+1.9
XPFO				IAmb	IAmb	10 43 56.8			baz=237,SNR=13						
	comp=Z,100nm,1.4s							K04D	Chiloquin, OR	78.77	37	P	P	10 44 04.9	+1.5
BBRC	Big Bear Solar	76.88	47	P	P	10 43 54.5	+1.3		baz=231						
	baz=236,SNR=8.5							KDAK	Kodiak Island	78.79	12	P	P	10 44 04.3	+1.4
SWSC	Sam W. Stewart	76.93	48	P	P	10 43 54.8	+1.5	KDAK	Kodiak Island	78.79	12	P	P	10 44 04.3	+1.4
	baz=237,SNR=12							TPNV	Topopah Spring	78.83	45	P	P	10 44 05.2	+1.3
TJN	Taejon	77.00	316	*d*iP	P	10 43 55.4	+1.8	TPNV				pmax	pmax		
ORV	Oroville	77.01	40	P	P	10 43 54.6	+1.0		comp=Z,114nm,1.3s						
ORV				pmax	pmax			TPNV	Topopah Spring	78.83	45	P	P	10 44 05.7	+1.8
	comp=Z,72nm,1.7s								baz=236,SNR=57						
ORV	Oroville	77.01	40	P	P	10 43 54.6	+1.0	TPNV	Topopah Spring	78.83	45	P	P	10 44 05.2	+1.3
WDC	Whiskeytown Da	77.03	39	P	P	10 43 54.4	+0.8	TPNV				IAmb	IAmb	10 44 07.1	
WDC				pmax	pmax				comp=Z,114nm,1.3s						
	comp=Z,148nm,1.7s							PDMCI	Parker Dam,Lak	78.83	48	P	P	10 44 05.6	+1.9
WDC	Whiskeytown Da	77.03	39	P	P	10 43 54.4	+0.8		baz=238,SNR=40						
WDC				IAmb	IAmb	10 44 52.0		J04D	Umpqua Nationa	78.95	37	P	P	10 44 05.7	+1.2
	comp=Z,148nm,1.7s								baz=231,SNR=13						
LRMC	Laurel Mtn Rad	77.04	45	P	P	10 43 55.5	+1.5	USA0B	Ussuriysk Arra	78.99	324	P	P	10 44 03.9	-0.5
	baz=235,SNR=5.2							USA0B				pmax	pmax		
TEY	Ternei	77.11	327	⇓*e*P	P	10 43 57.1	+3.2		comp=Z,361nm,1.6s						
TEY				*e*		10 53 25.4		USA0B	Ussuriysk Arra	78.99	324	P	P	10 44 03.9	-0.5
TEY				pmax	pmax			USA0B				IAmb	IAmb	10 44 11.8	
	comp=N,10.0nm,1.7s								comp=Z,361nm,1.6s						
TEY				pmax	pmax			USRK	Ussuriysk Ar.	78.99	324	P	P	10 44 06.5	+2.1
	comp=Z,40nm,1.5s								comp=Z,99nm,1.1s,baz=108,slow=4.0,SNR=44						
TEY				pmax	pmax			I04A	Tendick Farm,	79.13	36	P	P	10 44 06.7	+1.4
	comp=E,20nm,1.1s								baz=230						
TEY				pmax	pmax			MOD	Modoc Plateau	79.17	39	P	P	10 44 06.3	+0.7
	comp=Z,400nm,4.4s							MOD				IAmb	IAmb	10 45 04.0	
RRX	Edison Barstow	77.17	46	P	P	10 43 55.9	+1.3		comp=Z,98nm,1.3s						
	baz=236							LWLI	Liwa	79.29	268	P	P	10 44 07.7	+0.8
N02D	Trinity Center	77.18	38	P	P	10 43 56.6	+2.0		comp=Z,201nm,0.9s						
	baz=231,SNR=13							SHPR	Sheep Range	79.31	45	P	P	10 44 07.5	+1.0
KSRS	Korea Array	77.27	317	P	P	10 43 57.8	+2.7	K05A	Summer Lake	79.33	38	P	P	10 44 07.4	+0.9
	comp=Z,245nm,1.1s,baz=136,slow=6.0,SNR=326							K05A				IAmb	IAmb	10 45 05.3	
O03E	Paynes Creek	77.29	39	P	P	10 43 56.5	+1.3		comp=Z,167nm,1.3s						
	baz=231,SNR=20							MDSI	Maura Dua	79.34	269	P	P	10 44 05.9	-1.1
CWC	Cottonwood Cre	77.33	44	P	P	10 43 57.2	+1.6		comp=Z,2μmcomp=Z,109nm,1.2s						
	baz=235							H04D	Lebanon	79.42	35	P	P	10 44 08.0	+1.3
M02C	Callahan	77.36	38	P	P	10 43 57.8	+2.2		baz=230						
	baz=230,SNR=11							W13A	Hualapai Mount	79.43	47	P	P	10 44 07.0	-0.3
BELC	Belle Mtn. Jos	77.37	47	P	P	10 43 57.5	+1.6	Y14A	Wickenburg	79.44	49	IAmb	IAmb	10 44 11.2	
	baz=237,SNR=42								comp=Z,114nm,1.1s						
QZH	Quanzhou	77.50	302	⇓*i*P	P	10 43 59.2	+2.6	J05D	Fort Rock, OR	79.48	37	P	P	10 44 08.8	+1.5
QZH				sP	sP	10 44 51.6	-4.2		baz=231,SNR=33						
QZH				S	S	10 53 33.0	-0.6	G03D	McMinnville, O	79.58	35	P	P	10 44 09.3	+1.8
QZH				pmax	pmax				baz=230						
	comp=Z,110nm,1.4s							PINE	Pine Mountain	79.96	37	P	P	10 44 11.1	+1.2
QZH				pmax	pmax			PINE				IAmb	IAmb	10 45 08.9	
	comp=Z,1μm,3.2s								comp=Z,164nm,1.3s						
QZH				LR	LR			HKPS	Hong Kong Po S	79.97	298	IAmb	IAmb	10 44 15.0	
	comp=Z,470nm,22.3s								comp=Z,188nm,1.2s						
QZH				LR	LR			R11A	Troy Canyon, C	80.04	44	P	P	10 44 11.7	+1.3
	comp=Z,280nm,27.5s								baz=236,SNR=45						
								R11A	Troy Canyon, C	80.04	44	P	P	10 44 11.7	+1.3
I05D	Terrebonne, OR	80.08	36	P	P	10 44 12.0	+1.7								
	baz=231														
TUC	Tucson	80.22	51	P	P	10 44 13.0	+1.6								
TUC				pmax	pmax										
	comp=Z,57nm,1.0s														
TUC	Tucson	80.22	51	P	P	10 44 13.6	+2.2								
	baz=240														
TUC	Tucson	80.22	51	P	P	10 44 13.0	+1.6								
F04D	Rainier, OR	80.28	34	P	P	10 44 12.4	+1.2								
	baz=230														
E03A	Lebam	80.29	33	IAmb	IAmb	10 45 12.7									
	comp=Z,105nm,1.3s														
WVOR	Wild Horse Val	80.48	39	P	P	10 44 13.7	+1.1								
WVOR				pmax	pmax										
	comp=Z,93nm,1.3s														
WVOR	Wild Horse Val	80.48	39	P	P	10 44 13.7	+1.1								
WVOR				IAmb	IAmb	10 44 16.4									
	comp=Z,93nm,1.3s														
F04A	Amboy	80.50	34	IAmb	IAmb	10 44 16.9									
	comp=Z,179nm,1.7s														
MDJ	Mudanjiang	80.58	324	P	P	10 44 15.4	+2.5								
MDJ				pP	pP	10 44 53.2	-1.1								
MDJ				sP	sP	10 45 09.4	-2.8								
MDJ				S	S	10 54 10.9	+5.4								
MDJ				sS	sS	10 55 17.2	-0.5								
MDJ				pmax	pmax										
	comp=Z,150nm,1.0s														
MDJ				pmax	pmax										
	comp=Z,2μm,5.0s														
MDJ	Mudanjiang	80.58	324	IAmb	IAmb	10 44 19.1									
	comp=Z,206nm,1.1s														
G05D	Wamic, OR	80.66	36	P	P	10 44 14.6	+1.3								
	baz=231														
NJ2	Nanjing	80.67	308	⇓*i*P	P	10 44 16.1	+2.4								
NJ2				sP	sP	10 45 11.0	-1.9								
NJ2				S	S	10 54 08.2	+1.3								
NJ2				pmax	pmax										
	comp=Z,150nm,1.1s														
NJ2				pmax	pmax										
	comp=Z,1μm,4.0s														
CNPM	China Poot	80.67	12	IAmb	IAmb	10 44 16.5									
	comp=Z,108nm,1.0s														
TPRI	Tanjung Pinang	80.74	274	P	P	10 44 15.1	+0.6								
	comp=Z,32μmcomp=Z,179nm,1.3s														
X16A	Lo Mia Camp, P	80.80	49	IAmb	IAmb	10 44 19.1									
	comp=Z,69nm,0.8s														
E04D	Cinebar	80.82	34	P	P	10 44 16.1	+1.9								
	baz=230,SNR=6.6														
DLV	T Lat	80.87	286	IAmb	IAmb	10 44 19.0									
	comp=Z,205nm,1.2s														
LCMT	Little Creek M	80.88	46	P	P	10 44 15.7	+0.8								
319A	Douglas	80.89	52	IAmb	IAmb	10 44 19.6									
	comp=Z,146nm,1.1s														
BRLK	Bradley Lake	80.96	12	P	P	10 44 15.4	+0.7								
GZH	Guangzhou	80.98	298	P	P	10 44 18.0	+2.5								
GZH				sP	sP	10 45 14.1	-0.9								
GZH				S	S	10 54 14.9	+4.5								
GZH				pmax	pmax										
	comp=Z,1μm,6.3s														
F05D	White Salmon	80.98	35	P	P	10 44 16.6	+1.6								
	baz=231														
G06A	Carlson Farm,	81.03	36	P	P	10 44 16.5	+1.1								
G06A				IAmb	IAmb	10 45 14.0									
	comp=Z,104nm,1.5s														
KSI	Kapahiang	81.11	269	P	P	10 44 16.6	0.0								
KSI	Kapahiang	81.11	269	P	P	10 44 16.5	0.0								
D04E	Lakebay	81.11	33	P	P	10 44 17.5	+1.8								
	baz=230														
NKL	Nikolayevsk	81.12	335	*e*P	P	10 44 15.5	0.0								
NKL				*e*S	S	10 54 14.4	+3.8								
NKL				pmax	pmax										
	comp=Z,105nm,1.1s														
NKL				smax	smax										
	comp=E,3.0nm,4.0s														
NKL				smax	smax										
	comp=N,12nm,4.2s														
J08A	Circle Bar Ran	81.12	38	IAmb	IAmb	10 45 14.7									
	comp=Z,108nm,1.3s														
D03D	Eldon	81.18	33	P	P	10 44 17.8	+1.8								
	baz=229														
U15A	North Rim	81.23	47	IAmb	IAmb	10 44 21.4									
	comp=Z,129nm,1.2s														
LON	Longmire	81.34	34	P	P	10 44 17.5	+0.5								
LON				pmax	pmax										
	comp=Z,43nm,1.4s														
LON	Longmire	81.34	34	P	P	10 44 17.4	+0.5								
WUAZ	Wupatki	81.40	48	P	P	10 44 19.9	+2.2								
	baz=239,SNR=42														
D05A	Enumclaw	81.53	34	P	P	10 44 18.3	+0.4								
D05A				IAmb	IAmb	10 45 17.9									
	comp=Z,196nm,1.4s														
SEW	Seward	81.57	13	IAmb	IAmb	10 44 20.7									
	comp=Z,74nm,1.0s														
ELK	Elko	81.59	42	P	P	10 44 19.5	+0.8								
ELK				pmax	pmax										
	comp=Z,38nm,1.1s														
ELK	Elko	81.59	42	P	P	10 44 19.4	+0.8								
MASI	Maura Aman, Be	81.60	270	P	P	10 44 20.3	+1.2								
	comp=Z,7μmcomp=Z,228nm,0.8s														
HPIG		81.67	58	P	P	10 44 19.5	+0.2								
MYKOM	Kota Tinggi	81.67	275	P	P	10 44 20.2	+0.9								
MYKOM				IAmb	IAmb	10 44 23.2									
	comp=Z,171nm,1.1s														
MYKOM	Kota Tinggi	81.67	275	P	P	10 44 21.0	+1.6								
PKCU	Pink Cliffs	81.74	46	P	P	10 44 20.0	+0.3								
PMSA	Palmer Station	81.80	156	P	P	10 44 21.0	+1.9								
	comp=Z,62nm,0.8s,baz=240,slow=6.1,SNR=6.9														
PMSA	Palmer Station	81.80	156	P	P	10 44 20.1	+1.0								
PMSA				IAmb	IAmb	10 44 22.7									
	comp=Z,181nm,1.1s														
F07A	Phinny Hill Vi	81.83	36	P	P	10 44 20.5	+1.1								
G08A	Pilot Rock	82.00	37	P	P	10 44 21.2	+0.6								
G08A				IAmb	IAmb	10 45 19.3									
	comp=Z,129nm,1.4s														
A04D	Lummi Island	82.14	32	P	P	10 44 22.9	+1.9								
	baz=230														
B05A	Bryant	82.16	33	P	P	10 44 22.7	+1.6								
	baz=230,SNR=12														
DL2	Dalian	82.19	316	P	P	10 44 22.8	+1.3								
DL2				pP	pP	10 44 59.8	-3.2								
DL2				S	S	10 54 23.1	+0.9								
DL2				sS	sS	10 55 35.5	+0.9								
DL2				pmax	pmax										
	comp=Z,280nm,1.4s														
DL2				pmax	pmax										
	comp=Z,1μm,6.3s														
QIZ	Qiongzhong	82.33	293	P	P	10 44 24.0	+1.3								
QIZ				sP	sP	10 45 16.9	-5.4								
QIZ				PP	PP	10 47 33.7	-0.4								
QIZ				S	S	10 54 26.2	+1.8								
QIZ				sS	sS	10 55 33.6	-3.4								
QIZ				pmax	pmax										
	comp=Z,710nm,3.7s														
QIZ				LR	LR										
	comp=Z,580nm,21.9s														
QIZ				LR	LR										
	comp=Z,320nm,12.3s														
QIZ				LR	LR										
	comp=Z,540nm,25

CN2				LR	LR			
	comp=Z,460nm,23.0s							
CN2				LR	LR			
	comp=Z,280nm,23.0s							
CN2				LR	LR			
	comp=Z,430nm,21.0s							
GAMB	**Gambell**	**82.50**	**2**	IAmb	IAmb	10 44 26.0		
	comp=Z,63nm,0.9s							
SNY	**Shenyang**	**82.51**	**319**	⇑P	**P**	**10 44 25.8**	**+2.7**	
SNY				sP	**sP**	**10 45 17.3**	**-5.2**	
SNY				PP	**PP**	**10 47 35.1**	**-0.1**	
SNY				S	**S**	**10 54 24.6**	**-0.8**	
SNY				pmax	pmax			
	comp=Z,160nm,1.9s							
SNY				pmax	pmax			
	comp=Z,2µm,8.3s							
SNY				LR	LR			
	comp=Z,500nm,24.2s							
SNY				LR	LR			
	comp=Z,340nm,20.9s							
SNY				LR	LR			
	comp=Z,490nm,18.0s							
121A	**Cookes Peak, D**	**82.55**	**52**	P	**P**	**10 44 26.3**	**+2.5**	
	baz=242							
121A	**Cookes Peak, D**	**82.55**	**52**	IAmb	IAmb	10 44 28.6		
	comp=Z,154nm,1.4s							
C06D	**Leavenworth**	**82.57**	**34**	P	**P**	**10 44 24.6**	**+1.3**	
	baz=231							
B06A	**Marblemount**	**82.64**	**33**	P	**P**	**10 44 24.2**	**+0.6**	
E08A	**Dider Farm, El**	**82.67**	**36**	P	**P**	**10 44 25.0**	**+1.2**	
E08A				IAmb	IAmb	10 44 28.4		
	comp=Z,164nm,1.6s							
KRJI	**Kerinci**	**82.67**	**270**	P	**P**	**10 44 24.3**	**-0.4**	
	comp=Z,13µmcomp=Z,240nm,1.0s							
BMO	**Blue Mountains**	**82.68**	**38**	P	**P**	**10 44 24.0**	**-0.1**	
BMO				pmax	pmax			
	comp=Z,68nm,1.3s							
BMO	**Blue Mountains**	**82.68**	**38**	P	**P**	**10 44 24.0**	**-0.1**	
MFID	**Camas Ranch**	**82.73**	**39**	P	**P**	**10 44 24.8**	**+0.4**	
GLI	**Glacier Island**	**82.78**	**14**	IAmb	IAmb	10 44 26.4		
	comp=Z,123nm,0.7s							
FID	**Port Fidalgo**	**82.81**	**14**	IAmb	IAmb	10 44 27.1		
	comp=Z,164nm,1.8s							
DUG	**Dugway, Tooele**	**82.85**	**43**	P	**P**	**10 44 26.4**	**+1.3**	
	baz=238,SNR=26							
RAGM	**Ragged Mountai**	**82.91**	**15**	P	**P**	**10 44 24.9**	**+0.1**	
MA2	**Magadan**	**82.92**	**343**	P	**P**	**10 44 25.0**	**+0.2**	
	comp=Z,77nm,1.0s,baz=146,slow=5.3,SNR=22							
MA2	**Magadan**	**82.92**	**343**	*d* iP	**P**	**10 44 25.2**	**+0.4**	
MA2				pmax	pmax			
	comp=Z,111nm,1.1s							
MA2	**Magadan**	**82.92**	**343**	P	**P**	**10 44 24.5**	**-0.3**	
MA2	**Magadan**	**82.92**	**343**	IAmb	IAmb	10 44 27.6		
	comp=Z,112nm,1.1s							
KNK	**Knik Glacier**	**82.97**	**13**	P	**P**	**10 44 25.9**	**+0.8**	
KNK				IAmb	IAmb	10 44 27.6		
	comp=Z,61nm,0.8s							
SDSI	**Sungai Dareh**	**83.07**	**271**	P	**P**	**10 44 25.6**	**-1.1**	
	comp=Z,74nm,1.3s							
D08A	**Wollman Farm,**	**83.09**	**35**	IAmb	IAmb	10 45 25.0		
	comp=Z,102nm,1.3s							
E09A	**Wood Farm, Sta**	**83.19**	**36**	P	**P**	**10 44 26.8**	**+0.3**	
GHO	**Glory Hole Cre**	**83.20**	**12**	P	**P**	**10 44 26.7**	**+0.4**	
GHO				IAmb	IAmb	10 44 28.8		
	comp=Z,83nm,0.8s							
NLU	**North Lily Min**	**83.20**	**44**	P	**P**	**10 44 26.4**	**-0.7**	
SML	**Sawmill**	**83.35**	**13**	P	**P**	**10 44 27.2**	**+0.2**	
SML				IAmb	IAmb	10 44 30.2		
	comp=Z,115nm,1.6s							
F10A	**Beach Ranch, E**	**83.38**	**37**	IAmb	IAmb	10 44 45.2		
	comp=Z,72nm,0.8s							
WHN	**Wuhan**	**83.39**	**305**	⇓P	**P**	**10 44 29.9**	**+2.0**	
WHN				sP	**sP**	**10 45 25.8**	**-1.6**	
WHN				S	**S**	**10 54 30.8**	**-3.9**	
WHN				pmax	pmax			
	comp=Z,200nm,1.2s							
WHN				pmax	pmax			
	comp=Z,3µm,5.8s							
GO09	**Cerro Castillo**	**83.41**	**142**	IAmb	IAmb	10 44 31.8		
	comp=Z,69nm,1.0s							
WAX	**Waxell Ridge**	**83.42**	**16**	IAmb	IAmb	10 44 31.2		
	comp=Z,56nm,0.8s							
GO10	**Punta Arenas**	**83.42**	**144**	P	**P**	**10 44 25.5**	**-2.3**	
TMUT	**Trail Mountain**	**83.44**	**45**	P	**P**	**10 44 28.2**	**-0.1**	
MPU	**Maple Canyon**	**83.53**	**44**	P	**P**	**10 44 28.2**	**-0.4**	
DHAK	**Deception Hill**	**83.56**	**18**	P	**P**	**10 44 29.1**	**+0.9**	
DHAK				IAmb	IAmb	10 44 31.4		
	comp=Z,56nm,0.7s							
SCM	**Sheep Creek Mo**	**83.58**	**13**	P	**P**	**10 44 28.5**	**+0.2**	
SCM				pmax	pmax			
	comp=Z,103nm,0.8s							
SCM	**Sheep Creek Mo**	**83.58**	**13**	P	**P**	**10 44 28.5**	**+0.2**	
SCM				IAmb	IAmb	10 44 30.9		
	comp=Z,103nm,0.8s							
ANM	**Nome**	**83.61**	**4**	P	**P**	**10 44 26.7**	**-1.5**	
ANM				pmax	pmax			
	comp=Z,28nm,0.9s							
ANM	**Nome**	**83.61**	**4**	P	**P**	**10 44 26.7**	**-1.5**	
CRQM	**Cirque**	**83.61**	**15**	P	**P**	**10 44 28.8**	**+0.3**	
CRQM				IAmb	IAmb	10 44 32.0		
	comp=Z,58nm,0.8s							
PPLA	**Purkeypile**	**83.61**	**11**	P	**P**	**10 44 28.3**	**-0.2**	
B08A	**Colville Reser**	**83.66**	**34**	P	**P**	**10 44 29.2**	**+0.3**	
SPUT	**South Promonto**	**83.67**	**43**	P	**P**	**10 44 29.4**	**+0.1**	
MAW	**Mawson**	**83.79**	**199**	P	**P**	**10 44 30.5**	**+1.1**	
	baz=84,SNR=32							
MAW	**Mawson**	**83.79**	**199**	P	**P**	**10 44 30.4**	**+1.1**	
	comp=Z,13nm,0.5s,baz=137,slow=6.1,SNR=43							
MAW	**Mawson**	**83.79**	**199**	P	**P**	**10 44 30.6**	**+1.3**	
CTU	**Camp Tracy**	**83.80**	**43**	P	**P**	**10 44 31.0**	**+1.0**	
SRU	**San Rafael Swe**	**83.80**	**45**	P	**P**	**10 44 31.7**	**+1.6**	
SRU				pmax	pmax			
	comp=Z,94nm,0.7s							
SRU	**San Rafael Swe**	**83.80**	**45**	P	**P**	**10 44 31.7**	**+1.6**	
P17A	**Butcher Ranch,**	**83.84**	**45**	P	**P**	**10 44 30.2**	**0.0**	
BKNI	**Bangkinang**	**83.85**	**272**	P	**P**	**10 44 31.3**	**+0.7**	
	comp=Z,3µmcomp=Z,4µmcomp=Z,251nm,1.4s							
BKNI	**Bangkinang**	**83.85**	**272**	P	**P**	**10 44 30.9**	**+0.2**	
C09A	**Chrisman Ranch**	**83.89**	**35**	P	**P**	**10 44 29.6**	**-0.4**	
C09A				IAmb	IAmb	10 45 28.9		
	comp=Z,103nm,1.4s							
TLIG	**Tlapa**	**83.90**	**69**	P	**P**	**10 44 30.3**	**-0.6**	
Y22D	**IRIS PASSCAL I**	**83.91**	**51**	P	**P**	**10 44 33.3**	**+2.6**	
	baz=242							
Y22D	**IRIS PASSCAL I**	**83.91**	**51**	P	**P**	**10 44 31.3**	**+0.6**	
TIA	**Tai'an**	**83.93**	**311**	P	**P**	**10 44 32.4**	**+1.8**	
TIA				pmax	pmax			
	comp=Z,51nm,1.0s							
TIA				LR	LR			
	comp=Z,480nm,17.8s							
TIA				LR	LR			
	comp=Z,350nm,19.9s							
TIA				LR	LR			
	comp=Z,310nm,22.1s							
VRDI	**Verde Repeater**	**83.94**	**15**	P	**P**	**10 44 30.7**	**+0.5**	
JLU	**Jordanelle**	**83.95**	**44**	P	**P**	**10 44 31.1**	**+0.2**	
MNTX	**Cornudas Mount**	**83.99**	**54**	P	**P**	**10 44 33.3**	**+2.4**	
	baz=244							
PDSI	**Padang**	**84.00**	**271**	P	**P**	**10 44 30.8**	**-0.6**	
GLB	**Gilahina Butte**	**84.04**	**15**	P	**P**	**10 44 31.2**	**+0.7**	
GLB				IAmb	IAmb	10 44 33.2		
	comp=Z,50nm,0.7s							
BALM	**Baldy**	**84.05**	**16**	P	**P**	**10 44 30.7**	**0.0**	
USHA	**Ushuaia**	**84.16**	**146**	P	**P**	**10 44 33.3**	**+1.8**	
	comp=Z,88nm,0.9s,baz=258,slow=4.6,SNR=7.5							
MCARA	**McCarthy VSAT**	**84.18**	**15**	P	**P**	**10 44 30.9**	**-0.3**	
TCUT	**Toone Canyon**	**84.24**	**43**	P	**P**	**10 44 33.2**	**+0.9**	
BARN	**Barnard Glacie**	**84.25**	**16**	P	**P**	**10 44 31.7**	**-0.1**	
BARN				IAmb	IAmb	10 44 43.2		
	comp=Z,58nm,0.8s							
CTGM	**Chitina Glacie**	**84.25**	**16**	P	**P**	**10 44 32.6**	**+0.8**	
CTGM				IAmb	IAmb	10 44 34.6		
	comp=Z,58nm,0.7s							
MVCO	**Mesa Verde**	**84.25**	**48**	P	**P**	**10 44 33.8**	**+1.3**	
	baz=241,SNR=17							
PV05	**Paradox Valley**	**84.26**	**47**	IAmb	IAmb	10 44 36.8		
	comp=Z,75nm,0.8s							
TX31	**Lajitas Ar. Si**	**84.29**	**57**	P	**P**	**10 44 33.8**	**+1.2**	
TX32	**Lajitas Array**	**84.29**	**57**	P	**P**	**10 44 34.0**	**+1.4**	
TX32				IAmb	IAmb	10 44 37.3		
	comp=Z,215nm,1.2s							
TXAR	**Lajitas Array**	**84.29**	**57**	P	**P**	**10 44 34.8**	**+2.2**	
	comp=Z,90nm,1.0s,baz=222,slow=5.0,SNR=171							
PV10	**Paradox Valley**	**84.44**	**46**	IAmb	IAmb	10 44 36.9		
	comp=Z,69nm,0.7s							
PV19	**Morning Glory**	**84.45**	**46**	IAmb	IAmb	10 44 37.1		
	comp=Z,73nm,0.9s							
PV17	**East Wray Mesa**	**84.45**	**47**	IAmb	IAmb	10 44 37.1		
	comp=Z,65nm,0.8s							
PV14	**Lion Creek, Pa**	**84.45**	**46**	P	**P**	**10 44 33.5**	**0.0**	
PV14				IAmb	IAmb	10 44 37.1		
	comp=Z,119nm,1.1s							
TRF	**Thorofare Moun**	**84.46**	**11**	IAmb	IAmb	10 44 34.8		
	comp=Z,132nm,0.8s							
PV18	**Skein Mesa, Pa**	**84.47**	**47**	IAmb	IAmb	10 44 37.2		
	comp=Z,96nm,1.2s							
PV20	**West Nyswonger**	**84.48**	**46**	IAmb	IAmb	10 44 37.3		
	comp=Z,82nm,0.8s							
PV16	**Nyswonger Mesa**	**84.50**	**47**	IAmb	IAmb	10 44 37.5		
	comp=Z,150nm,1.5s							
PV23	**Carpenter Ridg**	**84.50**	**46**	IAmb	IAmb	10 44 37.5		
	comp=Z,78nm,0.8s							
PV03	**Paradox Valley**	**84.52**	**47**	IAmb	IAmb	10 44 37.5		
	comp=Z,93nm,1.4s							
PV11	**David Mesa, Pa**	**84.52**	**47**	IAmb	IAmb	10 44 37.7		
	comp=Z,217nm,1.5s							
PV04	**Paradox Valley**	**84.55**	**46**	IAmb	IAmb	10 44 37.7		
	comp=Z,58nm,0.8s							
PV02	**Paradox Valley**	**84.57**	**47**	IAmb	IAmb	10 45 33.9		
	comp=Z,79nm,1.2s							
PV12	**Saucer Basin,**	**84.58**	**47**	IAmb	IAmb	10 44 37.9		
	comp=Z,348nm,1.7s							
PV21	**Cone Mtn., Par**	**84.58**	**46**	IAmb	IAmb	10 44 38.0		
	comp=Z,66nm,0.7s							
ANMO	**Albuquerque**	**84.65**	**50**	*c* iP	**P**	**10 44 36.2**	**+1.8**	
ANMO				pmax	pmax			
	comp=Z,113nm,1.1s							
ANMO	**Albuquerque**	**84.65**	**50**	P	**P**	**10 44 36.4**	**+1.9**	
	baz=243							
ANMO	**Albuquerque**	**84.65**	**50**	P	**P**	**10 44 36.7**	**+2.2**	
ANMO				IAmb	IAmb	10 44 38.7		
	comp=Z,117nm,1.1s							
DHY	**Denali Highway**	**84.69**	**12**	IAmb	IAmb	10 44 37.1		
	comp=Z,157nm,1.8s							
RND	**Reindeer**	**84.69**	**12**	IAmb	IAmb	10 44 37.0		
	comp=Z,145nm,0.8s							
SKAG	**Skagway**	**84.74**	**19**	IAmb	IAmb	10 44 39.8		
	comp=Z,104nm,1.5s							
NEW	**Newport**	**84.78**	**35**	P	**P**	**10 44 34.9**	**+0.3**	
NEW				pmax	pmax			
	comp=Z,26nm,1.1s							
NEW	**Newport**	**84.78**	**35**	P	**P**	**10 44 35.6**	**+1.0**	
	baz=234,SNR=14							
NEW	**Newport**	**84.78**	**35**	P	**P**	**10 44 34.9**	**+0.3**	
MCK	**McKinley**	**84.97**	**12**	IAmb	IAmb	10 44 38.1		
	comp=Z,192nm,0.9s							
IPM	**Ipoh**	**85.21**	**276**	P	**P**	**10 44 39.0**	**+1.5**	
BWN	**Browne**	**85.28**	**11**	IAmb	IAmb	10 44 40.3		
	comp=Z,214nm,1.3s							
AHID	**Auburn Hatcher**	**85.29**	**42**	IAmb	IAmb	10 45 36.5		
	comp=Z,108nm,1.4s							
MCMT	**McKenzie Canyo**	**85.29**	**39**	P	**P**	**10 44 38.6**	**+1.1**	
MNSI	**Mandailing Nat**	**85.38**	**272**	P	**P**	**10 44 37.6**	**-0.7**	
SEY	**Seymchan**	**85.40**	**346**	⇑ *e*P	**P**	**10 44 38.5**	**+1.3**	
	comp=Z,169nm,0.9s,baz=146,slow=5.9,SNR=21							
SEY	**Seymchan**	**85.40**	**346**	⇑ *e*P	**P**	**10 44 38.7**	**+1.5**	
S22A	**4UR Ranch, Cre**	**85.68**	**48**	P	**P**	**10 44 41.3**	**+1.7**	
	baz=242,SNR=67							
DLMT	**Dillon**	**85.73**	**39**	P	**P**	**10 44 40.5**	**+1.0**	
DLMT				IAmb	IAmb	10 45 38.9		
	comp=Z,71nm,1.1s							
DLBC	**Dease Lake**	**85.74**	**22**	P	**P**	**10 44 39.9**	**+0.7**	
MSO	**Missoula**	**85.74**	**37**	P	**P**	**10 44 39.8**	**+0.3**	
	baz=237,SNR=22							
MSO	**Missoula**	**85.74**	**37**	P	**P**	**10 44 38.6**	**-0.8**	
TPAW	**Teton Pass**	**85.75**	**41**	IAmb	IAmb	10 45 39.1		
	comp=Z,73nm,1.2s							
FXWY	**Fox Creek**	**85.78**	**41**	P	**P**	**10 44 40.4**	**+0.4**	
WRH	**Wood River Hil**	**85.80**	**12**	IAmb	IAmb	10 45 40.4		
	comp=Z,148nm,1.0s							
WHY	**Whitehorse**	**85.83**	**19**	P	**P**	**10 44 40.0**	**+0.5**	
KULM	**Kulim**	**85.83**	**277**	IAmb	IAmb	10 44 44.6		
	comp=Z,142nm,1.0s							
KULM	**Kulim**	**85.83**	**277**	P	**P**	**10 44 42.0**	**+1.5**	
MLY	**Manley**	**85.84**	**10**	IAmb	IAmb	10 45 40.2		
	comp=Z,70nm,1.1s							
O20A	**White River Ci**	**85.84**	**45**	P	**P**	**10 44 41.3**	**+1.1**	
	baz=241,SNR=23							
O20A	**White River Ci**	**85.84**	**45**	IAmb	IAmb	10 45 39.4		
	comp=Z,105nm,1.4s							
SNOW	**Snow King Moun**	**85.86**	**41**	IAmb	IAmb	10 45 39.6		
	comp=Z,79nm,1.1s							
DOT	**Dot Lake**	**85.90**	**14**	IAmb	IAmb	10 44 42.5		
	comp=Z,72nm,0.7s							
HDA	**Harding Lake**	**85.97**	**12**	P	**P**	**10 44 40.8**	**+0.8**	
	baz=207,SNR=113							
HDA	**Harding Lake**	**85.97**	**12**	IAmb	IAmb	10 45 41.9		
	comp=Z,92nm,0.9s							
IMW	**Indian Meadow**	**85.97**	**41**	IAmb	IAmb	10 45 40.9		
	comp=Z,88nm,1.3s							
CCB	**Clear Creek Bu**	**86.02**	**12**	IAmb	IAmb	10 44 42.4		
	comp=Z,82nm,0.8s							
TCOL	**CIUAF Yank**	**86.21**	**11**	P	**P**	**10 44 41.6**	**+0.5**	
	baz=206,SNR=29							
COLA	**College**	**86.21**	**11**	*d* iP	**P**	**10 44 41.8**	**+0.6**	
COLA				pmax	pmax			
	comp=Z,111nm,0.8s							
COLA	**College**	**86.21**	**11**	P	**P**	**10 44 41.8**	**+0.6**	
COLA				IAmb	IAmb	10 45 43.1		
	comp=Z,137nm,0.8s							
FLWY	**Flagg Ranch**	**86.22**	**41**	IAmb	IAmb	10 45 41.6		
	comp=Z,77nm,1.1s							
MDM	**Murphy Dome**	**86.22**	**11**	P	**P**	**10 44 41.2**	**0.0**	
MDM				IAmb	IAmb	10 45 41.8		
	comp=Z,91nm,1.0s							
SMCO	**Snowmass**	**86.24**	**46**	P	**P**	**10 44 40.9**	**-1.7**	
BW06	**Boulder Array**	**86.27**	**42**	P	**P**	**10 44 43.0**	**+0.7**	
	baz=240							
BW06	**Boulder Array**	**86.27**	**42**	P	**P**	**10 44 43.6**	**+1.3**	
PDAR	**Pinedale Array**	**86.27**	**42**	P	**P**	**10 44 42.9**	**+0.5**	
	comp=Z,5.8nm,0.6s,baz=212,slow=3.5,SNR=62							
PDAR				PKKPbc	**PKKPbc**	**11 02 40.2**	**-1.1**	
	comp=Z,0.9nm,0.8s,baz=102,slow=3.5,SNR=6.6							
PDAR				PKPPKP	**P'P'df**	**11 10 49.9**	**+4.1**	
	comp=Z,0.2nm,0.5s,baz=79,slow=2.3,SNR=4.1							
IL31		**86.31**	**12**	P	**P**	**10 44 41.8**	**+0.2**	
IL31				IAmb	IAmb	10 44 44.6		
	comp=Z,94nm,1.4s							
ILAR	**Eielson Array**	**86.31**	**12**	P	**P**	**10 44 42.3**	**+0.6**	
	comp=Z,28nm,1.0s,baz=209,slow=5.1,SNR=100							
ILAR				PKKP	**PKKPdf**	**11 02 37.5**	**+2.4**	
	comp=Z,0.5nm,0.7s,baz=337,slow=2.8,SNR=6.3							
YMR	**Madison River**	**86.35**	**40**	P	**P**	**10 44 42.3**	**-0.3**	
BJI	**Beijing**	**86.41**	**314**	P	**P**	**10 44 45.0**	**+2.3**	
BJI				sP	**sP**	**10 45 39.0**	**-3.3**	
BJI				SKS	**SKSac**	**10 54 49.2**	**-3.6**	
BJI				S	**S**	**10 55 06.2**	**+2.1**	
BJI				pmax	pmax			
	comp=Z,210nm,1.4s							
BJI				LR	LR			
	comp=Z,500nm,25.9s							
H17A	**Grant Village**	**86.45**	**41**	P	**P**	**10 44 45.7**	**+2.5**	
	baz=239							
H17A	**Grant Village**	**86.45**	**41**	P	**P**	**10 44 41.6**	**-1.6**	
YHH	**Holmes Hill**	**86.48**	**40**	P	**P**	**10 44 44.5**	**+1.0**	
POKR	**Poker Flat Res**	**86.51**	**12**	P	**P**	**10 44 43.0**	**+0.3**	
	baz=207,SNR=15							
SDCO	**Great Sand Dun**	**86.61**	**48**	P	**P**	**10 44 45.0**	**+0.8**	
	baz=243,SNR=46							
SDCO	**Great Sand Dun**	**86.61**	**48**	P	**P**	**10 44 43.7**	**-0.5**	
RPSI	**Rantau Prapat**	**86.61**	**274**	P	**P**	**10 44 43.9**	**-0.4**	
RPSI				IAmb	IAmb	10 44 47.3		
	comp=Z,170nm,1.1s							
LKWY	**Lake**	**86.65**	**41**	P	**P**	**10 44 44.2**	**0.0**	
LKWY				pmax	pmax			
	comp=Z,59nm,1.2s							
LKWY	**Lake**	**86.65**	**41**	P	**P**	**10 44 44.2**	**0.0**	
PSI	**Prapat**	**86.65**	**274**	P	**P**	**10 44 44.7**	**0.0**	
	comp=Z,91nm,1.1s,baz=180,slow=4.2,SNR=82							
LL01	**San Ignacio de**	**86.74**	**134**	IAmb	IAmb	10 44 47.7		
	comp=Z,48nm,0.9s							
MSTX	**Muleshoe**	**86.95**	**53**	P	**P**	**10 44 47.2**	**+1.5**	
	baz=245							
YNE	**Yellowstone No**	**87.11**	**40**	P	**P**	**10 44 46.8**	**+0.4**	
T25A	**Trinidad**	**87.12**	**49**	P	**P**	**10 44 47.5**	**+1.0**	
	baz=244							
PRP	**Porcupine Dome**	**87.24**	**12**	P	**P**	**10 44 46.2**	**-0.2**	
PRP				IAmb	IAmb	10 45 47.9		
	comp=Z,76nm,1.0s							
833A	**Chaparral WMA,**	**87.30**	**59**	P	**P**	**10 44 48.7**	**+1.4**	
	baz=247,SNR=14							
DAWY	**Dawson**	**87.35**	**15**	IAmb	IAmb	10 45 48.5		
	comp=Z,68nm,0.9s							
ZEA	**Zeya**	**87.40**	**330**	*e*P	**P**	**10 44 49.4**	**+2.2**	
ZEA				*e*S	**SKSac**	**10 54 54.0**	**-4.3**	
ZEA				*e*		10 55 13.0		
ZEA				*e*		10 56 12.0		
ZEA				*e*		10 56 36.0		
ZEA				pmax	pmax			
	comp=Z,1µm,7.0s							
ZEA				pmax	pmax			
	comp=N,220nm,1.0s							
ZEA				pmax	pmax			
	comp=Z,490nm,1.2s							
ZEA				pmax	pmax			
	comp=Z,300nm,7.0s							
ZEA				smax	smax			
	comp=Z,400nm,8.0s							
ZEA				smax	smax			
	comp=N,800nm,6.0s							
ZEA				smax	smax			
	comp=E,1µm,6.0s							
Q24A	**Divide**	**87.41**	**47**	P	**P**	**10 44 49.0**	**+1.0**	
	baz=243,SNR=12							
GSI	**Gunungsitoli**	**87.44**	**272**	P	**P**	**10 44 49.5**	**+1.1**	
	comp=E,17µmcomp=E,1µm,1.5s							
GSI	**Gunungsitoli**	**87.44**	**272**	P	**P**	**10 44 48.1**	**-0.2**	
ISCO	**Idaho Springs**	**87.47**	**46**	P	**P**	**10 44 49.4**	**+1.1**	
ISCO				pmax	pmax			
	comp=Z,14nm,1.1s							
ISCO	**Idaho Springs**	**87.47**	**46**	P	**P**	**10 44 49.1**	**+0.9**	
	baz=243,SNR=16							
EGAK	**Eagle**	**87.53**	**14**	IAmb	IAmb	10 45 49.2		
	comp=Z,56nm,1.0s							
RLMT	**Red Lodge**	**87.62**	**40**	P	**P**	**10 44 50.2**	**+1.4**	
	baz=240,SNR=18							
GCMT	**Greycliff**	**87.71**	**40**	P	**P**	**10 44 48.4**	**-0.7**	
BILL	**Bilibino**	**87.74**	**353**	*de*P	**P**	**10 44 50.0**	**+1.5**	
BILL				*e*		10 48 13.0		
BILL				pmax	pmax			
	comp=Z,68nm,1.2s							
BILL	**Bilibino**	**87.74**	**353**	P	**P**	**10 44 48.2**	**-0.3**	
BILL				IAmb	IAmb	10 44 51.9		
	comp=Z,71nm,1.2s							
N23A	**Red Feather La**	**87.74**	**45**	P	**P**	**10 44 50.5**	**+1.0**	
	baz=243,SNR=24							
JCT	**Junction City**	**87.82**	**57**	P	**P**	**10 44 49.1**	**-0.7**	
JCT				pmax	pmax			
	comp=Z,41nm,1.2s							
JCT	**Junction City**	**87.82**	**57**	P	**P**	**10 44 50.7**	**+0.8**	
	baz=247,SNR=7.6							
JCT	**Junction City**	**87.82**	**57**	P	**P**	**10 44 49.1**	**-0.7**	
GYA	**Guiyang**	**87.88**	**299**	⇓ *i*P	**P**	**10 44 52.3**	**+2.0**	
GYA				pP	pP	10 45 30.2	-2.1	
GYA				sP	sP	10 45 49.2	-0.8	
GYA				PP	**PP**	**10 48 21.2**	**+2.0**	
GYA				SKS	**SKSac**	**10 54 59.5**	**-3.2**	
GYA				S	**S**	**10 55 18.8**	**-0.3**	
GYA				SS	**SS**	**11 01 07.8**	**-3.2**	
GYA				pmax	pmax			
	comp=Z,90nm,1.2s							
GYA				pmax	pmax			
	comp=Z,950nm,3.7s							
GYA				LR	LR			
	comp=Z,150nm,17.3s							
GYA				LR	LR			
	comp=Z,170nm,15.1s							
GYA				LR	LR			
	comp=Z,300nm,21.1s							
COLD	**Coldfoot**	**87.95**	**10**	P	**P**	**10 44 50.4**	**+0.9**	
TIY	**Taiyuan**	**87.96**	**311**	*e*P	**P**	**10 44 53.2**	**+2.9**	
TIY				SKS	**SKSac**	**10 54 59.9**	**-2.7**	
TIY				S	**ScS**	**10 55 22.5**	**-2.4**	
TIY				pmax	pmax			
	comp=Z,400nm,1.3s							
KCSI	**Kotacane, Aceh**	**87.97**	**274**	P	**P**	**10 44 51.2**	**+0.3**	
	comp=Z,2µmcomp=Z,76nm,1.8s							
AMTX	**Amarillo**	**88.15**	**52**	P	**P**	**10 44 52.6**	**+1.2**	
	baz=245							
AMTX	**Amarillo**	**88.15**	**52**	P	**P**	**10 44 51.2**	**-0.1**	
AMTX				IAmb	IAmb	10 44 54.7		
	comp=Z,84nm,1.2s							
K22A	**Casper**	**88.17**	**44**	P	**P**	**10 44 52.3**	**+0.9**	
	baz=242							
SLVN	**Son La**	**88.36**	**293**	P	**P**	**10 44 53.6**	**+1.0**	
SLVN				IAmb	IAmb	10 44 58.8		
	comp=Z,149nm,1.4s							
BI03	**Tigo**	**88.42**	**128**	P	**P**	**10 44 53.1**	**+0.5**	
BI03				IAmb	IAmb	10 44 56.0		
	comp=Z,219nm,1.6s							
TPTI		**88.44**	**274**	P	**P**	**10 44 53.8**	**+0.7**	
LC01	**Cunco**	**88.46**	**131**	IAmb	IAmb	10 44 55.8		
	comp=Z,70nm,1.1s							
PLCA	**Paso Flores**	**88.67**	**133**	P	**P**	**10 44 55.0**	**+1.2**	
	comp=Z,50nm,1.1s,baz=235,slow=5.2,SNR=35							
PLCA	**Paso Flores**	**88.67**	**133**	P	**P**	**10 44 55.0**	**+1.2**	
PLCA	**Paso Flores**	**88.67**	**133**	IAmb	IAmb	10 44 57.5		
	comp=Z,153nm,1.4s							
SYO	**Syowa Base**	**88.74**	**192**	⇓ *i*P	**P**	**10 44 53.0**	**-0.4**	
SYO	**Syowa Base**	**88.74**	**192**	⇓ *i*PcP	**P**	**10 44 54.0**	**+0.6**

	comp=Z,35nm,1.2s								
WMOK	**Wichita Mounta**	**90.28**	**53**	P	**P**	**10 45 01.8**	**+0.6**		
	baz=247,SNR=21								
NVL	**N'lazarevskaya**	**90.39**	**182**	*e*P	**P**	**10 45 00.5**	**-0.6**		
NVL				*e*S	**SKSac**	**10 55 17.7**	**+2.0**		
NVL				pmax	pmax				
	comp=Z,58nm,0.8s								
OGNE	**Ogallala**	**90.42**	**47**	P	**P**	**10 45 02.5**	**+0.7**		
	baz=245								
RSSD	**Black Hills**	**90.45**	**43**	P	**P**	**10 45 01.6**	**-0.5**		
RSSD				pmax	pmax				
	comp=Z,56nm,1.3s								
RSSD	**Black Hills**	**90.45**	**43**	P	**P**	**10 45 02.9**	**+0.8**		
	baz=244								
RSSD	**Black Hills**	**90.45**	**43**	P	**P**	**10 45 01.6**	**-0.5**		
RSSD				IAmb	IAmb	10 45 05.1			
	comp=Z,56nm,1.2s								
KMI	**Kunming**	**90.69**	**296**	P	**P**	**10 45 05.0**	**+1.4**		
KMI				pP	pP	10 45 41.3	-4.7		
KMI				sP	sP	10 45 59.4	-4.3		
KMI				PP	**PP**	**10 48 40.5**	**-1.2**		
KMI				SKS	**SKSac**	**10 55 17.2**	**-2.3**		
KMI				S	**S**	**10 55 44.6**	**-0.8**		
KMI				sS	sS	10 56 52.2	-7.1		
KMI				pmax	pmax				
	comp=Z,240nm,1.7s								
KMI				pmax	pmax				
	comp=Z,2µm,4.0s								
KMI				LR	LR				
	comp=Z,350nm,17.5s								
KMI				LR	LR				
	comp=Z,440nm,18.9s								
KMI				LR	LR				
	comp=Z,620nm,18.9s								
U32A	**Winter Ranch,**	**90.75**	**52**	P	**P**	**10 45 04.2**	**+0.8**		
HKT	**Hockley**	**90.80**	**59**	*e*P	**P**	**10 45 06.2**	**+2.6**		
HKT				pmax	pmax				
	comp=Z,56nm,1.5s								
BTO	**Baotou**	**90.88**	**313**	*e*P	**P**	**10 45 06.3**	**+2.3**		
BO02	**Sierra Bellavi**	**90.90**	**127**	IAmb	IAmb	10 45 07.5			
	comp=Z,73nm,0.8s								
Z35A	**Perchaven, San**	**90.92**	**55**	IAmb	IAmb	10 45 07.6			
	comp=Z,97nm,0.9s								
EFI	**East Falkland**	**91.14**	**146**	*de*P	**P**	**10 45 06.1**	**+1.2**		
EFI				pmax	pmax				
	comp=Z,143nm,1.0s								
EFI	**East Falkland**	**91.14**	**146**	P	**P**	**10 45 05.6**	**+0.7**		
CBKS	**Cedar Bluff**	**91.17**	**49**	P	**P**	**10 45 03.7**	**-1.6**		
CBKS				pmax	pmax				
	comp=Z,88nm,1.5s								
CBKS	**Cedar Bluff**	**91.17**	**49**	P	**P**	**10 45 06.1**	**+0.8**		
	baz=247,SNR=9.4								
CBKS	**Cedar Bluff**	**91.17**	**49**	P	**P**	**10 45 03.7**	**-1.6**		
CBKS				IAmb	IAmb	10 45 08.6			
	comp=Z,88nm,1.5s								
MT02	**Curacav**	**91.24**	**126**	P	**P**	**10 45 07.0**	**+1.2**		
MT02				IAmb	IAmb	10 45 11.2			
	comp=Z,44nm,0.9s								
ROC1	**El Roble**	**91.45**	**126**	P	**P**	**10 45 05.3**	**-1.8**		
ROC1	**El Roble**	**91.45**	**126**	*e*P	**P**	**10 45 08.5**	**+1.4**		
MT05	**Renca**	**91.50**	**126**	P	**P**	**10 45 05.8**	**-1.3**		
YAK	**Yakutsk**	**91.54**	**337**	P	**P**	**10 45 06.6**	**+0.3**		
	comp=Z,26nm,0.7s,baz=338,slow=0.4,SNR=17								
YAK	**Yakutsk**	**91.54**	**337**	*e*P	**P**	**10 45 05.8**	**-0.5**		
YAK				*e*		10 48 46.1			
YAK				*e*S	**SKSac**	**10 55 16.7**	**-5.4**		
YAK				*e*		10 55 43.8			
YAK				pmax	pmax				
	comp=Z,65nm,0.9s								
YAK				pmax	pmax				
	comp=E,17nm,1.3s								
YAK				pmax	pmax				
	comp=N,13nm,1.1s								
YAK				pmax	pmax				
	comp=Z,149nm,1.6s								
YAK				pmax	pmax				
	comp=E,144nm,2.1s								
YAK				pmax	pmax				
	comp=N,115nm,1.7s								
YAK				smax	smax				
	comp=E,95nm,1.6s								
YAK				smax	smax				
	comp=N,601nm,3.5s								
YAK	**Yakutsk**	**91.54**	**337**	P	**P**	**10 45 06.3**	**0.0**		
YAK				IAmb	IAmb	10 45 08.5			
	comp=Z,62nm,0.9s								
PEL	**Peldehue**	**91.64**	**126**	P	**P**	**10 45 09.1**	**+1.4**		
PEL				pmax	pmax				
	comp=Z,200nm,1.1s								
CM31	**Chiang Mai Arr**	**91.76**	**289**	P	**P**	**10 45 11.1**	**+2.6**		
	SNR=48								
CM31	**Chiang Mai Arr**	**91.76**	**289**	P	**P**	**10 45 09.9**	**+1.5**		
CMAR	**Chiang Mai Arr**	**91.76**	**289**	P	**P**	**10 45 10.8**	**+2.3**		
	comp=Z,82nm,1.0s,baz=111,slow=2.7,SNR=170								
CO04	**Los Peladeros**	**91.85**	**125**	P	**P**	**10 45 09.2**	**+0.2**		
CO04				IAmb	IAmb	10 45 13.7			
	comp=Z,66nm,0.9s								
CHTO	**Chiang Mai**	**91.88**	**289**	P	**P**	**10 45 11.2**	**+2.2**		
CHTO	**Chiang Mai**	**91.88**	**289**	P	**P**	**10 45 11.0**	**+2.0**		
CHTO				pmax	pmax				
	comp=Z,197nm,1.4s								
CHTO	**Chiang Mai**	**91.88**	**289**	P	**P**	**10 45 10.9**	**+2.0**		
W35A	**Tecumseh**	**91.89**	**54**	P	**P**	**10 45 08.3**	**-0.4**		
CD2	**Chengdu**	**91.89**	**302**	⇑*i*P	**P**	**10 45 11.3**	**+2.5**		
CD2				pP	pP	10 45 47.7	-3.4		
CD2				sP	sP	10 46 05.8	-3.0		
CD2				PP	**PP**	**10 48 50.1**	**-0.7**		
CD2				S	**S**	**10 55 59.1**	**+3.5**		
CD2				sS	sS	10 57 05.6	-4.0		
CD2				pmax	pmax				
	comp=Z,50nm,1.0s								
CD2				pmax	pmax				
	comp=Z,810nm,6.3s								
CD2				LR	LR				
	comp=Z,740nm,34.1s								
CD2				LR	LR				
	comp=Z,1µm,24.3s								
CD2				LR	LR				
	comp=Z,950nm,27.5s								
VA03	**San Esteban**	**91.89**	**125**	IAmb	IAmb	10 45 12.3			
	comp=Z,84nm,0.9s								
CO02	**Combarbal**	**92.17**	**124**	P	**P**	**10 45 11.3**	**+1.0**		
INK	**Inuvik**	**92.18**	**14**	P	**P**	**10 45 09.8**	**+0.6**		
INK				pmax	pmax				
	comp=Z,32nm,0.8s								
INK	**Inuvik**	**92.18**	**14**	P	**P**	**10 45 09.8**	**+0.6**		
INK				IAmb	IAmb	10 45 11.6			
	comp=Z,32nm,0.8s								
DGMT	**Dagmar**	**92.27**	**39**	P	**P**	**10 45 11.9**	**+1.7**		
	baz=244								
NATX	**Nacogdoches**	**92.39**	**57**	P	**P**	**10 45 12.6**	**+1.6**		
	baz=249								
NATX	**Nacogdoches**	**92.39**	**57**	P	**P**	**10 45 10.4**	**-0.6**		
NATX				IAmb	IAmb	10 46 12.9			
	comp=Z,171nm,1.9s								
CO03	**El Pedregal**	**92.56**	**124**	IAmb	IAmb	10 45 15.3			
	comp=Z,53nm,0.9s								
Z38A	**Mt. Pleasant**	**92.66**	**56**	P	**P**	**10 45 11.1**	**-1.1**		
Z38A				IAmb	IAmb	10 45 16.3			
	comp=Z,86nm,1.1s								
GO04	**Tololo Observa**	**92.74**	**123**	P	**P**	**10 45 12.8**	**-0.3**		
X37A	**Clayton**	**92.83**	**54**	IAmb	IAmb	10 45 16.3			
	comp=Z,39nm,1.0s								
TGUH	**Tegucigalpa,Un**	**92.90**	**76**	IAmb	IAmb	10 45 17.0			
	comp=Z,59nm,0.9s								
TUL1	**Leonard**	**92.98**	**53**	P	**P**	**10 45 14.9**	**+1.3**		
	baz=249,SNR=12								
TUL1	**Leonard**	**92.98**	**53**	P	**P**	**10 45 13.8**	**+0.1**		
TUL1				IAmb	IAmb	10 45 17.2			
	comp=Z,49nm,1.1s								
BGNE	**Belgrade**	**93.30**	**47**	P	**P**	**10 45 16.5**	**+1.5**		
	baz=248,SNR=11								
K31A	**O'Neill**	**93.34**	**46**	P	**P**	**10 45 15.8**	**+0.6**		
CO01	**Juntas del Tor**	**93.38**	**123**	IAmb	IAmb	10 45 21.2			
	comp=Z,27nm,0.9s								
KSU1	**Kansas State U**	**93.53**	**50**	P	**P**	**10 45 17.4**	**+1.3**		
	baz=248,SNR=14								
KSU1	**Kansas State U**	**93.53**	**50**	IAmb	IAmb	10 45 19.7			
	comp=Z,46nm,0.7s								
E28A	**Huff**	**93.62**	**42**	IAmb	IAmb	10 45 19.3			
	comp=Z,45nm,0.8s								
LZH	**Lanzhou**	**93.65**	**307**	⇓P	**P**	**10 45 19.3**	**+2.3**		
LZH				sP	sP	10 46 11.2	-5.8		
LZH				PP	**PP**	**10 49 05.6**	**+1.0**		
LZH				SKS	**SKSac**	**10 55 30.4**	**-5.0**		
LZH				S	**ScS**	**10 56 12.8**	**+0.3**		
LZH				sS	sS	10 57 18.5	-6.9		
LZH				SS	**SS**	**11 02 36.8**	**+3.0**		
LZH				pmax	pmax				
	comp=Z,210nm,1.4s								
LZH				pmax	pmax				
	comp=Z,730nm,8.7s								
LZH				LR	LR				
	comp=Z,250nm,17.5s								
LZH				LR	LR				
	comp=Z,270nm,17.4s								
LZH				LR	LR				
	comp=Z,460nm,19.6s								
AC05	**El Transito**	**93.69**	**122**	P	**P**	**10 45 17.9**	**+0.5**		
MATN	**Matagalpa**	**93.79**	**78**	P	**P**	**10 45 17.3**	**-0.7**		
MATN				IAmb	IAmb	10 45 21.0			
	comp=Z,63nm,1.1s								
RTCV	**Cerro Valdivia**	**93.81**	**125**	*e*P	**P**	**10 45 19.3**	**+1.5**		
JTS	**Las Juntas de**	**93.86**	**81**	*de*P	**P**	**10 45 20.0**	**+1.8**		
JTS				pmax	pmax				
	comp=Z,87nm,1.2s								
JTS	**Las Juntas de**	**93.86**	**81**	P	**P**	**10 45 16.8**	**-1.4**		
JTS				IAmb	IAmb	10 45 22.0			
	comp=Z,101nm,1.2s								
SUSD	**Miller**	**93.91**	**44**	P	**P**	**10 45 18.6**	**+0.8**		
	baz=247								
YKA	**Yellowknife Ar**	**94.15**	**24**	P	**P**	**10 45 18.9**	**+0.5**		
	comp=Z,7.0nm,0.7s,baz=234,slow=4.5,SNR=113								
YKA				PKiKP	**PKiKP**	**10 50 01.7**	**+0.4**		
	comp=Z,0.6nm,0.8s,baz=263,slow=1.4,SNR=2.5								
YKA				PKKPbc	**PKKPdf**	**11 02 19.6**	**-1.3**		
	comp=Z,0.5nm,0.4s,baz=55,slow=2.1,SNR=12								
CFA	**Coronel Fontan**	**94.16**	**125**	P	**P**	**10 45 20.2**	**+0.9**		
	comp=Z,66nm,1.0s,baz=239,slow=3.8,SNR=47								
CFA				PP	**PP**	**10 49 06.2**	**-1.8**		
	comp=Z,20nm,1.1s,baz=263,slow=5.9,SNR=6.5								
ACON	**Acoyapa**	**94.18**	**79**	P	**P**	**10 45 18.0**	**-1.7**		
MIAR	**Mount Ida**	**94.20**	**55**	P	**P**	**10 45 21.4**	**+2.1**		
MIAR				pmax	pmax				
	comp=Z,31nm,1.5s								
MIAR	**Mount Ida**	**94.20**	**55**	P	**P**	**10 45 20.3**	**+1.0**		
	baz=250,SNR=14								
GO03	**Copiap**	**94.22**	**121**	P	**P**	**10 45 19.2**	**-0.6**		
GO03				IAmb	IAmb	10 45 23.4			
	comp=Z,31nm,0.9s								
U38A	**Gravette**	**94.23**	**53**	IAmb	IAmb	10 45 22.7			
	comp=Z,64nm,1.5s								
AMOG	**MOGNA**	**94.24**	**125**	*e*P	**P**	**10 45 21.4**	**+1.6**		
W39A	**Magazine**	**94.27**	**54**	P	**P**	**10 45 20.5**	**+1.0**		
	baz=250,SNR=13								
W39A	**Magazine**	**94.27**	**54**	IAmb	IAmb	10 45 23.3			
	comp=Z,80nm,1.4s								
WLAR	**White Oak Lake**	**94.28**	**56**	P	**P**	**10 45 20.0**	**+0.4**		
WLAR				IAmb	IAmb	10 46 21.9			
	comp=Z,79nm,1.3s								
Z41A	**Richland Creek**	**94.37**	**56**	P	**P**	**10 45 21.2**	**+1.1**		
	baz=250								
HHAR	**Hobbs**	**94.52**	**53**	P	**P**	**10 45 19.3**	**-1.5**		
ACAN	**Cantantal**	**94.67**	**126**	*e*P	**P**	**10 45 22.9**	**+1.2**		
L34A	**Svendsen Farm,**	**94.74**	**47**	P	**P**	**10 45 20.7**	**-0.9**		
X40A	**Basin Creek Fa**	**94.76**	**55**	P	**P**	**10 45 22.6**	**+0.8**		
	baz=250								
MDND	**Maddock**	**94.81**	**41**	P	**P**	**10 45 22.7**	**+0.9**		
	baz=247								
MDND	**Maddock**	**94.81**	**41**	P	**P**	**10 45 21.4**	**-0.3**		
ECSD	**EROS Data Cent**	**95.21**	**46**	P	**P**	**10 45 24.3**	**+0.6**		
	baz=249,SNR=40								
PB14	**IPOC Station P**	**95.27**	**118**	IAmb	IAmb	10 45 28.7			
	comp=Z,55nm,1.0s								
C36M	**Paulatuk**	**95.31**	**16**	P	**P**	**10 45 24.6**	**+1.1**		
	baz=228								
U40A	**Yellville**	**95.37**	**54**	P	**P**	**10 45 25.4**	**+0.8**		
	baz=250,SNR=8.7								
U40A	**Yellville**	**95.37**	**54**	IAmb	IAmb	10 46 24.1			
	comp=Z,48nm,1.2s								
AC02	**Maricunga**	**95.43**	**121**	IAmb	IAmb	10 45 32.0			
	comp=Z,25nm,1.0s								
W41B	**Gary Mavity, V**	**95.44**	**55**	P	**P**	**10 45 25.9**	**+1.0**		
	baz=251,SNR=11								
WHAR	**Wooly Hollow**	**95.45**	**55**	P	**P**	**10 45 25.4**	**+0.4**		
WHAR				IAmb	IAmb	10 46 24.9			
	comp=Z,64nm,1.4s								
PB10	**IPOC Station P**	**95.58**	**117**	IAmb	IAmb	10 45 30.0			
	comp=Z,38nm,1.0s								
ULN	**Ulaanbaatar**	**95.69**	**319**	P	**P**	**10 45 28.2**	**+2.2**		
ULN	**Ulaanbaatar**	**95.69**	**319**	*d*iP	**P**	**10 45 27.5**	**+1.5**		
ULN				pmax	pmax				
	comp=Z,57nm,1.5s								
ULN	**Ulaanbaatar**	**95.69**	**319**	P	**P**	**10 45 25.0**	**-1.0**		
ULN				IAmb	IAmb	10 45 29.8			
	comp=Z,68nm,1.4s								
GO02	**Mina Guanaco**	**95.73**	**119**	P	**P**	**10 45 25.7**	**-1.3**		
GO02				IAmb	IAmb	10 45 32.3			
	comp=Z,29nm,1.0s								
FCAR	**Ozark Folk Cen**	**95.77**	**54**	P	**P**	**10 45 24.7**	**-1.7**		
FCAR				IAmb	IAmb	10 46 26.0			
	comp=Z,47nm,1.5s								
BOD	**Bodaibo**	**95.90**	**330**	*e*P	**P**	**10 45 26.3**	**-0.1**		
BOD				pmax	pmax				
	comp=Z,20nm,1.5s								
SONM	**Songino Array**	**96.09**	**318**	P	**P**	**10 45 29.1**	**+1.4**		
	comp=Z,12nm,1.1s,baz=132,slow=2.6,SNR=32								
SONM				PP	**PP**	**10 49 23.4**	**+0.2**		
	comp=Z,3.2nm,0.8s,baz=123,slow=11,SNR=4.0								
SONM				S	**SKSac**	**10 55 43.5**	**-4.3**		
	comp=Z,2.1nm,1.0s,baz=132,slow=4.1,SNR=5.7								
SONM				ScS	**S**	**10 56 30.3**	**-1.4**		
	comp=Z,0.4nm,0.3s,baz=108,slow=9.3,SNR=1.0								
F33A	**5 Mile Ranch,**	**96.18**	**44**	P	**P**	**10 45 27.5**	**-0.5**		
F33A				IAmb	IAmb	10 45 30.1			
	comp=Z,80nm,1.4s								
FFC	**Flin Flon**	**96.18**	**34**	P	**P**	**10 45 28.3**	**+0.5**		
FFC				pmax	pmax				
	comp=Z,17nm,1.4s								
FFC	**Flin Flon**	**96.18**	**34**	P	**P**	**10 45 28.3**	**+0.5**		
X43A	**Marvell**	**96.30**	**56**	P	**P**	**10 45 30.4**	**+1.6**		
	baz=251								
R40A	**Maddies Statio**	**96.44**	**52**	IAmb	IAmb	10 45 32.3			
	comp=Z,40nm,1.1s								
PB06	**IPOC Station P**	**96.73**	**117**	P	**P**	**10 45 30.0**	**-1.3**		
A36M	**Sachs Harbour**	**96.81**	**14**	P	**P**	**10 45 31.6**	**+1.4**		
	baz=227,SNR=13								
T42A	**Van Buren**	**96.92**	**53**	P	**P**	**10 45 31.6**	**-0.1**		
SCIA	**State Center**	**96.93**	**48**	P	**P**	**10 45 30.8**	**-0.8**		
PATCX	**Punta Patache**	**96.98**	**115**	P	**P**	**10 45 31.9**	**-0.6**		
PATCX				IAmb	IAmb	10 45 36.5			
	comp=Z,46nm,1.2s								
P40A	**Paris**	**97.00**	**51**	P	**P**	**10 45 30.9**	**-1.1**		
P40A				IAmb	IAmb	10 45 36.0			
	comp=Z,62nm,1.6s								
TA01	**Diego Aracena**	**97.05**	**114**	P	Pdif	10 45 34.1	+1.4		
TA01				IAmb	IAmb	10 45 36.6			
	comp=Z,31nm,0.8s								
TCA	**Tanti**	**97.07**	**126**	*e*P	Pdif	10 45 32.9	+0.2		
CCM	**Cathedral Cave**	**97.13**	**52**	P	**P**	**10 45 32.1**	**-0.4**		
CCM				pmax	pmax				
	comp=Z,19nm,1.2s								
CCM	**Cathedral Cave**	**97.13**	**52**	P	**P**	**10 45 32.2**	**-0.4**		
	baz=252								
CCM	**Cathedral Cave**	**97.13**	**52**	P	**P**	**10 45 32.1**	**-0.4**		
AGMN	**Agassiz Nation**	**97.31**	**41**	P	**P**	**10 45 33.0**	**-0.1**		
	baz=250								
AGMN	**Agassiz Nation**	**97.31**	**41**	P	**P**	**10 45 32.4**	**-0.7**		
AGMN				IAmb	IAmb	10 46 32.4			
	comp=Z,29nm,1.2s								
LVC	**Limon Verde**	**97.33**	**117**	P	Pdif	10 45 36.9	+2.5		
	comp=Z,34nm,1.1s,baz=248,slow=4.1,SNR=18								
LVC				PP	**PP**	**10 49 31.9**	**-1.2**		
	comp=Z,12nm,1.2s,baz=232,slow=7.7,SNR=6.1								
LVC	**Limon Verde**	**97.33**	**117**	P	**P**	**10 45 33.4**	**-0.9**		
LVC				pmax	pmax				
	comp=Z,65nm,1.2s								
LVC	**Limon Verde**	**97.33**	**117**	P	**P**	**10 45 33.4**	**-0.9**		
PB09	**IPOC Station P**	**97.37**	**116**	P	**P**	**10 45 33.6**	**-0.7**		
PB09				IAmb	IAmb	10 45 39.2			
	comp=Z,65nm,1.3s								
PB01	**IPOC Station P**	**97.46**	**115**	P	Pdif	10 45 36.0	+1.3		
PB01				IAmb	IAmb	10 45 38.7			
	comp=Z,24nm,0.9s								
PSGCX	**Pisagua**	**97.48**	**114**	P	**P**	**10 45 33.5**	**-1.3**		
PSGCX				IAmb	IAmb	10 45 38.5			
	comp=Z,32nm,1.1s								
K38A	**Parkersburg**	**97.48**	**48**	P	**P**	**10 45 34.0**	**-0.1**		
K38A				IAmb	IAmb	10 45 37.1			
	comp=Z,34nm,0.9s								
I37A	**Lemond, Waseca**	**97.49**	**46**	P	**P**	**10 45 33.7**	**-0.3**		
GTA	**Gaotai**	**97.76**	**309**	⇑P	Pdif	10 45 37.7	+2.1		
GTA				pP	pP	10 46 18.2	+0.2		
GTA				sP	sP	10 46 34.6	-1.1		
GTA				PP	**PP**	**10 49 39.6**	**+3.4**		
GTA				SKS	**SKSac**	**10 55 52.7**	**-4.1**		
GTA				S	**ScS**	**10 56 48.3**	**+1.7**		
GTA				sS	sS	10 57 57.7	-3.3		
GTA				SS	**SS**	**11 03 33.8**	**+2.0**		
GTA				pmax	pmax				
	comp=Z,20nm,1.0s								
GTA				pmax	pmax				
	comp=Z,310nm,9.4s								
GTA				LR	LR				
	comp=Z,190nm,18.4s								
GTA				LR	LR				
	comp=Z,320nm,21.0s								
GTA				LR	LR				
	comp=Z,430nm,20.6s								
PB11	**IPOC Station P**	**97.82**	**114**	P	**P**	**10 45 34.6**	**-1.8**		
TIXI	**Tiksi**	**97.84**	**345**	P	Pdif	10 45 35.4	+0.5		
	comp=Z,26nm,0.9s,baz=125,slow=4.6,SNR=49								
TIXI				PP	**PP**	**10 49 34.0**	**-1.8**		
	comp=Z,14nm,1.1s,baz=127,slow=7.5,SNR=14								
TIXI	**Tiksi**	**97.84**	**345**	*ce*P	Pdif	10 45 35.6	+0.7		
TIXI				pmax	pmax				
	comp=Z,35nm,1.0s								
TIXI	**Tiksi**	**97.84**	**345**	P	**P**	**10 45 34.9**	**0.0**		
TIXI				IAmb	IAmb	10 45 37.3			
	comp=Z,28nm,0.9s								
ULM	**Lac du Bonnet**	**97.97**	**40**	P	Pdif	10 45 36.1	+0.1		
	comp=Z,1.8nm,0.4s,baz=237,slow=7.9,SNR=5.1								
ULM	**Lac du Bonnet**	**97.97**	**40**	⇓*e*P	Pdif	10 45 36.3	+0.3		
ULM	**Lac du Bonnet**	**97.97**	**40**	P	**P**	**10 45 35.3**	**-0.7**		
ULM				IAmb	IAmb	10 46 34.7			
	comp=Z,23nm,1.3s								
F36A	**Milaca**	**98.00**	**44**	P	**P**	**10 45 35.9**	**-0.4**		
F36A				IAmb	IAmb	10 45 39.4			
	comp=Z,27nm,1.1s								
MNMC	**Minye Minye**	**98.12**	**113**	P	**P**	**10 45 37.0**	**-0.8**		
N41A	**Harden Midland**	**98.24**	**50**	P	**P**	**10 45 37.4**	**-0.1**		
N41A				IAmb	IAmb	10 45 42.0			
	comp=Z,28nm,1.1s								
GO01	**Chusmiza**	**98.26**	**114**	P	**P**	**10 45 37.8**	**-0.9**		
SPMN	**Marine on St.**	**98.28**	**45**	P	Pdif	10 45 38.3	+0.8		
	baz=252,SNR=6.5								
SPMN	**Marine on St.**	**98.28**	**45**	P	Pdif	10 45 38.4	+0.8		
SPMN				IAmb	IAmb	10 45 40.7			
	comp=Z,39nm,1.2s								
L40A	**Anamosa**	**98.39**	**49**	P	Pdif	10 45 38.2	+0.1		
L40A				IAmb	IAmb	10 45 42.1			
	comp=Z,56nm,1.4s								
PB16	**IPOC Station P**	**98.51**	**113**	P	Pdif	10 45 40.8	+0.8		
B35A	**Bob, Littlefor**	**98.67**	**42**	P	**P**	**10 45 37.0**	**-2.2**		
B35A				IAmb	IAmb	10 46 38.6			
	comp=Z,15nm,1.1s								
ZAK	**Zakamensk**	**98.89**	**320**	*e*P	Pdif	10 45 40.6	+0.3		
ZAK				pmax	pmax				
	comp=Z,8.0nm,1.3s								
TLY	**Talaya**	**99.09**	**322**	P	**Pdif**	**10 45 42.1**	**+1.1**		
	comp=Z,5.4nm,0.9s,baz=262,slow=5.2,SNR=4.5								
TLY	**Talaya**	**99.09**	**322**	*e*P	**Pdif**	**10 45 42.9**	**+1.9**		
TLY				*e*		10 56 02.8			
TLY				*e*		10 56 54.8			
TLY				*e*SS	SS	11 03 51.0	+1.5		
TLY				pmax	pmax				
	comp=Z,14nm,1.1s								
TLY	**Talaya**	**99.09**	**322**		**Pdif**	**10 45 41.4**	**+0.3**		
TLY				IAmb	IAmb	10 49 43.9			
	comp=Z,29nm,1.5s								
WVT	**Waverly**	**99.16**	**55**	P	**Pdif**	**10 45 42.5**	**+0.8**		
WVT				pmax	pmax				
	comp=Z,7.0nm,1.0s								
JFWS	**Jewell Farm**	**99.33**	**48**	P	**Pdif**	**10 45 43.5**	**+1.2**		
	baz=253								
U54A	**Nelsons Funny**	**103.95**	**56**	P	**Pdif**	**10 46 03.4**	**+0.3**		
	baz=257								
CPUP	**Villa Florida**	**105.05**	**125**	Pdiff	**Pdif**	**10 46 12.3**	**+4.1**		
	comp=Z,3.5nm,1.0s,baz=249,slow=4.3,SNR=4.6								
D47A	**Chapleau**	**105.26**	**45**	P	**PKiKP**	**10 50 21.0**	**-0.9**		
	baz=259								
T59A	**Double "B" Far**	**107.39**	**56**	P	**PKiKP**	**10 50 26.7**	**+0.6**		
	baz=259								
LSQQ	**Lebel-sur-Quev**	**109.63**	**44**	P	**PKiKP**	**10 50 30.0**	**+0.1**		
	baz=264								
E56A	**St. Veronique**	**110.67**	**46**	P	**PKiKP**	**10 50 32.1**	**+0.2**		
	baz=264								
ZALV	**Zalesovo Beam**	**110.70**	**321**	Pdiff	**Pdif**	**10 46 36.8**	**+4.3**		
	comp=Z,1.6nm,0.8s,baz=90,slow=1.9,SNR=7.8								
ZALV				PKiKP	**PKiKP**	**10 50 31.2**	**-0.5**		
	comp=Z,5.4nm,0.8s,baz=171,slow=1.1,SNR=13								
ZALV				PP	**PP**	**10 51 09.2**	**-2.3**		
	comp=Z,14nm,1.2s,baz=104,slow=6.3,SNR=7.1								
ZALV				SKP	**SKPdf**	**10 53 47.6**	**-3.3**		
	comp=Z,4.1nm,1.0s,baz=111,slow=3.2,SNR=4.1								
ZALV				PKKPbc	**PKKPbc**	**11 01 31.5**	**-1.1**		
	comp=Z,1.9nm,0.6s,baz=255,slow=4.1,SNR=6.1								
PAL	**Palisades**	**110.84**	**52**	P	**PKiKP**	**

SNR=8.0
KSH Kashi 115.86 305 PKP **PKiKP** **10 50 44.4 +2.2**
KSH sPKP 10 51 44.4
KSH PP **PP** **10 51 52.4 +3.7**
KSH SKKS 10 58 30.9
KSH SS **SS** **11 07 45.9 +9.1**
KSH AMB AMB
comp=Z,870nm,6.8s
KSH LR LR
comp=Z,300nm,11.3s
KSH LR LR
comp=Z,300nm,5.9s
KSH LR LR
comp=Z,220nm,12.8s
TKM2 Tokmak 2 116.31 309 P **PKPdf** **10 50 43.1 0.0**
SNR=12
KBK Karagaybulak 116.78 309 P **PKiKP** **10 50 45.0 +1.0**
SNR=6.1
BATG Bathurst New B 116.84 46 **PKPdf** **10 50 43.4 -0.3**
CHMS Chumysh 116.94 309 P **PKiKP** **10 50 44.9 +0.8**
SNR=6.0
UCH Uchtor 117.09 308 P **PKiKP** **10 50 45.9 +0.9**
SNR=12
AAK Ala-Archa 117.12 309 PKP **PKiKP** **10 50 45.3 +0.7**
comp=Z,4.6nm,0.8s,baz=223,slow=3.1,SNR=13
AAK PKKPbc **PKKPbc** **11 01 11.0 +0.4**
comp=Z,6.4nm,0.8s,baz=204,slow=6.8,SNR=10
AAK Ala-Archa 117.12 309*d* PKiKP **PKiKP** **10 50 45.6 +1.0**
AAK Ala-Archa 117.12 309 **PKPdf** **10 50 41.6 -3.0**
USP Ospennovka 117.12 310 P **PKiKP** **10 50 44.6 +0.1**
SNR=9.1
EKS2 Erkin-Say 117.64 309 P **PKiKP** **10 50 46.8 +1.2**
SNR=6.1
AML Almayashu 117.70 308 P **PKiKP** **10 50 46.4 +0.3**
SNR=13
BDFB Brasilia 118.00 120 PKP **PKPdf** **10 50 46.6 -0.4**
comp=Z,6.5nm,0.7s,baz=200,slow=3.2,SNR=6.5
BDFB PKKPab **PKKPab** **11 01 11.9 +0.2**
comp=Z,4.9nm,0.5s,baz=62,slow=4.4,SNR=6.1
BDFB Brasilia 118.00 120 PKiKP **PKPdf** **10 50 45.8 -1.2**
BDFB Brasilia 118.00 120 **PKPdf** **10 50 45.8 -1.2**
BVAR Borovoye Array 119.34 321 PKP **PKPdf** **10 50 48.2 -0.1**
comp=Z,13nm,0.6s,baz=100,slow=1.7,SNR=52
BVAR SKP **SKPdf** **10 54 04.7 -2.9**
comp=Z,13nm,1.1s,baz=45,slow=0.4,SNR=6.1
BVAR PKKPbc **PKKPbc** **11 01 03.0 +0.2**
comp=Z,2.0nm,0.7s,baz=279,slow=2.9,SNR=8.6
BRVK Borovoye 119.40 321 P **PKiKP** **10 50 49.4 +0.9**
BRVK Borovoye 119.40 321*d* PKiKP **PKiKP** **10 50 49.0 +0.5**
BRVK Borovoye 119.40 321 **PKPdf** **10 50 47.5 -0.9**
BTK Batken 119.85 306 PKiKP **PKPdf** **10 50 47.9 -1.9**
BTK Batken 119.85 306 **PKPdf** **10 50 47.9 -1.9**
KBS Kingsbay 119.86 358*d* PKiKP **PKiKP** **10 50 50.1 +1.4**
KBS Kingsbay 119.86 358 **PKPdf** **10 50 48.1 -0.5**
KBS Kingsbay 119.86 358 *e*PKPdf **PKiKP** **10 50 49.7 +0.9**
KKAR Karatay Array 120.04 309 PKiKP **PKPdf** **10 50 49.6 -0.4**
KKAR Karatay Array 120.04 309 **PKPdf** **10 50 49.6 -0.4**
SPA0 Spitsbergen Ar 120.44 357 *e*PKPdf **PKPdf** **10 50 49.1 -0.7**
SPITS Spitsbergen Ar 120.44 357 PKKPbc PKKPbc 11 00 59.5 +0.2
comp=Z,3.1nm,0.6s,baz=146,slow=1.0,SNR=4.5
SFJD Kangerlussuaq 120.64 22 *e*PKiKP **PKPdf** **10 50 49.9 -0.5**
SFJD Kangerlussuaq 120.64 22 *i* P **PKPdf** **10 50 49.9 -0.5**
DAG Danmarks Havn 120.96 6 *i* PKiKP **PKPdf** **10 50 50.0 -0.8**
DAG *i* 10 52 20.3
DAG pmax pmax
comp=Z,5.0nm,0.7s
DAG Danmarks Havn 120.96 6 *i* P **PKPdf** **10 50 50.0 -0.8**
comp=Z,5.0nm,0.7s
DAG *i* 10 52 20.3
SUMG Summit 121.10 14 PKiKP **PKPdf** **10 50 51.1 -0.6**
SUMG Summit 121.10 14 **PKPdf** **10 50 51.1 -0.6**
SUMG Summit 121.10 14 *i* P **PKiKP** **10 50 52.8 +1.0**
CHGR Chuyangaron 121.13 304 **PKPdf** **10 50 49.9 -2.5**
KBL Kabul 121.13 299 P **PKiKP** **10 50 54.4 +1.6**
KBL Kabul 121.13 299 PKiKP **PKPdf** **10 50 50.5 -2.1**
KBL Kabul 121.13 299 **PKPdf** **10 50 50.5 -2.1**
VOI Vohitsoka 121.99 228 P **PKiKP** **10 50 55.6 +0.8**
DRLN Deer Lake 122.38 43 **PKPdf** **10 50 53.6 -0.7**
OPO Ambohidratompo 123.86 231 PKP **PKiKP** **10 50 59.3 +0.8**
comp=Z,8.1nm,0.8s,baz=147,slow=2.0,SNR=8.4
SVE Sverdlovsk 123.97 327 *e*PKiKP **PKiKP** **10 50 58.0 +0.6**
SVE pmax pmax
comp=Z,32nm,0.8s
ARU Arti 125.19 327 PKP **PKiKP** **10 51 00.1 +0.3**
comp=Z,9.3nm,0.6s,baz=54,slow=0.3,SNR=30
ARU PP **PP** **10 52 49.4 -1.9**
comp=Z,4.9nm,0.8s,baz=63,slow=4.6,SNR=8.5
ARU SKP **SKPdf** **10 54 17.9 -0.8**
comp=Z,1.4nm,0.5s,baz=195,slow=1.5,SNR=3.9
ARU Arti 125.19 327*c* PKiKP **PKiKP** **10 50 59.8 0.0**
ARU Arti 125.19 327 **PKPdf** **10 50 59.2 -0.3**
SUR Sutherland 126.62 197 PKP **PKiKP** **10 51 05.0 +1.3**
comp=Z,14nm,0.7s,baz=140,slow=3.2,SNR=14
SUR Sutherland 126.62 197 P **PKiKP** **10 51 05.1 +1.3**
HAMF Hammerfest 127.02 352 *e*PKPdf **PKiKP** **10 51 03.3 +0.2**
KEV Kevo 127.34 350 PKiKP **PKPdf** **10 51 03.3 +0.1**
KEV Kevo 127.34 350 **PKPdf** **10 51 03.3 +0.1**
AKTO Aktyubinsk 127.39 320 PKP **PKiKP** **10 51 04.9 +0.5**
comp=Z,8.1nm,0.9s,baz=77,slow=2.5,SNR=21
AKTO PP **PP** **10 53 02.1 -4.1**
comp=Z,4.1nm,0.9s,baz=76,slow=1.2,SNR=5.3
AKTO SKP **SKPdf** **10 54 21.9 -1.1**
comp=Z,7.1nm,1.0s,baz=26,slow=5.3,SNR=3.6
LVZ Lovozero 127.45 346 || *i* PKiKP **PKiKP** **10 51 05.2 +1.1**
LVZ Lovozero 127.45 346 **PKPdf** **10 51 03.3 -0.2**
ARCES ARCESS Array B 127.78 351 PKP **PKiKP** **10 51 04.8 +0.1**
comp=Z,28nm,0.8s,baz=5.7,slow=1.2,SNR=52
ARCES SKPbc SKPbc 10 54 06.2
comp=Z,17nm,0.9s,baz=353,slow=2.2,SNR=9.7
ARE0 ARCESS Array S 127.78 351 **PKiKP** **10 51 04.9 +0.3**
ARE0 ARCESS Array S 127.78 351 *e*PKPdf **PKiKP** **10 51 04.8 +0.2**
TRO Tromso 128.53 354 *e*PKPdf **PKiKP** **10 51 06.1 0.0**
PRGR Permogore 128.57 336 *e*PKiKP **PKPdf** **10 51 05.8 +0.1**
PRGR pmax pmax
comp=Z,14nm,0.6s
KTK1 Kautokeino 128.59 351 *e*PKPdf **PKiKP** **10 51 06.7 +0.4**
BOSA Boshof 128.62 204 PKP **PKiKP** **10 51 08.3 +0.5**
comp=Z,5.0nm,0.6s,baz=158,slow=3.2,SNR=11
KIRV Kirov 128.71 332 PKP **PKiKP** **10 51 07.8 +1.1**
comp=Z,23nm,0.7s,baz=151,slow=1.5,SNR=10
KIRV PP **PP** **10 53 13.1 -1.3**
comp=Z,13nm,0.6s,baz=58,slow=8.3,SNR=11
KIRV SKPbc SKPbc 10 54 08.7
comp=Z,32nm,0.9s,baz=62,slow=3.8,SNR=8.1
WSAR Wadi Sarin 129.48 285 SKPbc SKPab 10 54 12.2 -1.7
comp=Z,22nm,1.1s,baz=78,slow=2.9,SNR=9.7
MHTO MHTO 129.82 282 P **PKiKP** **10 51 10.8 +0.7**
SNR=5.3
GEYT Alibeck 129.84 304 PKhKP PKPpre 10 50 57.3
comp=Z,2.3nm,0.7s,baz=290,slow=4.2,SNR=5.3
GEYT PKP **PKiKP** **10 51 10.0 +0.3**
comp=Z,11nm,0.9s,baz=221,slow=1.3,SNR=15
GEYT PP **PP** **10 53 22.4 -0.3**
comp=Z,15nm,1.1s,baz=142,slow=3.4,SNR=8.5
GEYT SKPbc SKPab 10 54 12.7 -2.4
comp=Z,8.3nm,1.0s,baz=104,slow=6.1,SNR=5.1
JMDO Jabal Madar 129.87 284 P **PKiKP** **10 51 10.9 +0.6**
SMDO Samad 129.99 285 P **PKiKP** **10 51 11.6 +1.1**
LOF Lofoten 130.48 356 *e*PP PP 10 53 25.9 +0.5
STEI Steigen 130.54 355 *e*PKPdf **PKiKP** **10 51 10.2 +0.1**
BSY Bisya 130.74 284 P **PKiKP** **10 51 12.0 0.0**
KLMR Klimovskoe 131.33 338 *e*PKiKP **PKPdf** **10 51 03.4 -7.6**
KLMR pmax pmax
comp=Z,18nm,0.9s
KLMR Klimovskoe 131.33 338 *e*PKPdf **PKPdf** **10 51 03.4 -7.6**
KLMR AMP 10 51 13.6
comp=Z,18nm,0.9s
KLMR *e*PP **PP** **10 53 25.5 -5.6**
SOHO SOHO 131.47 286 P **PKiKP** **10 51 13.6 +0.2**
SNR=11
LBTB Lobatse 131.70 206 PKP **PKiKP** **10 51 13.9 -0.2**
comp=Z,4.9nm,1.0s,baz=162,slow=3.2,SNR=4.9
LBTB SKPbc **SKPbc** **10 54 19.7 -3.0**
comp=Z,26nm,1.1s,baz=105,slow=1.7,SNR=8.1
UOSS Minazif 131.83 287 P **PKiKP** **10 51 13.9 -0.2**
UOSS Minazif 131.83 287 **PKPdf** **10 51 11.1 -2.0**
HATD Hatta, Dubai 131.89 287 P **PKiKP** **10 51 14.5 +0.2**
SNR=6.5
MOR8 Moi Rana 132.33 355 *e*PKPdf **PKiKP** **10 51 13.9 0.0**
RBK Rabkut 132.82 277 P **PKiKP** **10 51 16.4 +0.1**
RCBR Riachuelo 133.27 118 PKP **PKPdf** **10 51 14.3 -1.9**
comp=Z,12nm,0.9s,baz=124,slow=0.8,SNR=3.3
RCBR SKPbc **SKPbc** **10 54 25.0 -3.3**
comp=Z,22nm,1.0s,baz=143,slow=3.2,SNR=5.9
RCBR Riachuelo 133.27 118 **PKPdf** **10 51 12.9 -3.3**

WHFO Wadi Hawf 133.30 277 P **PKiKP** **10 51 17.1 -0.2**
ABTO Aybut 133.65 276 P **PKiKP** **10 51 18.0 0.0**
MATP Matopo 134.32 212 PKP **PKPdf** **10 51 16.6 -1.6**
comp=Z,7.9nm,0.7s,baz=158,slow=3.7,SNR=9.7
MATP SKPbc **SKPbc** **10 54 25.8 -5.9**
comp=Z,25nm,1.0s,baz=149,slow=3.6,SNR=9.8
FINES FINESS Array B 134.88 346 PKhKP PKPpre 10 51 03.3
comp=Z,1.4nm,0.8s,baz=29,slow=3.2,SNR=2.2
FINES PKP **PKPdf** **10 51 16.9 -0.7**
comp=Z,18nm,0.8s,baz=85,slow=2.4,SNR=15
FINES PP **PP** **10 53 51.6 -1.9**
comp=Z,5.5nm,1.0s,baz=39,slow=12,SNR=6.6
FINES SKPbc **SKPbc** **10 54 28.6 -3.4**
comp=Z,34nm,1.0s,baz=46,slow=5.5,SNR=14
MOS Moscow 135.56 334 *i* PKiKP **PKPdf** **10 51 19.5 +0.4**
MOL Molde 136.35 358 *e*PKPdf **PKPdf** **10 51 19.0 -1.3**
VRH Novokhopyorsk 136.42 326 *e*PKiKP **PKPdf** **10 51 20.5 -0.3**
VRH pmax pmax
comp=Z,20nm,0.6s
OBN Obninsk 136.43 334*d* PKiKP **PKiKP** **10 51 21.9 -0.5**
OBN *e* 10 54 00.4
OBN *e*PPP PPP 10 57 04.0
OBN pmax pmax
comp=Z,18nm,0.9s
MAK Makhachkala 136.60 313 *e*P **Pdif** **10 48 27.6 -0.4**
MAK *i* 10 51 22.9
MAK *e* 10 54 04.8
MAK *e*SS SS 11 11 58.3 +3.9
MAK *e*SSS SSS 11 17 02.3
MAK pmax pmax
comp=Z,116nm,1.2s
LPSR Galich'ya Gora 137.00 330 *e*PKiKP **PKiKP** **10 51 22.9 -0.8**
LPSR *e* 10 54 09.6
LPSR pmax pmax
comp=Z,10.0nm,0.9s
VSU Vasula 137.28 343 || *i* PKiKP **PKiKP** **10 51 24.5 +0.4**
NB2 NORSAR Subarra137.66 355 PKP PKPpre 10 51 12.6
comp=Z,11nm,1.4s,baz=17,slow=2.6
NOA NORSAR Array B137.66 355 PKhKP PKPpre 10 51 14.3
comp=Z,3.8nm,0.8s,baz=11,slow=2.3,SNR=9.5
NOA PKP **PKPdf** **10 51 23.6 +0.7**
comp=Z,2.4nm,0.8s,baz=19,slow=4.1,SNR=11
NOA PP **PP** **10 54 08.4 -2.5**
comp=Z,7.8nm,1.0s,baz=8.8,slow=6.1,SNR=6.8
NOA SKPbc **SKPbc** **10 54 38.2 -2.3**
comp=Z,12nm,0.9s,baz=15,slow=4.5,SNR=14
GROC Groznyy 137.68 314 *e*PKiKP **PKPdf** **10 51 24.1 +0.7**
GROC *e* 10 52 08.3
GROC *e* 10 52 25.6
GROC *e* 10 54 10.2
GROC *e* 10 58 16.5
GROC pmax pmax
comp=Z,23nm,0.4s
NBO00 NORSAR Array S 137.71 355 **PKPdf** **10 51 22.2 -0.8**
VSR Storozhevoye 137.73 328 *e*PKiKP **PKPdf** **10 51 22.3 -1.0**
VSR pmax pmax
comp=Z,10.0nm,0.7s
HYA Hoyanger 137.80 359 *e*PKPdf **PKiKP** **10 51 24.4 -0.7**
VORD Divnogorie 137.81 327 *e*PKiKP **PKPdf** **10 51 21.5 -1.9**
VORD pmax pmax
comp=Z,20nm,1.0s
NC602 NORSAR Array S 137.94 355 *e*PKPdf **PKiKP** **10 51 25.2 -0.2**
SKAR Skarslia 138.21 357 *e*PKPdf **PKiKP** **10 51 25.2 -0.9**
HFS Hagfors 138.31 353 PKhKP PKPpre 10 51 16.8
comp=Z,6.4nm,0.7s,baz=102,slow=3.5,SNR=3.8
HFS PKP **PKPdf** **10 51 25.1 +1.0**
comp=Z,14nm,0.8s,baz=48,slow=2.1,SNR=5.7
HFS SKPbc **SKPbc** **10 54 40.1 -2.3**
comp=Z,22nm,0.9s,baz=48,slow=2.2,SNR=12
LSZ Lusaka 138.73 216 PKP **PKPdf** **10 51 25.8 -0.5**
comp=Z,3.1nm,0.5s,baz=145,slow=1.6,SNR=4.6
LSZ PP **PP** **10 54 16.2 -2.0**
comp=Z,4.9nm,0.8s,baz=156,slow=2.8,SNR=4.1
LSZ SKP **SKPdf** **10 54 41.5 -3.6**
comp=Z,8.5nm,0.8s,baz=160,slow=4.0,SNR=4.8
LSZ Lusaka 138.73 216 **PKPdf** **10 51 24.7 -1.7**
ZEI Tsey 139.13 314 *i* PKiKP **PKPdf** **10 51 26.3 -0.1**
ZEI pmax pmax
comp=Z,13nm,0.9s
KONO Kongsberg 139.16 356 || *e*PKiKP **PKPdf** **10 51 25.0 -0.6**
KONO Kongsberg 139.16 356 *e*PKPdf **PKPdf** **10 51 22.3 -3.3**
KBZ Khabaz 139.41 316 PKhKP PKPpre 10 51 19.9
comp=Z,6.7nm,0.9s,baz=219,slow=1.9,SNR=8.4
KBZ PP **PP** **10 54 19.2 -3.3**
comp=Z,14nm,1.2s,baz=93,slow=5.4,SNR=3.8
KIV Kislovodsk 139.45 317 *i* PKiKP **PKiKP** **10 51 30.8 +1.6**
KIV *e* 10 54 24.2
KIV *e*SS SS 11 12 32.6 +4.5
KIV pmax pmax
comp=Z,25nm,1.0s
KIV MLR MLR
comp=Z,642nm,24.0s
BLS5 Blasjo 139.54 358 *e*PKPdf **PKPdf** **10 51 26.2 -0.2**
ISAL Salakas 139.91 341 *e*P **PKPdf** **10 51 23.5 -3.6**
TSUM Tsumeb 139.96 200 PKhKP PKPpre 10 51 23.4
comp=Z,3.8nm,0.8s,baz=117,slow=4.5,SNR=4.3
TSUM PKP **PKPdf** **10 51 29.0 +0.4**
comp=Z,3.0nm,0.5s,baz=132,slow=3.4,SNR=7.6
TSUM PP **PP** **10 54 30.6 +5.5**
comp=Z,7.0nm,0.8s,baz=165,slow=4.2,SNR=6.6
TSUM Tsumeb 139.96 200 **PKPdf** **10 51 24.8 -3.8**
IIGN Ignalina 140.06 341 *e*P **PKPdf** **10 51 23.5 -3.9**
MICGM Minsk 140.22 339 *e* **PKPdf** **10 51 24.0 -3.7**
MICGM *e* 10 54 56.0
MNK Minsk 140.22 339 *e*PKiKP **PKPdf** **10 51 24.0 -3.7**
PABE Paberze 140.60 343 *e*P **PKPdf** **10 51 24.2 -4.1**
PBUR Paburge 140.69 345 *e*P **PKPdf** **10 51 24.2 -4.3**
KAC Achnashellach 140.82 8 *e*P **PKPdf** **10 51 23.4 -5.3**
KPL Plockton 140.93 9 *e*P **PKPdf** **10 51 23.6 -5.2**
BCA Borcka 141.22 313 ⇑P **PKPdf** **10 51 26.4 -3.6**
AKDM Akdamar-Van 141.39 308 *e*P **PKPdf** **10 51 26.7 -3.9**
RAYN Ar Rayn 141.53 284 PKHKP PKPpre 10 51 27.0
RAYN Ar Rayn 141.53 284 PKPdf **PKPdf** **10 51 27.0 -4.1**
SOC Sochi 141.54 318 *i* PKiKP **PKiKP** **10 51 32.7 -0.6**
SOC *e* 10 54 33.8
DRUM Mains of Drumt 141.73 6 *e*P **PKPdf** **10 51 27.0 -3.4**
LAWE Loch Awe, Argy 142.01 9 *e*P **PKPdf** **10 51 27.0 -3.9**
INVG Invergeldie, C 142.03 8 *e*P **PKPdf** **10 51 26.2 -4.7**
KMBO Kilima Mbogo 142.09 242 PKP **PKPdf** **10 51 31.7 -0.9**
comp=Z,5.8nm,0.7s,baz=112,slow=4.5,SNR=4.5
KMBO Kilima Mbogo 142.09 242 *e*P **PKPdf** **10 51 27.3 -5.3**
KMBO Kilima Mbogo 142.09 242 *e*P **PKPdf** **10 51 27.3 -5.3**
KMBO Kilima Mbogo 142.09 242 **PKPdf** **10 51 30.7 -2.0**
VRTB Varto-Mus 142.22 310 *e*P **PKPdf** **10 51 30.6 -1.4**
ATD Arta Tunnel 142.27 264 PKP **PKPdf** **10 51 31.7 -1.0**
comp=Z,16nm,0.9s,baz=74,slow=7.4,SNR=4.0
ATD Arta Tunnel 142.27 264 *e*P **PKPdf** **10 51 27.1 -5.6**
ATD Arta Tunnel 142.27 264 *e*P **PKPdf** **10 51 27.1 -5.6**
ATD Arta Tunnel 142.27 264 **PKPdf** **10 51 31.3 -1.4**
ANN Anapa 142.34 321 *e*PKiKP **PKPdf** **10 51 29.6 -2.2**
ANN *e* 10 54 38.5
ANN pmax pmax
comp=Z,81nm,1.1s
AKASG Malin Array Be 142.69 334 PKhKP PKPpre 10 51 28.6
comp=Z,5.9nm,0.5s,baz=39,slow=5.3,SNR=50
AKASG PP **PP** **10 54 40.5 -1.4**
comp=Z,14nm,1.1s,baz=38,slow=5.4,SNR=4.7
AKBB Malin Array Si 142.69 334 PKiKP **PKPdf** **10 51 29.7 -2.5**
AKBB Malin Array Si 142.69 334 PKPdf **PKPdf** **10 51 29.7 -2.5**
ESY Stoneypath 142.70 7 *e*P **PKPdf** **10 51 29.5 -2.6**
SVAN Silvan-Diyarba 142.77 309 *e*P **PKPdf** **10 51 30.9 -2.0**
YEDI Yedisu-Bingol 142.77 311 *e*P **PKPdf** **10 51 31.5 -1.5**
EBL Broad Law 142.79 7 *e*P **PKPdf** **10 51 29.2 -3.0**
BNGB Bingl 142.84 310 *e*P **PKPdf** **10 51 31.8 -1.3**
BSD Bornholm Skovb 143.01 350 *i* PKHKP PKPab 10 51 29.0 +0.7
BSD pmax pmax
comp=Z,40nm,0.8s
BSD Bornholm Skovb 143.01 350 *i* P PKPab 10 51 29.0 +0.7
comp=Z,40nm,0.8s
CLGH Cloghs, Cushen 143.03 10 *e*P PKPbc 10 51 30.7 +0.7
ESK Eskdalemuir 143.22 7 *e*P PKPbc 10 51 30.3 -0.3
GAL1 Galloway 143.46 9 *e*P PKPbc 10 51 31.4 +0.2
MAZI Mazidag 143.57 308 *e*P PKPbc 10 51 33.2 +0.9
DYAB Diyarbakir 143.62 309 *e*P **PKPdf** **10 51 33.7 -0.7**
RGN Rugen 143.80 351 *e*P **PKPdf** **10 51 35.7 +1.6**
PTK Pertek 143.81 311 *e*P **PKPdf** **10 51 36.0 +1.1**
SHEL Horse Pasture 143.91 163 PKiKP PKPbc 10 51 34.2 +0.5
SHEL Horse Pasture 143.91 163 PKPbc 10 51 34.2 +0.5
SVRC Sivrice-ELAZID 144.07 310 *e*P **PKPdf** **10 51 35.8 +0.5**
SIM Simferopol' 144.19 323 *i* PKiKP **PKPdf** **10 51 35.0 -0.1**
SIM pmax pmax
comp=Z,302nm,0.8s
ARPR Arapgir-MALATY 144.48 312 *e*P **PKPdf** **10 51 36.9 +0.9**
MALT Malatya 144.73 310 *e*P **PKPdf** **10 51 37.8 +1.4**

HPK Haverah Park 144.73 6 *e*P **PKPdf** **10 51 35.5 -0.2**
BSEG Bad Segeberg 144.77 354 *e*PKPbc **PKPdf** **10 51 36.2 +0.4**
baz=10,slow=2.8
URFA Urfa 144.78 309 *e*P **PKPdf** **10 51 37.3 +0.8**
SORM Soroca 144.99 332 ||P **PKPdf** **10 51 36.8 +0.5**
SORM Soroca 144.99 332 ||PKiKP **PKPdf** **10 51 36.8 +0.5**
WLF1 Llynfaes 145.03 9 *e*P **PKPbc** **10 51 35.6 -0.4**
YRC Rhoscolyn 145.04 9 *e*P **PKPdf** **10 51 36.3 +0.1**
SVSK Karacayir 145.05 314 *e*P **PKiKP** **10 51 39.1 -1.5**
KVT Kavak 145.13 316 *e*P **PKiKP** **10 51 40.2 -0.6**
TOKT Tokat 145.17 315 *e*P **PKPab** **10 51 37.9 +0.7**
DESE Dese 145.17 262 *e*P **PKiKP** **10 51 40.9 -1.2**
YLL Llanberis 145.21 9 *e*P **PKPab** **10 51 36.8 0.0**
DARE Darende-Malaty 145.30 311 *e*P **PKiKP** **10 51 39.9 -1.4**
AAE Adis Abeba 145.32 258 *e*P **PKiKP** **10 51 41.3 -1.1**
AAE Adis Abeba 145.32 258 *e*P **PKiKP** **10 51 41.3 -1.1**
LMK Market Rasen 145.35 5 *e*P **PKPdf** **10 51 36.4 -0.4**
FURI Furi 145.35 258 *e*P **PKiKP** **10 51 41.8 -0.6**
FURI Furi 145.35 258 *e*P **PKiKP** **10 51 41.8 -0.6**
DIKM Dikmen 145.35 317 ⇑P **PKiKP** **10 51 40.3 -0.9**
DIKM Dikmen 145.35 317 *e*P **PKiKP** **10 51 40.3 -0.9**
LVV L'vov 145.42 337 *e*PKP2 **PKPab** **10 51 38.3 +0.6**
LVV *e* 10 54 59.3
LVV MLR MLR
comp=N,400nm,24.0s
LVV MLR MLR
comp=E,500nm,24.0s
LVV MLR MLR
comp=Z,100nm,22.0s
STNC Stoke 145.52 7 *e*P **PKPab** **10 51 38.6 +0.6**
LLW Llanuwchllyn 145.57 9 *e*P **PKPab** **10 51 38.6 +0.4**
KIS Kishinev 145.61 330 || /PKP **PKPab** **10 51 39.0 +0.5**
comp=Z,800nm,1.4s
KIS *e*pPKP sPKPab 10 53 00.0 +21
KIS Kishinev 145.61 330 *e*PP PP 10 55 02.0 +2.5
KIS Kishinev 145.61 330 || /PKP2 **PKPab** **10 51 39.0 +0.5**
KIS *e* 10 55 02.0
KIS pmax pmax
comp=Z,800nm,1.4s
KIS pmax pmax
comp=Z,1μm,8.0s
MILM Milestii Mici 145.67 330 ⇑P **PKPab** **10 51 39.4 +0.6**
RUE Ruedersdorf 145.73 350 *e*P **PKPab** **10 51 39.1 +0.3**
RUE Ruedersdorf 145.73 350 *e*PKPbc **PKPab** **10 51 39.2 +0.3**
baz=10,slow=2.8
CWF Charnwood Fore 145.97 6 *e*P **PKPab** **10 51 39.4 -0.3**
BZK Bozkurt 145.98 319 ⇑P **PKPab** **10 51 41.1 +1.0**
BZK Bozkurt 145.98 319 *e*P **PKiKP** **10 51 42.0 -0.5**
HLM1 Long Mynd 146.00 8 *e*P **PKPbc** **10 51 39.2 +0.2**
RETH Rethem/Aller, 146.04 355 *e*PKPbc **PKPab** **10 51 40.4 +0.4**
baz=10,slow=2.8
LODK Lodwar 146.06 247 P **PKPab** **10 51 42.0 +0.6**
SNR=28
GAZ Gaziantep 146.07 309 *e*P **PKiKP** **10 51 42.6 -0.3**
SARI SarD1z-Kayseri 146.12 312 *e*P **PKiKP** **10 51 42.8 -0.4**
WACR West Acre 146.15 4 *e*P **PKPdf** **10 51 38.8 +0.6**
KMRS Kahramanmaras 146.16 310 *e*P **PKiKP** **10 51 42.6 -0.5**
NRDL Niedersach Rie 146.22 354 *e*PKPbc **PKPab** **10 51 40.6 0.0**
baz=10,slow=2.8
LEOM Leova 146.26 330 ||P **PKPab** **10 51 41.6 +0.6**
LEOM Leova 146.26 330 ||P **PKPab** **10 51 41.5 +0.5**
LEOM Leova 146.26 330 ||PKP2 **PKPab** **10 51 41.6 +0.6**
YOZ Yozgat 146.32 314 *e*P **PKPab** **10 51 41.3 -0.4**
BNK Bunyan 146.33 310 *e*P **PKPab** **10 51 42.4 +0.6**
VASR Vaslui 146.35 330 ||P **PKPab** **10 51 41.7 +0.2**
OJC Ojcow 146.46 342 *e*PKP **PKPab** **10 51 41.8 +0.0**
OJC *e*PP **PP** **10 55 01.8 -2.4**
OJC LMZ LR 11 52 19.1
comp=Z,0.3nm,23.1s
MCH1 Michaelchurch 146.49 8 *e*P **PKPbc** **10 51 40.6 +0.1**
ASSE Asse, Remlinge 146.51 353 *e*PKPbc **PKPab** **10 51 41.8 0.0**
baz=10,slow=2.8
CORM Corum 146.52 316 *e*P **PKiKP** **10 51 44.2 +0.4**
IBBN Ibbenburen 146.59 356 *e*PKPbc **PKPab** **10 51 42.6 +0.5**
baz=10,slow=2.8
BURAR Bucovina Array 146.74 334 ⇑P **PKPab** **10 51 43.3 +0.2**
BURAR Bucovina Array 146.74 334 ⇑PKP2 **PKPab** **10 51 43.3 +0.2**
KOLS Kolonicke sedl 146.79 338 *e*PKP2 **PKiKP** **10 51 43.7 -0.3**
KOLS Kolonicke sedl 146.79 338 *e*PKP **PKiKP** **10 51 43.7 -0.3**
KOLS *e* 10 51 46.1
KSP Ksiaz 146.80 346 *e*PKP **PKPbc** **10 51 42.1 +0.7**
KSP *e*PP **PP** **10 55 02.2 -3.8**
KSP LMZ LR 11 54 16.0
comp=Z,0.3nm,23.1s
KURC Kurucasile-Bar 146.82 320 *e*P **PKiKP** **10 51 43.9 -0.3**
CLZ Clausthal 146.83 353 *e*PKPbc **PKPab** **10 51 42.9 -0.2**
baz=10,slow=2.8
BIZ Bicaz 146.89 332 ||P **PKPab** **10 51 43.5 0.0**
TLCR 146.90 328 ⇑P **PKPab** **10 51 43.3 -0.2**
TLCR 146.90 328 ⇑PKP2 **PKPab** **10 51 43.3 -0.2**
KOZT Kozan 146.95 311 *e*P **PKPab** **10 51 43.6 -0.5**
CANT Cankiri 146.96 317 *e*P **PKPab** **10 51 44.2 +0.1**
GHRR 146.96 330 ||P **PKiKP** **10 51 44.4 +0.1**
TESR Tescani 146.97 331 ⇑P **PKPab** **10 51 43.5 -0.4**
CLL Collm 146.99 350 *i* PKPbc **PKPab** **10 51 44.0 +0.3**
comp=Z,167nm,0.9s
CLL *i* PKPab **PKiKP** **10 51 46.4 +2.1**
comp=Z,113nm,1.2s
CLL *e* 10 51 52.0
CLL *i* sPKPdf sPKPab 10 52 45.6 +1.3
comp=Z,189nm,1.2s
CLL *e* 10 53 05.0
CLL *e*SKPbc **SKPbc** **10 55 03.0 -1.1**
comp=Z,55nm,1.3s
CLL *e*PP **PP** **10 55 10.0 +2.9**
CLL *e*PKSdf **PKSdf** **10 55 16.0 +1.3**
CLL *e* 10 55 47.0
CLL *es*PP 10 56 21.0
CLL *es*PPP 10 59 30.0
CLL *e* 11 01 12.0
CLL *e*SKKSac **SKKSac** **11 01 42.0 -0.4**
CLL *e*SKSP 11 05 12.0
CLL *es*SKSP 11 06 36.0
CLL *e*PPS PPS 11 07 48.0
CLL *e*SS **SS** **11 13 48.0 -4.7**
CLL *es*SS 11 15 12.0
CLL *e* 11 16 24.0
CLL *e*SSS SSS 11 19 30.0
CLL *e* 11 20 12.0
CLL *es*SSS 11 21 06.0
CLL *e*SSSS 11 23 24.0
CLL Collm 146.99 350 *e*PKPbc **PKPab** **10 51 43.7 0.0**
baz=10,slow=2.8
CLL Collm 146.99 350 *i* PKP2 **PKPab** **10 51 44.0 +0.3**
CLL pmax pmax
comp=Z,167nm,0.9s
CLL pmax pmax
comp=Z,113nm,1.2s
NIE Niedzica 147.02 341 *e*PKP **PKPab** **10 51 43.5 -0.5**
NIE *e*PP **PP** **10 55 04.0 -3.5**
NIE LMZ LR 11 53 04.6
comp=Z,0.2nm,25.6s
UZH Uzhgorod 147.04 338 *e*PKP2 **PKPbc** **10 51 42.3 +0.2**
UZH *i* 10 55 16.0
OSTC Ostas 147.08 346 *e*PKP **PKPbc** **10 51 41.8 -0.4**
OSTC *ex* x 10 51 44.2
OSTC *ex* x 10 51 51.7
CHVC Chvalec 147.09 346 *e*PKP **PKPab** **10 51 43.9 -0.3**
TAHT Tahtakopru-Hat 147.14 308 *e*P **PKiKP** **10 51 45.5 +0.4**
UPC Upice 147.17 346 *e*PKP2 **PKPab** **10 51 43.7 -0.8**
UPC *es*SS SS 11 13 48.7 -6.2
UPC Upice 147.17 346 *e*PKP **PKPab** **10 51 43.7 -0.8**
UPC *ex* x 10 51 46.8
UPC *es*SS SS 11 13 48.7 -6.2
CFR Carcaliu 147.25 328 ⇑P **PKPab** **10 51 44.4 -0.5**
CFR Carcaliu 147.25 328 ⇑PKP2 **PKPab** **10 51 44.4 -0.5**
BRG Berggiesshubel 147.25 349 *i* PKP **PKPbc** **10 51 41.9 -0.7**
comp=Z,9.2nm,0.9s
BRG Berggiesshubel 147.25 349 *i* PKP **PKPab** **10 51 43.9 -0.9**
comp=Z,75nm,0.8s
BRG *i* sPKP **sPKPdf** **10 52 43.0 +1.2**
comp=Z,126nm,1.3s
BRG *i* SKP **SKPbc** **10 55 03.9 -0.7**
comp=Z,28nm,1.2s
BRG PP **PP** **10 55 08.0 -0.6**
BRG SS **SS** **11 13 46.0 -10**
BRG Berggiesshubel 147.25 349 *e*PKPbc **PKPbc** **10 51 43.4 +0.8**
baz=10,slow=2.8
BRG Berggiesshubel 147.25 349 *i* PKiKP **PKPbc** **10 51 41.9 -0.7**
BRG *i* 10 51 43.9
BRG 10 55 08.0
BRG pmax pmax

comp=Z,9.0nm,0.9s
BRG pmax pmax
comp=Z,75nm,0.8s
DPC Dobruska-Polom 147.25 346 *e*PKP2 **PKPbc 10 51 42.3 -0.4**
DPC *e*SS SS 11 13 50.7 -5.1
DPC Dobruska-Polom 147.25 346 *e*PKP **PKPbc 10 51 42.3 -0.4**
DPC *ex* x 10 51 44.6
DPC *e*SS SS 11 13 50.7 -5.1
OKC Ostrava-Krasne 147.27 343 *e*PKP2 **PKiKP 10 51 44.1 -0.8**
OKC Ostrava-Krasne 147.27 343 *e*PKP **PKiKP 10 51 44.1 -0.8**
NEUB Neuenburg 147.28 351 *e*PKPbc **PKPbc 10 51 43.6 +0.9**
baz=10,slow=2.8
FBE Freiberg 147.31 350 *e*PKPbc **PKiKP 10 51 44.4 -0.5**
baz=10,slow=2.8
TOPG Topolog 147.34 328 ⇑P **PKiKP 10 51 45.1 -0.1**
YURE YÜREGİR 147.36 310 *e*P **PKiKP 10 51 44.7 -0.9**
TRPA Tarpa 147.37 337 ⇑P **PKiKP 10 51 44.7 -0.4**
BMR Baia Mare 147.39 336 ⇑P **PKiKP 10 51 44.9 -0.3**
BMR Baia Mare 147.39 336 ⇑PKP2 **PKiKP 10 51 44.9 -0.3**
KRLC Kraliky 147.40 345 *e*PKP2 **PKiKP 10 51 44.8 -0.4**
KRLC Kraliky 147.40 345 *e*PKP **PKiKP 10 51 44.8 -0.4**
KRLC *ex* x 10 51 47.8
BR131 Keskin Array S 147.40 316 P **PKPbc 10 51 44.7 +1.0**
SNR=63
BR131 Keskin Array S 147.40 316 PKIKP **PKPdf 10 51 40.2 -0.8**
BR131 Keskin Array S 147.40 316 **PKPdf 10 51 40.1 -0.8**
BRTR Keskin Array B 147.40 316 PKPbc **PKPbc 10 51 44.5 +0.9**
comp=Z,84nm,1.0s,baz=139,slow=2.6,SNR=66
BRTR PP **PP 10 55 04.6 -6.2**
comp=Z,7.8nm,1.1s,baz=87,slow=3.0,SNR=2.5
BRTR Keskin Array B 147.40 316 *e*P **PKPdf 10 51 42.1 +1.2**
VRI Vrincioaia 147.42 330 ⇓P **PKiKP 10 51 44.7 -0.7**
VRI Vrincioaia 147.42 330 *e*P **PKPbc 10 51 44.2 +0.9**
VRI Vrincioaia 147.42 330 ⇓PKP2 **PKiKP 10 51 44.7 -0.7**
PVCC Panska Ves 147.46 348 *e*PKP2 **PKiKP 10 51 45.0 -0.3**
PVCC Panska Ves 147.46 348 *e*PKP **PKiKP 10 51 45.0 -0.3**
PVCC *ex* x 10 51 51.9
PVCC *ex* x 10 52 05.9
MORC Moravsky Berou 147.48 344 *e*PKP **PKiKP 10 51 45.0 -0.4**
MORC Moravsky Berou 147.48 344 ⇓P **PKPbc 10 51 42.4 -1.0**
MORC Moravsky Berou 147.48 344 PKP2 **PKPbc 10 51 43.0 -0.4**
MORC Moravsky Berou 147.48 344 PKPbc **PKPbc 10 51 43.0 -0.4**
BUG Bochum--Univer 147.49 357 *e*PKPbc **PKPbc 10 51 44.1 +0.8**
baz=10,slow=2.8
ASCN Ascension 147.51 144 **PKPbc 10 51 44.0 -0.4**
LANS Liptovska Anna 147.51 342 *e*PKP2 **PKPab 10 51 45.9 0.0**
LANS Liptovska Anna 147.51 342 *e*PKP **PKPab 10 51 45.9 0.0**
ARCR ARCALIA 147.52 334 ⇑P **PKiKP 10 51 45.7 +0.1**
TIRR Tirgusor 147.61 327 ⇑P **PKiKP 10 51 45.4 -0.4**
TIRR Tirgusor 147.61 327 ⇑PKP2 **PKiKP 10 51 45.4 -0.4**
TIRR Tirgusor 147.61 327 PKPbc **PKPbc 10 51 44.2 +0.4**
MBAR Mbarara 147.68 236 PKPbc **PKiKP 10 51 46.5 -0.6**
comp=Z,73nm,0.8s,baz=105,slow=5.4,SNR=15
MBAR Mbarara 147.68 236 **PKPbc 10 51 45.2 0.0**
OZUR 147.68 332 ⇓P **PKiKP 10 51 45.7 -0.2**
YAYX Yaylak 147.68 314 *e*P **PKiKP 10 51 46.3 0.0**
HARR Harsova 147.69 328 ⇑P **PKPbc 10 51 44.9 +0.9**
HARR Harsova 147.69 328 ⇑PKP2 **PKPbc 10 51 44.9 +0.9**
KECS Kecovo 147.78 340 *e*PKP2 **PKiKP 10 51 46.5 +0.5**
KECS Kecovo 147.78 340 *e*PKP **PKiKP 10 51 46.5 +0.5**
MOX Moxa 147.85 351 *e*PKPbc **PKPbc 10 51 45.0 +0.7**
baz=10,slow=2.8
MOX *e*L L 11 55 01.6
comp=Z,189nm,21.8s
SERE Serefikochisa 147.85 314 *e*P **PKiKP 10 51 46.4 -0.2**
UBBA Unterbreizbach 147.88 353 *e*PKPbc **PKiKP 10 51 45.7 -0.3**
baz=10,slow=2.8
ANTO Ankara 147.88 317 ⇑P **PKiKP 10 51 46.5 -0.1**
ANTO Ankara 147.88 317 *e*P **PKiKP 10 51 46.6 -0.1**
ANTO Ankara 147.88 317 ⇑PKP2 **PKiKP 10 51 46.5 -0.1**
ANTO Ankara 147.88 317 **PKPbc 10 51 45.4 +0.6**
LOD Lodumlu 147.89 317 *e*P **PKPab 10 51 47.7 -0.1**
BR231 Keskin MP Arra 147.91 317 **PKPbc 10 51 44.8 -0.1**
AFSR Afar-Bala (An 147.92 316 *e*P **PKiKP 10 51 46.4 -0.3**
PLN Plauen 147.92 351 *e*PKPbc **PKiKP 10 51 45.9 -0.4**
baz=10,slow=2.8
TANN Tannenbergstha 147.94 350 *e*PKPbc **PKiKP 10 51 45.8 -0.5**
baz=10,slow=2.8
DOPR Dopca 147.96 332 ⇑P **PKiKP 10 51 46.9 +0.4**
MANR Mangalia 147.96 326 ⇑P **PKiKP 10 51 46.4 -0.1**
PRU Pruhonice 147.98 348 *e*PKIKP **PKPdf 10 51 42.9 +1.6**
PRU *e* **PKiKP 10 51 46.1 -0.2**
PRU Pruhonice 147.98 348 *e*PKP **PKPdf 10 51 42.9 +1.6**
PRU *ex* x 10 51 46.1
PRU *e*SS SS 11 13 56.8 -7.0
ASF Jabal al Asfar 148.01 301 PKPbc **PKiKP 10 51 46.6 -0.5**
comp=Z,100nm,1.1s,baz=58,slow=1.8,SNR=33
GUNZ Gunzen 148.01 350 *e*PKPbc **PKiKP 10 51 46.1 -0.4**
baz=10,slow=2.8
ISR Istrita 148.06 330 ⇓P **PKiKP 10 51 46.7 -0.1**
ISR Istrita 148.06 330 ⇓PKP2 **PKiKP 10 51 46.7 -0.1**
MLR Muntele Rosu 148.07 331 PKPbc **PKiKP 10 51 46.9 0.0**
comp=Z,50nm,1.0s,baz=47,slow=2.7,SNR=34
MLR Muntele Rosu 148.07 331 ⇑P **PKiKP 10 51 46.4 -0.5**
MLR Muntele Rosu 148.07 331 **PKPbc 10 51 43.8 -1.4**
WERN Wernitzgruen 148.08 350 *e*PKPbc **PKiKP 10 51 46.6 0.0**
baz=10,slow=2.8
NKC Novy Kostel 148.12 350 *e*PKIKP **PKPbc 10 51 43.8 -1.2**
NKC *e* **PKiKP 10 51 46.7 0.0**
NKC Novy Kostel 148.12 350 *e*PKP **PKPbc 10 51 43.8 -1.2**
NKC *ex* x 10 51 46.7
CJR Cluj-Napoca 148.13 335 ⇑P **PKiKP 10 51 47.1 +0.3**
CJR Cluj-Napoca 148.13 335 ⇑PKP2 **PKiKP 10 51 47.1 +0.3**
MERS Mersin 148.15 310 *e*P **PKiKP 10 51 47.7 +0.5**
VRAC Vranov 148.15 345 PKPbc **PKiKP 10 51 47.0 +0.2**
comp=Z,16nm,0.8s,baz=46,slow=0.9,SNR=23
VRAC Vranov 148.15 345 *e*PKP **PKiKP 10 51 46.8 0.0**
VRAC Vranov 148.15 345 ⇓P **PKiKP 10 51 47.4 +0.6**
VRAC Vranov 148.15 345 ⇓PKP2 **PKiKP 10 51 47.4 +0.6**
KULU Kulu 148.18 315 *e*P **PKiKP 10 51 47.3 0.0**
VYHS Vyhne 148.28 342 *e*PKP2 **PKiKP 10 51 46.9 -0.2**
VYHS Vyhne 148.28 342 *e*PKP **PKiKP 10 51 46.9 -0.2**
VYHS *e* 10 51 51.6
JAVC Velka Javorina 148.29 343 *e*PKP **PKiKP 10 51 47.1 0.0**
YUVA Yuva-Kibriscik 148.31 318 *e*P **PKiKP 10 51 47.1 -0.4**
SECR 148.35 330 ⇑P **PKiKP 10 51 48.0 +0.7**
PBCC Pribram 148.37 348 *e*PKP **PKPbc 10 51 43.9 -1.8**
PBCC *ex* x 10 51 47.1
PBCC *ex* x 10 51 51.3
AHRW Bad Neuenahr-A 148.39 357 *e*PKPbc **PKiKP 10 51 47.7 +0.6**
baz=10,slow=2.8
MANZ Manzenberg 148.41 351 *e*PKPbc **PKPbc 10 51 46.4 +0.6**
baz=10,slow=2.8
TREC Trest 148.43 346 *e*PKIKP **PKPdf 10 51 44.0 +1.8**
TREC *e* 10 51 47.2
TREC Trest 148.43 346 *e*PKP **PKPdf 10 51 44.0 +1.8**
TREC *ex* x 10 51 47.2
TREC *ex* x 10 51 51.6
KRUC Moravsky 148.43 345 *e*PKP **PKPbc 10 51 45.8 0.0**
RCY Rachaya 148.46 304 *e*P **PKiKP 10 51 47.9 -0.2**
BHL Bhannes 148.46 304 *e*P **PKiKP 10 51 47.7 -0.3**
PSZ Piszkesteto 148.47 340 ⇑P **PKiKP 10 51 47.9 +0.4**
PSZ Piszkesteto 148.47 340 PKIKP **PKPbc 10 51 44.6 -1.5**
PSZ Piszkesteto 148.47 340 **PKPbc 10 51 44.6 -1.5**
VOIR 148.52 332 ⇑P **PKPab 10 51 49.2 -1.0**
VOIR 148.52 332 ⇑PKP2 **PKPab 10 51 49.2 -1.0**
SHBL Chebaa 148.58 303 *e*P **PKPbc 10 51 46.5 -0.4**
DQRL Deir Qamar 148.59 304 *e*P **PKiKP 10 51 48.5 +0.3**
KIZK Mersin 148.59 310 *e*P **PKiKP 10 51 47.5 -0.5**
ROTZ Rotzenmuhle 148.61 350 *e*PKPbc **PKiKP 10 51 47.3 -0.4**
baz=10,slow=2.8
TNS Taunus Mts 148.62 355 *e*PKPbc **PKiKP 10 51 47.5 -0.3**
baz=10,slow=2.8
SMOL Smolenice 148.67 343 *e*PKP2 **PKiKP 10 51 49.0 +1.2**
SMOL Smolenice 148.67 343 *e*PKP **PKiKP 10 51 49.0 +1.2**
SMOL *e* 10 51 53.5
ARR Arges 148.76 332 ⇓P **PKPdf 10 51 44.7 +1.9**
SILI Silifke-Mersin 148.80 310 *e*P **PKiKP 10 51 48.4 -0.1**
GRA1 Grafenberg Arr 148.83 351 **PKPbc 10 51 47.0 +0.1**
GRF Grafenberg Arr 148.83 351 *e*PKPbc **PKiKP 10 51 49.1 +0.9**
baz=10,slow=2.8
GRF *e*L L 11 55 17.1
comp=Z,206nm,21.9s
GRF Grafenberg Arr 148.83 351 PKP2 **PKPbc 10 51 47.0 +0.1**
MODS Modra-Piesok 148.84 343 *e*PKP2 **PKiKP 10 51 48.1 -0.1**
MODS Modra-Piesok 148.84 343 *e*PKP **PKiKP 10 51 48.1 -0.1**
KEBE Keben-Mersin 148.92 310 *e*P **PKPab 10 51 55.0 +2.9**
AUSIV SIVRIHISAR 148.93 317 *e*P **PKiKP 10 51 49.4 +0.6**
SAUV Serdivan-Sakar 148.94 320 *e*P **PKiKP 10 51 48.6 0.0**
EREN Erenkoy 148.97 308 *e*P **PKiKP 10 51 50.4 +1.5**
KHC Kasperske Hory 148.99 348 *de*PKHKP **PKPdf 10 51 43.8 +0.7**
KHC Kasperske Hory 148.99 348 *e*PKP **PKPdf 10 51 44.1 +1.0**
KHC *ex* x 10 51 48.2
KHC *ex* x 10 51 54.1
KHC *e*SS SS 11 14 00.2 -15
SPNC Sapanca-Adapaz 148.99 320 *e*P **PKiKP 10 51 50.2 +1.5**
KIZT Kizilcal 149.01 316 *e*P **PKiKP 10 51 49.7 +0.7**
GULT Gulveren 149.01 319 *e*P **PKiKP 10 51 49.8 +0.9**
IKL Isikli 149.03 310 *e*P **PKiKP 10 51 49.8 +0.8**
LADK Ladik-KONYA 149.03 314 *e*P **PKiKP 10 51 49.5 +0.4**
ZST Bratislava 149.05 343 *e*PKP2 **PKiKP 10 51 49.5 +0.9**
ZST Bratislava 149.05 343 *e*PKP **PKiKP 10 51 49.5 +0.9**
ZST *e* 10 51 54.0
WET Wettzell 149.10 349 *e*PKPbc **PKiKP 10 51 50.2 +1.4**
baz=10,slow=2.8
SILT Sile 149.10 321 *e*P **PKiKP 10 51 50.1 +1.2**
TEVE Tevekalti-Mers 149.12 310 *e*P **PKPab 10 51 51.3 -1.6**
MMLI Mount Malkishu 149.12 302 *e*P **PKiKP 10 51 50.2 +0.9**
AKKU Akkuyu-Mersin 149.16 310 *e*P **PKPab 10 51 54.8 +1.8**
KONT Konya--Tatoy 149.17 314 *e*P **PKPbc 10 51 48.6 +0.5**
SRCK Saricakaya, Es 149.17 319 *e*P **PKiKP 10 51 50.0 +0.9**
RAZG Razgrad 149.21 328 ⇑P **PKiKP 10 51 48.8 -0.3**
GEC2 GERESS Array S 149.23 348 *e*PKPbc **PKiKP 10 51 49.2 0.0**
baz=10,slow=2.8
GEC2 GERESS Array S 149.23 348 **PKPdf 10 51 42.7 -0.8**
GERES GERESS Array B 149.23 348 PKP **PKPdf 10 51 44.2 +0.7**
comp=Z,38nm,0.3s,baz=38,slow=2.4,SNR=29
GERES PKPbc **PKiKP 10 51 48.8 -0.3**
comp=Z,25nm,0.7s,baz=25,slow=2.6,SNR=79
SIRR Siria 149.26 336 ⇑P **PKPbc 10 51 47.6 -0.4**
CIFT Cifteler, Eski 149.28 317 *e*P **PKiKP 10 51 49.3 -0.2**
WLF Walferdange 149.31 358 *e*PKPbc **PKiKP 10 51 49.5 +0.3**
baz=10,slow=2.8
WLF Walferdange 149.31 358 PKP2 **PKPbc 10 51 48.2 +0.2**
WLF Walferdange 149.31 358 **PKPbc 10 51 48.2 +0.2**
BERE Bereket-Mersin 149.32 310 *e*P **PKiKP 10 51 49.7 -0.1**
BORA Eskisehir 149.37 318 *e*P **PKiKP 10 51 49.7 0.0**
ADVT Abdulvahap 149.49 320 *e*P **PKiKP 10 51 50.6 +0.8**
TEKE Tekeli-Mersin 149.49 310 *e*P **PKiKP 10 51 50.0 +0.1**
GZR Gura Zlata 149.53 334 ⇑P **PKPdf 10 51 44.8 +0.7**
GZR Gura Zlata 149.53 334 ⇑PKIKP **PKPdf 10 51 44.8 +0.7**
CONA Conrad Observa 149.62 345 *i* PKPdf **PKPdf 10 51 45.4 +1.2**
comp=Z,2.5nm,0.9s,SNR=27
CONA *i* PKiKP **PKiKP 10 51 50.9 +1.0**
comp=Z,40nm,0.8s
YLV Yalova 149.63 321 *e*P **PKPbc 10 51 49.5 +0.3**
SEYD Seydisehir-KON 149.79 313 *e*P **PKiKP 10 51 51.8 +1.1**
BZS Buzias 149.82 336 ⇓P **PKPdf 10 51 45.7 +1.3**
BZS Buzias 149.82 336 ⇓PKHKP **PKPdf 10 51 45.7 +1.3**
GEMT Gemlik 149.82 321 *e*P **PKiKP 10 51 50.8 +0.3**
CSS Mathiatis 149.84 308 *e*P **PKiKP 10 51 51.1 +0.4**
CSS Mathiatis 149.84 308 **PKPbc 10 51 49.0 -0.8**
ARMT Armutlu 149.93 321 *e*P **PKiKP 10 51 50.6 -0.1**
SRE Strehaia 149.94 333 ⇑P **PKiKP 10 51 51.6 +1.0**
SRE Strehaia 149.94 333 ⇑PKP2 **PKiKP 10 51 51.6 +1.0**
STU Stuttgart 149.99 354 *e*PKPbc **PKiKP 10 51 50.3 -0.2**
baz=10,slow=2.8
STU Stuttgart 149.99 354 PKHKP **PKPbc 10 51 47.7 -2.0**
STU Stuttgart 149.99 354 **PKPbc 10 51 47.7 -2.0**
GAZI Gazipasa 150.02 311 *e*P **PKPab 10 51 57.9 +1.3**
MDNY Mudanya-Bursa 150.04 321 *e*P **PKiKP 10 51 51.9 +1.0**
SHUT Suhut-Afyon 150.06 316 *e*P **PKiKP 10 51 51.9 +0.7**
MOA Molln 150.06 347 *i* PKiKP **PKiKP 10 51 51.4 +0.6**
comp=Z,23nm,0.8s,SNR=12
HERR Herculane 150.10 334 ⇑P **PKiKP 10 51 51.3 +0.4**
LEF Lefka 150.10 308 ⇑P **PKiKP 10 51 52.1 +1.0**
LEF Lefka 150.10 308 *e*P **PKiKP 10 51 51.2 0.0**
HRFI Mount Harif 150.12 298 *e*P **PKiKP 10 51 52.6 +1.2**
PLVB Pleven 150.28 329 ⇓P **PKiKP 10 51 52.0 +0.7**
EIL Elat 150.28 297 PKPbc **PKiKP 10 51 52.1 +0.3**
comp=Z,70nm,0.9s,baz=64,slow=2.8,SNR=38
EIL Elat 150.28 297 *e*P **PKiKP 10 51 52.4 +0.7**
FUR Furstenfeldbru 150.31 351 *e*PKPbc **PKiKP 10 51 52.2 +0.9**
baz=10,slow=2.8
ARSA Arzberg 150.33 345 *i* PKiKP **PKiKP 10 51 51.9 +0.5**
comp=Z,14nm,0.8s,SNR=7.1
MORH Mrgy, Hungar 150.37 340 *e*P **PKPdf 10 51 47.1 +1.8**
KZIT Kziot 150.42 300 *e*P **PKiKP 10 51 53.7 +1.7**
MDVR Moldovita 150.47 335 ⇓P **PKiKP 10 51 51.9 +0.2**
RJOB Jochberg 150.47 348 *e*PKPbc **PKiKP 10 51 52.8 +1.1**
baz=10,slow=2.8
BFO Black Forest 150.51 355 *e*PKPbc **PKiKP 10 51 51.9 +0.2**
baz=10,slow=2.8
BFO Black Forest 150.51 355 PKIKP **PKiKP 10 51 51.4 -0.3**
BFO Black Forest 150.51 355 **PKiKP 10 51 51.4 -0.3**
EDC Edincik 150.66 322 *e*P **PKiKP 10 51 53.2 +1.0**
SIMA Simav-Kutahya 150.76 319 *e*P **PKiKP 10 51 53.6 +1.0**
FRGS Fruska Gora 150.89 337 *e*P **PKiKP 10 51 52.8 +0.3**
UBR Ueberruh 150.96 352 *e*PKPbc **PKiKP 10 51 53.6 +0.9**
baz=10,slow=2.8
KRBG Karabiga-Canak 150.96 322 *e*P **PKiKP 10 51 53.5 +0.7**
SOKA Soboth 150.99 345 *i* PKPdf **PKPdf 10 51 47.0 +0.6**
comp=Z,4.7nm,0.9s
SOKA *i* PKiKP **PKiKP 10 51 53.1 +0.3**
comp=Z,40nm,0.8s,SNR=16
SOKA *i* PKPab **PKPab 10 52 02.4 +2.2**
comp=Z,109nm,1.2s
KBA Koelnbreinsper 150.99 347 *i* PKPdf **PKPdf 10 51 46.6 +0.2**
comp=Z,4.2nm,0.7s
KBA *i* PKiKP **PKiKP 10 51 53.1 +0.2**
comp=Z,43nm,0.8s,SNR=17
KBA *i* PKPab **PKPab 10 52 02.9 +2.5**
KORT Korkueli 151.02 314 *e*P **PKiKP 10 51 54.9 +1.7**
RETA Reutte 151.05 351 *i* PKPdf **PKPdf 10 51 48.2 +1.8**
comp=Z,3.0nm,0.5s
RETA *i* PKiKP **PKiKP 10 51 53.7 +0.8**
comp=Z,25nm,0.8s,SNR=9.2
RETA *i* PKPab **PKPab 10 52 02.1 +1.6**
comp=Z,56nm,0.9s
WATA Walderalm 151.07 350 *i* PKPdf **PKPdf 10 51 48.2 +1.6**
comp=Z,3.5nm,0.6s
WATA *i* PKiKP **PKiKP 10 51 53.7 +0.7**
comp=Z,40nm,0.8s,SNR=16
WATA *i* PKPab **PKPab 10 52 02.6 +1.9**
comp=Z,73nm,0.7s
BALB Balikesir 151.10 321 *e*P **PKiKP 10 51 53.4 +0.3**
WTTA Wattenberg 151.13 350 *i* PKPdf **PKPdf 10 51 47.8 +1.1**
comp=Z,5.5nm,0.7s
WTTA *i* PKiKP **PKiKP 10 51 53.7 +0.5**
comp=Z,107nm,0.7s,SNR=26
MOTA Moosalm 151.14 351 *i* PKPdf **PKPdf 10 51 47.4 +0.7**
comp=Z,9.5nm,1.0s
MOTA *i* PKiKP **PKiKP 10 51 53.9 +0.7**
comp=Z,58nm,0.9s,SNR=14
MOTA *i* PKPab **PKPab 10 52 02.9 +1.9**
comp=Z,93nm,0.9s
KDZ Kurdzhali 151.15 326 *e*P **PKiKP 10 51 53.7 +0.5**
PLD Plovdiv 151.19 328 *e*P **PKPab 10 52 03.3 +2.2**
ERIK Erikli-Kesan 151.23 324 *e*P **PKiKP 10 51 54.1 +0.8**
SQTA Sankt Quirin 151.25 350 *i* PKPdf **PKPdf 10 51 47.8 +1.1**
comp=Z,7.9nm,0.7s
SQTA *i* PKiKP **PKiKP 10 51 54.1 +0.7**
comp=Z,58nm,0.8s,SNR=13
OBKA Obir 151.26 345 *i* PKiKP **PKiKP 10 51 53.5 +0.2**
comp=Z,16nm,0.8s,SNR=8.7
OBKA *i* PKPab **PKPab 10 52 02.6 +1.1**
comp=Z,68nm,0.8s
LPK Lapseki 151.28 323 *e*P **PKiKP 10 51 53.7 +0.2**
KULA Kula-Manisa 151.30 318 *e*P **PKiKP 10 51 53.6 -0.1**
ALN Alexandroupoli 151.33 324 *e*P **PKPbc 10 51 52.8 -0.3**
ALN Alexandroupoli 151.33 324 *e*P **PKPbc 10 51 53.3 +0.2**
MYKA Terra Mystica 151.36 347 *i* PKPdf **PKPdf 10 51 47.6 +0.7**
comp=Z,4.3nm,0.5s
MYKA *i* PKiKP **PKiKP 10 51 53.9 +0.3**
comp=Z,40nm,0.7s,SNR=14
MYKA *i* PKPab **PKPab 10 52 02.7 +0.9**
comp=Z,51nm,0.7s
DAVA Damuels 151.37 352 *i* PKiKP **PKiKP 10 51 54.6 +0.9**
comp=Z,72nm,0.9s,SNR=21
DAVA *i* PKPab **PKPab 10 52 02.0 +0.1**
comp=Z,64nm,0.9s
GELI Tayfur-Gelibol 151.43 323 *e*P **PKiKP 10 51 54.8 +1.0**
RDO Rodhopi 151.44 325 *e*P **PKPbc 10 51 53.4 +0.1**
RDO Rodhopi 151.44 325 *e*P **PKiKP 10 51 54.6 +0.9**
ELL Elmali 151.46 314 *e*P **PKiKP 10 51 55.1 +1.0**
ABTA Abfaltersbach 151.47 348 *i* PKPdf **PKPdf 10 51 47.7 +0.6**
comp=Z,13nm,0.8s
ABTA *i* PKiKP **PKiKP 10 51 54.1 +0.3**
comp=Z,95nm,0.8s
TEKS Tekeris 151.51 337 *e*P **PKiKP 10 51 54.7 +0.8**
FETA Feichten 151.51 351 *e*PKPdf **PKPdf 10 51 48.0 +0.8**
comp=Z,15nm,0.8s,SNR=11
FETA *i* PKiKP **PKiKP 10 51 55.2 +1.3**
comp=Z,47nm,0.8s
FETA *i* PKPab **PKPab 10 52 03.2 +0.6**
comp=Z,86nm,0.9s
VTS Vitosha 151.52 330 P **PKiKP 10 51 54.4 +0.3**
VTS Vitosha 151.52 330 ⇑P **PKPbc 10 51 51.1 -2.6**
VTS Vitosha 151.52 330 ⇑PKIKP **PKPbc 10 51 51.1 -2.6**
CRES Cresnjev 151.67 344 *e*P **PKPbc 10 51 53.8 0.0**
LJU Ljubljana 151.70 345 *e*PKPdf **PKPdf 10 51 48.1 +0.7**
LJU *i* PKPbc **PKiKP 10 51 55.1 +0.9**
LJU *i* PKPab **PKPab 10 52 03.7 +0.6**
LJU *i* 10 52 41.4
LJU *e* 10 52 50.2
LJU *i* 10 55 03.5
LJU *e*PP **PP 10 55 41.1 +6.7**
LJU *e*SS SS 11 14 41.1 -4.2
LJU Ljubljana 151.70 345 *e*P **PKiKP 10 51 54.5 +0.3**
DIVS Divibare 151.72 336 *e*P **PKiKP 10 51 55.1 +0.7**
DAVOX Davos/Dischmat 151.87 352 PKP **PKPdf 10 51 49.3 +1.4**
comp=Z,9.3nm,0.8s,baz=350,slow=6.1,SNR=0.8
DAVOX PKPbc **PKiKP 10 51 55.9 +1.1**
comp=Z,63nm,0.8s,baz=304,slow=7.3,SNR=5.3
EZN Ezine 151.90 322 *e*P **PKiKP 10 51 55.7 +1.0**
AKAS Kas 151.93 313 *e*P **PKiKP 10 51 55.8 +0.7**
CEY Cerknica 152.01 345 *e*P **PKPbc 10 51 54.5 -0.1**
BOJS Bojanci 152.02 344 *i* PKPdf **PKPdf 10 51 48.2 +0.3**
BOJS *i* PKPbc **PKiKP 10 51 56.2 +1.3**
BOZC Bozcaada 152.04 323 *e*P **PKPab 10 52 06.3 +1.5**
FETY Fethiye 152.08 314 *e*P **PKPab 10 52 08.1 +3.0**
KAVA Kavala 152.09 326 P **PKPbc 10 51 54.9 +0.1**
HAPS Han Pijesak,BI 152.12 337 *e*P **PKiKP 10 51 55.6 +0.4**
BBLS Lazići 152.14 336 *e*P **PKiKP 10 51 55.3 +0.1**
BLY Banja Luka 152.14 340 ⇓P **PKiKP 10 51 55.5 +0.4**
BLY Banja Luka 152.14 340 *e*P **PKiKP 10 51 55.9 +0.8**
YER Yerkesik 152.34 316 *e*P **PKiKP 10 51 56.2 +0.3**
RUDO Rudo 152.37 336 *e*P **PKPbc 10 51 55.2 -0.2**
RIY Rijeka 152.39 345 *e*P **PKiKP 10 51 56.0 +0.4**
MGRS Mrkonjic Grad 152.47 340 *e*P **PKiKP 10 51 57.5 +1.6**
SRS Serrai 152.48 328 P **PKPbc 10 51 55.2 -0.5**
SIGR SIGRI 152.57 322 P **PKiKP 10 51 56.8 +0.6**
PLE Pljevlja 152.60 336 ⇑PKP **PKiKP 10 51 57.1 +0.8**
GCAM G?zelcaml? 152.69 318 *e*P **PKPab 10 52 09.1 +1.5**
IVA Berane 152.79 335 ⇓PKP **PKiKP 10 51 57.3 +0.7**
VAY Valandovo 152.83 329 *i* P **PKiKP 10 51 56.6 0.0**
VAY Valandovo 152.83 329 *i* P **PKiKP 10 51 56.6 0.0**
OUR Ouranopolis 152.84 326 P **PKiKP 10 51 56.8 +0.1**
OUR Ouranopolis 152.84 326 *e*P **PKPab 10 52 09.8 +1.7**
SKO Skopje 152.86 331 *i* P **PKiKP 10 51 57.4 +0.7**
SKO Skopje 152.86 331 *i* P **PKiKP 10 51 57.4 +0.7**
UPM Unac-Piva 152.90 336 *e*P **PKiKP 10 51 57.6 +0.6**
UPM Unac-Piva 152.90 336 ⇑PKP **PKPbc 10 51 56.8 0.0**
ARG Arkhangelos 152.95 314 *e*P **PKPab 10 52 10.4 +1.6**
KOME Kolasin 152.96 335 ⇑PKP **PKiKP 10 51 57.5 +0.5**
PVY Plav 152.99 334 ⇑PKP **PKPbc 10 51 56.8 -0.2**
BODT Bodrum 153.02 317 *e*P **PKPab 10 52 10.6 +1.5**
PLG Polygyros 153.10 327 P **PKPbc 10 51 57.1 -0.1**
HORT Hortiatis 153.11 327 *e*P **PKPbc 10 51 55.5 -1.7**
NKME Niksic 153.25 336 ⇓PKP **PKiKP 10 51 57.8 +0.3**
BRY Bratogost 153.29 337 *e*P **PKPbc 10 51 57.6 0.0**
BRY Bratogost 153.29 337 ⇑PKP **PKiKP 10 51 57.9 +0.2**
PDG Podgorica 153.41 335 *e*P **PKiKP 10 51 58.6 +0.8**
TTG Podgorica 153.41 335 ⇓PKP **PKiKP 10 51 58.7 +0.9**
CEME Cevo 153.45 336 ⇑PKP **PKiKP 10 51 58.6 +0.6**
TREB Trebinje 153.52 337 *e*P **PKiKP 10 51 58.6 +0.6**
STON Ston 153.63 338 *e*P **PKiKP 10 51 58.6 +0.4**
DRME Dracevica, Mon 153.65 335 *e*P **PKiKP 10 51 58.6 +0.3**
DRME Dracevica, Mon 153.65 335 ⇑PKP **PKiKP 10 51 59.0 +0.7**
BUM Brajici-Budva 153.67 335 ⇑PKP **PKiKP 10 51 59.3 +0.9**
HCY Herceg Novi 153.70 336 *e*P **PKiKP 10 51 59.1 +0.6**
HCY Herceg Novi 153.70 336 ⇑PKP **PKiKP 10 51 59.0 +0.6**
LIT Litokhoron 153.79 327 P **PKPdf 10 51 49.6 -1.0**
LIT Litokhoron 153.79 327 PKIKP **PKPdf 10 51 49.0 -1.6**
LIT 10 52 11.1
LIT Litokhoron 153.79 327 **PKPdf 10 51 49.0 -1.6**
LIT PKPab **PKPab 10 52 11.1 -1.1**
ULC Ulcinj 153.81 334 ⇑PKP **PKPbc 10 51 58.4 -0.2**
FNA Florina 153.82 330 P **PKPbc 10 51 58.4 -0.3**
FNA Florina 153.82 330 PKP2 **PKPab 10 52 12.3 -0.1**
FNA 11 51 49.8
FNA Florina 153.82 330 **PKPdf 10 51 49.8 -0.9**
FNA PKPbc **PKPbc 10 51 58.4 -0.3**
FNA PKPab **PKPab 10 52 12.3 -0.1**
OHR Ohrid 153.83 331 *i* P **PKPdf 10 51 53.5 +2.8**
OHR Ohrid 153.83 331 *i* P **PKPdf 10 51 53.5 +2.8**
KARP Karpathos 153.97 314 *e*P **PKPab 10 52 14.5 +1.1**
TIR Tirane 154.06 333 PKP2 **PKPab 10 52 11.6 -1.7**
TIR 11 51 48.5
TIR Tirane 154.06 333 PKPdf **PKPdf 10 51 48.5 -2.5**
TIR **PKPab 10 52 11.6 -1.7**
LKR Lokris 154.58 324 P **PKPbc 10 52 00.2 -0.1**
PGAV Gavieira, Arco 154.63 22 *e*PKPdf **PKPdf 10 51 53.1 +1.3**
PGAV Gavieira, Arco 154.63 22 *e*PKPab **PKPab 10 52 17.4 +1.6**
MURB Monte Urbino 154.80 346 PKPab **PKPab 10 52 17.4 +1.0**
OSSC Osservatorio P 154.82 348 PKPdf **PKPdf 10 51 49.9 -2.0**
OSSC **PKPbc 10 52 00.2 -0.5**
OSSC PKPab **PKPab 10 52 16.4 0.0**
PCAB Cabril 154.94 22 *e*PKPdf **PKiKP 10 52 01.8 +0.8**
NRCA Norcia 155.07 345 **PKPdf 10 51 51.6 -0.7**
NRCA PKPab **PKPab 10 52 19.1 +1.5**
ANX Ano Chora 155.21 326 P **PKPdf 10 52 04.7 +12**
KALE Kalithea 155.24 325 P **PKPdf 10 52 02.8 +10**
DID Didima 155.24 322 P **PKPdf 10 52 01.4 +8.7**
SERG Sergoula 155.26 325 P **PKPdf 10 52 02.1 +9.4**
SGRT San Giovanni R 155.29 339 PKPdf **PKPdf 10 51 53.5 +0.7**
SGRT **PKPab 10 52 18.4 -0.2**
PBRG Braganca 155.30 20 *e*PKPdf **PKPdf 10 51 54.7 +2.0**
PBRG Braganca 155.30 20 *e*PKPab **PKPab 10 52 19.9 +1.3**
PVRL Vila Real 155.43 22 *e*PKPab **PKPab 10 52 20.8 +1.6**
INTR Introdacqua 155.62 343 **PKPdf 10 51 52.7 -0.5**
INTR PKPab **PKPab 10 52 19.7 -0.3**
IDI Anoyia 155.64 316 PKPab **PKPab 10 52 20.9 +0.6**
comp=Z,44nm,0.9s,baz=170,slow=9.1,SNR=2.3
IDI Anoyia 155.64 316 **PKPab 10 52 21.3 +1.0**
MVO Moncorvo 155.77 21 *e*PKPdf **PKPdf 10 51 54.9 +1.5**
PVIS Viseu 155.85 23 *e*PKPdf **PKPdf 10 51 55.0 +1.5**
PVIS Viseu 155.85 23 *e*PKPab **PKPab 10 52 22.3 +1.3**
VAM Vamos 156.02 317 P **PKPab 10 52 24.1 +2.2**
AMT Artemida-Makis 156.09 324 P **PKPab 10 52 23.3 +1.2**
**IMMV Iera Moni Meta 156

LIC	**Lamto**	**164.37**	**143**	*eP*	**PKPab**	**10 52 58.1**	**-0.6**
	comp=Z,71nm,1.1s						
KIC	**Kosan Boka**	**164.64**	**143**	*e*PKIKP	**PKPdf**	**10 52 03.2**	**-0.7**
	comp=Z,31nm,1.1s						
KIC	**Kosan Boka**	**164.64**	**143**	*eP*	**PKPab**	**10 52 59.4**	**-0.5**
	comp=Z,200nm,1.2s						
TIC	**Toumodi**	**164.71**	**142**	*e*PKIKP	**PKPdf**	**10 52 03.2**	**-0.8**
TIC	**Toumodi**	**164.71**	**142**	*eP*	**PKPab**	**10 52 59.7**	**-0.5**
DBIC	**Dimbokro**	**164.83**	**142**	PKP	**PKPdf**	**10 52 03.9**	**-0.2**
	comp=Z,11nm,0.8s,baz=180,slow=3.4,SNR=7.8						
DBIC				PKPab	**PKPab**	**10 53 00.8**	**+0.1**
	comp=Z,48nm,1.0s,baz=178,slow=5.4,SNR=15						
DBIC	**Dimbokro**	**164.83**	**142**		**PKPdf**	**10 52 01.0**	**-3.0**
DBIC					**PKPab**	**10 52 58.8**	**-2.0**
TOA0	**Torodi Ar. Sit**	**173.68**	**155**		**PKPdf**	**10 52 08.8**	**-0.6**
TOA0					**PKPab**	**10 53 39.3**	**-0.4**
TORD	**Torodi Ar. Bea**	**173.68**	**155**	PKP	**PKPdf**	**10 52 08.8**	**-0.7**
	comp=Z,10nm,0.9s,baz=338,slow=0.9,SNR=27						
TORD				PKPab	**PKPab**	**10 53 40.3**	**+0.6**
	comp=Z,17nm,0.8s,baz=219,slow=3.4,SNR=16						
TORD				PP	**PP**	**10 57 31.3**	**+0.7**
	comp=Z,6.6nm,1.0s,baz=179,slow=5.4,SNR=4.7						

*ATH **09** 10:54:27.5,34°.16N×25°.60E,h24km±4km, ML3.4/5, Error ellipse: s-maj=6.0km s-min=1.7km az=23.0*
*HLW **09** 10:54:28.0,34°.26N×25°.77E,h16km±27km, Md3.8, Ml3.7*
*DDA **09** 10:54:58.6,35°.90N×27°.72E,h6km±3km, MW3.9*
ISC 09 10:54:28.8±1.0,34°.21N±0°.04×25°.75E±0°.05,h26km, n25, σ1§60/32, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAST	**Lasithi**	**0.98**	**347**	P	**Pn**	**10 54 46.7**	**-0.2**
LAST				S	**Sn**	**10 55 00.7**	**+0.7**
LAST				AML	AML	10 55 02.4	
	comp=E,7846μm,0.7s						
LAST				AML	AML	10 55 02.9	
	comp=N,2958μm,0.5s						
ZKR	**Zakros**	**0.98**	**23**	P	**Pb**	**10 54 47.9**	**+0.8**
ZKR				AML	AML	10 55 08.6	
	comp=E,2942μm,0.6s						
ZKR				AML	AML	10 55 10.7	
	comp=N,1055μm,0.7s						
NPS	**Neapolis**	**1.06**	**354**	P	**Pb**	**10 54 48.5**	**0.0**
NPS				AML	AML	10 55 10.7	
	comp=N,1706μm,0.9s						
NPS				AML	AML	10 55 11.7	
	comp=E,2691μm,0.9s						
SIVA	**Sivas**	**1.12**	**316**	P	**Pn**	**10 54 48.0**	**-0.8**
SIVA				AML	AML	10 55 07.5	
	comp=N,8092μm,0.6s						
SIVA				AML	AML	10 55 11.0	
	comp=E,7046μm,0.6s						
IDI	**Anoyia**	**1.29**	**327**	P	**Pn**	**10 54 51.4**	**+0.2**
GVD	**Gavdhos**	**1.51**	**295**	P	**Pn**	**10 54 53.9**	**-0.3**
GVD				AML	AML	10 55 23.9	
	comp=N,1818μm,0.5s						
GVD				AML	AML	10 55 25.2	
	comp=E,2433μm,0.6s						
VAM	**Vamos**	**1.75**	**314**	P	**Pn**	**10 54 57.8**	**+0.3**
IMMV	**Iera Moni Meta**	**1.92**	**311**	P	**Pn**	**10 54 60.0**	**+0.2**
SLUM	**Salum**	**2.75**	**190**	P	**Pn**	**10 55 12.2**	**+1.1**
	baz=190						
SLUM				AMP		10 55 00.0	
	baz=190						
SLUM				S	**Sn**	**10 55 42.6**	**-0.9**
	baz=190						
DAT	**Datca**	**2.92**	**30**	*i* P	**Pn**	**10 55 14.3**	**+0.7**
DALY	**Dalyan (Mula)**	**3.52**	**41**	*i* P	**Pn**	**10 55 23.9**	**+2.2**
DALY				IAML		10 55 57.0	
	comp=N,45nm,1.3s						
DALY				IAML		10 56 02.0	
	comp=E,29nm,1.5s						
FETY	**Fethiye**	**3.64**	**47**	*i* P	**Pn**	**10 55 24.7**	**+1.2**
FETY				IAML		10 55 54.0	
	comp=E,16nm,1.7s						
FETY				IAML		10 56 10.0	
	comp=N,14nm,1.7s						
AKAS	**Kas**	**3.74**	**56**	*i* P	**Pn**	**10 55 26.4**	**+1.4**
AKAS				IAML		10 56 10.0	
	comp=N,57nm,0.5s						
AKAS				IAML		10 56 15.0	
	comp=E,16nm,0.3s						
TAVA	**DENIZLI_Tavas**	**4.14**	**37**	*i* P	**Pn**	**10 55 31.6**	**+1.2**
TAVA				IAML		10 56 11.0	
	comp=E,12nm,0.9s						
TAVA				IAML		10 56 36.0	
	comp=N,14nm,1.6s						
AKUM	**Antalya-Kumluc**	**4.31**	**59**	*i* P	**Pn**	**10 55 34.6**	**+2.0**
AKUM				*i* S	**Sn**	**10 56 18.0**	**-4.0**
AKUM				IAML		10 56 21.0	
	comp=E,76nm,2.1s						
AKUM				IAML		10 56 28.0	
	comp=N,61nm,2.4s						
GOLH	**Golhisar**	**4.33**	**45**	*i* P	**Pn**	**10 55 34.2**	**+1.2**
GOLH				IAML		10 56 00.0	
	comp=E,69nm,1.0s						
GOLH				IAML		10 56 16.0	
	comp=N,39nm,2.4s						
GOLH				*i* S	**Sn**	**10 56 20.9**	**-1.8**
SWA2		**4.96**	**183**	P	**Pn**	**10 55 42.2**	**+0.6**
	baz=184						
SWA2				AMP		10 56 00.0	
	baz=184						
SWA2				S	**Sn**	**10 56 36.5**	**-1.5**
	baz=184						
HBRG	**Burj al `Arab**	**5.01**	**135**	P	**Pn**	**10 55 41.3**	**-1.0**
	baz=135						
HNAT	**Natroun**	**6.16**	**136**	P	**Pn**	**10 55 59.6**	**+1.5**
	baz=136						
HNAT				S	**Sn**	**10 57 05.2**	**-2.4**
	baz=136						
KOT	**Kottamia**	**6.69**	**128**	P	**Pn**	**10 56 06.1**	**+0.6**
	baz=128						
KOT				S	**Sn**	**10 57 17.8**	**-3.1**
	baz=128						
HSAF	**As Saff**	**6.73**	**131**	P	**Pn**	**10 56 07.0**	**+1.1**
	baz=131						
GLL	**Jalalah**	**6.85**	**131**	P	**Pn**	**10 56 08.2**	**+0.6**
	baz=131						
HFRF	**Wahat Farafira**	**7.37**	**162**	P	**Pn**	**10 56 15.9**	**+1.1**
	baz=162						
HDK1	**Dakhla**	**9.20**	**159**	P	**Pn**	**10 56 42.0**	**+2.1**
	baz=159						
HHRG	**Al Ghardaqah**	**9.68**	**134**	P	**Pn**	**10 56 49.0**	**+2.6**
	baz=134						

IDC 09 11:03:01.6±52.0,17°.38S×178°.85W,h0km, mb4.3/3, mb1 4.5/3, mb1mx3.7/32, mbtmp4.3/3, Error ellipse: s-maj=952.9km s-min=159.4km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.52**	**240**	P	P	11 10 26.4	+0.6
	1.1nm,0.5s,baz=90,slow=9.1,SNR=3.2						
WRA	**Warramunga Arr**	**44.32**	**259**	P	P	11 11 13.6	-0.1
	1.4nm,0.3s,baz=96,slow=7.6,SNR=109						
ASAR	**Alice Springs**	**44.53**	**254**	P	P	11 11 14.8	-0.6
	5.1nm,0.7s,baz=87,slow=8.4,SNR=34						

*IDC **09** 11:16:52.3±1.0,20°.39S×70°.89W,h0km, mb3.8/6, mb1 4.0/8, mb1mx3.8/28, mbtmp3.9/8, ML3.6/2, MS3.8/4, Ms1 3.8/4, ms1mx3.3/27, Error ellipse: s-maj=26.9km s-min=16.1km az=61.0*
*NEIC **09** 11:16:53.2, 20°.51S×71°.02W, h18km, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr=0.55; Mθθ=1.04; Mφφ=-1.59; Mrθ=0.92; Mθφ=0.77; Mφr=-0.46; Fault plane solution: Mo=1.90000×10^15^ NP1:φs=125.16000°, δ=78.27000°, λ=37.58000°. NP2:φs=26.27000°, δ=53.34000°, λ=165.32000°. Principal axes: T 1.7817, Plg34.0000°, Azm352.0000°; N 0.2189, Plg51.0000°, Azm140.0000°; P -2.0007, Plg16.0000°, Azm251.0000°;*
*NEIC **09** 11:16:53.3±1.5, 20°.52S±0°.03×71°.01W±0°.02, h15km±4km, mb4.5/11, Mwr4.1/39 Error ellipse: s-maj=5.2km s-min=2.1km az=198.0*
*GUC **09** 11:16:54.8±0.8, 20°.50S×70°.92W, h41km±2km, ML3.6*
*VAO **09** 11:17:01.5±2.5, 19°.79S×70°.89W, h27km±15km, mb4.1*
ISC 09 11:16:51.6±1.7,20°.48S±0°.04×71°.08W±0°.06,h0km±10km, n94, σ1§78/96, mb4.3/10, MS3.8/3, 8C-2D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TA01	**Diego Aracena**	**0.85**	**96**	⇓*iP*	**Pb**	**11 17 08.5**	**-0.6**
TA01				*i* S	**Sg**	**11 17 18.2**	**-0.6**
TA01				IAML		11 17 21.1	
	comp=N,4μm,0.3s						
TA01	**Diego Aracena**	**0.85**	**96**		**Pb**	**11 17 08.5**	**-0.6**
TA01				Sg	**Sg**	**11 17 18.2**	**-0.6**
TA02	**Huaiquique**	**0.91**	**77**	⇓*iP*	**Pb**	**11 17 10.3**	**+0.1**
TA02				*i* S	**Sg**	**11 17 21.1**	**+0.1**
PATCX	**Punta Patache**	**0.93**	**112**	⇑*iP*	**Pg**	**11 17 10.1**	**+0.6**
PATCX				*i* S	**Sg**	**11 17 20.9**	**-0.7**
PATCX				IAML		11 17 29.3	
	comp=E,5μm,0.5s						
PATCX	**Punta Patache**	**0.93**	**112**		**Pg**	**11 17 10.0**	**+0.6**
PATCX				Sg	**Sg**	**11 17 20.9**	**-0.7**
PSGC	**Pisagua**	**1.25**	**46**	⇑*iP*	**Pg**	**11 17 15.6**	**-0.1**
PSGC				*i* S	**Sb**	**11 17 32.6**	**-0.4**
PSGC				IAML		11 17 37.7	
	comp=E,5μm,0.7s						
PSGCX	**Pisagua**	**1.25**	**46**		**Pg**	**11 17 15.7**	**+0.1**
PSGCX				Sn	**Sb**	**11 17 32.8**	**-0.1**
PB02	**IPOC Station P**	**1.39**	**127**	*eP*	**Pn**	**11 17 17.2**	**-1.0**
PB02				*i* S	**Sg**	**11 17 33.8**	**-2.4**
PB02				IAML		11 17 41.6	
	comp=E,3μm,0.1s						
PB11	**IPOC Station P**	**1.52**	**62**	⇑*iP*	**Pn**	**11 17 19.4**	**-0.7**
PB11				*i* S	**Sn**	**11 17 37.9**	**-2.8**
PB11				IAML		11 17 40.2	
	comp=N,704nm,0.3s						
PB11	**IPOC Station P**	**1.52**	**62**		**Pn**	**11 17 19.3**	**-0.7**
PB11				Sn	**Sn**	**11 17 38.2**	**-2.4**
PB01	**IPOC Station P**	**1.59**	**111**	*eP*	**Pn**	**11 17 20.4**	**-0.7**
PB01				*i* S	**Sn**	**11 17 39.5**	**-2.8**
PB01				IAML		11 17 47.0	
	comp=N,3μm,0.5s						
PB01	**IPOC Station P**	**1.59**	**111**		**Pn**	**11 17 20.7**	**-0.4**
PB01				Sn	**Sn**	**11 17 39.6**	**-2.8**
PB07	**IPOC Station P**	**1.67**	**138**	⇑*iP*	**Pn**	**11 17 21.4**	**-0.8**
PB07				IAML		11 17 57.0	
	comp=E,1μm,0.5s						
PB07	**IPOC Station P**	**1.67**	**138**		**Pn**	**11 17 21.3**	**-0.9**
PB08	**IPOC Station P**	**1.84**	**80**	⇑*iP*	**Pn**	**11 17 24.3**	**-0.5**
PB08				*i* S	**Sn**	**11 17 47.7**	**-1.2**
PB08				IAML		11 17 57.9	
	comp=N,1μm,0.5s						
PB08	**IPOC Station P**	**1.84**	**80**		**Pn**	**11 17 24.3**	**-0.5**
PB08				Sn	**Sn**	**11 17 47.4**	**-1.5**
MNMC	**Minye Minye**	**1.94**	**46**	⇑*iP*	**Pn**	**11 17 26.1**	**+0.1**
MNMC	**Minye Minye**	**1.94**	**46**		**Pn**	**11 17 26.1**	**+0.1**
GO01	**Chusmiza**	**1.95**	**66**	⇑*iP*	**Pn**	**11 17 25.9**	**-0.4**
GO01				*i* S	**Sn**	**11 17 49.8**	**-1.9**
GO01	**Chusmiza**	**1.95**	**66**		**Pn**	**11 17 25.9**	**-0.4**
PB12	**IPOC Station P**	**1.98**	**21**		**Pn**	**11 17 26.5**	**0.0**
PB03	**IPOC Station P**	**1.99**	**142**	⇑*iP*	**Pn**	**11 17 25.9**	**-0.8**
PB03				IAML		11 18 16.2	
	comp=N,467nm,0.8s						
PB04	**IPOC Station P**	**2.04**	**155**		**Pn**	**11 17 26.3**	**-1.0**
PB09	**IPOC Station P**	**2.16**	**128**		**Pn**	**11 17 29.3**	**+0.4**
PB16	**IPOC Station P**	**2.60**	**35**		**Pn**	**11 17 36.1**	**+0.7**
PB06	**IPOC Station P**	**2.62**	**148**		**Pn**	**11 17 34.4**	**-0.9**
LVC	**Limon Verde**	**2.93**	**137**	Pn	**Pn**	**11 17 40.7**	**+1.0**
	comp=N,6.6nm,0.3s,baz=319,slow=9.4,SNR=39						
LVC				Sn	**Sn**	**11 18 14.9**	**-0.9**
	comp=N,13nm,0.3s,baz=108,slow=21,SNR=2.5						
LVC				Lg	Lg	11 18 22.7	
	comp=N,34nm,0.3s,baz=28,slow=17,SNR=3.8						
PB10	**IPOC Station P**	**3.06**	**171**		**Pn**	**11 17 40.1**	**-1.1**
PB15	**IPOC Station P**	**3.10**	**151**		**Pn**	**11 17 41.2**	**-0.8**
PB14	**IPOC Station P**	**4.17**	**172**		**Pn**	**11 17 55.5**	**-1.3**
GO02	**Mina Guanaco**	**4.86**	**164**		**Pn**	**11 18 06.0**	**-0.2**
LPAZ	**La Paz**	**5.02**	**34**	LR	LR	11 20 09.1	
	comp=N,278nm,19.7s,baz=238,slow=41						
LPAZ	**La Paz**	**5.02**	**34**		Pn	11 18 14.1	+5.4
AC02	**Maricunga**	**6.58**	**165**		**Pn**	**11 18 29.8**	**-0.2**
AC05	**El Transito**	**8.35**	**175**	Pn	**Pn**	**11 18 53.5**	**-0.6**
GO04	**Tololo Observa**	**9.66**	**179**	Pn	**Pn**	**11 19 10.8**	**-1.3**
CO03	**El Pedregal**	**10.32**	**178**	Pn	**Pn**	**11 19 20.2**	**-0.8**
SIV	**San Ignacio**	**10.50**	**66**	Pn	**Pn**	**11 19 23.5**	**0.0**
	comp=N,0.7nm,0.3s,baz=263,slow=12,SNR=21						
PTLB	**Pontes e Lacer**	**12.41**	**68**	*eP*	**Pn**	**11 19 51.3**	**+1.7**
VILB	**Vilhena**	**12.82**	**56**	*eP*	**Pn**	**11 19 55.4**	**+0.1**
SAML	**Samuel**	**13.77**	**35**	Pn	**Pn**	**11 20 06.2**	**-1.9**
SAML	**Samuel**	**13.77**	**35**	*eP*	**Pn**	**11 20 06.5**	**-1.6**
CPUP	**Villa Florida**	**13.90**	**117**	*eP*	**P**	**11 20 19.3**	**+1.0**
AQDB	**Aquidauana**	**14.41**	**93**	*eP*	**P**	**11 20 22.5**	**-1.6**
H03N1	**Juan Fernandez**	**14.67**	**207**	T	T	11 36 05.8	
	baz=34,slow=72,SNR=36						
H03N2	**Juan Fernandez**	**14.68**	**207**	T	T	11 35 42.8	
	baz=34,slow=72,SNR=20						
H03N3	**Juan Fernandez**	**14.69**	**207**	T	T	11 35 36.3	
	baz=34,slow=72,SNR=33						
SALV	**Santo Antonio**	**15.31**	**75**	*eP*	**P**	**11 20 31.6**	**-2.5**
ITQB	**Itaqui**	**15.96**	**128**	*eP*	P	11 20 48.5	+7.2
BI02	**San Fabin de**	**16.13**	**181**	Pn	**Pn**	**11 20 37.5**	**-2.2**
CLDB	**Colider**	**17.53**	**59**	*eP*	**Pn**	**11 20 55.2**	**-2.3**
PTGB	**Pitanga**	**18.05**	**107**	*eP*	P	11 21 11.7	+7.1
PCMB	**Pacaembu**	**18.53**	**97**	*eP*	**Pn**	**11 21 15.5**	**+5.6**
ITAB	**Concordia**	**18.58**	**115**	*eP*	Pn	11 21 18.2	+7.8
CPSB	**Cacapava Do Su**	**18.73**	**125**	*eP*	Pn	11 21 20.1	+8.0
ARAG	**Araguaiana, MT**	**18.92**	**79**	*eP*	**Pn**	**11 21 17.0**	**+2.4**
PLTB	**Pedras Altas**	**19.27**	**129**	*eP*	Pn	11 21 26.2	+7.5
ITRB	**Iturama**	**19.48**	**91**	*eP*	**Pn**	**11 21 25.6**	**+4.3**
MACA	**Manacapuru-AM**	**19.97**	**32**	*eP*	**P**	**11 21 24.8**	**-0.8**
FRTB	**Fartura**	**20.16**	**102**	*eP*	Pn	11 21 35.1	+5.6
PLCA	**Paso Flores**	**20.20**	**179**	P	Pn	11 21 29.9	+0.1
	comp=N,3.2nm,0.9s,baz=352,slow=12,SNR=6.2						
PLCA	**Paso Flores**	**20.20**	**179**	P	**P**	**11 21 27.4**	**-0.5**
NPGB	**Novo Progresso**	**20.26**	**51**	*eP*	**P**	**11 21 28.6**	**-0.1**
BB19B	**Bebedouro**	**21.09**	**96**	*eP*	**P**	**11 21 43.1**	**+5.3**
IPMB	**Ipameri, GO**	**21.73**	**87**	*eP*	**P**	**11 21 49.0**	**+4.3**
PTGA	**Pitinga**	**22.43**	**30**	P	**P**	**11 21 50.9**	**-1.3**
	comp=N,8.2nm,0.6s,baz=211,slow=17,SNR=16						
PTGA	**Pitinga**	**22.43**	**30**	P	**P**	**11 21 50.9**	**-1.3**
PTGA				IAmb	IAmb	11 21 54.1	
	comp=Z,8.1nm,0.7s						
PTGA	**Pitinga**	**22.43**	**30**	*eP*	**P**	**11 21 51.1**	**-1.1**
BDFB	**Brasilia**	**22.44**	**81**	P	**P**	**11 21 52.1**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=208,slow=17,SNR=1.4						
PARB	**Paraibuna**	**23.78**	**102**	*eP*	**P**	**11 22 11.0**	**+4.9**
MALB	**Monte Alegre**	**24.74**	**44**	*eP*	**P**	**11 22 15.6**	**+0.7**
BOAV	**Boa Vista**	**24.98**	**26**	*eP*	**P**	**11 22 17.6**	**+0.6**
ROSC	**El Rosal**	**25.36**	**352**	LR	LR	11 33 26.4	
	comp=Z,149nm,18.1s,baz=220,slow=39						
VAS01	**Vassouras-RJ**	**25.79**	**99**	*eP*	**P**	**11 22 30.2**	**+5.8**
JANB	**Januaria**	**26.04**	**82**	*eP*	**P**	**11 22 30.6**	**+3.9**
RUSC	**La Rusia**	**26.28**	**355**	P	**P**	**11 22 29.3**	**-0.1**
TXAR	**Lajitas Array**	**58.65**	**327**	P	**P**	**11 26 50.8**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=147,slow=7.5,SNR=2.3						
TXAR				LR	LR	11 49 08.4	
	comp=Z,81nm,21.9s,baz=0.0,slow=33						
TX31	**Lajitas Ar. Si**	**58.65**	**327**	P	**P**	**11 26 50.1**	**-0.8**
TX31				IAmb	IAmb	11 27 04.4	
	comp=Z,5.9nm,1.4s						
MIAR	**Mount Ida**	**58.76**	**338**	P	**P**	**11 26 52.3**	**+0.9**
U40A	**Yellville**	**60.16**	**340**	P	**P**	**11 27 01.5**	**+0.4**
U40A				IAmb	IAmb	11 27 16.5	
	comp=Z,3.2nm,1.1s						
WMOK	**Wichita Mounta**	**60.90**	**334**	P	**P**	**11 27 05.7**	**-0.5**
SNAA	**Sanae**	**63.90**	**161**	P	**P**	**11 27 26.1**	**+0.2**
SNAA				IAmb	IAmb	11 27 30.1	
	comp=Z,6.1nm,1.5s						
QSPA	**South Pole Qui**	**69.71**	**180**		**P**	**11 28 04.5**	**+1.4**
QSPA				IAmb	IAmb	11 28 14.0	
	comp=Z,4.6nm,1.2s						
TOA0	**Torodi Ar. Sit**	**78.94**	**71**	P	**P**	**11 28 56.6**	**-0.9**
TOA0				IAmb	IAmb	11 29 08.9	
	comp=Z,8.0nm,1.5s						
TORD	**Torodi Ar. Bea**	**78.94**	**71**	P	**P**	**11 28 55.6**	**-2.0**
	comp=Z,0.9nm,0.5s,baz=254,slow=5.2,SNR=6.7						
RAR	**Rarotonga**	**81.66**	**251**	LR	LR	11 54 54.6	
	comp=Z,171nm,18.7s,baz=211,slow=28						
YKA	**Yellowknife Ar**	**89.56**	**341**	P	**P**	**11 29 51.4**	**+1.0**
	comp=Z,0.2nm,0.7s,baz=312,slow=31,SNR=3.2						
ASAR	**Alice Springs**	**129.82**	**210**	PKP	**PKiKP**	**11 36 04.7**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=154,slow=2.8,SNR=2.9						
WRA	**Warramunga Arr**	**132.75**	**213**	PKP	**PKiKP**	**11 36 10.6**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=148,slow=1.6,SNR=4.6						
ZALV	**Zalesovo Beam**	**141.85**	**23**	PKP	**PKiKP**	**11 36 26.8**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=321,slow=3.7,SNR=2.5						
MKAR	**Makanchi Array**	**145.95**	**33**	PKPbc	**PKPab**	**11 36 33.8**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=323,slow=3.0,SNR=6.2						
KSH	**Kashi**	**146.00**	**49**	PKPbc	**PKPdf**	**11 36 32.3**	**-0.6**
WMQ	**Urumqi**	**150.76**	**32**	*eP*	**PKPdf**	**11 36 39.3**	**-1.2**
CD2	**Chengdu**	**168.62**	**23**	PKP	**PKPdf**	**11 36 58.8**	**-2.2**

KRSC 09 11:23:23.2±1.7,48°.53N×156°.41E,h16km±22km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.17**	**355**	*eP*	Pn	11 23 59.2	+0.5
SKR				*eS*	Sb	11 24 27.7	-1.0
ALID	**Alaid**	**2.41**	**347**	*eP*	Pn	11 24 02.1	-0.1
ALID				*eS*	Sn	11 24 32.8	+1.3
PAU	**Pauzhetka**	**2.96**	**5**	*eS*	Sb	11 24 48.7	-2.7
KDTR	**Khodutka, Kamc**	**3.46**	**17**	*eP*	Pn	11 24 20.1	+3.7
KDTR				*eS*	Sn	11 25 00.9	+3.9
ASAK	**Asacha**	**3.98**	**13**	*eP*	Pb	11 24 28.4	-4.6
MTVR	**Mutnovka**	**4.12**	**15**	*eP*	Pn	11 24 28.5	+2.8
MTVR				*eS*	Sn	11 25 18.0	+4.4
RUS	**Russkaya**	**4.13**	**18**	*eP*	Pn	11 24 29.3	+3.6
RUS				*eS*	Sb	11 25 19.8	-5.5
GRL	**Gorelyy**	**4.17**	**14**	*eP*	Pn	11 24 30.8	+4.5
UGLR	**Uglovaya**	**4.93**	**17**	*eP*	Pn	11 24 41.6	+4.8
AVH	**Avacha**	**4.97**	**16**	*eP*	Pn	11 24 42.2	+5.0
KOK	**Koryaka**	**4.97**	**16**	*eP*	Pn	11 24 42.9	+5.5
SMAR	**Somma**	**4.98**	**17**	*eP*	Pn	11 24 42.5	+5.0
SDLR	**Sedlovina**	**5.01**	**17**	*eP*	Pn	11 24 41.3	+3.5
KRX	**Arik**	**5.04**	**15**	*eP*	Pn	11 24 43.4	+5.1
SPN	**Mys Shipunski**	**5.12**	**25**	*eP*	Pn	11 24 43.2	+4.0
SPN				*eS*	Sn	11 25 42.6	+4.7
KBTR	**Krutoberegovo**	**8.63**	**25**	*eP*	Pn	11 25 32.7	+5.3

MAN 09 11:28:39.1,13°.22N×122°.39E,h18km, mb4.1, ML2.9, MS2.6, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOAC	**Boac**	**0.58**	**294**	*eP*	Pb	11 28 51.0	+0.2
BOAC				*eS*	Sn	11 29 02.3	+0.6
GQP	**Guinayangan**	**0.69**	**5**	⇑*eP*	Pb	11 28 51.7	-0.9
GQP				*eS*	Sb	11 28 59.7	-2.0
LQP	**Lukban**	**1.22**	**317**	⇓*iP*	Pn	11 29 01.4	-0.1
LQP				*i* S	Sb	11 29 17.0	-0.2
POLP	**Polilio Island**	**1.56**	**344**	*eP*	Pn	11 29 06.0	0.0
POLP				*eS*	Sn	11 29 26.4	+0.6
PVCP	**Virac**	**1.76**	**77**	*eP*	Pn	11 29 08.4	-0.2
PVCP				*eS*	Sn	11 29 24.7	-5.9
BALP	**Baler**	**2.63**	**343**	*eP*	Pn	11 29 22.3	+1.6

*BJI **09** 11:44:50.0±0.0, 34°.70S×71°.60W, h30km, mB5.3/1, Ms4.8/1, Ms7 4.7/1*
*GUC **09** 11:44:51.8±0.7, 34°.71S×71°.69W, h44km±3km, ML4.8*
*IDC **09** 11:44:51.8±0.7, 34°.74S×71°.58W, h50km±6km, mb4.2/11, mb1 4.3/15, mb1mx4.2/29, mbtmp4.4/15, MS3.6/5, Ms1 3.6/5, ms1mx3.3/17, Error ellipse: s-maj=21.0km s-min=12.9km az=92.0*
*NEIC **09** 11:44:51.7±1.5, 34°.74S±0°.03×71°.72W±0°.08, h50km±4km, Error ellipse: s-maj=9.5km s-min=4.1km az=101.0*
*SJA **09** 11:44:52.3±1.2, 34°.61S×71°.39W, h20km±56km, ML4.2, MW4.3*
*VAO **09** 11:44:54.1±1.9, 34°.72S×71°.57W, h81km±29km, mb4.7*
ISC 09 11:44:51.6±0.5,34°.76S±0°.03×71°.78W±0°.05, h50km±4km, h51km:pP-P, n169, σ1§41/170, mb4.7/37, 6C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO05	**Huala**	**0.28**	**205**	⇑*iP*	**Pn**	**11 45 00.6**	**0.0**
GO05				*i* S	**Sn**	**11 45 07.5**	**+0.4**
GO05	**Huala**	**0.28**	**205**		**Pn**	**11 45 00.7**	**+0.1**
GO05					**Sn**	**11 45 07.5**	**+0.4**
BO02	**Sierra Bellavi**	**0.83**	**93**	⇓*iP*	**Pn**	**11 45 06.2**	**-0.9**
BO02				*i* S	**Sn**	**11 45 16.8**	**-1.6**
BO02	**Sierra Bellavi**	**0.83**	**93**		**Pn**	**11 45 06.1**	**-1.1**
BO02					**Sn**	**11 45 17.0**	**-1.4**
MT01	**Popeta**	**0.99**	**27**	⇓*iP*	**Pn**	**11 45 09.2**	**-0.1**
MT01				*i* S	**Sn**	**11 45 21.4**	**-0.9**
MT01				IAML		11 45 24.5	
	comp=E,63μm,0.2s						
MT01	**Popeta**	**0.99**	**27**		**Pn**	**11 45 09.2**	**-0.1**
MT01					**Sn**	**11 45 21.6**	**-0.7**
MT02	**Curacav**	**1.59**	**20**	⇑*iP*	**Pn**	**11 45 17.7**	**+0.4**
MT02				IAML		11 45 43.0	
	comp=E,12μm,0.5s						
MT02	**Curacav**	**1.59**	**20**		**Pn**	**11 45 17.

baz=97,slow=75,SNR=1891
H03S3 Juan Fernandez 5.97 277 T T 11 52 18.2
baz=97,slow=75,SNR=1778
H03S2 Juan Fernandez 5.98 277 T T 11 52 17.5
baz=97,slow=75,SNR=1538
AC05 El Transito 6.04 13 Pn 11 46 17.7 -0.8
PLCA Paso Flores 6.04 171 P **Pn 11 46 20.4 +1.9**
comp=Z,7.0nm,0.3s,baz=342,slow=12,SNR=70
PLCA S **Sn 11 47 29.1 +2.7**
baz=3.5,slow=19,SNR=0.7
PLCA LR LR 11 48 49.0
comp=Z,334nm,20.6s,baz=338,slow=39
PLCA Paso Flores 6.04 171 Pn 11 46 20.1 +1.6
PLCA Paso Flores 6.04 171 *eP* **Pn 11 46 21.0 +2.5**
H03N1 Juan Fernandez 6.06 281 T T 11 52 19.4
baz=108,slow=75,SNR=46
H03N3 Juan Fernandez 6.06 280 T T 11 52 25.7
baz=108,slow=75,SNR=44
H03N2 Juan Fernandez 6.07 280 T T 11 52 27.0
baz=108,slow=75,SNR=48
TCA Tanti 6.93 63 *i* P **Pn 11 46 30.1 -0.6**
TCA *eS* **Sn 11 47 53.6 +5.3**
GO03 Copiap 7.26 11 Pn 11 46 33.6 -1.6
LL01 San Ignacio de 7.63 184 Pn 11 46 39.7 -0.4
CYA Choya 8.10 41 *eP* **Pn 11 46 43.1 -3.6**
CYA *i* S **Sn 11 48 21.0 +4.0**
AC02 Maricunga 8.22 17 Pn 11 46 47.1 -1.6
GO02 Mina Guanaco 9.75 12 Pn 11 47 05.7 -3.8
PB14 IPOC Station P 10.17 7 Pn 11 47 10.5 -4.8
PB15 IPOC Station P 11.68 11 Pn 11 47 32.4 -3.4
LVC Limon Verde 12.36 12 P **Pn 11 47 45.8 +0.6**
comp=Z,0.8nm,0.3s,baz=201,slow=6.0,SNR=3.9
LVC S **Sn 11 50 07.3 +5.6**
comp=Z,0.8nm,0.3s,baz=336,slow=18,SNR=1.9
LVC LR LR 11 52 32.7
comp=Z,265nm,21.3s,baz=214,slow=38
LVC Limon Verde 12.36 12 Pn **Pn 11 47 40.7 -4.6**
PB07 IPOC Station P 13.09 8 Pn **Pn 11 47 55.5 +0.5**
PB09 IPOC Station P 13.11 10 Pn **Pn 11 47 54.4 -0.9**
PB01 IPOC Station P 13.81 9 Pn 11 48 04.5 -0.3
PB08 IPOC Station P 14.74 10 Pn **Pn 11 48 17.2 -0.3**
CPUP Villa Florida 15.01 60 P **Pn 11 48 20.6 0.0**
comp=Z,0.5nm,0.3s,baz=235,slow=6.4,SNR=5.8
CPUP S **Sn 11 51 07.0 +1.4**
comp=Z,0.2nm,0.3s,baz=270,slow=20,SNR=2.3
CPUP LR LR 11 54 39.0
comp=Z,270nm,19.3s,baz=192,slow=40
CPUP Villa Florida 15.01 60 Pn **Pn 11 48 20.9 +0.4**
PB11 IPOC Station P 15.06 8 Pn 11 48 21.2 -0.2
PSGCX Pisagua 15.17 6 Pn **Pn 11 48 22.0 -0.8**
GO01 Chusmiza 15.20 9 Pn 11 48 23.0 -0.6
MNMC Minye Minye 15.69 8 Pn 11 48 29.3 -0.3
MNMC IAmb IAmb 11 48 35.5
comp=Z,36nm,0.8s
PB16 IPOC Station P 16.48 8 Pn 11 48 39.2 -0.8
ITAB Concordia 18.42 71 *eP* **P 11 49 01.5 -1.3**
LPAZ La Paz 18.68 11 P **Pn 11 49 07.8 +0.8**
comp=Z,0.6nm,0.3s,baz=179,slow=11,SNR=3.5
LPAZ La Paz 18.68 11 P **P 11 49 06.2 -0.1**
PTGB Pitanga 19.80 65 *eP* **P 11 49 16.5 -1.5**
AQDB Aquidauana 20.10 49 *eP* **P 11 49 19.7 -1.4**
SIV San Ignacio 21.02 30 P **P 11 49 30.0 -1.2**
comp=Z,22nm,0.7s,baz=219,slow=9.5,SNR=106
PCMB Pacaembu 22.28 59 *eP* **P 11 49 41.6 -3.0**
PTLB Pontes e Lacer 22.34 34 *eP* **P 11 49 44.0 -1.3**
C2SB Chapadao do Su 23.17 51 *eP* **P 11 49 52.7 -1.1**
SPB Sao Paulo 23.94 69 *eP* **P 11 49 58.9 -2.1**
SAML Samuel 26.87 19 P **P 11 50 26.7 -1.0**
CLDB Colider 27.89 36 *eP* **P 11 50 35.0 -1.8**
BDFB Brasilia 28.59 54 P **P 11 50 40.3 -3.0**
comp=Z,2.7nm,0.4s,baz=221,slow=7.6,SNR=4.5
BDFB LR LR 12 03 00.3
comp=Z,200nm,19.8s,baz=265,slow=38
BDFB Brasilia 28.59 54 P **P 11 50 40.6 -2.7**
JANB Januaria 31.54 58 *eP* **P 11 51 07.2 -2.1**
PTGA Pitinga 35.61 21 P **P 11 51 43.6 -1.0**
CHIC Chingaza 39.22 357 *eP* **P 11 52 16.9 +1.3**
RUSC La Rusia 40.45 358 *eP* **P 11 52 26.7 +0.8**
RUSC La Rusia 40.45 358 P **P 11 52 26.9 +1.0**
CBOC Ciudad Bolivar 40.60 354 *eP* **P 11 52 27.7 +1.0**
PTBC PUERTO BERRIO, 41.15 356 *eP* **P 11 52 30.0 -1.1**
SMLC San Martn de 43.37 357 *eP* **P 11 52 47.0 -2.2**
VNA3 Neumayer Olymp 48.58 158 P **P 11 53 30.2 +0.6**
SVB Belmont 48.80 14 P **P 11 53 31.5 -0.3**
SNAA Sanae 50.81 158 P **P 11 53 46.9 +0.4**
SNAA Sanae 50.81 158 P **P 11 53 45.8 -0.7**
comp=Z,3.6nm,0.8s,baz=266,slow=7.1,SNR=9.7
SNAA Sanae 50.81 158 P P 11 53 46.7 +0.2
BANI BANI 52.87 2 P P 11 54 02.6 +0.1
QSPA South Pole Qui 55.48 180 P P 11 54 22.4 +1.3
comp=Z,6.2nm,0.9s,baz=324,slow=1.9,SNR=25
QSPA pP **pP 11 54 34.8 -0.2**
comp=Z,3.1nm,0.5s,baz=226,slow=1.4,SNR=5.9
QSPA South Pole Qui 55.48 180 P **P 11 54 22.2 +1.2**
QSPA IAmb IAmb 11 54 41.5
comp=Z,8.6nm,0.9s
TEIG Tepich 56.88 341 P P 11 54 31.4 0.0
SYO Syowa Base 65.09 158⇑ *eP* **P 11 55 25.1 -1.3**
SYO Syowa Base 65.09 158⇑ *ep* pP pP 11 55 37.1 -3.5
Z50A Ashland 68.94 347 P **P 11 55 51.4 +0.1**
Z50A IAmb IAmb 11 55 52.1
comp=Z,9.2nm,1.1s
PPT Papeete 70.35 262 LR LR 12 18 05.5
comp=Z,28nm,21.2s,baz=328,slow=28
TXAR Lajitas Array 70.50 331 P **P 11 56 02.2 +1.2**
comp=Z,0.8nm,0.5s,baz=157,slow=8.4,SNR=13
TXAR pP **pP 11 56 15.6 +0.2**
comp=Z,0.9nm,0.5s,baz=144,slow=7.8,SNR=7.8
TX31 Lajitas Ar. Si 70.50 331 P **P 11 56 01.9 +0.8**
TX31 IAmb IAmb 11 56 17.6
comp=Z,16nm,1.4s
WHTX Lake Whitney, 70.65 337 IAmb IAmb 11 56 03.9
comp=Z,5.1nm,0.7s
W50A Signal Mountai 70.73 348 IAmb IAmb 11 56 03.5
comp=Z,9.6nm,0.8s
V55A Taylorsville 70.80 352 IAmb IAmb 11 56 03.5
comp=Z,8.1nm,0.9s
CPCT Cooper Cave 70.85 349 IAmb IAmb 11 56 04.3
comp=Z,6.4nm,0.8s
SWET Sewanee 70.86 348 IAmb IAmb 11 56 04.1
comp=Z,13nm,1.0s
PLAL Pickwick Lake 71.03 346 IAmb IAmb 11 56 04.5
comp=Z,6.7nm,0.5s
CLTN Cedars of Leba 71.78 348 IAmb IAmb 11 56 09.2
comp=Z,5.9nm,0.8s
WVT Waverly 72.09 346 P **P 11 56 10.6 +0.2**
MAW Mawson 72.40 163 P **P 11 56 12.5 +0.6**
comp=Z,5.2nm,0.8s,baz=182,slow=3.3,SNR=6.1
MAW Mawson 72.40 163 P **P 11 56 12.2 +0.3**
W39A Magazine 72.57 341 IAmb IAmb 11 56 15.1
comp=Z,7.4nm,0.8s
LCAR Lake Charles 72.74 344 IAmb IAmb 11 56 14.8
comp=Z,6.6nm,0.5s
S51A Beattyville 72.86 350 IAmb IAmb 11 56 16.4
comp=Z,7.3nm,0.8s
MNTX Cornudas Mount 73.27 330 P **P 11 56 17.8 +0.3**
U40A Yellville 73.42 342 IAmb IAmb 11 56 19.0
comp=Z,5.2nm,0.6s
SUR Sutherland 74.28 119 P **P 11 56 24.2 +0.3**
CCM Cathedral Cave 74.66 344 P **P 11 56 25.8 +0.3**
CCM IAmb IAmb 11 56 26.7
comp=Z,10.0nm,0.9s
LIC Lamto 74.82 71 *eP* **P 11 56 26.3 -0.7**
comp=Z,30nm,0.7s
TIC Toumodi 75.08 71 *eP* **P 11 56 27.8 -0.7**
KIC Kosan Boka 75.12 71 *eP* **P 11 56 28.3 -0.5**
comp=Z,24nm,0.7s
R40A Maddies Statio 75.12 343 IAmb IAmb 11 56 29.2
comp=Z,8.2nm,0.7s
DBIC Dimbokro 75.22 71 P **P 11 56 28.9 -0.4**
comp=Z,7.8nm,0.6s,baz=209,slow=5.3,SNR=14
DBIC Dimbokro 75.22 71 P **P 11 56 29.1 -0.2**
DBIC IAmb IAmb 11 56 29.7
comp=Z,8.6nm,0.7s
N49A Columbus Grove 76.17 350 IAmb IAmb 11 56 34.6
comp=Z,9.4nm,0.8s
P38A Dawn 76.69 343 IAmb IAmb 11 56 37.9
comp=Z,6.8nm,0.7s
BOSA Boshof 79.53 117 P **P 11 56 53.1 -0.4**
comp=Z,10nm,0.7s,baz=241,slow=3.9,SNR=23
BOSA Boshof 79.53 117 P **P 11 56 53.3 -0.2**
ECSD EROS Data Cent 81.33 342 P **P 11 57 02.7 +0.4**
ECSD IAmb IAmb 11 57 03.6
comp=Z,7.1nm,0.9s
ECSD **pP 11 57 16.2 -0.7**

E46A Sault Ste Mari 81.54 351 IAmb IAmb 11 57 04.5
comp=Z,12nm,0.9s
F36A Milaca 82.62 345 IAmb IAmb 11 57 09.6
comp=Z,5.3nm,0.8s
R11A Troy Canyon, C 83.30 327 P **P 11 57 13.7 +0.7**
TOA0 Torodi Ar. Sit 84.27 70 P **P 11 57 17.8 -0.5**
TOA0 IAmb IAmb 11 57 18.9
comp=Z,7.4nm,0.7s
TORD Torodi Ar. Bea 84.27 70 P **P 11 57 17.8 -0.5**
comp=Z,6.1nm,0.7s,baz=252,slow=4.0,SNR=22
PDAR Pinedale Array 84.53 333 P **P 11 57 20.0 +0.7**
comp=Z,0.3nm,0.5s,baz=188,slow=4.5,SNR=5.0
NVAR Mina Array Bea 84.62 325 P **P 11 57 21.1 +1.3**
comp=Z,0.7nm,0.7s,baz=150,slow=5.7,SNR=5.8
NVAR pP **pP 11 57 34.6 +0.1**
comp=Z,0.7nm,0.8s,baz=134,slow=6.4,SNR=4.0
FLWY Flagg Ranch 86.09 333 IAmb IAmb 11 57 29.8
comp=Z,5.1nm,0.9s
RLMT Red Lodge 86.46 334 P **P 11 57 29.4 +0.6**
RLMT IAmb IAmb 11 57 30.8
comp=Z,4.7nm,1.2s
RLMT **pP 11 57 42.9 -0.6**
LAO LASA Array 86.80 337 IAmb IAmb 11 57 31.5
comp=Z,4.5nm,0.8s
MCMT McKenzie Canyo 87.53 332 P **P 11 57 35.1 +1.1**
ASAR Alice Springs 116.99 206 PKP **PKPdf 12 03 30.3 -1.0**
comp=Z,0.3nm,0.8s,baz=126,slow=2.3,SNR=2.0
WRA Warramunga Arr 120.20 209 PKP **PKPdf 12 03 36.8 -0.7**
comp=Z,0.2nm,0.4s,baz=157,slow=1.7,SNR=11
BRTR Keskin Array B 122.01 61 PKP **PKPdf 12 03 39.8 -0.7**
comp=Z,0.7nm,0.5s,baz=188,slow=2.5,SNR=2.1
H11N1 WAKE ISLAND Hyl 126.41 270 T T 14 23 01.0
baz=116,slow=74,SNR=5.2
H11N2 WAKE ISLAND Hyl 126.42 270 T T 14 22 52.0
baz=278,slow=74,SNR=3.2
RPSI Rantau Prapat 146.95 163 PKPbc 12 04 28.3 -0.9
BRVK Borovoye 147.61 44 PKPdf 12 04 27.8 +0.7
HYB Hyderabad 148.42 116 *i* PKP **PKPbc 12 04 33.0 -0.1**
GAR Garm 149.54 71 PKPbc 12 04 35.5 0.0
KK31 Karatay Array 149.71 63 PKPbc 12 04 35.2 -0.4
KKAR Karatay Array 149.71 63 PKPbc 12 04 35.2 -0.4
BTK Batken 149.98 69 PKPbc 12 04 36.3 -0.1
NIL Nilore 151.15 82 PKPbc 12 04 39.0 -0.3
YSS Yuzh-Sakhalins 151.41 306 PKPbc 12 04 39.7 +0.3
ARSB Arslanbob 151.62 66 PKiKP 12 04 40.6 -0.1
AAK Ala-Archa 152.67 63 PKiKP 12 04 43.2 +0.3
KSH Kashi 153.94 70 PKP PKiKP **12 04 45.8 +0.2**
KSH pPKP sPKPdf 12 04 56.7 -1.6
KSH PP PP 12 08 45.8 +12
ZALV Zalesovo Beam 154.75 33 PKPbc **PKPbc 12 04 44.9 -1.6**
comp=Z,1.1nm,0.6s,baz=307,slow=2.9,SNR=5.0
ZALV PKPab **pPKPbc 12 05 01.4 -0.5**
comp=Z,1.1nm,0.5s,baz=294,slow=3.9,SNR=4.6
MKAR Makanchi Array 157.09 51 PKPab **PKPab 12 05 11.2 -0.9**
comp=Z,1.1nm,0.8s,baz=281,slow=4.5,SNR=8.4
WMQ Urumqi 161.75 54 *e*PKP **PKPdf 12 04 47.7 +0.9**
NJ2 Nanjing 170.71 256 *e*PKP **PKPdf 12 04 55.1 +1.0**
HHC Hu-ho-hao-te 173.37 337 *e*PKP **PKPdf 12 04 56.6 +1.4**
CD2 Chengdu 174.63 134 PKP **PKPdf 12 04 55.4 -0.5**
LZH Lanzhou 176.19 68 *e*PKP **PKPdf 12 04 55.1 -1.2**
LZH pPKP pPKPdf 12 05 09.0 -2.7
LZH sPKP 12 05 13.7
LZH PKPab **PKPab 12 06 37.3 +0.5**
LZH LR LR
comp=Z,98nm,18.3s
LZH LR LR
comp=Z,110nm,18.0s
LZH LR LR
comp=Z,160nm,20.1s

*MEX **09** 11:48:45.2±0.9, 14°.29N×92°.05W, h45km±25km, MD4.0*
*GCG **09** 11:48:51.6±0.4, 14°.25N×91°.56W, h28km±4km, MD3.6*
ISC 09 11:48:44.0±2.1, 14°.2N±0°.1×92°.22W±0°.08, h35km, n10,
σ2s 31/15, Near coast of Chiapas

Code	Station	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ERG	**Entre ros, C**	**0.67**	**70**	*eP*		**Pn**	**11 48 57.5**	**+0.5**
THIG		**0.69**	**356**	*eP*		**Pn**	**11 48 56.9**	**-0.4**
THIG				*eS*		**Sn**	**11 49 05.4**	**-1.4**
FUG	**Fuego 3**	**1.35**	**80**	*eP*		**Pn**	**11 49 06.0**	**-0.6**
PCG	**Pacaya**	**1.57**	**83**	*eP*		**Pn**	**11 49 09.4**	**-0.2**
IXG	**Ixpaco**	**1.72**	**91**	*eP*		**Pn**	**11 49 11.6**	**-0.1**
PCIG		**1.77**	**327**	*eP*		**Pn**	**11 49 12.0**	**-0.2**
PCIG				*i* S		**Sn**	**11 49 32.7**	**-0.8**
NBG	**Las Nubes**	**1.85**	**78**	*eP*		**Pn**	**11 49 13.7**	**+0.2**
CCIG	**Comitan**	**2.06**	**2**	*eP*		**Pn**	**11 49 15.8**	**-0.5**
CCIG				*i* S		**Sn**	**11 49 46.1**	**+5.2**
TGIG		**2.69**	**341**	*eP*		**Pn**	**11 49 26.1**	**+1.1**
TGIG				*i* S		**Sn**	**11 49 51.0**	**-5.4**
CMIG	**Matias Romero**	**3.85**	**318**	*eP*		**Pn**	**11 49 41.8**	**+1.1**
CMIG				*eS*		**Sn**	**11 50 25.8**	**+1.1**

*SOME **09** 11:59:09.8, 43°.77N×84°.37E, h0km*
*NNC **09** 11:59:31.6±3.5, 44°.02N×83°.37E, h4km±20km, mb3.2, mpv2.8, Error ellipse: s-maj=24.7km s-min=11.9km az=124.0*
ISC 09 11:59:24.1±2.2, 43°.96N±0°.10×84°.2E±0°.1, h10km, n16,
σ1s 62/23, Northern Xinjiang

Code	Station	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**3.14**	**335**	Pn		**Pb**	**12 00 18.8**	**-1.2**
	0.6nm,0.3s,baz=165,slow=16,SNR=12							
MK31				Lg		Lg	12 00 59.1	
	1.7nm,0.3s,baz=164,slow=28,SNR=11							
DJR	**Jarkent**	**3.19**	**278**	*eP*		**Pn**	**12 00 12.7**	**-1.7**
	1.0nm,0.1s							
DJR				*eS*		**Sb**	**12 00 58.3**	**-1.7**
	12nm,0.2s							
DJR	**Jarkent**	**3.19**	**278**	Pg		**Pb**	**12 00 21.4**	**+0.4**
	1.9nm,0.3s							
DJR				Lg		Lg	12 00 58.2	
	17nm,0.6s							
MAKZ	**Makanchi**	**3.25**	**332**	Pn		**Pb**	**12 00 20.6**	**-1.3**
	0.9nm,0.3s							
MAKZ				Lg		Lg	12 01 02.1	
	4.0nm,0.5s							
PDGK	**Podgornoye**	**3.48**	**261**	Pg		**Pb**	**12 00 23.1**	**-2.7**
	1.5nm,0.4s							
PDGK				Lg		Lg	12 01 00.7	
	2.7nm,0.6s							
PDGK	**Podgornoye**	**3.48**	**261**	Pn		**Pn**	**12 00 17.2**	**-1.1**
	1.6nm,0.5s							
PDGK				Lg		Lg	12 01 02.8	
	3.4nm,0.5s							
ZSN	**Zaisan**	**3.52**	**7**	*eP*		**Pn**	**12 00 19.5**	**+0.6**
	1.3nm,0.1s							
ZSN				*eS*		**Sb**	**12 01 09.6**	**+0.3**
	4.0nm,0.3s							
KAPS	**Kapalarasan**	**3.70**	**293**	*eP*		**Pn**	**12 00 22.3**	**+1.0**
	1.1nm,0.1s							
KAPS				*eS*		**Sb**	**12 01 14.6**	**0.0**
	5.7nm,0.3s							
KAPS	**Kapalarasan**	**3.70**	**293**	Pg		**Pb**	**12 00 29.0**	**-0.6**
	0.6nm,0.3s							
KAPS				Lg		Lg	12 01 11.4	
	5.6nm,0.6s							
UZB	**Uzynbulak**	**3.85**	**260**	*eP*		**Pn**	**12 00 24.2**	**+0.7**
	0.5nm,0.1s							
UZB				*eS*		**Sb**	**12 01 17.8**	**-1.0**
	2.1nm,0.1s							
UZB	**Uzynbulak**	**3.85**	**260**	Pg		**Pb**	**12 00 31.8**	**-0.3**
	2.1nm,0.5s							
UZB				Lg		Lg	12 01 15.9	
	2.9nm,0.5s							
MNBS	**Baschi**	**4.18**	**274**	*eP*		**Pn**	**12 00 29.7**	**+1.7**
	0.6nm,0.1s							
MNBS				*eS*		**Sb**	**12 01 27.3**	**-1.1**
	9.4nm,0.3s							
MNBS	**Baschi**	**4.18**	**274**	Pg		**Pb**	**12 00 36.9**	**-0.9**
	5.3nm,0.5s							
MNBS				Lg		Lg	12 01 24.8	
	6.0nm,0.4s							
KURS	**Kuram**	**4.39**	**266**	*eP*		**Pn**	**12 00 33.9**	**+3.0**
	1.6nm,0.3s							
KURS				*eS*		**Sb**	**12 01 34.6**	**+0.1**
	2.5nm,0.5s							
ARXS	**Arharly**	**4.60**	**275**	*eP*		**Pn**	**12 00 37.6**	**+3.9**
	0.9nm,0.1s							
ARXS				*eS*		**Sb**	**12 01 41.0**	**+0.7**
	4.1nm,0.3s							
ARXS	**Arharly**	**4.60**	**275**	Pg		**Pb**	**12 00 46.1**	**+1.2**
	5.8nm,0.6s							
ARXS				Lg		Lg	12 01 41.0	

*IDC **09** 12:32:35.2±1.5, 3°.58N×82°.66W, h0km, mb3.7/8, mb1 4.0/9, mb1mx3.8/31, mbtmp3.7/9, ML4.3/1, MS3.3/5, Ms1 3.3/5, ms1mx2.9/32, Error ellipse: s-maj=62.1km s-min=23.2km az=51.0*
*NEIC **09** 12:32:36.1±1.2, 3°.36N±0°.09×83°.0W±0°.1, h10km±1km, mb4.4/11, Error ellipse: s-maj=20.3km s-min=11.1km az=228.0*
ISC 09 12:32:38.1±0.8, 3°.37N±0°.09×82°.9W±0°.1, h24km, n34,
σ0s 86/30, mb4.0/13, 1C, South of Panama

Code	Station	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BBAC	**Balboa, Cauca**	**5.82**	**103**⇑	*eP*		**Pn**	**12 34 02.7**	**-0.5**
SOTA	**Rioblanco**	**6.42**	**101**	*eP*		**Pn**	**12 34 11.6**	**-0.1**
BCIP	**Isla Barro Col**	**6.52**	**28**	*eP*		**Pn**	**12 34 13.8**	**+1.2**
BCIP	**Isla Barro Col**	**6.52**	**28**			**Pn**	**12 34 14.4**	**+1.8**
BCIP					Sn	**Sn**	**12 35 26.8**	**+0.5**
PCON	**Cinco Dias**	**6.59**	**99**	*eP*		**Pn**	**12 34 13.4**	**-0.8**
HDC	**Heredia**	**6.70**	**350**	Pn		**Pn**	**12 34 15.2**	**+0.1**
JTS	**Las Juntas de**	**7.17**	**344**	Pn		**Pn**	**12 34 20.5**	**-1.0**
	5.4nm,0.3s,baz=158,slow=8.2,SNR=14							
JTS	**Las Juntas de**	**7.17**	**344**	*eP*		**Pn**	**12 34 21.8**	**+0.3**
JTS	**Las Juntas de**	**7.17**	**344**			**Pn**	**12 34 21.2**	**-0.3**
CBOC	**Ciudad Bolivar**	**7.32**	**70**	*eP*		**Pn**	**12 34 23.1**	**-0.6**
ATAH	**Atahualpa**	**11.37**	**157**	LR		LR	12 39 32.7	
	comp=Z,248nm,21.8s,baz=357,slow=36							
APG	**El Apazote**	**13.75**	**328**	LR		LR	12 40 23.1	
	comp=Z,85nm,18.3s,baz=136,slow=34							
TEIG	**Tepich**	**17.55**	**343**	LR		LR	12 42 57.9	
	comp=Z,64nm,19.2s,baz=68,slow=36							
LPAZ	**La Paz**	**24.40**	**144**	P		**P**	**12 37 56.4**	**+0.8**
	0.8nm,0.6s,baz=306,slow=10,SNR=2.2							
LPAZ	**La Paz**	**24.40**	**144**	P		**P**	**12 37 55.7**	**+0.2**
PB11	**IPOC Station P**	**26.42**	**151**	P		**P**	**12 38 13.6**	**+0.2**
PB11				IAmb		IAmb	12 38 25.1	
	comp=Z,12nm,1.1s							
PB01	**IPOC Station P**	**27.60**	**152**	P		**P**	**12 38 25.0**	**+1.1**
250A	**Grady**	**28.63**	**354**	P		**P**	**12 38 32.8**	**0.0**
250A				IAmb		IAmb	12 38 43.9	
	comp=Z,8.6nm,0.7s							
SIV	**San Ignacio**	**28.93**	**132**	LR		LR	12 50 52.3	
	comp=Z,90nm,18.1s,baz=70,slow=38							
PB10	**IPOC Station P**	**29.31**	**156**	P		**P**	**12 38 39.2**	**+0.3**
LCAR	**Lake Charles**	**33.42**	**348**	P		**P**	**12 39 15.2**	**+0.2**
LCAR				IAmb		IAmb	12 39 17.0	
	comp=Z,3.4nm,0.9s							
X34A	**Smith Ranch, M**	**34.03**	**338**	P		**P**	**12 39 20.6**	**+0.2**
WMOK	**Wichita Mounta**	**34.52**	**337**	P		**P**	**12 39 23.3**	**-1.4**
WMOK				IAmb		IAmb	12 39 32.7	
	comp=Z,5.9nm,1.2s							
PDAR	**Pinedale Array**	**45.85**	**333**	P		**P**	**12 40 57.1**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=123,slow=6.6,SNR=1.7							
NVAR	**Mina Array Bea**	**47.52**	**322**	P		**P**	**12 41 13.4**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=137,slow=7.3,SNR=9.4							
ULM	**Lac du Bonnet**	**47.98**	**349**	P		**P**	**12 41 14.7**	**-0.3**
	comp=Z,1.6nm,0.4s,baz=140,slow=5.4,SNR=3.8							
ULM	**Lac du Bonnet**	**47.98**	**349**	P		**P**	**12 41 14.4**	**-0.6**
ULM				IAmb		IAmb	12 41 15.8	
	comp=Z,2.5nm,0.8s							
FRB	**Frobisher Bay**	**61.16**	**7**	LR		LR	13 09 17.0	
	comp=Z,22nm,20.1s,baz=150,slow=36							
YKA	**Yellowknife Ar**	**63.51**	**344**	P		**P**	**12 43 06.2**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=140,slow=6.7,SNR=8.7							
ILAR	**Eielson Array**	**76.08**	**337**	P		**P**	**12 44 24.2**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=136,slow=4.9,SNR=4.9							
ESDC	**Sonseca Array**	**79.36**	**50**	P		**P**	**12 44 40.8**	**-1.6**
	comp=Z,0.4nm,0.4s,baz=271,slow=7.3,SNR=3.1							
TOA0	**Torodi Ar. Sit**	**84.00**	**77**	P		**P**	**12 45 07.6**	**+0.3**
TOA0				IAmb		IAmb	12 45 17.1	
	comp=Z,4.0nm,1.2s							
TORD	**Torodi Ar. Bea**	**84.00**	**77**	P		**P**	**12 45 07.8**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=280,slow=4.6,SNR=3.2							
WRA	**Warramunga Arr**	**140.11**	**243**	PKP		**PKPdf**	**12 52 05.5**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=101,slow=1.9,SNR=5.7							

UCR 09 12:34:24.4±2.0, 9°.02N×83°.96W, h3km±4km, MD3.8, 1D,
Costa Rica

Code	Station	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
EDDO	**Dominical**	**0.25**	**21**	*eP*		Pg	12 34 30.5	+1.3
EDDO				*i* S		Sg	12 34 36.0	+3.6
EDLM	**Las Mercedes**	**0.44**	**55**	*eP*		Pg	12 34 33.7	+0.8
EDLM				*i* S		Sb	12 34 41.8	-0.2
EDPN	**Palmar Norte**	**0.50**	**97**	*eP*		Pg	12 34 33.8	-0.1
EDPN				*eS*		Sb	12 34 42.1	-1.3
LCR2	**La Lucha 2**	**0.72**	**356**	*eP*		Pg	12 34 38.2	0.0
LCR2				*eS*		Sb	12 34 50.5	+0.5
PTJ1	**Puerto Jimnez**	**0.81**	**127**	*eP*		Pg	12 34 40.3	+0.4
PTJ1				*eS*		Sb	12 34 53.0	+0.6
HDC	**Heredia**	**0.99**	**351**	*eP*		Pg	12 34 43.3	0.0
HDC				*eS*		Sb	12 34 58.2	+0.5
EDSV	**San Vito**	**0.99**	**102**	*eP*		Pg	12 34 43.8	+0.3
EDSV				*eS*		Sn	12 34 59.8	-0.2
CVTR	**Volcan Turrial**	**1.01**	**11**	*eP*		Pg	12 34 43.9	+0.1
CVTR				*eS*		Sb	12 34 59.0	+0.3
SRA1	**San Ramn**	**1.18**	**334**	*eP*		Pg	12 34 46.1	-0.9
BRU2	**Volcan**	**1.27**	**100**	*eP*		Pg	12 34 46.8	-2.0
BRU2				*eS*		Sg	12 35 04.5	-0.7
RGM0	**Gandoca**	**1.45**	**67**	*eP*		Pg	12 34 52.1	0.0
FORC	**Fortuna**	**1.60**	**334**	*i* P		Pn	12 34 53.0	-0.6
FORC				*i* S		Sn	12 35 15.0	+0.1
JTS	**Las Juntas de**	**1.60**	**322**	*eP*		Pn	12 34 51.6	-2.1
ARE1	**Arenal 1**	**1.62**	**332**	*eP*		Pn	12 34 53.0	-0.9
CEDE	**Laguna Cedeo**	**1.63**	**333**	*i* P		Pn	12 34 53.7	-0.4
PLVR	**Palo Verde**	**1.91**	**314**	*eP*		Pn	12 34 57.9	-0.1
ACAL	**Aguas Claras**	**1.92**	**326**	*i* P		Pn	12 34 59.0	+0.8
CUI	**Cuipilapa**	**2.02**	**324**	*i* P		Pn	12 34 59.9	+0.4
CUI				*i* S		Sg	12 35 28.4	-0.9
COLC	**Colonia**	**2.04**	**323**	*i* P		Pn	12 35 00.1	+0.3
LIM1	**Limonal**	**2.10**	**323**	*i* P		Pn	12 35 00.3	-0.3
GB1A	**Borinquen Arri**	**2.28**	**322**	*i* P		Pn	12 35 03.9	+0.7
ACON	**Acoyapa**	**3.16**	**338**⇓	*i* P		Pn	12 35 15.5	+0.3
ESPN	**Las Esperanzas**	**3.17**	**354**	*eP*		Pn	12 35 15.1	-0.1

*BJI **09** 12:54:50.9±0.0, 8°.67N×126°.40E, h86km, mB4.8/42, mb4.8/58, Ms4.2/28, Ms7 3.9/30*
*DJA **09** 12:54:50.5±0.6, 9°.N±4°×12°.7E±°, h66km±5km, M4.8/54, mb5.0/54, mB5.2/17, MLv5.1/4, Mw(mB)4.6/17, Mwp6.8/1*
*MAN **09** 12:54:51.5, 8°.62N×126°.34E, h43km, mb5.5, ML4.5, MS4.8*
MAN Intensity III - Bislig City Surigao del Sur; San Francisco Agusan del Sur.
*IDC **09** 12:54:52.1±1.2, 8°.79N×126°.40E, h73km±11km, mb4.6/34, mb1 4.7/36, mb1mx4.7/41, mb

MSLP Maasin 2.09 313 *e*P Pn 12 55 25.0 0.0
MSLP eS Sn 12 55 55.1 +5.0
KCP Kidapawan 2.14 218⇑ *i*P Pn 12 55 25.3 -0.4
KCP *i* S Sn 12 55 51.3 -0.1
CTBH Cotabato--PC H 2.61 236⇓ *i*P Pn 12 55 30.9 -1.1
DDMP Don Marcelino, 2.68 195 *e*P Pn 12 55 30.4 -2.6
DDMP eS Sn 12 56 11.5 +7.1
TBP Tagbilaran 2.71 291 *e*P Pn 12 55 37.2 +3.8
SKMP Bagumbayan, Su 2.86 221 *e*P Pn 12 55 34.1 -1.3
SKMP eS Sn 12 56 18.4 +10
LLP Lapu-Lapu 2.90 304⇑ *e*P Pn 12 55 36.3 +0.4
LLP *i* S Sn 12 56 12.4 +2.6
OCP Ormoc 2.93 323 *e*P Pn 12 55 37.8 +1.4
GSPH General Santos 2.98 209 *e*P Pn 12 55 36.8 -0.5
DCPH Dipolog City 3.03 268⇑ *i*P Pn 12 55 37.5 -0.2
DCPH *i* S Sn 12 56 12.1 -0.9
PAGZ Pagadian 3.12 254 *e*P Pn 12 55 37.6 -1.4
PAGZ eS Sn 12 56 09.9 -5.2
SNPH Sibulan 3.21 282⇑ *i*P Pn 12 55 40.1 -0.1
SNPH *i* S Sn 12 56 19.1 +1.8
CNOP Candoni, Negro 3.89 287 *e*P Pn 12 55 49.5 0.0
GUIM Jordan 4.23 297 *e*P Pn 12 55 54.1 +0.1
GUIM eS Sn 12 56 36.5 -5.7
RCP Roxas 4.59 308⇑ *e*P Pn 12 56 00.1 +1.0
ZCP Zamboanga City 4.65 248⇑ *e*P Pn 12 55 55.5 -4.4
JAP San Jose, Anti 4.85 295⇑ *e*P Pn 12 56 03.9 +1.3
PVCP Virac 5.34 336 *e*P Pn 12 56 07.5 -1.8
PGP Puerto Galera 7.17 312⇓ *e*P Pn 12 56 37.8 +3.4
LQP Lukban 7.19 319⇑ *e*P Pn 12 56 36.0 +1.2
TGY Tagaytay City 7.59 315 P Pn 12 56 42.6 +2.5
36nm,0.3s,baz=310,slow=7.8,SNR=10
TNTI Ternate 7.94 173 P Pn 12 56 42.7 -2.1
1µm98nm,0.9s
TNTI Ternate 7.94 173 Pn 12 56 47.2 +2.3
TNTI Sn Sn 12 58 15.1 +1.9
KMSI Cibinong 8.44 197 P Pn 12 56 52.8 +1.2
3µm161nm,0.8s
MRSI Marisa 9.31 209 P Pn 12 57 02.4 -1.2
1µm73nm,0.6s
LUWI Luwuk 10.34 201 P Pn 12 57 19.9 +2.2
9µm153nm,1.1s
LUWI Luwuk 10.34 201 Pn 12 57 19.8 +2.2
LUWI Sn Sn 12 59 14.3 +2.3
KKM Kota Kinabalu 10.46 256 Pn Pn 12 57 19.3 0.0
MPSI Mapaga 10.55 218 P Pn 12 57 24.9 +4.4
12nm,1.3s
SIJI Sorong 10.67 153 P Pn 12 57 20.8 -1.4
5.0nm,0.3s,baz=341,slow=14,SNR=12
SIJI S Sn 12 59 13.3 -6.7
1.3nm,0.3s,baz=18,slow=20,SNR=1.9
SIJI LR LR 13 01 54.2
comp=Z,204nm,19.7s,baz=331,slow=39
APSI Ampana 10.67 207 P Pn 12 57 26.3 +4.2
666nm55nm,0.9s
SANI Sanana 10.69 182 P Pn 12 57 20.5 -2.0
1µm74nm,0.7s
NLAI Namlea 11.89 177 P Pn 12 57 42.0 +3.3
51nm,0.5s
FAKI Fak Fak 12.93 153 P P 12 58 02.3 +1.4
FAKI Fak Fak 12.93 153 Pn Pn 12 57 53.2 +0.2
TTSI Tana Toraja 13.40 210 P Pn 12 58 02.5 +3.3
504nm47nm,1.0s
SPSI Sidrap Palu 14.23 208 P P 12 58 22.9 +7.6
BNSI Bone 14.46 206 P P 12 58 16.2 -1.7
906nm64nm,1.2s
TWG Pinlang 14.94 341 Pn 12 58 19.4 0.0
KAPI Kappang 15.16 206 P Pn 12 58 23.2 +1.0
1.2nm,0.3s,baz=65,slow=1.9,SNR=5.8
KAPI Kappang 15.16 206 Pn 12 58 23.0 +0.8
YULB Yu-li 15.40 342 Pn 12 58 25.3 +0.1
SBUM Sibu 15.43 247 Pn 12 58 26.2 +0.6
SBUM IAmb IAmb 12 58 33.1
comp=Z,52nm,0.8s
SBUM Sibu 15.43 247 P P 12 58 28.0 -0.7
TPUB Ta-pu 15.54 340 Pn 12 58 26.8 -0.2
KBKI Kotabaru 15.71 221 P P 12 58 32.5 +0.7
comp=Z,384nmcomp=Z,32nm,0.9s
SSLB Suanglung 15.88 341 Pn Pn 12 58 31.5 +0.2
YOJ Yonaguni jima 16.00 349 Pn Pn 12 58 32.8 +0.1
YOJ IAmb IAmb 12 58 43.1
comp=Z,110nm,1.3s
YHNB Yeheng 16.59 344 Pn 12 58 40.7 +0.5
KSM Kuching 17.57 247 P P 12 58 52.8 +0.4
KSM Kuching 17.57 247 P P 12 58 55.0 +2.6
GENI Genyem 17.72 129 P Pn 12 59 09.5 +15
MMRI Maumere 17.72 194 Pn 12 58 54.3 +0.1
DLV T Lat 17.93 282 P Pn 12 58 58.3 +1.4
EDFI Ende, Flores 17.97 195 P Pn 12 58 58.2 +1.0
comp=Z,17nm,1.1s
JOW Kunigami 18.11 5 P Pn 12 59 01.4 +2.6
comp=Z,1.2nm,0.3s,baz=22,slow=2.7,SNR=21
JOW Kunigami 18.11 5 Pn 12 59 00.2 +1.4
SOEI Soe 18.46 187 P Pn 12 59 06.0 +2.8
comp=Z,1µmcomp=Z,84nm,0.9s
SOEI Soe 18.46 187 Pn 12 59 05.1 +1.9
SOEI IAmb IAmb 12 59 22.6
comp=Z,99nm,1.2s
BATI Baumata 18.99 188 P Pn 12 59 10.2 +0.8
comp=Z,13nm,0.3s,baz=29,slow=2.4,SNR=11
BATI Baumata 18.99 188 P Pn 12 59 10.2 +0.8
comp=Z,61nm,0.8s
QIZ Qiongzhong 19.07 304 P P 12 59 08.9 +0.1
QIZ S S 13 02 39.6 -1.9
QIZ pmax pmax
comp=Z,27nm,0.9s
QIZ LR LR
comp=Z,300nm,19.4s
QIZ LR LR
comp=Z,390nm,22.2s
QIZ Qiongzhong 19.07 304 P P 12 59 09.3 +0.5
PLAI Plampang 19.43 207 P P 12 59 13.5 +0.7
comp=Z,56nm,0.8s
KMMI Kalianget 19.98 219 P Pn 12 59 22.6 +1.6
comp=Z,111nm,1.1s
SRBI Singaraja 20.07 214 P P 12 59 20.6 +0.8
comp=Z,55nm,0.9s
MTN Manton Dam 21.92 168 P P 12 59 39.5 0.0
MTN IAmb IAmb 12 59 58.5
comp=Z,27nm,0.4s
MYKOM Kota Tinggi 23.49 254 P P 12 59 55.5 -0.2
MYKOM Kota Tinggi 23.49 254 P P 12 59 57.0 +1.3
JCJ Chichijima 23.61 37 P P 12 59 56.5 -0.1
comp=Z,82nm,0.4s,baz=276,slow=15,SNR=38
NJ2 Nanjing 24.27 344 *e*P P 13 00 04.1 +1.6
NJ2 pmax pmax
comp=Z,20nm,0.6s
LEM Lembang 24.27 231 P P 13 00 05.0 +2.0
comp=Z,72nm,0.8s,baz=41,slow=13,SNR=14
KNRA Kununurra 24.34 175 P P 13 00 03.5 +0.3
KNRA IAmb IAmb 13 00 06.2
comp=Z,50nm,0.9s
WHN Wuhan 24.48 334 P P 13 00 11.7 +7.3
WHN S S 13 04 25.8 +6.1
WHN LR LR
comp=Z,490nm,17.2s
PMBI Palembang 24.48 243 P P 13 00 07.1 +2.5
CISI Cisompet, Garu 24.59 229 P P 13 00 09.9 +4.2
comp=Z,61nm,0.9s
JNU Nakatsue 24.64 9 P P 13 00 05.6 -0.4
comp=Z,54nm,0.8s,baz=215,slow=3.1,SNR=30
JNU Nakatsue 24.64 9 P P 13 00 05.7 -0.3
JNU IAmb IAmb 13 00 07.9
comp=Z,54nm,0.8s
SLVN Son La 25.06 303 P P 13 00 10.3 +0.4
BLSI Bandar Lampung 25.32 237 P P 13 00 14.2 +1.9
comp=Z,132nm,0.8s
IPM Ipoh 25.56 262 IAmb IAmb 13 00 17.3
comp=Z,77nm,1.4s
IPM Ipoh 25.56 262 P P 13 00 16.0 +1.4
GYA Guiyang 25.74 316⇑ *i*P P 13 00 18.2 +2.0
GYA pP sP 13 00 37.6 -4.2
GYA sP pP 13 00 47.3 +14
GYA S S 13 04 39.5 -0.7
GYA sS sS 13 05 07.8 -0.9
GYA SS SnSn 13 05 47.5 +5.1
GYA pmax pmax
comp=Z,10.0nm,0.9s
GYA pmax pmax
comp=Z,100nm,3.5s
GYA LR LR
comp=Z,110nm,3.8s
GYA LR LR
comp=Z,140nm,3.9s
GYA LR LR
comp=Z,270nm,18.7s
MDSI Maura Dua 25.76 240 P P 13 00 18.0 +1.8
comp=Z,82nm,1.1s
KULM Kulim 25.79 264 P P 13 00 17.4 +0.7
KULM IAmb IAmb 13 00 19.6
comp=Z,69nm,1.5s
KULM Kulim 25.79 264 P P 13 00 18.0 +1.4
KASI Kota Agung 26.03 238 P P 13 00 22.3 +3.6
comp=Z,88nm,0.9s
LWLI Liwa 26.13 239 P P 13 00 22.1 +2.3
comp=Z,371µmcomp=Z,4µmcomp=Z,168nm,0.9s
BKNI Bangkinang 26.61 253 P P 13 00 24.7 +0.7
FITZ Fitzroy Crossi 26.64 182 P P 13 00 24.4 +0.2
comp=Z,9.1nm,0.3s,baz=11,slow=9.8,SNR=126
FITZ PcP PcP 13 03 47.0 +0.4
comp=Z,3.9nm,0.4s,baz=4.4,slow=3.7,SNR=3.3
KSI Kapahiang 26.74 244 P P 13 00 31.9 +6.7
PDSI Padang 27.57 251 P P 13 00 32.1 -0.5
comp=Z,8.7nm,0.7s
KMI Kunming 27.84 309 P P 13 00 28.6 -6.6
KMI pP pP 13 00 49.3 -3.1
KMI sP sP 13 00 58.4 -2.5
KMI PP PnPn 13 01 18.8 -6.6
KMI S S 13 05 00.7 -13
KMI pmax pmax
comp=Z,13nm,1.4s
KMI pmax pmax
comp=Z,190nm,4.2s
KMI LR LR
comp=N,250nm,22.0s
KMI LR LR
comp=E,330nm,24.8s
KMI LR LR
comp=Z,440nm,24.1s
PSI Prapat 27.96 260 P P 13 00 37.3 +1.1
comp=Z,7.2nm,0.6s,baz=0.7,slow=4.4,SNR=14
PSI PcP PcP 13 03 49.9 -0.3
comp=Z,5.4nm,0.7s,baz=178,slow=2.5,SNR=6.1
RPSI Rantau Prapat 27.99 259 P P 13 00 37.0 +0.7
RPSI PcP 13 03 49.5 -0.6
COEN Coen 27.99 143 P P 13 00 36.3 0.0
COEN IAmb IAmb 13 00 52.2
comp=Z,30nm,1.2s
INU Inuyama 28.24 19 P P 13 00 38.5 +0.3
INU IAmb IAmb 13 00 39.4
comp=Z,54nm,0.8s
CM31 Chiang Mai Arr 28.37 293 P P 13 00 40.6 +0.9
CM31 IAmb IAmb 13 00 41.7
comp=Z,22nm,0.8s
CMAR Chiang Mai Arr 28.37 293 P P 13 00 40.6 +0.9
comp=Z,12nm,0.6s,baz=99,slow=7.3,SNR=99
CMAR PcP PcP 13 03 51.5 +0.6
comp=Z,1.4nm,0.5s,baz=115,slow=1.5,SNR=6.6
CMAR LR LR 13 11 59.6
comp=Z,90nm,18.9s,baz=78,slow=36
CHTO Chiang Mai 28.47 294 P P 13 00 40.6 0.0
KSRS Korea Array 28.65 2 P P 13 00 41.9 0.0
comp=Z,19nm,0.8s,baz=181,slow=10.0,SNR=122
KSRS PcP PcP 13 03 51.9 +0.7
comp=Z,4.9nm,0.6s,baz=185,slow=2.4,SNR=19
KSRS LR LR 13 14 52.2
comp=Z,60nm,18.2s,baz=194,slow=42
KS19 Wonju Array Si 28.70 2 P P 13 00 41.9 -0.5
KS19 IAmb IAmb 13 00 43.6
comp=Z,22nm,0.8s
KCSI Kotacane, Aceh 28.93 262 P P 13 00 45.1 +0.3
comp=Z,31nm,0.7s
WRAB Tennant Creek 29.51 165 P P 13 00 48.6 -1.1
WRA Warramunga Arr 29.52 165 P P 13 00 48.7 -1.1
comp=Z,1.5nm,0.4s,baz=346,slow=8.2,SNR=37
WRA PcP PcP 13 03 54.1 +0.4
comp=Z,6.9nm,0.7s,baz=339,slow=3.1,SNR=11
WRA S S 13 05 33.0 -6.5
comp=Z,2.0nm,0.8s,baz=345,slow=15,SNR=6.4
WRA ScP ScP 13 07 29.2 -0.2
comp=Z,1.0nm,0.6s,baz=337,slow=3.0,SNR=4.1
GSI Gunungsitoli 29.64 257 P P 13 00 51.5 +0.5
comp=Z,83nm,0.5s
GSI Gunungsitoli 29.64 257 P P 13 00 51.3 +0.3
GSI IAmb IAmb 13 00 53.4
comp=Z,19nm,0.9s
GSI PcP 13 03 54.8 +0.6
MAJO Matsushiro 29.71 19 P P 13 00 50.7 -0.7
MAJO IAmb IAmb 13 00 53.2
comp=Z,20nm,0.8s
MAT Matsushiro 29.71 19 P P 13 00 50.3 -1.1
MJAR Matsushiro Arr 29.71 19 P P 13 00 50.5 -0.9
comp=Z,21nm,0.7s,baz=195,slow=9.5,SNR=53
MJAR LR LR 13 11 55.0
comp=Z,105nm,20.9s,baz=210,slow=34
MJB9 Matsu-Tunnel 29.71 19 IAmb IAmb 13 00 52.0
comp=Z,17nm,0.7s
XAN Xi'an 29.92 330 P P 13 00 51.7 -1.6
XAN pmax pmax
comp=Z,9.0nm,0.7s
XAN pmax pmax
comp=Z,89nm,6.4s
XAN LR LR
comp=Z,150nm,21.7s
XAN LR LR
comp=Z,170nm,24.9s
XAN Xi'an 29.92 330 P P 13 00 51.4 -1.9
XAN IAmb IAmb 13 00 55.1
comp=Z,8.9nm,0.4s
CD2 Chengdu 30.57 319 P P 13 00 58.3 -0.8
CD2 pmax pmax
comp=Z,20nm,0.5s
PSA00 Pilbara Seismi 30.77 192 IAmb IAmb 13 01 02.5
comp=Z,14nm,0.6s
BJI Beijing 32.52 345 P P 13 01 15.0 -1.0
BJI pmax pmax
comp=Z,8.0nm,0.7s
AS31 Alice Springs 33.00 167 P P 13 01 19.7 -0.7
AS31 PcP PcP 13 04 03.2 +0.2
ASAR Alice Springs 33.00 167 P P 13 01 19.8 -0.7
comp=Z,2.4nm,0.4s,baz=345,slow=6.9,SNR=67
ASAR PcP PcP 13 04 03.4 +0.4
comp=Z,8.4nm,0.6s,baz=347,slow=2.7,SNR=22
ASAR S S 13 06 28.6 -5.2
comp=Z,1.2nm,0.8s,baz=347,slow=15,SNR=5.1
ASAR ScP ScP 13 07 40.0 -1.0
comp=Z,1.7nm,0.5s,baz=338,slow=3.4,SNR=8.0
SNY Shenyang 33.08 356⇑ P P 13 01 20.9 0.0
SNY pmax pmax
comp=Z,40nm,0.6s
LZH Lanzhou 34.14 326 *e*P P 13 01 31.0 +0.6
LZH pP pP 13 01 51.3 +3.4
LZH sP sP 13 02 01.9 +5.5
LZH *e*PP PP 13 02 48.2 -0.8
LZH pmax pmax
comp=Z,23nm,1.1s
LZH pmax pmax
comp=Z,85nm,5.0s
LZH LR LR
comp=Z,200nm,13.0s
LZH LR LR
comp=Z,210nm,13.3s
LZH LR LR
comp=Z,300nm,16.3s
HHC Hu-ho-hao-te 34.62 340 P P 13 01 34.5 0.0
HHC pP sP 13 02 00.4 +0.3
HHC S S 13 07 00.0 +1.2
HHC pmax pmax
comp=Z,5.0nm,0.8s
HHC pmax pmax
comp=Z,25nm,7.5s
HHC LR LR
comp=Z,140nm,16.7s
HHC LR LR
comp=Z,92nm,11.8s
HHC LR LR
comp=Z,77nm,16.9s
CTAO Charters Tower 34.64 146 P P 13 01 35.2 +0.6
CTAO IAmb IAmb 13 01 40.0
comp=Z,18nm,1.1s
CN2 Changchun 34.97 359 *e*P P 13 01 36.9 -0.3
CN2 pmax pmax
comp=Z,10.0nm,0.7s
USA0B Ussuriysk Arra 35.69 7 P P 13 01 44.1 +0.7
USRK Ussuriysk Ar. 35.69 7 P P 13 01 44.2 +0.8
comp=Z,51nm,0.7s,baz=193,slow=7.9,SNR=164
USRK LR LR 13 15 53.0
comp=Z,96nm,21.4s,baz=176,slow=35
MDJ Mudanjiang 35.88 4 P P 13 01 46.2 +1.2
MDJ pP pwP 13 02 06.1 +0.9
MDJ sP sP 13 02 16.3 +6.5
MDJ PP PP 13 03 09.2 +1.3
MDJ S S 13 07 20.4 +2.6
MDJ sS ScP 13 07 55.3 +4.4
MDJ pmax pmax
comp=Z,51nm,0.9s
MDJ pmax pmax
comp=Z,140nm,3.5s
MDJ Mudanjiang 35.88 4 P P 13 01 45.5 +0.5
ERM Erimo 36.31 21 P P 13 01 50.0 +1.3
SHL Shillong 36.86 301 P P 13 01 53.1 -0.7
GTA Gaotai 38.75 326 *e*P P 13 02 08.6 -1.0
GTA pP pP 13 02 25.3 -1.9
GTA PcP PcP 13 04 20.4 +0.4
GTA S S 13 08 02.0 +0.3
GTA SS SS 13 10 43.7 -12
GTA pmax pmax
comp=Z,6.0nm,1.0s
GTA pmax pmax
comp=Z,50nm,7.5s
GTA LR LR
comp=Z,100nm,19.0s
GTA LR LR
comp=Z,92nm,20.3s
GTA LR LR
comp=Z,150nm,21.3s
MORW Morawa 38.87 195 P P 13 02 11.1 +0.6
MORW IAmb IAmb 13 02 22.1
comp=Z,24nm,1.2s
LSA Lhasa 39.06 307 P P 13 02 13.4 +0.6
LSA Lhasa 39.06 307 P P 13 02 12.6 -0.2
LSA IAmb IAmb 13 02 20.5
comp=Z,11nm,0.7s
FORT Forrest 39.29 178 P P 13 02 14.2 +0.3
YSS Yuzh-Sakhalins 40.58 17 P P 13 02 25.5 +1.0
YSS IAmb IAmb 13 02 26.6
comp=Z,29nm,1.3s
TAPN Taplejung 40.98 302 *e*P P 13 02 28.5 0.0
comp=Z,51nm,0.4s
ODAN Odare 41.09 301 *e*P P 13 02 29.7 +0.4
comp=Z,177nm,0.7s
RAMN Ramite 41.79 301 *e*P P 13 02 35.8 +0.8
comp=Z,47nm,0.5s
BBOO Buckleboo 42.30 168 P P 13 02 39.0 +0.3
BBOO PcP 13 04 31.5 +0.2
NWAO Narrogin (SRO) 42.32 192 P P 13 02 39.4 +0.6
NWAO IAmb IAmb 13 02 54.4
comp=Z,37nm,1.4s
ULN Ulaanbaatar 42.34 341 P P 13 02 38.0 -1.1
JIRN Jiri 42.36 302 *e*P P 13 02 39.9 +0.1
comp=Z,158nm,0.5s
SONM Songino Array 42.53 340 P P 13 02 39.1 -1.5
comp=Z,1.4nm,0.4s,baz=151,slow=9.9,SNR=6.3
SONM PcP PcP 13 04 31.9 -0.1
comp=Z,4.4nm,0.8s,baz=171,slow=2.1,SNR=9.1
SONM LR LR 13 20 36.0
comp=Z,90nm,21.7s,baz=195,slow=36
GUN Gumba 42.70 302 *e*P P 13 02 42.5 0.0
comp=Z,165nm,0.7s
STKA Stephens Creek 42.88 161 P P 13 02 43.5 0.0
comp=Z,11nm,0.6s,baz=336,slow=8.5,SNR=36
STKA LR LR 13 24 32.7
comp=Z,77nm,18.1s,baz=19,slow=41
STKA Stephens Creek 42.88 161 P P 13 02 43.5 0.0
PKI Pulchoki 42.99 301 *e*P P 13 02 44.5 -0.4
comp=Z,36nm,0.6s
PKIN Phulchoki 43.00 301 *e*P P 13 02 44.6 -0.3
comp=Z,39nm,0.6s
KKN Kakani 43.16 302 *e*P P 13 02 46.1 -0.1
comp=Z,71nm,0.8s
DMN Daman 43.26 301 *e*P P 13 02 47.1 +0.2
comp=Z,35nm,0.5s
KOLN Koldanda 44.58 301 *e*P P 13 02 57.3 -0.2
comp=Z,126nm,0.5s
DANN Dangsing 44.61 302 *e*P P 13 02 57.6 -0.3
comp=Z,141nm,0.5s
ARMA Armidale 45.82 149 P P 13 03 08.0 +0.9
TLY Talaya 46.75 341 P P 13 03 13.5 -0.5
HYB Hyderabad 47.31 286 *i*P P 13 03 19.0 0.0
comp=Z,35nm,0.8s
WMQ Urumqi 48.54 323 *e*P P 13 03 27.4 -0.7
WMQ pP sP 13 03 50.2 -4.3
WMQ PcP PcP 13 04 53.2 +0.2
WMQ PP PP 13 05 23.9 +2.4
WMQ pmax pmax
comp=Z,11nm,0.7s
WMQ pmax pmax
comp=Z,45nm,5.9s
WMQ LR LR
comp=Z,58nm,20.3s
WMQ LR LR
comp=Z,100nm,20.3s
WMQ LR LR
comp=Z,110nm,23.1s
CAN Canberra 48.71 155 P P 13 03 30.5 +1.1
CAN IAmb IAmb 13 03 44.7
comp=Z,13nm,1.0s
TOO Toolangi 49.38 160 P P 13 03 35.7 +1.3
TOO IAmb IAmb 13 03 38.0
comp=Z,15nm,1.1s
PEA0B Petropavlovsk- 51.00 24 P P 13 03 47.9 +1.4
PETK Petropavlovsk- 51.00 24 P P 13 03 48.3 +1.8
comp=Z,25nm,0.5s,baz=202,slow=4.3,SNR=206
PETK PcP PcP 13 05 01.3 -0.3
comp=Z,5.2nm,0.9s,baz=204,slow=5.3,SNR=4.0
PET Petropavlovsk 51.32 24 P P 13 03 50.2 +1.4
YAK Yakutsk 53.28 2 P P 13 04 03.4 +0.2
MK31 Makanchi Array 53.36 323 P P 13 04 03.6 -0.5
MKAR Makanchi Array 53.36 323 P P 13 04 03.3 -0.8
comp=Z,7.1nm,0.5s,baz=123,slow=8.0,SNR=78
MKAR PcP PcP 13 05 10.4 -0.3
comp=Z,9.6nm,0.8s,baz=117,slow=4.2,SNR=8.3
MKAR LR LR 13 28 37.5
comp=Z,96nm,19.9s,baz=118,slow=38
MAKZ Makanchi 53.55 323 P P 13 04 04.8 -0.7
MAKZ IAmb IAmb 13 04 07.4
comp=Z,6.2nm,0.6s
PRZ Przheval'sk 53.82 317 IAmb IAmb 13 04 09.0
comp=Z,11nm,0.8s
MA2 Magadan 54.00 15 P P 13 04 09.3 +0.8
MA2 IAmb IAmb 13 04 10.4
comp=Z,16nm,0.8s
KSH Kashi 54.39 313 P P 13 04 15.7 +3.8
KSH sP sP 13 04 49.0 +10
KSH PP PP 13 06 14.7 +0.1
KSH S S 13 11 46.2 +1.2
KSH SS SS 13 15 30.0 +1.8
KSH pmax pmax
comp=Z,44nm,1.6s
KSH pmax pmax
comp=Z,180nm,5.3s
KSH LR LR
comp=Z,200nm,7.1s
KSH LR LR
comp=Z,190nm,5.2s
KSH LR LR
comp=Z,280nm,6.9s
KDJ Kajisay 54.50 316 IAmb IAmb 13 04 16.7
comp=Z,10nm,0.6s
NIL Nilore 54.74 305 P P 13 04 14.0 -0.4
ULHL Ulahol 55.19 316 P P 13 04 17.9 +0.1
SNR=8.2
KZA Kyzart 55.81 315 P P 13 04 23.1 +0.6
SNR=11
TKM2 Tokmak 2 55.89 317 P P 13 04 22.3 -0.5
SNR=9.3
ZAA0 Zalesovo Array 56.06 332 P P 13 04 21.9 -1.6
ZALV Zalesovo Beam 56.06 332 P P 13 04 21.6 -1.9
comp=Z,4.4nm,0.3s,baz=124,slow=6.6,SNR=34
ZALV PcP PcP 13 05 19.4 -1.5
comp=Z,5.2nm,0.5s,baz=132,slow=5.5,SNR=7.4
ZALV LR LR 13 30 21.5
comp=Z,48nm,21.2s,baz=121,slow=38
UCH Uchtor 56.38 315 P P 13 04 26.8 +0.2
SNR=20
AAK Ala-Archa 56.54 316 P P 13 04 26.7 -0.6
USP Ospenovka 56.76 317 P P 13 04 28.3 -0.5
SNR=9.4
AML Almayashu 56.91 315 P P 13 04 30.4 +0.1
SNR=10
EKS2 Erkin-Say 57.04 316 P P 13 04 30.8 -0.1
SNR=9.8
KURK Kurchatov 57.43 326 P P 13 04 32.5 -0.8
KURK IAmb IAmb 13 04 34.5
comp=Z,12nm,0.6s
BTK Batken 58.33 312 IAmb IAmb 13 04 40.9
comp=Z,9.9nm,1.1s

KBL	**Kabul**	**58.34**	**305**	P	**P**	**13 04 39.7**	**-0.5**
CHGR	**Chuyangaron**	**59.19**	**310**	P	**P**	**13 04 45.2**	**-0.7**
KK31	**Karatay Array**	**59.45**	**315**	P	**P**	**13 04 46.3**	**-1.2**
KK31				IAmb	IAmb	13 04 48.1	
	comp=Z,9.3nm,0.7s						
KKAR	**Karatay Array**	**59.45**	**315**	IAmb	IAmb	13 04 48.1	
	comp=Z,9.3nm,0.7s						
TIXI	**Tiksi**	**62.90**	**1**	P	**P**	**13 05 09.5**	**-0.8**
ADK	**Adak**	**63.09**	**36**	P	**P**	**13 05 12.8**	**+1.0**
BRVK	**Borovoye**	**63.10**	**326**	P	**P**	**13 05 11.2**	**-0.8**
BRVK				IAmb	IAmb	13 05 12.8	
	comp=Z,17nm,0.8s						
HRA	**Herat**	**63.85**	**304**	P	**P**	**13 05 16.7**	**-0.9**
HRA				IAmb	IAmb	13 05 20.9	
	comp=Z,8.5nm,0.7s						
ATKA	**Atka Island**	**64.64**	**36**	P	**P**	**13 05 23.3**	**+1.3**
BILL	**Bilibino**	**64.86**	**15**	P	**P**	**13 05 23.6**	**+0.4**
BILL				IAmb	IAmb	13 05 25.9	
	comp=Z,9.4nm,0.6s						
DCZ	**Deep Cove**	**65.14**	**150**	P	**P**	**13 05 26.6**	**+1.2**
DCZ				IAmb	IAmb	13 05 39.5	
	comp=Z,31nm,1.2s						
THZ	**Tophouse**	**65.83**	**144**	P	**P**	**13 05 30.1**	**+0.2**
THZ				IAmb	IAmb	13 05 31.2	
	comp=Z,20nm,0.7s						
RPZ	**Rata Peaks**	**66.01**	**146**	P	**P**	**13 05 31.9**	**+0.9**
LTZ	**Lake Taylor**	**66.10**	**145**	IAmb	IAmb	13 05 35.5	
	comp=Z,36nm,1.5s						
BKZ	**Black Stump Fm**	**66.51**	**139**	P	**P**	**13 05 35.1**	**+0.7**
BKZ				IAmb	IAmb	13 05 35.8	
	comp=Z,22nm,0.7s						
GEYT	**Alibeck**	**67.60**	**307**	P	**P**	**13 05 41.2**	**-0.1**
	comp=Z,4.9nm,0.6s,baz=123,slow=5.5,SNR=16						
GEYT				LR	LR	13 39 00.2	
	comp=Z,59nm,21.9s,baz=180,slow=39						
GYA0B	**ALIBECK ARRAY**	**67.60**	**307**	P	**P**	**13 05 41.1**	**-0.2**
GYA0B				IAmb	IAmb	13 05 42.7	
	comp=Z,30nm,1.4s						
BANOM	**Banah**	**68.40**	**294**	P	**P**	**13 05 45.9**	**-0.7**
UOSS	**Minazif**	**68.48**	**293**	P	**P**	**13 05 45.8**	**-1.3**
UOSS	**Minazif**	**68.48**	**293**	P	**P**	**13 05 46.0**	**-1.0**
MSFE	**Esma-Masafi**	**68.52**	**294**	P	**P**	**13 05 47.8**	**+0.4**
HATD	**Hatta, Dubai**	**68.54**	**293**	*i* P	**P**	**13 05 47.1**	**-0.4**
	SNR=7.1						
SHME	**Shamn**	**68.54**	**295**	P	**P**	**13 05 47.0**	**-0.5**
ASHO	**Ashiyiah**	**68.61**	**293**	*i* P	**P**	**13 05 47.1**	**-0.8**
	SNR=6.0						
ALNE	**Al Ain**	**68.89**	**292**	*i* P	**P**	**13 05 49.2**	**-0.5**
	SNR=9.4						
ARU	**Arti**	**70.61**	**327**	P	**P**	**13 05 58.4**	**-1.2**
SOCY	**Socotra**	**71.13**	**280**	P	**P**	**13 06 01.9**	**-1.7**
SOCY				IAmb	IAmb	13 06 02.9	
	comp=Z,18nm,0.8s						
CASY	**Casey**	**75.69**	**187**	P	**P**	**13 06 29.2**	**0.0**
CASY				IAmb	IAmb	13 06 31.1	
	comp=Z,24nm,0.7s						
KIRV	**Kirov**	**75.84**	**328**	P	**P**	**13 06 29.4**	**-0.9**
	comp=Z,57nm,0.7s,baz=352,slow=0.5,SNR=23						
KDAK	**Kodiak Island**	**77.89**	**33**	P	**P**	**13 06 43.5**	**+1.7**
RAYN	**Ar Rayn**	**78.29**	**292**	*i* P	**P**	**13 06 44.0**	**-0.9**
	SNR=44						
RAYN	**Ar Rayn**	**78.29**	**292**	P	**P**	**13 06 44.2**	**-0.6**
PPLA	**Purkeypile**	**78.38**	**28**	IAmb	IAmb	13 06 49.0	
	comp=Z,7.2nm,0.5s						
CNPM	**China Poot**	**78.67**	**31**	IAmb	IAmb	13 06 52.1	
	comp=Z,17nm,0.7s						
BRLK	**Bradley Lake**	**78.86**	**31**	IAmb	IAmb	13 06 48.5	
	comp=Z,14nm,0.5s						
BPAW	**Bear Paw Mtn.**	**78.99**	**26**	IAmb	IAmb	13 06 50.2	
	comp=Z,22nm,0.8s						
AKH	**Akhalkalaki**	**79.01**	**310**	IAmb	IAmb	13 06 52.9	
	comp=Z,8.2nm,0.6s						
MLY	**Manley**	**79.14**	**25**	IAmb	IAmb	13 06 51.1	
	comp=Z,18nm,0.6s						
TRF	**Thorofare Moun**	**79.27**	**27**	IAmb	IAmb	13 06 51.4	
	comp=Z,19nm,1.1s						
KBZ	**Khabaz**	**79.37**	**313**	P	**P**	**13 06 49.4**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=65,slow=11,SNR=4.5						
KBZ				LR	LR	13 45 53.6	
	comp=Z,73nm,21.4s,baz=68,slow=39						
KIV	**Kislovodsk**	**79.51**	**313**	P	**P**	**13 06 51.0**	**-0.3**
SEW	**Seward**	**79.58**	**30**	IAmb	IAmb	13 06 55.4	
	comp=Z,17nm,0.6s						
TOLK	**Toolik Lake Re**	**79.76**	**22**	P	**P**	**13 06 53.9**	**+1.9**
	baz=268						
TOLK	**Toolik Lake Re**	**79.76**	**22**	IAmb	IAmb	13 06 54.8	
	comp=Z,19nm,0.7s						
NEA	**Nenana**	**79.83**	**26**	IAmb	IAmb	13 06 54.7	
	comp=Z,17nm,0.7s						
GHO	**Glory Hole Cre**	**79.86**	**29**	IAmb	IAmb	13 06 54.0	
	comp=Z,12nm,0.6s						
RND	**Reindeer**	**79.91**	**27**	IAmb	IAmb	13 06 55.0	
	comp=Z,12nm,0.5s						
MDM	**Murphy Dome**	**80.20**	**25**	IAmb	IAmb	13 06 56.9	
	comp=Z,11nm,0.4s						
TCOL	**CIGO, UAF Yank**	**80.36**	**26**	P	**P**	**13 06 55.8**	**+0.6**
	baz=270						
COLA	**College**	**80.36**	**26**	P	**P**	**13 06 56.0**	**+0.8**
DHY	**Denali Highway**	**80.58**	**27**	IAmb	IAmb	13 07 00.7	
	comp=Z,11nm,0.6s						
SCM	**Sheep Creek Mo**	**80.62**	**29**	IAmb	IAmb	13 06 59.0	
	comp=Z,22nm,0.7s						
HDA	**Harding Lake**	**80.75**	**26**	P	**P**	**13 06 57.4**	**0.0**
	baz=271						
HDA	**Harding Lake**	**80.75**	**26**	IAmb	IAmb	13 06 59.7	
	comp=Z,18nm,0.8s						
IL31		**80.78**	**26**	P	**P**	**13 06 57.4**	**-0.1**
ILAR	**Eielson Array**	**80.78**	**26**	P	**P**	**13 06 57.0**	**-0.4**
	comp=Z,5.2nm,0.6s,baz=238,slow=4.9,SNR=67						
ILAR				PKKPbc	**PKKPbc**	**13 25 35.8**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=104,slow=1.5,SNR=7.4						
KLMR	**Klimovskoe**	**80.95**	**330**	*eP*	**P**	**13 06 55.6**	**-2.8**
KLMR				AMP		13 06 58.3	
	comp=Z,10.0nm,0.6s						
FID	**Port Fidalgo**	**81.05**	**30**	IAmb	IAmb	13 07 02.1	
	comp=Z,11nm,0.6s						
FYU	**Fort Yukon**	**81.42**	**24**	IAmb	IAmb	13 07 03.4	
	comp=Z,10nm,0.8s						
DOT	**Dot Lake**	**82.05**	**27**	IAmb	IAmb	13 07 07.1	
	comp=Z,10.0nm,0.6s						
GLB	**Gilahina Butte**	**82.31**	**29**	IAmb	IAmb	13 07 08.2	
	comp=Z,19nm,1.0s						
VRDI	**Verde Repeater**	**82.50**	**29**	IAmb	IAmb	13 07 09.8	
	comp=Z,9.8nm,0.6s						
CRQM	**Cirque**	**82.69**	**30**	IAmb	IAmb	13 07 10.4	
	comp=Z,13nm,0.8s						
MCARA	**McCarthy VSAT**	**82.69**	**29**	IAmb	IAmb	13 07 14.1	
	comp=Z,15nm,0.6s						
EGAK	**Eagle**	**83.23**	**26**	P	**P**	**13 07 11.5**	**+1.2**
EGAK				IAmb	IAmb	13 07 12.1	
	comp=Z,7.2nm,0.6s						
YAH	**Yahtse**	**83.41**	**30**	IAmb	IAmb	13 07 15.6	
	comp=Z,22nm,0.7s						
DAWY	**Dawson**	**84.07**	**26**	IAmb	IAmb	13 07 17.4	
	comp=Z,16nm,0.9s						
EPYK	**Eagle Plains**	**84.84**	**24**	P	**P**	**13 07 19.6**	**+1.1**
	baz=280						
HYT	**Haines Junctio**	**85.42**	**29**	IAmb	IAmb	13 07 25.3	
	comp=Z,11nm,0.8s						
SPA0	**Spitsbergen Ar**	**85.57**	**349**	P	**P**	**13 07 21.9**	**-0.1**
SPA0				IAmb	IAmb	13 07 22.2	
	comp=Z,11nm,0.7s						
SPA0	**Spitsbergen Ar**	**85.57**	**349**	*eP*	**P**	**13 07 21.4**	**-0.5**
SPITS	**Spitsbergen Ar**	**85.57**	**349**	P	**P**	**13 07 20.9**	**-1.1**
	comp=Z,4.3nm,0.4s,baz=94,slow=7.7,SNR=107						
INK	**Inuvik**	**85.67**	**22**	P	**P**	**13 07 23.3**	**+0.7**
	comp=Z,9.0nm,0.7s,baz=280,slow=5.0,SNR=69						
INK	**Inuvik**	**85.67**	**22**	IAmb	IAmb	13 07 24.4	
	comp=Z,8.1nm,0.7s						
ARCES	**ARCESS Array B**	**85.70**	**340**	P	**P**	**13 07 22.0**	**-0.8**
	comp=Z,11nm,0.7s,baz=82,slow=6.1,SNR=62						
ARCES				LR	LR	13 50 09.3	
	comp=Z,35nm,19.4s,baz=169,slow=39						
ARE0	**ARCESS Array S**	**85.70**	**340**	P	**P**	**13 07 22.5**	**-0.2**
ARE0	**ARCESS Array S**	**85.70**	**340**	*eP*	**P**	**13 07 22.2**	**-0.5**
HAMF	**Hammerfest**	**86.04**	**341**	*eP*	**P**	**13 07 23.7**	**-0.7**
KBS	**Kingsbay**	**86.08**	**350**	P	**P**	**13 07 23.8**	**-0.7**
KBS				IAmb	IAmb	13 07 25.4	
	comp=Z,8.3nm,0.7s						
KBS	**Kingsbay**	**86.08**	**350**	*eP*	**P**	**13 07 23.5**	**-0.9**
KTK1	**Kautokeino**	**86.61**	**339**	*eP*	**P**	**13 07 26.4**	**-0.9**
BRTR	**Keskin Array B**	**86.63**	**309**	P	**P**	**13 07 26.6**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=125,slow=6.2,SNR=3.8						
BRTR				LR	LR	13 50 31.8	
	comp=Z,30nm,21.6s,baz=92,slow=39						
WHY	**Whitehorse**	**86.72**	**29**	IAmb	IAmb	13 07 30.8	
	comp=Z,13nm,0.6s						
SKAG	**Skagway**	**86.74**	**30**	IAmb	IAmb	13 07 30.6	
	comp=Z,5.8nm,0.6s						
FIA1	**FINESS Array S**	**87.33**	**332**	P	**P**	**13 07 29.8**	**-1.0**
FIA1				IAmb	IAmb	13 07 30.6	
	comp=Z,9.6nm,0.6s						
FINES	**FINESS Array B**	**87.33**	**332**	P	**P**	**13 07 29.5**	**-1.3**
	comp=Z,8.7nm,0.5s,baz=82,slow=4.2,SNR=123						
FINES				LR	LR	13 48 52.6	
	comp=Z,52nm,20.1s,baz=75,slow=37						
AKASG	**Malin Array Be**	**87.86**	**321**	P	**P**	**13 07 31.5**	**-2.1**
	comp=Z,2.4nm,0.4s,baz=60,slow=5.1,SNR=8.0						
TRO	**Tromso**	**87.89**	**340**	*eP*	**P**	**13 07 31.7**	**-1.6**
NOR	**Nord**	**88.14**	**355**	*i* P	**P**	**13 07 33.8**	**-0.6**
	comp=Z,3.7nm,0.9s						
MAW	**Mawson**	**88.29**	**200**	P	**P**	**13 07 35.7**	**+0.6**
	comp=Z,5.1nm,0.5s,baz=93,slow=4.2,SNR=22						
MAW				LR	LR	13 45 35.8	
	comp=Z,38nm,20.6s,baz=61,slow=34						
MAW	**Mawson**	**88.29**	**200**	P	**P**	**13 07 35.4**	**+0.2**
VNDA	**Vanda**	**88.37**	**173**	P	**P**	**13 07 36.1**	**+0.7**
	comp=Z,5.8nm,0.5s,baz=319,slow=6.4,SNR=24						
VNDA	**Vanda**	**88.37**	**173**	P	**P**	**13 07 35.9**	**+0.5**
VNDA				IAmb	IAmb	13 07 36.9	
	comp=Z,10nm,1.0s						
C36M	**Paulatuk**	**88.66**	**20**	P	**P**	**13 07 37.3**	**+0.3**
	baz=291						
KMBO	**Kilima Mbogo**	**89.34**	**269**	P	**P**	**13 07 42.7**	**+1.0**
	comp=Z,5.0nm,0.8s,baz=39,slow=7.8,SNR=10						
KMBO	**Kilima Mbogo**	**89.34**	**269**	P	**P**	**13 07 41.3**	**-0.4**
KMBO				IAmb	IAmb	13 07 42.5	
	comp=Z,7.1nm,0.9s						
STEI	**Steigen**	**89.75**	**339**	*eP*	**P**	**13 07 40.6**	**-1.6**
LOF	**Lofoten**	**90.26**	**340**	*eP*	**P**	**13 07 43.8**	**-0.7**
MOR8	**Moi Rana**	**90.74**	**338**	*eP*	**P**	**13 07 44.5**	**-2.3**
DAG	**Danmarks Havn**	**92.31**	**352**	*i* P	**P**	**13 07 52.9**	**-1.0**
	comp=Z,14nm,0.6s						
NSS	**Namsos**	**92.37**	**337**	*eP*	**P**	**13 07 52.8**	**-1.5**
RES	**Resolute Bay**	**93.00**	**10**	P	**P**	**13 07 57.2**	**+0.2**
	comp=Z,4.6nm,0.8s,baz=281,slow=7.9,SNR=5.9						
RES	**Resolute Bay**	**93.00**	**10**	IAmb	IAmb	13 07 58.6	
	comp=Z,5.1nm,0.8s						
HFS	**Hagfors**	**93.49**	**332**	P	**P**	**13 07 58.0**	**-1.6**
	comp=Z,3.7nm,0.6s,baz=94,slow=4.9,SNR=13						
NB2	**NORSAR Subarra**	**94.22**	**334**	P	**P**	**13 08 00.8**	**-2.2**
	comp=Z,2.1nm,0.7s,baz=65,slow=4.4						
NB2	**NORSAR Subarra**	**94.22**	**334**	P	**P**	**13 08 00.8**	**-2.2**
	baz=65,slow=4.4						
NOA	**NORSAR Array B**	**94.22**	**334**	P	**P**	**13 08 01.0**	**-2.0**
	comp=Z,2.0nm,0.7s,baz=64,slow=4.6,SNR=16						
NOA				LR	LR	13 55 46.1	
	comp=Z,26nm,18.5s,baz=200,slow=39						
DOMB	**Dombas**	**94.67**	**335**	*eP*	**P**	**13 08 04.3**	**-0.8**
YKA	**Yellowknife Ar**	**95.12**	**24**	P	**P**	**13 08 07.5**	**+0.5**
	comp=Z,7.3nm,0.7s,baz=299,slow=4.2,SNR=105						
YKA				PP	**PP**	**13 11 57.4**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=296,slow=6.0,SNR=4.9						
YKA				PKKP	**PKiKP**	**13 12 48.3**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=292,slow=1.3,SNR=4.0						
YKA				PKKPbc	**PKKPdf**	**13 25 00.0**	**-2.6**
	comp=Z,0.5nm,0.5s,baz=125,slow=3.7,SNR=13						
AKN	**Aaknes**	**95.45**	**336**	*eP*	**P**	**13 08 07.9**	**-0.7**
VRAC	**Vranov**	**96.07**	**322**	P	**P**	**13 08 12.2**	**+0.5**
	comp=Z,1.7nm,0.3s,baz=14,slow=3.4,SNR=4.3						
HYA	**Hoyanger**	**96.30**	**335**	*eP*	**P**	**13 08 12.2**	**-0.2**
SYO	**Syowa Base**	**96.92**	**201**	⇑*eX*	**P**	**13 08 13.0**	**-2.0**
SYO	**Syowa Base**	**96.92**	**201**	⇓*eX*	pP	13 08 31.0	-3.9
BLS5	**Blasjo**	**97.08**	**333**	*eP*	**P**	**13 08 15.6**	**-0.4**
GERES	**GERESS Array B**	**98.01**	**322**	P	**P**	**13 08 19.2**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=73,slow=4.6,SNR=7.1						
GERES				LR	LR	13 54 40.4	
	comp=Z,75nm,21.3s,baz=104,slow=37						
QSPA	**South Pole Qui**	**98.58**	**180**	P	Pdif	13 08 23.1	+0.5
QSPA				IAmb	IAmb	13 08 24.6	
	comp=Z,5.5nm,1.1s						
NVAR	**Mina Array Bea**	**103.80**	**47**	PKKPbc	PKKPbc	13 24 37.5	-1.1
	comp=Z,0.8nm,0.7s,baz=121,slow=4.3,SNR=6.7						
PDAR	**Pinedale Array**	**107.80**	**40**	PKiKP	**PKiKP**	**13 13 11.5**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=134,slow=2.5,SNR=4.5						
PDAR				PKKPbc	**PKKPbc**	**13 24 24.6**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=113,slow=6.0,SNR=4.5						
T25A	**Trinidad**	**114.12**	**43**	P	**PKiKP**	**13 13 25.1**	**+1.3**
	baz=303						
MNTX	**Cornudas Mount**	**116.26**	**48**	P	**PKiKP**	**13 13 29.0**	**+1.1**
	baz=300						
MNTX	**Cornudas Mount**	**116.26**	**48**		**PKiKP**	**13 13 29.0**	**+1.1**
D47A	**Chapleau**	**118.58**	**23**	P	**PKPdf**	**13 13 31.9**	**0.0**
	baz=326						
TX32	**Lajitas Array**	**118.72**	**50**		**PKiKP**	**13 13 33.0**	**+0.1**
TXAR	**Lajitas Array**	**118.73**	**50**	PKP	**PKiKP**	**13 13 33.4**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=229,slow=0.3,SNR=19						
CHGQ	**Chibougamau**	**118.87**	**15**	P	**PKPdf**	**13 13 32.2**	**-0.2**
	baz=336						
D50A	**G1974 Best Tow**	**119.67**	**20**	P	**PKPdf**	**13 13 33.4**	**-0.6**
	baz=330						
D53A	**Lac Vacive, Po**	**120.46**	**19**	P	**PKPdf**	**13 13 35.0**	**-0.5**
	baz=332						
D54A	**Lac Fusel, La**	**120.72**	**18**	P	**PKPdf**	**13 13 35.2**	**-0.8**
	baz=333						
TORD	**Torodi Ar. Bea**	**120.97**	**291**	PKP	**PKPdf**	**13 13 36.2**	**-1.2**
	comp=Z,1.3nm,0.3s,baz=45,slow=2.1,SNR=23						
TORD				PKKPab	**PKKPab**	**13 23 42.1**	**0.0**
	comp=Z,1.1nm,0.8s,baz=260,slow=2.8,SNR=4.5						
JCT	**Junction City**	**120.97**	**47**	P	**PKiKP**	**13 13 37.6**	**+0.5**
	baz=304						
JCT	**Junction City**	**120.97**	**47**		**PKiKP**	**13 13 37.7**	**+0.5**
D55A	**Sainte-Anne-du**	**121.20**	**17**	P	**PKPdf**	**13 13 36.7**	**-0.2**
	baz=335						
ALGO	**Algonquin Park**	**121.33**	**20**	P	**PKPdf**	**13 13 37.0**	**-0.2**
	baz=332						
D56A	**ZEC Mazanza, M**	**121.38**	**17**	P	**PKPdf**	**13 13 37.0**	**-0.3**
	baz=335						
E55A	**Montcerf-Lytto**	**121.53**	**18**	P	**PKPdf**	**13 13 37.4**	**-0.2**
	baz=334						
D57A	**Chemin Vers le**	**121.65**	**16**	P	**PKPdf**	**13 13 37.4**	**-0.4**
	baz=336						
CCM	**Cathedral Cave**	**121.70**	**35**	P	**PKiKP**	**13 13 38.4**	**+0.1**
	baz=315						
E56A	**St. Veronique**	**121.76**	**17**	P	**PKPdf**	**13 13 37.6**	**-0.4**
	baz=335						
U40A	**Yellville**	**121.94**	**37**	P	**PKPdf**	**13 13 38.4**	**-0.2**
	baz=313						
E57A	**Chemin Saint G**	**122.13**	**17**	P	**PKiKP**	**13 13 38.9**	**0.0**
	baz=336						
L48A	**N Adams**	**122.21**	**27**	P	**PKPdf**	**13 13 38.8**	**-0.2**
	baz=323						
MIAR	**Mount Ida**	**122.70**	**39**	P	**PKiKP**	**13 13 41.1**	**+0.7**
	baz=311						
MIAR	**Mount Ida**	**122.70**	**39**		**PKiKP**	**13 13 40.8**	**+0.4**
D62A	**Allapoint, All**	**122.78**	**13**	P	**PKPdf**	**13 13 39.6**	**-0.3**
	baz=342						
H55A	**Tweed**	**122.86**	**20**	P	**PKPdf**	**13 13 40.0**	**-0.2**
	baz=332						
E61A	**Lac Etchemin**	**123.07**	**14**	P	**PKiKP**	**13 13 40.8**	**+0.1**
	baz=340						
F64A	**Sherman**	**124.09**	**12**	P	**PKPdf**	**13 13 42.3**	**-0.1**
	baz=342						
I58A	**Old Forge**	**124.35**	**19**	P	**PKPdf**	**13 13 43.1**	**0.0**
	baz=334						
G63A	**Kingsbury**	**124.51**	**14**	P	**PKiKP**	**13 13 43.6**	**-0.1**
	baz=341						
J58A	**Remsen**	**124.55**	**19**	P	**PKiKP**	**13 13 43.7**	**-0.1**
	baz=334						
J59A	**Piesco**	**124.70**	**18**	P	**PKiKP**	**13 13 44.0**	**-0.2**
	baz=335						
J59A	**Piesco**	**124.70**	**18**		**PKiKP**	**13 13 43.9**	**-0.2**
I60A	**Shoreham**	**124.72**	**17**	P	**PKiKP**	**13 13 44.3**	**+0.2**
	baz=336						
G65A	**Princeton**	**124.88**	**12**	P	**PKPdf**	**13 13 44.2**	**+0.2**
	baz=343						
WVT	**Waverly**	**124.98**	**34**	P	**PKiKP**	**13 13 44.8**	**-0.1**
	baz=318						
WVT	**Waverly**	**124.98**	**34**		**PKiKP**	**13 13 44.7**	**-0.1**
H65A	**Eastbrook**	**125.22**	**13**	P	**PKPdf**	**13 13 44.7**	**+0.1**
	baz=342						
H66A	**Whiting**	**125.33**	**12**	P	**PKPdf**	**13 13 45.0**	**+0.2**
	baz=343						
M61A	**Granite Spring**	**126.88**	**19**	P	**PKiKP**	**13 13 48.4**	**-0.1**
	baz=335						
Z50A	**Ashland**	**128.16**	**35**	P	**PKiKP**	**13 13 51.1**	**-0.2**
	baz=318						
PLCA	**Paso Flores**	**144.72**	**157**	PKP	**PKPdf**	**13 14 21.1**	**+0.1**
	comp=Z,13nm,0.8s,baz=230,slow=4.0,SNR=27						
PLCA	**Paso Flores**	**144.72**	**157**		**PKPdf**	**13 14 21.3**	**+0.3**
SDDR	**Presa de Saban**	**147.41**	**32**		**PKPbc**	**13 14 29.6**	**+0.9**
BCIP	**Isla Barro Col**	**148.39**	**56**	*eP*	**PKPdf**	**13 14 28.7**	**+0.8**
BCIP	**Isla Barro Col**	**148.39**	**56**		**PKPbc**	**13 14 31.0**	**-0.4**
ICMP	**Isla Caja de M**	**150.65**	**26**		**PKPbc**	**13 14 36.9**	**+0.1**
ROC1	**El Roble**	**150.96**	**149**		**PKiKP**	**13 14 38.0**	**-0.1**
PEL	**Peldehue**	**151.00**	**149**		**PKPbc**	**13 14 37.6**	**+0.2**
SJCC	**San Jacinto, C**	**151.65**	**50**	*eP*	**PKiKP**	**13 14 40.2**	**+0.4**
URIC	**Uribia, Colomb**	**152.68**	**42**	*eP*	**PKPbc**	**13 14 40.2**	**-1.4**
URIC	**Uribia, Colomb**	**152.68**	**42**		**PKiKP**	**13 14 42.3**	**+0.5**
UREC	**San Jos de Ur**	**152.69**	**54**	*eP*	**PKPbc**	**13 14 41.1**	**-0.6**
SMLC	**San Martn de**	**153.19**	**50**	*eP*	**PKPbc**	**13 14 42.0**	**-0.7**
GO04	**Tololo Observa**	**153.25**	**145**		**PKiKP**	**13 14 42.9**	**0.0**
CBOC	**Ciudad Bolivar**	**153.36**	**58**	*eP*	**PKiKP**	**13 14 43.8**	**+0.3**
CFA	**Coronel Fontan**	**153.45**	**151**	PKPbc	**PKiKP**	**13 14 43.3**	**+0.3**
	comp=Z,12nm,0.4s,baz=201,slow=2.3,SNR=19						
PTBC	**PUERTO BERRIO**	**154.26**	**55**	*eP*	**PKPbc**	**13 14 42.0**	**-3.1**
NORC	**Norcasia**	**154.48**	**57**	*eP*	**PKPbc**	**13 14 44.7**	**-1.0**
SOTA	**Rioblanco**	**154.65**	**66**	*eP*	**PKPbc**	**13 14 46.4**	**-0.1**
SPBC	**San Pablo de B**	**155.09**	**56**	*eP*	**PKPdf**	**13 14 44.7**	**+6.6**
PAMC	**Pamplona, Colo**	**155.16**	**51**	*eP*	**PKPdf**	**13 14 43.8**	**+5.1**
CHIC	**Chingaza**	**155.94**	**57**	*eP*	**PKPdf**	**13 14 47.3**	**+7.7**
CPUP	**Villa Florida**	**162.11**	**169**	PKPab	**PKPab**	**13 15 33.5**	**+0.9**
	comp=Z,2.5nm,0.8s,baz=204,slow=5.1,SNR=5.1						
SIV	**San Ignacio**	**169.71**	**135**	PKP	**PKPdf**	**13 14 52.5**	**+0.1**
	comp=Z,1.9nm,0.9s,baz=175,slow=1.5,SNR=7.7						

*NNC **09** 13:20:41.3±4.9, 36°.68N×70°.13E, h245km±72km, mb2.8, mpv3.7, Error ellipse: s-maj=47.3km s-min=35.2km az=34.0*

ISC 09 13:20:41.3±3.3, 36°.7N±0°.2×70°.0E±0°.1, h213km, n9, σ1°48/13, 5C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.15**	**26**	P		**Pn**		**13 22 10.2**	**-0.7**
	SNR=50								
KK31	**Karatay Array**	**6.43**	**3**	⇓P		**Pn**		**13 22 14.8**	**+0.5**
	4.2nm,0.5s,baz=183,slow=13,SNR=93								
KK31				⇑S		**S**		**13 23 29.8**	**+1.8**
	2.4nm,0.5s,baz=184,slow=22,SNR=8.9								
UCH	**Uchtor**	**6.55**	**31**	P		**Pn**		**13 22 15.5**	**-0.6**
	SNR=9.5								
AAK	**Ala-Archa**	**6.88**	**29**	⇑P		**Pn**		**13 22 19.3**	**-0.9**
	2.0nm,0.5s								
AAK				⇓S		**S**		**13 23 38.3**	**-0.5**
	1.6nm,0.6s								
CHMS	**Chumysh**	**7.29**	**29**	P		**Pn**		**13 22 25.4**	**0.0**
	SNR=5.7								
USP	**Ospenovka**	**7.43**	**26**	P		**Pn**		**13 22 27.1**	**0.0**
	SNR=6.9								
TKM2	**Tokmak 2**	**7.57**	**33**	P		**Pn**		**13 22 28.6**	**-0.5**
	SNR=8.8								
TKM2	**Tokmak 2**	**7.57**	**33**	⇑P		**Pn**		**13 22 27.5**	**-1.6**
	1.9nm,0.5s								
TKM2				⇑S		**S**		**13 23 57.0**	**+1.9**
	0.9nm,0.6s								
AB31	**Akbulak array**	**14.56**	**333**	⇑P		**P**		**13 23 59.4**	**+1.1**
	6.7nm,0.3s,baz=267,slow=35,SNR=15								
AB31				⇓S		**S**		**13 26 35.5**	**-2.9**
	1.2nm,0.3s,baz=162,slow=22,SNR=11								

*IDC **09** 13:20:58.4±0.9, 21°.93N×145°.14E, h0km, mb3.5/8, mb1 3.8/9, mb1mx3.6/35, mbtmp3.6/9, ML4.1/1, MS3.0/2, Ms1 3.1/2, ms1mx2.4/32, Error ellipse: s-maj=34.3km s-min=19.3km az=93.0*

*NEIC **09** 13:21:02.4±1.9, 22°.0N±0°.1×145°.1E±0°.1, h26km±6km, mb4.3/9, Error ellipse: s-maj=21.0km s-min=13.9km az=65.0*

ISC 09 13:21:04.6±0.8, 21°.99N±0°.09×145°.0E±0°.2, h44km, n20, σ0°99/19, mb3.8/13, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.68**	**334**	Pn		**Pn**		**13 22 25.1**	**-1.4**
	5.8nm,0.3s,baz=352,slow=18,SNR=11								
JCJ				Sn		**Sn**		**13 23 29.2**	**-1.2**
	12nm,0.3s,baz=295,slow=22,SNR=8.9								
YOJ	**Yonagu

SPX	**San Pedro Mart**	**0.39**	**112**	⇑*iP*	**Pb**	**13 26 39.0**	**-0.1**
SPX				*eS*	**Sb**	**13 26 44.8**	**-0.1**
SPX				⇑*e*		13 26 45.0	
SPX				IAML		13 26 45.0	
	comp=E,149nm,0.2s						
SPX	**San Pedro Mart**	**0.39**	**112**	*eP*	**Pb**	**13 26 38.9**	**-0.2**
SPX				*eS*	**Sb**	**13 26 44.2**	**-0.7**
SQX	**San Quintin**	**0.60**	**179**	⇓*eP*	**Pn**	**13 26 43.8**	**0.0**
SQX				*eS*	**Sn**	**13 26 52.4**	**-0.5**
ECBX	**El Chinero**	**0.77**	**68**	*eP*	**Pn**	**13 26 46.6**	**+0.5**
ECBX				*eS*	**Sn**	**13 26 56.5**	**-0.5**
ESJX	**Sierra Juarez**	**0.82**	**356**	*eP*	**Pb**	**13 26 45.6**	**-0.8**
ESJX				*eS*	**Sb**	**13 26 56.0**	**-1.1**
SFX	**San Felipe**	**0.90**	**99**	*eP*	**Pn**	**13 26 48.8**	**+1.0**
SFX				*eS*	**Sn**	**13 27 00.9**	**+0.8**
CBX	**Cerro Bola**	**1.31**	**330**	*eP*	**Pb**	**13 26 54.9**	**+0.2**
CBX				*eS*	**Sb**	**13 27 11.2**	**+0.1**
MBIG	**Mexicali**	**1.35**	**25**	*eP*	Pn	13 26 46.3	-7.8
MBIG				*eS*	Sn	13 26 59.1	-12
ERMX	**Rumorosa**	**1.37**	**355**	IAML		13 27 14.7	
	comp=N,31nm,0.1s						
ERMX				*e*		13 27 14.7	
TJIG	**Tijuana**	**1.42**	**332**	*eP*	**Pb**	**13 26 56.3**	**-0.1**
TJIG				*eS*	**Sb**	**13 27 14.3**	**+0.2**
BAR	**Barrett**	**1.64**	**336**	*eP*	**Pb**	**13 27 00.5**	**+0.4**

*IDC **09** 13:55:07.2±0.7,23°.20S×170°.46E,h0km,mb4.5/14, mb1 4.7/17,mb1mx4.5/29,mbtmp4.6/17,ML4.5/3,MS4.2/23, Ms1 4.2/23,ms1mx4.1/30,Error ellipse: s-maj=19.8km s-min=18.3km az=88.0*

*BJI **09** 13:55:11.0±0.0,23°.30S×170°.40E,h30km,mB5.1/17, mb4.7/22,Ms4.7/8,Ms7 4.4/8*

*NEIC **09** 13:55:12.9±1.4,23°.28S±0°.09×170°.31E±0°.07,h38km±4km, mb4.9/23,Error ellipse: s-maj=12.9km s-min=8.9km az=156.0*

*GCMT **09** 13:55:12.9±0.3,23°.27S±0°.02×170°.37E±0°.02,h20km±1km, MW5.0/96,Moment Tensor Solution. s25,c31; s96,c137; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=1.23±.22; Mθθ4.71±.18; Mϕϕ-3.48±.16; Mrθ-0.31±.30; Mrϕ-0.43±.14; Mθϕ0.18±.32; Best double couple: M♂4.13200×10^16 NP1:ϕ♂228.00000°,δ85.00000°,λ-179.00000°. NP2: ϕs138.00000°,δ89.00000°,λ-5.00000°. Principal axes: T 4.7500, Plg3.0000°, Azm183.0000°; N -1.2340, Plg85.0000°, Azm309.0000°; P -3.5150, Plg4.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **09** 13:55:15.1±0.0,25°.21S×171°.28E,h33km,Ms4.4*

ISC 09 13:55:11.6±0.5,23°.31S±0°.06×170°.31E±0°.07,h24km±3km, h24km:pP-P,n158,σ2s16/162,mb4.9/42,MS4.2/24,2D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.78**	**288**	**P**	**Pn**	**13 56 06.7**	**-1.8**
	58nm,0.3s,baz=111,slow=8.4,SNR=467						
DZM				Sn	**Sn**	**13 56 51.2**	**-1.1**
	34nm,0.3s,baz=126,slow=19,SNR=5.8						
DZM				LR	LR	13 57 38.9	
	comp=Z,5μm,18.7s,baz=150,slow=39						
NFK	**Norfolk Island**	**6.09**	**200**	P	**Pn**	**13 56 39.1**	**-1.1**
	baz=6.2,SNR=21						
MSVF	**Nonsavu**	**9.13**	**54**		**Pn**	**13 57 22.3**	**+0.3**
RAO	**Raoul Island**	**12.10**	**122**	LR	LR	14 01 28.4	
	comp=Z,706nm,21.4s,baz=338,slow=32						
OUZ	**Omahuta**	**12.21**	**167**	Pn	**Pn**	**13 58 04.4**	**+0.5**
URZ	**Urewera**	**15.99**	**160**	Pn	**Pn**	**13 58 55.5**	**+0.5**
	0.3nm,0.3s,baz=19,slow=11,SNR=3.5						
URZ				LR	LR	14 03 50.9	
	comp=Z,1μm,18.2s,baz=31,slow=33						
HNR	**Honiara**	**17.00**	**323**	Pn	**Pn**	**13 59 07.6**	**-0.3**
	5.3nm,0.3s,baz=244,slow=4.9,SNR=7.0						
HNR				LR	LR	14 05 06.4	
	comp=Z,899nm,19.0s,baz=151,slow=35						
EIDS	**Eidsvold**	**17.65**	**259**	P	**P**	**13 59 17.5**	**+0.8**
	baz=18,SNR=7.0						
ARMA	**Armidale**	**18.10**	**243**	P	**P**	**13 59 22.9**	**+1.1**
	baz=18,SNR=7.5						
ARMA	**Armidale**	**18.10**	**243**		**P**	**13 59 22.5**	**+0.7**
RMQ	**Roma**	**19.80**	**256**	P	**Pn**	**13 59 42.0**	**-0.1**
	baz=20,SNR=19						
RPZ	**Rata Peaks**	**20.36**	**178**	P	**P**	**13 59 46.4**	**+0.1**
	31nm,0.8s,baz=270,slow=2.2,SNR=4.3						
RPZ				LR	LR	14 07 13.1	
	comp=Z,1μm,18.0s,baz=2.0,slow=36						
RPZ	**Rata Peaks**	**20.36**	**178**	P	**P**	**13 59 45.6**	**-0.8**
RPZ				IAmb	IAmb	13 59 51.6	
	comp=Z,34nm,0.9s						
CAN	**Canberra**	**22.05**	**232**	P	**P**	**14 00 07.0**	**+2.2**
CAN				IAmb	IAmb	14 00 12.5	
	comp=Z,35nm,1.3s						
YNG	**Young**	**22.06**	**235**	P	**P**	**14 00 05.8**	**+1.0**
	baz=22,SNR=6.1						
CTA	**Charters Tower**	**22.58**	**274**	P	**P**	**14 00 11.6**	**+1.2**
	comp=Z,7.4nm,0.6s,baz=101,slow=13,SNR=11						
CTA				LR	LR	14 08 55.5	
	comp=Z,932nm,20.4s,baz=49,slow=36						
CTAO	**Charters Tower**	**22.58**	**274**	P	**P**	**14 00 11.8**	**+1.3**
CTAO				IAmb	IAmb	14 00 30.7	
	comp=Z,26nm,1.1s						
CMSA	**Cobar Meteorol**	**23.30**	**244**	P	**P**	**14 00 19.2**	**+1.4**
	baz=23,SNR=67						
QLP	**Quilpie**	**23.86**	**257**	P	**P**	**14 00 24.5**	**+1.3**
	baz=24,SNR=14						
MTSU	**Mount Surprise**	**24.84**	**277**	P	**P**	**14 00 33.3**	**+0.9**
	baz=25,SNR=9.7						
TOO	**Toolangi**	**25.59**	**231**	P	**P**	**14 00 40.1**	**+1.1**
	baz=26,SNR=8.1						
KRVT	**Keravat (AS076**	**25.87**	**314**	P	**P**	**14 00 45.1**	**+3.5**
	comp=Z,47nm,0.9s,baz=15,slow=13,SNR=7.3						
STKA	**Stephens Creek**	**26.78**	**245**	P	**P**	**14 00 51.3**	**+1.5**
	baz=27,SNR=11						
STKA	**Stephens Creek**	**26.78**	**245**	P	**P**	**14 00 50.8**	**+1.0**
	comp=Z,6.4nm,0.7s,baz=89,slow=11,SNR=16						
STKA				LR	LR	14 10 43.5	
	comp=Z,522nm,18.3s,baz=73,slow=35						
STKA	**Stephens Creek**	**26.78**	**245**	P	**P**	**14 00 49.4**	**-0.4**
COEN	**Coen**	**27.31**	**285**	P	**P**	**14 00 55.5**	**+0.9**
	baz=28,SNR=12						
COEN	**Coen**	**27.31**	**285**	P	**P**	**14 00 55.3**	**+0.6**
COEN				IAmb	IAmb	14 00 56.9	
	comp=Z,44nm,0.9s						
RAR	**Rarotonga**	**27.74**	**92**	LR	LR	14 09 33.6	
	comp=Z,305nm,22.0s,baz=272,slow=31						
HTT	**Hallett**	**29.30**	**243**	P	**P**	**14 01 13.6**	**+1.2**
	baz=29,SNR=5.2						
BBOO	**Buckleboo**	**31.56**	**245**	P	**P**	**14 01 31.5**	**-0.7**
	baz=32,SNR=6.6						
BBOO	**Buckleboo**	**31.56**	**245**	P	**P**	**14 01 32.8**	**+0.6**
BBOO				IAmb	IAmb	14 01 34.5	
	comp=Z,26nm,1.1s						
AS31	**Alice Springs**	**33.34**	**262**	P	**P**	**14 01 47.8**	**-0.2**
ASAR	**Alice Springs**	**33.34**	**262**	P	**P**	**14 01 47.7**	**-0.3**
	comp=Z,21nm,1.0s,baz=94,slow=10.0,SNR=140						
ASAR				LR	LR	14 14 41.4	
	comp=Z,409nm,21.1s,baz=102,slow=35						
WR0	**Warramunga Arr**	**33.37**	**269**	P	**P**	**14 01 45.8**	**-2.5**
WR0				IAmb	IAmb	14 01 49.8	
	comp=Z,17nm,0.9s						
WB0	**Warramunga Arr**	**33.55**	**269**	P	**P**	**14 01 49.0**	**-0.8**
WB0				IAmb	IAmb	14 01 49.9	
	comp=Z,11nm,1.1s						
WB2	**Warramunga Arr**	**33.55**	**269**	P	**P**	**14 01 48.9**	**-0.9**
WB2				IAmb	IAmb	14 01 52.8	
	comp=Z,15nm,0.9s						
WRAB	**Tennant Creek**	**33.55**	**269**	P	**P**	**14 01 48.1**	**-1.8**
WRAB				IAmb	IAmb	14 01 52.2	
	comp=Z,9.6nm,0.8s						
WRA	**Warramunga Arr**	**33.56**	**269**	P	**P**	**14 01 48.9**	**-1.0**
	comp=Z,9.3nm,0.9s,baz=105,slow=8.9,SNR=23						
WRA				LR	LR	14 15 41.7	
	comp=Z,1μm,18.2s,baz=100,slow=37						
JAY	**Jayapura**	**35.35**	**301**	LR	LR	14 14 57.6	
	comp=Z,219nm,18.4s,baz=86,slow=34						
KDU	**Kakadu**	**37.40**	**280**	P	**P**	**14 02 22.6**	**-0.3**
	baz=38,SNR=7.0						
PPT	**Papeete**	**37.93**	**89**	LR	LR	14 13 50.6	
	comp=Z,324nm,19.6s,baz=254,slow=30						
FORT	**Forrest**	**38.19**	**249**	P	**P**	**14 02 30.0**	**+0.5**
	baz=38,SNR=11						
FORT	**Forrest**	**38.19**	**249**	P	**P**	**14 02 30.2**	**+0.7**
WRKA	**Warakurna**	**38.26**	**259**	P	**P**	**14 02 29.9**	**-0.3**
	baz=38,SNR=26						
MTN	**Manton Dam**	**38.56**	**279**	P	**P**	**14 02 32.1**	**-0.7**
	baz=39,SNR=6.1						
MTN	**Manton Dam**	**38.56**	**279**	P	**P**	**14 02 32.0**	**-0.8**
MTN				IAmb	IAmb	14 02 40.8	
	comp=Z,24nm,0.9s						
KNRA	**Kununurra**	**39.79**	**273**	P	**P**	**14 02 42.5**	**-0.5**
	baz=40,SNR=12						
KNRA	**Kununurra**	**39.79**	**273**	P	**P**	**14 02 42.9**	**-0.1**
KNRA				IAmb	IAmb	14 02 51.5	
	comp=Z,39nm,1.0s						
SAUI	**Saumlaki**	**40.38**	**286**	P	**P**	**14 02 46.8**	**-1.1**
	comp=Z,365nm,1.1s						
FITZ	**Fitzroy Crossi**	**41.99**	**268**	P	**P**	**14 03 01.6**	**+0.5**
	baz=42,SNR=53						
FITZ	**Fitzroy Crossi**	**41.99**	**268**	LR	LR	14 20 51.4	
	comp=Z,558nm,18.1s,baz=105,slow=37						
FITZ	**Fitzroy Crossi**	**41.99**	**268**	P	**P**	**14 03 01.6**	**+0.5**
FITZ				IAmb	IAmb	14 03 11.0	
	comp=Z,45nm,0.9s						
BNDI	**Bandanaira**	**43.23**	**289**	P	**P**	**14 03 10.8**	**-0.4**
	comp=Z,2μmcomp=Z,66nm,1.2s						
SIJI	**Sorong**	**43.96**	**295**	P	**P**	**14 03 16.2**	**-0.9**
	comp=Z,15nm,0.9s,baz=72,slow=8.3,SNR=9.5						
SOEI	**Soe**	**45.96**	**279**	P	**P**	**14 03 32.1**	**-1.1**
	comp=Z,42nm,0.9s						
PSA00	**Pilbara Seismi**	**46.49**	**262**	P	**P**	**14 03 37.0**	**-0.2**
MEEK	**Meekatharra**	**46.73**	**255**	P	**P**	**14 03 38.6**	**-0.4**
	baz=47,SNR=9.7						
NWAO	**Narrogin (SRO)**	**47.37**	**246**	P	**P**	**14 03 43.5**	**-0.4**
NWAO				IAmb	IAmb	14 03 53.3	
	comp=Z,32nm,1.1s						
SANI	**Sanana**	**47.84**	**290**	P	**P**	**14 03 45.7**	**-2.1**
	comp=Z,968nmcomp=Z,57nm,1.0s						
BLDU	**Ballidu**	**47.96**	**249**	P	**P**	**14 03 48.1**	**-0.4**
	baz=48,SNR=5.5						
EDFI	**Ende, Flores**	**48.69**	**279**	P	P	14 04 05.7	+11
MORW	**Morawa**	**48.69**	**251**	P	**P**	**14 03 54.1**	**-0.1**
	baz=49,SNR=5.7						
MORW	**Morawa**	**48.69**	**251**	P	**P**	**14 03 53.9**	**-0.3**
KAPI	**Kappang**	**51.98**	**282**	LR	LR	14 27 16.6	
	comp=Z,548nm,21.4s,baz=166,slow=37						
APSI	**Ampana**	**52.17**	**288**	P	**P**	**14 04 22.2**	**+1.5**
	comp=Z,17nm,0.9s						
KEKH	**Kekaha**	**53.65**	**35**	P	**P**	**14 04 30.6**	**-0.8**
MPSI	**Mapaga**	**54.30**	**288**	P	**P**	**14 04 35.1**	**-1.3**
	comp=Z,380nmcomp=Z,20nm,1.1s						
VNDA	**Vanda**	**54.42**	**182**	P	**P**	**14 04 36.1**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=325,slow=6.4,SNR=4.6						
VNDA				LR	LR	14 24 24.3	
	comp=Z,293nm,20.4s,baz=10.0,slow=32						
VNDA	**Vanda**	**54.42**	**182**	P	**P**	**14 04 36.0**	**-0.2**
MDSI	**Maura Dua**	**66.34**	**275**	P	**P**	**14 05 59.8**	**+1.0**
	comp=Z,17nm,1.0s						
QSPA	**South Pole Qui**	**66.76**	**180**	P	**P**	**14 06 00.7**	**-0.1**
MJAR	**Matsushiro Arr**	**66.81**	**332**	LR	LR	14 32 45.8	
	comp=Z,31nm,21.0s,baz=115,slow=34						
SDSI	**Sungai Dareh**	**70.28**	**278**	P	P	14 06 32.3	+8.8
KSRS	**Korea Array**	**72.42**	**326**	P	**P**	**14 06 35.9**	**0.0**
	comp=Z,1.0nm,0.8s,baz=138,slow=6.9,SNR=6.8						
KSRS				LR	LR	14 34 31.5	
	comp=Z,79nm,21.5s,baz=130,slow=33						
MNSI	**Mandailing Nat**	**72.67**	**279**	P	**P**	**14 06 37.8**	**-0.1**
	comp=Z,23nm,0.4s						
NJ2	**Nanjing**	**73.83**	**316**	*eP*	**P**	**14 06 44.5**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
GSI	**Gunungsitoli**	**74.70**	**278**	P	P	14 06 59.1	+9.2
MAW	**Mawson**	**75.06**	**202**	P	**P**	**14 06 50.8**	**-0.2**
	comp=Z,4.6nm,0.8s,baz=96,slow=8.4,SNR=6.7						
MAW				LR	LR	14 38 03.2	
	comp=Z,68nm,18.1s,baz=89,slow=34						
MAW	**Mawson**	**75.06**	**202**	P	**P**	**14 06 49.5**	**-1.4**
WHN	**Wuhan**	**75.82**	**312**	P	P	14 07 05.4	+10
PETK	**Petropavlovsk-**	**76.89**	**352**	P	**P**	**14 07 00.2**	**-1.2**
	comp=Z,5.8nm,0.9s,baz=150,slow=7.0,SNR=5.6						
PETK				LR	LR	14 37 23.4	
	comp=Z,244nm,19.4s,baz=222,slow=33						
TIA	**Tai'an**	**77.64**	**318**	P	**P**	**14 07 06.0**	**-0.1**
TIA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GYA	**Guiyang**	**78.97**	**305**	*eP*	**P**	**14 07 15.5**	**+1.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**81.09**	**294**	P	**P**	**14 07 26.4**	**+1.2**
	comp=Z,5.7nm,0.8s,baz=136,slow=4.1,SNR=21						
KMI	**Kunming**	**81.27**	**302**	P	**P**	**14 07 23.3**	**-3.1**
KMI				pP	PcP	14 07 31.6	-0.9
KMI				sP	pwP	14 07 37.1	-1.0
KMI				S	S	14 17 24.9	-11
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KMI				LR	LR		
	comp=Z,170nm,29.1s						
KMI				LR	LR		
	comp=Z,180nm,22.4s						
KMI				LR	LR		
	comp=Z,170nm,19.1s						
SYO	**Syowa Base**	**81.32**	**196**	⇓*eX*	P	14 07 33.0	+7.4
SYO	**Syowa Base**	**81.32**	**196**	⇓*es*	sP	14 07 40.0	+5.4
XAN	**Xi'an**	**81.59**	**313**	P	P	14 07 36.0	+8.4
XAN				sP	pwP	14 07 51.8	+13
XAN	**Xi'an**	**81.59**	**313**	S	S	14 17 48.8	+10
XAN				pmax	pmax		
	comp=Z,14nm,1.4s						
XAN				pmax	pmax		
	comp=Z,67nm,3.7s						
XAN				LR	LR		
	comp=N,120nm,21.7s						
XAN				LR	LR		
	comp=E,100nm,17.3s						
CD2	**Chengdu**	**83.50**	**307**	P	**P**	**14 07 37.3**	**-0.4**
CD2				pmax	pmax		
	comp=E,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**83.95**	**319**	P	**P**	**14 07 40.0**	**+0.2**
HHC				pP	sP	14 07 49.6	+0.8
HHC				sP	pwP	14 07 55.1	+3.7
HHC				S	S	**14 17 59.5**	**-2.9**
HHC				sS	ScS	14 18 18.6	+3.8
HHC				pmax	pmax		
	comp=E,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=E,47nm,5.0s						
HHC				LR	LR		
	comp=E,140nm,19.4s						
HHC				LR	LR		
	comp=E,89nm,17.8s						
HHC				LR	LR		
	comp=E,55nm,15.3s						
SNAA	**Sanae**	**85.15**	**182**	P	**P**	**14 07 43.6**	**-1.9**
VNA3	**Neumayer Olymp**	**85.70**	**180**	P	**P**	**14 07 46.2**	**-2.0**
VNA2	**Neumayer--Watz**	**86.01**	**181**	P	**P**	**14 07 48.6**	**-1.0**
LZH	**Lanzhou**	**86.19**	**312**	*eP*	**P**	**14 07 51.2**	**0.0**
LZH				pP	pwP	14 08 01.8	-1.1
LZH				sP	sP	14 08 05.9	+5.7
LZH				*ePP*	**PP**	**14 11 15.0**	**+2.7**
LZH				pmax	pmax		
	comp=E,20nm,1.4s						
LZH				pmax	pmax		
	comp=E,100nm,5.6s						
LZH				LR	LR		
	comp=E,160nm,16.8s						
LZH				LR	LR		
	comp=E,190nm,17.0s						
LZH				LR	LR		
	comp=E,290nm,19.3s						
GTA	**Gaotai**	**90.64**	**313**	*eP*	**P**	**14 08 11.4**	**-0.9**
GTA				pP	sP	14 08 21.8	+0.5
GTA				sP	pwP	14 08 25.6	+1.6
GTA				pmax	pmax		
	comp=E,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=E,91nm,7.3s						
GTA				LR	LR		
	comp=E,63nm,20.0s						
GTA				LR	LR		
	comp=E,82nm,19.0s						
GTA				LR	LR		
	comp=E,130nm,17.1s						
NVAR	**Mina Array Bea**	**90.75**	**48**	P	**P**	**14 08 11.9**	**-1.0**
	comp=E,1.0nm,0.7s,baz=227,slow=8.4,SNR=12						
NVAR				LR	LR	14 42 07.0	
	comp=E,136nm,20.0s,baz=222,slow=31						
SONM	**Songino Array**	**91.06**	**323**	P	**P**	**14 08 14.0**	**0.0**
	comp=E,2.2nm,0.8s,baz=137,slow=3.5,SNR=8.6						
SONM				LR	LR	14 49 59.2	
	comp=E,34nm,18.1s,baz=150,slow=36						
ILAR	**Eielson Array**	**93.81**	**17**	P	**P**	**14 08 23.2**	**-2.9**
	comp=E,1.3nm,0.7s,baz=237,slow=5.1,SNR=15						
ILAR				LR	LR	14 47 17.6	
	comp=E,69nm,18.6s,baz=238,slow=33						
TXAR	**Lajitas Array**	**97.82**	**62**	LR	LR	14 47 30.0	
	comp=E,73nm,18.0s,baz=0.0,slow=32						
WMQ	**Urumqi**	**100.72**	**313**	*eP*	**Pdif**	**14 08 59.4**	**+1.4**
WMQ				pP	pwP	14 09 09.8	0.0
WMQ				sP	sP	14 09 13.4	+6.2
ARCES	**ARCESS Array B**	**129.24**	**345**	PKP	**PKPdf**	**14 14 14.9**	**-2.2**
	comp=E,1.1nm,0.6s,baz=72,slow=3.9,SNR=2.4						
FINES	**FINESS Array B**	**134.71**	**337**	PKP	**PKPdf**	**14 14 26.5**	**-1.1**
	comp=E,2.4nm,1.0s,baz=149,slow=6.5,SNR=2.5						
AKASG	**Malin Array Be**	**139.34**	**322**	PKP	**PKPdf**	**14 14 37.4**	**+0.9**
	comp=E,0.1nm,0.3s,baz=53,slow=2.4,SNR=2.1						
NB2	**NORSAR Subarra**	**139.62**	**344**	PKPdf	**PKPdf**	**14 14 36.5**	**-0.3**
	comp=Z,5.7nm,2.0s,baz=39,slow=1.9						
NOA	**NORSAR Array B**	**139.62**	**344**	PKP	**PKPdf**	**14 14 36.3**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=21,slow=2.7,SNR=2.3						
MORC	**Moravsky Berou**	**146.05**	**328**	*ePKP*	**PKPab**	**14 14 50.3**	**+0.3**
MORC				*e*		14 14 58.1	
OSTC	**Ostas**	**146.16**	**330**	*ePKP*	**PKiKP**	**14 14 56.8**	**+3.9**
OSTC				*ex*	x	14 15 02.6	
CHVC	**Chvalec**	**146.21**	**330**	*ePKP*	**PKPbc**	**14 14 49.5**	**-0.3**
VYHS	**Vyhne**	**146.22**	**325**	*eP*	**PKiKP**	**14 14 53.5**	**+0.5**
DPC	**Dobruska-Polom**	**146.25**	**330**	*ePKP*	**PKPbc**	**14 14 49.5**	**-0.4**
DPC				*epPKP*	**sPKPdf**	**14 14 57.6**	**-0.5**
UPC	**Upice**	**146.28**	**330**	*ePKP*	**PKiKP**	**14 14 56.6**	**+3.5**
UPC				*epPKP*	sPKPab	14 14 59.3	-0.6
JAVC	**Velka Javorina**	**146.59**	**327**	*ePKP*	**PKPab**	**14 14 51.8**	**-0.3**
JAVC				*e*		14 15 01.1	
VRAC	**Vranov**	**146.83**	**328**	*ePKP*	**PKPbc**	**14 14 51.4**	**-0.2**
VRAC				*e*		14 15 00.5	
BRG	**Berggiesshubel**	**146.94**	**332**	*ePKP*	**PKPbc**	**14 14 51.5**	**-0.3**
	comp=Z,10.0nm,1.3s						
BRG				*i*		14 15 00.4	
	comp=Z,20nm,1.1s						
BRG	**Berggiesshubel**	**146.94**	**332**	*ePKPbc*	**PKiKP**	**14 14 60.0**	**+5.6**
	baz=40,slow=2.5						
CLL	**Collm**	**147.01**	**334**	*ePKPbc*	**PKiKP**	**14 14 54.0**	**-0.5**
CLL				*ep*PKPbc	sPKPbc	14 15 01.0	-0.2
	comp=Z,25nm,1.4s						
CLL	**Collm**	**147.01**	**334**	*ePKPbc*	**PKiKP**	**14 15 01.8**	**+7.3**
	baz=40,slow=2.5						
KRUC	**Moravsky**	**147.09**	**328**	*ePKP*	**PKPbc**	**14 14 51.9**	**-0.4**
KRUC				*e*		14 15 01.1	
FBE	**Freiberg**	**147.15**	**333**	*ePKPbc*	**PKiKP**	**14 15 01.0**	**+6.2**
	baz=40,slow=2.5						
PRU	**Pruhonice**	**147.32**	**331**	*ePKP*	**PKPbc**	**14 14 52.6**	**-0.3**
PRU				*ep*PKP	**pPKPab**	**14 15 01.2**	**-0.4**
TREC	**Trest**	**147.37**	**329**	*ePKP*	**PKiKP**	**14 15 01.7**	**+6.3**
PBCC	**Pribram**	**147.78**	**331**	*ePKP*	**PKPab**	**14 15 02.7**	**+6.0**
TANN	**Tannenbergstha**	**147.91**	**333**	*ePKPbc*	**PKPab**	**14 15 03.3**	**+6.1**
	baz=40,slow=2.5						
PLN	**Plauen**	**147.98**	**333**	*ePKPbc*	**PKPab**	**14 15 03.3**	**+5.8**
	baz=40,slow=2.5						
GUNZ	**Gunzen**	**148.00**	**333**	*ePKPbc*	**PKPab**	**14 15 03.9**	**+6.3**
	baz=40,slow=2.5						
WERN	**Wernitzgruen**	**148.04**	**333**	*ePKPbc*	**PKPab**	**14 15 03.9**	**+6.2**
	baz=40,slow=2.5						
NKC	**Novy Kostel**	**148.05**	**333**	*ePKP*	**PKPab**	**14 15 02.5**	**+4.8**
NKC				*epPKP*	**sPKPab**	**14 15 08.3**	**+1.4**
MOX	**Moxa**	**148.08**	**334**	*ePKPbc*	**PKPab**	**14 15 03.5**	**+5.7**
	baz=40,slow=2.5						
MOX				*eL*	L	15 23 46.8	
	comp=Z,75nm,19.1s						
CONA	**Conrad Observa**	**148.11**	**327**	*ePKPbc*	**PKPbc**	**14 14 53.8**	**-1.5**
	comp=Z,3.5nm,0.8s						
CONA				*ep*PKPdf	**sPKPbc**	**14 15 04.0**	**-0.5**
	comp=Z,13nm,0.9s						
KHC	**Kasperske Hory**	**148.37**	**330**	*ePKP*	**PKPbc**	**14 14 55.4**	**-0.5**
KHC				*ep*PKP	**sPKPbc**	**14 15 04.5**	**-0.6**
MANZ	**Manzenberg**	**148.38**	**333**	*ePKPbc*	**PKPab**	**14 15 04.3**	**+5.2**
	baz=40,slow=2.5						
GEC2	**GERESS Array S**	**148.52**	**330**	*ePKPbc*	**PKPab**	**14 15 05.1**	**+5.3**
	baz=40,slow=2.5						
GERES	**GERESS Array B**	**148.52**	**330**	PKPbc	**PKPbc**	**14 14 55.6**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=64,slow=3.1,SNR=11						
ARSA	**Arzberg**	**148.73**	**326**	*ePKPbc*	**PKPbc**	**14 14 55.8**	**-1.0**
	comp=Z,1.7nm,0.8s						
ARSA				*ep*PKPbc	**sPKPbc**	**14 15 05.8**	**-0.2**
	comp=Z,7.1nm,1.0s						
MOA	**Molln**	**148.95**	**328**	*ep*PKPbc	**PKPab**	**14 15 07.0**	**+5.5**
	comp=Z,9.1nm,1.1s						
GRF	**Grafenberg Arr**	**148.98**	**333**	*ePKPbc*	**PKPab**	**14 15 04.7**	**+3.3**
	baz=40,slow=2.5						
GRF				*eL*	L	15 18 45.4	
	comp=Z,59nm,21.7s						
SOKA	**Soboth**	**149.36**	**326**	*ePKPbc*	**PKPbc**	**14 14 57.5**	**-1.0**
	comp=Z,3.2nm,1.0s						
SOKA				*ep*PKPbc	**sPKPbc**	**14 15 07.1**	**-0.7**
	comp=Z,16nm,1.0s,SNR=7.3						
TNS	**Taunus Mts**	**149.63**	**337**	*ePKPbc*	**PKPab**	**14 15 07.5**	**+3.4**
	baz=40,slow=2.5						
OBKA	**Obir**	**149.72**	**326**	*ePKPbc*	**PKPbc**	**14 14 58.1**	**-1.4**
	comp=Z,2.3nm,0.8s						

OTRP			*e*S	Sb	13 56 54.8	-0.8
BOAC	**Boac**	**0.92 43**	*e*P	Pb	13 56 43.6	-0.6
BOAC			*e*S	Sn	13 56 58.2	+1.0
BUSP	**Coron**	**1.25 232**	*e*P	Pn	13 56 48.6	-0.5
BUSP			*e*S	Sb	13 57 05.8	+0.5
LUBP	**Lubang**	**1.32 316**	*e*P	Pb	13 56 51.1	+0.1
LUBP			*e*S	Sb	13 57 12.4	+5.0
CUYO	**Cuyo Island**	**1.93 185**	*e*P	Pn	13 56 57.4	-1.0
CUYO			*e*S	Sb	13 57 28.9	+3.9
ENPP	**El Nido**	**2.34 228**	*e*P	Pn	13 57 02.2	-1.8
ENPP			*e*S	Sb	13 57 39.1	+2.4

JMA 09 14:00:58.7±0.1, 35°.83N×140°.90E, h14km±1km, M3.1, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.13**	**195**	P	Pg	14 01 02.3	+0.1
CHOJ				S	Sg	14 01 04.8	+0.2
JIHU	**Itakohorinouch**	**0.33**	**294**	P	Pb	14 01 06.0	-0.4
JIHU				S	Sb	14 01 11.7	+0.1
JHYU	**Hitachinakayam**	**0.57**	**334**	P	Pg	14 01 09.8	-0.1
JHYU				S	Sb	14 01 18.2	-0.2
JYT	**Yasato**	**0.70**	**305**	P	Pg	14 01 11.8	-0.5
JYT				S	Sg	14 01 20.7	-0.8
JCN	**Nagara**	**0.70**	**234**	S	Sn	14 01 25.1	+0.3
JHO	**Hitachi**	**0.82**	**341**	P	Pg	14 01 14.0	-0.7
MAT	**Matsushiro**	**2.29**	**289**	*e*S	Sn	14 02 06.0	+1.9
MAT	**Matsushiro**	**2.29**	**289**	P	Pn	14 01 36.4	+0.3

*BGR **09** 14:03:00.3±0.0, 19°.26S×176°.65W, h33km, Ms4.3*
*BJI **09** 14:03:58.3±0.0, 18°.29S×177°.62W, h536km, mB4.8/34, mb5.0/60*
*IDC **09** 14:03:59.5±0.4, 18°.50S×178°.16W, h521km±4km, mb4.7/35, mb1 4.8/37, mb1mx4.7/38, mbtmp5.6/37, Error ellipse: s-maj=7.5km s-min=6.8km az=166.0*
*NEIC **09** 14:03:59.8±1.7, 18°.37S±0°.10×178°.13W±0°.10, h529km±6km, mb4.9/308, Error ellipse: s-maj=14.0km s-min=13.4km az=182.0*
*GCMT **09** 14:04:01.8±0.3, 18°.51S±0°.04×177°.90W±0°.03, h547km±2km, MW5.4/76, Moment Tensor Solution. s76,c95; Duration: 1§3 Moment tensor: Scale 10^17 Nm; Mrr 0.79±.04; Mθθ -0.30±.09; Mϕϕ -0.49±.08; Mrθ -0.69±.09; Mθϕ 0.44±.07; Mϕr -1.40±.07; Best double couple: Mo 1.68800×10^17 NP1: ϕs 315.00000°, δ 20.00000°, λ 32.00000°. NP2: ϕs 194.00000°, δ 80.00000°, λ 107.00000°. Principal axes: T 1.9860, Plg 52.0000°, Azm 124.0000°; N -0.5970, Plg 17.0000°, Azm 11.0000°; P -1.3900, Plg 33.0000°, Azm 270.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
ISC 09 14:03:59.8±0.3, 18°.40S±0°.04×178°.13W±0°.04, h528km±3km, h529km: pP-P, n688, σ1§13/647, mb5.0/243, 23C-21D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.69**	**280**	P	**P**	**14 05 20.6**	**+2.6**
AFI	**Afiamalu**	**7.56**	**55**	P	**P**	**14 05 49.7**	**-3.1**
NIUE	**Niue**	**7.80**	**96**	P	**P**	**14 05 54.8**	**-0.2**
	baz=7.7,SNR=86						
NIUE	**Niue**	**7.80**	**96**	P	**P**	**14 05 54.7**	**-0.2**
FUNA	**Funafuti**	**10.15**	**345**	P	**P**	**14 06 18.8**	**-0.4**
RIZ	**Raoul Island**	**10.80**	**179**	S	**S**	**14 08 25.8**	**+0.1**
RAO	**Raoul Island**	**10.80**	**179**	S	**S**	**14 08 26.1**	**+0.3**
	62nm,0.3s,baz=252,slow=20,SNR=1.9						
GLKZ	**Green Lake**	**10.81**	**179**	P	**P**	**14 06 25.5**	**-0.3**
GLKZ				S	**S**	**14 08 25.8**	**-0.2**
DZM	**Mont Dzumac**	**14.93**	**253**	*e*P	**P**	**14 07 08.0**	**-1.1**
	457nm,1.0s						
DZM	**Mont Dzumac**	**14.93**	**253**	P	**P**	**14 07 07.9**	**-1.1**
	13nm,0.3s,baz=92,slow=22,SNR=85						
NFK	**Norfolk Island**	**16.56**	**228**	P	**P**	**14 07 27.5**	**+2.0**
	baz=17,SNR=3.9						
KNTN	**Kanton**	**16.75**	**23**	P	**P**	**14 07 26.4**	**-1.1**
RAR	**Rarotonga**	**17.50**	**102**	P	**P**	**14 07 34.1**	**-0.2**
	4.4nm,0.3s,baz=249,slow=6.4,SNR=48						
RAR	**Rarotonga**	**17.50**	**102**	P	**P**	**14 07 33.9**	**-0.4**
OUZ	**Omahuta**	**18.29**	**202**	P	**P**	**14 07 43.4**	**+2.1**
OUZ	**Omahuta**	**18.29**	**202**	P	**P**	**14 07 43.2**	**+1.9**
GRZ	**Great Barrier**	**18.66**	**196**	P	**P**	**14 07 46.0**	**+1.3**
WCZ	**Waipu Caves**	**18.70**	**199**	P	**P**	**14 07 47.7**	**+2.7**
MXZ	**Matakaoa Point**	**19.34**	**189**	P	**P**	**14 07 48.9**	**-1.9**
WMGZ	**Waiomatatini S**	**19.58**	**188**	P	**P**	**14 07 52.6**	**-0.5**
HAZ	**Te Kaha**	**19.61**	**190**	P	**P**	**14 07 52.0**	**-1.3**
WHRZ	**Whale Island**	**19.85**	**191**	P	**P**	**14 07 55.3**	**-0.2**
PUZ	**Puketiti**	**19.85**	**188**	P	**P**	**14 07 54.0**	**-1.5**
TGRZ	**Tauranga**	**19.87**	**193**	P	**P**	**14 07 56.9**	**+1.2**
MARZ	**Manawahe**	**20.03**	**192**	P	**P**	**14 07 56.9**	**-0.3**
KMRZ	**Kaimai**	**20.06**	**194**	P	**P**	**14 07 58.8**	**+1.4**
EDRZ	**Edgecumbe**	**20.14**	**192**	P	**P**	**14 07 57.6**	**-0.6**
KARZ	**Kaharoa**	**20.16**	**193**	P	**P**	**14 07 57.9**	**-0.4**
OMRZ	**Omania**	**20.21**	**193**	P	**P**	**14 07 58.6**	**-0.2**
URZ	**Urewera**	**20.22**	**191**	P	**P**	**14 07 56.0**	**-2.8**
	152nm,0.6s,baz=272,slow=2.3,SNR=105						
URZ				S	**S**	**14 11 08.9**	**-3.8**
	57nm,1.0s,baz=84,slow=21,SNR=7.0						
URZ	**Urewera**	**20.22**	**191**	P	**P**	**14 07 56.1**	**-2.7**
URZ				S	**S**	**14 11 08.2**	**-4.4**
URZ	**Urewera**	**20.22**	**191**	P	**P**	**14 07 55.5**	**-3.2**
MWZ	**Matawai**	**20.22**	**190**	P	**P**	**14 07 56.4**	**-2.5**
MWZ				S	**S**	**14 11 07.7**	**-5.1**
MKRZ	**Makatiti**	**20.22**	**192**	P	**P**	**14 08 00.7**	**+1.7**
CNGZ	**Carnagh Statio**	**20.26**	**188**	P	**P**	**14 07 58.3**	**-0.9**
TKGZ	**Te Karaka**	**20.27**	**189**	P	**P**	**14 07 58.4**	**-0.9**
RAGZ	**Rawiri**	**20.40**	**190**	P	**P**	**14 07 58.7**	**-1.8**
RRRZ	**Republican Roa**	**20.41**	**192**	P	**P**	**14 08 00.4**	**-0.2**
HSRZ	**Hossack Road**	**20.44**	**193**	P	**P**	**14 08 00.7**	**-0.1**
MUGZ	**Murupara**	**20.49**	**191**	P	**P**	**14 07 59.5**	**-1.8**
GRRZ	**Galatos Road**	**20.50**	**193**	P	**P**	**14 08 01.7**	**+0.3**
PRRZ	**Plateau Road**	**20.59**	**192**	P	**P**	**14 08 00.8**	**-1.3**
TLZ	**Tolley Road**	**20.61**	**194**	P	**P**	**14 08 03.6**	**+1.1**
ALRZ	**Allen Road**	**20.66**	**192**	P	**P**	**14 08 01.7**	**-1.1**
SNGZ	**Shannon Statio**	**20.69**	**190**	P	**P**	**14 08 00.4**	**-2.7**
SNGZ				S	**S**	**14 11 18.6**	**-1.6**
KUTZ	**Kaahu Road**	**20.70**	**194**	P	**P**	**14 08 03.4**	**+0.2**
WHTZ	**Whakaora**	**20.84**	**193**	P	**P**	**14 08 05.0**	**+0.5**
MTHZ	**Maungataniwha**	**20.84**	**191**	P	**P**	**14 08 02.4**	**-2.1**
RAHZ	**Arahi**	**20.86**	**191**	P	**P**	**14 08 02.4**	**-2.3**
RAHZ				S	**S**	**14 11 20.6**	**-2.4**
KNZ	**Kokohu**	**20.87**	**189**	P	**P**	**14 08 03.9**	**-0.8**
MRHZ	**Matea Rd**	**20.91**	**192**	P	**P**	**14 08 03.1**	**-2.0**
WATZ	**Wairara**	**20.93**	**194**	P	**P**	**14 08 05.0**	**-0.3**
MHGZ	**Mahia Peninsul**	**20.96**	**189**	P	**P**	**14 08 04.1**	**-1.4**
WHHZ	**Waihua**	**20.99**	**190**	P	**P**	**14 08 05.2**	**-0.6**
WHHZ				S	**S**	**14 11 26.8**	**+1.9**
HATZ	**Hinemaiaia**	**21.03**	**193**	P	**P**	**14 08 04.4**	**-1.8**
RATZ	**Rangitukua**	**21.07**	**193**	P	**P**	**14 08 05.5**	**-1.1**
NMHZ	**Naumai**	**21.09**	**191**	P	**P**	**14 08 04.3**	**-2.4**
RITZ	**Rihia Road**	**21.16**	**193**	P	**P**	**14 08 06.2**	**-1.2**
KATZ	**Kakaramea**	**21.19**	**193**	P	**P**	**14 08 08.5**	**+0.7**
BKZ	**Black Stump Fm**	**21.21**	**192**	P	**P**	**14 08 04.8**	**-3.0**
KRVZ	**Karewarewa**	**21.32**	**193**	P	**P**	**14 08 09.4**	**+0.5**
TWVZ	**Taurewa**	**21.34**	**194**	P	**P**	**14 08 07.7**	**-1.4**
WTVZ	**West Tongariro**	**21.35**	**194**	P	**P**	**14 08 08.6**	**-0.6**
MCHZ	**McNeill Hill**	**21.44**	**191**	P	**P**	**14 08 08.3**	**-1.6**
BHHZ	**Black Hill Sta**	**21.61**	**192**	P	**P**	**14 08 08.3**	**-3.1**
KAHZ	**Kahuranaki**	**21.75**	**190**	P	**P**	**14 08 11.1**	**-1.6**
HNR	**Honiara**	**23.05**	**290**	P	**P**	**14 08 24.2**	**-0.4**
	108nm,0.6s,baz=230,slow=7.2,SNR=3.8						
HNR	**Honiara**	**23.05**	**290**	P	**P**	**14 08 24.2**	**-0.4**
PLWZ	**Palliser**	**23.78**	**192**	P	**P**	**14 08 28.8**	**-2.0**
NNZ	**Nelson**	**23.88**	**196**	P	**P**	**14 08 30.3**	**-1.3**
NNZ				IAmb	IAmb	14 08 30.6	
	comp=Z,67nm,1.1s						
TUWZ	**Tuamarina**	**23.93**	**195**	P	**P**	**14 08 30.0**	**-2.1**
BSWZ	**Blackbirch Sta**	**24.22**	**195**	P	**P**	**14 08 34.8**	**+0.1**
THZ	**Tophouse**	**24.51**	**196**	P	**P**	**14 08 35.4**	**-2.0**
KHZ	**Kahutara**	**24.96**	**195**	P	**P**	**14 08 39.4**	**-1.8**
LTZ	**Lake Taylor**	**25.63**	**196**	P	**P**	**14 08 45.2**	**-2.0**
OXZ	**Oxford**	**26.20**	**196**	P	**P**	**14 08 50.1**	**-2.0**
RPZ	**Rata Peaks**	**26.83**	**198**	P	**P**	**14 08 56.0**	**-1.8**
	comp=Z,26nm,0.5s,baz=33,slow=2.4,SNR=19						
RPZ	**Rata Peaks**	**26.83**	**198**	P	**P**	**14 08 57.4**	**-0.4**
RPZ				IAmb	IAmb	14 09 01.2	
	comp=Z,36nm,0.6s						
FOZ	**Fox Glacier**	**27.04**	**200**	P	**P**	**14 08 58.9**	**-0.6**
PAE	**Paea**	**27.15**	**93**	*e*P	**P**	**14 09 00.5**	**-0.4**
	comp=Z,11nm,0.8s						
PAE				*e*ScP	**ScP**	**14 14 52.3**	**-2.3**
	comp=Z,4.4nm,1.0s						
PPT2	**Papeete2**	**27.16**	**93**	*e*P	**P**	**14 09 00.9**	**-0.2**
	comp=Z,95nm,1.2s						
PPT2				*e*ScP	**ScP**	**14 14 52.4**	**-2.4**
	comp=Z,45nm,1.1s						
PPT	**Papeete**	**27.16**	**93**	P	**P**	**14 09 01.1**	**+0.1**
	comp=Z,61nm,0.6s,baz=68,slow=1.6,SNR=23						
PPT				ScP	**ScP**	**14 14 57.8**	**+3.1**
	comp=Z,45nm,0.9s,baz=280,slow=8.5,SNR=7.5						
PPTF	**Pamatai, Papee**	**27.17**	**93**	P	**P**	**14 09 01.0**	**-0.2**
TBI	**Tubuai**	**27.21**	**105**	*e*P	**P**	**14 09 00.8**	**-0.6**
	comp=Z,188nm,0.7s						
TIAR	**Tiarei**	**27.38**	**93**	*e*P	**P**	**14 09 02.8**	**-0.1**
	comp=Z,32nm,0.7s						
TIAR				*e*ScP	**ScP**	**14 14 53.0**	**-2.4**
	comp=Z,6.5nm,0.9s						
TVO	**Taravao**	**27.45**	**93**	*e*P	**P**	**14 09 03.4**	**-0.2**
	comp=Z,26nm,0.7s						
TVO				*e*ScP	**ScP**	**14 14 53.0**	**-2.7**
	comp=Z,9.7nm,1.1s						
LBZ	**Lake Benmore**	**27.70**	**198**	P	**P**	**14 09 03.7**	**-1.6**
LBZ				IAmb	IAmb	14 09 08.2	
	comp=Z,57nm,0.7s						
WKZ	**Wanaka**	**28.46**	**199**	P	**P**	**14 09 11.1**	**-0.8**
PMOR	**Pomarioro Ree**	**29.14**	**88**	*e*P	**P**	**14 09 18.1**	**-0.2**
	comp=Z,301nm,1.3s						
MLZ	**Mavora Lakes**	**29.23**	**200**	P	**P**	**14 09 19.4**	**+0.8**
EIDS	**Eidsvold**	**29.35**	**251**	P	**P**	**14 09 19.8**	**-0.2**
	baz=30,SNR=63						
EIDS	**Eidsvold**	**29.35**	**251**	P	**P**	**14 09 20.1**	**+0.1**
VAH	**Vaihoa**	**29.35**	**88**	*e*P	**P**	**14 09 19.6**	**-0.5**
	comp=Z,86nm,0.8s						
DCZ	**Deep Cove**	**29.63**	**201**	P	**P**	**14 09 21.9**	**-0.2**
DCZ				IAmb	IAmb	14 09 25.7	
	comp=Z,54nm,0.7s						
ARMA	**Armidale**	**29.93**	**241**	P	**P**	**14 09 26.1**	**+1.1**
	baz=30,SNR=155						
ARMA	**Armidale**	**29.93**	**241**	P	**P**	**14 09 26.1**	**+1.1**
RMQ	**Roma**	**31.57**	**249**	P	**P**	**14 09 39.8**	**+0.7**
	baz=32,SNR=88						
RABL	**Rabaul**	**32.29**	**292**	P	**P**	**14 09 44.0**	**-1.4**
KRVT	**Keravat (AS076**	**32.36**	**292**	P	**P**	**14 09 44.8**	**-1.2**
	comp=Z,320nm,0.7s,baz=42,slow=0.6,SNR=42						
CNB	**Canberra Magne**	**33.34**	**233**	P	**P**	**14 09 54.9**	**+0.8**
	baz=34,SNR=57						
CAN	**Canberra**	**33.62**	**233**	P	**P**	**14 09 57.2**	**+0.7**
CTA	**Charters Tower**	**33.63**	**261**	P	**P**	**14 09 56.9**	**+0.2**
	comp=Z,416nm,0.9s,baz=91,slow=10,SNR=328						
CTA				ScP	**ScP**	**14 15 18.1**	**+1.9**
	comp=Z,30nm,1.0s,baz=99,slow=5.1,SNR=8.1						
CTAO	**Charters Tower**	**33.63**	**261**	P	**P**	**14 09 56.9**	**+0.2**
YNG	**Young**	**33.73**	**235**	P	**P**	**14 09 58.0**	**+0.7**
	baz=34,SNR=8.1						
MILA	**Mila**	**34.17**	**230**	P	**P**	**14 10 01.6**	**+0.6**
	baz=34,SNR=6.9						
PMG	**Port Moresby**	**34.80**	**280**	P	**P**	**14 10 07.4**	**+0.8**
	comp=Z,544nm,0.9s,baz=86,slow=5.7,SNR=94						
PMG				ScP	**ScP**	**14 15 22.3**	**+1.8**
	comp=Z,27nm,0.9s,baz=93,slow=21,SNR=5.2						
PMG	**Port Moresby**	**34.80**	**280**	P	**P**	**14 10 07.7**	**+1.1**
CMSA	**Cobar Meteorol**	**35.14**	**241**	P	**P**	**14 10 09.6**	**+0.5**
	baz=35,SNR=227						
QLP	**Quilpie**	**35.61**	**250**	P	**P**	**14 10 13.3**	**+0.1**
	baz=36,SNR=73						
MTSU	**Mount Surprise**	**35.62**	**264**	P	**P**	**14 10 13.3**	**0.0**
	baz=36,SNR=61						
TOO	**Toolangi**	**37.07**	**231**	P	**P**	**14 10 25.7**	**+0.6**
	baz=37,SNR=113						
TOO	**Toolangi**	**37.07**	**231**	P	**P**	**14 10 25.3**	**+0.2**
COEN	**Coen**	**37.37**	**271**	P	**P**	**14 10 28.3**	**+0.5**
	baz=38,SNR=186						
COEN	**Coen**	**37.37**	**271**	P	**P**	**14 10 28.1**	**+0.2**
MOO	**Moorlands**	**37.91**	**223**	P	**P**	**14 10 32.6**	**+0.7**
	baz=38,SNR=3.9						
STKA	**Stephens Creek**	**38.63**	**242**	P	**P**	**14 10 38.8**	**+0.9**
	baz=39,SNR=291						
STKA	**Stephens Creek**	**38.63**	**242**	P	**P**	**14 10 38.7**	**+0.9**
	comp=Z,259nm,0.8s,baz=90,slow=9.9,SNR=402						
STKA				ScP	**ScP**	**14 15 36.7**	**+2.1**
	comp=Z,13nm,0.9s,baz=49,slow=2.6,SNR=4.7						
STKA	**Stephens Creek**	**38.63**	**242**	P	**P**	**14 10 38.7**	**+0.9**
STKA				IAmb	IAmb	14 10 39.7	
	comp=Z,77nm,0.9s						
ARPS	**Mount Arapiles**	**39.57**	**234**	P	**P**	**14 10 45.7**	**+0.3**
	baz=40,SNR=51						
QIS	**Mount Isa**	**39.82**	**260**	P	**P**	**14 10 47.0**	**-0.7**
	baz=40,SNR=22						
RKT	**Rikitea**	**40.52**	**104**	*e*P	**P**	**14 10 52.7**	**-0.5**
	comp=Z,213nm,1.0s						
HTT	**Hallett**	**41.12**	**240**	P	**P**	**14 10 58.4**	**+0.5**
	baz=41,SNR=114						
MMPI	**Merauke**	**41.45**	**278**	P	**P**	**14 11 01.8**	**+1.1**
	comp=Z,10μmcomp=Z,968nm,0.9s						
JAY	**Jayapura**	**43.30**	**286**	P	**P**	**14 11 15.9**	**+0.6**
	comp=Z,334nm,0.7s,baz=120,slow=2.3,SNR=147						
JAY	**Jayapura**	**43.30**	**286**	P	**P**	**14 11 15.8**	**+0.5**
	comp=Z,2μmcomp=Z,287nm,0.8s						
BBOO	**Buckleboo**	**43.40**	**241**	P	**P**	**14 11 16.0**	**+0.2**
	baz=44,SNR=61						
BBOO	**Buckleboo**	**43.40**	**241**	P	**P**	**14 11 16.0**	**+0.2**
GENI	**Genyem**	**43.75**	**286**	P	**P**	**14 11 19.6**	**+0.8**
	comp=Z,6μmcomp=Z,573nm,1.4s						
WR0	**Warramunga Arr**	**44.61**	**260**	P	**P**	**14 11 24.5**	**-0.8**
WB0	**Warramunga Arr**	**44.77**	**260**	P	**P**	**14 11 25.8**	**-0.8**
WRAB	**Tennant Creek**	**44.79**	**260**	P	**P**	**14 11 25.9**	**-0.8**
WRAB					P	14 11 26.1	-0.7
WRA	**Warramunga Arr**	**44.80**	**260**	P	**P**	**14 11 26.2**	**-0.6**
	comp=Z,146nm,0.7s,baz=97,slow=6.7,SNR=351						
WRA				ScP	**ScP**	**14 16 01.1**	**+1.5**
	comp=Z,12nm,1.1s,baz=93,slow=4.3,SNR=11						
WRA				S	**S**	**14 17 25.8**	**0.0**
	comp=Z,3.2nm,0.8s,baz=96,slow=15,SNR=4.3						
AS31	**Alice Springs**	**44.91**	**255**	P	**P**	**14 11 27.7**	**+0.1**
ASAR	**Alice Springs**	**44.91**	**255**	P	**P**	**14 11 27.5**	**-0.2**
	comp=Z,961nm,0.7s,baz=89,slow=8.4,SNR=9198						
ASAR				ScP	**ScP**	**14 16 01.1**	**+1.0**
	comp=Z,12nm,0.8s,baz=97,slow=4.0,SNR=8.1						
ASAR				S	**S**	**14 17 25.5**	**-1.8**
	comp=Z,9.1nm,0.9s,baz=87,slow=16,SNR=12						
SMPI	**Sarmi**	**45.33**	**286**	P	**P**	**14 11 31.2**	**+0.3**
	comp=Z,3μmcomp=Z,184nm,0.9s						
SRPI	**Serui, Papua**	**47.64**	**285**	P	**P**	**14 11 49.3**	**+0.9**
	comp=Z,81nmcomp=Z,0.4nm,0.6s						
KDU	**Kakadu**	**47.81**	**269**	P	**P**	**14 11 49.4**	**-0.3**
	baz=48,SNR=133						
GUMO	**Guam**	**48.38**	**308**	P	**P**	**14 11 54.1**	**+0.2**
MTN	**Manton Dam**	**49.05**	**269**	P	**P**	**14 11 58.2**	**-0.7**
	baz=49,SNR=137						
WRKA	**Warakurna**	**49.95**	**252**	P	**P**	**14 12 05.4**	**-0.1**
	baz=50,SNR=592						
FORT	**Forrest**	**50.04**	**245**	P	**P**	**14 12 05.5**	**-0.5**
	baz=50,SNR=81						
KNRA	**Kununurra**	**50.70**	**265**	P	**P**	**14 12 10.8**	**-0.3**
	baz=51,SNR=260						
FAKI	**Fak Fak**	**50.93**	**282**	P	**P**	**14 12 13.5**	**+0.7**
	comp=Z,1μmcomp=Z,109nm,1.3s						
FAKI	**Fak Fak**	**50.93**	**282**	P	**P**	**14 12 12.1**	**-0.7**
FAKI				IAmb	IAmb	14 12 13.8	
	comp=Z,102nm,1.0s						
BNDI	**Bandanaira**	**52.57**	**279**	P	**P**	**14 12 24.6**	**+0.1**
	comp=Z,4μmcomp=Z,246nm,1.2s						
SIJI	**Sorong**	**52.60**	**283**	P	**P**	**14 12 25.0**	**+0.2**
	comp=Z,482nm,0.8s,baz=92,slow=4.8,SNR=320						
SIJI				ScP	**ScP**	**14 16 33.9**	**+0.9**
	baz=37,slow=5.1						
FITZ	**Fitzroy Crossi**	**53.21**	**261**	P	**P**	**14 12 29.2**	**+0.1**
	baz=53,SNR=125						
FITZ	**Fitzroy Crossi**	**53.21**	**261**	P	**P**	**14 12 29.1**	**+0.1**
	comp=Z,48nm,0.8s,baz=118,slow=3.9,SNR=215						
FITZ	**Fitzroy Crossi**	**53.21**	**261**	P	**P**	**14 12 29.1**	**0.0**
FITZ				IAmb	IAmb	14 12 29.8	
	comp=Z,54nm,0.8s						
MSAI	**Masohi**	**53.88**	**280**	P	**P**	**14 12 34.3**	**+0.4**
	comp=Z,451nmcomp=Z,44nm,0.6s						
AAI	**Ambon**	**54.45**	**279**	P	**P**	**14 12 37.4**	**-0.5**
	comp=Z,3μmcomp=Z,135nm,0.4s						
KMBL	**Kambalda**	**55.33**	**244**	P	**P**	**14 12 43.0**	**-0.9**
	baz=55,SNR=16						
NLAI	**Namlea**	**55.63**	**279**	P	**P**	**14 12 46.1**	**-0.1**
	comp=Z,2μmcomp=Z,245nm,0.8s						
LBMI	**Labuha**	**56.18**	**282**	P	**P**	**14 12 50.7**	**+0.7**
	comp=Z,287nm,0.8s						
SOEI	**Soe**	**56.34**	**270**	P	**P**	**14 12 52.4**	**+1.2**
	comp=Z,5μmcomp=Z,634nm,1.2s						
BATI	**Baumata**	**56.79**	**270**	P	**P**	**14 12 55.6**	**+1.4**
	comp=Z,172nm,0.7s,baz=207,slow=1.5,SNR=30						
BATI	**Baumata**	**56.79**	**270**	P	**P**	**14 12 55.6**	**+1.4**
	comp=Z,1μmcomp=Z,140nm,0.8s						
TNTI	**Ternate**	**56.83**	**283**	P	**P**	**14 12 54.6**	**+0.2**
	comp=Z,2μmcomp=Z,246nm,1.0s						
SANI	**Sanana**	**57.08**	**280**	P	**P**	**14 12 55.5**	**-0.7**
	comp=Z,3μmcomp=Z,334nm,1.0s						
PSA00	**Pilbara Seismi**	**58.04**	**256**	P	**P**	**14 13 02.0**	**-0.6**
MEEK	**Meekatharra**	**58.51**	**250**	P	**P**	**14 13 05.0**	**-0.7**
	baz=59,SNR=17						
MMRI	**Maumere**	**58.57**	**271**	P	**P**	**14 13 05.6**	**-0.7**
	comp=Z,3μmcomp=Z,209nm,0.8s						
KLBR	**Kellerberrin**	**58.85**	**244**	P	**P**	**14 13 07.3**	**-0.6**
	baz=59,SNR=80						
EDFI	**Ende, Flores**	**59.05**	**271**	P	**P**	**14 13 08.7**	**-1.0**
	comp=Z,1μmcomp=Z,123nm,0.9s						
BBSI	**Bau Bau**	**59.17**	**275**	P	P	14 13 23.6	+13
NWAO	**Narrogin (SRO)**	**59.21**	**242**	P	**P**	**14 13 10.1**	**-0.3**
	baz=59,SNR=13						
NWAO	**Narrogin (SRO)**	**59.21**	**242**	P	**P**	**14 13 10.0**	**-0.3**
	comp=Z,41nm,0.7s,baz=112,slow=5.1,SNR=24						
NWAO	**Narrogin (SRO)**	**59.21**	**242**	P	**P**	**14 13 09.7**	**-0.7**
NWAO				IAmb	IAmb	14 13 11.0	
	comp=Z,50nm,0.8s						
NWAO	**Narrogin (SRO)**	**59.21**	**242**	IAmb	IAmb	14 13 11.0	
	comp=Z,40nm,0.8s						
RKGY	**Rocky Gully**	**59.35**	**240**	P	**P**	**14 13 11.6**	**+0.3**
	baz=59,SNR=6.8						
JCJ	**Chichijima**	**59.38**	**319**	P	**P**	**14 13 11.1**	**-0.4**
	comp=Z,62nm,0.7s,baz=60,slow=0.3,SNR=4.7						
BASI	**Baing, Sumba**	**59.72**	**269**	P	**P**	**14 13 14.8**	**+0.8**
	comp=Z,2μmcomp=Z,206nm,1.1s						
BLDU	**Ballidu**	**59.81**	**245**	P	**P**	**14 13 13.8**	**-0.6**
	baz=60,SNR=46						
KMSI	**Cibinong**	**59.89**	**282**	P	**P**	**14 13 15.1**	**0.0**
	comp=Z,3μmcomp=Z,321nm,0.8s						
VNDA	**Vanda**	**59.98**	**185**	P	**P**	**14 13 15.8**	**+1.1**
	comp=Z,17nm,0.6s,baz=357,slow=7.6,SNR=72						
VNDA				ScP	**ScP**	**14 17 04.6**	**+0.2**
	comp=Z,3.5nm,0.7s,baz=348,slow=2.8,SNR=3.5						
VNDA	**Vanda**	**59.98**	**185**	P	**P**	**14 13 15.7**	**+1.1**
VNDA				IAmb	IAmb	14 13 16.3	
	comp=Z,25nm,0.8s						
MUN	**Mundaring**	**60.13**	**243**	P	**P**	**14 13 16.5**	**0.0**
	baz=60,SNR=14						
LUWI	**Luwuk**	**60.44**	**280**	P	**P**	**14 13 19.2**	**+0.4**
	comp=Z,3μmcomp=Z,346nm,1.0s						
LUWI	**Luwuk**	**60.44**	**280**	P	**P**	**14 13 19.1**	**+0.3**
DDMP	**Don Marcelino,**	**60.48**	**288**	*e*P	**P**	**14 13 16.8**	**-2.3**
MORW	**Morawa**	**60.52**	**247**	P	**P**	**14 13 18.6**	**-0.6**
	baz=61,SNR=22						
MORW	**Morawa**	**60.52**	**247**	P	**P**	**14 13 18.1**	**-1.0**
MORW				IAmb	IAmb	14 13 19.5	
	comp=Z,58nm,0.7s						
WBSI	**Waikabubak, Su**	**61.00**	**269**	P	**P**	**14 13 22.4**	**-0.1**
	comp=Z,2μmcomp=Z,182nm,1.0s						
DAV	**Davao City (W)**	**61.01**	**289**	P	**P**	**14 13 20.3**	**-2.2**
	comp=Z,247nm,0.4s,baz=182,slow=0.8,SNR=5.4						
DAV	**Davao City (W)**	**61.01**	**289**	P	**P**	**14 13 20.1**	**-2.5**
KCP	**Kidapawan**	**61.42**	**289**	‖ *i*P	**P**	**14 13 25.1**	**-0.2**
APSI	**Ampana**	**61.54**	**279**	P	**P**	**14 13 26.8**	**+0.8**
	comp=Z,2μmcomp=Z,282nm,1.0s						
BKSI	**Bulukumba**	**61.54**	**274**	P	**P**	**14 13 25.3**	**

TATO	Taipei	72.89	304	P		P		14 14 35.1	-0.4
KSM	Kuching	73.01	277	P		P		14 14 37.0	+0.5
CNJI	Cibinong	73.28	268	P		P		14 14 37.8	-0.2
	comp=Z,2µmcomp=Z,255nm,1.1s								
DBJI	Dramaga	73.87	268	P		P		14 14 41.2	-0.2
	comp=Z,12µmcomp=Z,169nm,1.0s								
YSS	Yuzh-Sakhalins	73.97	333	P		P		14 14 41.9	+0.7
YSS				IAmb		IAmb		14 14 43.2	
	comp=Z,48nm,0.9s								
PEA0B	Petropavlovsk-	74.22	345	IAmb		IAmb		14 14 43.0	
	comp=Z,40nm,0.8s								
PETK	Petropavlovsk-	74.22	345	P		P		14 14 42.5	+0.1
	comp=Z,30nm,0.7s,baz=122,slow=7.8,SNR=71								
PETK				pP		pP		14 16 32.4	-0.6
	comp=Z,5.1nm,1.1s,baz=131,slow=6.1,SNR=2.5								
QZH	Quanzhou	75.16	303	⇓*i*P		P		14 14 48.9	+0.5
QZH				pmax		pmax			
	comp=Z,69nm,0.9s								
KSRS	Korea Array	75.24	318	P		P		14 14 49.5	+1.0
	comp=Z,10nm,0.7s,baz=129,slow=6.5,SNR=83								
KSRS				pP		pP		14 16 38.3	-1.8
	comp=Z,0.7nm,0.9s,baz=145,slow=7.7,SNR=1.4								
SCZ2	Santa Cruz Isl	76.26	47	P		P		14 14 55.6	+1.3
	baz=236								
KASI	Kota Agung	76.31	269	P		P		14 14 54.1	-0.9
	comp=Z,2µmcomp=Z,269nm,1.0s								
SBC	Santa Barbara	76.45	46	P		P		14 14 56.6	+1.3
	baz=236								
SCI2	San Clemente I	76.47	48	P		P		14 14 56.1	+0.7
	baz=237								
PKM	Mcpherson Peak	76.63	46	P		P		14 14 57.6	+1.0
	baz=236,SNR=6.0								
SMMC	Simmler	76.74	46	P		P		14 14 58.3	+1.3
	baz=236								
CIS	Catalina Islan	76.78	48	P		P		14 14 58.2	+1.0
	baz=237								
LWLI	Liwa	76.88	269	P		P		14 14 57.6	-0.7
	comp=Z,139nm,0.6s								
MDSI	Maura Dua	76.92	270	P		P		14 14 56.8	-1.6
	comp=Z,62nm,0.9s								
FMP	Fort Macarthur	77.04	48	P		P		14 14 59.6	+1.1
	baz=237								
USRK	Ussuriysk Ar.	77.17	326	P		P		14 14 59.9	+0.9
	comp=Z,12nm,0.7s,baz=110,slow=3.7,SNR=21								
OSI	Osito Audit: C	77.23	47	P		P		14 15 00.6	+1.0
	baz=237								
DECC	Green Verdugo	77.30	47	P		P		14 15 00.7	+0.7
	baz=237								
PASC	Pasadena Art C	77.36	47	IAmb		IAmb		14 15 01.9	
	comp=Z,30nm,0.8s								
ARVC	Arvin	77.43	46	P		P		14 15 01.5	+0.9
	baz=237								
109C	Camp Elliot, M	77.44	49	P		P		14 15 01.7	+0.9
	baz=238								
109C	Camp Elliot, M	77.44	49	IAmb		IAmb		14 15 02.6	
	comp=Z,25nm,0.8s								
MWC	Mount Wilson	77.48	47	IAmb		IAmb		14 15 02.8	
	comp=Z,38nm,0.7s								
VES	Vestal, Richgr	77.65	46	P		P		14 15 02.4	+0.6
	baz=236,SNR=7.4								
MURC	Murrieta	77.75	48	P		P		14 15 03.2	+0.7
	baz=238,SNR=9.1								
O02D	Mt. Diablo Mer	77.76	40	P		P		14 15 04.0	+1.6
	baz=233,SNR=7.6								
BFSC	Mount Baldy Ra	77.76	48	P		P		14 15 03.1	+0.4
	baz=238,SNR=13								
EDW2	Edwards Air Fo	77.88	47	P		P		14 15 04.2	+1.0
	baz=237,SNR=21								
MONP2	Monument Peak	77.94	49	P		P		14 15 04.9	+1.2
	baz=239,SNR=38								
ISA	Isabella, Lake	77.97	46	P		P		14 15 04.7	+1.1
	baz=237,SNR=16								
ISA	Isabella, Lake	77.97	46	IAmb		IAmb		14 15 05.8	
	comp=Z,32nm,0.8s								
CMB	Columbia Colle	78.02	43	IAmb		IAmb		14 15 05.6	
	comp=Z,22nm,0.8s								
IKP	In-Ko-Pah, Jac	78.04	50	P		P		14 15 05.2	+1.1
	baz=239,SNR=16								
PFO	Pinyon Flats O	78.28	49	P		P		14 15 06.3	+0.8
	baz=238,SNR=10								
PFO	Pinyon Flats O	78.28	49	P		P		14 15 05.0	-0.5
TPRI	Tanjung Pinang	78.28	275	P		P		14 15 06.4	+0.6
	comp=Z,81nm,0.9s								
XPFO	Pion Flat	78.28	49	P		P		14 15 05.4	-0.1
N02D	Trinity Center	78.29	40	P		P		14 15 06.7	+1.4
	baz=233,SNR=7.3								
DLV	T Lat	78.39	287	IAmb		IAmb		14 15 08.4	
	comp=Z,46nm,1.1s								
LRMC	Laurel Mtn Rad	78.41	46	P		P		14 15 07.0	+0.8
	baz=237								
SWSC	Sam W. Stewart	78.41	49	P		P		14 15 07.1	+1.1
	baz=239,SNR=8.2								
O03E	Paynes Creek	78.43	41	P		P		14 15 06.8	+0.7
	baz=234,SNR=5.4								
M02C	Callahan	78.45	39	P		P		14 15 07.6	+1.5
	baz=233,SNR=8.6								
NJ2	Nanjing	78.45	309	⇓*i*P		P		14 15 07.1	+0.9
NJ2				pmax		pmax			
	comp=Z,52nm,0.6s								
RRX	Edison Barstow	78.56	47	P		P		14 15 07.8	+1.0
	baz=238								
CWC	Cottonwood Cre	78.66	45	P		P		14 15 08.4	+1.0
	baz=237								
KSI	Kapahiang	78.68	270	P		P		14 15 08.4	+0.4
	comp=Z,4µmcomp=Z,87nm,0.9s								
MDJ	Mudanjiang	78.74	325	IAmb		IAmb		14 15 09.7	
	comp=Z,84nm,0.9s								
MLAC	Mammoth, Mammo	78.81	44	P		P		14 15 09.4	+1.1
	baz=236								
BELC	Belle Mtn. Jos	78.81	48	P		P		14 15 09.3	+1.0
	baz=239,SNR=22								
MPMC	Manual Prospec	78.85	46	P		P		14 15 09.5	+0.9
	baz=237,SNR=19								
TIN	Tinemaha, Big	78.89	45	P		P		14 15 09.7	+1.1
	baz=237								
GSC	Goldstone, Bar	78.92	47	P		P		14 15 09.6	+0.8
	baz=238,SNR=5.9								
HEC	Hector,Ludlow	79.00	48	P		P		14 15 09.9	+0.7
	baz=238								
BC3	Big Chuckawall	79.02	49	P		P		14 15 10.6	+1.2
	baz=239,SNR=12								
BEKR	Beckworth	79.08	42	IAmb		IAmb		14 15 11.1	
	comp=Z,17nm,0.6s								
PNTR	Pine Nut	79.12	43	IAmb		IAmb		14 15 12.1	
	comp=Z,59nm,0.9s								
GLA	Glamis	79.17	50	P		P		14 15 11.5	+1.4
	baz=240,SNR=14								
GLA	Glamis	79.17	50	IAmb		IAmb		14 15 12.7	
	comp=Z,43nm,0.9s								
MYKOM	Kota Tinggi	79.20	276	IAmb		IAmb		14 15 12.1	
	comp=Z,46nm,0.9s								
MYKOM	Kota Tinggi	79.20	276	P		P		14 15 11.0	+0.3
L04D	Klamath Falls	79.27	39	P		P		14 15 11.5	+0.9
	baz=233,SNR=6.1								
M04C	Macdoel	79.29	39	P		P		14 15 11.7	+1.0
	baz=233,SNR=7.3								
YERR	Yerington	79.30	43	IAmb		IAmb		14 15 12.7	
	comp=Z,45nm,0.7s								
GRAC	Grapevine Rang	79.44	45	P		P		14 15 12.7	+1.2
	baz=237,SNR=16								
GMRC	Granite Mounta	79.45	48	P		P		14 15 12.6	+0.9
	baz=239,SNR=12								
IRM	Iron Mountain	79.50	49	P		P		14 15 13.0	+1.2
	baz=239,SNR=16								
FURC	Furnace Creek,	79.50	46	P		P		14 15 12.6	+0.9
	baz=238								
I03D	Drain, OR	79.56	37	P		P		14 15 13.0	+1.2
	baz=232								
NVAR	Mina Array Bea	79.60	44	P		P		14 15 13.4	+1.0
	comp=Z,20nm,0.7s,baz=224,slow=8.7,SNR=200								
NVAR				pP		pP		14 17 05.7	+0.9
	comp=Z,1.4nm,0.8s,baz=229,slow=7.8,SNR=2.0								
SHOC	Shoshone, Teco	79.60	47	P		P		14 15 13.1	+0.8
	baz=238								
TUQ	Turquoise Moun	79.61	47	P		P		14 15 13.3	+0.9
	baz=238								
PAHR	Pah Rah Range	79.61	42	P		P		14 15 13.3	+0.9
PAHR				IAmb		IAmb		14 15 14.4	
	comp=Z,34nm,1.1s								
NV11	Mina Array Sit	79.69	44	IAmb		IAmb		14 15 14.8	
	comp=Z,23nm,0.8s								
Y12C	Blythe	79.74	49	P		P		14 15 14.1	+1.1
	baz=240,SNR=8.5								
Y12C	Blythe	79.74	49	IAmb		IAmb		14 15 15.3	
	comp=Z,28nm,0.8s								
113A	Mohawk Valley,	79.80	51	IAmb		IAmb		14 15 15.7	
	comp=Z,25nm,0.8s								
J04D	Umpqua Nationa	80.00	38	P		P		14 15 15.6	+1.2
	baz=233,SNR=9.0								
KVN	Kaiserville	80.07	43	IAmb		IAmb		14 15 16.6	
	comp=Z,26nm,0.7s								
214A	Organ Pipe Nat	80.11	52	P		P		14 15 16.5	+1.4
	baz=241,SNR=18								
214A	Organ Pipe Nat	80.11	52	IAmb		IAmb		14 15 17.7	
	comp=Z,24nm,0.9s								
I04A	Tendick Farm,	80.16	37	P		P		14 15 15.8	+0.7
	baz=233								
TPNV	Topopah Spring	80.17	46	P		P		14 15 16.3	+0.9
	baz=238,SNR=23								
KRJI	Kerinci	80.24	271	P		P		14 15 17.2	+1.0
	comp=Z,94nm,0.6s								
PDMCI	Parker Dam,Lak	80.29	49	P		P		14 15 17.0	+1.1
	baz=240,SNR=9.4								
MOD	Modoc Plateau	80.29	40	IAmb		IAmb		14 15 17.8	
	comp=Z,28nm,0.7s								
K05A	Summer Lake	80.42	39	IAmb		IAmb		14 15 18.9	
	comp=Z,48nm,1.0s								
H04D	Lebanon	80.42	37	P		P		14 15 17.7	+1.4
	baz=232								
J05D	Fort Rock, OR	80.54	38	P		P		14 15 18.5	+1.3
	baz=234,SNR=23								
G03D	McMinnville, O	80.54	36	P		P		14 15 18.0	+1.1
	baz=232								
CN2	Changchun	80.57	322	*e*P		P		14 15 17.6	+0.5
CN2				*e*S		S		14 24 42.5	+2.0
CN2				pmax		pmax			
	comp=Z,130nm,1.5s								
SDSI	Sungai Dareh	80.63	272	P		P		14 15 17.8	-0.3
	comp=Z,291µmcomp=Z,5µmcomp=Z,39nm,0.9s								
H04A	Detroit Lake	80.83	37	IAmb		IAmb		14 15 19.9	
	comp=Z,21nm,0.9s								
Y14A	Wickenburg	80.93	50	IAmb		IAmb		14 15 21.4	
	comp=Z,18nm,0.8s								
PINE	Pine Mountain	81.01	38	IAmb		IAmb		14 15 22.1	
	comp=Z,45nm,0.9s								
I05D	Terrebonne, OR	81.11	37	P		P		14 15 20.8	+0.9
	baz=233								
WHN	Wuhan	81.11	306	⇑*i*P		P		14 15 21.2	+1.0
WHN				pmax		pmax			
	comp=Z,140nm,1.3s								
R11A	Troy Canyon, C	81.36	45	P		P		14 15 22.2	+0.6
	baz=238,SNR=32								
PDSI	Padang	81.56	272	P		P		14 15 21.8	-1.2
	comp=Z,502nmcomp=Z,37nm,0.9s								
WVOR	Wild Horse Val	81.61	40	IAmb		IAmb		14 15 24.8	
	comp=Z,39nm,1.1s								
G05D	Wamic, OR	81.66	37	P		P		14 15 23.5	+0.7
	baz=233								
MA2	Magadan	81.74	345	P		P		14 15 22.1	-0.6
MA2				IAmb		IAmb		14 15 23.1	
	comp=Z,31nm,1.1s								
E04D	Cinebar	81.75	35	P		P		14 15 24.4	+1.2
	baz=232								
TIA	Tai'an	81.77	312	P		P		14 15 24.3	+0.8
TIA				pmax		pmax			
	comp=Z,21nm,0.7s								
TUC	Tucson	81.79	52	P		P		14 15 25.6	+1.8
	baz=242								
TUC	Tucson	81.79	52	P		P		14 15 25.4	+1.5
TUC				IAmb		IAmb		14 15 26.7	
	comp=Z,48nm,0.9s								
I07A	Izee	82.03	38	IAmb		IAmb		14 15 26.9	
	comp=Z,30nm,0.8s								
GAMB	Gambell	82.06	3	IAmb		IAmb		14 15 26.7	
	comp=Z,23nm,1.0s								
D03D	Eldon	82.07	34	P		P		14 15 25.9	+1.2
	baz=232								
J08A	Circle Bar Ran	82.23	39	IAmb		IAmb		14 15 27.3	
	comp=Z,20nm,0.7s								
X16A	Lo Mia Camp, P	82.30	50	IAmb		IAmb		14 15 29.1	
	comp=Z,42nm,1.1s								
319A	Douglas	82.50	54	IAmb		IAmb		14 15 30.4	
	comp=Z,53nm,0.9s								
U15A	North Rim	82.65	48	IAmb		IAmb		14 15 30.8	
	comp=Z,71nm,0.8s								
IPM	Ipoh	82.74	277	P		P		14 15 29.2	+0.2
IPM	Ipoh	82.74	277	P		P		14 15 29.0	0.0
F07A	Phinny Hill Vi	82.83	37	IAmb		IAmb		14 15 30.4	
	comp=Z,19nm,0.8s								
ELK	Elko	82.84	43	IAmb		IAmb		14 15 30.9	
	comp=Z,22nm,0.8s								
GLI	Glacier Island	82.86	15	IAmb		IAmb		14 15 29.4	
	comp=Z,55nm,1.0s								
WUAZ	Wupatki	82.87	49	P		P		14 15 30.4	+1.1
	baz=241								
WUAZ	Wupatki	82.87	49	IAmb		IAmb		14 15 32.2	
	comp=Z,38nm,1.0s								
MNSI	Mandailing Nat	82.93	273	P		P		14 15 28.9	-1.0
	comp=Z,31nm,1.0s								
G08A	Pilot Rock	83.04	38	IAmb		IAmb		14 15 31.7	
	comp=Z,18nm,0.8s								
B05A	Bryant	83.05	34	P		P		14 15 30.6	+1.0
	baz=232								
GHO	Glory Hole Cre	83.22	14	IAmb		IAmb		14 15 31.0	
	comp=Z,30nm,1.0s								
PMSA	Palmer Station	83.26	157	P		P		14 15 31.0	+0.6
	comp=Z,46nm,0.8s,baz=325,slow=7.0,SNR=6.0								
PMSA	Palmer Station	83.26	157	P		P		14 15 30.5	+0.1
HAWA	Hanford	83.34	36	IAmb		IAmb		14 15 33.1	
	comp=Z,25nm,0.9s								
KULM	Kulim	83.36	278	IAmb		IAmb		14 15 33.7	
	comp=Z,36nm,0.9s								
KULM	Kulim	83.36	278	P		P		14 15 33.0	+1.0
X18A	Snowflake	83.44	50	IAmb		IAmb		14 15 34.4	
	comp=Z,24nm,0.8s								
HPIG		83.45	59	IAmb		IAmb		14 15 34.6	
	comp=Z,33nm,0.6s								
MAW	Mawson	83.49	200	P		P		14 15 31.8	+0.2
	baz=83,SNR=20								
MAW	Mawson	83.49	200	P		P		14 15 32.0	+0.4
	comp=Z,10nm,0.6s,baz=136,slow=6.0,SNR=33								
MAW	Mawson	83.49	200	P		P		14 15 31.8	+0.2
WAX	Waxell Ridge	83.58	17	IAmb		IAmb		14 15 34.0	
	comp=Z,16nm,0.6s								
MESA	MESA	83.61	17	IAmb		IAmb		14 15 34.7	
	comp=Z,22nm,0.8s								
SCM	Sheep Creek Mo	83.64	14	IAmb		IAmb		14 15 33.6	
	comp=Z,24nm,0.9s								
E08A	Dider Farm, El	83.67	37	IAmb		IAmb		14 15 34.6	
	comp=Z,15nm,0.7s								
CRQM	Cirque	83.77	16	IAmb		IAmb		14 15 34.7	
	comp=Z,17nm,0.9s								
YAH	Yahtse	83.82	17	IAmb		IAmb		14 15 35.4	
	comp=Z,17nm,0.9s								
W18A	Petrified Fore	83.86	50	P		P		14 15 35.1	+0.8
	baz=242								
W18A	Petrified Fore	83.86	50	IAmb		IAmb		14 15 36.4	
	comp=Z,19nm,0.9s								
MFID	Camas Ranch	83.88	40	IAmb		IAmb		14 15 35.9	
	comp=Z,22nm,0.9s								
D08A	Wollman Farm,	84.07	36	IAmb		IAmb		14 15 36.6	
	comp=Z,21nm,1.0s								
DUG	Dugway, Tooele	84.15	44	P		P		14 15 36.0	+0.5
	baz=240								
RPSI	Rantau Prapat	84.15	275	IAmb		IAmb		14 15 36.6	
	comp=Z,63nm,0.9s								
121A	Cookes Peak, D	84.16	53	P		P		14 15 37.3	+1.5
	baz=244								
121A	Cookes Peak, D	84.16	53	IAmb		IAmb		14 15 38.4	
	comp=Z,30nm,0.8s								
BJT	Baijiatuan	84.31	315	IAmb		IAmb		14 15 37.3	
	comp=Z,20nm,0.7s								
BJI	Beijing	84.32	315	P		P		14 15 36.8	+0.7
BJI				SKS		SKSac		14 25 08.5	-0.8
BJI				S		S		14 25 21.3	+3.4
BJI				pmax		pmax			
	comp=Z,28nm,1.0s								
ZAIG	Zacatecas	84.39	64	IAmb		IAmb		14 15 40.1	
	comp=Z,42nm,1.1s								
BARN	Barnard Glacie	84.42	17	IAmb		IAmb		14 15 38.1	
	comp=Z,15nm,0.9s								
F10A	Beach Ranch, E	84.43	38	IAmb		IAmb		14 15 38.1	
	comp=Z,33nm,0.9s								
TRF	Thorofare Moun	84.43	12	IAmb		IAmb		14 15 36.9	
	comp=Z,22nm,0.8s								
B08A	Colville Reser	84.59	35	IAmb		IAmb		14 15 38.4	
	comp=Z,16nm,0.8s								
RND	Reindeer	84.69	13	IAmb		IAmb		14 15 38.2	
	comp=Z,30nm,0.9s								
C09A	Chrisman Ranch	84.85	36	IAmb		IAmb		14 15 40.1	
	comp=Z,12nm,0.8s								
MCK	McKinley	84.96	13	IAmb		IAmb		14 15 39.2	
	comp=Z,28nm,1.1s								
GSI	Gunungsitoli	84.99	273	P		P		14 15 40.9	+0.8
	comp=Z,491nm,0.9s								
GO10	Punta Arenas	85.27	145	P		P		14 15 41.8	+1.1
GYA	Guiyang	85.51	300	⇓*i*P		P		14 15 43.2	+0.8
GYA				pP		pwP		14 17 43.4	+3.4
GYA				sP		sP		14 18 31.6	+1.1
GYA				PP		PP		14 19 10.5	-0.3
GYA				SKS		SKSac		14 25 18.3	+0.7
GYA				S		S		14 25 31.6	+1.3
GYA				sS		sS		14 28 53.6	-1.0
GYA				pmax		pmax			
	comp=Z,30nm,1.0s								
GYA				pmax		pmax			
	comp=Z,70nm,3.7s								
KCSI	Kotacane, Aceh	85.51	275	P		P		14 15 42.0	-0.6
	comp=Z,464nmcomp=Z,37nm,0.8s								
MNTX	Cornudas Mount	85.64	55	P		P		14 15 44.0	+1.1
	baz=245								
MNTX	Cornudas Mount	85.64	55	IAmb		IAmb		14 15 44.6	
	comp=Z,16nm,0.8s								
PV05	Paradox Valley	85.67	48	IAmb		IAmb		14 15 45.1	
	comp=Z,17nm,0.7s								
MVCO	Mesa Verde	85.71	49	P		P		14 15 43.8	+0.5
	baz=243								
NEW	Newport	85.75	36	P		P		14 15 43.1	+0.1
	baz=236								
MLY	Manley	85.77	11	P		P		14 15 40.6	-2.1
TIY	Taiyuan	85.79	312	*e*P		P		14 15 44.7	+1.2
TIY				pmax		pmax			
	comp=Z,56nm,0.8s								
WRH	Wood River Hil	85.79	13	IAmb		IAmb		14 15 43.8	
	comp=Z,23nm,1.1s								
PV14	Lion Creek, Pa	85.86	47	IAmb		IAmb		14 15 45.5	
	comp=Z,19nm,0.8s								
PV17	East Wray Mesa	85.86	48	IAmb		IAmb		14 15 46.6	
	comp=Z,13nm,0.7s								
PV20	West Nyswonger	85.89	47	IAmb		IAmb		14 15 45.6	
	comp=Z,15nm,0.8s								
PV23	Carpenter Ridg	85.91	47	IAmb		IAmb		14 15 45.9	
	comp=Z,23nm,0.7s								
PV11	David Mesa, Pa	85.93	48	IAmb		IAmb		14 15 46.6	
	comp=Z,12nm,0.7s								
PV04	Paradox Valley	85.95	47	IAmb		IAmb		14 15 46.0	
	comp=Z,19nm,0.8s								
HDA	Harding Lake	85.98	13	P		P		14 15 42.9	-0.8
	baz=209								
PV21	Cone Mtn., Par	85.98	47	IAmb		IAmb		14 15 46.2	
	comp=Z,16nm,0.8s								
TPTI		85.98	275	P		P		14 15 45.3	+0.5
	comp=Z,15nm,1.1s								
TLIG	Tlapa	85.99	70	IAmb		IAmb		14 15 47.4	
	comp=Z,36nm,0.9s								
PV12	Saucer Basin,	85.99	48	IAmb		IAmb		14 15 46.2	
	comp=Z,15nm,0.8s								
TXAR	Lajitas Array	86.04	57	P		P		14 15 46.7	+1.8
	comp=Z,59nm,0.7s,baz=220,slow=6.1,SNR=435								
PV01	Paradox Valley	86.07	48	IAmb		IAmb		14 15 46.4	
	comp=Z,16nm,0.9s								
PV22	Blue Mesa, Par	86.10	47	IAmb		IAmb		14 15 46.8	
	comp=Z,12nm,0.9s								
TCOL	CIGO, UAF Yank	86.19	12	P		P		14 15 43.4	-1.2
	baz=209								
ANMO	Albuquerque	86.20	51	P		P		14 15 46.3	+0.7
	baz=244								
ANMO	Albuquerque	86.20	51	P		P		14 15 45.3	-0.3
ANMO				IAmb		IAmb		14 15 47.9	
	comp=Z,28nm,1.1s								
PV15	Paradox Valley	86.23	48	IAmb		IAmb		14 15 47.2	
	comp=Z,13nm,0.8s								
ILAR	Eielson Array	86.31	13	P		P		14 15 44.4	-0.8
	comp=Z,10nm,1.1s,baz=221,slow=4.9,SNR=42								
ILAR				pP		pP		14 17 40.5	+0.2
	comp=Z,5.7nm,1.2s,baz=235,slow=4.8,SNR=4.3								
ILAR				PP		PP		14 19 16.6	+0.3
	comp=Z,2.2nm,0.9s,baz=219,slow=5.8,SNR=4.2								
ILAR				PKKP		PKKPdf		14 33 38.5	+2.9
	comp=Z,0.5nm,0.6s,baz=350,slow=2.0,SNR=7.2								
POKR	Poker Plat Res	86.49	12	P		P		14 15 45.0	-1.1
	baz=209								
AHID	Auburn Hatcher	86.53	43	IAmb		IAmb		14 15 49.0	
	comp=Z,11nm,0.8s								
XAN	Xi'an	86.77	307	P		P		14 15 48.5	+0.4
XAN				S		S		14 25 46.8	+5.0
XAN				pmax		pmax			
	comp=Z,74nm,1.2s								
MSO	Missoula	86.81	38	P		P		14 15 47.8	-0.3
	baz=239								
DLMT	Dillon	86.86	40	IAmb		IAmb		14 15 50.5	
	comp=Z,20nm,0.8s								
BILL	Bilibino	86.94	354	P		P		14 15 47.4	-0.7
TPAW	Teton Pass	86.97	42	IAmb		IAmb		14 15 51.2	
	comp=Z,21nm,1.0s								
MLSI	Meulaboh, Aceh	87.03	275	P		P		14 15 50.6	+0.8
	comp=Z,206nm,1.0s								
SNOW	Snow King Moun	87.08	42	IAmb		IAmb		14 15 51.8	
	comp=Z,29nm,0.9s								
S22A	4UR Ranch, Cre	87.13	49	P		P		14 15 50.9	+0.7
	baz=244								
IMW	Indian Meadow	87.18	42	IAmb		IAmb		14 15 52.3	
	comp=Z,30nm,0.9s								
O20A	White River Ci	87.20	46	P		P		14 15 50.8	+0.5
	baz=243								
O20A	White River Ci	87.20	46	IAmb		IAmb		14 15 53.8	
	comp=Z,16nm,0.9s								
FLWY	Flagg Ranch	87.42	42	IAmb		IAmb		14 15 53.5	
	comp=Z,34nm,0.9s								
PDAR	Pinedale Array	87.53	43	P		P		14 15 52.3	+0.5
	comp=Z,14nm,0.7s,baz=213,slow=2.8,SNR=125								
PDAR				pP		pP		14 17 47.0	-0.1
	comp=Z,1.5nm,0.8s,baz=204,slow=3.3

K22A	**Casper**	**89.47**	**44**	P	**P**	**14 16 01.1**	**+0.4**		
	baz=244								
K22A	**Casper**	**89.47**	**44**	IAmb	IAmb	14 16 01.7			
	comp=Z,9.1nm,0.7s								
CD2	**Chengdu**	**89.55**	**303**	⇓*i*P	**P**	**14 16 02.1**	**+0.9**		
CD2				S	**S**	**14 26 07.1**	**-0.5**		
CD2				pmax	pmax				
	comp=Z,20nm,0.7s								
CD2				pmax	pmax				
	comp=Z,90nm,4.7s								
JCT	**Junction City**	**89.57**	**58**	P	**P**	**14 16 01.6**	**+0.3**		
	baz=248								
JCT	**Junction City**	**89.57**	**58**	IAmb	IAmb	14 16 02.8			
	comp=Z,27nm,0.8s								
PHWY	**Pilot Hill**	**89.61**	**46**	IAmb	IAmb	14 16 03.0			
	comp=Z,13nm,1.1s								
AMTX	**Amarillo**	**89.76**	**53**	P	**P**	**14 16 02.4**	**+0.3**		
	baz=247								
AMTX	**Amarillo**	**89.76**	**53**	IAmb	IAmb	14 16 03.4			
	comp=Z,24nm,0.8s								
EGMT	**Eagleton**	**89.87**	**39**	P	**P**	**14 16 02.8**	**+0.4**		
	baz=242								
EPYK	**Eagle Plains**	**90.01**	**15**	P	**P**	**14 16 02.5**	**0.0**		
	baz=219								
EPYK	**Eagle Plains**	**90.01**	**15**	IAmb	IAmb	14 16 03.9			
	comp=Z,10nm,0.9s								
SNAA	**Sanae**	**90.10**	**179**	P	**P**	**14 16 02.5**	**-0.6**		
SNAA	**Sanae**	**90.10**	**179**	P	**P**	**14 16 02.5**	**-0.6**		
SNAA				IAmb	IAmb	14 16 02.9			
	comp=Z,18nm,0.7s								
YAK	**Yakutsk**	**90.13**	**338**	P	**P**	**14 16 02.5**	**-0.5**		
YAK				IAmb	IAmb	14 16 03.1			
	comp=Z,13nm,0.7s								
VNA3	**Neumayer Olymp**	**90.23**	**176**	P	**P**	**14 16 03.2**	**-0.4**		
ABTX	**Abilene, Hawle**	**90.48**	**56**	P	**P**	**14 16 06.2**	**+0.7**		
	baz=248								
VNA2	**Neumayer--Watz**	**90.68**	**177**	P	**P**	**14 16 05.7**	**+0.1**		
	baz=188,slow=6.8								
PLCA	**Paso Flores**	**90.80**	**134**	P	**P**	**14 16 07.8**	**+0.8**		
	comp=Z,9.1nm,0.6s,baz=233,slow=5.2,SNR=45								
PLCA	**Paso Flores**	**90.80**	**134**	P	**P**	**14 16 08.0**	**+1.0**		
PLCA				IAmb	IAmb	14 16 08.3			
	comp=Z,14nm,0.8s								
VNA1	**Neumayer--Stat**	**90.90**	**177**	P	**P**	**14 16 06.6**	**-0.1**		
LZH	**Lanzhou**	**91.40**	**308**	⇓P	**P**	**14 16 11.1**	**+1.3**		
LZH				pP	pwP	14 18 09.0	+0.7		
LZH				sP	sP	14 19 01.0	+1.9		
LZH				SKS	**SKSac**	**14 25 52.0**	**+0.2**		
LZH				sS	sS	14 29 53.7	+1.9		
LZH				pmax	pmax				
	comp=Z,52nm,1.3s								
LZH				pmax	pmax				
	comp=Z,180nm,8.2s								
LAO	**LASA Array**	**91.41**	**41**	P	**P**	**14 16 10.8**	**+1.3**		
	baz=244								
435B	**Jarrell**	**91.47**	**58**	P	**P**	**14 16 10.4**	**+0.4**		
	baz=249								
RSSD	**Black Hills**	**91.74**	**44**	P	**P**	**14 16 11.2**	**0.0**		
	baz=246								
RSSD	**Black Hills**	**91.74**	**44**	P	**P**	**14 16 10.8**	**-0.5**		
RSSD				IAmb	IAmb	14 16 12.4			
	comp=Z,18nm,0.8s								
OGNE	**Ogallala**	**91.84**	**47**	P	**P**	**14 16 11.9**	**+0.3**		
	baz=247								
WMOK	**Wichita Mounta**	**91.92**	**54**	P	**P**	**14 16 11.7**	**-0.4**		
	baz=249								
WHTX	**Lake Whitney,**	**91.99**	**57**	P	**P**	**14 16 12.7**	**+0.3**		
	baz=250								
WHTX	**Lake Whitney,**	**91.99**	**57**	IAmb	IAmb	14 16 13.8			
	comp=Z,21nm,0.7s								
INK	**Inuvik**	**92.29**	**15**	IAmb	IAmb	14 16 13.9			
	comp=Z,7.0nm,0.9s								
X34A	**Smith Ranch, M**	**92.60**	**54**	IAmb	IAmb	14 16 17.1			
	comp=Z,24nm,1.0s								
CBKS	**Cedar Bluff**	**92.67**	**50**	P	**P**	**14 16 15.7**	**+0.3**		
	baz=248								
DGMT	**Dagmar**	**93.40**	**40**	P	**P**	**14 16 19.4**	**+0.9**		
	baz=246								
ULN	**Ulaanbaatar**	**93.70**	**319**	P	**P**	**14 16 19.5**	**-0.6**		
ULN				IAmb	IAmb	14 16 21.0			
	comp=Z,9.4nm,0.9s								
SONM	**Songino Array**	**94.09**	**319**	P	**P**	**14 16 22.6**	**+0.8**		
	comp=Z,2.2nm,0.7s,baz=127,slow=4.0,SNR=12								
SONM				pP	**pP**	**14 18 18.9**	**+0.5**		
	comp=Z,0.5nm,0.7s,baz=119,slow=1.8,SNR=1.8								
SONM				PP	**PP**	**14 20 14.3**	**-3.3**		
	comp=Z,1.2nm,0.8s,baz=107,slow=9.9,SNR=4.4								
T35A	**Sooner Cattle**	**94.40**	**53**	IAmb	IAmb	14 16 26.3			
	comp=Z,17nm,1.1s								
X37A	**Clayton**	**94.51**	**55**	IAmb	IAmb	14 16 34.5			
	comp=Z,5.4nm,0.8s								
YKA	**Yellowknife Ar**	**94.67**	**25**	P	**P**	**14 16 23.7**	**-0.2**		
	comp=Z,0.9nm,0.5s,baz=234,slow=4.5,SNR=15								
YKA				pP	**pP**	**14 18 20.7**	**+0.2**		
	comp=Z,1.4nm,1.0s,baz=233,slow=3.9,SNR=3.0								
YKA				PKKPbc	**PKKPdf**	**14 33 16.9**	**-3.7**		
	comp=Z,0.4nm,0.5s,baz=56,slow=2.1,SNR=8.1								
BGNE	**Belgrade**	**94.73**	**48**	P	**P**	**14 16 25.2**	**+0.4**		
	baz=250								
KSU1	**Kansas State U**	**95.06**	**51**	P	**P**	**14 16 26.6**	**+0.4**		
	baz=250								
C36M	**Paulatuk**	**95.49**	**17**	P	**P**	**14 16 27.9**	**+0.5**		
	baz=230								
GTA	**Gaotai**	**95.55**	**310**	⇑P	**P**	**14 16 29.2**	**+0.6**		
GTA				pP	pP	14 18 26.4	+1.1		
GTA				sP	sP	14 19 16.4	-1.8		
GTA				pmax	pmax				
	comp=Z,10.0nm,1.0s								
U38A	**Gravette**	**95.86**	**54**	IAmb	IAmb	14 16 32.7			
	comp=Z,4.3nm,0.8s								
MIAR	**Mount Ida**	**95.90**	**56**	P	**P**	**14 16 30.3**	**+0.1**		
	baz=252								
W39A	**Magazine**	**95.94**	**55**	P	**P**	**14 16 30.5**	**+0.2**		
	baz=252								
W39A	**Magazine**	**95.94**	**55**	IAmb	IAmb	14 16 32.0			
	comp=Z,4.8nm,1.1s								
AC05	**El Transito**	**96.02**	**123**	IAmb	IAmb	14 16 34.5			
	comp=Z,3.0nm,0.9s								
ECSD	**EROS Data Cent**	**96.58**	**46**	P	**P**	**14 16 32.7**	**-0.3**		
	baz=251								
ECSD	**EROS Data Cent**	**96.58**	**46**	IAmb	IAmb	14 16 33.7			
	comp=Z,6.3nm,0.7s								
TIXI	**Tiksi**	**96.70**	**345**	P	**P**	**14 16 31.2**	**-1.6**		
TIXI				IAmb	IAmb	14 16 32.7			
	comp=Z,4.5nm,0.9s								
A36M	**Sachs Harbour**	**96.89**	**14**	P	**P**	**14 16 34.1**	**+0.5**		
	baz=230								
U40A	**Yellville**	**97.01**	**54**	P	**P**	**14 16 34.9**	**-0.2**		
	baz=252								
U40A	**Yellville**	**97.01**	**54**	IAmb	IAmb	14 16 37.4			
	comp=Z,4.4nm,0.8s								
W41B	**Gary Mavity, V**	**97.13**	**55**	P	Pdif	14 16 35.7	0.0		
	baz=253								
AGMN	**Agassiz Nation**	**98.53**	**42**	P	**P**	**14 16 41.8**	**+0.1**		
	baz=252								
H48A	**Harrisville**	**106.06**	**48**	P	**PKiKP**	**14 21 23.7**	**-0.1**		
	baz=260								
158A	**Hollywood**	**106.22**	**60**	P	**PKiKP**	**14 21 23.9**	**-0.6**		
	baz=258								
I49A	**Point Hope**	**106.28**	**49**	P	**PKiKP**	**14 21 24.5**	**+0.2**		
	baz=260								
Q57A	**Strasburg**	**108.77**	**54**	P	**PKiKP**	**14 21 29.2**	**+0.1**		
	baz=261								
ZALV	**Zalesovo Beam**	**108.78**	**322**	PP	**PP**	**14 22 01.9**	**-4.2**		
	comp=Z,0.6nm,0.4s,baz=90,slow=7.2,SNR=2.3								
ZALV				PKKPbc	**PKKPbc**	**14 32 38.0**	**-2.0**		
	comp=Z,1.1nm,0.7s,baz=284,slow=6.0,SNR=4.4								
MKAR	**Makanchi Array**	**109.66**	**314**	Pdiff	**Pdif**	**14 17 33.2**	**+2.0**		
	comp=Z,0.6nm,0.6s,baz=85,slow=5.5,SNR=6.3								
MKAR				PKiKP	**PKiKP**	**14 21 29.5**	**-1.1**		
	comp=Z,0.7nm,0.5s,baz=130,slow=0.6,SNR=9.8								
MKAR				PP	**PP**	**14 22 08.4**	**-4.2**		
	comp=Z,1.2nm,0.8s,baz=95,slow=7.8,SNR=4.7								
MKAR				PKKPbc	**PKKPbc**	**14 32 35.9**	**-1.2**		
	comp=Z,2.2nm,0.8s,baz=273,slow=3.4,SNR=16								
KSH	**Kashi**	**113.58**	**306**	PKP	**PKiKP**	**14 21 40.5**	**+2.1**		
KSH				PP	**PP**	**14 22 42.2**	**+1.6**		
KSH				AMB	AMB				
	comp=Z,160nm,5.0s								
BCX	**Boston College**	**114.58**	**51**		**PKiKP**	**14 21 41.7**	**+1.7**		
OPO	**Ambohidratompo**	**122.27**	**233**	PKP	**PKiKP**	**14 21 56.0**	**0.0**		
	comp=Z,3.6nm,0.7s,baz=11,slow=2.1,SNR=4.4								
ARCES	**ARCESS Array B**	**126.84**	**350**	PKP	**PKPdf**	**14 22 02.4**	**-0.5**		
	comp=Z,1.1nm,0.4s,baz=29,slow=1.9,SNR=26								
ARCES				PKKPbc	**PKKPab**	**14 31 34.0**	**+0.8**		
	comp=Z,0.8nm,0.6s,baz=227,slow=1.8,SNR=6.0								
GEYT	**Alibeck**	**127.53**	**304**	PKP	**PKiKP**	**14 22 05.4**	**-0.4**		
	comp=Z,3.0nm,0.8s,baz=279,slow=3.8,SNR=8.3								
GEYT				PP	**PP**	**14 24 12.5**	**-2.0**		
	comp=Z,3.9nm,1.0s,baz=96,slow=4.5,SNR=7.3								
GEYT				SKPbc	SKPbc	14 24 34.9			
	comp=Z,5.7nm,0.9s,baz=232,slow=3.6,SNR=8.2								
BOSA	**Boshof**	**128.08**	**206**	PKP	**PKiKP**	**14 22 07.0**	**-0.3**		
	comp=Z,5.8nm,0.8s,baz=161,slow=1.3,SNR=6.2								
FINES	**FINESS Array B**	**133.73**	**344**	PKhKP	PKPpre	14 22 09.8			
	comp=Z,0.7nm,0.5s,baz=119,slow=2.4,SNR=5.3								
FINES				SKPbc	**SKPbc**	**14 24 56.5**	**+1.0**		
	comp=Z,16nm,1.0s,baz=48,slow=6.2,SNR=7.8								
NB2	**NORSAR Subarra**	**136.89**	**353**	PKPdf	PKPpre	14 22 11.4			
	comp=Z,6.7nm,2.0s,baz=26,slow=2.0								
NOA	**NORSAR Array B**	**136.89**	**353**	PKhKP	PKPpre	14 22 13.5			
	comp=Z,0.6nm,0.7s,baz=335,slow=2.4,SNR=3.5								
NOA				PKP	**PKPdf**	**14 22 21.9**	**-0.1**		
	comp=Z,0.2nm,0.4s,baz=53,slow=2.1,SNR=3.3								
NOA				SKPbc	**SKPbc**	**14 25 06.1**	**+0.8**		
	comp=Z,2.8nm,0.9s,baz=14,slow=4.5,SNR=7.7								
KBZ	**Khabaz**	**137.34**	**315**	SKPbc	**SKPbc**	**14 25 07.7**	**+0.6**		
	comp=Z,5.0nm,1.0s,baz=76,slow=3.7,SNR=6.2								
HFS	**Hagfors**	**137.46**	**351**	PKhKP	PKPpre	14 22 13.0			
	comp=Z,1.0nm,0.5s,baz=76,slow=6.3,SNR=6.8								
HFS				SKPbc	**SKPbc**	**14 25 07.5**	**+0.6**		
	comp=Z,5.1nm,0.8s,baz=29,slow=3.4,SNR=6.1								
KMBO	**Kilima Mbogo**	**140.16**	**245**	SKPbc	**SKiKP**	**14 25 18.1**	**-0.3**		
	comp=Z,2.6nm,0.6s,baz=142,slow=3.5,SNR=7.5								
AKASG	**Malin Array Be**	**141.12**	**332**	PKhKP	PKPpre	14 22 23.8			
	comp=Z,6.9nm,0.6s,baz=44,slow=4.4,SNR=45								
AKASG				SKPbc	**SKPbc**	**14 25 17.1**	**0.0**		
	comp=Z,5.0nm,0.9s,baz=39,slow=2.8,SNR=6.6								
DIKM	**Dikmen**	**143.31**	**316**	⇓P	**PKPdf**	**14 22 33.6**	**-0.5**		
SORM	**Soroca**	**143.34**	**330**	⇑P	PKPab	14 22 31.8	-0.2		
BSEG	**Bad Segeberg**	**143.94**	**352**	*e*PKPbc	PKPbc	14 22 33.8	-0.2		
	baz=14,slow=2.7								
MILM	**Milestii Mici**	**143.96**	**328**	⇑P	PKPab	14 22 34.3	-0.2		
BZK	**Bozkurt**	**143.97**	**318**	⇑P	**PKPdf**	**14 22 35.2**	**0.0**		
KWP	**Kalwaria Pacla**	**144.62**	**336**	*e*PKP	**PKPab**	**14 22 36.5**	**-0.4**		
KWP				LMZ	LR	15 20 18.1			
	comp=Z,0.1nm,28.1s								
RUE	**Ruedersdorf**	**144.73**	**347**	*e*PKPbc	PKPbc	14 22 36.5	0.0		
	baz=14,slow=2.7								
TLCR		**145.12**	**326**	⇓P	**PKPbc**	**14 22 38.2**	**+0.2**		
OJC	**Ojcow**	**145.16**	**340**	*e*PKP	**PKPbc**	**14 22 37.9**	**0.0**		
OJC				LMZ	LR	15 15 31.7			
	comp=Z,0.1nm,26.1s								
BURAR	**Bucovina Array**	**145.17**	**332**	⇑P	**PKPbc**	**14 22 37.7**	**-0.5**		
RETH	**Rethem/Aller,**	**145.23**	**352**	*e*PKPbc	**PKPbc**	**14 22 37.8**	**-0.2**		
	baz=14,slow=2.7								
BR131	**Keskin Array S**	**145.31**	**314**	P	**PKPbc**	**14 22 38.9**	**-0.1**		
	SNR=9.0								
BRTR	**Keskin Array B**	**145.31**	**314**	PKPbc	**PKPbc**	**14 22 38.7**	**-0.2**		
	comp=Z,15nm,0.9s,baz=134,slow=3.6,SNR=41								
BRTR				pPKPbc	pPKPab	14 24 40.1	+0.3		
	comp=Z,1.6nm,0.7s,baz=169,slow=1.5,SNR=2.9								
BRTR				SKPbc	**SKiKP**	**14 25 28.8**	**+0.6**		
	comp=Z,4.3nm,0.8s,baz=149,slow=1.7,SNR=5.1								
KOLS	**Kolonicke sedl**	**145.36**	**336**	*e*PKP	**PKPab**	**14 22 39.1**	**-0.7**		
NRDL	**Niedersach Rie**	**145.37**	**351**	*e*PKPbc	**PKPbc**	**14 22 38.2**	**-0.2**		
	baz=14,slow=2.7								
CFR	**Carcaliu**	**145.49**	**326**	⇓P	**PKPbc**	**14 22 38.8**	**-0.2**		
TOPG	**Topolog**	**145.56**	**326**	⇑P	**PKPab**	**14 22 40.0**	**-0.7**		
ASSE	**Asse, Remlinge**	**145.63**	**350**	*e*PKPbc	**PKPbc**	**14 22 39.1**	**-0.1**		
	baz=14,slow=2.7								
KSP	**Ksiaz**	**145.65**	**344**	LMZ	LR	15 16 39.9			
	comp=Z,0.2nm,24.4s								
KSP	**Ksiaz**	**145.65**	**344**	*e*PKP	**PKPbc**	**14 22 39.9**	**+0.5**		
NIE	**Niedzica**	**145.68**	**339**	*e*PKP	**PKPab**	**14 22 40.1**	**-0.9**		
NIE				LMZ	LR	15 18 33.9			
	comp=Z,0.1nm,23.6s								
VRI	**Vrincioaia**	**145.73**	**329**	⇓P	**PKPbc**	**14 22 39.6**	**-0.2**		
PLOR	**Plostina**	**145.78**	**329**	⇑P	**PKPbc**	**14 22 40.2**	**+0.2**		
ANTO	**Ankara**	**145.81**	**315**	⇓P	**PKPbc**	**14 22 40.4**	**+0.1**		
TIRR	**Tirgusor**	**145.82**	**325**	⇑P	**PKPdf**	**14 22 38.7**	**+0.3**		
IBBN	**Ibbenburen**	**145.85**	**354**	*e*PKPbc	**PKPab**	**14 22 40.8**	**-0.7**		
	baz=14,slow=2.7								
TRPA	**Tarpa**	**145.90**	**335**	⇓P	**PKPbc**	**14 22 40.5**	**+0.4**		
MBAR	**Mbarara**	**145.91**	**239**	PKPbc	**PKPbc**	**14 22 41.7**	**+0.2**		
	comp=Z,4.6nm,0.2s,baz=216,slow=4.3,SNR=7.8								
HARR	**Harsova**	**145.92**	**326**	⇑P	**PKPbc**	**14 22 40.9**	**+0.6**		
OSTC	**Ostas**	**145.93**	**344**	*e*PKP	**PKPab**	**14 22 41.0**	**-1.0**		
OSTC				*ex*	x	14 22 43.3			
OSTC				*e*pPKP	**pPKPdf**	**14 24 46.3**	**+3.8**		
CHVC	**Chvalec**	**145.95**	**344**	*e*PKP	**PKPbc**	**14 22 40.5**	**+0.3**		
CHVC				*ex*	x	14 22 41.9			
ARCR	**ARCALIA**	**145.95**	**332**	⇑P	**PKPbc**	**14 22 40.7**	**+0.4**		
TLBR	**Topalu**	**145.96**	**326**	⇑P	**PKPbc**	**14 22 41.0**	**+0.6**		
CLZ	**Clausthal**	**145.96**	**351**	*e*PKPbc	**PKPbc**	**14 22 40.4**	**+0.1**		
	baz=14,slow=2.7								
CLL	**Collm**	**146.00**	**347**	*e*SKPbc	**SKiKP**	**14 25 31.0**	**+2.1**		
CLL	**Collm**	**146.00**	**347**	*e*PKPbc	**PKPab**	**14 22 41.3**	**-0.9**		
	baz=14,slow=2.7								
CLL	**Collm**	**146.00**	**347**	⇓*i*PKPbc	**PKPab**	**14 22 41.4**	**-0.8**		
	comp=Z,43nm,1.0s								
CLL	**Collm**	**146.00**	**347**	*i* PKPab	**PKiKP**	**14 22 42.9**	**0.0**		
	comp=Z,22nm,1.0s								
CLL	**Collm**	**146.00**	**347**	*e*pPKiKP	pPKiKP	14 24 46.0	-0.2		
UPC	**Upice**	**146.03**	**344**	*e*PKP	**PKPbc**	**14 22 40.7**	**+0.2**		
UPC				*ex*	x	14 22 42.9			
DPC	**Dobruska-Polom**	**146.09**	**343**	*e*PKP	**PKPbc**	**14 22 41.2**	**+0.5**		
DPC				*ex*	x	14 22 43.4			
DPC				*e*pPKP	**pPKPdf**	**14 24 44.4**	**+1.6**		
LANS	**Liptovska Anna**	**146.19**	**339**	*e*PKP	**PKPab**	**14 22 42.2**	**-0.9**		
BRG	**Berggiesshubel**	**146.20**	**346**	*e*PKS		14 26 25.4			
	comp=Z,2.5nm,0.6s								
BRG	**Berggiesshubel**	**146.20**	**346**	*e*PKPbc	**PKPbc**	**14 22 40.9**	**0.0**		
	baz=14,slow=2.7								
BRG	**Berggiesshubel**	**146.20**	**346**	*e*PKP	**PKPbc**	**14 22 40.6**	**-0.3**		
	comp=Z,20nm,1.3s								
BRG	**Berggiesshubel**	**146.20**	**346**	*e*pPKP	pPKPdf	14 24 44.1	+1.4		
	comp=Z,12nm,1.3s								
BRG	**Berggiesshubel**	**146.20**	**346**	*e*sPKP		14 25 30.3			
	comp=Z,4.3nm,0.8s								
KRLC	**Kraliky**	**146.21**	**343**	*e*PKP	**PKPbc**	**14 22 41.4**	**+0.4**		
KRLC				*ex*	x	14 22 43.6			
MORC	**Moravsky Berou**	**146.26**	**342**	*e*		14 24 44.4			
MORC	**Moravsky Berou**	**146.26**	**342**	⇓P	**PKPbc**	**14 22 41.5**	**+0.3**		
MORC	**Moravsky Berou**	**146.26**	**342**	*e*PKP	**PKPbc**	**14 22 41.2**	**0.0**		
FBE	**Freiberg**	**146.29**	**347**	*e*PKPbc	**PKPbc**	**14 22 41.3**	**+0.2**		
	baz=14,slow=2.7								
DOPR	**Dopca**	**146.31**	**330**	⇑P	**PKPab**	**14 22 42.5**	**-1.2**		
NEUB	**Neuenburg**	**146.33**	**349**	*e*PKPbc	**PKPbc**	**14 22 41.5**	**+0.3**		
	baz=14,slow=2.7								
PVCC	**Panska Ves**	**146.38**	**345**	*e*PKP	**PKPbc**	**14 22 41.9**	**+0.5**		
MLR	**Muntele Rosu**	**146.39**	**329**	⇑P	**PKPbc**	**14 22 41.7**	**-0.1**		
SECR		**146.65**	**328**	⇑P	**PKPbc**	**14 22 42.7**	**+0.4**		
VOIR		**146.86**	**330**	⇑P	**PKPbc**	**14 22 43.2**	**+0.2**		
PRU	**Pruhonice**	**146.89**	**345**	*e*PKP	**PKPbc**	**14 22 42.8**	**0.0**		
PRU				*ex*	x	14 22 46.2			
MOX	**Moxa**	**146.90**	**349**	*e*PKPbc	**PKPbc**	**14 22 42.5**	**-0.3**		
	baz=14,slow=2.7								
MOX				*e*L	L	15 30 23.3			
	comp=Z,45nm,19.2s								
PLN	**Plauen**	**146.95**	**348**	*e*PKPbc	**PKPbc**	**14 22 43.1**	**+0.1**		
	baz=14,slow=2.7								
TANN	**Tannenbergstha**	**146.96**	**348**	*e*PKPbc	**PKPbc**	**14 22 43.1**	**+0.1**		
	baz=14,slow=2.7								
VRAC	**Vranov**	**146.96**	**342**	*e*PKP	**PKPbc**	**14 22 43.2**	**+0.2**		
VRAC				*e*		14 22 46.8			
VRAC				*e*		14 24 47.2			
VRAC	**Vranov**	**146.96**	**342**	⇑P	**PKPab**	**14 22 46.7**	**+0.6**		
VYHS	**Vyhne**	**146.97**	**339**	*e*	**PKPab**	**14 22 46.9**	**+0.7**		
VYHS	**Vyhne**	**146.97**	**339**	*e*PKP	**PKPbc**	**14 22 43.5**	**+0.4**		
GUNZ	**Gunzen**	**147.03**	**348**	*e*PKPbc	**PKPbc**	**14 22 43.5**	**+0.3**		
	baz=14,slow=2.7								
JAVC	**Velka Javorina**	**147.03**	**341**	*e*		14 24 48.7			
JAVC	**Velka Javorina**	**147.03**	**341**	*e*PKP	**PKiKP**	**14 22 44.5**	**-0.7**		
JAVC	**Velka Javorina**	**147.03**	**341**	*e*	**PKPab**	**14 22 48.1**	**+1.6**		
PSZ	**Piszkesteto**	**147.09**	**337**	⇑P	**PKPbc**	**14 22 43.9**	**+0.4**		
WERN	**Wernitzgruen**	**147.09**	**348**	*e*PKPbc	**PKPbc**	**14 22 43.7**	**+0.3**		
	baz=14,slow=2.7								
ARR	**Arges**	**147.11**	**330**	⇓P	**PKiKP**	**14 22 44.5**	**-0.9**		
KRUC	**Moravsky**	**147.24**	**342**	*e*		14 24 48.2			
KRUC	**Moravsky**	**147.24**	**342**	*e*PKP	**PKPbc**	**14 22 43.9**	**+0.2**		
KRUC	**Moravsky**	**147.24**	**342**	*e*	**PKPab**	**14 22 47.7**	**+0.5**		
PBCC	**Pribram**	**147.30**	**345**	*e*PKP	**PKPbc**	**14 22 44.0**	**+0.1**		
PBCC				*ex*	x	14 22 47.7			
MANZ	**Manzenberg**	**147.43**	**348**	*e*PKPbc	**PKPbc**	**14 22 44.2**	**0.0**		
	baz=14,slow=2.7								
MODS	**Modra-Piesok**	**147.58**	**341**	*e*PKP	**PKPbc**	**14 22 44.2**	**-0.5**		
ROTZ	**Rotzenmuhle**	**147.62**	**347**	*e*PKPbc	**PKPbc**	**14 22 44.9**	**+0.2**		
	baz=14,slow=2.7								
SIRR	**Siria**	**147.75**	**334**	⇑P	**PKPbc**	**14 22 45.7**	**+0.5**		
TNS	**Taunus Mts**	**147.82**	**352**	*e*PKPbc	**PKPbc**	**14 22 45.1**	**-0.2**		
	baz=14,slow=2.7								
GRF	**Grafenberg Arr**	**147.89**	**349**	*e*L	L	15 30 45.5			
	comp=Z,58nm,18.9s								
KHC	**Kasperske Hory**	**147.92**	**345**	*e*PKP	**PKPbc**	**14 22 45.8**	**+0.2**		
KHC				*ex*	x	14 22 50.4			
KHC				*ex*	x	14 23 02.7			
KHC				*e*pPKP	**pPKPab**	**14 24 50.8**	**+1.9**		
GZR	**Gura Zlata**	**147.95**	**332**	⇑P	**PKPbc**	**14 22 45.7**	**-0.1**		
WET	**Wettzell**	**148.07**	**346**	*e*PKPbc	**PKPbc**	**14 22 45.7**	**-0.2**		
	baz=14,slow=2.7								
BMRD	**Maredsous**	**148.09**	**356**	PKPdf	**PKPdf**	**14 22 41.7**	**-0.2**		
BMRD	**Maredsous**	**148.09**	**356**	PKPbc	**PKPbc**	**14 22 45.2**	**-0.6**		
BMRD	**Maredsous**	**148.09**	**356**	PKPab	**PKPab**	**14 22 50.2**	**-0.4**		
GEC2	**GERESS Array S**	**148.15**	**345**	*e*PKPbc	**PKPbc**	**14 22 46.1**	**-0.1**		
	baz=14,slow=2.7								
GERES	**GERESS Array B**	**148.15**	**345**	PKPbc	**PKPbc**	**14 22 46.3**	**+0.1**		
	comp=Z,6.1nm,0.7s,baz=29,slow=3.0,SNR=58								
GERES				pPKPbc	**pPKPbc**	**14 24 49.0**	**+0.2**		
	comp=Z,3.0nm,0.9s,baz=40,slow=4.4,SNR=5.9								
GERES				PP	**PP**	**14 26 21.9**	**+2.6**		
	comp=Z,0.2nm,0.3s,baz=339,slow=5.2,SNR=1.7								
VLAD	**Vladila**	**148.22**	**328**	⇑P	**PKiKP**	**14 22 47.1**	**-0.5**		
CONA	**Conrad Observa**	**148.41**	**342**	*e*PKiKP	**PKPbc**	**14 22 47.3**	**+0.4**		
	comp=Z,20nm,1.1s,SNR=14								
CONA				*e*PKPab	**PKPab**	**14 22 53.0**	**+0.9**		
	comp=Z,19nm,0.8s								
CONA				*e*pPKiKP	**pPKiKP**	**14 24 52.8**	**+1.3**		
	comp=Z,10.0nm,1.0s								
HERR	**Herculane**	**148.51**	**331**	⇓P	**PKPbc**	**14 22 47.0**	**-0.1**		
PLVB	**Pleven**	**148.55**	**327**	⇑P	**PKiKP**	**14 22 47.9**	**-0.5**		
WLF	**Walferdange**	**148.62**	**355**	*e*PKPbc	**PKPbc**	**14 22 47.2**	**0.0**		
	baz=14,slow=2.7								
MDVR	**Moldovita**	**148.90**	**332**	⇓P	**PKPbc**	**14 22 47.9**	**-0.2**		
MOA	**Molln**	**148.93**	**344**	*i*

0.8nm,1.0s,baz=209,slow=7.2,SNR=7.2

TXAR	**Lajitas Array**	**85.39**	**57**	P		P	14 25 36.1	-0.5
	0.7nm,0.7s,baz=215,slow=7.6,SNR=4.6								

TAP 09 14:17:22.5, 23.68N×121.42E, h17km, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
EGFH	**Guangfu**	**0.02**	**151**	*i* P		Pg	14 17 25.6	+0.1
EGFH	baz=149			*i* S		Sg	14 17 27.5	0.0
	baz=149							
ESL	**Shilin**	**0.13**	**6**	P		Pg	14 17 26.4	0.0
ESL	baz=10.0			S		Sg	14 17 28.9	-0.1
	baz=10.0							
HGSD	**Ruisui**	**0.19**	**179**	*e*P		Pb	14 17 27.9	+0.4
HGSD	baz=183			*e*S		Sb	14 17 31.3	+0.4
	baz=183							
EHY	**Hungye**	**0.20**	**207**	P		Pg	14 17 27.2	-0.1
EHY	baz=204			S		Sg	14 17 30.6	0.0
	baz=204							
VWDT	**VWDT**	**0.26**	**286**	P		Pg	14 17 28.5	+0.2
VWDT	baz=286			S		Sg	14 17 32.5	+0.2
	baz=286							
YULB	**Yu-li**	**0.31**	**201**	*e*P		Pg	14 17 28.9	-0.2
YULB	baz=196			*e*S		Sb	14 17 34.3	-0.1
	baz=196							
TWF1	**Yuli**	**0.35**	**199**	P		Pg	14 17 29.7	-0.1
TWF1	baz=200			S		Sg	14 17 34.8	0.0
	baz=200							
OWD	**Renai**	**0.35**	**321**	P		Pg	14 17 29.9	0.0
OWD	baz=321			S		Sg	14 17 34.0	-0.9
	baz=321							
CHGB	**Renai**	**0.44**	**329**	P		Pg	14 17 31.5	+0.1
CHGB	baz=336			S		Sg	14 17 37.7	+0.2
	baz=336							
SSLB	**Suanglung**	**0.44**	**284**	S		Sg	14 17 36.4	-1.0
	baz=291							
WHF	**Hehuan Shan**	**0.48**	**343**	P		Pb	14 17 32.7	0.0
WHF	baz=345			S		Sg	14 17 38.7	-0.3
	baz=345							
FULB	**Fuli**	**0.50**	**193**	*e*S		Sb	14 17 41.2	+1.5
	baz=202							
ETLH	**Xiulin Townshi**	**0.53**	**6**	*e*S		Sg	14 17 39.8	-0.3
	baz=7.0							
DPDB	**Guoxing**	**0.57**	**308**	*e*S		Sg	14 17 41.3	-0.2
	baz=316							
ALS	**Alishan**	**0.59**	**253**	*e*S		Sg	14 17 41.5	-0.7
	baz=253							
ELDTW	**Lidau**	**0.61**	**217**	S		Sg	14 17 42.2	-0.7
	baz=208							
NNSH	**Datong**	**0.74**	**357**	*e*P		Pb	14 17 36.6	-0.5
NNSH	baz=3.0			S		Sg	14 17 46.4	-0.5
	baz=3.0							

JMA 09 14:17:47.8±0.1, 24.07N×123.49E, h24km±2km, M2.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.29**	**93**	P		Pb	14 17 54.4	-0.2
HATJ				S		Sb	14 17 59.3	+0.1
IRIF	**Iriomote-Funau**	**0.34**	**40**	P		Pb	14 17 55.3	-0.1
IRIF				S		Sb	14 18 00.5	-0.1
JKRS	**Kuro-shima**	**0.50**	**71**	P		Pb	14 17 58.2	+0.2
JKRS				S		Sb	14 18 06.0	+1.0
YOJ	**Yonaguni jima**	**0.59**	**312**	P		Pb	14 17 59.2	-0.2
YOJ				*e*S		Sb	14 18 07.7	+0.3
JYNG	**Yonagunijimaku**	**0.63**	**307**	P		Pb	14 17 59.8	-0.3
JYNG				S		Sb	14 18 07.9	-0.6
JIJ	**Ishigaki jima**	**0.66**	**64**	P		Pb	14 18 00.3	-0.5
JIJ				S		Sb	14 18 09.5	-0.1
JISG	**Ishigakijimahi**	**0.91**	**55**	P		Pb	14 18 04.2	-0.7
JISG				S		Sb	14 18 16.3	-0.3
JTJ	**Tarama**	**1.24**	**63**	P		Pn	14 18 10.1	+0.4
JTJ				S		Sb	14 18 26.8	+0.6

LDG 09 14:20:34.3±0.1, 43.85N×7.65E, h14km, Md1.6/1, Ml1.6/5, Error ellipse: s-maj=2.1km s-min=1.9km az=176.0, Near south coast of France

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SBF	**Sospel**	**0.15**	**274**	*e*Pg		Pg	14 20 37.7	-0.5
SBF				*e*Sg		Sg	14 20 40.0	-0.9
	48nm,0.2s							
FRF	**La Foret Royal**	**0.78**	**248**	*e*Pg		Pg	14 20 49.1	-0.4
FRF				*e*Sg		Sg	14 20 59.8	0.0
	1.3nm,0.2s							
LMR	**La Mourre**	**0.98**	**238**	*e*Pg		Pb	14 20 52.6	-0.4
LMR				*e*Sg		Sb	14 21 05.6	-0.1
	1.5nm,0.2s							
MBDF	**Montbardon**	**1.07**	**325**	*e*Pg		Pb	14 20 54.9	+0.1
MBDF				*e*Sg		Sg	14 21 09.2	+0.1
	0.5nm,0.2s							
SMRF	**Simiane la Rot**	**1.50**	**275**	*e*Pn		Pn	14 20 59.6	-1.2
SMRF	**Simiane la Rot**	**1.50**	**275**	*e*Pg		Pb	14 21 02.5	+0.5
SMRF				*e*Sg		Sg	14 21 22.4	-0.3
	1.0nm,0.2s							
PGF	**Pioggiola**	**1.64**	**142**	*e*Pn		Pn	14 21 01.0	-1.8
PGF				*e*Sn		Sn	14 21 20.6	-3.1
	0.7nm,0.3s							

*NEIC **09** 14:30:35.5±2.4, 5.43S±0.06×129.79E±0.1, h199km±5km, mb4.3/8, Error ellipse: s-maj=19.6km s-min=7.9km az=81.0*
*DJA **09** 14:30:35.9±0.4, 5.3°S±4.4×13.0°E±.°, h207km±5km, M4.3/11, mB4.8/6, mb4.3/7, MLv4.4/11, Mw(mB)4.1/6*
*IDC **09** 14:30:36.1±2.1, 5.34S×130.00E, h194km±24km, mb3.4/6, mb1 3.7/10, mb1mx3.4/26, mbtmp4.1/10, Error ellipse: s-maj=33.7km s-min=15.5km az=92.0*

ISC 09 14:30:35.8±0.6, 5.40S±0.05×130.08E±0.08, h200km, n33, σ2.902/38, mb3.6/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
BNDI	**Bandanaira**	**0.88**	**349**	P		**Pn**	**14 31 05.5**	**+0.6**
BNDI				S		**Sn**	**14 31 29.1**	**+1.6**
AAI	**Ambon**	**2.53**	**312**	P		**Pn**	**14 31 23.1**	**+3.0**
SAUI	**Saumlaki**	**2.84**	**155**	Pn		**Pn**	**14 31 27.5**	**+3.9**
FAKI	**Fak Fak**	**3.27**	**41**	P		**Pn**	**14 31 29.0**	**+0.2**
FAKI	**Fak Fak**	**3.27**	**41**			**Pn**	**14 31 29.7**	**+1.0**
NLAI	**Namlea**	**3.66**	**306**	P		**Pn**	**14 31 35.7**	**+2.2**
SIJI	**Sorong**	**4.65**	**15**	P		**Pn**	**14 31 45.9**	**0.0**
SIJI	14nm,0.3s,baz=204,slow=19,SNR=112			S		**Sn**	**14 32 36.8**	**-4.2**
SANI	**Sanana**	**5.26**	**309**	P		**Pn**	**14 31 52.8**	**-0.8**
LBMI	35nm,0.3s,baz=84,slow=22,SNR=51 **Labuha**	**5.38**	**331**	P		**Pn**	**14 31 54.9**	**-0.3**
RKPI	0.2nm1μm45nm,0.7s **Ransiki, Papua**	**5.62**	**47**	P		**Pn**	**14 32 00.0**	**+1.7**
MTN	0.5nm1μm66nm,0.7s **Manton Dam**	**7.47**	**172**			**Pn**	**14 32 22.5**	**+0.3**
EDFI	1.4nm6μm316nm,0.6s **Ende, Flores**	**8.97**	**248**	P		**Pn**	**14 32 42.5**	**+0.7**
MRSI	18nm,0.9s **Marisa**	**10.01**	**305**	P		**Pn**	**14 32 54.3**	**-0.9**
KNRA	773nm14nm,0.8s **Kununurra**	**10.30**	**187**			**Pn**	**14 32 58.2**	**-0.8**
FITZ	**Fitzroy Crossi**	**13.35**	**199**	P		**Pn**	**14 33 37.8**	**+0.1**
FITZ	0.7nm,0.3s,baz=32,slow=11,SNR=37			S		S	14 35 55.4	-11
FITZ	2.2nm,0.3s,baz=93,slow=22,SNR=10 **Fitzroy Crossi**	**13.35**	**199**	P		**Pn**	**14 33 37.7**	**-0.1**
WB0	**Warramunga Arr**	**14.89**	**164**	P		**Pn**	**14 33 56.3**	**-0.5**
WB0						**S**	**14 36 40.4**	**-1.8**
WRAB	**Tennant Creek**	**15.04**	**164**	P		**Pn**	**14 33 58.5**	**0.0**
WRAB	comp=Z,5.0nm,0.6s			IAmb		IAmb	14 34 04.8	
WRA	**Warramunga Arr**	**15.04**	**164**	P		**Pn**	**14 33 58.7**	**0.0**
	comp=Z,0.7nm,0.3s,baz=343,slow=13,SNR=27							
WRA				S		**S**	**14 36 38.2**	**-7.6**
	comp=Z,1.4nm,0.3s,baz=342,slow=18,SNR=6.1							
WB2	**Warramunga Arr**	**15.05**	**164**	P		**Pn**	**14 33 58.8**	**+0.1**
WR0	**Warramunga Arr**	**15.11**	**164**	P		**Pn**	**14 33 59.6**	**+0.1**
WR0				IAmb		IAmb	14 34 15.6	
	comp=Z,5.5nm,0.7s							
COEN	**Coen**	**15.45**	**124**	P		**P**	**14 34 07.0**	**+3.1**
COEN				IAmb		IAmb	14 34 16.2	
	comp=Z,21nm,1.1s							
AS31	**Alice Springs**	**18.54**	**169**	P		**Pn**	**14 34 40.3**	**+0.1**
ASAR	**Alice Springs**	**18.54**	**169**	P		**Pn**	**14 34 40.0**	**-0.2**
	comp=Z,1.3nm,0.3s,baz=347,slow=10,SNR=74							
ASAR				S		**S**	**14 37 57.4**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=345,slow=21,SNR=6.3							
PSA00	**Pilbara Seismi**	**18.89**	**211**	P		**P**	**14 34 42.0**	**+0.5**
PSA00				IAmb		IAmb	14 34 43.4	
	comp=Z,13nm,0.7s							
NWAO	**Narrogin (SRO)**	**29.90**	**202**	P		**P**	**14 36 22.6**	**-2.3**
NWAO	**Narrogin (SRO)**	**29.90**	**202**	P		**P**	**14 36 22.6**	**-2.3**
NWAO				IAmb		IAmb	14 36 39.1	
	comp=Z,14nm,1.1s							
CMAR	**Chiang Mai Arr**	**38.78**	**308**	P		**P**	**14 37 41.4**	**0.0**
	comp=Z,0.5nm,0.4s,baz=142,slow=6.8,SNR=5.2							
MJAR	**Matsushiro Arr**	**42.41**	**10**	P		**P**	**14 38 10.5**	**-0.3**
	comp=Z,2.6nm,0.6s,baz=178,slow=8.1,SNR=7.2							
KSRS	**Korea Array**	**42.67**	**357**	P		**P**	**14 38 13.3**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=175,slow=9.1,SNR=5.8							
USRK	**Ussuriysk Ar.**	**49.40**	**2**	P		**P**	**14 39 05.8**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=194,slow=7.5,SNR=4.3							
PETK	**Petropavlovsk-**	**62.78**	**18**	P		**P**	**14 40 40.7**	**+0.9**
	comp=Z,2.6nm,1.0s,baz=208,slow=5.9,SNR=2.0							
MKAR	**Makanchi Array**	**66.94**	**326**	P		**P**	**14 41 07.2**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=124,slow=7.8,SNR=11							

IDC 09 14:55:31.1±6.6, 5.74S×149.01E, h177km±49km, mb2.3/2, mb1 2.5/3, mb1mx2.5/29, mbtmp2.9/3, Error ellipse: s-maj=157.1km s-min=59.8km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**4.08**	**207**	P		Pn	14 56 33.7	+0.6
PMG	0.6nm,0.3s,baz=63,slow=18,SNR=1.4			S		Sn	14 57 21.9	+0.1
	1.0nm,0.3s,baz=349,slow=19,SNR=2.1							
WRA	**Warramunga Arr**	**20.07**	**224**	P		P	14 59 51.0	0.0
	0.2nm,0.6s,baz=49,slow=11,SNR=4.5							
ASAR	**Alice Springs**	**23.01**	**218**	P		P	15 00 21.2	+0.5
	0.1nm,0.4s,baz=58,slow=9.2,SNR=5.7							
TORD	**Torodi Ar. Bea**	**146.96**	**285**	PKPbc		PKPdf	15 14 52.6	+1.0
	0.2nm,0.4s,baz=70,slow=2.9,SNR=2.0							

IDC 09 15:03:19.1±2.6, 28.33S×23.02E, h0km, mb3.4/1, mb1 3.4/1, mb1mx3.1/32, mbtmp3.4/1, Error ellipse: s-maj=44.9km s-min=17.3km az=21.0, South Africa

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
I47ZA	**BOSHOF INFRASO**	**1.97**	**99**	*i*			15 13 50.0	
	baz=277,slow=297,SNR=3.6							
BOSA	**Boshof**	**1.98**	**99**	Pn		Pn	15 03 54.0	-0.1
	3.0nm,0.3s,baz=280,slow=17,SNR=51							
BOSA				Sn		Sn	15 04 19.6	-0.2
	4.5nm,0.3s,baz=242,slow=17,SNR=4.8							
BOSA				Lg		Lg	15 04 22.7	
	17nm,0.3s,baz=187,slow=21,SNR=18							
BOSA				Rg		Rg	15 04 31.6	
	313nm,0.8s,baz=240,slow=1.9,SNR=17							
TORD	**Torodi Ar. Bea**	**46.12**	**331**	P		P	15 11 45.2	-0.1
	0.5nm,0.9s,baz=150,slow=9.4,SNR=2.4							

*IDC **09** 15:09:36.0±2.7, 6.78S×130.48E, h57km±31km, mb3.6/6, mb1 4.0/10, mb1mx3.6/40, mbtmp4.1/10, ML4.3/4, Error ellipse: s-maj=44.7km s-min=23.0km az=93.0*
*DJA **09** 15:09:36.9±0.3, 7.°S±3.°×13.°1E±.°, h167km±7km, M4.2/13, mB4.9/5, mb4.1/10, MLv4.3/13, Mw(mB)4.2/5*

ISC 09 15:09:37.9±0.7, 6.86S±0.05×130.67E±0.08, h100km, n24, σ2.879/27, mb4.0/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**1.28**	**151**	P		Pn	15 10 06.8	+5.3
BNDI	**Bandanaira**	**2.44**	**342**	P		**Pn**	**15 10 13.8**	**-2.5**
MSAI	**Masohi**	**3.90**	**333**	P		**Pn**	**15 10 36.3**	**+0.6**
AAI	**Ambon**	**4.00**	**322**	P		**Pn**	**15 10 34.6**	**-2.5**
FAKI	**Fak Fak**	**4.21**	**22**	P		**Pn**	**15 10 38.4**	**-1.6**
NLAI	**Namlea**	**5.06**	**315**	P		**Pn**	**15 10 50.5**	**-0.9**
	0.3nm879nm73nm,1.0s							
SIJI	**Sorong**	**5.98**	**6**	P		**Pn**	**15 11 01.4**	**-2.6**
	5.3nm,0.3s,baz=201,slow=23,SNR=25							
SIJI				S		**Sn**	**15 12 02.6**	**-8.5**
	17nm,0.3s,baz=68,slow=23,SNR=13							
RKPI	**Ransiki, Papua**	**6.36**	**33**	P		**Pn**	**15 11 09.5**	**+0.4**
SANI	**Sanana**	**6.68**	**315**	P		**Pn**	**15 11 13.4**	**-0.1**
	0.1nm919nm36nm,1.1s							
LBMI	**Labuha**	**6.94**	**333**	P		**Pn**	**15 11 16.7**	**-0.4**
	0.2nm31nm,1.7s							
SOEI	**Soe**	**6.96**	**245**	P		**Pn**	**15 11 18.3**	**+0.8**
	0.3nm26nm,0.8s							
BATI	**Baumata**	**7.69**	**244**	P		**Pn**	**15 11 28.9**	**+1.6**
	9.4nm,0.3s,baz=91,slow=3.5,SNR=14							
BATI				S		**Sn**	**15 12 52.5**	**-0.4**
	5.1nm,0.3s,baz=12,slow=16,SNR=4.0							
BATI	**Baumata**	**7.69**	**244**	P		**Pn**	**15 11 29.1**	**+1.8**
	0.1nm14nm,0.8s							
MRSI	**Marisa**	**11.36**	**310**	P		**Pn**	**15 12 15.8**	**-1.3**
	715nm38nm,0.9s							
FITZ	**Fitzroy Crossi**	**12.20**	**203**	P		**Pn**	**15 12 26.8**	**-1.5**
	2.4nm,0.3s,baz=26,slow=9.4,SNR=56							
FITZ				S		**Sn**	**15 14 36.8**	**-5.8**
	2.2nm,0.3s,baz=107,slow=22,SNR=8.9							
WRA	**Warramunga Arr**	**13.49**	**165**	P		**Pn**	**15 12 46.0**	**+0.8**
	1.5nm,0.3s,baz=352,slow=13,SNR=82							
WRA				S		**Sn**	**15 15 09.5**	**-4.2**
	1.7nm,0.3s,baz=342,slow=21,SNR=10.0							
ASAR	**Alice Springs**	**17.00**	**170**	P		**P**	**15 13 32.0**	**+2.1**
	0.9nm,0.3s,baz=355,slow=12,SNR=47							
ASAR				S		**Sn**	**15 16 36.5**	**-2.1**
	0.8nm,0.3s,baz=350,slow=23,SNR=10							
CMAR	**Chiang Mai Arr**	**40.16**	**309**	P		**P**	**15 17 05.1**	**+0.6**
	0.7nm,0.6s,baz=136,slow=5.7,SNR=6.0							
KSRS	**Korea Array**	**44.16**	**357**	P		**P**	**15 17 38.0**	**+1.4**
	0.4nm,0.5s,baz=168,slow=7.4,SNR=2.6							
SONM	**Songino Array**	**58.52**	**341**	P		**P**	**15 19 25.8**	**+1.9**
	0.5nm,0.4s,baz=157,slow=7.7,SNR=2.1							
PETK	**Petropavlovsk-**	**63.98**	**18**	P		**P**	**15 20 03.1**	**+2.6**
	3.4nm,1.0s,baz=190,slow=7.3,SNR=1.8							
KSH	**Kashi**	**68.37**	**317**	P		P	15 20 33.4	+4.4
KSH				pP		pwP	15 20 57.7	-2.5
KSH				sP		sP	15 21 09.7	+7.2
KSH				pmax		pmax		
	comp=Z,8.0nm,0.7s							
MKAR	**Makanchi Array**	**68.47**	**326**	P		**P**	**15 20 31.2**	**+1.8**
	comp=Z,1.8nm,0.5s,baz=114,slow=8.8,SNR=33							
ZALV	**Zalesovo Beam**	**71.75**	**333**	P		**P**	**15 20 51.1**	**+1.9**
	comp=Z,0.5nm,0.5s,baz=145,slow=5.3,SNR=2.5							

ROM 09 16:21:20.4±0.1, 43.401N±0.002×12.463E±0.003, h6km, ML0.4/1, Error ellipse: s-maj=0.2km s-min=0.2km az=226.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
ATVO	**AVT- Monte Val**	**0.05**	**245**	P		Pg	16 21 21.9	+0.2
ATVO				S		Sg	16 21 23.1	+0.3
ATVO				AML		AML		
	comp=E,75μm,0.2s							
ATVO				AML		AML		
	comp=N,88μm,0.1s							
ATPI	**Pietralunga -**	**0.07**	**318**	P		Pg	16 21 22.2	+0.2
ATPI				S		Sg	16 21 23.6	+0.3
ATFO	**Monte Foce - G**	**0.09**	**114**	P		Pg	16 21 22.5	+0.2
ATFO				S		Sg	16 21 24.3	+0.5
PIEI	**Pieia**	**0.14**	**21**	P		Pg	16 21 23.8	+0.5
PIEI				AML		AML		
	comp=N,25μm,0.2s							
PIEI				AML		AML		
	comp=E,23μm,0.2s							

DJA 09 16:40:55.0±0.9, 2.°N±5.°×9.°7E±.°, h22km±10km, M3.0/7, MLv3.0/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.66**	**121**	P		Pb	16 41 07.8	-0.1
SNSI	**Sinabang, Aceh**	**1.02**	**318**	P		Pn	16 41 15.1	+1.1
TPTI		**1.61**	**6**	P		Pn	16 41 15.6	-6.5
TPTI				S		Sn	16 41 36.7	-5.5
KCSI	**Kotacane, Aceh**	**2.01**	**22**	P		Pn	16 41 23.7	-3.9
KCSI				S		Sn	16 41 52.3	+0.2
PBSI	**Pulau Batu**	**2.12**	**143**	P		Pn	16 41 28.5	-0.6
MNSI	**Mandailing Nat**	**2.71**	**108**	P		Pn	16 41 36.7	-0.5

*MEX **09** 16:58:53.9±42.0, 17.38N×101.54W, h14km±582km, MD4.3*
*NEIC **09** 16:58:54.7±1.9, 17.49N±0.03×101.35W±0.05, h19km±6km, Error ellipse: s-maj=7.7km s-min=3.3km az=103.0*

ISC 09 16:58:54.6±1.1, 17.51N±0.05×101.38W±0.05, h16km±8km, n29, σ1.957/51, 1D, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.12**	**320**	*e*P		**Pg**	**16 58 58.6**	**+0.4**
	baz=118,slow=12							
ZIIG				*i* S		**Sb**	**16 59 02.2**	**+1.0**
ZIIG	**Zihuatanejo**	**0.12**	**320**			**Pg**	**16 58 58.6**	**+0.4**
ZIIG						**Sb**	**16 59 02.2**	**+1.0**
UON	**La Union**	**0.61**	**318**	*e*P		**Pg**	**16 59 05.6**	**-1.1**
UON				*i* S		**Sg**	**16 59 13.6**	**-1.3**
CAIG	**El Cayaco**	**1.16**	**113**	*e*P		**Pn**	**16 59 13.7**	**-2.5**
CAIG				*i* S		**Sb**	**16 59 29.2**	**-1.9**
CAIG	**El Cayaco**	**1.16**	**113**			**Pn**	**16 59 13.7**	**-2.5**
CAIG						**Sb**	**16 59 29.2**	**-1.9**
ARIG	**Puente Sto Nin**	**1.25**	**52**	*e*P		**Pn**	**16 59 15.7**	**-1.7**
ARIG				*e*S		**Sn**	**16 59 32.5**	**-1.5**
ARIG	**Puente Sto Nin**	**1.25**	**52**			**Pn**	**16 59 15.7**	**-1.7**
ARIG						**Sn**	**16 59 32.5**	**-1.5**
ACP2	**Acapulco**	**1.56**	**114**	*e*P		**Pn**	**16 59 20.9**	**-0.9**
ACP2				*e*S		**Sn**	**16 59 42.3**	**+0.6**
ACP2	**Acapulco**	**1.56**	**114**			**Pn**	**16 59 20.9**	**-0.9**
ACP2						**Sn**	**16 59 42.3**	**+0.6**
MEIG	**Mezcala**	**1.73**	**76**	*e*P		**Pn**	**16 59 24.0**	**-0.1**
MEIG				*e*S		**Sn**	**16 59 46.4**	**+0.5**
MEIG	**Mezcala**	**1.73**	**76**			**Pn**	**16 59 24.0**	**-0.1**
MEIG						**Sn**	**16 59 46.4**	**+0.5**
PLIG	**Platanillo**	**1.99**	**64**	*e*P		**Pn**	**16 59 27.9**	**+0.2**
PLIG				*e*S		**Sn**	**16 59 53.9**	**+1.5**
PLIG	**Platanillo**	**1.99**	**64**			**Pn**	**16 59 27.9**	**+0.2**
PLIG						**Sn**	**16 59 53.9**	**+1.5**
MOIG	**Morelia**	**2.16**	**5**			**Pn**	**16 59 31.7**	**+1.5**
CRIG	**Cruz Grande**	**2.29**	**109**	*e*P		**Pn**	**16 59 32.9**	**+1.2**
CRIG				*e*S		**Sb**	**17 00 02.7**	**-0.9**
YAIG	**Yautepec**	**2.58**	**58**	*e*P		**Pn**	**16 59 38.0**	**+2.2**
YAIG				*e*S		**Sb**	**17 00 12.0**	**-0.1**
YAIG	**Yautepec**	**2.58**	**58**			**Pn**	**16 59 38.0**	**+2.2**
YAIG						**Sb**	**17 00 12.0**	**-0.1**
TLIG	**Tlapa**	**2.69**	**89**	*e*P		**Pn**	**16 59 36.6**	**-0.8**
TLIG				*e*S		**Sb**	**17 00 14.7**	**-0.5**
TLIG	**Tlapa**	**2.69**	**89**			**Pn**	**16 59 38.2**	**+0.9**
TLIG	**Tlapa**	**2.69**	**89**			**Sb**	**17 00 14.7**	**-0.5**
FTIG	**Fresnillo de T**	**3.12**	**82**	*e*P		**Pn**	**16 59 45.0**	**+1.7**
FTIG				*e*S		**Sb**	**17 00 26.1**	**-1.7**
PNIG	**Pinotepa**	**3.31**	**109**	*e*P		**Pn**	**16 59 48.0**	**+2.2**
PNIG				*e*S		**Sb**	**17 00 34.8**	**+1.8**
PNIG	**Pinotepa**	**3.31**	**109**			**Pn**	**16 59 48.0**	**+2.2**
PNIG						**Sb**	**17 00 34.8**	**+1.8**
TXIG	**Tlaxiaco**	**3.46**	**94**	*e*P		**Pn**	**16 59 49.4**	**+1.3**
TXIG				*e*S		**Sn**	**17 00 31.1**	**+2.1**
YOIG	**Yosondua**	**3.73**	**100**	*e*P		**Pn**	**16 59 56.3**	**+4.5**
YOIG				*e*S		**Sb**	**17 00 47.8**	**+2.5**
TEIG	**Tepich**	**12.70**	**76**	Pn		**Pn**	**17 01 54.6**	**+0.1**
JCT	**Junction City**	**12.99**	**6**	Pn		**Pn**	**17 01 58.5**	**-0.1**
NATX	**Nacogdoches**	**15.44**	**22**	Pn		**Pn**	**17 02 31.9**	**+0.1**
NATX				IAmb		IAmb	17 02 47.7	
	comp=Z,12nm,0.7s							
LCMT	**Little Creek M**	**22.06**	**334**	P		**P**	**17 03 47.3**	**-1.7**

*IDC **09** 17:17:58.5±2.0, 37.46N×142.12E, h0km, mb3.6/4, mb1 3.7/8, mb1mx3.5/35, mbtmp3.8/8, ML3.4/4, MS2.3/2, Ms1 2.3/2, ms1mx2.0/53, Error ellipse: s-maj=39.2km s-min=22.6km az=68.0*
*NIED **09** 17:18:00, 37.30N×141.60E, h44km, Mw3.6 Best double couple: M0 2.75000×10^14 NP1:φ 13.00000°, δ 76.00000°, λ 78.00000°. NP2:φ 326.00000°, δ 19.00000°, λ 131.00000°.*
*JMA **09** 17:18:05.7±0.1, 37.33N×141.57E, h47km±2km, M3.8*
JMA Felt I J1.

ISC 09 17:18:03.4±1.7, 37.33N±0.04×141.72E±0.07, h24km±12km, n28, σ1.923/35, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
JFK	**Kawauchi**	**0.68**	**273**	P		**Pn**	**17 18 17.5**	**-0.1**
JFK				S		**Sb**	**17 18 25.4**	**-0.2**
JMST	**Minamisoumatoc**	**0.77**	**301**	P		**Pn**	**17 18 18.8**	**0.0**
JMST				S		**Sb**	**17 18 28.1**	**-0.1**
ONAJ	**Iwakimizuishiy**	**0.77**	**253**	P		**Pb**	**17 18 18.7**	**+0.4**
ONAJ				S		**Sb**	**17 18 27.7**	**-0.7**
JMM	**Marumori**	**0.91**	**306**	P		**Pn**	**17 18 20.9**	**+0.1**
JMM				S		**Sb**	**17 18 32.1**	**-0.1**
JFFD	**Fukushimafurud**	**0.96**	**256**	P		**Pn**	**17 18 21.3**	**-0.2**
JFFD				S		**Sb**	**17 18 32.2**	**-1.5**
JFT	**Otama**	**1.12**	**280**	P		**Pb**	**17 18 24.4**	**+0.3**
JFT				S		**Sn**	**17 18 36.8**	**-1.6**
JIO	**Ouri**	**1.16**	**345**	P		**Pb**	**17 18 25.1**	**+0.3**
JIO	

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.69**	**4**	Pn	Pg	17 38 02.4	-0.1
	38nm,0.3s,baz=252,slow=23,SNR=1.3						
RAO				Sn	Sn	17 38 19.9	-3.2
	136nm,0.3s,baz=57,slow=21,SNR=7.0						
URZ	**Urewera**	**8.32**	**207**	Pn	Pn	17 39 33.9	+1.9
	0.2nm,0.3s,baz=337,slow=20,SNR=1.6						
URZ				Sn	Sn	17 41 04.6	-2.1
	0.2nm,0.3s,baz=360,slow=7.3,SNR=1.6						
ASAR	**Alice Springs**	**43.03**	**268**	P	P	17 45 31.6	-0.2
	0.5nm,0.7s,baz=106,slow=7.3,SNR=11						
WRA	**Warramunga Arr**	**44.07**	**273**	P	P	17 45 40.0	-0.2
	0.5nm,0.5s,baz=110,slow=8.1,SNR=10						
FINES	**FINESS Array B**	**145.63**	**340**	PKPbc	PKPdf	17 57 08.1	-1.7
	1.9nm,0.8s,baz=72,slow=4.5,SNR=7.0						

WEL 09 17:46:42.2±0.5,34°S±7°×17°9W±1°0,h251km±8km, M4.1/23,mB4.1/4,MLv4.4/23,Mw(mB)3.1/4,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.88**	**208**	P	Pn	17 47 45.8	+1.3
MXZ				S	S	17 48 32.8	-1.4
HAZ	**Te Kaha**	**4.26**	**211**	P	Pn	17 47 48.5	-0.5
HAZ				S	S	17 48 44.5	+2.3
PUZ	**Puketiti**	**4.35**	**205**	P	Pn	17 47 49.4	-0.7
PUZ				S	S	17 48 46.3	+2.1
CNGZ	**Carnagh Statio**	**4.74**	**203**	P	Pn	17 47 55.4	+0.6
CNGZ				S	S	17 48 49.6	-3.0
MWZ	**Matawai**	**4.86**	**209**	P	Pn	17 47 55.9	-0.3
MWZ				S	S	17 48 54.6	-0.6
URZ	**Urewera**	**4.97**	**213**	P	Pn	17 47 56.7	-0.8
URZ				S	S	17 48 57.2	-0.5
RAGZ	**Rawiri**	**5.04**	**209**	P	Pn	17 47 57.9	-0.5
RAGZ				S	S	17 49 00.3	+0.9
RIGZ	**Rimuhau**	**5.09**	**206**	P	Pn	17 47 59.4	+0.3
RIGZ				S	S	17 49 02.6	+2.2
PRGZ	**Paritu Road**	**5.24**	**204**	P	Pn	17 48 01.6	+0.7
PRGZ				S	S	17 49 04.8	+1.0
MUGZ	**Murupara**	**5.31**	**214**	P	Pn	17 48 01.2	-0.5
MUGZ				S	S	17 49 05.3	+0.1
SNGZ	**Shannon Statio**	**5.32**	**208**	P	Pn	17 48 01.8	0.0
SNGZ				S	S	17 49 07.2	+1.8
PRZ	**Ruatahuna**	**5.32**	**212**	P	Pn	17 48 01.4	-0.5
KNZ	**Kokohu**	**5.40**	**205**	P	Pn	17 48 03.1	+0.3
KNZ				S	S	17 49 04.5	-2.7
MHGZ	**Mahia Peninsul**	**5.44**	**202**	P	Pn	17 48 05.8	+2.4
MHGZ				S	S	17 49 09.9	+1.7
RAHZ	**Arahi**	**5.53**	**209**	P	Pn	17 48 03.6	-0.9
RAHZ				S	S	17 49 14.5	+4.2
WHHZ	**Waihua**	**5.61**	**208**	S	S	17 49 11.8	-0.2
MRHZ	**Matea Rd**	**5.76**	**214**	P	Pn	17 48 07.2	-0.1
MRHZ				S	S	17 49 16.3	+0.9
ARHZ	**Aropaoanui**	**5.87**	**208**	P	Pn	17 48 09.1	+0.5
ARHZ				S	S	17 49 16.8	-0.9
BKZ	**Black Stump Fm**	**5.99**	**212**	P	Pn	17 48 10.0	-0.2
BKZ				S	S	17 49 23.2	+2.5
KWHZ	**Kaweka Forest**	**6.24**	**211**	P	Pn	17 48 13.3	+0.1
KWHZ				S	S	17 49 26.5	+0.3
KAHZ	**Kahuranaki**	**6.37**	**207**	P	Pn	17 48 16.8	+1.9
KAHZ				S	S	17 49 28.2	-1.1
KRHZ	**Kereru**	**6.44**	**210**	P	Pn	17 48 14.5	-1.3
KRHZ				S	S	17 49 26.7	-4.1
BHHZ	**Black Hill Sta**	**6.45**	**213**	P	Pn	17 48 15.1	-0.8
BHHZ				S	S	17 49 31.9	+0.9
TUVZ	**Tukino**	**6.46**	**216**	S	S	17 49 30.2	-1.3
MOVZ	**Moawhango**	**6.53**	**215**	S	S	17 49 29.9	-2.9
PXZ	**Pawanui**	**6.59**	**206**	P	Pn	17 48 17.5	-0.1
PXZ				S	S	17 49 34.2	+0.2
PNHZ	**Pukenui**	**6.74**	**210**	P	Pn	17 48 18.7	-0.9
PNHZ				S	S	17 49 37.2	-0.4
WPHZ	**Waipukurau**	**6.77**	**208**	S	S	17 49 38.2	-0.1
PRHZ	**Porangahau**	**6.88**	**206**	P	Pn	17 48 22.1	+0.9
PRHZ				S	S	17 49 41.6	+0.9
TSZ	**Takapari Road**	**6.96**	**211**	P	Pn	17 48 21.6	-0.7
TSZ				S	S	17 49 42.9	+0.2
DVHZ	**Dannevirke**	**7.08**	**208**	P	Pn	17 48 23.7	-0.1
DVHZ				S	S	17 49 45.9	+0.5
ANWZ	**Angora Road**	**7.10**	**206**	P	Pn	17 48 24.6	+0.6
ANWZ				S	S	17 49 47.7	+1.8
WAZ	**Wanganui**	**7.17**	**217**	S	S	17 49 52.1	+4.7
POWZ	**Post Office Ro**	**7.32**	**210**	S	S	17 49 52.0	+1.1
BFZ	**Birch Farm**	**7.38**	**206**	P	Pn	17 48 26.2	-1.4
BFZ				S	S	17 49 52.0	-0.3

*BJI **09** 17:46:58.3±0.0,19°.70S×177°.40W,h417km,mB4.9/21, mb4.6/30*
*NEIC **09** 17:47:01.9±1.9,19°.69S±0°.08×177°.71W±0°.09, h438km±5km,mb4.8/172,Error ellipse: s-maj=13.2km s-min=11.0km az=111.0*
*IDC **09** 17:47:02.8±0.5,19°.69S×177°.81W,h434km±4km,mb4.2/31, mb1 4.2/32,mb1mx4.1/44,mbtmp4.9/32,Error ellipse: s-maj=9.5km s-min=7.3km az=145.0*
*GCMT **09** 17:47:06.0±0.5,19°.79S±0°.05×177°.97W±0°.06, h443km±3km,MW5.3/59,Moment Tensor Solution. s59,c69; Duration: 1§0 Moment tensor: Scale 10¹⁷Nm; M_{rr}0.24±.04; $M_{\theta\theta}$-0.50±.06; $M_{\phi\phi}$0.25±.07; $M_{r\theta}$-0.87±.05; $M_{\theta\phi}$-0.17±.06; $M_{\phi r}$-0.19±.06; Best double couple: $M_0$0.97100×10¹⁷ NP1:ϕ$_s$78.00000°,δ12.00000°, λ91.00000°. NP2:ϕ$_s$258.00000°,δ78.00000°,λ90.00000°. Principal axes: T 0.8240, Plg57.0000°, Azm167.0000°; N 0.2930, Plg0.0000°, Azm258.0000°; P -1.1170, Plg33.0000°, Azm348.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
ISC 09 17:47:02.0±0.3,19°.66S±0°.04×177°.68W±0°.05, h437km±3km,h438km;pP-P,n524,σ1§22/637,mb4.8/118, 28C-11D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.47**	**295**	P	P	**17 48 21.6**	**+0.8**
NIUE	**Niue**	**7.34**	**87**	P	P	**17 48 49.5**	**-0.7**
NIUE					S	**17 50 16.5**	**-2.2**
AFI	**Afiamalu**	**8.04**	**46**	P	P	**17 48 54.1**	**-3.8**
RIZ	**Raoul Island**	**9.55**	**181**	P	P	**17 49 13.4**	**-0.7**
RIZ				S	S	**17 50 59.1**	**-3.9**
RAO	**Raoul Island**	**9.56**	**181**	P	P	**17 49 13.6**	**-0.6**
	134nm,0.3s,baz=77,slow=20,SNR=4.2						
RAO				S	S	**17 50 59.4**	**-3.7**
	260nm,0.3s,baz=262,slow=22,SNR=11						
RAO	**Raoul Island**	**9.56**	**181**	P	P	**17 49 13.3**	**-0.8**
RAO					S	**17 51 00.5**	**-2.6**
GLKZ	**Green Lake**	**9.57**	**181**	P	P	**17 49 12.5**	**-1.8**
GLKZ				S	S	**17 50 59.5**	**-3.8**
FUNA	**Funafuti**	**11.47**	**344**	P	P	**17 49 34.6**	**-0.7**
DZM	**Mont Dzumac**	**15.03**	**258**	*eP*	P	**17 50 14.7**	**+0.8**
	68nm,1.0s						
DZM	**Mont Dzumac**	**15.03**	**258**	P	P	**17 50 16.0**	**+2.1**
	1.6nm,0.3s,baz=98,slow=19,SNR=13						
RAR	**Rarotonga**	**16.86**	**98**	P	P	**17 50 34.7**	**+1.5**
	0.8nm,0.3s,baz=270,slow=5.7,SNR=8.9						
RAR	**Rarotonga**	**16.86**	**98**	P	P	**17 50 36.1**	**+2.9**
RAR				IAmb	IAmb	17 50 37.6	
	comp=Z,38nm,0.8s						
OUZ	**Omahuta**	**17.31**	**205**	P	P	**17 50 39.2**	**+1.3**
OUZ	**Omahuta**	**17.31**	**205**	P	P	**17 50 39.6**	**+1.8**
OUZ				IAmb	IAmb	17 50 42.9	
	comp=Z,32nm,0.6s						
KNTN	**Kanton**	**17.76**	**20**	P	P	**17 50 41.5**	**-1.3**
MXZ	**Matakaoa Point**	**18.18**	**190**	P	P	**17 50 45.8**	**-1.1**
MXZ				IAmb	IAmb	17 50 57.7	
	comp=Z,48nm,0.9s						
MARZ	**Manawahe**	**18.91**	**194**	P	P	**17 50 54.3**	**+0.2**
KMRZ	**Kaimai**	**18.96**	**196**	P	P	**17 50 56.3**	**+1.8**
EDRZ	**Edgecumbe**	**19.02**	**194**	P	P	**17 50 55.6**	**+0.6**
KARZ	**Kaharoa**	**19.05**	**195**	P	P	**17 50 56.9**	**+1.6**
MWZ	**Matawai**	**19.07**	**192**	P	P	**17 50 53.8**	**-1.7**
MWZ				S	S	**17 54 04.8**	**-1.5**
URZ	**Urewera**	**19.08**	**193**	P	P	**17 50 52.7**	**-2.8**
	comp=Z,20nm,0.3s,baz=319,slow=2.3,SNR=81						
URZ				S	S	**17 54 04.7**	**-1.7**
	comp=Z,1.9nm,0.3s,baz=94,slow=19,SNR=3.8						
URZ	**Urewera**	**19.08**	**193**	P	P	**17 50 51.5**	**-4.1**
URZ				S	S	**17 53 59.8**	**-6.6**
URZ	**Urewera**	**19.08**	**193**	P	P	**17 50 53.0**	**-2.6**
URZ				IAmb	IAmb	17 50 56.2	
	comp=Z,46nm,0.8s						
URZ					S	**17 54 04.9**	**-1.6**
CNGZ	**Carnagh Statio**	**19.10**	**190**	P	P	**17 50 56.0**	**+0.3**
OMRZ	**Omania**	**19.10**	**194**	P	P	**17 50 57.3**	**+1.5**
TARZ	**Mount Tarawera**	**19.19**	**194**	P	P	**17 50 56.9**	**+0.2**
HLRZ	**Highlands Stat**	**19.24**	**194**	P	P	**17 50 58.0**	**+0.9**
RAGZ	**Rawiri**	**19.25**	**192**	P	P	**17 50 56.3**	**-0.9**
RAGZ				S	S	**17 54 11.4**	**+2.0**
RRRZ	**Republican Roa**	**19.29**	**194**	P	P	**17 50 57.9**	**+0.4**
HSRZ	**Hossack Road**	**19.32**	**195**	P	P	**17 50 59.1**	**+1.2**
MUGZ	**Murupara**	**19.36**	**193**	P	P	**17 50 56.8**	**-1.4**
HRRZ	**Handcock Road**	**19.39**	**194**	P	P	**17 50 59.0**	**+0.5**
RIGZ	**Rimuhau**	**19.39**	**191**	P	P	**17 50 58.2**	**-0.3**
RIGZ				S	S	**17 54 12.4**	**+0.8**
GRRZ	**Galatos Road**	**19.39**	**195**	P	P	**17 50 59.6**	**+1.1**
RTZ	**Ruatahuna**	**19.45**	**193**	P	P	**17 50 57.5**	**-1.6**
RTZ				S	S	**17 54 11.3**	**-1.4**
PRRZ	**Plateau Road**	**19.47**	**194**	P	P	**17 50 59.0**	**-0.1**
TLZ	**Tolley Road**	**19.52**	**196**	P	P	**17 51 01.4**	**+1.8**
ALRZ	**Allen Road**	**19.54**	**194**	P	P	**17 50 59.6**	**-0.3**
SNGZ	**Shannon Statio**	**19.54**	**192**	P	P	**17 50 59.2**	**-0.6**
SNGZ				S	S	**17 54 13.9**	**-0.1**
PRGZ	**Paritu Road**	**19.58**	**190**	P	P	**17 51 01.0**	**+0.7**
PRGZ				S	S	**17 54 16.0**	**+1.4**
KUTZ	**Kaahu Road**	**19.59**	**195**	P	P	**17 51 01.8**	**+1.5**
KNZ	**Kokohu**	**19.71**	**191**	P	P	**17 51 01.5**	**+0.1**
KNZ				S	S	**17 54 20.6**	**+4.0**
RAHZ	**Arahi**	**19.72**	**192**	P	P	**17 51 00.1**	**-1.4**
RAHZ				S	S	**17 54 21.5**	**+4.6**
MRHZ	**Matea Rd**	**19.78**	**194**	P	P	**17 51 00.6**	**-1.5**
MRHZ				S	S	**17 54 19.3**	**+1.3**
MHGZ	**Mahia Peninsul**	**19.80**	**190**	P	P	**17 51 02.8**	**+0.6**
MHGZ				S	S	**17 54 21.0**	**+2.9**
WATZ	**Wairara**	**19.82**	**195**	P	P	**17 51 03.2**	**+0.7**
WHHZ	**Waihua**	**19.85**	**192**	P	P	**17 51 02.9**	**+0.3**
WHHZ				S	S	**17 54 21.6**	**+2.7**
HIZ	**Hauiti**	**19.88**	**197**	P	P	**17 51 05.1**	**+2.2**
HIZ	**Hauiti**	**19.88**	**197**	P	P	**17 51 04.4**	**+1.5**
HATZ	**Hinemaiaia**	**19.91**	**194**	P	P	**17 51 02.1**	**-1.1**
NMHZ	**Naumai**	**19.95**	**193**	P	P	**17 51 04.0**	**+0.4**
RITZ	**Rihia Road**	**20.05**	**195**	P	P	**17 51 04.3**	**-0.2**
ARHZ	**Aropaoanui**	**20.07**	**192**	P	P	**17 51 04.3**	**-0.4**
BKZ	**Black Stump Fm**	**20.08**	**193**	P	P	**17 51 02.5**	**-2.3**
BKZ				S	S	**17 54 15.8**	**-7.0**
BKZ	**Black Stump Fm**	**20.08**	**193**	P	P	**17 51 02.5**	**-2.3**
BKZ				IAmb	IAmb	17 51 07.0	
	comp=Z,23nm,0.4s						
BKZ					S	**17 54 22.1**	**-0.8**
KRVZ	**Karewarewa**	**20.21**	**195**	P	P	**17 51 05.5**	**-0.6**
WTVZ	**West Tongariro**	**20.25**	**195**	P	P	**17 51 05.2**	**-1.2**
NGZ	**Ngauruhoe**	**20.30**	**195**	P	P	**17 51 06.8**	**-0.1**
MCHZ	**McNeill Hill**	**20.31**	**193**	P	P	**17 51 06.5**	**-0.3**
KWHZ	**Kaweka Forest**	**20.35**	**193**	P	P	**17 51 04.9**	**-2.3**
TUVZ	**Tukino**	**20.37**	**195**	P	P	**17 51 06.8**	**-0.7**
FWVZ	**Far West T-bar**	**20.39**	**195**	P	P	**17 51 07.1**	**-0.7**
WHVZ	**Whangaehu Hut**	**20.41**	**195**	P	P	**17 51 07.5**	**-0.5**
TRVZ	**Turoa**	**20.43**	**195**	P	P	**17 51 08.1**	**-0.1**
CKHZ	**Cape Kidnapper**	**20.44**	**192**	P	P	**17 51 08.3**	**+0.3**
PKVZ	**Pokaka**	**20.47**	**196**	P	P	**17 51 07.5**	**-0.9**
VRZ	**Vera Road**	**20.47**	**197**	P	P	**17 51 09.0**	**+0.8**
MOVZ	**Moawhango**	**20.48**	**195**	P	P	**17 51 07.5**	**-1.0**
BHHZ	**Black Hill Sta**	**20.49**	**194**	P	P	**17 51 05.8**	**-2.7**
KRHZ	**Kereru**	**20.57**	**193**	P	P	**17 51 07.9**	**-1.3**
KAHZ	**Kahuranaki**	**20.61**	**192**	P	P	**17 51 08.0**	**-1.2**
PXZ	**Pawanui**	**20.84**	**192**	P	P	**17 51 10.9**	**-0.8**
KHEZ	**Kahui Hut**	**20.84**	**198**	P	P	**17 51 15.3**	**+3.5**
NBEZ	**Newall Road No**	**20.86**	**199**	P	P	**17 51 15.3**	**+3.4**
PNHZ	**Pukenui**	**20.86**	**193**	P	P	**17 51 11.2**	**-0.8**
LREZ	**Lake Rotokare**	**20.88**	**197**	P	P	**17 51 13.6**	**+1.6**
WPHZ	**Waipukurau**	**20.96**	**193**	P	P	**17 51 13.1**	**+0.3**
NMEZ	**Namu Road**	**20.99**	**199**	P	P	**17 51 16.4**	**+3.4**
WAZ	**Wanganui**	**21.00**	**196**	P	P	**17 51 12.5**	**-0.7**
TSZ	**Takapari Road**	**21.06**	**194**	P	P	**17 51 12.3**	**-1.3**
PRHZ	**Porangahau**	**21.11**	**192**	P	P	**17 51 13.7**	**-0.4**
DVHZ	**Dannevirke**	**21.24**	**193**	P	P	**17 51 14.4**	**-0.9**
ANWZ	**Angora Road**	**21.33**	**192**	P	P	**17 51 15.3**	**-0.8**
POWZ	**Post Office Ro**	**21.42**	**194**	P	P	**17 51 16.9**	**0.0**
PRWZ	**Pori Road**	**21.53**	**193**	P	P	**17 51 17.9**	**0.0**
BFZ	**Birch Farm**	**21.59**	**193**	P	P	**17 51 16.9**	**-1.6**
BFZ	**Birch Farm**	**21.59**	**193**	P	P	**17 51 16.8**	**-1.6**
BFZ				IAmb	IAmb	17 51 50.6	
	comp=Z,30nm,1.1s						
MRZ	**Mangatainoka R**	**21.72**	**194**	P	P	**17 51 18.2**	**-1.4**
TIWZ	**Tintock**	**21.76**	**193**	P	P	**17 51 19.5**	**-0.5**
CPWZ	**Castlepoint**	**21.82**	**193**	P	P	**17 51 22.0**	**+1.5**
HOWZ	**Holdsworth Sta**	**21.96**	**194**	P	P	**17 51 21.7**	**-0.1**
OGWZ	**Otaki Gorge**	**21.96**	**195**	P	P	**17 51 20.3**	**-1.5**
KIW	**Kapiti Island**	**22.07**	**195**	P	P	**17 51 21.6**	**-1.2**
TMWZ	**Te Maipa**	**22.07**	**193**	P	P	**17 51 22.4**	**-0.5**
MTW	**Mount Morrison**	**22.21**	**194**	P	P	**17 51 23.1**	**-1.0**
CAW	**Cannon Point**	**22.26**	**195**	P	P	**17 51 23.4**	**-1.2**
MSWZ	**Moikau Station**	**22.51**	**194**	P	P	**17 51 25.3**	**-1.5**
SNZO	**South Karori**	**22.54**	**195**	P	P	**17 51 25.9**	**-1.1**
SNZO				IAmb	IAmb	17 51 33.2	
	comp=Z,51nm,1.1s						
BHW	**Baring Head**	**22.59**	**195**	P	P	**17 51 26.4**	**-1.1**
PLWZ	**Palliser**	**22.66**	**194**	P	P	**17 51 26.9**	**-1.3**
QRZ	**Quartz Range**	**22.70**	**200**	P	P	**17 51 28.6**	**+0.1**
NNZ	**Nelson**	**22.80**	**198**	P	P	**17 51 28.5**	**-0.9**
NNZ	**Nelson**	**22.80**	**198**	P	P	**17 51 28.7**	**-0.7**
NNZ				IAmb	IAmb	17 51 31.9	
	comp=Z,24nm,0.7s						
TARA	**Tarawa**	**22.82**	**335**	P	P	**17 51 27.9**	**-2.1**
TUWZ	**Tuamarina**	**22.85**	**196**	P	P	**17 51 28.2**	**-1.6**
CMWZ	**Cape Campbell**	**23.08**	**196**	P	P	**17 51 33.7**	**+1.9**
CMWZ	**Cape Campbell**	**23.08**	**196**	P	P	**17 51 31.9**	**+0.1**
BSWZ	**Blackbirch Sta**	**23.13**	**196**	P	P	**17 51 32.4**	**0.0**
BSWZ	**Blackbirch Sta**	**23.13**	**196**	P	P	**17 51 32.0**	**-0.4**
THZ	**Tophouse**	**23.44**	**198**	P	P	**17 51 34.0**	**-1.3**
THZ				IAmb	IAmb	17 51 36.3	
	comp=Z,18nm,0.5s						
KHZ	**Kahutara**	**23.88**	**196**	P	P	**17 51 37.7**	**-1.3**
HNR	**Honiara**	**23.89**	**292**	P	P	**17 51 39.5**	**0.0**
	comp=Z,68nm,0.8s,baz=200,slow=4.2,SNR=7.4						
HNR	**Honiara**	**23.89**	**292**	P	P	**17 51 38.1**	**-1.4**
LHI	**Lord Howe Isla**	**24.02**	**236**	P	P	**17 51 38.7**	**-1.7**
LTZ	**Lake Taylor**	**24.57**	**198**	P	P	**17 51 43.2**	**-2.0**
LTZ				IAmb	IAmb	17 52 30.4	
	comp=Z,50nm,1.3s						
OXZ	**Oxford**	**25.13**	**198**	P	P	**17 51 48.5**	**-1.7**
OXZ				IAmb	IAmb	17 51 54.6	
	comp=Z,30nm,0.9s						
MQZ	**McQueen's Vall**	**25.31**	**197**	P	P	**17 51 49.9**	**-1.9**
MQZ				IAmb	IAmb	17 52 40.7	
	comp=Z,68nm,1.3s						
RPZ	**Rata Peaks**	**25.78**	**199**	P	P	**17 51 54.6**	**-1.4**
	comp=Z,14nm,0.5s,baz=41,slow=7.5,SNR=17						
RPZ	**Rata Peaks**	**25.78**	**199**	P	P	**17 51 54.0**	**-2.0**
RPZ				IAmb	IAmb	17 52 43.0	
	comp=Z,87nm,1.7s						
FOZ	**Fox Glacier**	**26.02**	**201**	P	P	**17 51 56.1**	**-1.9**
FOZ				IAmb	IAmb	17 52 01.2	
	comp=Z,44nm,1.0s						
LBZ	**Lake Benmore**	**26.66**	**200**	P	P	**17 52 01.4**	**-2.4**
LBZ				IAmb	IAmb	17 52 04.5	
	comp=Z,30nm,1.1s						
TIAR	**Tiarei**	**26.92**	**90**	*eP*	P	**17 52 07.5**	**+1.0**
	comp=Z,8.8nm,0.9s						
ODZ	**Otahua Downs**	**27.11**	**198**	P	P	**17 52 06.1**	**-1.6**
ODZ				IAmb	IAmb	17 52 21.8	
	comp=Z,46nm,1.3s						
WKZ	**Wanaka**	**27.43**	**201**	P	P	**17 52 08.7**	**-1.9**
WKZ				IAmb	IAmb	17 52 28.4	
	comp=Z,70nm,1.2s						
MLZ	**Mavora Lakes**	**28.21**	**201**	P	P	**17 52 16.6**	**-0.8**
MLZ				IAmb	IAmb	17 52 25.6	
	comp=Z,65nm,1.4s						
DCZ	**Deep Cove**	**28.63**	**203**	P	P	**17 52 20.1**	**-1.0**
DCZ				IAmb	IAmb	17 52 25.6	
	comp=Z,46nm,1.1s						
PMOR	**Pomariorio Ree**	**28.79**	**85**	*eP*	P	**17 52 23.8**	**+1.0**
	comp=Z,75nm,1.2s						
EIDS	**Eidsvold**	**29.37**	**253**	P	P	**17 52 28.0**	**+0.1**
EIDS				IAmb	IAmb	17 52 29.4	
	comp=Z,63nm,1.3s						
ARMA	**Armidale**	**29.71**	**243**	P	P	**17 52 31.7**	**+0.8**
KWAJ	**Kwajalein Atol**	**31.77**	**332**	P	P	**17 52 49.9**	**+1.1**
CAN	**Canberra**	**33.23**	**235**	P	P	**17 53 01.7**	**+0.6**
CAN				IAmb	IAmb	17 53 03.0	
	comp=Z,61nm,1.2s						
KRVT	**Keravat (AS076**	**33.23**	**293**	P	P	**17 53 01.5**	**+0.2**
	comp=Z,35nm,0.8s,baz=162,slow=3.2,SNR=6.2						
CTA	**Charters Tower**	**33.88**	**263**	P	P	**17 53 07.3**	**+0.5**
	comp=Z,28nm,0.3s,baz=88,slow=11,SNR=11						
CTAO	**Charters Tower**	**33.88**	**263**	P	P	**17 53 07.4**	**+0.5**
CTAO				IAmb	IAmb	17 53 08.3	
	comp=Z,86nm,1.1s						
PATS	**Pohnpei**	**35.38**	**316**	P	P	**17 53 19.4**	**0.0**
TOO	**Toolangi**	**36.64**	**233**	P	P	**17 53 30.1**	**+0.4**
TOO				IAmb	IAmb	17 53 31.3	
	comp=Z,57nm,1.1s						
JOHN	**Johnston Islan**	**37.04**	**13**	P	P	**17 53 32.1**	**-1.0**
TAU	**Tasmania Unive**	**37.44**	**224**	P	P	**17 53 36.0**	**-0.2**
TAU				IAmb	IAmb	17 54 28.1	
	comp=Z,42nm,1.4s						
COEN	**Coen**	**37.84**	**272**	P	P	**17 53 40.0**	**+0.1**
COEN				IAmb	IAmb	17 54 00.6	
	comp=Z,46nm,1.6s						
STKA	**Stephens Creek**	**38.43**	**243**	P	P	**17 53 45.3**	**+0.7**
	comp=Z,21nm,0.4s,baz=78,slow=10,SNR=71						
STKA	**Stephens Creek**	**38.43**	**243**	P	P	**17 53 45.3**	**+0.7**
MCQ	**Macquarie Isla**	**39.08**	**202**	P	P	**17 53 50.0**	**+0.5**
WAKE	**Wake Island**	**41.63**	**337**	P	P	**17 54 10.3**	**-0.2**
BBOO	**Buckleboo**	**43.19**	**243**	P	P	**17 54 22.7**	**-0.1**
JAY	**Jayapura**	**44.07**	**287**	P	P	**17 54 30.5**	**+0.5**
	comp=Z,36nm,0.7s,baz=140,slow=7.9,SNR=20						
JAY	**Jayapura**	**44.07**	**287**	P	P	**17 54 30.2**	**+0.3**
	comp=Z,30nm,0.8s						
KHLU	**Kahalu`u**	**44.47**	**30**	P	P	**17 54 32.0**	**-1.0**
GENI	**Genyem**	**44.52**	**287**	P	P	**17 54 33.6**	**+0.2**
	comp=Z,60nm,1.0s						
HMH	**Humu'ula Sheep**	**44.67**	**30**	P	P	**17 54 35.4**	**+0.6**
WR0	**Warramunga Arr**	**44.83**	**261**	P	P	**17 54 35.1**	**-0.7**
WR0					S	**18 00 36.9**	**-3.5**
KEKH	**Kekaha**	**44.96**	**24**	P	P	**17 54 36.6**	**0.0**
WB0	**Warramunga Arr**	**44.99**	**261**	P	P	**17 54 36.4**	**-0.7**
WB0				IAmb	IAmb	17 54 37.4	
	comp=Z,35nm,0.7s						
WB0					S	**18 00 40.5**	**-2.3**
AS31	**Alice Springs**	**45.01**	**256**	P	P	**17 54 37.3**	**+0.2**
AS31				IAmb	IAmb	17 54 38.4	
	comp=Z,27nm,1.0s						
AS31					S	**18 00 41.6**	**-1.3**
ASAR	**Alice Springs**	**45.01**	**256**	P	P	**17 54 37.2**	**0.0**
	comp=Z,67nm,0.8s,baz=91,slow=7.7,SNR=1071						
ASAR				pP	**pP**	**17 55 59.9**	**-0.2**
	comp=Z,3.6nm,0.7s,baz=84,slow=8.7,SNR=1.5						
ASAR				S	S	**18 00 41.7**	**-1.3**
	comp=Z,4.6nm,0.9s,baz=92,slow=16,SNR=13						
WB2	**Warramunga Arr**	**45.01**	**261**	P	P	**17 54 36.6**	**-0.6**
WB2				IAmb	IAmb	17 54 37.6	
	comp=Z,60nm,1.2s						
WB2					S	**18 00 42.5**	**-0.4**
WRAB	**Tennant Creek**	**45.01**	**261**	P	P	**17 54 36.6**	**-0.6**
WRAB				IAmb	IAmb	17 54 37.6	
	comp=Z,35nm,1.0s						
WRAB					S	**18 00 38.1**	**-4.9**
WRA	**Warramunga Arr**	**45.02**	**261**	P	P	**17 54 36.8**	**-0.5**
	comp=Z,10nm,0.3s,baz=97,slow=7.3,SNR=569						
WRA				S	S	**18 00 40.5**	**-2.7**
	comp=Z,4.3nm,1.0s,baz=94,slow=13,SNR=7.9						
MTN	**Manton Dam**	**49.46**	**270**	P	P	**17 55 10.5**	**-0.5**
GUMO	**Guam**	**49.50**	**309**	P	P	**17 55 11.1**	**-0.1**
FORT	**Forrest**	**49.91**	**246**	P	P	**17 55 13.7**	**-0.3**
SAUI	**Saumlaki**	**50.70**	**276**	P	P	**17 55 19.4**	**-0.8**
KNRA	**Kununurra**	**51.02**	**265**	P	P	**17 55 22.4**	**-0.1**
KNRA				IAmb	IAmb	17 55 23.3	
	comp=Z,53nm,0.7s						
FAKI	**Fak Fak**	**51.61**	**282**	P	P	**17 55 26.5**	**-0.3**
FAKI				IAmb	IAmb	17 56 07.4	
	comp=Z,85nm,1.5s						
SIJI	**Sorong**	**53.32**	**284**	P	P	**17 55 39.5**	**+0.4**
	comp=Z,33nm,0.9s,baz=77,slow=7.1,SNR=23						
FITZ	**Fitzroy Crossi**	**53.44**	**262**	P	P	**17 55 40.2**	**+0.3**
	comp=Z,11nm,0.7s,baz=122,slow=3.8,SNR=139						
FITZ	**F

YHNB IAmb IAmb 17 57 52.9
comp=Z,38nm,1.1s
TATO Taipei 73.95 304 P **P** **17 57 51.8 +0.1**
XMIS Christmas Isla 74.08 264 P **P** **17 57 51.7 -1.1**
AKUT Akutan 74.20 7 P **P** **17 57 52.1 -0.3**
FALS False Pass 75.21 8 P **P** **17 57 58.2 +0.1**
FALS IAmb IAmb 17 58 39.0
comp=Z,22nm,0.8s
PET Petropavlovsk 75.23 345 P **P** **17 57 58.0 -0.3**
PET IAmb IAmb 17 58 25.8
comp=Z,33nm,1.2s
YSS Yuzh-Sakhalins 75.28 333 P **P** **17 57 59.1 +0.4**
YSS IAmb IAmb 17 58 02.0
comp=Z,22nm,0.9s
PETK Petropavlovsk- 75.54 345 P **P** **17 58 00.4 +0.3**
comp=Z,9.4nm,0.6s,baz=132,slow=7.4,SNR=56
KSRS Korea Array 76.46 318 P **P** **17 58 06.7 +1.2**
comp=Z,2.9nm,0.9s,baz=141,slow=6.3,SNR=11
KSRS pP **pP** **17 59 43.5 +2.3**
comp=Z,3.2nm,1.2s,baz=148,slow=7.1,SNR=5.2
USRK Ussuriysk Ar. 78.44 326 P **P** **17 58 17.8 +1.6**
comp=Z,8.8nm,0.8s,baz=151,slow=4.0,SNR=13
CMB Columbia Colle 78.64 43 P **P** **17 58 18.1 +0.5**
ORV Oroville 78.85 41 P **P** **17 58 18.9 +0.4**
OMMB Old Mammoth Mi 79.29 44 P **P** **17 58 22.8 +1.4**
YBH Yreka Blue Hor 79.45 39 P **P** **17 58 23.3 +1.5**
comp=Z,3.3nm,0.7s,baz=214,slow=3.6,SNR=8.0
YBH Yreka Blue Hor 79.45 39 P **P** **17 58 21.9 +0.1**
YBH IAmb IAmb 18 00 31.4
comp=Z,28nm,1.6s
NJ2 Nanjing 79.58 309 *e*P **P** **17 58 23.8 +1.2**
NJ2 pmax pmax
comp=Z,13nm,0.9s
MYKOM **Kota Tinggi 79.75 276** P **P** **17 58 23.0 -1.0**
PNTR Pine Nut 79.76 42 P **P** **17 58 24.2 +0.5**
YERR Yerington 79.93 42 P **P** **17 58 24.1 -0.4**
YERR pP **pP** **18 00 02.0 +1.3**
KDAK Kodiak Island 79.93 13 P **P** **17 58 25.0 +1.1**
comp=Z,6.6nm,0.7s,baz=181,slow=3.7,SNR=5.9
KDAK Kodiak Island 79.93 13 P **P** **17 58 24.4 +0.6**
MDJ Mudanjiang 80.00 325 P **P** **17 58 26.1 +1.5**
MDJ pmax pmax
comp=Z,32nm,0.9s
MDJ pmax pmax
comp=Z,140nm,3.6s
MDJ Mudanjiang 80.00 325 P **P** **17 58 25.2 +0.7**
MDJ IAmb IAmb 17 58 27.1
comp=Z,28nm,1.0s
NVAR Mina Array Bea 80.21 43 P **P** **17 58 27.3 +1.2**
comp=Z,1.8nm,0.7s,baz=224,slow=8.7,SNR=15
NVAR pP **pP** **18 00 04.2 +1.8**
comp=Z,0.3nm,0.3s,baz=256,slow=5.5,SNR=2.4
NV11 Mina Array Sit 80.31 43 P **P** **17 58 26.9 +0.4**
NV11 **pP** **18 00 03.8 +1.0**
KVN Kaiserville 80.69 43 P **P** **17 58 29.6 +1.0**
MOD Modoc Plateau 80.98 40 P **P** **17 58 31.0 +1.0**
K05A Summer Lake 81.12 39 P **P** **17 58 32.1 +1.4**
K05A IAmb IAmb 17 58 36.9
comp=Z,31nm,1.3s
PINE Pine Mountain 81.74 38 P **P** **17 58 34.4 +0.4**
TUC Tucson 82.23 52 P **P** **17 58 37.5 +1.0**
TUC pP **pP** **18 00 14.7 +1.5**
WVOR Wild Horse Val 82.30 40 P **P** **17 58 35.6 -1.1**
WVOR IAmb IAmb 17 59 14.8
comp=Z,15nm,0.6s
RSO Redoubt South 82.36 12 P **P** **17 58 36.0 -0.7**
MAW Mawson 82.45 200 P **P** **17 58 37.8 +0.9**
comp=Z,8.4nm,0.6s,baz=148,slow=4.8,SNR=18
MAW Mawson 82.45 200 P **P** **17 58 36.7 -0.2**
I07A Izee 82.74 38 P **P** **17 58 39.5 +0.6**
319A Douglas 82.91 53 P **P** **17 58 41.2 +1.2**
J08A Circle Bar Ran 82.93 39 P **P** **17 58 41.1 +1.2**
MA2 Magadan 83.06 344 P **P** **17 58 40.3 +0.3**
comp=Z,9.2nm,0.9s,baz=152,slow=12,SNR=2.7
MA2 Magadan 83.06 344 P **P** **17 58 39.0 -1.0**
MA2 IAmb IAmb 18 01 46.0
comp=Z,32nm,1.4s
U15A North Rim 83.18 48 P **P** **17 58 43.6 +2.1**
U15A **pwP** **18 00 21.8 +0.1**
IPM Ipoh 83.32 277 P **P** **17 58 42.4 -0.1**
IPM pP **pwP** **18 00 22.0 -0.9**
IPM Ipoh 83.32 277 P **P** **17 58 41.0 -1.4**
MNSI Mandailing Nat 83.42 273 P **P** **17 58 43.7 +0.8**
comp=Z,21nm,0.5s
ELK Elko 83.46 43 P **P** **17 58 43.3 +0.5**
G08A Pilot Rock 83.77 37 P **P** **17 58 44.4 +0.3**
G08A pP **pP** **18 00 21.4 +0.2**
KULM Kulim 83.95 278 P **P** **17 58 44.0 -1.5**
GLI Glacier Island 83.96 14 P **P** **17 58 44.1 -0.4**
GLI pP **pP** **18 00 23.4 +1.6**
TTA Tatalina 84.07 10 P **P** **17 58 44.4 -0.6**
TTA **pP** **18 00 24.5 +2.0**
KNK Knik Glacier 84.12 14 P **P** **17 58 45.4 +0.1**
KNK IAmb IAmb 17 58 46.9
comp=Z,14nm,0.7s
PMR Palmer 84.13 13 P **P** **17 58 44.6 -0.6**
PMR IAmb IAmb 17 58 46.6
comp=Z,24nm,1.3s
GHO Glory Hole Cre 84.34 13 P **P** **17 58 46.3 -0.1**
SML Sawmill 84.50 14 P **P** **17 58 46.2 -1.0**
SCM Sheep Creek Mo 84.75 14 P **P** **17 58 48.4 -0.1**
CRQM Cirque 84.84 16 P **P** **17 58 49.3 +0.2**
CRQM IAmb IAmb 17 58 52.5
comp=Z,13nm,1.0s
YAH Yahtse 84.89 17 P **P** **17 58 49.5 +0.1**
YAH IAmb IAmb 18 02 05.1
comp=Z,14nm,0.7s
TGL Tana Glacier 84.92 16 P **P** **17 58 49.2 -0.1**
TGL IAmb IAmb 17 58 51.9
comp=Z,28nm,1.5s
F10A Beach Ranch, E 85.16 38 P **P** **17 58 50.9 +0.1**
VRDI Verde Repeater 85.16 16 P **P** **17 58 50.3 -0.4**
GLB Gilahina Butte 85.25 16 P **P** **17 58 50.6 -0.3**
GLB IAmb IAmb 17 58 52.6
comp=Z,11nm,0.7s
BALM Baldy 85.29 16 P **P** **17 58 50.8 -0.4**
BALM IAmb IAmb 17 58 53.0
comp=Z,8.9nm,0.7s
MCARA **McCarthy VSAT 85.40 16** P **P** **17 58 52.1 +0.5**
MCARA IAmb IAmb 17 58 54.6
comp=Z,22nm,1.5s
GSI Gunungsitoli 85.48 273 P **P** **17 58 50.8 -2.3**
comp=Z,129nm,0.9s
GSI Gunungsitoli 85.48 273 P **P** **17 58 52.4 -0.7**
GSI IAmb IAmb 17 58 55.5
comp=Z,20nm,0.9s
BARN Barnard Glacie 85.49 17 P **P** **17 58 52.4 +0.2**
BARN IAmb IAmb 17 58 55.0
comp=Z,18nm,1.2s
CTGM Chitina Glacie 85.50 17 P **P** **17 58 52.2 -0.1**
KTH Kantishna Hill 85.54 12 P **P** **17 58 51.2 -1.0**
KTH pP **pP** **18 00 31.6 +1.5**
TRF Thorofare Moun 85.56 12 P **P** **17 58 51.9 -0.6**
TRF IAmb IAmb 17 58 53.5
comp=Z,19nm,0.7s
TRF **pP** **18 00 31.5 +1.1**
SEY Seymchan 85.62 347 P **P** **17 58 53.1 +0.5**
comp=Z,21nm,0.9s,baz=149,slow=5.2,SNR=31
RND Reindeer 85.81 13 P **P** **17 58 53.1 -0.5**
RND **pP** **18 00 32.1 +0.6**
DHY Denali Highway 85.83 13 P **P** **17 58 53.1 -0.7**
DHY **pP** **18 00 33.5 +1.7**
BPAW Bear Paw Mtn. 86.02 11 P **P** **17 58 53.5 -1.1**
MNTX Cornudas Mount 86.02 54 P **P** **17 58 55.3 0.0**
MCK McKinley 86.09 12 P **P** **17 58 54.5 -0.4**
MCK IAmb IAmb 17 58 56.0
comp=Z,58nm,1.7s
MCK pP **pP** **18 00 34.1 +1.3**
TCUT Toone Canyon 86.13 44 pP **18 00 35.0 +1.2**
TX31 Lajitas Ar. Si 86.35 57 P **P** **17 58 57.3 +0.2**
TX31 IAmb IAmb 17 59 00.3
comp=Z,17nm,1.1s
TX32 Lajitas Array 86.35 57 P **P** **17 58 57.5 +0.5**
TXAR Lajitas Array 86.35 57 P **P** **17 58 58.8 +1.7**
comp=Z,2.4nm,0.8s,baz=216,slow=6.2,SNR=22
TXAR pP **pwP** **18 00 37.5 -0.6**
comp=Z,0.3nm,0.7s,baz=234,slow=3.1,SNR=1.0
HYT Haines Junctio 86.48 18 P **P** **17 58 57.6 +0.7**
MENT Mentasta 86.55 15 P **P** **17 58 56.7 -0.4**
MENT IAmb IAmb 17 58 58.2
comp=Z,26nm,1.8s
MENT pP **pP** **18 00 36.2 +1.0**
ANMO Albuquerque 86.64 51 P **P** **17 59 00.2 +1.8**
comp=Z,0.6nm,0.4s,baz=214,slow=6.5,SNR=2.4

ANMO pP **pwP** **18 00 38.8 -0.9**
comp=Z,0.6nm,0.5s,baz=183,slow=7.1,SNR=1.8
ANMO Albuquerque 86.64 51 P **P** **17 58 59.2 +0.8**
ANMO **pP** **18 00 35.9 -0.5**
MLY Manley 86.91 11 P **P** **17 58 57.7 -1.1**
MLY **pP** **18 00 36.5 -0.4**
WRH Wood River Hil 86.92 12 P **P** **17 58 57.6 -1.2**
WRH IAmb IAmb 17 58 59.9
comp=Z,27nm,1.2s
WRH **pP** **18 00 37.3 +0.3**
DOT Dot Lake 87.08 14 P **P** **17 58 58.9 -0.7**
DOT **pP** **18 00 38.4 +0.6**
HDA Harding Lake 87.10 13 P **P** **17 58 58.0 -1.6**
HDA IAmb IAmb 17 59 00.8
comp=Z,11nm,0.6s
HDA **pP** **18 00 39.1 +1.2**
MCMT McKenzie Canyo 87.12 40 P **P** **17 58 59.7 -0.8**
MCMT **pP** **18 00 40.5 +1.9**
CCB Clear Creek Bu 87.13 12 P **P** **17 58 58.7 -1.0**
CCB IAmb IAmb 17 59 00.6
comp=Z,18nm,0.7s
CCB **pP** **18 00 38.5 +0.5**
COLA College 87.32 12 P **P** **17 59 00.0 -0.6**
COLA pP **pP** **18 00 39.7 +0.8**
MDM Murphy Dome 87.32 12 P **P** **17 59 00.0 -0.7**
MDM **pP** **18 00 38.9 -0.1**
IL31 87.43 13 P **P** **17 58 59.9 -1.2**
IL31 IAmb IAmb 17 59 02.2
comp=Z,16nm,1.1s
IL31 **pP** **18 00 38.4 -1.0**
ILAR Eielson Array 87.43 13 P **P** **17 59 00.9 -0.2**
comp=Z,4.1nm,0.6s,baz=226,slow=5.0,SNR=41
ILAR pP **pP** **18 00 40.9 +1.4**
comp=Z,4.4nm,1.0s,baz=234,slow=6.3,SNR=9.7
ILAR PP **PP** **18 02 27.6 -6.0**
comp=Z,1.6nm,1.0s,baz=220,slow=3.3,SNR=3.0
DLMT Dillon 87.55 40 P **P** **17 59 03.5 +1.1**
DLMT pP **pP** **18 00 40.8 +0.2**
SYO Syowa Base 87.61 193 *i*P **P** **17 59 00.6 -1.5**
SYO Syowa Base 87.61 193 *i*pP pP 18 00 38.4 -2.0
XAN Xi'an 87.86 307 P **P** **17 59 05.1 +1.1**
XAN pmax pmax
comp=Z,5.0nm,1.2s
YHB Horse Butte 88.09 41 P **P** **17 59 05.2 +0.2**
YHB pP **pP** **18 00 44.2 +0.8**
PDAR Pinedale Array 88.14 43 P **P** **17 59 06.4 +1.0**
comp=Z,0.5nm,0.6s,baz=173,slow=3.9,SNR=5.2
PDAR pP **pP** **18 00 45.6 +1.8**
comp=Z,1.5nm,1.1s,baz=258,slow=4.5,SNR=4.0
YHL Hebgen Lake 88.15 41 P **P** **17 59 05.8 +0.4**
YHL **pP** **18 00 44.7 +1.0**
BILL Bilibino 88.23 354 P **P** **17 59 04.9 +0.1**
BILL IAmb IAmb 17 59 06.9
comp=Z,8.1nm,0.7s
BILL **pP** **18 00 43.4 +0.1**
YHH Holmes Hill 88.32 41 pP 18 00 45.6 +1.0
PRP Porcupine Dome 88.36 13 P **P** **17 59 05.1 -0.6**
PRP IAmb IAmb 17 59 07.8
comp=Z,26nm,1.6s
PRP **pP** **18 00 45.1 +0.8**
DAWY Dawson 88.57 16 P **P** **17 59 06.2 -0.4**
DAWY **pP** **18 00 46.3 +1.1**
EGAK Eagle 88.72 15 P **P** **17 59 06.7 -0.4**
EGAK IAmb IAmb 17 59 09.5
comp=Z,7.6nm,0.8s
EGAK pP **pP** **18 00 46.8 +1.0**
SNAA Sanae 88.84 178 P **P** **17 59 08.2 +0.3**
SNAA Sanae 88.84 178 P **P** **17 59 07.2 -0.7**
SNAA IAmb IAmb 17 59 09.3
comp=Z,33nm,1.2s
VNA3 Neumayer Olymp 88.96 176 P **P** **17 59 09.1 +0.6**
HHC Hu-ho-hao-te 88.98 314 P **P** **17 59 10.2 +1.1**
HHC pmax pmax
comp=Z,9.0nm,0.8s
HHC pmax pmax
comp=Z,54nm,5.5s
COLD Coldfoot 89.00 10 P **P** **17 59 09.2 +0.8**
KMI Kunming 89.23 297 P **P** **17 59 13.3 +2.5**
KMI pmax pmax
comp=Z,7.0nm,1.9s
VNA2 Neumayer--Watz 89.41 177 P **P** **17 59 11.5 +1.0**
baz=177,slow=3.6
LC01 Cunco 89.50 131 P **P** **17 59 12.6 +1.0**
LC01 IAmb IAmb 17 59 14.7
comp=Z,16nm,1.1s
VNA1 Neumayer--Stat 89.63 176 P **P** **17 59 12.4 +0.9**
PLCA Paso Flores 89.63 133 P **P** **17 59 13.8 +1.5**
comp=Z,4.1nm,1.0s,baz=284,slow=4.0,SNR=5.1
PLCA Paso Flores 89.63 133 P **P** **17 59 12.7 +0.4**
PLCA IAmb IAmb 18 01 17.7
comp=Z,21nm,1.6s
TOLK Toolik Lake Re 90.38 10 P **P** **17 59 15.5 +0.6**
CD2 Chengdu 90.59 303 P **P** **17 59 16.7 -0.1**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
BI02 San Fabin de 90.88 130 P **P** **17 59 18.4 +0.2**
BI02 IAmb IAmb 18 00 48.9
comp=Z,19nm,1.6s
EPYK Eagle Plains 91.10 15 P **P** **17 59 16.8 -1.4**
EPYK IAmb IAmb 17 59 20.0
comp=Z,7.4nm,0.7s
YAK Yakutsk 91.45 338 P **P** **17 59 19.2 -0.7**
YAK IAmb IAmb 17 59 21.2
comp=Z,6.1nm,0.8s
LZH Lanzhou 92.50 307 ⇑P **P** **17 59 26.9 +1.3**
LZH pP pP 18 01 03.5 -1.7
LZH sP sP 18 01 45.6 -4.0
LZH PP **PP** **18 03 18.2 +3.9**
LZH pmax pmax
comp=Z,21nm,1.4s
LZH pmax pmax
comp=Z,95nm,9.3s
INK Inuvik 93.38 15 P **P** **17 59 28.9 +0.2**
comp=Z,2.7nm,0.6s,baz=239,slow=3.1,SNR=13
INK Inuvik 93.38 15 P **P** **17 59 27.3 -1.3**
INK **pP** **18 01 08.2 +0.5**
SONM Songino Array 95.32 319 PP **PP** **18 03 32.7 -3.1**
comp=Z,1.2nm,1.0s,baz=123,slow=5.5,SNR=5.0
YKA Yellowknife Ar 95.62 25 P **P** **17 59 39.4 +0.4**
comp=Z,0.8nm,0.7s,baz=236,slow=4.2,SNR=16
YKA PP **PP** **18 03 33.5 -4.0**
comp=Z,0.7nm,0.9s,baz=239,slow=7.6,SNR=4.6
C36M Paulatuk 96.56 17 pP 18 01 22.2 0.0
TIXI Tiksi 98.01 345 P **P** **17 59 48.0 -1.5**
TIXI IAmb IAmb 18 03 53.4
comp=Z,4.0nm,1.1s
WMQ Urumqi 106.60 311 *e*P **Pdif** **18 00 29.1 +0.6**
ZALV Zalesovo Beam 110.02 321 PKiKP **PKiKP** **18 04 42.4 -0.1**
comp=Z,1.2nm,0.5s,baz=222,slow=4.4,SNR=7.0
ZALV PP **PP** **18 05 24.2 +0.1**
comp=Z,0.3nm,0.3s,baz=116,slow=6.8,SNR=4.1
MKAR Makanchi Array 110.84 314 PKiKP **PKiKP** **18 04 44.3 0.0**
comp=Z,1.3nm,0.5s,baz=156,slow=0.6,SNR=21
KSH Kashi 114.65 305 PKP PKPdf 18 04 51.8 -0.2
KSH sPKP 18 07 13.1
BRVK Borovoye 118.69 320 **PKPdf** **18 04 59.1 -0.1**
KK31 Karatay Array 118.95 309 **PKPdf** **18 04 59.8 -0.2**
KKAR Karatay Array 118.95 309 **PKPdf** **18 04 59.6 -0.4**
GAR Garm 118.99 304 **PKPdf** **18 05 00.2 -0.1**
SPA0 Spitsbergen Ar 121.04 357 *e*PKPdf **PKiKP** **18 05 03.8 +0.6**
SPITS Spitsbergen Ar 121.04 357 PKP **PKiKP** **18 05 03.7 +0.5**
comp=Z,3.4nm,0.7s,baz=67,slow=6.4,SNR=11
ARU Arti 124.68 326 PKP **PKiKP** **18 05 11.4 +0.5**
comp=Z,3.0nm,0.4s,baz=72,slow=1.6,SNR=17
ARU pPKP **pPKPdf** **18 06 56.7 +1.3**
comp=Z,0.5nm,0.3s,baz=33,slow=2.2,SNR=2.1
ARU Arti 124.68 326 **PKPdf** **18 05 10.0 -0.5**
ARU **pPKPdf** **18 06 54.4 -0.9**
AKTO Aktyubinsk 126.63 319 PKP **PKiKP** **18 05 15.8 +0.8**
comp=Z,2.5nm,0.7s,baz=72,slow=5.0,SNR=8.6
BOSA Boshof 127.14 205 PKP **PKiKP** **18 05 17.5 +0.6**
comp=Z,7.2nm,0.8s,baz=167,slow=0.9,SNR=12
HAMF Hammerfest 127.44 351 *e*PKPdf **PKiKP** **18 05 16.0 0.0**
ARCES ARCESS Array B 128.15 350 PKP **PKiKP** **18 05 17.7 +0.2**
comp=Z,2.9nm,0.4s,baz=42,slow=1.0,SNR=46
ARE0 ARCESS Array S 128.15 350 *e*PKPdf **PKiKP** **18 05 17.4 0.0**
KIRV Kirov 128.38 331 PKP **PKiKP** **18 05 18.5 +0.4**
comp=Z,7.3nm,0.5s,baz=54,slow=4.3,SNR=5.9
GEYT Alibeck 128.58 303 PKP **PKiKP** **18 05 19.8 +0.5**
comp=Z,1.3nm,0.6s,baz=146,slow=2.8,SNR=4.7
KTK1 Kautokeino 128.98 350 *e*PKPdf **PKiKP** **18 05 19.4 +0.3**
TRO Tromso 129.00 353 *e*PKPdf **PKiKP** **18 05 19.5 +0.4**
STEI Steigen 131.05 354 *e*PKPdf **PKiKP** **18 05 23.2 0.0**
KONS Konsvik 132.65 354 *e*PKPdf **PKiKP** **18 05 26.6 0.0**

FINES FINESS Array B 135.05 344 PKhKP PKPpre 18 05 17.3
comp=Z,0.8nm,0.6s,baz=108,slow=3.1,SNR=1.4
FINES PKP **PKPdf** **18 05 30.5 +0.5**
comp=Z,5.7nm,1.0s,baz=2.9,slow=3.8,SNR=8.0
FINES SKPbc **SKPbc** **18 08 20.7 +1.6**
comp=Z,2.2nm,0.8s,baz=345,slow=1.6,SNR=5.3
NB2 NORSAR Subarra 138.18 354 PKP PKPpre 18 05 25.6
comp=Z,0.7nm,0.8s,baz=16,slow=3.2
NOA NORSAR Array B 138.18 354 PKhKP PKPpre 18 05 29.8
comp=Z,1.5nm,0.9s,baz=16,slow=5.1,SNR=6.5
NOA PKP **PKPdf** **18 05 36.8 +0.9**
comp=Z,0.6nm,0.5s,baz=8.0,slow=3.2,SNR=8.3
NOA SKPbc **SKiKP** **18 08 30.5 -1.6**
comp=Z,1.5nm,1.0s,baz=16,slow=4.6,SNR=4.4
NC602 NORSAR Array S 138.44 353 *e*PKPdf **PKiKP** **18 05 38.0 -0.6**
HFS Hagfors 138.75 351 PKhKP PKPpre 18 05 27.8
comp=Z,1.3nm,0.3s,baz=64,slow=3.4,SNR=12
SKAR Skarsla 138.80 356 *e*PKPdf **PKPdf** **18 05 36.8 -0.2**
KAC Achnashellach 141.79 7 *e*P **PKPdf** **18 05 39.0 -3.5**
KPL Plockton 141.91 7 *e*P **PKPdf** **18 05 39.6 -3.0**
AKASG **Malin Array Be 142.42 332** PKhKP PKPpre 18 05 39.8
comp=Z,1.2nm,0.3s,baz=41,slow=4.2,SNR=23
AKASG SKPbc **SKiKP** **18 08 41.6 +0.6**
comp=Z,2.1nm,0.8s,baz=38,slow=2.8,SNR=9.0
INVG Invergeldie, C 142.98 6 *e*P **PKPdf** **18 05 42.4 -2.2**
LAWE Loch Awe, Argy 143.00 7 *e*P **PKPdf** **18 05 42.4 -2.2**
EAB Aberfoyle 143.18 6 *e*P PKPbc 18 05 43.2 +0.5
ESY Stoneypath 143.60 5 *e*P PKPbc 18 05 44.4 +0.3
EBL Broad Law 143.71 5 *e*P PKPbc 18 05 44.9 +0.5
SHEL Horse Pasture 143.73 167 **PKPdf** **18 05 46.9 -0.3**
CLGH Cloghs, Cushen 144.06 8 *e*P **PKPab** **18 05 46.1 +0.5**
EKA Eskdalemuir Ar 144.14 5 PKP **PKPab** **18 05 46.1 +0.2**
comp=Z,19nm,0.6s,baz=328,slow=3.0,SNR=68
EKA SKPbc **SKiKP** **18 08 45.7 +1.3**
comp=Z,3.8nm,1.0s,baz=336,slow=1.8,SNR=3.5
ESK Eskdalemuir 144.15 5 *e*P **PKPab** **18 05 46.1 +0.2**
ESK Eskdalemuir 144.15 5 **PKPab** **18 05 46.2 +0.2**
NEWG New Galloway 144.25 6 *e*P **PKPab** **18 05 46.5 +0.2**
GAL1 Galloway 144.44 7 *e*P **PKPdf** **18 05 47.3 +0.1**
SORM Soroca 144.64 329 ⇓P **PKPab** **18 05 48.9 +0.8**
EDMD Edmundbyers 144.73 4 *e*P **PKPab** **18 05 48.2 +0.1**
KESW Keswick, Cumbr 144.88 5 *e*P PKPbc 18 05 48.4 +0.2
GAZ Gaziantep 144.95 307 **PKPab** **18 05 50.0 +0.3**
WIM Isle of Man 145.15 7 *e*P **PKPab** **18 05 50.1 +0.4**
MBAR Mbarara 145.62 237 **PKPbc** **18 05 51.9 0.0**
KWP Kalwaria Pacla 145.94 336 **PKPbc** **18 05 52.1 +0.5**
YLL Llanberis 146.20 7 *e*P **PKPab** **18 05 54.1 +0.2**
TLCR 146.40 325 ⇓P **PKPbc** **18 05 53.7 +0.8**
BUR08 Bucovina Ar. S 146.46 332 **PKPbc** **18 05 53.4 +0.1**
BURAR Bucovina Array 146.47 332 ⇑P **PKPab** **18 05 55.3 -0.1**
OJC Ojcow 146.48 340 **PKPbc** **18 05 53.0 0.0**
BR131 Keskin Array S 146.49 313 **PKPbc** **18 05 53.4 -0.2**
BRTR Keskin Array B 146.49 313 PKPbc **PKPbc** **18 05 54.4 +0.8**
comp=Z,4.9nm,0.6s,baz=138,slow=4.2,SNR=18
BRTR pPKPbc **pPKPdf** **18 07 36.7 -0.1**
comp=Z,5.3nm,1.2s,baz=197,slow=1.5,SNR=1.8
GHRR 146.54 328 ⇓P **PKPbc** **18 05 54.2 +0.8**
FOEL Foel Wylfa 146.55 6 *e*P **PKPbc** **18 05 54.0 +0.9**
TESR Tescani 146.60 329 ⇑P **PKPbc** **18 05 54.4 +0.9**
ASF Jabal al Asfar 146.64 299 PKPbc **PKPbc** **18 05 55.3 +1.1**
comp=Z,4.5nm,0.7s,baz=57,slow=1.3,SNR=8.1
ASF pPKPbc **pPKPdf** **18 07 37.5 +0.3**
comp=Z,1.9nm,0.9s,baz=135,slow=2.9,SNR=1.9
KOLS Kolonicke sedl 146.67 336 *e*PKP **PKPbc** **18 05 52.8 -0.8**
TOPG Topolog 146.83 325 ⇓P **PKiKP** **18 05 55.9 -0.3**
CWF Charnwood Fore 146.86 4 *e*P **PKiKP** **18 05 55.2 -0.8**
ANTO Ankara 146.99 314 **PKPdf** **18 05 53.3 +1.2**
VRI Vrincioaia 147.02 328 ⇓P **PKPbc** **18 05 55.6 +1.0**
PLOR Plostina 147.07 328 ⇑P **PKPbc** **18 05 55.3 +0.5**
HARR Harsova 147.19 325 ⇓P **PKPbc** **18 05 55.3 +0.2**
TRPA Tarpa 147.21 335 ⇑P **PKiKP** **18 05 56.1 -0.8**
OSTC Ostas 147.25 344 *e*PKP **PKiKP** **18 05 56.9 -0.1**
OSTC *ex* x 18 06 00.0
CHVC Chvalec 147.27 344 *e*PKP **PKPab** **18 05 57.9 -0.4**
CLL Collm 147.31 348 ⇓*i*PKPbc **PKiKP** **18 05 57.7 +0.7**
comp=Z,11nm,0.6s
CLL ⇑*i*PKiKP **PKPab** **18 05 59.8 +1.4**
comp=Z,28nm,1.0s
CLL *e*pPKiKP **pPKiKP** **18 07 42.0 +0.5**
CLL *i* SKPbc **SKiKP** **18 08 55.0 +3.9**
CLL Collm 147.31 348 **PKPbc** **18 05 54.1 -1.1**
CLL PKPbc **PKiKP** **18 05 57.4 +0.4**
OZUR 147.32 329 ⇓P **PKPbc** **18 05 54.8 -0.7**
UPC Upice 147.35 344 *e*PKP **PKiKP** **18 05 56.6 -0.6**
UPC *ex* x 18 06 00.2
DPC Dobruska-Polom 147.41 343 *e*PKP **PKiKP** **18 05 56.8 -0.6**
DPC *ex* x 18 06 00.0
BRG Berggiesshubel 147.52 346 *e*PKP **PKPdf** **18 05 53.2 +0.7**
comp=Z,13nm,1.5s
BRG Berggiesshubel 147.52 346 *e*PKP **PKiKP** **18 05 57.7 +0.2**
comp=Z,11nm,1.3s
BRG Berggiesshubel 147.52 346 *i* PKP **PKPab** **18 05 59.9 +0.6**
comp=Z,20nm,0.9s
BRG *e*pPKP **pPKPab** **18 07 41.0 +0.5**
comp=Z,6.6nm,1.0s
BRG *e*SKP 18 08 54.3
comp=Z,4.5nm,1.0s
KRLC Kraliky 147.53 343 *e*PKP **PKPbc** **18 05 56.5 +0.6**
KRLC *ex* x 18 06 00.9
MORC Moravsky Berou 147.58 341 *e*PKP **PKiKP** **18 05 57.7 0.0**
MORC Moravsky Berou 147.58 341 ⇑P **PKPbc** **18 05 55.1 -1.0**
MORC Moravsky Berou 147.58 341 PKPdf **PKPdf** **18 05 52.1 -0.6**
MORC **PKiKP** **18 05 57.4 -0.3**
DOPR Dopca 147.60 329 ⇑P **PKiKP** **18 05 57.7 -0.2**
MLR Muntele Rosu 147.67 328 PKPbc **PKiKP** **18 05 57.4 -0.7**
baz=106,slow=5.3
MLR Muntele Rosu 147.67 328 ⇑P **PKPbc** **18 05 57.0 +0.4**
MLR Muntele Rosu 147.67 328 **PKPbc** **18 05 56.8 +0.2**
PVCC Panska Ves 147.69 345 *e*PKP **PKiKP** **18 05 58.2 +0.3**
PVCC *ex* x 18 06 00.9
VOIR 148.15 329 ⇑P **PKPbc** **18 05 58.3 +0.6**
PRU Pruhonice 148.20 345 *e*PKP **PKiKP** **18 05 58.4 -0.5**
PRU *ex* x 18 06 02.9
VRAC Vranov 148.28 342 *e*PKP **PKiKP** **18 05 59.1 0.0**
VRAC Vranov 148.28 342 ⇑P **PKiKP** **18 05 59.7 +0.5**
VYHS Vyhne 148.29 339 *e*PKP **PKiKP** **18 05 59.4 +0.2**
JAVC Velka Javorina 148.35 341 *e*PKP **PKiKP** **18 06 00.2 +0.8**
ARR Arges 148.40 329 ⇑P **PKiKP** **18 06 00.3 +0.7**
PSZ Piszkesteto 148.40 337 ⇑P **PKPbc** **18 05 58.7 +0.4**
PSZ Piszkesteto 148.40 337 **PKPbc** **18 05 58.4 +0.1**
NKC Novy Kostel 148.44 348 *e*PKP **PKiKP** **18 06 00.2 +0.7**
NKC *ex* x 18 06 03.6
KRUC Moravsky 148.55 342 *e*PKP **PKiKP** **18 05 59.5 -0.2**
PBCC Pribram 148.62 345 *e*PKP **PKiKP** **18 05 59.6 -0.2**
PBCC *ex* x 18 06 04.3
EIL Elat 148.81 295 PKPbc **PKPbc** **18 06 00.2 +0.5**
comp=Z,4.5nm,0.7s,baz=319,slow=5.5,SNR=6.6
MODS Modra-Piesok 148.90 341 *e*PKP **PKiKP** **18 06 00.1 -0.4**
MEM Membach 148.97 355 PKiKP **PKiKP** **18 06 00.5 0.0**
MEM PKPab **PKPab** **18 06 05.0 -0.1**
SIRR Siria 149.06 333 ⇓P **PKPbc** **18 06 00.4 +0.5**
SNF Seneffe 149.18 358 PKPab **PKPab** **18 06 06.3 +0.4**
GRA1 Grafenberg Arr 149.20 349 PKPbc **PKPbc** **18 05 59.4 -0.7**
BCLA Clavier 149.21 356 PKiKP **PKiKP** **18 06 01.2 +0.2**
BCLA PKPab **PKPab** **18 06 06.2 +0.1**
BHOU Houvegnez 149.23 355 PKiKP **PKiKP** **18 06 00.9 -0.1**
BHOU PKPab **PKPab** **18 06 06.8 +0.6**
KHC Kasperske Hory 149.23 345 *e*PKP **PKPdf** **18 05 56.1 +0.7**
KHC *ex* x 18 06 01.3
KHC *ex* x 18 06 06.2
KHC *ex* x 18 07 47.5
KHC Kasperske Hory 149.23 345 **PKPdf** **18 05 54.1 -1.3**
KHC PKPbc **PKiKP** **18 06 01.1 -0.1**
GZR Gura Zlata 149.25 331 ⇑P **PKiKP** **18 06 01.0 -0.3**
BGES Gesves 149.26 357 PKPbc **PKPbc** **18 05 59.6 -0.5**
BGES PKPab **PKPab** **18 06 05.8 -0.5**
BMRD Maredsous 149.36 357 PKPdf **PKPdf** **18 05 56.2 +0.7**
BMRD Maredsous 149.36 357 PKiKP **PKiKP** **18 06 02.2 +0.9**
BMRD Maredsous 149.36 357 PKPab **PKPab** **18 06 06.5 -0.3**
GEC2 GERESS Array S 149.47 345 **PKPdf** **18 05 54.5 -1.4**
GEC2 **PKiKP** **18 06 01.6 -0.1**
GERES GERESS Array B 149.47 345 PKPbc **PKiKP** **18 06 01.9 +0.1**
comp=Z,4.3nm,0.6s,baz=320,slow=6.0,SNR=12
ELND Elena 149.48 325 ⇑P **PKiKP** **18 06 03.2 +1.3**
DOU Dourbes 149.57 357 PKiKP **PKiKP** **18 06 02.5 +0.8**
DOU PKPab **PKPab** **18 06 07.5 -0.2**
BZS Buzias 149.59 333 ⇑P **PKPbc** **18 06 01.5 +0.4**
CONA Conrad Observa 149.73 342 *i* PKiKP **PKiKP** **18 06 02.7 +0.4**
comp=Z,12nm,0.6s,SNR=11
HERR Herculane 149.81 331 ⇑P **PKPbc** **18 06 02.0 +0.4**
PLVB Pleven 149.83 327 ⇑P **PKPbc** **18 06 01.6 -0.1**
WLF Walferdange 149.90 355 PKiKP **PKiKP** **18 06 03.5 +1.0**

WLF				PKPab	**PKPab**	**18 06 07.6**	**-1.4**	
WLF	**Walferdange**	**149.90**	**355**		**PKiKP**	**18 06 02.5**	**+0.1**	
MDVR	**Moldovita**	**150.21**	**332**	⇑P	**PKPbc**	**18 06 02.5**	**-0.2**	
MOA	**Molln**	**150.25**	**344**	*e*PKiKP	**PKiKP**	**18 06 03.3**	**+0.1**	
	comp=Z,4.5nm,0.6s							
MORH	**Mrgy, Hungar**	**150.30**	**337**	⇑ *i* P	**PKPbc**	**18 06 02.8**	**0.0**	
ARSA	**Arzberg**	**150.44**	**342**	*i* PKiKP	**PKiKP**	**18 06 03.8**	**+0.1**	
	comp=Z,4.6nm,0.9s							
FRGS	**Fruska Gora**	**150.72**	**334**	⇑ *i* P	**PKiKP**	**18 06 04.4**	**+0.1**	
BFO	**Black Forest**	**150.98**	**352**		**PKPbc**	**18 06 03.9**	**-0.4**	
BFO					**PKPab**	**18 06 13.1**	**-0.6**	
VTS	**Vitosha**	**151.09**	**327**	⇑P	**PKiKP**	**18 06 06.0**	**+0.6**	
VTS	**Vitosha**	**151.09**	**327**	PKPdf	**PKPdf**	**18 05 57.4**	**-1.2**	
VTS					**PKPbc**	**18 06 05.0**	**+0.1**	
VTS				PKPab	**PKPab**	**18 06 15.7**	**+1.2**	
SOKA	**Soboth**	**151.10**	**342**	*e*PKPdf	**PKPdf**	**18 05 58.9**	**+0.5**	
	comp=Z,4.0nm,1.2s							
SOKA				*e*PKiKP	**PKPbc**	**18 06 05.0**	**+0.2**	
	comp=Z,15nm,1.1s,SNR=6.0							
PERS	**Pernice**	**151.12**	**342**	*i* PKPbc	**PKiKP**	**18 06 05.1**	**0.0**	
KBA	**Koelnbreinsper**	**151.20**	**344**	*e*PKPdf	**PKPdf**	**18 05 59.2**	**+0.5**	
	comp=Z,3.1nm,1.1s							
KBA				*e*PKiKP	**PKPbc**	**18 06 05.1**	**0.0**	
	comp=Z,9.6nm,0.6s,SNR=7.4							
WATA	**Walderalm**	**151.38**	**347**	*i* PKPdf	**PKPdf**	**18 05 59.7**	**+0.8**	
	comp=Z,4.5nm,0.8s							
WATA				*i* PKiKP	**PKiKP**	**18 06 05.9**	**+0.2**	
	comp=Z,9.5nm,0.5s,SNR=5.6							
OBKA	**Obir**	**151.40**	**342**	*e*PKiKP	**PKPbc**	**18 06 05.6**	**+0.1**	
	comp=Z,5.5nm,0.6s							
RETA	**Reutte**	**151.40**	**348**	*i* PKiKP	**PKiKP**	**18 06 06.1**	**+0.4**	
	comp=Z,4.9nm,0.6s							
WTTA	**Wattenberg**	**151.43**	**347**	*e*PKPdf	**PKPdf**	**18 05 60.0**	**+0.9**	
	comp=Z,6.1nm,1.2s							
WTTA				*i* PKiKP	**PKiKP**	**18 06 06.3**	**+0.3**	
	comp=Z,16nm,0.5s,SNR=7.4							
MOTA	**Moosalm**	**151.47**	**347**	*i* PKiKP	**PKiKP**	**18 06 06.1**	**+0.1**	
	comp=Z,5.4nm,0.5s							
DIVS	**Divibare**	**151.50**	**333**	⇑ *i* P	**PKiKP**	**18 06 06.2**	**+0.1**	
MYKA	**Terra Mystica**	**151.54**	**344**	*e*PKPdf	**PKPdf**	**18 05 59.4**	**+0.3**	
	comp=Z,1.4nm,0.5s							
MYKA				*e*PKiKP	**PKPbc**	**18 06 05.5**	**-0.2**	
	comp=Z,7.5nm,0.5s							
SQTA	**Sankt Quirin**	**151.56**	**347**	*i* PKPdf	**PKPdf**	**18 06 00.1**	**+0.9**	
	comp=Z,1.6nm,0.5s							
SQTA				*i* PKiKP	**PKiKP**	**18 06 06.4**	**+0.2**	
	comp=Z,9.8nm,0.6s,SNR=5.8							
CLF	**Chambon-Foret**	**151.70**	**0**	PKPdf	**PKPdf**	**18 05 58.9**	**-0.3**	
CLF					**PKPab**	**18 06 16.5**	**-0.1**	
ABTA	**Abfaltersbach**	**151.72**	**345**	*i* PKPdf	**PKPdf**	**18 05 59.0**	**-0.4**	
	comp=Z,11nm,1.1s							
ABTA				*i* PKiKP	**PKPbc**	**18 06 06.1**	**0.0**	
	comp=Z,16nm,0.6s							
CRES	**Cresnjev**	**151.74**	**340**	⇑ *i* P	**PKiKP**	**18 06 06.4**	**0.0**	
DAVA	**Damuels**	**151.76**	**349**	*i* PKPdf	**PKPdf**	**18 05 59.8**	**+0.3**	
	comp=Z,3.5nm,0.8s							
DAVA				*i* PKiKP	**PKiKP**	**18 06 07.9**	**+1.3**	
	comp=Z,13nm,1.1s							
LJU	**Ljubljana**	**151.82**	**342**	*i* PKPdf	**PKPdf**	**18 05 59.4**	**-0.1**	
LJU				*i* PKPbc	**PKiKP**	**18 06 06.8**	**+0.3**	
LJU	**Ljubljana**	**151.82**	**342**	⇑ *i* P	**PKiKP**	**18 06 06.6**	**0.0**	
FETA	**Feichten**	**151.85**	**348**	*i* PKPdf	**PKPdf**	**18 06 00.1**	**+0.4**	
	comp=Z,7.9nm,0.9s							
FETA				*i* PKiKP	**PKiKP**	**18 06 07.1**	**+0.3**	
	comp=Z,7.4nm,0.6s							
CRNS	**Crni Vrh**	**151.87**	**342**	*i* PKPbc	**PKiKP**	**18 06 06.8**	**+0.1**	
BBLS	**Lazići**	**151.94**	**333**	⇑ *i* P	**PKPbc**	**18 06 06.8**	**+0.1**	
HAPS	**Han Pijesak,BI**	**151.95**	**334**	⇑ *i* P	**PKPbc**	**18 06 06.9**	**+0.1**	
STAL	**STALIGIAL**	**152.12**	**344**		**PKPdf**	**18 05 58.7**	**-1.2**	
STAL				PKPbc	**PKPbc**	**18 06 06.9**	**-0.1**	
CEY	**Cerknica**	**152.13**	**342**	⇑ *i* P	**PKiKP**	**18 06 07.5**	**+0.3**	
RUDO	**Rudo**	**152.16**	**333**	*e*P	**PKPbc**	**18 06 07.0**	**-0.1**	
GBRS	**Gornja Briga**	**152.20**	**341**	*e*PKPbc	**PKiKP**	**18 06 07.8**	**+0.4**	
GBRS				*i* PKPab	**PKPab**	**18 06 19.1**	**+0.2**	
FUORN	**Ofenpass-Fuorn**	**152.33**	**348**		**PKPdf**	**18 06 00.1**	**-0.4**	
FUORN				PKPbc	**PKiKP**	**18 06 08.4**	**+0.5**	
FUORN				PKPab	**PKPab**	**18 06 20.5**	**+0.9**	
RIY	**Rijeka**	**152.49**	**341**	*e*P	**PKiKP**	**18 06 08.2**	**+0.3**	
CTI	**Castel Tesino**	**152.58**	**346**	PKPdf	**PKPdf**	**18 06 00.0**	**-0.7**	
CTI				PKPbc	**PKiKP**	**18 06 08.3**	**+0.1**	
CTI					**PKPab**	**18 06 19.9**	**-0.6**	
TUE	**Stuetta**	**152.64**	**349**		**PKPdf**	**18 06 01.2**	**+0.3**	
TUE				PKPbc	**PKiKP**	**18 06 09.2**	**+0.8**	
TUE					**PKPab**	**18 06 21.0**	**+0.1**	
UPM	**Unac-Piva**	**152.69**	**333**	*e*P	**PKPbc**	**18 06 08.0**	**-0.5**	
BRY	**Bratogost**	**153.09**	**333**	*e*P	**PKPbc**	**18 06 09.3**	**-0.1**	
LIT	**Litokhoron**	**153.26**	**324**	PKPdf	**PKPdf**	**18 06 00.7**	**-1.0**	
LIT				PKPbc	**PKPbc**	**18 06 09.3**	**-0.4**	
LIT					**PKPab**	**18 06 23.7**	**+0.2**	
TREB	**Trebinje**	**153.32**	**333**	*e*P	**PKPbc**	**18 06 09.3**	**-0.4**	
FNA	**Florina**	**153.38**	**326**		**PKPbc**	**18 06 09.3**	**-0.6**	
DRME	**Dracevica, Mon**	**153.38**	**331**	*e*P	**PKPbc**	**18 06 09.6**	**-0.2**	
HCY	**Herceg Novi**	**153.48**	**332**	*e*P	**PKPbc**	**18 06 09.5**	**-0.5**	
ZCCA	**Zocca**	**154.34**	**346**	PKPdf	**PKPdf**	**18 06 03.1**	**-0.1**	
ZCCA					**PKPab**	**18 06 29.2**	**+1.2**	
BNI	**Bardonecchia**	**154.42**	**353**	PKPdf	**PKPdf**	**18 06 02.1**	**-1.3**	
BNI					**PKPab**	**18 06 29.2**	**+0.8**	
NRCA	**Norcia**	**155.16**	**341**	PKPdf	**PKPdf**	**18 06 02.7**	**-1.7**	
NRCA					**PKPab**	**18 06 31.8**	**+0.2**	
INTR	**Introdacqua**	**155.64**	**339**		**PKPdf**	**18 06 03.3**	**-1.7**	
TIP	**Timpagrande**	**156.89**	**330**		**PKPdf**	**18 06 06.6**	**-0.2**	
ESDC	**Sonseca Array**	**159.33**	**14**	PKP	**PKPdf**	**18 06 10.4**	**+0.8**	
	comp=Z,1.1nm,0.9s,baz=344,slow=2.2,SNR=8.7							
ESDC				PKPab	**PKPab**	**18 06 50.2**	**+0.5**	
	comp=Z,1.6nm,0.8s,baz=341,slow=4.3,SNR=9.6							
KEST	**Kesra**	**162.83**	**340**	PKPab	**PKPab**	**18 07 06.0**	**+0.8**	
	comp=Z,3.8nm,0.6s,baz=294,slow=2.4,SNR=4.6							
KEST	**Kesra**	**162.83**	**340**	PKPdf	**PKPdf**	**18 06 11.4**	**-2.1**	
KEST					**PKPab**	**18 07 06.0**	**+0.8**	
LIC	**Lamto**	**164.86**	**151**	*e*PKIKP	**PKPdf**	**18 06 15.5**	**-0.3**	
	comp=Z,69nm,1.2s							
KIC	**Kosan Boka**	**165.11**	**152**	*e*PKIKP	**PKPdf**	**18 06 15.5**	**-0.6**	
	comp=Z,28nm,1.0s							
TIC	**Toumodi**	**165.23**	**150**	*e*PKIKP	**PKPdf**	**18 06 15.8**	**-0.4**	
DBIC	**Dimbokro**	**165.33**	**151**	PKP	**PKPdf**	**18 06 16.3**	**+0.1**	
	comp=Z,8.0nm,1.0s,baz=135,slow=4.5,SNR=3.6							
DBIC	**Dimbokro**	**165.33**	**151**		**PKPdf**	**18 06 14.1**	**-2.1**	
MDT	**Midelt**	**165.50**	**24**	PKP	**PKPdf**	**18 06 17.0**	**+1.0**	
	comp=Z,4.9nm,0.9s,baz=281,slow=1.2,SNR=6.6							
TOA0	**Torodi Ar. Sit**	**173.50**	**175**		**PKPdf**	**18 06 19.9**	**-1.1**	
TOA0					**PKPab**	**18 07 53.2**	**+0.6**	
TORD	**Torodi Ar. Bea**	**173.50**	**175**	PKP	**PKPdf**	**18 06 20.8**	**-0.2**	
	comp=Z,6.7nm,1.0s,baz=322,slow=0.6,SNR=22							
TORD				PKPab	**PKPab**	**18 07 53.5**	**+0.9**	
	comp=Z,4.3nm,0.9s,baz=187,slow=4.1,SNR=10							
TORD				PP	**PP**	**18 11 44.0**	**+0.4**	
	comp=Z,4.5nm,1.1s,baz=176,slow=5.6,SNR=8.7							

*IDC **09** 17:51:19.6±0.9, 4°.85S×102°.91E, h0km, mb4.3/19, mb1 4.4/19, mb1mx4.1/61, mbtmp4.3/19, MS3.1/5, Ms1 3.1/5, ms1mx2.8/42, Error ellipse: s-maj=32.7km s-min=13.2km az=49.0*

*NEIC **09** 17:51:27.3±1.1, 4°.93S±0°.05×102°.93E±0°.09, h62km±2km, mb4.4/18, Error ellipse: s-maj=14.3km s-min=6.1km az=69.0*

*DJA **09** 17:51:28.0±0.4, 5°.5S±4°×10°.3E±°, h50km±8km, M4.4/16, mB5.0/2, mb4.5/5, MLv4.3/16, MLv4.4/2, Mw(mB)4.3/2*

ISC 09 17:51:27.1±0.6, **4°.97S**±0°.08×**102°.92E**±0°.07, **h59km**, **n76,** σ1§**02**/73, **mb4.4**/31, **MS3.2**/3, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNAI	**Manna**	**0.60**	**4**	P	**Pn**	**17 51 40.5**	**+0.4**
MNAI	**Manna**	**0.60**	**4**		**Pn**	**17 51 40.3**	**+0.2**
MNAI				S	**Sn**	**17 51 49.6**	**0.0**
LWLI	**Liwa**	**1.14**	**93**	P	**Pn**	**17 51 46.4**	**-0.6**
LWLI				S	**Sn**	**17 52 00.0**	**-1.8**
KSI	**Kapahiang**	**1.34**	**346**	P	**Pn**	**17 51 50.5**	**+0.8**
MDSI	**Maura Dua**	**1.34**	**69**	P	**Pn**	**17 51 49.6**	**0.0**
KASI	**Kota Agung**	**1.67**	**110**	P	**Pn**	**17 51 53.8**	**-0.2**
MASI	**Maura Aman, Be**	**1.93**	**340**	P	**Pn**	**17 51 59.6**	**+1.9**
BLSI	**Bandar Lampung**	**2.35**	**100**	P	**Pn**	**17 52 04.3**	**+1.0**
PMBI	**Palembang**	**2.74**	**42**	P	Pn	17 52 19.3	+11
KRJI	**Kerinci**	**3.20**	**333**	P	**Pn**	**17 52 17.7**	**+2.6**
PPSI	**Pulau Pagai**	**3.63**	**307**	P	**Pn**	**17 52 20.7**	**-0.2**
DBJI	**Dramaga**	**4.13**	**113**	P	**Pn**	**17 52 29.7**	**+2.1**
SDSI	**Sungai Dareh**	**4.27**	**340**	P	**Pn**	**17 52 32.0**	**+2.4**
PDSI	**Padang**	**4.71**	**329**	P	**Pn**	**17 52 36.8**	**+1.1**
LEM	**Lembang**	**5.03**	**112**	Pn	**Pn**	**17 52 43.8**	**+3.7**
	3.5nm,0.3s,baz=330,slow=20,SNR=5.0						
LEM				Sn	**Sn**	**17 53 39.0**	**+2.0**
	3.0nm,0.3s,baz=236,slow=8.7,SNR=3.8						
LEM				LR	LR	17 55 00.8	
	comp=Z,106nm,20.5s,baz=255,slow=44						
LEM	**Lembang**	**5.03**	**112**	P	**Pn**	**17 52 40.8**	**+0.7**
CISI	**Cisompet, Garu**	**5.51**	**118**	Pn	**Pn**	**17 52 46.9**	**+0.3**
CISI					**Sn**	**17 53 48.9**	**+0.2**
TPRI	**Tanjung Pinang**	**6.06**	**15**	P	**Pn**	**17 52 55.6**	**+1.4**
	0.2nm2µm38nm,0.7s						
XMIS	**Christmas Isla**	**6.11**	**154**	Pn	**Pn**	**17 52 54.5**	**-0.4**
MNSI	**Mandailing Nat**	**6.62**	**330**	P	**Pn**	**17 53 01.9**	**+0.1**
	0.1nm11nm,0.6s						
MYKOM	**Kota Tinggi**	**6.77**	**8**		**Pn**	**17 53 05.8**	**+1.9**
UGM	**Wanagama**	**8.11**	**112**	Pn	**Pn**	**17 53 22.5**	**+0.4**
GSI	**Gunungsitoli**	**8.20**	**319**	P	**Pn**	**17 53 23.1**	**-0.4**
	77nm,0.9s						
GSI	**Gunungsitoli**	**8.20**	**319**		**Pn**	**17 53 23.3**	**-0.2**
PSI	**Prapat**	**8.69**	**333**	LR	LR	17 57 12.8	
	comp=Z,110nm,19.3s,baz=94,slow=42						
JAGI	**Jajag, Banyuwa**	**11.69**	**108**	Pn	**Pn**	**17 54 10.1**	**-1.1**
JAGI					**Sn**	**17 56 19.8**	**-0.4**
MRSI	**Marisa**	**19.75**	**75**	P	**P**	**17 55 52.1**	**-0.3**
BATI	**Baumata**	**21.21**	**105**	P	**P**	**17 56 08.4**	**+0.3**
	29nm,0.6s,baz=309,slow=7.4,SNR=6.1						
CMAR	**Chiang Mai Arr**	**23.60**	**351**	P	**P**	**17 56 31.9**	**-0.9**
	2.4nm,0.8s,baz=183,slow=8.5,SNR=20						
CMAR				LR	LR	18 05 24.0	
	comp=Z,39nm,18.1s,baz=170,slow=36						
CHTO	**Chiang Mai**	**23.95**	**351**	P	**P**	**17 56 34.5**	**-1.5**
FITZ	**Fitzroy Crossi**	**25.76**	**122**	P	**P**	**17 56 52.8**	**+0.3**
	4.5nm,0.7s,baz=295,slow=5.9,SNR=3.7						
FITZ	**Fitzroy Crossi**	**25.76**	**122**	P	**P**	**17 56 51.4**	**-1.1**
KNRA	**Kununurra**	**27.53**	**115**	P	**P**	**17 57 07.7**	**-0.7**
KNRA				IAmb	IAmb	17 57 10.3	
	comp=Z,11nm,1.1s						
H08S2	**Diego Garcia H**	**30.35**	**263**	T	T	18 29 57.3	
	baz=86,slow=76,SNR=2.8						
H08S3	**Diego Garcia H**	**30.36**	**263**	T	T	18 29 53.4	
	baz=86,slow=76,SNR=2.9						
H08S1	**Diego Garcia H**	**30.37**	**263**	T	T	18 29 46.7	
	baz=86,slow=76,SNR=2.8						
H01W3	**Cape Leeuwin H**	**31.53**	**162**	T	T	18 31 05.3	
	baz=340,slow=76,SNR=7.5						
H01W2	**Cape Leeuwin H**	**31.54**	**162**	T	T	18 31 03.0	
	baz=340,slow=76,SNR=6.9						
H01W1	**Cape Leeuwin H**	**31.55**	**162**	T	T	18 31 02.6	
	baz=340,slow=76,SNR=3.9						
WB0	**Warramunga Arr**	**33.99**	**118**	P	**P**	**17 58 05.5**	**+0.1**
WB0				IAmb	IAmb	17 58 06.7	
	comp=Z,5.5nm,0.9s						
WRA	**Warramunga Arr**	**34.01**	**119**	P	**P**	**17 58 05.9**	**+0.3**
	comp=Z,2.8nm,0.4s,baz=300,slow=9.1,SNR=8.7						
WRAB	**Tennant Creek**	**34.01**	**119**	P	**P**	**17 58 05.3**	**-0.3**
WB2	**Warramunga Arr**	**34.02**	**119**	P	**P**	**17 58 05.4**	**-0.3**
WB2				IAmb	IAmb	17 58 07.2	
	comp=Z,5.2nm,0.6s						
WR0	**Warramunga Arr**	**34.19**	**119**	P	**P**	**17 58 07.1**	**-0.1**
WR0				IAmb	IAmb	17 58 08.1	
	comp=Z,4.8nm,0.6s						
ASAR	**Alice Springs**	**35.17**	**125**	P	**P**	**17 58 16.1**	**+0.5**
	comp=Z,1.8nm,0.3s,baz=297,slow=7.6,SNR=7.9						
GTA	**Gaotai**	**44.25**	**357**	*e*P	**P**	**17 59 30.6**	**-0.2**
GTA				pP	pP	17 59 34.2	-12
GTA				sP	sP	17 59 37.2	-16
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CTA	**Charters Tower**	**44.73**	**114**	P	**P**	**17 59 35.4**	**+0.5**
	comp=Z,6.2nm,0.8s,baz=264,slow=7.7,SNR=2.7						
CTAO	**Charters Tower**	**44.73**	**114**	P	**P**	**17 59 34.5**	**-0.4**
STKA	**Stephens Creek**	**45.02**	**131**	P	**P**	**17 59 37.9**	**+0.9**
	comp=Z,3.8nm,0.7s,baz=308,slow=6.0,SNR=7.5						
STKA	**Stephens Creek**	**45.02**	**131**	P	**P**	**17 59 38.1**	**+1.1**
KSRS	**Korea Array**	**48.20**	**27**	P	**P**	**18 00 01.0**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=231,slow=7.0,SNR=9.6						
KSH	**Kashi**	**50.76**	**333**	P	**P**	**18 00 23.0**	**+1.6**
KSH				pP	pP	18 00 39.1	+2.4
KSH				sP	sP	18 00 46.5	+3.2
KSH				pmax	pmax		
	comp=Z,19nm,1.3s						
KSH				pmax	pmax		
	comp=Z,230nm,5.1s						
KDJ	**Kajisay**	**52.40**	**336**	P	**P**	**18 00 33.8**	**+0.1**
SONM	**Songino Array**	**52.66**	**3**	P	**P**	**18 00 35.5**	**0.0**
	comp=Z,2.7nm,0.6s,baz=182,slow=9.0,SNR=15						
SONM				PcP	**PcP**	**18 01 44.4**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=200,slow=4.4,SNR=4.8						
BOOM	**Boomskoye usch**	**53.21**	**335**	P	**P**	**18 00 39.3**	**-0.3**
ARSB	**Arslanbob**	**53.58**	**332**	P	**P**	**18 00 43.1**	**+0.8**
AAK	**Ala-Archa**	**53.95**	**334**	P	**P**	**18 00 44.9**	**-0.2**
AAK				IAmb	IAmb	18 00 47.3	
	comp=Z,3.6nm,1.4s						
MK31	**Makanchi Array**	**54.68**	**343**	P	**P**	**18 00 49.7**	**-0.3**
MK31				IAmb	IAmb	18 00 50.2	
	comp=Z,2.2nm,0.8s						
MKAR	**Makanchi Array**	**54.68**	**343**	P	**P**	**18 00 49.7**	**-0.4**
	comp=Z,2.9nm,0.7s,baz=146,slow=8.5,SNR=34						
MAKZ	**Makanchi**	**54.78**	**343**	P	**P**	**18 00 50.0**	**-0.8**
USRK	**Ussuriysk Ar.**	**55.49**	**25**	P	**P**	**18 00 54.9**	**-1.0**
	comp=Z,7nm,0.6s,baz=221,slow=6.0,SNR=12						
KURK	**Kurchatov**	**59.28**	**342**	P	**P**	**18 01 21.9**	**-0.6**
KURK				IAmb	IAmb	18 01 23.1	
	comp=Z,3.7nm,1.0s						
GEYT	**Alibeck**	**59.58**	**320**	P	**P**	**18 01 25.1**	**+0.2**
	comp=Z,1.6nm,0.5s,baz=159,slow=8.9,SNR=4.5						
ASAJ	**Asahikawa**	**60.49**	**32**	P	**P**	**18 01 30.3**	**-0.6**
	comp=Z,5.6nm,1.0s,baz=253,slow=6.4,SNR=5.4						
JKA	**Kamikawa-asahi**	**60.49**	**32**	P	**P**	**18 01 30.3**	**-0.7**
ZAA0	**Zalesovo Array**	**60.63**	**348**	P	**P**	**18 01 30.6**	**-1.1**
ZAA0				IAmb	IAmb	18 01 32.1	
	comp=Z,4.5nm,0.8s						
ZALV	**Zalesovo Beam**	**60.63**	**348**	P	**P**	**18 01 31.0**	**-0.7**
	comp=Z,2.5nm,0.3s,baz=163,slow=6.0,SNR=21						
BRVK	**Borovoye**	**64.03**	**339**	P	**P**	**18 01 53.6**	**-0.8**
BRVK				IAmb	IAmb	18 01 54.1	
	comp=Z,2.8nm,0.7s						
KIRV	**Kirov**	**76.28**	**334**	LR	LR	18 40 25.6	
	comp=Z,12nm,18.8s,baz=38,slow=39						
SEY	**Seymchan**	**77.31**	**21**	P	**P**	**18 03 14.6**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=17,slow=1.9,SNR=2.7						
BRTR	**Keskin Array B**	**77.46**	**312**	P	**P**	**18 03 16.9**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=126,slow=6.3,SNR=4.8						
AKASG	**Malin Array Be**	**83.60**	**322**	P	**P**	**18 03 49.1**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=88,slow=4.8,SNR=5.1						
BUR08	**Bucovina Ar. S**	**85.41**	**318**	P	**P**	**18 04 00.1**	**+1.7**
BUR08				IAmb	IAmb	18 04 15.8	
	comp=Z,4.2nm,1.3s						
FINES	**FINESS Array B**	**88.08**	**332**	P	**P**	**18 04 11.3**	**+0.4**
	comp=Z,1.8nm,0.5s,baz=120,slow=5.9,SNR=18						
FINES				LR	LR	18 46 48.8	
	comp=Z,18nm,21.3s,baz=190,slow=38						
ARCES	**ARCESS Array B**	**90.24**	**340**	P	**P**	**18 04 20.9**	**0.0**
	comp=Z,1.4nm,0.6s,baz=104,slow=5.1,SNR=6.1						
TXAR	**Lajitas Array**	**145.07**	**43**	PKP	**PKPab**	**18 10 58.5**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=270,slow=0.5,SNR=18						

*VIE **09** 17:56:22.8±0.5, 49°.75N×18°.54E, h0km, mb2.1/5, ml2.7/5, Error ellipse: s-maj=4.5km s-min=3.4km az=165.0 23 km ESE of Ostrava Suspected Mining induced.*

*IPEC **09** 17:56:23.0±0.2, 49°.84N×18°.53E, h0km, ML2.5/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*

*PRU **09** 17:56:24.2±0.0, 49°.82N×18°.44E, h0km, Mining Induced Event Karvina, E=2.4e+06, Felt In Orlova*

ISC 09 17:56:23.0±0.9, **49°.83N**±0°.04×**18°.49E**±0°.03, **h0km**, **n35,** σ0**59**/64, **5C-3D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.22**	**273**	*e*PG	**Pg**	**17 56 28.0**	**+0.8**
OKC				*e*SG	**Sg**	**17 56 31.2**	**+1.1**
	comp=Z,392nm,0.7s						
MORC	**Moravsky Berou**	**0.61**	**266**	*e*PG	**Pg**	**17 56 35.1**	**+0.3**
MORC				*e*SG	**Sg**	**17 56 43.0**	**+0.3**
MORC	**Moravsky Berou**	**0.61**	**266**	⇓P	**Pg**	**17 56 34.9**	**+0.2**
MORC				⇑S	**Sg**	**17 56 43.7**	**+1.0**
MORC	**Moravsky Berou**	**0.61**	**266**	*e*Pg	**Pg**	**17 56 35.1**	**+0.3**
	baz=84						
MORC				*e*Sg	**Sg**	**17 56 43.0**	**+0.3**
	107nm,0.3s,baz=84						
LANS	**Liptovska Anna**	**0.93**	**136**	*e*PG	**Pb**	**17 56 42.0**	**-0.1**
LANS				*e*SG	**Sn**	**17 56 57.3**	**-0.2**
LANS				*e*LG	Lg	17 57 03.0	
JAVC	**Velka Javorina**	**1.10**	**209**	*e*PG	**Pb**	**17 56 45.3**	**+0.3**
KRLC	**Kraliky**	**1.13**	**283**	*e*PG	**Pg**	**17 56 43.5**	**-1.2**
KRLC				*e*SG	**Sg**	**17 56 59.3**	**0.0**
	comp=Z,85nm,0.4s						
VRAC	**Vranov**	**1.34**	**248**	*e*PG	**Pg**	**17 56 48.6**	**0.0**
VRAC				*e*SG	**Sg**	**17 57 06.0**	**+0.1**
VRAC	**Vranov**	**1.34**	**248**	⇑P	**Pg**	**17 56 48.2**	**-0.4**
VRAC				⇑S	**Sb**	**17 57 06.2**	**-0.4**
VRAC	**Vranov**	**1.34**	**248**	*e*Pg	**Pg**	**17 56 48.6**	**0.0**
	baz=66						
VRAC				*e*Sg	**Sg**	**17 57 06.0**	**+0.1**
	82nm,0.4s,baz=66						
VYHS	**Vyhne**	**1.35**	**170**	*e*PG	**Pg**	**17 56 49.0**	**+0.1**
VYHS				*e*SG	**Sn**	**17 57 07.7**	**-0.1**
SMOL	**Smolenice**	**1.48**	**208**	*e*PG	**Pn**	**17 56 51.0**	**0.0**
SMOL				*e*SG	**Sn**	**17 57 11.2**	**+0.1**
SMOL				*e*LG	Lg	17 57 13.6	
DPC	**Dobruska-Polom**	**1.49**	**291**	*e*PG	**Pn**	**17 56 50.5**	**-0.6**
DPC				*e*SG	**Sg**	**17 57 10.9**	**0.0**
	comp=Z,43nm,0.7s						
KRUC	**Moravsky**	**1.56**	**242**	*e*PG	**Pn**	**17 56 52.0**	**-0.1**
KRUC				*e*SG	**Sg**	**17 57 13.0**	**-0.2**
KRUC	**Moravsky**	**1.56**	**242**	*e*Pg	**Pn**	**17 56 52.0**	**-0.1**
	baz=60						
KRUC				*e*Sg	**Sg**	**17 57 13.0**	**-0.2**
	34nm,0.4s,baz=60						
OSTC	**Ostas**	**1.63**	**297**	*e*PG	**Pn**	**17 56 53.1**	**+0.1**
OSTC				*e*SG	**Sn**	**17 57 14.8**	**0.0**
	comp=Z,80nm,0.8s						
MODS	**Modra-Piesok**	**1.66**	**209**	*e*PG	**Pn**	**17 56 52.8**	**-0.6**
MODS				*e*SG	**Sn**	**17 57 14.4**	**-0.9**
MODS				*e*LG	Lg	17 57 16.1	
UPC	**Upice**	**1.73**	**294**	*e*PG	**Pn**	**17 56 54.6**	**+0.2**
UPC				*e*SG	**Sb**	**17 57 18.5**	**+0.5**
	comp=Z,56nm,0.9s						
CHVC	**Chvalec**	**1.74**	**297**	*e*PG	**Pn**	**17 56 55.0**	**+0.5**
CHVC				*e*SG	**Sb**	**17 57 18.3**	**+0.1**
	comp=Z,94nm,1.3s						
KECS	**Kecovo**	**1.88**	**135**	*e*PN	**Pn**	**17 56 56.2**	**-0.2**
KECS				*e*SN	**Sb**	**17 57 22.2**	**0.0**
KECS				*e*LG	Lg	17 57 25.0	
TREC	**Trest**	**2.02**	**256**	*e*PN	**Pn**	**17 56 58.1**	**-0.3**
TREC				*e*SG	**Sg**	**17 57 27.4**	**-0.6**
	comp=Z,27nm,0.5s						
PSZ	**Piszkesteto**	**2.12**	**154**	⇑P	**Pn**	**17 57 00.4**	**+0.5**
PRU	**Pruhonice**	**2.56**	**275**	*e*PG	**Pb**	**17 57 10.1**	**+0.4**
PRU				*e*SG	**Sg**

	comp=N,34nm,1.2s						
YNR	Norris Junctio	4.01	285		Pn	18 02 13.4	+0.6
YPP	Pitchstone Pla	4.04	279		Pn	18 02 14.1	+0.9
IMW	Indian Meadow	4.12	274		Pn	18 02 15.0	+0.7
IMW				IAML		18 03 27.5	
	comp=N,30nm,0.6s						
IMW				IAML		18 03 29.2	
	comp=N,21nm,0.8s						
YHH	Holmes Hill	4.15	286		Pn	18 02 14.7	0.0
TPAW	Teton Pass	4.15	268		Pn	18 02 15.5	+0.8
TPAW				IAML		18 03 48.0	
	comp=N,27nm,1.7s						
FXWY	Fox Creek	4.19	270		Pn	18 02 14.5	-0.7
E28A	Huff	4.26	47		Pn	18 02 15.9	-0.1
O20A	White River Ci	4.27	213	Sb	Sb	18 03 21.9	+3.8
	baz=30						
O20A	White River Ci	4.27	213		Pn	18 02 16.2	-0.1
O20A				IAML		18 03 32.1	
	comp=E,41nm,1.5s						
O20A				IAML		18 03 40.8	
	comp=N,46nm,1.9s						
YHB	Horse Butte	4.38	285		Pn	18 02 17.1	-0.7
AHID	Auburn Hatcher	4.39	259		Pn	18 02 18.7	+0.7
AHID				IAML		18 03 32.2	
	comp=N,46nm,2.1s						
AHID				IAML		18 03 32.8	
	comp=E,22nm,0.4s						
YHL	Hebgen Lake	4.39	286		Pn	18 02 17.8	-0.3
RDMU	Red Mountain	4.54	227		Pn	18 02 21.3	+1.3
SUSD	Miller	4.58	80		Pn	18 02 22.7	+2.3
DGMT	Dagmar	4.75	8	Sb	Sb	18 03 36.2	+4.6
	baz=189						
DGMT	Dagmar	4.75	8		Pn	18 02 23.4	+0.7
HWUT	Hardware Ranch	5.14	247		Pn	18 02 28.7	+0.5
HWUT				IAML		18 04 07.6	
	comp=E,19nm,1.1s						
HWUT				IAML		18 04 09.0	
	comp=E,20nm,1.5s						
KSCO	Kaye Shedlock'	5.16	157	P	Pn	18 02 28.9	+0.5
	baz=338						
KSCO	Kaye Shedlock'	5.16	157		Pn	18 02 29.1	+0.7
KSCO					Pg	18 02 46.6	-2.0
TCUT	Toone Canyon	5.28	242		Pn	18 02 30.9	+0.7
EGMT	Eagleton	5.28	325	S	Sn	18 03 31.2	-0.4
	baz=142						
EGMT	Eagleton	5.28	325		Pn	18 02 28.4	-1.7
MDND	Maddock	5.67	42	S	Sn	18 03 42.3	+1.3
	baz=226						
MDND	Maddock	5.67	42	Pn	Pn	18 02 35.3	0.0
PV22	Blue Mesa, Par	5.88	208		Pn	18 02 38.5	+0.1
PV07	Paradox Valley	5.92	207		Pn	18 02 39.8	+0.8
PV21	Cone Mtn., Par	5.92	210		Pn	18 02 39.5	+0.5
P17A	Butcher Ranch,	5.95	226		Pn	18 02 39.3	-0.1
PV15	Paradox Valley	5.96	205		Pn	18 02 39.2	-0.4
SDCO	Great Sand Dun	6.03	182	Pn	Pn	18 02 40.5	0.0
PV23	Carpenter Ridg	6.03	209		Pn	18 02 39.0	-1.6
PV09	Paradox Valley	6.04	210	Pn	Pn	18 02 38.2	-2.4
PV20	West Nyswonger	6.12	209	Pn	Pn	18 02 41.1	-0.5
SRU	San Rafael Swe	6.12	222		Pn	18 02 41.0	-0.7
PV11	David Mesa, Pa	6.12	208		Pn	18 02 40.4	-1.4
PV19	Morning Glory	6.15	209		Pn	18 02 42.0	-0.1
PV03	Paradox Valley	6.15	207		Pn	18 02 41.3	-0.9
PV02	Paradox Valley	6.16	207		Pn	18 02 41.2	-1.1
PV18	Skein Mesa, Pa	6.18	208		Pn	18 02 40.7	-1.9
PV13	Radium Mtn., P	6.23	207		Pn	18 02 42.3	-1.0
ECSD	EROS Data Cent	6.25	87		Pn	18 02 44.8	+1.4
TMUT	Trail Mountain	6.33	227		Pn	18 02 44.5	-0.1
PV05	Paradox Valley	6.40	208		Pn	18 02 44.6	-0.9
Q16A	Castle Valley	6.59	225		Pn	18 02 48.5	+0.3
T25A	Trinidad	6.67	174	P	Pn	18 02 49.9	+0.7
	baz=355						
DUG	Dugway, Tooele	6.68	240	P	Pn	18 02 50.1	+0.8
	baz=55						
F33A	5 Mile Ranch,	6.69	69		Pn	18 02 49.7	+0.3
MSO	Missoula	6.84	299	P	Pn	18 02 52.4	+0.8
	baz=113						
AGMN	Agassiz Nation	7.94	52	Pn	Pn	18 03 07.8	+1.4
ELK	Elko	8.01	251	Pn	Pn	18 03 07.9	+0.3
PSUT	Pine Spring	8.34	234		Pn	18 03 12.6	+0.4
F36A	Milaca	8.59	72	Pn	Pn	18 03 14.2	-1.2
ULM	Lac du Bonnet	9.10	41	Pn	Pn	18 03 22.1	-0.2
	comp=E,1.8nm,0.3s,baz=230,slow=12,SNR=8.0						
ULM				Lg	Lg	18 05 53.0	
	comp=E,0.8nm,0.3s,baz=332,slow=14,SNR=2.0						
ULM	Lac du Bonnet	9.10	41		Pn	18 03 21.7	-0.7
FFC	Flin Flon	11.16	10		Pn	18 03 49.5	-1.0
TXAR	Lajitas Array	14.47	174	Pg	P	18 05 35.7	+53
	comp=E,0.0nm,0.3s,baz=360,slow=15,SNR=2.5						
N53A	Lisbon	18.29	91	P	P	18 05 26.4	+1.3
YKA	Yellowknife Ar	19.53	347	P	P	18 05 37.4	-1.2
	comp=E,0.1nm,0.3s,baz=154,slow=13,SNR=4.3						
ARCES	ARCESS Array B	61.37	18	P	P	18 11 26.2	-0.8
	comp=E,1.5nm,0.9s,baz=321,slow=7.0,SNR=4.7						
ZALV	Zalesovo Beam	82.27	354	P	P	18 13 32.0	-0.7
	comp=E,0.3nm,0.5s,baz=357,slow=6.3,SNR=2.2						
MKAR	Makanchi Array	89.56	355	P	P	18 14 09.0	-0.1
	comp=E,0.3nm,0.7s,baz=10,slow=4.4,SNR=4.4						

*IDC **09** 18:08:57.5±0.8,59.°58N×136.°84W,h0km,mb3.7/8, mb1 3.9/13,mb1mx3.7/47,mbtmp3.7/13,ML3.7/5,MS3.0/5, Ms1 3.0/5,ms1mx2.7/31,Error ellipse: s-maj=18.5km s-min=8.5km az=47.0*

*AEIC **09** 18:08:59.1±2.6,59.°80N±0.°03×136.°63W±0.°06,h2km±4km, Error ellipse: s-maj=4.2km s-min=4.0km az=165.0*

*PMR **09** 18:09:00±2.1,59.°75N±0.°03×136.°49W±0.°05,h5km±1km, Error ellipse: s-maj=5.4km s-min=2.9km az=225.0*

*NEIC **09** 18:09:00.8,59.°71N×136.°52W,h16km,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=0.01; Mθθ=0.11; Mϕϕ=0.09; Mrθ=-0.07; Mrϕ=0.26; Mθϕ=-0.03; Fault plane solution: M₀2.80000×10¹⁵ NP1:ϕs190.00000°, δ78.00000°,λ173.00000°. NP2:ϕs281.00000°,δ83.00000°, λ12.00000°. Principal axes: T 0.2976, Plg13.0000°, Azm146.0000°; N -0.0278, Plg76.0000°, Azm311.0000°; P -0.2697, Plg3.0000°, Azm55.0000°;*

*NEIC **09** 18:09:00.8,59.°71N×136.°52W,h20km,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=0.94; Mθθ=1.98; Mϕϕ 1.03; Mrθ=-1.51; Mrϕ=7.44; Mθϕ=-2.40; Fault plane solution: M₀8.15000×10¹⁴ NP1:ϕs172.32000°, δ76.91000°,λ163.01000°. NP2:ϕs266.28000°,δ73.47000°, λ13.66000°. Principal axes: T 8.2113, Plg21.0000°, Azm129.0000°; N -0.1313, Plg69.0000°, Azm316.0000°; P -8.0800, Plg2.0000°, Azm220.0000°;*

*NEIC **09** 18:09:00.8±2.5,59.°77N±0.°03×136.°60W±0.°05,h15km±4km, Mwr3.9/29,ML4.0(AEIC),Mwr4.2(OTT) Error ellipse: s-maj=4.6km s-min=2.9km az=222.0*

*PGC **09** 18:09:00.2,59.°78N×136.°70W,h6km,ML4.0/13,Mw4.2, 111km Wnw of Haines, Ak Southeastern Alaska*

ISC 09 18:08:59.8±0.9,59.77N±0.02°×136.68W±0.02°,h13km±6km, n168,σ1§69/193,mb3.8/8,Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	Pleasant Camp	0.35	152	P	Pg	18 09 06.8	-0.2
PLBC				S	Sg	18 09 11.4	-0.3
PLBC	Pleasant Camp	0.35	152		Pg	18 09 06.8	-0.2
PLBC					Sg	18 09 11.4	-0.3
SKAG	Skagway	0.76	114		Pg	18 09 13.5	-1.0
SKAG	Skagway	0.76	114		Sg	18 09 23.4	-0.9
DHAK	Deception Hill	1.04	230		Pb	18 09 18.8	-0.9
YUK7	Dusty Glacier	1.06	317	P	Pg	18 09 18.8	-1.4
YUK7				S	Sg	18 09 33.1	-0.9
YUK7	Dusty Glacier	1.06	317		Pg	18 09 19.1	-1.2
YUK7					Sg	18 09 33.5	-0.5
HYT	Haines Junctio	1.14	339	P	Pg	18 09 20.0	-1.7
HYT				S	Sg	18 09 34.9	-1.6
HYT	Haines Junctio	1.14	339		Pg	18 09 20.1	-1.6
HYT				Sg	Sg	18 09 36.7	+0.2
WHY	Whitehorse	1.27	44	P	Pn	18 09 22.9	-0.4
WHY				S	Sg	18 09 40.1	-0.6
WHY	Whitehorse	1.27	44		Pn	18 09 22.7	-0.7
WHY	Whitehorse	1.27	44		Sg	18 09 41.0	+0.2
PNL	Peninsula	1.38	267	P	Pb	18 09 25.0	-0.5
PNL				S	Sn	18 09 42.6	-0.3
PNL	Peninsula	1.38	267		Pb	18 09 25.2	-0.3
PNL					Sn	18 09 43.8	+0.8
YUK6	Outpost Mounta	1.44	325	P	Pn	18 09 25.4	-0.5
YUK6	Outpost Mounta	1.44	325		Pn	18 09 25.5	-0.4
YUK5	Granite Creek	1.49	337	P	Pn	18 09 26.2	-0.2
YUK5	Granite Creek	1.49	337		Pn	18 09 26.3	-0.2
BESE	Bessie Mountai	1.52	141	Pn	Pn	18 09 26.1	-0.7
BESE				Sn	Sn	18 09 46.5	+0.1
BESE	Bessie Mountai	1.52	141		Pn	18 09 26.1	-0.7
BESE	Bessie Mountai	1.52	141		Sn	18 09 47.2	+0.8
YKU2	Yakutat	1.54	262		Pg	18 09 28.9	-0.4
YKU2				Sn	Sg	18 09 51.0	+1.7
YUK4	Talbot Arm	1.85	329	Pn	Pn	18 09 33.0	+1.5
YUK4				Sg	Sg	18 10 00.1	+0.7
YUK4	Talbot Arm	1.85	329		Pn	18 09 33.2	+1.7
JIS	Juneau Island	1.91	141		Pn	18 09 31.1	-0.9
JIS	Juneau Island	1.91	141		Sb	18 09 59.7	+1.5
CHX	Chaix Hills	2.25	279		Pb	18 09 38.6	-1.8
RKAV	Rock Avalanche	2.40	285	Sn	Sn	18 10 08.4	+0.1
RKAV				Sg	Sg	18 10 15.1	-1.8
CTGM	Chitina Glacie	2.60	299	Pn	Pn	18 09 43.0	+1.2
CTGM				Sg	Sg	18 10 22.0	-1.4
CTGM	Chitina Glacie	2.60	299		Pn	18 09 42.8	+1.1
YAH	Yahtse	2.61	285		Pn	18 09 43.5	+1.6
MESA	MESA	2.68	281	Sg	Sg	18 10 22.3	-3.6
MESA	MESA	2.68	281		Pn	18 09 44.0	+1.2
GRNC	Granite Creek	2.71	293	Pn	Pn	18 09 43.9	+0.7
GRNC				Sn	Sn	18 10 15.4	-0.5
GRNC	Granite Creek	2.71	293		Pn	18 09 44.5	+1.3
YUK3	Moose Creek	2.74	319	Pn	Pn	18 09 44.6	+1.0
YUK3	Moose Creek	2.74	319		Pn	18 09 44.0	+0.3
BARN	Barnard Glacie	2.79	300		Pn	18 09 45.7	+1.4
SIT	Sitka	2.81	165		Pn	18 09 43.4	-1.0
YUK2	White River	2.87	317	Pn	Pn	18 09 46.0	+0.5
YUK2	White River	2.87	317		Pn	18 09 46.0	+0.5
YUK1	Sand Pete Hill	3.04	324	Sg	Sb	18 10 34.3	+3.4
KIAG	Kiagna River	3.05	295	Pn	Pn	18 09 48.8	+1.0
KIAG				Sg	Sg	18 10 35.6	-2.1
KIAG	Kiagna River	3.05	295		Pn	18 09 48.9	+1.0
KULT	Kultieth River	3.07	282		Pn	18 09 49.1	+1.0
BALM	Baldy	3.08	297	Pn	Pn	18 09 49.2	+0.8
BALM				Sg	Sg	18 10 36.1	-2.7
BALM	Baldy	3.08	297		Pn	18 09 49.1	+0.8
PTPK	Patty Peak	3.20	299	Pn	Pn	18 09 50.9	+1.0
PTPK				Pg	Pb	18 09 56.8	+0.3
PTPK	Patty Peak	3.20	299		Pn	18 09 51.5	+1.6
TGL	Tana Glacier	3.22	291		Pn	18 09 51.5	+1.4
BVCY	Beaver Creek	3.34	324	Pg	Pb	18 09 59.6	+0.7
CRQM	Cirque	3.37	290		Pn	18 09 53.2	+0.9
MCARA	McCarthy VSAT	3.52	300		Pn	18 09 55.5	+1.3
BERG	Berg Lake	3.57	283		Pn	18 09 56.1	+1.2
VRDI	Verde Repeater	3.65	297		Pn	18 09 56.7	+0.5
DLBC	Dease Lake	3.68	108	Pn	Pn	18 09 56.6	0.0
	13nm,0.3s,baz=284,slow=12,SNR=107						
DLBC				Lg	Lg	18 10 53.3	
	130nm,0.3s,baz=179,slow=26,SNR=14						
DLBC	Dease Lake	3.68	108	Pn	Pn	18 09 56.5	0.0
DLBC				Sg	Sb	18 10 54.0	+4.7
DLBC	Dease Lake	3.68	108		Pn	18 09 56.4	0.0
HMT	Hamilton	3.84	282		Pn	18 10 02.0	+3.4
GLB	Gilahina Butte	3.89	299		Pn	18 10 00.7	+1.3
RAGM	Ragged Mountai	4.05	282		Pn	18 10 04.7	+3.2
WRAK	Wrangell Islan	4.07	144		Pn	18 09 59.7	-2.0
GOAT	Goat Mountain	4.10	285		Pn	18 10 03.6	+1.4
BC03		4.12	326		Pn	18 10 03.6	+1.3
DAWY	Dawson	4.50	345	Pn	Pn	18 10 08.7	+1.1
DAWY	Dawson	4.50	345		Pn	18 10 09.1	+1.4
EYAK	Cordova Ski Ar	4.60	284	Pn	Pn	18 10 12.0	+3.1
MENT	Mentasta	4.64	316		Pn	18 10 11.9	+2.2
CRAG	Craig	4.72	155	Pn	Pn	18 10 09.1	-1.5
HARP	HAARP	4.89	306		Pn	18 10 25.3	+0.1
MID	Middleton Isla	4.92	270	Pn	Pn	18 10 15.8	+2.4
HIN	Hinchinbrook I	4.96	282		Pn	18 10 15.9	+2.0
FID	Port Fidalgo	4.98	286		Pn	18 10 16.9	+2.7
DOT	Dot Lake	5.24	321	Pn	Pn	18 10 18.8	+0.9
DOT	Dot Lake	5.24	321		Pn	18 10 20.6	+2.7
GLI	Glacier Island	5.29	287		Pn	18 10 20.7	+2.1
EGAK	Eagle	5.44	339		Pn	18 10 22.0	+1.4
SCM	Sheep Creek Mo	5.61	296		Pn	18 10 24.0	+1.1
LIB	Langara Island	5.87	159	Pn	Pn	18 10 26.4	-0.1
PWL	Port Wells	5.89	286		Pn	18 10 29.1	+2.3
KNK	Knik Glacier	6.03	291		Pn	18 10 30.6	+1.9
SML	Sawmill	6.06	295		Pn	18 10 31.5	+2.4
DHY	Denali Highway	6.11	307		Pn	18 10 32.8	+3.0
GHO	Glory Hole Cre	6.32	294		Pn	18 10 34.9	+2.1
PMR	Palmer	6.38	292		Pn	18 10 34.8	+2.4
SEW	Seward	6.43	279	Pn	Pn	18 10 33.6	+1.4
RUBB	Prince Rupert	6.49	144	Sn	Sn	18 11 47.4	-1.3
RUBB				Sg	Sb	18 12 19.4	+10
NBC1	NorthernBC 1	6.51	85	Sn	Sn	18 11 46.5	-2.7
WAT2	Susitna Watana	6.55	304		Pn	18 10 38.2	+2.3
RC01	Rabbit Creek A	6.60	287		Pn	18 10 37.9	+1.5
EPYK	Eagle Plains	6.63	360		Pn	18 10 38.2	+1.3
HDA	Harding Lake	6.70	318		Pn	18 10 40.0	+2.2
SLKM	Skilak Lake	6.80	282		Pn	18 10 40.2	+0.9
RND	Reindeer	6.85	307		Pn	18 10 42.8	+2.8
IL31		6.91	321		Pn	18 10 43.5	+2.9
ILAR	Eielson Array	6.91	321	Pn	Pn	18 10 41.4	+0.6
	0.2nm,0.3s,baz=145,slow=13,SNR=13						
ILAR				Lg	Lg	18 12 38.8	
	2.2nm,0.3s,baz=122,slow=27,SNR=4.8						
ILAR				LR	LR	18 13 20.0	
	comp=Z,87nm,21.9s,baz=111,slow=38						
VIB	Van Inlet	6.92	159	Pn	Pn	18 10 40.7	-0.3
VIB				Sn	Sn	18 11 56.0	-3.5
DIB	Dawson Inlet,	6.98	159	Pn	Pn	18 10 41.3	-0.4
DIB				Sn	Sn	18 11 58.1	-2.7
DIB	Dawson Inlet,	6.98	159	Pn	Pn	18 10 41.6	-0.1
MCK	McKinley	7.04	310		Pn	18 10 43.7	+1.2
PRP	Porcupine Dome	7.06	329		Pn	18 10 43.6	+0.7
BRSE	Bradley Lake S	7.10	276		Pn	18 10 45.0	+1.6
BNAB	Bonilla	7.12	149	Pn	Pn	18 10 44.6	+1.1
WRH	Wood River Hil	7.12	316		Pn	18 10 43.9	+0.3
CCB	Clear Creek Bu	7.13	318	Pn	Pn	18 10 47.3	+3.6
MOBC	Moresby Island	7.13	156	Pn	Pn	18 10 43.8	-0.1
MOBC				Sn	Sn	18 12 02.2	-2.5
MOBC	Moresby Island	7.13	156	Pn	Pn	18 10 43.7	-0.1
NBC2	NorthernBC 2	7.17	84	Pn	Pn	18 10 45.2	+0.9
NBC2				Sn	Sn	18 12 01.1	-4.4
BRLK	Bradley Lake	7.17	276	Pn	Pn	18 10 46.2	+1.8
COLA	College	7.29	319	Pn	Pn	18 10 48.3	+2.4
HG1B	Mitchell Dam	7.30	158	Pn	Pn	18 10 46.6	+0.6
CNPM	China Poot	7.38	274		Pn	18 10 48.3	+1.1
TRF	Thorofare Moun	7.46	305		Pn	18 10 50.1	+1.7
BWN	Browne	7.46	312	Pn	Pn	18 10 49.5	+1.3
MDM	Murphy Dome	7.47	319	Pn	Pn	18 10 50.3	+1.9
NEA	Nenana	7.54	315	Pn	Pn	18 10 50.2	+1.0
NBC5	NorthernBC 5	7.64	101	Pn	Pn	18 10 50.9	0.0
NBC5				Sn	Sn	18 12 12.4	-4.9
STLK	Strandline Lak	7.65	290		Pn	18 10 52.6	+1.7
BNB	Barry Inlet	7.71	157	Pn	Pn	18 10 51.5	-0.3
KTH	Kantishna Hill	7.76	305		Pn	18 10 54.8	+2.4
HG3B	Hotspring	7.78	156	Pn	Pn	18 10 52.5	-0.1
HG3B				Sn	Sn	18 12 17.2	-3.2
FYU	Fort Yukon	7.83	334	Pn	Pn	18 10 55.9	+2.5
NBC6	NorthernBC 6	7.97	92	Pn	Pn	18 10 55.5	+0.2
NBC6				Sg	Sb	18 13 05.2	+13
BPAW	Bear Paw Mtn.	8.01	309		Pn	18 10 57.5	+1.6
DFR	Drift River	8.02	283		Pn	18 10 57.6	+1.6
RSO	Redoubt South	8.06	282	Pn	Pn	18 10 59.9	+3.2
PPLA	Purkeypile	8.08	299		Pn	18 10 58.0	+1.1
NBC3	NorthernBC 3	8.10	84	Sn	Sn	18 12 24.4	-4.0
MLY	Manley	8.38	315		Pn	18 11 02.5	+1.6
BM03	Burnt Mountain	8.44	339		Pn	18 11 02.7	+0.9
CHUM	Lake Minchumin	8.46	306		Pn	18 11 03.6	+1.7
KDAK	Kodiak Island	8.50	263	Pn	Pn	18 11 03.7	+1.3
	2.4nm,0.3s,baz=57,slow=9.6,SNR=26						
KDAK				Sn	Sn	18 12 36.0	-2.0
	1.7nm,0.3s,baz=15,slow=24,SNR=8.4						
KDAK				LR	LR	18 14 43.4	
	comp=Z,101nm,19.9s,baz=312,slow=41						
BMBC	Bull Mountain	8.60	109		Pn	18 11 03.8	-0.1
INK	Inuvik	8.68	8	Pn	Pn	18 11 06.0	+1.1
	0.3nm,0.3s,baz=196,slow=15,SNR=9.0						
INK				Sn	Sn	18 12 40.2	-2.3
	1.1nm,0.3s,baz=165,slow=18,SNR=3.1						
INK				Lg	Lg	18 13 28.9	
	1.3nm,0.3s,baz=105,slow=22,SNR=5.6						
INK	Inuvik	8.68	8	Pn	Pn	18 11 05.5	+0.6
INK	Inuvik	8.68	8		Pn	18 11 06.2	+1.2
BBB	Bella Bella	8.98	144	Pn	Pn	18 11 07.5	-1.7
	0.5nm,0.3s,baz=320,slow=8.5,SNR=6.5						
BBB				Sn	Sn	18 12 46.9	-3.2
	0.3nm,0.3s,baz=276,slow=14,SNR=1.4						
BBB				Lg	Lg	18 13 35.4	
	0.3nm,0.3s,baz=59,slow=23,SNR=2.0						
BBB	Bella Bella	8.98	144	Pn	Pn	18 11 10.1	+1.0
BBB	Bella Bella	8.98	144	Pn	Pn	18 11 08.4	-0.7
OHAK	Old Harbor	9.06	261	Pn	Pn	18 11 10.6	+0.5
TTA	Tatalina	9.80	297		Pn	18 11 20.6	+0.3
IM03		9.95	316		Pn	18 11 24.1	+1.8
TOLK	Toolik Lake Re	10.50	333		Pn	18 11 32.4	+2.5
DHRN	Dharma Camp	10.56	39	Pn	Pn	18 11 30.4	-0.3
YKA	Yellowknife Ar	11.00	66	Pn	Pn	18 11 36.5	-0.1
	0.6nm,0.3s,baz=264,slow=13,SNR=16						
YKW3	Yellowknife Ar	11.00	66	Pn	Pn	18 11 35.7	-0.9
C36M	Paulatuk	11.01	24		Pn	18 11 36.4	-0.3
CHGN	Chignik	12.01	263	Pn	Pn	18 11 51.6	+1.1
KUKN	Kugluktuk,NWT	12.43	40	Pn	Pn	18 11 56.4	+0.2
LLLB	Lilloget	12.45	131	Pn	Pn	18 11 54.5	-2.1
MNB	Mounoet Dainar	12.71	119	Pn	Pn	18 12 02.9	+2.6
CNBA	Chernabura Isl	13.30	258	Pn	Pn	18 12 09.9	+1.8
NEW	Newport	16.20	127	LR	LR	18 18 05.7	
	comp=Z,20nm,20.5s,baz=322,slow=34						
FFC	Flin Flon	19.29	90	P	P	18 13 22.2	-1.8
WVOR	Wild Horse Val	20.61	139	P	P	18 13 37.2	-1.4
RES	Resolute Bay	21.29	29	P	P	18 13 46.8	+1.2
	4.6nm,0.9s,baz=245,slow=9.8,SNR=4.8						
RES	Resolute Bay	21.29	29	Pn	P	18 13 48.0	+2.4
PDAR	Pinedale Array	23.77	124	P	P	18 14 12.0	0.0
	0.7nm,0.8s,baz=322,slow=7.1,SNR=6.5						
KVN	Kaiserville	23.84	142	P	P	18 14 12.7	-0.1
NVAR	Mina Array Bea	24.35	143	P	P	18 14 17.2	-0.3
	2.1nm,0.8s,baz=325,slow=7.8,SNR=11						
ULM	Lac du Bonnet	24.88	94	LR	LR	18 24 20.3	
	comp=Z,37nm,19.9s,baz=65,slow=37						
EUNU	Eureka	25.09	18	P	P	18 14 26.9	+3.2
TXAR	Lajitas Array	37.73	129	LR	LR	18 33 06.8	
	comp=Z,59nm,20.3s,baz=0.0,slow=38						
FINES	FINESS Array B	58.38	10	P	P	18 18 53.7	-0.6
	1.5nm,0.8s,baz=295,slow=31,SNR=2.9						
ZALV	Zalesovo Beam	61.86	334	P	P	18 19 18.0	-0.1
	0.3nm,0.4s,baz=25,slow=4.8,SNR=2.1						
AKASG	Malin Array Be	69.30	10	P	P	18 20 07.5	+1.3
	0.3nm,0.4s,baz=355,slow=5.8,SNR=2.0						
ESDC	Sonseca Array	73.53	36	P	P	18 20 33.1	+1.0
	0.4nm,0.6s,baz=331,slow=5.0,SNR=2.3						
CMAR	Chiang Mai Arr	89.98	308	P	P	18 21 59.7	+0.7
	0.3nm,0.9s,baz=8.7,slow=6.6,SNR=1.3						

*NEIC **09** 18:13:06.0±1.9, 18.°7S±0.°1×177.°8W±0.°1,h590km±9km, mb4.6/30,Error ellipse: s-maj=20.6km s-min=16.2km az=144.0*

*IDC **09** 18:13:05.6±5.2, 18.°85S×177.°73W,h580km±67km, mb3.3/11,mb1 3.5/12,mb1mx3.2/33,mbtmp4.2/12,Error ellipse: s-maj=31.4km s-min=20.2km az=3.0*

ISC 09 18:13:06.7±0.6, 18.°8S±0.°1×177.°71W±0.°09,h600km,n56, σ0§99/57,mb4.4/23,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.16	284	P	P	18 14 35.2	+1.8
NIUE	Niue	7.37	94	P	P	18 14 58.3	-1.9
AFI	Afiamalu	7.48	50	P	P	18 14 60.0	-1.3
KNTN	Kanton	16.95	21	P	P	18 16 31.8	-1.1
OUZ	Omahuta	18.10	203	P	P	18 16 44.8	+1.7
OUZ				IAmb	IAmb	18 16 56.6	
	comp=Z,25nm,1.3s						
URZ	Urewera	19.93	192	P	P	18 16 58.0	-1.6
	comp=Z,0.7nm,0.3s,baz=268,slow=1.9,SNR=5.8						
URZ	Urewera	19.93	192	P	P	18 16 58.0	-1.6
URZ	Urewera	19.93	192	IAmb	IAmb	18 17 10.3	
	comp=Z,17nm,1.3s						
BKZ	Black Stump Fm	20.93	193	P	P	18 17 07.5	-1.2
BKZ				IAmb	IAmb	18 17 11.3	
	comp=Z,35nm,1.7s						
MSWZ	Moikau Station	23.35	193	P	P	18 17 30.2	0.0
OXZ	Oxford	25.95	197	P	P	18 17 52.9	-0.2
OXZ				IAmb	IAmb	18 18 12.1	
	comp=Z,15nm,0.9s	

mb5.0/99,Error ellipse: s-maj=15.4km s-min=10.1km az=274.0

*IDC **09** 18:14:03.2±0.5,23°45S×175°52W,h0km,mb4.7/28, mb1 4.8/30,mb1mx4.8/37,mbtmp4.7/30,ML4.3/2,MS4.2/24, Ms1 4.2/24,ms1mx4.1/38,Error ellipse: s-maj=16.6km s-min=13.3km az=149.0*

*MOS **09** 18:14:06.0±1.6,23°63S×175°44W,h30km,mb5.1/19, Error ellipse: s-maj=10.0km s-min=9.2km az=72.0*

*BGR **09** 18:14:07.0±0.0,23°83S×173°19W,h33km,Ms4.6*

ISC 09 18:14:03.1±0.5,23°69S±0°05×175°21W±0°06,h11km±3km, h11km:pP-P,n420,σ1§84/416,mb5.0/96,MS4.3/33, 46C-13D,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.05**	**203**	Pn		**Pn**	**18 15 33.9**	**+1.4**
	39nm,0.3s,baz=88,slow=22,SNR=1.7							
RAO				Sn		**Sn**	**18 16 41.3**	**-0.5**
	34nm,0.3s,baz=105,slow=22,SNR=1.6							
NIUE	**Niue**	**6.73**	**48**			Pn	18 15 36.9	-4.9
MSVF	**Nonsavu**	**8.65**	**312**		*eP*	**Pn**	**18 16 11.0**	**+2.6**
MSVF	**Nonsavu**	**8.65**	**312**			**Pn**	**18 16 11.3**	**+3.0**
AFI	**Afiamalu**	**10.25**	**19**	Pn		Pn	18 16 23.6	-6.7
RAR	**Rarotonga**	**14.48**	**83**	Pn		**Pn**	**18 17 24.4**	**-3.7**
	12nm,0.3s,baz=243,slow=8.1,SNR=25							
RAR				Sn		Sn	18 19 50.8	-18
	2.0nm,0.3s,baz=93,slow=11,SNR=2.5							
RAR				LR		LR	18 23 26.2	
	comp=Z,941nm,19.1s,baz=248,slow=38							
RAR	**Rarotonga**	**14.48**	**83**			**Pn**	**18 17 23.8**	**-4.3**
MXZ	**Matakaoa Point**	**14.91**	**200**	Pn		**Pn**	**18 17 32.7**	**-1.1**
MXZ				IAmb		IAmb	18 18 29.0	
	comp=Z,90nm,1.4s							
OUZ	**Omahuta**	**15.06**	**218**	Pn		**Pn**	**18 17 34.4**	**-1.4**
OUZ				IAmb		IAmb	18 17 45.7	
	comp=Z,79nm,1.6s							
URZ	**Urewera**	**15.94**	**203**	Pn		**Pn**	**18 17 45.9**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=21,slow=12,SNR=2.2							
URZ				Sn		Sn	18 20 26.5	-17
	comp=Z,0.3nm,0.3s,baz=33,slow=6.7,SNR=3.1							
URZ	**Urewera**	**15.94**	**203**			**Pn**	**18 17 44.7**	**-2.6**
BKZ	**Black Stump Fm**	**16.96**	**203**	Pn		**Pn**	**18 17 58.3**	**-2.1**
DZM	**Mont Dzumac**	**16.99**	**272**	*eP*		**P**	**18 18 03.3**	**+0.6**
	comp=Z,90nm,0.9s							
DZM				*e*LR		LR	18 22 03.0	
	comp=Z,1μm,23.7s							
DZM	**Mont Dzumac**	**16.99**	**272**	Pn		**Pn**	**18 17 58.0**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=266,slow=23,SNR=1.5							
DZM				LR		LR	18 21 56.1	
	comp=Z,274nm,20.5s,baz=100,slow=28							
HIZ	**Hauiti**	**17.04**	**208**	Pn		**Pn**	**18 17 59.3**	**-2.0**
HIZ				IAmb		IAmb	18 18 37.6	
	comp=Z,131nm,1.6s							
BFZ	**Birch Farm**	**18.41**	**201**			**P**	**18 18 13.8**	**-4.4**
MSWZ	**Moikau Station**	**19.40**	**202**			**P**	**18 18 25.7**	**-3.4**
SNZO	**South Karori**	**19.50**	**203**			**P**	**18 18 28.7**	**-1.4**
SNZO				IAmb		IAmb	18 18 50.6	
	comp=Z,78nm,1.2s							
BHW	**Baring Head**	**19.52**	**203**	P		**P**	**18 18 28.9**	**-1.6**
PLWZ	**Palliser**	**19.53**	**202**	P		**P**	**18 18 28.5**	**-2.1**
TUWZ	**Tuamarina**	**19.89**	**205**	P		**P**	**18 18 31.5**	**-2.9**
NNZ	**Nelson**	**19.93**	**206**	P		**P**	**18 18 32.3**	**-2.5**
ORZ	**Quartz Range**	**19.95**	**208**	P		**P**	**18 18 32.3**	**-2.9**
BSWZ	**Blackbirch Sta**	**20.16**	**204**	P		**P**	**18 18 34.3**	**-3.0**
THZ	**Tophouse**	**20.58**	**206**	P		**P**	**18 18 37.3**	**-4.6**
THZ				IAmb		IAmb	18 18 51.9	
	comp=Z,126nm,2.0s							
KHZ	**Kahutara**	**20.89**	**204**	P		**P**	**18 18 42.8**	**-2.4**
KNTN	**Kanton**	**21.06**	**10**	P		**P**	**18 18 43.1**	**-4.2**
KNTN				IAmb		IAmb	18 19 41.6	
	comp=Z,65nm,0.9s							
LTZ	**Lake Taylor**	**21.69**	**206**	P		**P**	**18 18 51.2**	**-2.7**
OXZ	**Oxford**	**22.24**	**205**	P		**P**	**18 18 56.5**	**-3.4**
OXZ				IAmb		IAmb	18 19 04.4	
	comp=Z,76nm,1.7s							
RPZ	**Rata Peaks**	**22.95**	**206**	P		**P**	**18 19 09.3**	**+1.9**
	comp=Z,22nm,1.0s,baz=94,slow=20,SNR=2.5							
RPZ				LR		LR	18 28 10.2	
	comp=Z,1μm,19.1s,baz=24,slow=37							
RPZ	**Rata Peaks**	**22.95**	**206**	P		**P**	**18 19 05.2**	**-2.2**
RPZ				IAmb		IAmb	18 19 13.7	
	comp=Z,35nm,1.1s							
FOZ	**Fox Glacier**	**23.33**	**208**	P		**P**	**18 19 08.0**	**-3.2**
FOZ				IAmb		IAmb	18 19 18.9	
	comp=Z,68nm,1.2s							
TBI	**Tubuai**	**23.60**	**94**	*e*LQ		LQ	18 23 51.3	
	comp=Z,384nm,27.8s							
TBI				*e*LR		LR	18 24 55.4	
	comp=Z,797nm,26.8s,baz=270							
TBI	**Tubuai**	**23.60**	**94**	*e*T		T	18 43 23.6	
	comp=Z,7.9nm,0.4s							
PAE	**Paea**	**24.70**	**81**	*e*P		**P**	**18 19 19.5**	**-4.8**
	comp=Z,6.2nm,1.0s							
PAE	**Paea**	**24.70**	**81**	*e*T		T	18 44 42.1	
	comp=Z,3.6nm,0.3s							
WKZ	**Wanaka**	**24.71**	**208**	P		**P**	**18 19 22.3**	**-2.0**
WKZ				IAmb		IAmb	18 19 45.6	
	comp=Z,84nm,1.3s							
PPT2	**Papeete2**	**24.72**	**81**	*e*P		**P**	**18 19 20.0**	**-4.7**
	comp=Z,60nm,1.4s							
PPT2				*e*LR		LR	18 25 22.2	
	comp=Z,820nm,24.0s,baz=250							
PPT	**Papeete**	**24.73**	**81**	LR		LR	18 28 19.4	
	comp=Z,673nm,18.7s,baz=278,slow=34							
TIAR	**Tiarei**	**24.94**	**81**	*e*P		**P**	**18 19 22.0**	**-4.6**
	comp=Z,24nm,1.3s							
MLZ	**Mavora Lakes**	**25.52**	**208**	P		**P**	**18 19 28.8**	**-2.9**
MLZ				IAmb		IAmb	18 20 07.9	
	comp=Z,74nm,1.4s							
MEH	**Mehetia**	**26.00**	**82**	*e*T		T	18 46 20.5	
	comp=Z,8.1nm,0.3s							
DCZ	**Deep Cove**	**26.02**	**209**	P		**P**	**18 19 33.0**	**-3.0**
HNR	**Honiara**	**27.65**	**297**	LR		LR	18 29 10.5	
	comp=Z,348nm,20.5s,baz=141,slow=33							
ARMA	**Armidale**	**30.21**	**250**	P		**P**	**18 20 12.4**	**-1.5**
ARMA				IAmb		IAmb	18 20 33.5	
	comp=Z,21nm,1.2s							
EIDS	**Eidsvold**	**30.67**	**260**	P		**P**	**18 20 16.7**	**-1.1**
EIDS				IAmb		IAmb	18 20 41.8	
	comp=Z,41nm,1.5s							
CAN	**Canberra**	**33.07**	**241**	P		**P**	**18 20 39.3**	**+0.4**
CAN				pmax		pmax		
	comp=Z,36nm,1.4s							
CAN	**Canberra**	**33.07**	**241**	P		**P**	**18 20 39.3**	**+0.4**
CAN				IAmb		IAmb	18 20 40.4	
	comp=Z,36nm,1.4s							
CTA	**Charters Tower**	**35.87**	**268**	P		**P**	**18 21 03.4**	**+0.2**
	comp=Z,17nm,0.6s,baz=91,slow=10,SNR=43							
CTAO	**Charters Tower**	**35.87**	**268**	P		**P**	**18 21 03.5**	**+0.2**
CTAO				pmax		pmax		
	comp=Z,33nm,1.1s							
CTAO	**Charters Tower**	**35.87**	**268**	P		**P**	**18 21 03.5**	**+0.2**
CTAO				IAmb		IAmb	18 21 26.8	
	comp=Z,33nm,1.1s							
TOO	**Toolangi**	**36.27**	**238**	P		**P**	**18 21 07.3**	**+0.7**
TOO				pmax		pmax		
	comp=Z,31nm,1.4s							
TOO	**Toolangi**	**36.27**	**238**	P		**P**	**18 21 07.3**	**+0.7**
TOO				IAmb		IAmb	18 22 27.1	
	comp=Z,31nm,1.4s							
TAOE	**Nuku Hiva Isla**	**36.61**	**72**	*e*LR		LR	18 30 49.6	
	comp=Z,296nm,25.8s							
KRVT	**Keravat (AS076**	**37.01**	**296**	P		**P**	**18 21 11.4**	**-1.7**
	comp=Z,7.4nm,0.5s,baz=135,slow=2.9,SNR=1.8							
KRVT				LR		LR	18 35 01.1	
	comp=Z,328nm,20.4s,baz=120,slow=34							
PMG	**Port Moresby**	**38.63**	**285**	P		**P**	**18 21 26.0**	**-0.8**
	comp=Z,17nm,0.8s,baz=254,slow=8.9,SNR=2.8							
PMG				LR		LR	18 35 56.1	
	comp=Z,508nm,18.8s,baz=116,slow=34							
PMG	**Port Moresby**	**38.63**	**285**	*ce*P		**P**	**18 21 25.9**	**-0.8**
PMG				pmax		pmax		
	comp=Z,229nm,2.5s							
PMG	**Port Moresby**	**38.63**	**285**	P		**P**	**18 21 25.3**	**-1.4**
PMG				IAmb		IAmb	18 21 39.3	
	comp=Z,47nm,0.9s							
STKA	**Stephens Creek**	**38.88**	**248**	P		**P**	**18 21 28.5**	**-0.1**
	comp=Z,2.5nm,0.5s,baz=96,slow=12,SNR=8.5							
STKA				LR		LR	18 36 28.2	
	comp=Z,491nm,18.0s,baz=57,slow=35							
COEN	**Coen**	**40.44**	**276**	P		**P**	**18 21 41.7**	**-0.1**
BBOO	**Buckleboo**	**43.56**	**247**	P		**P**	**18 22 06.2**	**-1.0**
BBOO				IAmb		IAmb	18 22 58.0	
	comp=Z,46nm,1.6s							
AS31	**Alice Springs**	**46.39**	**259**	P		**P**	**18 22 28.9**	**-1.1**
ASAR	**Alice Springs**	**46.39**	**259**	P		**P**	**18 22 29.0**	**-0.9**
	comp=Z,5.7nm,0.8s,baz=89,slow=8.5,SNR=30							
ASAR				LR		LR	18 41 56.4	
	comp=Z,755nm,18.1s,baz=105,slow=36							
ASAR	**Alice Springs**	**46.39**	**259**	P		**P**	**18 22 29.0**	**-0.9**
WR0	**Warramunga Arr**	**46.61**	**264**	P		**P**	**18 22 30.1**	**-1.5**
WB2	**Warramunga Arr**	**46.79**	**264**	P		**P**	**18 22 31.2**	**-1.8**
WB2				IAmb		IAmb	18 22 44.6	
	comp=Z,16nm,0.9s							
WRAB	**Tennant Creek**	**46.79**	**264**	*e*P		**P**	**18 22 31.6**	**-1.4**
WRAB				pmax		pmax		
	comp=Z,10.0nm,0.8s							
WRAB	**Tennant Creek**	**46.79**	**264**	P		**P**	**18 22 30.9**	**-2.1**
WRAB				IAmb		IAmb	18 22 44.5	
	comp=Z,24nm,1.2s							
WB0	**Warramunga Arr**	**46.79**	**265**	P		**P**	**18 22 31.2**	**-1.8**
WB0				IAmb		IAmb	18 22 33.3	
	comp=Z,14nm,0.7s							
WRA	**Warramunga Arr**	**46.80**	**264**	P		**P**	**18 22 31.0**	**-2.1**
	comp=Z,9.2nm,0.6s,baz=104,slow=8.1,SNR=31							
WRA				LR		LR	18 42 04.8	
	comp=Z,583nm,18.2s,baz=105,slow=36							
JAY	**Jayapura**	**47.53**	**290**	P		**P**	**18 22 37.5**	**-1.3**
	comp=Z,8.8nm,0.8s,baz=76,slow=3.6,SNR=6.2							
JAY				LR		LR	18 40 52.0	
	comp=Z,188nm,19.7s,baz=80,slow=34							
KIP	**Kipapa**	**47.86**	**22**	*e*P		**P**	**18 22 43.4**	**+2.3**
KIP				pmax		pmax		
	comp=Z,169nm,2.5s							
FORT	**Forrest**	**50.49**	**249**	P		**P**	**18 23 00.0**	**-1.3**
FORT				IAmb		IAmb	18 23 24.2	
	comp=Z,25nm,0.8s							
MTN	**Manton Dam**	**51.83**	**272**	P		**P**	**18 23 09.8**	**-1.8**
MTN				IAmb		IAmb	18 23 10.9	
	comp=Z,10.0nm,0.6s							
KNRA	**Kununurra**	**53.08**	**268**	P		**P**	**18 23 20.2**	**-0.7**
KNRA				IAmb		IAmb	18 23 34.2	
	comp=Z,20nm,0.7s							
VNDA	**Vanda**	**55.00**	**186**	P		P	18 23 39.0	+5.0
	comp=Z,4.2nm,0.9s,baz=9.8,slow=6.1,SNR=9.4							
VNDA				LR		LR	18 47 00.7	
	comp=Z,126nm,18.1s,baz=349,slow=36							
VNDA	**Vanda**	**55.00**	**186**	P		**P**	**18 23 35.9**	**+1.9**
VNDA				pmax		pmax		
	comp=Z,8.0nm,1.1s							
VNDA	**Vanda**	**55.00**	**186**	P		**P**	**18 23 35.9**	**+1.9**
FITZ	**Fitzroy Crossi**	**55.22**	**264**	LR		LR	18 47 05.4	
	comp=Z,369nm,18.0s,baz=108,slow=36							
FITZ	**Fitzroy Crossi**	**55.22**	**264**	P		**P**	**18 23 35.9**	**-0.5**
FITZ				IAmb		IAmb	18 24 00.2	
	comp=Z,10nm,1.0s							
SIJI	**Sorong**	**56.57**	**286**	P		**P**	**18 23 44.9**	**-1.3**
	comp=Z,26nm,0.7s,baz=70,slow=5.5,SNR=24							
RPN	**Rapa Nui**	**58.99**	**108**	LR		LR	18 48 33.8	
	comp=Z,94nm,18.2s,baz=260,slow=35							
SOEI	**Soe**	**59.21**	**273**	P		**P**	**18 24 04.4**	**-0.5**
NWAO	**Narrogin (SRO)**	**59.31**	**245**	LR		LR	18 46 51.5	
	comp=Z,222nm,21.6s,baz=104,slow=33							
NWAO	**Narrogin (SRO)**	**59.31**	**245**	P		**P**	**18 24 05.4**	**+0.2**
NWAO				pmax		pmax		
	comp=Z,152nm,2.0s							
NWAO	**Narrogin (SRO)**	**59.31**	**245**	P		**P**	**18 24 04.3**	**-0.8**
NWAO	**Narrogin (SRO)**	**59.31**	**245**	P		**P**	**18 24 05.4**	**+0.2**
NWAO				IAmb		IAmb	18 24 34.7	
	comp=Z,152nm,1.9s							
PSA00	**Pilbara Seismi**	**59.51**	**258**	P		**P**	**18 24 04.8**	**-1.9**
BATI	**Baumata**	**59.60**	**272**	P		**P**	**18 24 07.9**	**+0.5**
	comp=Z,30nm,0.6s,baz=165,slow=2.8,SNR=16							
LBMI	**Labuha**	**60.02**	**284**	P		**P**	**18 24 08.7**	**-1.6**
	comp=Z,19nm,0.9s							
LBMI				pP		**sP**	**18 24 11.6**	**-0.1**
	comp=Z,19nm,0.9s							
SANI	**Sanana**	**60.74**	**282**	P		**P**	**18 24 15.7**	**+0.4**
	comp=Z,9.2nm,0.5s							
MORW	**Morawa**	**61.06**	**249**	P		**P**	**18 24 17.3**	**+0.1**
MMRI	**Maumere**	**61.48**	**273**	P		**P**	**18 24 19.9**	**-0.5**
EDFI	**Ende, Flores**	**61.94**	**273**	P		**P**	**18 24 22.6**	**-0.9**
	comp=Z,13nm,0.8s							
GIRL	**Giralia**	**64.23**	**255**	P		**P**	**18 24 38.1**	**-0.4**
QSPA	**South Pole Qui**	**66.40**	**180**	P		**P**	**18 24 55.9**	**+3.9**
MPSI	**Mapaga**	**67.26**	**281**	P		**P**	**18 24 59.1**	**+1.0**
	comp=Z,16nm,1.0s							
UGM	**Wanagamma**	**72.49**	**269**	P		**P**	**18 25 30.0**	**-0.4**
KKM	**Kota Kinabalu**	**73.07**	**285**	P		**P**	**18 25 33.6**	**-0.3**
KKM				IAmb		IAmb	18 26 16.4	
	comp=Z,24nm,1.2s							
MJAR	**Matsushiro Arr**	**74.30**	**323**	P		**P**	**18 25 39.5**	**-1.0**
	comp=Z,2.6nm,0.8s,baz=137,slow=6.1,SNR=6.1							
MJAR				LR		LR	18 57 24.0	
	comp=Z,67nm,18.7s,baz=35,slow=35							
CISI	**Cisompet, Garu**	**75.11**	**268**	P		**P**	**18 25 44.7**	**-1.1**
ADK	**Adak**	**75.25**	**359**	P		**P**	**18 25 44.5**	**-1.1**
ADK	**Adak**	**75.25**	**359**	P		**P**	**18 25 44.5**	**-1.1**
LEM	**Lembang**	**75.57**	**269**	P		**P**	**18 25 47.6**	**-1.0**
	comp=Z,16nm,0.6s,baz=143,slow=10,SNR=4.8							
LEM	**Lembang**	**75.57**	**269**	P		**P**	**18 25 48.1**	**-0.5**
LEM				pmax		pmax		
	comp=Z,19nm,0.9s							
KSM	**Kuching**	**76.41**	**278**	P		**P**	**18 25 52.4**	**-0.8**
KSM				IAmb		IAmb	18 25 56.1	
	comp=Z,8.9nm,0.8s							
NACB	**Ninganchiao**	**77.59**	**303**	P		**P**	**18 25 57.6**	**-2.0**
NACB				IAmb		IAmb	18 26 20.6	
	comp=Z,19nm,0.8s							
TPUB	**Ta-pu**	**77.86**	**302**	P		**P**	**18 25 59.4**	**-1.7**
MAW	**Mawson**	**79.44**	**199**	P		**P**	**18 26 12.5**	**+3.4**
	comp=Z,9.6nm,1.0s,baz=108,slow=4.0,SNR=8.7							
MAW				LR		LR	19 00 45.6	
	comp=Z,334nm,19.1s,baz=68,slow=35							
MAW	**Mawson**	**79.44**	**199**	P		**P**	**18 26 10.4**	**+1.3**
MAW				pmax		pmax		
	comp=Z,7.0nm,1.3s							
MAW	**Mawson**	**79.44**	**199**	P		**P**	**18 26 10.4**	**+1.3**
MDSI	**Maura Dua**	**79.62**	**270**	P		**P**	**18 26 11.9**	**+0.8**
	comp=Z,10.0nm,0.9s							
PET	**Petropavlovsk**	**79.70**	**344**	P		**P**	**18 26 07.8**	**-2.7**
PET				pmax		pmax		
	comp=Z,48nm,1.4s							
PET	**Petropavlovsk**	**79.70**	**344**	P		**P**	**18 26 07.8**	**-2.7**
SDPT	**Sand Point**	**79.72**	**8**	P		**P**	**18 26 08.4**	**-2.1**
ISA	**Isabella, Lake**	**79.77**	**44**	P		**P**	**18 26 14.2**	**+2.8**
	baz=231							
YSS	**Yuzh-Sakhalins**	**79.90**	**332**	*e*P		**P**	**18 26 13.8**	**+2.1**
YSS				*e*			18 26 24.3	
YSS				*e*S		**S**	**18 36 15.1**	**+0.1**
YSS				pmax		pmax		
	comp=Z,40nm,0.9s							
YSS	**Yuzh-Sakhalins**	**79.90**	**332**	P		**P**	**18 26 10.9**	**-0.8**
PETK	**Petropavlovsk-**	**80.02**	**344**	P		**P**	**18 26 13.2**	**+0.9**
	comp=Z,7.8nm,0.8s,baz=122,slow=7.2,SNR=10							
PETK				LR		LR	18 55 32.5	
	comp=Z,175nm,21.3s,baz=219,slow=31							
CMB	**Columbia Colle**	**80.10**	**41**	P		**P**	**18 26 13.6**	**+0.5**
CMB				pmax		pmax		
	comp=Z,5.0nm,0.9s							
CMB	**Columbia Colle**	**80.10**	**41**	P		**P**	**18 26 13.6**	**+0.5**
O02D	**Mt. Diablo Mer**	**80.11**	**38**	P		**P**	**18 26 16.4**	**+3.2**
	baz=228							
ORV	**Oroville**	**80.44**	**39**	P		**P**	**18 26 12.6**	**-2.3**
ORV				pmax		pmax		
	comp=Z,5.0nm,1.1s							
ORV	**Oroville**	**80.44**	**39**	P		**P**	**18 26 12.6**	**-2.3**
CWC	**Cottonwood Cre**	**80.50**	**43**	P		**P**	**18 26 18.3**	**+2.8**
	baz=231							
WDC	**Whiskeytown Da**	**80.53**	**38**	P		**P**	**18 26 12.9**	**-2.4**
WDC				pmax		pmax		
	comp=Z,9.0nm,1.2s							
WDC	**Whiskeytown Da**	**80.53**	**38**	P		**P**	**18 26 12.9**	**-2.4**
GLA	**Glamis**	**80.58**	**48**	P		**P**	**18 26 17.9**	**+2.1**
GLA				pmax		pmax		
	comp=Z,5.0nm,1.0s							
GLA	**Glamis**	**80.58**	**48**	P		**P**	**18 26 17.9**	**+2.1**
GSC	**Goldstone, Bar**	**80.61**	**45**	P		**P**	**18 26 17.4**	**+1.4**
GSC				pmax		pmax		
	comp=Z,7.0nm,1.3s							
GSC	**Goldstone, Bar**	**80.61**	**45**	P		**P**	**18 26 18.8**	**+2.8**
	baz=232							
GSC	**Goldstone, Bar**	**80.61**	**45**	P		**P**	**18 26 17.4**	**+1.4**
MPMC	**Manual Prospec**	**80.64**	**44**	P		**P**	**18 26 18.3**	**+2.0**
	baz=232							
OMMB	**Old Mammoth Mi**	**80.67**	**42**	P		**P**	**18 26 15.3**	**-1.2**
O03E	**Paynes Creek**	**80.75**	**38**	P		**P**	**18 26 19.0**	**+2.3**
	baz=228							
WAKR	**Walker**	**80.97**	**41**	P		**P**	**18 26 17.5**	**-0.5**
KSRS	**Korea Array**	**80.98**	**318**	P		**P**	**18 26 18.4**	**+0.7**
	comp=Z,3.9nm,0.9s,baz=137,slow=5.8,SNR=18							
KSRS				LR		LR	18 58 46.2	
	comp=Z,100nm,18.8s,baz=132,slow=33							
IRM	**Iron Mountain**	**81.02**	**47**	P		**P**	**18 26 20.6**	**+2.5**
	baz=234							
YBH	**Yreka Blue Hor**	**81.21**	**37**	P		**P**	**18 26 21.1**	**+2.1**
	comp=Z,3.3nm,0.8s,baz=145,slow=4.7,SNR=6.6							
YBH	**Yreka Blue Hor**	**81.21**	**37**	P		**P**	**18 26 19.4**	**+0.4**
YBH				pmax		pmax		
	comp=Z,42nm,2.0s							
YBH	**Yreka Blue Hor**	**81.21**	**37**	P		**P**	**18 26 19.4**	**+0.4**
YBH				IAmb		IAmb	18 26 46.6	
	comp=Z,42nm,2.0s							
NVAR	**Mina Array Bea**	**81.61**	**42**	P		**P**	**18 26 23.5**	**+2.1**
	comp=Z,3.6nm,0.8s,baz=224,slow=8.5,SNR=21							
NVAR				LR		LR	18 57 23.6	
	comp=Z,158nm,18.7s,baz=239,slow=32							
PAHR	**Pah Rah Range**	**81.77**	**40**	P		**P**	**18 26 20.1**	**-2.0**
PAHR				IAmb		IAmb	18 26 25.3	
	comp=Z,20nm,1.8s							
TPNV	**Topopah Spring**	**81.97**	**44**	P		**P**	**18 26 25.6**	**+2.3**
	baz=232							
MSHR	**Mys Shultsa**	**82.41**	**323**	*e*P		**P**	**18 26 27.3**	**+2.1**
MYKOM	**Kota Tinggi**	**82.42**	**275**	P		**P**	**18 26 25.8**	**-0.2**
MYKOM				IAmb		IAmb	18 26 40.6	
	comp=Z,8.0nm,0.9s							
MOD	**Modoc Plateau**	**82.67**	**38**	P		**P**	**18 26 25.1**	**-1.7**
TYV	**Tymovskoe**	**83.00**	**335**	*e*P		**P**	**18 26 29.5**	**+1.4**
TYV				pmax		pmax		
	comp=Z,13nm,1.0s							
USRK	**Ussuriysk Ar.**	**83.05**	**325**	P		**P**	**18 26 30.1**	**+1.7**
	comp=Z,20nm,0.9s,baz=131,slow=3.5,SNR=22							
USA0B	**Ussuriysk Arra**	**83.05**	**325**	P		**P**	**18 26 27.8**	**-0.7**
USA0B				pmax		pmax		
	comp=Z,30nm,1.1s							
USA0B	**Ussuriysk Arra**	**83.05**	**325**	P		**P**	**18 26 27.8**	**-0.7**
R11A	**Troy Canyon, C**	**83.24**	**43**	P		**P**	**18 26 31.8**	**+1.9**
	baz=233							
R11A	**Troy Canyon, C**	**83.24**	**43**	P		**P**	**18 26 29.9**	**0.0**
PINE	**Pine Mountain**	**83.56**	**36**	P		**P**	**18 26 28.8**	**-2.6**
PINE				IAmb		IAmb	18 26 35.5	
	comp=Z,16nm,1.1s							
NJ2	**Nanjing**	**83.89**	**309**	*e*P		**P**	**18 26 33.4**	**+0.3**
NJ2				pmax		pmax		
	comp=Z,14nm,0.6s							
LCMT	**Little Creek M**	**83.95**	**45**	P		**P**	**18 26 30.7**	**-2.8**
SYO	**Syowa Base**	**84.18**	**192**	*e*P		**P**	**18 26 33.8**	**-0.2**
SYO	**Syowa Base**	**84.18**	**192**	*i*pP		pP	18 26 36.1	+1.0
WUAZ	**Wupatki**	**84.33**	**47**	P		**P**	**18 26 34.3**	**-1.2**
WUAZ				IAmb		IAmb	18 26 39.5	
	comp=Z,26nm,1.8s							
SZCU	**Shurtz Canyon**	**84.39**	**45**	P		**P**	**18 26 34.7**	**-1.1**
PSUT	**Pine Spring**	**84.44**	**44**	P		**P**	**18 26 34.7**	**-1.4**
I07A	**Izee**	**84.53**	**37**	P		**P**	**18 26 38.1**	**+1.8**
MDJ	**Mudanjiang**	**84.60**	**324**	P		**P**	**18 26 38.0**	**+1.6**
J08A	**Circle Bar Ran**	**84.64**	**38**	P		**P**	**18 26 39.1**	**+2.3**
J08A				IAmb		IAmb	18 26 40.5	
	comp=Z,9.9nm,1.0s							
SNAA	**Sanae**	**84.75**	**178**	P		**P**	**18 26 40.3**	**+3.3**
SNAA	**Sanae**	**84.75**	**178**	*ce*P		**P**	**18 26 39.9**	**+2.9**
SNAA	**Sanae**	**84.75**	**178**	P		**P**	**18 26 37.6**	**+0.6**
SNAA				IAmb		IAmb	18 26 41.6	
	comp=Z,18nm,1.1s							
VNA3	**Neumayer Olymp**	**84.79**	**175**	P		**P**	**18 26 39.8**	**+2.7**
ELK	**Elko**	**84.90**	**41**	P		**P**	**18 26 39.5**	**+1.1**
ELK				pmax		pmax		
	comp=Z,5.0nm,1.2s							
ELK	**Elko**	**84.90**	**41**	P		**P**	**18 26 39.5**	**+1.1**
LC01	**Cunco**	**85.13**	**130**	P		**P**	**18 26 42.3**	**+2.8**
LC01				IAmb		IAmb	18 26 45.7	
	comp=Z,20nm,1.2s							
PLCA	**Paso Flores**	**85.22**	**132**	P		**P**	**18 26 42.8**	**+2.8**
	comp=Z,10nm,1.3s,baz=275,slow=5.5,SNR=4.3							
PLCA	**Paso Flores**	**85.22**	**132**	P		**P**	**18 26 40.3**	**+0.3**
PLCA				pmax		pmax		
	comp=Z,26nm,1.6s							
PLCA	**Paso Flores**	**85.22**	**132**	P		**P**	**18 26 40.2**	**+0.3**
PLCA				IAmb		IAmb	18

baz=206
COLA College 90.78 11 *ce*P **P** 18 27 06.8 +1.1
COLA pmax pmax
comp=Z,6.0nm,1.0s
ILAR Eielson Array 90.86 12 P **P** 18 27 06.7 +0.5
comp=Z,1.5nm,0.9s,baz=216,slow=6.1,SNR=9.0
ABTX Abilene, Hawle 91.23 55 P **P** 18 27 10.9 +2.2
baz=243
ABTX Abilene, Hawle 91.23 55 P **P** 18 27 05.0 -3.6
ZEA Zeya 91.67 330 *e*P **P** 18 27 11.8 +1.7
DAWY Dawson 91.83 15 P **P** 18 27 09.3 -1.4
DAWY IAmb IAmb 18 27 27.8
comp=Z,4.3nm,0.9s
EGAK Eagle 92.03 14 P **P** 18 27 12.0 +0.5
EGAK IAmb IAmb 18 27 28.4
comp=Z,3.8nm,0.8s
XAN Xi'an 92.11 306 P **P** 18 27 14.2 +1.5
XAN SKS **SKSac** 18 37 40.7 -5.3
XAN S **S** 18 38 19.7 +4.5
XAN pmax pmax
comp=Z,14nm,1.1s
XAN pmax pmax
comp=Z,110nm,6.5s
XAN LR LR
comp=Z,160nm,22.8s
XAN LR LR
comp=Z,160nm,22.8s
XAN Xi'an 92.11 306 P **P** 18 27 12.9 +0.2
XAN pmax pmax
comp=Z,14nm,1.0s
XAN Xi'an 92.11 306 P **P** 18 27 12.8 +0.2
XAN IAmb IAmb 18 27 15.5
comp=Z,14nm,1.0s
BILL Bilibino 92.47 353 *e*P **P** 18 27 11.6 -1.9
BILL *e* 18 27 24.0
BILL pmax pmax
comp=Z,5.0nm,0.9s
WMOK Wichita Mounta 92.83 53 P **P** 18 27 16.9 +0.9
WMOK pmax pmax
comp=Z,17nm,0.7s
KMI Kunming 93.08 296 P **P** 18 27 17.4 -0.2
KMI pP pwP 18 27 27.8 -1.3
KMI pmax pmax
comp=Z,14nm,1.4s
KMI pmax pmax
comp=Z,140nm,6.7s
KMI LR LR
comp=Z,90nm,17.9s
HHC Hu-ho-hao-te 93.42 313 P **P** 18 27 18.9 +0.2
HHC SKS **SKSac** 18 37 56.3 +3.2
HHC S **S** 18 38 29.5 +2.8
HHC pmax pmax
comp=Z,4.0nm,1.0s
HHC pmax pmax
comp=Z,45nm,6.4s
HHC LR LR
comp=Z,160nm,18.9s
HHC LR LR
comp=Z,110nm,21.6s
HHC LR LR
comp=Z,75nm,20.6s
X34A Smith Ranch, M 93.47 54 P **P** 18 27 15.5 -3.5
CM31 Chiang Mai Arr 93.60 288 P **P** 18 27 21.8 +1.9
CMAR Chiang Mai Arr 93.60 288 P **P** 18 27 21.9 +2.0
comp=Z,12nm,0.9s,baz=133,slow=3.3,SNR=66
CMAR LR LR 19 10 35.4
comp=Z,48nm,19.1s,baz=137,slow=36
RSSD Black Hills 93.67 43 P **P** 18 27 19.7 -0.2
RSSD pmax pmax
comp=Z,8.0nm,1.1s
RSSD Black Hills 93.67 43 P **P** 18 27 21.6 +1.7
baz=240
RSSD Black Hills 93.67 43 P **P** 18 27 19.7 -0.2
RSSD IAmb IAmb 18 27 23.0
comp=Z,7.7nm,1.1s
CHTO Chiang Mai 93.74 289 P **P** 18 27 22.1 +1.6
CHTO Chiang Mai 93.74 289 P **P** 18 27 22.1 +1.6
CD2 Chengdu 94.67 302 P **P** 18 27 23.3 -1.3
CD2 pmax pmax
comp=Z,20nm,0.6s
TEIG Tepich 95.23 70 LR LR 19 02 52.7
comp=Z,58nm,19.2s,baz=220,slow=31
DGMT Dagmar 95.72 39 P **P** 18 27 31.8 +2.9
baz=241
YAK Yakutsk 96.03 337⇑ *e*P **P** 18 27 30.4 +0.5
YAK pmax pmax
comp=Z,5.0nm,1.2s
LZH Lanzhou 96.74 306 *e*P **P** 18 27 33.0 -1.1
LZH pP sP 18 27 35.2 -0.3
LZH pmax pmax
comp=Z,21nm,1.4s
LZH pmax pmax
comp=Z,90nm,9.5s
LZH LR LR
comp=Z,180nm,17.2s
LZH LR LR
comp=Z,180nm,17.0s
LZH LR LR
comp=Z,300nm,19.6s
YKA Yellowknife Ar 98.33 24 P Pdif 18 27 42.0 +1.6
comp=Z,0.5nm,0.9s,baz=227,slow=4.5,SNR=5.8
YKA PP **PP** 18 31 40.3 -0.3
comp=Z,0.1nm,0.3s,baz=235,slow=8.1,SNR=5.6
YKA PKKPbc **PKKPbc** 18 44 14.4 +0.7
comp=Z,0.1nm,0.4s,baz=63,slow=2.4,SNR=4.0
ULN Ulaanbaatar 99.45 318⇑ *e*P **Pdif** 18 27 46.9 +0.9
ULN pmax pmax
comp=Z,1.0nm,0.9s
SONM Songino Array 99.84 318 P **Pdif** 18 27 49.5 +1.8
comp=Z,0.5nm,0.6s,baz=130,slow=4.6,SNR=2.8
GTA Gaotai 100.98 308 *e*P **Pdif** 18 27 54.8 +1.9
GTA pP pwP 18 28 00.3 -4.2
GTA pmax pmax
comp=Z,2.0nm,1.0s
GTA pmax pmax
comp=Z,52nm,7.6s
GTA LR LR
comp=Z,85nm,18.7s
GTA LR LR
comp=Z,210nm,19.4s
GTA LR LR
comp=Z,110nm,16.5s
WMQ Urumqi 110.95 310 *e*PKP **PKiKP** 18 32 35.0 -1.5
ZALV Zalesovo Beam 114.59 320 PKP **PKiKP** 18 32 43.3 +0.3
comp=Z,1.1nm,0.7s,baz=226,slow=6.0,SNR=5.6
MKAR Makanchi Array 115.25 312 PKP **PKiKP** 18 32 45.0 +0.4
comp=Z,0.7nm,0.8s,baz=80,slow=1.5,SNR=6.7
MAKZ Makanchi 115.47 312 *i* PKIKP **PKPdf** 18 32 42.2 -2.8
MAKZ Makanchi 115.47 312 **PKPdf** 18 32 42.2 -2.8
KURK Kurchatov 118.08 316 ⇓ *i* PKIKP **PKiKP** 18 32 50.9 +1.0
KURK pmax pmax
comp=Z,3.0nm,1.0s
KURK Kurchatov 118.08 316 **PKiKP** 18 32 50.4 +0.5
KURBB Kurchatov Arra 118.13 316 PKP **PKPdf** 18 32 49.9 0.0
comp=Z,1.9nm,0.9s,baz=88,slow=1.8,SNR=21
KSH Kashi 118.81 303 PKP **PKiKP** 18 32 54.6 +2.7
AAK Ala-Archa 120.28 307 PKP **PKiKP** 18 32 55.5 +0.9
comp=Z,1.0nm,0.6s,baz=257,slow=8.9,SNR=1.9
AAK Ala-Archa 120.28 307⇑ *i* PKIKP **PKiKP** 18 32 56.1 +1.4
AAK pmax pmax
comp=Z,4.0nm,2.5s
BVAR Borovoye Array 123.17 319 PKP **PKiKP** 18 33 00.2 +0.4
comp=Z,3.0nm,0.8s,baz=90,slow=3.0,SNR=23
BRVK Borovoye 123.23 319 *d* PKIKP **PKiKP** 18 33 01.1 +1.2
BRVK pmax pmax
comp=Z,4.0nm,1.0s
BRVK Borovoye 123.23 319 **PKPdf** 18 32 59.2 -0.5
KK31 Karatay Array 123.24 307 PKIKP **PKPdf** 18 32 59.7 -0.4
KK31 Karatay Array 123.24 307 **PKPdf** 18 32 59.7 -0.4
KKAR Karatay Array 123.24 307 PKIKP **PKPdf** 18 33 00.0 -0.1
KKAR Karatay Array 123.24 307 **PKPdf** 18 32 60.0 -0.1
SUMG Summit 125.60 15 *i* PKIKP **PKiKP** 18 33 06.1 +1.5
SUMG pmax pmax
comp=Z,15nm,1.1s
SUMG Summit 125.60 15 *i* P **PKiKP** 18 33 06.1 +1.5
comp=Z,15nm,1.1s
DAG Danmarks Havn 125.62 6 *i* PKIKP **PKiKP** 18 33 04.4 +0.4
DAG pmax pmax
comp=Z,3.0nm,1.1s
DAG Danmarks Havn 125.62 6 *i* P **PKiKP** 18 33 04.4 +0.4
comp=Z,3.1nm,1.1s
SVE Sverdlovsk 128.07 325 *e*PKIKP **PKiKP** 18 33 11.4 +2.0
SVE pmax pmax
comp=Z,8.0nm,0.8s
ARU Arti 129.28 325 PKP **PKiKP** 18 33 13.5 +1.7
comp=Z,0.5nm,0.4s,baz=104,slow=3.1,SNR=6.6
ARU Arti 129.28 325⇑ *i* PKIKP **PKiKP** 18 33 13.4 +1.5
ARU pmax pmax
comp=Z,14nm,2.5s
ARU Arti 129.28 325 **PKiKP** 18 33 11.7 -0.2
AKTO Aktyubinsk 131.16 317 PKP **PKiKP** 18 33 16.4 +0.6
comp=Z,1.2nm,0.6s,baz=286,slow=2.0,SNR=4.7
ARCES ARCESS Array B 132.50 350 PKP **PKiKP** 18 33 18.3 +0.3
comp=Z,2.0nm,0.7s,baz=80,slow=1.4,SNR=7.8
GEYT Allbeck 132.85 300 PKP **PKiKP** 18 33 20.3 +1.0
comp=Z,0.7nm,0.4s,baz=284,slow=6.0,SNR=4.4
PRGR Permogore 133.02 335 *e*PKIKP **PKPdf** 18 33 16.8 -1.2
PRGR pmax pmax
comp=Z,5.0nm,1.0s
KLMR Klimovskoe 135.82 336 *e*PKIKP **PKPdf** 18 33 21.1 -2.2
KLMR pmax pmax
comp=Z,14nm,1.7s
KLMR Klimovskoe 135.82 336 *e*P **PKPdf** 18 33 21.2 -2.1
KLMR AMP 18 33 31.1
comp=Z,14nm,1.7s
FINES FINESS Array B 139.53 344 PKhKP PKPpre 18 33 22.4
comp=Z,0.7nm,0.7s,baz=22,slow=6.2,SNR=4.1
FINES PKP **PKiKP** 18 33 33.0 +0.6
comp=Z,3.6nm,0.9s,baz=77,slow=4.1,SNR=7.4
OBN Obninsk 140.78 331 *i* PKIKP **PKPdf** 18 33 33.8 +1.2
OBN pmax pmax
comp=Z,29nm,2.5s
NC303 NORSAR Array S 142.21 355 **PKPdf** 18 33 31.2 -3.9
NB2 NORSAR Subarra 142.41 355 PKP **PKPdf** 18 33 32.3 -3.1
comp=Z,4.1nm,1.1s,baz=13,slow=4.8
NOA NORSAR Array B 142.41 355 PKhKP PKPpre 18 33 31.1
comp=Z,1.5nm,0.9s,baz=16,slow=4.6,SNR=7.5
KIV Kislovodsk 143.01 312 *i* PKIKP **PKiKP** 18 33 41.2 +0.9
KIV pmax pmax
comp=Z,16nm,1.1s
KIV MLR MLR
comp=Z,253nm,24.0s
MBAR Mbarara 145.10 230 *c i* PKIKP **PKiKP** 18 33 44.4 -1.2
MBAR pmax pmax
comp=Z,24nm,1.3s
AKASG Malin Array Be 147.04 331 PKPbc **PKPbc** 18 33 46.3 +0.6
comp=Z,5.4nm,0.5s,baz=38,slow=3.8,SNR=33
AKBB Malin Array Si 147.04 331 PKIKP **PKPdf** 18 33 44.2 +0.5
AKBB Malin Array Si 147.04 331 **PKPdf** 18 33 44.2 +0.5
MUD Monsted U'grnd 147.11 356 *i* PKP2 **PKPab** 18 33 46.8 -0.5
MUD pmax pmax
comp=Z,52nm,1.2s
MUD Monsted U'grnd 147.11 356 *i* P **PKPab** 18 33 46.8 -0.5
comp=Z,52nm,1.2s
SIM Simferopol' 148.09 319 *i* PKP2 **PKiKP** 18 33 50.9 +0.3
SIM pmax pmax
comp=Z,18nm,0.9s
SORM Soroca 149.26 328 ⇑P **PKiKP** 18 33 52.6 -0.3
SORM Soroca 149.26 328 ⇑PKP2 **PKiKP** 18 33 52.6 -0.3
BSEG Bad Segeberg 149.51 354 *e*PKPbc **PKiKP** 18 33 54.3 +1.1
baz=9.2,slow=2.2
BSEG *e*L L 19 36 26.0
comp=Z,60nm,19.2s
LVV L'vov 149.88 335 *e*PKP2 **PKiKP** 18 33 54.5 +0.4
ASF Jabal al Asfar 150.49 294 PKPbc **PKiKP** 18 33 57.4 +1.3
comp=Z,4.1nm,0.8s,baz=349,slow=2.7,SNR=5.5
KWP Kalwaria Pacla 150.54 336 PKIKP **PKiKP** 18 33 56.5 +1.0
KWP Kalwaria Pacla 150.54 336 **PKiKP** 18 33 56.5 +1.0
VASR Vaslui 150.57 327 ⇓P **PKiKP** 18 33 57.6 +1.9
RETH Rethem/Aller, 150.78 354 *e*PKPbc **PKiKP** 18 33 57.6 +1.8
baz=9.2,slow=2.2
BR131 Keskin Array S 150.88 310 PKIKP **PKiKP** 18 33 57.0 +0.3
BR131 Keskin Array S 150.88 310 **PKiKP** 18 33 57.0 +0.3
BRTR Keskin Array B 150.88 310 PKPbc **PKiKP** 18 33 57.5 +0.8
comp=Z,6.3nm,0.9s,baz=119,slow=3.2,SNR=18
NRDL Niedersach Rie 150.95 353 *e*PKPbc **PKiKP** 18 33 57.6 +1.5
baz=9.2,slow=2.2
TLCR 151.00 324 ⇑P **PKPbc** 18 33 56.2 +0.2
TLCR 151.00 324 ⇑PKIKP **PKPbc** 18 33 56.2 +0.2
OJC Ojcow 151.04 340 *e*PKP **PKiKP** 18 33 57.7 +1.2
OJC LMZ LR 19 40 15.8
comp=Z,0.1nm,21.9s
OJC Ojcow 151.04 340 PKIKP **PKiKP** 18 33 56.9 +0.3
OJC Ojcow 151.04 340 **PKiKP** 18 33 56.9 +0.3
BUR08 Bucovina Ar. S 151.08 331 **PKiKP** 18 33 58.1 +1.3
BURAR Bucovina Array 151.09 331 ⇑P **PKiKP** 18 33 58.7 +1.8
BURAR Bucovina Array 151.09 331 ⇑PKIKP **PKiKP** 18 33 58.7 +1.8
GHRR 151.16 326 ⇓P **PKiKP** 18 33 58.9 +2.0
TESR Tescani 151.23 328 ⇑P **PKiKP** 18 33 57.6 +0.6
ASSE Asse, Remlinge 151.25 352 *e*PKPbc **PKiKP** 18 33 59.3 +2.5
baz=9.2,slow=2.2
KOLS Kolonicke sedl 151.27 336 *e*PKIKP **PKiKP** 18 33 59.5 +2.4
KOLS *e* 18 34 06.8
KOLS Kolonicke sedl 151.27 336 *e*PKP **PKiKP** 18 33 59.5 +2.4
KOLS *e* 18 34 06.8
CFR Carcaliu 151.37 324 ⇑P **PKiKP** 18 33 58.6 +1.3
CFR Carcaliu 151.37 324 ⇑PKIKP **PKiKP** 18 33 58.6 +1.3
ANTO Ankara 151.40 311 ⇑P **PKiKP** 18 33 59.4 +1.7
ANTO Ankara 151.40 311 PKIKP **PKPbc** 18 33 56.8 -0.4
ANTO Ankara 151.40 311 **PKPbc** 18 33 56.8 -0.4
TOPG Topolog 151.43 323 ⇑P **PKiKP** 18 33 59.4 +1.9
KSP Ksiaz 151.46 345 *e*PKP **PKiKP** 18 33 59.0 +1.6
KSP LMZ LR 19 41 50.7
comp=Z,0.1nm,21.1s
UZH Uzhgorod 151.51 335 *e*PKIKP **PKiKP** 18 33 58.6 +1.1
UZH *i* 18 34 03.4
UZH *e* 18 34 09.0
CLZ Clausthal 151.56 353 *e*PKPbc **PKiKP** 18 33 59.5 +1.9
baz=9.2,slow=2.2
NIE Niedzica 151.57 338 *e*PKP **PKiKP** 18 34 00.1 +2.3
NIE LMZ LR 19 41 57.9
comp=Z,0.0nm,22.4s
VRI Vrincioaia 151.64 327 ⇑P **PKiKP** 18 33 59.5 +1.6
VRI Vrincioaia 151.64 327 ⇑PKIKP **PKiKP** 18 33 59.5 +1.6
PLOR Plostina 151.69 327 ⇑P **PKiKP** 18 33 59.0 +0.9
PLOR Plostina 151.69 327 ⇑PKIKP **PKiKP** 18 33 59.0 +0.9
CLL Collm 151.70 349 *i* PKPbc **PKiKP** 18 34 00.2 +2.4
comp=Z,30nm,1.0s
CLL Collm 151.70 349 *e*PKPbc **PKiKP** 18 34 00.5 +2.7
baz=9.2,slow=2.2
CLL *e*L L 19 43 28.5
comp=Z,94nm,20.7s
CLL Collm 151.70 349 PKIKP **PKPbc** 18 33 56.2 -1.2
CLL Collm 151.70 349 **PKPbc** 18 33 56.2 -1.2
OSTC Ostas 151.74 345 *e*PKP **PKiKP** 18 33 59.5 +1.5
OSTC *ex* x 18 34 15.0
CHVC Chvalec 151.75 345 *e*PKP **PKiKP** 18 33 59.6 +1.6
HARR Harsova 151.80 324 ⇓P **PKiKP** 18 33 59.6 +1.4
HARR Harsova 151.80 324 ⇓PKIKP **PKiKP** 18 33 59.6 +1.4
TRPA Tarpa 151.82 334 ⇑P **PKiKP** 18 33 58.8 +0.7
UPC Upice 151.84 345 *e*PKIKP **PKiKP** 18 33 59.2 +1.0
UPC *e* 18 34 06.6
UPC Upice 151.84 345 *e*PKP **PKiKP** 18 33 59.2 +1.0
UPC *ex* x 18 34 06.6
ARCAR ARCALIA 151.88 331 ⇑P **PKiKP** 18 34 00.4 +2.0
OKC Ostrava-Krasne 151.88 342 *e*PKIKP **PKiKP** 18 33 59.3 +1.0
OKC Ostrava-Krasne 151.88 342 *e*PKP **PKiKP** 18 33 59.3 +1.0
DPC Dobruska-Polom 151.91 344 *e*PKIKP **PKiKP** 18 34 00.3 +1.9
DPC *e* 18 34 08.8
DPC Dobruska-Polom 151.91 344 *e*PKP **PKiKP** 18 34 00.3 +1.9
DPC *ex* x 18 34 08.8
DPC *ex* x 18 34 23.0
OZUR 151.94 328 ⇓P **PKiKP** 18 34 00.8 +2.2
BRG Berggiesshubel 151.95 348 *e*PKP **PKPdf** 18 33 54.4 +2.9
comp=Z,3.5nm,1.1s
BRG Berggiesshubel 151.95 348 *i* PKP **PKiKP** 18 34 00.1 +1.6
comp=Z,21nm,1.0s
BRG Berggiesshubel 151.95 348 *e*PKPbc **PKiKP** 18 33 60.0 +1.6
baz=9.2,slow=2.2
BRG Berggiesshubel 151.95 348 *e*PKIKP **PKPdf** 18 33 54.4 +2.9
BRG *i* 18 34 00.1
BRG pmax pmax
comp=Z,4.0nm,1.1s
BRG pmax pmax
comp=Z,21nm,1.0s
NEUB Neuenburg 152.00 351 *e*PKPbc **PKiKP** 18 34 00.4 +2.0
baz=9.2,slow=2.2
FBE Freiberg 152.01 348 *e*PKPbc **PKiKP** 18 34 00.6 +2.2
baz=9.2,slow=2.2
KRLC Kraliky 152.04 343 *e*PKIKP **PKiKP** 18 33 59.9 +1.2
KRLC *e* 18 34 09.8
KRLC Kraliky 152.04 343 *e*PKP **PKiKP** 18 33 59.9 +1.2
KRLC *ep*PKP **sPKPab** 18 34 09.8 +0.6
LANS Liptovska Anna 152.08 339 *e*PKIKP **PKiKP** 18 34 01.8 +3.0
LANS Liptovska Anna 152.08 339 *e*PKP **PKiKP** 18 34 01.8 +3.0
MORC Moravsky Berou 152.11 342 *e*PKP **PKiKP** 18 34 00.6 +1.8
MORC Moravsky Berou 152.11 342 ⇑P **PKiKP** 18 34 00.4 +1.6
MORC Moravsky Berou 152.11 342 PKIKP **PKiKP** 18 33 59.0 +0.2
MORC Moravsky Berou 152.11 342 **PKiKP** 18 33 59.0 +0.2
PVCC Panska Ves 152.15 347 *e*PKIKP **PKiKP** 18 34 00.6 +1.8
PVCC *e* 18 34 15.6
PVCC Panska Ves 152.15 347 *e*PKP **PKiKP** 18 34 00.6 +1.8
PVCC *ex* x 18 34 15.6
DOPR Dopca 152.23 328 ⇑P **PKiKP** 18 34 00.7 +1.6
MLR Muntele Rosu 152.29 327 ⇓P **PKiKP** 18 34 00.5 +1.0
MLR Muntele Rosu 152.29 327 ⇓PKIKP **PKiKP** 18 34 00.5 +1.0
EIL Elat 152.45 289 PKPbc **PKiKP** 18 34 01.6 +1.5
comp=Z,6.7nm,0.9s,baz=164,slow=7.3,SNR=3.9
MOX Moxa 152.57 351 *e*PKPbc **PKiKP** 18 34 00.8 +1.1
baz=9.2,slow=2.2
MOX *e*L L 19 51 30.8
comp=Z,115nm,18.6s
PLN Plauen 152.64 350 *e*PKPbc **PKiKP** 18 34 01.7 +1.8
baz=9.2,slow=2.2
TANN Tannenbergstha 152.66 349 *e*PKPbc **PKiKP** 18 34 01.5 +1.5
baz=9.2,slow=2.2
PRU Pruhonice 152.66 346 *e*PKIKP **PKiKP** 18 34 01.3 +1.4
PRU *e* 18 34 12.3
PRU Pruhonice 152.66 346 *e*PKP **PKiKP** 18 34 01.3 +1.4
PRU *ep*PKP **sPKPab** 18 34 12.3 +0.6
GUNZ Gunzen 152.73 349 *e*PKPbc **PKiKP** 18 34 02.1 +2.1
baz=9.2,slow=2.2
VOIR 152.78 328 ⇑P **PKiKP** 18 34 02.5 +2.1
VOIR 152.78 328 ⇑PKIKP **PKiKP** 18 34 02.5 +2.1
VRAC Vranov 152.79 343 *e*PKP **PKiKP** 18 34 01.8 +1.6
WERN Wernitzgruen 152.79 349 *e*PKPbc **PKiKP** 18 34 02.3 +2.1
baz=9.2,slow=2.2
NKC Novy Kostel 152.84 349 *e*PKIKP **PKiKP** 18 34 02.8 +2.5
NKC *e* 18 34 12.0
NKC Novy Kostel 152.84 349 *e*PKP **PKiKP** 18 34 02.8 +2.5
NKC *ep*PKP **pPKPab** 18 34 12.0 -0.1
VYHS Vyhne 152.86 339 *e*PKIKP **PKiKP** 18 34 01.9 +1.5
VYHS *e* 18 34 13.5
VYHS Vyhne 152.86 339 *e*PKP **PKiKP** 18 34 01.9 +1.5
VYHS *e* 18 34 13.4
JAVC Velka Javorina 152.90 341 *e*PKP **PKiKP** 18 34 03.5 +3.0
PSZ Piszkesteto 152.99 337 ⇑P **PKiKP** 18 34 03.5 +2.7
PSZ Piszkesteto 152.99 337 PKIKP **PKPbc** 18 34 00.4 -0.1
PSZ Piszkesteto 152.99 337 **PKPbc** 18 34 00.4 -0.1
KRUC Moravsky 153.07 343 *e*PKP **PKiKP** 18 34 02.4 +1.6
TNS Taunus Mts 153.36 355 *e*L L 19 50 04.2
comp=Z,104nm,18.7s
MODS Modra-Piesok 153.45 341 *e*PKIKP **PKiKP** 18 34 03.2 +1.6
MODS Modra-Piesok 153.45 341 *e*PKP **PKiKP** 18 34 03.2 +1.6
GRF Grafenberg Arr 153.56 351 *e*L L 19 50 52.7
comp=Z,128nm,18.0s
KHC Kasperske Hory 153.68 347 *ce*PKIKP **PKPdf** 18 33 56.2 +2.0
KHC Kasperske Hory 153.68 347 *e*PKP **PKPdf** 18 33 56.4 +2.2
KHC *ex* x 18 34 04.0
KHC *ep*PKP **pPKPab** 18 34 15.5 -0.2
KHC Kasperske Hory 153.68 347 **PKPdf** 18 33 55.0 +0.8
KHC PKPbc **sPKPbc** 18 34 03.5 0.0
KHC **PKPab** 18 34 15.0 +0.5
SIRR Siria 153.68 333 ⇑P **PKiKP** 18 34 04.2 +2.1
WET Wettzell 153.80 348 *e*L L 19 51 49.7
comp=Z,113nm,18.6s
GZR Gura Zlata 153.88 330 ⇑P **PKiKP** 18 34 03.9 +1.3
GZR Gura Zlata 153.88 330 ⇑PKIKP **PKiKP** 18 34 03.9 +1.3
GEC2 GERESS Array S 153.92 347 *e*L L 19 42 48.2
comp=Z,132nm,21.0s
GEC2 GERESS Array S 153.92 347 **PKiKP** 18 34 04.0 +1.3
GERES GERESS Array B 153.92 347 PKP **PKPdf** 18 33 56.0 +1.4
comp=Z,0.8nm,0.9s,baz=336,slow=2.9,SNR=6.8
GERES PKPbc **PKiKP** 18 34 04.0 +1.3
comp=Z,2.3nm,0.9s,baz=48,slow=2.0,SNR=13
GERES PKPab **PKPab** 18 34 15.3 -0.4
comp=Z,0.7nm,0.6s,baz=338,slow=1.4,SNR=5.8
ELND Elena 154.07 323 ⇓P **PKPab** 18 34 17.8 +1.3
BZS Buzias 154.22 332 ⇑P **PKiKP** 18 34 04.9 +1.7
BZS Buzias 154.22 332 ⇑PKIKP **PKiKP** 18 34 04.9 +1.7
CONA Conrad Observa 154.25 343 *ep*PKPdf pPKPdf 18 33 56.3 +0.1
comp=Z,5.2nm,1.0s
HERR Herculane 154.44 330 ⇑P **PKiKP** 18 34 05.3 +1.6
MDVR Moldovita 154.83 331 ⇑P **PKPdf** 18 33 56.3 +0.3
FUR Furstenfeldbru 155.03 350 *e*L L 19 45 59.6
comp=Z,91nm,21.8s
RJOB Jochberg 155.16 347 *e*L L 19 45 22.9
comp=Z,99nm,21.7s
BFO Black Forest 155.25 354 *e*L L 19 40 38.8
comp=Z,77nm,20.9s
SOKA Soboth 155.62 343 *e*PKPdf **PKPdf** 18 33 56.9 -0.1
comp=Z,1.7nm,0.6s
KBA Koelnbreinsper 155.67 346 *ep*PKPdf **PKPdf** 18 33 57.7 +0.5
comp=Z,3.2nm,0.9s
SQTA Sankt Quirin 155.96 349 *e*PKPdf **PKPdf** 18 33 57.1 -0.4
comp=Z,1.6nm,0.8s
ABTA Abfaltersbach 156.17 347 *e*PKPdf **PKPdf** 18 33 57.4 -0.4
comp=Z,9.4nm,1.3s
FETA Feichten 156.23 350 *ep*PKPdf pPKPdf 18 33 59.0 0.0
comp=Z,3.5nm,1.2s
LIT Litokhoron 157.85 322 PKIKP **PKPdf** 18 34 00.0 0.0
LIT Litokhoron 157.85 322 PKPdf **PKPdf** 18 34 00.0 0.0
LIT **PKPab** 18 34 33.0 +0.2
MURB Monte Urbino 159.46 344 PKPdf **PKPdf** 18 33 58.1 -3.8
NRCA Norcia 159.70 342 **PKPab** 18 34 41.8 +1.1
ESDC Sonseca Array 162.42 23 PKP **PKPdf** 18 34 07.1 +1.9
comp=Z,1.5nm,1.0s,baz=333,slow=2.6,SNR=7.1
KEST Kesra 167.36 343 PKPab **PKPab** 18 35 15.7 +1.2
comp=Z,2.9nm,0.9s,baz=330,slow=12,SNR=4.3
TORD Torodi Ar. Bea 169.11 164 PKP **PKPdf** 18 34 12.8 +1.6
comp=Z,2.6nm,1.0s,baz=336,slow=3.3,SNR=7.7
TORD PKPab **sPKPab** 18 35 26.0 +1.9
comp=Z,3.6nm,1.1s,baz=185,slow=2.9,SNR=5.8

*IDC **09** 18:19:17.0±6.1,23°.50S×175°.54W,h0km,mb4.0/3, mb1 4.1/3,mb1mx3.7/35,mbtmp4.0/3, Error ellipse: s-maj=264.1km s-min=61.6km az=152.0*
*NEIC **09** 18:20:05.4±1.9,21°.1S±0°.3×177°.9W±0°.1,h335km±7km, mb4.4/8, Error ellipse: s-maj=42.0km s-min=13.8km az=188.0*
ISC 09 18:20:05.1±1.5,20°.8S±0°.3×177°.6W±0°.2,h350km,n18, σ1§67/16,mb4.0/6,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.15**	**306**		**Pn**	**18 21 25.8**	**-0.7**
NIUE	**Niue**	**7.38**	**78**	Pn	Pn	18 21 56.7	+4.7
CTA	**Charters Tower**	**33.87**	**265**	P	**P**	**18 26 17.8**	**+1.5**
	4.6nm,0.8s,baz=86,slow=10,SNR=1.7						
CTA	**Charters Tower**	**33.87**	**265**	P	**P**	**18 26 17.8**	**+1.5**
ASAR	**Alice Springs**	**44.85**	**257**	P	**P**	**18 27 44.4**	**-1.7**
	0.6nm,0.6s,baz=98,slow=8.0,SNR=5.4						
ASAR	**Alice Springs**	**44.85**	**257**	P	**P**	**18 27 44.4**	**-1.7**
WB0	**Warramunga Arr**	**44.95**	**262**	P	**P**	**18 27 46.6**	**-0.3**
WB2	**Warramunga Arr**	**44.96**	**262**	P	**P**	**18 27 44.7**	**-2.2**
WRAB	**Tennant Creek**	**44.96**	**262**	P	**P**	**18 27 46.4**	**-0.6**
WRAB				IAmb	IAmb	18 28 55.4	
	comp=Z,22nm,1.8s						
WRA	**Warramunga Arr**	**44.97**	**262**	P	**P**	**18 27 44.8**	**-2.3**
	comp=Z,1.0nm,0.7s,baz=104,slow=8.2,SNR=16						
WRA	**Warramunga Arr**	**44.97**	**262**	P	**P**	**18 27 44.8**	**-2.3**
FAKI	**Fak Fak**	**51.97**	**283**	P	**P**	**18 28 41.2**	**+1.2**
FAKI				IAmb	IAmb	18 30 22.5	
	comp=Z,36nm,1.2s						
FITZ	**Fitzroy Crossi**	**53.40**	**262**	P	**P**	**18 28 51.7**	**+1.5**
FITZ				IAmb	IAmb	18 29 06.2	
	comp=Z,22nm,1.9s						
SOEI	**Soe**	**56.92**	**272**	P	**P**	**18 29 15.7**	**+0.3**
NLU	**North Lily Min**	**85.84**	**45**		pwP	18 33 30.4	+0.8
K22A	**Casper**	**90.80**	**44**	P	**P**	**18 32 30.3**	**+0.8**
AKASG	**Malin Array Be**	**143.48**	**331**	PKPbc	**PKiKP**	**18 39 00.0**	**-1.6**
	comp=Z,0.7nm,0.5s,baz=39,slow=3.6,SNR=2.0						
AKASG	**Malin Array Be**	**143.48**	**331**		**PKiKP**	**18 39 00.0**	**-1.6**

*IDC **09** 18:25:28.0±3.3,36°.52N×71°.01E,h185km±31km,mb3.3/3, mb1 3.2/9,mb1mx2.9/54,mbtmp3.6/9, Error ellipse: s-maj=31.0km s-min=25.1km az=134.0*
*NNC **09** 18:25:33.6±3.7,37°.07N×71°.14E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=28.8km s-min=27.3km az=136.0*
ISC 09 18:25:28.3±1.2,36°.6N±0°.1×70°.89E±0°.09,h188km,n12, σ1§51/17,mb3.6/3,3C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.52**	**358**	⇓Pn	**Pn**	**18 27 05.6**	**+3.4**
	1.0nm,0.5s,baz=183,slow=12,SNR=20						
KK31				⇑Sn	**Sn**	**18 28 14.7**	**-1.7**
	2.6nm,0.6s,baz=184,slow=23,SNR=8.6						
AAK	**Ala-Archa**	**6.66**	**24**	P	**Pn**	**18 27 06.0**	**+1.9**
	0.6nm,0.3s,baz=202,slow=10,SNR=9.1						
AAK				S	**Sn**	**18 28 19.3**	**-0.6**

0.6nm,0.3s,baz=356,slow=21,SNR=16

AAK	**Ala-Archa**	**6.66**	**24**	⇑Pn	**Pn**	**18 27 05.2**	**+1.1**
	2.5nm,0.8s							
AAK				Sn	**Sn**	**18 28 18.4**	**-1.5**
	4.9nm,0.6s							
TKM2	**Tokmak 2**	**7.29**	**28**	⇑Pn	**Pn**	**18 27 13.5**	**+1.0**
	3.9nm,0.8s							
TKM2				⇓Sn	**Sn**	**18 28 33.5**	**-1.5**
	2.3nm,0.7s							
GEYT	**Alibeck**	**10.28**	**281**	P	**Pn**	**18 27 51.6**	**+0.3**
	0.2nm,0.3s,baz=211,slow=34,SNR=1.7							
GEYT				S	**Sn**	**18 29 44.3**	**-1.5**
	0.3nm,0.3s,baz=115,slow=17,SNR=1.3							
MKAR	**Makanchi Array**	**13.28**	**36**	P	**Pn**	**18 28 30.0**	**+0.4**
	0.1nm,0.3s,baz=220,slow=13,SNR=12							
KURBB	**Kurchatov Arra**	**15.07**	**19**	P	**Pn**	**18 28 51.8**	**0.0**
	0.0nm,0.3s,baz=205,slow=12,SNR=4.6							
BVAR	**Borovoye Array**	**16.45**	**359**	P	**P**	**18 29 08.2**	**+0.4**
	0.1nm,0.3s,baz=140,slow=9.7,SNR=4.4							
ZALV	**Zalesovo Beam**	**19.88**	**25**	P	**P**	**18 29 43.7**	**-1.3**
	0.4nm,0.3s,baz=220,slow=12,SNR=14							
YKA	**Yellowknife Ar**	**81.17**	**3**	P	**P**	**18 37 23.6**	**+1.1**
	0.2nm,0.4s,baz=352,slow=4.8,SNR=4.8							
WRA	**Warramunga Arr**	**82.11**	**122**	P	**P**	**18 37 27.1**	**-0.9**
	0.7nm,0.5s,baz=325,slow=5.0,SNR=8.8							
ASAR	**Alice Springs**	**84.37**	**125**	P	**P**	**18 37 39.0**	**-0.6**
	0.6nm,0.5s,baz=306,slow=5.1,SNR=15							

*NEIC **09** 18:26:45.8±1.5, 6.90S×0.08×154.68E×0.08, h50km±7km, mb4.3/15, Error ellipse: s-maj=12.6km s-min=10.6km az=204.0*

*IDC **09** 18:26:47.4±1.6, 6.93S×154.69E, h62km±14km, mb3.7/11, mb1 3.9/14, mb1mx3.7/42, mbtmp4.0/14, Error ellipse: s-maj=15.9km s-min=11.8km az=30.0*

ISC 09 18:26:45.2±0.5, 6.89S±0.07×154.70E±0.06, h39km, n36, σ1°51/41, mb4.2/19, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.68**	**317**		**Pn**	**18 27 39.6**	**-0.1**
KRVT	**Keravat (AS076**	**3.70**	**314**	P	**Pn**	**18 27 40.8**	**+0.9**
	5.4nm,0.3s,baz=153,slow=2.2,SNR=12						
KRVT				S	**Sn**	**18 28 26.0**	**+3.8**
	10nm,0.3s,baz=346,slow=17,SNR=3.7						
HNR	**Honiara**	**5.77**	**116**	P	**Pn**	**18 28 11.0**	**+2.6**
	2.3nm,0.3s,baz=262,slow=4.0,SNR=5.3						
HNR				S	**Sn**	**18 29 16.2**	**+2.7**
	3.7nm,0.3s,baz=215,slow=23,SNR=1.4						
HNR	**Honiara**	**5.77**	**116**		**Pn**	**18 28 09.3**	**+0.9**
PMG	**Port Moresby**	**7.88**	**251**	P	**Pn**	**18 28 39.5**	**+2.3**
	0.3nm,0.3s,baz=98,slow=20,SNR=1.8						
PMG				S	**Sn**	**18 30 08.3**	**+3.1**
	0.6nm,0.3s,baz=237,slow=23,SNR=1.6						
PMG	**Port Moresby**	**7.88**	**251**		**Pn**	**18 28 37.8**	**+0.5**
COEN	**Coen**	**13.33**	**237**	Pn	**Pn**	**18 29 53.1**	**+1.0**
PATS	**Pohnpei**	**14.10**	**15**	Pn	**Pn**	**18 30 04.5**	**+2.0**
WR0	**Warramunga Arr**	**23.48**	**234**	P	**P**	**18 31 50.9**	**-0.7**
WR0				IAmb	IAmb	18 31 52.7	
	comp=Z,12nm,1.2s						
WB0	**Warramunga Arr**	**23.51**	**235**	P	**P**	**18 31 49.9**	**-2.0**
ARMA	**Armidale**	**23.58**	**187**	P	**P**	**18 31 53.5**	**+0.9**
ARMA				IAmb	IAmb	18 32 00.8	
	comp=Z,16nm,1.3s						
WRAB	**Tennant Creek**	**23.63**	**235**	P	**P**	**18 31 50.3**	**-2.7**
WRAB				IAmb	IAmb	18 31 53.9	
	comp=Z,10.0nm,1.1s						
WB2	**Warramunga Arr**	**23.63**	**235**	P	**P**	**18 31 51.4**	**-1.6**
WB2				IAmb	IAmb	18 31 54.0	
	comp=Z,11nm,1.2s						
WRA	**Warramunga Arr**	**23.64**	**235**	P	**P**	**18 31 52.1**	**-1.0**
	comp=Z,4.1nm,0.8s,baz=57,slow=9.3,SNR=14						
WRA				PcP	**PcP**	**18 35 37.1**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=61,slow=2.3,SNR=7.6						
MTN	**Manton Dam**	**23.95**	**254**	P	**P**	**18 31 55.7**	**-0.4**
SIJI	**Sorong**	**24.12**	**283**	P	**P**	**18 31 56.9**	**-0.8**
	comp=Z,4.1nm,0.4s,baz=49,slow=13,SNR=4.9						
AS31	**Alice Springs**	**26.02**	**228**	P	**P**	**18 32 12.8**	**-2.1**
ASAR	**Alice Springs**	**26.03**	**228**	P	**P**	**18 32 14.2**	**-0.7**
	comp=Z,1.9nm,0.7s,baz=60,slow=8.6,SNR=24						
ASAR				PcP	**PcP**	**18 35 42.3**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=64,slow=2.6,SNR=1.2						
KNRA	**Kununurra**	**26.87**	**249**	P	**P**	**18 32 21.9**	**-0.6**
KNRA				IAmb	IAmb	18 32 27.3	
	comp=Z,7.6nm,0.9s						
STKA	**Stephens Creek**	**27.71**	**205**	P	**P**	**18 32 27.9**	**-2.0**
FITZ	**Fitzroy Crossi**	**30.43**	**246**	P	**P**	**18 32 53.7**	**-0.6**
	comp=Z,2.9nm,0.7s,baz=84,slow=7.7,SNR=10						
FITZ	**Fitzroy Crossi**	**30.43**	**246**	P	**P**	**18 32 53.7**	**-0.6**
FITZ				IAmb	IAmb	18 33 09.5	
	comp=Z,14nm,1.6s						
KNTN	**Kanton**	**33.70**	**85**	P	**P**	**18 33 21.9**	**-1.1**
FORT	**Forrest**	**34.47**	**223**	P	**P**	**18 33 28.8**	**-0.7**
PETK	**Petropavlovsk-**	**59.82**	**2**	P	**P**	**18 36 46.1**	**-0.4**
	comp=Z,9.0nm,1.1s,baz=190,slow=4.4,SNR=1.7						
CMAR	**Chiang Mai Arr**	**60.48**	**296**	P	**P**	**18 36 51.6**	**0.0**
	comp=Z,0.7nm,0.6s,baz=116,slow=6.3,SNR=5.6						
SONM	**Songino Array**	**69.09**	**327**	P	**P**	**18 37 47.8**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=107,slow=5.0,SNR=4.0						
TRF	**Thorofare Moun**	**81.41**	**22**	P	**P**	**18 38 57.6**	**-0.4**
TRF				IAmb	IAmb	18 39 04.8	
	comp=Z,3.4nm,1.0s						
QSPA	**South Pole Qui**	**83.08**	**180**	P	**P**	**18 39 06.2**	**-0.5**
QSPA				IAmb	IAmb	18 39 32.8	
	comp=Z,5.6nm,1.3s						
MKAR	**Makanchi Array**	**83.13**	**319**	P	**P**	**18 39 07.0**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=96,slow=4.9,SNR=3.3						
ILAR	**Eielson Array**	**83.38**	**22**	P	**P**	**18 39 07.6**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=250,slow=4.3,SNR=3.2						
DOT	**Dot Lake**	**83.88**	**23**	P	**P**	**18 39 09.8**	**-0.9**
DOT				IAmb	IAmb	18 39 15.3	
	comp=Z,2.8nm,0.9s						
ZALV	**Zalesovo Beam**	**83.93**	**326**	P	**P**	**18 39 09.7**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=108,slow=4.7,SNR=2.0						
YKA	**Yellowknife Ar**	**96.38**	**28**	P	**P**	**18 40 08.1**	**-1.7**
	comp=Z,0.3nm,0.9s,baz=261,slow=4.6,SNR=3.3						
GERES	**GERESS Array B**	**126.81**	**329**	PKP	**PKPdf**	**18 45 44.1**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=90,slow=2.7,SNR=3.5						
TORD	**Torodi Ar. Bea**	**152.72**	**285**	PKPbc	**PKPbc**	**18 46 38.1**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=42,slow=2.3,SNR=6.3						

IDC 09 18:29:24.6±5.5, 23.53S×176.63W, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/31, mbtmp3.8/4, Error ellipse: s-maj=170.9km s-min=51.8km az=137.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**45.14**	**259**	P	P	18 37 44.3	+1.1
	0.8nm,0.9s,baz=91,slow=9.3,SNR=5.0						
WRA	**Warramunga Arr**	**45.52**	**265**	P	P	18 37 45.0	-1.2
	0.5nm,0.6s,baz=103,slow=8.1,SNR=5.1						
MJAR	**Matsushiro Arr**	**73.39**	**323**	P	P	18 40 58.8	+0.3
	1.5nm,0.8s,baz=127,slow=5.1,SNR=2.0						
CMAR	**Chiang Mai Arr**	**92.31**	**289**	P	P	18 42 36.7	-0.6
	0.2nm,0.8s,baz=121,slow=4.2,SNR=5.0						
AKASG	**Malin Array Be**	**146.26**	**330**	PKPbc	PKPdf	18 49 05.9	+0.2
	0.2nm,0.3s,baz=40,slow=4.0,SNR=2.4						

IDC 09 18:34:26.2±2.5, 23.79S×175.38W, h0km, mb3.9/5, mb1 4.2/5, mb1mx3.8/27, mbtmp3.9/5, Error ellipse: s-maj=110.6km s-min=34.0km az=155.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**46.22**	**259**	P	P	18 42 53.7	+0.2
	0.7nm,0.8s,baz=96,slow=8.5,SNR=6.1						
WRA	**Warramunga Arr**	**46.63**	**265**	P	P	18 42 55.0	-1.6
	0.3nm,0.3s,baz=103,slow=7.6,SNR=4.6						
PETK	**Petropavlovsk-**	**80.08**	**344**	P	P	18 46 37.2	-0.4
	3.0nm,0.8s,baz=132,slow=6.4,SNR=2.3						
TXAR	**Lajitas Array**	**86.82**	**56**	P	P	18 47 12.8	-0.2
	0.4nm,0.9s,baz=251,slow=5.5,SNR=3.2						
CMAR	**Chiang Mai Arr**	**93.48**	**289**	P	P	18 47 46.2	+1.9
	1.1nm,0.9s,baz=136,slow=3.2,SNR=8.8						
AKASG	**Malin Array Be**	**147.06**	**331**	PKPbc	PKPdf	18 54 09.6	+0.8
	0.4nm,0.3s,baz=45,slow=3.4,SNR=4.1						

*NEIC **09** 18:41:25.4±1.1, 62.87N±0.04×150.22W±0.07, h92km±4km, Error ellipse: s-maj=5.8km s-min=4.4km az=195.0*

AEIC 09 18:41:25±1.4, 62.86N±0.04×150.23W±0.07, h87km±6km, ML2.7, Error ellipse: s-maj=5.7km s-min=4.3km az=183.0, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRF	**Thorofare Moun**	**0.59**	**357**		Pn	18 41 41.6	+1.2
TRF	**Thorofare Moun**	**0.59**	**357**		Sn	18 41 53.2	+1.4
WAT2	**Susitna Watana**	**0.76**	**82**		Pn	18 41 42.5	+0.6
KTH	**Kantishna Hill**	**0.76**	**336**		Pn	18 41 43.2	+1.3
KTH	**Kantishna Hill**	**0.76**	**336**		Sn	18 41 55.9	+1.4
WAT1	**Susitna Watana**	**0.77**	**92**		Sn	18 41 55.8	+1.2
RND	**Reindeer**	**0.83**	**48**		Pn	18 41 43.6	+1.0
RND	**Reindeer**	**0.83**	**48**		Sn	18 41 56.9	+1.1
PPLA	**Purkeypile**	**0.90**	**273**		Pn	18 41 44.6	+1.1
PPLA	**Purkeypile**	**0.90**	**273**		Sn	18 41 58.8	+1.5
CAST	**Castle Rocks**	**1.01**	**304**		Pn	18 41 45.5	+0.9
MCK	**McKinley**	**1.05**	**33**		Pn	18 41 46.3	+1.2
MCK	**McKinley**	**1.05**	**33**		Sn	18 42 02.0	+1.9
GHO	**Glory Hole Cre**	**1.25**	**150**		Pn	18 41 48.4	+0.9
BPAW	**Bear Paw Mtn.**	**1.29**	**345**		Pn	18 41 48.9	+0.9
BPAW	**Bear Paw Mtn.**	**1.29**	**345**		Sn	18 42 05.9	+0.7
DHY	**Denali Highway**	**1.32**	**79**		Pn	18 41 48.9	+0.4
DHY	**Denali Highway**	**1.32**	**79**		Sn	18 42 08.3	+2.2
BWN	**Browne**	**1.36**	**14**		Pn	18 41 50.0	+1.3
PMR	**Palmer**	**1.38**	**158**		Pn	18 41 49.6	+0.6
PMR	**Palmer**	**1.38**	**158**		Sn	18 42 09.6	+2.5
SML	**Sawmill**	**1.38**	**139**		Pn	18 41 49.8	+0.6
SML	**Sawmill**	**1.38**	**139**		Sn	18 42 08.9	+1.6
CHUM	**Lake Minchumin**	**1.39**	**318**		Pn	18 41 50.4	+1.2
CHUM					Sn	18 42 08.4	+1.0
STLK	**Strandline Lak**	**1.56**	**210**		Pn	18 41 52.0	+0.5
KNK	**Knik Glacier**	**1.68**	**150**		Pn	18 41 53.3	+0.5
KNK	**Knik Glacier**	**1.68**	**150**		Sn	18 42 15.5	+1.5
SCM	**Sheep Creek Mo**	**1.70**	**126**		Pn	18 41 53.6	+0.4
SCM	**Sheep Creek Mo**	**1.70**	**126**		Sn	18 42 16.5	+1.9
FIS	**Fire Island**	**1.73**	**180**		Pn	18 41 55.7	+2.3
NEA	**Nenana**	**1.79**	**16**		Pn	18 41 55.2	+0.8
RC01	**Rabbit Creek A**	**1.79**	**172**		Pn	18 41 55.6	+1.3
CRP	**Crater Peak**	**1.84**	**210**		Pn	18 41 56.3	+1.1
WRH	**Wood River Hil**	**1.87**	**30**		Sn	18 42 18.1	-0.4
WRH	**Wood River Hil**	**1.87**	**30**		Pn	18 41 56.2	+0.8
SPBG	**Spurr Blockage**	**1.90**	**213**		Pn	18 41 57.1	+1.3
SPWE	**Spurr West**	**1.94**	**216**		Pn	18 41 57.5	+1.2
CCB	**Clear Creek Bu**	**2.09**	**30**		Pn	18 41 58.7	+0.6
PS10	**TAPS Pump St10**	**2.10**	**72**		Pn	18 42 00.4	+2.0
HDA	**Harding Lake**	**2.13**	**42**		Pn	18 41 59.5	+0.7
PAX	**Paxson**	**2.18**	**85**	Pn	Pn	18 41 59.5	0.0
MLY	**Manley**	**2.19**	**354**		Pn	18 42 00.5	+0.9
PWL	**Port Wells**	**2.20**	**155**		Pn	18 42 00.5	+0.8
PS08	**TAPS Pump Stn8**	**2.27**	**40**		Pn	18 42 01.5	+0.9
TCOL	**CIGO, UAF Yank**	**2.27**	**26**		Pn	18 42 01.9	+1.3
COLA	**College**	**2.28**	**26**		Pn	18 42 01.8	+1.2
MDM	**Murphy Dome**	**2.28**	**22**		Pn	18 42 01.3	+0.6
PS11	**TAPS Pump St11**	**2.34**	**107**		Pn	18 42 02.8	+1.2
SLKM	**Skilak Lake**	**2.36**	**180**		Pn	18 42 03.3	+1.4
IL31		**2.42**	**36**		Pn	18 42 03.3	+0.7
GLI	**Glacier Island**	**2.48**	**142**		Pn	18 42 03.3	-0.1
JPK	**Jack Peak**	**2.50**	**135**		Pn	18 42 04.0	+0.3
DFR	**Drift River**	**2.56**	**208**		Pn	18 42 05.5	+0.9
POKR	**Poker Plat Res**	**2.58**	**27**		Pn	18 42 06.1	+1.4
TTA	**Tatalina**	**2.65**	**274**		Pn	18 42 06.3	+0.5
TT01	**Tatalina**	**2.66**	**274**		Pn	18 42 06.3	+0.6
RDWB	**Redoubt West**	**2.69**	**209**		Pn	18 42 07.2	+0.8
RSO	**Redoubt South**	**2.69**	**208**	Pn	Pn	18 42 06.8	+0.3
RED	**Redoubt Volcan**	**2.74**	**207**		Pn	18 42 07.6	+0.6
FID	**Port Fidalgo**	**2.77**	**138**		Pn	18 42 06.8	-0.5
SEW	**Seward**	**2.79**	**172**	Pn	Pn	18 42 08.2	+0.6
DOT	**Dot Lake**	**2.90**	**71**		Pn	18 42 09.8	+0.8
MENT	**Mentasta**	**2.98**	**86**		Pn	18 42 11.3	+1.2
HIN	**Hinchinbrook I**	**3.05**	**143**	Pn	Pn	18 42 11.0	0.0
SVW2	**Sparrevohn**	**3.09**	**237**	Pn	Pn	18 42 12.1	+0.6
BRLK	**Bradley Lake**	**3.13**	**186**	Pn	Pn	18 42 12.1	0.0
BRLS	**Bradley Lake S**	**3.14**	**185**		Pn	18 42 13.7	+1.3
EYAK	**Cordova Ski Ar**	**3.15**	**135**	Pn	Pn	18 42 12.4	0.0
HOM	**Homer**	**3.29**	**193**	Pn	Pn	18 42 14.1	-0.1
GLB	**Gilahina Butte**	**3.33**	**112**		Pn	18 42 15.0	+0.1
PRP	**Porcupine Dome**	**3.37**	**36**		Pn	18 42 16.2	+0.8
CNPM	**China Poot**	**3.38**	**189**	Pn	Pn	18 42 16.4	+0.8
GOAT	**Goat Mountain**	**3.48**	**129**		Pn	18 42 17.2	+0.3
IM03		**3.49**	**336**		Pn	18 42 18.2	+1.3
VRDI	**Verde Repeater**	**3.59**	**114**		Pn	18 42 18.2	-0.3
RAGM	**Ragged Mountai**	**3.63**	**131**	Pn	Pn	18 42 18.9	0.0
MCARA	**McCarthy VSAT**	**3.69**	**110**		Pn	18 42 20.2	+0.5
BC03		**3.86**	**83**		Pn	18 42 22.5	+0.6
CRQM	**Cirque**	**3.97**	**119**		Pn	18 42 23.7	+0.1
BERG	**Berg Lake**	**3.98**	**126**		Pn	18 42 23.6	-0.1
PTPK	**Patty Peak**	**4.02**	**111**		Pn	18 42 24.8	+0.4
TGL	**Tana Glacier**	**4.10**	**118**	Pn	Pn	18 42 24.9	-0.4
KHIT	**Khitrov Hills**	**4.12**	**123**		Pn	18 42 25.4	-0.2
BALM	**Baldy**	**4.15**	**113**		Pn	18 42 25.6	-0.5
KIAG	**Kiagna River**	**4.20**	**114**		Pn	18 42 26.2	-0.6
WAX	**Wasell Ridge**	**4.27**	**121**		Pn	18 42 27.4	-0.2
COLD	**Coldfoot**	**4.38**	**0**	Pn	Pn	18 42 27.2	-1.9
BARN	**Barnard Glacie**	**4.43**	**110**		Pn	18 42 30.2	+0.3
KULT	**Kultieth River**	**4.45**	**123**		Pn	18 42 29.8	-0.3
EGAK	**Eagle**	**4.45**	**60**		Pn	18 42 31.3	+1.3
YUK2	**White River**	**4.51**	**100**		Pn	18 42 31.4	+0.5
CTGM	**Chitina Glacie**	**4.61**	**110**	Pn	Pn	18 42 32.2	-0.2
YUK3	**Moose Creek**	**4.68**	**99**		Pn	18 42 34.2	+0.8
YAH	**Yahtse**	**4.76**	**118**	Pn	Pn	18 42 34.7	+0.3
DAWY	**Dawson**	**5.01**	**71**		Pn	18 42 38.3	+0.7
BM03	**Burnt Mountain**	**5.15**	**25**		Pn	18 42 40.7	+1.2
KDAK	**Kodiak Island**	**5.23**	**194**	Pn	Pn	18 42 40.0	-0.6
HYT	**Haines Junctio**	**6.36**	**103**	Pn	Pn	18 42 55.7	-0.4
DHAK	**Deception Hill**	**6.96**	**118**	Pn	Pn	18 43 04.3	+0.2
WHY	**Whitehorse**	**7.61**	**100**	Pn	Pn	18 43 13.4	+0.3
BESE	**Bessie Mountai**	**8.66**	**113**	Pn	Pn	18 43 26.9	-0.5

*ANF **09** 18:52:46.6±0.2, 36.68N×97.63W, h5km, ML5.0/16, ML5.0/16, Error ellipse: s-maj=3.1km s-min=1.9km az=80.0*

*NEIC **09** 18:52:47.3, 36.56N×97.60W, h4km, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr=1.70; Mθθ=3.07; Mφφ=-1.38; Mrθ=4.96; Mθφ=-6.60; Mφr=1.13; Fault plane solution: M0=8.75000×10^14 NP1:φs=264.30000°, δ=81.87000°, λ=-142.43000°. NP2:φs=168.10000°, δ=52.87000°, λ=-10.21000°. Principal axes: T 8.9817, Plg=19.0000°, Azm=31.0000°; N -0.4867, Plg=52.0000°, Azm=275.0000°; P -8.4950, Plg=32.0000°, Azm=133.0000°;*

*TUL **09** 18:52:47±2.5, 36.58N±0.02×97.62W±0.02, h4km±5km, ML3.9, Mwr3.9/62(NEIC) Error ellipse: s-maj=2.6km s-min=2.1km az=77.0*

*NEIC **09** 18:52:47.0±2.1, 36.57N±0.01×97.61W±0.03, h11km±3km, Error ellipse: s-maj=3.4km s-min=2.1km az=94.0*

*IDC **09** 18:52:48.2±1.8, 36.76N×97.95W, h0km, mb3.9/1, mb1 4.0/4, mb1mx3.5/39, mbtmp3.6/4, ML3.3/4, MS3.5/4, Ms1 3.5/4, ms1mx3.0/43, Error ellipse: s-maj=30.8km s-min=11.2km az=108.0*

ISC 09 18:52:45.7±1.2, 36.67N±0.03×97.58W±0.03, h3km±10km, n199, σ1°56/216, MS3.5/3, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	**0.90**	**74**		**Pb**	**18 53 05.2**	**+1.3**
T35A				Sg	**Sb**	**18 53 18.0**	**+1.8**
ADOK	**Arcadia Dam**	**1.03**	**170**		**Pg**	**18 53 05.1**	**-0.3**
ADOK				Sg	**Sg**	**18 53 18.1**	**-0.7**
OK005	**Luther M Schoo**	**1.06**	**162**		**Pg**	**18 53 05.8**	**-0.3**
OK009	**Oakdale Elemen**	**1.10**	**173**		**Pg**	**18 53 05.8**	**-0.9**
U32A	**Winter Ranch,**	**1.18**	**256**		**Pg**	**18 53 08.3**	**0.0**
U32A				Sg	**Sg**	**18 53 23.9**	**+0.3**
OKCSW	**OKLAHOMA CITY**	**1.27**	**175**		**Pg**	**18 53 09.2**	**-0.8**
OKCSW				Sg	**Sg**	**18 53 25.4**	**-1.0**
FNO	**Franklin**	**1.42**	**174**		**Pn**	**18 53 12.0**	**-0.4**
W35A	**Tecumseh**	**1.62**	**159**		**Pn**	**18 53 15.0**	**-0.2**
TUL1	**Leonard**	**1.64**	**117**	P	**Pn**	**18 53 16.6**	**+1.2**
	baz=295,SNR=458						
TUL1				S	**Sn**	**18 53 38.2**	**+1.3**
	baz=295						
TUL1	**Leonard**	**1.64**	**117**		**Pn**	**18 53 16.4**	**+1.1**
R32A	**Long Quarter,**	**1.96**	**333**		**Pb**	**18 53 23.3**	**+1.2**
X34A	**Smith Ranch, M**	**2.08**	**186**		**Pn**	**18 53 22.4**	**+0.9**
WMOK	**Wichita Mounta**	**2.16**	**207**	P	**Pn**	**18 53 23.0**	**+0.3**
	baz=27,SNR=605						
WMOK				S	**Sn**	**18 53 50.6**	**+0.7**
	baz=27						
WMOK	**Wichita Mounta**	**2.16**	**207**		**Pn**	**18 53 22.9**	**+0.2**
KSU1	**Kansas State U**	**2.54**	**17**	P	**Pb**	**18 53 31.1**	**-0.9**
	baz=198,SNR=104						
KSU1	**Kansas State U**	**2.54**	**17**		**Pb**	**18 53 31.2**	**-0.9**
U38A	**Gravette**	**2.59**	**94**		**Pn**	**18 53 30.5**	**+2.0**
CBKS	**Cedar Bluff**	**2.74**	**322**	P	**Pn**	**18 53 32.8**	**+2.2**
	baz=142						
CBKS				Sb	**Sg**	**18 54 13.0**	**-0.6**
	baz=142						
CBKS	**Cedar Bluff**	**2.74**	**322**		**Pn**	**18 53 33.3**	**+2.7**
X37A	**Clayton**	**2.75**	**138**		**Pn**	**18 53 31.6**	**+0.9**
HHAR	**Hobbs**	**2.96**	**96**		**Pn**	**18 53 35.2**	**+1.5**
Z35A	**Perchaven, San**	**3.34**	**175**		**Pn**	**18 53 38.8**	**-0.1**
W39A	**Magazine**	**3.42**	**114**	P	**Pn**	**18 53 40.8**	**+0.9**
	baz=295,SNR=53						
W39A				Sb	**Sb**	**18 54 33.1**	**+4.3**
	baz=295						
W39A	**Magazine**	**3.42**	**114**		**Pn**	**18 53 41.0**	**+1.1**
AMTX	**Amarillo**	**3.78**	**243**	P	**Pn**	**18 53 45.9**	**+1.0**
	baz=62						
AMTX				S	**Sn**	**18 54 30.0**	**0.0**
	baz=62						
AMTX	**Amarillo**	**3.78**	**243**		**Pn**	**18 53 46.0**	**+1.0**
U40A	**Yellville**	**3.82**	**93**	P	**Pn**	**18 53 46.9**	**+1.4**
	baz=275,SNR=26						
U40A				S	**Sn**	**18 54 32.5**	**+1.5**
	baz=275						
U40A	**Yellville**	**3.82**	**93**		**Pn**	**18 53 46.9**	**+1.4**
MIAR	**Mount Ida**	**3.89**	**122**	P	**Pn**	**18 53 47.5**	**+1.0**
	baz=303,SNR=12						
MIAR				S	**Sn**	**18 54 33.7**	**+1.0**
	baz=303						
MIAR	**Mount Ida**	**3.89**	**122**		**Pn**	**18 53 46.5**	**+0.1**
Z38A	**Mt. Pleasant**	**4.02**	**147**	Pn	**Pn**	**18 53 47.5**	**-0.6**
N33A	**J Bar K, Exete**	**4.06**	**1**	Pn	**Pn**	**18 53 51.1**	**+2.3**
P38A	**Dawn**	**4.35**	**46**		**Pn**	**18 53 53.6**	**+1.0**
ABTX	**Abilene, Hawle**	**4.38**	**203**	P	**Pn**	**18 53 53.5**	**+0.4**
	baz=22						
ABTX				S	**Sb**	**18 55 01.2**	**+4.6**
	baz=22						
ABTX	**Abilene, Hawle**	**4.38**	**203**		**Pn**	**18 53 52.0**	**-1.2**
X40A	**Basin Creek Fa**	**4.44**	**118**	P	**Pn**	**18 53 55.2**	**+1.2**
	baz=300,SNR=14						
X40A				Sb	**Sb**	**18 55 04.0**	**+5.7**
	baz=300						
X40A	**Basin Creek Fa**	**4.44**	**118**		**Pn**	**18 53 54.9**	**+0.9**
N35A	**Tabor**	**4.45**	**19**		**Pn**	**18 53 56.8**	**+2.8**
FCAR	**Ozark Folk Cen**	**4.48**	**98**		**Pn**	**18 53 55.5**	**+1.0**
WHAR	**Wooly Hollow**	**4.51**	**106**		**Pn**	**18 53 55.6**	**+0.7**
R40A	**Maddies Statio**	**4.53**	**67**		**Pn**	**18 53 57.5**	**+2.4**
W41B	**Gary Mavity, V**	**4.58**	**107**	P	**Pn**	**18 53 56.7**	**+0.9**
	baz=290						
W41B				Sb	**Sb**	**18 55 07.2**	**+4.9**
	baz=290						
KSCO	**Kaye Shedlock'**	**4.62**	**302**		**Pn**	**18 53 58.4**	**+1.8**
UALR	**University of**	**4.67**	**112**		**Pn**	**18 53 57.5**	**+0.4**
WHTX	**Lake Whitney,**	**4.67**	**179**	P	**Pn**	**18 53 57.6**	**+0.5**
	baz=358						
WHTX				S	**Sn**	**18 54 49.7**	**-2.1**
	baz=358						
WHTX	**Lake Whitney,**	**4.67**	**179**		**Pn**	**18 53 55.2**	**-1.9**
WLAR	**White Oak Lake**	**4.72**	**128**		**Pn**	**18 53 56.7**	**-1.1**
BGNE	**Belgrade**	**4.75**	**355**	P	**Pn**	**18 53 59.7**	**+1.4**
	baz=175						
BGNE				S	**Sn**

	baz=276							
WVT	**Waverly**	**7.88**	**91**		**Pn**	18 54 39.9	**-1.3**	
PLAL	**Pickwick Lake**	**7.91**	**100**		**Pn**	18 54 40.3	**-1.2**	
O44A	**Mansfield**	**7.96**	**61**		**Pn**	18 54 40.6	**-1.6**	
I37A	**Lemond, Waseca**	**8.00**	**22**		**Pn**	18 54 44.3	**+1.5**	
USIN	**University of**	**8.01**	**78**	Pn	**Pn**	18 54 41.8	**-1.2**	
LENM	**Lemitar**	**8.06**	**255**		**Pn**	18 54 42.6	**-1.2**	
146A	**Union**	**8.10**	**117**		**Pn**	18 54 45.3	**+1.1**	
L42A	**Oliver, Polo**	**8.12**	**47**		**Pn**	18 54 46.1	**+1.7**	
MNTX	**Cornudas Mount**	**8.14**	**235**	P	**Pn**	18 54 44.6	**-0.2**	
	baz=51							
MNTX	**Cornudas Mount**	**8.14**	**235**		**Pn**	18 54 44.1	**-0.7**	
JFWS	**Jewell Farm**	**8.41**	**40**	P	**Pn**	18 54 49.4	**+0.9**	
	baz=224,SNR=7.4							
JFWS	**Jewell Farm**	**8.41**	**40**		**Pn**	18 54 49.6	**+1.2**	
T47A	**Sharon Grove**	**8.41**	**85**		**Pn**	18 54 50.0	**+1.6**	
Z47A	**Carrollton**	**8.54**	**111**	Pn	**Pn**	18 54 51.4	**+1.1**	
P46A	**Rosedale**	**8.69**	**67**	Pn	**Pn**	18 54 53.9	**+1.6**	
M44A	**Midewin, Midew**	**8.79**	**55**	Pn	**Pn**	18 54 56.0	**+2.4**	
PV15	**Paradox Valley**	**8.82**	**284**	Pn	**Pn**	18 54 54.7	**+0.4**	
PV01	**Paradox Valley**	**8.86**	**283**	Pn	**Pn**	18 54 53.5	**-1.4**	
X48A	**Hartselle**	**8.87**	**101**	Pn	**Pn**	18 54 55.0	**+0.2**	
RSSD	**Black Hills**	**8.92**	**329**		**Pn**	18 54 57.9	**+2.3**	
TXAR	**Lajitas Array**	**8.92**	**217**	Pn	**Pn**	18 54 54.8	**-0.8**	
	0.5nm,0.3s,baz=35,slow=11,SNR=23							
TXAR				Pg	Pg	18 55 26.7	-10	
	1.8nm,0.3s,baz=34,slow=14,SNR=9.5							
TXAR				Lg	Lg	18 57 22.7		
	2.1nm,0.3s,baz=41,slow=27,SNR=9.8							
TXAR				LR	LR	18 58 31.0		
	comp=Z,165nm,21.8s,baz=0.0,slow=39							
I40A	**Norwalk**	**8.96**	**34**		**Pn**	18 54 57.3	**+1.3**	
PV07	**Paradox Valley**	**8.96**	**285**	Pn	**Pn**	18 54 56.1	**-0.1**	
RWWY	**Rawlins**	**8.99**	**307**	Pn	**Pn**	18 54 56.6	**-0.1**	
PV02	**Paradox Valley**	**9.00**	**283**	Pn	**Pn**	18 54 55.4	**-1.4**	
SFIN	**Lafayette**	**9.01**	**63**	P	**Pn**	18 54 58.7	**+2.0**	
	baz=245							
SFIN	**Lafayette**	**9.01**	**63**		**Pn**	18 54 56.8	**+0.1**	
O20A	**White River Ci**	**9.05**	**296**	Pn	**Pn**	18 54 56.8	**-0.7**	
PV22	**Blue Mesa, Par**	**9.08**	**285**	Pn	**Pn**	18 54 59.1	**+1.2**	
BLO	**Bloomington**	**9.09**	**71**		**Pn**	18 54 59.6	**+1.8**	
CLTN	**Cedars of Leba**	**9.09**	**90**	Pn	**Pn**	18 54 58.3	**+0.5**	
PV03	**Paradox Valley**	**9.10**	**283**	Pn	**Pn**	18 54 58.2	**+0.1**	
WCI	**Wyandotte Cave**	**9.11**	**77**	Pn	**Pn**	18 54 59.9	**+1.9**	
PV11	**David Mesa, Pa**	**9.12**	**284**	Pn	**Pn**	18 54 58.7	**+0.3**	
PV18	**Skein Mesa, Pa**	**9.14**	**283**	Pn	**Pn**	18 54 58.2	**-0.5**	
PV16	**Nyswonger Mesa**	**9.15**	**284**	Pn	**Pn**	18 54 58.7	**-0.2**	
PV04	**Paradox Valley**	**9.16**	**284**	Pn	**Pn**	18 54 59.5	**+0.6**	
PV17	**East Wray Mesa**	**9.19**	**283**	Pn	**Pn**	18 54 59.5	**+0.2**	
F33A	**5 Mile Ranch,**	**9.21**	**6**		**Pn**	18 54 59.9	**+0.5**	
PV10	**Paradox Valley**	**9.26**	**284**	Pn	**Pn**	18 55 01.5	**+1.2**	
PV05	**Paradox Valley**	**9.27**	**282**	Pn	**Pn**	18 55 00.9	**+0.4**	
SPMN	**Marine on St.**	**9.28**	**21**	P	**Pn**	18 55 02.5	**+2.2**	
	baz=204							
SPMN	**Marine on St.**	**9.28**	**21**			18 55 02.5	**+2.2**	
K43A	**Burlington**	**9.33**	**47**	Pn	**Pn**	18 55 03.1	**+2.0**	
121A	**Cookes Peak, D**	**9.37**	**247**	Pn	**Pn**	18 55 00.6	**-1.1**	
U49A	**Red Boiling Sp**	**9.50**	**87**	Pn	**Pn**	18 55 05.2	**+1.9**	
Y49A	**Blount Mountai**	**9.56**	**104**	Pn	**Pn**	18 55 05.8	**+1.6**	
F36A	**Milaca**	**9.68**	**17**		**Pn**	18 55 06.0	**+0.3**	
I42A	**Draeger Farm,**	**9.79**	**40**	Pn	**Pn**	18 55 07.7	**+0.4**	
FPAL	**Fort Paine**	**9.98**	**99**	Pn	**Pn**	18 55 10.0	**0.0**	
P48A	**Milroy**	**9.98**	**70**	Pn	**Pn**	18 55 10.2	**+0.2**	
W50A	**Signal Mountai**	**10.06**	**95**	Pn	**Pn**	18 55 09.2	**-1.9**	
Z50A	**Ashland**	**10.16**	**106**	Pn	**Pn**	18 55 12.7	**+0.2**	
T50A	**Nancy**	**10.22**	**84**	Pn	**Pn**	18 55 13.4	**+0.1**	
G40A	**Rib Lake**	**10.24**	**31**		**Pn**	18 55 15.2	**+1.7**	
X18A	**Snowflake**	**10.29**	**262**	Pn	**Pn**	18 55 13.0	**-0.9**	
250A	**Cooper Cave**	**10.46**	**113**		**Pn**	18 55 14.9	**-1.6**	
CPCT	**Cooper Cave**	**10.65**	**93**		**Pn**	18 55 18.4	**-0.7**	
V51A	**Loudon**	**10.72**	**91**		**Pn**	18 55 20.5	**+0.3**	
H43A	**Windswept, Lux**	**10.78**	**41**	Pn	**Pn**	18 55 20.7	**-0.2**	
BW06	**Boulder Array**	**11.04**	**307**	Pn	**Pn**	18 55 24.2	**-0.5**	
PDAR	**Pinedale Array**	**11.04**	**307**	Pn	**Pn**	18 55 24.4	**-0.3**	
	0.1nm,0.3s,baz=99,slow=11,SNR=4.9							
PDAR				Pg		18 56 10.8		
	0.7nm,0.3s,baz=109,slow=18,SNR=8.6							
S51A	**Beattyville**	**11.21**	**81**		**Pn**	18 55 27.1	**+0.3**	
TKL	**Tuckaleechee C**	**11.21**	**91**	Lg	Lg	18 58 36.9		
	6.1nm,0.3s,baz=14,slow=18,SNR=11							
N49A	**Columbus Grove**	**11.29**	**64**	Pn	**Pn**	18 55 26.9	**-0.9**	
Q51A	**Peebles**	**11.50**	**74**	Pn	**Pn**	18 55 29.2	**-1.6**	
Q51A					**Sn**	18 57 36.9	**-2.9**	
AGMN	**Agassiz Nation**	**11.69**	**6**		**Pn**	18 55 32.8	**-0.5**	
B35A	**Bob, Littlefor**	**12.02**	**12**		**Pn**	18 55 37.8	**-0.1**	
EYMN	**Ely**	**12.13**	**20**	P	**Pn**	18 55 38.4	**-1.0**	
	baz=204,SNR=5.5							
EYMN	**Ely**	**12.13**	**20**		**Pn**	18 55 38.6	**-0.7**	
D41A	**Chassel**	**12.36**	**30**		**Pn**	18 55 41.9	**-0.6**	
E43A	**Lone Tree Farm**	**12.52**	**36**		**Pn**	18 55 44.0	**-0.7**	
N51A	**Ashland**	**12.60**	**66**		**Pn**	18 55 46.1	**+0.3**	
ULM	**Lac du Bonnet**	**13.63**	**5**	Pn	Pn	18 55 55.8	-4.0	
	0.4nm,0.3s,baz=187,slow=13,SNR=3.4							
ULM				Sn	Sn	18 58 20.4	-11	
	1.6nm,0.3s,baz=103,slow=14,SNR=7.0							
ULM				Lg	Lg	18 59 48.4		
	1.3nm,0.3s,baz=109,slow=20,SNR=2.0							
E46A	**Sault Ste Mari**	**13.87**	**42**		**Pn**	18 56 02.0	**-1.0**	
SADO	**Sadowa**	**16.13**	**54**	Sn	**Sn**	18 59 26.6	**-6.0**	
	0.7nm,0.3s,baz=231,slow=13,SNR=1.4							
SADO				Lg	Lg	19 01 07.9		
	0.8nm,0.3s,baz=1.2,slow=17,SNR=2.4							
E54A	**Lac Daplat, Po**	**18.07**	**51**	P	**Pn**	18 56 55.8	**-1.9**	
	baz=244,SNR=5.5							
FRB	**Frobisher Bay**	**32.30**	**24**	LR	LR	19 12 35.3		
	comp=Z,79nm,19.2s,baz=268,slow=37							
ILAR	**Eielson Array**	**40.36**	**330**	P	**P**	19 00 27.1	**+2.8**	
	1.1nm,0.6s,baz=107,slow=7.1,SNR=13							
NOA	**NORSAR Array B**	**66.83**	**30**	LR	LR	19 31 01.5		
	comp=Z,320nm,21.9s,baz=355,slow=34							
AKASG	**Malin Array Be**	**81.22**	**31**	LR	LR	19 39 26.5		
	comp=Z,65nm,20.6s,baz=240,slow=34							

WEL 09 19:13:22.7,39°S±2°×17°5E±°, h227km±3km, M3.6/6, MLv3.6/6, Error ellipse: s-maj=0.0km s-min=0.0km az=63.8, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWVZ	**Taurewa**	**0.36**	**158**	P	Pn	19 13 52.6	-0.1
TWVZ				S	S	19 14 14.1	-2.3
WATZ	**Wairara**	**0.37**	**86**	P	Pn	19 13 53.0	+0.3
WATZ				S	S	19 14 15.0	-1.1
HIZ	**Hauiti**	**0.39**	**305**	P	Pn	19 13 52.6	-0.2
HIZ				S	S	19 14 15.0	-1.1
KATZ	**Kakaramea**	**0.42**	**125**	P	Pn	19 13 52.8	-0.1
RATZ	**Rangitukua**	**0.42**	**108**	P	Pn	19 13 52.7	-0.1
RATZ				S	S	19 14 14.8	-1.6
TLZ	**Tolley Road**	**0.46**	**28**	P	Pn	19 13 52.9	-0.1
WTVZ	**West Tongariro**	**0.46**	**146**	P	Pn	19 13 52.9	-0.1
WTVZ				S	S	19 14 14.7	-2.1
KRVZ	**Karewarewa**	**0.47**	**141**	P	Pn	19 13 52.9	-0.1
KRVZ				S	S	19 14 14.8	-2.1
KUTZ	**Kaahu Road**	**0.51**	**61**	P	Pn	19 13 53.2	+0.2
NGZ	**Ngauruhoe**	**0.52**	**149**	P	Pn	19 13 53.2	0.0
NGZ				S	S	19 14 14.9	-2.4
RITZ	**Rihia Road**	**0.53**	**118**	P	Pn	19 13 53.4	+0.2
RITZ				S	S	19 14 15.4	-1.5
WHTZ	**Whakaora**	**0.55**	**83**	P	Pn	19 13 53.5	+0.2
VRZ	**Vera Road**	**0.55**	**225**	P	Pn	19 13 52.9	-0.3
PKVZ	**Pokaka**	**0.56**	**173**	P	Pn	19 13 53.2	-0.1
PKVZ				S	S	19 14 15.0	-2.4
FWVZ	**Far West T-bar**	**0.57**	**156**	P	Pn	19 13 53.5	0.0
FWVZ				S	S	19 14 15.4	-2.3
DRZ	**Dome Shelter**	**0.59**	**156**	P	Pn	19 13 53.8	+0.1
WHVZ	**Whangaehu Hut**	**0.60**	**155**	P	Pn	19 13 53.7	0.0
TRVZ	**Turoa**	**0.61**	**158**	P	Pn	19 13 53.7	0.0
TUVZ	**Tukino**	**0.61**	**150**	P	Pn	19 13 53.7	+0.1
HATZ	**Hinemaiaia**	**0.67**	**104**	P	Pn	19 13 53.5	-0.2
MTVZ	**Mangateitei**	**0.67**	**166**	P	Pn	19 13 53.7	0.0
WPRZ	**Whakapapatarin**	**0.74**	**73**	P	Pn	19 13 54.0	0.0
GRRZ	**Galatos Road**	**0.77**	**60**	P	Pn	19 13 54.2	0.0
MOVZ	**Moawhango**	**0.77**	**150**	P	Pn	19 13 53.9	-0.3
MHEZ	**Mangahewa**	**0.81**	**245**	P	Pn	19 13 54.4	+0.2
ALRZ	**Allen Road**	**0.86**	**79**	P	Pn	19 13 54.3	-0.3
HRRZ	**Handcock Road**	**0.87**	**67**	P	Pn	19 13 54.8	+0.1
HSRZ	**Hossack Road**	**0.88**	**62**	P	Pn	19 13 54.8	+0.1
MRHZ	**Matea Rd**	**0.91**	**97**	P	Pn	19 13 54.5	-0.4
PRRZ	**Plateau Road**	**0.92**	**76**	P	Pn	19 13 54.8	-0.1
UTU	**Utuhina**	**0.92**	**53**	P	Pn	19 13 55.1	+0.1
DREZ	**Durham Road**	**0.94**	**241**	P	Pn	19 13 54.9	-0.1
NGRZ	**Ngongotaha**	**0.96**	**49**	P	Pn	19 13 55.3	0.0
BHHZ	**Black Hill Sta**	**0.98**	**141**	P	Pn	19 13 55.1	-0.2
HLRZ	**Highlands Stat**	**0.98**	**61**	P	Pn	19 13 55.9	+0.6
LREZ	**Lake Rotokare**	**0.98**	**222**	P	Pn	19 13 55.2	0.0
TOZ	**Tahuroa Road**	**1.02**	**11**	P	Pn	19 13 55.6	+0.1
KMRZ	**Kaimai**	**1.04**	**31**	P	Pn	19 13 55.7	0.0
WAZ	**Wanganui**	**1.04**	**192**	P	Pn	19 13 55.7	+0.1
KARZ	**Kaharoa**	**1.05**	**48**	P	Pn	19 13 55.7	-0.1
RRRZ	**Republican Roa**	**1.06**	**69**	P	Pn	19 13 55.7	-0.1
OMRZ	**Omania**	**1.07**	**55**	P	Pn	19 13 55.8	-0.1
PKE	**Pukeiti**	**1.09**	**245**	P	Pn	19 13 55.9	-0.1
TARZ	**Mount Tarawera**	**1.10**	**63**	P	Pn	19 13 56.1	-0.1
MKRZ	**Makatiti**	**1.12**	**58**	P	Pn	19 13 56.8	+0.6
KHEZ	**Kahui Hut**	**1.12**	**240**	P	Pn	19 13 56.0	-0.2
KWHZ	**Kaweka Forest**	**1.14**	**128**	P	Pn	19 13 56.6	+0.3
LIRZ	**Lichensteins R**	**1.15**	**51**	P	Pn	19 13 56.3	0.0
NBEZ	**Newall Road No**	**1.21**	**243**	P	Pn	19 13 56.7	+0.1
MUGZ	**Murupara**	**1.21**	**78**	P	Pn	19 13 56.1	-0.6
MTHZ	**Maungataniwha**	**1.24**	**96**	P	Pn	19 13 57.0	0.0
KRHZ	**Kereru**	**1.25**	**137**	P	Pn	19 13 57.2	+0.1
NMHZ	**Naumai**	**1.26**	**107**	P	Pn	19 13 57.9	+0.8
NMEZ	**Namu Road**	**1.27**	**237**	P	Pn	19 13 57.1	0.0
TGRZ	**Tauranga**	**1.28**	**38**	P	Pn	19 13 57.1	-0.1
EDRZ	**Edgecumbe**	**1.32**	**62**	P	Pn	19 13 57.3	-0.4
MCHZ	**McNeill Hill**	**1.32**	**123**	P	Pn	19 13 58.4	+0.9
MARZ	**Manawahe**	**1.34**	**57**	P	Pn	19 13 57.6	-0.1
RTZ	**Ruatahuna**	**1.35**	**85**	P	Pn	19 13 57.6	-0.3
PNHZ	**Pukenui**	**1.39**	**149**	P	Pn	19 13 58.0	0.0
TSZ	**Takapari Road**	**1.43**	**158**	P	Pn	19 13 58.3	0.0
RAHZ	**Arahi**	**1.44**	**98**	P	Pn	19 13 58.8	+0.4
ARHZ	**Aropaoanui**	**1.45**	**112**	P	Pn	19 13 59.1	+0.6
OHWZ	**Ohakea**	**1.47**	**178**	P	Pn	19 13 59.0	+0.4
URZ	**Urewera**	**1.53**	**72**	P	Pn	19 13 58.5	-0.6
WHHZ	**Waihua**	**1.58**	**103**	P	Pn	19 13 59.9	+0.4
WHRZ	**Whale Island**	**1.61**	**58**	P	Pn	19 13 59.8	-0.1
WPHZ	**Waipukurau**	**1.61**	**146**	P	Pn	19 13 60.0	+0.2
SNGZ	**Shannon Statio**	**1.63**	**92**	P	Pn	19 14 00.2	+0.2
MKAZ	**Moumakai**	**1.63**	**357**	P	Pn	19 14 00.2	+0.2
KAHZ	**Kahuranaki**	**1.64**	**131**	P	Pn	19 14 00.7	+0.6
KBAZ	**Karaka Road Bo**	**1.66**	**350**	P	Pn	19 14 00.8	+0.5
CKHZ	**Cape Kidnapper**	**1.69**	**124**	P	Pn	19 14 01.1	+0.7
POWZ	**Post Office Ro**	**1.70**	**167**	P	Pn	19 14 00.2	-0.3
RAGZ	**Rawiri**	**1.71**	**83**	P	Pn	19 14 00.6	-0.1
DVHZ	**Dannevirke**	**1.71**	**156**	P	Pn	19 14 00.4	-0.2
AWAZ	**Awhitu Peninsu**	**1.74**	**343**	P	Pn	19 14 01.3	+0.3
PXZ	**Pawanui**	**1.79**	**137**	P	Pn	19 14 01.5	+0.1
ETAZ	**East Tamaki Re**	**1.80**	**351**	P	Pn	19 14 01.8	+0.2
MWZ	**Matawai**	**1.82**	**78**	P	Pn	19 14 01.4	-0.4
PRHZ	**Porangahau**	**1.86**	**146**	P	Pn	19 14 02.1	+0.1
WTAZ	**Waiatarua**	**1.88**	**343**	P	Pn	19 14 02.8	+0.6
PRWZ	**Pori Road**	**1.90**	**163**	P	Pn	19 14 02.2	-0.1
KNZ	**Kokohu**	**1.91**	**99**	P	Pn	19 14 02.5	+0.2
HBAZ	**Herne Bay Bore**	**1.93**	**347**	P	Pn	19 14 03.1	+0.4
MRZ	**Mangatainoka R**	**1.94**	**173**	P	Pn	19 14 02.2	-0.6
WIZ	**White Island**	**1.94**	**52**	P	Pn	19 14 02.3	-0.5
RIGZ	**Rimuhau**	**1.96**	**90**	P	Pn	19 14 03.3	+0.3
ANWZ	**Angora Road**	**1.96**	**152**	P	Pn	19 14 03.0	+0.1
MBAZ	**Motutapu North**	**1.98**	**352**	P	Pn	19 14 03.6	+0.4
KUZ	**Kuaotunu**	**2.02**	**11**	P	Pn	19 14 03.7	+0.1
RUGZ	**Raukumara Rang**	**2.05**	**69**	P	Pn	19 14 02.8	-1.2
TKGZ	**Te Karaka**	**2.05**	**83**	P	Pn	19 14 04.0	+0.2
PRGZ	**Paritu Road**	**2.06**	**96**	P	Pn	19 14 04.0	+0.1
OGWZ	**Otaki Gorge**	**2.08**	**182**	P	Pn	19 14 03.7	-0.3
BFZ	**Birch Farm**	**2.09**	**159**	P	Pn	19 14 03.6	-0.5
TIWZ	**Tintock**	**2.10**	**167**	P	Pn	19 14 03.7	-0.6
MHGZ	**Mahia Peninsul**	**2.11**	**102**	P	Pn	19 14 04.7	+0.4
KIW	**Kapiti Island**	**2.14**	**187**	P	Pn	19 14 03.8	-0.8
ABAZ	**Array Bay**	**2.16**	**351**	P	Pn	19 14 05.6	+0.9
HOWZ	**Holdsworth Sta**	**2.17**	**175**	P	Pn	19 14 04.1	-0.8
HAZ	**Te Kaha**	**2.21**	**65**	P	Pn	19 14 04.4	-1.0
CPWZ	**Castlepoint**	**2.29**	**162**	P	Pn	19 14 06.1	-0.1
DUWZ	**D'Urville Isla**	**2.31**	**206**	P	Pn	19 14 05.3	-1.1
CNGZ	**Carnagh Statio**	**2.32**	**85**	P	Pn	19 14 07.0	+0.5
PKGZ	**Pakihiroa**	**2.37**	**70**	P	Pn	19 14 06.6	-0.5
CAW	**Cannon Point**	**2.38**	**184**	P	Pn	19 14 06.2	-0.8
TMWZ	**Te Maipa**	**2.42**	**169**	P	Pn	19 14 06.7	-0.8
MTW	**Mount Morrison**	**2.43**	**176**	P	Pn	19 14 06.5	-1.1
PUZ	**Puketiti**	**2.45**	**75**	P	Pn	19 14 07.3	-0.6
GRZ	**Great Barrier**	**2.48**	**4**	P	Pn	19 14 08.6	+0.3
WEL	**Wellington**	**2.57**	**188**	P	Pn	19 14 08.0	-1.1
TCW	**Tory Channel**	**2.59**	**197**	P	Pn	19 14 08.4	-0.8
WMGZ	**Waiomatatini S**	**2.65**	**71**	P	Pn	19 14 09.5	-0.4
PAWZ	**Paruwai Farm**	**2.65**	**177**	P	Pn	19 14 08.8	-1.2
MXZ	**Matakaoa Point**	**2.67**	**65**	P	Pn	19 14 09.9	-0.3
MSWZ	**Moikau Station**	**2.68**	**180**	P	Pn	19 14 09.0	-1.2
TRWZ	**Traveller**	**2.68**	**173**	P	Pn	19 14 09.2	-1.1
BHW	**Baring Head**	**2.69**	**186**	P	Pn	19 14 09.0	-1.3
PLWZ	**Palliser**	**2.83**	**180**	P	Pn	19 14 10.6	-1.4
NNZ	**Nelson**	**2.87**	**210**	P	Pn	19 14 10.7	-1.6
TUWZ	**Tuamarina**	**2.88**	**200**	P	Pn	19 14 11.2	-1.2
WCZ	**Waipu Caves**	**2.88**	**345**	P	Pn	19 14 13.1	+0.5
QRZ	**Quartz Range**	**2.96**	**224**	P	Pn	19 14 11.2	-2.2
CMWZ	**Cape Campbell**	**3.12**	**195**	P	Pn	19 14 14.5	-0.6
BSWZ	**Blackbirch Sta**	**3.16**	**199**	P	Pn	19 14 14.6	-1.0
THZ	**Tophouse**	**3.52**	**210**	P	Pn	19 14 17.8	-2.1
KHZ	**Kahutara**	**3.90**	**199**	P	Pn	19 14 22.9	-1.4
DSZ	**Denniston Nort**	**4.00**	**220**	P	Pn	19 14 22.9	-2.7
GVZ	**Greta Valley S**	**4.55**	**201**	P	Pn	19 14 30.2	-2.1
LTZ	**Lake Taylor**	**4.64**	**208**	P	Pn	19 14 30.6	-2.7
AMCZ	**Amberley**	**4.86**	**203**	P	Pn	19 14 33.7	-2.2
INZ	**Inchbonnie**	**4.93**	**215**	P	Pn	19 14 33.8	-3.0
OXZ	**Oxford**	**5.19**	**207**	P	Pn	19 14 37.3	-2.9
OKCZ	**Okains Bay**	**5.25**	**198**	P	Pn	19 14 38.2	-2.2
MQZ	**McQueen's Vall**	**5.34**	**201**	P	Pn	19 14 39.1	-2.9
AKCZ	**Akaroa Harbour**	**5.43**	**198**	P	Pn	19 14 40.7	-2.4
RPZ	**Rata Peaks**	**5.90**	**211**	P	Pn	19 14 46.1	-2.9
FOZ	**Fox Glacier**	**6.31**	**219**	P	Pn	19 14 51.0	-3.3
LBZ	**Lake Benmore**	**6.81**	**212**	P	Pn	19 14 57.6	-3.1
ODZ	**Otahua Downs**	**7.18**	**207**	P	Pn	19 15 03.2	-2.1
JCZ	**Jackson Bay**	**7.22**	**220**	P	Pn	19 15 02.4	-3.6
WKZ	**Wanaka**	**7.67**	**215**	P	Pn	19 15 07.6	-4.0
MSZ	**Milford Sound**	**8.08**	**220**	P	Pn	19 15 14.5	-2.3
MLZ	**Mavora Lakes**	**8.49**	**216**	P	Pn	19 15 20.2	-2.0
WHZ	**Wether Hill Ro**	**8.97**	**215**	P	Pn	19 15 25.3	-3.0

*IDC **09** 19:21:43.5±4.2,5.66S×152.55E, h49km±33km, mb3.0/3, mb1 3.4/4, mb1mx3.1/37, mbtmp3.4/4, ML1.6/1, Error ellipse: s-maj=50.0km s-min=13.4km az=106.0*

ISC 09 19:21:42.0±2.2,5.67S±0.09×152.7E±0.2, h40km, n6, σ1§19/8, mb3.0/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.49**	**335**	P	**Pn**	**19 22 06.0**	**-0.3**
	46nm,0.3s,baz=161,slow=1.2,SNR=135						
KRVT				S	**Sn**	**19 22 25.2**	**+0.7**
	98nm,0.3s,baz=352,slow=22,SNR=30						
PMG	**Port Moresby**	**6.59**	**235**	P	**Pn**	**19 23 16.8**	**+0.5**
	0.8nm,0.3s,baz=307,slow=23,SNR=2.1						
PMG				S	**Sn**	**19 24 29.3**	**-1.0**
	1.0nm,0.3s,baz=169,slow=17,SNR=2.2						
WRA	**Warramunga Arr**	**22.77**	**230**	P	**P**	**19 26 41.8**	**+0.6**
	0.4nm,0.7s,baz=55,slow=10,SNR=2.2						
ASAR	**Alice Springs**	**25.41**	**223**	P	**P**	**19 27 07.7**	**+1.6**
	0.3nm,0.8s,baz=53,slow=9.5,SNR=4.8						
FITZ	**Fitzroy Crossi**	**29.12**	**243**	P	**P**	**19 27 38.6**	**-0.7**
	1.0nm,0.7s,baz=57,slow=8.8,SNR=1.8						
TORD	**Torodi Ar. Bea**	**150.42**	**287**	PKPbc	**PKPbc**	**19 41 28.9**	**-1.3**
	0.6nm,0.9s,baz=77,slow=1.7,SNR=2.5						

*SJA **09** 19:39:07.0±0.8,33.44S×72.48W, h16km±7km, ML3.5, MW3.6*

*GUC **09** 19:39:12.4±0.7,33.59S±0.04×72.28W±0.07, h16km±24km, n24, σ1§21/38, 2C-6D, Off coast of central Chile*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MT01	**Popeta**	**0.90**	**108**	*i* P	**Pn**	**19 39 27.4**	**+0.2**
MT01				*i* S	**Sb**	**19 39 38.2**	**0.0**
MT01				IAML		19 39 39.7	
	comp=E,8μm,0.2s						
MT02	**Curacav**	**1.01**	**71**	⇓*i* P	**Pb**	**19 39 28.6**	**+0.3**
MT02				*i* S	**Sb**	**19 39 40.7**	**-0.7**
ROC1	**El Roble**	**1.22**	**60**	*i* P	**Pn**	**19 39 32.1**	**+0.3**
ROC1				*e*S	**Sn**	**19 39 50.4**	**+2.1**
ROCH	**El Roble**	**1.23**	**60**	⇑*i*P	**Pn**	**19 39 32.1**	**+0.2**
ROCH				*i* S	**Sb**	**19 39 47.2**	**-0.7**
PEL	**Peldehue**	**1.41**	**72**	⇓*i* P	**Pn**	**19 39 34.9**	**+0.7**
PEL				*i* S	**Sn**	**19 39 51.8**	**-0.7**
PEL				IAML		19 39 54.6	
	comp=N,4μm,0.4s						
GO05	**Huala**	**1.44**	**169**	⇑*i* P	**Pb**	**19 39 35.9**	**+0.2**
GO05				*i* S	**Sn**	**19 39 52.9**	**-0.5**
GO05	**Huala**	**1.44**	**169**	*i* P	**Pb**	**19 39 35.9**	**+0.2**
CLCH	**Cerro Calan**	**1.47**	**83**	⇓*i* P	**Pb**	**19 39 36.1**	**0.0**
CLCH				*i* S	**Sn**	**19 39 53.4**	**-0.7**
CLCH				IAML		19 39 59.6	
	comp=E,4μm,0.4s						
MT03	**Universidad Ad**	**1.48**	**87**	*i* P	**Pb**	**19 39 36.2**	**-0.2**
MT03				*i* S	**Sn**	**19 39 53.9**	**-0.5**
VA03	**San Esteban**	**1.67**	**61**	⇓*i* P	**Pn**	**19 39 38.5**	**+0.6**
VA03				*i* S	**Sn**	**19 39 57.8**	**-1.3**
VA03				IAML		19 39 59.3	
	comp=E,4μm,0.2s						
FCH	**Farellones**	**1.68**	**82**	⇓*i* P	**Pn**	**19 39 39.2**	**+1.0**
FCH				*i* S	**Sn**	**19 39 59.1**	**-0.6**
FCH				IAML		19 40 00.5	
	comp=N,5μm,0.2s						
BO02	**Sierra Bellavi**	**1.73**	**134**	*i* P	**Pb**	**19 39 40.1**	**-0.5**
BO02				*i* S	**Sn**	**19 40 00.7**	**+0.3**
BO02				IAML		19 40 03.8	
	comp=E,2μm,0.2s						
LMEL	**Las Melosas**	**1.75**	**99**	⇓*i* P	**Pn**	**19 39 39.9**	**+0.9**
LMEL				*i* S	**Sn**	**19 40 00.4**	**-0.7**
CO02	**Combarbal**	**2.62**	**25**	*i* P	**Pn**	**19 39 51.1

comp=Z,8.7nm,1.3s
WRAB Tennant Creek 26.03 153 P **P** **19 57 50.9 +0.2**
WRAB IAmb IAmb 19 58 00.1
comp=Z,9.4nm,1.4s
WRA Warramunga Arr 26.03 153 P **P** **19 57 50.8 +0.1**
comp=Z,2.0nm,0.3s,baz=329,slow=10,SNR=91
WRA S **S** **20 01 38.3 -2.5**
comp=Z,0.2nm,0.5s,baz=350,slow=29,SNR=1.5
WRA ScP **ScP** **20 03 41.3 +0.1**
comp=Z,0.6nm,0.8s,baz=341,slow=2.8,SNR=4.8
WB2 Warramunga Arr 26.04 153 P **P** **19 57 50.9 +0.1**
WB2 IAmb IAmb 19 57 51.7
comp=Z,4.9nm,0.9s
WR0 Warramunga Arr 26.14 153 P **P** **19 57 51.7 +0.1**
WR0 IAmb IAmb 19 57 52.6
comp=Z,2.5nm,1.0s
COEN Coen 27.00 130 P **P** **19 58 00.4 +1.2**
CMAR Chiang Mai Arr 27.26 305 P **P** **19 58 02.8 +1.3**
comp=Z,0.6nm,0.8s,baz=140,slow=10,SNR=6.8
CHTO Chiang Mai 27.44 306 P **P** **19 58 01.6 -1.4**
CHTO IAmb IAmb 19 58 04.6
comp=Z,2.5nm,1.0s
AS31 Alice Springs 29.17 158 P **P** **19 58 18.8 +0.8**
AS31 IAmb IAmb 19 58 19.9
comp=Z,1.0nm,0.3s
ASAR Alice Springs 29.17 158 P **P** **19 58 18.9 +0.9**
comp=Z,0.9nm,0.5s,baz=333,slow=7,0,SNR=26
ASAR S **S** **20 02 28.2 -1.1**
comp=Z,1.0nm,0.9s,baz=343,slow=20,SNR=7.4
ASAR ScP **ScP** **20 03 50.5 -0.4**
comp=Z,0.4nm,0.5s,baz=300,slow=2.5,SNR=4.4
JNU Nakatsue 30.74 14 P **P** **19 58 30.9 -0.4**
MORW Morawa 32.75 190 P **P** **19 58 49.2 +0.9**
FORT Forrest 34.38 171 P **P** **19 59 03.0 +1.0**
BBOO Buckleboo 38.28 161 P **P** **19 59 35.2 +1.3**
LSA Lhasa 39.39 315 P **P** **19 59 44.6 +1.2**
LSA IAmb IAmb 19 59 46.1
comp=Z,3.9nm,0.7s
STKA Stephens Creek 39.58 154 P **P** **19 59 45.7 +1.4**
comp=Z,0.6nm,0.3s,baz=335,slow=6.3,SNR=7.5
STKA Stephens Creek 39.58 154 P **P** **19 59 45.8 +1.4**
TAPN Taplejung 40.67 309 *eP* **P** **19 59 53.9 +0.4**
comp=Z,5.6nm,0.4s
GTA Gaotai 41.26 333 *eP* **P** **19 59 58.9 +1.2**
GTA pmax pmax
comp=Z,3.0nm,0.6s
RAMN Ramite 41.34 308 *eP* **P** **19 59 59.9 +1.2**
comp=Z,10nm,0.6s
USRK Ussuriysk Ar. 41.62 11 P **P** **20 00 00.3 +0.1**
comp=Z,0.7nm,0.5s,baz=194,slow=8.4,SNR=4.2
JIRN Jiri 41.99 309 *eP* **P** **20 00 04.7 +0.7**
GUN Gumba 42.36 309 *eP* **P** **20 00 07.4 +0.6**
PKI Pulchoki 42.56 308 *eP* **P** **20 00 08.6 +0.2**
PKIN Phulchoki 42.58 308 *eP* **P** **20 00 08.6 +0.2**
KKN Kakani 42.77 308 *eP* **P** **20 00 10.2 +0.4**
DMN Daman 42.82 308 *eP* **P** **20 00 10.9 +0.6**
GKN Gorkha 43.37 308 *eP* **P** **20 00 14.7 +0.3**
KOLN Koldanda 44.08 307 *eP* **P** **20 00 20.7 +0.7**
DANN Dangsing 44.22 308 *eP* **P** **20 00 21.6 +0.5**
comp=Z,18nm,0.6s
PYUN Piuthan 44.71 307 *eP* **P** **20 00 25.7 +0.9**
SONM Songino Array 46.38 345 P **P** **20 00 37.3 +0.3**
comp=Z,1.1nm,0.8s,baz=171,slow=6.9,SNR=5.8
MK31 Makanchi Array 55.37 328 P **P** **20 01 42.3 +0.4**
MKAR Makanchi Array 55.37 328 P **P** **20 01 42.3 +0.4**
comp=Z,1.5nm,0.4s,baz=127,slow=7.9,SNR=29
MKAR PcP **PcP** **20 02 32.6 -0.4**
comp=Z,0.7nm,0.7s,baz=122,slow=4.4,SNR=5.8
MAKZ Makanchi 55.55 327 P **P** **20 01 42.8 -0.3**
MAKZ IAmb IAmb 20 01 43.8
comp=Z,2.1nm,0.5s
KDJ Kajisay 55.69 320 P **P** **20 01 45.4 +1.1**
ARSB Arslanbob 58.04 318 P **P** **20 02 00.9 +0.6**
GAR Garm 58.89 314 P **P** **20 02 06.6 +0.5**
GAR IAmb IAmb 20 02 06.8
comp=Z,5.5nm,0.4s
ZALV Zalesovo Beam 58.96 335 P **P** **20 02 04.2 -1.8**
comp=Z,0.6nm,0.5s,baz=116,slow=5.3,SNR=3.8
KURK Kurchatov 59.70 330 P **P** **20 02 11.3 +0.3**
KURK IAmb IAmb 20 02 11.5
comp=Z,5.0nm,0.5s
KK31 Karatay Array 60.47 319 P **P** **20 02 15.9 -0.4**
KKAR Karatay Array 60.47 319 P **P** **20 02 15.8 -0.5**
SOCY Socotra 67.98 282 P **P** **20 03 02.9 -1.4**
SOCY IAmb IAmb 20 03 08.5
comp=Z,8.2nm,1.2s
FINES FINESS Array B 90.02 331 P **P** **20 04 58.6 -1.0**
comp=Z,1.2nm,0.8s,baz=80,slow=3.1,SNR=4.0
TORD Torodi Ar. Bea 118.70 287 PKP **PKPdf** **20 10 44.3 -0.8**
comp=Z,0.3nm,0.4s,baz=48,slow=1.9,SNR=2.4

MAN 09 19:53:12.8, 16°50N×122°09E, h11km, mb4.7, ML3.6, MS3.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAUP	**Cauayan**	**0.51**	**330**	*eP*	Pg	19 53 22.9	+0.2
CAUP				*eS*	Sn	19 53 33.3	-1.4
BALP	**Baler**	**0.90**	**213**	*eP*	Pg	19 53 29.1	-1.1
BALP				*eS*	Sn	19 53 44.9	+0.5
SMPP	**San Manuel, Pa**	**1.40**	**256**	*eP*	Pn	19 53 37.8	-0.4
SMPP				*eS*	Sg	19 53 58.5	+0.8
APYP	**Conner**	**1.58**	**329**	*eP*	Pn	19 53 40.2	-0.5
APYP				*eS*	Sb	19 54 01.8	-0.1

*DJA **09** 20:00:47.5±1.7, 5°N±9°×9°6E±1°1, h10km, M4.1/8, mB4.8/1, mb4.2/2, MLv4.1/8, Mw(mB)4.0/1*
*IDC **09** 20:00:47.3±3.3, 3°96N×95°52E, h0km, mb3.6/2, mb1 3.8/4, mb1mx3.4/34, mbtmp3.6/4, ML3.7/2, MS2.7/1, Ms1 2.9/1, ms1mx2.5/31, Error ellipse: s-maj=69.7km s-min=43.7km az=57.0*
*NEIC **09** 20:00:49.3±1.5, 4°88N±0°09×95°88E±0°09, h37km±14km, mb4.6/10, Error ellipse: s-maj=15.9km s-min=9.2km az=134.0*
ISC 09 20:00:47.6±1.3, 4°94N±0°09×95°86E±0°09, h29km, n29, σ1s54/28, mb4.5/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.86**	**141**	P	**Pn**	**20 01 01.5**	**-2.3**
LHMI	**Lhok Sumawe**	**1.12**	**75**	P	**Pb**	**20 01 07.8**	**-0.6**
LHMI				S	**Sb**	**20 01 21.7**	**-0.9**
LHMI	**Lhok Sumawe**	**1.12**	**75**		**Pb**	**20 01 08.0**	**-0.4**
KCSI	**Kotacane, Aceh**	**2.37**	**126**	P	**Pb**	**20 01 27.9**	**-1.8**
SNSI	**Sinabang, Aceh**	**2.56**	**169**	P	**Pn**	**20 01 28.0**	**+0.8**
PSI	**Prapat**	**3.73**	**125**	Pn	**Pn**	**20 01 46.3**	**+3.0**
	6.4nm,0.3s,baz=359,slow=11,SNR=26						
PSI				Sn	**Sn**	**20 02 27.5**	**+1.2**
	3.6nm,0.3s,baz=180,slow=16,SNR=1.6						
RPSI	**Rantau Prapat**	**3.79**	**126**		**Pn**	**20 01 46.0**	**+1.9**
RPSI	**Rantau Prapat**	**3.79**	**126**		**Pn**	**20 01 46.3**	**+2.3**
RPSI					**Sn**	**20 02 27.5**	**-0.1**
GSI	**Gunungsitoli**	**4.00**	**155**	P	**Pn**	**20 01 48.2**	**+1.1**
GSI	**Gunungsitoli**	**4.00**	**155**		**Pn**	**20 01 48.1**	**+1.1**
KULM	**Kulim**	**4.79**	**86**		**Pn**	**20 01 58.6**	**+0.8**
IPM	**Ipoh**	**5.17**	**95**		**Pn**	**20 02 03.5**	**+0.3**
MNSI	**Mandailing Nat**	**5.55**	**138**	P	**Pn**	**20 02 12.5**	**+4.2**
CMAR	**Chiang Mai Arr**	**13.77**	**12**	Pn	P	20 04 18.0	+8.8
	0.1nm,0.3s,baz=205,slow=11,SNR=5.6						
CMAR				LR	LR	20 09 35.1	
	comp=Z,30nm,19.0s,baz=130,slow=36						
H08S2	**Diego Garcia H**	**26.45**	**242**	T	T	20 33 26.8	
	baz=61,slow=75,SNR=15						
H08S3	**Diego Garcia H**	**26.45**	**242**	T	T	20 33 25.6	
	baz=61,slow=75,SNR=9.6						
H08S1	**Diego Carcia H**	**26.47**	**242**	T	T	20 33 26.8	
	baz=61,slow=75,SNR=17						
FAKI	**Fak Fak**	**37.19**	**101**	P	**P**	**20 07 56.5**	**-0.1**
FITZ	**Fitzroy Crossi**	**37.24**	**129**		**P**	**20 07 57.1**	**+0.1**
FITZ				IAmb	IAmb	20 08 16.0	
	comp=Z,11nm,1.6s						
MORW	**Morawa**	**38.99**	**151**	P	**P**	**20 08 10.1**	**-1.5**
MORW				IAmb	IAmb	20 09 32.3	
	comp=Z,34nm,1.4s						
MTN	**Manton Dam**	**39.25**	**117**	P	**P**	**20 08 13.1**	**-0.8**
MTN				IAmb	IAmb	20 09 37.5	
	comp=Z,18nm,1.6s						
WB0	**Warramunga Arr**	**45.15**	**124**	P	**P**	**20 09 02.0**	**0.0**
WRA	**Warramunga Arr**	**45.19**	**124**	P	**P**	**20 09 03.6**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=303,slow=9.1,SNR=5.1						
WRAB	**Tennant Creek**	**45.20**	**124**	P	**P**		
WRAB				IAmb	IAmb	20 09 57.9	
	comp=Z,11nm,1.5s						
WB2	**Warramunga Arr**	**45.20**	**124**	P	**P**	**20 09 03.5**	**+1.0**
WB2				IAmb	IAmb	20 09 51.5	
	comp=Z,12nm,1.4s						
WR0	**Warramunga Arr**	**45.37**	**124**	P	**P**	**20 09 04.3**	**+0.5**
WR0				IAmb	IAmb	20 09 12.4	
	comp=Z,6.8nm,1.1s						
AS31	**Alice Springs**	**46.74**	**129**	P	**P**	**20 09 14.4**	**-0.2**
ASAR	**Alice Springs**	**46.74**	**129**	P	**P**	**20 09 16.1**	**+1.5**
	comp=Z,0.7nm,0.4s,baz=300,slow=7.3,SNR=15						
RER	**Riviere de l'E**	**47.12**	**235**	P	**P**	**20 09 17.9**	**+0.3**

*IDC **09** 20:23:16.4±0.8, 13°35N×93°34E, h0km, mb3.9/15, mb1 4.1/16, mb1mx3.9/33, mbtmp3.9/16, ML4.0/1, MS3.3/9, Ms1 3.3/9, ms1mx3.1/39, Error ellipse: s-maj=25.0km s-min=16.5km az=51.0*
*NEIC **09** 20:23:23.8±1.1, 13°49N±0°07×93°51E±0°07, h52km±8km, mb4.3/23, Error ellipse: s-maj=13.7km s-min=1.5km az=136.0*
*NDI **09** 20:23:28.3±9.6, 12°49N×92°47E, h176km±999km*
ISC 09 20:23:22.2±0.6, 13°47N±0°07×93°44E±0°08, h35km, n55, σ0s97/48, mb4.0/23, MS3.3/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.92**	**201**	*eP*	Pn	20 23 55.0	+2.7
PBA				*eS*	Sn	20 24 12.2	-3.1
PBA	**Port Blair**	**1.92**	**201**	*eP*	Pn	20 23 55.3	+2.9
PBA				*eS*	Sn	20 24 13.1	-2.3
PBA	**Port Blair**	**1.92**	**201**		**Pn**	20 23 54.8	+2.4
CM31	**Chiang Mai Arr**	**7.26**	**46**		**Pn**	**20 25 07.0**	**+1.2**
CMAR	**Chiang Mai Arr**	**7.26**	**46**	Pn	**Pn**	**20 25 07.0**	**+1.2**
	0.6nm,0.3s,baz=239,slow=15,SNR=44						
CMAR				Sn	**Sn**	**20 26 26.6**	**-0.4**
	baz=243,slow=20,SNR=1.0						
CHTO	**Chiang Mai**	**7.50**	**44**		**Pn**	**20 25 10.0**	**+0.9**
KULM	**Kulim**	**10.80**	**138**	Pn	**Pn**	**20 25 57.6**	**+3.2**
IPM	**Ipoh**	**11.65**	**139**	Pn	**Pn**	**20 26 05.0**	**-1.1**
PSI	**Prapat**	**11.90**	**152**	LR	LR	20 31 13.8	
	comp=Z,110nm,18.2s,baz=346,slow=40						
RPSI	**Rantau Prapat**	**12.00**	**153**	Pn	**Pn**	**20 26 11.7**	**+0.9**
MYKOM	**Kota Tinggi**	**15.52**	**138**	P	**P**	**20 27 02.6**	**+0.1**
MYKOM				IAmb	IAmb	20 27 06.0	
	comp=Z,18nm,1.1s						
LSA	**Lhasa**	**16.30**	**353**	P	**Pn**	**20 27 10.6**	**+1.8**
ENH	**Enshi**	**22.35**	**39**	P	**P**	**20 28 15.5**	**-1.7**
SMLA	**Simla**	**23.09**	**322**	*eP*	**P**	**20 28 26.0**	**+1.1**
DHRM	**DHARAMSHALA**	**24.41**	**323**	*eP*	P	20 28 27.5	-10
XAN	**Xi'an**	**24.84**	**32**	P	**P**	**20 28 40.5**	**-0.9**
XAN				IAmb	IAmb	20 28 41.8	
	comp=Z,11nm,1.1s						
BTK	**Batken**	**33.12**	**327**	P	**P**	**20 29 55.4**	**+0.3**
BTK				IAmb	IAmb	20 30 14.8	
	comp=Z,5.7nm,1.2s						
AAK	**Ala-Archa**	**33.37**	**334**	P	**P**	**20 29 57.7**	**+0.4**
MK31	**Makanchi Array**	**34.52**	**346**	P	**P**	**20 30 06.5**	**-0.6**
MKAR	**Makanchi Array**	**34.52**	**346**	P	**P**	**20 30 07.2**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=175,slow=7.3,SNR=7.5						
KK31	**Karatay Array**	**35.53**	**331**	P	**P**	**20 30 15.3**	**-0.5**
SONM	**Songino Array**	**35.93**	**15**	P	**P**	**20 30 20.2**	**+0.8**
	comp=Z,2.0nm,0.9s,baz=201,slow=9.0,SNR=11						
ULN	**Ulaanbaatar**	**36.12**	**16**	P	**P**	**20 30 20.7**	**-0.3**
ULN				IAmb	IAmb	20 30 32.6	
	comp=Z,5.5nm,1.4s						
KSRS	**Korea Array**	**38.90**	**46**	P	**P**	**20 30 43.9**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=242,slow=9.3,SNR=13						
TLY	**Talaya**	**39.00**	**10**	P	**P**	**20 30 46.9**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=240,slow=5.5,SNR=3.9						
TLY	**Talaya**	**39.00**	**10**	P	**P**	**20 30 44.4**	**-0.8**
TLY				IAmb	IAmb	20 30 47.8	
	comp=Z,5.2nm,1.3s						
KURK	**Kurchatov**	**39.06**	**345**	P	**P**	**20 30 45.0**	**-0.6**
KURK				IAmb	IAmb	20 31 05.1	
	comp=Z,5.8nm,1.6s						
GEYT	**Alibeck**	**39.71**	**314**	P	**P**	**20 30 52.2**	**+1.0**
	comp=Z,1.3nm,0.6s,baz=139,slow=7.9,SNR=3.7						
GEYT				LR	LR	20 49 21.3	
	comp=Z,34nm,19.0s,baz=165,slow=39						
GYA0B	**ALIBECK ARRAY**	**39.71**	**314**	P	**P**	**20 30 51.5**	**+0.2**
GYA0B				IAmb	IAmb	20 31 13.8	
	comp=Z,6.2nm,1.1s						
ZAA0	**Zalesovo Array**	**40.96**	**352**	P	**P**	**20 30 60.0**	**-1.3**
ZALV	**Zalesovo Beam**	**40.96**	**352**	P	**P**	**20 31 01.2**	**-0.1**
	comp=Z,2.3nm,0.9s,baz=170,slow=11,SNR=8.9						
ZALV				LR	LR	20 51 22.9	
	comp=Z,42nm,18.9s,baz=337,slow=41						
FITZ	**Fitzroy Crossi**	**44.64**	**134**	P	**P**	**20 31 30.4**	**-1.2**
FITZ				IAmb	IAmb	20 31 32.9	
	comp=Z,6.8nm,1.3s						
USRK	**Ussuriysk Ar.**	**44.93**	**39**	LR	LR	20 54 22.3	
	comp=Z,48nn,18.6s,baz=300,slow=41						
MJAR	**Matsushiro Arr**	**46.10**	**52**	LR	LR	20 55 04.3	
	comp=Z,33nn,18.5s,baz=260,slow=41						
WB0	**Warramunga Arr**	**52.11**	**129**	P	**P**	**20 32 28.6**	**-0.7**
WB0				IAmb	IAmb	20 32 41.6	
	comp=Z,7.6nm,1.4s						
WRA	**Warramunga Arr**	**52.17**	**129**	P	**P**	**20 32 29.0**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=306,slow=8.2,SNR=11						
WB2	**Warramunga Arr**	**52.18**	**129**	P	**P**	**20 32 29.1**	**-0.7**
WR0	**Warramunga Arr**	**52.33**	**129**	P	**P**	**20 32 30.1**	**-0.8**
WR0				IAmb	IAmb	20 32 31.3	
	comp=Z,3.3nm,0.9s						
ASAR	**Alice Springs**	**54.11**	**133**	P	**P**	**20 32 43.6**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=312,slow=6.9,SNR=27						
ASAR				PcP	**PcP**	**20 33 48.1**	**-0.4**
	comp=Z,0.7nm,0.9s,baz=323,slow=4.2,SNR=4.3						
BRTR	**Keskin Array B**	**58.35**	**308**	LR	LR	21 00 28.8	
	comp=Z,15nn,19.8s,baz=340,slow=38						
TIXI	**Tiksi**	**61.93**	**12**	P	**P**	**20 33 37.0**	**-0.9**
PETK	**Petropavlovsk-**	**63.94**	**37**	LR	LR	21 07 08.8	
	comp=Z,28nn,18.8s,baz=244,slow=41						
FIA1	**FINESS Array S**	**67.49**	**331**	P	**P**	**20 34 14.1**	**-0.3**
FINES	**FINESS Array B**	**67.49**	**331**	P	**P**	**20 34 13.7**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=106,slow=6.1,SNR=11						
FINES				LR	LR	21 06 14.2	
	comp=Z,35nn,18.7s,baz=156,slow=38						
ARCES	**ARCESS Array B**	**69.81**	**340**	P	**P**	**20 34 28.8**	**0.0**
	comp=Z,0.7nm,0.6s,baz=88,slow=6.2,SNR=3.7						
GERES	**GERESS Array B**	**73.25**	**317**	P	**P**	**20 34 50.0**	**0.0**
	comp=Z,1.3nm,0.8s,baz=86,slow=5.5,SNR=13						
NC602	**NORSAR Array S**	**74.40**	**330**	P	**P**	**20 34 56.0**	**-0.3**
NB2	**NORSAR Subarra**	**74.56**	**330**	P	**P**	**20 34 56.6**	**-0.8**
	comp=Z,1.1nm,1.0s,baz=89,slow=5.9						
NOA	**NORSAR Array B**	**74.56**	**330**	P	**P**	**20 34 56.5**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=90,slow=5.7,SNR=7.3						
NOA				LR	LR	21 10 48.2	
	comp=Z,11nn,20.7s,baz=100,slow=38						
ESDC	**Sonseca Array**	**87.11**	**310**	P	**P**	**20 36 03.6**	**-1.2**
	comp=Z,0.4nm,0.8s,baz=76,slow=5.4,SNR=4.8						
TORD	**Torodi Ar. Bea**	**88.66**	**283**	P	**P**	**20 36 12.8**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=54,slow=3.3,SNR=4.6						
BPAW	**Bear Paw Mtn.**	**88.66**	**23**	P	**P**	**20 36 12.4**	**+0.8**
ILAR	**Eielson Array**	**89.85**	**22**	P	**P**	**20 36 16.7**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=286,slow=4.1,SNR=4.2						
PDAR	**Pinedale Array**	**120.19**	**19**	PKP	**PKPdf**	**20 42 10.3**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=9.5,slow=2.2,SNR=2.4						
TXAR	**Lajitas Array**	**134.36**	**21**	PKP	**PKiKP**	**20 42 39.2**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=201,slow=0.8,SNR=2.4						

*ISK **09** 20:24:49.6, 34°37N×32°30E, h15km, ML2.5/7*
*NIC **09** 20:24:50.9±0.0, 34°49N×32°09E, h29km±1km, Ml2.6/3*
ISC 09 20:24:50.5±1.7, 34°43N±0°05×32°16E±0°08, h25km±15km, n16, σ0s87/24, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.60**	**14**	P	**Pb**	**20 25 02.4**	**-0.1**
AKMS				S	**Sn**	**20 25 11.7**	**-0.8**
AKMS				AML	AML	20 25 11.9	
	1.6nm,0.4s						
AKMS				AML	AML	20 25 11.9	
	1.6nm,0.4s						
AKMS				AML	AML	20 25 12.4	
	0.7nm,0.3s						
AKMS				AML	AML	20 25 12.4	
	0.7nm,0.3s						
SZAC	**Souni**	**0.68**	**61**	P	**Pn**	**20 25 03.9**	**-0.7**
SZAC				AML	AML	20 25 14.9	
	1.8nm,0.2s						
SZAC				AML	AML	20 25 14.9	
	1.8nm,0.2s						
SZAC				AML	AML	20 25 15.0	
	1.0nm,0.2s						
SZAC				S	**Sn**	**20 25 15.2**	**+0.8**
ALFC	**Alefka**	**0.81**	**26**	P	**Pb**	**20 25 05.8**	**-0.2**
ALFC				S	**Sn**	**20 25 16.9**	**-0.8**
ALFC				AML	AML	20 25 20.2	
	0.9nm,0.4s						
ALFC				AML	AML	20 25 20.2	
	0.9nm,0.4s						
LEF	**Lefka**	**0.91**	**41**	PG	**Pb**	**20 25 06.8**	**-0.9**
LEF				SG	**Sn**	**20 25 19.5**	**-0.6**
ASGA	**Asgata**	**0.97**	**68**	P	**Pb**	**20 25 07.9**	**-0.7**
ASGA				S	**Sn**	**20 25 22.0**	**+0.5**
CSS	**Mathiatis**	**1.10**	**61**	PG	**Pn**	**20 25 10.1**	**-0.3**
CSS				SG	**Sn**	**20 25 24.7**	**-0.1**
CSS	**Mathiatis**	**1.10**	**61**	P	**Pn**	**20 25 10.0**	**-0.3**
CSS				S	**Sn**	**20 25 25.4**	**+0.5**
MVOU	**Mavrovouni**	**1.35**	**64**	P	**Pn**	**20 25 13.8**	**+0.1**
MVOU				S	**Sb**	**20 25 33.3**	**+1.4**
OSC2	**CSNet OBS 4**	**1.35**	**176**	P	**Pb**	**20 25 14.8**	**-0.4**
TEKE	**Tekeli-Mersin**	**1.88**	**24**	PN	**Pb**	**20 25 22.4**	**-1.8**
AKKU	**Akkuyu-Mersin**	**2.07**	**33**	PN	**Pn**	**20 25 24.6**	**+1.0**
BERE	**Bereket-Mersin**	**2.10**	**24**	PN	**Pn**	**20 25 24.8**	**+0.5**
IKL	**Isikli**	**2.19**	**34**	PN	**Pn**	**20 25 26.5**	**+1.1**
TEVE	**Tevekalti-Mers**	**2.26**	**27**	PN	**Pn**	**20 25 27.7**	**+1.3**
KEBE	**Keben-Mersin**	**2.38**	**32**	PN	**Pn**	**20 25 28.7**	**+0.7**
MMLI	**Mount Malkishu**	**3.38**	**125**	PN	**Pn**	**20 25 41.7**	**0.0**

WEL 09 20:44:07.7, 39°S±4°×17°9E±°, h33km, M3.6/29, ML3.9/29, MLv3.6/29, Error ellipse: s-maj=0.0km s-min=0.0km az=2.1, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MHGZ	**Mahia Peninsul**	**0.52**	**260**	P	Pn	20 44 19.3	+0.5
MHGZ				S	Sn	20 44 28.8	+2.2
PRGZ	**Paritu Road**	**0.56**	**285**	P	Pn	20 44 19.0	-0.2
PRGZ				S	Sn	20 44 27.4	+0.1
CNGZ	**Carnagh Statio**	**0.65**	**334**	P	Pn	20 44 20.4	-0.1
KNZ	**Kokohu**	**0.70**	**273**	P	Pn	20 44 21.1	-0.1
RIGZ	**Rimuhau**	**0.73**	**299**	P	Pn	20 44 21.6	0.0
RIGZ				S	Sb	20 44 32.4	+0.6
TKGZ	**Te Karaka**	**0.84**	**318**	P	Pn	20 44 22.9	-0.2
TKGZ				S	Sn	20 44 33.5	-0.8
SNGZ	**Shannon Statio**	**1.00**	**286**	P	Pn	20 44 25.6	+0.2
PUZ	**Puketiti**	**1.02**	**346**	P	Pn	20 44 25.2	-0.5
PUZ				S	Sn	20 44 37.5	-1.4
WHHZ	**Waihua**	**1.04**	**269**	P	Pb	20 44 26.9	-0.3
RAGZ	**Rawiri**	**1.07**	**302**	P	Pn	20 44 26.2	-0.2
RAGZ				S	Sn	20 44 39.3	-0.8
MWZ	**Matawai**	**1.09**	**311**	P	Pn	20 44 26.4	-0.3
MWZ				S	Sn	20 44 39.0	-1.7
RAHZ	**Arahi**	**1.17**	**277**	P	Pn	20 44 28.1	+0.5
RAHZ				S	Sn	20 44 42.8	+0.3
PKGZ	**Pakihiroa**	**1.24**	**342**	P	Pn	20 44 28.7	0.0
PKGZ				S	Sn	20 44 43.8	-0.5
ARHZ	**Aropaoanui**	**1.24**	**260**	P	Pb	20 44 29.7	-0.8
WMGZ	**Waiomatatini S**	**1.25**	**354**	P	Pn	20 44 28.9	+0.1
WMGZ				S	Sn	20 44 45.4	+0.9
CKHZ	**Cape Kidnapper**	**1.30**	**242**	P	Pn	20 44 30.4	+0.9
RUGZ	**Raukumara Rang**	**1.30**	**327**	P	Pn	20 44 29.2	-0.4
RTZ	**Ruatahuna**	**1.32**	**289**	P	Pn	20 44 29.9	0.0
MTHZ	**Maungataniwha**	**1.36**	**278**	P	Pn	20 44 30.8	+0.3
NMHZ	**Naumai**	**1.37**	**268**	P	Pn	20 44 31.5	+0.9
URZ	**Urewera**	**1.40**	**305**	P	Pn	20 44 30.9	+0.1
HAZ	**Te Kaha**	**1.45**	**334**	P	Pn	20 44 31.4	0.0
KAHZ	**Kahuranaki**	**1.50**	**240**	P	Pn	20 44 33.2	+0.9
MCHZ	**McNeill Hill**	**1.50**	**255**	P	Pn	20 44 33.4	+1.1
MXZ	**Matakaoa Point**	**1.52**	**352**	P	Pn	20 44 32.7	+0.3
MUGZ	**Murupara**	**1.52**	**292**	P	Pn	20 44 32.9	+0.3
BKZ	**Black Stump Fm**	**1.62**	**266**	P	Pn	20 44 34.6	+0.6
PXZ	**Pawanui**	**1.64**	**233**	P	Pn	20 44 34.4	+0.3
MRHZ	**Matea Rd**	**1.69**	**277**	P	Pn	20 44 36.3	+1.3
KWHZ	**Kaweka Forest**	**1.71**	**257**	P	Pn	20 44 35.9	+0.8
RRRZ	**Republican Roa**	**1.77**	**294**	P	Pn	20 44 37.3	+1.4
KRHZ	**Kereru**	**1.80**	**251**	P	Pn	20 44 37.1	+0.6
TARZ	**Mount Tarawera**	**1.82**	**296**	P	Pn	20 44 38.0	+1.3
MARZ	**Manawahe**	**1.84**	**305**	P	Pn	20 44 38.3	+1.4
PRHZ	**Porangahau**	**1.92**	**231**	P	Pn	20 44 38.4	+0.4
WPHZ	**Waipukurau**	**1.93**	**238**	P	Pn	20 44 39.0	+0.9
BHHZ	**Black Hill Sta**	**1.99**	**257**	P	Pn	20 44 39.8	+0.7
PNHZ	**Pukenui**	**2.02**	**244**	P	Pn	20 44 40.0	+0.5
KARZ	**Kaharoa**	**2.10**	**299**	P	Pn	20 44 41.5	+0.9
RITZ	**Rihia Road**	**2.12**	**272**	P	Pn	20 44 42.2	+1.4
MOVZ	**Moawhango**	**2.21**	**260**	P	Pn	20 44 43.6	+1.5
DVHZ	**Dannevirke**	**2.23**	**236**	P	Pn	20 44 42.4	+0.1
KATZ	**Kakaramea**	**2.24**	**271**	P	Pn	20 44 43.9	+1.3
TSZ	**Takapari Road**	**2.25**	**243**	P	Pn	20 44 42.8	+0.2
KRVZ	**Karewarewa**	**2.28**	**268**	P	Pn	20 44 44.6	+1.5
NGZ	**Ngauruhoe**	**2.31**	**266**	P	Pn	20 44 45.1	+1.5
WTVZ	**West Tongariro**	**2.32**	**268**	P	Pn	20 44 45.3	+1.6

AKASG	**Malin Array Be**	**147.61**	**331**	PKPbc	**PKPbc**	**21 15 17.2**	**-1.0**
	0.4nm,0.4s,baz=32,slow=3.9,SNR=6.0						
BRG	**Berggiesshubel**	**152.52**	**348**	*e*PKP	**PKiKP**	**21 15 30.7**	**+0.3**
	3.0nm,0.7s						

*IDC **09** 20:56:06.9±1.3, 10°.19S×124°.18E, h0km, mb4.0/2, mb1 3.9/5, mb1mx3.6/33, mbtmp3.8/5, ML3.5/3, Error ellipse: s-maj=25.9km s-min=10.2km az=177.0*
*NEIC **09** 20:56:09.3±2.7, 10°.53S±0°.05×123°.80E±0°.09, h19km±6km, mb4.3/3, Error ellipse: s-maj=12.5km s-min=7.6km az=80.0*
ISC 09 20:56:08.3±0.7, **10°.60S**±0°.06×**123°.83E**±0°.08, **h10**km, **n18, σ2^{s}72/24, mb4.4/4, Timor region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BATI	**Baumata**	**0.42**	**338**	Pg		**Pg**	**20 56 16.4**	**-0.2**
	340nm,0.3s,baz=207,slow=3.6,SNR=284							
BATI				Lg		Lg	20 56 24.2	
	1μm,0.3s,baz=46,slow=21,SNR=15							
BATI				LR		LR	20 56 41.5	
	comp=Z,564nm,18.7s,baz=80,slow=67							
KNRA	**Kununurra**	**6.97**	**137**			**Pn**	**20 57 54.6**	**+4.1**
MTN	**Manton Dam**	**7.49**	**108**	Pn		**Pn**	**20 57 59.2**	**+1.4**
FITZ	**Fitzroy Crossi**	**6.66**	**167**	Pn		**Pn**	**20 58 04.1**	**+4.1**
	0.3nm,0.3s,baz=353,slow=9.8,SNR=50							
FITZ				Sn		**Sn**	**20 59 26.9**	**+0.1**
	1.5nm,0.3s,baz=181,slow=4.8,SNR=12							
FITZ	**Fitzroy Crossi**	**7.66**	**167**			**Pn**	**20 58 03.2**	**+3.3**
FITZ						**Sn**	**20 59 27.3**	**+0.5**
JAGI	**Jajag, Banyuwa**	**9.77**	**282**	Pn		**Pn**	**20 58 26.5**	**-2.5**
FAKI	**Fak Fak**	**11.32**	**48**	Pn		**Pn**	**20 58 54.0**	**+3.8**
WB0	**Warramunga Arr**	**13.67**	**133**	Pn		**Pn**	**20 59 23.7**	**+1.3**
WRA	**Warramunga Arr**	**13.74**	**134**	Pn		**Pn**	**20 59 23.8**	**+0.4**
	0.3nm,0.3s,baz=310,slow=15,SNR=18							
WRA				Sn		**Sn**	**21 01 50.6**	**-5.6**
	0.3nm,0.3s,baz=112,slow=31,SNR=5.6							
WRAB	**Tennant Creek**	**13.74**	**134**	Pn		**Pn**	**20 59 22.6**	**-0.8**
WRAB				Sn		**Sn**	**21 01 53.7**	**-2.5**
WB2	**Warramunga Arr**	**13.75**	**134**	Pn		**Pn**	**20 59 24.8**	**+1.3**
WR0	**Warramunga Arr**	**13.90**	**133**	Pn		**Pn**	**20 59 26.9**	**+1.4**
WR0						**Sn**	**21 01 56.5**	**-3.5**
AS31	**Alice Springs**	**16.16**	**145**			**Pn**	**20 59 57.3**	**+1.6**
AS31				IAmb		IAmb	21 00 00.3	
	comp=Z,0.9nm,0.9s							
ASAR	**Alice Springs**	**16.16**	**145**	Pn		**Pn**	**20 59 58.2**	**+2.6**
	comp=Z,0.2nm,0.3s,baz=318,slow=12,SNR=19							
ASAR				Sn		**Sn**	**21 02 50.8**	**-4.3**
	comp=Z,0.3nm,0.3s,baz=310,slow=21,SNR=10							
BBOO	**Buckleboo**	**24.81**	**155**	P		**P**	**21 01 29.7**	**-0.9**
BBOO				IAmb		IAmb	21 01 59.5	
	comp=Z,23nm,1.4s							
MKAR	**Makanchi Array**	**68.11**	**331**	P		**P**	**21 07 07.9**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=138,slow=8.0,SNR=12							
ZALV	**Zalesovo Beam**	**72.29**	**337**	P		**P**	**21 07 32.4**	**-1.5**
	comp=Z,1.3nm,0.8s,baz=123,slow=5.5,SNR=7.1							
SOCY	**Socotra**	**72.96**	**286**	P		**P**	**21 07 39.1**	**+0.4**
SOCY				IAmb		IAmb	21 08 08.3	
	comp=Z,8.0nm,1.2s							

*IDC **09** 21:00:25.5±7.4, 7°.20S×155°.05E, h137km±46km, mb3.2/4, mb1 3.4/5, mb1mx3.2/32, mbtmp3.6/5, Error ellipse: s-maj=77.0km s-min=29.3km az=93.0*
ISC 09 21:00:22.0±1.0, **7°.4S**±0°.2×**155°.1E**±0°.1, **h100**km, **n7, σ1^{s}94/8, mb3.3/4, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**4.35**	**315**	P		**Pn**	**21 01 28.5**	**+2.5**
	5.7nm,0.3s,baz=285,slow=11,SNR=3.5							
KRVT				S		**Sn**	**21 02 15.7**	**0.0**
	5.0nm,0.3s,baz=104,slow=21,SNR=1.8							
HNR	**Honiara**	**5.20**	**113**	S		**Sn**	**21 02 37.5**	**+1.3**
	baz=204,slow=18,SNR=1.0							
WRA	**Warramunga Arr**	**23.65**	**236**	P		**P**	**21 05 25.5**	**+0.9**
	0.7nm,0.5s,baz=63,slow=9.0,SNR=1.3							
ASAR	**Alice Springs**	**25.96**	**229**	P		**P**	**21 05 46.5**	**+1.0**
	0.3nm,0.3s,baz=59,slow=9.5,SNR=4.4							
CMAR	**Chiang Mai Arr**	**61.06**	**296**	P		**P**	**21 10 24.9**	**-0.9**
	0.8nm,0.9s,baz=115,slow=6.0,SNR=4.8							
MKAR	**Makanchi Array**	**83.80**	**319**	P		**P**	**21 12 38.1**	**-2.3**
	0.3nm,0.7s,baz=107,slow=5.0,SNR=2.9							
TORD	**Torodi Ar. Bea**	**153.23**	**284**	PKPbc		**PKPbc**	**21 20 07.7**	**-1.6**
	0.2nm,0.7s,baz=62,slow=2.2,SNR=1.6							

*NEIC **09** 21:09:55.6±1.7, 20°.23S±0°.03×70°.45W±0°.08, h37km±14km, Error ellipse: s-maj=11.5km s-min=4.3km az=94.0*
*GUC **09** 21:09:55.5±0.8, 20°.19S×70°.43W, h34km±2km, ML4.1*
ISC 09 21:09:55.6±1.1, **20°.21S**±0°.03×**70°.45W**±0°.07, **h30**km±7km, **n34, σ1^{s}18/49, 1C-8D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.30**	**102**	*e*P		**Pb**	**21 10 03.1**	**+0.1**
TA02				*i* S		**Sb**	**21 10 08.3**	**+0.1**
TA02				IAML			21 10 08.7	
	comp=E,43μm,0.1s							
TA01	**Diego Aracena**	**0.43**	**145**	↓*i*P		**Pb**	**21 10 05.0**	**0.0**
TA01				*i* S		**Sb**	**21 10 11.3**	**-0.1**
TA01	**Diego Aracena**	**0.43**	**145**			**Pb**	**21 10 05.0**	**0.0**
TA01				Sg		**Sb**	**21 10 11.3**	**-0.1**
PATCX	**Punta Patache**	**0.67**	**156**	↓*i*P		**Pn**	**21 10 08.4**	**-0.7**
PATCX				*e*S		**Sb**	**21 10 18.0**	**+0.1**
PATCX	**Punta Patache**	**0.67**	**156**			**Pn**	**21 10 08.3**	**-0.7**
PSGC	**Pisagua**	**0.68**	**27**	*i* P		**Pn**	**21 10 08.4**	**-0.8**
PSGC				*i* S		**Sb**	**21 10 17.6**	**-0.5**
PSGCX	**Pisagua**	**0.68**	**27**	Pn		**Pn**	**21 10 08.5**	**-0.7**
PSGCX				Sn		**Sb**	**21 10 17.6**	**-0.6**
PB11	**IPOC Station P**	**0.86**	**59**	↓*i*P		**Pn**	**21 10 11.3**	**-0.5**
PB11				*i* S		**Sn**	**21 10 22.8**	**-0.7**
PB11				IAML			21 10 23.0	
	comp=N,11μm,0.4s							
PB11	**IPOC Station P**	**0.86**	**59**			**Pn**	**21 10 10.9**	**-0.9**
PB08	**IPOC Station P**	**1.22**	**87**	↓*i*P		**Pn**	**21 10 17.0**	**+0.1**
PB08				*i* S		**Sn**	**21 10 32.3**	**-0.2**
PB08	**IPOC Station P**	**1.22**	**87**			**Pn**	**21 10 17.6**	**-0.2**
PB02	**IPOC Station P**	**1.22**	**155**	↓*i*P		**Pn**	**21 10 16.8**	**+0.1**
PB02				*e*S		**Sn**	**21 10 32.1**	**-0.2**
PB02				IAML			21 10 35.2	
	comp=E,5μm,0.6s							
PB01	**IPOC Station P**	**1.22**	**133**	↓*i*P		**Pn**	**21 10 16.6**	**-0.1**
PB01				*e*S		**Sn**	**21 10 32.0**	**-0.3**
PB01				IAML			21 10 35.8	
	comp=E,7μm,0.3s							
PB01	**IPOC Station P**	**1.22**	**133**			**Pn**	**21 10 16.5**	**-0.2**
GO01	**Chusmiza**	**1.29**	**66**			**Pn**	**21 10 18.2**	**+0.2**
MNMC	**Minye Minye**	**1.34**	**37**	↑*i*P		**Pn**	**21 10 19.0**	**+0.5**
MNMC				*e*S		**Sn**	**21 10 36.0**	**+0.7**
MNMC				IAML			21 10 41.1	
	comp=E,6μm,0.3s							
MNMC	**Minye Minye**	**1.34**	**37**			**Pn**	**21 10 18.9**	**+0.5**
PB12	**IPOC Station P**	**1.59**	**4**	↓*i*P		**Pn**	**21 10 22.4**	**+0.6**
PB12				*e*S		**Sn**	**21 10 43.0**	**+1.6**
PB12	**IPOC Station P**	**1.59**	**4**			**Pn**	**21 10 22.4**	**+0.6**
PB07	**IPOC Station P**	**1.60**	**161**	↓*i*P		**Pn**	**21 10 22.7**	**+0.7**
PB07				*e*S		**Sn**	**21 10 44.2**	**+2.4**
PB07	**IPOC Station P**	**1.60**	**161**			**Pn**	**21 10 22.5**	**+0.5**
AP01	**Chacalluta**	**1.83**	**3**	Pn		**Pn**	**21 10 24.7**	**-0.2**
PB09	**IPOC Station P**	**1.94**	**145**	*i* P		**Pn**	**21 10 28.7**	**+2.1**
PB09				*e*S		**Sb**	**21 10 53.5**	**-0.8**
PB09	**IPOC Station P**	**1.94**	**145**			**Pn**	**21 10 27.6**	**+0.9**
PB16	**IPOC Station P**	**2.06**	**26**			**Pn**	**21 10 28.1**	**-0.5**
PB04	**IPOC Station P**	**2.13**	**173**			**Pn**	**21 10 29.3**	**-0.1**
PB06	**IPOC Station P**	**2.62**	**162**			**Pn**	**21 10 36.3**	**+0.3**
PB15	**IPOC Station P**	**3.12**	**163**			**Pn**	**21 10 42.4**	**-0.5**
PB10	**IPOC Station P**	**3.29**	**182**			**Pn**	**21 10 44.3**	**-0.8**
PB14	**IPOC Station P**	**4.40**	**180**			**Pn**	**21 10 59.0**	**-1.6**
LPAZ	**La Paz**	**4.48**	**30**			**Pn**	**21 11 01.7**	**-0.2**
GSC	**Goldstone, Bar**	**70.57**	**321**			pP	21 21 18.7	+1.6
KSH	**Kashi**	**145.37**	**49**	PKPbc		**PKPbc**	**21 29 28.4**	**-2.4**
KSH				pPKP		pPKPdf	21 29 42.1	+1.5
KSH				PP		**PP**	**21 32 55.7**	**+5.0**
KSH				AMB		AMB		
	comp=Z,150nm,5.9s							
LZH	**Lanzhou**	**163.40**	**16**	*e*PKP		**PKPdf**	**21 29 53.3**	**-2.6**
LZH				pPKP		pPKPdf	21 30 04.8	-0.8
LZH				sPKP			21 30 08.5	
LZH				PKP		**PKPab**	**21 30 46.7**	**0.0**

KRSC 09 21:40:48.0±1.6, **49°.17N×156°.44E, h16**km±22km, **ML3.8, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.53**	**352**	*e*P		Pn	21 41 14.7	0.0
SKR				*e*S		Sn	21 41 34.4	+0.2
ALID	**Alaid**	**1.80**	**342**	*e*P		Pn	21 41 18.3	-0.2
ALID				*e*S		Sb	21 41 42.4	-0.6
PAU	**Pauzhetka**	**2.31**	**6**	*e*P		Pb	21 41 27.5	-1.8
PAU				*e*S		Sb	21 41 56.3	-1.4
KDTR	**Khodutka, Kamc**	**2.84**	**21**	*e*P		Pn	21 41 35.0	+2.3
KDTR				*e*S		Sb	21 42 09.8	-3.1
MIPR	**Malaya Ipel'ka**	**3.12**	**4**	*e*P		Pn	21 41 38.5	+2.0
ASAK	**Asacha**	**3.35**	**16**	*e*P		Pb	21 41 43.5	-3.6
MTVR	**Mutnovka**	**3.50**	**18**	*e*P		Pb	21 41 46.2	-3.4
MTVR				*e*S		Sb	21 42 28.0	-3.9
RUS	**Russkaya**	**3.52**	**21**	*e*P		Pn	21 41 44.5	+2.5
RUS				*e*S		Sn	21 42 25.7	+2.3
GRL	**Gorelyy**	**3.54**	**16**	*e*P		Pn	21 41 46.3	+3.9
KRMR	**Karymshinskiy**	**3.82**	**16**	*e*P		Pn	21 41 49.9	+3.8
UGLR	**Uglovaya**	**4.32**	**19**	*e*P		Pn	21 41 58.0	+5.0
AVH	**Avacha**	**4.35**	**19**	*e*P		Pn	21 41 58.4	+4.9
KOK	**Koryaka**	**4.36**	**18**	*e*P		Pb	21 41 59.0	-5.2
SMAR	**Somma**	**4.36**	**19**	*e*P		Pn	21 41 57.9	+4.1
SDLR	**Sedlovina**	**4.39**	**20**	*e*P		Pn	21 41 57.9	+3.8
KRX	**Arik**	**4.42**	**17**	*e*P		Pn	21 41 59.5	+5.0
SPN	**Mys Shipunski**	**4.54**	**28**	*e*P		Pn	21 42 00.1	+4.1
SPN				*e*S		Sn	21 42 53.1	+4.8
KBTR	**Krutoberegovo**	**8.04**	**26**	*e*P		Pn	21 42 48.7	+4.6

*SJA **09** 21:43:14.2±0.6, 23°.33S×69°.32W, h79km±2km, ML3.5, MW3.5*
*GUC **09** 21:43:15.2±0.7, 23°.33S×69°.38W, h76km±3km, ML3.3*
ISC 09 21:43:16.0±1.4, **23°.35S**±0°.03×**69°.38W**±0°.07, **h74**km±8km, **n28, σ0^{s}85/45, 4C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**0.16**	**328**	↓*i*P		**Pn**	**21 43 27.1**	**-0.2**
PB15				*i* S		**Sn**	**21 43 35.8**	**+0.3**
PB15	**IPOC Station P**	**0.16**	**328**	*i* P		**Pn**	**21 43 27.1**	**-0.2**
PB15				*e*S		**Sn**	**21 43 35.9**	**+0.3**
PB15				IAML			21 43 37.1	
	comp=Z,13μm,0.3s							
PB06	**IPOC Station P**	**0.66**	**344**	↓*i*P		**Pn**	**21 43 30.6**	**-0.4**
PB06				*i* S		**Sn**	**21 43 42.0**	**-0.1**
PB06				IAML			21 43 43.4	
	comp=E,3μm,0.1s							
PB06	**IPOC Station P**	**0.66**	**344**	*i* P		**Pn**	**21 43 30.7**	**-0.4**
PB06				*e*S		**Sn**	**21 43 42.1**	**0.0**
PB06				IAML			21 43 43.2	
	comp=Z,1μm,0.1s							
PB05	**IPOC Station P**	**0.91**	**303**	↓*i*P		**Pn**	**21 43 33.3**	**-0.4**
PB05				*i* S		**Sn**	**21 43 46.9**	**0.0**
PB05				IAML			21 43 51.6	
	comp=E,616nm,0.2s							
PB05	**IPOC Station P**	**0.91**	**303**	*i* P		**Pn**	**21 43 33.4**	**-0.4**
PB05				IAML			21 43 52.6	
	comp=Z,345nm,0.3s							
PB10	**IPOC Station P**	**1.09**	**261**	↑*i*P		**Pn**	**21 43 36.0**	**+0.1**
PB10				*i* S		**Sn**	**21 43 50.8**	**0.0**
PB10				IAML			21 43 56.6	
	comp=N,903nm,0.3s							
PB10	**IPOC Station P**	**1.09**	**261**	*i* P		**Pn**	**21 43 36.0**	**+0.1**
PB10				IAML			21 43 55.2	
	comp=Z,446nm,0.3s							
PB04	**IPOC Station P**	**1.24**	**325**	*e*P		**Pn**	**21 43 37.7**	**-0.2**
PB04				*i* S		**Sn**	**21 43 54.6**	**+0.3**
PB04				IAML			21 44 00.2	
	comp=E,730nm,0.4s							
PB04	**IPOC Station P**	**1.24**	**325**	*i* P		**Pn**	**21 43 37.5**	**-0.4**
PB04				*e*S		**Sn**	**21 43 55.5**	**+1.2**
PB04				IAML			21 44 01.2	
	comp=Z,479nm,0.3s							
PB03	**IPOC Station P**	**1.34**	**315**	↑*i*P		**Pn**	**21 43 38.9**	**-0.3**
PB03				*i* S		**Sn**	**21 43 56.6**	**-0.1**
PB03				IAML			21 43 58.5	
	comp=E,1μm,0.1s							
PB03	**IPOC Station P**	**1.34**	**315**	*i* P		**Pn**	**21 43 39.0**	**-0.3**
PB03				*e*S		**Sn**	**21 43 56.9**	**+0.2**
PB03				IAML			21 43 59.0	
	comp=Z,1μm,0.1s							
PB09	**IPOC Station P**	**1.55**	**5**	*e*P		**Pn**	**21 43 42.4**	**+0.4**
PB09				*i* S		**Sn**	**21 44 01.8**	**+0.2**
PB09				IAML			21 44 10.5	
	comp=E,506nm,0.4s							
PB09	**IPOC Station P**	**1.55**	**5**	*i* P		**Pn**	**21 43 42.7**	**+0.7**
PB09				IAML			21 44 07.9	
	comp=Z,418nm,0.2s							
PB14	**IPOC Station P**	**1.58**	**216**	*e*P		**Pn**	**21 43 42.8**	**+0.3**
PB14				*i* S		**Sn**	**21 44 02.7**	**+0.2**
PB14				IAML			21 44 08.2	
	comp=N,266nm,0.4s							
PB14	**IPOC Station P**	**1.58**	**216**	*i* P		**Pn**	**21 43 43.0**	**+0.5**
PB14				IAML			21 44 07.3	
	comp=E,446nm,0.6s							
PB07	**IPOC Station P**	**1.68**	**344**	*e*P		**Pn**	**21 43 43.4**	**-0.3**
PB07				*i* S		**Sn**	**21 44 04.6**	**-0.1**
PB07				IAML			21 44 12.1	
	comp=E,439nm,0.2s							
PB07	**IPOC Station P**	**1.68**	**344**	*i* P		**Pn**	**21 43 43.5**	**-0.3**
PB07				IAML			21 44 10.8	
	comp=Z,405nm,0.2s							
GO02	**Mina Guanaco**	**1.82**	**186**	↑*i*P		**Pn**	**21 43 45.8**	**+0.2**
GO02				*i* S		**Sn**	**21 44 09.5**	**+1.4**
PB02	**IPOC Station P**	**2.08**	**346**	*e*P		**Pn**	**21 43 48.8**	**-0.2**
PB02				*i* S		**Sn**	**21 44 14.3**	**+0.4**
PB02	**IPOC Station P**	**2.08**	**346**	*i* P		**Pn**	**21 43 48.7**	**-0.2**
PB02				IAML			21 44 21.0	
	comp=Z,516nm,0.4s							
PB01	**IPOC Station P**	**2.30**	**357**	↑*e*P		**Pn**	**21 43 51.5**	**-0.4**
PB01				*i* S		**Sn**	**21 44 19.4**	**+0.1**
PB01				IAML			21 44 24.8	
	comp=E,422nm,0.2s							
PATCX	**Punta Patache**	**2.62**	**344**	*e*P		**Pn**	**21 43 55.0**	**-1.2**
PATCX				*i* S		**Sn**	**21 44 30.6**	**+3.6**
PATCX	**Punta Patache**	**2.62**	**344**	*i* P		**Pn**	**21 43 54.8**	**-1.4**
PATCX				IAML			21 44 36.4	
	comp=Z,108nm,0.4s							
TA01	**Diego Aracena**	**2.87**	**345**	*e*P		**Pn**	**21 43 58.5**	**-1.0**
TA01				*i* S		**Sn**	**21 44 33.8**	**+0.8**
TA01				IAML			21 44 46.5	
	comp=E,165nm,0.4s							
PB08	**IPOC Station P**	**3.20**	**4**	*i* P		**Pn**	**21 44 03.9**	**-0.5**
PB08				IAML			21 44 51.5	
	comp=Z,42nm,0.1s							
GO03	**Copiap**	**4.30**	**190**	*i* P		**Pn**	**21 44 16.9**	**-2.1**
GO04	**Tololo Observa**	**6.92**	**190**	*i* P		Pn	21 44 48.8	-6.1

*IDC **09** 21:51:03.3±0.3, 6°.88S×154°.84E, h0km, mb4.8/34, mb1 4.8/39, mb1mx4.8/48, mbtmp4.8/39, ML4.4/4, MS4.3/31, Ms1 4.3/31, ms1mx4.2/38, Error ellipse: s-maj=11.5km s-min=10.2km az=116.0*
*NEIC **09** 21:51:07.8±1.5, 7°.03S±0°.08×154°.86E±0°.07, h33km±2km, mb5.1/174, Error ellipse: s-maj=12.0km s-min=9.1km az=200.0*
*BJI **09** 21:51:07.7±0.0, 6°.54S×154°.97E, h30km, mB5.2/56, mb5.1/69, Ms4.9/51, Ms7 4.5/53*
*GCMT **09** 21:51:08.8±0.1, 7°.05S±0°.01×154°.84E±0°.01, h12km, MW5.2/119, Moment Tensor Solution. s74,c121; s119,c210; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.66±.11; $M_{\theta\theta}$-6.47±.09; $M_{\phi\phi}$2.82±.10; $M_{r\theta}$1.92±.26; $M_{\theta\phi}$-1.44±.09; $M_{r\phi}$2.85±.30; Best double couple: M_o6.67900×10^{16} NP1:ϕ_s296.00000°, δ46.00000°, λ147.00000°. NP2:ϕ_s50.00000°, δ67.00000°, λ49.00000°. Principal axes: T 6.1430, Plg50.0000°, Azm274.0000°; N 1.0820, Plg37.0000°, Azm68.0000°; P -7.2150, Plg13.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **09** 21:51:10.5±0.5, 7°.5S×15°.5E±, h51km±5km, M4.9/61, mB5.5/30, mb5.1/61, MLv4.7/1, Mw(mB)5.0/30, Mwp5.0/3*
ISC 09 21:51:09.0±0.2, **6°.98S**±0°.04×**154°.92E**±0°.04, **h41**km, **n388, σ1^{s}28/384, mb5.1/148, MS4.3/37, 7C, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.92**	**312**	Pn		**Pn**	**21 52 06.1**	**-0.6**
	70nm,0.3s,baz=354,slow=2.5,SNR=44							
KRVT				Sn		**Sn**	**21 52 49.7**	**-1.8**
	86nm,0.3s,baz=60,slow=21,SNR=6.7							
KRVT				LR		LR	21 53 28.4	
	comp=Z,5μm,19.1s,baz=130,slow=38							
HNR	**Honiara**	**5.54**	**116**	Pn		**Pn**	**21 52 30.6**	**+1.7**
	27nm,0.3s,baz=197,slow=1.6,SNR=6.6							
HNR				Sn		Sn	21 53 41.5	+10
	21nm,0.3s,baz=20,slow=15,SNR=3.6							
HNR				LR		LR	21 54 29.9	
	comp=Z,5μm,21.4s,baz=284,slow=36							
HNR	**Honiara**	**5.54**	**116**			**Pn**	**21 52 27.6**	**-1.3**
PMG	**Port Moresby**	**8.05**	**252**	Pn		**Pn**	**21 53 03.0**	**-0.5**
	4.5nm,0.3s,baz=50,slow=11,SNR=15							
PMG				Sn		**Sn**	**21 54 34.6**	**+1.3**
	3.8nm,0.3s,baz=278,slow=14,SNR=2.6							
PMG				LR		LR	21 55 53.3	
	comp=Z,2μm,20.9s,baz=49,slow=36							
PMG	**Port Moresby**	**8.05**	**252**			**Pn**	**21 53 00.6**	**-2.9**
COEN	**Coen**	**13.47**	**238**	P		**Pn**	**21 54 19.7**	**+2.0**
	baz=14,SNR=7.3							
COEN	**Coen**	**13.47**	**238**	Pn		**Pn**	**21 54 15.7**	**-2.0**
PATS	**Pohnpei**	**14.13**	**14**	P		**Pn**	**21 54 26.2**	**-0.5**
	baz=14							
PATS	**Pohnpei**	**14.13**	**14**			**Pn**	**21 54 25.4**	**-1.3**
JAY	**Jayapura**	**14.85**	**287**	Pn		**Pn**	**21 54 35.4**	**-0.9**
	0.7nm,0.3s,baz=71,slow=7.2,SNR=5.6							
JAY				LR		LR	22 01 09.7	
	comp=Z,2μm,18.2s,baz=76,slow=41							
JAY	**Jayapura**	**14.85**	**287**	P		**Pn**	**21 54 35.1**	**-1.2**
	32nm,1.3s							
MTSU	**Mount Surprise**	**15.16**	**222**	P		**Pn**	**21 54 42.0**	**+1.6**
	baz=15,SNR=6.7							
GENI	**Genyem**	**15.33**	**286**	P		P	21 54 56.8	+10
CTA	**Charters Tower**	**15.51**	**212**	Pn		**Pn**	**21 54 46.1**	**+1.2**
	0.8nm,0.3s,baz=34,slow=12,SNR=10							
CTA				LR		LR	21 59 54.0	
	comp=Z,874nm,20.1s,baz=34,slow=34							
CTAO	**Charters Tower**	**15.51**	**212**	P		**Pn**	**21 54 42.7**	**-2.3**
SMPI	**Sarmi**	**16.90**	**286**	P		**P**	**21 55 04.0**	**-0.2**
EIDS	**Eidsvold**	**18.65**	**191**	P		**Pn**	**21 55 25.3**	**+1.2**
	baz=19,SNR=6.1							
EIDS	**Eidsvold**	**18.65**	**191**	P		**P**	**21 55 21.6**	**-1.9**
DZM	**Mont Dzumac**	**18.68**	**145**	*e*Pn		**P**	**21 55 21.8**	**-2.0**
	268nm,1.5s							
DZM				*e*LQ		LQ	21 58 57.0	
	4μm,31.7s							
DZM				*e*LR		LR	21 59 44.3	
	comp=Z,4μm,25.8s							
DZM	**Mont Dzumac**	**18.68**	**145**	P		**Pn**	**21 55 25.9**	**+1.4**
	1.4nm,0.3s,baz=348,slow=12,SNR=16							
DZM				LR		LR	22 01 33.3	
	comp=Z,1μm,21.3s,baz=321,slow=34							
TARA	**Tarawa**	**19.78**	**66**	P		**P**	**21 55 36.3**	**+0.4**
TARA				IAmb		IAmb	21 55 55.3	
	comp=Z,105nm,1.1s							
QIS	**Mount Isa**	**20.06**	**226**	P		**P**	**21 55 39.6**	**+0.6**
	baz=20,SNR=6.0							
KWAJ	**Kwajalein Atol**	**20.14**	**39**			**P**	**21 55 39.3**	**-0.6**
RMQ	**Roma**	**20.27**	**196**	P		Pn	21 55 42.8	-0.6
	baz=20,SNR=18							
KDU	**Kakadu**	**22.83**	**254**	P		**P**	**21 56 07.6**	**-1.1**
	baz=23,SNR=26							
FAKI	**Fak Fak**	**22.94**	**279**	P		**P**	**21 56 12.8**	**+2.9**
	comp=Z,2μmcomp=Z,2μmcomp=Z,46nm,1.4s							
FAKI	**Fak Fak**	**22.94**	**279**	P		**P**	**21 56 09.1**	**-0.8**
SAUI	**Saumlaki**	**23.44**	**266**	P		**P**	**21 56 14.3**	**-0.6**
ARMA	**Armidale**	**23.52**	**187**	P		**P**	**21 56 16.4**	**+0.8**
	baz=24,SNR=8.0							
ARMA	**Armidale**	**23.52**	**187**	P		**P**	**21 56 15.5**	**0.0**
WR0	**Warramunga Arr**	**23.61**	**235**	P		**P**	**21 56 15.5**	**-1.0**
WR0				IAmb		IAmb	21 56 17.5	
	comp=Z,38nm,0.8s							
WR9	**Warramunga Arr**	**23.63**	**235**	P		**P**	**21 56 16.5**	**-0.2**
	baz=24							
WB0	**Warramunga Arr**	**23.64**	**235**	P		**P**	**21 56 15.6**	**-1.1**
WB0				IAmb		IAmb	21 56 17.7	
	comp=Z,31nm,0.7s							
WRAB	**Tennant Creek**	**23.75**	**235**	P		**P**	**21 56 17.5**	**-0.3**
WRAB				IAmb		IAmb	21 56 18.8	
	comp=Z,41nm,0.8s

BBOO Buckleboo **31.11 212** P **P** **21 57 22.5 -1.2**
baz=31,SNR=7.4
BBOO Buckleboo **31.11 212** P **P** **21 57 22.4 -1.2**
WRKA Warakurna **31.15 232** P **P** **21 57 22.8 -1.4**
baz=31,SNR=29
KMSI Cibinong **31.77 282** P **P** **21 57 29.8 +0.1**
comp=Z,144nm,0.6s
ARPS Mount Arapiles **31.97 200** P **P** **21 57 31.4 +0.2**
baz=32,SNR=5.8
BBSI Bau Bau **32.19 271** P **P** **21 57 35.4 +2.0**
comp=Z,371nmcomp=Z,18nm,1.2s
MMRI Maumere **32.42 265** P **P** **21 57 35.9 +0.5**
comp=Z,2µmcomp=Z,97nm,1.1s
MMRI Maumere **32.42 265** P **P** **21 57 35.0 -0.4**
DAV Davao City (W) **32.43 295** LR LR 22 10 31.1
comp=Z,361nm,19.1s,baz=110,slow=36
LUWI Luwuk **32.60 279** P **P** **21 57 39.7 +2.8**
comp=Z,919nmcomp=Z,52nm,1.1s
KCP Kidapawan **32.84 294**⇑ *e*P **P** **21 57 41.2 +2.0**
OUZ Omahuta **32.94 151** P **P** **21 57 38.1 -1.5**
OUZ IAmb IAmb 21 57 41.9
comp=Z,22nm,1.1s
EDFI Ende, Flores **32.96 265** P **P** **21 57 39.8 -0.5**
comp=Z,448nmcomp=Z,28nm,0.8s
AFI Afiamalu **33.44 105** P **P** **21 57 44.1 -0.2**
APSI Ampana **33.72 279** P **P** **21 57 49.8 +3.0**
comp=Z,496nmcomp=Z,35nm,1.2s
MRSI Marisa **33.73 281** P **P** **21 57 48.7 +1.9**
comp=Z,22nm,0.8s
FORT Forrest **34.55 223** P **P** **21 57 53.3 -0.5**
baz=35,SNR=8.4
FORT Forrest **34.55 223** P **P** **21 57 52.6 -1.2**
FORT IAmb IAmb 21 57 56.0
comp=Z,30nm,0.9s
BKSI Bulukumba **34.63 271** P **P** **21 57 55.9 +1.2**
comp=Z,28nm,1.1s
BNSI Bone **34.73 272** P **P** **21 57 58.5 +2.9**
comp=Z,43nm,1.5s
KAPI Kappang **35.03 271** P **P** **21 57 58.1 0.0**
comp=Z,46nm,1.1s,baz=135,slow=3.7,SNR=9.8
KAPI LR LR 22 13 49.5
comp=Z,130nm,20.4s,baz=107,slow=39
KAPI Kappang **35.03 271** P **P** **21 57 57.5 -0.6**
KAPI IAmb IAmb 21 58 08.0
comp=Z,26nm,0.9s
SPSI Sidrap Palu **35.12 273** P **P** **21 57 58.7 -0.1**
comp=Z,22nm,1.1s
TTSI Tana Toraja **35.18 275** P **P** **21 58 01.2 +1.8**
comp=Z,529nmcomp=Z,27nm,1.1s
MPSI Mapaga **35.69 280** P **P** **21 58 03.7 -0.1**
comp=Z,489nmcomp=Z,43nm,1.0s
JCJ Chichijima **36.05 340** LR LR 22 10 05.7
comp=Z,277nm,21.7s,baz=163,slow=32
HIZ Hauiti **36.20 153** P **P** **21 58 08.3 +0.4**
NIUE Niue **36.21 113** P **P** **21 58 08.5 +0.3**
TAU Tasmania Unive **36.41 189** P **P** **21 58 10.0 +0.5**
PSAD2 Pilbara Seismi **36.75 243** P **P** **21 58 12.0 -0.8**
PSAD2 IAmb IAmb 21 58 13.3
comp=Z,17nm,0.8s
PSAC2 Pilbara Seismi **36.79 243** P **P** **21 58 11.8 -1.4**
PSAD1 Pilbara Seismi **36.82 243** P **P** **21 58 11.7 -1.6**
PSAD1 IAmb IAmb 21 58 13.9
comp=Z,19nm,0.8s
PSAB2 Pilbara Seismi **36.82 243** P **P** **21 58 11.3 -2.1**
PLAI Plampang **36.83 265** P **P** **21 58 14.7 +1.2**
comp=Z,42nm,0.8s
PSAA3 Pilbara Seismi **36.84 243** P **P** **21 58 11.9 -1.7**
PSAA3 IAmb IAmb 21 58 23.0
comp=Z,38nm,1.1s
PSAA2 Pilbara Seismi **36.84 243** P **P** **21 58 11.9 -1.6**
PSAB3 Pilbara Seismi **36.84 243** P **P** **21 58 12.2 -1.4**
PSAB3 IAmb IAmb 21 58 23.0
comp=Z,37nm,1.1s
PSA00 Pilbara Seismi **36.84 243** P **P** **21 58 12.4 -1.2**
PSA00 IAmb IAmb 21 58 23.0
comp=Z,34nm,0.9s
PSAA1 Pilbara Seismi **36.85 243** P **P** **21 58 12.4 -1.2**
PSAA1 IAmb IAmb 21 58 23.2
comp=Z,39nm,1.0s
PSAB1 Pilbara Seismi **36.86 243** P **P** **21 58 13.1 -0.7**
PSAB1 IAmb IAmb 21 58 23.2
comp=Z,29nm,0.9s
PSAC1 Pilbara Seismi **36.86 243** P **P** **21 58 12.8 -0.9**
PSAC1 IAmb IAmb 21 58 22.7
comp=Z,34nm,1.0s
PSAC3 Pilbara Seismi **36.87 243** P **P** **21 58 12.8 -1.1**
PSAC3 IAmb IAmb 21 58 23.3
comp=Z,38nm,1.1s
PSAD3 Pilbara Seismi **36.92 243** P **P** **21 58 12.9 -1.4**
PSAD3 IAmb IAmb 21 58 23.2
comp=Z,25nm,0.8s
URZ Urewera **37.06 150** P **P** **21 58 16.5 +1.4**
comp=Z,17nm,0.9s,baz=200,slow=3.3,SNR=5.3
URZ Urewera **37.06 150** P **P** **21 58 15.3 +0.2**
URZ IAmb IAmb 21 58 34.4
comp=Z,36nm,1.1s
MXZ Matakaoa Point **37.12 148** P **P** **21 58 15.2 -0.5**
QRZ Quartz Range **37.19 158** P **P** **21 58 16.8 +0.5**
BKZ Black Stump Fm **37.48 152** P **P** **21 58 19.2 +0.4**
BKZ IAmb IAmb 21 58 32.3
comp=Z,18nm,0.9s
THZ Tophouse **38.14 158** P **P** **21 58 24.4 +0.1**
THZ IAmb IAmb 21 58 26.4
comp=Z,43nm,1.0s
TUWZ Tuamarina **38.25 157** P **P** **21 58 25.6 +0.4**
SNZO South Karori **38.46 156** P **P** **21 58 25.8 -1.1**
BSWZ Blackbirch Sta **38.47 157** P **P** **21 58 26.6 -0.4**
BFZ Birch Farm **38.59 154** P **P** **21 58 27.5 -0.5**
BFZ IAmb IAmb 21 58 44.3
comp=Z,32nm,1.0s
MSWZ Moikau Station **38.77 155** P **P** **21 58 28.4 -1.1**
LTZ Lake Taylor **38.81 159** P **P** **21 58 30.5 +0.6**
LTZ IAmb IAmb 21 58 41.0
comp=Z,25nm,0.9s
PLWZ Palliser **38.90 155** P **P** **21 58 29.7 -1.0**
KHZ Kahutara **38.94 158** P **P** **21 58 29.7 -1.2**
KHZ IAmb IAmb 21 58 47.5
comp=Z,38nm,1.1s
OXZ Oxford **39.21 160** P **P** **21 58 32.7 -0.5**
RPZ Rata Peaks **39.23 161** P **P** **21 58 33.9 +0.4**
comp=Z,15nm,0.8s,baz=91,slow=1.5,SNR=5.2
RPZ Rata Peaks **39.23 161** P **P** **21 58 32.6 -0.8**
RPZ IAmb IAmb 21 58 38.2
comp=Z,40nm,1.1s
MEEK Meekatharra **39.66 236** P **P** **21 58 36.8 -0.5**
baz=40,SNR=9.7
TGY Tagaytay City **39.70 302** P **P** **21 58 37.4 -0.3**
comp=Z,106nm,0.3s,baz=141,slow=6.5,SNR=1.5
MQZ McQueen's Vall **39.75 160** P **P** **21 58 36.5 -1.2**
MQZ IAmb IAmb 21 58 55.3
comp=Z,46nm,1.1s
SPMM Sapulut **40.10 286** P **P** **21 58 42.0 +0.9**
JAGI Jajag, Banyuwa **40.42 265** P **P** **21 58 41.1 -2.6**
comp=Z,56nm,1.3s
JAGI Jajag, Banyuwa **40.42 265** IAmb IAmb 21 59 00.4
comp=Z,43nm,0.9s
KKM Kota Kinabalu **40.73 288** P **P** **21 58 44.4 -2.0**
KLBR Kellerberrin **42.44 230** P **P** **21 58 59.7 -0.4**
baz=42,SNR=5.8
MORW Morawa **42.71 234** P **P** **21 59 02.0 -0.2**
baz=43,SNR=5.2
MORW Morawa **42.71 234** P **P** **21 59 00.5 -1.7**
BLDU Ballidu **42.81 232** P **P** **21 59 02.5 -0.6**
baz=43,SNR=6.6
NWAO Narrogin (SRO) **43.45 228** LR LR 22 16 53.5
comp=Z,769nm,18.2s,baz=68,slow=36
SBUM Sibu **43.64 281** P **P** **21 59 09.9 0.0**
SBUM Sibu **43.64 281** P **P** **21 59 10.0 0.0**
YULB Yu-li **44.62 314** IAmb IAmb 21 59 22.6
comp=Z,39nm,1.0s
NACB Ninganchiao **44.90 315** P **P** **21 59 19.4 -0.4**
NACB **P** **21 59 20.5 +0.7**
TPUB Ta-pu **45.05 313** P **P** **21 59 20.6 -0.5**
TPUB **P** **21 59 20.8 -0.3**
SSLB Suanglung **45.11 314** P **P** **21 59 20.6 -1.0**
SSLB IAmb IAmb 21 59 27.4
comp=Z,27nm,1.0s
KSM Kuching **45.31 279** P **P** **21 59 22.9 -0.4**
KSM **P** **21 59 23.0 -0.3**
KSM IAmb IAmb 21 59 25.5
comp=Z,18nm,0.8s
KSM Kuching **45.31 279** P **P** **21 59 24.0 +0.7**
YHNB Yeheng **45.36 315** P **P** **21 59 24.0 +0.4**
YHNB **P** **21 59 24.9 +1.3**
JNU Nakatsue **45.96 332** P **P** **21 59 26.8 -1.4**
comp=Z,10nm,0.9s,baz=115,slow=4.3,SNR=4.5
JNU Nakatsue **45.96 332** P **P** **21 59 27.7 -0.5**
JNU IAmb IAmb 21 59 30.7
comp=Z,19nm,1.0s
RAR Rarotonga **45.98 113** P **P** **21 59 30.2 +1.7**
comp=Z,13nm,0.8s,baz=274,slow=9.6,SNR=3.0
RAR LR LR 22 16 19.6
comp=Z,287nm,19.4s,baz=297,slow=33
MJAR Matsushiro Arr **46.04 341** PcP **PcP** **22 01 06.0 +1.3**
comp=Z,1.6nm,0.7s,baz=160,slow=3.9,SNR=2.1
MJAR LR LR 22 19 04.0
comp=Z,183nm,18.0s,baz=205,slow=37
CISI Cisompet, Garu **46.72 266** P **P** **21 59 33.6 -0.9**
DLV T Lat **49.86 292** P **P** **21 59 58.1 -0.7**
KSRS Korea Array **50.89 332** P **P** **22 00 05.2 -0.8**
comp=Z,4.0nm,0.9s,baz=149,slow=8.7,SNR=16
KSRS ScP **ScP** **22 05 18.3 +3.0**
comp=Z,0.9nm,0.8s,baz=139,slow=4.8,SNR=5.0
KSRS LR LR 22 19 44.8
comp=Z,128nm,21.5s,baz=136,slow=34
KS19 Wonju Array Si **50.96 332** P **P** **22 00 06.0 -0.5**
QIZ Qiongzhong **51.39 301** P **P** **22 00 09.5 -0.6**
QIZ S **S** **22 07 27.9 +0.7**
QIZ LR LR
comp=Z,500nm,21.0s
QIZ LR LR
comp=Z,480nm,26.3s
INCN Inchon **51.52 331** P **P** **22 00 10.8 0.0**
INCN IAmb IAmb 22 00 17.9
comp=Z,29nm,1.1s
MYKOM Kota Tinggi **51.71 278** P **P** **22 00 12.2 -0.4**
NJ2 Nanjing **51.86 321** *e*P **P** **22 00 14.1 +0.8**
NJ2 pmax pmax
comp=Z,15nm,0.6s
KRJI Kerinci **53.49 273** P **P** **22 00 24.9 -1.0**
comp=Z,162nm,1.1s
SDSI Sungai Dareh **53.67 274** P **P** **22 00 27.4 +0.3**
comp=Z,1µmcomp=Z,50nm,0.9s
WHN Wuhan **53.88 316** P **P** **22 00 29.8 +1.5**
WHN PP **PP** **22 02 26.8 -3.1**
WHN S **S** **22 08 04.9 +4.1**
WHN pmax pmax
comp=Z,40nm,0.8s
WHN pmax pmax
comp=Z,450nm,4.8s
WHN LR LR
comp=Z,700nm,20.6s
PDSI Padang **54.63 274** P **P** **22 00 34.2 0.0**
comp=Z,28nm,1.0s
IPM Ipoh **54.98 280** P **P** **22 00 35.4 -1.3**
IPM IAmb IAmb 22 00 39.2
comp=Z,22nm,0.8s
IPM Ipoh **54.98 280** P **P** **22 00 37.0 +0.3**
USA0B Ussuriysk Arra **54.99 340** P **P** **22 00 35.8 -0.3**
USA0B IAmb IAmb 22 00 50.7
comp=Z,14nm,1.1s
USRK Ussuriysk Ar. **54.99 340** P **P** **22 00 35.4 -0.7**
comp=Z,2.9nm,0.8s,baz=153,slow=6.4,SNR=9.5
USRK LR LR 22 24 46.0
comp=Z,132nm,18.1s,baz=142,slow=37
PPT Papeete **55.07 106** LR LR 22 21 15.4
comp=Z,149nm,18.6s,baz=270,slow=33
PPT2 Papeete2 **55.07 107** *e*S **S** **22 08 14.0 -3.5**
comp=Z,120nm,28.2s
PPT2 *e*LQ LQ 22 14 12.4
comp=Z,707nm,26.8s
PPT2 *e*LR LR 22 16 32.2
comp=Z,300nm,22.8s
KULM Kulim **55.52 281** P **P** **22 00 39.6 -0.9**
KULM IAmb IAmb 22 00 41.3
comp=Z,18nm,1.1s
TIA Tai'an **55.71 323** P **P** **22 00 41.9 +0.4**
TIA pmax pmax
comp=Z,8.0nm,0.8s
TBI Tubuai **55.75 113** *e*S **S** **22 08 23.6 -2.7**
comp=Z,139nm,31.5s
TBI *e*LQ LQ 22 14 30.3
comp=Z,2µm,30.8s
TBI *e*LR LR 22 16 54.7
comp=Z,375nm,29.0s
MNSI Mandailing Nat **55.75 276** P **P** **22 00 41.1 -1.1**
comp=Z,500nmcomp=Z,41nm,0.9s
PSI Prapat **56.73 278** P **P** **22 00 48.6 -0.7**
comp=Z,2.5nm,0.4s,baz=180,slow=9.3,SNR=4.6
GYA Guiyang **57.39 307**⇑ *i*P **P** **22 00 54.6 +0.8**
GYA sP pP 22 01 05.2 +1.1
GYA PP **PP** **22 03 01.4 -0.2**
GYA ScP **ScP** **22 05 45.0 +0.8**
GYA S **S** **22 08 49.3 +1.3**
GYA ScS **ScS** **22 10 37.3 -3.1**
GYA SS **SS** **22 12 34.6 -3.7**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,100nm,3.5s
GYA LR LR
comp=Z,140nm,3.8s
GYA LR LR
comp=Z,100nm,4.1s
GYA LR LR
comp=Z,80nm,4.5s
SLVN Son La **57.42 301** P **P** **22 00 53.0 -1.0**
GSI Gunungsitoli **57.81 276** P **P** **22 00 55.6 -1.2**
comp=Z,212nm,1.2s
GSI Gunungsitoli **57.81 276** P **P** **22 00 54.4 -2.4**
GSI **P** **22 00 55.8 -1.0**
KCSI Kotacane, Aceh **57.99 279** P **P** **22 00 56.2 -1.9**
comp=Z,16nm,0.7s
LHMI Lhok Sumawe **59.12 280** P **P** **22 01 03.6 -2.4**
XAN Xi'an **59.65 316** P **P** **22 01 08.3 -1.0**
XAN S **S** **22 09 18.2 +1.1**
XAN pmax pmax
comp=Z,20nm,1.4s
XAN pmax pmax
comp=Z,190nm,5.3s
XAN LR LR
comp=Z,180nm,23.9s
XAN LR LR
comp=Z,240nm,20.6s
XAN LR LR
comp=Z,300nm,21.7s
XAN Xi'an **59.65 316** IAmb IAmb 22 01 17.1
comp=Z,10nm,0.7s
PETK Petropavlovsk- **59.90 2** P **P** **22 01 10.5 -0.1**
comp=Z,9.0nm,0.9s,baz=163,slow=7.3,SNR=11
PETK LR LR 22 22 56.9
comp=Z,522nm,21.8s,baz=226,slow=32
KMI Kunming **59.95 304** P **P** **22 01 09.8 -1.9**
KMI pP pP 22 01 21.5 -0.7
KMI sP sP 22 01 27.2 +0.9
KMI S **S** **22 09 23.6 +2.0**
KMI sS sS 22 09 41.9 +3.5
KMI SS **SS** **22 13 13.7 -5.1**
KMI pmax pmax
comp=Z,41nm,1.6s
KMI pmax pmax
comp=Z,440nm,4.6s
KMI LR LR
comp=Z,170nm,15.9s
KMI LR LR
comp=Z,410nm,27.4s
KMI LR LR
comp=Z,490nm,25.7s
KMI Kunming **59.95 304** P **P** **22 01 12.1 +0.3**
CM31 Chiang Mai Arr **60.71 296** P **P** **22 01 17.2 +0.4**
CMAR Chiang Mai Arr **60.71 296** P **P** **22 01 17.8 +0.9**
comp=Z,32nm,1.0s,baz=117,slow=5.1,SNR=95
CMAR PKP2bc PKPPKPbc 22 30 47.5
comp=Z,0.6nm,0.4s,baz=282,slow=4.4,SNR=6.8
CMAR PKP2ab PKPPKPab 22 30 56.7
comp=Z,0.9nm,0.3s,baz=296,slow=5.2,SNR=4.8
CHTO Chiang Mai **60.83 296** P **P** **22 01 18.2 +0.6**
CD2 Chengdu **61.75 311**⇑ *i*P **P** **22 01 24.2 +0.5**
CD2 pP pP 22 01 32.8 -1.3
CD2 sP sP 22 01 37.3 -0.9
CD2 PP **PP** **22 03 39.3 -0.8**
CD2 S **S** **22 09 45.2 +1.1**
CD2 sS sS 22 10 01.9 +0.5
CD2 pmax pmax
comp=Z,90nm,0.7s
CD2 pmax pmax
comp=Z,190nm,3.6s
CD2 LR LR
comp=Z,310nm,15.5s
CD2 LR LR
comp=Z,540nm,21.5s
CD2 LR LR
comp=Z,460nm,20.4s
HHC Hu-ho-hao-te **62.04 324** P **P** **22 01 26.2 +0.7**
HHC S **S** **22 09 48.0 +0.5**
HHC pmax pmax
comp=Z,6.0nm,1.0s
HHC pmax pmax
comp=Z,88nm,5.5s
HHC LR LR
comp=Z,220nm,19.4s
HHC LR LR
comp=Z,140nm,19.1s
HHC LR LR
comp=Z,230nm,19.4s
BTO Baotou **62.80 323** *e*P **P** **22 01 32.5 +1.9**
LZH Lanzhou **64.25 316** *e*P **P** **22 01 41.8 +1.4**
LZH sP sP 22 01 55.9 +1.0
LZH *e*S **S** **22 10 16.8 +1.3**
LZH sS pS 22 10 30.1 +2.2
LZH pmax pmax
comp=Z,33nm,1.3s
LZH pmax pmax
comp=Z,280nm,6.2s
LZH LR LR
comp=Z,300nm,15.0s
LZH LR LR
comp=Z,250nm,14.9s
LZH LR LR
comp=Z,470nm,17.6s
MA2 Magadan **66.42 358** P **P** **22 01 53.8 +0.1**
comp=Z,5.7nm,0.6s,baz=191,slow=12,SNR=2.3
MA2 Magadan **66.42 358** P **P** **22 01 54.8 +1.1**
MA2 IAmb IAmb 22 02 06.8
comp=Z,18nm,0.8s
NIKH Nikolski High **67.16 23** IAmb IAmb 22 01 59.7
comp=Z,18nm,0.8s
GTA Gaotai **68.68 317**⇑ P **P** **22 02 09.7 +1.1**
GTA pP pP 22 02 20.3 +1.3
GTA sP sP 22 02 24.2 +1.1
GTA S **S** **22 11 12.6 +3.7**
GTA sS sS 22 11 29.4 +2.4
GTA pmax pmax
comp=Z,12nm,1.1s
GTA pmax pmax
comp=Z,140nm,7.6s
GTA LR LR
comp=Z,200nm,17.8s
GTA LR LR
comp=Z,200nm,20.0s
GTA LR LR
comp=Z,180nm,18.1s
ULN Ulaanbaatar **68.95 328** P **P** **22 02 10.3 +0.2**
SHL Shillong **69.23 301** P **P** **22 02 11.6 -0.6**
SONM Songino Array **69.28 327** P **P** **22 02 12.4 +0.3**
comp=Z,9.6nm,1.0s,baz=132,slow=5.5,SNR=21
SONM LR LR 22 33 24.4
comp=Z,200nm,18.6s,baz=119,slow=37
SEY Seymchan **69.74 359** P **P** **22 02 14.7 +0.3**
comp=Z,2.1nm,0.7s,baz=354,slow=23,SNR=2.5
VNDA Vanda **70.60 178** P **P** **22 02 21.3 +1.8**
comp=Z,7.6nm,0.9s,baz=329,slow=6.8,SNR=17
VNDA LR LR 22 27 43.0
comp=Z,173nm,21.5s,baz=342,slow=31
VNDA Vanda **70.60 178** P **P** **22 02 19.3 -0.3**
VNDA IAmb IAmb 22 02 32.1
comp=Z,16nm,1.1s
LSA Lhasa **71.20 304** P **P** **22 02 25.6 +0.9**
LSA pmax pmax
comp=Z,92nm,1.0s
LSA Lhasa **71.20 304** P **P** **22 02 24.9 +0.2**
TLY Talaya **73.01 329** P **P** **22 02 34.2 -0.3**
TAPN Taplejung **73.33 301** *e*P **P** **22 02 37.7 +0.5**
comp=Z,185nm,1.2s
ODAN Odare **73.46 301** *e*P **P** **22 02 38.4 +0.5**
comp=Z,112nm,0.7s
RAMN Ramite **74.16 300** *e*P **P** **22 02 42.2 +0.1**
comp=Z,42nm,0.8s
JIRN Jiri **74.71 301** *e*P **P** **22 02 45.8 +0.4**
comp=Z,74nm,0.8s
GUN Gumba **75.05 301** *e*P **P** **22 02 47.7 +0.4**
comp=Z,175nm,1.1s
BILL Bilibino **75.27 4** P **P** **22 02 47.5 +0.2**
BILL IAmb IAmb 22 03 03.5
comp=Z,21nm,0.9s
PKI Pulchoki **75.36 301** *e*P **P** **22 02 49.1 +0.1**
comp=Z,76nm,1.0s
PKIN Phulchoki **75.37 301** *e*P **P** **22 02 49.0 0.0**
KKN Kakani **75.53 301** *e*P **P** **22 02 50.1 +0.2**
comp=Z,52nm,0.8s
DMN Daman **75.62 301** *e*P **P** **22 02 50.9 +0.4**
comp=Z,182nm,1.1s
GKN Gorkha **76.13 301** *e*P **P** **22 02 53.3 0.0**
comp=Z,116nm,0.9s
KOLN Koldanda **76.95 300** *e*P **P** **22 02 57.8 -0.2**
comp=Z,32nm,0.6s
DANN Dangsing **76.97 301** *e*P **P** **22 02 57.7 -0.5**
comp=Z,31nm,0.7s
KDAK Kodiak Island **77.18 26** P **P** **22 02 58.8 +0.5**
comp=Z,6.1nm,0.7s,baz=294,slow=3.0,SNR=4.4
KDAK LR LR 22 31 26.4
comp=Z,227nm,21.9s,baz=262,slow=31
PYUN Piuthan **77.56 301** *e*P **P** **22 03 01.1 -0.3**
comp=Z,164nm,1.1s
SVW2 Sparrevohn **78.01 22** P **P** **22 03 03.6 +0.7**
SVW2 IAmb IAmb 22 03 09.9
comp=Z,9.5nm,0.8s
WMQ Urumqi **78.77 317** *e*P **P** **22 03 09.1 +1.6**
WMQ sP pwP 22 03 23.5 -0.2
WMQ pmax pmax
comp=Z,16nm,0.7s
WMQ pmax pmax
comp=Z,66nm,4.1s
WMQ LR LR
comp=Z,170nm,17.5s
WMQ LR LR
comp=Z,250nm,17.5s
WMQ LR LR
comp=Z,250nm,24.3s
BRLK Bradley Lake **79.06 25** IAmb IAmb 22 03 09.4
comp=Z,16nm,0.8s
SEW Seward **79.84 25** IAmb IAmb 22 03 23.6
comp=Z,24nm,1.1s
TIXI Tiksi **80.33 352** P **P** **22 03 15.3 -0.1**
comp=Z,1.0nm,0.4s,baz=117,slow=7.8,SNR=2.3
TIXI Tiksi **80.33 352** P **P** **22 03 15.9 +0.5**
PPLA Purkeypile **80.38 22** P **P** **22 03 16.3 +0.3**
RDOG Red Dog Mine **80.52 15** P **P** **22 03 17.4 +0.9**
RDOG IAmb IAmb 22 03 31.5
comp=Z,11nm,0.6s
PMR Palmer **80.80 24** IAmb IAmb 22 03 18.7
comp=Z,13nm,0.7s
KNK Knik Glacier **80.97 24** IAmb IAmb 22 03 21.6
comp=Z,21nm,1.2s
GHO Glory Hole Cre **80.98 24** IAmb IAmb 22 03 20.7
comp=Z,16nm,0.8s
KTH Kantishna Hill **81.23 22** P **P** **22 03 19.3 -1.2**
HIN Hinchinbrook I **81.25 25** P **P** **22 03 20.4 -0.2**
HIN IAmb IAmb 22 03 22.3
comp=Z,19nm,0.8s
TRF Thorofare Moun **81.41 22** IAmb IAmb 22 03 34.5
comp=Z,12nm,0.7s
FID Port Fidalgo **81.44 25** IAmb IAmb 22 03 40.7
comp=Z,17nm,0.9s
RND Reindeer **81.92 22** IAmb IAmb 22 03 24.9
comp=Z,12nm,0.8s
RAGM Ragged Mountai **82.02 26** P **P** **22 03 25.0 +0.4**
RAGM IAmb IAmb 22 03 28.5
comp=Z,20nm,1.2s
BWN Browne **82.12 21** P **P** **22 03 24.2 -0.8**
NEA Nenana **82.49 21** IAmb IAmb 22 03 45.0
comp=Z,11nm,1.0s
WRH Wood River Hil **82.78 21** IAmb IAmb 22 03 34.1
comp=Z,12nm,1.1s
CRQM Cirque **82.87 26** IAmb IAmb 22 03 37.2
comp=Z,23nm,1.0s
GLB Gilahina Butte **82.91 25** IAmb IAmb 22 03 30.6
comp=Z,22nm,0.9s
VRDI Verde Repeater **82.96 25** IAmb IAmb 22 03 30.9
comp=Z,13nm,0.8s
TGL Tana Glacier **83.00 26** IAmb IAmb 22 03 40.3
comp=Z,22nm,1.2s
MDM Murphy Dome **83.00 21** P **P** **22 03 28.3 -1.3**
COLA College **83.09 21** P **P** **22 03 29.3 -0.7**
HDA Harding Lake **83.17 22** P **P** **22 03 30.7 +0.2**
baz=238
HDA Harding Lake **83.17 22** **P** **22 03 29.5 -1.0**

MCARA	**McCarthy VSAT**	**83.21**	**25**	P		**P**	**22 03 30.4**	**-0.3**
MCARA				IAmb		IAmb	22 03 42.1	
	comp=Z,17nm,0.9s							
YAH	**Yahtse**	**83.30**	**27**	P		**P**	**22 03 31.6**	**+0.1**
YAH				IAmb		IAmb	22 03 35.6	
	comp=Z,19nm,1.2s							
BALM	**Baldy**	**83.34**	**26**	IAmb		IAmb	22 03 32.9	
	comp=Z,12nm,0.8s							
MK31	**Makanchi Array**	**83.34**	**319**	P		**P**	**22 03 31.6**	**-0.2**
MK31				IAmb		IAmb	22 03 49.2	
	comp=Z,8.1nm,0.8s							
MKAR	**Makanchi Array**	**83.34**	**319**	P		**P**	**22 03 31.6**	**-0.2**
	comp=Z,5.4nm,0.9s,baz=102,slow=5.4,SNR=23							
MKAR				LR		LR	22 41 37.7	
	comp=Z,123nm,20.3s,baz=89,slow=36							
IL31		**83.38**	**22**	P		**P**	**22 03 30.5**	**-1.0**
ILAR	**Eielson Array**	**83.38**	**22**	P		**P**	**22 03 30.1**	**-1.5**
	comp=Z,2.4nm,0.6s,baz=255,slow=5.4,SNR=22							
ILAR				LR		LR	22 35 33.6	
	comp=Z,548nm,21.8s,baz=250,slow=32							
MAKZ	**Makanchi**	**83.56**	**319**	P		**P**	**22 03 32.3**	**-0.6**
MAKZ				IAmb		IAmb	22 03 50.2	
	comp=Z,12nm,0.8s							
COLD	**Coldfoot**	**83.62**	**19**	P		**P**	**22 03 34.3**	**+1.6**
BARN	**Barnard Glacie**	**83.65**	**26**	P		**P**	**22 03 33.1**	**-0.2**
DOT	**Dot Lake**	**83.88**	**23**	IAmb		IAmb	22 03 53.2	
	comp=Z,18nm,1.0s							
ZALV	**Zalesovo Beam**	**84.13**	**326**	P		**P**	**22 03 34.2**	**-1.3**
	comp=Z,2.4nm,0.5s,baz=111,slow=5.5,SNR=13							
ZALV				LR		LR	22 42 24.7	
	comp=Z,112nm,20.0s,baz=99,slow=37							
MAW	**Mawson**	**84.38**	**203**	P		**P**	**22 03 37.8**	**+1.1**
	baz=84,SNR=5.5							
MAW	**Mawson**	**84.38**	**203**	P		**P**	**22 03 37.6**	**+0.9**
	comp=Z,12nm,1.0s,baz=83,slow=3.3,SNR=8.7							
MAW				LR		LR	22 39 01.0	
	comp=Z,190nm,18.4s,baz=69,slow=34							
MAW	**Mawson**	**84.38**	**203**	P		**P**	**22 03 37.7**	**+1.0**
TOLK	**Toolik Lake Re**	**84.63**	**18**	P		**P**	**22 03 38.3**	**+0.4**
	baz=235							
TOLK	**Toolik Lake Re**	**84.63**	**18**	P		**P**	**22 03 37.9**	**+0.1**
TOLK						**P**	**22 03 38.5**	**+0.6**
TOLK				IAmb		IAmb	22 03 55.5	
	comp=Z,9.9nm,0.9s							
FYU	**Fort Yukon**	**84.90**	**20**	P		**P**	**22 03 39.5**	**+0.3**
FYU				IAmb		IAmb	22 03 47.5	
	comp=Z,15nm,1.1s							
EGAK	**Eagle**	**85.53**	**23**	IAmb		IAmb	22 03 46.5	
	comp=Z,18nm,1.1s							
BESE	**Bessie Mountai**	**85.80**	**30**	IAmb		IAmb	22 03 55.2	
	comp=Z,18nm,1.2s							
SKAG	**Skagway**	**85.89**	**29**	P		**P**	**22 03 44.7**	**+0.4**
SKAG				IAmb		IAmb	22 03 52.4	
	comp=Z,14nm,1.1s							
DAWY	**Dawson**	**85.91**	**24**	IAmb		IAmb	22 03 46.8	
	comp=Z,18nm,1.1s							
KSH	**Kashi**	**85.95**	**310**	P		**P**	**22 03 47.6**	**+2.4**
KSH				sP		sP	22 04 00.3	-0.4
KSH				PP		**PP**	**22 07 10.3**	**+4.7**
KSH				SKS		**SKSac**	**22 14 08.9**	**+0.7**
KSH				S		**S**	**22 14 17.9**	**+1.6**
KSH				SS		**SS**	**22 20 01.5**	**+6.7**
KSH				pmax		pmax		
	comp=Z,52nm,1.1s							
KSH				pmax		pmax		
	comp=Z,550nm,6.1s							
KSH				LR		LR		
	comp=Z,250nm,16.4s							
KSH				LR		LR		
	comp=Z,160nm,7.1s							
KSH				LR		LR		
	comp=Z,220nm,17.3s							
WRAK	**Wrangell Islan**	**86.36**	**32**	P		**P**	**22 03 47.2**	**+0.5**
WRAK				IAmb		IAmb	22 03 47.9	
	comp=Z,11nm,0.9s							
WHY	**Whitehorse**	**86.53**	**28**	IAmb		IAmb	22 03 49.9	
	comp=Z,7.7nm,0.8s							
KURK	**Kurchatov**	**86.78**	**322**	P		**P**	**22 03 48.3**	**-0.6**
KURBB	**Kurchatov Arra**	**86.81**	**322**	P		**P**	**22 03 47.9**	**-1.1**
	comp=Z,1.0nm,0.6s							
NIL	**Nilore**	**86.94**	**304**	P		**P**	**22 03 49.8**	**-0.3**
NIL				IAmb		IAmb	22 03 52.6	
	comp=Z,14nm,0.8s							
FRU1	**Bishkek**	**87.62**	**313**	P		**P**	**22 03 53.2**	**-0.1**
AAK	**Ala-Archa**	**87.69**	**313**	P		**P**	**22 03 54.3**	**+0.6**
EPYK	**Eagle Plains**	**87.87**	**22**	P		**P**	**22 03 54.3**	**+0.4**
	baz=247							
DLBC	**Dease Lake**	**88.16**	**31**	P		**P**	**22 03 56.4**	**+0.9**
	comp=Z,9.6nm,1.0s,baz=273,slow=4.8,SNR=12							
DLBC	**Dease Lake**	**88.16**	**31**	IAmb		IAmb	22 03 57.6	
	comp=Z,15nm,1.1s							
ARSB	**Arslanbob**	**88.54**	**312**	IAmb		IAmb	22 04 04.6	
	comp=Z,13nm,1.1s							
O02D	**Mt. Diablo Mer**	**88.60**	**49**	P		**P**	**22 03 59.7**	**+1.7**
	baz=260							
YBH	**Yreka Blue Hor**	**88.93**	**48**	P		**P**	**22 04 00.4**	**+0.9**
	comp=Z,1.5nm,0.7s,baz=190,slow=3.1,SNR=2.4							
ORV	**Oroville**	**89.47**	**50**	P		**P**	**22 04 02.5**	**+0.5**
INK	**Inuvik**	**89.73**	**21**	P		**P**	**22 04 02.0**	**-0.4**
	comp=Z,4.5nm,0.9s,baz=255,slow=4.8,SNR=14							
INK	**Inuvik**	**89.73**	**21**	IAmb		IAmb	22 04 21.5	
	comp=Z,7.2nm,0.8s							
BTK	**Batken**	**89.95**	**310**	IAmb		IAmb	22 04 05.4	
	comp=Z,9.6nm,1.0s							
GAR	**Garm**	**90.17**	**309**	IAmb		IAmb	22 04 09.2	
	comp=Z,13nm,1.1s							
KBL	**Kabul**	**90.53**	**305**	P		**P**	**22 04 06.4**	**-0.9**
KBL				IAmb		IAmb	22 04 10.2	
	comp=Z,5.9nm,0.8s							
KK31	**Karatay Array**	**90.65**	**313**	P		**P**	**22 04 06.6**	**-0.8**
KKAR	**Karatay Array**	**90.65**	**313**	P		**P**	**22 04 07.3**	**-0.1**
PNTR	**Pine Nut**	**90.85**	**51**	P		**P**	**22 04 08.8**	**+0.1**
PNTR				IAmb		IAmb	22 04 12.2	
	comp=Z,8.3nm,0.8s							
WAKR	**Walker**	**90.89**	**51**	P		**P**	**22 04 08.3**	**-0.6**
CHGR	**Chuyangaron**	**91.01**	**309**	P		**P**	**22 04 07.9**	**-1.5**
CHGR				IAmb		IAmb	22 04 12.7	
	comp=Z,9.7nm,0.9s							
PAHR	**Pah Rah Range**	**91.11**	**50**	P		**P**	**22 04 09.3**	**-0.5**
MWC	**Mount Wilson**	**91.42**	**56**	P		**P**	**22 04 11.4**	**0.0**
CWC	**Cottonwood Cre**	**91.69**	**54**	P		**P**	**22 04 13.5**	**+0.9**
	baz=263							
NVAR	**Mina Array Bea**	**91.77**	**52**	P		**P**	**22 04 13.0**	**+0.1**
	comp=Z,3.7nm,0.9s,baz=246,slow=7.6,SNR=8.8							
NVAR				LR		LR	22 40 11.6	
	comp=Z,185nm,19.5s,baz=266,slow=32							
NV11	**Mina Array Sit**	**91.88**	**52**	IAmb		IAmb	22 04 28.4	
	comp=Z,9.0nm,1.1s							
KVN	**Kaiserville**	**92.00**	**51**	IAmb		IAmb	22 04 15.2	
	comp=Z,5.4nm,1.1s							
MPMC	**Manual Prospec**	**92.11**	**54**	P		**P**	**22 04 16.1**	**+1.5**
	baz=263							
SYO	**Syowa Base**	**92.32**	**199**	eP		**P**	**22 04 11.8**	**-2.8**
SYO	**Syowa Base**	**92.32**	**199**	epP		pP	22 04 24.6	-0.8
SYO	**Syowa Base**	**92.32**	**199**	esP		sP	22 04 30.0	+0.5
FURC	**Furnace Creek,**	**92.66**	**54**	P		**P**	**22 04 18.1**	**+1.3**
	baz=263							
BELC	**Belle Mtn. Jos**	**93.09**	**56**	P		**P**	**22 04 20.0**	**+0.9**
	baz=264							
TPNV	**Topopah Spring**	**93.21**	**53**	P		**P**	**22 04 19.5**	**-0.1**
C36M	**Paulatuk**	**93.31**	**21**	P		**P**	**22 04 18.9**	**-0.2**
	baz=259							
GMRC	**Granite Mounta**	**93.45**	**56**	P		**P**	**22 04 21.1**	**+0.3**
	baz=264							
IRM	**Iron Mountain**	**93.81**	**56**	P		**P**	**22 04 23.3**	**+1.1**
	baz=264							
R11A	**Troy Canyon, C**	**93.88**	**52**	P		**P**	**22 04 23.2**	**+0.6**
	baz=264							
R11A	**Troy Canyon, C**	**93.88**	**52**	P		**P**	**22 04 22.9**	**+0.2**
SHPR	**Sheep Range**	**94.03**	**54**	P		**P**	**22 04 23.5**	**+0.1**
SHPR						**P**	**22 04 25.1**	**+1.7**
HRA	**Herat**	**96.10**	**304**	IAmb		IAmb	22 04 33.0	
	comp=Z,5.1nm,1.0s							
YKA	**Yellowknife Ar**	**96.36**	**28**	P		**P**	**22 04 33.2**	**0.0**
	comp=Z,12nm,0.9s,baz=263,slow=4.3,SNR=75							
YKA				LR		LR	22 43 56.2	
	comp=Z,71nm,20.9s,baz=0.0,slow=33							
PDAR	**Pinedale Array**	**98.74**	**48**	P		**P**	**22 04 44.4**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=232,slow=1.7,SNR=6.4							
GEYT	**Alibeck**	**99.61**	**307**	P		**Pdif**	**22 04 48.5**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=86,slow=7.4,SNR=2.4							
GEYT				PP		**PP**	**22 08 54.7**	**+1.8**
	comp=Z,0.9nm,0.5s,baz=92,slow=16,SNR=2.3							
GEYT				LR		LR	22 51 17.3	
	comp=Z,82nm,21.8s,baz=50,slow=36							
ULM	**Lac du Bonnet**	**107.59**	**39**	PKiKP		**PKiKP**	**22 09 33.0**	**+1.5**
	comp=Z,1.9nm,0.6s,baz=252,slow=1.3,SNR=1.8							
ARCES	**ARCESS Array B**	**109.55**	**343**	PKiKP		**PKiKP**	**22 09 35.2**	**+0.5**
	comp=Z,1.9nm,1.0s,baz=57,slow=3.3,SNR=4.5							
AKASG	**Malin Array Be**	**117.48**	**324**	PKP		**PKPdf**	**22 09 50.0**	**-0.4**
	comp=Z,1.5nm,0.4s,baz=49,slow=2.4,SNR=10							
BRTR	**Keskin Array B**	**118.32**	**312**	PKP		**PKPdf**	**22 09 52.4**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=186,slow=2.5,SNR=4.5							
HFS	**Hagfors**	**119.46**	**339**	PKP		**PKiKP**	**22 09 54.2**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=68,slow=8.5,SNR=9.0							
NB2	**NORSAR Subarra**	**119.66**	**341**	PKPdf		**PKPdf**	**22 09 54.0**	**-0.3**
	comp=Z,3.3nm,1.2s,baz=39,slow=1.9							
NOA	**NORSAR Array B**	**119.66**	**341**	PKP		**PKPdf**	**22 09 53.6**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=43,slow=1.8,SNR=7.0							
BOSA	**Boshof**	**119.97**	**231**	PKP		**PKiKP**	**22 09 57.0**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=150,slow=1.7,SNR=4.4							
Q54A	**Coxs Mills**	**120.73**	**49**	P		**PKiKP**	**22 09 57.0**	**-0.1**
	baz=287							
BUR08	**Bucovina Ar. S**	**121.19**	**323**			**PKiKP**	**22 09 59.4**	**+1.5**
X55A	**Gracelyn & Ava**	**121.33**	**54**	P		**PKiKP**	**22 09 58.8**	**+0.4**
	baz=284							
MLR	**Muntele Rosu**	**121.67**	**320**	PKP		**PKiKP**	**22 09 59.6**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=360,slow=17,SNR=2.2							
X56A	**White Oak**	**121.81**	**54**	P		**PKiKP**	**22 09 59.6**	**+0.2**
	baz=285							
D56A	**ZEC Mazanza, M**	**121.82**	**38**	P		**PKPdf**	**22 09 58.6**	**-0.2**
	baz=297							
N56A	**West Decatur**	**121.95**	**46**	P		**PKPdf**	**22 09 59.0**	**-0.3**
	baz=290							
KOLS	**Kolonicke sedl**	**122.29**	**325**	ePKP		**PKiKP**	**22 10 00.4**	**+0.5**
M58A	**Price's Panora**	**123.08**	**45**	P		**PKPdf**	**22 10 01.4**	**0.0**
	baz=292							
N58A	**Sunbury**	**123.10**	**45**	P		**PKiKP**	**22 10 01.6**	**-0.1**
	baz=292							
H58A	**Gabriels**	**123.36**	**40**	P		**PKPdf**	**22 10 01.8**	**-0.2**
	baz=296							
LANS	**Liptovska Anna**	**123.75**	**326**	ePKP		**PKiKP**	**22 10 03.9**	**+1.1**
MORC	**Moravsky Berou**	**124.44**	**328**	ePKP		**PKiKP**	**22 10 04.0**	**-0.1**
VYHS	**Vyhne**	**124.46**	**326**	ePKP		**PKiKP**	**22 10 04.2**	**0.0**
OSTC	**Ostas**	**124.66**	**329**	ePKPDF		**PKiKP**	**22 10 05.5**	**+1.0**
OSTC				ex		x	22 10 15.6	
VTS	**Vitosha**	**124.66**	**318**			**PKiKP**	**22 10 05.0**	**0.0**
E61A	**Lac Etchemin**	**124.69**	**37**	P		**PKiKP**	**22 10 04.5**	**-0.2**
	baz=301							
JAVC	**Velka Javorina**	**124.89**	**327**	ePKP		**PKiKP**	**22 10 05.8**	**+0.7**
VRAC	**Vranov**	**125.21**	**328**	ePKP		**PKPdf**	**22 10 04.9**	**-0.4**
MODS	**Modra-Piesok**	**125.39**	**327**	ePKP		**PKPdf**	**22 10 05.5**	**-0.2**
KRUC	**Moravsky**	**125.46**	**328**	ePKP		**PKPdf**	**22 10 05.8**	**+0.1**
BRG	**Berggiesshubel**	**125.59**	**331**	ePKP		**PKiKP**	**22 10 06.3**	**0.0**
	comp=Z,3.7nm,0.8s							
	comp=N,125nm,21.4s							
	comp=E,93nm,16.6s							
	comp=Z,177nm,18.9s							
CLL	**Collm**	**125.76**	**332**	ePKPdf		**PKiKP**	**22 10 08.0**	**+1.4**
	comp=Z,5.0nm,0.9s							
CLL				ePP		**PP**	**22 11 54.0**	**-4.3**
CLL				ePPS		PPS	22 23 30.0	
CLL				eSS		SS	22 28 54.0	-1.4
CLL				LmV			23 08 00.0	
	comp=Z,200nm,19.9s							
TREC	**Trest**	**125.80**	**328**	ePKPDF		**PKiKP**	**22 10 06.9**	**+0.1**
CONA	**Conrad Observa**	**126.42**	**327**	ePKiKP		**PKPdf**	**22 10 07.5**	**-0.2**
	comp=Z,3.0nm,1.0s							
FNA	**Florina**	**126.72**	**317**			**PKPdf**	**22 10 08.6**	**+0.1**
KHC	**Kasperske Hory**	**126.88**	**329**	ePKPDF		**PKiKP**	**22 10 09.2**	**+0.2**
KHC				epPKP		**pPKPdf**	**22 10 17.8**	**-2.0**
KHC				ex		x	22 10 26.5	
KHC	**Kasperske Hory**	**126.88**	**329**			**PKiKP**	**22 10 09.2**	**+0.2**
ARSA	**Arzberg**	**127.00**	**326**	ePKiKP		**PKPdf**	**22 10 09.0**	**+0.2**
	comp=Z,1.9nm,1.0s							
GEC2	**GERESS Array S**	**127.00**	**329**			**PKiKP**	**22 10 09.3**	**0.0**
GERES	**GERESS Array B**	**127.00**	**329**	PKP		**PKiKP**	**22 10 09.2**	**0.0**
	comp=Z,2.5nm,0.8s,baz=78,slow=1.9,SNR=19							
MOA	**Molln**	**127.32**	**328**	ePKiKP		**PKiKP**	**22 10 09.8**	**-0.1**
	comp=Z,2.6nm,1.4s							
SOKA	**Soboth**	**127.61**	**326**	ePKiKP		**PKPdf**	**22 10 10.2**	**+0.1**
	comp=Z,3.8nm,1.1s							
GCIS	**Gornji Cirnik**	**127.75**	**325**	*i* PKPdf		**PKPdf**	**22 10 10.4**	**+0.2**
KBA	**Koelnbreinsper**	**128.29**	**327**	ePKiKP		**PKPdf**	**22 10 11.6**	**+0.1**
	comp=Z,2.6nm,1.0s							
CEY	**Cerknica**	**128.50**	**325**	*i* PKPdf		**PKiKP**	**22 10 12.0**	**-0.4**
EKA	**Eskdalemuir Ar**	**128.70**	**344**	PKP		**PKiKP**	**22 10 12.5**	**+0.1**
	comp=Z,3.2nm,1.0s,baz=22,slow=3.0,SNR=4.1							
ABTA	**Abfaltersbach**	**128.94**	**327**	*i* PKPdf		**PKPdf**	**22 10 11.9**	**-0.7**
	comp=Z,4.5nm,1.0s							
WATA	**Walderalm**	**129.06**	**328**	ePKPdf		**PKPdf**	**22 10 11.9**	**-1.0**
	comp=Z,3.4nm,0.9s							
WTTA	**Wattenberg**	**129.08**	**328**	ePKPdf		**PKPdf**	**22 10 12.1**	**-0.8**
	comp=Z,3.5nm,0.6s							
GO01	**Chusmiza**	**129.14**	**122**			**PKiKP**	**22 10 15.2**	**+0.3**
MOTA	**Moosalm**	**129.30**	**329**	ePKPdf		**PKPdf**	**22 10 12.5**	**-0.8**
	comp=Z,5.5nm,1.1s							
SQTA	**Sanit Quirin**	**129.33**	**329**	*i* PKiKP		**PKPdf**	**22 10 13.2**	**-0.2**
	comp=Z,2.4nm,0.6s							
RETA	**Reutte**	**129.38**	**329**	ePKiKP		**PKiKP**	**22 10 13.9**	**-0.2**
	comp=Z,5.3nm,1.2s							
FETA	**Feichten**	**129.71**	**329**	ePKiKP		**PKPdf**	**22 10 14.1**	**-0.1**
	comp=Z,2.7nm,0.7s							
DAVA	**Damuels**	**129.96**	**329**	ePKiKP		**PKiKP**	**22 10 15.5**	**+0.1**
	comp=Z,2.8nm,0.7s							
DAVOX	**Davos/Dischmat**	**130.30**	**329**	PKP		**PKiKP**	**22 10 16.7**	**+0.6**
	comp=Z,2.3nm,0.6s,baz=280,slow=5.8,SNR=4.5							
LPAZ	**La Paz**	**131.53**	**119**			**PKiKP**	**22 10 20.0**	**0.0**
CPUP	**Villa Florida**	**134.44**	**138**	PKP		**PKiKP**	**22 10 24.4**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=182,slow=7.2,SNR=4.2							
CPUP				SKPbc		**SKPab**	**22 13 54.1**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=254,slow=2.8,SNR=3.2							
KEST	**Kesra**	**137.43**	**317**	PKP		**PKiKP**	**22 10 29.9**	**-0.9**
	comp=Z,2.8nm,0.8s,baz=293,slow=2.2,SNR=5.5							
ESDC	**Sonseca Array**	**142.32**	**333**	PKhKP		**PKPdf**	**22 10 35.2**	**-2.4**
	comp=Z,0.4nm,0.6s,baz=33,slow=3.1,SNR=3.0							
ESDC				SKPbc		**SKiKP**	**22 14 16.8**	**+3.1**
	comp=Z,0.6nm,0.7s,baz=70,slow=2.5,SNR=5.1							
MVO	**Moncorvo**	**142.35**	**337**	ePKP		**PKPdf**	**22 10 35.7**	**-1.9**
PTGA	**Pitinga**	**144.36**	**101**			**PKPab**	**22 10 39.7**	**-0.3**
PBEJ	**Beja**	**145.38**	**336**	ePKP		**PKPab**	**22 10 43.7**	**+0.7**
PNCL	**Nicolau / Gran**	**145.57**	**337**	ePKP		**PKPab**	**22 10 44.2**	**+0.5**
PCVE	**Castro Verde**	**145.78**	**336**	ePKP		**PKPab**	**22 10 45.3**	**+0.8**
TAM	**Tamanrasset**	**146.62**	**301**			**PKPab**	**22 10 48.0**	**-0.3**
MDT	**Midelt**	**148.02**	**326**	PKPbc		**PKPbc**	**22 10 51.5**	**+0.7**
	comp=Z,12nm,0.9s,baz=132,slow=2.3,SNR=15							
BDFB	**Brasilia**	**148.04**	**135**	PKPbc		**PKPbc**	**22 10 51.8**	**+0.5**
	comp=Z,15nm,0.8s,baz=224,slow=1.8,SNR=19							
BDFB	**Brasilia**	**148.04**	**135**			**PKPbc**	**22 10 51.1**	**-0.2**
TOA0	**Torodi Ar. Sit**	**152.95**	**285**	PKPbc		**PKPbc**	**22 11 02.5**	**-0.5**
TORD	**Torodi Ar. Bea**	**152.95**	**285**	PKP		**PKPdf**	**22 10 54.9**	**-0.8**
	comp=Z,1.0nm,0.9s,baz=68,slow=2.9,SNR=4.9							
TORD				PKPbc		**PKPbc**	**22 11 02.7**	**-0.3**
	comp=Z,13nm,0.9s,baz=63,slow=1.8,SNR=37							
TORD				PKPab		**PKPab**	**22 11 13.8**	**-0.5**
	comp=Z,7.1nm,0.7s,baz=60,slow=2.7,SNR=7.0							
DBIC	**Dimbokro**	**159.92**	**270**	PKPab		**PKPab**	**22 11 44.4**	**+0.1**
	comp=Z,8.3nm,1.1s,baz=117,slow=4.5,SNR=3.4							

*IDC **09** 22:06:24.4±1.8, 8°25S×108°92E, h0km, mb3.7/5,*
mb1 3.8**/5, **mb1mx3.6**/40, **mbtmp3.7**/5, **Error ellipse:
s-maj=112.4km s-min=18.3km az=48.0, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEM	**Lembang**	**1.91**	**317**	Pn	Pn	22 06 59.2	+0.8
	19nm,0.3s,baz=98,slow=14,SNR=8.0						
LEM				Sn	Sg	22 07 28.7	+2.9
	9.3nm,0.3s,baz=1.3,slow=17,SNR=7.8						
WRA	**Warramunga Arr**	**27.21**	**118**	P	P	22 12 10.1	-0.1
	0.3nm,0.6s,baz=289,slow=10.0,SNR=6.7						
ASAR	**Alice Springs**	**28.42**	**126**	P	P	22 12 21.4	+0.4
	0.5nm,0.5s,baz=305,slow=9.4,SNR=9.5						
ASAR				PcP	PcP	22 15 32.8	-0.8
	0.2nm,0.4s,baz=308,slow=2.1,SNR=1.6						
STKA	**Stephens Creek**	**38.40**	**132**	P	P	22 13 47.9	+0.1
	1.2nm,0.5s,baz=311,slow=8.8,SNR=4.9						
MKAR	**Makanchi Array**	**59.71**	**339**	P	P	22 16 30.8	0.0
	0.1nm,0.3s,baz=153,slow=6.9,SNR=4.4						
ZALV	**Zalesovo Beam**	**65.22**	**345**	P	P	22 17 06.9	-0.6
	0.3nm,0.3s,baz=167,slow=5.7,SNR=2.3						

*IDC **09** 22:15:30.3±51.0, 16°34S×175°39W, h0km, mb4.0/3,*
mb1 4.2**/3, **mb1mx3.7**/28, **mbtmp4.0**/3, **Error ellipse:
s-maj=968.7km s-min=181.1km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.91**	**240**	P	P	22 23 23.3	+0.6
	0.6nm,0.2s,baz=102,slow=11,SNR=3.2						
WRA	**Warramunga Arr**	**47.77**	**258**	P	P	22 24 09.2	-0.4
	0.4nm,0.5s,baz=95,slow=7.3,SNR=8.9						
ASAR	**Alice Springs**	**48.00**	**253**	P	P	22 24 11.1	-0.3
	3.2nm,0.6s,baz=88,slow=8.4,SNR=54						

*IDC **09** 22:29:12.7±3.6, 6°17S×102°58E, h0km, mb3.8/5,*
mb1 3.9/5, mb1mx3.6/32, mbtmp3.8/5, Error ellipse:
s-maj=149.0km s-min=23.0km az=47.0
ISC 09 22:29:16.1±3.2, 6°1S±0°6×102°6E±0°6, h21km, n9, σ0892/6,
mb3.5/5, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**21.20**	**102**	P	**P**	**22 34 01.2**	**+0.6**
	13nm,0.3s,baz=281,slow=16,SNR=3.2						
H08S2	**Diego Garcia H**	**29.97**	**265**	T	T	23 07 06.6	
	baz=89						
H08S3	**Diego Garcia H**	**29.98**	**265**	T	T	23 07 26.3	
	baz=89						
H08S1	**Diego Garcia H**	**29.98**	**265**	T	T	23 07 37.1	
	baz=89						
WRA	**Warramunga Arr**	**33.72**	**117**	P	**P**	**22 35 55.2**	**-1.1**
	0.3nm,0.8s,baz=291,slow=9.9,SNR=5.3						
ASAR	**Alice Springs**	**34.76**	**123**	P	**P**	**22 36 05.9**	**+0.6**
	0.4nm,0.7s,baz=301,slow=8.4,SNR=2.9						
MKAR	**Makanchi Array**	**55.68**	**343**	P	**P**	**22 38 50.7**	**-0.1**
	0.2nm,0.4s,baz=152,slow=8.7,SNR=5.9						
ZALV	**Zalesovo Beam**	**61.68**	**348**	P	**P**	**22 39 32.9**	**+0.5**
	0.1nm,0.3s,baz=163,slow=7.4,SNR=6.4						
TXAR	**Lajitas Array**	**146.08**	**44**	PKPbc	**PKPab**	**22 48 55.4**	**-0.6**
	0.3nm,0.6s,baz=296,slow=1.6,SNR=5.6						

*IDC **09** 22:48:45.6±1.4, 10°66S×111°13E, h0km, mb3.9/8,*
mb1 4.0/9, mb1mx3.8/36, mbtmp3.8/9, ML3.7/1, Error
ellipse: s-maj=81.6km s-min=16.6km az=49.0
*DJA **09** 22:48:46.8±1.4, 11°S±12°×11°1E±°, h10km, M4.4/6,*
mb4.3/1, MLv4.4/6
ISC 09 22:48:46.7±0.9, 10°84S±0°08×110°92E±0°09, h10km, n17,
σ1907/23, mb4.0/8, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCJI	**Pacitan**	**2.64**	**6**	P	Pn	**22 49 29.7**	**+0.2**
PCJI				S	**Sn**	**22 50 01.8**	**+0.2**
UGM	**Wanagama**	**2.94**	**352**	P	**Pn**	**22 49 34.4**	**+0.8**
UGM				S	**Sn**	**22 50 09.5**	**+0.6**
WOJI	**Wonogiri, Jawa**	**2.99**	**0**	P	**Pn**	**22 49 34.3**	**+0.1**
WOJI				S	**Sn**	**22 50 09.4**	**-0.7**
JAGI	**Jajag, Banyuwa**	**3.96**	**54**	P	**Pn**	**22 49 50.3**	**+2.6**
JAGI				S	**Sn**	**22 50 32.4**	**-1.9**
GRJI	**Gresik**	**4.20**	**22**	P	**Pn**	**22 49 51.3**	**+0.5**
CISI	**Cisompet, Garu**	**4.48**	**317**	P	**Pn**	**22 49 53.9**	**-0.9**
PLAI	**Plampang**	**7.05**	**74**	P	**Pn**	**22 50 30.9**	**+0.8**
EDFI	**Ende, Flores**	**10.82**	**80**	P	**Pn**	**22 51 23.5**	**+1.6**
FITZ	**Fitzroy Crossi**	**15.97**	**119**	Pn	**Pn**	**22 52

PEIG	**Puerto Escondi**	**1.41 293**	*i* P	**Pn**	23 39 49.0	**-0.8**
PEIG			*e*S	**Sn**	23 40 06.4	**-1.1**
VHO	**Vista Hermosa**	**1.84 331**	*i* P	**Pn**	23 39 55.4	**-0.6**
VHO			*e*S	**Sn**	23 40 17.7	**-0.8**
YOIG	**Yosondua**	**2.19 310**	*i* P	**Pn**	23 40 00.9	**+0.1**
YOIG			*e*S	**Sn**	23 40 25.6	**-1.4**
PNIG	**Pinotepa**	**2.43 293**	*i* P	**Pn**	23 40 03.9	**+0.1**
PNIG			*e*S	**Sn**	23 40 31.5	**-1.2**
PNIG	**Pinotepa**	**2.43 293**		**Pb**	23 40 08.7	**-0.4**
PNIG				**Sn**	23 40 31.5	**-1.2**
TXIG	**Tlaxiaco**	**2.60 314**	*e*P	**Pn**	23 40 05.7	**-0.9**
TXIG			*i* S	**Sn**	23 40 37.7	**+0.3**
TOIG	**Toxpalan**	**2.90 335**	*i* P	**Pn**	23 40 10.2	**-0.2**
TOIG			*e*S	**Sn**	23 40 44.9	**+0.5**
HLIG	**Huajuapan de L**	**3.05 321**	*i* P	**Pn**	23 40 11.0	**-1.6**
HLIG			*i* S	**Sn**	23 40 47.7	**-0.5**
FTIG	**Fresnillo de T**	**3.31 318**	*i* P	**Pn**	23 40 16.4	**+0.3**
FTIG			*i* S	**Sn**	23 40 54.6	**0.0**
TLIG	**Tlapa**	**3.38 309**	Pn	**Pn**	23 40 19.9	**+2.7**
MOIG	**Morelia**	**6.64 310**	Pn	**Pn**	23 41 06.6	**+4.6**

*JMA **09** 23:56:45.9±0.3,24°.75N×122°.22E,h3km±5km, M1.9*
*TAP **09** 23:56:45.1,24°.83N×122°.25E,h10km±1km,ML2.8,C*
ISC 09 23:56:45.5±1.1,24°.80N±0'.02×122°.25E±0'.02,h8km±9km, n42,σ0s46/75,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.27 203**		P	**Pb**	**23 56 52.4**	**-0.2**
	baz=201						
EOS1				S	**Sb**	**23 56 57.3**	**-0.1**
	baz=201						
TWB1	**Santiao Chiao**	**0.31 312**		P	**Pg**	**23 56 51.5**	**-0.2**
	baz=307						
TWB1				S	**Sg**	**23 56 55.2**	**-0.6**
	baz=307						
TWC	**Suao**	**0.41 242**		P	**Pg**	**23 56 53.4**	**0.0**
	baz=238						
TWC				S	**Sg**	**23 56 59.1**	**+0.3**
	baz=238						
TIPB	**Shuangxi**	**0.42 294**		P	**Pg**	**23 56 53.7**	**+0.1**
	baz=290						
TIPB				S	**Sb**	**23 57 01.4**	**-0.3**
	baz=290						
NWF	**Wu-fen Shan**	**0.50 303**		P	**Pb**	**23 56 56.8**	**+0.1**
	baz=299						
NWF				*e*S	**Sg**	**23 57 02.2**	**+0.4**
	baz=299						
WFSB	**Wu-fen Shan**	**0.50 303**		*e*P	**Pb**	**23 56 56.8**	**+0.2**
	baz=299						
WFSB				*e*S	**Sg**	**23 57 02.2**	**+0.4**
	baz=299						
TWE	**Neicheng**	**0.53 262**		P	**Pg**	**23 56 56.1**	**+0.3**
	baz=257						
TWE				*e*S	**Sb**	**23 57 04.8**	**-0.1**
	baz=257						
SLBB	**Yuanshan**	**0.56 265**		P	**Pb**	**23 56 57.5**	**-0.1**
	baz=262						
SLBB				*e*S	**Sb**	**23 57 05.7**	**0.0**
	baz=262						
ENA	**Nanau**	**0.59 231**		*e*P	**Pg**	**23 56 56.9**	**0.0**
	baz=228						
ENA				*e*S	**Sb**	**23 57 06.6**	**-0.1**
	baz=228						
ENTT	**Nioudou**	**0.64 256**		*e*P	**Pb**	**23 56 58.5**	**-0.4**
	baz=252						
ENTT				*e*S	**Sb**	**23 57 08.9**	**+0.8**
	baz=252						
NWLT	**Wulai**	**0.68 268**		*e*P	**Pb**	**23 56 59.4**	**-0.2**
	baz=265						
NWLT				*e*S	**Sb**	**23 57 09.2**	**+0.1**
	baz=265						
NDT	**Datong Townshi**	**0.70 254**		*e*P	**Pb**	**23 57 00.2**	**+0.3**
	baz=251						
NDT				*e*S	**Sb**	**23 57 08.7**	**-1.0**
	baz=251						
YM01	**YM01**	**0.70 299**		P	**Pb**	**23 56 59.7**	**-0.4**
	baz=297						
YM01				S	**Sb**	**23 57 09.3**	**-0.6**
	baz=297						
TATO	**Taipei**	**0.71 284**		*e*P	**Pb**	**23 57 00.1**	**0.0**
	baz=281						
TATO				*e*S	**Sb**	**23 57 10.1**	**0.0**
	baz=281						
YM10	**YM10**	**0.72 300**		*e*P	**Pg**	**23 56 59.7**	**+0.4**
	baz=297						
JYNG	**Yonagunijimaku**	**0.72 119**		P	**Pb**	**23 57 00.1**	**-0.3**
JYNG				S	**Sb**	**23 57 10.0**	**-0.5**
TWY	**Chenhua**	**0.75 309**		P	**Pb**	**23 57 00.6**	**-0.3**
	baz=307						
YOJ	**Yonaguni jima**	**0.77 116**		*e*P	**Pg**	**23 57 00.8**	**+0.5**
	baz=117						
YOJ				*e*S	**Sb**	**23 57 11.4**	**-0.4**
	baz=117						
YOJ	**Yonaguni jima**	**0.77 116**		P	**Pg**	**23 57 00.7**	**+0.3**
YOJ				S	**Sb**	**23 57 11.5**	**-0.4**
YHNB	**Yeheng**	**0.80 261**		*e*P	**Pg**	**23 57 01.0**	**0.0**
	baz=258						
YHNB				*e*S	**Sn**	**23 57 14.4**	**-1.0**
	baz=258						
NSK	**Sanguang**	**0.82 261**		*e*P	**Pg**	**23 57 01.1**	**-0.1**
	baz=259						
NSK				*e*S	**Sg**	**23 57 12.2**	**+0.3**
	baz=259						
PCYT	**Pengchaiyu**	**0.84 349**		*e*P	**Pg**	**23 57 01.0**	**-0.6**
	baz=349						
NACB	**Ninganchiao**	**0.86 224**		P	**Pg**	**23 57 01.7**	**-0.3**
	baz=222						
NACB				*e*S	**Sg**	**23 57 12.8**	**-0.4**
	baz=222						
NNSB	**Datong**	**0.87 245**		*e*P	**Pg**	**23 57 02.1**	**-0.1**
	baz=243						
NNSB				*e*S	**Sb**	**23 57 13.8**	**-1.0**
	baz=243						
NNSH	**Datong**	**0.87 245**		*e*P	**Pn**	**23 57 03.6**	**-0.6**
	baz=243						
NNSH				*e*S	**Sg**	**23 57 13.7**	**+0.2**
	baz=243						
NNS	**Nan Shan**	**0.87 246**		*e*P	**Pg**	**23 57 02.3**	**0.0**
	baz=243						
NNS				*e*S	**Sb**	**23 57 15.7**	**+0.8**
	baz=243						
ETLH	**Xiulin Townshi**	**0.91 230**		P	**Pg**	**23 57 03.1**	**+0.1**
	baz=228						
ETLH				*e*S	**Sg**	**23 57 14.2**	**-0.8**
	baz=228						
TWD	**Chiawan**	**0.93 220**		*e*P	**Pg**	**23 57 03.1**	**-0.3**
	baz=218						
TWD				*e*S	**Sg**	**23 57 15.0**	**-0.5**
	baz=218						
WHF	**Hehuan Shan**	**1.11 234**		*e*P	**Pb**	**23 57 06.9**	**-0.3**
	baz=232						
WHF				*e*S	**Sb**	**23 57 21.3**	**-0.6**
	baz=232						
LIOB	**Emei**	**1.13 262**		*e*P	**Pn**	**23 57 08.5**	**+0.9**
	baz=260						
LIOB				*e*S	**Sn**	**23 57 24.1**	**+0.7**
	baz=260						
TDCB	**Techi**	**1.13 241**		*e*P	**Pn**	**23 57 07.9**	**+0.1**
	baz=239						
TDCB				*e*S	**Sn**	**23 57 23.2**	**-0.4**
	baz=239						
NSTT	**Nanjuang**	**1.15 262**		*e*P	**Pn**	**23 57 08.6**	**+0.7**
	baz=260						
NSTT				*e*S	**Sn**	**23 57 24.6**	**+0.9**
	baz=260						
CHGB	**Renai**	**1.22 233**		P	**Pb**	**23 57 09.0**	**-0.1**
	baz=231						
CHGB				S	**Sn**	**23 57 25.6**	**-0.5**
	baz=231						
OWD	**Renai**	**1.29 229**		*e*P	**Pb**	**23 57 10.1**	**-0.1**
	baz=228						
OWD				*e*S	**Sb**	**23 57 26.9**	**0.0**
	baz=228						
WHP	**Taichung City**	**1.29 247**		*e*P	**Pg**	**23 57 11.4**	**+1.1**
	baz=245						
WHP				*e*S	**Sb**	**23 57 26.9**	**-0.1**
	baz=245						
HGSD	**Ruisui**	**1.50 210**		*e*P	**Pn**	**23 57 12.9**	**+0.1**
	baz=209						
SMLT	**Sun Moon Lake**	**1.53 234**		*e*P	**Pg**	**23 57 15.2**	**+0.4**
	baz=232						
SSLB	**Suanglung**	**1.55 230**		*e*P	**Pb**	**23 57 14.7**	**+0.1**
	baz=228						
SSLB				*e*S	**Sg**	**23 57 35.2**	**-0.2**
	baz=228						
JKRS	**Kuro-shima**	**1.70 109**		P	**Pb**	**23 57 17.5**	**+0.5**
JIJ	**Ishigaki jima**	**1.78 104**		*e*S	**Sb**	**23 57 41.2**	**+0.3**
CHN5	**Tsauling**	**1.87 230**		*e*P	**Pb**	**23 57 20.3**	**+0.4**
	baz=229						
CHN4	**Tsaushan**	**2.09 227**		*e*P	**Pb**	**23 57 23.6**	**-0.1**
	baz=225						

*NEIC **10** 00:00:14.9±2.0,24°.84S±0°.09×179°.9E±0°.1,h513km±5km, mb4.5/41,Error ellipse: s-maj=17.2km s-min=11.1km az=118.0*
*IDC **10** 00:00:15.2±1.5,24°.86S×179°.78E,h512km±14km, mb3.6/14,mb1 3.8/16,mb1mx3.7/31,mbtmp4.5/16,Error ellipse: s-maj=16.9km s-min=13.5km az=142.0*
ISC 10 00:00:14.3±0.4,24°.82S±0°.06×179°.85E±0°.08,h501km, n118,σ1s88/121,mb4.3/27,4C-1D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.85 156**		P	**P**	**00 01 40.4**	**+0.6**
MSVF	**Nonsavu**	**7.25 346**		P	**P**	**00 02 04.8**	**+1.6**
NIUE	**Niue**	**11.07 61**		P	**P**	**00 02 44.4**	**+1.3**
OUZ	**Omahutia**	**11.69 206**		P	**P**	**00 02 50.8**	**+1.3**
DZM	**Mont Dzumac**	**12.60 280**		P	**P**	**00 03 00.4**	**+1.0**
	0.5nm,0.3s,baz=74,slow=18,SNR=2.9						
MXZ	**Matakaoa Point**	**12.77 186**		P	**P**	**00 02 58.5**	**-2.4**
HAZ	**Te Kaha**	**13.02 187**		P	**P**	**00 03 03.9**	**+0.4**
PKGZ	**Pakihiroa**	**13.12 186**		P	**P**	**00 03 08.1**	**+3.5**
PUZ	**Puketiti**	**13.28 185**		P	**P**	**00 03 08.2**	**+1.9**
TOZ	**Tahuroa Road**	**13.39 195**		P	P	00 03 12.9	+5.5
AFI	**Afiamalu**	**13.42 38**		P	**P**	**00 03 07.6**	**-0.5**
URZ	**Urewera**	**13.60 189**		P	**P**	**00 03 09.3**	**-0.3**
	3.0nm,0.3s,baz=38,slow=2.8,SNR=16						
URZ				S	**S**	**00 05 31.8**	**-2.4**
	1.6nm,0.3s,baz=210,slow=23,SNR=10						
URZ	**Urewera**	**13.60 189**		P	**P**	**00 03 08.3**	**-1.3**
URZ	**Urewera**	**13.60 189**		P	**P**	**00 03 10.4**	**+0.8**
MWZ	**Matawai**	**13.62 188**		P	**P**	**00 03 09.5**	**-0.3**
MUGZ	**Murupara**	**13.87 190**		P	**P**	**00 03 14.3**	**+1.9**
SNGZ	**Shannon Statio**	**14.08 188**		P	**S**	**00 05 49.0**	**+5.5**
MTHZ	**Maungataniwha**	**14.22 190**		P	**S**	**00 03 19.9**	**+3.7**
MTHZ	**Maungataniwha**	**14.22 190**		P	**S**	**00 05 47.3**	**+1.1**
RAHZ	**Arahi**	**14.25 189**		P	**S**	**00 05 54.2**	**+7.5**
HIZ	**Hauiti**	**14.29 196**		P	**P**	**00 03 18.6**	**+1.7**
NMHZ	**Naumai**	**14.47 190**		P	**P**	**00 03 21.8**	**+3.0**
BKZ	**Black Stump Fm**	**14.58 190**		P	**P**	**00 03 19.8**	**-0.2**
BKZ	**Black Stump Fm**	**14.58 190**		P	**S**	**00 05 52.1**	**-1.0**
BKZ	**Black Stump Fm**	**14.58 190**		P	**P**	**00 03 20.6**	**+0.6**
KWHZ	**Kaweka Forest**	**14.85 190**		P	**P**	**00 03 23.7**	**+0.9**
KWHZ	**Kaweka Forest**	**14.85 190**		P	**S**	**00 05 56.5**	**-1.7**
MOVZ	**Moawhango**	**14.95 192**		P	**P**	**00 03 26.2**	**+2.4**
BHHZ	**Black Hill Sta**	**14.97 191**		P	**P**	**00 03 23.0**	**-1.1**
BHHZ	**Black Hill Sta**	**14.97 191**		P	**S**	**00 05 59.8**	**-0.8**
PNHZ	**Pukenui**	**15.36 191**		P	**S**	**00 06 08.0**	**0.0**
DVHZ	**Dannevirke**	**15.74 190**		P	**S**	**00 06 15.7**	**+0.5**
POWZ	**Post Office Ro**	**15.90 191**		P	**S**	**00 06 16.8**	**-1.4**
BFZ	**Birch Farm**	**16.10 190**		P	**S**	**00 06 14.9**	**-7.0**
BFZ	**Birch Farm**	**16.10 190**		P	**P**	**00 03 35.7**	**-0.1**
BFZ				IAmb	IAmb	00 03 45.2	
	comp=Z,26nm,1.0s						
MRZ	**Mangatainoka R**	**16.20 192**		P	**S**	**00 06 20.4**	**-3.2**
HOWZ	**Holdsworth Sta**	**16.44 192**		P	**S**	**00 06 22.3**	**-5.7**
MSWZ	**Moikau Station**	**16.99 192**		P	**P**	**00 03 45.0**	**+0.1**
SNZO	**South Karori**	**17.00 193**		P	**P**	**00 03 44.1**	**-0.8**
BHW	**Baring Head**	**17.06 193**		P	**P**	**00 03 45.6**	**+0.1**
QRZ	**Quartz Range**	**17.09 199**		P	**P**	**00 03 45.1**	**-0.9**
PLWZ	**Palliser**	**17.14 192**		P	**P**	**00 03 45.9**	**-0.5**
NNZ	**Nelson**	**17.22 197**		P	**P**	**00 03 47.2**	**0.0**
NNZ				IAmb	IAmb	00 03 53.1	
	comp=Z,26nm,1.1s						
TUWZ	**Tuamarina**	**17.28 195**		P	**P**	**00 03 47.4**	**-0.3**
CMWZ	**Cape Campbell**	**17.52 194**		P	**P**	**00 03 50.5**	**+0.5**
BSWZ	**Blackbirch Sta**	**17.57 195**		P	**P**	**00 03 49.7**	**-0.7**
THZ	**Tophouse**	**17.86 197**		P	**P**	**00 03 52.5**	**-0.6**
THZ				IAmb	IAmb	00 03 58.2	
	comp=Z,9.8nm,0.7s						
KHZ	**Kahutara**	**18.31 195**		P	**P**	**00 03 56.5**	**-0.7**
KHZ				IAmb	IAmb	00 04 02.7	
	comp=Z,24nm,1.1s						
LTZ	**Lake Taylor**	**18.98 197**		P	**P**	**00 04 03.2**	**-0.1**
LTZ				IAmb	IAmb	00 04 09.2	
	comp=Z,21nm,0.9s						
OXZ	**Oxford**	**19.54 197**		P	**P**	**00 04 08.1**	**-0.4**
OXZ				IAmb	IAmb	00 04 11.1	
	comp=Z,24nm,1.1s						
RPZ	**Rata Peaks**	**20.18 199**		P	**P**	**00 04 13.9**	**-0.4**
	comp=Z,8.0nm,0.5s,baz=34,slow=2.4,SNR=8.0						
RPZ	**Rata Peaks**	**20.18 199**		IAmb	IAmb	00 04 29.6	
	comp=Z,21nm,1.1s						
FOZ	**Fox Glacier**	**20.40 201**		P	**P**	**00 04 15.6**	**-0.7**
LBZ	**Lake Benmore**	**21.05 200**		P	**P**	**00 04 21.8**	**-0.4**
LBZ				IAmb	IAmb	00 04 22.2	
	comp=Z,20nm,1.1s						
ODZ	**Otahua Downs**	**21.52 198**		P	**P**	**00 04 25.5**	**-0.9**
WKZ	**Wanaka**	**21.81 201**		P	**P**	**00 04 29.8**	**+0.7**
WKZ				IAmb	IAmb	00 04 36.2	
	comp=Z,21nm,1.0s						
MLZ	**Mavora Lakes**	**22.59 202**		P	**P**	**00 04 36.0**	**-0.1**
CTAO	**Charters Tower**	**31.35 272**		P	**P**	**00 05 55.8**	**+2.4**
TOO	**Toolangi**	**31.84 238**		P	**P**	**00 05 57.1**	**-0.3**
STKA	**Stephens Creek**	**34.26 249**		P	**P**	**00 06 18.4**	**+0.4**
	comp=Z,3.9nm,0.3s,baz=94,slow=10,SNR=11						
STKA	**Stephens Creek**	**34.26 249**		IAmb	IAmb	00 06 21.0	
	comp=Z,0.9nm,0.8s						
COEN	**Coen**	**36.13 280**		P	**P**	**00 06 33.3**	**-0.4**
COEN				IAmb	IAmb	00 06 37.1	
	comp=Z,9.3nm,0.9s						
BBOO	**Buckleboo**	**38.96 248**		P	**P**	**00 06 56.9**	**+0.1**
BBOO				IAmb	IAmb	00 06 58.6	
	comp=Z,6.7nm,0.8s						
AS31	**Alice Springs**	**41.75 262**		P	**P**	**00 07 19.6**	**+0.3**
ASAR	**Alice Springs**	**41.76 262**		P	**P**	**00 07 19.2**	**-0.1**
	comp=Z,3.8nm,0.3s,baz=94,slow=7.2,SNR=84						
ASAR				ScP	**ScP**	**00 12 06.0**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=108,slow=3.8,SNR=8.0						
ASAR				S	**S**	**00 12 56.6**	**-3.5**
	comp=Z,0.8nm,0.8s,baz=98,slow=17,SNR=6.6						
WR0	**Warramunga Arr**	**42.02 267**		P	**P**	**00 07 22.4**	**+0.9**
WR0				IAmb	IAmb	00 07 23.3	
	comp=Z,9.3nm,0.7s						
WB2	**Warramunga Arr**	**42.20 267**		P	**P**	**00 07 23.9**	**+1.0**
WRAB	**Tennant Creek**	**42.20 267**		P	**P**	**00 07 24.0**	**+1.1**
WRAB				IAmb	IAmb	00 07 24.7	
	comp=Z,13nm,0.7s						
WB0	**Warramunga Arr**	**42.21 267**		P	**P**	**00 07 24.0**	**+1.1**
WRA	**Warramunga Arr**	**42.21 267**		P	**P**	**00 07 21.8**	**-1.2**
	comp=Z,11nm,0.3s,baz=99,slow=7.8,SNR=65						
WRA				ScP	**ScP**	**00 12 06.1**	**-2.3**
	comp=Z,2.5nm,0.7s,baz=104,slow=3.7,SNR=6.2						
JAY	**Jayapura**	**43.75 294**		P	**P**	**00 07 35.9**	**+0.8**
	comp=Z,4.2nm,0.3s,baz=181,slow=4.3,SNR=5.7						
FORT	**Forrest**	**45.87 250**		P	**P**	**00 07 50.5**	**-0.6**
FITZ	**Fitzroy Crossi**	**50.62 266**		P	**P**	**00 08 27.8**	**+0.9**
FITZ				IAmb	IAmb	00 08 29.6	
	comp=Z,18nm,1.1s						
MORW	**Morawa**	**56.43 251**		P	**P**	**00 09 07.9**	**-0.2**
CASY	**Casey**	**59.23 206**		P	**P**	**00 09 26.8**	**+0.4**
CASY				IAmb	IAmb	00 09 28.3	
	comp=Z,17nm,0.8s						
QSPA	**South Pole Qui**	**65.27 180**		P	**P**	**00 10 07.3**	**+1.4**
QSPA				IAmb	IAmb	00 10 08.9	
	comp=Z,9.1nm,1.1s						
MJAR	**Matsushiro Arr**	**72.57 326**		P	**P**	**00 10 49.3**	**-0.9**
	comp=Z,3.4nm,0.8s,baz=155,slow=6.0,SNR=7.9						
MAW	**Mawson**	**76.84 201**		P	**P**	**00 11 13.9**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=136,slow=8.5,SNR=4.8						
MAW	**Mawson**	**76.84 201**		IAmb	IAmb	00 11 16.0	
	comp=Z,0.8nm,0.8s						
KSRS	**Korea Array**	**78.86 320**		P	**P**	**00 11 25.9**	**+0.9**
	comp=Z,2.4nm,0.8s,baz=130,slow=5.9,SNR=7.6						
PETK	**Petropavlovsk-**	**79.96 347**		P	**P**	**00 11 30.7**	**+0.3**
	comp=Z,2.6nm,0.6s,baz=147,slow=8.2,SNR=3.3						
USRK	**Ussuriysk Ar.**	**81.46 327**		P	**P**	**00 11 38.0**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=121,slow=5.8,SNR=5.1						
ISA	**Isabella, Lake**	**83.76 46**		IAmb	IAmb	00 11 54.0	
	comp=Z,7.0nm,1.0s						
NVAR	**Mina Array Bea**	**85.51 44**		P	**P**	**00 11 58.0**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=225,slow=10,SNR=3.7						
TUC	**Tucson**	**87.19 53**		P	**P**	**00 12 09.2**	**+2.1**
TUC				IAmb	IAmb	00 12 11.4	
	comp=Z,5.5nm,1.1s						
I07A	**Izee**	**88.19 39**		P	**P**	**00 12 13.3**	**+1.7**
I07A				IAmb	IAmb	00 12 15.2	
	comp=Z,7.8nm,1.1s						
CMAR	**Chiang Mai Arr**	**89.71 290**		P	**P**	**00 12 20.2**	**+1.2**
	comp=Z,2.2nm,0.6s,baz=138,slow=3.7,SNR=15						
CHTO	**Chiang Mai**	**89.87 291**		P	**P**	**00 12 23.3**	**+3.6**
CHTO				IAmb	IAmb	00 12 23.4	
	comp=Z,4.5nm,0.9s						
TX31	**Lajitas Ar. Si**	**91.03 58**		IAmb	IAmb	00 12 28.6	
	comp=Z,8.0nm,1.1s						
TXAR	**Lajitas Array**	**91.03 58**		P	**P**	**00 12 25.9**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=214,slow=6.0,SNR=17						
TRF	**Thorofare Moun**	**91.08 13**		P	**P**	**00 12 23.1**	**-1.4**
CTGM	**Chitina Glacie**	**91.09 18**		P	**P**	**00 12 22.5**	**-2.1**
RND	**Reindeer**	**91.33 14**		P	**P**	**00 12 24.3**	**-1.3**
ILAR	**Eielson Array**	**92.95 14**		P	**P**	**00 12 32.1**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=229,slow=5.2,SNR=2.8						
MKAR	**Makanchi Array**	**112.67 312**		PKiKP	**PKiKP**	**00 17 52.2**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=129,slow=0.8,SNR=6.0						
ARU	**Arti**	**127.53 323**			**PKPdf**	**00 18 21.3**	**-0.2**
GEYT	**Alibeck**	**129.30 300**		SKPbc	SKPab	00 20 59.8	-0.1
	comp=Z,1.2nm,0.6s,baz=188,slow=5.5,SNR=5.9						
ARCES	**ARCESS Array B**	**132.75 348**		PKP	**PKPdf**	**00 18 29.5**	**-1.6**
	comp=Z,1.2nm,0.5s,baz=35,slow=2.2,SNR=3.7						
ARCES				SKPab	**SKPbc**	**00 21 11.2**	**-0.2**
	comp=Z,3.5nm,0.8s,baz=35,slow=3.6,SNR=12						
FINES	**FINESS Array B**	**139.26 341**		PKhKP	PKPpre	00 18 35.4	
	comp=Z,1.1nm,0.5s,baz=63,slow=3.6,SNR=14						
FINES				PKP	**PKPdf**	**00 18 44.2**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=54,slow=3.3,SNR=3.6						
FINES				SKPbc	**SKPbc**	**00 21 30.7**	**-0.5**
	comp=Z,3.0nm,0.7s,baz=94,slow=5.9,SNR=9.3						
NC303	**NORSAR Array S**	**142.76 351**		PKPdf	**PKPdf**	**00 18 46.6**	**-3.0**
NB2	**NORSAR Subarra**	**142.96 351**		PKP	**PKPdf**	**00 18 46.4**	**-3.6**
	comp=Z,0.8nm,0.5s,baz=14,slow=3.0						
NB2	**NORSAR Subarra**	**142.96 351**		PKP	**PKPdf**	**00 18 46.2**	**-3.8**
	comp=Z,0.7nm,0.6s,baz=10,slow=3.2						
NOA	**NORSAR Array B**	**142.96 351**		PKhKP	**PKPdf**	**00 18 45.5**	**-4.5**
	comp=Z,1.4nm,0.7s,baz=19,slow=2.4,SNR=14						
NOA				SKPbc	**SKPbc**	**00 21 39.3**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=16,slow=4.2,SNR=3.8						
NAO01	**NORSAR Array S**	**143.20 351**			PKPab	00 18 47.7	-0.4
KONO	**Kongsberg**	**144.53 351**			**PKPdf**	**00 18 52.1**	**-0.6**
AKASG	**Malin Array Be**	**145.66 326**		PKPbc	**PKPdf**	**00 18 54.8**	**-0.2**
	comp=Z,3.4nm,0.5s,baz=43,slow=4.4,SNR=12						
SORM	**Soroca**	**147.66 323**		P	**PKPbc**	**00 19 00.9**	**-1.0**
BR131	**Keskin Array S**	**148.01 306**			**PKPbc**	**00 19 02.7**	**-0.6**
BRTR	**Keskin Array B**	**148.01 306**		PKPbc	**PKPbc**	**00 19 02.2**	**-1.1**
	comp=Z,2.0nm,0.6s,baz=140,slow=3.9,SNR=16						
ARR	**Arges**	**151.36 322**			**PKiKP**	**00 19 11.4**	**+0.1**
CLL	**Collm**	**151.69 342**		*i* PKPbc	**PKiKP**	**00 19 11.9**	**+0.3**
	comp=Z,6.0nm,0.8s						
CLL				*i* PKPbc(2)	**PKPbc**	**00 19 13.6**	**+2.2**
CLL				*i* PKPab(2)	**PKPab**	**00 19 24.8**	**+2.3**
BRG	**Berggiesshubel**	**151.81 341**		*e*PKP	**PKPbc**	**00 19 11.6**	**-0.1**
	comp=Z,3.6nm,0.5s						
BZS	**Buzias**	**152.83 325**		P	**PKPbc**	**00 19 13.4**	**-0.7**
HERR	**Herculane**	**152.89 323**		P	**PKPbc**	**00 19 13.8**	**-0.5**
KHC	**Kasperske Hory**	**153.45 340**		*e*PKP	**PKPbc**	**00 19 14.5**	**-0.9**
KHC				*e*PKPAB	**PKPab**	**00 19 30.5**	**+0.4**
ESDC	**Sonseca Array**	**164.84 11**		PKPab	**PKPab**	**00 20 19.0**	**-1.0**
	comp=Z,0.9nm,1.0s,baz=332,slow=5.8,SNR=4.4						
ESDC	**Sonseca Array**	**164.84 11**			**PKPab**	**00 20 19.0**	**-1.0**
TORD	**Torodi Ar. Bea**	**168.26 189**		PKP	**PKPdf**	**00 19 22.1**	**-1.7**
	comp=Z,0.9nm,1.0s,baz=235,slow=1.1,SNR=4.1						
TORD				PKPab	**PKPab**	**00 20 34.2**	**-1.3**
	comp=Z,1.5nm,1.1s,baz=191,slow=6.1,SNR=3.8						

*IDC **10** 00:23:15.2±1.3,7°.03S×155°.83E,h0km,mb3.8/6, mb1 4.1/7,mb1mx3.8/35,mbtmp3.8/7,ML4.0/1,Error ellipse: s-maj=42.1km s-min=26.9km az=128.0*
ISC 10 00:23:22.8±1.0,7°.05S±0°.2×155°.6E±0°.1,h50km,n11, σ0s80/12,mb3.6/6,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**4.45 306**		Pn	**Pn**	**00 24 28.9**	**+1.0**
	6.9nm,0.3s,baz=80,slow=6.1,SNR=1.9						
KRVT				Sn	**Sn**	**00 25 17.5**	**-1.0**
	12nm,0.3s,baz=3.5,slow=19,SNR=2.1						
WRA	**Warramunga Arr**	**24.37 236**		P	**P**	**00 28 36.7**	**+0.2**
	0.9nm,0.4s,baz=60,slow=9.5,SNR=19						
WRA				PcP	**PcP**	**00 32 16.1**	**+1.0**
	0.2nm,0.4s,baz=61,slow=2.0,SNR=1.3						
ASAR	**Alice Springs**	**26.69 229**		P	**P**

QIZ LR LR
comp=E,290nm,15.1s
QIZ LR LR
comp=Z,260nm,12.6s
WHN Wuhan 12.28 330 P Pn 00 32 23.1 +3.8
WHN LR LR
comp=N,1μm,18.0s
WHN LR LR
comp=E,480nm,10.7s
WHN LR LR
comp=Z,690nm,15.1s
JNU Nakatsue 15.59 31 P **P** **00 33 08.2 +0.5**
0.4nm,0.3s,baz=184,slow=6.1,SNR=10
JNU Nakatsue 15.59 31 **Pn** **00 33 04.3 +0.3**
JNU IAmb IAmb 00 33 11.8
comp=Z,23nm,0.9s
TIA Tai'an 16.59 348 P **P** **00 33 20.9 +2.2**
TIA pmax pmax
comp=Z,13nm,1.1s
XAN Xi'an 17.84 324 P **P** **00 33 32.4 -0.2**
XAN pP sP 00 33 45.0 -1.1
XAN pmax pmax
comp=Z,7.0nm,1.0s
XAN pmax pmax
comp=Z,67nm,4.3s
XAN LR LR
comp=Z,160nm,21.7s
XAN LR LR
comp=Z,130nm,15.2s
XAN LR LR
comp=Z,160nm,15.2s
KMI Kunming 17.95 290 P P 00 33 42.6 +8.6
KMI pmax pmax
comp=Z,9.0nm,0.9s
KSRS Korea Array 18.32 17 P **Pn** **00 33 38.7 +0.7**
comp=Z,0.8nm,0.3s,baz=201,slow=12,SNR=22
KSRS LR LR 00 42 28.4
comp=Z,83nm,18.1s,baz=198,slow=42
KS19 Wonju Array Si 18.35 17 P **Pn** **00 33 39.0 +0.6**
CD2 Chengdu 19.24 308⇑*i* P **Pn** **00 33 48.0 -1.3**
CD2 S **S** **00 37 24.0 0.0**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 pmax pmax
comp=Z,110nm,5.3s
CD2 LR LR
comp=Z,240nm,14.3s
CD2 LR LR
comp=Z,280nm,14.7s
CD2 LR LR
comp=Z,350nm,16.3s
SBUM Sibu 19.59 208 P **P** **00 33 50.3 -1.5**
BJI Beijing 20.48 349 P Pn 00 34 02.9 -0.8
BJI pmax pmax
comp=Z,25nm,0.9s
CHTO Chiang Mai 21.19 271 P **P** **00 34 09.1 -0.1**
CMAR Chiang Mai Arr 21.23 270 P **P** **00 34 10.1 +0.4**
comp=Z,1.6nm,0.6s,baz=75,slow=9.7,SNR=12
CMAR LR LR 00 41 27.9
comp=Z,92nm,20.2s,baz=109,slow=34
MJAR Matsushiro Arr 22.12 38 P **P** **00 34 19.7 +0.6**
comp=Z,1.1nm,0.5s,baz=193,slow=12,SNR=2.6
LZH Lanzhou 22.23 320 *eP* **P** **00 34 21.7 +1.3**
LZH pP pwP 00 34 31.1 -3.0
LZH sP sP 00 34 35.7 +1.6
LZH PP **PnPn** **00 34 50.6 +6.8**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,160nm,4.5s
LZH LR LR
comp=Z,230nm,12.3s
LZH LR LR
comp=Z,250nm,12.2s
LZH LR LR
comp=Z,290nm,14.8s
HHC Hu-ho-hao-te 22.42 340 P **P** **00 34 23.0 +0.7**
HHC pP pP 00 34 32.2 +0.8
HHC S **S** **00 38 26.2 +0.1**
HHC pmax pmax
comp=Z,11nm,1.0s
HHC pmax pmax
comp=Z,56nm,4.8s
HHC LR LR
comp=Z,130nm,12.2s
HHC LR LR
comp=Z,130nm,12.5s
HHC LR LR
comp=Z,130nm,12.2s
SIJI Sorong 22.88 154 P **P** **00 34 25.9 -1.4**
comp=Z,8.2nm,0.6s,baz=12,slow=8.0,SNR=5.7
KAPI Kappang 24.89 184 P **P** **00 34 44.5 -1.7**
comp=Z,3.2nm,0.5s,baz=90,slow=6.1,SNR=2.3
USRK Ussuriysk Ar. 25.72 18 P **P** **00 34 54.1 +0.6**
comp=Z,2.1nm,0.5s,baz=198,slow=9.0,SNR=9.3
USRK LR LR 00 46 05.7
comp=Z,79nm,18.5s,baz=295,slow=38
GTA Gaotai 26.81 321 *eP* **P** **00 35 03.9 +0.3**
GTA pP pP 00 35 13.9 +0.3
GTA sP pwP 00 35 18.1 +0.2
GTA pmax pmax
comp=Z,4.0nm,0.7s
PSI Prapat 27.78 235 LR LR 00 44 44.2
comp=Z,60nm,19.9s,baz=88,slow=33
EDFI Ende, Flores 28.56 179 P **P** **00 35 18.3 -1.0**
comp=Z,19nm,0.7s
SAUI Saumlaki 29.46 160 P **P** **00 35 25.1 -2.1**
BATI Baumata 30.09 175 LR LR 00 49 14.7
comp=Z,152nm,18.3s,baz=106,slow=40
ULN Ulaanbaatar 30.14 341 P **P** **00 35 34.5 +1.3**
ULN IAmb IAmb 00 35 38.1
comp=Z,2.6nm,0.6s
SONM Songino Array 30.32 340 P **P** **00 35 35.7 +0.9**
comp=Z,2.4nm,0.7s,baz=158,slow=9.9,SNR=6.6
WMQ Urumqi 36.78 318 *eP* **P** **00 36 33.3 +2.4**
WB0 Warramunga Arr 41.52 161 P **P** **00 37 08.4 -2.2**
WB0 IAmb IAmb 00 37 09.2
comp=Z,5.6nm,0.7s
MK31 Makanchi Array 41.54 319 P **P** **00 37 11.6 +1.0**
MKAR Makanchi Array 41.54 319 P **P** **00 37 11.4 +0.8**
comp=Z,4.7nm,0.9s,baz=112,slow=9.8,SNR=24
WRA Warramunga Arr 41.66 161 P **P** **00 37 09.5 -2.3**
comp=Z,5.5nm,0.6s,baz=342,slow=9.0,SNR=62
WB2 Warramunga Arr 41.67 161 P **P** **00 37 09.9 -2.0**
WB2 IAmb IAmb 00 37 10.5
comp=Z,9.4nm,0.7s
MAKZ Makanchi 41.74 319 P **P** **00 37 13.7 +1.5**
MAKZ IAmb IAmb 00 37 14.4
comp=Z,5.2nm,0.9s
WR0 Warramunga Arr 41.74 161 P **P** **00 37 10.5 -2.0**
WR0 IAmb IAmb 00 37 11.1
comp=Z,10nm,0.7s
H11N1 WAKE ISLAND Hy 42.71 82 T T 01 23 02.3
baz=278,slow=75
H11S3 WAKE ISLAND Hy 42.71 84 T T 01 22 45.9
baz=280,slow=75
H11N2 WAKE ISLAND Hy 42.72 82 T T 01 23 00.6
baz=278,slow=75
H11S1 WAKE ISLAND Hy 42.72 84 T T 01 22 48.4
baz=280,slow=75
H11N3 WAKE ISLAND Hy 42.73 82 T T 01 23 04.3
baz=278,slow=75
H11S2 WAKE ISLAND Hy 42.73 84 T T 01 22 53.6
baz=280,slow=75
PETK Petropavlovsk- 43.29 31 P **P** **00 37 25.0 +0.3**
comp=Z,2.2nm,0.7s,baz=207,slow=6.3,SNR=8.3
KSH Kashi 43.43 307 P **P** **00 37 28.6 +2.4**
KSH pP sP 00 37 39.8 -1.0
KSH sP pwP 00 37 42.4 +1.5
KSH pmax pmax
comp=Z,4.0nm,0.7s
ZAA0 Zalesovo Array 43.89 329 P **P** **00 37 30.3 +0.8**
ZAA0 IAmb IAmb 00 37 30.9
comp=Z,5.6nm,0.8s
ZALV Zalesovo Beam 43.89 329 P **P** **00 37 29.9 +0.4**
comp=Z,4.9nm,0.7s,baz=114,slow=7.5,SNR=32
ZALV LR LR 00 57 07.4
comp=Z,65nm,18.1s,baz=96,slow=38
AS31 Alice Springs 45.07 164 P **P** **00 37 37.4 -1.9**
ASAR Alice Springs 45.08 164 P **P** **00 37 37.9 -1.4**
comp=Z,2.4nm,0.3s,baz=343,slow=7.6,SNR=57
AAK Ala-Archa 45.27 311 P **P** **00 37 41.6 +0.7**
KURK Kurchatov 45.47 323 P **P** **00 37 43.0 +0.9**
KURK IAmb IAmb 00 37 43.4
comp=Z,3.9nm,0.9s
GAR Garm 47.65 305 P **P** **00 38 00.2 +0.6**

KBL Kabul 48.22 299 P **P** **00 38 04.3 +0.1**
KBL IAmb IAmb 00 38 06.2
comp=Z,4.3nm,0.8s
KK31 Karatay Array 48.23 310 P **P** **00 38 02.8 -1.1**
KK31 IAmb IAmb 00 38 05.9
comp=Z,2.5nm,0.9s
KKAR Karatay Array 48.23 310 P **P** **00 38 03.1 -0.8**
KKAR IAmb IAmb 00 38 05.9
comp=Z,2.5nm,0.9s
FORT Forrest 50.88 173 P **P** **00 38 22.5 -1.5**
BRVK Borovoye 51.14 323 P **P** **00 38 25.9 +0.2**
BRVK IAmb IAmb 00 38 27.8
comp=Z,5.0nm,0.8s
TIXI Tiksi 51.86 3 P **P** **00 38 30.5 -0.3**
TIXI IAmb IAmb 00 38 42.1
comp=Z,4.2nm,0.8s
SMY Shemya 51.97 38 P **P** **00 38 32.6 +0.7**
BBOO Buckleboo 54.34 165 P **P** **00 38 48.5 -1.1**
STKA Stephens Creek 55.09 159 P **P** **00 38 53.8 -1.3**
comp=Z,1.7nm,0.6s,baz=323,slow=8.7,SNR=4.3
STKA Stephens Creek 55.09 159 P **P** **00 38 52.4 -2.6**
BILL Bilibino 55.57 19 P **P** **00 38 58.9 +0.8**
BILL **pP** **00 39 09.6 +0.6**
GEYT Alibeck 57.13 303 P **P** **00 39 10.3 +0.5**
comp=Z,4.0nm,0.8s,baz=108,slow=4.8,SNR=10
GEYT LR LR 01 06 03.6
comp=Z,55nm,19.7s,baz=40,slow=38
GYA0B ALIBECK ARRAY 57.13 303 P **P** **00 39 10.0 +0.2**
AKTO Aktyubinsk 57.93 318 P **P** **00 39 15.8 +0.6**
comp=Z,1.8nm,0.7s,baz=84,slow=7.1,SNR=5.2
ARU Arti 58.58 325 P **P** **00 39 19.8 +0.2**
comp=Z,1.0nm,0.4s,baz=121,slow=11,SNR=5.8
ARU Arti 58.58 325 P **P** **00 39 19.3 -0.3**
KIRV Kirov 63.77 326 P **P** **00 39 53.7 -0.9**
comp=Z,8.4nm,0.6s,baz=358,slow=0.2,SNR=3.8
TBLG Delisi 67.17 308 P **P** **00 40 17.0 0.0**
TBLG IAmb IAmb 00 40 33.5
comp=Z,5.0nm,1.0s
AKH Akhalkalaki 68.14 308 P **P** **00 40 24.0 +0.7**
AKH IAmb IAmb 00 40 26.1
comp=Z,6.2nm,0.9s
KBZ Khabaz 68.27 310 P **P** **00 40 24.4 +0.5**
comp=Z,2.4nm,0.8s,baz=70,slow=7.7,SNR=5.0
KVAR Kislovodsk Arr 68.39 310 P **P** **00 40 26.1 +1.4**
comp=Z,3.3nm,0.7s,baz=90,slow=20,SNR=7.5
KIV Kislovodsk 68.39 310 P **P** **00 40 25.0 +0.3**
KLMR Klimovskoe 68.81 329 *eP* **P** **00 40 22.2 -4.7**
KLMR AMP 00 40 40.9
comp=Z,6.0nm,0.8s
MLY Manley 71.20 27 P **P** **00 40 42.8 +1.2**
MLY IAmb IAmb 00 40 55.1
comp=Z,2.4nm,0.9s
BPAW Bear Paw Mtn. 71.20 28 P **P** **00 40 43.0 +1.4**
BPAW IAmb IAmb 00 40 54.9
comp=Z,5.9nm,1.2s
RND Reindeer 72.24 28 P **P** **00 40 48.3 +0.4**
RND IAmb IAmb 00 40 53.5
comp=Z,3.0nm,0.8s
ILAR Eielson Array 72.86 27 P **P** **00 40 49.6 -1.8**
comp=Z,0.3nm,0.5s,baz=268,slow=4.0,SNR=7.4
ARCES ARCESS Array B 73.49 339 P **P** **00 40 54.6 -0.5**
comp=Z,1.8nm,0.7s,baz=61,slow=5.7,SNR=7.0
SPITS Spitsbergen Ar 73.61 348 P **P** **00 40 55.1 -0.5**
comp=Z,3.0nm,0.6s,baz=84,slow=7.6,SNR=13
FINES FINESS Array B 75.15 330 P **P** **00 41 04.2 -0.7**
comp=Z,3.2nm,0.8s,baz=97,slow=7.7,SNR=10
FINES LR LR 01 20 07.1
comp=Z,45nm,18.3s,baz=80,slow=40
BRTR Keskin Array B 75.82 307 P **P** **00 41 08.9 -0.4**
comp=Z,0.4nm,0.6s,baz=146,slow=2.4,SNR=3.8
AKASG Malin Array Be 76.12 319 P **P** **00 41 09.8 -0.9**
comp=Z,1.5nm,0.7s,baz=62,slow=6.2,SNR=4.6
CTGM Chitina Glacie 76.21 30 pP 00 41 19.6 -2.8
MLR Muntele Rosu 79.69 315 P **P** **00 41 31.1 +0.3**
comp=Z,1.7nm,0.7s,baz=122,slow=1.9,SNR=3.9
HFS Hagfors 81.30 331 P **P** **00 41 38.6 -0.3**
comp=Z,2.3nm,0.7s,baz=124,slow=4.3,SNR=10
NC405 NORSAR Array S 81.76 332 P **P** **00 41 41.4 0.0**
NC405 **pP** **00 41 50.2 -2.2**
NB2 NORSAR Subarra 82.01 333 P **P** **00 41 42.2 -0.6**
comp=Z,0.8nm,0.7s,baz=63,slow=5.3
NOA NORSAR Array B 82.01 333 P **P** **00 41 42.1 -0.6**
comp=Z,1.6nm,0.8s,baz=63,slow=5.2,SNR=12
NOA LR LR 01 21 39.3
comp=Z,57nm,18.6s,baz=70,slow=38
GERES GERESS Array B 86.19 321 P **P** **00 42 04.2 -0.1**
comp=Z,0.8nm,0.7s,baz=37,slow=5.4,SNR=3.1
YKA Yellowknife Ar 86.76 23 P **P** **00 42 06.5 -0.1**
comp=Z,0.8nm,0.6s,baz=307,slow=4.2,SNR=16

*ATA **10** 00:42:38.6±2.0, 38°.93N×43°.43E, h0km±7km, ML2.4, MW3.6*
*TEH **10** 00:42:38.8, 38°.90N×43°.59E, h4km, ML2.7*
*DDA **10** 00:42:38.9, 38°.91N×43°.53E, h12km, ML2.6*
*ISK **10** 00:42:38.2, 38°.90N×43°.54E, h2km, ML2.6/17*
ISC 10 00:42:39.3±1.0, 38°.90N±0°.02×43°.53E±0°.02, h6km±8km, n50, σ0s73/60, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
VMUR	**Van-Muradiye**	**0.09**	**20**	*i* P		**Pg**	**00 42 41.3**	**-0.1**
VMUR				*i* S		**Sg**	**00 42 43.8**	**+0.9**
VMUR				IAML			00 42 44.0	
	comp=E,7μm,0.3s							
VMUR				IAML			00 42 44.0	
	comp=N,6μm,0.3s							
ERCV	**ERCIS-VAN**	**0.19**	**307**	PG		**Pg**	**00 42 43.4**	**+0.3**
ERCV	**ERCIS-VAN**	**0.19**	**307**	*e*Pg		**Pg**	**00 42 43.3**	**+0.2**
VANB	**Van**	**0.33**	**200**	PG		**Pb**	**00 42 47.4**	**-0.2**
VANB	**Van**	**0.33**	**200**	*e*Pn		**Pb**	**00 42 47.3**	**-0.3**
CLDR	**Caldiran**	**0.38**	**51**	PG		**Pg**	**00 42 46.3**	**-0.5**
CLDR				SG		**Sb**	**00 42 52.8**	**-2.2**
CLDR	**Caldiran**	**0.38**	**51**	*i* P		**Pg**	**00 42 46.3**	**-0.5**
CLDR				*i* S		**Sg**	**00 42 52.6**	**+0.7**
CLDR	**Caldiran**	**0.38**	**51**	*e*Pg		**Pg**	**00 42 46.3**	**-0.5**
TVAN	**Van**	**0.39**	**195**	*e*P		**Pg**	**00 42 47.5**	**+0.6**
TVAN				*e*S		**Sb**	**00 42 55.4**	**+0.3**
TVAN				IAML			00 43 01.4	
	comp=Z,393nm,0.7s							
TVAN	**Van**	**0.39**	**195**	*i* P		**Pg**	**00 42 47.4**	**+0.6**
TVAN				IAML			00 43 03.0	
	comp=N,424nm,0.4s							
DYDN	**Diyadin**	**0.65**	**11**	*e*P		**Pg**	**00 42 51.8**	**0.0**
DYDN				*e*S		**Sb**	**00 43 02.0**	**-0.6**
DYDN				IAML			00 43 11.7	
	comp=Z,64nm,0.6s							
DYDN	**Diyadin**	**0.65**	**11**	*i* P		**Pg**	**00 42 51.3**	**-0.5**
DYDN				*i* S		**Sg**	**00 42 59.6**	**-0.7**
GEVA	**Gevas**	**0.70**	**212**	*e*P		**Pg**	**00 42 52.4**	**-0.3**
GEVA				*e*S		**Sb**	**00 43 04.3**	**+0.3**
GEVA				IAML			00 43 15.0	
	comp=Z,60nm,0.8s							
GEVA	**Gevas**	**0.70**	**212**	*i* P		**Pg**	**00 42 52.7**	**0.0**
AKDM	**Akdamar-Van**	**0.72**	**217**	PG		**Pg**	**00 42 52.8**	**-0.3**
AGRB	**Hanur-Agry**	**0.79**	**328**	PG		**Pg**	**00 42 54.3**	**-0.2**
AGRB				SG		**Sb**	**00 43 06.4**	**-0.3**
MLAZ	**Malazgirt-MUS**	**0.80**	**287**	PG		**Pg**	**00 42 54.5**	**-0.2**
BASK	**Baskale_VAN**	**0.93**	**156**	*i* P		**Pg**	**00 42 57.0**	**-0.1**
IGDI	**IGDIR**	**1.05**	**24**	*e*P		**Pb**	**00 42 59.6**	**-0.3**
IGDI				*e*S		**Sn**	**00 43 18.2**	**+2.4**
IGDI				IAML			00 43 19.0	
	comp=N,17nm,0.4s							
IGDI	**IGDIR**	**1.05**	**24**	*i* P		**Pn**	**00 42 60.0**	**-0.7**
TASB	**TASBURUN-IGDIR**	**1.21**	**27**	PN		**Pb**	**00 43 02.1**	**-0.6**
BLIS	**Bitlis-Merkez**	**1.21**	**247**	*e*P		**Pg**	**00 43 01.4**	**-1.1**
BLIS				IAML			00 43 29.3	
	comp=Z,55nm,0.9s							
BLIS	**Bitlis-Merkez**	**1.21**	**247**	*i* P		**Pg**	**00 43 02.2**	**-0.3**
BLIS				*i* S		**Sg**	**00 43 17.4**	**-0.9**
GURO	**Guroymak-BITLI**	**1.23**	**254**	PN		**Pg**	**00 43 01.6**	**-1.2**
HAKT	**HAKKARI**	**1.35**	**174**	*i* P		**Pn**	**00 43 03.0**	**-1.9**
YOVA	**Hakkari_Yksek**	**1.44**	**155**	*i* P		**Pb**	**00 43 06.2**	**-0.5**
DIGO	**Kars**	**1.51**	**355**	*i* P		**Pg**	**00 43 08.6**	**+0.3**
SRTM	**Siirt_Merkez**	**1.56**	**235**	*i* P		**Pb**	**00 43 08.6**	**-0.1**
SRTM				IAML			00 43 39.0	
	comp=N,65nm,0.9s							
VRTB	**Varto-Mus**	**1.64**	**280**	PN		**Pn**	**00 43 08.9**	**+0.1**
VRTB	**Varto-Mus**	**1.64**	**280**	*i* P		**Pb**	**00 43 09.4**	**-0.6**
VRTB				IAML			00 43 48.0	
	comp=N,59nm,0.8s							
VRTB				IAML			00 43 55.0	
	comp=E,51nm,0.8s							
SIRT	**Sirnak**	**1.64**	**212**	PN		**Pn**	**00 43 08.8**	**0.0**
CUKT	**Cukurca**	**1.66**	**178**	PN		**Pn**	**00 43 08.9**	**-0.1**
CUKT	**Cukurca**	**1.66**	**178**	*i* P		**Pb**	**00 43 09.9**	**-0.3**
CUKT				IAML			00 43 42.0	
	comp=N,49nm,0.7s							
CUKT				IAML			00 43 42.0	
	comp=E,56nm,1.0s							
SIRN	**Sirnak**	**1.66**	**212**	*i* P		**Pg**	**00 43 11.0**	**-0.1**
KOPR	**Koprukoy-ERZUR**	**1.69**	**310**	PN		**Pn**	**00 43 09.8**	**+0.2**
HOMI	**Horasan**	**1.70**	**313**	*e*P		**Pg**	**00 43 12.0**	**+0.2**
IMRD	**Marand**	**1.71**	**96**	*e*			00 43 46.0	
IMRD				*e*Pn		**Pn**	**00 43 09.5**	**-0.3**
ISHB	**Shabestar**	**1.75**	**110**	*e*Pn		**Pn**	**00 43 10.3**	**-0.1**
ISHB				*e*			00 43 17.5	
KARS	**Kars**	**1.76**	**349**	PN		**Pn**	**00 43 10.4**	**0.0**
EAK	**Akyaka**	**1.78**	**2**	*e*P		**Pg**	**00 43 13.5**	**+0.1**
EAK				IAML			00 44 05.2	
	comp=Z,22nm,2.0s							
EAK	**Akyaka**	**1.78**	**2**	*i* P		**Pg**	**00 43 14.0**	**+0.6**
BNGL	**BINGOL**	**1.86**	**272**	*e*P		**Pb**	**00 43 13.3**	**-0.5**
BNGL				IAML			00 43 48.0	
	comp=Z,50nm,0.5s							
BNGL	**BINGOL**	**1.86**	**272**	*i* P		**Pb**	**00 43 13.6**	**-0.3**
SENK	**Senkaya-Erzuru**	**1.89**	**332**	PN		**Pn**	**00 43 12.5**	**+0.2**
SVAN	**Silvan-Diyarba**	**1.98**	**248**	PN		**Pn**	**00 43 13.9**	**+0.5**
SVAN	**Silvan-Diyarba**	**1.98**	**248**	*i* P		**Pb**	**00 43 14.8**	**-1.0**
BNGB	**Bingl**	**2.23**	**273**	PN		**Pn**	**00 43 17.3**	**+0.4**
IAZR	**Azarshahr**	**2.28**	**122**	*e*Pn		**Pn**	**00 43 19.0**	**+1.2**
IAZR				*e*			00 43 27.0	
YEDI	**Yedisu-Bingol**	**2.38**	**284**	PN		**Pn**	**00 43 19.7**	**+0.6**
IHRS	**Heris**	**2.81**	**101**	*e*Pn		**Pn**	**00 43 26.2**	**+1.2**
IHRS				*e*			00 43 32.0	

IDC 10 00:44:43.6±11.0, 0°.72S×99°.47E, h115km±60km, mb3.4/4, mb1 3.5/5, mb1mx3.2/28, mbtmp3.7/5, Error ellipse: s-maj=299.4km s-min=20.5km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PSI	**Prapat**	**3.54**	**351**	P		Pn	00 45 35.4	-1.7
	baz=180,slow=9.1							
WRA	**Warramunga Arr**	**39.10**	**121**	P		P	00 52 00.9	+1.0
	1.1nm,0.4s,baz=302,slow=8.9,SNR=2.3							
ASAR	**Alice Springs**	**40.43**	**127**	P		P	00 52 10.3	-0.6
	0.9nm,0.8s,baz=304,slow=7.8,SNR=9.5							
MKAR	**Makanchi Array**	**49.66**	**345**	P		P	00 53 24.3	+0.7
	0.4nm,0.4s,baz=161,slow=9.2,SNR=5.6							
ZALV	**Zalesovo Beam**	**55.82**	**350**	P		P	00 54 08.3	-0.4
	0.5nm,0.4s,baz=145,slow=5.3,SNR=2.3							
TXAR	**Lajitas Array**	**144.00**	**36**	PKP		PKPab	01 04 03.7	-0.3
	0.1nm,0.4s,baz=349,slow=0.7,SNR=4.6							

*NEIC **10** 00:46:19.6±2.2, 16°.91N±0°.04×101°.40W±0°.04, h9km±4km, Error ellipse: s-maj=6.6km s-min=3.1km az=224.0*
*MEX **10** 00:46:25.0±3.1, 17°.17N×101°.22W, h5km, MD4.2*
ISC 10 00:46:19.5±2.7, 17°.04N±0°.07×101°.46W±0°.08, h10km±15km, n28, σ1s75/47, 1D, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.56**	**359**	*e*P		**Pn**	**00 46 32.9**	**-0.6**
	baz=149,slow=14							
ZIIG				*i* S		**Sn**	**00 46 41.5**	**-1.4**
ZIIG	**Zihuatanejo**	**0.56**	**359**			**Pn**	**00 46 32.9**	**-0.6**
ZIIG						**Sn**	**00 46 41.5**	**-1.4**
UON	**La Union**	**0.98**	**340**	*e*P		**Pn**	**00 46 39.5**	**+0.2**
UON				*i* S		**Sn**	**00 46 52.6**	**-0.7**
CAIG	**El Cayaco**	**1.14**	**90**	*e*P		**Pn**	**00 46 40.5**	**-1.0**
CAIG				*e*S		**Sb**	**00 46 55.1**	**-1.1**
CAIG	**El Cayaco**	**1.14**	**90**			**Pn**	**00 46 40.5**	**-1.0**
CAIG						**Sb**	**00 46 55.1**	**-1.1**
ACP2	**Acapulco**	**1.52**	**96**	*i* P		**Pn**	**00 46 46.7**	**+0.1**
ACP2				*i* S		**Sn**	**00 47 04.7**	**-1.8**
ACP2	**Acapulco**	**1.52**	**96**			**Pn**	**00 46 46.7**	**+0.1**
ACP2						**Sn**	**00 47 04.7**	**-1.8**
ARIG	**Puente Sto Nin**	**1.62**	**41**	*e*P		**Pn**	**00 46 48.5**	**+0.3**
ARIG				*e*S		**Sb**	**00 47 10.1**	**0.0**
ARIG	**Puente Sto Nin**	**1.62**	**41**			**Pn**	**00 46 48.5**	**+0.3**
ARIG						**Sb**	**00 47 10.1**	**0.0**
MEIG	**Mezcala**	**1.96**	**63**	*e*P		**Pn**	**00 46 53.4**	**+0.4**
MEIG				*e*S		**Sb**	**00 47 21.1**	**+1.1**
MEIG	**Mezcala**	**1.96**	**63**			**Pn**	**00 46 53.4**	**+0.4**
MEIG						**Sb**	**00 47 21.1**	**+1.1**
CRIG	**Cruz Grande**	**2.25**	**97**	*e*P		**Pb**	**00 47 00.8**	**+0.6**
CRIG				*e*S		**Sg**	**00 47 33.1**	**+1.3**
PLIG	**Platanillo**	**2.30**	**54**	*e*P		**Pn**	**00 46 58.2**	**+0.7**
PLIG				*e*S		**Sg**	**00 47 33.0**	**-0.4**
PLIG	**Platanillo**	**2.30**	**54**			**Pn**	**00 46 58.2**	**+0.7**
PLIG						Lg	00 47 33.0	
MOIG	**Morelia**	**2.63**	**6**	Pn		**Pb**	**00 47 05.4**	**-1.5**
MOIG						**Sb**	**00 47 41.5**	**+2.1**
TLIG	**Tlapa**	**2.81**	**79**	*e*P		**Pn**	**00 47 05.7**	**+1.1**
TLIG				*e*S		**Sb**	**00 47 48.0**	**+3.5**
TLIG	**Tlapa**	**2.81**	**79**			Lg	00 47 48.0	
TLIG	**Tlapa**	**2.81**	**79**	Pn		**Pn**	**00 47 07.3**	**+2.7**
YAIG	**Yautepec**	**2.91**	**51**	*e*P		**Pn**	**00 47 04.2**	**-1.8**
YAIG				*e*S		**Sb**	**00 47 49.5**	**+2.2**
YAIG	**Yautepec**	**2.91**	**51**			**Pn**	**00 47 04.2**	**-1.8**
YAIG						LR	00 47 49.5	
UNM	**Universidad Na**	**3.14**	**43**	Pn		**Pn**	**00 47 12.4**	**+3.0**
PNIG	**Pinotepa**	**3.26**	**101**	*e*P		**Pb**	**00 47 15.6**	**-1.9**
PNIG				*e*S		**Sg**	**00 48 05.4**	**+1.2**
PNIG	**Pinotepa**	**3.26**	**101**			**Pb**	**00 47 15.6**	**-1.9**
PNIG						Lg	00 48 05.4	
FTIG	**Fresnillo de T**	**3.29**	**74**	*e*P		**Pn**	**00 47 12.3**	**+1.1**
FTIG				*e*S		**Sb**	**00 48 00.4**	**+2.2**
TXIG	**Tlaxiaco**	**3.54**	**86**	*e*P		**Pn**	**00 47 15.8**	**+1.0**
TXIG				*e*S		**Sb**	**00 48 08.2**	**+2.7**
YOIG	**Yosondua**	**3.75**	**92**	*e*P		**Pn**	**00 47 19.7**	**+2.0**
YOIG				*e*S		**Sg**	**00 48 17.0**	**-3.1**
ZAIG	**Zacatecas**	**5.79**	**350**	Pn		**Pn**	**00 47 50.1**	**+4.4**
CCIG	**Comitan**	**8.97**	**94**	Pn		**Pn**	**00 48 31.7**	**+2.4**

*RSNC **10** 01:15:36.6±1.0, 6°.82N×73°.15W, h144km±5km, ML3.3, Mw3.5*
*IDC **10** 01:15:39.0±4.8, 6°.18N×73°.53W, h215km±107km, mb2.7/3, mb1 3.2/3, mb1mx2.9/22, mbtmp3.3/3, Error ellipse: s-maj=205.0km s-min=46.7km az=23.0*
ISC 10 01:15:34.9±0.9, 6°.84N±0°.03×73°.12W±0°.04, h154km±7km, n26, σ1s02/48, mb3.1/3, 5C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PAMC	**Pamplona, Colo**	**0.65**	**40**⇓	*i* P		**Pn**	**01 15 59.0**	**+0.9**
PAMC				*e*S		**Sn**	**01 16 16.2**	**+0.3**
PAMC				*i*			01 16 18.2	
	comp=Z,189nm,0.3s							
RUSC	**La Rusia**	**0.94**	**178**⇑	*i* P		**Pn**	**01 16 00.1**	**-0.1**
RUSC				*e*S		**Sn**	**01 16 18.9**	**-0.7**
PTBC	**PUERTO BERRIO,**	**1.36**	**257**⇓	*i* P		**Pn**	**01 16 02.8**	**-0.6**
PTBC				*e*S		**Sn**	**01 16 23.3**	**-1.9**
PTBC				*i*			01 16 29.8	
	comp=Z,228nm,0.4s							
TAMC	**Tame, Arauca**	**1.38**	**107**⇑	*i* P		**Pn**	**01 16 04.5**	**+0.9**
TAMC				*i*			01 16 25.2	
	comp=Z,121nm,0.4s							
TAMC				*e*S		**Sn**	**01 16 25.9**	**+0.2**
OCAC	**Ocana**	**1.40**	**352**	*e*P		**Pn**	**01 16 04.3**	**+0.3**
OCAC				*e*S		**Sn**	**01 16 26.2**	**-0.1**
OCAC				*i*			01 16 29.7	
	comp=Z,211nm,0.2s							
SPBC	**San Pablo de B**	**1.51**	**219**⇑	*i* P		**Pn**	**01 16 05.2**	**+0.1**
SPBC				*e*S		**Sn**	**01 16 27.2**	**-1.0**
SPBC				*i*			01 16 34.3	
	comp=Z,253nm,0.4s							
ZARC	**Zaragoza, Cauc**	**1.84**	**291**	*e*P		**Pn**	**01 16 09.1**	**+0.6**
ZARC				*e*S		**Sn**	**01 16 34.5**	**+0.2**
ZARC				*i*			01 16 40.4	
	comp=Z,266nm,0.4s							
NORC	**Norcasia**	**2.15**	**234**⇓	*i* P		**Pn**	**01 16 12.2**	**0.0**
NORC				*e*S		**Sn**	**01 16 40.4**	**-0.4**
NORC				*i*			01 16 46.3	
	comp=Z,164nm,0.3s							
SMLC	**San Martn de**	**2.16**	**334**	*e*P		**Pn**	**01 16 12.7**	**+0.5**
SMLC			

CHIC *i* 01 16 49.3
comp=Z,76nm,0.4s
ROSC El Rosal 2.32 211 P **Pn** **01 16 16.1 +1.7**
comp=Z,32nm,0.3s,baz=15,slow=15,SNR=138
ROSC S **Sn** **01 16 42.7 -2.2**
comp=Z,14nm,0.3s,baz=30,slow=22,SNR=5.9
ROSC El Rosal 2.32 211 ⇑*i*P **Pn** **01 16 15.8 +1.4**
ROSC *e*S **Sn** **01 16 44.6 -0.3**
HELC Santa Helena 2.48 255 *e*P **Pn** **01 16 17.6 +1.3**
HELC *e*S **Sn** **01 16 48.1 -0.2**
HELC *i* 01 16 56.7
comp=Z,120nm,0.3s
UREC San Jos de Ur 2.56 291 *e*P **Pn** **01 16 16.3 -0.6**
UREC *e*S **Sn** **01 16 47.2 -2.3**
UREC *i* 01 16 59.9
comp=Z,132nm,0.3s
VILC Villavicencio, 2.77 192 *e*P **Pn** **01 16 19.7 -0.1**
VILC *e*S **Sn** **01 16 53.9 -0.5**
VILC *i* 01 16 57.9
comp=Z,90nm,0.3s
PTGC Puerto Gaitan, 2.80 159⇑*i*P **Pn** **01 16 19.2 -0.8**
PTGC *e*S **Sn** **01 16 52.3 -2.6**
PTGC *i* 01 17 04.4
comp=Z,44nm,0.3s
RREF El Recreo 2.94 229 *e*P **Pn** **01 16 22.9 +0.6**
RREF *i* 01 17 08.3
comp=Z,114nm,0.3s
CBOC Ciudad Bolivar 3.03 251 *e*P **Pn** **01 16 23.9 +0.9**
CBOC *e*S **Sn** **01 17 00.5 +0.2**
CBOC *i* 01 17 14.8
comp=Z,38nm,0.5s
SDV Santo Domingo 3.19 50 *e*P **Pn** **01 16 25.7 +0.6**
SDV *e*S **Sn** **01 17 02.3 -1.7**
ANIL Santa Ana 3.26 224 *e*P **Pn** **01 16 26.8 +0.8**
ANIL *e*S **Sn** **01 17 05.7 +0.2**
PRAC Prado 3.57 210 *e*P **Pn** **01 16 29.8 0.0**
PRAC *e*S **Sn** **01 17 12.0 -0.4**
PRAC *i* 01 17 18.4
comp=Z,107nm,0.6s
ORTC Ortega, Tolima 3.60 216 *e*P **Pn** **01 16 30.3 +0.2**
ORTC *e*S **Sn** **01 17 13.1 0.0**
ORTC *i* 01 17 20.4
comp=Z,74nm,0.3s
SJCC San Jacinto, C 3.66 326 *e*P **Pn** **01 16 30.1 -0.8**
SJCC *e*S **Sn** **01 17 11.9 -2.5**
SJCC *i* 01 17 16.2
comp=Z,27nm,0.4s
TXAR Lajitas Array 36.45 312 P **P** **01 22 25.8 +0.7**
comp=Z,0.1nm,0.4s,baz=122,slow=8.6,SNR=1.7
PDAR Pinedale Array 48.06 324 P **P** **01 23 59.0 -0.1**
comp=Z,0.2nm,0.4s,baz=148,slow=8.6,SNR=2.2
YKA Yellowknife Ar 63.24 340 P **P** **01 25 46.9 +0.3**
comp=Z,0.4nm,0.6s,baz=135,slow=7.1,SNR=9.7

*IDC **10** 01:19:00.4±1.2, 4.°06S×153.°30E, h58km±9km, mb4.1/16, mb1 4.3/18, mb1mx4.2/31, mbtmp4.5/18, MS3.7/18, Ms1 3.8/18, ms1mx3.6/26, Error ellipse: s-maj=13.1km s-min=9.2km az=138.0*
*NEIC **10** 01:19:01.5±1.5, 4.°10S±0.°09×153.°25E±0.°06, h63km±5km, mb4.6/59, Error ellipse: s-maj=12.8km s-min=8.1km az=193.0*
*BJI **10** 01:19:01.0±0.0, 3.°94S×153.°44E, h77km, mB4.9/28, mb4.8/32, Ms4.4/8, Ms7 4.1/6*
*DJA **10** 01:19:10.5±0.7, 4.°5S±4.°×15.°3E±.°, h133km±6km, M4.8/31, mB5.0/9, mb4.9/31, MLv5.5/1, Mw(mB)4.4/9*

ISC 10 01:19:00.1±0.4, **4.°05S**±0.°05×**153.°31E**±0.°05, **h50**km, **n117,** σ1**s19**/117, **mb4.6**/48, **MS3.7**/20, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.15**	**263**		**Pn**	**01 19 19.5**	**-0.4**
RABL				Sn	**Sn**	**01 19 34.8**	**+0.2**
KRVT	**Keravat (AS076**	**1.30**	**259**	P	**Pn**	**01 19 21.4**	**-0.6**
	941nm,0.3s,baz=184,slow=0.8,SNR=223						
KRVT				S	**Sn**	**01 19 38.7**	**+0.4**
	4µm,0.3s,baz=60,slow=14,SNR=20						
KRVT				LR	LR	01 19 56.9	
	comp=Z,6µm,18.1s,baz=144,slow=44						
PMG	**Port Moresby**	**8.10**	**229**	P	**Pn**	**01 20 58.0**	**+2.8**
	7.0nm,0.3s,baz=23,slow=12,SNR=9.3						
PMG				S	**Sn**	**01 22 25.8**	**+0.3**
	8.3nm,0.3s,baz=173,slow=20,SNR=14						
PMG				LR	LR	01 23 14.6	
	comp=Z,290nm,19.4s,baz=12,slow=31						
PMG	**Port Moresby**	**8.10**	**229**		**Pn**	**01 20 56.6**	**+1.4**
HNR	**Honiara**	**8.49**	**129**	P	**Pn**	**01 21 02.0**	**+1.5**
	55nm,0.3s,baz=261,slow=1.7,SNR=4.8						
HNR				S	**Sn**	**01 22 35.8**	**+0.9**
	14nm,0.3s,baz=302,slow=22,SNR=8.5						
HNR				LR	LR	01 24 30.8	
	comp=Z,1µm,19.9s,baz=296,slow=39						
HNR	**Honiara**	**8.49**	**129**	Pn	**Pn**	**01 21 00.8**	**+0.3**
JAY	**Jayapura**	**12.68**	**277**	P	**Pn**	**01 22 00.4**	**+2.6**
	0.4nm,0.3s,baz=207,slow=8.5,SNR=3.7						
JAY				LR	LR	01 26 10.8	
	comp=Z,980nm,20.0s,baz=98,slow=34						
JAY	**Jayapura**	**12.68**	**277**	P	**P**	**01 22 05.6**	**-2.2**
	271nm23nm,0.8s						
COEN	**Coen**	**14.03**	**225**		**Pn**	**01 22 18.7**	**+2.4**
SMPI	**Sarmi**	**14.72**	**278**	P	**P**	**01 22 31.5**	**+1.0**
	2µm99nm,1.0s						
CTA	**Charters Tower**	**17.36**	**203**	P	**P**	**01 22 59.8**	**0.0**
	0.7nm,0.3s,baz=32,slow=12,SNR=22						
CTAO	**Charters Tower**	**17.36**	**203**	P	**P**	**01 23 00.5**	**+0.8**
CTAO				IAmb	IAmb	01 23 04.9	
	comp=Z,43nm,0.9s						
FAKI	**Fak Fak**	**21.05**	**272**	P	**P**	**01 23 44.7**	**+4.5**
FAKI	**Fak Fak**	**21.05**	**272**	P	**P**	**01 23 37.7**	**-2.5**
EIDS	**Eidsvold**	**21.31**	**186**	P	**P**	**01 23 43.5**	**+0.7**
EIDS				IAmb	IAmb	01 23 46.9	
	comp=Z,26nm,0.8s						
DZM	**Mont Dzumac**	**21.98**	**146**	*e*Pn	**P**	**01 23 51.2**	**+1.1**
	comp=Z,20nm,0.7s						
DZM				*e*LR	LR	01 29 22.6	
	comp=Z,411nm,25.3s						
DZM	**Mont Dzumac**	**21.98**	**146**	P	**P**	**01 23 49.8**	**-0.4**
	comp=Z,11nm,0.8s,baz=251,slow=7.0,SNR=6.8						
DZM				LR	LR	01 31 46.1	
	comp=Z,379nm,20.1s,baz=25,slow=35						
SIJI	**Sorong**	**22.25**	**278**	P	**P**	**01 23 54.1**	**+1.2**
	comp=Z,48nm,0.8s,baz=71,slow=8.0,SNR=13						
SIJI				LR	LR	01 31 30.2	
	comp=Z,288nm,21.0s,baz=98,slow=34						
MTN	**Manton Dam**	**23.59**	**247**	P	**P**	**01 24 05.7**	**-0.9**
WB0	**Warramunga Arr**	**24.17**	**228**	P	**P**	**01 24 11.9**	**0.0**
WR0	**Warramunga Arr**	**24.18**	**228**	P	**P**	**01 24 12.1**	**+0.1**
WRAB	**Tennant Creek**	**24.31**	**228**	P	**P**	**01 24 13.4**	**+0.2**
WB2	**Warramunga Arr**	**24.31**	**228**	P	**P**	**01 24 13.4**	**+0.2**
WRA	**Warramunga Arr**	**24.32**	**228**	P	**P**	**01 24 12.7**	**-0.7**
	comp=Z,56nm,0.7s,baz=52,slow=9.8,SNR=86						
WRA				PcP	**PcP**	**01 27 52.1**	**-0.1**
	comp=Z,4.1nm,0.8s,baz=49,slow=2.5,SNR=8.0						
WRA				S	**S**	**01 28 28.0**	**-1.3**
	comp=Z,4.2nm,0.9s,baz=46,slow=16,SNR=7.9						
WRA				ScP	**ScP**	**01 31 27.3**	**+0.3**
	comp=Z,3.9nm,1.0s,baz=47,slow=2.6,SNR=7.2						
WRA				LR	LR	01 33 58.6	
	comp=Z,386nm,21.3s,baz=55,slow=37						
LBMI	**Labuha**	**26.00**	**277**	P	**P**	**01 24 32.4**	**+3.7**
ARMA	**Armidale**	**26.28**	**183**	P	**P**	**01 24 31.5**	**+0.5**
ARMA				IAmb	IAmb	01 24 33.3	
	comp=Z,22nm,0.8s						
KNRA	**Kununurra**	**26.76**	**243**	P	**P**	**01 24 34.6**	**-0.8**
AS31	**Alice Springs**	**27.04**	**222**	P	**P**	**01 24 37.8**	**-0.2**
ASAR	**Alice Springs**	**27.04**	**222**	P	**P**	**01 24 37.4**	**-0.6**
	comp=Z,9.3nm,0.8s,baz=55,slow=8.8,SNR=109						
ASAR				PcP	**PcP**	**01 27 58.1**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=64,slow=2.2,SNR=5.0						
ASAR				S	**S**	**01 29 11.3**	**-1.2**
	comp=Z,1.2nm,0.8s,baz=54,slow=13,SNR=3.9						
ASAR				ScP	**ScP**	**01 31 35.0**	**+0.2**
	comp=Z,1.4nm,1.0s,baz=49,slow=4.2,SNR=6.3						
ASAR				LR	LR	01 35 20.1	
	comp=Z,213nm,21.0s,baz=47,slow=36						
STKA	**Stephens Creek**	**29.79**	**200**	P	**P**	**01 25 01.6**	**-0.6**
	comp=Z,18nm,0.6s,baz=1.7,slow=8.4,SNR=44						
STKA				LR	LR	01 37 18.7	
	comp=Z,258nm,18.4s,baz=20,slow=37						
STKA	**Stephens Creek**	**29.79**	**200**	P	**P**	**01 25 02.2**	**-0.1**
DAV	**Davao City (W)**	**29.80**	**292**	LR	LR	01 36 45.1	
	comp=Z,184nm,18.3s,baz=208,slow=36						
FITZ	**Fitzroy Crossi**	**30.46**	**241**	P	**P**	**01 25 07.5**	**-0.9**
CAN	**Canberra**	**31.37**	**187**	P	**P**	**01 25 16.6**	**+0.4**

EDFI	**Ende, Flores**	**31.76**	**260**	P	**P**	**01 25 18.1**	**-1.9**
	comp=Z,13nm,1.0s						
BBOO	**Buckleboo**	**32.85**	**207**	P	**P**	**01 25 28.3**	**-1.0**
MPSI	**Mapaga**	**33.67**	**277**	P	**P**	**01 25 36.1**	**-0.5**
	comp=Z,686nmcomp=Z,36nm,0.8s						
TOO	**Toolangi**	**34.12**	**191**	P	**P**	**01 25 39.5**	**-0.8**
FORT	**Forrest**	**35.69**	**219**	P	**P**	**01 25 53.2**	**-0.6**
MBWA	**Marble Bar**	**36.78**	**240**	P	**P**	**01 26 02.2**	**-1.1**
SBUM	**Sibu**	**41.57**	**278**	P	**P**	**01 26 43.5**	**+0.1**
MJAR	**Matsushiro Arr**	**42.77**	**342**	P	**P**	**01 26 51.4**	**-1.4**
	comp=Z,1.8nm,0.7s,baz=159,slow=8.7,SNR=4.8						
MJAR				LR	LR	01 42 47.1	
	comp=Z,18nm,20.1s,baz=205,slow=33						
MORW	**Morawa**	**43.21**	**231**	P	**P**	**01 26 56.0**	**-0.5**
KSM	**Kuching**	**43.32**	**276**	P	**P**	**01 26 56.9**	**-0.7**
KSM				IAmb	IAmb	01 26 58.5	
	comp=Z,14nm,1.0s						
KSRS	**Korea Array**	**47.57**	**332**	P	**P**	**01 27 31.7**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=143,slow=7.7,SNR=5.1						
KSRS				LR	LR	01 45 56.4	
	comp=Z,28nm,19.9s,baz=152,slow=34						
KS19	**Wonju Array Si**	**47.63**	**332**	P	**P**	**01 27 32.2**	**+0.9**
INCN	**Inchon**	**48.20**	**331**	P	**P**	**01 27 36.4**	**+0.7**
NJ2	**Nanjing**	**48.59**	**320**	*e*P	**P**	**01 27 40.5**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WHN	**Wuhan**	**50.67**	**315**	P	P	01 28 10.2	+15
TIA	**Tai'an**	**52.42**	**323**	P	P	01 28 22.4	+15
TIA				pmax	pmax		
	comp=Z,14nm,0.9s						
BJI	**Beijing**	**55.56**	**326**	P	**P**	**01 28 32.5**	**+2.0**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
XAN	**Xi'an**	**56.44**	**316**	P	**P**	**01 28 37.0**	**0.0**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,130nm,3.9s						
PETK	**Petropavlovsk-**	**57.06**	**3**	P	**P**	**01 28 41.8**	**+0.7**
	comp=Z,5.6nm,0.8s,baz=160,slow=5.3,SNR=7.2						
PETK				LR	LR	01 49 03.7	
	comp=Z,71nm,21.8s,baz=238,slow=32						
PPT	**Papeete**	**57.47**	**108**	LR	LR	01 49 31.3	
	comp=Z,42nm,20.6s,baz=304,slow=32						
PPT2	**Papeete2**	**57.47**	**108**	*e*LR	LR	01 45 46.1	
	comp=Z,70nm,22.2s						
CMAR	**Chiang Mai Arr**	**58.02**	**295**	LR	LR	01 53 29.7	
	comp=Z,29nm,18.6s,baz=168,slow=36						
TBI	**Tubuai**	**58.41**	**115**	*e*LR	LR	01 46 04.5	
	comp=Z,86nm,23.2s						
CD2	**Chengdu**	**58.64**	**310**	P	**P**	**01 28 51.9**	**-0.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**58.74**	**324**	P	**P**	**01 28 54.9**	**+1.8**
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,66nm,6.9s						
LZH	**Lanzhou**	**61.05**	**315**	*e*P	**P**	**01 29 09.8**	**+0.6**
LZH				pP	sP	01 29 31.2	+3.5
LZH				sP	PcP	01 29 40.7	-11
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,5.8s						
LZH				LR	LR		
	comp=Z,150nm,14.9s						
LZH				LR	LR		
	comp=Z,160nm,15.0s						
LZH				LR	LR		
	comp=Z,200nm,17.8s						
MA2	**Magadan**	**63.46**	**359**	P	**P**	**01 29 25.3**	**+0.7**
GTA	**Gaotai**	**65.46**	**317**	*e*P	**P**	**01 29 39.4**	**+1.2**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,70nm,6.8s						
GTA				LR	LR		
	comp=Z,49nm,18.4s						
GTA				LR	LR		
	comp=Z,160nm,21.6s						
GTA				LR	LR		
	comp=Z,84nm,20.3s						
ULN	**Ulaanbaatar**	**65.63**	**328**	P	**P**	**01 29 40.0**	**+0.8**
ULN				IAmb	IAmb	01 29 56.0	
	comp=Z,6.4nm,0.8s						
SONM	**Songino Array**	**65.97**	**327**	P	**P**	**01 29 40.9**	**-0.5**
	comp=Z,3.0nm,0.8s,baz=141,slow=7.3,SNR=6.5						
YAK	**Yakutsk**	**68.34**	**348**	P	**P**	**01 29 57.1**	**+1.2**
TLY	**Talaya**	**69.69**	**330**	P	**P**	**01 30 04.5**	**-0.1**
BILL	**Bilibino**	**72.50**	**5**	P	**P**	**01 30 22.1**	**+0.9**
BILL				IAmb	IAmb	01 30 37.6	
	comp=Z,11nm,1.0s						
VNDA	**Vanda**	**73.56**	**178**	P	**P**	**01 30 26.9**	**-0.5**
	comp=Z,3.7nm,0.9s,baz=320,slow=8.8,SNR=5.2						
WMQ	**Urumqi**	**75.54**	**317**	*e*P	**P**	**01 30 40.5**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,61nm,3.9s						
WMQ				LR	LR		
	comp=Z,12nm,20.1s						
WMQ				LR	LR		
	comp=Z,40nm,18.3s						
WMQ				LR	LR		
	comp=Z,100nm,24.5s						
TIXI	**Tiksi**	**77.22**	**352**	P	**P**	**01 30 48.8**	**+0.3**
RDOG	**Red Dog Mine**	**78.13**	**15**	P	**P**	**01 30 54.5**	**+0.9**
PMR	**Palmer**	**78.80**	**24**	P	**P**	**01 30 57.6**	**+0.3**
SML	**Sawmill**	**79.23**	**24**	P	**P**	**01 31 00.1**	**+0.3**
RND	**Reindeer**	**79.84**	**23**	IAmb	IAmb	01 31 14.3	
	comp=Z,9.7nm,1.2s						
MCK	**McKinley**	**79.98**	**22**	P	**P**	**01 31 04.4**	**+0.6**
MLY	**Manley**	**80.00**	**21**	P	**P**	**01 31 04.2**	**+0.3**
MLY				IAmb	IAmb	01 31 06.2	
	comp=Z,3.8nm,0.7s						
MKAR	**Makanchi Array**	**80.10**	**319**	P	**P**	**01 31 03.9**	**-0.9**
	comp=Z,1.9nm,1.0s,baz=90,slow=7.3,SNR=9.5						
MKAR				LR	LR	02 06 45.1	
	comp=Z,18nm,21.1s,baz=55,slow=36						
RAGM	**Ragged Mountai**	**80.12**	**26**	P	**P**	**01 31 04.9**	**+0.3**
DHY	**Denali Highway**	**80.25**	**23**	P	**P**	**01 31 06.6**	**+1.1**
DHY				IAmb	IAmb	01 31 15.8	
	comp=Z,7.5nm,1.2s						
MAKZ	**Makanchi**	**80.31**	**319**	P	**P**	**01 31 06.0**	**+0.1**
NEA	**Nenana**	**80.36**	**22**	P	**P**	**01 31 06.3**	**+0.5**
WRH	**Wood River Hil**	**80.68**	**22**	P	**P**	**01 31 07.4**	**0.0**
WRH				IAmb	IAmb	01 31 17.9	
	comp=Z,11nm,1.3s						
ZAA0	**Zalesovo Array**	**80.81**	**326**	P	**P**	**01 31 07.5**	**-0.9**
ZALV	**Zalesovo Beam**	**80.81**	**326**	P	**P**	**01 31 06.9**	**-1.5**
	comp=Z,1.3nm,0.6s,baz=100,slow=7.7,SNR=6.0						
CCB	**Clear Creek Bu**	**80.87**	**22**	P	**P**	**01 31 08.0**	**-0.5**
GLB	**Gilahina Butte**	**80.97**	**26**	P	**P**	**01 31 09.8**	**+0.6**
GLB				IAmb	IAmb	01 31 21.4	
	comp=Z,6.3nm,0.9s						
COLA	**College**	**80.97**	**22**	P	**P**	**01 31 09.0**	**0.0**
VRDI	**Verde Repeater**	**81.03**	**26**	P	**P**	**01 31 11.3**	**+1.7**
VRDI				IAmb	IAmb	01 31 21.8	
	comp=Z,6.7nm,1.0s						
IL31		**81.28**	**22**	P	**P**	**01 31 10.4**	**-0.2**
IL31				IAmb	IAmb	01 31 21.4	
	comp=Z,5.7nm,1.1s						
ILAR	**Eielson Array**	**81.28**	**22**	P	**P**	**01 31 08.4**	**-2.3**
	comp=Z,2.6nm,0.9s,baz=247,slow=5.0,SNR=20						
ILAR				LR	LR	02 06 05.2	
	comp=Z,30nm,18.6s,baz=243,slow=35						
DOT	**Dot Lake**	**81.84**	**24**	P	**P**	**01 31 14.4**	**+0.7**
DOT				IAmb	IAmb	01 31 16.0	
	comp=Z,4.9nm,0.8s						
KSH	**Kashi**	**82.83**	**310**	P	**P**	**01 31 22.2**	**+2.6**
KSH				pP	sP	01 31 42.8	+4.3
KSH				sP	pP	01 31 48.9	+16
KSH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,56nm,4.4s						
EGAK	**Eagle**	**83.47**	**23**	P	**P**	**01 31 23.4**	**+1.2**
EGAK				IAmb	IAmb	01 31 37.8	
	comp=Z,8.2nm,1.3s						
HYT	**Haines Junctio**	**83.54**	**27**	P	**P**	**01 31 24.1**	**+1.4**
HYT				IAmb	IAmb	01 31 26.0	
	comp=Z,7.1nm,0.8s						
NIL	**Nilore**	**83.97**	**304**	P	**P**	**01 31 25.2**	**-0.3**
EPYK	**Eagle Plains**	**85.78**	**22**	P	**P**	**01 31 34.1**	**+0.2**

EPYK				IAmb	IAmb	01 31 35.0	
	comp=Z,5.0nm,0.9s						
QSPA	**South Pole Qui**	**85.91**	**180**	P	**P**	**01 31 34.5**	**-0.1**
MAW	**Mawson**	**86.45**	**203**	P	**P**	**01 31 36.1**	**-1.0**
	comp=Z,3.8nm,0.7s,baz=102,slow=6.5,SNR=5.2						
MAW	**Mawson**	**86.45**	**203**	IAmb	IAmb	01 31 37.2	
	comp=Z,1.4nm,1.0s						
GAR	**Garm**	**87.08**	**309**	P	**P**	**01 31 40.6**	**-0.4**
KBL	**Kabul**	**87.55**	**305**	P	**P**	**01 31 42.2**	**-1.2**
KBL				IAmb	IAmb	01 31 42.3	
	comp=Z,3.5nm,0.9s						
CHGR	**Chuyangaron**	**87.94**	**309**	P	**P**	**01 31 44.7**	**-0.3**
BRVK	**Borovoye**	**89.02**	**323**	P	**P**	**01 31 48.0**	**-1.6**
BRVK				IAmb	IAmb	01 31 49.1	
	comp=Z,5.7nm,1.1s						
C36M	**Paulatuk**	**91.15**	**21**	P	**P**	**01 31 59.5**	**+0.3**
C36M				IAmb	IAmb	01 32 16.8	
	comp=Z,2.2nm,0.9s						
NVAR	**Mina Array Bea**	**91.22**	**52**	P	**P**	**01 32 00.7**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=252,slow=4.6,SNR=2.3						
NVAR				LR	LR	02 07 26.2	
	comp=Z,130nm,19.4s,baz=256,slow=32						
YKA	**Yellowknife Ar**	**94.53**	**28**	P	**P**	**01 32 14.7**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=275,slow=4.4,SNR=6.7						
YKA				LR	LR	02 08 58.7	
	comp=Z,94nm,21.9s,baz=0.0,slow=32						
PDAR	**Pinedale Array**	**97.97**	**48**	P	**P**	**01 32 29.6**	**-1.8**
	comp=Z,0.1nm,0.4s,baz=258,slow=2.6,SNR=2.2						
AKASG	**Malin Array Be**	**114.18**	**325**	PKiKP	PKPdf	01 37 32.0	-2.1
	comp=Z,0.4nm,0.5s,baz=63,slow=1.7,SNR=2.7						
NB2	**NORSAR Subarra**	**116.38**	**341**	PKPdf	**PKPdf**	**01 37 35.8**	**-2.2**
	comp=Z,11nm,2.5s,baz=43,slow=2.0						
NOA	**NORSAR Array B**	**116.38**	**341**	PKP	**PKPdf**	**01 37 35.9**	**-2.2**
	comp=Z,0.3nm,0.7s,baz=46,slow=1.9,SNR=3.4						
BOSA	**Boshof**	**120.48**	**233**	PKP	**PKPdf**	**01 37 46.1**	**-0.9**
	comp=Z,4.9nm,1.0s,baz=69,slow=3.8,SNR=5.5						
VYHS	**Vyhne**	**121.15**	**326**	*e*PKP	**PKPdf**	**01 37 47.0**	**-0.6**
CLL	**Collm**	**122.44**	**332**	*e*PKPdf	**PKPdf**	**01 37 50.0**	**+0.1**
GERES	**GERESS Array B**	**123.68**	**329**	PKP	**PKPdf**	**01 37 51.9**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=37,slow=0.7,SNR=7.6						
RUSC	**La Rusia**	**133.76**	**86**		**PKPdf**	**01 38 12.7**	**-0.5**
TORD	**Torodi Ar. Bea**	**150.54**	**290**	PKPbc	**PKPbc**	**01 38 46.1**	**-1.4**
	comp=Z,13nm,0.8s,baz=61,slow=2.2,SNR=56						
BDFB	**Brasilia**	**151.22**	**133**	PKPbc	**PKPbc**	**01 38 48.8**	**-0.4**
	comp=Z,1.5nm,0.4s,baz=166,slow=6.6,SNR=3.5						

IDC 10 01:22:15.4±62.0, **16.°21S**×**178.°83W**, **h0**km, **mb4.2**/3, **mb1 4.4**/3, **mb1mx3.8**/28, **mbtmp4.2**/3, **Error ellipse: s-maj=1131.0km s-min=167.4km az=76.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.12**	**239**	P	P	01 29 45.0	+0.2
	3.0nm,0.7s,baz=61,slow=13,SNR=3.0						
WRA	**Warramunga Arr**	**44.56**	**258**	P	P	01 30 29.3	-0.2
	1.0nm,0.6s,baz=91,slow=8.3,SNR=11						
ASAR	**Alice Springs**	**44.88**	**253**	P	P	01 30 31.8	-0.3
	4.9nm,0.5s,baz=89,slow=8.0,SNR=38						

MAN 10 01:40:26.2, **16.°23N**×**120.°79E**, **h28**km, **mb4.0, ML2.8, MS2.5, Luzon**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMPP	**San Manuel, Pa**	**0.13**	**235**	*e*P	Pn	01 40 33.8	+1.3
SMPP				*e*S	Sb	01 40 38.8	+3.6
BALP	**Baler**	**0.90**	**122**	*e*P	Pb	01 40 43.4	+0.2
BALP				*e*S	Sn	01 40 55.4	+0.4
CAUP	**Cauayan**	**1.22**	**54**	*e*P	Pn	01 40 46.0	-1.4
CAUP				*e*S	Sn	01 41 02.8	-0.2
APYP	**Conner**	**1.68**	**15**	*e*P	Pn	01 40 53.6	-0.2
APYP				*e*S	Sn	01 41 15.9	+1.4

*ATA **10** 01:43:35.8±1.2, 39.°96N×39.°85E, h10km±67km, ML1.0, MW2.6*
*ISK **10** 01:43:35.7, 39.°95N×39.°87E, h14km, ML1.9/8*
*DDA **10** 01:43:36.8, 39.°93N×39.°80E, h7km±2km, ML1.5*

ISC 10 01:43:36.1±1.0, **39.°96N**±0.°03×**39.°84E**±0.°03, **h14**km±9km, **n19,** σ0**s45**/30, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EUZM	**Uzumlu**	**0.27**	**203**	*e*P	**Pg**	**01 43 41.9**	**0.0**
EUZM				IAML		01 43 47.4	
	comp=Z,15nm,0.3s						
EUZM	**Uzumlu**	**0.27**	**203**	*i* P	**Pg**	**01 43 41.9**	**0.0**
EUZM				*i* S	**Sg**	**01 43 45.9**	**+0.1**
ERZN	**Erzincan**	**0.38**	**193**	PG	**Pg**	**01 43 43.8**	**0.0**
ERZN				SG	**Sb**	**01 43 49.9**	**-0.6**
BAYB	**BAYBURT**	**0.44**	**47**	*e*P	**Pb**	**01 43 45.3**	**-0.5**
BAYB				*e*S	**Sb**	**01 43 52.0**	**-0.4**
BAYB				IAML		01 43 55.5	
	comp=Z,7.6nm,0.3s						
BAYB	**BAYBURT**	**0.44**	**47**	*i* P	**Pg**	**01 43 45.0**	**0.0**
BAYB				*i* S	**Sb**	**01 43 51.8**	**-0.6**
BAYB				IAML		01 43 54.0	
	comp=N,30nm,0.4s						
KELT	**Kelkit**	**0.48**	**293**	*e*P	**Pb**	**01 43 46.5**	**0.0**
KELT				*e*S	**Sb**	**01 43 53.6**	**0.0**
KELT				IAML		01 43 54.0	
	comp=Z,19nm,0.3s						
KELT	**Kelkit**	**0.48**	**293**	*i* P	**Pb**	**01 43 46.3**	**-0.2**
KELT				*i* S	**Sb**	**01 43 53.4**	**-0.2**
KELT				IAML		01 43 54.0	
	comp=N,38nm,0.3s						
BAYT	**Aydıntepe-Bayb**	**0.49**	**28**	PG	**Pb**	**01 43 46.2**	**-0.5**
BAYT				SG	**Sb**	**01 43 53.3**	**-0.6**
KOPT	**Kop Dagi**	**0.51**	**83**	*i* P	**Pb**	**01 43 47.6**	**+0.6**
KOPT				*i* S

STAF Sg Sg 01 43 59.3 +1.0
SBERN Bern, Kleine S 0.31 341 ⇑Pg Pg 01 43 55.1 +0.6
8.1nm,SNR=52
SBERN ⇑Pg Pg 01 43 55.1 +0.6
SBERN Sg Sg 01 43 59.7 +1.0
SIEB Ecole de Borzu 0.36 186 Pg Pg 01 43 55.7 +0.2
1.9nm,SNR=43
SIEB Pg Pg 01 43 55.7 +0.2
SIEB Sg Sg 01 44 00.7 +0.5
SCOU Cournillens 0.39 301 ⇓Pg Pg 01 43 56.4 +0.4
SCOU ⇓Pg Pg 01 43 56.4 +0.4
1.4nm,SNR=27
SCOU Sg Sg 01 44 02.1 +1.0
HASLI Hasliberg/Brie 0.40 75 ⇓Pg Pg 01 43 56.4 +0.2
HASLI ⇓Pg Pg 01 43 56.4 +0.2
1.1nm,SNR=138
HASLI Sg Sg 01 44 02.4 +0.9
SVIO Visp Obere Sta 0.41 151 Pg Pg 01 43 56.9 +0.4
1.3nm,SNR=29
SVIO Pg Pg 01 43 56.9 +0.4
SVIT Visp-Terbiners 0.42 151 ⇓Pg Pg 01 43 56.9 +0.4
SVIT ⇓Pg Pg 01 43 56.9 +0.4
1.8nm,SNR=38
FIESA Fiescheralp 0.42 121 ⇓Pg Pg 01 43 57.1 +0.4
0.7nm,SNR=72
FIESA ⇓Pg Pg 01 43 57.1 +0.4
FIESA Sg Sg 01 44 03.0 +0.8
SBRS Brig, Spital 0.43 141 ⇓Pg Pg 01 43 57.3 +0.4
SBRS ⇓Pg Pg 01 43 57.3 +0.4
2.5nm,SNR=35
SIOO Sion-Ophtalmol 0.44 199 ⇑Pg Pg 01 43 57.4 +0.4
SIOO ⇑Pg Pg 01 43 57.4 +0.4
2.5nm,SNR=51
SIOO Sg Sg 01 44 03.7 +0.9
VANNI Vissoie, Val d 0.44 179 ⇑Pg Pg 01 43 57.4 +0.3
VANNI ⇑Pg Pg 01 43 57.4 +0.3
0.9nm,SNR=78
VANNI Sg Sg 01 44 03.3 +0.5
SIOV Sion-Valere 0.45 200 Pg Pg 01 43 57.2 +0.1
SIOV Pg Pg 01 43 57.2 +0.1
1.8nm,SNR=55
SIOV Sg Sg 01 44 03.2 +0.3
TORNY Torny/Romont 0.45 286 ⇓Pg Pg 01 43 57.5 +0.3
1.3nm,SNR=70
TORNY ⇓Pg Pg 01 43 57.5 +0.3
TORNY Sg Sg 01 44 03.9 +0.9
SIOM Sion-Mayennets 0.45 200 Sg Sg 01 44 03.5 +0.4
2.2nm,SNR=41
SIOM Sg Sg 01 44 03.5 +0.4
EMBD Embd, Matterta 0.47 159 ⇓Pg Pg 01 43 57.8 +0.3
EMBD ⇓Pg Pg 01 43 57.8 +0.3
0.8nm,SNR=153
SGRA Graechen Ausbl 0.49 160 Pg Pg 01 43 58.3 +0.4
0.4nm,SNR=5.1
SGRA Pg Pg 01 43 58.3 +0.4
SGRA Sg Sg 01 44 05.1 +0.7
GRIMS Grimsel Gerste 0.51 98 ⇓Pg Pg 01 43 58.6 +0.3
1.8nm,SNR=310
GRIMS ⇓Pg Pg 01 43 58.6 +0.3
GRIMS Sg Sg 01 44 05.4 +0.4
SARK Sarnen Kantons 0.51 62 Pg Pg 01 43 58.7 +0.4
SARK Pg Pg 01 43 58.7 +0.4
1.1nm,SNR=23
SARK Sg Sb 01 44 06.3 -0.9
SIMPL Simplonpass 0.51 144 ⇓Pg Pg 01 43 58.7 +0.4
SIMPL ⇓Pg Pg 01 43 58.7 +0.4
0.6nm,SNR=56
SIMPL Sg Sg 01 44 05.7 +0.6
GRYON Gryon 0.52 219 Pg Pg 01 43 58.2 -0.3
1.5nm,SNR=228
GRYON Pg Pg 01 43 58.2 -0.3
GRYON Sg Sg 01 44 05.4 +0.1
SAIG Aigle Rue de l 0.55 232 ⇓Pg Pg 01 43 58.9 0.0
1.6nm,SNR=34
SAIG ⇓Pg Pg 01 43 58.9 0.0
DIX Grande Dixence 0.59 192 ⇑Pg Pg 01 43 59.9 +0.1
DIX ⇑Pg Pg 01 43 59.9 +0.1
0.4nm,SNR=64
DIX Sg Sg 01 44 07.5 -0.1
DIX Grande Dixence 0.59 192 P Pg 01 43 59.9 +0.1
DIX S Sg 01 44 07.3 -0.2
DIX AML AML
comp=N,322µm,0.2s
DIX AML AML
comp=E,232µm,1.0s
BNALP Bannalp 0.61 69 ⇓Pg Pg 01 44 00.5 +0.2
comp=E,0.3nm,SNR=36
BNALP ⇓Pg Pg 01 44 00.5 +0.2
BNALP Sg Sg 01 44 09.1 +0.8
BNALP Bannalp 0.61 69 P Pg 01 44 00.6 +0.3
BNALP S Sg 01 44 09.1 +0.7
BNALP AML AML
comp=E,158µm,0.3s
BNALP AML AML
comp=N,240µm,0.2s
BNALP AML AML
comp=N,240µm,0.2s
SLUB Luzern Bramber 0.64 50 Pg Pg 01 44 01.1 +0.4
comp=N,0.5nm,SNR=12
SLUB Pg Pg 01 44 01.1 +0.4
SLUB Sg Sb 01 44 10.1 -0.7
DAGMA Lutertal, Dagm 0.65 27 ⇑Pg Pg 01 44 01.2 +0.3
comp=N,1.0nm,SNR=77
DAGMA ⇑Pg Pg 01 44 01.2 +0.3
DAGMA Sg Sg 01 44 09.9 +0.6
MMK Mattmark 0.66 157 ⇓Pg Pg 01 44 01.3 +0.2
comp=N,0.3nm,SNR=40
MMK ⇓Pg Pg 01 44 01.3 +0.2
MMK Sg Sg 01 44 09.8 +0.1
MMK Mattmark 0.66 157 P Pg 01 44 01.3 +0.2
MMK S Sg 01 44 09.5 -0.2
MMK AML AML
comp=N,236µm,1.5s
MMK AML AML
comp=E,182µm,1.5s
SYVP Yverdon-les-Ba 0.66 281 ⇓Pg Pg 01 44 01.4 +0.3
SYVP ⇓Pg Pg 01 44 01.4 +0.3
comp=E,1.5nm,SNR=12
SALAN Lac Salanfe 0.66 220 ⇑Pg Pg 01 44 00.9 -0.3
SALAN ⇑Pg Pg 01 44 00.9 -0.3
comp=E,0.4nm,SNR=45
BALST Balsthal 0.69 6 ⇑Pg Pg 01 44 01.7 0.0
comp=E,0.8nm,SNR=74
BALST ⇑Pg Pg 01 44 01.7 0.0
BALST Sg Sg 01 44 10.9 +0.3
HAMIK Hmikon, Dlik 0.75 38 ⇑Pg Pg 01 44 03.2 +0.2
HAMIK ⇑Pg Pg 01 44 03.2 +0.2
comp=E,0.4nm,SNR=20
HAMIK Sg Sg 01 44 13.4 +0.6
FUSIO Fusio 0.77 105 ⇓Pg Pg 01 44 03.4 +0.2
comp=E,0.7nm,SNR=61
FUSIO ⇓Pg Pg 01 44 03.4 +0.2
FUSIO Sg Sg 01 44 13.5 +0.3
FUSIO Fusio 0.77 105 P Pg 01 44 03.4 +0.2
FUSIO AML AML
comp=N,344µm,1.1s
FUSIO AML AML
comp=E,220µm,0.2s
FUSIO AML AML
comp=N,344µm,1.1s
BOURR Bourrignon 0.78 342 ⇓Pg Pg 01 44 03.5 0.0
BOURR ⇓Pg Pg 01 44 03.5 0.0
comp=N,1.1nm,SNR=52
BOURR Sg Sg 01 44 14.1 +0.5
MUO Muotathal 0.79 66 Pg Pg 01 44 03.9 +0.3
comp=N,0.4nm,SNR=30
MUO Pg Pg 01 44 03.9 +0.3
SATI Passo dei Sala 0.80 166 ⇓Pg Pg 01 44 03.7 -0.2
SATI ⇓Pg Pg 01 44 03.7 -0.2
comp=N,0.4nm,SNR=62
SATI Sg Sg 01 44 14.6 +0.2
SATI Passo dei Sala 0.80 166 P Pg 01 44 03.7 -0.2
SATI S Sg 01 44 14.0 -0.4
BRANT Les Verrieres 0.82 291 ⇓Pg Pg 01 44 04.2 +0.1
BRANT ⇓Pg Pg 01 44 04.2 +0.1
comp=N,1.0nm,SNR=63
OGSI Sixt 0.82 225 Pg Pg 01 44 03.8 -0.4
comp=N,0.7nm,SNR=14
OGSI Pg Pg 01 44 03.8 -0.4
EMMET Emmethof 0.84 20 Pg Pg 01 44 04.4 -0.1
EMMET Pg Pg 01 44 04.4 -0.1
comp=N,0.9nm,SNR=54
EMMET Sg Sb 01 44 16.1 -0.5
ROTHE Rothenfluh 0.85 15 ⇑Pg Pg 01 44 04.8 0.0
comp=N,0.6nm,SNR=38
ROTHE ⇑Pg Pg 01 44 04.8 0.0
REMY Saint-Rhmy-en 0.87 200 ⇑Pg Pg 01 44 04.8 -0.3
REMY ⇑Pg Pg 01 44 04.8 -0.3
comp=N,0.7nm,SNR=61
REMY Saint-Rhmy-en 0.87 200 P Pg 01 44 04.8 -0.3
REMY S Sg 01 44 16.9 +0.4
REMY Saint-Rhmy-en 0.87 200 P Pg 01 44 04.8 -0.3
REMY AML AML
comp=E,467µm,0.2s
REMY AML AML
comp=E,468µm,0.2s
REMY AML AML
comp=N,496µm,0.7s
LOMF Lomont 0.87 324 P Pg 01 44 05.3 +0.2
LOMF Pg Pb 01 44 06.2 +0.4
LOMF Lomont 0.87 324 Sn Sb 01 44 17.3 -0.3
GIMEL St. Georges / 0.92 263 ⇓Pg Pg 01 44 06.2 +0.1
GIMEL ⇓Pg Pg 01 44 06.2 +0.1
comp=N,0.9nm,SNR=126
GIMEL St. Georges / 0.92 263 P Pg 01 44 06.2 +0.1
GIMEL AML AML
comp=E,411µm,0.8s
GIMEL AML AML
comp=N,576µm,1.4s
GIMEL AML AML
comp=E,411µm,0.8s
EWZT2 Wettswil, ZR 0.92 42 Pg Pg 01 44 06.4 +0.2
comp=E,0.9nm,SNR=42
EWZT2 Pg Pg 01 44 06.4 +0.2
EWZT2 Sg Sb 01 44 19.0 0.0
SULZ Cheisacher 0.94 22 Pg Pg 01 44 06.6 0.0
comp=E,0.6nm,SNR=34
SULZ Pg Pg 01 44 06.6 0.0
SULZ Sg Sb 01 44 19.5 -0.2
MRGE Morge 0.96 203 Pg Pg 01 44 06.3 -0.5
comp=E,0.4nm,SNR=46
MRGE Pg Pg 01 44 06.3 -0.5
MRGE Morge 0.96 203 P Pg 01 44 06.3 -0.5
MRGE AML AML
comp=E,461µm,0.2s
MRGE AML AML
comp=N,362µm,0.3s
LLS Linth-Limmern 0.99 78 ⇓Pg Pg 01 44 07.4 -0.1
LLS ⇓Pg Pg 01 44 07.4 -0.1
comp=N,0.2nm,SNR=48
BOBI Bbikon, Wasse 1.03 30 Pg Pg 01 44 08.1 -0.1
BOBI Pg Pg 01 44 08.1 -0.1
comp=N,0.3nm,SNR=17
CABF La Chapelle 1.03 268 *e*Pg Pb 01 44 08.6 0.0
CABF *e*Sg Sg 01 44 21.6 -0.1
comp=N,118nm,0.3s
CIRO Champorcher 1.05 181 P Pg 01 44 08.0 -0.6
CIRO S Sg 01 44 21.7 -0.6
CIRO Champorcher 1.05 181 P Pg 01 44 07.9 -0.7
CIRO AML AML
comp=N,123µm,0.7s
CIRO AML AML
comp=N,123µm,0.7s
CIRO AML AML
comp=E,208µm,0.7s
PANIX Pigniu (Panix) 1.06 80 ⇓Pg Pg 01 44 08.6 -0.2
comp=E,0.3nm,SNR=28
PANIX ⇓Pg Pg 01 44 08.6 -0.2
TRAV Traversella 1.15 174 P Pg 01 44 10.2 -0.2
TRAV S Sg 01 44 24.2 -1.1
TRAV Traversella 1.15 174 P Pg 01 44 09.7 -0.7
TRAV AML AML
comp=E,246µm,0.2s
TRAV AML AML
comp=N,310µm,0.5s
RSL Roselend 1.18 215 ⇑Pg Pg 01 44 10.2 -0.7
comp=N,0.3nm,SNR=46
RSL ⇑Pg Pg 01 44 10.2 -0.7
RSL Roselend 1.18 215 P Pg 01 44 10.3 -0.7
RSL Pn Pn 01 44 11.5 +0.3
RSL Sn Sb 01 44 26.9 +0.5
TUE Stuetta 1.23 98 P Pb 01 44 11.1 -0.8
TUE AML AML
comp=E,126µm,0.9s
TUE AML AML
comp=E,126µm,0.9s
TUE AML AML
comp=E,175µm,0.5s
TUE AML AML
comp=N,254µm,0.3s
TUE AML AML
comp=N,210µm,0.3s
LSD Lago del Serru 1.24 195 P Pb 01 44 11.5 -0.6
LSD S Sg 01 44 27.9 -0.3
LSD Lago del Serru 1.24 195 P Pb 01 44 11.4 -0.6
LSD AML AML
comp=E,146µm,0.3s
LSD AML AML
comp=N,100µm,0.4s
MOF Molkenrain 1.24 346 Pn Pg 01 44 12.2 0.0
MOF Molkenrain 1.24 346 Sn Sb 01 44 27.1 -1.1
MUGIO Muggio 1.25 125 ⇓Pg Pn 01 44 12.1 0.0
MUGIO ⇓Pg Pn 01 44 12.1 0.0
comp=N,0.3nm,SNR=53
MUGIO Sg Sb 01 44 28.3 0.0
MUGIO Muggio 1.25 125 P Pn 01 44 12.0 -0.1
MUGIO S Sb 01 44 28.0 -0.4
MUGIO AML AML
comp=N,170µm,1.3s
MUGIO AML AML
comp=E,148µm,0.5s
HINF Hinteralfeld 1.27 337 *e*Pn Pn 01 44 11.4 -1.0
HINF Hinteralfeld 1.27 337 *e*Pg Pn 01 44 12.3 -0.1
HINF *e*Sg Sb 01 44 27.8 -1.2
comp=E,74nm,0.2s
SLE Schleitheim 1.27 29 ⇓Pn Pn 01 44 11.1 -1.4
comp=E,0.5nm,SNR=61
SLE ⇓Pn Pn 01 44 11.1 -1.4
SLE Sg Sg 01 44 29.4 +0.1
BERGE Lenzkirch (DE) 1.28 18 ⇓Pn Pn 01 44 11.1 -1.6
BERGE ⇓Pn Pn 01 44 11.1 -1.6
comp=E,0.6nm,SNR=81
BERGE Sg Sg 01 44 29.6 -0.1
LPL La Plagne 1.28 208 *e*Pn Pn 01 44 12.8 0.0
LPL La Plagne 1.28 208 *e*Pg Pg 01 44 14.4 +1.4
LPL *e*Sg Sn 01 44 31.6 +1.4
comp=E,27nm,0.3s
PLONS Plons/SG 1.29 72 Pn Pb 01 44 12.9 -0.1
PLONS Pn Pb 01 44 12.9 -0.1
comp=E,0.2nm,SNR=30
PLONS Plons/SG 1.29 72 P Pn 01 44 12.7 0.0
PLONS AML AML
comp=E,132µm,1.1s
PLONS AML AML
comp=N,184µm,0.7s
PLONS AML AML
comp=E,132µm,1.1s
PLONS AML AML
comp=N,184µm,0.7s
LPG La Plagne 1.29 207 *e*Pn Pg 01 44 13.7 +0.5
LPG La Plagne 1.29 207 *e*Pg Pg 01 44 14.8 +1.6
LPG *e*Sg Sn 01 44 31.5 +0.9
comp=N,55nm,0.4s
KIZ Kirchzarten 1.32 10 Pn Pn 01 44 11.4 -1.7
comp=N,0.6nm,SNR=78
KIZ Pn Pn 01 44 11.4 -1.7
RSP Reno Superiore 1.52 189 P Pn 01 44 16.4 +0.4
RSP AML AML
comp=E,102µm,0.4s
RSP AML AML
comp=N,98µm,0.6s
RSP AML AML
comp=N,98µm,0.6s
RSP AML AML
comp=E,102µm,0.4s
OG35 Corcelles 1.52 247 Pg Pg 01 44 17.9 +0.3
OG35 Sg Sg 01 44 37.3 0.0
OGMO Fort Saint-Gob 1.58 204 Pn Pb 01 44 18.0 +0.2
DAVOX Davos/Dischmat 1.58 85 Pn Pb 01 44 18.2 +0.2
DAVOX Pn Pb 01 44 18.2 +0.2
comp=E,0.1nm,SNR=24
DAVOX Davos/Dischmat 1.58 85 P Pb 01 44 18.2 +0.3
DAVOX S Sg 01 44 42.0 +2.8
DAVOX AML AML
comp=N,91µm,0.7s
DAVOX AML AML
comp=E,55µm,0.4s
ECH Echery 1.59 350 Pn Pn 01 44 15.5 -1.3
ECH Pn Pn 01 44 15.5 -1.3
comp=E,0.4nm,SNR=57
ECH Echery 1.59 350 Pn Pn 01 44 16.2 -0.6
HAU Haudompre 1.59 328 *e*Pn Pn 01 44 15.9 -1.0
HAU Haudompre 1.59 328 *e*Pg Pb 01 44 18.1 0.0
HAU *e*Sg Sb 01 44 38.2 -0.2
comp=E,107nm,0.2s
MONC Moncucco Torin 1.60 171 P Pg 01 44 19.9 +0.9
MONC AML AML
comp=N,186µm,1.1s
MONC AML AML
comp=E,170µm,1.1s
MONC AML AML
comp=N,187µm,1.1s
OGSM Saint Maurice 1.68 232 Pn Pn 01 44 18.1 +0.1
OGSM Pg Pg 01 44 20.6 0.0
OGSM Sn Sn 01 44 39.2 -0.5
DAVA Damuels 1.69 67 *e*Pn Pb 01 44 19.4 -0.5
comp=N,2.6nm,0.3s,SNR=10
DAVA Sn Sg 01 44 43.4 +0.6
comp=N,33nm,0.2s
BERNI Berninapass 1.70 97 Pn Pb 01 44 20.1 +0.1
BERNI Pn Pb 01 44 20.1 +0.1
comp=N,0.3nm,SNR=47
MDI Monti di Nese 1.71 120 P Pg 01 44 21.2 0.0
MDI S Sg 01 44 46.0 +2.5
MDI AML AML
comp=N,217µm,1.0s
MDI AML AML
comp=E,230µm,1.0s
MDI AML AML
comp=N,216µm,1.0s
BNI Bardonecchia 1.72 202 P Pb 01 44 19.8 -0.5
BNI AML AML
comp=E,27µm,0.7s
BNI AML AML
comp=N,33µm,0.8s
GUT Gutenstein 1.76 36 Pn Pn 01 44 17.7 -1.4
GUT Pn Pn 01 44 17.7 -1.4
comp=N,0.1nm,SNR=10
CDF Champ du Feu 1.77 353 *e*Pn Pn 01 44 18.2 -1.2
CDF Champ du Feu 1.77 353 *e*Pg Pb 01 44 21.4 +0.3
CDF *e*Sn Sn 01 44 39.9 -2.2
CDF *e*Sg Sb 01 44 43.5 0.0
comp=N,73nm,0.4s
BHB Bricherasio 1.83 187 P Pn 01 44 20.7 +0.7
BHB AML AML
comp=E,47µm,1.6s
BHB AML AML
comp=N,46µm,0.9s
BHB AML AML
comp=N,45µm,0.9s
FUORN Ofenpass-Fuorn 1.84 90 P Pg 01 44 24.9 +1.2
FUORN AML AML
comp=N,76µm,0.3s
FUORN AML AML
comp=E,54µm,0.7s
ROTM Rocchetta Tana 1.88 163 AML AML
comp=E,175µm,0.4s
ROTM AML AML
comp=N,312µm,0.5s
GRN Grenoble 1.91 223 Pn Pn 01 44 21.7 +0.5
GRN Sn Sn 01 44 44.1 -1.4
THEF They Montfort 1.91 326 Pn Pn 01 44 21.6 +0.4
MBDF Montbardon 2.01 197 *e*Pn Pn 01 44 23.7 +1.0
MBDF *e*Sg Sg 01 44 54.0 +1.0
comp=N,9.6nm,0.3s
MOSI Grossmontoni 2.04 90 P Pg 01 44 28.2 +0.7
MOSI AML AML
comp=N,151µm,0.6s
MOSI AML AML
comp=E,131µm,1.2s
ORIF Oris-en-Rattie 2.11 215 *e*Pn Pn 01 44 24.6 +0.6
ORIF Oris-en-Rattie 2.11 215 *e*Pg Pg 01 44 28.8 0.0
ORIF *e*Sn Sn 01 44 49.7 -0.7
ORIF *e*Sg Sg 01 44 56.7 +0.6
comp=E,19nm,0.4s
CARE Lago del Cares 2.16 95 *e*Pn Pb 01 44 27.1 -0.7
CARE *e*Sn Sg 01 44 57.1 -0.5
PZZ Stroppo 2.17 189 P Pb 01 44 27.1 -0.9
PZZ AML AML
comp=E,69µm,0.6s
PZZ AML AML
comp=N,66µm,0.3s
FETA Feichten 2.19 79 Pn Pb 01 44 26.8 -1.4
comp=N,1.9nm,0.2s,SNR=14
FETA Sg Sg 01 44 59.6 +1.0
comp=N,5.4nm,0.3s
PCP Piancastagn 2.22 162 P Pb 01 44 27.8 -0.9
PCP AML AML
comp=E,42µm,0.9s
PCP AML AML
comp=N,42µm,0.9s
SURF Saint Ours 2.24 194 Pn Pn 01 44 27.0 +1.1
PAGF Fort de Pagny 2.28 327 *e*Pn Pn 01 44 25.7 -0.6
PAGF Fort de Pagny 2.28 327 *e*Pg Pb 01 44 30.8 +1.0
PAGF *e*Sn Sn 01 44 52.1 -2.5
PAGF *e*Sg Sb 01 44 59.6 +1.5
comp=N,15nm,0.2s
MAGA Magasa 2.29 111 P Pb 01 44 29.7 -0.2
MAGA AML AML
comp=N,135µm,0.4s
MAGA AML AML
comp=E,177µm,0.4s
RETA Reutte 2.32 68 *e*Pn Pn 01 44 28.7 +1.7
comp=E,0.2nm,0.1s
RETA Sg Sg 01 45 02.4 -0.6
comp=E,5.5nm,0.1s
SFTF Sexfontaines 2.33 313 *e*Pn Pn 01 44 26.2 -0.7
baz=131
SFTF Sexfontaines 2.33 313 *e*Pg Pg 01 44 31.8 -1.1
baz=130
SFTF *e*Sn Sn 01 44 53.2 -2.4
SFTF *e*Sg Sg 01 45 01.3 -1.8
comp=E,32nm,0.3s
QLNO Quiliano 2.39 167 P Pb 01 44 30.2 -1.4
QLNO AML AML
comp=N,58µm,0.5s
QLNO AML AML
comp=E,31µm,0.4s
MOTA Moosalm 2.50 73 *e*Pn Pn 01 44 30.9 +1.4
comp=E,0.4nm,0.1s
MOTA Sg Sg 01 45 08.6 -0.2
comp=E,6.7nm,0.2s
MEZF Maizieres J'vi 2.52 318 *e*Pn Pn 01 44 28.9 -0.7
MEZF Maizieres J'vi 2.52 318 *e*Pg Pg 01 44 35.5 -1.2
baz=140
MEZF *e*Sn Sn 01 44 57.8 -2.7
MEZF *e*Sg Sg 01 45 07.4 -2.0
comp=E,39nm,0.4s
SQTA Sankt Quirin 2.54 76 *e*Pn Pb 01 44 32.8 -1.5
comp=E,1.2nm,0.1s
SQTA Sg Sg 01 45 09.5 -0.6
comp=E,8.2nm,0.3s
SMF Signal de Mont 2.58 271 *e*Pn Pn 01 44 29.9 -0.5
SMF Signal de Mont 2.58 271 *e*Pg Pg 01 44 36.8 -1.0
SMF *e*Sg Sg 01 45 09.4 -1.9
comp=E,28nm,0.3s
LOR Lormes 2.63 285 *e*Pn Pn 01 44 30.6 -0.5
baz=108
LOR Lormes 2.63 285 *e*Pg Pb 01 44 37.0 +1.3
baz=109
LOR *e*Sn Sn 01 45 01.1 -2.0
LOR *e*Sg Sb 01 45 10.2 +2.1
comp=E,21nm,0.2s
TURF col de Turini 2.68 183 Pn Pn 01 44 32.6 +0.6
VIVF Saint-Julien-l 2.72 230 *e*Pn Pn 01 44 31.5 -0.8
VIVF Saint-Julien-l 2.72 230 *e*Pg Pg 01 44 39.6 -0.9
VIVF *e*Sn Sn 01 45 03.8 -1.6
VIVF *e*Sg Sg 01 45 14.8 -0.9
comp=E,21nm,0.2s
SBF Sospel 2.79 182 *e*Pn Pn 01 44 34.4 +1.0
SBF *e*Sn Sn 01 45 07.4 +0.2
comp=E,14nm,0.4s
NEGI Seborga 2.81 178 P Pn 01 44 35.2 +1.7
WATA Walderalm 2.81 75 Pn Pn 01 44 35.1 +1.4
comp=E,0.2nm,0.1s
WATA Sg Sg 01 45 19.3 +0.6
comp=E,4.1nm,0.3s
ESCA l'Escarene 2.83 183 Pn Pn 01 44 35.2 +1.4
SSF Saint Saulge 2.83 280 *e*Pn Pn 01 44 33.7 -0.1
SSF Saint Saulge 2.83 280 *e*Pg Pg 01 44 41.2 -1.4
SSF *e*Sn Sn 01 45 05.6 -2.5
SSF *e*Sg Sg 01 45 16.6 -2.7
comp=E,19nm,0.3s
WTTA Wattenberg 2.84 76 *e*Pn Pn 01 44 36.1 +2.0
comp=E,0.2nm,0.1s

WTTA					Sg		Sg	01 45 20.3 +0.7
	comp=E,5.9nm,0.3s							
AVF	**Avril sur Loir**	**2.92**	**274**	*e*Pn		Pn		01 44 34.7 -0.3
AVF	**Avril sur Loir**	**2.92**	**274**	*e*Pg		Pg		01 44 43.0 -1.3
AVF				*e*Sn		Sn		01 45 08.5 -1.7
AVF				*e*Sg		Sg		01 45 19.6 -2.4
	comp=E,5.5nm,0.2s							
CALF	**Calern**	**2.94**	**189**	Pn		Pn		01 44 36.2 +0.7
SMRF	**Simiane la Rot**	**3.03**	**209**	*e*Pn		Pn		01 44 36.7 +0.1
SMRF	**Simiane la Rot**	**3.03**	**209**	*e*Pg		Pg		01 44 45.5 -0.9
SMRF				*e*Sn		Sn		01 45 12.3 -0.8
SMRF				*e*Sg		Sg		01 45 26.1 +0.4
	comp=E,3.5nm,0.4s							
RUSF	**Rustrel**	**3.09**	**209**	Pn		Pn		01 44 37.7 +0.3
RISI	**Rein**	**3.10**	**83**	P		Pn		01 44 40.5 +2.8
RISI				AML		AML		
	comp=E,41μm,0.7s							
RISI				AML		AML		
	comp=N,100μm,0.4s							
FRF	**La Foret Royal**	**3.16**	**193**	*e*Pn		Pn		01 44 38.6 +0.2
FRF				*e*Sn		Sn		01 45 15.9 -0.4
FRF				*e*Sg		Sg		01 45 29.1 -0.9
	comp=N,3.2nm,0.3s							
BGF	**Bois d'Agland**	**3.27**	**270**	*e*Pn		Pn		01 44 39.0 -0.9
BGF	**Bois d'Agland**	**3.27**	**270**	*e*Pg		Pg		01 44 49.4 -1.6
BGF				*e*Sn		Sn		01 45 15.6 -3.3
BGF				*e*Sg		Sg		01 45 30.8 -2.6
	comp=N,32nm,0.4s							
LBL	**Lubilhac**	**3.35**	**246**	P		Pn		01 44 39.8 -1.2
LBL						Pb		01 44 40.6 -7.3
ABTA	**Abfaltersbach**	**3.39**	**87**	*e*Pg		Pg		01 44 52.5 -0.8
	comp=N,0.5nm,0.2s							
ABTA				Sg		Sg		01 45 34.3 -3.0
	comp=N,1.9nm,0.4s							
LMR	**La Mourre**	**3.41**	**193**	*e*Pn		Pn		01 44 41.1 -0.6
LMR	**La Mourre**	**3.41**	**193**	*e*Pg		Pg		01 44 53.4 -0.2
LMR				*e*Sn		Sn		01 45 21.8 -0.5
	comp=N,3.4nm,0.3s							
HYF	**Humbligny**	**3.44**	**282**	*e*Pn		Pn		01 44 42.2 -0.1
HYF				*e*Sg		Sg		01 45 36.6 -2.4
LASF	**Ste Croix**	**3.68**	**227**	*e*Pn		Pn		01 44 45.2 -0.4
LASF				*e*Sn		Sn		01 45 26.7 -2.4
LASF				*e*Sg		Sg		01 45 44.6 -2.0
	comp=N,9.8nm,0.4s							
TCF	**Toulx Ste Croi**	**3.73**	**266**	*e*Pn		Pn		01 44 45.2 -1.1
TCF	**Toulx Ste Croi**	**3.73**	**266**	*e*Pg		Pg		01 44 58.1 -1.8
TCF				*e*Sn		Sn		01 45 27.5 -2.9
TCF				*e*Sg		Sg		01 45 45.6 -2.7
	comp=N,6.7nm,0.3s							
GIVF	**Givet**	**3.91**	**333**	*e*Pn		Pn		01 44 47.8 -0.9
GIVF				*e*Sn		Sn		01 45 30.4 -4.3
GIVF				*e*Sg		Sg		01 45 50.1 -3.9
	comp=N,4.4nm,0.2s							
BAIF	**Baives**	**4.09**	**328**	*e*Pn		Pn		01 44 50.7 -0.3
BAIF	**Baives**	**4.09**	**328**	*e*Pg		Pg		01 45 03.6 -3.0
BAIF				*e*Sn		Sn		01 45 35.2 -3.8
BAIF				*e*Sg		Sg		01 45 55.5 -4.0
	comp=N,2.6nm,0.3s							
PGF	**Pioggiola**	**4.23**	**166**	*e*Pn		Pn		01 44 53.1 0.0
PGF				*e*Sn		Sn		01 45 41.3 -1.4
	comp=N,1.5nm,0.4s							
CAF	**Calviac**	**4.23**	**248**	*e*Pn		Pn		01 44 52.4 -0.7
CAF	**Calviac**	**4.23**	**248**	*e*Pg		Pg		01 45 07.8 -1.6
CAF				*e*Sn		Sn		01 45 40.2 -2.5
CAF				*e*Sg		Sg		01 46 01.5 -2.8
	comp=N,6.2nm,0.4s							
RJF	**Les Rejaudoux**	**4.44**	**255**	*e*P		Pn		01 44 59.1 +3.1
RJF	**Les Rejaudoux**	**4.44**	**255**	*e*Pg		Pg		01 45 11.5 -2.0
RJF				*e*Sn		Sn		01 45 45.0 -2.8
RJF				*e*Sg		Sg		01 46 07.7 -3.3
	comp=N,6.2nm,0.4s							
KHC	**Kasperske Hory**	**4.73**	**56**	*e*PN		Pn		01 45 01.1 +1.1
KHC				*e*PG		Pb		01 45 12.4 +0.9
KHC				*ex*		x		01 45 21.5
KHC				*e*SG		Sg		01 46 17.5 -2.7
	comp=N,4.7nm,0.7s							
ATFO	**Monte Foce - G**	**4.83**	**131**	P		Pn		01 44 59.9 -1.4
NKC	**Novy Kostel**	**4.83**	**40**	*e*SG		Sg		01 46 21.3 -1.9
	comp=N,3.7nm,0.4s							
ARVD	**Arcevia**	**4.93**	**128**	P		Pn		01 45 05.8 +3.0
ARVD				P		Pg		01 45 20.5 -2.3
MTLF	**Montolieu**	**5.05**	**231**	*e*Pn		Pn		01 45 04.2 -0.1
MTLF	**Montolieu**	**5.05**	**231**	*e*Pg		Pg		01 45 22.6 -2.4
MTLF				*e*Sn		Sn		01 46 00.3 -2.4
MTLF				*e*Sg		Sg		01 46 27.3 -3.1
	comp=N,1.5nm,0.3s							
LFF	**La Frestale**	**5.09**	**253**	*e*Pn		Pn		01 45 04.4 -0.4
LFF	**La Frestale**	**5.09**	**253**	*e*Pg		Pg		01 45 23.3 -2.5
LFF				*e*Sg		Sg		01 46 27.5 -4.1
	comp=N,10.0nm,0.5s							
SNTG	**Esanatoglia**	**5.10**	**130**	P		Pn		01 45 05.4 +0.4
ASSB	**Assisi San Ben**	**5.10**	**133**	P		Pn		01 45 06.0 +0.9
MFF	**Saint Martin d**	**5.33**	**272**	*e*Pn		Pn		01 45 07.5 -0.6
MFF				*e*Sn		Sn		01 46 05.0 -4.6
	comp=N,1.8nm,0.2s							
MFF				*e*Sg		Sg		01 46 35.4 -4.0
	comp=N,2.6nm,0.3s							
PP3	**Marolino**	**5.38**	**125**	P		Pg		01 45 30.1 -1.3
LDF	**La Druitiere**	**5.56**	**293**	*e*Pn		Pn		01 45 10.4 -0.9
LDF				*e*Sn		Sn		01 46 10.4 -5.0
LDF				*e*Sg		Sg		01 46 41.9 -5.0
	comp=N,2.3nm,0.3s							
PRU	**Pruhonice**	**5.71**	**52**	*e*SG		Sg		01 46 48.3 -3.4
GUMA	**Gualdo di Mace**	**5.76**	**126**	P		Pn		01 45 09.4 -4.8
GUMA				P		Pb		01 45 28.4 -0.7
FLN	**La Foliniere** baz=114	**5.84**	**294**	*e*Pn		Pn		01 45 14.6 -0.6
FLN	**La Foliniere** baz=112	**5.84**	**294**	*e*Pg		Pg		01 45 36.8 -3.4
FLN				*e*Sn		Sn		01 46 17.9 -4.3
FLN				*e*Sg		Sg		01 46 51.9 -3.9
	comp=N,3.8nm,0.3s							
CLL	**Collm**	**5.86**	**35**	*e*Sg		Sg		01 46 57.0 +0.5
BRG	**Berggiesshubel**	**5.96**	**43**	SG		Sg		01 47 09.4 +10
	comp=N,4.0nm,0.8s							
GRR	**Gorron**	**5.98**	**290**	*e*Pn		Pn		01 45 15.9 -1.2
GRR				*e*Sn		Sn		01 46 20.5 -5.1
GRR				*e*Sg		Sg		01 46 55.3 -4.9
	comp=N,4.0nm,0.4s							
EPF	**Esparros**	**6.30**	**238**	*e*Pn		Pn		01 45 20.6 -0.9
EPF				*e*Sg		Sg		01 47 06.4 -4.1
	comp=N,2.6nm,0.4s							
DPC	**Dobruska-Polom**	**6.88**	**54**	*e*SG		Sg		01 47 25.3 -3.8
SJPF	**Ste Jean**	**7.19**	**244**	*e*Sg		Sg		01 47 33.6 -5.5
	comp=N,1.0nm,0.5s							
QUIF	**Quistinic**	**7.42**	**284**	*e*Pn		Pn		01 45 35.9 -1.0
QUIF	**Quistinic**	**7.42**	**284**	*e*P		Pn		01 45 39.8 +2.9
QUIF				*e*Sn		Sn		01 46 55.5 -5.7
	comp=N,1.2nm,0.3s							
ROSF	**Rostrenen**	**7.55**	**287**	*e*P		Pn		01 45 42.1 +3.5

IDC ***10*** *01:44:15.3±0.8, 6°.97S×155°.02E, h0km, mb4.2/12, mb1 4.4/14, mb1mx4.1/33, mbtmp4.2/14, ML4.0/2, MS3.4/12, Ms1 3.4/12, ms1mx3.2/28, Error ellipse: s-maj=22.9km s-min=17.1km az=79.0*

NEIC ***10*** *01:44:19.1±1.4, 6°.88S±0°.09×155°.02E±0°.08, h23km±4km, mb4.5/23, Error ellipse: s-maj=13.3km s-min=10.3km az=207.0*

DJA ***10*** *01:44:25.2±5.6, 7°S±8°×15°4E±1°1, h22km±45km, M4.6/7, mB4.7/1, mb4.6/7, Mw(mB)3.9/1*

ISC 10 01:44:21.2±0.5,**6.94S**±0°.07×**155.01E**±0°.07,**h41km, n47,** σ**0s85/45, mb4.3/20, MS3.3/8, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RABL	**Rabaul**	**3.94**	**314**	Pn		**Pn**	**01 45 17.5**	**-1.8**
KRVT	**Keravat (AS076**	**3.96**	**311**	Pn		**Pn**	**01 45 18.9**	**-0.6**
	10nm,0.3s,baz=350,slow=4.2,SNR=16							
KRVT				Sn		**Sn**	**01 46 05.8**	**+1.1**
	14nm,0.3s,baz=300,slow=20,SNR=1.7							
HNR	**Honiara**	**5.47**	**117**	LR		LR	01 47 37.2	
	comp=Z,288nm,21.2s,baz=336,slow=37							
HNR	**Honiara**	**5.47**	**117**	Pn		**Pn**	**01 45 40.0**	**-0.3**
PMG	**Port Moresby**	**8.15**	**252**	Pn		**Pn**	**01 46 17.5**	**+0.4**
	4.6nm,0.3s,baz=22,slow=19,SNR=2.6							
PMG				Sn		**Sn**	**01 47 48.6**	**+0.6**
	2.5nm,0.3s,baz=49,slow=15,SNR=3.0							
PMG				LR		LR	01 49 03.3	
	comp=Z,193nm,19.8s,baz=80,slow=35							
PMG	**Port Moresby**	**8.15**	**252**			**Pn**	**01 46 16.4**	**-0.7**
JAY	**Jayapura**	**14.92**	**286**	LR		LR	01 53 29.8	
	comp=Z,137nm,18.3s,baz=3.5,slow=37							
CTA	**Charters Tower**	**15.59**	**212**	Pn		**P**	**01 48 00.5**	**-1.5**
	0.3nm,0.3s,baz=39,slow=13,SNR=3.9							
DZM	**Mont Dzumac**	**18.65**	**145**	P		**P**	**01 48 35.0**	**-0.9**
	0.4nm,0.3s,baz=70,slow=11,SNR=4.5							
DZM				LR		LR	01 54 15.1	
	comp=Z,237nm,20.8s,baz=222,slow=32							
EIDS	**Eidsvold**	**18.71**	**191**	P		**Pn**	**01 48 36.9**	**-0.2**
EIDS				IAmb		IAmb	01 48 38.4	
	comp=Z,22nm,1.1s							
ARMA	**Armidale**	**23.57**	**187**	P		**P**	**01 49 28.9**	**+0.6**
WR0	**Warramunga Arr**	**23.71**	**235**	P		**P**	**01 49 29.1**	**-0.5**
WR0				IAmb		IAmb	01 49 58.0	
	comp=Z,21nm,1.4s							
WB0	**Warramunga Arr**	**23.73**	**236**	P		**P**	**01 49 30.1**	**+0.2**
WB2	**Warramunga Arr**	**23.85**	**235**	P		**P**	**01 49 31.1**	**+0.2**
WB2				IAmb		IAmb	01 50 02.1	
	comp=Z,11nm,1.0s							
WRA	**Warramunga Arr**	**23.86**	**235**	P		**P**	**01 49 29.6**	**-1.5**
	comp=Z,2.3nm,0.4s,baz=58,slow=9.1,SNR=28							
WRA				PcP		**PcP**	**01 53 14.8**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=60,slow=2.4,SNR=5.4							
SIJI	**Sorong**	**24.44**	**283**	P		**P**	**01 49 36.3**	**-0.1**
	comp=Z,13nm,0.6s,baz=65,slow=7.9,SNR=19							
SIJI				LR		LR	02 00 38.1	
	comp=Z,74nm,20.9s,baz=36,slow=40							
AS31	**Alice Springs**	**26.22**	**228**	P		**P**	**01 49 52.6**	**+0.1**
ASAR	**Alice Springs**	**26.22**	**228**	P		**P**	**01 49 51.5**	**-1.1**
	comp=Z,2.2nm,0.8s,baz=62,slow=8.5,SNR=16							
ASAR				LR		LR	01 59 17.9	
	comp=Z,67nm,18.8s,baz=210,slow=34							
KNRA	**Kununurra**	**27.14**	**249**	P		**P**	**01 50 01.2**	**+0.4**
KNRA				IAmb		IAmb	01 50 19.1	
	comp=Z,7.0nm,0.8s							
STKA	**Stephens Creek**	**27.79**	**205**	P		**P**	**01 50 05.7**	**-0.8**
	comp=Z,11nm,0.9s,baz=18,slow=13,SNR=16							
STKA				LR		LR	02 00 56.4	
	comp=Z,113nm,18.4s,baz=29,slow=36							
STKA	**Stephens Creek**	**27.79**	**205**	P		**P**	**01 50 07.0**	**+0.5**
TNTI	**Ternate**	**28.63**	**284**	P		**P**	**01 50 13.3**	**-0.9**
FITZ	**Fitzroy Crossi**	**30.69**	**246**	LR		LR	02 01 52.0	
	comp=Z,68nm,18.3s,baz=66,slow=34							
KSM	**Kuching**	**45.39**	**279**	P		**P**	**01 52 35.8**	**-0.4**
KSRS	**Korea Array**	**50.90**	**332**	P		**P**	**01 53 18.3**	**0.0**
	comp=Z,0.7nm,0.6s,baz=148,slow=9.7,SNR=4.3							
KSRS				LR		LR	02 12 40.5	
	comp=Z,15nm,19.7s,baz=120,slow=34							
MDJ	**Mudanjiang**	**56.20**	**338**	P		**P**	**01 53 56.9**	**-0.2**
ENH	**Enshi**	**57.22**	**313**	P		**P**	**01 54 04.9**	**+0.3**
GSI	**Gunungsitoli**	**57.90**	**276**	P		**P**	**01 54 08.5**	**-1.2**
PETK	**Petropavlovsk-**	**59.86**	**2**	LR		LR	02 15 35.3	
	comp=Z,29nm,21.6s,baz=223,slow=31							
CM31	**Chiang Mai Arr**	**60.78**	**296**	P		**P**	**01 54 30.9**	**+1.4**
CMAR	**Chiang Mai Arr**	**60.78**	**296**	P		**P**	**01 54 31.1**	**+1.6**
	comp=Z,4.4nm,0.8s,baz=110,slow=5.5,SNR=21							
CMAR				LR		LR	02 21 48.8	
	comp=Z,13nm,18.3s,baz=200,slow=37							
CHTO	**Chiang Mai**	**60.89**	**296**	P		**P**	**01 54 31.1**	**+0.8**
CHTO				IAmb		IAmb	01 54 34.3	
	comp=Z,5.3nm,0.9s							
SONM	**Songino Array**	**69.30**	**327**	P		**P**	**01 55 24.4**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=151,slow=3.4,SNR=3.5							
VNDA	**Vanda**	**70.64**	**178**	P		**P**	**01 55 32.4**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=330,slow=8.4,SNR=4.1							
LSA	**Lhasa**	**71.26**	**304**	P		**P**	**01 55 38.1**	**+0.8**
GLB	**Gilahina Butte**	**82.83**	**25**	P		**P**	**01 56 42.2**	**+1.0**
QSPA	**South Pole Qui**	**83.03**	**180**	P		**P**	**01 56 43.0**	**+0.7**
IL31		**83.32**	**21**	P		**P**	**01 56 42.5**	**-0.9**
IL31				IAmb		IAmb	01 56 53.3	
	comp=Z,6.6nm,1.4s							
ILAR	**Eielson Array**	**83.32**	**21**	P		**P**	**01 56 42.9**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=280,slow=4.6,SNR=5.1							
ILAR				LR		LR	02 32 21.6	
	comp=Z,40nm,18.4s,baz=246,slow=35							
MK31	**Makanchi Array**	**83.38**	**319**	P		**P**	**01 56 44.7**	**+0.4**
MK31				IAmb		IAmb	01 57 03.7	
	comp=Z,2.8nm,1.0s							
MKAR	**Makanchi Array**	**83.38**	**319**	P		**P**	**01 56 43.8**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=92,slow=6.2,SNR=6.3							
ZAA0	**Zalesovo Array**	**84.14**	**326**	P		**P**	**01 56 47.5**	**-0.4**
ZAA0				IAmb		IAmb	01 59 09.9	
	comp=Z,1.6nm,0.6s							
ZALV	**Zalesovo Beam**	**84.14**	**326**	P		**P**	**01 56 46.8**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=111,slow=7.9,SNR=1.9							
HYT	**Haines Junctio**	**85.32**	**27**	IAmb		IAmb	01 57 15.2	
	comp=Z,4.9nm,1.0s							
YKA	**Yellowknife Ar**	**96.28**	**28**	P		**P**	**01 57 45.9**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=262,slow=4.7,SNR=8.6							
BDFB	**Brasilia**	**148.00**	**135**	PKPbc		**PKPbc**	**02 04 04.0**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=207,slow=4.5,SNR=3.4							
TORD	**Torodi Ar. Bea**	**153.03**	**285**	PKPbc		**PKiKP**	**02 04 15.5**	**0.0**
	comp=Z,0.9nm,1.1s,baz=80,slow=2.9,SNR=3.5							

ROM 10 01:44:59.3±0.1,**43°.370N**±0°.003×**12°.566E**±0°.005, **h4km, ML0.6/5, Error ellipse: s-maj=0.5km s-min=0.1km az=80.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.01**	**132**	S		Sg	01 45 00.7	-0.1
MURB	**Monte Urbino**	**0.11**	**196**	P		Pg	01 45 01.9	+0.3
MURB	**Monte Urbino**	**0.11**	**196**	P		Pg	01 45 01.9	+0.3
MURB				S		Sg	01 45 04.1	+0.9
MURB				AML		AML		
	comp=E,390μm,0.2s							
MURB				AML		AML		
	comp=E,390μm,0.2s							
MURB				AML		AML		
	comp=N,460μm,0.3s							
ATVO	**AVT- Monte Val**	**0.12**	**276**	P		Pg	01 45 01.9	+0.2
ATVO	**AVT- Monte Val**	**0.12**	**276**	P		Pg	01 45 01.8	+0.1
ATVO				S		Sg	01 45 04.1	+0.8
ATVO				AML		AML		
	comp=E,35μm,0.3s							
ATVO				AML		AML		
	comp=N,54μm,0.2s							
ATPI	**Pietralunga -**	**0.14**	**304**	P		Pg	01 45 02.6	+0.5
ATPI	**Pietralunga -**	**0.14**	**304**	P		Pg	01 45 02.5	+0.3
ATPI				S		Sg	01 45 05.5	+1.3
ATPI				AML		AML		
	comp=E,18μm,0.9s							
ATPI				AML		AML		
	comp=N,29μm,1.4s							
ATPI				AML		AML		
	comp=N,29μm,1.4s							
ATPI				AML		AML		
	comp=E,19μm,1.6s							
FOSV	**Fossato di Vic**	**0.16**	**118**	P		Pg	01 45 02.9	+0.4
FOSV	**Fossato di Vic**	**0.16**	**118**	P		Pg	01 45 02.9	+0.4
FOSV				S		Sg	01 45 05.9	+1.3
PIEI	**Pieia**	**0.17**	**352**	P		Pg	01 45 03.2	+0.6
PIEI	**Pieia**	**0.17**	**352**	P		Pg	01 45 03.2	+0.5
PIEI				S		Sg	01 45 06.5	+1.6
PIEI				AML		AML		
	comp=E,71μm,0.3s							
PIEI				AML		AML		
	comp=N,46μm,0.2s							
FRON	**Frontone**	**0.19**	**38**	P		Pg	01 45 03.5	+0.5
FRON	**Frontone**	**0.19**	**38**	P		Pg	01 45 03.4	+0.3
FRON				S		Sg	01 45 07.0	+1.5
ATCC	**AVT- Casa Cast**	**0.19**	**164**	P		Pg	01 45 03.5	+0.4
ATCC	**AVT- Casa Cast**	**0.19**	**164**	P		Pg	01 45 03.4	+0.4
ATCC				S		Sg	01 45 07.3	+1.7
ATCC				AML		AML		
	comp=E,37μm,1.1s							
ATCC				AML		AML		
	comp=N,43μm,0.3s							
NARO	**Abbazia di Nar**	**0.24**	**3**	P		Pg	01 45 04.4	+0.4
NARO	**Abbazia di Nar**	**0.24**	**3**	P		Pg	01 45 04.4	+0.4
NARO				S		Sg	01 45 08.7	+1.6
NARO				AML		AML		
	comp=N,17μm,0.4s							
NARO				AML		AML		
	comp=N,17μm,0.4s							
NARO				AML		AML		
	comp=E,14μm,1.0s							

JMA ***10*** *01:58:30.9, 33°.88N×136°.87E, h396km, M2.8*

IDC ***10*** *01:58:31.8±2.4, 32°.96N×136°.67E, h250km±41km, mb2.7/3, mb1 2.9/5, mb1mx2.7/40, mbtmp3.3/5, Error ellipse: s-maj=57.8km s-min=26.1km az=49.0*

ISC 10 01:58:34.8±1.0,**34°.0N**±0°.1×**136°.87E**±0°.10,**h350km, n20,** σ**1s62/21, mb2.5/3, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TTO1	**TONANKAI O.B.S**	**0.38**	**191**	P		**Pn**	**01 59 20.4**	**+1.9**
JIE	**Ise**	**0.42**	**341**	P		**Pn**	**01 59 20.5**	**+1.7**
JKN2	**Miekihoku**	**0.55**	**296**	P		**Pn**	**01 59 20.5**	**+1.4**
TK02	**Tokai 2**	**0.74**	**94**	P		**Pn**	**01 59 21.3**	**+2.0**
JTNC	**Tanabenakahech**	**1.06**	**261**	P		**Pn**	**01 59 21.8**	**+1.0**
JWY	**Kouya**	**1.08**	**282**	P		**Pn**	**01 59 22.3**	**+1.4**
JEG	**Eigenji**	**1.20**	**341**	P		**Pn**	**01 59 23.1**	**+1.8**
JAO	**Obara**	**1.30**	**14**	P		**Pn**	**01 59 23.8**	**+1.9**
JNY	**Yasuok**	**1.58**	**31**	P		**Pn**	**01 59 24.9**	**+1.5**
JWT	**Wachi**	**1.76**	**317**	P		**Pn**	**01 59 25.8**	**+1.4**
JRY	**Ryogami san**	**2.61**	**39**	P		**Pn**	**01 59 31.5**	**+0.8**
JRY				*e*S		**S**	**02 00 18.9**	**+3.1**
JHU	**Hanno**	**2.71**	**46**	P		**Pn**	**01 59 32.8**	**+1.3**
MJAR	**Matsushiro Arr**	**2.76**	**23**	P		**Pn**	**01 59 33.1**	**+1.1**
	0.1nm,0.3s,baz=192,slow=8.9,SNR=5.4							
BSO4	**Boso 4**	**3.03**	**70**	P		**Pn**	**01 59 34.6**	**+0.4**
JAG	**Ashikaga**	**3.21**	**40**	P		**Pn**	**01 59 36.8**	**+0.8**
JAG				*e*S		**S**	**02 00 24.0**	**-1.3**
JHO	**Hitachi**	**3.99**	**48**	P		**Pn**	**01 59 43.5**	**-0.1**
KSRS	**Korea Array**	**8.05**	**298**	P		**P**	**02 00 30.8**	**-1.7**
	0.2nm,0.3s,baz=117,slow=12,SNR=12							
MKAR	**Makanchi Array**	**42.67**	**304**	P		P	02 06 07.5	+9.3
	0.1nm,0.4s,baz=90,slow=8.6,SNR=1.8							
WRA	**Warramunga Arr**	**53.69**	**183**	P		**P**	**02 07 20.5**	**-1.2**
	0.4nm,0.4s,baz=358,slow=7.6,SNR=9.3							
ASAR	**Alice Springs**	**57.41**	**183**	P		**P**	**02 07 47.4**	**-0.6**
	0.1nm,0.5s,baz=11,slow=10,SNR=1.6							

ANF ***10*** *02:05:25.9±1.0, 31°.28N×116°.00W, h1km, ML4.0/25, Error ellipse: s-maj=9.0km s-min=6.2km az=49.0*

ECX ***10*** *02:05:26.8±0.5, 31°.28N×115°.92W, h15km±2km, MD3.6, ML3.8*

IDC ***10*** *02:05:33.1±3.3, 31°.66N×115°.37W, h0km, mb3.3/1, mb1 3.6/3, mb1mx3.3/39, mbtmp3.2/3, ML3.7/2, Error ellipse: s-maj=56.0km s-min=21.4km az=43.0*

ISC 10 02:05:26.6±0.8,**31°.29N**±0°.03×**115°.91W**±0°.03,**h10km, n42,** σ**1s98/60, 8C-6D, Baja California**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SVX	**San Vicente**	**0.30**	**276**	⇑*e*P		**Pg**	**02 05 32.6**	**0.0**
SVX				*e*S		**Sg**	**02 05 36.6**	**0.0**
SPIG	**San Pedro Mart**	**0.45**	**123**	*e*P		**Pg**	**02 05 34.6**	**-0.9**
SPIG				*e*S		**Sg**	**02 05 41.1**	**-0.4**
SPX	**San Pedro Mart**	**0.46**	**124**	⇑*e*P		**Sg**	**02 05 34.2**	**-1.4**
SPX				*e*S		**Sg**	**02 05 40.6**	**-1.1**
SPX				⇑*e*			02 05 41.6	
SPX				IAML			02 05 41.6	
	comp=N,2μm,0.7s							
ESJX	**Sierra Juarez**	**0.71**	**357**	⇓*e*P		**Pg**	**02 05 39.8**	**-0.6**
ESJX				*e*S		**Sb**	**02 05 50.0**	**-1.1**
SQX	**San Quintin**	**0.72**	**178**	⇓*e*P		**Pg**	**02 05 38.8**	**-1.7**
SQX				*e*S		**Sg**	**02 05 47.6**	**-2.2**
SQX				IAML			02 05 49.8	
	comp=E,6μm,0.4s							
SQX				⇑*e*			02 05 49.8	
SQX				IAML			02 05 52.9	
	comp=N,3μm,0.5s							
SQX				*e*			02 05 52.9	
ECBX	**El Chinero**	**0.75**	**76**	⇑*e*P		**Pb**	**02 05 41.6**	**-0.1**
ECBX				*e*S		**Sb**	**02 05 52.0**	**-0.1**
CCX	**Cicese**	**0.86**	**312**	⇓*e*P		**Pg**	**02 05 42.0**	**-1.2**
CCX				*e*S		**Sg**	**02 05 53.9**	**-0.7**
SFX	**San Felipe**	**0.94**	**106**	⇑*e*P		**Pg**	**02 05 43.3**	**-1.3**
SFX				*e*S		**Sg**	**02 05 56.4**	**-0.4**
SFX				⇑*e*			02 05 58.0	
SFX				IAML			02 05 58.0	
	comp=N,1μm,0.7s							
CBX	**Cerro Bola**	**1.20**	**328**	⇓*e*P		**Pb**	**02 05 48.6**	**-1.0**
CBX				*e*S		**Sb**	**02 06 04.4**	**-0.8**
CBX				⇓*e*			02 06 10.4	
CBX				IAML			02 06 10.4	
	comp=E,4μm,0.5s							
ERMX	**Rumorosa**	**1.26**	**355**	⇓*e*P		**Pg**	**02 05 50.6**	**-0.2**
ERMX				*e*S		**Sn**	**02 06 07.6**	**+0.1**
ERMX				⇑*e*			02 06 08.7	
ERMX				IAML			02 06 08.7	
	comp=N,4μm,0.5s							

NVAR	**Mina Array Bea**	**7.39**	**345**	Pn	Pb	02 07 26.8	-8.2
	comp=E,0.1nm,0.3s,baz=168,slow=15,SNR=3.4						
NVAR				Pg	Pg	02 07 41.5	-6.5
	comp=E,0.3nm,0.3s,baz=168,slow=18,SNR=4.8						
NVAR				Lg	Lg	02 09 22.8	
	comp=E,0.2nm,0.3s,baz=161,slow=34,SNR=3.3						
TXAR	**Lajitas Array**	**10.76**	**97**	Pn	**Pn**	**02 08 04.5**	**+3.8**
	comp=E,0.0nm,0.3s,baz=270,slow=11,SNR=7.0						
PDAR	**Pinedale Array**	**12.52**	**22**	Pn	Pn	02 08 29.7	+4.7
	comp=E,0.1nm,0.3s,baz=191,slow=9.2,SNR=4.4						
ILAR	**Eielson Array**	**38.60**	**339**	P	P	02 12 56.0	+6.5
	comp=E,0.5nm,0.9s,baz=157,slow=7.8,SNR=5.0						

WEL 10 02:11:48.9, 43.6S±0.9×172.4E±0.9, h5km±1km, M4.0/39, ML4.1/7, MLv4.0/39, Error ellipse: s-maj=0.0km s-min=0.0km az=137.0, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MQZ	**McQueen's Vall**	**0.23**	**131**	P	Pg	02 11 55.6	+2.3
MQZ				S	Sg	02 11 59.1	+2.9
OXZ	**Oxford**	**0.36**	**310**	P	Pb	02 11 57.6	-0.3
OXZ				S	Sb	02 12 02.8	-1.0
AKCZ	**Akaroa Harbour**	**0.47**	**131**	P	Pb	02 12 00.3	+0.6
OKCZ	**Okains Bay**	**0.49**	**110**	P	Pb	02 12 00.8	+0.8
GVZ	**Greta Valley S**	**0.74**	**37**	P	Pn	02 12 05.4	-0.7
LTZ	**Lake Taylor**	**0.79**	**352**	P	Pn	02 12 06.1	-0.6
RPZ	**Rata Peaks**	**1.00**	**261**	P	Pn	02 12 09.6	0.0
INZ	**Inchbonnie**	**1.10**	**319**	P	Pn	02 12 10.6	-0.3
WVZ	**Waitaha Valley**	**1.32**	**291**	P	Pg	02 12 15.2	+1.0
KHZ	**Kahutara**	**1.41**	**36**	P	Pn	02 12 14.9	-0.2
LBZ	**Lake Benmore**	**1.81**	**242**	P	Pn	02 12 21.4	+0.6
THZ	**Tophouse**	**1.83**	**11**	P	Pn	02 12 21.1	+0.1
FOZ	**Fox Glacier**	**1.89**	**270**	P	Pb	02 12 23.6	-0.2
ODZ	**Otahua Downs**	**1.96**	**220**	P	Pn	02 12 22.6	-0.1
BSWZ	**Blackbirch Sta**	**2.13**	**31**	P	Pn	02 12 25.5	+0.3
HHSZ	**Highcliff Hill**	**2.66**	**209**	P	Pn	02 12 32.3	-0.1
JCZ	**Jackson Bay**	**2.68**	**258**	P	Pn	02 12 33.2	+0.5
TCW	**Tory Channel**	**2.72**	**31**	P	Pn	02 12 33.5	+0.3
QRZ	**Quartz Range**	**2.73**	**2**	P	Pn	02 12 33.6	+0.2
WKZ	**Wanaka**	**2.75**	**241**	P	Pn	02 12 34.4	+0.7
EAZ	**Earnscleugh**	**2.79**	**232**	P	Pn	02 12 34.2	+0.1
PLWZ	**Palliser**	**2.89**	**47**	P	Pn	02 12 34.6	-0.9
DUWZ	**D'Urville Isla**	**2.98**	**23**	P	Pn	02 12 37.8	+1.1
TUZ	**Tuapeka**	**3.11**	**219**	P	Pn	02 12 38.6	+0.1
CAW	**Cannon Point**	**3.14**	**40**	P	Pn	02 12 37.9	-1.1
KIW	**Kapiti Island**	**3.27**	**35**	P	Pn	02 12 40.5	-0.3
MTW	**Mount Morrison**	**3.31**	**45**	P	Pn	02 12 40.2	-1.2
OGWZ	**Otaki Gorge**	**3.42**	**38**	P	Pn	02 12 42.0	-0.8
MSZ	**Milford Sound**	**3.42**	**249**	P	Pn	02 12 43.2	+0.3
MLZ	**Mavora Lakes**	**3.57**	**238**	P	Pn	02 12 45.2	+0.3
MRZ	**Mangatainoka R**	**3.73**	**40**	P	Pn	02 12 46.0	-1.1
SYZ	**Scrubby Hill**	**3.78**	**217**	P	Pn	02 12 48.4	+0.7
TIWZ	**Tintock**	**3.79**	**44**	P	Pn	02 12 48.7	+0.7
WHZ	**Wether Hill Ro**	**3.95**	**232**	P	Pn	02 12 49.3	-0.8
BFZ	**Birch Farm**	**4.05**	**46**	P	Pn	02 12 50.3	-1.2
KHEZ	**Kahui Hut**	**4.43**	**16**	P	Pn	02 12 58.0	+1.2
PKE	**Pukeiti**	**4.52**	**16**	P	Pn	02 12 59.6	+1.6
APZ	**The Paps**	**4.53**	**222**	P	Pn	02 12 58.5	+0.4
DREZ	**Durham Road**	**4.57**	**18**	P	Pn	02 12 59.8	+1.1
VRZ	**Vera Road**	**4.77**	**22**	P	Pn	02 13 03.8	+2.4
BHHZ	**Black Hill Sta**	**4.90**	**35**	P	Pn	02 13 03.4	+0.2
TUVZ	**Tukino**	**4.93**	**31**	P	Pn	02 13 05.3	+1.5
NGZ	**Ngauruhoe**	**4.99**	**30**	P	Pn	02 13 06.4	+1.8
HIZ	**Hauiti**	**5.37**	**21**	P	Pn	02 13 09.6	0.0
TLZ	**Tolley Road**	**5.73**	**25**	P	Pn	02 13 15.7	+1.1

IPEC ***10*** *02:13:34.7±0.3, 51.52N×16.25E, h0km, ML2.0/4, Error ellipse: s-maj=2.6km s-min=1.8km az=76.0*

LDG ***10*** *02:13:34.7±0.4, 51.52N×16.17E, h1km, Ml3.1/3, Error ellipse: s-maj=7.9km s-min=5.7km az=17.0, Suspected Mining induced.*

PRU ***10*** *02:13:35.6±0.0, 51.49N×16.17E, h0km*

IDC ***10*** *02:13:35.7±0.9, 51.48N×16.07E, h0km, mb1 3.0/5, mb1mx2.9/37, mbtmp2.9/5, ML2.3/4, Error ellipse: s-maj=14.7km s-min=8.8km az=113.0*

VIE ***10*** *02:13:36.9±1.0, 51.35N×15.97E, h0km, mb2.3/4, ml2.8/5, Error ellipse: s-maj=9.7km s-min=6.9km az=72.0 78 km WNW of Wroclaw Suspected Mining induced.*

ISC 10 02:13:33.1±0.9, 51.59N±0.04×16.12E±0.03, h0km, n37, σ1s32/71, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHVC	**Chvalec**	**1.00**	**182**	*e*PG	**Pb**	**02 13 52.9**	**-0.4**
CHVC				*e*SG	**Sg**	**02 14 05.0**	**-0.2**
	comp=Z,48nm,0.5s						
OSTC	**Ostas**	**1.03**	**177**	*e*PG	**Pb**	**02 13 53.8**	**-0.1**
OSTC				*e*SG	**Sg**	**02 14 06.3**	**+0.1**
UPC	**Upice**	**1.08**	**184**	*e*PG	**Pg**	**02 13 54.0**	**+0.2**
UPC				*e*SG	**Sg**	**02 14 07.9**	**+0.1**
DPC	**Dobruska-Polom**	**1.25**	**174**	*e*PG	**Pg**	**02 13 56.8**	**-0.1**
DPC				*e*SG	**Sg**	**02 14 12.0**	**-1.0**
	comp=Z,35nm,0.4s						
PVCC	**Panska Ves**	**1.44**	**223**	*e*PG	**Pb**	**02 14 01.2**	**+0.4**
PVCC				*e*SG	**Sn**	**02 14 20.7**	**+0.6**
	comp=Z,178nm,0.2s						
BRG	**Berggiesshubel**	**1.54**	**243**	PG	**Pg**	**02 14 03.4**	**+0.8**
BRG				SG	**Sg**	**02 14 24.2**	**+1.6**
	92nm,0.4s						
KRLC	**Kraliky**	**1.57**	**164**	*e*PG	**Pn**	**02 14 02.5**	**+0.2**
KRLC				*e*SG	**Sn**	**02 14 21.9**	**-1.4**
	comp=Z,27nm,0.3s						
GOPC	**GO Pecny, Ondr**	**1.88**	**207**	*e*PN	**Pn**	**02 14 06.8**	**+0.3**
GOPC				*e*PG	**Pb**	**02 14 08.7**	**+0.5**
GOPC				*e*SG	**Sb**	**02 14 32.7**	**+0.5**
	comp=Z,28nm,0.5s						
PRU	**Pruhonice**	**1.89**	**213**	*e*PG	**Pb**	**02 14 08.5**	**+0.1**
PRU				*e*SG	**Sb**	**02 14 32.8**	**+0.3**
	comp=Z,43nm,0.3s						
CLL	**Collm**	**1.97**	**263**	*e*Pn	**Pb**	**02 14 09.0**	**-0.8**
CLL				*e*Pg	**Pg**	**02 14 13.0**	**+2.2**
CLL				*e*Sg	**Sg**	**02 14 39.0**	**+2.7**
	comp=Z,32nm,0.5s						
MORC	**Moravsky Berou**	**2.03**	**153**	*e*PN	**Pn**	**02 14 08.5**	**-0.1**
MORC				*e*SG	**Sn**	**02 14 35.4**	**+0.8**
MORC	**Moravsky Berou**	**2.03**	**153**	*e*Pn	**Pn**	**02 14 08.4**	**-0.1**
	baz=335						
MORC				*e*Sg	**Sn**	**02 14 35.3**	**+0.8**
	comp=Z,13nm,0.3s,baz=335						
OKC	**Ostrava-Krasne**	**2.17**	**143**	*e*PG	**Pb**	**02 14 13.7**	**+0.4**
VRAC	**Vranov**	**2.30**	**172**	Pn	**Pn**	**02 14 12.5**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=356,slow=17,SNR=20						
VRAC				Lg	Lg	02 14 45.3	
	comp=Z,5.1nm,0.3s,baz=94,slow=22,SNR=11						
VRAC	**Vranov**	**2.30**	**172**	*e*PN	**Pn**	**02 14 13.0**	**+0.7**
VRAC				*e*SG	**Sb**	**02 14 44.6**	**+0.1**
VRAC	**Vranov**	**2.30**	**172**	*e*Pn	**Pn**	**02 14 13.0**	**+0.7**
	baz=354						
VRAC				*e*Sg	**Sb**	**02 14 44.5**	**+0.1**
	comp=Z,9.6nm,0.2s,baz=354						
TREC	**Trest**	**2.33**	**190**	*e*PG	**Pg**	**02 14 17.0**	**-0.7**
TREC				*e*SG	**Sg**	**02 14 46.9**	**-1.0**
	comp=Z,22nm,0.5s						
KRUC	**Moravsky**	**2.53**	**176**	*e*PN	**Pn**	**02 14 16.2**	**+0.7**
KRUC				*e*SG	**Sb**	**02 14 51.9**	**+0.8**
KRUC	**Moravsky**	**2.53**	**176**	*e*Pn	**Pn**	**02 14 16.1**	**+0.6**
	baz=358						
KRUC				*e*Sg	**Sb**	**02 14 51.9**	**+0.8**
	comp=Z,5.1nm,0.2s,baz=358						
NKC	**Novy Kostel**	**2.69**	**241**	*e*PN	**Pn**	**02 14 18.8**	**+1.2**
NKC				*e*PG	**Pg**	**02 14 25.2**	**+0.6**
NKC				*e*SG	**Sg**	**02 15 01.7**	**+2.2**
	comp=Z,60nm,0.4s						
JAVC	**Velka Javorina**	**2.91**	**159**	*e*PN	**Pn**	**02 14 21.2**	**+0.6**
JAVC				*e*SG	**Sb**	**02 15 03.4**	**+1.5**
JAVC	**Velka Javorina**	**2.91**	**159**	*e*Pn	**Pn**	**02 14 21.2**	**+0.6**
	baz=342						
JAVC				*e*Sg	**Sb**	**02 15 03.4**	**+1.5**
	comp=Z,5.9nm,0.5s,baz=342						
KHC	**Kasperske Hory**	**2.95**	**214**	*e*PN	**Pn**	**02 14 22.0**	**+0.8**
KHC				*e*PG	**Pb**	**02 14 27.9**	**+1.4**
KHC				*e*SN	**Sn**	**02 14 56.2**	**-1.1**
KHC				*e*SG	**Sg**	**02 15 06.7**	**-1.0**
	comp=Z,15nm,0.5s						
GERES	**GERESS Array B**	**3.15**	**210**	Pn	**Pn**	**02 14 25.3**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=31,slow=12,SNR=14						
GERES				Pg	**Pb**	**02 14 31.4**	**+1.4**
	comp=Z,1.6nm,0.3s,baz=33,slow=16,SNR=30						
GERES				Lg	Lg	02 15 12.4	

	comp=Z,3.7nm,0.3s,baz=32,slow=26,SNR=12							
LANS	**Liptovska Anna**	**3.25**	**137**	*e*PN	**Pn**	**02 14 26.5**	**+1.2**
MODS	**Modra-Piesok**	**3.30**	**166**	*e*	**Pg**	**02 14 36.1**	**-0.3**
VYHS	**Vyhne**	**3.56**	**149**	*e*PN	**Pn**	**02 14 29.2**	**-0.3**
BSD	**Bornholm Skovb**	**3.61**	**349**	*i* P	**Pn**	**02 14 30.7**	**+0.5**
BSD				*i* S	**Sn**	**02 15 11.3**	**-2.1**
CONA	**Conrad Observa**	**3.67**	**183**	*e*Pn	**Pn**	**02 14 32.3**	**+1.1**
	comp=Z,0.2nm,0.1s						
CONA				Sg	**Sg**	**02 15 30.5**	**-0.3**
	comp=Z,10nm,0.5s						
MOA	**Molln**	**3.93**	**199**	*e*Pn	**Pn**	**02 14 35.2**	**+0.5**
	comp=Z,1.5nm,0.2s						
MOA				Sg	**Sg**	**02 15 37.7**	**-1.6**
	comp=Z,8.3nm,0.5s						
ARSA	**Arzberg**	**4.36**	**185**	*e*Pn	**Pn**	**02 14 39.5**	**-1.1**
	comp=Z,0.8nm,0.3s						
ARSA				Sg	**Sg**	**02 15 52.0**	**-1.0**
	comp=Z,8.7nm,0.6s						
CDF	**Champ du Feu**	**6.53**	**244**	*e*Pn	**Pn**	**02 15 09.6**	**-0.8**
CDF				*e*Sg	**Sg**	**02 16 58.6**	**-4.0**
	comp=Z,5.9nm,0.6s						
HINF	**Hinteralfeld**	**7.09**	**241**	*e*Pn	**Pn**	**02 15 16.3**	**-1.8**
HINF				*e*Sg	**Sg**	**02 17 16.8**	**-4.0**
	comp=Z,8.7nm,0.9s						
HAU	**Haudompre**	**7.27**	**244**	*e*Pn	**Pn**	**02 15 19.1**	**-1.4**
HAU				*e*Sg	**Sg**	**02 17 21.7**	**-4.7**
	comp=Z,1.4nm,0.3s						
AKASG	**Malin Array Be**	**8.29**	**91**	Pn	**Pn**	**02 15 34.6**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=277,slow=12,SNR=5.0						
HFS	**Hagfors**	**8.68**	**352**	Pn	**Pn**	**02 15 40.1**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=167,slow=13,SNR=1.6						
FINES	**FINESS Array B**	**11.29**	**25**	Pn	**Pn**	**02 16 15.3**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=209,slow=12,SNR=2.1						

IDC ***10*** *02:14:31.4±0.4, 45.77S×12.47W, h0km, mb4.9/25, mb1 4.9/25, mb1mx4.8/31, mbtmp4.8/25, MS4.1/12, Ms1 4.1/12, ms1mx4.0/21, Error ellipse: s-maj=14.7km s-min=12.6km az=122.0*

NEIC ***10*** *02:14:32.8±1.7, 45.7S±0.1×12.5W±0.1, h10km±1km, mb5.3/103, Error ellipse: s-maj=17.9km s-min=13.1km az=158.0*

GCMT ***10*** *02:14:37.8±0.2, 45.87S±0.01×12.32W±0.02, h20km, MW5.2/115, Moment Tensor Solution. s64,c83; s115,c177; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-6.38±.23; Mθθ4.55±.16; Mϕϕ1.83±.15; Mrθ1.15±.28; Mθϕ2.96±.10; Mϕr-1.00±.32; Best double couple: M₀6.58900×10¹⁶ NP1₍ϕs45.00000°, δ44.00000°, λ-108.00000°. NP2₍ϕs250.00000°, δ48.00000°, λ-73.00000°. Principal axes: T 6.4620, Plg2.0000°, Azm328.0000°; N 0.2540, Plg12.0000°, Azm58.0000°; P -6.7160, Plg77.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 02:14:33.3±0.4, 45.76S±0.07×12.59W±0.06, h12km±2km, h12km:pP-P, n297, σ1s01/281, mb5.2/79, MS4.3/17, 2C-1D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**25.05**	**177**	P	**P**	**02 19 57.7**	**+0.7**
VNA2	**Neumayer--Watz**	**25.36**	**176**	P	**P**	**02 20 00.2**	**+0.3**
VNA3	**Neumayer Olymp**	**25.59**	**178**	P	**P**	**02 20 01.7**	**-0.3**
SNAA	**Sanae**	**26.40**	**173**	P	**P**	**02 20 11.6**	**+2.3**
SNAA	**Sanae**	**26.40**	**173**	P	**P**	**02 20 09.0**	**-0.3**
	8.7nm,1.0s,baz=344,slow=10,SNR=13						
SNAA				LR	LR	02 27 54.9	
	comp=Z,142nm,19.0s,baz=11,slow=30						
SNAA	**Sanae**	**26.40**	**173**	P	**P**	**02 20 08.7**	**-0.6**
SNAA				IAmb	IAmb	02 20 30.6	
	comp=Z,60nm,1.1s						
SUR	**Sutherland**	**28.94**	**74**	P	**P**	**02 20 31.9**	**-0.7**
	comp=Z,19nm,0.9s,baz=229,slow=9.9,SNR=4.1						
SUR				LR	LR	02 29 49.5	
	comp=Z,770nm,18.5s,baz=232,slow=32						
EFI	**East Falkland**	**30.18**	**242**	P	**P**	**02 20 44.3**	**+1.2**
BOSA	**Boshof**	**34.28**	**73**	P	**P**	**02 21 17.8**	**-1.7**
	comp=Z,15nm,0.9s,baz=210,slow=8.6,SNR=10						
BOSA				LR	LR	02 32 36.6	
	comp=Z,643nm,19.8s,baz=225,slow=32						
BOSA	**Boshof**	**34.28**	**73**	P	**P**	**02 21 18.1**	**-1.3**
PLTB	**Pedras Altas**	**34.51**	**279**	*e*P	**P**	**02 21 22.9**	**+1.6**
SYO	**Syowa Base**	**34.83**	**150**	*i e*P	**P**	**02 21 20.0**	**-3.6**
SYO	**Syowa Base**	**34.83**	**150**	*i* pP	**P**	**02 21 23.0**	**-0.6**
SYO	**Syowa Base**	**34.83**	**150**	*i e*sP	**P**	**02 21 25.0**	**+1.4**
BSFB	**Barra de Sao F**	**35.60**	**310**	*e*P	**P**	**02 21 31.6**	**+0.8**
SJMB	**Sao Joao De Ma**	**35.89**	**309**	*e*P	**P**	**02 21 33.8**	**+0.6**
SJMB				*e*pP	**sP**	**02 21 37.2**	**+0.4**
USHA	**Ushuaia**	**35.92**	**235**	P	**P**	**02 21 34.5**	**+1.4**
	comp=Z,50nm,0.9s,baz=216,slow=1.0,SNR=7.7						
BSCB	**Bom Sucesso**	**36.10**	**302**	*e*P	**P**	**02 21 35.7**	**+0.6**
ITAB	**Concordia**	**36.32**	**287**	*e*P	**P**	**02 21 38.6**	**+1.7**
TSUM	**Tsumeb**	**36.35**	**53**	P	**P**	**02 21 36.6**	**-0.8**
	comp=Z,15nm,1.0s,baz=213,slow=8.3,SNR=6.7						
TSUM	**Tsumeb**	**36.35**	**53**	P	**P**	**02 21 36.1**	**-1.2**
H10S2	**ASCENSION HYDR**	**36.71**	**357**	T	T	03 00 39.3	
	baz=177,slow=74,SNR=32						
H10S3	**ASCENSION HYDR**	**36.72**	**357**	T	T	03 00 39.8	
	baz=43,slow=74,SNR=67						
LBTB	**Lobatse**	**36.91**	**69**	P	**P**	**02 21 40.9**	**-1.2**
GO10	**Punta Arenas**	**37.76**	**237**	P	**P**	**02 21 49.6**	**+0.7**
H10N1	**ASCENSION HYDR**	**37.81**	**357**	T	T	03 02 06.1	
	baz=204,slow=80						
H10N3	**ASCENSION HYDR**	**37.82**	**357**	T	T	03 02 12.7	
	baz=204,slow=80						
H10N2	**ASCENSION HYDR**	**37.83**	**357**	T	T	03 02 06.2	
	baz=204,slow=80						
PTGB	**Pitanga**	**37.97**	**290**	*e*P	**P**	**02 21 52.8**	**+1.8**
PTGB				*e*pP	**sP**	**02 21 55.3**	**+0.5**
PCMB	**Pacaembu**	**39.65**	**294**	*e*P	**P**	**02 22 05.7**	**+0.7**
CPUP	**Villa Florida**	**40.43**	**283**	P	**P**	**02 22 11.9**	**+0.5**
	comp=Z,16nm,0.9s,baz=121,slow=7.6,SNR=22						
CPUP				PcP	**PcP**	**02 24 14.4**	**+0.1**
	comp=Z,6.1nm,1.0s,baz=124,slow=4.4,SNR=4.3						
CPUP				LR	LR	02 38 53.9	
	comp=Z,188nm,18.6s,baz=132,slow=36						
CPUP	**Villa Florida**	**40.43**	**283**	P	**P**	**02 22 11.9**	**+0.5**
IPMB	**Ipameri, GO**	**40.48**	**301**	*e*P	**P**	**02 22 12.7**	**+0.7**
JANB	**Januaria**	**40.57**	**309**	*e*P	**P**	**02 22 12.9**	**+0.1**
JANB				*e*pP	**sP**	**02 22 16.0**	**-0.4**
PLCA	**Paso Flores**	**41.73**	**255**	P	**P**	**02 22 22.6**	**+0.5**
	comp=Z,14nm,1.0s,baz=132,slow=9.5,SNR=17						
PLCA				PcP	**PcP**	**02 24 18.2**	**-0.2**
	comp=Z,4.4nm,0.9s,baz=119,slow=3.4,SNR=3.8						
PLCA				LR	LR	02 41 54.7	
	comp=Z,182nm,18.1s,baz=111,slow=39						
PLCA	**Paso Flores**	**41.73**	**255**	P	**P**	**02 22 22.8**	**+0.7**
PLCA					**PcP**	**02 24 18.7**	**+0.2**
BDFB	**Brasilia**	**42.19**	**304**	P	**P**	**02 22 27.0**	**+0.8**
	comp=Z,45nm,1.0s,baz=129,slow=5.2,SNR=44						
BDFB				LR	LR	02 36 50.8	
	comp=Z,466nm,18.4s,baz=115,slow=32						
BDFB	**Brasilia**	**42.19**	**304**	P	**P**	**02 22 26.4**	**+0.3**
C2SB	**Chapadao do Su**	**42.73**	**296**	*e*P	**P**	**02 22 31.6**	**+1.2**
MAW	**Mawson**	**43.37**	**147**	P	**P**	**02 22 34.5**	**-0.4**
	comp=Z,4.4nm,0.8s,baz=225,slow=5.7,SNR=10.0						
MAW				LR	LR	02 37 22.6	
	comp=Z,194nm,19.7s,baz=239,slow=32						
MAW	**Mawson**	**43.37**	**147**	P	**P**	**02 22 35.0**	**0.0**
LC01	**Cunco**	**43.49**	**257**	P	**P**	**02 22 32.2**	**-4.2**
BI02	**San Fabin de**	**44.19**	**260**	P	**P**	**02 22 41.9**	**-0.2**
ARAG	**Araguaiana, MT**	**44.41**	**299**	*e*P	**P**	**02 22 44.9**	**+0.9**
QSPA	**South Pole Qui**	**44.50**	**180**	P	**P**	**02 22 44.6**	**+0.3**
	comp=Z,33nm,0.9s,baz=213,slow=4.0,SNR=72						
QSPA				PcP	**PcP**	**02 24 26.6**	**-0.7**
	comp=Z,12nm,0.9s,baz=207,slow=4.6,SNR=3.1						
QSPA	**South Pole Qui**	**44.50**	**180**	P	**P**	**02 22 44.6**	**+0.3**
QSPA				IAmb	IAmb	02 22 49.1	
	comp=Z,47nm,1.0s						
CFA	**Coronel Fontan**	**44.81**	**268**	*i* P	**P**	**02 22 47.1**	**0.0**
BO02	**Sierra Bellavi**	**44.83**	**263**	P	**P**	**02 22 47.2**	**0.0**
RTCV	**Cerro Valdivia**	**44.88**	**268**	*i* P	**P**	**02 22 47.5**	**-0.1**
CYA	**Choya**	**44.97**	**274**	*i* P	**P**	**02 22 47.0**	**-1.4**
RTLL	**Cerro Villicun**	**45.14**	**268**	*i* P	**P**	**02 22 49.9**	**+0.2**
BI03	**Tigo**	**45.30**	**259**	P	**P**	**02 22 51.6**	**+0.7**
AMOG	**MÓGNA**	**45.37**	**269**	*i* P	**P**	**02 22 51.8**	**+0.2**
RTLS	**Leoncito**	**45.44**	**267**	*i* P	**P**	**02 22 53.2**	**+0.8**
MT05	**Renca**	**45.56**	**265**	P	**P**	**02 22 53.8**	**+0.7**
MT05				IAmb	IAmb	02 22 56.2	
	comp=Z,51nm,1.0s						
PEL	**Peldehue**	**45.66**	**265**	P	**P**	**02 22 53.9**	**0.0**
PEL	**Peldehue**	**45.66**	**265**	*i* P	**P**	**02 22 54.4**	**+0.6**

LSZ	**Lusaka**	**45.68**	**62**	P	**P**	**02 22 53.6**	**-0.6**
VA03	**San Esteban**	**45.77**	**265**	IAmb	IAmb	02 22 56.7	
	comp=Z,46nm,0.9s						
MT02	**Curacav**	**45.91**	**264**	IAmb	IAmb	02 22 57.0	
	comp=Z,59nm,1.1s						
ROC1	**El Roble**	**45.98**	**265**	*i* P	**P**	**02 22 57.5**	**+0.9**
CO04	**Los Peladeros**	**46.48**	**266**	P	**P**	**02 23 00.8**	**+0.3**
CO04				IAmb	IAmb	02 23 01.9	
	comp=Z,36nm,0.9s						
SALV	**Santo Antonio**	**46.67**	**295**	*e*P	**P**	**02 23 03.3**	**+1.5**
CO03	**El Pedregal**	**46.97**	**267**	IAmb	IAmb	02 23 05.3	
	comp=Z,24nm,0.8s						
CO01	**Juntas del Tor**	**47.06**	**269**	IAmb	IAmb	02 23 08.0	
	comp=Z,42nm,1.1s						
GO04	**Tololo Observa**	**47.44**	**268**	P	**P**	**02 23 08.0**	**-0.1**
AC02	**Maricunga**	**48.28**	**273**	IAmb	IAmb	02 23 17.2	
	comp=Z,19nm,0.8s						
PTLB	**Pontes e Lacer**	**49.21**	**292**	*e*P	**P**	**02 23 21.3**	**-0.2**
GO02	**Mina Guanaco**	**49.65**	**274**	P	**P**	**02 23 25.8**	**+0.6**
CLDB	**Colider**	**50.58**	**299**	*e*P	**P**	**02 23 31.7**	**-0.2**
CLDB				*e*pP	**sP**	**02 23 35.7**	**-0.2**
ROSB	**Rosrio**	**50.82**	**318**	*e*P	**P**	**02 23 34.1**	**+0.3**
ROSB				*e*pP	**sP**	**02 23 37.4**	**0.0**
LVC	**Limon Verde**	**50.83**	**277**	P	**P**	**02 23 35.1**	**+0.9**
PB10	**IPOC Station P**	**51.38**	**275**	IAmb	IAmb	02 23 39.8	
	comp=Z,38nm,1.0s						
VILB	**Vilhena**	**51.75**	**294**	*e*P	**P**	**02 23 41.5**	**+0.7**
PB04	**IPOC Station P**	**51.87**	**277**	IAmb	IAmb	02 23 49.4	
	comp=Z,48nm,0.9s						
PB01	**IPOC Station P**	**52.27**	**278**	P	**P**	**02 23 44.9**	**+0.3**
DBIC	**Dimbokro**	**52.65**	**10**	P	**P**	**02 23 47.1**	**-0.3**
	comp=Z,11nm,1.1s,baz=162,slow=5.7,SNR=4.8						
DBIC				LR	LR	02 41 42.4	
	comp=Z,104nm,18.5s,baz=155,slow=31						
DBIC	**Dimbokro**	**52.65**	**10**	IAmb	IAmb	02 24 24.8	
	comp=Z,92nm,1.9s						
PATCX	**Punta Patache**	**52.88**	**278**	IAmb	IAmb	02 24 09.8	
	comp=Z,52nm,1.1s						
GO01	**Chusmiza**	**52.99**	**280**	P	**P**	**02 23 50.7**	**+0.2**
GO01				IAmb	IAmb	02 23 51.9	
	comp=Z,32nm,0.8s						
NPGB	**Novo Progresso**	**53.34**	**303**	*e*P	**P**	**02 23 53.2**	**+0.7**
NPGB				*e*pP	**sP**	**02 23 56.1**	**-0.3**
VOI	**Vohitsoka**	**53.41**	**84**	P	**P**	**02 23 53.7**	**+0.5**
MNMC	**Minye Minye**	**53.63**	**280**	IAmb	IAmb	02 23 57.1	
	comp=Z,19nm,0.7s						
PSGCX	**Pisagua**	**53.68**	**279**	P	**P**	**02 23 55.1**	**0.0**
PB16	**IPOC Station P**	**54.11**	**281**	IAmb	IAmb	02 24 01.9	
	comp=Z,26nm,0.8s						
PB12	**IPOC Station P**	**54.49**	**280**	IAmb	IAmb	02 24 04.6	
	comp=Z,30nm,0.9s						
LPAZ	**La Paz**	**54.59**	**284**	P	**P**	**02 24 01.2**	**-1.2**
SAML	**Samuel**	**56.68**	**294**	P	**P**	**02 24 16.9**	**+0.2**
SAML				IAmb	IAmb	02 24 18.0	
	comp=Z,50nm,1.1s						
MALB	**Monte Alegre**	**56.94**	**308**	*e*P	**P**	**02 24 19.4**	**+0.9**
VNDA	**Vanda**	**56.95**	**179**	P	**P**	**02 24 18.4**	**+0.6**
	comp=Z,13nm,1.1s,baz=211,slow=7.7,SNR=17						
VNDA				LR	LR	02 46 18.7	
	comp=Z,126nm,22.0s,baz=170,slow=34						
VNDA	**Vanda**	**56.95**	**179**	P	**P**	**02 24 18.4**	**+0.6**
**

comp=Z,0.9nm,0.5s,baz=165,slow=4.6,SNR=5.0
TGUH Tegucigalpa,Un 89.60 291 P P 02 27 30.2 -0.9
TGUH IAmb IAmb 02 27 32.0
comp=Z,23nm,0.9s
PAOL Paolisi 89.76 20 IAmb IAmb 02 27 32.8
comp=Z,41nm,1.6s
CSS Mathiatis 90.42 36 P P **02 27 34.9 +0.6**
INTR Introdacqua 90.53 19 IAmb IAmb 02 27 36.0
comp=Z,29nm,1.3s
CASP Castiglione de 90.61 17 IAmb IAmb 02 27 36.3
comp=Z,26nm,1.2s
AQU L'Aquila 90.74 19 P P **02 27 35.8 +0.1**
AQU IAmb IAmb 02 27 37.2
comp=Z,18nm,1.1s
MURB Monte Urbino 91.41 18 IAmb IAmb 02 28 16.4
comp=Z,11nm,0.5s
TIR Tirane 91.44 24 P P **02 27 39.4 +0.5**
ZCCA Zocca 92.13 17 P P **02 27 42.4 +0.3**
PDG Podgorica 92.28 23 IAmb IAmb 02 27 44.6
comp=Z,31nm,1.5s
BSY Bisya 92.94 60 P P **02 27 46.5 +0.2**
SNR=6.9
ARQ Araqi 92.97 59 P P **02 27 47.3 +0.8**
SNR=6.7
SOHO SOHO 93.58 59 P P **02 27 49.3 +0.1**
SNR=8.9
VTS Vitosha 93.60 26 IAmb IAmb 02 27 51.0
comp=Z,21nm,1.2s
HOQ Hoqain 93.63 60 P P **02 27 49.6 +0.1**
SNR=10
ASHO Ashiyiah 93.71 58 P P **02 27 50.3 +0.5**
TUE Stuetta 93.86 15 P P **02 27 50.9 +0.7**
TUE IAmb IAmb 02 27 53.7
comp=Z,21nm,1.7s
CTI Castel Tesino 93.89 17 IAmb IAmb 02 27 52.0
comp=Z,14nm,1.0s
GAZ Gaziantep 93.94 38 P P **02 27 51.2 +0.6**
GAZ IAmb IAmb 02 27 56.6
comp=Z,22nm,1.3s
GBRS Gornja Briga 94.07 19 *i* P P **02 27 52.0 +1.0**
BIDO Bidbid 94.08 60 P P **02 27 52.4 +0.9**
SNR=5.2
FUORN Ofenpass-Fuorn 94.17 16 P P **02 27 51.2 -0.5**
FUORN IAmb IAmb 02 27 52.9
comp=Z,19nm,1.7s
DAVOX Davos/Dischmat 94.25 15 P P **02 27 51.8 -0.2**
comp=Z,4.0nm,0.9s,baz=167,slow=5.2,SNR=4.7
ROBS Robic 94.46 18 *e*P P **02 27 53.1 +0.4**
LJU Ljubljana 94.50 19 *e*P P **02 27 53.6 +0.8**
GCIS Gornji Cirnik 94.58 19 *i* P P **02 27 54.3 +1.0**
FETA Feichten 94.64 16 *e*P P **02 27 53.9 +0.1**
comp=Z,2.2nm,0.9s
BR131 Keskin Array S 94.65 34 P P **02 27 53.5 -0.4**
BR131 IAmb IAmb 02 27 57.7
comp=Z,14nm,1.3s
BRTR Keskin Array B 94.65 34 P P **02 27 54.7 +0.8**
comp=Z,4.3nm,1.1s,baz=190,slow=6.3,SNR=15
ABTA Abfaltersbach 94.73 17 *e*P P **02 27 55.2 +1.1**
comp=Z,17nm,1.2s,SNR=9.2
DAVA Damuels 94.74 15 *e*P P **02 27 54.3 +0.1**
comp=Z,3.7nm,0.8s
MYKA Terra Mystica 94.86 18 *e*P P **02 27 55.7 +1.1**
comp=Z,4.7nm,1.0s
SQTA Sankt Quirin 94.93 16 *e*P P **02 27 55.1 +0.1**
comp=Z,7.8nm,1.2s
OBKA Obir 94.94 18 *e*P P **02 27 56.2 +1.2**
comp=Z,5.2nm,0.8s
MOTA Moosalm 95.03 16 *e*P P **02 27 55.5 0.0**
comp=Z,8.2nm,1.4s
WTTA Wattenberg 95.05 16 *e*P P **02 27 55.9 +0.3**
comp=Z,11nm,1.2s,SNR=6.6
RETA Reutte 95.10 16 *i* P P **02 27 55.7 +0.1**
comp=Z,5.9nm,1.5s
WATA Walderalm 95.11 16 *e*P P **02 27 55.9 +0.1**
comp=Z,8.5nm,1.4s
SOKA Soboth 95.21 19 *e*P P **02 27 57.5 +1.3**
comp=Z,7.8nm,1.1s,SNR=6.2
KBA Koelnbreinsper 95.22 17 *e*P P **02 27 56.9 +0.5**
comp=Z,4.5nm,0.8s
ARSA Arzberg 95.86 19 *e*P P **02 28 00.4 +1.3**
comp=Z,7.4nm,1.2s
MOA Molln 96.15 18 *e*P P **02 28 00.7 +0.3**
comp=Z,6.8nm,1.1s
CONA Conrad Observa 96.58 19 *e*P P **02 28 03.8 +1.4**
comp=Z,8.4nm,1.2s,SNR=5.1
GERES GERESS Array B 96.98 17 P P **02 28 04.9 +0.6**
comp=Z,0.5nm,0.8s,baz=187,slow=6.9,SNR=3.4
MLR Muntele Rosu 97.03 26 P Pdif 02 28 05.1 +0.4
comp=Z,9.7nm,1.1s,baz=273,slow=6.7,SNR=6.8
KHC Kasperske Hory 97.22 17 *e*P Pdif 02 28 05.9 +0.6
VYHS Vyhne 97.81 20 *e*PDIFF Pdif 02 28 08.6 +0.7
VRAC Vranov 98.04 19 P Pdif 02 28 08.9 0.0
comp=Z,1.7nm,0.6s,baz=229,slow=2.8,SNR=3.8
CHVC Chvalec 99.12 18 *e*P **Pdif 02 28 14.7 +0.9**
OSTC Ostas 99.13 18 *e*P **Pdif 02 28 15.4 +1.6**
OSTC *e*P **Pdif 02 28 15.4 +1.6**
CLL Collm 99.18 16 *e*Pdif **Pdif 02 28 14.0 +0.1**
ASAR Alice Springs 104.48 148 PKiKP **PKiKP 02 32 56.0 +1.4**
comp=Z,0.6nm,0.9s,baz=165,slow=1.4,SNR=2.9
TXAR Lajitas Array 111.08 291 PKiKP **PKiKP 02 33 06.5 -0.1**
comp=Z,0.7nm,0.9s,baz=191,slow=1.3,SNR=6.3
KLMR Klimovskoe 114.34 25 *e*PP **PP 02 34 06.9 -1.6**
KLMR AMP 02 34 09.4
comp=Z,16nm,1.3s
KSH Kashi 116.04 59 PKP **PKiKP 02 33 19.1 +3.2**
KSH PP **PP 02 34 26.7 +5.6**
KSH PKS **PKSdf 02 36 52.8 +0.2**
KSH SKKS 02 41 19.0
KSH Kashi 116.04 59 SS SS 02 50 22.4 -1.0
KSH AMB AMB
comp=Z,140nm,5.9s
KSH LR LR
comp=N,100nm,10.0s
KSH LR LR
comp=E,170nm,7.4s
KSH LR LR
comp=Z,290nm,9.0s
ECSD EROS Data Cent 116.05 307 P **PKPdf 02 33 14.4 -1.2**
baz=129
ANMO Albuquerque 116.49 294 P **PKPdf 02 33 16.8 -0.2**
baz=129
ANMO Albuquerque 116.49 294 PKPdf 02 33 16.7 -0.2
T25A Trinidad 116.56 297 P **PKPdf 02 33 16.9 -0.2**
baz=129
SDCO Great Sand Dun 117.62 297 P **PKPdf 02 33 19.0 -0.1**
baz=128
TUC Tucson 117.67 289 P **PKiKP 02 33 19.3 +0.1**
baz=129
TUC Tucson 117.67 289 PKiKP 02 33 19.4 +0.2
CMAR Chiang Mai Arr 117.94 92 PKP **PKPdf 02 33 18.9 -1.1**
comp=Z,1.7nm,0.6s,baz=248,slow=4.3,SNR=5.0
ARCES ARCESS Array B 118.34 14 PKP **PKPdf 02 33 18.2 -0.9**
comp=Z,1.5nm,0.8s,baz=81,slow=3.1,SNR=5.4
ARCES PP **PP 02 34 33.0 -3.4**
comp=Z,2.2nm,1.0s,baz=218,slow=7.7,SNR=4.1
S22A 4UR Ranch, Cre 118.45 296 P **PKPdf 02 33 20.8 0.0**
baz=128
214A Organ Pipe Nat 118.80 287 P **PKiKP 02 33 21.3 0.0**
baz=128
ULM Lac du Bonnet 119.67 313 PKP **PKPdf 02 33 21.3 -1.0**
comp=Z,2.8nm,0.6s,baz=29,slow=1.5,SNR=5.0
N23A Red Feather La 119.79 299 P **PKPdf 02 33 22.6 -0.6**
baz=126
RSSD Black Hills 120.54 303 P **PKPdf 02 33 23.8 -0.7**
baz=126
RSSD Black Hills 120.54 303 PKPdf 02 33 23.1 -1.4
O20A White River Ci 120.76 297 P **PKPdf 02 33 24.1 -0.9**
baz=126
PDMCI Parker Dam,Lak 121.11 289 P **PKiKP 02 33 26.0 +0.3**
baz=127
K22A Casper 121.17 301 P **PKPdf 02 33 24.9 -0.8**
baz=125
IKP In-Ko-Pah, Jac 121.44 286 P **PKiKP 02 33 26.9 +0.3**
baz=127
BC3 Big Chuckawall 121.60 287 P **PKiKP 02 33 27.4 +0.6**
baz=127
IRM Iron Mountain 121.69 288 P **PKiKP 02 33 27.3 +0.3**
baz=127
BELC Belle Mtn. Jos 122.17 287 P **PKiKP 02 33 28.0 0.0**
baz=126
CCUT Cedar City 122.51 292 PKPdf 02 33 28.6 +0.1
MPU Maple Canyon 122.81 296 PKPdf 02 33 29.0 0.0
PDAR Pinedale Array 123.07 299 PKP **PKPdf 02 33 27.8 -1.6**
comp=Z,5.1nm,0.9s,baz=125,slow=3.4,SNR=34
PDAR PP **PP 02 35 07.9 -1.8**
comp=Z,2.0nm,1.1s,baz=102,slow=6.8,SNR=5.0
BW06 Boulder Array 123.07 299 P **PKPdf 02 33 28.0 -1.4**
baz=124
LAO LASA Array 123.27 305 P **PKPdf 02 33 29.0 -0.4**
baz=123
TCUT Toone Canyon 123.29 297 PKPdf 02 33 29.8 -0.2
GSC Goldstone, Bar 123.47 288 P **PKiKP 02 33 30.6 +0.2**
baz=126
GSC Goldstone, Bar 123.47 288 PKiKP 02 33 30.5 0.0
DUG Dugway, Tooele 123.66 295 P **PKPdf 02 33 30.5 -0.1**
baz=124
EDW2 Edwards Air Fo 124.02 287 P **PKPdf 02 33 31.2 -0.1**
baz=126
MKAR Makanchi Array 124.04 56 PKP **PKPdf 02 33 29.5 -1.4**
comp=Z,2.1nm,0.9s,baz=258,slow=5.7,SNR=11
MKAR PKKPbc **PKKPbc 02 43 15.7 -0.3**
comp=Z,0.5nm,0.7s,baz=52,slow=6.8,SNR=4.1
TPNV Topopah Spring 124.05 290 P **PKiKP 02 33 31.7 0.0**
baz=125
TPNV Topopah Spring 124.05 290 PKPdf 02 33 31.5 +0.1
KURK Kurchatov 124.10 50 PKPdf 02 33 30.2 -0.5
REDW Red Top Meadow 124.19 299 PKPdf 02 33 30.5 -1.0
RLMT Red Lodge 124.19 302 P **PKPdf 02 33 31.1 -0.4**
baz=123
TPAW Teton Pass 124.32 299 PKPdf 02 33 32.0 +0.1
MPMC Manual Prospec 124.36 288 P **PKiKP 02 33 32.5 +0.1**
baz=125
R11A Troy Canyon, C 124.41 292 P **PKiKP 02 33 32.7 +0.3**
baz=124
YPP Pitchstone Pla 124.66 300 PKiKP 02 33 33.7 +0.9
ISA Isabella, Lake 124.79 288 P **PKiKP 02 33 33.1 0.0**
baz=125
CWC Cottonwood Cre 124.97 289 P **PKiKP 02 33 33.9 +0.4**
baz=125
FFC Flin Flon 125.27 315 PKPdf 02 33 32.0 -0.9
WMQ Urumqi 125.67 61 *e*P **PKiKP 02 33 34.9 +0.4**
WMQ pmax pmax
comp=Z,50nm,4.5s
WMQ LR LR
comp=N,94nm,23.1s
WMQ LR LR
comp=E,270nm,19.9s
WMQ LR LR
comp=Z,270nm,24.5s
EGMT Eagleton 126.01 305 P **PKiKP 02 33 34.9 -0.2**
baz=121
NVAR Mina Array Bea 126.23 290 PKP **PKiKP 02 33 36.0 0.0**
comp=Z,2.3nm,0.6s,baz=145,slow=2.7,SNR=13
OMMB Old Mammoth Mi 126.23 289 PKiKP 02 33 36.4 +0.2
TULEG Thule 127.09 346 PKPdf 02 33 34.5 -1.3
MSO Missoula 127.87 301 P **PKPdf 02 33 38.0 -0.3**
baz=120
MSO Missoula 127.87 301 PKPdf 02 33 37.9 -0.3
GYA Guiyang 128.54 90 *e*PKP **PKPdf 02 33 40.3 +0.1**
ZALV Zalesovo Beam 129.00 49 PKP **PKPdf 02 33 38.6 -1.4**
comp=Z,2.0nm,0.8s,baz=258,slow=2.9,SNR=7.9
CD2 Chengdu 129.20 84 PKP **PKPdf 02 33 41.3 0.0**
O03E Paynes Creek 129.51 291 P **PKPdf 02 33 41.5 -0.1**
baz=121
PINE Pine Mountain 130.70 295 PKiKP 02 33 44.6 -0.1
GTA Gaotai 131.16 72 *e*PKP **PKiKP 02 33 45.4 -0.4**
GTA LR LR
comp=N,59nm,19.0s
GTA LR LR
comp=E,140nm,19.0s
GTA LR LR
comp=Z,83nm,20.6s
LZH Lanzhou 132.16 78 *e*PKP **PKPdf 02 33 46.2 -0.7**
LZH pPKP pPKPdf 02 33 49.5 -0.3
LZH sPKP 02 33 51.3
LZH LR LR
comp=N,160nm,17.9s
LZH LR LR
comp=E,160nm,18.0s
LZH LR LR
comp=Z,200nm,20.1s
YKA Yellowknife Ar 134.44 321 PKP **PKPdf 02 33 49.1 -0.9**
comp=Z,2.9nm,0.7s,baz=115,slow=2.6,SNR=8.6
XAN Xi'an 134.56 84 P **PKPdf 02 33 51.3 0.0**
XAN pmax pmax
comp=Z,6.0nm,0.9s
TLY Talaya 138.72 58 PKPdf 02 33 58.1 -0.3
SONM Songino Array 139.13 64 PKP **PKPdf 02 33 58.4 -1.0**
comp=Z,2.9nm,0.7s,baz=216,slow=2.9,SNR=8.5
C36M Paulatuk 139.34 330 PKPdf 02 33 58.7 -0.2
ULN Ulaanbaatar 139.56 64 PKPdf 02 33 58.9 -1.4
HHC Hu-ho-hao-te 139.76 76 *e*PKP **PKiKP 02 34 02.9 -0.3**
HHC PP **PP 02 36 57.3 0.0**
HHC Hu-ho-hao-te 139.76 76 SS SS 02 55 24.6 +6.5
HHC Hu-ho-hao-te 139.76 76 LR LR
comp=N,230nm,20.8s
HHC Hu-ho-hao-te 139.76 76 LR LR
comp=Z,39nm,19.3s
HHC Hu-ho-hao-te 139.76 76 LR LR
comp=E,170nm,21.8s
HHC Hu-ho-hao-te 139.76 76 AMB AMB
comp=Z,16nm,8.1s
NJ2 Nanjing 140.40 93 *e*P **PKPdf 02 34 01.8 -0.3**
NJ2 pmax pmax
comp=Z,14nm,0.5s
EPYK Eagle Plains 144.28 325 P **PKPab 02 34 05.9 0.0**
baz=83
DHAK Deception Hill 145.30 313 PKPdf 02 34 10.2 +0.3
TGL Tana Glacier 147.58 316 PKPbc 02 34 15.5 -1.0
HIA Hailar 148.03 66 PKPbc 02 34 18.0 0.0
TIXI Tiksi 148.29 22 PKPbc 02 34 16.5 -1.4
TOLK Toolik Lake Re 148.43 331 P **PKPbc 02 34 17.9 -0.5**
baz=66
IL31 148.73 324 PKPbc **PKPbc 02 34 18.4 -0.8**
ILAR Eielson Array 148.73 324 PKP **PKPdf 02 34 13.1 -2.3**
comp=Z,15nm,0.7s,baz=319,slow=0.9,SNR=72
ILAR PKPbc **pPKPdf 02 34 18.7 +0.2**
comp=Z,15nm,0.7s,baz=23,slow=0.8,SNR=72
HDA Harding Lake 148.85 323 P **PKPbc 02 34 19.0 -0.6**
baz=75
POKR Poker Plat Res 148.86 325 P **PKPbc 02 34 18.9 -0.7**
baz=74
COLA College 149.10 324 PKPbc 02 34 19.7 -0.4
TCOL CIGO, UAF Yank 149.10 324 P **PKPbc 02 34 19.1 -1.1**
baz=74
CCB Clear Creek Bu 149.15 324 PKPdf 02 34 15.1 -1.0
CCB PKPbc **pPKPdf 02 34 19.4 +0.2**
CCB PKPab **sPKPbc 02 34 23.9 -0.5**
KS19 Wonju Array Si 149.56 92 PKPbc 02 34 21.0 -1.2
KS19 PKPab **sPKPbc 02 34 26.2 0.0**
KSRS Korea Array 149.58 92 PKP **PKPdf 02 34 16.3 -1.3**
comp=Z,8.6nm,0.9s,baz=266,slow=1.6,SNR=14
KSRS PKPbc **sPKPdf 02 34 21.3 -0.3**
comp=Z,7.6nm,0.9s,baz=255,slow=3.0,SNR=11
MLY Manley 150.22 325 PKPbc **PKPbc 02 34 22.5 -0.6**
KDAK Kodiak Island 152.91 311 PKPbc 02 34 28.8 -0.5
MDJ Mudanjiang 153.48 79 P **PKPdf 02 34 22.4 -0.9**
MDJ pmax pmax
comp=Z,11nm,0.7s
MDJ pmax pmax
comp=Z,130nm,6.7s
MJAR Matsushiro Arr 156.27 102 PKPab **PKPab 02 34 55.4 -0.2**
comp=Z,1.0nm,0.4s,baz=220,slow=4.9,SNR=5.0
UNV Unalaska Valle 161.41 305 PKPdf **PKPdf 02 34 34.2 +1.3**
UNV **PKPab 02 35 17.6 +0.2**
YSS Yuzh-Sakhalins 162.95 77 PKPab 02 35 23.3 -1.1

UCR 10 02:17:43.1±1.5, 9.74N×84.77W, h14km±106km, MD3.6, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTS	**Las Juntas de**	**0.58**	**342**	*e*P	Pg	02 17 54.0	-0.5
JTS				*e*S	Sg	02 18 02.2	0.0
HDC	**Heredia**	**0.70**	**68**	*e*P	Pg	02 17 56.6	-0.1
ARE1	**Arenal 1**	**0.72**	**4**	*e*P	Pg	02 17 57.2	+0.1
FORC	**Fortuna**	**0.73**	**8**	*i* P	Pg	02 17 57.2	-0.1
FORC				*i* S	Sb	02 18 07.5	0.0
CEDE	**Laguna Cedeo**	**0.75**	**5**	*e*P	Pb	02 17 58.0	0.0
LCR2	**La Lucha 2**	**0.76**	**90**	*e*P	Pg	02 17 57.1	-0.8
PLVR	**Palo Verde**	**0.83**	**317**	*e*P	Pg	02 17 58.4	-1.0
GUAI	**GUAI**	**0.90**	**306**	*i* P	Pb	02 17 59.5	-1.0
GUAI				*i* S	Sb	02 18 12.1	-0.3
CUI	**Cuipilapa**	**0.99**	**337**	*i* P	Pb	02 18 01.2	-1.0
CUI				*i* S	Sb	02 18 13.8	-1.3
COLC	**Colonia**	**1.01**	**335**	*i* P	Pb	02 18 01.6	-0.9
CVTR	**Volcan Turrial**	**1.03**	**74**	*e*P	Pb	02 18 02.3	-0.7
GUAB	**Guayabo de Bag**	**1.06**	**335**	*i* P	Pb	02 18 02.2	-1.2
LIM1	**Limonal**	**1.06**	**334**	*i* P	Pb	02 18 02.0	-1.4
GPS3	**Bodega del ICE**	**1.17**	**330**	*i* P	Pn	02 18 03.8	-1.3
NY14	**Universidad de**	**1.18**	**320**	*i* P	Pn	02 18 04.1	-1.0

GB1A Borinquen Arri 1.24 330 *i* P Pn 02 18 04.6 -1.5

DJA ***10*** *02:39:18.6±0.5, 0.7°N±6.3°×13.7°E±0.7°, h75km±18km, M4.3/6, mB4.9/3, mb4.4/5, MLv4.3/6, Mw(mB)4.2/3*
IDC ***10*** *02:39:19.3±0.7, 0.0°S×136.7°E, h0km, mb4.3/10, mb1 4.5/13, mb1mx4.1/43, mbtmp4.3/13, ML4.4/3, MS4.0/4, Ms1 4.0/4, ms1mx3.3/39, Error ellipse: s-maj=24.4km s-min=15.1km az=79.0*
NEIC ***10*** *02:39:22.0±0.8, 0.0°S±0.09×136.76°E±0.08, h18km±2km, mb4.5/28, Error ellipse: s-maj=13.4km s-min=11.5km az=213.0*

ISC 10 02:39:24.4±0.5, 0.20S±0.06×136.70E±0.04, h35km, n40, σ2.902/42, mb4.4/13, MS4.2/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRPI	**Serui, Papua**	**1.72**	**195**	P	**Pn**	**02 39 51.2**	**-0.7**
SRPI				S	**Sn**	**02 40 13.5**	**+0.8**
SMPI	**Sarmi**	**2.69**	**132**	P	**Pn**	**02 40 04.5**	**-0.7**
SMPI				S	**Sn**	**02 40 35.5**	**-1.0**
RKPI	**Ransiki, Papua**	**2.84**	**243**	P	**Pn**	**02 40 05.5**	**-1.8**
RKPI				S	**Sn**	**02 40 38.2**	**-2.1**
GENI	**Genyem**	**4.21**	**124**	P	**Pn**	**02 40 22.5**	**-3.6**
GENI				S	**Sn**	**02 41 12.2**	**-1.8**
JAY	**Jayapura**	**4.62**	**120**	Pn	**Pn**	**02 40 29.6**	**-2.3**
	5.6nm,0.3s,baz=240,slow=9.0,SNR=19						
JAY				Sn	**Sn**	**02 41 21.3**	**-3.0**
	8.1nm,0.3s,baz=148,slow=21,SNR=5.9						
JAY				LR	LR	02 42 32.1	
	comp=Z,295nm,19.8s,baz=237,slow=41						
JAY	**Jayapura**	**4.62**	**120**	P	Pn	02 40 27.0	-4.8
JAY				S	**Sn**	**02 41 17.7**	**-6.6**
FAKI	**Fak Fak**	**5.20**	**239**	P	**Pn**	**02 40 37.5**	**-2.4**
	0.8nm2μm196nm,0.6s						
FAKI				S	**Sn**	**02 41 34.9**	**-3.8**
	0.8nm2μm196nm,0.6s						
FAKI	**Fak Fak**	**5.20**	**239**		**Pn**	**02 40 38.9**	**-1.0**
SIJI	**Sorong**	**5.47**	**263**	Pn	**Pn**	**02 40 42.6**	**-1.0**
	9.0nm,0.3s,baz=261,slow=22,SNR=17						
SIJI				Sn	**Sn**	**02 41 43.7**	**-1.6**
	14nm,0.3s,baz=126,slow=21,SNR=6.2						
KNRA	**Kununurra**	**17.26**	**207**		**Pn**	**02 43 22.0**	**-0.9**
WB0	**Warramunga Arr**	**19.58**	**186**	P	**Pn**	**02 43 50.8**	**-0.4**
WB0				IAmb	IAmb	02 43 52.3	
	comp=Z,25nm,1.1s						
WRAB	**Tennant Creek**	**19.75**	**187**	P	**Pn**	**02 43 52.8**	**-0.3**
WRAB				IAmb	IAmb	02 43 57.9	
	comp=Z,27nm,1.1s						
WR0	**Warramunga Arr**	**19.75**	**186**	P	**Pn**	**02 43 52.8**	**-0.3**
WB2	**Warramunga Arr**	**19.76**	**187**	P	**Pn**	**02 43 52.9**	**-0.3**
WB2				IAmb	IAmb	02 43 59.4	
	comp=Z,24nm,0.9s						
WRA	**Warramunga Arr**	**19.76**	**187**	P	**Pn**	**02 43 52.5**	**-0.7**
	comp=Z,2.4nm,0.3s,baz=8.5,slow=12,SNR=32						
FITZ	**Fitzroy Crossi**	**20.85**	**211**	P	**P**	**02 44 04.0**	**+0.6**
	comp=Z,5.5nm,1.0s,baz=34,slow=12,SNR=9.8						
FITZ	**Fitzroy Crossi**	**20.85**	**211**	P	Pn	02 44 05.2	-0.8
FITZ				IAmb	IAmb	02 44 13.9	
	comp=Z,26nm,1.4s						
KKM	**Kota Kinabalu**	**21.37**	**287**	P	**P**	**02 44 10.4**	**+1.3**
CTA	**Charters Tower**	**21.87**	**155**	P	**P**	**02 44 16.9**	**+2.6**
	comp=Z,6.5nm,0.6s,baz=335,slow=12,SNR=7.1						
AS31	**Alice Springs**	**23.48**	**186**	P	**P**	**02 44 32.2**	**+1.1**
ASAR	**Alice Springs**	**23.48**	**186**	P	**P**	**02 44 32.2**	**+1.0**
	comp=Z,14nm,0.7s,baz=9.6,slow=11,SNR=175						
ASAR				LR	LR	02 55 32.3	
	comp=Z,1μm,21.3s,baz=309,slow=41						
STKA	**Stephens Creek**	**31.84**	**172**	P	**P**	**02 45 47.2**	**+1.0**
	comp=Z,1.2nm,0.4s,baz=354,slow=10,SNR=3.8						
STKA	**Stephens Creek**	**31.84**	**172**	IAmb	IAmb	02 45 54.9	
	comp=Z,0.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**41.46**	**299**	P	**P**	**02 47 07.7**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=118,slow=7.2,SNR=8.4						
KLR	**Kul'dur**	**49.42**	**356**	P	**P**	**02 48 10.6**	**-0.2**
	comp=Z,2.9nm,0.6s,baz=188,slow=6.1,SNR=14						
URZ	**Urewera**	**53.02**	**140**	LR	LR	03 09 32.7	
	comp=Z,211nm,20.8s,baz=284,slow=34						
GSTR	**Great Sitkin T**	**65.41**	**30**		**P**	**02 50 06.8**	**+3.3**
MK31	**Makanchi Array**	**66.59**	**322**	P	**P**	**02 50 11.0**	**-0.3**
MK31				IAmb	IAmb	02 50 11.3	
	comp=Z,3.3nm,1.2s						
MKAR	**Makanchi Array**	**66.59**	**322**	P	**P**	**02 50 10.3**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=116,slow=7.9,SNR=12						
MKAR				LR	LR	03 18 48.4	
	comp=Z,162nm,21.9s,baz=141,slow=36						
MWH	**Moku'aweowe**	**69.10**	**69**		**P**	**02 50 31.1**	**+2.9**
GAR	**Garm**	**71.94**	**311**	P	**P**	**02 50 44.7**	**0.0**
BRVK	**Borovoye**	**76.19**	**325**	P	**P**	**02 51 08.4**	**-0.6**
BRVK				IAmb	IAmb	02 51 08.5	
	comp=Z,2.7nm,0.7s						
MLY	**Manley**	**82.87**	**24**	IAmb	IAmb	02 51 47.3	
	comp=Z,3.1nm,0.7s						
RND	**Reindeer**	**83.25**	**26**	P	**P**	**02 51 46.7**	**-0.5**
MAW	**Mawson**	**83.69**	**202**	P	**P**	**02 51 50.7**	**+1.4**
	comp=Z,4.1nm,0.7s,baz=108,slow=5.6,SNR=7.7						
MDM	**Murphy Dome**	**83.89**	**24**	P	**P**	**02 51 47.1**	**-3.3**
IL31		**84.40**	**25**	IAmb	IAmb	02 51 54.7	
	comp=Z,2.1nm,0.8s						
ILAR	**Eielson Array**	**84.40**	**25**	P	**P**	**02 51 51.8**	**-1.3**
	comp=Z,1.9nm,0.7s,baz=265,slow=4.3,SNR=23						
YKA	**Yellowknife Ar**	**98.74**	**26**	P	**P**	**02 52 59.6**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=289,slow=4.4,SNR=6.3						
CPUP	**Villa Florida**	**150.36**	**154**	PKPbc	**PKiKP**	**02 59 14.5**	**+0.8**
	comp=Z,3.8nm,0.8s,baz=230,slow=1.5,SNR=7.6						

BJI ***10*** *02:42:09.0±0.0, 8.20S×117.60E, h230km, mB4.9/57, mb5.1/73*
KLM ***10*** *02:42:10.0, 8.19S×117.65E, h201km, mb5.9*
IDC ***10*** *02:42:11.1±0.7, 8.02S×117.56E, h226km±6km, mb4.6/33, mb1 4.7/35, mb1mx4.6/43, mbtmp5.2/35, Error ellipse: s-maj=9.4km s-min=6.6km az=70.0*
NEIC ***10*** *02:42:11.3±1.9, 8.13S±0.05×117.54E±0.04, h229km±4km, mb5.2/108, Error ellipse: s-maj=9.4km s-min=1.3km az=142.0*
DJA ***10*** *02:42:11.5±0.1, 8.1°S±1.1°×11.8°E±0.9°, h222km±1km, M5.3/114, mB5.7/91, mb5.4/114, MLv6.0/27, Mw(mB)5.2/91, Mwp5.5/30*
GCMT ***10*** *02:42:12.3±0.1, 8.27S±0.01×117.58E±0.01, h228km±1km, MW5.6/151, Moment Tensor Solution. s121,c179; s151,c290; Duration: 1±5 Moment tensor: Scale 10^17 Nm; Mrr0.60±.03; Mθθ-2.20±.03; Mφφ1.59±.04; Mrθ0.83±.03; Mrφ1.21±.03; Mθφ1.29±.03; Best double couple: Mw5.2,76100×10^17 NP1:φs326.00000°, δ60.00000°, λ162.00000°. NP2:φs66.00000°, δ74.00000°, λ31.00000°. Principal axes: T 2.9000, Plg33.0000°, Azm289.0000°; N -0.2830, Plg55.0000°, Azm90.0000°; P -2.6220, Plg9.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 02:42:11.6±0.3, 8.17S±0.03×117.53E±0.03, h233km±2km, h233km:pP-P, n737, σ1976/783, mb5.1/103, 14C-8D, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.70**	**160**	P	**Pn**	**02 42 42.5**	**-0.8**
PLAI				S	**S**	**02 43 06.1**	**-2.0**
SRBI	**Singaraja**	**2.30**	**272**	P	**Pn**	**02 42 56.1**	**+0.5**
SRBI				S	**S**	**02 43 29.8**	**-0.2**
WBSI	**Waikabubak, Su**	**2.35**	**129**	P	**Pn**	**02 42 54.7**	**-1.4**
WBSI				S	**S**	**02 43 27.3**	**-3.7**
DNP	**Denpasar**	**2.35**	**257**	P	**Pn**	**02 42 56.9**	**+0.8**
DNP				S	**S**	**02 43 30.0**	**-1.0**
JAGI	**Jajag, Banyuwa**	**3.36**	**265**	P	**Pn**	**02 43 06.6**	**-0.5**
JAGI				S	**S**	**02 43 47.8**	**-3.0**
JAGI	**Jajag, Banyuwa**	**3.36**	**265**		**Pn**	**02 43 07.0**	**-0.1**
BASI	**Baing, Sumba**	**3.63**	**124**	P	**Pn**	**02 43 09.3**	**-1.0**
BASI				S	**S**	**02 43 53.6**	**-2.9**
KMMI	**Kalianget**	**3.71**	**287**	P	**Pn**	**02 43 14.1**	**+2.9**
BKSI	**Bulukumba**	**3.82**	**42**	P	**Pn**	**02 43 12.5**	**0.0**
BKSI				S	**S**	**02 44 01.0**	**+0.4**
KAPI	**Kappang**	**3.83**	**35**	P	**Pn**	**02 43 12.9**	**+0.3**
	458nm,0.3s,baz=206,slow=6.0,SNR=565						
KAPI				S	**S**	**02 44 00.6**	**-0.2**
	44nm,0.3s,baz=204,slow=22,SNR=14						
KAPI	**Kappang**	**3.83**	**35**		**Pn**	**02 43 12.8**	**+0.1**
EDFI	**Ende, Flores**	**4.15**	**98**	P	**Pn**	**02 43 13.8**	**-2.8**
EDFI				S	**S**	**02 44 01.9**	**-6.0**

BNSI	Bone	4.53	34	P		Pn	02 43 22.5	+1.4	
MMRI	Maumere	4.68	96	P		Pn	02 43 21.2	-1.7	
MMRI	Maumere	4.68	96	P		Pn	02 43 21.2	-1.7	
MMRI	Maumere	4.68	96			Pn	02 43 22.6	-0.3	
SPSI	Sidrap Palu	4.73	28	P		Pn	02 43 24.7	+1.2	
KBKI	Kotabaru	5.02	344	P		Pn	02 43 28.8	+1.6	
	2.8nm8µm838nm,0.8s								
GRJI	Gresik	5.16	284	P		Pn	02 43 31.0	+2.1	
	6.9nm1µm19µm2µm,0.7s								
TTSI	Tana Toraja	5.57	24	P		Pn	02 43 36.4	+2.4	
	26nm23µm95µm9µm, 1.1s								
BBSI	Bau Bau	5.66	62	P		Pn	02 43 35.9	+0.7	
	0.7nm2µm193nm,0.9s								
BBSI				S		S	02 44 40.5	-1.2	
	0.7nm2µm193nm,0.9s								
PWJI	Pagerwojo	5.68	271	P		Pn	02 43 36.5	+1.2	
	11nm20µm22µm2µm,0.6s								
PWJI				S		S	02 44 40.2	-1.7	
	11nm20µm22µm2µm,0.6s								
PCJI	Pacitan	6.29	269	P		Pn	02 43 43.4	+0.3	
	21nm43µm3µm,0.5s								
PCJI				S		S	02 44 51.1	-5.0	
	21nm43µm3µm,0.5s								
BATI	Baumata	6.38	109	P		Pn	02 43 42.4	-1.9	
	687nm,0.3s,baz=291,slow=1.7,SNR=298								
BATI				S		S	02 44 53.6	-4.6	
	576nm,0.3s,baz=314,slow=7.1,SNR=9.4								
BATI	Baumata	6.38	109	P		Pn	02 43 43.0	-1.3	
	19nm7µm48µm7µm,0.7s								
BATI				S		S	02 44 54.3	-3.9	
	19nm7µm48µm7µm,0.7s								
WOJI	Wonogiri, Jawa	6.55	272	P		Pn	02 43 47.2	+0.7	
	9.1nm20µm2µm,1.0s								
WOJI				S		S	02 45 00.2	-2.0	
	9.1nm20µm2µm,1.0s								
WOJI	Wonogiri, Jawa	6.55	272	P		S	02 45 01.9	-0.3	
UWJI	Ujung Watu	6.76	284	P		Pn	02 43 51.1	+2.0	
	1.6nm6µm407nm,0.6s								
SOEI	Soe	6.84	104	P		Pn	02 43 49.3	-0.9	
	39nm19µm97µm13µm,0.8s								
SOEI				S		S	02 45 02.3	-6.6	
	39nm19µm97µm13µm,0.8s								
SOEI	Soe	6.84	104			Pn	02 43 48.4	-1.7	
UGM	Wanagama	6.95	272	P		Pn	02 43 51.3	-0.2	
	19nm13µm30µm3µm,0.6s								
UGM				S		S	02 45 06.2	-5.1	
	19nm13µm30µm3µm,0.6s								
UGM	Wanagama	6.95	272	P		S	02 45 13.9	+2.6	
UGM	Wanagama	6.95	272			Pn	02 43 51.9	+0.4	
SMRI	Semarang	7.12	278	P		Pn	02 43 55.8	+2.1	
	24nm59µm7µm,0.7s								
SMRI	Semarang	7.12	278			Pn	02 43 56.0	+2.3	
SMKI	Samarinda	7.68	358	P		Pn	02 44 03.7	+2.9	
	6.8nm18µm22µm1,3s								
PBKI	Pangkalan Bun	7.97	313	P		Pn	02 44 06.9	+2.4	
	12µm773nm,1.1s								
APSI	Ampana	8.29	30	P		Pn	02 44 10.7	+2.1	
	5µm564nm,1.4s								
MPSI	Mapaga	8.77	16	P		Pn	02 44 17.4	+2.6	
	1.4nm11µm8µm401nm,1.6s								
LUWI	Luwuk	8.79	37	P		Pn	02 44 17.0	+1.9	
	3.9nm5µm14µm909nm,1.3s								
LUWI	Luwuk	8.79	37			Pn	02 44 15.8	+0.8	
MRSI	Marisa	9.64	27	P		Pn	02 44 27.3	+1.4	
	6µm7µm606nm,1.3s								
CISI	Cisompet, Garu	9.65	273	P		Pn	02 44 25.2	-0.8	
	4µm31µm1µm,0.6s								
CISI				S		S	02 46 07.6	-7.1	
	4µm31µm1µm,0.6s								
CISI	Cisompet, Garu	9.65	273			Pn	02 44 25.0	-1.0	
LEM	Lembang	9.92	277	P		Pn	02 44 29.2	-0.4	
	132nm,0.3s,baz=76,slow=7.6,SNR=62								
LEM	Lembang	9.92	277	P		Pn	02 44 30.6	+1.0	
	3µm9µm700nm,0.6s								
CNJI	Cibinong	10.35	274	P		Pn	02 44 34.6	-0.2	
	25µm2µm,0.6s								
CNJI				S		S	02 46 23.9	-7.1	
	25µm2µm,0.6s								
SANI	Sanana	10.38	55	P		Pn	02 44 36.9	+1.6	
	57µm6µm465nm,1.3s								
NLAI	Namlea	10.70	63	P		Pn	02 44 40.1	+0.8	
	3µm213nm,0.9s								
CBJI	Citeko	10.74	279	P		Pn	02 44 39.9	+0.1	
	42µm4µm,0.5s								
KMSI	Cibinong	10.80	37	P		Pn	02 44 43.0	+2.4	
	16µm1µm,1.0s								
DBJI	Dramaga	10.82	278	P		Pn	02 44 41.1	+0.3	
	29µm1µm,0.6s								
AAI	Ambon	11.50	68	P		Pn	02 44 50.6	+1.2	
	4µm5µm339nm,1.1s								
AAI				S		S	02 47 02.8	+5.8	
	4µm5µm339nm,1.1s								
SBUM	Sibu	11.80	333	P		Pn	02 44 54.7	+1.4	
SBUM	Sibu	11.80	333	P		Pn	02 44 55.0	+1.8	
XMIS	Christmas Isla	11.95	258			Pn	02 44 52.8	-2.3	
KSM	Kuching	11.98	323	P		P	02 44 58.1	-1.0	
KSM	Kuching	11.98	323	P		P	02 44 59.0	-0.1	
MSAI	Masohi	12.30	68	P		P	02 45 01.1	-1.6	
	899nm62nm,0.7s								
MSAI				S		S	02 47 18.7	+2.7	
	899nm62nm,0.7s								
LBMI	Labuha	12.43	54	P		Pn	02 45 02.0	+0.9	
	4µm449nm,0.9s								
LBMI				S		S	02 47 26.6	+7.6	
	4µm449nm,0.9s								
BLSI	Bandar Lampung	12.52	282	P		Pn	02 45 02.3	+0.1	
	20µm2µm,1.1s								
FITZ	Fitzroy Crossi	12.63	142	P		Pn	02 45 03.5	-0.1	
	baz=13,SNR=37								
FITZ				S		S	02 47 21.6	-2.0	
	baz=13								
FITZ	Fitzroy Crossi	12.63	142	P		Pn	02 45 02.8	-0.7	
	14nm,0.3s,baz=323,slow=10,SNR=60								
FITZ				S		S	02 47 21.5	-2.0	
	11nm,0.3s,baz=39,slow=22,SNR=9.8								
FITZ	Fitzroy Crossi	12.63	142	Pn		Pn	02 45 03.8	+0.2	
BNDI	Bandanaira	12.81	74	P		P	02 45 08.7	+0.4	
	15µm2µm,0.8s								
BNDI				S		S	02 47 34.4	+6.5	
	15µm2µm,0.8s								
SPMM	Sapulut	12.83	355	P		P	02 45 11.0	+2.4	
KASI	Kota Agung	13.21	281	P		P	02 45 11.9	-0.8	
	8µm50µm3µm,0.5s								
TNTI	Ternate	13.22	48	P		Pn	02 45 11.3	+0.4	
	4µm371nm,1.2s								
TNTI				S		S	02 47 41.1	+3.6	
	4µm371nm,1.2s								
TNTI	Ternate	13.22	48			Pn	02 45 11.6	+0.7	
KNRA	Kununurra	13.28	125	P		Pn	02 45 10.5	-1.1	
	baz=13,SNR=266								
KNRA	Kununurra	13.28	125			Pn	02 45 10.3	-1.2	
PSA00	Pilbara Seismi	13.51	171			Pn	02 45 13.6	-0.8	
SAUI	Saumlaki	13.63	90	P		Pn	02 45 14.1	-1.8	
	22µm3µm,0.9s								
SAUI				S		S	02 47 35.7	-11	
	22µm3µm,0.9s								
SAUI	Saumlaki	13.63	90			Pn	02 45 15.1	-0.8	
LWLI	Liwa	13.75	282	P		P	02 45 20.3	+1.5	
	32µm2µm,0.5s								
LWLI				S		S	02 47 54.1	+4.4	
	32µm2µm,0.5s								
MDSI	Maura Dua	13.77	285	P		P	02 45 19.6	+0.7	
	6µm5µm237nm,0.7s								
MTN	Manton Dam	14.15	110	P		Pn	02 45 21.3	-1.0	
	baz=14,SNR=357								
MTN	Manton Dam	14.15	110	P		Pn	02 45 21.4	-1.0	
KKM	Kota Kinabalu	14.18	355			P	02 45 23.2	-0.4	
GIRL	Giralia	14.74	192	P		Pn	02 45 29.4	0.0	
	baz=15,SNR=187								
GIRL	Giralia	14.74	192			Pn	02 45 29.3	0.0	
MNAI	Manna	14.97	284	P		P	02 45 33.0	+0.7	
	10µm36µm2µm,0.5s								
MNAI	Manna	14.97	284			P	02 45 32.5	+0.2	
KDU	Kakadu	15.36	108	P		P	02 45 35.8	-0.7	
	baz=15,SNR=108								
SIJI	Sorong	15.48	63	P		P	02 45 37.9	0.0	
	18nm,0.3s,baz=243,slow=7.0,SNR=81								
SIJI				S		S	02 48 22.6	-6.5	
	1.3nm,0.3s,baz=228,slow=23,SNR=1.8								
KSI	Kapahiang	15.52	286	P		Pn	02 45 39.9	+1.0	
	15µm1µm,0.6s								
FAKI	Fak Fak	15.54	71	P		P	02 45 38.4	-0.2	
	5µm426nm,0.7s								
FAKI	Fak Fak	15.54	71	P		P	02 45 37.1	-1.4	
TPRI	Tanjung Pinang	15.80	304	P		Pn	02 45 44.6	+2.4	
	353nm,1.1s								
MASI	Maura Aman, Be	16.01	287	P		Pn	02 45 46.1	+1.3	
	22µm2µm,0.7s								
SKMP	Bagumbayan, Su	16.18	26	*e*P		Pn	02 45 46.7	0.0	
DDMP	Don Marcelino,	16.35	30	*e*P		Pn	02 45 49.6	+0.8	
CTBH	Cotabato--PC H	16.69	24	⇓*i*P		Pn	02 45 53.5	+0.9	
KCP	Kidapawan	16.85	27	⇑*i*P		Pn	02 45 55.9	+1.2	
BATP	Bataraza	16.85	1	*e*P		Pn	02 45 55.5	+0.9	
MYKOM	Kota Tinggi	16.85	305	P		Pn	02 45 57.0	+2.3	
PAGZ	Pagadian	16.94	20	*e*P		Pn	02 45 57.1	+1.4	
KRJI	Kerinci	17.10	290	P		Pn	02 45 59.1	+1.4	
	5µm19µm1µm,0.8s								
DAV	Davao City (W)	17.13	28	⇓*i*P		Pn	02 45 57.3	-0.6	
MATI	Mati	17.35	30	*e*P		Pn	02 45 59.9	-0.6	
SDSI	Sungai Dareh	17.58	293	P		P	02 46 02.0	+1.1	
	3µm96nm,0.7s								
CGP	Cagayan de Oro	17.99	24	⇓*e*P		Pn	02 46 08.6	+0.6	
MEEK	Meekatharra	18.40	177	P		P	02 46 10.7	+1.0	
	baz=18,SNR=303								
PDSI	Padang	18.47	292	P		P	02 46 09.3	-1.3	
	62nm,0.5s								
BKNI	Bangkinang	18.48	296	P		Pn	02 46 12.9	-0.9	
	4µm4µm193nm,0.8s								
BKNI	Bangkinang	18.48	296	P		P	02 46 11.8	+1.2	
CNOP	Candoni, Negro	18.58	16	*e*P		Pn	02 46 13.8	-1.1	
CUYO	Cuyo Island	19.21	10	*e*P		Pn	02 46 20.6	-1.8	
GUIM	Jordan	19.34	15	*e*P		P	02 46 20.7	+0.9	
ENPP	El Nido	19.34	6	*e*P		P	02 46 20.8	+1.0	
WRKA	Warakurna	19.67	150	P		P	02 46 23.8	+0.4	
	baz=20,SNR=90								
MNSI	Mandailing Nat	19.99	296	P		P	02 46 27.4	+0.6	
	2µm65nm,0.7s								
WRA	Warramunga Arr	20.05	127	P		P	02 46 26.5	-0.9	
	32nm,0.4s,baz=303,slow=12,SNR=83								
WRA				S		S	02 49 56.3	-3.5	
	179nm,1.1s,baz=300,slow=20,SNR=15								
WRAB	Tennant Creek	20.05	127	P		P	02 46 26.7	-0.7	
WR0	Warramunga Arr	20.21	127	P		P	02 46 28.6	-0.5	
RCP	Roxas	20.27	15	⇑*e*P		P	02 46 30.8	+1.0	
IPM	Ipoh	20.71	307	IAmb		IAmb	02 46 37.3		
	comp=Z,98nm,0.7s								
IPM	Ipoh	20.71	307	P		P	02 46 36.0	+1.4	
COCO	West Island	20.76	257	P		P	02 46 37.1	+2.1	
PBSI	Pulau Batu	20.81	292	P		P	02 46 32.5	-3.1	
	comp=Z,72nm,0.6s								
MORW	Morawa	20.84	184	P		P	02 46 36.0	+0.3	
	baz=21,SNR=68								
MORW	Morawa	20.84	184	P		P	02 46 36.1	+0.3	
RPSI	Rantau Prapat	21.47	299	P		P	02 46 41.9	-0.3	
KULM	Kulim	21.50	308	P		P	02 46 43.0	+0.5	
PSI	Prapat	21.52	300	P		P	02 46 40.8	-2.0	
	comp=Z,118nm,0.4s,baz=180,slow=6.1,SNR=123								
CNP	Catarman	21.73	19	*e*P		P	02 46 44.5	-0.1	
BOAC	Boac	21.91	11	*e*P		P	02 46 48.8	+2.6	
DLV	T Lat	21.91	336	IAmb		IAmb	02 46 50.4		
	comp=Z,122nm,1.1s								
LUBP	Lubang	21.92	7	*e*P		P	02 46 48.5	+2.1	
SMPI	Sarmi	21.96	75	P		P	02 46 48.8	+2.0	
	comp=Z,4µmcomp=Z,92nm,0.9s								
ASAR	Alice Springs	21.99	136	P		P	02 46 47.1	0.0	
	comp=Z,43nm,0.4s,baz=304,slow=8.9,SNR=182								
ASAR				S		S	02 50 34.2	+1.3	
	comp=Z,31nm,0.9s,baz=329,slow=20,SNR=4.9								
ASAR				ScP		ScP	02 53 52.0	+0.2	
	comp=Z,42nm,0.7s,baz=326,slow=1.8,SNR=9.3								
AS31	Alice Springs	21.99	136	P		P	02 46 47.2	+0.1	
AS31				IAmb		IAmb	02 46 50.1		
	comp=Z,104nm,1.5s								
GSI	Gunungsitoli	22.01	294	P		P	02 46 46.3	-1.0	
	comp=Z,413nm,0.6s								
GSI	Gunungsitoli	22.01	294	IAmb		IAmb	02 46 52.1		
	comp=Z,79nm,0.5s								
BLDU	Ballidu	22.35	182	P		P	02 46 51.0	+0.8	
	baz=22,SNR=63								
TGY	Tagaytay City	22.38	9	P		P	02 46 52.2	+1.5	
	comp=Z,385nm,0.4s,baz=236,slow=4.9,SNR=17								
PVCP	Virac	22.60	17	*e*P		P	02 46 54.5	+1.9	
KCSI	Kotacane, Aceh	22.88	300	P		P	02 46 54.1	-1.2	
	comp=Z,3µmcomp=Z,122nm,0.6s								
GENI	Genyem	23.20	77	P		P	02 47 04.1	+6.0	
TPTI		23.26	298	P		P	02 46 58.3	-0.4	
	comp=Z,1µmcomp=Z,100nm,1.2s								
KLBR	Kellerberrin	23.31	180	P		P	02 46 59.4	+0.4	
	baz=23,SNR=38								
KMBL	Kambalda	23.44	171	P		P	02 47 00.6	+0.5	
	baz=24,SNR=43								
SNSI	Sinabang, Aceh	23.62	296	P		P	02 47 01.5	-0.4	
	comp=Z,110nm,0.7s								
MUN	Mudaring	23.73	183	P		P	02 47 04.9	+2.2	
	baz=24,SNR=9.9								
JAY	Jayapura	23.73	78	P		P	02 47 03.1	0.0	
	comp=Z,12nm,0.6s,baz=288,slow=3.2,SNR=5.5								
JAY	Jayapura	23.73	78	P		P	02 47 02.2	-0.9	
	comp=Z,2µmcomp=Z,22nm,0.8s								
SMPP	San Manuel, Pa	24.36	7	*e*P		P	02 47 09.5	+0.8	
MLSI	Meulaboh, Aceh	24.43	300	P		P	02 47 09.0	-0.3	
	comp=Z,6µmcomp=Z,5µmcomp=Z,342nm,0.5s								
LHMI	Lhok Sumawe	24.47	302	P		P	02 47 10.2	+0.5	
	comp=Z,3µmcomp=Z,129nm,1.0s								
FORT	Forrest	24.55	158	P		P	02 47 10.7	+0.5	
	baz=25,SNR=86								
FORT	Forrest	24.55	158	P		P	02 47 10.8	+0.5	
QIS	Mount Isa	24.63	122	P		P	02 47 11.5	+0.3	
	baz=25,SNR=25								
NWAO	Narrogin (SRO)	24.64	181	P		P	02 47 11.8	+0.9	
	baz=25,SNR=46								
NWAO	Narrogin (SRO)	24.64	181	P		P	02 47 11.6	+0.5	
	comp=Z,112nm,0.6s,baz=8.5,slow=7.6,SNR=40								
NWAO	Narrogin (SRO)	24.64	181	P		P	02 47 11.9	+0.9	
COEN	Coen	25.80	105	P		P	02 47 21.4	-0.3	
	baz=26,SNR=66								
COEN	Coen	25.80	105	P		P	02 47 21.7	0.0	
RKGY	Rocky Gully	26.32	181	P		P	02 47 27.3	+1.2	
	baz=26,SNR=25								
MTSU	Mount Surprise	27.86	114	P		P	02 47 41.6	+1.5	
	baz=28,SNR=12								
QIZ	Qiongzhong	28.07	344	P		P	02 47 43.1	+1.3	
QIZ				S		S	02 52 11.4	+2.2	
QIZ				pmax		pmax			
	comp=Z,480nm,2.5s								
QIZ				LR		LR			
	comp=Z,510nm,19.6s								
QIZ				LR		LR			
	comp=Z,1µm,15.8s								
QIZ				LR		LR			
	comp=Z,770nm,15.7s								
PMG	Port Moresby	29.30	95	P		P	02 47 53.5	+0.7	
PMG				IAmb		IAmb	02 49 02.7		
	comp=Z,55nm,1.0s								
BBOO	Buckleboo	29.93	148	P		P	02 47 58.2	+0.1	
	baz=30,SNR=73								
BBOO	Buckleboo	29.93	148	P		P	02 47 59.0	+0.9	
BBOO				IAmb		IAmb	02 48 00.6		
	comp=Z,102nm,1.1s								
CTA	Charters Tower	30.21	116	P		P	02 48 02.0	+1.2	
	comp=Z,21nm,0.9s,baz=294,slow=12,SNR=11								
CTAO	Charters Tower	30.21	116	P		P	02 48 01.9	+1.2	
QLP	Quilpie	31.26	129	P		P	02 48 11.2	+1.3	
	baz=31,SNR=20								
YULB	Yu-li	31.58	7	P		P	02 48 13.6	+0.9	
HTT	Hallett	31.98	145	P		P	02 48 17.0	+0.8	
	baz=32,SNR=40								
CM31	Chiang Mai Arr	32.19	325	P		P	02 48 19.8	+1.7	
	SNR=10								
CM31	Chiang Mai Arr	32.19	325	P		P	02 48 19.6	+1.6	
CM31				IAmb		IAmb	02 48 21.2		
	comp=Z,176nm,2.0s								
CMAR	Chiang Mai Arr	32.19	325	P		P	02 48 18.4	+0.3	
	comp=Z,16nm,0.5s,baz=151,slow=6.9,SNR=36								
CMAR				PcP		PcP	02 51 01.3	+0.2	
	comp=Z,8.5nm,0.7s,baz=172,slow=3.4,SNR=6.0								
CMAR				ScP		ScP	02 54 23.2	+0.7	
	comp=Z,9.6nm,0.8s,baz=178,slow=3.0,SNR=17								
SLVN	Son La	32.23	336	P		P	02 48 19.5	+1.1	
SLVN				IAmb		IAmb	02 48 21.9		
	comp=Z,92nm,1.7s								
CHTO	Chiang Mai	32.48	326	P		P	02 48 22.0	+1.5	
CHTO				IAmb		IAmb	02 48 23.3		
	comp=Z,67nm,1.6s								
STKA	Stephens Creek	32.52	140	P		P	02 48 21.3	+0.5	
	comp=Z,16nm,0.4s,baz=314,slow=9.2,SNR=31								
STKA				ScP		ScP	02 54 24.2	+0.7	
	comp=Z,12nm,0.5s,baz=360,slow=4.1,SNR=9.0								
STKA	Stephens Creek	32.52	140	P		P	02 48 21.3	+0.5	
RMQ	Roma	34.78	125	P		P	02 48 41.9	+1.5	
	baz=35,SNR=4.8								
CMSA	Cobar Meteorol	35.04	135	P		P	02 48 43.9	+1.4	
	baz=35,SNR=18								
GYA	Guiyang	36.00	343	⇓*i*P		P	02 48 52.9	+2.1	
GYA				pP		pP	02 49 41.7	+3.4	
GYA				S		S	02 54 12.1	0.0	
GYA				sS		sS	02 55 38.5	+1.8	
GYA				pmax		pmax			
	comp=Z,30nm,1.3s								
GYA				pmax		pmax			
	comp=Z,160nm,3.7s								
GYA				LR		LR			
	comp=Z,300nm,14.6s								
GYA				LR		LR			
	comp=Z,460nm,16.9s								
GYA				LR		LR			
	comp=Z,380nm,16.7s								
ARPS	Mount Arapiles	36.04	146	P		P	02 48 52.0	+1.1	
	baz=36,SNR=93								
KMI	Kunming	36.09	337	IAmb		IAmb	02 48 55.6		
	comp=Z,92nm,1.2s								
EIDS	Eidsvold	36.24	122	P		P	02 48 54.2	+1.4	
	baz=36,SNR=3.4								
JOW	Kunigami	36.32	16	P		P	02 48 54.7	+1.4	
YNG	Young	38.49	137	P		P	02 49 13.1	+1.6	
	baz=39,SNR=41								
WHN	Wuhan	38.61	356	⇓P		P	02 49 14.5	+2.1	
WHN				pP		pP	02 50 05.1	+4.6	
WHN				sP		sP	02 50 21.6	-5.3	
WHN				S		S	02 54 47.2	-3.9	
WHN				pmax		pmax			
	comp=Z,320nm,1.3s								
WHN				pmax		pmax			
	comp=Z,520nm,3.5s								
WHN				LR		LR			
	comp=Z,2µm,11.0s								
WHN				LR		LR			
	comp=Z,560nm,11.6s								
WHN				LR		LR			
	comp=Z,1µm,21.1s								
TOO	Toolangi	38.69	143	P		P	02 49 15.2	+2.0	
	baz=39,SNR=34								
TOO	Toolangi	38.69	143	P		P	02 49 14.8	+1.6	
TOO				IAmb		IAmb	02 49 17.6		
	comp=Z,84nm,0.8s								
ARMA	Armidale	38.80	129	P		P	02 49 15.8	+1.4	
	baz=39,SNR=11								
ARMA	Armidale	38.80	129	P		P	02 49 16.0	+1.7	
ENH	Enshi	38.99	349	P		P	02 49 15.2	-0.5	
ENH				IAmb		IAmb	02 49 17.7		
	comp=Z,76nm,1.0s								
CAN	Canberra	39.49	138	P		P	02 49 20.9	+1.1	
CAN				IAmb		IAmb	02 49 23.6		
	comp=Z,37nm,0.9s								
CNB	Canberra Magne	39.73	138	P		P	02 49 24.2	+2.4	
	baz=40,SNR=10								
MGCD	Mangrove Creek	39.79	134	P		P	02 49 23.4	+1.2	
	baz=40,SNR=12								
NJ2	Nanjing	40.01	2	⇓*i*P		P	02 49 26.4	+2.4	
NJ2				pmax		pmax			
	comp=Z,83nm,0.7s								
MILA	Mila	40.62	140	P		P	02 49 31.5	+2.4	
	baz=41,SNR=5.3								
CD2	Chengdu	41.04	342	⇑*i*P		P	02 49 32.6	+0.1	
CD2				pP		pP	02 50 23.5	+2.5	
CD2				sP		sP	02 50 47.9	+0.5	
CD2				PcS		PcS	02 55 20.9	+1.7	
CD2				S		S	02 55 30.0	+2.7	
CD2				SS		SS	02 58 38.5	-1.4	
CD2				pmax		pmax			
	comp=Z,20nm,0.7s								
CD2				pmax		pmax			
	comp=Z,360nm,5.8s								
CD2				LR		LR			
	comp=Z,640nm,24.9s								
CD2				LR		LR			
	comp=Z,1µm,22.7s								
CD2				LR		LR			
	comp=Z,650nm,15.0s								
SHL	Shillong	41.80	324	P		P	02 49 39.2	+0.3	
	SNR=15								
SHL	Shillong	41.80	324	IAmb		IAmb	02 49 41.0		
	comp=Z,136nm,1.3s								
JCJ	Chichijima	42.42	33	P		P	02 49 41.7	-2.0	
	comp=Z,104nm,0.5s,baz=284,slow=12,SNR=26								
XAN	Xi'an	42.76	349	P		P	02 49 45.1	-1.3	
XAN				pP		pP	02 50 33.1	-2.2	
XAN				sP		sP	02 50 58.0	-3.5	
XAN				S		S	02 55 47.1	-5.3	
XAN				sS		sS	02 57 17.4	-1.7	
XAN				pmax		pmax			
	comp=Z,55nm,0.9s								
XAN				pmax		pmax			
	comp=Z,380nm,6.5s								
XAN				LR		LR			
	comp=Z,390nm,18.6s								
XAN				LR		LR			
	comp=Z,1µm,18.6s								
XAN				LR		LR			
	comp=Z,550nm,16.2s								
XAN	Xi'an	42.76	349	P		P	02 49 45.8	-0.6	
XAN				IAmb		IAmb	02 49 47.7		
	comp=Z,42nm,0.7s								
JNU	Nakatsue	42.98	17	P		P	02 49 48.7	+0.6	
	comp=Z,27nm,0.6s,baz=8.5,slow=4.7,SNR=5.9								
JNU	Nakatsue	42.98	17	P		P	02 49 48.1	0.0	
TIA	Tai'an	44.14	360	P		P	02 49 56.6	-0.7	
TI

comp=Z,6.1nm,0.8s,baz=195,slow=8.9,SNR=1.3
KSRS ScP **ScP** **02 55 17.5 +0.6**
comp=Z,5.0nm,0.8s,baz=191,slow=3.8,SNR=8.8
KS19 Wonju Array Si 46.45 11 P **P** **02 50 14.7 -0.6**
KS19 IAmb IAmb 02 50 17.3
comp=Z,62nm,1.0s
JIRN Jiri 46.78 321 *e*P **P** **02 50 18.2 -0.3**
comp=Z,172nm,0.6s
DL2 Dalian 46.98 4 P **P** **02 50 19.9 +0.5**
DL2 pP **pP** **02 51 08.6 -0.6**
DL2 sP **sP** **02 51 32.8 -2.4**
DL2 PP **PP** **02 52 16.2 +3.7**
DL2 S **S** **02 56 50.9 -1.9**
DL2 ScS **ScS** **02 59 45.7 -3.0**
DL2 pmax pmax
comp=Z,80nm,0.6s
DL2 pmax pmax
comp=Z,190nm,4.4s
GUN Gumba 47.15 321 *e*P **P** **02 50 20.8 -0.6**
comp=Z,94nm,0.7s
PKI Pulchoki 47.21 320 *e*P **P** **02 50 20.8 -1.0**
comp=Z,40nm,0.5s
PKIN Phulchoki 47.22 320 *e*P **P** **02 50 20.8 -1.0**
comp=Z,53nm,0.5s
DMN Daman 47.43 320 *e*P **P** **02 50 22.7 -0.7**
comp=Z,99nm,0.9s
KKN Kakani 47.45 320 *e*P **P** **02 50 23.1 -0.4**
comp=Z,37nm,0.7s
BJT Baijiatuau 47.96 359 P **P** **02 50 26.3 -0.6**
BJT IAmb IAmb 02 50 28.4
comp=Z,72nm,0.6s
BJI Beijing 47.98 359 P **P** **02 50 26.6 -0.4**
BJI PcP **PcP** **02 51 52.4 +1.1**
BJI S **S** **02 57 11.1 +4.4**
BJI sS **sS** **02 58 37.2 +2.2**
BJI pmax pmax
comp=Z,92nm,0.6s
BJI LR LR
comp=Z,370nm,14.1s
BJI LR LR
comp=Z,250nm,14.8s
BJI LR LR
comp=Z,360nm,24.5s
GKN Gorkha 48.00 320 *e*P **P** **02 50 27.0 -0.7**
comp=Z,72nm,0.4s
KOLN Koldanda 48.52 319 *e*P **P** **02 50 30.6 -1.0**
comp=Z,63nm,0.6s
MJAR Matsushiro Arr 48.53 22 P **P** **02 50 29.4 -2.0**
comp=Z,20nm,0.8s,baz=199,slow=7.8,SNR=30
MJAR pP **pP** **02 51 21.3 -0.2**
comp=Z,2.9nm,0.8s,baz=196,slow=8.5,SNR=1.5
MJAR ScP **ScP** **02 55 26.1 +0.2**
comp=Z,2.4nm,0.7s,baz=186,slow=5.5,SNR=3.1
MAJO Matsushiro 48.53 22 P **P** **02 50 30.9 -0.5**
MAT Matsushiro 48.53 22 P **P** **02 50 29.5 -1.8**
MJB9 Matsu-Tunnel 48.53 22 P **P** **02 50 30.9 -0.4**
DANN Dangsing 48.80 319 *e*P **P** **02 50 32.9 -1.0**
comp=Z,201nm,0.6s
BTO Baotou 49.02 352 *e*P **P** **02 50 35.4 +0.3**
HHC Hu-ho-hao-te 49.08 354 P **P** **02 50 36.6 +1.0**
HHC pP pP 02 51 23.9 -1.9
HHC sP sP 02 51 51.1 -0.6
HHC S **S** **02 57 17.6 -4.8**
HHC sS sS 02 58 55.6 +4.6
HHC SS **SS** **03 00 52.1 -4.9**
HHC pmax pmax
comp=Z,23nm,0.9s
HHC pmax pmax
comp=Z,120nm,7.2s
PYUN Piuthan 49.13 319 *e*P **P** **02 50 35.7 -0.6**
comp=Z,104nm,0.4s
GTA Gaotai 50.11 342 ⇑P **P** **02 50 43.5 +0.1**
GTA pP pP 02 51 37.6 +3.8
GTA sP sP 02 51 59.8 +0.1
GTA ScP **ScP** **02 55 28.9 -3.9**
GTA S **S** **02 57 36.3 -0.4**
GTA sS sS 02 59 03.1 -2.5
GTA ScS **ScS** **03 00 08.0 -2.1**
GTA pmax pmax
comp=Z,34nm,1.3s
GTA pmax pmax
comp=Z,320nm,7.8s
GTA LR LR
comp=Z,500nm,21.3s
GTA LR LR
comp=Z,500nm,21.3s
GTA LR LR
comp=Z,230nm,20.0s
MDJ Mudanjiang 53.65 11 P **P** **02 51 08.9 -0.3**
MDJ pP pP 02 51 58.2 -2.2
MDJ sP sP 02 52 24.8 -1.2
MDJ PP **PP** **02 53 11.2 -1.6**
MDJ S **S** **02 58 22.3 -2.2**
MDJ sS sS 02 59 50.4 -4.1
MDJ SS **SS** **03 02 11.3 +2.4**
MDJ pmax pmax
comp=Z,37nm,0.7s
MDJ pmax pmax
comp=Z,240nm,4.2s
MDJ Mudanjiang 53.65 11 P **P** **02 51 08.4 -0.8**
MDJ IAmb IAmb 02 51 11.3
comp=Z,101nm,0.7s
USA0B Ussuriysk Arra 53.74 13 P **P** **02 51 09.2 -0.6**
USA0B IAmb IAmb 02 51 11.5
comp=Z,76nm,0.8s
USRK Ussuriysk Ar. 53.74 13 P **P** **02 51 09.1 -0.7**
comp=Z,52nm,0.6s,baz=193,slow=6.4,SNR=81
USRK S **S** **02 58 25.1 -0.5**
comp=Z,2.8nm,0.9s,baz=191,slow=13,SNR=6.0
ULN Ulaanbaatar 56.55 352 P **P** **02 51 30.8 +0.7**
ULN Ulaanbaatar 56.55 352 P **P** **02 51 29.7 -0.4**
ULN IAmb IAmb 02 51 31.6
comp=Z,78nm,1.3s
SONM Songino Array 56.62 351 P **P** **02 51 29.7 -0.8**
comp=Z,43nm,0.6s,baz=168,slow=7.5,SNR=104
SONM pP **PcP** **02 52 24.1 +0.2**
comp=Z,7.4nm,0.7s,baz=169,slow=7.0,SNR=1.9
SONM S **S** **02 59 03.6 -0.4**
comp=Z,1.0nm,0.8s,baz=144,slow=5.4,SNR=3.8
ASAJ Asahikawa 56.77 21 P **P** **02 51 31.0 -0.4**
comp=Z,6.6nm,0.3s,baz=230,slow=11,SNR=9.8
HIA Hailar 57.22 2 P **P** **02 51 33.8 -0.8**
WMQ Urumqi 58.38 335 *e*P **P** **02 51 43.6 +0.8**
WMQ S **S** **02 59 25.5 -1.5**
WMQ sS sS 03 00 54.0 -4.6
WMQ pmax pmax
comp=Z,24nm,0.9s
WMQ pmax pmax
comp=Z,200nm,5.5s
WMQ LR LR
comp=Z,150nm,20.3s
WMQ LR LR
comp=Z,150nm,22.7s
WMQ LR LR
comp=Z,290nm,20.3s
KLR Kul'dur 58.50 11 P **P** **02 51 42.0 -1.3**
comp=Z,11nm,0.6s,baz=218,slow=4.3,SNR=35
NIL Nilore 59.11 317 P **P** **02 51 46.6 -1.3**
YSS Yuzh-Sakhalins 59.29 20 P **P** **02 51 49.2 +0.4**
YSS IAmb IAmb 02 51 49.9
comp=Z,54nm,1.3s
TUWZ Tuamarina 59.67 133 P **P** **02 51 52.8 +1.1**
TLY Talaya 60.80 350 P **P** **02 51 58.7 -0.3**
comp=Z,9.1nm,0.7s,baz=192,slow=4.0,SNR=24
TLY S **S** **02 59 57.7 +0.3**
comp=Z,1.1nm,0.3s,baz=321,slow=18,SNR=8.1
TLY Talaya 60.80 350 P **P** **02 51 59.8 +0.8**
TLY Talaya 60.80 350 P **P** **02 51 58.8 -0.2**
RER Riviere de l'E 60.83 250 P **P** **02 52 02.7 +2.8**
RER Riviere de l'E 60.83 250 P **P** **02 52 02.2 +2.2**
KSH Kashi 61.08 324 P **P** **02 51 59.1 -2.2**
KSH pP pP 02 52 53.9 +0.1
KSH PP **PP** **02 54 20.4 +1.4**
KSH S S 02 59 50.9 -11
KSH pmax pmax
comp=Z,53nm,0.8s
KSH pmax pmax
comp=Z,570nm,4.2s
KSH LR LR
comp=Z,250nm,9.7s
KSH LR LR
comp=Z,250nm,9.9s
KSH LR LR
comp=Z,330nm,16.4s
URZ Urewera 61.20 129 P **P** **02 52 02.5 +0.4**
URZ IAmb IAmb 02 52 15.4
comp=Z,19nm,0.6s
MSEY Mahe Island 61.72 269 P **P** **02 52 06.9 +0.9**
MSEY Mahe Island 61.72 269 P **P** **02 52 06.7 +0.7**
KBL Kabul 62.49 316 P **P** **02 52 09.9 -1.0**
KBL Kabul 62.49 316 P **P** **02 52 09.8 -1.1**
KBL IAmb IAmb 02 52 10.4
comp=Z,40nm,1.1s
MK31 Makanchi Array 63.06 334 P **P** **02 52 13.5 -0.7**
MK31 IAmb IAmb 02 52 15.1
comp=Z,19nm,0.8s
MKAR Makanchi Array 63.06 334 P **P** **02 52 12.6 -1.6**
comp=Z,19nm,0.6s,baz=143,slow=6.4,SNR=94
MKAR PKP2bc 03 21 18.8
comp=Z,1.4nm,0.9s,baz=305,slow=4.3,SNR=7.3
BOOM Boomskoye usch 63.09 327 P **P** **02 52 14.1 -0.5**
BOOM IAmb IAmb 02 52 15.6
comp=Z,39nm,1.2s
KZA Kyzart 63.19 326 P **P** **02 52 15.9 +0.3**
SNR=17
MAKZ Makanchi 63.21 333 P **P** **02 52 15.2 0.0**
TKM2 Tokmak 2 63.56 327 P **P** **02 52 17.6 -0.2**
SNR=5.8
UCH Uchtor 63.70 326 P **P** **02 52 19.0 +0.1**
SNR=11
KBK Karagaybulak 63.74 326 P **P** **02 52 19.5 +0.6**
SNR=13
AAK Ala-Archa 63.98 326 P **P** **02 52 20.7 +0.3**
SNR=12
AAK Ala-Archa 63.98 326 *i* P **P** **02 52 19.4 -1.0**
SNR=9.3
AAK Ala-Archa 63.98 326 P **P** **02 52 21.0 +0.6**
AAK P **P** **02 52 21.0 +0.6**
AAK Ala-Archa 63.98 326 P **P** **02 52 19.7 -0.7**
ARSB Arslanbob 63.99 324 IAmb IAmb 02 52 21.5
comp=Z,53nm,0.8s
FRU1 Bishkek 64.02 326 P **P** **02 52 20.6 0.0**
FRU1 IAmb IAmb 02 53 49.2
comp=Z,28nm,0.4s
AML Almayashu 64.10 325 P **P** **02 52 21.8 +0.3**
SNR=21
USP Ospenovka 64.39 326 P **P** **02 52 21.7 -1.3**
SNR=13
EKS2 Erkin-Say 64.39 326 P **P** **02 52 23.6 +0.6**
SNR=15
BTK Batken 64.50 322 IAmb IAmb 02 52 24.7
comp=Z,141nm,1.9s
CHGR Chuyangaron 64.72 320 IAmb IAmb 02 52 25.0
comp=Z,65nm,0.7s
MHTO MHTO 65.27 297 P **P** **02 52 27.6 -1.4**
WSAR Wadi Sarin 65.48 300 P **P** **02 52 29.8 -0.5**
SNR=5.5
JMDO Jabal Madar 65.63 299 P **P** **02 52 30.6 -0.7**
SMDO Samad 65.92 300 P **P** **02 52 32.3 -1.0**
BIDO Bidbid 66.02 300 P **P** **02 52 33.5 -0.3**
SNR=9.3
TAS Tashkent 66.19 322 P **P** **02 52 34.3 -0.2**
SOCY Socotra 66.32 287 P **P** **02 52 35.5 -0.4**
SNR=8.8
SOCY Socotra 66.32 287 IAmb IAmb 02 52 36.4
comp=Z,38nm,0.6s
KK31 Karatay Array 66.53 324 P **P** **02 52 35.7 -0.9**
KKAR Karatay Array 66.53 324 P **P** **02 52 35.7 -0.9**
BSY Bisya 66.54 299 P **P** **02 52 36.4 -0.7**
HOQ Hoqain 66.74 300 P **P** **02 52 37.6 -0.7**
SNR=6.8
DMTO DMTO 66.94 293 P **P** **02 52 38.8 -0.8**
HRA Herat 67.24 313 P **P** **02 52 39.5 -2.0**
HRA **PcP** **02 53 07.7 +0.2**
ARQ Araqi 67.33 299 P **P** **02 52 41.2 -0.9**
SOHO SOHO 67.60 300 P **P** **02 52 43.0 -0.7**
SNR=5.2
KURK Kurchatov 67.62 334 P **P** **02 52 43.1 -0.1**
KURK P **P** **02 52 43.1 -0.1**
KURK Kurchatov 67.62 334 P **P** **02 52 41.9 -1.3**
KURK IAmb IAmb 02 52 45.1
comp=Z,32nm,1.0s
ZAA0 Zalesovo Array 67.76 340 P **P** **02 52 43.1 -0.9**
ZALV Zalesovo Beam 67.76 340 P **P** **02 52 41.6 -2.4**
comp=Z,17nm,0.7s,baz=147,slow=4.3,SNR=53
ZALV S **S** **03 01 19.5 -3.0**
comp=Z,0.6nm,0.4s,baz=163,slow=10,SNR=3.6
ZALV PKP2bc 03 21 05.8
comp=Z,0.4nm,0.3s,baz=352,slow=5.8,SNR=4.5
WHFO Wadi Hawf 68.07 293 P **P** **02 52 45.5 -1.2**
UOSS Minazif 68.16 301 P **P** **02 52 45.3 -1.9**
UOSS Minazif 68.16 301 P **P** **02 52 46.0 -1.2**
UOSS IAmb IAmb 02 52 46.9
comp=Z,48nm,1.5s
HATD Hatta, Dubai 68.18 301 *i* P **P** **02 52 45.8 -1.6**
SNR=7.4
HATD Hatta, Dubai 68.18 301 P **P** **02 52 46.7 -0.6**
SNR=6.0
ASHO Ashiyiah 68.19 301 *i* P **P** **02 52 45.8 -1.6**
SNR=5.2
ASHO Ashiyiah 68.19 301 P **P** **02 52 47.3 -0.1**
SNR=5.2
ASHO P **P** **02 52 47.3 -0.1**
ALNE Al Ain 68.24 300 *i* P **P** **02 52 46.4 -1.3**
SNR=5.9
ABTO Aybut 68.34 292 P **P** **02 52 47.8 -0.7**
MSFE Esma-Masafi 68.35 301 P **P** **02 52 47.1 -1.3**
BANOM Banah 68.43 302 P **P** **02 52 47.6 -1.3**
BANOM Banah 68.43 302 P **P** **02 52 48.4 -0.5**
SHME Shamm 68.61 302 P **P** **02 52 48.5 -1.5**
FAQ Al Faqa, Dubai 68.61 300 P **P** **02 52 49.1 -0.9**
ABPO Ambohimpanom 68.82 253 P **P** **02 52 53.3 +1.7**
FOMA Nahampoana Res 69.00 246 P **P** **02 52 54.6 +2.2**
VOI Vohitsoka 69.17 250 P **P** **02 52 55.8 +2.2**
SNR=6.2
MAW Mawson 69.53 199 P **P** **02 52 56.7 +1.9**
baz=70,SNR=44
MAW Mawson 69.53 199 P **P** **02 52 56.4 +1.7**
comp=Z,27nm,0.7s,baz=88,slow=7.8,SNR=52
MAW PKP2bc 03 20 59.3
comp=Z,2.9nm,0.9s,baz=292,slow=10.0,SNR=3.9
MAW Mawson 69.53 199 P **P** **02 52 56.2 +1.4**
PETK Petropavlovsk- 69.91 24 P **P** **02 52 57.2 -0.1**
comp=Z,6.2nm,0.6s,baz=217,slow=6.0,SNR=14
YAK Yakutsk 70.62 6 P **P** **02 53 00.9 -0.4**
GEYT Alibeck 71.83 314 P **P** **02 53 08.3 -0.9**
comp=Z,3.7nm,0.4s,baz=138,slow=5.1,SNR=27
GYA0B ALIBECK ARRAY 71.83 314 P **P** **02 53 09.5 +0.3**
GYA0B IAmb IAmb 02 53 12.4
comp=Z,32nm,1.1s
MA2 Magadan 72.54 17 P **P** **02 53 13.6 +0.7**
MA2 IAmb IAmb 02 53 14.6
comp=Z,137nm,2.0s
BRVK Borovoye 72.96 332 P **P** **02 53 14.8 -0.7**
BRVK IAmb IAmb 02 53 16.4
comp=Z,108nm,1.8s
VNDA Vanda 73.03 171 P **P** **02 53 16.8 +1.2**
comp=Z,3.9nm,0.4s,baz=319,slow=6.3,SNR=17
VNDA Vanda 73.03 171 P **P** **02 53 16.2 +0.6**
SEY Seymchan 75.75 16 P **P** **02 53 31.9 +0.6**
comp=Z,8.5nm,0.6s,baz=219,slow=5.9,SNR=24
ABKAR Akbulak array 76.05 325 P **P** **02 53 33.2 -0.2**
ABKAR IAmb IAmb 02 53 34.8
comp=Z,43nm,1.1s
ATD Arta Tunnel 76.81 284 P **P** **02 53 40.1 +1.7**
SNR=12
ATD Arta Tunnel 76.81 284 IAmb IAmb 02 53 41.1
comp=Z,102nm,1.4s
RAYN Ar Rayn 77.04 296 *i* P **P** **02 53 38.8 -0.8**
SNR=7.0
RAYN Ar Rayn 77.04 296 P **P** **02 53 39.1 -0.4**
SYO Syowa Base 78.10 201↓ *e*P **P** **02 53 44.4 0.0**
KIBK Kibwezi 79.27 269 P **P** **02 53 53.3 +1.3**
SNR=15
TIXI Tiksi 80.00 4 P **P** **02 53 53.4 -1.1**
comp=Z,7.6nm,0.5s,baz=168,slow=5.1,SNR=24
TIXI pP **pP** **02 54 50.3 +0.3**
comp=Z,10nm,0.8s,baz=159,slow=5.3,SNR=2.8
TIXI Tiksi 80.00 4 P **P** **02 53 53.1 -1.4**
TIXI IAmb IAmb 02 53 54.8
comp=Z,68nm,1.7s
KMBO Kilima Mbogo 80.22 270 P **P** **02 53 59.0 +1.7**
comp=Z,60nm,0.9s,baz=73,slow=7.4,SNR=98
KMBO Kilima Mbogo 80.22 270 *i* P **P** **02 53 58.6 +1.3**
SNR=42
KMBO Kilima Mbogo 80.22 270 P **P** **02 53 58.1 +0.8**
KMBO IAmb IAmb 02 54 00.1
comp=Z,114nm,1.1s
ARU Arti 80.44 331 P **P** **02 53 55.1 -2.1**
ARU IAmb IAmb 02 53 57.3
comp=Z,36nm,1.2s
QSPA South Pole Qui 81.82 180 P **P** **02 54 05.5 +1.0**
QSPA IAmb IAmb 02 55 24.2
comp=Z,64nm,1.6s
LODK Lodwar 82.75 275 P **P** **02 54 11.5 +1.2**
SNR=10
TBLG Delisi 82.78 314 IAmb IAmb 02 54 12.0
comp=Z,174nm,1.6s
AKH Akhalkalaki 83.58 313 IAmb IAmb 02 54 16.4
comp=Z,78nm,1.3s
KBZ Khabaz 84.67 315 P **P** **02 54 19.0 -0.2**
comp=Z,15nm,0.9s,baz=74,slow=1.7,SNR=29
KIV Kislovodsk 84.88 316 P **P** **02 54 20.4 -0.1**
MBAR Mbarara 86.74 270 P **P** **02 54 31.0 +0.6**
GAZ Gaziantep 87.25 308 P **P** **02 54 32.0 -0.2**
GAZ IAmb IAmb 02 54 33.8
comp=Z,141nm,1.6s
LSZ Lusaka 87.26 255 P **P** **02 54 33.2 +0.5**
BOSA Boshof 88.13 242 P **P** **02 54 38.4 +1.7**
comp=Z,18nm,0.7s,baz=98,slow=3.8,SNR=30
BOSA Boshof 88.13 242 P **P** **02 54 37.9 +1.2**
LBTB Lobatse 88.34 245 P **P** **02 54 39.3 +1.6**
LBTB IAmb IAmb 02 54 40.6
comp=Z,53nm,0.8s
CSS Mathiatis 89.91 305 IAmb IAmb 02 54 45.6
comp=Z,25nm,0.9s
BR131 Keskin Array S 90.50 310 P **P** **02 54 46.7 -0.7**
SNR=5.9
BRTR Keskin Array B 90.50 310 P **P** **02 54 46.5 -0.9**
comp=Z,4.7nm,0.8s,baz=140,slow=4.4,SNR=25
KLMR Klimovskoe 91.28 331 *e*P **P** **02 54 47.5 -2.8**
KLMR AMP 02 54 50.6
comp=Z,34nm,1.5s
SNAA Sanae 91.40 196 P **P** **02 54 52.2 +1.3**
SNAA Sanae 91.40 196 P **P** **02 54 52.3 +1.3**
SNAA IAmb IAmb 02 54 53.8
comp=Z,9.1nm,0.6s
OBN Obninsk 91.50 325 P **P** **02 54 50.2 -1.2**
OBN IAmb IAmb 02 54 52.3
comp=Z,27nm,0.9s
SDPT Sand Point 92.12 34 IAmb IAmb 02 54 54.5
comp=Z,28nm,0.8s
VNA2 Neumayer--Watz 93.04 196 P **P** **02 54 58.0 -0.4**
VNA3 Neumayer Olymp 93.45 195 P **P** **02 55 02.0 +1.8**
MANT Manisa 94.22 308 IAmb IAmb 02 55 05.3
comp=Z,40nm,1.0s
TLCR 94.83 315 ⇑P **P** **02 55 06.3 -0.7**
AKASG Malin Array Be 95.18 320 P **P** **02 55 06.8 -1.7**
comp=Z,2.7nm,0.6s,baz=82,slow=4.3,SNR=13
AKASG PKIKP **PKiKP** **02 59 48.2 -0.1**
comp=Z,1.1nm,0.5s,baz=88,slow=2.1,SNR=7.4
TLBR Topalu 95.30 314 ⇑P **P** **02 55 08.3 -0.9**
SORM Soroca 95.47 318 ⇑P **P** **02 55 08.4 -1.4**
VRI Vrincioaia 96.36 315 ⇑P **P** **02 55 12.6 -1.4**
PLOR Plostina 96.41 315 ⇑P **P** **02 55 13.7 -0.6**
TESR Tescani 96.47 316 ⇑P **P** **02 55 12.8 -1.7**
TSUM Tsumeb 96.64 250 P **P** **02 55 16.8 +0.8**
TSUM IAmb IAmb 02 55 18.2
comp=Z,14nm,0.6s
MLR Muntele Rosu 96.87 315 ⇑P **P** **02 55 15.0 -1.5**
BURAR Bucovina Array 97.53 317 ⇑P **P** **02 55 18.2 -1.2**
BUR08 Bucovina Ar. S 97.54 317 IAmb IAmb 02 55 19.9
comp=Z,7.2nm,1.0s
ARR Arges 97.78 315 ⇓P **P** **02 55 19.4 -1.1**
FINES FINESS Array B 97.81 331 P **P** **02 55 18.6 -1.5**
comp=Z,5.0nm,0.7s,baz=94,slow=7.6,SNR=18
FINES PKiKP **PKiKP** **02 59 52.9 +0.3**
comp=Z,1.1nm,0.5s,baz=125,slow=3.0,SNR=8.0
ARCR ARCALIA 98.08 316 ⇑P **P** **02 55 21.4 -0.3**
ARCES ARCESS Array B 98.30 339 P **P** **02 55 20.8 -1.4**
comp=Z,4.3nm,0.9s,baz=93,slow=5.0,SNR=8.9
ARCES PKiKP **PKiKP** **02 59 54.0 +0.6**
comp=Z,0.6nm,0.5s,baz=48,slow=1.8,SNR=5.8
KOLS Kolocsecke sedl 99.55 318 *e*PDIFF **Pdif** **02 55 28.2 -0.1**
ILAR Eilson Array 99.72 26 P **Pdif** **02 55 27.0 -1.6**
comp=Z,0.2nm,0.5s,baz=258,slow=4.2,SNR=5.9
ILAR PKKPbc **PKKPbc** **03 11 50.1 -1.6**
comp=Z,1.2nm,0.6s,baz=103,slow=1.1,SNR=18
CONA Conrad Observa 103.84 317 *e*PKiKP **PKiKP** **03 00 03.9 -0.1**
comp=Z,4.4nm,1.4s
SOKA Soboth 104.47 316 *e*PKiKP **PKiKP** **03 00 05.5 +0.3**
comp=Z,1.5nm,0.6s
INK Inuvik 104.50 21 Pdiff **Pdif** **02 55 49.9 +0.1**
comp=Z,1.1nm,1.0s,baz=248,slow=5.2,SNR=3.0
NB2 NORSAR Subarra 104.99 331 PKPdf **PKiKP** **03 00 04.9 -0.8**
comp=Z,4.4nm,1.4s,baz=68,slow=1.9
NOA NORSAR Array B 104.99 331 Pdiff **Pdif** **02 55 50.6 -1.6**
comp=Z,0.5nm,0.8s,baz=79,slow=4.5,SNR=3.2
NOA PKiKP **PKiKP** **03 00 05.7 0.0**
comp=Z,0.5nm,0.6s,baz=256,slow=3.2,SNR=5.1
GERES GERESS Array B 105.21 318 PKiKP **PKiKP** **03 00 06.4 -0.1**
comp=Z,1.4nm,0.6s,baz=83,slow=1.6,SNR=12
GERES PKKPbc **PKKPbc** **03 11 34.8 -0.4**
comp=Z,0.5nm,0.7s,baz=251,slow=4.1,SNR=3.8
KHC Kasperske Hory 105.26 319 *e*PKP **PKiKP** **03 00 07.0 +0.4**
CLL Collm 105.41 321 *e*Pdif **Pdif** **02 55 55.0 +0.8**
CLL *e*PP **PP** **03 00 16.0 -2.8**
CLL *e*PS **PS** **03 09 36.0 -3.8**
CLL *e*PPS PPS 03 10 24.0
CLL *e*SS SS 03 14 54.0 -3.1
ABTA Abfaltersbach 106.19 316 *e*PKiKP **PKiKP** **03 00 08.7 +0.3**
comp=Z,3.7nm,0.7s
WTTA Wattenberg 106.74 317 *i* PKiKP **PKiKP** **03 00 09.2 -0.3**
comp=Z,9.1nm,0.7s
WATA Walderalm 106.77 317 *e*PKiKP **PKiKP** **03 00 09.6 0.0**
comp=Z,2.6nm,0.4s
SQTA Sankt Quirin 107.03 317 *i* PKiKP **PKiKP** **03 00 09.7 -0.3**
comp=Z,1.2nm,0.4s
MOTA Moosalm 107.09 317 *e*PKiKP **PKiKP** **03 00 10.0 -0.1**
comp=Z,2.0nm,0.7s
RETA Reutte 107.30 317 *e*PKiKP **PKiKP** **03 00 09.8 -0.6**
comp=Z,1.8nm,0.4s
FETA Feichten 107.38 317 *e*PKiKP **PKiKP** **03 00 10.7 0.0**
comp=Z,1.9nm,0.6s
DAVA Damuels 107.92 317 *e*PKiKP **PKiKP** **03 00 12.1 +0.3**
comp=Z,3.4nm,0.4s
KEST Kesra 109.48 305 PKiKP **PKiKP** **03 00 16.1 +1.2**
comp=Z,1.4nm,0.5s,baz=132,slow=3.2,SNR=5.5
YKA Yellowknife Ar 114.02 24 PKiKP PKPdf 03 00 22.3 -0.3
comp=Z,1.6nm,0.5s,baz=307,slow=1.5,SNR=58
YKA SKP **SKPdf** **03 03 34.8 -1.0**
comp=Z,2.5nm,0.7s,baz=304,slow=1.6,SNR=10
YKA SKKPbc **SKKPbc** **03 14 26.6 -4.3**
comp=Z,0.6nm,0.9s,baz=125,slow=2.8,SNR=5.2
B05A Bryant 116.07 40 P **PKPdf** **03 00 26.4 -0.5**
baz=288
TOA0 Torodi Ar. Sit 116.89 281 **PKPdf** **03 00 28.9 -0.5**
TORD Torodi Ar. Bea 116.89 281 PKP **PKPdf** **03 00 28.5 -1.0**
comp=Z,21nm,0.5s,baz=76,slow=1.7,SNR=226
TORD SKP **SKPdf** **03 03 42.9 +0.2**
comp=Z,1.7nm,0.5s,baz=91,slow=1.9,SNR=8.3
M02C Callahan 117.45 47 P **PKiKP** **03 00 31.4 +1.4**
baz=284
J04D Umpqua Nationa 117.51 45 P **PKiKP** **03 00 31.5 +1.3**
baz=286
J05D Fort Rock, OR 118.11 45 P **PKiKP** **03 00 32.6 +1.3**
baz=286
O03E Paynes Creek 118.50 48 P **PKiKP** **03 00 32.4 +0.3**
baz=284
SESP Santiago Espad 118.56 309 P **PKiKP** **03 00 33.0 +0.7**
SNR=8.9
NEW Newport 119.19 39 P **PKiKP** **03 00 34.1 +1.0**
baz=292
ESDC Sonseca Array 119.27 311 PKP **PKiKP** **03 00 33.7 +0.2**
comp=Z,2.6nm,0.5s,baz=27,slow=2.7,SNR=32
ESDC SKP **SKPdf** **03 03 46.2 -0.6**
comp=Z,1.4nm,1.1s,baz=29,slow=3.0,SNR=7.4
PAB San Pablo 119.59 311 **PKiKP** **03 00 34.7 +0.5**
BMO Blue Mountains 120.31 42 **PKPdf** **03 00 35.4 0.0**
PBRG Braganca 120.70 314 *e*PKPdf **PKiKP** **03 00 36.5 +0.2**
HORN Hornachuelos 120.71 309 P **PKiKP** **03 00 36.6 +0.3**
SNR=7.7
MVO Moncorvo 121.10 313 *e*PKPdf **PKiKP** **03 00 38.1 +1.0**
MDT Midelt 121.31 303 P **PKiKP** **03 00 38.4 +0.6**
SNR=6.5
PVRL Vila Real 121.56 314 *e*PKPdf **PKiKP** **03 00 39.1 +1.1**
NVAR Mina Array Bea 121.60 50 PKP **PKiKP** **03 00 38.9 +0.6**
comp=Z,3.2nm,0.7s,baz=251,slow=1.7,SNR=16
NVAR pPKP **pPKPdf** **03 01 38.1 +0.8**
comp=Z,2.1nm,0.7s,baz=243,slow=2.4,SNR=4.4
NVAR SKP **SKPdf** **03 03 50.8 -0.7**
comp=Z,0.8nm,0.7s,baz=218,slow=2.3,SNR=3.7
NVAR PKKPab **PKKPbc** **03 10 41.1 +1.4**
comp=Z,2.4nm,0.7s,baz=136,slow=4.9,SNR=11
PCAB Cabril 121.64 314 *e*PKPdf **PKiKP** **03 00 38.5 +0.4**
MTE Manteigas 121.71 313 *e*PKPdf **PKiKP** **03 00 39.2 +0.9**

NV11	Mina Array Sit	121.71	50			PKiKP	03 00 39.0	+0.5	
PGAV	Gavieira, Arco	121.73	315		ePKPdf	PKiKP	03 00 38.5	+0.1	
MSO	Missoula	121.73	39	P		PKiKP	03 00 38.7	+0.5	
	baz=294								
PCBR	Castelo Branco	121.83	312		ePKPdf	PKiKP	03 00 38.6	+0.1	
PVIS	Viseu	121.86	313		ePKPdf	PKiKP	03 00 39.5	+0.9	
PMRV	Marv??o	121.89	312		ePKPdf	PKiKP	03 00 39.2	+0.6	
ISA	Isabella, Lake	122.18	53	P		PKiKP	03 00 40.5	+1.1	
	baz=284								
CWC	Cottonwood Cre	122.30	52	P		PKiKP	03 00 40.9	+1.1	
	baz=285								
TZRR	Tazzarine	122.49	301	P		PKiKP	03 00 41.2	+1.0	
	SNR=12								
PCAS	Casmilo, Conde	122.51	313		ePKPdf	PKiKP	03 00 40.3	+0.5	
PMTG	Montargil	122.61	311		ePKPdf	PKiKP	03 00 40.1	+0.1	
PBEJ	Beja	122.65	310		ePKPdf	PKiKP	03 00 41.0	+0.8	
ZGR	Zagora	122.65	301	P		PKiKP	03 00 42.0	+1.4	
	SNR=10								
GRAC	Grapevine Rang	122.70	51	P		PKiKP	03 00 42.0	+1.6	
	baz=286								
PVAQ	Vaqueiros	122.71	309		ePKPdf	PKiKP	03 00 41.2	+0.9	
KIC	Kosan Boka	122.75	272		ePKIKP	PKiKP	03 00 41.3	+0.3	
	comp=Z,42nm,0.7s								
EDW2	Edwards Air Fo	122.75	54	P		PKPdf	03 00 38.9	-1.4	
	baz=284								
MPMC	Manual Prospec	122.86	52	P		PKPdf	03 00 40.5	-0.2	
	baz=285,SNR=5.4								
PCVE	Castro Verde	122.89	310		ePKPdf	PKiKP	03 00 41.8	+1.2	
DBIC	Dimbokro	122.89	273	PKP		PKiKP	03 00 41.6	+0.3	
	comp=Z,22nm,0.6s,baz=70,slow=2.1,SNR=35								
PSBE	So Bento	122.90	312		ePKPdf	PKiKP	03 00 41.5	+0.9	
PBDV	Barranco-do-Ve	122.92	309		ePKPdf	PKiKP	03 00 41.6	+0.9	
MESJ	Messejana	122.97	310		ePKPdf	PKPdf	03 00 40.4	-0.1	
MESJ	Messejana	122.97	310		ePKPdf	PKiKP	03 00 41.5	+0.7	
LIC	Lamto	123.02	272		ePKIKP	PKiKP	03 00 41.7	+0.1	
	comp=Z,76nm,0.6s								
TIC	Toumodi	123.05	273		ePKIKP	PKiKP	03 00 41.7	+0.1	
LRM	Limekiln Ridge	123.09	40			PKiKP	03 00 41.4	+0.2	
PNCL	Nicolau / Gran	123.12	310		ePKPdf	PKiKP	03 00 42.0	+0.9	
FURC	Furnace Creek,	123.24	52	P		PKiKP	03 00 43.5	+2.2	
	baz=286								
MORF	Marmelete	123.45	310		ePKPdf	PKPdf	03 00 41.4	-0.1	
TPNV	Topopah Spring	123.58	51	P		PKiKP	03 00 43.3	+1.1	
	baz=287								
GSC	Goldstone, Bar	123.59	53	P		PKiKP	03 00 43.8	+1.6	
	baz=285								
PFVI	Vila Bisbo	123.64	309		ePKPdf	PKiKP	03 00 42.9	+0.8	
R11A	Troy Canyon, C	123.67	49	P		PKiKP	03 00 43.7	+1.3	
	baz=288,SNR=7.9								
MURC	Murrieta	123.70	55	P		PKiKP	03 00 43.6	+1.2	
	baz=284								
EGMT	Eagleton	123.74	36	P		PKiKP	03 00 42.7	+0.6	
	baz=299								
FFC	Flin Flon	123.92	26			PKiKP	03 00 42.6	+0.4	
PFO	Pinyon Flats O	124.29	55	P		PKiKP	03 00 45.2	+1.4	
	baz=284								
PFO	Pinyon Flats O	124.29	55			PKiKP	03 00 44.4	+0.6	
XPFO	Pion Flat	124.30	55			PKiKP	03 00 44.0	+0.3	
MONP2	Monument Peak	124.50	56	P		PKiKP	03 00 45.6	+1.3	
	baz=284								
SHPR	Sheep Range	124.54	51			PKiKP	03 00 45.4	+1.2	
BELC	Belle Mtn. Jos	124.57	54	P		PKiKP	03 00 44.9	+0.6	
	baz=285,SNR=7.0								
GMRC	Granite Mounta	124.63	53	P		PKiKP	03 00 46.2	+1.8	
	baz=286,SNR=9.4								
IKP	In-Ko-Pah, Jac	124.81	56	P		PKiKP	03 00 46.0	+1.3	
	baz=284								
H17A	Grant Village	124.91	41	P		PKiKP	03 00 47.0	+2.2	
	baz=296								
DUG	Dugway, Tooele	125.07	46	P		PKiKP	03 00 46.6	+1.5	
	baz=291								
DUG	Dugway, Tooele	125.07	46			PKiKP	03 00 46.1	+1.0	
BC3	Big Chuckawall	125.09	54	P		PKiKP	03 00 46.9	+1.7	
	baz=285								
IRM	Iron Mountain	125.21	54	P		PKiKP	03 00 47.4	+2.0	
	baz=286								
RLMT	Red Lodge	125.41	39	P		PKiKP	03 00 46.7	+1.0	
	baz=298								
NRS	Narsarsuaq	125.61	350			PKPdf	03 00 45.0	+0.1	
Y12C	Blythe	125.82	54	P		PKiKP	03 00 48.3	+1.8	
	baz=286								
BW06	Boulder Array	126.28	42	P		PKiKP	03 00 47.7	+0.1	
	baz=296								
PDAR	Pinedale Array	126.28	42	PKP		PKPdf	03 00 47.3	+0.2	
	comp=Z,1.3nm,0.8s,baz=215,slow=1.8,SNR=12								
PDAR					PKKPab	PKKPab	03 10 20.5	+1.3	
	comp=Z,0.3nm,0.5s,baz=125,slow=6.6,SNR=4.8								
PDAR					SKKPbc	SKKPbc	03 13 49.0	-1.9	
	comp=Z,1.0nm,0.7s,baz=118,slow=6.1,SNR=9.4								
LAO	LASA Array	126.48	36	P		PKiKP	03 00 49.0	+1.4	
	baz=302								
SRU	San Rafael Swe	127.12	47			PKiKP	03 00 49.0	-0.2	
214A	Organ Pipe Nat	127.69	56	P		PKiKP	03 00 51.8	+1.4	
	baz=286								
WUAZ	Wupatki	127.77	51	P		PKiKP	03 00 51.9	+1.3	
	baz=289								
O20A	White River Ci	128.31	44	P		PKiKP	03 00 52.7	+1.0	
	baz=295								
K22A	Casper	128.33	41	P		PKiKP	03 00 51.8	+0.2	
	baz=299								
RSSD	Black Hills	129.15	38	P		PKiKP	03 00 53.4	+0.2	
	baz=302								
RSSD	Black Hills	129.15	38			PKiKP	03 00 53.2	0.0	
TUC	Tucson	129.24	55	P		PKiKP	03 00 54.7	+1.2	
	baz=287								
MVCO	Mesa Verde	129.32	48	P		PKiKP	03 00 55.3	+1.5	
	baz=293								
ULM	Lac du Bonnet	129.70	27	PKP		PKPdf	03 00 53.3	+0.3	
	comp=Z,3.5nm,0.9s,baz=262,slow=1.8,SNR=4.6								
ULM					SKPbc	SKPab	03 03 51.7	-1.3	
	comp=Z,6.3nm,0.5s,baz=278,slow=4.3,SNR=9.2								
ISCO	Idaho Springs	130.27	44	P		PKiKP	03 00 55.4	-0.4	
	baz=298								
ISCO	Idaho Springs	130.27	44			PKiKP	03 00 56.8	+1.0	
S22A	4UR Ranch, Cre	130.32	47	P		PKiKP	03 00 56.6	+0.7	
	baz=295								
S22A					S	SKPbc	03 03 56.4	+0.1	
	baz=295,SNR=13								
PLCA	Paso Flores	130.78	172	PKP		PKiKP	03 00 57.8	+1.4	
	comp=Z,4.4nm,0.6s,baz=177,slow=2.7,SNR=18								
PLCA					SKPbc	SKPab	03 03 58.3	+0.4	
	comp=Z,21nm,1.1s,baz=190,slow=5.0,SNR=14								
AGMN	Agassiz Nation	131.07	29	S		SKPbc	03 03 57.2	-1.2	
	baz=314,SNR=10.0								
ANMO	Albuquerque	131.73	50	P		PKiKP	03 00 59.2	+0.6	
	baz=293								
ANMO	Albuquerque	131.73	50			PKiKP	03 00 59.4	+0.7	
T25A	Trinidad	132.32	46	P		PKiKP	03 00 59.9	+0.1	
	baz=297								
SCHQ	Schefferville	133.33	3	PKP		PKiKP	03 01 00.7	-0.3	
	comp=Z,7.2nm,0.6s,baz=41,slow=2.3,SNR=12								
SCHQ					SKPbc	SKPbc	03 04 05.2	-0.8	
	comp=Z,24nm,1.1s,baz=24,slow=4.6,SNR=18								
SCHQ	Schefferville	133.33	3			PKiKP	03 01 00.5	-0.6	
SCHQ						SKPbc	03 04 05.8	-0.2	
ECSD	EROS Data Cent	133.72	34	P		PKPdf	03 01 01.3	+0.4	
	baz=310								
MNTX	Cornudas Mount	133.77	53	P		PKiKP	03 01 02.6	0.0	
	baz=291,SNR=12								
BI02	San Fabin de	134.65	170			PKPdf	03 01 03.7	+0.7	
MSTX	Muleshoe	134.90	49	P		PKiKP	03 01 04.5	-0.5	
	baz=295								
TXAR	Lajitas Array	135.99	56	PKhKP		PKPpre	03 00 55.9		
	comp=Z,0.8nm,0.9s,baz=225,slow=3.8,SNR=7.5								
TXAR				PKP		PKiKP	03 01 07.6	+0.3	
	comp=Z,3.0nm,0.9s,baz=242,slow=2.3,SNR=17								
TXAR				pPKP		pPKPdf	03 02 06.2	+1.0	
	comp=Z,1.5nm,0.9s,baz=182,slow=1.8,SNR=2.5								
TXAR				SKPbc		SKPbc	03 04 15.5	+0.1	
	comp=Z,5.0nm,0.8s,baz=267,slow=2.3,SNR=20								
TXAR				SKPab		SKPab	03 04 20.7	-0.3	
	comp=Z,6.3nm,1.1s,baz=286,slow=1.9,SNR=5.2								
TXAR				SKKPbc		SKKPbc	03 13 15.6	+0.4	
	comp=Z,1.1nm,0.7s,baz=126,slow=6.2,SNR=11								
KSU1	Kansas State U	136.57	39	P		PKPdf	03 01 06.0	-0.3	
	baz=306								
MATQ	Matagami	136.64	14	P		PKPdf	03 01 05.7	-0.4	
	baz=338								
CHGQ	Chibougamau	137.22	11	P		PKPdf	03 01 07.2	0.0	
	baz=342								
MT02	Curacav	137.99	169			PKPdf	03 01 08.9	-0.3	
D50A	G1974 Best Tow	138.40	18	P		PKPdf	03 01 09.0	-0.4	
	baz=334								
JCT	Junction City	138.66	52	P		PKPdf	03 01 08.7	-1.8	
	baz=295								
E50A	Wahnapitae	138.78	19	P		PKPdf	03 01 09.5	-0.6	
	baz=332								
E51A	G1948 Merrick	139.08	18	P		PKPdf	03 01 08.7	-2.0	
	baz=334								
D54A	Lac Fusel, La	139.31	15	P		PKPdf	03 01 10.9	-0.2	
	baz=338								
833A	Chaparral WMA,	139.84	55	P		PKPdf	03 01 13.2	+0.5	
	baz=293								
D56A	ZEC Mazanza, M	139.86	13	P		PKPdf	03 01 09.7	-2.4	
	baz=341								
D58A	Chemin du LacG	140.20	11	P		PKPdf	03 01 10.8	-1.9	
	baz=344								
CCM	Cathedral Cave	140.50	37	P		PKPdf	03 01 06.3	-7.2	
	baz=312								
CCM	Cathedral Cave	140.50	37			PKPdf	03 01 06.4	-7.2	
U40A	Yellville	140.59	40	P		PKPdf	03 01 07.1	-6.7	
	baz=308								
W39A	Magazine	140.68	42			PKPdf	03 01 13.9	-0.1	
E58A	La Victoria	140.81	12	P		PKPdf	03 01 06.3	-7.5	
	baz=343								
D62A	Allapoint, All	140.82	7	P		PKPdf	03 01 07.3	-6.5	
	baz=350								
D63A	Stockholm	140.97	6	P		PKPdf	03 01 07.0	-7.0	
	baz=351								
MIAR	Mount Ida	141.20	43	P		PKPdf	03 01 10.0	-4.9	
	baz=305								
E61A	Lac Etchemin	141.25	9	P		PKPdf	03 01 09.0	-5.7	
	baz=347								
N47A	Urbana	141.43	29	P		PKPdf	03 01 08.2	-6.9	
	baz=321								
F60A	Warwick	141.46	11	P		PKPdf	03 01 10.2	-4.8	
	baz=345								
E64A	Bridgewater	141.61	6	P		PKPdf	03 01 09.4	-5.9	
	baz=351								
F61A	St Evariste	141.62	10	P		PKPdf	03 01 10.8	-4.5	
	baz=346,SNR=5.4								
W41B	Gary Mavity, V	141.71	41	P		PKPdf	03 01 10.7	-5.1	
	baz=308								
N48A	Chetur	141.76	28	P		PKPdf	03 01 09.7	-6.0	
	baz=322								
N49A	Columbus Grove	142.09	27	P		PKPdf	03 01 11.6	-4.7	
	baz=324								
F64A	Sherman	142.10	7	P		PKPdf	03 01 12.0	-4.2	
	baz=350								
F63A	Nahmakanta, Br	142.16	8	P		PKPdf	03 01 13.5	-2.8	
	baz=349								
O48A	Farmland	142.17	29	P		PKPdf	03 01 11.8	-4.7	
	baz=322								
G61A	St-Isidore-de-	142.20	10	P		PKPdf	03 01 12.2	-4.1	
	baz=345								
G62A	West of Eustis	142.43	9	P		PKPdf	03 01 13.1	-3.7	
	baz=347								
PKME	Peaks-Kenny Pk	142.57	8	P		PKPdf	03 01 13.6	-3.4	
	baz=349								
G64A	Maxfield	142.65	7	P		PKPdf	03 01 14.0	-3.1	
	baz=350								
H60A	Morristown	142.67	12	P		PKPdf	03 01 14.4	-2.9	
	baz=343								
G63A	Kingsbury	142.67	8	P		PKPdf	03 01 14.5	-2.7	
	baz=348								
N50A	Nevada	142.68	26	P		PKPdf	03 01 15.6	-1.8	
	baz=325								
K54A	Basiliko Farm,	142.84	20	P		PKPdf	03 01 14.0	-3.6	
	baz=333								
G65A	Princeton	142.84	6	P		PKPdf	03 01 14.3	-3.1	
	baz=352								
H61A	Lyndonville	142.85	11	P		PKPdf	03 01 14.9	-2.7	
	baz=344,SNR=5.6								
GBN	Guysborough	142.89	359			PKPdf	03 01 15.7	-1.9	
K55A	Perry	142.94	19	P		PKPdf	03 01 15.6	-2.2	
	baz=334								
P49A	Miami Univ. Ec	142.94	29	P		PKPdf	03 01 14.2	-3.7	
	baz=322								
H62A	Milan	142.95	10	P		PKPdf	03 01 14.8	-3.0	
	baz=346								
L54A	Sinclairville	142.95	21	P		PKPdf	03 01 14.1	-3.7	
	baz=332								
I58A	Old Forge	142.96	15	P		PKPdf	03 01 14.6	-3.2	
	baz=339								
O50A	Cable	142.97	27	P		PKPdf	03 01 16.4	-1.5	
	baz=324								
H63A	New Sharon	143.05	9	P		PKPbc	03 01 15.6	+0.3	
	baz=348,SNR=5.6								
LBNH	Lisbon	143.13	11	P		PKPbc	03 01 15.7	0.0	
	baz=344								
I59A	Olmsteadville	143.13	14	P		PKPbc	03 01 15.2	-0.5	
	baz=341								
M53A	WI Miller and	143.14	23	P		PKPbc	03 01 16.4	+0.7	
	baz=329								
WCI	Wyandotte Cave	143.15	32	P		PKPbc	03 01 15.3	-0.6	
	baz=318								
J58A	Remsen	143.19	16	P		PKPbc	03 01 15.7	-0.1	
	baz=338								
ACSO	Alum Creek Sta	143.19	27	P		PKPbc	03 01 15.5	-0.4	
	baz=325								
H64A	Troy	143.19	8	P		PKPab	03 01 14.4	+0.2	
	baz=349								
H65A	Eastbrook	143.26	7	P		PKPbc	03 01 15.4	-0.5	
	baz=350								
H66A	Whiting	143.28	6	P		PKPbc	03 01 16.0	0.0	
	baz=352								
J59A	Piesco	143.29	15	P		PKPab	03 01 15.3	+0.5	
	baz=340								
L55A	Hinsdale	143.30	20	P		PKPbc	03 01 15.9	-0.3	
	baz=333								
P50A	Jamestown	143.32	28	P		PKPbc	03 01 16.0	-0.3	
	baz=323,SNR=8.8								
I61A	Oroboro, Fairl	143.37	12	P		PKPbc	03 01 16.9	+0.6	
	baz=344								
K57A	Scipio Center	143.42	17	P		PKPbc	03 01 16.4	-0.1	
	baz=336								
O51A	Pataskala	143.43	26	P		PKPbc	03 01 16.1	-0.4	
	baz=325,SNR=6.7								
M54A	Oil Creek Stat	143.46	22	P		PKPab	03 01 15.6	+0.1	
	baz=331,SNR=7.9								
I63A	Otisfield	143.56	10	P		PKPab	03 01 16.0	+0.2	
	baz=346,SNR=5.6								
I62A	Tamworth	143.59	11	P		PKPbc	03 01 16.8	-0.1	
	baz=345								
N53A	Lisbon	143.62	24	P		PKPbc	03 01 17.2	+0.1	
	baz=328								
L56A	Greenwood	143.64	19	P		PKPab	03 01 16.6	+0.4	
	baz=334								
K58A	Earlville	143.64	16	P		PKPbc	03 01 17.2	+0.1	
	baz=338,SNR=5.1								
O52A	Adamsville	143.78	25	P		PKPab	03 01 17.2	+0.4	
	baz=326,SNR=5.6								
WVT	Waverly	143.81	36	P		PKPbc	03 01 17.5	-0.3	
	baz=314								
N54A	Moraine State	143.81	23	P		PKPbc	03 01 17.4	-0.2	
	baz=330,SNR=5.5								
M55A	Ridgway	143.82	21	P		PKPbc	03 01 17.4	-0.2	
	baz=332,SNR=7.5								
I64A	Boothbay	143.84	9	P		PKPab	03 01 17.1	+0.3	
	baz=348								
K59A	Cooperstown	143.85	16	P		PKPab	03 01 17.3	+0.3	
	baz=339								
J61A	Chester	143.86	13	P		PKPbc	03 01 18.1	+0.4	
	baz=343,SNR=6.0								
O53A	New Philadelph	143.93	25	P		PKPbc	03 01 17.8	-0.2	
	baz=327								
OXF	Oxford	143.94	39	P		PKPab	03 01 17.3	-0.3	
	baz=310								
L57A	Andrews Acres	143.98	18	P		PKPbc	03 01 18.1	-0.1	
	baz=335,SNR=8.6								
Q51A	Peebles	144.00	28	P		PKPab	03 01 17.6	-0.1	
	baz=323,SNR=13								
M56A	Emporium	144.01	20	P		PKPab	03 01 17.1	-0.6	
	baz=333,SNR=10								
P52A	Corning	144.05	26	P		PKPab	03 01 17.8	-0.1	
	baz=326,SNR=12								
BINY	Binghamton	144.06	17	P		PKPbc	03 01 18.2	-0.2	
	baz=337,SNR=6.4								
BINY	Binghamton	144.06	17			PKPab	03 01 17.8	0.0	
J62A	Henniker	144.13	12	P		PKPdf	03 01 19.3	-0.6	
	baz=344,SNR=8.2								
J63A	Strafford	144.22	11	P		PKPab	03 01 18.3	0.0	
	baz=345,SNR=8.8								
K60A	Five Rivers En	144.24	14	P		PKPdf	03 01 19.6	-0.4	
	baz=340								
L58A	Harry Jones Me	144.25	17	P		PKPbc	03 01 19.3	+0.4	
	baz=337,SNR=11								
O54A	Avella	144.33	24	P		PKPbc	03 01 19.1	-0.1	
	baz=329,SNR=11								
L59A	Walton	144.34	16	P		PKPbc	03 01 19.3	+0.1	
	baz=338,SNR=11								
K61A	Williamstown	144.34	14	P		PKPdf	03 01 19.8	-0.4	
	baz=342,SNR=8.9								
N55A	Marion Center	144.35	22	P		PKPbc	03 01 19.2	-0.1	
	baz=331,SNR=10								
PLAL	Pickwick Lake	144.45	38			PKPab	03 01 19.2	-0.3	
N56A	West Decatur	144.47	21	P		PKPbc	03 01 19.7	0.0	
	baz=332,SNR=11								
M57A	Sunshine Farm,	144.50	19	P		PKPab	03 01 19.1	-0.4	
	baz=334,SNR=30								
P53A	Whipple	144.50	26	P		PKPab	03 01 19.1	-0.5	
	baz=326,SNR=26								
Q52A	Bidwell	144.54	27	P		PKPab	03 01 18.7	-1.0	
	baz=325,SNR=18								
K62A	Royalston	144.58	12	P		PKPab	03 01 19.5	-0.2	
	baz=343								
VBMS	Vicksburg	144.63	44	P		PKPdf	03 01 20.8	-0.2	
	baz=307,SNR=12								
M58A	Price's Panora	144.68	18	P		PKPab	03 01 19.2	-1.0	
	baz=336,SNR=20								
L61B	Northampton	144.69	13	P		PKPab	03 01 19.2	-0.9	
	baz=342,SNR=11								
K63A	Dunstable	144.70	12	P		PKPab	03 01 19.8	-0.4	
	baz=344,SNR=17								
L61A	Hillsdale 1, H	144.72	14	P		PKPdf	03 01 20.8	-0.1	
	baz=341								
O55A	Ligonier	144.73	23	P		PKPab	03 01 19.4	-1.0	
	baz=330,SNR=12								
L60A	Shokan	144.75	15	P		PKPab	03 01 19.8	-0.6	
	baz=340,SNR=7.2								
P54A	Burton	144.78	24	P		PKPbc	03 01 19.9	-0.8	
	baz=328,SNR=38								
M59A	Waymart	144.83	17	P		PKPbc	03 01 19.8	-0.9	
	baz=337,SNR=14								
SSPA	Standing Stone	144.87	21	P		PKPbc	03 01 19.7	-1.2	
	baz=333								
SSPA	Standing Stone	144.87	21			PKPbc	03 01 20.6	-0.2	
HRV	Adam Dziewonsk	144.87	12	P		PKPbc	03 01 20.1	-0.6	
	baz=344								
HRV	Adam Dziewonsk	144.87	12			PKPbc	03 01 20.5	-0.2	
N57A	Milroy	144.88	20	P		PKPbc	03 01 19.8	-1.1	
	baz=334,SNR=23								
O56A	Blue Knob Stat	144.95	22	P		PKPbc	03 01 20.1	-1.1	
	baz=332,SNR=17								
Q53A	Leroy	144.96	26	P		PKPbc	03 01 20.2	-0.9	
	baz=326,SNR=25								
MCWV	Mont Chateau	144.99	24	P		PKPbc	03 01 20.5	-0.8	
	baz=329,SNR=23								
WES	Weston	145.03	11			PKPbc	03 01 20.2	-1.1	
N58A	Sunbury	145.08	19	P		PKPbc	03 01 20.4	-1.1	
	baz=335,SNR=24								
L62A	Suffield	145.09	13	P		PKPbc	03 01 21.0	-0.4	
	baz=342,SNR=5.6								
P55A	Reedsville	145.13	24	P		PKPdf	03 01 21.7	0.0	
	baz=329,SNR=25								
Q54A	Coxs Mills	145.15	25	P		PKPbc	03 01 21.9	+0.2	
	baz=327,SNR=37								
R53A	Hurricane	145.20	27	P		PKPab	03 01 22.1	-0.1	
	baz=325,SNR=14								
M60A	Port Jervis	145.26	16	P		PKPdf	03 01 21.1	-0.8	
	baz=339,SNR=22								
N59A	State Game Lan	145.30	18	P		PKPdf	03 01 21.5	-0.4	
	baz=336,SNR=46								
O57A	Amberson	145.33	21	P		PKPdf	03 01 21.6	-0.4	
	baz=333,SNR=16								
CPUP	Villa Florida	145.35	188	PKPbc		PKPab	03 01 24.0	+0.9	
	comp=Z,39nm,0.7s,baz=168,slow=1.7,SNR=89								
CPUP				pPKPbc	pPKPab		03 02 20.9	-0.3	
	comp=Z,13nm,0.7s,baz=158,slow=2.4,SNR=2.7								
CPUP				SKPbc		SKiKP	03 04 40.7	+0.2	
	comp=Z,22nm,0.8s,baz=166,slow=1.6,SNR=13								
CPUP	Villa Florida	145.35	188			PKPab	03 01 23.3	+0.2	
Q55A	Buckhannon	145.46	25	P		PKPdf	03 01 22.4	+0.1	
	baz=328,SNR=26								
L63A	North Scituate	145.48	12	P		PKPdf	03 01 22.1	-0.1	
	baz=344,SNR=6.4								
ODNJ	Ogdensburg	145.49	16			PKPdf	03 01 22.3	+0.1	
M61A	Granite Spring	145.50	15	P		PKPdf	03 01 22.3	+0.1	
	baz=340,SNR=25								
P56A	Dayton Farm, R	145.51	23	P		PKPbc	03 01 22.9	0.0	
	baz=331,SNR=32								
N60A	Cedar Hill Far	145.54	17	P		PKPdf	03 01 22.3	0.0	
	baz=338,SNR=23								
L64A	Middleborough	145.56	11	P		PKPbc	03 01 22.9	0.0	
	baz=345								
M62A	Hamden	145.59	14	P		PKPdf	03 01 22.7	+0.3	
	baz=342								
O58A	Lewisberry	145.66	20	P		PKPdf	03 01 22.9	+0.4	
	baz=334,SNR=20								
O59A	Robesonia	145.73	19	P		PKPbc	03 01 23.4	-0.1	
	baz=335,SNR=18								
PAL	Palisades	145.75	15	P		PKPbc	03 01 23.2	-0.3	
	baz=340,SNR=22								
R54A	Victor	145.75	26	P		PKPbc	03 01 23.5	-0.2	
	baz=326,SNR=10								
Q56A	Snyder Ridge,	145.78	23	P		PKPdf	03 01 23.1	+0.3	
	baz=330,SNR=15								
M63A	Gales Ferry	145.82	13	P		PKPbc	03 01 23.8	+0.1	
	baz=343								
P57A	Homestead

PB10	**IPOC Station P**	**147.54**	**166**	PKPdf	**PKPdf**	**03 01 25.8**	**-0.5**
PB10				PKPbc	**PKiKP**	**03 01 31.4**	**+0.3**
U56A	**King**	**147.54**	**28**	P	**PKPbc**	**03 01 28.4**	**-0.3**
	baz=326,SNR=7.0						
V55A	**Taylorsville**	**147.55**	**29**	P	**PKPbc**	**03 01 27.8**	**-1.0**
	baz=324,SNR=12						
Y52A	**Lilburn**	**147.59**	**35**	P	**PKPbc**	**03 01 28.4**	**-0.5**
	baz=317,SNR=16						
Y52A	**Lilburn**	**147.59**	**35**	PKPbc	**PKPbc**	**03 01 28.0**	**-1.0**
S59A	**Mechanicsville**	**147.62**	**22**	P	**PKPbc**	**03 01 28.4**	**-0.4**
	baz=332,SNR=11						
W54A	**Cherokee Point**	**147.68**	**31**	P	**PKPdf**	**03 01 26.9**	**+0.8**
	baz=322,SNR=6.7						
T58A	**Grand View Acr**	**147.84**	**25**	P	**PKPbc**	**03 01 28.8**	**-0.8**
	baz=329,SNR=8.7						
S60A	**Water View**	**147.91**	**21**	P	**PKPbc**	**03 01 29.2**	**-0.4**
	baz=333,SNR=5.3						
V56A	**Mocksville**	**147.93**	**28**	P	**PKPbc**	**03 01 29.1**	**-0.7**
	baz=325,SNR=7.1						
U57A	**Blanch**	**147.94**	**26**	P	**PKPbc**	**03 01 29.8**	**0.0**
	baz=327,SNR=12						
X54A	**Belton**	**147.99**	**32**	P	**PKPdf**	**03 01 27.3**	**+0.7**
	baz=321,SNR=14						
KMSC	**Kings Mountain**	**148.06**	**30**	P	**PKPdf**	**03 01 28.0**	**+1.2**
	baz=323,SNR=9.2						
V57A	**Coltrane Farms**	**148.19**	**27**	P	**PKPdf**	**03 01 27.9**	**+1.0**
	baz=326,SNR=8.7						
T59A	**Double "B" Far**	**148.21**	**23**	P	**PKPdf**	**03 01 28.3**	**+1.4**
	baz=331,SNR=16						
GOGA	**Godfrey**	**148.25**	**35**	P	**PKPdf**	**03 01 28.7**	**+1.6**
	baz=318,SNR=7.7						
U58A	**Oxford**	**148.31**	**25**	P	**PKPbc**	**03 01 30.6**	**-0.1**
	baz=329,SNR=13						
T60A	**Surry**	**148.38**	**22**	P	**PKPbc**	**03 01 30.2**	**-0.6**
	baz=332,SNR=8.7						
W56A	**Indian Trail**	**148.43**	**29**	P	**PKPbc**	**03 01 31.2**	**+0.1**
	baz=324,SNR=7.6						
X55A	**Gracelyn & Ava**	**148.44**	**31**	P	**PKPdf**	**03 01 28.6**	**+1.3**
	baz=322,SNR=6.8						
PB06	**IPOC Station P**	**148.54**	**167**		**PKPdf**	**03 01 28.6**	**+0.6**
PB06				PKPbc	**PKiKP**	**03 01 34.3**	**+0.9**
V58A	**Windy Hill, Pi**	**148.57**	**27**	P	**PKPbc**	**03 01 31.3**	**-0.2**
	baz=327,SNR=8.6						
U59A	**Littleton**	**148.66**	**24**	P	**PKPbc**	**03 01 30.4**	**-1.2**
	baz=330						
W57A	**Gilead**	**148.70**	**28**	P	**PKPbc**	**03 01 31.7**	**-0.1**
	baz=325,SNR=9.0						
W57A	**Gilead**	**148.70**	**28**		**PKPbc**	**03 01 31.6**	**-0.2**
X56A	**White Oak**	**148.73**	**30**	P	**PKPbc**	**03 01 32.1**	**+0.3**
	baz=323						
Y55A	**Saluda**	**148.74**	**32**	P	**PKPbc**	**03 01 32.2**	**+0.2**
	baz=321,SNR=7.3						
U60A	**Pendleton**	**148.80**	**23**	P	**PKPbc**	**03 01 30.8**	**-1.1**
	baz=331,SNR=6.5						
V59A	**Middlesex**	**148.97**	**25**	P	**PKPdf**	**03 01 28.8**	**+0.6**
	baz=329,SNR=7.8						
W58A	**Raeford**	**149.16**	**28**	P	**PKPbc**	**03 01 31.0**	**-1.9**
	baz=326,SNR=7.3						
U61A	**Possum Corner**	**149.20**	**22**	P	**PKPbc**	**03 01 32.3**	**-0.7**
	baz=332						
X57A	**Johnson Farm,**	**149.21**	**29**	P	**PKPbc**	**03 01 33.5**	**+0.4**
	baz=324						
Z56A	**Williston**	**149.47**	**32**	P	**PKPbc**	**03 01 33.2**	**-0.5**
	baz=321						
X58A	**Rowland**	**149.50**	**28**	P	**PKPbc**	**03 01 33.9**	**+0.1**
	baz=326						
TIGA	**Tifton**	**149.61**	**38**	P	**PKPbc**	**03 01 33.8**	**-0.3**
	baz=315						
W60A	**Pink Hill**	**149.80**	**25**	P	**PKPbc**	**03 01 34.6**	**+0.1**
	baz=329						
X59A	**McDuffie Farm,**	**149.82**	**27**	P	**PKPbc**	**03 01 34.5**	**-0.1**
	baz=327						
Z57A	**Bowman**	**149.84**	**31**	P	**PKiKP**	**03 01 35.2**	**-0.2**
	baz=322						
Y58A	**Scranton**	**149.87**	**29**	P	**PKiKP**	**03 01 35.2**	**-0.3**
	baz=324						
CCIG	**Comitan**	**149.93**	**72**		**PKPbc**	**03 01 35.6**	**+0.1**
X60A	**Albert Glenn T**	**150.09**	**26**	P	**PKPbc**	**03 01 35.6**	**+0.4**
	baz=328						
157A	**Early Branch**	**150.16**	**33**	P	**PKPdf**	**03 01 30.5**	**+0.4**
	baz=321						
NHSC	**New Hope**	**150.26**	**31**	P	**PKPbc**	**03 01 33.2**	**-2.5**
	baz=323						
Z58A	**St. Stephen**	**150.26**	**30**	P	**PKPbc**	**03 01 35.6**	**-0.1**
	baz=324						
PSGCX	**Pisagua**	**151.40**	**165**		**PKiKP**	**03 01 39.8**	**+0.6**
BDFB	**Brasília**	**152.35**	**211**	PKP	**PKPdf**	**03 01 35.3**	**+1.2**
	comp=Z,6.5nm,0.8s,baz=102,slow=1.7,SNR=9.7						
BDFB				PKPbc	**PKiKP**	**03 01 42.5**	**+1.2**
	comp=Z,22nm,0.7s,baz=140,slow=2.5,SNR=27						
BDFB	**Brasília**	**152.35**	**211**		**PKPdf**	**03 01 33.4**	**-0.6**
BDFB					**PKiKP**	**03 01 41.5**	**+0.2**
LPAZ	**La Paz**	**155.06**	**167**		**PKPdf**	**03 01 37.3**	**-1.3**
SAML	**Samuel**	**162.98**	**178**		**PKPdf**	**03 01 46.9**	**-0.1**
SAML				PKPab	**PKPab**	**03 02 38.1**	**+0.6**
ROSC	**El Rosal**	**167.77**	**105**	PKP	**PKPdf**	**03 01 52.4**	**+0.9**
	comp=Z,3.4nm,0.3s,baz=111,slow=4.1,SNR=6.3						
RUSC	**La Rusia**	**169.22**	**101**		**PKPdf**	**03 01 52.5**	**-0.1**
PTGA	**Pitinga**	**170.82**	**196**		**PKPdf**	**03 01 53.4**	**+0.4**

IDC 10 03:01:19.7±1.3, 10°68S×165°81E, h46km±9km, mb3.5/3, mb1 3.8/4, mb1mx3.4/36, mbtmp3.8/4, ML4.1/1, Error ellipse: s-maj=48.0km s-min=22.4km az=132.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.35**	**177**	P	Pn	03 04 00.1	+0.8
	1.4nm,0.3s,baz=274,slow=22,SNR=13						
DZM				S	Sn	03 06 01.2	-3.5
	0.6nm,0.3s,baz=343,slow=22,SNR=1.7						
H11S2	**WAKE ISLAND Hy 29.00**	**2**	T	T		03 37 44.9	
	baz=181,slow=76,SNR=31						
H11S3	**WAKE ISLAND Hy 29.00**	**2**	T	T		03 37 42.8	
	baz=181,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy 29.01**	**2**	T	T		03 37 43.8	
	baz=181,slow=76,SNR=24						
H11N1	**WAKE ISLAND Hy 30.22**	**2**	T	T		03 39 19.4	
	baz=182,slow=76,SNR=20						
H11N3	**WAKE ISLAND Hy 30.22**	**2**	T	T		03 39 14.0	
	baz=182,slow=76,SNR=15						
H11N2	**WAKE ISLAND Hy 30.24**	**2**	T	T		03 39 14.7	
	baz=182,slow=76,SNR=16						
WRA	**Warramunga Arr**	**31.67**	**249**	P	P	03 07 39.0	-0.1
	1.0nm,0.7s,baz=82,slow=8.8,SNR=4.2						
WRA				pP	pP	03 07 51.2	+0.5
	1.0nm,0.7s,baz=81,slow=9.0,SNR=4.5						
ASAR	**Alice Springs**	**33.02**	**243**	P	P	03 07 50.9	+0.1
	0.5nm,0.8s,baz=69,slow=10,SNR=3.2						
ASAR				pP	pP	03 08 02.9	+0.3
	1.0nm,0.9s,baz=72,slow=9.5,SNR=6.7						
ILAR	**Eielson Array**	**83.15**	**18**	P	P	03 13 40.8	+0.4
	0.5nm,0.6s,baz=239,slow=5.0,SNR=13						
ILAR				pP	pP	03 13 54.0	+0.3
	0.6nm,1.0s,baz=207,slow=7.1,SNR=3.3						
ARCES	**ARCESS Array B**	**116.00**	**346**	PKP	PKiKP	03 19 55.9	-1.1
	1.5nm,0.9s,baz=40,slow=1.5,SNR=4.6						
ESDC	**Sonseca Array**	**149.72**	**344**	PKPbc	PKPbc	03 21 04.3	-0.6
	0.3nm,0.7s,baz=11,slow=5.1,SNR=2.2						

*ISK **10** 03:04:49.7, 38°42N×22°48E, h13km, ML4.1/33*
*THE **10** 03:04:50.6, 38°42N×22°44E, h15km, ML4.2/4, Error ellipse: s-maj=0.6km s-min=0.2km az=278.0*
*PDG **10** 03:04:50.3±0.4, 38°43N×22°46E, h15km, ML4.0/14, Error ellipse: s-maj=0.4km s-min=0.4km az=0.0*
*ATH **10** 03:04:50.0, 38°42N×22°46E, h20km, ML4.1/41, Error ellipse: s-maj=0.8km s-min=0.5km az=183.0*
*HLW **10** 03:04:51.5, 38°45N×23°32E, h20km±42km, Md4.5, Ml4.4*
*NEIC **10** 03:04:51.4±1.6, 38°43N±0°05×22°47E±0°07, h10km±1km, Error ellipse: s-maj=9.3km s-min=7.9km az=254.0*
*MOS **10** 03:04:51.4±0.8, 38°49N×22°46E, h22km, mb4.4/16, Error ellipse: s-maj=6.1km s-min=3.2km az=83.2*
*IDC **10** 03:04:52.3±3.5, 38°51N×22°45E, h18km±22km, mb4.0/18, mb1 4.1/26, mb1mx3.9/60, mbtmp4.1/26, ML3.9/7, MS3.3/4, Ms1 3.3/4, ms1mx2.9/45, Error ellipse: s-maj=14.3km s-min=11.8km az=114.0*

ISC 10 03:04:51.1±0.8, 38°42N±0°01×22°46E±0°01, h10km±5km, n495, σ1°23/568, mb4.3/41, 60C-29D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DLFA	**Delphi**	**0.07**	**26**	P	**Pg**	**03 04 52.5**	**-0.9**
KALE	**Kalithea**	**0.25**	**264**	P	**Pg**	**03 04 55.7**	**-0.5**
KALE				S	**Sg**	**03 04 59.8**	**+0.2**
	76μm,0.5s						
KALE	**Kalithea**	**0.25**	**264**	P	**Pg**	**03 04 55.8**	**-0.5**
KALE				S	**Sg**	**03 04 59.8**	**+0.2**
KALE				AML	AML	03 05 01.8	
KALE				AML	AML	03 05 02.5	
TRIZ	**Trizonia**	**0.31**	**260**	P	**Pg**	**03 04 56.6**	**-0.6**
TRIZ				S	**Sg**	**03 05 01.6**	**+0.3**
	58μm,0.3s						
TRIZ	**Trizonia**	**0.31**	**260**	P	**Pg**	**03 04 56.6**	**-0.6**
TRIZ				S	**Sg**	**03 05 01.8**	**+0.4**
ALIK	**Aliki, Aigiali**	**0.31**	**240**	P	**Pg**	**03 04 57.4**	**+0.1**
ALIK				S	**Sg**	**03 05 02.1**	**+0.6**
SERG	**Sergoula**	**0.32**	**269**	P	**Pg**	**03 04 56.8**	**-0.6**
SERG				S	**Sg**	**03 05 02.0**	**+0.4**
SERG	**Sergoula**	**0.32**	**269**	P	**Pg**	**03 04 56.6**	**-0.8**
SERG				S	**Sg**	**03 05 01.7**	**+0.1**
SERG				AML	AML	03 05 02.4	
SERG				AML	AML	03 05 02.6	
AXAR	**Agios Charalam**	**0.38**	**24**	P	**Pg**	**03 04 58.3**	**-0.4**
AXAR				S	**Sg**	**03 05 04.7**	**+1.0**
AXAR	**Agios Charalam**	**0.38**	**24**	P	**Pg**	**03 04 58.0**	**-0.6**
AXAR				S	**Sg**	**03 05 04.3**	**+0.6**
AXAR				AML	AML	03 05 05.6	
AXAR				AML	AML	03 05 09.9	
PROD	**Prodromos**	**0.38**	**114**	P	**Pg**	**03 04 58.1**	**-0.6**
PROD				S	**Sg**	**03 05 04.4**	**+0.7**
PROD	**Prodromos**	**0.38**	**114**	P	**Pg**	**03 04 58.0**	**-0.6**
PROD				S	**Sg**	**03 05 04.2**	**+0.5**
PROD				AML	AML	03 05 06.2	
PROD				AML	AML	03 05 07.6	
LAKA	**Lakka**	**0.42**	**245**	P	**Pg**	**03 04 58.7**	**-0.6**
LAKA				S	**Sg**	**03 05 04.6**	**-0.2**
LAKA	**Lakka**	**0.42**	**245**	P	**Pg**	**03 04 58.6**	**-0.6**
LAKA				AML	AML	03 05 10.4	
	comp=N,19853μm,0.5s						
LAKA				AML	AML	03 05 15.8	
	comp=E,16171μm,0.8s						
EFP	**Efpalio**	**0.43**	**271**	P	**Pg**	**03 04 58.8**	**-0.8**
EFP				S	**Sg**	**03 05 05.7**	**+0.4**
EFP	**Efpalio**	**0.43**	**271**	P	**Pg**	**03 04 58.7**	**-0.9**
EFP				AML	AML	03 05 06.6	
	comp=N,50530μm,0.4s						
EFP				AML	AML	03 05 08.9	
	comp=E,47551μm,0.5s						
KLV	**Kalavryta, Ach**	**0.45**	**213**	P	**Pg**	**03 04 58.8**	**-1.0**
KLV				S	**Sg**	**03 05 05.5**	**-0.2**
KLV	**Kalavryta, Ach**	**0.45**	**213**	P	**Pg**	**03 04 58.8**	**-1.0**
KLV				S	**Sg**	**03 05 05.7**	**0.0**
KLV				AML	AML	03 05 10.7	
	comp=N,10620μm,0.4s						
KLV				AML	AML	03 05 11.9	
	comp=E,12584μm,0.8s						
ANX	**Ano Chora**	**0.46**	**293**	P	**Pg**	**03 04 59.4**	**-0.6**
ANX				S	**Sg**	**03 05 06.1**	**0.0**
ANX	**Ano Chora**	**0.46**	**293**	P	**Pg**	**03 04 59.4**	**-0.6**
ANX				S	**Sg**	**03 05 06.1**	**0.0**
ANX				AML	AML	03 05 08.4	
ANX				AML	AML	03 05 12.3	
LKR	**Lokris**	**0.48**	**61**	P	**Pg**	**03 04 59.9**	**-0.7**
LKR				S	**Sg**	**03 05 07.5**	**+0.6**
	comp=E,120μm,0.1s						
LKR	**Lokris**	**0.48**	**61**	P	**Pg**	**03 04 59.9**	**-0.7**
LKR				S	**Sg**	**03 05 07.0**	**0.0**
LKR				AML	AML	03 05 08.3	
LKR				AML	AML	03 05 08.3	
LOUT	**Loutraki**	**0.59**	**136**	P	**Pg**	**03 05 01.9**	**-0.7**
LOUT				S	**Sg**	**03 05 11.2**	**+0.9**
LOUT	**Loutraki**	**0.59**	**136**	P	**Pg**	**03 05 01.8**	**-0.7**
LOUT				S	**Sg**	**03 05 10.9**	**+0.6**
LOUT				AML	AML	03 05 13.0	
	comp=E,6943μm,0.3s						
LOUT				AML	AML	03 05 18.0	
	comp=N,6150μm,0.5s						
MAKR	**Makrakomi, Fth**	**0.65**	**337**	P	**Pg**	**03 05 02.8**	**-0.8**
MAKR	**Makrakomi, Fth**	**0.65**	**337**	P	**Pg**	**03 05 02.7**	**-1.0**
MAKR				S	**Sg**	**03 05 11.7**	**-0.4**
MAKR				AML	AML	03 05 20.8	
	comp=N,47278μm,0.7s						
MAKR				AML	AML	03 05 20.9	
	comp=E,69636μm,0.7s						
VIL2	**Platees**	**0.67**	**108**	P	**Pg**	**03 05 04.0**	**-0.1**
VIL2				S	**Sb**	**03 05 15.0**	**+0.7**
VIL2				AML	AML	03 05 17.6	
VIL2				AML	AML	03 05 17.9	
EVR	**Evrytania**	**0.71**	**315**	P	**Pg**	**03 05 03.7**	**-1.1**
EVR	**Evrytania**	**0.71**	**315**	P	**Pg**	**03 05 03.8**	**-1.1**
EVR				S	**Sg**	**03 05 14.4**	**+0.2**
EVR				AML	AML	03 05 21.2	
	comp=E,28759μm,0.9s						
EVR				AML	AML	03 05 24.1	
	comp=N,3391μm,1.0s						
VILL	**Villia**	**0.72**	**110**	P	**Pg**	**03 05 04.0**	**-1.0**
VILL				S	**Sb**	**03 05 16.2**	**+0.5**
DRO	**Drossia**	**0.75**	**232**	P	**Pg**	**03 05 04.5**	**-1.1**
DRO	**Drossia**	**0.75**	**232**	P	**Pg**	**03 05 04.4**	**-1.2**
DRO				AML	AML	03 05 20.2	
	comp=N,17881μm,0.5s						
DRO				AML	AML	03 05 22.4	
	comp=E,19060μm,0.5s						
RLS	**Riolos of Patr**	**0.86**	**246**	P	**Pg**	**03 05 06.5**	**-1.1**
RLS				S	**Sg**	**03 05 18.9**	**+0.1**
RLS	**Riolos of Patr**	**0.86**	**246**	P	**Pg**	**03 05 06.5**	**-1.1**
RLS				AML	AML	03 05 29.6	
	comp=E,6600μm,0.8s						
RLS				AML	AML	03 05 32.6	
	comp=N,6265μm,0.6s						
TRIP	**Tripoli**	**0.90**	**189**	P	**Pg**	**03 05 07.0**	**-1.4**
TRIP	**Tripoli**	**0.90**	**189**	P	**Pg**	**03 05 07.3**	**-1.1**
TRIP				S	**Sg**	**03 05 20.4**	**+0.3**
TRIP				AML	AML	03 05 25.6	
	comp=N,11248μm,0.6s						
TRIP				AML	AML	03 05 27.7	
	comp=E,13744μm,0.7s						
MRKA	**Markates**	**0.93**	**72**	P	**Pb**	**03 05 07.6**	**-1.8**
MRKA				S	**Sg**	**03 05 21.4**	**+0.2**
	comp=E,13μm,0.5s						
MRKA	**Markates**	**0.93**	**72**	P	**Pb**	**03 05 07.2**	**-2.2**
MRKA				AML	AML	03 05 25.5	
	comp=N,32505μm,0.5s						
MRKA				AML	AML	03 05 25.5	
	comp=E,21514μm,0.5s						
VLX	**Vlachokerasia**	**1.05**	**183**	P	**Pb**	**03 05 10.0**	**-1.4**
VLX	**Vlachokerasia**	**1.05**	**183**	P	**Pb**	**03 05 10.0**	**-1.4**
VLX				S	**Sb**	**03 05 25.1**	**-0.1**
AMT	**Artemida-Makis**	**1.06**	**214**	P	**Pb**	**03 05 10.1**	**-1.5**
AMT	**Artemida-Makis**	**1.06**	**214**	P	**Pb**	**03 05 10.3**	**-1.3**
AMT				AML	AML	03 05 37.0	
	comp=N,12218μm,0.9s						
AMT				AML	AML	03 05 39.3	
	comp=E,9077μm,0.7s						
NEO	**Neokhori**	**1.07**	**34**	P	**Pb**	**03 05 10.1**	**-1.7**
NEO				S	**Sn**	**03 05 26.8**	**-0.4**
NEO	**Neokhori**	**1.07**	**34**	P	**Pb**	**03 05 10.1**	**-1.7**
NEO				S	**Sb**	**03 05 25.3**	**-0.5**
NEO				AML	AML	03 05 31.4	
	comp=E,15593μm,0.5s						
NEO				AML	AML	03 05 31.5	
	comp=N,20997μm,0.3s						
ATH	**Athens Observa**	**1.09**	**114**	P	**Pb**	**03 05 11.0**	**-1.0**
ATH	**Athens Observa**	**1.09**	**114**	P	**Pb**	**03 05 11.2**	**-0.8**
ATH				S	**Sb**	**03 05 26.7**	**+0.4**
ATH				AML	AML	03 05 30.3	
	comp=N,45284μm,0.5s						
ATH				AML	AML	03 05 32.1	
	comp=E,46037μm,0.5s						
ATH	**Athens Observa**	**1.09**	**114**	P	**Pb**	**03 05 11.0**	**-1.0**
ATH				S	**Sn**	**03 05 27.6**	**+0.1**
SKIA	**Skiathos**	**1.09**	**46**	P	**Pb**	**03 05 11.1**	**-0.9**
SKIA	**Skiathos**	**1.09**	**46**	P	**Pb**	**03 05 10.9**	**-1.1**
SKIA				S	**Sb**	**03 05 26.4**	**+0.1**
SKIA				AML	AML	03 05 29.0	
	comp=E,18712μm,0.9s						
SKIA				AML	AML	03 05 29.7	
	comp=N,26180μm,0.8s						
DID	**Didima**	**1.10**	**146**	P	**Pb**	**03 05 11.1**	**-1.1**
DID	**Didima**	**1.10**	**146**	P	**Pb**	**03 05 10.8**	**-1.4**
DID				AML	AML	03 05 28.7	
	comp=E,20731μm,0.8s						
DID				AML	AML	03 05 29.1	
	comp=N,28526μm,0.7s						
XOR	**Xorichti**	**1.11**	**31**	P	**Pb**	**03 05 10.8**	**-1.6**
XOR	**Xorichti**	**1.11**	**31**	P	**Pb**	**03 05 10.7**	**-1.6**
XOR				S	**Sb**	**03 05 26.4**	**-0.6**
XOR				AML	AML	03 05 31.2	
	comp=E,15448μm,0.8s						
XOR				AML	AML	03 05 32.5	
	comp=N,26478μm,1.0s						
VTN	**Vitineika**	**1.12**	**244**	P	**Pb**	**03 05 11.6**	**-0.9**
ATHU	**Athens Univers**	**1.14**	**113**	P	**Pb**	**03 05 11.9**	**-1.0**
ATHU	**Athens Univers**	**1.14**	**113**	P	**Pb**	**03 05 11.8**	**-1.0**
ATHU				S	**Sb**	**03 05 27.8**	**+0.1**
ATHU				AML	AML	03 05 31.6	
	comp=N,28310μm,0.5s						
ATHU				AML	AML	03 05 32.4	
	comp=E,11536μm,0.5s						
PTL	**Penteli**	**1.17**	**108**	P	**Pn**	**03 05 12.4**	**-1.2**
PTL	**Penteli**	**1.17**	**108**	P	**Pn**	**03 05 12.4**	**-1.2**
PTL				S	**Sb**	**03 05 28.6**	**-0.1**
PTL				AML	AML	03 05 31.2	
	comp=N,20497μm,0.8s						
PTL				AML	AML	03 05 32.3	
	comp=E,28674μm,0.5s						
KRND	**KRANIDI**	**1.17**	**152**	P	**Pn**	**03 05 12.4**	**-1.1**
KRND	**KRANIDI**	**1.17**	**152**	P	**Pn**	**03 05 12.2**	**-1.4**
KRND				S	**Sb**	**03 05 29.0**	**+0.4**
KRND				AML	AML	03 05 31.4	
	comp=E,24331μm,0.6s						
KRND				AML	AML	03 05 32.6	
	comp=N,26751μm,0.6s						
THL	**Klokotos Trika**	**1.20**	**343**	P	**Pn**	**03 05 12.8**	**-1.1**
THL	**Klokotos Trika**	**1.20**	**343**	P	**Pn**	**03 05 12.0**	**-1.9**
THL				AML	AML	03 05 39.1	
	comp=E,3080μm,0.5s						
THL				AML	AML	03 05 41.2	
	comp=N,2921μm,0.7s						
VLY	**Voula,Athens**	**1.20**	**118**	P	**Pn**	**03 05 13.3**	**-0.6**
VLY				S	**Sb**	**03 05 29.0**	**-0.4**
VLY	**Voula,Athens**	**1.20**	**118**	P	**Pn**	**03 05 13.5**	**-0.5**
VLY				S	**Sb**	**03 05 29.0**	**-0.4**
VLY				AML	AML	03 05 33.7	
	comp=E,40210μm,0.6s						
VLY				AML	AML	03 05 34.0	
	comp=N,35269μm,0.5s						
DION	**Dionisos Attik**	**1.21**	**106**	P	**Pn**	**03 05 13.0**	**-1.1**
DION	**Dionisos Attik**	**1.21**	**106**	P	**Pn**	**03 05 12.6**	**-1.5**
DION				S	**Sb**	**03 05 30.2**	**+0.4**
DION				AML	AML	03 05 33.4	
	comp=N,49847μm,0.4s						
DION				AML	AML	03 05 34.1	
	comp=E,80757μm,0.9s						
LRSO	**Larissa Observ**	**1.25**	**358**	P	**Pn**	**03 05 13.5**	**-1.2**
LRSO	**Larissa Observ**	**1.25**	**358**	P	**Pn**	**03 05 14.3**	**-0.4**
ITM	**Ithomi**	**1.30**	**199**	P	**Pn**	**03 05 13.4**	**-2.0**
ITM				S	**Sb**	**03 05 32.1**	**-0.5**
ITM	**Ithomi**	**1.30**	**199**	P	**Pn**	**03 05 14.5**	**-1.0**
ITM				AML	AML	03 05 39.1	
	comp=E,5243μm,0.7s						
ITM				AML	AML	03 05 39.6	
	comp=N,5036μm,0.9s						
ITM	**Ithomi**	**1.30**	**199**	PN	**Pn**	**03 05 14.3**	**-1.1**
ITM				SN	**Sb**	**03 05 32.4**	**-0.2**
ITM	**Ithomi**	**1.30**	**199**		**Pn**	**03 05 14.7**	**-0.8**
KYMI	**Kymi, Euboea I**	**1.31**	**80**	P	**Pn**	**03 05 13.7**	**-1.7**
KYMI	**Kymi, Euboea I**	**1.31**	**80**	P	**Pn**	**03 05 14.3**	**-1.2**
KYMI				S	**Sb**	**03 05 32.7**	**+0.1**
KYMI				AML	AML	03 05 37.1	
	comp=E,11571μm,0.5s						
KYMI				AML	AML	03 05 38.4	
	comp=N,16880μm,0.6s						
ALNA	**Alonissos**	**1.32**	**56**	P	**Pn**	**03 05 15.8**	**+0.2**
ALNA				AML	AML	03 05 37.0	
	comp=N,15224μm,0.6s						
ALNA				AML	AML	03 05 37.8	
	comp=E,17075μm,0.6s						
AOS	**Alonnisos**	**1.34**	**55**	P	**Pn**	**03 05 14.8**	**-1.1**
AOS	**Alonnisos**	**1.34**	**55**	P	**Pn**	**03 05 14.8**	**-1.1**
AOS				AML	AML	03 05 38.2	
	comp=E,7491μm,0.8s						
AOS				AML	AML	03 05 41.5	
	comp=N,9279μm,0.8s						
AOS	**Alonnisos**	**1.34**	**55**	PN	**Pn**	**03 05 14.8**	**-1.1**
AOS				SN	**Sb**	**03 05 32.2**	**-1.4**
KFL	**Anninata**	**1.35**	**257**	P	**Pn**	**03 05 15.3**	**-0.8**
KFL	**Anninata**	**1.35**	**257**	P	**Pn**	**03 05 15.2**	**-0.8**
KFL				AML	AML	03 05 46.1	
	comp=N,9397μm,0.8s						
KFL				AML	AML	03 05 49.3	
	comp=E,10861μm,0.9s						
EVGI	**Lefkada island**	**1.43**	**279**	P	**Pn**	**03 05 17.4**	**+0.3**
EVGI	**Lefkada island**	**1.43**	**279**	P	**Pn**	**03 05 17.2**	**+0.1**
LKD2	**Lefkada island**	**1.46**	**285**	P	**Pg**	**03 05 19.6**	**+0.5**
LKD2	**Lefkada island**	**1.46**	**285**	P	**Pb**	**03 05 18.1**	**-0.3**
LKD2				AML	AML	03 05 46.5	
	comp=N,14429μm,0.9s						
LKD2				AML	AML	03 05 48.2	
	comp=E,10607μm,1.2s						
TSLK	**Tsoukalades, L**	**1.47**	**287**	P	**Pg**	**03 05 19.4**	**+0.1**
TSLK	**Tsoukalades, L**	**1.47**	**287**	P	**Pn**	**03 05 17.9**	**+0.2**
FSK	**Fiskardo**	**1.49**	**272**	P	**Pb**	**03 05 18.5**	**-0.4**
FSK	**Fiskardo**	**1.49**	**272**	P	**Pn**	**03 05 17.9**	**-0.1**
FSK				AML	AML	03 05 47.4	
	comp=E,16126μm,1.2s						
FSK				AML	AML	03 05 48.9	
	comp=N,9791μm,0.8s						
VLS	**Valsamata**	**1.49**	**261**	P	**Pn**	**03 05 17.2**	**-0.8**
VLS	**Valsamata**	**1.49**	**261**	P	**Pn**	**03 05 17.1**	**-0.8**
VLS				AML	AML	03 05 52.0	
	comp=E,3804μm,0.6s						
VLS				AML	AML	03 05 52.5	
	comp=N,6562μm,0.6s						
VLS	**Valsamata**	**1.49**	**261**	P	**Pn**	**03 05 17.2**	**-0.8**
KEF1	**Kardakata, Kep**	**1.57**	**266**	P

HORT Hortiatis 2.23 13 P Pn 03 05 27.4 -0.8
HORT Hortiatis 2.23 13 P Pn 03 05 27.4 -0.8
HORT Hortiatis 2.23 13 PN Pn 03 05 27.5 -0.8
HORT SN Sn 03 05 54.3 -1.7
THE Thessaloniki 2.25 10 P Pn 03 05 27.0 -1.4
THE Thessaloniki 2.25 10 P Pn 03 05 27.0 -1.4
OUR Ouranopolis 2.25 31 P Pn 03 05 27.8 -0.6
OUR Ouranopolis 2.25 31 P Pn 03 05 27.6 -0.8
OUR Ouranopolis 2.25 31 PN Pn 03 05 27.7 -0.6
OUR Ouranopolis 2.25 31 P Pn 03 05 27.8 -0.6
NEST Nestorio 2.27 332 P Pn 03 05 30.0 +1.2
NEST Nestorio 2.27 332 P Pn 03 05 29.5 +0.7
MHLA Plaka, Milos I 2.29 136 P Pn 03 05 29.1 +0.2
MHLO Agia Marina, M 2.32 138 P Pn 03 05 29.9 +0.6
MHLO Agia Marina, M 2.32 138 P Pn 03 05 30.0 +0.6
SRN Sarande 2.41 308 P Pn 03 05 27.4 -3.1
KEK Kerkira 2.44 303 P Pb 03 05 33.1 -2.0
KEK Kerkira 2.44 303 P Pn 03 05 32.3 +1.3
FNA Florina 2.51 341 P Pn 03 05 32.8 +0.8
FNA Florina 2.51 341 P Pn 03 05 32.7 +0.7
FNA Florina 2.51 341 PN Pn 03 05 31.8 -0.2
FNA Florina 2.51 341 P Pn 03 05 32.3 +0.3
FNA Florina 2.51 341 03 05 32.3 +0.3
LIA Limnos Island 2.58 54 P Pn 03 05 30.9 -2.1
LIA Limnos Island 2.58 54 P Pn 03 05 31.9 -1.1
KNT Kendrikon 2.76 7 P Pn 03 05 35.6 +0.1
KNT Kendrikon 2.76 7 P Pn 03 05 35.7 +0.1
KNT Kendrikon 2.76 7 PN Pn 03 05 34.8 -0.7
KNT Kendrikon 2.76 7 P Pn 03 05 35.6 +0.1
SIGR SIGRI 2.77 72 P Pn 03 05 35.5 -0.1
SIGR SIGRI 2.77 72 P Pn 03 05 35.4 -0.2
SIGR SIGRI 2.77 72 PN Pn 03 05 35.2 -0.4
APE Apeiranthos 2.78 118 P Pn 03 05 36.6 +0.8
APE Apeiranthos 2.78 118 ⇑P Pn 03 05 36.0 +0.2
APE Apeiranthos 2.78 118 PN Pn 03 05 35.8 0.0
APE Apeiranthos 2.78 118 ⇓ *e*P Pn 03 05 35.5 -0.3
THAS Thassos island 2.80 38 P Pn 03 05 34.5 -1.4
THAS Thassos island 2.80 38 P Pn 03 05 34.6 -1.4
IOSP Ios island 2.81 126 P Pn 03 05 36.2 0.0
CHOS Chios island 2.83 90 P Pn 03 05 36.5 +0.1
CHOS Chios island 2.83 90 P Pn 03 05 36.7 +0.2
CHOS Chios island 2.83 90 PN Pn 03 05 36.0 -0.4
SRS Serrai 2.83 18 P Pn 03 05 36.1 -0.4
SRS Serrai 2.83 18 P Pn 03 05 36.1 -0.4
SRS Serrai 2.83 18 P Pn 03 05 36.1 -0.4
VAY Valandovo 2.90 2 *i* Pn Pn 03 05 37.5 +0.2
VAY *e*Sn Sn 03 06 11.9 -0.5
VAY Valandovo 2.90 2 *i* Pn Pn 03 05 37.5 +0.2
VAY *e*Sn Sn 03 06 11.9 -0.5
VAY Valandovo 2.90 2 P Pn 03 05 37.3 -0.1
OHR Ohrid 2.98 335 *i* Pn Pn 03 05 40.4 +1.9
OHR *e*Sn Sn 03 06 16.7 +2.3
OHR Ohrid 2.98 335 *i* Pn Pn 03 05 40.4 +1.9
OHR *e*Sn Sn 03 06 16.7 +2.3
KAVA Kavala 3.02 31 P Pn 03 05 37.8 -1.3
KAVA Kavala 3.02 31 P Pn 03 05 37.8 -1.3
RODP Rodopos 3.04 160 P Pn 03 05 40.2 +1.0
RODP Rodopos 3.04 160 PN Pn 03 05 38.9 -0.3
THT2 Imerovigli 3.08 129 PN Pn 03 05 39.6 -0.2
PRK Paraskevi 3.09 73 P Pn 03 05 41.4 +1.4
PRK Paraskevi 3.09 73 P Pn 03 05 41.4 +1.4
NVR Nevrokopi 3.12 20 P Pn 03 05 40.2 -0.2
BOZC Bozcaada 3.14 62 PN Pn 03 05 39.7 -0.9
SMTH Samothraki Isl 3.14 48 P Pn 03 05 39.0 -1.6
SANT Santorini 3.14 130 ⇑P Pn 03 05 40.2 -0.5
SANT Santorini 3.14 130 PN Pn 03 05 39.9 -0.9
SANT Santorini 3.14 130 P Pn 03 05 40.8 0.0
AMGA Amorgos Island 3.15 119 P Pn 03 05 41.4 +0.5
IMMV Iera Moni Meta 3.19 157 P Pn 03 05 41.8 +0.4
IMMV Iera Moni Meta 3.19 157 P Pn 03 05 41.6 +0.2
IMMV Iera Moni Meta 3.19 157 PN Pn 03 05 41.4 0.0
GADA Gvkgeada 3.20 55 PN Pn 03 05 40.6 -0.9
URLA Izmir 3.25 90 PN Pn 03 05 42.0 -0.2
VAM Vamos 3.31 155 P Pn 03 05 43.5 +0.5
EZN Ezine 3.32 64 PN Pn 03 05 42.3 -0.8
EZN Ezine 3.32 64 P Pn 03 05 44.4 +1.3
SCTE Santa Cesarea 3.51 299 03 05 46.4 +0.6
SMG Samos 3.53 100 P Pn 03 05 46.2 +0.2
DKL Dikili 3.54 78 PN Pn 03 05 45.8 -0.3
TIR Tirane 3.54 327 ⇓P Pn 03 05 48.2 +2.0
TIR Tirane 3.54 327 P Pn 03 05 46.7 +0.5
TIR Tirane 3.54 327 Pn 03 05 46.7 +0.5
RDO Rodhopi 3.61 40 P Pn 03 05 46.0 -1.2
RDO Rodhopi 3.61 40 PN Pn 03 05 45.9 -1.2
SKO Skopje 3.63 348 *i* Pn Pn 03 05 48.4 +0.9
SKO Skopje 3.63 348 *i* Pn Pn 03 05 48.4 +0.9
SKO Skopje 3.63 348 P Pn 03 05 48.2 +0.7
ENEZ Enez 3.68 50 PN Pn 03 05 46.8 -1.2
IDI Anoyia 3.68 147 Pn Pn 03 05 47.5 -0.7
comp=N,3,4nm,0.3s,baz=307,slow=12,SNR=31
IDI Sn Sn 03 06 31.8 0.0
comp=N,7,2nm,0.3s,baz=149,slow=21,SNR=4.2
IDI Anoyia 3.68 147 ⇑P Pn 03 05 47.7 -0.4
IDI Anoyia 3.68 147 PN Pn 03 05 47.8 -0.4
IDI Anoyia 3.68 147 Pn 03 05 48.1 -0.1
GELI Tayfur-Gelibol 3.69 56 PN Pn 03 05 47.5 -0.7
ALN Alexandroupoli 3.71 47 PN Pn 03 05 47.1 -1.4
ALN Alexandroupoli 3.71 47 P Pn 03 05 47.5 -1.1
ALN Alexandroupoli 3.71 47 Pn 03 05 47.5 -1.1
HRKL Herakleio 3.76 145 PN Pn 03 05 48.9 -0.2
GCAM G?zelcaml? 3.84 99 PN Pn 03 05 50.1 -0.1
ERIK Erikli-Kesan 3.86 53 PN Pn 03 05 49.2 -1.3
LPK Lapseki 3.86 58 PN Pn 03 05 50.3 -0.3
KDZ Kurdzhali 3.95 34 PN Pn 03 05 50.2 -1.6
KOSK Kos Island 3.96 113 PN Pn 03 05 51.8 -0.1
PLD Plovdiv 4.06 24 PN Pn 03 05 53.0 -0.3
PLD Plovdiv 4.06 24 P Pn 03 05 53.8 +0.5
BODT Bodrum 4.08 108 PN Pn 03 05 53.9 +0.3
UKOP Uzunkopru-Edir 4.21 49 PN Pn 03 05 54.7 -0.6
KRBG Karabiga-Canak 4.24 61 PN Pn 03 05 55.3 -0.4
VTS Vitosha 4.24 8 ⇑P Pn 03 05 56.3 +0.5
VTS Vitosha 4.24 8 P Pn 03 05 56.0 +0.1
VTS Vitosha 4.24 8 03 05 56.0 +0.1
RKY Sarkoy-Tekirda 4.29 57 PN Pn 03 05 55.6 -1.0
AYDB Zeytinkoy-Aydi 4.31 95 PN Pn 03 05 57.2 +0.4
ULCJ Ulcinj 4.31 326 ⇑Pn Pn 03 05 57.1 +0.3
ULC *i* Sn Sn 03 06 47.0 +0.2
BALB Balikesir 4.40 72 PN Pn 03 05 58.2 +0.3
DAT Datca 4.40 111 PN Pn 03 05 58.3 +0.2
TIP Timpagrande 4.52 281 ⇑P Pn 03 06 01.5 +1.9
TIP Timpagrande 4.52 281 03 06 01.4 +1.7
DRME Dracevica, Mon 4.52 327 ⇑ *i*Pn Pn 03 05 59.8 +0.2
DRME *i* Sn Sn 03 06 51.9 -0.4
TAR1 Taranto 4.52 299 ⇓ *i*Pn Pn 03 06 01.0 +1.4
MRMT Marmara Adasi 4.53 60 PN Pn 03 05 59.7 -0.2
PVY Plav 4.59 336 ⇑ *i*Pn Sn 03 06 00.9 +0.2
PVY *i* Sn Sn 03 06 54.0 -0.1
EDC Edincik 4.61 64 PN Pn 03 06 01.1 +0.2
PDG Podgorica 4.69 330 ⇑P Pn 03 06 03.6 +1.6
PDG Podgorica 4.69 330 *e*Pn Pn 03 06 03.0 +1.0
PDG Podgorica 4.69 330 Pn 03 06 03.2 +1.2
TTG Podgorica 4.69 330 ⇓ *i*Pn Pn 03 06 02.4 +0.4
TTG *i* Sn Sn 03 06 56.7 +0.2
BUM Brajici-Budva 4.74 326 ⇑ *i*Pn Pn 03 06 03.0 +0.3
BUM *e*Sn Sn 03 06 57.4 -0.3
EDRB Edirne 4.75 42 PN Pn 03 06 01.3 -1.4
MANT Manisa 4.79 87 Pn 03 06 03.3 -0.3
YER Yerkesik 4.79 104 PN Pn 03 06 04.0 +0.6
IVA Berane 4.86 337 ⇓ *i*Pn Pn 03 06 04.5 +0.1
IVA *i* Sn Sn 03 07 00.1 -0.6
KULA Kula-Manisa 4.87 87 PN Pn 03 06 04.9 +0.4
CRLT Corlu 4.89 55 PN Pn 03 06 04.8 +0.2
CEME Cevo 4.93 328 ⇑ *i*Pn Pn 03 06 05.5 +0.2
CEME *i* Sn Sn 03 07 01.6 -0.8
KOME Kolasin 4.96 334 ⇓ *i*Pn Pn 03 06 06.1 +0.3
KOME *i* Sn Sn 03 07 02.7 -0.6
MATE Matera 4.97 298 ⇓P Pn 03 06 07.4 +1.6
HCY Herceg Novi 5.03 324 ⇑ *i*Pn Pn 03 06 07.0 +0.3
HCY *i* Sn Sn 03 07 04.6 -0.3
BAI Bari 5.07 304 ⇓ *i*Pn Pn 03 06 08.1 +1.0
SG1 Sgolgore (BA) 5.08 300 ⇓ *i*Pn Pn 03 06 08.8 +1.5
NKME Niksic 5.10 330 ⇑ *i*Pn Pn 03 06 07.8 +0.2
NKME *i* Sn Sn 03 07 05.9 -0.7
NKY Niksic 5.12 330 ⇑ *i*Pn Pn 03 06 08.2 +0.2
NKY *i* Sn Sn 03 07 06.6 -0.6
SIMA Simav-Kutahya 5.14 81 PN Pn 03 06 08.0 -0.3
CEL Celeste 5.16 270 Pn 03 06 08.5 0.0
ELND Elena 5.20 29 ⇓P Pn 03 06 08.5 -0.5
PLVB Pleven 5.23 18 ⇑P Pn 03 06 09.5 +0.1

SLVT Silivri 5.24 56 PN Pn 03 06 09.2 -0.4
TREB Trebinje 5.31 325 *e*Pn Pn 03 06 10.0 -0.5
DBRK Dubrovnik 5.37 324 *e*Pn Pn 03 06 11.3 0.0
DBRK Sn Sn 03 07 11.4 -1.8
BRY Bratogost 5.38 328 ⇑ *i*Pn Pn 03 06 11.4 -0.2
BRY *e*Sn Sn 03 07 13.2 -0.4
PLE Pljevlja 5.43 336 *e*Pn Pn 03 06 12.5 +0.3
PLE *e*Sn Sn 03 07 14.1 -0.8
UPM Unac-Piva 5.49 332 ⇓ *i*Pn Pn 03 06 13.2 +0.1
UPM *i* Sn Sn 03 07 15.6 -0.8
ZIMR 5.68 22 ⇑P Pn 03 06 15.5 0.0
ZIMR 5.68 22 ⇑P Pn 03 06 15.5 0.0
RUDO Rudo 5.70 337 *e*Pn Pn 03 06 16.5 +0.7
STON Ston 5.73 322 *e*Pn Pn 03 06 15.8 -0.5
STON Ston 5.73 322 *e*Pn Pn 03 06 16.0 -0.3
STON Sn Sn 03 07 19.8 -2.3
BBLS Lazići 5.91 338 *e*Pn Pn 03 06 19.7 +0.9
DIVS Divibare 5.97 343 *e*Pn Pn 03 06 19.9 +0.3
RAZG Razgrad 5.99 29 ⇓P Pn 03 06 19.5 -0.3
COPA Copaceanca 6.08 19 ⇑P Pn 03 06 21.0 0.0
SGRT San Giovanni R 6.13 305 Pn 03 06 22.1 +0.3
HAPS Han Pijesak,Bl 6.25 336 *e*Pn Pn 03 06 21.1 -2.4
MAKA Makarska 6.38 321 *i* Pn Pn 03 06 24.0 -1.1
MAKA Sn Sn 03 07 35.3 -2.6
MDVR Moldovita 6.38 355 ⇑P Pn 03 06 25.5 +0.3
HUMR Humele 6.39 16 ⇑P Pn 03 06 24.9 -0.5
VAE Valguarnera 6.43 264 Pn Pn 03 06 28.7 +2.8
comp=N,0.7nm,0.3s,baz=170,slow=8.8,SNR=4.3
VAE Sn Sn 03 07 44.0 +4.7
comp=N,1.0nm,0.3s,baz=312,slow=9.9,SNR=5.4
HERR Herculane 6.46 360 ⇑P Pn 03 06 26.1 -0.1
PAOL Paolisi 6.62 296 Pn 03 06 29.0 +0.5
ICOR Ion Corvin 6.97 34 ⇓P Pn 03 06 32.8 -0.5
GZR Gura Zlata 6.97 2 ⇑P Pn 03 06 33.3 -0.1
GZR Gura Zlata 6.97 2 ⇑P Pn 03 06 33.3 -0.1
FRGS Fruska Gora 7.02 344 *e*Pn Pn 03 06 34.6 +0.6
MTUR Matau 7.08 15 ⇑P Pn 03 06 35.1 +0.3
MTUR Matau 7.08 15 ⇑P Pn 03 06 35.1 +0.3
ARR Arges 7.13 12 ⇑P Pn 03 06 35.6 +0.1
SECR 7.14 21 ⇑P Pn 03 06 36.4 +0.7
KIJV Kijevo 7.21 323 *e*Pn Pn 03 06 34.1 -2.5
KIJV Sn Sn 03 07 54.6 -3.9
BZS Buzias 7.22 355 ⇓P Pn 03 06 37.7 +1.0
BZS Buzias 7.22 355 ⇓P Pn 03 06 37.7 +1.0
MGRS Mrkonjic Grad 7.23 328 *e*Pn Pn 03 06 37.0 +0.2
CORL Corleone 7.23 269 Pn 03 06 36.7 -0.2
SLUM Salum 7.27 161 P Pn 03 06 36.5 -0.9
baz=166
SLUM S Sn 03 07 50.9 -9.1
baz=166
SLUM AMP 03 08 00.0
baz=166
VOIR 7.28 15 ⇓P Pn 03 06 37.7 +0.2
VOIR 7.28 15 ⇓P Pn 03 06 37.7 +0.2
ZIRJ Zirje 7.34 318 *e*Pn Pn 03 06 37.6 -0.7
CLTB Caltabellotta 7.35 266 Pn 03 06 39.9 +1.3
TLBR Topalu 7.42 33 ⇓P Pn 03 06 38.7 -0.7
MORI Morici 7.45 319 *e*Pn Pn 03 06 39.0 -0.9
MORI Sn Sn 03 08 00.7 -3.8
BLY Banja Luka 7.46 330 ⇑P Pn 03 06 40.6 +0.6
BLY Banja Luka 7.46 330 *e*Pn Pn 03 06 40.1 +0.2
INTR Introdacqua 7.46 301 Pn 03 06 41.4 +1.2
DEV Deva 7.47 2 ⇑P Pn 03 06 41.7 +1.6
DEV Deva 7.47 2 ⇑P Pn 03 06 41.7 +1.6
HARR Harsova 7.49 31 ⇑P Pn 03 06 40.4 0.0
HARR Harsova 7.49 31 ⇑P Pn 03 06 40.4 0.0
MLR Muntele Rosu 7.53 19 Pn Pn 03 06 41.4 +0.3
comp=N,4.8nm,0.3s,baz=251,slow=5.0,SNR=26
MLR Muntele Rosu 7.53 19 ⇓P Pn 03 06 42.3 +1.3
MLR Muntele Rosu 7.53 19 Pn 03 06 40.7 -0.4
BISRR Bisoca 7.80 23 ⇑P Pn 03 06 45.4 +0.8
TOPG Topolog 7.83 33 ⇓P Pn 03 06 44.8 -0.2
DOPR Dopca 7.85 15 ⇑P Pn 03 06 46.2 +0.8
SIRR Siria 7.87 356 ⇑P Pn 03 06 46.0 +0.4
DUGI Dugi Otok 7.88 317 *e*Pn Pn 03 06 45.3 -0.4
AQU L'Aquila 7.95 302 *e*Pn Pn 03 06 48.7 +1.9
AQU L'Aquila 7.95 302 P Pn 03 06 45.9 -0.9
AQU L'Aquila 7.95 302 Pn 03 06 45.9 -0.9
CFR Carcaliu 7.97 30 ⇑P Pn 03 06 45.9 -1.1
CFR Carcaliu 7.97 30 ⇑P Pn 03 06 45.9 -1.1
PLOR Plostina 8.05 21 ⇑P Pn 03 06 48.7 +0.5
PLOR Plostina 8.05 21 ⇑P Pn 03 06 48.7 +0.5
OZUR 8.06 17 ⇑P Pn 03 06 48.9 +0.6
VRI Vrincioaia 8.09 22 ⇑P Pn 03 06 49.6 +1.0
VRI Vrincioaia 8.09 22 ⇑P Pn 03 06 49.6 +1.0
TLCR 8.26 33 ⇓P Pn 03 06 49.9 -1.0
TLCR 8.26 33 ⇓P Pn 03 06 49.9 -1.0
MORH Mrgy, Hungar 8.29 341 *e*Pn Pn 03 06 50.8 -0.5
NVLJ Novalja 8.37 320 *e*Pn Pn 03 06 50.3 -2.2
TESR Tescani 8.66 20 ⇓P Pn 03 06 57.1 +0.7
BR131 Keskin Array S 8.80 78 P Pn 03 07 01.1 +1.6
BR131 Keskin Array S 8.80 78 Pn 03 07 00.1 +1.6
BRTR Keskin Array B 8.80 78 Pn Pn 03 07 00.0 +1.6
comp=N,0.6nm,0.3s,baz=264,slow=12,SNR=26
BRTR LR LR 03 11 07.6
comp=N,141nm,19.9s,baz=215,slow=43
BRTR Keskin Array B 8.80 78 *i* P Pn 03 07 00.3 +1.8
BRTR pmax pmax
comp=Z,4.0nm,0.6s
PTJ Puntijarka 8.90 329 P Pn 03 07 00.0 +0.2
MURB Monte Urbino 8.95 306 Pn 03 07 01.2 +0.7
CRES Cresnjev 9.04 327 *e*Pn Pn 03 07 00.4 -1.3
RIY Rijeka 9.11 322 *e*Pn Pn 03 07 02.3 -0.3
BMR Baia Mare 9.28 4 ⇑P Pn 03 07 07.4 +2.4
BMR Baia Mare 9.28 4 ⇑P Pn 03 07 07.4 +2.4
BURAR Bucovina Array 9.41 11 ⇑P Pn 03 07 07.9 +1.1
BURAR Bucovina Array 9.41 11 ⇑P Pn 03 07 07.9 +1.1
BUR08 Bucovina Ar. S 9.44 11 Pn 03 07 07.7 +0.5
CEY Cerknica 9.44 323 *e*Pn Pn 03 07 05.7 -1.4
SWA2 9.48 164 P Pn 03 07 05.7 -2.1
baz=168
SWA2 S Sn 03 08 45.2 -9.2
baz=168
SWA2 AMP 03 09 00.0
baz=168
LJU Ljubljana 9.62 325 *e*Pn Pn 03 07 08.3 -1.3
PSZ Piszkesteto 9.68 350 ⇑P Pn 03 07 11.7 +1.2
PSZ Piszkesteto 9.68 350 ⇑P Pn 03 07 11.7 +1.2
TRPA Tarpa 9.71 0 ⇑P Pn 03 07 11.9 +1.1
SOKA Soboth 9.90 329 *e*Pn Pn 03 07 13.5 0.0
comp=Z,2.8nm,0.6s
SOKA *i* Sn Sn 03 08 59.4 -5.4
comp=Z,2.6nm,0.6s
OBKA Obir 9.97 327 *i* Pn Pn 03 07 17.1 +2.6
comp=Z,2.3nm,0.4s
OBKA *e*Sn Sn 03 09 00.6 -5.8
comp=Z,12nm,0.9s
ARSA Arzberg 10.19 332 *e*Pn Pn 03 07 17.9 +0.5
comp=Z,5.2nm,0.7s
VYHS Vyhne 10.41 347 *e*PN Pn 03 07 09.0 -11
VYHS *e* 03 07 22.7
VYHS Vyhne 10.41 347 *e*SN Sn 03 09 16.2 -0.9
SORM Soroca 10.62 22 ⇑P Pn 03 07 22.5 -0.7
SORM Soroca 10.62 22 ⇑P Pn 03 07 22.5 -0.7
STAL STALIGIAL 10.64 321 Pn 03 07 25.8 +2.1
CONA Conrad Observa 10.65 335 *e*Pn Pn 03 07 22.4 -1.4
comp=Z,1.0nm,0.5s
CONA Sn Sn 03 09 21.5 -1.7
comp=Z,3.5nm,0.7s
KEST Kesra 10.81 260 LR LR 03 12 23.4
comp=Z,126nm,20.8s,baz=340,slow=42
KBA Koelnbreinsper 10.94 325 P Pn 03 07 29.4 +1.6
KBA pmax pmax
comp=Z,5.0nm,1.5s
CTI Castel Tesino 11.05 317 P Pn 03 07 29.9 +0.6
CTI Castel Tesino 11.05 317 Pn 03 07 29.9 +0.6
ABTA Abfaltersbach 11.08 322 *e*Pn Pn 03 07 31.1 +1.4
comp=Z,2.0nm,0.4s
ABTA Sn Sn 03 09 29.1 -4.6
comp=Z,12nm,0.9s
MOA Molln 11.16 330 Pn Pn 03 07 30.1 -0.6
comp=Z,2.6nm,0.4s
MOA *e*Sn Sn 03 09 34.7 -0.8
comp=Z,3.7nm,0.8s
KWP Kalwaria Pacla 11.21 1 *e*P Pn 03 07 35.6 +4.2
LVV L'vov 11.45 5 *e*P Pn 03 07 40.2 +5.5
LVV *e*S Sn 03 09 47.4 +4.7
LVV pmax pmax
comp=Z,40nm,1.0s
LVV MLR MLR
comp=E,300nm,10.0s
LVV MLR MLR
comp=N,100nm,8.0s
LVV MLR MLR
comp=Z,200nm,8.0s
GLL Jalalah 11.68 136 P Pn 03 07 33.4 -4.5
baz=139
WTTA Wattenberg 11.87 322 *e*Pn Pn 03 07 36.5 -4.1
comp=Z,2.0nm,0.4s
WTTA *e*Sn Sn 03 09 49.0 -4.2
comp=Z,13nm,0.9s
TREC Trest 11.97 337 P Pn 03 07 43.2 +1.4
TREC pmax pmax
comp=Z,2.0nm,0.6s
FETA Feichten 12.17 319 *e*Pn Pn 03 07 47.3 +2.7
comp=Z,1.7nm,0.7s
FETA *e*Sn Sn 03 09 58.3 -2.1
comp=Z,4.1nm,0.8s
GERES GERESS Array B 12.19 332 Pn Pn 03 07 45.0 +0.1
comp=Z,0.2nm,0.3s,baz=155,slow=13,SNR=9.6
GERES Sn Sn 03 09 49.7 -11
comp=Z,0.0nm,0.3s,baz=152,slow=23,SNR=1.3
HFRF Wahat Farafira 12.26 155 P Pn 03 07 43.2 -2.7
baz=158
KRLC Kraliky 12.34 343 AMS AMS 03 13 30.0
comp=Z,100nm,10.6s
RETA Reutte 12.46 320 *e*Pn Pn 03 07 46.5 -2.0
comp=Z,1.3nm,0.2s
DAVOX Davos/Dischmat 12.47 316 LR LR 03 14 12.2
comp=Z,120nm,18.0s,baz=177,slow=45
KHC Kasperske Hory 12.47 332 ⇓ *e*P Pn 03 07 48.8 +0.2
KHC pmax pmax
comp=Z,10.0nm,1.3s
KHC Kasperske Hory 12.47 332 *e*PN Pn 03 07 48.5 -0.2
KHC *e*SN Sn 03 10 05.9 -1.8
KHC AMS AMS 03 13 00.0
comp=Z,300nm,12.5s
KHC Kasperske Hory 12.47 332 Pn 03 07 48.9 +0.2
DPC Dobruska-Polom 12.71 342 AMS AMS 03 13 40.0
comp=Z,200nm,10.4s
DAVA Damuels 12.78 318 *e*Pn Pn 03 07 49.9 -3.1
comp=Z,0.4nm,0.2s
DAVA Sn Sn 03 10 13.3 -2.1
comp=Z,5.3nm,0.6s
PRU Pruhonice 12.88 336 AMS AMS 03 14 10.0
comp=Z,200nm,7.6s
UPC Upice 12.93 341 AMS AMS 03 13 50.0
comp=Z,200nm,13.4s
AKASG Malin Array Be 13.19 19 Pn Pn 03 07 56.9 -1.4
comp=Z,0.6nm,0.3s,baz=208,slow=12,SNR=5.6
AKASG Malin Array Be 13.19 19 *ce*P Pn 03 08 02.4 +4.1
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKBB Malin Array Si 13.19 19 P Pn 03 07 58.9 +0.6
AKBB Malin Array Si 13.19 19 Pn 03 07 58.9 +0.6
PVCC Panska Ves 13.34 338 AMS AMS 03 13 50.0
comp=Z,200nm,11.7s
EIL Elat 13.53 126 Pn Pn 03 08 04.2 +1.1
comp=Z,0.4nm,0.3s,baz=349,slow=18,SNR=4.4
NKC Novy Kostel 13.80 332 AMS AMS 03 13 40.0
comp=Z,300nm,13.2s
SOC Sochi 14.01 63 *e*P Pn 03 08 12.8 +3.1
SOC *e* 03 10 50.2
SOC pmax pmax
comp=Z,19nm,0.8s
CLL Collm 14.51 336 *e*PP P 03 08 25.0 +1.9
SUW Suwalki 15.61 2 *e*P P 03 08 34.4 -0.8
SUW Suwalki 15.61 2 P P 03 08 34.3 -0.9
SUW pmax pmax
comp=Z,41nm,0.9s
SUW Suwalki 15.61 2 P P 03 08 34.3 -0.9
KIV Kislovodsk 16.19 64 *e*P Pn 03 08 40.3 +1.6
KIV pmax pmax
comp=Z,37nm,1.0s
KIV MLR MLR
comp=Z,89nm,13.0s
KIV Kislovodsk 16.19 64 P P 03 08 45.6 +3.6
GOF Gofitskoye 16.71 60 ⇑ *e*P P 03 08 50.2 +2.6
ZEI Tsey 16.85 68 *e*P Pn 03 08 43.7 -3.6
ZEI pmax pmax
comp=Z,5.0nm,0.6s
OBN Obninsk 19.23 25 P P 03 09 15.5 +0.2
comp=Z,0.5nm,0.3s,baz=17,slow=18,SNR=4.4
OBN Obninsk 19.23 25 ⇓ *e*P P 03 09 15.4 +0.2
OBN pmax pmax
comp=Z,19nm,1.1s
OBN Obninsk 19.23 25 IAmb IAmb 03 09 18.1
comp=Z,47nm,1.4s
MOS Moscow 20.09 26 *e*P P 03 09 23.6 -1.1
MOS *e* 03 09 41.0
MOS *e* 03 13 13.6
VSU Vasula 20.25 7 *c i*P P 03 09 25.6 -0.7
VSU pmax pmax
comp=Z,122nm,0.8s
ESDC Sonseca Array 20.54 282 P P 03 09 30.1 +0.4
comp=Z,3.0nm,0.8s,baz=75,slow=11,SNR=22
PAB San Pablo 20.85 282 P P 03 09 33.8 +0.7
PAB pmax pmax
comp=Z,6.0nm,0.9s
PAB San Pablo 20.85 282 P P 03 09 33.8 +0.7
PAB IAmb IAmb 03 09 39.5
comp=Z,6.2nm,0.8s
TAM Tamanrasset 21.28 228 P P 03 09 39.3 +1.4
TAM pmax pmax
comp=Z,4.0nm,1.1s
TAM Tamanrasset 21.28 228 P P 03 09 39.2 +1.4
HOMB Homborsund 21.84 340 *e*P P 03 09 41.7 -1.8
HFS Hagfors 22.44 348 P P 03 09 47.9 -2.0
comp=Z,1.9nm,0.6s,baz=144,slow=10,SNR=14
KONO Kongsberg 22.78 343 ⇓ *e*P P 03 09 51.8 -1.7
KONO pmax pmax
comp=Z,13nm,1.3s
KONO Kongsberg 22.78 343 *e*P P 03 09 51.7 -1.9
FINES FINESS Array B 23.16 4 P P 03 09 55.8 -1.7
comp=Z,3.9nm,0.7s,baz=170,slow=12,SNR=10
FINES FINESS Array B 23.16 4 *i* P P 03 09 56.7 -0.8
FINES pmax pmax
comp=Z,4.0nm,0.7s
NC602 NORSAR Array S 23.37 346 P P 03 09 60.0 +0.4
NC602 NORSAR Array S 23.37 346 *e*P P 03 09 58.1 -1.5
NORES NORESS Array B 23.37 346 P P 03 09 58.7 -0.9
NORES pmax pmax
comp=Z,3.0nm,0.4s
BLS5 Blasjo 23.38 339 *e*P P 03 09 59.6 -0.2
KMY Karmoy 23.56 338 *e*P P 03 10 00.3 -1.2
NAO01 NORSAR Array S 23.59 346 *e*P P 03 10 00.5 -1.3
NC405 NORSAR Array S 23.69 347 P P 03 10 02.6 -0.2
NB2 NORSAR Subarra 23.71 346 P P 03 10 01.1 -2.0
comp=Z,7.0nm,1.1s,baz=159,slow=11
NB2 NORSAR Subarra 23.71 346 P P 03 10 01.1 -2.0
baz=159,slow=11
NOA NORSAR Array B 23.71 346 P P 03 10 01.0 -2.0
comp=Z,1.7nm,0.7s,baz=156,slow=8.0,SNR=12
NOA PcP PcP 03 13 46.7 -0.1
comp=Z,0.6nm,0.8s,baz=134,slow=2.5,SNR=3.8
SKAR Skarslia 24.00 343 *e*P P 03 10 05.2 -0.6
NC204 NORSAR Array S 24.02 346 P P 03 10 05.0 -0.9
EKA Eskdalemuir Ar 24.14 323 P P 03 10 06.2 -0.8
comp=Z,2.9nm,0.6s,baz=122,slow=8.9,SNR=12
BER Bergen 24.50 339 *e*P P 03 10 09.4 -0.9
ASK Askoy 24.62 339 *e*P P 03 10 11.2 -0.1
KLMR Klimovskoe 24.88 20 *e*P P 03 10 12.4 -1.2
KLMR pmax pmax
comp=Z,23nm,0.9s
KLMR Klimovskoe 24.88 20 *e*P P 03 10 12.5 -1.2
KLMR AMP 03 10 15.2
comp=Z,23nm,0.9s
HYA Hoyanger 24.93 341 *e*P P 03 10 14.7 +0.5
DOMB Dombas 25.05 345 *e*P P 03 10 15.2 -0.1
NSS Namsos 26.88 350 *e*P P 03 10 29.3 -2.5
PRGR Permogore 27.31 24 *e*P P 03 10 33.6 -2.0
PRGR pmax pmax
comp=Z,7.0nm,0.8s
TOA0 Torodi Ar. Sit 31.20 222 P P 03 11 10.9 +0.3
TORD Torodi Ar. Bea 31.20 222 P P 03 11 10.8 +0.2
comp=Z,6.6nm,0.6s,baz=33,slow=9.3,SNR=74
ARCES ARCESS Array B 31.22 2 P P 03 11 09.0 -1.4
comp=Z,1.0nm,0.8s,baz=186,slow=9.8,SNR=7.1
ARCES PcP PcP 03 14 03.9 -0.7
comp=Z,0.7nm,0.7s,baz=177,slow=2.4,SNR=4.1
ARCES ARCESS Array B 31.22 2 P P 03 11 09.0 -1.4
BRVK Borovoye 35.74 50 ⇓ *e*P P 03 11 51.6 +1.8
BRVK pmax pmax
comp=Z,5.0nm,2.5s
KK31 Karatay Array 36.30 67 P P 03 11 55.3 +0.5
KK31 pmax pmax
comp=Z,7.0nm,1.5s

KK31	**Karatay Array**	**36.30**	**67**	P	**P**	**03 11 55.3**	**+0.5**
KK31				IAmb	IAmb	03 12 05.7	
	comp=Z,7.1nm,1.5s						
KKAR	**Karatay Array**	**36.30**	**67**	P	**P**	**03 11 55.2**	**+0.3**
KKAR				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KKAR	**Karatay Array**	**36.30**	**67**	P	**P**	**03 11 55.2**	**+0.3**
KKAR				IAmb	IAmb	03 12 05.7	
	comp=Z,7.1nm,1.5s						
DBIC	**Dimbokro**	**40.12**	**225**	P	**P**	**03 12 27.2**	**0.0**
	comp=Z,13nm,0.8s,baz=24,slow=9.8,SNR=11						
DBIC	**Dimbokro**	**40.12**	**225**	P	**P**	**03 12 27.2**	**0.0**
DBIC				pmax	pmax		
	comp=Z,12nm,0.8s						
DBIC	**Dimbokro**	**40.12**	**225**	IAmb	IAmb	03 12 27.5	
	comp=Z,12nm,0.8s						
TIC	**Toumodi**	**40.23**	**225**	*e*P	**P**	**03 12 27.7**	**-0.5**
KIC	**Kosan Boka**	**40.31**	**225**	*e*P	**P**	**03 12 28.5**	**-0.3**
	comp=Z,11nm,0.5s						
LIC	**Lamto**	**40.58**	**225**	*e*P	**P**	**03 12 30.7**	**-0.3**
	comp=Z,21nm,0.5s						
KURK	**Kurchatov**	**40.91**	**54**	*ce*P	**P**	**03 12 32.6**	**-0.8**
KURK				pmax	pmax		
	comp=Z,11nm,1.3s						
KURK	**Kurchatov**	**40.91**	**54**	P	**P**	**03 12 33.0**	**-0.4**
KURK				IAmb	IAmb	03 12 35.4	
	comp=Z,10.0nm,1.2s						
KSH	**Kashi**	**41.11**	**71**	P	**P**	**03 12 31.4**	**-3.9**
KSH				pP	pP	03 12 37.6	-1.1
KSH				sP	sP	03 12 42.1	+2.0
KSH				pmax	pmax		
	comp=Z,12nm,0.5s						
KSH				pmax	pmax		
	comp=Z,26nm,4.0s						
MK31	**Makanchi Array**	**43.88**	**59**	P	**P**	**03 12 57.5**	**-0.1**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK31	**Makanchi Array**	**43.88**	**59**	P	**P**	**03 12 57.5**	**-0.1**
MK31				IAmb	IAmb	03 12 59.1	
	comp=Z,3.3nm,0.8s						
MKAR	**Makanchi Array**	**43.88**	**59**	P	**P**	**03 12 57.2**	**-0.4**
	comp=Z,3.1nm,0.6s,baz=281,slow=6.7,SNR=22						
MKAR				ScP	**ScP**	**03 18 33.2**	**-2.3**
	comp=Z,0.8nm,0.7s,baz=278,slow=2.5,SNR=5.9						
ZALV	**Zalesovo Beam**	**44.40**	**48**	P	**P**	**03 13 00.8**	**-0.8**
	comp=Z,9.4nm,0.7s,baz=274,slow=8.5,SNR=31						
DGZ	**Jazzator, Alta**	**46.66**	**54**	⇓*e*P	**P**	**03 13 19.6**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WMQ	**Urumqi**	**48.31**	**62**	*e*P	**P**	**03 13 34.4**	**+1.7**
TLY	**Talaya**	**56.00**	**48**	*ce*P	**P**	**03 14 30.6**	**+0.9**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TLY	**Talaya**	**56.00**	**48**	P	**P**	**03 14 30.7**	**+0.9**
GTA	**Gaotai**	**58.37**	**63**	*e*P	**P**	**03 14 45.5**	**-1.3**
GTA				pP	pP	03 14 50.0	0.0
GTA				sP	sP	03 14 52.6	+1.4
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI	**Tiksi**	**58.89**	**21**	⇓*e*P	**P**	**03 14 50.3**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	**Songino Array**	**59.12**	**51**	P	**P**	**03 14 52.2**	**+0.3**
	comp=Z,3.4nm,0.9s,baz=284,slow=8.7,SNR=8.0						
SCHQ	**Schefferville**	**59.31**	**318**	P	**P**	**03 14 52.6**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=36,slow=2.1,SNR=4.0						
ULN	**Ulaanbaatar**	**59.51**	**51**	*ce*P	**P**	**03 14 54.6**	**0.0**
ULN				pmax	pmax		
	comp=Z,6.0nm,2.5s						
ULN	**Ulaanbaatar**	**59.51**	**51**	P	**P**	**03 14 55.4**	**+0.8**
LZH	**Lanzhou**	**62.73**	**64**	*e*P	**P**	**03 15 17.2**	**+0.6**
LZH				pP	pP	03 15 20.5	+0.6
LZH				sP	sP	03 15 22.1	+1.0
LZH				*e*PP	**PP**	**03 17 37.4**	**+3.1**
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,56nm,7.8s						
CD2	**Chengdu**	**65.26**	**69**	P	**P**	**03 15 31.9**	**-1.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**65.64**	**56**	P	**P**	**03 15 36.6**	**+1.0**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,78nm,6.2s						
BOSA	**Boshof**	**66.73**	**177**	P	**P**	**03 15 43.5**	**+1.0**
	comp=Z,3.5nm,0.9s,baz=342,slow=6.0,SNR=7.2						
BOSA	**Boshof**	**66.73**	**177**	P	**P**	**03 15 43.5**	**+1.0**
BOSA				pmax	pmax		
	comp=Z,28nm,1.4s						
C36M	**Paulatuk**	**69.75**	**348**	P	**P**	**03 16 01.0**	**+0.2**
INK	**Inuvik**	**72.08**	**351**	P	**P**	**03 16 14.0**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=12,slow=10,SNR=10						
INK	**Inuvik**	**72.08**	**351**	P	**P**	**03 16 14.5**	**-0.5**
KLR	**Kul'dur**	**72.71**	**40**	*e*P	**P**	**03 16 19.3**	**+0.1**
MA2	**Magadan**	**73.45**	**25**	⇑*e*P	**P**	**03 16 24.4**	**+1.1**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YKA	**Yellowknife Ar**	**73.68**	**341**	P	**P**	**03 16 24.1**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=36,slow=5.3,SNR=11						
COLD	**Coldfoot**	**74.53**	**357**	IAmb	IAmb	03 16 32.4	
	comp=Z,1.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**76.05**	**44**	P	**P**	**03 16 38.6**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=24,slow=3.5,SNR=5.1						
MLY	**Manley**	**76.75**	**357**	P	**P**	**03 16 43.3**	**+0.9**
MLY				IAmb	IAmb	03 16 44.8	
	comp=Z,2.8nm,0.7s						
ILAR	**Eielson Array**	**76.81**	**355**	P	**P**	**03 16 42.0**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=344,slow=3.2,SNR=14						
YSS	**Yuzh-Sakhalins**	**79.67**	**37**	*e*P	**P**	**03 16 58.8**	**+0.1**
PDAR	**Pinedale Array**	**88.20**	**327**	P	**P**	**03 17 42.7**	**0.0**
	comp=Z,0.2nm,0.4s,baz=59,slow=5.4,SNR=2.8						
PFO	**Pinyon Flats O**	**98.81**	**326**	LR	LR	04 07 54.5	
	comp=Z,29nm,18.2s,baz=268,slow=38						

VAO ***10*** *03:12:01.5±1.1,20.02S×69.29W,h82km±10km,mb4.3*
NEIC ***10*** *03:12:03.6±1.3,20.19S±0.03×69.20W±0.05,h98km±3km, mb4.2/7,ML4.7(GUC),Error ellipse: s-maj=7.0km s-min=4.8km az=88.0*
GUC ***10*** *03:12:03.6±0.8,20.17S×69.23W,h95km±3km,ML4.6*
IDC ***10*** *03:12:04.2±0.8,20.12S×68.99W,h102km±6km,mb3.7/7, mb1 3.9/10,mb1mx3.7/32,mbtmp4.2/10,Error ellipse: s-maj=21.3km s-min=9.6km az=94.0*

ISC 10 03:12:03.3±0.5, 20.17S±0.03×69.19W±0.05, h97km±4km, n91,σ1°08/111, mb4.2/7, 7C-6D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB08	**IPOC Station P**	**0.05**	**49**	⇓*e*P		**Pn**	**03 12 18.0**	**+0.7**
PB08				*e*S		**Sn**	**03 12 28.6**	**+0.8**
PB08				IAML			03 12 29.6	
	comp=E,64μm,0.2s							
PB08	**IPOC Station P**	**0.05**	**49**			**Pn**	**03 12 17.8**	**+0.4**
PB08				Sn		**Sn**	**03 12 28.2**	**+0.4**
GO01	**Chusmiza**	**0.50**	**360**	⇓*e*P		**Pn**	**03 12 20.0**	**+0.6**
GO01				*e*S		**Sn**	**03 12 32.0**	**+0.7**
GO01				IAML			03 12 34.2	
	comp=E,53μm,0.1s							
GO01	**Chusmiza**	**0.50**	**360**			**Pn**	**03 12 19.9**	**+0.6**
GO01				Sn		**Sn**	**03 12 31.7**	**+0.3**
PB11	**IPOC Station P**	**0.60**	**313**	⇑*i*P		**Pn**	**03 12 20.3**	**+0.5**
PB11				*e*S		**Sn**	**03 12 32.4**	**+0.3**
PB11	**IPOC Station P**	**0.60**	**313**			**Pn**	**03 12 19.9**	**+0.1**
PB11				Sn		**Sn**	**03 12 32.4**	**+0.3**
TA02	**Huaiquique**	**0.89**	**264**	⇑*i*P		**Pn**	**03 12 22.7**	**+0.4**
TA02				*e*S		**Sn**	**03 12 36.9**	**+0.3**
PB01	**IPOC Station P**	**0.91**	**198**	⇑*i*P		**Pn**	**03 12 23.4**	**+0.7**
PB01				*e*S		**Sn**	**03 12 37.9**	**+0.7**
PB01				IAML			03 12 39.4	
	comp=E,30μm,0.3s							
PB01	**IPOC Station P**	**0.91**	**198**			**Pn**	**03 12 23.1**	**+0.4**
PB01				Sn		**Sn**	**03 12 37.5**	**+0.3**
TA01	**Diego Aracena**	**1.01**	**247**	⇑*i*P		**Pn**	**03 12 23.7**	**0.0**
TA01				*e*S		**Sn**	**03 12 38.7**	**-0.1**
TA01	**Diego Aracena**	**1.01**	**247**			**Pn**	**03 12 23.6**	**0.0**
TA01				Sn		**Sn**	**03 12 38.7**	**-0.1**
PSGC	**Pisagua**	**1.05**	**303**	⇑*i*P		**Pn**	**03 12 24.3**	**+0.1**
PSGC				*i* S		**Sn**	**03 12 39.8**	**0.0**
PSGC				IAML			03 12 43.6	
	comp=E,9μm,0.2s							
PSGCX	**Pisagua**	**1.05**	**303**			**Pn**	**03 12 24.6**	**+0.4**
PSGCX				Sn		**Sn**	**03 12 39.9**	**0.0**
MNMC	**Minye Minye**	**1.10**	**340**	⇓*e*P		**Pn**	**03 12 25.9**	**+0.9**
MNMC				*e*S		**Sn**	**03 12 42.7**	**+1.4**
MNMC				IAML			03 12 44.7	
	comp=E,22μm,0.3s							
MNMC	**Minye Minye**	**1.10**	**340**			**Pn**	**03 12 26.2**	**+1.2**
MNMC				Sn		**Sn**	**03 12 42.5**	**+1.2**
PATCX	**Punta Patache**	**1.11**	**234**	⇑*i*P		**Pn**	**03 12 25.1**	**+0.2**
PATCX				*e*S		**Sn**	**03 12 41.6**	**+0.6**
PATCX				IAML			03 12 46.0	
	comp=E,21μm,0.3s							
PATCX	**Punta Patache**	**1.11**	**234**			**Pn**	**03 12 25.0**	**+0.2**
PB02	**IPOC Station P**	**1.32**	**210**	⇑*i*P		**Pn**	**03 12 27.9**	**+0.6**
PB02				*i* S		**Sn**	**03 12 46.1**	**+0.7**
PB02				IAML			03 12 52.5	
	comp=E,16μm,0.2s							
PB09	**IPOC Station P**	**1.62**	**182**	⇓*i*P		**Pn**	**03 12 32.2**	**+1.2**
PB09				*i* S		**Sn**	**03 12 53.8**	**+1.7**
PB09	**IPOC Station P**	**1.62**	**182**			**Pn**	**03 12 32.5**	**+1.4**
PB07	**IPOC Station P**	**1.68**	**203**	*e*P		**Pn**	**03 12 32.0**	**+0.2**
PB07				*i* S		**Sn**	**03 12 54.5**	**+1.0**
PB07	**IPOC Station P**	**1.68**	**203**			**Pn**	**03 12 32.7**	**+0.9**
PB16	**IPOC Station P**	**1.85**	**351**	*e*P		**Pn**	**03 12 36.1**	**+1.6**
PB16				*i* S		**Sn**	**03 13 00.1**	**+2.0**
PB16	**IPOC Station P**	**1.85**	**351**			**Pn**	**03 12 36.2**	**+1.8**
PB12	**IPOC Station P**	**1.89**	**325**	⇓*i*P		**Pn**	**03 12 34.7**	**+0.3**
PB12				*i* S		**Sn**	**03 12 58.6**	**+0.5**
PB12				IAML			03 13 03.5	
	comp=N,4μm,0.3s							
PB12	**IPOC Station P**	**1.89**	**325**			**Pn**	**03 12 34.6**	**+0.3**
PB03	**IPOC Station P**	**1.94**	**196**	⇓*i*P		**Pn**	**03 12 35.5**	**+0.3**
PB03				*i* S		**Sn**	**03 13 00.5**	**+1.1**
PB03				IAML			03 13 06.5	
	comp=N,5μm,0.5s							
AP01	**Chacalluta**	**2.10**	**329**	*e*P		**Pn**	**03 12 38.1**	**+1.1**
AP01				*i* S		**Sn**	**03 13 03.6**	**+0.8**
PB04	**IPOC Station P**	**2.33**	**202**	*e*P		**Pn**	**03 12 41.2**	**+1.0**
PB04				IAML			03 13 19.2	
	comp=E,3μm,0.6s							
PB04	**IPOC Station P**	**2.33**	**202**			**Pn**	**03 12 41.2**	**+1.0**
LVC	**Limon Verde**	**2.44**	**174**	P		**Pn**	**03 12 43.4**	**+1.5**
	comp=E,77nm,0.3s,baz=347,slow=8.9,SNR=448							
LVC				S		**Sn**	**03 13 13.7**	**+2.3**
	comp=E,166nm,0.3s,baz=344,slow=11,SNR=8.7							
PB06	**IPOC Station P**	**2.54**	**188**	*e*P		**Pn**	**03 12 43.1**	**0.0**
PB06				*i* S		**Sn**	**03 13 12.2**	**-1.4**
PB06				IAML			03 13 21.6	
	comp=E,3μm,0.5s							
PB06	**IPOC Station P**	**2.54**	**188**			**Pn**	**03 12 44.6**	**+1.5**
PB05	**IPOC Station P**	**2.83**	**199**	*e*P		**Pn**	**03 12 46.6**	**-0.3**
PB05				IAML			03 13 30.8	
	comp=E,2μm,0.4s							
PB15	**IPOC Station P**	**3.03**	**185**			**Pn**	**03 12 50.2**	**+0.6**
PB10	**IPOC Station P**	**3.56**	**201**			**Pn**	**03 12 55.2**	**-1.2**
PB14	**IPOC Station P**	**4.57**	**194**			**Pn**	**03 13 08.6**	**-1.8**
SIV	**San Ignacio**	**8.77**	**63**	P		**Pn**	**03 14 05.6**	**-1.8**
	comp=E,7.4nm,0.3s,baz=263,slow=11,SNR=157							
PTLB	**Pontes e Lacer**	**10.66**	**65**	*e*P		**Pn**	**03 14 31.7**	**-1.5**
VILB	**Vilhena**	**11.21**	**52**	*e*P		**Pn**	**03 14 38.9**	**-1.7**
CFA	**Coronel Fontan**	**11.42**	**176**	P		**Pn**	**03 14 39.5**	**-3.7**
	comp=E,0.8nm,0.3s,baz=32,slow=21,SNR=12							
CPUP	**Villa Florida**	**12.51**	**122**	P		**Pn**	**03 14 57.0**	**-0.7**
	comp=E,0.2nm,0.3s,baz=297,slow=11,SNR=8.0							
CPUP	**Villa Florida**	**12.51**	**122**			**Pn**	**03 14 56.8**	**-0.9**
CPUP	**Villa Florida**	**12.51**	**122**	*e*P		**Pn**	**03 14 55.5**	**-2.2**
AQDB	**Aquidauana**	**12.66**	**94**	*e*P		**Pn**	**03 15 00.7**	**+0.8**
MT02	**Curacav**	**13.15**	**187**			**Pn**	**03 15 07.0**	**+0.8**
SALV	**Santo Antonio**	**13.52**	**74**	*e*P		**Pn**	**03 15 09.9**	**-1.3**
BO02	**Sierra Bellavi**	**14.63**	**185**			**Pn**	**03 15 26.3**	**+0.8**
ITQB	**Itaqui**	**14.80**	**132**	*e*P		**Pn**	**03 15 27.9**	**+0.3**
C2SB	**Chapadao do Su**	**15.49**	**88**	*e*P		**Pn**	**03 15 37.5**	**+1.1**
TRCB	**Terra Rica**	**15.63**	**103**	*e*P		**Pn**	**03 15 38.6**	**+0.4**
H03N1	**Juan Fernandez**	**15.79**	**211**	T		T	03 31 05.4	
	baz=34,slow=72,SNR=48							
H03N2	**Juan Fernandez**	**15.80**	**211**	T		T	03 31 15.3	
	baz=34,slow=72,SNR=18							
H03N3	**Juan Fernandez**	**15.81**	**211**	T		T	03 31 30.6	
	baz=34,slow=72,SNR=20							
CLDB	**Colider**	**15.87**	**56**	*e*P		**Pn**	**03 15 40.5**	**-0.6**
PTGB	**Pitanga**	**16.46**	**109**	*e*P		**P**	**03 15 50.6**	**+1.0**
ARAG	**Araguaiana, MT**	**17.12**	**78**	*e*P		**P**	**03 15 57.4**	**+0.6**
FRTB	**Fartura**	**18.50**	**103**	*e*P		**P**	**03 16 12.2**	**+0.2**
NPGB	**Novo Progresso**	**18.71**	**48**	*e*P		**P**	**03 16 12.5**	**-1.8**
MACA	**Manacapuru-AM**	**18.84**	**27**	*e*P		**P**	**03 16 13.8**	**-1.8**
BB19B	**Bebedouro**	**19.36**	**96**	*e*P		**P**	**03 16 21.1**	**-0.3**
IPMB	**Ipameri, GO**	**19.95**	**87**	*e*P		**P**	**03 16 27.9**	**+0.1**
ITTB	**Itaituba**	**20.46**	**42**	*e*P		**P**	**03 16 31.9**	**-1.4**
PLCA	**Paso Flores**	**20.53**	**183**	P		**P**	**03 16 35.2**	**+1.4**
	comp=E,8.0nm,0.8s,baz=2.3,slow=12,SNR=14							
PLCA	**Paso Flores**	**20.53**	**183**	P		**P**	**03 16 34.5**	**+0.7**
PLCA				IAmb		IAmb	03 16 38.7	
	comp=Z,9.4nm,0.9s							
PLCA	**Paso Flores**	**20.53**	**183**	*e*P		**P**	**03 16 35.9**	**+2.0**
BDFB	**Brasilia**	**20.64**	**81**	P		**P**	**03 16 34.9**	**-0.5**
	comp=Z,3.0nm,0.4s,baz=273,slow=10,SNR=7.3							
BDFB	**Brasilia**	**20.64**	**81**	P		**P**	**03 16 35.8**	**+0.4**
BDFB				IAmb		IAmb	03 16 38.1	
	comp=Z,5.2nm,0.6s							
VAO	**Valinhos**	**20.86**	**102**	*e*P		**P**	**03 16 38.5**	**+0.9**
PTGA	**Pitinga**	**21.33**	**26**	P		**P**	**03 16 40.4**	**-2.2**
	comp=Z,4.1nm,0.4s,baz=199,slow=19,SNR=7.0							
PTGA	**Pitinga**	**21.33**	**26**	P		**P**	**03 16 43.2**	**+0.6**
PTGA	**Pitinga**	**21.33**	**26**	*e*P		**P**	**03 16 40.4**	**-2.2**
LL01	**San Ignacio de**	**22.30**	**186**	P		**P**	**03 16 52.4**	**-0.3**
LL01				IAmb		IAmb	03 16 54.6	
	comp=Z,6.2nm,0.6s							
SMTB	**Santa Maria do**	**23.71**	**65**	*e*P		**P**	**03 17 06.0**	**-0.6**
JANB	**Januaria**	**24.24**	**82**	*e*P		**P**	**03 17 11.0**	**-0.4**
RUSC	**La Rusia**	**26.18**	**351**	P		**P**	**03 17 29.8**	**+0.4**
TXAR	**Lajitas Array**	**59.40**	**325**	P		**P**	**03 21 56.6**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=138,slow=9.6,SNR=2.4							
DBIC	**Dimbokro**	**68.62**	**74**	P		**P**	**03 22 55.7**	**-0.7**
	comp=Z,4.6nm,0.9s,baz=227,slow=4.7,SNR=5.0							
BEKR	**Beckworth**	**76.44**	**322**	P		**P**	**03 23 42.8**	**+0.3**
BEKR				IAmb		IAmb	03 24 00.8	
	comp=Z,7.8nm,0.8s							
TORD	**Torodi Ar. Bea**	**77.17**	**71**	P		**P**	**03 23 45.8**	**-1.1**
	comp=Z,1.9nm,0.5s,baz=253,slow=5.3,SNR=33							
TORD				pP		**pP**	**03 24 12.7**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=256,slow=5.0,SNR=3.4							
YKA	**Yellowknife Ar**	**89.85**	**341**	P		**P**	**03 24 51.5**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=131,slow=5.0,SNR=15							
YKA				pP		**pP**	**03 25 18.7**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=131,slow=5.3,SNR=3.3							
YKA				sP		**sP**	**03 25 28.1**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=136,slow=5.0,SNR=5.9							
H11S2	**WAKE ISLAND Hyd**	**27.44**	**278**	T		T	05 50 45.9	
	baz=102,slow=75,SNR=166							
H11S1	**WAKE ISLAND Hyd**	**27.45**	**278**	T		T	05 50 45.1	
	baz=102,slow=75,SNR=109							
H11S3	**WAKE ISLAND Hyd**	**27.46**	**278**	T		T	05 50 45.7	
	baz=102,slow=75,SNR=135							
H11N3	**WAKE ISLAND Hyd**	**27.48**	**280**	T		T	05 50 50.5	
	baz=101,slow=74,SNR=66							
H11N2	**WAKE ISLAND Hyd**	**27.50**	**280**	T		T	05 50 49.6	
	baz=101,slow=74,SNR=59							
H11N1	**WAKE ISLAND Hyd**	**27.50**	**280**	T		T	05 50 52.7	
	baz=101,slow=74,SNR=57							
ASAR	**Alice Springs**	**130.95**	**208**	PKP		**PKPdf**	**03 31 04.4**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=124,slow=1.6,SNR=4.1							
KSH	**Kashi**	**144.46**	**49**	PKP		**PKPdf**	**03 31 28.9**	**+0.3**
KSH				pPKP		pPKPdf	03 31 55.4	-1.2
KSH				sPKP			03 32 05.8	
MKAR	**Makanchi Array**	**144.71**	**35**	PKP		**PKPdf**	**03 31 29.2**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=352,slow=3.3,SNR=1.8							
LZH	**Lanzhou**	**163.01**	**20**	*e*PKP		**PKPdf**	**03 31 52.9**	**-1.8**
LZH				pPKP		pPKPdf	03 32 07.2	-15
LZH				sPKP			03 32 30.6	
LZH				PKP		**PKPab**	**03 32 45.7**	**+1.1**

ISC 10 03:15:46.1±1.9, 51.51N±0.08×16.16E±0.06, h0km, n15, σ0°65/30, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CHVC	**Chvalec**	**0.92**	**184**	*e*PG		**Pg**	**03 16 04.6**	**+0.9**
CHVC				*e*SG		**Sb**	**03 16 17.3**	**-0.4**
	comp=Z,6.9nm,0.5s							
OSTC	**Ostas**	**0.95**	**178**	*e*PG		**Pb**	**03 16 05.3**	**-0.1**
OSTC				*e*SG		**Sb**	**03 16 18.2**	**-0.4**
	7.5nm,0.6s							
UPC	**Upice**	**1.00**	**186**	*e*PG		**Pg**	**03 16 05.6**	**+0.3**
UPC				*e*SG		**Sb**	**03 16 19.8**	**-0.3**
	comp=Z,9.4nm,0.3s							

DPC	**Dobruska-Polom**	**1.16**	**175**	*e*PG		**Pg**	**03 16 08.5**	**+0.2**
DPC				*e*SG		**Sg**	**03 16 23.9**	**+0.6**
	comp=Z,3.7nm,0.3s							
PVCC	**Panska Ves**	**1.41**	**226**	*e*PG		**Pg**	**03 16 12.9**	**-0.1**
PVCC				*e*SG		**Sb**	**03 16 32.1**	**+0.5**
	comp=Z,30nm,0.3s							
KRLC	**Kraliky**	**1.48**	**164**	*e*PG		**Pn**	**03 16 14.2**	**+0.1**
KRLC				*e*SG		**Sn**	**03 16 34.5**	**+0.3**
	comp=Z,3.3nm,0.3s							
BRG	**Berggiesshubel**	**1.54**	**246**	PG		**Pn**	**03 16 14.5**	**-0.2**
BRG				SG		**Sg**	**03 16 34.8**	**-0.5**
	8.7nm,0.5s							
GOPC	**GO Pecny, Ondr**	**1.82**	**209**	*e*PG		**Pb**	**03 16 20.1**	**-0.1**
PRU	**Puhonice**	**1.84**	**215**	*e*PG		**Pb**	**03 16 20.6**	**+0.1**
PRU				*e*SG		**Sb**	**03 16 44.4**	**+0.4**
	comp=Z,4.2nm,0.3s							
MORC	**Moravsky Berou**	**1.94**	**153**	*e*PN		**Pn**	**03 16 19.4**	**-0.9**
MORC				*e*SG		**Sn**	**03 16 45.5**	**+0.1**
CLL	**Collm**	**1.99**	**266**	*e*Pg		**Pb**	**03 16 23.0**	**-0.1**
CLL				*e*Sg		**Sb**	**03 16 49.0**	**+0.6**
VRAC	**Vranov**	**2.22**	**173**	*e*PN		**Pn**	**03 16 23.7**	**-0.4**
VRAC				*e*SG		**Sb**	**03 16 55.9**	**+0.9**
KRUC	**Moravsky**	**2.45**	**176**	*e*PN		**Pn**	**03 16 27.3**	**0.0**
KRUC				*e*SG		**Sg**	**03 17 03.5**	**-1.3**
NKC	**Novy Kostel**	**2.68**	**243**	*e*SG		**Sg**	**03 17 11.6**	**-0.4**
	comp=Z,4.7nm,0.3s							
KHC	**Kasperske Hory**	**2.90**	**216**	*e*PN		**Pn**	**03 16 33.5**	**0.0**
KHC				*e*PG		**Pb**	**03 16 40.3**	**+1.7**
KHC				*e*SN		**Sn**	**03 17 08.5**	**-0.5**
KHC				*e*SG		**Sg**	**03 17 17.8**	**-1.3**

IDC 10 03:17:20.2±999.0, 16.35S×70.97W, h0km, Error ellipse: s-maj=534.5km s-min=54.2km az=88.0, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I08BO	**LAS PENAS INFR**	**2.42**	**87**	*i*		03 33 20.0	
	baz=266,slow=318,SNR=16						
I41PY	**VILLA FLORIDA**	**16.13**	**130**	*i*		04 53 50.0	
	baz=306,slow=296,SNR=1.9						
I09BR	**BRASILIA INFRA**	**22.07**	**91**	*i*		05 23 10.0	
	baz=268,slow=316,SNR=1.0						

TAP ***10*** *03:32:11.8,24.86N×122.80E,h16km±1km,ML3.2,D*
JMA ***10*** *03:32:13.3±0.2,24.81N×122.82E,h31km±2km,M2.5*

ISC 10 03:32:11.6±1.3, 24.91N±0.05×122.83E±0.03, h19km±4km, n52,σ0°67/57, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JYNG	**Yonagunijimaku**	**0.47**	**166**	P		**Pb**	**03 32 21.6**	**+0.4**
YOJ	**Yonaguni jima**	**0.47**	**159**	⇑P		**Pb**	**03 32 21.6**	**+0.2**
	baz=154							
YOJ				S		**Sg**	**03 32 27.5**	**-0.2**
	baz=154							
YOJ	**Yonaguni jima**	**0.47**	**159**	P		**Pb**	**03 32 21.8**	**+0.5**
YOJ				S		**Sg**	**03 32 27.6**	**-0.2**
EOS1	**EOS1**	**0.73**	**241**	*e*P		**Pg**	**03 32 26.4**	**+0.5**
	baz=242							
TWB1	**Santiao Chiao**	**0.77**	**278**	P		**Pb**	**03 32 26.3**	**0.0**
	baz=281							
TIPB	**Shuangxi**	**0.91**	**274**	P		**Pb**	**03 32 28.9**	**+0.1**
	baz=277							
TWC	**Suao**	**0.94**	**252**	*e*P		**Pb**	**03 32 29.2**	**0.0**
	baz=253							
NWF	**Wu-fen Shan**	**0.96**	**280**	*e*P		**Pb**	**03 32 30.0**	**+0.3**
	baz=282					

	baz=126						
TPUB	**Ta-pu**	**0.29 281**	*e*P	Pb	03 32 55.1	+0.2	
	baz=231						
TPUB	**Ta-pu**	**0.29 281**	*i* P	Pb	03 32 55.1	+0.2	
	baz=281						
TPUB			*e*S	Sb	03 33 00.8	+1.3	
	baz=281						
WTP	**Ta-pu**	**0.30 271**	*e*P	Pb	03 32 55.5	+0.5	
	baz=270						
WTP			S	Sb	03 33 00.1	+0.4	
	baz=270						
CHN4	**Tsaushan**	**0.34 289**	*e*P	Pg	03 32 55.2	-0.1	
	baz=288						
CHN4			*e*S	Sb	03 33 00.8	0.0	
	baz=288						
SGST	**Jiashian**	**0.37 244**	P	Pb	03 32 56.2	+0.1	
	baz=243						
SGST			*e*S	Sb	03 33 01.7	+0.1	
	baz=243						
SLGT	**Liugui**	**0.37 228**	*e*P	Pn	03 32 57.5	-1.1	
	baz=227						
SLGT			S	Sb	03 33 02.6	+1.0	
	baz=227						
CHN1	**Nanshi**	**0.39 261**	*e*P	Pb	03 32 56.7	+0.2	
	baz=231						
CHN1	**Nanshi**	**0.39 261**	P	Pb	03 32 56.8	+0.3	
	baz=261						
CHN1			*e*S	Sb	03 33 03.2	+1.0	
	baz=261						

TAP 10 03:32:55.0, 22.73N×120.83E, h27km, ML1.7, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSD	**Sandimen**	**0.18 276**	*i* P		Pb	03 33 01.1	+0.4
	baz=276						
SSD			*i* S		Sb	03 33 05.4	+0.7
	baz=276						
MASBT	**Mashibuluo**	**0.22 238**	*e*P		Pn	03 33 02.3	-0.2
	baz=232						
MASBT			S		Sb	03 33 06.2	+0.9
	baz=232						
EAST	**Anshuo**	**0.34 177**	P		Pb	03 33 03.3	+0.4
	baz=181						
EAST			S		Sb	03 33 09.0	+0.7
	baz=181						
SCZT	**Fangliau**	**0.40 209**	*e*P		Pn	03 33 04.5	-0.6
	baz=218						
SCZT	**Fangliau**	**0.40 209**	*e*P		Pn	03 33 05.0	-0.1
	baz=207						

IDC 10 03:46:19.5±6.4, 17.05S×176.60W, h0km, mb4.1/2, mb1 4.3/2, mb1mx3.6/44, mbtmp4.1/2, MS3.7/1, Ms1 3.7/1, ms1mx2.8/23, Error ellipse: s-maj=314.5km s-min=51.9km az=145.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.49 258**	P		P	03 54 48.9	-0.1
	0.7nm,0.5s,baz=94,slow=7.1,SNR=16						
ASAR	**Alice Springs**	**46.69 253**	P		P	03 54 50.2	-0.2
	3.0nm,0.6s,baz=87,slow=8.6,SNR=51						
FITZ	**Fitzroy Crossi**	**54.88 260**	LR		LR	04 16 38.1	
	comp=Z,62nm,18.2s,baz=262,slow=33						
GERES	**GERESS Array B**	**147.19 347**	PKPbc		PKPbc	04 06 04.1	-0.8
	0.4nm,0.5s,baz=90,slow=2.8,SNR=4.5						

IDC 10 04:13:33.1±2.1, 7.16S×154.79E, h0km, mb3.6/5, mb1 3.9/5, mb1mx3.6/27, mbtmp3.6/5, MS3.3/2, Ms1 3.3/2, ms1mx2.6/34, Error ellipse: s-maj=102.1km s-min=28.0km az=130.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.88 253**		LR	LR	04 18 03.6	
	comp=Z,73nm,19.1s,baz=278,slow=34						
WRA	**Warramunga Arr**	**23.56 235**	P		P	04 18 44.4	-1.1
	1.2nm,0.9s,baz=57,slow=9.5,SNR=6.1						
ASAR	**Alice Springs**	**25.91 228**	P		P	04 19 08.0	+0.9
	0.4nm,0.9s,baz=64,slow=9.4,SNR=2.8						
RAR	**Rarotonga**	**46.04 113**	LR		LR	04 37 41.7	
	comp=Z,94nm,21.6s,baz=234,slow=32						
MKAR	**Makanchi Array**	**83.39 319**	P		P	04 26 02.6	+0.3
	0.8nm,0.7s,baz=103,slow=5.5,SNR=7.1						
ILAR	**Eielson Array**	**83.60 22**	P		P	04 26 02.3	-0.7
	0.9nm,1.1s,baz=224,slow=6.3,SNR=2.8						
YKA	**Yellowknife Ar**	**96.57 28**	P		P	04 27 04.6	0.0
	0.4nm,0.7s,baz=261,slow=4.4,SNR=6.0						
TORD	**Torodi Ar. Bea**	**152.87 285**	PKPbc		PKiKP	04 33 33.7	+0.1
	0.5nm,0.7s,baz=56,slow=1.7,SNR=3.2						

*JMA **10** 04:21:53.3±0.3, 24.81N×122.71E, h0km, M1.8*
*TAP **10** 04:21:54.5, 24.85N×122.80E, h13km±1km, ML2.7, D*
ISC 10 04:21:53.6±1.3, 24.86N±0.04×122.75E±0.04, h7km±10km, n43, σ0868/79, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.44 157**	P		**Pg**	**04 22 01.9**	**-0.3**
JYNG			S		**Sg**	**04 22 08.3**	**+0.3**
YOJ	**Yonaguni jima**	**0.46 149**	P		**Pg**	**04 22 02.7**	**+0.1**
	baz=153						
YOJ			S		**Sg**	**04 22 08.8**	**+0.2**
	baz=153						
YOJ	**Yonaguni jima**	**0.46 149**	P		**Pg**	**04 22 02.6**	**+0.1**
YOJ			*e*S		**Sg**	**04 22 08.8**	**+0.2**
EOS1	**EOS1**	**0.65 242**	P		**Pb**	**04 22 07.4**	**+0.2**
	baz=244						
EOS1			S		**Sb**	**04 22 16.4**	**0.0**
	baz=244						
TIPB	**Shuangxi**	**0.85 278**	*e*P		**Pg**	**04 22 09.8**	**-0.2**
	baz=278						
TIPB			*e*S		**Sb**	**04 22 23.1**	**+0.8**
	baz=278						
TWC	**Suao**	**0.86 253**	*e*P		**Pb**	**04 22 11.2**	**+0.3**
	baz=254						
TWC			*e*S		**Sn**	**04 22 24.0**	**-0.9**
	baz=254						
NWF	**Wu-fen Shan**	**0.91 284**	*e*P		**Pg**	**04 22 10.8**	**-0.2**
	baz=283						
WFSB	**Wu-fen Shan**	**0.91 284**	*e*P		**Pg**	**04 22 10.7**	**-0.3**
	baz=283						
ILA	**Ilan**	**0.92 264**	*e*P		**Pb**	**04 22 12.0**	**+0.2**
	baz=265						
ILA			*e*S		**Sb**	**04 22 25.1**	**+0.9**
	baz=265						
ENA	**Nanau**	**1.01 245**	*e*P		**Pg**	**04 22 13.1**	**0.0**
	baz=246						
ENA			*e*S		**Sb**	**04 22 27.6**	**+0.6**
	baz=246						
SLBB	**Yuanshan**	**1.02 264**	*e*S		**Sb**	**04 22 27.4**	**+0.1**
	baz=265						
ENTT	**Nioudou**	**1.10 259**	*e*P		**Pg**	**04 22 14.8**	**+0.1**
	baz=259						
ENTT			*e*S		**Sb**	**04 22 29.5**	**0.0**
	baz=259						
YM08	**YM08**	**1.10 287**	*e*P		**Pb**	**04 22 15.4**	**+0.4**
	baz=287						
YM08			*e*S		**Sn**	**04 22 31.0**	**0.0**
	baz=287						
YM11	**YM11**	**1.11 286**	*e*P		**Pg**	**04 22 13.4**	**-1.6**
	baz=285						
YM11			*e*S		**Sg**	**04 22 28.7**	**-0.7**
	baz=285						
TWY	**Chenhua**	**1.12 292**	*e*P		**Pg**	**04 22 15.3**	**+0.1**
	baz=291						
TWY			*e*S		**Sb**	**04 22 30.6**	**+0.4**
	baz=291						
NWLT	**Wulai**	**1.14 266**	*e*P		**Pg**	**04 22 15.3**	**-0.2**
	baz=266						
NWLT			*e*S		**Sn**	**04 22 32.1**	**+0.3**
	baz=266						
TAP	**Taipei**	**1.15 279**	*e*P		**Pg**	**04 22 15.5**	**-0.1**
	baz=279						
TAP			*e*S		**Sg**	**04 22 30.3**	**-0.1**
	baz=279						
NDT	**Datong Townshi**	**1.16 257**	P		**Pn**	**04 22 16.5**	**+0.3**
	baz=258						
NDT			*e*S		**Sg**	**04 22 30.7**	**-0.1**
	baz=258						
ANP	**Anpu**	**1.16 286**	*e*P		**Pg**	**04 22 15.6**	**-0.4**
	baz=286						
ANP			*e*S		**Sg**	**04 22 31.2**	**+0.1**
	baz=286						
NACB	**Ninganchiao**	**1.26 237**	P		**Pn**	**04 22 17.2**	**-0.4**
	baz=238						
NACB			*e*S		**Sg**	**04 22 34.0**	**0.0**
	baz=238						
YHNB	**Yeheng**	**1.27 262**	*e*P		**Pn**	**04 22 17.0**	**-0.7**
	baz=262						
YHNB			*e*S		**Sn**	**04 22 34.8**	**-0.3**
	baz=262						
NSK	**Sanguang**	**1.28 262**	*e*P		**Pg**	**04 22 18.6**	**+0.4**
	baz=262						
NSK			*e*S		**Sn**	**04 22 36.4**	**+1.0**
	baz=262						
NNSB	**Datong**	**1.32 251**	*e*P		**Pn**	**04 22 17.9**	**-0.7**
	baz=252						
NNSB			*e*S		**Sn**	**04 22 37.1**	**+0.7**
	baz=252						
NNSH	**Datong**	**1.32 251**	*e*P		**Pn**	**04 22 18.2**	**-0.3**
	baz=252						
NNSH			*e*S		**Sn**	**04 22 36.5**	**+0.1**
	baz=252						
ETLH	**Xiulin Townshi**	**1.33 241**	P		**Pb**	**04 22 18.9**	**0.0**
	baz=242						
ETLH			*e*S		**Sn**	**04 22 36.7**	**+0.1**
	baz=242						
HWA	**Hwalien**	**1.37 230**	*e*P		**Pn**	**04 22 18.6**	**-0.5**
	baz=231						
HWA			*e*S		**Sg**	**04 22 37.8**	**+0.2**
	baz=231						
WHF	**Hehuan Shan**	**1.53 243**	*e*P		**Pb**	**04 22 22.5**	**0.0**
	baz=243						
WHF			*e*S		**Sg**	**04 22 44.5**	**+1.6**
	baz=243						
ESL	**Shilin**	**1.59 229**	*e*S		**Sn**	**04 22 42.5**	**-0.5**
	baz=230						
NSTT	**Nanjuang**	**1.61 262**	*e*S		**Sg**	**04 22 45.0**	**-0.3**
	baz=262						
CHGB	**Renai**	**1.64 241**	*e*P		**Pb**	**04 22 24.4**	**0.0**
	baz=242						
CHGB			*e*S		**Sb**	**04 22 45.1**	**-0.3**
	baz=242						
OWD	**Renai**	**1.70 238**	*e*P		**Pb**	**04 22 24.6**	**-0.6**
	baz=239						
OWD			*e*S		**Sb**	**04 22 47.1**	**+0.3**
	baz=239						
WHP	**Taichung City**	**1.74 251**	*e*P		**Pn**	**04 22 25.1**	**+0.7**
	baz=251						
WHP			*e*S		**Sn**	**04 22 46.6**	**-0.3**
	baz=251						
HGSD	**Ruisui**	**1.82 222**	*e*P		**Pn**	**04 22 26.0**	**+0.6**
	baz=222						
EHY	**Hungye**	**1.88 224**	*e*P		**Pn**	**04 22 26.9**	**+0.8**
	baz=225						
EHY			*e*S		**Sn**	**04 22 49.2**	**-0.9**
	baz=225						
SSLB	**Suanglung**	**1.96 237**	*e*P		**Pb**	**04 22 30.2**	**+0.6**
	baz=237						
SSLB			*e*S		**Sb**	**04 22 54.9**	**+0.7**
	baz=237						
YULB	**Yu-li**	**1.98 223**	*e*P		**Pn**	**04 22 27.0**	**-0.5**
	baz=223						
YULB			*e*S		**Sn**	**04 22 51.1**	**-1.3**
	baz=223						
TWF1	**Yuli**	**2.00 222**	*e*P		**Pn**	**04 22 28.5**	**+0.6**
	baz=222						
FULB	**Fuli**	**2.12 219**	*e*P		**Pn**	**04 22 30.8**	**+1.2**
	baz=220						
FULB			*e*S		**Sn**	**04 22 57.1**	**+0.9**
	baz=220						
CHN5	**Tsauling**	**2.27 237**	*e*P		**Pn**	**04 22 32.4**	**+0.8**
	baz=237						
CHN5			*e*S		**Sb**	**04 23 01.7**	**-1.7**
	baz=237						
ELDTW	**Lidau**	**2.30 224**	*e*P		**Pn**	**04 22 32.4**	**+0.4**
	baz=224						
ELDTW			*e*S		**Sn**	**04 23 00.1**	**-0.5**
	baz=224						
TWH	**Lutao**	**2.44 209**	*e*P		**Pn**	**04 22 32.5**	**-1.4**
	baz=209						
TWH			*e*S		**Sn**	**04 23 03.5**	**-0.3**
	baz=209						
TWGBT	**Beinan**	**2.54 217**	*e*P		**Pb**	**04 22 38.2**	**-1.4**
	baz=217						
TWGBT			*e*S		**Sn**	**04 23 08.6**	**+2.1**
	baz=217						
TWG	**Pinlang**	**2.55 217**	*e*P		**Pn**	**04 22 35.8**	**+0.5**
	baz=217						
TWG			*e*S		**Sn**	**04 23 05.7**	**-0.9**
	baz=217						

TAP 10 04:22:43.9, 23.63N×121.32E, h9km±1km, ML1.1, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.11 68**		P	Pg	04 22 47.4	+0.9
	baz=68						
EGFH				S	Sg	04 22 49.4	+1.0
	baz=68						
EHY	**Hungye**	**0.12 178**	*e*P		Pg	04 22 47.7	+1.0
	baz=174						
EHY			*e*S		Sg	04 22 49.9	+1.2
	baz=174						
HGSD	**Ruisui**	**0.17 144**	*e*P		Pg	04 22 49.1	+1.7
	baz=144						
HGSD			*e*S		Sg	04 22 52.5	+2.7
	baz=144						
HGSD	**Ruisui**	**0.17 144**	*e*S		Pg	04 22 48.7	+1.2
	baz=222						
VWDT	**VWDT**	**0.20 308**	*e*P		Pg	04 22 49.9	+1.8
	baz=307						
VWDT			*e*S		Sg	04 22 52.7	+1.7
	baz=307						
ESL	**Shilin**	**0.21 30**	*e*P		Pg	04 22 48.7	+0.4
	baz=31						
ESL			*e*S		Sg	04 22 51.5	+0.2
	baz=31						
YULB	**Yu-li**	**0.23 185**	P		Pg	04 22 49.5	+0.8
	baz=184						
YULB			*e*S		Sg	04 22 52.7	+0.8
	baz=184						
TWF1	**Yuli**	**0.28 184**	P		Pb	04 22 50.5	-0.6
	baz=182						
TWF1			*e*S		Sg	04 22 54.1	+1.0
	baz=182						
TWF1	**Yuli**	**0.28 184**	*e*S		Sg	04 22 53.7	+0.6
	baz=222						
OWD	**Renai**	**0.35 338**	*e*P		Pb	04 22 51.9	-0.5
	baz=338						
OWD			*e*S		Sb	04 22 57.4	-0.8
	baz=338						
SSLB	**Suanglung**	**0.37 296**	P		Pg	04 22 50.9	-0.3
	baz=295						
SSLB			*e*S		Sb	04 22 58.3	-0.3
	baz=295						
FULB	**Fuli**	**0.43 183**	*e*P		Pb	04 22 53.9	+0.2
	baz=182						
FULB			*e*S		Sb	04 22 59.8	-0.4
	baz=182						
HWA	**Hwalien**	**0.44 37**	*e*P		Pg	04 22 52.6	+0.2
	baz=38						
HWA			*e*S		Sb	04 23 00.9	+0.4
	baz=38						
CHGB	**Renai**	**0.45 343**	*e*S		Sb	04 23 01.8	+0.7
	baz=342						
TWD	**Chiawan**	**0.52 29**	*e*P		Pb	04 22 55.1	-0.1
	baz=30						
TWD			*e*S		Sb	04 23 03.1	+0.3
	baz=30						
NACB	**Ninganchiao**	**0.60 25**	*e*P		Pb	04 22 56.8	+0.2
	baz=25						
NACB			*e*S		Sb	04 23 06.8	+1.6
	baz=25						

DJA 10 04:23:25.1±0.3, 8.S±4.×10.9E±, h41km±35km, M4.2/6, MLv4.2/6, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**1.24 61**		P	Pn	04 23 46.5	+0.5
YOGI				S	Sn	04 24 00.9	-0.7
UGM	**Wanagama**	**1.41 69**		P	Pn	04 23 49.0	+0.7
UGM				S	Sn	04 24 06.0	+0.3
CISI	**Cisompet, Garu**	**1.62 302**		P	Pn	04 23 51.3	0.0
CISI				S	Sn	04 24 10.2	-0.8
WOJI	**Wonogiri, Jawa**	**1.81 71**		P	Pn	04 23 53.3	-0.4
WOJI				S	Sn	04 24 14.2	-1.2
SMRI	**Semarang**	**1.84 42**		P	Pn	04 23 55.0	+0.7
SMRI				S	Sn	04 24 18.5	+2.1
PCJI	**Pacitan**	**1.97 83**		P	Pn	04 23 57.5	+1.5
PCJI				S	Sn	04 24 20.5	+1.0
LEM	**Lembang**	**2.24 315**		P	Pn	04 24 01.1	+1.3
CNJI	**Cibinong**	**2.33 298**		P	Pn	04 24 00.6	-0.4
CNJI				S	Sn	04 24 29.4	+0.9
PWJI	**Pagerwojo**	**2.61 81**		P	Pn	04 24 05.4	+0.6
PWJI				S	Sn	04 24 36.5	+1.2
UWJI	**Ujung Watu**	**2.65 41**		P	Pn	04 24 06.5	+1.2
UWJI				S	Sn	04 24 34.8	-1.4
GRJI	**Gresik**	**3.58 65**		P	Pn	04 24 19.1	+0.9
JAGI	**Jajag, Banyuwa**	**4.90 91**		P	Pn	04 24 37.0	+0.7
JAGI				S	Sn	04 25 30.9	-0.9
KSI	**Kapahiang**	**8.11 305**		P	Pn	04 25 19.1	-1.3

IDC 10 04:43:29.3±2.0, 4.48N×124.58E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/53, mbtmp3.5/4, Error ellipse: s-maj=143.0km s-min=25.2km az=68.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.46 177**		P	P	04 48 31.1	+0.9
	0.7nm,0.3s,baz=9.2,slow=8.4,SNR=10						
WRA	**Warramunga Arr**	**26.10 159**		P	P	04 49 05.2	+0.2
	0.2nm,0.4s,baz=332,slow=10.0,SNR=6.9						
ASAR	**Alice Springs**	**29.42 162**		P	P	04 49 33.6	-1.1
	0.3nm,0.5s,baz=342,slow=8.9,SNR=2.1						
MKAR	**Makanchi Array**	**55.73 326**		P	P	04 53 07.8	0.0
	0.3nm,0.4s,baz=117,slow=7.3,SNR=5.4						

*BJI **10** 04:47:19.2±0.0, 20.00S×176.96W, h29km, mB5.2/4, mb5.1/7, Ms4.7/1, Ms7 4.4/1*
*NEIC **10** 04:48:13.8±1.7, 20.75S±0.2×178.1W±0.1, h520km±9km, mb4.3/19, Error ellipse: s-maj=28.5km s-min=15.9km az=165.0*
*IDC **10** 04:48:17.0±3.9, 20.50S×178.26W, h539km±41km, mb3.6/22, mb1 3.7/23, mb1mx3.6/42, mbtmp4.4/23, Error ellipse: s-maj=21.8km s-min=18.7km az=112.0*
ISC 10 04:48:15.8±0.5, 20.46S±0.10×178.14W±0.08, h534km, n96, σ1930/96, mb4.1/26, 7C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.51 306**		P	**P**	**04 49 40.2**	**-0.6**
NIUE	**Niue**	**7.85 81**		P	**P**	**04 50 09.9**	**-1.7**
AFI	**Afiamalu**	**8.91 44**		P	**P**	**04 50 19.5**	**-3.0**
AFI					**S**	**04 52 03.0**	**-3.4**
DZM	**Mont Dzumac**	**14.46 261**		P	**P**	**04 51 19.6**	**-0.4**
	0.9nm,0.3s,baz=90,slow=18,SNR=9.2						
TGRZ	**Tauranga**	**17.88 195**		P	**P**	**04 51 54.0**	**+0.8**
KMRZ	**Kaimai**	**18.07 195**		P	**P**	**04 51 55.5**	**+0.6**
TOZ	**Tahuroa Road**	**18.07 196**		P	**P**	**04 51 55.5**	**+0.6**
KARZ	**Kaharoa**	**18.16 194**		P	**P**	**04 51 51.4**	**-4.4**
HIZ	**Hauiti**	**18.98 197**		P	**P**	**04 52 04.6**	**+1.4**
NMHZ	**Naumai**	**19.08 192**		P	**P**	**04 52 02.5**	**-1.7**
NGZ	**Ngauruhoe**	**19.41 195**		P	**P**	**04 52 06.9**	**-0.4**
MCHZ	**McNeill Hill**	**19.43 192**		P	**P**	**04 52 06.2**	**-1.1**
KWHZ	**Kaweka Forest**	**19.47 193**		P	**P**	**04 52 05.5**	**-2.2**
BHHZ	**Black Hill Sta**	**19.61 193**		P	**P**	**04 52 05.5**	**-3.5**
CTA	**Charters Tower**	**33.37 264**		P	**P**	**04 54 09.9**	**-0.1**
	12nm,0.4s,baz=90,slow=10,SNR=27						
CTAO	**Charters Tower**	**33.37 264**		P	**P**	**04 54 09.3**	**-0.7**
PMG	**Port Moresby**	**35.21 283**		P	**P**	**04 54 25.4**	**-0.1**
	28nm,0.8s,baz=132,slow=3.7,SNR=5.2						
PMG	**Port Moresby**	**35.21 283**		P	**P**	**04 54 24.5**	**-1.0**
STKA	**Stephens Creek**	**37.69 244**		P	**P**	**04 54 45.9**	**+0.2**
	3.5nm,0.7s,baz=86,slow=10.0,SNR=7.2						
STKA	**Stephens Creek**	**37.69 244**		P	**P**	**04 54 46.0**	**+0.2**
JAY	**Jayapura**	**43.91 289**		P	**P**	**04 55 35.8**	**+0.3**
	34nm,0.5s,baz=154,slow=4.4,SNR=30						
WR0	**Warramunga Arr**	**44.29 262**		P	**P**	**04 55 36.8**	**-1.6**
WR0				IAmb	IAmb	04 55 38.9	
	comp=Z,7.8nm,0.8s						
AS31	**Alice Springs**	**44.40 257**		P	**P**	**04 55 38.7**	**-0.5**
AS31				IAmb	IAmb	04 55 39.5	
	comp=Z,7.3nm,0.6s						
ASAR	**Alice Springs**	**44.40 257**		P	**P**	**04 55 38.8**	**-0.5**
	comp=Z,25nm,0.7s,baz=98,slow=7.8,SNR=309						
ASAR				PcP	**PcP**	**04 57 11.3**	**-0.2**
	comp=Z,3.0nm,0.7s,baz=106,slow=3.7,SNR=8.2						
ASAR				S	**S**	**05 01 33.2**	**-2.0**
	comp=Z,1.8nm,0.8s,baz=93,slow=16,SNR=13						
WB0	**Warramunga Arr**	**44.46 262**		P	**P**	**04 55 38.1**	**-1.6**
WB2	**Warramunga Arr**	**44.47 262**		P	**P**	**04 55 38.7**	**-1.0**
WRAB	**Tennant Creek**	**44.47 262**		P	**P**	**04 55 37.9**	**-1.9**
WRA	**Warramunga Arr**	**44.48 262**		P	**P**	**04 55 38.8**	**-1.1**
	comp=Z,11nm,0.5s,baz=98,slow=8.6,SNR=155						
MTN	**Manton Dam**	**49.03 271**		P	**P**	**04 56 12.9**	**-1.4**
KNRA	**Kununurra**	**50.53 266**		P	**P**	**04 56 24.1**	**-1.2**
FITZ	**Fitzroy Crossi**	**52.90 262**		P	**P**	**04 56 42.1**	**-0.4**
	comp=Z,3.4nm,0.5s,baz=114,slow=4.1,SNR=21						
FITZ	**Fitzroy Crossi**	**52.90 262**		P	**P**	**04 56 42.0**	**-0.4**
FITZ				IAmb	IAmb	04 56 42.9	
	comp=Z,29nm,1.9s						
SIJI	**Sorong**	**53.10 285**		P	**P**	**04 56 43.8**	**-0.1**
	comp=Z,38nm,0.7s,baz=94,slow=5.8,SNR=20						
SOEI	**Soe**	**56.37 272**		P	**P**	**04 57 06.2**	**-0.7**
VNDA	**Vanda**	**57.94 185**		P	**P**	**04 57 17.4**	**+1.0**
	comp=Z,2.1nm,0.8s,baz=6.4,slow=4.8,SNR=4.1						
MJAR	**Matsushiro Arr**	**70.10 324**		P	**P**	**04 58 34.4**	**0.0**
	comp=Z,1.8nm,0.6s,baz=143,slow=5.4,SNR=5.2						
KSM	**Kuching**	**73.28 278**		P	**P**	**04 58 51.8**	**-1.6**
JKA	**Kamikawa-asahi**	**73.63 332**		P	**P**	**04 58 56.2**	**+1.5**
ASAJ	**Asahikawa**	**73.63 332**		P	**P**	**04 58 56.2**	**+1.5**
	comp=Z,4.1nm,0.8s,baz=346,slow=19,SNR=3.7						
PETK	**Petropavlovsk-**	**76.20 345**		P	**P**	**04 59 09.3**	**+0.4**
	comp=Z,2.6nm,0.6s,baz=148,slow=12,SNR=4.1						
KSRS	**Korea Array**	**76.77 319**		P	**P**	**04 59 13.5**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=132,slow=5.1,SNR=4.4						
USRK	**Ussuriysk Ar.**	**78.86 326**		P	**P**	**04 59 25.0**	**+1.5**
	comp=Z,0.5nm,0.4s,baz=206,slow=13,SNR=4.5						
NVAR	**Mina Array Bea**	**81.09 43**		P	**P**	**04 59 37.8**	**+2.1**
	comp=Z,1.0nm,0.8s,baz=220,slow=8.3,SNR=2.2						
KLR	**Kul'dur**	**82.43 330**		P	**P**	**04 59 43.1**	**+1.2**
	comp=Z,1.2nm,0.7s,baz=91,slow=5.1,SNR=4.5						
TRF	**Thorofare Moun**	**86.44 12**		IAmb	IAmb	05 02 22.0	
	comp=Z,12nm,1.6s						
RND	**Reindeer**	**86.69 13**		P	**P**	**05 00 02.5**	**0.0**
RND				IAmb	IAmb	05 00 03.5	
	comp=Z,5.3nm,0.8s						
TXAR	**Lajitas Array**	**87.14 57**		P	**P**	**05 00 08.2**	**+2.7**
	comp=Z,0.4nm,0.9s,baz=252,slow=5.6,SNR=3.8						
ILAR	**Eielson Array**	**88.31 13**		P	**P**	**05 00 09.6**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=216,slow=5.3,SNR=10						
PDAR	**Pinedale Array**	**89.02 43**		P	**P**	**05 00 13.9**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=149,slow=3.1,SNR=3.5						
CMAR	**Chiang Mai Arr**	**89.98 290**		P	**P**	**05 00 20.9**	**+2.1**
	comp=Z,1.4nm,0.5s,baz=111,slow=32,SNR=5.4						
INK	**Inuvik**	**94.27 15**		P	**P**	**05 00 37.1**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=217,slow=4.6,SNR=3.3						
INK	**Inuvik**	**94.27 15**		IAmb	IAmb	05 00 38.6	
	comp=Z,3.2nm,1.3s						
SONM	**Songino Array**	**95.64 319**		P	**P**	**05 00 45.6**	**+1.4**
	comp=Z,0.6nm,0.9s,baz=90,slow=5.8,SNR=2.4						
MKAR	**Makanchi Array**	**111.08 313**		PKiKP	**PKiKP**	**05 05 47.9**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=94,slow=1.6,SNR=6.3						
KSH	**Kashi**	**114.76 305**		PKP	**P

CHVC	Chvalec	147.91	343	*e*PKP		PKPbc	05 06 59.2	-1.6
CLL	Collm	148.00	347	*i* PKPbc		PKiKP	05 07 01.9	-0.4
	comp=Z,11nm,1.0s							
CLL				*i* PKPab		PKPab	05 07 06.7	+1.1
	comp=Z,6.0nm,0.7s							
CLL	Collm	148.00	347			PKPbc	05 07 01.4	+0.5
DPC	Dobruska-Polom	148.05	342	*e*PKP		PKPbc	05 07 01.9	+0.7
DOPR	Dopca	148.07	328	P		PKPbc	05 07 01.1	-0.2
MLR	Muntele Rosu	148.12	327	P		PKiKP	05 07 02.4	-0.5
BRG	Berggiesshubel	148.19	345	*e*PKP		PKPbc	05 07 02.0	+0.6
	comp=Z,5.3nm,0.9s							
BRG				*e*			05 07 06.5	
	comp=Z,5.0nm,0.8s							
MORC	Moravsky Berou	148.20	341	*e*PKP		PKPbc	05 07 02.1	+0.5
PRU	Pruhonice	148.86	344	*e*PKP		PKPbc	05 07 03.3	+0.2
PRU				*ex*		x	05 07 09.8	
GOPC	GO Pecny, Ondr	148.87	344	*e*PKP		PKPbc	05 07 03.4	+0.2
GOPC				*ex*		x	05 07 10.0	
VYHS	Vyhne	148.88	338	*e*PKP		PKPbc	05 07 03.3	+0.1
VYHS				*e*			05 07 10.1	
JAVC	Velka Javorina	148.96	340	*e*PKP		PKiKP	05 07 05.1	+0.7
KRUC	Moravsky	149.18	341	*e*PKP		PKPbc	05 07 04.3	+0.4
KHC	Kasperske Hory	149.90	345	*e*PKP		PKPbc	05 07 06.0	+0.3
KHC				*ep*PKP		PKPab	05 07 14.1	+0.5
KHC	Kasperske Hory	149.90	345			PKPbc	05 07 05.2	-0.5
GERES	GERESS Array B	150.13	344	PKPbc		PKPbc	05 07 06.3	0.0
	comp=Z,1.3nm,0.6s,baz=28,slow=3.2,SNR=11							
CONA	Conrad Observa	150.35	341	*i* PKiKP		PKiKP	05 07 07.5	+0.1
	comp=Z,2.9nm,0.7s							
MANT	Manisa	150.78	314			PKPbc	05 07 07.8	-0.6
ARSA	Arzberg	151.06	341	*i* PKiKP		PKiKP	05 07 09.2	+0.4
	comp=Z,1.2nm,0.6s							
SOKA	Soboth	151.72	341	*i* PKiKP		PKPbc	05 07 09.7	-0.3
	comp=Z,2.4nm,1.1s							
OBKA	Obir	152.02	341	*i* PKPbc		PKPbc	05 07 10.1	-0.6
	comp=Z,3.7nm,1.1s							
WTTA	Wattenberg	152.11	346	*i* PKiKP		PKPbc	05 07 11.0	+0.1
	comp=Z,3.2nm,0.6s							
MOTA	Moosalm	152.15	346	*i* PKiKP		PKPbc	05 07 10.9	-0.1
	comp=Z,2.5nm,0.8s							
MYKA	Terra Mystica	152.18	342	*i* PKPbc		PKPbc	05 07 10.3	-0.7
	comp=Z,1.8nm,0.5s							
ABTA	Abfaltersbach	152.38	344	*i* PKPbc		PKPbc	05 07 11.0	-0.5
	comp=Z,3.4nm,0.6s							

NEIC ***10*** *05:24:40.5±2.6,23.˚68S±0.˚10×174.˚92W±0.˚09,h10km±1km, mb4.6/15, Error ellipse: s-maj=17.9km s-min=12.1km az=145.0*

IDC ***10*** *05:24:42.4±1.0,23.˚72S×175.˚39W,h0km,mb4.3/14, mb1 4.5/15,mb1mx4.3/36,mbtmp4.2/15,ML3.9/1,MS3.7/11, Ms1 3.7/11,ms1mx3.5/25,Error ellipse: s-maj=41.5km s-min=17.8km az=153.0*

ISC 10 05:24:46.3±0.5,23.˚86S±0.˚08×175.˚3W±0.˚1,h28km,n66, σ1ş**78**/58**, mb4.4**/22**, MS3.8**/11**, 4C-2D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	6.87	47		Pn	05 26 15.7	-9.5
MSVF	Nonsavu	8.74	313		Pn	05 26 50.9	0.0
AFI	Afiamalu	10.43	19	Pn	Pn	05 27 03.2	-11
RAR	Rarotonga	14.54	83	Pn	Pn	05 28 03.1	-7.1
	5.1nm,0.3s,baz=206,slow=5.9,SNR=13						
RAR				Sn	Sn	05 30 29.8	-21
	1.5nm,0.3s,baz=161,slow=22,SNR=1.7						
RAR				LR	LR	05 33 58.1	
	comp=Z,156nm,19.7s,baz=286,slow=38						
RAR	Rarotonga	14.54	83		Pn	05 28 02.0	-8.2
URZ	Urewera	15.77	203	Pn	Pn	05 28 26.9	+0.6
	0.5nm,0.3s,baz=322,slow=22,SNR=1.9						
URZ				Sn	Sn	05 31 14.4	-5.8
	0.4nm,0.3s,baz=152,slow=21,SNR=2.4						
BKZ	Black Stump Fm	16.79	203		Pn	05 28 40.4	+0.9
DZM	Mont Dzumac	16.95	272	*e*Pn	P	05 28 45.6	+2.2
	53nm,0.9s						
DZM				eLR	LR	05 32 45.5	
	comp=Z,240nm,22.2s						
DZM	Mont Dzumac	16.95	272	Pn	P	05 28 45.8	+2.5
	0.9nm,0.3s,baz=93,slow=16,SNR=11						
DZM				LR	LR	05 32 53.4	
	comp=Z,130nm,19.5s,baz=202,slow=29						
BFZ	Birch Farm	18.23	201	P	Pn	05 28 57.0	-0.3
BFZ				IAmb	IAmb	05 29 04.3	
	comp=Z,28nm,1.0s						
SNZO	South Karori	19.33	203	P	Pn	05 29 10.6	+0.1
SNZO				IAmb	IAmb	05 29 18.5	
	comp=Z,45nm,0.9s						
TUWZ	Tuamarina	19.71	205	P	P	05 29 11.7	-1.8
RPZ	Rata Peaks	22.79	206	LR	LR	05 38 49.6	
	comp=Z,398nm,18.3s,baz=18,slow=37						
TBI	Tubuai	23.63	94	eLQ	LQ	05 34 27.4	
	comp=Z,204nm,22.8s						
TBI				eLR	LR	05 35 33.2	
	comp=Z,173nm,28.0s						
TBI	Tubuai	23.63	94	*e*T	T	05 53 51.6	
	comp=Z,7.9nm,0.4s						
PAE	Paea	24.76	80	*e*T	T	05 55 13.6	
	comp=Z,2.6nm,0.4s						
PPT2	Papeete2	24.79	80	eLQ	LQ	05 35 00.2	
	comp=Z,251nm,24.5s						
PPT2				eLR	LR	05 36 03.4	
	comp=Z,219nm,26.5s						
PPT2	Papeete2	24.79	80	*e*T	T	05 55 17.4	
	comp=Z,3.1nm,0.3s						
PPT	Papeete	24.80	80	LR	LR	05 39 00.2	
	comp=Z,130nm,18.9s,baz=276,slow=34						
MEH	Mehetia	26.07	82	*e*T	T	05 56 51.6	
	comp=Z,6.7nm,0.3s						
HNR	Honiara	27.69	297	LR	LR	05 41 18.6	
	comp=Z,121nm,18.2s,baz=144,slow=36						
ARMA	Armidale	30.12	250	P	P	05 30 57.5	+3.6
ARMA				IAmb	IAmb	05 30 58.4	
	comp=Z,6.2nm,0.8s						
CTA	Charters Tower	35.82	268	P	P	05 31 43.7	+0.1
	comp=Z,3.1nm,0.3s,baz=97,slow=11,SNR=9.9						
CTAO	Charters Tower	35.82	268	P	P	05 31 43.0	-0.6
STKA	Stephens Creek	38.77	248	P	P	05 32 08.9	+0.4
	comp=Z,1.5nm,0.5s,baz=89,slow=9.5,SNR=5.6						
STKA				LR	LR	05 47 42.4	
	comp=Z,202nm,18.1s,baz=151,slow=36						
STKA	Stephens Creek	38.77	248	P	P	05 32 08.6	0.0
BBOO	Buckleboo	43.46	247	P	P	05 32 46.8	-0.3
BBOO				IAmb	IAmb	05 32 51.7	
	comp=Z,19nm,1.4s						
AS31	Alice Springs	46.32	259	P	P	05 33 10.1	0.0
ASAR	Alice Springs	46.32	259	P	P	05 33 08.8	-1.3
	comp=Z,2.7nm,0.7s,baz=97,slow=8.0,SNR=30						
WR0	Warramunga Arr	46.55	265	P	P	05 33 10.4	-1.5
WR0				IAmb	IAmb	05 33 12.5	
	comp=Z,4.6nm,1.1s						
WB2	Warramunga Arr	46.73	265	P	P	05 33 11.3	-2.0
WB0	Warramunga Arr	46.74	265	P	P	05 33 11.0	-2.3
WB0				IAmb	IAmb	05 33 24.3	
	comp=Z,7.0nm,0.8s						
WRA	Warramunga Arr	46.74	265	P	P	05 33 10.8	-2.5
	comp=Z,5.2nm,0.9s,baz=102,slow=8.1,SNR=10						
FORT	Forrest	50.39	249	P	P	05 33 40.2	-1.0
KNRA	Kununurra	53.03	268	P	P	05 34 00.3	-0.8
KNRA				IAmb	IAmb	05 34 12.5	
	comp=Z,8.4nm,0.7s						
FITZ	Fitzroy Crossi	55.16	264	P	P	05 34 16.7	0.0
FITZ				IAmb	IAmb	05 34 33.3	
	comp=Z,3.5nm,0.9s						
MJAR	Matsushiro Ar	74.41	323	P	P	05 36 20.6	-1.2
	comp=Z,0.9nm,0.4s,baz=133,slow=7.1,SNR=4.3						
PETK	Petropavlovsk-	80.17	344	P	P	05 36 52.9	-0.7
	comp=Z,4.2nm,0.7s,baz=141,slow=9.6,SNR=5.3						
PETK				LR	LR	06 05 59.9	
	comp=Z,40nm,20.0s,baz=63,slow=31						
KSRS	Korea Array	81.07	318	P	P	05 36 59.0	+0.2
	comp=Z,1.2nm,0.8s,baz=145,slow=6.3,SNR=5.2						
KSRS				LR	LR	06 09 04.2	
	comp=Z,39nm,18.9s,baz=130,slow=33						
NVAR	Mina Array Bea	81.77	42	P	P	05 37 03.3	+0.6
	comp=Z,1.3nm,0.9s,baz=220,slow=10,SNR=7.7						
NVAR				LR	LR	06 07 53.7	
	comp=Z,53nm,19.0s,baz=216,slow=32						
USRK	Ussuriysk Ar.	83.16	325	P	P	05 37 10.1	+0.5
	comp=Z,6.5nm,0.8s,baz=175,slow=3.8,SNR=10						
SYO	Syowa Base	84.01	192	*es*P	P	05 37 16.0	+2.3
SNAA	Sanae	84.58	178	P	P	05 37 19.2	+2.5
VNA3	Neumayer Olymp	84.62	175	P	P	05 37 19.2	+2.3
VNA2	Neumayer--Watz	85.09	176	P	P	05 37 22.3	+3.1
VNA1	Neumayer--Stat	85.31	176	P	P	05 37 23.7	+3.5
TXAR	Lajitas Array	86.76	56	P	P	05 37 28.9	+0.7
	comp=Z,1.1nm,0.9s,baz=207,slow=8.0,SNR=10						
TXAR				LR	LR	06 10 25.7	
	comp=Z,38nm,18.9s,baz=0.0,slow=32						
ANMO	Albuquerque	87.55	50	P	P	05 37 33.5	+1.4
	comp=Z,0.7nm,0.8s,baz=240,slow=4.1,SNR=4.1						
PDAR	Pinedale Array	89.69	42	P	P	05 37 42.0	0.0
	comp=Z,0.5nm,0.9s,baz=211,slow=5.1,SNR=3.4						
DOT	Dot Lake	90.59	13	P	P	05 37 38.6	-6.8
DOT				lAmb	lAmb	05 37 39.5	
	comp=Z,4.6nm,1.1s						
ILAR	Eielson Array	91.04	12	P	P	05 37 46.3	-1.1
	comp=Z,0.8nm,1.1s,baz=243,slow=4.0,SNR=4.5						
CMAR	Chiang Mai Arr	93.61	288	P	P	05 38 02.0	+1.6
	comp=Z,3.6nm,0.8s,baz=119,slow=3.1,SNR=20						
CMAR				LR	LR	06 18 11.3	
	comp=Z,17nm,21.0s,baz=245,slow=34						
YKA	Yellowknife Ar	98.50	24	P	P	05 38 19.0	-2.6
	comp=Z,0.2nm,0.8s,baz=241,slow=3.5,SNR=3.5						
NB2	NORSAR Subarra1	42.57	355	PKP	PKPdf	05 44 12.2	-4.0
	comp=Z,0.2nm,0.7s,baz=14,slow=2.6						
NOA	NORSAR Array B	142.57	355	PKhKP	PKPdf	05 44 12.9	-3.3
	comp=Z,0.4nm,0.9s,baz=14,slow=4.6,SNR=4.4						
AKASG	Malin Array Be	147.17	331	PKPbc	PKPbc	05 44 25.9	-0.6
	comp=Z,1.9nm,0.5s,baz=40,slow=4.3,SNR=12						
BRTR	Keskin Array B	150.96	310	PKPbc	PKPbc	05 44 36.6	-0.2
	comp=Z,2.2nm,0.8s,baz=174,slow=2.5,SNR=7.4						
BUR08	Bucovina Ar. S	151.21	331		PKPbc	05 44 37.3	+0.3
CLL	Collm	151.86	349	*i* PKPbc	PKiKP	05 44 39.8	+1.2
	comp=Z,10.0nm,0.9s						
CLL				*i* pPKPbc	pPKPbc	05 44 44.5	-0.8
CLL				*e*PKPab	sPKPbc	05 44 49.0	+1.5
CLL				*ep*PKPab	pPKPab	05 44 53.0	-1.2
CLL	Collm	151.86	349		PKiKP	05 44 38.7	+0.1
OSTC	Ostas	151.89	344	*e*PKP	PKiKP	05 44 39.3	+0.5
UPC	Upice	151.99	345	*e*PKP	PKiKP	05 44 39.8	+0.9
DPC	Dobruska-Polom	152.06	344	*e*PKP	PKiKP	05 44 39.7	+0.6
BRG	Berggiesshubel	152.10	348	*e*PKP	PKiKP	05 44 39.6	+0.5
	comp=Z,8.1nm,0.8s						
KHC	Kasperske Hory	153.83	347	*e*PKP	PKiKP	05 44 43.6	+0.8
KHC				*ep*PKPAB	PKPab	05 44 54.9	-0.9
GERES	GERESS Array B	154.08	346	PKPbc	PKiKP	05 44 43.7	+0.3
	comp=Z,0.5nm,0.6s,baz=90,slow=1.3,SNR=5.0						
GERES				PKPab	PKPab	05 44 56.6	-0.2
	comp=Z,0.6nm,0.7s,baz=75,slow=1.5,SNR=3.6						

NEIC ***10*** *05:40:14.4±1.5,23.˚81S±0.˚07×174.˚7W±0.˚1,h10km±2km, mb4.6/7, Error ellipse: s-maj=19.2km s-min=10.3km az=113.0*

IDC ***10*** *05:40:17.1±5.0,23.˚87S×175.˚35W,h0km,mb3.9/4, mb1 4.2/4,mb1mx3.8/24,mbtmp3.9/4,MS4.0/1,Ms1 4.0/1, ms1mx2.8/26,Error ellipse: s-maj=278.8km s-min=34.7km az=155.0*

ISC 10 05:40:19.8±0.8,23.˚7S±0.˚1×174.˚9W±0.˚1,h29km,n16, σ2ş**40**/15**, mb4.4**/8**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	6.52	47		Pn	05 41 50.2	-3.7
MSVF	Nonsavu	8.81	311		Pn	05 42 25.8	+0.4
BKZ	Black Stump Fm	17.09	203	P	Pn	05 44 14.6	-2.1
BKZ				IAmb	IAmb	05 44 25.1	
	comp=Z,18nm,1.4s						
EIDS	Eidsvold	30.92	260	P	P	05 46 33.5	-0.7
EIDS				IAmb	IAmb	05 46 40.9	
	comp=Z,20nm,1.4s						
ASAR	Alice Springs	46.64	259	P	P	05 48 44.4	-1.5
	comp=Z,0.9nm,0.7s,baz=101,slow=7.5,SNR=6.9						
WR0	Warramunga Arr	46.86	264	P	P	05 48 45.9	-1.7
WR0				IAmb	IAmb	05 48 47.0	
	comp=Z,4.1nm,1.1s						
WB2	Warramunga Arr	47.03	264	P	P	05 48 46.9	-2.1
WB2				IAmb	IAmb	05 48 54.4	
	comp=Z,11nm,1.5s						
WB0	Warramunga Arr	47.04	264	P	P	05 48 46.6	-2.5
WB0				IAmb	IAmb	05 48 50.5	
	comp=Z,7.6nm,1.2s						
WRA	Warramunga Arr	47.04	264	P	P	05 48 46.4	-2.7
	comp=Z,0.5nm,0.4s,baz=101,slow=8.2,SNR=2.3						
JAY	Jayapura	47.74	289	LR	LR	06 06 01.6	
	comp=Z,153nm,20.5s,baz=45,slow=32						
FORT	Forrest	50.73	249	P	P	05 49 17.2	-0.1
QSPA	South Pole Qui	66.44	180	P	P	05 51 07.6	+1.4
NVAR	Mina Array Bea	81.42	42	P	P	05 52 38.2	+3.9
	comp=Z,0.4nm,0.7s,baz=228,slow=9.3,SNR=3.8						
CMAR	Chiang Mai Arr	93.81	288	P	P	05 53 37.1	+2.3
	comp=Z,1.6nm,0.9s,baz=139,slow=3.7,SNR=6.4						
AKASG	Malin Array Be	147.13	331	PKPbc	PKPab	06 00 00.8	-0.7
	comp=Z,0.5nm,0.4s,baz=43,slow=4.1,SNR=5.6						
CLL	Collm	151.71	349	*e*PKPbc	PKPdf	06 00 07.0	+2.1

IDC ***10*** *05:56:18.4±0.8,6.˚97S×154.˚82E,h0km,mb4.3/14, mb1 4.5/15,mb1mx4.3/27,mbtmp4.3/15,ML4.2/1,MS3.5/7, Ms1 3.5/7,ms1mx3.1/28,Error ellipse: s-maj=25.7km s-min=17.6km az=121.0*

DJA ***10*** *05:56:20.0±0.8,7.˚5S×7.˚5×15.˚5E±.˚,h57km±6km,M4.7/16, mB5.5/3,mb4.6/16,Mw(mB)5.0/3*

NEIC ***10*** *05:56:25.6±2.0,7.˚18S±0.˚08×154.˚53E±0.˚08,h35km±1km, mb4.6/40,Error ellipse: s-maj=15.3km s-min=12.0km az=37.0*

ISC 10 05:56:25.9±0.4,7.˚12S±0.˚07×154.˚59E±0.˚08,h39km,n79, σ1ş**60**/74**, mb4.6**/42**, MS3.6**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.78	320		Pn	05 57 24.4	+2.7
KRVT	Keravat (AS076	3.79	318	Pn	Pn	05 57 20.2	-1.6
	16nm,0.3s,baz=294,slow=1.6,SNR=4.0						
HNR	Honiara	5.78	114	LR	LR	05 59 56.2	
	comp=Z,262nm,18.9s,baz=272,slow=39						
HNR	Honiara	5.78	114	Pn	Pn	05 57 51.8	+2.7
PMG	Port Moresby	7.70	252	LR	LR	06 01 30.4	
	comp=Z,322nm,18.1s,baz=66,slow=39						
PMG	Port Moresby	7.70	252	Pn	Pn	05 58 15.8	+0.3
CTAO	Charters Tower	15.21	211	P	P	06 00 04.3	+1.8
EIDS	Eidsvold	18.45	190	P	Pn	06 00 40.2	+1.5
WR0	Warramunga Arr	23.26	235	P	P	06 01 30.3	+0.2
WR0				IAmb	IAmb	06 01 31.6	
	comp=Z,14nm,0.8s						
WB0	Warramunga Arr	23.28	235	P	P	06 01 30.0	-0.4
ARMA	Armidale	23.34	186	P	P	06 01 29.8	-1.1
ARMA				IAmb	IAmb	06 01 33.0	
	comp=Z,29nm,1.3s						
WRAB	Tennant Creek	23.40	235	P	P	06 01 31.0	-0.5
WRAB				IAmb	IAmb	06 01 33.2	
	comp=Z,18nm,0.9s						
WB2	Warramunga Arr	23.40	235	P	P	06 01 31.2	-0.3
WB2				IAmb	IAmb	06 01 33.3	
	comp=Z,17nm,1.0s						
WRA	Warramunga Arr	23.41	235	P	P	06 01 31.5	-0.1
	comp=Z,12nm,0.8s,baz=60,slow=9.7,SNR=14						
WRA				PcP	PcP	06 05 16.9	-0.6
	comp=Z,0.5nm,0.6s,baz=62,slow=2.5,SNR=6.1						
WRA				pPcP		06 05 26.6	
	comp=Z,0.8nm,0.7s,baz=60,slow=2.2,SNR=4.9						
WRA				LR	LR	06 09 54.3	
	comp=Z,93nm,19.6s,baz=30,slow=34						
MTN	Manton Dam	23.78	254	P	P	06 01 35.2	+0.1
MTN				IAmb	IAmb	06 01 37.1	
	comp=Z,28nm,1.2s						
SIJI	Sorong	24.07	284	P	P	06 01 37.8	-0.1
	comp=Z,17nm,0.7s,baz=101,slow=6.6,SNR=6.3						
MSVF	Nonsavu	25.19	117	P	P	06 01 47.2	-0.8
MSVF				IAmb	IAmb	06 01 56.4	
	comp=Z,22nm,1.3s						
AS31	Alice Springs	25.79	228	P	P	06 01 52.6	-0.8
ASAR	Alice Springs	25.79	228	P	P	06 01 53.2	-0.2
	comp=Z,5.5nm,0.7s,baz=59,slow=8.5,SNR=69						
KNRA	Kununurra	26.68	249	P	P	06 02 01.6	0.0
KNRA				IAmb	IAmb	06 02 04.7	
	comp=Z,16nm,0.9s						
STKA	Stephens Creek	27.45	205	P	P	06 02 07.9	-0.4
	comp=Z,2.7nm,0.8s,baz=36,slow=14,SNR=5.4						
STKA				LR	LR	06 13 31.5	
	comp=Z,117nm,18.0s,baz=23,slow=37						
STKA	Stephens Creek	27.45	205	P	P	06 02 08.1	-0.2
LBMI	Labuha	27.77	282	P	P	06 02 09.5	-1.8
	comp=Z,2μmcomp=Z,84nm,0.6s						
H11S3	WAKE ISLAND Hy	28.11	25	T	T	06 30 46.9	
	baz=203,slow=75,SNR=15						
H11S2	WAKE ISLAND Hy	28.12	25	T	T	06 30 40.1	
	baz=203,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	28.13	25	T	T	06 30 42.4	
	baz=203,slow=75,SNR=9.5						
FITZ	Fitzroy Crossi	30.23	246	P	P	06 02 33.1	-0.1
	comp=Z,5.7nm,0.6s,baz=83,slow=6.6,SNR=29						
FITZ	Fitzroy Crossi	30.23	246	P	P	06 02 32.8	-0.4
FITZ				lAmb	lAmb	06 02 33.7	
	comp=Z,6.2nm,0.6s						
BBOO	Buckleboo	30.82	211	P	P	06 02 37.1	-1.1
BBOO				lAmb	lAmb	06 02 45.4	
	comp=Z,16nm,1.3s						
EDFI	Ende, Flores	32.62	265	P	P	06 02 49.4	-5.0
	comp=Z,6.3nm,1.0s						
FORT	Forrest	34.22	223	P	P	06 03 08.0	0.0
MPSI	Mapaga	35.39	281	P	P	06 03 16.3	-2.0
MORW	Morawa	42.36	234	P	P	06 04 15.9	-0.6
MORW				lAmb	lAmb	06 04 28.5	
	comp=Z,24nm,1.4s						
KSRS	Korea Array	50.87	333	P	P	06 05 19.4	-3.5
	comp=Z,0.7nm,0.6s,baz=141,slow=7.9,SNR=1.8						
NJ2	Nanjing	51.76	321	*e*P	P	06 05 30.5	+0.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
XAN	Xi'an	59.52	316	P	P	06 06 28.8	+3.3
XAN				sP	sP	06 06 39.4	+1.2
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
PEA0B	Petropavlovsk-	60.06	2	P	P	06 06 30.0	+1.3
PETK	Petropavlovsk-	60.06	2	LR	LR	06 28 38.2	
	comp=Z,2.4nm,21.4s,baz=65,slow=32						
CMAR	Chiang Mai Arr	60.48	296	P	P	06 06 33.5	+1.2
	comp=Z,1.0nm,0.3s,baz=106,slow=4.9,SNR=4.4						
CD2	Chengdu	61.59	311	P	P	06 06 39.7	0.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	61.96	324	P	P	06 06 42.5	+0.4
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,67nm,6.3s						
LZH	Lanzhou	64.13	316	*e*P	P	06 07 00.2	+3.6
LZH				pP	pwP	06 07 14.8	-0.2
LZH				sP	PcP	06 07 20.9	-11
LZH				*e*PP	PP	06 09 24.5	+6.4
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,67nm,7.6s						
LZH				LR	LR		
	comp=N,130nm,15.2s						
LZH				LR	LR		
	comp=E,140nm,15.4s						
LZH				LR	LR		
	comp=Z,170nm,18.0s						
MA2	Magadan	66.55	358	P	P	06 07 12.6	+0.9
GTA	Gaotai	68.56	317	*e*P	P	06 07 26.0	+1.1
GTA				pP	sP	06 07 39.5	+1.8
GTA				sP	pwP	06 07 44.1	+0.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,57nm,8.3s						
GTA				LR	LR		
	comp=N,72nm,16.5s						
GTA				LR	LR		
	comp=E,630nm,20.3s						
GTA				LR	LR		
	comp=Z,72nm,17.8s						
SONM	Songino Array	69.23	328	P	P	06 07 27.4	-1.5
	comp=Z,0.8nm,1.0s,baz=146,slow=10,SNR=2.3						
VNDA	Vanda	70.47	178	P	P	06 07 36.2	+0.3
VNDA				lAmb	lAmb	06 07 41.0	
	comp=Z,7.3nm,1.5s						
BILL	Bilibino	75.44	5	P	P	06 08 06.8	+1.5
BILL				lAmb	lAmb	06 08 07.9	
	comp=Z,6.0nm,0.9s						
OHAK	Old Harbor	76.82	26	P	P	06 08 14.7	+1.3
WMQ	Urumqi	78.65	317	*e*P	P	06 08 26.3	+2.3
CNPM	China Poot	79.04	25	P	P	06 08 25.3	-0.5
RC01	Rabbit Creek A	80.55	24		P	06 08 33.5	-0.4
PPLA	Purkeypile	80.64	22	P	P	06 08 36.3	+1.8
PPLA				lAmb	lAmb	06 08 49.0	
	comp=Z,8.4nm,1.3s						
PMR	Palmer	81.07	24	P	P	06 08 37.0	+0.4
PMR				lAmb	lAmb	06 08 38.4	
	comp=Z,5.8nm,0.9s						
TRF	Thorofare Moun	81.66	22	P	P	06 08 40.3	+0.3
TRF				lAmb	lAmb	06 08 42.9	
	comp=Z,5.2nm,0.8s						
RND	Reindeer	82.17	22	P	P	06 08 43.0	+0.5
MCK	McKinley	82.33	22	P	P	06 08 44.2	+0.9
MLY	Manley	82.41	20	P	P	06 08 44.3	+0.6
DHY	Denali Highway	82.56	23	P	P	06 08 45.7	+1.1
DHY				lAmb	lAmb	06 08 46.8	
	comp=Z,4.8nm,1.0s						
NEA	Nenana	82.74	21	P	P	06 08 44.9	-0.4
QSPA	South Pole Qui	82.85	180	P	P	06 08 45.1	-1.1
QSPA				lAmb	lAmb	06 08 46.4	
	comp=Z,6.1nm,0.9s						
GLB	Gilahina Butte	83.18	25	P	P	06 08 48.3	+0.6
GLB				lAmb	lAmb	06 08 49.8	
	comp=Z,5.9nm,0.8s						
VRDI	Verde Repeater	83.23	25	P	P	06 08 48.3	+0.1
VRDI				lAmb	lAmb	06 08 49.7	
	comp=

0.5nm,0.4s,baz=122,slow=7.0,SNR=2.7
CMAR Chiang Mai Arr 41.38 274 P **P** 06 29 52.0 -0.2
1.1nm,0.3s,baz=78,slow=8.4,SNR=1.9
WRA Warramunga Arr 42.26 192 P **P** 06 29 58.0 -1.2
0.3nm,0.2s,baz=12,slow=7.8,SNR=13
ASAR Alice Springs 45.97 192 P **P** 06 30 26.8 -1.6
0.2nm,0.7s,baz=7.8,slow=7.5,SNR=1.8
ZALV Zalesovo Beam 54.07 322 P **P** 06 31 29.0 +0.5
0.9nm,0.5s,baz=86,slow=5.9,SNR=2.1
ZALV PcP **PcP** 06 32 28.6 -0.5
0.8nm,0.4s,baz=113,slow=4.5,SNR=2.5
MKAR Makanchi Array 54.54 313 P **P** 06 31 32.7 +0.6
0.5nm,0.5s,baz=96,slow=9.3,SNR=5.8
MKAR PcP **PcP** 06 32 31.4 +0.2
0.3nm,0.5s,baz=77,slow=4.9,SNR=4.3
ILAR Eielson Array 62.10 27 P **P** 06 32 23.1 -0.6
0.4nm,0.6s,baz=264,slow=5.9,SNR=6.0
INK Inuvik 67.62 24 P **P** 06 32 58.9 0.0
0.6nm,0.8s,baz=284,slow=4.2,SNR=2.2
YKA Yellowknife Ar 76.52 28 P **P** 06 33 51.7 +0.2
0.7nm,0.7s,baz=290,slow=5.2,SNR=11
ARCES ARCESS Array B 78.84 341 P **P** 06 34 05.0 +0.9
1.6nm,0.5s,baz=66,slow=8.5,SNR=15
FINES FINESS Array B 83.08 334 P **P** 06 34 26.2 -0.3
0.9nm,0.4s,baz=69,slow=5.4,SNR=16
NVAR Mina Array Bea 83.28 51 P **P** 06 34 29.2 +0.9
0.3nm,0.6s,baz=294,slow=6.7,SNR=2.8
PLCA Paso Flores 145.91 131 PKPbc **PKPdf** 06 41 38.5 +0.6
1.1nm,0.8s,baz=5.8,slow=23,SNR=1.6

*IDC **10** 07:09:11.8±2.5,50.°73N×157.°85E,h0km,mb3.6/8,*
mb1 3.9/9,mb1mx3.6/47,mbtmp3.6/9,ML2.8/1,MS2.3/2,
Ms1 2.3/2,ms1mx2.1/53,Error ellipse: s-maj=63.8km
s-min=26.5km az=27.0
*KRSC **10** 07:09:19.5±1.5,51.°25N×158.°69E,h60km±18km,ML4.3*
*MOS **10** 07:09:21.0±0.6,51.°24N×158.°64E,h56km,mb3.9/2,Error*
ellipse: s-maj=14.5km s-min=3.8km az=87.7
ISC 10 07:09:17.1±1.7,51.°21N±0.°04×158.°71E±0.°04,h10km±11km,
n96,σ1s73/126,mb3.7/8,1C-1D,Near east coast of
Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**0.72**	**327**	*i* P		**Pn**	**07 09 34.4**	**+1.1**
KDTR				eS		**Sn**	**07 09 43.7**	**-0.6**
KDTR	**Khodutka, Kamc**	**0.72**	**327**	PN		**Pn**	**07 09 34.4**	**+1.1**
KDTR				S		**Sn**	**07 09 43.7**	**-0.6**
PAU	**Pauzhetka**	**1.22**	**283**	eP		**Pn**	**07 09 42.2**	**+2.1**
PAU				eS		**Sn**	**07 09 57.1**	**+0.5**
PAU	**Pauzhetka**	**1.22**	**283**	PN		**Pn**	**07 09 42.2**	**+2.1**
PAU				S		**Sn**	**07 09 57.1**	**+0.5**
RUS	**Russkaya**	**1.23**	**354**	eP		**Pn**	**07 09 41.4**	**+1.1**
RUS				eS		**Sb**	**07 09 55.9**	**-0.4**
RUS	**Russkaya**	**1.23**	**354**	PN		**Pn**	**07 09 41.4**	**+1.1**
RUS				S		**Sb**	**07 09 55.9**	**-0.4**
ASAK	**Asacha**	**1.28**	**337**	eP		**Pn**	**07 09 42.6**	**+1.5**
ASAK				eS		**Sb**	**07 09 58.0**	**+0.2**
ASAK	**Asacha**	**1.28**	**337**	PN		**Pn**	**07 09 42.6**	**+1.5**
ASAK				S		**Sb**	**07 09 58.0**	**+0.2**
MTVR	**Mutnovka**	**1.32**	**346**	eP		**Pn**	**07 09 43.0**	**+1.3**
MTVR				eS		**Sb**	**07 09 58.7**	**-0.2**
MTVR	**Mutnovka**	**1.32**	**346**	PN		**Pn**	**07 09 43.0**	**+1.3**
MTVR				S		**Sb**	**07 09 58.7**	**-0.2**
GRL	**Gorelyy**	**1.40**	**344**	eP		**Pb**	**07 09 44.6**	**+1.2**
GRL				eS		**Sb**	**07 10 01.2**	**-0.2**
GRL	**Gorelyy**	**1.40**	**344**	PN		**Pb**	**07 09 44.6**	**+1.2**
GRL				S		**Sb**	**07 10 01.2**	**-0.2**
MIPR	**Malaya Ipel'ka**	**1.61**	**312**	eP		**Pg**	**07 09 47.6**	**-0.5**
MIPR				eS		**Sn**	**07 10 06.5**	**0.0**
MIPR	**Malaya Ipel'ka**	**1.61**	**312**	PN		**Pg**	**07 09 47.6**	**-0.5**
MIPR				S		**Sn**	**07 10 06.5**	**0.0**
KRMR	**Karymshinskiy**	**1.66**	**348**	eP		**Pg**	**07 09 48.2**	**-0.8**
KRMR				eS		**Sn**	**07 10 07.7**	**+0.1**
KRMR	**Karymshinskiy**	**1.66**	**348**	PN		**Pg**	**07 09 48.2**	**-0.8**
KRMR				S		**Sn**	**07 10 07.7**	**+0.1**
SKR	**Severo-Kuril's**	**1.72**	**253**	*i* P		**Pb**	**07 09 49.1**	**+0.3**
SKR				eS		**Sn**	**07 10 09.4**	**+0.4**
SKR	**Severo-Kuril's**	**1.72**	**253**	*d* PN		**Pb**	**07 09 49.1**	**+0.3**
SKR				*i* S		**Sn**	**07 10 09.3**	**+0.3**
PET	**Petropavlovsk**	**1.82**	**359**	*i* PN		**Pb**	**07 09 49.9**	**-0.5**
PET				pmax		pmax		
	comp=Z,41nm,0.2s							
DALK	**Dalny**	**1.82**	**1**	eP		**Pb**	**07 09 50.1**	**-0.4**
DALK				eS		**Sn**	**07 10 11.5**	**-0.1**
DALK	**Dalny**	**1.82**	**1**	PN		**Pb**	**07 09 50.1**	**-0.4**
DALK				S		**Sn**	**07 10 11.5**	**-0.1**
APC	**Apacha**	**1.97**	**332**	eP		**Pb**	**07 09 52.6**	**-0.3**
APC				eS		**Sn**	**07 10 15.7**	**+0.6**
APC	**Apacha**	**1.97**	**332**	PN		**Pb**	**07 09 52.6**	**-0.3**
APC				S		**Sn**	**07 10 15.7**	**+0.6**
PETK	**Petropavlovsk-**	**2.00**	**342**	Pn		**Pb**	**07 09 52.9**	**-0.6**
	comp=Z,12nm,0.3s,baz=149,slow=17,SNR=228							
PETK	Sn					**Sb**	**07 10 18.4**	**-0.1**
	comp=Z,17nm,0.3s,baz=177,slow=28,SNR=16							
PETK				LR		LR	07 10 47.8	
	comp=Z,72nm,19.3s,baz=234,slow=40							
NLC	**Nalytchevo**	**2.00**	**11**	eP		**Pn**	**07 09 51.8**	**+0.9**
NLC				eS		**Sn**	**07 10 14.8**	**-1.2**
NLC	**Nalytchevo**	**2.00**	**11**	PN		**Pn**	**07 09 51.8**	**+0.9**
NLC				S		**Sn**	**07 10 14.8**	**-1.2**
UGLR	**Uglovaya**	**2.00**	**2**	eP		**Pb**	**07 09 53.3**	**-0.4**
UGLR				eS		**Sn**	**07 10 16.7**	**+0.5**
UGLR	**Uglovaya**	**2.00**	**2**	PN		**Pb**	**07 09 53.3**	**-0.4**
UGLR				S		**Sn**	**07 10 16.7**	**+0.5**
ALID	**Alaid**	**2.02**	**262**	eP		**Pb**	**07 09 53.7**	**-0.3**
ALID				eS		**Sn**	**07 10 16.6**	**-0.1**
ALID	**Alaid**	**2.02**	**262**	PN		**Pb**	**07 09 53.7**	**-0.3**
ALID				S		**Sn**	**07 10 16.6**	**-0.1**
SMAR	**Somma**	**2.06**	**2**	eP		**Pb**	**07 09 54.5**	**-0.2**
SMAR				eS		**Sn**	**07 10 18.6**	**+0.9**
SMAR	**Somma**	**2.06**	**2**	PN		**Pb**	**07 09 54.5**	**-0.2**
SMAR				S		**Sn**	**07 10 18.6**	**+0.9**
SPN	**Mys Shipunski**	**2.06**	**23**	eP		**Pb**	**07 09 54.6**	**+0.1**
SPN				eS		**Sn**	**07 10 18.2**	**+0.8**
SPN	**Mys Shipunski**	**2.06**	**23**	PN		**Pb**	**07 09 54.6**	**+0.1**
SPN				S		**Sn**	**07 10 18.2**	**+0.8**
AVH	**Avacha**	**2.06**	**1**	eP		**Pb**	**07 09 54.3**	**-0.3**
AVH				eS		**Sn**	**07 10 18.0**	**+0.5**
AVH	**Avacha**	**2.06**	**1**	PN		**Pb**	**07 09 54.3**	**-0.3**
AVH				S		**Sn**	**07 10 18.0**	**+0.5**
SDLR	**Sedlovina**	**2.07**	**3**	eP		**Pn**	**07 09 53.4**	**+1.3**
SDLR	**Sedlovina**	**2.07**	**3**	PN		**Pn**	**07 09 53.4**	**+1.3**
KOK	**Koryaka**	**2.09**	**359**	eP		**Pb**	**07 09 54.4**	**-0.7**
KOK	**Koryaka**	**2.09**	**359**	PN		**Pb**	**07 09 54.4**	**-0.7**
KRER	**Koryakskii**	**2.10**	**1**	eP		**Pb**	**07 09 54.9**	**-0.4**
KRER	**Koryakskii**	**2.10**	**1**	PN		**Pb**	**07 09 54.9**	**-0.4**
KRX	**Arik**	**2.15**	**359**	eP		**Pb**	**07 09 55.1**	**-1.1**
KRX				eS		**Sn**	**07 10 19.7**	**-0.3**
KRX	**Arik**	**2.15**	**359**	PN		**Pb**	**07 09 55.1**	**-1.1**
KRX				S		**Sn**	**07 10 19.7**	**-0.3**
KII	**Karymskiy**	**2.87**	**9**	eP		**Pn**	**07 10 05.7**	**+2.8**
KII				eS		**Sn**	**07 10 39.0**	**+1.5**
KII	**Karymskiy**	**2.87**	**9**	PN		**Pn**	**07 10 05.7**	**+2.8**
KII				S		**Sn**	**07 10 39.0**	**+1.5**
KZV	**Kizimen**	**4.03**	**13**	eP		**Pn**	**07 10 22.4**	**+3.5**
KZV	**Kizimen**	**4.03**	**13**	PN		**Pn**	**07 10 22.4**	**+3.5**
TUMD	**Tumrok D**	**4.13**	**14**	eS		**Sn**	**07 11 09.5**	**+1.1**
TUMR	**Tumrok**	**4.17**	**11**	eP		**Pn**	**07 10 24.8**	**+4.0**
TUMR	**Tumrok**	**4.17**	**11**	PN		**Pn**	**07 10 24.8**	**+4.0**
KMNR	**Kamenistaya**	**4.64**	**11**	eP		**Pn**	**07 10 30.1**	**+2.8**
KMNR	**Kamenistaya**	**4.64**	**11**	PN		**Pn**	**07 10 30.1**	**+2.8**
KPT	**Kopyto**	**4.85**	**10**	P		**Pn**	**07 10 31.6**	**+1.5**
KPT	**Kopyto**	**4.85**	**10**	PN		**Pn**	**07 10 31.6**	**+1.5**
BZWR	**Bezymyannyi-We**	**4.88**	**12**	eP		**Pn**	**07 10 33.4**	**+2.8**
BZWR	**Bezymyannyi-We**	**4.88**	**12**	PN		**Pn**	**07 10 33.4**	**+2.8**
ZLN	**Zelenaya**	**4.97**	**14**	eP		**Pn**	**07 10 34.8**	**+2.9**
ZLN	**Zelenaya**	**4.97**	**14**	PN		**Pn**	**07 10 34.8**	**+2.9**
LGNR	**Loginova**	**5.02**	**13**	eP		**Pn**	**07 10 35.9**	**+3.2**
LGNR	**Loginova**	**5.02**	**13**	PN		**Pn**	**07 10 35.9**	**+3.2**
CIRR	**Tsirk**	**5.06**	**13**	eP		**Pn**	**07 10 36.6**	**+3.5**
CIRR	**Tsirk**	**5.06**	**13**	PN		**Pn**	**07 10 36.6**	**+3.5**
SRDR	**Sredinnyy**	**5.15**	**6**	eP		**Pn**	**07 10 37.9**	**+3.6**
SRDR	**Sredinnyy**	**5.15**	**6**	PN		**Pn**	**07 10 37.9**	**+3.6**
KBTR	**Krutoberegovo**	**5.57**	**24**	eP		**Pn**	**07 10 43.0**	**+3.1**
KBTR	**Krutoberegovo**	**5.57**	**24**	PN		**Pn**	**07 10 43.0**	**+3.1**
KBG	**Krutoberegovo**	**5.58**	**24**	eS		**Sn**	**07 11 46.2**	**+2.0**
SRKR	**Sorokina**	**5.64**	**14**	eP		**Pn**	**07 10 44.8**	**+3.8**
SRKR	**Sorokina**	**5.64**	**14**	PN		**Pn**	**07 10 44.8**	**+3.8**
BKI	**Bering**	**5.92**	**45**	eP		**Pn**	**07 10 46.1**	**+1.4**
BKI				eS		**Sn**	**07 11 47.4**	**-5.1**
BKI	**Bering**	**5.92**	**45**	PN		**Pn**	**07 10 46.1**	**+1.4**
MA2	**Magadan**	**9.52**	**335**	LR		LR	07 16 02.0	
	comp=Z,16nm,20.1s,baz=145,slow=42							
BILL	**Bilibino**	**17.29**	**10**	⇑*e*P		**P**	**07 13 20.3**	**+0.7**
BILL				pmax		pmax		
	comp=Z,1.0nm,1.0s							
BILL				MLR		MLR		
	comp=Z,49nm,20.0s							
TIXI	**Tiksi**	**24.47**	**338**	P		**P**	**07 14 34.3**	**-1.5**
	comp=Z,1.4nm,0.4s,baz=136,slow=10,SNR=5.5							
TIXI	**Tiksi**	**24.47**	**338**	*i* P		**P**	**07 14 34.0**	**-1.8**
TIXI				pmax		pmax		
	comp=Z,1.0nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**32.07**	**165**	T		T	07 49 46.1	
	baz=350,slow=76,SNR=65							
H11N3	**WAKE ISLAND Hy**	**32.09**	**165**	T		T	07 49 41.9	
	baz=350,slow=76,SNR=64							
H11N1	**WAKE ISLAND Hy**	**32.09**	**165**	T		T	07 49 46.9	
	baz=350,slow=76,SNR=45							
H11S1	**WAKE ISLAND Hy**	**33.24**	**166**	T		T	07 51 08.5	
	baz=351,slow=76,SNR=15							
H11S3	**WAKE ISLAND Hy**	**33.25**	**166**	T		T	07 51 07.7	
	baz=351,slow=76,SNR=15							
H11S2	**WAKE ISLAND Hy**	**33.26**	**166**	T		T	07 51 16.4	
	baz=351,slow=76,SNR=7.6							
YKA	**Yellowknife Ar**	**45.14**	**41**	P		**P**	**07 17 33.5**	**+0.3**
	comp=Z,0.1nm,0.6s,baz=299,slow=7.0,SNR=2.5							
NVAR	**Mina Array Bea**	**57.22**	**68**	P		**P**	**07 19 06.0**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=290,slow=8.4,SNR=1.5							
PDAR	**Pinedale Array**	**59.21**	**59**	P		**P**	**07 19 19.8**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=304,slow=6.4,SNR=3.5							
FINES	**FINESS Array B**	**61.51**	**336**	P		**P**	**07 19 30.8**	**-2.7**
	comp=Z,1.2nm,0.9s,baz=52,slow=7.2,SNR=4.4							
FINES	**FINESS Array B**	**61.51**	**336**	*i* P		**P**	**07 19 31.8**	**-1.7**
FINES				pmax		pmax		
	comp=Z,1.0nm,0.8s							
NB2	**NORSAR Subarra**	**65.11**	**343**	P		**P**	**07 19 55.5**	**-1.9**
	comp=Z,0.5nm,0.6s,baz=22,slow=6.9							
NOA	**NORSAR Array B**	**65.11**	**343**	P		**P**	**07 19 55.8**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=22,slow=6.6,SNR=8.7							
TXAR	**Lajitas Array**	**72.18**	**65**	P		**P**	**07 20 43.0**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=304,slow=4.8,SNR=8.7							
TXAR	**Lajitas Array**	**72.18**	**65**	P		**P**	**07 20 43.0**	**+0.8**
GERES	**GERESS Array B**	**75.92**	**337**	P		**P**	**07 21 01.5**	**-2.2**
	comp=Z,0.4nm,0.5s,baz=32,slow=5.8,SNR=4.7							
GERES	**GERESS Array B**	**75.92**	**337**	*e*P		**P**	**07 21 02.5**	**-1.2**
H03N2	**Juan Fernandez**	**135.06**	**90**	T		T	09 59 03.7	
	baz=314,slow=78,SNR=20							
H03N1	**Juan Fernandez**	**135.08**	**90**	T		T	09 59 04.5	
	baz=314,slow=78,SNR=26							
H03N3	**Juan Fernandez**	**135.08**	**90**	T		T	09 59 04.4	
	baz=314,slow=78,SNR=25							

*SOME **10** 07:14:12.2,40.°72N×77.°58E,h10km*
*KRNET **10** 07:14:13.1±0.1,40.°77N×77.°56E,h17km,mb3.0*
*NNC **10** 07:14:13.3±1.0,40.°76N×77.°57E,h0km,mb3.7,mpv3.3,*
Error ellipse: s-maj=6.6km s-min=4.5km az=177.0
ISC 10 07:14:09.8±2.4,40.°64N±0.°09×77.°50E±0.°04,h4km±17km,
n46,σ1s69/73,23C-8D,Kyrgyzstan-Xinjiang border
region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.51**	**351**	⇑*i*P		**Pg**	**07 14 39.4**	**+0.7**
	baz=49							
KDJ				⇑*i*S		**Sg**	**07 14 58.4**	**+0.1**
	baz=49							
ULHL	**Ulahol**	**1.86**	**330**	⇓*i*P		**Pb**	**07 14 46.0**	**+1.5**
	baz=27							
ULHL				⇓*i*S		**Sg**	**07 15 10.5**	**+0.9**
	baz=27							
PRZ	**Przheval'sk**	**1.96**	**20**	⇑*i*P		**Pg**	**07 14 47.2**	**-0.2**
	baz=20							
PRZ				⇑*i*S		**Sg**	**07 15 12.2**	**-0.6**
	baz=20							
ANVS	**Anan'yevo**	**2.15**	**3**	⇑*i*P		**Pb**	**07 14 50.4**	**+1.1**
	baz=2.0							
ANVS				⇑*i*S		**Sg**	**07 15 17.6**	**-1.1**
	baz=2.0							
BOOM	**Boomskoye usch**	**2.19**	**328**	⇓*i*P		**Pb**	**07 14 51.6**	**+1.6**
	baz=25							
BOOM				⇓*i*S		**Sg**	**07 15 19.6**	**-0.5**
	baz=25							
KZA	**Kyzart**	**2.22**	**311**	⇑*i*P		**Pb**	**07 14 52.9**	**+2.2**
	baz=8.0							
KZA				⇑*i*S		**Sg**	**07 15 21.7**	**+0.5**
	baz=8.0							
TNSS	**Tian-Shan**	**2.43**	**350**	*e*P		**Pg**	**07 14 56.6**	**+0.2**
	35nm,0.5s							
TNSS				*e*S		**Sg**	**07 15 28.4**	**+0.5**
	38nm,0.5s							
TNSS	**Tian-Shan**	**2.43**	**350**	Pg		**Pb**	**07 14 55.8**	**+1.5**
	32nm,0.5s							
TNSS				Lg		Lg	07 15 27.0	
	38nm,0.5s							
IZV	**Izvestkoviy**	**2.48**	**345**	*e*P		**Pg**	**07 14 57.5**	**+0.1**
	16nm,0.4s							
IZV				*e*S		**Sg**	**07 15 30.3**	**+0.7**
	47nm,0.5s							
IZV	**Izvestkoviy**	**2.48**	**345**	Pg		**Pg**	**07 14 57.3**	**-0.1**
	16nm,0.4s							
IZV				Lg		Lg	07 15 30.3	
	47nm,0.5s							
MDOK	**Medeo**	**2.54**	**353**	*e*P		**Pg**	**07 14 58.1**	**-0.4**
	22nm,0.5s							
MDOK				*e*S		**Sg**	**07 15 31.2**	**-0.4**
	39nm,0.4s							
MDOK	**Medeo**	**2.54**	**353**	⇑Pg		**Pg**	**07 14 58.1**	**-0.4**
	13nm,0.4s							
MDOK				Lg		Lg	07 15 32.3	
	41nm,0.7s							
MDOK	**Medeo**	**2.54**	**353**	Pg		**Pg**	**07 14 58.0**	**-0.5**
	22nm,0.5s							
MDOK				Lg		Lg	07 15 30.9	
	36nm,0.5s							
KOTS	**Kotyrbulak**	**2.61**	**354**	*e*P		**Pg**	**07 14 59.6**	**-0.2**
	35nm,0.4s							
KOTS				*e*S		**Sg**	**07 15 33.7**	**+0.1**
	105nm,0.5s							
KOTS	**Kotyrbulak**	**2.61**	**354**	Pg		**Pb**	**07 14 58.9**	**+1.7**
	35nm,0.4s							
KOTS				Lg		Lg	07 15 32.8	
	105nm,0.5s							
MTBS	**Maitube**	**2.62**	**343**	*e*P		**Pb**	**07 14 59.2**	**+2.0**
	9.4nm,0.3s							
MTBS				*e*S		**Sg**	**07 15 32.8**	**-0.9**
	17nm,0.4s							
MTBS	**Maitube**	**2.62**	**343**	Pg		**Pb**	**07 14 59.2**	**+2.0**
	9.4nm,0.3s							
MTBS				Lg		Lg	07 15 32.8	
	17nm,0.4s							
KST	**Kastek**	**2.66**	**335**	*e*P		**Pg**	**07 15 01.2**	**+0.4**
	8.2nm,0.5s							
KST				*e*S		**Sg**	**07 15 36.5**	**+1.2**
	20nm,0.7s							
KST	**Kastek**	**2.66**	**335**	Pg		**Pg**	**07 15 01.4**	**+0.6**
	8.1nm,0.5s							
KST				Lg		Lg	07 15 36.5	
	20nm,0.7s							
TKM2	**Tokmak 2**	**2.69**	**329**	⇑*i*P		**Pb**	**07 14 58.4**	**-0.2**
	baz=26							
TKM2				⇑*i*S		**Sb**	**07 15 31.5**	**-0.5**
	baz=26							
TKM2	**Tokmak 2**	**2.69**	**329**	⇓Pg		**Pg**	**07 15 01.2**	**-0.1**
	7.3nm,0.9s							
TKM2				⇑Lg		Lg	07 15 36.9	
	9.3nm,0.5s							
UCH	**Uchtor**	**2.75**	**306**	⇑*i*P		**Pb**	**07 15 00.2**	**+0.4**
	baz=3.0							
UCH				⇑*i*S		**Sb**	**07 15 34.4**	**+0.4**
	baz=3.0							
UZB	**Uzynbulak**	**2.75**	**24**	*e*P		**Pb**	**07 15 01.2**	**+1.6**
	3.6nm,0.3s							
UZB				*e*S		**Sg**	**07 15 36.2**	**-1.9**
	6.6nm,0.4s							
UZB	**Uzynbulak**	**2.75**	**24**	Pg		**Pb**	**07 15 00.9**	**+1.2**
	3.3nm,0.3s							
UZB				Lg		Lg	07 15 35.6	
	6.6nm,0.4s							
KBK	**Karagaybulak**	**2.78**	**317**	⇑*i*P		**Pb**	**07 15 00.0**	**-0.1**
	baz=15							
KBK				⇑*i*S		**Sb**	**07 15 34.3**	**-0.3**
	baz=15							
DGS	**Degeres**	**2.90**	**334**	*e*P		**Pb**	**07 15 04.6**	**+2.4**
	6.1nm,0.6s							
DGS				*e*S		**Sg**	**07 15 42.5**	**-0.5**
	14nm,0.6s							
DGS	**Degeres**	**2.90**	**334**	Pg		**Pb**	**07 15 04.6**	**+2.4**
	6.1nm,0.7s							
DGS				Lg		Lg	07 15 42.5	
	14nm,0.8s							
AAK	**Ala-Archa**	**3.01**	**313**	⇑*i*P		**Pb**	**07 15 03.4**	**-0.6**
	baz=10.0							
AAK				⇑*i*S		**Sb**	**07 15 40.0**	**-1.2**
	baz=10.0							
AAK	**Ala-Archa**	**3.01**	**313**	Pg		**Pb**	**07 15 06.7**	**+2.7**
	9.1nm,0.9s							
AAK				Lg		Lg	07 15 47.1	
	23nm,0.8s							
PDGK	**Podgornoye**	**3.07**	**28**	Pg		**Pb**	**07 15 05.8**	**+0.8**
	1.6nm,0.3s							
PDGK				Lg		Lg	07 15 44.1	
	7.2nm,0.6s							
PDGK	**Podgornoye**	**3.07**	**28**	⇓Pg		**Pg**	**07 15 08.4**	**-0.2**
	6.1nm,0.6s							
PDGK				⇑Lg		Lg	07 15 47.5	
	24nm,1.0s							
CHMS	**Chumysh**	**3.13**	**320**	⇑*i*P		**Pb**	**07 15 04.5**	**-1.5**
	baz=18							
CHMS				⇑*i*S		**Sb**	**07 15 42.6**	**-1.9**
	baz=18							
KTBS	**Karatobe**	**3.13**	**349**	*e*P		**Pb**	**07 15 08.2**	**+2.2**
	7.1nm,0.6s							
KTBS				*e*S		**Sg**	**07 15 48.5**	**-1.9**
	21nm,0.6s							
KTBS	**Karatobe**	**3.13**	**349**	Pg		**Pb**	**07 15 08.2**	**+2.2**
	7.1nm,0.6s							
KTBS				Lg		Lg	07 15 48.5	
	21nm,0.6s							
AML	**Almayashu**	**3.23**	**299**	⇑*i*P		**Pb**	**07 15 06.9**	**-1.0**
	baz=96							
AML				⇑*i*S		**Sb**	**07 15 46.5**	**-1.2**
	baz=96							
KRBS	**Karabastau**	**3.34**	**337**	*e*P		**Pb**	**07 15 12.1**	**+2.5**
	4.5nm,0.2s							
KRBS				*e*S		**Sg**	**07 15 54.9**	**-2.2**
	8.2nm,0.6s							
KRBS	**Karabastau**	**3.34**	**337**	Pg		**Pb**	**07 15 11.8**	**+2.1**
	4.5nm,0.3s							
KRBS				Lg		Lg	07 15 54.9	
	2.9nm,0.6s							
KUU	**Kurty**	**3.36**	**346**	*e*P		**Pb**	**07 15 12.2**	**+2.2**
	3.5nm,0.2s							
KUU				*e*S		**Sg**	**07 15 55.2**	**-2.6**
	11nm,0.5s							
KUU	**Kurty**	**3.36**	**346**	Pg		**Pb**	**07 15 12.2**	**+2.2**
	3.5nm,0.2s							
KUU				Lg		Lg	07 15 55.2	
	11nm,0.5s							
EKS2	**Erkin-Say**	**3.44**	**307**	⇓*i*P		**Pb**	**07 15 09.4**	**-2.0**
	baz=5.0							
EKS2				⇓*i*S		**Sb**	**07 15 50.7**	**-3.0**
	baz=5.0							
KTMS	**Ketmen**	**3.52**	**36**	*e*P		**Pb**	**07 15 15.2**	**+2.5**
	0.2nm,0.1s							
KTMS				*e*S		**Sg**	**07 16 00.2**	**-2.6**
	12nm,0.5s							
KTMS	**Ketmen**	**3.52**	**36**	Pg		**Pb**	**07 15 15.2**	**+2.5**
	0.2nm,0.1s							
KTMS				Lg		Lg	07 16 00.2	
	12nm,0.5s							
ARXS	**Arharly**	**3.58**	**4**	*e*P		**Pb**	**07 15 15.9**	**+2.2**
	5.5nm,0.5s							
ARXS				*e*S		**Sg**	**07 16 02.0**	**-2.8**
	13nm,0.5s							
ARXS	**Arharly**	**3.58**	**4**	Pg		**Pb**	**07 15 15.9**	**+2.2**
	5.5nm,0.5s							
ARXS				Lg		Lg	07 16 02.0	
	13nm,0.5s							
MRKS	**Merke**	**3.83**	**305**	*e*P		**Pb**	**07 15 22.1**	**+4.1**
	4.0nm,0.3s							
MRKS				*e*S		**Sg**	**07 16 11.7**	**-1.0**
	3.6nm,0.4s							
MRKS	**Merke**	**3.83**	**305**	Pg		**Pb**	**07 15 21.9**	**+3.9**
	4.0nm,0.5s							
MRKS				Lg		Lg	07 16 11.7	
	3.6nm,0.3s							

*IDC **10** 07:23:48.0±1.6,24.°34N×121.°11E,h0km,mb3.2/3,*
mb1 3.5/4,mb1mx3.2/48,mbtmp3.3/4,ML3.4/1,MS2.7/2,
Ms1 2.7/2,ms1mx2.4/23,Error ellipse: s-maj=72.9km
s-min=28.3km az=69.0
*TAP **10** 07:23:49.8,24.°85N×122.°88E,h52km,ML3.1,C*
*JMA **10** 07:23:51.0±0.1,24.°86N×122.°83E,h26km±2km,M2.6*
ISC 10 07:23:50.0±1.2,24.°92N±0.°06×122.°85E±0.°04,h31km±9km,
n37,σ1s14/43,mb3.3/3,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.47**

0.2nm,0.3s,baz=204,slow=15,SNR=2.3

KSRS					LR	LR	07 33 21.4	
	comp=Z,40nm,18.0s,baz=188,slow=40							
MJAR	**Matsushiro Arr**	**17.54**	**45**	LR	LR	07 37 22.3		
	comp=Z,14nm,19.1s,baz=90,slow=43							
MKAR	**Makanchi Array**	**38.89**	**315**	P	**P**	**07 31 09.1**	**-3.6**	
	0.3nm,0.8s,baz=122,slow=7.0,SNR=2.2							
WRA	**Warramunga Arr**	**45.97**	**165**	P	**P**	**07 32 12.7**	**+2.3**	
	0.8nm,0.8s,baz=346,slow=8.7,SNR=5.3							
ASAR	**Alice Springs**	**49.47**	**167**	P	**P**	**07 32 38.3**	**+0.8**	
	0.2nm,0.7s,baz=350,slow=8.5,SNR=1.6							

NEIC ***10*** *07:30:30.8±1.3,58°.253N±0°.008×153°.61W±0°.06, h76km±7km, Error ellipse: s-maj=4.6km s-min=1.3km az=92.0*

AEIC 10 07:30:32±1.6,**58°.29N**±0°.02×**153°.61W**±0°.05,**h64**km±6km, **ML3.0, Error ellipse: s-maj=4.1km s-min=3.3km az=115.0, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPH	**Katmai Pasha**	**0.50**	**309**		Pn	07 30 44.3	0.0
KAHG	**Katmai Hook Gl**	**0.54**	**293**		Pn	07 30 44.2	-0.5
KAHG					Sn	07 30 54.4	+0.4
KAWH	**Katmai**	**0.64**	**279**		Pn	07 30 45.1	-0.6
KAWH					Sn	07 30 56.2	+0.3
KDAK	**Kodiak Island**	**0.74**	**132**		Pn	07 30 46.5	-0.4
KDAK					Sn	07 30 58.2	+0.4
KCG	**Knife Ck. Glac**	**0.80**	**272**		Pn	07 30 46.9	-0.8
KCG					Sn	07 30 59.1	-0.1
KAHC	**Katmai Hardscr**	**0.82**	**297**		Pn	07 30 47.1	-0.9
KABU	**Katmai Buttres**	**0.89**	**270**		Pn	07 30 48.3	-0.5
ACHA	**Angle Creek He**	**0.91**	**266**		Pn	07 30 48.7	-0.5
ACHA					Sn	07 31 02.1	+0.3
CAHL	**Cahill**	**0.93**	**256**		Pn	07 30 48.7	-0.6
ANCK	**Angle Creek**	**1.00**	**266**		Pn	07 30 49.0	-0.3
KJI	**Kejulik**	**1.07**	**258**		Pn	07 30 50.7	-0.4
AUJK	**Augustine Jueg**	**1.07**	**5**		Pn	07 30 50.9	-0.2
OHAK	**Old Harbor**	**1.08**	**171**		Pn	07 30 50.6	-0.5
OHAK					Sn	07 31 04.5	-0.9
AUP	**Augustine Pinn**	**1.08**	**5**		Pn	07 30 51.2	-0.2
AUH	**Augustine H**	**1.09**	**4**		Pn	07 30 51.3	-0.1
AUW	**Augustine West**	**1.09**	**4**		Pn	07 30 51.2	-0.2
AU2	**Augustine Isla**	**1.09**	**6**		Pn	07 30 51.2	-0.2
AU22	**Augustine Moun**	**1.10**	**7**		Pn	07 30 51.2	-0.1
AU22					Sn	07 31 06.1	+0.3
AUL	**Augustine Lava**	**1.10**	**5**		Pn	07 30 51.3	-0.2
KELA	**Mount Kelaz**	**1.14**	**279**		Pn	07 30 51.2	-0.7
PLK2	**Peulik 2**	**1.54**	**251**		Pn	07 30 57.2	0.0
PLK3	**Peulik 3**	**1.54**	**248**		Pn	07 30 57.4	+0.1
PLK3					Sn	07 31 16.3	-0.1
PLK1	**Peulik 1**	**1.67**	**254**		Pn	07 30 58.8	-0.1
ILS	**Iliamna Low So**	**1.70**	**9**		Pn	07 30 59.3	-0.2
HOM	**Homer**	**1.71**	**36**		Pn	07 30 58.5	0.0
HOM				Sn	Sn	07 31 22.0	+1.5
CNPM	**China Poot**	**1.75**	**44**		Pn	07 30 59.8	-0.3
PLK5	**Peulik 5**	**1.76**	**262**		Pn	07 31 00.2	0.0
ILW	**Iliamna West**	**1.80**	**8**		Pn	07 31 00.5	-0.4
PLBL	**Peulik Blue Cr**	**1.81**	**252**		Pn	07 31 01.3	+0.4
BRLK	**Bradley Lake**	**2.04**	**42**		Pn	07 31 03.2	-0.9
BRLK					Sn	07 31 27.1	-1.5
BRSE	**Bradley Lake S**	**2.08**	**44**		Pn	07 31 04.0	-0.6
RED	**Redoubt Volcan**	**2.18**	**11**		Pn	07 31 05.7	-0.3
RSO	**Redoubt South**	**2.23**	**11**		Pn	07 31 06.9	+0.2
RDWB	**Redoubt West**	**2.25**	**10**		Pn	07 31 06.6	-0.3
RDJH	**Redoubt Jeurge**	**2.35**	**10**		Pn	07 31 08.5	+0.2
DFR	**Drift River**	**2.36**	**11**		Pn	07 31 08.6	+0.1
RDT	**Redoubt**	**2.38**	**14**		Pn	07 31 08.6	-0.1
SEW	**Seward**	**2.81**	**48**		Pn	07 31 13.1	-1.3
SLKM	**Skilak Lake**	**2.82**	**36**		Pn	07 31 14.1	-0.6
SPCR	**Spurr Chakacha**	**3.01**	**13**		Pn	07 31 17.2	-0.1
SPWE	**Spurr West**	**3.04**	**10**		Pn	07 31 18.1	+0.3
SPBG	**Spurr Blockage**	**3.05**	**11**		Pn	07 31 18.1	+0.3
BGL	**Barrier Glacie**	**3.05**	**11**		Pn	07 31 18.1	+0.2
CHGN	**Chignik**	**3.28**	**235**		Pn	07 31 20.3	-0.6
STLK	**Strandline Lak**	**3.35**	**15**		Pn	07 31 21.9	0.0
RC01	**Rabbit Creek A**	**3.43**	**33**		Pn	07 31 22.5	-0.4
VNHG	**Veniaminof 1**	**3.66**	**238**		Pn	07 31 26.6	+0.5
PWL	**Port Wells**	**3.72**	**44**		Pn	07 31 25.8	-1.2
VNSS	**Veniaminof 8**	**3.79**	**239**		Pn	07 31 27.8	-0.2
MID	**Middleton Isla**	**3.94**	**70**	Pn	Pn	07 31 29.5	-0.4
PMR	**Palmer**	**4.01**	**32**		Pn	07 31 29.1	-1.7
KNK	**Knik Glacier**	**4.07**	**37**		Pn	07 31 30.2	-1.5
GLI	**Glacier Island**	**4.21**	**49**		Pn	07 31 31.1	-2.5
HIN	**Hinchinbrook I**	**4.21**	**57**		Pn	07 31 32.6	-0.9
GHO	**Glory Hole Cre**	**4.21**	**32**		Pn	07 31 32.6	-1.1
FID	**Port Fidalgo**	**4.39**	**53**		Pn	07 31 33.2	-2.9
SML	**Sawmill**	**4.41**	**35**		Pn	07 31 34.9	-1.5
EYAK	**Cordova Ski Ar**	**4.61**	**57**		Pn	07 31 37.0	-2.0
PPLA	**Purkeypile**	**4.68**	**8**		Pn	07 31 42.0	+1.8
SCM	**Sheep Creek Mo**	**4.75**	**39**		Pn	07 31 39.8	-1.2
SDPT	**Sand Point**	**4.79**	**235**		Pn	07 31 40.4	-1.0
TT01	**Tatalina**	**4.79**	**347**		Pn	07 31 41.5	0.0
CNBA	**Chernabura Isl**	**4.80**	**226**		Pn	07 31 39.5	-2.1
TTA	**Tatalina**	**4.81**	**347**		Pn	07 31 41.5	-0.4
RAGM	**Ragged Mountai**	**5.03**	**61**		Pn	07 31 43.4	-1.5
GOAT	**Goat Mountain**	**5.08**	**59**		Pn	07 31 44.7	-0.8
WAT1	**Susitna Watana**	**5.20**	**27**		Pn	07 31 46.1	-1.0
WAT2	**Susitna Watana**	**5.30**	**26**		Pn	07 31 47.7	-0.9
NICHA	**Nichawak Mount**	**5.32**	**64**		Pn	07 31 47.9	-0.8
TRF	**Thorofare Moun**	**5.43**	**16**		Pn	07 31 50.2	-0.2
KTH	**Kantishna Hill**	**5.45**	**13**		Pn	07 31 50.5	-0.1
BERG	**Berg Lake**	**5.49**	**63**		Pn	07 31 50.0	-1.1
RND	**Reindeer**	**5.64**	**22**		Pn	07 31 51.6	-1.5
DHY	**Denali Highway**	**5.70**	**30**		Pn	07 31 52.7	-1.3
KHIT	**Khitrov Hills**	**5.72**	**63**		Pn	07 31 53.1	-1.2
GLB	**Gilahina Butte**	**5.86**	**53**		Pn	07 31 54.4	-1.8
CRQM	**Cirque**	**5.88**	**61**		Pn	07 31 54.8	-1.8
WAX	**Waxell Ridge**	**5.91**	**64**		Pn	07 31 55.9	-1.0
KULT	**Kultieth River**	**5.92**	**66**		Pn	07 31 56.2	-0.8
MCK	**McKinley**	**5.92**	**21**		Pn	07 31 57.3	+0.4
VRDI	**Verde Repeater**	**5.92**	**56**		Pn	07 31 55.9	-1.2
BPAW	**Bear Paw Mtn.**	**5.97**	**11**		Pn	07 31 58.4	+0.8
TGL	**Tana Glacier**	**6.02**	**61**		Pn	07 31 57.5	-0.9
MESA	**MESA**	**6.28**	**67**		Pn	07 32 01.4	-0.6
KIAG	**Kiagna River**	**6.29**	**60**		Pn	07 32 01.1	-1.1
BALM	**Baldy**	**6.34**	**59**		Pn	07 32 01.9	-0.9
PTPK	**Patty Peak**	**6.34**	**58**		Pn	07 32 02.0	-0.8
GRNC	**Granite Creek**	**6.51**	**63**		Pn	07 32 04.6	-0.6
RKAV	**Rock Avalanche**	**6.60**	**67**		Pn	07 32 06.0	-0.4
BARN	**Barnard Glacie**	**6.66**	**60**		Pn	07 32 05.6	-1.6
CHX	**Chaix Hills**	**6.66**	**69**		Pn	07 32 06.9	-0.3
NEA	**Nenana**	**6.68**	**17**		Pn	07 32 05.7	-1.6
WRH	**Wood River Hil**	**6.75**	**21**		Pn	07 32 06.7	-1.5
CTGM	**Chitina Glacie**	**6.78**	**61**		Pn	07 32 07.7	-1.2
HDA	**Harding Lake**	**6.92**	**25**		Pn	07 32 10.0	-0.7
CCB	**Clear Creek Bu**	**6.96**	**21**		Pn	07 32 08.9	-2.2
IL31		**7.25**	**23**		Pn	07 32 13.2	-1.9
YUK2	**White River**	**7.29**	**56**		Pn	07 32 13.3	-2.5
PNL	**Peninsula**	**7.47**	**73**		Pn	07 32 17.1	-1.1
BC03		**7.52**	**45**		Pn	07 32 16.4	-2.4
IM03		**7.73**	**360**		Pn	07 32 20.2	-1.4
AKSA	**Akutan Strait**	**7.92**	**244**		Pn	07 32 24.4	+0.1
AKLV	**Akutan Long Va**	**8.02**	**244**		Pn	07 32 26.0	+0.2
DHAK	**Deception Hill**	**8.06**	**78**		Pn	07 32 24.2	-2.0
PRP	**Porcupine Dome**	**8.19**	**24**		Pn	07 32 26.9	-1.2
YUK7	**Dusty Glacier**	**8.20**	**68**		Pn	07 32 27.2	-1.2
UNV	**Unalaska Valle**	**8.47**	**244**		Pn	07 32 30.4	-1.4
MNAT	**Makushin Natee**	**8.54**	**245**		Pn	07 32 32.1	-0.6
MSW	**Makushin Switc**	**8.56**	**245**		Pn	07 32 32.1	-1.1
MREP	**Makushin Rep't**	**8.61**	**244**		Pn	07 32 32.3	-1.5

GCG ***10*** *07:35:35.1±3.0, 19°.26N×102°.32W, h0km±999km, MD6.1*

UCR ***10*** *07:35:54.5±2.1, 18°.72N×100°.66W, h0km±999km, mb6.0(NEIC)*

UPA ***10*** *07:35:55.8±2.2, 19°.44N×100°.39W, h10km±40km, MW6.0*

MEX ***10*** *07:36:00.9±0.4, 17°.04N×100°.89W, h10km, MD6.1*

BJI ***10*** *07:36:01.0±0.0, 17°.31N×100°.72W, h30km, mB6.3/52, mb5.7/5, Ms6.4/62, Ms7 6.3/57*

NEIC ***10*** *07:36:01.2±2.6, 17°.22N±0°.05×100°.81W±0°.04, h23km±1km, mb6.0/704, Ms_20 6.0/632, Mwb6.0/63, Mwc6.1/42, Mww6.0, Md6.1/22(MEX), Mwc6.1(GCMT), Error ellipse: s-maj=10.4km s-min=5.0km az=211.0*

MOS ***10*** *07:36:02.4±0.9, 17°.29N×100°.68W, h38km, mb6.1/85, MS6.0/57, Error ellipse: s-maj=6.9km s-min=3.9km az=84.1*

NEIC ***10*** *07:36:03.1, 17°.23N×100°.80W, h23km, Moment Tensor Solution. Moment tensor: Scale 10^18 Nm; Mrr 1.05; Mθθ -0.92; Mϕϕ -0.13; Mrθ 0.65; Mϕθ 0.45; Mϕr -0.26; Fault plane solution: M0 1.29000×10^18 NP1:ϕs 296.08000°, δ 28.71000°, λ 92.80000°. NP2:ϕs 112.90000°, δ 61.33000°, λ 88.47000°. Principal axes: T 1.2514, Plg74.0000°, Azm19.0000°; N 0.0725, Plg1.0000°, Azm114.0000°; P -1.3239, Plg16.0000°, Azm204.0000°;*

IDC ***10*** *07:36:04.2±1.9, 17°.28N×100°.59W, h43km±16km, mb5.3/32, mb1 5.3/38, mb1mx5.2/41, mbtmp5.4/38, ML4.3/6, MS5.8/32, Ms1 5.9/32, ms1mx5.8/36 Error ellipse: s-maj=16.9km s-min=9.3km az=53.0*

INET ***10*** *07:36:05.6, 17°.30N×100°.74W, h20km, mb5.7*

GCMT ***10*** *07:36:05.2±0.1, 17°.31N×100°.82W, h21km, MW6.1/166, Moment Tensor Solution. s166,c381; s165,c575; Duration: 29.7 Moment tensor: Scale 10^18 Nm; Mrr 1.11±.01; Mθθ -0.95±.01; Mϕϕ -0.16±.01; Mrθ 1.02±.02; Mθϕ 0.37±.01; Mϕr -0.62±.01; Best double couple: M0 1.62700×10^18 NP1:ϕs 285.00000°, δ 22.00000°, λ 77.00000°. NP2:ϕs 119.00000°, δ 69.00000°, λ 95.00000°. Principal axes: T 1.6420, Plg66.0000°, Azm38.0000°; N -0.0280, Plg5.0000°, Azm297.0000°; P -1.6120, Plg24.0000°, Azm205.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***10*** *07:36:06, 17°.30N×100°.73W, h21km, Moment Tensor Solution. Moment tensor: Scale 10^18 Nm; Mrr 1.11; Mθθ -1.01; Mϕϕ -0.10; Mrθ 1.29; Mθϕ 0.38; Mϕr -0.71; Fault plane solution: M0 1.86000×10^18 NP1:ϕs 117.00000°, δ 71.00000°, λ 95.00000°. NP2:ϕs 283.00000°, δ 19.00000°, λ 76.00000°. Principal axes: T 1.8473, Plg63.0000°, Azm34.0000°; N 0.0168, Plg4.0000°, Azm296.0000°; P -1.8641, Plg26.0000°, Azm203.0000°;*

NEIC ***10*** *07:36:08, 17°.36N×100°.86W, h18km, Moment Tensor Solution. Moment tensor: Scale 10^18 Nm; Mrr 0.90; Mθθ -0.52; Mϕϕ -0.38; Mrθ 0.86; Mθϕ 0.28; Mϕr -0.35; Fault plane solution: M0 1.25000×10^18 NP1:ϕs 117.00000°, δ 69.00000°, λ 84.00000°. NP2:ϕs 313.00000°, δ 21.00000°, λ 105.00000°. Principal axes: T 1.3298, Plg65.0000°, Azm17.0000°; N -0.1819, Plg6.0000°, Azm119.0000°; P -1.1478, Plg24.0000°, Azm211.0000°;*

BGR ***10*** *07:36:08.7±0.0, 17°.78N×99°.85W, h33km, mb5.9, mB_BB6.2, Ms5.9*

NEIC ***10*** *07:36:18.8, 17°.46N×100°.35W, h20km, Moment Tensor Solution. Moment tensor: Scale 10^18 Nm; Mrr 1.14; Mθθ -0.93; Mϕϕ -0.22; Mrθ 0.95; Mθϕ 0.31; Mϕr -0.94; Fault plane solution: M0 1.72000×10^18 NP1:ϕs 128.14000°, δ 70.75000°, λ 100.31000°. NP2:ϕs 279.26000°, δ 21.74000°, λ 62.87000°. Principal axes: T 1.8196, Plg63.0000°, Azm54.0000°; N -0.1995, Plg10.0000°, Azm305.0000°; P -1.6201, Plg25.0000°, Azm210.0000°;*

ISC 10 07:36:00.6±0.4,**17°.06N**±0°.03×**100°.93W**±0°.02,**h23**km±2km, **h24**km:**pP-P, n2093, σ2 907**/1839,**mb6.0**/488,**MS6.0**/428, **166C-29D, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.64**	**91**	‖ *eP*	**Pb**	**07 36 11.3**	**-1.8**
	baz=269,slow=16						
CAIG				*eS*	**Sb**	**07 36 19.5**	**-2.0**
CAIG	**El Cayaco**	**0.64**	**91**		**Pb**	**07 36 11.3**	**-1.8**
CAIG				*i* S	**Sb**	**07 36 19.5**	**-2.0**
ZIIG	**Zihuatanejo**	**0.75**	**317**	*eP*	**Pb**	**07 36 13.9**	**-1.0**
ZIIG				*i* S	**Sb**	**07 36 24.3**	**-0.4**
ZIIG	**Zihuatanejo**	**0.75**	**317**		**Pb**	**07 36 13.9**	**-1.0**
ZIIG					**Sb**	**07 36 24.3**	**-0.4**
ACP2	**Acapulco**	**1.02**	**100**	*eP*	**Pn**	**07 36 17.4**	**-2.1**
ACP2				*i* S	**Sb**	**07 36 30.6**	**-1.9**
ACP2	**Acapulco**	**1.02**	**100**		**Pn**	**07 36 17.4**	**-2.1**
ACP2					**Sb**	**07 36 30.6**	**-1.9**
UON	**La Union**	**1.24**	**317**	*eP*	**Pn**	**07 36 21.6**	**-0.8**
UON				*eS*	**Sn**	**07 36 37.4**	**-1.1**
ARIG	**Puente Sto Nin**	**1.34**	**25**	‖ *eP*	**Pn**	**07 36 22.5**	**-1.4**
ARIG				*eS*	**Sn**	**07 36 38.5**	**-2.5**
ARIG	**Puente Sto Nin**	**1.34**	**25**		**Pn**	**07 36 22.5**	**-1.4**
ARIG					**Sn**	**07 36 38.5**	**-2.5**
MEIG	**Mezcala**	**1.52**	**55**	*eP*	**Pn**	**07 36 25.3**	**-1.2**
MEIG				*eS*	**Sn**	**07 36 43.5**	**-2.1**
MEIG	**Mezcala**	**1.52**	**55**		**Pn**	**07 36 25.3**	**-1.2**
MEIG					**Sn**	**07 36 43.5**	**-2.1**
CRIG	**Cruz Grande**	**1.75**	**100**	*eP*	**Pn**	**07 36 27.9**	**-1.7**
CRIG				*i* S	**Sb**	**07 36 53.5**	**-0.3**
PLIG	**Platanillo**	**1.90**	**46**	*eP*	**Pn**	**07 36 30.9**	**-0.9**
PLIG				*eS*	**Sn**	**07 36 53.5**	**-1.5**
PLIG	**Platanillo**	**1.90**	**46**		**Pn**	**07 36 30.9**	**-0.9**
PLIG					**Sn**	**07 36 53.5**	**-1.5**
TLIG	**Tlapa**	**2.31**	**77**	*eP*	**Pn**	**07 36 36.7**	**-0.7**
TLIG				*eS*	**Sn**	**07 37 05.2**	**-0.1**
TLIG	**Tlapa**	**2.31**	**77**		**Pn**	**07 36 36.7**	**-0.7**
MOIG	**Morelia**	**2.62**	**355**		**Pn**	**07 36 41.3**	**-0.4**
UNM	**Universidad Na**	**2.81**	**36**	P	**Pn**	**07 36 43.5**	**-0.8**
UNM	**Universidad Na**	**2.81**	**36**		**Pn**	**07 36 43.5**	**-0.8**
CMIG	**Matias Romero**	**5.79**	**89**	P	**Pn**	**07 37 23.3**	**-1.8**
	8.0nm,0.3s,baz=264,slow=13,SNR=120			Lg	Lg	07 38 45.8	
CMIG	91nm,0.3s,baz=54,slow=15,SNR=5.3			LR	LR	07 39 55.0	
	comp=Z,179µm,18.1s,baz=248,slow=42						
ZAIG	**Zacatecas**	**5.89**	**345**		**Pn**	**07 37 25.9**	**-0.8**
CCIG	**Comitan**	**8.46**	**94**		**Pn**	**07 38 02.6**	**+0.6**
STG3	**Santiaguito 3,**	**9.30**	**103**	*eP*	**Pn**	**07 38 16.9**	**+3.3**
H06E1	**SOCORRO T-PHAS**	**9.67**	**282**	T	T	07 48 04.3	
H06S1	**SOCORRO T**	**9.69**	**281**	T	T	07 48 01.3	
H06N1	**SOCORRO T-PHAS**	**9.73**	**282**	T	T	07 48 08.6	
	baz=90						
FUG	**Fuego 3**	**10.05**	**104**	*eP*	**Pn**	**07 38 28.1**	**+4.2**
APG	**El Apazote**	**10.27**	**100**	P	**Pn**	**07 38 26.6**	**-0.3**
	4.7nm,0.3s,baz=320,slow=12,SNR=68			S	**Sn**	**07 40 28.1**	**+6.7**
APG	7.3nm,0.3s,baz=355,slow=14,SNR=5.5			Lg	Lg	07 41 25.7	
APG	33nm,0.3s,baz=24,slow=17,SNR=3.8			LR	LR	07 42 19.9	
	comp=Z,48µm,20.2s,baz=288,slow=38						
PCG	**Pacaya**	**10.29**	**103**	*eP*	**Pn**	**07 38 31.7**	**+4.6**
NBG	**Las Nubes**	**10.48**	**102**	*eP*	**Pn**	**07 38 33.0**	**+3.2**
IXG	**Ixpaco**	**10.51**	**104**	*eP*	**Pn**	**07 38 33.7**	**+3.7**
HPIG		**10.76**	**337**		**Pn**	**07 38 35.2**	**+1.7**
KVTX	**Kingsville**	**10.81**	**15**		**Pn**	**07 38 36.8**	**+2.8**
MRL	**Marmol**	**10.99**	**99**	*eP*	**Pn**	**07 38 38.5**	**+1.8**
LPIG	**La Paz**	**11.23**	**310**	P	**Pn**	**07 38 43.0**	**+3.3**
	1.8nm,0.3s,baz=3.0,slow=2.6,SNR=7.4			Lg	Lg	07 42 22.8	
LPIG	comp=Z,63µm,20.9s,baz=129,slow=33			LR	LR	07 42 22.8	
833A	**Chaparral WMA,**	**11.30**	**7**	P	**Pn**	**07 38 40.7**	**0.0**
	baz=187,SNR=67						
SNET	**Serv Nac Est T**	**11.77**	**105**		**Pn**	**07 38 49.1**	**+1.8**
735A	**Kenedy**	**12.09**	**13**		**Pn**	**07 38 52.0**	**+0.5**
TEIG	**Tepich**	**12.40**	**73**	P	**Pn**	**07 38 51.5**	**-4.3**
	2.3nm,0.3s,baz=189,slow=0.0,SNR=16			S	Sn	07 41 02.4	-11
TEIG	12nm,0.3s,baz=292,slow=0.0,SNR=3.6			LR	LR	07 44 48.5	
	comp=Z,54µm,19.2s,baz=251,slow=44						
TEIG	**Tepich**	**12.40**	**73**		**Pn**	**07 38 52.8**	**-3.0**
TXAR	**Lajitas Array**	**12.47**	**349**	P	**Pn**	**07 38 58.2**	**+1.3**
	0.2nm,0.3s,baz=162,slow=11,SNR=55			Lg	Lg	07 42 29.7	
TXAR	0.8nm,0.3s,baz=178,slow=29,SNR=2.0			LR	LR	07 44 18.0	
	comp=Z,151µm,18.1s,baz=0.0,slow=40						
TX31	**Lajitas Ar. Si**	**12.47**	**349**		**Pn**	**07 38 58.4**	**+1.5**
TX32	**Lajitas Array**	**12.47**	**349**		**Pn**	**07 38 58.0**	**+1.2**
JCT	**Junction City**	**13.40**	**4**	P	**Pn**	**07 39 09.2**	**-0.3**
JCT	**Junction City**	**13.40**	**4**	P	**Pn**	**07 39 09.4**	**0.0**
	baz=184,SNR=48						
JCT	**Junction City**	**13.40**	**4**		**Pn**	**07 39 09.2**	**-0.3**
TGUH	**Tegucigalpa,Un**	**13.49**	**101**		**Pn**	**07 39 12.2**	**+1.3**
HKT	**Hockley**	**13.65**	**19**	P	**Pn**	**07 39 10.7**	**-2.1**
HKT	**Hockley**	**13.65**	**19**		**Pn**	**07 39 10.7**	**-2.1**
435B	**Jarrell**	**14.00**	**12**	P	**Pn**	**07 39 16.3**	**-1.3**
	baz=193,SNR=84						
SRIG	**Santa Rosalia**	**14.62**	**316**		**Pn**	**07 39 28.4**	**+2.4**
MNTX	**Cornudas Mount**	**15.13**	**345**	P	**Pn**	**07 39 33.3**	**+0.4**
	baz=163,SNR=694						
MNTX	baz=163			S	**S**	**07 42 32.3**	**-4.3**
MNTX	**Cornudas Mount**	**15.13**	**345**		**Pn**	**07 39 33.0**	**+0.1**
WHTX	**Lake Whitney,**	**15.20**	**11**	P	**Pn**	**07 39 31.7**	**-2.1**
	baz=192,SNR=363						
WHTX	**Lake Whitney,**	**15.20**	**11**		**Pn**	**07 39 31.6**	**-2.2**
ABTX	**Abilene, Hawle**	**15.54**	**4**	P	**Pn**	**07 39 36.7**	**-1.7**
	baz=184,SNR=127						
NATX	**Nacogdoches**	**15.71**	**20**	P	**Pn**	**07 39 37.9**	**-2.6**
	baz=202,SNR=255						
NATX	**Nacogdoches**	**15.71**	**20**		**Pn**	**07 39 37.8**	**-2.6**
ACON	**Accyapa**	**16.07**	**106**	*eP*	**Pn**	**07 39 45.8**	**+0.6**
319A	**Douglas**	**16.15**	**333**	IAmb	IAmb	07 40 01.3	
	comp=Z,2µm,1.2s						
NY14	**Universidad de**	**16.25**	**111**	*eP*	**P**	**07 39 51.3**	**+1.0**
GBS3	**Finca Las Img**	**16.26**	**111**	*eP*	**P**	**07 39 49.7**	**-0.9**
LAPC	**Finca la Perla**	**16.29**	**111**	*eP*	**Pn**	**07 39 49.3**	**+1.2**
GB1A	**Boringuen Arri**	**16.30**	**110**	*eP*	**P**	**07 39 50.2**	**-0.9**
BUEV	**Buena Vista**	**16.30**	**110**	*eP*	**P**	**07 39 50.0**	**-1.1**
BUAI	**Buenos Aires**	**16.33**	**110**	*eP*	**P**	**07 39 50.4**	**-1.0**
GPS3	**Bodega del ICE**	**16.35**	**111**	*eP*	**Pn**	**07 39 49.7**	**+0.8**
GPS1	**Guardaparques**	**16.36**	**110**	*eP*	**P**	**07 39 50.9**	**-0.9**
GPS2	**Hotel Rincn d**	**16.37**	**110**	*eP*	**P**	**07 39 50.9**	**-0.9**
GUAI	**GUAI**	**16.43**	**112**	*eP*	**P**	**07 39 53.6**	**+1.2**
LIM1	**Limonal**	**16.48**	**111**	*eP*	**P**	**07 39 52.5**	**-0.5**
GUAB	**Guayabo de Bag**	**16.49**	**110**	*eP*	**P**	**07 39 52.5**	**-0.7**
COLC	**Colonia**	**16.53**	**111**	*eP*	**P**	**07 39 52.7**	**-0.9**
PLVR	**Palo Verde**	**16.54**	**112**	*eP*	**P**	**07 39 57.2**	**+3.4**
Z35A	**Perchaven, San**	**16.54**	**11**	IAmb	IAmb	07 40 02.4	
	comp=Z,2µm,1.3s						
CUI	**Cuipilapa**	**16.57**	**111**	*eP*	**P**	**07 39 53.4**	**-0.7**
121A	**Cookes Peak, D**	**16.61**	**339**	P	**Pn**	**07 39 53.1**	**+0.9**
	baz=156,SNR=124						
121A	**Cookes Peak, D**	**16.61**	**339**	IAmb	IAmb	07 40 05.8	
	comp=Z,2µm,1.3s						
ACAL	**Aguas Claras**	**16.70**	**110**	*eP*	**P**	**07 39 54.8**	**-0.7**
PTEN	**Parque Tenorio**	**16.71**	**110**	*eP*	**P**	**07 39 55.2**	**-0.4**
ESPN	**Las Esperanzas**	**16.80**	**104**	*eP*	**Pn**	**07 39 55.4**	**+0.9**
JTS	**Las Juntas de**	**16.91**	**111**	P	**P**	**07 39 58.0**	**+0.1**
	comp=Z,3.9nm,0.3s,baz=356,slow=7.8,SNR=25						
JTS	comp=Z,20µm,19.2s,baz=13,slow=34			LR	LR	07 45 38.8	
JTS	**Las Juntas de**	**16.91**	**111**	*eP*	**P**	**07 40 00.3**	**+2.5**
JTS				*eS*	**S**	**07 43 18.2**	**+4.8**
JTS	**Las Juntas de**	**16.91**	**111**	*c iP*	**P**	**07 39 56.9**	**-0.9**
JTS	comp=Z,303nm,1.1s			pmax	pmax		
JTS	comp=Z,23µm,21.0s			MLR	MLR		
JTS	**Las Juntas de**	**16.91**	**111**	*eP*	**P**	**07 39 57.3**	**-0.5**
JTS	**Las Juntas de**	**16.91**	**111**	P	**P**	**07 39 59.2**	**+1.4**
MSTX	**Muleshoe**	**16.92**	**355**	P	**Pn**	**07 39 54.8**	**-1.2**
	baz=174,SNR=319						
ARE1	**Arenal 1**	**17.05**	**111**	*eP*	**P**	**07 39 59.4**	**0.0**
CEDE	**Laguna Cedeo**	**17.06**	**110**	*eP*	**P**	**07 39 59.6**	**+0.2**
FORC	**Fortuna**	**17.09**	**110**	*eP*	**P**	**07 40 00.0**	**+0.2**
SRA1	**San Ramn**	**17.42**	**111**	*eP*	**P**	**07 40 04.6**	**+1.0**
TUC	**Tucson**	**17.61**	**331**	P	**P**	**07 40 06.1**	**+0.6**
TUC	comp=Z,2µm,1.7s			pmax	pmax		
TUC	**Tucson**	**17.61**	**331**	P	**P**	**07 40 05.9**	**+0.4**
	baz=147						
TUC	baz=147			S	**S**	**07 43 30.7**	**+3.2**
TUC	**Tucson**	**17.61**	**331**	P	**P**	**07 40 06.1**	**+0.6**
TUC	comp=Z,2µm,1.7

baz=213,SNR=51
OXF Oxford 20.21 29 IAmb IAmb 07 40 42.0
comp=Z,1µm,1.2s
T25A Trinidad 20.24 352 P **P** **07 40 34.5 +0.1**
baz=170,SNR=205
GLA Glamis 20.26 324 P Pn 07 40 36.9 +0.3
baz=138,SNR=87
LRAL Lakeview Retre 20.27 36 P **P** **07 40 32.7 -1.9**
baz=222,SNR=184
LRAL Lakeview Retre 20.27 36 P **P** **07 40 32.6 -1.9**
LRAL IAmb IAmb 07 40 40.4
comp=Z,462nm,0.9s
PAYG Puerto Ayora 20.51 148 IAMs_20 IAMs_20 07 46 25.2
comp=Z,44µm,20.0s
U40A Yellville 20.51 19 P **P** **07 40 35.4 -1.8**
baz=202,SNR=456
U40A Yellville 20.51 19 IAmb IAmb 07 40 46.2
comp=Z,919nm,0.9s
061Z Ochoppi 20.57 61 P **P** **07 40 37.0 -0.9**
061Z IAMs_20 IAMs_20 07 49 46.4
comp=Z,44µm,18.0s
WUAZ Wupatki 20.60 335 P Pn 07 40 40.8 +0.1
baz=150,SNR=367
Y12C Blythe 20.63 326 P Pn 07 40 40.7 -0.1
baz=140,SNR=105
Y12C S Sn 07 44 42.2 +9.3
baz=140
Y12C Blythe 20.63 326 IAmb IAmb 07 40 49.9
comp=Z,902nm,1.1s
Y12C IAMs_20 IAMs_20 07 48 18.1
comp=Z,37µm,18.0s
IKP In-Ko-Pah, Jac 20.71 321 P Pn 07 40 42.0 +0.1
baz=134,SNR=43
IKP S Sn 07 44 44.7 +10
baz=134
SWSC Sam W. Stewart 20.74 322 P Pn 07 40 42.2 +0.1
baz=136,SNR=52
SWSC S Sn 07 44 46.3 +11
baz=136
W45A Hickory Valley 20.85 28 IAmb IAmb 07 40 45.6
comp=Z,519nm,0.9s
PDMCI Parker Dam,Lak 20.86 328 P Pn 07 40 43.1 -0.3
baz=142,SNR=139
PDMCI S Sn 07 44 45.0 +6.6
baz=142
SDCO Great Sand Dun 21.00 350 P **P** **07 40 43.0 +0.3**
baz=167,SNR=487
SDCO S Sn 07 44 45.6 +3.5
baz=167
Z50A Ashland 21.05 37 P **P** **07 40 40.9 -2.1**
baz=224,SNR=141
Z50A S Sn 07 44 41.6 -1.3
baz=224
Z50A Ashland 21.05 37 IAmb IAmb 07 40 55.9
comp=Z,480nm,0.9s
BC3 Big Chuckawall 21.06 324 P **P** **07 40 45.3 +2.1**
baz=138,SNR=125
BC3 S Sn 07 44 49.5 +6.0
baz=138
DWPF Disney Wildern 21.07 55 P **P** **07 40 41.4 -1.8**
baz=243
DWPF Disney Wildern 21.07 55 P **P** **07 40 41.6 -1.6**
DWPF IAmb IAmb 07 40 53.4
comp=Z,614nm,1.0s
MONP2 Monument Peak 21.07 321 P **P** **07 40 45.7 +2.3**
baz=134,SNR=42
MONP2 S Sn 07 44 50.6 +6.8
baz=134
BAR Barrett 21.07 320 P **P** **07 40 45.5 +2.2**
BAR IAmb IAmb 07 40 54.9
comp=Z,2µm,1.9s
BAR IAMs_20 IAMs_20 07 48 17.5
comp=Z,50µm,19.0s
MVCO Mesa Verde 21.16 343 P **P** **07 40 45.1 +0.8**
baz=159,SNR=177
MVCO S Sn 07 44 52.2 +6.3
baz=159
MVCO Mesa Verde 21.16 343 IAMs_20 IAMs_20 07 49 11.2
comp=Z,69µm,20.0s
S22A 4UR Ranch, Cre 21.25 347 P **P** **07 40 46.5 +1.0**
baz=164,SNR=356
IRM Iron Mountain 21.27 326 P **P** **07 40 47.8 +2.4**
baz=139,SNR=237
IRM S Sn 07 44 53.2 +4.8
baz=139
TIGA Tifton 21.29 45 P **P** **07 40 43.9 -1.6**
baz=232,SNR=95
TIGA S Sn 07 44 47.9 -0.9
baz=232
GMAL Guarumal, Vera 21.32 113 *i* P **P** **07 40 48.8 +2.7**
GMAL *i* S Sn 07 44 52.7 +2.8
GMAL Guarumal, Vera 21.32 113 *eP* **P** **07 40 47.5 +1.5**
X48A Hartselle 21.32 33 IAmb IAmb 07 40 54.4
comp=Z,504nm,0.8s
152A Waverly Hall 21.36 40 IAmb IAmb 07 40 57.9
comp=Z,695nm,1.1s
W13A Hualapai Mount 21.37 330 IAmb IAmb 07 40 58.2
comp=Z,1µm,1.8s
W13A IAMs_20 IAMs_20 07 49 09.2
comp=Z,59µm,18.0s
R32A Long Quarter, 21.37 5 IAmb IAmb 07 40 54.7
comp=Z,1µm,1.2s
NEE2 Needles Airpor 21.47 328 P **P** **07 40 49.6 +2.1**
baz=141,SNR=63
109C Camp Elliot, M 21.48 320 P **P** **07 40 49.7 +2.1**
baz=133,SNR=34
109C S Sn 07 44 58.2 +4.8
baz=133
109C Camp Elliot, M 21.48 320 P **P** **07 40 49.5 +1.9**
109C IAmb IAmb 07 40 59.0
comp=Z,2µm,1.8s
LNXT Lenox 21.52 26 P **P** **07 40 45.9 -2.1**
Z51A Franklin 21.53 38 IAmb IAmb 07 40 54.2
comp=Z,548nm,0.9s
XPFO Pion Flat 21.60 323 P **P** **07 40 51.2 +2.1**
XPFO IAmb IAmb 07 41 01.5
comp=Z,1µm,1.5s
PFO Pinyon Flats O 21.60 323 P **P** **07 40 51.1 +2.0**
comp=Z,142nm,1.2s,baz=134,slow=9.9,SNR=68
PFO LR LR 07 49 06.9
comp=Z,19µm,18.3s,baz=144,slow=36
PFO Pinyon Flats O 21.60 323 *c i* P **P** **07 40 50.4 +1.3**
PFO pmax pmax
comp=Z,847nm,1.6s
PFO MLR MLR
comp=Z,82µm,16.0s
PFO Pinyon Flats O 21.60 323 P **P** **07 40 51.4 +2.3**
baz=136,SNR=86
PFO S Sn 07 45 00.4 +3.9
baz=136
PFO Pinyon Flats O 21.60 323 P **P** **07 40 51.2 +2.2**
PFO IAmb IAmb 07 41 01.5
comp=Z,1µm,1.6s
BELC Belle Mtn. Jos 21.62 324 P **P** **07 40 51.3 +2.0**
baz=137,SNR=114
BELC S Sn 07 44 59.9 +2.9
baz=137
CBKS Cedar Bluff 21.70 3 P **P** **07 40 48.2 -1.8**
baz=183,SNR=53
CBKS Cedar Bluff 21.70 3 IAMs_20 IAMs_20 07 50 03.0
comp=Z,63µm,18.0s
U15A North Rim 21.76 335 IAMs_20 IAMs_20 07 49 05.2
comp=Z,43µm,22.0s
PNME Penonome 21.81 110 *eP* **P** **07 40 52.8 +1.5**
PNME *eS* Sn 07 45 00.1 -1.5
CACAO El Cacao, Vera 21.84 114 ⇑ *iP* **P** **07 40 54.3 +2.6**
CACAO *i* S Sn 07 45 01.5 -0.8
KSCO Kaye Shedlock' 21.92 356 P **P** **07 40 51.7 -0.7**
baz=175,SNR=226
456A Hilliard 21.95 48 IAmb IAmb 07 41 03.9
comp=Z,728nm,0.9s
BCIP Isla Barro Col 21.98 108 *eP* **P** **07 40 52.0 -1.1**
BCIP Isla Barro Col 21.98 108 *i* P **P** **07 40 54.0 +1.0**
BCIP *eS* Sn 07 45 02.3 -3.3
BCIP Isla Barro Col 21.98 108 *eP* **P** **07 40 53.3 +0.2**
HICK Hickman 22.00 26 P **P** **07 40 50.5 -2.7**
HICK **P** **07 40 51.3 -1.8**
MBJ Montego Bay 22.01 83 ⇓ *iP* **P** **07 40 53.8 +0.3**
GMRC Granite Mounta 22.02 326 P **P** **07 40 55.5 +1.9**
baz=139,SNR=161
MURC Murrieta 22.03 321 P **P** **07 40 55.6 +2.0**
baz=134,SNR=104
ZANG Zanguenga, Cho 22.03 109 *eP* **P** **07 40 54.4 +0.7**
PV13 Radium Mtn., P 22.13 343 IAmb IAmb 07 41 40.4
comp=Z,840nm,1.3s
Q24A Divide 22.14 351 P **P** **07 40 54.3 -0.7**
baz=169,SNR=10

PV05 Paradox Valley 22.14 343 IAmb IAmb 07 41 41.5
comp=Z,1µm,1.6s
AZU Azuero 22.16 112 ⇑ *iP* **P** **07 40 57.4 +2.4**
AZU *i* S Sn 07 45 06.2 -3.7
AZU Azuero 22.16 112 *eP* **P** **07 40 56.5 +1.5**
PV02 Paradox Valley 22.16 344 IAmb IAmb 07 41 39.7
comp=Z,789nm,1.4s
FPAL Fort Paine 22.16 35 IAmb IAmb 07 41 00.3
comp=Z,481nm,0.9s
MCJ Malvern 22.19 84 *i* P **P** **07 40 54.5 -0.9**
MCJ *i* P **P** **07 40 56.1 +0.7**
PV15 Paradox Valley 22.21 344 IAmb IAmb 07 41 06.3
comp=Z,700nm,1.2s
PV15 IAMs_20 IAMs_20 07 49 46.1
comp=Z,55µm,18.0s
PV03 Paradox Valley 22.23 343 IAmb IAmb 07 41 31.5
comp=Z,930nm,1.6s
PV18 Skein Mesa, Pa 22.24 343 P **P** **07 40 56.0 0.0**
PV18 IAmb IAmb 07 41 40.9
comp=Z,1µm,1.6s
WVT Waverly 22.27 29 P **P** **07 40 52.4 -3.7**
WVT pmax pmax
comp=Z,2µm,1.9s
WVT Waverly 22.27 29 P **P** **07 40 52.6 -3.5**
baz=215
WVT S **S** **07 45 01.2 +1.2**
baz=215
WVT Waverly 22.27 29 P **P** **07 40 52.4 -3.7**
PV12 Saucer Basin, 22.28 343 IAmb IAmb 07 41 34.6
comp=Z,614nm,1.2s
PV11 David Mesa, Pa 22.28 343 IAmb IAmb 07 41 45.1
comp=Z,445nm,0.9s
PV11 IAMs_20 IAMs_20 07 49 20.1
comp=Z,29µm,18.0s
KSU1 Kansas State U 22.29 9 P **P** **07 40 53.6 -2.6**
baz=191,SNR=178
KSU1 S **S** **07 44 59.8 -0.4**
baz=191
PV16 Nyswonger Mesa 22.30 343 IAmb IAmb 07 41 40.9
comp=Z,2µm,2.0s
PV16 IAMs_20 IAMs_20 07 50 54.5
comp=Z,55µm,18.0s
PV19 Morning Glory 22.32 343 IAmb IAmb 07 41 52.1
comp=Z,1µm,1.8s
UPA Univ. de Panam 22.32 108 *i* P **P** **07 40 57.4 +0.6**
UPA *i* S **S** **07 45 06.1 +4.8**
UPA Univ. de Panam 22.32 108 *eP* **P** **07 40 56.3 -0.6**
MTDJ Mount Denham 22.33 83 P **P** **07 40 56.2 -0.8**
BBRC Big Bear Solar 22.34 323 P **P** **07 40 59.2 +2.1**
baz=136,SNR=41
PV20 West Nyswonger 22.34 343 IAmb IAmb 07 41 29.3
comp=Z,756nm,1.4s
PV07 Paradox Valley 22.35 344 IAmb IAmb 07 41 30.1
comp=Z,858nm,1.4s
PV04 Paradox Valley 22.38 343 IAMs_20 IAMs_20 07 51 08.4
comp=Z,65µm,18.0s
PV14 Lion Creek, Pa 22.39 343 IAmb IAmb 07 41 44.4
comp=Z,1µm,1.6s
PV10 Paradox Valley 22.40 343 IAmb IAmb 07 41 30.2
comp=Z,1µm,1.7s
HEC Hector,Ludlow 22.42 325 P **P** **07 40 59.6 +1.8**
baz=138,SNR=38
SCI2 San Clemente I 22.44 318 P **P** **07 40 59.8 +1.9**
baz=130
PV23 Carpenter Ridg 22.46 343 IAMs_20 IAMs_20 07 49 12.7
comp=Z,37µm,18.0s
R40A Maddies Statio 22.48 18 P **P** **07 40 55.6 -2.7**
PV21 Cone Mtn., Par 22.55 343 IAmb IAmb 07 41 25.2
comp=Z,517nm,1.2s
Y52A Lilburn 22.57 39 P **P** **07 40 56.4 -2.9**
baz=226,SNR=68
Y52A S **S** **07 45 05.7 +0.1**
baz=226
Y52A Lilburn 22.57 39 IAmb IAmb 07 41 09.0
comp=Z,488nm,1.1s
BBJ Bamboo Saint A 22.58 83 *i* P **P** **07 40 59.3 -0.3**
CCM Cathedral Cave 22.58 20 P **P** **07 40 56.5 -2.9**
CCM pmax pmax
comp=Z,589nm,1.0s
CCM Cathedral Cave 22.58 20 P **P** **07 40 56.6 -2.8**
baz=205
CCM Cathedral Cave 22.58 20 P **P** **07 40 56.5 -2.9**
CCM IAmb IAmb 07 41 11.4
comp=Z,589nm,1.0s
X51A Calhoun 22.60 36 IAmb IAmb 07 41 40.7
comp=Z,1µm,1.6s
GOGA Godfrey 22.63 41 P **P** **07 40 57.2 -2.8**
GOGA pmax pmax
comp=Z,682nm,1.2s
GOGA Godfrey 22.63 41 P **P** **07 40 57.1 -2.8**
baz=228,SNR=126
GOGA S **S** **07 45 07.7 +1.0**
baz=228
GOGA Godfrey 22.63 41 IAmb IAmb 07 41 11.6
comp=Z,467nm,0.9s
CIS Catalina Island 22.64 319 P **P** **07 41 01.5 +1.4**
baz=131,SNR=12
CIS S **S** **07 45 12.5 +5.7**
baz=131
T45A Paducah 22.66 26 P **P** **07 40 57.4 -2.8**
LCMT Little Creek M 22.66 334 P **P** **07 41 01.6 +1.2**
TUQ Turquoise Moun 22.66 327 P **P** **07 41 02.3 +1.9**
baz=140,SNR=42
TUQ S Sn 07 45 15.4 -6.4
baz=140
SMCO Snowmass 22.66 348 IAmb IAmb 07 41 11.9
comp=Z,1µm,1.4s
PCJ Portland Cotta 22.70 85 *i* P **P** **07 41 00.0 -0.8**
BFSC Mount Baldy Ra 22.75 322 P **P** **07 41 02.9 +1.6**
baz=134,SNR=22
BFSC S Sn 07 45 17.4 -6.6
baz=134
FMP Fort Macarthur 22.77 320 P **P** **07 41 03.0 +1.6**
baz=132
FMP S Sn 07 45 17.0 -7.2
baz=132
W50A Signal Mountai 22.82 35 IAmb IAmb 07 41 14.6
comp=Z,319nm,0.8s
RRX Edison Barstow 22.82 324 P **P** **07 41 03.9 +1.9**
baz=137,SNR=5.4
BNJ Bonny Gate 22.88 83 ⇑ *iP* **P** **07 41 02.0 -0.7**
MWC Mount Wilson 22.98 321 IAmb IAmb 07 41 08.1
comp=Z,1µm,1.7s
STH Stony Hill 23.02 84 ⇑ *iP* **P** **07 41 05.2 +1.0**
ISCO Idaho Springs 23.02 351 P **P** **07 41 03.7 -0.6**
ISCO pmax pmax
comp=Z,400nm,2.5s
ISCO Idaho Springs 23.02 351 P **P** **07 41 03.5 -0.9**
baz=168,SNR=110
ISCO S Sn 07 45 23.7 -7.0
baz=168
GSC Goldstone, Bar 23.03 325 P **P** **07 41 05.7 +1.5**
GSC pmax pmax
comp=Z,933nm,1.9s
GSC MLR MLR
comp=Z,46µm,18.0s
GSC Goldstone, Bar 23.03 325 P **P** **07 41 05.9 +1.6**
baz=138,SNR=79
GSC S **S** **07 45 21.4 +7.7**
baz=138
GSC Goldstone, Bar 23.03 325 P **P** **07 41 05.7 +1.5**
GSC IAmb IAmb 07 41 18.8
comp=Z,933nm,1.9s
GSC IAMs_20 IAMs_20 07 49 56.9
comp=Z,46µm,18.0s
HOJ Hope 23.08 84 ⇓ *iP* **P** **07 41 06.1 +1.4**
SHPR Sheep Range 23.11 330 IAMs_20 IAMs_20 07 50 37.3
comp=Z,35µm,19.0s
DECC Green Verdugo 23.16 321 P **P** **07 41 07.4 +1.9**
baz=133,SNR=13
DECC S **S** **07 45 23.8 +7.9**
baz=133
CCUT Cedar City 23.17 334 P **P** **07 41 06.8 +1.0**
SHOC Shoshone, Teco 23.20 327 P **P** **07 41 07.3 +1.4**
baz=140,SNR=71
SNCC San Nicolas Is 23.24 317 P **P** **07 41 07.9 +1.6**
baz=129
SNCC San Nicolas Is 23.24 317 P **P** **07 41 08.5 +2.2**
T47A Sharon Grove 23.31 29 IAmb IAmb 07 41 20.9
comp=Z,678nm,0.9s
257A Skidaway Islan 23.36 47 IAmb IAmb 07 41 08.4
comp=Z,553nm,0.9s
P38A Dawn 23.39 15 IAmb IAmb 07 41 21.6
comp=Z,783nm,1.3s
P38A IAMs_20 IAMs_20 07 50 52.0
comp=Z,46µm,21.0s
EDW2 Edwards Air Fo 23.40 323 P **P** **07 41 09.1 +1.2**

baz=135,SNR=64
EDW2 S **S** **07 45 25.0 +5.2**
baz=135
CMJ Castle Mountai 23.43 84 ⇓ *iP* **P** **07 41 10.1 +1.7**
SLM Saint Louis 23.45 21 IAmb IAmb 07 41 23.7
comp=Z,522nm,1.1s
W52A Murphy 23.51 37 IAmb IAmb 07 41 35.2
comp=Z,343nm,0.9s
MSU Marysvale 23.54 337 P **P** **07 41 10.4 +1.0**
MSU Marysvale 23.54 337 P **P** **07 41 10.4 +1.0**
OSI Osito Audit: C 23.64 321 P **P** **07 41 12.2 +1.9**
baz=133,SNR=12
OSI Osito Audit: C 23.64 321 P **P** **07 41 11.9 +1.6**
LRMC Laurel Mtn Rad 23.65 324 P **P** **07 41 12.1 +1.7**
baz=136,SNR=27
LRMC S **S** **07 45 29.5 +5.5**
baz=136
157A Early Branch 23.79 45 P **P** **07 41 10.0 -1.6**
baz=234,SNR=86
N33A J Bar K, Exete 23.79 7 IAMs_20 IAMs_20 07 50 55.0
comp=Z,39µm,22.0s
V51A Loudon 23.79 35 IAmb IAmb 07 41 21.7
comp=Z,274nm,0.8s
SCZ2 Santa Cruz Isl 23.79 319 P **P** **07 41 13.0 +1.3**
baz=130
OGNE Ogallala 23.82 358 P **P** **07 41 10.9 -1.1**
baz=177,SNR=38
O20A White River Ci 23.85 346 P **P** **07 41 12.8 +0.3**
baz=162,SNR=115
USIN University of 23.87 27 IAmb IAmb 07 41 14.0
comp=Z,593nm,0.8s
UPD2 Meteti 23.87 108 ⇑ *iP* **P** **07 41 14.1 +1.5**
UPD2 *eS* **S** **07 45 32.7 +5.0**
P17A Butcher Ranch, 23.91 341 P **P** **07 41 13.2 +0.2**
HODGE Hodges 23.93 41 P **P** **07 41 10.2 -2.7**
HODGE IAmb IAmb 07 41 59.2
comp=Z,407nm,1.2s
Z56A Williston 23.93 44 P **P** **07 41 10.6 -2.3**
baz=232,SNR=49
Z56A Williston 23.93 44 IAmb IAmb 07 41 13.8
comp=Z,598nm,0.9s
FURC Furnace Creek, 23.94 327 P **P** **07 41 14.8 +1.8**
baz=139,SNR=106
MPMC Manual Prospec 23.96 325 P **P** **07 41 15.3 +1.8**
baz=138,SNR=173
Y55A Saluda 23.99 42 P **P** **07 41 11.0 -2.5**
baz=230,SNR=156
Y55A S **S** **07 45 28.4 -0.7**
baz=230
TPNV Topopah Spring 24.00 329 P **P** **07 41 16.0 +2.3**
baz=141,SNR=429
TPNV Topopah Spring 24.00 329 IAmb IAmb 07 41 18.3
comp=Z,902nm,1.2s
TPNV IAMs_20 IAMs_20 07 51 28.9
comp=Z,44µm,18.0s
TKL Tuckaleechee C 24.00 36 P **P** **07 41 10.5 -3.1**
comp=Z,167nm,0.9s,baz=210,slow=10.0,SNR=103
TKL Tuckaleechee C 24.00 36 IAmb IAmb 07 41 24.5
comp=Z,370nm,1.0s
ARVC Arvin 24.06 322 P **P** **07 41 16.1 +2.0**
baz=134,SNR=18
X54A Belton 24.06 40 P **P** **07 41 11.9 -2.3**
baz=228,SNR=112
X54A S **S** **07 45 29.9 -0.5**
baz=228
SBC Santa Barbara 24.13 319 P **P** **07 41 16.5 +1.7**
baz=131
N23A Red Feather La 24.14 351 P **P** **07 41 14.9 -0.3**
baz=168,SNR=120
PSUT Pine Spring 24.20 335 P **P** **07 41 17.1 +1.4**
ISA Isabella, Lake 24.23 323 P **P** **07 41 17.9 +2.1**
baz=135,SNR=88
ISA S **S** **07 45 40.5 +7.4**
baz=135
ISA Isabella, Lake 24.23 323 IAmb IAmb 07 41 20.2
comp=Z,1µm,1.8s
ISA IAMs_20 IAMs_20 07 50 17.7
comp=Z,34µm,18.0s
V52A Sevierville 24.24 36 IAmb IAmb 07 41 16.7
comp=Z,289nm,0.9s
Y56A Pelion 24.26 43 P **P** **07 41 14.0 -1.9**
baz=231,SNR=12
OLIL Olney 24.34 25 IAmb IAmb 07 41 52.8
comp=Z,738nm,1.1s
Z57A Bowman 24.35 45 P **P** **07 41 15.3 -1.6**
baz=233,SNR=180
158A Hollywood 24.37 46 P **P** **07 41 16.2 -0.9**
baz=235,SNR=15
BGNE Belgrade 24.39 5 P **P** **07 41 15.7 -1.4**
baz=186,SNR=45
BGNE Belgrade 24.39 5 IAMs_20 IAMs_20 07 51 47.9
comp=Z,40µm,18.0s
CAPC Capurgana 24.45 107 *eP* **P** **07 41 17.8 -0.1**
PHWY Pilot Hill 24.47 352 P **P** **07 41 17.6 -0.7**
PHWY IAmb IAmb 07 41 31.1
comp=Z,778nm,1.6s
PHWY IAMs_20 IAMs_20 07 51 26.2
comp=Z,57µm,18.0s
X55A Gracelyn & Ava 24.48 41 P **P** **07 41 16.3 -1.7**
baz=230,SNR=126
PKM Mcpherson Peak 24.49 320 P **P** **07 41 20.1 +1.7**
baz=131,SNR=10
W54A Cherokee Point 24.54 39 P **P** **07 41 17.4 -1.1**
baz=228,SNR=84
W54A S **S** **07 45 38.1 +0.1**
baz=228
CWC Cottonwood Cre 24.57 325 P **P** **07 41 21.1 +2.1**
baz=137
PAULI Pauline 24.59 40 IAmb IAmb 07 41 28.5
comp=Z,602nm,1.0s
NHSC New Hope 24.60 46 P **P** **07 41 18.3 -0.8**
baz=234,SNR=100
GRAC Grapevine Rang 24.60 327 P **P** **07 41 21.6 +2.4**
baz=138,SNR=42
CSU Charleston Sou 24.60 46 P **P** **07 41 18.3 -0.8**
WCI Wyandotte Cave 24.69 28 P **P** **07 41 17.8 -2.1**
WCI pmax pmax
comp=Z,428nm,0.9s
WCI Wyandotte Cave 24.69 28 P **P** **07 41 17.9 -2.1**
baz=215
WCI Wyandotte Cave 24.69 28 P **P** **07 41 17.8 -2.1**
WCI IAmb IAmb 07 41 28.5
comp=Z,428nm,0.8s
VES Vestal, Richgr 24.70 323 P **P** **07 41 22.4 +2.4**
baz=134,SNR=73
R11A Troy Canyon, C 24.80 332 P **P** **07 41 23.0 +1.9**
baz=144,SNR=188
X56A White Oak 24.87 42 P **P** **07 41 20.3 -1.2**
baz=231,SNR=112
SMMC Simmler 24.88 321 P **P** **07 41 24.0 +2.2**
baz=132,SNR=27
Z58A St. Stephen 24.98 46 P **P** **07 41 21.6 -0.9**
baz=235,SNR=26
Y57A Sumter 24.99 44 P **P** **07 41 21.3 -1.4**
baz=232,SNR=24
KMSC Kings Mountain 25.10 40 P **P** **07 41 22.3 -1.3**
baz=229,SNR=102
KMSC Kings Mountain 25.10 40 P **P** **07 41 22.3 -1.3**
TIN Tinemaha, Big 25.10 326 P **P** **07 41 26.2 +2.5**
baz=138,SNR=19
N41A Harden Midland 25.13 18 IAmb IAmb 07 41 34.2
comp=Z,511nm,0.9s
N41A IAMs_20 IAMs_20 07 52 00.9
comp=Z,38µm,22.0s
L34A Svendsen Farm, 25.13 8 IAmb IAmb 07 42 03.1
comp=Z,337nm,0.8s
L34A IAMs_20 IAMs_20 07 51 47.5
comp=Z,54µm,21.0s
V54A Nebo 25.15 38 P **P** **07 41 22.9 -1.2**
baz=227,SNR=149
V54A S **S** **07 45 50.1 +2.3**
baz=227
JLU Jordanelle 25.16 341 P **P** **07 41 24.9 +0.4**
VOG Valley Oaks Go 25.21 323 P **P** **07 41 26.7 +2.1**
baz=134
DUG Dugway, Tooele 25.25 338 P **P** **07 41 26.5 +1.4**
DUG pmax pmax
comp=Z,277nm,1.7s
DUG Dugway, Tooele 25.25 338 P **P** **07 41 26.3 +1.2**
baz=152,SNR=136
DUG Dugway, Tooele 25.25 338 IAmb IAmb 07 41 36.9
comp=Z,649nm,1.6s
LCBC Los crdobas, 25.27 106 *eP* **P** **07 41 27.5 +2.2**
Z59A Georgetown, SC 25.29 46 P **P** **07 41 24.7 -0.7**
baz=236,SNR=13
BLO Bloomington 25.37 27 IAmb IAmb 07 41 33.2
comp=Z,293nm,0.9s

Y58A Scranton 25.41 45 P P 07 41 25.4 -1.0
baz=234,SNR=76
O44A Mansfield 25.43 23 IAmb IAmb 07 41 34.7
comp=Z,600nm,1.0s
P46A Rosedale 25.45 25 IAmb IAmb 07 41 36.2
comp=Z,304nm,0.8s
X57A Johnson Farm, 25.46 43 P P 07 41 25.8 -1.1
baz=232,SNR=76
HDIL Hopedale 25.49 21 P P 07 41 25.1 -2.0
baz=206,SNR=164
HDIL Hopedale 25.49 21 P P 07 41 25.0 -2.0
K31A O'Neill 25.55 4 IAmb IAmb 07 42 15.0
comp=Z,452nm,0.9s
K31A IAMs_20 IAMs_20 07 52 32.8
comp=Z,42µm,18.0s
S51A Beattyville 25.56 33 IAmb IAmb 07 41 37.1
comp=Z,322nm,0.8s
W56A Indian Trail 25.56 41 P P 07 41 26.2 -1.6
baz=230,SNR=74
TCUT Toone Canyon 25.62 341 P P 07 41 29.5 +0.9
SCIA State Center 25.64 13 P P 07 41 26.4 -2.0
baz=197,SNR=53
SCIA State Center 25.64 13 IAMs_20 IAMs_20 07 52 10.5
comp=Z,44µm,20.0s
V55A Taylorsville 25.64 39 P P 07 41 27.3 -1.2
baz=228,SNR=155
T53A Wise 25.65 36 P P 07 41 26.8 -1.8
baz=224,SNR=119
U54A Nelsons Funny 25.73 37 P P 07 41 27.8 -1.6
baz=226,SNR=167
U54A Nelsons Funny 25.73 37 IAmb IAmb 07 41 30.1
comp=Z,564nm,0.9s
MLAC Mammoth, Mammc 25.85 326 P P 07 41 33.2 +2.5
baz=137,SNR=34
OMMB Old Mammoth Mi 25.93 326 IAmb IAmb 07 41 44.9
comp=Z,593nm,1.4s
OMMB IAMs_20 IAMs_20 07 51 09.5
comp=Z,26µm,20.0s
W57A Gilead 25.95 42 P P 07 41 29.7 -1.6
baz=231,SNR=226
W57A Gilead 25.95 42 IAmb IAmb 07 41 40.5
comp=Z,456nm,0.8s
K22A Casper 25.95 351 P P 07 41 31.2 -0.3
baz=167,SNR=123
K22A Casper 25.95 351 IAmb IAmb 07 41 48.5
comp=Z,644nm,1.1s
BGU Big Grassy Mou 25.98 339 P P 07 41 32.5 +0.8
Y59A Loris 26.00 45 P P 07 41 30.8 -1.0
baz=235,SNR=106
X58A Rowland 26.01 44 P P 07 41 30.9 -1.0
baz=233,SNR=44
SJCC San Jacinto, C 26.02 103 *eP* P 07 41 33.3 +1.1
SJCC San Jacinto, C 26.02 103 *iP* P 07 41 33.9 +1.7
SJCC *eS* S 07 46 02.6 +0.6
PIZC Pizarro, Choco 26.03 115 *eP* P 07 41 34.7 +2.4
V56A Mocksville 26.05 40 P P 07 41 30.8 -1.4
baz=229,SNR=108
P48A Milroy 26.09 28 IAmb IAmb 07 41 54.5
comp=Z,218nm,0.8s
NV11 Mina Array Sit 26.10 328 IAMs_20 IAMs_20 07 51 54.8
comp=Z,40µm,19.0s
HWUT Hardware Ranch 26.12 342 IAmb IAmb 07 41 45.2
comp=Z,261nm,0.9s
HWUT IAMs_20 IAMs_20 07 52 15.7
comp=Z,29µm,18.0s
DBBC Dabeiba 26.12 109 *eP* P 07 41 35.5 +2.3
SFIN Lafayette 26.15 24 P P 07 41 31.5 -1.6
baz=211,SNR=90
SFIN S S 07 46 12.7 +9.2
baz=211
SFIN Lafayette 26.15 24 IAmb IAmb 07 41 33.8
comp=Z,424nm,1.0s
NVAR Mina Array Bea 26.17 328 P P 07 41 35.7 +2.1
comp=Z,157nm,0.9s,baz=153,slow=9.5,SNR=479
NVAR PcP PcP 07 45 02.8 +2.4
comp=Z,7.6nm,0.9s,baz=141,slow=3.1,SNR=1.9
NVAR LR LR 07 52 05.9
comp=Z,40µm,18.2s,baz=140,slow=37
NVAR P3KPbc 08 14 22.9
comp=Z,1.6nm,1.0s,baz=297,slow=4.8,SNR=6.2
U55A TA2, Sparta 26.18 38 P P 07 41 32.1 -1.4
baz=227,SNR=120
T54A Tazewell 26.25 37 P P 07 41 32.5 -1.7
baz=226,SNR=287
L40A Anamosa 26.27 16 IAmb IAmb 07 41 45.4
comp=Z,508nm,0.9s
L40A IAMs_20 IAMs_20 07 52 42.6
comp=Z,42µm,20.0s
W58A Raeford 26.36 43 P P 07 41 33.6 -1.5
baz=233,SNR=33
S53A Williamson 26.38 35 P P 07 41 33.3 -1.9
baz=224,SNR=44
RYN Ryan 26.43 328 IAmb IAmb 07 41 50.7
comp=Z,853nm,1.6s
RYN IAMs_20 IAMs_20 07 52 22.7
comp=Z,39µm,18.0s
K38A Parkersburg 26.44 14 IAmb IAmb 07 41 45.3
comp=Z,470nm,0.9s
K38A IAMs_20 IAMs_20 07 52 38.8
comp=Z,38µm,21.0s
UREC San Jos de Ur 26.44 107 *eP* P 07 41 37.1 +1.1
Y60A Bolivia 26.45 46 P P 07 41 34.7 -1.2
baz=236
Y60A Bolivia 26.45 46 P P 07 41 35.1 -0.8
Y60A IAmb IAmb 07 41 47.9
comp=Z,277nm,0.8s
U56A King 26.47 39 P P 07 41 34.6 -1.4
baz=229,SNR=41
U56A King 26.47 39 IAmb IAmb 07 42 25.3
comp=Z,303nm,1.2s
P49A Miami Univ. Ec 26.47 29 P P 07 41 33.6 -2.4
baz=217,SNR=130
X59A McDuffie Farm, 26.51 45 P P 07 41 35.1 -1.3
baz=234,SNR=50
SMRC Santa Marta, M 26.54 99 *eP* P 07 41 36.5 -0.3
KVN Kaiserville 26.55 329 IAmb IAmb 07 41 50.9
comp=Z,381nm,1.1s
KVN IAMs_20 IAMs_20 07 53 38.4
comp=Z,34µm,18.0s
V57A Coltrane Farms 26.55 41 P P 07 41 35.3 -1.5
baz=230,SNR=186
TUMC Tumaco 26.57 122 *eP* P 07 41 38.3 +1.2
HVU Hansel Valley 26.65 340 P P 07 41 38.7 +0.9
HVU pmax pmax
comp=Z,108nm,1.0s
HVU Hansel Valley 26.65 340 P P 07 41 38.7 +0.9
BW06 Boulder Array 26.66 346 P P 07 41 37.9 -0.1
baz=161,SNR=190
BW06 Boulder Array 26.66 346 IAMs_20 IAMs_20 07 53 43.7
comp=Z,58µm,19.0s
PDAR Pinedale Array 26.66 346 P P 07 41 37.6 -0.3
comp=Z,89nm,0.9s,baz=148,slow=8.7,SNR=302
PDAR PcP PcP 07 45 01.6 +0.1
comp=Z,9.6nm,0.9s,baz=126,slow=4.7,SNR=3.1
PDAR P3KPbc 08 14 20.2
comp=Z,0.6nm,1.0s,baz=337,slow=5.9,SNR=4.5
M44A Midewin, Midew 26.66 22 IAmb IAmb 07 42 07.4
comp=Z,529nm,1.3s
L42A Oliver, Polo 26.67 19 P P 07 41 35.0 -2.8
L42A IAmb IAmb 07 41 48.9
comp=Z,750nm,1.4s
SAO San Andreas Ge 26.73 321 IAmb IAmb 07 41 49.6
comp=Z,495nm,1.9s
SAO IAMs_20 IAMs_20 07 51 35.1
comp=Z,26µm,19.0s
Q51A Peebles 26.74 32 P P 07 41 36.1 -2.3
baz=220,SNR=104
Q51A Peebles 26.74 32 IAmb IAmb 07 41 47.1
comp=Z,346nm,0.8s
T55A Pulaski 26.75 38 P P 07 41 37.0 -1.5
baz=227,SNR=49
CBOC Ciudad Bolivar 26.80 112 *eP* P 07 41 41.7 +2.3
WAKR Walker 26.82 326 IAmb IAmb 07 41 43.9
comp=Z,1µm,1.9s
WAKR IAMs_20 IAMs_20 07 52 47.0
comp=Z,26µm,18.0s
ECSD EROS Data Cent 26.84 7 P P 07 41 37.2 -2.2
baz=189,SNR=97
O48A Farmland 26.86 27 P P 07 41 37.1 -2.4
baz=215,SNR=235
ARGC Ariguani, Magd 26.90 102 *eP* P 07 41 40.8 +0.7
V58A Windy Hill, Pi 26.91 42 P P 07 41 38.6 -1.4
baz=232,SNR=98
V58A Windy Hill, Pi 26.91 42 IAmb IAmb 07 41 49.8
comp=Z,397nm,1.1s
S54A Dingess, Beckl 26.92 36 P P 07 41 38.3 -1.8
baz=225,SNR=107
S54A Dingess, Beckl 26.92 36 IAmb IAmb 07 41 41.5
comp=Z,250nm,0.9s
X60A Albert Glenn T 26.94 45 P P 07 41 38.8 -1.4
baz=235,SNR=30
R53A Hurricane 26.94 34 P P 07 41 38.6 -1.7
baz=223,SNR=111
R53A Hurricane 26.94 34 IAmb IAmb 07 41 52.1
comp=Z,265nm,0.8s
P50A Jamestown 26.96 30 P P 07 41 38.1 -2.4
baz=218,SNR=79
W59A Clinton 26.97 44 P P 07 41 39.4 -1.1
baz=234,SNR=19
LGNH Logne 27.00 83 IAmb IAmb 07 41 55.3
comp=Z,967nm,1.6s
BLA Blacksburg 27.02 38 P P 07 41 39.5 -1.5
BLA pmax pmax
comp=Z,404nm,0.9s
BLA Blacksburg 27.02 38 P P 07 41 39.6 -1.5
baz=227,SNR=124
BLA Blacksburg 27.02 38 P P 07 41 39.5 -1.5
BLA IAmb IAmb 07 41 49.2
comp=Z,404nm,0.9s
AHID Auburn Hatcher 27.05 343 IAmb IAmb 07 41 52.4
comp=Z,341nm,1.2s
AHID IAMs_20 IAMs_20 07 52 55.2
comp=Z,41µm,18.0s
YERR Yerington 27.07 327 IAmb IAmb 07 41 53.6
comp=Z,925nm,1.9s
YERR IAMs_20 IAMs_20 07 52 49.4
comp=Z,34µm,18.0s
HELC Santa Helena 27.09 110 *eP* P 07 41 44.1 +1.9
JAKH Jacmel 27.09 83 IAmb IAmb 07 41 48.8
comp=Z,836nm,1.5s
RSSD Black Hills 27.11 355 P P 07 41 41.3 -0.7
RSSD pmax pmax
comp=Z,997nm,2.0s
RSSD MLR MLR
comp=Z,130µm,18.0s
RSSD Black Hills 27.11 355 P P 07 41 41.3 -0.7
baz=173
RSSD Black Hills 27.11 355 P P 07 41 41.3 -0.7
RSSD IAmb IAmb 07 41 54.7
comp=Z,997nm,2.0s
T56A Rocky Mt 27.13 39 P P 07 41 40.6 -1.4
baz=228,SNR=69
N47A Urbana 27.14 26 P P 07 41 39.5 -2.5
baz=213,SNR=40
N47A Urbana 27.14 26 IAmb IAmb 07 41 51.0
comp=Z,423nm,0.8s
ZARC Zaragoza, Cauc 27.16 107 *eP* P 07 41 43.3 +0.8
U57A Blanch 27.17 41 P P 07 41 41.0 -1.3
baz=230,SNR=120
P51A Williamsport 27.23 31 P P 07 41 40.6 -2.2
baz=220,SNR=102
P51A Williamsport 27.23 31 IAmb IAmb 07 41 42.9
comp=Z,301nm,1.1s
Q52A Bidwell 27.24 33 P P 07 41 40.8 -2.1
baz=222,SNR=190
PAPH Port-au-Prince 27.29 83 IAmb IAmb 07 41 58.4
comp=Z,622nm,1.1s
JFWS Jewell Farm 27.33 17 P P 07 41 41.1 -2.6
baz=202,SNR=44
JFWS Jewell Farm 27.33 17 IAmb IAmb 07 42 00.7
comp=Z,200nm,0.8s
PNTR Pine Nut 27.33 327 IAMs_20 IAMs_20 07 54 07.6
comp=Z,35µm,19.0s
SUSD Miller 27.35 3 P P 07 41 42.3 -1.6
baz=184
SUSD Miller 27.35 3 P P 07 41 42.1 -1.7
SUSD IAmb IAmb 07 41 54.8
comp=Z,348nm,0.9s
S55A Lewisburg 27.36 37 P P 07 41 42.6 -1.5
baz=226,SNR=126
R54A Victor 27.36 36 P P 07 41 42.4 -1.7
baz=225,SNR=114
CNNC Cliffs of the 27.38 44 P P 07 41 42.9 -1.3
baz=234,SNR=39
W60A Pink Hill 27.39 45 P P 07 41 43.1 -1.2
baz=235,SNR=44
YOTC Yotoco, Valle 27.39 116 *eP* P 07 41 45.0 +0.3
L44A Lake County Fo 27.41 21 P P 07 41 42.4 -2.0
baz=208
L44A Lake County Fo 27.41 21 IAmb IAmb 07 42 35.7
comp=Z,498nm,1.3s
N48A Decatur 27.41 27 P P 07 41 42.1 -2.4
baz=215,SNR=158
SMLC San Martn de 27.41 104 *eP* P 07 41 44.5 -0.1
V59A Middlesex 27.46 43 P P 07 41 43.5 -1.4
baz=233,SNR=60
PAC1 Pacto, Paraso 27.46 125 *eP* P 07 41 45.3 0.0
O50A Cable 27.47 30 P P 07 41 42.6 -2.4
baz=218,SNR=157
VCNR Virginia City 27.51 327 IAmb IAmb 07 41 49.9
comp=Z,888nm,1.8s
REDW Red Top Meadow 27.54 344 P P 07 41 46.0 +0.2
Q53A Leroy 27.55 34 P P 07 41 43.9 -1.9
baz=223,SNR=48
M47A Cromwell 27.57 25 P P 07 41 43.6 -2.3
baz=213
T57A Hurt 27.58 40 P P 07 41 44.9 -1.2
baz=230,SNR=55
RUBR Rubicon Trail 27.60 326 P P 07 41 49.0 +2.6
RUBR IAMs_20 IAMs_20 07 53 20.6
comp=Z,24µm,20.0s
SNOW Snow King Moun 27.61 344 IAmb IAmb 07 42 00.9
comp=Z,72nm,1.6s
I37A Lemond, Waseca 27.62 12 IAmb IAmb 07 42 36.0
comp=Z,607nm,1.4s
U58A Oxford 27.64 41 P P 07 41 45.0 -1.5
baz=232,SNR=101
BBAC Balboa, Cauca 27.67 120 *eP* P 07 41 48.4 +1.1
TPAW Teton Pass 27.69 344 IAmb IAmb 07 42 01.8
comp=Z,569nm,1.2s
TPAW IAMs_20 IAMs_20 07 53 17.0
comp=Z,29µm,18.0s
PAHR Pah Rah Range 27.69 328 IAmb IAmb 07 42 03.3
comp=Z,564nm,1.7s
PAHR IAMs_20 IAMs_20 07 53 05.8
comp=Z,31µm,18.0s
K43A Burlington 27.73 20 IAmb IAmb 07 41 57.7
comp=Z,444nm,1.4s
CUSE Cuicocha Este 27.74 125 *eP* P 07 41 47.9 -0.2
P52A Corning 27.81 32 P P 07 41 45.6 -2.4
baz=221,SNR=105
RREF El Recreo 27.82 113 *eP* P 07 41 51.1 +2.0
N49A Columbus Grove 27.83 28 P P 07 41 46.0 -2.2
baz=216,SNR=65
N49A Columbus Grove 27.83 28 IAmb IAmb 07 41 48.2
comp=Z,214nm,0.9s
S56A Natural Bridge 27.84 38 P P 07 41 46.9 -1.5
baz=228,SNR=58
ACSO Alum Creek Sta 27.84 30 P P 07 41 46.1 -2.2
baz=219,SNR=49
ACSO Alum Creek Sta 27.84 30 IAmb IAmb 07 42 36.3
comp=Z,300nm,1.1s
FXWY Fox Creek 27.84 344 P P 07 41 48.8 +0.2
FXWY IAMs_20 IAMs_20 07 53 22.1
comp=Z,25µm,19.0s
L46A Eue Claire 27.86 24 P P 07 41 46.5 -1.9
baz=211,SNR=21
L46A Eue Claire 27.86 24 IAmb IAmb 07 42 24.9
comp=Z,447nm,1.1s
PTBC PUERTO BERRIO, 27.91 109 *eP* P 07 41 50.6 +1.4
R55A Marlinton 27.93 37 P P 07 41 47.9 -1.3
baz=226,SNR=96
R55A Marlinton 27.93 37 IAmb IAmb 07 41 58.4
comp=Z,255nm,0.9s
W61A Ground Anchor 27.95 45 P P 07 41 48.3 -1.0
baz=236,SNR=23
NORC Norcasia 27.95 111 *eP* P 07 41 51.0 +1.4
O51A Pataskala 27.96 31 P P 07 41 47.0 -2.4
baz=220,SNR=71
ANIL Santa Ana 27.97 114 *eP* P 07 41 51.5 +1.5
T58A Grand View Acr 27.99 41 P P 07 41 48.3 -1.4
baz=231,SNR=65
Q54A Coxs Mills 28.02 35 P P 07 41 48.0 -1.9
baz=224,SNR=27
GCUF Volcan Galeras 28.04 122 *eP* P 07 41 51.9 +1.0
M48A Edgerton 28.05 26 P P 07 41 47.9 -2.3
baz=214,SNR=7.2
M48A Edgerton 28.05 26 IAmb IAmb 07 42 43.5
comp=Z,366nm,1.2s
IMW Indian Meadow 28.06 345 P P 07 41 50.8 +0.1
IMW IAMs_20 IAMs_20 07 53 27.9
comp=Z,24µm,18.0s
P53A Whipple 28.09 33 P P 07 41 48.4 -2.1
baz=223,SNR=35
U59A Littleton 28.10 42 P P 07 41 49.2 -1.5
baz=233,SNR=30
V60A Jim Taylor Roa 28.10 44 P P 07 41 49.4 -1.2
baz=235,SNR=24
V60A Jim Taylor Roa 28.10 44 IAmb IAmb 07 42 00.8
comp=Z,378nm,0.9s
SOTA Rioblanco 28.14 119 *eP* P 07 41 52.5 +0.8
I40A Norwalk 28.14 16 IAmb IAmb 07 42 45.9
comp=Z,639nm,1.9s
CRUC La Cruz 28.17 121 *eP* P 07 41 53.3 +1.4
N50A Nevada 28.18 29 P P 07 41 48.9 -2.5
baz=218,SNR=43
PCON Cinco Dias 28.21 119 *eP* P 07 41 54.4 +1.9
S57A Dark Hollow, R 28.26 39 P P 07 41 50.8 -1.3
baz=229,SNR=87
OCAC Ocana 28.30 105 *eP* P 07 41 52.9 0.0
BEKR Beckworth 28.30 327 IAmb IAmb 07 41 56.0
comp=Z,250nm,1.2s
BEKR IAMs_20 IAMs_20 07 54 19.3
comp=Z,24µm,18.0s
O52A Adamsville 28.32 32 P P 07 41 50.0 -2.6
baz=221,SNR=112
O52A Adamsville 28.32 32 IAmb IAmb 07 41 52.4
comp=Z,345nm,1.0s
M49A Liberty Center 28.37 27 P P 07 41 50.9 -2.1
baz=216,SNR=58
ORTC Ortega, Tolima 28.38 115 *eP* P 07 41 54.7 +1.3
H17A Grant Village 28.44 345 P P 07 41 54.7 +0.7
baz=160,SNR=44
H17A Grant Village 28.44 345 IAmb IAmb 07 42 11.6
comp=Z,528nm,1.9s
Q55A Buckhannon 28.44 36 P P 07 41 52.1 -1.6
baz=226,SNR=70
GRTK Grand Turk 28.45 76 P P 07 41 55.1 +1.1
MCCM Marconi Confer 28.49 322 IAMs_20 IAMs_20 07 52 55.8
comp=Z,23µm,18.0s
URIC Uribia, Colomb 28.52 97 *eP* P 07 41 54.7 +0.2
L48A N Adams 28.55 26 P P 07 41 52.5 -2.1
baz=214,SNR=48
LKWY Lake 28.56 346 P P 07 41 55.8 +0.8
LKWY pmax pmax
comp=Z,151nm,1.2s
LKWY MLR MLR
comp=Z,81µm,19.0s
LKWY Lake 28.56 346 P P 07 41 55.8 +0.8
V61A Roper 28.57 45 P P 07 41 54.0 -0.9
baz=236,SNR=7.9
U60A Pendleton 28.58 43 P P 07 41 53.8 -1.1
baz=234,SNR=54
I42A Draeger Farm, 28.62 18 IAMs_20 IAMs_20 07 54 16.3
comp=Z,39µm,18.0s
SPBC San Pablo de B 28.62 110 *eP* P 07 41 57.0 +1.3
T59A Double "B" Far 28.62 42 P P 07 41 54.0 -1.3
baz=232,SNR=32
T59A Double "B" Far 28.62 42 IAmb IAmb 07 42 05.7
comp=Z,215nm,1.1s
K46A Dorr 28.63 24 P P 07 41 52.9 -2.4
baz=211,SNR=14
P54A Burton 28.65 34 P P 07 41 53.5 -2.1
baz=224,SNR=35
N51A Ashland 28.67 30 P P 07 41 52.9 -2.8
baz=219,SNR=25
N51A Ashland 28.67 30 IAmb IAmb 07 42 43.0
comp=Z,253nm,1.1s
N51A IAMs_20 IAMs_20 07 55 23.0
comp=Z,21µm,20.0s
ORV Oroville 28.68 326 P P 07 41 58.1 +2.3
ORV pmax pmax
comp=Z,769nm,1.8s
ORV MLR MLR
comp=Z,14µm,19.0s
ORV Oroville 28.68 326 P P 07 41 58.1 +2.3
ORV IAmb IAmb 07 42 00.3
comp=Z,769nm,1.8s
S58A Poland Farm, P 28.71 40 P P 07 41 54.4 -1.6
baz=231,SNR=23
M50A Fremont 28.73 29 P P 07 41 53.8 -2.4
baz=218,SNR=18
O53A New Philadelph 28.74 32 P P 07 41 53.8 -2.5
baz=222,SNR=18
ROSC El Rosal 28.76 112 P P 07 41 57.0 -0.2
comp=Z,34nm,1.0s,baz=348,slow=5.1,SNR=23
ROSC LR LR 07 54 12.3
comp=Z,8µm,18.4s,baz=356,slow=38
ROSC El Rosal 28.76 112 *eP* P 07 41 60.0 +2.8
ROSC El Rosal 28.76 112 P P 07 42 00.5 +3.2
PRAC Prado 28.79 115 *eP* P 07 41 58.9 +1.8
BETC Betania 28.83 117 *eP* P 07 41 59.0 +1.6
RLMT Red Lodge 28.84 348 P P 07 41 57.4 -0.1
baz=163,SNR=54
RLMT Red Lodge 28.84 348 IAmb IAmb 07 42 13.3
comp=Z,665nm,1.9s
V62A Hyde County Ai 28.86 45 P P 07 41 56.7 -0.8
baz=237
R57A Stanardsville 28.87 38 P P 07 41 55.9 -1.6
baz=229,SNR=22
SPMN Marine on St. 28.90 12 P P 07 41 55.5 -2.2
baz=196,SNR=18
SPMN Marine on St. 28.90 12 IAMs_20 IAMs_20 07 54 14.9
comp=Z,27µm,20.0s
N52A McGinn's Farm, 28.92 31 P P 07 41 55.0 -2.9
baz=221,SNR=19
K47A Vermontville 28.92 25 P P 07 41 55.5 -2.4
baz=213,SNR=59
P55A Reedsville 28.94 35 P P 07 41 56.4 -1.8
baz=225,SNR=67
U61A Possum Corner 28.96 44 P P 07 41 57.1 -1.3
baz=235,SNR=5.3
U61A Possum Corner 28.96 44 IAmb IAmb 07 42 09.5
comp=Z,628nm,1.4s
Q56A Snyder Ridge, 28.98 37 P P 07 41 57.3 -1.2
baz=227,SNR=55
MCWV Mont Chateau 29.04 35 P P 07 41 57.2 -1.7
baz=225,SNR=36
MCWV Mont Chateau 29.04 35 P P 07 41 57.0 -2.0
R58B Mineral 29.04 40 P P 07 41 57.5 -1.5
baz=230,SNR=16
GARC Garzon, Huila 29.05 118 *eP* P 07 41 59.0 -0.6
J45A Montague 29.05 22 P P 07 41 56.4 -2.6
baz=210
J45A Montague 29.05 22 IAMs_20 IAMs_20 07 55 03.3
comp=Z,27µm,18.0s
PUAC Puerto Asis, P 29.06 122 *eP* P 07 41 60.0 +0.5
M51A Elyria 29.08 30 P P 07 41 56.6 -2.7
baz=219,SNR=19
O54A Avella 29.12 34 P P 07 41 57.5 -2.3
baz=224,SNR=26
MFID Camas Ranch 29.16 337 IAMs_20 IAMs_20 07 55 01.6
comp=Z,41µm,18.0s
HOPS Hopland Field 29.17 323 IAmb IAmb 07 42 04.8
comp=Z,551nm,1.8s
HOPS IAMs_20 IAMs_20 07 53 21.6
comp=Z,43µm,18.0s
AAM Ann Arbor 29.18 27 P P 07 41 58.3 -1.9
AAM pmax pmax
comp=Z,281nm,0.8s
AAM Ann Arbor 29.18 27 P P 07 41 58.3 -1.9
baz=216,SNR=47
AAM Ann Arbor 29.18 27 P P 07 41 58.3 -1.9
AAM IAmb IAmb 07 42 09.0
comp=Z,281nm,0.8s
R58A Rapidan 29.18 39 P P 07 41 58.7 -1.6
baz=230,SNR=44
PAMC Pamplona, Colo 29.20 106 *eP* P 07 42 02.7 +1.5
T60A Surry 29.25 42 P P 07 41 59.8 -1.1
baz=233
T60A Surry 29.25 42 IAmb IAmb 07 42 11.3
comp=Z,403nm,1.0s
S59A Mechanicsville 29.27 41 P P 07 42 00.2 -0.9
baz=232,SNR=19
N53A Lisbon 29.34 32 P P 07 41 59.1 -2.6
baz=222,SNR=42
N53A Lisbon 29.34 32 IAmb IAmb 07 42 02.1
comp=Z,173nm,0.9s
L50A Kingsville 29.34 28 P P 07 41 59.2 -2.5
baz=217,SNR=15
O03E Paynes Creek 29.37 326 P P 07 42 03.6 +1.5
baz=136,SNR=28
CHIC Chingaza 29.38 112 *eP* P 07 42 04.8 +2.1
F36A Milaca 29.38 11 IAMs_20 IAMs_20 07 54 05.7
comp=Z,22µm,19.0s
K48A Perry 29.39 26 P P 07 41 59.8 -2.3
baz=214,SNR=14
RUSC La Rusia 29.41 109 *eP* P 07 42 03.9 +0.7
RUSC La Rusia 29.41 109 P P 07 42 04.5 +1.4
Q57A Strasburg 29.42 37 P P 07 42 01.5 -0.9
baz=228,SNR=67

E28A	**Huff**	**29.43**	**0**	IAmb	IAmb	07 42 04.2		
	comp=Z,156nm,0.8s							
J47A	**Sunmer**	**29.47**	**24**	P	**P**	**07 42 00.7**	**-2.1**	
	baz=212,SNR=19							
J47A	**Sunmer**	**29.47**	**24**	IAmb	IAmb	07 42 51.7		
	comp=Z,192nm,0.9s							
WVOR	**Wild Horse Val**	**29.47**	**333**	P	**P**	**07 42 04.4**	**+1.4**	
WVOR				pmax	pmax			
	comp=Z,155nm,2.1s							
WVOR	**Wild Horse Val**	**29.47**	**333**	IAMs_20	IAMs_20	07 55 56.4		
	comp=Z,48µm,19.0s							
P56A	**Dayton Farm, R**	**29.49**	**36**	P	**P**	**07 42 01.7**	**-1.3**	
	baz=227,SNR=80							
H43A	**Windswept, Lux**	**29.49**	**19**	IAmb	IAmb	07 43 02.1		
	comp=Z,302nm,1.4s							
H43A				IAMs_20	IAMs_20	07 54 46.4		
	comp=Z,36µm,21.0s							
CBN	**Corbin Frederi**	**29.50**	**40**	P	**P**	**07 42 01.9**	**-1.1**	
	baz=231,SNR=10							
CBN	**Corbin Frederi**	**29.50**	**40**	P	**P**	**07 42 02.0**	**-1.1**	
G40A	**Rib Lake**	**29.53**	**15**	IAmb	IAmb	07 43 07.1		
	comp=Z,374nm,1.5s							
I45A	**Fountain**	**29.63**	**22**	P	**P**	**07 42 02.0**	**-2.1**	
	baz=209							
I45A	**Fountain**	**29.63**	**22**	IAmb	IAmb	07 42 58.4		
	comp=Z,179nm,0.9s							
M52A	**Chesterland**	**29.64**	**31**	P	**P**	**07 42 01.7**	**-2.6**	
	baz=220,SNR=22							
M52A	**Chesterland**	**29.64**	**31**	IAmb	IAmb	07 42 13.9		
	comp=Z,214nm,0.8s							
S60A	**Water View**	**29.64**	**41**	P	**P**	**07 42 03.5**	**-0.8**	
	baz=233,SNR=11							
K49A	**Clarkson**	**29.66**	**27**	P	**P**	**07 42 02.1**	**-2.3**	
	baz=215,SNR=17							
R59A	**King George, V**	**29.66**	**40**	P	**P**	**07 42 03.6**	**-0.9**	
	baz=231,SNR=16							
O55A	**Ligonier**	**29.72**	**35**	P	**P**	**07 42 03.0**	**-2.1**	
	baz=225,SNR=54							
Q58A	**Fox Den Farm,**	**29.79**	**38**	P	**P**	**07 42 04.5**	**-1.1**	
	baz=229,SNR=19							
MOD	**Modoc Plateau**	**29.81**	**330**	IAmb	IAmb	07 42 08.7		
	comp=Z,261nm,1.1s							
MOD				IAMs_20	IAMs_20	07 55 03.7		
	comp=Z,29µm,18.0s							
O02D	**Mt. Diablo Mer**	**29.82**	**325**	P	**P**	**07 42 07.0**	**+0.9**	
	baz=134,SNR=7.1							
I46A	**Reed City**	**29.83**	**23**	P	**P**	**07 42 03.4**	**-2.5**	
	baz=211							
DLMT	**Dillon**	**29.86**	**343**	IAmb	IAmb	07 42 09.6		
	comp=Z,339nm,1.1s							
DLMT				IAMs_20	IAMs_20	07 54 45.6		
	comp=Z,37µm,21.0s							
LAO	**LASA Array**	**29.87**	**353**	P	**P**	**07 42 05.5**	**-0.8**	
	baz=170,SNR=17							
LAO	**LASA Array**	**29.87**	**353**	P	**P**	**07 42 05.5**	**-0.8**	
LAO				IAMs_20	IAMs_20	07 55 41.0		
	comp=Z,41µm,19.0s							
N54A	**Moraine State**	**29.89**	**33**	P	**P**	**07 42 04.3**	**-2.3**	
	baz=223,SNR=37							
M53A	**WI Miller and**	**29.90**	**31**	P	**P**	**07 42 03.8**	**-2.7**	
	baz=222,SNR=17							
J48A	**Bridge Port**	**29.94**	**26**	P	**P**	**07 42 04.7**	**-2.2**	
	baz=214,SNR=16							
P57A	**Homestead Farm**	**29.95**	**37**	P	**P**	**07 42 06.0**	**-1.0**	
	baz=228,SNR=38							
WDC	**Whiskeytown Da**	**29.97**	**326**	P	**P**	**07 42 07.0**	**-0.2**	
WDC				pmax	pmax			
	comp=Z,57nm,1.4s							
WDC				MLR	MLR			
	comp=Z,15µm,18.0s							
WDC	**Whiskeytown Da**	**29.97**	**326**	P	**P**	**07 42 07.0**	**-0.2**	
K50A	**Casco**	**30.01**	**28**	P	**P**	**07 42 04.9**	**-2.6**	
	baz=217,SNR=30							
K50A	**Casco**	**30.01**	**28**	IAmb	IAmb	07 42 07.1		
	comp=Z,304nm,0.9s							
R60A	**Leonardtown, M**	**30.03**	**40**	P	**P**	**07 42 06.6**	**-1.2**	
	baz=232							
J08A	**Circle Bar Ran**	**30.15**	**334**	IAmb	IAmb	07 42 11.4		
	comp=Z,280nm,1.1s							
J08A				IAMs_20	IAMs_20	07 54 59.3		
	comp=Z,36µm,18.0s							
D32A	**Dogwood Acres,**	**30.17**	**5**	IAMs_20	IAMs_20	07 54 28.9		
	comp=Z,20µm,20.0s							
O56A	**Blue Knob Stat**	**30.17**	**35**	P	**P**	**07 42 07.3**	**-1.8**	
	baz=226,SNR=84							
O56A	**Blue Knob Stat**	**30.17**	**35**	IAmb	IAmb	07 42 09.6		
	comp=Z,243nm,1.0s							
H45A	**Beulah**	**30.20**	**21**	P	**P**	**07 42 06.7**	**-2.6**	
	baz=209							
S61A	**Accomac**	**30.25**	**42**	P	**P**	**07 42 09.2**	**-0.5**	
	baz=234							
I47A	**Gladwin**	**30.25**	**24**	P	**P**	**07 42 07.5**	**-2.2**	
	baz=212,SNR=24							
I47A	**Gladwin**	**30.25**	**24**	IAmb	IAmb	07 43 09.3		
	comp=Z,343nm,1.2s							
I47A				IAMs_20	IAMs_20	07 56 03.3		
	comp=Z,19µm,20.0s							
J49A	**Marlette**	**30.26**	**26**	P	**P**	**07 42 07.4**	**-2.4**	
	baz=215,SNR=43							
N55A	**Marion Center**	**30.30**	**34**	P	**P**	**07 42 08.3**	**-1.8**	
	baz=225,SNR=96							
ALLY	**Alegheny Colle**	**30.32**	**32**	P	**P**	**07 42 07.7**	**-2.6**	
ALLY				IAmb	IAmb	07 43 02.2		
	comp=Z,261nm,1.1s							
N02D	**Trinity Center**	**30.34**	**326**	P	**P**	**07 42 10.4**	**-0.2**	
	baz=135,SNR=7.4							
Q59A	**Harwood**	**30.35**	**39**	P	**P**	**07 42 09.3**	**-1.3**	
	baz=231							
P58A	**Pank, Wackersv**	**30.37**	**38**	P	**P**	**07 42 09.5**	**-1.2**	
	baz=229,SNR=29							
TAMC	**Tame, Arauca**	**30.37**	**107**	*e*P	**P**	**07 42 13.4**	**+2.2**	
H46A	**Fife Lake**	**30.43**	**23**	P	**P**	**07 42 08.8**	**-2.5**	
	baz=211							
M54A	**Oil Creek Stat**	**30.46**	**33**	P	**P**	**07 42 09.2**	**-2.3**	
	baz=223,SNR=83							
M54A	**Oil Creek Stat**	**30.46**	**33**	IAmb	IAmb	07 42 12.1		
	comp=Z,200nm,0.9s							
MACC	**Macarena, Meta**	**30.47**	**116**	*e*P	**P**	**07 42 12.9**	**+1.0**	
E38A	**The Farm, Brul**	**30.47**	**13**	IAmb	IAmb	07 43 11.9		
	comp=Z,210nm,1.1s							
E38A				IAMs_20	IAMs_20	07 55 11.6		
	comp=Z,31µm,20.0s							
K51A	**Iona Station**	**30.47**	**29**	P	**P**	**07 42 08.5**	**-3.1**	
	baz=219,SNR=9.5							
M04C	**Macdoel**	**30.48**	**328**	P	**P**	**07 42 13.7**	**+1.8**	
	baz=137,SNR=71							
L53A	**Girard**	**30.49**	**31**	P	**P**	**07 42 09.1**	**-2.7**	
	baz=222,SNR=15							
F42A	**Maple Grove Fa**	**30.55**	**18**	IAMs_20	IAMs_20	07 55 23.3		
	comp=Z,30µm,18.0s							
SDV	**Santo Domingo**	**30.59**	**102**	*e*P	**P**	**07 42 13.9**	**+0.7**	
SDV	**Santo Domingo**	**30.59**	**102**	P	**P**	**07 42 14.5**	**+1.3**	
SDV	**Santo Domingo**	**30.59**	**102**	*e*P	**P**	**07 42 13.4**	**+0.2**	
O57A	**Amberson**	**30.65**	**36**	P	**P**	**07 42 12.0**	**-1.3**	
	baz=228,SNR=50							
G45A	**Suttons Bay**	**30.70**	**21**	P	**P**	**07 42 11.3**	**-2.3**	
	baz=209							
G45A	**Suttons Bay**	**30.70**	**21**	IAmb	IAmb	07 42 58.6		
	comp=Z,203nm,0.9s							
I48A	**Sherman Twp**	**30.71**	**25**	P	**P**	**07 42 11.8**	**-2.0**	
	baz=214,SNR=28							
M02C	**Callahan**	**30.71**	**327**	P	**P**	**07 42 14.2**	**+0.3**	
	baz=135,SNR=13							
MDND	**Maddock**	**30.73**	**2**	P	**P**	**07 42 12.5**	**-1.4**	
	baz=182,SNR=9.2							
PTLC	**Puerto Leguiza**	**30.73**	**120**	*e*P	**P**	**07 42 17.0**	**+2.8**	
K05A	**Summer Lake**	**30.73**	**331**	IAmb	IAmb	07 42 25.5		
	comp=Z,338nm,1.4s							
K05A				IAMs_20	IAMs_20	07 55 16.9		
	comp=Z,23µm,19.0s							
ERPA	**Erie**	**30.74**	**31**	P	**P**	**07 42 11.4**	**-2.7**	
	baz=222,SNR=8.6							
ERPA	**Erie**	**30.74**	**31**	IAmb	IAmb	07 43 12.0		
	comp=Z,190nm,1.1s							
ERPA				IAMs_20	IAMs_20	07 56 40.2		
	comp=Z,22µm,21.0s							
N56A	**West Decatur**	**30.76**	**35**	P	**P**	**07 42 12.5**	**-1.8**	
	baz=226,SNR=123							
SSPA	**Standing Stone**	**30.80**	**36**	P	**P**	**07 42 12.9**	**-1.7**	
	baz=227							
SSPA	**Standing Stone**	**30.80**	**36**	P	**P**	**07 42 12.6**	**-2.0**	
SSPA				IAmb	IAmb	07 42 15.3		
	comp=Z,257nm,1.0s							
R61A	**Willards**	**30.84**	**42**	P	**P**	**07 42 13.7**	**-1.3**	
	baz=234							
H47A	**Mio**	**30.86**	**24**	P	**P**	**07 42 12.9**	**-2.1**	
	baz=212,SNR=28							
I49A	**Point Hope**	**30.86**	**26**	P	**P**	**07 42 12.6**	**-2.5**	
	baz=215,SNR=5.9							
I49A	**Point Hope**	**30.86**	**26**	IAmb	IAmb	07 43 09.3		
	comp=Z,220nm,1.1s							
YBH	**Yreka Blue Hor**	**30.89**	**327**	P	**P**	**07 42 15.4**	**0.0**	
	comp=Z,24nm,0.9s,baz=134,slow=12,SNR=3.5							
YBH				LR	LR	07 54 11.9		
	comp=Z,13µm,20.0s,baz=168,slow=35							
K52A	**Tillsonburg**	**30.89**	**30**	P	**P**	**07 42 12.3**	**-3.0**	
	baz=220,SNR=32							
GLMI	**Grayling**	**30.89**	**23**	P	**P**	**07 42 13.3**	**-2.1**	
	baz=211,SNR=11							
GLMI	**Grayling**	**30.89**	**23**	IAmb	IAmb	07 42 15.5		
	comp=Z,259nm,0.9s							
M55A	**Ridgway**	**30.90**	**34**	P	**P**	**07 42 13.4**	**-2.1**	
	baz=224,SNR=94							
M55A	**Ridgway**	**30.90**	**34**	IAmb	IAmb	07 42 15.5		
	comp=Z,205nm,0.9s							
Q60A	**Greensboro**	**30.93**	**40**	P	**P**	**07 42 14.7**	**-1.0**	
	baz=232,SNR=5.8							
Q60A	**Greensboro**	**30.93**	**40**	IAmb	IAmb	07 43 19.8		
	comp=Z,405nm,1.6s							
BMO	**Blue Mountains**	**30.94**	**337**	P	**P**	**07 42 16.1**	**+0.3**	
BMO				pmax	pmax			
	comp=Z,176nm,1.3s							
BMO				MLR	MLR			
	comp=Z,69µm,18.0s							
BMO	**Blue Mountains**	**30.94**	**337**	P	**P**	**07 42 16.1**	**+0.3**	
JCC	**Jacoby Creek,**	**30.95**	**325**	IAmb	IAmb	07 42 27.7		
	comp=Z,607nm,1.7s							
JCC				IAMs_20	IAMs_20	07 54 15.5		
	comp=Z,25µm,19.0s							
P59A	**Jarrettsville**	**30.96**	**39**	P	**P**	**07 42 14.8**	**-1.2**	
	baz=230,SNR=23							
PTGC	**Puerto Gaitan,**	**30.99**	**111**	*e*P	**P**	**07 42 17.4**	**+0.8**	
O58A	**Lewisberry**	**31.00**	**37**	P	**P**	**07 42 14.8**	**-1.5**	
	baz=229,SNR=63							
L04D	**Klamath Falls**	**31.03**	**328**	P	**P**	**07 42 17.9**	**+1.2**	
	baz=137,SNR=33							
K04D	**Chiloquin, OR**	**31.06**	**329**	P	**P**	**07 42 18.6**	**+1.6**	
	baz=138,SNR=14							
N57A	**Milroy**	**31.07**	**36**	P	**P**	**07 42 15.4**	**-1.5**	
	baz=227,SNR=117							
L54A	**Sinclairville**	**31.17**	**32**	P	**P**	**07 42 15.2**	**-2.6**	
	baz=223,SNR=18							
Q61A	**Milford**	**31.18**	**41**	P	**P**	**07 42 17.4**	**-0.5**	
	baz=233							
M56A	**Emporium**	**31.22**	**34**	P	**P**	**07 42 16.2**	**-2.1**	
	baz=225,SNR=86							
M56A	**Emporium**	**31.22**	**34**	IAmb	IAmb	07 42 18.5		
	comp=Z,203nm,0.9s							
G46A	**Petoskey**	**31.23**	**22**	P	**P**	**07 42 15.8**	**-2.4**	
	baz=210							
H48A	**Harrisville**	**31.29**	**25**	P	**P**	**07 42 16.6**	**-2.1**	
	baz=214,SNR=5.9							
H48A	**Harrisville**	**31.29**	**25**	P	**P**	**07 42 16.7**	**-2.1**	
H48A				IAmb	IAmb	07 43 16.1		
	comp=Z,362nm,1.2s							
H48A				IAMs_20	IAMs_20	07 56 37.7		
	comp=Z,33µm,18.0s							
F45A	**CMU Biological**	**31.31**	**21**	P	**P**	**07 42 16.6**	**-2.4**	
	baz=209							
J05D	**Fort Rock, OR**	**31.32**	**331**	P	**P**	**07 42 20.5**	**+1.2**	
	baz=140,SNR=24							
J52A	**Paris**	**31.36**	**29**	P	**P**	**07 42 16.4**	**-3.0**	
	baz=220,SNR=15							
AGMN	**Agassiz Nation**	**31.43**	**6**	P	**P**	**07 42 18.3**	**-1.7**	
	baz=189,SNR=122							
AGMN	**Agassiz Nation**	**31.43**	**6**	IAmb	IAmb	07 42 31.7		
	comp=Z,208nm,1.1s							
AGMN				IAMs_20	IAMs_20	07 55 53.3		
	comp=Z,31µm,19.0s							
DGMT	**Dagmar**	**31.44**	**356**	P	**P**	**07 42 19.6**	**-0.5**	
	baz=174,SNR=31							
DGMT	**Dagmar**	**31.44**	**356**	IAmb	IAmb	07 42 32.1		
	comp=Z,276nm,1.1s							
E43A	**Lone Tree Farm**	**31.45**	**19**	IAmb	IAmb	07 43 27.1		
	comp=Z,224nm,1.4s							
E43A				IAMs_20	IAMs_20	07 56 04.0		
	comp=Z,32µm,18.0s							
G47A	**Hillman**	**31.48**	**23**	P	**P**	**07 42 18.5**	**-2.0**	
	baz=212							
I51A	**Listowel**	**31.54**	**28**	P	**P**	**07 42 18.5**	**-2.5**	
	baz=218,SNR=27							
O59A	**Rolesonia**	**31.55**	**38**	P	**P**	**07 42 19.9**	**-1.3**	
	baz=230,SNR=73							
P60A	**Greenville**	**31.56**	**39**	P	**P**	**07 42 19.9**	**-1.4**	
	baz=231,SNR=17							
PINE	**Pine Mountain**	**31.57**	**332**	IAMs_20	IAMs_20	07 55 11.2		
	comp=Z,36µm,19.0s							
L55A	**Hinsdale**	**31.58**	**33**	P	**P**	**07 42 19.4**	**-2.1**	
	baz=224,SNR=60							
MSO	**Missoula**	**31.58**	**343**	P	**P**	**07 42 21.9**	**+0.4**	
	baz=156,SNR=117							
MSO	**Missoula**	**31.58**	**343**	IAmb	IAmb	07 42 31.6		
	comp=Z,546nm,1.8s							
N58A	**Sunbury**	**31.59**	**36**	P	**P**	**07 42 19.8**	**-1.8**	
	baz=228,SNR=57							
N58A	**Sunbury**	**31.59**	**36**	IAmb	IAmb	07 42 22.0		
	comp=Z,157nm,0.9s							
D41A	**Chassel**	**31.62**	**16**	IAmb	IAmb	07 42 39.5		
	comp=Z,193nm,1.1s							
D41A				IAMs_20	IAMs_20	07 55 47.7		
	comp=Z,24µm,19.0s							
HUMO	**Hull Mountain**	**31.64**	**328**	P	**P**	**07 42 21.8**	**-0.2**	
HUMO					**P**	**07 42 22.2**	**+0.2**	
HUMO				IAMs_20	IAMs_20	07 56 26.4		
	comp=Z,17µm,18.0s							
WVNY	**West Valley, N**	**31.65**	**32**	P	**P**	**07 42 19.9**	**-2.2**	
WVNY				IAmb	IAmb	07 42 22.6		
	comp=Z,236nm,0.9s							
WVNY				IAMs_20	IAMs_20	07 57 23.3		
	comp=Z,24µm,20.0s							
M57A	**Sunshine Farm,**	**31.69**	**35**	P	**P**	**07 42 20.9**	**-1.5**	
	baz=227,SNR=116							
M57A	**Sunshine Farm,**	**31.69**	**35**	IAmb	IAmb	07 42 23.8		
	comp=Z,244nm,0.8s							
J04D	**Umpqua Nationa**	**31.70**	**330**	P	**P**	**07 42 24.1**	**+1.4**	
	baz=139,SNR=23							
EGMT	**Eagleton**	**31.72**	**349**	P	**P**	**07 42 23.0**	**+0.3**	
	baz=164,SNR=22							
EGMT	**Eagleton**	**31.72**	**349**	IAMs_20	IAMs_20	07 56 21.3		
	comp=Z,45µm,20.0s							
K54A	**Basiliko Farm,**	**31.76**	**32**	P	**P**	**07 42 20.4**	**-2.6**	
	baz=223,SNR=38							
EYMN	**Ely**	**31.77**	**12**	P	**P**	**07 42 20.7**	**-2.3**	
	baz=197,SNR=14							
EYMN	**Ely**	**31.77**	**12**	IAmb	IAmb	07 43 32.6		
	comp=Z,354nm,1.4s							
EYMN	**Ely**	**31.77**	**12**	IAMs_20	IAMs_20	07 56 15.8		
	comp=Z,24µm,19.0s							
F10A	**Beach Ranch, E**	**31.87**	**338**	IAmb	IAmb	07 42 25.6		
	comp=Z,365nm,1.2s							
F10A				IAMs_20	IAMs_20	07 54 20.3		
	comp=Z,18µm,19.0s							
G08A	**Pilot Rock**	**31.94**	**336**	IAmb	IAmb	07 42 26.3		
	comp=Z,214nm,1.2s							
P61A	**Hammonton**	**31.99**	**40**	P	**P**	**07 42 24.1**	**-0.9**	
	baz=233,SNR=6.7							
E44A	**Grand Marais A**	**32.00**	**20**	P	**P**	**07 42 23.1**	**-2.0**	
	baz=208							
E44A	**Grand Marais A**	**32.00**	**20**	IAmb	IAmb	07 43 21.5		
	comp=Z,336nm,1.4s							
E44A				IAMs_20	IAMs_20	07 56 21.7		
	comp=Z,37µm,18.0s							
L56A	**Greenwood**	**32.01**	**34**	P	**P**	**07 42 23.3**	**-2.0**	
	baz=226,SNR=53							
L56A	**Greenwood**	**32.01**	**34**	IAmb	IAmb	07 42 25.6		
	comp=Z,144nm,0.9s							
O60A	**Telford**	**32.02**	**38**	P	**P**	**07 42 24.3**	**-1.0**	
	baz=231,SNR=27							
K02D	**Willamette Mer**	**32.07**	**328**	P	**P**	**07 42 27.2**	**+1.3**	
	baz=136,SNR=9.8							
M58A	**Price's Panora**	**32.09**	**36**	P	**P**	**07 42 24.3**	**-1.7**	
	baz=228,SNR=82							
I52A	**Shelburne**	**32.13**	**29**	P	**P**	**07 42 23.7**	**-2.6**	
	baz=219,SNR=14							
K55A	**Perry**	**32.16**	**33**	P	**P**	**07 42 24.3**	**-2.2**	
	baz=224,SNR=22							
I05D	**Terrebonne, OR**	**32.18**	**332**	P	**P**	**07 42 28.0**	**+1.3**	
	baz=141,SNR=28							
N59A	**State Game Lan**	**32.18**	**37**	P	**P**	**07 42 25.5**	**-1.3**	
	baz=230,SNR=51							
LUPA	**Lehigh Univers**	**32.21**	**38**	P	**P**	**07 42 25.9**	**-1.2**	
LUPA					**P**	**07 42 26.0**	**-1.0**	
I53A	**Kortright Cn E**	**32.22**	**30**	P	**P**	**07 42 24.3**	**-2.7**	
	baz=221,SNR=23							
MMNY	**Mt. Morris Dam**	**32.25**	**33**	IAmb	IAmb	07 42 27.2		
	comp=Z,176nm,1.0s							
MMNY				IAMs_20	IAMs_20	07 57 51.0		
	comp=Z,31µm,20.0s							
I04A	**Tendick Farm,**	**32.26**	**330**	P	**P**	**07 42 28.3**	**+0.8**	
	baz=139,SNR=14							
J54A	**Appleton**	**32.27**	**31**	P	**P**	**07 42 24.8**	**-2.7**	
	baz=223,SNR=14							
J54A	**Appleton**	**32.27**	**31**	IAmb	IAmb	07 42 27.0		
	comp=Z,164nm,1.1s							
J54A				IAMs_20	IAMs_20	07 57 37.5		
	comp=Z,23µm,20.0s							
MEDO	**Medina**	**32.28**	**32**	IAmb	IAmb	07 42 27.2		
	comp=Z,200nm,0.9s							
MEDO				IAMs_20	IAMs_20	07 57 37.9		
	comp=Z,20µm,20.0s							
L57A	**Andrews Acres**	**32.30**	**35**	P	**P**	**07 42 25.9**	**-1.8**	
	baz=227,SNR=47							
E46A	**Sault Ste Mari**	**32.33**	**22**	IAmb	IAmb	07 43 31.9		
	comp=Z,214nm,1.2s							
E46A				IAMs_20	IAMs_20	07 56 45.2		
	comp=Z,35µm,18.0s							
O61A	**Allentown**	**32.39**	**40**	P	**P**	**07 42 27.5**	**-1.1**	
	baz=232,SNR=10.0							
F48A	**Evansville**	**32.50**	**24**	P	**P**	**07 42 27.4**	**-2.0**	
	baz=214,SNR=6.4							
JTMT	**Jette**	**32.52**	**343**	P	**P**	**07 42 29.9**	**+0.1**	
JTMT				IAmb	IAmb	07 42 38.3		
	comp=Z,465nm,1.9s							
K56A	**Middlesex**	**32.53**	**33**	P	**P**	**07 42 28.0**	**-1.8**	
	baz=225,SNR=105							
J01E	**Myrtle Point**	**32.54**	**328**	P	**P**	**07 42 32.0**	**+2.2**	
	baz=136,SNR=21							
N60A	**Cedar Hill Far**	**32.55**	**38**	P	**P**	**07 42 28.6**	**-1.3**	
	baz=231,SNR=57							
G06A	**Carlson Farm,**	**32.58**	**334**	IAMs_20	IAMs_20	07 56 28.6		
	comp=Z,26µm,19.0s							
I03D	**Drain, OR**	**32.64**	**329**	P	**P**	**07 42 32.0**	**+1.3**	
	baz=137							
E09A	**Wood Farm, Sta**	**32.66**	**338**	P	**P**	**07 42 30.4**	**-0.5**	
E09A					**P**	**07 42 30.6**	**-0.2**	
F49A	**Sandfield**	**32.67**	**25**	P	**P**	**07 42 28.9**	**-2.1**	
	baz=215,SNR=24							
J55A	**Hilton**	**32.67**	**32**	P	**P**	**07 42 28.4**	**-2.6**	
	baz=224,SNR=67							
J55A	**Hilton**	**32.67**	**32**	IAMs_20	IAMs_20	07 58 00.3		
	comp=Z,22µm,18.0s							
H52A	**Wyevale**	**32.70**	**28**	P	**P**	**07 42 28.8**	**-2.5**	
	baz=219,SNR=36							
OBIP	**Obispado Ponce**	**32.72**	**83**	IAmb	IAmb	07 42 51.9		
	comp=Z,147nm,1.0s							
BRNJ	**Basking Ridge**	**32.74**	**39**	IAmb	IAmb	07 42 42.1		
	comp=Z,295nm,1.2s							
E47A	**Iron Bridge**	**32.77**	**23**	P	**P**	**07 42 30.1**	**-1.7**	
	baz=212,SNR=8.6							
M59A	**Waymart**	**32.78**	**37**	P	**P**	**07 42 30.5**	**-1.6**	
	baz=229,SNR=74							
ICMP	**Isla Caja de M**	**32.80**	**83**	IAmb	IAmb	07 42 50.9		
	comp=Z,154nm,0.9s							
F07A	**Phinny Hill Vi**	**32.83**	**335**	IAMs_20	IAMs_20	07 56 34.9		
	comp=Z,31µm,20.0s							
H04A	**Detroit Lake**	**32.83**	**332**	P	**P**	**07 42 32.6**	**+0.1**	
H04A					**P**	**07 42 33.3**	**+0.9**	
H04A				IAmb	IAmb	07 42 34.3		
	comp=Z,298nm,1.1s							
H04A				IAMs_20	IAMs_20	07 57 28.4		
	comp=Z,37µm,18.0s							
D46A	**Sault St. Mari**	**32.87**	**22**	P	**P**	**07 42 30.6**	**-2.1**	
	baz=211,SNR=15							
L58A	**Harry Jones Me**	**32.88**	**36**	P	**P**	**07 42 31.4**	**-1.5**	
	baz=228,SNR=117							
G05D	**Wamic, OR**	**32.88**	**333**	P	**P**	**07 42 34.2**	**+1.3**	
	baz=142,SNR=15							
BINY	**Binghamton**	**32.91**	**35**	P	**P**	**07 42 31.5**	**-1.6**	
	baz=228,SNR=170							
N61A	**South Mountain**	**32.95**	**39**	P	**P**	**07 42 32.3**	**-1.1**	
	baz=232,SNR=17							
H04D	**Lebanon**	**32.96**	**331**	P	**P**	**07 42 32.7**	**-0.8**	
	baz=139,SNR=7.4							
ODNJ	**Ogdensburg**	**32.97**	**38**	IAmb	IAmb	07 42 34.3		
	comp=Z,124nm,0.9s							
K57A	**Scipio Center**	**32.98**	**34**	P	**P**	**07 42 31.6**	**-2.1**	
	baz=226,SNR=40							
HAWA	**Hanford**	**33.08**	**336**	IAmb	IAmb	07 42 39.1		
	comp=Z,246nm,2.0s							
M60A	**Port Jervis**	**33.11**	**38**	P	**P**	**07 42 33.4**	**-1.5**	
	baz=231,SNR=29							
SADO	**Sadowa**	**33.14**	**29**	IAmb	IAmb	07 42 34.4		
	comp=Z,135nm,0.9s							
SJG	**San Juan**	**33.15**	**83**	*e*P	**P**	**07 42 31.6**	**-3.8**	
SJG	**San Juan**	**33.15**	**83**	P	**P**	**07 42 33.4**	**-2.0**	
SJG					**P**	**07 42 34.8**	**-0.6**	
SJG				IAmb	IAmb	07 42 55.7		
	comp=Z,222nm,0.9s							
CPNY	**Central Park**	**33.17**	**39**	IAmb	IAmb	07 42 36.2		
	comp=Z,136nm,1.1s							
J56A	**Wolcott**	**33.17**	**33**	P	**P**	**07 42 33.1**	**-2.3**	
	baz=225,SNR=48							
J56A	**Wolcott**	**33.17**	**33**	IAmb	IAmb	07 42 35.8		
	comp=Z,205nm,0.9s							
J56A				IAMs_20	IAMs_20	07 58 28.5		
	comp=Z,32µm,18.0s							
I02D	**Swisshome**	**33.18**	**329**	P	**P**	**07 42 37.6**	**+2.2**	
	baz=137,

baz=218,SNR=36
MTP Monte Pirata 33.71 83 P P 07 42 39.8 -0.6
J57A Williamstown 33.72 34 P P 07 42 37.9 -2.2
baz=226,SNR=120
J57A Williamstown 33.72 34 IAMs_20 IAMs_20 07 58 46.0
comp=Z,30µm,21.0s
G03D McMinnville, O 33.73 331 P P 07 42 41.6 +1.5
baz=139,SNR=7.4
E50A Wahnapitae 33.74 25 P P 07 42 38.0 -2.3
baz=216,SNR=20
L60A Shokan 33.76 37 P P 07 42 39.2 -1.4
baz=231,SNR=64
WSPT Westport, CT 33.78 39 IAmb IAmb 07 42 41.4
comp=Z,263nm,0.9s
C09A Chrisman Ranch 33.81 339 IAMs_20 IAMs_20 07 56 43.5
comp=Z,28µm,18.0s
NEW Newport 33.83 340 P P 07 42 40.5 -0.6
comp=Z,26nm,0.8s,baz=150,slow=8.9,SNR=43
NEW PcP PcP 07 45 19.4 -0.4
comp=Z,24nm,0.8s,baz=138,slow=1.0,SNR=3.8
NEW LR LR 07 57 19.0
comp=Z,40µm,18.4s,baz=162,slow=38
NEW Newport 33.83 340 P P 07 42 41.1 0.0
NEW pmax pmax
comp=Z,107nm,3.0s
NEW Newport 33.83 340 P P 07 42 40.9 -0.2
baz=151,SNR=31
F52A Sundridge 33.85 28 P P 07 42 38.6 -2.6
baz=219,SNR=44
F04A Amboy 33.90 333 IAmb IAmb 07 42 43.6
comp=Z,206nm,1.2s
F04A IAMs_20 IAMs_20 07 56 46.6
comp=Z,20µm,20.0s
K59A Cooperstown 33.91 35 P P 07 42 40.3 -1.6
baz=229,SNR=74
H55A Tweed 33.92 31 P P 07 42 39.4 -2.4
baz=224,SNR=49
D48A Paudash Townsh 33.93 24 P P 07 42 39.7 -2.3
baz=214,SNR=25
KSCT Kent School, K 34.03 38 P P 07 42 41.1 -1.7
KSCT IAmb IAmb 07 42 43.7
comp=Z,147nm,0.9s
J58A Remsen 34.07 34 P P 07 42 41.2 -2.0
baz=228,SNR=68
J58A Remsen 34.07 34 IAmb IAmb 07 42 43.3
comp=Z,116nm,0.9s
G54A Lake Saint Pet 34.11 29 P P 07 42 41.0 -2.5
baz=221,SNR=39
YLE Yale 34.11 39 IAmb IAmb 07 42 44.4
comp=Z,196nm,0.9s
D49A Beulah Townshi 34.18 24 P P 07 42 41.9 -2.2
baz=215,SNR=10
M62A Hamden 34.21 39 P P 07 42 43.0 -1.4
baz=233,SNR=12
LTY Liberty 34.23 336 IAmb IAmb 07 42 46.9
comp=Z,377nm,1.3s
I57A Carthage 34.26 33 P P 07 42 42.6 -2.3
baz=226,SNR=19
STVI Saint Thomas 34.27 82 IAmb IAmb 07 42 46.6
comp=Z,168nm,1.0s
F04D Rainier, OR 34.28 332 P P 07 42 46.7 +1.8
baz=140,SNR=7.4
L61A Hillsdale 1, H 34.28 37 P P 07 42 43.6 -1.4
baz=231,SNR=42
LON Longmire 34.28 334 IAmb IAmb 07 42 47.4
comp=Z,189nm,1.1s
LON IAMs_20 IAMs_20 07 57 25.6
comp=Z,32µm,19.0s
PLVO Plevna 34.33 31 P P 07 42 42.7 -2.7
E51A G1948 Merrick 34.35 27 P P 07 42 43.6 -2.0
baz=218,SNR=36
K60A Five Rivers En 34.35 36 P P 07 42 44.2 -1.5
baz=230,SNR=18
F03A Seaside 34.41 332 IAMs_20 IAMs_20 07 57 24.2
comp=Z,34µm,19.0s
H56A Elgin 34.41 32 P P 07 42 43.7 -2.4
baz=225,SNR=22
E04D Cinebar 34.45 333 P P 07 42 47.9 +1.4
baz=141,SNR=25
I58A Old Forge 34.46 34 P P 07 42 44.5 -2.1
baz=228,SNR=128
CDVI St. Croix 34.48 83 eP P 07 42 46.2 -0.9
CDVI St. Croix 34.48 83 P P 07 42 45.3 -1.8
E52A Mattawa 34.52 28 P P 07 42 44.6 -2.5
baz=220,SNR=14
ALGO Algonquin Park 34.54 29 P P 07 42 44.8 -2.4
baz=221,SNR=42
TRY Troy 34.55 37 IAmb IAmb 07 42 55.7
comp=Z,132nm,1.1s
J59A Piesco 34.56 35 P P 07 42 45.6 -1.9
baz=228,SNR=40
G55A Calabogie 34.65 31 P P 07 42 45.9 -2.4
baz=224,SNR=33
B08A Colville Reser 34.66 338 IAMs_20 IAMs_20 07 57 45.9
comp=Z,28µm,20.0s
M63A Gales Ferry 34.70 40 P P 07 42 47.8 -0.9
baz=234,SNR=52
M63A S S 07 48 17.5 +0.2
baz=234
L62A Suffield 34.70 38 P P 07 42 47.4 -1.3
baz=233,SNR=32
D50A G1974 Best Tow 34.71 26 P P 07 42 46.2 -2.4
baz=217,SNR=27
D05A Enumclaw 34.71 335 IAmb IAmb 07 42 51.1
comp=Z,403nm,1.5s
D05A IAMs_20 IAMs_20 07 57 37.8
comp=Z,29µm,21.0s
K61A Williamstown 34.74 37 P P 07 42 48.0 -1.0
baz=231,SNR=54
D51A Lot 18 Range I 34.84 26 P P 07 42 47.5 -2.3
baz=218,SNR=19
E03A Lebam 34.88 332 IAMs_20 IAMs_20 07 57 17.5
comp=Z,36µm,21.0s
L61B Northampton 34.95 38 P P 07 42 49.4 -1.4
baz=232,SNR=38
ACCN Adirondack Com 34.97 36 IAmb IAmb 07 42 51.4
comp=Z,150nm,0.9s
J60A Lant Hill Farm 35.02 36 P P 07 42 50.2 -1.2
baz=230,SNR=20
D04E Lakebay 35.03 334 P P 07 42 52.9 +1.5
baz=142,SNR=9.3
QUA2 Belchertown 35.04 38 IAmb IAmb 07 43 01.4
comp=Z,405nm,1.9s
E53A Dumoine, Ponti 35.04 28 P P 07 42 49.3 -2.2
baz=221,SNR=52
I59A Olmsteadville 35.12 35 P P 07 42 50.4 -1.9
baz=229,SNR=102
L63A North Scituate 35.23 39 P P 07 42 51.9 -1.3
baz=234,SNR=21
F55A Otter Lake 35.25 30 P P 07 42 51.1 -2.2
baz=224,SNR=44
LONY Lake Ozonia 35.29 33 P P 07 42 51.6 -2.1
baz=227,SNR=60
LONY Lake Ozonia 35.29 33 P P 07 42 51.7 -2.1
LONY IAmb IAmb 07 42 54.3
comp=Z,113nm,0.8s
LONY IAMs_20 IAMs_20 07 59 42.5
comp=Z,30µm,19.0s
M64A Tiverton 35.30 40 P P 07 42 52.7 -1.1
baz=235,SNR=16
E54A Lac Daplat, Po 35.30 29 P P 07 42 51.7 -2.1
baz=222,SNR=62
BRYW Bryant College 35.31 39 IAmb IAmb 07 42 54.7
comp=Z,124nm,1.0s
K62A Royalston 35.34 38 P P 07 42 52.9 -1.3
baz=232,SNR=30
K62A Royalston 35.34 38 IAmb IAmb 07 42 55.0
comp=Z,120nm,0.9s
H58A Gabriels 35.37 34 P P 07 42 52.5 -2.0
baz=228,SNR=25
ORIO Orleans, Innes 35.39 31 P P 07 42 52.3 -2.3
baz=225,SNR=48
G57A Newington 35.41 32 P P 07 42 52.6 -2.1
baz=226,SNR=87
D03D Eldon 35.44 334 P P 07 42 55.8 +0.9
baz=141,SNR=41
D03D S S 07 48 33.7 +5.1
baz=141
I60A Shoreham 35.48 35 P P 07 42 53.6 -1.7
baz=230,SNR=24
D53A Lac Vacive, Po 35.55 28 P P 07 42 54.1 -1.9
baz=220,SNR=24
J61A Chester 35.57 37 P P 07 42 55.4 -0.8
baz=231,SNR=64
B06A Marblemount 35.58 336 IAmb IAmb 07 42 58.3
comp=Z,164nm,1.0s
B05A Bryant 35.61 336 P P 07 42 56.8 +0.4
baz=143,SNR=44

HRV Adam Dziewonsk 35.64 38 P P 07 42 55.3 -1.5
HRV pmax pmax
comp=Z,136nm,1.0s
HRV MLR MLR
comp=Z,4µm,20.0s
HRV Adam Dziewonsk 35.64 38 P P 07 42 55.7 -1.1
baz=234
HRV S S 07 48 32.6 +0.7
baz=234
HRV Adam Dziewonsk 35.64 38 P P 07 42 55.3 -1.5
HRV IAmb IAmb 07 42 57.7
comp=Z,136nm,0.9s
M65A Busby, Falmout 35.65 40 P P 07 42 55.8 -1.0
baz=236
NLWA Neilton Lookou 35.66 333 P P 07 42 58.4 +1.4
NLWA IAMs_20 IAMs_20 07 58 27.9
comp=Z,35µm,20.0s
WES Weston 35.71 39 IAmb IAmb 07 42 57.2
comp=Z,146nm,0.9s
L64A Middleborough 35.75 40 P P 07 42 56.8 -0.8
baz=235,SNR=28
K63A Dunstable 35.77 38 P P 07 42 56.8 -1.0
baz=233,SNR=46
H59A Cadyville 35.78 34 P P 07 42 56.1 -1.8
baz=228,SNR=35
E55A Montcerf-Lytto 35.84 30 P P 07 42 56.4 -2.0
baz=223,SNR=17
J62A Henniker 35.93 37 P P 07 42 58.3 -0.9
baz=232,SNR=51
G58A Ormstown 35.93 33 P P 07 42 57.2 -1.9
baz=227,SNR=45
SABA Saba 35.94 83 eP P 07 42 57.5 -2.1
HNH Hanover 35.95 36 IAmb IAmb 07 43 00.6
comp=Z,177nm,0.9s
FRNY Flat Rock 35.96 34 IAMs_20 IAMs_20 08 00 13.3
comp=Z,33µm,18.0s
F57A Harrington 36.05 32 P P 07 42 58.2 -2.0
baz=225
SMRT St. Maarten 36.07 83 eP P 07 42 58.2 -2.6
BBSR BB Station 36.08 58 P P 07 43 00.2 -0.4
BBSR IAmb IAmb 07 43 14.1
comp=Z,203nm,1.1s
BBSR BB Station 36.08 58 IAMs_20 IAMs_20 07 58 39.9
comp=Z,15µm,20.0s
D54A Lac Fusel, La 36.08 28 P P 07 42 58.4 -2.1
baz=222,SNR=62
VT1 Waterbury 36.09 35 IAMs_20 IAMs_20 08 00 21.4
comp=Z,31µm,18.0s
I61A Oroboro, Fairl 36.13 36 P P 07 43 00.1 -0.8
baz=231,SNR=56
I61A S S 07 48 41.2 +1.8
baz=231
SEUS St. Eustatius 36.20 84 eP P 07 42 58.9 -3.0
A04D Lummi Island 36.22 335 P P 07 43 02.8 +1.2
baz=143,SNR=18
H60A Morristown 36.26 35 P P 07 43 00.7 -1.4
baz=230,SNR=29
J63A Strafford 36.39 38 P P 07 43 02.5 -0.6
baz=233,SNR=34
E56A St. Veronique 36.40 31 P P 07 43 01.1 -2.2
baz=225,SNR=81
SKI Saint Kitts 36.45 84 eP P 07 43 02.5 -1.5
SKI Saint Kitts 36.45 84 P P 07 43 02.7 -1.3
SKI pmax pmax
comp=Z,431nm,0.9s
SKI MLR MLR
comp=Z,16µm,20.0s
SKI Saint Kitts 36.45 84 P P 07 43 02.7 -1.3
SKI IAMs_20 IAMs_20 07 58 54.6
comp=Z,16µm,20.0s
LBNH Lisbon 36.49 36 P P 07 43 03.1 -0.9
baz=231,SNR=51
LBNH Lisbon 36.49 36 IAmb IAmb 07 43 06.7
comp=Z,156nm,1.0s
LBNH IAMs_20 IAMs_20 08 00 38.2
comp=Z,22µm,18.0s
D55A Sainte-Anne-du 36.53 30 P P 07 43 02.4 -1.9
baz=224,SNR=136
F58A St-Lin Laurent 36.54 32 P P 07 43 02.3 -2.1
baz=227,SNR=5.2
NVDO Nevis, Disaste 36.58 84 eP P 07 43 04.0 -1.2
I62A Tamworth 36.59 37 P P 07 43 04.2 -0.7
baz=232,SNR=96
I62A Tamworth 36.59 37 IAmb IAmb 07 43 06.3
comp=Z,309nm,0.9s
H61A Lyndonville 36.67 35 P P 07 43 04.6 -1.0
baz=231,SNR=54
E57A Chemin Saint G 36.74 31 P P 07 43 04.2 -2.0
baz=226,SNR=89
G60A Masonville 36.81 34 P P 07 43 05.4 -1.4
baz=230,SNR=44
D56A ZEC Mazanza, M 36.89 30 P P 07 43 05.2 -2.3
baz=224,SNR=122
MLYT Lee's Yard 37.03 85 eP P 07 43 08.7 -0.3
F59A Saint Guillaume 37.06 33 P P 07 43 07.1 -1.7
baz=228,SNR=6.4
H62A Milan 37.13 36 P P 07 43 08.6 -0.8
baz=232,SNR=43
H62A Milan 37.13 36 IAMs_20 IAMs_20 08 01 07.1
comp=Z,23µm,18.0s
I63A Otisfield 37.14 37 P P 07 43 08.5 -1.0
baz=233,SNR=48
I63A Otisfield 37.14 37 IAmb IAmb 07 43 11.7
comp=Z,177nm,0.9s
I63A IAMs_20 IAMs_20 08 00 58.4
comp=Z,17µm,22.0s
E58A La Victoria 37.16 32 P P 07 43 08.0 -1.7
baz=227,SNR=34
D57A Chemin Vers le 37.29 31 P P 07 43 08.9 -1.9
baz=226,SNR=84
ANWB Willy Bob 37.32 83 eP P 07 43 10.3 -1.1
ANWB Willy Bob 37.32 83 IAmb IAmb 07 43 29.4
comp=Z,238nm,1.0s
G61A St-Isidore-de- 37.36 35 P P 07 43 10.3 -1.1
baz=231,SNR=44
LSQQ Lebel-sur-Quev 37.38 26 P P 07 43 09.6 -1.9
baz=220
NNA Nana 37.41 139 P P 07 43 13.6 +1.4
NNA pmax pmax
comp=Z,32nm,2.4s
LLLB Lillooet 37.45 338 IAmb IAmb 07 43 22.5
comp=Z,322nm,1.3s
F60A Warwick 37.58 34 P P 07 43 11.5 -1.7
baz=229,SNR=77
FFC Flin Flon 37.60 359 P P 07 43 12.0 -1.3
FFC pmax pmax
comp=Z,92nm,0.9s
FFC MLR MLR
comp=Z,73µm,18.0s
FFC Flin Flon 37.60 359 P P 07 43 12.0 -1.3
I64A Boothbay 37.61 38 P P 07 43 12.7 -0.8
baz=234,SNR=12
E59A St. Maurice 37.62 33 P P 07 43 12.2 -1.4
baz=228,SNR=8.4
MATQ Matagami 37.66 25 P P 07 43 11.9 -2.0
baz=218,SNR=187
CBE Ff, Capester 37.66 86 eP P 07 43 12.4 -1.9
CBE Ff, Capester 37.66 86 eP P 07 43 14.4 0.0
TDBA Terre de Bas, 37.66 86 eP P 07 43 13.6 -0.7
TDBA Terre de Bas, 37.66 86 eP P 07 43 13.7 -0.6
ABD La Joyeuse, An 37.73 85 eP P 07 43 13.2 -1.7
H63A New Sharon 37.82 37 P P 07 43 14.6 -0.6
baz=233,SNR=7.5
D58A Chemin du LacG 37.85 32 P P 07 43 13.9 -1.6
baz=227,SNR=61
G62A West of Eustis 37.87 36 P P 07 43 15.0 -0.8
baz=232,SNR=158
G62A West of Eustis 37.87 36 IAmb IAmb 07 43 17.8
comp=Z,302nm,0.8s
G62A IAMs_20 IAMs_20 08 01 36.9
comp=Z,29µm,19.0s
WVL Waterville 37.98 37 IAmb IAmb 07 43 17.9
comp=Z,157nm,1.0s
MAGL Barre de l'ile 37.99 86 eP P 07 43 13.6 -3.4
LATQ La Tuque 38.09 31 P P 07 43 15.9 -1.6
baz=227,SNR=24
F61A St Evariste 38.09 34 P P 07 43 16.3 -1.3
baz=231,SNR=16
E60A Ste Agathe de 38.10 34 P P 07 43 16.1 -1.5
baz=230,SNR=48
PCM Pelee Case Pet 38.22 88 eP P 07 43 17.8 -1.2
PML Morne Lenard 38.25 88 eP P 07 43 18.2 -1.1
CXM Morne La Croix 38.26 88 eP P 07 43 18.1 -1.4
GBMF Grand Be 38.26 88 eP P 07 43 18.3 -1.2
GRHS Sauteurs 38.27 92 eP P 07 43 19.9 +0.4
H64A Troy 38.27 37 P P 07 43 18.4 -0.7
baz=234,SNR=50

GRGR Grenville 38.28 92 eP P 07 43 18.6 -0.9
GRGR Grenville 38.28 92 IAmb IAmb 07 44 05.5
comp=Z,259nm,0.9s
FDF Fort de France 38.29 88 eP P 07 43 18.1 -1.6
FDF Fort de France 38.29 88 eP P 07 43 18.2 -1.4
FDF Fort de France 38.29 88 P P 07 43 18.1 -1.6
FDF pmax pmax
comp=Z,250nm,0.9s
FDF Fort de France 38.29 88 IAmb IAmb 07 43 22.3
comp=Z,194nm,0.9s
D59A Saint-Raymond 38.32 32 P P 07 43 17.9 -1.5
baz=228,SNR=33
G63A Kingsbury 38.32 36 P P 07 43 18.7 -0.8
baz=233,SNR=63
BIM Bigot 38.40 88 eP P 07 43 18.1 -2.4
BIM Bigot 38.40 88 eP P 07 43 21.4 +0.8
TRMF Trois Ilets 38.41 88 eP P 07 43 21.6 +0.9
GCMP Grenada, Carri 38.42 91 eP P 07 43 19.2 -1.6
GCMP Grenada, Carri 38.42 91 eP P 07 43 20.3 -0.5
ZAM Aeronautique 38.43 88 eP P 07 43 22.0 +1.2
SVB Belmont 38.44 90 eP P 07 43 19.6 -1.3
SVB Belmont 38.44 90 eP P 07 43 20.2 -0.7
SVB Belmont 38.44 90 IAmb IAmb 07 43 22.2
comp=Z,257nm,1.0s
SVV Soufriere Volc 38.46 90 eP P 07 43 21.2 +0.1
SSV Crater Summit 38.48 90 eP P 07 43 21.7 +0.3
LPMF Morne Lapointe 38.49 88 eP P 07 43 20.5 -0.8
SVCV St. Vincent, C 38.54 90 eP P 07 43 20.5 -1.3
ILAM Ilet Lapin Mar 38.55 88 eP P 07 43 18.2 -3.6
ILAM Ilet Lapin Mar 38.55 88 eP P 07 43 20.4 -1.3
SLBI Saint Lucia, B 38.57 89 eP P 07 43 20.3 -1.7
PKME Peaks-Kenny Pk 38.60 36 P P 07 43 20.9 -1.0
baz=234,SNR=35
PKME Peaks-Kenny Pk 38.60 36 P P 07 43 20.6 -1.2
MPOM Morne Pois Mar 38.61 88 eP P 07 43 20.4 -1.9
MPOM Morne Pois Mar 38.61 88 eP P 07 43 21.1 -1.2
E61A Lac Etchemin 38.65 34 P P 07 43 20.8 -1.5
baz=231,SNR=52
MCLT Moule a Chique 38.66 89 eP P 07 43 20.3 -2.5
MCLT Moule a Chique 38.66 89 eP P 07 43 22.5 -0.2
D60A Saint Jean D'O 38.73 33 P P 07 43 21.1 -1.8
baz=230,SNR=39
TRN Trinidad (W) 38.85 94 eP P 07 43 23.3 -1.0
H65A Eastbrook 38.87 38 P P 07 43 23.1 -1.0
baz=235,SNR=23
TPP Pointe-a-Pierr 38.89 95 eP P 07 43 24.7 +0.1
G64A Maxfield 38.90 37 P P 07 43 23.1 -1.3
baz=234,SNR=30
F63A Nahmakanta, Br 38.97 36 P P 07 43 23.9 -1.1
baz=233,SNR=47
CHGQ Chibougamau 39.14 27 P P 07 43 24.5 -1.8
baz=222,SNR=119
D61A St Aubert, Com 39.30 33 P P 07 43 26.5 -1.2
baz=230,SNR=48
H66A Whiting 39.47 38 P P 07 43 28.2 -0.9
baz=236,SNR=9.2
F64A Sherman 39.49 36 P P 07 43 28.2 -1.1
baz=234,SNR=62
TOSP Speyside 39.53 93 eP P 07 43 26.3 -3.7
G65A Princeton 39.56 38 P P 07 43 29.1 -0.7
baz=236,SNR=31
G65A Princeton 39.56 38 IAmb IAmb 07 43 39.8
comp=Z,190nm,0.8s
E63A Oxbow 39.78 36 P P 07 43 30.8 -0.9
baz=233,SNR=85
E63A Oxbow 39.78 36 IAmb IAmb 07 43 41.4
comp=Z,222nm,0.8s
D62A Allapoint, All 39.83 34 P P 07 43 31.1 -1.0
baz=232,SNR=134
D62A Allapoint, All 39.83 34 IAmb IAmb 07 43 41.9
comp=Z,234nm,0.8s
D62A IAMs_20 IAMs_20 08 02 22.7
comp=Z,23µm,19.0s
GGN Saint George 39.94 38 P P 07 43 31.9 -1.1
BBGH Gun Hill 40.08 90 eP P 07 43 34.1 -0.5
BBGH Gun Hill 40.08 90 IAMs_20 IAMs_20 08 01 23.5
comp=Z,15µm,20.0s
E64A Bridgewater 40.10 36 P P 07 43 33.4 -1.0
baz=234,SNR=34
BBSP Saint Philip 40.19 90 eP P 07 43 34.1 -1.4
D63A Stockholm 40.32 35 P P 07 43 35.2 -1.0
baz=233,SNR=63
BBB Bella Bella 41.09 335 P P 07 43 43.7 +1.3
comp=Z,77nm,0.9s,baz=130,slow=6.6,SNR=25
BBB Bella Bella 41.09 335 IAmb IAmb 07 43 45.0
comp=Z,252nm,1.2s
BBB IAMs_20 IAMs_20 08 01 38.6
comp=Z,19µm,20.0s
LMN Caledonia Moun 41.54 38 IAmb IAmb 07 43 47.2
comp=Z,246nm,1.1s
BATG Bathurst New B 41.59 36 P P 07 43 44.2 -2.4
HAL Halifax 41.66 41 P P 07 43 46.5 -0.8
HAL pmax pmax
comp=Z,208nm,1.0s
HAL Halifax 41.66 41 P P 07 43 46.5 -0.8
HAL IAmb IAmb 07 43 48.6
comp=Z,208nm,1.0s
FCC Fort Churchill 41.95 5 P P 07 43 47.9 -1.4
FCC pmax pmax
comp=Z,112nm,1.1s
FCC MLR MLR
comp=Z,27µm,19.0s
FCC Fort Churchill 41.95 5 P P 07 43 47.9 -1.4
DIB Dawson Inlet, 43.67 333 IAmb IAmb 07 44 06.2
comp=Z,290nm,1.2s
DIB IAMs_20 IAMs_20 08 03 12.1
comp=Z,20µm,18.0s
PTGA Pitinga 44.06 110 P P 07 44 07.1 0.0
PTGA Pitinga 44.06 110 eP P 07 44 07.2 0.0
MACA Manacapuru-AM 44.52 113 eP P 07 44 10.9 +0.2
RPN Rapa Nui 44.67 191 P P 07 44 14.8 +3.1
comp=Z,129nm,0.8s,baz=6.5,slow=7.3,SNR=7.1
RPN Rapa Nui 44.67 191 P P 07 44 14.8 +3.1
RPN pmax pmax
comp=Z,211nm,0.9s
RPN Rapa Nui 44.67 191 P P 07 44 14.8 +3.1
RPN IAmb IAmb 07 44 16.5
comp=Z,210nm,0.9s
RPN IAMs_20 IAMs_20 07 58 23.1
comp=Z,16µm,19.0s
SAML Samuel 45.40 122 P P 07 44 16.5 -1.2
SAML pmax pmax
comp=Z,59nm,1.1s
SAML Samuel 45.40 122 P P 07 44 16.5 -1.2
SAML Samuel 45.40 122 eP P 07 44 17.0 -0.7
CRAG Craig 45.52 335 IAMs_20 IAMs_20 08 03 37.8
comp=Z,16µm,20.0s
SCHQ Schefferville 45.89 27 P P 07 44 19.8 -1.3
comp=Z,164nm,0.8s,baz=233,slow=6.7,SNR=175
SCHQ LR LR 08 05 29.9
comp=Z,17µm,18.6s,baz=231,slow=39
SCHQ Schefferville 45.89 27 IAmb IAmb 07 44 22.5
comp=Z,201nm,0.9s
SCHQ IAMs_20 IAMs_20 08 05 18.9
comp=Z,18µm,18.0s
WRAK Wrangell Islan 45.89 336 P P 07 44 22.7 +1.6
WRAK IAmb IAmb 07 44 24.9
comp=Z,139nm,1.1s
YKA Yellowknife Ar 46.39 351 P P 07 44 24.5 -0.4
comp=Z,176nm,0.8s,baz=160,slow=7.8,SNR=706
YKA PcP PcP 07 45 59.4 -0.1
comp=Z,21nm,0.8s,baz=155,slow=4.0,SNR=6.7
YKA LR LR 08 05 25.3
comp=Z,69µm,18.1s,baz=0.0,slow=38
YKA PKPPKP P'P'df 08 15 50.6 -3.2
comp=Z,0.2nm,0.8s,baz=349,slow=1.9,SNR=1.7
YKA P4KPbc 08 22 07.4
comp=Z,0.5nm,0.8s,baz=142,slow=4.0,SNR=8.1
PB12 IPOC Station P 46.51 138 P P 07 44 28.6 +2.1
TAOE Nuku Hiva Isla 46.54 239 eT T 08 34 10.0
comp=Z,714nm,0.2s
PB11 IPOC Station P 47.78 139 IAmb IAmb 07 46 09.0
comp=Z,148nm,0.9s
BESE Bessie Mountai 48.38 337 P P 07 44 41.8 +1.2
BESE IAmb IAmb 07 44 44.3
comp=Z,412nm,1.8s
SKAG Skagway 49.18 338 IAmb IAmb 07 44 49.1
comp=Z,167nm,1.4s
ITTB Itaituba 49.45 111 eP P 07 44 49.5 +0.1
MALB Monte Alegre 49.70 108 eP P 07 44 51.6 +0.4
WHY Whitehorse 49.87 339 IAmb IAmb 07 45 03.4
comp=Z,131nm,0.9s
DHAK Deception Hill 50.02 336 IAmb IAmb 07 45 05.0
comp=Z,149nm,1.0s
PB06 IPOC Station P 50.03 141 P P 07 44 55.2 +1.4
VILB Vilhena 50.08 124 eP P 07 44 53.6 -0.5

LVC	**Limon Verde**	**50.36**	**140**	P	**P**	**07 44 58.9**	**+2.4**
LVC	comp=Z,44nm,1.2s			pmax	pmax		
LVC	**Limon Verde**	**50.36**	**140**	P	**P**	**07 44 58.9**	**+2.4**
LVC	**Limon Verde**	**50.36**	**140**	*e*P	**P**	**07 44 55.5**	**-1.0**
PTCN	**Pitcairn Islan**	**50.61**	**215**	IAMs_20	IAMs_20	08 00 30.4	
	comp=Z,9µm,20.0s						
PB14	**IPOC Station P**	**51.02**	**144**	P	**P**	**07 45 02.3**	**+0.9**
NPGB	**Novo Progresso**	**51.02**	**114**	*e*P	**P**	**07 44 60.0**	**-1.3**
MLH	**Mauna Loa**	**51.59**	**282**	IAmb	IAmb	07 45 15.2	
	comp=Z,312nm,1.1s						
FRB	**Frobisher Bay**	**51.66**	**18**	P	**P**	**07 45 04.7**	**-0.5**
FRB	comp=Z,195nm,1.0s			pmax	pmax		
POHA	**Pohakuloa**	**51.69**	**282**	P	**P**	**07 45 08.9**	**+2.4**
HPAH	**Hawaii Prepara**	**51.82**	**282**	IAmb	IAmb	07 45 17.1	
	comp=Z,380nm,1.3s						
RKT	**Rikitea**	**51.98**	**221**	*e*S	**S**	**07 52 28.5**	**-1.9**
RKT	comp=Z,8µm,27.2s			*e*LR	LR	08 00 05.0	
	comp=Z,13µm,25.5s						
RKT	**Rikitea**	**51.98**	**221**	*e*T	T	08 41 03.1	
	comp=Z,142nm,0.3s						
PTLB	**Pontes e Lacer**	**52.37**	**126**	*e*P	**P**	**07 45 10.5**	**-0.7**
CTGM	**Chitina Glacie**	**52.42**	**336**	P	**P**	**07 45 13.3**	**+2.1**
CTGM	comp=Z,243nm,1.6s			IAmb	IAmb	07 45 26.1	
CLDB	**Colider**	**52.54**	**119**	*e*P	**P**	**07 45 10.4**	**-2.1**
BARN	**Barnard Glacie**	**52.60**	**336**	IAmb	IAmb	07 45 26.0	
	comp=Z,304nm,1.8s						
WAX	**Waxell Ridge**	**52.70**	**335**	IAmb	IAmb	07 45 17.5	
WAX	comp=Z,286nm,1.3s			IAMs_20	IAMs_20	08 07 11.4	
	comp=Z,17µm,21.0s						
BALM	**Baldy**	**52.85**	**336**	IAmb	IAmb	07 45 18.6	
	comp=Z,176nm,1.2s						
TGL	**Tana Glacier**	**52.87**	**336**	IAmb	IAmb	07 45 18.6	
TGL	comp=Z,173nm,1.1s			IAMs_20	IAMs_20	08 07 46.0	
	comp=Z,19µm,20.0s						
CRQM	**Cirque**	**52.99**	**336**	IAmb	IAmb	07 45 19.4	
CRQM	comp=Z,166nm,1.0s			IAMs_20	IAMs_20	08 07 48.7	
	comp=Z,18µm,20.0s						
MCARA	**McCarthy VSAT**	**53.33**	**336**	IAmb	IAmb	07 45 22.3	
	comp=Z,195nm,1.1s						
RAGM	**Ragged Mountai**	**53.40**	**335**	IAmb	IAmb	07 45 22.7	
	comp=Z,187nm,1.2s						
VRDI	**Verde Repeater**	**53.40**	**336**	P	**P**	**07 45 20.3**	**+1.8**
MID	**Middleton Isla**	**53.57**	**333**	IAMs_20	IAMs_20	08 10 29.7	
	comp=Z,8µm,18.0s						
GLB	**Gilahina Butte**	**53.66**	**336**	IAmb	IAmb	07 45 24.4	
	comp=Z,162nm,1.1s						
DAWY	**Dawson**	**53.76**	**340**	IAmb	IAmb	07 45 23.9	
DAWY	comp=Z,137nm,1.1s			IAMs_20	IAMs_20	08 08 47.8	
	comp=Z,17µm,20.0s						
OPA	**Opana**	**53.80**	**285**	IAmb	IAmb	07 45 31.2	
	comp=Z,181nm,1.0s						
KIP	**Kipapa**	**53.83**	**284**	*e*P	**P**	**07 45 25.0**	**+3.0**
KIP	comp=Z,88nm,1.0s			pmax	pmax		
KIP	comp=Z,3µm,16.0s			MLR	MLR		
KIP	**Kipapa**	**53.83**	**284**	P	**P**	**07 45 24.5**	**+2.5**
KIP	comp=Z,133nm,0.8s			IAmb	IAmb	07 45 31.8	
EYAK	**Cordova Ski Ar**	**53.93**	**334**	IAmb	IAmb	07 45 26.5	
	comp=Z,238nm,1.3s						
HIN	**Hinchinbrook I**	**54.16**	**334**	IAmb	IAmb	07 45 26.6	
HIN	comp=Z,199nm,1.2s			IAMs_20	IAMs_20	08 07 17.2	
	comp=Z,11µm,19.0s						
C36M	**Paulatuk**	**54.22**	**350**	P	**P**	**07 45 24.1**	**0.0**
	baz=152,SNR=82						
C36M	**Paulatuk**	**54.22**	**350**	IAmb	IAmb	07 45 25.0	
	comp=Z,190nm,1.3s						
FID	**Port Fidalgo**	**54.34**	**334**	IAmb	IAmb	07 45 28.0	
	comp=Z,222nm,1.2s						
AC05	**El Transito**	**54.41**	**147**	IAMs_20	IAMs_20	08 03 10.2	
	comp=Z,12µm,20.0s						
H03N2	**Juan Fernandez**	**54.43**	**157**	T	T	08 44 13.9	
	baz=335,slow=77,SNR=1609						
H03N1	**Juan Fernandez**	**54.44**	**157**	T	T	08 44 12.8	
	baz=335,slow=77,SNR=3646						
H03N3	**Juan Fernandez**	**54.45**	**157**	T	T	08 44 13.2	
	baz=335,slow=77,SNR=2156						
MENT	**Mentasta**	**54.52**	**338**	IAmb	IAmb	07 45 30.3	
	comp=Z,148nm,1.2s						
EPYK	**Eagle Plains**	**54.58**	**343**	P	**P**	**07 45 27.6**	**+0.8**
	baz=136,SNR=152						
GLI	**Glacier Island**	**54.66**	**334**	P	**P**	**07 45 28.6**	**+1.1**
GLI	comp=Z,98nm,0.8s			IAmb	IAmb	07 45 31.7	
GLI	comp=Z,12µm,20.0s			IAMs_20	IAMs_20	08 07 31.5	
DOT	**Dot Lake**	**55.08**	**338**	IAMs_20	IAMs_20	08 07 18.1	
	comp=Z,16µm,20.0s						
PAX	**Paxson**	**55.19**	**337**	IAmb	IAmb	07 45 34.8	
	comp=Z,166nm,1.1s						
GO04	**Tololo Observa**	**55.21**	**148**	IAMs_20	IAMs_20	08 04 17.5	
	comp=Z,14µm,18.0s						
INK	**Inuvik**	**55.23**	**346**	P4KPbc		08 22 45.1	
	comp=Z,1.6nm,1.2s,baz=154,slow=1.5,SNR=2.9						
INK	**Inuvik**	**55.23**	**346**	P	**P**	**07 45 31.9**	**+0.5**
INK	comp=Z,343nm,1.7s			pmax	pmax		
SEW	**Seward**	**55.27**	**333**	IAMs_20	IAMs_20	08 08 38.7	
	comp=Z,12µm,18.0s						
SCM	**Sheep Creek Mo**	**55.27**	**335**	IAmb	IAmb	07 46 38.9	
SCM	comp=Z,197nm,1.4s			IAMs_20	IAMs_20	08 10 58.5	
	comp=Z,13µm,21.0s						
SALV	**Santo Antonio**	**55.34**	**124**	*e*P	**P**	**07 45 32.5**	**-0.4**
KEKH	**Kekaha**	**55.34**	**285**	P	**P**	**07 45 35.5**	**+2.5**
CO01	**Juntas del Tor**	**55.41**	**147**	IAMs_20	IAMs_20	08 04 08.8	
	comp=Z,16µm,19.0s						
KNK	**Knik Glacier**	**55.51**	**335**	IAmb	IAmb	07 45 35.8	
KNK	comp=Z,129nm,1.2s			IAMs_20	IAMs_20	08 12 41.8	
	comp=Z,15µm,18.0s						
KDAK	**Kodiak Island**	**55.66**	**329**	P	**P**	**07 45 35.8**	**+1.1**
	comp=Z,42nm,0.9s,baz=96,slow=3.9,SNR=6.7						
KDAK	**Kodiak Island**	**55.66**	**329**	P	**P**	**07 45 35.3**	**+0.6**
KDAK	comp=Z,153nm,1.2s			pmax	pmax		
KDAK	comp=Z,10µm,20.0s			MLR	MLR		
KDAK	**Kodiak Island**	**55.66**	**329**	P	**P**	**07 45 35.3**	**+0.6**
KDAK	comp=Z,153nm,1.2s			IAmb	IAmb	07 45 37.0	
KDAK	**Kodiak Island**	**55.66**	**329**	IAMs_20	IAMs_20	08 09 22.5	
	comp=Z,10µm,20.0s						
SML	**Sawmill**	**55.66**	**335**	IAmb	IAmb	07 45 39.6	
SML	comp=Z,99nm,0.9s			IAMs_20	IAMs_20	08 08 26.8	
	comp=Z,13µm,22.0s						
BRLK	**Bradley Lake**	**55.74**	**332**	IAmb	IAmb	07 45 37.4	
	comp=Z,180nm,1.0s						
BRLK	comp=Z,10µm,19.0s			IAMs_20	IAMs_20	08 08 11.4	
OHAK	**Old Harbor**	**55.78**	**329**	IAMs_20	IAMs_20	08 09 07.7	
	comp=Z,8µm,19.0s						
CNPM	**China Poot**	**55.79**	**332**	IAmb	IAmb	07 45 37.8	
	comp=Z,152nm,1.2s						
CNPM	comp=Z,7µm,18.0s			IAMs_20	IAMs_20	08 09 47.6	
CO03	**El Pedregal**	**55.80**	**148**	IAMs_20	IAMs_20	08 04 17.3	
	comp=Z,14µm,19.0s						
PMR	**Palmer**	**55.88**	**334**	IAmb	IAmb	07 45 47.8	
	comp=Z,105nm,0.8s						
PMR	comp=Z,13µm,20.0s			IAMs_20	IAMs_20	08 08 10.6	
RC01	**Rabbit Creek A**	**55.88**	**334**	IAMs_20	IAMs_20	08 12 03.7	
	comp=Z,10µm,18.0s						
GHO	**Glory Hole Cre**	**55.89**	**335**	IAmb	IAmb	07 45 40.7	
	comp=Z,144nm,0.8s						
GHO	comp=Z,14µm,18.0s			IAMs_20	IAMs_20	08 11 22.8	
CO02	**Combarbal**	**55.94**	**149**	IAMs_20	IAMs_20	08 04 11.1	
	comp=Z,12µm,20.0s						
DHY	**Denali Highway**	**55.97**	**337**	P	**P**	**07 45 37.4**	**+0.4**
HOM	**Homer**	**56.03**	**332**	IAmb	IAmb	07 45 53.0	
	comp=Z,232nm,1.1s						
VAH	**Vaihoa**	**56.14**	**238**	*e*P	**P**	**07 45 40.0**	**+1.3**
	comp=Z,81nm,1.1s						
VAH	**Vaihoa**	**56.14**	**238**	*e*T	T	08 46 13.3	
	comp=Z,42nm,0.3s						
PMOR	**Pomariorio Ree**	**56.23**	**238**	*e*P	**P**	**07 45 40.6**	**+1.3**
	comp=Z,122nm,1.2s						
PMOR	**Pomariorio Ree**	**56.23**	**238**	*e*T	T	08 46 19.8	
	comp=Z,131nm,0.2s						
HDA	**Harding Lake**	**56.56**	**338**	P	**P**	**07 45 41.6**	**+0.6**
HDA	baz=124,SNR=119			S	**S**	**07 53 34.5**	**+3.4**
HDA	baz=124			S	**S**	**07 53 34.5**	**+3.4**
HDA	**Harding Lake**	**56.56**	**338**	IAMs_20	IAMs_20	08 08 24.1	
	comp=Z,14µm,21.0s						
CO04	**Los Peladeros**	**56.64**	**149**	IAMs_20	IAMs_20	08 03 51.6	
	comp=Z,10µm,21.0s						
PRP	**Porcupine Dome**	**56.71**	**340**	P	**P**	**07 45 43.6**	**+1.3**
RND	**Reindeer**	**56.71**	**336**	IAmb	IAmb	07 45 44.5	
	comp=Z,287nm,1.3s						
ILAR	**Eielson Array**	**56.74**	**338**	P	**P**	**07 45 42.9**	**+0.6**
	comp=Z,72nm,1.0s,baz=145,slow=5.1,SNR=354						
ILAR				PKPPKP	**P'P'df**	**08 15 40.0**	**+0.6**
	comp=Z,1.2nm,1.1s,baz=328,slow=4.0,SNR=6.1						
ILAR				P4KPbc		08 22 51.1	
	comp=Z,0.2nm,0.5s,baz=144,slow=3.4,SNR=2.1						
A36M	**Sachs Harbour**	**56.75**	**351**	P	**P**	**07 45 42.2**	**0.0**
	baz=152,SNR=90						
A36M	baz=152			S	**S**	**07 53 33.5**	**0.0**
MCK	**McKinley**	**56.91**	**337**	P	**P**	**07 45 44.5**	**+0.9**
MCK	comp=Z,122nm,0.9s			pmax	pmax		
MCK	**McKinley**	**56.91**	**337**	P	**P**	**07 45 44.5**	**+0.9**
MCK	comp=Z,122nm,0.9s			IAmb	IAmb	07 45 55.2	
WRH	**Wood River Hil**	**57.00**	**338**	IAmb	IAmb	07 45 55.2	
	comp=Z,101nm,0.9s						
AMOG	**MOGNA**	**57.01**	**147**	*i* P	**P**	**07 45 48.5**	**+3.8**
POKR	**Poker Plat Res**	**57.13**	**339**	P	**P**	**07 45 45.8**	**+0.7**
	baz=124,SNR=54						
POKR	baz=124			S	**S**	**07 53 42.0**	**+3.2**
COLA	**College**	**57.14**	**338**	*i* P	**P**	**07 45 45.6**	**+0.5**
COLA	comp=Z,108nm,1.2s			pmax	pmax		
COLA	**College**	**57.14**	**338**	P	**P**	**07 45 45.5**	**+0.4**
COLA	comp=Z,112nm,0.9s			IAmb	IAmb	07 46 43.0	
TCOL	**CIGO, UAF Yank**	**57.14**	**338**	P	**P**	**07 45 45.5**	**+0.3**
	baz=124,SNR=34						
TCOL	baz=124			S	**S**	**07 53 41.9**	**+3.0**
FYU	**Fort Yukon**	**57.25**	**341**	IAMs_20	IAMs_20	08 11 19.1	
	comp=Z,15µm,21.0s						
RTLS	**Leoncito**	**57.28**	**148**	*i* P	**P**	**07 45 48.8**	**+1.9**
RTLL	**Cerro Villicun**	**57.33**	**147**	*i* P	**P**	**07 45 50.2**	**+3.2**
NEA	**Nenana**	**57.42**	**338**	IAmb	IAmb	07 45 59.4	
	comp=Z,410nm,1.7s						
VA03	**San Esteban**	**57.44**	**150**	IAMs_20	IAMs_20	08 04 34.7	
	comp=Z,10µm,21.0s						
XMAS	**Kiritimati**	**57.47**	**261**	IAMs_20	IAMs_20	08 07 35.8	
	comp=Z,12µm,18.0s						
MT02	**Curacav**	**57.56**	**150**	IAMs_20	IAMs_20	08 04 38.1	
	comp=Z,9µm,20.0s						
KTH	**Kantishna Hill**	**57.58**	**336**	P	**P**	**07 45 48.9**	**+0.5**
KTH	comp=Z,97nm,1.0s			IAmb	IAmb	07 45 59.4	
IVI	**Ivigtut**	**57.63**	**27**	IAmb	IAmb	07 45 49.5	
	comp=Z,202nm,1.1s						
IVI	comp=Z,12µm,18.0s			IAMs_20	IAMs_20	08 11 59.4	
CFA	**Coronel Fontan**	**57.67**	**147**	*i* P	**P**	**07 45 52.0**	**+2.6**
PEL	**Peldehue**	**57.68**	**150**	P	**P**	**07 45 51.2**	**+1.8**
PEL	comp=Z,58nm,1.0s			pmax	pmax		
PEL	**Peldehue**	**57.68**	**150**	IAMs_20	IAMs_20	08 04 52.4	
	comp=Z,9µm,20.0s						
RTCV	**Cerro Valdivia**	**57.71**	**147**	*i* P	**P**	**07 45 51.3**	**+1.6**
RES	**Resolute Bay**	**57.73**	**2**	P	**P**	**07 45 48.3**	**-0.8**
	comp=Z,80nm,0.8s,baz=191,slow=9.8,SNR=72						
RES	**Resolute Bay**	**57.73**	**2**	P	**P**	**07 45 48.6**	**-0.5**
RES	comp=Z,194nm,2.6s			pmax	pmax		
RES	**Resolute Bay**	**57.73**	**2**	IAmb	IAmb	07 45 49.4	
	comp=Z,186nm,1.1s						
PPLA	**Purkeypile**	**57.77**	**335**	P	**P**	**07 45 50.7**	**+0.9**
PPLA	comp=Z,279nm,1.4s			IAmb	IAmb	07 45 51.5	
MT05	**Renca**	**57.86**	**150**	IAMs_20	IAMs_20	08 04 48.0	
	comp=Z,8µm,20.0s						
BPAW	**Bear Paw Mtn.**	**57.88**	**337**	IAMs_20	IAMs_20	08 09 56.2	
	comp=Z,13µm,22.0s						
MEH	**Mehetia**	**57.94**	**235**	*e*T	T	08 48 28.5	
	comp=Z,30nm,0.2s						
AQDB	**Aquidauana**	**57.98**	**128**	*e*P	**P**	**07 45 51.2**	**-0.5**
CHGN	**Chignik**	**58.08**	**326**	IAmb	IAmb	07 45 54.2	
	comp=Z,490nm,2.0s						
ASAL	**Salagasta**	**58.14**	**148**	*i* P	**P**	**07 45 55.4**	**+2.7**
MLY	**Manley**	**58.26**	**338**	IAmb	IAmb	07 45 56.4	
	comp=Z,155nm,1.0s						
MLY	comp=Z,16µm,21.0s			IAMs_20	IAMs_20	08 10 58.3	
CNBA	**Chernabura Isl**	**58.28**	**324**	IAmb	IAmb	07 45 54.9	
	comp=Z,146nm,1.1s						
CNBA	comp=Z,8µm,21.0s			IAMs_20	IAMs_20	08 10 28.3	
ARCO	**CERRO ARCO**	**58.30**	**148**	*i* P	**P**	**07 45 55.2**	**+1.3**
ARAG	**Araguaiana, MT**	**58.36**	**121**	*e*P	**P**	**07 45 54.0**	**-0.5**
SVW2	**Sparrevohn**	**58.42**	**332**	IAMs_20	IAMs_20	08 14 02.4	
	comp=Z,9µm,22.0s						
AAGR	**Agrelo**	**58.54**	**148**	*i* P	**P**	**07 45 57.8**	**+2.3**
GO05	**Huala**	**58.65**	**152**	*i* P	**P**	**07 45 57.5**	**+1.3**
SMTB	**Santa Maria do**	**58.69**	**112**	*e*P	**P**	**07 45 56.8**	**0.0**
ACAN	**Cantantal**	**58.74**	**147**	*i* P	**P**	**07 45 58.9**	**+2.1**
TIAR	**Tiarei**	**58.78**	**237**	*e*T	T	08 49 31.4	
	comp=Z,6.3nm,0.3s						
NRS	**Narsarsuaq**	**58.83**	**28** ⇑	*i* P	**P**	**07 45 56.8**	**-0.2**
NRS	comp=Z,310nm,1.2s			pmax	pmax		
NRS	comp=Z,10µm,16.0s			MLR	MLR		
NRS	**Narsarsuaq**	**58.83**	**28**	IAMs_20	IAMs_20	08 14 41.1	
	comp=Z,9µm,19.0s						
NRS	**Narsarsuaq**	**58.83**	**28** ⇑	*i* P	**P**	**07 45 56.8**	**-0.2**
	comp=Z,313nm,1.2s						
	comp=Z,10µm,16.0s						
TVO	**Taravao**	**58.83**	**236**	*e*T	T	08 49 35.0	
	comp=Z,1.5nm,0.3s						
SDPT	**Sand Point**	**58.92**	**325**	P	**P**	**07 45 58.1**	**+0.4**
SDPT	comp=Z,250nm,1.3s			IAmb	IAmb	07 45 59.2	
PPT	**Papeete**	**58.97**	**237**	LR	LR	08 05 05.1	
	comp=Z,8µm,18.2s,baz=60,slow=29						
PPTF	**Pamatai, Papee**	**58.98**	**237**	IAMs_20	IAMs_20	08 04 43.9	
	comp=Z,9µm,20.0s						
PPT2	**Papeete2**	**58.98**	**237**	*e*S	**S**	**07 54 02.9**	**-1.4**
	comp=Z,11µm,26.8s						
PPT2	comp=Z,4µm,25.5s			*e*SS	**SS**	**07 57 57.0**	**-1.6**
PPT2	comp=Z,11µm,28.5s			*e*LQ	LQ	08 00 51.5	
PPT2	comp=Z,18µm,24.2s,baz=52			*e*LR	LR	08 03 23.8	
PPT2	**Papeete2**	**58.98**	**237**	*e*T	T	08 49 46.4	
	comp=Z,2.0nm,0.3s						
COLD	**Coldfoot**	**59.23**	**340**	IAmb	IAmb	07 46 03.6	
	comp=Z,169nm,1.4s						
TCA	**Tanti**	**59.44**	**144**	*i* P	**P**	**07 46 02.2**	**+0.5**
ROSB	**Rorio**	**59.44**	**104**	*e*P	**P**	**07 46 02.3**	**+0.3**
SFJD	**Kangerlussuaq**	**59.46**	**21** ⇑	*i* P	**P**	**07 46 01.1**	**-0.2**
SFJD	comp=Z,25nm,1.2s			pmax	pmax		
SFJD	comp=Z,600nm,17.0s			MLR	MLR		
SFJD	**Kangerlussuaq**	**59.46**	**21**	P	**P**	**07 46 00.7**	**-0.5**
SFJD	**Kangerlussuaq**	**59.46**	**21**	IAMs_20	IAMs_20	08 14 22.7	
	comp=Z,7µm,20.0s						
SFJD	**Kangerlussuaq**	**59.46**	**21** ⇑	*i* P	**P**	**07 46 01.1**	**-0.2**
	comp=Z,24nm,1.2s						
	comp=Z,590nm,17.0s						
MRA	**San Martin**	**59.64**	**146** ⇑	*i* P	**P**	**07 46 03.8**	**+0.7**
BI03	**Tigo**	**59.73**	**154**	IAmb	IAmb	07 46 07.3	
BI03	comp=Z,90nm,1.1s			IAMs_20	IAMs_20	08 05 53.9	
	comp=Z,7µm,19.0s						
TOLK	**Toolik Lake Re**	**59.81**	**341**	P	**P**	**07 46 04.6**	**+0.8**
	baz=124,SNR=68						
TOLK	baz=124			S	**S**	**07 54 18.1**	**+4.5**
TOLK	**Toolik Lake Re**	**59.81**	**341**	IAmb	IAmb	07 46 06.9	
	comp=Z,227nm,1.5s						
CPUP	**Villa Florida**	**60.46**	**135**	P	**P**	**07 46 08.6**	**-0.2**
	comp=Z,25nm,0.9s,baz=323,slow=7.9,SNR=30						
CPUP				LR	LR	08 11 45.9	
	comp=Z,7µm,19.9s,baz=333,slow=36						
CPUP	**Villa Florida**	**60.46**	**135**	P	**P**	**07 46 08.6**	**-0.2**
CPUP	comp=Z,43nm,1.1s			pmax	pmax		
CPUP	**Villa Florida**	**60.46**	**135**	P	**P**	**07 46 08.6**	**-0.2**
CPUP	**Villa Florida**	**60.46**	**135**	*e*P	**P**	**07 46 08.6**	**-0.2**
ILULI	**Ilulissat**	**60.49**	**18** ⇑	*i* P	**P**	**07 46 08.0**	**-0.3**
ILULI	comp=Z,280nm,1.2s			pmax	pmax		
ILULI	comp=Z,12µm,15.0s			MLR	MLR		
ILULI	**Ilulissat**	**60.49**	**18**	P	**P**	**07 46 08.1**	**-0.3**
ILULI	**Ilulissat**	**60.49**	**18** ⇑	*i* P	**P**	**07 46 08.0**	**-0.3**
	comp=Z,279nm,1.2s						
	comp=Z,12µm,15.0s						
BDFB	**Brasilia**	**61.47**	**119**	P	**P**	**07 46 16.1**	**+0.1**
	comp=Z,14nm,0.9s,baz=282,slow=5.4,SNR=18						
BDFB	**Brasilia**	**61.47**	**119**	P	**P**	**07 46 16.2**	**+0.2**
BDFB	comp=Z,61nm,1.3s			pmax	pmax		
BDFB	comp=Z,7µm,19.0s			MLR	MLR		
BDFB	**Brasilia**	**61.47**	**119**	P	**P**	**07 46 16.2**	**+0.2**
BDFB	comp=Z,7µm,19.0s			IAMs_20	IAMs_20	08 15 42.5	
AKUT	**Akutan**	**61.64**	**323**	P	**P**	**07 46 15.9**	**-0.5**
AKUT	comp=Z,163nm,1.1s			IAmb	IAmb	07 46 17.4	
TRCB	**Terra Rica**	**61.65**	**128**	*e*P	**P**	**07 46 16.6**	**-0.3**
ITRB	**Iturama**	**61.66**	**124**	*e*P	**P**	**07 46 17.5**	**+0.4**
LC01	**Cunco**	**61.95**	**155**	P	**P**	**07 46 19.4**	**+0.8**
LC01	comp=Z,74nm,0.9s			IAmb	IAmb	07 46 21.9	
LC01	comp=Z,7µm,18.0s			IAMs_20	IAMs_20	08 07 56.8	
PCMB	**Pacaembu**	**62.01**	**127**	*e*P	**P**	**07 46 19.1**	**-0.3**
UNV	**Unalaska Valle**	**62.01**	**322**	P	**P**	**07 46 19.2**	**+0.3**
TBI	**Tubuai**	**62.14**	**231**	*e*S	**S**	**07 54 43.6**	**-0.8**
TBI	comp=Z,6µm,33.5s			*e*SS	**SS**	**07 58 45.8**	**-2.1**
TBI	comp=Z,3µm,31.2s			*e*LQ	LQ	08 02 10.1	
TBI	comp=Z,4µm,40.2s			*e*LR	LR	08 04 48.3	
TBI	**Tubuai**	**62.14**	**231**	*e*T	T	08 53 43.2	
	comp=Z,16µm,24.5s,baz=56						
KULLO	**Kullorsuaq**	**62.23**	**12** ⇑	*i* P	**P**	**07 46 20.2**	**+0.2**
KULLO	comp=Z,44nm,0.3s			pmax	pmax		
KULLO	comp=Z,360nm,1.1s			MLR	MLR		
KULLO	**Kullorsuaq**	**62.23**	**12** ⇑	*i* P	**P**	**07 46 20.2**	**+0.2**
	comp=Z,11µm,18.0s						
	comp=Z,356nm,1.1s						
	comp=Z,11µm,18.0s						
IPMB	**Ipameri, GO**	**62.49**	**121**	*e*P	**P**	**07 46 22.6**	**0.0**
ITQB	**Itaqui**	**63.12**	**137**	*e*P	**P**	**07 46 26.5**	**-0.1**
PTGB	**Pitanga**	**63.19**	**130**	*e*P	**P**	**07 46 28.0**	**+0.7**
NBMO	**Morrinhos-CE**	**63.39**	**103**	*e*P	**P**	**07 46 29.8**	**+1.0**
H07S1	**FLORES T-PHASE**	**63.83**	**54**	*e*P	**P**	**07 46 29.9**	**-1.4**
BB19B	**Bebedouro**	**63.84**	**124**	*e*P	**P**	**07 46 31.7**	**+0.1**
H07N1	**FLORES T-PHASE**	**63.89**	**54**	*e*P	**P**	**07 46 32.4**	**+0.7**
RDOG	**Red Dog Mine**	**63.95**	**338**	IAmb	IAmb	07 46 33.1	
	comp=Z,179nm,1.3s						
PLCA	**Paso Flores**	**64.05**	**155**	P	**P**	**07 46 33.9**	**+1.3**
	comp=Z,41nm,0.9s,baz=333,slow=7.3,SNR=42						
PLCA				LR	LR	08 08 41.5	
	comp=Z,8µm,18.4s,baz=340,slow=30						
PLCA	**Paso Flores**	**64.05**	**155**	P	**P**	**07 46 33.8**	**+1.2**
PLCA	comp=Z,53nm,1.1s			pmax	pmax		
PLCA	**Paso Flores**	**64.05**	**155**	P	**P**	**07 46 33.8**	**+1.2**
PLCA	**Paso Flores**	**64.05**	**155**	*e*P	**P**	**07 46 32.0**	**-0.6**
FRTB	**Fartura**	**64.28**	**127**	*e*P	**P**	**07 46 33.8**	**-0.6**
JANB	**Januaria**	**64.33**	**116**	*e*P	**P**	**07 46 35.2**	**+0.3**
SPIA	**Saint Paul Isl**	**64.63**	**326**	IAMs_20	IAMs_20	08 19 18.8	
	comp=Z,8µm,18.0s						
ITAB	**Concordia**	**64.64**	**132**	*e*P	**P**	**07 46 36.5**	**-0.2**
LL01	**San Ignacio de**	**64.72**	**157**	IAMs_20	IAMs_20	08 08 32.3	
	comp=Z,11µm,18.0s						
RCLB	**Rio Claro- Sao**	**65.34**	**125**	*e*P	**P**	**07 46 41.9**	**+0.4**
SUMG	**Summit**	**65.72**	**17** ⇑	*i* P	**P**	**07 46 43.9**	**+0.4**
SUMG	comp=Z,1µm,1.2s			pmax	pmax		
SUMG	comp=Z,20µm,16.0s			MLR	MLR		
SUMG	**Summit**	**65.72**	**17** ⇑	*i* P	**P**	**07 46 43.9**	**+0.4**
	comp=Z,1µm,1.2s						
	comp=Z,20µm,16.0s						
PCED	**Cedros**	**65.80**	**55**	*e*P	**P**	**07 46 43.2**	**-0.9**
	comp=Z,194nm,1.0s						
TIJ01	**Guaruva-PR**	**65.81**	**129**	*e*P	**P**	**07 46 44.4**	**0.0**
LPA	**La Plata**	**65.87**	**142**	*e*P	P	07 46 39.4	-5.0
LPA				PCP	**PcP**	**07 47 14.3**	**-1.0**
LPA				pPP		07 49 14.9	
LPA				PKIKP	**PKiKP**	**07 53 20.1**	**+2.0**
LPA				S	**S**	**07 55 26.6**	**-3.6**
LPA				SKIKP		07 56 46.2	
LPA				SKIKS		08 00 18.5	
LPA				SSS	SSS	08 02 55.6	
PCAN	**Candelaria**	**65.98**	**55**	*e*P	**P**	**07 46 44.9**	**-0.4**
	comp=Z,299nm,1.1s						
SPB	**Sao Paulo**	**66.05**	**126**	IAMs_20	IAMs_20	08 14 09.6	
	comp=Z,6µm,21.0s						
SPB	**Sao Paulo**	**66.05**	**126**	*e*P	**P**	**07 46 46.2**	**+0.3**
VAO	**Valinhos**	**66.09**	**125**	*e*P	**P**	**07 46 46.5**	**+0.2**
ROSA	**Rosais**	**66.16**	**55**	*e*P	**P**	**07 46 45.7**	**-0.7**
	comp=Z,173nm,1.2s						
ROSA	**Rosais**	**66.16**	**55**	IAmb	IAmb	07 46 48.9	
	comp=Z,128nm,1.0s						
PMAN	**Manadas**	**66.28**	**55**	*e*P	**P**	**07 46 47.4**	**+0.2

BORG Borgarnes 70.28 27 P **P** **07 47 10.7 -1.1**
BORG pmax pmax
comp=Z,214nm,1.1s
BORG MLR MLR
comp=Z,6µm,22.0s
BORG Borgarnes 70.28 27 P **P** **07 47 10.7 -1.1**
BORG Borgarnes 70.28 27 IAms_20 IAms_20 08 18 28.8
comp=Z,6µm,22.0s
SCO Scoresbysund 70.36 21⇑*iP* **P** **07 47 12.3 +0.1**
SCO pmax pmax
comp=Z,95nm,1.1s
SCO MLR MLR
comp=Z,10µm,14.0s
SCO Scoresbysund 70.36 21 IAmb IAmb 07 47 23.1
comp=Z,83nm,1.0s
SCO IAMs_20 IAMs_20 08 23 60.0
comp=Z,8µm,18.0s
SCO Scoresbysund 70.36 21⇑*iP* **P** **07 47 12.3 +0.1**
comp=Z,95nm,1.1s
comp=Z,10µm,14.0s
DAG Danmarks Havn 71.74 14⇑*iP* **P** **07 47 20.0 -0.5**
DAG pmax pmax
comp=Z,210nm,1.1s
DAG MLR MLR
comp=Z,15µm,15.0s
DAG Danmarks Havn 71.74 14⇑*iP* **P** **07 47 20.0 -0.5**
comp=Z,206nm,1.1s
comp=Z,15µm,15.0s
NOR Nord 72.39 9⇑*iP* **P** **07 47 24.6 +0.3**
NOR pmax pmax
comp=Z,280nm,1.3s
NOR MLR MLR
comp=Z,16µm,15.0s
NOR Nord 72.39 9⇑*iP* **P** **07 47 24.6 +0.3**
comp=Z,281nm,1.3s
comp=Z,16µm,15.0s
GO09 Cerro Castillo 72.50 162 IAMs_20 IAMs_20 08 12 48.3
comp=Z,10µm,20.0s
KNTN Kanton 72.52 261 IAMs_20 IAMs_20 08 10 52.6
comp=Z,6µm,20.0s
BILL Bilibino 75.37 337*ce*P **P** **07 47 42.8 +0.9**
BILL pmax pmax
comp=Z,248nm,2.0s
BILL MLR MLR
comp=Z,12µm,18.0s
BILL Bilibino 75.37 337 P **P** **07 47 42.9 +0.9**
BILL IAmb IAmb 07 47 43.9
comp=Z,144nm,1.2s
PMOZ Porto Moniz, M 75.81 60 *e*P **P** **07 47 44.8 -0.5**
PMOZ *e*S **S** **07 57 34.3 +7.9**
PMOZ Porto Moniz, M 75.81 60 *e*LR LR 08 11 58.7
comp=Z,6µm,22.0s
PMAR Madeira 76.06 60 *e*P **P** **07 47 47.3 +0.5**
comp=Z,256nm,1.8s
AFI Afiamalu 76.40 251 IAMs_20 IAMs_20 08 16 59.2
comp=Z,4µm,18.0s
PMPST Porto Santo, M 76.47 59 *e*P **P** **07 47 48.9 0.0**
comp=Z,357nm,1.9s
PMPS Porto Santo 76.47 59 *e*P **P** **07 47 49.2 +0.3**
comp=Z,286nm,1.7s
NIUE Niue 76.73 245 IAMs_20 IAMs_20 08 13 49.1
comp=Z,7µm,19.0s
USHA Ushuaia 76.76 161 LR LR 08 15 52.0
comp=Z,8µm,18.1s,baz=330,slow=31
KBS Kingsbay 77.63 11*ce*P **P** **07 47 56.3 +1.7**
KBS pmax pmax
comp=Z,165nm,1.1s
KBS Kingsbay 77.63 11 P **P** **07 47 56.1 +1.6**
KBS IAmb IAmb 07 47 57.2
comp=Z,213nm,1.1s
KBS Kingsbay 77.63 11⇑*iP* **P** **07 47 56.2 +1.7**
KBS IVmB_BB 07 47 56.9
comp=Z,4µm,3.6s
KBS *e*S **S** **07 57 47.8 +3.2**
KBS IVMs_BB IVMs_BB 08 27 23.0
comp=Z,3µm,15.2s
EFI East Falkland 77.97 154 IAMs_20 IAMs_20 08 16 36.5
comp=Z,7µm,20.0s
KPL Plockton 78.62 33⇑*eP* **P** **07 48 00.5 +0.1**
KPL IAmb IAmb 07 48 01.1
comp=Z,208nm,1.1s
KPL IAMs_20 IAMs_20 08 19 28.3
comp=Z,7µm,25.8s
SPA0 Spitsbergen Ar 78.77 11 IAmb IAmb 07 48 02.5
comp=Z,171nm,1.2s
SPA0 Spitsbergen Ar 78.77 11⇑*iP* **P** **07 48 01.3 +0.4**
SPA0 IVmB_BB 07 48 02.2
comp=Z,3µm,4.9s
SPA0 *e*S **S** **07 58 03.2 +6.3**
SPA0 IVMs_BB IVMs_BB 08 26 06.6
comp=Z,8µm,14.4s
SPITS Spitsbergen Ar 78.77 11 P **P** **07 48 01.3 +0.4**
SPITS pmax pmax
comp=Z,50nm,0.7s
KAC Achnashellach 78.77 33⇑*eP* **P** **07 48 01.2 -0.1**
LAWE Loch Awe, Argy 79.02 34⇑*eP* **P** **07 48 02.6 0.0**
LAWE IAmb IAmb 07 48 03.1
comp=Z,133nm,1.2s
LAWE IAMs_20 IAMs_20 08 26 51.3
comp=Z,7µm,17.6s
HSPB Hornsund (broa 79.19 12 *ePcP* **PcP** **07 48 12.2 +0.7**
HSPB *ePP* **PP** **07 51 02.0 -0.4**
HSPB *e*SKKSac **SKKSac** **07 58 18.6 -0.2**
HSPB LMZ LR 08 28 38.1
comp=Z,12nm,17.5s
HSPB Hornsund (broa 79.19 12⇑*iP* **P** **07 48 03.9 +0.6**
HSPB *e*S **S** **07 57 59.1 -2.2**
HSPB IVMs_BB IVMs_BB 08 28 44.8
comp=Z,4µm,16.5s
BIGH Upper Bighouse 79.24 32⇑*eP* **P** **07 48 04.0 +0.2**
BIGH IAMs_20 IAMs_20 08 26 42.1
comp=Z,6µm,18.1s
MDO Dochfour 79.28 33⇑*eP* **P** **07 48 03.8 -0.2**
MLA1 Latheron 79.57 32⇑*eP* **P** **07 48 05.8 +0.2**
EAB Aberfoyle 79.61 34⇑*eP* **P** **07 48 05.7 -0.2**
INVG Invergeldie, C 79.71 34⇑*eP* **P** **07 48 06.3 -0.1**
INVG IAmb IAmb 07 48 06.9
comp=Z,115nm,1.3s
INVG IAMs_20 IAMs_20 08 19 16.2
comp=Z,8µm,29.3s
GAL1 Galloway 79.75 36⇑*eP* **P** **07 48 06.7 0.0**
GAL1 IAMs_20 IAMs_20 08 23 46.6
comp=Z,7µm,20.0s
MCD Coleburn Disti 79.82 33⇑*eP* **P** **07 48 07.4 +0.4**
WAL1 Walls 79.89 30⇑*eP* **P** **07 48 07.7 +0.4**
NEWG New Galloway 79.95 35⇑*eP* **P** **07 48 07.7 -0.1**
NEWG IAmb IAmb 07 48 09.0
comp=Z,175nm,1.5s
NEWG IAMs_20 IAMs_20 08 23 42.4
comp=Z,8µm,19.5s
WIM Isle of Man 79.96 36⇑*eP* **P** **07 48 07.6 -0.2**
IOMK Kirk Michael 79.99 36⇑*eP* **P** **07 48 08.2 +0.3**
IOMK IAmb IAmb 07 48 08.7
comp=Z,354nm,1.2s
IOMK IAMs_20 IAMs_20 08 23 56.5
comp=Z,17µm,18.2s
YEL1 Yell 80.06 30 *eP* **P** **07 48 09.1 +0.9**
LRW Lerwick 80.14 30⇑*eP* **P** **07 48 09.0 +0.4**
LRW IAMs_20 IAMs_20 08 21 46.1
comp=Z,6µm,20.5s
EDU Dundee 80.23 34⇑*eP* **P** **07 48 09.4 +0.2**
WPS Cemaes, Angles 80.25 37⇑*eP* **P** **07 48 09.0 -0.3**
WPS IAMs_20 IAMs_20 08 23 47.6
comp=Z,7µm,19.5s
EDI Edinburgh 80.31 34⇑*eP* **P** **07 48 09.9 +0.3**
WLF1 Llynfaes 80.34 37⇑*eP* **P** **07 48 09.8 -0.1**
WLF1 IAMs_20 IAMs_20 08 23 49.6
comp=Z,16µm,22.2s
WME Myndd Eilian 80.37 37⇑*eP* **P** **07 48 09.8 -0.2**
DRUM Mains of Drumt 80.40 33⇑*eP* **P** **07 48 10.4 +0.3**
DRUM IAMs_20 IAMs_20 08 20 45.2
comp=Z,7µm,25.0s
EBL Broad Law 80.42 35⇑*eP* **P** **07 48 09.9 -0.4**
ESK Eskdalemuir 80.46 35⇑*eP* **P** **07 48 10.5 0.0**
ESK IAmb IAmb 07 48 10.9
comp=Z,147nm,1.1s
ESK IAMs_20 IAMs_20 08 23 26.9
comp=Z,8µm,21.1s
ESK Eskdalemuir 80.46 35 P **P** **07 48 09.7 -0.8**
ESK pmax pmax
comp=Z,142nm,1.2s
ESK MLR MLR
comp=Z,7µm,20.0s
ESK Eskdalemuir 80.46 35 P **P** **07 48 09.7 -0.8**
ESK IAmb IAmb 07 48 11.3
comp=Z,142nm,1.1s
ESK Eskdalemuir 80.46 35 IAMs_20 IAMs_20 08 24 02.2
comp=Z,7µm,20.0s
EKA Eskdalemuir Ar 80.48 35 P **P** **07 48 10.3 -0.3**
EKA pmax pmax
comp=Z,4.0nm,0.7s
RSBS Rosebush, Pemb 80.49 39⇑*eP* **P** **07 48 10.6 -0.1**
RSBS IAMs_20 IAMs_20 08 25 06.3
comp=Z,6µm,16.5s
YLL Llanberis 80.51 37 *eP* **P** **07 48 10.6 -0.2**
ESY Stoneypath 80.62 34⇑*eP* **P** **07 48 11.4 +0.1**
KESW Keswick, Cumbr 80.72 36⇑*eP* **P** **07 48 11.8 -0.1**
KESW IAMs_20 IAMs_20 08 24 15.2
comp=Z,6µm,21.6s
PGAV Gavieira, Arco 80.73 49⇑*iP* **P** **07 48 12.1 -0.2**
comp=Z,117nm,1.6s
PGAV Gavieira, Arco 80.73 49 *ePP* PP 07 51 16.6 +0.4
PGAV *e*S S 07 58 28.8 +10
PGAV Gavieira, Arco 80.73 49 *e*LR LR 08 15 11.5
comp=Z,4µm,20.0s
PMAFR Mafra 80.73 52⇑*iP* **P** **07 48 12.1 -0.2**
comp=Z,160nm,1.9s
PMAFR Mafra 80.73 52 *e*S S 07 58 28.9 +10
LLW Llanuwchllyn 80.89 38⇑*eP* **P** **07 48 12.1 -0.7**
LLW IAmb IAmb 07 48 13.0
comp=Z,34nm,1.1s
LLW IAMs_20 IAMs_20 08 24 29.7
comp=Z,3µm,17.1s
LIS Lisbon 80.89 52 *eP* **P** **07 48 12.8 -0.3**
LIS AMS AMS 08 22 03.1
comp=Z,6µm,20.5s
LIS Lisbon 80.89 52 *eP* **P** **07 48 12.8 -0.3**
LIS Lisbon 80.89 52⇑*iP* **P** **07 48 13.2 +0.1**
comp=Z,250nm,2.1s
PSBE So Bento 80.96 52⇑*iP* **P** **07 48 13.5 0.0**
comp=Z,225nm,2.2s
PSBE So Bento 80.96 52 *e*S **S** **07 58 24.6 +3.3**
PCAB Cabril 80.97 49 *iP* **P** **07 48 13.4 -0.2**
comp=Z,122nm,1.6s
PCAB Cabril 80.97 49 *ePP* PP 07 51 22.5 +4.4
PCAS Casmilo, Conde 81.04 51⇑*iP* **P** **07 48 14.4 +0.5**
comp=Z,298nm,1.5s
PCAS Casmilo, Conde 81.04 51 *e*S S 07 58 31.7 +10
COI Coimbra 81.07 51⇑*iP* **P** **07 48 14.0 0.0**
comp=Z,158nm,2.5s
COI Coimbra 81.07 51 *e*S **S** **07 58 30.6 +8.3**
COI Coimbra 81.07 51 IAmb IAmb 07 48 15.0
comp=Z,131nm,1.2s
COI IAMs_20 IAMs_20 08 19 52.6
comp=Z,5µm,21.0s
FOEL Foel Wylfa 81.14 37⇑*eP* **P** **07 48 13.5 -0.7**
FOEL IAmb IAmb 07 48 14.5
comp=Z,93nm,1.1s
FOEL IAMs_20 IAMs_20 08 24 25.1
comp=Z,6µm,21.5s
BJO1 Bjornoya 81.23 14⇑*iP* **P** **07 48 14.9 +0.7**
BJO1 IVmB_BB 07 48 15.9
comp=Z,5µm,2.9s
BJO1 *e*S **S** **07 58 25.5 +2.7**
BJO1 IVMs_BB IVMs_BB 08 24 51.0
comp=Z,3µm,21.0s
HOPEN Hopen 81.28 11⇑*iP* **P** **07 48 15.1 +0.6**
HOPEN IVmB_BB 07 48 15.9
comp=Z,5µm,3.3s
HOPEN *e*S **S** **07 58 25.4 +2.2**
HOPEN IVMs_BB IVMs_BB 08 25 43.6
comp=Z,3µm,18.3s
EDMD Edmundbyers 81.28 35⇑*eP* **P** **07 48 15.4 +0.5**
EDMD IAMs_20 IAMs_20 08 23 26.9
comp=Z,7µm,22.0s
PVRL Vila Real 81.31 50⇑*iP* **P** **07 48 15.1 -0.3**
comp=Z,120nm,1.8s
PVRL Vila Real 81.31 50 *ePP* PP 07 51 23.3 +2.4
PVIS Viseu 81.32 50⇑*iP* **P** **07 48 15.3 -0.2**
comp=Z,121nm,1.3s
HLM1 Long Mynd 81.44 38⇑*eP* **P** **07 48 15.6 -0.1**
HLM1 IAmb IAmb 07 48 16.9
comp=Z,116nm,1.1s
HLM1 IAMs_20 IAMs_20 08 24 57.6
comp=Z,8µm,18.0s
PMTG Montargil 81.50 52⇑*iP* **P** **07 48 16.1 -0.3**
comp=Z,161nm,2.2s
PMTG Montargil 81.50 52 *e*S S 07 58 36.2 +9.3
PTEO Sao Teotonio 81.51 53⇑*iP* **P** **07 48 16.6 +0.2**
comp=Z,262nm,2.1s
PNCL Nicolau / Gran 81.52 53⇑*iP* **P** **07 48 16.4 -0.1**
comp=Z,112nm,2.5s
PNCL Nicolau / Gran 81.52 53 *e*S **S** **07 58 35.4 +8.3**
MCH1 Michaelchurch 81.52 38⇑*eP* **P** **07 48 16.0 -0.1**
MCH1 IAmb IAmb 07 48 19.9
comp=Z,45nm,1.0s
MCH1 IAMs_20 IAMs_20 08 25 29.1
comp=Z,10µm,18.0s
PFVI Vila Bisbo 81.54 54 P **P** **07 48 17.8 +1.2**
SNR=5.5
PFVI Vila Bisbo 81.54 54⇑*iP* **P** **07 48 16.7 +0.1**
comp=Z,201nm,1.2s
PFVI Vila Bisbo 81.54 54 *e*S S 07 58 37.9 +11
PFVI Vila Bisbo 81.54 54 IAmb IAmb 07 48 18.6
comp=Z,131nm,1.0s
PFVI IAMs_20 IAMs_20 08 21 52.3
comp=Z,7µm,19.0s
MORF Marmelete 81.63 54 *eP* **P** **07 48 16.9 -0.2**
MORF *e*S **S** **07 58 27.7 -0.7**
MORF AMS AMS 08 22 50.6
comp=Z,6µm,20.4s
MORF Marmelete 81.63 54 *eP* **P** **07 48 16.9 -0.2**
MORF *e*S **S** **07 58 27.7 -0.7**
MORF Marmelete 81.63 54⇑*iP* **P** **07 48 17.3 +0.1**
comp=Z,157nm,2.1s
MORF Marmelete 81.63 54 *e*S **S** **07 58 36.8 +8.4**
MTE Manteigas 81.66 50⇑*iP* **P** **07 48 16.9 -0.4**
comp=Z,163nm,2.3s
MTE Manteigas 81.66 50 *ePP* PP 07 51 21.8 -2.1
MTE *e*S **S** **07 58 36.3 +7.6**
MTE Manteigas 81.66 50 *e*LR LR 08 16 13.4
comp=Z,5µm,18.0s
MTE Manteigas 81.66 50 IAmb IAmb 07 48 18.5
comp=Z,88nm,0.9s
MTE IAMs_20 IAMs_20 08 22 16.2
comp=Z,5µm,20.0s
STNC Stoke 81.66 37⇑*eP* **P** **07 48 17.5 +0.6**
STNC IAMs_20 IAMs_20 08 24 38.4
comp=Z,7µm,20.7s
HPK Haverah Park 81.73 36⇑*eP* **P** **07 48 17.7 +0.4**
HPK IAMs_20 IAMs_20 08 25 07.0
comp=Z,6µm,18.0s
EVO Evora 81.80 52⇑*iP* **P** **07 48 17.9 -0.1**
comp=Z,153nm,1.8s
EVO Evora 81.80 52 *ePP* PP 07 51 22.7 -2.3
MESJ Messejana 81.82 53 *eP* **P** **07 48 17.9 -0.2**
MESJ *e*S **S** **07 58 29.5 -0.8**
MESJ AMS AMS 08 23 04.7
comp=Z,4µm,17.6s
MESJ Messejana 81.82 53 *eP* **P** **07 48 17.9 -0.2**
MESJ *e*S **S** **07 58 29.4 -0.8**
MESJ Messejana 81.82 53⇑*iP* **P** **07 48 18.1 0.0**
comp=Z,120nm,2.0s
MVO Moncorvo 81.84 50⇑*iP* **P** **07 48 18.2 0.0**
comp=Z,164nm,2.0s
MVO Moncorvo 81.84 50 *ePP* PP 07 51 26.3 +1.0
MVO *e*S **S** **07 58 37.4 +6.9**
MVO Moncorvo 81.84 50 *e*LR LR 08 18 02.9
comp=Z,6µm,18.0s
LBWR Ladybower, Pea 81.84 37⇑*eP* **P** **07 48 18.0 +0.1**
LBWR IAmb IAmb 07 48 19.0
comp=Z,247nm,1.3s
LBWR IAMs_20 IAMs_20 08 25 56.6
comp=Z,6µm,17.0s
PCBR Castelo Branco 81.86 51⇑*iP* **P** **07 48 18.1 -0.1**
comp=Z,142nm,1.9s
PCBR Castelo Branco 81.86 51 *ePP* PP 07 51 25.1 -0.3
PBRG Braganca 81.87 49⇑*iP* **P** **07 48 18.4 0.0**
comp=Z,117nm,1.7s
PBRG Braganca 81.87 49 *ePP* PP 07 51 29.2 +3.6
PBRG *e*S **S** **07 58 39.2 +8.4**
PCVE Castro Verde 82.01 53⇑*iP* **P** **07 48 19.2 +0.1**
comp=Z,142nm,1.8s
PCVE Castro Verde 82.01 53 *e*S S 07 58 42.1 +10
PESTR Estremoz 82.03 52 P **P** **07 48 19.1 0.0**
SNR=8.4
PESTR Estremoz 82.03 52 *e*S S 07 58 42.1 +10
PMRV Marv??o 82.03 51⇑*iP* **P** **07 48 19.0 -0.2**
comp=Z,180nm,2.0s
PMRV Marv??o 82.03 51 *ePP* PP 07 51 23.9 -3.0
PMRV *e*S **S** **07 58 40.0 +7.6**
PMRV Marv??o 82.03 51 *e*LR LR 08 16 14.0
comp=Z,4µm,18.0s
PBEJ Beja 82.04 53⇑*iP* **P** **07 48 19.3 0.0**
comp=Z,138nm,1.4s
GDLE Glaisdale, N Y 82.05 36⇑*eP* **P** **07 48 19.5 +0.6**
GDLE IAmb IAmb 07 48 20.2
comp=Z,133nm,1.1s
GDLE IAMs_20 IAMs_20 08 24 55.9
comp=Z,6µm,22.4s
STRD Stroud 82.08 38⇑*eP* **P** **07 48 18.8 -0.3**
STRD IAMs_20 IAMs_20 08 25 55.1
comp=Z,9µm,16.8s
PBDV Barranco-do-Ve 82.20 54⇑*iP* **P** **07 48 20.4 +0.3**
comp=Z,220nm,1.6s
PBDV Barranco-do-Ve 82.20 54 *e*S **SKSac** **07 58 44.1 +4.4**
CWF Charnwood Fore 82.29 37⇑*eP* **P** **07 48 20.4 +0.2**
CWF IAMs_20 IAMs_20 08 24 57.8
comp=Z,6µm,20.2s
PVAQ Vaqueiros 82.32 53 P **P** **07 48 21.8 +1.1**
SNR=8.4
PVAQ Vaqueiros 82.32 53⇑*iP* **P** **07 48 21.0 +0.3**
comp=Z,137nm,2.2s
PVAQ Vaqueiros 82.32 53 *e*S **SKSac** **07 58 45.2 +4.8**
PVAQ Vaqueiros 82.32 53 *e*LR LR 08 14 42.4
comp=Z,6µm,18.0s
PVAQ Vaqueiros 82.32 53 IAmb IAmb 07 48 22.1
comp=Z,136nm,1.2s
PVAQ IAMs_20 IAMs_20 08 23 24.0
comp=Z,6µm,19.0s
SEY Seymchan 82.32 334 P **P** **07 48 21.1 +0.9**
comp=Z,43nm,0.9s,baz=88,slow=5.2,SNR=103
SEY Seymchan 82.32 334*c iP* **P** **07 48 21.7 +1.5**
SWN1 Swindon 82.37 38⇑*eP* **P** **07 48 21.1 +0.4**
SWN1 IAMs_20 IAMs_20 08 26 05.1
comp=Z,8µm,16.6s
FOO Floro 82.52 28⇑*iP* **P** **07 48 21.5 +0.3**
FOO IVmB_BB 07 48 23.1
comp=Z,5µm,2.8s
FOO *e*S **S** **07 58 37.7 +1.2**
FOO IVMs_BB IVMs_BB 08 30 44.8
comp=Z,2µm,15.5s
SUE Sulen 82.60 28⇑*iP* **P** **07 48 22.4 +0.8**
SUE IVmB_BB 07 48 23.7
comp=Z,7µm,2.8s
SUE *e*S **S** **07 58 35.4 -1.9**
SUE IVMs_BB IVMs_BB 08 28 11.1
comp=Z,2µm,16.5s
LMK Market Rasen 82.62 36⇑*eP* **P** **07 48 22.8 +0.8**
LMK IAMs_20 IAMs_20 08 31 31.7
comp=Z,5µm,15.5s
PET Petropavlovsk 82.65 323*ce*P **P** **07 48 23.3 +1.2**
PET *e* 07 51 31.2
PET *i* S **S** **07 58 38.3 +0.1**
PET *e*PPS PPS 07 59 45.0
PET *e*SS **SS** **08 04 08.3 +8.7**
PET pmax pmax
comp=Z,161nm,1.6s
PET pmax pmax
comp=Z,2µm,15.2s
PET MLR MLR
comp=Z,5µm,17.0s
PET Petropavlovsk 82.65 323 P **P** **07 48 23.1 +1.0**
PET IAMs_20 IAMs_20 08 26 51.3
comp=Z,5µm,18.0s
WOL Wolverton 82.78 39⇑*eP* **P** **07 48 22.9 +0.1**
WOL IAMs_20 IAMs_20 08 26 18.9
comp=Z,6µm,17.1s
LOF Lofoten 83.00 20⇑*iP* **P** **07 48 24.2 +0.6**
LOF *e*S **S** **07 58 45.8 +4.7**
LOF IVMsBB 08 26 18.5
comp=Z,2µm,16.4s
ASK Askoy 83.01 29⇑*iP* **P** **07 48 24.7 +1.0**
BER Bergen 83.11 29 P **P** **07 48 25.4 +1.1**
BER pmax pmax
comp=Z,145nm,2.5s
BER Bergen 83.11 29⇑*iP* **P** **07 48 25.3 +1.0**
BER *e*S **S** **07 58 46.2 +3.7**
AKN Aaknes 83.15 27⇑*iP* **P** **07 48 25.8 +1.2**
AKN *e*S **S** **07 58 46.5 +3.5**
PEA0B Petropavlovsk- 83.17 323 IAMs_20 IAMs_20 08 26 57.9
comp=Z,3µm,18.0s
PETK Petropavlovsk- 83.17 323 P **P** **07 48 26.2 +1.4**
comp=Z,49nm,0.9s,baz=80,slow=11,SNR=43
HYA Hoyanger 83.19 28⇑*iP* **P** **07 48 25.7 +1.0**
HYA *e*S **S** **07 58 41.4 -1.9**
MOL Molde 83.22 26⇑*iP* **P** **07 48 25.9 +1.1**
MOL IVmB_BB 07 48 26.9
comp=Z,5µm,2.7s
MOL *e*S **S** **07 58 46.2 +2.5**
MOL IVMs_BB IVMs_BB 08 26 08.0
comp=Z,2µm,19.5s
WACR West Acre 83.41 37⇑*eP* **P** **07 48 26.3 +0.3**
WACR IAmb IAmb 07 48 26.9
comp=Z,454nm,1.2s
WACR IAMs_20 IAMs_20 08 26 54.9
comp=Z,7µm,17.3s
SRHM Skhour des Reh 83.51 58 P **P** **07 48 28.0 +0.9**
SNR=12
KMY Karmoy 83.52 30⇑*iP* **P** **07 48 26.7 +0.3**
KMY *e*S **S** **07 58 44.9 -1.8**
TTIG Tnine Tigouga, 83.59 60 P **P** **07 48 29.0 +1.3**
SNR=5.6
KONS Konsvik 83.64 22⇑*iP* **P** **07 48 27.6 +0.7**
STEI Steigen 83.66 20⇑*iP* **P** **07 48 27.7 +0.7**
STEI IVmB_BB 07 48 28.8
comp=Z,5µm,2.6s
STEI *e*S **S** **07 58 49.2 +1.4**
STEI IVMs_BB IVMs_BB 08 30 00.6
comp=Z,2µm,14.9s
AVE Averroes 83.68 57 P **P** **07 48 28.8 +0.9**
SNR=12
STOK Stokkvaagen 83.69 22 *eP* **P** **07 48 27.1 0.0**
OUK Oukaimeden 83.89 59 P **P** **07 48 31.0 +1.6**
SNR=14
ODD1 Odda 83.89 29⇑*iP* **P** **07 48 30.2 +1.8**
ODD1 IVmB_BB 07 48 30.9
comp=Z,6µm,2.9s
ODD1 *e*S **S** **07 58 57.4 +6.8**
TRO Tromso 83.89 18⇑*iP* **P** **07 48 29.0 +0.8**
TRO IVmB_BB 07 48 29.8
comp=Z,5µm,2.6s
TRO *e*S **S** **07 58 45.7 -4.4**
TRO IVMs_BB IVMs_BB 08 30 48.9
comp=Z,2µm,17.6s
RTC Rabat Centre 83.93 56 P **P** **07 48 31.0 +1.9**
SNR=10.0
BLS5 Blasjo 84.01 29⇑*iP* **P** **07 48 30.4 +1.4**
BLS5 IVmB_BB 07 48 31.3
comp=Z,5µm,2.7s
BLS5 *e*S **S** **07 58 53.5 +1.8**
BLS5 IVMs_BB IVMs_BB 08 23 55.1
comp=Z,2µm,27.0s
TBLU Trondheim 84.06 25⇑*iP* **P** **07 48 30.2 +1.1**
TBLU IVmB_BB 07 48 30.9
comp=Z,4µm,2.6s
TBLU *e*S **S** **07 58 47.6 -4.5**
TBLU IVMs_BB IVMs_BB 08 28 19.7
comp=Z,2µm,18.4s
HORN Hornachuelos 84.07 52 P **P** **07 48 29.9 +0.2**
SNR=21
DOMB Dombas 84.09 26⇑*iP* **P** **07 48 30.4 +1.0**
DOMB IVmB_BB 07 48 31.1
comp=Z,4µm,2.7s
DOMB *e*S **S** **07 58 56.1 +3.6**
DOMB IVMs_BB IVMs_BB 08 26 02.9
comp=Z,2µm,22.8s
NSS Namsos 84.15 24⇑*iP* **P** **07 48 30.1 +0.5**
NSS IVmB_BB 07 48 31.1
comp=Z,4µm,2.8s
NSS *e*S **S** **07 58 50.3 -2.6**
NSS IVMs_BB IVMs_BB 08 26 43.1
comp=Z,3µm,17.4s
ZHG ZHG 84.25 57 P **P** **07 48 32.0 +1.1**
SNR=16
PAB San Pablo 84.26 51 P **P** **07 48 30.8 0.0**
PAB pmax pmax
comp=Z,199nm,1.3s
PAB MLR MLR
comp=Z,4µm,18.0s
PAB San Pablo 84.26 51 P **P** **07 48 30.8 0.0**
PAB IAmb IAmb 07 48 32.1
comp=Z,199nm,1.3s
PAB San Pablo 84.26 51 IAMs_20 IAMs_20 08 27 39.9
comp=Z,4µm,18.0s
MOR8 Moi Rana 84.27 22⇑*iP* **P** **07 48 30.3 +0.1**

MOR8 IVmB_BB 07 48 31.9
comp=Z,3µm,2.8s
MOR8 eS S 07 58 53.9 -0.2
MOR8 IVMs_BB IVMs_BB 08 25 24.3
comp=Z,2µm,22.7s
SKAR Skarslia 84.34 28⇑ *i*P P **07 48 31.1 +0.4**
SKAR IVmB_BB 07 48 32.5
comp=Z,4µm,3.1s
SKAR eS S **07 58 56.1 +1.0**
SKAR IVMs_BB IVMs_BB 08 30 02.0
comp=Z,2µm,19.1s
MA2 Magadan 84.37 331 *ce*P P **07 48 32.2 +1.4**
MA2 pmax pmax
comp=Z,311nm,2.5s
MA2 MLR MLR
comp=Z,5µm,18.0s
MA2 Magadan 84.37 331 P P **07 48 31.9 +1.1**
MA2 IAmb IAmb 07 48 33.1
comp=Z,159nm,1.2s
RSA Sarsar 84.50 55 P P **07 48 33.0 +1.0**
SNR=9.8
ESDC Sonseca Array 84.50 50 P P **07 48 31.8 -0.2**
comp=Z,29nm,1.0s,baz=302,slow=5.0,SNR=111
ESDC LR LR 08 26 04.9
comp=Z,2µm,18.1s,baz=260,slow=36
SMIR Smir Dam 84.61 54 P P **07 48 34.0 +1.5**
SNR=18
HAMF Hammerfest 84.63 16⇑ *i*P P **07 48 31.6 -0.3**
HAMF IVmB_BB 07 48 32.5
comp=Z,3µm,2.9s
HAMF *e*PP **PP** **07 51 42.8 -4.4**
HAMF eS S **07 58 55.5 -2.0**
HAMF IVMs_BB IVMs_BB 08 28 52.7
comp=Z,2µm,16.9s
SNART Snartemo 84.80 30⇑ *i*P P **07 48 33.9 +0.9**
SNART eS S **07 58 58.0 -1.7**
CHEFC Chefchaouen 84.81 55 P P **07 48 35.0 +1.3**
SNR=15
OUZM OUZ 84.88 59 P P **07 48 35.0 +0.9**
SNR=18
SKR Severo-Kuril's 84.92 322 *c i*P P **07 48 34.1 +0.4**
SKR *e* 07 51 50.6
SKR eS S **07 58 58.0 -3.0**
SKR eSS SS **08 04 38.4 +5.2**
SKR eSSS SSS 08 08 05.3
SKR pmax pmax
comp=Z,94nm,1.2s
SKR pmax pmax
comp=Z,2µm,5.0s
SKR pmax pmax
comp=Z,700nm,5.9s
SKR pmax pmax
comp=Z,400nm,6.8s
SKR pmax pmax
comp=Z,100nm,5.3s
SICH Sidi Chahed 85.12 56 P P **07 48 36.2 +1.0**
SNR=11
TIXI Tiksi 85.36 346 *e*P P **07 48 35.6 +0.1**
TIXI pmax pmax
comp=Z,127nm,1.0s
TIXI MLR MLR
comp=Z,8µm,19.8s
TIXI Tiksi 85.36 346 P P **07 48 35.6 +0.1**
KONO Kongsberg 85.37 28 P P **07 48 36.4 +0.6**
KONO pmax pmax
comp=Z,146nm,1.1s
KONO MLR MLR
comp=Z,6µm,18.0s
KONO Kongsberg 85.37 28 P P **07 48 36.4 +0.6**
KONO IAmb IAmb 07 48 38.5
comp=Z,146nm,1.1s
KONO Kongsberg 85.37 28 IAMs_20 IAMs_20 08 29 56.6
comp=Z,6µm,18.0s
KONO Kongsberg 85.37 28⇑ *i*P P **07 48 36.6 +0.8**
KONO IVmB_BB 07 48 37.4
comp=Z,4µm,2.9s
KONO *e*PP **PP** **07 51 51.8 -1.7**
KONO eS S **07 58 59.8 -5.4**
KONO IVMsBB 08 25 40.9
comp=Z,2µm,21.9s
NC303 NORSAR Array S 85.44 27 IAmb IAmb 07 49 34.1
comp=Z,114nm,1.2s
HOMB Homborsund 85.45 30⇑ *i*P P **07 48 37.1 +0.8**
HOMB *e*PP **PP** **07 51 53.5 -0.7**
HOMB eS S **07 58 58.7 -7.3**
NB2 NORSAR Subarra 85.46 27 P P **07 48 36.6 +0.3**
comp=Z,245nm,1.7s,baz=299,slow=4.8
NB2 NORSAR Subarra 85.46 27 P P **07 48 32.7 -3.6**
NB2 NORSAR Subarra 85.46 27 P P **07 48 36.6 +0.3**
baz=299,slow=4.8
NOA NORSAR Array B 85.46 27 P P **07 48 36.1 -0.2**
comp=Z,22nm,0.8s,baz=301,slow=4.8,SNR=126
NOA LR LR 08 27 60.0
comp=Z,2µm,20.6s,baz=300,slow=37
NB201 NORSAR Array S 85.49 27 IAmb IAmb 07 48 38.4
comp=Z,115nm,0.9s
KTK1 Kautokeino 85.50 17⇑ *i*P P **07 48 35.7 -0.6**
KTK1 IVmBBB 07 48 37.0
comp=Z,2µm,3.3s
KTK1 eS **SKSac** **07 58 56.6 -3.3**
NC405 NORSAR Array S 85.64 27 IAmb IAmb 07 48 39.0
comp=Z,93nm,1.1s
CZD Col de Zad 85.66 57 P P **07 48 39.2 +1.0**
SNR=21
NC602 NORSAR Array S 85.74 27 IAmb IAmb 07 50 00.8
comp=Z,237nm,1.6s
NC602 NORSAR Array S 85.74 27⇑ *i*P P **07 48 37.9 +0.2**
NC602 IVmBBB 07 48 41.1
comp=Z,2µm,3.6s
NC602 *e*PP **PP** **07 51 51.2 -5.2**
NC602 eS **SKSac** **07 59 03.1 +1.4**
NC602 IVMs_BB IVMs_BB 08 26 10.6
comp=Z,1µm,24.1s
NORES NORESS Array B 85.74 27 P P **07 48 38.5 +0.8**
NORES pmax pmax
comp=Z,32nm,0.9s
OSL Oslo 85.75 28⇑ *i*P P **07 48 38.4 +0.7**
OSL eS **SKSac** **07 59 04.0 +2.3**
OSL IVMs_BB IVMs_BB 08 25 52.8
comp=Z,2µm,23.8s
ARCES ARCESS Array B 85.81 16 P P **07 48 36.9 -1.0**
comp=Z,35nm,0.9s,baz=305,slow=4.3,SNR=80
ARCES LR LR 08 29 51.2
comp=Z,5µm,18.8s,baz=321,slow=38
ARE0 ARCESS Array S 85.81 16⇑ *i*P P **07 48 37.3 -0.6**
ARE0 IVmB_BB 07 48 38.1
comp=Z,2µm,4.3s
ARE0 *e*PP **PP** **07 51 52.5 -4.4**
ARE0 eS **SKSac** **07 59 05.3 +3.5**
ARE0 IVMs_BB IVMs_BB 08 29 29.0
comp=Z,2µm,18.3s
PALE Palemas 85.87 55 P P **07 48 39.3 +0.4**
SNR=24
TZRR Tazzarine 85.90 59 P P **07 48 41.0 +1.8**
SNR=17
TARA Tarawa 85.92 270 IAMs_20 IAMs_20 08 21 44.1
comp=Z,4µm,19.0s
CLF Chambon-Foret 86.01 41 IAMs_20 IAMs_20 08 28 39.4
comp=Z,5µm,18.0s
SESP Santiago Espad 86.03 51 P P **07 48 40.3 +0.5**
SNR=28
ZGR Zagora 86.05 60 P P **07 48 42.0 +2.0**
SNR=15
KEV Kevo 86.07 16 P P **07 48 38.5 -0.6**
KEV pmax pmax
comp=Z,44nm,1.0s
KEV MLR MLR
comp=Z,7µm,20.0s
KEV Kevo 86.07 16 P P **07 48 38.5 -0.6**
KEV IAMs_20 IAMs_20 08 29 18.9
comp=Z,7µm,20.0s
MDT Midelt 86.07 57 LR LR 08 22 02.9
comp=Z,6µm,21.9s,baz=314,slow=32
MDT Midelt 86.07 57 P P **07 48 41.0 +1.0**
SNR=19
GOLM Goulmima 86.13 58 P P **07 48 43.0 +2.6**
SNR=13
AKLM AKL 86.15 55 P P **07 48 40.7 +0.3**
SNR=45
PMSA Palmer Station 86.30 165 LR LR 08 19 17.2
comp=Z,5µm,18.9s,baz=320,slow=30
GOET G??ttrup 86.34 31 *i* P P **07 48 41.2 +0.6**
comp=Z,165nm,1.0s
MUD Monsted U'grnd 86.56 31 P P **07 48 42.2 +0.4**
MUD pmax pmax
comp=Z,34nm,2.4s
comp=Z,214nm,2.2s,baz=297,slow=4.7
CLL Collm 90.95 35⇑ *i*P P **07 49 03.0 +0.3**
comp=Z,103nm,1.9s
CLL *i* pP **pP** **07 49 10.8 +0.5**
CLL *e*PP **PP** **07 52 37.0 -1.4**
CLL *e*PPP PPP 07 54 36.0
CLL *e*SKKSac **SKKSac** **07 59 42.0 -6.2**
CLL *e*pS **sS** **08 00 13.0 +2.1**
CLL *e* 08 00 54.0
CLL *e*(PPS) 08 01 29.0
CLL *e*SS **SS** **08 06 06.0 +4.9**
CLL *e*SSS SSS 08 09 42.0
CLL *e*SSSS 08 13 00.0
CLL Lm MLR 08 32 00.0
comp=N,2µm,20.4s
CLL Lm MLR 08 32 00.0
comp=E,4µm,19.7s
CLL Lm MLR 08 32 00.0
comp=Z,6µm,19.5s
CLL Collm 90.95 35 *e*P P **07 49 03.3 +0.6**
comp=Z,103nm,1.9s,baz=297,slow=4.7
CLL *e*L L 08 32 02.7
comp=Z,6µm,19.5s
CLL Collm 90.95 35⇑ *i*P P **07 49 03.0 +0.3**
CLL *i* 07 49 10.8
CLL *e* 07 52 37.0
CLL pmax pmax
comp=Z,103nm,1.9s
CLL MLR MLR
comp=Z,6µm,19.5s
CLL Collm 90.95 35 IAMs_20 IAMs_20 08 32 02.7
comp=Z,7µm,20.0s
UBR Ueberruh 90.98 39 *e*P P **07 49 02.8 -0.3**
comp=Z,47nm,1.3s,baz=297,slow=4.7
UBR *e*PP **PP** **07 52 37.4 -1.6**
DAVA Damuels 91.02 40 *i* PcP P **07 49 03.1 -0.2**
comp=Z,46nm,1.1s,SNR=15
DAVA *i* PP **PP** **07 52 36.7 -2.7**
comp=Z,35nm,1.3s
GUNZ Gunzen 91.03 36 *e*P P **07 49 03.2 0.0**
comp=Z,312nm,2.4s,baz=297,slow=4.7
GUNZ *e*PP **PP** **07 52 38.5 -0.7**
TUE Stuetta 91.06 40 P P **07 49 03.1 -0.5**
TANN Tannenbergstha 91.08 36 *e*P P **07 49 03.3 -0.1**
comp=Z,549nm,2.4s,baz=297,slow=4.7
TANN *e*PP **PP** **07 52 38.9 -0.7**
MANZ Manzenberg 91.09 36 *e*P P **07 49 03.5 0.0**
comp=Z,222nm,2.4s,baz=297,slow=4.7
MANZ *e*PP **PP** **07 52 38.5 -1.1**
WERN Wernitzgruen 91.10 36 *e*P P **07 49 03.7 +0.2**
comp=Z,340nm,2.4s,baz=297,slow=4.7
NKC Novy Kostel 91.16 36 *e*P P **07 49 03.6 -0.2**
NKC *e* 07 52 38.0
NKC MLR MLR
comp=Z,5µm,17.3s
NKC Novy Kostel 91.16 36 *e*P P **07 49 03.6 -0.2**
NKC *e*PP **PP** **07 52 38.0 -2.2**
NKC AMS AMS 08 32 50.0
comp=Z,5µm,17.3s
FIA1 FINESS Array S 91.20 23 IAmb IAmb 07 49 03.5
comp=Z,99nm,1.4s
FINES FINESS Array B 91.20 23 P P **07 49 02.4 -1.3**
comp=Z,23nm,0.9s,baz=348,slow=2.7,SNR=40
FINES PP **PP** **07 52 38.2 -1.9**
comp=Z,8.3nm,0.9s,baz=343,slow=10,SNR=4.0
FINES LR LR 08 30 05.8
comp=Z,9µm,21.6s,baz=318,slow=36
GRC1 Grafenberg Arr 91.22 38 P P **07 49 04.1 +0.1**
ROTZ Rotzenmuhle 91.25 37 *e*P P **07 49 04.2 +0.1**
comp=Z,236nm,2.5s,baz=297,slow=4.7
ROTZ *e*PP **PP** **07 52 40.4 -0.4**
FBE Freiberg 91.33 35 *e*P P **07 49 04.6 +0.1**
comp=Z,323nm,2.2s,baz=297,slow=4.7
FUR Furstenfeldbru 91.46 38 *e*L L 08 31 04.6
comp=Z,4µm,20.6s
RETA Reutte 91.47 39 *i* PcP P **07 49 05.1 -0.2**
comp=Z,31nm,1.3s,SNR=15
RETA *i* PP **PP** **07 52 39.9 -2.9**
comp=Z,36nm,1.6s,SNR=7.0
FUORN Ofenpass-Fuorn 91.56 40 IAmb IAmb 07 49 38.2
comp=Z,55nm,1.1s
FUORN IAMs_20 IAMs_20 08 32 16.0
comp=Z,7µm,18.0s
FETA Feichten 91.66 40 *i* PcP P **07 49 06.2 -0.1**
comp=Z,25nm,1.2s,SNR=12
FETA *i* PP **PP** **07 52 42.4 -2.0**
comp=Z,46nm,1.2s,SNR=7.5
YAK Yakutsk 91.67 339 P P **07 49 06.4 +0.7**
comp=Z,84nm,0.8s,baz=56,slow=0.6,SNR=39
YAK Yakutsk 91.67 339 *c i*P P **07 49 06.6 +0.9**
YAK *e**PP **sP** **07 49 15.9 0.0**
YAK *e* 07 52 40.4
YAK *e*S **SKSac** **07 59 34.5 -2.4**
YAK *e* 08 00 07.9
YAK *e*SSS SSS 08 09 50.9
YAK pmax pmax
comp=Z,115nm,0.8s
YAK pmax pmax
comp=E,10.0nm,1.0s
YAK pmax pmax
comp=N,13nm,1.0s
YAK pmax pmax
comp=Z,450nm,3.8s
YAK pmax pmax
comp=N,167nm,3.0s
YAK pmax pmax
comp=E,181nm,3.0s
YAK smax smax
comp=E,363nm,5.3s
YAK smax smax
comp=N,541nm,4.9s
YAK Yakutsk 91.67 339 P P **07 49 06.4 +0.7**
BRG Berggiesshubel 91.68 35 *i* P P **07 49 05.8 -0.2**
comp=N,65nm,1.4s
BRG PP **PP** **07 52 38.0 -6.2**
BRG S **SKSac** **07 59 42.0 +4.5**
BRG SS **SS** **08 06 03.0 -8.6**
comp=N,2µm,18.9s
comp=E,4µm,16.7s
comp=Z,5µm,17.4s
BRG Berggiesshubel 91.68 35 *e*P P **07 49 05.9 -0.2**
comp=Z,264nm,2.4s,baz=297,slow=4.7
BRG Berggiesshubel 91.68 35 *i* P P **07 49 05.8 -0.2**
BRG SS SS 08 06 03.0 -8.6
BRG pmax pmax
comp=Z,65nm,1.4s
BRG MLR MLR
comp=N,2µm,18.9s
BRG MLR MLR
comp=E,4µm,16.7s
BRG MLR MLR
comp=Z,5µm,17.4s
MOTA Moosalm 91.74 39 *i* PcP P **07 49 06.5 -0.2**
comp=Z,36nm,1.1s,SNR=19
MOTA *i* PP **PP** **07 52 42.0 -3.0**
comp=Z,31nm,1.2s
SQTA Sankt Quirin 91.86 39 *i* PcP P **07 49 07.0 -0.1**
comp=Z,34nm,1.2s,SNR=14
SQTA *i* PP **PP** **07 52 43.2 -2.7**
comp=Z,66nm,1.4s,SNR=8.5
WET Wettzell 91.93 37 *e*P P **07 49 07.5 +0.2**
comp=Z,92nm,1.6s,baz=297,slow=4.7
WET *e*PP **PP** **07 52 44.5 -1.8**
WET *e*L L 08 29 54.5
comp=Z,5µm,22.0s
WET Wettzell 91.93 37 P P **07 49 07.4 0.0**
WET pmax pmax
comp=Z,39nm,2.1s
JOF Joensuu 92.01 20 P P **07 49 06.2 -1.2**
JOF pmax pmax
comp=Z,18nm,1.9s
WATA Walderalm 92.03 39 *i* PcP P **07 49 07.7 -0.2**
comp=Z,34nm,1.4s,SNR=8.8
WATA *i* PP **PP** **07 52 45.2 -2.0**
comp=Z,41nm,1.4s
SLIT Slitere, Latvi 92.07 27 *e*P P **07 49 05.7 -2.0**
SLIT *e*PP **PP** **07 52 43.6 -3.4**
WTTA Wattenberg 92.10 39 *i* PcP P **07 49 08.1 -0.2**
comp=Z,60nm,2.2s,SNR=13
WTTA *i* PP **PP** **07 52 46.0 -1.9**
comp=Z,67nm,1.5s,SNR=7.4
MSSA Maissana 92.12 42 IAmb IAmb 07 49 07.7
comp=Z,98nm,1.7s
SALO Salr 92.17 41 IAmb IAmb 07 49 09.9
comp=Z,47nm,0.9s
SALO IAMs_20 IAMs_20 08 32 07.4

GRA1 Grafenberg Arr 90.72 37 IAMs_20 IAMs_20 08 29 19.6
comp=Z,4µm,22.0s
GRF Grafenberg Arr 90.72 37 *e*P P **07 49 02.2 +0.5**
comp=Z,316nm,2.5s,baz=297,slow=4.7
GRF *e*L L 08 29 31.2
comp=Z,4µm,21.9s
GRF Grafenberg Arr 90.72 37 P P **07 49 02.0 +0.3**
GRF pmax pmax
comp=Z,38nm,2.0s
RUE Ruedersdorf 90.80 34 *e*P P **07 48 59.7 -2.2**
RUE *e*PP **PP** **07 52 33.9 -3.2**
RUE Ruedersdorf 90.80 34 *e*P P **07 49 01.8 -0.1**
baz=297,slow=4.7
PLN Plauen 90.88 36 *e*P P **07 49 02.4 -0.1**

comp=Z,7µm,20.0s
GKP Gorka Klasztor 92.19 32 *e*P **P** **07 49 08.3 -0.1**
GKP *e*PP **PP** **07 52 45.9 -2.2**
GKP LMZ LR 08 27 27.9
comp=Z,7.8nm,25.8s
KUR Kuril'sk 92.19 319*c* *i*P **P** **07 49 09.0 +0.5**
KUR *e* 07 52 47.8
KUR pmax pmax
comp=Z,171nm,1.9s
KUR pmax pmax
comp=Z,578nm,12.6s
PVCC Panska Ves 92.20 35 *e*P **P** **07 49 08.6 +0.1**
PVCC MLR MLR
comp=Z,6µm,19.6s
PVCC Panska Ves 92.20 35 *e*P **P** **07 49 08.6 +0.1**
PVCC AMS AMS 08 32 20.0
comp=Z,6µm,19.6s
PBCC Pribram 92.30 36 *e*P **P** **07 49 09.3 +0.3**
KHC Kasperske Hory 92.34 37*c* *e*P **P** **07 49 09.1 -0.2**
KHC pmax pmax
comp=Z,79nm,1.5s
KHC MLR MLR
comp=Z,11µm,21.0s
KHC Kasperske Hory 92.34 37 *e*P **P** **07 49 09.1 -0.2**
KHC *e*pP **pP** **07 49 17.3 +0.5**
KHC *e*PP **PP** **07 52 47.1 -2.4**
KHC AMS AMS 08 30 00.0
comp=Z,6µm,20.6s
NKL Nikolayevsk 92.36 328 *e*P **P** **07 49 06.3 -2.8**
NKL pmax pmax
comp=Z,123nm,1.2s
NKL pmax pmax
comp=N,5.0nm,0.8s
PRMA PARMA 92.43 42 IAMs_20 IAMs_20 08 33 04.1
comp=Z,7µm,19.0s
PRU Pruhonice 92.46 36 *e*P **P** **07 49 09.6 -0.1**
PRU MLR MLR
comp=Z,5µm,18.0s
PRU Pruhonice 92.46 36 *e*P **P** **07 49 09.6 -0.1**
PRU AMS AMS 08 33 40.0
comp=Z,5µm,18.0s
TYV Tymovskoe 92.53 325 *e*P **P** **07 49 11.0 +1.0**
TYV *e* 08 00 14.0
TYV pmax pmax
comp=Z,83nm,1.1s
TYV pmax pmax
comp=Z,700nm,2.0s
GEC2 GERESS Array S 92.55 37 *e*P **P** **07 49 10.1 -0.2**
comp=Z,64nm,1.6s,baz=297,slow=4.7
GEC2 *e*L L 08 30 12.0
comp=Z,5µm,21.6s
GEC2 GERESS Array S 92.55 37 IAMs_20 IAMs_20 08 31 45.1
comp=Z,5µm,20.0s
GERES GERESS Array B 92.55 37 P **P** **07 49 09.4 -0.9**
comp=Z,4.7nm,0.9s,baz=323,slow=3.5,SNR=30
GERES PP **PP** **07 52 48.5 -2.8**
comp=Z,5.6nm,0.9s,baz=308,slow=6.6,SNR=7.2
GERES PKKP **PKKPbc** **08 06 23.2 -1.0**
comp=Z,1.0nm,0.8s,baz=160,slow=4.3,SNR=4.1
GERES LR LR 08 32 05.4
comp=Z,5µm,19.0s,baz=300,slow=36
RJOB Jochberg 92.56 38 *e*P **P** **07 49 10.2 -0.1**
comp=Z,48nm,1.5s,baz=297,slow=4.7
RJOB *e*PP **PP** **07 52 49.6 -1.8**
GOPC GO Pecny, Ondr 92.63 36 *e*P **P** **07 49 10.8 +0.2**
GOPC *e* 07 49 18.4
GOPC *e* 07 59 42.2
GOPC MLR MLR
comp=Z,5µm,17.3s
GOPC GO Pecny, Ondr 92.63 36 *e*P **P** **07 49 10.8 +0.2**
GOPC *e*pP **pP** **07 49 18.4 +0.3**
GOPC *e*SKS **SKSac** **07 59 42.2 -0.7**
GOPC AMS AMS 08 33 50.0
comp=Z,5µm,17.3s
CTI Castel Tesino 92.67 40 IAMs_20 IAMs_20 08 33 20.5
comp=Z,6µm,19.0s
VLC Villacollemand 92.75 42 IAMs_20 IAMs_20 08 33 19.6
comp=Z,4µm,19.0s
DFRA Djebel Bou Aff 92.86 51 P **P** **07 49 12.2 +0.2**
ABTA Abfaltersbach 92.87 39 *i* PcP **P** **07 49 11.6 -0.2**
comp=Z,40nm,1.2s,SNR=21
ABTA *i* PP **PP** **07 52 52.0 -1.8**
comp=Z,35nm,1.3s,SNR=5.5
PBUR Paburge 92.88 28 *e*P **P** **07 49 11.0 -0.5**
PBUR *e*PP **PP** **07 52 47.8 -5.6**
KSP Ksiaz 92.98 34 *i* P **P** **07 49 11.6 -0.5**
KSP *e*PP **PP** **07 52 52.0 -2.5**
KSP LMZ LR 08 33 58.5
comp=Z,7.0nm,19.1s
KSP Ksiaz 92.98 34 P **P** **07 49 12.1 0.0**
CHVC Chvalec 92.98 35 *e*P **P** **07 49 12.2 0.0**
CHVC AMS AMS 08 33 20.0
comp=Z,6µm,18.4s
UPC Upice 93.00 35 *e*P **P** **07 49 12.0 -0.2**
UPC *e* 07 52 54.0
UPC MLR MLR
comp=Z,6µm,19.3s
UPC Upice 93.00 35 *e*P **P** **07 49 12.0 -0.2**
UPC *e*pP **pP** **07 49 18.1 -1.7**
UPC *e*PP **PP** **07 52 54.0 -0.6**
UPC AMS AMS 08 33 10.0
comp=Z,6µm,19.3s
ZCCA Zocca 93.04 42 IAmb IAmb 07 49 15.3
comp=Z,71nm,1.0s
OSTC Ostas 93.09 35 *e*P **P** **07 49 12.8 +0.2**
OSTC *e*PP **PP** **07 52 53.9 -1.4**
OSTC AMS AMS 08 33 30.0
comp=Z,6µm,18.8s
TMCR Tamitsa 93.10 17 *e*P **P** **07 49 09.9 -2.4**
TMCR pmax pmax
comp=Z,76nm,1.1s
MXZ Matakaoa Point 93.15 232 IAMs_20 IAMs_20 08 23 07.0
comp=Z,5µm,19.0s
KBA Koelnbreinsper 93.21 39 *i* PcP **P** **07 49 13.1 -0.4**
comp=Z,26nm,1.1s,SNR=15
KBA *i* PP **PP** **07 52 54.7 -1.9**
comp=Z,21nm,1.1s
KBA Koelnbreinsper 93.21 39 P **P** **07 49 13.1 -0.4**
DPC Dobruska-Polom 93.25 35 *e*P **P** **07 49 13.2 -0.3**
DPC *e* 07 52 55.6
DPC MLR MLR
comp=Z,5µm,18.9s
DPC Dobruska-Polom 93.25 35 *e*P **P** **07 49 13.2 -0.3**
DPC *e*PP **PP** **07 52 55.6 -1.0**
DPC AMS AMS 08 33 10.0
comp=Z,5µm,18.9s
TREC Trest 93.34 36 *e*P **P** **07 49 13.4 -0.4**
TREC MLR MLR
comp=Z,6µm,19.8s
TREC Trest 93.34 36 *e*P **P** **07 49 13.4 -0.4**
TREC AMS AMS 08 31 10.0
comp=Z,6µm,19.8s
MOA Molln 93.37 38 *i* PcP **P** **07 49 13.7 -0.3**
comp=Z,22nm,0.8s,SNR=5.6
MOA *i* PP **PP** **07 52 55.7 -2.0**
comp=Z,35nm,1.5s,SNR=6.3
VSU Vasula 93.39 25 *e*P **P** **07 49 12.5 -1.3**
VSU *e*PP **PP** **07 52 54.2 -3.2**
VSU Vasula 93.39 25*c* *i*P **P** **07 49 11.9 -1.9**
VSU pmax pmax
comp=Z,55nm,0.9s
VSU MLR MLR
comp=Z,11µm,20.0s
CTEI Djebel Teioual 93.45 51 P **P** **07 49 14.2 -0.6**
CKFL Kef-Lekhel 93.54 50 P **P** **07 49 14.8 -0.4**
OSSC Osservatorio P 93.59 42 IAMs_20 IAMs_20 08 34 10.0
comp=Z,6µm,18.0s
MYKA Terra Mystica 93.61 39 *i* PcP **P** **07 49 14.5 -0.6**
comp=Z,22nm,1.4s,SNR=7.9
MYKA *i* PP **PP** **07 52 57.2 -2.3**
comp=Z,22nm,1.1s
KRLC Kraliky 93.65 35 AMS AMS 08 33 30.0
comp=Z,4µm,19.2s
TIC Toumodi 93.69 82 *e*PKP2 **P** **07 49 14.7 -1.4**
ROBS Robic 93.71 39 *i* P **P** **07 49 15.0 -0.6**
LIC Lamto 93.81 82 *e*PKP2 **P** **07 49 15.4 -1.2**
comp=Z,185nm,1.3s
DBIC Dimbokro 93.84 82 P **P** **07 49 16.1 -0.7**
comp=Z,22nm,0.9s,baz=270,slow=4.7,SNR=18
DBIC LR LR 08 30 20.2
comp=Z,3µm,18.9s,baz=276,slow=35
DBIC Dimbokro 93.84 82 P **P** **07 49 16.1 -0.7**
DBIC pmax pmax
comp=Z,41nm,1.0s
DBIC Dimbokro 93.84 82 P **P** **07 49 16.1 -0.7**
DBIC IAmb IAmb 07 49 23.9
comp=Z,41nm,0.9s
VRAC Vranov 93.95 36⇑ *i*P **P** **07 49 16.2 -0.4**
VRAC *e*PP **PP** **07 53 01.1 -1.0**
VRAC Vranov 93.95 36⇓ P **P** **07 49 17.2 +0.5**
VRAC Vranov 93.95 36⇓ P **P** **07 49 17.2 +0.5**
CMAH Djebel Manchou 93.96 50 P **P** **07 49 15.8 -1.2**
KRUC Moravsky 93.97 36⇑ *i*P **P** **07 49 16.1 -0.6**
KRUC *e*PP **PP** **07 53 00.5 -1.7**
KRUC Moravsky 93.97 36 P **P** **07 49 16.3 -0.4**
YUK Yuzh-Kuril'sk 94.01 318 *e*P **P** **07 49 13.1 -3.9**
YUK *e* 07 53 04.7
YUK *e*PPP PPP 07 55 05.2
YUK *e*S **SKSac** **07 59 49.2 -1.4**
YUK *e*SP SP 08 02 15.1 +35
YUK *e*SS **SS** **08 06 44.0 -1.3**
YUK *e*SSS SSS 08 10 27.4
YUK pmax pmax
comp=Z,391nm,1.6s
YUK pmax pmax
comp=Z,236nm,0.9s
YUK pmax pmax
comp=N,203nm,1.1s
YUK pmax pmax
comp=E,126nm,1.1s
YUK MLR MLR
comp=N,464nm,16.0s
YUK MLR MLR
comp=Z,2µm,16.0s
YUK MLR MLR
comp=E,1µm,18.0s
KIC Kosan Boka 94.04 82 *e*PKP2 **P** **07 49 16.2 -1.5**
comp=E,155nm,1.2s
PABE Paberze 94.11 28 *e*P **P** **07 49 16.1 -1.0**
TRI Trieste 94.13 40 IAMs_20 IAMs_20 08 40 18.1
comp=Z,3µm,20.0s
VSL Villasalto 94.14 47 IAmb IAmb 07 49 18.5
comp=Z,56nm,1.3s
VSL IAMs_20 IAMs_20 08 30 45.0
comp=Z,3µm,19.0s
OBKA Obir 94.21 39 *i* PcP **P** **07 49 17.3 -0.7**
comp=Z,28nm,1.1s,SNR=11
OBKA *i* PP **PP** **07 53 02.7 -1.6**
comp=Z,28nm,1.1s
MORC Moravsky Berou 94.23 35⇑ *i*P **P** **07 49 17.7 -0.2**
MORC *e*PP **PP** **07 53 02.9 -1.3**
MORC Moravsky Berou 94.23 35⇓ P **P** **07 49 18.4 +0.5**
MORC Moravsky Berou 94.23 35⇓ P **P** **07 49 18.4 +0.5**
MORC Moravsky Berou 94.23 35 IAmb IAmb 07 49 18.8
comp=Z,65nm,1.3s
MORC IAMs_20 IAMs_20 08 35 11.2
comp=Z,5µm,18.0s
CONA Conrad Observa 94.26 37 *i* PcP **P** **07 49 18.3 +0.1**
comp=Z,24nm,1.2s,SNR=18
CONA *i* PP **PP** **07 53 02.6 -2.0**
comp=Z,36nm,1.9s
URZ Urewera 94.27 231 IAMs_20 IAMs_20 08 23 33.6
comp=Z,5µm,19.0s
SKDS Skadanscina 94.36 40 *e*P **P** **07 49 18.4 -0.3**
SKDS *e*PP **PP** **07 53 03.3 -2.1**
ARSA Arzberg 94.41 38 *i* PcP **P** **07 49 18.1 -0.7**
comp=Z,111nm,1.1s,SNR=7.2
ARSA *i* PP **PP** **07 53 03.5 -2.3**
comp=Z,36nm,1.3s,SNR=6.5
SOKA Soboth 94.41 38 *i* PcP **P** **07 49 18.1 -0.8**
comp=Z,34nm,1.1s,SNR=32
SOKA *i* PP **PP** **07 53 02.2 -3.7**
comp=Z,37nm,1.2s,SNR=6.7
LJU Ljubljana 94.43 39 *e*P **P** **07 49 18.6 -0.3**
LJU *e*PP **PP** **07 53 03.9 -2.1**
YSS Yuzh-Sakhalins 94.48 322*a* *i*P **P** **07 49 19.7 +0.7**
YSS *e**SP **sP** **07 49 29.6 +0.4**
YSS *e* 07 53 06.7
YSS *e*PPP PPP 07 55 10.0
YSS *e*S **S** **08 00 25.5 -4.6**
YSS *e*PPS PPS 08 01 45.8
YSS *e*SS **SS** **08 06 50.0 -1.7**
YSS pmax pmax
comp=Z,50nm,1.5s
YSS pmax pmax
comp=Z,700nm,9.8s
YSS pmax pmax
comp=N,200nm,8.0s
YSS pmax pmax
comp=E,300nm,10.6s
YSS pmax pmax
comp=Z,800nm,7.3s
YSS pmax pmax
comp=N,300nm,7.6s
YSS pmax pmax
comp=E,400nm,15.0s
YSS Yuzh-Sakhalins 94.48 322 P **P** **07 49 19.5 +0.4**
YSS IAmb IAmb 07 49 20.6
comp=Z,132nm,1.5s
YSS IAMs_20 IAMs_20 08 36 32.1
comp=Z,5µm,18.0s
PERS Pernice 94.48 38 *i* P **P** **07 49 18.4 -0.8**
OKC Ostrava-Krasne 94.52 35 *e*P **P** **07 49 19.7 +0.5**
OKC MLR MLR
comp=Z,4µm,17.9s
OKC Ostrava-Krasne 94.52 35 *e*P **P** **07 49 19.7 +0.5**
OKC AMS AMS 08 35 10.0
comp=Z,4µm,17.9s
SUW Suwalki 94.66 29 *e*P **P** **07 49 18.5 -1.2**
SUW *e*PP **PP** **07 53 05.7 -1.7**
SUW LMZ LR 08 27 29.4
comp=Z,3.5nm,26.2s
SUW Suwalki 94.66 29 IAMs_20 IAMs_20 08 34 39.4
comp=Z,4µm,20.0s
PDKS Podkum 94.70 39 *i* P **P** **07 49 19.7 -0.5**
PDKS *e*SKSac **SKSac** **07 59 56.1 +1.6**
RIY Rijeka 94.76 40 *i* P **P** **07 49 19.6 -0.8**
BEL Belsk 94.79 32 *e*P **P** **07 49 20.5 +0.2**
BEL *e*PP **PP** **07 53 08.6 +0.1**
BEL LMZ LR 08 29 18.1
comp=Z,8.0nm,25.2s
SOP Sopron 94.79 37 P **P** **07 49 20.6 +0.1**
SOP pmax pmax
comp=Z,32nm,2.5s
JAVC Velka Javorina 94.79 36⇑ *i*P **P** **07 49 21.3 +0.7**
JAVC *e*PP **PP** **07 53 07.9 -0.8**
ZST Bratislava 94.83 36 *e*P **P** **07 49 20.1 -0.5**
ZST pmax pmax
comp=Z,532nm,2.4s
ZST Bratislava 94.83 36 *e*P **P** **07 49 20.1 -0.5**
ZST *e*PP **PP** **07 53 06.1 -2.8**
MODS Modra-Piesok 94.83 36 *e*P **P** **07 49 20.2 -0.5**
MODS pmax pmax
comp=Z,134nm,1.7s
MODS Modra-Piesok 94.83 36 *e*P **P** **07 49 20.2 -0.5**
MODS *e*PP **PP** **07 53 05.8 -3.2**
SMOL Smolenice 94.84 36 *e*P **P** **07 49 21.2 +0.5**
SMOL pmax pmax
comp=Z,124nm,2.3s
SMOL Smolenice 94.84 36 *e*P **P** **07 49 21.1 +0.4**
IZAR Zarasai 94.95 27 *e*P **P** **07 49 20.3 -0.8**
BKZ Black Stump Fm 95.01 231 IAMs_20 IAMs_20 08 24 19.2
comp=Z,6µm,19.0s
ISAL Salakas 95.02 27 *e*P **P** **07 49 21.1 -0.3**
BOJS Bojanci 95.14 39 *e*P **P** **07 49 22.0 -0.1**
BOJS *e*PS **PS** **08 01 55.1 -0.3**
GCIS Gornji Cirnik 95.18 39 *i* P **P** **07 49 22.2 -0.1**
OJC Ojcow 95.20 34 *i* P **P** **07 49 21.8 -0.5**
OJC *e*PP **PP** **07 53 09.8 -1.9**
OJC *e*SKSac **SKSac** **07 59 57.0 +0.2**
OJC LMZ LR 08 31 16.7
comp=Z,4.6nm,23.1s
OJC Ojcow 95.20 34 P **P** **07 49 22.1 -0.2**
OJC Ojcow 95.20 34 IAmb IAmb 07 49 22.8
comp=Z,67nm,1.3s
IIGN Ignalina 95.20 27 *e*P **P** **07 49 21.6 -0.6**
OZLJ Ozalj 95.21 39 *i* P **P** **07 49 22.6 +0.2**
PTJ Puntijarka 95.36 39 *i* P **P** **07 49 22.9 -0.4**
NVLJ Novalja 95.38 40 *i* P **P** **07 49 22.7 -0.5**
ZAG Zagreb 95.42 39 *i* P **P** **07 49 23.5 +0.1**
AQU L'Aquila 95.54 43 IAMs_20 IAMs_20 08 34 38.6
comp=Z,5µm,20.0s
KALN Kalnik 95.54 38 *i* P **P** **07 49 22.9 -1.1**
LANS Liptovska Anna 95.62 35 *e*P **P** **07 49 25.2 +0.9**
LANS pmax pmax
comp=Z,21nm,1.2s
LANS Liptovska Anna 95.62 35 *e*P **P** **07 49 25.2 +0.9**
VYHS Vyhne 95.64 35 *e*P **P** **07 49 24.6 +0.2**
VYHS *e*PP **PP** **07 53 13.2 -2.0**
NACGM Naroch 95.74 27 *e*P **P** **07 49 23.0 -1.6**
NACGM *e*PP **PP** **07 53 14.0 -1.7**
NACGM *e*PPP PPP 07 55 08.0
NACGM *e*SKS **SKSac** **08 00 08.0 +8.6**
NACGM *e*PS **PS** **08 02 07.0 +5.5**
NACGM *e*SS **SS** **08 07 11.0 +1.9**
NACGM *e*LQ LQ 08 20 20.0
NACGM *e*LR LR 08 25 24.0
NACGM LRM MLR 08 35 48.0
comp=Z,16nm,20.0s
KEST Kesra 95.75 50 P **P** **07 49 25.2 0.0**
comp=Z,9.9nm,1.0s,baz=147,slow=3.2,SNR=9.6
KEST PP **PP** **07 53 17.1 +0.4**
comp=Z,4.7nm,0.7s,baz=192,slow=4.6,SNR=5.3
KEST LR LR 08 32 56.1
comp=Z,3µm,18.8s,baz=252,slow=36
KEST Kesra 95.75 50 IAmb IAmb 07 49 45.6
comp=Z,61nm,1.2s
KEST IAMs_20 IAMs_20 08 32 26.2
comp=Z,4µm,19.0s
DUGI Dugi Otok 95.78 41 *i* P **P** **07 49 24.6 -0.5**
NIE Niedzica 95.92 34 *i* P **P** **07 49 26.1 +0.5**
NIE *e*PP **PP** **07 53 17.0 -0.4**
NIE LMZ LR 08 31 36.6
comp=Z,1.9nm,24.1s
MOSL Moslavina 95.99 39 *i* P **P** **07 49 25.4 -0.7**
ASAJ Asahikawa 96.02 320 P **P** **07 49 27.2 +1.1**
comp=Z,12nm,0.9s,baz=359,slow=3.2,SNR=8.6
INTR Introdacqua 96.03 43 IAmb IAmb 07 49 41.3
comp=Z,86nm,1.7s
HIZ Hauiti 96.03 232 IAMs_20 IAMs_20 08 24 39.4
comp=Z,6µm,20.0s
OUZ Omahuta 96.06 235 IAMs_20 IAMs_20 08 25 45.1
comp=Z,4µm,20.0s
KLMR Klimovskoe 96.13 18*c* *i*P **P** **07 49 25.0 -1.2**
KLMR *e* 07 53 16.5
KLMR *e*S **SKSac** **07 59 58.6 -2.7**
KLMR pmax pmax
comp=Z,85nm,1.0s
KLMR Klimovskoe 96.13 18⇑ *i*P **P** **07 49 25.1 -1.2**
KLMR ⇓ *i*P **P** **07 49 25.1 -1.2**
KLMR ⇓ *i*P **P** **07 49 25.1 -1.2**
KLMR AMP 07 49 26.5
comp=Z,85nm,1.0s
KLMR *e*PP **PP** **07 53 16.6 -1.9**
KLMR *e*S **SKSac** **07 59 58.7 -2.6**
KLMR *e*S **SKSac** **07 59 58.7 -2.6**
KLMR LQ LQ 08 27 41.3
KLMR LQ LQ 08 27 41.3
KLMR LR LR 08 32 29.5
KLMR AMP 08 40 01.8
comp=Z,5µm,16.5s
MORI Morici 96.25 41 *i* P **P** **07 49 26.5 -0.7**
ZIRJ Zirje 96.32 41 *i* P **P** **07 49 26.4 -1.2**
MICGM Minsk 96.48 27 *e*P **PcP** **07 49 26.0 -2.2**
MICGM *e*P P 07 49 21.0 -7.0
MICGM *e*PP **PP** **07 53 15.0 -6.4**
MICGM *e*PPP PPP 07 55 25.0
MICGM *e*SKS **SKSac** **07 59 55.0 -8.4**
MICGM *e*S **S** **08 00 42.0 -5.2**
MICGM *e*PS **PS** **08 02 14.0 +4.4**
MICGM *e*SS **SS** **08 07 30.0 +10**
MICGM *e*LQ LQ 08 26 14.0
MICGM *e*LR LR 08 33 00.0
MICGM LRM MLR 08 36 10.0
comp=Z,12nm,18.0s
MNK Minsk 96.48 27 *e*P **P** **07 49 26.0 -2.0**
MNK *e* 07 55 25.0
MNK *e* 07 59 55.0
MNK *e*S **S** **08 00 42.0 -5.2**
MNK *e* 08 02 14.0
MNK *e* 08 07 30.0
PSZ Piszkesteto 96.55 36 ⇓ P **P** **07 49 29.8 +1.2**
PSZ Piszkesteto 96.55 36 ⇓ P **P** **07 49 29.8 +1.2**
PSZ Piszkesteto 96.55 36 IAMs_20 IAMs_20 08 33 35.7
comp=Z,4µm,20.0s
KECS Kecovo 96.55 35 *e*P **P** **07 49 29.4 +0.9**
KECS pmax pmax
comp=Z,17nm,1.3s
KECS Kecovo 96.55 35 *e*P **P** **07 49 29.4 +0.9**
KIJV Kijevo 96.61 40 *i* P **P** **07 49 27.9 -1.1**
BLY Banja Luka 96.70 39⇑ P **P** **07 49 29.5 +0.3**
BLY Banja Luka 96.70 39 IAMs_20 IAMs_20 08 35 05.0
comp=Z,5µm,20.0s
ERM Erimo 96.72 318*c* *e*P **P** **07 49 30.9 +1.5**
ERM pmax pmax
comp=Z,55nm,1.0s
ERM MLR MLR
comp=Z,2µm,21.0s
ERM Erimo 96.72 318 P **P** **07 49 31.3 +1.9**
ERM IAmb IAmb 07 49 32.5
comp=Z,76nm,1.1s
ERM Erimo 96.72 318 IAMs_20 IAMs_20 08 41 06.5
comp=Z,3µm,18.0s
PAOL Paolisi 96.94 43 IAMs_20 IAMs_20 08 36 23.9
comp=Z,3µm,19.0s
KWP Kalwaria Pacla 97.07 33 *i* P Pdif 07 49 31.2 +0.2
KWP *e*PP **PP** **07 53 24.9 -1.3**
KWP LMZ LR 08 39 09.5
comp=Z,4.4nm,20.3s
KWP Kalwaria Pacla 97.07 33 IAMs_20 IAMs_20 08 39 31.3
comp=Z,5µm,20.0s
PRGR Permogore 97.18 15 *e*P **P** **07 49 29.1 -1.9**
PRGR pmax pmax
comp=Z,90nm,0.8s
KOLS Kolonicke sedl 97.25 34 *e*P Pdif 07 49 32.1 +0.3
KOLS pmax pmax
comp=Z,48nm,1.4s
KOLS Kolonicke sedl 97.25 34 *e*P Pdif 07 49 32.1 +0.3
SGRT San Giovanni R 97.35 42 IAMs_20 IAMs_20 08 37 28.5
comp=Z,4µm,20.0s
MAKA Makarska 97.37 41 *i* P **P** **07 49 31.4 -0.9**
UZH Uzhgorod 97.44 34⇑ *i*P **P** **07 49 30.4 -2.1**
UZH *i* 07 49 40.0
UZH *e* 07 49 50.0
UZH *i* 07 53 28.2
UZH *e*S **S** **08 00 47.6 -8.1**
CORL Corleone 97.61 47 IAmb IAmb 07 49 54.0
comp=Z,53nm,1.0s
CORL IAMs_20 IAMs_20 08 33 15.7
comp=Z,4µm,19.0s
LVV L'vov 97.64 32 *e*P **P** **07 49 32.1 -1.3**
LVV *i* 07 53 31.4
LVV *e*PPP PPP 07 55 37.2
LVV *e* 08 00 08.7
LVV *e*S S 08 00 47.5 -10
LVV *e*PS **PS** **08 02 16.0 -6.5**
LVV *e*SS **SS** **08 07 46.5 +10**
LVV pmax pmax
comp=Z,100nm,1.8s
CLTB Caltabellotta 97.69 47 IAMs_20 IAMs_20 08 33 49.1
comp=Z,5µm,20.0s
TRPA Tarpa 97.87 34 ⇓ P Pdif 07 49 35.0 +0.5
NNZ Nelson 97.88 229 IAMs_20 IAMs_20 08 25 05.2
comp=Z,5µm,20.0s
TAM Tamanrasset 97.92 63 IAMs_20 IAMs_20 08 30 35.1
comp=Z,5µm,21.0s
TORD Torodi Ar. Bea 97.92 74 P **P** **07 49 33.6 -1.7**
comp=Z,6.3nm,0.9s,baz=294,slow=4.2,SNR=20
TORD PP **PP** **07 53 32.2 -1.8**
comp=Z,2.3nm,1.0s,baz=308,slow=7.3,SNR=3.6
TORD PKKP **PKKPdf** **08 06 10.6 -0.9**
comp=Z,2.8nm,0.9s,baz=77,slow=2.6,SNR=9.0
TORD PKPPKP **P'P'df** **08 14 22.6 -4.1**
comp=Z,0.9nm,0.9s,baz=101,slow=1.4,SNR=4.0
TORD LR LR 08 32 38.2
comp=Z,4µm,19.2s,baz=280,slow=35
KHZ Kahutara 98.09 228 IAMs_20 IAMs_20 08 24 47.7
comp=Z,6µm,20.0s
ZEA Zeya 98.30 333 *e*P Pdif 07 49 36.8 +0.5
ZEA *e*PPP PPP 07 53 36.0
ZEA *e*PS **SKSac** **08 00 16.0 +3.2**
ZEA pmax pmax
comp=Z,46nm,1.4s
ZEA pmax pmax
comp=Z,800nm,12.0s
QRZ Quartz Range 98.40 230 IAMs_20 IAMs_20 08 24 46.9
comp=Z,6µm,20.0s
SIRR Siria 98.48 36⇑ P **P** **07 49 37.1 -0.1**
MATE Matera 98.54 43 ⇓ P **P** **07 49 37.0 -0.6**
DZM Mont Dzumac 98.60 250 *e*PP **PP** **07 53 36.6 -2.9**

comp=Z,477nm,26.2s
DZM eSKSac **SKSac 08 00 11.5 -4.0**
comp=Z,2μm,29.4s
DZM Mont Dzumac 98.60 250 eP PS 08 02 34.2 -0.4
comp=Z,2μm,26.7s
DZM eSS SS 08 07 51.2 -1.4
comp=Z,5μm,25.6s
DZM eLQ LQ 08 17 30.2
comp=Z,3μm,39.1s
DZM eLR LR 08 21 44.0
comp=Z,11μm,22.5s,baz=88
DZM Mont Dzumac 98.60 250 LR LR 08 25 18.9
comp=Z,7μm,19.9s,baz=82,slow=30
BZS Buzias 98.83 37 ⇑P Pdif 07 49 39.0 +0.2
BZS Buzias 98.83 37 ⇑P Pdif 07 49 39.0 +0.2
MQZ McQueen's Vall 99.05 227 IAMs_20 IAMs_20 08 25 52.1
comp=Z,6μm,20.0s
LTZ Lake Taylor 99.09 228 IAMs_20 IAMs_20 08 28 00.1
comp=Z,6μm,19.0s
KLR Kul'dur 99.21 328 ceP **Pdif 07 49 41.0 +0.6**
KLR pmax pmax
comp=Z,8.0nm,1.0s
KLR MLR MLR
comp=Z,3μm,19.0s
CEL Celeste 99.21 45 IAMs_20 IAMs_20 08 38 28.0
comp=Z,3μm,19.0s
PDG Podgorica 99.21 40 IAMs_20 IAMs_20 08 35 55.8
comp=Z,4μm,21.0s
TIP Timpagrande 99.33 44 ⇓P **Pdif 07 49 39.8 -1.5**
TIP Timpagrande 99.33 44 IAMs_20 IAMs_20 08 38 19.0
comp=Z,5μm,19.0s
MDVR Moldovita 99.37 37 ⇓P **Pdif 07 49 41.2 -0.2**
OXZ Oxford 99.39 228 IAMs_20 IAMs_20 08 24 47.1
comp=Z,4μm,21.0s
WDD Wied Dalam 99.45 48 IAMs_20 IAMs_20 08 33 56.6
comp=Z,3μm,20.0s
MOS Moscow 99.50 22 eP **Pdif 07 49 38.7 -2.9**
MOS e 07 53 40.1
MOS pmax pmax
comp=Z,55nm,1.1s
OBN Obninsk 99.59 23 P **Pdif 07 49 40.6 -1.3**
comp=Z,4.2nm,0.4s,baz=360,slow=1.3,SNR=16
OBN Obninsk 99.59 23 c iP **Pdif 07 49 40.7 -1.3**
OBN e 07 53 39.6
OBN ePPP PPP 07 55 56.3
OBN pmax pmax
comp=Z,159nm,2.0s
OBN MLR MLR
comp=Z,8μm,21.0s
OBN Obninsk 99.59 23 IAmb IAmb 07 49 43.8
comp=Z,282nm,2.0s
OBN IAMs_20 IAMs_20 08 35 05.4
comp=Z,8μm,22.0s
BURAR Bucovina Array 99.62 34 ⇓P **Pdif 07 49 42.6 +0.2**
BURAR Bucovina Array 99.62 34 ⇓P **Pdif 07 49 42.6 +0.2**
GZR Gura Zlata 99.62 36 ⇓P **Pdif 07 49 42.4 -0.1**
GZR Gura Zlata 99.62 36 ⇓P **Pdif 07 49 42.4 -0.1**
AKASG Malin Array Be 99.63 30 P **Pdif 07 49 40.4 -1.8**
comp=Z,3.4nm,0.8s,baz=293,slow=3.3,SNR=27
AKASG PP **PP 07 53 43.5 -2.1**
comp=Z,14nm,0.9s,baz=316,slow=6.8,SNR=11
AKASG PKKPbc **PKKPbc 08 06 04.6 -0.5**
comp=Z,0.2nm,0.3s,baz=111,slow=2.2,SNR=4.1
AKASG Malin Array Be 99.63 30 i P **Pdif 07 49 40.7 -1.6**
AKASG pmax pmax
comp=Z,6.0nm,0.9s
HERR Herculane 99.72 37 ⇓P **Pdif 07 49 42.7 -0.1**
BOD Bodaibo 99.98 342 eP **Pdif 07 49 42.6 -1.1**
BOD pmax pmax
comp=Z,21nm,1.8s
SCTE Santa Cesarea 99.98 43 IAMs_20 IAMs_20 08 37 41.3
comp=Z,5μm,20.0s
RPZ Rata Peaks 100.18 227 IAMs_20 IAMs_20 08 25 22.0
comp=Z,6μm,21.0s
TIR Tirane 100.19 41 IAMs_20 IAMs_20 08 37 45.5
comp=Z,4μm,20.0s
ARR Arges 100.69 36 ⇓P **Pdif 07 49 47.5 +0.3**
KIRV Kirov 100.78 15 P **Pdif 07 49 46.2 -1.0**
comp=Z,35nm,0.8s,baz=311,slow=2.6,SNR=21
FOZ Fox Glacier 101.01 228 IAMs_20 IAMs_20 08 25 28.0
comp=Z,4μm,21.0s
MLR Muntele Rosu 101.34 35 ⇓P **Pdif 07 49 50.3 +0.1**
MLR Muntele Rosu 101.34 35 ⇓P **Pdif 07 49 50.3 +0.1**
MLR Muntele Rosu 101.34 35 IAMs_20 IAMs_20 08 36 20.4
comp=Z,6μm,22.0s
HNR Honiara 101.37 264 IAMs_20 IAMs_20 08 35 00.1
comp=Z,2μm,18.0s
MPEP Malo Peshtene 101.39 38 i P **Pdif 07 49 49.5 -0.8**
VTS Vitosha 101.53 39 i P **Pdif 07 49 50.3 -0.8**
VTS Vitosha 101.53 39 IAMs_20 IAMs_20 08 39 01.8
comp=Z,5μm,19.0s
KKB Krupnik 101.88 39 i P **Pdif 07 49 51.6 -0.9**
KIS Kishinev 101.89 33 ⇓i P **Pdif 07 49 53.0 +0.6**
comp=Z,180nm,3.0s
KIS Kishinev 101.89 33 ePKP PKiKP 07 53 54.0 -21
KIS Kishinev 101.89 33 ePP **PP 07 54 04.0 +1.1**
comp=Z,600nm,16.0s
KIS i SKS **SKSac 08 00 28.0 -2.7**
KIS i SKKS SKKSac 08 00 42.0 -26
KIS eS 08 01 13.0
KIS Kishinev 101.89 33 i PS PS 08 03 02.0 -6.2
KIS Kishinev 101.89 33 ⇓i P **Pdif 07 49 53.0 +0.6**
KIS i 07 54 04.0
KIS i 08 00 28.0
KIS eS **SKKSac 08 01 13.0 +4.7**
KIS i PS **PS 08 03 02.0 -6.2**
KIS i PPS PPS 08 04 00.0
KIS eSS **SS 08 08 40.0 +4.3**
KIS pmax pmax
comp=Z,180nm,3.0s
KIS pmax pmax
comp=Z,600nm,16.0s
KIS MLR MLR
comp=Z,4μm,24.0s
USA0B Ussuriysk Arra 102.25 324 IAMs_20 IAMs_20 08 45 30.6
comp=Z,5μm,18.0s
USRK Ussuriysk Ar. 102.25 324 P **Pdif 07 49 54.5 +0.5**
comp=Z,3.3nm,0.8s,baz=86,slow=1.8,SNR=5.0
USRK PP **PP 07 54 05.3 -0.4**
comp=Z,1.5nm,0.7s,baz=52,slow=9.3,SNR=4.8
LPSR Galich'ya Gora 102.42 24 eP **Pdif 07 49 53.9 -0.7**
LPSR ePS **PS 08 03 12.8 -0.6**
LPSR pmax pmax
comp=Z,50nm,0.9s
LPSR pmax pmax
comp=Z,80nm,1.0s
LPSR MLR MLR
comp=Z,8μm,22.0s
MMB Musomiste 102.43 39 i P **Pdif 07 49 52.9 -2.1**
CFR Carcaliu 102.73 34 ⇑P **Pdif 07 49 55.2 -0.9**
CFR Carcaliu 102.73 34 ⇑P **Pdif 07 49 55.2 -0.9**
MJAR Matsushiro Arr 102.84 315 P **Pdif 07 49 57.3 +0.4**
comp=Z,1.9nm,0.7s,baz=41,slow=2.6,SNR=7.6
KDZ Kurdzhali 103.41 38 i P **Pdif 07 49 57.2 -2.1**
VSR Storozhevoye 103.58 25 eP **Pdif 07 49 58.6 -1.2**
VSR ePS **PS 08 03 14.7 -11**
VSR pmax pmax
comp=Z,40nm,0.8s
VSR pmax pmax
comp=Z,100nm,1.6s
VSR MLR MLR
comp=Z,6μm,19.0s
VORD Divnogorie 103.83 25 eP **Pdif 07 49 59.4 -1.5**
VORD pmax pmax
comp=Z,170nm,1.4s
VORD pmax pmax
comp=Z,70nm,0.4s
VORD MLR MLR
comp=Z,5μm,20.0s
ITM Ithomi 103.83 44 IAMs_20 IAMs_20 08 42 15.2
comp=Z,3μm,19.0s
VRH Novokhopyorsk 104.58 23 eP **Pdif 07 50 03.5 -0.8**
VRH pmax pmax
comp=Z,40nm,1.2s
VRH pmax pmax
comp=Z,50nm,1.0s
VRH MLR MLR
comp=Z,6μm,17.0s
ARU Arti 104.79 12 P **Pdif 07 50 04.5 -0.6**
ARU S **SKSac 08 00 41.7 -2.1**
ARU SP **SP 08 03 29.2 -5.4**
ARU Arti 104.79 12 **Pdif 07 50 04.3 -0.8**
ARU IAMs_20 IAMs_20 08 41 13.0
comp=Z,5μm,20.0s
SIM Simferopol' 105.99 31 ceP **Pdif 07 50 10.3 -0.4**
SIM e 07 54 30.0
SIM e 08 00 51.0
SIM ePS **PS 08 03 51.0 -0.2**
SIM ePPS PPS 08 04 52.0
SIM pmax pmax
comp=Z,150nm,11.6s
SIM pmax pmax
comp=Z,850nm,12.4s
CN2 Changchun 106.06 327 Pdif **Pdif 07 50 09.6 -1.5**
CN2 PP **PP 07 54 35.1 +1.1**
CN2 eSS SS 08 09 32.7 -0.3
CN2 AMB AMB
comp=Z,900nm,7.0s
CN2 LR LR
comp=Z,4μm,18.0s
CN2 LR LR
comp=Z,8μm,20.0s
SANT Santorini 106.61 43 IAMs_20 IAMs_20 08 48 14.9
comp=Z,3μm,19.0s
QSPA South Pole Qui 106.98 180 IAMs_20 IAMs_20 08 31 47.0
comp=Z,5μm,20.0s
RABL Rabaul 107.37 271 IAMs_20 IAMs_20 08 33 51.6
comp=Z,2μm,19.0s
ANN Anapa 107.71 30 eP **Pdif 07 50 17.1 -1.2**
ANN e 07 54 43.8
ANN e 08 01 33.3
ANN ePS **PS 08 04 07.6 -1.2**
ANN eSS SS 08 10 05.2 +10
ANN pmax pmax
comp=Z,29nm,0.9s
VNDA Vanda 108.10 193 PKKPbc PKKPbc 08 05 38.7 -2.0
comp=Z,1.6nm,0.8s,baz=281,slow=9.7,SNR=4.5
KARP Karpathos 108.21 43 IAMs_20 IAMs_20 08 41 21.0
comp=Z,2μm,21.0s
TLY Talaya 108.27 344 c iP **Pdif 07 50 21.9 +1.2**
TLY e 07 54 50.8
TLY eSS SS 08 10 06.2 +4.1
TLY pmax pmax
comp=Z,5.0nm,0.7s
SNY Shenyang 108.43 326 Pdif **Pdif 07 50 21.0 -0.6**
SNY PP **PP 07 54 51.3 0.0**
SNY S **Sdif 08 02 29.4 +1.5**
SNY AMB AMB
comp=Z,1μm,10.8s
SNY LR LR
comp=Z,6μm,16.7s
SNY LR LR
comp=Z,1μm,24.5s
SNY LR LR
comp=Z,10μm,15.9s
SNAA Sanae 108.61 161 IAMs_20 IAMs_20 08 30 19.0
comp=Z,3μm,22.0s
ANTO Ankara 108.83 36 IAMs_20 IAMs_20 08 44 58.7
comp=Z,2μm,20.0s
ISP Isparta 108.87 39 IAMs_20 IAMs_20 08 41 39.6
comp=Z,3μm,22.0s
KSRS Korea Array 108.92 321 Pdiff **Pdif 07 50 25.2 +1.4**
comp=Z,0.4nm,0.3s,baz=79,slow=3.5,SNR=1.6
KSRS PKiKP **PKiKP 07 54 28.9 +0.4**
comp=Z,1.9nm,0.9s,baz=26,slow=2.5,SNR=5.9
KSRS PKKP **PKKPab 08 05 49.1 -1.6**
comp=Z,1.7nm,0.9s,baz=239,slow=5.2,SNR=4.6
ZALV Zalesovo Beam 109.11 356 Pdiff **Pdif 07 50 23.9 -0.5**
comp=Z,2.6nm,0.9s,baz=2.7,slow=6.2,SNR=6.9
ZALV PKiKP **PKiKP 07 54 27.7 -0.7**
comp=Z,1.0nm,0.6s,baz=349,slow=3.7,SNR=3.8
ZALV PP **PP 07 54 52.9 -2.8**
comp=Z,14nm,0.9s,baz=350,slow=7.8,SNR=9.0
ZALV PKKPab **PKKPdf 08 05 53.1 +2.1**
comp=Z,0.8nm,0.5s,baz=180,slow=1.4,SNR=4.0
BRTR Keskin Array B 109.40 36 PKiKP **PKiKP 07 54 29.6 0.0**
comp=Z,2.1nm,0.9s,baz=297,slow=0.8,SNR=5.7
BRTR PP **PP 07 54 55.4 -3.2**
comp=Z,5.5nm,1.0s,baz=300,slow=4.4,SNR=4.1
BRTR PKKPbc **PKKPbc 08 05 36.3 +0.6**
comp=Z,2.5nm,0.9s,baz=163,slow=4.8,SNR=5.9
SOC Sochi 109.71 29 c iP **Pdif 07 50 25.9 -1.4**
SOC e 07 54 56.4
SOC e 08 01 01.5
SOC ePS **PS 08 04 24.4 -4.8**
KIV Kislovodsk 110.76 27 eP **Pdif 07 50 30.6 -1.5**
KIV i 07 54 31.0
KIV e 07 55 05.2
KIV e 08 01 06.7
KIV ePS **PS 08 04 37.6 -1.8**
KIV eSS SS 08 10 34.7 -1.6
KIV pmax pmax
comp=Z,17nm,1.1s
KIV Kislovodsk 110.76 27 IAMs_20 IAMs_20 08 47 51.3
comp=Z,3μm,19.0s
SONM Songino Array 110.92 341 Pdiff **Pdif 07 50 33.0 +0.2**
comp=Z,0.3nm,0.4s,baz=28,slow=6.5,SNR=1.7
SONM PKiKP **PKiKP 07 54 32.6 +0.4**
comp=Z,1.5nm,0.9s,baz=50,slow=1.2,SNR=4.2
SONM PP **PP 07 55 10.8 +1.6**
comp=Z,2.0nm,0.8s,baz=25,slow=3.4,SNR=8.6
SONM PKKPbc **PKKPbc 08 05 30.0 -1.1**
comp=Z,1.5nm,0.9s,baz=194,slow=4.1,SNR=5.3
SONM Songino Array 110.92 341 P **Pdif 07 50 33.0 +0.2**
KBZ Khabaz 111.04 27 Pdiff **Pdif 07 50 33.6 +0.5**
comp=Z,2.3nm,0.8s,baz=10,slow=4.4,SNR=5.2
KBZ PP **PP 07 55 09.0 -1.0**
comp=Z,13nm,1.0s,baz=310,slow=12,SNR=7.6
KBZ PKKPbc **PKKPbc 08 05 31.8 +1.5**
comp=Z,1.6nm,0.7s,baz=184,slow=6.5,SNR=3.5
GROC Groznyy 112.70 26 i PKiKP **PKiKP 07 54 38.2 +2.7**
GROC e 07 55 21.0
GROC pmax pmax
comp=Z,20nm,0.6s
BRZS Berezniki 113.02 4 eLR LR 08 45 41.5
comp=Z,2μm,18.7s
EIDS Eidsvold 113.04 249 IAMs_20 IAMs_20 08 32 29.1
comp=Z,3μm,20.0s
AKH Akhalkalaki 113.15 28 IAMs_20 IAMs_20 08 49 19.4
comp=Z,3μm,21.0s
GAZ Gaziantep 113.19 35 IAMs_20 IAMs_20 08 48 00.1
comp=Z,3μm,19.0s
ARMA Armidale 113.23 244 IAMs_20 IAMs_20 08 33 16.1
comp=Z,2μm,20.0s
NVL N'lazarevskaya 113.44 161 i PKIKP **PKiKP 07 54 32.1 -3.9**
NVL e 07 55 30.8
NVL eSS SS 08 11 17.8 +5.8
NVL MLR MLR
comp=Z,1μm,16.0s
PMG Port Moresby 113.55 267 IAMs_20 IAMs_20 08 37 47.6
comp=Z,3μm,18.0s
MAK Makhachkala 113.60 25 eP **Pdif 07 50 42.2 -2.4**
MAK i 07 54 35.7
MAK e 07 55 27.4
MAK e 08 01 17.1
MAK ePS **PS 08 04 59.2 -6.0**
MAK pmax pmax
comp=Z,230nm,1.5s
HHC Hu-ho-hao-te 114.97 333 PKP PKPdf 07 54 40.6 +0.5
HHC PP **PP 07 55 37.8 -0.3**
HHC SS SS 08 11 36.3 +4.3
HHC AMB AMB
comp=Z,570nm,9.3s
HHC LR LR
comp=Z,3μm,18.6s
HHC LR LR
comp=Z,3μm,18.6s
HHC LR LR
comp=Z,3μm,18.1s
ZSN Zaisan 115.58 356 ePKP **PKiKP 07 54 39.4 -1.6**
ZSN ePP **PP 07 55 41.2 -0.7**
ZSN ePS **PS 08 05 26.6 +3.4**
ZSN eLR LR 08 50 20.9
ZSN Zaisan 115.58 356 ePKIKP **PKiKP 07 54 39.3 -1.6**
ZSN e 07 55 41.2
ZSN ePS **PS 08 05 26.5 +3.4**
CAN Canberra 115.86 239 IAMs_20 IAMs_20 08 36 38.5
comp=Z,2μm,20.0s
TIA Tai'an 115.95 326 Pdif **Pdif 07 50 58.6 +3.4**
TIA AMB AMB
comp=Z,500nm,8.9s
TIA LR LR
comp=Z,4μm,17.1s
TIA LR LR
comp=Z,2μm,15.9s
TIA LR LR
comp=Z,8μm,17.7s
MAKZ Makanchi 116.38 358 PKIKP **PKiKP 07 54 41.7 -0.8**
MAKZ Makanchi 116.38 358 **PKiKP 07 54 41.7 -0.8**
MKAR Makanchi Array 116.38 358 PKP **PKiKP 07 54 42.0 -0.5**
comp=Z,3.5nm,0.8s,baz=8.5,slow=2.5,SNR=17
MKAR PP **PP 07 55 44.9 -2.6**
comp=Z,12nm,0.9s,baz=18,slow=5.2,SNR=8.5
MKAR PKKPbc **PKKPbc 08 05 12.6 0.0**
comp=Z,3.2nm,0.9s,baz=147,slow=2.5,SNR=5.2
CTAO Charters Tower 116.62 256 IAMs_20 IAMs_20 08 38 03.8
comp=Z,3μm,18.0s
TIY Taiyuan 117.13 331 ePKP **PKiKP 07 54 45.0 +0.7**
TIY PP **PP 07 55 52.3 -1.0**
TIY SKS **SKSdf 08 01 50.4 -4.9**
TIY SS **SS 08 12 01.7 +1.3**
TIY AMB AMB
comp=Z,640nm,5.3s
TIY LR LR
comp=Z,2μm,13.2s
TIY LR LR
comp=Z,12μm,16.8s
SSE Sheshan 117.31 320 PKP **PKiKP 07 54 45.1 +0.4**
SSE PP **PP 07 55 54.3 -0.6**
SSE AMB AMB
comp=Z,290nm,11.8s
SSE LR LR
comp=Z,2μm,16.1s
SSE LR LR
comp=Z,1μm,17.0s
SSE Sheshan 117.31 320 IAMs_20 IAMs_20 08 54 24.9
comp=Z,3μm,19.0s
BTLS Baital 118.03 4 ePKP **PKPdf 07 54 44.7 -1.0**
BTLS ePP **PP 07 55 57.2 -1.8**
BTLS ePS **PS 08 05 43.1 -2.2**
BTLS eLR LR 08 51 09.5
comp=Z,2μm,16.6s
BTLS Baital 118.03 4 ePKIKP **PKPdf 07 54 44.6 -1.1**
BTLS e 07 55 57.1
BTLS ePS **PS 08 05 43.1 -2.2**
NJ2 Nanjing 118.05 322 ePKP **PKiKP 07 54 47.6 +1.5**
NJ2 SS SS 08 12 18.4 +5.7
NJ2 AMB AMB
comp=Z,560nm,4.5s
NJ2 LR LR
comp=Z,2μm,20.8s
NJ2 LR LR
comp=Z,4μm,18.9s
NJ2 LR LR
comp=Z,3μm,18.9s
TDK Taldyqorghan 118.24 1 ePP PP 07 55 59.5 -1.0
TDK ePS **PS 08 05 45.5 -1.8**
TDK eLR LR 08 53 21.3
comp=Z,3μm,16.5s
COEN Coen 118.39 263 IAMs_20 IAMs_20 08 44 28.2
comp=Z,2μm,18.0s
TOO Toolangi 118.75 236 IAMs_20 IAMs_20 08 38 01.9
comp=Z,4μm,19.0s
WMQ Urumqi 118.91 353 ePKP **PKiKP 07 54 47.6 0.0**
WMQ PP **PP 07 56 08.5 +3.3**
WMQ SKS **SKSdf 08 01 54.4 -4.0**
WMQ SS **SS 08 12 24.4 +1.8**
WMQ AMB AMB
comp=Z,830nm,5.1s
WMQ LR LR
comp=Z,5μm,22.7s
WMQ LR LR
comp=Z,3μm,22.7s
WMQ LR LR
comp=Z,8μm,25.9s
KUU Kurty 119.30 2 ePKP **PKPdf 07 54 46.8 -1.5**
KUU ePP **PP 07 56 05.8 -2.0**
KUU eLR LR 08 51 22.3
comp=Z,5μm,15.8s
KUU Kurty 119.30 2 ePKIKP **PKPdf 07 54 46.7 -1.5**
KUU e 07 56 05.7
BRLS Borolday 119.61 8 ePS PS 08 05 59.5 -0.1
SGDS Sogindy 119.65 4 ePKP **PKPdf 07 54 48.9 -0.1**
SGDS ePP **PP 07 56 09.0 -1.3**
SGDS eLR LR 08 52 55.8
comp=Z,3μm,14.5s
USP Ospenovka 119.83 4 P **PKiKP 07 54 50.2 +0.8**
SNR=6.7
DZA Taraz 119.93 7 ePP PP 07 56 10.4 -1.7
AAA Alma-Ata 120.00 2 ePKP **PKPdf 07 54 49.0 -0.7**
AAA i PP **PP 07 56 10.8 -1.9**
AAA eLR LR 08 51 30.7
comp=Z,4μm,18.3s
AAA Alma-Ata 120.00 2 ePKIKP **PKPdf 07 54 49.0 -0.7**
AAA i 07 56 10.7
MDOK Medeo 120.05 2 ePKP **PKPdf 07 54 49.5 -0.4**
MDOK ePP **PP 07 56 10.6 -2.6**
MDOK ePS **PS 08 06 02.6 -1.2**
MDOK eLR LR 08 51 27.0
comp=Z,3μm,17.4s
MDOK Medeo 120.05 2 ePKIKP **PKPdf 07 54 49.5 -0.4**
MDOK e 07 56 10.5
MDOK ePS **PS 08 06 02.6 -1.2**
SHLS Shalkode 120.08 360 ePKP **PKPdf 07 54 49.2 -0.7**
SHLS ePP **PP 07 56 11.7 -1.6**
SHLS eLR LR 08 52 14.3
comp=Z,2μm,16.0s
SHLS Shalkode 120.08 360 ePKIKP **PKPdf 07 54 49.2 -0.7**
SHLS e 07 56 11.6
UZB Uzunbulak 120.09 0 ePKP **PKPdf 07 54 49.3 -0.7**
UZB ePP **PP 07 56 11.2 -2.2**
UZB ePS **PS 08 06 06.4 +2.2**
UZB eLR LR 08 52 44.6
comp=Z,2μm,16.2s
UZB Uzunbulak 120.09 0 ePKIKP **PKPdf 07 54 49.2 -0.7**
UZB e 07 56 11.2
UZB ePS **PS 08 06 06.4 +2.2**
TKM2 Tokmak 2 120.23 3 P **PKiKP 07 54 50.5 +0.1**
SNR=7.0
JBG Jabagly 120.30 7 ePKIKP **PKPdf 07 54 49.6 -0.8**
JBG e 07 56 13.3
JBG ePS **PS 08 06 04.9 -1.1**
EKS2 Erkin-Say 120.38 5 P **PKiKP 07 54 51.0 +0.4**
SNR=10.0
AAK Ala-Archa 120.45 4 PKIKP **PKPdf 07 54 50.4 -0.3**
AAK Ala-Archa 120.45 4 **PKPdf 07 54 50.4 -0.3**
IUG Iuzhnay 120.50 8 ePP PP 07 56 15.2 -1.1
IUG eLR LR 08 50 40.9
GTA Gaotai 120.57 341 ⇑PKP **PKiKP 07 54 51.3 +0.2**
GTA sPKP 07 55 05.7
GTA PP **PP 07 56 19.4 +2.5**
GTA SKS **SKSdf 08 01 58.2 -3.7**
GTA SKKS **SKKSac 08 03 06.8 -10**
GTA SS **SKKSdf 08 12 41.0 +0.8**
GTA AMB AMB
comp=Z,1μm,9.8s
GTA LR LR
comp=Z,4μm,17.8s
GTA LR LR
comp=Z,8μm,18.1s
UCH Uchtor 120.86 4 P **PKiKP 07 54 52.5 +0.6**
SNR=15
AML Almayashu 120.90 5 P **PKiKP 07 54 52.5 +0.5**
SNR=12
ULHL Ulahol 120.94 2 P **PKiKP 07 54 52.4 +0.6**
SNR=14
TATO Taipei 121.23 314 IAMs_20 IAMs_20 08 52 37.8
comp=Z,2μm,19.0s
YHNB Yeheng 121.51 314 IAMs_20 IAMs_20 08 56 31.4
comp=Z,3μm,18.0s
NACB Ninganchiao 121.68 313 IAMs_20 IAMs_20 08 52 30.0
comp=Z,2μm,20.0s
WHN Wuhan 121.75 324 PKP **PKPdf 07 54 52.5 -0.8**
WHN SKS **SKSdf 08 02 00.9 -3.3**
WHN SS **SS 08 13 00.4 +0.1**
WHN LR LR
comp=Z,4μm,16.6s
WHN LR LR
comp=Z,11μm,18.9s
XAN Xi'an 121.77 331 PKP **PKPdf 07 54 53.1 -0.2**
XAN SS SS 08 12 55.6 -4.6
XAN AMB AMB
comp=Z,2μm,11.3s
XAN LR LR
comp=Z,3μm,17.2s
XAN LR LR
comp=Z,10μm,16.7s
GEYT Alibeck 121.87 19 PKP **PKPdf 07 54 53.3 -0.1**
comp=Z,15nm,0.8s,baz=298,slow=3.2,SNR=28
GEYT PP **PP 07 56 24.9 -0.7**
comp=Z,6.9nm,0.9s,baz=305,slow=8.2,SNR=3.9
GYA0B ALIBECK ARRAY 121.87 19 IAMs_20 IAMs_20 08 57 28.7
comp=Z,4μm,19.0s
STKA Stephens Creek 121.91 243 PKP **PKiKP 07 54 54.5 +0.8**
comp=Z,17nm,0.8s,baz=61,slow=2.1,SNR=40
STKA PKKPbc **PKKPab 08 04 49.8 -1.4**

comp=Z,5.4nm,0.9s,baz=294,slow=6.9,SNR=10
LZH Lanzhou 122.18 336 ⇓Pdif **Pdif 07 51 30.1 +7.0**
LZH PKP **PKiKP 07 54 54.6 +0.2**
LZH pPKP pPKPdf 07 55 00.9 -0.5
LZH sPKP 07 55 05.2
LZH *i* 07 56 11.9
LZH PP **PP 07 56 32.5 +4.5**
LZH Lanzhou 122.18 336 SKKS SKKSac 08 03 02.3 -25
LZH Lanzhou 122.18 336 SS SS 08 13 05.1 -0.2
LZH AMB AMB
comp=Z,2μm,9.2s
LZH LR LR
comp=N,5μm,17.9s
LZH LR LR
comp=E,5μm,18.0s
LZH LR LR
comp=Z,6μm,20.1s
LZH Lanzhou 122.18 336 PKP **PKiKP 07 54 54.6 +0.2**
LZH sPKP 07 55 05.2
LZH PP **PP 07 56 32.5 +4.5**
LZH SKS **SKSdf 08 02 02.0 -3.2**
LZH SS **SS 08 13 05.1 -0.2**
LZH AMB AMB
comp=Z,2μm,9.2s
LZH LR LR
comp=Z,5μm,17.9s
LZH LR LR
comp=Z,6μm,20.1s
SSLB Suanglung 122.37 314 IAMs_20 IAMs_20 08 59 09.4
comp=Z,3μm,19.0s
SYO Syowa Base 122.55 164⇑ *e*pPdiff pPdif 07 51 30.8 +0.1
SYO Syowa Base 122.55 164 *e*PKPdf **PKPdf 07 54 52.4 -1.1**
BTK Batken 122.66 8 PKiKP **PKPdf 07 54 54.0 -0.9**
BTK Batken 122.66 8 **PKPdf 07 54 54.0 -0.9**
TPUB Ta-pu 122.91 313 IAMs_20 IAMs_20 08 59 36.8
comp=Z,3μm,19.0s
KSH Kashi 123.65 3 PKP **PKiKP 07 54 58.2 +1.1**
KSH sPKP 07 55 11.4
KSH PKS **PKSdf 07 58 31.5 -2.2**
KSH SKKS 08 03 31.9
KSH AMB AMB
comp=Z,850nm,7.9s
KNMB Chin-men Tao 123.66 316 IAMs_20 IAMs_20 08 59 06.0
comp=Z,4μm,18.0s
FAKI Fak Fak 125.96 279 IAMs_20 IAMs_20 08 39 47.7
comp=Z,3μm,20.0s
BBOO Buckleboo 126.59 242 IAMs_20 IAMs_20 08 42 51.6
comp=Z,3μm,20.0s
CD2 Chengdu 126.72 333⇑ *i* PKP **PKPdf 07 55 02.9 0.0**
CD2 SKS **SKSdf 08 02 10.0 -3.7**
CD2 SKKS **SKKSac 08 03 52.9 -3.6**
CD2 SS **SS 08 14 01.4 -1.2**
CD2 AMB AMB
comp=Z,730nm,5.4s
CD2 LR LR
comp=Z,5μm,19.4s
CD2 LR LR
comp=Z,3μm,28.5s
WR0 Warramunga Arr 127.51 258 IAMs_20 IAMs_20 08 47 37.2
comp=Z,3μm,18.0s
WR9 Warramunga Arr 127.54 258 IAMs_20 IAMs_20 08 47 53.8
comp=Z,4μm,19.0s
WR8 Warramunga Arr 127.55 258 IAMs_20 IAMs_20 08 47 54.2
comp=Z,4μm,18.0s
WR7 Warramunga Arr 127.57 258 IAMs_20 IAMs_20 08 47 54.8
comp=Z,3μm,18.0s
WR6 Warramunga Arr 127.59 258 IAMs_20 IAMs_20 08 47 55.4
comp=Z,3μm,18.0s
WB0 Warramunga Arr 127.63 258 IAMs_20 IAMs_20 08 48 13.3
comp=Z,4μm,18.0s
WR4 Warramunga Arr 127.64 258 IAMs_20 IAMs_20 08 49 06.5
comp=Z,3μm,18.0s
WB9 Warramunga Arr 127.64 258 IAMs_20 IAMs_20 08 48 22.6
comp=Z,4μm,18.0s
WB8 Warramunga Arr 127.64 258 IAMs_20 IAMs_20 08 48 13.7
comp=Z,4μm,18.0s
WB7 Warramunga Arr 127.65 258 IAMs_20 IAMs_20 08 48 56.8
comp=Z,4μm,19.0s
WR3 Warramunga Arr 127.66 258 IAMs_20 IAMs_20 08 48 15.0
comp=Z,3μm,18.0s
WB5 Warramunga Arr 127.67 258 IAMs_20 IAMs_20 08 48 57.3
comp=Z,4μm,18.0s
WC3 Warramunga Arr 127.67 258 IAMs_20 IAMs_20 08 48 57.4
comp=Z,3μm,18.0s
WC2 Warramunga Arr 127.67 258 IAMs_20 IAMs_20 08 48 14.5
comp=Z,3μm,18.0s
WR2 Warramunga Arr 127.68 258 IAMs_20 IAMs_20 08 48 06.6
comp=Z,3μm,18.0s
WB2 Warramunga Arr 127.69 258 IAMs_20 IAMs_20 08 40 59.9
comp=Z,3μm,21.0s
WRAB Tennant Creek 127.69 258 PKIKP **PKiKP 07 55 05.5 +0.1**
WRAB MLR MLR
comp=Z,3μm,18.0s
WRAB Tennant Creek 127.69 258 **PKiKP 07 55 05.5 +0.1**
WRAB Tennant Creek 127.69 258 IAMs_20 IAMs_20 08 48 06.6
comp=Z,3μm,18.0s
WB1 Warramunga Ar. 127.69 258 IAMs_20 IAMs_20 08 49 07.0
comp=Z,3μm,19.0s
WC1 Warramunga Arr 127.70 258 IAMs_20 IAMs_20 08 48 58.1
comp=Z,3μm,18.0s
WR1 Warramunga Arr 127.70 258 IAMs_20 IAMs_20 08 48 58.1
comp=Z,3μm,19.0s
WRA Warramunga Arr 127.70 258 PKP **PKiKP 07 55 05.5 +0.1**
comp=Z,31nm,0.8s,baz=81,slow=2.2,SNR=132
WC4 Warramunga Arr 127.70 258 IAMs_20 IAMs_20 08 48 57.2
comp=Z,4μm,19.0s
KBL Kabul 127.81 10 PKIKP **PKPdf 07 55 05.0 -0.1**
KBL Kabul 127.81 10 **PKPdf 07 55 05.0 -0.1**
KBL IAMs_20 IAMs_20 09 00 48.0
comp=Z,4μm,19.0s
RAYN Ar Rayn 128.02 40 *i* PKPdf **PKPdf 07 55 05.2 -0.4**
SNR=11
RAYN Ar Rayn 128.02 40 *i* P **PKPdf 07 55 05.2 -0.4**
SNR=11
RAYN Ar Rayn 128.02 40 PKIKP **PKPdf 07 55 05.1 -0.4**
RAYN Ar Rayn 128.02 40 **PKPdf 07 55 05.1 -0.4**
TBP Tagbilaran 128.35 298 *i* P **Pdif 07 51 40.0 -11**
MAW Mawson 128.41 172 PKP **PKiKP 07 55 05.9 +0.5**
comp=Z,33nm,0.9s,baz=273,slow=4.3,SNR=28
MAW Mawson 128.41 172 PKIKP **PKiKP 07 55 06.0 +0.5**
MAW Mawson 128.41 172 **PKiKP 07 55 06.0 +0.6**
ASAR Alice Springs 128.42 253 PKP **PKiKP 07 55 06.9 0.0**
comp=Z,19nm,0.9s,baz=99,slow=1.9,SNR=34
ASAR PKKPab PKKPab 08 04 27.1
comp=Z,1.0nm,1.0s,baz=267,slow=3.7,SNR=4.8
GYA Guiyang 129.10 328 PKP **PKPdf 07 55 07.5 -0.1**
GYA PP **PP 07 57 16.8 +2.4**
GYA SKKS 08 04 01.3
GYA S **Sdif 08 05 07.6 -14**
GYA SS **SS 08 14 35.7 +3.0**
GYA AMB AMB
comp=Z,970nm,15.5s
GYA LR LR
comp=Z,2μm,17.2s
GYA LR LR
comp=Z,2μm,15.7s
GYA LR LR
comp=Z,3μm,24.2s
NIL Nilore 129.27 6 PKIKP **PKPdf 07 55 07.1 -0.6**
NIL Nilore 129.27 6 **PKPdf 07 55 07.0 -0.6**
BOSA Boshof 129.46 113 PKP **PKiKP 07 55 08.6 -0.4**
comp=Z,29nm,0.9s,baz=221,slow=1.5,SNR=24
LBMI Labuha 129.63 284 PKP **PKiKP 07 55 10.1 +0.6**
MTN Manton Dam 129.64 267 IAMs_20 IAMs_20 08 49 28.0
comp=Z,2μm,19.0s
MBAR Mbarara 129.72 76 PKP **PKPdf 07 55 09.1 0.0**
comp=Z,12nm,0.8s,baz=191,slow=5.1,SNR=4.0
MBAR Mbarara 129.72 76 PKIKP **PKPdf 07 55 09.5 +0.3**
MBAR Mbarara 129.72 76 **PKPdf 07 55 09.5 +0.3**
MBAR IAMs_20 IAMs_20 08 56 26.4
comp=Z,3μm,19.0s
LBTB Lobatse 129.73 109 PKP **PKPdf 07 55 08.5 -0.3**
comp=Z,12nm,1.0s,baz=334,slow=2.5
AAI Ambon 130.04 280 PKP **PKiKP 07 55 10.0 -0.3**
DHRM DHARAMSHALA 130.90 3 *e*P **PKPdf 07 55 11.2 +0.1**
DHRM *i* x x 07 57 24.1
NLAI Namlea 130.92 281 PKP **PKiKP 07 55 12.6 +0.5**
LSZ Lusaka 131.21 96 PKiKP PKPpre 07 55 05.2
comp=Z,3.0nm,0.7s,baz=54,slow=2.6,SNR=6.8
LSZ Lusaka 131.21 96 PKIKP **PKiKP 07 55 12.6 -0.2**
LSZ Lusaka 131.21 96 PKPpre 07 55 05.7
LSZ **PKiKP 07 55 12.6 -0.2**
LSZ Lusaka 131.21 96 IAMs_20 IAMs_20 09 05 30.2
comp=Z,2μm,18.0s
SHME Shamm 131.70 28 *i* PKPdf **PKPdf 07 55 12.1 -0.4**
SNR=9.2
SHME Shamm 131.70 28 *i* P **PKPdf 07 55 12.1 -0.4**
SNR=9.2
BHK Bhakra 131.74 3 *ex* **PKPdf 07 55 14.0 +1.6**
BANOM Banah 131.88 28 *i* PKPdf **PKPdf 07 55 12.6 -0.2**
SNR=8.0
BANOM Banah 131.88 28 *i* P **PKPdf 07 55 12.6 -0.2**
SNR=8.0
DESE Dese 132.01 57 *e*P PKPdf 07 55 04.7 -9.0
DESE *e*SN **SKPbc 07 58 32.7 -5.8**
DESE *e*SG **SKPab 07 58 40.7 +1.3**
LSA Lhasa 132.08 346 PKP **PKiKP 07 55 15.2 +0.5**
LSA Lhasa 132.08 346 PKPdf **PKPdf 07 55 14.1 +0.4**
LSA Lhasa 132.08 346 P **PKPdf 07 55 14.1 +0.4**
KMI Kunming 132.15 331 PKP **PKiKP 07 55 21.6 +7.0**
KMI pPKP sPKPdf 07 55 29.0 +5.8
KMI sPKP 07 55 32.3
KMI PP PP 07 58 00.1 +26
KMI PKS **PKSdf 07 58 55.7 +5.3**
KMI Kunming 132.15 331 SS SS 08 15 59.1 +49
KMI pmax pmax
comp=Z,2μm,12.0s
KMI LR LR
comp=N,5μm,19.2s
KMI LR LR
comp=E,5μm,19.8s
KMI LR LR
comp=Z,9μm,19.8s
MSFE Esma-Masafi 132.30 28 *i* PKPdf **PKPdf 07 55 13.5 -0.1**
SNR=7.5
MSFE Esma-Masafi 132.30 28 *i* P **PKPdf 07 55 13.5 -0.1**
SNR=7.5
NAZ Nazwa, Dubai 132.39 29 *i* PKPdf **PKPdf 07 55 13.8 0.0**
SNR=12
NAZ Nazwa, Dubai 132.39 29 *i* P **PKPdf 07 55 13.8 0.0**
SNR=12
NAZ Nazwa, Dubai 132.39 29 P **PKPdf 07 55 11.1 -2.6**
SNR=6.5
KNRA Kununurra 132.40 264 IAMs_20 IAMs_20 08 48 39.5
comp=Z,3μm,19.0s
MDH Madha 132.41 28 *i* PKPdf **PKPdf 07 55 13.3 -0.5**
SNR=14
MDH Madha 132.41 28 *i* P **PKPdf 07 55 13.3 -0.5**
SNR=14
MDH Madha 132.41 28 P **PKPdf 07 55 09.9 -3.9**
SNR=6.7
AJN Ajban 132.43 30 *i* PKPdf **PKPdf 07 55 13.9 +0.1**
SNR=8.0
AJN Ajban 132.43 30 *i* P **PKPdf 07 55 13.9 +0.1**
SNR=8.0
FURI Furi 132.46 60 IAMs_20 IAMs_20 08 54 05.0
comp=Z,3μm,20.0s
FAQ Al Faqa, Dubai 132.56 29 *i* PKPdf **PKPdf 07 55 14.0 -0.1**
SNR=6.6
FAQ Al Faqa, Dubai 132.56 29 *i* P **PKPdf 07 55 14.0 -0.1**
SNR=6.6
UOSS Minazif 132.68 29 *i* PKPdf **PKPdf 07 55 13.5 -0.8**
SNR=15
UOSS Minazif 132.68 29 *i* P **PKPdf 07 55 13.5 -0.8**
SNR=15
UOSS Minazif 132.68 29 **PKPdf 07 55 13.7 -0.6**
HATD Hata, Dubai 132.75 29 *i* PKPdf **PKPdf 07 55 14.0 -0.4**
SNR=16
HATD Hatta, Dubai 132.75 29 *i* P **PKPdf 07 55 14.0 -0.4**
SNR=16
HATD Hatta, Dubai 132.75 29 P **PKPdf 07 55 11.2 -3.3**
SNR=11
ASHO Ashiyiah 132.83 29 *i* PKPdf **PKPdf 07 55 14.2 -0.4**
SNR=6.1
ASHO Ashiyiah 132.83 29 *i* P **PKPdf 07 55 14.2 -0.4**
SNR=6.1
ASHO Ashiyiah 132.83 29 P **PKPdf 07 55 11.6 -3.0**
SNR=8.9
DDI Dehra Dun 132.88 1 *e*P **PKPdf 07 55 14.1 -0.5**
DDI *i* x x 07 57 38.1
QIZ Qiongzhong 133.08 318 PKP **PKPdf 07 55 14.3 -0.9**
QIZ PP **PP 07 57 39.8 -0.6**
QIZ SS SS 08 15 21.7 -0.1
QIZ AMB AMB
comp=Z,670nm,4.8s
QIZ LR LR
comp=Z,3μm,18.1s
QIZ LR LR
comp=Z,3μm,15.1s
QIZ LR LR
comp=Z,5μm,17.6s
DIBR DIBRUGARH 133.15 341 *ex* **PKPdf 07 55 16.4 +1.3**
ALNE Al Ain 133.22 30 *i* PKPdf **PKPdf 07 55 15.2 -0.2**
SNR=10
ALNE Al Ain 133.22 30 *i* P **PKPdf 07 55 15.2 -0.2**
SNR=10
SOHO SOHO 133.52 29 P **PKPdf 07 55 12.3 -3.5**
SNR=16
DAMY Dhamar 133.53 49 IAMs_20 IAMs_20 08 51 40.9
comp=Z,3μm,22.0s
ITAN ITANAGAR 133.82 342 *e*P **PKPdf 07 55 16.3 -0.1**
LUWI Luwuk 134.16 286 PKP **PKPdf 07 55 16.4 -0.9**
ARQ Araqi 134.20 29 P **PKPdf 07 55 13.0 -4.3**
SNR=6.5
ATD Arta Tunnel 134.30 54 PKP **PKPdf 07 55 17.8 +0.2**
baz=287,slow=2.4
ATD Arta Tunnel 134.30 54 P **PKPdf 07 55 12.5 -5.2**
SNR=2
ATD Arta Tunnel 134.30 54 IAMs_20 IAMs_20 08 51 09.8
comp=Z,3μm,22.0s
MRSI Marisa 134.31 288 PKP **PKPdf 07 55 17.3 -0.3**
HOQ Hoqain 134.36 28 P **PKPdf 07 55 13.1 -4.4**
SNR=7.1
BIDO Bidbid 134.78 28 P **PKPdf 07 55 13.8 -4.5**
SNR=11
BSY Bisya 135.03 29 P **PKPdf 07 55 14.1 -4.6**
SNR=9.0
APSI Ampana 135.14 286 PKP **PKiKP 07 55 20.0 -0.7**
SMDO Samad 135.14 28 P **PKPdf 07 55 14.4 -4.7**
SNR=14
SOEI Soe 135.52 273 PKP **PKPdf 07 55 17.1 -2.9**
SOEI Soe 135.52 273 IAMs_20 IAMs_20 08 48 09.7
comp=Z,2μm,20.0s
FITZ Fitzroy Crossi 135.68 261 IAMs_20 IAMs_20 08 52 47.6
comp=Z,3μm,18.0s
JMDO Jabal Madar 135.77 28 P **PKPdf 07 55 15.5 -4.6**
SNR=6.3
SHL Shillong 135.83 343 *e*P **PKPdf 07 55 20.3 -0.1**
SHL *i* x x 07 57 55.0
BBSI Bau Bau 135.92 280 PKP **PKPdf 07 55 20.7 +0.1**
KMBO Kilima Mbogo 135.93 73 PKhKP PKPpre 07 55 15.3
comp=Z,0.8nm,0.3s,baz=297,slow=24,SNR=1.4
KMBO Kilima Mbogo 135.93 73 *i* PKPdf **PKiKP 07 55 22.8 +0.2**
SNR=8.8
KMBO Kilima Mbogo 135.93 73 *i* P **PKiKP 07 55 22.8 +0.2**
SNR=8.8
KMBO Kilima Mbogo 135.93 73 PKIKP PKPpre 07 55 15.3
KMBO MLR MLR
comp=Z,4μm,20.0s
MHTO MHTO 136.90 29 P **PKPdf 07 55 17.5 -4.7**
SNR=5.9
SPSI Sidrap Palu 138.03 283 PKP **PKPdf 07 55 25.0 +0.5**
KAPI Kappang 138.41 282 PKHKP PKPpre 07 55 16.1
KAPI 07 55 26.1
KAPI Kappang 138.41 282 PKPpre 07 55 16.1
KAPI PKPdf **PKPdf 07 55 26.1 +0.8**
BOK Bokaro 138.85 350 *e*P **PKPdf 07 55 25.1 -0.7**
BOK *i* x **PP 07 58 14.0 -1.8**
CHTO Chiang Mai 139.34 330 PKIKP **PKPdf 07 55 24.7 -2.1**
BKB Balikpapan 139.62 289 IAMs_20 IAMs_20 08 53 54.9
comp=Z,2μm,20.0s
CMAR Chiang Mai Arr 139.65 330 PKhKP PKPpre 07 55 18.4
comp=Z,0.9nm,0.3s,baz=344,slow=3.4,SNR=6.4
CMAR PKP **PKPdf 07 55 27.6 +0.2**
comp=Z,16nm,0.9s,baz=334,slow=2.7,SNR=13
WBSI Waikabubak, Su 140.14 275 PKP **PKPdf 07 55 24.7 -3.7**
PBKT Sadao Pong 140.22 326 **PKPdf 07 55 27.4 -1.0**
MBWA Marble Bar 141.43 257 IAMs_20 IAMs_20 08 51 18.1
comp=Z,3μm,21.0s
PLAI Plampang 141.46 277 PKP **PKPdf 07 55 25.6 -5.1**
SOCY Socotra 141.81 42 IAMs_20 IAMs_20 09 05 12.3
comp=Z,2μm,20.0s
NGP Nagpur 142.03 0 IVMs_BB IVMs_BB 09 01 04.6
comp=Z,1μm,18.7s
NGP IVMs_BB IVMs_BB 09 04 55.5
comp=Z,980nm,17.1s
NWAO Narrogin (SRO) 142.21 238 PKIKP **PKPdf 07 55 31.4 -0.2**
NWAO Narrogin (SRO) 142.21 238 **PKPdf 07 55 31.4 -0.2**
BWNR Bhubaneshwar 142.29 350 *e*P **PKPdf 07 55 30.8 -1.3**
BWNR IVMs_BB IVMs_BB 09 01 03.9
comp=Z,1μm,23.3s
SRBI Singaraja 143.67 280 PKP PKPab 07 55 31.6 +0.3
MORW Morawa 144.09 244 **PKPab 07 55 32.6 +0.1**
MORW IAMs_20 IAMs_20 08 49 12.2
comp=Z,3μm,21.0s
SRSP Sriramsagar 144.23 1 *e*PKPdf **PKPab 07 55 32.6 -0.7**
SRSP IVMs_BB IVMs_BB 09 11 31.9
comp=Z,631nm,15.8s
POO Poona 144.26 8 *e*P PKPbc 07 55 34.1 +0.3
POO *i* x x 07 58 46.8
RPR Rampur 144.31 360 *e*PKPdf **PKPab 07 55 33.3 -0.2**
JAGI Jajag, Banyuwa 144.78 280 PKP **PKPab 07 55 30.0 -5.5**
PBKI Pangkalan Bun 144.95 290 PKP **PKPdf 07 55 36.9 0.0**
KLRI Killari 145.01 4 *e*PKPdf **PKPab 07 55 35.2 -1.0**
KLRI IVMs_BB IVMs_BB 09 07 45.7
comp=Z,1μm,19.8s
HYBB Hyderabad (bro 145.74 1 *e*PKPab **PKPdf 07 55 37.8 -0.4**
HYBB IVMs_BB IVMs_BB 09 12 56.6
comp=Z,681nm,16.0s
HYB Hyderabad 145.74 1 *i* PKP **PKPdf 07 55 37.5 -0.7**
comp=Z,545nm,1.0s
HYB *e*PP **PP 07 59 00.0 +2.5**
HYB *e*PPP PPP 08 02 16.0
HYB Hyderabad 145.74 1⇑ *i*P **PKPdf 07 55 37.8 -0.4**
HYB IAmb IAmb 07 55 49.4
comp=Z,196nm,1.1s
PVM Polavaram 145.82 356 *e*PKPab **PKPdf 07 55 37.6 -0.7**
PVM IVMs_BB IVMs_BB 09 09 26.6
comp=Z,652nm,18.2s
MYLAV Mylavaram 146.37 357 *e*PKPab **PKPbc 07 55 40.1 -0.3**
MYLAV IVMs_BB IVMs_BB 09 07 50.3
comp=Z,816nm,19.0s
NJS Nagarjunasagar 146.60 360 *e*PKPbc **PKPdf 07 55 39.7 +0.1**
NJS IVMs_BB IVMs_BB 09 14 07.5
comp=Z,443nm,17.5s
PWJI Pagerwojo 146.85 282 PKP **PKPdf 07 55 40.4 +0.3**
DGPR DIGLIPUR 146.98 335 *e*P **PKPab 07 55 43.0 -0.6**
SRLM Srisailam 147.05 0 *e*PKPbc **PKPdf 07 55 40.1 -0.3**
SRLM IVMs_BB IVMs_BB 09 09 02.3
comp=Z,568nm,19.7s
GOA Goa 147.25 9 *e*P **PKPdf 07 55 40.4 -0.3**
GOA *i* x x 07 59 04.0
ADKI Addanki 147.29 358 *e*PKPbc **PKPdf 07 55 41.2 +0.4**
ADKI IVMs_BB IVMs_BB 09 12 16.2
comp=Z,564nm,16.5s
PCJI Pacitan 147.50 282 PKP **PKPbc 07 55 42.5 -1.3**
WOJI Wonogiri, Jawa 147.62 282 PKP **PKPdf 07 55 41.9 +0.5**
SMRI Semarang 147.80 284 PKP **PKPdf 07 55 40.4 -1.3**
UGM Wanagama 148.02 283 PKP **PKPbc 07 55 44.6 -0.6**
URV Uravakonda 148.15 3 *e*PKPbc **PKPdf 07 55 42.5 +0.2**
URV IVMs_BB IVMs_BB 09 09 57.1
comp=Z,2μm,16.6s
PBA Port Blair 148.43 334 *e*P PKPdf 07 55 43.2 +0.4
FOMA Nahampoana Res 149.09 110 P PKPdf 07 55 23.6 -20
SNR=6.8
VOI Vohitsoka 149.23 104 P PKPdf 07 55 25.7 -18
SNR=13
SKHT Srikalahasti 149.39 359 *e*PKPdf **PKPdf 07 55 44.8 +0.5**
SKHT IVMs_BB IVMs_BB 09 09 45.5
comp=Z,627nm,19.7s
IPM Ipoh 149.53 313 **PKPdf 07 55 44.3 -0.3**
IPM PKPbc **PKPbc 07 55 49.5 +0.4**
OPO Ambohidratompo 149.63 98 PKP **PKPdf 07 55 45.6 +0.8**
comp=Z,33nm,1.0s,baz=304,slow=3.0,SNR=8.4
OPO PKPbc **PKPbc 07 55 49.9 +0.5**
comp=Z,55nm,0.8s,baz=249,slow=3.2,SNR=14
ABPO Ambohimpanom 149.68 99 PKP2 **PKiKP 07 55 50.5 0.0**
ABPO Ambohimpanom 149.68 99 **PKPdf 07 55 46.2 +1.4**
ABPO PKPbc **PKiKP 07 55 50.5 0.0**
ABPO Ambohimpanom 149.68 99 IAMs_20 IAMs_20 09 10 56.9
comp=Z,2μm,20.0s
MDRS Chennai 150.04 358 *e*P **PKPdf 07 55 43.4 -1.9**
MDRS IAmb IAmb 07 55 58.5
comp=Z,68nm,0.8s
PMBI Palembang 151.11 296 IAMs_20 IAMs_20 09 15 16.4
comp=Z,3μm,20.0s
LHMI Lhok Sumawe 151.67 320 IAMs_20 IAMs_20 09 12 19.2
comp=Z,3μm,21.0s
PSI Prapat 152.19 313 PKIKP **PKPdf 07 55 48.5 -0.3**
RPSI Rantau Prapat 152.26 313 **PKPdf 07 55 48.5 -0.2**
BKNI Bangkinang 152.30 306 IAMs_20 IAMs_20 09 16 35.0
comp=Z,3μm,21.0s
MSEY Mahe Island 153.81 65 PKIKP **PKPdf 07 55 52.9 +1.8**
MSEY Mahe Island 153.81 65 **PKPdf 07 55 52.9 +1.8**
MSEY Mahe Island 153.81 65 IAMs_20 IAMs_20 09 11 08.4
comp=Z,2μm,20.0s
GSI Gunungsitoli 154.19 313 **PKPdf 07 55 52.1 +0.6**
RER Riviere de l'E 157.60 104 **PKPab 07 56 27.9 -0.2**

SOME **10** *07:37:58.5, 40.77N×77.53E, h5km*
NNC **10** *07:37:59.3±0.8, 40.74N×77.54E, h0km, mb3.7, mpv3.3,*
Error ellipse: s-maj=5.6km s-min=3.9km az=177.0
KRNET **10** *07:37:59.4±0.1, 40.74N×77.53E, h19km, mb3.0*
ISC 10 07:37:59.4±1.4, **40.76N**±0.04×**77.49E**±0.03, **h8**km±16km,
n54,σ1.944/82, 19C-11D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.39**	**350**	⇑*i*P		**Pg**	**07 38 26.2**	**+0.1**
	baz=50							
KDJ				⇑*i*S		**Sg**	**07 38 45.8**	**+1.7**
	baz=50							
KSH	**Kashi**	**1.71**	**224**	⇓*i*P		**Pg**	**07 38 32.2**	**+0.1**
	baz=26							
KSH				⇓*i*S		**Sg**	**07 38 55.6**	**+1.4**
	baz=26							
ULHL	**Ulahol**	**1.75**	**328**	⇑*i*P		**Pb**	**07 38 32.8**	**+0.8**
	baz=28							
ULHL				⇑*i*S		**Sg**	**07 38 57.3**	**+1.4**
	baz=28							
ULHL	**Ulahol**	**1.75**	**328**	P		**Pb**	**07 38 32.5**	**+0.5**
	SNR=6.4							
PRZ	**Przheval'sk**	**1.85**	**21**	⇑*i*P		**Pb**	**07 38 34.0**	**+0.4**
	baz=21							
PRZ				⇑*i*S		**Sg**	**07 38 59.8**	**+0.9**
	baz=21							
ANVS	**Anan'yevo**	**2.02**	**4**	⇓*i*P		**Pb**	**07 38 37.3**	**+0.7**
	baz=3.0							
ANVS				⇓*i*S		**Sg**	**07 39 05.0**	**+0.5**
	baz=3.0							
BOOM	**Boomskoye usch**	**2.08**	**327**	⇑*i*P		**Pb**	**07 38 38.3**	**+0.7**
	baz=26							
BOOM				⇑*i*S		**Sg**	**07 39 06.6**	**+0.2**
	baz=26							
KZA	**Kyzart**	**2.14**	**309**	⇓*i*P		**Pb**	**07 38 39.2**	**+0.5**
	baz=9.0							
KZA				⇓*i*S		**Sg**	**07 39 08.4**	**+0.2**
	baz=9.0							
KZA	**Kyzart**	**2.14**	**309**	P		**Pb**	**07 38 39.5**	**+0.9**
	SNR=26							
TNSS	**Tian-Shan**	**2.31**	**350**	*e*P		**Pb**	**07 38 42.7**	**+1.1**
	32nm,0.5s							
TNSS				*e*S		**Sg**	**07 39 14.2**	**+0.5**
	39nm,0.5s							
TNSS	**Tian-Shan**	**2.31**	**350**	Pg		**Pb**	**07 38 42.6**	**+1.0**
	32nm,0.5s							
TNSS				Lg		Lg	07 39 14.1	
	39nm,0.5s							
IZV	**Izvestkoviy**	**2.37**	**344**	*e*P		**Pb**	**07 38 43.8**	**+1.4**
	16nm,0.5s							
IZV				*e*S		**Sg**	**07 39 16.5**	**+1.1**
	51nm,0.5s							
IZV	**Izvestkoviy**	**2.37**	**344**	Pg		**Pb**	**07 38 43.8**	**+1.4**
	16nm,0.5s							
IZV				Lg		Lg	07 39 16.8	
	51nm,0.5s							
MDOK	**Medeo**	**2.42**	**352**	*e*P		**Pb**	**07 38 44.6**	**+1.2**
	20nm,0.4s							
MDOK				*e*S		**Sg**	**07 39 17.6**	**+0.4**
	36nm,0.7s							
MDOK	**Medeo**	**2.42**	**352**	⇑Pg		**Pb**	**07 38 44.2**	**+0.8**
	12nm,0.4s							
MDOK				⇓Lg		Lg	07 39 18.4	
	37nm,0.6s							
MDOK	**Medeo**	**2.42**	**352**	Pg		**Pb**	**07 38 44.6**	**+1.2**
	20nm,0.4s							
MDOK				Lg		Lg	07 39 17.6	
	36nm,0.7s							
KOTS	**Kotyrbulak**	**2.49**	**354**	*e*P		**Pb**	**07 38 45.5**	**+1.0**
	29nm,0.4s							
KOTS				*e*S		**Sg**	**07 39 18.9**	**-0.4**
	38nm,0.4s							
KOTS	**Kotyrbulak**	**2.49**	**354**	Pg		**Pb**	**07 38 45.5**	**+1.0**
	29nm,0.4s							
KOTS				Lg		Lg	07 39 18.9	

	38nm,0.4s								
MTBS	**Maitube**	**2.50**	**342**	*e*P		**Pb**	**07 38 45.7**	**+1.1**
	9.0nm,0.4s								
MTBS				*e*S		**Sg**	**07 39 19.5**	**-0.1**
	12nm,0.4s								
MTBS	**Maitube**	**2.50**	**342**	Pg		**Pb**	**07 38 45.7**	**+1.1**
	9.0nm,0.4s								
MTBS				Lg		Lg	07 39 19.5		
	12nm,0.4s								
KST	**Kastek**	**2.55**	**334**	*e*P		**Pb**	**07 38 46.7**	**+1.2**
	9.9nm,0.3s								
KST				*e*S		**Sg**	**07 39 21.1**	**-0.2**
	21nm,0.6s								
KST	**Kastek**	**2.55**	**334**	Pg		**Pb**	**07 38 47.3**	**+1.7**
	9.9nm,0.3s								
KST				Lg		Lg	07 39 22.2		
	21nm,0.6s								
TKM2	**Tokmak 2**	**2.58**	**327**	⇓Pg		**Pb**	**07 38 46.5**	**+0.4**
	7.1nm,0.9s								
TKM2				⇑Lg		Lg	07 39 23.0		
	8.2nm,0.5s								
UZB	**Uzynbulak**	**2.64**	**25**	*e*P		**Pb**	**07 38 48.0**	**+0.9**
	2.2nm,0.3s								
UZB				*e*S		**Sg**	**07 39 23.8**	**-0.5**
	9.4nm,0.4s								
UZB	**Uzynbulak**	**2.64**	**25**	Pg		**Pb**	**07 38 48.0**	**+0.9**
	2.2nm,0.3s								
UZB				Lg		Lg	07 39 23.8		
	9.4nm,0.4s								
UCH	**Uchtor**	**2.67**	**304**	⇑*e*P		**Pb**	**07 38 46.6**	**-1.2**
	baz=4.0								
UCH				⇑*e*S		**Sb**	**07 39 21.1**	**+0.1**
	baz=4.0								
UCH	**Uchtor**	**2.67**	**304**	P		**Pg**	**07 38 50.9**	**+0.2**
	SNR=14								
KURS	**Kuram**	**2.77**	**10**	*e*P		**Pb**	**07 38 50.2**	**+1.0**
	4.4nm,0.5s								
KURS				*e*S		**Sg**	**07 39 27.8**	**-0.6**
	12nm,0.6s								
DGS	**Degeres**	**2.79**	**333**	*e*P		**Pb**	**07 38 51.2**	**+1.6**
	4.2nm,0.5s								
DGS				*e*S		**Sg**	**07 39 29.0**	**-0.1**
	7.3nm,0.4s								
DGS	**Degeres**	**2.79**	**333**	Pg		**Pb**	**07 38 51.3**	**+1.6**
	4.2nm,0.5s								
DGS				Lg		Lg	07 39 29.0		
	7.3nm,0.4s								
AAK	**Ala-Archa**	**2.92**	**311**	⇑*i*P		**Pb**	**07 38 50.1**	**-1.8**
	baz=11								
AAK				⇑*i*S		**Sb**	**07 39 26.8**	**-1.1**
	baz=11								
AAK	**Ala-Archa**	**2.92**	**311**	P		**Pb**	**07 38 53.6**	**+1.6**
	SNR=8.7								
AAK	**Ala-Archa**	**2.92**	**311**	⇑Pg		**Pb**	**07 38 52.6**	**+0.7**
	8.8nm,0.8s								
AAK				⇑Lg		Lg	07 39 33.2		
	14nm,0.5s								
PDGK	**Podgornoye**	**2.96**	**29**	Pg		**Pb**	**07 38 53.7**	**+1.1**
	2.2nm,0.3s								
PDGK				Lg		Lg	07 39 33.3		
	7.7nm,0.7s								
PDGK	**Podgornoye**	**2.96**	**29**	⇓Pg		**Pb**	**07 38 53.4**	**+0.8**
	3.6nm,0.5s								
PDGK				⇑Lg		Lg	07 39 33.8		
	26nm,1.1s								
KTBS	**Karatobe**	**3.01**	**349**	*e*P		**Pb**	**07 38 54.6**	**+1.3**
	7.3nm,0.5s								
KTBS				*e*S		**Sg**	**07 39 34.9**	**-1.2**
	23nm,0.6s								
KTBS	**Karatobe**	**3.01**	**349**	Pg		**Pg**	**07 38 55.6**	**-1.5**
	7.3nm,0.5s								
KTBS				Lg		Lg	07 39 36.5		
	23nm,0.6s								
CHMS	**Chumysh**	**3.03**	**318**	⇑*i*P		**Pb**	**07 38 51.4**	**-2.3**
	baz=18								
CHMS				⇑*i*S		**Sb**	**07 39 29.1**	**-1.7**
	baz=18								
CHMS	**Chumysh**	**3.03**	**318**	P		**Pb**	**07 38 56.0**	**+2.3**
	SNR=6.8								
CHKK	**Chushkaly**	**3.11**	**353**	*e*P		**Pb**	**07 38 56.4**	**+1.4**
	6.2nm,0.5s								
CHKK				*e*S		**Sg**	**07 39 38.0**	**-1.4**
	32nm,0.3s								
CHKK	**Chushkaly**	**3.11**	**353**	Pg		**Pb**	**07 38 56.4**	**+1.4**
	6.2nm,0.5s								
CHKK				Lg		Lg	07 39 38.0		
	32nm,0.3s								
AML	**Almayashu**	**3.17**	**297**	⇓*e*P		**Pb**	**07 38 53.6**	**-2.6**
	baz=97								
AML				⇓*i*S		**Sb**	**07 39 33.1**	**-2.0**
	baz=97								
KRBS	**Karabastau**	**3.23**	**336**	*e*P		**Pb**	**07 38 58.7**	**+1.7**
	5.2nm,0.3s								
KRBS				*e*S		**Sg**	**07 39 41.4**	**-1.7**
	3.6nm,0.5s								
KRBS	**Karabastau**	**3.23**	**336**	Pg		**Pb**	**07 38 58.7**	**+1.7**
	5.2nm,0.3s								
KRBS				Lg		Lg	07 39 41.4		
	3.6nm,0.5s								
KUU	**Kurty**	**3.24**	**345**	*e*P		**Pb**	**07 38 58.0**	**+0.7**
	3.6nm,0.2s								
KUU				*e*S		**Sb**	**07 39 40.5**	**+3.6**
	8.3nm,0.6s								
KUU	**Kurty**	**3.24**	**345**	Pg		**Pb**	**07 38 58.0**	**+0.7**
	3.6nm,0.2s								
KUU				Lg		Lg	07 39 40.5		
	8.3nm,0.6s								
KTMS	**Ketmen**	**3.42**	**37**	*e*P		**Pb**	**07 39 01.4**	**+1.0**
	0.2nm,0.1s								
KTMS				*e*S		**Sg**	**07 39 46.5**	**-2.8**
	13nm,0.6s								
KTMS	**Ketmen**	**3.42**	**37**	Pg		**Pb**	**07 39 01.5**	**+1.0**
	0.2nm,0.1s								
KTMS				Lg		Lg	07 39 46.5		
	13nm,0.6s								
ARXS	**Arharly**	**3.46**	**4**	*e*P		**Pb**	**07 39 02.6**	**+1.6**
	4.3nm,0.6s								
ARXS				*e*S		**Sg**	**07 39 48.7**	**-1.8**
	15nm,0.5s								
ARXS	**Arharly**	**3.46**	**4**	Pg		**Pb**	**07 39 02.6**	**+1.6**
	4.3nm,0.6s								
ARXS				Lg		Lg	07 39 48.7		
	15nm,0.5s								
MRKS	**Merke**	**3.76**	**303**	*e*P		**Pb**	**07 39 08.2**	**+2.1**
	4.1nm,0.5s								
MRKS				*e*S		**Sg**	**07 39 58.1**	**-2.0**
	3.2nm,0.3s								
MRKS	**Merke**	**3.76**	**303**	Pg		**Pb**	**07 39 08.2**	**+2.1**
	4.1nm,0.5s								
MRKS				Lg		Lg	07 39 58.1		
	3.2nm,0.3s								
DJR	**Jarkent**	**3.95**	**25**	*e*P		**Pb**	**07 39 10.5**	**+1.2**
	1.3nm,0.2s								
DJR				*e*S		**Sg**	**07 40 01.9**	**-4.3**
	4.5nm,0.4s								
DJR	**Jarkent**	**3.95**	**25**	Pg		**Pb**	**07 39 10.5**	**+1.2**
	1.3nm,0.2s								
DJR				Lg		Lg	07 40 02.0		
	4.5nm,0.4s								

*NEIC **10** 07:47:02.2±2.1, 16.°94N±0.°04×100.°98W±0.°04, h24km±11km, Error ellipse: s-maj=8.1km s-min=1.9km az=45.0*
*MEX **10** 07:47:05.8±0.8, 17.°03N×100.°93W, h16km±15km, MD4.1*
ISC 10 07:47:04.4±1.3, **17.°11N**±0.°09×**100.°85W**±0.°05, **h11**km±10km, **n19**, **σ1§41**/34, **Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.56**	**96**		*e*P	**Pg**	**07 47 15.8**	**+0.5**
	baz=269,slow=5.1							
CAIG					*e*S	**Sg**	**07 47 24.1**	**+1.3**
CAIG	**El Cayaco**	**0.56**	**96**			**Pg**	**07 47 15.8**	**+0.5**
CAIG						**Sg**	**07 47 24.1**	**+1.3**
ZIIG	**Zihuatanejo**	**0.77**	**310**		*e*P	**Pb**	**07 47 18.3**	**-1.4**
ZIIG					*e*S	**Sg**	**07 47 27.5**	**-1.8**
ZIIG	**Zihuatanejo**	**0.77**	**310**			**Pb**	**07 47 18.3**	**-1.4**
ZIIG						**Sg**	**07 47 27.5**	**-1.8**
ACP2	**Acapulco**	**0.95**	**104**		*e*P	**Pb**	**07 47 21.7**	**-1.2**
ACP2					*e*S	**Sb**	**07 47 33.5**	**-2.0**
ACP2	**Acapulco**	**0.95**	**104**			**Pb**	**07 47 21.7**	**-1.2**
ACP2						**Sb**	**07 47 33.5**	**-2.0**
ARIG	**Puente Sto Nin**	**1.26**	**22**		*e*P	**Pn**	**07 47 27.2**	**-0.8**
ARIG					*i*S	**Sn**	**07 47 43.3**	**-1.7**
ARIG	**Puente Sto Nin**	**1.26**	**22**			**Pn**	**07 47 27.2**	**-0.8**
ARIG						**Sn**	**07 47 43.3**	**-1.7**
MEIG	**Mezcala**	**1.43**	**55**		*e*P	**Pn**	**07 47 30.3**	**0.0**
MEIG					*e*S	**Sn**	**07 47 48.9**	**-0.3**
MEIG	**Mezcala**	**1.43**	**55**			**Pn**	**07 47 30.3**	**0.0**
MEIG						**Sn**	**07 47 48.9**	**-0.3**
PLIG	**Platanillo**	**1.81**	**45**		*e*P	**Pn**	**07 47 34.8**	**-0.8**
PLIG					*e*S	**Sn**	**07 47 59.0**	**+0.4**
PLIG	**Platanillo**	**1.81**	**45**			**Pn**	**07 47 34.8**	**-0.8**
PLIG						**Sn**	**07 47 59.0**	**+0.4**
TLIG	**Tlapa**	**2.23**	**78**		*e*P	**Pn**	**07 47 40.7**	**-0.7**
TLIG					*e*S	**Sn**	**07 48 08.3**	**-0.7**
TLIG	**Tlapa**	**2.23**	**78**	Pn		**Pn**	**07 47 41.6**	**+0.2**
TLIG				Sn		**Sn**	**07 48 11.0**	**+2.0**
MOIG	**Morelia**	**2.58**	**353**		*e*P	**Pn**	**07 47 48.9**	**+2.6**
MOIG					*e*S	**Sb**	**07 48 23.4**	**+0.8**
MOIG	**Morelia**	**2.58**	**353**	Pn		**Pn**	**07 47 48.8**	**+2.6**
UNM	**Universidad Na**	**2.72**	**36**			**Pn**	**07 47 48.6**	**+0.3**
SRIG	**Santa Rosalia**	**14.63**	**316**	Pn		**Pn**	**07 50 33.9**	**+2.5**
319A	**Douglas**	**16.14**	**333**	P		**P**	**07 50 54.7**	**0.0**

*IDC **10** 08:12:36.4±2.7, 13.°84N×49.°49W, h0km, mb3.4/3, mb1 4.3/7, mb1mx3.7/46, mbtmp4.2/7, ML4.6/4, Error ellipse: s-maj=62.1km s-min=30.6km az=100.0*
ISC 10 08:12:39.0±1.5, **13.°64N**±0.°10×**49.°6W**±0.°1, **h10**km, **n22**, **σ3§66**/21, **mb3.5**/3, **North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MDP	**Montagnes des**	**8.98**	**199**		Pn	**Pn**	**08 14 50.8**	**+1.9**
	6.7nm,0.3s,baz=16,slow=17,SNR=89							
MDP					Sn	Sn	08 16 20.4	-10
	3.3nm,0.3s,baz=27,slow=18,SNR=2.7							
MPOM	**Morne Pois Mar**	**10.91**	**276**		*e*P	**Pn**	**08 15 19.4**	**+4.1**
LPMF	**Morne Lapointe**	**11.02**	**276**		*e*P	**Pn**	**08 15 20.8**	**+3.9**
ZAM	**Aeronautique**	**11.08**	**276**		*e*P	**Pn**	**08 15 21.8**	**+4.1**
BIM	**Bigot**	**11.12**	**276**		*e*P	**Pn**	**08 15 22.6**	**+4.4**
FDF	**Fort de France**	**11.21**	**277**		*e*P	**Pn**	**08 15 23.3**	**+3.8**
BAMF	**Morne Balai**	**11.22**	**277**		*e*P	**Pn**	**08 15 24.1**	**+4.5**
GBMF	**Grand Be**	**11.23**	**277**		*e*P	**Pn**	**08 15 24.1**	**+4.4**
CXM	**Morne La Croix**	**11.23**	**277**		*e*P	**Pn**	**08 15 24.3**	**+4.4**
SVN	**Savane Anatole**	**11.24**	**278**		*e*P	Pn	08 15 24.7	+4.8
PCM	**Pelee Case Pet**	**11.28**	**277**		*e*P	**Pn**	**08 15 24.4**	**+4.0**
H05N1	**Guadeloupe/Mar**	**11.35**	**285**		Pn	**Pn**	**08 15 23.0**	**+1.7**
	SNR=5.5							
H05N1					Sn	**Sn**	**08 17 25.2**	**-3.0**
GRGR	**Grenville**	**11.81**	**264**		*e*P	**Pn**	**08 15 31.4**	**+3.8**
CBE	**Ff, Capester**	**11.82**	**283**		*e*P	Pn	08 15 32.9	+5.1
ANWB	**Willy Bob**	**12.36**	**290**		*e*P	Pn	08 15 40.1	+4.9
SKI	**Saint Kitts**	**13.14**	**288**		*e*P	**Pn**	**08 15 49.2**	**+3.2**
PCRV	**Puerto La Cruz**	**15.07**	**258**		Pn	**Pn**	**08 16 12.7**	**+0.5**
	1.0nm,0.3s,baz=6.4,slow=16,SNR=2.3							
SJG	**San Juan**	**16.49**	**288**		Pn	**Pn**	**08 16 31.0**	**+0.5**
	2.1nm,0.3s,baz=99,slow=17,SNR=5.8							
PTGA	**Pitinga**	**17.56**	**216**		P	**P**	**08 16 45.8**	**+0.6**
	7.2nm,0.3s,baz=34,slow=16,SNR=82							
PTGA					S	**Sn**	**08 19 53.8**	**-6.1**
	0.8nm,0.3s,baz=313,slow=22,SNR=2.0							
TXAR	**Lajitas Array**	**52.20**	**297**		P	**P**	**08 21 49.9**	**-0.6**
	0.1nm,0.7s,baz=128,slow=8.1,SNR=3.7							
PDAR	**Pinedale Array**	**58.84**	**312**		P	**P**	**08 22 36.8**	**-1.5**
	0.2nm,0.5s,baz=114,slow=11,SNR=2.6							
ILAR	**Eielson Array**	**80.84**	**334**		P	**P**	**08 24 51.4**	**-1.5**
	0.5nm,0.8s,baz=87,slow=5.5,SNR=7.4							

*IDC **10** 08:44:24.4±4.3, 16.°85N×101.°00W, h0km, mb3.6/4, mb1 3.8/8, mb1mx3.6/35, mbtmp3.5/8, ML3.0/3, Error ellipse: s-maj=98.7km s-min=26.8km az=29.0*
*MEX **10** 08:44:28.7±0.9, 17.°01N×100.°95W, h10km±10km, MD3.8*
ISC 10 08:44:27.4±1.5, **17.°01N**±0.°10×**100.°90W**±0.°06, **h15**km±8km, **n19**, **σ1§90**/22, **mb3.5**/4, **1D**, **Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.61**	**86**	⇓	*e*P	**Pg**	**08 44 39.4**	**0.0**
	baz=267,slow=14							
CAIG					*i*S	**Sg**	**08 44 48.7**	**+1.3**
ZIIG	**Zihuatanejo**	**0.80**	**318**		*e*P	**Pg**	**08 44 41.9**	**-1.2**
ZIIG					*e*S	**Sg**	**08 44 52.2**	**-1.4**
ACP2	**Acapulco**	**0.98**	**98**		*e*P	**Pg**	**08 44 45.5**	**-0.9**
ACP2					*i*S	**Sg**	**08 44 57.8**	**-1.5**
ARIG	**Puente Sto Nin**	**1.37**	**23**		*e*P	**Pn**	**08 44 50.9**	**-1.2**
ARIG					*i*S	**Sn**	**08 45 06.6**	**-3.4**
MEIG	**Mezcala**	**1.52**	**53**		*e*P	**Pn**	**08 44 53.5**	**-0.8**
MEIG					*e*S	**Sn**	**08 45 11.9**	**-2.1**
CRIG	**Cruz Grande**	**1.71**	**99**		*e*P	**Pn**	**08 44 56.0**	**-0.8**
CRIG					*e*S	**Sn**	**08 45 14.7**	**-3.8**
TLIG	**Tlapa**	**2.30**	**76**		*e*P	**Pn**	**08 45 04.8**	**-0.1**
TLIG					*e*S	**Sb**	**08 45 38.1**	**+1.2**
CMIG	**Matias Romero**	**5.75**	**88**		Pn	**Pn**	**08 45 52.9**	**+0.4**
	0.3nm,0.3s,baz=244,slow=11,SNR=14							
CMIG					Sn	Sn	08 46 51.7	-6.6
	1.5nm,0.3s,baz=289,slow=12,SNR=4.0							
CMIG					Lg	Lg	08 47 25.0	
	2.3nm,0.3s,baz=258,slow=21,SNR=7.6							
H06E1	**SOCORRO T-PHAS**	**9.71**	**282**		T	T	08 56 37.0	
	SNR=55							
APG	**El Apazote**	**10.23**	**100**		Pn	**Pn**	**08 46 54.4**	**+0.3**
	0.1nm,0.3s,baz=59,slow=23,SNR=2.3							
TXAR	**Lajitas Array**	**12.53**	**349**		Pn	**Pn**	**08 47 29.9**	**+4.5**
	0.0nm,0.3s,baz=168,slow=14,SNR=2.3							
ANMO	**Albuquerque**	**18.54**	**346**		P	**P**	**08 48 44.2**	**+0.4**
	baz=157,slow=16,SNR=2.3							
NVAR	**Mina Array Bea**	**26.23**	**328**		P	**P**	**08 50 03.4**	**+1.2**
	0.7nm,0.8s,baz=149,slow=11,SNR=3.0							
PDAR	**Pinedale Array**	**26.71**	**346**		P	**P**	**08 50 07.2**	**+0.7**
	0.5nm,0.7s,baz=149,slow=11,SNR=4.7							
YKA	**Yellowknife Ar**	**46.44**	**351**		P	**P**	**08 52 52.7**	**-0.7**
	0.9nm,0.8s,baz=160,slow=7.9,SNR=14							
H03N2	**Juan Fernandez**	**54.37**	**157**		T	T	09 52 38.7	
	baz=335,slow=77,SNR=18							
H03N1	**Juan Fernandez**	**54.38**	**157**		T	T	09 52 42.3	
	baz=335,slow=77,SNR=24							
H03N3	**Juan Fernandez**	**54.39**	**157**		T	T	09 52 38.4	
	baz=335,slow=77,SNR=15							
ILAR	**Eielson Array**	**56.80**	**338**		P	**P**	**08 54 10.5**	**-0.4**
	0.9nm,1.1s,baz=150,slow=5.8,SNR=5.1							

*NEIC **10** 08:50:34.2±1.4, 16.°99N±0.°07×100.°98W±0.°03, h21km±10km, Error ellipse: s-maj=10.8km s-min=3.9km az=195.0*
*MEX **10** 08:50:37.1±1.3, 17.°03N×100.°90W, h10km±17km, MD4.1*
ISC 10 08:50:34.3±2.4, **17.°09N**±0.°07×**100.°88W**±0.°05, **h7**km±18km, **n16**, **σ0§60**/29, **1D**, **Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.59**	**94**	⇓	*e*P	**Pb**	**08 50 46.9**	**0.0**
	baz=269,slow=14							
CAIG					*i*S	**Sb**	**08 50 55.0**	**-0.5**
CAIG					*i*S	**Sb**	**08 50 56.0**	**+0.5**
CAIG	**El Cayaco**	**0.59**	**94**			**Pb**	**08 50 46.9**	**0.0**
CAIG						**Sb**	**08 50 56.0**	**+0.5**
ZIIG	**Zihuatanejo**	**0.76**	**313**		*e*P	**Pb**	**08 50 49.9**	**+0.1**
ZIIG					*i*S	**Sb**	**08 51 00.9**	**+0.5**
ZIIG	**Zihuatanejo**	**0.76**	**313**			**Pb**	**08 50 49.9**	**+0.1**
ZIIG						**Sb**	**08 51 00.9**	**+0.5**
ACP2	**Acapulco**	**0.97**	**102**		*e*P	**Pn**	**08 50 54.2**	**-0.2**
ACP2					*e*S	**Sb**	**08 51 06.2**	**-0.4**
ACP2	**Acapulco**	**0.97**	**102**			**Pn**	**08 50 54.2**	**-0.2**
ACP2						**Sb**	**08 51 06.2**	**-0.4**
ARIG	**Puente Sto Nin**	**1.29**	**23**		*e*P	**Pn**	**08 50 58.6**	**-0.2**
ARIG					*e*S	**Sn**	**08 51 16.2**	**-0.2**
ARIG	**Puente Sto Nin**	**1.29**	**23**			**Pn**	**08 50 58.6**	**-0.2**
ARIG						**Sn**	**08 51 16.2**	**-0.2**
MEIG	**Mezcala**	**1.46**	**55**		*e*P	**Pn**	**08 51 01.2**	**0.0**
MEIG					*e*S	**Sn**	**08 51 21.7**	**+1.0**
MEIG	**Mezcala**	**1.46**	**55**			**Pn**	**08 51 01.2**	**0.0**
MEIG						**Sn**	**08 51 21.7**	**+1.0**
CRIG	**Cruz Grande**	**1.71**	**102**		*e*P	**Pn**	**08 51 03.3**	**-1.3**
CRIG					*e*S	**Sb**	**08 51 27.6**	**-0.3**
TLIG	**Tlapa**	**2.26**	**78**		*e*P	**Pn**	**08 51 12.8**	**+0.5**
TLIG					*e*S	**Sg**	**08 51 47.9**	**+0.9**
TLIG	**Tlapa**	**2.26**	**78**			**Pn**	**08 51 12.5**	**+0.3**
MOIG	**Morelia**	**2.59**	**354**			**Pb**	**08 51 19.9**	**-1.4**
UNM	**Universidad Na**	**2.75**	**36**			**Pb**	**08 51 23.3**	**-0.8**
HPIG		**10.76**	**336**		Pn	**Pn**	**08 53 08.9**	**-0.1**

*CRAAG **10** 08:56:16.8, 36.°37N×7.°58E, Ml3.6*
*IDC **10** 08:56:17.7±1.8, 36.°17N×7.°49E, h0km, mb3.0/3, mb1 3.5/4, mb1mx3.2/42, mbtmp3.4/4, ML4.3/1, Error ellipse: s-maj=31.6km s-min=16.5km az=13.0*
*TUN **10** 08:56:18.9, 36.°48N×7.°82E, h23km±8km, MD3.6*
*LDG **10** 08:56:19.5±0.6, 36.°26N×7.°57E, h30km, Ml3.6/15, Error ellipse: s-maj=12.0km s-min=5.3km az=134.0*
ISC 10 08:56:17.5±1.2, **36.°45N**±0.°06×**7.°53E**±0.°04, **h17**km±10km, **n36**, **σ2§51**/43, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ABSA	**Djebel Ababsia**	**0.18**	**193**		P	**Pg**	**08 56 20.5**	**-1.6**
CMAH	**Djebel Manchou**	**0.20**	**334**		P	**Pb**	**08 56 23.8**	**+1.0**
GHAT	**Ghardimaou**	**0.63**	**85**		*i* P	**Pn**	**08 56 31.8**	**+0.1**
CAEH	**'Ain El Ouahch**	**0.64**	**302**		P	**Pn**	**08 56 31.8**	**0.0**
CKFL	**Kef-Lekhel**	**0.65**	**266**		P	**Pn**	**08 56 31.4**	**-0.7**
CASM	**Ain Smara**	**0.86**	**258**		P	**Pn**	**08 56 34.5**	**-0.3**
CTEI	**Djebel Teioual**	**0.98**	**248**		P	**Pn**	**08 56 37.0**	**+0.4**
BLIT	**Baltah**	**1.18**	**76**		*i* P	**Pn**	**08 56 39.8**	**+0.6**
THTN	**Thala**	**1.29**	**133**		*i* P	**Pg**	**08 56 43.0**	**+0.6**
DFRA	**Djebel Bou Aff**	**1.33**	**275**		P	**Pg**	**08 56 43.0**	**-0.2**
TAMR	**Tamra**	**1.41**	**64**		*i* P	**Pn**	**08 56 43.5**	**+1.2**
KEST	**Kesra**	**1.64**	**115**		Pg	**Pn**	**08 56 46.8**	**+1.2**
	9.9nm,0.3s,baz=288,slow=10,SNR=105							
KEST					Lg	Lg	08 57 07.5	
	16nm,0.3s,baz=100,slow=3.1,SNR=6.1							
CKHR	**Kef el Ahmar**	**1.69**	**256**		P	**Pg**	**08 56 48.9**	**-1.0**
SET	**Setif**	**1.74**	**263**		P	**Pg**	**08 56 54.0**	**+3.1**
TROT	**Trozza**	**1.90**	**117**		*i* P	**Pb**	**08 56 51.4**	**-0.3**
PGF	**Pioggiola**	**6.20**	**10**		*e*Pn	**Pn**	**08 57 49.9**	**+1.6**
PGF					*e*Sn	**Sn**	**08 58 55.6**	**-3.3**
	6.4nm,0.3s							
LMR	**La Mourre**	**6.92**	**354**		*e*Pn	**Pn**	**08 57 59.3**	**+1.1**
LMR					*e*Sn	**Sn**	**08 59 12.3**	**-4.2**
	13nm,0.2s							
FRF	**La Foret Royal**	**7.14**	**355**		*e*Pn	**Pn**	**08 58 02.5**	**+1.4**
FRF					*e*Sn	**Sn**	**08 59 18.0**	**-3.8**
	6.4nm,0.2s							
SBF	**Sospel**	**7.41**	**359**		*e*Pn	**Pn**	**08 58 06.4**	**+1.5**
SBF					*e*Sn	**Sn**	**08 59 24.2**	**-4.4**
	10nm,0.3s							
SMRF	**Simiane la Rot**	**7.67**	**349**		*e*Pn	**Pn**	**08 58 10.1**	**+1.7**
SMRF					*e*Sn	**Sn**	**08 59 33.1**	**-1.8**
	4.8nm,0.2s							
MTLF	**Montolieu**	**8.01**	**331**		*e*Pn	**Pn**	**08 58 14.0**	**+1.0**
MTLF					*e*Sn	**Sn**	**08 59 40.7**	**-2.4**
	5.7nm,0.4s							
LASF	**Ste Croix**	**8.12**	**341**		*e*Pn	**Pn**	**08 58 16.1**	**+1.5**
LASF					*e*Sn	**Sn**	**08 59 42.6**	**-3.4**
	4.2nm,0.4s							
MBDF	**Montbardon**	**8.29**	**356**		*e*Sn	**Sn**	**08 59 46.4**	**-4.0**
	4.4nm,0.4s							
ORIF	**Oris-en-Rattie**	**8.56**	**352**		*e*P	Pn	08 58 27.6	+7.0
EPF	**Esparros**	**8.60**	**322**		*e*Pn	**Pn**	**08 58 22.0**	**+0.9**
EPF	**Esparros**	**8.60**	**322**		*e*P	**Pn**	**08 58 25.5**	**+4.4**
EPF					*e*Sn	**Sn**	**08 59 55.3**	**-2.4**
	4.5nm,0.3s							
VIVF	**Saint-Julien-l**	**8.68**	**346**		*e*Pn	**Pn**	**08 58 22.8**	**+0.6**
VIVF					*e*Sn	**Sn**	**08 59 55.3**	**-4.4**
	6.2nm,0.4s							
ETSF	**Etsaut**	**8.96**	**318**		*e*Pn	**Pn**	**08 58 27.9**	**+1.7**
ETSF	**Etsaut**	**8.96**	**318**		*e*P	Pn	08 58 31.9	+5.7
ETSF					*e*Sn	**Sn**	**09 00 03.8**	**-3.0**
	1.5nm,0.3s							
LPG	**La Plagne**	**9.06**	**357**		*e*Pn	**Pn**	**08 58 29.1**	**+1.3**
LPG					*e*Sn	**Sn**	**09 00 04.1**	**-5.4**
	1.8nm,0.3s							
SJPF	**Ste Jean**	**9.47**	**317**		*e*Pn	**Pn**	**08 58 33.7**	**+0.6**
SJPF	**Ste Jean**	**9.47**	**317**		*e*P	Pn	08 58 39.3	+6.2
SJPF					*e*Sn	**Sn**	**09 00 16.5**	**-2.6**
	2.4nm,0.3s							
ESDC	**Sonseca Array**	**9.62**	**293**		Pn	Pn	08 58 39.6	+4.4
	0.8nm,0.3s,baz=101,slow=14,SNR=35							
BRTR	**Keskin Array B**	**20.79**	**73**		P	Pn	09 01 02.1	+1.8
	0.9nm,1.0s,baz=284,slow=12,SNR=1.8							
AKASG	**Malin Array Be**	**21.11**	**41**		P	**P**	**09 01 05.5**	**+4.4**
	0.2nm,0.3s,baz=240,slow=9.5,SNR=2.1							
TORD	**Torodi Ar. Bea**	**23.78**	**194**		P	**P**	**09 01 28.8**	**-0.5**
	0.3nm,0.5s,baz=11,slow=11

PARB Paraibuna 34.66 70 *e*P P 09 07 25.3 -1.2
SAML Samuel 35.97 31 *e*P P 09 07 39.3 +1.6
CLDB Colider 37.65 43 *e*P P 09 07 53.2 +1.2
BDFB Brasilia 38.38 58 P P 09 07 58.9 +0.5
comp=Z,5.9nm,0.7s,baz=212,slow=10,SNR=6.9
NPGB Novo Progresso 41.14 41 *e*P P 09 08 20.6 -0.6
NBIT Itapeh - BA 44.61 66 *e*P P 09 08 47.1 -2.2
PTGA Pitinga 44.73 31 P P 09 08 50.6 +0.2
comp=Z,1.1nm,0.3s,baz=319,slow=22,SNR=6.0
PTGA Pitinga 44.73 31 *e*P P 09 08 50.4 +0.1
VNA3 Neumayer Olymp 45.56 155 P P 09 08 58.0 +1.7
VNA1 Neumayer--Stat 46.02 154 P P 09 09 01.4 +1.5
VNA2 Neumayer--Watz 46.30 154 P P 09 09 03.9 +1.8
baz=271,slow=9.2
NBPN Ponto Novo - B 47.01 62 *e*P P 09 09 07.1 -1.4
RUSC La Rusia 47.59 11 P P 09 09 15.1 +1.7
SNAA Sanae 47.73 155 P P 09 09 14.8 +1.5
SNAA Sanae 47.73 155 P P 09 09 13.3 0.0
comp=Z,4.7nm,1.1s,baz=242,slow=5.6,SNR=7.2
SNAA Sanae 47.73 155 P P 09 09 15.0 +1.6
SNAA IAmb IAmb 09 09 25.1
comp=Z,14nm,1.4s
NBLA Lagarto - SE 48.52 64 *e*P P 09 09 15.6 -4.5
QSPA South Pole Qui 48.89 180 P P 09 09 22.6 +0.1
comp=Z,4.7nm,0.8s,baz=141,slow=2.4,SNR=25
QSPA South Pole Qui 48.89 180 P P 09 09 24.0 +1.4
QSPA IAmb IAmb 09 09 24.5
comp=Z,9.4nm,1.0s
NBTA Tacaratu-PE 49.70 62 *e*P P 09 09 27.6 -1.6
SDV Santo Domingo 50.91 13 *e*P P 09 09 35.7 -2.7
URIC Uribia, Colomb 53.45 11 P P 09 09 56.7 -0.4
SYO Syowa Base 61.62 159‖ *e*P P 09 10 51.2 -2.8
SYO Syowa Base 61.62 159‖ *e*pP P 09 10 53.4 -0.6
MAW Mawson 68.01 166 P P 09 11 35.6 0.0
comp=Z,4.7nm,1.0s,baz=205,slow=23,SNR=3.9
HPIG 71.64 337 P P 09 11 59.8 +1.1
HPIG IAmb IAmb 09 12 01.3
comp=Z,8.2nm,0.9s
TXAR Lajitas Array 73.36 340 P P 09 12 09.3 +0.6
comp=Z,2.1nm,0.9s,baz=159,slow=8.8,SNR=19
TXAR LR LR 09 36 51.3
comp=Z,371nm,19.8s,baz=0.0,slow=30
TX31 Lajitas Ar. Si 73.36 340 P P 09 12 08.7 0.0
TX32 Lajitas Array 73.36 340 P P 09 12 09.7 +1.0
JCT Junction City 73.53 343 P P 09 12 10.1 +0.5
JCT IAmb IAmb 09 12 11.7
comp=Z,8.9nm,1.1s
Z51A Franklin 74.39 356 P P 09 12 15.1 +0.5
Z51A IAmb IAmb 09 12 19.9
comp=Z,10.0nm,1.2s
WHTX Lake Whitney, 74.52 346 P P 09 12 15.1 -0.2
WHTX IAmb IAmb 09 12 21.3
comp=Z,7.5nm,1.1s
X51A Calhoun 75.62 357 P P 09 12 21.4 -0.3
X48A Hartselle 75.63 355 P P 09 12 21.1 -0.5
X48A IAmb IAmb 09 12 23.1
comp=Z,6.2nm,0.8s
W50A Signal Mountai 76.27 356 P P 09 12 25.5 +0.1
SWET Sewanee 76.32 356 P P 09 12 26.1 +0.4
CPCT Cooper Cave 76.49 357 P P 09 12 26.3 -0.2
CPCT IAmb IAmb 09 12 27.9
comp=Z,7.1nm,0.8s
V48A Smith Brothers 76.89 355 P P 09 12 28.6 -0.2
V48A IAmb IAmb 09 12 30.0
comp=Z,9.7nm,0.8s
CLTN Cedars of Leba 77.21 356 P P 09 12 30.8 +0.2
CLTN IAmb IAmb 09 12 31.9
comp=Z,10.0nm,1.1s
WMOK Wichita Mounta 77.44 345 P P 09 12 32.2 +0.2
MSTX Muleshoe 77.55 342 P P 09 12 33.0 +0.3
MSTX IAmb IAmb 09 12 34.6
comp=Z,6.6nm,0.9s
LCAR Lake Charles 77.59 352 P P 09 12 32.7 -0.1
U49A Red Boiling Sp 77.60 356 P P 09 12 32.6 -0.2
U49A IAmb IAmb 09 12 34.0
comp=Z,6.6nm,0.8s
TUL1 Leonard 78.05 348 P P 09 12 35.1 -0.2
TUL1 IAmb IAmb 09 12 40.8
comp=Z,13nm,1.1s
U40A Yellville 78.07 350 P P 09 12 35.6 +0.2
T47A Sharon Grove 78.15 355 P P 09 12 36.1 +0.2
T47A IAmb IAmb 09 12 36.7
comp=Z,8.3nm,0.8s
AMTX Amarillo 78.18 343 P P 09 12 36.8 +0.6
AMTX IAmb IAmb 09 12 38.3
comp=Z,7.8nm,0.8s
PBMO Poplar Bluff 78.22 352 P P 09 12 36.4 +0.2
PBMO IAmb IAmb 09 12 37.0
comp=Z,6.5nm,0.8s
TUC Tucson 78.23 335 P P 09 12 35.7 -0.8
S51A Beattyville 78.64 358 P P 09 12 39.0 +0.5
S51A IAmb IAmb 09 12 39.5
comp=Z,9.1nm,0.7s
S44A Carbondale 79.02 353 P P 09 12 41.0 +0.5
S44A IAmb IAmb 09 12 41.6
comp=Z,10nm,0.7s
SIUC Southern Illin 79.03 353 P P 09 12 40.9 +0.2
SIUC IAmb IAmb 09 12 41.7
comp=Z,9.7nm,0.7s
ANMO Albuquerque 79.41 339 P P 09 12 44.8 +1.7
S39A Bolivar 79.45 350 P P 09 12 43.5 +0.5
CCM Cathedral Cave 79.57 352 P P 09 12 44.4 +0.8
Q44A Meyer Farm, Va 80.20 354 P P 09 12 47.1 +0.1
Q44A IAmb IAmb 09 12 47.9
comp=Z,10nm,0.8s
BLO Bloomington 80.29 356 P P 09 12 47.4 -0.1
BLO IAmb IAmb 09 12 48.0
comp=Z,10.0nm,0.8s
PSUB Penn St. - Bra 81.06 4 P P 09 12 52.8 +1.2
PSUB IAmb IAmb 09 12 53.4
comp=Z,8.9nm,0.8s
P40A Paris 81.11 351 P P 09 12 52.5 +0.7
P40A IAmb IAmb 09 12 53.1
comp=Z,8.4nm,0.8s
P38A Dawn 81.38 350 P P 09 12 53.4 +0.1
N47A Urbana 81.95 357 P P 09 12 55.2 -1.0
U15A North Rim 82.50 335 P P 09 13 02.1 +2.5
BOSA Boshof 82.72 122 P P 09 13 01.4 +0.3
comp=Z,5.3nm,1.0s,baz=163,slow=5.1,SNR=4.4
KNB Kanab 83.21 335 P P 09 13 05.7 +2.5
SZCU Shurtz Canyon 83.82 335 P P 09 13 09.3 +2.9
CCUT Cedar City 83.87 335 P P 09 13 09.5 +2.8
MTPU Mount Pierson 83.95 336 P P 09 13 09.9 +2.7
DBIC Dimbokro 84.17 76 P P 09 13 07.4 -1.1
comp=Z,4.4nm,0.9s,baz=73,slow=19,SNR=3.6
JFWS Jewell Farm 84.28 353 P P 09 13 08.9 +0.6
MSU Marysvale 84.38 336 P P 09 13 11.5 +2.3
SRU San Rafael Swe 84.44 337 P P 09 13 12.2 +2.8
Q16A Castle Valley 84.45 337 P P 09 13 11.7 +2.2
RDMU Red Mountain 85.53 339 P P 09 13 16.6 +1.7
NLU North Lily Min 85.68 337 P P 09 13 19.2 +3.5
I37A Lemond, Waseca 85.69 351 P P 09 13 16.1 +0.7
SADO Sadowa 85.75 1 P P 09 13 15.8 +0.2
ECSD EROS Data Cent 85.84 349 P P 09 13 16.6 +0.4
ECSD IAmb IAmb 09 13 17.2
comp=Z,6.9nm,1.2s
DUG Dugway, Tooele 86.12 336 P P 09 13 19.9 +2.1
DUG IAmb IAmb 09 13 20.7
comp=Z,8.9nm,1.3s
NVAR Mina Array Bea 86.34 332 P P 09 13 19.2 +0.2
comp=Z,0.7nm,0.8s,baz=143,slow=4.4,SNR=4.9
K22A Casper 86.70 342 P P 09 13 22.2 +1.6
SPMN Marine on St. 86.82 352 P P 09 13 21.0 +0.1
PDAR Pinedale Array 87.58 339 P P 09 13 24.5 -0.4
comp=Z,0.6nm,0.6s,baz=140,slow=5.3,SNR=8.0
ORV Oroville 88.51 330 P P 09 13 32.0 +2.8
ORV IAmb IAmb 09 13 32.1
comp=Z,7.7nm,1.4s
YHH Holmes Hill 89.80 339 P P 09 13 37.5 +2.1
MFID Camas Ranch 89.98 335 P P 09 13 37.9 +1.8
MCMT McKenzie Canyo 90.38 338 P P 09 13 38.2 +0.1
TOO Toolangi 90.64 215 P P 09 13 40.0 +0.3
TORD Torodi Ar. Bea 93.28 75 P P 09 13 53.0 +1.1
comp=Z,1.4nm,0.9s,baz=218,slow=3.1,SNR=4.8
ILAR Eielson Array 117.53 334 PKP PKPdf 09 19 21.2 -0.5
comp=Z,0.2nm,0.6s,baz=149,slow=2.1,SNR=2.5
GERES GERESS Array B 122.41 51 PKP PKiKP 09 19 32.3 +0.4
comp=Z,1.5nm,0.7s,baz=207,slow=1.5,SNR=9.1
NOA NORSAR Array B 126.15 37 PKP PKPdf 09 19 38.6 +0.2
comp=Z,0.3nm,0.7s,baz=226,slow=1.9,SNR=2.3
BRTR Keskin Array B 131.47 69 PKP PKiKP 09 19 50.6 +0.2
comp=Z,0.5nm,0.6s,baz=212,slow=3.2,SNR=2.8
AKASG Malin Array Be 132.41 54 PKP PKPdf 09 19 49.0 -1.6
comp=Z,0.6nm,0.4s,baz=187,slow=15,SNR=2.4

ARCES ARCESS Array B 133.78 28 PKP PKPdf 09 19 52.6 0.0
comp=Z,1.9nm,0.8s,baz=286,slow=5.7,SNR=5.4
PETK Petropavlovsk- 139.47 307 PKP PKPdf 09 20 03.6 0.0
comp=Z,5.4nm,0.9s,baz=196,slow=10,SNR=4.0
TIXI Tiksi 146.18 343 PKPdf 09 20 14.6 -0.4
YSS Yuzh-Sakhalins 148.34 295 PKPbc 09 20 23.0 +0.3
GEYT Alibeck 148.64 83 PKPbc PKiKP 09 20 25.0 -0.4
comp=Z,4.3nm,0.8s,baz=259,slow=3.0,SNR=7.3
MJAR Matsushiro Arr 149.22 274 PKPbc PKPbc 09 20 24.3 -1.1
comp=Z,6.0nm,1.0s,baz=149,slow=2.4,SNR=10
MAT Matsushiro 149.22 274 PKP PKPbc 09 20 25.0 -0.4
ARU Arti 150.02 46 PKiKP 09 20 28.0 +0.5
USRK Ussuriysk Ar. 155.61 288 PKPbc PKPdf 09 20 39.1 +8.9
comp=Z,1.3nm,0.7s,baz=110,slow=4.5,SNR=5.7
USRK PKPab PKPab 09 20 55.8 -0.7
comp=Z,1.9nm,0.9s,baz=120,slow=4.8,SNR=5.4
CMAR Chiang Mai Arr 157.18 180 PKPab PKPab 09 21 02.7 -1.0
comp=Z,7.8nm,0.5s,baz=19,slow=16,SNR=31
PHRA Phrae 157.19 183 P PKPab 09 21 01.3 -2.4
LAMP Lampang 157.24 182 P PKPab 09 20 58.2 -5.8
KSRS Korea Array 157.26 270 PKPab PKPab 09 21 04.2 +0.4
comp=Z,2.8nm,1.0s,baz=109,slow=4.7,SNR=5.9
NANT Nan 157.47 185 P PKPab 09 20 59.6 -5.4
CMMT Chiang Mai 157.54 180 P PKPab 09 20 57.4 -7.8
NJ2 Nanjing 161.52 246 *e*PKP PKPdf 09 20 37.9 +0.2
KSH Kashi 162.48 88 PKP PKPdf 09 20 39.5 +0.8
ZAA0 Zalesovo Array 164.28 32 PKPdf 09 20 38.6 -1.1
ZALV Zalesovo Beam 164.28 32 PKP PKPdf 09 20 39.0 -0.7
comp=Z,4.9nm,0.9s,baz=273,slow=2.8,SNR=14
MKAR Makanchi Array 166.90 60 PKP PKPdf 09 20 42.8 +0.6
comp=Z,1.1nm,0.8s,baz=236,slow=1.3,SNR=6.8
MKAR PKPab PKPab 09 21 46.8 +1.0
comp=Z,2.4nm,0.8s,baz=288,slow=3.8,SNR=10
CD2 Chengdu 168.86 202 PKP PKPdf 09 20 43.7 -0.4
HHC Hu-ho-hao-te 170.40 271 *e*PKP PKPdf 09 20 46.5 +1.8
WMQ Urumqi 171.39 70 *e*PKP PKPdf 09 20 46.4 +1.3
SONM Songino Array 171.58 323 PKP PKPdf 09 20 44.0 -1.2
comp=Z,0.7nm,0.9s,baz=174,slow=3.0,SNR=4.7
SONM PKPab pPKPab 09 22 08.1 -0.5
comp=Z,0.6nm,0.8s,baz=132,slow=22,SNR=4.2
LZH Lanzhou 173.46 218 *e*PKP PKPdf 09 20 46.0 -0.4
LZH pPKP sPKPdf 09 20 49.2 -0.2
LZH sPKP 09 20 51.6
LZH LR LR
comp=Z,150nm,18.3s
LZH LR LR
comp=Z,150nm,18.1s
LZH LR LR
comp=Z,180nm,20.0s
GTA Gaotai 177.93 201 *e*PKP PKPdf 09 20 45.0 -2.4

DJA 10 09:07:05.2±0.4, 7°S±2°×13°2E±°, h77km±10km, M4.5/9, mB5.4/3, mb4.2/7, MLv4.5/9, Mw(mB)4.8/3, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.06**	**214**	P	Pn	09 07 25.1	+0.3
SAUI				S	Sn	09 07 39.9	+0.4
BNDI	**Bandanaira**	**3.24**	**322**	P	Pn	09 07 54.9	+1.1
BNDI				S	Sn	09 08 30.4	-0.9
FAKI	**Fak Fak**	**4.17**	**5**	P	Pn	09 08 07.8	+1.3
FAKI				S	Sn	09 08 53.8	-0.2
MSAI	**Masohi**	**4.76**	**321**	P	Pn	09 08 18.2	+3.7
RKPI	**Ransiki, Papua** 1.5nm14µm204nm,0.8s	**6.00**	**22**	P	Pn	09 08 32.2	+0.8
LBMI	**Labuha** 0.1nm19nm,0.7s	**7.78**	**325**	P	Pn	09 08 57.0	+1.3
SOEI	**Soe** 0.4nm23nm,0.9s	**8.00**	**250**	P	Pn	09 08 59.8	+0.9
SMPI	**Sarmi** 8.6nm,1.2s	**8.47**	**54**	P	Pn	09 09 03.8	-1.5

*NEIC **10** 09:16:13.6±2.2,24°.3S±0°.1×179°.9W±0°.1, h504km±7km, mb4.4/30, Error ellipse: s-maj=19.2km s-min=14.3km az=107.0*
*IDC **10** 09:16:13.7±1.7,24°.37S×179°.97E, h499km±16km, mb3.5/13, mb1 3.7/15, mb1mx3.6/23, mbtmp4.4/15, Error ellipse: s-maj=18.8km s-min=14.5km az=91.0*
ISC 10 09:16:14.0±0.4, 24°.28S±0°.05×179°.98W±0°.08, h505km, n130, σ1°77/151, mb4.3/25, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**5.29**	**160**	S	**S**	**09 18 59.7**	**+2.5**
MSVF	**Nonsavu**	**6.77**	**344**	P	**P**	**09 18 01.0**	**+2.8**
OUZ	**Omahuta**	**12.24**	**206**	P	**P**	**09 18 57.6**	**+2.7**
OUZ	**Omahuta**	**12.24**	**206**	P	**P**	**09 18 58.3**	**+3.4**
DZM	**Mont Dzumac** 0.9nm,0.3s,baz=40,slow=22,SNR=8.4	**12.68**	**277**	P	**P**	**09 19 00.5**	**+0.7**
AFI	**Afiamalu**	**12.90**	**38**	P	**P**	**09 19 00.4**	**-1.8**
MXZ	**Matakaoa Point**	**13.32**	**186**	P	**P**	**09 19 07.2**	**+1.0**
HAZ	**Te Kaha**	**13.57**	**188**	P	**P**	**09 19 10.4**	**+1.6**
HAZ				S	**S**	**09 21 35.8**	**+2.6**
PKGZ	**Pakihiroa**	**13.67**	**187**	P	**P**	**09 19 13.9**	**+3.9**
RUGZ	**Raukumara Rang**	**13.79**	**188**	P	**P**	**09 19 12.6**	**+1.3**
RUGZ				S	**S**	**09 21 40.6**	**+3.0**
PUZ	**Puketiti**	**13.83**	**186**	P	**P**	**09 19 13.8**	**+2.2**
PUZ				S	**S**	**09 21 40.9**	**+2.7**
KMRZ	**Kaimai**	**13.96**	**193**	P	**P**	**09 19 17.0**	**+3.9**
KARZ	**Kaharoa**	**14.07**	**192**	P	**P**	**09 19 17.3**	**+3.1**
URZ	**Urewera** 3.7nm,0.3s,baz=285,slow=3.3,SNR=36	**14.16**	**189**	P	**P**	**09 19 14.1**	**-0.9**
URZ				S	**S**	**09 21 42.2**	**-2.1**
	1.3nm,0.3s,baz=213,slow=23,SNR=16						
URZ	**Urewera**	**14.16**	**189**	P	**P**	**09 19 14.9**	**-0.2**
URZ				S	**S**	**09 21 42.0**	**-2.4**
URZ	**Urewera**	**14.16**	**189**	P	**P**	**09 19 15.2**	**+0.2**
URZ				S	**S**	**09 21 44.5**	**+0.1**
MWZ	**Matawai**	**14.17**	**188**	P	**P**	**09 19 15.7**	**+0.5**
MWZ				S	**S**	**09 21 40.6**	**-4.2**
TKGZ	**Te Karaka**	**14.24**	**187**	P	**P**	**09 19 18.1**	**+2.2**
CNGZ	**Carnagh Statio**	**14.24**	**186**	P	**P**	**09 19 18.5**	**+2.5**
RAGZ	**Rawiri**	**14.35**	**188**	P	**P**	**09 19 16.3**	**-0.9**
HSRZ	**Hossack Road**	**14.35**	**192**	P	**P**	**09 19 20.4**	**+3.2**
GRRZ	**Galatos Road**	**14.42**	**192**	P	**P**	**09 19 20.7**	**+2.9**
MUGZ	**Murupara**	**14.42**	**190**	P	**P**	**09 19 18.2**	**+0.4**
MUGZ				S	**S**	**09 21 46.7**	**-2.9**
PRRZ	**Plateau Road**	**14.51**	**191**	P	**P**	**09 19 20.4**	**+1.6**
RIGZ	**Rimuhau**	**14.51**	**187**	P	**P**	**09 19 20.0**	**+1.2**
RIGZ				S	**S**	**09 21 51.9**	**+0.7**
TLZ	**Tolley Road**	**14.52**	**194**	P	**P**	**09 19 22.4**	**+3.5**
RTZ	**Ruatahuna**	**14.52**	**190**	P	**P**	**09 19 20.3**	**+1.3**
KUTZ	**Kaahu Road**	**14.61**	**193**	P	**P**	**09 19 23.1**	**+3.2**
SNGZ	**Shannon Statio**	**14.64**	**188**	P	**P**	**09 19 20.6**	**+0.5**
SNGZ				S	**S**	**09 21 50.8**	**-2.9**
RAHZ	**Arahi**	**14.80**	**189**	P	**P**	**09 19 21.6**	**-0.3**
RAHZ				S	**S**	**09 21 57.5**	**+0.6**
MRHZ	**Matea Rd**	**14.83**	**191**	P	**P**	**09 19 22.9**	**+0.7**
WATZ	**Wairara**	**14.84**	**193**	P	**P**	**09 19 24.5**	**+2.3**
HIZ	**Hauiti**	**14.85**	**196**	P	**P**	**09 19 26.5**	**+4.1**
NMHZ	**Naumai**	**15.02**	**190**	P	**P**	**09 19 24.1**	**-0.2**
NMHZ				S	**S**	**09 21 59.1**	**-2.1**
RITZ	**Rihia Road**	**15.07**	**193**	P	**P**	**09 19 26.2**	**+1.5**
KATZ	**Kakaramea**	**15.10**	**193**	P	**P**	**09 19 26.8**	**+1.7**
BKZ	**Black Stump Fm**	**15.14**	**191**	P	**P**	**09 19 24.5**	**-0.9**
KRVZ	**Karewarewa**	**15.23**	**193**	P	**P**	**09 19 28.3**	**+1.8**
TWVZ	**Taurewa**	**15.25**	**194**	P	**P**	**09 19 27.7**	**+1.1**
WTVZ	**West Tongariro**	**15.26**	**193**	P	**P**	**09 19 27.1**	**+0.3**
NGZ	**Ngauruhoe**	**15.32**	**193**	P	**P**	**09 19 28.9**	**+1.6**
MCHZ	**McNeil Hill**	**15.38**	**190**	P	**P**	**09 19 27.8**	**-0.1**
TUVZ	**Tukino**	**15.39**	**193**	P	**P**	**09 19 28.4**	**+0.2**
FWVZ	**Far West T-bar**	**15.40**	**193**	P	**P**	**09 19 28.8**	**+0.5**
KWHZ	**Kaweka Forest**	**15.40**	**191**	P	**P**	**09 19 27.3**	**-0.8**
WHVZ	**Whangaehu Hut**	**15.42**	**193**	P	**P**	**09 19 28.9**	**+0.4**
TRVZ	**Turoa**	**15.45**	**193**	P	**P**	**09 19 29.1**	**+0.3**
VRZ	**Vera Road**	**15.46**	**196**	P	**P**	**09 19 31.7**	**+3.0**
PKVZ	**Pokaka**	**15.48**	**194**	P	**P**	**09 19 29.4**	**+0.5**
MOVZ	**Moawhango**	**15.51**	**192**	P	**P**	**09 19 28.8**	**-0.5**
BHHZ	**Black Hill Sta**	**15.53**	**191**	P	**P**	**09 19 27.2**	**-2.2**
MTVZ	**Mangateitei**	**15.54**	**193**	P	**P**	**09 19 31.0**	**+1.4**
KRHZ	**Kereru**	**15.63**	**191**	P	**P**	**09 19 29.4**	**-1.0**
KAHZ	**Kahuranaki**	**15.70**	**189**	P	**P**	**09 19 31.5**	**+0.3**
PKE	**Pukeiti**	**15.72**	**198**	P	**P**	**09 19 35.5**	**+4.0**
KHEZ	**Kahui Hut**	**15.81**	**197**	P	**P**	**09 19 36.6**	**+4.2**
PREZ	**Palmer Road**	**15.81**	**197**	P	**P**	**09 19 36.8**	**+4.3**
LREZ	**Lake Rotokare**	**15.86**	**196**	P	**P**	**09 19 36.3**	**+3.4**
PNHZ	**Pukenui**	**15.92**	**191**	P	**P**	**09 19 31.9**	**-1.6**
PXZ	**Pawanui**	**15.93**	**189**	P	**P**	**09 19 33.6**	**0.0**
WAZ	**Wanganui**	**16.00**	**194**	P	**P**	**09 19 35.2**	**+0.8**
TSZ	**Takapari Road**	**16.10**	**191**	P	**P**	**09 19 35.4**	**0.0**
DVHZ	**Dannevirke**	**16.30**	**191**	P	**P**	**09 19 37.1**	**-0.4**
ANWZ	**Angora Road**	**16.41**	**190**	P	**P**	**09 19 37.9**	**-0.6**
PRWZ	**Pori Road**	**16.58**	**191**	P	**P**	**09 19 40.4**	**0.0**
BFZ	**Birch Farm**	**16.66**	**190**	P	**P**	**09 19 39.6**	**-1.6**
MRZ	**Mangatainoka R**	**16.75**	**192**	P	**P**	**09 19 40.2**	**-1.9**
OGWZ	**Otaki Gorge**	**16.98**	**193**	P	**P**	**09 19 42.7**	**-1.6**
HOWZ	**Holdsworth Sta**	**17.00**	**192**	P	**P**	**09 19 43.6**	**-0.9**
KIW	**Kapiti Island**	**17.08**	**193**	P	**P**	**09 19 43.7**	**-1.7**
CAW	**Cannon Point**	**17.29**	**193**	P	**P**	**09 19 46.3**	**-1.0**
PAWZ	**Paruwai Farm**	**17.48**	**192**	P	**P**	**09 19 48.1**	**-1.1**
PAWZ				S	**S**	**09 22 40.7**	**-4.2**
PLWZ	**Palliser**	**17.69**	**192**	P	**P**	**09 19 49.7**	**-1.4**
NNZ	**Nelson**	**17.78**	**197**	P	**P**	**09 19 50.9**	**-0.9**
RPZ	**Rata Peaks** 10nm,0.5s,baz=356,slow=1.5,SNR=8.2	**20.74**	**199**	P	**P**	**09 20 18.7**	**-0.1**
ARMA	**Armidale**	**25.91**	**250**	P	**P**	**09 21 06.9**	**+1.6**
EIDS	**Eidsvold**	**26.26**	**262**	P	**P**	**09 21 09.1**	**+0.6**
EIDS				IAmb	IAmb	09 21 11.3	
	comp=Z,12nm,0.9s						
CAN	**Canberra**	**28.97**	**240**	P	**P**	**09 21 33.1**	**+1.1**
CAN				IAmb	IAmb	09 21 41.0	
	comp=Z,27nm,1.5s						
CTAO	**Charters Tower**	**31.49**	**271**	P	**P**	**09 21 54.7**	**+0.6**
TOO	**Toolangi**	**32.26**	**238**	P	**P**	**09 22 01.1**	**+0.7**
TAU	**Tasmania Unive**	**32.59**	**227**	P	**P**	**09 22 04.3**	**+0.4**
STKA	**Stephens Creek**	**34.60**	**249**	P	**P**	**09 22 20.2**	**0.0**
	comp=Z,6.1nm,0.6s,baz=100,slow=10.0,SNR=18						
STKA				PcP	**PcP**	**09 24 41.0**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=104,slow=8.7,SNR=3.0						
STKA	**Stephens Creek**	**34.60**	**249**	P	**P**	**09 22 20.7**	**+0.5**
PMG	**Port Moresby**	**34.63**	**290**	P	**P**	**09 22 20.9**	**+0.2**
KWAJ	**Kwajalein Atol**	**35.04**	**338**	P	**P**	**09 22 24.2**	**+0.2**
COEN	**Coen**	**36.19**	**280**	P	**P**	**09 22 34.1**	**+0.4**
COEN				IAmb	IAmb	09 22 34.8	
	comp=Z,17nm,1.1s						
BBOO	**Buckleboo**	**39.31**	**247**	P	**P**	**09 22 58.2**	**-0.8**
AS31	**Alice Springs**	**41.99**	**261**	P	**P**	**09 23 20.1**	**-0.5**
AS31				IAmb	IAmb	09 23 22.2	
	comp=Z,3.4nm,0.4s						
ASAR	**Alice Springs**	**41.99**	**261**	P	**P**	**09 23 20.1**	**-0.5**
	comp=Z,4.0nm,0.4s,baz=95,slow=6.8,SNR=202						
ASAR				PcP	**PcP**	**09 25 04.2**	**0.0**
	comp=Z,1.0nm,0.8s,baz=96,slow=4.6,SNR=4.1						
ASAR				ScP	**ScP**	**09 28 08.2**	**+1.8**
	comp=Z,0.3nm,0.7s,baz=90,slow=4.8,SNR=2.1						
ASAR				S	**S**	**09 28 58.8**	**-3.8**
	comp=Z,0.3nm,0.9s,baz=242,slow=24,SNR=3.2						
WR0	**Warramunga Arr**	**42.21**	**267**	P	**P**	**09 23 21.5**	**-0.8**
WR0				IAmb	IAmb	09 23 21.7	
	comp=Z,8.2nm,0.5s						
WB2	**Warramunga Arr**	**42.38**	**267**	P	**P**	**09 23 22.9**	**-0.8**
WRAB	**Tennant Creek**	**42.39**	**267**	P	**P**	**09 23 22.7**	**-1.0**
WB0	**Warramunga Arr**	**42.39**	**267**	P	**P**	**09 23 22.8**	**-1.0**
WRA	**Warramunga Arr**	**42.40**	**267**	P	**P**	**09 23 22.8**	**-1.0**
	comp=Z,13nm,0.5s,baz=97,slow=8.3,SNR=299						
WRA				PcP	**PcP**	**09 25 05.7**	**0.0**
	comp=Z,0.4nm,0.3s,baz=100,slow=6.6,SNR=2.2						
WRA				ScP	**ScP**	**09 28 09.0**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=100,slow=4.1,SNR=5.7						
FORT	**Forrest**	**46.19**	**250**	P	**P**	**09 23 51.7**	**-1.4**
MTN	**Manton Dam**	**47.50**	**275**	P	**P**	**09 24 02.1**	**-1.1**
MTN				IAmb	IAmb	09 24 02.4	
	comp=Z,6.7nm,0.7s						
KNRA	**Kununurra**	**48.70**	**270**	P	**P**	**09 24 11.8**	**-0.3**
KNRA				IAmb	IAmb	09 24 12.4	
	comp=Z,22nm,0.8s						
FAKI	**Fak Fak**	**50.71**	**287**	P	**P**	**09 24 26.1**	**-0.8**
FAKI				IAmb	IAmb	09 24 26.5	
	comp=Z,14nm,0.9s						
FITZ	**Fitzroy Crossi**	**50.81**	**266**	P	**P**	**09 24 27.5**	**-0.2**
FITZ				IAmb	IAmb	09 24 28.3	
	comp=Z,11nm,0.8s						
VNDA	**Vanda**	**54.01**	**185**	P	**P**	**09 24 48.4**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=24,slow=9.3,SNR=1.8						
PSA00	**Pilbara Seismi**	**55.11**	**260**	P	**P**	**09 24 57.5**	**-0.8**
MORW	**Morawa**	**56.76**	**250**	P	**P**	**09 25 09.0**	**-0.6**
MORW				IAmb	IAmb	09 25 09.1	
	comp=Z,8.6nm,0.6s						
CASY	**Casey**	**59.78**	**206**	P	**P**	**09 25 29.2**	**-0.2**
GIRL	**Giralia**	**59.84**	**257**	P	**P**	**09 25 30.5**	**-0.1**
QSPA	**South Pole Qui**	**65.81**	**180**	P	**P**	**09 26 09.8**	**+1.3**
QSPA				IAmb	IAmb	09 26 10.6	
	comp=Z,6.1nm,0.8s						
MJAR	**Matsushiro Arr**	**72.22**	**326**	P	**P**	**09 26 47.1**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=144,slow=6.1,SNR=6.9						
MAW	**Mawson**	**77.40**	**200**	P	**P**	**09 27 15.5**	**-0.6**
	comp=Z,2.7nm,0.5s,baz=145,slow=6.5,SNR=8.4						
KSRS	**Korea Array**	**78.55**	**320**	P	**P**	**09 27 23.5**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=125,slow=4.7,SNR=6.2						
PETK	**Petropavlovsk-**	**79.47**	**347**	P	**P**	**09 27 28.0**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=133,slow=8.5,SNR=1.8						
USA0B	**Ussuriysk Arra**	**81.09**	**327**	P	**P**	**09 27 37.3**	**+1.4**
USRK	**Ussuriysk Ar.**	**81.09**	**327**	P	**P**	**09 27 37.0**	**+1.1**
	comp=Z,1.1nm,0.4s,baz=130,slow=3.9,SNR=9.0						
GSI	**Gunungsitoli**	**83.64**	**274**	P	**P**	**09 27 50.1**	**+0.5**
GSI				IAmb	IAmb	09 27 50.2	
	comp=Z,14nm,0.7s						
SNAA	**Sanae**	**84.29**	**179**	P	**P**	**09 27 51.3**	**-0.5**
NVAR	**Mina Array Bea**	**85.01**	**44**	P	**P**	**09 27 56.4**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=226,slow=4.9,SNR=1.8						
NVAR				PKKPbc	**PKKPbc**	**09 46 01.6**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=76,slow=12,SNR=3.6						
BJT	**Baijiatuau**	**87.31**	**316**	P	**P**	**09 28 05.2**	**-1.5**
BJT				IAmb	IAmb	09 28 18.8	
	comp=Z,4.5nm,0.5s						
CMAR	**Chiang Mai Arr**	**89.67**	**290**	P	**P**	**09 28 19.6**	**+1.4**
	comp=Z,1.1nm,0.3s,baz=141,slow=3.8,SNR=7.0						
TXAR	**Lajitas Array**	**90.62**	**58**	P	**P**	**09 28 24.5

MLSI	**Meulaboh, Aceh**	**1.75**	**143**	P	**Pn**	**09 55 15.2**	**+0.2**
MLSI				S	**Sn**	**09 55 38.8**	**+1.5**
TPTI		**3.01**	**143**	P	**Pn**	**09 55 32.0**	**-0.4**
KCSI	**Kotacane, Aceh**	**3.22**	**132**	P	**Pn**	**09 55 35.6**	**+0.3**
SNSI	**Sinabang, Aceh**	**3.39**	**163**	P	**Pn**	**09 55 36.3**	**-1.3**
SNSI				S	**Sn**	**09 56 11.1**	**-6.8**
PSI	**Prapat**	**4.56**	**129**	Pn	**Pn**	**09 55 55.0**	**+1.1**
	3.6nm,0.3s,baz=360,slow=10,SNR=32						
PSI				Pg	**Pb**	**09 56 09.4**	**+4.5**
	5.1nm,0.3s,baz=360,slow=16,SNR=9.8						
PSI				Lg	Lg	09 57 16.4	
	8.8nm,0.3s,baz=0.3,slow=13,SNR=4.2						
PSI				LR	LR	09 58 01.7	
	comp=Z,2μm,21.5s,baz=270,slow=42						
RPSI	**Rantau Prapat**	**4.63**	**130**		**Pn**	**09 55 52.4**	**-2.2**
GSI	**Gunungsitoli**	**4.88**	**153**	P	**Pn**	**09 55 58.2**	**+0.1**
GSI				S	**Sn**	**09 56 49.5**	**-5.1**
GSI	**Gunungsitoli**	**4.88**	**153**		**Pn**	**09 55 58.4**	**+0.4**
KULM	**Kulim**	**5.28**	**94**		**Pn**	**09 56 01.3**	**-2.4**
IPM	**Ipoh**	**5.77**	**102**		Pn	09 56 07.3	-3.1
MNSI	**Mandailing Nat**	**6.42**	**139**	P	**Pn**	**09 56 19.2**	**-0.2**
CM31	**Chiang Mai Arr**	**13.18**	**15**	Pn	**P**	**09 58 00.8**	**-1.3**
CMAR	**Chiang Mai Arr**	**13.18**	**15**	Pn	**Pn**	**09 57 50.4**	**-1.6**
	0.5nm,0.3s,baz=109,slow=28,SNR=1.7						
CMAR				LR	LR	10 02 14.3	
	comp=Z,261nm,19.2s,baz=215,slow=35						
MDSI	**Maura Dua**	**13.40**	**139**	P	Pn	09 57 51.5	-3.5
	10nm,0.7s						
CHTO	**Chiang Mai**	**13.52**	**15**	Pn	**P**	**09 58 06.0**	**+0.1**
KSM	**Kuching**	**15.49**	**105**	Pn	Pn	09 58 17.3	-6.1
SLVN	**Son La**	**17.63**	**27**	P	**P**	**09 58 56.2**	**+4.6**
QIZ	**Qiongzhong**	**19.38**	**45**	P	**P**	**09 59 12.7**	**+1.9**
QIZ				S	**Sn**	**10 02 45.8**	**-3.6**
QIZ				LR	LR		
	comp=N,1μm,13.8s						
QIZ				LR	LR		
	comp=E,800nm,11.8s						
QIZ				LR	LR		
	comp=Z,740nm,13.7s						
SMRI	**Semarang**	**19.66**	**130**	P	**P**	**09 59 10.0**	**-3.8**
SMRI				IAmb	IAmb	09 59 11.5	
	comp=Z,37nm,0.8s						
SHL	**Shillong**	**20.06**	**351**	P	Pn	09 59 28.4	+8.3
SHL					**PcP**	**10 03 39.4**	**+5.2**
SRBI	**Singaraja**	**24.06**	**124**	P	**P**	**09 59 58.8**	**-1.6**
	comp=Z,125nm,1.4s						
SRBI				pP	**pP**	**10 00 03.5**	**+0.1**
	comp=Z,125nm,1.4s						
MPSI	**Mapaga**	**25.06**	**101**	P	**P**	**10 00 09.3**	**-0.2**
	comp=Z,11nm,0.9s						
CD2	**Chengdu**	**26.31**	**16**	P	**P**	**10 00 26.5**	**+5.8**
CD2				S	**S**	**10 04 57.1**	**+3.4**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,170nm,5.0s						
CD2				LR	LR		
	comp=Z,670nm,17.8s						
CD2				LR	LR		
	comp=Z,1μm,18.4s						
CD2				LR	LR		
	comp=Z,640nm,10.6s						
H08S2	**Diego Garcia H**	**26.37**	**240**	T	T	10 27 23.2	
	baz=60,slow=76,SNR=215						
H08S3	**Diego Garcia H**	**26.37**	**240**	T	T	10 27 24.9	
	baz=60,slow=76,SNR=157						
H08S1	**Diego Garcia H**	**26.39**	**240**	T	T	10 27 25.8	
	baz=60,slow=76,SNR=96						
XAN	**Xi'an**	**30.90**	**22**	P	**P**	**10 01 01.9**	**+0.3**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LZH	**Lanzhou**	**31.25**	**13**	*e*P	P	10 01 12.9	+8.1
LZH				pP	sP	10 01 29.0	+20
LZH				sP	pP	10 01 37.2	+29
LZH				*e*PP	**PP**	**10 02 18.5**	**+3.0**
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,73nm,5.2s						
LZH				LR	LR		
	comp=Z,350nm,12.8s						
LZH				LR	LR		
	comp=Z,370nm,13.0s						
LZH				LR	LR		
	comp=Z,500nm,16.2s						
GTA	**Gaotai**	**33.82**	**6**	*e*P	P	10 01 33.0	+5.7
GTA				pP	sP	10 01 45.7	+14
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,64nm,7.9s						
GTA				LR	LR		
	comp=Z,81nm,18.4s						
GTA				LR	LR		
	comp=Z,370nm,18.7s						
NJ2	**Nanjing**	**34.22**	**37**	*e*P	**P**	**10 01 34.3**	**+3.7**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
PSA00	**Pilbara Seismi**	**36.19**	**139**	P	**P**	**10 01 46.5**	**-1.3**
PSA00				IAmb	IAmb	10 01 51.4	
	comp=Z,9.1nm,1.2s						
PSAA3	**Pilbara Seismi**	**36.20**	**139**	P	**P**	**10 01 46.5**	**-1.3**
PSAC3	**Pilbara Seismi**	**36.21**	**139**	P	**P**	**10 01 47.2**	**-0.8**
PSAC3				IAmb	IAmb	10 02 06.9	
	comp=Z,13nm,1.4s						
PSAC2	**Pilbara Seismi**	**36.22**	**139**	P	**P**	**10 01 46.7**	**-1.3**
HHC	**Hu-ho-hao-te**	**37.91**	**20**	P	**P**	**10 02 04.8**	**+2.5**
HHC				pP	sP	10 02 21.4	+15
HHC				S	**S**	**10 07 47.8**	**-6.2**
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,71nm,7.3s						
HHC				LR	LR		
	comp=Z,260nm,17.3s						
HHC				LR	LR		
	comp=Z,770nm,16.2s						
HHC				LR	LR		
	comp=Z,190nm,15.5s						
KSH	**Kashi**	**37.96**	**335**	P	P	10 02 15.7	+13
KSH				pP	sP	10 02 29.6	+23
KSH				PP	PnPn	10 03 47.4	+17
KSH				S	S	10 08 07.0	+12
KSH				pmax	pmax		
	comp=Z,43nm,1.7s						
KSH				pmax	pmax		
	comp=Z,180nm,6.0s						
KSH				LR	LR		
	comp=Z,220nm,7.7s						
KSH				LR	LR		
	comp=Z,120nm,12.2s						
KSH				LR	LR		
	comp=Z,300nm,11.6s						
FITZ	**Fitzroy Crossi**	**38.09**	**129**	LR	LR	10 19 11.5	
	comp=Z,175nm,18.2s,baz=329,slow=38						
FITZ	**Fitzroy Crossi**	**38.09**	**129**	P	**P**	**10 02 02.1**	**-1.9**
FITZ				IAmb	IAmb	10 02 05.1	
	comp=Z,4.8nm,0.7s						
WMQ	**Urumqi**	**38.59**	**351**	*e*P	P	10 02 16.9	+9.0
BJI	**Beijing**	**39.01**	**26**	P	**P**	**10 02 14.5**	**+3.2**
BJI				pmax	pmax		
	comp=Z,15nm,0.9s						
MORW	**Morawa**	**39.87**	**151**	P	**P**	**10 02 19.8**	**+1.2**
MORW				IAmb	IAmb	10 02 38.9	
	comp=Z,12nm,1.4s						
MTN	**Manton Dam**	**40.03**	**118**	P	**P**	**10 02 17.8**	**-2.4**
MTN				IAmb	IAmb	10 02 27.5	
	comp=Z,5.0nm,0.5s						
MKAR	**Makanchi Array**	**42.49**	**347**	P	P	10 02 36.8	-3.2
	comp=Z,0.2nm,0.3s,baz=185,slow=16,SNR=2.4						
SONM	**Songino Array**	**43.06**	**11**	P	**P**		
	comp=Z,0.8nm,0.8s,baz=181,slow=9.5,SNR=5.2						
SONM				PcP	**PcP**	**10 04 34.1**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=194,slow=5.3,SNR=2.2						
KSRS	**Korea Array**	**43.37**	**39**	P	**P**	**10 02 46.1**	**-1.1**
	comp=Z,2.4nm,0.8s,baz=220,slow=8.5,SNR=7.9						
NWAO	**Narrogin (SRO)**	**43.65**	**153**	LR	LR	10 18 35.9	
	comp=Z,157nm,20.8s,baz=318,slow=33						
WB0	**Warramunga Arr**	**45.97**	**124**	P	**P**	**10 03 06.3**	**-2.1**
WB0				IAmb	IAmb	10 03 10.0	
	comp=Z,8.0nm,0.9s						
WRA	**Warramunga Ar**	**46.02**	**125**	P	**P**	**10 03 06.6**	**-2.1**
	comp=Z,4.0nm,0.8s,baz=302,slow=10,SNR=26						
WRA				LR	LR	10 22 60.0	
	comp=Z,214nm,21.8s,baz=75,slow=37						
WRAB	**Tennant Creek**	**46.02**	**125**	P	**P**	**10 03 06.9**	**-1.9**
WRAB				IAmb	IAmb	10 03 10.5	
	comp=Z,10nm,0.9s						
WB2	**Warramunga Arr**	**46.03**	**125**	P	**P**	**10 03 06.8**	**-2.0**
WB2				IAmb	IAmb	10 03 10.6	
	comp=Z,9.3nm,0.9s						
WR0	**Warramunga Arr**	**46.19**	**125**	P	**P**	**10 03 08.0**	**-2.0**
WR0				IAmb	IAmb	10 03 11.9	
	comp=Z,8.8nm,0.9s						
GEYT	**Alibeck**	**46.64**	**319**	P	**P**	**10 03 11.1**	**-2.3**
	comp=Z,3.8nm,1.0s,baz=153,slow=8.3,SNR=5.0						
GEYT				LR	LR	10 24 19.6	
	comp=Z,165nm,19.1s,baz=80,slow=38						
AS31	**Alice Springs**	**47.59**	**129**	P	**P**	**10 03 19.5**	**-1.5**
ASAR	**Alice Springs**	**47.59**	**129**	P	**P**	**10 03 19.4**	**-1.6**
	comp=Z,10nm,0.8s,baz=300,slow=7.1,SNR=53						
ASAR				PcP	**PcP**	**10 04 52.4**	**+1.5**
	comp=Z,1.5nm,0.8s,baz=309,slow=3.7,SNR=5.0						
ASAR				LR	LR	10 23 52.0	
	comp=Z,149nm,20.7s,baz=290,slow=37						
FORT	**Forrest**	**47.88**	**141**	P	**P**	**10 03 23.4**	**+0.3**
ZALV	**Zalesovo Beam**	**48.88**	**352**	P	P	10 03 26.0	-4.5
	comp=Z,0.4nm,0.3s,baz=166,slow=7.4,SNR=1.5						
MJAR	**Matsushiro Arr**	**49.77**	**46**	P	**P**	**10 03 36.3**	**-1.4**
	comp=Z,1.5nm,0.9s,baz=88,slow=40,SNR=2.3						
MJAR				LR	LR	10 25 51.5	
	comp=Z,112nm,18.5s,baz=295,slow=38						
USRK	**Ussuriysk Ar.**	**50.01**	**34**	P	P	10 03 35.5	-3.7
	comp=Z,0.4nm,0.6s,baz=332,slow=26,SNR=3.7						
USRK				LR	LR	10 26 16.8	
	comp=Z,118nm,18.1s,baz=212,slow=38						
STKA	**Stephens Creek**	**57.73**	**133**	P	**P**	**10 04 35.5**	**-0.5**
	comp=Z,2.7nm,0.6s,baz=306,slow=6.8,SNR=11						
STKA				LR	LR	10 32 09.7	
	comp=Z,114nm,20.1s,baz=219,slow=39						
STKA	**Stephens Creek**	**57.73**	**133**	P	**P**	**10 04 36.2**	**+0.2**
KMBO	**Kilima Mbogo**	**58.41**	**265**	P	**P**	**10 04 44.8**	**+3.4**
	comp=Z,1.6nm,0.3s,baz=71,slow=5.7,SNR=1.8						
KMBO				LR	LR	10 24 45.6	
	comp=Z,139nm,22.0s,baz=100,slow=31						
CAN	**Canberra**	**64.79**	**133**	P	**P**	**10 05 25.9**	**+2.0**
AKASG	**Malin Array Be**	**70.62**	**322**	P	P	10 05 57.2	-3.1
	comp=Z,0.7nm,0.6s,baz=92,slow=4.7,SNR=8.2						
FINES	**FINESS Array B**	**75.21**	**332**	P	P	10 06 24.5	-2.7
	comp=Z,1.1nm,0.7s,baz=98,slow=4.6,SNR=7.4						
BOSA	**Boshof**	**75.47**	**239**	P	**P**	**10 06 28.4**	**-1.2**
	comp=Z,3.0nm,0.8s,baz=70,slow=6.6,SNR=4.5						
ARCES	**ARCESS Array B**	**77.73**	**340**	LR	LR	10 43 29.1	
	comp=Z,197nm,20.7s,baz=155,slow=38						
GERES	**GERESS Array B**	**80.26**	**318**	P	**P**	**10 06 54.0**	**-1.9**
	comp=Z,1.4nm,0.7s,baz=87,slow=4.7,SNR=8.3						
NOA	**NORSAR Array B**	**82.23**	**331**	P	P	10 07 02.8	-3.2
	comp=Z,0.5nm,0.9s,baz=95,slow=5.4,SNR=3.1						
NOA				LR	LR	10 48 21.3	
	comp=Z,88nm,19.5s,baz=110,slow=39						
TORD	**Torodi Ar. Bea**	**92.28**	**283**	P	**P**	**10 07 54.9**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=93,slow=4.3,SNR=3.5						
ESDC	**Sonseca Array**	**93.55**	**310**	P	**P**	**10 08 00.2**	**-1.1**
	comp=Z,0.9nm,0.9s,baz=44,slow=4.7,SNR=4.7						
TXAR	**Lajitas Array**	**140.68**	**27**	PKhKP	PKPpre	10 14 10.4	
	comp=Z,0.4nm,1.0s,baz=220,slow=0.7,SNR=2.8						
TXAR				PKP	**PKPdf**	**10 14 13.7**	**-1.8**
	comp=Z,0.1nm,0.5s,baz=204,slow=33,SNR=2.4						
CPUP	**Villa Florida**	**146.81**	**229**	PKPbc	**PKPdf**	**10 14 27.4**	**+1.3**
	comp=Z,2.3nm,0.9s,baz=141,slow=6.2,SNR=3.4						
CFA	**Coronel Fontan**	**149.97**	**209**	PKPbc	**PKPdf**	**10 14 34.4**	**+3.2**
	comp=Z,1.0nm,0.4s,baz=254,slow=4.2,SNR=5.1						

*NEIC **10** 10:01:24.5±2.3, 16°.94N±0°.05×101°.06W±0°.03, h14km±4km, Error ellipse: s-maj=7.7km s-min=2.8km az=201.0*
*MEX **10** 10:01:26.6±0.6, 17°.08N×101°.00W, h5km, MD4.2*
*IDC **10** 10:01:38.0±6.9, 17°.76N×100°.31W, h93km±48km, mb3.1/4, mb1 3.3/7, mb1mx3.2/38, mbtmp3.3/7, Error ellipse: s-maj=104.5km s-min=26.9km az=31.0*

ISC 10 10:01:25.8±1.2, 17°.13N±0°.06×100°.94W±0°.04, h11km±8km, n33, σ1$47/48, mb3.5/4, 1D, Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.65**	**98**	⇓*e*P		**Pg**		**10 01 38.9**	**+0.6**
	baz=272,slow=9.3								
CAIG				*i* S		**Sb**		**10 01 48.4**	**+0.3**
CAIG	**El Cayaco**	**0.65**	**98**			**Pg**		**10 01 38.9**	**+0.6**
CAIG						**Sb**		**10 01 48.4**	**+0.3**
ZIIG	**Zihuatanejo**	**0.69**	**313**	*e*P		**Pg**		**10 01 39.0**	**-0.2**
ZIIG				*e*S		**Sg**		**10 01 48.1**	**-0.2**
ZIIG	**Zihuatanejo**	**0.69**	**313**			**Pg**		**10 01 39.0**	**-0.2**
ZIIG						**Sg**		**10 01 48.1**	**-0.2**
ACP2	**Acapulco**	**1.04**	**104**	*e*P		**Pg**		**10 01 45.5**	**-0.3**
ACP2				*e*S		**Sg**		**10 01 59.4**	**+0.1**
ACP2	**Acapulco**	**1.04**	**104**			**Pg**		**10 01 45.5**	**-0.3**
ACP2						**Sg**		**10 01 59.4**	**+0.1**
UON	**La Union**	**1.18**	**315**	*e*P		**Pb**		**10 01 47.2**	**-1.0**
UON				*e*S		**Sb**		**10 02 03.6**	**+0.1**
ARIG	**Puente Sto Nin**	**1.27**	**26**	*i* P		**Pn**		**10 01 48.2**	**-1.3**
ARIG				*e*S		**Sb**		**10 02 04.7**	**-1.5**
ARIG	**Puente Sto Nin**	**1.27**	**26**			**Pn**		**10 01 48.2**	**-1.3**
ARIG						**Sb**		**10 02 04.7**	**-1.5**
CRIG	**Cruz Grande**	**1.77**	**103**	*e*P		**Pn**		**10 01 55.6**	**-0.7**
CRIG				*e*S		**Sn**		**10 02 16.0**	**-2.9**
PLIG	**Platanillo**	**1.85**	**47**	*e*P		**Pn**		**10 01 57.1**	**-0.5**
PLIG				*e*S		**Sn**		**10 02 22.8**	**+1.7**
PLIG	**Platanillo**	**1.85**	**47**			**Pn**		**10 01 57.1**	**-0.5**
PLIG						**Sn**		**10 02 22.8**	**+1.7**
TLIG	**Tlapa**	**2.30**	**79**	*e*P		**Pn**		**10 02 03.9**	**+0.1**
TLIG				*e*S		**Sb**		**10 02 38.0**	**+2.0**
TLIG	**Tlapa**	**2.30**	**79**			**Pn**		**10 02 04.4**	**+0.6**
TLIG						**Sn**		**10 02 35.1**	**+2.9**
MOIG	**Morelia**	**2.54**	**355**			**Pn**		**10 02 09.2**	**+1.9**
MOIG					Sn	**Sb**		**10 02 42.2**	**-0.8**
UNM	**Universidad Na**	**2.75**	**37**			**Pb**		**10 02 13.6**	**-1.5**
PNIG	**Pinotepa**	**2.79**	**105**	*e*P		**Pb**		**10 02 14.9**	**-0.8**
PNIG				*e*S		**Sg**		**10 02 55.3**	**-0.2**
PNIG	**Pinotepa**	**2.79**	**105**			**Pb**		**10 02 14.9**	**-0.8**
CMIG	**Matias Romero**	**5.79**	**90**	P		**Pn**		**10 02 53.1**	**+1.4**
	0.1nm,0.3s,baz=263,slow=16,SNR=1.7								
CMIG				S		**Sn**		**10 03 53.5**	**-4.5**
	0.5nm,0.3s,baz=274,slow=13,SNR=2.5								
TXAR	**Lajitas Array**	**12.40**	**349**	P		**Pn**		**10 04 25.7**	**+3.3**
	0.0nm,0.3s,baz=166,slow=15,SNR=1.8								
NATX	**Nacogdoches**	**15.63**	**20**	Pn		**Pn**		**10 05 08.1**	**+1.9**
Z38A	**Mt. Pleasant**	**16.93**	**17**	P		**P**		**10 05 24.7**	**+0.1**
Z38A				IAmb		IAmb		10 05 33.2	
	comp=Z,18nm,1.1s								
X34A	**Smith Ranch, M**	**17.62**	**8**	P		**P**		**10 05 33.5**	**+1.2**
WMOK	**Wichita Mounta**	**17.64**	**6**			**Pn**		**10 05 32.3**	**+0.8**
WMOK				IAmb		IAmb		10 05 37.6	
	comp=Z,5.5nm,0.7s								
ANMO	**Albuquerque**	**18.41**	**346**	P		**P**		**10 05 39.5**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=146,slow=11,SNR=2.3								
HHAR	**Hobbs**	**20.06**	**17**	P		**P**		**10 06 00.1**	**+1.0**
HHAR				IAmb		IAmb		10 06 04.0	
	comp=Z,5.3nm,0.5s								
FCAR	**Ozark Folk Cen**	**20.26**	**21**	P		**P**		**10 06 00.0**	**-1.2**
FCAR				IAmb		IAmb		10 06 09.7	
	comp=Z,7.9nm,0.8s								
WUAZ	**Wupatki**	**20.53**	**335**	P		Pn		10 06 06.7	0.0
SDCO	**Great Sand Dun**	**20.92**	**350**	P		Pn		10 06 11.2	0.0
NVAR	**Mina Array Bea**	**26.11**	**328**	P		**P**		**10 07 01.7**	**+1.7**
	comp=Z,1.0nm,0.9s,baz=152,slow=13,SNR=6.0								
PDAR	**Pinedale Array**	**26.59**	**346**	P		**P**		**10 07 04.3**	**0.0**
	comp=Z,0.4nm,0.9s,baz=132,slow=12,SNR=2.5								
YKA	**Yellowknife Ar**	**46.31**	**351**	P		**P**		**10 09 50.1**	**-1.3**
	comp=Z,0.7nm,0.8s,baz=156,slow=7.4,SNR=9.2								
ILAR	**Eielson Array**	**56.67**	**338**	P		**P**		**10 11 08.8**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=139,slow=8.4,SNR=2.8								

IDC 10 10:18:16.8±5.9, 8°.64S×128°.39E, h0km, mb3.9/1, mb1 3.7/4, mb1mx3.4/32, mbtmp3.5/4, ML3.4/3, MS3.7/1, Ms1 3.7/1, ms1mx2.7/39, Error ellipse: s-maj=71.2km s-min=54.7km az=133.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.77**	**196**	Pn		Pn		10 20 39.8	+1.0
	0.2nm,0.3s,baz=22,slow=14,SNR=1.8								
FITZ				Sn		Sn		10 22 33.5	+4.2
	0.3nm,0.3s,baz=342,slow=14,SNR=1.9								
WRA	**Warramunga Arr**	**12.63**	**153**	Pn		Pn		10 21 17.9	0.0
	0.2nm,0.3s,baz=322,slow=14,SNR=14								
WRA				Sn		Sn		10 23 38.7	-0.7
	0.2nm,0.3s,baz=331,slow=22,SNR=2.0								
ASAR	**Alice Springs**	**15.85**	**161**	Pn		Pn		10 22 00.7	-0.8
	0.1nm,0.3s,baz=341,slow=11,SNR=15								
ASAR				Sn		Sn		10 24 59.5	+1.5
	0.1nm,0.3s,baz=338,slow=36,SNR=1.4								
STKA	**Stephens Creek**	**26.18**	**154**	P		P		10 23 53.0	-0.2
	1.0nm,0.5s,baz=321,slow=14,SNR=3.8								
URZ	**Urewera**	**52.73**	**132**	LR		LR		10 50 54.8	
	comp=Z,73nm,18.3s,baz=250,slow=37								

*IDC **10** 10:32:35.0±0.6, 18°.19S×71°.20W, h0km, mb4.4/12, mb1 4.5/15, mb1mx4.2/41, mbtmp4.4/15, ML4.0/3, MS3.7/8, Ms1 3.7/8, ms1mx3.4/27, Error ellipse: s-maj=19.8km s-min=15.3km az=70.0*
*NEIC **10** 10:32:38.8±1.7, 18°.31S±0°.04×71°.30W±0°.05, h26km±3km, mb4.5/39, Mwr4.3/34, ML4.3(GUC), Error ellipse: s-maj=7.7km s-min=5.2km az=67.0*
*GUC **10** 10:32:39.5±0.8, 18°.34S×71°.34W, h45km±13km, ML4.2*
*VAO **10** 10:32:39.4±0.9, 18°.22S×71°.48W, h50km±6km, mb4.5*
*NEIC **10** 10:32:39.1, 18°.35S×71°.34W, h29km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.23; $M_{\theta\theta}$-0.68; $M_{\phi\phi}$-0.55; $M_{r\theta}$0.16; $M_{r\phi}$0.68; $M_{\theta\phi}$-2.75; Fault plane solution: M_o3.03000×10^{15} NP1:$\phi_0$296.89000°, δ16.95000°, λ37.51000°. NP2:$\phi_0$170.61000°, δ79.77000°, λ103.59000°. Principal axes: T 3.2486, Plg53.0000°, Azm97.0000°; N -0.4941, Plg13.0000°, Azm348.0000°; P -2.7545, Plg33.0000°, Azm249.0000°;*

ISC 10 10:32:37.7±1.9, 18°.36S±0°.04×71°.40W±0°.05, h18km±8km, n170, σ1$36/172, mb4.5/25, MS3.8/4, 11C-2D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**1.00**	**91**	⇓*i*P		**Pb**		**10 32 56.6**	**+0.1**
AP01				*i* S		**Sb**		**10 33 09.9**	**+0.5**
AP01	**Chacalluta**	**1.00**	**91**			**Pb**		**10 32 56.8**	**+0.3**
PB12	**IPOC Station P**	**1.05**	**104**	⇑*i*P		**Pb**		**10 32 57.4**	**0.0**
PB12				*i* S		**Sb**		**10 33 10.4**	**-0.4**
PB12				IAML				10 33 12.2	
	comp=E,6μm,0.3s								
PB12	**IPOC Station P**	**1.05**	**104**			**Pb**		**10 32 57.4**	**0.0**
PB12						**Sb**		**10 33 10.3**	**-0.4**
PSGC	**Pisagua**	**1.72**	**136**	⇑*i*P		**Pn**		**10 33 07.9**	**+1.0**
PSGC				*i* S		**Sn**		**10 33 29.4**	**+1.0**
PSGCX	**Pisagua**	**1.72**	**136**			**Pn**		**10 33 07.6**	**+0.8**
PB16	**IPOC Station P**	**1.80**	**89**	⇑*i*P		**Pn**		**10 33 09.4**	**+1.1**
PB16				*i* S		**Sb**		**10 33 32.4**	**-0.4**
PB16				IAML				10 33 35.4	
	comp=N,3μm,0.5s								
PB16	**IPOC Station P**	**1.80**	**89**			**Pn**		**10 33 09.2**	**+0.9**
MNMC	**Minye Minye**	**1.87**	**114**	*e*P		**Pn**		**10 33 10.3**	**+1.2**
MNMC				*i* S		**Sn**		**10 33 33.6**	**+1.2**
MNMC				IAML				10 33 44.1	
	comp=N,4μm,0.4s								
MNMC	**Minye Minye**	**1.87**	**114**			**Pn**		**10 33 10.3**	**+1.2**
PB11	**IPOC Station P**	**2.16**	**130**	⇑*i*P		**Pn**		**10 33 14.2**	**+1.3**
PB11				*i* S		**Sn**		**10 33 40.5**	**+1.3**
PB11				IAML				10 33 48.6	
	comp=E,2μm,0.5s								
PB11	**IPOC Station P**	**2.16**	**130**			**Pn**		**10 33 14.2**	**+1.3**
TA02	**Huaiquique**	**2.24**	**148**	*e*P		**Pn**		**10 33 15.3**	**+1.4**
TA02				IAML				10 33 44.5	
	comp=N,3μm,0.5s								
GO01	**Chusmiza**	**2.46**	**122**	*e*P		**Pn**		**10 33 19.4**	**+2.1**
GO01				*i* S		**Sn**		**10 33 49.4**	**+2.3**
GO01				IAML				10 33 58.6	
	comp=N,1μm,0.5s								
GO01				IAML				10 33 58.9	
	comp=N,2μm,0.4s								
GO01	**Chusmiza**	**2.46**	**122**			**Pn**		**10 33 19.0**	**+1.7**
TA01	**Diego Aracena**	**2.47**	**152**	⇑*i*P		**Pn**		**10 33 18.1**	**+1.0**
TA01				*i* S		**Sn**		**10 33 43.8**	**-3.0**
TA01	**Diego Aracena**	**2.47**	**152**			**Pn**		**10 33 18.0**	**+1.0**
PATCX	**Punta Patache**	**2.71**	**155**	⇑*i*P		**Pn**		**10 33 21.3**	**+0.9**
PATCX				IAML				10 34 03.4	
	comp=E,986nm,0.5s								
PATCX	**Punta Patache**	**2.71**	**155**			**Pn**		**10 33 21.3**	**+0.9**
PB08	**IPOC Station P**	**2.76**	**130**	⇓*i*P		**Pn**		**10 33 23.0**	**+1.6**
PB08				IAML				10 34 05.5	
	comp=N,597nm,0.3s								
PB08	**IPOC Station P**	**2.76**	**130**			**Pn**		**10 33 23.2**	**+1.8**
PB01	**IPOC Station P**	**3.22**	**146**	⇑*i*P		**Pn**		**10 33 28.4**	**+1.0**
PB01				*i* S		**Sn**		**10 34 04.9**	**-0.4**
PB01				IAML				10 34 21.0	
	comp=E,414nm,0.8s								
PB01	**IPOC Station P**	**3.22**	**146**			**Pn**		**10 33 28.2**	**+0.7**
PB02	**IPOC Station P**

PTGA LR LR 10 45 50.0
comp=Z,329nm,18.8s,baz=202,slow=39
PTGA Pitinga 20.81 34 P **P 10 37 16.3 -2.0**
PTGA IAmb IAmb 10 37 16.8
comp=Z,21nm,0.7s
PTGA Pitinga 20.81 34 *e*P **P 10 37 16.1 -2.2**
PLTB Pedras Altas 20.89 133 *e*P **P 10 37 19.3 +0.3**
FRTB Fartura 20.99 107 *e*P **P 10 37 19.3 -1.0**
SOTA Rioblanco 21.00 345 *e*P **P 10 37 20.1 -0.8**
BB19B Bebedouro 21.70 101 *e*P **P 10 37 28.4 +0.6**
IPMB Ipameri, GO 22.04 93 *e*P **P 10 37 30.0 -1.5**
PRAC Prado 22.21 351 *e*P **P 10 37 30.2 -3.1**
PLCA Paso Flores 22.30 178 P **P 10 37 35.3 +1.1**
comp=Z,8.2nm,1.1s,baz=359,slow=11,SNR=11
PLCA Paso Flores 22.30 178 P **P 10 37 35.0 +0.8**
PLCA Paso Flores 22.30 178 *e*P **P 10 37 35.4 +1.1**
ORTC Ortega, Tolima 22.45 350 *e*P **P 10 37 34.6 -1.4**
BDFB Brasilia 22.52 87 P **P 10 37 35.8 -1.0**
comp=Z,12nm,0.6s,baz=260,slow=11,SNR=15
BDFB Brasilia 22.52 87 P **P 10 37 36.3 -0.5**
BDFB IAmb IAmb 10 37 37.1
comp=Z,12nm,0.7s
YOTC Yotoco, Valle 22.73 347 *e*P **P 10 37 39.8 +0.7**
MALB Monte Alegre 23.49 48 *e*P **P 10 37 44.0 -2.6**
SPBC San Pablo de B 24.01 353 *e*P **P 10 37 47.4 -4.3**
NORC Norcasia 24.02 351 *e*P **P 10 37 49.5 -2.2**
RUSC La Rusia 24.16 356 *e*P **P 10 37 55.0 +1.5**
RUSC La Rusia 24.16 356 P **P 10 37 53.0 -0.5**
CBOC Ciudad Bolivar 24.50 349 *e*P **P 10 37 56.0 -0.3**
SMTB Santa Maria do 24.97 71 *e*P **P 10 37 59.2 -1.2**
JANB Januaria 26.14 87 *e*P **P 10 38 09.5 -1.6**
MDP Montagnes des 29.76 40 LR LR 10 51 11.5
comp=Z,268nm,19.0s,baz=200,slow=38
NBIT Itapeh - BA 30.79 88 *e*P **P 10 38 51.6 -1.0**
ROSB Rosrio 30.82 63 *e*P **P 10 38 50.4 -2.4**
NBPN Ponto Novo - B 31.07 80 *e*P **P 10 38 53.0 -2.1**
NBPS Pedro II - PI 32.40 68 *e*P **P 10 39 05.5 -1.3**
NBLA Lagarto - SE 33.26 82 *e*P **P 10 39 11.6 -2.9**
NBPB Pedra_Branca-C 33.56 72 *e*P **P 10 39 15.6 -1.3**
NBMA Muriti-CE 33.58 75 *e*P **P 10 39 15.6 -1.5**
NBAN Anadia - AL 35.10 81 *e*P **P 10 39 28.1 -2.1**
RPN Rapa Nui 35.94 249 LR LR 10 50 07.0
comp=Z,157nm,18.5s,baz=128,slow=29
RCBR Riachuelo 36.79 75 P **P 10 39 43.5 -1.3**
comp=Z,9.2nm,0.7s,baz=228,slow=11,SNR=5.5
T59A Double "B" Far 55.34 354 P **P 10 42 10.4 +0.1**
T57A Hurt 55.56 352 P **P 10 42 12.0 +0.1**
T57A IAmb IAmb 10 42 12.8
comp=Z,5.7nm,0.8s
WLAR White Oak Lake 55.75 338 P **P 10 42 13.9 +0.6**
S57A Dark Hollow, R 56.27 353 P **P 10 42 16.5 -0.6**
S57A IAmb IAmb 10 42 17.7
comp=Z,7.2nm,1.0s
TXAR Lajitas Array 56.73 326 P **P 10 42 20.6 -0.1**
comp=Z,0.1nm,0.4s,baz=146,slow=8.2,SNR=2.9
X37A Clayton 57.39 337 P **P 10 42 24.7 -0.3**
X37A IAmb IAmb 10 42 26.0
comp=Z,4.9nm,0.8s
Q56A Snyder Ridge, 57.57 353 P **P 10 42 26.5 +0.3**
Q56A IAmb IAmb 10 42 27.3
comp=Z,7.1nm,0.9s
U40A Yellville 58.08 340 P **P 10 42 29.1 -0.8**
U40A IAmb IAmb 10 42 29.7
comp=Z,3.3nm,0.9s
SIUC Southern Illin 58.25 343 P **P 10 42 29.8 -1.2**
TUL1 Leonard 58.72 337 P **P 10 42 33.5 -0.9**
VNA3 Neumayer Olymp 63.78 161 P **P 10 43 09.2 +1.0**
VNA2 Neumayer--Watz 64.37 161 P **P 10 43 12.9 +0.8**
SDCO Great Sand Dun 64.37 330 P **P 10 43 12.7 -0.2**
SNAA Sanae 65.99 161 P **P 10 43 23.9 +1.2**
SNAA Sanae 65.99 161 P **P 10 43 23.4 +0.7**
SNAA IAmb IAmb 10 43 24.3
comp=Z,3.4nm,0.7s
ISCO Idaho Springs 66.08 332 P **P 10 43 23.8 -0.2**
KNB Kanab 67.53 325 P **P 10 43 34.1 +1.1**
O20A White River Ci 67.56 330 P **P 10 43 33.5 +0.2**
O20A IAmb IAmb 10 43 34.8
comp=Z,4.9nm,1.2s
SRU San Rafael Swe 67.89 328 P **P 10 43 35.3 0.0**
CCUT Cedar City 68.21 325 P **P 10 43 36.7 -0.7**
P17A Butcher Ranch, 68.27 328 P **P 10 43 38.2 +0.5**
MSU Marysvale 68.28 327 P **P 10 43 37.2 -0.7**
RSSD Black Hills 68.98 335 P **P 10 43 40.6 -1.5**
PSUT Pine Spring 69.19 326 P **P 10 43 42.0 -1.5**
JLU Jordanelle 69.48 328 P **P 10 43 45.2 -0.1**
E28A Huff 69.84 339 P **P 10 43 47.7 +0.6**
DUG Dugway, Tooele 69.86 327 P **P 10 43 46.7 -0.8**
DUG IAmb IAmb 10 43 49.6
comp=Z,2.8nm,0.9s
R11A Troy Canyon, C 70.00 324 P **P 10 43 47.3 -1.2**
R11A IAmb IAmb 10 44 01.8
comp=Z,3.8nm,1.2s
DBIC Dimbokro 70.16 76 P **P 10 43 47.9 -1.9**
comp=Z,6.1nm,0.6s,baz=244,slow=7.7,SNR=8.3
DBIC Dimbokro 70.16 76 P **P 10 43 48.6 -1.2**
PDAR Pinedale Array 70.24 331 P **P 10 43 49.5 -0.4**
comp=Z,0.3nm,0.5s,baz=127,slow=9.4,SNR=4.6
ELK Elko 71.53 326 P **P 10 43 57.8 0.0**
NVAR Mina Array Bea 71.59 323 P **P 10 43 58.6 +0.4**
comp=Z,0.9nm,0.8s,baz=150,slow=6.1,SNR=8.3
IMW Indian Meadow 71.75 331 P **P 10 43 59.8 +0.7**
IMW IAmb IAmb 10 43 59.9
comp=Z,4.5nm,1.4s
QSPA South Pole Qui 71.81 180 P **P 10 44 00.2 +1.1**
comp=Z,2.4nm,0.6s,baz=190,slow=0.8,SNR=21
QSPA South Pole Qui 71.81 180 P **P 10 44 01.0 +1.9**
YNE Yellowstone No 72.20 332 P **P 10 44 02.5 +0.7**
MFID Camas Ranch 73.75 328 P **P 10 44 11.0 +0.2**
MFID IAmb IAmb 10 44 13.1
comp=Z,5.3nm,1.1s
ORV Oroville 74.20 322 P **P 10 44 14.1 +0.7**
ORV IAmb IAmb 10 44 26.7
comp=Z,5.6nm,1.1s
TOA0 Torodi Ar. Sit 78.57 72 P **P 10 44 37.1 -1.6**
TOA0 IAmb IAmb 10 44 37.9
comp=Z,4.6nm,0.8s
TORD Torodi Ar. Bea 78.57 72 P **P 10 44 37.0 -1.7**
comp=Z,3.6nm,0.8s,baz=249,slow=5.2,SNR=15
ESDC Sonseca Array 85.29 46 P **P 10 45 13.3 -0.3**
comp=Z,1.9nm,0.9s,baz=253,slow=5.8,SNR=10.0
BOSA Boshof 87.00 119 LR LR 11 22 23.4
comp=Z,22nm,18.2s,baz=213,slow=34
YKA Yellowknife Ar 87.47 341 P **P 10 45 23.3 -0.4**
comp=Z,6.0nm,0.8s,baz=137,slow=5.3,SNR=86
MAW Mawson 87.98 164 P **P 10 45 28.0 +1.7**
comp=Z,3.8nm,0.9s,baz=288,slow=4.4,SNR=3.6
H11S2 WAKE ISLAND Hyl 25.09 280 T T 13 09 02.1
baz=100,slow=74,SNR=425
H11S1 WAKE ISLAND Hyl 25.10 280 T T 13 08 58.8
baz=100,slow=74,SNR=275
H11N3 WAKE ISLAND Hyl 25.10 282 T T 13 09 02.1
baz=99,slow=75,SNR=130
H11S3 WAKE ISLAND Hyl 25.11 280 T T 13 09 03.4
baz=100,slow=74,SNR=222
H11N2 WAKE ISLAND Hyl 25.12 282 T T 13 09 06.6
baz=99,slow=75,SNR=92
H11N1 WAKE ISLAND Hyl 25.12 282 T T 13 09 03.3
baz=99,slow=75,SNR=76
ASAR Alice Springs 131.47 212 PKP **PKPdf 10 51 50.5 +0.5**
comp=Z,0.6nm,0.7s,baz=135,slow=2.0,SNR=7.0
WRA Warramunga Arr 134.32 215 PKP **PKPdf 10 51 55.3 -0.1**
comp=Z,0.6nm,0.7s,baz=156,slow=1.7,SNR=6.9
ZALV Zalesovo Beam 140.02 22 PKP **PKPdf 10 52 05.2 +0.4**
comp=Z,2.2nm,0.8s,baz=300,slow=3.1,SNR=6.2
KDJ Kajisay 144.31 42 PKPbc 10 52 11.8 +0.4
MKAR Makanchi Array 144.34 31 PKP **PKPab 10 52 10.9 +0.1**
comp=Z,1.5nm,0.7s,baz=335,slow=4.0,SNR=12
KSH Kashi 144.80 46 PKP **PKiKP 10 52 16.9 -0.8**
KSH pPKP sPKPdf 10 52 23.1 +1.3
KSH sPKP 10 52 25.8
PRZ Przheval'sk 144.87 40 **PKPdf 10 52 15.0 +0.9**
USRK Ussuriysk Ar. 147.62 328 PKPbc **PKPbc 10 52 21.5 +0.4**
comp=Z,2.0nm,0.8s,baz=223,slow=1.5,SNR=5.0
MJAR Matsushiro Arr 148.28 311 PKPbc **PKPbc 10 52 23.2 +0.1**
comp=Z,3.3nm,0.9s,baz=99,slow=2.0,SNR=10
MAT Matsushiro 148.28 311 PKP **PKPbc 10 52 23.7 +0.6**
SONM Songino Array 150.55 3 PKPbc **PKPbc 10 52 28.3 -0.2**
comp=Z,2.3nm,0.8s,baz=329,slow=1.6,SNR=16
LZH Lanzhou 161.85 12 *e*PKP **PKPdf 10 52 38.2 -0.2**
LZH pPKP sPKPdf 10 52 47.0 +0.8
LZH sPKP 10 52 49.5
LZH PKP **PKPab 10 53 26.3 +2.5**
LZH LR LR
comp=N,52nm,18.1s
LZH LR LR
comp=E,58nm,18.0s
LZH LR LR
comp=Z,75nm,20.4s
CD2 Chengdu 166.76 18 PKP **PKPdf 10 52 41.5 -1.2**

*NEIC **10** 10:36:33.9±1.6,22°.5S±0°.2×179°.5W±0°.1,h573km±13km, mb4.3/25, Error ellipse: s-maj=22.4km s-min=14.7km az=189.0*
*IDC **10** 10:36:35.7±2.5,23°.03S×179°.77W,h560km±27km,mb3.6/7, mb1 3.7/9,mb1mx3.2/37,mbtmp4.6/9, Error ellipse: s-maj=47.1km s-min=15.2km az=33.0*
ISC 10 10:36:31.8±0.7,**22°.76S**±0°.08×**179°.34W**±0°.09,**h550**km, **n84**,σ1**943**/87,**mb4.3**/19,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.57**	**333**	P	**P**	**10 38 08.5**	**+1.8**
GLKZ	**Green Lake**	**6.60**	**169**	P	**P**	**10 38 14.3**	**-1.5**
GLKZ				S	**S**	**10 39 40.0**	**-1.1**
AFI	**Afiamalu**	**11.36**	**40**	P	**P**	**10 39 02.8**	**-1.1**
DZM	**Mont Dzumac**	**13.17**	**270**	P	**P**	**10 39 21.9**	**-0.7**
	0.2nm,0.3s,baz=111,slow=15,SNR=3.3						
KUZ	**Kuaotunu**	**14.58**	**196**	P	**P**	**10 39 37.3**	**+0.6**
WIAZ	**Waiheke Island**	**14.78**	**198**	P	**P**	**10 39 39.8**	**+1.0**
ETAZ	**East Tamaki Re**	**14.99**	**198**	P	**P**	**10 39 42.1**	**+1.1**
MKAZ	**Moumakai**	**15.06**	**197**	P	**P**	**10 39 42.4**	**+0.6**
WTAZ	**Waiatarua**	**15.07**	**199**	P	**P**	**10 39 42.7**	**+0.8**
KBAZ	**Karaka Road Bo**	**15.13**	**198**	P	**P**	**10 39 43.5**	**+1.1**
HAZ	**Te Kaha**	**15.15**	**189**	P	**P**	**10 39 42.0**	**-0.5**
AWAZ	**Awhitu Peninsu**	**15.17**	**199**	P	**P**	**10 39 43.5**	**+0.6**
RUGZ	**Raukumara Rang**	**15.37**	**189**	P	**P**	**10 39 44.1**	**-0.9**
URZ	**Urewera**	**15.75**	**190**	P	**P**	**10 39 46.7**	**-2.0**
	3.4nm,0.3s,baz=0.0,slow=8.1,SNR=23						
URZ	**Urewera**	**15.75**	**190**	P	**P**	**10 39 45.9**	**-2.8**
URZ	**Urewera**	**15.75**	**190**	P	**P**	**10 39 46.7**	**-2.0**
MWZ	**Matawai**	**15.76**	**189**	P	**P**	**10 39 46.9**	**-1.9**
TKGZ	**Te Karaka**	**15.81**	**188**	P	**P**	**10 39 48.8**	**-0.5**
CNGZ	**Carnagh Statio**	**15.81**	**187**	P	**P**	**10 39 48.9**	**-0.4**
RAGZ	**Rawiri**	**15.93**	**189**	P	**P**	**10 39 49.6**	**-1.0**
RIGZ	**Rimuhau**	**16.09**	**188**	P	**P**	**10 39 51.4**	**-0.7**
SNGZ	**Shannon Statio**	**16.22**	**189**	P	**P**	**10 39 51.9**	**-1.3**
RAHZ	**Arahi**	**16.39**	**190**	P	**P**	**10 39 53.7**	**-1.2**
NMHZ	**Naumai**	**16.61**	**191**	P	**P**	**10 39 55.4**	**-1.5**
BKZ	**Black Stump Fm**	**16.74**	**191**	P	**P**	**10 39 55.0**	**-3.0**
BKZ	**Black Stump Fm**	**16.74**	**191**	P	**P**	**10 39 55.6**	**-2.4**
BKZ				IAmb	IAmb	10 40 11.0	
	comp=Z,25nm,1.4s						
KWHZ	**Kaweka Forest**	**17.00**	**191**	P	**P**	**10 39 58.4**	**-2.0**
MOVZ	**Moawhango**	**17.11**	**193**	P	**P**	**10 39 59.1**	**-2.4**
BHHZ	**Black Hill Sta**	**17.13**	**192**	P	**P**	**10 39 58.9**	**-2.7**
KRHZ	**Kereru**	**17.22**	**191**	P	**P**	**10 40 00.7**	**-1.7**
KAHZ	**Kahuranaki**	**17.28**	**190**	P	**P**	**10 40 02.0**	**-1.0**
KHEZ	**Kahui Hut**	**17.43**	**197**	P	**P**	**10 40 06.7**	**+2.3**
LREZ	**Lake Rotokare**	**17.48**	**196**	P	**P**	**10 40 05.6**	**+0.9**
PNHZ	**Pukenui**	**17.52**	**191**	P	**P**	**10 40 03.2**	**-1.9**
PXZ	**Pawanui**	**17.52**	**190**	P	**P**	**10 40 03.5**	**-1.5**
TSZ	**Takapari Road**	**17.70**	**192**	P	**P**	**10 40 05.7**	**-1.0**
DVHZ	**Dannevirke**	**17.90**	**191**	P	**P**	**10 40 06.9**	**-1.6**
ANWZ	**Angora Road**	**18.00**	**190**	P	**P**	**10 40 08.7**	**-0.7**
PRWZ	**Pori Road**	**18.18**	**192**	P	**P**	**10 40 10.5**	**-0.6**
BFZ	**Birch Farm**	**18.25**	**191**	P	**P**	**10 40 10.2**	**-1.6**
MRZ	**Mangatainoka R**	**18.36**	**192**	P	**P**	**10 40 10.4**	**-2.3**
OGWZ	**Otaki Gorge**	**18.59**	**193**	P	**P**	**10 40 13.5**	**-1.3**
HOWZ	**Holdsworth Sta**	**18.60**	**192**	P	**P**	**10 40 13.3**	**-1.6**
KIW	**Kapiti Island**	**18.69**	**194**	P	**P**	**10 40 14.8**	**-1.0**
TMWZ	**Te Maipa**	**18.73**	**191**	P	**P**	**10 40 14.8**	**-1.4**
MTW	**Mount Morrison**	**18.85**	**192**	P	**P**	**10 40 15.9**	**-1.3**
DUWZ	**D'Urville Isla**	**18.87**	**196**	P	**P**	**10 40 16.7**	**-0.7**
CAW	**Cannon Point**	**18.89**	**193**	P	**P**	**10 40 16.8**	**-0.8**
PAWZ	**Paruwai Farm**	**19.08**	**192**	P	**P**	**10 40 18.4**	**-0.9**
TCW	**Tory Channel**	**19.17**	**195**	P	**P**	**10 40 19.9**	**-0.2**
PLWZ	**Palliser**	**19.30**	**192**	P	**P**	**10 40 20.2**	**-1.1**
TUWZ	**Tuamarina**	**19.45**	**195**	P	**P**	**10 40 22.5**	**-0.2**
LTZ	**Lake Taylor**	**21.15**	**197**	P	**P**	**10 40 36.6**	**-1.5**
KNTN	**Kanton**	**21.20**	**21**	P	**P**	**10 40 38.6**	**-0.2**
MQZ	**McQueen's Vall**	**21.92**	**196**	P	**P**	**10 40 45.4**	**+0.5**
RPZ	**Rata Peaks**	**22.36**	**199**	P	**P**	**10 40 48.7**	**-0.2**
	comp=Z,13nm,0.4s,baz=3.8,slow=3.0,SNR=8.8						
ARMA	**Armidale**	**27.00**	**247**	P	**P**	**10 41 31.9**	**+1.5**
ARMA				IAmb	IAmb	10 41 40.7	
	comp=Z,15nm,1.4s						
EIDS	**Eidsvold**	**27.11**	**259**	P	**P**	**10 41 31.9**	**+0.8**
EIDS				IAmb	IAmb	10 41 41.5	
	comp=Z,14nm,1.4s						
CAN	**Canberra**	**30.24**	**238**	P	**P**	**10 41 59.5**	**+1.2**
CAN				IAmb	IAmb	10 42 09.8	
	comp=Z,13nm,1.3s						
CTA	**Charters Tower**	**32.10**	**268**	P	**P**	**10 42 14.8**	**+0.5**
	comp=Z,18nm,0.6s,baz=98,slow=10.0,SNR=38						
CTAO	**Charters Tower**	**32.10**	**268**	P	**P**	**10 42 14.9**	**+0.5**
TOO	**Toolangi**	**33.58**	**236**	P	**P**	**10 42 27.7**	**+1.0**
TOO				IAmb	IAmb	10 42 27.9	
	comp=Z,5.6nm,0.7s						
TAU	**Tasmania Unive**	**34.16**	**226**	P	**P**	**10 42 32.3**	**+0.9**
PMG	**Port Moresby**	**34.72**	**287**	P	**P**	**10 42 37.3**	**+0.8**
STKA	**Stephens Creek**	**35.72**	**247**	P	**P**	**10 42 45.0**	**+0.4**
	comp=Z,1.4nm,0.4s,baz=90,slow=10,SNR=3.6						
STKA	**Stephens Creek**	**35.72**	**247**	P	**P**	**10 42 45.3**	**+0.7**
COEN	**Coen**	**36.55**	**277**	P	**P**	**10 42 52.9**	**+1.3**
BBOO	**Buckleboo**	**40.45**	**246**	P	**P**	**10 43 22.9**	**-0.2**
BBOO				IAmb	IAmb	10 43 23.4	
	comp=Z,9.3nm,1.0s						
AS31	**Alice Springs**	**42.83**	**259**	P	**P**	**10 43 42.1**	**+0.1**
ASAR	**Alice Springs**	**42.83**	**259**	P	**P**	**10 43 41.9**	**-0.1**
	comp=Z,3.5nm,0.5s,baz=96,slow=6.9,SNR=66						
ASAR				S	**S**	**10 49 24.6**	**-2.3**
	comp=Z,0.9nm,0.7s,baz=100,slow=16,SNR=8.4						
WR0	**Warramunga Arr**	**42.91**	**265**	P	**P**	**10 43 41.9**	**-0.7**
WB0	**Warramunga Arr**	**43.09**	**265**	P	**P**	**10 43 43.3**	**-0.7**
WB0				IAmb	IAmb	10 43 44.0	
	comp=Z,7.2nm,0.7s						
WB2	**Warramunga Arr**	**43.09**	**265**	P	**P**	**10 43 43.4**	**-0.6**
WB2				IAmb	IAmb	10 43 43.8	
	comp=Z,6.1nm,0.7s						
WRAB	**Tennant Creek**	**43.09**	**265**	P	**P**	**10 43 42.6**	**-1.5**
WRAB				IAmb	IAmb	10 43 44.1	
	comp=Z,6.0nm,0.8s						
WRA	**Warramunga Arr**	**43.10**	**265**	P	**P**	**10 43 43.4**	**-0.7**
	comp=Z,4.1nm,0.5s,baz=96,slow=8.5,SNR=163						
WRA				S	**S**	**10 49 26.4**	**-4.5**
	comp=Z,1.9nm,1.1s,baz=100,slow=14,SNR=6.2						
FORT	**Forrest**	**47.28**	**249**	P	**P**	**10 44 15.0**	**-0.9**
FORT				IAmb	IAmb	10 44 16.2	
	comp=Z,8.7nm,0.7s						
MTN	**Manton Dam**	**47.99**	**273**	P	**P**	**10 44 20.9**	**-0.5**
MTN				IAmb	IAmb	10 44 21.1	
	comp=Z,5.7nm,0.7s						
KNRA	**Kununurra**	**49.31**	**269**	P	**P**	**10 44 31.2**	**0.0**
KNRA				IAmb	IAmb	10 44 31.4	
	comp=Z,7.6nm,0.6s						
FAKI	**Fak Fak**	**50.85**	**286**	P	**P**	**10 44 41.7**	**-0.8**
FAKI				IAmb	IAmb	10 44 44.8	
	comp=Z,13nm,1.3s						
FITZ	**Fitzroy Crossi**	**51.53**	**264**	P	**P**	**10 44 47.8**	**+0.5**
VNDA	**Vanda**	**55.56**	**185**	P	**P**	**10 45 17.0**	**+2.1**
	comp=Z,1.2nm,0.7s,baz=346,slow=8.0,SNR=1.7						
VNDA	**Vanda**	**55.56**	**185**	P	**P**	**10 45 17.5**	**+2.6**
QSPA	**South Pole Qui**	**67.32**	**180**	P	**P**	**10 46 33.3**	**+1.3**
	comp=Z,3.7nm,0.6s,baz=77,slow=1.5,SNR=20						
QSPA	**South Pole Qui**	**67.32**	**180**	P	**P**	**10 46 33.5**	**+1.5**

*IDC **10** 10:40:24.2±2.0,59°.81N×152°.15W,h40km±29km,mb3.1/2, mb1 3.6/7,mb1mx3.2/44,mbtmp3.4/7,ML3.5/5, Error ellipse: s-maj=52.4km s-min=8.6km az=106.0*
*NEIC **10** 10:40:25.4±1.3,59°.76N±0°.03×152°.16W±0°.05,h68km±6km, Error ellipse: s-maj=4.3km s-min=3.9km az=170.0*
*AEIC **10** 10:40:26±1.2,59°.76N±0°.01×152°.19W±0°.05,h70km±5km, ML3.2, Error ellipse: s-maj=3.9km s-min=2.0km az=91.0*
ISC 10 10:40:25.6±0.9,**59°.76N**±0°.03×**152°.12W**±0°.03,**h69**km±7km, **n130**,σ0**96**/154,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOM	**Homer**	**0.26**	**113**	Pn	**Pn**	**10 40 36.9**	**+0.4**
HOM	**Homer**	**0.26**	**113**		**Sn**	**10 40 45.5**	**+1.1**
CNPM	**China Poot**	**0.51**	**117**		**Pn**	**10 40 38.8**	**+0.4**
CNPM					**Sn**	**10 40 48.5**	**+0.7**
ILS	**Iliamna Low So**	**0.52**	**293**		**Pn**	**10 40 37.8**	**-0.8**
IVE	**Iliamna Volcan**	**0.52**	**300**		**Pn**	**10 40 37.8**	**-0.9**
ILW	**Iliamna West**	**0.59**	**301**		**Pn**	**10 40 38.7**	**-0.8**
BRLK	**Bradley Lake**	**0.62**	**89**		**Pn**	**10 40 39.6**	**-0.1**
BRLK					**Sn**	**10 40 50.4**	**+0.4**
BRSE	**Bradley Lake S**	**0.70**	**91**		**Pn**	**10 40 40.2**	**-0.2**
BRSE					**Sn**	**10 40 52.2**	**+0.8**
RED	**Redoubt Volcan**	**0.74**	**334**		**Pn**	**10 40 40.2**	**-0.7**
RED					**Sn**	**10 40 52.1**	**-0.2**
AU22	**Augustine Moun**	**0.74**	**239**		**Pn**	**10 40 40.5**	**-0.4**
AU22					**Sn**	**10 40 52.5**	**+0.3**
AUL	**Augustine Lava**	**0.77**	**241**		**Pn**	**10 40 41.0**	**-0.3**
AUL					**Sn**	**10 40 53.1**	**+0.3**
RSO	**Redoubt South**	**0.77**	**336**		**Pn**	**10 40 41.1**	**-0.4**
AUP	**Augustine Pinn**	**0.78**	**239**		**Pn**	**10 40 41.1**	**-0.3**
AUH	**Augustine H**	**0.78**	**240**		**Pn**	**10 40 41.2**	**-0.3**
AUW	**Augustine West**	**0.79**	**241**		**Pn**	**10 40 41.2**	**-0.4**
RDWB	**Redoubt West**	**0.81**	**334**		**Pn**	**10 40 41.1**	**-0.8**
RDWB					**Sn**	**10 40 53.7**	**-0.3**
DFR	**Drift River**	**0.88**	**341**		**Pn**	**10 40 41.9**	**-0.8**
DFR					**Sn**	**10 40 54.8**	**-0.5**
RDJH	**Redoubt Jeurge**	**0.90**	**338**		**Pn**	**10 40 42.4**	**-0.6**
RDJH					**Sn**	**10 40 56.0**	**+0.2**
CAPN	**Captain Cook N**	**1.12**	**25**		**Pn**	**10 40 46.8**	**+1.3**
SLKM	**Skilak Lake**	**1.21**	**51**		**Pn**	**10 40 46.2**	**-0.6**
SLKM					**Sn**	**10 41 03.8**	**+1.2**
SEW	**Seward**	**1.39**	**74**		**Pn**	**10 40 50.0**	**+1.0**
CKL	**Chakachamna La**	**1.44**	**356**		**Pn**	**10 40 49.9**	**0.0**
SPCR	**Spurr Chakacha**	**1.44**	**358**		**Pn**	**10 40 49.7**	**-0.2**
SPCR					**Sn**	**10 41 08.3**	**+0.2**
SPBG	**Spurr Blockage**	**1.51**	**355**		**Pn**	**10 40 50.6**	**-0.1**
SPBG					**Sn**	**10 41 10.6**	**+1.0**
SPWE	**Spurr West**	**1.53**	**352**		**Pn**	**10 40 51.0**	**-0.1**
STLK	**Strandline Lak**	**1.75**	**4**		**Pn**	**10 40 54.1**	**+0.2**
RC01	**Rabbit Creek A**	**1.78**	**41**		**Pn**	**10 40 54.8**	**+0.5**
KAHG	**Katmai Hook Gl**	**1.79**	**226**		**Pn**	**10 40 53.8**	**-0.6**
KAHC	**Katmai Hardscr**	**1.86**	**234**		**Pn**	**10 40 54.3**	**-1.1**
KAWH	**Katmai**	**1.96**	**226**		**Pn**	**10 40 55.9**	**-0.7**
KDAK	**Kodiak Island**	**2.00**	**187**	P	**Pn**	**10 40 56.2**	**-0.9**
	5.6nm,0.3s,baz=9.0,slow=14,SNR=241						
KDAK					S	**Sn**	**10 41 20.6**	**-0.6**
	25nm,0.3s,baz=307,slow=20,SNR=19						
KDAK	**Kodiak Island**	**2.00**	**187**		**Pn**	**10 40 56.6**	**-0.5**
KDAK	**Kodiak Island**	**2.00**	**187**		**Sn**	**10 41 20.8**	**-0.4**
KCG	**Knife Ck. Glac**	**2.13**	**228**		**Pn**	**10 40 58.5**	**-0.4**
SVW2	**Sparrevohn**	**2.18**	**309**		**Pn**	**10 40 58.7**	**-0.9**
PWL	**Port Wells**	**2.18**	**58**		**Pn**	**10 40 59.1**	**-0.6**
KABU	**Katmai Buttres**	**2.22**	**229**		**Pn**	**10 40 59.0**	**-0.6**
PMR	**Palmer**	**2.35**	**37**		**Pn**	**10 41 01.6**	**-0.3**
PMR					**Sn**	**10 41 29.9**	**+0.2**
CAHL	**Cahill**	**2.38**	**225**		**Pn**	**10 41 02.2**	**-0.2**
KNK	**Knik Glacier**	**2.45**	**46**		**Pn**	**10 41 03.2**	**-0.1**
KJL	**Kejulik**	**2.48**	**228**		**Pn**	**10 41 03.8**	**0.0**
GHO	**Glory Hole Cre**	**2.55**	**36**		**Pn**	**10 41 05.6**	**+0.8**
OHAK	**Old Harbor**	**2.62**	**194**		**Pn**	**10 41 04.1**	**-1.5**
GLI	**Glacier Island**	**2.74**	**64**		**Pn**	**10 41 05.4**	**-1.8**
SML	**Sawmill**	**2.77**	**41**		**Pn**	**10 41 07.2**	**-0.4**
HIN	**Hinchinbrook I**	**2.89**	**75**		**Pn**	**10 41 07.8**	**-1.4**
MID	**Middleton Isla**	**2.96**	**94**		**Pn**	**10 41 10.0**	**-0.2**
FID	**Port Fidalgo**	**2.98**	**68**		**Pn**	**10 41 08.4**	**-2.1**
PLK3	**Peulik 3**	**3.00**	**228**		**Pn**	**10 41 10.9**	**+0.2**
JPK	**Jack Peak**	**3.03**	**62**		**Pn**	**10 41 10.0**	**-1.2**
PLK1	**Peulik 1**	**3.05**	**232**		**Pn**	**10 41 11.3**	**-0.1**
SCM	**Sheep Creek Mo**	**3.13**	**46**		**Pn**	**10 41 12.7**	**+0.1**
PPLA	**Purkeypile**	**3.15**	**359**		**Pn**	**10 41 13.5**	**+0.6**
EYAK	**Cordova Ski Ar**	**3.28**	**73**		**Pn**	**10 41 12.9**	**-1.6**
WAT2	**Susitna Watana**	**3.63**	**26**		**Pn**	**10 41 19.5**	**0.0**
TT01	**Tatalina**	**3.67**	**331**		**Pn**	**10 41 19.1**	**-0.8**
TTA	**Tatalina**	**3.69**	**331**		**Pn**	**10 41 19.6**	**-0.7**
RAGM	**Ragged Mountai**	**3.78**	**77**	Pn	**Pn**	**10 41 20.3**	**-1.1**
GOAT	**Goat Mountain**	**3.78**	**74**		**Pn**	**10 41 19.9**	**-1.5**
TRF	**Thorofare Moun**	**3.80**	**12**		**Pn**	**10 41 21.6**	**-0.2**
PS12	**TAPS Pump St12**	**3.84**	**60**		**Pn**	**10 41 21.5**	**-0.8**
KTH	**Kantishna Hill**	**3.85**	**8**		**Pn**	**10 41 23.0**	**+0.6**
RND	**Reindeer**	**3.98**	**22**		**Pn**	**10 41 24.3**	**+0.2**
HMT	**Hamilton**	**3.98**	**78**	Pn	**Pn**	**10 41 24.3**	**+0.1**
DHY	**Denali Highway**	**4.03**	**32**		**Pn**	**10 41 25.3**	**+0.4**
CHUM	**Lake Minchumin**	**4.14**	**359**		**Pn**	**10 41 26.2**	**0.0**
SUCK	**Suckling Hills**	**4.21**	**82**		**Pn**	**10 41 27.4**	**+0.2**
MCK	**McKinley**	**4.26**	**19**		**Pn**	**10 41 28.9**	**+0.9**
BERG	**Berg Lake**	**4.26**	**78**		**Pn**	**10 41 27.7**	**-0.3**
BPAW	**Bear Paw Mtn.**	**4.39**	**7**		**Pn**	**10 41 29.8**	**+0.1**
**GLB

0.8nm,0.6s,baz=315,slow=14,SNR=6.1
TXAR Lajitas Array 44.48 111 P P 10 48 31.0 +1.1
0.1nm,0.6s,baz=304,slow=5.3,SNR=2.1

*JMA **10** 11:03:45.2±0.2,37.18N×135.07E,h381km,M3.3*
*IDC **10** 11:03:46.1±1.1,37.09N×135.14E,h369km±16km,mb2.8/2, mb1 2.9/8,mb1mx2.7/38,mbtmp3.7/8,Error ellipse: s-maj=23.8km s-min=22.6km az=99.0*
ISC 10 11:03:45.7±1.0,37.12N±0.09×135.24E±0.09,h372km,n18, σ1♦44/20,Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JWT	**Wachi**	**1.83**	**176**	P			**Pn**	**11 04 39.3**	**+1.2**
JNG	**Nsakai**	**2.41**	**106**	P			**Pn**	**11 04 43.8**	**+1.8**
MAT	**Matsushiro**	**2.45**	**103**	P			**Pn**	**11 04 43.8**	**+1.5**
MJAR	**Matsushiro Arr**	**2.45**	**103**	P			**Pn**	**11 04 44.4**	**+2.1**
	0.1nm,0.3s,baz=280,slow=9.3,SNR=8.3								
JSD	**Sado**	**2.57**	**68**	P			**Pn**	**11 04 44.9**	**+1.8**
JIE	**Ise**	**2.97**	**156**	P			**Pn**	**11 04 47.9**	**+1.4**
JHK	**Hiroka**	**3.02**	**86**	P			**Pn**	**11 04 48.3**	**+1.4**
JMM	**Marumori**	**4.48**	**79**	P			**Pn**	**11 05 02.7**	**+1.9**
JFK	**Kawauchi**	**4.51**	**85**	P			**Pn**	**11 05 02.4**	**+1.3**
JFK					eS		**S**	**11 06 00.7**	**-1.6**
JTO	**Tosashimizu**	**4.69**	**206**	P			**Pn**	**11 05 03.1**	**0.0**
JMK	**Ichinoseki**	**5.07**	**67**	P			**Pn**	**11 05 08.5**	**+1.6**
JMK					eS		**S**	**11 06 11.1**	**-1.8**
JNU	**Nakatsue**	**5.35**	**223**	P			**Pn**	**11 05 09.6**	**-0.6**
	0.6nm,0.3s,baz=360,slow=6.4,SNR=5.5								
KSRS	**Korea Array**	**5.84**	**276**	P			**Pn**	**11 05 14.8**	**-0.6**
	0.3nm,0.3s,baz=91,slow=12,SNR=11								
USRK	**Ussuriysk Ar.**	**7.49**	**342**	P			**P**	**11 05 34.8**	**-0.3**
	baz=167,slow=11,SNR=6.8								
ASAJ	**Asahikawa**	**8.96**	**36**	P			**Pn**	**11 05 51.5**	**+0.4**
	2.0nm,0.3s,baz=221,slow=9.9,SNR=24								
JCJ	**Chichijima**	**11.59**	**148**	P			**P**	**11 06 20.6**	**-1.3**
	0.8nm,0.3s,baz=4.1,slow=21,SNR=7.1								
WRA	**Warramunga Arr**	**56.76**	**181**	P			**P**	**11 12 52.7**	**+0.4**
	0.3nm,0.4s,baz=359,slow=7.5,SNR=6.3								
ASAR	**Alice Springs**	**60.47**	**181**	P			**P**	**11 13 18.4**	**+0.9**
	0.1nm,0.3s,baz=358,slow=5.3,SNR=4.8								

*TAP **10** 11:04:23.8,24.88N×122.84E,h17km±1km,ML2.9,D*
*JMA **10** 11:04:24.5±0.2,24.85N×122.84E,h25km±3km,M2.1*
ISC 10 11:04:21.8±1.4,24.90N±0.04×122.86E±0.02,h2km±11km, n52,σ0♦79/68,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.45**	**170**	P			**Pb**	**11 04 32.9**	**+0.4**
JYNG					eS		**Sb**	**11 04 39.4**	**-0.3**
YOJ	**Yonaguni jima**	**0.46**	**162**	*i* P			**Pb**	**11 04 33.1**	**+0.5**
	baz=160								
YOJ					eS		**Sb**	**11 04 38.8**	**-1.0**
	baz=160								
YOJ	**Yonaguni jima**	**0.46**	**162**	P			**Pb**	**11 04 33.1**	**+0.5**
YOJ					eS		**Sb**	**11 04 38.5**	**-1.3**
EOS1	**EOS1**	**0.75**	**242**	P			**Pb**	**11 04 37.9**	**+0.4**
	baz=243								
EOS1					S		**Sb**	**11 04 47.7**	**-0.4**
	baz=243								
TWB1	**Santiao Chiao**	**0.80**	**278**	P			**Pb**	**11 04 38.2**	**-0.1**
	baz=279								
TWB1					eS		**Sb**	**11 04 48.6**	**-1.0**
	baz=279								
TIPB	**Shuangxi**	**0.94**	**275**	*i* P			**Pb**	**11 04 40.8**	**0.0**
	baz=276								
TWC	**Suao**	**0.96**	**253**	*e*P			**Pg**	**11 04 40.5**	**+0.3**
	baz=253								
IRIF	**Iriomote-Funau**	**0.97**	**125**	P			**Pn**	**11 04 41.8**	**-0.7**
IRIF					eS		**Sb**	**11 04 53.8**	**-0.8**
NWF	**Wu-fen Shan**	**0.99**	**280**	*e*P			**Pb**	**11 04 41.8**	**0.0**
	baz=281								
WFSB	**Wu-fen Shan**	**0.99**	**280**	*e*P			**Pb**	**11 04 41.9**	**+0.2**
	baz=281								
WFSB					eS		**Sg**	**11 04 54.4**	**+0.6**
	baz=281								
PCYT	**Pengchaiyu**	**1.02**	**316**	*e*P			**Pn**	**11 04 42.9**	**-0.2**
	baz=316								
TWE	**Neicheng**	**1.10**	**261**	*e*P			**Pg**	**11 04 43.0**	**+0.2**
	baz=262								
ENA	**Nanau**	**1.12**	**245**	*e*P			**Pg**	**11 04 43.3**	**+0.1**
	baz=257								
ENA					eS		**Sg**	**11 04 58.4**	**+0.6**
	baz=257								
YM01	**YM01**	**1.19**	**282**	*e*P			**Pb**	**11 04 45.1**	**-0.1**
	baz=283								
ENTT	**Nioudou**	**1.20**	**258**	*e*P			**Pn**	**11 04 45.9**	**+0.2**
	baz=259								
HATJ	**Hateruma jima**	**1.20**	**134**	P			**Pn**	**11 04 45.9**	**+0.3**
HATJ					eS		**Sg**	**11 05 00.5**	**0.0**
NWLT	**Wulai**	**1.24**	**265**	*e*P			**Pb**	**11 04 45.7**	**-0.2**
	baz=266								
JKRS	**Kuro-shima**	**1.24**	**122**	P			**Pn**	**11 04 46.2**	**+0.1**
NDT	**Datong Townshi**	**1.26**	**257**	*e*P			**Pn**	**11 04 46.9**	**+0.4**
	baz=258								
JIJ	**Ishigaki jima**	**1.28**	**114**	P			**Pn**	**11 04 46.8**	**0.0**
JIJ					eS		**Sb**	**11 05 03.8**	**+0.1**
JISG	**Ishigakijimahi**	**1.36**	**103**	P			**Pb**	**11 04 48.6**	**+0.7**
JISG					eS		**Sn**	**11 05 06.1**	**-0.2**
NACB	**Ninganchiao**	**1.36**	**238**	P			**Pb**	**11 04 48.0**	**0.0**
	baz=239								
NACB					eS		**Sg**	**11 05 04.8**	**-0.7**
	baz=239								
YHNB	**Yeheng**	**1.37**	**261**	P			**Pg**	**11 04 47.6**	**-0.4**
	baz=262								
NSK	**Sanguang**	**1.38**	**261**	*e*P			**Pb**	**11 04 49.0**	**+0.6**
	baz=262								
TWD	**Chiawan**	**1.41**	**235**	*e*P			**Pb**	**11 04 49.3**	**+0.5**
	baz=245								
NNSB	**Datong**	**1.42**	**251**	*e*P			**Pn**	**11 04 48.7**	**-0.1**
	baz=252								
NNSH	**Datong**	**1.42**	**251**	P			**Pg**	**11 04 49.1**	**0.0**
	baz=252								
NNSH					eS		**Sg**	**11 05 06.3**	**-1.2**
	baz=252								
NNS	**Nan Shan**	**1.43**	**252**	*e*P			**Pb**	**11 04 49.6**	**+0.4**
	baz=253								
ETLH	**Xiulin Townshi**	**1.43**	**241**	P			**Pb**	**11 04 49.6**	**+0.4**
	baz=252								
ETLH					eS		**Sn**	**11 05 08.7**	**+0.4**
	baz=252								
WHF	**Hehuan Shan**	**1.63**	**243**	P			**Pb**	**11 04 52.7**	**-0.2**
	baz=253								
WHF					eS		**Sn**	**11 05 13.2**	**-0.5**
	baz=253								
ESL	**Shilin**	**1.69**	**231**	*e*P			**Pn**	**11 04 51.6**	**-0.8**
	baz=232								
LIOB	**Emei**	**1.69**	**262**	*e*P			**Pb**	**11 04 53.7**	**0.0**
	baz=263								
CHGB	**Renai**	**1.75**	**242**	*e*P			**Pb**	**11 04 54.7**	**0.0**
	baz=250								
CHGB					eS		**Sn**	**11 05 17.0**	**+0.7**
	baz=250								
OWD	**Renai**	**1.80**	**239**	*e*P			**Pn**	**11 04 54.6**	**+0.6**
	baz=226								
WHP	**Taichung City**	**1.85**	**251**	*e*P			**Pb**	**11 04 56.4**	**+0.1**
	baz=239								
HGSD	**Ruisui**	**1.92**	**223**	*e*P			**Pn**	**11 04 54.4**	**-1.1**
	baz=225								
VWDT	**VWDT**	**1.94**	**234**	*e*P			**Pn**	**11 04 56.4**	**+0.7**
	baz=236								
EHY	**Hungye**	**1.97**	**226**	*e*P			**Pn**	**11 04 55.7**	**-0.5**
	baz=228								
SMLT	**Sun Moon Lake**	**2.05**	**241**	*e*P			**Pb**	**11 04 59.5**	**-0.4**
	baz=229								
SSLB	**Suanglung**	**2.06**	**238**	*e*P			**Pb**	**11 04 59.4**	**-0.5**
	baz=225								
YULB	**Yu-li**	**2.07**	**224**	*e*P			**Pn**	**11 04 57.3**	**-0.3**
	baz=213								
TYC	**Yuchr**	**2.08**	**242**	*e*P			**Pb**	**11 05 00.7**	**+0.5**
	baz=229								
TWF1	**Yuli**	**2.10**	**223**	*e*P			**Pn**	**11 04 57.6**	**-0.3**
	baz=212								
FULB	**Fuli**	**2.21**	**221**	*e*P			**Pn**	**11 04 59.9**	**+0.3**
	baz=223								
ALS	**Alishan**	**2.33**	**234**	*e*P			**Pn**	**11 05 02.9**	**+1.5**
	baz=223								
CHN5	**Tsauling**	**2.37**	**237**	*e*P			**Pb**	**11 05 04.2**	**-1.2**
	baz=239								
TWH	**Lutao**	**2.52**	**210**	*e*P			**Pn**	**11 05 03.0**	**-0.7**
	baz=225								
CHN4	**Tsaushan**	**2.58**	**234**	*e*P			**Pn**	**11 05 06.8**	**+2.2**
	baz=236								
TPUB	**Ta-pu**	**2.58**	**232**	*e*P			**Pn**	**11 05 06.8**	**+2.1**
	baz=235								
WTP	**Ta-pu**	**2.63**	**232**	*e*P			**Pn**	**11 05 07.3**	**+2.0**
	baz=234								
SLGT	**Liugui**	**2.77**	**227**	*e*P			**Pn**	**11 05 09.4**	**+2.2**
	baz=230								
MASBT	**Mashibuluo**	**3.06**	**222**	*e*P			**Pn**	**11 05 12.4**	**+1.3**
	baz=215								

IDC 10 11:39:44.8±5.2,18.56S×174.63W,h0km,mb4.3/5, mb1 4.4/5,mb1mx3.8/40,mbtmp4.3/5,Error ellipse: s-maj=147.2km s-min=100.9km az=165.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.89**	**261**	P			P	11 46 56.6	+1.2
	2.8nm,0.4s,baz=76,slow=8.5,SNR=6.4								
STKA	**Stephens Creek**	**41.50**	**243**	P			P	11 47 34.1	+0.3
	1.8nm,0.5s,baz=90,slow=9.1,SNR=4.6								
WRA	**Warramunga Arr**	**48.05**	**260**	P			P	11 48 25.7	-0.6
	1.3nm,0.4s,baz=98,slow=7.7,SNR=35								
ASAR	**Alice Springs**	**48.08**	**255**	P			P	11 48 25.9	-0.6
	3.0nm,0.5s,baz=89,slow=8.1,SNR=46								
ASAR						PcP	PcP	11 49 54.5	0.0
	0.2nm,0.4s,baz=102,slow=3.9,SNR=1.7								
FITZ	**Fitzroy Crossi**	**56.46**	**260**	P			P	11 49 28.4	-0.5
	1.2nm,0.4s,baz=72,slow=6.2,SNR=14								

*IDC **10** 11:41:24.5±1.4,17.80N×146.02E,h0km,mb3.9/6, mb1 4.2/6,mb1mx3.6/51,mbtmp3.9/6,Error ellipse: s-maj=121.5km s-min=29.8km az=110.0*
*NEIC **10** 11:41:37.9±0.7,17.45N±0.09×145.2E±0.3,h135km±8km, mb4.1/11,Error ellipse: s-maj=36.5km s-min=9.3km az=106.0*
ISC 10 11:41:39.4±0.8,17.55N±0.09×145.0E±0.2,h150km,n18, σ1♦72/16,mb3.9/11,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.94**	**181**	Pn			**Pn**	**11 42 35.7**	**-3.2**
GUMO				Sn			**Sn**	**11 43 29.6**	**+4.4**
JOW	**Kunigami**	**17.99**	**304**	P			**Pn**	**11 45 40.5**	**+0.3**
WB0	**Warramunga Arr**	**38.52**	**196**	P			**P**	**11 48 46.8**	**-0.6**
WB0				IAmb			IAmb	11 49 00.2	
	comp=Z,2.1nm,1.1s								
WRA	**Warramunga Arr**	**38.70**	**196**	P			P	11 48 54.7	+5.8
	comp=Z,0.7nm,1.0s,baz=25,slow=9.8,SNR=2.2								
KTH	**Kantishna Hill**	**62.96**	**27**	P			**P**	**11 51 49.8**	**0.0**
BPAW	**Bear Paw Mtn.**	**63.08**	**26**	P			**P**	**11 51 50.9**	**+0.3**
BPAW				IAmb			IAmb	11 51 51.4	
	comp=Z,2.7nm,0.8s								
MLY	**Manley**	**63.44**	**25**	P			**P**	**11 51 53.3**	**+0.4**
MLY				IAmb			IAmb	11 51 53.7	
	comp=Z,1.6nm,0.6s								
WRH	**Wood River Hil**	**64.40**	**26**	P			**P**	**11 51 58.7**	**-0.5**
WRH				IAmb			IAmb	11 51 59.5	
	comp=Z,2.3nm,1.1s								
TOLK	**Toolik Lake Re**	**64.91**	**22**	P			**P**	**11 52 03.8**	**+1.3**
TOLK				IAmb			IAmb	11 52 04.3	
	comp=Z,1.9nm,0.6s								
ILAR	**Eielson Array**	**64.97**	**26**	P			**P**	**11 52 00.9**	**-2.0**
	comp=Z,0.9nm,0.8s,baz=247,slow=5.7,SNR=14								
EGAK	**Eagle**	**67.39**	**26**	P			**P**	**11 52 19.2**	**+0.9**
DAWY	**Dawson**	**68.08**	**27**	P			**P**	**11 52 23.0**	**+0.4**
INK	**Inuvik**	**70.69**	**23**	P			**P**	**11 52 38.5**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=250,slow=4.6,SNR=7.8								
INK	**Inuvik**	**70.69**	**23**	IAmb			IAmb	11 52 39.7	
	comp=Z,2.4nm,0.9s								
YKA	**Yellowknife Ar**	**79.32**	**28**	P			**P**	**11 53 28.9**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=284,slow=5.0,SNR=13								
RES	**Resolute Bay**	**80.69**	**13**	P			**P**	**11 53 35.7**	**+0.4**
	comp=Z,2.4nm,1.1s,baz=309,slow=5.5,SNR=6.2								
RES	**Resolute Bay**	**80.69**	**13**	IAmb			IAmb	11 53 53.1	
	comp=Z,3.1nm,1.1s								
NVAR	**Mina Array Bea**	**84.39**	**52**	P			**P**	**11 53 55.1**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=270,slow=5.1,SNR=8.6								

*SOME **10** 11:49:37.9,40.77N×73.25E,h5km*
*KRNET **10** 11:49:38.2±0.1,40.72N×73.31E,h15km,mb2.3*
*NNC **10** 11:49:40.9±2.0,40.83N×73.20E,h0km,mb3.0,mpv2.7, Error ellipse: s-maj=16.2km s-min=8.0km az=168.0*
ISC 10 11:49:36.4±1.5,40.67N±0.05×73.34E±0.03,h6km±17km, n23,σ1♦24/39,19C-6D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.71**	**337**	↑*i* P			**Pb**	**11 49 50.9**	**-0.3**
	baz=38								
ARSB				↑*i* S			**Sb**	**11 50 00.2**	**-1.1**
	baz=38								
AML	**Almayashu**	**1.48**	**10**	↑*i* P			**Pg**	**11 50 05.6**	**+0.7**
	baz=11								
AML				↑*i* S			**Sg**	**11 50 25.3**	**+1.2**
	baz=11								
UCH	**Uchtor**	**1.79**	**29**	↑*i* P			**Pg**	**11 50 11.0**	**+0.3**
	baz=31								
UCH				↑*i* S			**Sg**	**11 50 35.1**	**+1.2**
	baz=31								
KZA	**Kyzart**	**2.01**	**45**	↑*i* P			**Pb**	**11 50 15.2**	**+1.6**
	baz=46								
KZA				↑*i* S			**Sg**	**11 50 42.3**	**+1.3**
	baz=46								
EKS2	**Erkin-Say**	**2.01**	**9**	↑*i* P			**Pg**	**11 50 14.9**	**-0.1**
	baz=10.0								
EKS2				↑*i* S			**Sg**	**11 50 41.2**	**0.0**
	baz=10.0								
BTK	**Batken**	**2.02**	**253**	↓*i* P			**Pb**	**11 50 15.4**	**+1.8**
	baz=52								
BTK				↓*i* S			**Sg**	**11 50 43.0**	**+1.6**
	baz=52								
MRKS	**Merke**	**2.07**	**358**	*e*P			**Pg**	**11 50 15.8**	**-0.4**
	4.0nm,0.3s								
MRKS				*e*S			**Sg**	**11 50 42.9**	**-0.2**
	16nm,0.2s								
MRKS	**Merke**	**2.07**	**358**	Pg			**Pg**	**11 50 15.8**	**-0.4**
	4.0nm,0.3s								
MRKS				Lg			Lg	11 50 42.9	
	16nm,0.2s								
AAK	**Ala-Archa**	**2.15**	**23**	↑*i* P			**Pb**	**11 50 16.6**	**+0.8**
	baz=24								
AAK				↑*i* S			**Sg**	**11 50 44.7**	**-0.7**
	baz=24								
AAK	**Ala-Archa**	**2.15**	**23**	↑P			**Pg**	**11 50 18.0**	**+0.5**
	0.7nm,0.3s								
AAK				↑S			**Sg**	**11 50 44.8**	**-0.5**
	2.8nm,0.3s								
BOOM	**Boomskoye usch**	**2.66**	**46**	↓*i* P			**Pb**	**11 50 24.1**	**-0.5**
	baz=47								
BOOM				↓*i* S			**Sb**	**11 50 58.2**	**+0.6**
	baz=47								
ULHL	**Ulahol**	**2.69**	**53**	↑*i* P			**Pb**	**11 50 24.8**	**-0.2**
	baz=54								
ULHL				↑*i* S			**Sb**	**11 50 58.6**	**+0.3**
	baz=54								
TKM2	**Tokmak 2**	**2.81**	**36**	Pn			**Pb**	**11 50 27.9**	**+0.8**
TKM2				↓Lg			Lg	11 51 08.2	
	1.9nm,0.6s								
IUG	**Iuzhnay**	**2.89**	**302**	*e*P			**Pg**	**11 50 30.3**	**-1.6**
	1.7nm,0.2s								
IUG				*e*S			**Sg**	**11 51 07.6**	**-1.7**
	19nm,0.4s								
IUG	**Iuzhnay**	**2.89**	**302**	Pg			**Pg**	**11 50 30.3**	**-1.6**
	1.7nm,0.2s								
IUG				Lg			Lg	11 51 07.6	
	19nm,0.4s								
KST	**Kastek**	**3.07**	**39**	*e*P			**Pg**	**11 50 34.3**	**-1.0**
	1.2nm,0.3s								
KST				*e*S			**Sg**	**11 51 14.7**	**-0.5**
	2.4nm,0.6s								
KST	**Kastek**	**3.07**	**39**	Pg			**Pg**	**11 50 34.3**	**-1.0**
	1.2nm,0.3s								
KST				Lg			Lg	11 51 14.7	
	2.4nm,0.6s								
KK31	**Karatay Array**	**3.22**	**320**	↓Pg			**Pb**	**11 50 35.4**	**+1.4**
	0.3nm,0.3s,baz=133,slow=17,SNR=6.6								
KK31				↑Lg			Lg	11 51 15.5	
	2.6nm,0.5s,baz=135,slow=28,SNR=7.2								
KDJ	**Kajisay**	**3.23**	**62**	↑*i* P			**Pb**	**11 50 32.3**	**-2.0**
	baz=63								
KDJ				↑*i* S			**Sb**	**11 51 12.5**	**-1.5**
	baz=63								
KRBS	**Karabastau**	**3.48**	**29**	*e*P			**Pb**	**11 50 41.2**	**+2.7**
	0.5nm,0.3s								
KRBS				*e*S			**Sg**	**11 51 27.0**	**-1.3**
	1.9nm,0.5s								
KRBS	**Karabastau**	**3.48**	**29**	Pg			**Pb**	**11 50 41.2**	**+2.7**
	0.5nm,0.3s								
KRBS				Lg			Lg	11 51 27.0	
	1.9nm,0.5s								
TNSS	**Tian-Shan**	**3.58**	**48**	*e*P			**Pg**	**11 50 44.5**	**-0.6**
	1.0nm,0.4s								
TNSS				*e*S			**Sg**	**11 51 32.0**	**+0.5**
	2.7nm,0.4s								
TNSS	**Tian-Shan**	**3.58**	**48**	Pg			**Pg**	**11 50 44.5**	**-0.6**
	1.0nm,0.4s								
TNSS				Lg			Lg	11 51 32.0	
	2.7nm,0.4s								

*IDC **10** 11:53:14.8±0.4,15.17S×172.20W,h0km,mb4.5/18, mb1 4.7/18,mb1mx4.6/35,mbtmp4.5/18,MS3.9/16, Ms1 3.9/16,ms1mx3.7/32,Error ellipse: s-maj=20.0km s-min=11.3km az=122.0*
*BGR **10** 11:53:17.1±0.0,16.72S×171.85W,h33km,Ms4.1*
*BJI **10** 11:53:17.0±0.0,14.80S×172.20W,h10km,mB5.3/6, mb5.0/10*
*NEIC **10** 11:53:18.4±2.3,15.02S±0.06×171.87W±0.09,h26km±3km, mb4.8/112,Error ellipse: s-maj=13.4km s-min=8.3km az=105.0*
ISC 10 11:53:16.7±0.3,15.06S±0.05×171.77W±0.06,h18km, n294,σ2♦16/256,mb4.7/71,MS4.0/19,2C-21D,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.14**	**359**	Pn			**Pn**	**11 53 37.2**	**-0.7**
AFI				Sn			**Sb**	**11 53 51.3**	**-1.3**
NIUE	**Niue**	**4.37**	**157**				Pn	11 54 14.5	-7.7
NIUE							Sn	11 55 00.6	-12
MSVF	**Nonsavu**	**10.13**	**253**				**Pn**	**11 55 40.9**	**-0.5**
KNTN	**Kanton**	**12.21**	**0**	Pn			**Pn**	**11 56 07.4**	**-2.4**
RAR	**Rarotonga**	**12.94**	**120**	Pn			**Pn**	**11 56 16.4**	**-3.3**
	2.3nm,0.3s,baz=261,slow=8.2,SNR=11								
RAR				Sn			Sn	11 58 29.0	-14
	baz=107,slow=12,SNR=1.6								
RAR				LR			LR	12 00 28.5	
	comp=Z,269nm,21.6s,baz=326,slow=33								
RAR	**Rarotonga**	**12.94**	**120**	Pn			**Pn**	**11 56 17.7**	**-2.0**
PPT	**Papeete**	**21.44**	**100**	LR			LR	12 04 07.2	
	comp=Z,216nm,20.3s,baz=288,slow=30								
PPT2	**Papeete2**	**21.44**	**100**	*e*S			**S**	**12 01 55.0**	**-6.7**
	211nm,27.0s								
PPT2				*e*LQ			LQ	12 02 16.5	
	1μm,26.8s								
PPT2				*e*LR			LR	12 03 15.2	
	comp=Z,506nm,24.8s								
PPT2	**Papeete2**	**21.44**	**100**	*e*T			T	12 18 40.3	
	2.3nm,0.4s								
PAE	**Paea**	**21.44**	**100**	*e*T			T	12 18 36.9	
	1.9nm,0.2s								
DZM	**Mont Dzumac**	**21.79**	**248**	*e*P			**P**	**11 58 11.0**	**+3.0**
	89nm,1.4s								
DZM				*e*LR			LR	12 03 29.9	
	comp=Z,716nm,26.6s								
DZM	**Mont Dzumac**	**21.79**	**248**	P			**P**	**11 58 04.6**	**-3.4**
	12nm,1.0s,baz=110,slow=8.9,SNR=2.8								
TBI	**Tubuai**	**22.60**	**115**	*e*S			**S**	**12 02 13.9**	**-10**
	118nm,30.8s								
TBI				*e*LQ			LQ	12 02 42.9	
	773nm,30.2s								
TBI				*e*LR			LR	12 03 50.2	
	comp=Z,441nm,24.8s,baz=294								
TBI	**Tubuai**	**22.60**	**115**	*e*T			T	12 20 31.0	
	6.0nm,0.3s								
OUZ	**Omahuta**	**24.00**	**211**	P			**P**	**11 58 31.8**	**+1.4**
OUZ	**Omahuta**	**24.00**	**211**	P			**P**	**11 58 29.7**	**-0.7**
MXZ	**Matakaoa Point**	**24.08**	**200**	P			**P**	**11 58 34.7**	**+3.5**
WCZ	**Waipu Caves**	**24.23**	**208**	P			**P**	**11 58 32.0**	**-0.5**
WMGZ	**Waiomatatini S**	**24.28**	**199**	P			**P**	**11 58 37.8**	**+4.8**
KUZ	**Kuaotunu**	**24.31**	**205**	P			**P**	**11 58 31.2**	**-2.1**
WIAZ	**Waiheke Island**	**24.59**	**206**	P			**P**	**11 58 35.8**	**-0.1**
RUGZ	**Raukumara Rang**	**24.66**	**200**	P			**P**	**11 58 38.9**	**+2.3**
MKAZ	**Moumakai**	**24.85**	**205**	P			**P**	**11 58 38.5**	**+0.3**
MARZ	**Manawahe**	**25.02**	**202**	P			**P**	**11 58 42.4**	**+2.6**
MWZ	**Matawai**	**25.04**	**200**	P			**P**	**11 58 41.6**	**+1.7**
URZ	**Urewera**	**25.11**	**201**	P			**P**	**11 58 39.5**	**-1.0**
	11nm,0.5s,baz=331,slow=3.6,SNR=12								
URZ				S			**S**	**12 03 06.0**	**+1.5**
	10.0nm,0.7s,baz=108,slow=22,SNR=10								
URZ	**Urewera**	**25.11**	**201**	P			**P**	**11 58 39.5**	**-1.0**
URZ				IAmb			IAmb	11 58 57.9	
	comp=Z,26nm,0.8s								
TOZ	**Tahuroa Road**	**25.25**	**204**	P			**P**	**11 58 42.9**	**+1.1**
BKZ	**Black Stump Fm**	**26.14**	**201**	P			**P**	**11 58 49.9**	**0.0**
BKZ				IAmb			IAmb	11 58 52.3	
	comp=Z,34nm,1.4s								
KAHZ	**Kahuranaki**	**26.58**	**200**	P			**P**	**11 59 00.1**	**+6.3**
KAHZ				S			**S**	**12 03 37.3**	**+10**
VRZ	**Vera Road**	**26.74**	**204**	P			**P**	**11 58 54.9**	**-0.4**
DVHZ	**Dannevirke**	**27.27**	**200**	P			**P**	**11 59 03.8**	**+3.8**
DVHZ				S			**S**	**12 03 46.3**	**+7.8**
ANWZ	**Angora Road**	**27.31**	**200**	P			**P**	**11 59 02.7**	**+2.3**
ANWZ				S			**S**	**12 03 47.8**	**+8.7**
BFZ	**Birch Farm**	**27.58**	**200**	P			**P**	**11 59 04.2**	**+1.3**
BFZ				S			**S**	**12 03 52.9**	**+9.4**
**MRZ

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,11nm,1.3s						
WB2	**Warramunga Arr**	**51.45**	**256**	P	**P**	**12 02 18.0**	**-3.3**
WB2				IAmb	IAmb	12 02 27.0	
	comp=Z,28nm,1.5s						
WRA	**Warramunga Arr**	**51.46**	**256**	P	**P**	**12 02 17.5**	**-3.9**
	comp=Z,3.2nm,0.6s,baz=95,slow=6.8,SNR=65						
WRA				PcP	**PcP**	**12 03 35.1**	**-0.7**
	comp=Z,0.7nm,0.9s,baz=15,slow=27,SNR=3.0						
WRA				LR	LR	12 22 50.4	
	comp=Z,136nm,18.4s,baz=90,slow=35						
AS31	**Alice Springs**	**51.71**	**252**	P	**P**	**12 02 19.8**	**-3.6**
ASAR	**Alice Springs**	**51.72**	**252**	P	**P**	**12 02 19.8**	**-3.6**
	comp=Z,14nm,0.4s,baz=90,slow=7.8,SNR=257						
ASAR				PcP	**PcP**	**12 03 37.1**	**+0.3**
	comp=Z,2.5nm,0.9s,baz=86,slow=8.4,SNR=0.8						
ASAR				LR	LR	12 22 40.9	
	comp=Z,252nm,19.7s,baz=94,slow=34						
FORT	**Forrest**	**56.98**	**243**	P	**P**	**12 02 58.1**	**-3.4**
FITZ	**Fitzroy Crossi**	**59.82**	**258**	LR	LR	12 26 55.7	
	comp=Z,159nm,21.1s,baz=128,slow=34						
FITZ	**Fitzroy Crossi**	**59.82**	**258**	P	**P**	**12 03 18.9**	**-2.6**
VNDA	**Vanda**	**63.88**	**186**	P	**P**	**12 03 48.1**	**+0.2**
	comp=Z,2.2nm,0.9s,baz=360,slow=6.2,SNR=3.7						
VNDA				LR	LR	12 28 04.3	
	comp=Z,41nm,19.4s,baz=344,slow=33						
VNDA	**Vanda**	**63.88**	**186**	P	**P**	**12 03 47.9**	**0.0**
LUWI	**Luwuk**	**66.06**	**276**	P	**P**	**12 04 01.7**	**-1.4**
NWAO	**Narrogin (SRO)**	**66.16**	**240**	P	**P**	**12 04 01.9**	**-1.6**
MORW	**Morawa**	**67.45**	**244**	P	**P**	**12 04 09.6**	**-2.2**
MJAR	**Matsushiro Arr**	**69.71**	**319**	P	**P**	**12 04 26.0**	**+0.3**
	comp=Z,2.3nm,0.7s,baz=140,slow=6.1,SNR=8.8						
MJAR				LR	LR	12 29 20.7	
	comp=Z,42nm,21.9s,baz=80,slow=31						
GIRL	**Giralia**	**69.83**	**251**	P	**P**	**12 04 26.1**	**-0.7**
ISA	**Isabella, Lake**	**71.31**	**44**	P	**P**	**12 04 37.5**	**+1.9**
ISA				IAmb	IAmb	12 04 40.2	
	comp=Z,7.0nm,1.0s						
CMB	**Columbia Colle**	**71.47**	**41**	P	**P**	**12 04 37.8**	**+1.4**
CMB				IAmb	IAmb	12 04 41.3	
	comp=Z,5.0nm,0.9s						
ORV	**Oroville**	**71.72**	**39**	P	**P**	**12 04 38.2**	**+0.4**
WAKR	**Walker**	**72.35**	**41**	P	**P**	**12 04 43.3**	**+1.4**
WAKR				IAmb	IAmb	12 04 46.6	
	comp=Z,7.2nm,1.0s						
PNTR	**Pine Nut**	**72.60**	**40**	P	**P**	**12 04 45.2**	**+1.9**
PNTR				IAmb	IAmb	12 04 47.9	
	comp=Z,9.3nm,1.0s						
BEKR	**Beckworth**	**72.60**	**39**	P	**P**	**12 04 44.7**	**+1.4**
BEKR				IAmb	IAmb	12 04 47.6	
	comp=Z,6.5nm,1.0s						
YERR	**Yerington**	**72.76**	**40**	P	**P**	**12 04 45.5**	**+1.1**
PETK	**Petropavlovsk-**	**72.80**	**341**	P	**P**	**12 04 44.6**	**+0.6**
	comp=Z,4.6nm,0.8s,baz=165,slow=7.7,SNR=4.4						
RYN	**Ryan**	**73.00**	**41**	P	**P**	**12 04 47.1**	**+1.3**
NVAR	**Mina Array Bea**	**73.03**	**41**	P	**P**	**12 04 49.6**	**+3.6**
	comp=Z,5.0nm,0.8s,baz=227,slow=10,SNR=40						
NVAR				LR	LR	12 32 38.8	
	comp=Z,150nm,18.1s,baz=196,slow=32						
PAHR	**Pah Rah Range**	**73.10**	**40**	P	**P**	**12 04 47.7**	**+1.4**
NV11	**Mina Array Sit**	**73.12**	**41**	P	**P**	**12 04 48.0**	**+1.6**
NV11				IAmb	IAmb	12 04 50.9	
	comp=Z,8.0nm,1.0s						
KVN	**Kaiserville**	**73.52**	**41**	IAmb	IAmb	12 04 53.1	
	comp=Z,6.1nm,1.0s						
TPNV	**Topopah Spring**	**73.52**	**44**	IAmb	IAmb	12 04 54.1	
	comp=Z,5.4nm,0.8s						
TUC	**Tucson**	**74.96**	**50**	P	**P**	**12 04 58.3**	**+1.1**
QSPA	**South Pole Qui**	**74.98**	**180**	P	**P**	**12 04 56.8**	**-0.1**
WVOR	**Wild Horse Val**	**75.19**	**38**	P	**P**	**12 04 59.1**	**+0.8**
WVOR				IAmb	IAmb	12 05 02.8	
	comp=Z,8.9nm,0.9s						
319A	**Douglas**	**75.64**	**52**	IAmb	IAmb	12 05 20.8	
	comp=Z,8.0nm,1.2s						
TPUB	**Ta-pu**	**76.30**	**299**	P	**P**	**12 05 04.1**	**-0.9**
D05A	**Enumclaw**	**76.31**	**32**	P	**P**	**12 05 05.9**	**+1.4**
PKCU	**Pink Cliffs**	**76.44**	**45**	P	**P**	**12 05 06.6**	**+0.7**
KSRS	**Korea Array**	**77.03**	**315**	P	**P**	**12 05 10.4**	**+1.6**
	comp=Z,2.6nm,1.0s,baz=130,slow=6.8,SNR=13						
BMO	**Blue Mountains**	**77.41**	**36**	IAmb	IAmb	12 05 14.8	
	comp=Z,7.3nm,1.1s						
MFID	**Camas Ranch**	**77.44**	**38**	IAmb	IAmb	12 05 15.2	
	comp=Z,7.5nm,1.0s						
DUG	**Dugway, Tooele**	**77.54**	**42**	IAmb	IAmb	12 05 15.9	
	comp=Z,7.1nm,0.9s						
F10A	**Beach Ranch, E**	**78.12**	**35**	IAmb	IAmb	12 05 22.8	
	comp=Z,11nm,0.9s						
B08A	**Colville Reser**	**78.43**	**33**	IAmb	IAmb	12 05 19.8	
	comp=Z,7.3nm,1.1s						
LLLB	**Lillooet**	**78.60**	**30**	P	**P**	**12 05 18.0**	**+0.7**
LLLB				IAmb	IAmb	12 05 26.5	
	comp=Z,8.1nm,1.1s						
C09A	**Chrisman Ranch**	**78.65**	**34**	IAmb	IAmb	12 05 21.4	
	comp=Z,10nm,1.1s						
KSM	**Kuching**	**78.73**	**275**	P	**P**	**12 05 18.4**	**-0.4**
MNTX	**Cornudas Mount**	**78.76**	**53**	P	**P**	**12 05 20.1**	**+1.5**
PV05	**Paradox Valley**	**78.96**	**46**	IAmb	IAmb	12 05 24.7	
	comp=Z,12nm,0.9s						
SCM	**Sheep Creek Mo**	**79.04**	**12**	P	**P**	**12 05 20.9**	**+1.4**
TX31	**Lajitas Ar. Si**	**79.11**	**56**	P	**P**	**12 05 22.3**	**+1.6**
TX31				IAmb	IAmb	12 05 32.5	
	comp=Z,18nm,1.2s						
TXAR	**Lajitas Array**	**79.11**	**56**	P	**P**	**12 05 24.3**	**+3.6**
	comp=Z,1.8nm,1.0s,baz=221,slow=8.3,SNR=16						
TXAR				LR	LR	12 33 56.7	
	comp=Z,86nm,19.7s,baz=0.0,slow=31						
VRDI	**Verde Repeater**	**79.31**	**14**	IAmb	IAmb	12 05 35.9	
	comp=Z,6.5nm,0.9s						
ANMO	**Albuquerque**	**79.38**	**49**	P	**P**	**12 05 25.3**	**+3.2**
	comp=Z,1.4nm,0.7s,baz=228,slow=6.2,SNR=9.6						
ANMO	**Albuquerque**	**79.38**	**49**	P	**P**	**12 05 23.8**	**+1.6**
BALM	**Baldy**	**79.39**	**14**	IAmb	IAmb	12 05 36.4	
	comp=Z,6.4nm,0.9s						
PV15	**Paradox Valley**	**79.51**	**46**	IAmb	IAmb	12 05 27.5	
	comp=Z,9.1nm,0.9s						
CTGM	**Chitina Glacie**	**79.57**	**15**	IAmb	IAmb	12 05 37.4	
	comp=Z,6.3nm,0.9s						
BARN	**Barnard Glacie**	**79.58**	**14**	IAmb	IAmb	12 05 37.2	
	comp=Z,8.5nm,0.9s						
TRF	**Thorofare Moun**	**80.02**	**10**	IAmb	IAmb	12 05 39.8	
	comp=Z,8.2nm,0.8s						
RND	**Reindeer**	**80.22**	**10**	IAmb	IAmb	12 05 29.0	
	comp=Z,10nm,1.1s						
TPAW	**Teton Pass**	**80.45**	**40**	IAmb	IAmb	12 05 32.5	
	comp=Z,10nm,0.8s						
MSO	**Missoula**	**80.47**	**36**	IAmb	IAmb	12 05 31.6	
	comp=Z,7.0nm,1.0s						
MCK	**McKinley**	**80.50**	**10**	IAmb	IAmb	12 05 44.1	
	comp=Z,15nm,0.9s						
MENT	**Mentasta**	**80.77**	**13**	IAmb	IAmb	12 05 43.5	
	comp=Z,5.2nm,0.8s						
PDAR	**Pinedale Array**	**80.96**	**41**	P	**P**	**12 05 33.4**	**+2.8**
	comp=Z,3.2nm,0.8s,baz=204,slow=3.3,SNR=26						
DOT	**Dot Lake**	**81.33**	**12**	IAmb	IAmb	12 05 35.0	
	comp=Z,10nm,1.1s						
MLY	**Manley**	**81.43**	**9**	IAmb	IAmb	12 05 46.0	
	comp=Z,6.0nm,0.9s						
CCB	**Clear Creek Bu**	**81.54**	**10**	IAmb	IAmb	12 05 35.6	
	comp=Z,17nm,1.2s						
WALA	**Waterton Lakes**	**81.74**	**34**	IAmb	IAmb	12 05 37.9	
	comp=Z,6.8nm,0.9s						
COLA	**College**	**81.74**	**10**	P	**P**	**12 05 35.0**	**+1.2**
IL31		**81.81**	**10**	P	**P**	**12 05 35.6**	**+1.4**
ILAR	**Eielson Array**	**81.81**	**10**	P	**P**	**12 05 35.8**	**+1.5**
	comp=Z,2.3nm,0.9s,baz=224,slow=6.0,SNR=18						
ILAR				LR	LR	12 38 56.8	
	comp=Z,47nm,18.8s,baz=171,slow=33						
ISCO	**Idaho Springs**	**82.17**	**45**	P	**P**	**12 05 37.4**	**+0.3**
RLMT	**Red Lodge**	**82.33**	**39**	IAmb	IAmb	12 05 42.0	
	comp=Z,6.5nm,1.0s						
DAWY	**Dawson**	**82.71**	**14**	IAmb	IAmb	12 05 53.9	
	comp=Z,8.9nm,0.9s						
PRP	**Porcupine Dome**	**82.74**	**11**	IAmb	IAmb	12 05 57.1	
	comp=Z,11nm,1.0s						
EGAK	**Eagle**	**82.93**	**13**	IAmb	IAmb	12 05 55.2	
	comp=Z,4.3nm,0.8s						
EGMT	**Eagleton**	**83.51**	**37**	IAmb	IAmb	12 05 47.2	
	comp=Z,7.4nm,0.8s						
WHN	**Wuhan**	**84.22**	**304**	P	**P**	**12 05 49.1**	**+1.6**
BILL	**Bilibino**	**84.39**	**352**	P	**P**	**12 05 47.5**	**0.0**
LAO	**LASA Array**	**84.95**	**39**	P	**P**	**12 05 51.3**	**+0.4**
TOLK	**Toolik Lake Re**	**84.98**	**8**	P	**P**	**12 05 52.0**	**+1.5**
TOLK				IAmb	IAmb	12 05 54.2	
	comp=Z,6.6nm,1.1s						
RSSD	**Black Hills**	**85.15**	**42**	P	**P**	**12 05 53.8**	**+1.6**
EPYK	**Eagle Plains**	**85.27**	**13**	P	**P**	**12 05 52.9**	**+0.9**
EPYK				IAmb	IAmb	12 05 55.3	
	comp=Z,9.9nm,1.2s						
Z38A	**Mt. Pleasant**	**87.47**	**55**	P	**P**	**12 06 04.9**	**+1.4**
INK	**Inuvik**	**87.57**	**13**	P	**P**	**12 06 04.2**	**+1.1**
INK				IAmb	IAmb	12 06 06.1	
	comp=Z,6.2nm,1.1s						
ENH	**Enshi**	**88.08**	**302**	P	**P**	**12 06 06.2**	**-0.3**
PLCA	**Paso Flores**	**88.56**	**132**	P	**P**	**12 06 09.4**	**+0.6**
	comp=Z,3.6nm,1.1s,baz=242,slow=6.1,SNR=3.5						
MAW	**Mawson**	**88.61**	**198**	P	**P**	**12 06 07.6**	**-0.7**
	comp=Z,5.9nm,0.8s,baz=135,slow=7.3,SNR=9.3						
MAW				LR	LR	12 42 31.1	
	comp=Z,74nm,21.0s,baz=82,slow=33						
MAW	**Mawson**	**88.61**	**198**	P	**P**	**12 06 08.0**	**-0.4**
YKA	**Yellowknife Ar**	**89.16**	**23**	P	**P**	**12 06 12.9**	**+2.1**
	comp=Z,3.0nm,0.9s,baz=229,slow=4.2,SNR=40						
XAN	**Xi'an**	**89.72**	**305**	P	**P**	**12 06 15.3**	**+1.1**
XAN				pP	pwP	12 06 26.2	+1.5
XAN				pmax	pmax		
	comp=Z,6.0nm,1.5s						
RPSI	**Rantau Prapat**	**90.03**	**273**	P	**P**	**12 06 15.6**	**-0.5**
GSI	**Gunungsitoli**	**90.97**	**271**	P	**P**	**12 06 20.5**	**0.0**
ULM	**Lac du Bonnet**	**92.68**	**39**	LR	LR	12 41 60.0	
	comp=Z,146nm,20.6s,baz=269,slow=31						
SNAA	**Sanae**	**93.16**	**177**	P	**P**	**12 06 29.4**	**-0.2**
SYO	**Syowa Base**	**93.23**	**191**	⇑*e*X	P	12 06 24.9	-4.9
CMAR	**Chiang Mai Arr**	**94.01**	**288**	P	**P**	**12 06 36.1**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=83,slow=4.8,SNR=4.8						
GTA	**Gaotai**	**98.20**	**309**	*e*P	Pdif	12 06 56.0	+2.8
GTA				pP	pwP	12 07 02.5	-1.1
GTA				sP	sP	12 07 05.7	+6.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ROSC	**El Rosal**	**98.42**	**87**	LR	LR	12 43 33.9	
	comp=Z,44nm,18.9s,baz=252,slow=30						
ZALV	**Zalesovo Beam**	**109.92**	**322**	PKiKP	**PKiKP**	**12 11 46.0**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=158,slow=4.8,SNR=3.6						
MKAR	**Makanchi Array**	**111.71**	**315**	PKiKP	**PKiKP**	**12 11 50.3**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=148,slow=1.7,SNR=5.5						
KURBB	**Kurchatov Arra**	**113.99**	**319**	PKiKP	**PKiKP**	**12 11 53.9**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=102,slow=1.9,SNR=12						
KSH	**Kashi**	**116.53**	**307**	PKP	**PKiKP**	**12 12 00.4**	**+0.3**
KSH				PP	**PP**	**12 13 13.9**	**+6.6**
KSH				PKS	**PKSdf**	**12 15 36.9**	**0.0**
KSH				AMB	AMB		
	comp=Z,220nm,4.4s						
BVAR	**Borovoye Array**	**118.58**	**323**	PKP	**PKiKP**	**12 12 03.6**	**+0.1**
	comp=Z,2.1nm,0.6s,baz=80,slow=2.1,SNR=16						
ARCES	**ARCESS Array B**	**124.48**	**353**	PKP	**PKiKP**	**12 12 15.1**	**+0.5**
	comp=Z,4.8nm,0.7s,baz=333,slow=1.4,SNR=26						
FINES	**FINESS Array B**	**131.94**	**349**	PKP	**PKPdf**	**12 12 28.7**	**0.0**
	comp=Z,2.9nm,0.7s,baz=85,slow=2.1,SNR=12						
NB2	**NORSAR Subarra**	**134.03**	**358**	PKP	**PKiKP**	**12 12 33.5**	**-0.6**
	comp=Z,4.0nm,1.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**134.03**	**358**	PKP	**PKiKP**	**12 12 33.5**	**-0.6**
	comp=Z,1.5nm,0.9s,baz=14,slow=3.9,SNR=5.1						
AKASG	**Malin Array Be**	**140.61**	**339**	PKhKP	PKPpre	12 12 40.0	
	comp=Z,0.7nm,0.4s,baz=38,slow=4.1,SNR=5.6						
CLL	**Collm**	**143.64**	**355**	*i* PKPdf	**PKPdf**	**12 12 49.9**	**-0.6**
	comp=Z,9.0nm,0.8s						
CLL				*e*PKiKP	**PKiKP**	**12 12 54.0**	**+0.1**
CLL	**Collm**	**143.64**	**355**	*e*PKPbc	**PKPdf**	**12 12 50.7**	**+0.2**
	baz=5.4,slow=2.9						
CLL	**Collm**	**143.64**	**355**		**PKPdf**	**12 12 50.3**	**-0.2**
BRG	**Berggiesshubel**	**143.98**	**354**	*e*PKP	**PKPdf**	**12 12 50.7**	**-0.4**
	comp=Z,3.6nm,0.8s						
OSTC	**Ostas**	**144.01**	**351**	*e*PKP	**PKPdf**	**12 12 51.0**	**-0.2**
DPC	**Dobruska-Polom**	**144.19**	**351**	*e*PKP	**PKPdf**	**12 12 51.5**	**-0.1**
OKC	**Ostrava-Krasne**	**144.38**	**349**	*e*PKP	**PKPdf**	**12 12 51.8**	**-0.1**
MOX	**Moxa**	**144.40**	**356**	*e*PKPbc	**PKPdf**	**12 12 52.1**	**+0.2**
	baz=5.4,slow=2.9						
MOX				*e*L	L	13 23 60.0	
	comp=Z,33nm,19.6s						
PLN	**Plauen**	**144.52**	**356**	*e*PKPbc	**PKPdf**	**12 12 52.3**	**+0.2**
	baz=5.4,slow=2.9						
MORC	**Moravsky Berou**	**144.55**	**350**	*e*PKP	**PKPdf**	**12 12 52.1**	**-0.1**
MORC	**Moravsky Berou**	**144.55**	**350**	⇓P	**PKPdf**	**12 12 52.1**	**-0.1**
MORC	**Moravsky Berou**	**144.55**	**350**		**PKPdf**	**12 12 52.3**	**+0.1**
TANN	**Tannenbergstha**	**144.57**	**355**	*e*PKPbc	**PKPdf**	**12 12 52.6**	**+0.3**
	baz=5.4,slow=2.9						
BUR08	**Bucovina Ar. S**	**144.59**	**340**		**PKPdf**	**12 12 52.3**	**-0.1**
BURAR	**Bucovina Array**	**144.61**	**340**	⇓P	**PKPdf**	**12 12 52.4**	**-0.1**
GUNZ	**Gunzen**	**144.63**	**355**	*e*PKPbc	**PKPdf**	**12 12 52.9**	**+0.5**
	baz=5.4,slow=2.9						
WERN	**Wernitzgruen**	**144.70**	**355**	*e*PKPbc	**PKPdf**	**12 12 53.3**	**+0.8**
	baz=5.4,slow=2.9						
TSUM	**Tsumeb**	**144.73**	**195**		PKPbc	12 12 52.4	0.0
NKC	**Novy Kostel**	**144.75**	**355**	*e*PKP	**PKPdf**	**12 12 53.1**	**+0.6**
LANS	**Liptovska Anna**	**144.78**	**347**	*e*PKP	**PKPdf**	**12 12 54.0**	**+1.4**
PRU	**Pruhonice**	**144.79**	**353**	*e*PKP	**PKPdf**	**12 12 53.6**	**+1.0**
GOPC	**GO Pecny, Ondr**	**144.83**	**353**	*e*PKP	**PKPdf**	**12 12 53.6**	**+0.9**
TRPA	**Tarpa**	**144.97**	**343**	⇓P	**PKPdf**	**12 12 53.2**	**+0.3**
MANZ	**Manzenberg**	**145.02**	**356**	*e*PKPbc	**PKPdf**	**12 12 54.1**	**+1.0**
	baz=5.4,slow=2.9						
TESR	**Tescani**	**145.06**	**338**	⇓P	**PKPdf**	**12 12 53.3**	**+0.2**
DAMY	**Dhamar**	**145.07**	**274**		**PKPdf**	**12 12 54.2**	**-0.2**
VRAC	**Vranov**	**145.16**	**350**	*e*PKP	**PKPdf**	**12 12 54.3**	**+1.0**
VRAC	**Vranov**	**145.16**	**350**	⇓P	**PKPdf**	**12 12 54.2**	**+1.0**
KECS	**Kecovo**	**145.17**	**346**	*e*PKP	**PKPdf**	**12 12 54.7**	**+1.4**
ROTZ	**Rotzenmuhle**	**145.23**	**355**	*e*PKPbc	**PKPdf**	**12 12 54.7**	**+1.4**
	baz=5.4,slow=2.9						
GRF	**Grafenberg Arr**	**145.37**	**357**	*e*PKPbc	**PKiKP**	**12 12 55.7**	**-1.8**
	baz=5.4,slow=2.9						
GRF				*e*L	L	13 25 44.1	
	comp=Z,33nm,20.2s						
JAVC	**Velka Javorina**	**145.41**	**349**	*e*PKP	**PKiKP**	**12 12 56.1**	**-1.6**
KRUC	**Moravsky**	**145.44**	**351**	*e*PKP	**PKPab**	**12 12 55.0**	**+1.2**
WLF	**Walferdange**	**145.44**	**2**	*e*PKPbc	**PKiKP**	**12 12 55.8**	**-1.9**
	baz=5.4,slow=2.9						
WLF	**Walferdange**	**145.44**	**2**		**PKPab**	**12 12 55.0**	**+1.1**
VYHS	**Vyhne**	**145.53**	**348**	*e*PKP	**PKPab**	**12 12 55.9**	**+1.7**
VRI	**Vrincioaia**	**145.58**	**337**	⇓P	**PKPab**	**12 12 55.3**	**+0.8**
CFR	**Carcaliu**	**145.59**	**335**	⇓P	**PKPab**	**12 12 55.2**	**+0.7**
PLOR	**Plostina**	**145.62**	**337**	⇓P	**PKPab**	**12 12 54.8**	**+0.2**
OZUR		**145.73**	**338**	⇓P	**PKPab**	**12 12 56.7**	**+1.7**
TOPG	**Topolog**	**145.73**	**334**	⇓P	**PKPab**	**12 12 56.1**	**+1.0**
KHC	**Kasperske Hory**	**145.74**	**354**	*e*PKP	**PKPab**	**12 12 56.0**	**+1.0**
KHC	**Kasperske Hory**	**145.74**	**354**		**PKPab**	**12 12 55.4**	**+0.4**
WET	**Wettzell**	**145.79**	**355**	*e*PKPbc	**PKPab**	**12 12 56.5**	**+1.3**
	baz=5.4,slow=2.9						
PSZ	**Piszkesteto**	**145.84**	**346**	⇓P	**PKPab**	**12 12 56.2**	**+0.7**
PSZ	**Piszkesteto**	**145.84**	**346**		**PKPab**	**12 12 55.3**	**-0.2**
MODS	**Modra-Piesok**	**145.95**	**349**	*e*PKP	**PKPab**	**12 12 56.5**	**+0.7**
DOPR	**Dopca**	**145.98**	**338**	⇓P	**PKPab**	**12 12 57.1**	**+1.1**
GEC2	**GERESS Array S**	**146.01**	**354**	*e*PKPbc	**PKPab**	**12 12 56.8**	**+0.7**
	baz=5.4,slow=2.9						
GEC2	**GERESS Array S**	**146.01**	**354**		**PKPab**	**12 12 56.5**	**+0.4**
GERES	**GERESS Array B**	**146.01**	**354**	PKPbc	**PKPab**	**12 12 56.3**	**+0.2**
	comp=Z,6.0nm,0.8s,baz=29,slow=3.0,SNR=27						
TIRR	**Tirgusor**	**146.06**	**334**	⇓P	**PKPab**	**12 12 56.8**	**+0.5**
HARR	**Harsova**	**146.07**	**334**	⇓P	**PKPab**	**12 12 57.0**	**+0.7**
ZST	**Bratislava**	**146.15**	**349**	*e*PKP	**PKPab**	**12 12 57.1**	**+0.6**
ATD	**Arta Tunnel**	**146.16**	**268**		**PKPab**	**12 12 58.2**	**+0.6**
MLR	**Muntele Rosu**	**146.19**	**337**	⇓P	**PKPab**	**12 12 57.2**	**+0.2**
MLR	**Muntele Rosu**	**146.19**	**337**		**PKPab**	**12 12 57.2**	**+0.2**
VOIR		**146.56**	**338**	⇓P	**PKPab**	**12 12 58.9**	**+0.6**
CONA	**Conrad Observa**	**146.62**	**351**	*i* PKiKP	**PKPab**	**12 12 59.1**	**+0.6**
	comp=Z,14nm,0.8s,SNR=8.7						
CLF	**Chambon-Foret**	**146.76**	**7**		**PKPab**	**12 12 58.9**	**+0.1**
ARR	**Arges**	**146.77**	**339**	⇓P	**PKPab**	**12 12 59.9**	**+0.8**
BFO	**Black Forest**	**146.82**	**360**	*e*PKPbc	**PKPab**	**12 12 59.4**	**+0.2**
	baz=5.4,slow=2.9						
BFO	**Black Forest**	**146.82**	**360**		**PKPab**	**12 12 58.9**	**-0.3**
BR131	**Keskin Array S**	**146.86**	**323**		**PKPab**	**12 12 59.2**	**-0.6**
BRTR	**Keskin Array B**	**146.86**	**323**	PKPbc	**PKPab**	**12 12 59.2**	**-0.6**
	comp=Z,6.3nm,0.8s,baz=120,slow=2.3,SNR=24						
FUR	**Furstenfeldbru**	**146.89**	**356**	*e*PKPbc	**PKiKP**	**12 13 00.1**	**-0.6**
	baz=5.4,slow=2.9						
SIRR	**Siria**	**146.91**	**343**	⇓P	**PKPbc**	**12 12 58.8**	**+0.5**
MOA	**Molln**	**146.92**	**353**	*i* PKPab	**PKPab**	**12 12 59.6**	**0.0**
	comp=Z,8.1nm,0.7s,SNR=7.4						
ECH	**Echery**	**146.93**	**1**		**PKPab**	**12 12 59.3**	**-0.2**
KMBO	**Kilima Mbogo**	**147.10**	**243**	PKPbc	**PKPab**	**12 13 01.3**	**-0.3**
	comp=Z,2.8nm,0.5s,baz=41,slow=13,SNR=7.7						
KMBO	**Kilima Mbogo**	**147.10**	**243**		**PKPbc**	**12 13 00.3**	**+0.3**
RJOB	**Jochberg**	**147.20**	**354**	*e*PKPbc	**PKPab**	**12 13 00.4**	**-0.3**
	baz=5.4,slow=2.9						
ARSA	**Arzberg**	**147.33**	**351**	*e*PKPab	**PKPbc**	**12 13 00.3**	**+0.9**
	comp=Z,6.9nm,0.8s						
BZS	**Buzias**	**147.52**	**342**	⇓P	**PKPbc**	**12 13 00.8**	**+0.9**
RETA	**Reutte**	**147.60**	**357**	*i* PKPab	**PKPab**	**12 13 01.4**	**-0.9**
	comp=Z,9.9nm,0.8s,SNR=5.4						
WATA	**Walderalm**	**147.70**	**356**	*e*PKPab	**PKiKP**	**12 13 01.9**	**-0.7**
	comp=Z,14nm,1.1s						
MOTA	**Moosalm**	**147.72**	**356**	*i* PKPab	**PKiKP**	**12 13 01.7**	**-1.0**
	comp=Z,16nm,1.0s,SNR=5.9						
WTTA	**Wattenberg**	**147.76**	**356**	*i* PKPab	**PKiKP**	**12 13 02.0**	**-0.8**
	comp=Z,19nm,0.7s,SNR=8.0						
KBA	**Koelnbreinsper**	**147.79**	**353**	*i* PKPab	**PKPbc**	**12 13 01.4**	**+0.5**
	comp=Z,6.4nm,1.1s						
DAVA	**Damuels**	**147.84**	**358**	*i* PKPab	**PKiKP**	**12 13 02.0**	**-0.9**
	comp=Z,23nm,0.9s,SNR=6.5						
SQTA	**Sankt Quirin**	**147.84**	**356**	*i* PKPab	**PKiKP**	**12 13 01.9**	**-0.9**
	comp=Z,14nm,1.1s,SNR=5.4						
HERR	**Herculane**	**147.94**	**341**	⇓P	**PKiKP**	**12 13 02.2**	**-0.8**
SOKA	**Soboth**	**147.97**	**351**	*i* PKPab	**PKPbc**	**12 13 01.9**	**+0.7**
	comp=Z,16nm,1.2s,SNR=11						
FETA	**Feichten**	**148.06**	**357**	*i* PKiKP	**PKiKP**	**12 13 02.9**	**-0.5**
	comp=Z,10nm,1.0s,SNR=5.1						
MYKA	**Terra Mystica**	**148.20**	**353**	*i* PKPbc	**PKPbc**	**12 13 02.0**	**+0.2**
	comp=Z,5.1nm,0.6s						
OBKA	**Obir**	**148.20**	**352**	*i* PKiKP	**PKPbc**	**12 13 02.3**	**+0.4**
	comp=Z,5.2nm,0.9s						
ABTA	**Abfaltersbach**	**148.21**	**354**	*i* PKiKP	**PKPbc**	**12 13 02.4**	**+0.5**
	comp=Z,13nm,0.7s,SNR=7.6						
PLVB	**Pleven**	**148.48**	**337**	⇑P	**PKPbc**	**12 13 02.6**	**0.0**
FUORN	**Ofenpass-Fuorn**	**148.49**	**357**		**PKPdf**	**12 12 60.0**	**+0.7**
FUORN				PKPbc	**PKiKP**	**12 13 04.3**	**-0.1**
STAL	**STALIGIAL**	**148.67**	**354**		**PKPbc**	**12 13 03.6**	**+0.6**
TUE	**Stuetta**	**148.67**	**359**		**PKiKP**	**12 13 04.1**	**-0.6**
PGAV	**Gavieira, Arco**	**149.63**	**25**	*e*PKPbc	**PKiKP**	**12 13 07.4**	**+0.7**
VTS	**Vitosha**	**149.66**	**338**	⇓P	**PKiKP**	**12 13 07.2**	**+0.4**
PCAB	**Cabril**	**149.94**	**25**	*e*PKPbc	**PKiKP**	**12 13 07.8**	**+0.5**
BNI	**Bardonecchia**	**150.07**	**2**		**PKiKP**	**12 13 08.4**	**+0.9**
PBRG	**Braganca**	**150.37**	**23**	*e*PKPbc	**PKiKP**	**12 13 09.1**	**+1.0**
PVRL	**Vila Real**	**150.44**	**25**	*e*PKPbc	**PKiKP**	**12 13 09.7**	**+1.4**
MVO	**Moncorvo**	**150.81**	**24**	*e*PKPbc	**PKiKP**	**12 13 10.6**	**+1.5**
PVIS	**Viseu**	**150.83**	**26**	*e*PKPbc	**PKiKP**	**12 13 10.3**	**+1.2**
PDG	**Podgorica**	**151.12**	**343**		**PKPbc**	**12 13 09.0**	**0.0**
PCAS	**Casmilo, Conde**	**151.12**	**27**	*e*PKPbc	**PKiKP**	**12 13 11.0**	**+1.3**
MTE	**Manteigas**	**151.24**	**26**	*e*PKPbc	**PKiKP**	**12 13 11.4**	**+1.4**
PSBE	**So Bento**	**151.42**	**28**	*e*PKPbc	**PKiKP**	**12 13 11.8**	**+1.4**
PCBR	**Castelo Branco**	**151.74**	**26**	*e*PKPbc	**PKiKP**	**12 13 12.4**	**+1.4**
PMTG	**Montargil**	**152.04**	**28**	*e*PKPbc	**PKiKP**	**12 13 12.8**	**+1.2**
PMRV	**Marv??o**	**152.12**	**26**	*e*PKPbc	**PKiKP**	**12 13 13.4**	**+1.6**
EVO	**Evora**	**152.57**	**28**	*e*PKPbc	**PKiKP**	**12 13 14.5**	**+1.8**
PNCL	**Nicolau / Gran**	**152.67**	**30**	*e*PKPbc	**PKiKP**	**12 13 14.6**	**+1.7**
MESJ	**Messejana**	**153.03**	**30**	*e*PKPbc	**PKiKP**	**12 13 15.6**	**+1.9**
PBEJ	**Beja**	**153.05**	**29**	*e*PKPbc	**PKiKP**	**12 13 15.5**	**+1.8**
ESDC	**Sonseca Array**	**153.25**	**21**	PKP	**PKPdf**	**12 13 09.0**	**+2.4**
	comp=Z,0.8nm,0.9s,baz=351,slow=2.5,SNR=4.9						
PCVE	**Castro Verde**	**153.28**	**30**	*e*PKPbc	**PKiKP**	**12 13 16.6**	**+2.4**
PVAQ	**Vaqueiros**	**153.62**	**30**	*e*PKPbc	**PKiKP**	**12 13 16.9**	**+2.0**
KEST	**Kesra**	**159.39**	**357**	PKP	**PKPdf**	**12 13 17.4**	**+2.7**
	comp=Z,3.8nm,0.9s,baz=325,slow=2.7,SNR=3.7						
DBIC	**Dimbokro**	**164.69**	**122**	PKP	**PKPdf**	**12 13 21.3**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=186,slow=4.1,SNR=3.7						
DBIC	**Dimbokro**	**164.69**	**122**		**PKPdf**	**12 13 20.4**	**-0.2**
TORD	**Torodi Ar. Bea**	**173.38**	**106**	PKP	**PKPdf**	**12 13 25.5**	**-0.6**
	comp=Z,3.0nm,1.0s,baz=335,slow=0.9,SNR=10.0						
TORD				PKPab	**PKPab**	**12 14 56.0**	**+1.5**
	comp=Z,1.5nm,0.8s,baz=249,slow=3.7,SNR=5.6						

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*CNRM **10** 12:00:16.8±1.8, 36.°40N×7.°41W, h2km±14km, Error ellipse: s-maj=11.3km s-min=6.4km az=90.0*

*INMG **10** 12:00:19.9±1.6, 36.°64N×7.°32W, h11km±3km, ML2.3, Error ellipse: s-maj=3.7km s-min=2.1km az=26.0*

*SFS **10** 12:00:20.0, 36.°70N×7.°24W, h8km, ML2.4, GOLFO DE CADIZ*

*IGIL **10** 12:00:20.5, 36.°71N×7.°24W, h20km, ML2.9*

*MDD **10** 12:00:20.1±0.6, 36.°68N×7.°28W, h11km, mbLg2.5/24, Error ellipse: s-maj=6.7km s-min=2.9km az=21.0, PRXIMO*

ISC 10 12:00:17.1±1.2**, 36.°51N**±0.°03**×7.°33W**±0.°02**, h8km**±9km**, n70, σ2.°35/105, 4D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.87**	**327**	Pg	**Pg**	**12 00 34.2**	**+0.3**
PBDV				Lg	Lg	12 00 44.8	
	93nm,0.4s						
PBDV	**Barranco-do-Ve**	**0.87**	**327**	*e*P	**Pg**	**12 00 34.2**	**+0.3**
PBDV				*e*S	**Sg**	**12 00 44.8**	**-0.5**
PBDV				A	A	12 00 48.0	
	93nm,0.4s						
PVAQ	**Vaqueiros**	**0.94**	**341**	Pg	**Pg**	**12 00 35.1**	**-0.1**
PVAQ				Lg	Lg	12 00 46.4	
	84nm,0.1s						
PVAQ	**Vaqueiros**	**0.94**	**341**	P	**Pg**	**12 00 35.1**	**-0.1**
PVAQ				S	**Sg**	**12 00 46.6**	**-0.8**
PVAQ	**Vaqueiros**	**0.94**	**341**	⇓*e*P	**Pg**	**12 00 35.1**	**-0.1**
PVAQ				*e*S	**Sg**	**12 00 46.4**	**-1.0**
PVAQ				A	A	12 00 48.4	
	84nm,0.1s						
EGRO	**El Granado**	**1.03**	**353**	⇓Pg	**Pg**	**12 00 36.5**	**-0.3**
	0.5nm,0.2s,SNR=18						
EGRO				Lg	Lg	12 00 48.3	
	79nm,0.1s,SNR=22						
ESPR	**Espera**	**1.23**	**73**	Pg	**Pg**	**12 00 40.9**	**+0.1**
	8.2nm,0.1s,SNR=80						
ESPR				Lg	Lg	12 00 55.5	
	67nm,0.4s,SNR=6.9						
PCVE	**Castro Verde**	**1.25**	**333**	Pg	**Pg**	**12 00 39.9**	**-1.2**
PCVE				Lg	Lg	12 00 56.0	
	35nm,0.2s						
PCVE	**Castro Verde**	**1.25**	**333**	*e*P	**Pg**	**12 00 39.9**	**-1.2**
PCVE				*e*S	**Sg**	**12 00 56.0**	**-1.4**
PCVE				A	A	12 00 58.3	
	35nm,0.2s						
MORF	**Marmelete**	**1.32**	**307**	*e*P	**Pg**	**12 00 41.5**	**-0.9**
MORF				*e*S	**Sg**	**12 00 57.2**	**-2.5**
MORF				AML	AML	12 01 03.1	
	comp=N,148nm,0.3s						
MORF	**Marmelete**	**1.32**	**307**	Pg	**Pg**	**12 00 41.5**	**-0.9**
MORF				Lg	Lg	12 00 58.4	
	comp=N,75nm,0.2s						
MORF	**Marmelete**	**1.32**	**307**	*e*P	**Pg**	**12 00 41.6**	**-0.9**
MORF				*e*S	**Sg**	**12 00 58.4**	**-1.3**
MORF				A	A	12 01 01.0	
	comp=N,75nm,0.2s						
PFVI	**Vila Bisbo**	**1.35**	**298**	Pg	**Pb**	**12 00 44.3**	**+1.6**
	comp=N,5.0nm,0.1s,SNR=6.2						
PFVI				Lg	Lg	12 01 01.8	
	comp=N,52nm,0.1s,SNR=12						
PFVI	**Vila Bisbo**	**1.35**	**298**	P	**Pb**	**12 00 44.1**	**+1.4**
PFVI				S	**Sn**	**12 01 02.7**	**+2.3**
PFVI	**Vila Bisbo**	**1.35**	**298**	*e*P	**Pn**	**12 00 42.2**	**-0.1**
PFVI				*e*S	**Sg**	**12 00 59.4**	**-1.2**
PFVI				A	A	12 01 04.6	
	comp=N,46nm,0.5s						
EMIN	**Mina Concepcio**	**1.36**	**23**	Pg	**Pn**	**12 00 41.4**	**-1.0**
	comp=N,2.0nm,0.2s,SNR=35						
EMIN				Lg	Lg	12 00 56.4	
	comp=N,12nm,0.1s,SNR=13						
EJIF	**Jimena Fronter**	**1.50**	**92**	⇓Pg	**Pb**	**12 00 46.5**	**+1.3**
	comp=N,148nm,0.1s,SNR=18						
MESJ	**Messejana**	**1.50**	**332**	*e*P	**Pn**	**12 00 43.1**	**-1.2**
MESJ	**Messejana**	**1.50**	**332**	Pg	**Pn**	**12 00 43.1**	**-1.2**
MESJ				Lg	Lg	12 01 02.7	
	comp=N,32nm,0.3s						
MESJ	**Messejana**	**1.50**	**332**	*e*P	**Pn**	**12 00 43.2**	**-1.2**
MESJ				*e*S	**Sn**	**12 01 02.7**	**-1.5**
MESJ				A	A	12 01 05.3	
	comp=N,32nm,0.3s						
PTEO	**Sao Teotonio**	**1.52**	**313**	Pn	**Pn**	**12 00 43.9**	**-0.7**
PTEO				Sn	**Sn**	**12 01 03.8**	**-0.8**
	comp=N,17nm,0.3s						
PTEO	**Sao Teotonio**	**1.52**	**313**	*e*P	**Pn**	**12 00 43.9**	**-0.7**
PTEO				*e*S	**Sn**	**12 01 03.8**	**-0.8**
PTEO				A	A	12 01 08.4	
	comp=N,34nm,0.3s						
PBEJ	**Beja**	**1.57**	**344**	Pg	**Pn**	**12 00 46.3**	**+1.0**
PBEJ				Lg	Lg	12 01 04.2	
	comp=N,9.0nm,0.1s						
PBEJ	**Beja**	**1.57**	**344**	*e*P	**Pn**	**12 00 46.3**	**+1.0**
PBEJ				*e*S	**Sn**	**12 01 04.2**	**-1.7**
PBEJ				A	A	12 01 06.4	
	comp=N,18nm,0.1s						
PNCL	**Nicolau / Gran**	**1.86**	**329**	Pn	**Pn**	**12 00 48.1**	**-1.2**
PNCL				Lg	Lg	12 01 13.9	
	comp=N,28nm,0.3s						
PNCL	**Nicolau / Gran**	**1.86**	**329**	*e*Pn	**Pn**	**12 00 48.1**	**-1.2**
PNCL				*e*Sg	**Sn**	**12 01 13.9**	**+0.9**
PNCL				A	A	12 01 18.1	
	comp=N,28nm,0.3s						
EMIJ	**Mijas**	**2.06**	**88**	Pn	**Pn**	**12 00 53.3**	**+1.3**
	comp=N,0.0nm,0.2s,SNR=7.9						
EMIJ				Sn	**Sn**	**12 01 17.8**	**-0.1**
	comp=N,1.1nm,0.2s,SNR=7.9						

EVO	**Evora**	**2.09**	**345**	Pg	**Pb**	**12 00 56.6**	**+1.4**
EVO				Lg	Lg	12 01 21.4	
	comp=N,26nm,0.1s						
EVO	**Evora**	**2.09**	**345**	*eP*	**Pb**	**12 00 56.6**	**+1.4**
EVO				*eS*	**Sn**	**12 01 19.8**	**+1.2**
EVO	**Evora**	**2.09**	**345**	*eSg*	**Sn**	**12 01 21.4**	**+2.8**
EVO				A	A	12 01 24.8	
	comp=N,26nm,0.1s						
HORN	**Hornachuelos**	**2.12**	**51**	P	**Pn**	**12 00 55.3**	**+2.4**
HORN				S	**Sn**	**12 01 24.8**	**+5.3**
ECAB	**El Cabril**	**2.18**	**44**	Pn	**Pn**	**12 00 53.5**	**-0.2**
	comp=N,0.3nm,0.2s,SNR=6.6						
ECAB				Sn	Sn	12 01 15.8	-5.1
	comp=N,0.5nm,0.2s,SNR=7.9						
ECAB				Lg	Lg	12 01 23.3	
	comp=N,6.5nm,0.2s,SNR=11						
EBAD	**Badajoz**	**2.25**	**6**	Pn	**Pn**	**12 00 53.3**	**-1.4**
	comp=N,0.3nm,0.1s,SNR=12						
EBAD				Pg	**Pb**	**12 00 58.0**	**0.0**
	comp=N,1.9nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	12 01 17.2	-5.5
	comp=N,8.0nm,0.2s,SNR=7.9						
EBAD				Lg	Lg	12 01 24.7	
	comp=N,45nm,0.2s,SNR=14						
PESTR	**Estremoz**	**2.36**	**355**	P	**Pn**	**12 00 59.4**	**+3.2**
PESTR				S	**Sb**	**12 01 31.0**	**+1.8**
PESTR	**Estremoz**	**2.36**	**355**	*ePn*	**Pn**	**12 00 54.8**	**-1.4**
PESTR				*eSg*	**Sn**	**12 01 28.2**	**+2.9**
PMTG	**Montargil**	**2.65**	**345**	Pn	**Pn**	**12 00 59.1**	**-1.0**
PMTG				Lg	Lg	12 01 39.8	
	comp=N,10nm,0.6s						
PMTG	**Montargil**	**2.65**	**345**	*ePn*	**Pn**	**12 00 59.1**	**-1.0**
PMTG				*eSg*	**Sb**	**12 01 39.8**	**+2.3**
PMTG				A	A	12 01 48.0	
	comp=N,10nm,0.6s						
EGOR	**Sierra Gorda,**	**2.65**	**76**	Pn	**Pn**	**12 01 01.5**	**+1.3**
	comp=N,0.2nm,0.1s,SNR=7.9						
EGOR				Sn	**Sn**	**12 01 30.8**	**-1.9**
	comp=N,0.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**2.74**	**52**	Pn	**Pn**	**12 01 00.7**	**-0.8**
	comp=N,0.5nm,0.1s,SNR=7.9						
EADA				Sn	**Sn**	**12 01 31.3**	**-3.6**
	comp=N,1.8nm,0.1s,SNR=7.9						
EADA				Lg	Lg	12 01 40.9	
	comp=N,3.6nm,0.3s,SNR=7.9						
PMAFR	**Mafra**	**2.89**	**328**	Pn	**Pn**	**12 01 03.5**	**0.0**
	comp=N,1.8nm,0.2s,SNR=7.9						
PMAFR				Sn	**Sn**	**12 01 35.4**	**-3.0**
	comp=N,2.9nm,0.1s,SNR=7.9						
PMAFR				Lg	Lg	12 01 46.9	
	comp=N,7.6nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**2.89**	**328**	*eSn*	**Sn**	**12 01 35.6**	**-2.8**
PMAFR				*eSg*	**Sb**	**12 01 48.1**	**+3.7**
PMAFR				A	A	12 01 56.5	
	comp=N,12nm,0.7s						
PMRV	**Marv??o**	**2.91**	**359**	Pn	**Pn**	**12 01 02.7**	**-1.0**
PMRV				Sn	**Sn**	**12 01 35.0**	**-3.9**
PMRV				Lg	Lg	12 01 45.5	
	comp=N,11nm,0.7s						
PMRV	**Marv??o**	**2.91**	**359**	*ePn*	**Pn**	**12 01 02.7**	**-1.0**
PMRV				*eSn*	**Sn**	**12 01 35.0**	**-3.9**
PMRV				*eSg*	**Sb**	**12 01 45.5**	**+0.5**
PMRV				A	A	12 01 50.6	
	comp=N,11nm,0.7s						
ELGU	**Los Guajares,**	**3.00**	**82**	Pn	**Pn**	**12 01 06.8**	**+1.9**
	comp=N,0.6nm,0.2s,SNR=7.9						
ELGU				Sn	**Sn**	**12 01 39.1**	**-2.0**
	comp=N,0.2nm,0.2s,SNR=7.9						
ZHG	**ZHG**	**3.11**	**169**	P	**Pn**	**12 01 07.5**	**+0.9**
ZHG				S	**Sb**	**12 01 46.8**	**-4.1**
EQUE	**Quentar**	**3.19**	**76**	Pn	**Pn**	**12 01 08.3**	**+0.6**
	comp=N,1.3nm,0.3s,SNR=7.9						
EQUE				Sn	**Sn**	**12 01 42.5**	**-3.6**
	comp=N,0.2nm,0.1s,SNR=7.9						
PSBE	**So Bento**	**3.21**	**339**	*eSg*	**Sb**	**12 01 57.3**	**+3.6**
PSBE				A	A	12 02 04.3	
	comp=N,8.5nm,0.5s						
PCBR	**Castelo Branco**	**3.32**	**358**	Sn	**Sn**	**12 01 44.2**	**-4.9**
	comp=N,2.3nm,0.5s						
PCBR	**Castelo Branco**	**3.32**	**358**	*eSn*	**Sn**	**12 01 44.2**	**-4.9**
PCBR				A	A	12 02 07.6	
	comp=N,4.7nm,0.5s						
EBER	**Berja**	**3.59**	**83**	Pn	**Pn**	**12 01 15.2**	**+2.0**
	comp=N,0.4nm,0.1s,SNR=7.9						
EBER				Sn	**Sn**	**12 01 53.6**	**-2.3**
	comp=N,0.2nm,0.2s,SNR=7.9						
EQES	**Quesada**	**3.64**	**68**	Pn	**Pn**	**12 01 14.1**	**+0.3**
	comp=N,0.0nm,0.2s,SNR=7.9						
EQES				Sn	**Sn**	**12 01 53.7**	**-3.3**
	comp=N,0.8nm,0.2s,SNR=7.9						
PCAS	**Casmilo, Conde**	**3.65**	**346**	Lg	Lg	12 02 12.8	
	comp=N,6.7nm,0.7s						
PCAS	**Casmilo, Conde**	**3.65**	**346**	*eSg*	**Sb**	**12 02 12.8**	**+6.4**
PCAS				A	A	12 02 20.0	
	comp=N,6.7nm,0.7s						
EPLA	**Plasencia**	**3.68**	**15**	⇓Pn	**Pn**	**12 01 14.4**	**+0.1**
	comp=N,1.1nm,0.1s,SNR=18						
EPLA				Sn	Sn	12 01 51.8	-6.1
	comp=N,1.9nm,0.2s,SNR=7.9						
EPLA				Lg	Lg	12 02 10.5	
	comp=N,3.9nm,0.3s,SNR=5.7						
PAB	**San Pablo**	**3.83**	**37**	Sn	Sn	12 01 53.7	-8.1
	comp=N,1.0nm,0.2s,SNR=7.9						
PAB				Lg	Lg	12 02 15.9	
	comp=N,1.9nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**3.88**	**358**	Sn	**Sn**	**12 01 57.7**	**-5.3**
MTE				Lg	Lg	12 02 19.1	
	comp=N,4.6nm,0.6s						
MTE	**Manteigas**	**3.88**	**358**	*eSn*	**Sn**	**12 01 57.7**	**-5.3**
MTE				*eSg*	**Sb**	**12 02 19.1**	**+6.0**
MTE				A	A	12 02 28.1	
	comp=N,9.2nm,0.6s						
ESDC	**Sonseca Array**	**4.12**	**39**	Sn	Sn	12 02 01.3	-7.6
	SNR=7.9						
SESP	**Santiago Espad**	**4.14**	**66**	Pn	**Pn**	**12 01 20.2**	**-0.5**
	comp=N,0.2nm,0.2s,SNR=7.9						
SESP				Sn	**Sn**	**12 02 05.4**	**-3.9**
	comp=N,2.2nm,0.1s,SNR=7.9						
MD31	**MD31**	**4.21**	**149**	P	**Pn**	**12 01 24.0**	**+2.4**
MD31				S	**Sn**	**12 02 11.6**	**+0.5**
MDT	**Midelt**	**4.32**	**148**	P	**Pn**	**12 01 25.1**	**+1.9**
MDT				S	**Sn**	**12 02 13.2**	**-0.6**
JBK	**JBK**	**4.45**	**118**	P	**Pn**	**12 01 26.1**	**+1.0**
JBK				S	**Sn**	**12 02 15.9**	**-1.3**
MVO	**Moncorvo**	**4.65**	**3**	Sn	Sn	12 02 13.8	-8.1
	comp=N,2.0nm,0.1s,SNR=7.9						
MVO				Lg	Lg	12 02 40.1	
	comp=N,2.8nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**4.65**	**3**	*eSn*	Sn	12 02 16.2	-5.7
MVO				A	A	12 02 52.7	
	comp=N,4.7nm,0.5s						
ETOB	**Tobarra**	**5.06**	**63**	Pn	**Pn**	**12 01 32.6**	**-0.8**
	comp=N,0.9nm,0.1s,SNR=9.7						
ETOB				Sn	**Sn**	**12 02 27.0**	**-5.1**
	comp=N,0.4nm,0.3s,SNR=7.9						
PBRG	**Braganca**	**5.30**	**5**	*ePn*	**Pn**	**12 01 36.3**	**-0.4**
OUK	**Oukaimeden**	**5.31**	**185**	P	**Pn**	**12 01 36.5**	**-0.6**
OUK				S	**Sn**	**12 02 35.8**	**-2.9**
ECAL	**Calabor**	**5.44**	**5**	Pn	**Pn**	**12 01 38.2**	**-0.4**
	comp=N,0.5nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	12 02 34.6	-6.8
	comp=N,0.7nm,0.2s,SNR=7.9						
ECAL				Lg	Lg	12 03 07.5	
	comp=N,4.7nm,0.4s,SNR=7.9						
PGAV	**Gavieira, Arco**	**5.49**	**353**	*eSn*	**Sn**	**12 02 37.6**	**-5.1**
OUZM	**OUZ**	**5.61**	**175**	P	**Pn**	**12 01 42.3**	**+1.3**
OUZM				S	**Sn**	**12 02 44.8**	**-0.9**

GCG ***10*** *12:03:28.6±0.7, 15°.60N×94°.04W, h21km±999km, MD4.6*
MEX ***10*** *12:03:30.5±0.6, 15°.56N×94°.00W, h62km±15km, MD3.8*
NEIC ***10*** *12:03:31.1±2.0, 15°.64N±0°.06×93°.85W±0°.05, h61km±11km, Error ellipse: s-maj=8.9km s-min=6.1km az=211.0*
IDC ***10*** *12:03:31.7±1.6, 15°.81N×93°.76W, h69km±10km, mb3.4/7, mb1 3.8/10, mb1mx3.5/44, mbtmp3.8/10, MS2.9/6, Ms1 2.9/6, ms1mx2.7/26, Error ellipse: s-maj=26.7km s-min=6.4km az=30.0*

ISC 10 12:03:30.8±0.9, 15°.67N±0°.05×93°.87W±0°.05, h65km±9km, n67, σ1ᵎ23/81, mb4.0/11, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.63**	**87**	*eP*	**Pn**	**12 03 44.1**	**-0.5**
PCIG				*eS*	**Sn**	**12 03 55.2**	**+0.6**
PCIG		**0.63**	**87**		**Pn**	**12 03 44.1**	**-0.5**
PCIG					**Sn**	**12 03 55.2**	**+0.6**
TGIG		**1.31**	**33**	*eP*	**Pn**	**12 03 53.6**	**+0.4**
TGIG				*eS*	**Sn**	**12 04 11.0**	**+0.9**
TGIG		**1.31**	**33**		**Pn**	**12 03 53.6**	**+0.4**
TGIG					**Sn**	**12 04 11.0**	**+0.9**
TGBT	**Tuxtla Gutierr**	**1.33**	**34**	*eP*	**Pn**	**12 03 53.5**	**+0.1**
TGBT				*eS*	**Sn**	**12 04 11.6**	**+1.3**
TGBT	**Tuxtla Gutierr**	**1.33**	**34**		**Pn**	**12 03 53.5**	**+0.1**
TGBT					**Sn**	**12 04 11.6**	**+1.3**
CMIG	**Matias Romero**	**1.71**	**326**	P	**Pn**	**12 03 58.1**	**-0.5**
	20nm,0.3s,baz=144,slow=11,SNR=227						
CMIG				S	**Sn**	**12 04 19.5**	**-0.1**
	145nm,0.3s,baz=131,slow=16,SNR=26						
CMIG				LR	LR	12 04 54.4	
	comp=Z,146nm,19.9s,baz=192,slow=50						
THIG		**1.73**	**116**	*eP*	**Pn**	**12 03 57.0**	**-1.7**
THIG				*eS*	**Sn**	**12 04 18.5**	**-1.3**
THIG		**1.73**	**116**		**Pn**	**12 03 57.0**	**-1.7**
THIG					**Sn**	**12 04 18.5**	**-1.3**
CCIG	**Comitan**	**1.77**	**70**	*eP*	**Pn**	**12 04 00.7**	**+1.2**
CCIG				*eS*	**Sn**	**12 04 22.5**	**+1.3**
CCIG	**Comitan**	**1.77**	**70**		**Pn**	**12 03 59.9**	**+0.3**
CCIG				Sn	**Sn**	**12 04 18.8**	**-2.5**
STG3	**Santiaguito 3,**	**2.42**	**113**	*eP*	**Pn**	**12 04 08.6**	**+0.4**
FUG	**Fuego 3**	**3.17**	**112**	*eP*	**Pn**	**12 04 19.9**	**+1.4**
FUG				*eS*	**Sn**	**12 04 57.6**	**+2.4**
APG	**El Apazote**	**3.35**	**101**	P	**Pn**	**12 04 20.9**	**-0.2**
	6.5nm,0.3s,baz=201,slow=22,SNR=51						
APG				LR	LR	12 04 57.6	
	comp=Z,40nm,21.3s,baz=274,slow=26						
APG				S	**Sn**	**12 04 59.3**	**-0.5**
	58nm,0.3s,baz=33,slow=18,SNR=17						
PCG	**Pacaya**	**3.40**	**112**	*eP*	**Pn**	**12 04 23.4**	**+1.7**
PCG				*eS*	**Sn**	**12 05 05.9**	**+4.9**
IXG	**Ixpaco**	**3.63**	**114**	*eP*	**Pn**	**12 04 26.2**	**+1.4**
TLIG	**Tlapa**	**4.88**	**293**		**Pn**	**12 04 42.5**	**+0.7**
TLIG				Sn	**Sn**	**12 05 37.2**	**+0.1**
TGUH	**Tegucigalpa,Un**	**6.58**	**103**		**Pn**	**12 05 04.8**	**-0.3**
TEIG	**Tepich**	**6.99**	**49**	P	**Pn**	**12 05 09.3**	**-1.3**
	34nm,0.3s,SNR=25						
TEIG				S	**Sn**	**12 06 26.5**	**-2.2**
	17nm,0.3s,SNR=4.7						
TEIG				LR	LR	12 08 15.1	
	comp=Z,69nm,21.6s,baz=251,slow=42						
TEIG	**Tepich**	**6.99**	**49**	*eP*	**Pn**	**12 05 09.3**	**-1.3**
TEIG				*eS*	**Sn**	**12 06 27.9**	**-0.8**
TEIG	**Tepich**	**6.99**	**49**		**Pn**	**12 05 09.3**	**-1.3**
TEIG					**Sn**	**12 06 28.0**	**-0.7**
MOIG	**Morelia**	**8.03**	**301**	Pn	**Pn**	**12 05 24.4**	**-0.7**
MATN	**Matagalpa**	**8.17**	**108**		**Pn**	**12 05 26.9**	**+0.1**
ACON	**Acoyapa**	**9.21**	**112**	Pn	**Pn**	**12 05 40.6**	**-0.4**
JTS	**Las Juntas de**	**10.20**	**121**	P	**Pn**	**12 05 55.6**	**+1.0**
	2.2nm,0.3s,baz=331,slow=8.5,SNR=8.7						
JTS	**Las Juntas de**	**10.20**	**121**	Pn	**Pn**	**12 05 54.7**	**+0.1**
FSCY	**Frank Sound, G**	**12.63**	**72**	Pn	**Pn**	**12 06 26.3**	**-1.5**
BCIP	**Isla Barro Col**	**15.15**	**114**	Pn	**P**	**12 07 03.4**	**-1.5**
JCT	**Junction City**	**15.71**	**341**		**P**	**12 07 11.1**	**0.0**
TXAR	**Lajitas Array**	**16.32**	**328**	P	**Pn**	**12 07 17.0**	**+1.0**
	0.1nm,0.3s,baz=150,slow=14,SNR=13						
TX32	**Lajitas Array**	**16.32**	**328**	P	**P**	**12 07 18.0**	**+0.1**
656A	**Williston**	**17.17**	**36**	Pn	**Pn**	**12 07 26.9**	**+0.4**
Z47A	**Carrollton**	**18.23**	**16**	P	**Pn**	**12 07 40.1**	**+0.8**
Z47A				IAmb	IAmb	12 07 57.6	
	comp=Z,12nm,0.8s						
LRAL	**Lakeview Retre**	**18.38**	**19**	P	**P**	**12 07 41.3**	**+0.8**
MIAR	**Mount Ida**	**18.80**	**1**	P	**P**	**12 07 44.5**	**-0.5**
Z50A	**Ashland**	**18.93**	**21**	P	**Pn**	**12 07 48.1**	**+0.3**
GDL2	**Guadalupe Moun**	**19.02**	**332**	P	**Pn**	**12 07 49.8**	**+0.7**
MNTX	**Cornudas Mount**	**19.10**	**329**	P	**Pn**	**12 07 50.4**	**+0.5**
X34A	**Smith Ranch, M**	**19.18**	**350**		**Pn**	**12 07 53.4**	**+2.6**
X34A				IAmb	IAmb	12 08 08.5	
	comp=Z,14nm,0.9s						
OXF	**Oxford**	**19.19**	**11**	P	**Pn**	**12 07 51.4**	**+0.6**
Y49A	**Blount Mountai**	**19.32**	**19**	P	**P**	**12 07 51.8**	**+1.0**
Y49A				IAmb	IAmb	12 08 03.2	
	comp=Z,8.2nm,1.2s						
WMOK	**Wichita Mounta**	**19.49**	**348**	P	**P**	**12 07 51.9**	**-0.8**
WHAR	**Wooly Hollow**	**19.59**	**4**	P	**P**	**12 07 54.7**	**+1.0**
WHAR				IAmb	IAmb	12 08 00.6	
	comp=Z,6.5nm,1.0s						
X48A	**Hartselle**	**19.68**	**17**	P	**P**	**12 07 55.6**	**+0.9**
X48A				IAmb	IAmb	12 08 11.2	
	comp=Z,7.3nm,0.8s						
MSTX	**Muleshoe**	**19.91**	**338**	P	**P**	**12 07 58.0**	**+0.7**
MSTX				IAmb	IAmb	12 08 00.7	
	comp=Z,7.3nm,1.0s						
PLAL	**Pickwick Lake**	**19.92**	**14**	P	**P**	**12 07 58.1**	**+0.8**
PLAL				IAmb	IAmb	12 08 13.8	
	comp=Z,5.0nm,0.8s						
Y52A	**Lilburn**	**20.16**	**24**	P	**P**	**12 08 01.1**	**+1.1**
AMTX	**Amarillo**	**20.38**	**341**	P	**P**	**12 08 01.9**	**-0.5**
AMTX				IAmb	IAmb	12 08 02.9	
	comp=Z,8.2nm,0.7s						
LCAR	**Lake Charles**	**20.46**	**6**	P	**P**	**12 08 05.1**	**+2.0**
LCAR				IAmb	IAmb	12 08 08.7	
	comp=Z,6.2nm,1.2s						
X51A	**Calhoun**	**20.49**	**22**	P	**P**	**12 08 05.2**	**+1.7**
HHAR	**Hobbs**	**20.53**	**360**	P	Pn	**12 08 07.8**	**+1.1**
HHAR				IAmb	IAmb	12 08 22.4	
	comp=Z,7.2nm,0.9s						
SWET	**Sewanee**	**20.73**	**19**	P	**P**	**12 08 06.7**	**+0.7**
SWET				IAmb	IAmb	12 08 22.4	
	comp=Z,11nm,1.0s						
HODGE	**Hodges**	**21.24**	**27**	P	**P**	**12 08 13.2**	**+1.7**
HODGE				IAmb	IAmb	12 08 16.6	
	comp=Z,6.8nm,1.0s						
PBMO	**Poplar Bluff**	**21.25**	**8**	P	**P**	**12 08 12.8**	**+1.3**
PBMO				IAmb	IAmb	12 08 28.3	
	comp=Z,6.4nm,0.8s						
TKL	**Tuckaleechee C**	**21.86**	**23**	LR	LR	12 19 31.4	
	comp=Z,26nm,18.0s,baz=2,slow=44						
U49A	**Red Boiling Sp**	**21.97**	**18**	P	**P**	**12 08 20.5**	**+1.1**
U49A				IAmb	IAmb	12 08 26.5	
	comp=Z,8.3nm,0.8s						
ANMO	**Albuquerque**	**22.27**	**332**	P	**P**	**12 08 23.4**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=152,slow=17,SNR=3.8						
ANMO				LR	LR	12 18 22.3	
	comp=Z,71nm,18.6s,baz=162,slow=40						
ANMO	**Albuquerque**	**22.27**	**332**	P	**P**	**12 08 23.1**	**+0.2**
PDAR	**Pinedale Array**	**30.17**	**337**	P	**P**	**12 09 36.2**	**+1.1**
	comp=Z,0.1nm,0.4s,baz=157,slow=9.8,SNR=1.6						
SNOW	**Snow King Moun**	**31.22**	**336**	P	**P**	**12 09 45.0**	**+0.6**
SNOW				IAmb	IAmb	12 09 47.8	
	comp=Z,2.5nm,0.6s						
NVAR	**Mina Array Bea**	**31.24**	**321**	P	**P**	**12 09 45.9**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=138,slow=5.5,SNR=4.6						
SADO	**Sadowa**	**31.57**	**20**	LR	LR	12 22 57.0	
	comp=Z,44nm,20.0s,baz=236,slow=37						
SCHQ	**Schefferville**	**44.33**	**22**	LR	LR	12 31 01.9	
	comp=Z,19nm,20.4s,baz=280,slow=37						
YKA	**Yellowknife Ar**	**49.00**	**347**	P	**P**	**12 12 09.2**	**-1.5**
	comp=Z,1.1nm,0.6s,baz=150,slow=7.8,SNR=21						
INK	**Inuvik**	**58.34**	**344**	P	**P**	**12 13 17.7**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=135,slow=9.2,SNR=5.3						
ARCES	**ARCESS Array B**	**85.12**	**18**	P	**P**	**12 15 59.5**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=311,slow=8.2,SNR=1.5						
SEY	**Seymchan**	**86.49**	**335**	P	**P**	**12 16 05.4**	**-0.9**
	comp=Z,1.4nm,1.1s,baz=53,slow=20,SNR=1.8						

IDC 10 12:03:30.4±36.0, 34°.63N×77°.66E, h0km, mb3.5/2, mb1 3.5/3, mb1mx3.2/50, mbtmp3.4/3, ML3.1/1, 2C, Error ellipse: s-maj=672.9km s-min=73.9km az=141.0, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**8.37**	**344**	⇑Pg	Pg	12 06 26.6	+16
	3.0nm,0.7s						
AAK				⇑Lg	Lg	12 07 39.1	
	4.1nm,0.7s						
KK31	**Karatay Array**	**10.13**	**329**	Pg	Pn	12 06 17.6	+21
	0.7nm,0.3s,baz=178,slow=12,SNR=10						
KK31				Lg	Lg	12 07 27.2	
	10nm,0.7s,baz=155,slow=12,SNR=16						
MKAR	**Makanchi Array**	**12.64**	**15**	Pn	Pn	12 06 33.0	+1.5
	0.1nm,0.3s,baz=191,slow=12,SNR=4.4						
FINES	**FINESS Array B**	**42.07**	**326**	P	P	12 11 23.1	-0.4
	0.5nm,0.5s,baz=116,slow=9.4,SNR=4.8						
ARCES	**ARCESS Array B**	**44.97**	**337**	P	P	12 11 47.1	+0.3
	0.5nm,0.8s,baz=111,slow=9.8,SNR=4.0						

BEO 10 12:12:02.9±0.8, 44°.40N×21°.88E, h0km, ML1.3/6, 5C-3D,

Mining explosion., Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUBS	**Kucevo**	**0.15**	**276**	*ePg*	Pg	12 12 04.4	-1.3
KUBS				*eSg*	Sg	12 12 07.3	-0.3
MDVR	**Moldovita**	**0.40**	**343**	⇓P	Pg	12 12 09.5	-1.1
MDVR				⇑S	Sg	12 12 14.7	-1.1
HERR	**Herculane**	**0.62**	**38**	⇑P	Pg	12 12 12.7	-2.0
HERR				⇑S	Sg	12 12 21.4	-1.3
ZAGS	**Zajecar**	**0.64**	**156**	*ePg*	Pg	12 12 14.0	-1.1
ZAGS				*eSg*	Sg	12 12 22.1	-1.3
GRUS	**Gruza**	**0.98**	**239**	*ePg*	Pg	12 12 21.3	-0.4
GRUS				*eSg*	Sg	12 12 35.0	+0.6
TRUS	**Trudelj**	**1.07**	**261**	*ePg*	Pg	12 12 22.8	-0.6
TRUS				*eSg*	Sg	12 12 36.1	-1.2
GZR	**Gura Zlata**	**1.18**	**32**	⇓P	Pg	12 12 23.4	-2.1
GZR				⇓S	Sg	12 12 40.2	-0.6
BZS	**Buzias**	**1.23**	**351**	⇑P	Pg	12 12 24.8	-1.7
BZS				⇑S	Sg	12 12 41.3	-1.2
ZAPS	**Zavoj**	**1.25**	**154**	*ePg*	Pg	12 12 26.3	-0.5
ZAPS				*eSg*	Sg	12 12 43.4	+0.4
SELS	**Selova**	**1.30**	**205**	*ePg*	Pg	12 12 26.3	-1.5
BARS	**Barje**	**1.58**	**182**	*ePg*	Pn	12 12 30.9	-1.3
BARS				*eSg*	Sn	12 12 52.3	-1.1

DJA ***10*** *12:44:18.4±1.0, 2°.5±2°×12°.2E±°, h12km±7km, M4.4/12, mB5.0/2, mb4.8/3, MLv4.3/12, Mw(mB)4.3/2*
IDC ***10*** *12:44:20.1±5.2, 2°.80S×121°.68E, h0km, mb3.8/3, mb1 4.0/6, mb1mx3.6/50, mbtmp3.9/6, ML3.4/2, MS3.2/4, Ms1 3.2/4, ms1mx2.8/37, Error ellipse: s-maj=84.0km s-min=28.3km az=152.0*

ISC 10 12:44:19.3±0.8, 2°.44S±0°.05×121°.44E±0°.05, h22km, n24, σ1ᵎ51/26, mb3.7/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.53**	**8**	P	**Pn**	**12 44 45.2**	**-0.1**
APSI				S	**Sb**	**12 45 08.1**	**+2.1**
TTSI	**Tana Toraja**	**1.73**	**249**	P	**Pn**	**12 44 47.9**	**-0.1**
TTSI				S	**Sb**	**12 45 11.1**	**-0.5**
LUWI	**Luwuk**	**1.92**	**44**	P	**Pn**	**12 44 50.5**	**-0.2**
LUWI				S	**Sb**	**12 45 16.6**	**-0.7**
SPSI	**Sidrap Palu**	**2.25**	**228**	P	**Pn**	**12 44 56.0**	**+0.7**
SPSI				S	**Sb**	**12 45 25.0**	**-1.8**
BNSI	**Bone**	**2.36**	**214**	P	**Sb**	**12 45 32.9**	**+3.1**
MRSI	**Marisa**	**2.94**	**10**	P	**Pn**	**12 45 05.2**	**+0.5**
KAPI	**Kappang**	**3.06**	**213**	Pn	**Pn**	**12 45 07.3**	**+0.9**
	baz=14,slow=4.4						
KAPI				Sn	**Sn**	**12 45 45.6**	**+3.2**
	14nm,0.3s,baz=226,slow=24,SNR=2.3						
KAPI				LR	LR	12 46 34.1	
	comp=Z,305nm,20.3s,baz=55,slow=46						
BKSI	**Bulukumba**	**3.15**	**205**	P	**Pn**	**12 45 07.8**	**+0.2**
MPSI	**Mapaga**	**3.16**	**331**	P	**Pn**	**12 45 08.3**	**+0.6**
BBSI	**Bau Bau**	**3.23**	**160**	P	**Pn**	**12 45 09.2**	**+0.4**
KMSI	**Cibinong**	**3.93**	**40**	P	**Pb**	**12 45 28.3**	**+0.4**
SANI	**Sanana**	**4.56**	**85**	P	**Pn**	**12 45 25.1**	**-2.0**
KBKI	**Kotabaru**	**5.33**	**261**	P	**Pb**	**12 45 50.3**	**-1.5**
EDFI	**Ende, Flores**	**6.28**	**178**	P	**Pn**	**12 45 48.1**	**-2.6**
LBMI	**Labuha**	**6.32**	**74**	P	**Pn**	**12 45 51.9**	**+0.7**
	0.3nm1µm76nm,0.9s						
SOEI	**Soe**	**7.80**	**159**	P	**Pn**	**12 46 10.9**	**-0.7**
BATI	**Baumata**	**8.03**	**164**	LR	LR	12 50 03.0	
	comp=Z,223nm,19.2s,baz=113,slow=45						
SIJI	**Sorong**	**9.95**	**81**	Pn	**Pn**	**12 46 41.8**	**+0.7**
	1.9nm,0.3s,baz=290,slow=19,SNR=4.4						
LEM	**Lembang**	**14.45**	**252**	LR	LR	12 53 35.9	
	comp=Z,78nm,20.4s,baz=60,slow=38						
FITZ	**Fitzroy Crossi**	**16.10**	**165**	Pn	**Pn**	**12 48 02.2**	**-2.2**
	0.0nm,0.3s,baz=328,slow=15,SNR=2.2						
WRA	**Warramunga Arr**	**21.48**	**145**	P	**P**	**12 49 05.4**	**-1.3**
	2.9nm,0.9s,baz=320,slow=11,SNR=10						
ASAR	**Alice Springs**	**24.31**	**151**	P	**P**	**12 49 35.6**	**+0.1**
	1.2nm,0.7s,baz=333,slow=9.6,SNR=14						
STKA	**Stephens Creek**	**34.90**	**149**	P	**P**	**12 51 10.3**	**+0.9**
	2.1nm,0.7s,baz=315,slow=11,SNR=4

TGUH	**Tegucigalpa,Un**	**2.46**	**337**			**Pn**	**12 45 37.1**	**+1.5**
TGUH				Sn		**Sn**	**12 46 09.0**	**+1.7**
TGUH	**Tegucigalpa,Un**	**2.46**	**337**	⇑*iP*		**Pn**	**12 45 37.2**	**+1.5**
BLLM	**Bellamira**	**2.53**	**311**	*eP*		**Pn**	**12 45 38.2**	**+1.7**
BLLM	**Bellamira**	**2.53**	**311**	*eP*		**Pn**	**12 45 38.2**	**+1.7**
LCY	**Lacayo**	**2.56**	**310**	*eP*		**Pn**	**12 45 38.3**	**+1.4**
LCY				*eS*		**Sn**	**12 46 11.2**	**+1.8**
LCY	**Lacayo**	**2.56**	**310**	*eP*		**Pn**	**12 45 38.3**	**+1.4**
LCY				*eS*		**Sn**	**12 46 11.2**	**+1.8**
FAGO	**Alcalda de S**	**2.61**	**317**	*eP*		**Pn**	**12 45 38.5**	**+1.0**
FAGO	**Alcalda de S**	**2.61**	**317**	*eP*		**Pn**	**12 45 38.5**	**+1.0**
TECA	**Tecapa**	**2.76**	**308**	*eP*		**Pn**	**12 45 40.8**	**+1.3**
TECA	**Tecapa**	**2.76**	**308**	*eP*		**Pn**	**12 45 40.8**	**+1.3**
COEB	**Comit de Eme**	**2.79**	**308**	*eP*		**Pn**	**12 45 41.0**	**+1.3**
COEB				IAML			12 46 23.5	
	comp=Z,575nm,0.5s							
COEB	**Comit de Eme**	**2.79**	**308**	*eP*		**Pn**	**12 45 41.0**	**+1.3**
COEB				IAML			12 46 23.5	
	comp=Z,575nm,0.5s							
LCR2	**La Lucha 2**	**3.01**	**132**	*eP*		**Pn**	**12 45 43.2**	**+0.6**
LFRS	**El Faro**	**3.28**	**304**	*eP*		**Pn**	**12 45 47.6**	**+1.7**
LFRS	**El Faro**	**3.28**	**304**	*eP*		**Pn**	**12 45 47.6**	**+1.7**
SNET	**Serv Nac Est T**	**3.45**	**304**	Pn		**Pn**	**12 45 47.7**	**-0.4**
SNET				Sn		**Sn**	**12 46 27.7**	**-1.8**
BOQS	**Boqueron**	**3.52**	**304**	*eP*		**Pn**	**12 45 51.3**	**+2.2**
BOQS	**Boqueron**	**3.52**	**304**	*eP*		**Pn**	**12 45 51.3**	**+2.2**
CEVE	**Cerro Verde**	**3.85**	**302**	*eP*		**Pn**	**12 45 56.0**	**+2.6**
CEVE	**Cerro Verde**	**3.85**	**302**	*eP*		**Pn**	**12 45 56.0**	**+2.6**
APG	**El Apazote**	**5.19**	**309**	P		**Pn**	**12 46 13.3**	**+2.3**
	comp=Z,2.2nm,0.3s,baz=117,slow=9.5,SNR=15							
APG				S		**Sn**	**12 47 05.1**	**-5.2**
	comp=Z,0.7nm,0.3s,baz=270,slow=20,SNR=1.6							
CMIG	**Matias Romero**	**9.87**	**303**	P		**Pn**	**12 47 14.0**	**+0.9**
	comp=Z,2.3nm,0.3s,baz=119,slow=11,SNR=13							
CMIG				S		**Sn**	**12 48 54.8**	**-7.7**
	comp=Z,1.0nm,0.3s,baz=35,slow=22,SNR=5.0							
TLIG	**Tlapa**	**13.21**	**297**	Pn		**Pn**	**12 47 57.9**	**+1.1**
RUSC	**La Rusia**	**14.28**	**113**	P		**P**	**12 48 12.3**	**-1.2**
SDV	**Santo Domingo**	**15.65**	**99**	P		**Pn**	**12 48 25.2**	**-2.3**
	comp=Z,0.4nm,0.3s,baz=274,slow=6.6,SNR=7.6							
SDV	**Santo Domingo**	**15.65**	**99**			**Pn**	**12 48 26.3**	**-1.1**
SDV				IAmb		IAmb	12 48 45.2	
	comp=Z,7.8nm,1.1s							
PCRV	**Puerto La Cruz**	**21.30**	**92**	P		**P**	**12 49 30.1**	**+0.5**
	comp=Z,5.7nm,0.5s,baz=221,slow=9.0,SNR=2.4							
PLCV	**Puerto La Cruz**	**21.35**	**92**	P		**P**	**12 49 30.1**	**0.0**
MIAR	**Mount Ida**	**23.62**	**345**	P		**P**	**12 49 52.9**	**+1.0**
MIAR				IAmb		IAmb	12 49 59.7	
	comp=Z,5.1nm,1.2s							
TX32	**Lajitas Array**	**23.82**	**320**	P		**P**	**12 49 54.7**	**+0.8**
TXAR	**Lajitas Array**	**23.82**	**320**	P		**P**	**12 49 54.6**	**+0.6**
	comp=Z,7.8nm,0.6s,baz=142,slow=9.6,SNR=102							
WHAR	**Wooly Hollow**	**24.03**	**348**	P		**P**	**12 49 56.6**	**+0.9**
WHAR				IAmb		IAmb	12 50 10.9	
	comp=Z,8.6nm,1.4s							
ABTX	**Abilene, Hawle**	**24.11**	**331**	P		**P**	**12 49 57.8**	**+1.3**
ABTX				IAmb		IAmb	12 50 05.8	
	comp=Z,3.2nm,0.8s							
MNTX	**Cornudas Mount**	**26.52**	**321**	P		**P**	**12 50 18.6**	**+0.3**
X16A	**Lo Mia Camp, P**	**32.13**	**319**	P		**P**	**12 51 08.3**	**+0.2**
PDAR	**Pinedale Array**	**36.91**	**321**	P		**P**	**12 51 48.6**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=149,slow=9.4,SNR=2.2							
NVAR	**Mina Array Bea**	**38.96**	**319**	P		**P**	**12 52 07.7**	**+1.3**
	comp=Z,0.8nm,0.6s,baz=133,slow=7.7,SNR=8.2							
PLCA	**Paso Flores**	**54.24**	**165**	P		**P**	**12 54 04.7**	**-0.2**
	comp=Z,3.0nm,0.9s,baz=8.0,slow=3.8,SNR=4.8							
PLCA	**Paso Flores**	**54.24**	**165**	P		**P**	**12 54 04.6**	**-0.3**
YKA	**Yellowknife Ar**	**54.56**	**344**	pP		pP	12 54 42.0	-0.1
	comp=Z,0.3nm,0.8s,baz=133,slow=7.2,SNR=4.4							
ASAR	**Alice Springs**	**140.08**	**247**	PKhKP	PKPpre		13 04 01.6	
	comp=Z,1.0nm,0.6s,baz=106,slow=3.6,SNR=4.5							
ASAR				PKP		**PKPdf**	**13 04 06.2**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=104,slow=1.6,SNR=4.7							
WRA	**Warramunga Arr**	**140.19**	**253**	PKhKP	PKPpre		13 03 59.5	
	comp=Z,0.4nm,0.8s,baz=90,slow=2.2,SNR=4.7							
WRA				PKP		**PKPdf**	**13 04 06.2**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=91,slow=2.1,SNR=24							
FITZ	**Fitzroy Crossi**	**148.57**	**255**	PKPbc		**PKPbc**	**13 04 24.6**	**0.0**
	comp=Z,0.6nm,0.5s,baz=211,slow=4.5,SNR=6.1							

*IDC **10** 12:45:06.4±1.1, 11°38S×162°86E, h0km, mb4.0/10, mb1 4.1/11,mb1mx3.9/54,mbtmp4.0/11,ML3.8/1,MS3.2/3, Ms1 3.2/3,ms1mx2.7/29, Error ellipse: s-maj=35.3km s-min=22.2km az=130.0*

*NEIC **10** 12:45:07.5±1.3, 11°39S±0°05×162°9E±0°1, h10km±1km, mb4.2/12, Error ellipse: s-maj=19.0km s-min=4.7km az=64.0*

ISC 10 12:45:11.3±0.6, 11°43S±0°09×162°90E±0°10, h35km, n34, σ0§91/28, mb4.0/15, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.52**	**304**	Pn	**Pn**	**12 46 05.1**	**+1.5**
	14nm,0.3s,baz=177,slow=7.8,SNR=2.7						
HNR				Sn	**Sn**	**12 46 43.8**	**-0.3**
	24nm,0.3s,baz=165,slow=16,SNR=2.2						
HNR				LR	LR	12 47 39.6	
	comp=Z,178nm,20.4s,baz=127,slow=44						
HNR	**Honiara**	**3.52**	**304**		**Pn**	**12 46 02.2**	**-1.4**
HNR					**Sn**	**12 46 45.6**	**+1.5**
DZM	**Mont Dzumac**	**11.11**	**163**	Pn	**Pn**	**12 47 48.6**	**+0.8**
	0.7nm,0.3s,baz=26,slow=8.7,SNR=39						
KRVT	**Keravat (AS076**	**12.89**	**302**	LR	LR	12 53 27.8	
	comp=Z,134nm,21.5s,baz=97,slow=39						
COEN	**Coen**	**19.41**	**260**	Pn	**Pn**	**12 49 35.5**	**-0.5**
COEN				IAmb	IAmb	12 49 42.4	
	comp=Z,13nm,1.1s						
RAO	**Raoul Island**	**25.18**	**138**	LR	LR	12 59 30.8	
	comp=Z,66nm,19.1s,baz=35,slow=34						
STKA	**Stephens Creek**	**28.29**	**221**	P	**P**	**12 51 01.9**	**+0.3**
WB0	**Warramunga Arr**	**28.65**	**250**	P	**P**	**12 51 04.4**	**-0.6**
WB0				IAmb	IAmb	12 51 21.5	
	comp=Z,5.2nm,1.1s						
WB2	**Warramunga Arr**	**28.73**	**249**	P	**P**	**12 51 04.2**	**-1.5**
WB2				IAmb	IAmb	12 51 05.8	
	comp=Z,2.5nm,0.8s						
WRA	**Warramunga Arr**	**28.74**	**249**	P	**P**	**12 51 05.2**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=78,slow=9.0,SNR=7.4						
MXZ	**Matakaoa Point**	**29.46**	**155**	P	**P**	**12 51 11.5**	**-0.5**
H11S2	**WAKE ISLAND Hy**	**29.97**	**7**	T	T	13 22 48.5	
	baz=188,slow=76,SNR=31						
H11S3	**WAKE ISLAND Hy**	**29.97**	**7**	T	T	13 22 50.3	
	baz=188,slow=76,SNR=26						
H11S1	**WAKE ISLAND Hy**	**29.98**	**7**	T	T	13 22 49.0	
	baz=188,slow=76,SNR=18						
ASAR	**Alice Springs**	**30.14**	**242**	P	**P**	**12 51 17.9**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=62,slow=9.8,SNR=12						
TOO	**Toolangi**	**30.36**	**208**	P	**P**	**12 51 20.9**	**+0.9**
TOO				IAmb	IAmb	12 51 30.3	
	comp=Z,2.9nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**31.20**	**7**	T	T	13 24 22.0	
	baz=188,slow=76,SNR=9.0						
H11N3	**WAKE ISLAND Hy**	**31.20**	**7**	T	T	13 24 25.7	
	baz=188,slow=76,SNR=11						
H11N2	**WAKE ISLAND Hy**	**31.22**	**7**	T	T	13 24 26.4	
	baz=188,slow=76,SNR=11						
BBOO	**Buckleboo**	**32.56**	**225**	P	**P**	**12 51 39.2**	**-0.1**
BBOO				IAmb	IAmb	12 51 42.9	
	comp=Z,4.0nm,0.8s						
KNRA	**Kununurra**	**33.43**	**259**	P	**P**	**12 51 46.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**36.59**	**255**	P	**P**	**12 52 14.2**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=90,slow=9.8,SNR=2.0						
FITZ	**Fitzroy Crossi**	**36.59**	**255**	P	**P**	**12 52 14.1**	**-0.3**
FITZ				IAmb	IAmb	12 52 20.2	
	comp=Z,3.6nm,1.1s						
JKA	**Kamikawa-asahi**	**58.29**	**343**	P	**P**	**12 55 02.7**	**+0.2**
ASAJ	**Asahikawa**	**58.29**	**343**	P	**P**	**12 55 02.7**	**+0.2**
	comp=Z,5.5nm,0.7s,baz=236,slow=8.2,SNR=6.1						
ULN	**Ulaanbaatar**	**77.00**	**325**	P	**P**	**12 57 00.5**	**-0.2**
ULN				IAmb	IAmb	12 57 02.6	
	comp=Z,2.9nm,0.8s						
SONM	**Songino Array**	**77.35**	**325**	P	**P**	**12 57 03.8**	**+1.1**
	comp=Z,2.0nm,0.7s,baz=136,slow=6.1,SNR=12						
QSPA	**South Pole Qui**	**78.57**	**180**	P	**P**	**12 57 08.9**	**-0.3**
HDA	**Harding Lake**	**84.52**	**20**	P	**P**	**12 57 39.4**	**-1.0**
ILAR	**Eielson Array**	**84.78**	**19**	P	**P**	**12 57 40.9**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=227,slow=9.3,SNR=1.9						
NVAR	**Mina Array Bea**	**88.41**	**50**	P	**P**	**12 58 02.2**	**+1.9**
	comp=Z,0.3nm,0.7s,baz=246,slow=7.8,SNR=2.2						
MKAR	**Makanchi Array**	**91.90**	**317**	P	**P**	**12 58 16.5**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=99,slow=5.9,SNR=8.9						
ZALV	**Zalesovo Beam**	**92.25**	**325**	P	**P**	**12 58 17.3**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=24,slow=5.0,SNR=1.6						
YKA	**Yellowknife Ar**	**96.60**	**28**	P	**P**	**12 58 35.9**	**-1.4**
	comp=Z,0.4nm,0.8s,baz=262,slow=4.2,SNR=4.9						

*SOME **10** 12:51:55.7, 40°88N×71°53E, h5km*

*NNC **10** 12:51:56.6±3.8, 40°88N×71°50E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=29.5km s-min=10.3km az=179.0*

*KRNET **10** 12:51:58.3±0.1, 40°92N×71°47E, h18km, mb2.5*

ISC 10 12:51:58.2±1.7, 40°93N±0°04×71°43E±0°04, h8km±15km, n22, σ1§75/35, 14C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.95**	**25**	⇓*iP*	**Pb**	**12 52 15.8**	**-1.2**
	baz=24						
ARK				⇓*iS*	**Sb**	**12 52 28.9**	**-1.0**
	baz=24						
BTK	**Batken**	**0.99**	**208**	⇑*iP*	**Pb**	**12 52 16.9**	**-0.7**
	baz=10.0						
BTK				⇑*iS*	**Sg**	**12 52 30.6**	**+0.5**
	baz=10.0						
ARSB	**Arslanbob**	**1.24**	**71**	⇑*iP*	**Pn**	**12 52 20.4**	**-1.5**
	baz=70						
ARSB				⇑*iS*	**Sg**	**12 52 37.2**	**-0.8**
	baz=70						
IUG	**Iuzhnay**	**1.61**	**320**	*eP*	**Pb**	**12 52 28.3**	**+0.1**
	6.0nm,0.2s						
IUG				*eS*	**Sg**	**12 52 50.4**	**+0.6**
	47nm,0.3s						
IUG	**Iuzhnay**	**1.61**	**320**	P	**Pb**	**12 52 28.3**	**+0.1**
	6.0nm,0.2s						
IUG				S	**Sg**	**12 52 50.4**	**+0.6**
	47nm,0.3s						
DZA	**Taraz**	**1.96**	**358**	*eP*	**Pb**	**12 52 34.3**	**+0.2**
	100nm,0.1s						
DZA				*eS*	**Sg**	**12 53 01.2**	**0.0**
	174nm,0.2s						
AML	**Almayashu**	**2.08**	**54**	⇑*iP*	**Pb**	**12 52 34.3**	**-2.1**
	baz=53						
AML				⇑*iS*	**Sb**	**12 53 00.6**	**-1.9**
	baz=53						
MRKS	**Merke**	**2.25**	**36**	*eP*	**Pb**	**12 52 38.2**	**-1.0**
	4.9nm,0.2s						
MRKS				*eS*	**Sb**	**12 53 07.5**	**+0.3**
	13nm,0.5s						
MRKS	**Merke**	**2.25**	**36**	Pg	**Pb**	**12 52 38.2**	**-1.0**
	4.9nm,0.2s						
MRKS				Lg	Lg	12 53 07.5	
	13nm,0.5s						
KK31	**Karatay Array**	**2.28**	**343**	Pg	**Pb**	**12 52 38.6**	**-0.9**
	0.5nm,0.3s,baz=161,slow=16,SNR=13						
KK31				Lg	Lg	12 53 10.0	
	3.5nm,0.3s,baz=168,slow=29,SNR=19						
BRLS	**Borolday**	**2.41**	**331**	*eP*	**Pb**	**12 52 40.3**	**-1.5**
	1.4nm,0.3s						
BRLS				*eS*	**Sb**	**12 53 11.2**	**-0.4**
	5.7nm,0.3s						
EKS2	**Erkin-Say**	**2.46**	**45**	⇑*iP*	**Pb**	**12 52 39.7**	**-3.1**
	baz=44						
EKS2				⇑*iS*	**Sb**	**12 53 09.5**	**-3.8**
	baz=44						
UCH	**Uchtor**	**2.65**	**60**	⇑*iP*	**Pn**	**12 52 42.0**	**+0.4**
	baz=59						
UCH				⇑*iS*	**Sn**	**12 53 14.3**	**+0.2**
	baz=59						
AAK	**Ala-Archa**	**2.85**	**52**	⇑Lg	Lg	12 53 26.0	
	1.6nm,0.3s						
KZA	**Kyzart**	**3.09**	**67**	⇑*iP*	**Pn**	**12 52 47.8**	**+0.2**
	baz=67						
KZA				⇑*iS*	**Sn**	**12 53 24.5**	**-0.4**
	baz=67						
TKM2	**Tokmak 2**	**3.69**	**56**	⇑Lg	Lg	12 53 53.2	
	1.4nm,0.6s						
DGS	**Degeres**	**3.97**	**53**	*eP*	**Pb**	**12 53 09.0**	**+0.6**
	1.5nm,0.4s						
DGS				*eS*	**Sb**	**12 53 59.8**	**+3.2**
	2.7nm,0.4s						
DGS	**Degeres**	**3.97**	**53**	Pg	**Pb**	**12 53 09.0**	**+0.6**
	1.5nm,0.4s						
DGS				Lg	Lg	12 53 59.8	
	2.7nm,0.4s						
KRBS	**Karabastau**	**4.19**	**47**	*eP*	**Pb**	**12 53 13.3**	**+1.2**
	1.0nm,0.4s						
KRBS				*eS*	**Sb**	**12 54 06.7**	**+3.9**
	4.0nm,0.6s						
KRBS	**Karabastau**	**4.19**	**47**	Pg	**Pb**	**12 53 13.3**	**+1.2**
	1.0nm,0.4s						
KRBS				Lg	Lg	12 54 06.7	
	4.0nm,0.6s						
KUU	**Kurty**	**4.69**	**49**	*eP*	**Pb**	**12 53 21.9**	**+1.4**
	0.4nm,0.1s						
KUU				*eS*	**Sb**	**12 54 21.4**	**+4.3**
	1.5nm,0.5s						
KUU	**Kurty**	**4.69**	**49**	Pg	**Pb**	**12 53 21.9**	**+1.4**
	0.4nm,0.1s						
KUU				Lg	Lg	12 54 21.4	
	1.5nm,0.5s						

*MAN **10** 12:52:03.3, 9°90N×124°10E, h1km, mb5.1, ML4.0, MS4.1*

MAN Intensity IV - Sagbayan Bohol; Intensity III - Antequera Bohol.

*NEIC **10** 12:52:04.1±1.6, 9°96N±0°08×124°06E±0°08, h10km±1km, mb4.4/16, Error ellipse: s-maj=16.5km s-min=11.1km az=42.0*

*IDC **10** 12:52:11.0±3.4, 9°87N×124°07E, h72km±35km, mb3.7/9, mb1 3.8/12,mb1mx3.5/52,mbtmp4.2/12, ML4.5/3, MS3.3/14, Ms1 3.4/14,ms1mx3.1/35, Error ellipse: s-maj=36.0km s-min=14.9km az=77.0*

ISC 10 12:52:04.6±1.1, 9°94N±0°02×124°09E±0°03, h11km±7km, n67, σ1§30/78, mb4.1/19, MS3.5/10, 6C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.34**	**222**	*eP*	**Pn**	**12 52 14.5**	**-0.9**
TBP				*iS*	**Sb**	**12 52 20.9**	**+2.9**
LLP	**Lapu-Lapu**	**0.39**	**342**	⇓*iP*	**Pg**	**12 52 12.2**	**-0.3**
LLP				*i* S	**Sg**	**12 52 18.8**	**+1.1**
MSLP	**Maasin**	**0.78**	**76**	*eP*	**Pg**	**12 52 18.2**	**-1.6**
MSLP				*eS*	**Sb**	**12 52 31.6**	**+0.7**
SNPH	**Sibulan**	**1.03**	**235**	⇓*eP*	**Pg**	**12 52 23.5**	**-1.1**
SNPH				*i* S	**Sn**	**12 52 41.2**	**+1.7**
OCLP	**Ormoc**	**1.21**	**25**	*eP*	**Pn**	**12 52 26.6**	**-0.9**
OCLP				*eS*	**Sn**	**12 52 46.6**	**+2.6**
SCPH	**Surigao**	**1.39**	**97**	*eP*	**Pb**	**12 52 30.3**	**-0.3**
SCPH				*eS*	**Sb**	**12 52 45.5**	**-2.8**
CNOP	**Candoni, Negro**	**1.43**	**266**	*eP*	**Pn**	**12 52 30.0**	**-0.5**
CNOP				*eS*	**Sg**	**12 52 50.6**	**-0.2**
DCPH	**Dipolog City**	**1.54**	**208**	⇑*iP*	**Pn**	**12 52 31.1**	**-0.9**
DCPH				*i* S	**Sb**	**12 52 51.9**	**-0.6**
CGP	**Cagayan de Oro**	**1.60**	**158**	⇑*eP*	**Pn**	**12 52 31.6**	**-1.1**
CGP				*i* S	**Sn**	**12 52 52.1**	**-1.2**
GUIM	**Jordan**	**1.62**	**295**	*eP*	**Pn**	**12 52 32.4**	**-0.8**
GUIM				*eS*	**Sg**	**12 52 56.2**	**-0.7**
BUTP	**Butuan**	**1.80**	**123**	*eP*	**Pn**	**12 52 34.6**	**-0.9**
RCP	**Roxas**	**2.08**	**321**	⇑*eP*	**Pn**	**12 52 40.3**	**+0.9**
RCP				*i* S	**Sb**	**12 53 08.1**	**-0.1**
PAGZ	**Pagadian**	**2.20**	**199**	*eP*	**Pn**	**12 52 41.2**	**+0.1**
PAGZ				*eS*	**Sn**	**12 53 08.9**	**+0.7**
JAP	**San Jose, Anti**	**2.25**	**291**	⇑*eP*	**Pb**	**12 52 44.1**	**-1.2**
CNP	**Catarman**	**2.61**	**12**	*eP*	**Pn**	**12 52 47.4**	**+0.7**
CTBH	**Cotabato--PC H**	**2.71**	**177**	⇑*eP*	**Pn**	**12 52 48.1**	**0.0**
KCP	**Kidapawan**	**3.08**	**161**	⇑*eP*	**Pn**	**12 52 55.0**	**+1.7**
KCP				*i* S	**Sn**	**12 53 29.6**	**-0.6**
DMPH	**Davao City--Mi**	**3.17**	**154**	⇓*eP*	**Pb**	**12 53 02.2**	**+1.2**
DMPH				*i* S	**Sg**	**12 53 47.7**	**+1.1**
DAV	**Davao City (W)**	**3.21**	**153**	P	**Pn**	**12 52 57.6**	**+2.5**
	69nm,0.3s,baz=325,slow=7.0,SNR=5.7						
DAV				S	**Sg**	**12 53 51.2**	**+3.3**
	43nm,0.3s,baz=115,slow=23,SNR=4.7						
DAV				LR	LR	12 54 28.0	
	comp=Z,803nm,18.2s,baz=358,slow=43						
DAV	**Davao City (W)**	**3.21**	**153**	Pn	**Pn**	**12 52 55.3**	**+0.2**
DAV				Sn	**Sn**	**12 53 35.2**	**+1.9**
SKMP	**Bagumbayan, Su**	**3.43**	**172**	*eP*	**Pn**	**12 52 59.7**	**+1.6**
SKMP				*eS*	**Sn**	**12 53 39.5**	**+0.8**
MATI	**Mati**	**3.67**	**144**	*eP*	**Pn**	**12 53 02.5**	**+1.2**
MATI				*eS*	**Sb**	**12 53 54.9**	**+0.8**
DDMP	**Don Marcelino,**	**4.14**	**157**	*eP*	**Pn**	**12 53 08.2**	**+0.4**
DDMP				*eS*	**Sn**	**12 53 55.8**	**-0.4**
TGY	**Tagaytay City**	**5.16**	**324**	LR	LR	12 55 43.1	
	comp=Z,269nm,18.1s,baz=142,slow=41						
KKM	**Kota Kinabalu**	**8.71**	**244**	Pn	**Pn**	**12 54 10.0**	**-0.6**
KKM				Sn	**Sn**	**12 55 50.2**	**+1.3**
LUWI	**Luwuk**	**10.99**	**187**	Pn	**Pn**	**12 54 41.8**	**-0.1**
SIJI	**Sorong**	**12.90**	**146**	LR	LR	13 00 50.2	
	comp=Z,69nm,18.1s,baz=266,slow=40						
SBUM	**Sibu**	**13.95**	**239**	Pn	**Pn**	**12 55 22.6**	**+0.2**
SSLB	**Suanglung**	**14.09**	**348**	P	**P**	**12 55 31.9**	**-0.1**
KAPI	**Kappang**	**15.47**	**196**	LR	LR	13 02 30.9	
	comp=Z,25nm,18.4s,baz=319,slow=40						
JOW	**Kunigami**	**17.26**	**13**	P	**P**	**12 56 09.5**	**+2.4**
	1.7nm,0.3s,baz=91,slow=19,SNR=8.1						
BATI	**Baumata**	**20.02**	**181**	P	**P**	**12 56 37.9**	**+0.3**
	3.3nm,0.3s,baz=264,slow=2.9,SNR=6.9						
BATI				LR	LR	13 07 04.0	
	comp=Z,73nm,18.1s,baz=150,slow=45						
LEM	**Lembang**	**23.38**	**225**	LR	LR	13 06 23.2	
	comp=Z,119nm,19.3s,baz=72,slow=36						
MTN	**Manton Dam**	**23.70**	**163**		**P**	**12 57 16.0**	**-0.6**
MTN				IAmb	IAmb	12 57 23.1	
	comp=Z,18nm,1.4s						
CMAR	**Chiang Mai Arr**	**25.78**	**292**	P	**P**	**12 57 37.5**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=91,slow=8.5,SNR=1.7						
CMAR				LR	LR	13 07 44.9	
	comp=Z,46nm,18.7s,baz=115,slow=36						
KNRA	**Kununurra**	**25.87**	**170**	P	**P**	**12 57 36.1**	**-0.4**
KNRA				IAmb	IAmb	12 57 42.0	
	comp=Z,4.9nm,0.7s						
PSI	**Prapat**	**25.98**	**256**	P	**P**	**12 57 38.2**	**+0.4**
	comp=Z,1.6nm,0.4s,baz=0.3,slow=8.7,SNR=1.8						
RPSI	**Rantau Prapat**	**26.01**	**256**	P	**P**	**12 57 38.2**	**+0.3**
KSRS	**Korea Array**	**27.61**	**7**	P	**P**	**12 57 52.7**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=191,slow=12,SNR=3.1						
FITZ	**Fitzroy Crossi**	**27.91**	**177**	P	**P**	**12 57 53.9**	**-0.9**
	comp=Z,2.0nm,0.8s,baz=0.0,slow=14,SNR=3.7						
FITZ	**Fitzroy Crossi**	**27.91**	**177**	P	**P**	**12 57 53.0**	**-1.8**
FITZ				IAmb	IAmb	12 57 59.7	
	comp=Z,6.8nm,1.4s						
WRA	**Warramunga Arr**	**31.37**	**161**	P	**P**	**12 58 23.8**	**-1.7**
	comp=Z,0.4nm,0.9s,baz=342,slow=9.5,SNR=2.0						
WB2	**Warramunga Arr**	**31.37**	**161**	P	**P**	**12 58 25.7**	**+0.1**
AS31	**Alice Springs**	**34.76**	**164**	P	**P**	**12 58 55.0**	**-0.2**
ASAR	**Alice Springs**	**34.76**	**164**	P	**P**	**12 58 53.5**	**-1.6**
	comp=Z,1.1nm,0.6s,baz=342,slow=6.7,SNR=14						
ASAR				LR	LR	13 15 47.7	
	comp=Z,78nm,19.0s,baz=162,slow=41						
GTA	**Gaotai**	**36.47**	**328**	*eP*	**P**	**12 59 11.7**	**+1.9**
GTA				pP	sP	12 59 20.3	+5.4
GTA				sP	pP	12 59 24.5	+11
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KLR	**Kul'dur**	**39.68**	**8**	LR	LR	13 16 13.4	
	comp=Z,20nm,18.7s,baz=211,slow=36						
ULN	**Ulaanbaatar**	**40.44**	**342**	P	**P**	**12 59 43.6**	**+0.5**
SONM	**Songino Array**	**40.61**	**342**	P	**P**	**12 59 47.6**	**+3.0**
	comp=Z,0.4nm,0.6s,baz=156,slow=11,SNR=2.2						
NWAO	**Narrogin (SRO)**	**43.13**	**188**	P	**P**	**13 00 03.9**	**-1.3**
BBOO	**Buckleboo**	**44.02**	**165**	P	**P**	**13 00 12.7**	**+0.3**
BBOO				IAmb	IAmb	13 00 25.0	
	comp=Z,9.4nm,1.2s						
STKA	**Stephens Creek**	**44.83**	**159**	P	**P**	**13 00 18.5**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=342,slow=12,SNR=3.2						
STKA				LR	LR	13 21 50.7	
	comp=Z,70nm,20.9s,baz=212,slow=40						
STKA	**Stephens Creek**	**44.83**	**159**	P	**P**	**13 00 18.6**	**-0.3**
TLY	**Talaya**	**44.85**	**342**	P	**P**	**13 00 17.6**	**-1.2**
TLY				IAmb	IAmb	13 00 19.5	
	comp=Z,2.9nm,0.7s						
MK31	**Makanchi Array**	**51.00**	**324**	P	**P**	**13 01 05.9**	**-0.7**
MKAR	**Makanchi Array**	**51.00**	**324**	P	**P**	**13 01 04.1**	**-2.5**
	comp=Z,1.0nm,0.7s,baz=128,slow=10,SNR=4.6						
NIL	**Nilore**	**52.15**	**305**	P

YUK				A	A	12 59 17.0		
	160nm,0.2s							
YUK				A	A	12 59 17.0		
	200nm,0.2s							
YUK	**Yuzh-Kuril'sk**	**2.86**	**242**	*c iPN*	**Pn**	**12 58 41.6**	**+1.2**	
YUK				*i* S	**Sn**	**12 59 15.9**	**+0.5**	
YUK				pmax	pmax			
	comp=Z,125µm,0.3s							
YUK				pmax	pmax			
	comp=N,47µm,0.2s							
YUK				smax	smax			
	comp=N,160nm,0.2s							
YUK				smax	smax			
	comp=E,203nm,0.2s							
LAGR	**Lagunnoye**	**2.89**	**243**	*e*P	**Pn**	**12 58 41.8**	**+1.0**	
LAGR				AMB	AMB	12 58 43.0		
	comp=E,80nm,0.3s							
LAGR				*i* S	**Sn**	**12 59 16.7**	**+0.4**	
LAGR				A	A	12 59 21.0		
	comp=E,390nm,0.3s							
LAGR				A	A	12 59 21.0		
	comp=E,280nm,0.3s							
LAGR	**Lagunnoye**	**2.89**	**243**	*e*PN	**Pn**	**12 58 41.8**	**+1.0**	
LAGR				*i* S	**Sn**	**12 59 16.5**	**+0.2**	
LAGR				pmax	pmax			
	comp=E,77nm,0.2s							
LAGR				pmax	pmax			
	comp=N,24nm,0.1s							
LAGR				pmax	pmax			
	comp=E,68nm,0.1s							
LAGR				smax	smax			
	comp=N,393nm,0.2s							
LAGR				smax	smax			
	comp=E,279nm,0.2s							
GRPR	**Tuman**	**2.93**	**242**	*e*P	**Pn**	**12 58 42.3**	**+0.9**	
GRPR				AMB	AMB	12 58 44.0		
	comp=E,60nm,0.2s							
GRPR				AMB	AMB	12 58 44.0		
	comp=E,60nm,0.2s							
GRPR				*i* S	**Sn**	**12 59 17.5**	**+0.3**	
GRPR				A	A	12 59 19.0		
	comp=E,210nm,0.2s							
GRPR				A	A	12 59 19.0		
	comp=E,160nm,0.2s							
GRPR	**Tuman**	**2.93**	**242**	*e*PN	**Pn**	**12 58 42.3**	**+0.9**	
GRPR				*i* S	**Sn**	**12 59 17.5**	**+0.3**	
GRPR				pmax	pmax			
	comp=N,58nm,0.2s							
GRPR				pmax	pmax			
	comp=Z,64nm,0.2s							
GRPR				smax	smax			
	comp=N,213nm,0.2s							
GRPR				smax	smax			
	comp=E,161nm,0.2s							
GLVR	**Golovnino**	**3.22**	**240**	*e*P	**Pn**	**12 58 46.1**	**+1.1**	
GLVR				AMB	AMB	12 58 47.0		
	comp=E,60nm,0.3s							
GLVR				*i* S	**Sn**	**12 59 24.5**	**+0.7**	
GLVR				A	A	12 59 26.0		
	comp=E,140nm,0.3s							
GLVR				A	A	12 59 26.0		
	comp=E,170nm,0.3s							
GLVR	**Golovnino**	**3.22**	**240**	*e*PN	**Pn**	**12 58 46.1**	**+1.1**	
GLVR				*i* S	**Sn**	**12 59 24.5**	**+0.7**	
GLVR				pmax	pmax			
	comp=Z,61µm,0.1s							
GLVR				smax	smax			
	comp=N,139nm,0.2s							
GLVR				smax	smax			
	comp=E,170nm,0.2s							
NEM2	**Nemuro 2**	**3.31**	**233**	P	**Pn**	**12 58 45.8**	**-0.4**	
NEM2				*e*S	**Sn**	**12 59 23.0**	**-2.8**	
NMR	**Nemuro--Hokkai**	**3.32**	**233**	*i* P	**Pn**	**12 58 45.4**	**-0.9**	
NMR	**Nemuro--Hokkai**	**3.32**	**233** ⇑	*i*PN	**Pn**	**12 58 45.4**	**-0.9**	
NMR				*i* S	**Sn**	**12 59 23.1**	**-2.9**	
JNK	**Nakash**	**3.80**	**243**	P	**Pn**	**12 58 53.7**	**+1.2**	
JAK	**Akkeshi**	**4.14**	**236**	P	**Pn**	**12 58 56.6**	**-0.4**	
JAK				*e*S	**Sn**	**12 59 42.0**	**-3.1**	
JAR	**Ashorobuto**	**4.54**	**244**	P	**Pn**	**12 59 03.7**	**+1.5**	
JOB	**Onbets**	**4.71**	**240**	P	**Pn**	**12 59 05.1**	**+0.7**	
JOB				*e*S	**Sn**	**12 59 56.5**	**-2.0**	
YSS	**Yuzh-Sakhalins**	**4.83**	**291**	*e*P	**Pn**	**12 59 08.3**	**+2.3**	
YSS				AMB	AMB	12 59 10.5		
	comp=E,30nm,0.8s							
YSS				*e*S	**Sn**	**13 00 04.2**	**+2.8**	
YSS	**Yuzh-Sakhalins**	**4.83**	**291**	*e*PN	Pn	12 59 11.3	+5.3	
YSS				MLR	MLR			
	comp=Z,100nm,13.0s							
YSS	**Yuzh-Sakhalins**	**4.83**	**291**	Pn	**Pn**	**12 59 05.3**	**-0.7**	
JKA	**Kamikawa-asahi**	**4.99**	**257**	*e*P	**Pn**	**12 59 10.9**	**+2.7**	
JKA	**Kamikawa-asahi**	**4.99**	**257**		**Pn**	**12 59 10.9**	**+2.7**	
ASAJ	**Asahikawa**	**4.99**	**257**	P	**Pn**	**12 59 10.9**	**+2.7**	
	comp=Z,0.3nm,0.3s,baz=113,slow=12,SNR=3.3							
JCH	**Churui**	**5.16**	**239**	P	**Pn**	**12 59 10.7**	**+0.3**	
JCH				*e*S	**Sn**	**13 00 05.2**	**-4.0**	
ERM	**Erimo**	**5.64**	**235**	*i* PN	**Pn**	**12 59 18.8**	**+1.9**	
ERM	**Erimo**	**5.64**	**235**	Pn	**Pn**	**12 59 18.7**	**+1.9**	
ERM				Sn	**Sn**	**13 00 20.7**	**0.0**	
TYV	**Tymovskoe**	**7.05**	**323**	*e*P	**Pn**	**12 59 38.6**	**+3.1**	
PETK	**Petropavlovsk-**	**9.42**	**32**	P	**Pn**	**13 00 05.8**	**-1.3**	
	comp=Z,0.6nm,0.3s,baz=199,slow=12,SNR=23							
MJAR	**Matsushiro Arr**	**12.23**	**227**	P	**P**	**13 00 53.3**	**+2.8**	
	comp=Z,0.0nm,0.3s,baz=46,slow=9.7,SNR=4.9							
MJB9	**Matsu-Tunnel**	**12.23**	**227**		**Pn**	**13 00 46.8**	**+2.5**	
EKMR	**Ekimchan**	**13.15**	**311**	*e*P	**P**	**13 00 58.7**	**-1.9**	
INU	**Inuyama**	**13.76**	**227**	P	**P**	**13 01 10.1**	**+2.6**	
MA2	**Magadan**	**14.20**	**3**	*i* P	**Pn**	**13 01 10.3**	**+1.1**	
MA2	**Magadan**	**14.20**	**3**	*i* P	**Pn**	**13 01 10.3**	**+1.1**	
MA2				pmax	pmax			
	comp=Z,4.0nm,0.8s							
BMKR	**Bomnak**	**16.06**	**313**	*e*P	**P**	**13 01 33.0**	**+0.1**	
SEY	**Seymchan**	**17.62**	**5**	P	**P**	**13 01 48.6**	**-1.4**	
	comp=Z,0.4nm,0.3s,baz=194,slow=7.4,SNR=14							
SEY	**Seymchan**	**17.62**	**5**	*e*P	**Pn**	**13 01 51.0**	**-0.1**	
SEY	**Seymchan**	**17.62**	**5**	*e*P	**Pn**	**13 01 51.0**	**-0.1**	
YAK	**Yakutsk**	**20.16**	**333**	P	**P**	**13 02 15.4**	**-2.0**	
	comp=Z,0.1nm,0.3s,baz=140,slow=3.0,SNR=6.7							
YAK	**Yakutsk**	**20.16**	**333**	P	**P**	**13 02 14.7**	**-2.6**	
YAK				IAmb	IAmb	13 02 25.4		
	comp=Z,4.7nm,0.6s							
BILL	**Bilibino**	**24.32**	**15**	*e*P	**P**	**13 03 01.2**	**+2.8**	
BILL				pmax	pmax			
	comp=Z,6.0nm,2.1s							
TIXI	**Tiksi**	**28.07**	**346**	P	**P**	**13 03 28.6**	**-3.5**	
	comp=Z,1.3nm,0.4s,baz=145,slow=5.0,SNR=6.3							
TIXI	**Tiksi**	**28.07**	**346**	P	**P**	**13 03 28.9**	**-3.2**	
TIXI				pmax	pmax			
	comp=Z,2.0nm,1.2s							
TIXI	**Tiksi**	**28.07**	**346**	P	**P**	**13 03 28.9**	**-3.2**	
H11N2	**WAKE ISLAND Hy**	**29.45**	**145**	T	T	13 34 59.4		
	baz=334,slow=76,SNR=112							
H11N1	**WAKE ISLAND Hy**	**29.46**	**145**	T	T	13 35 00.4		
	baz=334,slow=76,SNR=88							
H11N3	**WAKE ISLAND Hy**	**29.47**	**145**	T	T	13 35 00.7		
	baz=334,slow=76,SNR=96							
H11S1	**WAKE ISLAND Hy**	**30.47**	**146**	T	T	13 36 15.2		
	baz=335,slow=76,SNR=182							
H11S3	**WAKE ISLAND Hy**	**30.48**	**146**	T	T	13 36 19.5		
	baz=335,slow=76,SNR=117							
H11S2	**WAKE ISLAND Hy**	**30.49**	**146**	T	T	13 36 23.8		
	baz=335,slow=76,SNR=109							
ILAR	**Eielson Array**	**39.20**	**37**	P	**P**	**13 05 08.8**	**+0.7**	
	comp=Z,0.3nm,0.6s,baz=284,slow=8.5,SNR=4.8							
ILAR	**Eielson Array**	**39.20**	**37**	*e*P	**P**	**13 05 10.6**	**+2.4**	
ZALV	**Zalesovo Beam**	**41.27**	**306**	P	**P**	**13 05 22.9**	**-2.4**	
	comp=Z,0.4nm,0.4s,baz=65,slow=8.1,SNR=2.4							
INK	**Inuvik**	**44.15**	**31**	P	**P**	**13 05 49.2**	**+0.9**	
	comp=Z,0.5nm,0.3s,baz=300,slow=8.7,SNR=13							
INK	**Inuvik**	**44.15**	**31**	P	**P**	**13 05 49.0**	**+0.7**	
INK				IAmb	IAmb	13 05 54.5		
	comp=Z,3.8nm,1.4s							
MK31	**Makanchi Array**	**45.22**	**297**	P	**P**	**13 05 56.0**	**-1.1**	
MK31				pmax	pmax			
	comp=Z,3.0nm,1.5s							
MK31	**Makanchi Array**	**45.22**	**297**	P	**P**	**13 05 56.0**	**-1.1**	
KURK	**Kurchatov**	**45.91**	**303**	P	**P**	**13 06 01.7**	**-0.8**	
KURBB	**Kurchatov Arra**	**46.00**	**303**	P	**P**	**13 06 01.7**	**-1.4**	
	comp=Z,0.7nm,0.5s,baz=70,slow=8.5,SNR=6.3							
YKA	**Yellowknife Ar**	**53.52**	**35**	P	**P**	**13 07 00.4**	**+0.6**	
	comp=Z,0.2nm,0.6s,baz=301,slow=6.6,SNR=6.0							
FINES	**FINESS Array B**	**64.09**	**333**	P	**P**	**13 08 10.4**	**-2.2**	
	comp=Z,0.4nm,0.5s,baz=35,slow=10,SNR=6.4							
HRA	**Herat**	**64.63**	**294**	P	**P**	**13 08 17.4**	**+0.5**	
HRA				IAmb	IAmb	13 08 36.0		
	comp=Z,4.1nm,0.9s							

GEYT	**Alibeck**	**65.00**	**299**	P	**P**	**13 08 19.4**	**+0.3**	
	comp=Z,1.0nm,0.4s,baz=39,slow=9.3,SNR=2.5							
WB0	**Warramunga Arr**	**66.30**	**195**	P	**P**	**13 08 28.6**	**+1.2**	
WB0				IAmb	IAmb	13 08 44.3		
	comp=Z,3.2nm,1.0s							
WB2	**Warramunga Arr**	**66.48**	**195**	P	**P**	**13 08 29.9**	**+1.4**	
WRA	**Warramunga Arr**	**66.48**	**195**	P	**P**	**13 08 30.2**	**+1.7**	
	comp=Z,0.2nm,0.4s,baz=8.9,slow=6.9,SNR=5.8							
WRA	**Warramunga Arr**	**66.48**	**195**	*e*P	**P**	**13 08 29.3**	**+0.8**	
NC405	**NORSAR Array S**	**68.41**	**339**	P	**P**	**13 08 38.9**	**-1.4**	
NB2	**NORSAR Subarra**	**68.59**	**340**	P	**P**	**13 08 40.1**	**-1.3**	
	comp=Z,0.5nm,0.5s,baz=28,slow=6.5							
NOA	**NORSAR Array B**	**68.59**	**340**	P	**P**	**13 08 40.1**	**-1.3**	
	comp=Z,0.4nm,0.4s,baz=30,slow=6.6,SNR=9.2							
ASAR	**Alice Springs**	**70.19**	**195**	P	**P**	**13 08 54.5**	**+2.9**	
	comp=Z,0.6nm,0.7s,baz=11,slow=5.7,SNR=8.1							
AKASG	**Malin Array Be**	**71.15**	**324**	P	**P**	**13 08 55.8**	**-1.3**	
	comp=Z,0.4nm,0.4s,baz=39,slow=5.3,SNR=2.6							
BUR08	**Bucovina Ar. S**	**75.18**	**325**	P	**P**	**13 09 20.7**	**-0.4**	
BUR08				IAmb	IAmb	13 09 21.9		
	comp=Z,1.6nm,0.8s							
CLL	**Collm**	**76.53**	**334**	*e*P	**P**	**13 09 29.0**	**+0.6**	
CLL	**Collm**	**76.53**	**334**	*e*P	**P**	**13 09 29.0**	**+0.6**	
KHC	**Kasperske Hory**	**78.24**	**332**	*e*P	**P**	**13 09 38.0**	**0.0**	
KHC	**Kasperske Hory**	**78.24**	**332**	*e*P	**P**	**13 09 38.0**	**0.0**	
GERES	**GERESS Array B**	**78.44**	**332**	P	**P**	**13 09 39.1**	**-0.1**	
	comp=Z,0.8nm,0.3s,baz=27,slow=5.5,SNR=5.7							
TXAR	**Lajitas Array**	**80.41**	**58**	P	**P**	**13 09 53.2**	**+2.9**	
	comp=Z,0.2nm,0.7s,baz=268,slow=3.3,SNR=2.3							

MEX ***10*** *13:00:27.3±0.6, 14°.84N×92°.40W, h108km±6km, MD3.8*
GCG ***10*** *13:00:28.4±0.6, 15°.20N×92°.46W, h38km±999km, MD4.1*
IDC ***10*** *13:00:30.3±1.6, 15°.18N×92°.32W, h99km±13km, mb3.1/2, mb1 3.2/4, mb1mx3.0/36, mbtmp3.2/4, Error ellipse: s-maj=28.3km s-min=8.1km az=21.0*

ISC 10 13:00:30.0±1.1, 15°.06N±0°.07×92°.38W±0°.05, h88km±9km, n14, σ1s37/21, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
THIG		**0.19**	**143**	*e*P	**Pn**		**13 00 41.2**	**-1.5**
THIG				*e*S	**Sn**		**13 00 52.1**	**+0.1**
PCIG		**1.03**	**309**	*e*P	**Pn**		**13 00 49.1**	**-0.7**
PCIG				*e*S	**Sn**		**13 01 05.7**	**+0.9**
CCIG	**Comitan**	**1.24**	**11**	*e*P	**Pn**		**13 00 53.2**	**+0.6**
CCIG				*e*S	**Sn**		**13 01 12.5**	**+3.0**
FUG	**Fuego 3**	**1.61**	**112**	*e*P	**Pn**		**13 00 55.7**	**-1.6**
FUG				*e*S	**Sn**		**13 01 18.6**	**+0.7**
PCG	**Pacaya**	**1.84**	**111**	*e*S	**Sn**		**13 01 25.2**	**+1.8**
TGIG		**1.85**	**338**	*e*P	**Pn**		**13 00 59.1**	**-1.2**
TGIG				*e*S	**Sn**		**13 01 22.3**	**-0.9**
APG	**El Apazote**	**1.86**	**92**	P	**Pn**		**13 00 59.4**	**-1.1**
	10.0nm,0.3s,baz=192,slow=15,SNR=5.5							
APG				*e*S	**Sn**		**13 01 23.9**	**+0.3**
	21nm,0.3s,baz=67,slow=8.5,SNR=15							
IXG	**Ixpaco**	**2.08**	**115**	*e*P	**Pn**		**13 01 03.5**	**+0.2**
MRL	**Marmol**	**2.61**	**89**	*e*P	**Pn**		**13 01 10.2**	**-0.3**
CMIG	**Matias Romero**	**3.14**	**310**	P	**Pn**		**13 01 16.5**	**-0.8**
	1.6nm,0.3s,baz=135,slow=12,SNR=12							
CMIG				*e*S	**Sn**		**13 01 54.4**	**+0.5**
	10nm,0.3s,baz=111,slow=20,SNR=7.1							
TEIG	**Tepich**	**6.46**	**37**	P	**Pn**		**13 02 01.0**	**-1.5**
TEIG				*e*S	**Sn**		**13 03 12.5**	**-2.3**
	10.0nm,0.3s,baz=346,slow=0.0,SNR=6.9							
TXAR	**Lajitas Array**	**17.61**	**326**	P	**P**		**13 04 30.4**	**+0.7**
	0.0nm,0.3s,baz=154,slow=13,SNR=2.0							
NVAR	**Mina Array Bea**	**32.62**	**320**	P	**P**		**13 06 54.1**	**+0.4**
	0.7nm,0.7s,baz=133,slow=8.7,SNR=6.6							
YKA	**Yellowknife Ar**	**49.91**	**347**	P	P		13 09 10.8	-3.7
	0.2nm,0.7s,baz=147,slow=7.9,SNR=4.3							

IDC 10 13:07:02.6±7.8, 29°.54S×61°.91E, h0km, mb4.1/2, mb1 4.4/2, mb1mx3.5/35, mbtmp4.1/2, MS3.6/1, Ms1 3.4/1, ms1mx2.6/29, Error ellipse: s-maj=465.9km s-min=47.7km az=33.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Garcia H**	**23.94**	**27**	T	T		13 39 14.8	
	baz=208							
H08S2	**Diego Garcia H**	**23.94**	**27**	T	T		13 39 15.0	
	baz=208,slow=74							
H08S3	**Diego Garcia H**	**23.96**	**27**	T	T		13 39 16.7	
	baz=208,slow=74							
MAW	**Mawson**	**38.10**	**179**	LR	LR		13 28 10.3	
	comp=Z,74nm,19.1s,baz=66,slow=33							
ASAR	**Alice Springs**	**63.72**	**103**	P	P		13 17 36.6	+0.2
	1.8nm,0.6s,baz=246,slow=6.2,SNR=32							
WRA	**Warramunga Arr**	**65.56**	**100**	P	P		13 17 48.4	-0.1
	1.5nm,0.8s,baz=247,slow=6.0,SNR=14							
YKA	**Yellowknife Ar**	**146.96**	**357**	PKPbc	PKPbc		13 26 45.6	-0.8
	0.6nm,0.5s,baz=352,slow=3.0,SNR=23							

GCG ***10*** *13:39:51.6±1.7, 13°.30N×92°.03W, h34km±999km, MD4.5*
SNET ***10*** *13:39:56.6±1.4, 13°.78N×91°.68W, h15km±21km, ML4.5*
UCR ***10*** *13:39:56.8±1.4, 13°.78N×91°.69W, h16km±20km, ML4.3*
INET ***10*** *13:39:57.7, 13°.73N×91°.72W, h20km, ML4.7*
NEIC ***10*** *13:39:59.0±3.0, 13°.79N±0°.07×91°.69W±0°.06, h47km±1km, mb4.4/59, Md4.2/10(MEX), Error ellipse: s-maj=11.0km s-min=7.2km az=206.0*
MEX ***10*** *13:39:59.1±0.5, 13°.88N×91°.66W, h27km±18km, MD4.2*
IDC ***10*** *13:40:04.4±2.2, 13°.98N×91°.27W, h91km±17km, mb3.8/10, mb1 4.1/13, mb1mx3.8/34, mbtmp4.2/13, MS3.5/12, Ms1 3.5/12, ms1mx3.3/48, Error ellipse: s-maj=30.3km s-min=14.4km az=47.0*

ISC 10 13:39:55.6±1.8, 13°.76N±0°.07×91°.83W±0°.05, h22km±12km, n136, σ1s41/132, mb4.4/37, MS3.5/10, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.77**	**10**	*e*P	**Pn**		**13 40 11.1**	**-0.1**
RTAL				*e*S	**Sb**		**13 40 20.5**	**0.0**
FUG	**Fuego 3**	**1.18**	**54**	*e*P	**Pb**		**13 40 17.4**	**0.0**
THIG		**1.22**	**340**	*i* P	**Pn**		**13 40 17.4**	**+0.1**
THIG		**1.22**	**340**		**Pn**		**13 40 17.4**	**+0.1**
PCG	**Pacaya**	**1.34**	**62**	*e*P	**Pb**		**13 40 20.4**	**+0.2**
IXG	**Ixpaco**	**1.41**	**73**	*e*P	**Pn**		**13 40 19.9**	**-0.3**
HUEH	**Huehuetenango**	**1.58**	**12**	*e*P	**Pb**		**13 40 24.0**	**-0.4**
HUEH				*e*P	**Pn**		**13 40 25.4**	**+2.9**
NBG	**Las Nubes**	**1.66**	**60**	*e*P	**Pb**		**13 40 26.2**	**+0.5**
APG	**El Apazote**	**1.81**	**47**	P	**Pb**		**13 40 27.4**	**-0.9**
	103nm,0.3s,baz=220,slow=7.3,SNR=513							
APG				S	**Sb**		**13 40 50.3**	**-0.3**
	211nm,0.3s,baz=238,slow=22,SNR=12							
RTR	**El Retiro**	**2.13**	**86**	*e*P	**Pn**		**13 40 30.0**	**0.0**
RTR	**El Retiro**	**2.13**	**86**	*e*P	**Pn**		**13 40 30.0**	**0.0**
CEVE	**Cerro Verde**	**2.15**	**88**	*e*P	**Pn**		**13 40 29.8**	**-0.6**
CEVE				*e*S	**Sn**		**13 40 56.5**	**+0.1**
CEVE				IAML			13 41 06.0	
	comp=Z,5µm,0.4s							
CEVE	**Cerro Verde**	**2.15**	**88**	*e*P	**Pn**		**13 40 29.8**	**-0.6**
CEVE				*e*S	**Sn**		**13 40 56.5**	**+0.1**
CEVE				IAML			13 41 06.0	
	comp=Z,5µm,0.4s							
SBLS	**San Blas**	**2.15**	**88**	*e*P	**Pn**		**13 40 29.7**	**-0.7**
SBLS	**San Blas**	**2.15**	**88**	*e*P	**Pn**		**13 40 29.7**	**-0.7**
SNJE	**San Jose**	**2.17**	**87**	*e*P	**Pn**		**13 40 30.1**	**-0.4**
SNJE	**San Jose**	**2.17**	**87**	*e*P	**Pn**		**13 40 30.1**	**-0.4**
PCIG		**2.35**	**325**	*i* P	**Pn**		**13 40 33.6**	**+0.6**
PCIG				*i* S	**Sn**		**13 41 01.9**	**+0.7**
LALI	**Alcalda de L**	**2.46**	**96**	*e*P	**Pn**		**13 40 33.0**	**-1.4**
LALI				*e*S	**Sn**		**13 41 03.8**	**+0.1**
LALI	**Alcalda de L**	**2.46**	**96**	*e*P	**Pn**		**13 40 33.0**	**-1.4**
LALI				*e*S	**Sn**		**13 41 03.8**	**+0.1**
MRL	**Marmol**	**2.46**	**57**	*e*P	**Pn**		**13 40 36.9**	**+2.3**
MRL				*e*S	**Sb**		**13 41 10.9**	**+1.6**
BOQS	**Boqueron**	**2.48**	**90**	*e*P	**Pn**		**13 40 34.3**	**-0.6**
BOQS	**Boqueron**	**2.48**	**90**	*e*P	**Pn**		**13 40 34.3**	**-0.6**
MTO3	**Montecristo**	**2.48**	**75**	*e*P	**Pn**		**13 40 35.5**	**+0.6**
MTO3				*e*S	**Sn**		**13 41 04.3**	**-0.3**
MTO3	**Montecristo**	**2.48**	**75**	*e*P	**Pn**		**13 40 35.5**	**+0.6**
MTO3				*e*S	**Sn**		**13 41 04.3**	**-0.3**
CCIG	**Comitan**	**2.52**	**353**	*e*P	**Pn**		**13 40 35.5**	**0.0**
CCIG				*i* S	**Sn**		**13 41 03.2**	**-2.5**
CCIG	**Comitan**	**2.52**	**353**		**Pb**		**13 40 39.3**	**-1.1**
SNET	**Serv Nac Est T**	**2.53**	**91**	*e*P	**Pn**		**13 40 35.7**	**+0.2**
SNET				*e*S	**Sn**		**13 41 04.9**	**-0.8**
SNET	**Serv Nac Est T**	**2.53**	**91**		**Pn**		**13 40 35.2**	**-0.2**

SNET	**Serv Nac Est T**	**2.53**	**91**	*e*P	**Pn**		**13 40 35.7**	**+0.2**
SNET				*e*S	**Sn**		**13 41 04.9**	**-0.8**
ESQI	**Esquipulas**	**2.54**	**71**	*e*P	**Pn**		**13 40 36.4**	**+0.7**
UDBS	**Universidad Do**	**2.60**	**91**	*e*S	**Sn**		**13 41 07.7**	**+0.2**
UDBS	**Universidad Do**	**2.60**	**91**	*e*S	**Sn**		**13 41 07.7**	**+0.2**
AEIL	**Aeropuerto Ilo**	**2.64**	**91**	IAML			13 41 15.4	
	comp=Z,2µm,0.3s							
AEIL	**Aeropuerto Ilo**	**2.64**	**91**	IAML			13 41 15.4	
	comp=Z,2µm,0.3s							
LFRS	**El Faro**	**2.69**	**93**	*e*P	**Pn**		**13 40 37.6**	**-0.1**
LFRS	**El Faro**	**2.69**	**93**	*e*P	**Pn**		**13 40 37.6**	**-0.1**
LBRS	**Las Brisas**	**2.71**	**90**	*e*P	**Pn**		**13 40 38.1**	**+0.2**
LBRS	**Las Brisas**	**2.71**	**90**	*e*P	**Pn**		**13 40 38.1**	**+0.2**
LLGN	**La Laguna**	**2.83**	**82**	*e*P	**Pn**		**13 40 39.9**	**+0.2**
LLGN	**La Laguna**	**2.83**	**82**	*e*P	**Pn**		**13 40 39.9**	**+0.2**
ALJI	**Alcalda de J**	**3.20**	**97**	*e*S	**Sn**		**13 41 21.6**	**-0.5**
ALJI	**Alcalda de J**	**3.20**	**97**	*e*S	**Sn**		**13 41 21.6**	**-0.5**
COEB	**Comit de Eme**	**3.22**	**94**	*e*P	**Pn**		**13 40 45.1**	**+0.1**
COEB				*e*S	**Sn**		**13 41 22.6**	**-0.1**
COEB	**Comit de Eme**	**3.22**	**94**	*e*P	**Pn**		**13 40 45.1**	**+0.1**
COEB				*e*S	**Sn**		**13 41 22.6**	**-0.1**
TECA	**Tecapa**	**3.25**	**94**	*e*P	**Pn**		**13 40 45.5**	**+0.1**
TECA	**Tecapa**	**3.25**	**94**	*e*P	**Pn**		**13 40 45.5**	**+0.1**
TGIG		**3.25**	**338**	*e*P	**Pn**		**13 40 46.5**	**+1.2**
TGIG				*i* S	**Sn**		**13 41 22.3**	**-1.1**
TGIG		**3.25**	**338**		**Pn**		**13 40 44.1**	**-1.3**
FAGO	**Alcalda de S**	**3.62**	**91**	*e*P	**Pn**		**13 40 50.0**	**-0.4**
FAGO				*e*S	**Sn**		**13 41 32.6**	**+0.1**
FAGO	**Alcalda de S**	**3.62**	**91**	*e*P	**Pn**		**13 40 50.0**	**-0.4**
FAGO				*e*S	**Sn**		**13 41 32.6**	**+0.1**
CMIG	**Matias Romero**	**4.43**	**319**	P	**Pn**		**13 41 03.0**	**+1.4**
	comp=Z,3.2nm,0.3s,baz=141,slow=11,SNR=22							
CMIG				S	**Sb**		**13 42 01.7**	**-4.1**
	comp=Z,9.9nm,0.3s,baz=264,slow=19,SNR=7.6							
CMIG				LR	LR		13 43 17.5	
	comp=Z,594nm,20.4s,baz=150,slow=41							
CMIG	**Matias Romero**	**4.43**	**319**	*e*P	**Pn**		**13 41 02.5**	**+0.9**
CMIG				*i* S	**Sn**		**13 41 53.4**	**+0.9**
CMIG	**Matias Romero**	**4.43**	**319**		**Pn**		**13 41 02.5**	**+0.9**
TGUH	**Tegucigalpa,Un**	**4.44**	**86**		**Pn**		**13 41 01.6**	**-0.2**
MATN	**Matagalpa**	**5.81**	**97**		**Pn**		**13 41 19.8**	**-0.7**
ACON	**Acoyapa**	**6.73**	**105**		**Pn**		**13 41 35.0**	**+1.8**
TEIG	**Tepich**	**7.27**	**27**	P	**Pn**		**13 41 43.2**	**+2.6**
	comp=Z,24nm,0.3s,SNR=23							
TEIG				LR	LR		13 44 57.3	
	comp=Z,553nm,19.0s,baz=252,slow=43							
TLIG	**Tlapa**	**7.51**	**301**		**Pn**		13 41 48.5	+4.5
JTS	**Las Juntas de**	**7.56**	**116**	P	**Pn**		**13 41 46.4**	**+1.8**
	comp=Z,3.5nm,0.3s,baz=13,slow=17,SNR=4.8							
JTS				S	**Sn**		**13 43 09.6**	**-0.1**
	comp=Z,1.5nm,0.3s,baz=336,slow=18,SNR=1.0							
JTS	**Las Juntas de**	**7.56**	**116**		**Pn**		**13 41 44.7**	**+0.1**
POPC	**Popayan, Colom**	**18.67**	**125**	*e*P	**Pn**		**13 44 13.8**	**+0.8**
SOTA	**Rioblanco**	**18.97**	**126**	*e*P	**Pn**		**13 44 23.1**	**+6.2**
TX32	**Lajitas Array**	**18.98**	**327**	P	**Pn**		**13 44 17.3**	**+0.7**
TXAR	**Lajitas Array**	**18.98**	**327**	P	**Pn**		**13 44 19.6**	**+3.0**
	comp=Z,0.2nm,0.3s,baz=156,slow=12,SNR=58							
TXAR				PcP	**PcP**		**13 48 44.5**	**+3.5**
	comp=Z,0.1nm,0.3s,baz=197,slow=2.

ILAR	**Eielson Array**	**63.12**	**337**	P		**P**		**13 50 22.1**	**+0.8**
	comp=Z,2.7nm,0.8s,baz=102,slow=5.8,SNR=29								
CCB	**Clear Creek Bu**	**63.42**	**336**	IAmb		IAmb		13 50 25.5	
	comp=Z,1.7nm,0.6s								
NEA	**Nenana**	**63.89**	**336**	IAmb		IAmb		13 50 34.6	
	comp=Z,2.8nm,0.9s								
TRF	**Thorofare Moun**	**63.92**	**335**	IAmb		IAmb		13 50 29.1	
	comp=Z,6.1nm,0.9s								
KTH	**Kantishna Hill**	**64.22**	**335**	IAmb		IAmb		13 50 33.3	
	comp=Z,3.9nm,1.0s								
BPAW	**Bear Paw Mtn.**	**64.46**	**335**	IAmb		IAmb		13 50 32.1	
	comp=Z,4.9nm,1.0s								
MLY	**Manley**	**64.72**	**336**	P		**P**		**13 50 33.0**	**+1.0**
COLD	**Coldfoot**	**65.41**	**339**	IAmb		IAmb		13 50 52.0	
	comp=Z,4.5nm,1.2s								
TOLK	**Toolik Lake Re**	**65.80**	**340**	IAmb		IAmb		13 50 41.0	
	comp=Z,4.3nm,0.9s								
SUMG	**Summit**	**66.42**	**15**	P		**P**		**13 50 41.5**	**-1.7**
SUMG				IAmb		IAmb		13 50 42.9	
	comp=Z,3.6nm,0.8s								
DAG	**Danmarks Havn**	**72.86**	**13**	*iP*		**P**		**13 51 20.1**	**-2.2**
	comp=Z,3.7nm,0.5s								
BILL	**Bilibino**	**81.74**	**338**	P		**P**		**13 52 12.2**	**-0.1**
NOA	**NORSAR Array B**	**84.28**	**28**	P		**P**		**13 52 23.9**	**-1.7**
	comp=Z,0.3nm,0.7s,baz=290,slow=5.1,SNR=3.9								
ARCES	**ARCESS Array B**	**86.31**	**18**	P		**P**		**13 52 33.3**	**-2.3**
	comp=Z,0.7nm,0.6s,baz=298,slow=5.2,SNR=6.8								
PMG	**Port Moresby**	**122.16**	**267**	PKP		**PKPdf**		**13 58 48.0**	**-1.7**
	comp=Z,20nm,0.9s,baz=108,slow=13,SNR=3.6								
JAY	**Jayapura**	**126.92**	**277**	PKP		**PKiKP**		**13 59 00.8**	**+1.5**
	comp=Z,13nm,1.1s,baz=335,slow=12,SNR=3.9								
WRA	**Warramunga Arr**	**135.49**	**256**	PKP		**PKPdf**		**13 59 14.8**	**-0.1**
	comp=Z,0.5nm,0.9s,baz=232,slow=9.5,SNR=2.4								
ASAR	**Alice Springs**	**135.74**	**250**	PKP		**PKPdf**		**13 59 15.6**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=94,slow=2.8,SNR=2.2								
FITZ	**Fitzroy Crossi**	**143.75**	**258**	PKP		**PKiKP**		**13 59 34.7**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=116,slow=3.0,SNR=5.6								
CMAR	**Chiang Mai Arr**	**146.27**	**341**	PKPbc		**PKPbc**		**13 59 35.3**	**-0.1**
	comp=Z,3.4nm,0.7s,baz=338,slow=3.7,SNR=19								

*IDC **10** 13:55:20.7±1.2, 17.17N×100.72W, h0km, mb4.3/11, mb1 4.5/13,mb1mx4.2/38,mbtmp4.3/13,ML3.4/2,MS3.8/8, Ms1 3.8/8,ms1mx3.6/41,Error ellipse: s-maj=28.8km s-min=20.6km az=16.0*

*NEIC **10** 13:55:21.9±2.5, 17.10N±0.08×100.83W±0.08, h10km±1km, Error ellipse: s-maj=12.8km s-min=9.2km az=46.0*

*MEX **10** 13:55:23.6±1.4, 17.00N×100.94W, h15km, MD4.6*

ISC 10 13:55:22.3±0.6, **17.12N**±0.05×**100.87W**±0.03, **h15**km, **n98,** σ1§**33**/80, **mb4.4**/34, **MS3.3**/3, **1D, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.58**	**97**	‖*eP*	**Pg**	**13 55 33.6**	**-0.2**
	baz=267,slow=14						
CAIG				*i* S	**Sb**	**13 55 42.7**	**+0.4**
CAIG	**El Cayaco**	**0.58**	**97**		**Pg**	**13 55 33.6**	**-0.2**
CAIG					**Sb**	**13 55 42.7**	**+0.4**
ZIIG	**Zihuatanejo**	**0.75**	**311**	*i* P	**Pg**	**13 55 36.3**	**-0.7**
ZIIG				*eS*	**Sb**	**13 55 47.4**	**+0.3**
ZIIG	**Zihuatanejo**	**0.75**	**311**		**Pg**	**13 55 36.3**	**-0.7**
ZIIG					**Sb**	**13 55 47.4**	**+0.3**
ACP2	**Acapulco**	**0.97**	**104**	*eP*	**Pb**	**13 55 39.6**	**-1.3**
ACP2	**Acapulco**	**0.97**	**104**		**Pb**	**13 55 39.6**	**-1.3**
UON	**La Union**	**1.24**	**313**	*eP*	**Pn**	**13 55 43.6**	**-1.5**
ARIG	**Puente Sto Nin**	**1.26**	**23**	*iP*	**Pn**	**13 55 45.3**	**-0.1**
ARIG				*eS*	**Sb**	**13 56 01.6**	**-0.2**
ARIG	**Puente Sto Nin**	**1.26**	**23**		**Pn**	**13 55 45.3**	**-0.1**
ARIG					**Sb**	**13 56 01.6**	**-0.2**
MEIG	**Mezcala**	**1.44**	**56**	*iP*	**Pn**	**13 55 47.9**	**-0.1**
MEIG				*iS*	**Sb**	**13 56 07.4**	**+0.3**
MEIG	**Mezcala**	**1.44**	**56**		**Pn**	**13 55 47.9**	**-0.1**
MEIG					**Sb**	**13 56 07.4**	**+0.3**
CRIG	**Cruz Grande**	**1.71**	**103**	*eP*	**Pn**	**13 55 50.0**	**-1.6**
PLIG	**Platanillo**	**1.82**	**46**	*eP*	**Pn**	**13 55 53.3**	**+0.1**
PLIG	**Platanillo**	**1.82**	**46**		**Pn**	**13 55 53.3**	**+0.1**
TLIG	**Tlapa**	**2.24**	**78**	*eP*	**Pn**	**13 55 59.2**	**+0.1**
TLIG	**Tlapa**	**2.24**	**78**		**Pn**	**13 55 59.8**	**+0.7**
MOIG	**Morelia**	**2.56**	**353**		**Pb**	**13 56 06.2**	**-2.0**
UNM	**Universidad Na**	**2.72**	**36**		**Pb**	**13 56 10.0**	**-1.0**
PPM	**Popocatepetl**	**2.88**	**47**	*eP*	**Pn**	**13 56 07.8**	**-0.4**
CMIG	**Matias Romero**	**5.72**	**89**	Pn	**Pn**	**13 56 47.2**	**+0.4**
	1.0nm,0.3s,baz=273,slow=8.5,SNR=3.9						
CMIG				Sn	**Sn**	**13 57 47.2**	**-5.1**
	6.7nm,0.3s,baz=328,slow=11,SNR=5.9						
CMIG				Lg	Lg	13 58 20.1	
	6.8nm,0.3s,baz=22,slow=20,SNR=9.2						
H06E1	**SOCORRO T-PHAS**	**9.71**	**281**	T	T	14 07 24.6	
	SNR=179						
H06S1	**SOCORRO T**	**9.74**	**281**	T	T	14 07 25.7	
	SNR=26						
H06N1	**SOCORRO T-PHAS**	**9.78**	**282**	T	T	14 07 33.0	
	SNR=5.6						
APG	**El Apazote**	**10.22**	**100**	Pn	**Pn**	**13 57 50.4**	**+1.6**
	0.9nm,0.3s,baz=59,slow=19,SNR=1.5						
APG				Sn	**Sn**	**13 59 41.5**	**-1.8**
	0.7nm,0.3s,baz=338,slow=15,SNR=2.2						
APG				Lg	Lg	14 00 42.3	
	0.7nm,0.3s,baz=328,slow=19,SNR=2.0						
APG				LR	LR	14 01 32.3	
	comp=Z,425nm,18.1s,baz=282,slow=37						
KVTX	**Kingsville**	**10.74**	**14**		**Pn**	**13 57 56.0**	**+0.4**
LPIG	**La Paz**	**11.24**	**310**	LR	LR	14 01 34.6	
	comp=Z,292nm,21.2s,baz=130,slow=33						
TEIG	**Tepich**	**12.33**	**74**	Pn	**Pn**	**13 58 20.9**	**+3.5**
	0.8nm,0.3s,SNR=1.4						
TEIG				LR	LR	14 04 10.1	
	comp=Z,604nm,18.3s,baz=256,slow=44						
TEIG	**Tepich**	**12.33**	**74**		**Pn**	**13 58 19.9**	**+2.5**
TX32	**Lajitas Array**	**12.43**	**349**		**Pn**	**13 58 20.1**	**+1.3**
TXAR	**Lajitas Array**	**12.43**	**349**	Pn	P	13 58 24.5	-6.3
	0.0nm,0.3s,baz=172,slow=13,SNR=6.0						
TXAR				Lg	Lg	14 01 58.3	
	0.1nm,0.3s,baz=166,slow=26,SNR=3.7						
TXAR				LR	LR	14 03 42.0	
	comp=Z,1µm,18.9s,baz=0.0,slow=40						
MNTX	**Cornudas Mount**	**15.08**	**345**	P	**P**	**13 59 01.4**	**+1.2**
319A	**Douglas**	**16.12**	**333**		**Pn**	**13 59 08.1**	**-0.6**
AMTX	**Amarillo**	**17.71**	**358**	P	**Pn**	**13 59 28.3**	**-0.3**
AMTX				IAmb	IAmb	13 59 37.5	
	comp=Z,33nm,1.2s						
ANMO	**Albuquerque**	**18.44**	**345**	P	**Pn**	**13 59 38.4**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=151,slow=12,SNR=9.2						
ANMO				Lg	Lg	14 05 05.5	
	baz=41,slow=19,SNR=1.3						
ANMO				LR	LR	14 07 27.9	
	comp=Z,1µm,18.1s,baz=166,slow=39						
ANMO	**Albuquerque**	**18.44**	**345**	P	**Pn**	**13 59 37.3**	**-0.4**
MIAR	**Mount Ida**	**18.54**	**19**	P	**Pn**	**13 59 38.8**	**+0.1**
TUL1	**Leonard**	**19.25**	**13**	P	**P**	**13 59 45.2**	**-1.1**
WHAR	**Wooly Hollow**	**19.65**	**21**	P	**P**	**13 59 50.2**	**-0.4**
WHAR				IAmb	IAmb	13 59 59.4	
	comp=Z,19nm,1.1s						
HHAR	**Hobbs**	**20.05**	**17**	IAmb	IAmb	14 00 03.7	
	comp=Z,21nm,1.0s						
T35A	**Sooner Cattle**	**20.09**	**10**	IAmb	IAmb	13 59 57.8	
	comp=Z,18nm,1.0s						
LRAL	**Lakeview Retre**	**20.19**	**36**	P	**P**	**13 59 54.8**	**-1.7**
FCAR	**Ozark Folk Cen**	**20.25**	**21**	IAmb	IAmb	14 00 06.5	
	comp=Z,23nm,1.1s						
U40A	**Yellville**	**20.44**	**19**	IAmb	IAmb	13 59 60.0	
	comp=Z,13nm,0.9s						
WUAZ	**Wupatki**	**20.58**	**335**	IAmb	IAmb	14 00 05.6	
	comp=Z,15nm,0.9s						
Z50A	**Ashland**	**20.96**	**37**	P	**P**	**14 00 03.8**	**-1.1**
Z50A				IAmb	IAmb	14 00 09.8	
	comp=Z,14nm,1.1s						
Y49A	**Blount Mountai**	**21.13**	**35**	P	**P**	**14 00 06.3**	**-0.4**
Y49A				IAmb	IAmb	14 00 10.4	
	comp=Z,14nm,0.9s						
PFO	**Pinyon Flats O**	**21.59**	**322**	P	**P**	**14 00 15.8**	**+4.0**
	comp=Z,1.1nm,0.5s,baz=155,slow=10,SNR=2.1						
PFO				LR	LR	14 07 53.0	
	comp=Z,121nm,21.6s,baz=148,slow=35						
PBMO	**Poplar Bluff**	**21.65**	**23**	P	**P**	**14 00 11.0**	**-1.3**
PBMO				IAmb	IAmb	14 00 24.8	
	comp=Z,23nm,1.1s						
WVT	**Waverly**	**22.19**	**29**	P	**P**	**14 00 17.4**	**-0.7**
WVT				IAmb	IAmb	14 00 25.7	
	comp=Z,15nm,1.3s						
GOGA	**Godfrey**	**22.55**	**41**	P	**P**	**14 00 20.3**	**-1.6**
GOGA				IAmb	IAmb	14 00 26.0	
	comp=Z,16nm,1.4s						
SHPR	**Sheep Range**	**23.09**	**330**	P	**P**	**14 00 25.4**	**-2.4**
V51A	**Loudon**	**23.70**	**35**	P	**P**	**14 00 33.1**	**-0.6**
V51A				IAmb	IAmb	14 00 34.7	
	comp=Z,9.9nm,0.8s						
TKL	**Tuckaleechee C**	**23.92**	**36**	P	**P**	**14 00 35.1**	**-0.7**
	comp=Z,2.5nm,0.6s,baz=209,slow=19,SNR=2.5						
TKL	**Tuckaleechee C**	**23.92**	**36**	IAmb	IAmb	14 00 44.2	
	comp=Z,7.3nm,0.9s						
TPNV	**Topopah Spring**	**23.98**	**328**	IAmb	IAmb	14 00 42.2	
	comp=Z,9.5nm,1.0s						
T50A	**Nancy**	**24.36**	**32**	P	**P**	**14 00 39.8**	**-0.1**
T50A				IAmb	IAmb	14 00 41.6	
	comp=Z,4.9nm,0.5s						
RWWY	**Rawlins**	**25.09**	**349**	IAmb	IAmb	14 00 55.5	
	comp=Z,7.3nm,1.1s						
S51A	**Beattyville**	**25.47**	**33**	IAmb	IAmb	14 00 51.7	
	comp=Z,8.8nm,0.7s						
W57A	**Gilead**	**25.86**	**42**	P	**P**	**14 00 52.7**	**-0.8**
K22A	**Casper**	**25.90**	**350**	IAmb	IAmb	14 01 04.7	
	comp=Z,9.5nm,1.1s						
HWUT	**Hardware Ranch**	**26.08**	**342**	P	**P**	**14 00 56.4**	**+0.8**
NV11	**Mina Array Sit**	**26.08**	**328**	IAmb	IAmb	14 01 00.0	
	comp=Z,8.2nm,1.1s						
NVAR	**Mina Array Bea**	**26.15**	**328**	P	**P**	**14 00 59.0**	**+2.6**
	comp=Z,6.2nm,1.0s,baz=153,slow=9.1,SNR=18						
NVAR				LR	LR	14 11 38.7	
	comp=Z,214nm,19.6s,baz=182,slow=38						
L40A	**Anamosa**	**26.20**	**16**	IAmb	IAmb	14 01 06.5	
	comp=Z,12nm,1.0s						
RYN	**Ryan**	**26.42**	**328**	IAmb	IAmb	14 01 09.4	
	comp=Z,7.1nm,1.1s						
KVN	**Kaiserville**	**26.53**	**329**	P	**P**	**14 01 00.6**	**+0.8**
KVN				IAmb	IAmb	14 01 03.9	
	comp=Z,12nm,1.2s						
PDAR	**Pinedale Array**	**26.62**	**346**	P	**P**	**14 01 01.5**	**+1.0**
	comp=Z,4.2nm,1.0s,baz=145,slow=11,SNR=23						
SNOW	**Snow King Moun**	**27.57**	**344**	IAmb	IAmb	14 01 12.3	
	comp=Z,10nm,1.1s						
TPAW	**Teton Pass**	**27.65**	**344**	P	**P**	**14 01 10.3**	**+0.5**
TPAW				IAmb	IAmb	14 01 17.0	
	comp=Z,4.5nm,0.8s						
O52A	**Adamsville**	**28.24**	**32**	P	**P**	**14 01 14.1**	**-0.7**
ROSC	**El Rosal**	**28.73**	**112**	LR	LR	14 12 10.7	
	comp=Z,68nm,18.8s,baz=7.0,slow=35						
LRM	**Limekiln Ridge**	**30.21**	**344**	P	**P**	**14 01 32.8**	**+0.3**
B35A	**Bob, Littlefor**	**31.70**	**9**	IAmb	IAmb	14 01 46.9	
	comp=Z,4.9nm,1.1s						
G08A	**Pilot Rock**	**31.91**	**336**	IAmb	IAmb	14 01 50.1	
	comp=Z,3.9nm,1.0s						
ULM	**Lac du Bonnet**	**33.29**	**6**	P	**P**	**14 01 58.2**	**-1.1**
	comp=Z,3.4nm,0.6s,baz=197,slow=6.8,SNR=5.3						
ULM	**Lac du Bonnet**	**33.29**	**6**	IAmb	IAmb	14 02 00.3	
	comp=Z,4.6nm,0.8s						
WALA	**Waterton Lakes**	**33.58**	**344**	IAmb	IAmb	14 02 05.0	
	comp=Z,4.2nm,1.1s						
FFC	**Flin Flon**	**37.54**	**359**	P	**P**	**14 02 36.1**	**+0.3**
SCHQ	**Schefferville**	**45.81**	**27**	P	**P**	**14 03 41.7**	**-1.8**
	comp=Z,4.1nm,0.6s,baz=217,slow=4.4,SNR=3.7						
YKA	**Yellowknife Ar**	**46.34**	**351**	P	**P**	**14 03 47.5**	**0.0**
	comp=Z,5.9nm,0.9s,baz=160,slow=7.9,SNR=46						
YKA				PcP	**PcP**	**14 05 23.6**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=155,slow=3.2,SNR=5.1						
GLB	**Gilahina Butte**	**53.63**	**336**	P	**P**	**14 04 45.2**	**+2.2**
H03N2	**Juan Fernandez**	**54.46**	**157**	T	T	15 03 30.7	
	baz=335,slow=77,SNR=63						
H03N1	**Juan Fernandez**	**54.47**	**157**	T	T	15 03 34.3	
	baz=335,slow=77,SNR=110						
H03N3	**Juan Fernandez**	**54.48**	**157**	T	T	15 03 33.3	
	baz=335,slow=77,SNR=68						
DOT	**Dot Lake**	**55.05**	**338**	P	**P**	**14 04 55.7**	**+2.4**
DOT				IAmb	IAmb	14 04 56.7	
	comp=Z,7.8nm,1.3s						
INK	**Inuvik**	**55.19**	**346**	P	**P**	**14 04 54.6**	**+0.5**
	comp=Z,8.2nm,0.9s,baz=130,slow=6.5						
INK	**Inuvik**	**55.19**	**346**	P	**P**	**14 04 55.2**	**+1.1**
HDA	**Harding Lake**	**56.52**	**338**	IAmb	IAmb	14 05 07.9	
	comp=Z,4.5nm,1.0s						
PRP	**Porcupine Dome**	**56.67**	**339**	P	**P**	**14 05 05.1**	**+0.1**
ILAR	**Eielson Array**	**56.71**	**338**	P	**P**	**14 05 06.5**	**+1.4**
	comp=Z,3.8nm,1.0s,baz=145,slow=5.3,SNR=21						
TRF	**Thorofare Moun**	**57.26**	**336**	IAmb	IAmb	14 05 17.5	
	comp=Z,3.9nm,0.8s						
SEY	**Seymchan**	**82.30**	**334**	P	**P**	**14 07 43.2**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=78,slow=8.4,SNR=3.9						
TIXI	**Tiksi**	**85.31**	**346**	P	**P**	**14 07 58.7**	**+0.4**
	comp=Z,4.0nm,0.9s,baz=32,slow=3.9,SNR=8.1						
NOA	**NORSAR Array B**	**85.38**	**27**	P	**P**	**14 07 58.9**	**-0.1**
	comp=Z,0.6nm,0.9s,baz=337,slow=3.4,SNR=3.5						
WRA	**Warramunga Arr**	**127.77**	**256**	PKP	**PKiKP**	**14 14 29.3**	**+0.6**
	comp=Z,0.9nm,0.9s,baz=84,slow=2.0,SNR=5.3						
TGY	**Tagaytay City**	**128.37**	**304**	PKP	**PKiKP**	**14 14 29.6**	**-0.5**
	comp=Z,132nm,0.3s,baz=188,slow=4.3,SNR=5.2						
ASAR	**Alice Springs**	**128.50**	**253**	PKP	**PKiKP**	**14 14 30.1**	**0.0**
	comp=Z,0.6nm,0.9s,baz=106,slow=3.6,SNR=4.9						
CMAR	**Chiang Mai Arr**	**139.63**	**330**	PKP	**PKiKP**	**14 14 51.2**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=268,slow=38,SNR=2.2						

*IDC **10** 14:04:56.1±0.5, 51.69N×173.67W, h0km, mb4.1/30, mb1 4.3/32,mb1mx4.2/63,mbtmp4.1/32,ML3.9/2, Error ellipse: s-maj=18.0km s-min=10.5km az=167.0*

*AEIC **10** 14:05:00.8±3.0, 51.58N±0.05×173.81W±0.07, h18km±4km, ML3.8,mb4.2/29(NEIC),Error ellipse: s-maj=8.4km s-min=4.9km az=145.0*

*NEIC **10** 14:05:01.7±1.8, 51.66N±0.05×173.71W±0.08, h40km±7km, Error ellipse: s-maj=8.0km s-min=6.8km az=192.0*

ISC 10 14:05:02.7±1.4, **51.71N**±0.10×**173.73W**±0.04, **h46**km±11km, **n126,** σ1§**13**/125, **mb4.2**/38, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.57**	**329**		**Pn**	**14 05 14.0**	**-0.5**
ATKA	**Atka Island**	**0.57**	**329**		**Sn**	**14 05 23.4**	**+0.4**
KOSE	**Korovin Southe**	**0.66**	**343**		**Pn**	**14 05 16.1**	**+0.3**
KONE	**Korovin Northe**	**0.72**	**340**		**Pn**	**14 05 16.8**	**+0.3**
GSMY	**Great Sitkin M**	**1.48**	**284**		**Pn**	**14 05 25.5**	**-1.4**
GSTR	**Great Sitkin T**	**1.50**	**286**		**Pn**	**14 05 26.4**	**-0.6**
GSTD	**Great Sitkin T**	**1.54**	**284**		**Pn**	**14 05 26.3**	**-1.4**
GSTD					**Sn**	**14 05 48.6**	**+2.1**
ADAG	**Mount Adagdak**	**1.80**	**280**		**Pn**	**14 05 30.5**	**-0.7**
ADK	**Adak**	**1.84**	**276**	Pn	**Pn**	**14 05 30.7**	**-1.1**
KIKV	**Kanaga Island**	**2.15**	**276**		**Pn**	**14 05 35.1**	**-0.8**
KICM	**Kanaga Island**	**2.16**	**277**		**Pn**	**14 05 35.8**	**-0.4**
KIMD	**Kanaga Island**	**2.18**	**273**		**Pn**	**14 05 35.1**	**-1.3**
TAPA	**Tanaga Point A**	**2.54**	**274**		**Pn**	**14 05 40.8**	**-0.6**
TAFP	**Tanaga Falls P**	**2.65**	**276**		**Pn**	**14 05 43.1**	**+0.2**
TAFP					**Sn**	**14 06 15.8**	**+2.0**
TASE	**Tanaga Southea**	**2.68**	**274**		**Pn**	**14 05 43.1**	**-0.2**
NIKH	**Nikolski High**	**3.24**	**65**		**Pn**	**14 05 50.0**	**-0.9**
OKSP	**Okmok Steeple**	**3.66**	**63**		**Pn**	**14 05 57.6**	**+0.9**
OKWE	**Okmok W'ng Wal**	**3.78**	**60**		**Pn**	**14 05 60.0**	**+1.6**
OKFG	**Magazine Ridge**	**3.93**	**62**		**Pn**	**14 06 02.0**	**+1.6**
MREP	**Makushin Rep't**	**4.73**	**61**		**Pn**	**14 06 13.2**	**+1.8**
MSW	**Makushin Switc**	**4.75**	**60**		**Pn**	**14 06 12.4**	**+0.7**
MNAT	**Makushin Natee**	**4.79**	**60**		**Pn**	**14 06 13.9**	**+1.7**
MTBL	**Makushin Table**	**4.83**	**59**		**Pn**	**14 06 14.7**	**+1.9**
UNV	**Unalaska Valle**	**4.88**	**61**		**Pn**	**14 06 14.4**	**+1.1**
AKRB	**Akutan Reef Bi**	**5.23**	**59**		**Pn**	**14 06 20.7**	**+2.5**
AKMO	**Akutan Morgan**	**5.24**	**60**		**Pn**	**14 06 20.4**	**+2.0**
LVA	**Lava Point**	**5.26**	**59**		**Pn**	**14 06 20.5**	**+1.9**
AKBBA	**Akutan Broad B**	**5.29**	**60**		**Pn**	**14 06 21.1**	**+2.1**
AKGG	**Akutan Green G**	**5.30**	**59**		**Pn**	**14 06 21.1**	**+2.0**
AKUT	**Akutan**	**5.39**	**60**		**Pn**	**14 06 20.7**	**+0.4**
SPIA	**Saint Paul Isl**	**5.84**	**19**		**Pn**	**14 06 28.6**	**+2.1**
SDPT	**Sand Point**	**8.69**	**60**		**Pn**	**14 07 05.1**	**-0.4**
CNBA	**Chernabura Isl**	**9.03**	**64**		**Pn**	**14 07 08.7**	**-1.5**
GAMB	**Gambell**	**12.14**	**4**		**Pn**	**14 07 50.8**	**-1.9**
OHAK	**Old Harbor**	**13.08**	**57**	Pn	**Pn**	**14 08 02.1**	**-3.4**
KDAK	**Kodiak Island**	**13.61**	**55**	Pn	**Pn**	**14 08 10.1**	**-2.6**
	0.9nm,0.3s,baz=288,slow=2.8,SNR=9.5						
KDAK				Sn	S	14 10 53.2	-10
	0.3nm,0.3s,baz=207,slow=18,SNR=1.4						
KDAK	**Kodiak Island**	**13.61**	**55**		**Pn**	**14 08 10.2**	**-2.5**
TTA	**Tatalina**	**14.69**	**33**		**Pn**	**14 08 28.4**	**+1.0**
CNPM	**China Poot**	**14.86**	**49**	Pn	**Pn**	**14 08 29.9**	**+0.4**
BRLK	**Bradley Lake**	**15.11**	**49**		**Pn**	**14 08 31.9**	**-1.0**
BRLK				IAmb	IAmb	14 08 46.0	
	comp=Z,16nm,1.1s						
SPU	**Mount Spurr**	**15.20**	**43**	Pn	**Pn**	**14 08 32.3**	**-1.8**
RC01	**Rabbit Creek A**	**16.17**	**45**		**Pn**	**14 08 43.0**	**-3.3**
PEA0B	**Petropavlovsk-**	**17.44**	**286**	Pn	**Pn**	**14 09 01.2**	**-1.1**
PETK	**Petropavlovsk-**	**17.44**	**286**	P	**P**	**14 09 03.0**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=94,slow=13,SNR=26						
FID	**Port Fidalgo**	**17.52**	**48**	Pn	**Pn**	**14 09 01.4**	**-1.8**
FID				IAmb	IAmb	14 09 24.8	
	comp=Z,9.8nm,0.8s						
MLY	**Manley**	**17.83**	**33**	P	**P**	**14 09 08.2**	**+1.0**
RAGM	**Ragged Mountai**	**18.26**	**50**	P	**P**	**14 09 11.3**	**-0.7**
RAGM				IAmb	IAmb	14 09 20.3	
	comp=Z,7.1nm,0.6s						
WRH	**Wood River Hil**	**18.44**	**36**	P	**P**	**14 09 12.5**	**-1.5**
SUCK	**Suckling Hills**	**18.62**	**52**	P	**Pn**	**14 09 16.5**	**-0.1**
SUCK				IAmb	IAmb	14 09 20.9	
	comp=Z,31nm,1.3s						
HDA	**Harding Lake**	**18.84**	**37**	P	**P**	**14 09 18.6**	**+0.3**
HDA				IAmb	IAmb	14 09 19.8	
	comp=Z,13nm,0.7s						
IL31		**19.04**	**36**	P	**P**	**14 09 18.8**	**-1.7**
ILAR	**Eielson Array**	**19.04**	**36**	P	**P**	**14 09 19.4**	**-1.2**
	comp=Z,1.3nm,0.3s,baz=235,slow=8.5,SNR=66						
DOT	**Dot Lake**	**19.63**	**41**	P	**P**	**14 09 26.3**	**-0.7**
DOT				IAmb	IAmb	14 09 33.4	
	comp=Z,6.9nm,0.6s						
BARN	**Barnard Glacie**	**19.86**	**49**	P	**P**	**14 09 29.4**	**-0.4**
TOLK	**Toolik Lake Re**	**20.54**	**25**	P	**P**	**14 09 37.6**	**+0.8**
TOLK				IAmb	IAmb	14 09 56.1	
	comp=Z,7.8nm,0.8s						
SEY	**Seymchan**	**21.18**	**315**	P	**P**	**14 09 44.7**	**+1.0**
	comp=Z,2.3nm,0.8s,baz=97,slow=17,SNR=4.3						
MA2	**Magadan**	**21.30**	**306**	P	**P**	**14 09 46.1**	**+1.0**
	comp=Z,3.9nm,0.6s,baz=117,slow=16,SNR=3.4						
DAWY	**Dawson**	**21.71**	**42**	P	**P**	**14 09 48.8**	**-0.7**
DAWY				IAmb	IAmb	14 09 57.5	
	comp=Z,3.5nm,0.7s						
HYT	**Haines Junctio**	**21.81**	**51**	P	**P**	**14 09 50.4**	**-0.2**
HYT				IAmb	IAmb	14 10 37.8	
	comp=Z,6.5nm,1.2s						
SKAG	**Skagway**	**22.76**	**55**	IAmb	IAmb	14 10 21.0	
	comp=Z,6.7nm,0.7s						
EPYK	**Eagle Plains**	**23.55**	**37**	P	**P**	**14 10 07.9**	**-0.5**
EPYK				IAmb	IAmb	14 10 11.4	
	comp=Z,6.8nm,0.7s						
INK	**Inuvik**	**25.38**	**34**	P	**P**	**14 10 24.5**	**-0.6**
	comp=Z,5.3nm,0.9s,baz=231,slow=9.8,SNR=17						
INK				PcP	**PcP**	**14 13 56.6**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=273,slow=2.7,SNR=4.0						
INK	**Inuvik**	**25.38**	**34**	P	**P**	**14 10 24.7**	**-0.4**
INK				IAmb	IAmb	14 10 25.8	
	comp=Z,5.8nm,0.9s						
INK					**PcP**	**14 13 56.2**	**+0.1**
DLBC	**Dease Lake**	**25.52**	**58**	P	**P**	**14 10 27.4**	**+0.9**
	comp=Z,5.7nm,0.9s,baz=267,slow=13,SNR=6.7						
DLBC	**Dease Lake**	**25.52**	**58**	IAmb	IAmb	14 10 31.1	
	comp=Z,6.3nm,0.9s						
JKA	**Kamikawa-asahi**	**29.86**	**273**	P	**P**	**14 11 06.4**	**+0.9**
ASAJ	**Asahikawa**	**29.87**	**273**	P	**P**	**14 11 06.4**	**+0.9**
	comp=Z,3.9nm,0.7s,baz=62,slow=11,SNR=6.4						

BOSA	**Boshof**	**152.90**	**321**	PKPbc	**PKPbc**	**14**	**24**	**54.5**	**0.0**
	comp=Z,3.5nm,1.0s,baz=70,slow=2.2,SNR=5.8								

MEX 10 14:09:26.0±0.6, 16°92'N×100°92'W, h5km, MD3.9, 1D, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
CAIG	**El Cayaco**	**0.64**	**79**	*eP*	Pg	14	09	37.3	-1.0
	baz=259,slow=12								
CAIG				*i* S	Sg	14	09	46.6	0.0
ZIIG	**Zihuatanejo**	**0.86**	**323**	*eP*	Pg	14	09	40.8	-1.7
ZIIG				*eS*	Sg	14	09	52.2	-1.4
ACP2	**Acapulco**	**0.99**	**93**	*eS*	Sg	14	09	50.6	-7.4
ARIG	**Puente Sto Nin**	**1.46**	**22**	*eP*	Pn	14	09	49.6	-3.5
ARIG				*eS*	Sb	14	10	06.7	-5.8
PLIG	**Platanillo**	**1.99**	**43**	*eP*	Pn	14	09	56.9	-3.6
PLIG				*eS*	Sn	14	10	23.9	-1.9
TLIG	**Tlapa**	**2.34**	**74**	*eP*	Pn	14	10	06.2	+1.0
TLIG				*eS*	Sb	14	10	39.0	+1.0
YAIG	**Yautepec**	**2.62**	**42**	*eP*	Pn	14	10	10.2	+1.2
YAIG				*eS*	Sn	14	10	42.7	+1.3
HLIG	**Huajuapan de L**	**3.11**	**73**	*eP*	Pn	14	10	14.3	-1.6
HLIG				*eS*	Sn	14	10	50.0	-3.6

*IDC **10** 14:14:43.0±0.9, 9°.99N×124°.33E, h0km, mb3.9/10, mb1 4.0/11,mb1mx3.8/54,mbtmp3.9/11,ML4.4/1,MS3.4/2, Ms1 3.4/2,ms1mx3.0/43,Error ellipse: s-maj=35.2km s-min=14.4km az=72.0*

*MAN **10** 14:14:43.0, 9°.98N×124°.08E, h3km, mb5.0, ML3.9, MS3.9*
MAN Intensity III - Loboc Bohol; Intensity II - Buenavista Bohol.

ISC 10 14:14:42.8±1.2, 9°.95N±0°.02×124°.20E±0°.03, h1km±9km, n32, σ1≈98/47, mb3.7/10, 5C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
TBP	**Tagbilaran**	**0.42**	**233**	*eP*	**Pg**	**14**	**14**	**53.9**	**+3.1**
TBP				*i* S	**Sg**	**14**	**14**	**59.5**	**+3.2**
LLP	**Lapu-Lapu**	**0.44**	**328**	*eP*	**Sg**	**14**	**14**	**50.3**	**-0.8**
LLP				*i* S	**Sg**	**14**	**14**	**57.0**	**+0.2**
MSLP	**Maasin**	**0.68**	**74**	*eP*	**Pn**	**14**	**14**	**58.1**	**-1.3**
MSLP				*eS*	**Sn**	**14**	**15**	**11.3**	**+0.7**
SNPH	**Sibulan**	**1.12**	**238**	*iP*	**Pn**	**14**	**15**	**02.7**	**-3.0**
SNPH				*i* S	**Sb**	**14**	**15**	**20.1**	**-0.1**
OCLP	**Ormoc**	**1.17**	**20**	*eP*	**Pn**	**14**	**15**	**05.8**	**-0.5**
OCLP				*eS*	**Sn**	**14**	**15**	**26.3**	**+3.4**
CNOP	**Candoni, Negro**	**1.54**	**266**	*eP*	**Pn**	**14**	**15**	**09.1**	**-2.3**
CNOP				*eS*	**Sn**	**14**	**15**	**29.3**	**-2.8**
CGP	**Cagayan de Oro**	**1.56**	**162**	*eP*	**Pg**	**14**	**15**	**13.1**	**+0.4**
CGP				*eS*	**Sg**	**14**	**15**	**33.7**	**+0.8**
DCPH	**Dipolog City**	**1.59**	**212**	*iP*	**Pn**	**14**	**15**	**10.8**	**-1.2**
DCPH				*i* S	**Sn**	**14**	**15**	**33.3**	**0.0**
BUTP	**Butuan**	**1.70**	**125**	*eP*	**Pg**	**14**	**15**	**15.3**	**-0.2**
BUTP				*eS*	**Sg**	**14**	**15**	**39.5**	**+1.9**
GUIM	**Jordan**	**1.72**	**293**	*eP*	**Pn**	**14**	**15**	**12.1**	**-1.8**
GUIM				*eS*	**Sn**	**14**	**15**	**33.6**	**-3.0**
RCP	**Roxas**	**2.15**	**318**	*eP*	**Pn**	**14**	**15**	**19.2**	**-0.5**
RCP				*eS*	**Sn**	**14**	**15**	**47.0**	**-0.1**
JAP	**San Jose, Anti**	**2.36**	**290**	*eP*	**Pn**	**14**	**15**	**23.4**	**+0.8**
MMPH	**Masbate**	**2.46**	**347**	*eP*	**Pb**	**14**	**15**	**26.6**	**-1.3**
MMPH				*eS*	**Sb**	**14**	**15**	**56.0**	**-2.8**
CNP	**Catarman**	**2.59**	**10**	*eP*	**Pn**	**14**	**15**	**25.2**	**-0.6**
CTBH	**Cotabato--PC H**	**2.71**	**179**	*iP*	**Pn**	**14**	**15**	**27.3**	**-0.1**
CTBH				*i* S	**Sn**	**14**	**16**	**02.3**	**+1.5**
KCP	**Kidapawan**	**3.05**	**163**	*eP*	**Pn**	**14**	**15**	**34.2**	**+2.0**
KCP				*i* S	**Sg**	**14**	**16**	**22.9**	**+2.1**
DAV	**Davao City (W)**	**3.17**	**154**	Pn	**Pb**	**14**	**15**	**35.9**	**-3.9**
	40nm,0.3s,baz=248,slow=19,SNR=1.8								
DAV				Sn	**Sg**	**14**	**16**	**21.6**	**-2.9**
	65nm,0.3s,baz=218,slow=14,SNR=2.1								
DAV				LR	LR	14	16	59.1	
	comp=Z,634nm,19.0s,baz=222,slow=43								
SKMP	**Bagumbayan, Su**	**3.42**	**174**	*eP*	**Pb**	**14**	**15**	**40.6**	**-3.6**
SKMP				*eS*	**Sn**	**14**	**16**	**20.7**	**+2.3**
DDMP	**Don Marcelino,**	**4.10**	**158**	*eP*	**Pn**	**14**	**15**	**46.9**	**+0.3**
DDMP				*eS*	**Sb**	**14**	**16**	**43.3**	**-2.5**
LQP	**Lukban**	**4.89**	**328**	*eP*	**Pn**	**14**	**16**	**01.0**	**+3.3**
TGY	**Tagaytay City**	**5.22**	**323**	LR	LR	14	18	13.3	
	comp=Z,406nm,19.2s,baz=166,slow=40								
BATI	**Baumata**	**20.03**	**182**	P	Pn	14	19	19.7	+0.7
	42nm,0.7s,baz=0.2,slow=2.2,SNR=6.5								
LEM	**Lembang**	**23.46**	**225**	P	**P**	**14**	**19**	**57.0**	**+2.8**
	7.6nm,0.5s,baz=307,slow=21,SNR=4.4								
CMAR	**Chiang Mai Arr**	**25.88**	**292**	P	**P**	**14**	**20**	**17.0**	**+0.6**
	0.5nm,0.3s,baz=108,slow=6.7,SNR=8.6								
KSRS	**Korea Array**	**27.59**	**6**	P	**P**	**14**	**20**	**31.8**	**+0.2**
	0.8nm,0.7s,baz=183,slow=9.7,SNR=3.9								
FITZ	**Fitzroy Crossi**	**27.90**	**177**	P	**P**	**14**	**20**	**34.0**	**-0.5**
	2.8nm,1.0s,baz=342,slow=6.4,SNR=3.6								
WRA	**Warramunga Arr**	**31.33**	**161**	P	**P**	**14**	**21**	**03.9**	**-1.0**
	0.8nm,1.0s,baz=343,slow=9.1,SNR=3.2								
ASAR	**Alice Springs**	**34.73**	**164**	P	**P**	**14**	**21**	**34.5**	**-0.1**
	1.2nm,1.0s,baz=350,slow=8.2,SNR=9.7								
SONM	**Songino Array**	**40.65**	**342**	P	**P**	**14**	**22**	**26.2**	**+1.6**
	0.6nm,0.3s,baz=36,slow=26,SNR=3.7								
STKA	**Stephens Creek**	**44.79**	**159**	P	**P**	**14**	**22**	**58.7**	**+0.4**
	1.5nm,0.9s,baz=334,slow=11,SNR=3.1								
MKAR	**Makanchi Array**	**51.07**	**324**	P	**P**	**14**	**23**	**47.0**	**+0.2**
	0.7nm,0.7s,baz=110,slow=9.2,SNR=5.7								
ZALV	**Zalesovo Beam**	**53.95**	**332**	P	**P**	**14**	**24**	**07.8**	**-0.2**
	0.4nm,0.4s,baz=106,slow=8.0,SNR=3.7								

*BJI **10** 14:16:05.7±0.0, 60°.15N×152°.33W, h85km, mB5.5/63, mb5.5/78, Ms5.3/80, Ms7 4.9/69*

*MOS **10** 14:16:08.0±0.9, 60°.12N×152°.36W, h94km, mb5.6/139, Error ellipse: s-maj=7.8km s-min=3.1km az=90.1*

*BGR **10** 14:16:08.5±0.0, 60°.74N×152°.21W, h33km, mb6.0, mB_BB6.2, Ms4.6*

*NEIC **10** 14:16:09.2±2.0, 60°.01N±0°.03×152°.19W±0°.08, h94km±1km, Error ellipse: s-maj=6.7km s-min=4.7km az=81.0*

*AEIC **10** 14:16:09±2.7, 60°.00N±0°.05×152°.1W±0°.2, h91km±5km, ML5.6, mb5.9/499(NEIC), Mwb5.7/72(NEIC), Mwc5.8(GCMT), Mwr5.7/39(NEIC), Mww5.7(NEIC), Error ellipse: s-maj=11.7km s-min=6.3km az=75.0*

*IDC **10** 14:16:09.4±0.7, 60°.17N×152°.38W, h90km±5km, mb5.2/41, mb1 5.3/45, mb1mx5.2/49, mbtmp5.5/45, MS4.5/39, Ms1 4.5/39, ms1mx4.5/53, Error ellipse: s-maj=7.6km s-min=6.3km az=26.0*

*NEIC **10** 14:16:09.2, 60°.04N×152°.21W, h86km, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr=3.72; Mθθ=-4.90; Mφφ 1.18; Mrθ=0.91; Mφθ -0.54; Mφr-0.59; Fault plane solution: Mo=4.59000×10^17^ NP1:φ=97.69000°, δ52.08000°, λ107.23000°. NP2:φ=250.92000°, δ41.10000°, λ69.18000°. Principal axes: T 3.9629, Plg75.0000°, Azm63.0000°; N 1.0683, Plg14.0000°, Azm267.0000°; P -5.0313, Plg6.0000°, Azm176.0000°;*

*NEIC **10** 14:16:09.3, 60°.04N×152°.20W, h93km, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr=3.72; Mθθ=-4.90; Mφφ 1.18; Mrθ=-0.73; Mφθ=-0.33; Mφr-1.05; Fault plane solution: Mo=4.62000×10^17^ NP1:φ=249.46000°, δ53.00000°, λ66.29000°. NP2:φ=105.59000°, δ43.01000°, λ118.09000°. Principal axes: T 4.1293, Plg70.0000°, Azm101.0000°; N 0.8584, Plg19.0000°, Azm264.0000°; P -4.9877, Plg5.0000°, Azm356.0000°;*

*NEIC **10** 14:16:11, 60°.11N×152°.16W, h110km, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr=3.74; Mθθ=-5.07; Mφφ 1.32; Mrθ=0.74; Mφθ 0.10; Mφr-1.20; Fault plane solution: Mo=4.77000×10^17^ NP1:φ=111.00000°, δ54.00000°, λ117.00000°. NP2:φ=250.00000°, δ44.00000°, λ58.00000°. Principal axes: T 4.2824, Plg68.0000°, Azm79.0000°; N 0.8530, Plg22.0000°, Azm274.0000°; P -5.1353, Plg5.0000°, Azm182.0000°;*

*GCMT **10** 14:16:11.0±0.1, 60°.04N±0°.01×152°.05W±0°.01, h106km, MW5.8/161, Moment Tensor Solution. s161,c316; s157,c339; Duration: 1s8 Moment tensor: Scale 10^17^Nm; Mrr4.11±.04; Mθθ-6.13±.05; Mφφ2.03±.05; Mrθ-0.11±.04; Mφθ 0.14±.05; Mφr-1.16±.03; Best double couple: Mo5.38200×10^17^ NP1:φ=113.00000°, δ49.00000°, λ123.00000°. NP2:φ=249.00000°, δ50.00000°, λ58.00000°. Principal axes: T 4.6300, Plg66.0000°, Azm92.0000°; N 1.5130, Plg24.0000°, Azm271.0000°; P -6.1330, Plg1.0000°, Azm1.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

Triangular moment-rate function

*NEIC **10** 14:16:12, 59°.98N×152°.07W, h105km, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr=4.16; Mθθ-6.30; Mφφ 2.14; Mrθ=-0.38; Mφθ 0.26; Mφr-1.21; Fault plane solution: Mo 5.70000×10^17^ NP1:φ=249.00000°, δ52.00000°, λ57.00000°. NP2:φ=115.00000°, δ48.00000°, λ125.00000°. Principal axes: T 4.7445, Plg65.0000°, Azm95.0000°; N 1.5746, Plg25.0000°, Azm271.0000°; P -6.3191, Plg2.0000°, Azm1.0000°;*

ISC 10 14:16:08.7±0.2, 60°.03N±0°.02×152°.24W±0°.02, h92km±1km, h91km: pP-P, n1974, σ1≈150/2141, mb5.8/517, 230C-29D, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
IVE	**Iliamna Volcan**	**0.39**	**269**		**Pn**	**14**	**16**	**23.5**	**+0.5**
ILS	**Iliamna Low So**	**0.42**	**261**		**Pn**	**14**	**16**	**23.8**	**+0.6**
ILW	**Iliamna West**	**0.45**	**274**		**Pn**	**14**	**16**	**24.3**	**+0.8**
RED	**Redoubt Volcan**	**0.47**	**326**		**Pn**	**14**	**16**	**23.8**	**+0.2**
RED					**Sn**	**14**	**16**	**36.1**	**+1.6**
HOM	**Homer**	**0.48**	**141**	Pn	**Pn**	**14**	**16**	**24.9**	**+1.4**
HOM				Sn	**Sn**	**14**	**16**	**35.7**	**+1.3**
RSO	**Redoubt South**	**0.51**	**329**		**Pn**	**14**	**16**	**24.7**	**+0.8**
RDWB	**Redoubt West**	**0.55**	**327**		**Pn**	**14**	**16**	**25.1**	**+0.8**
RDWB					**Sn**	**14**	**16**	**36.9**	**+1.2**
DFR	**Drift River**	**0.61**	**339**		**Pn**	**14**	**16**	**25.4**	**+0.7**
DFR					**Sn**	**14**	**16**	**37.8**	**+1.3**
RDJH	**Redoubt Jeurge**	**0.63**	**334**		**Pn**	**14**	**16**	**25.8**	**+0.9**
RDJH					**Sn**	**14**	**16**	**38.4**	**+1.5**
CNPM	**China Poot**	**0.71**	**135**		**Pn**	**14**	**16**	**25.9**	**+0.4**
CNPM				Sn	**Sn**	**14**	**16**	**38.1**	**+0.1**
BRLK	**Bradley Lake**	**0.73**	**111**		**Pn**	**14**	**16**	**25.7**	**0.0**
BRLK					**Sn**	**14**	**16**	**38.3**	**-0.1**
BRSE	**Bradley Lake S**	**0.81**	**110**		**Pn**	**14**	**16**	**26.5**	**+0.1**
BRSE					**Sn**	**14**	**16**	**40.2**	**+0.5**
AU22	**Augustine Moun**	**0.87**	**221**		**Pn**	**14**	**16**	**27.9**	**+0.9**
AU22					**Sn**	**14**	**16**	**42.6**	**+1.8**
AU2	**Augustine Isla**	**0.88**	**222**		**Pn**	**14**	**16**	**28.0**	**+0.9**
AUL	**Augustine Lava**	**0.89**	**224**		**Pn**	**14**	**16**	**28.2**	**+0.9**
AUL					**Sn**	**14**	**16**	**42.9**	**+1.7**
AUP	**Augustine Pinn**	**0.90**	**222**	P	**Pn**	**14**	**16**	**28.4**	**+0.9**
AUP	**Augustine Pinn**	**0.90**	**222**		**Pn**	**14**	**16**	**28.4**	**+0.9**
AUH	**Augustine H**	**0.91**	**223**		**Pn**	**14**	**16**	**28.4**	**+0.9**
AUW	**Augustine West**	**0.91**	**224**		**Pn**	**14**	**16**	**28.4**	**+0.9**
CAPN	**Captain Cook N**	**0.92**	**35**		**Pn**	**14**	**16**	**29.7**	**+2.1**
SLKM	**Skilak Lake**	**1.11**	**64**		**Pn**	**14**	**16**	**29.7**	**-0.1**
SLKM					**Sn**	**14**	**16**	**44.9**	**-0.8**
SPCR	**Spurr Chakacha**	**1.18**	**1**		**Pn**	**14**	**16**	**31.4**	**+0.7**
SPCR					**Sn**	**14**	**16**	**49.6**	**+2.5**
SPBG	**Spurr Blockage**	**1.24**	**357**		**Pn**	**14**	**16**	**32.5**	**+1.1**
SPBG					**Sn**	**14**	**16**	**50.4**	**+1.9**
SPWE	**Spurr West**	**1.26**	**353**		**Pn**	**14**	**16**	**32.8**	**+1.1**
SEW	**Seward**	**1.40**	**86**		**Pn**	**14**	**16**	**32.7**	**-0.5**
SEW	**Seward**	**1.40**	**86**		**Sn**	**14**	**16**	**51.0**	**-0.7**
STLK	**Strandline Lak**	**1.49**	**7**		**Pn**	**14**	**16**	**35.7**	**+1.1**
RC01	**Rabbit Creek A**	**1.63**	**48**		**Pn**	**14**	**16**	**35.7**	**-0.5**
RC01	**Rabbit Creek A**	**1.63**	**48**		**Sn**	**14**	**16**	**57.4**	**+0.4**
KAHG	**Katmai Hook Gl**	**1.94**	**219**		**Pn**	**14**	**16**	**41.2**	**+0.9**
SVW2	**Sparrevohn**	**1.97**	**304**		**Pn**	**14**	**16**	**41.9**	**+1.3**
KAHC	**Katmai Hardscr**	**1.98**	**227**		**Pn**	**14**	**16**	**41.5**	**+0.6**
PWL	**Port Wells**	**2.10**	**65**		**Pn**	**14**	**16**	**41.6**	**-0.8**
PWL					**Sn**	**14**	**17**	**06.7**	**-1.3**
PMR	**Palmer**	**2.19**	**43**	P	**Pn**	**14**	**16**	**43.0**	**-0.3**
PMR						14	17	08.5	
PMR	**Palmer**	**2.19**	**43**		**Pn**	**14**	**16**	**43.0**	**-0.3**
KDAK	**Kodiak Island**	**2.26**	**185**	P	**Pn**	**14**	**16**	**43.6**	**-0.7**
	2μm,0.3s,baz=45,slow=6.9								
KDAK				S	**Sn**	**14**	**17**	**09.4**	**-2.2**
	3μm,0.3s,baz=13,slow=14,SNR=7.4								
KDAK				LR	LR	14	17	36.3	
	comp=Z,15μm,19.5s,baz=5.9,slow=36								
KDAK				PcP	**PcP**	**14**	**24**	**27.2**	**+0.2**
	0.5nm,0.3s,baz=53,slow=5.1,SNR=7.3								
KCG	**Knife Ck. Glac**	**2.27**	**222**		**Pn**	**14**	**16**	**45.5**	**+0.9**
KNK	**Knik Glacier**	**2.32**	**52**		**Pn**	**14**	**16**	**44.8**	**-0.4**
KNK	**Knik Glacier**	**2.32**	**52**		**Sn**	**14**	**17**	**11.8**	**-1.2**
KABU	**Katmai Buttres**	**2.36**	**223**		**Pn**	**14**	**16**	**46.7**	**+0.9**
GHO	**Glory Hole Cre**	**2.38**	**41**		**Pn**	**14**	**16**	**45.9**	**-0.1**
GHO	**Glory Hole Cre**	**2.38**	**41**		**Sn**	**14**	**17**	**14.1**	**-0.6**
SML	**Sawmill**	**2.61**	**45**	P	**Pn**	**14**	**16**	**48.9**	**-0.2**
SML	**Sawmill**	**2.61**	**45**		**Pn**	**14**	**16**	**48.9**	**-0.2**
SML	**Sawmill**	**2.61**	**45**		**Sn**	**14**	**17**	**19.8**	**-0.3**
GLI	**Glacier Island**	**2.69**	**69**		**Pn**	**14**	**16**	**47.6**	**-1.8**
OHAK	**Ohlo Harbor**	**2.87**	**192**		**Pn**	**14**	**16**	**51.2**	**-1.2**
PPLA	**Purkeypile**	**2.88**	**0**		**Pn**	**14**	**16**	**53.5**	**+0.8**
HIN	**Hinchinbrook I**	**2.89**	**80**		**Pn**	**14**	**16**	**51.5**	**-1.3**
HIN	**Hinchinbrook I**	**2.89**	**80**		**Sn**	**14**	**17**	**24.2**	**-2.4**
FID	**Port Fidalgo**	**2.95**	**73**		**Pn**	**14**	**16**	**51.6**	**-1.9**
FID	**Port Fidalgo**	**2.95**	**73**		**Sn**	**14**	**17**	**24.1**	**-4.0**
JPK	**Jack Peak**	**2.97**	**67**		**Pn**	**14**	**16**	**52.7**	**-1.1**
SCM	**Sheep Creek Mo**	**3.00**	**51**	P	**Pn**	**14**	**16**	**53.9**	**-0.4**
SCM	**Sheep Creek Mo**	**3.00**	**51**		**Sn**	**14**	**16**	**53.9**	**-0.4**
MID	**Middleton Isla**	**3.05**	**99**	P	**Pn**	**14**	**16**	**54.6**	**-0.2**
MID	**Middleton Isla**	**3.05**	**99**		**Pn**	**14**	**16**	**54.6**	**-0.2**
VMT	**TAPS Tl Valdez**	**3.08**	**67**		**Pn**	**14**	**16**	**54.6**	**-0.7**
VMT					**Sn**	**14**	**17**	**29.1**	**-2.1**
PLK2	**Peulik 2**	**3.11**	**225**		**Pn**	**14**	**16**	**57.0**	**+1.3**
PLK3	**Peulik 3**	**3.15**	**223**		**Pn**	**14**	**16**	**57.8**	**+1.5**
PLK1	**Peulik 1**	**3.18**	**227**		**Pn**	**14**	**16**	**58.0**	**+1.4**
EYAK	**Cordova Ski Ar**	**3.27**	**78**		**Pn**	**14**	**16**	**56.4**	**-1.5**
CAST	**Castle Rocks**	**3.40**	**1**		**Pn**	**14**	**17**	**00.5**	**+0.8**
TT01	**Tatalina**	**3.41**	**329**		**Pn**	**14**	**17**	**00.8**	**+1.1**
WAT2	**Susitna Watana**	**3.42**	**29**		**Pn**	**14**	**17**	**00.3**	**+0.3**
TTA	**Tatalina**	**3.43**	**330**	P	**Pn**	**14**	**17**	**01.0**	**+1.0**
TTA	**Tatalina**	**3.43**	**330**		**Pn**	**14**	**17**	**01.0**	**+1.0**
TRF	**Thorofare Moun**	**3.56**	**14**		**Pn**	**14**	**17**	**02.5**	**+0.7**
KTH	**Kantishna Hill**	**3.59**	**9**		**Pn**	**14**	**17**	**02.8**	**+0.6**
RND	**Reindeer**	**3.75**	**24**	P	**Pn**	**14**	**17**	**04.4**	**0.0**
RND	**Reindeer**	**3.75**	**24**		**Pn**	**14**	**17**	**04.4**	**0.0**
PS12	**TAPS Pump St12**	**3.77**	**64**		**Pn**	**14**	**17**	**03.8**	**-0.8**
GOAT	**Goat Mountain**	**3.78**	**78**		**Pn**	**14**	**17**	**03.3**	**-1.4**
RAGM	**Ragged Mountai**	**3.79**	**81**		**Pn**	**14**	**17**	**03.2**	**-1.7**
DHY	**Denali Highway**	**3.84**	**35**		**Pn**	**14**	**17**	**05.9**	**+0.3**
CHUM	**Lake Minchumin**	**3.87**	**359**		**Pn**	**14**	**17**	**06.5**	**+0.7**
PS11	**TAPS Pump St11**	**3.88**	**55**		**Pn**	**14**	**17**	**06.0**	**0.0**
HMT	**Hamilton**	**4.00**	**82**		**Pn**	**14**	**17**	**07.1**	**-0.5**
MCK	**McKinley**	**4.03**	**21**	P	**Pn**	**14**	**17**	**08.3**	**+0.2**
MCK	**McKinley**	**4.03**	**21**		**Pn**	**14**	**17**	**08.3**	**+0.2**
BPAW	**Bear Paw Mtn.**	**4.13**	**8**		**Pn**	**14**	**17**	**08.7**	**-0.7**
NICHA	**Nichawak Mount**	**4.14**	**84**		**Pn**	**14**	**17**	**09.2**	**-0.4**
SUCK	**Suckling Hills**	**4.24**	**86**		**Pn**	**14**	**17**	**10.6**	**-0.4**
BWN	**Browne**	**4.36**	**16**		**Pn**	**14**	**17**	**12.4**	**-0.1**
GLB	**Gilahina Butte**	**4.37**	**67**		**Pn**	**14**	**17**	**11.8**	**-1.0**
PAX	**Paxson**	**4.38**	**45**	P	**Pn**	**14**	**17**	**13.1**	**+0.1**
PAX	**Paxson**	**4.38**	**45**		**Pn**	**14**	**17**	**13.1**	**+0.1**
GRIN	**Grindle Hills**	**4.46**	**83**		**Pn**	**14**	**17**	**14.2**	**+0.1**
BGLC	**Bering Glacier**	**4.49**	**85**		**Pn**	**14**	**17**	**14.4**	**+0.2**
VRDI	**Verde Repeater**	**4.49**	**71**		**Pn**	**14**	**17**	**13.2**	**-1.3**
KHIT	**Khitrov Hills**	**4.50**	**81**		**Pn**	**14**	**17**	**14.7**	**+0.1**
PS10	**TAPS Pump St10**	**4.59**	**39**		**Pn**	**14**	**17**	**16.5**	**+0.8**
WAX	**Waxell Ridge**	**4.70**	**81**		**Pn**	**14**	**17**	**17.1**	**-0.1**
MCARA	**McCarthy VSAT**	**4.72**	**69**		**Pn**	**14**	**17**	**16.5**	**-1.0**
NEA	**Nenana**	**4.80**	**17**		**Pn**	**14**	**17**	**19.2**	**+0.7**
WRH	**Wood River Hil**	**4.86**	**22**		**Pn**	**14**	**17**	**19.9**	**+0.6**
PTPK	**Patty Peak**	**4.95**	**72**		**Pn**	**14**	**17**	**20.2**	**-0.6**
CHGN	**Chignik**	**4.97**	**224**		**Pn**	**14**	**17**	**21.1**	**+0.3**
KIAG	**Kiagna River**	**4.97**	**75**		**Pn**	**14**	**17**	**20.3**	**-0.7**
BALM	**Baldy**	**4.99**	**74**		**Pn**	**14**	**17**	**20.3**	**-0.9**
MENT	**Mentasta**	**5.02**	**51**		**Pn**	**14**	**17**	**21.2**	**-0.3**
HDA	**Harding Lake**	**5.04**	**27**	P	**Pn**	**14**	**17**	**21.9**	**0.0**
	baz=211,SNR=1000								
HDA				S	**Sn**	**14**	**18**	**17.8**	**-0.9**
	baz=211								
HDA				S	**Sn**	**14**	**18**	**17.8**	**-0.9**
	baz=211								
HDA	**Harding Lake**	**5.04**	**27**		**Pn**	**14**	**17**	**22.4**	**+0.5**
MLY	**Manley**	**5.07**	**7**		**Pn**	**14**	**17**	**22.5**	**+0.2**
CCB	**Clear Creek Bu**	**5.07**	**22**		**Pn**	**14**	**17**	**22.4**	**+0.2**
MESA	**MESA**	**5.15**	**84**		**Pn**	**14**	**17**	**23.6**	**+0.2**
PS08	**TAPS Pump Stn8**	**5.19**	**27**		**Pn**	**14**	**17**	**24.4**	**+0.7**
TCOL	**CIGO, UAF Yank**	**5.27**	**21**	P	**Pn**	**14**	**17**	**24.4**	**-0.4**
	baz=204,SNR=1000								
TCOL				S	**Sn**	**14**	**18**	**23.3**	**-0.8**
	baz=204								
TCOL	**CIGO, UAF Yank**	**5.27**	**21**		**Pn**	**14**	**17**	**25.4**	**+0.5**
COLA	**College**	**5.27**	**21**	*d iP*	**Pn**	**14**	**17**	**24.4**	**-0.5**
COLA	**College**	**5.27**	**21**		**Pn**	**14**	**17**	**24.6**	**-0.3**
I53US	**FAIRBANKS INFR**	**5.27**	**21**	P	**Pn**	**14**	**17**	**25.0**	**+0.1**
	baz=201,slow=22,SNR=2.0								
I53US				*i*		14	41	10.0	

	baz=209,slow=334,SNR=2.8								
MDM	**Murphy Dome**	**5.28**	**19**		**Pn**	**14**	**17**	**25.5**	**+0.4**
VNNF	**Veniaminof 3**	**5.30**	**228**		**Pn**	**14**	**17**	**27.2**	**+1.7**
DOT	**Dot Lake**	**5.31**	**43**		**Pn**	**14**	**17**	**25.7**	**+0.2**
BARN	**Barnard Glacie**	**5.32**	**74**		**Pn**	**14**	**17**	**25.9**	**+0.1**
IL31		**5.37**	**25**		**Pn**	**14**	**17**	**26.8**	**+0.6**
ILAR	**Eielson Array**	**5.37**	**25**	P	**Pn**	**14**	**17**	**26.5**	**+0.2**
	607nm,0.3s,baz=212,slow=12,SNR=6877								
ILAR				S	**Sn**	**14**	**18**	**24.0**	**-2.7**
	626nm,0.3s,baz=4.1,slow=17,SNR=1.8								
ILAR				LR	LR	14	19	12.8	
	comp=Z,7μm,18.4s,baz=188,slow=35								
ILAR				PKiKP	**PKiKP**	**14**	**32**	**27.9**	**-1.7**
	0.2nm,0.3s,baz=293,slow=2.2,SNR=8.1								
ILAR				P3KPbc		14	55	24.6	
	0.1nm,0.3s,baz=237,slow=3.1,SNR=8.4								
ILAR				P3KP		14	55	54.7	
	0.1nm,0.3s,baz=217,slow=2.9,SNR=4.0								
VNWF	**Veniaminof 8**	**5.50**	**228**		**Pn**	**14**	**17**	**29.5**	**+1.4**
POKR	**Poker Plat Res**	**5.57**	**21**	P	**Pn**	**14**	**17**	**28.5**	**-0.4**
	baz=205,SNR=1000								
POKR	**Poker Plat Res**	**5.57**	**21**		**Pn**	**14**	**17**	**29.2**	**+0.3**
PS07	**TAPS Pump Stn7**	**5.61**	**17**		**Pn**	**14**	**17**	**29.8**	**+0.4**
YUK2	**White River**	**5.83**	**68**		**Pn**	**14**	**17**	**32.2**	**-0.4**
BC03		**5.85**	**54**		**Pn**	**14**	**17**	**32.3**	**-0.4**
PS06	**TAPS Pump Stn6**	**5.96**	**10**		**Pn**	**14**	**17**	**34.9**	**+0.6**
BVCY	**Beaver Creek**	**5.99**	**62**		**Pn**	**14**	**17**	**34.7**	**0.0**
YUK3	**Moose Creek**	**6.01**	**68**		**Pn**	**14**	**17**	**34.8**	**-0.4**
IM03		**6.02**	**354**		**Pn**	**14**	**17**	**35.4**	**+0.4**
YUK1	**Sand Pete Hill**	**6.07**	**64**		**Pn**	**14**	**17**	**35.6**	**-0.2**
PRP	**Porcupine Dome**	**6.31**	**26**		**Pn**	**14**	**17**	**39.5**	**+0.4**
YKU2	**Yakutat**	**6.37**	**89**		**Pn**	**14**	**17**	**40.0**	**+0.

baz=315
E04D Cinebar 22.04 114 P P 14 20 58.5 +3.0
baz=319,SNR=34
F03A Seaside 22.06 117 IAmb IAmb 14 21 02.2
comp=Z,388nm,1.1s
F04D Rainier, OR 22.19 116 P P 14 20 59.6 +2.5
baz=320,SNR=8.9
B08A Colville Reser 22.25 107 IAmb IAmb 14 21 02.1
comp=Z,1µm,1.9s
LTY Liberty 22.40 111 IAmb IAmb 14 21 03.7
comp=Z,948nm,1.9s
F04A Amboy 22.57 115 P P 14 21 03.5 +2.4
F04A **PcP 14 24 52.0 +1.1**
G03D McMinnville, O 22.75 118 P P 14 21 05.6 +2.6
baz=321,SNR=14
F05D White Salmon 23.05 114 P P 14 21 08.4 +2.5
baz=319,SNR=32
COR Corvallis 23.22 119 P P 14 21 10.9 +3.3
COR pmax pmax
comp=Z,249nm,2.2s
E07A Sunnyside 23.29 111 IAmb IAmb 14 21 12.5
comp=Z,344nm,0.9s
I02D Swisshome 23.36 120 P P 14 21 11.7 +2.8
baz=323
D08A Wollman Farm, 23.37 109 IAmb IAmb 14 21 12.8
comp=Z,341nm,1.0s
NEW Newport 23.39 104 P P 14 21 10.9 +1.7
comp=Z,267nm,0.8s,baz=314,slow=7.9,SNR=312
NEW Newport 23.39 104 P P 14 21 10.9 +1.7
baz=313,SNR=246
NEW Newport 23.39 104 P P 14 21 11.3 +2.1
NEW IAmb IAmb 14 21 12.6
comp=Z,246nm,0.8s
H04D Lebanon 23.52 118 P P 14 21 13.1 +2.7
baz=322,SNR=26
HAWA Hanford 23.56 111 P P 14 21 13.2 +2.5
G05D Wamic, OR 23.60 115 P P 14 21 13.5 +2.4
baz=320,SNR=53
H04A Detroit Lake 23.64 117 PcP 14 24 54.4 +1.2
E08A Dider Farm, El 23.71 110 PcP 14 24 55.1 +1.9
F07A Phinny Hill Vi 23.75 112 IAmb IAmb 14 21 16.2
comp=Z,298nm,0.7s
I03D Drain, OR 23.91 120 P P 14 21 16.5 +2.8
baz=323,SNR=9.9
J01E Myrtle Point 24.09 122 P P 14 21 18.7 +3.3
baz=324,SNR=12
I04A Tendick Farm, 24.24 119 P P 14 21 19.3 +2.5
baz=323,SNR=25
I05D Terrebonne, OR 24.29 116 P P 14 21 19.9 +2.6
baz=321,SNR=105
K02D Willamette Mer 24.58 122 P P 14 21 23.2 +3.2
baz=325,SNR=42
J04D Umpqua Nationa 24.81 119 P P 14 21 25.2 +2.9
baz=323,SNR=53
PINE Pine Mountain 24.89 117 IAmb IAmb 14 21 28.4
comp=Z,316nm,0.9s
HUMO Hull Mountain 24.95 121 P P 14 21 27.1 +3.8
HUMO **PcP 14 24 58.3 +2.2**
F10A Beach Ranch, E 24.96 109 IAmb IAmb 14 21 26.5
comp=Z,202nm,0.7s
RES Resolute Bay 25.08 32 P P 14 21 25.0 +0.9
RES pmax pmax
comp=Z,110nm,0.8s
RES Resolute Bay 25.08 32 P P 14 21 24.9 +0.9
J05D Fort Rock, OR 25.16 118 P P 14 21 28.4 +3.0
baz=323,SNR=48
K04D Chiloquin, OR 25.46 119 P P 14 21 30.9 +2.8
baz=324,SNR=9.6
L04D Klamath Falls 25.55 121 P P 14 21 31.6 +2.8
baz=325,SNR=38
BMO Blue Mountains 25.75 110 IAmb IAmb 14 21 35.5
comp=Z,378nm,1.6s
YBH Yreka Blue Hor 25.77 122 P P 14 21 34.2 +3.3
comp=Z,65nm,0.8s,baz=347,slow=4.4,SNR=124
YBH ScP **ScP 14 28 29.6 +0.7**
comp=Z,6.0nm,1.0s,baz=16,slow=2.8,SNR=3.6
YBH LR LR 14 30 16.9
comp=Z,1µm,21.6s,baz=318,slow=33
SEY Seymchan 25.91 300 P P 14 21 32.3 +0.6
comp=Z,13nm,0.4s,baz=90,slow=6.6,SNR=125
SEY PcP **PcP 14 24 58.4 +0.5**
comp=Z,33nm,1.0s,baz=24,slow=3.8,SNR=4.5
SEY ScP **ScP 14 28 28.9 +0.2**
comp=Z,11nm,0.6s,baz=108,slow=3.7,SNR=20
SEY PKiKP **PKiKP 14 32 36.3 -0.5**
comp=Z,1.7nm,0.6s,baz=36,slow=8.7,SNR=1.7
SEY P3KPbc 14 54 21.1
comp=Z,5.8nm,0.7s,baz=232,slow=4.7,SNR=46
MSO Missoula 25.93 103 P P 14 21 33.5 +1.2
baz=315,SNR=94
M02C Callahan 26.00 123 P P 14 21 36.4 +3.5
baz=326,SNR=35
M04C Macdoel 26.11 121 P P 14 21 36.9 +3.0
baz=325,SNR=36
N02D Trinity Center 26.40 123 P P 14 21 40.0 +3.5
baz=326,SNR=22
WVOR Wild Horse Val 27.00 116 P P 14 21 44.5 +2.6
WVOR pmax pmax
comp=Z,128nm,2.0s
O02D Mt. Diablo Mer 27.03 124 P P 14 21 45.2 +3.0
baz=327,SNR=27
FFC Flin Flon 27.05 79 P P 14 21 43.6 +1.5
FFC pmax pmax
comp=Z,76nm,0.9s
FFC Flin Flon 27.05 79 P P 14 21 43.5 +1.5
EGMT Eagleton 27.18 97 P P 14 21 44.3 +0.8
baz=312,SNR=92
O03E Paynes Creek 27.35 123 P P 14 21 47.0 +2.0
baz=326,SNR=128
PET Petropavlovsk 27.41 277 *c iP* **P 14 21 45.3 0.0**
PET *e**PP **pP 14 22 05.0 -1.2**
PET *eS* **S 14 26 18.3 -0.2**
PET pmax pmax
comp=Z,400nm,16.2s
PET pmax pmax
comp=Z,167nm,1.4s
PET MLR MLR
comp=Z,1µm,18.0s
PET Petropavlovsk 27.41 277 P P 14 21 46.5 +1.3
PET IAmb IAmb 14 21 48.4
comp=Z,370nm,1.5s
PEA0B Petropavlovsk- 27.84 278 P P 14 21 49.7 +0.6
PEA0B pmax pmax
comp=Z,197nm,1.4s
PEA0B Petropavlovsk- 27.84 278 P P 14 21 49.7 +0.6
PETK Petropavlovsk- 27.84 278 P P 14 21 49.4 +0.3
comp=Z,37nm,0.5s,baz=72,slow=13,SNR=533
PETK PcP **PcP 14 25 03.2 +0.6**
comp=Z,18nm,0.9s,baz=130,slow=3.2,SNR=6.0
PETK ScP **ScP 14 28 34.7 0.0**
comp=Z,50nm,0.9s,baz=76,slow=6.6,SNR=26
PETK PKiKP **PKiKP 14 32 37.4 -0.9**
comp=Z,1.9nm,0.6s,baz=112,slow=2.8,SNR=8.3
MA2 Magadan 27.92 294 P **P 14 21 50.8 +1.0**
comp=Z,36nm,0.5s,baz=74,slow=11,SNR=26
MA2 PcP **PcP 14 25 03.2 +0.5**
comp=Z,16nm,0.5s,baz=38,slow=3.6,SNR=5.9
MA2 ScP **ScP 14 28 34.6 -0.2**
comp=Z,34nm,0.7s,baz=94,slow=5.4,SNR=22
MA2 Magadan 27.92 294 *ce*P **P 14 21 50.6 +0.8**
MA2 pmax pmax
comp=Z,184nm,1.5s
MA2 MLR MLR
comp=Z,693nm,17.0s
MA2 Magadan 27.92 294 P P 14 21 51.3 +1.5
MA2 IAmb IAmb 14 21 52.3
comp=Z,345nm,1.6s
ORV Oroville 28.09 123 P P 14 21 53.1 +1.6
ORV pmax pmax
comp=Z,32nm,1.0s
ORV Oroville 28.09 123 P P 14 21 53.1 +1.6
QLMT Earthquake Lak 28.59 104 P P 14 21 58.9 +2.7
QLMT **PcP 14 25 07.1 +2.2**
FCC Fort Churchill 28.82 67 P P 14 21 59.2 +1.5
FCC pmax pmax
comp=Z,229nm,1.3s
FCC Fort Churchill 28.82 67 P P 14 21 59.1 +1.5
FCC IAmb IAmb 14 22 00.2
comp=Z,229nm,1.2s
RUBR Rubicon Trail 29.09 122 IAmb IAmb 14 22 05.4
comp=Z,199nm,0.8s
LKWY Lake 29.29 103 IAmb IAmb 14 22 07.8
comp=Z,129nm,0.8s
PNTR Pine Nut 29.29 121 P P 14 22 05.7 +3.3
PNTR IAmb IAmb 14 22 12.8
comp=Z,153nm,0.7s
H17A Grant Village 29.32 103 P P 14 22 06.2 +3.4
baz=317,SNR=97
RLMT Red Lodge 29.44 101 P P 14 22 06.2 +2.5
baz=316,SNR=190
RLMT Red Lodge 29.44 101 IAmb IAmb 14 22 08.9
comp=Z,143nm,0.9s
FLWY Flagg Ranch 29.49 104 IAmb IAmb 14 22 09.1
comp=Z,225nm,0.8s
FXWY Fox Creek 29.66 105 IAmb IAmb 14 22 10.2
comp=Z,192nm,0.8s
DGMT Dagmar 29.67 91 P P 14 22 06.6 +1.2
baz=311,SNR=9.0
TPAW Teton Pass 29.81 105 IAmb IAmb 14 22 11.0
comp=Z,346nm,0.8s
CMB Columbia Colle 29.84 123 P P 14 22 09.6 +2.5
CMB 14 25 09.0
CMB pmax pmax
comp=Z,60nm,0.8s
CMB Columbia Colle 29.84 123 P P 14 22 09.6 +2.5
CMB **PcP 14 25 09.0 +1.0**
WAKR Walker 29.85 121 IAmb IAmb 14 22 12.1
comp=Z,111nm,0.8s
LAO LASA Array 29.85 96 P P 14 22 08.8 +1.7
baz=314,SNR=15
LAO LASA Array 29.85 96 IAmb IAmb 14 22 11.8
comp=Z,296nm,1.7s
ELK Elko 29.89 113 IAmb IAmb 14 22 12.6
comp=Z,123nm,0.8s
SKR Severo-Kuril's 30.07 275 *eP* **P 14 22 06.5 -2.3**
SKR *e**PP **pP 14 22 26.7 -3.2**
SKR *e* 14 22 43.3
SKR *eS* **S 14 26 58.3 -1.9**
SKR pmax pmax
comp=Z,400nm,2.2s
SKR pmax pmax
comp=Z,92nm,1.3s
SKR MLR MLR
comp=Z,500nm,20.0s
NVAR Mina Array Bea 30.40 120 P P 14 22 15.2 +2.9
comp=Z,88nm,0.7s,baz=312,slow=8.5,SNR=486
NVAR PcP **PcP 14 25 11.4 +1.7**
comp=Z,33nm,0.5s,baz=281,slow=3.0,SNR=42
NVAR pPcP 14 25 37.0
comp=Z,19nm,0.8s,baz=306,slow=2.1,SNR=6.1
NVAR ScP **ScP 14 28 44.8 +1.4**
comp=Z,6.3nm,0.8s,baz=279,slow=2.5,SNR=8.3
NVAR LR LR 14 32 35.9
comp=Z,2µm,19.9s,baz=318,slow=32
NVAR PKiKP **PKiKP 14 32 41.0 +0.4**
comp=Z,1.2nm,0.6s,baz=6.6,slow=0.7,SNR=5.3
OMMB Old Mammoth Mi 30.79 122 IAmb IAmb 14 22 20.0
comp=Z,102nm,0.8s
MLAC Mammoth, Mammo 30.84 122 P P 14 22 19.7 +3.5
baz=328,SNR=7.4
HWUT Hardware Ranch 30.94 108 IAmb IAmb 14 22 20.8
comp=Z,151nm,0.7s
BW06 Boulder Array 31.03 104 P P 14 22 19.7 +2.0
baz=319,SNR=250
BW06 Boulder Array 31.03 104 IAmb IAmb 14 22 22.4
comp=Z,119nm,0.8s
PDAR Pinedale Array 31.03 104 P P 14 22 20.1 +2.4
comp=Z,124nm,0.8s,baz=325,slow=4.1,SNR=293
PDAR PcP **PcP 14 25 11.4 +0.1**
comp=Z,18nm,0.7s,baz=129,slow=1.1,SNR=16
PDAR ScP **ScP 14 28 45.7 +0.3**
comp=Z,3.1nm,0.9s,baz=248,slow=1.6,SNR=4.1
DUG Dugway, Tooele 31.46 111 P P 14 22 23.8 +2.4
DUG pmax pmax
comp=Z,208nm,1.0s
DUG Dugway, Tooele 31.46 111 P P 14 22 23.7 +2.4
baz=322,SNR=147
DUG Dugway, Tooele 31.46 111 IAmb IAmb 14 22 25.0
comp=Z,110nm,0.8s
TIN Tinemaha, Big 31.59 121 P P 14 22 25.9 +3.4
baz=328,SNR=19
R11A Troy Canyon, C 31.67 117 P P 14 22 25.6 +2.2
baz=325,SNR=174
TIXI Tiksi 31.69 324 P P 14 22 22.7 -0.2
comp=Z,37nm,0.8s,baz=78,slow=9.1,SNR=93
TIXI PcP **PcP 14 25 11.9 -0.3**
comp=Z,39nm,0.5s,baz=64,slow=3.3,SNR=16
TIXI S **S 14 27 23.4 -1.8**
comp=Z,3.1nm,0.4s,baz=270,slow=13,SNR=5.7
TIXI ScP **ScP 14 28 45.0 -1.7**
comp=Z,64nm,0.9s,baz=73,slow=3.6,SNR=28
TIXI PKiKP **PKiKP 14 32 41.1 +0.9**
comp=Z,17nm,1.1s,baz=180,slow=21,SNR=27
TIXI LR LR 14 35 22.1
comp=Z,871nm,19.8s,baz=96,slow=37
TIXI P3KPbc 14 53 55.2
comp=Z,2.9nm,0.7s,baz=315,slow=2.9,SNR=14
TIXI Tiksi 31.69 324 P P 14 22 22.7 -0.2
TIXI **P 14 22 23.4 +0.5**
VOG Valley Oaks Go 31.72 124 P P 14 22 26.0 +2.4
baz=329
GRAC Grapevine Rang 32.01 120 P P 14 22 29.4 +3.2
baz=327,SNR=33
CWC Cottonwood Cre 32.17 122 P P 14 22 30.6 +2.9
baz=328
VES Vestal, Richgr 32.25 124 P P 14 22 30.5 +2.3
baz=329,SNR=19
SMMC Simmler 32.33 125 P P 14 22 32.1 +3.2
baz=330,SNR=5.2
MDND Maddock 32.39 88 P P 14 22 30.8 +1.5
baz=312,SNR=11
MDND Maddock 32.39 88 IAmb IAmb 14 22 32.1
comp=Z,261nm,0.7s
TPNV Topopah Spring 32.53 119 P P 14 22 33.3 +2.4
baz=327,SNR=109
TPNV Topopah Spring 32.53 119 IAmb IAmb 14 22 35.3
comp=Z,135nm,1.1s
K22A Casper 32.60 101 P P 14 22 32.9 +1.5
baz=318,SNR=34
ISA Isabella, Lake 32.66 123 P P 14 22 34.1 +2.2
baz=329,SNR=66
ISA Isabella, Lake 32.66 123 IAmb IAmb 14 22 35.3
comp=Z,98nm,0.8s
FURC Furnace Creek, 32.67 120 P P 14 22 34.8 +3.0
baz=328,SNR=91
ULM Lac du Bonnet 32.69 82 P P 14 22 32.9 +1.0
comp=Z,164nm,0.7s,baz=309,slow=9.1,SNR=210
ULM PcP **PcP 14 25 15.5 +0.2**
comp=Z,50nm,0.6s,baz=340,slow=2.9,SNR=10
ULM pPcP 14 25 41.0
comp=Z,32nm,0.8s,baz=279,slow=5.4,SNR=3.3
ULM ScP **ScP 14 28 52.5 +2.0**
comp=Z,7.0nm,0.6s,baz=348,slow=1.1,SNR=3.5
ULM LR LR 14 37 38.6
comp=Z,1µm,18.4s,baz=312,slow=39
ULM Lac du Bonnet 32.69 82 IAmb IAmb 14 22 35.1
comp=Z,200nm,0.8s
MPMC Manual Prospec 32.74 121 P P 14 22 35.5 +2.8
baz=323,SNR=157
RSSD Black Hills 32.75 97 P P 14 22 34.7 +1.9
RSSD pmax pmax
comp=Z,209nm,1.8s
RSSD Black Hills 32.75 97 P P 14 22 34.6 +1.9
baz=316
RSSD Black Hills 32.75 97 IAmb IAmb 14 22 35.4
comp=Z,118nm,0.9s
PKM Mcpherson Peak 32.77 125 P P 14 22 36.2 +3.2
baz=330,SNR=72
ARVC Arvin 32.97 124 P P 14 22 36.2 +1.7
baz=330,SNR=8.9
RWWY Rawlins 32.98 103 IAmb IAmb 14 22 37.8
comp=Z,268nm,0.9s
LRMC Laurel Mtn Rad 33.15 122 P P 14 22 38.8 +2.5
baz=329,SNR=97
SBC Santa Barbara 33.20 126 P P 14 22 39.8 +3.3
baz=331,SNR=5.3
SHPR Sheep Range 33.38 118 P P 14 22 40.7 +2.4
SHOC Shoshone, Teco 33.40 120 P P 14 22 41.1 +2.8
baz=328,SNR=10
SZCU Shurtz Canyon 33.42 114 P P 14 22 41.9 +3.2
OSI Osito Audit: C 33.46 124 P P 14 22 41.4 +2.6
baz=330,SNR=7.9
EDW2 Edwards Air Fo 33.53 123 P P 14 22 41.5 +2.0
baz=329,SNR=15
SCZ2 Santa Cruz Isl 33.62 126 P P 14 22 42.7 +2.5
baz=331
O20A White River Ci 33.68 106 P P 14 22 42.9 +2.0
baz=321,SNR=208
GSC Goldstone, Bar 33.68 121 P P 14 22 43.5 +2.7
baz=328,SNR=81
GSC Goldstone, Bar 33.68 121 IAmb IAmb 14 22 44.7
comp=Z,122nm,0.8s
DECC Green Verdugo 33.93 124 P P 14 22 45.4 +2.5
baz=330,SNR=14
TUQ Turquoise Moun 33.95 120 P P 14 22 45.8 +2.6
baz=328,SNR=73
RRX Edison Barstow 33.96 122 P P 14 22 46.0 +2.9
baz=329,SNR=14
AGMN Agassiz Nation 33.96 84 P P 14 22 44.0 +1.0
baz=312,SNR=240
PASC Pasadena Art C 34.06 124 P P 14 22 45.6 +1.6
PASC IAmb IAmb 14 22 47.7
comp=Z,108nm,0.8s
PASC **PcP 14 25 20.8 +1.3**
MWC Mount Wilson 34.07 124 P P 14 22 44.6 +0.3
MWC pmax pmax
comp=Z,462nm,1.6s
MWC Mount Wilson 34.07 124 P P 14 22 44.6 +0.3
MWC IAmb IAmb 14 22 48.5
comp=Z,462nm,1.6s
D32A Dogwood Acres, 34.16 87 IAmb IAmb 14 22 46.7
comp=Z,203nm,0.8s
N23A Red Feather La 34.21 103 P P 14 22 47.2 +1.7
baz=320,SNR=49
BFSC Mount Baldy Ra 34.23 123 P P 14 22 48.3 +2.7
baz=330,SNR=14
HEC Hector,Ludlow 34.28 121 P P 14 22 48.5 +2.5
baz=329,SNR=21
SNCC San Nicolas Is 34.32 127 P P 14 22 48.7 +2.5
baz=331
FMP Fort Macarthur 34.41 125 P P 14 22 49.3 +2.3
baz=330
BBRC Big Bear Solar 34.52 122 P P 14 22 50.8 +2.6
baz=329
PV21 Cone Mtn., Par 34.56 109 IAmb IAmb 14 22 51.8
comp=Z,164nm,0.7s
GMRC Granite Mounta 34.61 120 P P 14 22 51.5 +2.6
baz=328,SNR=69
PV23 Carpenter Ridg 34.63 109 IAmb IAmb 14 22 52.0
comp=Z,294nm,1.0s
CIS Catalina Islan 34.63 125 P P 14 22 51.1 +2.2
baz=331,SNR=5.4
PV20 West Nyswonger 34.74 109 IAmb IAmb 14 22 53.4
comp=Z,173nm,0.8s
U15A North Rim 34.74 115 IAmb IAmb 14 22 53.5
comp=Z,103nm,1.0s
PV19 Morning Glory 34.76 109 IAmb IAmb 14 22 53.0
comp=Z,200nm,1.0s
KULLO Kullorsuaq 34.76 28⇑ *iP* **P 14 22 50.5 +0.9**
KULLO pmax pmax
comp=Z,100nm,1.2s
KULLO Kullorsuaq 34.76 28⇑ *iP* **P 14 22 50.5 +0.9**
comp=Z,102nm,1.2s
PV16 Nyswonger Mesa 34.79 109 IAmb IAmb 14 22 53.8
comp=Z,191nm,0.8s
PV07 Paradox Valley 34.81 108 IAmb IAmb 14 22 54.0
comp=Z,191nm,0.9s
PV03 Paradox Valley 34.87 109 IAmb IAmb 14 22 54.4
comp=Z,205nm,0.8s
PV05 Paradox Valley 34.89 109 IAmb IAmb 14 22 56.0
comp=Z,195nm,0.8s
SCI2 San Clemente I 34.95 126 P P 14 22 54.3 +2.7
baz=331,SNR=7.5
PV02 Paradox Valley 34.96 109 IAmb IAmb 14 22 54.8
comp=Z,211nm,1.0s
MURC Murrieta 34.97 123 P P 14 22 53.9 +2.0
baz=330,SNR=11
B35A Bob, Littlefor 34.98 83 IAmb IAmb 14 22 53.9
comp=Z,172nm,0.8s
SMCO Snowmass 35.03 106 IAmb IAmb 14 22 56.6
comp=Z,95nm,1.1s
SUSD Miller 35.06 92 P P 14 22 53.4 +0.9
baz=316
SUSD Miller 35.06 92 IAmb IAmb 14 22 57.3
comp=Z,78nm,0.8s
NEE2 Needles Airpor 35.08 119 P P 14 22 55.2 +2.4
baz=328,SNR=9.2
BELC Belle Mtn. Jos 35.13 121 P P 14 22 55.7 +2.3
baz=329,SNR=78
ISCO Idaho Springs 35.21 104 P P 14 22 57.3 +3.1
ISCO pmax pmax
comp=Z,35nm,0.9s
ISCO Idaho Springs 35.21 104 P P 14 22 56.2 +2.0
baz=321,SNR=60
ISCO Idaho Springs 35.21 104 P P 14 22 57.3 +3.1
PFO Pinyon Flats O 35.27 122 P P 14 22 56.5 +2.0
comp=Z,42nm,0.7s,baz=324,slow=6.2,SNR=57
PFO PcP **PcP 14 25 24.2 +1.0**
comp=Z,16nm,0.8s,baz=312,slow=4.3,SNR=5.9
PFO pPcP 14 25 50.7
comp=Z,29nm,1.0s,baz=250,slow=1.0,SNR=4.4
PFO ScP **ScP 14 29 01.0 +0.8**
comp=Z,9.6nm,1.1s,baz=321,slow=5.0,SNR=4.4
PFO Pinyon Flats O 35.27 122 P P 14 22 56.6 +2.0
baz=330,SNR=32
IRM Iron Mountain 35.37 120 P P 14 22 58.0 +2.7
baz=329,SNR=104
109C Camp Elliot, M 35.62 124 P P 14 23 00.1 +2.7
baz=330,SNR=18
109C Camp Elliot, M 35.62 124 IAmb IAmb 14 23 01.4
comp=Z,137nm,0.9s
BC3 Big Chuckawall 35.66 121 P P 14 22 59.9 +2.0
baz=329,SNR=39
PDMCI Parker Dam,Lak 35.68 119 P P 14 23 00.3 +2.4
baz=328,SNR=31
YAK Yakutsk 35.75 308 P P 14 22 58.7 +0.5
comp=Z,42nm,0.5s,baz=89,slow=1.4,SNR=65
YAK PcP **PcP 14 25 23.8 0.0**
comp=Z,37nm,0.6s,baz=218,slow=0.3,SNR=7.0
YAK S **S 14 28 26.2 -1.8**
comp=Z,10nm,0.9s,baz=55,slow=19,SNR=3.2
YAK ScP **ScP 14 29 00.1 -1.1**
comp=Z,19nm,0.7s,baz=9.5,slow=1.0,SNR=6.9
YAK LR LR 14 38 17.5
comp=Z,628nm,21.9s,baz=68,slow=37
YAK Yakutsk 35.75 308 *c iP* **P 14 22 58.4 +0.2**
YAK *eS* **S 14 28 23.5 -4.6**
YAK *e* 14 33 01.2
YAK pmax pmax
comp=Z,110nm,0.9s
YAK pmax pmax
comp=N,34nm,1.1s
YAK pmax pmax
comp=E,80nm,1.3s
YAK smax smax
comp=N,433nm,2.0s
YAK smax smax
comp=E,885nm,2.4s
YAK Yakutsk 35.75 308 P P 14 22 58.6 +0.4
YAK IAmb IAmb 14 22 59.8
comp=Z,278nm,1.3s
MVCO Mesa Verde 35.87 110 P P 14 23 01.5 +1.7
baz=324,SNR=58
MVCO Mesa Verde 35.87 110 IAmb IAmb 14 23 02.8
comp=Z,82nm,0.8s
MONP2 Monument Peak 35.91 123 P P 14 23 02.7 +2.6
baz=330,SNR=44
WUAZ Wupatki 35.91 114 P P 14 23 02.6 +2.6
baz=326,SNR=185
WUAZ Wupatki 35.91 114 IAmb IAmb 14 23 03.9
comp=Z,244nm,0.8s
Y12C Blythe 35.98 120 P P 14 23 03.0 +2.5
baz=329,SNR=42
Y12C Blythe 35.98 120 P P 14 23 02.8 +2.3
Y12C IAmb IAmb 14 23 04.3
comp=Z,118nm,0.7s
Q24A Divide 36.09 104 P P 14 23 03.9 +2.2
baz=322,SNR=103
NKL Nikolayevsk 36.09 290 *eP* **P 14 23 01.3 +0.2**
NKL *e* 14 24 53.3
NKL *eS* **S 14 28 35.9 +2.5**
NKL pmax pmax
comp=Z,125nm,1.5s
NKL pmax pmax
comp=Z,248nm,2.3s
NKL smax smax
comp=E,5.0nm,3.0s
NKL smax smax
comp=N,13nm,2.5s
NKL MLR MLR
comp=Z,883nm,18.0s
NKL MLR MLR
comp=E,10.0nm,17.0s
NKL MLR MLR
comp=N,157nm,20.0s
OGNE Ogallala 36.10 99 P P 14 23 03.0 +1.5
baz=319,SNR=26
SWSC Sam W. Stewart 36.12 122 P P 14 23 03.9 +2.2
baz=330,SNR=17
S22A 4UR Ranch, Cre 36.23 107 P P 14 23 05.5 +2.6
baz=323,SNR=201
IKP In-Ko-Pah, Jac 36.25 123 P P 14 23 05.4 +2.5
baz=330,SNR=20

EYMN	**Ely**	36.37	82		P		P	14 23 04.8	+1.1
	baz=312,SNR=204								
GLA	**Glamis**	36.45	121		P		P	14 23 06.8	+2.3
	baz=329,SNR=32								
GLA	**Glamis**	36.45	121		IAmb		IAmb	14 23 08.2	
	comp=Z,105nm,0.8s								
Y14A	**Wickenburg**	36.49	118		IAmb		IAmb	14 23 08.3	
	comp=Z,92nm,1.1s								
TYV	**Tymovskoe**	36.59	285		eP		P	14 23 06.3	+0.8
TYV					eS		S	14 28 44.0	+2.9
TYV					pmax		pmax		
	comp=Z,125nm,1.4s								
TYV					pmax		pmax		
	comp=Z,800nm,3.5s								
TYV					smax		smax		
	comp=E,800nm,5.0s								
NOR	**Nord**	36.61	10	i	P		P	14 23 04.9	-0.4
NOR					pmax		pmax		
	comp=Z,35nm,1.1s								
NOR	**Nord**	36.61	10	i	P		P	14 23 04.9	-0.4
	comp=Z,35nm,1.1s								
ECSD	**EROS Data Cent**	36.75	91		P		P	14 23 07.3	+0.3
	baz=316,SNR=33								
F36A	**Milaca**	36.79	86		IAmb		IAmb	14 23 09.1	
	comp=Z,104nm,0.8s								
SDCO	**Great Sand Dun**	36.87	106		P		P	14 23 10.9	+2.5
	baz=323,SNR=451								
SDCO	**Great Sand Dun**	36.87	106		IAmb		IAmb	14 23 12.2	
	comp=Z,174nm,0.8s								
FRB	**Frobisher Bay**	36.95	47		P		P	14 23 09.2	+0.8
FRB					pmax		pmax		
	comp=Z,413nm,1.0s								
W18A	**Petrified Fore**	36.99	113		P		P	14 23 11.7	+2.4
	baz=326,SNR=9.6								
KSCO	**Kaye Shedlock'**	37.28	102		P		P	14 23 13.7	+2.1
	baz=321,SNR=45								
SPMN	**Marine on St.**	37.60	86		P		P	14 23 15.4	+1.4
	baz=315,SNR=68								
SPMN	**Marine on St.**	37.60	86		IAmb		IAmb	14 23 16.6	
	comp=Z,225nm,0.9s								
BGNE	**Belgrade**	37.69	95		P		P	14 23 16.2	+1.3
	baz=318								
KUR	**Kuril'sk**	37.83	275		eP		P	14 23 16.1	+0.2
KUR					eS		S	14 29 01.5	+1.6
KUR					pmax		pmax		
	comp=E,160nm,1.4s								
KUR					pmax		pmax		
	comp=Z,475nm,1.4s								
KUR					pmax		pmax		
	comp=N,75nm,1.5s								
KUR					pmax		pmax		
	comp=Z,1μm,4.4s								
KUR					smax		smax		
	comp=Z,484nm,15.0s								
T25A	**Trinidad**	37.88	105		P		P	14 23 19.1	+2.3
	baz=323,SNR=111								
214A	**Organ Pipe Nat**	38.26	119		P		P	14 23 22.3	+2.4
	baz=329,SNR=54								
214A	**Organ Pipe Nat**	38.26	119		IAmb		IAmb	14 23 23.1	
	comp=Z,90nm,1.0s								
ANMO	**Albuquerque**	38.67	110	i	P		P	14 23 23.4	0.0
ANMO					pmax		pmax		
	comp=Z,56nm,0.8s								
ANMO	**Albuquerque**	38.67	110		P		P	14 23 25.5	+2.1
	baz=325								
ANMO	**Albuquerque**	38.67	110		P		P	14 23 25.4	+2.0
ANMO					IAmb		IAmb	14 23 27.4	
	comp=Z,334nm,1.9s								
TUC	**Tucson**	38.86	117		P		P	14 23 27.9	+3.0
TUC					pmax		pmax		
	comp=Z,61nm,1.0s								
TUC	**Tucson**	38.86	117		P		P	14 23 27.5	+2.6
	baz=328								
TUC	**Tucson**	38.86	117		P		P	14 23 27.9	+3.0
CBKS	**Cedar Bluff**	38.86	99		P		P	14 23 26.6	+1.8
	baz=321,SNR=38								
Y22D	**IRIS PASSCAL I**	39.16	111		P		P	14 23 30.5	+3.1
	baz=326,SNR=8.9								
YSS	**Yuzh-Sakhalins**	39.16	281	α	iP		P	14 23 27.7	+0.6
YSS					e*PP		pP	14 23 49.2	+0.5
YSS					e*SP		sP	14 23 56.8	-2.6
YSS					e			14 25 05.7	
YSS					eS		S	14 29 18.5	-1.6
YSS					pmax		pmax		
	comp=N,300nm,3.1s								
YSS					pmax		pmax		
	comp=Z,1μm,3.1s								
YSS					pmax		pmax		
	comp=E,500nm,2.4s								
YSS					pmax		pmax		
	comp=N,40nm,1.6s								
YSS					pmax		pmax		
	comp=E,60nm,1.6s								
YSS					pmax		pmax		
	comp=Z,100nm,1.6s								
YSS					smax		smax		
	comp=N,800nm,5.7s								
YSS					smax		smax		
	comp=E,200nm,3.3s								
YSS					MLR		MLR		
	comp=Z,500nm,16.0s								
YSS					MLR		MLR		
	comp=E,300nm,15.0s								
YSS	**Yuzh-Sakhalins**	39.16	281		IAmb		IAmb	14 23 29.5	
	comp=Z,314nm,1.6s								
N35A	**Tabor**	39.35	93		IAmb		IAmb	14 23 32.7	
	comp=Z,245nm,1.1s								
ILULI	**Ilulissat**	39.35	34	i	P		P	14 23 26.2	-2.3
ILULI					i			14 25 04.7	
ILULI					pmax		pmax		
	comp=Z,47nm,1.3s								
ILULI	**Ilulissat**	39.35	34	i	P		P	14 23 26.2	-2.3
	comp=Z,47nm,1.3s								
ILULI					i			14 25 04.7	
K38A	**Parkersburg**	39.47	89		IAmb		IAmb	14 23 32.6	
	comp=Z,140nm,0.7s								
GRNR	**Gornyy**	39.64	289	⇑	iP		P	14 23 31.9	+0.8
GRNR					eS		S	14 29 30.2	+3.0
GRNR					pmax		pmax		
	comp=Z,50nm,1.1s								
GRNR					smax		smax		
	comp=E,3.0nm,0.9s								
GRNR					MLR		MLR		
	comp=Z,260nm,13.0s								
R32A	**Long Quarter,**	39.67	98		IAmb		IAmb	14 23 33.8	
	comp=Z,212nm,0.9s								
YUK	**Yuzh-Kuril'sk**	39.68	275		eP		P	14 23 31.2	-0.3
YUK					eS		S	14 29 29.2	+1.3
YUK					pmax		pmax		
	comp=Z,443nm,1.7s								
YUK					MLR		MLR		
	comp=Z,462nm,16.0s								
YUK					MLR		MLR		
	comp=E,179nm,11.0s								
YUK					MLR		MLR		
	comp=N,414nm,15.0s								
SCIA	**State Center**	39.79	90		P		P	14 23 33.3	+0.9
	baz=318,SNR=14								
121A	**Cookes Peak, D**	40.04	113		P		P	14 23 37.6	+2.8
	baz=327,SNR=132								
E44A	**Grand Marais A**	40.04	79		P		P	14 23 36.1	+1.7
	baz=314,SNR=15								
KSU1	**Kansas State U**	40.20	96		P		P	14 23 36.8	+0.9
	baz=320,SNR=23								
KSU1	**Kansas State U**	40.20	96		IAmb		IAmb	14 23 37.5	
	comp=Z,178nm,0.8s								
SUMG	**Summit**	40.21	25	i	P		P	14 23 36.7	+0.7
SUMG					pmax		pmax		
	comp=Z,250nm,0.8s								
SUMG	**Summit**	40.21	25		IAmb		IAmb	14 23 42.0	
	comp=Z,484nm,1.6s								
SUMG	**Summit**	40.21	25	i	P		P	14 23 36.7	+0.7
	comp=Z,251nm,0.8s								
DAG	**Danmarks Havn**	40.37	15	i	P		P	14 23 36.2	-0.6
DAG					i			14 25 16.4	
DAG	**Danmarks Havn**	40.37	15	i	P		P	14 23 36.2	-0.6
DAG					i			14 25 16.4	
HMH	**Humu'ula Sheep**	40.45	185		IAmb		IAmb	14 23 42.1	
	comp=Z,268nm,1.4s								
JFWS	**Jewell Farm**	40.54	86		P		P	14 23 39.1	+0.5
	baz=317,SNR=115								
MLH	**Mauna Loa**	40.55	185		IAmb		IAmb	14 23 43.2	
	comp=Z,307nm,1.2s								
N38A	**Joes South For**	40.61	91		IAmb		IAmb	14 23 40.9	
	comp=Z,177nm,0.8s								
D46A	**Sault St. Mari**	40.78	77		P		P	14 23 41.4	+0.9
	baz=314,SNR=31								
KHU	**Kahuku**	40.81	185		P		P	14 23 43.9	+2.6
KHU					pmax		pmax		
	comp=Z,204nm,0.7s								
KHU	**Kahuku**	40.81	185		P		P	14 23 43.4	+2.1
KHU					IAmb		IAmb	14 23 44.9	
	comp=Z,204nm,0.7s								
F45A	**CMU Biological**	40.90	80		P		P	14 23 42.7	+1.1
	baz=315,SNR=12								
SFJD	**Kangerlussuaq**	40.93	36	⇑	iP		P	14 23 42.6	+1.1
SFJD	**Kangerlussuaq**	40.93	36		P		P	14 23 42.4	+0.9
SFJD					IAmb		IAmb	14 23 43.7	
	comp=Z,311nm,1.7s								
SFJD	**Kangerlussuaq**	40.93	36	⇑	iP		P	14 23 42.6	+1.1
KBS	**Kingsbay**	40.97	5		P		P	14 23 43.0	+1.3
KBS					pmax		pmax		
	comp=Z,73nm,0.9s								
KBS	**Kingsbay**	40.97	5		eP		P	14 23 42.4	+0.8
AMTX	**Amarillo**	41.01	105		P		P	14 23 44.6	+1.9
	baz=324								
AMTX	**Amarillo**	41.01	105		IAmb		IAmb	14 23 46.1	
	comp=Z,240nm,0.8s								
E46A	**Sault Ste Mari**	41.01	78		P		P	14 23 43.4	+0.9
D47A	**Chapleau**	41.12	76		P		P	14 23 44.0	+0.7
	baz=314,SNR=58								
MSTX	**Muleshoe**	41.22	107		P		P	14 23 46.2	+1.8
	baz=325,SNR=161								
MSTX	**Muleshoe**	41.22	107		P		P	14 23 46.0	+1.6
ASAJ	**Asahikawa**	41.25	278		P		P	14 23 44.9	+0.5
	comp=Z,24nm,0.5s,baz=297,slow=1.6,SNR=79								
ASAJ					PcP		PcP	14 25 41.5	+0.1
	comp=Z,19nm,0.8s,baz=240,slow=7.2,SNR=3.8								
ASAJ					ScP		ScP	14 29 22.6	0.0
	comp=Z,26nm,0.8s,baz=329,slow=2.9,SNR=20								
ASAJ					LR		LR	14 40 00.4	
	comp=Z,378nm,20.6s,baz=36,slow=35								
G45A	**Suttons Bay**	41.29	80		P		P	14 23 45.9	+1.2
	baz=316,SNR=21								
H45A	**Beulah**	41.40	81		P		P	14 23 46.7	+1.0
	baz=316,SNR=12								
E47A	**Iron Bridge**	41.45	77		P		P	14 23 46.6	+0.5
	baz=315,SNR=38								
G46A	**Petoskey**	41.48	79		P		P	14 23 47.6	+1.3
	baz=316,SNR=44								
L42A	**Oliver, Polo**	41.50	87		IAmb		IAmb	14 23 47.9	
	comp=Z,192nm,0.7s								
D48A	**Paudash Townsh**	41.66	75		P		P	14 23 48.4	+0.6
	baz=315,SNR=61								
I45A	**Fountain**	41.73	82		P		P	14 23 49.6	+1.3
	baz=316,SNR=26								
D49A	**Beulah Townshi**	41.81	75		P		P	14 23 49.8	+0.8
	baz=315,SNR=59								
MNTX	**Cornudas Mount**	41.85	111		P		P	14 23 51.9	+2.4
	baz=327,SNR=342								
MNTX	**Cornudas Mount**	41.85	111		IAmb		IAmb	14 23 53.8	
	comp=Z,131nm,0.8s								
ZEA	**Zeya**	41.85	299		eP		P	14 23 49.0	-0.2
ZEA					e			14 24 12.0	
ZEA					e			14 25 35.0	
ZEA					ePPP		PPP	14 26 02.0	
ZEA					eS		S	14 29 54.0	-5.9
ZEA					pmax		pmax		
	comp=N,56nm,1.4s								
ZEA					pmax		pmax		
	comp=E,110nm,1.4s								
ZEA					pmax		pmax		
	comp=Z,190nm,1.2s								
ZEA					pmax		pmax		
	comp=Z,300nm,6.0s								
ZEA					smax		smax		
	comp=N,600nm,10.0s								
ZEA					MLR		MLR		
	comp=N,1μm,15.0s								
ZEA					MLR		MLR		
	comp=E,1μm,15.0s								
ZEA					MLR		MLR		
	comp=Z,2μm,15.0s								
MATQ	**Matagami**	41.86	70		P		P	14 23 49.7	+0.3
	baz=314,SNR=77								
SPA0	**Spitsbergen Ar**	41.86	4		eP		P	14 23 48.1	-1.0
SPITS	**Spitsbergen Ar**	41.86	4		P		P	14 23 48.3	-0.7
	comp=Z,16nm,0.3s,baz=27,slow=5.6,SNR=196								
H46A	**Fife Lake**	41.87	81		P		P	14 23 50.6	+1.1
	baz=316,SNR=19								
T35A	**Sooner Cattle**	41.94	98		IAmb		IAmb	14 23 53.5	
	comp=Z,287nm,1.0s								
GLMI	**Grayling**	41.96	80		P		P	14 23 51.5	+1.3
	baz=316,SNR=5.3								
E48A	**Lockeyer**	41.98	76		P		P	14 23 51.1	+0.7
	baz=315,SNR=56								
G47A	**Hillman**	42.08	79		P		P	14 23 52.1	+0.9
	baz=316,SNR=5.3								
J45A	**Montague**	42.09	83		P		P	14 23 51.8	+0.6
	baz=317								
I46A	**Reed City**	42.19	81		P		P	14 23 53.2	+1.2
	baz=317,SNR=26								
F48A	**Evansville**	42.22	77		P		P	14 23 53.1	+0.8
	baz=316,SNR=18								
L44A	**Lake County Fo**	42.25	85		P		P	14 23 53.3	+0.7
	baz=318,SNR=25								
H47A	**Mio**	42.32	80		P		P	14 23 54.3	+1.1
	baz=316,SNR=6.5								
ERM	**Erimo**	42.51	275	c	eP		P	14 23 55.4	+0.7
ERM					pmax		pmax		
	comp=Z,145nm,1.2s								
ERM	**Erimo**	42.51	275		P		P	14 23 55.8	+1.1
ERM					IAmb		IAmb	14 23 57.0	
	comp=Z,118nm,1.1s								
WMOK	**Wichita Mounta**	42.54	102		P		P	14 23 56.6	+1.5
WMOK					pmax		pmax		
	comp=Z,226nm,0.8s								
WMOK	**Wichita Mounta**	42.54	102		P		P	14 23 56.6	+1.5
	baz=324,SNR=357								
WMOK	**Wichita Mounta**	42.54	102		P		P	14 23 56.6	+1.5
WMOK					IAmb		IAmb	14 23 57.9	
	comp=Z,226nm,0.8s								
F49A	**Sandfield**	42.55	77		P		P	14 23 55.6	+0.6
	baz=316,SNR=20								
I47A	**Gladwin**	42.59	81		P		P	14 23 56.7	+1.4
	baz=317,SNR=38								
D50A	**G1974 Best Tow**	42.62	74		P		P	14 23 56.1	+0.6
	baz=315,SNR=35								
LSQQ	**Lebel-sur-Quev**	42.66	70		P		P	14 23 56.2	+0.4
	baz=314								
H48A	**Harrisville**	42.69	79		P		P	14 23 57.3	+1.2
	baz=316,SNR=13								
H48A	**Harrisville**	42.69	79		P		P	14 23 57.0	+1.0
H48A					IAmb		IAmb	14 23 58.3	
	comp=Z,231nm,0.6s								
E50A	**Wahnapitae**	42.72	75		P		P	14 23 56.9	+0.6
	baz=316,SNR=27								
HDIL	**Hopedale**	42.77	88		P		P	14 23 57.2	+0.4
	baz=319,SNR=124								
M44A	**Midewin, Midew**	42.77	86		IAmb		IAmb	14 23 58.6	
	comp=Z,237nm,0.7s								
I48A	**Sherman Twp**	42.87	80		P		P	14 23 59.0	+1.4
	baz=317,SNR=19								
KLR	**Kul'dur**	42.89	291		P		P	14 23 58.0	+0.3
	comp=Z,50nm,0.8s,baz=39,slow=8.5,SNR=120								
KLR					ScP		ScP	14 29 28.3	-0.8
	comp=Z,4.6nm,0.9s,baz=47,slow=4.3,SNR=7.9								
KLR					PKiKP		PKiKP	14 32 48.8	-1.2
	comp=Z,0.6nm,0.4s,baz=150,slow=8.1,SNR=2.2								
KLR	**Kul'dur**	42.89	291	c	eP		P	14 23 57.9	+0.2
KLR					pmax		pmax		
	comp=Z,94nm,1.1s								
D51A	**Lot 18 Range I**	42.90	74		P		P	14 23 58.3	+0.5
	baz=315,SNR=25								
K46A	**Dorr**	42.94	83		P		P	14 23 58.8	+0.7
	baz=318,SNR=35								
R40A	**Maddies Statio**	42.99	93		IAmb		IAmb	14 23 59.5	
	comp=Z,158nm,0.9s								
HSPB	**Hornsund (broa**	43.00	4		eS		S	14 30 13.0	-3.3
HSPB					LMZ		LR	14 39 31.1	
	comp=Z,1.8nm,24.4s								
HSPB	**Hornsund (broa**	43.00	4		eP		P	14 23 57.5	-0.7
J47A	**Sumner**	43.01	82		P		P	14 23 60.0	+1.3
	baz=317,SNR=11								
TUL1	**Leonard**	43.09	98		P		P	14 24 00.1	+0.7
	baz=322,SNR=51								
TUL1	**Leonard**	43.09	98		IAmb		IAmb	14 24 01.5	
	comp=Z,195nm,0.9s								
VLDQ	**Val d'Or**	43.10	71		IAmb		IAmb	14 23 59.2	
	comp=Z,184nm,0.7s								
L46A	**Eue Claire**	43.18	84		P		P	14 24 01.1	+1.0
	baz=318,SNR=12								
SCHQ	**Schefferville**	43.23	57		P		P	14 24 00.7	+0.4
	comp=Z,38nm,0.8s,baz=320,slow=8.2,SNR=23								
SCHQ					PcP		PcP	14 25 48.4	+0.5
	comp=Z,28nm,0.6s,baz=312,slow=2.6,SNR=5.1								
SCHQ					ScP		ScP	14 29 28.8	-1.6
	comp=Z,14nm,1.0s,baz=330,slow=7.9,SNR=3.2								
SCHQ					LR		LR	14 42 05.3	
	comp=Z,1μm,18.2s,baz=310,slow=36								
E51A	**G1948 Merrick**	43.24	74		P		P	14 24 00.9	+0.4
	baz=316,SNR=32								
CHGQ	**Chibougamau**	43.28	67		P		P	14 24 00.6	-0.2
	baz=314,SNR=78								
K47A	**Vermontville**	43.34	82		P		P	14 24 02.4	+1.0
	baz=318,SNR=36								
U38A	**Gravette**	43.37	96		IAmb		IAmb	14 24 03.2	
	comp=Z,272nm,0.8s								
F51A	**Arnstein**	43.47	75		P		P	14 24 02.7	+0.3
	baz=316,SNR=24								
J48A	**Bridge Port**	43.48	81		P		P	14 24 03.6	+1.1
	baz=317,SNR=50								
TEY	**Ternei**	43.55	283	⇑	iP		P	14 24 02.1	-0.9
TEY					e			14 24 26.4	
TEY					e			14 25 48.8	
TEY					pmax		pmax		
	comp=N,10.0nm,1.5s								
TEY					pmax		pmax		
	comp=E,30nm,0.7s								
TEY					pmax		pmax		
	comp=Z,30nm,1.4s								
TEY					pmax		pmax		
	comp=Z,40nm,1.4s								
TEY					pmax		pmax		
	comp=Z,40nm,1.0s								
K48A	**Perry**	43.68	81		P		P	14 24 05.3	+1.2
	baz=318,SNR=39								
CCM	**Cathedral Cave**	43.69	92		P		P	14 24 04.0	-0.2
CCM					pmax		pmax		
	comp=Z,87nm,1.0s								
CCM	**Cathedral Cave**	43.69	92		P		P	14 24 04.1	-0.2
	baz=321								
CCM	**Cathedral Cave**	43.69	92		P		P	14 24 04.0	-0.2
D53A	**Lac Vacive, Po**	43.71	72		P		P	14 24 05.0	+0.6
	baz=316,SNR=56								
D53A	**Lac Vacive, Po**	43.71	72		P		P	14 24 04.9	+0.6
D53A					IAmb		IAmb	14 24 05.7	
	comp=Z,123nm,0.6s								
HHAR	**Hobbs**	43.72	96		IAmb		IAmb	14 24 05.1	
	comp=Z,99nm,0.9s								
J49A	**Marlette**	43.75	80		P		P	14 24 06.0	+1.3
	baz=317,SNR=102								
E52A	**Mattawa**	43.82	74		P		P	14 24 05.6	+0.4
	baz=316,SNR=77								
ABTX	**Abilene, Hawle**	43.83	105		P		P	14 24 06.7	+1.2
	baz=325,SNR=108								
ABTX	**Abilene, Hawle**	43.83	105		IAmb		IAmb	14 24 09.3	
	comp=Z,199nm,0.8s								
F52A	**Sundridge**	43.85	75		P		P	14 24 06.0	+0.5
	baz=316,SNR=59								
SFIN	**Lafayette**	44.00	86		P		P	14 24 07.5	+0.8
	baz=319,SNR=104								
SFIN	**Lafayette**	44.00	86		IAmb		IAmb	14 24 08.6	
	comp=Z,202nm,0.6s								
M47A	**Cromwell**	44.00	84		P		P	14 24 07.4	+0.7
	baz=318,SNR=20								
K49A	**Clarkson**	44.02	81		P		P	14 24 08.2	+1.4
	baz=318,SNR=44								
D54A	**Lac Fusel, La**	44.16	72		P		P	14 24 08.3	+0.4
	baz=316,SNR=56								
L48A	**N Adams**	44.16	83		P		P	14 24 08.9	+1.0
	baz=318,SNR=87								
U40A	**Yellville**	44.20	95		P		P	14 24 07.8	-0.6
	baz=322,SNR=50								
E53A	**Dumoine, Ponti**	44.23	73		P		P	14 24 09.0	+0.5
	baz=316,SNR=80								
AAM	**Ann Arbor**	44.28	82		P		P	14 24 10.1	+1.2
	baz=318,SNR=19								
N47A	**Urbana**	44.33	85		P		P	14 24 09.5	+0.2
	baz=319,SNR=134								
X37A	**Clayton**	44.34	99		IAmb		IAmb	14 24 17.5	
	comp=Z,153nm,0.8s								
ALGO	**Algonquin Park**	44.35	74		P		P	14 24 09.9	+0.5
	baz=316,SNR=66								
M48A	**Edgerton**	44.36	83		P		P	14 24 10.0	+0.5
	baz=318,SNR=23								
H52A	**Wyevale**	44.41	76		P		P	14 24 10.6	+0.7
	baz=317,SNR=7.1								
E54A	**Lac Daplat, Po**	44.42	73		P		P	14 24 10.4	+0.4
	baz=316,SNR=115								
K50A	**Casco**	44.44	80		P		P	14 24 11.3	+1.1
	baz=318,SNR=16								
K50A	**Casco**	44.44	80		IAmb		IAmb	14 24 12.4	
	comp=Z,202nm,0.7s								
I51A	**Listowel**	44.47	78		P		P	14 24 12.0	+1.5
	baz=317,SNR=61								
BOD	**Bodaibo**	44.53	310	⇓	iP		P	14 24 10.3	-0.4
BOD					e			14 30 38.7	
BOD					pmax		pmax		
	comp=Z,173nm,1.0s								
TX31	**Lajitas Ar. Si**	44.63	111		IAmb		IAmb	14 24 14.8	
	comp=Z,303nm,0.9s								
TX32	**Lajitas Array**	44.63	111		P		P	14 24 14.6	+2.6
TX32					IAmb		IAmb	14 24 14.8	
	comp=Z,104nm,0.9s								
TXAR	**Lajitas Array**	44.63	111		P		P	14 24 14.2	+2.2
	comp=Z,80nm,0.8s,baz=330,slow=6.2,SNR=720								
TXAR					PcP		PcP	14 25 54.3	+1.1
	comp=Z,12nm,0.7s,baz=336,slow=1.4,SNR=6.9								
TXAR					pPcP			14 26 21.3	
	comp=Z,18nm,0.9s,baz=278,slow=3.5,SNR=4.2								
TXAR					ScP		ScP	14 29 38.3	+1.7
	comp=Z,2.8nm,0.9s,baz=298,slow=1.9,SNR=3.7								
TXAR					PKiKP		PKiKP	14 32 51.8	-0.4
	comp=Z,0.8nm,0.4s,baz=195,slow=1.6,SNR=18								
TXAR					LR		LR	14 41 58.2	
	comp=Z,813nm,20.6s,baz=0.0,slow=35								
W39A	**Magazine**	44.65	97		P		P	14 24 12.3	+0.3
	baz=323,SNR=59								
W39A	**Magazine**	44.65	97		IAmb		IAmb	14 24 13.1	
	comp=Z,139nm,1.1s								
N48A	**Decatur**	44.67	84		P		P	14 24 12.3	+0.3
	baz=319,SNR=140								
G53A	**Haliburton**	44.68	75		P		P	14 24 12.8	+0.8
	baz=317,SNR=81								
SADO	**Sadowa**	44.69	76		IAmb		IAmb	14 24 13.2	
	comp=Z,117nm,0.8s								
G54A	**Lake Saint Pet**	44.74	74		P		P	14 24 13.0	+0.4
	baz=317,SNR=56								
M49A	**Liberty Center**	44.74	83		P		P	14 24 13.4	+0.8
	baz=319,SNR=53								
D55A	**Sainte-Anne-du**	44.82	71		P		P	14 24 13.6	+0.5
	baz=316,SNR=125								
L50A	**Kingsville**	44.89	81		P		P	14 24 14.9	+1.1
	baz=318,SNR=43								
FCAR	**Ozark Folk Cen**	44.94	95		P		P	14 24 14.6	+0.4

comp=Z,137nm,0.8s
LCAR Lake Charles 45.28 94 P **P** **14 24 16.1 -0.8**
LCAR IAmb IAmb 14 25 56.6
comp=Z,117nm,0.8s
WHAR Wooly Hollow 45.33 95 P **P** **14 24 16.7 -0.5**
WHAR IAmb IAmb 14 25 56.5
comp=Z,202nm,1.8s
E56A St. Veronique 45.37 71 P **P** **14 24 17.8 +0.3**
baz=317,SNR=43
K52A Tillsonburg 45.38 79 P **P** **14 24 18.8 +1.2**
baz=318,SNR=8.2
WHTX Lake Whitney, 45.41 103 P **P** **14 24 19.4 +1.4**
baz=325,SNR=92
W41B Gary Mavity, V 45.44 95 P **P** **14 24 17.7 -0.5**
baz=322,SNR=23
PLVO Plevna 45.49 74 IAmb IAmb 14 24 20.7
comp=Z,666nm,2.0s
G55A Calabogie 45.50 73 P **P** **14 24 18.9 +0.3**
baz=317,SNR=93
JCT Junction City 45.51 106 P **P** **14 24 20.6 +1.8**
baz=326,SNR=761
P48A Milroy 45.53 86 IAmb IAmb 14 24 19.9
comp=Z,193nm,0.7s
D57A Chemin Vers le 45.57 70 P **P** **14 24 19.2 +0.1**
baz=316,SNR=67
BJO1 Bjornoya 45.61 3 *e*P **P** **14 24 19.4 +0.4**
DELO Deloro Mine 45.61 75 IAmb IAmb 14 24 21.7
comp=Z,438nm,1.7s
N50A Nevada 45.68 83 P **P** **14 24 20.8 +0.8**
baz=319,SNR=71
X40A Basin Creek Fa 45.69 96 P **P** **14 24 20.1 0.0**
baz=323,SNR=18
M51A Elyria 45.73 81 P **P** **14 24 21.1 +0.7**
baz=319,SNR=27
H55A Tweed 45.80 75 P **P** **14 24 21.4 +0.5**
baz=318,SNR=39
I55A Frankford 45.80 75 P **P** **14 24 21.5 +0.6**
baz=318,SNR=49
P49A Miami Univ. Ec 45.83 85 P **P** **14 24 20.8 -0.5**
baz=320,SNR=29
E57A Chemin Saint G 45.88 71 P **P** **14 24 21.7 +0.1**
baz=317,SNR=92
O50A Cable 45.91 84 P **P** **14 24 22.4 +0.5**
baz=320,SNR=213
ORIO Orleans, Innes 45.94 72 P **P** **14 24 22.0 0.0**
baz=317,SNR=21
N51A Ashland 45.95 82 P **P** **14 24 22.6 +0.4**
baz=319,SNR=53
D58A Chemin du LacG 45.98 69 P **P** **14 24 22.3 -0.1**
baz=317,SNR=56
M52A Chesterland 45.99 80 P **P** **14 24 23.4 +1.0**
baz=319,SNR=116
J54A Appleton 46.03 77 P **P** **14 24 23.9 +1.2**
baz=318,SNR=83
WCI Wyandotte Cave 46.04 87 P **P** **14 24 23.2 +0.3**
WCI pmax pmax
comp=Z,235nm,0.9s
WCI Wyandotte Cave 46.04 87 P **P** **14 24 23.2 +0.3**
baz=320
WCI Wyandotte Cave 46.04 87 P **P** **14 24 23.2 +0.3**
WCI IAmb IAmb 14 24 24.6
comp=Z,235nm,0.8s
F57A Harrington 46.06 72 P **P** **14 24 22.8 -0.2**
baz=317,SNR=6.9
ACSO Alum Creek Sta 46.17 83 P **P** **14 24 24.4 +0.5**
baz=320,SNR=52
ACSO Alum Creek Sta 46.17 83 IAmb IAmb 14 24 25.6
comp=Z,209nm,0.7s
LPIG La Paz 46.17 122 P **P** **14 24 25.4 +1.4**
comp=Z,31nm,0.6s,baz=78,slow=3.7,SNR=6.6
H56A Elgin 46.21 74 P **P** **14 24 24.6 +0.4**
baz=318,SNR=32
L53A Girard 46.22 79 P **P** **14 24 25.4 +1.1**
baz=319,SNR=81
ERPA Erie 46.23 79 P **P** **14 24 25.4 +1.1**
baz=319,SNR=66
ERPA Erie 46.23 79 P **P** **14 24 25.4 +1.1**
P50A Jamestown 46.23 84 P **P** **14 24 24.5 +0.1**
baz=320,SNR=134
E58A La Victoria 46.33 70 P **P** **14 24 24.9 -0.1**
baz=317,SNR=22
435B Jarrell 46.34 104 P **P** **14 24 27.1 +1.8**
baz=326,SNR=66
PECO Prince Edward 46.34 75 IAmb IAmb 14 24 26.5
comp=Z,112nm,0.7s
N52A McGinn's Farm, 46.37 81 P **P** **14 24 25.8 +0.4**
baz=319,SNR=37
M53A WI Miller and 46.40 80 P **P** **14 24 26.8 +1.1**
baz=319,SNR=188
USA0B Ussuriysk Arra 46.40 286 P **P** **14 24 25.0 -0.6**
USA0B pmax pmax
comp=Z,50nm,1.2s
USA0B Ussuriysk Arra 46.40 286 P **P** **14 24 25.0 -0.6**
USRK Ussuriysk Ar. 46.40 286 P **P** **14 24 24.7 -0.9**
comp=Z,14nm,0.5s,baz=49,slow=9.0,SNR=40
USRK PcP **PcP** **14 25 59.8 +0.9**
comp=Z,20nm,1.0s,baz=48,slow=2.8,SNR=8.9
USRK ScP **ScP** **14 29 43.0 -0.6**
comp=Z,5.5nm,0.7s,baz=12,slow=1.7,SNR=9.1
USRK PKiKP **PKiKP** **14 32 52.4 -1.1**
comp=Z,0.6nm,0.4s,baz=275,slow=2.4,SNR=4.7
USRK LR LR 14 45 01.3
comp=Z,682nm,22.0s,baz=42,slow=37
O51A Pataskala 46.42 83 P **P** **14 24 26.3 +0.5**
baz=320,SNR=107
J55A Hilton 46.44 76 P **P** **14 24 26.7 +0.8**
baz=318,SNR=55
F58A St-Lin Laurent 46.44 71 P **P** **14 24 25.7 -0.2**
baz=317
G57A Newington 46.45 72 P **P** **14 24 26.0 +0.1**
baz=318,SNR=29
L54A Sinclairville 46.48 78 P **P** **14 24 27.4 +1.1**
baz=319,SNR=114
K54A Basiliko Farm, 46.50 77 P **P** **14 24 27.5 +1.0**
baz=318,SNR=53
R49A Shelbyville 46.56 86 IAmb IAmb 14 24 28.3
comp=Z,140nm,0.7s
T47A Sharon Grove 46.59 89 IAmb IAmb 14 24 30.0
comp=Z,183nm,0.7s
E59A St. Maurice 46.61 69 P **P** **14 24 27.1 -0.1**
baz=317
X43A Marvell 46.64 95 P **P** **14 24 28.3 +0.7**
baz=323
Z41A Richland Creek 46.69 97 P **P** **14 24 29.1 +1.1**
baz=324,SNR=13
NRS Narsarsuaq 46.69 40⇑ *i*P **P** **14 24 28.0 +0.4**
NRS pmax pmax
comp=Z,62nm,0.9s
NRS Narsarsuaq 46.69 40⇑ *i*P **P** **14 24 28.0 +0.4**
comp=Z,62nm,0.9s
WVNY West Valley, N 46.70 78 P **P** **14 24 29.0 +1.0**
P51A Williamsport 46.70 84 P **P** **14 24 28.1 +0.1**
baz=320,SNR=23
P51A Williamsport 46.70 84 IAmb IAmb 14 24 29.4
comp=Z,204nm,0.9s
K55A Perry 46.72 77 P **P** **14 24 28.8 +0.7**
baz=318,SNR=95
N53A Lisbon 46.80 81 P **P** **14 24 29.5 +0.7**
baz=319,SNR=91
O52A Adamsville 46.83 82 P **P** **14 24 29.3 +0.3**
baz=320,SNR=100
M54A Oil Creek Stat 46.85 79 P **P** **14 24 30.1 +0.9**
baz=319,SNR=180
G58A Ormstown 46.86 72 P **P** **14 24 28.9 -0.2**
baz=318,SNR=31
J56A Wolcott 46.90 75 P **P** **14 24 29.9 +0.4**
baz=318,SNR=32
J56A Wolcott 46.90 75 IAmb IAmb 14 24 31.2
comp=Z,124nm,0.7s
WVT Waverly 46.90 91 P **P** **14 24 30.7 +1.1**
WVT pmax pmax
comp=Z,123nm,0.9s
WVT Waverly 46.90 91 P **P** **14 24 30.3 +0.7**
baz=322
WVT Waverly 46.90 91 P **P** **14 24 30.7 +1.1**
WVT IAmb IAmb 14 24 31.7
comp=Z,123nm,0.8s
Q51A Peebles 46.91 84 P **P** **14 24 30.2 +0.5**
baz=320,SNR=143
F59A Saint Guilaume 46.94 70 P **P** **14 24 29.9 +0.1**
baz=318,SNR=10
L55A Hinsdale 46.95 78 P **P** **14 24 31.0 +1.0**
baz=319,SNR=113
NATX Nacogdoches 46.98 100 P **P** **14 24 31.6 +1.4**
baz=325,SNR=40
I57A Carthage 46.98 74 P **P** **14 24 30.5 +0.3**
baz=318,SNR=68
LONY Lake Ozonia 47.00 73 P **P** **14 24 30.1 -0.2**
baz=318,SNR=42
D60A Saint Jean D'O 47.03 68 P **P** **14 24 30.6 +0.2**
baz=317,SNR=20
O53A New Philadelph 47.03 82 P **P** **14 24 30.9 +0.3**
baz=320,SNR=67
P52A Corning 47.05 83 P **P** **14 24 30.6 -0.1**
baz=320,SNR=27
N54A Moraine State 47.10 80 P **P** **14 24 32.0 +0.8**
baz=319,SNR=95
K56A Middlesex 47.10 76 P **P** **14 24 32.1 +1.0**
baz=319,SNR=92
D61A St Aubert, Com 47.16 67 P **P** **14 24 31.9 +0.4**
baz=317,SNR=50
E60A Ste Agathe de 47.19 69 P **P** **14 24 31.9 +0.2**
baz=318,SNR=21
J57A Williamstown 47.22 75 P **P** **14 24 32.3 +0.3**
baz=318,SNR=39
J57A Williamstown 47.22 75 IAmb IAmb 14 24 33.1
comp=Z,107nm,0.8s
F60A Warwick 47.25 69 P **P** **14 24 32.1 -0.1**
baz=318,SNR=37
MDJ Mudanjiang 47.25 288 P **P** **14 24 32.4 +0.2**
MDJ pP pP 14 24 53.2 -1.1
MDJ sP sP 14 25 04.6 -0.1
MDJ PP **PP** **14 26 22.9 -0.8**
MDJ S **S** **14 31 18.4 +0.3**
MDJ pmax pmax
comp=Z,52nm,1.1s
MDJ pmax pmax
comp=Z,550nm,4.6s
MDJ LR LR
comp=Z,760nm,10.7s
MDJ LR LR
comp=Z,640nm,16.4s
MDJ LR LR
comp=Z,1μm,16.0s
FRNY Flat Rock 47.31 72 IAmb IAmb 14 24 33.5
comp=Z,97nm,0.7s
M55A Ridgway 47.32 79 P **P** **14 24 34.0 +1.1**
baz=319,SNR=256
H58A Gabriels 47.34 72 P **P** **14 24 32.9 -0.1**
baz=318,SNR=32
OXF Oxford 47.38 93 P **P** **14 24 34.4 +1.0**
baz=323,SNR=132
H59A Cadyville 47.40 72 P **P** **14 24 33.4 0.0**
baz=318,SNR=44
L56A Greenwood 47.41 77 P **P** **14 24 34.5 +1.0**
baz=319,SNR=210
K57A Scipio Center 47.47 76 P **P** **14 24 34.6 +0.6**
baz=319,SNR=32
Q52A Bidwell 47.49 83 P **P** **14 24 34.3 +0.1**
baz=320,SNR=121
I58A Old Forge 47.50 74 P **P** **14 24 34.5 +0.3**
baz=318,SNR=83
O54A Avella 47.50 81 P **P** **14 24 34.8 +0.5**
baz=320,SNR=145
833A Chaparral WMA, 47.50 108 P **P** **14 24 36.2 +1.8**
baz=327,SNR=24
P53A Whipple 47.53 82 P **P** **14 24 34.8 +0.3**
baz=320,SNR=152
E61A Lac Etchemin 47.59 68 P **P** **14 24 35.1 +0.2**
baz=318,SNR=21
J58A Remsen 47.60 74 P **P** **14 24 35.5 +0.5**
baz=319,SNR=92
M56A Emporium 47.60 78 P **P** **14 24 35.9 +0.9**
baz=319,SNR=209
CLTN Cedars of Leba 47.68 89 IAmb IAmb 14 24 38.1
comp=Z,234nm,0.8s
F61A St Evariste 47.69 69 P **P** **14 24 36.0 +0.4**
baz=318,SNR=13
G60A Masonville 47.71 70 P **P** **14 24 35.9 +0.1**
baz=318,SNR=28
N55A Marion Center 47.73 79 P **P** **14 24 36.9 +0.8**
baz=319,SNR=144
D62A Allapoint, All 47.77 66 P **P** **14 24 36.8 +0.5**
baz=318,SNR=35
D62A Allapoint, All 47.77 66 IAmb IAmb 14 24 38.0
comp=Z,98nm,0.8s
L57A Andrews Acres 47.86 77 P **P** **14 24 38.0 +0.9**
baz=319,SNR=182
K58A Earlville 47.87 75 P **P** **14 24 37.8 +0.7**
baz=319,SNR=44
K58A Earlville 47.87 75 IAmb IAmb 14 24 38.6
comp=Z,128nm,0.8s
HKT Hockley 47.88 103 *i*P **P** **14 24 36.4 -0.8**
HKT pmax pmax
comp=Z,724nm,1.9s
P54A Burton 47.89 82 P **P** **14 24 37.7 +0.4**
baz=320,SNR=174
J59A Piesco 47.90 74 P **P** **14 24 37.4 +0.1**
baz=319,SNR=34
H60A Morristown 47.94 71 P **P** **14 24 37.6 0.0**
baz=318,SNR=28
Q53A Leroy 47.94 83 P **P** **14 24 38.1 +0.4**
baz=320,SNR=106
I59A Olmsteadville 47.95 73 P **P** **14 24 37.9 +0.2**
baz=319
G61A St-Isidore-de- 47.95 70 P **P** **14 24 38.0 +0.3**
baz=318,SNR=18
N56A West Decatur 47.97 79 P **P** **14 24 38.8 +0.9**
baz=320,SNR=105
O55A Ligonier 48.01 80 P **P** **14 24 38.8 +0.5**
baz=320,SNR=57
MSHR Mys Shultsa 48.02 285 *ce*P **P** **14 24 38.6 +0.4**
BINY Binghamton 48.13 76 P **P** **14 24 40.0 +0.9**
baz=319,SNR=127
R53A Hurricane 48.14 84 P **P** **14 24 39.7 +0.5**
baz=321,SNR=100
MCWV Mont Chateau 48.16 81 P **P** **14 24 40.0 +0.6**
baz=320,SNR=101
MCWV Mont Chateau 48.16 81 IAmb IAmb 14 24 41.2
comp=Z,170nm,0.7s
Q54A Cows Mills 48.19 82 P **P** **14 24 39.9 +0.3**
baz=320,SNR=141
I60A Shoreham 48.19 72 P **P** **14 24 39.4 -0.1**
baz=319,SNR=12
M57A Sunshine Farm, 48.23 77 P **P** **14 24 40.6 +0.8**
baz=320,SNR=85
M57A Sunshine Farm, 48.23 77 IAmb IAmb 14 24 41.4
comp=Z,212nm,0.7s
D63A Stockholm 48.24 66 P **P** **14 24 40.1 +0.2**
baz=318,SNR=20
K59A Cooperstown 48.25 74 P **P** **14 24 40.6 +0.6**
baz=319,SNR=35
P55A Reedsville 48.29 81 P **P** **14 24 41.0 +0.6**
baz=320,SNR=138
L58A Harry Jones Me 48.31 76 P **P** **14 24 41.6 +1.1**
baz=319,SNR=111
H61A Lyndonville 48.33 71 P **P** **14 24 40.7 +0.2**
baz=318,SNR=26
O56A Blue Knob Stat 48.33 79 P **P** **14 24 41.2 +0.5**
baz=320,SNR=79
O56A Blue Knob Stat 48.33 79 IAmb IAmb 14 24 42.0
comp=Z,176nm,0.8s
ACCN Adirondack Com 48.36 73 IAmb IAmb 14 24 42.9
comp=Z,93nm,0.8s
SSPA Standing Stone 48.38 79 P **P** **14 24 41.9 +0.9**
baz=320
SSPA Standing Stone 48.38 79 P **P** **14 24 42.0 +0.9**
N57A Milroy 48.46 78 P **P** **14 24 42.5 +0.9**
baz=320,SNR=140
G62A West of Eustis 48.47 69 P **P** **14 24 42.1 +0.5**
baz=318,SNR=28
G62A West of Eustis 48.47 69 IAmb IAmb 14 24 42.9
comp=Z,99nm,0.7s
M58A Price's Panora 48.52 77 P **P** **14 24 42.9 +0.7**
baz=320,SNR=67
LBNH Lisbon 48.55 71 P **P** **14 24 42.6 +0.3**
baz=319,SNR=19
S53A Williamson 48.55 84 P **P** **14 24 42.9 +0.5**
baz=321,SNR=65
E63A Oxbow 48.55 67 P **P** **14 24 42.0 -0.3**
baz=318,SNR=26
E63A Oxbow 48.55 67 IAmb IAmb 14 24 42.8
comp=Z,105nm,0.8s
PQI Presque Isle 48.55 66 IAmb IAmb 14 26 07.7
comp=Z,262nm,1.7s
Q55A Buckhannon 48.56 82 P **P** **14 24 43.0 +0.5**
baz=320,SNR=52
J60A Lant Hill Farm 48.58 73 P **P** **14 24 43.2 +0.7**
baz=319,SNR=81
L59A Walton 48.59 75 P **P** **14 24 43.5 +0.8**
baz=319,SNR=66
X48A Hartselle 48.62 91 IAmb IAmb 14 24 44.2
comp=Z,172nm,0.8s
I61A Oroboro, Fairl 48.64 71 P **P** **14 24 43.6 +0.6**
baz=319,SNR=32
H62A Milan 48.66 70 P **P** **14 24 43.5 +0.4**
baz=319,SNR=24
H62A Milan 48.66 70 IAmb IAmb 14 24 44.7
comp=Z,119nm,0.8s
VBMS Vicksburg 48.66 96 P **P** **14 24 44.7 +1.5**
baz=324,SNR=38
R54A Victor 48.73 83 P **P** **14 24 44.2 +0.4**
baz=321,SNR=117
F63A Nahmakanta, Br 48.77 68 P **P** **14 24 44.1 +0.1**
baz=318,SNR=21
F63A Nahmakanta, Br 48.77 68 IAmb IAmb 14 24 45.3
comp=Z,96nm,0.9s
HNH Hanover 48.78 72 IAmb IAmb 14 24 45.8
comp=Z,73nm,0.7s
P56A Dayton Farm, R 48.78 80 P **P** **14 24 44.8 +0.7**
baz=320,SNR=78
N58A Sunbury 48.81 77 P **P** **14 24 45.1 +0.8**
baz=320,SNR=90
N58A Sunbury 48.81 77 IAmb IAmb 14 24 46.3
comp=Z,229nm,0.8s
E64A Bridgewater 48.83 66 P **P** **14 24 44.1 -0.2**
baz=318,SNR=22
K60A Five Rivers En 48.83 74 P **P** **14 24 44.8 +0.4**
baz=319,SNR=9.7
O57A Amberson 48.83 79 P **P** **14 24 45.6 +1.0**
baz=320,SNR=186
S54A Bingess, Beckl 48.87 84 P **P** **14 24 45.3 +0.4**
baz=321,SNR=60
T53A Wise 48.89 85 P **P** **14 24 46.0 +0.9**
baz=321,SNR=127
W50A Signal Mountai 48.90 89 IAmb IAmb 14 24 48.3
comp=Z,279nm,1.4s
M59A Waymart 48.90 76 P **P** **14 24 45.6 +0.7**
baz=320,SNR=89
V51A Loudon 48.90 88 IAmb IAmb 14 24 47.5
comp=Z,173nm,0.7s
CIT Chita 48.92 305 *e*P **P** **14 24 46.4 +1.4**
CIT *e* 14 25 09.2
CIT *e* 14 25 20.9
CIT *e*S **S** **14 31 44.9 +3.3**
CIT pmax pmax
comp=Z,389nm,1.6s
J61A Chester 48.92 72 P **P** **14 24 45.6 +0.5**
baz=319,SNR=20
Q56A Snyder Ridge, 48.97 81 P **P** **14 24 46.1 +0.6**
baz=320,SNR=82
Q56A Snyder Ridge, 48.97 81 IAmb IAmb 14 24 47.0
comp=Z,182nm,0.8s
G63A Kingsbury 48.98 69 P **P** **14 24 45.8 +0.3**
baz=319,SNR=12
F64A Sherman 49.00 67 P **P** **14 24 45.8 +0.1**
baz=319,SNR=30
F64A Sherman 49.00 67 IAmb IAmb 14 24 46.6
comp=Z,112nm,0.8s
PKME Peaks-Kenny Pk 49.02 68 P **P** **14 24 46.0 +0.2**
baz=319
PKME Peaks-Kenny Pk 49.02 68 IAmb IAmb 14 24 46.8
comp=Z,66nm,0.8s
R55A Marlinton 49.09 82 P **P** **14 24 47.2 +0.7**
baz=321,SNR=88
R55A Marlinton 49.09 82 IAmb IAmb 14 24 49.0
comp=Z,171nm,0.7s
K61A Williamstown 49.09 73 P **P** **14 24 47.0 +0.6**
baz=319,SNR=26
CPCT Cooper Cave 49.09 88 P **P** **14 24 46.7 +0.2**
CPCT IAmb IAmb 14 24 47.7
comp=Z,88nm,0.9s
I62A Tamworth 49.10 71 P **P** **14 24 46.7 +0.2**
baz=319,SNR=5.8
H63A New Sharon 49.12 69 P **P** **14 24 46.9 +0.3**
baz=319,SNR=9.9
L60A Shokan 49.15 75 P **P** **14 24 47.6 +0.8**
baz=320,SNR=28
MJB9 Matsu-Tunnel 49.16 274 P **P** **14 24 47.4 +0.3**
MJB9 IAmb IAmb 14 24 49.4
comp=Z,146nm,1.5s
MAJO Matsushiro 49.16 274 P **P** **14 24 47.0 -0.1**
MAJO pmax pmax
comp=Z,232nm,1.5s
MAJO Matsushiro 49.16 274 P **P** **14 24 47.0 -0.1**
MAJO IAmb IAmb 14 24 49.1
comp=Z,232nm,1.5s
MAT Matsushiro 49.16 274 P **P** **14 24 47.3 +0.2**
MAT S **S** **14 31 47.0 +1.6**
MJAR Matsushiro Arr 49.16 274 P **P** **14 24 47.3 +0.3**
comp=Z,14nm,0.6s,baz=17,slow=6.2,SNR=69
MJAR PcP **PcP** **14 26 09.2 +0.2**
comp=Z,13nm,0.9s,baz=15,slow=2.7,SNR=5.6
MJAR ScP **ScP** **14 29 55.5 +0.1**
comp=Z,18nm,0.9s,baz=17,slow=2.5,SNR=27
MJAR LR LR 14 44 15.8
comp=Z,244nm,21.8s,baz=25,slow=34
P57A Homestead Farm 49.21 80 P **P** **14 24 48.2 +0.9**
baz=320,SNR=172
N59A State Game Lan 49.21 77 P **P** **14 24 48.2 +0.8**
baz=320,SNR=72
V52A Sevierville 49.25 87 IAmb IAmb 14 24 49.3
comp=Z,129nm,0.8s
O58A Lewisberry 49.25 78 P **P** **14 24 48.6 +0.9**
baz=320,SNR=320
G64A Maxfield 49.27 68 P **P** **14 24 47.7 0.0**
baz=319,SNR=11
S55A Lewisburg 49.29 83 P **P** **14 24 48.7 +0.7**
baz=321,SNR=160
TKL Tuckaleechee C 49.31 88 IAmb IAmb 14 24 50.5
comp=Z,164nm,0.7s
T54A Tazewell 49.31 85 P **P** **14 24 48.8 +0.6**
baz=321,SNR=73
L61A Hillsdale 1, H 49.31 74 P **P** **14 24 49.1 +0.9**
baz=320,SNR=26
I63A Otisfield 49.33 70 P **P** **14 24 48.8 +0.6**
baz=319,SNR=22
I63A Otisfield 49.33 70 IAmb IAmb 14 24 50.5
comp=Z,106nm,0.8s
Q57A Strasburg 49.35 80 P **P** **14 24 49.2 +0.7**
baz=321,SNR=125
J62A Henniker 49.37 72 P **P** **14 24 48.9 +0.4**
baz=319,SNR=15
M60A Port Jervis 49.45 75 P **P** **14 24 49.9 +0.7**
baz=320,SNR=226
O59A Robesonia 49.47 78 P **P** **14 24 50.3 +0.9**
baz=320,SNR=159
H64A Troy 49.52 69 P **P** **14 24 49.8 +0.1**
baz=319,SNR=5.4
L61B Northampton 49.54 73 P **P** **14 24 50.1 +0.3**
baz=320
P58A Pank, Wackersv 49.55 79 P **P** **14 24 50.5 +0.5**
baz=320,SNR=62
N60A Cedar Hill Far 49.57 76 P **P** **14 24 50.9 +0.8**
baz=320,SNR=66
HAMF Hammerfest 49.58 2 *e*P **P** **14 24 48.7 -1.0**
K62A Royalston 49.59 73 P **P** **14 24 50.9 +0.7**
baz=320,SNR=40
U54A Nelsons Funny 49.61 85 P **P** **14 24 51.5 +0.9**
baz=322,SNR=97
H11N2 WAKE ISLAND Hy 49.62 234 P **P** **14 24 50.5 +0.1**
baz=1.8,slow=3.3,SNR=3.8
H11N3 WAKE ISLAND Hy 49.62 234 P **P** **14 24 50.7 +0.3**
baz=1.8,slow=3.3,SNR=3.8
H11N1 WAKE ISLAND Hy 49.63 234 P **P** **14 24 47.3 -3.2**
baz=1.8,slow=3.3,SNR=5.8
LUPA Lehigh Univers 49.65 77 IAmb IAmb 14 24 52.9
comp=Z,53nm,0.7s
T55A Pulaski 49.66 84 P **P** **14 24 51.6 +0.7**
baz=321,SNR=64
J63A Strafford 49.67 71 P **P** **14 24 51.2 +0.4**
baz=319,SNR=6.1
W52A Murphy 49.67 88 IAmb IAmb 14 24 53.4
comp=Z,126nm,0.8s
LRAL Lakeview Retre 49.77 92 P **P** **14 24 51.8 +0.1**
baz=323,SNR=67
LRAL Lakeview Retre 49.77 92 P **P** **14 24 51.7 +0.1**
LRAL IAmb IAmb 14 24 52.5
comp=Z,70nm,0.8s
BLA Blacksburg 49.77 83 P **P** **14 24 52.3 +0.6**
BLA pmax pmax
comp=Z,323nm,0.7s
BLA Blacksburg 49.77 83 P **P** **14 24 52.3 +0.6**
baz=321,SNR=121
BLA Blacksburg 49.77 83 P **P** **14 24 52.3 +0.6**
Q58A Fox Den Farm, 49.79 80 P **P** **14 24 52.4 +0.6**
baz=321,SNR=169
CN2 Changchun 49.83 290 ⇑P **P** **14 24 52.0 0.0**
CN2 *e*pP pP 14 25 13.0 -1.2
CN2 *e*S **S** **14 31 50.8 -3.6**
CN2 pmax pmax
comp=Z,200nm,1.0s
CN2 pmax pmax
comp=Z,800nm,4.0s

QUA2	**Belchertown**	**49.83**	**73**	IAmb	IAmb	14 24 53.6
	comp=Z,71nm,0.8s					
S56A	**Natural Bridge**	**49.83**	**82**	P	**P**	**14 24 52.9 +0.8**
	baz=321,SNR=34					
SDMD	**Soldier's Deli**	**49.84**	**79**	IAmb	IAmb	14 24 53.9
	comp=Z,132nm,0.8s					
O60A	**Telford**	**49.85**	**77**	P	**P**	**14 24 53.1 +1.0**
	baz=320,SNR=146					
L62A	**Suffield**	**49.87**	**73**	P	**P**	**14 24 53.0 +0.7**
	baz=320					
G65A	**Princeton**	**49.87**	**67**	P	**P**	**14 24 52.4 +0.2**
	baz=319,SNR=6.6					
G65A	**Princeton**	**49.87**	**67**	IAmb	IAmb	14 24 53.1
	comp=Z,55nm,0.8s					
R57A	**Stanardsville**	**49.87**	**81**	P	**P**	**14 24 53.1 +0.7**
	baz=321,SNR=112					
I64A	**Boothbay**	**49.87**	**70**	P	**P**	**14 24 52.7 +0.4**
	baz=319,SNR=7.2					
M61A	**Granite Spring**	**49.88**	**75**	P	**P**	**14 24 53.0 +0.6**
	baz=320,SNR=30					
P59A	**Jarrettsville**	**49.89**	**78**	P	**P**	**14 24 53.3 +0.8**
	baz=320,SNR=62					
K63A	**Dunstable**	**49.91**	**72**	P	**P**	**14 24 53.1 +0.5**
	baz=320,SNR=19					
H65A	**Eastbrook**	**49.93**	**68**	P	**P**	**14 24 53.1 +0.3**
	baz=319,SNR=8.7					
U55A	**TA2, Sparta**	**50.01**	**85**	P	**P**	**14 24 54.4 +0.9**
	baz=322,SNR=243					
HRV	**Adam Dziewonsk**	**50.03**	**72**	P	**P**	**14 24 53.5 -0.1**
HRV				pmax	pmax	
	comp=Z,56nm,0.9s					
HRV	**Adam Dziewonsk**	**50.03**	**72**	P	**P**	**14 24 54.0 +0.5**
	baz=320					
HRV	**Adam Dziewonsk**	**50.03**	**72**	P	**P**	**14 24 53.5 -0.1**
PAL	**Palisades**	**50.05**	**75**	P	**P**	**14 24 54.3 +0.6**
	baz=320,SNR=42					
N61A	**South Mountain**	**50.05**	**76**	P	**P**	**14 24 54.7 +1.0**
	baz=320,SNR=62					
S57A	**Dark Hollow, R**	**50.07**	**82**	P	**P**	**14 24 54.7 +0.8**
	baz=321,SNR=53					
T56A	**Rocky Mt**	**50.11**	**83**	P	**P**	**14 24 54.7 +0.4**
	baz=322,SNR=73					
P60A	**Greenville**	**50.12**	**78**	P	**P**	**14 24 54.8 +0.6**
	baz=320,SNR=38					
P60A	**Greenville**	**50.12**	**78**	IAmb	IAmb	14 24 56.3
	comp=Z,164nm,0.8s					
PSUB	**Penn St. - Bra**	**50.12**	**77**	IAmb	IAmb	14 24 56.3
	comp=Z,264nm,1.1s					
R58A	**Rapidan**	**50.12**	**81**	P	**P**	**14 24 54.9 +0.6**
	baz=321,SNR=62					
V54A	**Nebo**	**50.13**	**86**	P	**P**	**14 24 55.5 +1.1**
	baz=322,SNR=12					
Z50A	**Ashland**	**50.13**	**91**	P	**P**	**14 24 55.0 +0.5**
	baz=323,SNR=160					
BORG	**Borgarnes**	**50.20**	**25**	P	**P**	**14 24 54.2 -0.3**
BORG				pmax	pmax	
	comp=Z,120nm,1.3s					
BORG	**Borgarnes**	**50.20**	**25**	P	**P**	**14 24 54.2 -0.3**
BORG				IAmb	IAmb	14 25 00.7
	comp=Z,120nm,1.2s					
WSPT	**Westport, CT**	**50.20**	**75**	IAmb	IAmb	14 24 56.0
	comp=Z,150nm,0.7s					
M62A	**Hamden**	**50.20**	**74**	P	**P**	**14 24 55.3 +0.4**
	baz=320,SNR=18					
WES	**Weston**	**50.24**	**72**	IAmb	IAmb	14 24 55.8
	comp=Z,125nm,0.7s					
GGN	**Saint George**	**50.26**	**67**	IAmb	IAmb	14 24 56.1
	comp=Z,102nm,0.8s					
YLE	**Yale**	**50.28**	**74**	IAmb	IAmb	14 24 56.7
	comp=Z,162nm,0.8s					
EMMW	**East Machias**	**50.29**	**67**	IAmb	IAmb	14 24 56.3
	comp=Z,77nm,0.8s					
H66A	**Whiting**	**50.30**	**67**	P	**P**	**14 24 55.6 +0.1**
	baz=320					
N62A	**Caumsett State**	**50.32**	**75**	P	**P**	**14 24 56.4 +0.7**
	baz=320,SNR=12					
Q59A	**Harwood**	**50.35**	**79**	P	**P**	**14 24 56.9 +0.9**
	baz=321,SNR=6.0					
O61A	**Allentown**	**50.44**	**76**	P	**P**	**14 24 57.5 +0.9**
	baz=321,SNR=10					
V55A	**Taylorsville**	**50.44**	**85**	P	**P**	**14 24 57.6 +0.9**
	baz=322,SNR=70					
V55A	**Taylorsville**	**50.44**	**85**	IAmb	IAmb	14 24 58.3
	comp=Z,144nm,0.8s					
R58B	**Mineral**	**50.45**	**81**	P	**P**	**14 24 57.6 +0.9**
	baz=321,SNR=86					
R58B	**Mineral**	**50.45**	**81**	IAmb	IAmb	14 24 59.2
	comp=Z,230nm,1.1s					
U56A	**King**	**50.46**	**84**	P	**P**	**14 24 57.7 +0.8**
	baz=322,SNR=66					
TRO	**Tromso**	**50.48**	**4**	*e*P	**P**	**14 24 56.1 -0.3**
BRYW	**Bryant College**	**50.49**	**73**	IAmb	IAmb	14 24 58.5
	comp=Z,110nm,0.7s					
L63A	**North Scituate**	**50.50**	**73**	P	**P**	**14 24 57.3 +0.3**
	baz=320,SNR=6.6					
KEV	**Kevo**	**50.51**	**0**	P	**P**	**14 24 56.5 -0.2**
KEV				pmax	pmax	
	comp=Z,71nm,1.0s					
CBN	**Corbin Frederi**	**50.51**	**80**	P	**P**	**14 24 57.9 +0.7**
	baz=321,SNR=18					
T57A	**Hurt**	**50.52**	**83**	P	**P**	**14 24 57.6 +0.4**
	baz=322,SNR=59					
T57A	**Hurt**	**50.52**	**83**	IAmb	IAmb	14 24 58.9
	comp=Z,118nm,0.8s					
W54A	**Cherokee Point**	**50.55**	**87**	P	**P**	**14 24 58.3 +0.7**
	baz=322,SNR=58					
Y52A	**Lilburn**	**50.58**	**89**	P	**P**	**14 24 58.8 +1.0**
	baz=323,SNR=79					
LMN	**Caledonia Moun**	**50.63**	**65**	IAmb	IAmb	14 24 59.0
	comp=Z,108nm,0.7s					
S58A	**Poland Farm, P**	**50.63**	**81**	P	**P**	**14 24 59.0 +0.9**
	baz=321,SNR=58					
S58A	**Poland Farm, P**	**50.63**	**81**	IAmb	IAmb	14 24 59.7
	comp=Z,117nm,0.8s					
R59A	**King George, V**	**50.64**	**80**	P	**P**	**14 24 59.3 +1.1**
	baz=321,SNR=15					
M63A	**Gales Ferry**	**50.64**	**73**	P	**P**	**14 24 58.7 +0.5**
	baz=320,SNR=20					
P61A	**Hammonton**	**50.64**	**77**	P	**P**	**14 24 59.0 +0.8**
	baz=321					
H06E1	**SOCORRO T-PHAS**	**50.65**	**126**	P	**P**	**14 25 01.4 +3.0**
H06S1	**SOCORRO T**	**50.68**	**126**	P	**P**	**14 25 01.1 +2.5**
ARCES	**ARCESS Array B**	**50.72**	**1**	P	**P**	**14 24 57.5 -0.9**
	comp=Z,25nm,0.5s,baz=360,slow=8.1,SNR=343					
ARCES				PcP	**PcP**	**14 26 14.5 +0.4**
	comp=Z,35nm,1.0s,baz=350,slow=5.4,SNR=4.5					
ARCES				ScP	**ScP**	**14 30 00.2 -1.3**
	comp=Z,12nm,0.9s,baz=5.7,slow=3.7,SNR=6.4					
ARCES				S	**S**	**14 32 09.2 +3.0**
	comp=Z,8.4nm,1.1s,baz=357,slow=24,SNR=5.1					
ARCES				PKiKP	**PKiKP**	**14 32 56.0 -1.2**
	comp=Z,3.1nm,0.9s,baz=302,slow=2.3,SNR=3.8					
ARE0	**ARCESS Array S**	**50.72**	**1**	P	**P**	**14 24 57.7 -0.7**
ARE0	**ARCESS Array S**	**50.72**	**1**	*e*P	**P**	**14 24 57.5 -0.8**
H11S1	**WAKE ISLAND Hy**	**50.80**	**234**	P	**P**	**14 24 60.0 +0.6**
H11S2	**WAKE ISLAND Hy**	**50.81**	**234**	P	**P**	**14 25 00.1 +0.6**
H11S3	**WAKE ISLAND Hy**	**50.81**	**234**	P	**P**	**14 24 59.7 +0.3**
L64A	**Middleborough**	**50.81**	**72**	P	**P**	**14 24 59.7 +0.3**
	baz=320					
V56A	**Mocksville**	**50.83**	**85**	P	**P**	**14 25 00.3 +0.7**
	baz=322,SNR=137					
R60A	**Leonardtown, M**	**50.85**	**80**	P	**P**	**14 25 00.9 +1.2**
	baz=321					
X54A	**Belton**	**50.88**	**87**	P	**P**	**14 25 00.9 +0.8**
	baz=323,SNR=80					
S59A	**Mechanicsville**	**50.89**	**80**	P	**P**	**14 25 01.0 +0.9**
	baz=321,SNR=44					
T58A	**Grand View Acr**	**50.92**	**82**	P	**P**	**14 25 00.5 +0.2**
	baz=322,SNR=94					
U57A	**Blanch**	**50.92**	**83**	P	**P**	**14 25 00.7 +0.4**
	baz=322,SNR=72					
M64A	**Tiverton**	**50.93**	**73**	P	**P**	**14 25 00.7 +0.4**
	baz=320,SNR=6.4					
KMSC	**Kings Mountain**	**50.94**	**86**	P	**P**	**14 25 01.0 +0.6**
	baz=322,SNR=48					
PAULI	**Pauline**	**50.95**	**87**	IAmb	IAmb	14 25 02.3
	comp=Z,144nm,0.7s					
Q61A	**Milford**	**51.00**	**78**	P	**P**	**14 25 02.3 +1.5**
	baz=321					
JHJ	**Hachijo jima 2**	**51.08**	**270**	P	**P**	**14 25 02.0 +0.4**
	comp=Z,66nm,0.6s,baz=224,slow=23,SNR=8.8					
V57A	**Coltrane Farms**	**51.13**	**84**	P	**P**	**14 25 02.2 +0.3**
	baz=322,SNR=41					
152A	**Waverly Hall**	**51.20**	**91**	IAmb	IAmb	14 25 03.1
	comp=Z,102nm,0.8s					
KTK1	**Kautokeino**	**51.21**	**2**	*e*P	**P**	**14 25 01.2 -0.9**
DRLN	**Deer Lake**	**51.23**	**57**	IAmb	IAmb	14 25 03.3
	comp=Z,96nm,0.9s					
GOGA	**Godfrey**	**51.24**	**89**	P	**P**	**14 25 03.4 +0.7**
GOGA				pmax	pmax	
	comp=Z,84nm,1.0s					
GOGA	**Godfrey**	**51.24**	**89**	P	**P**	**14 25 02.9 +0.2**
	baz=323,SNR=35					
GOGA	**Godfrey**	**51.24**	**89**	IAmb	IAmb	14 25 03.7
	comp=Z,84nm,1.0s					
S60A	**Water View**	**51.26**	**80**	P	**P**	**14 25 03.8 +1.0**
	baz=322					
W56A	**Indian Trail**	**51.32**	**85**	P	**P**	**14 25 03.8 +0.5**
	baz=322,SNR=53					
X55A	**Gracelyn & Ava**	**51.32**	**87**	P	**P**	**14 25 03.9 +0.6**
	baz=323,SNR=115					
U58A	**Oxford**	**51.34**	**83**	P	**P**	**14 25 03.8 +0.3**
	baz=322,SNR=37					
T59A	**Double "B" Far**	**51.38**	**81**	P	**P**	**14 25 04.5 +0.7**
	baz=322,SNR=55					
T59A	**Double "B" Far**	**51.38**	**81**	IAmb	IAmb	14 25 05.3
	comp=Z,115nm,0.7s					
R61A	**Willards**	**51.42**	**78**	P	**P**	**14 25 05.5 +1.5**
	baz=321,SNR=5.1					
V58A	**Windy Hill, Pi**	**51.53**	**84**	P	**P**	**14 25 05.6 +0.7**
	baz=322,SNR=53					
V58A	**Windy Hill, Pi**	**51.53**	**84**	IAmb	IAmb	14 25 06.2
	comp=Z,144nm,1.0s					
W57A	**Gilead**	**51.60**	**85**	P	**P**	**14 25 05.8 +0.5**
	baz=322,SNR=108					
X56A	**White Oak**	**51.60**	**86**	P	**P**	**14 25 06.1 +0.6**
	baz=323,SNR=72					
Y55A	**Saluda**	**51.63**	**87**	P	**P**	**14 25 06.2 +0.6**
	baz=323,SNR=54					
T60A	**Surry**	**51.66**	**81**	P	**P**	**14 25 06.7 +0.9**
	baz=322,SNR=6.7					
LOF	**Lofoten**	**51.72**	**7**	*e*P	**P**	**14 25 05.1 -0.7**
U59A	**Littleton**	**51.75**	**82**	P	**P**	**14 25 07.4 +0.9**
	baz=322,SNR=30					
S61A	**Acomac**	**51.76**	**79**	P	**P**	**14 25 08.1 +1.6**
	baz=322					
U60A	**Pendleton**	**51.97**	**81**	P	**P**	**14 25 09.1 +1.0**
	baz=322,SNR=23					
V59A	**Middlesex**	**51.99**	**83**	P	**P**	**14 25 09.0 +0.7**
	baz=322,SNR=62					
STEI	**Steigen**	**52.02**	**6**	*e*P	**P**	**14 25 07.5 -0.5**
STEI				*e*P	**P**	**14 25 07.5 -0.5**
Y56A	**Pelion**	**52.02**	**87**	P	**P**	**14 25 09.2 +0.6**
	baz=323					
W58A	**Raeford**	**52.08**	**84**	P	**P**	**14 25 09.8 +0.9**
	baz=323,SNR=106					
X57A	**Johnson Farm,**	**52.09**	**85**	P	**P**	**14 25 09.9 +0.9**
	baz=323,SNR=43					
HAL	**Halifax**	**52.12**	**65**	IAmb	IAmb	14 25 09.9
	comp=Z,75nm,0.9s					
SNY	**Shenyang**	**52.22**	**290**	⇑P	**P**	**14 25 10.4 +0.5**
SNY				S	**S**	**14 32 26.9 -0.5**
SNY				pmax	pmax	
	comp=Z,85nm,1.7s					
SNY				LR	LR	
	comp=Z,580nm,26.7s					
SNY				LR	LR	
	comp=Z,570nm,18.8s					
SNY				LR	LR	
	comp=Z,850nm,19.6s					
LVZ	**Lovozero**	**52.27**	**357**	*c*eP	**P**	**14 25 09.3 -0.7**
LVZ				pmax	pmax	
	comp=Z,230nm,1.2s					
Y57A	**Sumter**	**52.30**	**86**	P	**P**	**14 25 11.3 +0.7**
	baz=323,SNR=12					
Z56A	**Williston**	**52.36**	**87**	P	**P**	**14 25 11.7 +0.6**
	baz=323,SNR=13					
X58A	**Rowland**	**52.40**	**85**	P	**P**	**14 25 12.3 +1.0**
	baz=323,SNR=13					
U61A	**Possum Corner**	**52.44**	**81**	P	**P**	**14 25 12.6 +1.0**
	baz=322					
V60A	**Jim Taylor Roa**	**52.48**	**82**	P	**P**	**14 25 12.8 +0.9**
	baz=322,SNR=10					
CNNC	**Cliffs of the**	**52.58**	**83**	P	**P**	**14 25 13.6 +1.0**
	baz=323					
APA	**Apatity**	**52.64**	**357**	⇑*i*P	**P**	**14 25 11.3 -1.3**
APA				pmax	pmax	
	comp=Z,50nm,0.9s					
Z57A	**Bowman**	**52.72**	**87**	P	**P**	**14 25 14.4 +0.7**
	baz=323,SNR=34					
Y58A	**Scranton**	**52.75**	**85**	P	**P**	**14 25 14.7 +0.8**
	baz=323,SNR=15					
X59A	**McDuffie Farm,**	**52.75**	**84**	P	**P**	**14 25 14.8 +0.9**
	baz=323,SNR=12					
TIGA	**Tifton**	**52.76**	**91**	P	**P**	**14 25 13.8 -0.2**
	baz=324,SNR=17					
V61A	**Roper**	**52.80**	**81**	P	**P**	**14 25 15.2 +1.0**
	baz=322					
SGF	**Sodankyl**	**52.83**	**1**	P	**P**	**14 25 14.1 +0.1**
SGF				pmax	pmax	
	comp=Z,229nm,0.8s					
255A	**Hazlehurst**	**52.93**	**89**	IAmb	IAmb	14 25 16.9
	comp=Z,153nm,0.8s					
X60A	**Albert Glenn T**	**53.06**	**84**	P	**P**	**14 25 16.8 +0.6**
	baz=323,SNR=16					
157A	**Early Branch**	**53.07**	**87**	P	**P**	**14 25 17.3 +1.0**
	baz=324,SNR=13					
W61A	**Ground Anchor**	**53.08**	**82**	P	**P**	**14 25 17.4 +1.1**
	baz=323,SNR=11					
Y59A	**Loris**	**53.08**	**85**	P	**P**	**14 25 17.1 +0.7**
	baz=323,SNR=24					
TLY	**Talaya**	**53.09**	**311**	*i* P	**P**	**14 25 16.2 -0.1**
TLY				*e*		14 25 40.4
TLY				*e*S	**S**	**14 32 40.7 +1.5**
TLY				*e*		14 33 20.3
TLY				*e*		14 34 55.8
TLY				pmax	pmax	
	comp=Z,255nm,1.3s					
TLY				MLR	MLR	
	comp=Z,2μm,14.0s					
NHSC	**New Hope**	**53.13**	**86**	P	**P**	**14 25 17.8 +1.0**
	baz=323,SNR=16					
Z58A	**St. Stephen**	**53.13**	**86**	P	**P**	**14 25 17.4 +0.7**
	baz=323,SNR=6.9					
V62A	**Hyde County Ai**	**53.29**	**81**	P	**P**	**14 25 19.0 +1.2**
	baz=323					
KONS	**Konsvik**	**53.31**	**7**	*e*P	**P**	**14 25 17.1 -0.4**
553A	**Crawfordville**	**53.35**	**92**	IAmb	IAmb	14 25 19.2
	comp=Z,194nm,0.9s					
Y60A	**Bolivia**	**53.40**	**84**	P	**P**	**14 25 19.3 +0.6**
	baz=323,SNR=11					
158A	**Hollywood**	**53.42**	**87**	P	**P**	**14 25 19.5 +0.7**
	baz=324					
Z59A	**Georgetown, SC**	**53.48**	**86**	P	**P**	**14 25 20.1 +0.9**
	baz=323,SNR=6.5					
KS19	**Wonju Array Si**	**53.54**	**283**	IAmb	IAmb	14 25 22.5
	comp=Z,220nm,1.3s					
KSRS	**Korea Array**	**53.55**	**283**	P	**P**	**14 25 20.9 +1.2**
	comp=Z,28nm,0.6s,baz=39,slow=6.8,SNR=135					
KSRS				ScP	**ScP**	**14 30 15.2 +0.8**
	comp=Z,10nm,0.9s,baz=43,slow=4.2,SNR=16					
KSRS				S	**S**	**14 32 49.2 +3.6**
	comp=Z,1.5nm,1.0s,baz=177,slow=26,SNR=4.4					
KSRS				LR	LR	14 49 34.7
	comp=Z,111nm,18.9s,baz=26,slow=38					
MOR8	**Moi Rana**	**53.72**	**7**	*e*P	**P**	**14 25 19.2 -1.4**
MOY	**Mondy**	**54.10**	**313**	*e*P	**P**	**14 25 24.7 +1.0**
MOY				pmax	pmax	
	comp=Z,237nm,3.0s					
ZAK	**Zakamensk**	**54.27**	**310**	*e*P	**P**	**14 25 24.8 -0.2**
ZAK				pmax	pmax	
	comp=Z,27nm,1.3s					
TJN	**Taejon**	**54.67**	**283**	*c*eP	**P**	**14 25 29.1 +1.2**
ULN	**Ulaanbaatar**	**54.79**	**306**	*c*eP	**P**	**14 25 29.5 +0.7**
ULN				pmax	pmax	
	comp=Z,107nm,1.0s					
ULN	**Ulaanbaatar**	**54.79**	**306**	P	**P**	**14 25 29.9 +1.0**
ULN				IAmb	IAmb	14 25 31.2
	comp=Z,144nm,1.3s					
656A	**Willston**	**54.97**	**91**	IAmb	IAmb	14 25 31.0
	comp=Z,93nm,0.8s					
SONM	**Songino Array**	**55.08**	**306**	P	**P**	**14 25 33.0 +2.1**
	comp=Z,107nm,0.9s,baz=41,slow=6.5,SNR=407					
SONM				PcP	**PcP**	**14 26 32.0 +0.8**
	comp=Z,37nm,1.0s,baz=38,slow=4.0,SNR=3.7					
SONM				ScP	**ScP**	**14 30 20.2 -0.9**
	comp=Z,17nm,1.0s,baz=36,slow=3.1,SNR=9.5					
SONM				PKiKP	**PKiKP**	**14 33 02.8 0.0**
	comp=Z,1.0nm,0.9s,baz=37,slow=7.4,SNR=2.2					
SONM				ScS	**ScS**	**14 35 12.6 +1.7**
	comp=Z,2.0nm,1.1s,baz=44,slow=4.5,SNR=5.2					
SONM				LR	LR	14 50 00.9
	comp=Z,806nm,18.8s,baz=38,slow=37					
SONM				PKPPKP	P'P'df	14 55 31.3 -8.4
	comp=Z,0.5nm,0.6s,baz=186,slow=6.0,SNR=4.9					
NSS	**Namsos**	**55.19**	**8**	*e*P	**P**	**14 25 30.2 -1.0**
OUL	**Oulu**	**55.19**	**1**	P	**P**	**14 25 31.0 -0.2**
OUL				pmax	pmax	
	comp=Z,206nm,1.0s					
DL2	**Dalian**	**55.44**	**289**	P	**P**	**14 25 33.7 +0.3**
DL2				pP	**pP**	**14 25 56.9 +0.9**
DL2				S	**S**	**14 33 09.8 -1.0**
DL2				sS	**sS**	**14 33 44.4 -5.0**
DL2				pmax	pmax	
	comp=Z,48nm,1.2s					
DL2				pmax	pmax	
	comp=Z,610nm,4.5s					
DL2				LR	LR	
	comp=Z,450nm,12.4s					
DL2				LR	LR	
	comp=Z,640nm,13.7s					
DL2				LR	LR	
	comp=Z,630nm,25.5s					
TMCR	**Tamitsa**	**55.88**	**355**	*e*P	**P**	**14 25 34.9 -1.3**
TMCR				*e*S	**S**	**14 33 17.3 +1.2**
TMCR				pmax	pmax	
	comp=Z,200nm,1.4s					
DWPF	**Disney Wildern**	**56.55**	**91**	P	**P**	**14 25 41.5 +0.1**
	baz=326					
MOL	**Molde**	**56.75**	**11**	*e*P	**P**	**14 25 41.2 -1.1**
BJI	**Beijing**	**57.08**	**294**	P	**P**	**14 25 45.7 +0.7**
BJI				pP	**pP**	**14 26 08.0 +0.2**
BJI				PcP	**PcP**	**14 26 42.7 +3.8**
BJI				PcS	**PcS**	**14 30 41.5 +1.7**
BJI				S	**S**	**14 33 33.2 +0.7**
BJI				pmax	pmax	
	comp=Z,56nm,1.2s					
BJI				LR	LR	
	comp=Z,910nm,11.8s					
AKN	**Aaknes**	**57.08**	**11**	*e*P	**P**	**14 25 44.5 -0.3**
VAF	**Ylistaro**	**57.19**	**3**	P	**P**	**14 25 45.3 -0.2**
VAF				pmax	pmax	
	comp=Z,61nm,1.1s					
JOF	**Joensuu**	**57.35**	**358**	P	**P**	**14 25 46.5 -0.1**
JOF				pmax	pmax	
	comp=Z,52nm,1.1s					
DOMB	**Dombas**	**57.41**	**10**	*e*P	**P**	**14 25 46.2 -0.9**
SUF	**Sumiainen**	**57.57**	**1**	P	**P**	**14 25 48.1 0.0**
SUF				pmax	pmax	
	comp=Z,132nm,0.9s					
ZAA0	**Zalesovo Array**	**57.58**	**324**	IAmb	IAmb	14 25 50.7
	comp=Z,197nm,1.1s					
ZALV	**Zalesovo Beam**	**57.58**	**324**	P	**P**	**14 25 48.4 0.0**
	comp=Z,83nm,0.5s,baz=30,slow=6.1,SNR=175					
ZALV				ScP	**ScP**	**14 30 29.9 -1.9**
	comp=Z,10nm,1.0s,baz=25,slow=4.9,SNR=4.4					
ZALV				S	**S**	**14 33 38.9 +0.2**
	comp=Z,2.5nm,0.8s,baz=35,slow=13,SNR=3.6					
ZALV				LR	LR	14 52 48.9
	comp=Z,778nm,19.1s,baz=19,slow=38					
ZALV				PKP2ab		14 55 58.4
	comp=Z,1.6nm,0.8s,baz=220,slow=3.9,SNR=4.6					
ZALV	**Zalesovo Beam**	**57.58**	**324**	*i* P	**P**	**14 25 48.0 -0.3**
ZALV				pmax	pmax	
	comp=Z,83nm,0.5s					
PRGR	**Permogore**	**57.88**	**350**	*e*P	**P**	**14 25 50.0 -0.3**
PRGR				*e**PP	**pP**	**14 26 15.3 +2.3**
PRGR				*e*		14 26 38.6
PRGR				*e*S	**S**	**14 33 42.7 +0.2**
PRGR				*e*		14 35 26.7
PRGR				pmax	pmax	
	comp=Z,339nm,1.3s					
SUE	**Sulen**	**57.94**	**13**	*e*P	**P**	**14 25 50.1 -0.6**
HYA	**Hoyanger**	**57.99**	**12**	*e*P	**P**	**14 25 50.6 -0.5**
LRW	**Lerwick**	**58.07**	**17**	⇑*e*P	**P**	**14 25 51.5 -0.2**
NC204	**NORSAR Array S**	**58.31**	**10**	IAmb	IAmb	14 25 54.3
	comp=Z,78nm,1.0s					
NC303	**NORSAR Array S**	**58.41**	**9**	IAmb	IAmb	14 25 58.7
	comp=Z,111nm,1.1s					
HHC	**Hu-ho-hao-te**	**58.51**	**298**	P	**P**	**14 25 56.0 +0.8**
HHC				S	**S**	**14 33 49.5 -2.0**
HHC				sS	sS	14 34 25.4 -5.0
HHC				ScS	**ScS**	**14 35 34.8 -1.2**
HHC				pmax	pmax	
	comp=Z,53nm,1.0s					
HHC				pmax	pmax	
	comp=Z,190nm,5.7s					
HHC				LR	LR	
	comp=Z,430nm,11.7s					
HHC				LR	LR	
	comp=Z,340nm,14.3s					
HHC				LR	LR	
	comp=Z,470nm,13.1s					
ASK	**Askoy**	**58.55**	**13**	*e*P	**P**	**14 25 54.7 -0.3**
NC405	**NORSAR Array S**	**58.55**	**9**	IAmb	IAmb	14 25 55.3
	comp=Z,89nm,1.1s					
NBO00	**NORSAR Array S**	**58.56**	**10**	IAmb	IAmb	14 25 59.5
	comp=Z,232nm,1.6s					
NB201	**NORSAR Array S**	**58.58**	**9**	IAmb	IAmb	14 25 56.1
	comp=Z,106nm,1.1s					
NB2	**NORSAR Subarra**	**58.58**	**9**	P	**P**	**14 25 54.6 -0.8**
	comp=Z,52nm,1.1s,baz=351,slow=6.9					
NB2	**NORSAR Subarra**	**58.58**	**9**	P	**P**	**14 25 54.2 -1.1**
NB2				pmax	pmax	
	comp=Z,89nm,1.1s					
NB2	**NORSAR Subarra**	**58.58**	**9**	P	**P**	**14 25 54.6 -0.8**
	baz=351,slow=6.9					
NOA	**NORSAR Array B**	**58.58**	**9**	P	**P**	**14 25 54.5 -0.8**
	comp=Z,25nm,0.9s,baz=351,slow=7.0,SNR=107					
NOA				ScP	**ScP**	**14 30 35.0 -1.1**
	comp=Z,16nm,0.9s,baz=354,slow=5.2,SNR=9.5					
NOA				S	**S**	**14 33 52.1 +0.4**
	comp=Z,1.0nm,1.0s,baz=353,slow=12,SNR=3.5					
NOA				LR	LR	14 51 59.1
	comp=Z,306nm,20.9s,baz=350,slow=37					
BER	**Bergen**	**58.66**	**13**	P	**P**	**14 25 55.7 -0.1**
BER				pmax	pmax	
	comp=Z,30nm,1.2s					
BER	**Bergen**	**58.66**	**13**	*e*P	**P**	**14 25 55.6 -0.2**
SKAR	**Skarslia**	**58.68**	**11**	*e*P	**P**	**14 25 55.4 -0.6**
NAO01	**NORSAR Array S**	**58.75**	**10**	IAmb	IAmb	14 26 02.7
	comp=Z,363nm,1.9s					
FIA1	**FINESS Array S**	**58.85**	**1**	P	**P**	**14 25 56.7 -0.4**
FIA1				IAmb	IAmb	14 26 00.8
	comp=Z,108nm,0.9s					
FINES	**FINESS Array B**	**58.85**	**1**	P	**P**	**14 25 56.6 -0.4**
	comp=Z,77nm,0.9s,baz=32,slow=5.8,SNR=218					
FINES				ScP	**ScP**	**14 30 36.5 -0.7**
	comp=Z,22nm,0.8s,baz=5.0,slow=4.4,SNR=12					
FINES				S	**S**	**14 33 53.0 -2.0**
	comp=Z,11nm,1.2s,baz=340,slow=10,SNR=6.4					
FINES				LR	LR	14 52 47.8
	comp=Z,310nm,21.0s,baz=18,slow=37					
FINES	**FINESS Array B**	**58.85**	**1**	*i* P	**P**	**14 25 56.7 -0.4**
FINES				pmax	pmax	
	comp=Z,75nm,0.9s					
NC602	**NORSAR Array S**	**58.91**	**9**	IAmb	IAmb	14 26 04.8
	comp=Z,112nm,1.4s					
NC602	**NORSAR Array S**	**58.91**	**9**	*e*P	**P**	**14 25 56.9 -0.6**
NORES	**NORESS Array B**	**58.91**	**9**	P	**P**	**14 26 00.1 +2.6**
NORES				pmax	pmax	
	comp=Z,10.0nm,0.3s					
LEWI	**Lewis, Hebride**	**59.06**	**21**	⇑*e*P	**P**	**14 25 58.3 -0.3**
LEWI				IAmb	IAmb	14 25 59.4
	comp=Z,63nm,1.0s					
KLMR	**Klimovskoe**	**59.10**	**353**	*c i*P	**P**	**14 25 58.2 -0.6**
KLMR				*e**PP	**pP**	**14 26 23.9 +2.3**
KL

comp=Z,410nm,6.7s
TIA LR LR
comp=Z,490nm,16.4s
TIA LR LR
comp=Z,470nm,16.0s
KONO Kongsberg 59.82 11 P **P 14 26 03.9 +0.2**
KONO pmax pmax
comp=Z,37nm,0.9s
KONO Kongsberg 59.82 11 P **P 14 26 03.9 +0.2**
KONO Kongsberg 59.82 11 *e*P **P 14 26 03.1 -0.6**
KAC Achnashellach 59.95 20 *e*P **P 14 26 04.7 0.0**
KPL Plockton 60.04 20⇑*e*P **P 14 26 04.9 -0.4**
KPL lAmb lAmb 14 26 05.7
comp=Z,57nm,1.0s
MCD Coleburn Disti 60.21 19 *e*P **P 14 26 05.8 -0.7**
KIRV Kirov 60.51 347 S **S 14 34 16.3 -0.1**
comp=Z,11nm,0.4s,baz=121,slow=22,SNR=11
KIRV LR LR 14 54 52.5
comp=Z,590nm,19.9s,baz=355,slow=38
PUL Pulkovo 60.52 359*c*e**P P 14 26 05.8 -2.7**
PUL pmax pmax
comp=Z,123nm,0.9s
PUL MLR MLR
comp=Z,644nm,22.0s
SVE Sverdlovsk 60.62 340*de***P P 14 26 08.7 -0.6**
SVE *e*S **S 14 34 14.2 -3.7**
SVE pmax pmax
comp=Z,90nm,1.0s
SNART Snartemo 60.87 12 *e*P **P 14 26 11.1 +0.1**
DRUM Mains of Drumt 60.97 18⇑*e*P **P 14 26 11.5 -0.1**
DRUM lAmb lAmb 14 26 12.4
comp=Z,160nm,0.8s
HOMB Homborsund 61.07 11 *e*P **P 14 26 12.1 -0.2**
LAWE Loch Awe, Argy 61.11 20 *e*P **P 14 26 12.6 0.0**
LAWE lAmb lAmb 14 26 13.0
comp=Z,55nm,0.8s
INVG Invergeldie, C 61.18 20 *e*P **P 14 26 12.4 -0.7**
INVG lAmb lAmb 14 26 13.7
comp=Z,62nm,0.9s
CCIG Comitan 61.23 108 lAmb lAmb 14 26 16.0
comp=Z,68nm,0.9s
EDU Dundee 61.24 19⇑*e*P **P 14 26 13.4 -0.1**
ARU Arti 61.35 341 S **S 14 34 22.6 -4.5**
comp=Z,0.8nm,0.3s,baz=104,slow=22,SNR=11
ARU LR LR 14 54 13.5
comp=Z,1μm,21.5s,baz=8.0,slow=37
ARU Arti 61.35 341*c i*P **P 14 26 13.4 -0.8**
ARU *PP **pP 14 26 38.5 +1.2**
ARU *SP **sP 14 26 48.6 +1.1**
ARU 14 26 55.0
ARU 14 28 29.7
ARU S **S 14 34 25.9 -1.3**
ARU *SS **pS 14 34 57.9 +4.2**
ARU 14 35 54.2
ARU SS **SS 14 38 23.7 -4.3**
ARU SSS SSS 14 41 17.1
ARU pmax pmax
comp=Z,77nm,0.8s
ARU MLR MLR
comp=Z,1μm,20.0s
ARU Arti 61.35 341 P **P 14 26 13.5 -0.8**
ARU lAmb lAmb 14 26 16.9
comp=Z,77nm,0.9s
EAB Aberfoyle 61.36 20⇑*e*P **P 14 26 14.5 +0.2**
BBSR BB Station 61.38 74 lAmb lAmb 14 26 15.7
comp=Z,190nm,1.1s
EDI Edinburgh 61.81 19 *e*P **P 14 26 17.3 +0.1**
EDI lAmb lAmb 14 26 17.6
comp=Z,60nm,0.9s
VSU Vasula 61.84 1 *e*P **P 14 26 18.2 +0.7**
VSU Vasula 61.84 1 *i*P **P 14 26 16.9 -0.6**
VSU pmax pmax
comp=Z,675nm,1.0s
IDGL Inch Island, C 61.85 22 *e*P **P 14 26 18.0 +0.4**
ESY Stoneypath 61.91 19⇑*e*P **P 14 26 17.8 -0.1**
EBL Broad Law 61.98 19⇑*e*P **P 14 26 18.4 -0.1**
CLGH Cloghs, Cushen 62.10 21⇑*e*P **P 14 26 19.2 -0.1**
CLGH lAmb lAmb 14 26 20.1
comp=Z,59nm,1.0s
BRVK Borovoye 62.22 333*ce***P P 14 26 19.3 -0.8**
BRVK pmax pmax
comp=Z,178nm,1.3s
BRVK Borovoye 62.22 333 P **P 14 26 19.6 -0.5**
BRVK lAmb lAmb 14 26 22.9
comp=Z,125nm,1.0s
KURK Kurchatov 62.22 326*ce***P P 14 26 19.8 -0.3**
KURK pmax pmax
comp=Z,139nm,1.3s
KURK Kurchatov 62.22 326 P **P 14 26 19.9 -0.3**
KURK lAmb lAmb 14 26 23.1
comp=Z,150nm,1.2s
BVAR Borovoye Array 62.22 332 S **S 14 34 34.2 -4.1**
comp=Z,3.4nm,0.9s,baz=358,slow=10,SNR=4.9
NJ2 Nanjing 62.30 286⇓*i*P **P 14 26 21.5 +0.6**
NJ2 pmax pmax
comp=Z,84nm,1.6s
KURBB Kurchatov Arra 62.33 326 S **S 14 34 33.6 -6.1**
comp=Z,2.7nm,0.9s,baz=29,slow=12,SNR=7.4
KURBB PKPPKP 14 55 23.1
comp=Z,1.4nm,1.0s,baz=221,slow=2.2,SNR=11
KURBB Kurchatov Arra 62.33 326 P **P 14 26 19.5 -1.4**
GOET G??ttrup 62.36 11 *i*P **P 14 26 22.7 +1.8**
comp=Z,138nm,1.2s
EKA Eskdalemuir Ar 62.38 19 P **P 14 26 20.5 -0.6**
EKA pmax pmax
comp=Z,3.0nm,0.4s
ESK Eskdalemuir 62.39 19⇑*e*P **P 14 26 21.3 +0.1**
ESK lAmb lAmb 14 26 22.1
comp=Z,117nm,1.0s
ESK Eskdalemuir 62.39 19 P **P 14 26 21.3 +0.1**
ESK pmax pmax
comp=Z,131nm,1.1s
ESK Eskdalemuir 62.39 19 P **P 14 26 21.3 +0.1**
ESK lAmb lAmb 14 26 22.4
comp=Z,131nm,1.1s
NEWG New Galloway 62.40 20 *e*P **P 14 26 21.2 -0.1**
NEWG lAmb lAmb 14 26 22.1
comp=Z,66nm,0.9s
GAL1 Galloway 62.56 20⇑*e*P **P 14 26 22.5 +0.1**
GAL1 lAmb lAmb 14 26 23.1
comp=Z,177nm,0.9s
SLIT Slitere, Latvi 62.60 3 *e*P **P 14 26 22.5 -0.1**
MUD Monsted U'grnd 62.93 11⇑*i*P **P 14 26 25.1 +0.4**
MUD pmax pmax
comp=Z,77nm,1.1s
MUD Monsted U'grnd 62.93 11⇑*i*P **P 14 26 25.1 +0.4**
comp=Z,77nm,1.1s
GMM Mts of Mourne 62.94 21⇑*e*P **P 14 26 24.8 0.0**
IGLA Glengowla, Co 63.05 24 *e*P **P 14 26 25.0 -0.6**
EDMD Edmundbyers 63.06 19 *e*P **P 14 26 25.6 -0.1**
EDMD lAmb lAmb 14 26 26.6
comp=Z,122nm,1.2s
KESW Keswick, Cumbr 63.10 20⇑*e*P **P 14 26 26.1 +0.2**
KESW lAmb lAmb 14 26 26.8
comp=Z,147nm,1.0s
IOMK Kirk Michael 63.16 21⇑*e*P **P 14 26 26.3 -0.1**
IOMK lAmb lAmb 14 26 26.9
comp=Z,254nm,1.3s
WIM Isle of Man 63.25 21⇑*e*P **P 14 26 26.9 -0.1**
ZSN Zaisan 63.25 320⇑*i*P **P 14 26 26.7 -0.5**
comp=Z,74nm,1.3s
ZSN *i*S **S 14 34 51.1 -0.4**
ZSN Zaisan 63.25 320*c i*P **P 14 26 26.6 -0.5**
ZSN *i*S **S 14 34 51.0 -0.4**
ZSN pmax pmax
comp=Z,74nm,1.3s
HPK Haverah Park 63.95 19 *e*P **P 14 26 32.1 +0.5**
WME Myndd Eilian 64.04 21⇑*e*P **P 14 26 31.7 -0.4**
WLF1 Llynfaes 64.12 21⇑*e*P **P 14 26 32.1 -0.6**
WLF1 lAmb lAmb 14 26 32.8
comp=Z,117nm,1.0s
PBUR Paburge 64.20 4 *e*P **P 14 26 33.1 0.0**
YLL Llanberis 64.31 21 *e*P **P 14 26 34.3 +0.5**
MOS Moscow 64.31 354 *e*P **P 14 26 33.1 -0.7**
MOS *e* 14 26 55.3
MOS *e* 14 27 12.3
MOS *e*S **S 14 35 02.7 -1.4**
MOS *e* 14 35 48.8
MOS *e* 14 36 14.0
MOS pmax pmax
comp=Z,122nm,0.6s
LBWR Ladybower, Pea 64.47 19⇑*e*P **P 14 26 35.2 +0.2**
LBWR lAmb lAmb 14 26 36.0
comp=Z,131nm,0.9s

BRZS Berezniki 64.47 330⇑*i*P **P 14 26 33.8 -1.2**
comp=Z,94nm,1.1s
BRZS Berezniki 64.47 330*c i*P **P 14 26 33.8 -1.2**
BRZS pmax pmax
comp=Z,94nm,1.1s
IWEX Carrickbyrne, 64.55 23 *e*P **P 14 26 35.1 -0.4**
IZAR Zarasai 64.56 1 *e*P **P 14 26 36.0 +0.5**
MK31 Makanchi Array 64.65 322 *i*P **P 14 26 35.8 -0.5**
MK31 Makanchi Array 64.65 322 P **P 14 26 35.5 -0.8**
MKAR Makanchi Array 64.65 322 P **P 14 26 35.4 -0.9**
comp=Z,33nm,0.9s,baz=31,slow=6.1,SNR=84
MKAR PP **PP 14 28 58.4 -0.4**
comp=Z,15nm,0.9s,baz=59,slow=7.2,SNR=3.8
MKAR S **S 14 35 02.7 -5.9**
comp=Z,0.7nm,0.8s,baz=33,slow=11,SNR=1.7
MKAR PKPPKP **P'P'df 14 55 21.6 -3.1**
comp=Z,4.1nm,1.0s,baz=222,slow=1.6,SNR=12
MKAR LR LR 14 57 46.5
comp=Z,542nm,19.1s,baz=18,slow=39
LLW Llanuwchllyn 64.67 20⇑*e*P **P 14 26 36.0 -0.3**
FOEL Foel Wylfa 64.72 20⇑*e*P **P 14 26 36.8 +0.2**
FOEL lAmb lAmb 14 26 37.6
comp=Z,170nm,1.1s
GTA Gaotai 64.72 305 ⇑P **P 14 26 37.0 0.0**
GTA pP pP 14 26 57.6 -2.6
GTA sP PcP 14 27 05.9 -4.0
GTA PP **PP 14 29 03.4 +3.6**
GTA ScP 14 31 04.0
GTA S **S 14 35 10.2 +0.2**
GTA sS sS 14 35 43.5 -6.3
GTA ScS **SKSac 14 36 20.8 -2.0**
GTA SS **SS 14 39 22.4 +0.7**
GTA pmax pmax
comp=Z,41nm,1.6s
GTA pmax pmax
comp=Z,520nm,7.6s
GTA LR LR
comp=Z,610nm,17.8s
GTA LR LR
comp=Z,1μm,19.7s
GTA LR LR
comp=Z,720nm,19.4s
MAKZ Makanchi 64.73 322 P **P 14 26 36.8 0.0**
MAKZ pmax pmax
comp=Z,59nm,1.1s
MAKZ Makanchi 64.73 322 P **P 14 26 36.8 0.0**
ISAL Salakas 64.74 1 *e*P **P 14 26 37.1 +0.4**
BSD Bornholm Skovb 64.75 8⇑*i*P **P 14 26 36.8 +0.1**
BSD pmax pmax
comp=Z,97nm,1.0s
BSD Bornholm Skovb 64.75 8⇑*i*P **P 14 26 36.8 +0.1**
comp=Z,97nm,1.0s
PABE Paberze 64.77 2 *e*P **P 14 26 37.2 +0.3**
GUMO Guam 64.89 253 P **P 14 26 36.4 -1.8**
GUMO pmax pmax
comp=Z,109nm,1.3s
GUMO Guam 64.89 253 P **P 14 26 36.4 -1.8**
GUMO lAmb lAmb 14 27 01.5
comp=Z,109nm,1.3s
IIGN Ignalina 64.96 1 *e*P **P 14 26 38.4 +0.3**
OBN Obninsk 64.99 354⇓P **P 14 26 38.6 +0.3**
OBN Obninsk 64.99 354*c i*P **P 14 26 37.8 -0.4**
OBN *e* 14 27 08.1
OBN *e* 14 28 58.8
OBN *e*SS SS 14 39 26.4 +1.8
OBN pmax pmax
comp=Z,196nm,1.0s
OBN Obninsk 64.99 354 P **P 14 26 38.5 +0.3**
HLM1 Long Mynd 65.13 20⇑*e*P **P 14 26 39.5 +0.3**
HLM1 lAmb lAmb 14 26 39.8
comp=Z,99nm,1.1s
RGN Rugen 65.19 9 *e*P **P 14 26 40.6 +1.1**
XAN Xi'an 65.31 295 P **P 14 26 40.1 -0.6**
XAN pP pP 14 27 03.5 -0.4
XAN PcP **PcP 14 27 12.2 -0.1**
XAN ScP 14 31 06.1
XAN S **S 14 35 12.4 -4.7**
XAN sS sS 14 35 57.9 +1.0
XAN SS **SS 14 39 27.2 -3.6**
XAN pmax pmax
comp=Z,81nm,1.7s
XAN pmax pmax
comp=Z,640nm,5.5s
XAN LR LR
comp=Z,650nm,19.5s
XAN LR LR
comp=Z,750nm,15.2s
XAN LR LR
comp=Z,840nm,19.5s
XAN Xi'an 65.31 295 lAmb lAmb 14 26 42.0
comp=Z,149nm,1.4s
RSBS Rosebush, Pemb 65.34 21⇑*e*P **P 14 26 41.0 +0.4**
RSBS lAmb lAmb 14 26 41.6
comp=Z,159nm,1.1s
NACGM Naroch 65.41 1 *e*P **P 14 26 40.0 -1.0**
NACGM *e*PcP **pP 14 27 07.0 +2.9**
NACGM *e*S **S 14 35 18.0 +0.3**
NACGM *e*ScS SKSac 14 36 16.0 -11
NACGM *e*SS SS 14 39 04.0 -27
WACR West Acre 65.50 18⇑*e*P **P 14 26 41.6 0.0**
WACR lAmb lAmb 14 26 43.0
comp=Z,521nm,1.0s
WMQ Urumqi 65.50 316 P **P 14 26 43.2 +1.3**
WMQ pP pP 14 27 04.8 -0.3
WMQ S **S 14 35 23.0 +3.7**
WMQ ScS **SKSac 14 36 28.3 -0.2**
WMQ SS **SS 14 39 33.7 +0.3**
WMQ pmax pmax
comp=Z,57nm,1.7s
WMQ pmax pmax
comp=Z,390nm,6.9s
WMQ LR LR
comp=Z,520nm,20.3s
WMQ LR LR
comp=Z,520nm,20.3s
WMQ LR LR
comp=Z,890nm,24.5s
BSEG Bad Segeberg 65.53 11 *e*P **P 14 26 42.5 +0.7**
comp=Z,106nm,1.1s,baz=351,slow=6.2
BSEG *e*L L 14 53 59.3
comp=Z,375nm,21.5s
MCH1 Michaelchurch 65.61 20⇑*e*P **P 14 26 42.3 0.0**
MCH1 lAmb lAmb 14 26 43.4
comp=Z,154nm,1.0s
WHN Wuhan 65.70 289 ⇑P **P 14 26 42.9 -0.3**
WHN S **S 14 35 17.6 -4.3**
WHN LR LR
comp=Z,690nm,10.2s
WHN LR LR
comp=Z,940nm,11.3s
WHN LR LR
comp=Z,1μm,19.9s
MICGM Minsk 65.82 360⇑*e*P **P 14 26 43.0 -0.6**
MICGM PM 14 26 44.0
comp=Z,1.2nm,1.0s
MICGM *e*pP **PcP 14 27 12.0 -2.0**
MICGM *e*S **S 14 35 22.0 -0.6**
MICGM *e*LR LR 14 50 00.0
MNK Minsk 65.82 360⇑*e*P **P 14 26 43.0 -0.6**
MNK *e* 14 27 12.0
MNK *e*S **S 14 35 22.0 -0.6**
MNK pmax pmax
comp=Z,1μm,1.0s
LZH Lanzhou 65.84 300 ⇑P **P 14 26 44.5 +0.2**
LZH pP pP 14 27 07.5 -0.1
LZH sP PcP 14 27 15.0 +0.4
LZH PP **PP 14 29 14.0 +4.3**
LZH S **S 14 35 21.5 -2.3**
LZH sS pS 14 35 57.4 +6.2
LZH SS **SS 14 39 36.5 -2.7**
LZH pmax pmax
comp=Z,220nm,1.3s
LZH pmax pmax
comp=Z,700nm,6.2s
LZH LR LR
comp=Z,1μm,15.3s
LZH LR LR
comp=Z,1μm,14.6s
LZH LR LR
comp=Z,2μm,18.0s
STRD Stroud 65.96 20⇑*e*P **P 14 26 44.9 +0.3**
STRD lAmb lAmb 14 26 45.9
comp=Z,296nm,1.0s
OTUK Ortayu 66.16 329 P **P 14 26 44.7 -1.3**

BATH Bath 66.26 20 *e*P **P 14 26 47.0 +0.5**
BATH lAmb lAmb 14 26 47.2
comp=Z,111nm,0.6s
SWN1 Swindon 66.28 20 *e*P **P 14 26 47.4 +0.8**
SWN1 lAmb lAmb 14 26 48.1
comp=Z,184nm,0.8s
GTBY Guantanamo Bay 66.53 91 lAmb lAmb 14 26 50.4
comp=Z,112nm,0.7s
WOL Wolverton 66.57 19⇑*e*P **P 14 26 49.1 +0.7**
WOL lAmb lAmb 14 26 49.9
comp=Z,504nm,1.1s
RETH Rethem/Aller, 66.61 12 *e*P **P 14 26 49.4 +0.7**
comp=Z,76nm,1.2s,baz=351,slow=6.2
GKP Gorka Klasztor 66.74 7 *e*P **P 14 26 50.1 +0.6**
GKP *e*S **S 14 35 34.4 +0.7**
GKP LMZ LR 14 54 05.3
comp=Z,0.8nm,23.9s
GKP Gorka Klasztor 66.74 7 P **P 14 26 50.3 +0.8**
GKP pmax pmax
comp=Z,257nm,1.1s
IBBN Ibbenburen 66.86 13 *e*P **P 14 26 51.1 +0.8**
comp=Z,116nm,1.0s,baz=351,slow=6.2
NRDL Niedersach Rie 66.93 12 *e*P **P 14 26 51.4 +0.7**
comp=Z,140nm,1.2s,baz=351,slow=6.2
AKTO Aktyubinsk 67.20 340 S **S 14 35 35.8 -3.7**
comp=Z,1.4nm,0.8s,baz=239,slow=21,SNR=9.7
AKTO PKPPKP 14 55 11.8
comp=Z,1.9nm,0.6s,baz=146,slow=3.2,SNR=4.6
STH Stony Hill 67.24 93⇑*i*P **P 14 26 54.1 +0.9**
RUE Ruedersdorf 67.28 9 *e*P **P 14 26 53.7 +0.9**
RUE Ruedersdorf 67.28 9 *e*P **P 14 26 53.8 +0.9**
comp=Z,269nm,1.0s,baz=351,slow=6.2
PCJ Portland Cotta 67.35 94 *i*P **P 14 26 54.8 +1.0**
LPSR Galich'ya Gora 67.36 353 *e*P **P 14 26 52.4 -1.1**
LPSR *e*S **S 14 35 35.2 -6.1**
LPSR pmax pmax
comp=Z,60nm,0.7s
LPSR smax smax
comp=N,670nm,11.1s
TDK Taldyqorghan 67.44 324 *e*P **P 14 26 52.5 -1.7**
TDK *e*S **S 14 35 41.1 -1.6**
TDK Taldyqorghan 67.44 324 *e*P **P 14 26 52.5 -1.7**
TDK *e*S **S 14 35 41.0 -1.6**
CLZ Clausthal 67.60 12 *e*P **P 14 26 56.1 +1.0**
comp=N,278nm,1.5s,baz=351,slow=6.2
BUG Bochum--Univer 67.66 14 *e*P **P 14 26 55.9 +0.5**
comp=N,206nm,1.3s,baz=351,slow=6.2
BUG Bochum--Univer 67.66 14 P **P 14 26 55.7 +0.4**
BUG pmax pmax
comp=Z,150nm,1.1s
BEBN Eben Emael 68.09 15 ⇑P **P 14 26 58.4 +0.3**
BEBN pP **pP 14 27 20.4 -0.9**
SNF Seneffe 68.19 16 ⇑P **P 14 26 59.0 +0.3**
comp=Z,56nm,0.0s
VORR Voronezh 68.27 352 P **P 14 26 57.0 -2.2**
VORR pmax pmax
comp=Z,300nm,0.8s
BSTI Sart Tilman 68.29 15 ⇑P **P 14 27 00.0 +0.7**
comp=Z,27nm,1.1s
BSTI pP **pP 14 27 21.8 -0.7**
BSTI sP **sP 14 27 31.7 -0.9**
MEM Membach 68.32 15 ⇑P **P 14 26 60.0 +0.4**
MEM pP **pP 14 27 21.9 -0.9**
MEM sP **sP 14 27 31.7 -1.1**
QZH Quanzhou 68.33 282⇑*i*P **P 14 26 59.8 -0.1**
QZH pP **pP 14 27 23.9 +0.5**
QZH S **S 14 35 55.0 +1.4**
QZH pmax pmax
comp=Z,390nm,5.9s
QZH LR LR
comp=Z,450nm,14.9s
BEL Belsk 68.35 5 *e*P **P 14 27 00.4 +0.8**
BEL *e*S **S 14 35 55.8 +2.7**
BEL LMZ LR 14 53 34.0
comp=Z,1.0nm,23.7s
BEL Belsk 68.35 5 P **P 14 27 00.8 +1.1**
BEL pmax pmax
comp=Z,251nm,1.2s
NEUB Neuenburg 68.37 11 *e*P **P 14 27 00.3 +0.6**
comp=Z,231nm,1.4s,baz=351,slow=6.2
CLL Collm 68.38 10⇑*i*P **P 14 27 00.6 +0.7**
comp=Z,79nm,1.1s
CLL *e*sP **sP 14 27 30.0 -3.1**
CLL *e*pPcP 14 27 48.0
CLL *e*PP **PP 14 29 33.0 +1.9**
CLL *e*sPP 14 30 06.0
CLL *e*PPPP 14 32 06.0
CLL *e*S **S 14 35 52.0 -1.5**
CLL *i*Sk 14 35 54.8
CLL *e*PS **PnS 14 36 30.0 +0.4**
CLL *e*SKSac **SKiKP 14 36 45.0 +1.0**
CLL *e*SS **SS 14 40 14.0 -3.2**
CLL *e*SSS SSS 14 43 42.0
CLL *e*SSSS 14 44 48.0
CLL *e*PKPPKPdf **P'P'df 14 55 16.0 -2.5**
CLL *e*pPKPPKPd 14 55 41.0
CLL *e*SKPPKPbc 14 58 46.0
CLL Collm 68.38 10 *e*P **P 14 27 01.0 +1.2**
comp=Z,79nm,1.1s,baz=351,slow=6.2
CLL *e*L L 14 55 40.3
comp=Z,311nm,20.9s
CLL Collm 68.38 10⇑*i*P **P 14 27 00.6 +0.7**
CLL *e*PP **sP 14 27 30.0 -3.1**
CLL *e*S **S 14 35 52.0 -1.5**
CLL pmax pmax
comp=Z,79nm,1.1s
BCLA Clavier 68.41 15 ⇑P **P 14 27 00.5 +0.3**
BCLA pP **pP 14 27 22.4 -1.0**
BCLA sP **sP 14 27 31.1 -2.3**
BGES Gesves 68.42 15 ⇑P **P 14 27 00.3 +0.2**
comp=Z,40nm,1.1s
BGES pP **pP 14 27 22.5 -0.9**
BGES sP **sP 14 27 32.0 -1.4**
BMRD Maredsous 68.46 16 ⇑P **P 14 27 00.6 +0.2**
comp=Z,99nm,1.3s
BMRD pP **pP 14 27 22.3 -1.4**
AHRW Bad Neuenahr-A 68.52 14 *e*P **P 14 27 01.4 +0.6**
comp=Z,73nm,1.2s,baz=351,slow=6.2
VRH Novokhopyorsk 68.55 351 *e*P **P 14 26 59.5 -1.4**
VRH *e*S **S 14 35 46.6 -8.9**
VRH pmax pmax
comp=Z,40nm,0.6s
VRH smax smax
comp=N,460nm,11.5s
BHOU Houvegnez 68.57 15 ⇑P **P 14 27 01.6 +0.5**
BHOU sP **sP 14 27 33.4 -1.0**
UBBA Unterbreizbach 68.58 12 *e*P **P 14 27 01.5 +0.5**
comp=N,123nm,1.6s,baz=351,slow=6.2
DOU Dourbes 68.64 16 ⇑P **P 14 27 01.8 +0.3**
comp=Z,51nm,1.1s
DOU pP **pP 14 27 23.8 -1.0**
BTLS Baital 68.66 327⇑*i*P **P 14 27 01.1 -0.7**
BTLS *i*S **S 14 35 53.9 -3.1**
comp=Z,103nm,4.1s
BTLS Baital 68.66 327*c i*P **P 14 27 01.1 -0.7**
BTLS *i*S **S 14 35 53.9 -3.1**
BTLS smax smax
comp=E,103nm,4.1s
VSR Storozhevoye 68.73 352 *e*P **P 14 27 00.4 -1.6**
VSR *e*S **S 14 35 52.3 -5.3**
VSR pmax pmax
comp=Z,40nm,0.5s
VSR smax smax
comp=N,540nm,10.9s
FBE Freiberg 68.79 10 *e*P **P 14 27 03.1 +0.7**
comp=N,151nm,1.2s,baz=351,slow=6.2
SHLS Shalkode 68.80 322⇑*i*P **P 14 27 01.3 -1.5**
comp=N,59nm,1.1s
SHLS *e*S **S 14 35 57.2 -1.8**
SHLS Shalkode 68.80 322*c i*P **P 14 27 01.2 -1.5**
SHLS *e*S **S 14 35 57.1 -1.8**
SHLS pmax pmax
comp=Z,59nm,1.1s
BRG Berggiesshubel 68.89 9⇑*i*P **P 14 27 03.5 +0.5**
comp=Z,120nm,1.2s
BRG *i*sP **sP 14 27 34.0 -2.3**
comp=Z,60nm,1.1s
BRG S **S 14 35 55.0 -4.5**
BRG SS **SS 14 40 25.0 -0.1**
BRG PKPPKP **P'P'df 14 55 10.9 -6.7**
comp=Z,30nm,1.7s
BRG Berggiesshubel 68.89 9 *e*P **P 14 27 03.4 +0.4**
comp=Z,120nm,1.2s,baz=351,slow=6.2
BRG Berggiesshubel 68.89 9⇑*i*P **P 14 27 03.5 +0.4**

BRG *i* *SP **sP** 14 27 34.0 -2.3
BRG S **S** 14 35 55.0 -4.5
BRG SS **SS** 14 40 25.0 -0.1
BRG pmax pmax
comp=Z,120nm,1.2s
BRG pmax pmax
comp=N,60nm,1.1s
MOX Moxa 68.91 11 *e*P **P** 14 27 03.8 +0.6
comp=N,176nm,1.3s,baz=351,slow=6.2
MOX *e*L L 14 53 09.1
comp=N,601nm,21.8s
MOX Moxa 68.91 11 P **P** 14 27 03.7 +0.5
MOX pmax pmax
comp=Z,136nm,1.1s
UZB Uzynbulak 68.94 322 *e*P **P** 14 27 03.0 -0.8
comp=Z,78nm,3.6s
UZB *e*S **S** 14 35 58.8 -2.0
UZB Uzynbulak 68.94 322 *e*P **P** 14 27 02.9 -0.8
UZB *e*S **S** 14 35 58.7 -2.0
UZB pmax pmax
comp=Z,78nm,3.6s
VORD Divnogorie 68.97 352 *e*P **P** 14 27 02.1 -1.4
VORD pmax pmax
comp=Z,40nm,0.6s
TNS Taunus Mts 68.99 13 *e*P **P** 14 27 04.3 +0.5
comp=Z,91nm,1.2s,baz=351,slow=6.2
TNS *e*L L 14 54 31.2
comp=Z,390nm,21.3s
TNS Taunus Mts 68.99 13 P **P** 14 27 04.2 +0.4
TNS pmax pmax
comp=Z,72nm,1.4s
KUU Kurty 69.06 325⇑ *i*P **P** 14 27 02.1 -2.3
comp=Z,179nm,3.2s
KUU *e*S **S** 14 35 59.3 -2.7
KUU Kurty 69.06 325*c i*P **P** 14 27 02.0 -2.3
KUU *e*S **S** 14 35 59.2 -2.7
KUU pmax pmax
comp=Z,179nm,3.2s
KSP Ksiaz 69.09 8 *e*P **P** 14 27 04.8 +0.5
KSP *e*S **S** 14 36 03.3 +1.4
KSP LMZ LR 14 54 06.1
comp=Z,0.7nm,29.0s
KSP Ksiaz 69.09 8 P **P** 14 27 04.9 +0.5
KSP pmax pmax
comp=Z,147nm,1.2s
PLN Plauen 69.12 11 *e*P **P** 14 27 05.0 +0.5
comp=Z,84nm,1.1s,baz=351,slow=6.2
SATY Saty 69.21 323⇑ *i*P **P** 14 27 04.7 -0.7
comp=Z,52nm,2.3s
SATY *e*S **S** 14 36 01.4 -2.5
SATY Saty 69.21 323*c i*P **P** 14 27 04.6 -0.8
SATY *e*S **S** 14 36 01.4 -2.5
SATY pmax pmax
comp=Z,53nm,2.3s
TANN Tannenbergstha 69.22 10 *e*P **P** 14 27 05.8 +0.7
comp=Z,185nm,1.3s,baz=351,slow=6.2
SDDR Presa de Saban 69.25 88 IAmb IAmb 14 27 07.0
comp=Z,127nm,0.8s
GUNZ Gunzen 69.25 10 *e*P **P** 14 27 06.1 +0.7
comp=Z,624nm,2.7s,baz=351,slow=6.2
WLF Walferdange 69.26 15⇑P **P** 14 27 06.1 +0.7
comp=Z,95nm,1.4s
WLF Walferdange 69.26 15 *e*P **P** 14 27 06.4 +1.0
comp=Z,159nm,1.2s,baz=351,slow=6.2
PVCC Panska Ves 69.28 9 *e*P **P** 14 27 06.4 +0.9
PVCC *e*S **S** 14 36 04.4 +0.2
PVCC Panska Ves 69.28 9 *e*P **P** 14 27 06.4 +0.9
PVCC *e*S **S** 14 36 04.4 +0.2
CHVC Chvalec 69.33 8 *e*P **P** 14 27 06.7 +0.9
TAOE Nuku Hiva Isla 69.33 167 *e*P **P** 14 27 06.3 0.0
comp=Z,199nm,0.7s
TAOE *e*S **S** 14 36 03.2 -2.4
comp=Z,2µm,25.6s
TAOE *e*LQ LQ 14 45 10.5
comp=Z,2µm,30.9s
TAOE *e*LR LR 14 48 20.8
comp=Z,3µm,31.7s
TAOE Nuku Hiva Isla 69.33 167 *e*T T 15 42 29.0
comp=Z,24nm,0.2s
WERN Wernitzgruen 69.33 10 *e*P **P** 14 27 06.7 +0.8
comp=Z,96nm,1.1s,baz=351,slow=6.2
OSTC Ostas 69.37 8 *e*P **P** 14 27 06.8 +0.7
OSTC *e*S **S** 14 36 04.5 -0.8
OSTC AMS AMS 14 54 10.0
comp=Z,600nm,21.2s
NKC Novy Kostel 69.39 10 *e*P **P** 14 27 07.1 +0.9
NKC *e*S **S** 14 36 04.5 -1.1
NKC MLR MLR
comp=Z,500nm,18.1s
NKC Novy Kostel 69.39 10 *e*P **P** 14 27 07.1 +0.9
NKC *e*S **S** 14 36 04.5 -1.1
NKC AMS AMS 14 56 20.0
comp=Z,500nm,18.1s
UPC Upice 69.41 8 *e*P **P** 14 27 06.9 +0.6
UPC *e*S **S** 14 36 04.5 -1.2
UPC MLR MLR
comp=Z,700nm,22.4s
UPC Upice 69.41 8 *e*P **P** 14 27 06.9 +0.6
UPC *e*S **S** 14 36 04.5 -1.2
UPC AMS AMS 14 54 10.0
comp=Z,700nm,22.4s
AAA Alma-Ata 69.52 324 *e*P **P** 14 27 05.9 -1.3
AAA Alma-Ata 69.52 324 *e*P **P** 14 27 05.9 -1.3
MDOK Medeo 69.52 324 *e*P **P** 14 27 05.7 -1.6
MDOK *e*S **S** 14 36 06.2 -1.5
MDOK Medeo 69.52 324 *e*P **P** 14 27 05.7 -1.6
MDOK *e*S **S** 14 36 06.1 -1.5
DPC Dobruska-Polom 69.59 8 *e*P **P** 14 27 08.4 +1.0
DPC *e*S **S** 14 36 05.0 -2.9
DPC MLR MLR
comp=Z,600nm,24.4s
DPC Dobruska-Polom 69.59 8 *e*P **P** 14 27 08.4 +1.0
DPC *e*S **S** 14 36 05.0 -2.9
DPC AMS AMS 14 54 10.0
comp=Z,600nm,24.4s
MANZ Manzenberg 69.61 11 *e*P **P** 14 27 08.1 +0.5
comp=Z,76nm,1.3s,baz=351,slow=6.2
AKASG Malin Array Be 69.62 359 P **P** 14 27 07.1 -0.5
comp=Z,54nm,0.4s,baz=4.3,slow=6.2,SNR=126
AKASG S **S** 14 36 05.1 -3.0
comp=Z,4.9nm,0.9s,baz=6.0,slow=13,SNR=9.8
AKASG PKP2bc 14 55 13.4
comp=Z,0.2nm,0.4s,baz=171,slow=2.4,SNR=11
AKASG LR LR 14 56 16.7
comp=Z,546nm,21.8s,baz=350,slow=35
AKASG Malin Array Be 69.62 359 *i* P **P** 14 27 06.6 -0.9
AKASG pmax pmax
comp=Z,54nm,0.4s
AKBB Malin Array Si 69.62 359 P **P** 14 27 07.1 -0.4
AKBB pmax pmax
comp=Z,228nm,1.3s
AKBB Malin Array Si 69.62 359 P **P** 14 27 07.1 -0.4
AKBB IAmb IAmb 14 27 07.9
comp=Z,228nm,1.2s
TOD Tromm 69.64 13 P **P** 14 27 08.3 +0.5
TNSS Tian-Shan 69.67 324 *e*P **P** 14 27 06.5 -2.1
TNSS Tian-Shan 69.67 324 *e*P **P** 14 27 06.4 -2.1
H07S1 FLORES T-PHASE 69.77 45 *e*P **P** 14 27 09.2 +0.5
H07S1 FLORES T-PHASE 69.77 45 P **P** 14 27 08.8 +0.1
GRF Grafenberg Arr 69.81 11 *e*P **P** 14 27 09.7 +0.8
comp=Z,107nm,1.2s,baz=351,slow=6.2
GRF *e*L L 14 53 25.3
comp=Z,480nm,21.0s
GRF Grafenberg Arr 69.81 11 P **P** 14 27 09.6 +0.8
GRF pmax pmax
comp=Z,81nm,1.8s
PRU Pruhonice 69.82 9 *e*P **P** 14 27 09.5 +0.7
PRU *e*S **S** 14 36 07.1 -3.4
PRU MLR MLR
comp=Z,500nm,16.6s
PRU Pruhonice 69.82 9 *e*P **P** 14 27 09.5 +0.7
PRU *e*S **S** 14 36 07.1 -3.4
PRU AMS AMS 14 54 50.0
comp=Z,500nm,16.6s
ROTZ Rotzenmuhle 69.83 11 *e*P **P** 14 27 09.7 +0.8
comp=Z,93nm,1.2s,baz=351,slow=6.2
KTD Kalmit 69.84 14 P **P** 14 27 09.8 +0.8
KRLC Kraliky 69.89 8 *e*P **P** 14 27 10.1 +0.8
KRLC *e*S **S** 14 36 11.0 -0.5
KRLC Kraliky 69.89 8 *e*P **P** 14 27 10.1 +0.8
KRLC *e*S **S** 14 36 11.0 -0.5
GOPC GO Pecny, Ondr 69.91 9 *e*P **P** 14 27 10.2 +0.8
GOPC GO Pecny, Ondr 69.91 9 *e*P **P** 14 27 10.2 +0.8
OJC Ojcow 69.92 5 *e*P **P** 14 27 09.7 +0.3
OJC *e*S **S** 14 36 11.6 0.0
OJC *e*SKSac **SKSac** 14 37 00.3 -1.2
OJC LMZ LR 14 54 50.2
comp=Z,0.9nm,24.5s
OJC Ojcow 69.92 5 P **P** 14 27 09.6 +0.2
OJC pmax pmax
comp=Z,74nm,0.9s
SGDS Sogindy 69.96 326⇑ *i*P **P** 14 27 09.1 -0.8
comp=Z,46nm,1.4s
SGDS *e*S **S** 14 36 10.8 -1.7
PBCC Pribram 70.07 9 *e*P **P** 14 27 11.3 +0.9
LANF Langenberg 70.14 14 P **P** 14 27 11.7 +0.9
USP Ospenovka 70.17 326 P **P** 14 27 11.0 -0.1
SNR=22
TKM2 Tokmak 2 70.17 325 P **P** 14 27 11.2 -0.1
SNR=29
TKM2 Tokmak 2 70.17 325 P **P** 14 27 10.5 -0.9
OKC Ostrava-Krasne 70.21 7 *e*P **P** 14 27 11.8 +0.6
OKC *e*S **S** 14 36 14.8 -0.3
OKC MLR MLR
comp=Z,500nm,19.5s
OKC Ostrava-Krasne 70.21 7 *e*P **P** 14 27 11.8 +0.6
OKC *e*S **S** 14 36 14.8 -0.3
OKC AMS AMS 14 55 50.0
comp=Z,500nm,19.5s
MORC Moravsky Berou 70.24 7⇑ *i*P **P** 14 27 11.6 +0.2
MORC *e*S **S** 14 36 17.4 +1.9
MORC Moravsky Berou 70.24 7 P **P** 14 27 11.7 +0.2
MORC Moravsky Berou 70.24 7 P **P** 14 27 11.7 +0.2
MORC Moravsky Berou 70.24 7 P **P** 14 27 11.6 +0.2
CD2 Chengdu 70.27 298⇓ *i*P **P** 14 27 12.4 +0.5
CD2 PcP **pP** 14 27 35.3 -0.1
CD2 sP sP 14 27 45.1 -0.3
CD2 S **S** 14 36 17.5 +1.1
CD2 sS sS 14 36 55.9 -0.8
CD2 SS **SS** 14 40 49.1 +1.6
CD2 pmax pmax
comp=Z,110nm,1.4s
CD2 pmax pmax
comp=Z,560nm,6.1s
CD2 LR LR
comp=Z,1µm,49.0s
CD2 LR LR
comp=Z,910nm,18.6s
CD2 LR LR
comp=Z,810nm,26.5s
CLF Chambon-Foret 70.32 18 IAmb IAmb 14 27 13.8
comp=Z,555nm,1.7s
CHMS Chumysh 70.34 325 P **P** 14 27 12.7 +0.5
SNR=20
DR12 Loma Pena Alta 70.37 86 P **P** 14 27 13.8 +1.1
BBP Basco 70.44 277 *e*P **P** 14 27 12.6 -0.4
LVV L'vov 70.47 3 *e*P **P** 14 27 12.6 -0.2
LVV *e**PP **pP** 14 27 38.8 +2.7
LVV *e*S **S** 14 36 17.9 -0.2
LVV *e*PS **PnS** 14 36 58.3 +1.1
LVV *e*SSS SSS 14 43 53.6
LVV pmax pmax
comp=Z,300nm,1.2s
STU Stuttgart 70.51 13 *e*P **P** 14 27 13.7 +0.7
comp=Z,76nm,1.2s,baz=351,slow=6.2
STU Stuttgart 70.51 13 P **P** 14 27 13.9 +0.8
STU pmax pmax
comp=Z,66nm,1.1s
WET Wettzell 70.51 10 *e*P **P** 14 27 13.9 +0.8
comp=Z,112nm,1.4s,baz=351,slow=6.2
WET *e*L L 14 57 03.2
comp=Z,377nm,22.0s
WET Wettzell 70.51 10 P **P** 14 27 13.9 +0.8
WET pmax pmax
comp=Z,73nm,1.8s
GRC1 Grafenberg Arr 70.53 11 P **P** 14 27 13.8 +0.6
TREC Trest 70.58 8 *e*P **P** 14 27 14.0 +0.5
TREC Trest 70.58 8 *e*P **P** 14 27 14.0 +0.5
KHC Kasperske Hory 70.59 10 *e*P **P** 14 27 14.6 +1.0
KHC *e*S **S** 14 36 14.5 -5.1
KHC MLR MLR
comp=Z,400nm,19.4s
KHC Kasperske Hory 70.59 10 *e*P **P** 14 27 14.6 +1.0
KHC *e*S **S** 14 36 14.5 -5.1
KHC AMS AMS 14 56 10.0
comp=Z,400nm,19.4s
KBK Karagaybulak 70.60 325 P **P** 14 27 14.3 +0.4
SNR=26
KWP Kalwaria Pacla 70.62 3 *e*P **P** 14 27 14.4 +0.7
KWP *e*S **S** 14 36 20.5 +0.6
KWP LMZ LR 14 55 19.8
comp=Z,0.8nm,23.1s
KWP Kalwaria Pacla 70.62 3 P **P** 14 27 14.2 +0.5
KWP pmax pmax
comp=Z,230nm,1.1s
VRAC Vranov 70.64 8 LR LR 14 58 46.2
comp=Z,219nm,21.4s,baz=346,slow=36
VRAC Vranov 70.64 8⇑ *i*P **P** 14 27 14.2 +0.3
VRAC *e*S **S** 14 36 22.3 +2.1
VRAC Vranov 70.64 8⇓P **P** 14 27 14.8 +0.9
VRAC Vranov 70.64 8⇓P **P** 14 27 14.8 +0.9
NIE Niedzica 70.74 5 *e*P **P** 14 27 15.2 +0.7
NIE *e*S **S** 14 36 22.7 +1.4
NIE LMZ LR 14 54 50.0
comp=Z,0.5nm,25.7s
NIE Niedzica 70.74 5 P **P** 14 27 15.2 +0.7
NIE pmax pmax
comp=Z,44nm,1.2s
AAK Ala-Archa 70.75 325 S **S** 14 36 21.2 -0.7
comp=Z,1.0nm,0.3s,baz=308,slow=21,SNR=8.9
AAK PKP2bc 14 55 08.2
comp=Z,1.0nm,0.5s,baz=144,slow=5.6,SNR=7.6
AAK LR LR 15 01 25.6
comp=Z,587nm,20.6s,baz=356,slow=38
AAK Ala-Archa 70.75 325 P **P** 14 27 14.8 -0.1
SNR=37
AAK Ala-Archa 70.75 325 *i* P **P** 14 27 14.5 -0.3
SNR=48
AAK Ala-Archa 70.75 325*ce*P **P** 14 27 14.6 -0.3
AAK pmax pmax
comp=Z,57nm,1.3s
AAK Ala-Archa 70.75 325 P **P** 14 27 15.4 +0.6
ECH Echery 70.81 14 P **P** 14 27 15.4 +0.4
ECH pmax pmax
comp=Z,92nm,1.2s
BFO Black Forest 70.84 14 *e*P **P** 14 27 15.6 +0.5
comp=Z,74nm,1.1s,baz=351,slow=6.2
BFO *e*L L 14 54 56.8
comp=Z,296nm,21.3s
KRUC Moravsky 70.87 8⇑ *i*P **P** 14 27 15.5 +0.3
KRUC *e*S **S** 14 36 25.1 +2.3
KRUC Moravsky 70.87 8 P **P** 14 27 15.6 +0.3
KRUC pmax pmax
comp=Z,104nm,1.6s
GEC2 GERESS Array S 70.88 10 *e*P **P** 14 27 16.0 +0.5
comp=Z,66nm,1.1s,baz=351,slow=6.2
GEC2 *e*L L 14 56 39.2
comp=Z,371nm,21.3s
GEC2 GERESS Array S 70.88 10 P **P** 14 27 15.8 +0.4
GEC2 pmax pmax
comp=Z,58nm,1.3s
GERES GERESS Array B 70.88 10 P **P** 14 27 15.9 +0.5
comp=Z,10.0nm,0.4s,baz=349,slow=4.2,SNR=118
GERES S **S** 14 36 25.0 +1.9
comp=Z,0.2nm,0.3s,baz=328,slow=7.2,SNR=1.4
GERES PKP2bc 14 55 06.6
comp=Z,0.4nm,0.8s,baz=149,slow=29,SNR=3.4
GERES PKPPKP **P'P'df** **14 55 13.4 -0.9**
comp=Z,1.0nm,0.7s,baz=180,slow=3.7,SNR=5.8
GERES GERESS Array B 70.88 10 P **P** 14 27 16.0 +0.5
GERES S **S** 14 36 25.0 +1.9
EKS2 Erkin-Say 70.93 326 P **P** 14 27 15.9 0.0
SNR=45
LANS Liptovska Anna 70.97 6 *e*P **P** 14 27 17.4 +1.5
LANS pmax pmax
comp=Z,73nm,0.9s
LANS Liptovska Anna 70.97 6 *e*P **P** 14 27 17.4 +1.5
KZA Kyzart 71.05 325 P **P** 14 27 17.3 +0.4
SNR=14
HORU Horodok 71.11 1 P **P** 14 27 16.1 -0.6
MORS Morshin 71.15 3 P **P** 14 27 17.4 +0.5
JAVC Velka Javorina 71.16 7⇑ *i*P **P** 14 27 18.3 +1.2
JAVC *e*S **S** 14 36 30.4 +4.2
MOF Molkenrain 71.17 15 P **P** 14 27 17.7 +0.5
PGRA Graciosa 71.20 43 *e*P **P** 14 27 18.1 +0.7
comp=Z,174nm,1.3s
KOLS Kolonicke sedl 71.30 4 *e*P **P** 14 27 18.5 +0.6
KOLS pmax pmax
comp=Z,100nm,1.3s
KOLS Kolonicke sedl 71.30 4 *e*P **P** 14 27 18.5 +0.6
FUR Furstenfeldbru 71.33 12 *e*P **P** 14 27 18.8 +0.7
comp=Z,146nm,1.2s,baz=351,slow=6.2
FUR *e*L L 14 56 11.2
comp=Z,364nm,21.9s
DZA Taraz 71.39 328 *e*P **P** 14 27 17.1 -1.4
DZA Taraz 71.39 328 *e*P **P** 14 27 17.1 -1.4
KK31 Karatay Array 71.41 328 P **P** 14 27 18.6 0.0
KK31 pmax pmax
comp=Z,46nm,0.9s
KK31 Karatay Array 71.41 328 P **P** 14 27 18.6 0.0
KKAR Karatay Array 71.41 328 P **P** 14 27 18.6 0.0
KKAR pmax pmax
comp=Z,46nm,0.9s
KKAR Karatay Array 71.41 328 P **P** 14 27 18.6 0.0
SLE Schleitheim 71.42 14 P **P** 14 27 18.6 0.0
SLE pmax pmax
comp=Z,68nm,1.2s
AML Almayashu 71.44 326 P **P** 14 27 19.6 +0.3
SNR=36
SMOL Smolenice 71.49 7 *e*P **P** 14 27 20.2 +1.2
SMOL pmax pmax
comp=Z,46nm,1.3s
SMOL Smolenice 71.49 7 *e*P **P** 14 27 20.2 +1.2
VYHS Vyhne 71.59 6 *e*P **P** 14 27 20.4 +0.8
VYHS pmax pmax
comp=Z,138nm,1.1s
VYHS Vyhne 71.59 6 *e*P **P** 14 27 20.4 +0.8
UZH Uzhgorod 71.61 4⇓ *i*P **P** 14 27 18.5 -1.1
UZH *e* 14 27 43.2
UZH *i* S **S** 14 36 26.6 -4.6
UZH *i* 14 36 57.8
UZH *i* 14 37 18.6
MODS Modra-Piesok 71.62 7 *e*P **P** 14 27 19.9 +0.1
MODS pmax pmax
comp=Z,161nm,1.2s
MODS Modra-Piesok 71.62 7 *e*P **P** 14 27 19.9 +0.1
LOMF Lomont 71.62 15 P **P** 14 27 20.7 +0.8
BRLS Borolday 71.66 329 *e*S **S** 14 36 32.7 +0.6
KECS Kecovo 71.68 5 *e*P **P** 14 27 21.0 +0.9
KECS pmax pmax
comp=Z,56nm,0.9s
KECS Kecovo 71.68 5 *e*P **P** 14 27 21.0 +0.9
UBR Ueberruh 71.69 12 *e*P **P** 14 27 21.0 +0.7
comp=Z,91nm,1.1s,baz=351,slow=6.2
ZST Bratislava 71.78 7 *e*P **P** 14 27 20.9 +0.2
ZST pmax pmax
comp=Z,132nm,1.2s
ZST Bratislava 71.78 7 *e*P **P** 14 27 20.9 +0.2
RJOB Jochberg 71.90 11 *e*P **P** 14 27 22.0 +0.5
comp=Z,85nm,1.1s,baz=351,slow=6.2
MOA Molln 71.92 10 *i* P **P** 14 27 21.9 +0.3
comp=Z,47nm,1.1s,SNR=32
MOA *i* S **S** 14 36 38.6 +3.7
comp=Z,18nm,1.7s,SNR=5.7
RETA Reutte 71.95 12 *i* P **P** 14 27 22.3 +0.5
comp=Z,33nm,0.9s,SNR=16
RETA *e*S **S** 14 36 39.7 +4.3
comp=Z,13nm,1.3s
CONA Conrad Observa 71.96 8 *i* P **P** 14 27 22.6 +0.6
comp=Z,113nm,1.1s,SNR=95
CONA *e*S **S** 14 36 39.0 +3.4
comp=Z,10nm,1.6s
KSV Kosov 71.99 2 P **P** 14 27 20.8 -1.2
JBG Jabagly 72.04 328*c i*P **P** 14 27 21.9 -0.6
JBG *e*S **S** 14 36 35.2 -1.5
JBG pmax pmax
comp=Z,75nm,2.6s
DAVA Damuels 72.05 13 *i* P **P** 14 27 22.8 +0.3
comp=Z,41nm,1.2s,SNR=16
DAVA Damuels 72.05 13 S **S** 14 36 44.4 +7.6
comp=Z,14nm,1.6s
TRPA Tarpa 72.11 4⇑P **P** 14 27 23.4 +0.7
MOTA Moosalm 72.12 12 *i* P **P** 14 27 23.3 +0.3
comp=Z,132nm,1.3s,SNR=39
MOTA *i* S **S** 14 36 41.6 +4.0
comp=Z,32nm,1.8s,SNR=6.9
CRPR Cabo Rojo, PR 72.16 85 IAmb IAmb 14 27 24.6
comp=Z,80nm,0.7s
TRSU Trosnyk 72.16 3 P **P** 14 27 23.4 +0.4
WATA Walderalm 72.18 11 *i* P **P** 14 27 23.7 +0.4
comp=Z,146nm,1.1s,SNR=58
SORM Soroca 72.19 360⇑P **P** 14 27 22.5 -0.7
SORM Soroca 72.19 360⇑P **P** 14 27 22.5 -0.7
PSZ Piszkesteto 72.22 6⇑P **P** 14 27 24.4 +0.9
PSZ Piszkesteto 72.22 6⇑P **P** 14 27 24.4 +0.9
PSZ Piszkesteto 72.22 6 IAmb IAmb 14 27 25.6
comp=Z,153nm,1.0s
MLPR Magueyes Islan 72.23 85 IAmb IAmb 14 27 25.1
comp=Z,85nm,0.8s
SOP Sopron 72.26 8 P **P** 14 27 24.5 +0.9
SOP pmax pmax
comp=Z,104nm,1.1s
SQTA Sankt Quirin 72.26 12 *i* P **P** 14 27 24.4 +0.6
comp=Z,151nm,1.1s,SNR=86
SQTA *i* S **S** 14 36 41.4 +2.3
comp=Z,13nm,1.3s
WTTA Wattenberg 72.26 11 *i* P **P** 14 27 24.5 +0.7
comp=Z,155nm,1.2s,SNR=73
WTTA *e*S **S** 14 36 43.2 +4.1
comp=Z,12nm,1.6s
WTTA Wattenberg 72.26 11 P **P** 14 27 24.5 +0.7
WTTA pmax pmax
comp=Z,137nm,1.2s
SGCP Mt. Cagua 72.26 276 *e*P **P** 14 27 22.6 -1.4
OBIP Obispado Ponce 72.38 84 IAmb IAmb 14 27 26.9
comp=Z,78nm,0.7s
FETA Feichten 72.41 12 *i* P **P** 14 27 25.4 +0.7
comp=Z,98nm,1.2s,SNR=47
FETA *e*S **S** 14 36 44.7 +3.8
comp=Z,5.6nm,1.2s
GCPR Guaynabo City 72.42 84 IAmb IAmb 14 27 26.7
comp=Z,106nm,0.8s
IUG Iuzhnay 72.43 328⇑ *i*P **P** 14 27 24.5 -0.4
IUG *e*S **S** 14 36 40.0 -1.2
IUG Iuzhnay 72.43 328*c i*P **P** 14 27 24.4 -0.4
IUG *e*S **S** 14 36 39.9 -1.2
DAVOX Davos/Dischmat 72.55 13 LR LR 15 01 15.5
comp=Z,216nm,19.9s,baz=282,slow=37
SJG San Juan 72.55 84 P **P** 14 27 26.1 +0.4
SJG pmax pmax
comp=Z,83nm,0.8s
SJG San Juan 72.55 84 P **P** 14 27 26.1 +0.4
SJG IAmb IAmb 14 27 27.0
comp=Z,83nm,0.8s
ICMP Isla Caja de M 72.56 84 IAmb IAmb 14 27 27.6
comp=Z,103nm,0.6s
BMR Baia Mare 72.60 3⇑P **P** 14 27 26.5 +0.9
BMR Baia Mare 72.60 3⇑P **P** 14 27 26.5 +0.9
KBA Koelnbreinsper 72.60 10 *i* P **P** 14 27 26.7 +0.8
comp=Z,231nm,1.1s,SNR=133
KBA *i* S **S** 14 36 46.4 +3.3
comp=Z,56nm,1.1s,SNR=13
KBA Koelnbreinsper 72.60 10 P **P** 14 27 26.8 +0.9
KBA pmax pmax
comp=Z,191nm,1.2s
BUD Budapest 72.61 6 P **P** 14 27 26.5 +0.8
BUD pmax pmax
comp=Z,55nm,1.2s
ARSA Arzberg 72.61 9 *i* P **P** 14 27 26.5 +0.7
comp=Z,80nm,1.1s,SNR=22
BURAR Bucovina Array 72.69 2⇑P **P** 14 27 26.3 -0.1
BURAR Bucovina Array 72.69 2 P **P** 14 27 27.7 +1.4
GYA Guiyang 72.75 293⇓ *i*P **P** 14 27 27.6 +0.6
GYA S **S** 14 36 42.6 -2.6
GYA SKS **SKSac** 14 37 23.8 0.0
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,500nm,3.5s
GYA LR LR
comp=Z,460nm,22.3s
GYA LR LR
comp=Z,580nm,18.6s
GYA LR LR
comp=Z,450nm,17.9s
FUORN Ofenpass-Fuorn 72.75 13 P **P** 14 27 28.1 +1.3
ABTA Abfaltersbach 72.86 11 *i* P **P** 14 27 27.4 +0.1
comp=Z,71nm,1.3s,SNR=26
ABTA *i* S **S** 14 36 46.8 +1.0
comp=Z,20nm,1.2s,SNR=10.0
APYP Conner 72.98 276 *e*P **P** 14 27 27.0 -1.2
PSET Sete Cidades 73.05 42 *e*P **P** 14 27 29.4 +0.9
comp=Z,217nm,1.1s
MYKA Terra Mystica 73.08 10 *i* P **P** 14 27 28.6 0.0
comp=Z,51nm,1.1s,SNR=26

MYKA *i* S **SKiKP** **14 36 49.9 -1.3**
comp=Z,33nm,1.4s,SNR=5.6
SOKA **Soboth** **73.14 9** *i* P **P** **14 27 29.1 +0.1**
comp=Z,99nm,1.2s,SNR=65
SOKA S **S** **14 36 51.6 +2.6**
comp=Z,14nm,1.3s
GRON **Grota Negra** **73.16 42** *e*P **P** **14 27 31.1 +1.9**
comp=Z,182nm,1.1s
CMLA **Cha da Macela** **73.17 42** *e*P **P** **14 27 29.3 +0.1**
comp=Z,164nm,1.1s
KSH **Kashi** **73.19 323** P **P** **14 27 32.1 +2.7**
KSH pP pP 14 27 55.5 +2.5
KSH S **S** **14 36 48.2 -1.6**
KSH SKS **SKSac** **14 37 21.7 -5.1**
KSH SS **SS** **14 41 38.1 +6.4**
KSH pmax pmax
comp=Z,43nm,1.2s
KSH pmax pmax
comp=Z,600nm,4.9s
KSH LR LR
comp=Z,450nm,11.7s
KSH LR LR
comp=Z,1µm,13.4s
KSH LR LR
comp=Z,320nm,11.2s
PERS **Pernice** **73.19 9** *i* P **P** **14 27 29.5 +0.2**
PERS *e*S **S** **14 36 51.9 +2.3**
ARCR **ARCALIA** **73.21 2** ⇑P **P** **14 27 30.3 +1.1**
OBKA **Obir** **73.27 9** *i* P **P** **14 27 30.2 +0.4**
comp=Z,227nm,0.9s,SNR=110
OBKA *i* S **S** **14 36 52.6 +2.0**
comp=Z,16nm,1.0s,SNR=6.2
BART **Pico Bartolome** **73.28 41** *e*P **P** **14 27 30.3 +0.4**
comp=Z,293nm,1.1s
KIS **Kishinev** **73.33 359**⇑ *i*P **P** **14 27 29.0 -0.9**
comp=Z,220nm,1.5s
KIS **Kishinev** **73.33 359** *e*PcP **PcP** **14 27 45.0 -0.8**
KIS *e*pP **sP** **14 28 00.0 -3.4**
KIS *i* S **S** **14 36 49.0 -1.9**
comp=Z,1µm,9.0s
KIS *i* SKS SKSac 14 37 16.0 -11
KIS *e*sS **SKKSac** **14 37 28.0 +0.5**
KIS **Kishinev** **73.33 359**⇑ *i*P **P** **14 27 29.0 -0.9**
KIS *e* 14 27 45.0
KIS *e**PP **sP** **14 28 00.0 -3.4**
KIS *i* S **S** **14 36 49.0 -1.9**
KIS *e**SS **SKKSac** **14 37 28.0 +0.5**
KIS *e*PS **PnS** **14 37 34.0 -0.6**
KIS pmax pmax
comp=Z,220nm,1.5s
KIS smax smax
comp=N,1µm,9.0s
BCIP **Isla Barro Col** **73.33 101**⇑ *e*P **P** **14 27 28.0 -2.4**
SSB **Saint Sauveur** **73.34 17** P **P** **14 27 30.5 +0.4**
SSB pmax pmax
comp=Z,50nm,2.0s
CAUP **Cauayan** **73.47 275** *e*P **P** **14 27 29.1 -2.0**
CADS **Cadrg** **73.48 10** *e*P **P** **14 27 30.3 -0.6**
CDVI **St. Croix** **73.55 83** *e*P **P** **14 27 31.9 +0.3**
CDVI **St. Croix** **73.55 83** IAmb IAmb 14 27 31.8
comp=Z,93nm,0.6s
CJR **Cluj-Napoca** **73.56 3** ⇑P **P** **14 27 32.0 +0.6**
CJR **Cluj-Napoca** **73.56 3** ⇑P **P** **14 27 32.0 +0.6**
VASR **Vaslui** **73.69 360** ⇓P **P** **14 27 31.9 -0.1**
LJU **Ljubljana** **73.73 10** *i* P **P** **14 27 32.1 -0.2**
LJU *e*S **S** **14 36 56.7 +1.2**
LJU **Ljubljana** **73.73 10**⇑ *i*P **P** **14 27 32.0 -0.3**
PDKS **Podkum** **73.75 9** *i* P **P** **14 27 32.2 -0.3**
KALN **Kalnik** **73.80 8** *i* P **P** **14 27 32.7 0.0**
TESR **Tescani** **73.81 1** ⇑P **P** **14 27 32.4 -0.4**
MORH **Mrgy, Hungar** **73.85 7**⇑ *i*P **P** **14 27 32.9 -0.1**
LEOM **Leova** **73.86 360** ⇑P **P** **14 27 32.9 -0.1**
LEOM **Leova** **73.86 360** ⇑P **P** **14 27 32.9 -0.1**
BNI **Bardonecchia** **73.86 15** P **P** **14 27 34.7 +1.4**
BNI pmax pmax
comp=Z,90nm,1.3s
SIRR **Siria** **73.94 4** ⇑P **P** **14 27 34.0 +0.5**
PTJ **Puntijarka** **73.98 9** *i* P **P** **14 27 34.1 +0.2**
PSMA **Santa Maria** **74.00 42** *e*P **P** **14 27 34.2 +0.2**
comp=Z,178nm,1.1s
PSMN **Pico do Norte,** **74.01 42** *e*P **P** **14 27 34.6 +0.5**
comp=Z,194nm,1.1s
CRES **Cresnjev** **74.02 9**⇑ *i*P **P** **14 27 33.5 -0.5**
CEY **Cerknica** **74.03 10**⇑ *i*P **P** **14 27 33.5 -0.6**
PGAV **Gavieira, Arco** **74.14 27**⇑ *i*P **P** **14 27 35.8 +0.9**
comp=Z,147nm,1.4s
PGAV *e*S **S** **14 37 04.0 +3.6**
PGAV *e*SS **SS** **14 41 52.8 +6.8**
PGAV **Gavieira, Arco** **74.14 27** *e*LR LR 14 52 00.2
comp=Z,462nm,22.0s
SMRT **St. Maarten** **74.14 81** *e*P P 14 27 52.7 +18
SMRT **St. Maarten** **74.14 81** IAmb IAmb 14 28 17.7
comp=Z,141nm,0.9s
SKDS **Skadanscina** **74.18 10** *e*P **P** **14 27 34.2 -0.7**
OZUR **74.22 1** ⇓P **P** **14 27 36.2 +1.0**
OZLJ **Ozalj** **74.23 9** *i* P **P** **14 27 34.9 -0.3**
GHRR **74.27 0**⇑ P **P** **14 27 36.5 +1.1**
BOJS **Bojanci** **74.33 9** *i* P **P** **14 27 35.6 -0.2**
BOJS *e*S **S** **14 37 02.6 +0.4**
MOSL **Moslavina** **74.33 8** *i* P **P** **14 27 36.0 +0.2**
DOPR **Dopca** **74.34 2** ⇑P **P** **14 27 36.8 +0.9**
SMRC **Santa Marta, M** **74.41 95** *e*P **P** **14 27 36.3 -0.4**
PCAB **Cabril** **74.44 27**⇑ *i*P **P** **14 27 37.4 +0.9**
comp=Z,81nm,1.8s
RIY **Rijeka** **74.44 10**⇑ *i*P **P** **14 27 36.2 -0.2**
RIY **Rijeka** **74.44 10** *i* P **P** **14 27 36.3 -0.1**
VRI **Vrincioaia** **74.46 1** ⇓P **P** **14 27 36.3 -0.3**
VRI **Vrincioaia** **74.46 1** ⇓P **P** **14 27 36.3 -0.3**
PLOR **Plostina** **74.47 1** ⇑P **P** **14 27 37.1 +0.4**
PLOR **Plostina** **74.47 1** ⇑P **P** **14 27 37.1 +0.4**
GOF **Gofitskoye** **74.53 349**⇑ *e*P **P** **14 27 37.1 +0.2**
GOF *e*S **S** **14 37 02.3 -2.1**
GOF pmax pmax
comp=Z,215nm,1.1s
GOF smax smax
comp=E,86nm,1.1s
BZS **Buzias** **74.59 4** ⇑P **P** **14 27 37.7 +0.4**
BZS **Buzias** **74.59 4** ⇑P **P** **14 27 37.7 +0.4**
BALP **Baler** **74.61 275** *e*P **P** **14 27 38.5 +0.7**
PBRG **Braganca** **74.63 26**⇑ *i*P **P** **14 27 38.5 +0.8**
comp=E,84nm,1.3s
PBRG *e*S **S** **14 37 08.0 +2.2**
PBRG *e*SS **SS** **14 42 01.1 +7.7**
SEUS **St. Eustatius** **74.66 82** *e*P **P** **14 27 34.0 -4.0**
SMPP **San Manuel, Pa** **74.72 276** *e*P **P** **14 27 36.8 -1.7**
BISRR **Bisoca** **74.78 1** ⇑P **P** **14 27 39.2 +0.7**
BANR **Banloc** **74.81 5** ⇑P **P** **14 27 39.6 +1.0**
MLR **Muntele Rosu** **74.83 1** PKPPKP 14 55 02.4
comp=E,2.0nm,0.9s,baz=181,slow=7.8,SNR=3.6
MLR **Muntele Rosu** **74.83 1** P **P** **14 27 40.1 +1.3**
MLR **Muntele Rosu** **74.83 1** P **P** **14 27 40.1 +1.3**
SCHL **Schela** **74.83 360** ⇑P **P** **14 27 39.1 +0.4**
PMOR **Pomariorio Ree** **74.85 176** *e*P **P** **14 27 38.5 -0.5**
comp=E,173nm,1.4s
PMOR **Pomariorio Ree** **74.85 176** *e*T T 15 49 20.0
comp=E,25nm,0.3s
GZR **Gura Zlata** **74.86 4** P **P** **14 27 39.0 +0.1**
GZR **Gura Zlata** **74.86 4** P **P** **14 27 39.1 +0.1**
VOIR **74.87 2** ⇑P **P** **14 27 39.4 +0.4**
VOIR **74.87 2** ⇑P **P** **14 27 39.4 +0.4**
BOLP **Bolinao** **74.90 277** *e*P P 14 27 27.4 -12
SKI **Saint Kitts** **74.91 82** *e*P **P** **14 27 39.3 -0.3**
PVRL **Vila Real** **74.92 27**⇑ *i*P **P** **14 27 40.3 +1.0**
comp=E,152nm,1.7s
ARR **Arges** **74.93 2** ⇑P **P** **14 27 40.0 +0.6**
FRGS **Fruska Gora** **74.97 6**⇑ *i*P **P** **14 27 39.3 -0.2**
CAPC **Capurgana** **75.02 99** *e*P **P** **14 27 39.1 -1.1**
VAH **Vaihoa** **75.09 175** *e*P **P** **14 27 40.5 +0.1**
comp=E,91nm,0.8s
ANWB **Willy Bob** **75.10 81** *e*P **P** **14 27 41.6 +1.1**
TLCR **75.14 359** ⇑P **P** **14 27 40.6 +0.2**
TLCR **75.14 359** ⇑P **P** **14 27 40.6 +0.2**
PVCP **Virac** **75.15 271** *e*P **P** **14 27 40.4 -0.5**
CFR **Carcaliu** **75.15 360** ⇑P **P** **14 27 40.6 +0.1**
CFR **Carcaliu** **75.15 360** ⇑P **P** **14 27 40.6 +0.1**
MVO **Moncorvo** **75.18 26**⇑ *i*P **P** **14 27 41.7 +0.8**
comp=E,133nm,1.3s
MVO *e*S **S** **14 37 15.1 +3.1**
MVO *e*SS **SS** **14 42 06.6 +4.9**
MVO **Moncorvo** **75.18 26** *e*LR LR 14 52 30.0
comp=E,386nm,22.0s
ISR **Istrita** **75.21 1** ⇑P **P** **14 27 40.5 -0.4**
ISR **Istrita** **75.21 1** ⇑P **P** **14 27 40.5 -0.4**

BLY **Banja Luka** **75.22 8** ⇓P **P** **14 27 41.4 +0.5**
BLY **Banja Luka** **75.22 8**⇑ *i*P **P** **14 27 40.9 0.0**
ANN **Anapa** **75.23 353***c i*P **P** **14 27 39.7 -1.2**
ANN *e**PP **pP** **14 28 06.6 +2.0**
ANN *e*S **S** **14 37 08.6 -3.6**
ANN pmax pmax
comp=Z,63nm,1.1s
SIM **Simferopol'** **75.25 355***ce*P **P** **14 27 41.0 -0.1**
SIM *e**PP **pP** **14 28 02.0 -2.7**
SIM *e*S **S** **14 37 11.0 -1.5**
SIM pmax pmax
comp=Z,28nm,1.0s
SIM pmax pmax
comp=Z,100nm,9.3s
SECR **75.29 1** ⇑P **P** **14 27 41.0 -0.3**
POLP **Polilio Island** **75.29 274** *e*P **P** **14 27 43.5 +1.8**
GAR **Garm** **75.30 327** IAmb IAmb 14 28 17.4
comp=Z,94nm,0.9s
HERR **Herculane** **75.36 4** ⇑P **P** **14 27 42.4 +0.7**
PVIS **Viseu** **75.41 27**⇑ *i*P **P** **14 27 43.1 +0.9**
comp=Z,119nm,1.3s
MDVR **Moldovita** **75.43 4** P **P** **14 27 42.1 -0.1**
TOPG **Topolog** **75.45 360** ⇑P **P** **14 27 42.5 +0.3**
GOLR **75.47 2** ⇓P **P** **14 27 43.2 +0.9**
ARGC **Ariguani, Magd** **75.52 95** *e*P **P** **14 27 43.5 +0.5**
MGRS **Mrkonjic Grad** **75.55 8** *e*P **P** **14 27 43.6 +0.8**
JURR **Jurilovca** **75.56 359** ⇑P **P** **14 27 42.9 +0.1**
SRE **Strehaia** **75.60 3** ⇑P **P** **14 27 43.7 +0.6**
SRE **Strehaia** **75.60 3** ⇑P **P** **14 27 43.7 +0.6**
HARR **Harsova** **75.64 360** ⇑P **P** **14 27 43.5 +0.2**
HARR **Harsova** **75.64 360** P **P** **14 27 44.3 +1.0**
KVAR **Kislovodsk Arr** **75.65 349** S **S** **14 37 16.7 -0.4**
comp=Z,9.2nm,1.0s,baz=344,slow=16,SNR=2.8
KIV **Kislovodsk** **75.65 349** ⇑P **P** **14 27 43.4 -0.1**
KIV **Kislovodsk** **75.65 349** *i* P **P** **14 27 43.4 -0.1**
SNR=16
KIV **Kislovodsk** **75.65 349** *e*P **P** **14 27 43.7 +0.1**
KIV *e*S **S** **14 37 17.2 +0.1**
KIV pmax pmax
comp=Z,203nm,3.8s
KIV pmax pmax
comp=Z,194nm,1.0s
KIV MLR MLR
comp=Z,1µm,18.0s
COI **Coimbra** **75.78 28**⇑ *i*P **P** **14 27 45.3 +1.1**
comp=Z,241nm,1.6s
COI *e*S **S** **14 37 19.8 +1.4**
HUMR **Humele** **75.78 2** ⇑P **P** **14 27 43.7 -0.5**
TLBR **Topalu** **75.78 360** ⇑P **P** **14 27 44.3 +0.2**
MTE **Manteigas** **75.79 27**⇑ *i*P **P** **14 27 45.1 +0.7**
comp=Z,182nm,1.3s
MTE *e*S **S** **14 37 20.8 +2.0**
MTE *e*SS **SS** **14 42 18.7 +7.7**
MTE **Manteigas** **75.79 27** *e*LR LR 14 52 46.8
comp=Z,401nm,20.0s
MTE **Manteigas** **75.79 27** IAmb IAmb 14 27 46.4
comp=Z,220nm,1.3s
DUGI **Dugi Otok** **75.81 9** *i* P **P** **14 27 44.2 -0.2**
LEHL **Lehliu** **75.85 1** ⇓P **P** **14 27 44.3 -0.2**
KBZ **Khabaz** **75.86 349** P **P** **14 27 44.8 +0.3**
comp=Z,40nm,0.9s,baz=348,slow=2.8,SNR=36
KBZ S **S** **14 37 18.1 -1.0**
KBZ comp=Z,0.5nm,0.4s,baz=52,slow=19,SNR=1.7 ScS **ScS** **14 37 50.6 +0.4**
comp=Z,3.8nm,0.9s,baz=17,slow=11,SNR=4.0
KBZ LR LR 15 03 40.8
comp=Z,366nm,20.6s,baz=8.5,slow=38
TIRR **Tirgusor** **75.87 360** ⇓P **P** **14 27 45.1 +0.4**
TIRR **Tirgusor** **75.87 360** ⇓P **P** **14 27 45.1 +0.4**
TIRR **Tirgusor** **75.87 360** ⇓P **P** **14 27 45.1 +0.4**
TIRR **Tirgusor** **75.87 360** IAmb IAmb 14 27 45.8
comp=Z,217nm,1.3s
PCAS **Casmilo, Conde** **75.90 28**⇑ *i*P **P** **14 27 45.9 +1.0**
comp=Z,188nm,1.6s
PCAS *e*S **S** **14 37 23.0 +3.2**
PCAS *e*SS **SS** **14 42 17.6 +5.0**
KIJV **Kijevo** **75.91 8** *i* P **P** **14 27 44.9 +0.1**
KIJV **Kijevo** **75.91 8** Sg S 14 37 36.9 +17
CHGR **Chuyangaron** **75.93 328** IAmb IAmb 14 28 20.4
comp=Z,218nm,0.9s
HAPS **Han Pijesak,Bl** **75.99 7** *e*P **P** **14 27 45.1 -0.4**
MORI **Morici** **75.99 9** *i* P **P** **14 27 45.0 -0.3**
MORI **Morici** **75.99 9** Sg S 14 37 35.2 +15
DIVS **Divibare** **76.04 6**⇑ *i*P **P** **14 27 45.7 0.0**
GROC **Groznyy** **76.06 347** *e*P **P** **14 27 47.6 +1.8**
GROC *e**SP **sP** **14 28 19.8 +0.4**
GROC *e* 14 30 42.9
GROC *e*S **S** **14 37 21.9 +0.4**
GROC *e**SS **sS** **14 38 02.9 +0.1**
GROC pmax pmax
comp=Z,61nm,1.2s
MAK **Makhachkala** **76.09 345** *e*P **P** **14 27 44.7 -1.2**
MAK *e**PP **pP** **14 28 09.9 +0.3**
MAK *e**SP **sP** **14 28 20.1 +0.6**
MAK *e*S **S** **14 37 20.8 -1.0**
MAK *e**SS **sS** **14 38 04.0 +0.9**
MAK *e*SS **SS** **14 42 11.0 -4.2**
MAK pmax pmax
comp=Z,214nm,1.5s
MAK MLR MLR
comp=Z,260nm,14.0s
SGRR **Singureni** **76.10 1** ⇑P **P** **14 27 45.6 -0.4**
ZIRJ **Zirje** **76.20 9** *i* P **P** **14 27 46.4 -0.1**
ICOR **Ion Corvin** **76.21 360** ⇑P **P** **14 27 47.3 +0.7**
BBLS **Lazići** **76.24 6**⇑ *i*P **P** **14 27 47.3 +0.5**
ABD **La Joyeuse, An** **76.26 81** *e*P **P** **14 27 45.2 -2.0**
SOC **Sochi** **76.28 351** *e*P **P** **14 27 45.3 -1.7**
SOC *e* 14 30 38.6
SOC *e*PPP PPP 14 32 36.5
SOC *e*S **S** **14 37 20.8 -3.0**
SOC *e*SS **SS** **14 42 20.3 +2.3**
SOC *e*SSS SSS 14 45 30.4
SOC pmax pmax
comp=Z,36nm,0.7s
MURB **Monte Urbino** **76.31 11** IAmb IAmb 14 27 50.2
comp=Z,242nm,1.3s
PCBR **Castelo Branco** **76.34 27**⇑ *i*P **P** **14 27 48.1 +0.7**
comp=Z,125nm,1.6s
PSBE **So Bento** **76.34 28**⇑ *i*P **P** **14 27 48.1 +0.6**
comp=Z,180nm,1.2s
PSBE *e*S **S** **14 37 28.0 +3.3**
RUDO **Rudo** **76.48 6**⇑ *i*P **P** **14 27 47.9 -0.3**
CBE **Ff, Capester** **76.55 81** *e*P **P** **14 27 46.1 -2.8**
H05N1 **Guadeloupe/Mar** **76.61 81** P **P** **14 27 49.1 -0.2**
MAKA **Makarska** **76.66 8** *i* P **P** **14 27 48.8 -0.3**
LSA **Lhasa** **76.67 307** P **P** **14 27 50.6 +0.6**
LSA pmax pmax
comp=Z,100nm,1.4s
LSA **Lhasa** **76.67 307** *i* P **P** **14 27 51.0 +1.0**
SNR=9.2
LSA **Lhasa** **76.67 307** P **P** **14 27 51.9 +1.9**
LSA pmax pmax
comp=Z,78nm,1.2s
LSA **Lhasa** **76.67 307** P **P** **14 27 51.9 +1.9**
UREC **San Jos de Ur** **76.68 98** *e*P **P** **14 27 49.4 -0.3**
ZEI **Tsey** **76.69 348** *e*P **P** **14 27 47.3 -2.3**
ZEI *e*S **S** **14 37 26.1 -2.6**
ZEI pmax pmax
comp=Z,60nm,1.1s
PMRV **Marv??o** **76.75 27**⇑ *i*P **P** **14 27 50.2 +0.4**
comp=Z,95nm,1.7s
PMRV *e*S **S** **14 37 32.2 +3.0**
PMRV *e*SS **SS** **14 42 33.4 +7.9**
PMRV **Marv??o** **76.75 27** *e*LR LR 14 53 16.9
comp=Z,442nm,22.0s
PMAFR **Mafra** **76.76 29**⇑ *i*P **P** **14 27 50.4 +0.6**
comp=Z,367nm,1.3s
PMAFR *e*S **S** **14 37 31.9 +2.7**
PMAFR *e*SS **SS** **14 42 30.2 +4.7**
PLE **Pljevlja** **76.77 6** ⇓P **P** **14 27 48.9 -1.0**
NRCA **Norcia** **76.79 11** IAmb IAmb 14 27 51.9
comp=Z,133nm,1.3s
MAGL **Barre de l'ile** **76.81 81** *e*P **P** **14 27 50.3 -0.1**
PGP **Puerto Galera** **76.83 274**⇑ *i*P **P** **14 27 49.5 -1.0**
UPM **Unac-Piva** **76.87 7**⇑ *i*P **P** **14 27 50.5 -0.1**
UPM **Unac-Piva** **76.87 7**⇑ *i*P **P** **14 27 49.3 -1.3**
PMTG **Montargil** **76.90 28**⇑ *i*P **P** **14 27 50.7 +0.1**
comp=Z,95nm,1.1s
PMTG *e*S **S** **14 37 32.8 +2.0**
PMTG *e*SS **SS** **14 42 33.5 +5.8**
PLVB **Pleven** **76.91 2** ⇑P **P** **14 27 49.9 -0.6**
DBBC **Dabeiba** **76.98 99** *e*P **P** **14 27 47.9 -3.5**
LUBP **Lubang** **76.99 275** *e*P **P** **14 27 48.1 -3.3**

LIS **Lisbon** **77.02 29** *e*P **P** **14 27 51.6 +0.4**
LIS AMb AMB 14 27 53.4
comp=Z,264nm,1.4s
LIS **Lisbon** **77.02 29** *e*P **P** **14 27 51.6 +0.4**
LIS pmax pmax
comp=Z,264nm,1.4s
LIS **Lisbon** **77.02 29**⇑ *i*P **P** **14 27 52.2 +1.0**
comp=Z,263nm,1.3s
STON **Ston** **77.12 8**⇑ *i*P **P** **14 27 50.9 -0.8**
STON **Ston** **77.12 8** *i* P **P** **14 27 51.0 -0.8**
STON **Ston** **77.12 8** Sg S 14 37 42.7 +10
BRY **Bratogost** **77.15 7**⇑ *i*P **P** **14 27 51.8 -0.3**
BRY **Bratogost** **77.15 7**⇑ *i*P **P** **14 27 51.0 -1.1**
ZARC **Zaragoza, Cauc** **77.24 97** *e*P **P** **14 27 52.1 -0.7**
PESTR **Estremoz** **77.24 28** P **P** **14 27 53.3 +0.8**
SNR=12
PESTR **Estremoz** **77.24 28** *e*S **S** **14 37 37.9 +3.4**
PESTR *e*SS **SS** **14 42 39.3 +6.4**
IVA **Berane** **77.25 6**⇑ *i*P **P** **14 27 51.8 -0.8**
KOME **Kolasin** **77.25 6**⇑ *i*P **P** **14 27 51.8 -0.8**
OTRP **Odiongan** **77.27 273** *e*P **P** **14 27 52.4 -0.5**
ESDC **Sonseca Array** **77.27 25** P **P** **14 27 53.8 +1.0**
comp=Z,55nm,1.0s,baz=341,slow=5.4,SNR=209
ESDC S **S** **14 37 36.5 +1.6**
comp=Z,0.5nm,0.8s,baz=331,slow=24,SNR=1.9
ESDC PKKPbc **PKKPbc** **14 46 56.1 +1.8**
comp=Z,0.7nm,0.6s,baz=166,slow=0.8,SNR=8.9
ESDC PKPPKP **P'P'df** **14 54 56.9 -6.1**
comp=Z,0.9nm,0.7s,baz=202,slow=0.7,SNR=7.5
ESDC LR LR 15 02 30.5
comp=Z,202nm,21.9s,baz=345,slow=36
AQU **L'Aquila** **77.29 11**⇑ *i*P **P** **14 27 53.1 +0.3**
AQU **L'Aquila** **77.29 11** P **P** **14 27 53.8 +1.0**
AQU pmax pmax
comp=Z,51nm,1.1s
NKME **Niksic** **77.31 7**⇑ *i*P **P** **14 27 52.3 -0.5**
PAB **San Pablo** **77.31 25** P **P** **14 27 53.6 +0.6**
PAB pmax pmax
comp=Z,49nm,1.3s
TREB **Trebinje** **77.32 7**⇑ *i*P **P** **14 27 52.1 -0.8**
TIAR **Tiarei** **77.34 177** *e*T T 15 52 25.9
comp=Z,5.8nm,0.2s
PPT **Papeete** **77.35 177** LR LR 14 54 26.6
comp=Z,757nm,19.5s,baz=335,slow=30
DBRK **Dubrovnik** **77.36 7** *i* P **P** **14 27 52.3 -0.7**
LGD **Lagodekhi** **77.36 346** P **P** **14 27 52.8 -0.3**
OCAC **Ocana** **77.37 95** *e*P **P** **14 27 52.4 -1.3**
PPT2 **Papeete2** **77.37 177** *e*P **P** **14 27 53.5 +0.2**
comp=Z,74nm,1.5s
PPT2 *e*S **S** **14 37 33.1 -3.0**
comp=Z,1µm,24.8s
PPT2 **Papeete2** **77.37 177** *e*LR LR 14 51 56.3
comp=Z,3µm,31.2s,baz=346
PPT2 **Papeete2** **77.37 177** *e*T T 15 52 28.4
comp=Z,2.0nm,0.3s
KRVT **Keravat (AS076** **77.45 238** P **P** **14 27 53.6 -0.3**
comp=Z,26nm,0.7s,baz=357,slow=3.2,SNR=10
EVO **Evora** **77.46 28**⇑ *i*P **P** **14 27 54.2 +0.5**
comp=Z,138nm,1.2s
AKT **Akhty** **77.52 345** *e*P **P** **14 27 53.9 -0.2**
AKT *e* 14 28 03.7
AKT *e**PP **pP** **14 28 17.6 -0.3**
AKT *e**SP **sP** **14 28 28.6 +0.8**
AKT *e* 14 30 47.9
AKT *e*S **S** **14 37 35.1 -2.5**
AKT *e*S SKSac 14 37 37.9 -21
AKT pmax pmax
comp=Z,93nm,1.2s
CEME **Cevo** **77.52 7**⇑ *i*P **P** **14 27 53.5 -0.6**
PVY **Plav** **77.53 6**⇑ *i*P **P** **14 27 53.3 -0.9**
TVO **Taravao** **77.57 177** *e*T T 15 52 42.8
comp=Z,1.0nm,0.3s
QIZ **Qiongzhong** **77.59 286** P **P** **14 27 56.6 +1.9**
QIZ S **S** **14 37 41.4 +2.6**
QIZ SS **SS** **14 42 43.2 +3.9**
QIZ LR LR
comp=Z,320nm,18.0s
QIZ LR LR
comp=Z,310nm,11.4s
QIZ LR LR
comp=Z,730nm,32.9s
HCY **Herceg Novi** **77.60 7**⇑ *i*P **P** **14 27 53.8 -0.6**
HCY **Herceg Novi** **77.60 7**⇑ *i*P **P** **14 27 53.9 -0.5**
VTS **Vitosha** **77.64 3** ⇑P **P** **14 27 54.2 -0.6**
VTS **Vitosha** **77.64 3** P **P** **14 27 55.8 +0.9**
PDG **Podgorica** **77.66 6** ⇑P **P** **14 27 54.5 -0.3**
PDG **Podgorica** **77.66 6**⇑ *i*P **P** **14 27 54.3 -0.4**
PDG **Podgorica** **77.66 6** IAmb IAmb 14 27 55.6
comp=Z,174nm,1.1s
TTG **Podgorica** **77.66 6**⇑ *i*P **P** **14 27 54.4 -0.3**
PNCL **Nicolau / Gran** **77.74 29**⇑ *i*P **P** **14 27 56.0 +0.7**
comp=Z,217nm,1.4s
PNCL *e*S **S** **14 37 41.5 +1.7**
PNCL *e*SS **SS** **14 42 45.0 +4.7**
MSLP **Maasin** **77.75 269** *e*P **P** **14 27 56.2 +0.6**
BUM **Brajici-Budva** **77.77 7**⇑ *i*P **P** **14 27 54.9 -0.5**
DRME **Dracevica, Mon** **77.90 7**⇑ *i*P **P** **14 27 55.7 -0.4**
DRME **Dracevica, Mon** **77.90 7**⇑ *i*P **P** **14 27 55.7 -0.4**
FDF **Fort de France** **77.92 82** *e*P **P** **14 27 53.9 -2.6**
PBEJ **Beja** **77.98 28**⇑ *i*P **P** **14 27 57.2 +0.6**
comp=Z,65nm,1.3s
ILAM **Ilet Lapin Mar** **78.02 81** *e*P **P** **14 27 56.7 -0.4**
HELC **Santa Helena** **78.03 98**⇓ *e*P **P** **14 27 59.0 +1.4**
MESJ **Messejana** **78.07 28** *e*P **P** **14 27 57.5 +0.4**
MESJ AMb AMB 14 27 59.2
comp=Z,88nm,1.1s
MESJ *e*S **S** **14 37 44.3 +0.8**
MESJ **Messejana** **78.07 28** *e*P **P** **14 27 57.5 +0.4**
MESJ *e*S **S** **14 37 44.2 +0.8**
MESJ pmax pmax
comp=Z,88nm,1.1s
MESJ **Messejana** **78.07 28**⇑ *i*P **P** **14 27 57.6 +0.4**
comp=Z,88nm,1.1s
AKH **Akhalkalaki** **78.09 348** ⇓P **P** **14 27 57.8 +0.4**
AKH **Akhalkalaki** **78.09 348** P **P** **14 27 57.8 +0.4**
ULC **Ulcinj** **78.12 6**⇑ *i*P **P** **14 27 56.9 -0.5**
BIM **Bigot** **78.14 82** *e*P **P** **14 27 57.0 -0.8**
SDV **Santo Domingo** **78.16 93** *e*P **P** **14 27 58.0 -0.1**
SDV **Santo Domingo** **78.16 93** IAmb IAmb 14 28 00.8
comp=Z,113nm,0.8s
SDV **Santo Domingo** **78.16 93** *e*P **P** **14 27 58.5 +0.4**
PLD **Plovdiv** **78.19 2** P **P** **14 27 57.5 -0.2**
SKO **Skopje** **78.22 5**⇑ *i*P **P** **14 27 58.1 +0.2**
SKO *i* S **S** **14 37 46.5 +1.6**
SKO **Skopje** **78.22 5**⇑ *i*P **P** **14 27 58.1 +0.2**
SKO *i* S **S** **14 37 46.5 +1.6**
PTEO **Sao Teotonio** **78.23 29**⇑ *i*P **P** **14 27 58.5 +0.5**
comp=Z,91nm,1.5s
PTBC **PUERTO BERRIO,** **78.26 97** *e*P **P** **14 27 57.8 -0.6**
MPOM **Morne Pois Mar** **78.31 82** *e*P **P** **14 27 55.3 -3.4**
PCVE **Castro Verde** **78.31 28**⇑ *i*P **P** **14 27 59.0 +0.5**
comp=Z,63nm,1.4s
PCVE *e*S **S** **14 37 50.3 +4.3**
PCVE *e*SS SS 14 43 01.0 +12
BUTP **Butuan** **78.36 268** *e*P **P** **14 28 01.9 +3.0**
GUIM **Jordan** **78.47 271** *e*P **P** **14 27 58.4 -1.2**
MORF **Marmelete** **78.48 29** *e*P **P** **14 27 59.9 +0.5**
MORF AMb AMB 14 28 02.2
comp=Z,173nm,1.2s
MORF *e*S **S** **14 37 48.6 +0.7**
MORF **Marmelete** **78.48 29** *e*P **P** **14 27 59.9 +0.5**
MORF *e*S **S** **14 37 48.6 +0.7**
MORF pmax pmax
comp=Z,173nm,1.2s
MORF **Marmelete** **78.48 29**⇑ *i*P **P** **14 28 00.1 +0.7**
comp=Z,173nm,1.4s
MORF *e*S **S** **14 37 50.6 +2.7**
MORF *e*SS SS 14 43 03.7 +12
EDRB **Edirne** **78.48 1** P **P** **14 27 59.4 +0.1**
BUSP **Coron** **78.49 274** *e*P **P** **14 28 00.4 +0.7**
DIKM **Dikmen** **78.49 354** ⇑P **P** **14 28 00.3 +0.9**
DIKM **Dikmen** **78.49 354** P **P** **14 28 00.7 +1.3**
PFVI **Vila Bisbo** **78.60 29**⇑ *i*P **P** **14 28 00.8 +0.8**
comp=Z,145nm,1.4s
PFVI *e*S **S** **14 37 51.7 +2.6**
PFVI *e*SS **SS** **14 43 00.6 +7.3**
PVAQ **Vaqueiros** **78.61 28** P **P** **14 28 01.0 +0.9**
SNR=16
PVAQ P **P** **14 28 01.0 +0.9**
SNR=16
PVAQ **Vaqueiros** **78.61 28**⇑ *i*P **P** **14 28 00.9 +0.9**
comp=Z,139nm,1.2s
PVAQ *e*S **S** **14 37 50.5 +1.3**
PVAQ *e*SS **SS** **14 42 58.8 +5.4**

PVAQ Vaqueiros 78.61 28 eLR LR 14 54 07.5
comp=Z,439nm,22.0s
PVAQ Vaqueiros 78.61 28 IAmb IAmb 14 28 02.4
comp=Z,272nm,1.6s
SLBI Saint Lucia, B 78.61 82 eP P 14 27 59.7 -0.6
PBDV Barranco-do-Ve 78.71 28⇑iP P 14 28 01.6 +0.9
comp=Z,184nm,1.7s
PBDV eS S 14 37 52.9 +2.6
PBDV eSS SS 14 43 04.2 +9.2
HORN Hornachuelos 78.75 26 P P 14 28 01.4 +0.6
SNR=25
TIR Tirane 78.77 6⇑P P 14 28 01.4 +0.5
TIR Tirane 78.77 6⇑P P 14 28 01.4 +0.5
CTYL Yalikoy Yolu 78.85 360 P P 14 28 01.6 +0.3
KTUT Trabzon 78.86 351⇑P P 14 28 01.5 +0.2
MCLT Moule a Chique 78.89 82 eP P 14 28 01.0 -0.9
NORC Norcasia 78.90 98 eP P 14 27 55.7 -6.3
VAY Valandovo 78.92 4⇑iP P 14 28 02.0 +0.3
VAY i S S 14 37 51.8 -0.6
VAY Valandovo 78.92 4⇑iP P 14 28 02.0 +0.3
VAY i S S 14 37 51.8 -0.6
NVR Nevrokopi 78.93 3 P P 14 28 02.0 +0.2
HNR Honiara 78.94 228 P P 14 28 02.5 +0.6
comp=Z,77nm,0.7s,baz=90,slow=1.0,SNR=2.4
HNR Honiara 78.94 228 P P 14 28 02.6 +0.6
HNR pmax pmax
comp=Z,164nm,1.1s
HNR Honiara 78.94 228 IAmb IAmb 14 28 14.2
comp=Z,164nm,1.1s
MALC Bahia Malaga 79.01 101 eP P 14 28 01.2 -1.3
KVT Kavak 79.02 354 P P 14 28 03.1 +0.8
SENK Senkaya-Erzuru 79.05 349 P P 14 28 03.2 +0.5
OHR Ohrid 79.05 5⇑iP P 14 28 02.8 +0.3
OHR i S S 14 37 52.3 -1.6
OHR Ohrid 79.05 5⇑iP P 14 28 02.8 +0.3
OHR i S S 14 37 52.3 -1.6
SESP Santiago Espad 79.06 24 P P 14 28 03.9 +1.1
SNR=23
CUYO Cuyo Island 79.06 273 eP P 14 28 02.5 -0.3
KLYT Kilyos 79.07 359 P P 14 28 02.4 -0.1
KNT Kendrikon 79.09 4 P P 14 28 03.1 +0.5
KNT Kendrikon 79.09 4 P P 14 28 03.2 +0.6
KNT pmax pmax
comp=Z,124nm,1.0s
CTKS Kestanelik-??a 79.09 359 P P 14 28 01.9 -0.7
SVV Soufriere Volc 79.09 82 eP P 14 28 03.4 +0.4
SSV Crater Summit 79.09 82 eP P 14 28 03.3 +0.2
SLVT Silivri 79.10 360 P P 14 28 03.3 +0.6
SVB Belmont 79.11 82 eP P 14 28 04.1 +1.0
CNOP Candoni, Negro 79.12 271 eP P 14 28 01.2 -2.0
SRS Serrai 79.15 3 P P 14 28 03.0 0.0
SRS Serrai 79.15 3 P P 14 28 03.2 +0.2
SRS pmax pmax
comp=Z,70nm,1.6s
RDO Rodhopi 79.17 2 P P 14 28 03.3 +0.3
CRLT Corlu 79.20 0 P P 14 28 04.4 +1.2
SPBC San Pablo de B 79.22 97 eP P 14 28 02.8 -1.0
RREF El Recreo 79.23 99 eP P 14 28 04.1 -0.4
RREF eP PcP 14 28 04.3 -8.2
GEYT Alibeck 79.24 336 P P 14 28 03.8 +0.2
comp=Z,24nm,0.8s,baz=326,slow=4.5,SNR=42
GEYT LR LR 15 07 07.8
comp=Z,433nm,20.1s,baz=45,slow=39
MATE Matera 79.27 9 P P 14 28 04.0 +0.5
KAVA Kavala 79.30 3 P P 14 28 03.9 +0.1
FNA Florina 79.41 5 P P 14 28 04.0 -0.5
FNA Florina 79.41 5 P P 14 28 04.2 -0.3
FNA pmax pmax
comp=Z,187nm,1.2s
ALN Alexandroupoli 79.42 1 P P 14 28 04.2 -0.2
ALN Alexandroupoli 79.42 1 P P 14 28 04.5 +0.1
ALN pmax pmax
comp=Z,84nm,1.1s
NIL Nilore 79.43 323 P P 14 28 04.6 -0.1
NIL pmax pmax
comp=Z,55nm,1.2s
GR1C Gorgona, Isla 79.48 102 eP P 14 28 03.5 -1.6
HRT Hereke 79.49 359 P P 14 28 05.2 +0.3
RUSC La Rusia 79.50 96 eP P 14 28 05.6 -0.2
TOLC Tolima 79.52 99 eP P 14 28 05.5 -0.2
YOTC Yotoco, Valle 79.53 100 eP P 14 28 05.3 -0.2
ANIL Santa Ana 79.56 99 eP P 14 28 03.5 -2.4
ENPP El Nido 79.56 274 eP P 14 28 05.1 -0.4
ENEZ Enez 79.58 1 P P 14 28 05.6 +0.3
CANT Cankiri 79.61 355 P P 14 28 06.7 +1.2
RSDY Resadiye-TOKAT 79.62 353 P P 14 28 06.7 +1.1
RKY Sarkoy-Tekirda 79.64 0 P P 14 28 06.1 +0.4
ERIK Erikli-Kesan 79.65 1 P P 14 28 05.4 -0.3
KOPR Koprukoy-ERZUR 79.66 349 P P 14 28 05.9 -0.1
TAMC Tame, Arauca 79.68 95 eP P 14 28 04.6 -1.7
TAMC Tame, Arauca 79.68 95 eP P 14 28 06.8 +0.5
THAS Thassos island 79.69 0 P P 14 28 04.9 -1.0
GCMP Grenada, Carri 79.70 83 eP P 14 28 05.5 -0.8
MRMT Marmara Adasi 79.72 0 P P 14 28 05.8 -0.4
TOKT Tokat 79.75 353 P P 14 28 07.2 +0.9
YLV Yalova 79.75 359 P P 14 28 06.2 -0.1
ARMT Armutlu 79.76 359 P P 14 28 06.1 -0.2
NEST Nestorio 79.76 5 P P 14 28 06.4 0.0
GRSS Sisters 79.77 83 eP P 14 28 07.1 +0.5
DHRM DHARAMSHALA 79.77 320 eP P 14 28 06.0 -0.8
DHRM IAmb IAmb 14 28 13.0
comp=Z,37nm,0.8s
ROSC El Rosal 79.79 98 P P 14 28 07.8 +0.5
comp=Z,25nm,0.5s,baz=10,slow=4.5,SNR=32
ROSC LR LR 15 08 37.5
comp=Z,233nm,18.3s,baz=346,slow=39
ROSC El Rosal 79.79 98 eP P 14 28 07.3 +0.1
GRHS Sauteurs 79.81 83 eP P 14 28 06.6 -0.3
MDUB Mudurnu 79.82 357 P P 14 28 07.2 +0.5
KBL Kabul 79.83 326 P P 14 28 05.8 -1.2
KBL pmax pmax
comp=Z,20nm,0.9s
GULT Gulveren 79.87 358 P P 14 28 06.8 -0.2
ADVT Abdulvahap 79.88 358 P P 14 28 06.6 -0.3
GEMT Gemlik 79.89 359 P P 14 28 08.1 +1.1
GRGR Grenville 79.89 83 eP P 14 28 05.8 -1.5
PLG Polygyros 79.89 3 P P 14 28 06.5 -0.6
GELI Tayfur-Gelibol 79.92 1 P P 14 28 07.3 +0.1
KRBG Karabiga-Canak 79.93 0 P P 14 28 07.4 +0.2
OUR Ouranopolis 79.94 3 P P 14 28 06.8 -0.5
LPK Lapseki 79.95 1 P P 14 28 07.7 +0.4
AGRB Hanur-Agry 79.96 348 P P 14 28 07.4 -0.2
SCTE Santa Cesarea 79.96 7 IAmb IAmb 14 28 08.8
comp=Z,185nm,1.1s
EDC Edincik 79.98 360 P P 14 28 07.1 -0.4
CORM Corum 79.99 355 P P 14 28 08.7 +1.0
SHL Shillong 80.02 304 eP P 14 28 07.3 -0.9
SHL IAmb IAmb 14 28 09.8
comp=Z,96nm,1.7s
BBGH Gun Hill 80.06 81 eP P 14 28 09.0 +0.8
SVSK Karacayir 80.12 353 P P 14 28 09.3 +1.1
TAPN Taplejung 80.12 309 eP P 14 28 09.1 +0.3
comp=Z,151nm,0.4s
GADA Gvkgeada 80.12 1 P P 14 28 08.4 +0.2
LIT Litokhoron 80.13 4 P P 14 28 07.9 -0.4
LIT Litokhoron 80.13 4 P P 14 28 08.3 0.0
LIT pmax pmax
comp=Z,158nm,1.2s
BBSP Saint Philip 80.15 81 eP P 14 28 13.2 +4.6
KPRO Kipourio 80.23 5 P P 14 28 08.6 -0.3
SRCK Saricakaya, Es 80.26 358 P P 14 28 09.8 +0.8
CLDR Caldiran 80.29 347 P P 14 28 10.5 +1.0
KCP Kidapawan 80.31 267⇓iP P 14 28 10.1 +0.5
GUN Gumba 80.33 310 eP P 14 28 10.1 +0.1
comp=Z,297nm,1.0s
YEDI Yedisu-Bingol 80.33 350 P P 14 28 10.8 +1.2
PAIG Paliouri 80.34 3 P P 14 28 09.4 0.0
PAIG pmax pmax
comp=Z,36nm,1.5s
LOD Lodumlu 80.35 356 P P 14 28 10.3 +0.7
PMOZ Porto Moniz, M 80.36 37⇑iP P 14 28 10.2 +0.4
comp=Z,196nm,1.5s
PMOZ Porto Moniz, M 80.36 37 eS S 14 38 12.6 +4.5
PMOZ Porto Moniz, M 80.36 37 eLR LR 14 54 07.0
comp=Z,252nm,20.0s
ANTO Ankara 80.37 356⇓P P 14 28 10.5 +0.8
ANTO Ankara 80.37 356⇓P P 14 28 10.5 +0.8
PMPST Porto Santo, M 80.38 36⇑iP P 14 28 10.2 +0.4
comp=Z,303nm,1.9s
PMPS Porto Santo 80.40 36 eP P 14 28 10.3 +0.5
comp=Z,275nm,1.4s
LIA Limnos Island 80.41 2 P P 14 28 09.1 -0.6

JIRN Jiri 80.44 310 eP P 14 28 11.0 +0.4
comp=Z,305nm,0.4s
BOZC Bozcaada 80.47 1 P P 14 28 09.7 -0.4
BR131 Keskin Array S 80.48 355 P P 14 28 10.3 -0.1
BR131 pmax pmax
comp=Z,73nm,1.2s
BR131 Keskin Array S 80.48 355 P P 14 28 10.3 -0.1
BRTR Keskin Array B 80.48 355 P P 14 28 10.1 -0.3
comp=Z,41nm,1.0s,baz=27,slow=3.0,SNR=108
BRTR PP PP 14 31 13.3 -0.5
BRTR comp=Z,11nm,1.2s,baz=44,slow=4.4,SNR=2.8
PKKPbc PKKPbc 14 46 48.8 +1.3
BRTR comp=Z,2.8nm,0.6s,baz=168,slow=6.0,SNR=9.9
PKPPKP P'P'df 14 54 55.0 -2.4
BRTR comp=Z,0.7nm,0.6s,baz=64,slow=9.8,SNR=3.6
BRTR LR LR 15 08 48.3
comp=Z,193nm,19.8s,baz=333,slow=39
YOZ Yozgat 80.49 354 P P 14 28 10.9 +0.5
EZN Ezine 80.49 1 P P 14 28 10.1 -0.1
IGT Igoumenitsa 80.61 6 P P 14 28 10.6 -0.3
THL Klokotos Trika 80.65 5 P P 14 28 10.3 -0.8
KKN Kakani 80.67 311 eP P 14 28 11.8 +0.2
comp=Z,66nm,0.5s
ODAN Odare 80.69 309 eP P 14 28 11.7 -0.1
comp=Z,131nm,0.9s
BALB Balikesir 80.69 360 P P 14 28 11.3 0.0
GKN Gorkha 80.72 311 eP P 14 28 11.8 0.0
comp=Z,72nm,0.3s
TIP Timpagrande 80.73 9 P P 14 28 11.2 -0.4
TIP Timpagrande 80.73 9⇓P P 14 28 11.8 +0.2
DANN Dangsing 80.73 312 eP P 14 28 12.3 +0.2
comp=Z,332nm,0.5s
BNGB Bingl 80.76 350 P P 14 28 12.9 +1.1
DDMP Don Marcelino, 80.77 266 eP P 14 28 11.9 -0.2
BBAC Balboa, Cauca 80.78 102 eP P 14 28 07.9 -4.5
AFSR Afar-Bala (An 80.78 356 P P 14 28 12.4 +0.5
SMIR Smir Dam 80.80 27 P P 14 28 13.5 +1.6
SNR=20
PKIN Phulchoki 80.81 311 eP P 14 28 12.2 -0.3
comp=Z,172nm,1.2s
PKI Pulchoki 80.81 311 eP P 14 28 12.2 -0.4
comp=Z,147nm,1.1s
TVSB Tavsanli 80.87 359 P P 14 28 12.5 +0.1
VANB Van 80.89 348 P P 14 28 13.9 +1.4
XOR Xorichti 80.89 4 P P 14 28 11.6 -0.8
DMN Daman 80.89 311 eP P 14 28 13.0 +0.1
comp=Z,75nm,0.6s
RAMN Ramite 80.91 309 eP P 14 28 12.9 -0.1
comp=Z,214nm,0.8s
JAY Jayapura 80.92 249 P P 14 28 13.2 +0.3
comp=Z,45nm,1.0s,baz=354,slow=3.1,SNR=16
JAY Jayapura 80.92 249 P P 14 28 13.5 +0.7
comp=Z,752ncomp=Z,44nm,1.6s
CIFT Cifteler, Eski 80.93 357 P P 14 28 12.7 0.0
DDI Dehra Dun 80.96 318 eP P 14 28 12.8 -0.1
DDI IAmb IAmb 14 28 17.0
comp=Z,107nm,1.2s
DDI i PP PP 14 31 17.9 -0.1
PTK Pertek 80.97 351 P P 14 28 14.0 +0.9
SOTA Rioblanco 80.99 101 eP P 14 28 13.8 0.0
SKMP Bagumbayan, Su 81.00 267 eP P 14 28 13.0 -0.3
SKIA Skiathos 81.10 3 P P 14 28 13.0 -0.5
AOS Alonnisos 81.10 3 P P 14 28 12.5 -1.0
MSVF Nonsavu 81.15 209 P P 14 28 16.4 +2.5
MSVF pmax pmax
comp=Z,47nm,1.2s
TOSP Speyside 81.16 83 eP P 14 28 14.4 +0.3
TOSP Speyside 81.16 83 IAmb IAmb 14 28 16.1
comp=Z,300nm,0.9s
AKDM Akdamar-Van 81.19 348 P P 14 28 15.1 +0.9
AGG Agios Georgios 81.20 4 P P 14 28 13.3 -0.8
AGG Agios Georgios 81.20 4 P P 14 28 13.6 -0.5
AGG pmax pmax
comp=Z,121nm,1.2s
MAKR Makrakomi, Fth 81.20 4 P P 14 28 13.8 -0.3
GENI Genyem 81.24 249 P P 14 28 15.5 +1.0
comp=Z,3µmcomp=Z,128nm,1.6s
PYUN Piuthan 81.24 313 eP P 14 28 14.6 -0.1
comp=Z,481nm,1.0s
BNN Bunyan 81.25 354 P P 14 28 15.0 +0.5
DKL Dikili 81.25 1 P P 14 28 13.6 -0.7
YAYX Yaylak 81.26 355 P P 14 28 14.8 +0.3
SERE Sereflikochisa 81.26 355 P P 14 28 14.7 +0.2
TRN Trinidad (W) 81.28 84 eP P 14 28 14.0 -0.7
EVR Evrytania 81.29 5 P P 14 28 14.7 +0.1
CRUC La Cruz 81.32 102 eP P 14 28 16.8 +1.4
KOLN Koldanda 81.32 312 eP P 14 28 15.0 -0.1
comp=Z,58nm,0.6s
CHEFC Chefchaouen 81.36 27 P P 14 28 17.0 +1.9
SNR=43
KIZT Kizkal 81.39 357 P P 14 28 14.9 -0.3
SMPI Sarmi 81.40 251 P P 14 28 16.4 +1.1
comp=Z,1µmcomp=Z,70nm,1.1s
GCUF Volcan Galeras 81.42 103 eP P 14 28 10.1 -6.0
DARE Darende-Malaty 81.43 352 P P 14 28 16.1 +0.7
PTGC Puerto Gaitan, 81.43 96 eP P 14 28 14.4 -1.2
RSA Sarsar 81.46 27 P P 14 28 17.1 +1.6
SNR=26
SVRC Sivrice-ELAZID 81.48 351 P P 14 28 17.2 +1.4
EVGI Lefkada island 81.53 6 P P 14 28 15.5 -0.3
TPP Pointe-a-Pierr 81.54 84 eP P 14 28 16.0 -0.1
SVAN Silvan-Diyarba 81.55 349 P P 14 28 16.4 +0.5
MRKA Markates 81.56 3 P P 14 28 14.9 -1.1
LKR Lokris 81.60 4 P P 14 28 14.8 -1.3
ANX Ano Chora 81.61 5 P P 14 28 16.1 -0.2
MALT Malatya 81.62 352 P P 14 28 17.2 +0.8
EBNR Beni Rached 81.62 21 P P 14 28 18.0 +1.7
SARI SarD1z-Kayseri 81.66 353 P P 14 28 17.4 +0.7
CUSE Cuicocha Este 81.70 104 eP P 14 28 15.6 -1.8
ECHA Ech Chlef 81.72 21 P P 14 28 17.5 +0.7
SHUT Suhut-Afyon 81.75 358 P P 14 28 17.2 +0.1
GOG Mont Gurugu 81.76 25 P P 14 28 18.0 +0.8
SNR=5.1
EFP Efpalio 81.78 5 P P 14 28 17.3 +0.2
SERG Sergoula 81.80 5 P P 14 28 17.1 -0.1
KULA Kula-Manisa 81.81 359 P P 14 28 17.2 -0.1
KALE Kalithea 81.82 4 P P 14 28 16.7 -0.7
DYBB Diyarbakir 81.84 350 P P 14 28 18.6 +1.1
TRIZ Trizonia 81.85 5 P P 14 28 17.1 -0.3
CHOS Chios island 81.93 1 P P 14 28 17.4 -0.6
URLA Izmir 81.96 1 P P 14 28 17.5 -0.6
LAKA Lakka 81.97 5 P P 14 28 18.1 0.0
VLS Valsamata 81.97 6 P P 14 28 17.5 -0.6
PROD Prodromos 81.98 4 P P 14 28 16.9 -1.3
LADK Ladik-KONYA 82.05 356 P P 14 28 18.6 -0.1
SIRT Sirnak 82.07 348 P P 14 28 19.6 +0.8
VILL Villia 82.09 4 P P 14 28 17.6 -1.2
RLS Riolos of Patr 82.13 5 P P 14 28 19.4 +0.5
KLV Kalavryta, Ach 82.17 4 P P 14 28 19.0 -0.2
CUKT Cukurca 82.20 347 P P 14 28 19.7 +0.2
PTL Penteli 82.22 3 P P 14 28 18.3 -1.2
DRO Drossia 82.24 5 P P 14 28 19.8 +0.2
TAF Taforalt 82.28 25 P P 14 28 22.0 +2.1
SNR=6.7
TAF P P 14 28 22.0 +2.1
SNR=6.7
MAZI Mazidag 82.30 350 P P 14 28 20.3 +0.3
KONT Konya--Tatoy 82.31 356 P P 14 28 20.0 +0.1
SICH Sidi Chahed 82.32 27 P P 14 28 21.2 +1.2
SNR=17
MACC Macarena, Meta 82.35 99 eP P 14 28 14.5 -5.8
SET Setif 82.36 18 P P 14 28 22.0 +1.7
AYDB Zeytinkoy-Aydi 82.38 360 P P 14 28 20.0 -0.4
BATP Bataraza 82.43 274 eP P 14 28 20.7 -0.1
URFA Urfa 82.45 351 P P 14 28 22.0 +1.3
ISP Isparta 82.47 358 P P 14 28 21.0 +0.1
ISP pmax pmax
comp=Z,96nm,1.1s
KMRS Kahramanmaras 82.53 353 P P 14 28 20.6 -0.5
KOZT Kozan 82.61 354 P P 14 28 21.9 +0.4
GCAM G?zelcaml? 82.62 0 P P 14 28 20.9 -0.6
ZHG ZHG 82.64 28 P P 14 28 23.0 +1.2
SNR=14
TRIP Tripoli 82.69 4 P P 14 28 21.6 -0.3
DID Didima 82.75 4 P P 14 28 20.6 -1.6
GAZ Gaziantep 82.84 352 P P 14 28 23.2 +0.5
VLX Vlachokerasia 82.85 4 P P 14 28 22.5 -0.3
KRND KRANIDI 82.87 4 P P 14 28 21.2 -1.5
CHTO Chiang Mai 82.89 295 P P 14 28 22.4 -0.7
CHTO pmax pmax
comp=Z,26nm,1.7s
ITM Ithomi 83.02 5 P P 14 28 23.0 -0.6
ITM Ithomi 83.02 5 IAmb IAmb 14 28 24.4

comp=Z,364nm,1.6s
WAMI Wamena 83.06 250 P P 14 28 26.0 +2.1
CEYT Ceyhan 83.09 354 P P 14 28 24.6 +0.7
TBI Tubuai 83.10 177 eS S 14 38 33.4 -2.3
comp=Z,1µm,31.5s
TBI Tubuai 83.10 177 eLQ LQ 14 50 50.0
comp=Z,537nm,28.2s
TBI eLR LR 14 54 40.0
comp=Z,2µm,34.2s,baz=349
TBI Tubuai 83.10 177 eT T 15 59 37.3
comp=Z,6.2nm,0.3s
YER Yerkesik 83.19 360 P P 14 28 24.5 0.0
CMAR Chiang Mai Arr 83.20 295 P P 14 28 24.1 -0.7
comp=Z,11nm,0.6s,baz=11,slow=5.7,SNR=50
CMAR S S 14 38 37.2 -0.2
comp=Z,0.5nm,0.3s,baz=27,slow=6.1,SNR=2.9
CMAR PKKPbc PKKPbc 14 46 44.5 +3.3
comp=Z,1.7nm,0.6s,baz=223,slow=3.3,SNR=11
CMAR LR LR 15 09 50.0
comp=Z,187nm,18.4s,baz=30,slow=39
APE Apeiranthos 83.24 2⇑P P 14 28 22.7 -2.0
APE Apeiranthos 83.24 2⇑P P 14 28 22.7 -2.0
SRHM Skhour des Reh 83.27 30 P P 14 28 26.0 +1.0
SNR=14
MERS Mersin 83.29 355 P P 14 28 24.4 -0.7
KORT Korkueli 83.30 358 P P 14 28 24.4 -0.8
KEST Kesra 83.38 15 P P 14 28 26.1 +0.5
comp=Z,69nm,1.1s,baz=272,slow=2.4,SNR=40
KEST S S 14 38 41.7 +2.7
comp=Z,2.2nm,0.6s,baz=202,slow=23,SNR=12
KEST LR LR 15 10 01.6
comp=Z,184nm,19.0s,baz=328,slow=39
KEST Kesra 83.38 15 IAmb IAmb 14 28 27.6
comp=Z,154nm,1.2s
CZD Col de Zad 83.41 27 P P 14 28 28.0 +2.0
SNR=76
DALY Dalyan (Mula) 83.50 359 P P 14 28 25.3 -0.7
VLI Velia 83.52 4 P P 14 28 24.8 -1.3
IOSP Ios island 83.58 2 P P 14 28 23.8 -2.6
KIZK Mersin 83.70 355 P P 14 28 26.4 -0.6
MDT Midelt 83.72 27 P P 14 28 28.5 +1.1
comp=Z,140nm,1.0s,baz=356,slow=4.3,SNR=115
MDT S S 14 38 43.3 +0.8
comp=Z,1.4nm,0.7s,baz=240,slow=21,SNR=4.2
MDT Midelt 83.72 27 P P 14 28 28.4 +1.1
SNR=104
KEBE Keben-Mersin 83.75 355 P P 14 28 27.3 -0.1
TEVE Tevekalti-Mers 83.77 355 P P 14 28 27.4 -0.1
SANT Santorini 83.93 2⇑P P 14 28 25.7 -2.6
IKL Isikli 83.96 355 P P 14 28 27.7 -0.7
BOK Bokaro 84.03 309 eP P 14 28 27.2 -1.7
BOK IAmb IAmb 14 28 31.8
comp=Z,20nm,0.9s
RKT Rikitea 84.04 164 eP P 14 28 28.2 -0.5
comp=Z,95nm,0.8s
RKT Rikitea 84.04 164 eS S 14 38 43.2 -2.0
comp=Z,477nm,26.8s
RKT Rikitea 84.04 164 eLR LR 14 55 04.6
comp=Z,3µm,32.2s
TDRA Tendrara 84.07 25 P P 14 28 30.0 +0.8
SNR=26
TDRA P P 14 28 30.0 +0.8
SNR=26
AKAS Kas 84.08 359 P P 14 28 26.4 -2.8
TEKE Tekeli-Mersin 84.08 356 P P 14 28 28.2 -0.8
OUK Oukaimeden 84.48 30 P P 14 28 32.0 +0.5
SNR=14
OUK P P 14 28 32.0 +0.5
SNR=14
GOLM Goulmima 84.71 28 P P 14 28 34.3 +1.9
SNR=12
IMMV Iera Moni Meta 84.81 3 P P 14 28 31.6 -1.1
VAM Vamos 84.87 3 P P 14 28 32.1 -0.9
TTIG Tnine Tigouga, 84.96 31 P P 14 28 33.0 -0.7
SNR=7.4
TTIG P P 14 28 33.0 -0.7
SNR=7.4
IDI Anoyia 85.00 2⇑P P 14 28 31.8 -1.9
OUZM OUZ 85.04 29 P P 14 28 35.0 +0.9
SNR=10
OUZM P P 14 28 35.0 +0.9
SNR=10
LEF Lefka 85.11 356 P P 14 28 33.8 -0.4
ARF Arif 85.14 27 P P 14 28 36.0 +1.4
SNR=10
LAST Lasithi 85.14 2 P P 14 28 33.0 -1.4
FAKI Fak Fak 85.31 256 P P 14 28 35.5 +0.1
comp=Z,2µmcomp=Z,92nm,1.8s
FAKI Fak Fak 85.31 256 IAmb IAmb 14 28 36.5
comp=Z,272nm,1.7s
TZRR Tazzarine 85.44 28 P P 14 28 37.0 +0.9
SNR=17
LBMI Labuha 85.68 261 P P 14 28 38.1 +0.9
comp=Z,55nm,1.2s
ZGR Zagora 86.07 29 P P 14 28 40.0 +0.8
SNR=25
MSAI Masohi 87.31 259 P P 14 28 46.4 +1.2
comp=Z,308nmcomp=Z,21nm,0.9s
MRSI Marisa 87.49 267 P P 14 28 45.8 -0.3
comp=Z,674nmcomp=Z,17nm,0.8s
BHPL Bhopal 87.69 315 eP P 14 28 45.0 -2.0
BHPL i PP PP 14 32 08.5 -4.3
BNDI Bandanaira 87.85 257 P P 14 28 47.1 -0.6
comp=Z,140nm,1.1s
AAI Ambon 87.97 259 P P 14 28 47.9 -0.4
comp=Z,2µmcomp=Z,136nm,1.7s
AAI Ambon 87.97 259 P P 14 28 48.1 -0.2
AAI pmax pmax
comp=Z,133nm,1.7s
NLAI Namlea 88.12 260 P P 14 28 49.3 +0.3
comp=Z,23nm,0.8s
ATAH Atahualpa 88.17 108 LR LR 15 10 36.3
comp=Z,173nm,21.0s,baz=336,slow=37
DZM Mont Dzumac 88.47 218 eP P 14 28 50.1 -0.4
comp=Z,69nm,1.4s
DZM Mont Dzumac 88.47 218 eS S 14 39 25.2 -3.3
comp=Z,592nm,25.8s
DZM Mont Dzumac 88.47 218 eLR LR 14 56 55.8
comp=Z,1µm,25.8s
MPSI Mapaga 88.64 268 P P 14 28 50.7 -0.8
comp=Z,666nmcomp=Z,26nm,1.6s
APSI Ampana 88.83 266 P P 14 28 52.0 -0.4
comp=Z,22nm,1.2s
COEN Coen 89.89 241 P P 14 28 57.1 -0.2
COEN IAmb IAmb 14 28 57.8
comp=Z,173nm,1.6s
RPR Rampur 91.03 312 eP P 14 29 02.5 -0.1
SHME Shamm 91.13 335 P P 14 29 01.7 -1.4
BANOM Banah 91.21 335 P P 14 29 02.7 -0.8
SRSP Sriramsagar 91.31 313 eP P 14 29 02.5 -1.5
SRSP IVmB_BB 14 29 03.3
comp=Z,126nm,4.6s
TTSI Tana Toraja 91.58 267 P P 14 29 04.9 -0.3
comp=Z,485nmcomp=Z,35nm,1.7s
PVM Polavaram 91.61 309 eP P 14 29 04.8 -0.5
PVM IVmB_BB 14 29 05.5
comp=Z,234nm,1.7s
UMQ Umm Al-Quwin 91.74 335 P P 14 29 05.1 -0.7
PTGA Pitinga 91.77 88 LR LR 15 13 27.4
comp=Z,137nm,21.6s,baz=334,slow=37
PTGA Pitinga 91.77 88 P P 14 29 06.5 +0.4
PTGA Pitinga 91.77 88 eP P 14 29 06.4 +0.3
MSFE Esma-Masafi 91.79 335 P P 14 29 05.0 -1.2
MDH Madha 91.82 334 P P 14 29 05.7 -0.6
UOSS Minazif 92.18 334 P P 14 29 06.3 -1.7
NAZ Nazwa, Dubai 92.26 335 P P 14 29 06.8 -1.5
HATD Hatta, Dubai 92.31 334 P P 14 29 07.2 -1.3
MYLAV Mylavaram 92.45 310 eP P 14 29 08.6 -0.6
MYLAV IVmB_BB 14 29 09.6
comp=Z,223nm,1.9s
HYBB Hyderabad (bro 92.62 312 eP P 14 29 08.4 -1.7
HYBB IVmB_BB 14 29 09.4
comp=Z,204nm,2.6s
HYB Hyderabad 92.62 312 iP P 14 29 09.0 -1.1
HYB Hyderabad 92.62 312 eP P 14 29 08.1 -2.0
KLRI Killari 92.74 314 eP P 14 29 08.9 -1.7
KLRI IVmB_BB 14 29 09.9
comp=Z,253nm,2.1s
NNA Nana 93.13 109 LR LR 15 10 17.0
comp=Z,84nm,21.6s,baz=283,slow=35
NJS Nagarjunasagar 93.13 311 eP P 14 29 11.5 -0.9
NJS IVmB_BB 14 29 12.1
comp=Z,231nm,2.6s
MACA Manacapuru-AM 93.50 90 eP P 14 29 13.2 -0.8
ADKI Addanki 93.53 310 eP P 14 29 13.6 -0.6
ADKI IVmB_BB 14 29 14.2

comp=Z,200nm,2.4s
RPN Rapa Nui 93.69 143 LR LR 15 04 27.7
comp=Z,353nm,18.2s,baz=310,slow=31
SRLM Srisailam 93.70 311 *eP* **P 14 29 13.9 -1.2**
SRLM IVmB_BB 14 29 14.5
comp=Z,172nm,1.8s
CTA Charters Tower 94.02 236 P **P 14 29 16.4 +0.1**
comp=Z,16nm,0.8s,baz=29,slow=7.4,SNR=15
CTAO Charters Tower 94.02 236 P **P 14 29 16.9 +0.6**
CTAO pmax pmax
comp=Z,165nm,1.7s
CTAO Charters Tower 94.02 236 P **P 14 29 16.9 +0.6**
MTN Manton Dam 94.46 252 P **P 14 29 17.7 -0.7**
URV Uravakonda 95.37 312 *eP* **P 14 29 19.4 -3.3**
URV IVmB_BB 14 29 21.6
comp=Z,276nm,3.3s
RAYN Ar Rayn 95.49 344 *i* P **P 14 29 23.1 -0.1**
SNR=27
RAYN Ar Rayn 95.49 344 P **P 14 29 22.8 -0.4**
RAYN pmax pmax
comp=Z,44nm,1.2s
RAYN Ar Rayn 95.49 344 P **P 14 29 22.8 -0.4**
RAYN IAmb IAmb 14 29 24.4
comp=Z,44nm,1.1s
SKHT Srikalahasti 95.55 310 *eP* **P 14 29 23.0 -0.4**
SKHT IVmB_BB 14 29 23.6
comp=Z,135nm,1.8s
MALB Monte Alegre 95.59 84 *eP* **P 14 29 23.0 -0.6**
RPSI Rantau Prapat 96.98 288 IAmb IAmb 14 29 30.3
comp=Z,31nm,1.4s
ITTB Itaituba 97.01 87 *eP* **P 14 29 29.9 -0.2**
SAML Samuel 97.21 95 P **P 14 29 30.3 -0.6**
SAML pmax pmax
comp=Z,17nm,0.7s
SAML Samuel 97.21 95 P **P 14 29 30.3 -0.6**
SAML IAmb IAmb 14 29 34.2
comp=Z,17nm,0.7s
SAML Samuel 97.21 95 *eP* **P 14 29 29.7 -1.2**
WR0 Warramunga Arr 99.04 246 P **Pdif 14 29 38.2 -0.8**
WR0 IAmb IAmb 14 29 39.3
comp=Z,36nm,1.8s
WRAB Tennant Creek 99.11 246 P **Pdif 14 29 38.2 -1.1**
WRAB pmax pmax
comp=Z,40nm,1.6s
WRAB Tennant Creek 99.11 246 P **Pdif 14 29 38.2 -1.1**
WRAB IAmb IAmb 14 29 39.6
comp=Z,40nm,1.6s
WB2 Warramunga Arr 99.11 246 P **Pdif 14 29 38.3 -1.0**
WB2 IAmb IAmb 14 29 39.7
comp=Z,56nm,1.7s
WRA Warramunga Arr 99.12 246 P **Pdif 14 29 38.3 -1.1**
comp=Z,3.2nm,0.6s,baz=36,slow=5.7,SNR=24
WRA PP **PP 14 33 43.0 -0.1**
comp=Z,1.3nm,1.0s,baz=3.9,slow=7.5,SNR=2.6
WRA PKiKP **PKiKP 14 34 09.1 0.0**
comp=Z,1.1nm,0.5s,baz=0.7,slow=1.7,SNR=15
WRA S **SKSac 14 40 10.6 +1.6**
comp=Z,1.3nm,1.0s,baz=23,slow=4.7,SNR=5.2
WRA PKKPbc **PKKPbc 14 46 01.9 0.0**
comp=Z,0.7nm,0.5s,baz=221,slow=2.5,SNR=12
WRA LR LR 15 11 06.5
comp=Z,181nm,21.5s,baz=65,slow=33
NPGB Novo Progresso 99.50 88 *eP* **Pdif 14 29 40.3 -1.0**
URZ Urewera 101.14 204 PKiKP **PKiKP 14 34 10.0 -2.1**
comp=Z,8.7nm,0.9s,baz=253,slow=1.7,SNR=2.5
ASAR Alice Springs 102.55 244 P **Pdif 14 29 53.9 -0.7**
comp=Z,1.7nm,0.6s,baz=26,slow=4.5,SNR=42
ASAR PP **PP 14 34 10.1 +1.1**
comp=Z,1.5nm,0.9s,baz=29,slow=5.8,SNR=2.9
ASAR PKiKP **PKiKP 14 34 15.0 -0.3**
comp=Z,1.3nm,0.6s,baz=87,slow=1.9,SNR=13
ASAR S **SKSac 14 40 25.9 +0.4**
comp=Z,1.0nm,0.7s,baz=1.6,slow=3.0,SNR=8.3
ASAR PKKPbc **PKKPbc 14 45 51.2 -1.0**
comp=Z,1.0nm,0.5s,baz=198,slow=2.2,SNR=12
TORD Torodi Ar. Bea 104.11 26 Pdiff **Pdif 14 29 59.8 -2.0**
comp=Z,0.8nm,0.8s,baz=352,slow=4.7,SNR=4.3
TORD PKiKP **PKiKP 14 34 17.8 -0.7**
comp=Z,1.4nm,0.6s,baz=328,slow=2.4,SNR=9.6
TORD PKKPbc **PKKPbc 14 45 48.3 +1.4**
comp=Z,2.8nm,0.6s,baz=158,slow=1.9,SNR=15
SIV San Ignacio 104.28 97 PKiKP **PKiKP 14 34 18.6 0.0**
comp=Z,4.4nm,0.8s,baz=347,slow=8.2,SNR=5.3
SIV PKKPbc **PKKPbc 14 45 50.3 +3.6**
comp=Z,2.6nm,0.7s,baz=150,slow=5.1,SNR=11
SIV SKKPbc SKKPbc 14 49 22.9 +3.3
comp=Z,1.2nm,0.8s,baz=120,slow=4.2,SNR=6.0
STKA Stephens Creek 106.37 234 Pdiff **Pdif 14 30 12.8 +1.5**
comp=Z,1.5nm,1.0s,baz=42,slow=14,SNR=1.9
STKA PKiKP **PKiKP 14 34 21.7 -0.3**
comp=Z,3.2nm,0.6s,baz=124,slow=4.1,SNR=11
STKA PKKPbc **PKKPbc 14 45 36.9 -3.9**
comp=Z,0.5nm,0.3s,baz=162,slow=21,SNR=3.6
STKA PKKPab **PKKPab 14 45 58.0 +2.2**
comp=Z,3.2nm,0.8s,baz=197,slow=1.2,SNR=4.6
RPZ Rata Peaks 107.68 207 PKiKP **PKiKP 14 34 20.2 -3.8**
comp=Z,14nm,1.1s,baz=62,slow=1.5,SNR=3.2
DBIC Dimbokro 108.68 34 PKKPbc PKKPbc 14 45 32.8 -0.1
comp=Z,2.3nm,0.6s,baz=243,slow=2.3,SNR=2.1
DBIC PKKPab **PKKPdf 14 45 48.4 +1.8**
comp=Z,3.6nm,0.7s,baz=127,slow=5.2,SNR=4.7
BDFB Brasilia 110.52 86 PP **PP 14 35 02.9 -4.7**
comp=Z,5.1nm,0.7s,baz=353,slow=6.9,SNR=4.2
CFA Coronel Fontan 113.97 112 PKP **PKiKP 14 34 36.0 -0.4**
comp=Z,4.7nm,0.6s,baz=274,slow=1.2,SNR=11
CFA PKKPbc **PKKPbc 14 45 15.3 -0.9**
comp=Z,1.2nm,0.4s,baz=180,slow=6.1,SNR=2.4
CFA SKKPbc SKKPbc 14 48 54.1 +1.1
comp=Z,1.8nm,0.6s,baz=281,slow=3.3,SNR=4.6
CPUP Villa Florida 114.84 100 PKP PKPdf 14 34 38.0 -0.2
comp=Z,1.8nm,0.5s,baz=353,slow=2.9,SNR=5.4
CPUP PKKPbc **PKKPbc 14 45 15.9 +2.9**
comp=Z,2.1nm,0.6s,baz=166,slow=2.8,SNR=7.7
CPUP SKKPbc SKKPbc 14 48 51.4 +1.8
comp=Z,1.3nm,0.6s,baz=39,slow=2.0,SNR=3.3
CPUP Villa Florida 114.84 100 PKiKP PKPdf 14 34 38.0 -0.1
NWAO Narrogin (SRO) 118.15 253 PKiKP **PKPdf 14 34 44.0 -0.3**
NWAO Narrogin (SRO) 118.15 253 **PKPdf 14 34 44.0 -0.3**
PLCA Paso Flores 120.46 119 PKP **PKiKP 14 34 48.8 +0.1**
comp=Z,8.0nm,0.5s,baz=316,slow=2.9,SNR=42
PLCA PKKPab **PKKPab 14 44 55.8 +1.4**
comp=Z,2.1nm,0.9s,baz=272,slow=1.1,SNR=5.2
PLCA SKKPbc SKKPbc 14 48 38.6 +5.3
comp=Z,3.5nm,1.1s,baz=329,slow=7.1,SNR=3.0
PLCA Paso Flores 120.46 119 *eP* **PKPdf 14 34 48.6 0.0**
CNLB Canela 120.52 96 *eP* **PKiKP 14 34 49.4 +0.2**
KMBO Kilima Mbogo 120.80 349 PKP **PKiKP 14 34 52.7 +2.2**
comp=Z,14nm,0.6s,baz=7.2,slow=1.9,SNR=40
KMBO SKP 14 38 19.5
comp=Z,5.1nm,0.7s,baz=29,slow=3.0,SNR=8.9
KMBO Kilima Mbogo 120.80 349 *i* P **PKiKP 14 34 51.0 +0.5**
SNR=24
LL01 San Ignacio de 121.00 122 **PKPdf 14 34 49.5 0.0**
PLTB Pedras Altas 121.15 100 *eP* **PKPdf 14 34 50.2 +0.1**
USHA Ushuaia 132.38 129 PP PP 14 37 38.1 +2.2
comp=Z,12nm,0.4s,baz=330,slow=6.4,SNR=3.2
EFI East Falkland 134.38 120 PKiKP **PKiKP 14 35 15.4 -0.6**
EFI East Falkland 134.38 120 **PKiKP 14 35 15.4 -0.6**
LSZ Lusaka 135.32 359 PKiKP **PKiKP 14 35 18.9 -0.3**
LSZ Lusaka 135.32 359 **PKiKP 14 35 18.9 -0.3**
VNDA Vanda 140.19 194 PKhKP PKPpre 14 35 18.5
comp=Z,1.2nm,0.6s,baz=51,slow=4.4,SNR=2.3
VNDA PKP **PKPdf 14 35 25.3 +0.7**
comp=Z,3.2nm,0.6s,baz=355,slow=1.3,SNR=7.2
VNDA SKPbc **SKPbc 14 38 53.2 +1.1**
comp=Z,6.1nm,0.9s,baz=322,slow=4.1,SNR=4.8
VNDA SKKPbc **SKKPbc 14 47 24.3 -0.1**
comp=Z,2.8nm,0.8s,baz=262,slow=7.7,SNR=5.1
PMSA Palmer Station 140.77 137 PKhKP PKPpre 14 35 19.1
comp=Z,27nm,1.0s,baz=143,slow=5.1,SNR=1.8
PMSA PKP **PKPdf 14 35 26.2 +0.3**
comp=Z,18nm,0.6s,baz=34,slow=3.1,SNR=4.5
CASY Casey 144.73 224 **PKPdf 14 35 32.6 -0.3**
LBTB Lobatse 144.97 3 PKiKP **PKPdf 14 35 35.1 +0.2**
LBTB Lobatse 144.97 3 **PKPdf 14 35 35.1 +0.2**
H09N1 TRISTAN DA CUNI 145.72 66 PKPbc **PKPab 14 35 36.6 -0.1**
H09W1 TRISTAN DA CUNI 145.74 66 PKPbc **PKPdf 14 35 35.8 +0.2**
BOSA Boshof 148.54 4 PKPbc **PKPbc 14 35 44.2 -0.3**
comp=Z,93nm,0.5s,baz=352,slow=2.3,SNR=209
BOSA Boshof 148.54 4 PKP2 **PKPbc 14 35 44.8 +0.3**
BOSA Boshof 148.54 4 **PKPbc 14 35 44.8 +0.3**
QSPA South Pole Qui 149.83 180 PKPbc **PKiKP 14 35 47.1 -0.2**
comp=Z,140nm,0.7s,baz=109,slow=0.7,SNR=85
SUR Sutherland 151.96 13 **PKiKP 14 35 53.8 +0.7**
VNA3 Neumayer Olymp 161.31 142 PKPab **PKPab 14 36 41.5 +0.1**
VNA1 Neumayer--Stat 161.94 141 PKPab **PKPab 14 36 44.2 +0.2**
VNA2 Neumayer--Watz 162.12 142 PKPab **PKPab 14 36 44.9 +0.1**
MAW Mawson 162.98 229 PKP **PKPdf 14 35 58.6 +0.2**
comp=Z,6.9nm,1.1s,baz=40,slow=2.4,SNR=5.4
MAW PKPab **PKPab 14 36 49.2 +0.5**
comp=Z,27nm,0.9s,baz=90,slow=5.9,SNR=14
SYO Syowa Base 169.67 204⇓ *eP* **PKPdf 14 35 57.6 -5.9**
SYO Syowa Base 169.67 204⇑ *i*PKPdf **PKPdf 14 36 05.0 +1.5**
SYO Syowa Base 169.67 204⇑ *i*pPKPdf pPKPdf 14 36 30.0 +1.0

MAN 10 14:22:52.8, 10.01N×124.09E, h6km, mb4.2, ML3.0, MS2.7, 2D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.33**	**338**	⇓*i*	P	Pb	14 23 00.4	-0.7
LLP				*i*	S	Sb	14 23 06.9	+0.3
TBP	**Tagbilaran**	**0.39**	**215**	*e*	P	Pb	14 23 03.3	+1.1
TBP				*i*	S	Sb	14 23 09.0	+0.5
MSLP	**Maasin**	**0.77**	**81**	*e*	P	Pg	14 23 07.4	-0.2
MSLP				*e*	S	Sn	14 23 21.8	-0.3
SNPH	**Sibulan**	**1.07**	**232**	⇓*i*	P	Pg	14 23 12.7	-0.8
SNPH				*i*	S	Sb	14 23 28.2	+0.1
OCLP	**Ormoc**	**1.15**	**26**	*e*	P	Pb	14 23 15.1	-0.1
OCLP				*e*	S	Sn	14 23 35.0	+3.4
GUIM	**Jordan**	**1.60**	**293**	*e*	P	Pn	14 23 20.1	-1.5
GUIM				*e*	S	Sb	14 23 43.0	-0.2
PAGZ	**Pagadian**	**2.26**	**198**	*e*	P	Pn	14 23 30.9	+0.1
PAGZ				*e*	S	Sn	14 24 00.5	+1.5

*ATA **10** 14:40:35.4±1.1, 40.52N×42.61E, h50km±912km, ML2.3, MW3.6*
*ISK **10** 14:40:36.6, 40.66N×42.50E, h4km, ML2.5/7*
*DDA **10** 14:40:36.8, 40.60N×42.51E, h7km±3km, ML2.2*
*TIF **10** 14:40:40.4, 40.57N×42.48E, h19km*
ISC 10 14:40:36.6±0.9, 40.61N±0.03×42.55E±0.02, h13km±7km, **n25**, σ0**.95**/40, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SENK	**Senkaya-Erzuru**	**0.16**	**252**		PG	**Pg**	**14 40 40.1**	**-0.4**
SENK					SG	**Sg**	**14 40 43.4**	**+0.1**
KARS	**Kars**	**0.41**	**87**		PG	**Pb**	**14 40 45.9**	**+0.1**
KARS					SG	**Sb**	**14 40 53.4**	**+1.4**
DIGO	**Kars**	**0.66**	**107**	*e*	P	**Pg**	**14 40 50.0**	**+0.4**
DIGO				*e*	S	**Sb**	**14 40 59.5**	**+0.1**
DIGO					IAML		14 41 01.3	
comp=Z,35nm,0.1s								
DIGO	**Kars**	**0.66**	**107**	*i*	P	**Pb**	**14 40 50.4**	**+0.2**
DIGO				*i*	S	**Sb**	**14 40 59.9**	**+0.4**
DIGO					IAML		14 41 00.0	
comp=E,228nm,0.4s								
DIGO					IAML		14 41 03.0	
comp=N,208nm,0.5s								
DDEM	**Demirkent**	**0.67**	**295**	*i*	P	**Pg**	**14 40 49.5**	**-0.1**
DDEM				*i*	S	**Sb**	**14 40 59.2**	**-0.3**
DAGI	**Agillar**	**0.67**	**314**	*i*	P	**Pg**	**14 40 49.7**	**0.0**
DAGI				*i*	S	**Sb**	**14 40 59.7**	**+0.2**
DAGI					IAML		14 41 01.0	
comp=N,83nm,0.6s								
DAGI					IAML		14 41 01.0	
comp=E,92nm,0.5s								
HOMI	**Horasan**	**0.75**	**221**	*e*	P	**Pg**	**14 40 51.2**	**+0.1**
HOMI					IAML		14 41 09.2	
comp=Z,47nm,0.4s								
DBAD	**Bademkaya**	**0.76**	**303**	*i*	P	**Pg**	**14 40 51.2**	**-0.3**
DBAD					IAML		14 41 02.0	
comp=E,104nm,0.5s								
DBAD					IAML	**S**	**14 41 02.0**	**+0.5**
comp=N,155nm,0.7s								
DBAD				*i*	S	**S**	**14 41 02.0**	**+0.5**
EAK	**Akyaka**	**0.81**	**84**	*e*	P	**Pg**	**14 40 52.2**	**-0.2**
EAK				*e*	S	**Sn**	**14 41 05.4**	**-0.6**
EAK					IAML		14 41 11.8	
comp=Z,53nm,0.4s								
EAK	**Akyaka**	**0.81**	**84**	*i*	P	**Pg**	**14 40 52.7**	**+0.4**
EAK				*i*	S	**Sn**	**14 41 05.7**	**-0.3**
EAK					IAML		14 41 06.0	
comp=N,102nm,0.3s								
EAK					IAML		14 41 06.0	
comp=E,54nm,0.5s								
KOPR	**Koprukoy-ERZUR**	**0.81**	**221**		PG	**Pb**	**14 40 52.9**	**+0.1**
KOPR					SG	**Sn**	**14 41 05.4**	**-0.6**
EPOS	**Posof**	**0.90**	**9**	*e*	P	**Pb**	**14 40 54.1**	**-0.2**
EPOS					IAML		14 41 17.8	
comp=Z,18nm,0.6s								
EPOS	**Posof**	**0.90**	**9**	*i*	P	**Pg**	**14 40 54.9**	**+0.8**
DBOC	**Borcka**	**0.99**	**318**	*i*	P	**Pb**	**14 40 55.2**	**-0.6**
AKDA	**Akdag**	**1.03**	**241**	*e*	P	**Pb**	**14 40 56.0**	**-0.6**
AKDA				*e*	S	**Sn**	**14 41 13.7**	**+2.1**
AKDA					IAML		14 41 19.5	
comp=Z,73nm,0.5s								
AKDA	**Akdag**	**1.03**	**241**	*i*	P	**Pn**	**14 40 58.1**	**+1.0**
AKH	**Akhalkalaki**	**1.07**	**42**		PG	**Pn**	**14 40 57.7**	**+0.1**
AKH					SG	**Sn**	**14 41 13.1**	**+0.6**
BCA	**Borcka**	**1.09**	**320**		PG	**Pb**	**14 40 57.0**	**-0.4**
BCA					SG	**Sg**	**14 41 11.7**	**-0.1**
AGRB	**Hanur-Agry**	**1.09**	**162**		PN	**Pg**	**14 40 59.2**	**+1.6**
BATM	**Batumi**	**1.18**	**327**		PN	**Pn**	**14 40 58.6**	**-0.3**
KRIK	**Erzurum-spir**	**1.26**	**258**	*e*	P	**Pn**	**14 40 59.6**	**-0.6**
KRIK				*e*	S	**Sg**	**14 41 18.0**	**+0.6**
KRIK					IAML		14 41 27.3	
comp=Z,1μm,0.5s								
IGDI	**IGDIR**	**1.39**	**122**	*e*	P	**Pn**	**14 40 58.2**	**-3.6**
IGDI					IAML		14 41 24.6	
comp=Z,2.1nm,0.6s								
CHOM	**Cayeli-Rize**	**1.44**	**290**		PN	**Pb**	**14 41 03.6**	**+0.3**
KOPT	**Kop Dagi**	**1.67**	**250**	*e*	P	**Pn**	**14 41 04.4**	**-1.5**
KOPT					IAML		14 41 47.7	
comp=Z,17nm,1.1s								
BAYB	**BAYBURT**	**1.78**	**259**	*e*	P	**Pn**	**14 41 05.9**	**-1.4**
BAYB					IAML		14 41 40.9	
comp=Z,8.3nm,0.4s								

*NNC **10** 14:47:04.7±3.6, 38.79N×73.43E, h184km±88km, mb2.3, mpv3.2, Error ellipse: s-maj=57.2km s-min=18.7km az=10.0*
*IDC **10** 14:47:24.9±44.0, 39.44N×74.01E, h342km±310km, mb2.9/3, mb1 2.8/6, mb1mx2.5/54, mbtmp3.6/6, ML3.0/3, Error ellipse: s-maj=418.8km s-min=99.9km az=179.0*
ISC 10 14:47:04.8±2.4, 38.7N±0.2×73.5E±0.1, h150km, **n10**, σ1**81**/13, **mb3.6**/3, **4C-1D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.05**	**11**	⇑	P	**Pn**	**14 48 05.1**	**-0.7**
1.2nm,0.4s								
AAK					S	**Sn**	**14 48 54.2**	**+0.9**
18nm,1.1s								
TKM2	**Tokmak 2**	**4.56**	**20**	⇑	P	**Pn**	**14 48 11.1**	**-1.4**
2.2nm,0.6s								
TKM2				⇑	S	**Sn**	**14 49 03.6**	**-1.6**
7.8nm,0.8s								
KK31	**Karatay Array**	**4.98**	**334**	⇑	P	**Pn**	**14 48 16.8**	**-1.0**
7.5nm,0.7s,baz=142,slow=12,SNR=30								
KK31				⇓	S	**Sn**	**14 49 13.2**	**-1.7**
9.6nm,0.7s,baz=150,slow=21,SNR=14								
KURBB	**Kurchatov Arra**	**12.49**	**15**		P	**Pn**	**14 50 01.1**	**+3.8**
0.0nm,0.3s,baz=204,slow=10,SNR=7.0								
AB31	**Akbulak array**	**14.37**	**322**		P	**Pn**	**14 50 19.3**	**-1.8**
0.9nm,0.6s,baz=135,slow=12,SNR=8.9								
BVAR	**Borovoye Array**	**14.53**	**353**		P	**P**	**14 50 27.0**	**+1.5**
0.2nm,0.3s,baz=165,slow=13,SNR=5.2								
ZALV	**Zalesovo Beam**	**17.15**	**23**		P	**P**	**14 50 53.9**	**-0.6**
0.4nm,0.3s,baz=207,slow=12,SNR=12								
FINES	**FINESS Array B**	**36.85**	**324**		P	**P**	**14 53 58.2**	**+0.1**
0.6nm,0.5s,baz=105,slow=15,SNR=5.2								
HFS	**Hagfors**	**42.62**	**320**		P	**P**	**14 54 45.9**	**0.0**
1.2nm,0.7s,baz=95,slow=11,SNR=5.7								
NOA	**NORSAR Array B**	**43.88**	**322**		P	**P**	**14 54 54.5**	**-1.5**
0.3nm,0.7s,baz=91,slow=7.7,SNR=3.6								

*NEIC **10** 14:52:22.2±2.0, 43.69N±0.08×146.56E±0.08, h69km±7km, mb4.4/17, Error ellipse: s-maj=11.4km s-min=7.7km az=167.0*
*MOS **10** 14:52:22.3±1.1, 43.68N×146.52E, h83km, mb4.1/14, Error ellipse: s-maj=8.3km s-min=6.4km az=86.8*
*IDC **10** 14:52:23.3±0.6, 43.73N×146.44E, h74km±5km, mb3.7/28, mb1 3.9/36, mb1mx3.8/53, mbtmp4.1/36, Error ellipse: s-maj=13.1km s-min=9.8km az=130.0*
*SKHL **10** 14:52:23.9±0.3, 43.69N×146.38E, h90km±4km, mb5.1/10, msh6.4/5*
*JMA **10** 14:52:24.1±0.1, 43.59N×146.51E, h75km±1km, M3.9*
JMA Felt I /1:
ISC 10 14:52:23.4±0.5, **43.67N**±0.05×**146.52E**±0.05, **h77**km±4km, **h77**km:**pP-P, n154**, σ1**98**/180, **mb4.1**/45, **16C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.60**	**308**	*i*	P	**Pn**	**14 52 38.2**	**+0.5**
YUK					AMB	AMB	14 52 40.0	
500nm,0.3s								
YUK					AMB	AMB	14 52 40.0	
900nm,0.3s								
YUK					AMB	AMB	14 52 40.0	
1μm,0.3s								
YUK				*i*	S	**Sn**	**14 52 48.8**	**+0.4**
YUK					A	A	14 52 52.0	
10μm,0.3s								
YUK					A	A	14 52 52.0	
7μm,0.3s								
YUK	**Yuzh-Kuril'sk**	**0.60**	**308**	*d*	PN	**Pn**	**14 52 38.1**	**+0.4**
YUK				*i*	S	**Sn**	**14 52 48.8**	**+0.4**
YUK					pmax	pmax		
comp=Z,2332μm,0.2s								
YUK					pmax	pmax		
comp=N,498μm,0.1s								
YUK					pmax	pmax		
comp=E,903μm,0.1s								
YUK					smax	smax		
comp=N,10μm,0.2s								
YUK					smax	smax		
comp=E,7μm,0.2s								
GRPR	**Tuman**	**0.63**	**302**	*e*	P	**Pn**	**14 52 38.1**	**+0.1**
GRPR					AMB	AMB	14 52 39.0	
comp=E,1μm,0.3s								
GRPR				*i*	S	**Sn**	**14 52 48.8**	**-0.1**
GRPR					A	A	14 52 49.0	
comp=E,13μm,0.4s								
GRPR					A	A	14 52 49.0	
comp=E,12μm,0.4s								
GRPR	**Tuman**	**0.63**	**302**	*e*	PN	**Pn**	**14 52 38.1**	**+0.1**
GRPR				*i*	S	**Sn**	**14 52 48.5**	**-0.4**
GRPR					pmax	pmax		
comp=Z,1μm,0.2s								
GRPR					smax	smax		
comp=N,13μm,0.3s								
GRPR					smax	smax		
comp=E,12μm,0.3s								
NEM2	**Nemuro 2**	**0.64**	**242**	⇑	P	**Pn**	**14 52 38.5**	**+0.4**
NEM2					S	**Sn**	**14 52 49.0**	**0.0**
NMR	**Nemuro--Hokkai**	**0.65**	**243**	*i*	P	**Pn**	**14 52 38.1**	**-0.1**
NMR				*i*	S	**Sn**	**14 52 48.8**	**-0.3**
NMR	**Nemuro--Hokkai**	**0.65**	**243**	⇑	PN	**Pn**	**14 52 38.1**	**-0.1**
NMR				*i*	S	**Sn**	**14 52 48.6**	**-0.5**
LAGR	**Lagunnoye**	**0.66**	**307**	*e*	P	**Pn**	**14 52 38.5**	**+0.2**
LAGR					AMB	AMB	14 52 40.0	
comp=E,440nm,0.3s								
LAGR					AMB	AMB	14 52 40.0	
comp=E,420nm,0.3s								
LAGR					AMB	AMB	14 52 40.0	
comp=E,1μm,0.3s								
LAGR				*i*	S	**Sn**	**14 52 49.2**	**-0.2**
LAGR					A	A	14 52 51.0	
comp=E,17μm,0.4s								
LAGR					A	A	14 52 51.0	
comp=E,11μm,0.4s								
LAGR	**Lagunnoye**	**0.66**	**307**	*e*	PN	**Pn**	**14 52 38.3**	**0.0**
LAGR				*i*	S	**Sn**	**14 52 49.2**	**-0.2**
LAGR					pmax	pmax		
comp=Z,1μm,0.3s								
LAGR					pmax	pmax		
comp=N,437nm,0.2s								
LAGR					pmax	pmax		
comp=E,418nm,0.2s								
LAGR					smax	smax		
comp=E,11μm,0.2s								
LAGR					smax	smax		
comp=N,17μm,0.4s								
GLVR	**Golovnino**	**0.73**	**276**	*e*	P	**Pn**	**14 52 39.7**	**+0.7**
GLVR					AMB	AMB	14 52 40.0	
comp=N,2μm,0.4s								
GLVR				*i*	S	**Sn**	**14 52 51.9**	**+1.3**
GLVR					A	A	14 52 57.0	
comp=N,16μm,0.4s								
GLVR					A	A	14 52 57.0	
comp=N,9μm,0.4s								
GLVR	**Golovnino**	**0.73**	**276**	*e*	PN	**Pn**	**14 52 39.8**	**+0.7**
GLVR				*i*	S	**Sn**	**14 52 51.9**	**+1.3**
GLVR					pmax	pmax		
comp=Z,2μm,0.1s								
GLVR					smax	smax		
comp=E,9μm,0.2s								
GLVR					smax	smax		
comp=N,16μm,0.3s								
JRA	**Rausu**	**1.04**	**286**	⇑	P	**Pn**	**14 52 43.8**	**+1.1**
JRA					S	**Sn**	**14 52 58.4**	**+1.2**
JNSB	**Nemuroshibetsu**	**1.10**	**276**	⇑	P	**Pn**	**14 52 44.5**	**+1.1**
JNSB					S	**Sn**	**14 52 59.9**	**+1.4**
JKHN	**Kushirohamanak**	**1.15**	**240**	⇑	P	**Pn**	**14 52 44.6**	**+0.6**
JNK	**Nakash**	**1.31**	**267**		P	**Pn**	**14 52 46.4**	**+0.4**
JAK	**Akkeshi**	**1.49**	**244**	⇑	P	**Pn**	**14 52 48.7**	**+0.4**
JAK					S	**Sn**	**14 53 07.0**	**-0.2**
KUR	**Kuril'sk**	**1.84**	**31**	*i*	P	**Pn**	**14 52 54.7**	**+1.7**
KUR					AMB	AMB	14 52 55.0	
comp=N,500nm,0.3s								
KUR				*i*	S	**Sn**	**14 53 16.8**	**+1.2**
KUR					A	A	14 53 19.0	
comp=N,1μm,0.4s								
KUR					A	A	14 53 19.0	
comp=N,2μm,0.4s								
KUR	**Kuril'sk**	**1.84**	**31**	*c*	PN	**Pn**	**14 52 54.7**	**+1.7**
KUR				*i*	S	**Sn**	**14 53 16.7**	**+1.2**
JTKR	**Abashiri--Toko**	**1.91**	**280**	⇓	P	**Pn**	**14 52 55.2**	**+1.3**
JAR	**Ashorobuto**	**2.03**	**261**	⇑	P	**Pn**	**14 52 56.8**	**+1.2**
JAR					S	**Sn**	**14 53 21.0**	**+0.9**
JOB	**Onbets**	**2.10**	**250**	⇑	P	**Pn**	**14 52 57.4**	**+0.9**
JOB					S	**Sn**	**14 53 22.0**	**+0.3**
JMP	**Maruseppu**	**2.31**	**280**	⇓	P	**Pn**	**14 53 00.7**	**+1.4**
JCH	**Churui**	**2.54**	**247**	⇑	P	**Pn**	**14 53 02.6**	**+0.3**
JKK2	**Kamakawa 2**	**2.74**	**276**	⇓	P	**Pn**	**14 53 06.9**	**+1.8**
JKA	**Kamikawa-asahi**	**2.87**	**280**		P	**Pn**	**14 53 08.8**	**+2.0**
JKA	**Kamikawa-asahi**	**2.87**	**280**			**Pn**	**14 53 08.8**	**+2.0**
ASAJ	**Asahikawa**	**2.87**	**280**		P	**Pn**	**14 53 08.8**	**+2.0**
comp=N,12nm,0.3s,baz=101,slow=8.6,SNR=163								
ASAJ					S	**Sn**	**14 53 43.0**	**+2.6**
comp=N,11nm,0.3s,baz=76,slow=32,SNR=6.4								
ERM	**Erimo**	**2.97**	**237**	*ce*	PN	**Pn**	**14 53 10.5**	**+2.3**
ERM					pmax	pmax		
comp=Z,224nm,1.0s								
ERM	**Erimo**	**2.97**	**237**			**Pn**	**14 53 10.3**	**+2.1**
YSS	**Yuzh-Sakhalins**	**4.22**	**322**	*e*	P	**Pn**	**14 53 25.5**	**+0.3**
YSS					AMB	AMB	14 53 30.1	
comp=Z,50nm,0.4s								
YSS				*e*	S	**Sn**	**14 54

KLR	Kul'dur	11.60	304	*eP*		Pn	14 55 07.7	+1.9	
KLR	Kul'dur	11.60	304	*ce*PN		Pn	14 55 07.7	+1.9	
KLR				pmax	pmax				
	comp=Z,1.0nm,0.4s								
JHJ	Hachijo jima 2	11.77	209	P		Pn	14 55 07.0	-1.2	
	comp=Z,7.4nm,0.3s,baz=293,slow=23,SNR=6.7								
JHJ				S		Sn	14 57 07.6	-10	
	comp=Z,9.8nm,0.3s,baz=96,slow=23,SNR=6.1								
PETK	Petropavlovsk-	12.01	34	P		Pn	14 55 10.5	-0.9	
	comp=Z,0.5nm,0.3s,baz=186,slow=9.1,SNR=14								
PET	Petropavlovsk	12.35	36	*eP*		Pn	14 55 16.0	+0.1	
PET	Petropavlovsk	12.35	36	*i* PN		Pn	14 55 14.9	-1.0	
EKMR	Ekimchan	13.01	321	*eP*		Pn	14 55 24.2	-0.8	
KSRS	Korea Array	15.42	253	P		Pn	14 55 54.5	-1.8	
	comp=Z,0.1nm,0.3s,baz=56,slow=12,SNR=6.0								
BMKR	Bomnak	15.94	320	*eP*		Pn	14 55 59.5	-3.2	
MA2	Magadan	16.14	8	P		P	14 56 06.1	-1.1	
	comp=Z,0.2nm,0.3s,baz=260,slow=6.1,SNR=4.6								
MA2	Magadan	16.14	8	P		P	14 56 07.3	+0.2	
ZEA	Zeya	16.18	315	*eP*		Pn	14 56 02.4	-3.3	
JCJ	Chichijima	16.90	193	P		Pn	14 56 14.8	-0.1	
	comp=Z,1.8nm,0.3s,baz=137,slow=23,SNR=7.7								
SEY	Seymchan	19.60	8	P		P	14 56 43.8	-1.3	
	comp=Z,0.2nm,0.3s,baz=167,slow=8.8,SNR=4.9								
SEY	Seymchan	19.60	8	*i* P		P	14 56 45.6	+0.5	
BILL	Bilibino	26.57	17	*eP*		P	14 57 55.3	+1.5	
BILL	Bilibino	26.57	17	*i* P		P	14 57 55.3	+1.5	
BILL				pmax	pmax				
	comp=Z,3.0nm,1.6s								
ULN	Ulaanbaatar	27.64	293	*eP*		P	14 58 03.9	+0.2	
ULN	Ulaanbaatar	27.64	293	*ce*P		P	14 58 03.9	+0.2	
ULN				pmax	pmax				
	comp=Z,7.0nm,0.8s								
SONM	Songino Array	28.08	293	P		P	14 58 07.3	-0.3	
	comp=Z,4.1nm,0.8s,baz=85,slow=8.6,SNR=26								
H11N2	WAKE ISLAND Hy	29.34	138	T		T	15 29 18.3		
	baz=329,slow=75,SNR=160								
TIXI	Tiksi	29.35	349	*eP*		P	14 58 18.8	+0.3	
TIXI	Tiksi	29.35	349	*i* P		P	14 58 18.8	+0.3	
TIXI				pmax	pmax				
	comp=Z,5.0nm,3.1s								
H11N1	WAKE ISLAND Hy	29.35	138	T		T	15 29 19.9		
	baz=329,slow=75,SNR=201								
H11N3	WAKE ISLAND Hy	29.36	138	T		T	15 29 21.7		
	baz=329,slow=75,SNR=123								
TLY	Talaya	29.60	301	*eP*		P	14 58 19.3	-1.6	
TLY	Talaya	29.60	301	*i* P		P	14 58 19.3	-1.6	
TLY				pmax	pmax				
	comp=Z,1.0nm,0.9s								
H11S1	WAKE ISLAND Hy	30.30	140	T		T	15 30 27.6		
	baz=330,slow=76,SNR=102								
H11S3	WAKE ISLAND Hy	30.30	140	T		T	15 30 28.2		
	baz=330,slow=76,SNR=75								
H11S2	WAKE ISLAND Hy	30.32	140	T		T	15 30 27.9		
	baz=330,slow=76,SNR=13								
KDAK	Kodiak Island	39.64	47	P		P	14 59 47.0	-0.2	
	comp=Z,3.5nm,0.5s,baz=235,slow=1.9,SNR=7.4								
KDAK	Kodiak Island	39.64	47	P		P	14 59 46.8	-0.5	
KDAK				IAmb	IAmb		15 00 01.2		
	comp=Z,11nm,1.2s								
DGZ	Jazzator, Alta	40.06	300	*i* P		P	14 59 51.8	+0.8	
DGZ				pmax	pmax				
	comp=Z,1.0nm,1.0s								
KTH	Kantishna Hill	40.10	38	P		P	14 59 50.8	-0.3	
KTH				IAmb	IAmb		14 59 53.4		
	comp=Z,5.3nm,0.9s								
ZALV	Zalesovo Beam	40.68	307	P		P	14 59 55.3	-0.6	
	comp=Z,1.6nm,0.4s,baz=83,slow=7.5,SNR=9.3								
ZALV				PcP		PcP	15 01 56.4	+0.3	
	comp=Z,1.8nm,0.5s,baz=95,slow=1.9,SNR=11								
ZALV	Zalesovo Beam	40.68	307	*i* P		P	14 59 55.2	-0.7	
ZALV				pmax	pmax				
	comp=Z,2.0nm,0.4s								
NEA	Nenana	40.89	36	P		P	14 59 58.7	+1.2	
NEA				IAmb	IAmb		14 59 59.2		
	comp=Z,3.1nm,0.7s								
ILAR	Eielson Array	41.83	36	P		P	15 00 05.5	+0.4	
	comp=Z,0.9nm,0.5s,baz=272,slow=7.6,SNR=18								
SCM	Sheep Creek Mo	41.86	41	P		P	15 00 02.9	-2.6	
SCM				pmax	pmax				
	comp=Z,14nm,0.7s								
SCM	Sheep Creek Mo	41.86	41	P		P	15 00 02.9	-2.6	
PRP	Porcupine Dome	42.36	35	P		P	15 00 08.2	-1.5	
PRP				IAmb	IAmb		15 00 11.5		
	comp=Z,2.8nm,0.6s								
MK31	Makanchi Array	44.22	297	P		P	15 00 23.8	-0.9	
MK31				pmax	pmax				
	comp=Z,4.0nm,0.7s								
MK31	Makanchi Array	44.22	297	P		P	15 00 23.8	-0.9	
MK31				IAmb	IAmb		15 00 24.9		
	comp=Z,4.3nm,0.7s								
MKAR	Makanchi Array	44.22	297	P		P	15 00 24.1	-0.6	
	comp=Z,4.6nm,0.7s,baz=81,slow=8.5,SNR=30								
MKAR				PcP		PcP	15 02 08.0	0.0	
	comp=Z,0.6nm,0.6s,baz=44,slow=3.7,SNR=3.6								
KURK	Kurchatov	45.20	304	*eP*		P	15 00 31.3	-1.0	
KURK	Kurchatov	45.20	304	*i* P		P	15 00 31.3	-1.0	
KURK				pmax	pmax				
	comp=Z,2.0nm,0.4s								
KURK	Kurchatov	45.20	304	P		P	15 00 31.5	-0.8	
KURK				IAmb	IAmb		15 00 32.0		
	comp=Z,4.0nm,0.5s								
KURBB	Kurchatov Arra	45.28	304	P		P	15 00 31.8	-1.2	
	comp=Z,3.0nm,0.5s,baz=74,slow=8.0,SNR=28								
KURBB				PcP		PcP	15 02 11.6	+0.1	
	comp=Z,0.7nm,0.8s,baz=75,slow=3.3,SNR=7.1								
HYT	Haines Junctio	46.69	41	P		P	15 00 45.2	+1.1	
HYT				IAmb	IAmb		15 00 47.7		
	comp=Z,4.8nm,0.8s								
INK	Inuvik	46.71	30	P		P	15 00 44.5	+0.5	
	comp=Z,0.5nm,0.3s,baz=301,slow=10,SNR=12								
INK	Inuvik	46.71	30	P		P	15 00 44.1	+0.1	
CMAR	Chiang Mai Arr	47.06	253	P		P	15 00 48.0	+0.7	
	comp=Z,0.7nm,0.6s,baz=42,slow=7.6,SNR=6.3								
BVAR	Borovoye Array	49.20	309	P		P	15 01 03.1	-0.4	
	comp=Z,0.6nm,0.4s,baz=80,slow=8.2,SNR=7.0								
BVAR				PcP		PcP	15 02 25.7	+0.2	
	comp=Z,0.6nm,0.3s,baz=92,slow=4.7,SNR=5.4								
BRVK	Borovoye	49.25	309	*eP*		P	15 01 03.6	-0.2	
BRVK	Borovoye	49.25	309	*i* P		P	15 01 03.6	-0.2	
BRVK				pmax	pmax				
	comp=Z,1.0nm,0.9s								
TAPN	Taplejung	49.55	271	*eP*		P	15 01 06.9	+0.1	
	comp=Z,16nm,0.9s								
TKM2	Tokmak 2	50.13	295	P		P	15 01 11.3	+0.4	
	SNR=11								
JIRN	Jiri	50.48	272	*eP*		P	15 01 14.7	+0.8	
GUN	Gumba	50.56	273	*eP*		P	15 01 14.7	+0.2	
	comp=Z,31nm,0.7s								
RAMN	Ramite	50.59	271	*eP*		P	15 01 14.6	0.0	
	comp=Z,29nm,0.6s								
KBK	Karagaybulak	50.67	295	P		P	15 01 15.3	+0.3	
	SNR=5.2								
USP	Ospenovka	50.69	296	P		P	15 01 15.3	+0.3	
	SNR=6.1								
KZA	Kyzart	50.74	294	P		P	15 01 16.8	+1.0	
	SNR=7.1								
AAK	Ala-Archa	50.98	295	P		P	15 01 16.8	-0.5	
	comp=Z,3.0nm,0.4s,baz=89,slow=8.0,SNR=8.8								
AAK	Ala-Archa	50.98	295	*eP*		P	15 01 17.2	-0.1	
AAK	Ala-Archa	50.98	295	*ce*P		P	15 01 17.2	-0.1	
AAK				pmax	pmax				
	comp=Z,2.0nm,0.6s								
AAK	Ala-Archa	50.98	295	P		P	15 01 16.1	-1.2	
AAK				IAmb	IAmb		15 01 17.8		
	comp=Z,3.4nm,0.5s								
KKN	Kakani	51.06	273	*eP*		P	15 01 18.7	+0.6	
PKI	Pulchoki	51.09	273	*eP*		P	15 01 18.6	+0.1	
PKIN	Phulchoki	51.10	273	*eP*		P	15 01 18.6	+0.1	
DMN	Daman	51.29	273	*eP*		P	15 01 20.4	+0.5	
	comp=Z,10nm,0.7s								
GKN	Gorkha	51.41	274	*eP*		P	15 01 20.5	-0.1	
EKS2	Erkin-Say	51.44	296	P		P	15 01 20.7	+0.1	
	SNR=8.8								
DANN	Dangsing	51.84	275	*eP*		P	15 01 24.6	+0.5	
	comp=Z,16nm,0.5s								
KOLN	Koldanda	52.29	274	*eP*		P	15 01 27.3	0.0	
KK31	Karatay Array	53.34	298	P		P	15 01 34.1	-0.5	
KK31				pmax	pmax				
	comp=Z,5.0nm,0.8s								
KK31	Karatay Array	53.34	298	P		P	15 01 34.1	-0.5	
KKAR	Karatay Array	53.34	298	P		P	15 01 34.2	-0.4	
KKAR				pmax	pmax				
	comp=Z,5.0nm,0.8s								
KKAR	Karatay Array	53.34	298	P		P	15 01 34.2	-0.4	
GAR	Garm	55.52	293	P		P	15 01 50.1	-0.5	
YKA	Yellowknife Ar	56.13	34	P		P	15 01 54.2	-0.1	
	comp=Z,0.4nm,0.8s,baz=299,slow=6.6,SNR=6.4								
YKA				pP		pP	15 02 13.7	-0.1	
	comp=Z,0.6nm,0.7s,baz=298,slow=6.6,SNR=6.8								
YKA				PP		PP	15 04 01.8	+2.1	
	comp=Z,0.4nm,0.8s,baz=270,slow=3.9,SNR=5.6								
ARCES	ARCESS Array B	59.16	339	P		P	15 02 15.1	-0.5	
	comp=Z,1.4nm,0.9s,baz=46,slow=6.9,SNR=4.8								
GEYT	Alibeck	64.08	298	P		P	15 02 49.0	-0.1	
	comp=Z,2.0nm,0.6s,baz=169,slow=0.8,SNR=4.9								
WRA	Warramunga Arr	64.27	193	P		P	15 02 50.3	-0.2	
	comp=Z,1.0nm,0.4s,baz=8.3,slow=6.7,SNR=19								
WRA	Warramunga Arr	64.27	193	*ce*P		P	15 02 51.0	+0.6	
WRA				pmax	pmax				
	comp=Z,1.0nm,0.4s								
FINES	FINESS Array B	64.74	333	P		P	15 02 51.3	-1.7	
	comp=Z,1.1nm,0.6s,baz=40,slow=8.0,SNR=12								
FINES	FINESS Array B	64.74	333	*i* P		P	15 02 51.2	-1.8	
FINES				pmax	pmax				
	comp=Z,1.0nm,0.6s								
AS31	Alice Springs	67.99	192	P		P	15 03 13.8	-0.4	
ASAR	Alice Springs	67.99	192	P		P	15 03 15.3	+1.1	
	comp=Z,2.2nm,0.7s,baz=8.3,slow=5.3,SNR=51								
NVAR	Mina Array Bea	68.01	58	P		P	15 03 16.1	+1.5	
	comp=Z,0.1nm,0.4s,baz=284,slow=7.3,SNR=2.0								
NVAR				pP		pP	15 03 34.4	-0.2	
	comp=Z,0.6nm,0.7s,baz=283,slow=8.4,SNR=4.6								
KIV	Kislovodsk	69.48	312	*eP*		P	15 03 24.8	+1.4	
KIV	Kislovodsk	69.48	312	*eP*		P	15 03 24.8	+1.4	
KIV				pmax	pmax				
	comp=Z,30nm,1.0s								
KBZ	Khabaz	69.51	311	P		P	15 03 24.2	+0.8	
	comp=Z,4.9nm,0.8s,baz=20,slow=3.2,SNR=12								
NB2	NORSAR Subarra	69.51	339	P		P	15 03 22.7	-0.6	
	comp=Z,1.4nm,0.8s,baz=32,slow=6.9								
NOA	NORSAR Array B	69.51	339	P		P	15 03 22.5	-0.8	
	comp=Z,0.4nm,0.5s,baz=32,slow=6.2,SNR=8.5								
HFS	Hagfors	69.59	337	P		P	15 03 22.8	-1.0	
	comp=Z,1.2nm,0.4s,baz=54,slow=7.5,SNR=15								
PDAR	Pinedale Array	70.31	49	P		P	15 03 27.9	-0.9	
	comp=Z,0.1nm,0.3s,baz=290,slow=2.7,SNR=1.9								
PDAR				pP		pP	15 03 48.0	-0.9	
	comp=Z,0.3nm,0.3s,baz=61,slow=7.0,SNR=3.6								
AKASG	Malin Array Be	71.37	323	P		P	15 03 34.2	-0.5	
	comp=Z,1.0nm,0.5s,baz=41,slow=6.2,SNR=9.5								
STKA	Stephens Creek	75.31	184	P		P	15 03 58.0	+0.1	
	comp=Z,0.6nm,0.4s,baz=344,slow=11,SNR=3.2								
STKA	Stephens Creek	75.31	184	P		P	15 03 58.0	+0.1	
BUR08	Bucovina Ar. S	75.42	323	P		P	15 03 57.7	-1.0	
BUR08				IAmb	IAmb		15 03 59.5		
	comp=Z,2.6nm,0.7s								
CLL	Collm	77.18	332	*eP*		P	15 04 09.0	+0.6	
CLL				*e*(sP)		pP	15 04 32.0	+3.1	
CLL	Collm	77.18	332	*eP*		P	15 04 09.0	+0.6	
BRTR	Keskin Array B	77.27	313	P		P	15 04 09.8	+0.5	
	comp=Z,0.5nm,0.5s,baz=98,slow=6.7,SNR=2.2								
KHC	Kasperske Hory	78.81	331	*ce*P		P	15 04 18.2	+0.6	
KHC				pmax	pmax				
	comp=Z,14nm,2.5s								
KHC	Kasperske Hory	78.81	331	*eP*		P	15 04 17.5	-0.1	
GERES	GERESS Array B	79.01	330	P		P	15 04 17.9	-0.8	
	comp=Z,0.5nm,0.6s,baz=42,slow=6.1,SNR=5.3								
GERES	GERESS Array B	79.01	330	P		P	15 04 18.0	-0.8	
DAVOX	Davos/Dischmat	82.11	332	P		P	15 04 35.8	+0.3	
	comp=Z,1.2nm,0.6s,baz=335,slow=15,SNR=2.0								
TXAR	Lajitas Array	83.08	56	P		P	15 04 41.2	+0.5	
	comp=Z,0.4nm,0.9s,baz=310,slow=3.1,SNR=3.2								
TXAR				pP		pP	15 05 01.2	-0.2	
	comp=Z,0.9nm,0.6s,baz=294,slow=3.6,SNR=11								
ESDC	Sonseca Array	92.86	338	P		P	15 05 27.0	-0.6	
	comp=Z,0.4nm,0.7s,baz=2.9,slow=7.7,SNR=3.3								
TORD	Torodi Ar. Bea	114.98	322	PKP		PKiKP	15 10 54.8	-1.0	
	comp=Z,0.3nm,0.7s,baz=95,slow=1.6,SNR=1.6								

ATH ***10*** *14:52:42.2,37.87N×21.08E,h20km±1km, ML2.7/19, Error ellipse: s-maj=1.3km s-min=0.5km az=240.0*
THE ***10*** *14:52:43.0,37.87N×21.10E,h20km±1km, ML2.9/8, Error ellipse: s-maj=1.1km s-min=0.6km az=196.0*

ISC 10 14:52:42.8±1.0, 37.87N±0.03×21.08E±0.02, h21km±1km, n58, σ0.961/92, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VTN	Vitineika	0.10	59	P		P	Pb	14 52 46.5	-0.4
VTN				S		S	Sb	14 52 49.5	-0.1
VTN	Vitineika	0.10	59	P		P	Pb	14 52 46.4	-0.5
VTN				S		S	Sb	14 52 48.6	-1.0
ZAK2	Zakynthos	0.16	241	P		P	Pb	14 52 47.8	-1.0
ZAK2				S		S	Sb	14 52 52.2	-0.8
	18μm,0.2s								
KRI1	kERI	0.29	226	P		P	Pb	14 52 49.3	-0.1
KRI1				S		S	Sb	14 52 55.1	+1.1
	11μm,0.3s								
KFL	Anninata	0.34	316	P		P	Pb	14 52 49.8	-0.2
KFL				S		S	Sb	14 52 55.9	+0.9
	2μm,0.3s								
KFL	Anninata	0.34	316	P		P	Pb	14 52 49.6	-0.5
KFL				S		S	Sb	14 52 55.3	+0.3
KFL				AML		AML		14 52 57.5	
	comp=E,3223μm,0.1s								
KFL				AML		AML		14 52 57.9	
	comp=N,4364μm,0.3s								
RLS	Riolos of Patr	0.36	58	P		P	Pb	14 52 50.1	-0.3
RLS				S		S	Sb	14 52 56.2	+0.7
	comp=N,2μm,0.4s								
RLS	Riolos of Patr	0.36	58	P		P	Pb	14 52 50.1	-0.3
RLS				S		S	Sb	14 52 55.7	+0.2
RLS				AML		AML		14 52 56.6	
	comp=N,4330μm,0.6s								
RLS				AML		AML		14 52 56.8	
	comp=E,4914μm,0.3s								
VLS	Valsamata	0.50	309	P		P	Pb	14 52 52.4	-0.5
VLS				S		S	Sb	14 53 00.1	+0.4
	comp=E,1μm,0.1s								
VLS	Valsamata	0.50	309	P		P	Pb	14 52 52.2	-0.6
VLS				S		S	Sb	14 52 60.0	+0.3
VLS				AML		AML		14 53 01.3	
	comp=E,2714μm,0.1s								
VLS				AML		AML		14 53 01.6	
	comp=N,2145μm,0.1s								
DRO	Drossia	0.50	80	P		P	Pb	14 52 52.4	-0.6
DRO	Drossia	0.50	80	P		P	Pb	14 52 52.4	-0.6
DRO				S		S	Sb	14 53 00.1	+0.2
DRO				AML		AML		14 53 03.4	
	comp=N,3956μm,0.4s								
DRO				AML		AML		14 53 04.9	
	comp=E,2939μm,0.2s								
KEF2	Argostoli. Kep	0.56	303	P		P	Pb	14 52 53.4	-0.6
KEF2				S		S	Sb	14 53 00.9	-0.6
ARGA	Argostoli. Kep	0.57	303	P		P	Pb	14 52 53.4	-0.7
AMT	Artemida-Makis	0.60	124	P		P	Pb	14 52 54.2	-0.5
AMT				S		S	Sb	14 53 03.0	+0.2
AMT				AML		AML		14 53 05.3	
	comp=N,2292μm,0.5s								
AMT				AML		AML		14 53 06.7	
	comp=E,2218μm,0.7s								
LXRA	Lixouri, Kepha	0.61	303	P		P	Pb	14 52 54.7	-0.2
KEF1	Kardakata, Kep	0.63	311	P		P	Pb	14 52 54.7	-0.5
KEF4	Livadi, Kephal	0.65	307	P		P	Pb	14 52 55.0	-0.6
KEF4				S		S	Sb	14 53 04.6	+0.4
KEF3	Kipouria, Keph	0.67	300	P		P	Pb	14 52 55.5	-0.3
KEF3				S		S	Sb	14 53 05.4	+0.6
AGT1	Agia Thekli	0.67	305	P		P	Pb	14 52 55.6	-0.3
AST1	Astakos	0.67	0	P		P	Pb	14 52 55.8	-0.1
VSK1	VASILIKIADES	0.68	323	P		P	Pb	14 52 55.4	-0.6
FSK	Fiskardo	0.72	325	P		P	Pb	14 52 56.1	-0.5
FSK				S		S	Sb	14 53 06.2	+0.1
FSK				AML		AML		14 53 09.8	
	comp=E,1318μm,0.2s								
FSK				AML		AML		14 53 15.9	
	comp=N,588μm,0.3s								
PDO	Prodromos	0.73	6	P		P	Pb	14 52 56.8	-0.1
PDO				S		S	Sn	14 53 07.7	-0.8
PDO	Prodromos	0.73	6	P		P	Pb	14 52 56.8	-0.1
PDO				S		S	Sb	14 53 07.3	+0.8
PDO				AML		AML		14 53 11.6	
	comp=E,2320μm,0.2s								
PDO				AML		AML		14 53 14.0	
	comp=N,3183μm,0.4s								
LAKA	Lakka	0.80	62	P		P	Pb	14 52 57.3	-0.7
LAKA	Lakka	0.80	62	P		P	Pb	14 52 57.4	-0.6
LAKA				S		S	Sn	14 53 09.3	-0.9
LAKA				AML		AML		14 53 11.0	
	comp=E,410μm,0.3s								
LAKA				AML		AML		14 53 11.2	
	comp=N,457μm,0.5s								
MGNA	Meganis	0.82	344	P		P	Pb	14 52 58.0	-0.3
MGNA				S		S	Sb	14 53 09.5	+0.5
MGNA				AML		AML		14 53 12.1	
	comp=E,2413μm,0.2s								
MGNA				AML		AML		14 53 12.1	
	comp=N,1712μm,0.2s								
EVGI	Lefkada island	0.82	336	P		P	Pb	14 52 57.8	-0.6
EVGI				S		S	Sn	14 53 10.8	+0.1
EVGI	Lefkada island	0.82	336	P		P	Pb	14 52 57.9	-0.6
EFP	Efpalio	0.86	49	P		P	Pb	14 52 58.4	-0.6
EFP				S		S	Sn	14 53 11.6	+0.1
	comp=N,575nm,0.4s								
EFP	Efpalio	0.86	49	P		P	Pb	14 52 58.5	-0.5
EFP				S		S	Sn	14 53 11.0	-0.5
EFP				AML		AML		14 53 13.8	
	comp=E,760μm,0.2s								
EFP				AML		AML		14 53 14.3	
	comp=N,1460μm,0.6s								
KLV	Kalavryta, Ach	0.86	78	P		P	Pb	14 52 58.2	-0.9
KLV	Kalavryta, Ach	0.86	78	P		P	Pb	14 52 58.4	-0.8
KLV				S		S	Sn	14 53 11.2	-0.6
KLV				AML		AML		14 53 15.8	
	comp=E,286μm,0.2s								
KLV				AML		AML		14 53 16.0	
	comp=N,542μm,0.3s								
ALIK	Aliki, Aigiali	0.90	64	P		P	Pb	14 52 59.3	-0.4
TRIZ	Trizonia	0.93	57	P		P	Pb	14 52 59.4	-0.8
TRIZ	Trizonia	0.93	57	P		P	Pb	14 52 59.5	-0.6
SERG	Sergoula	0.94	54	P		P	Pb	14 52 59.7	-0.8
SERG	Sergoula	0.94	54	P		P	Pb	14 52 59.9	-0.6
SERG				S		S	Sn	14 53 13.9	+0.2
SERG				AML		AML		14 53 15.9	
	comp=E,807μm,0.4s								
SERG				AML		AML		14 53 16.9	
	comp=N,818μm,0.4s								
ITM	Ithomi	0.96	135	P		P	Pb	14 53 00.6	-0.1
ITM				S		S	Sn	14 53 14.2	+0.1
	comp=N,245nm,0.6s								
ITM	Ithomi	0.96	135	P		P	Pb	14 53 00.6	-0.1
ITM				S		S	Sn	14 53 14.3	+0.1
ITM				AML		AML		14 53 20.1	
	comp=N,535μm,0.7s								
ITM				AML		AML		14 53 23.3	
	comp=E,411μm,0.6s								
LKD2	Lefkada island	0.98	340	P		P	Pb	14 53 00.7	-0.4
LKD2				S		S	Sn	14 53 15.8	+1.2
	comp=E,912nm,0.4s								
LKD2	Lefkada island	0.98	340	P		P	Pb	14 53 00.6	-0.5
LKD2				S		S	Sn	14 53 14.8	+0.2
LKD2				AML		AML		14 53 21.6	
	comp=E,2266μm,0.5s								
LKD2				AML		AML		14 53 22.4	
	comp=N,1458μm,0.4s								
ANX	Ano Chora	0.98	42	P		P	Pb	14 53 00.8	-0.4
ANX	Ano Chora	0.98	42	P		P	Pb	14 53 00.7	-0.4
ANX				S		S	Sn	14 53 15.2	+0.5
ANX				AML		AML		14 53 18.1	
	comp=E,1511μm,0.4s								
ANX				AML		AML		14 53 18.4	
	comp=N,822μm,0.3s								
KALE	Kalithea	0.98	58	P		P	Pb	14 53 00.3	-0.9
KALE	Kalithea	0.98	58	P		P	Pb	14 53 00.5	-0.7
KALE				S		S	Sn	14 53 15.0	+0.2
KALE				AML		AML		14 53 17.7	
	comp=E,667μm,0.2s								
KALE				AML		AML		14 53 19.5	
	comp=N,712μm,0.6s								
TRIP	Tripoli	1.00	109	P		P	Pb	14 53 01.3	-0.1
TRIP				S		S	Sn	14 53 15.7	+0.5
TRIP				AML		AML		14 53 23.4	
	comp=N,269μm,0.5s								
TRIP				AML		AML		14 53 23.9	
	comp=E,320μm,0.4s								
TSLK	Tsoukalades, L	1.01	341	P		P	Pb	14 53 01.4	-0.3
TSLK	Tsoukalades, L	1.01	341	P		P	Pb	14 53 01.4	-0.3
PYL	PYLOS	1.10	151	P		P	Pn	14 53 02.6	-0.5
VLX	Vlachokerasia	1.14	115	P		P	Pb	14 53 05.1	+1.2
EVR	Evrytania	1.19	28	P		P	Pb	14 53 04.6	-0.2
EVR				S		S	Sn	14 53 21.0	+1.0
EVR				AML		AML		14 53 25.2	
	comp=N,296μm,0.2s								
EVR				AML		AML		14 53 27.3	
	comp=E,431μm,0.4s								
MAKR	Makrakomi, Fth	1.41	35	P		P	Pb	14 53 08

comp=Z,1.7nm,0.9s
NWAO Narrogin (SRO) 59.17 245 P P 15 25 18.4 -0.9
SYO Syowa Base 83.73 192⇑*es*P P 15 27 47.0 +0.3

ATH 10 15:15:46.3,37.84N×21.06E,h27$^{km}_{\pm 2km}$,ML1.6/3,Error ellipse: s-maj=4.1km s-min=1.5km az=190.0,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VTN	**Vitineika**	**0.13**	**53**	P	Pb	15 15 51.6	+0.1
VTN				S	Sb	15 15 54.9	0.0
KFL	**Anninata**	**0.34**	**322**	P	Pb	15 15 53.8	-0.3
KFL				S	Sb	15 16 00.3	+0.9
KFL				AML	AML	15 16 03.2	
	comp=N,182μm,0.2s						
KFL				AML	AML	15 16 04.6	
	comp=E,140μm,0.2s						
RLS	**Riolos of Patr**	**0.39**	**56**	P	Pb	15 15 55.3	+0.4
RLS				S	Sb	15 16 01.1	+0.4
RLS				AML	AML	15 16 01.9	
	comp=N,244μm,0.1s						
RLS				AML	AML	15 16 02.5	
	comp=E,230μm,0.2s						
DRO	**Drossia**	**0.53**	**77**	P	Pb	15 15 57.6	+0.4
DRO				S	Sn	15 16 05.4	-0.8
DRO				AML	AML	15 16 06.6	
	comp=N,156μm,0.3s						
DRO				AML	AML	15 16 08.7	
	comp=E,164μm,0.3s						
LAKA	**Lakka**	**0.83**	**61**	P	Pn	15 16 02.7	+0.4
LAKA				S	Sn	15 16 14.7	+1.0
KLV	**Kalavryta, Ach**	**0.89**	**76**	P	Pb	15 16 03.5	+0.4
EFP	**Efpalio**	**0.89**	**49**	P	Pb	15 16 03.5	+0.3
TRIZ	**Trizonia**	**0.96**	**56**	P	Pb	15 16 04.8	+0.5
ANX	**Ano Chora**	**1.02**	**42**	P	Pb	15 16 06.1	+0.8
KALE	**Kalithea**	**1.02**	**57**	P	Pb	15 16 05.6	+0.2

IDC 10 15:17:07.8±16.0,32.18N×42.79W,h0^{km},mb3.5/4, mb1 3.9/4,mb1mx3.5/34,mbtmp3.5/4,MS3.6/1,Ms1 3.7/1, ms1mx2.8/30,Error ellipse: s-maj=358.2km s-min=93.0km az=142.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESDC	**Sonseca Array**	**32.12**	**66**	LR	LR	15 34 01.4	
	comp=Z,110nm,19.4s,baz=245,slow=32						
PDAR	**Pinedale Array**	**52.78**	**302**	P	P	15 26 25.1	+0.1
	0.7nm,0.7s,baz=87,slow=9.4,SNR=6.2						
YKA	**Yellowknife Ar**	**53.68**	**327**	P	P	15 26 30.8	-0.2
	0.5nm,0.8s,baz=89,slow=7.8,SNR=7.2						
NVAR	**Mina Array Bea**	**60.35**	**299**	P	P	15 27 18.6	-0.4
	0.3nm,0.6s,baz=64,slow=10,SNR=2.5						
ILAR	**Eielson Array**	**67.02**	**333**	P	P	15 28 02.4	+0.1
	0.7nm,0.8s,baz=56,slow=4.3,SNR=7.1						

*TAP **10** 15:38:20.0,24.80N×122.33E,h13^{km},ML3.1,C*
*JMA **10** 15:38:20.2,24.73N×122.38E,h35$^{km}_{\pm 3km}$,M2.4*
ISC 10 15:38:19.3±1.0,24.79N±0.02×122.41E±0.02,h12$^{km}_{\pm 8km}$, n86,σ0.80/157,2C-4D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.34**	**227**	⇑P	**Pg**	**15 38 27.1**	**+0.8**
	baz=217						
EOS1				S	**Sb**	**15 38 32.5**	**-0.2**
	baz=217						
TWB1	**Santiao Chiao**	**0.44**	**300**	⇓*i*P	**Pg**	**15 38 28.0**	**0.0**
	baz=304						
TWB1				*i* S	**Sg**	**15 38 33.3**	**-0.5**
	baz=304						
NTC	**Toucheng**	**0.53**	**277**	*e*P	**Pg**	**15 38 29.8**	**+0.1**
	baz=277						
NTC				*e*S	**Sg**	**15 38 36.5**	**-0.1**
	baz=277						
TWC	**Suao**	**0.54**	**251**	*i* P	**Pg**	**15 38 29.3**	**-0.5**
	baz=254						
TWC				*i* S	**Sg**	**15 38 35.4**	**-1.5**
	baz=254						
TIPB	**Shuangxi**	**0.56**	**289**	P	**Pg**	**15 38 30.4**	**+0.2**
	baz=290						
TIPB				*i* S	**Sb**	**15 38 38.7**	**-0.2**
	baz=290						
JYNG	**Yonagunijimaku**	**0.59**	**124**	P	**Pb**	**15 38 31.8**	**+0.2**
JYNG				S	**Sg**	**15 38 39.8**	**+1.0**
ILA	**Ilan**	**0.60**	**268**	*i* P	**Pg**	**15 38 31.5**	**+0.5**
	baz=266						
ILA				S	**Sb**	**15 38 40.6**	**+0.5**
	baz=266						
NWF	**Wu-fen Shan**	**0.63**	**297**	*e*P	**Pb**	**15 38 32.4**	**0.0**
	baz=298						
NWF				*i* S	**Sb**	**15 38 41.2**	**+0.1**
	baz=298						
WFSB	**Wu-fen Shan**	**0.63**	**297**	⇓P	**Pb**	**15 38 32.5**	**+0.2**
	baz=298						
WFSB				S	**Sb**	**15 38 41.0**	**-0.1**
	baz=298						
YOJ	**Yonaguni jima**	**0.64**	**120**	P	**Pb**	**15 38 32.9**	**+0.5**
	baz=118						
YOJ	**Yonaguni jima**	**0.64**	**120**	P	**Pb**	**15 38 32.7**	**+0.3**
YOJ				S	**Sg**	**15 38 40.9**	**+0.7**
TWE	**Neicheng**	**0.67**	**265**	⇓*i*P	**Pg**	**15 38 31.9**	**-0.6**
	baz=262						
TWE				S	**Sg**	**15 38 39.8**	**-1.5**
	baz=262						
SLBB	**Yuanshan**	**0.70**	**267**	*i* P	**Pg**	**15 38 33.0**	**+0.1**
	baz=266						
SLBB				S	**Sg**	**15 38 41.8**	**-0.3**
	baz=266						
ENA	**Nanau**	**0.70**	**240**	*i* P	**Pg**	**15 38 32.6**	**-0.3**
	baz=235						
ENA				*i* S	**Sg**	**15 38 41.2**	**-0.9**
	baz=235						
TWA	**Mucha**	**0.77**	**285**	*i* P	**Pg**	**15 38 34.6**	**+0.4**
	baz=285						
TWA				S	**Sg**	**15 38 44.0**	**-0.4**
	baz=285						
ENTT	**Nioudou**	**0.78**	**259**	P	**Pg**	**15 38 34.1**	**-0.2**
	baz=256						
ENTT				S	**Sg**	**15 38 44.2**	**-0.3**
	baz=256						
NHDH	**Xindian Distri**	**0.82**	**283**	*i* P	**Pb**	**15 38 35.7**	**+0.3**
	baz=271						
NHDH				*i* S	**Sb**	**15 38 46.6**	**+0.2**
	baz=271						
NWLT	**Wulai**	**0.82**	**270**	P	**Pg**	**15 38 35.2**	**0.0**
	baz=287						
NWLT				*e*S	**Sg**	**15 38 45.0**	**-0.9**
	baz=287						
NDT	**Datong Townshi**	**0.83**	**257**	P	**Pg**	**15 38 35.2**	**-0.2**
	baz=263						
NDT				S	**Sg**	**15 38 45.8**	**-0.5**
	baz=263						
YM01	**YM01**	**0.84**	**295**	⇓*i*P	**Pg**	**15 38 35.6**	**+0.1**
	baz=296						
YM01				S	**Sg**	**15 38 46.7**	**+0.2**
	baz=296						
TAP1	**Taipei**	**0.84**	**288**	*e*S	**Sb**	**15 38 47.1**	**+0.1**
	baz=287						
YM08	**YM08**	**0.84**	**299**	P	**Pg**	**15 38 35.2**	**-0.3**
	baz=300						
YM08				S	**Sg**	**15 38 45.9**	**-0.7**
	baz=300						
YM11	**YM11**	**0.84**	**297**	*i* P	**Pg**	**15 38 35.5**	**-0.1**
	baz=298						
YM11				*i* S	**Sg**	**15 38 47.0**	**+0.3**
	baz=298						
YM05	**YM05**	**0.85**	**296**	P	**Pg**	**15 38 36.1**	**+0.4**
	baz=297						
YM05				*e*S	**Sg**	**15 38 46.5**	**-0.4**
	baz=297						
YM10	**YM10**	**0.85**	**296**	P	**Pg**	**15 38 35.8**	**+0.1**
	baz=297						
YM10				S	**Sg**	**15 38 46.9**	**0.0**
	baz=297						
TATO	**Taipei**	**0.85**	**283**	P	**Pb**	**15 38 36.1**	**+0.1**
	baz=283						
TATO				S	**Sg**	**15 38 47.0**	**0.0**
	baz=283						
YM04	**YM04**	**0.87**	**295**	P	**Pb**	**15 38 36.0**	**-0.4**
	baz=296						
YM04				S	**Sg**	**15 38 47.1**	**-0.4**
	baz=296						
YM03	**YM03**	**0.88**	**297**	P	**Pg**	**15 38 36.8**	**+0.5**
	baz=297						
YM03				S	**Sb**	**15 38 48.6**	**+0.4**
	baz=297						
TWY	**Chenhua**	**0.88**	**304**	*i* P	**Pn**	**15 38 37.5**	**0.0**
	baz=305						
TWY				*i* S	**Sg**	**15 38 48.2**	**+0.5**
	baz=305						
PCYT	**Pengchaiyu**	**0.89**	**340**	P	**Pb**	**15 38 36.6**	**-0.1**
	baz=344						
PCYT				*e*S	**Sb**	**15 38 48.7**	**+0.1**
	baz=344						
ANP	**Anpu**	**0.90**	**297**	P	**Pb**	**15 38 36.5**	**-0.4**
	baz=297						
ANP				S	**Sb**	**15 38 47.9**	**-0.9**
	baz=297						
YHNB	**Yeheng**	**0.94**	**263**	P	**Pb**	**15 38 37.0**	**-0.6**
	baz=271						
YHNB				S	**Sb**	**15 38 49.7**	**-0.4**
	baz=271						
TWS1	**Kuangyinshan**	**0.95**	**289**	P	**Pn**	**15 38 38.4**	**-0.1**
	baz=290						
TWS1				*i* S	**Sb**	**15 38 49.7**	**-0.5**
	baz=290						
NACB	**Ninganchiao**	**0.96**	**231**	P	**Pb**	**15 38 37.3**	**-0.5**
	baz=236						
NACB				S	**Sb**	**15 38 49.2**	**-1.3**
	baz=236						
NSK	**Sanguang**	**0.96**	**264**	*i* P	**Pb**	**15 38 37.5**	**-0.4**
	baz=272						
NSK				S	**Sb**	**15 38 48.8**	**-1.7**
	baz=272						
NNSH	**Datong**	**1.00**	**249**	*e*P	**Pb**	**15 38 38.3**	**-0.2**
	baz=236						
NNSH				S	**Sb**	**15 38 50.8**	**-0.8**
	baz=236						
NNSB	**Datong**	**1.00**	**249**	P	**Pb**	**15 38 38.0**	**-0.5**
	baz=235						
NNSB				S	**Sb**	**15 38 50.8**	**-0.8**
	baz=235						
NNS	**Nan Shan**	**1.00**	**250**	*i* P	**Pb**	**15 38 38.2**	**-0.4**
	baz=236						
NNS				S	**Sb**	**15 38 50.7**	**-1.1**
	baz=236						
TWD	**Chiawan**	**1.02**	**227**	P	**Pb**	**15 38 38.6**	**-0.3**
	baz=230						
TWD				S	**Sb**	**15 38 51.3**	**-0.9**
	baz=230						
ETLH	**Xiulin Townshi**	**1.02**	**236**	P	**Pg**	**15 38 39.3**	**+0.3**
	baz=232						
ETLH				S	**Sb**	**15 38 51.8**	**-0.5**
	baz=232						
WLTB	**Daxi**	**1.05**	**274**	P	**Pg**	**15 38 40.2**	**+0.7**
	baz=288						
WHF	**Hehuan Shan**	**1.22**	**239**	⇑*i*P	**Pn**	**15 38 42.5**	**0.0**
	baz=235						
WHF				*i* S	**Sb**	**15 38 56.9**	**-1.5**
	baz=235						
TDCB	**Techi**	**1.25**	**245**	P	**Pb**	**15 38 43.3**	**+0.4**
	baz=242						
TDCB				S	**Sb**	**15 38 58.7**	**-0.4**
	baz=242						
LIOB	**Emei**	**1.27**	**264**	P	**Pn**	**15 38 43.1**	**+0.3**
	baz=282						
NSTT	**Nanjuang**	**1.29**	**263**	P	**Pn**	**15 38 43.4**	**+0.3**
	baz=261						
NSTT				*e*S	**Sb**	**15 38 59.4**	**-0.5**
	baz=261						
IRIF	**Iriomote-Funau**	**1.29**	**110**	P	**Pn**	**15 38 42.0**	**-1.1**
ESL	**Shilin**	**1.31**	**223**	P	**Pb**	**15 38 44.2**	**+0.4**
	baz=202						
ESL				S	**Sg**	**15 39 01.9**	**+0.3**
	baz=202						
CHGB	**Renai**	**1.33**	**237**	P	**Pb**	**15 38 44.6**	**+0.2**
	baz=234						
CHGB				S	**Sn**	**15 39 01.7**	**0.0**
	baz=234						
OWD	**Renai**	**1.39**	**234**	*e*P	**Pb**	**15 38 45.8**	**+0.4**
	baz=245						
OWD				*e*S	**Sg**	**15 39 05.2**	**+0.9**
	baz=245						
WHP	**Taichung City**	**1.42**	**249**	*e*P	**Pb**	**15 38 46.4**	**+0.6**
	baz=247						
WHP				*e*S	**Sb**	**15 39 03.9**	**0.0**
	baz=247						
EGFH	**Guangfu**	**1.43**	**219**	*e*P	**Pb**	**15 38 46.1**	**+0.3**
	baz=199						
EGFH				*e*S	**Sn**	**15 39 03.5**	**-0.1**
	baz=199						
HATJ	**Hateruma jima**	**1.47**	**119**	*e*S	**Sn**	**15 39 02.7**	**-2.0**
NMLH	**Miaoli**	**1.49**	**261**	*e*P	**Pb**	**15 38 47.1**	**+0.3**
	baz=259						
NMLH				S	**Sb**	**15 39 06.1**	**+0.4**
	baz=259						
DPDB	**Guoxing**	**1.54**	**241**	P	**Pg**	**15 38 49.0**	**+0.1**
	baz=239						
DPDB				S	**Sb**	**15 39 07.3**	**0.0**
	baz=239						
VWDT	**VWDT**	**1.54**	**229**	P	**Pg**	**15 38 48.8**	**-0.2**
	baz=208						
VWDT				S	**Sg**	**15 39 08.5**	**-0.5**
	baz=208						
JKRS	**Kuro-shima**	**1.56**	**110**	P	**Pn**	**15 38 46.8**	**0.0**
HGSD	**Ruisui**	**1.57**	**215**	P	**Pn**	**15 38 47.1**	**+0.1**
	baz=197						
HGSD				*e*S	**Sb**	**15 39 08.0**	**-0.1**
	baz=197						
PTSB	**Yuanli**	**1.58**	**258**	*e*S	**Sb**	**15 39 08.3**	**-0.2**
	baz=273						
EHY	**Hungye**	**1.61**	**218**	P	**Pb**	**15 38 48.5**	**-0.5**
	baz=199						
EHY				S	**Sb**	**15 39 09.0**	**-0.3**
	baz=199						
JIJ	**Ishigaki jima**	**1.64**	**105**	P	**Pn**	**15 38 47.8**	**-0.1**
SMLT	**Sun Moon Lake**	**1.64**	**237**	P	**Pb**	**15 38 49.5**	**0.0**
	baz=247						
SMLT				S	**Sb**	**15 39 11.0**	**+0.7**
	baz=247						
SSLB	**Suanglung**	**1.66**	**233**	*e*P	**Pb**	**15 38 49.2**	**-0.5**
	baz=215						
SSLB				*e*S	**Sb**	**15 39 10.2**	**-0.4**
	baz=215						
TYC	**Yuchr**	**1.66**	**238**	*i* P	**Pb**	**15 38 50.2**	**+0.4**
	baz=236						
TYC				*i* S	**Sg**	**15 39 12.7**	**-0.1**
	baz=236						
WDJ	**Dajia District**	**1.67**	**255**	*e*P	**Pb**	**15 38 50.7**	**+0.9**
	baz=253						
TCU	**Taichung**	**1.70**	**248**	*e*P	**Pn**	**15 38 49.3**	**+0.5**
	baz=246						
YULB	**Yu-li**	**1.72**	**216**	P	**Pn**	**15 38 48.5**	**-0.5**
	baz=213						
YULB				S	**Sn**	**15 39 10.7**	**-0.2**
	baz=213						
JISG	**Ishigakijimahi**	**1.75**	**96**	P	**Pn**	**15 38 49.1**	**-0.3**
TWF1	**Yuli**	**1.75**	**216**	*e*P	**Pn**	**15 38 48.8**	**-0.7**
	baz=212						
WJS	**Zhushan**	**1.81**	**238**	*e*P	**Pb**	**15 38 53.4**	**+1.1**
	baz=236						
WJS				*e*S	**Sg**	**15 39 17.8**	**+0.4**
	baz=236						
YUS	**Yu-Shan**	**1.85**	**226**	P	**Pn**	**15 38 52.4**	**+1.2**
	baz=208						
YUS				S	**Sb**	**15 39 16.6**	**-0.1**
	baz=208						
FULB	**Fuli**	**1.88**	**213**	P	**Pn**	**15 38 51.2**	**0.0**
	baz=194						
ALS	**Alishan**	**1.94**	**229**	P	**Pb**	**15 38 54.9**	**+0.2**
	baz=210						
ALS				*e*S	**Sb**	**15 39 18.8**	**-0.2**
	baz=210						
CHN5	**Tsauling**	**1.97**	**233**	*i* P	**Pb**	**15 38 55.1**	**-0.1**
	baz=213						
CHN5				*i* S	**Sg**	**15 39 22.2**	**-0.6**
	baz=213						
WDLH	**Douliu**	**2.02**	**238**	*e*P	**Pb**	**15 38 56.3**	**+0.3**
	baz=253						
WDLH				*e*S	**Sb**	**15 39 22.4**	**+1.3**
	baz=253						
ELDTW	**Lidau**	**2.04**	**219**	*e*P	**Pn**	**15 38 54.9**	**+1.4**
	baz=202						
ELDTW				*e*S	**Sn**	**15 39 17.1**	**-1.8**
	baz=202						
CHN4	**Tsaushan**	**2.19**	**230**	P	**Pb**	**15 38 57.5**	**-1.3**
	baz=211						
CHN4				S	**Sb**	**15 39 26.6**	**+0.7**
	baz=211						
TPUB	**Ta-pu**	**2.20**	**228**	*e*P	**Pn**	**15 38 57.1**	**+1.5**
	baz=209						
TPUB				*e*S	**Sn**	**15 39 23.9**	**+1.2**
	baz=209						
STYT	**Tauyuan**	**2.21**	**223**	*e*P	**Pb**	**15 38 58.8**	**-0.4**
	baz=206						
STYT				S	**Sb**	**15 39 25.1**	**-1.5**
	baz=206						
TWH	**Lutao**	**2.23**	**203**	*e*S	**Sn**	**15 39 21.9**	**-1.7**
	baz=199						
WTP	**Ta-pu**	**2.24**	**227**	*e*P	**Pn**	**15 38 57.8**	**+1.5**
	baz=209						
WTP				*e*S	**Sb**	**15 39 28.1**	**+0.5**
	baz=209						
TWK	**Hsinying**	**2.32**	**230**	*e*P	**Pb**	**15 38 59.8**	**-1.3**
	baz=211						
TWK				*e*S	**Sb**	**15 39 28.5**	**-1.1**
	baz=211						
CHN1	**Nanshi**	**2.34**	**228**	*e*P	**Pb**	**15 39 01.0**	**-0.5**
	baz=210						
CHN1				S	**Sb**	**15 39 29.5**	**-0.9**
	baz=210						
SGST	**Jiashian**	**2.38**	**225**	*e*P	**Pn**	**15 39 00.2**	**+2.1**
	baz=207						
SGST				*e*S	**Sb**	**15 39 30.2**	**-1.1**
	baz=207						
SLGT	**Liugui**	**2.40**	**222**	*e*P	**Pn**	**15 39 00.2**	**+1.8**
	baz=205						
SLGT				*e*S	**Sb**	**15 39 30.0**	**-2.1**
	baz=205						
MASBT	**Mashibuluo**	**2.71**	**217**	*e*P	**Pn**	**15 39 03.9**	**+1.3**
	baz=201						
MASBT				*e*S	**Sn**	**15 39 37.1**	**+1.8**
	baz=201						
SCZT	**Fangliau**	**2.91**	**215**	*e*P	**Pn**	**15 39 08.3**	**+2.9**
	baz=199						
SCZT				*e*S	**Sn**	**15 39 42.4**	**+2.2**
	baz=199						

IDC 10 15:39:27.6±3.1,7.07S×154.66E,h0^{km},mb3.3/2, mb1 3.7/4,mb1mx3.4/28,mbtmp3.5/4,ML2.2/2,Error ellipse: s-maj=61.5km s-min=40.2km az=101.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.79**	**316**	Pn	Pn	15 40 28.1	+0.7
	0.8nm,0.3s,baz=193,slow=16,SNR=2.5						
KRVT				Sn	Sn	15 41 07.4	-5.4
	4.8nm,0.3s,baz=351,slow=17,SNR=4.8						
PMG	**Port Moresby**	**7.77**	**252**	Pn	Pn	15 41 22.3	+0.2
	0.8nm,0.3s,baz=85,slow=10,SNR=2.2						
WRA	**Warramunga Arr**	**23.50**	**235**	P	P	15 44 39.4	0.0
	0.8nm,1.0s,baz=58,slow=9.6,SNR=4.6						
ASAR	**Alice Springs**	**25.87**	**228**	P	P	15 45 00.9	-0.4
	0.6nm,0.8s,baz=59,slow=9.1,SNR=7.7						
TORD	**Torodi Ar. Bea**	**152.72**	**285**	PKPbc	PKPbc	15 59 27.6	+0.1
	0.5nm,1.1s,baz=66,slow=2.8,SNR=2.2						

*BGR **10** 15:54:32.0±0.4,51.47N×16.16E,h1^{km},ML3.0/7,Error ellipse: s-maj=4.4km s-min=2.2km az=31.0*
*IDC **10** 15:54:31.9±0.6,51.47N×15.95E,h0^{km},mb3.6/3, mb1 3.5/11,mb1mx3.3/45,mbtmp3.4/11,ML3.0/8,Error ellipse: s-maj=14.3km s-min=7.0km az=102.0*
*IPEC **10** 15:54:32.3±0.3,51.42N×16.20E,h0^{km},ML2.8/4,Error ellipse: s-maj=3.1km s-min=1.7km az=61.0*
*VIE **10** 15:54:32.6±0.6,51.36N×16.15E,h0^{km},mb2.7/12, ml3.0/14,ms3.3/1,Error ellipse: s-maj=6.4km s-min=3.4km az=40.0 66 km WNW of Wroclaw Suspected Mining induced.*
*PRU **10** 15:54:32.0±0.0,51.47N×16.08E,h0^{km}*
*UPP **10** 15:54:33.9±3.0,51.64N×15.71E,h0^{km},ML1.8,Suspected explosion*
ISC 10 15:54:29.7±0.6,51.52N±0.03×16.15E±0.02,h0^{km},n86, σ1.31/142,mb3.7/3,4C-1D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.68**	**172**	*e*Pg	**Pb**	**15 54 44.0**	**-0.5**
	SNR=32						
CHVC	**Chvalec**	**0.93**	**184**	*e*PG	**Pb**	**15 54 48.7**	**-0.1**
CHVC				*e*SG	**Sg**	**15 55 00.1**	**+0.5**
	comp=Z,120nm,0.5s						
OSTC	**Ostas**	**0.96**	**177**	*e*PG	**Pb**	**15 54 49.4**	**+0.1**
OSTC				*e*SG	**Sg**	**15 54 59.9**	**-0.7**
UPC	**Upice**	**1.01**	**185**	*e*PG	**Pb**	**15 54 50.1**	**-0.1**
UPC				*e*SG	**Sg**	**15 55 02.8**	**+0.5**
	comp=Z,278nm,0.5s						
DPC	**Dobruska-Polom**	**1.17**	**174**	*e*Pg	**Pg**	**15 54 52.8**	**+0.6**
	SNR=81						
DPC	**Dobruska-Polom**	**1.17**	**174**	*e*PG	**Pg**	**15 54 52.8**	**+0.6**
DPC				*e*SG	**Sg**	**15 55 07.2**	**-0.2**
	comp=Z,74nm,0.4s						
PVCC	**Panska Ves**	**1.40**	**226**	*e*Pg	**Pb**	**15 54 57.2**	**+0.4**
	SNR=24						
PVCC				*e*Sg	**Sn**	**15 55 16.7**	**+1.0**
	SNR=2.2						
PVCC	**Panska Ves**	**1.40**	**226**	*e*PG	**Pb**	**15 54 57.2**	**+0.4**
PVCC				*e*SG	**Sb**	**15 55 15.5**	**+0.3**
	comp=Z,212nm,0.4s						
KRLC	**Kraliky**	**1.50**	**164**	*e*PG	**Pg**	**15 54 58.5**	**+0.1**
KRLC				*e*SG	**Sg**	**15 55 16.8**	**-1.0**
	comp=Z,134nm,0.6s						
BRG	**Berggiesshubel**	**1.53**	**246**	PN	**Pn**	**15 54 58.2**	**-0.1**
BRG				PG	**Pg**	**15 55 00.0**	**+1.0**
BRG				SG	**Sn**	**15 55 19.6**	**+0.8**
	164nm,0.5s						
BRG	**Berggiesshubel**	**1.53**	**246**	*e*Pn	**Pn**	**15 54 58.4**	**+0.2**
	SNR=3.4						
BRG				*e*Pg	**Pg**	**15 54 60.0**	**+1.0**
	SNR=49						
BRG				*e*Sg	**Sn**	**15 55 19.7**	**+0.8**
	SNR=6.1						
RUE	**Ruedersdorf**	**1.75**	**304**	*e*Pn	**Pn**	**15 55 01.9**	**+0.5**
	SNR=3.3						
RUE				*e*Sg	**Sg**	**15 55 28.7**	**+2.7**
	SNR=3.8						
GOPC	**GO Pecny, Ondr**	**1.82**	**209**	*e*PG	**Pb**	**15 55 04.5**	**+0.6**
GOPC				*e*SG	**Sg**	**15 55 28.1**	**-0.1**
	comp=Z,41nm,0.6s						
PRU	**Pruhonice**	**1.84**	**214**	*e*Pn	**Pn**	**15 55 02.6**	**+0.1**
	SNR=2.8						
PRU	**Pruhonice**	**1.84**	**214**	*e*PG	**Pb**	**15 55 04.4**	**+0.2**
PRU				*e*SG	**Sn**	**15 55 27.0**	**+0.5**
	comp=Z,52nm,0.5s						
FBE	**Freiberg**	**1.85**	**252**	*e*Pn	**Pn**	**15 55 03.4**	**+0.7**
	SNR=2.1						
FBE				*e*Sg	**Sg**	**15 55 29.9**	**+0.6**
	SNR=1.7						
MORC	**Moravsky Berou**	**1.96**	**152**	*e*PN	**Pn**	**15 55 04.8**	**+0.6**
MORC				*e*SG	**Sn**	**15 55 30.1**	**+0.7**
MORC	**Moravsky Berou**	**1.96**	**152**	*e*Pn	**Pn**	**15 55 04.9**	**+0.7**
	SNR=27						
MORC	**Moravsky Berou**	**1.96**	**152**	⇑P	**Pn**	**15 55 04.9**	**+0.7**
MORC				⇑S	**Sn**	**15 55 27.3**	**-2.2**
MORC	**Moravsky Berou**	**1.96**	**152**	*e*Pn	**Pn**	**15 55 04.7**	**+0.6**
	baz=333						
MORC				*e*Sg	**Sn**	**15 55 30.1**	**+0.7**
	67nm,0.6s,baz=333						
CLL	**Collm**	**1.98**	**265**	*e*Pn	**Pn**	**15 55 05.6**	**+1.1**
	SNR=22						
CLL				*e*Sg	**Sg**	**15 55 35.1**	**+1.8**
	SNR=2.0						
CLL	**Collm**	**1.98**	**265**	*e*Pn	**Pb**	**15 55 06.0**	**-0.6**
CLL				*e*Pg	**Pg**	**15 55 08.0**	**+0.4**
CLL				*i*		15 55 12.5	
CLL				*e*Sg	**Sg**	**15 55 34.0**	**+0.7**
	comp=Z,56nm,0.7s						
OKC	**Ostrava-Krasne**	**2.11**	**142**	*e*Pg	**Pg**	**15 55 10.4**	**+0.4**
	SNR=4.0						
OKC				*e*Sg	**Sg**	**15 55 36.9**	**-0.5**
	SNR=4.5						
OKC	**Ostrava-Krasne**	**2.11**	**142**	*e*PG	**Pg**	**15 55 10.5**	**+0.4**
VRAC	**Vranov**	**2.23**	**172**	Pn	**Pb**	**15 55 09.7**	**-1.2**
	comp=Z,3.7nm,0.3s,baz=339,slow=14,SNR=25						
VRAC				Lg	Lg	15 55 40.2	
	comp=Z,4.4nm,0.3s,baz=34,slow=20,SNR=5.4						
VRAC	**Vranov**	**2.23**	**172**	*e*PN	**Pn**	**15 55 09.3**	**+1.3**
VRAC				*e*SG	**Sb**	**15 55 38.9**	**-0.1**
VRAC	**Vranov**	**2.23**

VRAC eSg Sb 15 55 38.9 -0.1
comp=Z,60nm,0.9s,baz=353
TREC Trest 2.26 191 ePn Pb 15 55 10.5 -1.0
SNR=3.7
TREC eSg Sg 15 55 41.9 -0.5
SNR=3.4
TREC Trest 2.26 191 ePG Pg 15 55 12.7 -0.4
PBCC Pribram 2.29 218 ePN Pn 15 55 08.9 +0.2
PBCC ePG Pg 15 55 13.1 -0.5
KRUC Moravsky 2.46 176 ePN Pn 15 55 12.3 +1.2
KRUC eSG Sb 15 55 46.2 +0.5
KRUC Moravsky 2.46 176 ePn Pn 15 55 12.1 +1.0
SNR=3.6
KRUC Moravsky 2.46 176 ePn Pn 15 55 12.3 +1.2
baz=357
KRUC eSg Sb 15 55 46.1 +0.4
comp=Z,48nm,0.6s,baz=357
TANN Tannenbergstha 2.58 246 ePn Pn 15 55 14.0 +1.2
SNR=6.1
NKC Novy Kostel 2.67 243 ePn Pn 15 55 15.0 +1.0
SNR=5.9
NKC Novy Kostel 2.67 243 ePN Pn 15 55 14.9 +0.9
NKC ePG Pg 15 55 21.2 +0.3
NKC eSG Sg 15 55 56.4 +0.9
comp=Z,62nm,0.4s
GUNZ Gunzen 2.67 246 ePn Pn 15 55 15.2 +1.2
SNR=4.1
WERN Wernitzgruen 2.69 244 ePn Pn 15 55 15.5 +1.3
SNR=6.2
JAVC Velka Javorina 2.83 159 ePN Pn 15 55 17.7 +1.4
JAVC eSG Sb 15 55 57.9 +1.4
JAVC Velka Javorina 2.83 159 ePn Pn 15 55 17.7 +1.4
baz=340
JAVC eSg Sb 15 55 57.8 +1.3
comp=Z,46nm,0.7s,baz=340
KHC Kasperske Hory 2.90 216 ePN Pn 15 55 17.9 +0.7
KHC ePG Pb 15 55 23.8 +1.5
KHC eSN Sn 15 55 51.2 -1.5
KHC eSG Sg 15 56 02.8 0.0
comp=Z,36nm,0.6s
MANZ Manzenberg 2.99 241 ePn Pn 15 55 19.2 +0.9
SNR=9.0
MOX Moxa 2.99 255 ePn Pn 15 55 19.2 +0.8
SNR=3.9
ROTZ Rotzenmuhle 3.06 237 ePn Pn 15 55 20.1 +0.8
SNR=13
GEC2 GERESS Array S 3.10 211 ePn Pn 15 55 21.3 +1.3
SNR=7.6
GERES GERESS Array B 3.10 211 Pn Pn 15 55 21.2 +1.2
comp=Z,1.9nm,0.3s,baz=28,slow=12,SNR=43
GERES Lg Lg 15 56 07.5
comp=Z,2.8nm,0.3s,baz=36,slow=26,SNR=5.6
SMOL Smolenice 3.12 164 ePG Pg 15 55 30.1 +0.7
SMOL eSG Sg 15 56 10.4 +0.6
SMOL eLG Lg 15 56 25.0
WET Wettzell 3.17 223 ePn Pn 15 55 21.5 +0.7
SNR=7.6
LANS Liptovska Anna 3.18 137 eSG Sg 15 56 14.2 +2.2
LANS eLG Lg 15 56 19.4
MODS Modra-Piesok 3.23 166 ePN Pn 15 55 21.1 -0.6
MODS ePG Pg 15 55 31.3 -0.3
MODS eSG Sg 15 56 15.5 +2.1
MODS eLG Lg 15 56 18.5
ZST Bratislava 3.38 169 ePG Pg 15 55 32.9 -1.6
ZST eSG Sg 15 56 19.6 +1.3
VYHS Vyhne 3.49 149 ePN Pn 15 55 25.5 +0.3
VYHS ePG Pg 15 55 36.9 +0.4
VYHS eSG Sg 15 56 27.9 +6.2
CONA Conrad Observa 3.60 183 *i* Pn Pn 15 55 28.0 +1.2
comp=Z,3.6nm,0.4s,SNR=6.5
CONA Pg Pg 15 55 38.4 -0.2
comp=Z,9.9nm,0.4s
CONA Sg Sg 15 56 24.8 -0.4
comp=Z,31nm,0.5s
BSD Bornholm Skovb 3.68 349 *i* P Pn 15 55 28.2 +0.4
BSD *e* 15 56 08.4
MOA Molln 3.87 199 ePn Pn 15 55 31.3 +0.8
comp=Z,4.4nm,0.3s,SNR=4.6
MOA Sg Sg 15 56 33.4 -0.6
comp=Z,32nm,0.6s
ARSA Arzberg 4.29 186 ePn Pn 15 55 38.2 +1.9
comp=Z,2.1nm,0.3s
ARSA Sg Sg 15 56 48.0 +0.5
comp=Z,38nm,0.7s
LUNU Lund 4.43 340 P Pn 15 55 38.2 +0.1
LUNU S Sn 15 56 29.7 -0.6
KOLS Kolonicke sedl 4.71 121 ePN Pn 15 55 42.8 +0.8
BLEU Blekinge 4.80 358 P Pn 15 55 44.5 +1.3
BLEU S Sn 15 56 37.5 -2.0
KBA Koelnbreinsper 4.80 204 ePn Pn 15 55 44.6 +1.1
comp=Z,3.6nm,0.3s,SNR=5.1
KBA Sg Sg 15 57 02.6 -1.4
comp=Z,24nm,0.7s
OBKA Obir 5.12 192 *i* Pn Pn 15 55 49.0 +1.3
comp=Z,0.9nm,0.2s
OBKA ePg Pg 15 56 08.2 +0.3
comp=Z,3.5nm,0.4s
OBKA Sg Sg 15 57 14.3 +0.1
comp=Z,17nm,0.8s
WATA Walderalm 5.14 217 ePn Pn 15 55 49.7 +1.7
comp=Z,2.8nm,0.3s
DEL Delary 5.14 346 P Pn 15 55 48.0 +0.1
WTTA Wattenberg 5.17 216 ePn Pn 15 55 50.3 +1.8
comp=Z,0.7nm,0.2s
WTTA Sg Sg 15 57 15.6 -0.3
comp=Z,4.7nm,0.3s
MOTA Moosalm 5.32 220 ePn Pn 15 55 51.3 +0.8
comp=Z,2.7nm,0.4s
MOTA Sg Sg 15 57 18.2 -2.2
comp=Z,5.5nm,0.5s
ABTA Abfaltersbach 5.33 208 Pn Pn 15 55 50.7 0.0
comp=Z,2.4nm,0.5s,SNR=4.6
ABTA Sg Sg 15 57 19.3 -1.7
comp=Z,26nm,0.9s
RETA Reutte 5.34 223 ePn Pn 15 55 51.4 +0.6
comp=Z,2.6nm,0.5s
RETA Sg Sg 15 57 21.1 -0.2
comp=Z,13nm,0.8s
SQTA Sankt Quirin 5.37 219⇑ ePn Pn 15 55 53.5 +2.3
comp=Z,3.6nm,0.4s,SNR=4.3
VXJU Vaexsjoe 5.46 353 P Pn 15 55 53.4 +1.1
FETA Feichten 5.73 220 ePn Pn 15 55 57.2 +1.1
comp=Z,2.3nm,0.6s
FABU Falkenberg 5.85 341 P Pn 15 55 57.8 +0.2
GNOU Gnosjoe 5.95 347 P Pn 15 55 59.8 +0.8
DAVOX Davos/Dischmat 6.27 223 Pn Pn 15 56 03.8 +0.2
comp=Z,0.3nm,0.3s,baz=64,slow=17,SNR=2.5
DAVOX Lg Lg 15 57 48.8
comp=Z,0.6nm,0.3s,baz=61,slow=5.7,SNR=3.0
BORU Boraas 6.44 344 P Pn 15 56 06.3 +0.6
FKPU Falk 6.80 349 P Pn 15 56 12.1 +1.4
AKASG Malin Array Be 8.27 91 Pn Pn 15 56 31.7 +0.8
comp=Z,0.8nm,0.3s,baz=279,slow=12,SNR=4.7
HFS Hagfors 8.75 352 Pn Pn 15 56 37.8 +0.4
comp=Z,0.2nm,0.3s,baz=172,slow=12,SNR=8.7
NOA NORSAR Array B 9.93 346 Pn Pn 15 56 52.4 -1.2
comp=Z,0.0nm,0.3s,baz=156,slow=12,SNR=4.2
FINES FINESS Array B 11.35 25 Pn Pn 15 57 12.7 -0.3
comp=Z,0.3nm,0.3s,baz=207,slow=11,SNR=19
FINES Sn Sn 15 59 13.3 -7.0
comp=Z,0.3nm,0.3s,baz=210,slow=19,SNR=6.4
EKA Eskdalemuir Ar 12.12 296 Pn Pn 15 57 20.9 -2.6
baz=106,slow=14,SNR=3.5
ARCES ARCESS Array B 18.61 10 Pn P 15 58 46.5 -1.9
comp=Z,0.2nm,0.3s,baz=197,slow=11,SNR=18
ARU Arti 25.11 62 P P 15 59 57.5 +1.6
comp=Z,0.5nm,0.3s,baz=255,slow=8.4,SNR=4.4
TORD Torodi Ar. Bea 40.01 202 P P 16 02 07.0 +0.7
comp=Z,0.6nm,0.8s,baz=12,slow=7.8,SNR=3.3
YKA Yellowknife Ar 59.86 336 P P 16 04 38.6 +2.0
comp=Z,0.6nm,0.6s,baz=33,slow=6.4,SNR=9.2

*IDC **10** 15:59:42.5±2.1,54.˚46S×29.˚21W,h0km,mb3.9/3, mb1 4.0/3,mb1mx3.7/29,mbtmp3.9/3,Error ellipse: s-maj=116.9km s-min=40.2km az=178.0*
*NEIC **10** 15:59:43.6±1.2,55.˚27S±0.˚09×29.˚2W±0.˚2,h17km±6km, mb4.4/6,Error ellipse: s-maj=17.5km s-min=10.9km az=57.0*
ISC 10 15:59:42.1±0.8,55.˚2S±0.˚1×29.˚1W±0.˚1,h10km,n15, σ0 95/12,mb4.2/4,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**4.37**	**280**	Pn	**Pn**	**16 00 47.9**	**-0.5**

PMSA Palmer Station 19.62 227 P P 16 04 10.3 0.0
PMSA IAmb IAmb 16 04 24.4
comp=Z,84nm,1.2s
SNAA Sanae 19.93 156 P P 16 04 13.0 -0.8
SNAA IAmb IAmb 16 04 14.5
comp=Z,6.4nm,1.0s
QSPA South Pole Qui 35.01 180 P P 16 06 34.6 +0.2
AC05 El Transito 39.49 295 P P 16 07 14.0 +1.2
AC05 IAmb IAmb 16 07 14.5
comp=Z,4.3nm,0.7s
BOSA Boshof 46.87 78 P P 16 08 13.6 +1.2
comp=Z,2.2nm,0.9s,baz=212,slow=13,SNR=1.7
BOSA Boshof 46.87 78 IAmb IAmb 16 08 19.3
comp=Z,20nm,1.4s
LBTB Lobatse 49.86 76 P P 16 08 36.5 +1.0
comp=Z,2.0nm,0.7s,baz=216,slow=9.6,SNR=2.5
LBTB Lobatse 49.86 76 IAmb IAmb 16 08 53.4
comp=Z,7.8nm,1.2s
TORD Torodi Ar. Bea 72.92 31 P P 16 11 09.6 -1.8
comp=Z,0.3nm,0.5s,baz=194,slow=7.1,SNR=2.2
FINES FINESS Array B 124.19 28 PKP **PKPdf** 16 18 39.5 0.0
comp=Z,1.0nm,0.7s,baz=184,slow=3.9,SNR=6.1
ARCES ARCESS Array B 130.61 22 PKP **PKPdf** 16 18 51.3 -0.2
comp=Z,1.0nm,0.8s,baz=222,slow=1.2,SNR=4.1
YKA Yellowknife Ar 134.83 319 PKP **PKiKP** 16 19 00.6 -0.5
comp=Z,0.3nm,0.5s,baz=135,slow=2.4,SNR=7.3
ZALV Zalesovo Beam 143.00 64 PKhKP PKPbc 16 19 11.0 -0.8
comp=Z,0.5nm,0.6s,baz=298,slow=3.1,SNR=1.9
ILAR Eielson Array 148.75 313 PKPbc **PKPbc** 16 19 28.6 +0.5
comp=Z,3.0nm,0.9s,baz=130,slow=1.8,SNR=24

IDC 10 16:01:47.9±2.3,0.˚79N×18.˚66W,h0km,mb3.8/2, mb1 4.0/3,mb1mx3.4/42,mbtmp4.0/3,ML4.2/1,Error ellipse: s-maj=88.4km s-min=42.5km az=125.0,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**9.52**	**154**	T	T	16 12 29.5	
	baz=330,slow=73,SNR=23						
H10N3	**ASCENSION HYDR**	**9.52**	**154**	T	T	16 12 26.0	
	baz=330,slow=73,SNR=29						
H10N1	**ASCENSION HYDR**	**9.54**	**154**	T	T	16 12 28.1	
	baz=330,slow=73,SNR=29						
H10S3	**ASCENSION HYDR**	**10.46**	**158**	T	T	16 13 33.4	
	baz=311,slow=74,SNR=14						
H10S2	**ASCENSION HYDR**	**10.48**	**158**	T	T	16 13 35.4	
	baz=269,slow=74,SNR=9.3						
DBIC	**Dimbokro**	**14.96**	**67**	Pn	Pn	16 05 19.4	-1.4
	1.0nm,0.3s,baz=253,slow=15,SNR=10						
DBIC				Sn	Sn	16 07 58.5	-8.9
	0.6nm,0.3s,baz=155,slow=14,SNR=4.1						
TORD	**Torodi Ar. Bea**	**23.61**	**58**	P	P	16 07 01.1	+0.3
	6.3nm,0.9s,baz=243,slow=10,SNR=20						
AKASG	**Malin Array Be**	**64.09**	**32**	P	P	16 12 23.8	0.0
	0.5nm,0.5s,baz=232,slow=6.5,SNR=5.4						
ASAR	**Alice Springs**	**145.00**	**133**	PKPbc	PKPab	16 21 25.9	-1.6
	0.2nm,0.7s,baz=220,slow=2.6,SNR=4.8						
WRA	**Warramunga Arr**	**147.44**	**127**	PKPbc	PKPbc	16 21 34.8	0.0
	0.4nm,0.9s,baz=238,slow=4.7,SNR=1.5						

IDC 10 16:25:05.9±2.2,0.˚33N×126.˚42E,h0km,mb3.3/3, mb1 3.6/3,mb1mx3.3/35,mbtmp3.3/3,Error ellipse: s-maj=183.4km s-min=28.0km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.59**	**159**	P	P	16 29 56.5	-1.0
	0.3nm,0.3s,baz=338,slow=11,SNR=23						
ASAR	**Alice Springs**	**24.94**	**164**	P	P	16 30 31.8	+0.7
	0.4nm,0.3s,baz=344,slow=12,SNR=23						
MKAR	**Makanchi Array**	**60.17**	**327**	P	P	16 35 15.5	-0.1
	0.1nm,0.3s,baz=113,slow=7.5,SNR=1.8						

IDC 10 16:30:09.5±1.9,8.˚76S×127.˚08E,h0km,mb3.6/1, mb1 3.9/5,mb1mx3.5/37,mbtmp3.7/5,ML3.7/4,Error ellipse: s-maj=36.3km s-min=28.4km az=71.0,Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**3.66**	**247**	Pn	Pn	16 31 08.1	+0.5
	13nm,0.3s,baz=111,slow=0.9,SNR=9.0						
BATI				Sn	Sn	16 31 52.8	+1.3
	13nm,0.3s,baz=332,slow=23,SNR=9.4						
FITZ	**Fitzroy Crossi**	**9.39**	**188**	Pn	Pn	16 32 26.4	+0.2
	0.7nm,0.3s,baz=17,slow=9.2,SNR=34						
FITZ				Sn	Sn	16 34 04.2	-8.3
	1.1nm,0.3s,baz=208,slow=19,SNR=10.0						
WRA	**Warramunga Arr**	**13.15**	**148**	Pn	Pn	16 33 17.4	-0.4
	0.3nm,0.3s,baz=321,slow=14,SNR=31						
WRA				Sn	Sn	16 35 36.0	-9.0
	0.5nm,0.3s,baz=321,slow=25,SNR=6.7						
ASAR	**Alice Springs**	**16.20**	**157**	Pn	Pn	16 33 58.8	0.0
	0.3nm,0.3s,baz=324,slow=11,SNR=22						
ASAR				Sn	Sn	16 36 51.0	-8.3
	0.2nm,0.3s,baz=320,slow=18,SNR=7.1						
MKAR	**Makanchi Array**	**68.15**	**329**	P	P	16 41 11.5	-0.1
	0.3nm,0.5s,baz=128,slow=6.8,SNR=4.3						

*NEIC **10** 16:32:10.7±1.8,4.˚30N±0.˚08×126.˚0E±0.˚1,h135km±7km, mb4.1/7,Error ellipse: s-maj=19.3km s-min=10.0km az=72.0*
*IDC **10** 16:32:10.9±1.3,4.˚20N×125.˚96E,h134km±20km,mb3.3/4, mb1 3.6/8,mb1mx3.2/47,mbtmp3.9/8,MS2.7/1,Ms1 2.7/1, ms1mx2.2/21,Error ellipse: s-maj=32.8km s-min=12.3km az=65.0*
*DJA **10** 16:32:13.3±0.4,4.˚N±2.˚×12.˚6E±.˚,h116km±6km,M4.3/13, mB4.9/3,mb4.4/6,MLv4.3/13,MLv4.4/2,Mw(mB)4.2/3*
ISC 10 16:32:11.4±0.8,4.˚25N±0.˚04×126.˚03E±0.˚06,h150km,n33, σ1 8 74/38,mb4.0/7,2C-2D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.83**	**351**	P	**Pn**	**16 32 54.8**	**-1.9**
	32nm,0.3s,baz=74,slow=10,SNR=1.4						
DAV				S	**Sn**	**16 33 31.8**	**0.0**
	85nm,0.3s,baz=280,slow=23,SNR=6.1						
DMPH	**Davao City--Mi**	**2.86**	**350**⇑	*eP*	Pn	16 33 07.2	+10
DMPH				*i*	**Sn**	**16 33 30.8**	**-1.6**
KCP	**Kidapawan**	**2.89**	**341**⇓	*eP*	**Pn**	**16 32 55.6**	**-1.9**
CTBH	**Cotabato--PC H**	**3.44**	**329**⇓	*iP*	**Pn**	**16 33 02.0**	**-2.4**
TNTI	**Ternate**	**3.71**	**159**	P	**Pn**	**16 33 07.7**	**-0.2**
TNTI				S	**Sn**	**16 33 48.7**	**-3.1**
TNTI	**Ternate**	**3.71**	**159**		**Pn**	**16 33 07.5**	**-0.4**
KMSI	**Cibinong**	**4.19**	**209**	P	**Pn**	**16 33 14.5**	**+0.3**
KMSI				S	**Sn**	**16 34 01.4**	**-1.6**
ZCP	**Zamboanga City**	**4.75**	**304**⇑	*eP*	**Pn**	**16 33 19.9**	**-1.6**
ZCP				*eS*	**Sn**	**16 34 12.0**	**-4.2**
LBMI	**Labuha**	**5.08**	**163**	P	**Pn**	**16 33 25.9**	**0.0**
LBMI				S	**Sn**	**16 34 21.5**	**-2.6**
MRSI	**Marisa**	**5.54**	**228**	P	**Pn**	**16 33 33.0**	**+0.9**
	0.2nm0.2nm1μm64nm,0.7s						
MRSI				S	**Sn**	**16 34 34.0**	**-1.2**
	0.2nm0.2nm1μm64nm,0.7s						
LUWI	**Luwuk**	**6.18**	**212**	P	**Pn**	**16 33 42.3**	**+1.6**
	0.5nm71nm,0.6s						
LUWI				S	**Sn**	**16 34 49.4**	**-1.1**
	0.5nm71nm,0.6s						
LUWI	**Luwuk**	**6.18**	**212**		**Pn**	**16 33 42.8**	**+2.2**
SANI	**Sanana**	**6.26**	**180**	P	**Pn**	**16 33 39.3**	**-2.4**
	0.6nm5μm89nm,0.7s						
APSI	**Ampana**	**6.74**	**221**	P	**Pn**	**16 33 50.1**	**+2.0**
	0.1nm371nm20nm,0.9s						
MPSI	**Mapaga**	**7.25**	**238**	P	Pn	16 33 49.7	-5.3
SIJI	**Sorong**	**7.30**	**134**	P	**Pn**	**16 33 55.0**	**-0.6**
	0.8nm,0.3s,baz=239,slow=22,SNR=12						
SIJI				S	**Sn**	**16 35 16.3**	**-1.0**
	0.4nm,0.3s,baz=237,slow=23,SNR=1.9						
NLAI	**Namlea**	**7.52**	**172**	P	**Pn**	**16 33 57.1**	**-1.4**
TTSI	**Tana Toraja**	**9.54**	**221**	P	**Pn**	**16 34 27.4**	**+1.9**
KAPI	**Kappang**	**11.14**	**214**	P	**Pn**	**16 34 45.6**	**-0.9**
	1.4nm,0.3s,baz=1.2,slow=9.4,SNR=6.2						
SBUM	**Sibu**	**13.90**	**263**	P	**P**	**16 35 25.6**	**0.0**
KSM	**Kuching**	**15.94**	**260**	P	**P**	**16 35 48.6**	**+0.4**
JAY	**Jayapura**	**16.13**	**114**	P	**P**	**16 35 52.8**	**+2.4**
	0.6nm,0.3s,baz=46,slow=20,SNR=5.2						
MTN	**Manton Dam**	**17.73**	**163**	P	**P**	**16 36 06.0**	**-1.8**
MTN				IAmb	IAmb	16 36 13.2	
	comp=Z,12nm,1.4s						

KNRA Kununurra 19.99 172 P P **16 36 32.5 +0.2**
FITZ Fitzroy Crossi 22.21 181 P P **16 36 56.6 +0.7**
comp=Z,5.2nm,0.4s,baz=359,slow=8.7,SNR=8.6
FITZ Fitzroy Crossi 22.21 181 IAmb IAmb 16 36 57.7
comp=Z,9.7nm,1.1s
WB0 Warramunga Arr 25.25 161 P P **16 37 25.6 +1.9**
WB0 IAmb IAmb 16 37 27.1
comp=Z,13nm,1.4s
WRAB Tennant Creek 25.39 161 P P **16 37 27.0 +1.9**
WRAB IAmb IAmb 16 37 31.3
comp=Z,12nm,1.4s
WRA Warramunga Arr 25.39 162 P P **16 37 26.4 +1.3**
comp=Z,0.3nm,0.3s,baz=340,slow=9.7,SNR=3.2
WB2 Warramunga Arr 25.40 161 P P **16 37 27.1 +2.0**
WB2 IAmb IAmb 16 37 29.1
comp=Z,4.2nm,0.9s
ASAR Alice Springs 28.79 165 P P **16 37 55.5 0.0**
comp=Z,0.4nm,0.5s,baz=340,slow=8.1,SNR=4.1
USRK Ussuriysk Ar. 40.13 7 LR LR 16 57 21.6
comp=Z,9.2nm,18.2s,baz=201,slow=38
MKAR Makanchi Array 56.73 325 P P **16 41 40.1 +0.6**
comp=Z,0.2nm,0.5s,baz=115,slow=7.9,SNR=1.3

*IDC **10** 16:33:45.3±0.9,22.˚36S×68.˚31W,h92km±9km,mb3.8/4, mb1 3.9/6,mb1mx3.5/39,mbtmp4.1/6,Error ellipse: s-maj=28.1km s-min=22.0km az=104.0*
*NEIC **10** 16:33:45.7±1.9,22.˚33S±0.˚04×68.˚50W±0.˚09,h107km±4km, Error ellipse: s-maj=11.8km s-min=5.8km az=80.0*
*SJA **10** 16:33:45.2±0.8,22.˚33S×68.˚70W,h124km±5km,ML3.6, MW3.7*
*GUC **10** 16:33:46.4±0.7,22.˚28S×68.˚72W,h116km±4km,ML3.6*
ISC 10 16:33:46.4±0.8,22.˚32S±0.˚03×68.˚66W±0.˚05,h115km±6km, n66, σ0 91/83,mb4.0/4,8C,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**0.37**	**219**	P	**Pn**	**16 34 02.8**	**-0.7**
	315nm,0.3s,baz=52,slow=6.1,SNR=8557						
LVC				LR	LR	16 34 09.5	
	comp=Z,82nm,18.6s,baz=86,slow=39						
LVC				S	**Sn**	**16 34 15.2**	**-1.1**
	615nm,0.3s,baz=284,slow=23,SNR=34						
LVC	**Limon Verde**	**0.37**	**219**		**Pn**	**16 34 03.0**	**-0.5**
LVC				Sn	**Sn**	**16 34 15.0**	**-1.3**
PB09	**IPOC Station P**	**0.75**	**314**	*i* P	**Pn**	**16 34 06.0**	**+0.2**
PB09				*i* S	**Sn**	**16 34 20.7**	**+0.3**
PB09				IAML		16 34 22.4	
	comp=E,3μm,0.4s						
PB09	**IPOC Station P**	**0.75**	**314**		**Pn**	**16 34 06.1**	**+0.2**
PB09				Sn	**Sn**	**16 34 20.8**	**+0.3**
PB09	**IPOC Station P**	**0.75**	**314**	*i* P	**Pn**	**16 34 06.0**	**+0.2**
PB09				*e*S	**Sn**	**16 34 21.3**	**+0.9**
PB09				IAML		16 34 21.6	
	comp=Z,3μm,0.5s						
PB06	**IPOC Station P**	**0.93**	**245**⇑	*i* P	**Pn**	**16 34 07.5**	**+0.1**
PB06				*i* S	**Sn**	**16 34 23.6**	**+0.3**
PB06				IAML		16 34 26.9	
	comp=N,2μm,0.2s						
PB06	**IPOC Station P**	**0.93**	**245**		**Pn**	**16 34 07.3**	**-0.1**
PB06				Sn	**Sn**	**16 34 23.7**	**+0.4**
PB06	**IPOC Station P**	**0.93**	**245**	*i* P	**Pn**	**16 34 07.5**	**+0.1**
PB06				*e*S	**Sn**	**16 34 24.1**	**+0.8**
PB06				IAML		16 34 25.4	
	comp=Z,2μm,0.2s						
PB03	**IPOC Station P**	**1.05**	**285**⇑	*i* P	**Pn**	**16 34 08.7**	**+0.1**
PB03				*i* S	**Sn**	**16 34 25.5**	**0.0**
PB03	**IPOC Station P**	**1.05**	**285**	*i* P	**Pn**	**16 34 08.7**	**+0.1**
PB03				*e*S	**Sn**	**16 34 25.6**	**+0.2**
PB03				IAML		16 34 28.5	
	comp=Z,2μm,0.3s						
PB15	**IPOC Station P**	**1.16**	**220**⇑	*i* P	**Pn**	**16 34 10.4**	**+0.5**
PB15				*i* S	**Sn**	**16 34 28.7**	**+1.1**
PB15	**IPOC Station P**	**1.16**	**220**		**Pn**	**16 34 10.3**	**+0.4**
PB15	**IPOC Station P**	**1.16**	**220**	*i* P	**Pn**	**16 34 10.4**	**+0.5**
PB15				IAML		16 34 31.4	
	comp=Z,7μm,0.2s						
PB07	**IPOC Station P**	**1.28**	**297**⇑	*i* P	**Pn**	**16 34 11.4**	**+0.2**
PB07				*i* S	**Sn**	**16 34 30.0**	**+0.1**
PB07				IAML		16 34 30.6	
	comp=N,2μm,0.2s						
PB07	**IPOC Station P**	**1.28**	**297**		**Pn**	**16 34 10.8**	**-0.4**
PB07	**IPOC Station P**	**1.28**	**297**	*i* P	**Pn**	**16 34 11.4**	**+0.2**
PB07				IAML		16 34 33.5	
	comp=Z,1μm,0.4s						
PB04	**IPOC Station P**	**1.38**	**269**⇑	*i* P	**Pn**	**16 34 12.2**	**0.0**
PB04				*i* S	**Sn**	**16 34 32.3**	**+0.4**
PB04				IAML		16 34 36.5	
	comp=N,2μm,0.2s						
PB04	**IPOC Station P**	**1.38**	**269**		**Pn**	**16 34 12.0**	**-0.3**
PB04	**IPOC Station P**	**1.38**	**269**	*i* P	**Pn**	**16 34 12.3**	**0.0**
PB04				IAML		16 34 35.4	
	comp=Z,1μm,0.1s						
PB01	**IPOC Station P**	**1.49**	**329**	*i* P	**Pn**	**16 34 13.6**	**+0.1**
PB01				*i* S	**Sn**	**16 34 33.7**	**-0.3**
PB01				IAML		16 34 35.3	
	comp=E,737nm,0.3s						
PB01	**IPOC Station P**	**1.49**	**329**		**Pn**	**16 34 13.2**	**-0.2**
PB02	**IPOC Station P**	**1.52**	**311**⇑	*i* P	**Pn**	**16 34 14.0**	**+0.1**
PB02				*i* S	**Sn**	**16 34 34.3**	**-0.3**
PB02	**IPOC Station P**	**1.52**	**311**	*i* P	**Pn**	**16 34 13.9**	**+0.1**
PB02				IAML		16 34 38.3	
	comp=Z,1μm,0.4s						
PB05	**IPOC Station P**	**1.52**	**249**⇑	*i* P	**Pn**	**16 34 13.9**	**0.0**
PB05				*i* S	**Sn**	**16 34 35.6**	**+0.9**
PB05				IAML		16 34 37.6	
	comp=N,530nm,0.2s						
PB05	**IPOC Station P**	**1.52**	**249**	*i* P	**Pn**	**16 34 13.8**	**0.0**
PB05				IAML		16 34 41.0	
	comp=Z,352nm,0.2s						
PATCX	**Punta Patache**	**2.04**	**317**⇑	*i* P	**Pn**	**16 34 19.8**	**-0.4**
PATCX				*i* S	**Sn**	**16 34 45.9**	**-0.1**
PATCX				IAML		16 34 53.0	
	comp=N,710nm,0.3s						
PATCX	**Punta Patache**	**2.04**	**317**		**Pn**	**16 34 19.5**	**-0.7**
PATCX	**Punta Patache**	**2.04**	**317**	*i* P	**Pn**	**16 34 19.9**	**-0.3**
PATCX				IAML		16 34 53.1	
	comp=Z,380nm,0.5s						
PB10	**IPOC Station P**	**2.11**	**235**		**Pn**	**16 34 21.5**	**+0.5**
PB10	**IPOC Station P**	**2.11**	**235**	*i* P	**Pn**	**16 34 20.7**	**-0.3**
PB10				IAML		16 35 04.7	
	comp=Z,118nm,0.4s						
PB08	**IPOC Station P**	**2.22**	**348**	*eP*	**Pn**	**16 34 23.8**	**+1.1**
PB08				*i* S	**Sn**	**16 34 51.1**	**+0.6**
PB08				IAML		16 34 55.7	
	comp=E,163nm,0.2s						
PB08	**IPOC Station P**	**2.22**	**348**		**Pn**	**16 34 23.8**	**+1.1**
PB08	**IPOC Station P**	**2.22**	**348**	*i* P	**Pn**	**16 34 23.9**	**+1.1**
PB08				IAML		16 34 54.8	
	comp=Z,78nm,0.5s						
TA01	**Diego Aracena**	**2.25**	**321**	*i* P	**Pn**	**16 34 22.4**	**-0.3**
TA01				*i* S	**Sn**	**16 34 50.0**	**-0.6**
TA01				IAML		16 34 59.1	
	comp=N,453nm,0.3s						
TA01	**Diego Aracena**	**2.25**	**321**		**Pn**	**16 34 22.6**	**-0.2**
GO01	**Chusmiza**	**2.69**	**349**	*eP*	**Pn**	**16 34 27.6**	**-1.2**
GO01				*i* S	**Sn**	**16 35 02.3**	**+0.9**
GO01	**Chusmiza**	**2.69**	**349**	Pn	**Pn**	**16 34 27.6**	**-1.2**
PB11	**IPOC Station P**	**2.71**	**340**	*eP*	**Pn**	**16 34 28.5**	**-0.4**
PB11				*i* S	**Sn**	**16 35 01.1**	**-0.5**
PB11				IAML		16 35 09.0	
	comp=E,203nm,0.6s						
PB11	**IPOC Station P**	**2.71**	**340**		**Pn**	**16 34 28.4**	**-0.4**
PB11	**IPOC Station P**	**2.71**	**340**	*i* P	**Pn**	**16 34 28.6**	**-0.3**
PB11				IAML		16 35 04.3	
	comp=Z,128nm,0.4s						
PB14	**IPOC Station P**	**2.80**	**215**		**Pn**	**16 34 30.0**	**-0.2**
PB14	**IPOC Station P**	**2.80**	**215**	*i* P	**Pn**	**16 34 29.9**	**-0.3**
PB14				IAML		16 35 33.1	
	comp=Z,178nm,1.0s						
YJA	**Yavi**	**2.92**	**88**	*i* P

PB12	**IPOC Station P**	**4.00**	**337**		**Pn**	16 34 47.2	**+1.2**
AC02	**Maricunga**	**4.52**	**185**		**Pn**	16 34 53.3	**+0.1**
GO03	**Copiap**	**5.44**	**195**	Pn	**Pn**	16 35 03.1	**-2.1**
LPAZ	**La Paz**	**6.02**	**5**		**Pn**	16 35 15.5	**+1.9**
SIV	**San Ignacio**	**9.54**	**50**	P	**Pn**	16 35 56.8	**-4.0**
	comp=Z,4.0nm,0.3s,baz=258,slow=9.2,SNR=69						
PLCA	**Paso Flores**	**18.43**	**185**	P	**Pn**	16 37 55.2	**+0.9**
	comp=Z,0.1nm,0.3s,baz=355,slow=12,SNR=3.4						
PLCA	**Paso Flores**	**18.43**	**185**	IAmb	IAmb	16 37 58.6	
	comp=Z,4.3nm,1.4s						
JTS	**Las Juntas de**	**36.13**	**332**	P	P	16 40 41.3	+3.6
	comp=Z,3.6nm,0.5s,baz=152,slow=20,SNR=4.8						
JTS	**Las Juntas de**	**36.13**	**332**	IAmb	IAmb	16 40 55.3	
	comp=Z,17nm,1.1s						
SNAA	**Sanae**	**61.43**	**161**	P	**P**	16 43 50.4	**+0.2**
	comp=Z,0.3nm,0.3s,baz=261,slow=6.7,SNR=4.2						
SNAA	**Sanae**	**61.43**	**161**	IAmb	IAmb	16 43 52.2	
	comp=Z,1.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**77.41**	**70**	P	**P**	16 45 28.8	**-0.6**
	comp=Z,1.1nm,0.6s,baz=255,slow=5.6,SNR=8.3						
YKA	**Yellowknife Ar**	**92.03**	**340**	P	**P**	16 46 42.8	**+0.9**
	comp=Z,0.5nm,0.6s,baz=136,slow=5.0,SNR=13						
ASAR	**Alice Springs**	**129.29**	**207**	PKP	**PKiKP**	16 52 43.0	**+0.3**
	comp=Z,0.4nm,0.7s,baz=139,slow=2.5,SNR=5.8						
WRA	**Warramunga Arr**	**132.37**	**210**	PKP	**PKiKP**	16 52 48.8	**-0.3**
	comp=Z,0.4nm,0.8s,baz=149,slow=1.4,SNR=5.7						
ZALV	**Zalesovo Beam**	**142.59**	**26**	PKP	**PKiKP**	16 53 07.9	**-0.8**
	comp=Z,0.5nm,0.3s,baz=333,slow=1.8,SNR=3.0						
MKAR	**Makanchi Array**	**146.15**	**37**	PKPbc	**PKiKP**	16 53 14.4	**-1.9**
	comp=Z,1.2nm,0.8s,baz=291,slow=3.8,SNR=6.8						

*JMA **10** 16:51:49.9±0.2,28.˚53N×129.˚02E,h69km±3km,M3.4*
JMA Felt I J1.
*IDC **10** 16:51:51.3±1.3,28.˚43N×128.˚98E,h91km±14km,mb3.3/8, mb1 3.5/10,mb1mx3.2/39,mbtmp3.6/10,MS3.1/2, Ms1 3.1/2,ms1mx2.4/24,Error ellipse: s-maj=29.2km s-min=11.5km az=96.0*

ISC 10 16:51:49.9±0.8,28.˚46N±0.˚04×129.˚12E±0.˚05,h77km±6km, n31,σ1§08/50,mb3.5/8,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAMN	**Amaminishikomi**	**0.23**	**168**	P	**Pn**	16 52 01.3	**-0.2**
JAMN				S	**Sn**	16 52 09.7	**-0.2**
JAM	**Amami Oshima**	**0.43**	**97**	P	**Pn**	16 52 02.7	**0.0**
JAM				S	**Sn**	16 52 12.2	**0.0**
JTAJ	**Takarajima**	**0.69**	**6**	P	**Pn**	16 52 04.3	**-0.9**
JTAJ				S	**Sn**	16 52 15.4	**-1.2**
JTK	**Tokunoshima**	**0.69**	**193**	P	**Pn**	16 52 05.4	**+0.1**
JTK				*e*S	**Sn**	16 52 16.9	**+0.3**
JZK	**Kikaishima**	**0.76**	**101**	P	**Pn**	16 52 07.7	**+1.7**
JZK				S	**Sn**	16 52 21.5	**+3.5**
JOKE	**Okinoerabujima**	**1.20**	**204**	P	**Pn**	16 52 11.9	**+0.6**
JOKE				*e*S	**Sn**	16 52 27.8	**+0.5**
JNN	**Nakanoshima**	**1.52**	**25**	P	**Pn**	16 52 14.7	**-0.7**
JNN				*e*S	**Sn**	16 52 33.9	**-0.7**
JYRO	**Yoronjima**	**1.55**	**203**	P	**Pn**	16 52 16.2	**+0.4**
JYRO				*e*S	**Sn**	16 52 36.8	**+1.5**
JIH	**Iheya**	**1.75**	**216**	P	**Pn**	16 52 18.7	**+0.3**
JIH				*e*S	**Sn**	16 52 40.0	**-0.1**
JOW	**Kunigami**	**1.79**	**205**	P	**Pn**	16 52 19.5	**+0.5**
	3.9nm,0.3s,baz=214,slow=20,SNR=3.5						
JOW				S	**Sn**	16 52 41.5	**+0.5**
	13nm,0.3s,baz=95,slow=24,SNR=17						
JOW	**Kunigami**	**1.79**	**205**	P	**Pn**	16 52 19.4	**+0.5**
JOW				S	**Sn**	16 52 41.0	**0.0**
JYAK	**Yakushimahirau**	**2.14**	**34**	P	**Pn**	16 52 23.7	**+0.1**
JYAK				S	**Sn**	16 52 48.7	**-0.6**
JNTH	**Nagotoyohara**	**2.17**	**207**	P	**Pn**	16 52 24.2	**+0.2**
JNTH				*e*S	**Sn**	16 52 50.2	**+0.2**
JKC	**Kuchinoerabu**	**2.20**	**25**	P	**Pn**	16 52 24.5	**+0.1**
JKC				*e*S	**Sn**	16 52 50.2	**-0.5**
JMTN	**Minamitane**	**2.47**	**38**	P	**Pn**	16 52 29.0	**+1.0**
JMTN				*e*S	**Sn**	16 52 57.8	**+0.5**
JAGN	**Aguni-jima**	**2.51**	**222**	P	**Pn**	16 52 29.1	**+0.6**
JAGN				*e*S	**Sn**	16 52 59.1	**+1.0**
JTN	**Tanegashima 3**	**2.72**	**36**	P	**Pn**	16 52 32.5	**+1.2**
JTN				*e*S	**Sn**	16 53 03.9	**+0.7**
JKE	**Kume jima 2**	**2.98**	**225**	P	**Pn**	16 52 35.5	**+0.7**
JKE				*e*S	**Sn**	16 53 10.5	**+1.0**
JKDJ	**Kitadaitoujima**	**3.17**	**142**	P	**Pn**	16 52 37.9	**+0.5**
JKDJ				S	**Sn**	16 53 12.4	**-1.7**
JMZ	**Minamidaito 2**	**3.23**	**144**	P	**Pn**	16 52 38.4	**+0.1**
JMZ				S	**Sn**	16 53 13.0	**-2.7**
JNU	**Nakatsue**	**4.88**	**18**	P	**Pn**	16 53 02.8	**+2.0**
	3.9nm,0.3s,baz=210,slow=0.8,SNR=40						
JNU				LR	LR	16 55 02.7	
	comp=Z,34nm,21.0s,baz=170,slow=39						
KSRS	**Korea Array**	**9.02**	**354**	P	**Pn**	16 53 59.0	**+1.7**
	0.4nm,0.3s,baz=176,slow=14,SNR=15						
SONM	**Songino Array**	**26.17**	**324**	P	**P**	16 57 18.1	**+1.0**
	0.6nm,0.5s,baz=136,slow=9.5,SNR=4.7						
KRVT	**Keravat (AS076**	**39.34**	**142**	LR	LR	17 15 23.8	
	comp=Z,157nm,19.5s,baz=240,slow=36						
MKAR	**Makanchi Array**	**40.68**	**310**	P	**P**	16 59 21.8	**-0.9**
	0.3nm,0.6s,baz=95,slow=7.2,SNR=3.5						
WRA	**Warramunga Arr**	**48.39**	**173**	P	**P**	17 00 23.8	**-0.3**
	1.0nm,0.6s,baz=353,slow=8.3,SNR=12						
ASAR	**Alice Springs**	**52.03**	**174**	P	**P**	17 00 51.6	**-0.1**
	0.3nm,0.5s,baz=9.3,slow=7.7,SNR=14						
ILAR	**Eielson Array**	**62.10**	**29**	P	**P**	17 02 03.5	**+1.2**
	0.3nm,0.7s,baz=289,slow=6.2,SNR=4.7						
INK	**Inuvik**	**66.53**	**24**	P	**P**	17 02 31.9	**+0.8**
	0.3nm,0.4s,baz=292,slow=5.7						
FINES	**FINESS Array B**	**71.32**	**330**	P	**P**	17 02 59.4	**-1.5**
	0.6nm,0.7s,baz=77,slow=2.5,SNR=4.6						
YKA	**Yellowknife Ar**	**76.17**	**25**	P	**P**	17 03 28.5	**-0.8**
	0.4nm,0.9s,baz=301,slow=5.1,SNR=3.8						

*NIED **10** 16:59:00,39.˚40N×143.˚80E,h11km,Mw3.7 Best double couple: M0=4.37000×1014 NP1:φs=21.00000°,δ52.00000°, λ104.00000°. NP2:φs=180.00000°,δ40.00000°,λ73.00000°.*
*IDC **10** 16:59:47.6±1.0,39.˚32N×143.˚73E,h0km,mb3.5/8, mb1 3.7/12,mb1mx3.5/52,mbtmp3.6/12,ML3.3/4,MS3.0/1, Ms1 3.0/1,ms1mx2.1/42,Error ellipse: s-maj=27.2km s-min=18.8km az=97.0*
*JMA **10** 16:59:49.1±0.1,39.˚41N×143.˚80E,h34km,M4.0*

ISC 10 16:59:49.6±0.9,39.˚39N±0.˚05×143.˚70E±0.˚09,h11km,n32, σ1§63/39,mb3.6/8,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.47**	**278**	P	**Pn**	17 00 15.3	**-0.7**
MIYJ				S	**Sn**	17 00 34.0	**-1.2**
JTH	**Tanohata**	**1.52**	**292**	P	**Pn**	17 00 15.7	**-1.0**
JTH				*e*S	**Sn**	17 00 35.8	**-0.7**
OFUJ	**Ofunato**	**1.61**	**260**	P	**Pn**	17 00 17.3	**-0.6**
OFUJ				*e*S	**Sn**	17 00 38.0	**-0.6**
JOM	**Ohasama**	**1.87**	**273**	P	**Pn**	17 00 21.3	**-0.2**
JOM				S	**Sn**	17 00 45.2	**+0.2**
JANG	**Nango**	**1.95**	**301**	P	**Pn**	17 00 21.8	**-0.8**
JMK	**Ichinoseki**	**1.98**	**258**	P	**Pn**	17 00 22.8	**-0.2**
JMK				*e*S	**Sn**	17 00 47.8	**+0.1**
JIO	**Ouri**	**2.06**	**244**	P	**Pn**	17 00 23.4	**-0.7**
JYK	**Kaneyama**	**2.64**	**261**	P	**Pn**	17 00 32.5	**+0.4**
JYK				*e*S	**Sn**	17 01 04.7	**+0.6**
JOT	**Ohata**	**2.84**	**315**	P	**Pn**	17 00 34.4	**-0.5**
JNBK	**Urakawa-nobuka**	**2.98**	**346**	P	**Pn**	17 00 36.6	**-0.2**
JNBK				*e*S	**Sn**	17 01 11.4	**-1.0**
JKB	**Kayabe**	**3.22**	**322**	S	**Sn**	17 01 16.5	**-1.8**
JCH	**Churui**	**3.23**	**356**	P	**Pn**	17 00 39.2	**-1.1**
JCH				S	**Sn**	17 01 16.0	**-2.8**
JFT	**Otama**	**3.23**	**236**	P	**Pn**	17 00 40.2	**-0.1**
JAK	**Akkeshi**	**3.68**	**11**	P	**Pn**	17 00 45.1	**-1.3**
JAK				S	**Sn**	17 01 25.9	**-3.9**
ASAJ	**Asahikawa**	**4.80**	**350**	Pn	**Pn**	17 01 00.9	**-0.9**
	1.9nm,0.3s,baz=192,slow=11,SNR=22						
ASAJ				Sn	**Sn**	17 01 57.6	**+0.3**
	2.1nm,0.3s,baz=33,slow=14,SNR=5.1						
MJAR	**Matsushiro Arr**	**5.18**	**238**	Pn	**Pn**	17 01 08.2	**+1.0**
	0.4nm,0.3s,baz=34,slow=14,SNR=66						
MAT	**Matsushiro**	**5.19**	**238**	P	**Pn**	17 01 08.4	**+1.2**
JHJ	**Hachijo jima 2**	**7.01**	**208**	Pn	**Pn**	17 01 30.6	**-1.6**
	6.4nm,0.3s,baz=162,slow=23,SNR=6.1						
JHJ				Sn	**Sn**	17 02 45.7	**-6.2**
	15nm,0.3s,baz=93,slow=22,SNR=5.4						
USRK	**Ussuriysk Ar.**	**9.98**	**303**	Pn	**Pn**	17 02 13.5	**+0.7**
	baz=99,slow=12,SNR=6.1						
KLR	**Kul'dur**	**13.02**	**323**	Pn	**Pn**	17 02 57.8	**+3.3**
	0.1nm,0.3s,baz=90,slow=9.1,SNR=2.0						
MA2	**Magadan**	**20.70**	**10**	LR	LR	17 12 52.3	
	comp=Z,40nm,20.3s,baz=251,slow=38						
H11N2	**WAKE ISLAND Hy**	**27.98**	**128**	T	T	17 36 00.3	
	baz=318,slow=75,SNR=31						
H11N1	**WAKE ISLAND Hy**	**27.99**	**128**	T	T	17 36 00.3	
	baz=318,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**28.00**	**128**	T	T	17 36 00.3	
	baz=318,slow=75,SNR=26						
SONM	**Songino Array**	**28.07**	**300**	P	**P**	17 05 41.2	**0.0**
	0.3nm,0.4s,baz=98,slow=8.9,SNR=2.5						
ZALV	**Zalesovo Beam**	**41.71**	**310**	P	**P**	17 07 38.5	**+0.3**
	1.0nm,0.4s,baz=96,slow=7.1,SNR=6.5						
MKAR	**Makanchi Array**	**44.44**	**300**	P	**P**	17 08 00.0	**-0.4**
	0.4nm,0.6s,baz=80,slow=8.9,SNR=3.7						
INK	**Inuvik**	**51.47**	**28**	P	**P**	17 08 55.1	**+0.7**
	0.5nm,0.6s,baz=332,slow=6.4,SNR=4.8						
WRA	**Warramunga Arr**	**59.67**	**190**	P	**P**	17 09 52.8	**-1.2**
	0.4nm,0.7s,baz=7.9,slow=6.9,SNR=5.0						
YKA	**Yellowknife Ar**	**60.87**	**31**	P	**P**	17 10 02.3	**+0.6**
	0.1nm,0.6s,baz=299,slow=5.5,SNR=2.6						
ASAR	**Alice Springs**	**63.39**	**190**	P	**P**	17 10 18.3	**-0.8**
	0.2nm,0.8s,baz=8.9,slow=6.6,SNR=2.3						
FINES	**FINESS Array B**	**67.56**	**333**	P	**P**	17 10 45.5	**-0.2**
	1.1nm,0.9s,baz=64,slow=9.4,SNR=3.5						

*IDC **10** 17:10:23.7±1.0,44.˚32N×105.˚83W,h0km,mb1 3.7/5, mb1mx3.4/40,mbtmp3.3/5,ML3.2/5,Error ellipse: s-maj=25.8km s-min=8.4km az=144.0*
*NEIC **10** 17:10:23.7±2.0,44.˚01N±0.˚05×105.˚26W±0.˚08,h0km±2km, ML3.2/63,Error ellipse: s-maj=10.3km s-min=8.7km az=101.0*

ISC 10 17:10:22.9±0.9,44.˚04N±0.˚06×105.˚28W±0.˚07,h0km,n62, σ0§97/62,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.90**	**84**		**Pn**	17 10 42.1	**-1.0**
K22A	**Casper**	**1.66**	**214**		**Pn**	17 10 53.1	**-0.2**
K22A				IAML		17 11 16.9	
	comp=E,274nm,0.3s						
K22A				IAML		17 11 20.4	
	comp=N,393nm,0.3s						
LAO	**LASA Array**	**2.73**	**346**		**Pn**	17 11 08.8	**+0.8**
LAO				IAML		17 11 55.7	
	comp=N,104nm,0.3s						
LAO				IAML		17 12 04.1	
	comp=N,114nm,0.5s						
PHWY	**Pilot Hill**	**2.74**	**183**		**Pn**	17 11 07.6	**-0.8**
RWWY	**Rawlins**	**2.75**	**212**		**Pn**	17 11 09.7	**+1.3**
RWWY				IAML		17 11 53.2	
	comp=N,73nm,0.6s						
RWWY				IAML		17 11 55.6	
	comp=N,90nm,0.6s						
RLMT	**Red Lodge**	**3.05**	**292**		**Pn**	17 11 13.7	**+1.2**
PDAR	**Pinedale Array**	**3.37**	**249**	Pn	**Pn**	17 11 17.8	**+0.8**
	comp=N,2.7nm,0.3s,baz=65,slow=16,SNR=78						
PDAR				Pg	**Pg**	17 11 22.3	**-1.3**
	comp=N,12nm,0.3s,baz=69,slow=19,SNR=45						
PDAR				Lg	Lg	17 12 03.4	
	comp=N,13nm,0.3s,baz=68,slow=36,SNR=2.7						
BW06	**Boulder Array**	**3.37**	**249**		**Pn**	17 11 18.0	**+1.1**
BW06				IAML		17 12 09.1	
	comp=E,44nm,0.5s						
BW06				IAML		17 12 09.4	
	comp=N,41nm,0.4s						
YNE	**Yellowstone No**	**3.52**	**288**		**Pn**	17 11 19.8	**+0.8**
YMP	**Mirror Lake Pl**	**3.56**	**283**		**Pn**	17 11 20.4	**+0.7**
GCMT	**Greyclift**	**3.57**	**301**		**Pn**	17 11 21.0	**+1.3**
LKWY	**Lake**	**3.71**	**280**		**Pn**	17 11 22.8	**+1.1**
LKWY				IAML		17 11 50.6	
	comp=N,33nm,0.5s						
LKWY				IAML		17 11 51.6	
	comp=N,27nm,0.5s						
H17A	**Grant Village**	**3.82**	**277**		**Pn**	17 11 24.3	**+1.1**
FLWY	**Flagg Ranch**	**3.91**	**272**		**Pn**	17 11 25.2	**+0.9**
FLWY				IAML		17 12 37.0	
	comp=N,28nm,1.8s						
FLWY				IAML		17 12 38.8	
	comp=N,44nm,1.4s						
OGNE	**Ogallala**	**3.92**	**141**		**Pn**	17 11 25.5	**+1.1**
YNR	**Norris Junctio**	**3.93**	**282**		**Pn**	17 11 24.6	**0.0**
YHH	**Holmes Hill**	**4.06**	**283**		**Pn**	17 11 27.6	**+1.0**
IMW	**Indian Meadow**	**4.09**	**270**		**Pn**	17 11 28.1	**+1.3**
IMW				IAML		17 12 38.1	
	comp=N,18nm,0.7s						
IMW				IAML		17 12 45.7	
	comp=N,30nm,0.7s						
E28A	**Huff**	**4.11**	**50**		**Pn**	17 11 27.7	**+0.7**
E28A				IAML		17 12 40.9	
	comp=E,51nm,0.7s						
YMR	**Madison River**	**4.12**	**281**		**Pn**	17 11 27.2	**-0.1**
TPAW	**Teton Pass**	**4.14**	**264**		**Pn**	17 11 28.5	**+0.9**
TPAW				IAML		17 12 56.1	
	comp=E,21nm,0.6s						
FXWY	**Fox Creek**	**4.18**	**266**		**Pn**	17 11 29.1	**+1.1**
ISCO	**Idaho Springs**	**4.25**	**183**		**Pn**	17 11 30.1	**+1.0**
ISCO				IAML		17 12 39.4	
	comp=E,19nm,0.7s						
YHB	**Horse Butte**	**4.30**	**282**		**Pn**	17 11 29.0	**-0.7**
YHL	**Hebgen Lake**	**4.30**	**283**		**Pn**	17 11 30.3	**+0.4**
AHID	**Auburn Hatcher**	**4.43**	**255**		**Pn**	17 11 31.5	**0.0**
AHID				IAML		17 12 46.7	
	comp=N,27nm,1.3s						
AHID				IAML		17 12 54.2	
	comp=E,24nm,1.2s						
O20A	**White River Ci**	**4.48**	**210**		**Pn**	17 11 32.6	**+0.4**
O20A				IAML		17 12 49.6	
	comp=E,24nm,0.7s						
O20A				IAML		17 13 01.3	
	comp=N,20nm,0.8s						
DGMT	**Dagmar**	**4.49**	**9**		**Pn**	17 11 34.2	**+2.0**
SUSD	**Miller**	**4.56**	**83**		**Pn**	17 11 34.2	**+1.1**
RDMU	**Red Mountain**	**4.70**	**224**		**Pn**	17 11 35.0	**-0.3**
EGMT	**Eagleton**	**5.06**	**324**		**Pn**	17 11 40.2	**+0.2**
HWUT	**Hardware Ranch**	**5.22**	**244**		**Pn**	17 11 43.3	**+0.9**
HWUT				IAML		17 13 13.2	
	comp=N,21nm,0.7s						
HWUT				IAML		17 13 14.8	
	comp=N,23nm,1.0s						
TCUT	**Toone Canyon**	**5.38**	**239**		**Pn**	17 11 46.4	**+1.8**
LRM	**Limekiln Ridge**	**5.39**	**292**		**Pn**	17 11 44.7	**0.0**
KSCO	**Kaye Shedlock'**	**5.41**	**157**		**Pn**	17 11 45.8	**+0.9**
MCMT	**McKenzie Canyo**	**5.48**	**281**		**Pn**	17 11 46.5	**+0.6**
PV22	**Blue Mesa, Par**	**6.10**	**207**		**Pn**	17 11 55.8	**+1.3**
P17A	**Butcher Ranch,**	**6.12**	**224**		**Pn**	17 11 56.1	**+1.4**
PV21	**Cone Mtn., Par**	**6.14**	**208**		**Pn**	17 11 55.8	**+0.8**
PV09	**Paradox Valley**	**6.25**	**209**		**Pn**	17 11 57.8	**+1.1**
PV23	**Carpenter Ridg**	**6.25**	**208**		**Pn**	17 11 56.6	**+0.1**
ECSD	**EROS Data Cent**	**6.27**	**90**		**Pn**	17 11 58.7	**+2.1**
SDCO	**Great Sand Dun**	**6.29**	**182**		**Pn**	17 11 58.5	**+1.3**
SRU	**San Rafael Swe**	**6.30**	**220**		**Pn**	17 11 58.0	**+0.8**
PV20	**West Nyswonger**	**6.34**	**207**		**Pn**	17 11 57.2	**-0.5**
PV11	**David Mesa, Pa**	**6.34**	**206**		**Pn**	17 11 59.0	**+1.2**
PV16	**Nyswonger Mesa**	**6.35**	**207**		**Pn**	17 11 56.9	**-1.0**
PV03	**Paradox Valley**	**6.38**	**206**		**Pn**	17 11 57.3	**-1.0**
PV02	**Paradox Valley**	**6.38**	**205**		**Pn**	17 11 58.1	**-0.3**
PV13	**Radium Mtn., P**	**6.46**	**206**		**Pn**	17 12 00.6	**+1.2**
MSO	**Missoula**	**6.70**	**298**		**Pn**	17 12 02.6	**+0.1**
Q16A	**Castle Valley**	**6.76**	**223**		**Pn**	17 12 04.1	**+0.5**
DUG	**Dugway, Tooele**	**6.79**	**238**		**Pn**	17 12 04.8	**+0.9**
MSU	**Marysvale**	**7.58**	**226**		**Pn**	17 12 15.2	**+0.4**
AGMN	**Agassiz Nation**	**7.80**	**54**		**Pn**	17 12 17.2	**-0.4**
ULM	**Lac du Bonnet**	**8.92**	**43**	Pn	**Pn**	17 12 32.5	**-0.5**
	comp=N,1.8nm,0.3s,baz=238,slow=11,SNR=8.7						
ULM				Lg	Lg	17 15 02.5	
	comp=N,0.4nm,0.3s,baz=316,slow=17,SNR=1.6						
ULM	**Lac du Bonnet**	**8.92**	**43**		**Pn**	17 12 33.3	**+0.4**
B35A	**Bob, Littlefor**	**9.10**	**58**		**Pn**	17 12 36.1	**+0.7**
I56US	**NEWPORT INFRAS**	**9.24**	**301**	*i*		18 04 30.0	
	baz=113,slow=326,SNR=4.6						
NVAR	**Mina Array Bea**	**11.29**	**245**	Pn	**Pn**	17 13 05.7	**+0.1**
	comp=N,0.1nm,0.3s,baz=61,slow=12,SNR=2.8						
TXAR	**Lajitas Array**	**14.74**	**174**	Pn	**P**	17 13 59.7	**+0.7**
	comp=N,0.0nm,0.3s,baz=355,slow=9.1,SNR=4.4						
YKA	**Yellowknife Ar**	**19.27**	**347**	P	**P**	17 14 47.5	**-1.3**
	comp=N,0.0nm,0.3s,baz=157,slow=12,SNR=2.0						

*IDC **10** 17:16:01.6±4.0,19.˚92S×169.˚05E,h0km,mb3.8/3, mb1 4.0/4,mb1mx3.6/27,mbtmp3.8/4,ML3.2/1,MS3.4/2, Ms1 3.4/2,ms1mx2.8/29,Error ellipse: s-maj=101.3km s-min=37.1km az=131.0*

*NEIC **10** 17:16:04.2±2.5,20.˚4S±0.˚2×169.˚49E±0.˚04,h35km±2km, mb4.6/5,Error ellipse: s-maj=28.4km s-min=5.1km az=172.0*

ISC 10 17:16:04.2±1.5,20.˚4S±0.˚2×169.˚6E±0.˚2,h35km,n12, σ1§41/11,mb4.2/5,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.34**	**240**	Pn	**Pn**	17 16 53.7	**-0.2**
	2.6nm,0.3s,baz=98,slow=14,SNR=33						
DZM				Sn	**Sn**	17 17 33.8	**+1.3**
	6.7nm,0.3s,baz=352,slow=23,SNR=8.2						
HNR	**Honiara**	**14.34**	**318**	LR	LR	17 23 12.8	
	comp=Z,72nm,19.5s,baz=159,slow=32						
CTA	**Charters Tower**	**21.87**	**267**	P	**P**	17 20 53.1	**-1.0**
	3.8nm,0.9s,baz=93,slow=9.5,SNR=1.9						
CTAO	**Charters Tower**	**21.87**	**267**	P	**P**	17 20 55.7	**+1.6**
CTAO				IAmb	IAmb	17 21 14.5	
	comp=Z,41nm,1.6s						
WB0	**Warramunga Arr**	**33.00**	**265**	P	**P**	17 22 35.1	**-1.0**
WB0				IAmb	IAmb	17 22 59.3	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**33.03**	**265**	P	**P**	17 22 34.0	**-2.4**
	comp=Z,0.3nm,0.5s,baz=91,slow=8.5,SNR=6.3						
AS31	**Alice Springs**	**33.15**	**258**	P	**P**	17 22 36.2	**-1.3**
ASAR	**Alice Springs**	**33.16**	**258**	P	**P**	17 22 36.7	**-0.8**
	comp=Z,2.0nm,0.6s,baz=85,slow=9.2,SNR=58						
MAJO	**Matsushiro**	**63.94**	**332**	P	**P**	17 26 34.8	**+1.0**
QSPA	**South Pole Qui**	**69.63**	**180**	P	**P**	17 27 10.0	**+0.2**
QSPA				IAmb	IAmb	17 27 31.9	
	comp=Z,10.0nm,1.5s						
LPIG	**La Paz**	**89.66**	**64**	LR	LR	18 00 09.5	
	comp=Z,39nm,18.2s,baz=90,slow=30						
GERES	**GERESS Array B**	**145.68**	**331**	PKPbc	**PKPab**	17 35 39.9	**+0.3**
	comp=Z,0.2nm,0.4s,baz=46,slow=4.2,SNR=2.3						

*JMA **10** 17:20:17.1±0.1,24.˚16N×121.˚66E,h10km±1km,M2.1*
*TAP **10** 17:20:17.2,24.˚20N×121.˚71E,h15km,ML3.1,C*

ISC 10 17:20:17.1±0.8,24.˚18N±0.˚02×121.˚71E±0.˚02,h14km±5km, n106,σ0§65/168,3C-12D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**0.11**	**266**	⇓*i*P	**Pg**	17 20 20.4	**0.0**
	baz=255						
NACB				*i* S	**Sg**	17 20 22.5	**0.0**
	baz=255						
TWD	**Chiawan**	**0.15**	**226**	P	**Pb**	17 20 21.1	**-0.6**
	baz=219						
TWD				*e*S	**Sg**	17 20 23.8	**+0.4**
	baz=219						
ETLH	**Xiulin Townshi**	**0.21**	**277**	⇓*i*P	**Pb**	17 20 22.0	**-0.8**
	baz=272						
ETLH				*e*S	**Sg**	17 20 25.1	**-0.1**
	baz=272						
HWA	**Hwalien**	**0.23**	**205**	*e*P	**Pb**	17 20 23.1	**+0.1**
	baz=202						
ENA	**Nanau**	**0.25**	**6**	⇓*i*P	**Pg**	17 20 22.3	**-0.2**
	baz=8.0						
ENA				*e*S	**Sg**	17 20 25.7	**-0.4**
	baz=8.0						
NNSB	**Datong**	**0.39**	**309**	⇓*i*P	**Pg**	17 20 25.1	**+0.1**
	baz=307						
NNSB				S	**Sg**	17 20 30.3	**0.0**
	baz=307						
NNSH	**Datong**	**0.39**	**309**	⇓P	**Pg**	17 20 25.1	**0.0**
	baz=306						
NNSH				*e*S	**Sg**	17 20 30.1	**-0.3**
	baz=306						
NNS	**Nan Shan**	**0.40**	**310**	⇓P	**Pg**	17 20 25.3	**0.0**
	baz=308						
NNS				*i* S	**Sg**	17 20 30.8	**0.0**
	baz=308						
WHF	**Hehuan Shan**	**0.41**	**265**	⇓*i*P	**Pb**	17 20 25.7	**-0.7**
	baz=262						
WHF				S	**Sb**	17

WLTB	**Daxi**	**0.79**	**328**	*eP*	**Pb**	**17 20 32.7**	**+0.1**
	baz=327							
WLTB				*eS*	**Sb**	**17 20 44.0**	**+0.8**
	baz=327							
TIPB	**Shuangxi**	**0.79**	**8**	*eP*	**Pg**	**17 20 32.4**	**-0.2**
	baz=359							
TIPB				*eS*	**Sg**	**17 20 40.8**	**-2.2**
	baz=359							
NHDH	**Xindian Distri**	**0.80**	**348**	*eP*	**Pb**	**17 20 33.3**	**+0.5**
	baz=347							
NHDH				*eS*	**Sg**	**17 20 42.9**	**-0.2**
	baz=347							
SSLB	**Suanglung**	**0.80**	**241**	*eP*	**Pb**	**17 20 32.6**	**-0.2**
	baz=248							
SSLB				*eS*	**Sg**	**17 20 42.5**	**-0.5**
	baz=248							
SMLT	**Sun Moon Lake**	**0.80**	**248**	*eP*	**Pb**	**17 20 33.1**	**+0.2**
	baz=240							
SMLT				*eS*	**Sb**	**17 20 43.4**	**-0.3**
	baz=240							
TWA	**Mucha**	**0.80**	**352**	*eP*	**Pg**	**17 20 32.8**	**0.0**
	baz=351							
TWA				*eS*	**Sg**	**17 20 42.8**	**-0.6**
	baz=351							
TATO	**Taipei**	**0.82**	**346**	*eP*	**Pb**	**17 20 33.0**	**-0.1**
	baz=354							
TATO				*eS*	**Sg**	**17 20 42.8**	**-1.0**
	baz=354							
TYC	**Yuchr**	**0.83**	**251**	*eP*	**Pb**	**17 20 33.4**	**+0.1**
	baz=243							
TYC				*eS*	**Sb**	**17 20 44.1**	**-0.3**
	baz=243							
TWB1	**Santiao Chiao**	**0.86**	**17**	*eP*	**Pg**	**17 20 32.1**	**-1.8**
	baz=17							
TWB1				*eS*	**Sg**	**17 20 44.0**	**-1.2**
	baz=17							
TAP1	**Taipei**	**0.87**	**349**	*eP*	**Pg**	**17 20 33.1**	**-0.9**
	baz=347							
TAP1				*eS*	**Sb**	**17 20 46.0**	**+0.5**
	baz=347							
TWQ1	**Liyutan**	**0.87**	**281**	*eP*	**Pn**	**17 20 35.3**	**+0.3**
	baz=280							
YULB	**Yu-li**	**0.87**	**206**	*eP*	**Pg**	**17 20 33.2**	**-0.8**
	baz=216							
YULB				*eS*	**Sb**	**17 20 45.7**	**+0.1**
	baz=216							
TAP	**Taipei**	**0.87**	**348**	*eS*	**Sg**	**17 20 45.5**	**-0.1**
	baz=347							
NWF	**Wu-fen Shan**	**0.89**	**4**	*eP*	**Pg**	**17 20 34.4**	**+0.1**
	baz=355							
NWF				*eS*	**Sg**	**17 20 46.1**	**+0.1**
	baz=355							
WFSB	**Wu-fen Shan**	**0.89**	**4**	*eP*	**Pb**	**17 20 34.7**	**+0.3**
	baz=356							
WFSB				*eS*	**Sg**	**17 20 45.6**	**-0.4**
	baz=356							
NSY	**Sanyi**	**0.90**	**285**	*eP*	**Pn**	**17 20 35.6**	**+0.2**
	baz=284							
NSY				*eS*	**Sn**	**17 20 48.5**	**+0.3**
	baz=284							
SBCB	**Hsinchu**	**0.90**	**313**	*eP*	**Pb**	**17 20 34.4**	**-0.1**
	baz=311							
SBCB				*eS*	**Sn**	**17 20 47.7**	**-0.5**
	baz=311							
TWF1	**Yuli**	**0.91**	**205**	*eP*	**Pg**	**17 20 33.8**	**-0.9**
	baz=216							
TWF1				*eS*	**Sn**	**17 20 48.8**	**+0.3**
	baz=216							
NMLH	**Miaoli**	**0.91**	**293**	*eP*	**Pn**	**17 20 36.4**	**+0.8**
	baz=292							
NMLH				*eS*	**Sn**	**17 20 47.6**	**-0.9**
	baz=292							
HSN	**Hsinchu**	**0.92**	**313**	*eP*	**Pn**	**17 20 35.1**	**-0.5**
	baz=314							
NCUH	**Zhongli**	**0.92**	**329**	*eP*	**Pn**	**17 20 35.7**	**0.0**
	baz=327							
NCUH				*eS*	**Sn**	**17 20 48.7**	**0.0**
	baz=327							
NCU	**National Centr**	**0.92**	**329**	*eS*	**Sn**	**17 20 49.7**	**+1.0**
	baz=328							
WHYT	**Xinyi Township**	**0.92**	**239**	*eP*	**Pn**	**17 20 36.2**	**+0.5**
	baz=238							
TCU	**Taichung**	**0.95**	**268**	*eP*	**Pn**	**17 20 36.6**	**+0.6**
	baz=267							
TWS1	**Kuangyinshan**	**0.95**	**344**	*eP*	**Pn**	**17 20 36.6**	**+0.4**
	baz=349							
TWS1				*eS*	**Sn**	**17 20 48.9**	**-0.6**
	baz=349							
PTSB	**Yuanli**	**0.95**	**286**	*eP*	**Pn**	**17 20 37.3**	**+1.1**
	baz=285							
PTSB				*eS*	**Sn**	**17 20 50.4**	**+0.8**
	baz=285							
WJS	**Zhushan**	**0.97**	**248**	*eP*	**Pn**	**17 20 36.9**	**+0.6**
	baz=244							
WJS				*eS*	**Sn**	**17 20 51.2**	**+1.3**
	baz=244							
YM01	**YM01**	**0.97**	**352**	*eP*	**Pn**	**17 20 36.5**	**0.0**
	baz=359							
YM01				*eS*	**Sg**	**17 20 47.9**	**-0.7**
	baz=359							
YM10	**YM10**	**0.98**	**352**	*eP*	**Pn**	**17 20 36.4**	**-0.2**
	baz=2.0							
YM04	**YM04**	**0.98**	**351**	*eP*	**Pg**	**17 20 34.8**	**-1.3**
	baz=359							
WNT	**Mingjian**	**0.99**	**252**	*eP*	**Pn**	**17 20 37.5**	**+0.9**
	baz=249							
WNT				*eS*	**Sn**	**17 20 52.0**	**+1.7**
	baz=249							
YM11	**YM11**	**0.99**	**353**	*eP*	**Pg**	**17 20 35.7**	**-0.6**
	baz=3.0							
WDJ	**Dajia District**	**0.99**	**280**	*eP*	**Pn**	**17 20 37.5**	**+0.9**
	baz=287							
WDJ				*eS*	**Sn**	**17 20 51.1**	**+0.7**
	baz=287							
YM03	**YM03**	**1.00**	**351**	P	**Pn**	**17 20 37.1**	**+0.2**
	baz=1.0							
NTST	**Danshui**	**1.01**	**346**	*eP*	**Pn**	**17 20 37.2**	**+0.4**
	baz=345							
ANP	**Anpu**	**1.01**	**350**	*eP*	**Pn**	**17 20 37.0**	**-0.1**
	baz=350							
FULB	**Fuli**	**1.05**	**201**	*eP*	**Pb**	**17 20 36.8**	**-0.4**
	baz=215							
WCHH	**Zhanghua**	**1.06**	**265**	*eP*	**Pn**	**17 20 38.7**	**+1.1**
	baz=265							
WCHH				*eS*	**Sn**	**17 20 53.8**	**+1.7**
	baz=265							
ALS	**Alishan**	**1.06**	**231**	*eP*	**Pn**	**17 20 38.0**	**0.0**
	baz=220							
ALS				*eS*	**Sn**	**17 20 52.4**	**-0.3**
	baz=220							
TWY	**Chenhua**	**1.09**	**355**	*eP*	**Pn**	**17 20 39.5**	**+1.4**
	baz=340							
CHN5	**Tsauling**	**1.11**	**239**	*eP*	**Pn**	**17 20 39.5**	**+1.1**
	baz=240							
CHN5				*eS*	**Sn**	**17 20 54.8**	**+1.3**
	baz=240							
CHKT	**Chengkung**	**1.12**	**196**	*eP*	**Pb**	**17 20 37.4**	**-0.9**
	baz=178							
JYNG	**Yonagunijimaku**	**1.16**	**76**	P	**Pn**	**17 20 39.2**	**+0.3**
JYNG				S	**Sn**	**17 20 55.9**	**+1.3**
WGK	**Gukeng**	**1.16**	**245**	*eP*	**Pg**	**17 20 40.2**	**+0.7**
	baz=245							
ELDTW	**Lidau**	**1.18**	**213**	*eP*	**Pb**	**17 20 38.6**	**-0.7**
	baz=213							
WDLH	**Douliu**	**1.18**	**246**	*eP*	**Pg**	**17 20 41.1**	**+1.2**
	baz=246							
YOJ	**Yonaguni jima**	**1.22**	**77**	*eP*	**Pn**	**17 20 39.6**	**-0.1**
	baz=65							
YOJ	**Yonaguni jima**	**1.22**	**77**	P	**Pn**	**17 20 39.9**	**+0.1**
YOJ				*eS*	**Sg**	**17 20 57.2**	**+0.7**
RLNB	**Erlin**	**1.27**	**257**	*eP*	**Pg**	**17 20 42.1**	**+0.6**
	baz=257							
CHN4	**Tsaushan**	**1.32**	**231**	*eP*	**Pg**	**17 20 43.0**	**+0.5**
	baz=232							
TPUB	**Ta-pu**	**1.32**	**229**	*eP*	**Pg**	**17 20 42.6**	**0.0**
	baz=230							
STYT	**Tauyuan**	**1.34**	**221**	*eP*	**Pg**	**17 20 42.5**	**-0.4**
	baz=222							
CHY	**Chiayi**	**1.36**	**240**	*eP*	**Pg**	**17 20 44.1**	**+0.7**
	baz=227							
WTP	**Ta-pu**	**1.37**	**227**	*eP*	**Pg**	**17 20 43.4**	**-0.1**
	baz=229							
TWK	**Hsinying**	**1.44**	**231**	*eP*	**Pg**	**17 20 44.4**	**-0.5**
	baz=232							
WSF	**Szhu**	**1.47**	**249**	*eP*	**Pb**	**17 20 44.2**	**0.0**
	baz=249							
CHN1	**Nanshi**	**1.47**	**228**	*eP*	**Pg**	**17 20 45.5**	**+0.1**
	baz=230							
WLGB	**Puzi**	**1.47**	**242**	*eP*	**Pg**	**17 20 45.5**	**+0.1**
	baz=242							
TWGBT	**Beinan**	**1.48**	**203**	*eP*	**Pn**	**17 20 43.7**	**+0.4**
	baz=188							
SGST	**Jiashian**	**1.51**	**224**	*eP*	**Pb**	**17 20 44.6**	**-0.3**
	baz=225							
SLGT	**Liugui**	**1.53**	**220**	*eP*	**Pb**	**17 20 45.3**	**-0.1**
	baz=222							
SSD	**Sandimen**	**1.74**	**215**	*eP*	**Pb**	**17 20 49.2**	**+0.4**
	baz=228							
IRIF	**Iriomote-Funau**	**1.85**	**85**	P	**Pn**	**17 20 49.7**	**+1.2**
MASBT	**Mashibuluo**	**1.85**	**213**	*eP*	**Pb**	**17 20 49.8**	**-1.0**
	baz=217							
SCZT	**Fangliau**	**2.06**	**209**	*eP*	**Pb**	**17 20 52.9**	**-1.5**
	baz=192							
PNG	**Penghu**	**2.07**	**253**	*eP*	**Pn**	**17 20 52.0**	**+0.6**
	baz=254							
PHUB	**P'eng-hu**	**2.07**	**252**	*eP*	**Pn**	**17 20 51.8**	**+0.3**
	baz=252							
WDGT	**Dungji**	**2.09**	**244**	*eP*	**Pb**	**17 20 53.2**	**-1.7**
	baz=246							
JKRS	**Kuro-shima**	**2.10**	**88**	P	**Pn**	**17 20 52.8**	**+0.9**
JKRS				*eS*	**Sb**	**17 21 20.3**	**-0.7**
PTTC	**Pingtan**	**2.20**	**307**	*eP*	**Pn**	**17 20 52.9**	**-0.3**
	baz=305							
VWUC	**VWUC**	**2.21**	**292**	*eP*	**Pn**	**17 20 53.4**	**0.0**
	baz=279							
JIJ	**Ishigaki jima**	**2.23**	**85**	P	**Pn**	**17 20 53.8**	**+0.1**
JIJ				S	**Sn**	**17 21 21.0**	**0.0**
JISG	**Ishigakijimahi**	**2.41**	**80**	P	**Pn**	**17 20 56.6**	**+0.5**
JISG				S	**Sn**	**17 21 25.6**	**+0.2**
PTMZ	**Houxiangcun**	**2.51**	**290**	*eP*	**Pn**	**17 20 57.3**	**-0.2**
	baz=289							

*NEIC **10** 17:26:33.9±2.9, 17°.42N±0°.06×100°.64W±0°.07, h14km±4km, mb4.7/241, Md4.9/18(MEX), Error ellipse: s-maj=11.4km s-min=7.3km az=52.0*

*MEX **10** 17:26:34.8±1.1, 16°.98N×100°.98W, h20km±244km, MD4.9*

*IDC **10** 17:26:38.3±4.7, 17°.22N×100°.65W, h33km±34km, mb3.9/13, mb1 4.1/18, mb1mx4.0/35, mbtmp4.1/18, ML3.7/5, MS4.2/18, Ms1 4.2/18, ms1mx4.1/27, Error ellipse: s-maj=27.6km s-min=13.5km az=47.0*

*GCMT **10** 17:26:38.9±0.3, 17°.23N±0°.02×100°.71W±0°.03, h22km, MW5.0/88, Moment Tensor Solution. s52,c65; s88,c121; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr3.06±.18; Mθθ-3.37±.11; Mφφ0.31±.11; Mrθ1.91±.16; Mφφ0.52±.08; Mφr0.17±.21; Best double couple: Mo3.77800×10^{16} NP1:φs286.00000°, δ31.00000°, λ103.00000°. NP2: φs91.00000°, δ60.00000°, λ82.00000°. Principal axes: T 3.6120, Plg73.0000°, Azm341.0000°; N 0.3340, Plg7.0000°, Azm95.0000°; P -3.9440, Plg15.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 17:26:34.8±1.2, 17°.21N±0°.04×100°.82W±0°.03, h20km±6km, n433, σ2s30/421, mb4.7/93, MS4.3/19, 1C, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.55**	**106**	*eP*		**Pb**	**17 26 45.3**	**-0.6**
	baz=264,slow=11							
CAIG				*i*	S	**Sg**	**17 26 54.7**	**+1.2**
CAIG	**El Cayaco**	**0.55**	**106**			**Pb**	**17 26 45.3**	**-0.6**
CAIG						**Sg**	**17 26 54.7**	**+1.2**
ZIIG	**Zihuatanejo**	**0.73**	**303**	*eP*		**Pb**	**17 26 47.9**	**-1.0**
ZIIG				*i*	S	**Sg**	**17 26 59.8**	**+0.8**
ZIIG	**Zihuatanejo**	**0.73**	**303**			**Pb**	**17 26 47.9**	**-1.0**
ZIIG						**Sg**	**17 26 59.8**	**+0.8**
ACP2	**Acapulco**	**0.95**	**110**	*eP*		**Pb**	**17 26 52.4**	**-0.3**
ACP2				*eS*		**Sb**	**17 27 04.9**	**0.0**
ACP2	**Acapulco**	**0.95**	**110**			**Pb**	**17 26 52.4**	**-0.3**
ACP2						**Sb**	**17 27 04.9**	**0.0**
ARIG	**Puente Sto Nin**	**1.16**	**23**	*eP*		**Pb**	**17 26 56.7**	**+0.5**
ARIG				*eS*		**Sg**	**17 27 13.2**	**+0.6**
ARIG	**Puente Sto Nin**	**1.16**	**23**			**Pb**	**17 26 56.7**	**+0.5**
ARIG						**Sg**	**17 27 13.2**	**+0.6**
UON	**La Union**	**1.21**	**309**	*eP*		**Pn**	**17 26 56.3**	**-0.4**
UON				*eS*		**Sg**	**17 27 14.6**	**+0.3**
MEIG	**Mezcala**	**1.35**	**58**	*eP*		**Pg**	**17 27 00.3**	**-0.7**
MEIG				*i*	S	**Sb**	**17 27 16.9**	**+0.5**
MEIG	**Mezcala**	**1.35**	**58**			**Pg**	**17 27 00.3**	**-0.7**
MEIG						**Sb**	**17 27 16.9**	**+0.5**
PLIG	**Platanillo**	**1.72**	**47**	*eP*		**Pb**	**17 27 05.1**	**-0.8**
PLIG	**Platanillo**	**1.72**	**47**			**Pb**	**17 27 05.1**	**-0.8**
TLIG	**Tlapa**	**2.18**	**80**	*eP*		**Pn**	**17 27 10.9**	**+0.8**
TLIG	**Tlapa**	**2.18**	**80**			**Pn**	**17 27 09.9**	**-0.3**
MOIG	**Morelia**	**2.48**	**352**			**Pn**	**17 27 15.9**	**+1.5**
UNM	**Universidad Na**	**2.63**	**36**			**Pn**	**17 27 18.5**	**+2.1**
CMIG	**Matias Romero**	**5.68**	**90**	Pn		**Pn**	**17 27 59.3**	**+1.2**
	2.8nm,0.3s,baz=251,slow=14,SNR=17							
CMIG				Sn		**Sn**	**17 29 02.5**	**-0.3**
	23nm,0.3s,baz=350,slow=20,SNR=6.0							
CMIG				Lg		Lg	17 29 30.6	
	25nm,0.3s,baz=265,slow=21,SNR=6.2							
CMIG				LR		LR	17 30 28.3	
	comp=Z,4μm,20.1s,baz=268,slow=42							
ZAIG	**Zacatecas**	**5.77**	**344**			**Pn**	**17 28 03.1**	**+3.5**
CCIG	**Comitan**	**8.37**	**95**			**Pn**	**17 28 35.6**	**+0.3**
H06E1	**SOCORRO T-PHAS**	**9.74**	**281**	T		T	17 38 41.8	
	SNR=240							
APG	**El Apazote**	**10.19**	**101**	Pn		**Pn**	**17 29 02.4**	**+2.1**
	2.2nm,0.3s,baz=317,slow=17,SNR=6.6							
APG				LR		LR	17 32 39.8	
	comp=Z,572nm,19.8s,baz=270,slow=36							
HPIG		**10.67**	**336**			**Pn**	**17 29 05.5**	**-1.3**
735A	**Kenedy**	**11.92**	**13**	Pn		**Pn**	**17 29 20.5**	**-3.2**
TEIG	**Tepich**	**12.26**	**74**	Pn		**Pn**	**17 29 24.1**	**-4.3**
TX31	**Lajitas Ar. Si**	**12.35**	**348**	Pn		**Pn**	**17 29 30.1**	**+0.4**
TX32	**Lajitas Array**	**12.35**	**348**	Pn		**Pn**	**17 29 28.4**	**-1.3**
TXAR	**Lajitas Array**	**12.35**	**348**	Pn		Pn	17 29 34.9	+5.2
	0.0nm,0.3s,baz=158,slow=15,SNR=4.2							
TXAR				LR		LR	17 34 52.7	
	comp=Z,3μm,18.2s,baz=0.0,slow=40							
JCT	**Junction City**	**13.25**	**4**	Pn		**Pn**	**17 29 41.4**	**-0.5**
TGUH	**Tegucigalpa,Un**	**13.42**	**102**			**Pn**	**17 29 44.7**	**+0.3**
HKT	**Hockley**	**13.48**	**19**			**Pn**	**17 29 45.7**	**+0.7**
SRIG	**Santa Rosalia**	**14.58**	**316**	Pn		**Pn**	**17 30 01.8**	**+1.6**
HSIG		**14.99**	**323**	Pn		**Pn**	**17 30 05.8**	**+0.1**
MATN	**Matagalpa**	**15.00**	**104**	Pn		**Pn**	**17 30 04.2**	**-1.8**
MNTX	**Cornudas Mount**	**15.01**	**345**	P		**P**	**17 30 14.3**	**+3.1**
	baz=162,SNR=20							
MNTX	**Cornudas Mount**	**15.01**	**345**			**Pn**	**17 30 06.6**	**+0.7**
WHTX	**Lake Whitney,**	**15.03**	**11**	Pn		**Pn**	**17 30 03.2**	**-3.0**
441A	**DeRidder**	**15.17**	**26**	Pn		**Pn**	**17 30 07.5**	**-0.5**
GDL2	**Guadalupe Moun**	**15.27**	**349**			**P**	**17 30 12.8**	**-1.4**
ABTX	**Abilene, Hawle**	**15.39**	**4**	P		**P**	**17 30 16.8**	**+1.4**
	baz=184							
ABTX	**Abilene, Hawle**	**15.39**	**4**			**Pn**	**17 30 11.4**	**+0.5**
237A	**Washetta, Mont**	**15.41**	**16**			**Pn**	**17 30 11.3**	**+0.1**
NATX	**Nacogdoches**	**15.53**	**20**	P		**P**	**17 30 18.9**	**+1.9**
	baz=202							
NATX	**Nacogdoches**	**15.53**	**20**			**Pn**	**17 30 13.0**	**+0.3**
ACON	**Acoyapa**	**16.01**	**107**	P		**Pn**	**17 30 20.2**	**+1.2**
319A	**Douglas**	**16.06**	**333**	P		**Pn**	**17 30 21.7**	**-1.3**
319A				IAmb		IAmb	17 30 36.0	
	comp=Z,115nm,1.6s							
342A	**Flagon Creek P**	**16.08**	**27**	P		**Pn**	**17 30 18.6**	**-1.3**
Z35A	**Perchaven, San**	**16.38**	**11**			**Pn**	**17 30 23.4**	**-0.1**
121A	**Cookes Peak, D**	**16.51**	**339**	P		**P**	**17 30 33.0**	**+5.0**
	baz=155							
121A	**Cookes Peak, D**	**16.51**	**339**			**Pn**	**17 30 26.1**	**+0.7**
ESPN	**Las Esperanzas**	**16.74**	**105**	P		**Pn**	**17 30 25.2**	**-3.1**
ESPN				IAmb		IAmb	17 30 40.0	
	comp=Z,173nm,2.0s							
MSTX	**Muleshoe**	**16.79**	**354**	P		**P**	**17 30 30.8**	**-0.2**
	baz=173,SNR=5.7							
MSTX	**Muleshoe**	**16.79**	**354**	P		**P**	**17 30 30.4**	**-0.6**
Z38A	**Mt. Pleasant**	**16.83**	**17**	P		**Pn**	**17 30 28.3**	**-1.0**
JTS	**Las Juntas de**	**16.87**	**112**	Pn		**Pn**	**17 30 30.7**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=350,slow=18,SNR=1.5							
JTS	**Las Juntas de**	**16.87**	**112**	P		**Pn**	**17 30 28.9**	**-1.1**
344A	**Westbrook Farm**	**16.89**	**31**	P		**Pn**	**17 30 27.7**	**-2.3**
344A				IAmb		IAmb	17 30 42.5	
	comp=Z,137nm,1.6s							
TUC	**Tucson**	**17.53**	**331**	P		**P**	**17 30 42.6**	**+3.3**
	baz=146							
TUC	**Tucson**	**17.53**	**331**	P		**P**	**17 30 39.0**	**-0.2**
Z41A	**Richland Creek**	**17.54**	**23**	P		**P**	**17 30 41.6**	**+2.4**
	baz=206							
WMOK	**Wichita Mounta**	**17.55**	**6**	P		**P**	**17 30 41.1**	**+1.7**
	baz=186,SNR=5.1							
WMOK	**Wichita Mounta**	**17.55**	**6**	P		**Pn**	**17 30 37.3**	**-1.2**
VBMS	**Vicksburg**	**17.62**	**30**	P		**Pn**	**17 30 36.7**	**-2.4**
VBMS				IAmb		IAmb	17 30 48.1	
	comp=Z,75nm,1.2s							
AMTX	**Amarillo**	**17.62**	**358**	P		**P**	**17 30 41.2**	**+1.0**
	baz=177							
AMTX	**Amarillo**	**17.62**	**358**	P		**Pn**	**17 30 37.8**	**-1.5**
LENM	**Lemitar**	**17.77**	**343**			**Pn**	**17 30 39.7**	**-1.5**
WLAR	**White Oak Lake**	**17.82**	**21**	P		**Pn**	**17 30 39.6**	**-2.0**
WLAR				IAmb		IAmb	17 30 53.7	
	comp=Z,88nm,1.1s							
214A	**Organ Pipe Nat**	**18.27**	**326**	P		**P**	**17 30 51.6**	**+4.3**
	baz=140							
214A	**Organ Pipe Nat**	**18.27**	**326**	P		**Pn**	**17 30 45.1**	**-2.1**
ANMO	**Albuquerque**	**18.37**	**345**	P		**Pn**	**17 30 51.6**	**+3.0**
	comp=Z,0.2nm,0.3s,baz=161,slow=12,SNR=12							
ANMO	**Albuquerque**	**18.37**	**345**	P		**Pn**	**17 30 52.4**	**+3.8**
	baz=162							
ANMO	**Albuquerque**	**18.37**	**345**	P		**P**	**17 30 47.0**	**-1.5**
ANMO				IAmb		IAmb	17 31 02.8	
	comp=Z,140nm,1.9s							
MIAR	**Mount Ida**	**18.45**	**19**	P		**Pn**	**17 30 51.5**	**+2.2**
	baz=202							
MIAR	**Mount Ida**	**18.45**	**19**	P		**P**	**17 30 47.5**	**-1.7**
CCAR	**Cane Creek**	**18.52**	**24**	P		**P**	**17 30 46.9**	**-3.1**
X40A	**Basin Creek Fa**	**18.64**	**21**	P		**P**	**17 30 47.3**	**-4.0**
X40A				IAmb		IAmb	17 31 01.1	
	comp=Z,137nm,1.9s							
W39A	**Magazine**	**18.98**	**18**	P		**Pn**	**17 30 57.5**	**+1.7**
	baz=201,SNR=16							
W39A	**Magazine**	**18.98**	**18**	P		**P**	**17 30 52.3**	**-2.8**
W39A				IAmb		IAmb	17 31 06.9	
	comp=Z,43nm,1.1s							
UALR	**University of**	**19.07**	**22**	P		**P**	**17 30 52.4**	**-3.6**
TUL1	**Leonard**	**19.16**	**13**	P		**Pn**	**17 30 58.3**	**+0.3**
	baz=194							
TUL1	**Leonard**	**19.16**	**13**	P		**P**	**17 30 54.3**	**-2.7**
TUL1				IAmb		IAmb	17 31 06.4	
	comp=Z,53nm,0.8s							
U32A	**Winter Ranch,**	**19.17**	**4**	P		**P**	**17 30 54.1**	**-3.0**
U32A				IAmb		IAmb	17 31 07.4	
	comp=Z,35nm,0.7s							
113A	**Mohawk Valley,**	**19.41**	**325**	P		**P**	**17 30 59.0**	**-0.7**
113A				IAmb		IAmb	17 31 14.5	
	comp=Z,121nm,1.9s							
Y45A	**Yeager Farm, C**	**19.44**	**29**	P		**P**	**17 30 55.0**	**-5.1**
Y45A				IAmb		IAmb	17 31 30.1	
	comp=Z,76nm,1.2s							
W41B	**Gary Mavity, V**	**19.46**	**22**	P		**Pn**	**17 31 02.1**	**+0.5**
	baz=205							
W18A	**Petrified Fore**	**19.53**	**338**	P		**Pn**	**17 31 07.6**	**+4.9**
	baz=153							
W18A	**Petrified Fore**	**19.53**	**338**	P		**P**	**17 30 59.6**	**-1.8**
W18A				IAmb		IAmb	17 31 16.0	
	comp=Z,66nm,1.4s							
WHAR	**Wooly Hollow**	**19.55**	**21**	P		**P**	**17 30 58.3**	**-3.1**
X16A	**Lo Mia Camp, P**	**19.60**	**333**	P		**P**	**17 31 01.1**	**-1.0**
Z47A	**Carrollton**	**19.64**	**33**	P		**P**	**17 30 58.1**	**-4.2**
250A	**Grady**	**19.75**	**39**	P		**P**	**17 30 59.9**	**-3.6**
250A				IAmb		IAmb	17 31 14.6	
	comp=Z,42nm,1.1s							
Y14A	**Wickenburg**	**19.93**	**329**	P		**P**	**17 31 04.6**	**-1.0**
Y14A				IAmb		IAmb	17 31 19.5	
	comp=Z,79nm,1.6s							
HHAR	**Hobbs**	**19.96**	**16**	P		**P**	**17 31 03.5**	**-2.3**
U38A	**Gravette**	**19.99**	**15**	P		**P**	**17 31 02.7**	**-3.4**
U38A				IAmb		IAmb	17 31 17.6	
	comp=Z,34nm,0.9s							
T35A	**Sooner Cattle**	**20.00**	**10**	P		**P**	**17 31 03.4**	**-2.9**
OXF	**Oxford**	**20.03**	**28**	P		**P**	**17 31 04.5**	**-2.1**
OXF				IAmb		IAmb	17 31 17.6	
	comp=Z,110nm,1.9s							
LRAL	**Lakeview Retre**	**20.09**	**36**	P		**Pn**	**17 31 08.3**	**-0.8**
	baz=221							
LRAL	**Lakeview Retre**	**20.09**	**36**	P		**P**	**17 31 03.5**	**-3.8**
T25A	**Trinidad**	**20.11**	**352**	P		**Pn**	**17 31 11.2**	**+1.7**
	baz=169							
FCAR	**Ozark Folk Cen**	**20.15**	**21**	P		**P**	**17 31 05.0**	**-2.9**
GLA	**Glamis**	**20.20**	**324**	P		Pn	17 31 17.9	+7.4
	baz=138,SNR=6.1							
GLA	**Glamis**	**20.20**	**324**	P		**P**	**17 31 07.8**	**-0.8**
GLA				IAmb		IAmb	17 31 21.4	
	comp=Z,49nm,1.1s							
352A	**Blakely**	**20.25**	**43**	P		**P**	**17 31 05.3**	**-3.7**
352A				IAmb		IAmb	17 31 17.1	
	comp=Z,41nm,0.8s							
U40A	**Yellville**	**20.34**	**19**	P		Pn	17 31 11.2	-0.8
	baz=202,SNR=12							
U40A	**Yellville**	**20.34**	**19**	P		**P**	**17 31 07.6**	**-2.4**
HBAR	**Harrisburg**	**20.39**	**24**	P		**P**	**17 31 08.0**	**-2.4**
WUAZ	**Wupatki**	**20.51**	**335**	P		Pn	17 31 16.7	+2.5
	baz=150,SNR=8.0							
WUAZ	**Wupatki**	**20.51**	**335**	P		**P**	**17 31 10.9**	**-1.1**
WUAZ				IAmb		IAmb	17 31 25.4	
	comp=Z,46nm,0.9s							
Y12C	**Blythe**	**20.56**	**326**	P		Pn	17 31 15.9	+1.2
	baz=139							
**

comp=Z,55nm,1.6s
PARMO **Parma** 21.72 25 P P 17 31 20.9 -3.8
PARMO IAmb IAmb 17 31 41.3
comp=Z,42nm,0.8s
KSCO **Kaye Shedlock'** 21.78 356 P P 17 31 27.6 +2.0
baz=175,SNR=5.7
KSCO **Kaye Shedlock'** 21.78 356 P P 17 31 24.6 -1.0
PV01 **Paradox Valley** 21.93 343 P P 17 31 26.3 -1.0
PV01 IAmb IAmb 17 32 09.8
comp=Z,49nm,1.8s
GMRC **Granite Mounta** 21.96 326 P P 17 31 32.6 +5.0
baz=139
FPAL **Fort Paine** 21.98 35 P P 17 31 24.0 -3.7
FPAL IAmb IAmb 17 31 38.7
comp=Z,29nm,1.0s
PV13 **Radium Mtn., P** 22.02 343 P P 17 31 26.8 -1.5
PV05 **Paradox Valley** 22.03 342 P P 17 31 26.9 -1.5
PV02 **Paradox Valley** 22.04 343 P P 17 31 25.0 -3.6
PV02 IAmb IAmb 17 31 44.6
comp=Z,69nm,1.9s
WVT **Waverly** 22.09 29 P P 17 31 30.2 +1.3
baz=214
WVT **Waverly** 22.09 29 P P 17 31 25.8 -3.0
WVT IAmb IAmb 17 31 42.1
comp=Z,98nm,2.0s
PV15 **Paradox Valley** 22.10 344 P P 17 31 27.4 -1.8
PV15 IAmb IAmb 17 31 46.3
comp=Z,30nm,1.1s
PV03 **Paradox Valley** 22.12 343 P P 17 31 27.8 -1.5
KSU1 **Kansas State U** 22.12 9 P P 17 31 31.7 +2.6
baz=190
KSU1 **Kansas State U** 22.12 9 P P 17 31 25.1 -4.1
KSU1 IAmb IAmb 17 31 39.1
comp=Z,34nm,0.7s
PV18 **Skein Mesa, Pa** 22.13 343 P P 17 31 26.3 -3.1
255A **Hazlehurst** 22.16 45 P P 17 31 25.7 -3.8
255A IAmb IAmb 17 31 38.4
comp=Z,51nm,1.1s
154A **Montrose** 22.16 43 P P 17 31 25.7 -3.9
154A IAmb IAmb 17 31 35.8
comp=Z,53nm,1.1s
PV12 **Saucer Basin,** 22.16 343 P P 17 31 28.2 -1.7
PV11 **David Mesa, Pa** 22.17 343 P P 17 31 27.4 -2.4
PV11 IAmb IAmb 17 32 19.5
comp=Z,73nm,1.8s
PV16 **Nyswonger Mesa** 22.19 343 P P 17 31 27.1 -3.0
PV16 IAmb IAmb 17 32 15.6
comp=Z,34nm,1.5s
PV19 **Morning Glory** 22.21 343 P P 17 31 26.6 -3.7
PV20 **West Nyswonger** 22.23 343 P P 17 31 28.5 -2.0
PV20 IAmb IAmb 17 32 17.1
comp=Z,44nm,1.7s
PV07 **Paradox Valley** 22.24 344 P P 17 31 27.2 -3.4
V48A **Smith Brothers** 22.26 31 P P 17 31 27.9 -2.8
PV04 **Paradox Valley** 22.27 343 P P 17 31 27.6 -3.3
PV04 IAmb IAmb 17 32 06.1
comp=Z,43nm,1.4s
PV14 **Lion Creek, Pa** 22.28 343 P P 17 31 31.4 +0.4
PV14 IAmb IAmb 17 31 42.8
comp=Z,26nm,1.0s
PV10 **Paradox Valley** 22.29 343 P P 17 31 27.5 -3.6
R40A **Maddies Statio** 22.30 18 P P 17 31 27.7 -3.3
R40A IAmb IAmb 17 31 46.2
comp=Z,55nm,1.4s
SWET **Sewanee** 22.31 34 P P 17 31 28.2 -3.0
PV23 **Carpenter Ridg** 22.35 343 P P 17 31 28.4 -3.5
PV23 IAmb IAmb 17 32 06.9
comp=Z,34nm,1.3s
HEC **Hector,Ludlow** 22.36 325 P P 17 31 36.9 +5.1
baz=137
PV22 **Blue Mesa, Par** 22.36 343 P P 17 31 31.4 -0.6
PV22 IAmb IAmb 17 32 20.7
comp=Z,57nm,1.9s
Y52A **Lilburn** 22.39 39 P P 17 31 28.6 -3.5
KNB **Kanab** 22.40 334 P P 17 31 32.9 +0.6
CCM **Cathedral Cave** 22.41 20 P P 17 31 36.4 +4.2
baz=204
CCM **Cathedral Cave** 22.41 20 P P 17 31 29.9 -2.3
CCM IAmb IAmb 17 31 44.0
comp=Z,18nm,0.8s
X51A **Calhoun** 22.42 37 P P 17 31 30.3 -2.1
X51A IAmb IAmb 17 32 17.3
comp=Z,45nm,1.4s
PV09 **Paradox Valley** 22.43 343 P P 17 31 31.0 -1.7
PV21 **Cone Mtn., Par** 22.44 343 P P 17 31 29.3 -3.5
GOGA **Godfrey** 22.45 41 P P 17 31 33.1 +0.4
baz=228
GOGA **Godfrey** 22.45 41 P P 17 31 29.3 -3.4
PKCU **Pink Cliffs** 22.56 336 P P 17 31 30.9 -3.3
LCMT **Little Creek M** 22.57 333 P P 17 31 33.8 -0.3
TUQ **Turquoise Moun** 22.59 326 P P 17 31 37.8 +3.4
baz=139,SNR=16
W50A **Signal Mountai** 22.64 35 P P 17 31 31.5 -3.2
CLTN **Cedars of Leba** 22.79 32 P P 17 31 33.8 -2.4
CLTN IAmb IAmb 17 32 07.4
comp=Z,53nm,1.7s
S44A **Carbondale** 22.81 24 P P 17 31 34.8 -1.6
SIUC **Southern Illin** 22.84 24 P P 17 31 32.6 -4.2
ISCO **Idaho Springs** 22.89 350 P P 17 31 39.5 +1.8
baz=168
ISCO **Idaho Springs** 22.89 350 P P 17 31 34.2 -3.4
SZCU **Shurtz Canyon** 23.00 334 P P 17 31 37.0 -1.7
MTPU **Mount Pierson** 23.03 337 P P 17 31 37.9 -1.2
SHPR **Sheep Range** 23.04 329 P P 17 31 37.6 -1.4
CCUT **Cedar City** 23.08 334 P P 17 31 39.3 -0.2
T47A **Sharon Grove** 23.13 29 P P 17 31 37.9 -1.9
T47A IAmb IAmb 17 31 52.3
comp=Z,16nm,0.8s
P38A **Dawn** 23.22 14 P P 17 31 38.4 -2.2
CPCT **Cooper Cave** 23.25 35 P P 17 31 39.7 -1.3
W52A **Murphy** 23.33 37 P P 17 31 40.8 -1.0
W52A IAmb IAmb 17 31 54.0
comp=Z,20nm,1.0s
U49A **Red Boiling Sp** 23.39 32 P P 17 31 39.9 -2.5
SRU **San Rafael Swe** 23.41 341 P P 17 31 41.3 -1.5
MSU **Marysvale** 23.44 337 P P 17 31 41.5 -1.6
Q16A **Castle Valley** 23.45 339 P P 17 31 40.4 -2.7
P40A **Paris** 23.52 17 P P 17 31 40.4 -3.2
OSI **Osito Audit: C** 23.59 321 P P 17 31 42.3 -2.2
OSI IAmb IAmb 17 32 29.9
comp=Z,36nm,1.4s
V51A **Loudon** 23.61 35 P P 17 31 41.9 -2.6
V51A IAmb IAmb 17 32 21.3
comp=Z,15nm,0.8s
OGNE **Ogallala** 23.68 358 P P 17 31 42.2 -3.1
OGNE IAmb IAmb 17 31 58.1
comp=Z,22nm,0.7s
USIN **University of** 23.69 27 P P 17 31 42.3 -3.0
O20A **White River Ci** 23.74 346 P P 17 31 43.2 -2.7
HODGE **Hodges** 23.75 41 P P 17 31 42.3 -3.6
HODGE IAmb IAmb 17 31 53.6
comp=Z,46nm,1.6s
TMUT **Trail Mountain** 23.80 340 P P 17 31 41.5 -5.2
P17A **Butcher Ranch,** 23.81 341 P P 17 31 44.1 -2.5
Y55A **Saluda** 23.81 42 P P 17 31 48.5 +2.0
baz=230
TKL **Tuckaleechee C** 23.82 36 P P 17 31 46.8 +0.2
comp=Z,3.7nm,0.6s,baz=196,slow=13,SNR=6.6
TKL **Tuckaleechee C** 23.82 36 P P 17 31 44.6 -2.0
BG3 **Lake Jocassee** 23.85 39 P P 17 31 44.7 -2.1
FURC **Furnace Creek,** 23.87 327 P P 17 31 51.5 +4.5
baz=139
X54A **Belton** 23.88 40 P P 17 31 48.7 +1.5
baz=228
MPMC **Manual Prospec** 23.90 325 P P 17 31 50.6 +3.0
baz=137,SNR=6.8
TPNV **Topopah Spring** 23.92 328 P P 17 31 51.8 +4.0
baz=141,SNR=12
TPNV **Topopah Spring** 23.92 328 P P 17 31 44.4 -3.4
Q44A **Meyer Farm, Va** 23.95 23 P P 17 31 43.8 -4.0
N35A **Tabor** 23.99 10 P P 17 31 44.4 -3.8
N35A IAmb IAmb 17 32 08.6
comp=Z,23nm,0.8s
N23A **Red Feather La** 24.02 350 P P 17 31 52.0 +3.3
baz=168
V52A **Sevierville** 24.06 36 P P 17 31 46.1 -2.7
V52A IAmb IAmb 17 31 57.9
comp=Z,20nm,1.2s
PSUT **Pine Spring** 24.12 334 P P 17 31 46.4 -3.2
OLIL **Olney** 24.16 25 P P 17 31 45.9 -3.8
ISA **Isabella, Lake** 24.17 323 P P 17 31 47.4 -2.6
ISA IAmb IAmb 17 32 02.4
comp=Z,64nm,1.9s
T50A **Nancy** 24.26 32 P P 17 31 47.1 -3.6
T50A IAmb IAmb 17 31 53.9
comp=Z,9.9nm,0.6s
X55A **Gracelyn & Ava** 24.30 41 P P 17 31 51.3 +0.3
baz=229
PHWY **Pilot Hill** 24.34 352 P P 17 31 47.5 -4.2
W54A **Cherokee Point** 24.36 39 P P 17 31 53.0 +1.4
baz=227
V53A **Saluda** 24.38 38 P P 17 31 47.4 -4.5
V53A IAmb IAmb 17 32 01.5
comp=Z,48nm,1.6s
N38A **Joes South For** 24.40 14 P P 17 31 47.6 -4.3
PAULI **Pauline** 24.41 40 P P 17 31 50.8 -1.3
PAULI IAmb IAmb 17 32 04.3
comp=Z,17nm,0.9s
P43A **Skaggs, Pawnee** 24.42 21 P P 17 31 47.2 -4.8
P43A IAmb IAmb 17 32 04.9
comp=Z,28nm,1.0s
RDMU **Red Mountain** 24.48 344 P P 17 31 51.8 -1.1
CWC **Cottonwood Cre** 24.51 325 P P 17 31 56.7 +3.6
baz=136
WCI **Wyandotte Cave** 24.51 28 P P 17 31 54.6 +1.6
baz=215
WCI **Wyandotte Cave** 24.51 28 P P 17 31 49.8 -3.2
MPU **Maple Canyon** 24.59 340 P P 17 31 51.1 -2.7
NLU **North Lily Min** 24.68 339 P P 17 31 51.2 -3.6
X56A **White Oak** 24.69 42 P P 17 31 55.6 +1.0
baz=230
R11A **Troy Canyon, C** 24.72 331 P P 17 31 58.6 +3.6
baz=144,SNR=6.1
R11A **Troy Canyon, C** 24.72 331 P P 17 31 54.2 -0.8
R11A IAmb IAmb 17 32 07.7
comp=Z,19nm,1.3s
KMSC **Kings Mountain** 24.92 40 P P 17 31 53.1 -3.5
V54A **Nebo** 24.97 39 P P 17 31 58.8 +1.6
baz=227
RWWY **Rawlins** 25.01 349 P P 17 31 53.7 -4.1
RWWY IAmb IAmb 17 32 09.6
comp=Z,34nm,1.4s
JLU **Jordanelle** 25.06 341 P P 17 31 55.7 -2.5
BIRD **Birdtown, Kers** 25.15 42 P P 17 31 56.4 -2.4
DUG **Dugway, Tooele** 25.16 338 P P 17 32 02.1 +3.2
baz=152
DUG **Dugway, Tooele** 25.16 338 P P 17 31 57.2 -1.7
DUG IAmb IAmb 17 32 11.6
comp=Z,23nm,1.6s
HDIL **Hopedale** 25.31 21 P P 17 31 59.3 -0.9
S51A **Beattyville** 25.38 33 P P 17 31 57.8 -3.0
S51A IAmb IAmb 17 32 21.3
comp=Z,13nm,0.8s
W56A **Indian Trail** 25.38 41 P P 17 32 02.8 +2.0
baz=230
V55A **Taylorsville** 25.46 39 P P 17 31 59.0 -2.5
V55A IAmb IAmb 17 32 14.0
comp=Z,18nm,1.1s
T53A **Wise** 25.47 36 P P 17 32 03.8 +2.1
baz=224
TCUT **Toone Canyon** 25.52 341 P P 17 32 02.5 +0.2
U54A **Nelsons Funny** 25.55 37 P P 17 32 03.6 +1.1
baz=226
U54A **Nelsons Funny** 25.55 37 P P 17 31 59.1 -3.4
W57A **Gilead** 25.77 42 P P 17 32 06.7 +2.4
baz=231
W57A **Gilead** 25.77 42 P P 17 32 03.7 -0.7
W57A IAmb IAmb 17 32 14.7
comp=Z,23nm,1.0s
K22A **Casper** 25.82 350 P P 17 32 09.4 +4.4
baz=167
K22A **Casper** 25.82 350 P P 17 32 04.2 -0.8
K22A IAmb IAmb 17 32 17.3
comp=Z,27nm,1.3s
OMMB **Old Mammoth Mi** 25.86 325 P P 17 32 05.0 -0.6
OMMB IAmb IAmb 17 32 19.4
comp=Z,38nm,1.5s
V56A **Mocksville** 25.87 40 P P 17 32 06.5 +1.2
baz=229
BGU **Big Grassy Mou** 25.88 338 P P 17 32 04.8 -0.6
SFIN **Lafayette** 25.97 24 P P 17 32 07.9 +1.8
baz=211
SFIN **Lafayette** 25.97 24 P P 17 32 05.4 -0.7
U55A **TA2, Sparta** 25.99 38 P P 17 32 07.5 +1.0
baz=227
HWUT **Hardware Ranch** 26.01 341 P P 17 32 06.8 +0.1
NV11 **Mina Array Sit** 26.03 328 P P 17 32 07.7 +0.8
NV11 IAmb IAmb 17 32 23.6
comp=Z,30nm,1.3s
T54A **Tazewell** 26.07 37 P P 17 32 08.3 +1.2
baz=226,SNR=5.6
L40A **Anamosa** 26.10 16 P P 17 32 06.5 -0.8
L40A IAmb IAmb 17 32 18.9
comp=Z,11nm,0.8s
NVAR **Mina Array Bea** 26.10 328 P P 17 32 10.5 +2.9
comp=Z,3.3nm,0.8s,baz=154,slow=9.8,SNR=18
NVAR LR LR 17 42 41.9
comp=Z,886nm,18.7s,baz=167,slow=37
S53A **Williamson** 26.20 35 P P 17 32 09.8 +1.6
baz=224
P49A **Miami Univ. Ec** 26.29 29 P P 17 32 10.2 +1.1
baz=216,SNR=6.5
RYN **Ryan** 26.36 328 P P 17 32 07.1 -2.8
RYN IAmb IAmb 17 32 25.2
comp=Z,28nm,1.4s
V57A **Coltrane Farms** 26.37 41 P P 17 32 11.5 +1.7
baz=230
KVN **Kaiserville** 26.47 329 P P 17 32 11.8 +0.8
KVN IAmb IAmb 17 32 22.9
comp=Z,36nm,1.4s
M44A **Midewin, Midew** 26.49 22 P P 17 32 07.0 -3.8
M44A IAmb IAmb 17 32 49.1
comp=Z,29nm,1.4s
L42A **Oliver, Polo** 26.50 19 P P 17 32 07.5 -3.4
L42A IAmb IAmb 17 32 49.8
comp=Z,19nm,0.8s
BW06 **Boulder Array** 26.54 346 P P 17 32 14.6 +3.0
baz=161
BW06 **Boulder Array** 26.54 346 P P 17 32 11.6 0.0
BW06 IAmb IAmb 17 32 25.6
comp=Z,39nm,1.8s
PDAR **Pinedale Array** 26.54 346 P P 17 32 14.1 +2.5
comp=Z,1.7nm,0.7s,baz=144,slow=10,SNR=22
ECSD **EROS Data Cent** 26.68 7 P P 17 32 12.7 +0.2
V58A **Windy Hill, Pi** 26.73 42 P P 17 32 16.4 +3.4
baz=232
V58A **Windy Hill, Pi** 26.73 42 P P 17 32 12.6 -0.5
S54A **Dingess, Beckl** 26.73 36 P P 17 32 15.1 +1.9
baz=225
S54A **Dingess, Beckl** 26.73 36 P P 17 32 12.4 -0.7
S54A IAmb IAmb 17 32 59.3
comp=Z,12nm,0.8s
WAKR **Walker** 26.75 326 P P 17 32 13.8 +0.3
WAKR IAmb IAmb 17 32 26.0
comp=Z,32nm,1.4s
R53A **Hurricane** 26.76 34 P P 17 32 15.2 +1.9
baz=223
R53A **Hurricane** 26.76 34 P P 17 32 09.2 -4.1
R53A IAmb IAmb 17 32 38.6
comp=Z,16nm,0.8s
P50A **Jamestown** 26.78 30 P P 17 32 14.1 +0.6
baz=218
BLA **Blacksburg** 26.84 38 P P 17 32 14.8 +0.7
baz=227
BLA **Blacksburg** 26.84 38 P P 17 32 11.3 -2.9
BLA IAmb IAmb 17 32 26.1
comp=Z,17nm,0.8s
YERR **Yerington** 27.00 327 P P 17 32 14.7 -1.1
Q52A **Bidwell** 27.06 33 P P 17 32 17.9 +1.9
baz=222
S55A **Lewisburg** 27.18 37 P P 17 32 18.3 +1.2
baz=226
N48A **Decatur** 27.23 27 P P 17 32 17.8 +0.3
baz=214
Q53A **Leroy** 27.37 34 P P 17 32 23.2 +4.4
baz=223
T57A **Hurt** 27.40 40 P P 17 32 17.2 -1.9
TPAW **Teton Pass** 27.57 344 P P 17 32 20.1 -0.7
N49A **Columbus Grove** 27.65 28 P P 17 32 23.1 +1.8
baz=216
N49A **Columbus Grove** 27.65 28 P P 17 32 17.9 -3.4
ACSO **Alum Creek Sta** 27.66 30 P P 17 32 18.1 -3.3
ACSO IAmb IAmb 17 33 14.0
comp=Z,27nm,1.4s
FXWY **Fox Creek** 27.73 344 P P 17 32 22.0 -0.3
R55A **Marlinton** 27.75 37 P P 17 32 23.5 +1.2
baz=226
R55A **Marlinton** 27.75 37 P P 17 32 19.1 -3.1
R55A IAmb IAmb 17 32 29.4
comp=Z,11nm,0.9s
T58A **Grand View Acr** 27.81 41 P P 17 32 24.1 +1.3
baz=231
IMW **Indian Meadow** 27.95 344 P P 17 32 21.5 -2.8
FLWY **Flagg Ranch** 28.06 345 P P 17 32 24.5 -0.7
S57A **Dark Hollow, R** 28.08 39 P P 17 32 26.6 +1.5
baz=229
S57A **Dark Hollow, R** 28.08 39 P P 17 32 23.4 -1.7
O52A **Adamsville** 28.14 32 P P 17 32 26.8 +1.1
baz=221
O52A **Adamsville** 28.14 32 P P 17 32 23.6 -2.1
O52A IAmb IAmb 17 32 35.7
comp=Z,14nm,0.8s
M49A **Liberty Center** 28.19 27 P P 17 32 27.0 +0.9
baz=216
BEKR **Beckworth** 28.24 327 P P 17 32 24.0 -2.8
BEKR IAmb IAmb 17 32 39.1
comp=Z,14nm,1.3s
ORV **Oroville** 28.62 325 P P 17 32 28.0 -2.0
ORV IAmb IAmb 17 32 43.2
comp=Z,34nm,1.9s
ROSC **El Rosal** 28.72 112 LR LR 17 45 04.7
comp=Z,174nm,18.2s,baz=354,slow=39
RLMT **Red Lodge** 28.72 348 P P 17 32 28.9 -2.1
YHH **Holmes Hill** 28.76 345 P P 17 32 31.1 -0.4
YNE **Yellowstone No** 28.77 346 P P 17 32 31.2 -0.3
YHL **Hebgen Lake** 28.90 345 P P 17 32 31.0 -1.7
MFID **Camas Ranch** 29.06 337 P P 17 32 33.8 -0.2
F36A **Milaca** 29.21 10 P P 17 32 33.7 -1.4
MCMT **McKenzie Canyo** 29.33 342 P P 17 32 35.8 -0.8
RUSC **La Rusia** 29.36 109 P P 17 32 34.4 -2.9
DLMT **Dillon** 29.75 343 P P 17 32 39.7 -0.4
DLMT IAmb IAmb 17 32 51.8
comp=Z,12nm,1.1s
J08A **Circle Bar Ran** 30.07 334 P P 17 32 42.6 -0.3
N55A **Marion Center** 30.11 34 P P 17 32 43.9 +0.6
baz=225
LRM **Limekiln Ridge** 30.14 344 P P 17 32 42.7 -0.9
M54A **Oil Creek Stat** 30.28 33 P P 17 32 46.0 +1.3
baz=223
M55A **Ridgway** 30.72 34 P P 17 32 50.0 +1.5
baz=224
BMO **Blue Mountains** 30.84 337 P P 17 32 49.7 0.0
BMO IAmb IAmb 17 33 00.2
comp=Z,12nm,1.4s
AGMN **Agassiz Nation** 31.27 6 P P 17 32 56.7 +3.4
baz=189
AGMN **Agassiz Nation** 31.27 6 P P 17 32 51.4 -2.0
AGMN IAmb IAmb 17 33 02.4
comp=Z,8.0nm,0.8s
MSO **Missoula** 31.47 343 P P 17 32 58.2 +3.0
baz=155
MSO **Missoula** 31.47 343 P P 17 32 53.8 -1.4
M57A **Sunshine Farm,** 31.51 35 P P 17 32 57.6 +2.1
baz=227
B35A **Bob, Littlefor** 31.61 9 P P 17 32 54.4 -1.9
B35A IAmb IAmb 17 33 04.8
comp=Z,11nm,1.2s
F10A **Beach Ranch, E** 31.77 338 P P 17 32 57.4 -0.5
F10A IAmb IAmb 17 33 08.6
comp=Z,17nm,1.1s
G08A **Pilot Rock** 31.85 335 P P 17 32 57.6 -1.0
G08A IAmb IAmb 17 33 09.4
comp=Z,17nm,1.5s
M58A **Price's Panora** 31.91 36 P P 17 32 58.9 -0.2
baz=228
L58A **Harry Jones Me** 32.70 36 P P 17 33 07.6 +1.6
baz=228
BINY **Binghamton** 32.72 35 P P 17 33 07.6 +1.5
baz=228
H53A **Bobcaygeon** 33.08 30 P P 17 33 10.6 +1.4
baz=221
ULM **Lac du Bonnet** 33.20 6 P P 17 33 10.6 +0.3
comp=Z,1.8nm,0.5s,baz=201,slow=7.2,SNR=3.8
ULM LR LR 17 47 48.6
comp=Z,576nm,18.2s,baz=149,slow=38
ULM **Lac du Bonnet** 33.20 6 P P 17 33 08.4 -1.8
ULM IAmb IAmb 17 33 18.6
comp=Z,8.4nm,1.0s
L59A **Walton** 33.24 36 P P 17 33 11.5 +0.8
baz=229
J57A **Williamstown** 33.54 34 P P 17 33 14.1 +0.9
baz=226
J57A **Williamstown** 33.54 34 P P 17 33 10.7 -2.6
J57A IAmb IAmb 17 33 24.3
comp=Z,9.2nm,0.8s
H55A **Tweed** 33.74 31 P P 17 33 16.2 +1.2
baz=223
G54A **Lake Saint Pet** 33.93 29 P P 17 33 18.2 +1.6
baz=221
LTY **Liberty** 34.14 336 P P 17 33 17.5 -1.1
I58A **Old Forge** 34.27 34 P P 17 33 21.1 +1.4
baz=227
B08A **Colville Reser** 34.56 338 P P 17 33 19.8 -2.3
I59A **Olmsteadville** 34.94 35 P P 17 33 26.8 +1.4
baz=229
D55A **Sainte-Anne-du** 36.35 30 P P 17 33 38.5 +1.0
baz=223
G60A **Masonville** 36.63 34 P P 17 33 42.1 +2.3
baz=230
FFC **Flin Flon** 37.46 359 P P 17 33 46.9 +0.2
MATQ **Matagami** 37.48 25 P P 17 33 49.0 +2.0
baz=218
D58A **Chemin du LacG** 37.66 32 P P 17 33 50.5 +1.9
baz=227
G62A **West of Eustis** 37.69 36 P P 17 33 51.4 +2.4
baz=232
CHGQ **Chibougamau** 38.96 27 P P 17 34 04.4 +4.9
baz=222
E63A **Oxbow** 39.59 36 P P 17 34 06.7 +1.9
baz=233
D62A **Allapoint, All** 39.65 34 P P 17 34 06.6 +1.3
baz=232
D62A **Allapoint, All** 39.65 34 P P 17 34 06.2 +0.9
E64A **Bridgewater** 39.92 36 P P 17 34 09.0 +1.4
baz=234
PTGA **Pitinga** 44.02 110 P P 17 34 41.5 +0.1
comp=Z,2.4nm,0.8s,baz=304,slow=9.0,SNR=4.3
PTGA **Pitinga** 44.02 110 P P 17 34 42.2 +0.7
SCHQ **Schefferville** 45.71 27 P P 17 34 55.0 +0.6
comp=Z,4.8nm,0.6s,baz=234,slow=10,SNR=4.7
SCHQ LR LR 17 56 12.6
comp=Z,335nm,18.2s,baz=284,slow=39
SCHQ **Schefferville** 45.71 27 P P 17 34 53.1 -1.3
SCHQ IAmb IAmb 17 35 02.2
comp=Z,7.1nm,0.7s
YKA **Yellowknife Ar** 46.26 351 P P 17 34 59.4 +0.8
comp=Z,4.9nm,0.7s,baz=158,slow=7.6,SNR=59
YKA PcP PcP 17 36 34.9 +1.1
comp=Z,0.9nm,0.7s,baz=150,slow=3.5,SNR=5.7
TAOE **Nuku Hiva Isla** 46.71 239 eT T 18 24 45.9
comp=Z,144nm,0.2s
HYT **Haines Junctio** 50.81 338 P P 17 35 35.3 +1.4
RKT **Rikitea** 52.16 221 eT T 18 31 34.3
comp=Z,17nm,0.3s
DAWY **Dawson** 53.65 340 P P 17 35 55.5 +0.7
DAWY IAmb IAmb 17 36 06.4
comp=Z,20nm,1.9s
EPYK **Eagle Plains** 54.47 343 P P 17 36 03.2 +2.5
baz=136,SNR=5.1
H03N2 **Juan Fernandez** 54.53 157 T T 18 34 43.5
baz=335,slow=77,SNR=295
H03N1 **Juan Fernandez** 54.54 157 T T 18 34 48.2
baz=335,slow=77,SNR=542
H03N3 **Juan Fernandez** 54.54 157 T T 18 34 44.2
baz=335,slow=77,SNR=243
DOT **Dot Lake** 54.98 338 P P 17 36 03.3 -1.1
INK **Inuvik** 55.11 346 P P 17 36 06.9 +1.6
baz=114,slow=5.3
BRLK **Bradley Lake** 55.66 332 P P 17 36 09.0 -0.4
GHO **Glory Hole Cre** 55.80 335 P P 17 36 10.2 -0.2
GHO IAmb IAmb 17 36 23.9
comp=Z,14nm,1.2s
VAH **Vaihoa** 56.31 238 eT T 18 36 45.3
comp=Z,5.1nm,0.3s
PMOR **Pomariorio Ree** 56.40 238 eT T 18 36 51.7
comp=Z,16nm,0.2s
HDA **Harding Lake** 56.46 338 P P 17 36 17.2 +2.2
baz=124
HDA **Harding Lake** 56.46 338 P P 17 36 16.1 +1.1
HDA IAmb IAmb 17 36 23.5
comp=Z,11nm,1.3s
RND **Reindeer** 56.62 336 P P 17 36 17.0 +0.7
RND IAmb IAmb 17 36 47.4
comp=Z,9.5nm,1.1s
IL31 56.64 338 P P 17 36 15.2 -1.0
ILAR **Eielson Array** 56.64 338 P P 17 36 18.1 +1.8

comp=Z,1.5nm,0.8s,baz=151,slow=5.8,SNR=14

ILAR				PcP	PcP	17 37 13.7	+1.2

comp=Z,2.0nm,0.7s,baz=166,slow=2.7,SNR=7.6

RSO	Redoubt South	56.81	332	P	P	17 36 16.9	-0.9
CCB	Clear Creek Bu	56.90	338	P	P	17 36 18.4	+0.3
CCB				IAmb	IAmb	17 36 21.8	

comp=Z,14nm,1.8s

BWN	Browne	57.25	337	P	P	17 36 19.9	-0.7
KTH	Kantishna Hill	57.49	336	P	P	17 36 23.0	+0.6
KTH				IAmb	IAmb	17 36 57.6	

comp=Z,16nm,1.4s

PPLA	Purkeypile	57.68	335	P	P	17 36 24.4	+0.5
MLY	Manley	58.17	338	P	P	17 36 26.8	-0.3
PPT	Papeete	59.14	237	LR	LR	17 55 51.4	

comp=Z,143nm,20.8s,baz=43,slow=30

PPT2	Papeete2	59.15	237	*e*S	S	17 44 41.8	+0.3

comp=Z,94nm,28.5s

PPT2				*e*LQ	LQ	17 51 37.8	

comp=Z,335nm,26.2s

PPT2				*e*LR	LR	17 54 01.2	

comp=Z,276nm,24.8s

CPUP	Villa Florida	60.49	135	LR	LR	18 02 19.6	

comp=Z,203nm,19.5s,baz=349,slow=36

TBI	Tubuai	62.31	231	*e*S	S	17 45 21.3	-0.3

comp=Z,71nm,27.0s

TBI	Tubuai	62.31	231	*e*LR	LR	17 55 36.6	

comp=Z,201nm,25.0s

TBI	Tubuai	62.31	231	*e*T	T	18 44 14.9	

comp=Z,6.2nm,0.3s

PLCA	Paso Flores	64.14	155	P	P	17 37 09.3	+1.4

comp=Z,2.3nm,1.0s,baz=300,slow=7.3,SNR=3.5

PLCA				LR	LR	18 00 41.2	

comp=Z,271nm,19.9s,baz=334,slow=32

PLCA	Paso Flores	64.14	155	P	P	17 37 09.1	+1.2
SUMG	Summit	65.55	17	P	P	17 37 15.1	-2.0
PAB	San Pablo	84.08	51	P	P	17 39 00.6	-4.1
ESDC	Sonseca Array	84.33	50	P	P	17 39 06.9	+1.0

comp=Z,0.8nm,0.9s,baz=316,slow=4.1,SNR=4.4

ESDC				LR	LR	18 16 57.0	

comp=Z,52nm,18.3s,baz=245,slow=36

NB2	NORSAR Subarra	85.28	27	P	P	17 39 12.0	+1.8

comp=Z,1.0nm,0.7s,baz=299,slow=4.8

NOA	NORSAR Array B	85.28	27	P	P	17 39 12.3	+2.2

comp=Z,0.6nm,0.7s,baz=300,slow=4.8,SNR=7.1

NOA				LR	LR	18 18 43.7	

comp=Z,44nm,20.1s,baz=295,slow=37

ARCES	ARCESS Array B	85.64	17	P	P	17 39 13.8	+2.0

comp=Z,1.7nm,0.9s,baz=305,slow=4.3,SNR=6.8

ARCES				LR	LR	18 20 25.2	

comp=Z,96nm,18.8s,baz=336,slow=38

CLL	Collm	90.77	35	*e*pP	P	17 39 38.0	+1.4
CLL				*e*PP	PP	17 43 09.0	-2.7
CLL				LmV		18 22 00.0	

comp=Z,100nm,20.0s

FINES	FINESS Array B	91.03	23	LR	LR	18 21 28.9	

comp=Z,113nm,19.4s,baz=330,slow=36

GERES	GERESS Array B	92.37	37	LR	LR	18 22 57.7	

comp=Z,122nm,18.2s,baz=282,slow=37

DBIC	Dimbokro	93.71	82	LR	LR	18 20 23.9	

comp=Z,72nm,19.0s,baz=260,slow=34

KEST	Kesra	95.58	50	LR	LR	18 23 39.0	

comp=Z,56nm,18.1s,baz=259,slow=36

TORD	Torodi Ar. Bea	97.78	74	LR	LR	18 22 51.3	

comp=Z,88nm,19.4s,baz=280,slow=35

DZM	Mont Dzumac	98.75	250	*e*LR	LR	18 12 30.6	

comp=Z,136nm,23.4s

STKA	Stephens Creek	122.08	243	PKP	PKiKP	17 45 29.3	+0.6

comp=Z,0.9nm,0.6s,baz=241,slow=6.8,SNR=3.5

STKA	Stephens Creek	122.08	243		PKiKP	17 45 29.4	+0.7
LZH	Lanzhou	122.08	336	*e*PKP	PKPdf	17 45 27.4	-1.4
LZH				pPKP	PKiKP	17 45 30.2	+1.3
LZH				sPKP		17 45 31.3	
LZH				LR	LR		

comp=N,85nm,18.2s

LZH				LR	LR		

comp=E,79nm,18.1s

LZH				LR	LR		

comp=Z,100nm,20.0s

CD2	Chengdu	126.64	334	Pdif	Pdif	17 42 14.8	-2.9
WRA	Warramunga Arr	127.83	258	PKP	PKiKP	17 45 41.1	+0.6

comp=Z,1.8nm,0.7s,baz=82,slow=2.0,SNR=26

ASAR	Alice Springs	128.57	253	PKP	PKiKP	17 45 42.3	+0.4

comp=Z,0.9nm,0.8s,baz=89,slow=2.2,SNR=11

BOSA	Boshof	129.42	113	PKP	PKiKP	17 45 43.5	0.0

comp=Z,3.0nm,0.8s,baz=282,slow=4.7,SNR=3.5

BOSA	Boshof	129.42	113		PKPdf	17 45 43.2	+0.4
CMAR	Chiang Mai Arr	139.58	330	PKP	PKiKP	17 46 03.6	-0.7

comp=Z,0.5nm,0.6s,baz=360,slow=2.4,SNR=4.8

HYB	Hyderabad	145.59	1	*i* PKP	PKPab	17 46 13.0	-0.1

IDC 10 17:49:03.2±1.8, 5.86S×130.00E, h0km, mb3.6/1, mb1 3.8/4, mb1mx3.4/29, mbtmp3.6/4, ML3.8/3, Error ellipse: s-maj=71.2km s-min=27.6km az=81.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.12	14	Pn	Pn	17 50 20.4	-0.8

7.7nm,0.3s,baz=38,slow=16,SNR=89

SIJI				Sn	Sn	17 51 10.6	-10

3.8nm,0.3s,baz=266,slow=23,SNR=8.6

WRA	Warramunga Arr	14.62	164	Pn	Pn	17 52 30.0	-1.6

0.4nm,0.3s,baz=346,slow=13,SNR=23

WRA				Sn	Sn	17 55 05.0	-9.5

0.3nm,0.3s,baz=351,slow=24,SNR=5.3

ASAR	Alice Springs	18.10	168	P	P	17 53 16.9	+0.1

0.2nm,0.3s,baz=345,slow=8.0,SNR=31

MKAR	Makanchi Array	67.28	327	P	P	18 00 00.1	+0.3

0.2nm,0.4s,baz=116,slow=8.3,SNR=5.5

*IDC **10** 17:50:26.7±55.0, 18.03S×178.80W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/26, mbtmp4.0/3, MS3.6/3, Ms1 3.6/3, ms1mx3.0/41, Error ellipse: s-maj=1011.0km s-min=162.8km az=79.0*

*NEIC **10** 17:51:29.0±2.1, 18.3S±0.2×179.9E±0.1, h599km±13km, mb4.1/14, Error ellipse: s-maj=31.7km s-min=12.9km az=153.0*

ISC 10 17:51:28.5±1.1, 18.2S±0.2×179.9E±0.2, h598km, n23, σ1§12/20, mb4.1/11, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	1.76	284	P	P	17 52 41.5	-0.3
RAR	Rarotonga	19.43	102	LR	LR	18 00 20.9	

comp=Z,92nm,18.1s,baz=32,slow=33

BFZ	Birch Farm	22.66	187	P	P	17 55 46.2	+0.3
ARMA	Armidale	28.39	239	P	P	17 56 36.7	+0.1
ARMA				IAmb	IAmb	17 56 39.7	

comp=Z,7.7nm,1.2s

STKA	Stephens Creek	37.06	241	P	P	17 57 49.8	+0.4

comp=Z,0.6nm,0.4s,baz=74,slow=15,SNR=2.0

STKA	Stephens Creek	37.06	241	P	P	17 57 49.5	0.0
BBOO	Buckleboo	41.84	241	P	P	17 58 26.3	-1.4
BBOO				IAmb	IAmb	17 58 52.5	

comp=Z,35nm,1.6s

WR0	Warramunga Arr	42.77	260	P	P	17 58 36.7	+1.6
WR0				IAmb	IAmb	17 58 46.9	

comp=Z,7.7nm,1.3s

WB0	Warramunga Arr	42.92	260	P	P	17 58 37.8	+1.4
WB0				IAmb	IAmb	17 58 38.2	

comp=Z,5.5nm,1.3s

WB2	Warramunga Arr	42.94	260	P	P	17 58 38.0	+1.5
WB2				IAmb	IAmb	17 58 46.9	

comp=Z,8.1nm,1.4s

WRA	Warramunga Arr	42.96	260	P	P	17 58 38.1	+1.5

comp=Z,0.9nm,0.4s,baz=97,slow=7.6,SNR=13

WRA	Warramunga Arr	42.96	260	P	P	17 58 38.1	+1.5
AS31	Alice Springs	43.13	255	P	P	17 58 38.9	+1.0
ASAR	Alice Springs	43.13	255	P	P	17 58 38.6	+0.7

comp=Z,1.9nm,0.7s,baz=91,slow=7.6,SNR=28

ASAR	Alice Springs	43.13	255	P	P	17 58 38.6	+0.7
BYL	Byron's Ledge	44.62	34	P	P	17 58 51.0	+1.5
HATHI	Halema'uma'u T	44.63	34	P	P	17 58 49.0	-0.5
KNRA	Kununurra	48.81	265	P	P	17 59 21.6	+0.7
KNRA				IAmb	IAmb	17 59 44.4	

comp=Z,8.1nm,1.2s

FITZ	Fitzroy Crossi	51.35	261	P	P	17 59 40.2	+0.8
FITZ				IAmb	IAmb	17 59 44.3	

comp=Z,3.6nm,1.2s

PSAD1	Pilbara Seismi	56.27	256	P	P	18 00 12.8	-1.2
VNDA	Vanda	60.06	184	LR	LR	18 20 47.6	

comp=Z,50nm,20.6s,baz=116,slow=30

MAW	Mawson	83.06	200	LR	LR	18 37 38.4	

comp=Z,71nm,18.3s,baz=236,slow=34

BALM	Baldy	84.54	17	P	P	18 02 58.8	-0.6
BALM				IAmb	IAmb	18 03 04.9	

comp=Z,6.7nm,0.9s

MAN 10 17:53:02.2, 10.03N×124.17E, h6km, mb4.1, ML2.9, MS2.6, 2D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	Lapu-Lapu	0.35	325	⇓*i* P	Pg	17 53 09.1	0.0
LLP				*i* S	Sb	17 53 15.8	-0.9
TBP	Tagbilaran	0.45	222	*e*P	Pg	17 53 11.4	+0.4
TBP				*i* S	Sg	17 53 16.5	-0.4
MSLP	Maasin	0.69	81	*e*P	Pb	17 53 16.1	-0.6
MSLP				*e*S	Sn	17 53 28.7	-0.8
OCLP	Ormoc	1.10	23	*e*P	Pb	17 53 23.6	-0.1
OCLP				*e*S	Sn	17 53 42.6	+2.7
SNPH	Sibulan	1.15	234	⇓*i* P	Pg	17 53 20.8	-3.4
SNPH				*i* S	Sg	17 53 36.7	-2.4

*NIED **10** 18:15:00.23.70N×122.50E, h20km, Mw4.6 Best double couple: M0 1.04000×10^16 NP1:φs68.00000°, δ85.00000°, λ91.00000°. NP2:φs235.00000°, δ5.00000°, λ76.00000°.*

*JMA **10** 18:15:39.5±0.1, 23.67N×122.49E, h36km, M4.6*

*NEIC **10** 18:15:41.0±1.9, 23.68N±0.05×122.51E±0.06, h37km±5km, mb4.5/66, Mwr4.4/22, Error ellipse: s-maj=8.6km s-min=7.2km az=104.0*

*BJI **10** 18:15:40.9±0.0, 23.73N×122.49E, h42km, mB4.5/35, mb4.1/41, ML4.2/5, Ms4.2/33, Ms7 4.0/31*

*TAP **10** 18:15:40.2, 23.68N×122.51E, h41km, ML4.6, D*

*NEIC **10** 18:15:41.7, 23.73N×122.51E, h25km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr-2.75; Mθθ 5.57; Mθφ-2.82; Mrθ 0.30; Mθθ 0.88; Mθr-2.04; Fault plane solution: M0 5.32000×10^15 NP1:φs48.20000°, δ60.15000°, λ-146.28000°. NP2:φs299.83000°, δ61.22000°, λ-34.60000°. Principal axes: T 5.6618, Plg1.0000°, Azm354.0000°; N -0.7678, Plg46.0000°, Azm85.0000°; P -4.8940, Plg44.0000°, Azm264.0000°;*

*IDC **10** 18:15:42.3±0.6, 23.85N×122.62E, h40km±5km, mb3.9/20, mb1 4.0/23, mb1mx3.9/49, mbtmp4.0/23, ML3.1/3, MS3.7/4, Ms1 3.7/4, ms1mx3.0/61 Error ellipse: s-maj=17.2km s-min=10.7km az=71.0*

ISC 10 18:15:40.0±0.6, 23.68N±0.02×122.51E±0.02, h28km±4km, n277, σ1§30/383, mb4.4/64, MS3.9/3, 1C-19D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.87	27	P	Pn	18 15 55.8	-0.6
JYNG				S	Sb	18 16 06.2	-1.6
HWA	Hwalien	0.88	290	P	Pn	18 15 55.8	-0.7

baz=281

HWA				S	Sb	18 16 06.8	-1.2

baz=281

YOJ	Yonaguni jima	0.91	30	P	Pn	18 15 56.6	-0.4

baz=30

YOJ	Yonaguni jima	0.91	30	P	Pn	18 15 56.5	-0.4
YOJ				S	Sb	18 16 07.4	-1.5
YOJ	Yonaguni jima	0.91	30		Pn	18 15 56.5	-0.4
TWD	Chiawan	0.93	296	P	Pn	18 15 55.9	-1.3

baz=286

TWD				S	Sb	18 16 07.3	-2.0

baz=286

EOS1	EOS1	0.94	338	*e*P	Pb	18 15 57.8	+0.2

baz=329

NACB	Ninganchiao	0.97	301	⇓P	Pn	18 15 56.4	-1.3

baz=291

NACB				S	Sn	18 16 08.6	-2.1

baz=291

NACB	Ninganchiao	0.97	301		Pn	18 15 56.5	-1.3
EGFH	Guangfu	0.99	270	P	Pn	18 15 57.5	-0.5

baz=269

EGFH				S	Sn	18 16 09.8	-1.3

baz=269

ESL	Shilin	0.99	278	⇓*i* P	Pn	18 15 56.7	-1.4

baz=277

ESL				S	Sn	18 16 09.6	-1.6

baz=277

HGSD	Ruisui	1.01	260	⇓P	Pn	18 15 57.4	-0.9

baz=259

HGSD				S	Sn	18 16 09.8	-1.8

baz=259

ENA	Nanau	1.02	317	*i* P	Pn	18 15 58.7	+0.2

baz=316

ENA				*i* S	Sb	18 16 12.3	0.0

baz=316

ETLH	Xiulin Townshi	1.08	300	P	Pn	18 15 58.4	-1.0

baz=299

ETLH				*e*S	Sn	18 16 12.1	-1.3

baz=299

EHY	Hungye	1.10	261	⇓*i* P	Pn	18 15 59.0	-0.6

baz=261

EHY				S	Sn	18 16 12.3	-1.5

baz=261

TWC	Suao	1.11	327	*i* P	Pn	18 15 59.4	-0.2

baz=327

TWC				*i* S	Sn	18 16 13.7	-0.3

baz=327

YULB	Yu-li	1.15	256	⇓P	Pn	18 15 59.6	-0.6

baz=248

YULB				S	Sn	18 16 14.2	-0.8

baz=248

TWF1	Yuli	1.16	254	⇓*i* P	Pn	18 15 59.8	-0.6

baz=246

TWF1				*i* S	Sn	18 16 14.7	-0.5

baz=246

CHKT	Chengkung	1.20	242	*i* P	Pn	18 15 59.6	-1.3

baz=232

CHKT				S	Sn	18 16 13.4	-2.7

baz=232

FULB	Fuli	1.21	247	⇓*i* P	Pn	18 15 59.9	-1.2

baz=237

FULB				S	Sn	18 16 14.9	-1.7

baz=237

WHF	Hehuan Shan	1.23	293	*i* P	Pn	18 16 00.8	-0.9

baz=284

WHF				*i* S	Sn	18 16 16.3	-1.3

baz=284

HATJ	Hateruma jima	1.25	72	P	Pn	18 16 01.3	-0.3
HATJ				S	Sn	18 16 16.7	-0.8
OWD	Renai	1.25	283	*i* P	Pn	18 16 01.4	-0.4

baz=282

OWD				S	Sn	18 16 16.7	-1.1

baz=282

VWDT	VWDT	1.25	274	⇓P	Pn	18 16 01.4	-0.3

baz=273

VWDT				S	Sn	18 16 17.0	-0.6

baz=273

NNSB	Datong	1.27	306	⇓P	Pn	18 16 01.5	-0.5

baz=305

NNSB				S	Sn	18 16 17.0	-1.2

baz=305

NNSH	Datong	1.27	306	*i* P	Pn	18 16 01.7	-0.3

baz=305

NNSH				*i* S	Sn	18 16 17.6	-0.7

baz=305

CHGB	Renai	1.28	288	⇓P	Pn	18 16 01.7	-0.5

baz=281

CHGB				S	Sn	18 16 17.0	-1.5

baz=281

NNS	Nan Shan	1.29	307	*i* P	Pn	18 16 02.0	-0.2

baz=306

NNS				*i* S	Sn	18 16 18.3	-0.3

baz=306

ILA	Ilan	1.29	328	P	Pn	18 16 02.8	+0.6

baz=327

ILA				S	Sb	18 16 19.3	-0.4

baz=327

ENTT	Nioudou	1.29	318	*i* P	Pn	18 16 02.2	+0.1

baz=318

ENTT				S	Sn	18 16 17.6	-1.0

baz=318

TWE	Neicheng	1.29	324	*i* P	Pn	18 16 02.6	+0.4

baz=323

TWE				S	Sn	18 16 18.4	-0.1

baz=323

NDT	Datong Townshi	1.29	316	*i* P	Pn	18 16 02.4	+0.2

baz=315

NDT				S	Sn	18 16 17.7	-0.9

baz=315

IRIF	Iriomote-Funau	1.30	59	P	Pn	18 16 02.2	-0.1

IRIF				S	Sn	18 16 18.3	-0.4
NTC	Toucheng	1.33	332	*e*P	Pn	18 16 02.9	+0.3

baz=332

NTC				*e*S	Sn	18 16 19.3	-0.1

baz=332

SLBB	Yuanshan	1.34	324	*i* P	Pn	18 16 03.5	+0.6

baz=323

SLBB				*i* S	Sn	18 16 20.4	+0.6

baz=323

TWH	Lutao	1.35	225	⇓*i* P	Pb	18 16 02.3	-0.7

baz=223

TWH				*i* S	Sn	18 16 17.9	-2.1

baz=223

TDCB	Techi	1.36	295	⇓P	Pn	18 16 02.9	-0.3

baz=286

TDCB				S	Sn	18 16 19.5	-1.0

baz=286

TWB1	Santiao Chiao	1.41	340	*i* P	Pn	18 16 03.8	0.0

baz=354

TWB1				*i* S	Sn	18 16 21.1	-0.4

baz=354

SSLB	Suanglung	1.43	275	⇓P	Pn	18 16 03.8	-0.3

baz=274

SSLB				*e*S	Sn	18 16 20.4	-1.6

baz=274

SSLB	Suanglung	1.43	275		Pn	18 16 03.7	-0.4
NWLT	Wulai	1.43	320	P	Pn	18 16 05.0	+0.9

baz=320

NWLT				*e*S	Sn	18 16 21.6	-0.4

baz=320

YHNB	Yeheng	1.43	314	P	Pn	18 16 04.5	+0.3

baz=313

YHNB				S	Sn	18 16 21.6	-0.5

baz=313

YHNB	Yeheng	1.43	314		Pn	18 16 04.3	+0.1
TIPB	Shuangxi	1.43	334	*i* P	Pn	18 16 04.2	0.0

baz=334

TIPB				S	Sn	18 16 20.9	-1.2

baz=334

NSK	Sanguang	1.45	314	*i* P	Pn	18 16 05.0	+0.7

baz=313

NSK				S	Sn	18 16 22.0	-0.5

baz=313

ELDTW	Lidau	1.45	251	*i* P	Pn	18 16 04.0	-0.5

baz=250

ELDTW				S	Sn	18 16 20.7	-1.9

baz=250

JKRS	Kuro-shima	1.48	68	P	Pn	18 16 04.9	+0.1
SMLT	Sun Moon Lake	1.49	278	⇓*i* P	Pn	18 16 05.2	+0.3

baz=277

SMLT				*i* S	Sn	18 16 23.7	+0.2

baz=277

DPDB	Guoxing	1.49	284	⇓*i* P	Pn	18 16 05.0	+0.1

baz=276

DPDB				S	Sn	18 16 23.7	+0.2

baz=276

WHYT	Xinyi Township	1.52	271	P	Pn	18 16 05.9	+0.6

baz=270

TYC	Yuchr	1.53	279	⇓*i* P	Pn	18 16 05.6	+0.2

baz=278

TYC				S	Sn	18 16 24.6	+0.2

baz=278

NWF	Wu-fen Shan	1.54	335	*i* P	Pn	18 16 05.6	-0.1

baz=347

WFSB	Wu-fen Shan	1.54	335	P	Pn	18 16 05.6	0.0

baz=347

TWA	Mucha	1.55	327	*i* P	Pb	18 16 07.2	-0.9

baz=327

TWA				S	Sn	18 16 26.0	+1.1

baz=327

WHP	Taichung City	1.55	293	P	Pb	18 16 07.2	-0.9

baz=292

WHP				*e*S	Sn	18 16 25.1	+0.1

baz=292

TTN	Taitung	1.55	234	P	Pn	18 16 05.0	-0.7

baz=233

TTN				*i* S	Sn	18 16 23.9	-1.0

baz=233

NHDH	Xindian Distri	1.56	325	P	Pn	18 16 07.0	+1.1

baz=325

NHDH				S	Sb	18 16 26.5	-1.1

baz=325

TWGBT	Beinan	1.57	237	⇓P	Pn	18 16 05.4	-0.6

baz=229

TWGBT				S	Sn	18

NCUH Zhongli 1.76 317 eP Pn 18 16 09.8 +1.1
baz=316
NCUH eS Sb 18 16 32.7 -0.7
baz=316
TPUB Ta-pu 1.76 258 ⇓P Pn 18 16 10.0 +1.2
baz=257
TPUB S Sn 18 16 31.3 +1.0
baz=257
TPUB Ta-pu 1.76 258 Pn 18 16 09.9 +1.2
NTST Danshui 1.77 327 eP Pn 18 16 10.2 +1.4
baz=340
NTST eS Sn 18 16 30.9 +0.6
baz=340
SBCB Hsinchu 1.78 309 P Pb 18 16 10.9 -1.1
baz=308
SBCB S Sn 18 16 32.0 +1.4
baz=308
WGK Gukeng 1.78 271 P Pb 18 16 10.7 -1.3
baz=270
WGK S Sb 18 16 32.5 -1.4
baz=270
CHN4 Tsaushan 1.79 260 P Pb 18 16 10.8 -1.3
baz=259
CHN4 eS Sn 18 16 31.5 +0.7
baz=259
ECL Taimali 1.79 233 P Pn 18 16 08.2 -0.8
baz=243
ECL S Sn 18 16 28.1 -2.7
baz=243
NMLH Miaoli 1.79 299 eP Pn 18 16 10.5 +1.5
baz=285
NMLH eS Sn 18 16 32.0 +1.2
baz=285
WTP Ta-pu 1.79 257 P Pn 18 16 10.3 +1.2
baz=256
WTP S Sn 18 16 30.9 0.0
baz=256
TWY Chenhua 1.79 333 P Pb 18 16 11.2 -1.0
baz=345
TWY S Sn 18 16 29.7 -1.3
baz=345
HSN Hsinchu 1.80 309 P Pn 18 16 10.5 +1.4
baz=310
HSN S Sb 18 16 32.9 -1.4
baz=310
WDLH Douliu 1.81 271 P Pb 18 16 11.0 -1.3
baz=270
PTSB Yuanli 1.82 295 P Pn 18 16 10.9 +1.4
baz=283
PTSB S Sb 18 16 33.4 -1.5
baz=283
WCHH Zhanghua 1.83 283 P Pb 18 16 11.8 -0.9
baz=282
WCHH eS Sn 18 16 32.7 +0.9
baz=282
WDJ Dajia District 1.83 292 P Pn 18 16 11.2 +1.6
baz=291
WDJ eS Sn 18 16 33.4 +1.5
baz=291
SLGT Liugui 1.84 249 P Pn 18 16 11.0 +1.3
baz=242
LAY Lan-yu 1.85 209 iP Pn 18 16 08.8 -1.2
baz=208
LAY iS Sn 18 16 28.8 -3.6
baz=208
SGST Jiashian 1.86 252 iP Pn 18 16 10.7 +0.6
baz=243
SGST S Sn 18 16 33.9 +1.2
baz=243
CHN2 Minshiung 1.87 266 eP Pb 18 16 12.8 -0.7
baz=265
CHN2 S Sb 18 16 35.4 -1.1
baz=265
JISG Ishigakijimahi 1.88 61 P Pn 18 16 09.7 -0.6
CHN1 Nanshi 1.88 255 iP Pb 18 16 12.1 -1.6
baz=255
CHN1 S Sn 18 16 33.8 +0.6
baz=255
SNST Tainan City 1.90 257 eP Pb 18 16 12.6 -1.4
baz=256
SNST S Sb 18 16 36.4 -0.9
baz=256
CHY Chiayi 1.92 265 eP Pn 18 16 12.4 +1.6
baz=264
CHY eS Sn 18 16 35.4 +1.3
baz=264
SSD Sandimen 1.96 242 P Pn 18 16 12.3 +0.9
baz=237
RLNB Erlin 1.98 277 P Pb 18 16 13.9 -1.4
baz=276
RLNB eS Sb 18 16 38.2 -1.4
baz=276
TAW Tawu 1.98 229 P Pn 18 16 11.6 -0.1
baz=237
TAW eS Sn 18 16 34.6 -0.9
baz=237
EAST Anshuo 2.00 230 P Pn 18 16 11.0 -0.9
baz=238
MASBT Mashibuluo 2.02 239 P Pn 18 16 12.6 +0.4
baz=235
MASBT eS Sn 18 16 35.5 -1.1
baz=235
WLGB Puzi 2.03 265 P Pb 18 16 14.4 -1.9
baz=264
WLGB eS Sb 18 16 39.0 -2.1
baz=264
WTCT Ta-ch'eng 2.05 276 iP Pb 18 16 14.6 -1.9
baz=275
CHN3 Shinhua 2.06 254 P Pb 18 16 15.6 -1.0
baz=253
CHN3 eS Sb 18 16 41.9 +0.1
baz=253
SGLT Jiouru 2.08 243 P Pb 18 16 16.3 -0.8
baz=240
WSF Szhu 2.10 269 P Pn 18 16 14.6 +1.3
baz=268
WSF eS Sn 18 16 39.2 +0.8
baz=268
TWM1 Shoushan 2.10 247 P Pb 18 16 16.5 -0.9
baz=246
CHN8 Yiju 2.13 262 P Pn 18 16 15.7 +2.0
baz=261
CHN8 S Sn 18 16 41.2 +1.9
baz=261
SSPT Xinbi 2.14 237 eP Pn 18 16 15.3 +1.4
baz=232
SCZT Fangliau 2.17 234 eP Pn 18 16 14.9 +0.6
baz=233
SCLT Jiali 2.18 257 P Pb 18 16 16.7 -2.1
baz=268
TAI1 Yung-k'ang 2.19 254 eP Pb 18 16 17.7 -1.1
baz=264
SNJT Kaohsiung City 2.20 246 eP Pb 18 16 18.1 -1.0
baz=245
SNJT eS Sb 18 16 45.6 -0.3
baz=245
JTJ Tarama 2.22 64 P Pn 18 16 15.2 +0.2
JTJ eS Sn 18 16 41.7 +0.1
KAU Kaohsiung 2.31 242 eP Pb 18 16 19.5 -1.4
baz=255
TSEB Hengchuen, Pin 2.31 220 P Pn 18 16 17.4 +1.2
baz=228
TSEB S Sn 18 16 45.6 +2.0
baz=228
HEN Hengchun 2.33 225 eP Pn 18 16 17.4 +0.9
baz=225
HEN eS Sn 18 16 44.0 -0.2
baz=225
TWKBT Hengchun 2.33 222 P Pn 18 16 17.0 +0.6
baz=222
TWKBT S Sn 18 16 43.5 -0.7
baz=222
WDGT Dungji 2.65 262 P Pn 18 16 21.6 +0.8
baz=260
WDGT S Sn 18 16 51.7 -0.3
baz=260
PHUB P'eng-hu 2.70 267 P Pn 18 16 22.7 +1.2
baz=266
PHUB S Sn 18 16 53.7 +0.4
baz=266
PNG Penghu 2.71 268 P Pn 18 16 22.7 +1.0
baz=267
PNG S Sn 18 16 54.2 +0.6
baz=267
JMJ Miyako jima 2 2.79 65 eP Pn 18 16 23.0 +0.3
baz=66
VWUC VWUC 3.08 296 eP Pn 18 16 26.7 -0.1
baz=295

PTTC Pingtan 3.08 307 eP Pn 18 16 26.5 -0.3
baz=317
PTMZ Houxiangcun 3.37 294 eP Pn 18 16 30.6 -0.2
baz=293
MATB Ma-tsu 3.39 317 eP Pn 18 16 30.8 -0.3
baz=317
MATB eS Sn 18 17 08.3 -2.0
baz=317
QZH Quanzhou 3.79 290 ⇓iP Pn 18 16 36.3 -0.2
QZH S Sn 18 17 18.2 -2.0
QZH smax smax
comp=N,250nm,0.6s
QZH smax smax
comp=E,190nm,0.7s
QZH LR LR
comp=N,2µm,9.5s
QZH LR LR
comp=E,1µm,10.4s
QZH LR LR
comp=Z,1µm,8.2s
LYJJ Jianjiangzhen 3.79 320 eP Pn 18 16 36.8 +0.2
baz=319
LYJJ eS Sn 18 17 19.4 -0.9
baz=319
KNM Kinmen 3.80 282 eP Pn 18 16 38.5 +1.9
baz=279
KNM eS Sn 18 17 21.3 +1.0
baz=279
KNMB Chin-men Tao 3.84 283 eP Pn 18 16 37.1 -0.2
baz=281
KNMB Chin-men Tao 3.84 283 Pn 18 16 37.4 +0.1
XPSS Dashiqiu 3.86 328 eP Pn 18 16 37.6 +0.1
baz=338
AXDP Jialang 4.32 287 eP Pn 18 16 44.3 +0.6
baz=285
ZPLA Ao Xicun 4.36 274 eP Pn 18 16 45.0 +0.6
baz=281
ZZJH Jiuhuzhen 4.53 281 eP Pn 18 16 47.0 +0.3
baz=279
JOW Kunigami 6.09 58 eP Pn 18 17 07.2 -1.0
baz=58
JOW Kunigami 6.09 58 P Pn 18 17 07.3 -1.0
1.1nm,0.3s,baz=43,slow=11,SNR=4.6
JOW Kunigami 6.09 58 Pn Pn 18 17 06.4 -1.8
VDOS Pratas Island 6.12 242 eP Pn 18 17 11.1 +2.6
baz=241
SZP Santa 6.39 198 Pn 18 17 12.0 -0.3
SSE Sheshan 7.48 351 Pn 18 17 29.2 +1.9
HKPS Hong Kong Po S 7.83 261 Pn 18 17 33.0 +0.8
TGY Tagaytay City 9.64 189 P Pn 18 18 05.5 +8.5
28nm,0.3s,baz=339,slow=11,SNR=3.0
TGY LR LR 18 22 07.3
comp=Z,335nm,21.7s,baz=22,slow=39
WHN Wuhan 9.98 315 P Pn 18 18 01.8 +0.3
WHN S Sn 18 20 01.0 +8.5
WHN LR LR
comp=N,1µm,11.0s
WHN LR LR
comp=E,1µm,11.2s
JNU Nakatsue 11.95 36 LR LR 18 23 37.6
comp=Z,303nm,20.2s,baz=216,slow=40
JNU Nakatsue 11.95 36 Pn Pn 18 18 27.5 -1.0
QIZ Qiongzhong 12.67 251 Pn Pn 18 18 35.2 -3.2
INCN Inchon 14.21 13 Pn Pn 18 19 02.7 +3.3
KSRS Korea Array 14.50 17 P Pn 18 19 03.6 +0.4
0.3nm,0.3s,baz=194,slow=12,SNR=18
KSRS LR LR 18 25 33.5
comp=Z,302nm,19.2s,baz=194,slow=41
KS19 Wonju Array Si 14.53 17 P Pn 18 19 05.4 +1.7
XAN Xi'an 15.74 314 P P 18 19 26.9 +3.4
XAN pP sP 18 19 32.6 -0.5
XAN pmax pmax
comp=Z,7.0nm,1.0s
XAN LR LR
comp=N,660nm,19.5s
XAN LR LR
comp=E,390nm,19.5s
XAN LR LR
comp=Z,340nm,15.2s
XAN Xi'an 15.74 314 Pn 18 19 18.9 -0.9
SLVN Son La 17.35 266 P Pn 18 19 38.5 -1.8
JHJ2 Mitsune 17.88 54 P Pn 18 19 45.6 -1.1
CD2 Chengdu 18.14 297 P Pn 18 19 49.0 -1.0
CD2 S Sn 18 23 12.3 +0.6
CD2 pmax pmax
comp=Z,10.0nm,0.7s
CD2 pmax pmax
comp=Z,140nm,6.5s
CD2 LR LR
comp=Z,1µm,23.5s
CD2 LR LR
comp=Z,570nm,18.4s
CD2 LR LR
comp=Z,490nm,9.6s
MAJO Matsushiro 18.65 43 P P 18 19 55.0 -0.6
MJAR Matsushiro Arr 18.65 43 P P 18 19 55.5 -0.1
comp=Z,0.0nm,0.3s,baz=228,slow=9.3,SNR=6.4
MJB9 Matsu-Tunnel 18.65 43 P P 18 19 55.3 -0.3
HHC Hu-ho-hao-te 19.43 334 P Pn 18 20 05.9 +0.3
HHC pP pwP 18 20 18.6 +3.0
HHC sP sP 18 20 26.4 +12
HHC S S 18 23 35.7 -6.8
HHC sS pS 18 23 56.8 -3.3
HHC pmax pmax
comp=Z,11nm,0.6s
HHC pmax pmax
comp=Z,40nm,6.1s
HHC LR LR
comp=Z,230nm,11.4s
HHC LR LR
comp=Z,230nm,12.4s
HHC LR LR
comp=Z,220nm,13.9s
LZH Lanzhou 20.32 312 eP P 18 20 13.1 -1.0
LZH sP pwP 18 20 29.7 +4.8
LZH PP PnPn 18 20 34.6 +3.2
LZH SS Sn 18 24 22.2 +18
LZH pmax pmax
comp=Z,25nm,1.0s
LZH pmax pmax
comp=Z,130nm,4.6s
LZH LR LR
comp=Z,510nm,11.6s
LZH LR LR
comp=Z,430nm,12.1s
LZH LR LR
comp=Z,550nm,14.0s
PBKT Sadao Pong 21.41 255 P P 18 20 25.5 -0.2
MDJ Mudanjiang 21.68 14 P P 18 20 27.9 -0.6
USA0B Ussuriysk Arra 21.90 19 P P 18 20 30.3 -0.5
USRK Ussuriysk Ar. 21.90 19 P P 18 20 28.9 -1.9
comp=Z,2.0nm,0.7s,baz=203,slow=10.0,SNR=6.0
CHTO Chiang Mai 22.48 262 P P 18 20 37.7 +0.4
CHTO IAmb IAmb 18 20 42.0
comp=Z,12nm,1.1s
CM31 Chiang Mai Arr 22.58 261 P P 18 20 38.9 +0.5
CMAR Chiang Mai Arr 22.58 261 P P 18 20 41.0 +2.6
comp=Z,2.8nm,0.9s,baz=65,slow=7.6,SNR=17
CMAR PcP PcP 18 24 32.8 +1.5
comp=Z,0.2nm,0.6s,baz=103,slow=1.9,SNR=2.3
CMAR pPcP 18 24 46.5
comp=Z,0.5nm,0.6s,baz=40,slow=1.4,SNR=5.9
MRSI Marisa 23.07 181 P P 18 20 47.6 +4.2
comp=Z,15nm,0.7s
TNTI Ternate 23.25 168 P P 18 20 48.7 +3.4
comp=Z,606nmcomp=Z,32nm,0.8s
TNTI Ternate 23.25 168 P P 18 20 44.4 -0.8
TNTI IAmb IAmb 18 20 51.1
comp=Z,25nm,0.8s
SBUM Sibu 23.33 207 P P 18 20 45.7 -0.4
MPSI Mapaga 23.34 187 P P 18 20 48.9 +2.8
comp=Z,9.3nm,1.1s
APSI Ampana 24.45 182 P P 18 20 59.8 +3.2
comp=Z,12nm,0.8s
LUWI Luwuk 24.57 179 P P 18 21 01.8 +4.1
comp=Z,2µmcomp=Z,19nm,0.7s
LBMI Labuha 24.65 168 P P 18 21 00.9 +2.5
comp=Z,46nm,0.9s
GTA Gaotai 24.80 315 ⇑P P 18 21 01.5 +1.7
GTA pP pwP 18 21 12.7 +1.6
GTA sP sP 18 21 17.3 +7.3
GTA S S 18 25 21.1 +0.3
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA pmax pmax
comp=Z,46nm,7.3s

GTA LR LR
comp=Z,180nm,19.4s
GTA LR LR
comp=Z,260nm,15.6s
GTA LR LR
comp=Z,260nm,16.8s
KSM Kuching 25.04 210 P P 18 21 01.4 -0.6
KSM IAmb IAmb 18 21 29.9
comp=Z,12nm,1.3s
SANI Sanana 25.79 172 P P 18 21 09.3 +0.5
SIJI Sorong 25.84 160 P P 18 21 11.5 +2.2
comp=Z,5.9nm,0.8s,baz=14,slow=4.0,SNR=3.9
KLR Kul'dur 26.52 14 P P 18 21 13.9 -1.2
comp=Z,1.0nm,0.6s,baz=206,slow=5.5,SNR=4.3
ULN Ulaanbaatar 27.10 337 P P 18 21 19.5 -1.0
ULN IAmb IAmb 18 21 33.4
comp=Z,19nm,1.4s
NLAI Namlea 27.12 170 P P 18 21 23.0 +2.2
comp=Z,61nm,0.8s
SONM Songino Array 27.31 336 P P 18 21 22.3 -0.1
comp=Z,5.1nm,0.8s,baz=148,slow=9.6,SNR=27
IPM Ipoh 28.17 231 P P 18 21 30.0 -0.2
IPM IAmb IAmb 18 21 32.5
comp=Z,8.4nm,0.8s
TPRI Tanjung Pinang 28.56 220 P P 18 21 36.3 +2.6
comp=Z,20nm,0.8s
MMRI Maumere 32.11 180 P P 18 22 06.7 +1.6
WMQ Urumqi 34.88 314 eP P 18 22 30.5 +1.5
MTN Manton Dam 37.26 166 P P 18 22 49.5 -0.1
MK31 Makanchi Array 39.54 316 P P 18 23 08.4 -0.1
MK31 IAmb IAmb 18 23 22.5
comp=Z,14nm,1.3s
MKAR Makanchi Array 39.54 316 P P 18 23 09.4 +0.9
comp=Z,5.4nm,0.8s,baz=99,slow=9.0,SNR=26
KNRA Kununurra 39.59 171 P P 18 23 09.2 +0.1
KNRA IAmb IAmb 18 23 23.3
comp=Z,8.3nm,0.6s
MAKZ Makanchi 39.75 316 P P 18 23 10.1 -0.1
H11N1 WAKE ISLAND Hy 41.31 87 T T 19 07 25.2
baz=283,slow=74,SNR=4.5
H11N2 WAKE ISLAND Hy 41.31 87 T T 19 07 27.5
baz=283,slow=74,SNR=5.7
H11N3 WAKE ISLAND Hy 41.32 87 T T 19 07 28.9
baz=283,slow=74,SNR=6.2
ZAA0 Zalesovo Array 41.33 327 P P 18 23 22.1 -1.0
ZAA0 IAmb IAmb 18 23 35.4
comp=Z,9.5nm,0.8s
ZALV Zalesovo Beam 41.33 327 P P 18 23 22.5 -0.6
comp=Z,2.6nm,0.7s,baz=117,slow=7.8,SNR=15
ZALV pP pwP 18 23 34.6 -0.3
comp=Z,7.7nm,0.7s,baz=114,slow=7.7,SNR=16
H11S3 WAKE ISLAND Hy 41.42 88 T T 19 07 39.2
baz=284,slow=75,SNR=11
H11S1 WAKE ISLAND Hy 41.43 88 T T 19 07 39.9
baz=284,slow=75,SNR=10
H11S2 WAKE ISLAND Hy 41.44 88 T T 19 07 40.9
baz=284,slow=75,SNR=6.7
KSH Kashi 42.19 303 P P 18 23 33.3 +2.7
KSH pP pwP 18 23 44.7 +2.4
KSH sP sP 18 23 51.2 +10
KSH pmax pmax
comp=Z,14nm,0.6s
KSH pmax pmax
comp=Z,140nm,4.7s
KURK Kurchatov 43.26 320 P P 18 23 38.8 -0.1
KURK IAmb IAmb 18 23 52.4
comp=Z,12nm,1.1s
AAK Ala-Archa 43.77 308 P P 18 23 43.8 +0.3
WRAB Tennant Creek 44.86 164 P P 18 23 52.5 +0.5
WRAB IAmb IAmb 18 24 07.1
comp=Z,7.5nm,0.7s
WRA Warramunga Arr 44.86 164 P P 18 23 53.0 +0.9
comp=Z,2.0nm,0.8s,baz=345,slow=8.9,SNR=14
WRA pP pwP 18 24 05.9 +1.7
comp=Z,2.8nm,0.8s,baz=345,slow=8.7,SNR=8.5
WRA PcP PcP 18 25 34.1 +0.6
comp=Z,0.8nm,0.8s,baz=317,slow=5.5,SNR=4.6
WB2 Warramunga Arr 44.87 164 P P 18 23 52.8 +0.7
WB2 IAmb IAmb 18 24 15.0
comp=Z,15nm,1.5s
WR0 Warramunga Arr 44.93 164 P P 18 23 53.4 +0.8
WR0 IAmb IAmb 18 24 09.7
comp=Z,7.5nm,0.8s
GAR Garm 46.51 302 P P 18 24 04.5 -0.6
KK31 Karatay Array 46.74 308 P P 18 24 05.6 -1.2
KKAR Karatay Array 46.74 308 P P 18 24 05.7 -1.1
KBL Kabul 47.47 296 P P 18 24 12.9 0.0
KBL IAmb IAmb 18 24 17.7
comp=Z,8.8nm,1.0s
TIXI Tiksi 48.14 3 P P 18 24 15.8 -1.3
TIXI IAmb IAmb 18 24 32.8
comp=Z,3.7nm,1.1s
AS31 Alice Springs 48.34 166 P P 18 24 19.6 +0.3
ASAR Alice Springs 48.34 166 P P 18 24 21.0 +1.7
comp=Z,1.4nm,0.8s,baz=342,slow=6.7,SNR=27
SMY Shemya 48.44 40 P P 18 24 18.9 -0.9
HNR Honiara 49.22 128 P P 18 24 26.6 +0.5
FORT Forrest 54.41 174 P P 18 25 04.0 -0.5
GEYT Alibeck 56.10 301 P P 18 25 18.8 +1.8
comp=Z,3.3nm,0.8s,baz=153,slow=1.7,SNR=7.2
GYA0B ALIBECK ARRAY 56.10 301 P P 18 25 14.7 -2.2
GYA0B IAmb IAmb 18 25 21.5
comp=Z,6.2nm,0.9s
ARU Arti 56.24 323 P P 18 25 16.1 -1.5
ARU IAmb IAmb 18 25 29.9
comp=Z,3.3nm,0.7s
STKA Stephens Creek 58.18 161 P P 18 25 32.9 +1.4
comp=Z,3.7nm,0.7s,baz=346,slow=7.9,SNR=11
STKA Stephens Creek 58.18 161 P P 18 25 31.5 0.0
CNBA Chernabura Isl 64.10 39 P P 18 26 09.7 -1.7
TTA Tatalina 65.34 30 P P 18 26 19.8 +0.2
KBZ Khabaz 66.74 309 P P 18 26 29.6 +0.8
comp=Z,1.9nm,0.8s,baz=141,slow=7.2,SNR=3.8
PPLA Purkeypile 67.09 30 P P 18 26 31.4 +0.6
PPLA IAmb IAmb 18 26 52.0
comp=Z,12nm,1.5s
SPU Mount Spurr 67.38 32 P P 18 26 32.0 -0.6
TOLK Toolik Lake Re 67.44 23 P P 18 26 32.4 -0.4
TOLK IAmb IAmb 18 26 59.5
comp=Z,3.1nm,0.6s
MLY Manley 67.44 27 P P 18 26 32.0 -0.9
MLY IAmb IAmb 18 26 53.8
comp=Z,3.8nm,1.0s
BPAW Bear Paw Mtn. 67.46 28 P P 18 26 33.9 +0.8
BPAW IAmb IAmb 18 27 05.0
comp=Z,3.0nm,0.9s
KDAK Kodiak Island 67.62 35 P P 18 26 34.7 +0.7
NEA Nenana 68.22 28 P P 18 26 37.8 +0.1
NEA IAmb IAmb 18 26 39.0
comp=Z,4.6nm,0.8s
RND Reindeer 68.51 29 P P 18 26 39.2 -0.5
RND IAmb IAmb 18 26 40.2
comp=Z,6.1nm,0.7s
MDM Murphy Dome 68.51 27 P P 18 26 40.5 +0.9
MDM IAmb IAmb 18 26 59.2
comp=Z,5.2nm,0.8s
WRH Wood River Hil 68.65 28 P P 18 26 40.8 +0.3
WRH IAmb IAmb 18 27 14.2
comp=Z,2.9nm,1.0s
CCB Clear Creek Bu 68.74 28 P P 18 26 41.2 +0.3
ILAR Eielson Array 69.11 27 P P 18 26 43.3 0.0
comp=Z,0.7nm,0.5s,baz=297,slow=8.9,SNR=12
DHY Denali Highway 69.23 29 P P 18 26 44.7 +0.5
DHY IAmb IAmb 18 26 50.6
comp=Z,2.2nm,0.8s
SCM Sheep Creek Mo 69.50 30 P P 18 26 45.5 -0.3
KEV Kevo 69.89 338 P P 18 26 47.9 -0.1
ARCES ARCESS Array B 70.46 338 P P 18 26 50.5 -1.0
comp=Z,1.1nm,0.8s,baz=58,slow=7.3,SNR=7.4
DOT Dot Lake 70.56 28 P P 18 26 52.2 0.0
GLB Gilahina Butte 71.22 30 P P 18 26 56.3 -0.1
GLB IAmb IAmb 18 27 00.0
comp=Z,3.3nm,0.8s
VRDI Verde Repeater 71.45 31 P P 18 26 57.6 -0.2
VRDI IAmb IAmb 18 26 59.1
comp=Z,3.8nm,0.8s
EGAK Eagle 71.49 27 P P 18 26 57.9 +0.1
EGAK IAmb IAmb 18 27 13.6
comp=Z,2.5nm,0.9s
BARN Barnard Glacie 72.33 31 P P 18 27 02.4 -0.8
BARN IAmb IAmb 18 27 19.8
comp=Z,3.7nm,0.6s
FINES FINESS Array B 72.49 330 P P 18 27 03.4 -0.5
comp=Z,0.8nm,0.4s,baz=56,slow=6.3,SNR=12
EPYK Eagle Plains 72.76 24 P P 18 27 05.5 0.0

EPYK					IAmb	IAmb	18 27 24.3	
	comp=Z,3.6nm,0.8s							
INK	**Inuvik**	**73.24**	**22**	P		**P**	**18 27 07.3**	**-0.8**
INK					IAmb	IAmb	18 27 26.8	
	comp=Z,2.5nm,0.8s							
AKASG	**Malin Array Be**	**74.05**	**319**	P		**P**	**18 27 13.1**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=57,slow=6.6,SNR=4.3							
AKASG				pP		**pwP**	**18 27 25.0**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=57,slow=6.1,SNR=5.5							
AKBB	**Malin Array Si**	**74.05**	**319**	P		**P**	**18 27 12.2**	**-1.1**
AKBB					IAmb	IAmb	18 27 29.9	
	comp=Z,3.8nm,1.0s							
HYT	**Haines Junctio**	**74.33**	**30**	P		**P**	**18 27 14.0**	**-0.8**
HYT					IAmb	IAmb	18 27 17.0	
	comp=Z,3.4nm,0.9s							
BRTR	**Keskin Array B**	**74.45**	**307**	P		**P**	**18 27 16.8**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=111,slow=6.8,SNR=6.6							
WHY	**Whitehorse**	**75.59**	**30**	P		**P**	**18 27 22.5**	**+0.4**
WHY					IAmb	IAmb	18 27 23.8	
	comp=Z,3.9nm,0.9s							
MLR	**Muntele Rosu**	**77.87**	**314**	LR		LR	19 03 15.6	
	comp=Z,56nm,21.6s,baz=302,slow=37							
NC405	**NORSAR Array S**	**78.99**	**332**	P		**P**	**18 27 40.4**	**-0.6**
NB2	**NORSAR Subarra**	**79.23**	**333**	P		**P**	**18 27 42.4**	**0.0**
	comp=Z,2.1nm,0.9s,baz=55,slow=6.2							
NOA	**NORSAR Array B**	**79.23**	**333**	P		**P**	**18 27 42.5**	**0.0**
	comp=Z,0.9nm,0.7s,baz=57,slow=5.8,SNR=11							
NOA				pP		**pwP**	**18 27 53.9**	**-0.6**
	comp=Z,1.7nm,0.9s,baz=59,slow=5.5,SNR=7.1							
KHZ	**Kahutara**	**80.87**	**144**	P		**P**	**18 27 51.6**	**+0.3**
YKA	**Yellowknife Ar**	**82.96**	**23**	P		**P**	**18 28 02.4**	**+0.2**
	comp=Z,3.7nm,0.7s,baz=310,slow=4.4,SNR=58							
KHC	**Kasperske Hory**	**83.93**	**321**	*e*P		**P**	**18 28 10.0**	**+2.5**
GERES	**GERESS Array B**	**84.00**	**321**	P		**P**	**18 28 08.1**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=37,slow=3.3,SNR=6.0							
GERES				pP		**pwP**	**18 28 21.6**	**+1.5**
	comp=Z,2.0nm,0.9s,baz=57,slow=4.9,SNR=7.6							
BEKR	**Beckworth**	**93.83**	**43**	P		**P**	**18 28 55.4**	**+0.2**
PAHR	**Pah Rah Range**	**94.54**	**43**	P		**P**	**18 28 57.2**	**-1.2**
NVAR	**Mina Array Bea**	**95.97**	**44**	pP		pP	18 29 17.1	+4.0
	comp=Z,0.2nm,0.3s,baz=303,slow=8.5,SNR=2.8							

NIED ***10*** *18:24:00,23.70N×122.50E,h17km,Mw4.7 Best double couple: M0 1.43000×10^16 NP1:φs=36.00000°,δ87.00000°, λ173.00000°. NP2:φs=126.00000°,δ83.00000°,λ3.00000°.*

NEIC ***10*** *18:24:30.3,23.77N×122.52E,h29km,Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr=0.00; Mθθ=1.35; Mφφ=-1.35; Mrθ=-0.23; Mrφ=-0.09; Mθφ=0.24; Fault plane solution: M0 1.39000×10^16 NP1:φs=316.82000°, δ76.27000°,λ-0.55000°. NP2:φs=46.95000°,δ89.47000°, λ-166.27000°. Principal axes: T 1.3895, Plg9.0000°, Azm181.0000°; N 0.0031, Plg76.0000°, Azm49.0000°; P -1.3926, Plg10.0000°, Azm273.0000°;*

JMA ***10*** *18:24:30.3±0.1,23.65N×122.48E,h34km,M4.9*

NEIC ***10*** *18:24:32.0±2.5,23.84N±0.06×122.54E±0.03,h34km±4km, mb4.9/153,Mwr4.7/21,ML5.0(TAP),Error ellipse: s-maj=8.5km s-min=3.6km az=197.0*

TAP ***10*** *18:24:31.2,23.71N×122.51E,h29km,ML5.0,D*

GCMT ***10*** *18:24:32.0±0.3,23.66N±0.02×122.44E±0.02,h24km±1km, MW4.8/74,Moment Tensor Solution. s12,c14; s74,c104; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.11±.12; Mθθ1.73±.09; Mφφ-1.84±.09; Mrθ-0.69±.19; Mθφ0.50±.07; Mφr-0.95±.21; Best double couple: M0 2.19600×10^16 NP1:φs=307.00000°,δ58.00000°,λ2.00000°. NP2: φs=216.00000°,δ89.00000°,λ148.00000°. Principal axes: T 2.1510, Plg23.0000°, Azm167.0000°; N 0.0860, Plg58.0000°, Azm34.0000°; P -2.2410, Plg21.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***10*** *18:24:32.2±0.0,23.78N×122.48E,h28km,mB4.7/51, mb4.4/59,ML4.6/8,Ms4.4/66,Ms7 4.2/61*

IDC ***10*** *18:24:33.5±0.6,23.77N×122.56E,h44km±4km,mb4.2/36, mb1 4.2/41,mb1mx4.1/66,mbtmp4.4/41,ML3.7/5,MS3.8/33, Ms1 3.8/33,ms1mx3.7/53,Error ellipse: s-maj=11.5km s-min=8.8km az=80.0*

BGR ***10*** *18:24:48.4±0.0,23.99N×121.16E,h33km,mb5.1,Ms4.1*

ISC 10 18:24:31.5±0.4,23°69N±0°02×122°51E±0°02,h31km±2km, h31km:pP-P,n489,σ1s53/575,mb4.8/122,MS3.9/31, 14C-73D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.86**	**28**	P		**Pn**	**18 24 46.8**	**-0.6**
JYNG				S		**Sn**	**18 24 58.5**	**-0.4**
HWA	**Hwalien**	**0.87**	**289**	P		**Pn**	**18 24 46.6**	**-1.0**
	baz=275							
HWA				*e*S		**Sn**	**18 24 56.8**	**-2.4**
	baz=275							
YOJ	**Yonaguni jima**	**0.90**	**31**	⇑*i*P		**Pn**	**18 24 47.5**	**-0.5**
	baz=31							
YOJ				*e*S		**Sn**	**18 24 59.0**	**-0.9**
	baz=31							
YOJ	**Yonaguni jima**	**0.90**	**31**	P		**Pn**	**18 24 47.5**	**-0.5**
YOJ				S		**Sn**	**18 24 59.6**	**-0.3**
YOJ	**Yonaguni jima**	**0.90**	**31**			**Pn**	**18 24 47.3**	**-0.7**
TWD	**Chiawan**	**0.92**	**295**	⇓*i*P		**Pn**	**18 24 47.0**	**-1.3**
	baz=282							
TWD				*e*S		**Sn**	**18 24 58.5**	**-1.9**
	baz=282							
EOS1	**EOS1**	**0.92**	**338**	*e*P		**Pn**	**18 24 48.0**	**-0.3**
	baz=323							
EOS1				*e*S		**Sb**	**18 25 01.0**	**+0.2**
	baz=323							
NACB	**Ninganchiao**	**0.96**	**300**	⇓*i*P		**Pn**	**18 24 47.5**	**-1.4**
	baz=287							
NACB				*e*S		**Sn**	**18 24 59.7**	**-1.8**
	baz=287							
NACB	**Ninganchiao**	**0.96**	**300**			**Pn**	**18 24 47.3**	**-1.6**
EGFH	**Guangfu**	**0.99**	**269**	⇓P		**Pn**	**18 24 48.3**	**-1.0**
	baz=268							
EGFH				*e*S		**Sn**	**18 25 00.8**	**-1.4**
	baz=268							
ESL	**Shilin**	**0.99**	**277**	⇓*i*P		**Pn**	**18 24 47.7**	**-1.5**
	baz=276							
ESL				*e*S		**Sn**	**18 24 59.9**	**-2.3**
	baz=276							
HGSD	**Ruisui**	**1.01**	**259**	⇓P		**Pn**	**18 24 48.3**	**-1.2**
	baz=258							
HGSD				*e*S		**Sn**	**18 25 00.9**	**-1.8**
	baz=258							
ENA	**Nanau**	**1.01**	**317**	*i* P		**Pn**	**18 24 49.2**	**-0.4**
	baz=315							
ENA				*e*S		**Sb**	**18 25 02.5**	**-1.0**
	baz=315							
ETLH	**Xiulin Townshi**	**1.07**	**299**	⇓*i*P		**Pn**	**18 24 49.4**	**-1.0**
	baz=298							
ETLH				S		**Sn**	**18 25 03.0**	**-1.3**
	baz=298							
TWC	**Suao**	**1.09**	**327**	P		**Pn**	**18 24 50.0**	**-0.7**
	baz=326							
TWC				*e*S		**Sn**	**18 25 02.7**	**-2.1**
	baz=326							
EHY	**Hungye**	**1.10**	**261**	*i* P		**Pn**	**18 24 50.0**	**-0.8**
	baz=259							
EHY				*e*S		**Sn**	**18 25 03.5**	**-1.5**
	baz=259							
YULB	**Yu-li**	**1.15**	**255**	P		**Pn**	**18 24 50.5**	**-1.0**
	baz=254							
YULB				*e*S		**Sn**	**18 25 05.1**	**-1.0**
	baz=254							
YULB	**Yu-li**	**1.15**	**255**			**Pn**	**18 24 50.4**	**-1.0**
TWF1	**Yuli**	**1.16**	**253**	⇓*i*P		**Pn**	**18 24 50.7**	**-0.9**
	baz=252							
TWF1				*e*S		**Sn**	**18 25 04.6**	**-1.8**
	baz=252							
CHKT	**Chengkung**	**1.20**	**241**	⇓*i*P		**Pn**	**18 24 50.6**	**-1.5**
	baz=240							
CHKT				*e*S		**Sn**	**18 25 04.9**	**-2.5**
	baz=240							
FULB	**Fuli**	**1.22**	**247**	⇓*i*P		**Pn**	**18 24 51.0**	**-1.4**
	baz=234							
FULB				*e*S		**Sn**	**18 25 05.6**	**-2.2**
	baz=234							
WHF	**Hehuan Shan**	**1.22**	**292**	⇓*i*P		**Pn**	**18 24 51.9**	**-1.0**
	baz=279							
WHF				*e*S		**Sn**	**18 25 07.5**	**-1.1**
	baz=279							
HATJ	**Hateruma jima**	**1.25**	**73**	P		**Pn**	**18 24 52.5**	**-0.2**
HATJ				S		**Sn**	**18 25 07.7**	**-0.8**
OWD	**Renai**	**1.25**	**282**	⇓*i*P		**Pn**	**18 24 52.1**	**-0.8**
	baz=281							
OWD				*e*S		**Sn**	**18 25 07.6**	**-1.1**
	baz=281							
VWDT	**VWDT**	**1.25**	**273**	⇓*i*P		**Pn**	**18 24 52.5**	**-0.3**
	baz=262							
VWDT				*e*S		**Sn**	**18 25 06.4**	**-2.2**
	baz=262							
NNSB	**Datong**	**1.26**	**306**	⇓*i*P		**Pn**	**18 24 52.7**	**-0.4**
	baz=305							
NNSB				*e*S		**Sn**	**18 25 08.2**	**-0.9**
	baz=305							
NNSH	**Datong**	**1.26**	**306**	⇓*i*P		**Pn**	**18 24 52.8**	**-0.4**
	baz=304							
NNSH				*e*S		**Sn**	**18 25 08.0**	**-1.2**
	baz=304							
CHGB	**Renai**	**1.27**	**287**	⇓*i*P		**Pn**	**18 24 52.7**	**-0.7**
	baz=286							
CHGB				*e*S		**Sn**	**18 25 08.1**	**-1.4**
	baz=286							
ILA	**Ilan**	**1.27**	**327**	P		**Pb**	**18 24 53.6**	**-1.2**
	baz=326							
NNS	**Nan Shan**	**1.28**	**306**	⇓*i*P		**Pn**	**18 24 52.8**	**-0.5**
	baz=305							
NNS				*e*S		**Sn**	**18 25 09.3**	**-0.2**
	baz=305							
ENTT	**Nioudou**	**1.28**	**318**	P		**Pb**	**18 24 53.9**	**-1.1**
	baz=317							
ENTT				*e*S		**Sb**	**18 25 10.3**	**-0.8**
	baz=317							
TWE	**Neicheng**	**1.28**	**323**	⇓*i*P		**Pn**	**18 24 53.6**	**+0.4**
	baz=322							
TWE				*e*S		**Sn**	**18 25 08.2**	**-1.2**
	baz=322							
NDT	**Datong Townshi**	**1.28**	**315**	⇓P		**Pn**	**18 24 53.4**	**0.0**
	baz=314							
NDT				*e*S		**Sn**	**18 25 08.4**	**-1.1**
	baz=314							
IRIF	**Iriomote-Funau**	**1.29**	**60**	P		**Pn**	**18 24 53.3**	**-0.1**
IRIF				S		**Sn**	**18 25 09.8**	**+0.2**
NTC	**Toucheng**	**1.31**	**332**	P		**Pn**	**18 24 53.8**	**+0.1**
	baz=343							
SLBB	**Yuanshan**	**1.32**	**323**	*i* P		**Pb**	**18 24 54.4**	**-1.4**
	baz=322							
SLBB				*e*S		**Sb**	**18 25 11.3**	**-1.1**
	baz=322							
TDCB	**Techi**	**1.35**	**295**	⇓*i*P		**Pn**	**18 24 54.3**	**-0.1**
	baz=293							
TDCB				*e*S		**Sn**	**18 25 09.5**	**-1.9**
	baz=293							
TWH	**Lutao**	**1.36**	**224**	⇓*i*P		**Pn**	**18 24 53.2**	**-1.1**
	baz=223							
TWH				S		**Sn**	**18 25 09.0**	**-2.2**
	baz=223							
TWB1	**Santiao Chiao**	**1.40**	**340**	*e*P		**Pn**	**18 24 54.7**	**-0.2**
	baz=339							
NWLT	**Wulai**	**1.42**	**320**	⇓P		**Pn**	**18 24 55.8**	**+0.6**
	baz=318							
NWLT				*e*S		**Sn**	**18 25 12.2**	**-0.6**
	baz=318							
TIPB	**Shuangxi**	**1.42**	**334**	⇑*i*P		**Pn**	**18 24 55.3**	**+0.1**
	baz=332							
TIPB				*e*S		**Sn**	**18 25 12.1**	**-0.8**
	baz=332							
YHNB	**Yeheng**	**1.42**	**314**	⇓*i*P		**Pn**	**18 24 55.4**	**+0.1**
	baz=312							
YHNB				*e*S		**Sn**	**18 25 12.8**	**-0.1**
	baz=312							
YHNB	**Yeheng**	**1.42**	**314**			**Pn**	**18 24 55.1**	**-0.1**
SSLB	**Suanglung**	**1.43**	**274**	⇓*i*P		**Pn**	**18 24 54.9**	**-0.4**
	baz=273							
SSLB	**Suanglung**	**1.43**	**274**			**Pn**	**18 24 54.4**	**-0.9**
NSK	**Sanguang**	**1.44**	**313**	P		**Pn**	**18 24 55.7**	**+0.2**
	baz=312							
YUS	**Yu-Shan**	**1.44**	**262**	⇓*i*P		**Pn**	**18 24 55.7**	**-0.1**
	baz=261							
ELDTW	**Lidau**	**1.46**	**250**	⇓P		**Pn**	**18 24 54.8**	**-0.9**
	baz=249							
ELDTW				*e*S		**Sn**	**18 25 11.1**	**-2.7**
	baz=249							
JKRS	**Kuro-shima**	**1.48**	**68**	P		**Pn**	**18 24 56.1**	**+0.1**
JKRS				*e*S		**Sn**	**18 25 14.9**	**+0.6**
SMLT	**Sun Moon Lake**	**1.48**	**278**	⇓*i*P		**Pn**	**18 24 56.1**	**0.0**
	baz=277							
SMLT				*e*S		**Sn**	**18 25 14.2**	**-0.4**
	baz=277							
DPDB	**Guoxing**	**1.48**	**284**	⇓*i*P		**Pn**	**18 24 56.2**	**+0.1**
	baz=273							
DPDB				*e*S		**Sb**	**18 25 15.3**	**-1.7**
	baz=273							
WHYT	**Xinyi Township**	**1.51**	**271**	P		**Pn**	**18 24 57.0**	**+0.4**
	baz=270							
TYC	**Yuchr**	**1.52**	**278**	⇓*i*P		**Pn**	**18 24 56.6**	**+0.1**
	baz=277							
TYC				*e*S		**Sn**	**18 25 13.0**	**-2.4**
	baz=277							
NWF	**Wu-fen Shan**	**1.53**	**334**	*e*P		**Pn**	**18 24 56.9**	**+0.2**
	baz=333							
WFSB	**Wu-fen Shan**	**1.53**	**334**	⇑*i*P		**Pn**	**18 24 56.9**	**+0.3**
	baz=333							
TWA	**Mucha**	**1.54**	**327**	P		**Pb**	**18 24 57.8**	**-1.6**
	baz=326							
WHP	**Taichung City**	**1.54**	**293**	*e*P		**Pn**	**18 24 57.4**	**+0.4**
	baz=291							
NHDH	**Xindian Distri**	**1.55**	**325**	P		**Pb**	**18 24 58.2**	**-1.3**
	baz=323							
NHDH				S		**Sb**	**18 25 17.7**	**-1.1**
	baz=323							
TTN	**Taitung**	**1.56**	**234**	*e*P		**Pn**	**18 24 56.3**	**-0.7**
	baz=233							
TTN				*e*S		**Sn**	**18 25 16.3**	**+0.1**
	baz=233							
ALS	**Alishan**	**1.57**	**264**	⇓*i*P		**Pn**	**18 24 58.0**	**+0.5**
	baz=263							
ALS				*e*S		**Sn**	**18 25 17.2**	**+0.2**
	baz=263							
TWGBT	**Beinan**	**1.57**	**237**	⇓*i*P		**Pn**	**18 24 56.3**	**-1.0**
	baz=227							
TWGBT				*e*S		**Sn**	**18 25 14.0**	**-2.6**
	baz=227							
TWG	**Pinlang**	**1.58**	**237**	⇓P		**Pn**	**18 24 56.4**	**-0.9**
	baz=227							
TWG				*e*S		**Sn**	**18 25 14.0**	**-2.7**
	baz=227							
TWG	**Pinlang**	**1.58**	**237**			**Pn**	**18 24 56.2**	**-1.1**
TATO	**Taipei**	**1.58**	**324**	P		**Pb**	**18 24 58.3**	**-1.7**
	baz=322							
TATO				*e*S		**Sb**	**18 25 17.4**	**-2.2**
	baz=322							
TATO	**Taipei**	**1.58**	**324**			**Pn**	**18 24 58.2**	**+0.8**
TAP1	**Taipei**	**1.61**	**327**	P		**Pb**	**18 24 58.8**	**-1.8**
	baz=324							
TAP1				*e*S		**Sb**	**18 25 19.8**	**-0.9**
	baz=324							
TAP	**Taipei**	**1.62**	**326**	*e*P		**Pb**	**18 24 58.9**	**-1.9**
	baz=325							
WLTB	**Daxi**	**1.63**	**316**	⇓*i*P		**Pb**	**18 24 59.4**	**-1.5**
	baz=303							
WLTB				*e*S		**Sn**	**18 25 18.6**	**+0.7**
	baz=303							
WJS	**Zhushan**	**1.63**	**275**	⇓*i*P		**Pb**	**18 24 59.5**	**-1.5**
	baz=274							
WJS				*e*S		**Sb**	**18 25 20.5**	**-0.7**
	baz=274							
JIJ	**Ishigaki jima**	**1.64**	**66**	P		**Pn**	**18 24 57.7**	**-0.5**
JIJ				S		**Sn**	**18 25 17.3**	**-1.0**
LIOB	**Emei**	**1.66**	**305**	⇓*i*P		**Pb**	**18 24 59.9**	**-1.6**
	baz=293							
LIOB				*e*S		**Sb**	**18 25 20.0**	**-2.0**
	baz=293							
NSTT	**Nanjuang**	**1.66**	**305**	⇓P		**Pb**	**18 24 59.8**	**-1.7**
	baz=303							
NSTT				*e*S		**Sn**	**18 25 18.5**	**-0.4**
	baz=303							
CHN5	**Tsauling**	**1.68**	**267**	⇓*i*P		**Pn**	**18 24 59.9**	**+1.1**
	baz=266							
CHN5				*e*S		**Sb**	**18 25 21.6**	**-1.0**
	baz=266							
WNT	**Mingjian**	**1.68**	**277**	*e*P		**Pb**	**18 25 00.1**	**-1.6**
	baz=275							
WNT				*e*S		**Sb**	**18 25 21.2**	**-1.2**
	baz=275							
YM01	**YM01**	**1.68**	**330**	*e*P		**Pn**	**18 24 59.4**	**+0.6**
	baz=344							
YM01				*e*S		**Sn**	**18 25 20.0**	**+0.6**
	baz=344							
YM10	**YM10**	**1.69**	**330**	P		**Pn**	**18 24 59.2**	**+0.2**
	baz=343							
YM10				*e*S		**Sn**	**18 25 20.5**	**+0.8**
	baz=343							
YM11	**YM11**	**1.70**	**330**	*e*P		**Pn**	**18 24 59.0**	**-0.1**
	baz=344							
YM04	**YM04**	**1.70**	**329**	*e*P		**Pn**	**18 24 59.2**	**+0.1**
	baz=342							
YM08	**YM08**	**1.71**	**331**	*e*P		**Pn**	**18 24 59.0**	**-0.2**
	baz=344							
TWQ1	**Liyutan**	**1.71**	**293**	⇓*i*P		**Pb**	**18 25 00.7**	**-1.6**
	baz=292							
TWQ1				*e*S		**Sn**	**18 25 20.6**	**+0.5**
	baz=292							
TWS1	**Kuangyinshan**	**1.72**	**325**	P		**Pb**	**18 25 00.4**	**-2.0**
	baz=323							
TWS1				*e*S		**Sb**	**18 25 21.7**	**-1.9**
	baz=323							
YM03	**YM03**	**1.72**	**330**	*e*P		**Pn**	**18 24 60.0**	**+0.5**
	baz=343							
TCU	**Taichung**	**1.73**	**286**	⇓P		**Pb**	**18 25 01.2**	**-1.5**
	baz=284							
TCU				*e*S		**Sb**	**18 25 23.9**	**-0.2**
	baz=284							
ANP	**Anpu**	**1.74**	**329**	*e*P		**Pn**	**18 25 00.7**	**+1.0**
	baz=344							
NSY	**Sanyi**	**1.75**	**295**	⇓*i*P		**Pb**	**18 25 01.4**	**-1.5**
	baz=293							
NSY				*e*S		**Sb**	**18 25 23.0**	**-1.5**
	baz=293							
NCU	**National Centr**	**1.75**	**317**	*e*P		**Pb**	**18 25 01.0**	**-2.0**
	baz=315							
NCU				*e*S		**Sb**	**18 25 22.7**	**-1.9**
	baz=315							
NCUH	**Zhongli**	**1.75**	**317**	*e*P		**Pn**	**18 25 00.7**	**+0.9**
	baz=315							
NCUH				*e*S		**Sb**	**18 25 22.7**	**-1.9**
	baz=315							
NTST	**Danshui**	**1.76**	**327**	*e*P		**Pb**	**18 25 00.9**	**-2.1**
	baz=340							
NTST				*e*S		**Sb**	**18 25 22.3**	**-2.4**
	baz=340							
TPUB	**Ta-pu**	**1.77**	**258**	⇓*i*P		**Pn**	**18 25 01.0**	**+1.1**
	baz=257							
TPUB				*e*S		**Sn**	**18 25 22.5**	**+1.1**
	baz=257							
TPUB	**Ta-pu**	**1.77**	**258**			**Pn**	**18 25 00.6**	**+0.6**
SBCB	**Hsinchu**	**1.77**	**309**	⇓P		**Pb**	**18 25 01.5**	**-1.8**
	baz=307							
SBCB				*e*S		**Sb**	**18 25 23.5**	**-1.6**
	baz=307							
NMLH	**Miaoli**	**1.78**	**299**	*e*P		**Pb**	**18 25 01.6**	**-1.8**
	baz=283							
NMLH				*e*S		**Sb**	**18 25 23.8**	**-1.6**
	baz=283							
WGK	**Gukeng**	**1.78**	**270**	*e*P		**Pn**	**18 25 01.4**	**+1.3**
	baz=269							
WGK				*e*S		**Sn**	**18 25 22.5**	**+0.8**
	baz=269							
TWY	**Chenhua**	**1.78**	**333**	*e*P		**Pb**	**18 25 01.6**	**-1.9**
	baz=346							
CHN4	**Tsaushan**	**1.79**	**260**	⇓*i*P		**Pn**	**18 25 01.7**	**+1.4**
	baz=252							
CHN4				*e*S		**Sb**	**18 25 25.1**	**-0.5**
	baz=252							
HSN	**Hsinchu**	**1.79**	**309**	P		**Pb**	**18 25 01.5**	**-2.0**
	baz=309							
HSN				*e*S		**Sb**	**18 25 23.9**	**-1.7**
	baz=309							
WTP	**Ta-pu**	**1.79**	**256**	⇓*i*P		**Pn**	**18 25 01.4**	**+1.1**
	baz=255							
WTP				*e*S		**Sb**	**18 25 24.3**	**-1.5**
	baz=255							
ECL	**Taimali**	**1.79**	**233**	*e*P		**Pn**	**18 24 59.2**	**-1.1**
	baz=244							
ECL				*e*S		**Sn**	**18 25 19.8**	**-2.2**
	baz=244							
WDLH	**Douliu**	**1.80**	**270**	*e*P		**Pb**	**18 25 02.1**	**-1.7**
	baz=269							
WDLH				*e*S		**Sb**	**18 25 25.6**	**-0.4**
	baz=269							
PTSB	**Yuanli**	**1.81**	**295**	⇓*i*P		**Pb**	**18 25 02.0**	**-2.0**
	baz=294							
PTSB				*e*S		**Sb**	**18 25 24.6**	**-1.7**
	baz=294							
WCHH	**Zhanghua**	**1.82**	**283**	P		**Pb**	**18 25 02.6**	**-1.6**
	baz=281							
WCHH				*e*S		**Sb**	**18 25 25.8**	**-0.9**
	baz=281							
WDJ	**Dajia District**	**1.83**	**291**	*e*P		**Pb**	**18 25 02.3**	**-2.0**
	baz=290							
WDJ				*e*S		**Sb**	**18 25 24.3**	**-2.4**
	baz=290							
SLGT	**Liugui**	**1.84**	**248**	⇓*i*P		**Pb**	**18 25 01.6**	**+0.6**
	baz=241							
SLGT				*e*S		**Sn**	**18 25 22.5**	**-0.8**
	baz=241							
LAY	**Lan-yu**	**1.86**	**208**	*e*P		**Pn**	**18 24 59.6**	**-1.7**
	baz=208							
LAY				*e*S		**Sn**	**18 25 22.0**	**-1.8**
	baz=208							
SGST	**Jiashian**	**1.87**	**251**	⇓*i*P		**Pn**	**18 25 01.4**	**+0.1**
	baz=250							
SGST				*e*S		**Sn**	**18 25 23.9**	**0.0**
	baz=250							
JISG	**Ishigakijimahi**	**1.88**	**61**	P		**Pn**	**18 25 00.8**	**-0.6**
JISG				S		**Sn**	**18 25 24.7**	**+0.6**
CHN1	**Nanshi**	**1.88**	**255**	⇓*i*P		**Pn**	**18 25 03.0**	**+1.5**
	baz=254							
CHN1				*e*S		**Sb**	**18 25 26.2**	**-2.2**
	baz=254							
TWK	**Hsinying**	**1.90**	**258**	⇓*i*P		**Pn**	**18 25 03.2**	**+1.4**
	baz=256							
TWK				*e*S		**Sb**	**18 25 27.1**	**-1.8**
	baz=256							
SNST	**Tainan City**	**1.90**	**256**	P		**Pn**	**18 25 03.3**	**+1.5**
	baz=255							
SNST				*e*S		**Sb**	**18 25 27.5**	**-1.4**
	baz=255							
CHY	**Chiayi**	**1.92**	**265**	⇓*i*P		**Pn**	**18 25 03.6**	**+1.6**
	baz=263							
CHY				*e*S		**Sb**	**18 25 27.2**	**-2.1**
	baz=263							
SSD	**Sandimen**	**1.96**	**242**	*e*P		**Pn**	**18 25 03.0**	**+0.4**
	baz=235							
SSD				*e*S		**Sn**	**18 25 24.8**	**-1.4**
	baz=235							
PCYT	**Pengchaiyu**	**1.97**	**349**	*e*P		**Pn**	**18 25 01.1**	**-1.6**
	baz=334							
RLNB	**Erlin**	**1.98**	**276**	⇓*i*P		**Pn**	**18 25 04.4**	**+1.6**
	baz=275							
RLNB				*e*S		**Sb**	**18 25 29.5**	**-1.5**
	baz=275							
TAW	**Tawu**	**1.99**	**229**	*e*P		**Pn**	**18 25 02.7**	**-0.3**
	baz=238							
EAST	**Anshuo**	**2.00**	**230**	*e*P		**Pn**	**18 25 02.7**	**-0.6**
	baz=238							
EAST				*e*S		**Sn**	**18 25 26.2**	**-1.2**

	baz=260								
CHN8				*e*S		**Sb**	**18 25 33.1**	**-2.4**	
	baz=260								
SSPT	**Xinbi**	**2.15 236**		*e*P		**Pn**	**18 25 06.3**	**+1.1**	
	baz=230								
SCZT	**Fangliau**	**2.18 233**		*e*P		**Pn**	**18 25 06.8**	**+1.2**	
	baz=233								
SCLT	**Jiali**	**2.18 257**		*i* P		**Pn**	**18 25 07.5**	**+1.8**	
	baz=255								
SCLT				*e*S		**Sb**	**18 25 35.1**	**-1.9**	
	baz=255								
TAI1	**Yung-k'ang**	**2.19 253**	⇓	*i*P		**Pb**	**18 25 08.0**	**-2.4**	
	baz=252								
TAI1				*e*S		**Sb**	**18 25 36.3**	**-0.8**	
	baz=252								
SNJT	**Kaohsiung City**	**2.20 245**	⇓	*i*P		**Pb**	**18 25 08.7**	**-1.9**	
	baz=244								
SNJT				*e*S		**Sb**	**18 25 36.4**	**-1.1**	
	baz=244								
JTJ	**Tarama**	**2.22 64**		P		**Pn**	**18 25 05.7**	**-0.4**	
JTJ				S		**Sn**	**18 25 32.3**	**-0.2**	
KAU	**Kaohsiung**	**2.31 242**		*e*P		**Pb**	**18 25 10.4**	**-2.1**	
	baz=255								
TSEB	**Hengchuen, Pin**	**2.32 220**		*e*P		**Pn**	**18 25 08.8**	**+1.3**	
	baz=229								
HEN	**Hengchun**	**2.34 225**		*e*P		**Pn**	**18 25 08.9**	**+1.1**	
	baz=224								
HEN				*e*S		**Sn**	**18 25 35.7**	**+0.3**	
	baz=224								
TWKBT	**Hengchun**	**2.34 222**		*e*P		**Pn**	**18 25 08.5**	**+0.7**	
	baz=222								
TWKBT				*e*S		**Sn**	**18 25 35.1**	**-0.4**	
	baz=222								
TWK1	**Hengchun**	**2.34 222**		*e*P		**Pn**	**18 25 08.8**	**+0.9**	
	baz=222								
WLCH	**Liuqiu**	**2.37 236**	⇓	*i*P		**Pb**	**18 25 12.1**	**-1.4**	
	baz=229								
WDGT	**Dungji**	**2.65 261**	⇓	*i*P		**Pn**	**18 25 12.9**	**+0.8**	
	baz=259								
WDGT				*e*S		**Sn**	**18 25 43.1**	**0.0**	
	baz=259								
PHUB	**P'eng-hu**	**2.70 267**	⇓	*i*P		**Pn**	**18 25 13.4**	**+0.7**	
	baz=265								
PHUB				S		**Sn**	**18 25 44.4**	**+0.1**	
	baz=265								
PNG	**Penghu**	**2.71 268**	⇓	*i*P		**Pn**	**18 25 13.7**	**+0.8**	
	baz=266								
PNG				*e*S		**Sn**	**18 25 45.5**	**+0.8**	
	baz=266								
JMJ	**Miyako jima 2**	**2.78 66**		*e*P		**Pn**	**18 25 13.5**	**-0.4**	
	baz=67								
PTTC	**Pingtan**	**3.07 306**	⇓	*e*P		**Pn**	**18 25 17.6**	**-0.3**	
	baz=305								
VWUC	**VWUC**	**3.07 296**	⇓	*i*P		**Pn**	**18 25 17.8**	**-0.2**	
	baz=294								
PTMZ	**Houxiangcun**	**3.37 294**	⇓	*i*P		**Pn**	**18 25 21.8**	**-0.1**	
	baz=292								
MATB	**Ma-tsu**	**3.38 317**		*e*P		**Pn**	**18 25 21.5**	**-0.6**	
	baz=314								
LYJJ	**Jianjiangzhen**	**3.78 319**		*e*P		**Pn**	**18 25 27.2**	**-0.4**	
	baz=317								
QZH	**Quanzhou**	**3.78 290**	⇓	*i*Pn		**Pn**	**18 25 27.3**	**-0.3**	
QZH				Sn		**Sn**	**18 26 08.7**	**-2.4**	
QZH				smax		smax			
	comp=N,630nm,0.5s								
QZH				smax		smax			
	comp=E,370nm,0.5s								
QZH				LR		LR			
	comp=N,4μm,8.9s								
QZH				LR		LR			
	comp=E,3μm,9.0s								
QZH				LR		LR			
	comp=Z,3μm,9.2s								
KNM	**Kinmen**	**3.79 282**		*e*P		**Pn**	**18 25 29.7**	**+1.9**	
	baz=279								
KNMB	**Chin-men Tao**	**3.84 282**		P		**Pn**	**18 25 28.4**	**0.0**	
	baz=280								
KNMB	**Chin-men Tao**	**3.84 282**				**Pn**	**18 25 28.3**	**-0.2**	
XPSS	**Dashiqiu**	**3.85 327**		*e*P		**Pn**	**18 25 28.5**	**0.0**	
	baz=314								
MHZQ	**Yeshan**	**3.96 308**		*e*P		**Pn**	**18 25 29.0**	**-1.1**	
	baz=306								
AXDP	**Jialang**	**4.31 287**		*e*P		**Pn**	**18 25 35.1**	**+0.2**	
	baz=284								
ZPLA	**Ao Xicun**	**4.36 274**		*e*P		**Pn**	**18 25 36.0**	**+0.3**	
	baz=282								
ZZJH	**Jiuhuzhen**	**4.52 281**		*e*P		**Pn**	**18 25 37.8**	**-0.1**	
	baz=278								
SGCP	**Mt. Cagua**	**5.44 185**		*e*P		**Sn**	**18 26 47.2**	**-4.7**	
APYP	**Conner**	**5.92 192**		*e*P		**Sn**	**18 27 01.3**	**-2.5**	
JOW	**Kunigami**	**6.09 58**		*e*P		**Pn**	**18 25 57.8**	**-1.6**	
	baz=62								
JOW	**Kunigami**	**6.09 58**		P		**Pn**	**18 25 58.1**	**-1.3**	
	2.4nm,0.3s,baz=11,slow=16,SNR=15								
JOW	**Kunigami**	**6.09 58**				**Pn**	**18 25 57.4**	**-2.0**	
VDOS	**Pratas Island**	**6.12 242**		*e*P		**Pn**	**18 26 01.9**	**+2.1**	
	baz=241								
SZP	**Santa**	**6.40 198**		*e*P		**Pn**	**18 26 03.7**	**0.0**	
	baz=197								
SZP	**Santa**	**6.40 198**				**Pn**	**18 26 05.2**	**+1.5**	
SSE	**Sheshan**	**7.47 351**		Pn		Pn	18 26 13.4	-4.9	
BOLP	**Bolinao**	**7.67 199**		*e*P		**Pn**	**18 26 19.0**	**-2.1**	
SMPP	**San Manuel, Pa**	**7.69 193**		*e*P		**Pn**	**18 26 21.7**	**+0.2**	
HKPS	**Hong Kong Po S**	**7.83 261**		*e*P		**Pn**	**18 26 24.2**	**+0.9**	
	baz=259								
HKPS	**Hong Kong Po S**	**7.83 261**				**Pn**	**18 26 24.3**	**+0.9**	
BALP	**Baler**	**7.96 186**		*e*P		**Pn**	**18 26 26.8**	**+1.7**	
SCZP	**Santa Cruz**	**8.24 198**		*e*P		**Pn**	**18 26 30.6**	**+1.7**	
NJ2	**Nanjing**	**8.93 340**		*e*P		**Pn**	**18 26 38.7**	**+0.3**	
NJ2				S		**Sn**	**18 28 16.3**	**-1.7**	
NJ2				pmax		pmax			
	comp=Z,18nm,0.6s								
NJ2				smax		smax			
	comp=N,91nm,1.2s								
NJ2				smax		smax			
	comp=E,110nm,2.0s								
NJ2				LR		LR			
	comp=N,1μm,12.1s								
NJ2				LR		LR			
	comp=E,860nm,7.6s								
NJ2				LR		LR			
	comp=Z,1μm,14.7s								
TGY	**Tagaytay City**	**9.65 189**		P		**Pn**	**18 26 52.5**	**+4.1**	
	38nm,0.3s,baz=132,slow=9.4,SNR=4.3								
TGY				LR		LR	18 30 36.3		
	comp=Z,370nm,19.5s,baz=0.0,slow=37								
WHN	**Wuhan**	**9.97 315**		P		**Pn**	**18 26 55.6**	**+3.0**	
WHN				S		**Sn**	**18 28 50.1**	**+6.8**	
WHN				LR		LR			
	comp=N,3μm,8.8s								
WHN				LR		LR			
	comp=E,2μm,5.3s								
LUBP	**Lubang**	**10.13 193**		*e*P		Pn	18 26 49.8	-5.1	
PVCP	**Virac**	**10.16 171**		*e*P		**Pn**	**18 26 53.0**	**-2.2**	
BOAC	**Boac**	**10.20 184**		*e*P		Pn	18 27 02.3	+6.5	
OTRP	**Odiongan**	**11.28 182**		*e*P		**Pn**	**18 27 12.7**	**+2.1**	
CNP	**Catarman**	**11.31 169**		*e*P		**Pn**	**18 27 13.4**	**+2.4**	
BUSP	**Coron**	**11.83 191**		*e*P		**Pn**	**18 27 17.5**	**-0.7**	
JNU	**Nakatsue**	**11.94 36**		P		**Pn**	**18 27 21.1**	**+1.5**	
	0.5nm,0.3s,baz=242,slow=8.2,SNR=6.3								
JNU	**Nakatsue**	**11.94 36**		Pn		**Pn**	**18 27 18.0**	**-1.5**	
QIZ	**Qiongzhong**	**12.67 251**		P		**Pn**	**18 27 29.6**	**-0.1**	
QIZ				S		**Sn**	**18 29 51.5**	**+1.7**	
QIZ				LR		LR			
	comp=E,560nm,4.8s								
QIZ				LR		LR			
	comp=Z,480nm,13.8s								
QIZ	**Qiongzhong**	**12.67 251**		Pn		**Pn**	**18 27 29.8**	**+0.1**	
OCLP	**Ormoc**	**12.73 171**		*e*P		**Pn**	**18 27 34.7**	**+4.2**	
CUYO	**Cuyo Island**	**12.85 187**		*e*P		**P**	**18 27 46.2**	**+3.6**	
GUIM	**Jordan**	**12.99 180**		*e*P		**Pn**	**18 27 36.5**	**+2.5**	
ENH	**Enshi**	**13.32 302**				**Pn**	**18 27 38.9**	**+0.4**	
MSLP	**Maasin**	**13.67 170**		*e*P		**P**	**18 27 54.5**	**+2.8**	
CNOP	**Candoni, Negro**	**13.79 179**		*e*P		**Pn**	**18 27 46.0**	**+1.1**	
INCN	**Inchon**	**14.20 14**		P		**P**	**18 27 56.1**	**-1.4**	
KSRS	**Korea Array**	**14.49 17**		P		**Pn**	**18 27 55.2**	**+0.9**	
	0.4nm,0.3s,baz=196,slow=12,SNR=21								
KSRS				LR		LR	18 34 35.2		
	comp=Z,633nm,18.3s,baz=194,slow=42								
KS19	**Wonju Array Si**	**14.52 17**		P		**P**	**18 27 57.9**	**-3.1**	
GYA	**Guiyang**	**14.62 284**	⇓	*i*P		**Pn**	**18 27 56.2**	**-0.1**	
GYA				S		**Sn**	**18 30 34.8**	**-2.6**	
GYA				SS		**S**	**18 31 00.5**	**+4.6**	
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s								
GYA				pmax		pmax			
	comp=Z,160nm,4.6s								
GYA				LR		LR			
	comp=N,760nm,12.0s								
GYA				LR		LR			
	comp=E,1μm,12.7s								
GYA				LR		LR			
	comp=Z,1μm,12.7s								
BATP	**Bataraza**	**15.48 198**		*e*P		**P**	**18 28 13.9**	**+2.1**	
XAN	**Xi'an**	**15.73 314**		P		**Pn**	**18 28 11.7**	**+0.8**	
XAN				pP		P	18 28 16.6	+2.0	
XAN				S		**Sn**	**18 31 04.8**	**+0.5**	
XAN				pmax		pmax			
	comp=Z,20nm,1.5s								
XAN				pmax		pmax			
	comp=Z,160nm,4.5s								
XAN				LR		LR			
	comp=N,1μm,19.1s								
XAN				LR		LR			
	comp=E,900nm,20.1s								
XAN				LR		LR			
	comp=Z,610nm,15.2s								
XAN	**Xi'an**	**15.73 314**		P		**Pn**	**18 28 11.9**	**+1.0**	
PAGZ	**Pagadian**	**15.78 177**		*e*P		**P**	**18 28 16.6**	**+1.5**	
TIY	**Taiyuan**	**16.43 331**		*e*P		**P**	**18 28 25.9**	**+3.6**	
TIY				PP		**pwP**	**18 28 36.9**	**+3.0**	
TIY				S		**S**	**18 31 27.8**	**-4.9**	
TIY				pmax		pmax			
	comp=Z,190nm,4.2s								
TIY				LR		LR			
	comp=N,860nm,8.5s								
TIY				LR		LR			
	comp=E,310nm,9.6s								
TIY				LR		LR			
	comp=Z,760nm,10.5s								
CTBH	**Cotabato--PC H**	**16.46 174**	⇑	*e*P		**P**	**18 28 24.0**	**+1.3**	
KCP	**Kidapawan**	**16.77 171**	⇓	*e*P		**P**	**18 28 25.9**	**-0.3**	
DAV	**Davao City (W)**	**16.79 169**		LR		LR	18 34 17.3		
	comp=Z,347nm,21.1s,baz=340,slow=35								
DAV	**Davao City (W)**	**16.79 169**				**Pn**	**18 28 24.9**	**+0.5**	
MATI	**Mati**	**17.03 167**		*e*P		**Pn**	**18 28 25.1**	**-2.4**	
BJIT	**Baijiatuao**	**17.14 343**		P		**Pn**	**18 28 28.9**	**+0.3**	
INU	**Inuyama**	**17.14 44**		P		**Pn**	**18 28 27.1**	**-1.5**	
BJI	**Beijing**	**17.16 343**		P		**P**	**18 28 30.2**	**0.0**	
BJI				pP		**pP**	**18 28 37.2**	**-0.2**	
BJI				sP		**sP**	**18 28 40.6**	**-0.3**	
BJI				pmax		pmax			
	comp=Z,9.0nm,0.9s								
SKMP	**Bagumbayan, Su**	**17.18 173**		*e*P		**P**	**18 28 33.1**	**+2.4**	
SLVN	**Son La**	**17.35 266**		P		**P**	**18 28 32.9**	**+0.4**	
JHJ	**Hachijo jima 2**	**17.85 54**		LR		LR	18 35 19.0		
	comp=Z,206nm,21.1s,baz=236,slow=36								
JHJ2	**Mitsune**	**17.87 54**		P		**Pn**	**18 28 37.8**	**0.0**	
JCJ	**Chichijima**	**18.10 75**		P		**P**	**18 28 41.0**	**+0.2**	
	1.8nm,0.3s,baz=11,slow=23,SNR=1.8								
JCJ				LR		LR	18 34 26.0		
	comp=Z,207nm,21.1s,baz=240,slow=33								
SNY	**Shenyang**	**18.11 3**	⇓	P		**P**	**18 28 46.8**	**+6.0**	
SNY				pmax		pmax			
	comp=Z,9.0nm,0.4s								
SNY				pmax		pmax			
	comp=Z,160nm,4.8s								
SNY				LR		LR			
	comp=N,570nm,13.1s								
SNY				LR		LR			
	comp=E,360nm,16.5s								
SNY				LR		LR			
	comp=Z,960nm,14.7s								
CD2	**Chengdu**	**18.13 297**	⇑	*i*P		**P**	**18 28 42.1**	**+0.9**	
CD2				S		**Sn**	**18 32 03.9**	**+1.3**	
CD2				pmax		pmax			
	comp=Z,30nm,0.9s								
CD2				pmax		pmax			
	comp=Z,400nm,6.6s								
CD2				LR		LR			
	comp=N,3μm,17.7s								
CD2				LR		LR			
	comp=E,1μm,17.8s								
CD2				LR		LR			
	comp=Z,960nm,12.4s								
KKM	**Kota Kinabalu**	**18.56 200**		P		**P**	**18 28 46.0**	**-0.1**	
MAJO	**Matsushiro**	**18.64 43**		P		**P**	**18 28 46.0**	**-0.6**	
MJB9	**Matsu-Tunnel**	**18.64 43**				**P**	**18 28 45.9**	**-0.8**	
MJAR	**Matsushiro Arr**	**18.64 43**		P		**P**	**18 28 46.7**	**0.0**	
	0.0nm,0.3s,baz=231,slow=9.0,SNR=9.9								
MJAR				LR		LR	18 37 08.5		
	comp=Z,243nm,19.6s,baz=245,slow=41								
HHC	**Hu-ho-hao-te**	**19.42 334**		P		**Pn**	**18 28 57.8**	**+1.2**	
HHC				sP		pwP	18 29 09.5	+2.5	
HHC				S		**S**	**18 32 29.7**	**-3.5**	
HHC				sS		sS	18 32 41.9	-3.1	
HHC				SS		**SnSn**	**18 32 58.2**	**+10**	
HHC				pmax		pmax			
	comp=Z,20nm,0.9s								
HHC				pmax		pmax			
	comp=Z,87nm,4.8s								
HHC				LR		LR			
	comp=N,320nm,10.8s								
HHC				LR		LR			
	comp=E,190nm,11.4s								
HHC				LR		LR			
	comp=Z,310nm,13.0s								
BTO	**Baotou**	**19.87 331**		*e*P		Pn	18 29 11.8	+10	
CN2	**Changchun**	**20.21 6**		*e*P		Pn	18 29 06.4	+0.6	
CN2				pmax		pmax			
	comp=Z,10.0nm,0.6s								
LZH	**Lanzhou**	**20.31 312**		*e*P		Pn	18 29 06.0	-1.3	
LZH				pP		pP	18 29 12.5	0.0	
LZH				sP		sP	18 29 15.3	-0.7	
LZH				sS		Sn	18 32 57.0	+1.7	
LZH				SS		**SnSn**	**18 33 15.8**	**+5.7**	
LZH				pmax		pmax			
	comp=Z,51nm,1.2s								
LZH				pmax		pmax			
	comp=Z,450nm,4.6s								
LZH				LR		LR			
	comp=N,1μm,12.1s								
LZH				LR		LR			
	comp=E,660nm,12.6s								
LZH				LR		LR			
	comp=Z,1μm,14.5s								
PBKT	**Sadao Pong**	**21.41 255**		P		**P**	**18 29 18.5**	**+1.6**	
MDJ	**Mudanjiang**	**21.67 14**		P		**P**	**18 29 19.6**	**+0.2**	
MDJ				pP		sP	18 29 29.6	-0.6	
MDJ				sP		pwP	18 29 33.1	+1.6	
MDJ				PP		**PnPn**	**18 29 42.2**	**+1.4**	
MDJ				SS		SS	18 33 54.7		
MDJ				pmax		pmax			
	comp=Z,2.0nm,0.6s								
MDJ				pmax		pmax			
	comp=Z,170nm,9.1s								
MDJ				LR		LR			
	comp=N,1μm,17.1s								
MDJ				LR		LR			
	comp=E,420nm,13.6s								
MDJ				LR		LR			
	comp=Z,1μm,14.5s								
MDJ	**Mudanjiang**	**21.67 14**		P		**P**	**18 29 18.8**	**-0.6**	
USA0B	**Ussuriysk Arra**	**21.89 19**		P		**P**	**18 29 19.7**	**-2.2**	
USRK	**Ussuriysk Ar.**	**21.89 19**		P		**P**	**18 29 20.4**	**-1.4**	
	2.7nm,0.7s,baz=188,slow=7.5,SNR=8.4								
CHTO	**Chiang Mai**	**22.48 262**		P		**P**	**18 29 28.5**	**+0.1**	
CHTO				lAmb		lAmb	18 29 32.1		
	comp=Z,60nm,1.6s								
CM31	**Chiang Mai Arr**	**22.58 261**		P		**P**	**18 29 29.5**	**0.0**	
CMAR	**Chiang Mai Arr**	**22.58 261**		P		**P**	**18 29 30.9**	**+1.3**	
	comp=Z,6.1nm,0.8s,baz=66,slow=7.9,SNR=34								
KMSI	**Cibinong**	**23.02 176**		P		**P**	**18 29 35.4**	**+1.3**	
	comp=Z,47nm,1.0s								
MRSI	**Marisa**	**23.08 181**		P		**P**	**18 29 37.7**	**+3.0**	
	comp=Z,836nmcomp=Z,43nm,0.8s								
TNTI	**Ternate**	**23.27 168**		P		**P**	**18 29 38.7**	**+2.2**	
	comp=Z,1μmcomp=Z,107nm,0.8s								
TNTI	**Ternate**	**23.27 168**		P		**P**	**18 29 36.6**	**0.0**	
SBUM	**Sibu**	**23.34 207**		P		**P**	**18 29 36.6**	**-0.7**	
SBUM	**Sibu**	**23.34 207**		P		**P**	**18 29 38.0**	**+0.7**	
MPSI	**Mapaga**	**23.35 187**		P		**P**	**18 29 39.4**	**+2.0**	
	comp=Z,26nm,0.9s								
APSI	**Ampana**	**24.47 182**		P		**P**	**18 29 49.8**	**+1.9**	
	comp=Z,415nmcomp=Z,43nm,1.2s								
LUWI	**Luwuk**	**24.59 179**		P		**P**	**18 29 51.3**	**+2.4**	
	comp=Z,733nmcomp=Z,44nm,1.0s								
LUWI	**Luwuk**	**24.59 179**		P		**P**	**18 29 48.8**	**-0.1**	
LBMI	**Labuha**	**24.66 168**		P		**P**	**18 29 52.2**	**+2.5**	
	comp=Z,2μmcomp=Z,206nm,1.0s								
GTA	**Gaotai**	**24.79 315**	⇑	P		**P**	**18 29 52.0**	**+1.2**	
GTA				pP		pwP	18 30 03.6	+0.8	
GTA				sP		sP	18 30 08.3	+6.1	
GTA				S		**S**	**18 34 17.9**	**+6.4**	
GTA				pmax		pmax			
	comp=Z,4.0nm,1.1s								
GTA				pmax		pmax			
	comp=Z,110nm,7.5s								
GTA				LR		LR			
	comp=Z,470nm,18.7s								
GTA				LR		LR			
	comp=Z,470nm,15.9s								
GTA				LR		LR			
	comp=Z,570nm,16.5s								
KSM	**Kuching**	**25.05 210**		P		**P**	**18 29 52.9**	**-0.3**	
KSM				lAmb		lAmb	18 30 20.9		
	comp=Z,26nm,1.1s								
KSM	**Kuching**	**25.05 210**		P		**P**	**18 29 54.0**	**+0.8**	
ERM	**Erimo**	**25.09 38**		P		**P**	**18 29 51.8**	**-1.4**	
BKB	**Balikpapan**	**25.39 193**		P		**P**	**18 29 55.7**	**-0.5**	
HIA	**Hailar**	**25.62 356**		P		**P**	**18 29 55.5**	**-2.6**	
SlJl	**Sorong**	**25.85 160**		P		**P**	**18 30 01.1**	**+0.6**	
	comp=Z,18nm,0.8s,baz=22,slow=8.1,SNR=13								
ASAJ	**Asahikawa**	**26.20 34**		P		**P**	**18 30 02.6**	**-0.8**	
	comp=Z,2.9nm,0.7s,baz=258,slow=9.3,SNR=2.6								
ASAJ				LR		LR	18 41 14.7		
	comp=Z,312nm,21.3s,baz=178,slow=38								
JKA	**Kamikawa-asahi**	**26.20 34**		P		**P**	**18 30 02.6**	**-0.8**	
KLR	**Kul'dur**	**26.51 14**		P		**P**	**18 30 05.4**	**-0.7**	
	comp=Z,1.5nm,0.6s,baz=235,slow=8.5,SNR=6.1								
KLR				LR		LR	18 41 53.2		
	comp=Z,441nm,18.9s,baz=199,slow=39								
TTSI	**Tana Toraja**	**26.70 186**		P		**P**	**18 30 10.5**	**+2.4**	
	comp=Z,15nm,1.0s								
ULN	**Ulaanbaatar**	**27.08 337**		P		**P**	**18 30 09.9**	**-1.5**	
ULN				lAmb		lAmb	18 30 24.5		
	comp=Z,44nm,1.4s								
NLAI	**Namlea**	**27.14 170**		P		**P**	**18 30 14.6**	**+2.6**	
	comp=Z,295nm,0.8s								
SONM	**Songino Array**	**27.30 336**		P		**P**	**18 30 13.3**	**-0.1**	
	comp=Z,8.7nm,0.7s,baz=149,slow=9.8,SNR=68								
SONM				pP		**pwP**	**18 30 25.4**	**-0.1**	
	comp=Z,40nm,1.0s,baz=153,slow=9.1,SNR=27								
SONM				LR		LR	18 43 10.4		
	comp=Z,158nm,19.1s,baz=128,slow=41								
SPSI	**Sidrap Palu**	**27.62 186**		P		P	18 30 25.9	+10	
FAKI	**Fak Fak**	**28.10 159**		P		**P**	**18 30 23.3**	**+2.6**	
	comp=Z,404nmcomp=Z,42nm,0.9s								
FAKI	**Fak Fak**	**28.10 159**		P		**P**	**18 30 19.5**	**-1.1**	
FAKI				lAmb		lAmb	18 30 26.6		
	comp=Z,33nm,0.9s								
IPM	**Ipoh**	**28.18 231**		P		**P**	**18 30 19.7**	**-1.7**	
IPM				lAmb		lAmb	18 30 35.9		
	comp=Z,18nm,0.8s								
IPM	**Ipoh**	**28.18 231**		P		**P**	**18 30 23.0**	**+1.6**	
MYKOM	**Kota Tinggi**	**28.29 222**		P		**P**	**18 30 23.0**	**+0.6**	
TPRI	**Tanjung Pinang**	**28.57 220**		P		**P**	**18 30 27.6**	**+2.7**	
	comp=Z,43nm,0.8s								
LSA	**Lhasa**	**28.59 289**		P		**P**	**18 30 24.7**	**-0.9**	
KAPI	**Kappang**	**28.66 186**		LR		LR	18 42 52.8		
	comp=Z,50nm,18.2s,baz=22,slow=38								
PSI	**Prapat**	**30.84 231**		P		**P**	**18 30 45.2**	**+0.1**	
	comp=Z,1.5nm,0.4s,baz=0.2,slow=8.5								
PSI				LR		LR	18 43 15.7		
	comp=Z,171nm,18.1s,baz=358,slow=36								
RPSI	**Rantau Prapat**	**30.92 231**		P		**P**	**18 30 45.4**	**-0.3**	
RPSI				lAmb		lAmb	18 31 00.4		
	comp=Z,18nm,1.0s								
RPSI	**Rantau Prapat**	**30.92 231**		P		**P**	**18 30 45.2**	**-0.4**	
TLY	**Talaya**	**31.49 337**		P		**P**	**18 30 50.3**	**-0.1**	
	comp=Z,4.3nm,0.7s,baz=140,slow=8.3,SNR=4.3								
TLY				LR		LR	18 44 25.4		
	comp=Z,91nm,21.7s,baz=135,slow=38								
TLY	**Talaya**	**31.49 337**		P		**P**	**18 30 48.2**	**-2.1**	
TLY				lAmb		lAmb	18 31 03.2		
	comp=Z,17nm,0.9s								
JAY	**Jayapura**	**31.50 143**		LR		LR	18 45 02.8		
	comp=Z,114nm,18.2s,baz=301,slow=39								
TAPN	**Taplejung**	**31.55 284**		*e*P		**P**	**18 30 52.9**	**+1.3**	
	comp=Z,28nm,1.1s								
MNSI	**Mandailing Nat**	**31.82 228**		P		P	18 31 05.9	+12	
ODAN	**Odare**	**31.85 283**		*e*P		**P**	**18 30 55.1**	**+1.0**	
	comp=Z,28nm,1.0s								
RAMN	**Ramite**	**32.55 283**		*e*P		**P**	**18 31 01.7**	**+1.4**	
	comp=Z,18nm,0.8s								
KRJI	**Kerinci**	**32.80 221**		P		P	18 31 17.4	+15	
JIRN	**Jiri**	**32.89 285**		*e*P		**P**	**18 31 04.5**	**+1.1**	
GUN	**Gumba**	**33.16 285**		*e*P		**P**	**18 31 07.0**	**+1.2**	
MDSI	**Maura Dua**	**33.22 215**		P		P	18 31 17.0	+11	
PKI	**Pulchoki**	**33.59 285**		*e*P		**P**	**18 31 10.0**	**+0.6**	
PKIN	**Phulchoki**	**33.60 285**		*e*P		**P**	**18 31 10.1**	**+0.6**	
LEM	**Lembang**	**33.64 207**		P		**P**	**18 31 10.5**	**+0.9**	
	comp=Z,9.0nm,0.4s,baz=308,slow=22,SNR=3.5								
KKN	**Kakani**	**33.70 285**		*e*P		**P**	**18 31 10.9**	**+0.6**	
	comp=Z,20nm,1.0s								
BATI	**Baumata**	**33.71 178**		LR		LR	18 45 12.1		
	comp=Z,101nm,19.0s,baz=26,slow=37								
GKN	**Gorkha**	**34.26 285**		*e*P		**P**	**18 31 15.7**	**+0.6**	
WMQ	**Urumqi**	**34.87 314**		*e*P		**P**	**18 31 20.9**	**+0.9**	
WMQ				pmax		pmax			
	comp=Z,16nm,0.7s								
WMQ				pmax		pmax			
	comp=Z,90nm,4.3s								
WMQ				LR		LR		

SNR=26
KURK Kurchatov 43.24 320 P **P** 18 32 29.3 -0.5
KURK IAmb IAmb 18 32 43.4
comp=Z,40nm,1.1s
KURBB Kurchatov Arra 43.26 320 P **P** 18 32 29.2 -0.8
comp=Z,5.2nm,0.8s,baz=110,slow=8.2,SNR=46
KURBB pP **pwP** 18 32 42.3 +0.1
comp=Z,23nm,1.1s,baz=110,slow=8.1,SNR=21
KBK Karagaybulak 43.44 308 P **P** 18 32 34.0 +2.2
SNR=9.8
CHMS Chumysh 43.64 308 P **P** 18 32 34.8 +1.6
SNR=11
UCH Uchtor 43.68 307 P **P** 18 32 36.3 +2.2
SNR=18
FRU1 Bishkek 43.70 308 P **P** 18 32 33.5 -0.2
FRU1 IAmb IAmb 18 32 36.4
comp=Z,10nm,0.7s
AAK Ala-Archa 43.77 308 P **P** 18 32 35.0 +0.6
comp=Z,4.9nm,0.6s,baz=109,slow=6.1,SNR=14
AAK Ala-Archa 43.77 308 P **P** 18 32 36.2 +1.8
SNR=7.3
AAK Ala-Archa 43.77 308 P **P** 18 32 34.2 -0.2
NIL Nilore 43.99 295 P **P** 18 32 35.8 -0.3
SEY Seymchan 44.04 19 P **P** 18 32 35.9 -0.1
comp=Z,1.4nm,0.7s,baz=53,slow=20,SNR=2.6
SEY pP **pwP** 18 32 48.5 +0.1
comp=Z,4.4nm,0.9s,baz=228,slow=3.3,SNR=6.5
AML Almayashu 44.27 307 P **P** 18 32 41.1 +2.3
SNR=9.3
ARSB Arslanbob 44.68 305 P **P** 18 32 42.2 +0.5
WB0 Warramunga Arr 44.72 164 P **P** 18 32 41.8 -0.3
WB0 IAmb IAmb 18 32 52.8
comp=Z,35nm,1.5s
WRAB Tennant Creek 44.87 164 P **P** 18 32 43.1 -0.1
WRAB IAmb IAmb 18 32 45.0
comp=Z,20nm,1.1s
WRA Warramunga Arr 44.88 164 P **P** 18 32 43.8 +0.5
comp=Z,7.9nm,0.8s,baz=346,slow=8.4,SNR=31
WB2 Warramunga Arr 44.88 164 P **P** 18 32 43.4 +0.2
WB2 IAmb IAmb 18 32 45.0
comp=Z,17nm,1.0s
WR0 Warramunga Arr 44.94 164 P **P** 18 32 43.5 -0.2
WR0 IAmb IAmb 18 32 45.5
comp=Z,16nm,0.9s
PSAC1 Pilbara Seismi 45.03 184 P **P** 18 32 43.6 -0.8
PSAC1 IAmb IAmb 18 33 27.0
comp=Z,44nm,1.8s
PSAA2 Pilbara Seismi 45.05 183 P **P** 18 32 43.3 -1.3
PSAB1 Pilbara Seismi 45.06 184 P **P** 18 32 43.5 -1.2
PSAB1 IAmb IAmb 18 33 29.0
comp=Z,48nm,1.9s
PSA00 Pilbara Seismi 45.06 183 P **P** 18 32 43.8 -0.9
PSA00 IAmb IAmb 18 33 29.3
comp=Z,41nm,1.6s
PSAA1 Pilbara Seismi 45.07 184 P **P** 18 32 43.0 -1.7
PSAA3 Pilbara Seismi 45.07 183 P **P** 18 32 43.7 -1.1
PSAA3 IAmb IAmb 18 33 18.3
comp=Z,34nm,1.5s
PSAB3 Pilbara Seismi 45.08 183 P **P** 18 32 43.4 -1.5
PSAB3 IAmb IAmb 18 33 16.3
comp=Z,38nm,1.7s
PSAC3 Pilbara Seismi 45.11 184 P **P** 18 32 43.5 -1.6
PSAD3 Pilbara Seismi 45.14 184 P **P** 18 32 44.5 -0.8
PSAD3 IAmb IAmb 18 33 22.9
comp=Z,41nm,1.8s
BTK Batken 46.19 303 P **P** 18 32 52.0 -1.6
GAR Garm 46.50 302 P **P** 18 32 54.9 -1.2
KK31 Karatay Array 46.73 308 P **P** 18 32 56.8 -1.0
KK31 IAmb IAmb 18 33 00.1
comp=Z,5.9nm,0.6s
KK31 PcP **PcP** 18 34 32.4 +1.5
KKAR Karatay Array 46.73 308 P **P** 18 32 56.5 -1.2
KKAR IAmb IAmb 18 33 00.1
comp=Z,5.9nm,0.6s
KKAR PcP **PcP** 18 34 31.9 +0.9
GIRL Giralia 46.75 191 P **P** 18 32 57.8 -0.2
CHGR Chuyangaron 47.39 301 P **P** 18 32 60.0 -3.1
KBL Kabul 47.47 296 P **P** 18 33 04.4 +0.5
KBL IAmb IAmb 18 33 06.5
comp=Z,16nm,0.9s
TIXI Tiksi 48.12 3 LR LR 18 56 32.4
comp=Z,425nm,18.1s,baz=200,slow=40
TIXI Tiksi 48.12 3 P **P** 18 33 06.0 -2.1
TIXI IAmb IAmb 18 33 25.9
comp=Z,9.5nm,0.8s
AS31 Alice Springs 48.36 166 P **P** 18 33 10.6 +0.1
ASAR Alice Springs 48.36 166 P **P** 18 33 11.9 +1.4
comp=Z,4.2nm,0.6s,baz=347,slow=7.7,SNR=55
ASAR LR LR 18 56 12.6
comp=Z,95nm,18.8s,baz=150,slow=39
BVAR Borovoye Array 48.82 321 P **P** 18 33 14.3 +0.5
comp=Z,2.4nm,0.5s,baz=96,slow=7.5,SNR=26
BRVK Borovoye 48.89 321 P **P** 18 33 13.4 -0.9
BRVK IAmb IAmb 18 33 28.0
comp=Z,16nm,0.9s
CTA Charters Tower 49.29 150 P **P** 18 33 18.2 +0.6
comp=Z,2.7nm,0.4s,baz=338,slow=5.4,SNR=2.2
BILL Bilibino 51.74 19 P **P** 18 33 35.0 -0.6
HRA Herat 53.08 296 P **P** 18 33 45.7 -0.7
FORT Forrest 54.42 174 P **P** 18 33 55.8 +0.1
ATKA Atka Island 55.36 42 P **P** 18 34 00.6 -1.8
AKTO Aktyubinsk 55.97 316 LR LR 18 57 09.6
comp=Z,126nm,20.8s,baz=98,slow=35
EIDS Eidsvold 56.08 149 P **P** 18 34 07.3 -0.6
GEYT Alibeck 56.09 301 P **P** 18 34 09.9 +2.0
comp=Z,6.3nm,0.8s,baz=116,slow=3.4,SNR=14
GEYT LR LR 18 59 16.0
comp=Z,98nm,20.7s,baz=45,slow=37
GYA0B ALIBECK ARRAY 56.09 301 P **P** 18 34 08.1 +0.1
GYA0B IAmb IAmb 18 34 27.8
comp=Z,18nm,1.1s
ARU Arti 56.23 323 LR LR 18 58 34.7
comp=Z,96nm,18.7s,baz=94,slow=36
ARU Arti 56.23 323 P **P** 18 34 07.4 -1.2
ARU IAmb IAmb 18 34 21.8
comp=Z,11nm,0.6s
BBOO Buckleboo 57.65 166 P **P** 18 34 19.2 +0.4
STKA Stephens Creek 58.19 161 P **P** 18 34 24.1 +1.5
comp=Z,20nm,0.7s,baz=338,slow=7.6,SNR=55
STKA Stephens Creek 58.19 161 P **P** 18 34 23.5 +0.8
ARMA Armidale 60.63 151 P **P** 18 34 40.4 +0.8
ARMA IAmb IAmb 18 34 44.6
comp=Z,10.0nm,0.8s
SDPT Sand Point 63.54 38 P **P** 18 34 57.0 -1.8
CAN Canberra 63.83 156 P **P** 18 35 02.1 +1.2
CNBA Chernabura Isl 64.09 39 P **P** 18 35 02.2 -0.2
CNBA IAmb IAmb 18 35 26.0
comp=Z,16nm,1.0s
TOO Toolangi 64.66 160 P **P** 18 35 06.3 0.0
LHI Lord Howe Isla 65.10 146 P **P** 18 35 09.0 -0.3
TTA Tatalina 65.33 30 **P** 18 35 10.6 +0.1
KLMR Klimovskoe 66.22 328 *e*P **P** 18 35 14.8 -1.4
KLMR AMP 18 35 30.3
comp=Z,22nm,1.3s
KBZ Khabaz 66.73 309 P **P** 18 35 20.8 +1.1
comp=Z,2.1nm,0.7s,baz=81,slow=11,SNR=5.5
KBZ pP **pwP** 18 35 33.0 +0.2
comp=Z,8.6nm,1.0s,baz=174,slow=4.0,SNR=7.6
KBZ LR LR 19 06 19.8
comp=Z,78nm,20.9s,baz=72,slow=38
AKH Akhalkalaki 66.75 307 P **P** 18 35 20.9 +0.7
AKH IAmb IAmb 18 35 31.5
comp=Z,11nm,1.0s
KIV Kislovodsk 66.84 309 P **P** 18 35 20.5 -0.1
KIV IAmb IAmb 18 35 35.8
comp=Z,16nm,1.0s
PPLA Purkeypile 67.08 30 P **P** 18 35 22.2 +0.4
PPLA IAmb IAmb 18 35 42.2
comp=Z,21nm,1.4s
RSO Redoubt South 67.13 32 P **P** 18 35 21.7 -0.6
OHAK Old Harbor 67.32 36 **P** 18 35 22.6 -0.7
TOLK Toolik Lake Re 67.42 23 P **P** 18 35 24.1 +0.3
TOLK IAmb IAmb 18 35 45.3
comp=Z,5.2nm,0.8s
MLY Manley 67.43 27 P **P** 18 35 24.1 +0.2
MLY IAmb IAmb 18 35 44.4
comp=Z,8.3nm,1.1s
BPAW Bear Paw Mtn. 67.45 28 P **P** 18 35 24.3 +0.3
KTH Kantishna Hill 67.56 29 P **P** 18 35 25.4 +0.7
KDAK Kodiak Island 67.61 35 P **P** 18 35 24.1 -0.9
comp=Z,3.4nm,0.8s,baz=293,slow=13,SNR=2.1
KDAK Kodiak Island 67.61 35 P **P** 18 35 25.9 +0.9
TRF Thorofare Moun 67.85 29 P **P** 18 35 26.2 -0.5
TRF IAmb IAmb 18 35 41.8
comp=Z,24nm,1.8s

CNPM China Poot 68.02 33 P **P** 18 35 26.6 -1.1
CNPM IAmb IAmb 18 36 29.9
comp=Z,21nm,1.3s
NEA Nenana 68.20 28 P **P** 18 35 28.9 +0.2
NEA IAmb IAmb 18 35 49.4
comp=Z,7.5nm,0.8s
MCK McKinley 68.41 29 P **P** 18 35 29.2 -0.8
MCK IAmb IAmb 18 35 45.4
comp=Z,19nm,1.4s
RND Reindeer 68.50 29 P **P** 18 35 30.4 -0.3
MDM Murphy Dome 68.50 27 P **P** 18 35 30.4 -0.2
MDM IAmb IAmb 18 35 50.2
comp=Z,8.0nm,0.8s
WRH Wood River Hil 68.64 28 P **P** 18 35 32.0 +0.6
CCB Clear Creek Bu 68.73 28 P **P** 18 35 31.9 -0.1
CCB IAmb IAmb 18 37 57.1
comp=Z,4.7nm,0.4s
SML Sawmill 69.03 31 P **P** 18 35 33.5 -0.4
SML IAmb IAmb 18 35 57.2
comp=Z,7.1nm,0.8s
KNK Knik Glacier 69.04 31 P **P** 18 35 33.6 -0.4
KNK IAmb IAmb 18 35 49.8
comp=Z,15nm,1.2s
IL31 69.10 27 P **P** 18 35 33.4 -0.8
IL31 IAmb IAmb 18 36 01.7
comp=Z,16nm,1.9s
ILAR Eielson Array 69.10 27 P **P** 18 35 33.6 -0.6
comp=Z,1.1nm,0.6s,baz=294,slow=8.6,SNR=8.7
ILAR LR LR 19 09 00.7
comp=Z,50nm,18.1s,baz=298,slow=39
HDA Harding Lake 69.14 28 P **P** 18 35 33.4 -1.1
DHY Denali Highway 69.22 29 P **P** 18 35 34.7 -0.5
FYU Fort Yukon 69.41 25 P **P** 18 35 34.0 -2.1
FYU IAmb IAmb 18 36 29.3
comp=Z,17nm,1.3s
SCM Sheep Creek Mo 69.49 30 P **P** 18 35 37.0 +0.1
SCM IAmb IAmb 18 36 38.0
comp=Z,9.8nm,0.8s
PRP Porcupine Dome 69.51 26 P **P** 18 35 36.5 -0.5
RAYN Ar Rayn 69.65 287 P **P** 18 35 38.7 +0.3
RAYN IAmb IAmb 18 35 56.3
comp=Z,8.7nm,1.1s
KEV Kevo 69.88 338 P **P** 18 35 38.7 -0.3
KEV IAmb IAmb 18 35 57.1
comp=Z,9.6nm,0.9s
FID Port Fidalgo 70.12 31 P **P** 18 35 40.9 +0.2
FID IAmb IAmb 18 36 35.0
comp=Z,25nm,1.5s
HIN Hinchinbrook I 70.19 32 P **P** 18 35 40.2 -0.9
HIN IAmb IAmb 18 36 15.9
comp=Z,16nm,1.2s
SPA0 Spitsbergen Ar 70.22 348 P **P** 18 35 40.8 -0.2
SPITS Spitsbergen Ar 70.22 348 LR LR 19 10 32.8
comp=Z,48nm,19.0s,baz=40,slow=39
ARCES ARCESS Array B 70.44 338 P **P** 18 35 41.9 -0.6
comp=Z,1.4nm,0.6s,baz=60,slow=7.1,SNR=14
ARE0 ARCESS Array S 70.44 338 P **P** 18 35 41.1 -1.4
DOT Dot Lake 70.55 28 P **P** 18 35 43.0 -0.2
DOT IAmb IAmb 18 36 02.7
comp=Z,12nm,1.4s
MENT Mentasta 70.87 29 P **P** 18 35 44.7 -0.5
MENT IAmb IAmb 18 36 18.9
comp=Z,8.3nm,1.0s
RAGM Ragged Mountai 71.07 32 P **P** 18 35 46.4 -0.2
GLB Gilahina Butte 71.21 30 P **P** 18 35 47.5 +0.1
GLB IAmb IAmb 18 36 11.2
comp=Z,11nm,1.0s
VRDI Verde Repeater 71.44 31 P **P** 18 35 48.8 0.0
VRDI IAmb IAmb 18 36 20.2
comp=Z,8.3nm,1.0s
EGAK Eagle 71.48 27 P **P** 18 35 48.4 -0.4
MCARA McCarthy VSAT 71.59 30 P **P** 18 35 49.2 -0.4
BALM Baldy 72.00 31 P **P** 18 35 50.3 -1.9
BALM IAmb IAmb 18 36 10.5
comp=Z,9.5nm,0.7s
BARN Barnard Glacie 72.32 31 P **P** 18 35 51.7 -2.5
BARN IAmb IAmb 18 36 06.6
comp=Z,8.9nm,0.8s
DAWY Dawson 72.42 27 P **P** 18 35 54.7 +0.2
FIA1 FINESS Array S 72.48 330 P **P** 18 35 54.9 +0.1
FIA1 IAmb IAmb 18 36 12.8
comp=Z,9.4nm,0.9s
FINES FINESS Array B 72.48 330 P **P** 18 35 55.2 +0.4
comp=Z,2.1nm,0.7s,baz=62,slow=5.8,SNR=20
FINES LR LR 19 11 54.9
comp=Z,106nm,18.3s,baz=77,slow=39
CTGM Chitina Glacie 72.50 31 P **P** 18 35 52.5 -2.7
CTGM IAmb IAmb 18 36 13.7
comp=Z,11nm,0.8s
GAZ Gaziantep 72.52 303 P **P** 18 35 54.1 -1.6
GAZ IAmb IAmb 18 36 13.9
comp=Z,18nm,1.3s
EPYK Eagle Plains 72.75 24 P **P** 18 35 55.7 -0.8
EPYK IAmb IAmb 18 36 13.7
comp=Z,6.9nm,0.8s
INK Inuvik 73.22 22 P **P** 18 35 59.4 +0.2
comp=Z,3.9nm,1.0s,baz=279,slow=6.3,SNR=11
INK Inuvik 73.22 22 P **P** 18 35 58.5 -0.6
DAMY Dhamar 73.58 279 P **P** 18 36 01.3 -1.3
DAMY IAmb IAmb 18 36 21.7
comp=Z,6.0nm,0.7s
ILGA Ilgaz 73.98 308 P **P** 18 36 02.8 -1.6
ILGA IAmb IAmb 18 36 14.9
comp=Z,25nm,1.4s
AKASG Malin Array Be 74.04 319 P **P** 18 36 04.0 -0.3
comp=Z,1.8nm,0.8s,baz=59,slow=6.4,SNR=9.4
AKASG LR LR 19 10 30.1
comp=Z,79nm,20.7s,baz=75,slow=37
AKBB Malin Array Si 74.04 319 P **P** 18 36 03.3 -1.0
AKBB IAmb IAmb 18 36 17.1
comp=Z,8.9nm,0.9s
HYT Haines Junctio 74.31 30 P **P** 18 36 06.1 +0.2
BR131 Keskin Array S 74.44 307 P **P** 18 36 06.3 -0.7
BR131 IAmb IAmb 18 36 17.0
comp=Z,12nm,1.1s
BRTR Keskin Array B 74.44 307 P **P** 18 36 08.2 +1.1
comp=Z,2.7nm,0.8s,baz=114,slow=5.5,SNR=10.0
BRTR LR LR 19 12 22.0
comp=Z,33nm,20.8s,baz=58,slow=38
ANTO Ankara 75.01 307 P **P** 18 36 10.7 +0.4
ANTO IAmb IAmb 18 36 24.6
comp=Z,8.4nm,0.7s
SORM Soroca 75.39 316 ⇑P P 18 36 24.3 +12
WHY Whitehorse 75.58 30 P **P** 18 36 13.6 +0.5
SKAG Skagway 75.83 31 P **P** 18 36 15.1 +0.7
SKAG IAmb IAmb 18 36 38.1
comp=Z,13nm,1.0s
C36M Paulatuk 75.86 20 P **P** 18 36 13.9 -0.5
C36M IAmb IAmb 18 36 31.2
comp=Z,9.8nm,1.0s
TOPG Topolog 76.47 313 ⇑P P 18 36 31.7 +13
JIS Juneau Island 76.74 32 P **P** 18 36 18.5 -1.1
JIS IAmb IAmb 18 36 33.9
comp=Z,8.2nm,0.9s
HARR Harsova 76.83 313 ⇑P P 18 36 34.3 +14
TESR Tescani 77.04 315 ⇑P P 18 36 34.5 +13
BISRR Bisoca 77.34 314 ⇑P P 18 36 38.2 +15
BUR08 Bucovina Ar. S 77.55 317 P P 18 36 23.5 -1.1
BURAR Bucovina Array 77.56 317 ⇓P P 18 36 37.9 +13
OZUR 77.74 315 ⇓P P 18 36 39.3 +14
MLR Muntele Rosu 77.86 314 ⇓P P 18 36 29.2 +2.8
MLR Muntele Rosu 77.86 314 P P 18 36 26.1 -0.2
DOPR Dopca 78.05 315 ⇑P P 18 36 41.0 +14
ELL Elmali 78.19 305 P P 18 36 28.2 -0.2
DLBC Dease Lake 78.75 31 P P 18 36 31.8 +0.8
comp=Z,3.4nm,0.8s,baz=304,slow=7.3,SNR=4.7
DLBC Dease Lake 78.75 31 P **P** 18 36 31.7 +0.8
DLBC IAmb IAmb 18 36 51.3
comp=Z,7.9nm,0.8s
NC405 NORSAR Array S 78.97 332 P **P** 18 36 31.5 -0.5
TRPA Tarpa 79.03 318 ⇓P P 18 36 45.0 +12
NC303 NORSAR Array S 79.06 333 P **P** 18 36 29.8 -2.7
NB201 NORSAR Array S 79.18 332 P **P** 18 36 32.1 -1.1
NB2 NORSAR Subarra 79.22 333 P **P** 18 36 33.1 -0.3
comp=Z,1.0nm,0.6s,baz=55,slow=5.6
NOA NORSAR Array B 79.22 333 P **P** 18 36 33.5 0.0
comp=Z,1.8nm,0.8s,baz=56,slow=5.7,SNR=13
NOA LR LR 19 14 05.3
comp=Z,62nm,21.1s,baz=55,slow=38
NC602 NORSAR Array S 79.23 332 P **P** 18 36 31.5 -2.0
NC204 NORSAR Array S 79.29 333 P **P** 18 36 33.4 -0.4
NC204 IAmb IAmb 18 36 36.8
comp=Z,16nm,1.1s
OJC Ojcow 79.83 320 P **P** 18 36 36.1 -0.7
OJC IAmb IAmb 18 36 50.9
comp=Z,16nm,1.0s
PUNG Punghina 80.30 314 ⇑P **P** 18 36 41.1 +1.6
HERR Herculane 80.40 315 ⇑P P 18 36 53.1 +13
VTS Vitosha 80.76 312 P **P** 18 36 42.8 +0.6
MDVR Moldovita 80.90 315 ⇓P **P** 18 36 45.5 +2.7
VYHS Vyhne 81.13 319 *e*P **P** 18 36 46.5 +2.6
MORC Moravsky Berou 81.33 321 *e*P **P** 18 36 47.1 +2.1
KRLC Kraliky 81.64 321 *e*P **P** 18 36 47.9 +1.3
JAVC Velka Javorina 81.66 320 *e*P **P** 18 36 50.6 +3.8
OSTC Ostas 81.74 322 *e*P P 18 37 01.3 +14
VRAC Vranov 82.09 321 *e*P **P** 18 36 51.7 +2.7
KRUC Moravsky 82.32 320 *e*P **P** 18 36 52.7 +2.5
BRG Berggiesshubel 82.86 323 *e*P P 18 37 06.2 +13
comp=Z,5.9nm,1.2s
YKA Yellowknife Ar 82.95 23 P **P** 18 36 53.3 +0.2
comp=Z,5.3nm,0.7s,baz=311,slow=4.4,SNR=74
CLL Collm 83.17 323 *e*P **P** 18 36 56.0 +1.5
CLL *i* sP **pwP** 18 37 08.4 +0.6
KHC Kasperske Hory 83.92 321 *e*P **P** 18 37 01.2 +2.7
KHC *e*pP **pwP** 18 37 11.8 0.0
GEC2 GERESS Array S 83.99 321 *e*P P 18 37 11.7 +13
comp=Z,9.2nm,1.1s,baz=65,slow=4.8
GEC2 *e*L L 19 15 11.4
comp=Z,62nm,21.5s
GEC2 GERESS Array S 83.99 321 P **P** 18 36 58.5 -0.5
GEC2 IAmb IAmb 18 37 12.8
comp=Z,8.8nm,1.1s
GERES GERESS Array B 83.99 321 P **P** 18 36 59.4 +0.5
comp=Z,1.9nm,0.9s,baz=71,slow=5.8,SNR=16
MOX Moxa 84.26 323 *e*L L 19 21 36.3
comp=Z,79nm,19.4s
GRF Grafenberg Arr 84.97 323 *e*P P 18 37 14.7 +11
comp=Z,37nm,1.9s,baz=65,slow=4.8
GRF *e*L L 19 20 18.7
comp=Z,82nm,18.4s
BFO Black Forest 87.31 322 *e*L L 19 26 08.4
comp=Z,88nm,18.7s
NRCA Norcia 87.32 316 P **P** 18 37 15.2 -0.4
FRB Frobisher Bay 92.42 5 P **P** 18 37 39.0 +0.1
comp=Z,1.2nm,0.7s,baz=38,slow=4.4,SNR=3.2
FFC Flin Flon 93.09 24 P **P** 18 37 42.3 +0.1
NVAR Mina Array Bea 95.96 44 P **P** 18 37 56.8 +0.7
comp=Z,0.4nm,0.6s,baz=287,slow=5.1,SNR=3.9
NVAR pP **pwP** 18 38 09.8 +0.7
comp=Z,1.2nm,0.8s,baz=264,slow=4.2,SNR=4.3
OMMB Old Mammoth Mi 96.00 45 P **P** 18 37 52.1 -4.3
OMMB IAmb IAmb 18 38 04.1
comp=Z,5.8nm,0.9s
ULM Lac du Bonnet 98.92 24 LR LR 19 27 55.0
comp=Z,45nm,18.5s,baz=99,slow=38
ESDC Sonseca Array 99.58 321 LR LR 19 26 50.7
comp=Z,40nm,20.2s,baz=70,slow=38
RUSC La Rusia 146.89 29 **PKPdf** 18 44 10.5 0.0

IDC ***10*** *18:27:18.2±2.2, 18°.02N×73°.38W, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.6/39, mbtmp3.7/5, Error ellipse: s-maj=62.9km s-min=37.5km az=2.0*
NEIC ***10*** *18:27:22.4±2.1, 18°.33N±0°.06×73°.57W±0°.03, h16km±5km, ML4.0/20, Error ellipse: s-maj=8.4km s-min=3.5km az=176.0*
OSPL ***10*** *18:27:22.7±1.2, 18°.32N×73°.59W, h4km±7km, ML3.3*
ISC 10 18:27:22.7±1.7, 18°.39N±0°.08×73°.57W±0°.04, h17km±12km, n41,σ1°94/48, mb3.8/5, Haiti region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LGNH	**Logne**	**0.92**	**82**		**Pb**	**18 27 39.5**	**-0.7**
LGNH				Sg	**Sg**	**18 27 52.4**	**-0.4**
LGNH				IAML		18 27 52.5	
	comp=E,4μm,0.4s						
LGNH				IAML		18 27 52.6	
	comp=N,3μm,0.2s						
LGNH	**Logne**	**0.92**	**82**	*i* P	**Pb**	**18 27 39.8**	**-0.5**
LGNH				*e*S	**Sg**	**18 27 52.2**	**-0.6**
LGNH				IAML		18 27 56.3	
	comp=Z,301nm,0.2s						
JAKH	**Jacmel**	**1.01**	**98**		**Pb**	**18 27 41.2**	**-0.6**
JAKH					**Sn**	**18 27 56.3**	**+0.5**
JAKH				IAML		18 28 04.5	
	comp=E,4μm,0.4s						
JAKH				IAML		18 28 06.2	
	comp=N,4μm,0.5s						
JAKH	**Jacmel**	**1.01**	**98**	*i* P	**Pb**	**18 27 41.3**	**-0.4**
JAKH				*e*S	**Sg**	**18 27 55.0**	**-0.5**
JAKH				IAML		18 28 07.8	
	comp=Z,479nm,0.5s						
PAPH	**Port-au-Prince**	**1.21**	**83**		**Pn**	**18 27 44.2**	**-0.7**
PAPH					**Sg**	**18 28 01.0**	**-1.0**
LOPE2	**Hotel El Peder**	**1.77**	**101**	*i* P	**Pn**	**18 27 51.9**	**-0.6**
LOPE2				*e*S	**Sn**	**18 28 14.0**	**-0.6**
GTBY	**Guantanamo Bay**	**2.12**	**317**		**Pn**	**18 27 57.2**	**-0.2**
GTBY	**Guantanamo Bay**	**2.12**	**317**	*i* P	**Pn**	**18 27 57.3**	**-0.1**
GTBY				IAML		18 28 38.1	
	comp=Z,275nm,0.6s						
SDDR	**Presa de Saban**	**2.24**	**74**	Pn	**Pn**	**18 27 59.3**	**+0.2**
SDDR				IAML		18 28 30.9	
	comp=Z,717nm,0.8s						
SDDR	**Presa de Saban**	**2.24**	**74**	*i* P	**Pn**	**18 28 00.4**	**+1.3**
SDDR				IAML		18 28 37.4	
	comp=Z,271nm,0.6s						
SC01	**Santiago de lo**	**2.88**	**68**		**Pn**	**18 28 08.2**	**+0.3**
SC01				IAML		18 29 03.4	
	comp=E,358nm,0.9s						
SC01				IAML		18 29 04.7	
	comp=N,388nm,1.0s						
BANI	**BANI**	**3.05**	**89**		**Pn**	**18 28 12.6**	**+2.3**
HOJ	**Hope**	**3.05**	**263**	*i* P	**Sn**	**18 28 54.0**	**+0.5**
MTDJ	**Mount Denham**	**3.77**	**268**	Pn	**Pn**	**18 28 22.7**	**+2.4**
GRTK	**Grand Turk**	**3.86**	**36**	Pn	**Pn**	**18 28 21.8**	**+0.5**
GRTK				IAML		18 29 07.1	
	comp=N,310nm,0.6s						
GRTK				IAML		18 29 08.2	
	comp=N,253nm,0.5s						
MCJ	**Malvern**	**3.94**	**264**	*i* P	**Sn**	**18 29 02.5**	**-6.0**
DR12	**Loma Pena Alta**	**3.99**	**84**		**Pn**	**18 28 25.8**	**+2.6**
CRPR	**Cabo Rojo, PR**	**6.15**	**93**	Pn	**Pn**	**18 28 53.7**	**+0.8**
MLPR	**Magueyes Islan**	**6.21**	**93**	Pn	**Pn**	**18 28 54.6**	**+0.9**
AOPR	**Arecibo Observ**	**6.47**	**89**	Pn	**Pn**	**18 28 58.1**	**+0.8**
OBIP	**Obispado Ponce**	**6.62**	**92**	Pn	**Pn**	**18 28 58.9**	**-0.5**
FSCY	**Frank Sound, G**	**7.27**	**279**	Pn	**Pn**	**18 29 07.8**	**-0.4**
MTP	**Monte Pirata**	**7.62**	**91**	Pn	**Pn**	**18 29 10.2**	**-2.9**
CUPR	**Culebra, Puert**	**7.87**	**89**	Pn	**Pn**	**18 29 15.4**	**-1.0**
CAPC	**Capurgana**	**10.37**	**201**	*e*P	**Pn**	**18 29 52.1**	**+1.4**
CAPC				*e*P	**Pn**	**18 29 52.7**	**+2.0**
URCC	**San Jos de Ur**	**10.74**	**191**	*e*P	**Pn**	**18 29 59.5**	**+3.6**
BCIP	**Isla Barro Col**	**11.00**	**214**	*e*P	**Pn**	**18 30 00.6**	**+1.2**
BCIP	**Isla Barro Col**	**11.00**	**214**	Pn	**Pn**	**18 29 58.3**	**-1.1**
PAMC	**Pamplona, Colo**	**11.01**	**175**	*e*P	**Pn**	**18 30 02.1**	**+2.1**
ANWB	**Willy Bob**	**11.23**	**92**	Pn	**Pn**	**18 29 58.1**	**-4.5**
PTBC	**PUERTO BERRIO,**	**11.81**	**184**	*e*P	**Pn**	**18 30 12.2**	**+1.7**
HELC	**Santa Helena**	**12.27**	**189**	*e*P	**Pn**	**18 30 20.9**	**+3.8**
RUSC	**La Rusia**	**12.43**	**178**	Pn	**Pn**	**18 30 15.5**	**-3.9**
NORC	**Norcasia**	**12.81**	**186**	*e*P	**Pn**	**18 30 26.1**	**+1.9**
TEIG	**Tepich**	**14.01**	**280**	Pn	**Pn**	**18 30 42.1**	**+1.6**
TXAR	**Lajitas Array**	**29.52**	**297**	P	**P**	**18 33 27.6**	**+1.1**
	comp=N,0.1nm,0.4s,baz=108,slow=5.8,SNR=2.7						
YKA	**Yellowknife Ar**	**52.40**	**337**	P	**P**	**18 36 34.9**	**+1.1**
	comp=N,1.1nm,0.7s,baz=130,slow=8.5,SNR=20						
ESDC	**Sonseca Array**	**62.95**	**54**	P	**P**	**18 37 46.7**	**-1.9**
	comp=N,0.7nm,0.9s,baz=279,slow=6.3,SNR=2.4						
ILAR	**Eielson Array**	**66.42**	**333**	P	**P**	**18 38 10.9**	**+0.2**
	comp=N,0.5nm,0.6s,baz=94,slow=6.4,SNR=2.9						
ARCES	**ARCESS Array B**	**76.07**	**21**	P	**P**	**18 39 09.8**	**+0.8**
	comp=N,0.6nm,0.8s,baz=284,slow=3.6,SNR=3.8						
WRA	**Warramunga Arr**	**153.60**	**262**	PKPbc	**PKPbc**	**18 47 20.1**	**-1.3**
	comp=N,0.7nm,0.8s,baz=80,slow=2.2,SNR=5.0						

IDC 10 18:31:20.7±1.2, 4°.26N×122°.22E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/50, mbtmp3.6/4, MS3.4/1, Ms1 3.4/1, ms1mx2.6/40, Error ellipse: s-maj=170.1km s-min=20.9km az=65.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.84**	**154**	P	P	18 07 02.8	-0.3
	1.0nm,0.3s,baz=331,slow=10.0,SNR=44						
ASAR	**Alice Springs**	**30.01**	**158**	P	P	18 37 31.7	+0.3
	0.4nm,0.3s,baz=340,slow=7.1,SNR=15						
STKA	**Stephens Creek**	**40.40**	**154**	LR	LR	18 56 56.8	
	comp=Z,56nm,19.8s,baz=208,slow=38						
SONM	**Songino Array**	**45.49**	**345**	P	P	18 39 42.1	+0.1
	0.2nm,0.4s,baz=142,slow=7.2,SNR=2.1						

MKAR	**Makanchi Array**	**54.62**	**327**	P	P	18 40 50.9	-0.3
	0.4nm,0.4s,baz=122,slow=7.9,SNR=10.0						

*IDC **10** 18:43:31.4±4.7,52.39N×175.48E,h78km±40km,mb3.3/14, mb1 3.4/15,mb1mx3.2/68,mbtmp3.6/15,ML2.4/1,Error ellipse: s-maj=29.6km s-min=20.8km az=145.0*

ISC 10 18:43:27.2±1.2,52.4N±0.2×175.44E±0.10,h35km,n22, σ1s65/17,mb3.7/14,Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**10.78**	**281**	P	**Pn**	**18 46 03.0**	**+4.2**
	0.1nm,0.3s,baz=101,slow=19,SNR=5.4						
PETK				S	**Sn**	**18 47 54.5**	**-3.5**
	0.3nm,0.3s,baz=204,slow=29,SNR=6.4						
ILAR	**Eielson Array**	**22.79**	**43**	P	**P**	**18 48 28.1**	**+1.8**
	0.2nm,0.4s,baz=252,slow=8.9,SNR=2.1						
H11N2	**WAKE ISLAND Hy**	**33.29**	**195**	T	T	19 25 37.1	
	baz=9.8,slow=76,SNR=3.2						
H11N3	**WAKE ISLAND Hy**	**33.30**	**195**	T	T	19 25 38.8	
	baz=9.8,slow=76,SNR=4.3						
H11N1	**WAKE ISLAND Hy**	**33.31**	**195**	T	T	19 25 34.1	
	baz=9.8,slow=76,SNR=2.6						
H11S1	**WAKE ISLAND Hy**	**34.52**	**195**	T	T	19 27 11.9	
	baz=8.9,slow=76,SNR=6.7						
H11S3	**WAKE ISLAND Hy**	**34.54**	**195**	T	T	19 27 06.1	
	baz=8.9,slow=76,SNR=8.8						
H11S2	**WAKE ISLAND Hy**	**34.54**	**195**	T	T	19 27 10.7	
	baz=8.9,slow=76,SNR=5.4						
YKA	**Yellowknife Ar**	**37.10**	**46**	P	**P**	**18 50 32.7**	**-1.0**
	0.3nm,0.8s,baz=280,slow=6.8,SNR=2.1						
SONM	**Songino Array**	**42.97**	**293**	P	**P**	**18 51 22.9**	**+0.2**
	0.5nm,0.4s,baz=57,slow=8.1,SNR=5.8						
KURBB	**Kurchatov Arra**	**55.78**	**310**	P	**P**	**18 53 00.1**	**-0.1**
	0.7nm,0.4s,baz=40,slow=7.1,SNR=15						
ARCES	**ARCESS Array B**	**56.39**	**348**	P	**P**	**18 53 03.7**	**-0.6**
	1.5nm,1.0s,baz=41,slow=8.4,SNR=1.5						
MKAR	**Makanchi Array**	**56.55**	**305**	P	**P**	**18 53 04.9**	**-0.9**
	0.2nm,0.3s,baz=46,slow=6.5,SNR=5.9						
BVAR	**Borovoye Array**	**57.73**	**316**	P	**P**	**18 53 13.9**	**-0.2**
	0.5nm,0.4s,baz=56,slow=8.3,SNR=7.4						
ARU	**Arti**	**59.78**	**325**	P	**P**	**18 53 28.8**	**+0.7**
	0.6nm,0.4s,baz=77,slow=11,SNR=3.7						
AKTO	**Aktyubinsk**	**64.71**	**321**	P	**P**	**18 54 01.1**	**-0.1**
	0.6nm,0.3s,baz=50,slow=4.2,SNR=4.9						
NB2	**NORSAR Subarra**	**66.20**	**352**	P	**P**	**18 54 11.0**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=9.2,slow=6.5						
NOA	**NORSAR Array B**	**66.20**	**352**	P	**P**	**18 54 11.3**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=11,slow=6.4,SNR=4.0						
HFS	**Hagfors**	**66.85**	**350**	P	**P**	**18 54 14.5**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=247,slow=3.1,SNR=7.2						
AKASG	**Malin Array Be**	**73.37**	**338**	P	**P**	**18 54 54.0**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=24,slow=7.1,SNR=2.7						
WRA	**Warramunga Arr**	**80.43**	**219**	P	**P**	**18 55 34.1**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=28,slow=5.8,SNR=2.6						
ASAR	**Alice Springs**	**83.98**	**218**	P	**P**	**18 55 53.2**	**-0.3**
	comp=Z,0.1nm,0.6s,baz=28,slow=5.1,SNR=5.1						

ISC 10 19:00:17.1±1.2,50.01N±0.05×18.49E±0.05,h0km,n15, σ0s89/26,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.28**	**232**	*e*PG	**Pb**	**19 00 24.0**	**-1.0**
OKC				*e*SG	**Sg**	**19 00 28.1**	**+2.0**
	comp=Z,16nm,0.5s						
MORC	**Moravsky Berou**	**0.66**	**250**	*e*PG	**Pg**	**19 00 30.3**	**+0.7**
MORC				*e*SG	**Sg**	**19 00 38.7**	**+0.6**
LANS	**Liptovska Anna**	**1.07**	**143**	*e*PG	**Pb**	**19 00 38.6**	**+0.1**
LANS				*e*SG	**Sg**	**19 00 51.1**	**-0.3**
LANS				*e*LG	Lg	19 00 57.7	
KRLC	**Kraliky**	**1.10**	**274**	*e*PG	**Pg**	**19 00 38.0**	**-0.2**
KRLC				*e*SG	**Sg**	**19 00 52.4**	**-0.1**
	comp=Z,9.8nm,0.5s						
JAVC	**Velka Javorina**	**1.27**	**205**	*e*PG	**Pn**	**19 00 42.3**	**+0.2**
JAVC				*e*SG	**Sg**	**19 00 58.7**	**+0.9**
VRAC	**Vranov**	**1.42**	**241**	*e*PG	**Pn**	**19 00 43.9**	**-0.2**
VRAC				*e*SG	**Sg**	**19 01 02.7**	**+0.1**
DPC	**Dobruska-Polom**	**1.44**	**285**	*e*PG	**Pg**	**19 00 44.3**	**-0.3**
DPC				*e*SG	**Sn**	**19 01 03.6**	**-0.4**
	comp=Z,8.5nm,0.4s						
VYHS	**Vyhne**	**1.53**	**171**	*e*PG	**Pb**	**19 00 46.2**	**-0.1**
OSTC	**Ostas**	**1.56**	**291**	*e*PG	**Pn**	**19 00 46.0**	**-0.1**
OSTC				*e*SG	**Sg**	**19 01 07.1**	**0.0**
	comp=Z,3.1nm,0.4s						
KRUC	**Moravsky**	**1.66**	**236**	*e*PG	**Pn**	**19 00 47.9**	**+0.4**
KRUC				*e*SG	**Sb**	**19 01 10.3**	**+0.3**
UPC	**Upice**	**1.67**	**288**	*e*PG	**Pg**	**19 00 49.3**	**+0.3**
UPC				*e*SG	**Sg**	**19 01 11.2**	**+0.6**
	comp=Z,5.5nm,0.5s						
PVCC	**Panska Ves**	**2.57**	**283**	*e*SG	**Sg**	**19 01 40.8**	**+1.2**
	comp=Z,3.8nm,0.4s						
BRG	**Berggiesshubel**	**3.03**	**288**	SG	**Pg**	**19 01 14.6**	**-0.6**
	1.6nm,0.8s						
KHC	**Kasperske Hory**	**3.32**	**256**	*e*PG	**Pg**	**19 01 19.0**	**-1.6**
KHC				*e*SG	**Sg**	**19 02 02.9**	**-0.7**
CLL	**Collm**	**3.73**	**293**	*e*Sg	**Sg**	**19 02 19.0**	**+2.3**

*JMA **10** 19:01:03.4±0.2,24.93N×122.84E,h22km±3km,M2.4*
*TAP **10** 19:01:04.0,24.86N×122.79E,h10km±1km,ML2.8,D*

ISC 10 19:01:03.2±1.4,24.90N±0.05×122.84E±0.02,h18km,n44, σ0s55/60,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.46**	**168**	P	**Pb**	**19 01 13.0**	**+0.2**
JYNG				S	**Sb**	**19 01 19.5**	**+0.2**
YOJ	**Yonaguni jima**	**0.47**	**160**	⇑P	**Pb**	**19 01 13.2**	**+0.3**
	baz=154						
YOJ				S	**Sg**	**19 01 19.4**	**+0.4**
	baz=154						
YOJ	**Yonaguni jima**	**0.47**	**160**	P	**Pb**	**19 01 13.2**	**+0.3**
YOJ				S	**Sb**	**19 01 20.5**	**+1.0**
EOS1	**EOS1**	**0.73**	**242**	P	**Pn**	**19 01 18.3**	**-0.3**
	baz=243						
EOS1				S	**Sb**	**19 01 27.3**	**+0.1**
	baz=243						
TIPB	**Shuangxi**	**0.92**	**275**	*i* P	**Pb**	**19 01 20.7**	**0.0**
	baz=277						
TIPB				*e*S	**Sb**	**19 01 32.8**	**+0.1**
	baz=277						
TWC	**Suao**	**0.94**	**252**	*i* P	**Pb**	**19 01 21.4**	**+0.3**
	baz=253						
TWC				S	**Sb**	**19 01 32.7**	**-0.6**
	baz=253						
NWF	**Wu-fen Shan**	**0.97**	**280**	P	**Pn**	**19 01 22.1**	**0.0**
	baz=282						
NWF				*e*S	**Sn**	**19 01 35.6**	**+0.1**
	baz=282						
WFSB	**Wu-fen Shan**	**0.97**	**280**	*e*P	**Pn**	**19 01 22.1**	**0.0**
	baz=282						
WFSB				S	**Sn**	**19 01 35.7**	**+0.3**
	baz=282						
IRIF	**Iriomote-Funau**	**0.99**	**125**	P	**Pb**	**19 01 21.8**	**-0.1**
IRIF				*e*S	**Sb**	**19 01 35.0**	**+0.4**
TWE	**Neicheng**	**1.08**	**261**	P	**Pg**	**19 01 24.2**	**+0.1**
	baz=262						
SLBB	**Yuanshan**	**1.10**	**263**	*e*P	**Pg**	**19 01 24.3**	**-0.3**
	baz=264						
SLBB				*e*S	**Sn**	**19 01 38.7**	**0.0**
	baz=264						
ENA	**Nanau**	**1.10**	**245**	P	**Pn**	**19 01 23.6**	**-0.2**
	baz=245						
ENA				S	**Sb**	**19 01 37.6**	**-0.2**
	baz=245						
ENTT	**Nioudou**	**1.18**	**258**	P	**Pg**	**19 01 25.9**	**-0.3**
	baz=259						
YM10	**YM10**	**1.19**	**283**	*e*P	**Pb**	**19 01 25.6**	**+0.4**
	baz=285						
NWLT	**Wulai**	**1.22**	**264**	*e*P	**Pn**	**19 01 25.4**	**-0.1**
	baz=266						
HATJ	**Hateruma jima**	**1.22**	**133**	P	**Pn**	**19 01 25.1**	**-0.3**
HATJ				*e*S	**Sb**	**19 01 41.5**	**+0.3**
NDT	**Datong Townshi**	**1.24**	**256**	*e*P	**Pg**	**19 01 27.1**	**-0.1**
	baz=258						
JKRS	**Kuro-shima**	**1.26**	**122**	P	**Pn**	**19 01 26.1**	**+0.2**
JIJ	**Ishigaki jima**	**1.30**	**114**	P	**Pn**	**19 01 26.4**	**-0.2**
JIJ				*e*S	**Sn**	**19 01 43.4**	**-0.2**
NACB	**Ninganchiao**	**1.34**	**238**	S	**Sb**	**19 01 44.9**	**+0.1**
	baz=237						
YHNB	**Yeheng**	**1.35**	**260**	*e*P	**Pb**	**19 01 28.1**	**0.0**
	baz=262						
NSK	**Sanguang**	**1.36**	**261**	P	**Pb**	**19 01 28.8**	**+0.5**
	baz=261						
NSK				*e*S	**Sn**	**19 01 43.6**	**-1.5**
	baz=261						
JISG	**Ishigakijimahi**	**1.38**	**103**	P	**Pn**	**19 01 27.7**	**+0.1**
NNSB	**Datong**	**1.40**	**251**	*e*P	**Pn**	**19 01 28.3**	**+0.2**
	baz=252						
NNSH	**Datong**	**1.40**	**251**	*e*P	**Pb**	**19 01 28.8**	**-0.2**
	baz=252						
NNS	**Nan Shan**	**1.41**	**251**	P	**Pg**	**19 01 30.0**	**-0.4**
	baz=251						
NNS				*e*S	**Sn**	**19 01 46.3**	**0.0**
	baz=251						
ETLH	**Xiulin Townshi**	**1.41**	**241**	*e*P	**Pb**	**19 01 29.0**	**-0.2**
	baz=242						
WHF	**Hehuan Shan**	**1.62**	**243**	P	**Pb**	**19 01 32.4**	**-0.4**
	baz=255						
LIOB	**Emei**	**1.68**	**262**	*e*P	**Pb**	**19 01 33.6**	**+0.1**
	baz=263						
ESL	**Shilin**	**1.68**	**230**	P	**Pn**	**19 01 31.9**	**+0.2**
	baz=230						
NSTT	**Nanjuang**	**1.69**	**261**	*e*P	**Pb**	**19 01 34.1**	**+0.3**
	baz=262						
JTJ	**Tarama**	**1.71**	**98**	P	**Pb**	**19 01 33.5**	**-0.7**
CHGB	**Renai**	**1.73**	**241**	*e*P	**Pn**	**19 01 33.4**	**+0.7**
	baz=226						
EGFH	**Guangfu**	**1.78**	**227**	*e*P	**Pb**	**19 01 34.4**	**-0.9**
	baz=227						
OWD	**Renai**	**1.78**	**238**	*e*P	**Pb**	**19 01 34.6**	**-0.9**
	baz=223						
WHP	**Taichung City**	**1.83**	**251**	*e*P	**Pb**	**19 01 37.4**	**+1.1**
	baz=237						
HGSD	**Ruisui**	**1.91**	**223**	*e*P	**Pb**	**19 01 36.3**	**-1.2**
	baz=223						
VWDT	**VWDT**	**1.92**	**234**	*e*P	**Pb**	**19 01 37.1**	**-0.7**
	baz=235						
SMLT	**Sun Moon Lake**	**2.04**	**241**	*e*P	**Pn**	**19 01 38.0**	**+1.3**
	baz=225						
SMLT				*e*S	**Sn**	**19 02 01.4**	**-0.4**
	baz=225						
YULB	**Yu-li**	**2.06**	**223**	*e*P	**Pn**	**19 01 36.3**	**-0.7**
	baz=225						
TYC	**Yuchr**	**2.06**	**242**	*e*S	**Sn**	**19 02 02.2**	**0.0**
	baz=227						
TWF1	**Yuli**	**2.09**	**223**	*e*P	**Pn**	**19 01 38.0**	**+0.7**
	baz=209						
FULB	**Fuli**	**2.21**	**220**	P	**Pn**	**19 01 40.0**	**+1.0**
	baz=221						
ALS	**Alishan**	**2.31**	**234**	*e*P	**Pn**	**19 01 42.0**	**+1.2**
	baz=235						

*TAP **10** 19:02:10.3,24.91N×122.81E,h4km±1km,ML2.8,D*
*JMA **10** 19:02:11.3±0.1,24.92N×122.84E,h18km±3km,M2.4*

ISC 10 19:02:10.6±1.3,24.93N±0.05×122.85E±0.03,h12km±9km, n33,σ0s56/56,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.48**	**170**	P	**Pg**	**19 02 20.6**	**+0.4**
JYNG				S	**Sg**	**19 02 27.3**	**+0.7**
YOJ	**Yonaguni jima**	**0.49**	**163**	P	**Pb**	**19 02 20.8**	**-0.3**
	baz=158						
YOJ				S	**Sb**	**19 02 29.0**	**+0.7**
	baz=158						
YOJ	**Yonaguni jima**	**0.49**	**163**	P	**Pg**	**19 02 20.7**	**+0.5**
YOJ				*e*S	**Sg**	**19 02 27.3**	**+0.6**
EOS1	**EOS1**	**0.76**	**240**	P	**Pb**	**19 02 26.0**	**+0.2**
	baz=239						
EOS1				S	**Sb**	**19 02 36.8**	**+0.8**
	baz=239						
TWB1	**Santiao Chiao**	**0.79**	**276**	*e*P	**Pb**	**19 02 26.5**	**+0.2**
	baz=277						
TWB1				*e*S	**Sb**	**19 02 37.3**	**+0.4**
	baz=277						
TIPB	**Shuangxi**	**0.93**	**273**	P	**Pb**	**19 02 28.6**	**-0.1**
	baz=273						
TIPB				*e*S	**Sn**	**19 02 42.1**	**-0.7**
	baz=273						
TWC	**Suao**	**0.97**	**251**	*e*P	**Pg**	**19 02 28.5**	**-0.8**
	baz=250						
TWC				S	**Sn**	**19 02 43.2**	**-0.5**
	baz=250						
NWF	**Wu-fen Shan**	**0.98**	**278**	*e*P	**Pg**	**19 02 29.4**	**-0.2**
	baz=279						
NWF				*e*S	**Sn**	**19 02 44.0**	**-0.1**
	baz=279						
WFSB	**Wu-fen Shan**	**0.98**	**278**	*e*P	**Pb**	**19 02 29.8**	**+0.2**
	baz=279						
WFSB				*e*S	**Sn**	**19 02 44.1**	**+0.1**
	baz=279						
ILA	**Ilan**	**1.02**	**261**	*e*P	**Pg**	**19 02 29.3**	**-1.0**
	baz=261						
ILA				S	**Sb**	**19 02 43.9**	**+0.4**
	baz=261						
TWE	**Neicheng**	**1.10**	**259**	P	**Pb**	**19 02 31.4**	**-0.2**
	baz=259						
TWE				S	**Sn**	**19 02 46.1**	**-0.7**
	baz=259						
ENA	**Nanau**	**1.13**	**244**	P	**Pn**	**19 02 32.1**	**-0.1**
	baz=243						
ENA				S	**Sn**	**19 02 47.1**	**-0.5**
	baz=243						
TWA	**Mucha**	**1.15**	**273**	*e*P	**Pn**	**19 02 32.8**	**+0.2**
	baz=273						
TWA				S	**Sn**	**19 02 48.8**	**+0.5**
	baz=273						
YM08	**YM08**	**1.17**	**283**	P	**Pg**	**19 02 33.2**	**-0.1**
	baz=283						
YM08				*e*S	**Sn**	**19 02 49.5**	**+0.7**
	baz=283						
YM11	**YM11**	**1.18**	**282**	*e*P	**Pb**	**19 02 32.9**	**-0.1**
	baz=282						
ENTT	**Nioudou**	**1.21**	**256**	*e*P	**Pg**	**19 02 33.7**	**-0.1**
	baz=256						
ENTT				*e*S	**Sn**	**19 02 50.5**	**+0.9**
	baz=256						
NHDH	**Xindian Distri**	**1.21**	**272**	*e*P	**Pb**	**19 02 33.2**	**-0.2**
	baz=272						
NHDH				*e*S	**Sn**	**19 02 50.7**	**+1.2**
	baz=272						
YM03	**YM03**	**1.22**	**282**	*e*S	**Sn**	**19 02 51.2**	**+1.3**
	baz=282						
HATJ	**Hateruma jima**	**1.23**	**135**	P	**Pn**	**19 02 33.3**	**-0.3**
HATJ				S	**Sb**	**19 02 49.1**	**-0.4**
JKRS	**Kuro-shima**	**1.26**	**123**	*e*S	**Sb**	**19 02 48.9**	**-1.5**
NDT	**Datong Townshi**	**1.26**	**255**	*e*P	**Pg**	**19 02 35.1**	**+0.2**
	baz=255						
JISG	**Ishigakijimahi**	**1.37**	**104**	P	**Pn**	**19 02 35.7**	**+0.2**
YHNB	**Yeheng**	**1.37**	**259**	P	**Pn**	**19 02 35.7**	**+0.1**
	baz=259						
YHNB				*e*S	**Sg**	**19 02 54.6**	**-0.1**
	baz=259						
NACB	**Ninganchiao**	**1.37**	**237**	*e*P	**Pb**	**19 02 35.9**	**-0.4**
	baz=236						
NACB				*e*S	**Sn**	**19 02 53.4**	**-0.2**
	baz=236						
NSK	**Sanguang**	**1.38**	**260**	*e*P	**Pb**	**19 02 36.6**	**+0.1**
	baz=259						
TWD	**Chiawan**	**1.42**	**234**	*e*P	**Pn**	**19 02 36.6**	**+0.3**
	baz=233						
TWD				*e*S	**Sg**	**19 02 55.6**	**-0.9**
	baz=233						
NNSB	**Datong**	**1.43**	**250**	*e*P	**Pb**	**19 02 36.8**	**-0.4**
	baz=249						
NNSB				*e*S	**Sg**	**19 02 56.3**	**-0.3**
	baz=249						
NNSH	**Datong**	**1.43**	**250**	*e*P	**Pb**	**19 02 36.8**	**-0.4**
	baz=249						
NNSH				*e*S	**Sg**	**19 02 56.6**	**-0.1**
	baz=249						
NNS	**Nan Shan**	**1.43**	**250**	*e*P	**Pg**	**19 02 37.5**	**-0.6**
	baz=250						
NNS				*e*S	**Sg**	**19 02 57.1**	**+0.2**
	baz=250						
ETLH	**Xiulin Townshi**	**1.44**	**240**	*e*P	**Pb**	**19 02 37.3**	**-0.2**
	baz=239						
WHF	**Hehuan Shan**	**1.64**	**242**	*e*P	**Pn**	**19 02 40.2**	**+0.5**
	baz=241						
ESL	**Shilin**	**1.71**	**230**	*e*P	**Pn**	**19 02 40.0**	**-0.2**
	baz=228						
OWD	**Renai**	**1.81**	**238**	*e*P	**Pn**	**19 02 41.9**	**+0.2**
	baz=237						

TAP 10 19:02:10.1,24.21N×121.69E,h13km,ML1.9,2D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**0.10**	**248**	⇓P	Pg	19 02 13.7	+0.7
	baz=247						
NACB				S	Sg	19 02 15.8	+0.7
	baz=247						
TWD	**Chiawan**	**0.16**	**214**	*i* P	Pb	19 02 14.4	-0.5
	baz=212						
TWD				*i* S	Sb	19 02 17.4	-0.7
	baz=212						
ETLH	**Xiulin Townshi**	**0.19**	**269**	P	Pb	19 02 15.4	-0.2
	baz=268						
ETLH				S	Sb	19 02 18.6	-0.6
	baz=268						
ENA	**Nanau**	**0.22**	**11**	⇓*i* P	Pb	19 02 15.6	-0.5
	baz=13						
ENA				*i* S	Sg	19 02 19.0	+0.8
	baz=13						
NNSB	**Datong**	**0.36**	**308**	*e*P	Pb	19 02 18.4	0.0
	baz=307						
NNSB				S	Sb	19 02 23.6	-0.4
	baz=307						
NNSH	**Datong**	**0.36**	**308**	*e*P	Pb	19 02 18.4	-0.1
	baz=307						
NNSH				S	Sb	19 02 23.7	-0.3
	baz=307						
NNS	**Nan Shan**	**0.37**	**308**	*e*P	Pb	19 02 18.3	-0.4
	baz=308						
NNS				*i* S	Sb	19 02 24.1	-0.4
	baz=308						
WHF	**Hehuan Shan**	**0.40**	**261**	*i* P	Pb	19 02 19.2	-0.1
	baz=260						
WHF				*i* S	Sb	19 02 25.0	-0.4
	baz=260						
NDT	**Datong Townshi**	**0.42**	**337**	P	Pb	19 02 19.6	+0.1
	baz=337						
NDT				S	Sb	19 02 25.9	0.0
	baz=337						
ENTT	**Nioudou**	**0.44**	**345**	*i* P	Pb	19 02 20.1	+0.3
	baz=345						
ENTT				*i* S	Sb	19 02 26.2	-0.2
	baz=345						
ESL	**Shilin**	**0.46**	**211**	P	Pg	19 02 19.6	+0.4
	baz=210						
ESL				S	Sb	19 02 26.8	-0.1
	baz=210						
TDCB	**Techi**	**0.49**	**275**	*e*P	Pb	19 02 21.0	+0.2
	baz=274						
TDCB				*e*S	Sb	19 02 27.5	-0.4
	baz=274						
CHGB	**Renai**	**0.50**	**253**	P	Pb	19 02 21.0	+0.1
	baz=252						
CHGB				S	Sb	19 02 27.5	-0.7
	baz=252						
EOS1	**EOS1**	**0.52**	**50**	*e*P	Pb	19 02 21.0	-0.2
	baz=49						
YHNB	**Yeheng**	**0.54**	**328**	*e*P	Pb	19 02 21.5	-0.1
	baz=327						
YHNB				*e*S	Sb	19 02 29.4	0.0
	baz=327						
SLBB	**Yuanshan**	**0.54**	**354**	*e*S	Sb	19 02 30.2	+0.8
	baz=354						
NSK	**Sanguang**	**0.56**	**327**	S	Sb	19 02 30.3	+0.6
	baz=327						
NWLT	**Wulai**	**0.59**	**343**	*e*P	Pg	19 02 21.8	+0.1
	baz=342						
NWLT				*e*S	Sb	19 02 30.7	0.0
	baz=342						

JMA 10 19:03:09.5±0.2,24.90N×122.86E,h21km±3km,M2.4, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.45**	**170**	P	Pb	19 03 18.5	-0.2
JYNG				S	Sb	19 03 25.1	+0.1
YOJ	**Yonaguni jima**	**0.46**	**163**	P	Pb	19 03 18.7	-0.1
IRIF	**Iriomote-Funau**	**0.97**	**125**	P	Pb	19 03 27.2	-0.4
IRIF				*e*S	Sb	19 03 40.1	+0.1
HATJ	**Hateruma jima**	**1.20**	**134**	P	Pn	19 03 31.0	-0.1
HATJ				*e*S	Sb	19 03 46.0	-0.6
JKRS	**Kuro-shima**	**1.24**	**122**	P	Pn	19 03 31.7	+0.2

*IDC **10** 19:15:39.7±1.9,2.47N×95.87E,h0km,mb3.8/7,mb1 3.8/7, mb1mx3.6/42,mbtmp3.8/7,MS3.2/3,Ms1 3.2/3, ms1mx2.7/49,Error ellipse: s-maj=66.9km s-min=21.1km az=57.0*
*DJA **10** 19:15:42.4±1.3,2°N±5'×9°6E±', h14km±6km,M4.3/10, mB4.7/1,mb4.5/5,MLv4.2/10,Mw(mB)3.9/1*
*NEIC **10** 19:15:45.3±0.9,2.50N±0.07×95.94E±0.08,h34km±6km, mb4.3/17,Error ellipse: s-maj=12.6km s-min=9.0km az=61.0*

ISC 10 19:15:44.2±0.6,2.46N±0.06×95.91E±0.06,h25km,n65, σ0s91/60,mb4.2/17,MS3.2/3,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**0.42**	**97**	P	**Pb**	**19 15 53.8**	**+0.7**
SNSI				S	**Sb**	**19 15 58.5**	**-0.7**
MLSI	**Meulaboh, Aceh**	**1.86**	**15**	P	**Pn**	**19 16 13.8**	**-0.7**
MLSI				S	**Sb**	**19 16 41.5**	**+1.1**
GSI	**Gunungsitoli**	**2.03**	**125**	P	**Pn**	**19 16 17.2**	**+0.4**
GSI	**Gunungsitoli**	**2.03**	**125**		**Pn**	**19 16 17.1**	**+0.3**
KCSI	**Kotacane, Aceh**	**2.14**	**60**	P	**Pn**	**19 16 18.7**	**+0.4**
KCSI				S	**Sn**	**19 16 45.5**	**+1.4**
LHMI	**Lhok Sumawe**	**2.94**	**21**	P	**Pn**	**19 16 29.3**	**0.0**
LHMI	**Lhok Sumawe**	**2.94**	**21**		**Pn**	**19 16 28.6**	**-0.7**
RPSI	**Rantau Prapat**	**3.02**	**86**		**Pn**	**19 16 31.3**	**+0.8**
PBSI	**Pulau Batu**	**3.45**	**136**	P	**Pn**	**19 16 36.6**	**+0.3**
MNSI	**Mandailing Nat**	**4.03**	**114**	P	**Pn**	**19 16 45.6**	**+1.3**
IPM	**Ipoh**	**5.49**	**68**		**Pn**	**19 17 04.7**	**+0.3**
IPM				Sn	**Sn**	**19 18 04.5**	**-2.3**
KULM	**Kulim**	**5.50**	**59**		**Pn**	**19 17 04.6**	**0.0**
BKNI	**Bangkinang**	**5.55**	**112**	Pn	**Pn**	**19 17 05.3**	**0.0**
MYKOM	**Kota Tinggi**	**7.96**	**95**	Pn	**Pn**	**19 17 37.7**	**-0.7**
MNAI	**Manna**	**9.78**	**134**	Pn	**Pn**	**19 18 03.6**	**+0.3**
PBKT	**Sadao Pong**	**14.88**	**19**		**Pn**	**19 19 15.7**	**+2.7**
CMAR	**Chiang Mai Arr**	**16.17**	**10**	LR	LR	19 25 29.3	
	comp=Z,76nm,19.5s,baz=202,slow=36						
SBUM	**Sibu**	**16.30**	**90**		**Pn**	**19 19 31.4**	**-0.1**
KMI	**Kunming**	**23.47**	**16**	P	**P**	**19 20 52.2**	**-0.1**
H08S2	**Diego Garcia H**	**25.43**	**247**	T	T	19 47 22.9	
	baz=67,slow=76,SNR=583						
H08S3	**Diego Garcia H**	**25.43**	**247**	T	T	19 47 22.7	
	baz=67,slow=76,SNR=661						
H08S1	**Diego Garcia H**	**25.44**	**247**	T	T	19 47 23.3	
	baz=67,slow=76,SNR=436						
ODAN	**Odare**	**25.60**	**342**	*e*P	**P**	**19 21 12.5**	**+0.6**
	13nm,0.8s						
RAMN	**Ramite

GTA				LR	LR				
	comp=N,53nm,15.9s								
GTA				LR	LR				
	comp=E,78nm,15.6s								
GTA				LR	LR				
	comp=Z,93nm,16.5s								
NIL	**Nilore**	**37.57**	**328**	P	**P**		**19 22 56.5**	**-0.2**
H01W3	**Cape Leeuwin H**	**40.90**	**157**	T	T		20 06 50.1	
	baz=332,slow=76,SNR=131								
H01W2	**Cape Leeuwin H**	**40.91**	**157**	T	T		20 06 50.4	
	baz=332,slow=76,SNR=136								
H01W1	**Cape Leeuwin H**	**40.92**	**157**	T	T		20 06 51.6	
	baz=332,slow=76,SNR=127								
BJT	**Baijiatuan**	**41.66**	**24**	P	**P**		**19 23 30.9**	**+0.2**
WMQ	**Urumqi**	**41.82**	**351**	*e*P	**P**		**19 23 33.3**	**+1.3**
WB0	**Warramunga Arr**	**43.77**	**122**	P	**P**		**19 23 47.7**	**-0.4**
WB0				IAmb	IAmb		19 23 55.9	
	comp=Z,7.4nm,1.3s								
BTK	**Batken**	**43.80**	**332**	P	**P**		**19 23 48.5**	**+0.3**
BTK				IAmb	IAmb		19 23 51.7	
	comp=Z,3.4nm,0.8s								
WRA	**Warramunga Arr**	**43.80**	**122**	P	**P**		**19 23 48.3**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=302,slow=9.0,SNR=5.8								
WB2	**Warramunga Arr**	**43.81**	**122**	P	**P**		**19 23 48.5**	**+0.1**
WB2				IAmb	IAmb		19 24 05.2	
	comp=Z,5.0nm,1.2s								
ARSB	**Arslanbob**	**43.85**	**335**	P	**P**		**19 23 49.2**	**+0.5**
ARSB				IAmb	IAmb		19 24 07.7	
	comp=Z,6.7nm,1.0s								
AAK	**Ala-Archa**	**44.34**	**337**	LR	LR		19 45 51.1	
	comp=Z,22nm,20.1s,baz=140,slow=41								
HRA	**Herat**	**44.63**	**319**	P	**P**		**19 23 54.9**	**-0.2**
HRA				IAmb	IAmb		19 24 07.7	
	comp=Z,4.3nm,0.9s								
ASAR	**Alice Springs**	**45.18**	**127**	P	**P**		**19 23 58.8**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=304,slow=8.0,SNR=7.8								
KSRS	**Korea Array**	**45.57**	**36**	P	**P**		**19 24 00.9**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=230,slow=9.5,SNR=3.6								
MK31	**Makanchi Array**	**45.72**	**347**	P	**P**		**19 24 02.8**	**-0.5**
MK31				IAmb	IAmb		19 24 11.1	
	comp=Z,4.8nm,1.2s								
MKAR	**Makanchi Array**	**45.72**	**347**	P	**P**		**19 24 03.0**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=164,slow=7.5,SNR=19								
SONM	**Songino Array**	**46.10**	**10**	P	**P**		**19 24 05.5**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=188,slow=8.6,SNR=9.5								
ULN	**Ulaanbaatar**	**46.24**	**10**	P	**P**		**19 24 07.2**	**-0.4**
ULN				IAmb	IAmb		19 24 24.4	
	comp=Z,2.0nm,0.5s								
KK31	**Karatay Array**	**46.36**	**334**	P	**P**		**19 24 08.3**	**-0.1**
TLY	**Talaya**	**49.48**	**6**	LR	LR		19 47 43.3	
	comp=Z,25nm,19.1s,baz=178,slow=39								
KURK	**Kurchatov**	**50.25**	**346**	P	**P**		**19 24 38.4**	**+0.1**
ZAA0	**Zalesovo Array**	**52.12**	**352**	P	**P**		**19 24 51.5**	**-0.8**
ZAA0				IAmb	IAmb		19 24 52.7	
	comp=Z,2.5nm,0.9s								
ZALV	**Zalesovo Beam**	**52.12**	**352**	P	**P**		**19 24 51.7**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=177,slow=5.9,SNR=10								
BRVK	**Borovoye**	**54.71**	**341**	P	**P**		**19 25 11.2**	**-0.1**
YAK	**Yakutsk**	**64.58**	**17**	P	**P**		**19 26 17.5**	**-1.6**
FINES	**FINESS Array B**	**78.29**	**333**	P	**P**		**19 27 40.6**	**-1.2**
	comp=Z,1.1nm,0.9s,baz=96,slow=5.7,SNR=4.0								
CLL	**Collm**	**83.64**	**321**	*e*(P)	**P**		**19 28 13.0**	**+2.4**

*IDC **10** 19:25:37.5±0.7,23°.50S×175°.63W,h0km,mb4.6/20, mb1 4.7/21,mb1mx4.5/42,mbtmp4.6/21,ML3.8/1,MS4.2/8, Ms1 4.2/8,ms1mx3.9/31,Error ellipse: s-maj=24.3km s-min=17.1km az=146.0*

*NEIC **10** 19:25:39.8±1.6,23°.44S±0°.08×175°.6W±0°.1,h14km±2km, mb5.0/46,Error ellipse: s-maj=16.3km s-min=11.6km az=86.0*

*GCMT **10** 19:25:41.8±0.2,23°.49S±0°.03×175°.05W±0°.01,h20km, MW5.0/98,Moment Tensor Solution. s42,c51; s98,c135; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.16±.15; Mθθ0.04±.10; Mϕϕ-3.20±.10; Mrθ-0.84±.24; Mrϕ-0.38±.06; Mθϕ0.52±.16; Best double couple: M0 3.35000×10^16 NP1:ϕ=201.00000°,δ51.00000°,λ71.00000°. NP2: ϕ=352.00000°,δ51.00000°,λ71.00000°. Principal axes: T 3.4270, Plg75.0000°, Azm200.0000°; N -0.1530, Plg15.0000°, Azm4.0000°; P -3.2720, Plg4.0000°, Azm96.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 19:25:41.7±0.4,23°.56S±0°.06×175°.46W±0°.10,h30km, n134,σ1≥44/132,mb4.9/41,MS4.2/9,14C-5D,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.08**	**201**	Pn	**Pn**		**19 27 10.0**	**+0.4**
RAO				Sn	**Sn**		**19 28 20.8**	**+2.7**
NIUE	**Niue**	**6.82**	**50**		Pn		19 27 11.4	-8.4
MSVF	**Nonsavu**	**8.40**	**312**		Pn		19 27 46.3	+4.8
AFI	**Afiamalu**	**10.21**	**21**		Pn		19 27 58.9	-7.6
RAR	**Rarotonga**	**14.70**	**84**	Pn	Pn		19 28 59.7	-7.9
	12nm,0.3s,baz=229,slow=6.1,SNR=27							
RAR				Sn	Sn		19 31 24.0	-26
	0.6nm,0.3s,baz=266,slow=19,SNR=1.5							
OUZ	**Omahuta**	**15.02**	**217**	Pn	**Pn**		**19 29 14.1**	**+2.2**
OUZ				IAmb	IAmb		19 29 21.5	
	comp=Z,99nm,1.8s							
URZ	**Urewera**	**15.97**	**202**	Pn	**Pn**		**19 29 23.3**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=27,slow=2.3,SNR=2.0							
URZ				Sn	**Sn**		**19 32 10.7**	**-10**
	comp=Z,0.6nm,0.3s,baz=55,slow=16,SNR=1.8							
URZ				LR	LR		19 33 57.5	
	comp=Z,348nm,21.2s,baz=337,slow=31							
DZM	**Mont Dzumac**	**16.75**	**272**	*e*P	**P**		**19 29 40.2**	**+3.8**
DZM	comp=Z,89nm,1.1s			*e*LR	LR		19 33 41.0	
	comp=Z,1μm,25.9s							
DZM	**Mont Dzumac**	**16.75**	**272**	Pn	**P**		**19 29 39.4**	**+3.1**
	comp=Z,1.7nm,0.3s,baz=81,slow=18,SNR=16							
DZM				LR	LR		19 33 44.3	
	comp=Z,366nm,18.4s,baz=64,slow=29							
BFZ	**Birch Farm**	**18.44**	**200**	P	**Pn**		**19 29 55.1**	**+0.1**
BSWZ	**Blackbirch Sta**	**20.18**	**204**	P	**P**		**19 30 12.4**	**-1.4**
TBI	**Tubuai**	**23.84**	**95**	*e*LR	LR		19 36 11.2	
	comp=Z,926nm,30.8s							
LHI	**Lord Howe Isla**	**23.90**	**245**	P	**P**		**19 30 54.0**	**+1.0**
LHI				IAmb	IAmb		19 30 58.1	
	comp=Z,28nm,0.9s							
PPT2	**Papeete2**	**24.93**	**81**	*e*S	S		19 35 09.9	-14
	comp=Z,204nm,27.0s							
PPT2				*e*LQ	LQ		19 36 34.5	
	comp=Z,951nm,26.0s							
PPT2				*e*LR	LR		19 36 38.0	
	comp=Z,1μm,28.0s							
PPT	**Papeete**	**24.94**	**81**	LR	LR		19 39 58.1	
	comp=Z,557nm,18.5s,baz=228,slow=34							
MLZ	**Mavora Lakes**	**25.52**	**208**	P	**P**		**19 31 09.9**	**+2.2**
MLZ				IAmb	IAmb		19 31 59.9	
	comp=Z,129nm,2.0s							
ARMA	**Armidale**	**30.04**	**250**	P	**P**		**19 31 48.8**	**+0.5**
CTAO	**Charters Tower**	**35.64**	**268**	P	**P**		**19 32 37.0**	**-0.3**
CTAO				IAmb	IAmb		19 32 39.4	
	comp=Z,13nm,0.7s							
RKT	**Rikitea**	**37.09**	**98**	*e*LR	LR		19 42 10.5	
	comp=Z,645nm,30.5s							
PMG	**Port Moresby**	**38.37**	**285**	P	**P**		**19 32 59.7**	**-0.8**
PMG				IAmb	IAmb		19 33 16.3	
	comp=Z,27nm,0.9s							
STKA	**Stephens Creek**	**38.71**	**248**	P	**P**		**19 33 02.5**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=92,slow=11,SNR=6.5							
STKA	**Stephens Creek**	**38.71**	**248**	P	**P**		**19 33 02.5**	**-0.7**
COEN	**Coen**	**40.19**	**276**	P	**P**		**19 33 15.1**	**-0.6**
BBOO	**Buckleboo**	**43.40**	**247**	P	**P**		**19 33 40.9**	**-0.9**
BBOO				IAmb	IAmb		19 33 48.0	
	comp=Z,33nm,1.5s							
AS31	**Alice Springs**	**46.19**	**259**	P	**P**		**19 34 04.4**	**+0.2**
ASAR	**Alice Springs**	**46.19**	**259**	P	**P**		**19 34 03.2**	**-1.0**
	comp=Z,6.6nm,0.8s,baz=90,slow=8.6,SNR=52							
ASAR				PcP	**PcP**		**19 35 40.4**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=100,slow=4.6,SNR=1.9							
ASAR				LR	LR		19 53 18.2	
	comp=Z,705nm,18.0s,baz=130,slow=36							
WR0	**Warramunga Arr**	**46.39**	**264**	P	**P**		**19 34 04.7**	**-1.1**
WB2	**Warramunga Arr**	**46.57**	**264**	P	**P**		**19 34 06.2**	**-1.0**
WB2				IAmb	IAmb		19 34 19.6	
	comp=Z,10.0nm,0.8s							
WRA	**Warramunga Arr**	**46.58**	**264**	P	**P**		**19 34 05.2**	**-2.1**
	comp=Z,9.2nm,0.9s,baz=101,slow=8.1,SNR=36							
WRA				PcP	**PcP**		**19 35 42.0**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=101,slow=3.4,SNR=2.6							
JAY	**Jayapura**	**47.27**	**290**	P	**P**		**19 34 10.2**	**-2.5**
	comp=Z,4.5nm,0.6s,baz=139,slow=9.3,SNR=1.9							
JAY				LR	LR		19 52 51.8	
	comp=Z,254nm,19.6s,baz=134,slow=35							
FORT	**Forrest**	**50.32**	**249**	P	**P**		**19 34 35.7**	**-0.2**
MTN	**Manton Dam**	**51.59**	**272**	P	**P**		**19 34 44.1**	**-1.5**
KNRA	**Kununurra**	**52.85**	**268**	P	**P**		**19 34 54.2**	**-0.8**
KNRA				IAmb	IAmb		19 35 12.1	
	comp=Z,19nm,1.1s							
FITZ	**Fitzroy Crossi**	**55.00**	**264**	P	**P**		**19 35 09.6**	**-1.1**
	comp=Z,4.1nm,0.6s,baz=146,slow=6.0,SNR=16							
FITZ	**Fitzroy Crossi**	**55.00**	**264**	P	**P**		**19 35 10.4**	**-0.3**
FITZ				IAmb	IAmb		19 36 06.0	
	comp=Z,17nm,1.5s							
SIJI	**Sorong**	**56.31**	**286**	P	**P**		**19 35 18.7**	**-1.5**
	comp=Z,22nm,0.8s,baz=69,slow=8.2,SNR=13							
SOEI	**Soe**	**58.97**	**273**	P	**P**		**19 35 39.7**	**+0.6**
SOEI	**Soe**	**58.97**	**273**	P	**P**		**19 35 39.4**	**+0.4**
BATI	**Baumata**	**59.36**	**272**	P	**P**		**19 35 41.6**	**-0.1**
	comp=Z,21nm,0.6s,baz=154,slow=4.7,SNR=9.7							
BATI	**Baumata**	**59.36**	**272**	P	**P**		**19 35 41.9**	**+0.2**
MORW	**Morawa**	**60.89**	**249**	P	**P**		**19 35 51.4**	**-0.5**
CASY	**Casey**	**62.24**	**206**	P	**P**		**19 36 01.7**	**+1.4**
QSPA	**South Pole Qui**	**66.52**	**180**	P	**P**		**19 36 30.2**	**+1.6**
QSPA				IAmb	IAmb		19 36 31.6	
	comp=Z,18nm,1.1s							
MJAR	**Matsushiro Arr**	**74.06**	**323**	P	**P**		**19 37 13.9**	**-0.9**
	comp=Z,1.8nm,0.6s,baz=138,slow=6.3,SNR=14							
MAJO	**Matsushiro**	**74.06**	**323**	P	**P**		**19 37 14.2**	**-0.7**
MAT	**Matsushiro**	**74.06**	**323**	P	**P**		**19 37 13.5**	**-1.4**
CISI	**Cisompet, Garu**	**74.88**	**268**	P	**P**		**19 37 21.2**	**+1.0**
ADK	**Adak**	**75.13**	**359**	P	**P**		**19 37 19.8**	**-0.8**
LEM	**Lembang**	**75.34**	**269**	P	**P**		**19 37 23.1**	**+0.1**
	comp=Z,15nm,0.6s,baz=127,slow=20,SNR=5.2							
JNU	**Nakatsue**	**76.11**	**316**	P	**P**		**19 37 26.0**	**-0.8**
	comp=Z,6.9nm,0.8s,baz=206,slow=3.7,SNR=3.8							
TPUB	**Ta-pu**	**77.60**	**302**	P	**P**		**19 37 34.6**	**-0.8**
TPUB				IAmb	IAmb		19 38 45.9	
	comp=Z,15nm,1.0s							
MAW	**Mawson**	**79.48**	**199**	P	**P**		**19 37 46.7**	**+1.7**
	comp=Z,4.0nm,0.9s,baz=138,slow=20,SNR=4.8							
MAW	**Mawson**	**79.48**	**199**	P	**P**		**19 37 46.5**	**+1.5**
YSS	**Yuzh-Sakhalins**	**79.68**	**332**	P	**P**		**19 37 46.6**	**+0.3**
YSS				IAmb	IAmb		19 37 48.4	
	comp=Z,27nm,1.0s							
PEA0B	**Petropavlovsk-**	**79.84**	**344**	P	**P**		**19 37 46.8**	**-0.2**
PEA0B				IAmb	IAmb		19 37 56.6	
	comp=Z,31nm,1.1s							
PETK	**Petropavlovsk-**	**79.84**	**344**	P	**P**		**19 37 47.3**	**+0.3**
	comp=Z,8.1nm,0.8s,baz=133,slow=8.0,SNR=11							
KSRS	**Korea Array**	**80.73**	**318**	P	**P**		**19 37 51.5**	**-0.6**
	comp=Z,2.6nm,0.8s,baz=128,slow=5.5,SNR=11							
NVAR	**Mina Array Bea**	**81.67**	**42**	P	**P**		**19 37 58.4**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=220,slow=8.8,SNR=5.8							
NVAR				LR	LR		20 10 42.5	
	comp=Z,186nm,18.1s,baz=235,slow=33							
NV11	**Mina Array Sit**	**81.77**	**42**	P	**P**		**19 37 56.5**	**-1.4**
USRK	**Ussuriysk Ar.**	**82.81**	**325**	P	**P**		**19 38 04.6**	**+1.6**
	comp=Z,13nm,0.8s,baz=127,slow=3.1,SNR=27							
USA0B	**Ussuriysk Arra**	**82.81**	**325**	P	**P**		**19 38 04.0**	**+1.0**
USA0B				IAmb	IAmb		19 38 06.2	
	comp=Z,11nm,0.8s							
SYO	**Syowa Base**	**84.25**	**192**	*i*eP	**P**		**19 38 08.0**	**-2.1**
SYO	**Syowa Base**	**84.25**	**192**	*i*ePcP	**PcP**		**19 38 14.0**	**+0.2**
CCUT	**Cedar City**	**84.26**	**45**	P	**P**		**19 38 10.9**	**0.0**
U15A	**North Rim**	**84.32**	**46**	P	**P**		**19 38 11.7**	**+0.4**
MDJ	**Mudanjiang**	**84.37**	**324**	P	**P**		**19 38 11.4**	**+0.4**
MDJ				IAmb	IAmb		19 38 14.1	
	comp=Z,16nm,1.0s							
SNAA	**Sanae**	**84.88**	**178**	P	**P**		**19 38 14.1**	**+0.8**
SNAA	**Sanae**	**84.88**	**178**	P	**P**		**19 38 14.3**	**+0.9**
SNAA				IAmb	IAmb		19 38 15.1	
	comp=Z,7.6nm,1.0s							
VNA3	**Neumayer Olymp**	**84.93**	**175**	P	**P**		**19 38 14.1**	**+0.6**
PLCA	**Paso Flores**	**85.47**	**133**	LR	LR		20 08 51.6	
	comp=Z,119nm,18.7s,baz=223,slow=30							
VNA1	**Neumayer--Stat**	**85.61**	**176**	P	**P**		**19 38 18.0**	**+1.1**
RSO	**Redoubt South**	**85.75**	**11**	P	**P**		**19 38 17.6**	**-0.2**
IPM	**Ipoh**	**85.84**	**277**	P	**P**		**19 38 19.6**	**+0.4**
IPM				IAmb	IAmb		19 38 23.0	
	comp=Z,6.9nm,0.8s							
KLR	**Kul'dur**	**86.36**	**328**	P	**P**		**19 38 22.1**	**+1.3**
	comp=Z,3.3nm,0.9s,baz=102,slow=5.6,SNR=9.4							
KULM	**Kulim**	**86.51**	**277**	P	**P**		**19 38 22.7**	**+0.3**
KULM				IAmb	IAmb		19 38 25.7	
	comp=Z,5.0nm,0.7s							
TX31	**Lajitas Ar. Si**	**86.75**	**56**	P	**P**		**19 38 23.7**	**+0.3**
TXAR	**Lajitas Array**	**86.75**	**56**	P	**P**		**19 38 24.0**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=212,slow=6.9,SNR=10							
TXAR				LR	LR		20 12 20.9	
	comp=Z,123nm,18.3s,baz=0.0,slow=32							
RPSI	**Rantau Prapat**	**87.05**	**274**	P	**P**		**19 38 25.3**	**+0.2**
RPSI				IAmb	IAmb		19 38 29.8	
	comp=Z,8.0nm,1.0s							
GSI	**Gunungsitoli**	**87.73**	**272**	P	**P**		**19 38 30.6**	**+2.3**
GSI	**Gunungsitoli**	**87.73**	**272**	P	**P**		**19 38 29.0**	**+0.6**
KCSI	**Kotacane, Aceh**	**88.43**	**274**	P	**P**		**19 38 34.2**	**+2.5**
TRF	**Thorofare Moun**	**88.96**	**11**	P	**P**		**19 38 32.6**	**-0.5**
TRF				IAmb	IAmb		19 39 03.4	
	comp=Z,5.5nm,0.9s							
RND	**Reindeer**	**89.18**	**12**	P	**P**		**19 38 34.0**	**-0.1**
RND				IAmb	IAmb		19 39 28.4	
	comp=Z,9.4nm,1.3s							
ENH	**Enshi**	**89.69**	**303**	P	**P**		**19 38 38.1**	**+0.9**
SEY	**Seymchan**	**89.89**	**346**	P	**P**		**19 38 37.5**	**+0.3**
	comp=Z,3.0nm,0.9s,baz=147,slow=8.4,SNR=7.0							
ILAR	**Eielson Array**	**90.79**	**12**	P	**P**		**19 38 41.1**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=218,slow=5.7,SNR=3.4							
PBKT	**Sadao Pong**	**90.81**	**288**	P	**P**		**19 38 43.8**	**+1.1**
PBKT				IAmb	IAmb		19 38 45.9	
	comp=Z,11nm,1.1s							
XAN	**Xi'an**	**91.85**	**306**	P	**P**		**19 38 47.6**	**+0.4**
XAN				IAmb	IAmb		19 38 49.9	
	comp=Z,6.9nm,0.8s							
CM31	**Chiang Mai Arr**	**93.34**	**289**	P	**P**		**19 38 55.6**	**+1.3**
CMAR	**Chiang Mai Arr**	**93.34**	**289**	P	**P**		**19 38 56.6**	**+2.3**
	comp=Z,8.1nm,0.8s,baz=136,slow=3.2,SNR=65							
CHTO	**Chiang Mai**	**93.48**	**289**	P	**P**		**19 38 55.9**	**+0.9**
SONM	**Songino Array**	**99.60**	**318**	P	**Pdif**		**19 39 23.0**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=104,slow=6.1,SNR=2.8							
MKAR	**Makanchi Array**	**115.00**	**312**	PKiKP	**PKiKP**		**19 44 20.0**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=88,slow=1.8,SNR=1.4							
KURBB	**Kurchatov Arra**	**117.88**	**316**	PKP	**PKPdf**		**19 44 24.7**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=99,slow=2.0,SNR=6.8							
BVAR	**Borovoye Array**	**122.93**	**319**	PKP	**PKPdf**		**19 44 33.9**	**-0.8**
	comp=Z,1.9nm,0.9s,baz=143,slow=0.7,SNR=11							
ARCES	**ARCESS Array B**	**132.34**	**350**	PKP	**PKPdf**		**19 44 52.2**	**0.0**
	comp=Z,2.0nm,0.8s,baz=318,slow=1.2,SNR=9.2							
GEYT	**Ailbek**	**132.39**	**301**	PKP	**PKiKP**		**19 44 53.7**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=144,slow=1.2,SNR=3.9							
FINES	**FINESS Array B**	**139.35**	**344**	PKhKP	PKPpre		19 44 56.8	
	comp=Z,0.9nm,0.9s,baz=72,slow=6.2,SNR=4.1							
FINES				PKP	**PKPdf**		**19 45 06.0**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=11,slow=1.9,SNR=7.7							
NB2	**NORSAR Subarra**	**142.26**	**355**	PKPdf	**PKPdf**		**19 45 05.2**	**-5.6**
	comp=Z,2.5nm,1.2s,baz=44,slow=1.9							
AKASG	**Malin Array Be**	**146.82**	**331**	PKPbc	**PKPbc**		**19 45 20.2**	**-0.6**
	comp=Z,2.9nm,0.5s,baz=43,slow=4.1,SNR=22							
AKBB	**Malin Array Si**	**146.82**	**331**		**PKPbc**		**19 45 20.5**	**-0.2**
SORM	**Soroca**	**149.04**	**328**	⇑P	**PKPbc**		**19 45 26.9**	**+0.1**
BR131	**Keskin Array S**	**150.62**	**310**		**PKPbc**		**19 45 30.9**	**-0.3**
BRTR	**Keskin Array B**	**150.62**	**310**	PKPbc	**PKiKP**		**19 45 31.4**	**-0.4**
	comp=Z,4.0nm,0.9s,baz=156,slow=2.5,SNR=15							
OJC	**Ojcow**	**150.85**	**340**		**PKiKP**		**19 45 31.3**	**-0.5**
BURAR	**Bucovina Array**	**150.87**	**331**	⇓P	**PKiKP**		**19 45 33.0**	**+1.0**
CFR	**Carcaliu**	**151.13**	**324**	⇓P	**PKiKP**		**19 45 32.0**	**-0.4**
VRI	**Vrincioaia**	**151.41**	**327**	⇑P	**PKiKP**		**19 45 33.2**	**+0.2**
PLOR	**Plostina**	**151.46**	**327**	⇓P	**PKiKP**		**19 45 32.9**	**-0.3**
CLL	**Collm**	**151.54**	**349**	*i* PKPbc	**PKiKP**		**19 45 34.1**	**+1.0**
	comp=Z,18nm,1.1s							
CLL				*i* pPKPbc	**sPKPdf**		**19 45 37.9**	**+0.1**
CLL				*ep*PKPab	**pPKPab**		**19 45 47.0**	**-2.3**
CLL				*e*			19 45 53.0	
CLL	**Collm**	**151.54**	**349**		**PKiKP**		**19 45 33.3**	**+0.1**
OSTC	**Ostas**	**151.56**	**344**	*i*ePKP	**PKiKP**		**19 45 33.9**	**+0.7**
CHVC	**Chvalec**	**151.57**	**344**	*i*ePKP	**PKiKP**		**19 45 33.4**	**+0.1**
TRPA	**Tarpa**	**151.61**	**334**	⇓P	**PKiKP**		**19 45 33.5**	**+0.2**
OKC	**Ostrava-Krasne**	**151.69**	**341**	*i*ePKP	**PKiKP**		**19 45 33.9**	**+0.4**
DPC	**Dobruska-Polom**	**151.72**	**344**	*i*ePKP	**PKiKP**		**19 45 34.2**	**+0.6**
BRG	**Berggiesshubel**	**151.78**	**347**	*e*PKP	**PKiKP**		**19 45 33.8**	**+0.2**
	comp=Z,12nm,1.0s							
KRLC	**Kraliky**	**151.86**	**343**	⇑ePKP	**PKiKP**		**19 45 34.1**	**+0.2**
MORC	**Moravsky Berou**	**151.92**	**342**	*e*PKP	**PKiKP**		**19 45 34.5**	**+0.5**
MORC	**Moravsky Berou**	**151.92**	**342**	⇑P	**PKiKP**		**19 45 34.0**	**-0.1**
MORC	**Moravsky Berou**	**151.92**	**342**		**PKiKP**		**19 45 33.9**	**-0.1**
MDUB	**Mudurnu**	**151.96**	**313**		**PKiKP**		**19 45 34.5**	**0.0**
PVCC	**Panska Ves**	**151.97**	**346**	⇑ePKP	**PKiKP**		**19 45 34.4**	**+0.4**
MLR	**Muntele Rosu**	**152.06**	**327**		**PKiKP**		**19 45 34.2**	**-0.3**
PRU	**Pruhonice**	**152.49**	**346**	⇑ePKP	**PKiKP**		**19 45 35.6**	**+0.5**
PRU				AMS	AMS		20 57 20.0	
GOPC	**GO Pecny, Ondr**	**152.50**	**346**	⇑ePKP	**PKiKP**		**19 45 36.4**	**+1.2**
VRAC	**Vranov**	**152.61**	**343**	*e*PKP	**PKiKP**		**19 45 37.0**	**+1.6**
JAVC	**Velka Javorina**	**152.70**	**341**	*e*PKP	**PKiKP**		**19 45 37.4**	**+1.7**
KRUC	**Moravsky**	**152.88**	**343**	*e*PKP	**PKiKP**		**19 45 36.4**	**+0.4**
SIRR	**Siria**	**153.46**	**333**	⇑P	**PKiKP**		**19 45 37.5**	**+0.2**
KHC	**Kasperske Hory**	**153.50**	**347**	⇑ePKP	**PKiKP**		**19 45 37.6**	**+0.3**
KHC	**Kasperske Hory**	**153.50**	**347**		**PKiKP**		**19 45 37.4**	**+0.1**
GERES	**GERESS Array B**	**153.75**	**346**	PKPbc	**PKPbc**		**19 45 37.5**	**-0.3**
	comp=Z,1.5nm,0.9s,baz=46,slow=3.9,SNR=6.0							
TORD	**Torodi Ar. Bea**	**169.29**	**165**	PKP	**PKPdf**		**19 45 46.3**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=128,slow=0.6,SNR=4.8							
TORD				PKPab	**PKPab**		**19 46 59.1**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=184,slow=3.7,SNR=4.3							

*IDC **10** 19:27:16.1±0.7,67°.98N×162°.26W,h0km,mb3.8/15, mb1 3.9/18,mb1mx3.7/59,mbtmp3.8/18,ML3.7/3,MS3.3/5, Ms1 3.2/5,ms1mx2.7/59,Error ellipse: s-maj=22.3km s-min=13.0km az=26.0*

*NEIC **10** 19:27:16.6±1.1,67°.72N±0°.05×162°.3W±0°.1,h11km±4km, Error ellipse: s-maj=9.2km s-min=4.4km az=133.0*

*AEIC **10** 19:27:16±1.7,67°.69N±0°.05×162°.2W±0°.1,h7km±4km, ML3.8,mb4.2/8(NEIC),Error ellipse: s-maj=9.3km s-min=3.7km az=137.0*

ISC 10 19:27:16.4±0.5,67.74N±0°.06×162°.23W±0°.05,h10km,n81, σ1≥11/83,mb4.0/18,MS3.2/4,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.41**	**321**			**Pg**	**19 27 24.5**	**0.0**
RDOG						**Sg**	**19 27 31.0**	**+1.1**
ANM	**Nome**	**3.43**	**203**			**Pn**	**19 28 09.3**	**-0.6**
ANM						**Sn**	**19 28 49.7**	**-0.8**
IM03		**3.78**	**114**			**Pn**	**19 28 14.9**	**+0.3**
IM03						**Sn**	**19 28 59.7**	**+0.6**
COLD	**Coldfoot**	**4.65**	**91**			**Pn**	**19 28 27.7**	**+1.1**
TOLK	**Toolik Lake Re**	**4.81**	**73**			**Pn**	**19 28 29.9**	**+1.1**
TOLK						**Sn**	**19 29 25.3**	**+0.8**
MLY	**Manley**	**5.36**	**115**			**Pn**	**19 28 36.3**	**-0.1**
TTA	**Tatalina**	**5.48**	**149**			**Pn**

*JMA **10** 19:31:33.3±0.1,23.66N×122.49E,h35km,M3.2*
*TAP **10** 19:31:34.1,23.64N×122.43E,h23km,ML3.6,D*
ISC 10 19:31:30.2±1.2,**23.64N**±0.02×**122.52E**±0.02,**h2**km±9km,
n126,σ0**677**/180,**mb3.3**/4,**1C-16D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.90**	**26**	P		**Pn**		**19 31 49.6**	**-0.3**
JYNG				S		**Sb**		**19 32 01.2**	**+0.2**
HWA	**Hwalien**	**0.90**	**292**	*e*P		**Pn**		**19 31 49.6**	**-0.4**
	baz=294								
HWA				*e*S		**Sb**		**19 32 01.5**	**+0.5**
	baz=294								
YOJ	**Yonaguni jima**	**0.93**	**29**	P		**Pn**		**19 31 50.2**	**-0.2**
YOJ				*e*S		**Sb**		**19 32 01.6**	**-0.4**
TWD	**Chiawan**	**0.95**	**298**	⇓*i*P		**Pb**		**19 31 49.9**	**+0.4**
	baz=300								
TWD				*e*S		**Sg**		**19 32 01.3**	**+0.5**
	baz=300								
EOS1	**EOS1**	**0.97**	**339**	P		**Pn**		**19 31 51.3**	**+0.4**
	baz=343								
EOS1				*e*S		**Sn**		**19 32 05.0**	**-0.3**
	baz=343								
NACB	**Ninganchiao**	**1.00**	**302**	⇓P		**Pb**		**19 31 50.4**	**+0.1**
	baz=304								
NACB				*e*S		**Sg**		**19 32 02.8**	**+0.5**
	baz=304								
EGFH	**Guangfu**	**1.00**	**272**	*i* P		**Pn**		**19 31 50.8**	**-0.5**
	baz=271								
ESL	**Shilin**	**1.01**	**280**	⇓*i*P		**Pb**		**19 31 50.6**	**+0.2**
	baz=280								
HGSD	**Ruisui**	**1.01**	**262**	⇓*i*P		**Pn**		**19 31 51.2**	**-0.3**
	baz=261								
HGSD				*i* S		**Sg**		**19 32 03.5**	**+0.7**
	baz=261								
ENA	**Nanau**	**1.06**	**318**	P		**Pn**		**19 31 52.3**	**+0.2**
	baz=321								
ENA				*e*S		**Sb**		**19 32 05.8**	**+0.1**
	baz=321								
ETLH	**Xiulin Townshi**	**1.10**	**301**	P		**Pb**		**19 31 52.1**	**0.0**
	baz=303								
ETLH				*e*S		**Sg**		**19 32 06.3**	**+0.5**
	baz=303								
EHY	**Hungye**	**1.10**	**263**	⇓P		**Pn**		**19 31 52.8**	**0.0**
	baz=262								
EHY				*e*S		**Sb**		**19 32 07.3**	**+0.3**
	baz=262								
TWC	**Suao**	**1.14**	**328**	*e*P		**Pn**		**19 31 53.7**	**+0.4**
	baz=331								
TWC				*e*S		**Sb**		**19 32 08.3**	**+0.3**
	baz=331								
YULB	**Yu-li**	**1.15**	**258**	⇓*i*P		**Pn**		**19 31 53.4**	**+0.1**
	baz=256								
YULB				*e*S		**Sb**		**19 32 08.1**	**-0.1**
	baz=256								
TWF1	**Yuli**	**1.16**	**256**	⇓*i*P		**Pn**		**19 31 53.5**	**+0.1**
	baz=254								
TWF1				*e*S		**Sb**		**19 32 08.6**	**+0.2**
	baz=254								
CHKT	**Chengkung**	**1.19**	**243**	*e*P		**Pb**		**19 31 53.6**	**+0.1**
	baz=240								
CHKT				*e*S		**Sg**		**19 32 08.3**	**-0.1**
	baz=240								
FULB	**Fuli**	**1.21**	**249**	⇓*i*P		**Pb**		**19 31 53.8**	**0.0**
	baz=247								
FULB				*e*S		**Sg**		**19 32 09.3**	**+0.3**
	baz=247								
HATJ	**Hateruma jima**	**1.25**	**70**	P		**Pn**		**19 31 55.1**	**+0.4**
HATJ				*e*S		**Sb**		**19 32 11.0**	**-0.1**
WHF	**Hehuan Shan**	**1.25**	**294**	⇓*i*P		**Pb**		**19 31 54.7**	**-0.2**
	baz=295								
WHF				*e*S		**Sg**		**19 32 10.2**	**-0.4**
	baz=295								
VWDT	**VWDT**	**1.27**	**275**	⇓P		**Pn**		**19 31 55.4**	**+0.4**
	baz=275								
VWDT				*e*S		**Sg**		**19 32 10.8**	**-0.1**
	baz=275								
OWD	**Renai**	**1.27**	**285**	P		**Pn**		**19 31 55.3**	**+0.2**
	baz=285								
OWD				*e*S		**Sg**		**19 32 10.8**	**-0.2**
	baz=285								
CHGB	**Renai**	**1.30**	**289**	P		**Pn**		**19 31 55.6**	**-0.1**
	baz=290								
CHGB				*e*S		**Sg**		**19 32 11.4**	**-0.7**
	baz=290								
NNSB	**Datong**	**1.30**	**307**	P		**Pn**		**19 31 55.8**	**+0.2**
	baz=309								
NNSB				*e*S		**Sg**		**19 32 11.6**	**-0.5**
	baz=309								
NNSH	**Datong**	**1.30**	**307**	P		**Pb**		**19 31 55.4**	**-0.1**
	baz=309								
NNSH				*e*S		**Sg**		**19 32 11.3**	**-0.8**
	baz=309								
IRIF	**Iriomote-Funau**	**1.31**	**58**	P		**Pb**		**19 31 56.0**	**+0.5**
IRIF				S		**Sn**		**19 32 13.3**	**-0.2**
NNS	**Nan Shan**	**1.31**	**308**	⇑*i*P		**Pb**		**19 31 56.0**	**+0.3**
	baz=309								
NNS				*e*S		**Sg**		**19 32 11.2**	**-1.4**
	baz=309								
ENTT	**Nioudou**	**1.32**	**319**	P		**Pb**		**19 31 56.3**	**+0.5**
	baz=321								
ENTT				*e*S		**Sg**		**19 32 12.7**	**-0.1**
	baz=321								
NDT	**Datong Townshi**	**1.33**	**316**	P		**Pb**		**19 31 56.7**	**+0.8**
	baz=318								
TWE	**Neicheng**	**1.33**	**324**	*i* P		**Pb**		**19 31 56.5**	**+0.6**
	baz=327								
TWE				*e*S		**Sg**		**19 32 12.7**	**-0.2**
	baz=327								
TWH	**Lutao**	**1.33**	**226**	⇓*i*P		**Pg**		**19 31 56.0**	**+0.2**
	baz=222								
TWH				*i* S		**Sg**		**19 32 12.0**	**-1.0**
	baz=222								
NTC	**Toucheng**	**1.36**	**333**	*e*P		**Pb**		**19 31 59.1**	**+2.6**
	baz=335								
SLBB	**Yuanshan**	**1.37**	**324**	*e*P		**Pb**		**19 31 57.5**	**+0.8**
	baz=326								
TWT	**Tachien**	**1.37**	**297**	P		**Pb**		**19 31 57.1**	**+0.4**
	baz=297								
TWT				*e*S		**Sg**		**19 32 13.5**	**-0.8**
	baz=297								
TDCB	**Techi**	**1.39**	**296**	P		**Pb**		**19 31 57.2**	**+0.2**
	baz=297								
TDCB				*e*S		**Sg**		**19 32 13.6**	**-1.2**
	baz=297								
SSLB	**Suanglung**	**1.44**	**276**	⇓*i*P		**Pb**		**19 31 57.7**	**-0.2**
	baz=276								
SSLB				*e*S		**Sb**		**19 32 15.4**	**-1.3**
	baz=276								
YUS	**Yu-Shan**	**1.44**	**264**	*e*P		**Pb**		**19 31 58.6**	**+0.5**
	baz=263								
TWB1	**Santiao Chiao**	**1.45**	**341**	*e*P		**Pg**		**19 31 58.3**	**+0.3**
	baz=343								
ELDTW	**Lidau**	**1.45**	**252**	⇓*i*P		**Pn**		**19 31 57.6**	**0.0**
	baz=250								
ELDTW				*e*S		**Sb**		**19 32 14.9**	**-2.0**
	baz=250								
NWLT	**Wulai**	**1.46**	**321**	P		**Pg**		**19 31 58.6**	**+0.3**
	baz=323								
NWLT				*e*S		**Sb**		**19 32 16.1**	**-1.2**
	baz=323								
YHNB	**Yeheng**	**1.46**	**315**	P		**Pg**		**19 31 58.3**	**0.0**
	baz=316								
YHNB				*e*S		**Sb**		**19 32 15.9**	**-1.5**
	baz=316								
TIPB	**Shuangxi**	**1.47**	**335**	P		**Pg**		**19 31 58.3**	**-0.1**
	baz=337								
TIPB				*e*S		**Sb**		**19 32 17.1**	**-0.4**
	baz=337								
NSK	**Sanguang**	**1.48**	**314**	P		**Pb**		**19 31 58.5**	**0.0**
	baz=316								
NSK				*e*S		**Sb**		**19 32 16.1**	**-1.7**
	baz=316								
JKRS	**Kuro-shima**	**1.49**	**66**	P		**Pg**		**19 31 58.8**	**0.0**
JKRS				*e*S		**Sb**		**19 32 17.4**	**-0.6**
SMLT	**Sun Moon Lake**	**1.50**	**280**	⇓*i*P		**Pb**		**19 31 58.9**	**0.0**
	baz=279								
SMLT				*e*S		**Sn**		**19 32 16.6**	**-2.0**
	baz=279								
DPDB	**Guoxing**	**1.51**	**285**	*e*P		**Pg**		**19 31 59.2**	**0.0**
	baz=285								
WHYT	**Xinyi Township**	**1.53**	**272**	*e*P		**Pg**		**19 31 59.8**	**+0.3**
	baz=272								
TTN	**Taitung**	**1.54**	**235**	*e*S		**Sn**		**19 32 18.9**	**-0.3**
	baz=233								
TYC	**Yuchr**	**1.54**	**280**	⇓*i*P		**Pb**		**19 31 59.5**	**0.0**
	baz=280								
TWGBT	**Beinan**	**1.56**	**239**	*e*P		**Pn**		**19 31 59.3**	**+0.3**
	baz=236								
TWGBT				*e*S		**Sn**		**19 32 18.5**	**-1.2**
	baz=236								
TWG	**Pinlang**	**1.56**	**239**	*e*P		**Pn**		**19 31 59.3**	**+0.3**
	baz=236								
TWG				*e*S		**Sn**		**19 32 18.5**	**-1.3**
	baz=236								
WHP	**Taichung City**	**1.57**	**294**	*e*P		**Pg**		**19 32 00.5**	**+0.1**
	baz=295								
WHP				*e*S		**Sn**		**19 32 19.1**	**-1.2**
	baz=295								
NWF	**Wu-fen Shan**	**1.57**	**335**	P		**Pb**		**19 31 59.7**	**-0.5**
	baz=337								
WFSB	**Wu-fen Shan**	**1.57**	**335**	*e*P		**Pb**		**19 31 59.8**	**-0.3**
	baz=337								
ALS	**Alishan**	**1.58**	**266**	*e*P		**Pg**		**19 32 00.8**	**+0.3**
	baz=264								
TWA	**Mucha**	**1.58**	**328**	P		**Pg**		**19 32 00.9**	**+0.2**
	baz=330								
TWA				*e*S		**Sn**		**19 32 19.4**	**-1.0**
	baz=330								
NHDH	**Xindian Distri**	**1.60**	**326**	*e*P		**Pg**		**19 32 00.9**	**0.0**
	baz=327								
NHDH				*e*S		**Sn**		**19 32 20.5**	**-0.3**
	baz=327								
WJS	**Zhushan**	**1.65**	**277**	*e*P		**Pg**		**19 32 02.6**	**+0.7**
	baz=276								
JIJ	**Ishigaki jima**	**1.65**	**64**	P		**Pn**		**19 32 00.4**	**+0.1**
JIJ				S		**Sn**		**19 32 20.0**	**-2.1**
WLTB	**Daxi**	**1.67**	**317**	*e*P		**Pg**		**19 32 02.7**	**+0.4**
	baz=318								
STYT	**Tauyuan**	**1.69**	**254**	⇓P		**Pb**		**19 32 01.8**	**-0.3**
	baz=252								
STYT				*e*S		**Sn**		**19 32 22.1**	**-0.9**
	baz=252								
CHN5	**Tsauling**	**1.69**	**269**	*e*P		**Pg**		**19 32 02.7**	**+0.1**
	baz=268								
WNT	**Mingjian**	**1.70**	**278**	*e*P		**Pg**		**19 32 02.9**	**+0.1**
	baz=278								
LIOB	**Emei**	**1.70**	**306**	*e*P		**Pg**		**19 32 02.9**	**0.0**
	baz=307								
NSTT	**Nanjuang**	**1.70**	**306**	*e*P		**Pg**		**19 32 02.8**	**-0.1**
	baz=307								
NSTT				*e*S		**Sn**		**19 32 22.4**	**-1.0**
	baz=307								
YM01	**YM01**	**1.73**	**330**	*e*P		**Pb**		**19 32 02.5**	**-0.3**
	baz=332								
YM01				*e*S		**Sn**		**19 32 23.5**	**-0.6**
	baz=332								
YM10	**YM10**	**1.74**	**330**	*e*P		**Pb**		**19 32 02.6**	**-0.4**
	baz=332								
TWQ1	**Liyutan**	**1.74**	**294**	*e*P		**Pg**		**19 32 03.6**	**-0.1**
	baz=294								
YM11	**YM11**	**1.75**	**331**	*e*P		**Pb**		**19 32 03.2**	**+0.1**
	baz=332								
YM04	**YM04**	**1.75**	**330**	*e*P		**Pb**		**19 32 02.4**	**-0.8**
	baz=331								
YM04				*e*S		**Sn**		**19 32 23.8**	**-0.9**
	baz=331								
YM08	**YM08**	**1.76**	**331**	*e*P		**Pb**		**19 32 03.0**	**-0.2**
	baz=333								
TCU	**Taichung**	**1.76**	**287**	*e*P		**Pg**		**19 32 04.2**	**+0.2**
	baz=287								
TPUB	**Ta-pu**	**1.77**	**259**	*e*P		**Pg**		**19 32 03.9**	**-0.3**
	baz=258								
TWS1	**Kuangyinshan**	**1.77**	**326**	*e*P		**Pb**		**19 32 03.1**	**-0.3**
	baz=327								
TWS1				*e*S		**Sn**		**19 32 24.4**	**-0.6**
	baz=327								
YM03	**YM03**	**1.77**	**330**	*e*P		**Pb**		**19 32 03.7**	**+0.2**
	baz=332								
ECL	**Taimali**	**1.77**	**235**	*e*P		**Pn**		**19 32 02.0**	**+0.1**
	baz=232								
NSY	**Sanyi**	**1.78**	**296**	*e*P		**Pg**		**19 32 04.3**	**-0.1**
	baz=296								
ANP	**Anpu**	**1.79**	**330**	*e*P		**Pb**		**19 32 03.3**	**-0.5**
	baz=331								
CHN4	**Tsaushan**	**1.79**	**261**	*e*P		**Pg**		**19 32 04.4**	**-0.2**
	baz=260								
WTP	**Ta-pu**	**1.79**	**258**	*e*P		**Pb**		**19 32 04.2**	**+0.4**
	baz=256								
WGK	**Gukeng**	**1.79**	**272**	*e*P		**Pg**		**19 32 04.6**	**0.0**
	baz=271								
NTST	**Danshui**	**1.80**	**328**	*e*P		**Pb**		**19 32 03.8**	**-0.2**
	baz=329								
NTST				*e*S		**Sn**		**19 32 25.0**	**-0.8**
	baz=329								
SBCB	**Hsinchu**	**1.81**	**310**	*e*P		**Pg**		**19 32 04.5**	**-0.4**
	baz=311								
NMLH	**Miaoli**	**1.81**	**300**	*e*P		**Pg**		**19 32 04.6**	**-0.4**
	baz=300								
WDLH	**Douliu**	**1.82**	**272**	*e*P		**Pg**		**19 32 04.8**	**-0.2**
	baz=271								
LAY	**Lan-yu**	**1.83**	**209**	*e*P		**Pn**		**19 32 02.7**	**0.0**
	baz=206								
HSN	**Hsinchu**	**1.83**	**310**	*e*S		**Sn**		**19 32 24.6**	**-1.8**
	baz=312								
SLGT	**Liugui**	**1.84**	**250**	*e*P		**Pb**		**19 32 04.7**	**+0.1**
	baz=248								
PTSB	**Yuanli**	**1.84**	**296**	*e*P		**Pb**		**19 32 04.8**	**+0.1**
	baz=297								
WCHH	**Zhanghua**	**1.85**	**284**	*e*P		**Pg**		**19 32 05.4**	**-0.2**
	baz=284								
SGST	**Jiashian**	**1.86**	**253**	*e*P		**Pb**		**19 32 04.4**	**-0.6**
	baz=251								
CHN1	**Nanshi**	**1.88**	**256**	*e*P		**Pb**		**19 32 05.9**	**+0.5**
	baz=255								
JISG	**Ishigakijimahi**	**1.89**	**60**	P		**Pn**		**19 32 03.6**	**+0.1**
JISG				S		**Sn**		**19 32 26.9**	**-1.1**
TWK	**Hsinying**	**1.90**	**259**	*e*P		**Pb**		**19 32 05.8**	**+0.1**
	baz=258								
CHY	**Chiayi**	**1.93**	**266**	*e*P		**Pb**		**19 32 06.6**	**+0.5**
	baz=265								
SSD	**Sandimen**	**1.95**	**243**	*e*P		**Pb**		**19 32 06.0**	**-0.5**
	baz=241								
TAW	**Tawu**	**1.96**	**230**	*e*P		**Pn**		**19 32 05.5**	**+1.0**
	baz=227								
EAST	**Anshuo**	**1.98**	**231**	*e*P		**Pb**		**19 32 06.2**	**-0.9**
	baz=229								
RLNB	**Erlin**	**1.99**	**278**	*e*P		**Pb**		**19 32 07.7**	**+0.5**
	baz=277								
MASBT	**Mashibuluo**	**2.01**	**240**	*e*P		**Pn**		**19 32 06.4**	**+1.2**
	baz=238								
WLGB	**Puzi**	**2.04**	**266**	*e*P		**Pb**		**19 32 08.3**	**+0.3**
	baz=265								
CHN3	**Shinhua**	**2.06**	**255**	*e*P		**Pg**		**19 32 09.4**	**-0.3**
	baz=253								
WTCT	**Ta-ch'eng**	**2.06**	**277**	*e*P		**Pb**		**19 32 08.4**	**0.0**
	baz=276								
SSPT	**Xinbi**	**2.13**	**238**	*e*P		**Pb**		**19 32 09.7**	**+0.1**
	baz=236								
CHN8	**Yiju**	**2.14**	**263**	*e*P		**Pb**		**19 32 09.4**	**-0.3**
	baz=261								
SCZT	**Fangliau**	**2.16**	**235**	*e*P		**Pb**		**19 32 09.3**	**-0.8**
	baz=232								
JTJ	**Tarama**	**2.23**	**63**	P		**Pn**		**19 32 09.1**	**+0.9**
JTJ				S		**Sn**		**19 32 34.9**	**-1.5**
TSEB	**Hengchuen, Pin**	**2.29**	**221**	*e*P		**Pb**		**19 32 11.2**	**-1.1**
	baz=220								
TSEB				*e*S		**Sn**		**19 32 38.8**	**+1.1**
	baz=220								
TWKBT	**Hengchun**	**2.31**	**223**	*e*P		**Pb**		**19 32 11.3**	**-1.3**
	baz=221								
TWKBT				*e*S		**Sn**		**19 32 38.4**	**+0.1**
	baz=221								
HEN	**Hengchun**	**2.31**	**226**	*e*P		**Pn**		**19 32 10.8**	**+1.5**
	baz=223								
HEN				*e*S		**Sn**		**19 32 39.0**	**+0.6**
	baz=223								
TWK1	**Hengchun**	**2.31**	**223**	*e*P		**Pn**		**19 32 10.8**	**+1.5**
	baz=221								
TWK1				*e*S		**Sn**		**19 32 38.6**	**+0.2**
	baz=221								
WDGT	**Dungji**	**2.65**	**262**	*e*P		**Pn**		**19 32 15.7**	**+1.7**
	baz=261								
PHUB	**P'eng-hu**	**2.71**	**268**	*e*P		**Pn**		**19 32 16.2**	**+1.5**
	baz=267								
PNG	**Penghu**	**2.72**	**269**	*e*P		**Pn**		**19 32 16.6**	**+1.7**
	baz=268								
VWUC	**VWUC**	**3.11**	**296**	*e*P		**Pn**		**19 32 21.0**	**+0.7**
	baz=296								
PTTC	**Pingtan**	**3.11**	**307**	*e*P		**Pn**		**19 32 20.6**	**+0.2**
	baz=307								
PTMZ	**Houxiangcun**	**3.40**	**295**	*e*P		**Pn**		**19 32 24.9**	**+0.7**
	baz=294								
MATB	**Ma-tsu**	**3.42**	**317**	*e*P		**Pn**		**19 32 25.3**	**+0.7**
	baz=317								
KNM	**Kinmen**	**3.81**	**283**	*e*P		**Pn**		**19 32 32.6**	**+2.6**
	baz=281								
KNMB	**Chin-men Tao**	**3.86**	**283**	*e*P		**Pn**		**19 32 31.4**	**+0.7**
	baz=282								
XPSS	**Dashiqiu**	**3.90**	**328**	*e*P		**Pn**		**19 32 31.6**	**+0.5**
	baz=328								
AXDP	**Jialang**	**4.34**	**288**	*e*P		**Pn**		**19 32 38.0**	**+0.8**
	baz=287								
ZPLA	**Ao Xicun**	**4.38**	**275**	*e*P		**Pn**		**19 32 39.1**	**+1.3**
	baz=273								
SONM	**Songino Array**	**27.35**	**336**	P		P		19 37 27.7	+11
	0.8nm,0.7s,baz=152,slow=9.5,SNR=4.3								
MKAR	**Makanchi Array**	**39.58**	**316**	P		**P**		**19 39 02.4**	**-0.5**
	0.2nm,0.4s,baz=101,slow=9.4,SNR=6.3								
ZALV	**Zalesovo Beam**	**41.36**	**327**	P		**P**		**19 39 20.6**	**+3.0**
	0.2nm,0.3s,baz=109,slow=7.8,SNR=1.5								
KURBB	**Kurchatov Arra**	**43.31**	**320**	P		**P**		**19 39 33.4**	**-0.1**
	0.2nm,0.7s,baz=105,slow=5.8,SNR=2.3								

*IDC **10** 19:33:27.1±0.8,0.24S×125.17E,h0km,mb4.0/13,*
mb1 4.0/14,mb1mx3.8/44,mbtmp4.0/14,ML2.6/1,Error
ellipse: s-maj=29.5km s-min=16.6km az=62.0
*DJA **10** 19:33:31.4±1.4,0.3S±3.2×125.5E±1.1,h15km±12km,M4.2/13,*
mB4.8/1,mb4.5/5,MLv4.1/13,Mw(mB)4.0/1
*NEIC **10** 19:33:33.0±2.0,0.35S±0.08×125.36E±0.06,h45km±9km,*
mb4.2/16,Error ellipse: s-maj=13.3km s-min=6.5km
az=149.0
ISC 10 19:33:34.7±0.5,**0.32S**±0.06×**125.33E**±0.04,**h57**km,**n51,**
σ1º**26**/56,**mb4.1**/20,**1D,Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.61**	**303**		P		**Pn**	**19 33 58.4**	**-2.4**
LBMI	**Labuha**	**2.19**	**98**		P		**Pn**	**19 34 07.9**	**-0.9**
LBMI					S		**Sn**	**19 34 34.8**	**0.0**
TNTI	**Ternate**	**2.31**	**62**		P		**Pn**	**19 34 10.4**	**+0.1**
TNTI					S		**Sn**	**19 34 39.0**	**+1.4**
TNTI	**Ternate**	**2.31**	**62**				**Pn**	**19 34 10.5**	**+0.1**
TNTI					Sn		**Sn**	**19 34 35.9**	**-1.7**
LUWI	**Luwuk**	**2.66**	**254**		P		**Pn**	**19 34 14.7**	**-0.3**
LUWI	**Luwuk**	**2.66**	**254**				**Pn**	**19 34 14.7**	**-0.3**
LUWI					Sn		**Sn**	**19 34 44.1**	**-2.0**
NLAI	**Namlea**	**3.40**	**149**		P		**Pn**	**19 34 22.1**	**-3.1**
MRSI	**Marisa**	**3.48**	**283**		P		**Pn**	**19 34 26.0**	**-0.3**
APSI	**Ampana**	**3.73**	**261**		P		**Pn**	**19 34 29.8**	**+0.1**
AAI	**Ambon**	**4.40**	**139**		P		Pn	19 34 34.2	-4.8
MSAI	**Masohi**	**4.69**	**130**		P		**Pn**	**19 34 42.7**	**-0.2**
MPSI	**Mapaga**	**5.47**	**277**		P		**Pn**	**19 34 53.9**	**+0.3**
	0.2nm751nm25nm,0.8s								
SIJI	**Sorong**	**5.96**	**95**		Pn		**Pn**	**19 34 57.6**	**-2.8**
	0.1nm,0.3s,baz=197,slow=19,SNR=1.6								
SIJI					Sn		**Sn**	**19 36 10.7**	**+3.3**
	0.3nm,0.3s,baz=233,slow=20,SNR=1.0								
TTSI	**Tana Toraja**	**6.13**	**244**		P		**Pn**	**19 35 03.4**	**+0.6**
BNSI	**Bone**	**6.61**	**232**		P		**Pn**	**19 35 09.4**	**+0.2**
	0.2nm26nm,0.5s								
SPSI	**Sidrap Palu**	**6.63**	**237**		P		**Pn**	**19 35 10.6**	**+1.1**
KAPI	**Kappang**	**7.26**	**230**		Pn		**Pn**	**19 35 18.9**	**+0.7**
	3.6nm,0.3s,baz=78,slow=5.9,SNR=6.1								
KAPI	**Kappang**	**7.26**	**230**				**Pn**	**19 35 18.6**	**+0.4**
KCP	**Kidapawan**	**7.29**	**358**	⇓*i*P			**Pn**	**19 35 21.6**	**+3.0**
SBUM	**Sibu**	**13.39**	**282**		Pn		**Pn**	**19 36 44.2**	**+2.1**
KSM	**Kuching**	**15.12**	**277**		P		**P**	**19 37 09.3**	**+0.3**
KNRA	**Kununurra**	**15.63**	**168**		Pn		**Pn**	**19 37 11.3**	**-0.1**
KNRA					IAmb		IAmb	19 37 12.8	
	comp=Z,12nm,1.1s								
WRA	**Warramunga Arr**	**21.40**	**156**		P		**P**	**19 38 17.4**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=338,slow=12,SNR=6.5								
WB2	**Warramunga Arr**	**21.41**	**156**		P		**P**	**19 38 19.0**	**+1.1**
WB2					IAmb		IAmb	19 38 33.3	
	comp=Z,8.9nm,1.1s								
WR0	**Warramunga Arr**	**21.50**	**156**		P		**P**	**19 38 18.2**	**-0.7**
TPUB	**Ta-pu**	**23.92**	**349**		P		**P**	**19 38 43.3**	**-0.2**
AS31	**Alice Springs**	**24.65**	**161**		P		**P**	**19 38 52.0**	**+1.8**
ASAR	**Alice Springs**	**24.65**	**161**		P		**P**	**19 38 52.0**	**+1.7**
	comp=Z,0.4nm,0.4s,baz=349,slow=14,SNR=9.4								
ASAR					PcP		**PcP**	**19 42 26.9**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=348,slow=2.3,SNR=5.4								
CHTO	**Chiang Mai**	**32.14**	**308**		P		**P**	**19 39 56.6**	**-0.5**
CHTO					IAmb		IAmb	19 39 58.1	
	comp=Z,4.1nm,1.2s								
MJAR	**Matsushiro Arr**	**38.58**	**17**		P		**P**	**19 40 51.1**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=199,slow=9.2,SNR=7.0								
GTA	**Gaotai**	**45.92**	**332**	*e*P			**P**	**19 41 53.0**	**+1.0**
GTA					pP		pP	19 41 58.6	-7.6
GTA					sP		pwP	19 42 01.7	-7.4
GTA					pmax		pmax		
	comp=Z,2.0nm,0.8s								
KLR	**Kul'dur**	**49.67**	**6**	P			**P**	**19 42 20.9**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=214,slow=6.0,SNR=4.6								
SONM	**Songino Array**	**50.72**	**344**	P			**P**	**19 42 27.4**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=158,slow=9.7,SNR=7.3								
PETK	**Petropavlovsk-**	**59.69**	**22**	P			**P**	**19 43 34.6**	**+1.5**
	comp=Z,3.5nm,0.8s,baz=184,slow=5.9,SNR=5.0								
MK31	**Makanchi Array**	**60.12**	**327**		P		**P**	**19 43 35.9**	**-0.4**
MK31					IAmb		IAmb	19 43 38.0	
	comp=Z,1.6nm,0.9s								
MKAR	**Makanchi Array**	**60.12**	**327**		P		**P**	**19 43 35.1**	**-1.2**
	comp=Z,

39nm,0.3s,baz=264,slow=11,SNR=3.8
KRVT LR LR 19 49 23.2
comp=Z,2µm,18.8s,baz=133,slow=43
HNR Honiara 5.06 119 Pn **Pn 19 47 31.8 -2.1**
baz=263,slow=8.1,SNR=1.1
HNR Sn **Sn 19 48 32.8 +1.8**
29nm,0.3s,baz=100,slow=16,SNR=1.8
HNR LR LR 19 49 37.7
comp=Z,3µm,18.8s,baz=296,slow=41
HNR Honiara 5.06 119 Pn 19 47 33.0 -1.0
HNR Sn **Sn 19 48 31.3 +0.2**
PMG Port Moresby 8.58 253 Pn **Pn 19 48 21.0 -1.3**
2.1nm,0.3s,baz=82,slow=14,SNR=1.8
PMG Sn **Sn 19 49 58.9 +1.2**
1.2nm,0.3s,baz=97,slow=22,SNR=7.6
PMG LR LR 19 51 30.8
comp=Z,1µm,20.0s,baz=67,slow=37
PMG Port Moresby 8.58 253 Pn 19 48 22.5 +0.2
PMG Sn **Sn 19 49 57.4 -0.4**
COEN Coen 13.94 239 P **Pn 19 49 33.0 -2.7**
baz=14,SNR=5.1
COEN Coen 13.94 239 Pn 19 49 33.2 -2.4
PATS Pohnpei 14.00 12 Pn **Pn 19 49 36.3 -0.1**
PATS Sn **Sn 19 52 06.9 -3.6**
JAY Jayapura 15.37 286 P P 19 50 17.6 +19
CTA Charters Tower 15.81 214 Pn **Pn 19 49 58.9 -1.2**
0.1nm,0.3s,baz=47,slow=15,SNR=3.5
CTAO Charters Tower 15.81 214 Pn 19 50 00.1 +0.1
GENI Genyem 15.86 285 P **P 19 50 03.1 -0.5**
37nm,1.2s
SMPI Sarmi 17.43 286 P **P 19 50 23.0 +2.0**
2µm32nm,1.3s
DZM Mont Dzumac 18.37 146 *e*Pn Pn 19 50 40.9 +9.0
17nm,0.7s
DZM *e*LR LR 19 54 58.4
comp=Z,879nm,26.3s
EIDS Eidsvold 18.77 192 P **Pn 19 50 37.5 +0.9**
baz=19,SNR=3.6
EIDS Eidsvold 18.77 192 P 19 50 35.3 -0.5
RMQ Roma 20.44 197 P Pn 19 50 55.6 -0.8
baz=21,SNR=7.4
QIS Mount Isa 20.47 227 P **P 19 50 53.0 -1.3**
baz=20,SNR=8.1
QLP Quilpie 22.25 207 P **P 19 51 13.9 +0.6**
baz=22,SNR=3.6
KDU Kakadu 23.36 254 P **P 19 51 21.1 -3.8**
baz=23,SNR=5.3
FAKI Fak Fak 23.48 279 P **P 19 51 25.4 -0.8**
ARMA Armidale 23.61 188 P **P 19 51 27.9 +0.7**
baz=24,SNR=4.7
ARMA Armidale 23.61 188 P **P 19 51 27.9 +0.7**
ARMA IAmb IAmb 19 51 39.4
comp=Z,30nm,1.1s
WR0 Warramunga Arr 24.07 236 P **P 19 51 31.4 -0.1**
WR0 IAmb IAmb 19 51 33.4
comp=Z,41nm,1.2s
WB0 Warramunga Arr 24.09 236 P **P 19 51 31.9 +0.1**
WB0 IAmb IAmb 19 51 34.3
comp=Z,52nm,1.4s
WRAB Tennant Creek 24.21 236 P **P 19 51 32.7 -0.1**
WRAB IAmb IAmb 19 51 34.7
comp=Z,34nm,1.2s
WB2 Warramunga Arr 24.21 236 P **P 19 51 32.9 0.0**
WB2 IAmb IAmb 19 51 34.8
comp=Z,36nm,1.2s
WRA Warramunga Arr 24.22 236 P **P 19 51 32.7 -0.2**
comp=Z,26nm,1.1s,baz=60,slow=9.1,SNR=23
WRA PcP **PcP 19 55 13.1 +0.5**
comp=Z,0.9nm,0.6s,baz=55,slow=2.8,SNR=1.4
MSVF Nonsavu 24.48 118 P **P 19 51 35.2 -0.1**
MSVF IAmb IAmb 19 51 37.9
comp=Z,38nm,0.8s
MTN Manton Dam 24.67 254 P **P 19 51 36.8 -0.3**
SIJI Sorong 24.89 283 P **P 19 51 38.3 -0.8**
comp=Z,23nm,0.8s,baz=54,slow=8.4,SNR=12
CMSA Cobar Meteorol 26.10 199 P **P 19 51 52.0 +2.2**
baz=26,SNR=11
MGCD Mangrove Creek 26.42 188 P **P 19 51 56.8 +4.1**
baz=27,SNR=5.3
AS31 Alice Springs 26.55 229 P **P 19 51 53.2 -0.8**
ASAR Alice Springs 26.55 229 P **P 19 51 53.0 -1.0**
comp=Z,27nm,0.5s,baz=58,slow=9.3,SNR=48
ASAR PcP **PcP 19 55 17.5 -0.3**
comp=Z,1.4nm,0.8s,baz=50,slow=2.5,SNR=5.3
ASAR ScP **ScP 19 58 57.0 +3.2**
comp=Z,1.2nm,1.0s,baz=62,slow=2.6,SNR=4.3
KNRA Kununurra 27.56 249 P **P 19 52 00.8 -2.3**
baz=27,SNR=6.1
KNRA Kununurra 27.56 249 P **P 19 52 02.6 -0.5**
STKA Stephens Creek 27.96 206 P **P 19 52 10.1 +3.6**
baz=28,SNR=4.8
STKA Stephens Creek 27.96 206 P **P 19 52 06.0 -0.6**
comp=Z,6.2nm,0.9s,baz=26,slow=13,SNR=8.8
STKA PcP **PcP 19 55 20.3 -0.7**
comp=Z,2.2nm,0.8s,baz=339,slow=8.8,SNR=3.0
STKA LR LR 20 03 04.7
comp=Z,317nm,19.2s,baz=34,slow=36
STKA Stephens Creek 27.96 206 P **P 19 52 06.2 -0.4**
LBMI Labuha 28.60 282 P **P 19 52 15.6 +3.2**
comp=Z,7µmcomp=Z,53nm,1.0s
SOEI Soe 30.99 263 P **P 19 52 34.3 +0.5**
comp=Z,32nm,0.8s
FITZ Fitzroy Crossi 31.10 246 P **P 19 52 34.0 -0.5**
baz=31,SNR=18
FITZ Fitzroy Crossi 31.10 246 P **P 19 52 34.1 -0.4**
FITZ IAmb IAmb 19 52 45.4
comp=Z,15nm,0.8s
BBOO Buckleboo 31.41 212 P **P 19 52 38.2 +1.1**
baz=32,SNR=7.4
WRKA Warakurna 31.59 232 P **P 19 52 37.8 -1.0**
baz=32,SNR=11
BATI Baumata 31.61 262 LR LR 20 07 24.5
comp=Z,434nm,18.1s,baz=120,slow=40
KMSI Cibinong 32.30 282 P P 19 52 50.2 +5.0
comp=Z,63nm,0.9s
BBSI Bau Bau 32.74 271 P **P 19 52 50.0 +1.0**
comp=Z,9.5nm,0.9s
MMRI Maumere 32.97 265 P **P 19 52 49.7 -1.2**
LUWI Luwuk 33.14 279 P **P 19 52 54.8 +2.4**
comp=Z,26nm,1.1s
LUWI Luwuk 33.14 279 P **P 19 52 52.1 -0.4**
LUWI IAmb IAmb 19 53 09.3
comp=Z,29nm,1.1s
EDFI Ende, Flores 33.51 265 P **P 19 52 55.0 -0.8**
comp=Z,27nm,0.9s
FORT Forrest 34.94 224 P **P 19 53 07.8 -0.1**
BKSI Bulukumba 35.18 271 P **P 19 53 11.4 +1.2**
comp=Z,23nm,1.0s
BNSI Bone 35.28 272 P **P 19 53 09.9 -1.1**
comp=Z,22nm,0.9s
KAPI Kappang 35.58 271 P **P 19 53 13.4 -0.2**
MPSI Mapaga 36.23 280 P **P 19 53 19.4 +0.2**
comp=Z,626nmcomp=Z,13nm,0.8s
URZ Urewera 36.80 151 P **P 19 53 24.2 +0.6**
comp=Z,8.4nm,1.1s,baz=17,slow=19,SNR=1.8
BKZ Black Stump Fm 37.23 153 P **P 19 53 28.3 +0.9**
BKZ IAmb IAmb 19 53 47.1
comp=Z,21nm,1.3s
PSA00 Pilbara Seismi 37.34 243 P **P 19 53 28.6 +0.1**
PSA00 IAmb IAmb 19 53 37.0
comp=Z,22nm,1.0s
THZ Tophouse 37.95 159 P **P 19 53 33.4 0.0**
THZ IAmb IAmb 19 53 50.9
comp=Z,16nm,0.9s
MEEK Meekatharra 40.12 236 P **P 19 53 52.1 +0.2**
baz=40,SNR=5.3
KKM Kota Kinabalu 41.25 287 P **P 19 54 01.0 -0.4**
KKM IAmb IAmb 19 54 10.8
comp=Z,20nm,0.9s
JOW Kunigami 42.71 323 P **P 19 54 13.3 +0.3**
MORW Morawa 43.16 234 P **P 19 54 16.2 -0.5**
YULB Yu-li 45.01 313 P **P 19 54 31.6 +0.1**
YULB IAmb IAmb 19 54 35.3
comp=Z,14nm,1.2s
TPUB Ta-pu 45.44 313 P **P 19 54 34.8 -0.1**
TPUB IAmb IAmb 19 54 50.1
comp=Z,21nm,1.3s
SSLB Suanglung 45.50 313 P **P 19 54 35.2 -0.2**
KSM Kuching 45.85 279 P **P 19 54 38.0 -0.3**
MJAR Matsushiro Arr 46.21 341 P **P 19 54 39.6 -1.2**
comp=Z,3.2nm,0.8s,baz=153,slow=8.1,SNR=12
MJAR PcP **PcP 19 56 16.2 +0.3**
comp=Z,7.2nm,0.8s,baz=160,slow=4.0,SNR=18
MAJO Matsushiro 46.22 341 P **P 19 54 40.5 -0.3**
MAT Matsushiro 46.22 341 P **P 19 54 39.7 -1.1**
JNU Nakatsue 46.22 331 P **P 19 54 39.6 -1.3**
comp=Z,6.3nm,0.7s,baz=180,slow=20,SNR=2.5
JNU Nakatsue 46.22 331 P **P 19 54 40.0 -0.9**
JNU IAmb IAmb 19 54 44.6
comp=Z,9.0nm,0.8s
MJB9 Matsu-Tunnel 46.22 341 P **P 19 54 40.5 -0.4**
CISI Cisompet, Garu 47.26 266 P **P 19 54 49.6 +0.1**
DLV T Lat 50.36 292 P **P 19 55 13.0 -0.4**
KSRS Korea Array 51.14 332 P **P 19 55 18.2 -0.3**
comp=Z,3.2nm,0.9s,baz=150,slow=8.1,SNR=9.2
QIZ Qiongzhong 51.86 301 P **P 19 55 24.9 +0.6**
PPT Papeete 54.55 107 LR LR 20 15 37.6
comp=Z,54nm,18.0s,baz=252,slow=32
PPT2 Papeete2 54.55 107 *e*LR LR 20 11 46.7
comp=Z,86nm,22.0s
PAE Paea 54.55 107 *e*T T 19 56 10.8
comp=Z,3.3nm,0.4s
USRK Ussuriysk Ar. 55.17 340 P **P 19 55 48.6 +0.5**
comp=Z,3.5nm,0.7s,baz=145,slow=6.9,SNR=7.8
TBI Tubuai 55.25 114 *e*T T 19 54 50.9
comp=Z,6.1nm,0.4s
TBI Tubuai 55.25 114 *e*LR LR 20 12 06.7
comp=Z,231nm,30.0s
IPM Ipoh 55.52 280 P **P 19 55 50.7 -0.6**
IPM IAmb IAmb 19 55 54.9
comp=Z,7.6nm,0.7s
KULM Kulim 56.05 281 P **P 19 55 54.2 -0.8**
KULM IAmb IAmb 19 56 02.8
comp=Z,27nm,1.5s
ENH Enshi 57.57 313 P **P 19 56 05.4 -0.2**
ENH IAmb IAmb 19 56 06.4
comp=Z,7.4nm,1.0s
SLVN Son La 57.88 300 P **P 19 56 07.7 -0.2**
SLVN IAmb IAmb 19 56 09.8
comp=Z,8.2nm,0.9s
GSI Gunungsitoli 58.35 276 P **P 19 56 11.2 -0.2**
PBKT Sadao Pong 58.76 294 P **P 19 56 14.5 +0.5**
PBKT IAmb IAmb 19 56 15.9
comp=Z,12nm,0.7s
KLR Kul'dur 59.69 342 P **P 19 56 19.9 +0.1**
comp=Z,1nm,0.6s,baz=153,slow=3.0,SNR=12
PEA0B Petropavlovsk- 59.88 2 P **P 19 56 22.1 +1.0**
PETK Petropavlovsk- 59.88 2 P **P 19 56 21.8 +0.8**
comp=Z,18nm,0.8s,baz=168,slow=7.6,SNR=17
XAN Xi'an 60.02 316 P **P 19 56 22.1 -0.4**
XAN pP pP 19 56 35.3 -1.1
XAN pmax pmax
comp=Z,10.0nm,0.7s
XAN Xi'an 60.02 316 P **P 19 56 22.0 -0.6**
XAN IAmb IAmb 19 56 23.4
comp=Z,7.3nm,0.7s
KMI Kunming 60.40 304 P **P 19 56 23.1 -2.4**
KMI pmax pmax
comp=Z,27nm,1.0s
KMI Kunming 60.40 304 P **P 19 56 25.6 +0.1**
KMI IAmb IAmb 19 56 27.5
comp=Z,12nm,1.0s
CM31 Chiang Mai Arr 61.20 295 P **P 19 56 31.4 +0.6**
CMAR Chiang Mai Arr 61.20 295 P **P 19 56 31.6 +0.8**
comp=Z,20nm,0.8s,baz=119,slow=5.1,SNR=176
CMAR PcP **PcP 19 57 14.2 +0.9**
comp=Z,2.5nm,0.7s,baz=114,slow=2.9,SNR=4.2
CHTO Chiang Mai 61.32 296 P **P 19 56 32.0 +0.4**
ADK Adak 63.29 19 P **P 19 56 44.5 +0.4**
MA2 Magadan 66.44 357 P **P 19 57 04.5 +0.1**
MA2 IAmb IAmb 19 57 09.6
comp=Z,12nm,0.8s
NIKH Nikolski High 66.94 23 P **P 19 57 07.8 +0.1**
NIKH IAmb IAmb 19 57 09.0
comp=Z,14nm,0.8s
AKUT Akutan 69.02 23 P **P 19 57 20.1 -0.7**
GTA Gaotai 69.05 317 *e*P **P 19 57 21.9 +0.4**
GTA pP pP 19 57 34.9 -0.6
GTA sP sP 19 57 40.6 -0.5
GTA pmax pmax
comp=Z,3.0nm,1.2s
GTA pmax pmax
comp=Z,86nm,8.4s
GTA LR LR
comp=Z,370nm,23.5s
GTA LR LR
comp=Z,170nm,22.2s
GTA LR LR
comp=Z,180nm,20.9s
ULN Ulaanbaatar 69.24 327 P **P 19 57 22.8 +0.3**
SONM Songino Array 69.57 327 P **P 19 57 25.0 +0.4**
comp=Z,7.6nm,0.9s,baz=132,slow=6.0,SNR=43
SONM PKP2bc 20 25 33.0
comp=Z,1.0nm,0.8s,baz=306,slow=2.8,SNR=4.3
SEY Seymchan 69.74 358 P **P 19 57 25.5 +0.4**
comp=Z,4.0nm,0.9s,baz=174,slow=5.0,SNR=11
VNDA Vanda 70.59 179 P **P 19 57 30.4 +0.2**
comp=Z,1.3nm,0.8s,baz=325,slow=8.2,SNR=4.0
VNDA Vanda 70.59 179 P **P 19 57 31.1 +0.9**
YAK Yakutsk 71.64 348 P **P 19 57 37.1 +0.5**
comp=Z,9.0nm,0.8s,baz=144,slow=0.2,SNR=13
YAK Yakutsk 71.64 348 P **P 19 57 36.9 +0.3**
YAK IAmb IAmb 19 57 41.1
comp=Z,18nm,0.8s
LSA Lhasa 71.65 304 P **P 19 57 39.2 +1.2**
LSA pmax pmax
comp=Z,42nm,0.9s
LSA Lhasa 71.65 304 P **P 19 57 37.9 -0.1**
LSA IAmb IAmb 19 57 40.3
comp=Z,8.3nm,0.8s
TAPN Taplejung 73.80 301 *e*P **P 19 57 50.0 -0.6**
comp=Z,62nm,1.0s
ODAN Odare 73.93 300 *e*P **P 19 57 51.2 -0.1**
comp=Z,66nm,0.7s
RAMN Ramite 74.63 300 *e*P **P 19 57 55.0 -0.4**
comp=Z,12nm,0.7s
JIRN Jiri 75.18 301 *e*P **P 19 57 59.1 +0.4**
BILL Bilibino 75.22 4 P **P 19 57 58.0 +0.4**
BILL IAmb IAmb 19 58 01.6
comp=Z,23nm,1.2s
GUN Gumba 75.51 301 *e*P **P 19 58 00.4 -0.2**
comp=Z,38nm,0.7s
PKI Pulchoki 75.82 301 *e*P **P 19 58 01.9 -0.4**
PKIN Phulchoki 75.83 301 *e*P **P 19 58 01.7 -0.6**
comp=Z,26nm,1.0s
KKN Kakani 75.99 301 *e*P **P 19 58 02.8 -0.4**
comp=Z,24nm,0.8s
DMN Daman 76.09 301 *e*P **P 19 58 03.5 -0.3**
comp=Z,54nm,1.0s
GKN Gorkha 76.60 301 *e*P **P 19 58 06.2 -0.3**
KDAK Kodiak Island 76.94 26 P **P 19 58 06.9 -0.6**
comp=Z,8.1nm,0.9s,baz=209,slow=7.9,SNR=5.6
KDAK Kodiak Island 76.94 26 P **P 19 58 07.9 +0.4**
KDAK IAmb IAmb 19 58 08.8
comp=Z,15nm,1.1s
ANM Nome 77.07 16 P **P 19 58 08.8 +0.6**
ANM IAmb IAmb 19 58 12.5
comp=Z,12nm,0.8s
KOLN Koldanda 77.42 300 *e*P **P 19 58 10.8 -0.4**
DANN Dangsing 77.43 301 *e*P **P 19 58 10.3 -1.1**
comp=Z,13nm,0.6s
PYUN Piuthan 78.03 301 *e*P **P 19 58 13.9 -0.7**
WMQ Urumqi 79.13 317 *e*P **P 19 58 21.4 +1.2**
WMQ LR LR
comp=Z,480nm,23.1s
WMQ LR LR
comp=Z,390nm,20.9s
WMQ LR LR
comp=Z,490nm,21.3s
HYB Hyderabad 79.71 289 *i* P **P 19 58 23.0 -0.8**
HYB *es*P **sP 19 58 42.0 -0.9**
RC01 Rabbit Creek A 80.05 24 IAmb IAmb 19 58 27.3
comp=Z,14nm,1.1s
PPLA Purkeypile 80.17 22 P **P 19 58 25.8 +0.3**
TIXI Tiksi 80.40 352 P **P 19 58 26.1 -0.2**
PMR Palmer 80.58 24 IAmb IAmb 19 58 28.4
comp=Z,12nm,0.9s
HIN Hinchinbrook I 81.00 25 IAmb IAmb 19 58 31.1
comp=Z,16nm,1.0s
KTH Kantishna Hill 81.03 21 IAmb IAmb 19 58 30.7
comp=Z,12nm,1.1s
TRF Thorofare Moun 81.20 22 IAmb IAmb 19 58 33.0
comp=Z,9.2nm,0.8s
RND Reindeer 81.70 22 IAmb IAmb 19 58 34.1
comp=Z,12nm,0.7s
MLY Manley 81.96 20 P **P 19 58 35.0 +0.2**
MLY IAmb IAmb 19 58 35.9
comp=Z,5.8nm,0.6s
DHY Denali Highway 82.08 23 IAmb IAmb 19 58 39.5
comp=Z,8.7nm,0.7s
NEA Nenana 82.28 21 IAmb IAmb 19 58 36.8
comp=Z,7.9nm,0.7s
WRH Wood River Hil 82.58 21 IAmb IAmb 19 58 52.8
comp=Z,16nm,1.4s
GLB Gilahina Butte 82.67 25 IAmb IAmb 19 58 40.6
comp=Z,13nm,0.8s
VRDI Verde Repeater 82.71 25 IAmb IAmb 19 58 40.5
comp=Z,8.5nm,0.9s
QSPA South Pole Qui 83.00 180 P **P 19 58 40.9 +0.5**
QSPA IAmb IAmb 19 58 42.0
comp=Z,8.6nm,0.8s
BALM Baldy 83.10 26 IAmb IAmb 19 58 43.2
comp=Z,10nm,1.0s
ILAR Eielson Array 83.18 21 P **P 19 58 40.1 -1.0**
comp=Z,4.9nm,0.9s,baz=255,slow=4.9,SNR=38
ILAR LR LR 20 30 33.5
comp=Z,158nm,21.9s,baz=260,slow=32
BARN Barnard Glacie 83.40 26 IAmb IAmb 19 58 44.4
comp=Z,13nm,0.8s
DOT Dot Lake 83.65 23 IAmb IAmb 19 58 44.9
comp=Z,11nm,0.8s
MK31 Makanchi Array 83.70 319 P **P 19 58 44.0 -0.3**
MK31 IAmb IAmb 19 58 49.9
comp=Z,5.5nm,0.7s
MKAR Makanchi Array 83.70 319 P **P 19 58 44.0 -0.2**
comp=Z,7.5nm,0.7s,baz=107,slow=5.5,SNR=38
MAKZ Makanchi 83.91 319 P **P 19 58 44.6 -0.8**
MAKZ IAmb IAmb 19 58 50.9
comp=Z,7.5nm,0.7s
ZAA0 Zalesovo Array 84.43 326 P **P 19 58 46.5 -1.2**
ZALV Zalesovo Beam 84.43 326 P **P 19 58 46.0 -1.7**
comp=Z,1.8nm,0.6s,baz=111,slow=6.5,SNR=13
TOLK Toolik Lake Re 84.45 18 P **P 19 58 48.3 +0.7**
MAW Mawson 84.60 203 P **P 19 58 47.4 -1.0**
comp=Z,2.2nm,0.3s,baz=94,slow=21,SNR=7.4
MAW Mawson 84.60 203 P **P 19 58 48.1 -0.3**
EGAK Eagle 85.31 23 IAmb IAmb 19 58 53.7
comp=Z,7.2nm,0.8s
KSH Kashi 86.36 310 P **P 19 59 02.2 +4.3**
KSH PP **PP 20 02 22.1 +2.4**
KSH SKS S 20 09 16.6 -13
KSH S **SKKSac 20 09 29.6 +1.2**
KSH pmax pmax
comp=Z,20nm,1.1s
KSH pmax pmax
comp=Z,140nm,4.1s
KSH LR LR
comp=Z,110nm,11.1s
KSH LR LR
comp=Z,160nm,14.3s
KSH LR LR
comp=Z,330nm,10.3s
KURK Kurchatov 87.11 322 P **P 19 59 00.5 -0.6**
NIL Nilore 87.39 304 P **P 19 59 02.4 -0.5**
NIL IAmb IAmb 19 59 03.5
comp=Z,9.6nm,1.1s
INK Inuvik 89.53 21 P **P 19 59 12.4 +0.3**
NVAR Mina Array Bea 91.33 52 P **P 19 59 21.8 +0.3**
comp=Z,1.7nm,0.9s,baz=274,slow=7.0,SNR=7.0
SYO Syowa Base 92.50 199 *i es*P sP 19 59 44.2 -1.4
BRVK Borovoye 92.63 323 P **P 19 59 26.6 -0.3**
YKA Yellowknife Ar 96.09 28 P **P 19 59 42.9 +0.3**
comp=Z,3.9nm,0.9s,baz=259,slow=4.2,SNR=29
YKA PKiKP **PKiKP 20 04 20.8 0.0**
comp=Z,0.2nm,0.6s,baz=273,slow=1.2,SNR=2.4
PDAR Pinedale Array 98.33 48 P **P 19 59 53.0 -0.5**
comp=Z,1.3nm,0.9s,baz=228,slow=3.6,SNR=11
ARCES ARCESS Array B 109.70 343 PKiKP **PKiKP 20 04 45.5 0.0**
comp=Z,1.9nm,0.8s,baz=107,slow=1.3,SNR=7.5
FINES FINESS Array B 114.11 336 PKiKP PKPdf 20 04 53.7 -0.4
comp=Z,1.4nm,0.7s,baz=97,slow=9.8,SNR=7.4
FINES PKKPbc **PKKPbc 20 15 34.8 -2.7**
comp=Z,1.3nm,1.0s,baz=180,slow=1.9,SNR=4.1
PLCA Paso Flores 116.45 142 PKP **PKPdf 20 04 58.9 -0.5**
comp=Z,2.7nm,0.8s,baz=265,slow=12,SNR=1.6
PLCA Paso Flores 116.45 142 PKPdf 20 04 59.3 -0.1
AKASG Malin Array Be 117.80 325 PKP **PKPdf 20 05 01.0 -0.4**
comp=Z,1.1nm,0.6s,baz=64,slow=2.3,SNR=7.5
NB2 NORSAR Subarra 119.83 341 PKPdf **PKPdf 20 05 05.2 0.0**
comp=Z,1.0nm,0.7s,baz=39,slow=1.8
NOA NORSAR Array B 119.83 341 PKP **PKPdf 20 05 04.5 -0.6**
comp=Z,1.2nm,0.7s,baz=45,slow=1.9,SNR=12
BOSA Boshof 120.41 231 PKP **PKPdf 20 05 07.0 -0.4**
comp=Z,1.2nm,0.7s,baz=24,slow=7.7,SNR=3.1
BOSA Boshof 120.41 231 PKiKP 20 05 07.9 +0.4
KOLS Kolonicke sedl 122.60 325 *e*PKP **PKiKP 20 05 11.6 +0.6**
MORC Moravsky Berou 124.72 328 *e*PKP **PKiKP 20 05 15.3 +0.1**
VYHS Vyhne 124.76 326 *e*PKP **PKiKP 20 05 15.5 +0.2**
JAVC Velka Javorina 125.19 327 *e*PKP **PKiKP 20 05 17.2 +1.0**
KRUC Moravsky 125.75 328 *e*PKP **PKiKP 20 05 17.3 +0.1**
BRG Berggiesshubel 125.85 331 *e*PKP **PKiKP 20 05 17.4 0.0**
comp=Z,5.5nm,0.9s
CLL Collm 126.02 332 *e*PKPdf **PKiKP 20 05 19.0 +1.3**
comp=Z,5.0nm,0.9s
FNA Florina 127.09 317 PKPdf 20 05 19.6 -0.2
KHC Kasperske Hory 127.16 329 *e*PKPDF **PKiKP 20 05 20.0 -0.1**
KHC Kasperske Hory 127.16 329 PKPdf 20 05 19.7 +0.1
PB07 IPOC Station P 127.17 124 PKPdf 20 05 20.8 +0.2
GEC2 GERESS Array S 127.28 329 PKPdf 20 05 20.1 +0.2
GERES GERESS Array B 127.28 329 PKP **PKiKP 20 05 20.7 +0.3**
comp=Z,2.5nm,0.7s,baz=64,slow=3.1,SNR=24
PB08 IPOC Station P 128.50 122 PKiKP 20 05 23.9 -0.2
MNMC Minye Minye 128.58 121 PKPdf 20 05 23.7 +0.3
NRCA Norcia 131.29 323 PKPdf 20 05 27.4 -0.3
CPUP Villa Florida 134.08 137 PKP **PKPdf 20 05 32.4 -1.0**
comp=Z,2.4nm,0.7s,baz=324,slow=3.1,SNR=5.3
CPUP Villa Florida 134.08 137 PKPdf 20 05 33.4 +0.1
SDV Santo Domingo 134.31 84 PKPdf 20 05 34.2 -0.1
MVO Moncorvo 142.55 338 *e*PKP **PKPdf 20 05 46.6 -1.9**
ESDC Sonseca Array 142.56 334 PKhKP PKPpre 20 05 45.2
comp=Z,1.2nm,0.9s,baz=0.5,slow=3.3,SNR=8.3
PVIS Viseu 143.26 339 *e*PKP PKPbc 20 05 47.1 +0.3
MTE Manteigas 143.41 338 *e*PKP PKPbc 20 05 48.2 +0.9
PCBR Castelo Branco 143.87 337 *e*PKP PKPbc 20 05 49.6 +1.1
PMRV Marv??o 144.19 337 *e*PKP PKPbc 20 05 50.0 +0.4
HORN Hornachuelos 144.64 333 P **PKPdf 20 05 51.8 -0.4**
SNR=7.6
PSBE So Bento 144.64 339 *e*PKP **PKPdf 20 05 51.9 -0.3**
PMTG Montargil 144.82 338 *e*PKP **PKPdf 20 05 52.1 -0.4**
EVO Evora 145.21 337 *e*PKP **PKPab 20 05 53.0 +0.1**
PMAFR Mafra 145.31 339 *e*PKP **PKPab 20 05 53.8 +0.5**
PBEJ Beja 145.59 336 *e*PKP **PKPab 20 05 55.2 +0.9**
PNCL Nicolau / Gran 145.78 337 *e*PKP **PKPab 20 05 55.6 +0.6**
MESJ Messejana 145.89 337 *e*PKP **PKPab 20 05 56.2 +0.8**
PCVE Castro Verde 146.00 336 *e*PKP **PKPbc 20 05 55.5 +0.2**
PVAQ Vaqueiros 146.06 336 *e*PKP **PKPab 20 05 56.5 +0.4**
PVAQ Vaqueiros 146.06 336 PKPab 20 05 56.7 +0.6
PTEO Sao Teotonio 146.34 337 *e*PKP **PKPab 20 05 57.4 +0.2**
SMIR Smir Dam 146.46 331 P **PKPbc 20 05 57.0 +0.2**
SNR=6.5
CHEFC Chefchaouen 146.90 330 P **PKPab 20 05 59.0 -0.6**
SNR=9.1
TAM Tamanrasset 147.08 302 PKPbc 20 05 59.4 +0.3
BDFB Brasilia 147.66 134 PKPbc **PKPdf 20 05 59.1 +1.1**
comp=Z,19nm,0.6s,baz=229,slow=1.3,SNR=24
CZD Col de Zad 148.38 328 P **PKPab 20 06 05.0 -0.8**
SNR=6.7
TZRR Tazzarine 150.39 326 P **PKiKP 20 06 09.0 +0.9**
SNR=6.4
ZGR Zagora 150.92 325 P **PKiKP 20 06 10.0 +0.7**
SNR=9.8
TORD Torodi Ar. Bea 153.48 285 PKP **PKPdf 20 06 06.7 -0.2**
comp=Z,0.7nm,0.8s,baz=44,slow=0.8,SNR=3.5
TORD PKPbc **PKPbc 20 06 14.0 -0.6**
comp=Z,2.2nm,0.7s,baz=48,slow=2.0,SNR=11

*IDC **10** 20:07:45.1±0.5, 14.58N×123.72E, h0km, mb4.0/27, mb1 4.2/29, mb1mx4.1/56, mbtmp4.1/29, ML4.4/2, MS4.1/27, Ms1 4.1/27, ms1mx4.0/40, Error ellipse: s-maj=20.7km s-min=11.0km az=76.0*
*NEIC **10** 20:07:47.1±1.5, 14.55N±0.06×123.72E±0.08, h15km±1km, mb4.8/71, Error ellipse: s-maj=11.7km s-min=9.1km az=90.0*
*MAN **10** 20:07:47.8, 14.84N×123.88E, h16km, mb5.5, ML4.5, MS4.8*
*BJI **10** 20:07:49.2±0.0, 14.70N×123.70E, h10km, mB4.9/58, mb4.5/61, Ms4.5/59, Ms7 4.2/52*
*GCMT **10** 20:07:50.1±0.2, 14.80N±0.01×123.88E±0.02, h27km±1km, MW5.0/112, Moment Tensor Solution. s43,c48; s112,c166; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.58±.16; $M_{\theta\theta}$3.74±.12; $M_{\phi\phi}$-4.32±.13; $M_{r\theta}$-1.43±.23; $M_{\theta\phi}$-0.90±.10; $M_{\phi r}$1.81±.27; Best double couple: M_o4.74500×10^{16} NP1:ϕ_s231.00000°,δ60.00000°,*

λ175.00000°. NP2:φ∞323.00000°,δ86.00000°,λ30.00000°. Principal axes: T 4.5530, Plg24.0000°, Azm191.0000°; N 0.3810, Plg60.0000°, Azm330.0000°; P -4.9360, Plg17.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

KLM ***10*** *20:07:53.0, 14.77N×123.99E, h81km, mb4.8*

DJA ***10*** *20:07:55.6±0.4, 15°N±3°×12°4E±°, h82km±5km, M4.6/37, mb4.7/37, mB5.0/18, MLv5.5/1, Mw(mB)4.3/18*

ISC 10 20:07:46.4±1.2, 14.57N±0.03×123.75E±0.04, h5km±7km, n226, σ2²12/212, mb4.7/78, MS4.1/37, 11C-6D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**1.04**	**158**	*e*P	**Pn**	**20 08 09.8**	**+2.1**
PVCP				*e*S	**Sn**	**20 08 27.2**	**+4.5**
GQP	**Guinayangan**	**1.43**	**243**↑	*e*P	**Pg**	**20 08 16.4**	**+2.6**
GQP				*i* S	**Sg**	**20 08 38.2**	**+5.8**
POLP	**Polilio Island**	**1.76**	**275**	*e*P	**Pb**	**20 08 19.2**	**-0.1**
POLP				*e*S	**Sg**	**20 08 43.7**	**+0.6**
LQP	**Lukban**	**2.19**	**258**↑	*e*P	**Pb**	**20 08 26.6**	**-0.1**
LQP				*i* S	**Sg**	**20 08 59.7**	**+2.7**
MMPH	**Masbate**	**2.20**	**183**↑	*e*P	**Pg**	**20 08 29.6**	**+1.0**
MMPH				*e*S	**Sg**	**20 09 01.4**	**+4.2**
CNP	**Catarman**	**2.23**	**156**	*e*P	**Pb**	**20 08 27.8**	**+0.6**
CNP				*e*S	**Sg**	**20 08 57.9**	**-0.2**
PCPH	**Palayan**	**2.75**	**291**↑	*e*p	**Pn**	**20 08 29.8**	**-1.5**
OTRP	**Odiongan**	**2.77**	**218**	*e*P	**Pb**	**20 08 35.8**	**-0.6**
OTRP				*e*S	**Sb**	**20 09 07.9**	**-2.7**
TGY	**Tagaytay City**	**2.77**	**261**	Pn	**Pb**	**20 08 35.4**	**-1.1**
	216nm,0.3s,baz=82,slow=1.5,SNR=6.5						
TGY				Lg	Lg	20 09 15.1	
	789nm,0.3s,baz=113,slow=6.0,SNR=5.5						
TGY				LR	LR	20 09 40.8	
	comp=Z,3μm,18.9s,baz=220,slow=42						
PGP	**Puerto Galera**	**2.92**	**249**↓	*e*P	**Pb**	**20 08 36.3**	**-2.6**
RCP	**Roxas**	**3.15**	**198**↑	*e*P	**Pb**	**20 08 42.8**	**-0.1**
OCLP	**Ormoc**	**3.59**	**166**	*e*P	**Pb**	**20 08 48.1**	**-2.4**
GUIM	**Jordan**	**4.08**	**196**	*e*P	**Pb**	**20 08 54.6**	**-4.2**
JAP	**San Jose, Anti**	**4.19**	**205**↑	*e*P	**Pb**	**20 08 58.3**	**-2.4**
LLP	**Lapu-Lapu**	**4.23**	**177**	*e*P	**Pn**	**20 08 54.9**	**+3.3**
LLP				*e*S	**Sb**	**20 09 56.7**	**+3.9**
SZP	**Santa**	**4.34**	**314**		**Pn**	**20 08 52.7**	**-0.4**
MSLP	**Maasin**	**4.54**	**166**	*e*P	Pb	20 09 01.2	-5.4
MSLP				*e*S	**Sb**	**20 09 56.3**	**-5.4**
TBP	**Tagbilaran**	**4.85**	**179**	*e*P	**Pb**	**20 09 09.8**	**-2.1**
TBP	**Tagbilaran**	**4.85**	**179**	*e*P	**Sn**	**20 10 00.0**	**+3.3**
SNPH	**Sibulan**	**5.22**	**180**	*e*P	Pb	20 09 13.4	-4.8
ENPP	**El Nido**	**5.38**	**232**	*e*P	**Pn**	**20 09 06.8**	**-0.6**
KCP	**Kidapawan**	**7.63**	**170**↓	*e*P	Pb	20 09 49.2	-10
DAV	**Davao City (W)**	**7.67**	**166**	LR	LR	20 13 32.7	
	comp=Z,4μm,18.4s,baz=2.5,slow=45						
TWG	**Pinlang**	**8.59**	**343**		**Pn**	**20 09 49.0**	**-2.5**
YULB	**Yu-li**	**9.08**	**346**		**Pn**	**20 09 55.5**	**-2.7**
TPUB	**Ta-pu**	**9.17**	**342**		**Pn**	**20 09 58.4**	**-1.1**
TPUB				Sn	**Sn**	**20 11 44.0**	**+0.8**
SSLB	**Suanglung**	**9.54**	**344**		**Pn**	**20 10 03.6**	**-1.0**
YOJ	**Yonaguni jima**	**9.87**	**356**	Pn	**Pn**	**20 10 07.0**	**-2.0**
TATO	**Taipei**	**10.57**	**349**	Pn	**Pn**	**20 10 17.6**	**-1.0**
KKM	**Kota Kinabalu**	**11.26**	**222**	Pn	**Pn**	**20 10 26.5**	**-1.6**
KMSI	**Cibinong**	**13.91**	**179**	P	**P**	**20 11 12.9**	**+0.2**
	48nm,0.8s						
QIZ	**Qiongzhong**	**14.04**	**290**	P	**Pn**	**20 11 03.4**	**-2.7**
QIZ				S	**Sn**	**20 13 40.3**	**-2.1**
QIZ				LR	LR		
	comp=N,600nm,14.6s						
QIZ				LR	LR		
	comp=E,930nm,17.0s						
QIZ				LR	LR		
	comp=Z,930nm,19.5s						
MRSI	**Marisa**	**14.12**	**187**	P	**P**	**20 11 15.0**	**0.0**
	comp=Z,520nmcomp=Z,34nm,1.5s						
TNTI	**Ternate**	**14.17**	**165**	P	**P**	**20 11 15.0**	**-0.6**
	comp=Z,420nmcomp=Z,28nm,1.1s						
TNTI	**Ternate**	**14.17**	**165**		**Pn**	**20 11 04.5**	**-3.4**
MPSI	**Mapaga**	**14.64**	**195**	P	**P**	**20 11 22.4**	**+1.5**
	comp=Z,370nmcomp=Z,16nm,1.3s						
DLV	**T Lat**	**15.09**	**262**		**Pn**	**20 11 20.2**	**-0.4**
APSI	**Ampana**	**15.52**	**188**	P	**P**	**20 11 33.1**	**+2.5**
	comp=Z,896nmcomp=Z,58nm,0.8s						
LUWI	**Luwuk**	**15.54**	**184**	P	**P**	**20 11 32.5**	**+1.6**
	comp=Z,2μmcomp=Z,174nm,1.0s						
LUWI	**Luwuk**	**15.54**	**184**		**Pn**	**20 11 25.5**	**-0.9**
LBMI	**Labuha**	**15.56**	**166**	P	**P**	**20 11 34.1**	**+3.0**
	comp=Z,916nmcomp=Z,24nm,2.2s						
SBUM	**Sibu**	**16.57**	**224**	P	**Pn**	**20 11 40.2**	**+0.5**
SBUM	**Sibu**	**16.57**	**224**	P	**P**	**20 11 44.0**	**+1.7**
SIJI	**Sorong**	**17.05**	**154**	P	**P**	**20 11 47.3**	**-0.3**
	comp=Z,1.9nm,0.3s,baz=353,slow=12,SNR=8.4						
BKB	**Balikpapan**	**17.13**	**204**		**Pn**	**20 11 44.2**	**-2.6**
BKB				IAmb	IAmb	20 11 57.3	
	comp=Z,60nm,1.1s						
TTSI	**Tana Toraja**	**17.93**	**193**	P	**P**	**20 12 01.8**	**+4.5**
	comp=Z,686nmcomp=Z,50nm,0.8s						
NJ2	**Nanjing**	**17.97**	**346**	*e*P	**Pn**	**20 11 56.6**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
WHN	**Wuhan**	**18.10**	**333**	⇑P	**P**	**20 12 05.9**	**+6.8**
WHN				S	**S**	**20 15 26.4**	**-0.6**
WHN				LR	LR		
	comp=Z,4μm,26.9s						
WHN				LR	LR		
	comp=Z,3μm,21.6s						
WHN				LR	LR		
	comp=Z,1μm,17.0s						
MSAI	**Masohi**	**18.52**	**164**	P	Pn	20 12 11.2	+7.2
KSM	**Kuching**	**18.59**	**227**	P	**P**	**20 12 02.9**	**-1.8**
KSM	**Kuching**	**18.59**	**227**	P	**Pn**	**20 12 07.0**	**+2.1**
SPSI	**Sidrap Palu**	**18.83**	**192**	P	**Pn**	**20 12 10.1**	**+2.3**
	comp=Z,660nmcomp=Z,47nm,0.9s						
BNSI	**Bone**	**19.19**	**191**	P	**Pn**	**20 12 15.1**	**+3.0**
	comp=Z,960nmcomp=Z,78nm,1.1s						
FAKI	**Fak Fak**	**19.31**	**153**	P	**Pn**	**20 12 17.0**	**+3.5**
FAKI	**Fak Fak**	**19.31**	**153**		**Pn**	**20 12 13.3**	**-0.2**
JNU	**Nakatsue**	**19.57**	**18**	LR	LR	20 20 18.4	
	comp=Z,476nm,18.5s,baz=200,slow=38						
KAPI	**Kapang**	**19.86**	**192**	P	**P**	**20 12 18.3**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=352,slow=11,SNR=4.1						
KAPI				LR	LR	20 20 23.8	
	comp=Z,882nm,20.9s,baz=28,slow=38						
KAPI	**Kappang**	**19.86**	**192**	P	**P**	**20 12 17.9**	**-0.6**
KAPI				IAmb	IAmb	20 12 26.9	
	comp=Z,66nm,1.2s						
GYA	**Guiyang**	**19.87**	**309**↑	*i*P	**Pn**	**20 12 20.5**	**+0.1**
GYA				PP	**PnPn**	**20 12 35.8**	**+1.5**
GYA				S	**S**	**20 15 59.6**	**-3.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,220nm,5.5s						
GYA				LR	LR		
	comp=Z,490nm,13.2s						
GYA				LR	LR		
	comp=Z,510nm,13.4s						
GYA				LR	LR		
	comp=Z,800nm,14.6s						
BNDI	**Bandanaira**	**19.93**	**162**	P	Pn	20 12 28.0	+7.1
BBSI	**Bau Bau**	**19.96**	**183**	P	**Pn**	**20 12 28.0**	**+6.7**
SLVN	**Son La**	**20.03**	**292**	P	**P**	**20 12 20.0**	**-0.5**
BKSI	**Bulukumba**	**20.09**	**191**	P	Pn	20 12 27.9	+5.1
ENH	**Enshi**	**20.41**	**322**	P	**P**	**20 12 22.9**	**-1.6**
GUMO	**Guam**	**20.51**	**90**	P	**P**	**20 12 25.8**	**+0.1**
JCJ	**Chichijima**	**21.23**	**51**	LR	LR	20 18 53.6	
	comp=Z,432nm,21.9s,baz=285,slow=32						
PBKT	**Sadao Pong**	**22.04**	**278**	P	**P**	**20 12 40.4**	**-1.7**
PBKT				IAmb	IAmb	20 12 54.1	
	comp=Z,49nm,1.2s						
SMPI	**Sarmi**	**22.14**	**137**	P	**P**	**20 12 46.0**	**+2.8**
	comp=Z,28nm,1.7s						
KMI	**Kunming**	**22.35**	**301**	P	**P**	**20 12 45.3**	**-0.4**
KMI				S	**S**	**20 16 44.1**	**-8.0**
KMI				pmax	pmax		
	comp=Z,20nm,1.1s						
KMI				pmax	pmax		
	comp=Z,260nm,3.6s						
KMI				LR	LR		
	comp=Z,790nm,18.3s						
KMI				LR	LR		
	comp=Z,500nm,21.6s						
KMI				LR	LR		
	comp=Z,990nm,15.8s						
TIA	**Tai'an**	**22.36**	**346**	P	**P**	**20 12 50.8**	**+5.4**
TIA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSRS	**Korea Array**	**23.09**	**8**	P	**P**	**20 12 51.8**	**-1.3**
	comp=Z,1.8nm,1.0s,baz=180,slow=11,SNR=5.2						
KSRS				LR	LR	20 21 11.3	
	comp=Z,511nm,21.4s,baz=197,slow=35						
MMRI	**Maumere**	**23.10**	**184**	P	**P**	**20 12 57.1**	**+3.7**
	comp=Z,63nm,1.8s						
MMRI	**Maumere**	**23.10**	**184**	P	**P**	**20 12 53.2**	**-0.2**
KS19	**Wonju Array Si**	**23.13**	**8**	P	**P**	**20 12 54.3**	**+0.8**
KS19				IAmb	IAmb	20 13 01.8	
	comp=Z,40nm,1.3s						
EDFI	**Ende, Flores**	**23.26**	**185**	P	**P**	**20 12 59.2**	**+4.1**
	comp=Z,32nm,0.8s						
MYKOM	**Kota Tinggi**	**23.40**	**239**	P	**P**	**20 12 55.5**	**-1.0**
JHJ	**Hachijo jima 2**	**23.52**	**35**	LR	LR	20 20 22.3	
	comp=Z,992nm,20.4s,baz=245,slow=32						
XAN	**Xi'an**	**23.58**	**328**	P	**P**	**20 12 57.0**	**-1.1**
XAN				S	**S**	**20 17 14.1**	**+1.1**
XAN				pmax	pmax		
	comp=Z,22nm,0.9s						
XAN				pmax	pmax		
	comp=Z,230nm,4.5s						
XAN				LR	LR		
	comp=Z,430nm,17.3s						
XAN				LR	LR		
	comp=Z,250nm,16.3s						
XAN				LR	LR		
	comp=Z,380nm,14.2s						
XAN	**Xi'an**	**23.58**	**328**	P	**P**	**20 12 56.9**	**-1.3**
XAN				IAmb	IAmb	20 13 06.2	
	comp=Z,20nm,0.9s						
JAY	**Jayapura**	**23.88**	**134**	LR	LR	20 21 36.9	
	comp=Z,330nm,20.9s,baz=346,slow=35						
INU	**Inuyama**	**23.88**	**28**	P	**P**	**20 12 59.9**	**-1.1**
INU				IAmb	IAmb	20 13 07.5	
	comp=Z,26nm,1.2s						
PLAI	**Plampang**	**23.99**	**195**	P	**P**	**20 13 03.4**	**+1.2**
	comp=Z,84nm,0.9s						
CM31	**Chiang Mai Arr**	**24.09**	**283**	P	**P**	**20 13 02.7**	**-0.5**
CMAR	**Chiang Mai Arr**	**24.09**	**283**	P	**P**	**20 13 02.9**	**-0.3**
	comp=Z,6.0nm,0.9s,baz=96,slow=7.9,SNR=33						
CMAR				LR	LR	20 23 35.1	
	comp=Z,514nm,18.4s,baz=103,slow=40						
CHTO	**Chiang Mai**	**24.13**	**284**	P	**P**	**20 13 01.7**	**-1.8**
CHTO				IAmb	IAmb	20 13 14.2	
	comp=Z,41nm,1.4s						
SOEI	**Soe**	**24.17**	**179**	P	**P**	**20 13 05.5**	**+1.5**
	comp=Z,49nm,1.1s						
SOEI	**Soe**	**24.17**	**179**	P	**P**	**20 13 03.1**	**-0.9**
SOEI				IAmb	IAmb	20 13 11.2	
	comp=Z,43nm,1.1s						
DL2	**Dalian**	**24.32**	**356**	P	**P**	**20 13 11.1**	**+6.1**
DL2				pmax	pmax		
	comp=Z,42nm,1.1s						
DL2				pmax	pmax		
	comp=Z,420nm,7.0s						
DL2				LR	LR		
	comp=Z,510nm,18.9s						
DL2				LR	LR		
	comp=Z,580nm,17.1s						
DL2				LR	LR		
	comp=Z,560nm,17.5s						
WBSI	**Waikabubak, Su**	**24.44**	**190**	P	**P**	**20 13 06.5**	**+0.1**
	comp=Z,1μmcomp=Z,88nm,1.0s						
CD2	**Chengdu**	**24.52**	**315**↓	*i*P	**P**	**20 13 07.1**	**0.0**
CD2				S	**S**	**20 17 27.3**	**-0.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,5.7s						
CD2				LR	LR		
	comp=Z,2μm,20.3s						
CD2				LR	LR		
	comp=Z,2μm,21.9s						
CD2				LR	LR		
	comp=Z,590nm,12.1s						
IPM	**Ipoh**	**24.52**	**248**	P	**P**	**20 13 05.0**	**-2.2**
IPM				IAmb	IAmb	20 13 20.6	
	comp=Z,19nm,0.9s						
IPM	**Ipoh**	**24.52**	**248**	P	**P**	**20 13 06.0**	**-1.2**
KULM	**Kulim**	**24.53**	**250**	P	**P**	**20 13 05.8**	**-1.4**
KULM	**Kulim**	**24.53**	**250**	P	**P**	**20 13 07.0**	**-0.2**
BATI	**Baumata**	**24.61**	**180**	P	**P**	**20 13 07.9**	**-0.1**
	comp=Z,81nm,0.9s,baz=346,slow=0.6,SNR=12						
BATI	**Baumata**	**24.61**	**180**	P	**P**	**20 13 09.0**	**+1.0**
	comp=Z,49nm,1.1s						
JAGI	**Jajag, Banyuwa**	**24.79**	**203**	P	**P**	**20 13 07.9**	**-1.7**
JAGI				IAmb	IAmb	20 13 14.6	
	comp=Z,19nm,0.8s						
TIY	**Taiyuan**	**25.15**	**339**	*e*P	P	20 13 19.9	+7.2
TIY				pmax	pmax		
	comp=Z,15nm,0.7s						
TIY				pmax	pmax		
	comp=Z,290nm,5.5s						
TIY				LR	LR		
	comp=Z,330nm,10.5s						
TIY				LR	LR		
	comp=Z,130nm,5.4s						
SMRI	**Semarang**	**25.21**	**212**	P	**P**	**20 13 12.7**	**-0.7**
MAJO	**Matsushiro**	**25.41**	**28**	P	**P**	**20 13 14.2**	**-0.7**
MAT	**Matsushiro**	**25.41**	**28**	P	**P**	**20 13 12.6**	**-2.4**
MJAR	**Matsushiro Arr**	**25.41**	**28**	P	**P**	**20 13 15.5**	**+0.5**
	comp=Z,3.4nm,1.0s,baz=208,slow=9.5,SNR=4.1						
MJAR				LR	LR	20 22 39.6	
	comp=Z,425nm,18.3s,baz=185,slow=35						
BJT	**Baijiatuan**	**26.21**	**347**	P	**P**	**20 13 20.3**	**-1.9**
BJI	**Beijing**	**26.23**	**347**	P	**P**	**20 13 27.8**	**+5.5**
BJI				S	**S**	**20 18 00.8**	**+5.7**
BJI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BJI				LR	LR		
	comp=Z,240nm,15.3s						
BJI				LR	LR		
	comp=Z,110nm,15.7s						
BKNI	**Bangkinang**	**26.55**	**240**	P	**P**	**20 13 24.6**	**-0.9**
LEM	**Lembang**	**26.61**	**218**	LR	LR	20 26 11.8	
	comp=Z,427nm,19.5s,baz=35,slow=42						
RPSI	**Rantau Prapat**	**27.19**	**247**	P	**P**	**20 13 30.8**	**-0.5**
RPSI				IAmb	IAmb	20 13 47.4	
	comp=Z,10.0nm,0.8s						
MNSI	**Mandailing Nat**	**27.54**	**242**	P	P	20 13 51.6	+17
KCSI	**Kotacane, Aceh**	**27.87**	**249**	P	P	20 13 50.6	+13
LZH	**Lanzhou**	**27.87**	**324**	*e*P	**P**	**20 13 36.0**	**-1.4**
LZH				sS	sS	20 18 27.3	+3.5
LZH				SS	**SnSn**	**20 19 38.4**	**+3.9**
LZH				pmax	pmax		
	comp=Z,30nm,1.0s						
LZH				pmax	pmax		
	comp=Z,150nm,4.9s						
LZH				LR	LR		
	comp=Z,790nm,12.3s						
LZH				LR	LR		
	comp=Z,590nm,12.0s						
LZH				LR	LR		
	comp=Z,990nm,14.5s						
MTN	**Manton Dam**	**28.20**	**165**	P	**P**	**20 13 38.1**	**-2.1**
MTN				IAmb	IAmb	20 13 40.8	
	comp=Z,30nm,1.5s						
HHC	**Hu-ho-hao-te**	**28.26**	**340**	P	**P**	**20 13 41.3**	**+0.6**
HHC				S	**S**	**20 18 29.7**	**+2.3**
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,86nm,6.7s						
HHC				LR	LR		
	comp=Z,290nm,16.5s						
HHC				LR	LR		
	comp=Z,160nm,14.2s						
HHC				LR	LR		
	comp=Z,210nm,16.3s						
GSI	**Gunungsitoli**	**29.03**	**245**	P	P	20 14 04.0	+16
GSI	**Gunungsitoli**	**29.03**	**245**	P	**P**	**20 13 46.1**	**-1.6**
GSI				IAmb	IAmb	20 14 00.9	
	comp=Z,39nm,1.4s						
CN2	**Changchun**	**29.17**	**3**	*e*P	**P**	**20 13 50.3**	**+1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USA0B	**Ussuriysk Arra**	**30.36**	**12**	P	**P**	**20 13 58.2**	**-1.0**
USA0B				IAmb	IAmb	20 14 07.8	
	comp=Z,12nm,0.9s						
USRK	**Ussuriysk Ar.**	**30.36**	**12**	P	**P**	**20 13 58.9**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=207,slow=9.1,SNR=5.1						
USRK				LR	LR	20 25 44.4	
	comp=Z,352nm,20.1s,baz=177,slow=36						
MDJ	**Mudanjiang**	**30.36**	**8**	P	**P**	**20 14 00.4**	**+1.2**
MDJ				pP	sP	20 14 09.5	+8.3
MDJ				sP	pP	20 14 12.6	+12
MDJ				S	**S**	**20 19 02.5**	**+2.4**
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,140nm,4.1s						
MDJ				LR	LR		
	comp=Z,430nm,19.2s						
MDJ				LR	LR		
	comp=Z,240nm,14.5s						
MDJ				LR	LR		
	comp=Z,650nm,18.6s						
KNRA	**Kununurra**	**30.46**	**170**	P	**P**	**20 13 59.1**	**-1.2**
GTA	**Gaotai**	**32.47**	**324**	*e*P	**P**	**20 14 20.8**	**+2.7**
GTA				pP	sP	20 14 25.2	+5.2
GTA				sP	pP	20 14 28.1	+8.7
GTA				S	**S**	**20 19 38.2**	**+4.6**
GTA				sS	sS	20 19 47.7	+12
GTA				pmax	pmax		
	comp=Z,72nm,6.5s						
GTA				LR	LR		
	comp=Z,240nm,14.9s						
GTA				LR	LR		
	comp=Z,300nm,14.6s						
GTA				LR	LR		
	comp=Z,300nm,15.2s						
FITZ	**Fitzroy Crossi**	**32.51**	**177**	P	**P**	**20 14 16.8**	**-1.5**
ASAJ	**Asahikawa**	**33.55**	**25**	LR	LR	20 28 17.9	
	comp=Z,285nm,19.4s,baz=248,slow=37						
LSA	**Lhasa**	**33.60**	**302**	P	**P**	**20 14 29.4**	**+1.0**
LSA	**Lhasa**	**33.60**	**302**	P	**P**	**20 14 28.3**	**-0.1**
LSA				IAmb	IAmb	20 14 39.3	
	comp=Z,24nm,1.3s						
KLR	**Kul'dur**	**35.18**	**9**	P	**P**	**20 14 40.5**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=255,slow=3.8,SNR=5.4						
KLR				LR	LR	20 28 49.0	
	comp=Z,200nm,20.4s,baz=198,slow=36						
WB0	**Warramunga Arr**	**35.69**	**163**	P	**P**	**20 14 44.7**	**-1.3**
WB0				IAmb	IAmb	20 14 46.6	
	comp=Z,17nm,0.9s						
WRA	**Warramunga Arr**	**35.84**	**163**	P	**P**	**20 14 46.3**	**-1.0**
	comp=Z,13nm,1.0s,baz=342,slow=9.8,SNR=37						
TAPN	**Taplejung**	**35.84**	**297**	*e*P	**P**	**20 14 49.8**	**+2.1**
	comp=Z,38nm,1.0s						
WB2	**Warramunga Arr**	**35.84**	**163**	P	**P**	**20 14 46.2**	**-1.1**
WB2				IAmb	IAmb	20 14 48.1	
	comp=Z,21nm,0.9s						
WR0	**Warramunga Arr**	**35.92**	**163**	P	**P**	**20 14 46.8**	**-1.1**
ULN	**Ulaanbaatar**	**35.97**	**341**	P	**P**	**20 14 47.2**	**-1.2**
ULN				IAmb	IAmb	20 14 56.8	
	comp=Z,19nm,0.9s						
ODAN	**Odare**	**36.01**	**296**	*e*P	**P**	**20 14 51.1**	**+2.0**
	comp=Z,66nm,0.8s						
PSA00	**Pilbara Seismi**	**36.12**	**186**	P	**P**	**20 14 48.5**	**-1.1**
SONM	**Songino Array**	**36.16**	**340**	P	**P**	**20 14 49.9**	**0.0**
	comp=Z,3.0nm,0.5s,baz=156,slow=9.3,SNR=28						
SONM				LR	LR	20 30 00.1	
	comp=Z,414nm,21.8s,baz=156,slow=37						
RAMN	**Ramite**	**36.72**	**296**	*e*P	**P**	**20 14 55.3**	**+0.2**
	comp=Z,33nm,0.7s						
JIRN	**Jiri**	**37.23**	**297**	*e*P	**P**	**20 15 01.2**	**+1.6**
	comp=Z,72nm,0.7s						
GUN	**Gumba**	**37.55**	**297**	*e*P	**P**	**20 15 02.4**	**+0.1**
	comp=Z,74nm,0.9s						
PKI	**Pulchoki**	**37.89**	**296**	*e*P	**P**	**20 15 04.5**	**-0.6**
	comp=Z,40nm,1.0s						
PKIN	**Phulchoki**	**37.90**	**296**	*e*P	**P**	**20 15 04.4**	**-0.8**
KKN	**Kakani**	**38.05**	**297**	*e*P	**P**	**20 15 04.5**	**-1.8**
DMN	**Daman**	**38.16**	**296**	*e*P	**P**	**20 15 08.1**	**+0.8**
	comp=Z,68nm,1.1s						
GKN	**Gorkha**	**38.65**	**297**	*e*P	**P**	**20 15 10.4**	**-0.9**
AS31	**Alice Springs**	**39.27**	**165**	P	**P**	**20 15 15.9**	**-0.5**
ASAR	**Alice Springs**	**39.28**	**165**	P	**P**	**20 15 15.8**	**-0.6**
	comp=Z,2.6nm,0.5s,baz=350,slow=13,SNR=54						
ASAR				LR	LR	20 31 50.1	
	comp=Z,131nm,21.4s,baz=328,slow=37						
DANN	**Dangsing**	**39.47**	**297**	*e*P	**P**	**20 15 17.4**	**-1.0**
	comp=Z,52nm,0.8s						
PYUN	**Piuthan**	**40.09**	**296**	*e*P	**P**	**20 15 22.6**	**-0.9**
	comp=Z,108nm,1.0s						
H11S3	**WAKE ISLAND Hy**	**41.28**	**78**	T	T	20 59 26.4	
	baz=271,slow=75,SNR=4499						
H11S1	**WAKE ISLAND Hy**	**41.29**	**78**	T	T	20 59 27.1	
	baz=271,slow=75,SNR=2946						
H11S2	**WAKE ISLAND Hy**	**41.29**	**78**	T	T	20 59 28.1	
	baz=271,slow=75,SNR=3923						
H11N1	**WAKE ISLAND Hy**	**41.46**	**77**	T	T	20 59 44.4	
	baz=268,slow=74,SNR=459						
H11N2	**WAKE ISLAND Hy**	**41.46**	**77**	T	T	20 59 42.1	
	baz=268,slow=74,SNR=587						
H11N3	**WAKE ISLAND Hy**	**41.48**	**77**	T	T	20 59 45.2	
	baz=268,slow=74,SNR=538						
WMQ	**Urumqi**	**42.35**	**321**	*e*P	**P**	**20 15 41.9**	**+0.3**
WMQ				sP	sP	20 15 49.0	+5.4
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,42nm,4.5s						
WMQ				LR	LR		
	comp=Z,310nm,18.3s						
WMQ				LR	LR		
	comp=Z,390nm,18.9s						
WMQ				LR	LR		
	comp=Z,490nm,21.7s						
MORW	**Morawa**	**44.02**	**190**	P	**P**	**20 15 53.5**	**-1.6**
MORW				IAmb	IAmb	20 16 07.7	
	comp=Z,16nm,1.1s						
FORT	**Forrest**	**45.28**	**175**	P	**P**	**20 16 04.1**	**-1.0**
FORT				IAmb	IAmb	20 16 23.1	
	comp=Z,15nm,0.8s						
PETK	**Petropavlovsk-**	**46.87**	**27**	P	**P**	**20 16 17.1**	**-0.5**
	comp=Z,4.0nm,0.8s,baz=208,slow=4.2,SNR=6.4						
MK31	**Makanchi Array**	**47.14**	**322**	P	**P**	**20 16 19.3**	**-0.5**
MK31				IAmb	IAmb	20 16 29.1	
	comp=Z,6.9nm,1.0s						
MKAR	**Makanchi Array**	**47.14**	**322**	P	**P**	**20 16 19.4**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=114,slow=9.2,SNR=8.8						
MKAR				LR	LR	20 35 16.8	
	comp=Z,219nm,19.7s,baz=132,slow=35						
NWAO	**Narrogin (SRO)**	**47.64**	**187**	P	**P**	**20 16 22.8**	**-0.9**
BBOO	**Buckleboo**	**48.56**

	comp=Z,8.2nm,1.1s							
GEYT	**Alibeck**	**62.04**	**305**	P		**P**	**20 18 07.8**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=132,slow=2.1,SNR=2.9							
GEYT				LR		LR	20 48 20.9	
	comp=Z,117nm,18.1s,baz=20,slow=39							
GYA0B	**ALIBECK ARRAY**	**62.04**	**305**	P		**P**	**20 18 06.7**	**-1.5**
AKTO	**Aktyubinsk**	**63.47**	**319**	P		**P**	**20 18 16.1**	**-1.4**
	comp=Z,1.2nm,0.7s,baz=110,slow=5.3,SNR=4.1							
ARU	**Arti**	**64.31**	**326**	P		**P**	**20 18 21.9**	**-0.9**
	comp=Z,1.3nm,0.4s,baz=140,slow=6.5,SNR=8.6							
ARU	**Arti**	**64.31**	**326**	P		**P**	**20 18 21.3**	**-1.5**
NIKH	**Nikolski High**	**64.90**	**38**	P		**P**	**20 18 25.9**	**-0.8**
SOCY	**Socotra**	**67.67**	**277**	P		**P**	**20 18 44.1**	**-1.3**
KBZ	**Khabaz**	**73.52**	**312**	P		**P**	**20 19 19.6**	**-0.8**
	comp=Z,1.0nm,0.6s,baz=151,slow=2.0,SNR=1.9							
RAYN	**Ar Rayn**	**73.73**	**291**	P		**P**	**20 19 21.0**	**-1.2**
RAYN				IAmb		IAmb	20 19 33.1	
	comp=Z,14nm,1.0s							
KLMR	**Klimovskoe**	**74.60**	**330**	*e*P		**P**	**20 19 25.0**	**-1.4**
KLMR				AMP			20 19 35.9	
	comp=Z,21nm,1.3s							
BPAW	**Bear Paw Mtn.**	**74.95**	**27**	P		**P**	**20 19 27.6**	**-0.8**
MLY	**Manley**	**75.02**	**26**	P		**P**	**20 19 28.2**	**-0.7**
MLY				IAmb		IAmb	20 19 37.9	
	comp=Z,7.6nm,0.8s							
TOLK	**Toolik Lake Re**	**75.33**	**22**	P		**P**	**20 19 29.7**	**-0.9**
TOLK				IAmb		IAmb	20 19 39.3	
	comp=Z,6.8nm,0.8s							
RND	**Reindeer**	**75.94**	**28**	P		**P**	**20 19 33.7**	**-0.5**
RND				IAmb		IAmb	20 19 42.1	
	comp=Z,7.5nm,0.8s							
ILAR	**Eielson Array**	**76.67**	**26**	P		**P**	**20 19 37.0**	**-1.3**
	comp=Z,0.1nm,0.5s,baz=263,slow=5.4,SNR=3.0							
PRP	**Porcupine Dome**	**77.17**	**25**	P		**P**	**20 19 41.1**	**-0.1**
EGAK	**Eagle**	**79.10**	**26**	P		**P**	**20 19 50.2**	**-1.6**
EGAK				IAmb		IAmb	20 20 03.0	
	comp=Z,7.3nm,1.1s							
ARCES	**ARCESS Array B**	**79.33**	**339**	P		**P**	**20 19 53.2**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=79,slow=6.3,SNR=7.1							
EPYK	**Eagle Plains**	**80.55**	**24**	P		**P**	**20 19 59.0**	**-0.7**
EPYK				IAmb		IAmb	20 20 08.2	
	comp=Z,8.9nm,0.8s							
BRTR	**Keskin Array B**	**80.93**	**309**	LR		LR	20 59 09.5	
	comp=Z,52nm,21.9s,baz=51,slow=38							
FIA1	**FINESS Array S**	**80.96**	**331**	P		**P**	**20 20 01.4**	**-0.4**
FIA1				IAmb		IAmb	20 20 10.6	
	comp=Z,10.0nm,1.2s							
FINES	**FINESS Array B**	**80.96**	**331**	P		**P**	**20 20 00.2**	**-1.6**
	comp=Z,0.8nm,0.6s,baz=62,slow=5.0,SNR=9.8							
FINES				LR		LR	20 56 52.8	
	comp=Z,200nm,20.8s,baz=76,slow=36							
INK	**Inuvik**	**81.21**	**22**	P		**P**	**20 20 02.4**	**-0.7**
	comp=Z,2.0nm,1.1s,baz=261,slow=3.2,SNR=3.8							
INK	**Inuvik**	**81.21**	**22**	P		**P**	**20 20 02.1**	**-0.9**
INK				IAmb		IAmb	20 20 11.5	
	comp=Z,5.7nm,0.9s							
AKASG	**Malin Array Be**	**81.70**	**320**	P		**P**	**20 20 05.6**	**-0.4**
	comp=Z,0.1nm,0.2s,baz=64,slow=5.3,SNR=1.7							
TESR	**Tescani**	**84.37**	**316**	⇑P		**P**	**20 20 19.3**	**-0.6**
VRI	**Vrincioaia**	**84.49**	**316**	⇓P		P	20 20 28.8	+8.2
PLOR	**Plostina**	**84.54**	**316**	⇑P		P	20 20 31.3	+10
BURAR	**Bucovina Array**	**85.02**	**318**	⇓P		**P**	**20 20 23.3**	**-0.1**
BUR08	**Bucovina Ar. S**	**85.02**	**318**	P		**P**	**20 20 22.7**	**-0.6**
BUR08				IAmb		IAmb	20 20 35.6	
	comp=Z,3.4nm,0.8s							
MLR	**Muntele Rosu**	**85.11**	**316**	P		**P**	**20 20 23.7**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=112,slow=18,SNR=1.6							
MLR	**Muntele Rosu**	**85.11**	**316**	⇑P		P	20 20 29.7	+5.8
KWP	**Kalwaria Pacla**	**86.03**	**320**	P		**P**	**20 20 27.9**	**-0.3**
ARR	**Arges**	**86.04**	**316**	⇓P		P	20 20 38.0	+10
KMBO	**Kilima Mbogo**	**86.89**	**268**	LR		LR	20 58 03.3	
	comp=Z,93nm,18.5s,baz=94,slow=35							
HFS	**Hagfors**	**87.12**	**332**	P		**P**	**20 20 31.3**	**-2.0**
	comp=Z,0.8nm,0.6s,baz=83,slow=12,SNR=4.7							
NB2	**NORSAR Subarra**	**87.84**	**333**	P		P	20 20 42.2	+5.4
	comp=Z,13nm,2.0s,baz=65,slow=4.6							
NOA	**NORSAR Array B**	**87.84**	**333**	P		**P**	**20 20 35.4**	**-1.4**
	comp=Z,0.2nm,0.6s,baz=65,slow=4.7,SNR=1.7							
NOA				LR		LR	21 03 08.5	
	comp=Z,145nm,19.8s,baz=55,slow=38							
YKA	**Yellowknife Ar**	**90.83**	**23**	P		**P**	**20 20 50.3**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=301,slow=4.2,SNR=3.6							
CLL	**Collm**	**91.19**	**324**	*e*P		**P**	**20 20 52.0**	**-0.7**
PPT	**Papeete**	**91.22**	**108**	LR		LR	20 54 12.2	
	comp=Z,56nm,20.7s,baz=326,slow=30							
PPT2	**Papeete2**	**91.23**	**108**	*e*S		S	20 31 42.2	-11
	comp=Z,86nm,26.2s							
PPT2	**Papeete2**	**91.23**	**108**	*e*LR		LR	20 49 55.4	
	comp=Z,132nm,23.0s							
GERES	**GERESS Array B**	**91.81**	**322**	LR		LR	21 06 32.8	
	comp=Z,149nm,18.3s,baz=84,slow=38							
TBI	**Tubuai**	**92.79**	**113**	*e*LR		LR	20 50 43.4	
	comp=Z,119nm,24.5s							
MAW	**Mawson**	**92.89**	**200**	LR		LR	20 59 11.0	
	comp=Z,47nm,20.9s,baz=46,slow=33							
VNDA	**Vanda**	**94.49**	**172**	LR		LR	21 06 01.4	
	comp=Z,68nm,18.9s,baz=357,slow=37							
TAOE	**Nuku Hiva Isla**	**98.04**	**97**	*e*T		T	22 10 04.7	
	comp=Z,69nm,0.2s							
RKT	**Rikitea**	**105.78**	**110**	*e*T		T	22 19 46.2	
	comp=Z,3.7nm,0.2s							
TORD	**Torodi Ar. Bea**	**116.37**	**293**	PKP		**PKPdf**	**20 26 30.1**	**-2.1**
	comp=Z,0.4nm,0.8s,baz=14,slow=1.0,SNR=2.5							
PLCA	**Paso Flores**	**151.10**	**157**	PKPbc		**PKPbc**	**20 27 40.9**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=251,slow=3.5,SNR=3.6							

IDC 10 20:13:09.7±6.9, 2.67N×95.89E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.3/54, mbtmp3.4/5, Error ellipse: s-maj=333.5km s-min=30.9km az=54.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**25.50**	**246**	T	T	20 44 53.7	
	baz=67,slow=76,SNR=48						
H08S3	**Diego Garcia H**	**25.50**	**246**	T	T	20 44 54.9	
	baz=67,slow=76,SNR=52						
H08S1	**Diego Carcia H**	**25.51**	**246**	T	T	20 44 55.0	
	baz=67,slow=76,SNR=30						
H01W3	**Cape Leeuwin H**	**41.09**	**157**	T	T	21 04 22.3	
	baz=332,slow=76,SNR=22						
H01W2	**Cape Leeuwin H**	**41.11**	**157**	T	T	21 04 22.9	
	baz=332,slow=76,SNR=25						
H01W1	**Cape Leeuwin H**	**41.11**	**157**	T	T	21 04 23.5	
	baz=332,slow=76,SNR=18						
WRA	**Warramunga Arr**	**43.92**	**123**	P	P	20 21 18.6	-0.1
	0.4nm,0.6s,baz=297,slow=10,SNR=2.2						
MKAR	**Makanchi Array**	**45.52**	**347**	P	P	20 21 31.8	+0.8
	0.3nm,0.6s,baz=158,slow=8.1,SNR=2.3						
KURBB	**Kurchatov Arra**	**49.99**	**346**	P	P	20 22 05.9	+0.2
	0.3nm,0.7s,baz=149,slow=6.8,SNR=2.4						
ZALV	**Zalesovo Beam**	**51.92**	**352**	P	P	20 22 19.7	-0.4
	0.5nm,0.4s,baz=169,slow=7.7,SNR=2.0						
BVAR	**Borovoye Array**	**54.45**	**341**	P	P	20 22 37.8	-1.0
	0.2nm,0.5s,baz=146,slow=10,SNR=1.8						

*IDC **10** 20:17:01.0±0.8, 14.61N×123.94E, h0km, mb3.6/9, mb1 3.8/10, mb1mx3.6/38, mbtmp3.6/10, ML4.5/1, MS3.7/2, Ms1 3.7/2, ms1mx3.1/34, Error ellipse: s-maj=26.4km s-min=16.4km az=64.0*
*NEIC **10** 20:17:02.3±2.6, 14.69N±0.07×124.0E±0.1, h11km±6km, mb4.1/11, Error ellipse: s-maj=14.7km s-min=10.7km az=101.0*
*MAN **10** 20:17:03.5, 14.84N×123.86E, h20km, mb5.3, ML4.3, MS4.5*

ISC 10 20:17:05.4±1.6, 14.78N±0.04×123.81E±0.05, h28km±12km, n49, σ1s94/53, mb3.7/15, 5C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**1.23**	**164**	*e*P	**Pn**	**20 17 25.7**	**-1.0**
PVCP				*e*S	**Sb**	**20 17 43.2**	**-0.2**
GQP	**Guinayangan**	**1.58**	**237**	⇑*i*P	**Pn**	**20 17 32.1**	**+0.5**
GQP				*i* S	**Sb**	**20 17 53.2**	**-0.4**
POLP	**Polilio Island**	**1.81**	**268**	*e*P	**Pn**	**20 17 34.8**	**+0.1**
POLP				*e*S	**Sb**	**20 18 00.1**	**0.0**
BOAC	**Boac**	**2.32**	**236**	*e*P	**Pn**	**20 17 42.4**	**+0.7**
BOAC				*e*S	**Sn**	**20 18 11.5**	**+2.3**
CNP	**Catarman**	**2.41**	**160**	*e*P	**Pn**	**20 17 43.3**	**+0.4**
CNP				*e*S	**Sn**	**20 18 12.8**	**+1.3**
PCPH	**Palayan**	**2.73**	**287**	⇑*e*p	**Pn**	**20 17 45.6**	**-1.7**
TGY	**Tagaytay City**	**2.86**	**257**	Pn	**Pn**	**20 17 51.0**	**+1.8**
	60nm,0.3s,baz=147,slow=3.9,SNR=2.7						
TGY				Sn	**Sb**	**20 18 28.1**	**-2.4**
	145nm,0.3s,baz=207,slow=20,SNR=6.3						
CAUP	**Cauayan**	**2.88**	**319**	*e*P	**Pn**	**20 17 47.8**	**-1.5**
CAUP				*e*S	**Sn**	**20 18 23.3**	**+0.3**
OTRP	**Odiongan**	**2.97**	**216**	*e*P	**Pn**	**20 17 50.5**	**-0.1**
OTRP				*e*S	**Sn**	**20 18 28.1**	**+2.8**
PGP	**Puerto Galera**	**3.05**	**246**	⇑*e*P	**Pn**	**20 17 52.2**	**+0.4**
RCP	**Roxas**	**3.37**	**198**	⇑*e*P	**Pn**	**20 17 57.5**	**+1.4**
LUBP	**Lubang**	**3.61**	**254**	*e*P	**Pn**	**20 18 00.4**	**+1.0**
LUBP				*e*S	**Sn**	**20 18 44.3**	**+3.2**
OCLP	**Ormoc**	**3.79**	**168**	*e*P	**Pn**	**20 18 03.0**	**+1.0**
SZP	**Santa**	**4.24**	**311**	Pn	**Pn**	**20 18 08.7**	**+0.8**
LLP	**Lapu-Lapu**	**4.44**	**178**	⇑P	**Pb**	**20 18 23.7**	**+1.0**
LLP				*i* S	Sb	20 19 31.3	+15
BUSP	**Coron**	**4.47**	**232**	*e*P	**Pn**	**20 18 11.8**	**+0.5**
BUSP				*e*S	**Sn**	**20 18 57.2**	**-5.2**
CUYO	**Cuyo Island**	**4.76**	**215**	*e*P	**Pn**	**20 18 15.0**	**-0.4**
CNOP	**Candoni, Negro**	**5.06**	**193**	*e*P	**Pn**	**20 18 20.6**	**+1.2**
CNOP				*e*S	**Sn**	**20 19 23.7**	**+6.9**
NACB	**Ninganchiao**	**9.57**	**348**	Pn	**Pn**	**20 19 21.6**	**+0.2**
YOJ	**Yonaguni jima**	**9.66**	**356**	Pn	**Pn**	**20 19 22.7**	**+0.2**
TATO	**Taipei**	**10.37**	**348**	Pn	**Pn**	**20 19 32.0**	**-0.3**
LUWI	**Luwuk**	**15.76**	**184**	Pn	**Pn**	**20 20 44.1**	**-1.4**
LUWI				IAmb	IAmb	20 20 53.8	
	comp=Z,22nm,1.0s						
SBUM	**Sibu**	**16.76**	**224**	P	**P**	**20 20 59.4**	**-0.9**
KSRS	**Korea Array**	**22.87**	**8**	P	**P**	**20 22 07.8**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=189,slow=11,SNR=1.5						
JHJ	**Hachijo jima 2**	**23.32**	**36**	LR	LR	20 28 53.4	
	comp=Z,151nm,20.6s,baz=243,slow=30						
CM31	**Chiang Mai Arr**	**24.10**	**282**	P	**P**	**20 22 18.5**	**-0.4**
CM31				IAmb	IAmb	20 22 28.9	
	comp=Z,7.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**24.10**	**282**	P	**P**	**20 22 18.8**	**0.0**
	comp=Z,1.8nm,0.8s,baz=96,slow=8.2,SNR=14						
FITZ	**Fitzroy Crossi**	**32.72**	**177**	P	**P**	**20 23 32.5**	**-3.2**
FITZ				IAmb	IAmb	20 23 48.3	
	comp=Z,2.4nm,1.1s						
WB0	**Warramunga Arr**	**35.88**	**163**	P	**P**	**20 24 00.6**	**-2.5**
WB0				IAmb	IAmb	20 24 09.7	
	comp=Z,5.0nm,1.3s						
SONM	**Songino Array**	**35.98**	**340**	P	**P**	**20 24 06.2**	**+2.3**
	comp=Z,0.6nm,0.7s,baz=158,slow=8.7,SNR=3.8						
WRA	**Warramunga Arr**	**36.03**	**163**	P	**P**	**20 24 02.2**	**-2.2**
	comp=Z,1.3nm,0.7s,baz=347,slow=8.8,SNR=13						
WB2	**Warramunga Arr**	**36.03**	**163**	P	**P**	**20 24 01.5**	**-2.9**
AS31	**Alice Springs**	**39.47**	**165**	P	**P**	**20 24 31.8**	**-1.6**
AS31				IAmb	IAmb	20 24 44.9	
	comp=Z,1.4nm,1.2s						
ASAR	**Alice Springs**	**39.47**	**165**	P	**P**	**20 24 31.7**	**-1.7**
	comp=Z,0.6nm,0.4s,baz=352,slow=14,SNR=24						
ASAR				PcP	**PcP**	**20 26 39.9**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=340,slow=2.2,SNR=1.6						
H11S3	**WAKE ISLAND Hy**	**41.18**	**79**	T	T	21 08 46.4	
	baz=271,slow=75,SNR=110						
H11S1	**WAKE ISLAND Hy**	**41.19**	**79**	T	T	21 08 47.1	
	baz=271,slow=75,SNR=110						
H11S2	**WAKE ISLAND Hy**	**41.20**	**79**	T	T	21 08 45.4	
	baz=271,slow=75,SNR=100						
H11N1	**WAKE ISLAND Hy**	**41.35**	**77**	T	T	21 08 56.6	
	baz=267,slow=74,SNR=56						
H11N2	**WAKE ISLAND Hy**	**41.36**	**77**	T	T	21 08 57.0	
	baz=267,slow=74,SNR=99						
H11N3	**WAKE ISLAND Hy**	**41.37**	**77**	T	T	21 08 58.0	
	baz=267,slow=74,SNR=54						
MK31	**Makanchi Array**	**47.01**	**321**	P	**P**	**20 25 35.3**	**+1.1**
MK31				IAmb	IAmb	20 25 43.8	
	comp=Z,2.4nm,1.2s						
MKAR	**Makanchi Array**	**47.01**	**321**	P	**P**	**20 25 36.2**	**+2.0**
	comp=Z,0.5nm,0.7s,baz=127,slow=6.5,SNR=2.7						
BBOO	**Buckleboo**	**48.75**	**166**	P	**P**	**20 25 46.3**	**-1.4**
STKA	**Stephens Creek**	**49.43**	**160**	P	**P**	**20 25 52.0**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=337,slow=13,SNR=1.7						
STKA	**Stephens Creek**	**49.43**	**160**	P	**P**	**20 25 51.3**	**-1.6**
KURK	**Kurchatov**	**51.01**	**325**	P	**P**	**20 26 06.0**	**+1.3**
KURK				IAmb	IAmb	20 26 24.5	
	comp=Z,3.0nm,0.9s						
KURBB	**Kurchatov Arra**	**51.02**	**324**	P	**P**	**20 26 05.4**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=121,slow=9.6,SNR=4.5						
RPZ	**Rata Peaks**	**72.45**	**146**	LR	LR	20 59 26.2	
	comp=Z,74nm,19.4s,baz=206,slow=35						
YKA	**Yellowknife Ar**	**90.61**	**23**	P	**P**	**20 30 05.8**	**+0.9**
	comp=Z,0.1nm,0.6s,baz=302,slow=4.2,SNR=1.5						

MAN 10 20:24:53.4, 9.92N×124.04E, h1km, mb4.2, ML3.0, MS2.7, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.29**	**218**	*e*P	Pn	20 25 10.2	+5.4
LLP	**Lapu-Lapu**	**0.40**	**350**	⇓*i*P	Pg	20 25 01.8	+0.6
LLP				*i* S	Sb	20 25 08.6	-1.4
MSLP	**Maasin**	**0.83**	**75**	*e*P	Pg	20 25 08.8	-0.6
MSLP				*e*S	Sg	20 25 21.2	+0.9
SNPH	**Sibulan**	**0.98**	**234**	⇓*i*P	Pb	20 25 13.3	+0.1
SNPH				*i* S	Sn	20 25 28.8	0.0
OCLP	**Ormoc**	**1.26**	**26**	*e*P	Pb	20 25 17.7	-0.2
OCLP				*e*S	Sn	20 25 36.1	+0.5
CNOP	**Candoni, Negro**	**1.38**	**266**	*e*P	Pn	20 25 19.0	-0.9
CNOP				*e*S	Sn	20 25 40.0	+1.2
GUIM	**Jordan**	**1.59**	**296**	*e*P	Pn	20 25 22.4	-0.4
GUIM				*e*S	Sb	20 25 44.3	0.0
PAGZ	**Pagadian**	**2.16**	**198**	*e*P	Pn	20 25 31.4	+0.9
PAGZ				*e*S	Sn	20 25 59.2	+1.2

IDC 10 20:56:37.1±11.0, 23.46S×179.55W, h502km±120km, mb3.4/5, mb1 3.6/5, mb1mx3.1/31, mbtmp4.3/5, Error ellipse: s-maj=91.4km s-min=51.5km az=164.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.89**	**269**	P	P	21 02 21.4	+0.5
	6.8nm,0.4s,baz=93,slow=11,SNR=23						
STKA	**Stephens Creek**	**35.27**	**248**	P	P	21 02 49.4	+0.1
	1.5nm,0.4s,baz=94,slow=11,SNR=9.9						
ASAR	**Alice Springs**	**42.52**	**260**	P	P	21 03 48.0	-0.3
	1.6nm,0.5s,baz=96,slow=7.9,SNR=21						
WRA	**Warramunga Arr**	**42.85**	**266**	P	P	21 03 50.1	-0.7
	1.0nm,0.3s,baz=90,slow=5.9,SNR=42						
TXAR	**Lajitas Array**	**89.84**	**58**	P	P	21 08 42.1	-0.3
	0.4nm,0.8s,baz=249,slow=2.4,SNR=4.4						
ARCES	**ARCESS Array B**	**131.54**	**349**	PKP	PKPdf	21 14 50.8	-0.9
	0.6nm,0.8s,baz=37,slow=3.0,SNR=7.2						
FINES	**FINESS Array B**	**138.16**	**342**	PKP	PKPdf	21 15 03.5	-0.7
	2.5nm,1.1s,baz=98,slow=3.1,SNR=3.1						
NOA	**NORSAR Array B**	**141.71**	**352**	PKhKP	PKPdf	21 15 06.5	-4.2
	0.1nm,0.6s,baz=2.9,slow=5.3,SNR=1.4						
AKASG	**Malin Array Be**	**144.82**	**328**	PKP	PKPbc	21 15 16.6	-0.1
	1.3nm,0.5s,baz=44,slow=3.8,SNR=9.3						

*SOME **10** 21:20:00.7, 39.55N×73.62E, h5km*
*KRNET **10** 21:20:04.0±0.1, 39.31N×74.09E, mb3.3*
*NNC **10** 21:20:09.8±1.9, 39.88N×73.89E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=14.6km s-min=9.1km az=179.0*

ISC 10 21:20:10.4±1.6, 39.80N±0.08×73.93E±0.04, h10km, n41, σ1s87/65, 26C-9D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**2.33**	**356**	⇑*i*P	**Pb**	**21 20 51.1**	**-1.8**
AML	baz=54			⇑*i*S	**Sg**	**21 21 25.6**	**+0.1**
	baz=54						
AML	**Almayashu**	**2.33**	**356**	P	Pb	21 20 50.5	-2.3
	SNR=21						
BTK	**Batken**	**2.41**	**277**	⇑*i*P	**Pn**	**21 20 48.0**	**-1.9**
BTK	baz=88			⇑*i*S	**Sn**	**21 21 20.0**	**+0.5**
	baz=88						
UCH	**Uchtor**	**2.46**	**10**	⇓*i*P	**Pn**	**21 20 52.0**	**+0.9**
	baz=6.0						
UCH				⇓*i*S	**Sb**	**21 21 27.6**	**+1.9**
	baz=6.0						
UCH	**Uchtor**	**2.46**	**10**	P	Pn	21 20 52.0	+0.9
	SNR=41						
KZA	**Kyzart**	**2.48**	**23**	⇑*i*P	**Pn**	**21 20 52.1**	**+0.8**
KZA	baz=17			⇑*i*S	**Sb**	**21 21 26.7**	**+0.5**
	baz=17						
KZA	**Kyzart**	**2.48**	**23**	P	Pb	21 20 53.7	-1.7
	SNR=26						

ARK	**Arkit**	**2.49**	**324**	⇑*i*P		**Pn**	**21 20 51.9**	**+0.7**
	baz=28							
ARK				⇑*i*S		**Sb**	**21 21 27.5**	**+1.4**
	baz=28							
EKS2	**Erkin-Say**	**2.86**	**358**	⇑*i*P		**Pn**	**21 20 58.2**	**+2.0**
	baz=56							
EKS2				⇑*i*S		**Sb**	**21 21 37.6**	**+0.8**
	baz=56							
EKS2	**Erkin-Say**	**2.86**	**358**	P		**Pb**	**21 20 59.4**	**-2.2**
	SNR=15							
AAK	**Ala-Archa**	**2.87**	**8**	⇑*i*P		**Pn**	**21 20 57.9**	**+1.5**
	baz=5.0							
AAK				⇑*i*S		**Sb**	**21 21 37.0**	**0.0**
	baz=5.0							
AAK	**Ala-Archa**	**2.87**	**8**	P		**Pn**	**21 20 57.7**	**+1.3**
	SNR=11							
AAK	**Ala-Archa**	**2.87**	**8**	⇓Pn		**Pn**	**21 20 56.7**	**+0.4**
	5.5nm,0.5s							
AAK				⇑Lg		Lg	21 21 40.8	
	20nm,0.7s							
KBK	**Karagaybulak**	**2.96**	**15**	⇑*i*P		**Pn**	**21 20 58.8**	**+1.2**
	baz=11							
KBK				⇑*i*S		**Sb**	**21 21 38.4**	**-1.1**
	baz=11							
KBK	**Karagaybulak**	**2.96**	**15**	P		**Pn**	**21 20 58.4**	**+0.8**
	SNR=9.1							
MRKS	**Merke**	**2.99**	**350**	*e*P		**Pn**	**21 20 59.0**	**+1.0**
	7.5nm,0.5s							
MRKS				*e*S		**Sb**	**21 21 39.7**	**-0.7**
	16nm,0.6s							
MRKS	**Merke**	**2.99**	**350**	Pg		**Pn**	**21 20 59.0**	**+1.0**
	3.7nm,0.3s							
MRKS				Lg		Lg	21 21 39.7	
	8.2nm,0.4s							
ULHL	**Ulahol**	**3.00**	**35**	⇑*i*P		**Pn**	**21 20 57.9**	**-0.4**
	baz=28							
ULHL				⇑*i*S		**Sb**	**21 21 37.0**	**-4.0**
	baz=28							
ULHL	**Ulahol**	**3.00**	**35**	P		**Pn**	**21 20 59.8**	**+1.5**
	SNR=5.8							
BOOM	**Boomskoye usch**	**3.09**	**29**	⇑*i*P		**Pn**	**21 20 59.8**	**+0.4**
	baz=23							
BOOM				⇑*i*S		**Sb**	**21 21 40.6**	**-2.7**
	baz=23							
CHMS	**Chumysh**	**3.25**	**11**	⇓*i*P		**Pn**	**21 21 02.9**	**+1.3**
	baz=8.0							
CHMS				⇓*i*S		**Sb**	**21 21 45.7**	**-2.3**
	baz=8.0							
TKM2	**Tokmak 2**	**3.36**	**21**	⇑Pn		**Pn**	**21 21 04.0**	**+0.8**
	3.4nm,0.7s							
TKM2				⇑Lg		Lg	21 21 54.6	
	13nm,0.8s							
KDJ	**Kajisay**	**3.39**	**46**	⇓*i*P		**Pn**	**21 21 02.5**	**-1.0**
	baz=39							
KDJ				⇓*i*S		**Sn**	**21 21 45.5**	**+1.6**
	baz=39							
KST	**Kastek**	**3.58**	**25**	*e*P		**Pb**	**21 21 11.9**	**-2.1**
	3.9nm,0.5s							
KST				*e*S		**Sb**	**21 22 01.2**	**+3.6**
	8.4nm,0.8s							
KST	**Kastek**	**3.58**	**25**	Pg		**Pb**	**21 21 11.9**	**-2.1**
	3.9nm,0.5s							
KST				Lg		Lg	21 22 01.2	
	8.4nm,0.8s							
IUG	**Iuzhnay**	**3.77**	**310**	*e*P		**Pn**	**21 21 10.0**	**+1.4**
	3.1nm,0.5s							
IUG				*e*S		**Sn**	**21 21 58.1**	**+4.9**
	38nm,0.5s							
IUG	**Iuzhnay**	**3.77**	**310**	Pg		**Pn**	**21 21 10.0**	**+1.4**
	3.1nm,0.5s							
IUG				Lg		Lg	21 21 58.1	
	38nm,0.5s							
IZV	**Izvestkoviy**	**3.81**	**31**	*e*P		**Pb**	**21 21 18.1**	**+0.3**
	6.3nm,0.9s							
IZV				*e*S		**Sg**	**21 22 11.9**	**-0.9**
	15nm,0.9s							
IZV	**Izvestkoviy**	**3.81**	**31**	Pg		**Pb**	**21 21 18.1**	**+0.3**
	6.3nm,0.9s							
IZV				Lg		Lg	21 22 11.9	
	15nm,0.9s							
TNSS	**Tian-Shan**	**3.95**	**34**	*e*P		**Pb**	**21 21 20.8**	**+0.4**
	4.0nm,0.3s							
TNSS				*e*S		**Sg**	**21 22 16.2**	**-1.1**
	8.8nm,0.8s							
TNSS	**Tian-Shan**	**3.95**	**34**	Pg		**Pb**	**21 21 20.8**	**

KECS				*e*SN	**Sn**	**21 39 41.0**	**+0.6**
KECS				*e*LG	Lg	21 39 49.7	
DPC	**Dobruska-Polom**	**1.92**	**276**	*e*PG	**Pb**	**21 39 17.9**	**-0.5**
DPC				*e*SG	**Sb**	**21 39 43.0**	**+0.2**
	comp=Z,30nm,0.5s						
VRAC	**Vranov**	**1.96**	**244**	Pn	**Pn**	**21 39 17.3**	**+0.2**
	2.6nm,0.3s,baz=62,slow=12,SNR=28						
VRAC				Sn	**Sn**	**21 39 42.8**	**+0.4**
	3.6nm,0.3s,baz=63,slow=16,SNR=11						
VRAC	**Vranov**	**1.96**	**244**	*e*PN	**Pn**	**21 39 18.4**	**+1.3**
VRAC				*e*SG	**Sn**	**21 39 43.5**	**+1.0**
VRAC	**Vranov**	**1.96**	**244**	*e*Pn	**Pn**	**21 39 18.3**	**+1.2**
	baz=63						
VRAC				*e*Sg	**Sn**	**21 39 43.5**	**+1.0**
	11nm,0.3s,baz=63						
OSTC	**Östas**	**2.01**	**282**	*e*PG	**Pb**	**21 39 20.3**	**+0.4**
OSTC				*e*SG	**Sg**	**21 39 46.5**	**-0.4**
	comp=Z,18nm,0.7s						
UPC	**Upice**	**2.13**	**280**	*e*SG	**Sg**	**21 39 50.1**	**-0.7**
	comp=Z,18nm,0.5s						
KRUC	**Moravsky**	**2.20**	**240**	*e*PN	**Pn**	**21 39 21.7**	**+1.4**
KRUC				*e*SG	**Sb**	**21 39 50.9**	**-0.1**
KRUC	**Moravsky**	**2.20**	**240**	*e*Pn	**Pn**	**21 39 21.6**	**+1.3**
	baz=59						
KRUC				*e*Sg	**Sb**	**21 39 50.8**	**-0.2**
	12nm,0.3s,baz=59						
PRU	**Pruhonice**	**3.07**	**268**	*e*PG	**Pb**	**21 39 38.7**	**+0.7**
PRU				*e*SG	**Sb**	**21 40 18.0**	**+2.0**
	comp=Z,9.3nm,0.6s						
BRG	**Berggiesshubel**	**3.48**	**283**	PG	**Pg**	**21 39 48.7**	**-0.5**
BRG				SG	**Sg**	**21 40 33.2**	**-1.1**
	7.0nm,0.6s						
KHC	**Kasperske Hory**	**3.87**	**256**	*e*PN	**Pn**	**21 39 44.5**	**+1.3**
KHC				*e*PG	**Pb**	**21 39 52.0**	**+0.4**
KHC				*e*SG	**Sg**	**21 40 43.2**	**-3.4**
	comp=Z,7.3nm,0.5s						
GERES	**GERESS Array B**	**3.89**	**252**	Pn	**Pn**	**21 39 44.6**	**+1.0**
	0.2nm,0.3s,baz=68,slow=15,SNR=6.6						
GERES				Lg	Lg	21 40 41.6	
	1.2nm,0.3s,baz=70,slow=27,SNR=10.0						
CLL	**Collm**	**4.15**	**288**	*e*Pg	Pg	21 40 15.0	+13
CLL				*e*Sg	**Sg**	**21 40 58.0**	**+2.2**
	comp=Z,7.0nm,0.7s						
NKC	**Novy Kostel**	**4.40**	**273**	*e*SG	**Sg**	**21 41 01.2**	**-2.6**
FINES	**FINESS Array B**	**11.89**	**16**	Pn	**Pn**	**21 41 34.0**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=199,slow=14,SNR=4.7						
FINES				Sn	**Sn**	**21 43 43.1**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=199,slow=20,SNR=2.6						
ARCES	**ARCESS Array B**	**19.63**	**7**	Pn	**P**	**21 43 12.4**	**+0.1**
	comp=Z,0.0nm,0.3s,baz=197,slow=12,SNR=1.4						

IDC ***10*** *22:04:53.4±1.1,36.°10N×52.°05E,h0km,mb3.7/16, mb1 3.8/21,mb1mx3.7/50,mbtmpb3.8/21,ML3.7/5,MS2.8/5, Ms1 2.8/5,ms1mx2.5/38,Error ellipse: s-maj=22.8km s-min=11.8km az=178.0*

THR ***10*** *22:04:53.8±0.6,36.°10N×52.°06E,h14km±7km,ML4.0*

TEH ***10*** *22:04:53.2,36.°11N×52.°14E,h12km,ML4.0*

NEIC ***10*** *22:04:55.0±2.3,36.°1N±0.°1×52.°23E±0.°09,h10km±2km, mb4.1/27,Error ellipse: s-maj=19.3km s-min=12.7km az=187.0*

NNC ***10*** *22:05:06.0±5.3,36.°96N×52.°66E,h21km±29km,mb3.9, Error ellipse: s-maj=27.4km s-min=18.0km az=75.0*

ISC 10 22:04:53.6±1.3,36.°15N±0.°03×52.°13E±0.°02,h2km±9km, n12,σ1s50/174,mb3.9/35,17C-11D,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPRN	**Peran**	**0.19**	**62**	*e*Pg	**Pg**	**22 04 58.0**	**+0.7**
IPRN				*e*Sg	**Sg**	**22 05 01.7**	**+1.9**
IPRN				*e*		22 05 02.0	
DAMV	**Damavand**	**0.54**	**194**	*e*Pg	**Pg**	**22 05 03.1**	**-0.8**
DAMV	**Damavand**	**0.54**	**194**	*e*Pg	**Pg**	**22 05 03.1**	**-0.8**
IALA	**Alasht**	**0.55**	**97**	*e*Pg	**Pg**	**22 05 04.0**	**-0.2**
IDMV	**Damavand**	**0.58**	**188**	*e*Pg	**Pg**	**22 05 04.0**	**-0.8**
TEH	**Tehran**	**0.74**	**236**	*e*		22 05 19.4	
TEH				*e*Pg	**Pg**	**22 05 07.3**	**-0.4**
IHSB	**Hasanabad**	**1.00**	**224**	*e*Pg	**Pg**	**22 05 11.7**	**-1.0**
IHSB				*e*		22 05 27.0	
ISHM	**Shahmirzad**	**1.00**	**110**	*e*Pg	**Pg**	**22 05 11.4**	**-1.4**
ILAS	**Lasjerd**	**1.02**	**139**	*e*Pg	**Pg**	**22 05 11.8**	**-1.4**
ILAS				*e*		22 05 26.4	
THKV	**Tehran--Karaj**	**1.04**	**257**	IAML		22 05 24.9	
	comp=E,5µm,0.5s						
IVRN	**Varamin**	**1.20**	**196**	*e*Pg	**Pg**	**22 05 15.5**	**-1.1**
IVRN				*e*		22 05 37.4	
QALM	**Alamut, Qazvin**	**1.23**	**283**	*e*Pn	**Pg**	**22 05 16.4**	**-0.8**
QALM				*e*		22 05 37.2	
IMHD	**Mahdasht**	**1.28**	**249**	*e*Pg	**Pg**	**22 05 17.4**	**-0.7**
IMHD				*e*		22 05 38.1	
IGLO	**Ghaloghah**	**1.42**	**75**	*e*Pn	**Pn**	**22 05 19.7**	**-0.8**
IGZV	**Ghazvin**	**1.56**	**279**	*e*Pn	**Pn**	**22 05 22.5**	**-0.1**
IGZV				*e*		22 05 25.8	
IQOM	**Qom**	**1.57**	**214**	*e*Pn	**Pn**	**22 05 21.8**	**-0.9**
IQOM				*e*		22 05 53.5	
IANJ	**Anjilo**	**1.60**	**115**	*e*Pn	**Pn**	**22 05 22.5**	**-0.6**
IANJ				*e*		22 05 49.8	
GHVR	**GHOM**	**1.81**	**202**	*e*Pg	**Pn**	**22 05 26.1**	**+0.3**
GHVR				IAML		22 05 59.4	
	comp=E,1µm,0.4s						
GHVR	**GHOM**	**1.81**	**202**	*e*Pg	**Pn**	**22 05 26.1**	**+0.3**
IRAZ	**Razeghan**	**1.94**	**248**	*e*Pn	**Pn**	**22 05 28.6**	**+0.9**
QABG	**Abgarm-Qazvin**	**2.12**	**259**	*e*Pn	**Pn**	**22 05 30.7**	**+0.5**
QABG				*e*		22 06 01.8	
ASAO	**Ashtian**	**2.35**	**228**	*e*Pg	**Pn**	**22 05 34.8**	**+1.4**
ASAO				*e*Sg	**Sb**	**22 06 05.4**	**-1.0**
ASAO	**Ashtian**	**2.35**	**228**	*e*Pg	**Pn**	**22 05 34.8**	**+1.4**
HAGD	**Aghdareh**	**2.78**	**242**	*e*Pn	**Pn**	**22 05 40.7**	**+1.4**
IMND	**Minoodasht**	**2.85**	**66**	*e*Pn	**Pn**	**22 05 40.5**	**+0.4**
IKLH	**Kolahrood**	**2.87**	**189**	*e*Pn	**Pn**	**22 05 41.0**	**+0.5**
IKLH				*e*		22 06 23.6	
KHMZ	**Khomeyn**	**3.00**	**217**	*e*Pn	**Pn**	**22 05 41.9**	**-0.4**
KHMZ	**Khomeyn**	**3.00**	**217**	*e*Pn	**Pn**	**22 05 41.9**	**-0.4**
SHRO	**Shahrood**	**3.15**	**92**	*e*Pn	**Pn**	**22 05 46.0**	**+1.8**
SHRO	**Shahrood**	**3.15**	**92**	*e*Pn	**Pn**	**22 05 46.0**	**+1.8**
ANAR	**Anarak**	**3.24**	**156**	*e*Pn	**Pn**	**22 05 46.8**	**+1.3**
IZEF	**Zefreh**	**3.25**	**177**	*e*Pn	**Pn**	**22 05 46.2**	**+0.3**
IZEF				*e*		22 06 52.9	
HSAM	**Samen**	**3.48**	**237**	*e*Pn	**Pn**	**22 05 51.3**	**+2.4**
ASTR	**Astara**	**3.58**	**313**	*e*Pn	**Pn**	**22 05 50.1**	**0.0**
BMDN	**Meydan**	**3.68**	**229**	*e*Pn	**Pn**	**22 05 54.2**	**+2.6**
LKRN	**Lenkeran, Azer**	**3.69**	**315**	*e*Pn	**Pn**	**22 05 51.4**	**-0.2**
IBZA	**Bozab**	**3.88**	**246**	*e*Pn	**Pn**	**22 05 54.1**	**-0.3**
ISRB	**Sarab**	**3.94**	**296**	*e*Pn	**Pn**	**22 05 57.5**	**+2.2**
IDOB	**Doab**	**4.01**	**235**	*e*Pn	**Pn**	**22 05 58.5**	**+2.3**
IKMR	**Kamar-syah**	**4.05**	**231**	*e*Pn	**Pn**	**22 05 59.6**	**+3.0**
YRD	**Yardimli**	**4.14**	**313**	*e*Pn	**Pn**	**22 05 57.9**	**-0.1**
IKOM	**Komasi**	**4.27**	**244**	*e*Pn	**Pn**	**22 06 01.3**	**+1.6**
TNSJ	**Nastanj**	**4.27**	**119**	*e*Pn	**Pn**	**22 06 00.6**	**+0.9**
GLBA	**Cilabad**	**4.28**	**317**	*e*Pn	**Pn**	**22 05 59.8**	**+0.2**
GRMI	**Germi**	**4.29**	**309**	*e*Pn	**Pn**	**22 06 00.7**	**+0.8**
GRMI				IAML		22 06 55.1	
	comp=N,123nm,0.6s						
GRMI	**Germi**	**4.29**	**309**	*e*Pn	**Pn**	**22 06 00.7**	**+0.8**
ICHK	**Chekchek**	**4.33**	**154**	*e*Pn	**Pn**	**22 06 01.0**	**+0.4**
IRAM	**Ramesheh**	**4.34**	**177**	*e*Pn	**Pn**	**22 06 02.3**	**+1.6**
ISAD	**Sadrabad**	**4.42**	**163**	*e*Pn	**Pn**	**22 06 03.1**	**+1.2**
IHSH	**Hashtrud**	**4.44**	**300**	*e*Pn	**Pn**	**22 05 59.0**	**-3.2**
KER	**Kermanshah**	**4.45**	**248**	*e*Pn	**Pn**	**22 06 02.5**	**+0.3**
BJRD	**Bojnurd**	**4.50**	**68**	*e*Pn	**Pn**	**22 06 04.7**	**+1.8**
BJRD	**Bojnurd**	**4.50**	**68**	*e*Pn	**Pn**	**22 06 04.7**	**+1.8**
ALIB	**Äli-Bayra**	**4.53**	**328**	*e*Pn	**Pn**	**22 06 05.8**	**+2.7**
IHRS	**Heris**	**4.60**	**300**	*e*Pn	**Pn**	**22 06 05.7**	**+1.4**
AHAR	**Ahar**	**4.67**	**301**	*e*Pn	**Pn**	**22 06 07.0**	**+1.8**
ISFR	**Sfrayin**	**4.81**	**78**	*e*Pn	**Pn**	**22 06 08.4**	**+1.2**
TKDS	**Koohdasht(Taba**	**4.82**	**120**	*e*Pn	**Pn**	**22 06 08.8**	**+1.5**
TPRV	**Parvadeh(Tabas**	**4.88**	**128**	*e*Pn	**Pn**	**22 06 09.3**	**+2.2**
IDHR	**Dehrash**	**4.91**	**254**	*e*Pn	**Pn**	**22 06 09.7**	**+1.2**
GEYT	**Alibeck**	**5.11**	**68**	Pn	**Pn**	**22 06 12.6**	**+1.5**
	comp=N,12nm,0.3s,baz=249,slow=15,SNR=98						
GEYT				Pg	**Pg**	**22 06 29.0**	**-2.4**
	comp=N,4.7nm,0.3s,baz=264,slow=13,SNR=5.1						
GEYT				Sn	**Sn**	**22 07 12.9**	**+2.3**
	baz=238,slow=19,SNR=1.6						
GYA0	**ALIBECK ARRAY**	**5.11**	**68**	*e*Pn	**Pn**	**22 06 12.1**	**+1.0**
GYA0B	**ALIBECK ARRAY**	**5.11**	**68**	⇑Pn	**Pn**	**22 06 12.6**	**+1.5**
GYA0B				⇓Lg	Lg	22 07 27.0	
GYA0B	**ALIBECK ARRAY**	**5.11**	**68**		**Pn**	**22 06 12.1**	**+1.0**
KLNJ	**Kolanjah**	**5.15**	**185**	*e*Pn	**Pn**	**22 06 14.1**	**+2.1**
IAZR	**Azarshahr**	**5.16**	**289**	*e*Pn	**Pn**	**22 06 13.2**	**+1.2**
IKRD	**Kardeh**	**5.18**	**81**	*e*Pn	**Pb**	**22 06 24.9**	**-0.2**
IMEH	**Mehriz**	**5.18**	**156**	*e*Pn	**Pn**	**22 06 12.6**	**+0.3**
ASHT	**Ashkhabad**	**5.31**	**69**	Pn	**Pn**	**22 06 14.9**	**+1.0**
IAKL	**Akhelmad**	**5.37**	**83**	*e*Pn	**Pn**	**22 06 15.3**	**+0.4**
IBAF	**Bafgh**	**5.38**	**147**	*e*Pn	**Pn**	**22 06 15.6**	**+0.7**
IEMG	**Emamgholi**	**5.38**	**75**	*e*Pn	**Pn**	**22 06 17.1**	**+2.0**
IPAY	**Payeh**	**5.55**	**85**	*e*Pn	**Pn**	**22 06 19.1**	**+1.7**
ISHB	**Shabestar**	**5.62**	**294**	*e*Pn	**Pn**	**22 06 20.0**	**+1.7**
ITEG	**Tejag**	**6.36**	**119**	*e*Pn	**Pn**	**22 06 29.4**	**+1.0**
KHGB	**Koh Gabri**	**6.81**	**147**	*e*Pn	**Pn**	**22 06 35.4**	**+0.6**
TBLG	**Delisi**	**8.01**	**316**	Pn	**Pn**	**22 06 53.1**	**+2.2**
HRA	**Herat**	**8.46**	**99**		**Pn**	**22 06 54.9**	**-2.4**
AKH	**Akhalkalaki**	**8.54**	**310**		**Pn**	**22 07 00.8**	**+2.4**
KBZ	**Khabaz**	**10.36**	**320**	Pn	**Pn**	**22 07 26.3**	**+3.3**
	comp=N,0.3nm,0.3s,baz=152,slow=9,SNR=2.6						
KBZ				Sn	**Sn**	**22 09 17.9**	**-1.8**
	comp=N,0.2nm,0.3s,baz=143,slow=19,SNR=1.4						
RAYN	**Ar Rayn**	**13.83**	**206**	Pn	**Pn**	**22 08 12.2**	**+1.5**
KBL	**Kabul**	**13.90**	**92**	Pn	**Pn**	**22 08 11.6**	**-0.2**
AB31	**Akbulak array**	**14.29**	**21**	Pn	**Pn**	**22 08 14.0**	**-2.8**
	comp=N,0.4nm,0.3s,baz=204,slow=13,SNR=19						
AB31				Sn	Sn	22 10 44.6	-11
	comp=N,0.7nm,0.3s,baz=189,slow=23,SNR=10						
GAR	**Garm**	**14.70**	**73**		**Pn**	**22 08 21.4**	**-1.1**
AKTO	**Aktyubinsk**	**14.89**	**15**	Pn	**Pn**	**22 08 22.6**	**-2.4**
	comp=N,0.6nm,0.3s,baz=203,slow=9.8,SNR=4.9						
AKTO	**Aktyubinsk**	**14.89**	**15**	⇑Pn	**Pn**	**22 08 22.1**	**-2.9**
	comp=N,2.5nm,0.8s						
AKTO				⇑Sn	Sn	22 10 58.0	-13
	comp=N,2.4nm,0.5s						
BR131	**Keskin Array S**	**15.02**	**289**	Pn	**P**	**22 08 30.5**	**-2.0**
BRTR	**Keskin Array B**	**15.02**	**289**	Pn	**Pn**	**22 08 29.2**	**+2.3**
	comp=N,0.0nm,0.3s,baz=143,slow=35,SNR=1.9						
BRTR				LR	LR	22 15 06.5	
	comp=N,50nm,19.6s,baz=100,slow=41						
BTK	**Batken**	**15.22**	**70**	Pn	**Pn**	**22 08 28.1**	**-1.4**
CSS	**Mathiatis**	**15.35**	**271**	Pn	**P**	**22 08 33.9**	**-2.2**
CSS				IAmb	IAmb	22 08 53.7	
	comp=Z,25nm,1.6s						
KK31	**Karatay Array**	**15.76**	**58**	P	**Pn**	**22 08 35.7**	**-0.8**
	comp=Z,1.8nm,0.4s,baz=241,slow=17,SNR=30						
KK31	**Karatay Array**	**15.76**	**58**		**Pn**	**22 08 34.3**	**-2.2**
KKAR	**Karatay Array**	**15.76**	**58**		**Pn**	**22 08 34.3**	**-2.2**
EIL	**Elat**	**15.80**	**251**	LR	LR	22 15 49.3	
	comp=Z,137nm,20.3s,baz=104,slow=42						
MDUB	**Mudumu**	**16.98**	**291**		**P**	**22 08 54.4**	**+0.2**
NIL	**Nilore**	**17.50**	**92**	Pn	**Pn**	**22 08 57.1**	**-1.7**
AAK	**Ala-Archa**	**18.43**	**63**	P	**P**	**22 09 10.4**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=240,slow=7.3,SNR=8.9						
AAK				LR	LR	22 16 55.6	
	comp=Z,10nm,21.6s,baz=238,slow=39						
AAK	**Ala-Archa**	**18.43**	**63**	P	**Pn**	**22 09 10.1**	**-0.2**
MANT	**Manisa**	**18.88**	**284**	P	**Pn**	**22 09 17.2**	**+1.3**
MANT				IAmb	IAmb	22 09 30.3	
	comp=Z,20nm,1.2s						
KSH	**Kashi**	**19.11**	**73**	P	**P**	**22 09 15.9**	**-1.9**
KSH				pP	sP	22 09 20.1	+0.2
KSH				PP	**PnPn**	**22 09 32.9**	**+1.9**
KSH				S	Sn	22 12 40.7	-13
KSH				SS	**SnSn**	**22 13 03.9**	**-3.2**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,90nm,3.8s						
KSH				LR	LR		
	comp=N,340nm,6.8s						
KSH				LR	LR		
	comp=E,78nm,10.8s						
KSH				LR	LR		
	comp=Z,300nm,6.0s						
OTUK	**Ortayu**	**19.17**	**45**	⇑P	**Pn**	**22 09 18.9**	**-0.2**
	comp=Z,5.4nm,0.8s						
TOPG	**Topolog**	**20.00**	**303**	⇓P	**Pn**	**22 09 28.2**	**-0.7**
TLBR	**Topalu**	**20.12**	**302**	⇑P	Pn	22 09 30.2	-0.2
HARR	**Harsova**	**20.25**	**302**	⇓P	Pn	22 09 31.2	-0.6
CFR	**Carcaliu**	**20.25**	**304**	⇑P	**P**	**22 09 30.6**	**+0.6**
MILM	**Milestii Mici**	**20.43**	**309**	⇓P	Pn	22 09 33.1	-0.9
KIS	**Kishinev**	**20.45**	**309**	*e*P	**P**	**22 09 33.0**	**+0.8**
ARU	**Arti**	**20.74**	**10**	P	**P**	**22 09 35.8**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=182,slow=8.4,SNR=6.1						
ARU				LR	LR	22 19 15.9	
	comp=Z,24nm,19.8s,baz=237,slow=42						
ARU	**Arti**	**20.74**	**10**	P	**P**	**22 09 35.8**	**+0.5**
ARU				IAmb	IAmb	22 09 42.0	
	comp=Z,16nm,1.5s						
ODBI	**Odobesti**	**21.16**	**305**	⇑P	**P**	**22 09 42.5**	**+2.7**
BRVK	**Borovoye**	**21.17**	**31**	⇓P	**P**	**22 09 40.5**	**+0.5**
	comp=Z,6.1nm,1.0s						
BRVK	**Borovoye**	**21.17**	**31**	P	**P**	**22 09 41.1**	**+1.1**
BRVK				IAmb	IAmb	22 09 47.5	
	comp=Z,5.6nm,1.0s						
BVAR	**Borovoye Array**	**21.19**	**32**	P	**P**	**22 09 41.1**	**+0.9**
	comp=Z,1.7nm,0.6s,baz=219,slow=8.1,SNR=12						
VRI	**Vrincioaia**	**21.41**	**305**	⇓P	**P**	**22 09 44.3**	**+1.7**
PLOR	**Plostina**	**21.45**	**305**	⇑P	**P**	**22 09 45.2**	**+2.2**
TESR	**Tescani**	**21.66**	**306**	⇓P	**P**	**22 09 46.6**	**+1.3**
OBN	**Obninsk**	**21.77**	**335**	P	**P**	**22 09 46.6**	**+0.3**
	comp=Z,1.7nm,0.4s,baz=156,slow=12,SNR=3.8						
OBN	**Obninsk**	**21.77**	**335**	P	**P**	**22 09 46.6**	**+0.3**
MLR	**Muntele Rosu**	**21.82**	**303**	P	**P**	**22 09 47.1**	**-0.1**
	comp=Z,5.4nm,0.8s,baz=132,slow=9.1,SNR=7.1						
MLR	**Muntele Rosu**	**21.82**	**303**	⇑P	**P**	**22 09 50.1**	**+2.9**
MLR	**Muntele Rosu**	**21.82**	**303**	P	**P**	**22 09 50.1**	**+2.9**
MLR				IAmb	IAmb	22 10 02.3	
	comp=Z,9.5nm,1.0s						
AKASG	**Malin Array Be**	**21.97**	**319**	P	**P**	**22 09 48.8**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=122,slow=11,SNR=8.5						
AKBB	**Malin Array Si**	**21.97**	**319**	P	**P**	**22 09 48.6**	**+0.1**
AKBB				IAmb	IAmb	22 09 50.9	
	comp=Z,5.1nm,1.2s						
OZUR		**22.10**	**305**	⇓P	**P**	**22 09 47.3**	**-2.7**
IDI	**Anoyia**	**22.11**	**276**	P	**P**	**22 09 51.1**	**+0.9**
	comp=Z,1.3nm,0.3s,baz=204,slow=10,SNR=1.9						
PLVB	**Pleven**	**22.28**	**297**	⇑P	**P**	**22 09 54.2**	**+2.3**
DOPR	**Dopca**	**22.33**	**304**	⇑P	**P**	**22 09 55.2**	**+2.8**
VOIR		**22.41**	**303**	⇓P	**P**	**22 09 55.6**	**+2.2**
KIRV	**Kirov**	**22.51**	**356**	LR	LR	22 21 39.4	
	comp=Z,25nm,21.6s,baz=227,slow=45						
ARR	**Arges**	**22.68**	**302**	⇑P	**P**	**22 09 57.6**	**+1.4**
BURAR	**Bucovina Array**	**22.96**	**308**	⇓P	**P**	**22 10 00.9**	**+1.7**
BUR08	**Bucovina Ar. S**	**22.98**	**308**	P	**P**	**22 10 00.9**	**+1.5**
BUR08				IAmb	IAmb	22 10 03.1	
	comp=Z,4.9nm,1.3s						
VTS	**Vitosha**	**23.18**	**295**	⇑P	**P**	**22 10 03.2**	**+1.7**
VTS	**Vitosha**	**23.18**	**295**	P	**P**	**22 10 03.5**	**+1.9**
VTS				IAmb	IAmb	22 10 04.4	
	comp=Z,5.5nm,1.3s						
LIT	**Litokhoron**	**23.59**	**289**	P	**P**	**22 10 07.7**	**+2.1**
LIT				IAmb	IAmb	22 10 12.1	
	comp=Z,6.6nm,0.9s						
KURBB	**Kurchatov Arra**	**23.86**	**44**	P	**P**	**22 10 09.9**	**+1.9**
	comp=Z,3.5nm,0.7s,baz=245,slow=9.9,SNR=17						
KURK	**Kurchatov**	**23.95**	**44**	⇑P	**P**	**22 10 10.5**	**+1.6**
	comp=Z,7.6nm,0.8s						
KURK	**Kurchatov**	**23.95**	**44**	P	**P**	**22 10 10.1**	**+1.2**
KURK				IAmb	IAmb	22 10 15.1	
	comp=Z,8.4nm,0.8s						
GZR	**Gura Zlata**	**23.96**	**302**	⇑P	**P**	**22 10 10.3**	**+1.2**
FNA	**Florina**	**24.45**	**290**	P	**P**	**22 10 14.5**	**+0.7**
MDVR	**Moldovita**	**24.58**	**300**	⇑P	**P**	**22 10 16.7**	**+1.8**
MAKZ	**Makanchi**	**24.62**	**55**	P	**P**	**22 10 14.9**	**-0.4**
MAKZ				IAmb	IAmb	22 10 18.9	
	comp=Z,7.8nm,1.4s						
MK31	**Makanchi Array**	**24.83**	**55**	P	**P**	**22 10 18.7**	**+1.6**
	comp=Z,5.4nm,1.1s,baz=233,slow=2.4,SNR=12						
MK31	**Makanchi Array**	**24.83**	**55**	P	**P**	**22 10 17.7**	**+0.6**
MK31				IAmb	IAmb	22 10 21.3	
	comp=Z,3.1nm,1.1s						
MKAR	**Makanchi Array**	**24.83**	**55**	P	**P**	**22 10 18.0**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=254,slow=8.7,SNR=12						
TRPA	**Tarpa**	**24.83**	**308**	⇑P	**P**	**22 10 19.6**	**+2.6**
SIRR	**Siria**	**24.91**	**303**	⇓P	**P**	**22 10 20.0**	**+2.2**
KWP	**Kalwaria Pacla**	**25.23**	**311**	P	**P**	**22 10 20.9**	**+0.3**
KWP				IAmb	IAmb	22 11 05.5	
	comp=Z,6.5nm,1.1s						
PSZ	**Piszkesteto**	**26.48**	**306**	P	**P**	**22 10 34.0**	**+1.9**
WMQ	**Urumqi**	**28.14**	**63**	*e*P	**P**	**22 10 49.0**	**+2.0**
ZAA0	**Zalesovo Array**	**28.79**	**42**	P	**P**	**22 10 52.6**	**0.0**
ZAA0				IAmb	IAmb	22 10 58.8	
	comp=Z,2.7nm,0.9s						
ZALV	**Zalesovo Beam**	**28.79**	**42**	P	**P**	**22 10 52.5**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=240,slow=12,SNR=7.3						
FINES	**FINESS Array B**	**30.18**	**335**	P	**P**	**22 11 05.8**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=134,slow=12,SNR=3.7						
GEC2	**GERESS Array S**	**30.71**	**306**	P	**P**	**22 11 10.4**	**+0.6**
GEC2				IAmb	IAmb	22 11 11.0	
	comp=Z,3.2nm,1.1s						
GERES	**GERESS Array B**	**30.71**	**306**	P	**P**	**22 11 09.2**	**-0.6**
	comp=Z,0.9nm,0.9s,baz=99,slow=8.2,SNR=10						
ABTA	**Abfaltersbach**	**31.22**	**302**	*e*P	**P**	**22 11 11.6**	**-2.8**
	comp=Z,1.5nm,0.9s						
CLL	**Collm**	**31.64**	**311**	P	**P**	**22 11 18.1**	**+0.3**
WTTA	**Wattenberg**	**31.87**	**303**	*i* P	**P**	**22 11 19.8**	**-0.4**
	comp=Z,9.1nm,1.2s						
WATA	**Walderalm**	**31.92**	**303**	*e*P	**P**	**22 11 19.6**	**-0.9**
	comp=Z,9.0nm,1.8s						
SQTA	**Sankt Quirin**	**32.16**	**303**	*e*P	**P**	**22 11 21.9**	**-0.7**
	comp=Z,2.1nm,0.5s						
MOTA	**Moosalm**	**32.24**	**303**	*e*P	**P**	**22 11 22.6**	**-0.7**
	comp=Z,2.3nm,0.6s						
FETA	**Feichten**	**32.47**	**303**	*e*P	**P**	**22 11 25.9**	**+0.6**
	comp=Z,6.9nm,1.1s						
DAVOX	**Davos/Dischmat**	**33.03**	**302**	P	**P**	**22 11 30.5**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=125,slow=12,SNR=2.6						
DAVA	**Damuels**	**33.06**	**303**	*e*P	**P**	**22 11 29.3**	**-1.3**
	comp=Z,6.2nm,0.8s						
VSL	**Villasalto**	**33.70**	**289**	P	**P**	**22 11 35.8**	**-0.3**
HFS	**Hagfors**	**34.33**	**327**	P	**P**	**22 11 42.0**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=121,slow=7.1,SNR=5.7						
GTA	**Gaotai**	**37.48**	**70**	*e*P	**P**	**22 12 08.0**	**-0.7**
GTA				pP	sP	22 12 14.9	+4.0
GTA				sP	pP	22 12 18.0	+7.7
GTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
LZH	**Lanzhou**	**41.35**	**74**	*e*P	**P**	**22 12 41.5**	**+0.4**
LZH				pP	sP	22 12 44.6	+1.3
LZH				sP	pP	22 12 46.2	+3.5
LZH				*e*PP	**PnPn**	**22 14 20.3**	**-0.6**
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,49nm,5.9s						
ESDC	**Sonseca Array**	**43.79**	**292**	P	**P**	**22 13 00.3**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=59,slow=7.2,SNR=2.4						
CMAR	**Chiang Mai Arr**	**44.72**	**100**	P	**P**	**22 13 09.0**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=294,slow=9.6,SNR=1.5						
HHC	**Hu-ho-hao-te**	**45.98**	**65**	P	**P**	**22 13 18.8**	**+0.6**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax

comp=Z,16nm,18.0s,baz=245,slow=36
FINES FINESS Array B 91.88 341 P **P** **22 32 24.0 -0.5**
1.0nm,0.9s,baz=199,slow=4.0,SNR=3.7
YKA Yellowknife Ar 141.26 3 PKP **PKPdf** **22 38 45.1 -1.8**
0.1nm,0.6s,baz=348,slow=2.7,SNR=2.6
ULM Lac du Bonnet 151.27 340 PKPbc **PKPbc** **22 39 10.0 -0.1**
1.8nm,0.5s,baz=4.2,slow=3.7,SNR=2.7

TAP 10 22:23:01.6, 22°.45N×121°.20E, h32km, ML2.2, 2C, B, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECL	**Taimali**	**0.27**	**304**	⇑*i* P	Pn	22 23 09.4	0.0
	baz=304						
ECL				*e*S	Sn	22 23 15.0	+0.6
	baz=304						
TAW	**Tawu**	**0.29**	**253**	*i* P	Pn	22 23 09.4	-0.2
	baz=251						
TAW				S	Sn	22 23 15.1	+0.2
	baz=251						
EAST	**Anshuo**	**0.33**	**259**	*i* P	Pn	22 23 10.0	-0.2
	baz=258						
EAST				*e*S	Sn	22 23 15.8	0.0
	baz=258						
TWH	**Lutao**	**0.37**	**44**	*e*P	Pb	22 23 09.4	-0.7
	baz=49						
TWGBT	**Beinan**	**0.39**	**344**	⇑*i* P	Pn	22 23 10.9	-0.1
	baz=343						
TWGBT				S	Sn	22 23 17.8	+0.5
	baz=343						
TWG	**Pinlang**	**0.39**	**343**	*i* P	Pn	22 23 10.9	-0.2
	baz=343						
TWG				*i* S	Sn	22 23 17.8	+0.3
	baz=343						
LAY	**Lan-yu**	**0.52**	**141**	*e*P	Pn	22 23 13.0	+0.2
	baz=140						
SCZT	**Fangliau**	**0.54**	**262**	*i* P	Pn	22 23 13.2	+0.1
	baz=261						
MASBT	**Mashibuluo**	**0.55**	**288**	P	Pn	22 23 13.6	+0.4
	baz=287						
MASBT				S	Sn	22 23 21.8	+0.6
	baz=287						
HEN	**Hengchun**	**0.61**	**224**	*e*S	Sn	22 23 22.8	0.0
	baz=223						
FULB	**Fuli**	**0.76**	**7**	P	Pn	22 23 16.2	+0.1
	baz=6.0						
ELDTW	**Lidau**	**0.76**	**347**	*e*P	Pb	22 23 16.4	0.0
	baz=347						

TAP 10 22:23:12.2, 22°.70N×120°.72E, h41km, ML2.4, 1C-1D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSD	**Sandimen**	**0.09**	**298**	*e*P	Pn	22 23 19.3	+0.4
	baz=299						
MASBT	**Mashibuluo**	**0.12**	**221**	⇑*i* P	Pn	22 23 19.4	+0.3
	baz=221						
MASBT				S	Sn	22 23 24.6	+0.8
	baz=221						
ECL	**Taimali**	**0.24**	**116**	*i* P	Pn	22 23 20.4	+0.4
	baz=115						
ECL				S	Sn	22 23 26.2	+0.8
	baz=115						
SSPT	**Xinbi**	**0.26**	**212**	*e*P	Pn	22 23 20.8	+0.7
	baz=212						
SLGT	**Liugui**	**0.30**	**347**	*e*P	Pn	22 23 20.9	+0.4
	baz=347						
TWM1	**Shoushan**	**0.30**	**294**	*e*P	Pn	22 23 21.7	+1.1
	baz=293						
EAST	**Anshuo**	**0.34**	**159**	*e*P	Pn	22 23 21.6	+0.5
	baz=158						
EAST				*i* S	Sn	22 23 28.1	+0.9
	baz=158						
SCZT	**Fangliau**	**0.34**	**195**	*i* P	Pn	22 23 21.3	+0.3
	baz=194						
SCZT				S	Sn	22 23 28.0	+0.8
	baz=194						
TWG	**Pinlang**	**0.35**	**70**	⇓*i* P	Pn	22 23 21.8	+0.7
	baz=71						
TWG				S	Sn	22 23 28.3	+1.0
	baz=71						
TWGBT	**Beinan**	**0.35**	**71**	P	Pn	22 23 21.8	+0.6
	baz=71						
TWGBT				*i* S	Sn	22 23 28.4	+1.0
	baz=71						
TAW	**Tawu**	**0.38**	**154**	*e*P	Pn	22 23 21.9	+0.4
	baz=153						
SGST	**Jiashian**	**0.40**	**342**	*e*P	Pn	22 23 21.4	-0.3
	baz=342						
SGST				*e*S	Sn	22 23 28.8	+0.4
	baz=342						
WLCH	**Liuqiu**	**0.47**	**222**	*e*P	Pn	22 23 24.0	+1.4
	baz=221						
CHN1	**Nanshi**	**0.51**	**340**	*i* P	Pn	22 23 23.6	+0.4
	baz=339						
CHN1				*i* S	Sn	22 23 32.0	+1.1
	baz=339						
WTP	**Ta-pu**	**0.55**	**350**	*e*P	Pn	22 23 24.4	+0.7
	baz=350						
ELDTW	**Lidau**	**0.56**	**30**	P	Pn	22 23 24.2	+0.3
	baz=30						
ELDTW				*e*S	Sn	22 23 32.6	+0.5
	baz=30						
TPUB	**Ta-pu**	**0.60**	**352**	*e*S	Sn	22 23 34.1	+1.1
	baz=352						
TWK	**Hsinying**	**0.60**	**339**	*i* P	Pn	22 23 24.8	+0.3
	baz=340						
TWK				*i* S	Sn	22 23 34.0	+0.9
	baz=340						
CHN4	**Tsaushan**	**0.66**	**350**	P	Pn	22 23 25.8	+0.7
	baz=349						
TWH	**Lutao**	**0.70**	**89**	*e*P	Pn	22 23 26.2	+0.5
	baz=92						
TWH				*e*S	Sn	22 23 36.6	+1.3
	baz=92						
FULB	**Fuli**	**0.72**	**47**	*e*P	Pn	22 23 27.8	+1.7
	baz=47						
FULB				*e*S	Sn	22 23 38.4	+2.4
	baz=47						
FULB	**Fuli**	**0.72**	**47**	*e*S	Pn	22 23 27.8	+1.7
	baz=6.0						

*NEIC **10** 22:57:41.7±2.8, 41°.43N±0°.09×29°.6W±0°.1, h10km±1km, mb4.4/38, Error ellipse: s-maj=16.9km s-min=14.1km az=236.0*
*SVSA **10** 22:57:42.0±1.6, 41°.73N×29°.30W, h10km, ML4.0, Error ellipse: s-maj=11.7km s-min=7.3km az=16.0*
*IDC **10** 22:57:43.3±1.1, 41°.76N×29°.49W, h0km, mb3.8/13, mb1 3.9/14, mb1mx3.7/51, mbtmp3.8/14, ML4.0/1, MS3.3/19, Ms1 3.3/19, ms1mx3.1/41, Error ellipse: s-maj=32.8km s-min=18.3km az=14.0*
ISC 10 22:57:41.3±0.4, 41°.27N±0°.06×29°.51W±0°.06, h12km, n79, σ1°49/71, mb4.3/30, MS3.3/18, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07S1	**FLORES T-PHASE**	**2.29**	**215**	*e*P	**Pb**	**22 58 21.9**	**-0.7**
H07S1				*e*S	**Sb**	**22 58 51.7**	**+0.9**
PGRA	**Graciosa**	**2.53**	**152**	*e*P	**Pn**	**22 58 23.6**	**+1.4**
ROSA	**Rosais**	**2.73**	**159**	*e*P	**Pn**	**22 58 26.8**	**+1.9**
ROSA	**Rosais**	**2.73**	**159**	Pn	**Pn**	**22 58 26.9**	**+1.9**
PMAN	**Manadas**	**2.85**	**157**	*e*P	**Pn**	**22 58 28.5**	**+1.9**
ADH	**Angra Heroismo**	**3.14**	**145**	*e*P	**Pn**	**22 58 30.6**	**0.0**
PSCM	**Serra do Cume**	**3.16**	**144**	*e*P	**Pn**	**22 58 30.4**	**-0.4**
PSET	**Sete Cidades**	**4.52**	**138**	*e*P	**Pn**	**22 58 49.9**	**+0.3**
PSET				*e*S	**Sn**	**22 59 40.9**	**-1.2**
PSET				A	A	22 59 44.5	
	12nm,0.4s						
GRON	**Grota Negra**	**4.66**	**137**	*e*S	**Sn**	**22 59 45.5**	**0.0**
GRON				A	A	22 59 46.7	
	13nm,0.2s						
CMLA	**Cha da Macela**	**4.67**	**137**	*e*P	**Pn**	**22 58 51.8**	**+0.2**
CMLA				*e*S	**Sn**	**22 59 44.3**	**-1.4**
CMLA				A	A	22 59 47.1	
	16nm,0.2s						
CMLA	**Cha da Macela**	**4.67**	**137**	Pn	**Pn**	**22 58 51.8**	**+0.2**
BART	**Pico Bartolome**	**4.84**	**135**	*e*P	**Pn**	**22 58 53.9**	**-0.2**
BART				*e*S	**Sn**	**22 59 48.0**	**-2.1**
BART				A	A	22 59 51.9	
	8.0nm,0.2s						
PSMA	**Santa Maria**	**5.46**	**140**	*e*P	**Pn**	**22 59 03.3**	**+0.8**
PSMA				*e*S	**Sn**	**23 00 03.5**	**-1.7**
PSMA				A	A	23 00 07.0	
	6.8nm,0.2s						
PSMN	**Pico do Norte,**	**5.49**	**140**	*e*P	**Pn**	**22 59 03.5**	**+0.7**
PSMN				*e*S	**Sn**	**23 00 03.8**	**-2.1**
PSMN				A	A	23 00 05.2	
	8.5nm,0.4s						
ESDC	**Sonseca Array**	**19.49**	**86**	P	**Pn**	**23 02 11.2**	**+1.9**
	0.1nm,0.3s,baz=285,slow=13,SNR=6.2						
ESDC				LR	LR	23 08 00.1	
	comp=Z,129nm,21.3s,baz=295,slow=32						
MDT	**Midelt**	**21.54**	**105**	LR	LR	23 09 13.4	
	comp=Z,63nm,19.8s,baz=330,slow=32						
BORG	**Borgarnes**	**23.99**	**9**	LR	LR	23 09 44.2	
	comp=Z,39nm,18.0s,baz=204,slow=31						
SCHQ	**Schefferville**	**28.02**	**312**	LR	LR	23 12 48.2	
	comp=Z,55nm,19.0s,baz=28,slow=33						
PQI	**Presque Isle**	**28.03**	**294**	P	**P**	**23 03 30.0**	**-2.1**
SFJD	**Kangerlussuaq**	**28.28**	**343**	LR	LR	23 12 32.1	
	comp=Z,52nm,18.1s,baz=148,slow=32						
DAVOX	**Davos/Dischmat**	**28.64**	**66**	LR	LR	23 12 50.6	
	comp=Z,79nm,18.5s,baz=268,slow=32						
BBSR	**BB Station**	**29.37**	**264**	P	**P**	**23 03 43.4**	**-0.8**
OSSC	**Osservatorio P**	**29.98**	**72**	P	**P**	**23 03 51.0**	**+1.6**
KONO	**Kongsberg**	**30.34**	**39**	P	**P**	**23 03 49.2**	**-3.2**
KONO				IAmb	IAmb	23 03 52.8	
	comp=Z,9.7nm,1.1s						
H62A	**Milan**	**30.43**	**290**	P	**P**	**23 03 51.9**	**-1.7**
H62A				IAmb	IAmb	23 03 52.9	
	comp=Z,7.4nm,1.1s						
KEST	**Kesra**	**30.73**	**88**	LR	LR	23 15 38.7	
	comp=Z,84nm,20.0s,baz=277,slow=35						
BCX	**Boston College**	**30.85**	**286**	P	**P**	**23 03 57.9**	**+0.7**
BCX				IAmb	IAmb	23 04 12.4	
	comp=Z,7.6nm,0.8s						
GERES	**GERESS Array B**	**31.11**	**61**	LR	LR	23 15 05.8	
	comp=Z,59nm,19.2s,baz=274,slow=34						
HNH	**Hanover**	**31.38**	**289**	P	**P**	**23 03 60.0**	**-1.9**
HNH				IAmb	IAmb	23 04 06.4	
	comp=Z,9.1nm,1.2s						
NOA	**NORSAR Array B**	**31.57**	**37**	LR	LR	23 14 39.2	
	comp=Z,27nm,20.1s,baz=250,slow=33						
CPNY	**Central Park**	**33.26**	**284**	P	**P**	**23 04 17.0**	**-1.3**
PSUB	**Penn St. - Bra**	**34.59**	**283**	P	**P**	**23 04 30.0**	**0.0**
PSUB				IAmb	IAmb	23 04 33.7	
	comp=Z,4.8nm,0.9s						
N58A	**Sunbury**	**35.25**	**285**	P	**P**	**23 04 36.2**	**+0.5**
N58A				IAmb	IAmb	23 04 41.0	
	comp=Z,5.1nm,1.0s						
PSZ	**Piszkesteto**	**35.30**	**62**	P	**P**	**23 04 36.7**	**+0.7**
M57A	**Sunshine Farm,**	**35.41**	**286**	P	**P**	**23 04 38.1**	**+1.1**
M57A				IAmb	IAmb	23 04 40.2	
	comp=Z,3.8nm,0.9s						
MMNY	**Mt. Morris Dam**	**35.60**	**289**	P	**P**	**23 04 38.4**	**-0.3**
MMNY				IAmb	IAmb	23 04 42.5	
	comp=Z,8.1nm,1.1s						
S58A	**Poland Farm, P**	**37.28**	**281**	P	**P**	**23 04 52.3**	**-0.7**
S58A				IAmb	IAmb	23 05 10.4	
	comp=Z,5.6nm,1.0s						
FINES	**FINESS Array B**	**38.65**	**39**	P	**P**	**23 05 05.6**	**+1.3**
	comp=Z,1.4nm,0.9s,baz=254,slow=14,SNR=4.0						
FINES				LR	LR	23 19 20.6	
	comp=Z,39nm,19.4s,baz=240,slow=34						
TORD	**Torodi Ar. Bea**	**39.05**	**127**	P	P	23 05 15.0	+6.9
	comp=Z,1.1nm,0.8s,baz=319,slow=9.2,SNR=5.6						
TORD				LR	LR	23 19 52.8	
	comp=Z,36nm,19.0s,baz=80,slow=34						
S54A	**Dingess, Beckl**	**39.62**	**283**	P	**P**	**23 05 13.4**	**+0.7**
KEV	**Kevo**	**40.47**	**27**	P	**P**	**23 05 18.7**	**-0.6**
DBIC	**Dimbokro**	**40.86**	**141**	LR	LR	23 20 58.6	
	comp=Z,41nm,18.1s,baz=351,slow=34						
AKASG	**Malin Array Be**	**40.90**	**56**	P	**P**	**23 05 25.3**	**+2.3**
	comp=Z,0.4nm,0.4s,baz=277,slow=8.0,SNR=1.0						
AKASG				LR	LR	23 22 15.0	
	comp=Z,48nm,18.2s,baz=270,slow=36						
TIRR	**Tirgusor**	**41.82**	**66**	P	**P**	**23 05 28.4**	**-2.4**
V51A	**Loudon**	**42.64**	**281**	P	**P**	**23 05 37.4**	**-0.2**
G40A	**Rib Lake**	**43.46**	**296**	P	**P**	**23 05 41.4**	**-2.7**
G40A					**P**	**23 05 41.7**	**-2.4**
TIGA	**Tifton**	**44.02**	**275**	P	**P**	**23 05 49.5**	**+0.8**
T47A	**Sharon Grove**	**44.18**	**284**	P	**P**	**23 05 49.3**	**-0.7**
T47A				IAmb	IAmb	23 05 55.5	
	comp=Z,3.8nm,0.8s						
RES	**Resolute Bay**	**44.20**	**340**	P	**P**	**23 05 50.6**	**+1.0**
	comp=Z,3.0nm,0.9s,baz=103,slow=7.6,SNR=4.1						
RES	**Resolute Bay**	**44.20**	**340**	P	**P**	**23 05 48.9**	**-0.7**
RES				IAmb	IAmb	23 05 57.2	
	comp=Z,6.4nm,1.1s						
V48A	**Smith Brothers**	**44.49**	**282**	P	**P**	**23 05 49.2**	**-3.3**
F36A	**Milaca**	**45.50**	**298**	P	**P**	**23 05 59.6**	**-0.8**
F36A				IAmb	IAmb	23 06 03.2	
	comp=Z,3.3nm,1.1s						
ULM	**Lac du Bonnet**	**45.74**	**305**	LR	LR	23 23 32.6	
	comp=Z,76nm,21.3s,baz=110,slow=34						
LRAL	**Lakeview Retre**	**45.82**	**279**	P	**P**	**23 06 02.8**	**-0.3**
Z47A	**Carrollton**	**46.54**	**280**	P	**P**	**23 06 05.7**	**-3.0**
Z47A				IAmb	IAmb	23 06 10.6	
	comp=Z,6.2nm,1.0s						
ILGA	**Ilgaz**	**46.63**	**68**	P	**P**	**23 06 06.8**	**-2.8**
BRTR	**Keskin Array B**	**47.09**	**70**	LR	LR	23 24 51.0	
	comp=Z,16nm,20.1s,baz=164,slow=35						
T35A	**Sooner Cattle**	**51.02**	**288**	P	**P**	**23 06 42.6**	**-0.5**
YKA	**Yellowknife Ar**	**52.27**	**324**	P	**P**	**23 06 53.6**	**+1.6**
	comp=Z,0.5nm,0.8s,baz=72,slow=6.9,SNR=4.5						
ROSC	**El Rosal**	**53.98**	**240**	LR	LR	23 29 16.0	
	comp=Z,23nm,18.0s,baz=38,slow=35						
ARU	**Arti**	**55.91**	**42**	LR	LR	23 30 07.0	
	comp=Z,24nm,18.2s,baz=342,slow=35						
INK	**Inuvik**	**57.17**	**335**	P	**P**	**23 07 28.1**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=47,slow=9.5,SNR=6.2						
PDAR	**Pinedale Array**	**57.28**	**300**	P	**P**	**23 07 30.8**	**+1.8**
	comp=Z,1.4nm,0.9s,baz=57,slow=9.8,SNR=4.6						
AKTO	**Aktyubinsk**	**58.27**	**49**	LR	LR	23 31 19.2	
	comp=Z,32nm,20.9s,baz=305,slow=35						
TX31	**Lajitas Ar. Si**	**60.00**	**284**	P	**P**	**23 07 47.2**	**-0.7**
TX32	**Lajitas Array**	**60.00**	**284**	P	**P**	**23 07 47.8**	**-0.2**
TX32				IAmb	IAmb	23 07 51.8	
	comp=Z,1.9nm,0.9s						
TXAR	**Lajitas Array**	**60.00**	**284**	P	**P**	**23 07 50.9**	**+2.9**
	comp=Z,1.2nm,0.9s,baz=70,slow=7.2,SNR=12						
TXAR				LR	LR	23 33 17.3	
	comp=Z,15nm,19.5s,baz=0.0,slow=36						
TMUT	**Trail Mountain**	**60.07**	**298**	P	**P**	**23 07 47.3**	**-1.3**
J08A	**Circle Bar Ran**	**62.65**	**305**	P	**P**	**23 08 06.9**	**+1.2**
JIS	**Juneau Island**	**62.89**	**325**	P	**P**	**23 08 06.5**	**-0.3**
JIS				IAmb	IAmb	23 08 08.3	
	comp=Z,1.9nm,0.8s						
COLD	**Coldfoot**	**62.90**	**338**	P	**P**	**23 08 06.9**	**+0.1**
COLD				IAmb	IAmb	23 08 09.9	
	comp=Z,3.4nm,1.1s						
TUC	**Tucson**	**63.49**	**291**	P	**P**	**23 08 10.3**	**-1.1**
TUC				IAmb	IAmb	23 08 16.1	
	comp=Z,2.4nm,1.1s						
ILAR	**Eielson Array**	**63.57**	**335**	P	**P**	**23 08 12.7**	**+1.4**
	comp=Z,0.5nm,0.9s,baz=57,slow=1.8,SNR=4.1						
KURK	**Kurchatov**	**69.02**	**40**	P	**P**	**23 08 46.9**	**+0.4**
KURK				IAmb	IAmb	23 08 48.6	
	comp=Z,2.4nm,0.8s						
ZALV	**Zalesovo Beam**	**69.73**	**35**	P	**P**	**23 08 51.3**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=328,slow=10,SNR=4.4						
PB16	**IPOC Station P**	**69.94**	**221**	P	**P**	**23 08 54.3**	**+1.2**
MKAR	**Makanchi Array**	**73.44**	**42**	P	**P**	**23 09 13.9**	**+0.6**
	comp=Z,1.6nm,0.9s,baz=316,slow=5.1,SNR=10						
SEY	**Seymchan**	**76.13**	**359**	P	**P**	**23 09 30.9**	**+2.3**
	comp=Z,0.8nm,0.7s,baz=61,slow=3.5,SNR=4.0						
SONM	**Songino Array**	**83.06**	**28**	P	**P**	**23 10 07.5**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=327,slow=7.4,SNR=5.1						

*IDC **10** 23:04:03.8±1.3, 20°.64S×174°.82W, h0km, mb3.9/5, mb1 4.2/7, mb1mx3.9/31, mbtmp4.0/7, ML3.7/2, Error ellipse: s-maj=49.6km s-min=27.6km az=152.0*
ISC 10 23:04:07.6±0.9, 20°.8S±0°.2×174°.7W±0°.1, h27km, n7, σ0°85/7, mb3.8/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**13.97**	**95**	Pn	**Pn**	**23 07 23.5**	**-0.4**
	0.9nm,0.3s,baz=280,slow=12,SNR=1.7						
URZ	**Urewera**	**18.82**	**200**	P	**Pn**	**23 08 26.6**	**+0.7**
	0.8nm,0.3s,baz=355,slow=11,SNR=1.9						
ASAR	**Alice Springs**	**47.45**	**257**	P	**P**	**23 12 39.2**	**-1.2**
	0.6nm,0.8s,baz=93,slow=7.8,SNR=6.2						
WRA	**Warramunga Arr**	**47.61**	**262**	P	**P**	**23 12 41.1**	**-0.6**
	0.9nm,0.9s,baz=99,slow=7.8,SNR=2.7						
PDAR	**Pinedale Array**	**87.07**	**42**	P	**P**	**23 16 51.4**	**+0.3**
	0.3nm,0.7s,baz=210,slow=5.2,SNR=2.5						
CMAR	**Chiang Mai Arr**	**93.10**	**288**	P	**P**	**23 17 20.3**	**+0.6**
	1.2nm,0.3s,baz=105,slow=3.2,SNR=4.5						
YKA	**Yellowknife Ar**	**95.48**	**24**	P	**P**	**23 17 29.8**	**+0.2**
	0.3nm,0.7s,baz=232,slow=4.3,SNR=6.3						

*IDC **10** 23:23:05.1±2.4, 36°.32N×70°.90E, h167km±20km, mb3.6/16, mb1 3.7/22, mb1mx3.5/44, mbtmp4.1/22, Error ellipse: s-maj=16.3km s-min=12.0km az=171.0*
*BJI **10** 23:23:07.6±0.0, 36°.58N×70°.87E, h210km, mB4.6/4, mb4.4/7*
*NEIC **10** 23:23:08.6±1.5, 36°.54N±0°.05×70°.86E±0°.09, h200km±4km, mb4.2/37, Error ellipse: s-maj=10.7km s-min=7.9km az=89.0*
*NNC **10** 23:23:10.7±1.9, 36°.86N×70°.62E, h192km±21km, mb3.2, mpv4.1, Error ellipse: s-maj=21.2km s-min=8.5km az=158.0*
ISC 10 23:23:07.4±0.4, 36°.56N±0°.05×70°.91E±0°.04, h188km, n116, σ1°45/126, mb4.1/34, 9C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.48**	**349**		**Pn**	**23 23 52.8**	**+2.3**
GAR				Sn	**Sn**	**23 24 24.7**	**+0.5**
CHGR	**Chuyangaron**	**2.52**	**327**		**Pn**	**23 23 52.9**	**+2.1**
CHGR				Sn	**Sn**	**23 24 24.7**	**0.0**
KBL	**Kabul**	**2.52**	**218**		**Pn**	**23 23 53.1**	**+2.0**
KBL				Sn	**Sn**	**23 24 26.0**	**+1.0**
NIL	**Nilore**	**3.48**	**146**		**Pn**	**23 24 04.7**	**+2.4**
BTK	**Batken**	**3.50**	**359**		**Pn**	**23 24 05.5**	**+2.9**
BTK				Sn	**Sn**	**23 24 46.9**	**+1.1**
TAS	**Tashkent**	**4.93**	**346**		**Pn**	**23 24 22.9**	**+2.4**
KSH	**Kashi**	**4.97**	**52**	P	**Pn**	**23 24 19.0**	**-2.2**
KSH				S	Sn	23 25 08.2	-11
KSH				smax	smax		
	comp=N,500nm,0.6s						
KSH				smax	smax		
	comp=E,290nm,0.4s						
THN	**Thein Dam**	**5.71**	**135**	*e*P	**Pn**	**23 24 33.5**	**+2.7**
THN				*e*S	**Sn**	**23 25 35.0**	**-1.5**
AML	**Almayashu**	**5.97**	**20**	P	**Pn**	**23 24 35.8**	**+1.4**
	SNR=366						
UCH	**Uchtor**	**6.31**	**25**	P	**Pn**	**23 24 40.5**	**+1.6**
	SNR=31						
EKS2	**Erkin-Say**	**6.49**	**19**	P	**Pn**	**23 24 42.5**	**+1.6**
	SNR=14						
KK31	**Karatay Array**	**6.55**	**357**	P	**Pn**	**23 24 41.1**	**-0.4**
	4.4nm,0.2s,baz=197,slow=11,SNR=130						
KK31				S	**Sn**	**23 25 52.3**	**-3.8**
	26nm,0.3s,baz=190,slow=21,SNR=20						
KK31	**Karatay Array**	**6.55**	**357**		**Pn**	**23 24 42.8**	**+1.3**
KKAR	**Karatay Array**	**6.55**	**357**		**Pn**	**23 24 42.8**	**+1.3**
AAK	**Ala-Archa**	**6.67**	**23**	P	**Pn**	**23 24 45.0**	**+1.6**
	4.1nm,0.3s,baz=157,slow=5.7,SNR=36						
AAK				S	**Sn**	**23 25 58.5**	**-0.8**
	3.5nm,0.3s,baz=322,slow=20,SNR=14						
AAK	**Ala-Archa**	**6.67**	**23**	P	**Pn**	**23 24 45.3**	**+1.9**
	SNR=9.5						
AAK	**Ala-Archa**	**6.67**	**23**	⇑P	**Pn**	**23 24 44.8**	**+1.5**
	4.0nm,0.3s						
AAK				⇑S	**Sn**	**23 25 59.0**	**-0.3**
	41nm,0.8s						
KBK	**Karagaybulak**	**6.84**	**26**	P	**Pn**	**23 24 47.5**	**+1.9**
	SNR=8.2						
BHK	**Bhakra**	**6.87**	**137**	*e*S	**Sn**	**23 26 03.0**	**-0.8**
FRU1	**Bishkek**	**6.87**	**24**	Pn	**Pn**	**23 24 47.6**	**+1.7**
CHMS	**Chumysh**	**7.08**	**23**	P	**Pn**	**23 24 50.5**	**+1.9**
	SNR=6.1						
TKM2	**Tokmak 2**	**7.31**	**28**	P	**Pn**	**23 24 53.5**	**+1.7**
	SNR=8.2						
TKM2	**Tokmak 2**	**7.31**	**28**	⇑P	**Pn**	**23 24 52.7**	**+0.9**
	11nm,0.5s						
TKM2				⇑S	**Sn**	**23 26 14.6**	**+0.3**
	13nm,0.9s						
HRA	**Herat**	**7.39**	**256**		**Pn**	**23 24 54.3**	**+1.4**
SMLA	**Simla**	**7.51**	**134**	*e*P	**Pn**	**23 24 54.3**	**+0.1**
SMLA				*e*S	**Sn**	**23 26 15.6**	**-3.3**
SMLA				IAML		23 26 18.2	
	comp=N,170nm,0.4s						
SMLA				IAML		23 26 19.7	
	comp=E,240nm,0.3s						
MDOK	**Medeo**	**8.11**	**34**	P	**Pn**	**23 25 04.2**	**+2.0**
	comp=E,7.6nm,0.8s						
DDI	**Dehra Dun**	**8.62**	**134**	*e*P	**Pn**	**23 25 09.1**	**+0.2**
NDI	**New Delhi**	**9.48**	**144**	*e*P	**Pn**	**23 25 21.0**	**+0.9**
GEYT	**Alibeck**	**10.29**	**281**	P	**Pn**	**23 25 30.7**	**+0.1**
	comp=E,1.1nm,0.3s,baz=101,slow=11,SNR=14						
GEYT				S	**Sn**	**23 27 20.2**	**-5.0**
	comp=E,0.8nm,0.3s,baz=109,slow=12,SNR=1.4						
GYA0B	**ALIBECK ARRAY**	**10.29**	**281**	⇓P	**Pn**	**23 25 29.4**	**-1.2**
GYA0B				⇑S	**Sn**	**23 27 22.1**	**-3.2**
GYA0B	**ALIBECK ARRAY**	**10.29**	**281**		**Pn**	**23 25 30.7**	**0.0**
MAKZ	**Makanchi**	**13.15**	**35**	⇑P	**Pn**	**23 26 07.5**	**+0.5**
	comp=E,6.0nm,0.6s						
MAKZ	**Makanchi**	**13.15**	**35**		**Pn**	**23 26 07.9**	**+0.9**
PYUN	**Piuthan**	**13.23**	**126**	*e*P	**Pn**	**23 26 08.3**	**-0.2**
	comp=E,89nm,0.4s						
MK31	**Makanchi Array**	**13.29**	**36**	⇓P	**P**	**23 26 12.4**	**+0.4**
	comp=E,5.0nm,0.8s,baz=217,slow=11,SNR=14						
MK31	**Makanchi Array**	**13.29**	**36**		**P**	**23 26 10.5**	**-1.5**
MKAR	**Makanchi Array**	**13.29**	**36**	P	**P**	**23 26 10.5**	**-1.5**
	comp=E,0.4nm,0.3s,baz=197,slow=10,SNR=9.6						
DANN	**Dangsing**	**13.58**	**123**	*e*P	**Pn**	**23 26 12.2**	**-0.7**
	comp=E,61nm,0.5s						
KOLN	**Koldanda**	**13.86**	**126**	*e*P	**Pn**	**23 26 16.1**	**-0.1**
	comp=E,19nm,0.2s						
GKN	**Gorkha**	**14.39**	**122**	*e*P	**Pn**	**23 26 22.1**	**-0.8**
	comp=E,49nm,0.3s						
BHPL	**Bhopal**	**14.41**	**155**	*e*P	**P**	**23 26 26.8**	**+2.1**
BHPL				*e*S	Sn	23 28 53.7

comp=Z,57nm,4.8s
CD2 Chengdu 27.81 92 P P 23 28 38.3 -0.8
CD2 pmax pmax
comp=Z,10.0nm,0.5s
SONM Songino Array 28.36 55 P P 23 28 45.8 +1.8
comp=Z,0.6nm,0.5s,baz=268,slow=9.0,SNR=5.6
OBN Obninsk 29.85 319 P P 23 28 57.3 +0.5
XAN Xi'an 30.99 83 P P 23 29 01.1 -0.1
XAN IAmb IAmb 23 29 11.8
comp=Z,7.5nm,1.3s
MDUB Mudurnu 31.14 289 P P 23 29 05.8 -2.7
HHC Hu-ho-hao-te 31.81 70 P P 23 29 23.4 +9.0
HHC pmax pmax
comp=Z,10.0nm,0.8s
HHC pmax pmax
comp=Z,33nm,5.5s
ELL Elmali 32.72 283 P P 23 29 22.6 +0.3
AKASG Malin Array Be 32.85 309 P P 23 29 24.7 +1.5
comp=Z,1.1nm,0.5s,baz=81,slow=6.5,SNR=6.6
AKBB Malin Array Si 32.85 309 P P 23 29 22.4 -0.7
AKBB IAmb IAmb 23 29 28.9
comp=Z,5.8nm,1.4s
FIA1 FINESS Array S 37.40 326 P P 23 30 02.3 +0.6
FINES FINESS Array B 37.40 326 P P 23 30 03.2 +1.4
comp=Z,1.3nm,0.4s,baz=121,slow=10.0,SNR=25
ARCES ARCESS Array B 41.07 338 P P 23 30 33.8 +1.7
comp=Z,3.7nm,0.7s,baz=113,slow=7.9,SNR=30
YAK Yakutsk 43.96 36 pP 23 31 42.7 +5.4
NC405 NORSAR Array S 44.06 323 P P 23 30 55.9 -0.4
NC405 IAmb IAmb 23 31 05.1
comp=Z,12nm,1.1s
NC303 NORSAR Array S 44.24 323 P P 23 30 58.3 +0.6
NC303 IAmb IAmb 23 30 59.6
comp=Z,12nm,0.8s
NB2 NORSAR Subarra 44.29 323 P P 23 30 58.7 +0.5
comp=Z,1.1nm,0.5s,baz=97,slow=7.9
NOA NORSAR Array B 44.29 323 P P 23 30 59.0 +0.9
comp=Z,2.8nm,0.7s,baz=96,slow=7.8,SNR=23
MURB Monte Urbino 44.49 297 P P 23 30 58.7 -1.4
MURB IAmb IAmb 23 30 59.0
comp=Z,6.2nm,1.0s
NBO00 NORSAR Array S 44.50 323 P P 23 31 00.3 +0.5
NBO00 IAmb IAmb 23 31 08.8
comp=Z,15nm,1.2s
NC204 NORSAR Array S 44.53 323 P P 23 30 60.0 -0.1
NC204 IAmb IAmb 23 31 01.4
comp=Z,20nm,1.2s
TIXI Tiksi 45.75 22 P P 23 31 10.5 +1.1
comp=Z,3.7nm,0.3s,baz=262,slow=3.6,SNR=12
TIXI Tiksi 45.75 22 P P 23 31 09.5 +0.1
KMBO Kilima Mbogo 46.81 227 P P 23 31 35.5 +1.4
comp=Z,0.5nm,0.5s,baz=43,slow=14,SNR=3.6
ESDC Sonseca Array 57.37 298 P P 23 32 36.1 0.0
comp=Z,0.3nm,0.6s,baz=57,slow=7.6,SNR=4.8
TOA0 Torodi Ar. Sit 65.65 269 P P 23 33 30.5 -1.3
TORD Torodi Ar. Bea 65.65 269 P P 23 33 30.6 -1.1
comp=Z,0.8nm,0.5s,baz=51,slow=6.0,SNR=16
ANM Nome 70.01 22 P P 23 33 58.4 +0.2
ANM IAmb IAmb 23 34 10.8
comp=Z,12nm,1.2s
IVI Ivigtut 70.77 333 P P 23 34 02.5 -0.3
TOLK Toolik Lake Re 70.89 15 P P 23 34 04.4 +0.9
COLD Coldfoot 71.94 16 P P 23 34 10.2 +0.5
C36M Paulatuk 73.83 5 P P 23 34 20.4 -0.4
INK Inuvik 73.86 9 P P 23 34 22.4 +1.4
comp=Z,2.2nm,0.5s,baz=347,slow=6.1,SNR=21
INK Inuvik 73.86 9 IAmb IAmb 23 34 22.8
comp=Z,2.7nm,0.7s
MDM Murphy Dome 74.29 16 P P 23 34 22.9 -0.7
MDM IAmb IAmb 23 34 36.6
comp=Z,11nm,1.4s
NEA Nenana 74.42 17 P P 23 34 24.4 +0.1
NEA IAmb IAmb 23 34 25.8
comp=Z,2.7nm,0.8s
ILAR Eielson Array 74.75 16 P P 23 34 26.5 +0.3
comp=Z,1.4nm,1.1s,baz=330,slow=3.5,SNR=6.3
DHY Denali Highway 76.10 17 P P 23 34 34.1 0.0
DHY IAmb IAmb 23 34 35.3
comp=Z,2.4nm,0.7s
BOSA Boshof 77.74 220 P P 23 34 43.0 -0.6
comp=Z,3.1nm,1.0s,baz=45,slow=2.9,SNR=1.9
VRDI Verde Repeater 78.61 16 P P 23 34 48.2 0.0
VRDI IAmb IAmb 23 34 55.8
comp=Z,4.9nm,1.2s
BALM Baldy 79.03 16 P P 23 34 51.0 +0.7
BALM IAmb IAmb 23 34 54.0
comp=Z,4.2nm,1.2s
KDAK Kodiak Island 79.17 22 P P 23 34 51.8 +0.8
CNBA Chernabura Isl 79.21 27 P P 23 34 51.2 0.0
HYT Haines Junctio 80.21 14 P P 23 34 57.6 +0.9
YKA Yellowknife Ar 81.19 3 P P 23 35 02.6 +1.0
comp=Z,1.6nm,0.4s,baz=353,slow=5.1,SNR=56
DHAK Deception Hill 81.67 15 P P 23 35 04.5 +0.2
WRA Warramunga Arr 82.08 122 P P 23 35 06.0 -0.9
comp=Z,0.8nm,0.5s,baz=323,slow=4.9,SNR=12
WB2 Warramunga Arr 82.09 122 P P 23 35 06.4 -0.6
WB2 IAmb IAmb 23 35 19.1
comp=Z,11nm,1.5s
WR0 Warramunga Arr 82.23 122 P P 23 35 05.1 -2.7
WR0 IAmb IAmb 23 35 10.5
comp=Z,3.9nm,1.1s
ASAR Alice Springs 84.35 125 P P 23 35 17.7 -0.8
comp=Z,1.3nm,0.6s,baz=310,slow=5.0,SNR=21
PLCA Paso Flores 149.78 250 PKPbc PKiKP 23 42 36.0 +0.2
comp=Z,2.5nm,1.2s,baz=44,slow=5.7,SNR=2.8

*BJI **10** 23:42:36.7±0.0,6˚.35S×131˚.13E,h124km,mB4.9/41, mb4.9/56*
*NEIC **10** 23:42:41.2±1.6,6˚.00S±0˚.08×130˚.7E±0˚.1,h121km±7km, mb4.7/55,Error ellipse: s-maj=14.7km s-min=11.9km az=71.0*
*IDC **10** 23:42:42.1±1.4,5˚.94S×130˚.77E,h120km±13km,mb4.3/24, mb1 4.4/26,mb1mx4.3/44,mbtmp4.7/26,MS3.2/7, Ms1 3.2/7,ms1mx2.9/28,Error ellipse: s-maj=13.5km s-min=8.9km az=87.0*
*DJA **10** 23:42:43.9±0.2,6˚S±2˚×13˚1E±˚,h132km±3km,M4.9/29, mb4.9/29,mB5.5/12,MLv5.0/12,Mw(mB)4.9/12,Mwp4.8/2*
ISC 10 23:42:44.0±0.3,6.06S±0.03×130.82E±0.04,h150km,n196, σ1s91/216**,mb4.7/55,5C-2D,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.78**	**329**	P		**Pn**	**23 43 15.1**	**-1.5**
BNDI				S		**Sn**	**23 43 38.3**	**-3.4**
SAUI	**Saumlaki**	**1.96**	**166**	P		**Pn**	**23 43 19.4**	**+0.7**
SAUI				S		**Sn**	**23 43 46.4**	**+0.9**
SAUI	**Saumlaki**	**1.96**	**166**			**Pn**	**23 43 18.4**	**-0.3**
MSAI	**Masohi**	**3.29**	**325**	P		**Pn**	**23 43 33.0**	**-2.1**
MSAI				S		**Sn**	**23 44 10.8**	**-3.9**
FAKI	**Fak Fak**	**3.43**	**25**	P		**Pn**	**23 43 34.4**	**-2.5**
FAKI	**Fak Fak**	**3.43**	**25**			**Pn**	**23 43 34.4**	**-2.5**
AAI	**Ambon**	**3.52**	**312**	P		**Pn**	**23 43 36.8**	**-1.3**
AAI				S		**Sn**	**23 44 16.3**	**-3.7**
NLAI	**Namlea**	**4.65**	**307**	P		**Pn**	**23 43 51.3**	**-1.5**
NLAI				S		**Sn**	**23 44 44.7**	**-1.7**
SIJI	**Sorong**	**5.18**	**5**	P		**Pn**	**23 43 56.7**	**-3.1**
	327nm,0.3s,baz=257,slow=23,SNR=880							
SIJI				S		**Sn**	**23 44 51.1**	**-8.0**
	100nm,0.3s,baz=89,slow=23,SNR=7.6							
RKPI	**Ransiki, Papua**	**5.63**	**37**	P		**Pn**	**23 44 04.8**	**-1.0**
	15nm73μm2μm,0.7s							
LBMI	**Labuha**	**6.33**	**328**	P		**Pn**	**23 44 13.7**	**-1.4**
	1.4nm3μm229nm,0.9s							
MTN	**Manton Dam**	**6.74**	**177**	P		**Pn**	**23 44 19.8**	**-0.9**
	baz=6.8,SNR=1000							
MTN				S		**Sn**	**23 45 33.5**	**-3.0**
	baz=6.8							
MTN	**Manton Dam**	**6.74**	**177**			**Pn**	**23 44 19.6**	**-1.1**
KDU	**Kakadu**	**6.78**	**166**	P		**Pn**	**23 44 19.8**	**-1.3**
	baz=6.9,SNR=207							
KDU				S		**Sn**	**23 45 31.7**	**-5.6**
	baz=6.9							
SRPI	**Serui, Papua**	**6.82**	**53**	P		**Pn**	**23 44 20.9**	**-0.8**
	0.0nm74nm0.8nm,0.6s							
SOEI	**Soe**	**7.46**	**240**	P		**Pn**	**23 44 29.5**	**-0.8**
SOEI				S		**Sn**	**23 45 52.7**	**-1.0**
SOEI	**Soe**	**7.46**	**240**			**Pn**	**23 44 28.6**	**-1.7**
TNTI	**Ternate**	**7.62**	**333**	P		**Pn**	**23 44 30.6**	**-1.7**
	0.2nm606nm949nm60nm,0.7s							
TNTI	**Ternate**	**7.62**	**333**			**Pn**	**23 44 29.3**	**-3.0**
BATI	**Baumata**	**8.19**	**239**	P		**Pn**	**23 44 38.9**	**-1.2**
	97nm,0.3s,baz=95,slow=1.3,SNR=60							
BATI				S		**Sn**	**23 46 06.8**	**-4.6**
	40nm,0.3s,baz=102,slow=21,SNR=7.2							
BATI	**Baumata**	**8.19**	**239**	P		**Pn**	**23 44 39.0**	**-1.1**
BBSI	**Bau Bau**	**8.23**	**274**	P		**Pn**	23 44 43.2	+2.7
	0.0nm799nm12nm,1.0s							
SMPI	**Sarmi**	**8.85**	**63**	P		**Pn**	**23 44 49.3**	**+0.6**
	0.1nm41nm,0.8s							
MMRI	**Maumere**	**8.89**	**253**	P		**Pn**	**23 44 51.3**	**+2.0**
MMRI	**Maumere**	**8.89**	**253**			**Pn**	**23 44 46.6**	**-2.6**
EDFI	**Ende, Flores**	**9.44**	**253**	P		**Pn**	**23 44 58.4**	**+1.7**
	2μm50nm,1.0s							
EDFI				S		**Sn**	**23 46 41.4**	**-0.1**
	2μm50nm,1.0s							
LUWI	**Luwuk**	**9.46**	**302**	Pn		**Pn**	**23 44 52.4**	**-4.4**
KNRA	**Kununurra**	**9.77**	**192**	P		**Pn**	**23 44 58.6**	**-2.3**
	baz=9.8,SNR=249							
KNRA				S		**Sn**	**23 46 41.2**	**-7.9**
	baz=9.8							
KNRA	**Kununurra**	**9.77**	**192**			**Pn**	**23 44 58.6**	**-2.3**
GENI	**Genyem**	**9.94**	**70**	P		**Pn**	**23 45 04.6**	**+1.4**
	88nm,0.6s							
JAY	**Jayapura**	**10.47**	**71**	P		**Pn**	**23 45 09.8**	**-0.5**
	1.4nm,0.3s,baz=188,slow=7.7,SNR=8.9							
JAY				S		**Sn**	**23 47 04.6**	**-1.6**
	0.4nm,0.3s,baz=126,slow=22,SNR=2.0							
JAY	**Jayapura**	**10.47**	**71**	P		Pn	23 45 13.6	+3.3
	276nm18nm,0.8s							
MRSI	**Marisa**	**10.99**	**306**	P		**Pn**	**23 45 18.4**	**+1.3**
	40nm,0.9s							
TTSI	**Tana Toraja**	**11.37**	**285**	P		**P**	**23 45 31.1**	**+1.2**
WBSI	**Waikabubak, Su**	**11.87**	**252**	P		**Pn**	**23 45 28.7**	**0.0**
	2μm140nm,0.6s							
FITZ	**Fitzroy Crossi**	**12.99**	**202**	P		**Pn**	**23 45 39.5**	**-3.5**
	baz=13,SNR=84							
FITZ				S		Sn	23 47 54.1	-13
	baz=13							
FITZ	**Fitzroy Crossi**	**12.99**	**202**	P		**Pn**	**23 45 38.9**	**-4.2**
	6.4nm,0.3s,baz=20,slow=9.4,SNR=112							
FITZ				S		Sn	23 47 53.5	-13
	18nm,0.3s,baz=192,slow=20,SNR=8.6							
FITZ	**Fitzroy Crossi**	**12.99**	**202**			**Pn**	**23 45 39.6**	**-3.5**
PLAI	**Plampang**	**13.22**	**257**	P		**P**	**23 45 47.9**	**-2.7**
	111nm,0.8s							
DAV	**Davao City (W)**	**14.06**	**338**	LR		LR	23 51 29.5	
	comp=Z,49nm,18.3s,baz=154,slow=38							
WB0	**Warramunga Arr**	**14.06**	**166**			**Pn**	**23 45 55.0**	**-1.7**
KCP	**Kidapawan**	**14.19**	**336**	i/P		**P**	**23 46 02.2**	**+0.8**
WRAB	**Tennant Creek**	**14.21**	**166**			**Pn**	**23 45 57.7**	**-0.9**
WRA	**Warramunga Arr**	**14.21**	**166**	P		**Pn**	**23 45 57.0**	**-1.7**
	2.6nm,0.3s,baz=344,slow=13,SNR=61							
WRA				S		Sn	23 48 24.9	-11
	6.6nm,0.3s,baz=351,slow=22,SNR=11							
WRA				LR		LR	23 52 22.3	
	comp=Z,108nm,19.6s,baz=270,slow=40							
WB2	**Warramunga Arr**	**14.22**	**166**			**Pn**	**23 45 57.0**	**-1.7**
WR0	**Warramunga Arr**	**14.28**	**166**			**Pn**	**23 45 57.9**	**-1.6**
COEN	**Coen**	**14.47**	**124**	P		**P**	**23 46 02.1**	**-2.3**
	baz=15,SNR=10							
COEN	**Coen**	**14.47**	**124**	Pn		**Pn**	**23 46 01.5**	**-0.4**
CTBH	**Cotabato--PC H**	**14.74**	**333**	i/P		**P**	**23 46 08.3**	**+0.9**
PMG	**Port Moresby**	**16.52**	**103**	S		**S**	**23 49 24.0**	**-7.0**
	0.7nm,0.3s,baz=229,slow=19,SNR=2.4							
JAGI	**Jajag, Banyuwa**	**16.71**	**261**	P		**P**	**23 46 25.5**	**-3.7**
JAGI					IAmb	IAmb	23 46 39.1	
	comp=Z,26nm,0.8s							
QIS	**Mount Isa**	**16.74**	**150**	P		**Pn**	**23 46 31.0**	**+1.2**
	baz=17,SNR=27							
AS31	**Alice Springs**	**17.75**	**171**	P		**Pn**	**23 46 42.1**	**+0.2**
AS31					IAmb	IAmb	23 46 43.8	
	comp=Z,21nm,0.7s							
ASAR	**Alice Springs**	**17.75**	**171**	P		**Pn**	**23 46 42.1**	**+0.1**
	comp=Z,7.8nm,0.3s,baz=350,slow=11,SNR=525							
ASAR				S		**S**	**23 49 49.2**	**-8.2**
	comp=Z,2.4nm,0.3s,baz=349,slow=23,SNR=7.8							
MTSU	**Mount Surprise**	**17.82**	**134**	P		**Pn**	**23 46 42.1**	**-0.7**
	baz=18,SNR=6.6							
MBWA	**Marble Bar**	**18.46**	**215**	P		**Pn**	**23 46 47.9**	**-2.4**
MBWA					IAmb	IAmb	23 46 50.3	
	comp=Z,48nm,0.7s							
PSA00	**Pilbara Seismi**	**18.72**	**214**	P		**Pn**	**23 46 52.2**	**-1.2**
KKM	**Kota Kinabalu**	**18.90**	**309**	P		**P**	**23 46 51.3**	**-2.0**
KKM					IAmb	IAmb	23 46 55.6	
	comp=Z,21nm,0.9s							
WRKA	**Warakurna**	**19.02**	**187**	P		**Pn**	**23 46 56.3**	**-0.6**
	baz=19,SNR=82							
SBUM	**Sibu**	**20.41**	**294**	P		**P**	**23 47 07.4**	**-2.1**
CTA	**Charters Tower**	**20.47**	**134**	P		Pn	23 47 13.1	-0.9
	comp=Z,7.4nm,0.9s,baz=315,slow=10.0,SNR=4.2							
KRVT	**Keravat (AS076**	**21.19**	**86**	P		**P**	**23 47 20.1**	**+2.2**
	comp=Z,18nm,0.4s,baz=5.1,slow=24,SNR=3.8							
TGY	**Tagaytay City**	**22.31**	**334**	P		**P**	**23 47 28.9**	**-0.5**
	comp=Z,156nm,0.3s,baz=227,slow=0.5,SNR=6.3							
CISI	**Cisompet, Garu**	**22.89**	**265**	P		**P**	**23 47 36.0**	**+1.0**
	comp=Z,89nm,0.8s							
CISI	**Cisompet, Garu**	**22.89**	**265**	P		**P**	**23 47 33.2**	**-1.8**
GIRL	**Giralia**	**22.98**	**223**	P		**P**	**23 47 37.3**	**+1.7**
	baz=23,SNR=4.1							
GIRL	**Giralia**	**22.98**	**223**	P		**P**	**23 47 36.1**	**+0.5**
LEM	**Lembang**	**23.07**	**267**	P		**P**	**23 47 37.2**	**+0.4**
	comp=Z,20nm,0.8s,baz=314,slow=23,SNR=2.2							
LEM				LR		LR	23 59 17.7	
	comp=Z,45nm,18.3s,baz=58,slow=43							
MEEK	**Meekatharra**	**23.54**	**208**	P		**P**	**23 47 41.8**	**+1.0**
	baz=24,SNR=19							
CNJI	**Cibinong**	**23.56**	**266**	P		**P**	**23 47 42.1**	**+1.0**
	comp=Z,153nm,1.3s							
QLP	**Quilpie**	**24.08**	**149**	P		**P**	**23 47 48.2**	**+2.6**
	baz=24,SNR=8.3							
FORT	**Forrest**	**24.72**	**186**	P		**P**	**23 47 52.9**	**+1.5**
	baz=25,SNR=28							
FORT	**Forrest**	**24.72**	**186**	P		**P**	**23 47 51.9**	**+0.4**
MORW	**Morawa**	**26.81**	**210**	P		**P**	**23 48 11.3**	**+1.0**
	baz=27,SNR=11							
BBOO	**Buckleboo**	**27.06**	**170**	P		**P**	**23 48 13.9**	**+1.5**
	baz=27,SNR=14							
STKA	**Stephens Creek**	**27.59**	**160**	P		**P**	**23 48 19.2**	**+2.0**
	baz=28,SNR=22							
STKA	**Stephens Creek**	**27.59**	**160**	P		**P**	**23 48 19.1**	**+2.0**
	comp=Z,6.4nm,0.3s,baz=342,slow=8.0,SNR=32							
STKA	**Stephens Creek**	**27.59**	**160**	P		**P**	**23 48 18.2**	**+1.0**
BLDU	**Balidu**	**27.79**	**207**	P		**P**	**23 48 20.2**	**+1.2**
	baz=28,SNR=10							
KLBR	**Kellerberrin**	**28.19**	**204**	P		**P**	**23 48 23.9**	**+1.3**
	baz=28,SNR=45							
HTT	**Hallett**	**28.25**	**166**	P		**P**	**23 48 25.1**	**+2.0**
	baz=28,SNR=7.8							
CMSA	**Cobar Meteorol**	**28.92**	**153**	P		**P**	**23 48 31.6**	**+2.7**
	baz=29,SNR=6.7							
MUN	**Mundaring**	**29.18**	**206**	P		**P**	**23 48 32.6**	**+1.4**
	baz=29,SNR=4.5							
NWAO	**Narrogin (SRO)**	**29.57**	**204**	P		**P**	**23 48 36.2**	**+1.5**
	baz=30,SNR=11							
NWAO	**Narrogin (SRO)**	**29.57**	**204**	P		**P**	**23 48 36.1**	**+1.4**
	comp=Z,13nm,0.5s,baz=39,slow=11,SNR=14							
NWAO				LR		LR	00 01 46.7	
	comp=Z,156nm,21.1s,baz=1.5,slow=39							
NWAO	**Narrogin (SRO)**	**29.57**	**204**	P		**P**	**23 48 35.4**	**+0.6**
NWAO					IAmb	IAmb	23 48 36.6	
	comp=Z,12nm,0.7s							
RKGY	**Rocky Gully**	**31.16**	**202**	P		P	23 48 51.6	+2.9
	baz=31,SNR=8.3							
YOJ	**Yonaguni jima**	**31.28**	**346**	P		**P**	**23 48 49.0**	**-0.8**
GSI	**Gunungsitoli**	**33.99**	**281**	P		**P**	**23 49 12.2**	**-1.4**
GSI					IAmb	IAmb	23 49 16.2	
	comp=Z,11nm,0.7s							
PBKT	**Sadao Pong**	**37.12**	**308**	P		**P**	**23 49 39.0**	**-1.2**
JNU	**Nakatsue**	**38.97**	**0**	P		**P**	**23 49 55.4**	**-0.3**
	comp=Z,15nm,0.9s,baz=161,slow=6.6,SNR=6.0							
JNU	**Nakatsue**	**38.97**	**0**	P		**P**	**23 49 55.8**	**+0.2**
JNU					IAmb	IAmb	23 49 57.9	
	comp=Z,15nm,0.9s							
NJ2	**Nanjing**	**39.58**	**344**	eP		**P**	**23 50 01.8**	**+1.1**
NJ2					pmax	pmax		
	comp=Z,20nm,0.7s							
WHN	**Wuhan**	**39.67**	**337**	P		**P**	**23 50 02.5**	**+1.1**
CMAR	**Chiang Mai Arr**	**39.77**	**308**	P		**P**	**23 50 03.0**	**+0.5**
	comp=Z,1.2nm,0.3s,baz=145,slow=7.2,SNR=5.9							
CMAR				PcP		**PcP**	**23 52 08.5**	**+2.6**
	comp=Z,1.2nm,0.3s,baz=170,slow=1.3,SNR=4.3							
CMAR				ScP		**ScP**	**23 55 43.9**	**+2.9**
	comp=Z,1.3nm,0.3s,baz=148,slow=3.5,SNR=7.5							
GYA	**Guiyang**	**39.92**	**325**	eP		**P**	**23 50 04.0**	**+0.3**
GYA					pmax	pmax		
	comp=Z,10.0nm,0.7s							
CHTO	**Chiang Mai**	**39.98**	**309**	P		**P**	**23 50 02.8**	**-1.4**
MJAR	**Matsushiro Arr**	**42.94**	**9**	P		**P**	**23 50 27.2**	**-0.8**
	comp=Z,14nm,0.8s,baz=188,slow=9.8,SNR=55							
MJAR				LR		LR	00 07 49.1	
	comp=Z,16nm,19.7s,baz=210,slow=35							
MAJO	**Matsushiro**	**42.94**	**9**	P		**P**	**23 50 27.7**	**-0.3**
MAT	**Matsushiro**	**42.94**	**9**	P		**P**	**23 50 27.3**	**-0.8**
MJB9	**Matsu-Tunnel**	**42.95**	**9**	P		**P**	**23 50 27.7**	**-0.4**
MJB9					IAmb	IAmb	23 50 29.0	
	comp=Z,18nm,0.8s							
KSRS	**Korea Array**	**43.38**	**357**	P		**P**	**23 50 32.4**	**+0.9**
	comp=Z,4.7nm,0.7s,baz=173,slow=8.6,SNR=17							
KSRS				PcP		**PcP**	**23 52 18.9**	**+1.5**
	comp=Z,1.4nm,0.8s,baz=184,slow=4.9,SNR=2.9							
KSRS				LR		LR	00 09 27.5	
	comp=Z,16nm,18.5s,baz=174,slow=37							
KS19	**Wonju Array Si**	**43.43**	**357**	P		**P**	**23 50 31.6**	**-0.3**
KS19					IAmb	IAmb	23 50 41.7	
	comp=Z,10.0nm,1.1s							
XAN	**Xi'an**	**44.95**	**334**	P		**P**	**23 50 43.4**	**-0.8**
XAN					pmax	pmax		
	comp=Z,19nm,0.9s							
XAN					pmax	pmax		
	comp=Z,110nm,4.2s							
CD2	**Chengdu**	**44.97**	**326**	P		**P**	**23 50 44.0**	**-0.4**
CD2					pmax	pmax		
	comp=Z,20nm,0.5s							
BJI	**Beijing**	**47.82**	**345**	P		**P**	**23 51 06.4**	**0.0**
BJI					pmax	pmax		
	comp=Z,16nm,0.7s							
LZH	**Lanzhou**	**48.98**	**331**	⇑P		**P**	**23 51 16.0**	**+0.5**
LZH					pP	pP	23 51 44.3	-4.8
LZH					sP	sP	23 51 58.2	-7.4
LZH					PP	**PP**	**23 53 11.6**	**+1.0**
LZH					pmax	pmax		
	comp=Z,23nm,1.3s							
LZH					pmax	pmax		
	comp=Z,82nm,5.2s							
SHL	**Shillong**	**49.19**	**311**	P		**P**	**23 51 16.1**	**-1.3**
SHL					IAmb	IAmb	23 51 18.1	
	comp=Z,16nm,1.0s							
HHC	**Hu-ho-hao-te**	**49.92**	**341**	P		**P**	**23 51 22.9**	**+0.4**
HHC					pmax	pmax		
	comp=Z,10.0nm,0.9s							
HHC					pmax	pmax		
	comp=Z,56nm,6.1s							
USA0B	**Ussuriysk Arra**	**50.04**	**1**	P		**P**	**23 51 22.9**	**-0.3**
USA0B					IAmb	IAmb	23 51 24.8	
	comp=Z,8.6nm,0.8s							
USRK	**Ussuriysk Ar.**	**50.04**	**1**	P		**P**	**23 51 23.9**	**+0.7**
	comp=Z,8.1nm,0.7s,baz=190,slow=8.2,SNR=18							
ODAN	**Odare**	**53.27**	**310**	eP		**P**	**23 51 47.8**	**-0.1**
	comp=Z,36nm,0.7s							
TAPN	**Taplejung**	**53.29**	**311**	eP		**P**	**23 51 48.0**	**0.0**
	comp=Z,21nm,0.5s							
GTA	**Gaotai**	**53.56**	**330**	⇑P		**P**	**23 51 50.8**	**+1.2**
GTA					pP	pP	23 52 15.7	-7.7
GTA					PcP	**PcP**	**23 52 55.4**	**+1.1**
GTA					S	**S**	**23 59 13.7**	**+2.4**
GTA					pmax	pmax		
	comp=Z,11nm,1.0s							
GTA					pmax	pmax		
	comp=Z,60nm,6.8s							
GTA					LR	LR		
	comp=Z,40nm,16.5s							
GTA					LR	LR		
	comp=Z,51nm,17.8s							
GTA					LR	LR		
	comp=Z,50nm,16.2s							
RAMN	**Ramite**	**53.92**	**310**	eP		**P**	**23 51 53.0**	**+0.4**
	comp=Z,75nm,0.6s							
JIRN	**Jiri**	**54.60**	**310**	eP		**P**	**23 51 57.7**	**+0.1**
	comp=Z,45nm,0.6s							
GUN	**Gumba**	**54.96**	**310**	eP		**P**	**23 52 00.4**	**+0.2**
	comp=Z,62nm,0.7s							
PKI	**Pulchoki**	**55.15**	**310**	eP		**P**	**23 52 01.2**	**-0.4**
	comp=Z,15nm,0.6s							
PKIN	**Phulchoki**	**55.16**	**310**	eP		**P**	**23 52 01.0**	**-0.6**
	comp=Z,16nm,0.6s							
KKN	**Kakani**	**55.36**	**310**	eP		**P**	**23 52 03.0**	**+0.1**
	comp=Z,30nm,0.7s							
DMN	**Daman**	**55.40**	**309**	eP		**P**	**23 52 03.0**	**-0.3**
	comp=Z,31nm,0.9s							
GKN	**Gorkha**	**55.96**	**310**	eP		**P**	**23 52 07.4**	**+0.3**
	comp=Z,50nm,0.6s							
KOLN	**Koldanda**	**56.64**	**309**	eP		**P**	**23 52 12.4**	**+0.4**
	comp=Z,24nm,0.6s							
DANN	**Dangsing**	**56.80**	**310**	eP		**P**	**23 52 13.4**	**+0.2**
	comp=Z,27nm,0.6s							
ULN	**Ulaanbaatar**	**57.64**	**341**	P		**P**	**23 52 19.3**	**+0.7**
SONM	**Songino Array**	**57.82**	**341**	P		**P**	**23 52 21.2**	**+1.4**
	comp=Z,8.7nm,1.0s,baz=157,slow=7.0,SNR=26							
WMQ	**Urumqi**	**63.07**	**326**	eP		**P**	**23 52 56.6**	**+1.2**
WMQ					pP	pP	23 53 26.0	-4.2
WMQ					pmax	pmax		
	comp=Z,22nm,1.1s							
WMQ					pmax	pmax		
	comp=Z,71nm,4.7s							
WMQ					LR	LR		
	comp=Z,73nm,22.7s							
WMQ					LR	LR		
	comp=Z,130nm,21.9s							
WMQ					LR	LR		
	comp=Z,70nm,24.5s							
PETK	**Petropavlovsk-**	**63.19**	**18**	P		**P**	**23 52 57.4**	**+1.5**
	comp=Z,14nm,0.7s,baz=176,slow=2.9,SNR=27							
PET	**Petropavlovsk**	**63.41**	**18**	P		**P**	**23 52 57.4**	**+0.1**
MA2	**Magadan**	**67.33**	**11**	P		**P**	**23 53 24.0**	**+1.5**
	comp=Z,12nm,0.7s,baz=156,slow=5.7,SNR=8.7							
MA2	**Magadan**	**67.33**	**11**	P		**P**	**23 53 23.2**	**+0.8**
MA2					IAmb	IAmb	23 53 24.8	
	comp=Z,15nm,0.8s							
KSH	**Kashi**	**67.89**	**317**	P		**P**	**23 53 28.7**	**+2.1**
KSH					sP	sP	23 54 14.6	-3.6
KSH					PP

comp=Z,7.1nm,0.9s
VNDA Vanda 73.27 173 P **P** 23 54 00.1 +1.7
comp=Z,2.2nm,0.8s,baz=310,slow=6.1,SNR=8.1
MAW Mawson 76.11 201 P **P** 23 54 17.0 +2.2
comp=Z,3.7nm,0.8s,baz=58,slow=9.5,SNR=6.1
MAW LR LR 00 28 01.1
comp=Z,46nm,18.1s,baz=224,slow=36
TIXI Tiksi 77.57 359 P **P** 23 54 22.5 -0.4
BRVK Borovoye 77.79 327 P **P** 23 54 24.0 -0.4
UNV Unalaska Valle 79.28 32 P **P** 23 54 33.9 +1.3
UNV IAmb IAmb 23 54 35.4
comp=Z,11nm,0.9s
GEYT Alibeck 80.24 310 P **P** 23 54 39.3 +1.1
comp=Z,2.9nm,0.7s,baz=152,slow=6.6,SNR=8.1
GYA0B ALIBECK ARRAY 80.24 310 P **P** 23 54 38.3 +0.1
SDPT Sand Point 83.10 32 P **P** 23 54 54.0 +1.3
CNBA Chernabura Isl 83.39 33 P **P** 23 54 54.9 +0.7
CNBA IAmb IAmb 23 54 56.3
comp=Z,7.9nm,0.8s
AKTO Aktyubinsk 83.84 322 P **P** 23 54 57.3 +0.6
comp=Z,2.0nm,0.6s,baz=154,slow=3.9,SNR=7.4
SYO Syowa Base 84.83 201‖ *e*P **P** 23 55 01.0 -0.3
SYO Syowa Base 84.83 201‖ *e*PcP **PcP** 23 55 04.4 0.0
ARU Arti 85.35 328 P **P** 23 55 04.6 +0.5
comp=Z,0.9nm,0.5s,baz=165,slow=9.3,SNR=5.7
ARU Arti 85.35 328 P **P** 23 55 03.3 -0.8
ARU **P** 23 55 03.4 -0.6
OHAK Old Harbor 87.49 32 P **P** 23 55 14.9 +0.5
OHAK IAmb IAmb 23 55 16.9
comp=Z,12nm,0.8s
TTA Tatalina 87.80 26 P **P** 23 55 16.2 +0.2
KDAK Kodiak Island 88.00 31 P **P** 23 55 19.0 +2.1
comp=Z,6.3nm,0.8s,baz=280,slow=1.9,SNR=5.9
RAYN Ar Rayn 88.12 294 P **P** 23 55 18.3 0.0
MLY Manley 90.60 25 P **P** 23 55 29.4 +0.4
MLY **P** 23 55 29.7 +0.7
RND Reindeer 91.06 26 IAmb IAmb 23 55 31.9
comp=Z,5.0nm,0.8s
WRH Wood River Hil 91.59 25 P **P** 23 55 32.6 -0.9
WRH **P** 23 55 33.6 0.0
WRH IAmb IAmb 23 55 34.2
comp=Z,4.0nm,0.9s
DHY Denali Highway 91.66 27 P **P** 23 55 34.9 +0.8
DHY IAmb IAmb 23 55 38.1
comp=Z,2.8nm,0.7s
CCB Clear Creek Bu 91.75 25 P **P** 23 55 33.8 -0.5
CCB **P** 23 55 34.1 -0.2
CCB IAmb IAmb 23 55 34.7
comp=Z,4.9nm,0.8s
HDA Harding Lake 92.07 26 IAmb IAmb 23 55 36.5
comp=Z,4.1nm,0.9s
IL31 92.16 25 P **P** 23 55 34.8 -1.3
IL31 **P** 23 55 35.5 -0.6
IL31 IAmb IAmb 23 55 36.1
comp=Z,2.5nm,0.8s
ILAR Eielson Array 92.16 25 P **P** 23 55 35.4 -0.8
comp=Z,2.0nm,0.8s,baz=273,slow=4.2,SNR=17
ILAR PP **PP** 23 59 15.3 -3.0
comp=Z,0.7nm,1.0s,baz=248,slow=7.3,SNR=4.4
FYU Fort Yukon 93.11 23 P **P** 23 55 41.1 +0.7
EGAK Eagle 94.59 25 P **P** 23 55 47.9 +0.5
EGAK **P** 23 55 48.9 +1.5
EGAK IAmb IAmb 23 55 49.5
comp=Z,4.5nm,0.9s
KLMR Klimovskoe 95.89 331 *e*P **P** 23 55 49.7 -3.6
KLMR AMP 23 55 54.2
comp=Z,5.0nm,1.0s
INK Inuvik 97.69 22 P Pdif 23 56 00.9 -0.5
comp=Z,2.6nm,1.1s,baz=273,slow=7.7,SNR=6.3
FINES FINESS Array B 102.34 332 P **Pdif** 23 56 21.8 -0.4
comp=Z,0.9nm,0.8s,baz=53,slow=5.4,SNR=1.9
YKA Yellowknife Ar 106.56 26 PKiKP **PKiKP** 00 00 51.6 +0.8
comp=Z,0.3nm,0.6s,baz=288,slow=1.4,SNR=9.3
GERES GERESS Array B 112.22 321 PKiKP **PKiKP** 00 01 02.8 +0.8
comp=Z,0.6nm,0.6s,baz=64,slow=3.1,SNR=7.0
WTTA Wattenberg 114.02 319 *i* PKiKP **PKiKP** 00 01 06.6 +1.0
comp=Z,3.5nm,0.5s
WATA Walderalm 114.04 319 *e*PKiKP **PKiKP** 00 01 07.8 +2.1
comp=Z,0.8nm,0.4s
MOTA Moosalm 114.34 320 *e*PKiKP **PKiKP** 00 01 06.9 +0.7
comp=Z,1.9nm,0.9s
FETA Feichten 114.69 319 *e*PKiKP **PKiKP** 00 01 08.4 +1.5
comp=Z,3.7nm,1.0s
DAVOX Davos/Dischmat 115.32 319 PKP **PKPdf** 00 01 09.1 +0.9
comp=Z,1.4nm,0.6s,baz=332,slow=4.9,SNR=2.5
PDAR Pinedale Array 115.66 45 PKP **PKiKP** 00 01 10.1 +1.1
comp=Z,0.3nm,0.6s,baz=256,slow=0.6,SNR=3.6
EKA Eskdalemuir Ar 118.73 332 PKP **PKiKP** 00 01 15.5 +1.2
comp=Z,1.1nm,0.7s,baz=31,slow=3.4,SNR=4.6
KEST Kesra 118.91 308 PKP **PKiKP** 00 01 16.5 +1.2
comp=Z,0.6nm,0.6s,baz=109,slow=21,SNR=1.6
TXAR Lajitas Array 123.75 59 PKP **PKiKP** 00 01 26.4 +1.3
comp=Z,0.3nm,0.7s,baz=325,slow=2.0,SNR=3.5

WEL 10 23:52:29.2,45°S±2°×16°8E±°, h76km±3km, M3.4/12, ML3.6/12, MLv3.4/12, Error ellipse: s-maj=0.0km s-min=0.0km az=81.7, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.18**	**42**	P	Pn	23 52 41.0	+0.5
MSZ				S	Sn	23 52 49.5	+0.8
MLZ	**Mavora Lakes**	**0.61**	**155**	P	Pn	23 52 44.5	+0.8
DCZ	**Deep Cove**	**0.78**	**213**	P	Pn	23 52 45.7	+0.3
DCZ				S	Sn	23 52 57.6	+0.2
WKZ	**Wanaka**	**0.90**	**92**	P	Pn	23 52 48.1	+1.2
JCZ	**Jackson Bay**	**1.04**	**45**	P	Pn	23 52 48.9	+0.3
WHZ	**Wether Hill Ro**	**1.09**	**173**	P	Pn	23 52 49.9	+0.8
WHZ				S	Sn	23 53 04.9	+0.8
EAZ	**Earnscleugh**	**1.18**	**111**	P	Pn	23 52 51.7	+1.5
PYZ	**Puysegur Point**	**1.55**	**209**	P	Pn	23 52 55.4	+0.3
TUZ	**Tuapeka**	**1.75**	**131**	P	Pn	23 52 58.8	+1.2
LBZ	**Lake Benmore**	**1.79**	**77**	P	Pn	23 52 58.4	+0.3
FOZ	**Fox Glacier**	**1.96**	**50**	P	Pn	23 52 59.7	-0.7
SYZ	**Scrubby Hill**	**1.98**	**151**	P	Pn	23 53 01.8	+1.1
APZ	**The Paps**	**2.03**	**175**	P	Pn	23 53 02.3	+0.9
ODZ	**Otahua Downs**	**2.07**	**98**	P	Pn	23 53 02.2	+0.4
HHSZ	**Highcliff Hill**	**2.28**	**119**	P	Pn	23 53 05.9	+1.2
RPZ	**Rata Peaks**	**2.61**	**66**	P	Pn	23 53 08.7	-0.6
INZ	**Inchbonnie**	**3.39**	**53**	P	Pn	23 53 19.4	-0.3
OXZ	**Oxford**	**3.43**	**66**	P	Pn	23 53 18.4	-1.8
MQZ	**McQueen's Vall**	**3.69**	**74**	P	Pn	23 53 22.5	-1.2
LTZ	**Lake Taylor**	**3.85**	**60**	P	Pn	23 53 24.2	-1.8
AMCZ	**Amberley**	**3.89**	**67**	P	Pn	23 53 25.4	-1.2
OKCZ	**Okains Bay**	**3.96**	**76**	P	Pn	23 53 27.1	-0.5
GVZ	**Greta Valley S**	**4.24**	**66**	P	Pn	23 53 29.8	-1.5
DSZ	**Denniston Nort**	**4.26**	**45**	P	Pn	23 53 31.0	-0.6
THZ	**Tophouse**	**4.84**	**53**	P	Pn	23 53 38.1	-1.4
QRZ	**Quartz Range**	**5.31**	**43**	P	Pn	23 53 45.5	-0.4
NNZ	**Nelson**	**5.47**	**51**	P	Pn	23 53 48.7	+0.7
TCW	**Tory Channel**	**5.98**	**55**	P	Pn	23 53 58.3	+3.2
DUWZ	**D'Urville Isla**	**6.05**	**51**	P	Pn	23 53 56.4	+0.4
CAW	**Cannon Point**	**6.52**	**58**	P	Pn	23 54 00.9	-1.5
KIW	**Kapiti Island**	**6.58**	**56**	P	Pn	23 54 02.0	-1.2
OGWZ	**Otaki Gorge**	**6.76**	**56**	P	Pn	23 54 04.2	-1.5
NBEZ	**Newall Road No**	**7.17**	**42**	P	Pn	23 54 11.5	+0.3
KHZ	**Kahui Hut**	**7.21**	**42**	P	Pn	23 54 13.0	+1.0
PREZ	**Palmer Road**	**7.25**	**43**	P	Pn	23 54 13.2	+0.7
PKE	**Pukeiti**	**7.28**	**42**	P	Pn	23 54 13.1	+0.3
VRZ	**Vera Road**	**7.71**	**45**	P	Pn	23 54 19.7	+1.0
PKVZ	**Pokaka**	**7.89**	**48**	P	Pn	23 54 23.9	+2.6
TRVZ	**Turoa**	**8.00**	**49**	P	Pn	23 54 25.5	+2.7
FWVZ	**Far West T-bar**	**8.03**	**49**	P	Pn	23 54 25.3	+2.1
NGZ	**Ngauruhoe**	**8.11**	**49**	P	Pn	23 54 26.7	+2.3
WTVZ	**West Tongariro**	**8.15**	**48**	P	Pn	23 54 27.7	+2.9
HIZ	**Hauiti**	**8.23**	**43**	P	Pn	23 54 25.6	-0.3
KATZ	**Kakaramea**	**8.31**	**48**	P	Pn	23 54 30.2	+3.3
TLZ	**Tolley Road**	**8.71**	**45**	P	Pn	23 54 33.3	+0.9
AWAZ	**Awhitu Peninsu**	**9.33**	**36**	P	Pn	23 54 42.3	+1.5
WCZ	**Waipu Caves**	**10.18**	**32**	P	Pn	23 54 53.1	+0.7
OUZ	**Omahuta**	**10.57**	**27**	P	Pn	23 54 59.2	+1.5

*IDC **10** 23:54:02.1±0.9, 28°.15N×99°.52E, h0km, mb3.6/10, mb1 3.7/10, mb1mx3.4/49, mbtmp3.6/10, Error ellipse: s-maj=53.1km s-min=16.4km az=63.0*

ISC 10 23:54:03.7±1.1, 28°.2N±0°.4×99°.5E±0°.6, h10km, n11, σ0.9s54/10, mb3.6/10, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.68**	**183**	Pg	Pn	23 56 59.8	+37
	0.9nm,0.3s,baz=359,slow=18,SNR=1.6						
CMAR				Lg	Lg	23 59 08.5	
	0.8nm,0.3s,baz=3.6,slow=30,SNR=2.4						
MKAR	**Makanchi Array 23.00 329**			P	**P**	**23 59 08.1**	**-0.5**
	1.0nm,0.6s,baz=131,slow=10,SNR=7.1						
AAK	**Ala-Archa 24.89 312**			P	**P**	**23 59 27.6**	**+0.8**
	1.5nm,0.5s,baz=118,slow=17,SNR=4.0						
KURBB	**Kurchatov Arra 27.50 330**			P	**P**	**23 59 50.8**	**+0.6**
	0.9nm,0.7s,baz=142,slow=9.7,SNR=4.9						
ZALV	**Zalesovo Beam 27.93 341**			P	**P**	**23 59 54.4**	**+0.5**
	0.3nm,0.3s,baz=146,slow=8.0,SNR=3.8						
FINES	**FINESS Array B 57.82 327**			P	**P**	**00 03 54.9**	**-0.1**
	0.5nm,0.6s,baz=97,slow=6.5,SNR=4.2						
WRA	**Warramunga Arr 58.48 141**			P	**P**	**00 04 00.1**	**0.0**
	0.6nm,0.7s,baz=328,slow=7.7,SNR=8.1						
ASAR	**Alice Springs 61.26 144**			P	**P**	**00 04 19.3**	**+0.1**
	0.2nm,0.4s,baz=324,slow=6.9,SNR=1.9						
NOA	**NORSAR Array B 64.99 328**			P	**P**	**00 04 43.3**	**-0.4**
	0.2nm,0.5s,baz=77,slow=6.5,SNR=2.0						
GERES	**GERESS Array B 66.75 314**			P	**P**	**00 04 55.2**	**0.0**
	0.1nm,0.3s,baz=67,slow=7.4,SNR=2.2						
DAVOX	**Davos/Dischmat 69.84 313**			P	**P**	**00 05 14.1**	**-0.6**
	0.8nm,0.5s,baz=65,slow=15,SNR=1.9						

*IDC **11** 00:12:50.7±1.1, 11°.73S×165°.09E, h0km, mb4.1/10, mb1 4.2/11, mb1mx4.1/25, mbtmp4.0/11, ML3.8/1, MS3.3/5, Ms1 3.3/5, ms1mx2.9/26, Error ellipse: s-maj=35.6km s-min=23.3km az=120.0*

*NEIC **11** 00:12:55.6±1.5, 11°.84S±0°.10×165°.1E±0°.2, h35km±5km, mb4.2/8, Error ellipse: s-maj=26.2km s-min=14.0km az=93.0*

ISC 11 00:12:55.4±0.7, 11°.82S±0°.08×165°.2E±0°.2, h35km, n28, σ0.9s96/24, mb4.1/14, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara 5.64 294**			LR	LR	00 16 46.7	
	comp=Z,111nm,19.1s,baz=163,slow=42						
DZM	**Mont Dzumac 10.27 173**			Pn	**Pn**	**00 15 22.6**	**+2.2**
	0.7nm,0.3s,baz=308,slow=15,SNR=33						
DZM				Sn	**Sn**	**00 17 12.0**	**-2.4**
	0.2nm,0.3s,baz=256,slow=18,SNR=1.0						
DZM				LR	LR	00 18 19.9	
	comp=Z,94nm,19.1s,baz=52,slow=32						
PMG	**Port Moresby 17.85 276**			LR	LR	00 23 16.0	
	comp=Z,72nm,18.7s,baz=111,slow=35						
STKA	**Stephens Creek 29.48 224**			LR	LR	00 29 07.0	
	comp=Z,148nm,20.2s,baz=199,slow=33						
H11S2	**WAKE ISLAND Hy 30.16 3**			T	T	00 50 29.3	
	baz=184,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy 30.16 3**			T	T	00 50 29.7	
	baz=184,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy 30.18 3**			T	T	00 50 30.5	
	baz=184,slow=76,SNR=11						
WR0	**Warramunga Arr 30.50 251**			P	**P**	**00 19 05.0**	**-0.5**
WR0				IAmb	IAmb	00 19 06.8	
	comp=Z,2.8nm,1.1s						
WB0	**Warramunga Arr 30.60 251**			P	**P**	**00 19 05.7**	**-0.7**
WB0				IAmb	IAmb	00 19 07.5	
	comp=Z,4.0nm,0.8s						
WB2	**Warramunga Arr 30.67 251**			P	**P**	**00 19 06.7**	**-0.3**
WRA	**Warramunga Arr 30.68 251**			P	**P**	**00 19 07.0**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=82,slow=8.9,SNR=7.9						
ASAR	**Alice Springs 31.93 244**			P	**P**	**00 19 17.3**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=76,slow=9.3,SNR=7.4						
ASAR				PcP	**PcP**	**00 22 07.8**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=51,slow=4.1,SNR=4.9						
ASAR				LR	LR	00 32 27.4	
	comp=Z,103nm,18.2s,baz=168,slow=37						
FITZ	**Fitzroy Crossi 38.63 256**			P	**P**	**00 20 15.0**	**-0.7**
MJAR	**Matsushiro Arr 54.39 333**			P	**P**	**00 22 18.1**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=165,slow=9.0,SNR=6.0						
USRK	**Ussuriysk Ar. 63.38 334**			P	**P**	**00 23 21.9**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=101,slow=9.9,SNR=4.7						
CMAR	**Chiang Mai Arr 71.89 294**			P	**P**	**00 24 16.7**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=119,slow=4.8,SNR=4.3						
QSPA	**South Pole Qui 78.19 180**			P	**P**	**00 24 51.4**	**+0.3**
SONM	**Songino Array 78.95 324**			P	**P**	**00 24 56.1**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=138,slow=6.9,SNR=6.3						
DHY	**Denali Highway 83.10 20**			P	**P**	**00 25 16.6**	**-0.8**
DHY				IAmb	IAmb	00 25 28.4	
	comp=Z,2.2nm,1.1s						
HDA	**Harding Lake 84.16 19**			P	**P**	**00 25 23.1**	**+0.4**
IL31	**84.43 19**			P	**P**	**00 25 23.7**	**-0.2**
IL31				IAmb	IAmb	00 25 25.6	
	comp=Z,2.5nm,1.1s						
ILAR	**Eielson Array 84.43 19**			P	**P**	**00 25 24.6**	**+0.7**
	comp=Z,1.4nm,0.6s,baz=238,slow=5.1,SNR=17						
MKAR	**Makanchi Array 93.69 317**			P	**P**	**00 26 08.9**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=93,slow=5.2,SNR=7.1						
ZALV	**Zalesovo Beam 93.84 324**			P	**P**	**00 26 08.0**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=101,slow=7.5,SNR=2.0						
YKA	**Yellowknife Ar 95.92 27**			P	**P**	**00 26 17.6**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=252,slow=4.3,SNR=9.9						
ARCES	**ARCESS Array B 116.93 345**			PKP	**PKiKP**	**00 31 36.0**	**+0.1**
	comp=Z,2.4nm,1.1s,baz=56,slow=3.1,SNR=5.2						
KEST	**Kesra 147.67 321**			PKPbc	**PKiKP**	**00 32 37.9**	**-1.0**
	comp=Z,2.5nm,0.9s,baz=350,slow=6.6,SNR=4.6						
ESDC	**Sonseca Array 150.63 343**			PKPbc	**PKiKP**	**00 32 44.9**	**+0.1**
	comp=Z,0.8nm,1.0s,baz=9.8,slow=3.7,SNR=6.0						

UCR 11 00:16:11.2±1.4, 9°.46N×84°.62W, h0km±3km, MD3.8, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCR2	**La Lucha 2**	**0.67**	**65**	*e*P	Pg	00 16 24.6	+0.6
LCR2				*e*S	Sg	00 16 32.9	+0.1
JTS	**Las Juntas de**	**0.89**	**338**	*e*P	Pg	00 16 28.4	+0.1
ARE1	**Arenal 1**	**1.00**	**354**	*e*P	Pb	00 16 31.4	-0.1
FORC	**Fortuna**	**1.00**	**357**	*i* P	Pb	00 16 31.2	-0.3
FORC				*i* S	Sb	00 16 45.5	+0.2
CVTR	**Volcan Turrial**	**1.01**	**57**	*e*P	Pb	00 16 32.1	+0.2
CEDE	**Laguna Cedeo**	**1.03**	**355**	*i* P	Pb	00 16 31.8	-0.1
CEDE				*e*P	Pg	00 16 31.9	+0.9
PLVR	**Palo Verde**	**1.14**	**321**	*e*P	Pg	00 16 32.7	-0.4
GUAI	**GUAI**	**1.19**	**313**	*i* P	Pg	00 16 33.2	-0.9
ACAL	**Aguas Claras**	**1.24**	**341**	*i* P	Pg	00 16 34.1	-0.9
CUI	**Cuipilapa**	**1.31**	**336**	*i* P	Pg	00 16 35.6	-0.7
CUI				*i* S	Sb	00 16 53.7	-0.3
LIM1	**Limonal**	**1.38**	**333**	*i* P	Pg	00 16 36.8	-0.9
GPS3	**Bodega del ICE**	**1.48**	**330**	*i* P	Pn	00 16 38.7	-0.5
NY1A	**Universidad de**	**1.49**	**323**	*i* P	Pn	00 16 38.5	-0.7
GB1A	**Borinquen Arri**	**1.56**	**330**	*i* P	Pn	00 16 39.9	-0.3
GB1A				*e*P	Pb	00 16 40.2	-0.8

*NEIC **11** 00:26:47.8±1.4, 15°.2S±0°.1×167°.5E±0°.2, h106km±7km, mb4.4/18, Error ellipse: s-maj=25.3km s-min=14.5km az=91.0*

*IDC **11** 00:26:47.3±2.8, 15°.18S×167°.51E, h97km±24km, mb3.9/13, mb1 4.0/14, mb1mx3.9/28, mbtmp4.2/14, MS3.7/1, Ms1 3.7/1, ms1mx2.6/32, Error ellipse: s-maj=22.9km s-min=17.1km az=87.0*

ISC 11 00:26:50.0±0.6, 15°.26S±0°.07×167°.5E±0°.1, h124km, n57, σ1.9s08/56, mb4.1/22, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac 6.84 188**			P	**Pn**	**00 28 27.5**	**-0.5**
	12nm,0.3s,baz=311,slow=23,SNR=64						
DZM				S	**Sn**	**00 29 43.3**	**-1.2**
	33nm,0.3s,baz=142,slow=23,SNR=11						
WCZ	**Waipu Caves 21.50 165**			P	**P**	**00 31 29.9**	**+1.1**
TOZ	**Tahuroa Road 23.49 164**			P	**P**	**00 31 50.3**	**+1.8**
OMRZ	**Omania 24.09 163**			P	**P**	**00 31 56.0**	**+2.1**
RUGZ	**Raukumara Rang 24.36 160**			P	**P**	**00 31 56.6**	**+0.1**
RUGZ				S	S	00 35 50.7	-16
PKGZ	**Pakihiroa 24.42 159**			P	**P**	**00 31 57.4**	**+0.4**
URZ	**Urewera 24.45 161**			P	**P**	**00 31 57.6**	**+0.5**
	6.5nm,0.3s,baz=244,slow=3.6,SNR=10						
URZ	**Urewera 24.45 161**			P	**P**	**00 31 57.8**	**+0.6**
MUGZ	**Murupara 24.55 162**			P	**P**	**00 31 59.7**	**+1.6**
PUZ	**Puketiti 24.65 159**			P	**P**	**00 31 58.7**	**-0.4**
MRHZ	**Matea Rd 24.77 163**			P	**P**	**00 32 02.3**	**+2.0**
SNGZ	**Shannon Statio 25.00 161**			P	**P**	**00 32 02.5**	**+0.3**
CNGZ	**Carnagh Statio 25.00 160**			P	**P**	**00 32 02.1**	**-0.1**
RIGZ	**Rimuhau 25.06 161**			P	**P**	**00 32 03.0**	**+0.2**
BKZ	**Black Stump Fm 25.11 163**			P	**P**	**00 32 03.3**	**0.0**
QRZ	**Quartz Range 25.85 171**			P	**P**	**00 32 10.3**	**+0.4**
QRZ				IAmb	IAmb	00 32 12.4	
	comp=Z,29nm,1.2s						
BFZ	**Birch Farm 26.46 165**			P	**P**	**00 32 14.7**	**-0.7**
BFZ				IAmb	IAmb	00 32 20.1	
	comp=Z,19nm,0.8s						
TUWZ	**Tuamarina 26.68 169**			P	**P**	**00 32 17.5**	**+0.2**
SNZO	**South Karori 26.71 168**			P	**P**	**00 32 17.3**	**-0.3**
THZ	**Tophouse 26.83 171**			P	**P**	**00 32 18.8**	**+0.1**
THZ				IAmb	IAmb	00 32 34.7	
	comp=Z,12nm,1.2s						
MSWZ	**Moikau Station 26.93 167**			P	**P**	**00 32 18.0**	**-1.6**
PLWZ	**Palliser 27.07 167**			P	**P**	**00 32 20.0**	**-0.9**
KHZ	**Kahutara 27.57 170**			P	**P**	**00 32 24.6**	**-0.6**
KHZ				IAmb	IAmb	00 32 38.5	
	comp=Z,20nm,1.1s						
LTZ	**Lake Taylor 27.74 172**			P	**P**	**00 32 27.1**	**+0.3**
LTZ				IAmb	IAmb	00 32 29.3	
	comp=Z,14nm,0.9s						
OXZ	**Oxford 28.25 173**			P	**P**	**00 32 31.3**	**0.0**
OXZ				IAmb	IAmb	00 32 41.9	
	comp=Z,16nm,1.0s						
RPZ	**Rata Peaks 28.53 175**			LR	LR	00 42 30.9	
	comp=Z,146nm,19.3s,baz=252,slow=33						
STKA	**Stephens Creek 28.80 230**			P	**P**	**00 32 37.4**	**+1.1**
	comp=Z,2.3nm,0.4s,baz=38,slow=7.0,SNR=7.8						
STKA	**Stephens Creek 28.80 230**			P	**P**	**00 32 36.2**	**-0.1**
LBZ	**Lake Benmore 29.13 176**			P	**P**	**00 32 38.7**	**-0.4**
LBZ				IAmb	IAmb	00 32 43.8	
	comp=Z,18nm,1.2s						
WR0	**Warramunga Arr 31.69 257**			P	**P**	**00 33 01.4**	**-0.6**
WR0				IAmb	IAmb	00 33 15.2	
	comp=Z,2.3nm,1.0s						
WB0	**Warramunga Arr 31.82 257**			P	**P**	**00 33 02.1**	**-1.1**
WB2	**Warramunga Arr 31.87 257**			P	**P**	**00 33 01.8**	**-1.8**
WB2				IAmb	IAmb	00 33 13.2	
	comp=Z,3.3nm,1.1s						
WRA	**Warramunga Arr 31.88 257**			P	**P**	**00 33 02.9**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=84,slow=9.1,SNR=18						
AS31	**Alice Springs 32.66 250**			P	**P**	**00 33 09.2**	**-1.3**
ASAR	**Alice Springs 32.66 250**			P	**P**	**00 33 10.8**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=78,slow=9.1,SNR=18						
ASAR				ScP	**ScP**	**00 39 29.1**	**+2.7**
	comp=Z,0.4nm,0.6s,baz=93,slow=3.4,SNR=5.2						
BBOO	**Buckleboo 33.40 233**			P	**P**	**00 33 17.4**	**+0.5**
FORT	**Forrest 39.19 240**			P	**P**	**00 34 06.4**	**+0.4**
FITZ	**Fitzroy Crossi 40.10 260**			P	**P**	**00 34 12.8**	**-0.9**
MJAR	**Matsushiro Arr 58.45 333**			P	**P**	**00 36 32.8**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=155,slow=7.9,SNR=5.3						
VNDA	**Vanda 62.34 181**			P	**P**	**00 36 59.8**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=75,slow=2.7,SNR=2.1						
KSRS	**Korea Array 64.28 326**			P	**P**	**00 37 11.6**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=152,slow=7.1,SNR=4.1						
QSPA	**South Pole Qui 74.77 180**			P	**P**	**00 38 16.7**	**+0.4**
QSPA				IAmb	IAmb	00 38 17.6	
	comp=Z,5.0nm,1.1s						
CMAR	**Chiang Mai Arr 75.33 294**			P	**P**	**00 38 22.0**	**+1.8**
	comp=Z,0.4nm,0.4s,baz=138,slow=4.0,SNR=4.6						
SONM	**Songino Array 83.03 324**			P	**P**	**00 39 02.4**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=152,slow=8.3,SNR=12						
ILAR	**Eielson Array 86.97 18**			P	**P**	**00 39 19.8**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=239,slow=4.8,SNR=6.3						
MKAR	**Makanchi Array 97.71 316**			P	Pdif	00 40 11.6	+0.7
	comp=Z,0.9nm,0.6s,baz=92,slow=5.5,SNR=8.2						
ZALV	**Zalesovo Beam 97.92 324**			P	**P**	**00 40 11.3**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=106,slow=3.2,SNR=8.3						
YKA	**Yellowknife Ar 97.93 27**			P	**P**	**00 40 11.1**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=248,slow=4.6,SNR=6.6						
ARCES	**ARCESS Array B 120.81 345**			PKP	**PKPdf**	**00 45 26.7**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=90,slow=1.3,SNR=20						
FINES	**FINESS Array B 126.28 338**			PKP	**PKPdf**	**00 45 37.6**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=98,slow=4.2,SNR=5.3						
NOA	**NORSAR Array B 131.18 345**			PKP	**PKPdf**	**00 45 47.3**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=32,slow=2.0,SNR=2.2						
GERES	**GERESS Array B 140.19 333**			PKhKP	PKPpre	00 45 58.9	
	comp=Z,0.3nm,0.6s,baz=46,slow=5.6,SNR=2.2						
MOTA	**Moosalm 142.47 333**			*e*PKPdf	**PKPdf**	**00 46 06.0**	**-2.4**
	comp=Z,5.3nm,1.5s						
FETA	**Feichten 142.88 333**			*e*PKPdf	**PKPdf**	**00 46 06.7**	**-2.5**
	comp=Z,5.0nm,1.0s						
DAVA	**Damuels 143.03 334**			*e*PKPdf	PKPbc	00 46 07.3	+0.8
	comp=Z,3.6nm,0.7s						
KEST	**Kesra 151.73 320**			PKPbc	**PKiKP**	**00 46 31.0**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=95,slow=1.4,SNR=6.4						
ESDC	**Sonseca Array 154.54 344**			PKPbc	**PKiKP**	**00 46 38.1**	**+1.6**

GO04	**Tololo Observa**	**8.42**	**19**		**Pn**	**00 48 32.5**	**-2.2**
AC05	**El Transito**	**9.83**	**19**		**Pn**	**00 48 52.0**	**-1.9**
AC02	**Maricunga**	**12.03**	**21**		**Pn**	**00 49 21.8**	**-2.7**
GO02	**Mina Guanaco**	**13.51**	**17**	Pn	**Pn**	**00 49 42.6**	**-1.9**
PB14	**IPOC Station P**	**13.87**	**13**	Pn	**Pn**	**00 49 47.3**	**-2.1**
PB10	**IPOC Station P**	**14.93**	**12**	Pn	**Pn**	**00 50 02.0**	**-1.4**
CPUP	**Villa Florida**	**18.31**	**54**	P	**Pn**	**00 50 45.7**	**-0.5**
	comp=N,0.2nm,0.3s,baz=207,slow=9.1,SNR=3.5						
CPUP				LR	LR	00 58 40.2	
	comp=N,168nm,20.6s,baz=232,slow=40						
CPUP	**Villa Florida**	**18.31**	**54**	IAmb	IAmb	00 51 02.5	
	comp=Z,17nm,1.6s						
PB08	**IPOC Station P**	**18.47**	**14**		**P**	**00 50 46.5**	**-1.9**
PB11	**IPOC Station P**	**18.75**	**12**	P	**P**	**00 50 49.9**	**-1.3**
PB11				IAmb	IAmb	00 50 56.1	
	comp=Z,17nm,1.0s						
PSGCX	**Pisagua**	**18.84**	**11**	P	**Pn**	**00 50 52.2**	**-0.6**
GO01	**Chusmiza**	**18.93**	**14**	P	**P**	**00 50 52.0**	**-1.5**
GO01				IAmb	IAmb	00 51 07.1	
	comp=Z,19nm,1.8s						
MNMC	**Minye Minye**	**19.38**	**12**	P	**P**	**00 50 57.2**	**-1.0**
MNMC				IAmb	IAmb	00 51 17.6	
	comp=Z,8.4nm,0.7s						
PB16	**IPOC Station P**	**20.17**	**12**	P	Pn	00 51 07.0	-2.2
PB16				IAmb	IAmb	00 51 18.6	
	comp=Z,35nm,1.9s						
LPAZ	**La Paz**	**22.42**	**15**	P	**P**	**00 51 34.4**	**+2.9**
	baz=153,slow=6.2						
LPAZ	**La Paz**	**22.42**	**15**	P	**P**	**00 51 30.0**	**-1.4**
SIV	**San Ignacio**	**24.85**	**30**	P	**P**	**00 51 53.8**	**-0.5**
	comp=Z,1.6nm,0.9s,baz=240,slow=10.0,SNR=5.4						
SIV				LR	LR	01 01 11.2	
	comp=Z,58nm,21.0s,baz=260,slow=36						
PTGA	**Pitinga**	**39.44**	**22**	P	**P**	**00 54 01.9**	**0.0**
RCBR	**Riachuelo**	**47.17**	**57**	P	**P**	**00 55 05.0**	**+0.6**
APG	**El Apazote**	**55.18**	**340**	LR	LR	01 12 39.9	
	comp=Z,151nm,21.2s,baz=67,slow=28						
TEIG	**Tepich**	**59.69**	**344**	LR	LR	01 15 35.2	
	comp=Z,82nm,21.1s,baz=249,slow=29						
TXAR	**Lajitas Array**	**72.74**	**333**	P	**P**	**00 58 02.8**	**+3.0**
	comp=Z,0.6nm,0.7s,baz=152,slow=9.0,SNR=5.3						
MKAR	**Makanchi Array**	**160.51**	**56**	PKPab	**PKPab**	**01 07 14.4**	**+2.2**
	comp=Z,0.7nm,0.8s,baz=305,slow=4.3,SNR=5.6						
LZH	**Lanzhou**	**177.20**	**139**	*e*PKP	**PKPdf**	**01 06 39.6**	**-2.3**
LZH				pPKP	pPKPdf	01 06 50.2	-2.2
LZH				sPKP		01 06 54.1	

BJI **11** *00:58:14.4±0.0,3˚.77S×146˚.89E, h9km, mB4.9/26, mb4.7/39, Ms4.9/4, Ms7 4.7/4*

IDC **11** *00:58:18.1±0.6,3˚.37S×146˚.09E, h0km, mb4.2/17, mb1 4.4/19, mb1mx4.3/39, mbtmp4.3/19, ML3.1/2, MS4.3/5, Ms1 4.3/5, ms1mx3.8/41, Error ellipse: s-maj=19.2km s-min=13.8km az=92.0*

NEIC **11** *00:58:20.4±1.7, 3˚.50S±0˚.08×146˚.08E±0˚.09, h9km±4km, mb4.8/47, Error ellipse: s-maj=13.4km s-min=11.9km az=66.0*

GCMT **11** *00:58:23.4±0.2,3˚.31S±0˚.01×146˚.28E±0˚.02, h12km, MW5.2/103, Moment Tensor Solution. s64,c88; s103,c155; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.48±.20; Mθθ 0.46±.21; Mϕϕ 0.02±.25; Mrθ-0.03±.45; Mθϕ 6.72±.16; Mϕr 0.37±.54; Best double couple: M₀6.73400×10¹⁶ NP1:ϕs 91.00000°, δ87.00000°, λ-1.00000°. NP2:ϕs 181.00000°, δ89.00000°, λ-177.00000°. Principal axes: T 6.9710, Plg2.0000°, Azm316.0000°; N -0.4730, Plg87.0000°, Azm193.0000°; P -6.4980, Plg3.0000°, Azm46.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA **11** *00:58:38.8±0.6,4˚S±3˚×14˚5E±˚, h103km±5km, M4.5/33, mB5.2/7, mb4.7/33, MLv4.3/3, Mw(mB)4.5/7, Mwp5.3/1*

ISC 11 00:58:23.0±0.4,**3˚.51S**±0˚.05×**146˚.19E**±0˚.06,**h25km**,**n124,** σ1ᵎ**72**/122,**mb4.7**/53,**MS4.5**/4,**1C-1D**,**Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**5.56**	**280**	Pn	**Pn**	**00 59 45.0**	**+0.7**
	0.5nm,0.3s,baz=157,slow=13,SNR=5.3						
JAY				LR	LR	01 01 44.0	
	comp=Z,2μm,20.7s,baz=90,slow=38						
JAY	**Jayapura**	**5.56**	**280**	P	**Pn**	**00 59 47.1**	**+2.8**
KRVT	**Keravat (AS076**	**5.88**	**98**	Pn	**Pn**	**00 59 49.8**	**+1.2**
	2.9nm,0.3s,baz=244,slow=22,SNR=3.8						
PMG	**Port Moresby**	**5.94**	**171**	Pn	**Pn**	**00 59 49.6**	**+0.2**
	9.8nm,0.3s,baz=2.4,slow=6.3,SNR=15						
PMG				LR	LR	01 01 58.8	
	comp=Z,2μm,19.1s,baz=354,slow=36						
PMG	**Port Moresby**	**5.94**	**171**		**Pn**	**00 59 49.4**	**0.0**
GENI	**Genyem**	**6.08**	**278**	P	Pn	00 59 59.5	+8.2
	0.5nm3μm50nm,0.8s						
SMPI	**Sarmi**	**7.62**	**281**	P	Pn	01 00 18.1	+5.6
	0.2nm52nm,0.8s						
COEN	**Coen**	**10.80**	**196**	P	**Pn**	**01 00 59.0**	**+2.9**
	baz=11,SNR=9.6						
COEN	**Coen**	**10.80**	**196**		**Pn**	**01 00 55.6**	**-0.5**
FAKI	**Fak Fak**	**13.93**	**272**	Pn	**Pn**	**01 01 37.5**	**-1.4**
MTSU	**Mount Surprise**	**14.65**	**187**	P	**P**	**01 01 53.1**	**-1.8**
	baz=15,SNR=4.1						
SIJI	**Sorong**	**15.14**	**280**	Pn	**P**	**01 01 57.7**	**-2.6**
	0.6nm,0.3s,baz=90,slow=9.8,SNR=6.5						
SIJI				LR	LR	01 07 07.2	
	comp=Z,1μm,20.9s,baz=164,slow=35						
KDU	**Kakadu**	**16.34**	**235**	P	**Pn**	**01 02 10.4**	**-0.6**
	baz=16,SNR=15						
CTA	**Charters Tower**	**16.48**	**180**	Pn	**P**	**01 02 16.3**	**+1.1**
	0.3nm,0.3s,baz=22,slow=17,SNR=4.2						
MTN	**Manton Dam**	**17.54**	**237**	P	**Pn**	**01 02 25.8**	**-0.2**
	baz=17,SNR=6.3						
MTN	**Manton Dam**	**17.54**	**237**		**Pn**	**01 02 23.3**	**-2.7**
MTN				IAmb	IAmb	01 02 28.7	
	comp=Z,44nm,0.9s						
AAI	**Ambon**	**17.96**	**269**	P	**Pn**	**01 02 30.6**	**-0.6**
	comp=Z,55nm,1.0s						
LBMI	**Labuha**	**18.89**	**278**	P	**Pn**	**01 02 43.3**	**+0.8**
	comp=Z,1μmcomp=Z,38nm,1.2s						
NLAI	**Namlea**	**19.06**	**270**	P	**Pn**	**01 02 44.9**	**+0.4**
	comp=Z,23nm,0.7s						
TNTI	**Ternate**	**19.29**	**282**	P	**P**	**01 02 44.9**	**-1.2**
TNTI				IAmb	IAmb	01 02 57.6	
	comp=Z,34nm,1.0s						
WB0	**Warramunga Arr**	**19.84**	**215**	P	**P**	**01 02 51.0**	**-1.2**
WB0				IAmb	IAmb	01 02 55.6	
	comp=Z,108nm,1.1s						
WB8	**Warramunga Arr**	**19.89**	**215**	P	**Pn**	**01 02 53.7**	**-0.7**
	baz=20						
WR0	**Warramunga Arr**	**19.91**	**214**	P	**P**	**01 02 52.5**	**-0.5**
WR0				IAmb	IAmb	01 02 57.0	
	comp=Z,68nm,1.1s						
WRAB	**Tennant Creek**	**20.00**	**214**	P	**P**	**01 02 53.7**	**-0.2**
WB2	**Warramunga Arr**	**20.00**	**214**	P	**P**	**01 02 53.8**	**-0.2**
WB2				IAmb	IAmb	01 02 57.0	
	comp=Z,88nm,1.1s						
WRA	**Warramunga Arr**	**20.01**	**214**	P	**P**	**01 02 53.5**	**-0.5**
	comp=Z,73nm,1.0s,baz=37,slow=11,SNR=48						
KNRA	**Kununurra**	**20.98**	**234**	P	**P**	**01 03 02.9**	**-1.8**
	baz=21,SNR=31						
KNRA	**Kununurra**	**20.98**	**234**	P	**P**	**01 03 02.8**	**-1.8**
EIDS	**Eidsvold**	**22.24**	**168**	P	**P**	**01 03 17.8**	**-0.2**
SOEI	**Soe**	**22.63**	**253**	P	**P**	**01 03 23.8**	**+1.3**
	comp=Z,2μmcomp=Z,140nm,0.8s						
SOEI	**Soe**	**22.63**	**253**	P	**P**	**01 03 20.4**	**-2.1**
RMQ	**Roma**	**22.98**	**174**	P	**P**	**01 03 30.0**	**+4.1**
	baz=23,SNR=5.1						
QLP	**Quilpie**	**23.02**	**184**	P	**P**	**01 03 28.8**	**+2.5**
	baz=23,SNR=6.5						
AS31	**Alice Springs**	**23.29**	**210**	P	**P**	**01 03 28.4**	**-0.7**
AS31					**S**	**01 07 44.7**	**+4.4**
ASAR	**Alice Springs**	**23.29**	**210**	P	**P**	**01 03 28.7**	**-0.4**
	comp=Z,22nm,0.9s,baz=44,slow=7.3,SNR=72						
BATI	**Baumata**	**23.32**	**252**	P	**P**	**01 03 27.9**	**-1.5**
	comp=Z,66nm,0.8s,baz=177,slow=2.2,SNR=9.9						
BATI	**Baumata**	**23.32**	**252**	P	**P**	**01 03 29.8**	**+0.3**
	comp=Z,59nm,1.1s						
KCP	**Kidapawan**	**23.51**	**296**ǁ	*e*P	**P**	**01 03 34.0**	**+2.7**
LUWI	**Luwuk**	**23.52**	**275**	P	**P**	**01 03 32.9**	**+1.4**
	comp=Z,2μmcomp=Z,63nm,1.0s						
LUWI	**Luwuk**	**23.52**	**275**	P	**P**	**01 03 31.4**	**0.0**
LUWI				IAmb	IAmb	01 03 33.0	
	comp=Z,64nm,1.1s						
MRSI	**Marisa**	**24.56**	**279**	P	**P**	**01 03 42.0**	**+0.9**
	comp=Z,29nm,0.8s						
APSI	**Ampana**	**24.66**	**275**	P	**P**	**01 03 43.5**	**+1.5**
	comp=Z,782nmcomp=Z,38nm,1.1s						
FITZ	**Fitzroy Crossi**	**24.80**	**233**	P	**P**	**01 03 41.8**	**-1.5**
	baz=24,SNR=43						
FITZ	**Fitzroy Crossi**	**24.80**	**233**	P	**P**	**01 03 41.8**	**-1.5**
	comp=Z,37nm,0.9s,baz=51,slow=8.7,SNR=47						
FITZ	**Fitzroy Crossi**	**24.80**	**233**	P	**P**	**01 03 41.8**	**-1.5**
EDFI	**Ende, Flores**	**24.90**	**257**	P	**P**	**01 03 42.7**	**-1.6**
	comp=Z,11nm,1.0s						
BNSI	**Bone**	**26.03**	**267**	P	**P**	**01 03 55.2**	**+0.7**
	comp=Z,27nm,1.1s						
TTSI	**Tana Toraja**	**26.33**	**270**	P	**P**	**01 04 01.1**	**+3.9**
	comp=Z,26nm,1.2s						
KAPI	**Kappang**	**26.41**	**266**	P	**P**	**01 03 56.7**	**-1.1**
KAPI				IAmb	IAmb	01 04 10.3	
	comp=Z,14nm,1.1s						
MPSI	**Mapaga**	**26.55**	**278**	P	P	01 04 14.9	+16
DZM	**Mont Dzumac**	**26.96**	**135**	P	**P**	**01 04 03.6**	**+0.8**
	comp=Z,8.5nm,0.8s,baz=142,slow=14,SNR=5.9						
ARMA	**Armidale**	**27.25**	**170**	P	**P**	**01 04 06.3**	**+0.8**
WRKA	**Warakurna**	**27.47**	**217**	P	**P**	**01 04 06.6**	**-0.8**
	baz=27,SNR=20						
STKA	**Stephens Creek**	**28.55**	**188**	P	**P**	**01 04 20.3**	**+3.4**
	baz=29,SNR=7.3						
STKA	**Stephens Creek**	**28.55**	**188**	P	**P**	**01 04 19.7**	**+2.9**
	comp=Z,5.6nm,0.8s,baz=4.2,slow=12,SNR=9.9						
STKA	**Stephens Creek**	**28.55**	**188**	P	**P**	**01 04 18.0**	**+1.2**
HTT	**Hallett**	**30.53**	**192**	P	**P**	**01 04 36.5**	**+2.0**
	baz=30,SNR=4.2						
BBOO	**Buckleboo**	**30.66**	**197**	P	**P**	**01 04 34.9**	**-0.7**
BBOO				IAmb	IAmb	01 04 49.1	
	comp=Z,8.3nm,0.8s						
PSAC2	**Pilbara Seismi**	**31.21**	**233**	P	**P**	**01 04 38.3**	**-2.3**
PSAB2	**Pilbara Seismi**	**31.24**	**233**	P	**P**	**01 04 37.4**	**-3.4**
PSAA1	**Pilbara Seismi**	**31.27**	**233**	P	**P**	**01 04 39.9**	**-1.2**
PSAB1	**Pilbara Seismi**	**31.28**	**233**	P	**P**	**01 04 40.5**	**-0.7**
PSAC3	**Pilbara Seismi**	**31.30**	**233**	P	**P**	**01 04 40.2**	**-1.2**
FORT	**Forrest**	**32.07**	**210**	P	**P**	**01 04 47.0**	**-1.1**
	baz=32						
MEEK	**Meekatharra**	**35.01**	**226**	P	**P**	**01 05 14.8**	**+1.0**
	baz=35,SNR=3.1						
NACB	**Ninganchiao**	**36.47**	**320**	P	**P**	**01 05 25.6**	**-0.6**
NACB				IAmb	IAmb	01 05 31.5	
	comp=Z,17nm,0.9s						
JHJ2	**Mitsune**	**36.92**	**351**	P	**P**	**01 05 28.3**	**-1.6**
KLBR	**Kellerberrin**	**38.67**	**221**	P	**P**	**01 05 45.0**	**+0.2**
	baz=38						
OUZ	**Omahuta**	**40.50**	**145**	P	**P**	**01 05 59.1**	**-0.9**
MJAR	**Matsushiro Arr**	**40.53**	**350**	P	**P**	**01 05 56.7**	**-3.5**
	comp=Z,1.1nm,0.5s,baz=146,slow=6.6,SNR=4.1						
MAJO	**Matsushiro**	**40.53**	**350**	P	**P**	**01 05 59.9**	**-0.4**
MAT	**Matsushiro**	**40.53**	**350**	P	**P**	**01 06 00.0**	**-0.3**
MJB9	**Matsu-Tunnel**	**40.54**	**350**	P	**P**	**01 05 59.9**	**-0.4**
XMIS	**Christmas Isla**	**40.79**	**258**	P	**P**	**01 06 01.9**	**-0.8**
RAO	**Raoul Island**	**42.59**	**131**	LR	LR	01 20 24.4	
	comp=Z,515nm,19.0s,baz=291,slow=31						
NJ2	**Nanjing**	**43.88**	**326**	*e*P	**P**	**01 06 28.9**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KSRS	**Korea Array**	**44.15**	**339**	P	**P**	**01 06 27.9**	**-1.8**
	comp=Z,1.1nm,0.6s,baz=154,slow=7.8,SNR=3.4						
URZ	**Urewera**	**44.64**	**145**	LR	LR	01 22 44.2	
	comp=Z,513nm,21.7s,baz=300,slow=33						
TUWZ	**Tuamarina**	**45.23**	**150**	P	**P**	**01 06 39.5**	**+1.3**
NIUE	**Niue**	**45.56**	**113**	P	**P**	**01 06 40.4**	**-0.9**
BHW	**Baring Head**	**45.67**	**150**	P	**P**	**01 06 41.2**	**-0.5**
RPZ	**Rata Peaks**	**45.69**	**155**	P	**P**	**01 06 40.7**	**-1.2**
RPZ				IAmb	IAmb	01 06 48.0	
	comp=Z,23nm,1.1s						
IPM	**Ipoh**	**45.82**	**280**	P	**P**	**01 06 41.8**	**-1.5**
IPM				IAmb	IAmb	01 06 58.9	
	comp=Z,8.2nm,1.0s						
RPSI	**Rantau Prapat**	**47.64**	**277**	P	**P**	**01 06 55.7**	**-1.9**
RPSI				IAmb	IAmb	01 07 14.6	
	comp=Z,6.3nm,0.4s						
JOHN	**Johnston Islan**	**48.14**	**64**	P	**P**	**01 07 01.5**	**+0.1**
GYA	**Guiyang**	**48.45**	**310**	*e*P	**P**	**01 07 06.5**	**+2.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.1s						
ENH	**Enshi**	**48.56**	**316**	P	**P**	**01 07 03.6**	**-0.9**
ENH				IAmb	IAmb	01 07 07.6	
	comp=Z,8.9nm,1.1s						
GSI	**Gunungsitoli**	**48.82**	**275**	P	**P**	**01 07 04.9**	**-1.8**
GSI				IAmb	IAmb	01 07 18.3	
	comp=Z,11nm,0.9s						
USA0B	**Ussuriysk Arra**	**49.17**	**347**	P	**P**	**01 07 07.9**	**-1.0**
USA0B				IAmb	IAmb	01 07 13.9	
	comp=Z,7.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**49.17**	**347**	P	**P**	**01 07 06.5**	**-2.4**
	comp=Z,2.7nm,0.7s,baz=150,slow=6.9,SNR=11						
XAN	**Xi'an**	**51.26**	**320**	P	**P**	**01 07 24.5**	**-0.6**
XAN				IAmb	IAmb	01 07 35.6	
	comp=Z,12nm,1.2s						
BJI	**Beijing**	**51.35**	**331**	P	**P**	**01 07 27.6**	**+2.2**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**51.39**	**297**	P	**P**	**01 07 25.7**	**-0.5**
	comp=Z,3.2nm,0.9s,baz=115,slow=6.0,SNR=12						
CD2	**Chengdu**	**52.98**	**313**	P	**P**	**01 07 37.4**	**-0.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**54.30**	**328**	*e*P	**P**	**01 07 49.0**	**+1.5**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,69nm,5.9s						
LZH	**Lanzhou**	**55.81**	**319**	*e*P	**P**	**01 08 00.1**	**+1.6**
LZH				pP	pP	01 08 04.4	-1.2
LZH				sP	sP	01 08 07.5	-0.9
LZH				PP	**PP**	**01 10 08.9**	**+5.6**
LZH				pmax	pmax		
	comp=Z,29nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
PETK	**Petropavlovsk-**	**57.24**	**8**	P	**P**	**01 08 06.2**	**-1.9**
	comp=Z,1.1nm,0.7s,baz=250,slow=3.9,SNR=1.9						
GTA	**Gaotai**	**60.33**	**320**	ǁP	**P**	**01 08 33.1**	**+3.1**
GTA				pP	pP	01 08 37.7	+0.5
GTA				sP	pwP	01 08 40.3	+0.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,77nm,5.1s						
GTA				LR	LR		
	comp=Z,700nm,17.8s						
GTA				LR	LR		
	comp=Z,500nm,18.4s						
ULN	**Ulaanbaatar**	**61.55**	**331**	P	**P**	**01 08 37.5**	**-0.8**
ULN				IAmb	IAmb	01 08 54.8	
	comp=Z,3.1nm,0.7s						
SONM	**Songino Array**	**61.85**	**331**	P	**P**	**01 08 38.3**	**-1.9**
	comp=Z,1.2nm,0.7s,baz=140,slow=5.2,SNR=6.7						
SBLHI	**Steaming Bluff**	**61.87**	**66**	P	**P**	**01 08 42.4**	**+1.5**
BYL	**Byron's Ledge**	**61.87**	**66**	P	**P**	**01 08 42.2**	**+1.3**
TLY	**Talaya**	**65.78**	**333**	P	**P**	**01 09 06.5**	**+0.6**
SEY	**Seymchan**	**66.43**	**3**	P	**P**	**01 09 08.3**	**-1.5**
	comp=Z,1.5nm,0.6s,baz=134,slow=3.1,SNR=4.0						
WMQ	**Urumqi**	**70.39**	**319**	*e*P	**P**	**01 09 36.5**	**+1.4**
WMQ				pP	pP	01 09 41.4	-1.0
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,96nm,3.7s						
WMQ				LR	LR		
	comp=Z,560nm,29.1s						
VNDA	**Vanda**	**74.43**	**177**	P	**P**	**01 09 58.1**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=331,slow=10,SNR=2.2						
MKAR	**Makanchi Array**	**75.08**	**320**	P	**P**	**01 10 01.2**	**-1.6**
	comp=Z,4.6nm,1.0s,baz=102,slow=7.1,SNR=11						
MAKZ	**Makanchi**	**75.28**	**320**	P	**P**	**01 10 02.4**	**-1.6**
MAKZ				IAmb	IAmb	01 10 09.9	
	comp=Z,7.1nm,0.9s						
ZALV	**Zalesovo Beam**	**76.49**	**328**	P	**P**	**01 10 07.6**	**-3.1**
	comp=Z,2.5nm,0.8s,baz=107,slow=5.1,SNR=5.9						
KSH	**Kashi**	**77.12**	**312**	P	**P**	**01 10 16.0**	**+1.2**
KSH				pP	pP	01 10 21.6	-0.5
KSH				sP	sP	01 10 24.3	-0.5
KSH				pmax	pmax		
	comp=Z,14nm,0.7s						
KSH				pmax	pmax		
	comp=Z,140nm,4.5s						
KURK	**Kurchatov**	**78.74**	**323**	P	**P**	**01 10 23.1**	**-0.2**
KURK					**P**	**01 10 24.5**	**+1.2**
KURK				IAmb	IAmb	01 10 40.3	
	comp=Z,10nm,1.1s						
CNPM	**China Poot**	**79.51**	**27**	P	**P**	**01 10 27.9**	**+0.5**
CNPM				IAmb	IAmb	01 10 30.3	
	comp=Z,11nm,1.0s						
KTH	**Kantishna Hill**	**81.41**	**24**	P	**P**	**01 10 38.0**	**+0.3**
KNK	**Knik Glacier**	**81.55**	**26**	P	**P**	**01 10 38.6**	**+0.3**
KNK				IAmb	IAmb	01 10 48.2	
	comp=Z,5.5nm,0.8s						
SML	**Sawmill**	**81.77**	**26**	P	**P**	**01 10 41.0**	**+1.5**
SML				IAmb	IAmb	01 10 49.7	
	comp=Z,6.8nm,0.8s						
MLY	**Manley**	**82.14**	**22**	P	**P**	**01 10 42.4**	**+1.1**
FID	**Port Fidalgo**	**82.19**	**27**	P	**P**	**01 10 43.0**	**+1.3**
FID				IAmb	IAmb	01 10 59.9	
	comp=Z,8.1nm,0.8s						
RND	**Reindeer**	**82.19**	**24**	P	**P**	**01 10 42.3**	**+0.6**
RND				IAmb	IAmb	01 10 58.5	
	comp=Z,5.0nm,1.0s						
SCM	**Sheep Creek Mo**	**82.21**	**26**	P	**P**	**01 10 42.8**	**+0.9**
SCM				IAmb	IAmb	01 10 59.5	
	comp=Z,6.9nm,1.0s						
ILAR	**Eielson Array**	**83.53**	**23**	P	**P**	**01 10 45.7**	**-2.8**
	comp=Z,0.6nm,0.7s,baz=239,slow=6.1,SNR=3.1						
INK	**Inuvik**	**89.65**	**21**	P	**P**	**01 11 18.5**	**+0.2**
	comp=Z,0.8nm,1.0s,baz=225,slow=3.5,SNR=1.4						
YKA	**Yellowknife Ar**	**97.35**	**28**	P	**P**	**01 11 53.4**	**-0.5**
	comp=Z,0.3nm,0.9s,baz=254,slow=4.4,SNR=2.7						
SIV	**San Ignacio**	**146.80**	**126**	PKPbc	**PKPdf**	**01 18 02.8**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=235,slow=4.2,SNR=9.2						
DBIC	**Dimbokro**	**150.99**	**277**	PKPbc	**PKPdf**	**01 18 11.7**	**+2.6**
	comp=Z,1.8nm,0.8s,baz=72,slow=3.2,SNR=1.4						

SNET **11** *01:02:25.6±0.7, 13˚.57N×89˚.96W, h55km±5km, ML3.2*

GCG **11** *01:02:25.0±0.3, 13˚.29N×90˚.38W, h22km±8km, MD3.5*

ISC 11 01:02:25.6±2.2,**13˚.5N**±0˚.1×**89˚.96W**±0˚.07,**h61**km±18km, **n14,** σ0ᵎ**60**/23,**El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEVE	**Cerro Verde**	**0.46**	**46**	*e*P	**Pn**	**01 02 37.2**	**-0.3**
CEVE				*e*S	**Sn**	**01 02 46.2**	**0.0**
CEVE				IAML		01 02 48.1	
	comp=Z,3μm,0.3s						
SBLS	**San Blas**	**0.47**	**45**	*e*P	**Pn**	**01 02 37.0**	**-0.6**
SBLS				*e*S	**Sn**	**01 02 46.6**	**+0.3**
RTR	**El Retiro**	**0.49**	**38**	*e*P	**Pn**	**01 02 37.7**	**-0.1**
RTR				*e*S	**Sn**	**01 02 46.6**	**-0.1**
SNJE	**San Jose**	**0.50**	**44**	*e*P	**Pn**	**01 02 37.6**	**-0.3**
SNJE				*e*S	**Sn**	**01 02 46.4**	**-0.5**
UNIC	**Universidad Ca**	**0.62**	**40**	*e*P	**Pn**	**01 02 38.6**	**-0.5**
BOQS	**Boqueron**	**0.70**	**71**	*e*P	**Pn**	**01 02 40.2**	**+0.1**
BOQS				*e*S	**Sn**	**01 02 51.3**	**+0.5**
SNET	**Serv Nac Est T**	**0.73**	**76**	*e*P	**Pn**	**01 02 40.4**	**0.0**
SNET				*e*S	**Sn**	**01 02 51.7**	**+0.5**
SNET				IAML		01 02 52.7	
	comp=Z,330nm,0.3s						
UEES	**Universidad Ev**	**0.73**	**73**	*e*P	**Pn**	**01 02 39.8**	**-0.6**
IXG	**Ixpaco**	**0.81**	**325**	*e*P	**Pn**	**01 02 41.6**	**+0.1**
LFRS	**El Faro**	**0.88**	**82**	*e*P	**Pn**	**01 02 42.1**	**-0.2**
LFRS				*e*S	**Sn**	**01 02 55.5**	**+0.8**
MTO3	**Montecristo**	**1.06**	**33**	*e*P	**Pn**	**01 02 44.3**	**-0.5**
MTO3				*e*S	**Sn**	**01 02 59.2**	**+0.3**
PCG	**Pacaya**	**1.08**	**325**	*e*S	**Sn**	**01 03 00.5**	**+1.1**
FUG	**Fuego 3**	**1.27**	**318**	*e*P	**Pn**	**01 02 47.3**	**-0.1**
FUG				*e*S	**Sn**	**01 03 04.7**	**+1.0**
STG3	**Santiaguito 3,**	**1.97**	**308**	*e*P	**Pn**	**01 02 55.6**	**-1.3**

BJI **11** *01:10:12.7±0.0,3˚.58S×146˚.86E, h27km, mB5.6/70, mb5.1/80, Ms5.8/91, Ms7 5.7/83*

IDC **11** *01:10:14.0±0.4,3˚.42S×146˚.15E, h0km, mb4.7/30, mb1 4.7/35, mb1mx4.7/43, mbtmp4.7/35, ML3.4/4, MS5.4/34, Ms1 5.5/34, ms1mx5.3/40, Error ellipse: s-maj=12.8km s-min=8.2km az=96.0*

NEIC **11** *01:10:15.7±1.6, 3˚.43S±0˚.07×146˚.11E±0˚.07, h10km±1km, mb5.5/152, Ms_20 5.8/799, Mww5.9, Mwc5.9(GCMT), Error ellipse: s-maj=12.9km s-min=11.6km az=238.0*

MOS **11** *01:10:17.9±1.2, 3˚.44S×146˚.12E, h39km, mb5.6/34, MS5.3/14, Error ellipse: s-maj=9.0km s-min=5.1km az=105.6*

GCMT **11** *01:10:19.7±0.1, 3˚.32S×146˚.18E, h12km, MW5.9/169, Moment Tensor Solution. s152,c323; s169,c588; Duration: 2s1 Moment tensor: Scale 1017Nm; Mrr-0.04±.04; Mθθ-0.84±.05; Mϕϕ 0.87±.05; Mrθ 0.40±.12; Mθϕ 8.34±.04; Mϕr-0.99±.12; Best double couple: M₀8.45200×10¹⁷ NP1:ϕs 267.

CTA Charters Tower 16.50 180 Pn **P** **01 14 11.1 +0.7**
comp=Z,1.8nm,0.3s,baz=5.7,slow=14,SNR=20
CTA LR LR 01 20 40.4
comp=Z,15µm,19.6s,baz=4.5,slow=38
CTAO Charters Tower 16.50 180 P **Pn** **01 14 08.8 +0.9**
CTAO pmax pmax
comp=Z,449nm,1.7s
CTAO Charters Tower 16.50 180 Pn **Pn** **01 14 08.8 +0.9**
CTAO IAmb IAmb 01 14 17.1
comp=Z,449nm,1.6s
GUMO Guam 17.02 355 P **Pn** **01 14 14.2 -0.2**
GUMO pmax pmax
comp=Z,431nm,1.6s
GUMO Guam 17.02 355 **Pn** **01 14 14.2 -0.2**
GUMO IAmb IAmb 01 15 12.4
comp=Z,431nm,1.6s
MSAI Masohi 17.29 270 P P 01 14 30.0 +11
MTN Manton Dam 17.61 237 P **Pn** **01 14 19.8 -2.0**
baz=18,SNR=39
MTN Manton Dam 17.61 237 **Pn** **01 14 20.0 -1.7**
AAI Ambon 18.02 269 P **P** **01 14 30.1 +2.8**
comp=Z,5µmcomp=Z,216nm,1.2s
QIS Mount Isa 18.16 200 P **P** **01 14 29.0 +0.2**
baz=18,SNR=8.7
LBMI Labuha 18.95 278 P Pn 01 14 46.0 +7.8
NLAI Namlea 19.12 270 P **Pn** **01 14 42.6 +2.3**
comp=Z,7µmcomp=Z,160nm,1.6s
TNTI Ternate 19.34 282 P **Pn** **01 14 45.9 +2.9**
comp=Z,9µmcomp=Z,6µmcomp=Z,171nm,1.3s
TNTI Ternate 19.34 282 P **P** **01 14 41.5 -0.3**
WB0 Warramunga Arr 19.89 215 P **P** **01 14 47.4 -0.4**
WB9 Warramunga Arr 19.92 215 P **P** **01 14 48.5 +0.4**
baz=20
WR0 Warramunga Arr 19.96 214 P **P** **01 14 48.2 -0.3**
WRAB Tennant Creek 20.05 214*ce*P **P** **01 14 49.8 +0.3**
WRAB pmax pmax
comp=Z,797nm,1.5s
WRAB Tennant Creek 20.05 214 P **P** **01 14 49.2 -0.3**
WB2 Warramunga Arr 20.06 214 P **P** **01 14 48.8 -0.8**
WRA Warramunga Arr 20.07 214 P **P** **01 14 48.0 -1.6**
comp=Z,339nm,1.2s,baz=35,slow=12,SNR=62
WRA S **S** **01 18 34.1 0.0**
comp=Z,1.4nm,0.8s,baz=39,slow=9.4,SNR=1.4
WRA LR LR 01 23 41.2
comp=Z,21µm,18.5s,baz=40,slow=40
WC4 Warramunga Arr 20.08 214 IAMs_20 IAMs_20 01 23 30.2
comp=Z,29µm,18.0s
KNRA Kununurra 21.05 234 P **P** **01 14 59.2 -1.1**
baz=21,SNR=62
KNRA Kununurra 21.05 234 P **P** **01 14 58.8 -1.5**
KNRA IAMs_20 IAMs_20 01 24 00.9
comp=Z,50µm,21.0s
EIDS Eidsvold 22.25 168 P **P** **01 15 14.9 +1.8**
baz=22,SNR=13
EIDS Eidsvold 22.25 168 P **P** **01 15 13.9 +0.8**
MATI Mati 22.49 297 *eP* P 01 15 07.6 -8.2
DDMP Don Marcelino, 22.62 295 *eP* **P** **01 15 12.2 -5.0**
KMSI Cibinong 22.62 280 P **P** **01 15 24.0 +6.8**
SOEI Soe 22.70 253 P **P** **01 15 18.6 +0.4**
comp=Z,13µmcomp=Z,483nm,1.0s
RMQ Roma 23.00 174 P **P** **01 15 23.0 +2.0**
baz=23,SNR=30
QLP Quilpie 23.05 185 P **P** **01 15 22.0 +0.5**
baz=23,SNR=44
DAV Davao City (W) 23.14 297 P **P** **01 15 22.5 -0.1**
comp=Z,78nm,0.3s,baz=221,slow=9.3,SNR=1.1
DAV LR LR 01 24 07.3
comp=Z,5µm,19.3s,baz=99,slow=36
DAV Davao City (W) 23.14 297⇓*i*P **P** **01 15 22.5 -0.1**
DAV Davao City (W) 23.14 297 P **P** **01 15 20.4 -2.2**
ASAR Alice Springs 23.34 210 P **P** **01 15 24.3 -0.3**
comp=Z,144nm,0.9s,baz=39,slow=8.4,SNR=185
ASAR S **S** **01 19 41.9 +5.8**
comp=Z,19nm,1.2s,baz=30,slow=15,SNR=4.7
ASAR LR LR 01 24 51.5
comp=Z,14µm,21.4s,baz=34,slow=38
BATI Baumata 23.39 252 P **P** **01 15 24.4 -0.7**
comp=Z,464nm,1.1s,baz=31,slow=0.8,SNR=23
BATI LR LR 01 26 23.0
comp=Z,11µm,21.6s,baz=93,slow=42
BATI Baumata 23.39 252 P **P** **01 15 25.0 -0.1**
comp=Z,4µmcomp=Z,288nm,1.1s
KCP Kidapawan 23.55 296⇑*eP* **P** **01 15 26.1 -0.7**
LUWI Luwuk 23.59 275 P **P** **01 15 27.5 +0.5**
comp=Z,6µmcomp=Z,9µmcomp=Z,388nm,1.5s
BBSI Bau Bau 23.69 264 P P 01 15 39.2 +11
SKMP Bagumbayan, Su 23.84 295 *eP* **P** **01 15 23.0 -6.5**
BUTP Butuan 24.00 301 *eP* **P** **01 15 28.1 -2.9**
MMRI Maumere 24.41 257 P P 01 15 47.9 +13
MRSI Marisa 24.61 279 P **P** **01 15 36.3 -0.3**
comp=Z,2µmcomp=Z,166nm,1.6s
APSI Ampana 24.71 275 P **P** **01 15 38.7 +1.2**
comp=Z,4µmcomp=Z,291nm,1.4s
FITZ Fitzroy Crossi 24.87 233 P **P** **01 15 37.6 -1.2**
baz=25,SNR=155
FITZ Fitzroy Crossi 24.87 233 P **P** **01 15 37.7 -1.1**
comp=Z,252nm,1.0s,baz=49,slow=8.4,SNR=64
FITZ LR LR 01 26 06.3
comp=Z,30µm,20.4s,baz=56,slow=38
FITZ Fitzroy Crossi 24.87 233 P **P** **01 15 37.8 -1.1**
FITZ IAMs_20 IAMs_20 01 25 44.7
comp=Z,30µm,20.0s
EDFI Ende, Flores 24.97 257 P **P** **01 15 39.7 -0.2**
comp=Z,1µmcomp=Z,46nm,1.3s
MSLP Maasin 25.24 303 *eP* **P** **01 15 39.7 -2.5**
PAGZ Pagadian 25.44 296 *eP* **P** **01 15 40.1 -3.9**
BNSI Bone 26.10 267 P **P** **01 15 53.2 +3.1**
comp=Z,3µmcomp=Z,100nm,1.1s
BKSI Bulukumba 26.11 265 P **P** **01 15 53.1 +2.9**
comp=Z,2µmcomp=Z,53nm,1.1s
BASI Baing, Sumba 26.34 254 P **P** **01 15 50.2 -2.0**
comp=Z,6µmcomp=Z,238nm,1.6s
TTSI Tana Toraja 26.39 270 P **P** **01 15 53.4 +0.7**
comp=Z,2µmcomp=Z,164nm,1.3s
SPSI Sidrap Palu 26.43 268 P **P** **01 15 55.8 +2.7**
comp=Z,3µmcomp=Z,90nm,1.7s
KAPI Kappang 26.47 266 P **P** **01 15 53.2 -0.2**
comp=Z,47nm,1.2s,baz=68,slow=2.0,SNR=6.5
KAPI LR LR 01 27 56.0
comp=Z,3µm,21.0s,baz=94,slow=40
KAPI Kappang 26.47 266 P **P** **01 15 52.5 -0.9**
KAPI pmax pmax
comp=Z,230nm,1.8s
KAPI MLR MLR
comp=Z,8µm,22.0s
KAPI Kappang 26.47 266 P **P** **01 15 52.5 -0.9**
KAPI IAmb IAmb 01 16 31.3
comp=Z,230nm,1.8s
MPSI Mapaga 26.61 278 P **P** **01 15 53.6 -1.1**
comp=Z,1µmcomp=Z,34nm,1.2s
DZM Mont Dzumac 26.93 135 *eP* **P** **01 15 58.8 +1.2**
comp=Z,150nm,1.2s
DZM *e*S **S** **01 20 30.2 -3.2**
comp=Z,8µm,25.8s
DZM *e*LR LR 01 22 43.5
comp=Z,44µm,25.4s
DZM Mont Dzumac 26.93 135 P **P** **01 15 59.2 +1.6**
comp=Z,15nm,0.7s,baz=288,slow=5.9,SNR=7.7
DZM LR LR 01 25 26.2
comp=Z,24µm,19.4s,baz=319,slow=34
CNOP Candoni, Negro 26.99 300 *eP* **P** **01 15 55.2 -2.9**
ARMA Armidale 27.27 170 P **P** **01 16 01.7 +1.2**
baz=27,SNR=16
ARMA Armidale 27.27 170 P **P** **01 16 02.1 +1.6**
WBSI Waikabubak, Su 27.36 256 P P 01 16 10.3 +8.8
GUIM Jordan 27.41 301 *eP* P 01 15 53.1 -8.8
WRKA Warakurna 27.53 217 P **P** **01 16 02.2 -0.7**
baz=28,SNR=46
PVCP Virac 27.73 308 *eP* **P** **01 16 01.4 -3.3**
CMSA Cobar Meteorol 27.91 181 P **P** **01 16 07.8 +1.6**
baz=28,SNR=9.1
STKA Stephens Creek 28.58 188 P **P** **01 16 12.9 +0.8**
baz=29,SNR=18
STKA Stephens Creek 28.58 188 P **P** **01 16 12.4 +0.3**
comp=Z,3.4nm,0.6s,baz=356,slow=11,SNR=15
STKA LR LR 01 28 35.9
comp=Z,21µm,18.1s,baz=6.2,slow=38
STKA Stephens Creek 28.58 188 P **P** **01 16 12.4 +0.3**
STKA pmax pmax
comp=Z,16nm,1.2s
STKA MLR MLR
comp=Z,4µm,18.0s
STKA Stephens Creek 28.58 188 P **P** **01 16 12.4 +0.3**
SJMP San Jose 29.57 303 *eP* P 01 16 11.0 -10
H11S3 WAKE ISLAND Hy 29.70 42 T T 01 45 38.9
baz=224,slow=74,SNR=21
H11S2 WAKE ISLAND Hy 29.71 42 T T 01 45 45.9
baz=224,slow=74,SNR=17
H11S1 WAKE ISLAND Hy 29.72 42 T T 01 45 45.3
baz=224,slow=74,SNR=16
PGP Puerto Galera 30.25 304⇑*eP* **P** **01 16 26.2 -1.0**
LHI Lord Howe Isla 30.38 158 P **P** **01 16 28.7 +0.6**
baz=30,SNR=3.1
ENPP El Nido 30.42 299 *eP* **P** **01 16 25.6 -3.0**
HTT Hallett 30.57 192 P **P** **01 16 29.8 0.0**
baz=31,SNR=13
TGY Tagaytay City 30.59 305 P **P** **01 16 27.8 -2.4**
comp=Z,105nm,0.3s,baz=205,slow=6.4,SNR=1.7
TGY LR LR 01 26 31.2
comp=Z,11µm,21.9s,baz=112,slow=32
BBOO Buckleboo 30.70 197 P **P** **01 16 30.5 -0.4**
baz=31,SNR=24
BBOO Buckleboo 30.70 197 P **P** **01 16 30.5 -0.4**
BBOO IAmb IAmb 01 16 34.2
comp=Z,77nm,1.3s
BBOO IAMs_20 IAMs_20 01 29 52.5
comp=Z,20µm,19.0s
H11N1 WAKE ISLAND Hy 30.71 41 T T 01 47 40.5
baz=225,slow=74,SNR=2.7
YNG Young 30.72 177 P **P** **01 16 33.2 +2.1**
baz=31,SNR=7.6
H11N3 WAKE ISLAND Hy 30.72 41 T T 01 47 46.1
baz=225
H11N2 WAKE ISLAND Hy 30.73 41 T T 01 47 51.0
baz=225,slow=74,SNR=3.1
LUBP Lubang 30.96 304 *eP* **P** **01 16 31.0 -2.3**
MBWA Marble Bar 31.20 234 P **P** **01 16 34.0 -1.6**
MBWA IAmb IAmb 01 16 44.0
comp=Z,74nm,1.3s
MBWA Marble Bar 31.20 234 IAMs_20 IAMs_20 01 29 48.0
comp=Z,18µm,19.0s
PSAA2 Pilbara Seismi 31.32 233 IAMs_20 IAMs_20 01 29 52.1
comp=Z,25µm,18.0s
PSAA3 Pilbara Seismi 31.32 233 IAMs_20 IAMs_20 01 29 52.1
comp=Z,26µm,19.0s
PSA00 Pilbara Seismi 31.32 233 IAMs_20 IAMs_20 01 29 52.2
comp=Z,25µm,18.0s
PSAB3 Pilbara Seismi 31.33 233 IAMs_20 IAMs_20 01 29 52.3
comp=Z,26µm,19.0s
PSAA1 Pilbara Seismi 31.33 233 IAMs_20 IAMs_20 01 29 52.5
comp=Z,26µm,18.0s
PSAB1 Pilbara Seismi 31.34 233 IAMs_20 IAMs_20 01 29 53.7
comp=Z,26µm,19.0s
PSAD3 Pilbara Seismi 31.41 233 IAMs_20 IAMs_20 01 29 54.6
comp=Z,26µm,19.0s
KKM Kota Kinabalu 31.45 287 P **P** **01 16 36.3 -1.6**
KKM IAmb IAmb 01 16 47.4
comp=Z,55nm,1.1s
CAN Canberra 31.78 176 P **P** **01 16 41.5 +1.1**
CAN pmax pmax
comp=Z,123nm,2.0s
CAN MLR MLR
comp=Z,11µm,20.0s
CAN Canberra 31.78 176 P **P** **01 16 41.5 +1.1**
CAN IAmb IAmb 01 17 05.8
comp=Z,123nm,2.0s
SMPP San Manuel, Pa 31.94 308 *eP* P 01 16 35.6 -6.4
FORT Forest 32.12 210 P **P** **01 16 42.9 -0.6**
baz=32,SNR=53
FORT Forest 32.12 210 P **P** **01 16 43.2 -0.3**
FORT IAmb IAmb 01 17 51.3
comp=Z,71nm,0.8s
ARPS Mount Arapiles 33.37 186 P **P** **01 16 56.2 +1.9**
baz=33
TOO Toolangi 33.93 181 P **P** **01 17 00.1 +0.9**
TOO pmax pmax
comp=Z,59nm,1.7s
TOO MLR MLR
comp=Z,8µm,20.0s
TOO Toolangi 33.93 181 P **P** **01 17 00.1 +0.9**
SBUM Sibu 34.52 279 P **P** **01 17 03.4 -1.2**
SBUM Sibu 34.52 279 P **P** **01 17 05.0 +0.4**
JOW Kunigami 34.79 331 LR LR 01 28 19.3
comp=Z,1µm,20.4s,baz=229,slow=31
MEEK Meekatharra 35.07 226 P **P** **01 17 08.7 -0.6**
baz=35,SNR=15
WOJI Wonogiri, Jawa 35.41 261 P P 01 17 19.2 +6.9
YOJ Yonaguni jima 35.81 322 P **P** **01 17 15.3 -0.3**
YOJ pmax pmax
comp=Z,198nm,1.3s
YOJ Yonaguni jima 35.81 322 P **P** **01 17 15.3 -0.3**
YOJ IAMs_20 IAMs_20 01 28 28.0
comp=Z,24µm,22.0s
TWG Pinlang 35.89 318 P **P** **01 17 14.2 -2.0**
YULB Yu-li 36.13 319 P **P** **01 17 17.4 -1.0**
YULB IAmb IAmb 01 17 38.2
comp=Z,147nm,1.7s
YULB IAMs_20 IAMs_20 01 29 12.3
comp=Z,15µm,20.0s
KSM Kuching 36.26 277 P **P** **01 17 19.3 -0.4**
KSM Kuching 36.26 277 P **P** **01 17 20.0 +0.4**
GIRL Giralia 36.39 236 P **P** **01 17 21.1 +0.6**
GIRL IAMs_20 IAMs_20 01 33 01.3
comp=Z,12µm,19.0s
NACB Ninganchiao 36.49 320 P **P** **01 17 20.6 -0.8**
NACB IAmb IAmb 01 17 25.5
comp=Z,92nm,1.1s
NACB IAMs_20 IAMs_20 01 29 05.8
comp=Z,17µm,20.0s
TPUB Ta-pu 36.51 318 IAMs_20 IAMs_20 01 30 32.2
comp=Z,13µm,19.0s
SSLB Suanglung 36.63 319 P **P** **01 17 21.4 -1.3**
SSLB IAMs_20 IAMs_20 01 29 28.5
comp=Z,19µm,19.0s
YHNB Yeheng 36.98 320 IAMs_20 IAMs_20 01 29 01.9
comp=Z,20µm,22.0s
TATO Taipei 37.13 321 P **P** **01 17 26.8 0.0**
TATO Taipei 37.13 321 IAMs_20 IAMs_20 01 29 59.6
comp=Z,21µm,20.0s
MORW Morawa 38.34 225 P **P** **01 17 36.0 -1.1**
baz=38,SNR=12
MORW Morawa 38.34 225 IAmb IAmb 01 17 40.7
comp=Z,142nm,1.5s
CISI Cisompet, Garu 38.46 262 P **P** **01 17 37.3 -1.0**
KLBR Kellerberrin 38.73 221 P **P** **01 17 39.0 -1.3**
baz=39,SNR=8.2
KNMB Chin-men Tao 38.81 317 P **P** **01 17 40.2 -0.8**
KNMB IAmb IAmb 01 17 56.5
comp=Z,71nm,0.9s
KNMB IAMs_20 IAMs_20 01 30 11.0
comp=Z,13µm,22.0s
BLDU Ballidu 38.81 223 P **P** **01 17 41.1 +0.1**
baz=39,SNR=8.9
QZH Quanzhou 38.99 318⇑*i*P **P** **01 17 42.7 +0.2**
QZH PP **PnPn** **01 19 18.0 +3.3**
QZH S **S** **01 23 41.4 +1.3**
QZH pmax pmax
comp=Z,50nm,1.4s
QZH pmax pmax
comp=Z,1µm,9.7s
QZH LR LR
comp=Z,4µm,18.5s
QZH LR LR
comp=Z,8µm,19.9s
QZH LR LR
comp=Z,8µm,17.1s
JNU Nakatsue 39.21 339 P **P** **01 17 41.6 -2.7**
comp=Z,15nm,1.1s,baz=229,slow=9.3,SNR=2.5
JNU LR LR 01 32 24.7
comp=Z,4µm,19.2s,baz=160,slow=34
JNU Nakatsue 39.21 339 P **P** **01 17 45.0 +0.7**
TAU Tasmania Unive 39.27 179 IAMs_20 IAMs_20 01 36 06.7
comp=Z,15µm,19.0s
NWAO Narrogin (SRO) 39.93 219 P **P** **01 17 49.7 -0.6**
NWAO pmax pmax
comp=Z,206nm,1.9s
NWAO Narrogin (SRO) 39.93 219 P **P** **01 17 49.7 -0.6**
NWAO IAmb IAmb 01 18 38.6
comp=Z,206nm,1.9s
NWAO Narrogin (SRO) 39.93 219 IAMs_20 IAMs_20 01 35 34.7
comp=Z,18µm,20.0s
MUN Mundaring 39.99 221 P **P** **01 17 50.6 -0.2**
baz=40,SNR=3.7
OUZ Omahuta 40.48 145 P **P** **01 17 55.8 +1.0**
OUZ IAmb IAmb 01 17 59.8
comp=Z,119nm,1.6s
MJAR Matsushiro Arr 40.52 350 P **P** **01 17 52.7 -2.5**
comp=Z,4.0nm,0.8s,baz=175,slow=10,SNR=22
MAJO Matsushiro 40.52 350 P **P** **01 17 53.7 -1.4**
MAJO pmax pmax
comp=Z,194nm,1.8s
MAJO MLR MLR
comp=Z,4µm,19.0s
MAJO Matsushiro 40.52 350 P **P** **01 17 53.7 -1.4**
MAJO IAmb IAmb 01 17 58.3
comp=Z,194nm,1.8s
MAT Matsushiro 40.52 350 P **P** **01 17 52.7 -2.4**
MAT S **S** **01 24 02.0 -0.8**
GZH Guangzhou 41.57 311 P **P** **01 18 06.7 +2.8**
GZH PcP **PcP** **01 20 03.4 +2.4**
GZH S **S** **01 24 23.1 +4.4**
GZH LR LR
comp=Z,6µm,16.3s
GZH LR LR
comp=Z,4µm,17.1s
SSE Sheshan 41.88 327 P **P** **01 18 05.6 -0.7**
SSE S **S** **01 24 21.4 -1.6**
SSE pmax pmax
comp=Z,24nm,0.7s
SSE pmax pmax
comp=Z,190nm,3.7s
SSE LR LR
comp=Z,4µm,20.2s
SSE LR LR
comp=Z,5µm,20.7s
SSE Sheshan 41.88 327 IAMs_20 IAMs_20 01 32 19.2
comp=Z,17µm,21.0s
QIZ Qiongzhong 42.23 303 P **P** **01 18 08.0 -1.4**
QIZ S **S** **01 24 28.0 -0.7**
QIZ pmax pmax
comp=Z,750nm,4.1s
QIZ LR LR
comp=Z,5µm,20.1s
QIZ LR LR
comp=Z,3µm,27.5s
QIZ LR LR
comp=Z,8µm,25.3s
QIZ Qiongzhong 42.23 303 IAmb IAmb 01 18 25.2
comp=Z,117nm,1.4s
TJN Taejon 43.41 338*ce*P **P** **01 18 20.6 +2.0**
NJ2 Nanjing 43.89 326 *eP* **P** **01 18 24.6 +2.0**
NJ2 sP **pwP** **01 18 33.6 +1.1**
NJ2 S **S** **01 24 56.1 +3.5**
NJ2 SS **SS** **01 28 08.6 -1.1**
NJ2 ScS **ScS** **01 28 18.6 -1.8**
NJ2 pmax pmax
comp=Z,15nm,0.6s
NJ2 pmax pmax
comp=Z,380nm,3.5s
NJ2 LR LR
comp=Z,9µm,18.6s
NJ2 LR LR
comp=Z,5µm,17.7s
NJ2 LR LR
comp=Z,11µm,18.8s
KSRS Korea Array 44.15 339 P **P** **01 18 22.7 -1.9**
comp=Z,15nm,1.0s,baz=155,slow=9.7,SNR=14
KSRS LR LR 01 33 45.7
comp=Z,7µm,21.7s,baz=170,slow=32
KS19 Wonju Array Si 44.22 339 IAmb IAmb 01 18 42.1
comp=Z,168nm,2.0s
URZ Urewera 44.62 145 P **P** **01 18 28.4 0.0**
comp=Z,9.4nm,0.9s,baz=246,slow=5.7,SNR=3.2
INCN Inchon 44.66 338 P **P** **01 18 28.4 -0.3**
INCN pmax pmax
comp=Z,155nm,1.7s
INCN Inchon 44.66 338 P **P** **01 18 28.4 -0.3**
INCN IAmb IAmb 01 18 31.2
comp=Z,155nm,1.6s
MXZ Matakaoa Point 44.85 143 IAMs_20 IAMs_20 01 35 19.5
comp=Z,9µm,19.0s
BKZ Black Stump Fm 44.90 146 IAMs_20 IAMs_20 01 35 13.4
comp=Z,10µm,21.0s
THZ Tophouse 44.97 152 P **P** **01 18 33.2 +2.0**
THZ IAmb IAmb 01 18 51.3
comp=Z,88nm,1.6s
BKNI Bangkinang 45.34 274 P **P** **01 18 32.3 -2.3**
LTZ Lake Taylor 45.47 153 IAMs_20 IAMs_20 01 37 33.6
comp=Z,11µm,19.0s
WHN Wuhan 45.53 320⇑P **P** **01 18 36.5 +0.8**
WHN S **S** **01 25 19.0 +2.5**
WHN SS **SS** **01 28 40.1 -0.6**
WHN pmax pmax
comp=Z,2µm,14.9s
WHN LR LR
comp=Z,17µm,18.8s
WHN LR LR
comp=Z,3µm,10.4s
WHN LR LR
comp=Z,19µm,24.7s
RPZ Rata Peaks 45.68 155 P **P** **01 18 37.8 +0.9**
comp=Z,28nm,1.0s,baz=153,slow=2.2,SNR=6.4
KHZ Kahutara 45.77 152 IAMs_20 IAMs_20 01 36 14.7
comp=Z,8µm,19.0s
OXZ Oxford 45.80 154 IAMs_20 IAMs_20 01 37 34.2
comp=Z,10µm,19.0s
BFZ Birch Farm 45.84 148 IAMs_20 IAMs_20 01 37 18.3
comp=Z,10µm,20.0s
IPM Ipoh 45.88 280 P **P** **01 18 37.3 -1.5**
IPM Ipoh 45.88 280 P **P** **01 18 39.0 +0.2**
MQZ McQueen's Vall 46.37 154 IAMs_20 IAMs_20 01 38 00.4
comp=Z,8µm,20.0s
KULM Kulim 46.38 281 IAmb IAmb 01 18 51.7
comp=Z,61nm,1.6s
KULM Kulim 46.38 281 P **P** **01 18 42.0 -0.7**
MNSI Mandailing Nat 46.84 274 P P 01 18 55.6 +9.2
YUK Yuzh-Kuril'sk 47.31 360 *eP* **P** **01 18 48.0 -1.4**
YUK *i*S **S** **01 25 40.4 -1.1**
YUK pmax pmax
comp=Z,262nm,0.9s
ASAJ Asahikawa 47.50 356 P **P** **01 18 51.5 +0.5**
comp=Z,20nm,1.1s,baz=230,slow=14,SNR=9.1
ASAJ LR LR 01 35 00.4
comp=Z,2µm,21.7s,baz=180,slow=31
RPSI Rantau Prapat 47.70 277 P **P** **01 18 51.5 -1.6**
PSI Prapat 47.71 277 P **P** **01 18 51.5 -1.8**
PSI pmax pmax
comp=Z,124nm,1.7s
PSI MLR MLR
comp=Z,3µm,20.0s
MSHR Mys Shultsa 47.85 345*ce*P **P** **01 18 56.0 +2.3**
DL2 Dalian 47.92 334 P **P** **01 18 53.5 -0.8**
DL2 S **S** **01 25 49.1 -1.2**
DL2 pmax pmax
comp=Z,33nm,1.0s
DL2 pmax pmax
comp=Z,460nm,7.5s
DL2 LR LR
comp=Z,5µm,19.4s
DL2 LR LR
comp=Z,4µm,19.2s
DL2 LR LR
comp=Z,9µm,19.8s
TIA Tai'an 47.96 328 P **P** **01 18 53.7 -1.0**
TIA S **S** **01 25 52.5 +1.4**
TIA pmax pmax
comp=Z,13nm,1.1s
TIA pmax pmax
comp=Z,280nm,2.9s
TIA LR LR
comp=Z,8µm,17.2s
TIA LR LR
comp=Z,5µm,17.2s
TIA LR LR
comp=Z,14µm,19.2s
SLVN Son La 48.24 303 P **P** **01 18 56.6 -0.6**
GYA Guiyang 48.48 310⇑*i*P **P** **01 19 00.2 +1.1**
GYA pP sP 01 19 07.6 -1.2
GYA PP **PP** **01 20 53.4 +1.4**
GYA ScP **ScP** **01 24 19.0 +0.6**
GYA S **S** **01 25 59.6 +0.5**
GYA SS **SS** **01 29 24.5 -4.8**
GYA pmax pmax
comp=Z,20nm,1.1s
GYA pmax pmax
comp=Z,510nm,5.2s
GYA LR LR
comp=Z,4µm,18.7s
GYA LR LR
comp=Z,4µm,17.7s
GYA LR LR
comp=Z,7µm,22.2s
KUR Kuril'sk 48.52 2 P P 01 19 03.7 +4.8
KUR S **S** **01 25 58.8 +0.1**
KUR MLR MLR
comp=Z,1µm,16.0s
KUR MLR MLR
comp=N,1µm,15.0s

KUR MLR MLR
comp=E,896nm,13.0s
ENH Enshi 48.59 316 P **P** **01 18 58.8 -0.9**
ENH IAmb IAmb 01 19 13.3
comp=Z,89nm,1.4s
GSI Gunungsitoli 48.88 275 P **P** **01 19 01.7 -0.5**
comp=Z,216nm,1.6s
KCSI Kotacane, Aceh 48.95 278 P **P** **01 19 01.1 -1.6**
comp=Z,1µmcomp=Z,34nm,1.1s
PBKT Sadao Pong 48.97 295 IAmb IAmb 01 19 11.6
comp=Z,66nm,1.6s
USA0B Ussuriysk Arra 49.17 346 IAmb IAmb 01 19 13.0
comp=Z,49nm,1.1s
USRK Ussuriysk Ar. 49.17 346 P **P** **01 19 02.2 -1.6**
comp=Z,10nm,0.7s,baz=166,slow=7.1,SNR=30
USRK LR LR 01 36 43.7
comp=Z,3µm,21.1s,baz=147,slow=32
SNY Shenyang 49.59 338 ⇑P **P** **01 19 06.1 -1.0**
SNY S **S** **01 26 15.8 +2.0**
SNY pmax pmax
comp=Z,5.0nm,0.3s
SNY LR LR
comp=Z,4µm,19.6s
SNY LR LR
comp=Z,3µm,16.2s
SNY LR LR
comp=Z,8µm,23.0s
MDJ Mudanjiang 50.16 345 P **P** **01 19 10.1 -1.3**
YSS Yuzh-Sakhalins 50.32 357⇑ *e*P **P** **01 19 10.0 -2.5**
YSS *e* 01 20 26.7
YSS *e* 01 21 08.6
YSS *e*S **S** **01 26 20.1 -3.7**
YSS *e*SSS SSS 01 31 22.0
YSS pmax pmax
comp=Z,300nm,5.7s
YSS smax smax
comp=N,700nm,8.7s
YSS smax smax
comp=E,1µm,9.1s
YSS MLR MLR
comp=Z,2µm,16.0s
YSS MLR MLR
comp=N,2µm,15.0s
YSS MLR MLR
comp=E,1µm,13.0s
YSS Yuzh-Sakhalins 50.32 357 P **P** **01 19 11.7 -0.8**
MLSI Meulaboh, Aceh 50.40 278 P **P** **01 19 15.1 +1.3**
comp=E,64nm,1.2s
CN2 Changchun 50.66 341 *e*P **P** **01 19 15.5 +0.3**
CN2 *es*P pP 01 19 22.6 +0.4
CN2 *e*S **S** **01 26 28.9 +0.2**
CN2 pmax pmax
comp=E,20nm,0.8s
CN2 pmax pmax
comp=E,500nm,5.0s
CN2 LR LR
comp=E,6µm,18.0s
CN2 LR LR
comp=E,4µm,18.0s
CN2 LR LR
comp=E,7µm,17.0s
KMI Kunming 50.90 306 P **P** **01 19 18.7 +1.1**
KMI pP pP 01 19 25.7 +1.1
KMI sP pwP 01 19 28.9 +1.3
KMI PP **PP** **01 21 12.8 -1.4**
KMI S **S** **01 26 30.0 -3.1**
KMI pmax pmax
comp=E,38nm,1.4s
KMI pmax pmax
comp=E,550nm,7.5s
KMI LR LR
comp=E,3µm,25.2s
KMI LR LR
comp=E,2µm,15.5s
KMI LR LR
comp=E,6µm,39.6s
XAN Xi'an 51.29 320 P **P** **01 19 19.5 -0.7**
XAN pmax pmax
comp=Z,56nm,1.2s
XAN Xi'an 51.29 320 P **P** **01 19 19.4 -0.7**
XAN IAmb IAmb 01 19 43.7
comp=Z,56nm,1.2s
XAN Xi'an 51.29 320 IAMs_20 IAMs_20 01 40 26.0
comp=Z,6µm,18.0s
BJT Baijiatuau 51.35 330 P **P** **01 19 20.4 0.0**
BJT pmax pmax
comp=Z,83nm,1.6s
BJT Baijiatuau 51.35 330 P **P** **01 19 20.4 0.0**
BJT IAmb IAmb 01 19 49.2
comp=Z,83nm,1.6s
BJT Baijiatuau 51.35 330 IAMs_20 IAMs_20 01 39 35.1
comp=Z,8µm,20.0s
BJI Beijing 51.36 330 P **P** **01 19 21.7 +1.2**
BJI S **S** **01 26 42.0 +3.5**
BJI SS **SS** **01 30 10.4 -4.2**
BJI pmax pmax
comp=Z,18nm,1.9s
BJI pmax pmax
comp=Z,310nm,4.5s
BJI LR LR
comp=Z,5µm,19.1s
CM31 Chiang Mai Arr 51.43 297 P **P** **01 19 20.2 -1.3**
CMAR Chiang Mai Arr 51.43 297 P **P** **01 19 22.4 +0.9**
comp=Z,12nm,0.9s,baz=115,slow=5.9,SNR=32
CMAR LR LR 01 38 22.2
comp=Z,2µm,21.9s,baz=115,slow=33
CHTO Chiang Mai 51.56 297 P **P** **01 19 22.1 -0.3**
CHTO pmax pmax
comp=Z,77nm,1.4s
CHTO MLR MLR
comp=Z,2µm,19.0s
CHTO Chiang Mai 51.56 297 P **P** **01 19 22.1 -0.3**
CHTO IAmb IAmb 01 19 37.1
comp=Z,77nm,1.4s
TIY Taiyuan 51.62 326 *e*P **P** **01 19 23.3 +0.7**
TIY S **S** **01 26 43.5 +1.1**
TIY SS **SS** **01 30 16.6 -2.4**
TIY pmax pmax
comp=Z,19nm,0.7s
TIY pmax pmax
comp=Z,240nm,4.0s
TIY LR LR
comp=Z,2µm,14.1s
TIY LR LR
comp=Z,4µm,14.8s
TIY LR LR
comp=Z,7µm,21.2s
CD2 Chengdu 53.01 313⇑ *i*P **P** **01 19 32.5 -0.5**
CD2 pP pP 01 19 38.0 -2.1
CD2 PP **PP** **01 21 32.8 -0.2**
CD2 S **S** **01 27 01.6 0.0**
CD2 sS sS 01 27 13.9 +0.7
CD2 SS **SS** **01 30 40.0 -1.2**
CD2 pmax pmax
comp=Z,30nm,1.1s
CD2 pmax pmax
comp=Z,870nm,8.9s
CD2 LR LR
comp=Z,6µm,20.8s
CD2 LR LR
comp=Z,7µm,25.6s
CD2 LR LR
comp=Z,8µm,17.2s
KLR Kul'dur 53.99 348 P **P** **01 19 39.5 -0.4**
comp=Z,6.3nm,0.9s,baz=158,slow=8.1,SNR=20
KLR LR LR 01 41 14.0
comp=Z,3µm,19.5s,baz=162,slow=34
KLR Kul'dur 53.99 348 *i*P **P** **01 19 40.8 +1.0**
KLR pmax pmax
comp=Z,63nm,2.0s
TYV Tymovskoe 54.23 357 *e*P **P** **01 19 42.4 +0.9**
TYV *e*S **S** **01 27 20.9 +3.7**
TYV pmax pmax
comp=Z,100nm,2.4s
TYV smax smax
comp=E,1µm,6.6s
HHC Hu-ho-hao-te 54.32 328 *e*P **P** **01 19 47.2 +4.7**
HHC PP **PP** **01 21 50.2 +5.5**
HHC S **S** **01 27 22.3 +3.2**
HHC SS **SS** **01 31 03.5 +1.8**
HHC pmax pmax
comp=E,23nm,0.8s
HHC pmax pmax
comp=E,270nm,7.0s
HHC LR LR
comp=E,2µm,20.0s
HHC LR LR
comp=E,3µm,19.4s
HHC LR LR
comp=E,5µm,18.8s
SKR Severo-Kuril's 54.62 8 *e*P **P** **01 19 43.7 -0.6**
SKR *e* 01 19 58.3
SKR *e*S **S** **01 27 24.6 +2.1**
SKR pmax pmax
comp=Z,100nm,3.3s
SKR pmax pmax
comp=Z,200nm,4.8s
SKR MLR MLR
comp=Z,800nm,17.0s
SKR MLR MLR
comp=Z,800nm,18.0s
BTO Baotou 54.98 327 *e*P **P** **01 19 47.8 +0.5**
LZH Lanzhou 55.84 319 ⇑P **P** **01 19 54.6 +0.9**
LZH pP pP 01 20 01.8 +1.0
LZH sP pwP 01 20 05.5 +1.8
LZH S **S** **01 27 39.4 -0.4**
LZH SS **SS** **01 31 27.3 +1.4**
LZH pmax pmax
comp=Z,27nm,1.2s
LZH pmax pmax
comp=Z,490nm,4.9s
LZH LR LR
comp=Z,4µm,16.3s
LZH LR LR
comp=Z,7µm,17.1s
LZH LR LR
comp=Z,8µm,18.2s
NKL Nikolayevsk 56.62 356 *e*P **P** **01 20 02.1 +3.4**
NKL *e* 01 20 51.6
NKL *e* 01 22 04.3
NKL *e*S **S** **01 27 56.8 +7.6**
NKL pmax pmax
comp=Z,16nm,1.5s
NKL pmax pmax
comp=N,5.0nm,1.0s
NKL pmax pmax
comp=E,6.0nm,0.6s
NKL pmax pmax
comp=Z,70nm,4.2s
PEA0B Petropavlovsk- 57.21 8 *ce*P **P** **01 20 03.7 +0.8**
PEA0B Petropavlovsk- 57.21 8 P **P** **01 20 04.5 +1.6**
PETK Petropavlovsk- 57.21 8 P **P** **01 20 01.5 -1.4**
comp=Z,4.1nm,0.7s,baz=175,slow=6.9,SNR=6.7
PETK LR LR 01 40 32.0
comp=Z,3µm,21.5s,baz=188,slow=32
PET Petropavlovsk 57.27 9 *e*P **P** **01 20 06.5 +3.3**
PET *e*S **S** **01 27 59.8 +2.1**
PET *e*SS **SS** **01 31 47.8 +0.5**
PET pmax pmax
comp=Z,24nm,1.1s
HIA Hailar 57.35 340 IAmb IAmb 01 20 22.5
comp=Z,99nm,1.5s
HIA Hailar 57.35 340 IAMs_20 IAMs_20 01 43 18.5
comp=Z,6µm,18.0s
ZEA Zeya 59.20 347 *e*P **P** **01 20 15.8 -1.0**
ZEA *e*S **S** **01 28 20.0 -2.9**
ZEA pmax pmax
comp=Z,300nm,5.0s
ZEA pmax pmax
comp=N,73nm,1.6s
ZEA pmax pmax
comp=Z,190nm,1.8s
ZEA pmax pmax
comp=Z,500nm,12.0s
ZEA smax smax
comp=E,700nm,9.0s
ZEA smax smax
comp=N,1µm,10.0s
SHL Shillong 60.05 302 *e*P **P** **01 20 22.4 -1.1**
SHL Shillong 60.05 302 IAmb IAmb 01 20 34.0
comp=Z,50nm,1.0s
GTA Gaotai 60.35 320 ⇓P **P** **01 20 25.3 +0.1**
GTA pP pP 01 20 30.4 -1.9
GTA sP sP 01 20 33.5 -1.6
GTA S **S** **01 28 39.0 +0.4**
GTA SS **SS** **01 32 35.8 -0.9**
GTA pmax pmax
comp=Z,10.0nm,1.1s
GTA pmax pmax
comp=Z,460nm,5.7s
GTA LR LR
comp=Z,3µm,19.4s
GTA LR LR
comp=Z,3µm,21.9s
GTA LR LR
comp=Z,5µm,22.5s
GUWA GUWAHATI 60.43 303 *ex* **P** **01 20 27.8 +2.0**
KHLU Kahalu`u 61.28 66 IAMs_20 IAMs_20 01 42 03.2
comp=Z,6µm,20.0s
KHU Kahuku 61.44 66 IAMs_20 IAMs_20 01 44 31.4
comp=Z,6µm,20.0s
MLOA Mauna Loa Obse 61.55 66 IAMs_20 IAMs_20 01 41 41.4
comp=Z,7µm,21.0s
ULN Ulaanbaatar 61.56 331 *ce*P **P** **01 20 32.9 -0.4**
ULN pmax pmax
comp=Z,66nm,2.5s
ULN Ulaanbaatar 61.56 331 P **P** **01 20 33.6 +0.3**
ULN IAmb IAmb 01 21 02.3
comp=Z,47nm,1.4s
ULN Ulaanbaatar 61.56 331 IAMs_20 IAMs_20 01 46 28.4
comp=Z,8µm,19.0s
HPAH Hawaii Prepara 61.57 65 IAMs_20 IAMs_20 01 42 11.9
comp=Z,6µm,20.0s
POHA Pohakuloa 61.65 65 IAMs_20 IAMs_20 01 42 34.9
comp=Z,8µm,20.0s
SBLHI Steaming Bluff 61.80 66 P **P** **01 20 35.3 -0.1**
BYL Byron's Ledge 61.81 66 P **P** **01 20 36.1 +0.7**
SONM Songino Array 61.86 331 P **P** **01 20 34.4 -0.9**
comp=Z,3.6nm,0.8s,baz=144,slow=6.3,SNR=23
SONM LR LR 01 46 39.8
comp=Z,10µm,19.8s,baz=126,slow=35
SONM PKPPKP P'P'df 01 49 56.0 +11
comp=Z,0.8nm,0.9s,baz=248,slow=4.0,SNR=3.7
MA2 Magadan 62.97 3 LR LR 01 43 23.2
comp=Z,1µm,21.2s,baz=184,slow=32
MA2 Magadan 62.97 3 *ce*P **P** **01 20 43.0 +0.7**
MA2 pmax pmax
comp=Z,37nm,1.6s
MA2 Magadan 62.97 3 P **P** **01 20 42.9 +0.7**
MA2 IAmb IAmb 01 20 51.1
comp=Z,60nm,1.6s
GTK Tadong 63.41 303 *e*P **P** **01 20 45.0 -1.0**
GTK IAmb IAmb 01 20 57.6
comp=Z,38nm,1.2s
ADK Adak 63.49 25 P **P** **01 20 47.7 +1.8**
ADK pmax pmax
comp=Z,108nm,1.3s
ADK Adak 63.49 25 P **P** **01 20 47.7 +1.8**
ADK Adak 63.49 25 IAMs_20 IAMs_20 01 42 24.2
comp=Z,8µm,21.0s
BWNR Bhubaneshwar 63.81 295 *e*P **P** **01 20 48.0 -0.6**
BWNR IAmb IAmb 01 20 52.0
comp=Z,27nm,0.9s
PPT Papeete 64.34 108 LR LR 01 45 13.0
comp=Z,1µm,19.3s,baz=277,slow=33
PPT2 Papeete2 64.35 108 *e*S **S** **01 29 25.6 -4.0**
comp=Z,7µm,29.0s
PPT2 *e*LQ LQ 01 37 20.9
comp=Z,5µm,24.8s
PPT2 *e*LR LR 01 40 04.2
comp=Z,3µm,27.5s
BOK Bokaro 64.67 298 *e*P **P** **01 20 53.2 -1.0**
BOK IAmb IAmb 01 21 07.5
comp=Z,21nm,1.0s
ATKA Atka Island 64.78 26 IAMs_20 IAMs_20 01 42 13.4
comp=Z,5µm,22.0s
TBI Tubuai 65.05 114 *e*S **S** **01 29 34.5 -3.4**
comp=Z,6µm,30.8s
TBI *e*LQ LQ 01 37 41.4
comp=Z,7µm,34.0s
TBI *e*LR LR 01 40 26.5
comp=Z,9µm,39.0s,baz=288
ZAK Zakamensk 65.09 331 *e*P **P** **01 20 55.7 -0.8**
ZAK pmax pmax
comp=Z,26nm,1.2s
TLY Talaya 65.79 332 P **P** **01 21 00.9 0.0**
comp=Z,3.8nm,0.7s,baz=132,slow=8.6,SNR=8.7
TLY Talaya 65.79 332 *c i*P **P** **01 21 00.3 -0.6**
TLY *e*S **S** **01 29 48.2 +2.2**
TLY pmax pmax
comp=Z,93nm,1.5s
TLY MLR MLR
comp=Z,6µm,17.0s
TLY Talaya 65.79 332 P **P** **01 21 01.1 +0.1**
TLY IAmb IAmb 01 21 12.7
comp=Z,59nm,1.6s
TLY IAMs_20 IAMs_20 01 49 45.2
comp=Z,5µm,19.0s
IRK Irkutsk 65.88 333 *e*P **P** **01 20 58.6 -2.9**
IRK pmax pmax
comp=Z,81nm,2.4s
BOD Bodaibo 66.37 342 *e*P **P** **01 21 03.4 -1.1**
BOD pmax pmax
comp=Z,34nm,1.7s
SEY Seymchan 66.40 3 P **P** **01 21 04.8 +0.3**
comp=Z,5.6nm,0.9s,baz=190,slow=6.1,SNR=13
SEY Seymchan 66.40 3 *i*P **P** **01 21 05.2 +0.6**
YAK Yakutsk 66.56 352 P **P** **01 21 05.2 -0.4**
comp=Z,7.5nm,0.5s,baz=57,slow=0.7,SNR=1.7
YAK LR LR 01 50 13.7
comp=Z,1µm,18.1s,baz=154,slow=36
YAK Yakutsk 66.56 352 *e*P **P** **01 21 07.8 +2.2**
YAK *e* 01 21 33.4
YAK *e*PPP PPP 01 25 04.0
YAK *e*S **S** **01 29 51.1 -3.8**
YAK *e**SS **sS** **01 30 10.4 +3.6**
YAK *e* 01 31 01.3
YAK *e*SSS SSS 01 37 13.4
YAK pmax pmax
comp=Z,13nm,1.4s
YAK pmax pmax
comp=N,8.0nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK pmax pmax
comp=Z,116nm,3.2s
YAK pmax pmax
comp=N,88nm,3.3s
YAK pmax pmax
comp=E,49nm,3.4s
YAK smax smax
comp=N,232nm,4.9s
YAK smax smax
comp=E,351nm,5.0s
YAK Yakutsk 66.56 352 P **P** **01 21 06.1 +0.5**
YAK IAmb IAmb 01 21 22.6
comp=Z,26nm,1.0s
PVM Polavaram 66.99 290 *e*P **P** **01 21 09.6 +0.3**
MOY Mondy 67.03 331 *e*P **P** **01 21 09.3 +0.3**
MOY pmax pmax
comp=Z,105nm,2.9s
CASY Casey 67.47 195 P **P** **01 21 11.9 +0.5**
CASY IAmb IAmb 01 21 22.4
comp=Z,56nm,1.6s
MYLAV Mylavaram 67.82 290 *e*P **P** **01 21 14.3 -0.2**
ADKI Addanki 68.28 288 *e*P **P** **01 21 16.5 -0.9**
NJS Nagarjunasagar 69.03 289 *e*P **P** **01 21 21.2 -0.9**
UNV Unalaska Valle 69.34 28 P **P** **01 21 24.3 +1.1**
UNV IAmb IAmb 01 21 32.0
comp=Z,43nm,1.3s
UNV IAMs_20 IAMs_20 01 46 43.1
comp=Z,5µm,21.0s
SRLM Srisailam 69.35 289 *e*P **P** **01 21 22.1 -2.0**
RPR Rampur 69.48 291 *e*P **P** **01 21 24.7 -0.2**
HYB Hyderabad 69.90 290 *i*P **P** **01 21 26.5 -1.0**
HYB Hyderabad 69.90 290 *e*P **P** **01 21 26.1 -1.4**
HYB IAmb IAmb 01 21 41.6
comp=Z,39nm,1.5s
HYBB Hyderabad (bro 69.90 290 *e*P **P** **01 21 27.2 -0.4**
NGP Nagpur 70.16 294 *e*P **P** **01 21 27.7 -1.3**
SRSP Sriramsagar 70.37 291 *e*P **P** **01 21 29.9 -0.4**
WMQ Urumqi 70.41 319 *e*P **P** **01 21 31.3 +1.1**
WMQ sP pwP 01 21 41.5 +1.1
WMQ PP **PP** **01 24 09.1 +2.7**
WMQ S **S** **01 30 41.2 -0.5**
WMQ SKS **SKSac** **01 31 27.0 -3.6**
WMQ SS **SS** **01 35 14.9 +1.9**
WMQ pmax pmax
comp=Z,28nm,1.1s
WMQ pmax pmax
comp=Z,310nm,5.1s
WMQ LR LR
comp=Z,2µm,15.5s
WMQ LR LR
comp=Z,2µm,17.7s
WMQ LR LR
comp=Z,3µm,18.9s
FALS False Pass 71.39 28 IAMs_20 IAMs_20 01 47 33.4
comp=Z,4µm,21.0s
KLRI Killari 71.85 290 *e*P **P** **01 21 38.7 -0.7**
BILL Bilibino 72.73 8⇑ *i*P **P** **01 21 43.0 -0.6**
BILL *i* 01 21 56.5
BILL *i*S **S** **01 31 02.1 -5.3**
BILL pmax pmax
comp=Z,40nm,1.5s
BILL MLR MLR
comp=Z,2µm,19.0s
BILL Bilibino 72.73 8 P **P** **01 21 43.8 +0.2**
BILL IAmb IAmb 01 21 53.9
comp=Z,43nm,1.4s
DDI Dehra Dun 73.13 303 *e*P **P** **01 21 45.4 -1.4**
DGZ Jazzator, Alta 73.17 325 *c i*P **P** **01 21 45.7 -1.0**
DGZ pmax pmax
comp=Z,29nm,1.0s
CNBA Chernabura Isl 73.20 29 IAMs_20 IAMs_20 01 49 59.6
comp=Z,4µm,21.0s
TAOE Nuku Hiva Isla 73.28 98 *e*S **S** **01 31 14.2 -1.5**
comp=Z,845nm,27.9s
TAOE *e*LQ LQ 01 41 08.6
comp=Z,5µm,28.3s
TAOE *e*LR LR 01 44 12.6
comp=Z,4µm,25.7s
GAMB Gambell 74.03 18 IAMs_20 IAMs_20 01 48 43.0
comp=Z,6µm,22.0s
GOA Goa 74.07 287 *e*P **P** **01 21 52.0 -0.4**
GOA IAmb IAmb 01 22 02.0
comp=Z,20nm,0.3s
SMLA Simla 74.07 304 *ex* **P** **01 21 49.5 -2.7**
VNDA Vanda 74.45 177 P **P** **01 21 52.8 -0.8**
comp=Z,1.4nm,0.5s,baz=354,slow=3.3,SNR=5.0
VNDA LR LR 01 52 24.5
comp=Z,4µm,19.2s,baz=346,slow=34
VNDA Vanda 74.45 177 P **P** **01 21 53.8 +0.2**
VNDA pmax pmax
comp=Z,35nm,1.6s
VNDA Vanda 74.45 177 P **P** **01 21 53.8 +0.2**
CHGN Chignik 74.56 28 IAmb IAmb 01 22 02.2
comp=Z,78nm,1.5s
MK31 Makanchi Array 75.10 320 *i*P **P** **01 21 57.4 -0.5**
MK31 Makanchi Array 75.10 320 P **P** **01 21 57.7 -0.2**
MK31 IAmb IAmb 01 22 10.9
comp=Z,48nm,1.3s
MKAR Makanchi Array 75.10 320 P **P** **01 21 57.7 -0.2**
comp=Z,16nm,1.0s,baz=101,slow=6.5,SNR=51
MKAR LR LR 01 53 09.7
comp=Z,3µm,21.5s,baz=90,slow=34
MAKZ Makanchi 75.30 320 P **P** **01 21 58.7 -0.4**
MAKZ pmax pmax
comp=Z,108nm,1.6s
MAKZ Makanchi 75.30 320 P **P** **01 21 58.7 -0.4**
MAKZ IAMs_20 IAMs_20 01 52 42.8
comp=Z,5µm,22.0s
PDGK Podgornoye 75.75 316 P **P** **01 22 01.7 -0.2**
TIXI Tiksi 75.85 354 P **P** **01 22 01.5 -0.2**
comp=Z,0.8nm,0.3s,baz=141,slow=8.9,SNR=4.2
TIXI Tiksi 75.85 354 *ce*P **P** **01 22 00.5 -1.2**
TIXI pmax pmax
comp=Z,10.0nm,1.7s
TIXI Tiksi 75.85 354 P **P** **01 22 02.1 +0.5**
PRZ Przheval'sk 76.25 315 IAMs_20 IAMs_20 01 54 57.7
comp=Z,6µm,20.0s
ZAA0 Zalesovo Array 76.50 328 IAMs_20 IAMs_20 01 54 03.5
comp=Z,6µm,21.0s
ZALV Zalesovo Beam 76.50 328 P **P** **01 22 04.3 -1.4**
comp=Z,4.1nm,0.6s,baz=144,slow=3.3,SNR=18
ZALV LR LR 01 54 14.6
comp=Z,6µm,21.8s,baz=121,slow=35
ANM Nome 76.59 19 IAMs_20 IAMs_20 01 50 46.1
comp=Z,7µm,21.0s
KSH Kashi 77.16 312 P **P** **01 22 12.9 +3.0**
KSH pP sP 01 22 18.7 -1.3
KSH sP PcP 01 22 22.4 +1.7
KSH pmax pmax
comp=Z,97nm,2.1s
KSH pmax pmax
comp=Z,290nm,4.4s
OHAK Old Harbor 77.47 29 IAmb IAmb 01 22 21.2

comp=Z,78nm,1.5s
NIL Nilore 77.87 305 P **P** **01 22 13.8 -0.1**
NIL pmax pmax
comp=Z,29nm,0.7s
NIL MLR MLR
comp=Z,3µm,20.0s
NIL Nilore 77.87 305 P **P** **01 22 13.8 -0.1**
NIL IAmb IAmb 01 22 30.6
comp=Z,29nm,0.7s
KDAK Kodiak Island 78.06 29 P **P** **01 22 15.4 +1.0**
KDAK pmax pmax
comp=Z,63nm,1.4s
KDAK Kodiak Island 78.06 29 P **P** **01 22 15.4 +1.0**
KDAK IAmb IAmb 01 22 22.9
comp=Z,63nm,1.4s
KDAK Kodiak Island 78.06 29 IAMs_20 IAMs_20 01 49 25.8
comp=Z,4µm,22.0s
RKT Rikitea 78.32 113 *e*S **S** **01 32 08.0 -2.9**
comp=Z,3µm,29.0s
RKT Rikitea 78.32 113 *e*LQ LQ 01 43 16.0
comp=Z,4µm,39.8s
RKT *e*LR LR 01 46 33.7
comp=Z,9µm,31.5s
TKM2 Tokmak 2 78.35 315 P **P** **01 22 15.4 -1.2**
KURK Kurchatov 78.76 323 *ce*P **P** **01 22 17.8 -0.6**
KURK pmax pmax
comp=Z,25nm,1.3s
KURK Kurchatov 78.76 323 P **P** **01 22 17.5 -1.0**
KURK IAmb IAmb 01 22 30.9
comp=Z,70nm,1.2s
KURK Kurchatov 78.76 323 IAMs_20 IAMs_20 01 55 35.3
comp=Z,5µm,21.0s
KURBB Kurchatov Arra 78.79 323 P **P** **01 22 17.9 -0.6**
comp=Z,8.3nm,1.0s,baz=106,slow=5.6,SNR=26
KURBB Kurchatov Arra 78.79 323 P **P** **01 22 17.5 -1.1**
FRU1 Bishkek 79.01 315 IAMs_20 IAMs_20 01 56 50.8
comp=Z,6µm,20.0s
AAK Ala-Archa 79.06 314 P **P** **01 22 24.9 +4.4**
AAK Ala-Archa 79.06 314 P **P** **01 22 18.9 -1.5**
AAK Ala-Archa 79.06 314 IAMs_20 IAMs_20 01 56 53.2
comp=Z,5µm,20.0s
CNPM China Poot 79.46 27 IAmb IAmb 01 22 30.3
comp=Z,95nm,1.3s
CNPM IAMs_20 IAMs_20 01 56 21.8
comp=Z,4µm,20.0s
RDOG Red Dog Mine 79.57 17 P **P** **01 22 23.4 +0.9**
RDOG IAmb IAmb 01 22 43.3
comp=Z,56nm,1.4s
RDOG IAMs_20 IAMs_20 01 54 46.6
comp=Z,4µm,20.0s
BRLK Bradley Lake 79.73 27 IAMs_20 IAMs_20 01 53 58.4
comp=Z,4µm,20.0s
SEW Seward 80.53 27 P **P** **01 22 29.0 +1.2**
SEW IAMs_20 IAMs_20 01 51 49.9
comp=Z,6µm,22.0s
PPLA Purkeypile 80.56 24 IAmb IAmb 01 22 37.7
comp=Z,56nm,1.5s
PPLA IAMs_20 IAMs_20 01 55 48.4
comp=Z,4µm,20.0s
RC01 Rabbit Creek A 80.81 26 IAmb IAmb 01 22 49.3
comp=Z,79nm,1.4s
RC01 IAMs_20 IAMs_20 01 53 39.2
comp=Z,4µm,20.0s
BTK Batken 81.14 311 IAmb IAmb 01 22 45.4
comp=Z,58nm,1.6s
PMR Palmer 81.28 26 IAmb IAmb 01 22 51.6
comp=Z,41nm,1.2s
PMR IAMs_20 IAMs_20 01 52 50.7
comp=Z,4µm,22.0s
GAR Garm 81.31 310 P **P** **01 22 30.9 -1.7**
GAR IAmb IAmb 01 22 45.2
comp=Z,103nm,1.6s
KTH Kantishna Hill 81.37 24 IAmb IAmb 01 22 40.4
comp=Z,63nm,1.4s
KTH IAMs_20 IAMs_20 01 53 29.7
comp=Z,5µm,22.0s
GHO Glory Hole Cre 81.45 26 IAmb IAmb 01 22 54.5
comp=Z,44nm,1.2s
GHO IAMs_20 IAMs_20 01 52 58.0
comp=Z,4µm,22.0s
KBL Kabul 81.47 306 P **P** **01 22 33.1 -0.6**
KBL pmax pmax
comp=Z,53nm,2.0s
KBL MLR MLR
comp=Z,1µm,20.0s
KBL Kabul 81.47 306 P **P** **01 22 33.1 -0.6**
KNK Knik Glacier 81.50 26 IAMs_20 IAMs_20 01 55 12.6
comp=Z,5µm,20.0s
TRF Thorofare Moun 81.58 24 IAmb IAmb 01 22 52.8
comp=Z,23nm,1.2s
TRF IAMs_20 IAMs_20 01 54 09.3
comp=Z,5µm,20.0s
BPAW Bear Paw Mtn. 81.58 23 IAMs_20 IAMs_20 01 55 17.3
comp=Z,4µm,20.0s
SML Sawmill 81.72 26 IAmb IAmb 01 22 54.5
comp=Z,66nm,1.2s
SML IAMs_20 IAMs_20 01 55 20.2
comp=Z,3µm,20.0s
GLI Glacier Island 81.91 27 IAMs_20 IAMs_20 01 52 54.3
comp=Z,4µm,21.0s
OTUK Ortayu 81.95 320 P **P** **01 22 35.5 -0.2**
KK31 Karatay Array 82.01 314 P **P** **01 22 36.0 -0.1**
KK31 Karatay Array 82.01 314 P **P** **01 22 35.8 -0.4**
KKAR Karatay Array 82.01 314 P **P** **01 22 34.8 -1.3**
KKAR pmax pmax
comp=Z,35nm,1.3s
KKAR Karatay Array 82.01 314 P **P** **01 22 34.8 -1.3**
CHGR Chuyangaron 82.13 310 P **P** **01 22 35.9 -1.1**
CHGR IAmb IAmb 01 22 58.6
comp=Z,64nm,1.3s
FID Port Fidalgo 82.14 27 P **P** **01 22 36.9 +0.5**
SCM Sheep Creek Mo 82.17 26 IAmb IAmb 01 22 57.1
comp=Z,61nm,1.3s
SCM IAMs_20 IAMs_20 01 55 45.1
comp=Z,5µm,20.0s
BWN Browne 82.22 23 IAMs_20 IAMs_20 01 55 51.9
comp=Z,4µm,20.0s
MCK McKinley 82.25 24 IAmb IAmb 01 22 56.4
comp=Z,77nm,1.4s
MCK IAMs_20 IAMs_20 01 53 46.9
comp=Z,5µm,22.0s
EYAK Cordova Ski Ar 82.40 28 IAMs_20 IAMs_20 01 55 03.4
comp=Z,3µm,20.0s
TAS Tashkent 82.53 312 P **P** **01 22 38.0 -0.9**
TAS pmax pmax
comp=Z,173nm,1.6s
TAS Tashkent 82.53 312 P **P** **01 22 38.0 -0.9**
NEA Nenana 82.54 23 IAmb IAmb 01 22 57.9
comp=Z,45nm,1.4s
NEA IAMs_20 IAMs_20 01 54 04.9
comp=Z,4µm,21.0s
DHY Denali Highway 82.63 25 IAmb IAmb 01 22 59.4
comp=Z,43nm,1.2s
RAGM Ragged Mountai 82.84 28 IAMs_20 IAMs_20 01 54 51.1
comp=Z,4µm,20.0s
WRH Wood River Hil 82.89 23 IAMs_20 IAMs_20 01 56 08.8
comp=Z,4µm,20.0s
HMT Hamilton 83.02 28 IAMs_20 IAMs_20 01 56 36.8
comp=Z,4µm,20.0s
CCB Clear Creek Bu 83.07 23 IAMs_20 IAMs_20 01 56 13.7
comp=Z,4µm,20.0s
COLA College 83.14 23 P **P** **01 22 41.6 +0.1**
COLA pmax pmax
comp=Z,92nm,1.7s
COLA College 83.14 23 P **P** **01 22 41.5 +0.1**
COLA College 83.14 23 IAMs_20 IAMs_20 01 54 21.4
comp=Z,4µm,22.0s
SUCK Suckling Hills 83.16 28 IAMs_20 IAMs_20 01 56 08.5
comp=Z,3µm,20.0s
COLD Coldfoot 83.25 21 IAMs_20 IAMs_20 01 56 28.2
comp=Z,4µm,20.0s
HDA Harding Lake 83.32 24 IAMs_20 IAMs_20 01 54 18.3
comp=Z,5µm,22.0s
HARP HAARP 83.32 26 IAMs_20 IAMs_20 01 54 06.7
comp=Z,6µm,22.0s
ILAR Eielson Array 83.48 23 P **P** **01 22 41.1 -2.2**
comp=Z,2.6nm,0.7s,baz=256,slow=4.7,SNR=22
ILAR LR LR 01 54 45.2
comp=Z,3µm,21.7s,baz=266,slow=32
GLB Gilahina Butte 83.59 27 IAmb IAmb 01 22 52.9
comp=Z,32nm,1.4s
VRDI Verde Repeater 83.69 27 IAMs_20 IAMs_20 01 55 34.4
comp=Z,3µm,21.0s
WAX Waxell Ridge 83.72 28 IAMs_20 IAMs_20 01 56 47.3
comp=Z,3µm,20.0s
MCARA McCarthy VSAT 83.93 27 IAMs_20 IAMs_20 01 57 02.9
comp=Z,3µm,20.0s

TOLK Toolik Lake Re 84.08 19 IAMs_20 IAMs_20 01 55 01.0
comp=Z,5µm,22.0s
BALM Baldy 84.14 28 IAmb IAmb 01 22 55.9
comp=Z,33nm,1.4s
DOT Dot Lake 84.23 25 IAmb IAmb 01 23 06.7
comp=Z,39nm,1.3s
DOT IAMs_20 IAMs_20 01 54 12.3
comp=Z,5µm,22.0s
MAW Mawson 84.27 202 P **P** **01 22 45.8 -1.4**
comp=Z,3.1nm,0.8s,baz=135,slow=7.1,SNR=2.5
MAW LR LR 01 56 54.0
comp=Z,3µm,21.5s,baz=79,slow=33
MAW Mawson 84.27 202 P **P** **01 22 46.1 -1.1**
MAW pmax pmax
comp=Z,16nm,2.0s
MAW Mawson 84.27 202 P **P** **01 22 46.1 -1.1**
PRP Porcupine Dome 84.30 23 IAMs_20 IAMs_20 01 54 24.0
comp=Z,4µm,22.0s
BVAR Borovoye Array 84.31 324 P **P** **01 22 46.3 -1.4**
comp=Z,2.9nm,0.5s,baz=111,slow=6.5,SNR=16
BRVK Borovoye 84.38 324 *ce*P **P** **01 22 47.3 -0.8**
BRVK pmax pmax
comp=Z,47nm,1.5s
BRVK Borovoye 84.38 324 P **P** **01 22 48.1 0.0**
BARN Barnard Glacie 84.46 28 IAmb IAmb 01 23 08.1
comp=Z,59nm,1.7s
CTGM Chitina Glacie 84.58 28 IAmb IAmb 01 23 09.5
comp=Z,28nm,1.2s
FYU Fort Yukon 84.79 22 IAMs_20 IAMs_20 01 57 17.9
comp=Z,5µm,20.0s
EGAK Eagle 85.79 24 IAmb IAmb 01 23 14.1
comp=Z,44nm,1.5s
DAWY Dawson 86.33 25 IAmb IAmb 01 23 07.7
comp=Z,58nm,1.4s
HYT Haines Junctio 86.35 28 IAmb IAmb 01 23 22.3
comp=Z,36nm,1.3s
QSPA South Pole Qui 86.46 180 P **P** **01 22 58.5 +0.1**
QSPA IAmb IAmb 01 24 09.0
comp=Z,49nm,1.9s
QSPA South Pole Qui 86.46 180 IAMs_20 IAMs_20 01 59 41.8
comp=Z,5µm,21.0s
SIT Sitka 86.63 32 IAMs_20 IAMs_20 01 52 59.8
comp=Z,5µm,22.0s
HRA Herat 87.01 305 P **P** **01 23 01.0 -0.9**
HRA IAmb IAmb 01 23 36.4
comp=Z,52nm,1.5s
HRA IAMs_20 IAMs_20 02 02 18.8
comp=Z,3µm,21.0s
SKAG Skagway 87.11 30 P **P** **01 23 03.0 +1.5**
SKAG IAmb IAmb 01 23 10.3
comp=Z,37nm,1.3s
BESE Bessie Mountai 87.18 31 IAMs_20 IAMs_20 01 56 05.1
comp=Z,3µm,21.0s
JIS Juneau Island 87.36 31 IAMs_20 IAMs_20 01 56 57.0
comp=Z,3µm,20.0s
DIB Dawson Inlet, 87.54 37 IAMs_20 IAMs_20 01 53 07.6
comp=Z,4µm,21.0s
MOBC Moresby Island 87.84 37 IAMs_20 IAMs_20 01 53 27.3
comp=Z,4µm,21.0s
EPYK Eagle Plains 87.99 23 IAMs_20 IAMs_20 01 59 30.7
comp=Z,4µm,20.0s
INK Inuvik 89.60 21 P **P** **01 23 14.2 +1.1**
comp=Z,2.8nm,1.1s,baz=289,slow=3.8,SNR=10
INK Inuvik 89.60 21 IAmb IAmb 01 23 30.6
comp=Z,36nm,1.6s
DLBC Dease Lake 89.65 32 IAmb IAmb 01 23 33.7
comp=Z,58nm,1.8s
DLBC IAMs_20 IAMs_20 01 54 44.7
comp=Z,4µm,22.0s
BBB Bella Bella 90.05 38 IAMs_20 IAMs_20 01 54 31.9
comp=Z,5µm,22.0s
ASHT Ashkhabad 90.44 308 IAMs_20 IAMs_20 02 05 14.5
comp=Z,4µm,21.0s
SVE Sverdlovsk 90.49 327 *e*P **P** **01 23 16.5 -1.0**
SVE *e*S **SKSac** **01 33 45.6 -1.7**
SVE *e*SS **SS** **01 40 11.2 -0.8**
SVE pmax pmax
comp=Z,31nm,1.8s
SVE MLR MLR
comp=Z,6µm,20.0s
GEYT Alibeck 90.65 308 P **P** **01 23 17.2 -1.6**
comp=Z,0.6nm,0.5s,baz=111,slow=6.3,SNR=1.8
GEYT PP **PP** **01 26 56.6 +2.4**
comp=Z,2.5nm,0.9s,baz=116,slow=6.8,SNR=4.9
GEYT LR LR 02 05 53.4
comp=Z,5µm,21.0s,baz=70,slow=37
GYA0B ALIBECK ARRAY 90.65 308 P **P** **01 23 17.3 -1.5**
GYA0B IAMs_20 IAMs_20 02 05 32.1
comp=Z,5µm,21.0s
ARU Arti 91.60 326 *c* iP **P** **01 23 19.9 -2.8**
ARU 01 26 57.1
ARU S **SKSac** **01 33 50.6 -3.0**
ARU SP **SP** **01 35 26.7 -3.1**
ARU PS **PnS** **01 35 37.1 +2.9**
ARU SS **SS** **01 40 33.8 +5.8**
ARU SSS SSS 01 43 58.3
ARU pmax pmax
comp=Z,3.0nm,1.1s
ARU MLR MLR
comp=Z,5µm,22.0s
ARU Arti 91.60 326 P **P** **01 23 21.3 -1.4**
ARU IAmb IAmb 01 23 43.6
comp=Z,35nm,1.9s
ARU IAMs_20 IAMs_20 02 03 10.7
comp=Z,5µm,22.0s
JCC Jacoby Creek, 92.04 49 IAMs_20 IAMs_20 01 58 24.3
comp=Z,3µm,20.0s
KMRM Mail Ridge 92.26 50 IAMs_20 IAMs_20 02 03 54.1
comp=Z,3µm,18.0s
KHMM Horse Mountain 92.27 49 IAMs_20 IAMs_20 01 58 20.3
comp=Z,3µm,20.0s
KCPM Cahto Peak 92.33 51 IAMs_20 IAMs_20 01 55 44.1
comp=Z,4µm,21.0s
F03A Seaside 92.61 44 IAMs_20 IAMs_20 01 59 12.7
comp=Z,4µm,20.0s
E03A Lebam 92.63 44 IAMs_20 IAMs_20 02 01 07.2
comp=Z,3µm,19.0s
SYO Syowa Base 92.68 200 ‖ *e*P **P** **01 23 26.0 -1.4**
SYO Syowa Base 92.68 200 ‖ *es*P sP 01 23 34.2 -3.4
HOPS Hopland Field 92.70 51 IAMs_20 IAMs_20 01 55 22.8
comp=Z,5µm,22.0s
COR Corvallis 92.74 46 IAMs_20 IAMs_20 01 59 25.2
comp=Z,4µm,20.0s
C36M Paulatuk 93.12 21 IAmb IAmb 01 23 47.4
comp=Z,21nm,1.4s
C36M IAMs_20 IAMs_20 02 02 26.1
comp=Z,3µm,21.0s
WDC Whiskeytown Da 93.16 50 IAMs_20 IAMs_20 01 57 51.0
comp=Z,3µm,21.0s
F04A Amboy 93.41 44 IAMs_20 IAMs_20 01 59 48.7
comp=Z,3µm,20.0s
H04A Detroit Lake 93.54 46 IAMs_20 IAMs_20 01 59 51.4
comp=Z,3µm,20.0s
LON Longmire 93.85 44 IAMs_20 IAMs_20 01 58 15.2
comp=Z,3µm,22.0s
LLLB Lillooet 93.86 40 IAMs_20 IAMs_20 01 58 42.0
comp=Z,3µm,22.0s
SAO San Andreas Ge 93.91 54 IAMs_20 IAMs_20 01 56 06.3
comp=Z,4µm,22.0s
AFDM Forest Hills D 94.33 51 IAMs_20 IAMs_20 01 56 47.2
comp=Z,4µm,22.0s
PINE Pine Mountain 94.42 47 IAMs_20 IAMs_20 01 55 58.8
comp=Z,3µm,22.0s
K05A Summer Lake 94.44 48 IAMs_20 IAMs_20 01 56 37.6
comp=Z,4µm,22.0s
LTY Liberty 94.63 43 IAMs_20 IAMs_20 02 02 51.0
comp=Z,3µm,19.0s
G06A Carlson Farm, 94.65 45 IAMs_20 IAMs_20 01 57 37.7
comp=Z,3µm,21.0s
BEKR Beckworth 94.82 50 IAMs_20 IAMs_20 01 57 27.9
comp=Z,4µm,22.0s
F07A Phinny Hill Vi 95.14 44 IAMs_20 IAMs_20 02 02 45.7
comp=Z,3µm,19.0s
E07A Sunnyside 95.19 44 IAMs_20 IAMs_20 02 00 56.9
comp=Z,3µm,20.0s
HAWA Hanford 95.42 44 IAMs_20 IAMs_20 02 00 53.8
comp=Z,3µm,20.0s
SNCC San Nicolas Is 95.43 57 IAMs_20 IAMs_20 01 59 24.8
comp=Z,4µm,20.0s
I07A Izee 95.46 46 IAMs_20 IAMs_20 02 01 24.3
comp=Z,3µm,20.0s
B08A Colville Reser 95.52 42 P **P** **01 23 40.7 -0.3**
B08A IAmb IAmb 01 24 04.5
comp=Z,26nm,1.6s
PAHR Pah Rah Range 95.57 51 IAMs_20 IAMs_20 01 57 50.8
comp=Z,3µm,22.0s
YERR Yerington 95.68 51 IAMs_20 IAMs_20 01 57 28.9

comp=Z,5µm,22.0s
E08A Dider Farm, El 95.74 44 IAMs_20 IAMs_20 02 01 03.4
comp=Z,3µm,20.0s
D08A Wollman Farm, 95.83 43 IAMs_20 IAMs_20 02 02 59.6
comp=Z,3µm,19.0s
G08A Pilot Rock 95.83 45 P **P** **01 23 43.3 +0.7**
G08A IAmb IAmb 01 24 12.6
comp=Z,29nm,1.8s
G08A IAMs_20 IAMs_20 01 58 25.0
comp=Z,3µm,21.0s
WVOR Wild Horse Val 96.11 48 IAMs_20 IAMs_20 02 00 20.8
comp=Z,4µm,20.0s
NVAR Mina Array Bea 96.42 52 LR LR 01 58 50.3
comp=Z,4µm,21.6s,baz=272,slow=30
PASC Pasadena Art C 96.55 56 IAMs_20 IAMs_20 01 59 47.4
comp=Z,2µm,20.0s
KVN Kaiserville 96.57 51 IAMs_20 IAMs_20 01 57 57.3
comp=Z,4µm,22.0s
NEW Newport 97.00 42 P **P** **01 23 47.4 -0.3**
comp=Z,1.4nm,0.7s,baz=243,slow=4.1,SNR=4.4
NEW Newport 97.00 42 IAmb IAmb 01 24 04.9
comp=Z,23nm,1.7s
BMO Blue Mountains 97.02 45 P **P** **01 23 48.0 0.0**
BMO pmax pmax
comp=Z,15nm,1.3s
BMO Blue Mountains 97.02 45 P **P** **01 23 48.0 0.0**
BMO IAmb IAmb 01 23 56.6
comp=Z,15nm,1.3s
BMO IAMs_20 IAMs_20 02 02 12.3
comp=Z,3µm,20.0s
F10A Beach Ranch, E 97.03 44 IAmb IAmb 01 24 09.1
comp=Z,14nm,1.2s
F10A IAMs_20 IAMs_20 01 59 04.5
comp=Z,3µm,22.0s
YKA Yellowknife Ar 97.30 28 P **P** **01 23 48.1 -0.5**
comp=Z,1.4nm,0.9s,baz=271,slow=4.3,SNR=13
YKA PP **PP** **01 27 49.9 +4.6**
comp=Z,0.9nm,1.0s,baz=267,slow=6.6,SNR=5.1
YKA PKKPbc **PKKPbc** **01 40 27.3 -2.5**
comp=Z,0.3nm,0.8s,baz=104,slow=2.9,SNR=3.7
YKA LR LR 02 03 02.1
comp=Z,3µm,21.9s,baz=0.0,slow=33
109C Camp Elliot, M 97.46 57 IAMs_20 IAMs_20 01 59 22.7
comp=Z,3µm,21.0s
BAR Barrett 97.83 58 IAMs_20 IAMs_20 01 58 40.4
comp=Z,3µm,22.0s
PFO Pinyon Flats O 97.99 57 IAMs_20 IAMs_20 02 00 47.7
comp=Z,4µm,20.0s
XPFO Pion Flat 97.99 57 IAMs_20 IAMs_20 02 00 47.7
comp=Z,4µm,20.0s
TPNV Topopah Spring 98.08 53 IAMs_20 IAMs_20 01 59 34.6
comp=Z,4µm,22.0s
PRGR Permogore 98.10 332 *e*P **P** **01 23 48.2 -4.1**
PRGR pmax pmax
comp=Z,15nm,1.6s
ELK Elko 98.71 49 IAMs_20 IAMs_20 02 03 36.9
comp=Z,2µm,20.0s
MAK Makhachkala 98.77 313 *e*P P 01 23 50.3 -5.4
MAK *e* 01 27 55.1
MAK *e* 01 34 25.3
MAK *e*PS **PS** **01 36 42.0 -11**
MAK *e*SSS SSS 01 46 00.3
MAK pmax pmax
comp=Z,152nm,1.3s
JTMT Jette 98.94 42 IAMs_20 IAMs_20 02 02 44.8
comp=Z,2µm,20.0s
SHPR Sheep Range 98.97 54 IAMs_20 IAMs_20 01 59 42.3
comp=Z,4µm,22.0s
WALA Waterton Lakes 99.07 41 IAMs_20 IAMs_20 02 08 00.1
comp=Z,2µm,20.0s
MSO Missoula 99.25 43 IAMs_20 IAMs_20 02 05 06.1
comp=Z,2µm,19.0s
GLA Glamis 99.37 57 IAMs_20 IAMs_20 02 00 20.2
comp=Z,3µm,21.0s
Y12C Blythe 99.60 57 IAMs_20 IAMs_20 02 01 30.2
comp=Z,3µm,20.0s
GROC Groznyy 100.00 313 *e*P **Pdif** **01 24 02.6 +1.4**
GROC *e* 01 28 02.8
113A Mohawk Valley, 100.27 57 IAMs_20 IAMs_20 02 00 36.2
comp=Z,3µm,21.0s
DLMT Dillon 100.31 45 IAMs_20 IAMs_20 02 02 31.4
comp=Z,3µm,20.0s
Y14A Wickenburg 100.85 56 IAMs_20 IAMs_20 02 02 40.4
comp=Z,3µm,21.0s
214A Organ Pipe Nat 101.12 58 IAMs_20 IAMs_20 02 00 08.6
comp=Z,3µm,22.0s
KLMR Klimovskoe 101.15 331 *e*P **Pdif** **01 24 02.9 -3.0**
KLMR *e* 01 28 12.8
KLMR *e*S **SKSac** **01 34 41.0 -2.3**
KLMR *e*SS **SS** **01 42 45.7 +3.1**
KLMR pmax pmax
comp=Z,23nm,1.5s
KLMR MLR MLR
comp=Z,4µm,17.0s
KLMR Klimovskoe 101.15 331 *e*P **Pdif** **01 24 02.9 -3.0**
KLMR AMP 01 24 18.8
comp=Z,23nm,1.5s
KLMR *e*PP **PP** **01 28 12.8 -1.8**
KLMR *e*S **SKSac** **01 34 41.1 -2.3**
KLMR *e*S **SKSac** **01 34 41.1 -2.3**
KLMR *e*SS **SS** **01 42 45.8 +3.1**
KLMR *e*SS **SS** **01 42 45.8 +3.1**
KLMR LQ LQ 02 00 39.6
KLMR LQ LQ 02 00 39.6
KLMR LR LR 02 09 54.6
KLMR AMP 02 12 14.1
comp=Z,4µm,17.2s
LVZ Lovozero 101.24 339 IAMs_20 IAMs_20 02 13 22.7
comp=Z,2µm,20.0s
U15A North Rim 101.28 54 IAMs_20 IAMs_20 02 00 19.4
comp=Z,3µm,22.0s
FXWY Fox Creek 101.60 46 IAMs_20 IAMs_20 02 04 14.9
comp=Z,3µm,20.0s
IMW Indian Meadow 101.64 46 IAMs_20 IAMs_20 02 03 48.8
comp=Z,2µm,21.0s
TPAW Teton Pass 101.67 46 IAMs_20 IAMs_20 02 04 26.8
comp=Z,3µm,20.0s
REDW Red Top Meadow 101.76 47 IAMs_20 IAMs_20 02 05 08.1
comp=Z,3µm,20.0s
APA Apatity 101.80 339 ↓ *i*P **Pdif** **01 24 05.2 -3.5**
APA pmax pmax
comp=Z,3.0nm,1.0s
SNOW Snow King Moun 101.82 46 IAMs_20 IAMs_20 02 02 40.6
comp=Z,3µm,21.0s
AKH Akhalkalaki 101.87 311 IAMs_20 IAMs_20 02 11 29.9
comp=Z,2µm,22.0s
KBZ Khabaz 102.05 314 PP **PKiKP** **01 28 29.1 -3.8**
comp=Z,1.6nm,0.7s,baz=58,slow=13,SNR=3.7
X16A Lo Mia Camp, P 102.11 56 IAMs_20 IAMs_20 02 03 30.7
comp=Z,3µm,20.0s
SNAA Sanae 102.34 190 IAMs_20 IAMs_20 02 10 05.5
comp=Z,4µm,20.0s
RLMT Red Lodge 102.67 45 IAMs_20 IAMs_20 02 04 25.9
comp=Z,2µm,20.0s
PDAR Pinedale Array 102.77 47 P **Pdif** **01 24 14.0 +0.1**
comp=Z,0.3nm,0.8s,baz=274,slow=5.3,SNR=1.9
PDAR PP **PKiKP** **01 28 37.7 +3.2**
comp=Z,0.4nm,0.8s,baz=232,slow=5.6,SNR=2.7
PDAR Pinedale Array 102.77 47 **Pdif** **01 24 14.0 +0.1**
TUC Tucson 102.81 58 IAMs_20 IAMs_20 02 01 53.5
comp=Z,3µm,21.0s
HSIG 102.88 61 IAMs_20 IAMs_20 02 01 05.6
comp=Z,3µm,22.0s
KEV Kevo 103.08 342 IAMs_20 IAMs_20 02 12 26.7
comp=Z,3µm,20.0s
X18A Snowflake 103.33 55 IAMs_20 IAMs_20 02 03 60.0
comp=Z,3µm,20.0s
W18A Petrified Fore 103.46 55 IAMs_20 IAMs_20 02 02 39.2
comp=Z,3µm,22.0s
OBN Obninsk 104.04 326 IAMs_20 IAMs_20 02 10 45.8
comp=Z,3µm,22.0s
O20A White River Ci 104.09 50 IAMs_20 IAMs_20 02 09 01.1
comp=Z,2µm,20.0s
319A Douglas 104.16 59 IAMs_20 IAMs_20 02 02 03.8
comp=Z,3µm,21.0s
MVCO Mesa Verde 104.24 53 IAMs_20 IAMs_20 02 03 03.6
comp=Z,3µm,22.0s
RWWY Rawlins 104.64 48 IAMs_20 IAMs_20 02 03 29.6
comp=Z,4µm,22.0s
SMCO Snowmass 105.18 50 IAMs_20 IAMs_20 02 03 29.3
comp=Z,3µm,21.0s
FFC Flin Flon 105.31 34 IAMs_20 IAMs_20 02 03 51.9
comp=Z,4µm,22.0s
121A Cookes Peak, D 105.32 57 IAMs_20 IAMs_20 02 03 43.8
comp=Z,3µm,21.0s
Y22D IRIS PASSCAL I 105.88 56 IAMs_20 IAMs_20 02 05 41.3
comp=Z,3µm,20.0s

PHWY	**Pilot Hill**	**106.01**	**48**	IAMs_20	IAMs_20	02 06 08.4			
	comp=Z,3µm,21.0s								
EPT	**El Paso**	**106.48**	**58**	IAMs_20	IAMs_20	02 03 59.6			
	comp=Z,2µm,21.0s								
FINES	**FINESS Array B**	**107.10**	**334**	Pdiff	**Pdif**	**01 24 31.2**	**-1.1**		
	comp=Z,0.4nm,0.8s,baz=70,slow=8.1,SNR=1.2								
FINES				PP	PP	01 29 09.0	+10		
	comp=Z,1.6nm,1.1s,baz=23,slow=6.2,SNR=4.5								
MNTX	**Cornudas Mount**	**107.44**	**58**	IAMs_20	IAMs_20	02 03 24.0			
	comp=Z,2µm,22.0s								
HPIG		**107.69**	**63**	IAMs_20	IAMs_20	02 05 21.3			
	comp=Z,4µm,21.0s								
E28A	**Huff**	**108.26**	**42**	IAMs_20	IAMs_20	02 08 34.5			
	comp=Z,2µm,21.0s								
KSCO	**Kaye Shedlock'**	**108.55**	**50**	IAMs_20	IAMs_20	02 07 18.3			
	comp=Z,2µm,21.0s								
OGNE	**Ogallala**	**108.61**	**48**	IAMs_20	IAMs_20	02 05 49.7			
	comp=Z,4µm,22.0s								
TXAR	**Lajitas Array**	**109.19**	**60**	PKiKP	**PKiKP**	**01 28 49.9**	**+3.3**		
	comp=Z,0.6nm,1.0s,baz=343,slow=1.3,SNR=4.6								
MSTX	**Muleshoe**	**109.30**	**55**	IAMs_20	IAMs_20	02 07 32.0			
	comp=Z,2µm,20.0s								
BRTR	**Keskin Array B**	**109.54**	**311**	PP	**PP**	**01 29 18.2**	**+0.6**		
	comp=Z,0.6nm,0.9s,baz=94,slow=7.4,SNR=3.6								
AKASG	**Malin Array Be**	**109.58**	**323**	PP	PP	01 29 09.2	-8.0		
	comp=Z,0.3nm,0.3s,baz=48,slow=4.3,SNR=4.1								
AKBB	**Malin Array Su**	**109.58**	**323**	IAMs_20	IAMs_20	02 15 20.3			
	comp=Z,3µm,21.0s								
SUSD	**Miller**	**110.00**	**44**	IAMs_20	IAMs_20	02 09 23.6			
	comp=Z,2µm,20.0s								
AMTX	**Amarillo**	**110.04**	**54**	IAMs_20	IAMs_20	02 07 12.4			
	comp=Z,2µm,20.0s								
CBKS	**Cedar Bluff**	**110.80**	**50**	IAMs_20	IAMs_20	02 09 02.7			
	comp=Z,3µm,21.0s								
ZAIG	**Zacatecas**	**110.86**	**67**	IAMs_20	IAMs_20	02 12 35.9			
	comp=Z,1µm,19.0s								
AGMN	**Agassiz Nation**	**110.90**	**39**	IAMs_20	IAMs_20	02 06 52.7			
	comp=Z,3µm,22.0s								
KIS	**Kishinev**	**111.03**	**319**	*e*PP	**PP**	**01 29 30.0**	**+2.2**		
KIS	**Kishinev**	**111.03**	**319**	*e*PS	PS	01 38 40.0	-19		
MDUB	**Mudurnu**	**111.19**	**312**	IAMs_20	IAMs_20	02 20 05.7			
	comp=Z,3µm,22.0s								
BGNE	**Belgrade**	**111.36**	**47**	IAMs_20	IAMs_20	02 10 45.1			
	comp=Z,3µm,20.0s								
F33A	**5 Mile Ranch,**	**111.40**	**42**	IAMs_20	IAMs_20	02 11 15.5			
	comp=Z,2µm,20.0s								
R32A	**Long Quarter,**	**111.67**	**50**	IAMs_20	IAMs_20	02 07 20.8			
	comp=Z,4µm,22.0s								
ECSD	**EROS Data Cent**	**111.81**	**44**	IAMs_20	IAMs_20	02 10 38.8			
	comp=Z,3µm,20.0s								
U32A	**Winter Ranch,**	**111.89**	**52**	IAMs_20	IAMs_20	02 21 06.2			
	comp=Z,2µm,19.0s								
N33A	**J Bar K, Exete**	**112.04**	**47**	IAMs_20	IAMs_20	02 11 05.3			
	comp=Z,2µm,21.0s								
JCT	**Junction City**	**112.35**	**59**	IAMs_20	IAMs_20	02 07 05.1			
	comp=Z,4µm,22.0s								
WMOK	**Wichita Mounta**	**112.41**	**54**	IAMs_20	IAMs_20	02 10 36.1			
	comp=Z,2µm,20.0s								
L34A	**Svendsen Farm,**	**112.49**	**46**	IAMs_20	IAMs_20	02 10 49.9			
	comp=Z,3µm,20.0s								
ELL	**Elmali**	**113.06**	**309**	IAMs_20	IAMs_20	02 19 30.4			
	comp=Z,3µm,22.0s								
F36A	**Milaca**	**113.22**	**41**	IAMs_20	IAMs_20	02 13 38.6			
	comp=Z,2µm,20.0s								
N35A	**Tabor**	**113.33**	**47**	IAMs_20	IAMs_20	02 12 07.3			
	comp=Z,3µm,21.0s								
MLR	**Muntele Rosu**	**113.41**	**319**	PP	PP	01 29 55.3	+10		
	comp=Z,1.2nm,0.8s,baz=177,slow=7.8,SNR=4.1								
MLR	**Muntele Rosu**	**113.41**	**319**	IAMs_20	IAMs_20	02 17 21.9			
	comp=Z,3µm,21.0s								
MANT	**Manisa**	**113.67**	**311**	IAMs_20	IAMs_20	02 22 17.4			
	comp=Z,3µm,21.0s								
T35A	**Sooner Cattle**	**113.72**	**51**	IAMs_20	IAMs_20	02 08 39.3			
	comp=Z,3µm,22.0s								
KWP	**Kalwaria Pacla**	**113.86**	**324**	IAMs_20	IAMs_20	02 20 21.7			
	comp=Z,2µm,19.0s								
I37A	**Lemond, Waseca**	**113.94**	**43**	IAMs_20	IAMs_20	02 11 16.7			
	comp=Z,3µm,20.0s								
Z35A	**Perchaven, San**	**113.94**	**55**	IAMs_20	IAMs_20	02 11 42.9			
	comp=Z,2µm,20.0s								
WHTX	**Lake Whitney,**	**114.05**	**57**	IAMs_20	IAMs_20	02 16 51.9			
	comp=Z,2µm,19.0s								
E38A	**The Farm, Brul**	**114.23**	**40**	IAMs_20	IAMs_20	02 08 10.0			
	comp=Z,3µm,22.0s								
UNM	**Universidad Na**	**114.32**	**70**	IAMs_20	IAMs_20	02 08 16.4			
	comp=Z,2µm,20.0s								
735A	**Kenedy**	**114.33**	**60**	IAMs_20	IAMs_20	02 11 03.8			
	comp=Z,2µm,20.0s								
KVTX	**Kingsville**	**114.47**	**61**	IAMs_20	IAMs_20	02 15 13.8			
	comp=Z,3µm,19.0s								
UZH	**Uzhgorod**	**114.53**	**323**	*i* PKIKP	PKPdf	01 28 58.2	+2.2		
UZH				*i*		01 30 01.0			
UZH				MLR	MLR				
	comp=N,400nm,19.0s								
UZH				MLR	MLR				
	comp=E,400nm,19.0s								
UZH				MLR	MLR				
	comp=Z,100nm,19.0s								
TUL1	**Leonard**	**114.53**	**52**	IAMs_20	IAMs_20	02 11 43.9			
	comp=Z,3µm,21.0s								
SCIA	**State Center**	**114.75**	**45**	IAMs_20	IAMs_20	02 20 38.7			
	comp=Z,2µm,19.0s								
K38A	**Parkersburg**	**114.82**	**44**	IAMs_20	IAMs_20	02 13 30.4			
	comp=Z,3µm,20.0s								
KONO	**Kongsberg**	**114.88**	**337**	IAMs_20	IAMs_20	02 18 40.0			
	comp=Z,3µm,20.0s								
X37A	**Clayton**	**115.18**	**53**	IAMs_20	IAMs_20	02 08 51.5			
	comp=Z,2µm,22.0s								
P38A	**Dawn**	**115.24**	**48**	IAMs_20	IAMs_20	02 19 04.9			
	comp=Z,2µm,19.0s								
237A	**Washetta, Mont**	**115.42**	**56**	IAMs_20	IAMs_20	02 13 07.0			
	comp=Z,2µm,20.0s								
U38A	**Gravette**	**115.49**	**51**	IAMs_20	IAMs_20	02 09 33.3			
	comp=Z,3µm,22.0s								
G40A	**Rib Lake**	**115.61**	**41**	IAMs_20	IAMs_20	02 19 36.7			
	comp=Z,2µm,20.0s								
Z38A	**Mt. Pleasant**	**115.81**	**55**	IAMs_20	IAMs_20	02 24 48.2			
	comp=Z,2µm,20.0s								
HKT	**Hockley**	**115.82**	**58**	IAMs_20	IAMs_20	02 09 35.9			
	comp=Z,3µm,21.0s								
I40A	**Norwalk**	**115.86**	**42**	IAMs_20	IAMs_20	02 19 35.5			
	comp=Z,2µm,19.0s								
HHAR	**Hobbs**	**115.88**	**51**	IAMs_20	IAMs_20	02 15 30.6			
	comp=Z,2µm,20.0s								
LSZ	**Lusaka**	**115.94**	**251**	IAMs_20	IAMs_20	02 13 14.6			
	comp=Z,2µm,22.0s								
L40A	**Anamosa**	**116.10**	**44**	IAMs_20	IAMs_20	02 14 28.3			
	comp=Z,3µm,20.0s								
PSZ	**Piszkesteto**	**116.28**	**323**	IAMs_20	IAMs_20	02 21 56.6			
	comp=Z,2µm,20.0s								
W39A	**Magazine**	**116.29**	**52**	IAMs_20	IAMs_20	02 12 46.7			
	comp=Z,3µm,20.0s								
P40A	**Paris**	**116.36**	**47**	IAMs_20	IAMs_20	02 20 15.5			
	comp=Z,2µm,19.0s								
OKC	**Ostrava-Krasne**	**116.41**	**325**	*e*SP	SP	01 39 45.8	+1.1		
OKC				AMS	AMS	02 23 00.0			
	comp=Z,2µm,17.5s								
JFWS	**Jewell Farm**	**116.47**	**43**	IAMs_20	IAMs_20	02 12 54.8			
	comp=Z,2µm,20.0s								
MIAR	**Mount Ida**	**116.63**	**53**	IAMs_20	IAMs_20	02 10 32.7			
	comp=Z,3µm,22.0s								
U40A	**Yellville**	**116.70**	**51**	IAMs_20	IAMs_20	02 10 44.3			
	comp=Z,3µm,22.0s								
MORC	**Moravsky Berou**	**116.79**	**325**	IAMs_20	IAMs_20	02 18 34.9			
	comp=Z,3µm,22.0s								
N41A	**Harden Midland**	**116.83**	**46**	IAMs_20	IAMs_20	02 14 33.7			
	comp=Z,3µm,20.0s								
I42A	**Draeger Farm,**	**117.00**	**42**	IAMs_20	IAMs_20	02 13 33.5			
	comp=Z,2µm,20.0s								
KRLC	**Kraliky**	**117.07**	**326**	AMS	AMS	02 19 30.0			
	comp=Z,2µm,19.5s								
OSTC	**Ostas**	**117.14**	**327**	AMS	AMS	02 18 20.0			
	comp=Z,3µm,20.8s								
DPC	**Dobruska-Polom**	**117.18**	**326**	AMS	AMS	02 18 20.0			
	comp=Z,3µm,20.0s								
E43A	**Lone Tree Farm**	**117.20**	**39**	IAMs_20	IAMs_20	02 16 00.3			
	comp=Z,3µm,20.0s								
L42A	**Oliver, Polo**	**117.20**	**44**	IAMs_20	IAMs_20	02 12 04.4			
	comp=Z,3µm,22.0s								
CHVC	**Chvalec**	**117.21**	**327**	AMS	AMS	02 18 20.0			
	comp=Z,3µm,21.4s								
WLAR	**White Oak Lake**	**117.22**	**54**	IAMs_20	IAMs_20	02 11 45.5			
	comp=Z,2µm,21.0s								
UPC	**Upice**	**117.27**	**327**	*e*SP	SP	01 39 52.6	+0.2		
UPC				AMS	AMS	02 18 20.0			
	comp=Z,4µm,20.8s								
FCAR	**Ozark Folk Cen**	**117.40**	**51**	IAMs_20	IAMs_20	02 11 15.9			
	comp=Z,2µm,22.0s								
WHAR	**Wooly Hollow**	**117.45**	**52**	IAMs_20	IAMs_20	02 14 46.1			
	comp=Z,2µm,20.0s								
H43A	**Windswept, Lux**	**117.52**	**41**	IAMs_20	IAMs_20	02 10 36.1			
	comp=Z,2µm,22.0s								
K43A	**Burlington**	**117.85**	**43**	IAMs_20	IAMs_20	02 20 43.4			
	comp=Z,2µm,20.0s								
441A	**DeRidder**	**117.88**	**57**	IAMs_20	IAMs_20	02 11 04.4			
	comp=Z,2µm,22.0s								
SLM	**Saint Louis**	**117.98**	**48**	IAMs_20	IAMs_20	02 19 26.5			
	comp=Z,2µm,20.0s								
HDIL	**Hopedale**	**118.00**	**45**	IAMs_20	IAMs_20	02 11 25.5			
	comp=Z,2µm,21.0s								
PVCC	**Panska Ves**	**118.04**	**327**	AMS	AMS	02 24 40.0			
	comp=Z,2µm,17.8s								
LCAR	**Lake Charles**	**118.10**	**51**	IAMs_20	IAMs_20	02 11 16.3			
	comp=Z,2µm,22.0s								
TREC	**Trest**	**118.19**	**326**	*e*SP	SP	01 40 02.2	+1.4		
TREC				AMS	AMS	02 20 20.0			
	comp=Z,3µm,20.3s								
BRG	**Berggiesshubel**	**118.19**	**328**	PKP	PKiKP	01 29 24.0	+21		
BRG				PP	**PP**	**01 30 23.0**	**+4.9**		
BRG				SS	SS	01 46 28.0	-3.6		
	comp=N,2µm,17.3s								
	comp=E,2µm,18.7s								
	comp=Z,3µm,18.6s								
BSEG	**Bad Segeberg**	**118.22**	**332**	*e*L	L	02 19 57.3			
	comp=Z,2µm,21.2s								
CCAR	**Cane Creek**	**118.24**	**53**	IAMs_20	IAMs_20	02 14 54.3			
	comp=Z,2µm,20.0s								
GOPC	**GO Pecny, Ondr**	**118.25**	**327**	*e*SP	SP	01 40 02.2	+0.9		
GOPC				AMS	AMS	02 19 00.0			
	comp=Z,3µm,21.6s								
L44A	**Lake County Fo**	**118.35**	**43**	IAMs_20	IAMs_20	02 14 21.5			
	comp=Z,3µm,21.0s								
PRU	**Pruhonice**	**118.35**	**327**	*e*SP	SP	01 40 03.5	+1.4		
PRU				AMS	AMS	02 19 10.0			
	comp=Z,3µm,22.2s								
CLL	**Collm**	**118.44**	**329**	*e*PP	PP	01 30 21.0	+1.2		
CLL				*e*PPP	PPP	01 32 48.0			
CLL				*e*PS	**PS**	**01 40 06.0**	**-0.9**		
CLL				*e*PPS	PPS	01 41 12.0			
CLL				*e*		01 41 54.0			
CLL				*e*		01 44 54.0			
CLL				*e*		01 45 48.0			
CLL				*e*SS	SS	01 46 42.0	+7.2		
CLL				*e*SSS	SSS	01 51 00.0			
CLL				*e*		01 56 12.0			
CLL				Lm	MLR	02 21 00.0			
	comp=N,2µm,19.9s								
CLL				Lm	MLR	02 21 00.0			
	comp=E,3µm,20.7s								
CLL				Lm	MLR	02 21 00.0			
	comp=Z,4µm,20.3s								
CLL	**Collm**	**118.44**	**329**	*e*L	L	02 21 25.4			
	comp=Z,4µm,20.2s								
342A	**Flagon Creek P**	**118.45**	**56**	IAMs_20	IAMs_20	02 13 15.4			
	comp=Z,2µm,22.0s								
M44A	**Midewin, Midew**	**118.56**	**44**	IAMs_20	IAMs_20	02 13 57.3			
	comp=Z,2µm,21.0s								
HBAR	**Harrisburg**	**118.64**	**51**	IAMs_20	IAMs_20	02 15 04.7			
	comp=Z,3µm,21.0s								
I45A	**Fountain**	**118.70**	**41**	IAMs_20	IAMs_20	02 15 03.4			
	comp=Z,2µm,21.0s								
O44A	**Mansfield**	**118.73**	**46**	IAMs_20	IAMs_20	02 13 03.0			
	comp=Z,3µm,22.0s								
Q44A	**Meyer Farm, Va**	**118.78**	**47**	IAMs_20	IAMs_20	02 15 17.4			
	comp=Z,3µm,21.0s								
J45A	**Montague**	**118.86**	**41**	IAMs_20	IAMs_20	02 19 57.6			
	comp=Z,2µm,20.0s								
143A	**Sos Landing,**	**118.86**	**54**	IAMs_20	IAMs_20	02 20 23.0			
	comp=Z,2µm,19.0s								
LPAR	**Lepanto**	**118.91**	**51**	IAMs_20	IAMs_20	02 15 31.6			
	comp=Z,2µm,20.0s								
GNAR	**Gosnell**	**119.01**	**50**	IAMs_20	IAMs_20	02 12 06.3			
	comp=Z,2µm,22.0s								
PEBM	**Pemiscott Bayo**	**119.08**	**50**	IAMs_20	IAMs_20	02 11 59.2			
	comp=Z,2µm,22.0s								
KHC	**Kasperske Hory**	**119.34**	**326**	*e*PKP	PKiKP	01 29 13.5	+8.1		
KHC				*ex*	x	01 29 33.0			
KHC				*e*SP	SP	01 40 14.4	+3.3		
KHC				AMS	AMS	02 19 30.0			
	comp=Z,4µm,20.7s								
MET	**Memphis--Engin**	**119.34**	**51**	IAMs_20	IAMs_20	02 15 49.1			
	comp=Z,2µm,20.0s								
NKC	**Novy Kostel**	**119.34**	**328**	AMS	AMS	02 23 50.0			
	comp=Z,4µm,17.9s								
LNXT	**Lenox**	**119.37**	**50**	IAMs_20	IAMs_20	02 12 08.8			
	comp=Z,3µm,22.0s								
BLY	**Banja Luka**	**119.38**	**321**	IAMs_20	IAMs_20	02 22 04.9			
	comp=Z,3µm,22.0s								
GLMI	**Grayling**	**119.39**	**39**	IAMs_20	IAMs_20	02 17 31.4			
	comp=Z,3µm,21.0s								
GEC2	**GERESS Array S**	**119.42**	**326**	*e*L	L	02 21 21.8			
	comp=Z,2µm,21.5s								
GERES	**GERESS Array B**	**119.42**	**326**	PKP	**PKiKP**	**01 29 07.6**	**+1.9**		
	comp=Z,0.6nm,0.8s,baz=96,slow=9.0,SNR=2.3								
L46A	**Eue Claire**	**119.51**	**43**	IAMs_20	IAMs_20	02 16 27.4			
	comp=Z,2µm,20.0s								
OLIL	**Olney**	**119.51**	**47**	IAMs_20	IAMs_20	02 18 16.9			
	comp=Z,3µm,19.0s								
MOX	**Moxa**	**119.54**	**329**	*e*L	L	02 22 07.5			
	comp=Z,3µm,21.4s								
SFIN	**Lafayette**	**119.61**	**45**	IAMs_20	IAMs_20	02 15 25.4			
	comp=Z,2µm,21.0s								
WET	**Wettzell**	**119.72**	**327**	*e*L	L	02 20 02.5			
	comp=Z,3µm,21.9s								
VBMS	**Vicksburg**	**119.72**	**55**	IAMs_20	IAMs_20	02 21 23.6			
	comp=Z,2µm,18.0s								
ROTZ	**Rotzenmuhle**	**119.73**	**328**	*e*PP	PP	01 30 32.0	+3.3		
344A	**Westbrook Farm**	**119.75**	**56**	IAMs_20	IAMs_20	02 21 31.6			
	comp=Z,2µm,18.0s								
I47A	**Gladwin**	**119.82**	**40**	IAMs_20	IAMs_20	02 12 29.1			
	comp=Z,3µm,22.0s								
P46A	**Rosedale**	**119.83**	**46**	IAMs_20	IAMs_20	02 13 46.2			
	comp=Z,3µm,21.0s								
J47A	**Sunmer**	**119.97**	**41**	IAMs_20	IAMs_20	02 22 23.2			
	comp=Z,2µm,20.0s								
Y45A	**Yeager Farm, C**	**120.03**	**53**	IAMs_20	IAMs_20	02 12 24.6			
	comp=Z,3µm,22.0s								
USIN	**University of**	**120.11**	**48**	IAMs_20	IAMs_20	02 15 08.6			
	comp=Z,3µm,21.0s								
H48A	**Harrisville**	**120.26**	**39**	IAMs_20	IAMs_20	02 12 30.4			
	comp=Z,3µm,22.0s								
GRF	**Grafenberg Arr**	**120.30**	**328**	*e*PP	PP	01 30 35.7	+3.1		
GRF				*e*L	L	02 23 42.9			
	comp=Z,3µm,19.5s								
BLO	**Bloomington**	**120.49**	**46**	IAMs_20	IAMs_20	02 14 06.8			
	comp=Z,3µm,21.0s								
J48A	**Bridge Port**	**120.62**	**41**	IAMs_20	IAMs_20	02 11 58.3			
	comp=Z,3µm,22.0s								
146A	**Union**	**120.78**	**54**	IAMs_20	IAMs_20	02 16 52.8			
	comp=Z,3µm,20.0s								
M48A	**Edgerton**	**120.81**	**43**	IAMs_20	IAMs_20	02 15 47.6			
	comp=Z,2µm,21.0s								
PLAL	**Pickwick Lake**	**120.83**	**51**	IAMs_20	IAMs_20	02 18 42.1			
	comp=Z,2µm,20.0s								
I49A	**Point Hope**	**120.94**	**40**	IAMs_20	IAMs_20	02 21 23.3			
	comp=Z,3µm,20.0s								
TRI	**Trieste**	**121.03**	**323**	IAMs_20	IAMs_20	02 25 23.3			
	comp=Z,3µm,20.0s								
FUR	**Furstenfeldbru**	**121.14**	**326**	*e*L	L	02 21 42.5			
	comp=Z,2µm,21.8s								
AAM	**Ann Arbor**	**121.16**	**42**	IAMs_20	IAMs_20	02 18 20.7			
	comp=Z,3µm,21.0s								
P48A	**Milroy**	**121.16**	**45**	IAMs_20	IAMs_20	02 16 21.3			
	comp=Z,2µm,21.0s								
Z47A	**Carrollton**	**121.40**	**53**	IAMs_20	IAMs_20	02 13 07.1			
	comp=Z,3µm,22.0s								
N49A	**Columbus Grove**	**121.41**	**43**	IAMs_20	IAMs_20	02 16 07.7			
	comp=Z,3µm,21.0s								
TNS	**Taunus Mts**	**121.42**	**330**	*e*L	L	02 23 16.0			
	comp=Z,8µm,20.5s								
K50A	**Casco**	**121.62**	**41**	IAMs_20	IAMs_20	02 12 49.7			
	comp=Z,3µm,22.0s								
CLTN	**Cedars of Leba**	**121.78**	**49**		**PKiKP**	**01 29 10.6**	**+0.1**		
R49A	**Shelbyville**	**121.81**	**46**	IAMs_20	IAMs_20	02 20 22.7			
	comp=Z,3µm,19.0s								
VLDQ	**Val d'Or**	**121.90**	**33**	IAMs_20	IAMs_20	02 16 53.1			
	comp=Z,3µm,20.0s								
STU	**Stuttgart**	**121.92**	**328**	IAMs_20	IAMs_20	02 24 59.4			
	comp=Z,2µm,19.0s								
M50A	**Fremont**	**121.97**	**42**	IAMs_20	IAMs_20	02 16 53.3			
	comp=Z,2µm,21.0s								
CTI	**Castel Tesino**	**122.11**	**324**	IAMs_20	IAMs_20	02 24 47.6			
	comp=Z,2µm,19.0s								
SCHQ	**Schefferville**	**122.22**	**22**	IAMs_20	IAMs_20	02 17 51.3			
	comp=Z,2µm,22.0s								
LRAL	**Lakeview Retre**	**122.31**	**53**	IAMs_20	IAMs_20	02 14 60.0			
	comp=Z,2µm,21.0s								
SWET	**Sewanee**	**122.40**	**50**	IAMs_20	IAMs_20	02 21 24.6			
	comp=Z,2µm,20.0s								
R50A	**Paris**	**122.42**	**46**	IAMs_20	IAMs_20	02 22 19.9			
	comp=Z,2µm,19.0s								
LL01	**San Ignacio de**	**122.47**	**147**	IAMs_20	IAMs_20	02 08 50.6			
	comp=Z,3µm,22.0s								
Y49A	**Blount Mountai**	**122.50**	**52**	IAMs_20	IAMs_20	02 17 15.8			
	comp=Z,2µm,20.0s								
ACSO	**Alum Creek Sta**	**122.54**	**43**	IAMs_20	IAMs_20	02 21 37.5			
	comp=Z,3µm,20.0s								
FUORN	**Ofenpass-Fuorn**	**122.59**	**325**	IAMs_20	IAMs_20	02 25 14.3			
	comp=Z,3µm,20.0s								
BFO	**Black Forest**	**122.64**	**328**	*e*L	L	02 24 54.7			
	comp=Z,2µm,18.5s								
BFO	**Black Forest**	**122.64**	**328**	IAMs_20	IAMs_20	02 25 39.6			
	comp=Z,2µm,20.0s								
N51A	**Ashland**	**122.64**	**42**	IAMs_20	IAMs_20	02 17 05.1			
	comp=Z,3µm,21.0s								
Q51A	**Peebles**	**122.81**	**45**	IAMs_20	IAMs_20	02 19 48.9			
	comp=Z,2µm,21.0s								
P51A	**Williamsport**	**122.81**	**44**	IAMs_20	IAMs_20	02 22 20.9			
	comp=Z,2µm,20.0s								
W50A	**Signal Mountai**	**122.88**	**50**	IAMs_20	IAMs_20	02 14 41.2			
	comp=Z,2µm,22.0s								
FPAL	**Fort Paine**	**122.88**	**51**	IAMs_20	IAMs_20	02 19 44.5			
	comp=Z,2µm,20.0s								
AQU	**L'Aquila**	**122.94**	**320**	IAMs_20	IAMs_20	02 24 29.2			
	comp=Z,2µm,21.0s								
SALO	**Salr**	**123.00**	**324**	IAMs_20	IAMs_20	02 25 49.3			
	comp=Z,2µm,20.0s								
M52A	**Chesterland**	**123.03**	**41**	IAMs_20	IAMs_20	02 23 44.2			
	comp=Z,3µm,20.0s								
Z50A	**Ashland**	**123.09**	**52**	IAMs_20	IAMs_20	02 17 25.5			
	comp=Z,3µm,20.0s								
TUE	**Stuetta**	**123.19**	**326**	IAMs_20	IAMs_20	02 22 50.2			
	comp=Z,2µm,22.0s								
250A	**Grady**	**123.23**	**54**	IAMs_20	IAMs_20	02 17 20.6			
	comp=Z,2µm,22.0s								
X51A	**Calhoun**	**123.46**	**50**	IAMs_20	IAMs_20	02 14 13.9			
	comp=Z,2µm,22.0s								
PRMA	**PARMA**	**123.60**	**324**	IAMs_20	IAMs_20	02 26 58.2			
	comp=Z,2µm,19.0s								
ERPA	**Erie**	**123.64**	**40**	IAMs_20	IAMs_20	02 14 26.1			
	comp=Z,2µm,22.0s								
Z51A	**Franklin**	**123.65**	**52**	IAMs_20	IAMs_20	02 17 42.5			
	comp=Z,2µm,20.0s								
N53A	**Lisbon**	**123.72**	**42**	IAMs_20	IAMs_20	02 24 08.7			
	comp=Z,2µm,19.0s								
ALLY	**Alegheny Colle**	**123.77**	**41**	IAMs_20	IAMs_20	02 23 34.7			
	comp=Z,2µm,19.0s								
PLVO	**Plevna**	**123.88**	**36**	IAMs_20	IAMs_20	02 17 16.6			
	comp=Z,2µm,22.0s								
VLC	**Villacollemand**	**123.89**	**323**	IAMs_20	IAMs_20	02 28 12.8			
	comp=Z,2µm,18.0s								
P53A	**Whipple**	**123.97**	**44**	IAMs_20	IAMs_20	02 20 34.4			
	comp=Z,3µm,21.0s								
W52A	**Murphy**	**123.97**	**49**	IAMs_20	IAMs_20	02 14 40.1			
	comp=Z,3µm,22.0s								
451A	**Vernon**	**124.08**	**55**	IAMs_20	IAMs_20	02 20 37.4			
	comp=Z,2µm,19.0s								
R53A	**Hurricane**	**124.09**	**45**	IAMs_20	IAMs_20	02 22 40.0			
	comp=Z,2µm,20.0s								
M54A	**Oil Creek Stat**	**124.16**	**41**	IAMs_20	IAMs_20	02 24 31.9			
	comp=Z,2µm,18.0s								
N54A	**Moraine State**	**124.21**	**41**	IAMs_20	IAMs_20	02 16 07.5			
	comp=Z,2µm,21.0s								
152A	**Waverly Hall**	**124.24**	**52**	IAMs_20	IAMs_20

	comp=Z,5µm,20.0s							
PB04	**IPOC Station P**	**136.14**	**128**		IAMs_20	IAMs_20	02 19 50.4	
	comp=Z,1µm,18.0s							
MTE	**Manteigas**	**136.30**	**331**	*e*SS		SS	01 50 26.9	+10
MTE	**Manteigas**	**136.30**	**331**	*e*LQ		LQ	02 11 49.4	
MTE	**Manteigas**	**136.30**	**331**	*e*LR		LR	02 22 48.1	
	comp=Z,5µm,20.0s							
GTBY	**Guantanamo Bay**	**136.50**	**65**		IAMs_20	IAMs_20	02 29 41.6	
	comp=Z,1µm,20.0s							
PMRV	**Marv??o**	**136.97**	**330**	*e*SS		SS	01 50 57.3	+32
PMRV	**Marv??o**	**136.97**	**330**	*e*LQ		LQ	02 12 39.9	
PMRV	**Marv??o**	**136.97**	**330**	*e*LR		LR	02 24 41.2	
	comp=Z,3µm,20.0s							
PCAS	**Casmilo, Conde**	**137.03**	**331**	*e*SS		SS	01 50 49.7	+24
EMAL	**Malaga-Limoner**	**137.30**	**325**	*e*PP		PP	01 32 08.7	-15
EMAL					SSS	SSS	01 44 24.6	
MELI	**Melilla**	**137.39**	**322**	*e*PP		PP	01 32 02.3	-22
PESTR	**Estremoz**	**137.49**	**329**	*e*SS		SS	01 51 09.6	+38
PMTG	**Montargil**	**137.66**	**330**	*e*SS		SS	01 50 52.9	+20
PB08	**IPOC Station P**	**138.05**	**125**		IAMs_20	IAMs_20	02 17 58.4	
	comp=Z,2µm,22.0s							
MNMC	**Minye Minye**	**138.18**	**124**			**PKPdf**	**01 29 40.9**	**-1.3**
MNMC					IAMs_20	IAMs_20	02 18 08.7	
	comp=Z,2µm,22.0s							
PVLZ	**Peæn de**	**138.31**	**323**	PKS			01 33 16.1	
PVLZ				SSS		SSS	01 44 33.3	
CEU	**Ceuta**	**138.45**	**324**	*e*PP		PP	01 32 19.6	-11
CEU				SSS		SSS	01 44 22.1	
SFS	**San Fernando**	**138.52**	**326**	*e*PP		PP	01 32 30.2	-1.4
SFS	**San Fernando**	**138.52**	**326**		IAMs_20	IAMs_20	02 35 42.3	
	comp=Z,2µm,20.0s							
PNCL	**Nicolau / Gran**	**138.54**	**329**	*e*SS		SS	01 50 56.8	+13
PVAQ	**Vaqueiros**	**138.66**	**328**	*e*LQ		LQ	02 13 11.2	
PVAQ				*e*LR		LR	02 17 42.6	
	comp=Z,2µm,20.0s							
PVAQ	**Vaqueiros**	**138.66**	**328**		IAMs_20	IAMs_20	02 36 26.6	
	comp=Z,2µm,20.0s							
PBDV	**Barranco-do-Ve**	**138.89**	**328**	*e*SS		SS	01 51 04.1	+16
BBSR	**BB Station**	**139.17**	**42**		IAMs_20	IAMs_20	02 24 48.1	
	comp=Z,2µm,21.0s							
GRTK	**Grand Turk**	**139.51**	**61**		IAMs_20	IAMs_20	02 26 21.0	
	comp=Z,1µm,21.0s							
SDDR	**Presa de Saban**	**140.22**	**64**		IAMs_20	IAMs_20	02 31 48.2	
	comp=Z,1µm,19.0s							
SC01	**Santiago de lo**	**140.58**	**63**		IAMs_20	IAMs_20	02 37 08.7	
	comp=Z,2µm,18.0s							
AVE	**Averroes**	**141.47**	**323**	PKP		PKiKP	01 30 13.1	+23
CPUP	**Villa Florida**	**142.59**	**144**	PKP		**PKiKP**	**01 29 51.4**	**-1.4**
	comp=Z,3.7nm,1.1s,baz=240,slow=8.1,SNR=2.7							
SDV	**Santo Domingo**	**142.96**	**80**			**PKPdf**	**01 29 49.4**	**-1.5**
CMLA	**Cha da Macela**	**145.06**	**349**		IAMs_20	IAMs_20	02 38 27.5	
	comp=Z,2µm,20.0s							
SJG	**San Juan**	**145.10**	**63**		IAMs_20	IAMs_20	02 33 52.5	
	comp=Z,2µm,22.0s							
HUMP	**Col San Antoni**	**145.36**	**63**			**PKPab**	**01 29 54.9**	**+0.1**
PMOZ	**Porto Moniz, M**	**146.95**	**334**	*e*LR		LR	02 22 00.9	
	comp=Z,2µm,22.0s							
SMRT	**St. Maarten**	**147.84**	**61**		IAMs_20	IAMs_20	02 32 29.6	
	comp=Z,2µm,22.0s							
SABA	**Saba**	**147.86**	**62**		IAMs_20	IAMs_20	02 33 29.2	
	comp=Z,2µm,20.0s							
SAML	**Samuel**	**148.16**	**113**	PKP2		**PKPbc**	**01 30 03.0**	**+0.2**
SAML	**Samuel**	**148.16**	**113**			**PKPbc**	**01 30 03.0**	**+0.2**
FDF	**Fort de France**	**150.77**	**66**		IAMs_20	IAMs_20	02 36 33.2	
	comp=Z,1µm,20.0s							
KIC	**Kosan Boka**	**150.96**	**277**	*e*PKP2		**PKPab**	**01 30 14.5**	**-2.7**
	comp=Z,127nm,1.5s							
DBIC	**Dimbokro**	**151.05**	**277**	PKPbc		**PKiKP**	**01 30 10.8**	**+0.2**
	comp=Z,5.5nm,0.7s,baz=310,slow=0.7,SNR=4.9							
DBIC	**Dimbokro**	**151.05**	**277**	PKIKP		**PKPbc**	**01 30 10.0**	**0.0**
DBIC	**Dimbokro**	**151.05**	**277**			**PKPbc**	**01 30 09.9**	**0.0**
TIC	**Toumodi**	**151.22**	**277**	*e*PKP2		**PKPab**	**01 30 15.1**	**-3.2**
LIC	**Lamto**	**151.26**	**277**	*e*PKP2		**PKiKP**	**01 30 13.5**	**+2.5**
	comp=Z,17nm,0.8s							
PTGA	**Pitinga**	**153.46**	**99**			**PKiKP**	**01 30 16.5**	**+1.0**
PTGA					PKPab	**sPKPbc**	**01 30 25.1**	**-0.6**
PTGA					IAMs_20	IAMs_20	02 31 34.9	
	comp=Z,1µm,20.0s							
BDFB	**Brasilia**	**156.32**	**144**	PKPab		**PKPab**	**01 30 38.5**	**-1.2**
	comp=Z,4.0nm,0.9s,baz=233,slow=11,SNR=3.5							
BDFB	**Brasilia**	**156.32**	**144**		IAMs_20	IAMs_20	02 38 22.3	
	comp=Z,2µm,21.0s							

*IDC **11** 01:11:17.7±0.7, 15°.86N×93°.08W, h112$^{km}_{\pm 6}$, mb3.7/14, mb1 3.9/19, mb1mx3.7/52, mbtmp4.1/19, MS2.7/1, Ms1 2.7/1, ms1mx2.4/25, Error ellipse: s-maj=15.2km s-min=5.7km az=32.0*

*NEIC **11** 01:11:18.9±1.9, 15°.83N±0°.05×93°.11W±0°.06, h121$^{km}_{\pm 5}$km, Error ellipse: s-maj=8.9km s-min=5.8km az=54.0*

*MEX **11** 01:11:19.1±0.6, 15°.76N×93°.24W, h121$^{km}_{\pm 5}$km, MD4.2*

*GCG **11** 01:11:23.8±0.7, 16°.01N×92°.71W, h35$^{km}_{\pm 1}$.999km, MD4.7*

ISC 11 01:11:17.9±0.6, **15°.71N**±0°.04×**93°.22W**±0°.03, **h119**$^{km}_{\pm 5}$km, **n114,** σ1$^{s}_{}$**74**/122, **mb4.2**/**27, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.01**	**173**	*e*P	**Pn**	**01 11 34.1**	**0.0**
PCIG				*e*S	**Sn**	**01 11 46.1**	**-0.2**
PCIG		**0.01**	**173**		**Pn**	**01 11 34.1**	**0.0**
PCIG					**Sn**	**01 11 46.1**	**-0.2**
TGIG		**1.06**	**5**	*e*P	**Pn**	**01 11 40.4**	**-0.2**
TGIG				*e*S	**Sn**	**01 11 56.5**	**-1.2**
TGIG		**1.06**	**5**		**Pn**	**01 11 40.4**	**-0.2**
TGIG					**Sn**	**01 11 56.5**	**-1.2**
TGBT	**Tuxtla Gutierr**	**1.06**	**7**	*e*P	**Pn**	**01 11 40.3**	**-0.2**
TGBT				*e*S	**Sn**	**01 11 56.2**	**-1.4**
TGBT	**Tuxtla Gutierr**	**1.06**	**7**		**Pn**	**01 11 40.3**	**-0.2**
TGBT					**Sn**	**01 11 56.2**	**-1.4**
CCIG	**Comitan**	**1.19**	**61**	*e*P	**Pn**	**01 11 41.8**	**-0.1**
CCIG				*e*S	**Sn**	**01 11 59.6**	**-0.5**
CCIG	**Comitan**	**1.19**	**61**		**Pn**	**01 11 41.9**	**0.0**
CCIG	**Comitan**	**1.19**	**61**		**Sn**	**01 11 58.3**	**-1.9**
THIG		**1.22**	**131**	*e*P	**Pn**	**01 11 43.0**	**+0.8**
THIG				*e*S	**Sn**	**01 12 00.9**	**+0.4**
THIG		**1.22**	**131**		**Pn**	**01 11 43.0**	**+0.8**
THIG					**Sn**	**01 12 00.9**	**+0.4**
STG3	**Santiaguito 3,**	**1.88**	**122**	*e*P	**Pn**	**01 11 51.4**	**+1.4**
ERG	**Entre ros, C**	**2.04**	**128**	*e*P	**Pn**	**01 11 54.1**	**+2.3**
CMIG	**Matias Romero**	**2.10**	**311**	P	**Pn**	**01 11 53.4**	**+0.8**
	42nm,0.3s,baz=128,slow=11,SNR=835						
CMIG				S	**Sn**	**01 12 18.9**	**-0.3**
	293nm,0.3s,baz=294,slow=21,SNR=53						
CMIG				LR	LR	01 12 37.8	
	comp=Z,165nm,19.9s,baz=192,slow=38						
CMIG	**Matias Romero**	**2.10**	**311**	*e*P	**Pn**	**01 11 52.4**	**-0.3**
CMIG				*e*S	**Sn**	**01 12 18.8**	**-0.4**
TUIG	**Tuzandepetl**	**2.58**	**334**	*e*P	**Pn**	**01 11 58.3**	**-0.4**
TUIG				*i* S	**Sn**	**01 12 29.0**	**-1.0**
TUIG	**Tuzandepetl**	**2.58**	**334**		**Pn**	**01 11 58.3**	**-0.4**
TUIG					**Sn**	**01 12 30.1**	**0.0**
FUG	**Fuego 3**	**2.62**	**118**	*e*P	**Pn**	**01 12 01.3**	**+2.0**
APG	**El Apazote**	**2.75**	**104**	P	**Pn**	**01 12 00.4**	**-0.7**
	36nm,0.3s,baz=324,slow=13,SNR=115						
APG				S	**Sn**	**01 12 32.4**	**-1.9**
	176nm,0.3s,baz=297,slow=15,SNR=49						
HUIG	**Huatulco**	**2.78**	**272**	*e*P	**Pn**	**01 12 00.8**	**-0.5**
HUIG				*e*S	**Sn**	**01 12 31.2**	**-3.5**
HUIG	**Huatulco**	**2.78**	**272**		**Pn**	**01 12 00.8**	**-0.5**
HUIG					**Sn**	**01 12 31.2**	**-3.5**
NBG	**Las Nubes**	**2.99**	**112**	*e*P	**Pn**	**01 12 05.9**	**+1.6**
IXG	**Ixpaco**	**3.09**	**119**	*e*P	**Pn**	**01 12 06.9**	**+1.4**
MRL	**Marmol**	**3.47**	**100**	*e*P	**Pn**	**01 12 10.6**	**0.0**
MRL				*e*S	**Sn**	**01 12 47.2**	**-4.0**
VHO	**Vista Hermosa**	**3.63**	**292**	*e*P	**Pn**	**01 12 14.6**	**+1.9**
VHO				*e*S	**Sn**	**01 12 48.0**	**-7.2**
PEIG	**Puerto Escondi**	**3.79**	**275**	*e*P	**Pn**	**01 12 14.4**	**-0.3**
PEIG				*e*S	**Sn**	**01 12 55.1**	**-3.6**
YOIG	**Yosondua**	**4.31**	**286**	*e*P	**Pn**	**01 12 23.5**	**+1.7**
YOIG				*e*S	**Sn**	**01 13 14.3**	**+3.0**
SNET	**Serv Nac Est T**	**4.35**	**117**	Pn	**Pn**	**01 12 22.7**	**+0.4**
TOIG	**Toxpalan**	**4.38**	**303**	*e*P	**Pn**	**01 12 24.2**	**+1.6**
TOIG				*e*S	Sn	01 13 00.9	-12
PNIG	**Pinotepa**	**4.77**	**279**	*e*P	**Pn**	**01 12 26.1**	**-1.7**
PNIG				*e*S	**Sn**	**01 13 17.6**	**-4.4**
PNIG	**Pinotepa**	**4.77**	**279**		**Sn**	**01 13 17.6**	**-4.4**
PNIG					**Sn**	**01 13 17.6**	**-4.4**
TGUH	**Tegucigalpa,Un**	**5.98**	**105**		**Pn**	**01 12 42.5**	**-1.8**
TEIG	**Tepich**	**6.50**	**46**	P	**Pn**	**01 12 49.0**	**-2.1**
	22nm,0.3s,baz=16,slow=0.0,SNR=35						
TEIG				S	**Sn**	**01 13 59.0**	**-4.9**
MATN	**Matagalpa**	**7.59**	**110**		**Pn**	**01 13 06.1**	**+0.1**
MOIG	**Morelia**	**8.56**	**299**		Pn	01 13 24.4	+5.2
JTS	**Las Juntas de**	**9.69**	**123**	P	**Pn**	**01 13 34.5**	**+0.2**
	1.2nm,0.3s,baz=323,slow=9.6,SNR=9.9						
JTS				S	**Sn**	**01 15 17.5**	**-3.9**
	0.4nm,0.3s,baz=156,slow=12,SNR=2.3						
ZAIG	**Zacatecas**	**11.27**	**310**	Pn	**Pn**	**01 13 59.6**	**+3.8**
344A	**Westbrook Farm**	**15.83**	**8**		**P**	**01 14 55.4**	**0.0**
344A					IAmb	IAmb	01 14 55.9	
	comp=Z,15nm,0.9s							
JCT	**Junction City**	**15.89**	**339**		**P**	**01 14 57.2**	**+1.0**
JCT					IAmb	IAmb	01 15 38.3	
	comp=Z,8.7nm,0.7s							
NATX	**Nacogdoches**	**16.03**	**356**		**P**	**01 14 58.0**	**+0.3**
TXAR	**Lajitas Array**	**16.62**	**326**	P	**P**	**01 15 05.1**	**+0.7**
	comp=Z,0.0nm,0.3s,baz=146,slow=12,SNR=17							
TX31	**Lajitas Ar. Si**	**16.63**	**326**	Pn	**P**	**01 15 07.6**	**+3.2**
TX31					IAmb	IAmb	01 15 44.8	
	comp=Z,49nm,1.9s							
TX32	**Lajitas Array**	**16.63**	**326**		**P**	**01 15 07.7**	**+3.3**
WHTX	**Lake Whitney,**	**16.66**	**347**		**P**	**01 15 04.8**	**+0.2**
WHTX					IAmb	IAmb	01 15 10.1	
	comp=Z,9.9nm,0.8s							
143A	**Socs Landing,**	**17.00**	**5**		**P**	**01 15 08.2**	**-0.1**
143A					IAmb	IAmb	01 15 32.6	
	comp=Z,29nm,1.2s							
GTBY	**Guantanamo Bay**	**17.74**	**74**	P	**P**	**01 15 16.1**	**-0.5**
WLAR	**White Oak Lake**	**17.90**	**0**	P	**Pn**	**01 15 19.8**	**+0.5**
WLAR					IAmb	IAmb	01 16 02.7	
	comp=Z,12nm,0.8s							
Z47A	**Carrollton**	**18.02**	**14**	IAmb	IAmb	01 15 26.7		
	comp=Z,15nm,1.0s							
LRAL	**Lakeview Retre**	**18.14**	**17**	P	**Pn**	**01 15 22.2**	**0.0**
Z50A	**Ashland**	**18.67**	**19**	IAmb	IAmb	01 15 32.0		
	comp=Z,13nm,1.1s							
MIAR	**Mount Ida**	**18.76**	**359**	P	**Pn**	**01 15 29.5**	**+0.1**
X37A	**Clayton**	**18.90**	**355**	P	**Pn**	**01 15 32.3**	**+1.3**
X37A					IAmb	IAmb	01 15 44.6	
	comp=Z,7.6nm,0.7s							
OXF	**Oxford**	**19.03**	**10**	P	**P**	**01 15 30.8**	**+0.2**
GDL2	**Guadalupe Moun**	**19.29**	**330**	P	**Pn**	**01 15 36.9**	**+1.0**
X48A	**Hartselle**	**19.47**	**15**	IAmb	IAmb	01 15 40.4		
	comp=Z,13nm,0.9s							
WHAR	**Wooly Hollow**	**19.51**	**2**	P	**P**	**01 15 36.0**	**+0.1**
WHAR					IAmb	IAmb	01 16 16.3	
	comp=Z,13nm,1.2s							
GOGA	**Godfrey**	**19.71**	**25**	IAmb	IAmb	01 15 41.9		
	comp=Z,14nm,0.9s							
Y52A	**Lilburn**	**19.87**	**23**	IAmb	IAmb	01 15 54.5		
	comp=Z,15nm,0.8s							
FPAL	**Fort Paine**	**19.96**	**19**	P	**P**	**01 15 40.7**	**-0.1**
MSTX	**Muleshoe**	**20.12**	**336**	IAmb	IAmb	01 15 45.1		
	comp=Z,13nm,0.9s							
U40A	**Yellville**	**20.56**	**1**	IAmb	IAmb	01 15 49.9		
	comp=Z,6.6nm,0.7s							
WVT	**Waverly**	**20.89**	**12**	P	**P**	**01 15 51.9**	**+1.2**
PBMO	**Poplar Bluff**	**21.13**	**6**	P	**P**	**01 15 54.0**	**+0.8**
PBMO					IAmb	IAmb	01 16 37.9	
	comp=Z,12nm,1.1s							
TKL	**Tuckaleechee C**	**21.59**	**21**	P	**P**	**01 15 58.8**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=172,slow=11,SNR=4.0							
T47A	**Sharon Grove**	**21.88**	**13**	IAmb	IAmb	01 16 28.6		
	comp=Z,7.7nm,0.8s							
S44A	**Carbondale**	**22.17**	**8**	P	**P**	**01 16 04.9**	**+0.7**
S44A					IAmb	IAmb	01 16 32.2	
	comp=Z,9.9nm,0.6s							
CCM	**Cathedral Cave**	**22.32**	**4**	P	**P**	**01 16 05.1**	**-0.7**
CCM					IAmb	IAmb	01 16 05.5	
	comp=Z,7.1nm,0.6s							
R40A	**Maddies Statio**	**22.51**	**2**	IAmb	IAmb	01 16 07.3		
	comp=Z,11nm,1.1s							
ANMO	**Albuquerque**	**22.54**	**331**	P	**P**	**01 16 09.1**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=162,slow=14,SNR=3.0							
TUC	**Tucson**	**22.97**	**319**	P	**P**	**01 16 13.8**	**+1.4**
SDV	**Santo Domingo**	**23.07**	**104**	P	**P**	**01 16 11.6**	**-2.0**
	comp=Z,2.1nm,0.4s,baz=340,slow=6.2,SNR=3.2							
SDV	**Santo Domingo**	**23.07**	**104**	P	**P**	**01 16 12.8**	**-0.8**
SDV					IAmb	IAmb	01 16 56.8	
	comp=Z,5.5nm,0.9s							
R32A	**Long Quarter,**	**23.13**	**349**	IAmb	IAmb	01 16 14.7		
	comp=Z,11nm,0.6s							
MVCO	**Mesa Verde**	**25.34**	**331**	IAmb	IAmb	01 16 37.6		
	comp=Z,7.0nm,0.8s							
PV18	**Skein Mesa, Pa**	**26.36**	**331**	P	**P**	**01 16 43.9**	**+0.7**
PV18					IAmb	IAmb	01 16 46.9	
	comp=Z,5.9nm,0.9s							
STVI	**Saint Thomas**	**27.14**	**80**	P	**P**	**01 16 49.2**	**-0.9**
PDAR	**Pinedale Array**	**30.38**	**336**	P	**P**	**01 17 17.9**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=163,slow=16,SNR=3.0							
REDW	**Red Top Meadow**	**31.40**	**335**	IAmb	IAmb	01 17 30.8		
	comp=Z,6.3nm,0.8s							
TPAW	**Teton Pass**	**31.55**	**335**	P	**P**	**01 17 30.9**	**+1.7**
NVAR	**Mina Array Bea**	**31.61**	**321**	P	**P**	**01 17 31.8**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=118,slow=9.3,SNR=2.0							
FXWY	**Fox Creek**	**31.70**	**335**	P	**P**	**01 17 31.2**	**+0.7**
IMW	**Indian Meadow**	**31.88**	**335**	IAmb	IAmb	01 18 06.4		
	comp=Z,4.6nm,1.1s							
YHH	**Holmes Hill**	**32.59**	**336**	P	**P**	**01 17 39.6**	**+1.3**
LRM	**Limekiln Ridge**	**34.08**	**336**	P	**P**	**01 17 52.4**	**+1.3**
ULM	**Lac du Bonnet**	**34.52**	**357**	P	**P**	**01 17 52.4**	**-2.2**
	comp=Z,1.7nm,0.5s,baz=165,slow=13,SNR=2.1							
MNMC	**Minye Minye**	**41.70**	**145**	P	**P**	**01 18 57.0**	**+1.5**
PB11	**IPOC Station P**	**42.18**	**146**	P	**P**	**01 19 00.5**	**+1.2**
PB04	**IPOC Station P**	**44.05**	**149**	P	**P**	**01 19 14.4**	**+0.2**
SIV	**San Ignacio**	**44.72**	**133**	P	**P**	**01 19 19.7**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=315,slow=11,SNR=3.6							
SIV				PcP	**PcP**	**01 21 00.7**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=312,slow=4.0,SNR=4.7							
LVC	**Limon Verde**	**44.91**	**147**	P	**P**	**01 19 22.5**	**+1.1**
	comp=Z,3.9nm,0.8s,baz=53,slow=14,SNR=3.6							
LVC	**Limon Verde**	**44.91**	**147**	IAmb	IAmb	01 19 24.4		
	comp=Z,4.2nm,0.8s							
GO02	**Mina Guanaco**	**46.70**	**150**	P	**P**	**01 19 36.2**	**+0.8**
GO02					IAmb	IAmb	01 19 37.7	
	comp=Z,7.7nm,1.1s							
YKA	**Yellowknife Ar**	**49.10**	**347**	P	**P**	**01 19 52.8**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=150,slow=7.8,SNR=23							
YKA				pP	**pP**	**01 20 18.7**	**-2.2**
	comp=Z,1.1nm,0.9s,baz=148,slow=8.0,SNR=6.1							
CO03	**El Pedregal**	**51.11**	**155**	P	**P**	**01 20 09.6**	**+1.0**
BDFB	**Brasilia**	**54.43**	**123**	P	**P**	**01 20 31.7**	**-1.6**
	comp=Z,2.7nm,0.7s,baz=294,slow=14,SNR=3.2							
CPUP	**Villa Florida**	**54.45**	**140**	P	**P**	**01 20 32.0**	**-1.1**
	comp=Z,1.6nm,0.8s,baz=336,slow=8.2,SNR=2.8							
SFJD	**Kangerlussuaq**	**58.26**	**18**	P	**P**	**01 20 58.7**	**-0.9**
	comp=Z,9.2nm,0.7s,baz=25,slow=23,SNR=6.2							
SFJD	**Kangerlussuaq**	**58.26**	**18**	P	**P**	**01 20 59.8**	**+0.2**
RES	**Resolute Bay**	**58.98**	**359**	P	**P**	**01 21 03.3**	**-1.2**
	comp=Z,2.6nm,1.0s,baz=187,slow=13,SNR=4.0							
RES	**Resolute Bay**	**58.98**	**359**	IAmb	IAmb	01 21 08.9		
	comp=Z,6.9nm,1.3s							
PLCA	**Paso Flores**	**59.97**	**160**	P	**P**	**01 21 13.5**	**+1.7**
	comp=Z,4.7nm,0.8s,baz=334,slow=8.9,SNR=9.1							
PLCA	**Paso Flores**	**59.97**	**160**	P	**P**	**01 21 13.2**	**+1.3**
PRP	**Porcupine Dome**	**60.66**	**338**	IAmb	IAmb	01 21 18.3		
	comp=Z,3.2nm,0.8s							
IL31		**60.81**	**337**	P	**P**	**01 21 18.6**	**+1.5**
ILAR	**Eielson Array**	**60.81**	**337**	P	**P**	**01 21 18.2**	**+1.0**
	comp=Z,2.0nm,0.9s,baz=124,slow=5.4,SNR=18							
LL01	**San Ignacio de**	**60.90**	**162**	P	**P**	**01 21 19.5**	**+1.5**
RND	**Reindeer**	**60.99**	**335**	P	**P**	**01 21 20.4**	**+1.9**
BPAW	**Bear Paw Mtn.**	**62.13**	**335**	P	**P**	**01 21 26.4**	**+0.2**
MLY	**Manley**	**62.41**	**336**	P	**P**	**01 21 28.2**	**+0.3**
KURK	**Kurchatov**	**113.47**	**6**		**PKiKP**	**01 29 41.8**	**-0.1**
KURBB	**Kurchatov Arra**	**113.56**	**6**	PKiKP	**PKiKP**	**01 29 41.8**	**-0.3**
	comp=Z,0.2nm,1.0s,baz=357,slow=1.8,SNR=4.4							
KSH	**Kashi**	**124.14**	**10**	PKP	PKiKP	01 30 12.0	+8.7
KSH				sPKP		01 30 43.2		
LZH	**Lanzhou**	**126.01**	**343**	*e*PKP	**PKiKP**	**01 30 09.9**	**+2.8**
LZH				pPKP	pPKPdf	01 30 36.9	-2.4
LZH				sPKP		01 30 48.8	
CD2	**Chengdu**	**130.85**	**341**	Pdif	**Pdif**	**01 27 06.5**	**-0.9**

*IDC **11** 01:34:22.0±1.9, 38°.91N×142°.23E, h0^{km}, mb3.5/5, mb1 3.6/6, mb1mx3.3/29, mbtmp3.4/6, ML2.5/1, Error ellipse: s-maj=57.7km s-min=26.3km az=77.0*

*JMA **11** 01:34:28.2, 38°.64N×141°.90E, h48$^{km}_{\pm 1}$km, M3.6*

JMA Felt I J1.

ISC 11 01:34:26.8±1.8, **38°.55N**±0°.05×**142°.01E**±0°.09, **h28**$^{km}_{\pm 11}$km, **n25,** σ1$^{s}_{}$**52**/28, **mb3.5**/**5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.49**	**241**	P	**Pn**	**01 34 38.9**	**+1.0**
JIKH				S	**Sn**	**01 34 46.3**	**+0.8**
JKMT	**Kesennumamotoy**	**0.50**	**302**	P	**Pb**	**01 34 37.9**	**+0.8**
JKMT				S	**Sb**	**01 34 44.6**	**+0.5**
JIO	**Ouri**	**0.53**	**260**	P	**Pn**	**01 34 38.9**	**+0.4**
JIO				*i* S	**Sn**	**01 34 46.2**	**-0.3**
OFUJ	**Ofunato**	**0.60**	**333**	P	**Pb**	**01 34 39.1**	**+0.3**
OFUJ				S	**Sb**	**01 34 46.6**	**-0.3**
JMK	**Ichinoseki**	**0.74**	**303**	P	**Pb**	**01 34 40.9**	**-0.2**
JMK				S	**Sb**	**01 34 49.9**	**-1.0**
JOU	**Okura**	**1.07**	**261**	P	**Pb**	**01 34 46.0**	**-0.8**
JOU				*e*S	**Sb**	**01 34 59.2**	**-1.3**
JOM	**Ohasama**	**1.08**	**329**	P	**Pn**	**01 34 45.5**	**-0.6**
JMM	**Marumori**	**1.18**	**235**	P	**Pn**	**01 34 47.6**	**+0.2**
JMM				S	**Sb**	**01 35 01.9**	**-1.4**
JYK	**Kaneyama**	**1.35**	**286**	P	**Pn**	**01 34 49.3**	**-0.4**
JRG	**Rokugo**	**1.37**	**309**	P	**Pn**	**01 34 49.3**	**-0.8**
MJAR	**Matsushiro Arr**	**3.63**	**238**	Pn	**Pn**	**01 35 23.3**	**+2.2**
	0.3nm,0.3s,baz=46,slow=13,SNR=11						
MAT	**Matsushiro**	**3.63**	**238**	P	**Pn**	**01 35 23.4**	**+2.3**
MAT				*e*S	**Sn**	**01 36 05.8**	**+2.8**
JHJ	**Hachijo jima 2**	**5.71**	**199**	Pn	**Pn**	**01 35 50.0**	**+0.3**
	5.5nm,0.3s,baz=95,slow=14,SNR=1.3						
JHJ				Sn	**Sn**	**01 36 52.9**	**-1.4**
	3.4nm,0.3s,baz=287,slow=19,SNR=1.1						
USRK	**Ussuriysk Ar.**	**9.41**	**310**	Pn	**Pn**	**01 36 42.6**	**+2.1**
	baz=118,slow=14,SNR=3.7						
H11N2	**WAKE ISLAND Hy**	**28.55**	**124**	T	T	02 10 41.1	
	baz=317,slow=75,SNR=131						
H11N1	**WAKE ISLAND Hy**	**28.56**	**124**	T	T	02 10 40.7	
	baz=317,slow=75,SNR=174						
H11N3	**WAKE ISLAND Hy**	**28.57**	**124**	T	T	02 10 47.3	
	baz=317,slow=75,SNR=173						
H11S1	**WAKE ISLAND Hy**	**29.32**	**126**	T	T	02 11 33.4	
	baz=318,slow=76,SNR=82						
H11S3	**WAKE ISLAND Hy**	**29.32**	**126**	T	T	02 11 33.7	
	baz=318,slow=76,SNR=85						
H11S2	**WAKE ISLAND Hy**	**29.34**	**126**	T	T	02 11 35.3	
	baz=318,slow=76,SNR=76						
ZALV	**Zalesovo Beam**	**41.26**	**311**	P	**P**	**01 42 07.1**	**-2.1**
	0.6nm,0.4s,baz=85,slow=7.7,SNR=3.6						
MKAR	**Makanchi Array**	**43.73**	**301**	P	**P**	**01 42 29.4**	**-0.1**
	0.3nm,0.5s,baz=84,slow=9.7,SNR=4.8						
WRA	**Warramunga Arr**	**58.62**	**188**	P	**P**	**01 44 24.6**	**+3.2**
	0.2nm,0.7s,baz=3.6,slow=6.8,SNR=1.5						
ASAR	**Alice Springs**	**62.35**	**188**	P	**P**	**01 44 47.9**	**+1.2**
	0.3nm,0.8s,baz=40,slow=3.0

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.48**	**91**	P	**Pn**	**02 54 24.7**	**+0.6**
SOEI	**Soe**	**3.92**	**242**	P	**Pn**	**02 54 29.8**	**+0.2**
BATI	**Baumata**	**4.66**	**241**	P	**Pn**	**02 54 39.3**	**+0.6**
	14nm,0.3s,baz=313,slow=2.3,SNR=18						
BATI				S	**Sn**	**02 55 31.5**	**-2.4**
	12nm,0.3s,baz=59,slow=8.6,SNR=7.0						
BATI	**Baumata**	**4.66**	**241**	P	**Pn**	**02 54 39.2**	**+0.4**
EDFI	**Ende, Flores**	**6.09**	**262**	P	**Pn**	**02 54 58.2**	**+1.0**
	0.0nm3.4nm,0.7s						
FAKI	**Fak Fak**	**6.67**	**42**	P	**Pn**	**02 55 01.8**	**-2.9**
	0.1nm8.2nm,1.7s						
SIJI	**Sorong**	**7.83**	**26**	P	**Pn**	**02 55 17.7**	**-2.0**
	2.5nm,0.3s,baz=193,slow=12,SNR=4.4						
FITZ	**Fitzroy Crossi**	**10.32**	**191**	P	**Pn**	**02 55 52.6**	**+0.6**
	2.7nm,0.3s,baz=30,slow=11,SNR=86						
FITZ				S	**Sn**	**02 57 43.8**	**-3.5**
	2.3nm,0.3s,baz=125,slow=20,SNR=7.2						
WRA	**Warramunga Arr**	**13.52**	**153**	P	**P**	**02 56 35.1**	**-0.1**
	0.8nm,0.3s,baz=339,slow=8.9,SNR=9.5						
WRA				S	**S**	**02 59 00.2**	**-3.3**
	2.4nm,0.3s,baz=326,slow=23,SNR=9.8						
ASAR	**Alice Springs**	**16.71**	**160**	P	**Pn**	**02 57 16.6**	**+5.0**
	1.8nm,0.3s,baz=340,slow=12,SNR=119						
ASAR				S	**S**	**03 00 12.9**	**-1.9**
	0.3nm,0.3s,baz=328,slow=23,SNR=4.5						
PMG	**Port Moresby**	**19.21**	**96**	LR	LR	03 07 02.2	
	comp=Z,162nm,20.0s,baz=203,slow=42						
STKA	**Stephens Creek**	**27.07**	**154**	P	**P**	**02 58 57.0**	**+4.3**
	0.5nm,0.3s,baz=305,slow=12,SNR=2.9						
MKAR	**Makanchi Array**	**67.83**	**328**	P	**P**	**03 04 05.8**	**+0.6**
	0.3nm,0.4s,baz=116,slow=8.5,SNR=6.1						

MAN 11 03:13:30.6,9.°90N×124.°09E,h7km,MS3.9,3C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.31**	**227**	*e*P	Pn	03 13 41.9	+0.4
TBP				*i* S	Sb	03 13 48.0	+4.3
LLP	**Lapu-Lapu**	**0.43**	**343**	⇓*i*P	Pg	03 13 39.6	+0.6
LLP				*i* S	Sb	03 13 46.3	-1.0
MSLP	**Maasin**	**0.79**	**73**	*e*P	Pg	03 13 45.7	-0.1
MSLP				*e*S	Sn	03 13 60.0	-0.3
SNPH	**Sibulan**	**1.01**	**237**	⇑*i*P	Pb	03 13 50.6	+0.2
SNPH				*i* S	Sn	03 14 06.1	+0.4
OCLP	**Ormoc**	**1.25**	**24**	*e*P	Pn	03 13 53.1	-1.4
OCLP				*e*S	Sn	03 14 12.7	+1.0
CNOP	**Candoni, Negro**	**1.43**	**267**	*e*P	Pn	03 13 56.1	-0.9
CNOP				*e*S	Sb	03 14 15.1	-1.0
DCPH	**Dipolog City**	**1.50**	**209**	⇓*i*P	Pn	03 13 58.2	+0.3
DCPH				*i* S	Sb	03 14 18.0	+0.1
CGP	**Cagayan de Oro**	**1.56**	**157**	⇓*e*P	Pg	03 14 00.5	0.0
CGP				*e*S	Sn	03 14 17.7	-1.4
GUIM	**Jordan**	**1.64**	**296**	*e*P	Pn	03 13 59.0	-0.8
GUIM				*e*S	Sb	03 14 21.8	-0.4
RCP	**Roxas**	**2.11**	**321**	⇓*e*P	Pn	03 14 07.1	+0.7
RCP				*e*S	Sb	03 14 35.2	-0.5
PAGZ	**Pagadian**	**2.16**	**199**	*e*P	Pn	03 14 06.4	-0.6
PAGZ				*e*S	Sn	03 14 34.9	+1.0
JAP	**San Jose, Anti**	**2.27**	**292**	⇓*e*P	Pb	03 14 11.3	-0.6
CNP	**Catarman**	**2.65**	**12**	*e*P	Pn	03 14 13.4	-0.3
CNP				*e*S	Sn	03 14 48.5	+2.3
CTBH	**Cotabato--PC H**	**2.67**	**177**	⇑*i*P	Pn	03 14 15.8	+1.9
KCP	**Kidapawan**	**3.04**	**161**	⇑*e*P	Pb	03 14 22.9	-2.1

*IDC **11** 03:18:40.1±7.2, 68.°32N×165.°06W, h0km, mb3.0/2, mb1 3.8/3, mb1mx3.3/28, mbtmp3.3/3, ML3.8/1, Error ellipse: s-maj=107.8km s-min=101.8km az=38.0*
*AEIC **11** 03:18:51±2.0, 67.°71N±0.°07×162.°2W±0.°1, h11km±7km, ML2.8, Error ellipse: s-maj=11.3km s-min=6.7km az=151.0*
*NEIC **11** 03:18:53.2±2.2, 67.°72N±0.°04×162.°5W±0.°2, h32km±6km, Error ellipse: s-maj=13.7km s-min=5.1km az=103.0*
ISC 11 03:18:51.0±1.0, 67.°70N±0.°07×162.°33W±0.°07, h10km, n27, σ1°34/29, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.42**	**329**		**Pb**	**03 18 59.8**	**-0.6**
RDOG					**Sb**	**03 19 07.0**	**+0.2**
ANM	**Nome**	**3.38**	**203**		**Pn**	**03 19 44.8**	**+1.0**
IM03		**3.80**	**113**		**Pn**	**03 19 50.4**	**+0.9**
COLD	**Coldfoot**	**4.69**	**90**		**Pn**	**03 20 02.6**	**+0.8**
TOLK	**Toolik Lake Re**	**4.86**	**73**		**Pn**	**03 20 05.5**	**+1.4**
MLY	**Manley**	**5.38**	**114**		**Pn**	**03 20 12.4**	**+1.2**
TTA	**Tatalina**	**5.47**	**148**		**Pn**	**03 20 14.3**	**+1.8**
TT01	**Tatalina**	**5.49**	**148**		**Pn**	**03 20 14.2**	**+1.4**
BPAW	**Bear Paw Mtn.**	**5.88**	**123**		**Pn**	**03 20 20.0**	**+1.9**
NEA	**Nenana**	**6.22**	**114**		**Pn**	**03 20 24.2**	**+1.5**
KTH	**Kantishna Hill**	**6.29**	**126**		**Pn**	**03 20 23.4**	**-0.4**
MDM	**Murphy Dome**	**6.31**	**109**	Pn	**Pn**	**03 20 25.6**	**+1.6**
PPLA	**Purkeypile**	**6.42**	**134**		**Pn**	**03 20 25.5**	**-0.1**
COLA	**College**	**6.49**	**109**		**Pn**	**03 20 28.6**	**+2.2**
POKR	**Poker Plat Res**	**6.51**	**106**		**Pn**	**03 20 28.3**	**+1.5**
TRF	**Thorofare Moun**	**6.56**	**125**		**Pn**	**03 20 28.9**	**+1.3**
CCB	**Clear Creek Bu**	**6.63**	**111**		**Pn**	**03 20 29.8**	**+1.4**
WRH	**Wood River Hil**	**6.63**	**113**		**Pn**	**03 20 29.5**	**+1.2**
BM03	**Burnt Mountain**	**6.79**	**84**		**Pn**	**03 20 31.7**	**+1.2**
IL31		**6.89**	**108**		**Pn**	**03 20 33.5**	**+1.6**
ILAR	**Eielson Array**	**6.89**	**108**	Pn	**Pn**	**03 20 33.0**	**+1.1**
	1.2nm,0.3s,baz=304,slow=14,SNR=51						
ILAR				Sn	**Sn**	**03 21 48.3**	**-2.0**
	0.2nm,0.3s,baz=316,slow=15,SNR=0.9						
RND	**Reindeer**	**7.05**	**121**	Pn	**Pn**	**03 20 33.5**	**-0.7**
HDA	**Harding Lake**	**7.07**	**111**		**Pn**	**03 20 34.8**	**+0.4**
WAT2	**Susitna Watana**	**7.45**	**123**		**Pn**	**03 20 41.1**	**+1.4**
DHY	**Denali Highway**	**7.77**	**120**		**Pn**	**03 20 45.3**	**+1.2**
YKA	**Yellowknife Ar**	**20.31**	**82**	P	**P**	**03 23 27.0**	**+0.4**
	0.2nm,0.5s,baz=303,slow=10.0,SNR=7.8						
TXAR	**Lajitas Array**	**51.41**	**107**	P	**P**	**03 27 55.1**	**-0.8**
	0.2nm,0.6s,baz=347,slow=7.4,SNR=3.7						

*IDC **11** 04:10:53.5±0.7, 5.°32S×150.°71E, h131km±7km, mb3.8/17, mb1 4.0/18, mb1mx4.0/28, mbtmp4.3/18, Error ellipse: s-maj=14.7km s-min=7.3km az=123.0*
*NEIC **11** 04:10:53.3±1.5, 5.°31S±0.°07×150.°8E±0.°1, h130km±6km, mb4.2/21, Error ellipse: s-maj=15.7km s-min=8.6km az=112.0*
ISC 11 04:10:52.0±0.5, 5.°25S±0.°08×150.°64E±0.°09, h114km, n42, σ1°49/43, mb4.2/24, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.67**	**56**	P	**Pn**	**04 11 23.3**	**+2.2**
	61nm,0.3s,baz=224,slow=0.3,SNR=29						
KRVT				S	**Sn**	**04 11 46.1**	**+2.8**
	61nm,0.3s,baz=206,slow=19,SNR=16						
RABL	**Rabaul**	**1.85**	**55**	Pn	**Pn**	**04 11 24.5**	**+1.1**
PMG	**Port Moresby**	**5.38**	**220**	P	**Pn**	**04 12 12.4**	**+2.4**
	70nm,0.3s,baz=50,slow=6.4,SNR=59						
PMG				S	**Sn**	**04 13 12.9**	**+2.2**
	41nm,0.3s,baz=174,slow=18,SNR=9.2						
CTA	**Charters Tower**	**15.35**	**196**	P	**P**	**04 14 27.0**	**+2.3**
	0.5nm,0.3s,baz=23,slow=13,SNR=6.9						
MTN	**Manton Dam**	**20.67**	**247**	P	**P**	**04 15 23.8**	**+0.7**
MTN				IAmb	IAmb	04 16 21.1	
	comp=Z,10nm,1.0s						
WB0	**Warramunga Arr**	**21.40**	**226**	P	**P**	**04 15 30.1**	**-0.7**
WB0				IAmb	IAmb	04 15 55.4	
	comp=Z,11nm,1.1s						
WR0	**Warramunga Arr**	**21.42**	**226**	P	**P**	**04 15 32.4**	**+1.3**
WRAB	**Tennant Creek**	**21.54**	**226**	P	**P**	**04 15 33.1**	**+0.7**
WRAB				IAmb	IAmb	04 15 56.8	
	comp=Z,9.6nm,0.8s						
WB2	**Warramunga Arr**	**21.55**	**226**	P	**P**	**04 15 32.2**	**-0.2**
WRA	**Warramunga Arr**	**21.56**	**226**	P	**P**	**04 15 32.6**	**+0.1**
	comp=Z,2.4nm,0.5s,baz=52,slow=10.0,SNR=35						
WRA				S	**S**	**04 19 22.1**	**-2.8**
	comp=Z,4.2nm,1.2s,baz=78,slow=12,SNR=6.9						
WRA				PcP	**PcP**	**04 19 31.2**	**+0.6**
	comp=Z,0.8nm,0.4s,baz=40,slow=1.9,SNR=6.9						
WRA				ScP	**ScP**	**04 22 53.9**	**-3.5**
	comp=Z,0.6nm,0.7s,baz=50,slow=3.0,SNR=2.8						
DZM	**Mont Dzumac**	**22.66**	**139**	P	**P**	**04 15 43.6**	**-0.4**
	comp=Z,10nm,0.5s,baz=254,slow=8.3,SNR=24						
KNRA	**Kununurra**	**23.84**	**243**	P	**P**	**04 15 54.6**	**-0.4**
AS31	**Alice Springs**	**24.39**	**220**	P	**P**	**04 15 59.7**	**-0.2**
ASAR	**Alice Springs**	**24.39**	**220**	P	**P**	**04 16 00.7**	**+0.8**
	comp=Z,3.1nm,0.5s,baz=53,slow=8.8,SNR=65						
ASAR				S	**S**	**04 20 08.8**	**-2.8**
	comp=Z,0.5nm,0.8s,baz=46,slow=14,SNR=2.3						
ASAR				ScP	**ScP**	**04 23 01.9**	**-3.0**
	comp=Z,0.3nm,0.6s,baz=47,slow=3.3,SNR=5.5						
FITZ	**Fitzroy Crossi**	**27.55**	**240**	P	**P**	**04 16 29.1**	**+0.7**
	comp=Z,4.6nm,0.4s,baz=52,slow=6.9,SNR=39						
STKA	**Stephens Creek**	**27.81**	**197**	P	**P**	**04 16 30.1**	**-0.5**
	comp=Z,2.8nm,0.5s,baz=30,slow=13,SNR=13						
RPZ	**Rata Peaks**	**42.32**	**158**	P	**P**	**04 18 34.7**	**+0.1**
	comp=Z,14nm,1.1s,baz=257,slow=4.7,SNR=6.5						
RPZ	**Rata Peaks**	**42.32**	**158**	IAmb	IAmb	04 18 41.1	
	comp=Z,33nm,1.3s						
JNU	**Nakatsue**	**42.52**	**335**	P	**P**	**04 18 37.2**	**+0.9**
MJAR	**Matsushiro Arr**	**43.17**	**345**	P	**P**	**04 18 42.0**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=25,slow=30,SNR=4.0						
KSRS	**Korea Array**	**47.47**	**335**	P	**P**	**04 19 16.9**	**+1.5**
	comp=Z,4.3nm,0.7s,baz=154,slow=8.2,SNR=12						
USRK	**Ussuriysk Ar.**	**52.01**	**343**	P	**P**	**04 19 50.3**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=233,slow=50,SNR=3.2						
PETK	**Petropavlovsk-**	**58.45**	**5**	P	**P**	**04 20 36.0**	**+0.2**
	comp=Z,5.2nm,0.7s,baz=167,slow=7.6,SNR=18						
SONM	**Songino Array**	**65.58**	**329**	P	**P**	**04 21 24.9**	**+1.2**
	comp=Z,1.1nm,0.6s,baz=147,slow=4.4,SNR=7.2						
VNDA	**Vanda**	**72.47**	**177**	P	**P**	**04 22 05.2**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=33,slow=4.2,SNR=3.9						
CNPM	**China Poot**	**79.06**	**26**	P	**P**	**04 22 42.8**	**-0.7**
MKAR	**Makanchi Array**	**79.26**	**319**	P	**P**	**04 22 45.1**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=82,slow=9.3,SNR=3.6						
ZALV	**Zalesovo Beam**	**80.34**	**327**	P	**P**	**04 22 49.7**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=90,slow=6.1,SNR=3.9						
MLY	**Manley**	**82.08**	**21**	IAmb	IAmb	04 22 59.9	
	comp=Z,5.1nm,1.2s						
MCK	**McKinley**	**82.11**	**23**	P	**P**	**04 22 58.6**	**-1.1**
DHY	**Denali Highway**	**82.42**	**24**	IAmb	IAmb	04 25 18.3	
	comp=Z,6.9nm,1.4s						
WRH	**Wood River Hil**	**82.79**	**23**	IAmb	IAmb	04 23 03.6	
	comp=Z,3.6nm,0.8s						
CCB	**Clear Creek Bu**	**82.99**	**22**	IAmb	IAmb	04 23 03.5	
	comp=Z,4.9nm,1.2s						
IL31		**83.39**	**22**	IAmb	IAmb	04 23 05.2	
	comp=Z,3.2nm,0.9s						
ILAR	**Eielson Array**	**83.39**	**22**	P	**P**	**04 23 04.3**	**-1.9**
	comp=Z,2.3nm,0.8s,baz=256,slow=5.2,SNR=20						
EGAK	**Eagle**	**85.63**	**24**	P	**P**	**04 23 16.7**	**-0.8**
KK31	**Karatay Array**	**86.38**	**314**	P	**P**	**04 23 21.3**	**-0.5**
NVAR	**Mina Array Bea**	**94.06**	**52**	P	**P**	**04 23 57.6**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=244,slow=6.6,SNR=2.3						
YKA	**Yellowknife Ar**	**96.83**	**28**	P	**P**	**04 24 08.8**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=268,slow=4.6,SNR=23						
PDAR	**Pinedale Array**	**100.75**	**48**	P	**Pdif**	**04 24 26.9**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=214,slow=2.2,SNR=4.0						
GERES	**GERESS Array B**	**123.29**	**327**	PKP	**PKPdf**	**04 29 34.1**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=31,slow=4.6,SNR=1.6						
BDFB	**Brasilia**	**152.21**	**139**	PKPbc	**PKPbc**	**04 30 34.9**	**-0.6**
	comp=Z,4.8nm,0.5s,baz=251,slow=0.9,SNR=9.6						

*IDC **11** 04:27:36.4±1.7, 51.°52N×171.°08W, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.2/51, mbtmp3.2/4, ML2.6/1, Error ellipse: s-maj=82.6km s-min=32.6km az=139.0*
*NEIC **11** 04:27:44.6±1.0, 52.°0N±0.°1×171.°63W±0.°09, h64km±10km, Error ellipse: s-maj=20.4km s-min=6.5km az=165.0*
*AEIC **11** 04:27:44±1.1, 52.°2N±0.°1×171.°74W±0.°07, h49km±8km, ML2.9, Error ellipse: s-maj=20.8km s-min=4.4km az=166.0*
ISC 11 04:27:44.5±1.4, 52.°0N±0.°2×171.°65W±0.°05, h65km±15km, n38, σ0°81/37, mb3.2/3, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOSE	**Korovin Southe**	**1.52**	**284**		**Pn**	**04 28 09.5**	**0.0**
KOFP	**Korovin Flat P**	**1.54**	**281**		**Pn**	**04 28 09.6**	**-0.2**
ATKA	**Atka Island**	**1.59**	**278**		**Pn**	**04 28 09.7**	**-0.7**
ATKA					**Sn**	**04 28 28.8**	**-1.1**
KOKL	**Mount Kliuchef**	**1.61**	**283**		**Pn**	**04 28 10.7**	**0.0**
NIKH	**Nikolski High**	**1.96**	**59**		**Pn**	**04 28 14.7**	**-0.7**
NIKH					**Sn**	**04 28 39.1**	**+0.1**
OKSP	**Okmok Steeple**	**2.40**	**57**		**Pn**	**04 28 21.6**	**+0.2**
OKFG	**Magazine Ridge**	**2.68**	**57**		**Pn**	**04 28 25.8**	**+0.7**
OKFG					**Sn**	**04 28 57.2**	**+0.9**
GSMY	**Great Sitkin M**	**2.73**	**273**		**Pn**	**04 28 26.1**	**+0.3**
GSMY					**Sn**	**04 28 58.2**	**+0.6**
GSTR	**Great Sitkin T**	**2.73**	**274**		**Sn**	**04 28 59.8**	**+2.1**
GSTR	**Great Sitkin T**	**2.73**	**274**		**Pn**	**04 28 26.5**	**+0.7**
GSTD	**Great Sitkin T**	**2.78**	**273**		**Pn**	**04 28 26.8**	**+0.2**
GSTD					**Sn**	**04 28 58.7**	**-0.3**
ADK	**Adak**	**3.12**	**270**		**Pn**	**04 28 31.6**	**+0.4**
KIRH	**Kanaga Island**	**3.37**	**270**		**Pn**	**04 28 35.3**	**+0.6**
KINC	**Kanaga Island**	**3.39**	**271**		**Pn**	**04 28 35.4**	**+0.5**
KIKV	**Kanaga Island**	**3.42**	**270**		**Pn**	**04 28 35.8**	**+0.5**
KIMD	**Kanaga Island**	**3.47**	**268**		**Pn**	**04 28 36.4**	**+0.4**
MREP	**Makushin Rep't**	**3.48**	**57**		**Pn**	**04 28 36.6**	**+0.5**
MSW	**Makushin Switc**	**3.51**	**55**		**Pn**	**04 28 37.0**	**+0.5**
MNAT	**Makushin Natee**	**3.55**	**56**		**Pn**	**04 28 37.4**	**+0.4**
MTBL	**Makushin Table**	**3.59**	**55**		**Pn**	**04 28 38.4**	**+0.7**
UNV	**Unalaska Valle**	**3.62**	**57**		**Pn**	**04 28 38.6**	**+0.6**
AKRB	**Akutan Reef Bi**	**3.98**	**55**		**Pn**	**04 28 44.0**	**+1.0**
AKBBA	**Akutan Broad B**	**4.04**	**56**		**Pn**	**04 28 44.5**	**+0.8**
AKGG	**Akutan Green G**	**4.06**	**55**		**Pn**	**04 28 44.9**	**+1.0**
AKUT	**Akutan**	**4.14**	**57**	Pn	**Pn**	**04 28 44.8**	**-0.2**
AKSA	**Akutan Strait**	**4.18**	**57**		**Pn**	**04 28 46.1**	**+0.5**
SPIA	**Saint Paul Isl**	**5.25**	**8**		**Pn**	**04 29 00.2**	**-0.1**
CNBA	**Chernabura Isl**	**7.74**	**64**	Pn	**Pn**	**04 29 33.2**	**-1.0**
ILAR	**Eielson Array**	**18.06**	**35**	P	**P**	**04 31 50.3**	**+0.1**
	0.0nm,0.3s,baz=238,slow=8.4,SNR=1.9						
YKA	**Yellowknife Ar**	**31.54**	**48**	P	**P**	**04 34 00.5**	**+0.5**
	0.1nm,0.4s,baz=274,slow=7.4,SNR=4.7						
H11N2	**WAKE ISLAND Hy**	**36.31**	**216**	T	T	05 13 16.2	
	baz=22,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**36.32**	**216**	T	T	05 13 16.9	
	baz=22,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy**	**36.33**	**216**	T	T	05 13 19.6	
	baz=22,slow=76,SNR=8.8						
H11S1	**WAKE ISLAND Hy**	**37.51**	**215**	T	T	05 14 49.5	
	baz=22,slow=76,SNR=8.5						
H11S2	**WAKE ISLAND Hy**	**37.52**	**215**	T	T	05 14 45.2	
	baz=22,slow=76,SNR=8.6						
H11S3	**WAKE ISLAND Hy**	**37.52**	**215**	T	T	05 14 50.0	
	baz=22,slow=76,SNR=9.0						
TXAR	**Lajitas Array**	**54.16**	**87**	P	**P**	**04 37 00.9**	**-2.2**
	0.1nm,0.4s,baz=295,slow=6.6,SNR=1.9						
ASAR	**Alice Springs**	**89.09**	**228**	P	**P**	**04 40 33.2**	**+0.9**
	0.4nm,0.6s,baz=31,slow=5.1,SNR=6.0						

*IDC **11** 04:35:23.5±2.5, 3.°72N×95.°55E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/51, mbtmp3.6/6, ML3.1/1, MS2.8/1, Ms1 2.8/1, ms1mx2.4/42, Error ellipse: s-maj=87.5km s-min=23.5km az=50.0*
ISC 11 04:35:29.3±2.0, 3.°8N±0.°3×95.°7E±0.°2, h35km, n9, σ0°86/7, mb3.6/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.39**	**107**	P	**Pn**	**04 36 20.9**	**+1.2**
	1.7nm,0.3s,baz=360,slow=6.7,SNR=4.9						
PSI				Sn	**Sn**	**04 36 58.0**	**-0.8**
	1.9nm,0.3s,baz=180,slow=19,SNR=3.8						
PSI				LR	LR	04 37 38.4	
	comp=Z,119nm,18.1s,baz=269,slow=38						
H08S2	**Diego Garcia H**	**25.79**	**244**	T	T	05 08 53.8	
	baz=61,slow=75,SNR=11						
H08S3	**Diego Garcia H**	**25.79**	**244**	T	T	05 08 36.6	
	baz=61,slow=75,SNR=15						
H08S1	**Diego Garcia H**	**25.81**	**244**	T	T	05 08 22.6	
	baz=61,slow=75,SNR=1.2						
MKAR	**Makanchi Array**	**44.36**	**347**	P	**P**	**04 43 35.9**	**-0.3**
	0.2nm,0.4s,baz=154,slow=9.6,SNR=5.7						
WRA	**Warramunga Arr**	**44.71**	**123**	P	**P**	**04 43 38.7**	**-0.7**
	0.6nm,0.6s,baz=302,slow=9.2,SNR=8.8						
SONM	**Songino Array**	**44.81**	**10**	P	**P**	**04 43 39.7**	**-0.3**
	0.6nm,0.7s,baz=178,slow=9.9,SNR=2.4						
ZALV	**Zalesovo Beam**	**50.76**	**352**	P	**P**	**04 44 25.8**	**0.0**
	0.9nm,0.5s,baz=170,slow=7.5,SNR=4.4						
ARCES	**ARCESS Array B**	**79.58**	**340**	P	**P**	**04 47 32.9**	**+0.4**
	0.3nm,0.4s,baz=92,slow=6.3,SNR=5.6						

*IDC **11** 05:01:39.6±1.2, 20.°31S×70.°90W, h0km, mb3.7/3, mb1 4.0/7, mb1mx3.8/22, mbtmp3.9/7, ML3.8/4, MS3.1/4, Ms1 3.1/4, ms1mx2.9/24, Error ellipse: s-maj=36.5km s-min=22.4km az=84.0*
*NEIC **11** 05:01:40.4±0.7, 20.°60S±0.°04×70.°90W±0.°02, h16km±4km, mb3.7/3, Mwr4.0/44, ML4.2(GUC), Error ellipse: s-maj=5.4km s-min=1.9km az=188.0*
*NEIC **11** 05:01:40.3, 20.°61S×70.°91W, h18km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr0.64; Mθθ0.06; Mϕϕ-0.70; Mrθ0.07; Mrϕ0.29; Mθϕ-0.80; Fault plane solution: M₀1.09000×10¹⁵ NP1:φs172.69000°, δ69.58000°, λ99.99000°. NP2:φs325.92000°, δ22.64000°, λ65.03000°. Principal axes: T 1.0215, Plg64.0000°, Azm99.0000°; N 0.1256, Plg9.0000°, Azm349.0000°; P -1.1471, Plg24.0000°, Azm255.0000°;*
*GUC **11** 05:01:42.1±0.7, 20.°60S×70.°83W, h43km±2km, ML4.1*
ISC 11 05:01:40.0±1.9, 20.°61S±0.°03×70.°92W±0.°05, h12km±11km, n62, σ0°79/71, 12C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA01	**Diego Aracena**	**0.69**	**86**	⇓*e*P	**Pb**	**05 01 53.7**	**-0.3**
TA01				*e*S	**Sg**	**05 02 02.5**	**0.0**
TA01	**Diego Aracena**	**0.69**	**86**		**Pb**	**05 01 53.7**	**-0.3**
TA01				Sg	**Sg**	**05 02 02.5**	**0.0**
PATCX	**Punta Patache**	**0.74**	**106**	⇓*e*P	**Pb**	**05 01 54.9**	**-0.1**
PATCX				*e*S	**Sb**	**05 02 04.7**	**-0.4**
PATCX				IAML		05 02 07.0	
	comp=E,14μm,0.6s						
PATCX	**Punta Patache**	**0.74**	**106**		**Pb**	**05 01 54.9**	**-0.1**
PATCX				Sg	**Sb**	**05 02 04.8**	**-0.4**
TA02	**Huaiquique**	**0.81**	**65**	⇑*i*P	**Pb**	**05 01 56.0**	**0.0**
TA02				*e*S	**Sb**	**05 02 06.3**	**-0.7**
TA02				IAML		05 02 07.0	
	comp=E,30μm,0.4s						
TA02				IAML		05 02 07.4	
	comp=N,29μm,0.8s						
PB02	**IPOC Station P**	**1.19**	**127**	*i* P	**Pn**	**05 02 02.4**	**-0.2**
PB02				*e*S	**Sb**	**05 02 17.2**	**-0.7**
PB02				IAML		05 02 23.9	
	comp=E,13μm,0.6s						
PSGC	**Pisagua**	**1.25**	**37**	⇑*i*P	**Pn**	**05 02 03.2**	**-0.3**
PSGC				*e*S	**Sb**	**05 02 18.7**	**-1.1**
PSGC				IAML		05 02 24.4	
	comp=E,5μm,0.9s						
PSGCX	**Pisagua**	**1.25**	**37**		**Pn**	**05 02 03.2**	**-0.3**
PSGCX					**Sn**	**05 02 19.8**	**-0.5**
PB01	**IPOC Station P**	**1.40**	**108**	⇑*i*P	**Pn**	**05 02 05.3**	**-0.2**
PB01				*e*S	**Sn**	**05 02 23.1**	**-0.9**
PB01				IAML		05 02 24.7	
	comp=N,11μm,0.5s						
PB01	**IPOC Station P**	**1.40**	**108**		**Pn**	**05 02 05.2**	**-0.4**
PB01					**Pb**	**05 02 05.5**	**-0.8**
PB01				Sn	**Sn**	**05 02 23.5**	**-0.6**
PB11	**IPOC Station P**	**1.45**	**55**	⇑*i*P	**Pn**	**05 02 05.9**	**-0.4**
PB11				*e*S	**Sn**	**05 02 24.5**	**-0.9**
PB11	**IPOC Station P**	**1.45**	**55**		**Pn**	**05 02 05.8**	**-0.5**
PB07	**IPOC Station P**	**1.47**	**139**	⇑*i*P	**Pn**	**05 02 06.4**	**-0.1**
PB07				*e*S	**Sn**	**05 02 25.3**	**-0.5**
PB07				IAML		05 02 33.1	
	comp=E,3μm,0.4s						
PB07	**IPOC Station P**	**1.47**	**139**		**Pn**	**05 02 06.3**	**-0.3**
PB08	**IPOC Station P**	**1.72**	**75**	⇑*i*P	**Pn**	**05 02 10.0**	**-0.1**
PB08				*i* S	**Sn**	**05 02 31.8**	**-0.4**
PB08				IAML		05 02 35.6	
	comp=N,2μm,0.2s						
PB08	**IPOC Station P**	**1.72**	**75**		**Pn**	**05 02 10.3**	**+0.1**
PB03	**IPOC Station P**	**1.79**	**143**	⇑*i*P	**Pn**	**05 02 10.9**	**-0.1**
PB03				*i* S	**Sn**	**05 02 34.3**	**+0.5**
PB03				IAML		05 02 42.1	
	comp=E,1μm,

SART					IAML		05 07 06.0		
	comp=N,6μm,0.3s								
SART					IAML		05 07 06.0		
	comp=E,9μm,0.4s								
KRBG	**Karabiga-Canak**	**0.33**	**144**	PG	**Pg**	**05 07 07.9**	**+0.2**		
KRBG				SG	**Sg**	**05 07 12.8**	**+0.6**		
LPK	**Lapseki**	**0.36**	**217**	PG	**Pb**	**05 07 08.5**	**-0.8**		
LPK				SG	**Sb**	**05 07 13.9**	**-0.9**		
ERIK	**Erikli-Kesan**	**0.40**	**272**	PG	**Pg**	**05 07 09.1**	**0.0**		
ERIK				SG	**Sg**	**05 07 14.9**	**+0.4**		
MRMT	**Marmara Adasi**	**0.42**	**97**	PG	**Pg**	**05 07 08.8**	**-0.7**		
MRMT				SG	**Sg**	**05 07 15.2**	**0.0**		
TKR	**Tekirdag**	**0.50**	**48**	PG	**Pg**	**05 07 10.6**	**-0.3**		
TKR				SG	**Sg**	**05 07 17.6**	**0.0**		
GELI	**Tayfur-Gelibol**	**0.51**	**239**	PG	**Pg**	**05 07 10.7**	**-0.3**		
GELI				SG	**Sb**	**05 07 18.5**	**-0.6**		
KNL	**Balıkesir**	**0.53**	**136**	*i* P	**Pb**	**05 07 11.8**	**-0.4**		
KNL				*i* S	**Sg**	**05 07 19.1**	**+0.5**		
KNL				IAML		05 07 20.0			
	comp=E,3μm,0.4s								
KNL				IAML		05 07 26.0			
	comp=N,1μm,0.4s								
UKOP	**Uzunkopru-Edir**	**0.56**	**327**	PG	**Pb**	**05 07 12.4**	**-0.4**		
UKOP				SG	**Sb**	**05 07 20.0**	**-0.8**		
ENEZ	**Enez**	**0.68**	**277**	PG	**Pg**	**05 07 14.0**	**-0.3**		
ENEZ				SG	**Sb**	**05 07 23.8**	**-0.3**		
EDC	**Edincik**	**0.70**	**116**	PG	**Pg**	**05 07 14.5**	**-0.1**		
CRLT	**Corlu**	**0.70**	**48**	PG	**Pb**	**05 07 14.7**	**-0.5**		
GONE	**Gonen-Balikesi**	**0.78**	**141**	PG	**Pb**	**05 07 16.3**	**-0.2**		
BOTS	**Marmara Eregli**	**0.79**	**65**	PG	**Pg**	**05 07 16.0**	**-0.3**		
ALN	**Alexandroupoli**	**0.80**	**288**	P	**Pg**	**05 07 15.9**	**-0.5**		
ALN				S	**Sg**	**05 07 26.4**	**-0.5**		
	comp=N,2μm,0.4s								
ALN	**Alexandroupoli**	**0.80**	**288**	P	**Pg**	**05 07 16.1**	**-0.4**		
ALN				S	**Sg**	**05 07 26.5**	**-0.4**		
ALN				AML	AML	05 07 26.9			
	comp=N,3977μm,0.4s								
ALN				AML	AML	05 07 27.1			
	comp=E,3081μm,0.5s								
ALN	**Alexandroupoli**	**0.80**	**288**	PG	**Pg**	**05 07 16.0**	**-0.5**		
BAYC	**CANAKKALE_Bayr**	**0.99**	**203**	*i* P	**Pg**	**05 07 19.4**	**-0.8**		
BAYC				*i* S	**Sg**	**05 07 32.6**	**-0.5**		
BAYC				IAML		05 07 36.0			
	comp=E,655nm,0.3s								
BAYC				IAML		05 07 38.0			
	comp=N,502nm,0.5s								
GADA	**Gvkgeada**	**0.99**	**242**	PG	**Pg**	**05 07 19.6**	**-0.6**		
EZN	**Ezine**	**1.00**	**214**	PG	**Pb**	**05 07 20.2**	**+0.1**		
BALY	**Balya**	**1.02**	**154**	*i* P	**Pg**	**05 07 20.1**	**-0.6**		
BALY				*i* S	**Sg**	**05 07 33.6**	**-0.4**		
BALY				IAML		05 07 36.0			
	comp=N,1μm,0.7s								
BALY				IAML		05 07 36.0			
	comp=E,1μm,0.4s								
PHSR	**Pinarhisar**	**1.04**	**20**	PG	**Pg**	**05 07 20.5**	**-0.6**		
SLVT	**Silivri**	**1.05**	**57**	PG	**Pg**	**05 07 20.9**	**-0.4**		
BOZC	**Bozcaada**	**1.11**	**223**	PN	**Pb**	**05 07 22.2**	**0.0**		
BOZC	**Bozcaada**	**1.11**	**223**	*i* P	**Pg**	**05 07 21.4**	**-1.1**		
BOZC				*i* P	**Pb**	**05 07 22.0**	**-0.2**		
BOZC				*i* S	**Sg**	**05 07 36.5**	**-0.5**		
BOZC				IAML		05 07 39.0			
	comp=N,1μm,0.4s								
BOZC				IAML		05 07 39.0			
	comp=N,1μm,0.4s								
BOZC				IAML		05 07 39.0			
	comp=E,2μm,0.5s								
KIRK	**Kırklareli**	**1.12**	**2**	*i* P	**Pg**	**05 07 21.5**	**-1.2**		
KIRK				*i* S	**Sg**	**05 07 36.0**	**-1.3**		
KIRK				IAML		05 07 38.0			
	comp=N,550nm,0.4s								
ELBA	**Catalca**	**1.16**	**65**	*i* P	**Pg**	**05 07 22.4**	**-1.0**		
ELBA				*i* S	**Sg**	**05 07 36.6**	**-1.8**		
ELBA				IAML		05 07 40.0			
	comp=N,890nm,0.2s								
ELBA				IAML		05 07 40.0			
	comp=E,544nm,0.1s								
SMTH	**Samothraki Isl**	**1.17**	**261**	P	**Pg**	**05 07 22.2**	**-1.3**		
SMTH				S	**Sb**	**05 07 38.4**	**+0.2**		
SMTH	**Samothraki Isl**	**1.17**	**261**	P	**Pg**	**05 07 22.2**	**-1.3**		
SMTH				S	**Sb**	**05 07 38.7**	**+0.5**		
SMTH				AML	AML	05 07 39.3			
	comp=E,3382μm,0.4s								
SMTH				AML	AML	05 07 40.8			
	comp=N,4337μm,0.4s								
BALB	**Balikesir**	**1.20**	**148**	PN	**Pb**	**05 07 23.4**	**-0.3**		
EDRB	**Edirne**	**1.21**	**349**	PN	**Pg**	**05 07 23.4**	**-0.9**		
RDO	**Rodhopi**	**1.24**	**294**	P	**Pb**	**05 07 23.7**	**-0.7**		
RDO				S	**Sn**	**05 07 41.6**	**+0.9**		
RDO	**Rodhopi**	**1.24**	**294**	P	**Pb**	**05 07 23.7**	**-0.7**		
RDO				S	**Sg**	**05 07 40.4**	**-0.7**		
RDO				AML	AML	05 07 43.0			
	comp=E,2861μm,0.5s								
RDO				AML	AML	05 07 43.8			
	comp=N,3422μm,0.4s								
RDO	**Rodhopi**	**1.24**	**294**	PN	**Pb**	**05 07 23.9**	**-0.4**		
CTYL	**Yalikoy Yolu**	**1.25**	**49**	PN	**Pn**	**05 07 24.0**	**-0.2**		
CTKS	**Kestanelik-??a**	**1.25**	**62**	PN	**Pn**	**05 07 24.0**	**-0.2**		
AVCI	**Avcilar-stanb**	**1.32**	**75**	PN	**Pn**	**05 07 25.0**	**-0.1**		
AYVA	**Ayvalik**	**1.38**	**192**	*i* P	**Pb**	**05 07 26.5**	**-0.1**		
AYVA				*i* S	**Sg**	**05 07 44.9**	**-0.4**		
STEP	**BALIKESIR_Sava**	**1.38**	**158**	*i* P	**Pn**	**05 07 26.1**	**0.0**		
STEP				*i* S	**Sb**	**05 07 44.1**	**-0.1**		
STEP				IAML		05 07 48.0			
	comp=E,470nm,0.3s								
STEP				IAML		05 07 51.0			
	comp=N,498nm,0.4s								
ARMT	**Armutlu**	**1.39**	**93**	PN	**Pn**	**05 07 26.1**	**0.0**		
HVHR	**Bakirkoy-Istan**	**1.40**	**77**	PN	**Pn**	**05 07 26.3**	**0.0**		
BGKT	**Bogazkoy**	**1.41**	**68**	PN	**Pn**	**05 07 26.4**	**0.0**		
MDNY	**Mudanya-Bursa**	**1.43**	**101**	PN	**Pn**	**05 07 26.9**	**+0.2**		
DURS	**Dursunbey**	**1.52**	**133**	*i* P	**Pn**	**05 07 27.9**	**-0.2**		
DURS				*i* S	**Sb**	**05 07 49.2**	**+0.8**		
DURS				IAML		05 07 51.0			
	comp=N,1μm,0.6s								
DURS				IAML		05 07 51.0			
	comp=E,928nm,0.2s								
PRK	**Paraskevi**	**1.53**	**203**	P	**Pb**	**05 07 29.6**	**+0.4**		
PRK				S	**Sg**	**05 07 50.5**	**+0.2**		
	comp=E,2μm,0.8s								
PRK	**Paraskevi**	**1.53**	**203**	P	**Pb**	**05 07 28.9**	**-0.3**		
PRK				AML	AML	05 07 52.3			
	comp=N,6361μm,0.7s								
PRK				AML	AML	05 07 55.2			
	comp=E,3239μm,0.9s								
ORLT	**Orhaneli**	**1.54**	**113**	PN	**Pn**	**05 07 28.4**	**+0.1**		
KDZ	**Kurdzhali**	**1.58**	**309**	*i* P	**Pn**	**05 07 28.6**	**-0.2**		
KDZ				S	**Sn**	**05 07 48.5**	**-0.6**		
KDZ	**Kurdzhali**	**1.58**	**309**	PN	**Pn**	**05 07 29.2**	**+0.4**		
ISK	**Istanbul-Kandi**	**1.58**	**74**	PN	**Pn**	**05 07 28.8**	**0.0**		
KAVV	**Kandilli-Istan**	**1.58**	**74**	PN	**Pn**	**05 07 28.7**	**-0.1**		
BUY	**Buyukada**	**1.59**	**82**	*i* P	**Pn**	**05 07 27.9**	**-0.9**		
BUY				*i* S	**Sn**	**05 07 47.6**	**-1.6**		
BUY				IAML		05 07 57.0			
	comp=N,373nm,0.6s								
BUY				IAML		05 07 59.0			
	comp=E,181nm,0.4s								
DKL	**Dikili**	**1.59**	**184**	PN	**Pn**	**05 07 29.1**	**+0.3**		
DST	**Dursunbey**	**1.60**	**131**	PN	**Pn**	**05 07 29.2**	**+0.1**		
LIA	**Limnos Island**	**1.61**	**243**	P	**Pn**	**05 07 28.6**	**-0.6**		
LIA				S	**Sg**	**05 07 52.0**	**-1.0**		
	comp=E,340nm,0.5s								
LIA	**Limnos Island**	**1.61**	**243**	P	**Pn**	**05 07 28.8**	**-0.4**		
LIA				AML	AML	05 07 54.5			
	comp=N,743μm,0.4s								
LIA				AML	AML	05 07 57.1			
	comp=E,661μm,0.6s								
KLYT	**Kilyos**	**1.63**	**68**	PN	**Pn**	**05 07 29.4**	**0.0**		
GEMT	**Gemlik**	**1.65**	**97**	PN	**Pn**	**05 07 30.1**	**+0.4**		
ULDT	**Uludag**	**1.68**	**107**	*i* P	**Pb**	**05 07 31.7**	**-0.2**		
ULDT				*i* S	**Sb**	**05 07 53.4**	**+0.4**		
ULDT				IAML		05 07 55.0			
	comp=E,446nm,0.5s								
ULDT				IAML		05 07 56.0			
	comp=N,595nm,0.5s								
ZEDA	**zmir-Bergama**	**1.69**	**179**	*i* P	**Pn**	**05 07 31.1**	**+0.8**		
ZEDA				*i* S	**Sb**	**05 07 54.0**	**+0.9**		
ZEDA				IAML		05 07 56.0			
	comp=N,620nm,0.4s								
ZEDA				IAML		05 07 56.0			
	comp=E,285nm,0.6s								
IGD	**Bursa**	**1.69**	**103**	*i* P	**Pn**	**05 07 29.6**	**-0.7**		
IGD				IAML		05 07 57.0			
	comp=E,171nm,0.4s								
IGD				IAML		05 07 57.0			
	comp=N,206nm,0.3s								
SIGR	**SIGRI**	**1.71**	**213**	P	**Pn**	**05 07 31.5**	**+1.0**		
SIGR				S	**Sb**	**05 07 54.7**	**+1.0**		
SIGR	**SİGRI**	**1.71**	**213**	P	**Pn**	**05 07 30.2**	**-0.3**		
SIGR				AML	AML	05 07 56.0			
	comp=E,2377μm,0.5s								
SIGR				AML	AML	05 07 56.4			
	comp=N,2814μm,0.5s								
SIGR	**SIGRI**	**1.71**	**213**	PN	**Pn**	**05 07 31.1**	**+0.6**		
THAS	**Thassos island**	**1.77**	**269**	P	**Pn**	**05 07 30.7**	**-0.7**		
THAS	**Thassos island**	**1.77**	**269**	P	**Pn**	**05 07 30.6**	**-0.8**		
YLV	**Yalova**	**1.77**	**92**	PN	**Pn**	**05 07 32.0**	**+0.5**		
AKHS	**Akhisar**	**1.87**	**161**	*i* P	**Pn**	**05 07 32.6**	**-0.2**		
AKHS				IAML		05 08 04.0			
	comp=E,78nm,0.3s								
KAVA	**Kavala**	**1.95**	**281**	P	**Pn**	**05 07 33.8**	**0.0**		
KAVA				S	**Sn**	**05 07 59.3**	**+1.1**		
	comp=E,342nm,0.3s								
KAVA	**Kavala**	**1.95**	**281**	P	**Pn**	**05 07 33.2**	**-0.6**		
KAVA				AML	AML	05 08 05.7			
	comp=E,525μm,0.6s								
KAVA				AML	AML	05 08 06.7			
	comp=N,784μm,0.3s								
HRT	**Hereke**	**2.00**	**84**	PN	**Pn**	**05 07 34.9**	**+0.3**		
SILT	**Sile**	**2.03**	**75**	PN	**Pn**	**05 07 35.1**	**+0.2**		
KVLA	**Kavala**	**2.04**	**279**	P	**Pn**	**05 07 35.2**	**+0.1**		
RZN	**Rozhen**	**2.04**	**301**	*i* P	**Pb**	**05 07 38.7**	**+0.7**		
RZN				S	**Sb**	**05 08 03.7**	**+0.4**		
DEMI	**Demirci**	**2.06**	**141**	*i* P	**Pn**	**05 07 35.8**	**+0.3**		
DEMI				IAML		05 08 07.0			
	comp=N,278nm,0.6s								
DEMI				IAML		05 08 09.0			
	comp=E,455nm,0.4s								
ADVT	**Abdulvahap**	**2.06**	**95**	PN	**Pn**	**05 07 35.9**	**+0.5**		
SIMA	**Simav-Kutahya**	**2.17**	**136**	PN	**Pn**	**05 07 37.4**	**+0.5**		
TVSB	**Tavsanli**	**2.21**	**122**	PN	**Pn**	**05 07 38.3**	**+0.7**		
PLD	**Plovdiv**	**2.28**	**310**	*i* P	**Pn**	**05 07 38.3**	**-0.1**		
URLA	**Izmir**	**2.32**	**189**	*i* P	**Pn**	**05 07 38.6**	**-0.4**		
URLA				*i* S	**Sg**	**05 08 15.6**	**0.0**		
URLA				IAML		05 08 22.0			
	comp=E,64nm,0.5s								
URLA				IAML		05 08 29.0			
	comp=N,74nm,0.6s								
OUR	**Ouranopolis**	**2.36**	**263**	P	**Pn**	**05 07 38.5**	**-1.0**		
OUR	**Ouranopolis**	**2.36**	**263**	P	**Pn**	**05 07 38.4**	**-1.0**		
CHOS	**Chios island**	**2.39**	**199**	P	**Pn**	**05 07 40.5**	**+0.5**		
CHOS	**Chios island**	**2.39**	**199**	P	**Pn**	**05 07 39.8**	**-0.2**		
CHOS				AML	AML	05 08 24.2			
	comp=E,990μm,0.3s								
CHOS				AML	AML	05 08 25.0			
	comp=N,555μm,0.3s								
PSRA	**Psara**	**2.40**	**209**	P	**Pn**	**05 07 40.2**	**+0.1**		
KAND	**Kocaeli-Kandir**	**2.43**	**79**	*i* P	**Pn**	**05 07 39.6**	**-0.7**		
KAND				IAML		05 08 24.0			
	comp=N,110nm,0.4s								
KAND				IAML		05 08 27.0			
	comp=E,90nm,0.6s								
ELND	**Elena**	**2.43**	**339**	⇓P	**Pn**	**05 07 40.2**	**-0.3**		
ELND				⇑S	**Sn**	**05 08 12.0**	**+1.9**		
GDZ	**Gediz**	**2.44**	**129**	*i* P	**Pn**	**05 07 41.3**	**+0.5**		
GDZ				IAML		05 08 23.0			
	comp=E,80nm,0.3s								
GDZ				IAML		05 08 24.0			
	comp=N,86nm,0.5s								
MANT	**Manisa**	**2.46**	**151**	*i* P	**Pn**	**05 07 41.2**	**+0.1**		
MANT				IAML		05 08 21.0			
	comp=E,79nm,0.3s								
MANT				IAML		05 08 24.0			
	comp=N,69nm,0.5s								
USAK	**Uak-Merkez**	**2.47**	**141**	*i* P	**Pn**	**05 07 41.4**	**+0.3**		
USAK				IAML		05 08 11.0			
	comp=E,55nm,1.1s								
USAK				IAML		05 08 27.0			
	comp=N,42nm,0.3s								
GEYV	**SAKARYA_Geyve**	**2.48**	**93**	*i* P	**Pn**	**05 07 42.8**	**+1.7**		
GEYV				IAML		05 08 27.0			
	comp=E,83nm,0.6s								
GEYV				IAML		05 08 37.0			
	comp=N,55nm,1.0s								
NVR	**Nevrokopi**	**2.51**	**287**	P	**Pn**	**05 07 41.5**	**0.0**		
NVR	**Nevrokopi**	**2.51**	**287**	P	**Pn**	**05 07 41.2**	**-0.3**		
NVR				AML	AML	05 08 23.5			
	comp=E,533μm,0.7s								
NVR				AML	AML	05 08 24.2			
	comp=N,477μm,0.4s								
DGB	**zmir**	**2.60**	**183**	*i* P	**Pn**	**05 07 42.1**	**-0.8**		
DGB				*i* S	**Sg**	**05 08 24.1**	**-0.6**		
DGB				IAML		05 08 26.0			
	comp=E,105nm,0.6s								
DGB				IAML		05 08 27.0			
	comp=N,99nm,0.7s								
SRS	**Serrai**	**2.66**	**281**	P	**Pn**	**05 07 43.0**	**-0.6**		
SRS	**Serrai**	**2.66**	**281**	P	**Pn**	**05 07 43.0**	**-0.6**		
MMB	**Musomiste**	**2.67**	**291**	*i* P	**Pb**	**05 07 50.0**	**+1.2**		
MMB				S	**Sg**	**05 08 24.8**	**-2.1**		
PAIG	**Paliouri**	**2.67**	**255**	P	**Pn**	**05 07 42.5**	**-1.3**		
BORA	**Eskisehir**	**2.72**	**105**	*i* P	**Pn**	**05 07 44.3**	**-0.3**		
BORA				IAML		05 08 33.0			
	comp=N,44nm,0.6s								
BORA				IAML		05 08 33.0			
	comp=E,50nm,0.5s								
SZH	**Strazhica**	**2.74**	**343**	*i* P	**Pn**	**05 07 44.7**	**0.0**		
PLG	**Polygyros**	**2.76**	**265**	P	**Pn**	**05 07 44.5**	**-0.5**		
AOS	**Alonnisos**	**2.85**	**240**	P	**Pn**	**05 07 46.2**	**0.0**		
AOS	**Alonnisos**	**2.85**	**240**	P	**Pn**	**05 07 44.9**	**-1.3**		
PGB	**Panagyurishte**	**2.87**	**312**	*i* P	**Pb**	**05 07 53.5**	**+1.4**		
PGB				S	**Sb**	**05 08 27.6**	**+0.4**		
SAHE	**Sakarya_HENDEK**	**2.90**	**85**	*i* P	**Pn**	**05 07 45.9**	**-1.0**		
SAHE				IAML		05 08 37.0			
	comp=E,42nm,0.7s								
RAZG	**Razgrad**	**2.93**	**352**	⇓P	**Pn**	**05 07 47.6**	**+0.2**		
SMG	**Samos**	**2.95**	**183**	P	**Pn**	**05 07 47.2**	**-0.4**		
GCAM	**G?zelcaml?**	**2.96**	**177**	*i* P	**Pn**	**05 07 47.0**	**-0.7**		
GCAM				IAML		05 08 35.0			
	comp=E,42nm,0.7s								
GCAM				IAML		05 08 48.0			
	comp=N,44nm,1.1s								
KHAL	**Karahalli**	**2.97**	**140**	*i* P	**Pn**	**05 07 48.5**	**+0.6**		
KHAL				IAML		05 08 44.0			
	comp=E,53nm,0.7s								
KHAL				IAML		05 08 44.0			
	comp=N,38nm,0.5s								
HORT	**Hortiatis**	**3.00**	**270**	P	**Pn**	**05 07 48.1**	**-0.3**		
BTAS	**Taskesti**	**3.01**	**90**	*i* P	**Pn**	**05 07 48.4**	**-0.2**		
BTAS				IAML		05 08 46.0			
	comp=N,59nm,0.5s								
BTAS				IAML		05 08 55.0			
	comp=E,58nm,0.4s								
KYMI	**Kymi, Euboea I**	**3.04**	**229**	P	**Pn**	**05 07 48.7**	**-0.1**		
AYDN	**Tasoluk**	**3.06**	**167**	*i* P	**Pn**	**05 07 48.8**	**-0.4**		
AYDN				IAML		05 08 41.0			
	comp=N,24nm,0.5s								
AYDN				IAML		05 08 45.0			
	comp=E,26nm,0.7s								
AFYO	**Afyonkarahisar**	**3.13**	**126**	*i* P	**Pn**	**05 07 49.0**	**-1.2**		
AFYO				IAML		05 08 51.0			
	comp=N,205nm,0.7s								
AFYO				IAML		05 08 51.0			
	comp=E,192nm,0.6s								
SKIA	**Skiathos**	**3.13**	**243**	P	**Pn**	**05 07 48.8**	**-1.3**		
KNT	**Kendrikon**	**3.18**	**280**	P	**Pn**	**05 07 50.9**	**+0.1**		
KNT	**Kendrikon**	**3.18**	**280**	P	**Pn**	**05 07 51.2**	**+0.4**		
KKB	**Krupnik**	**3.22**	**293**	*i* P	**Pb**	**05 07 59.4**	**+1.3**		
KKB				S	**Sb**	**05 08 40.1**	**+2.9**		
PLVB	**Pleven**	**3.27**	**327**	⇓P	**Pn**	**05 07 51.6**	**-0.4**		
PLVB				⇑S	**Sn**	**05 08 33.2**	**+2.5**		
MRKA	**Markates**	**3.30**	**235**	P	**Pn**	**05 07 51.7**	**-0.8**		
KZIL	**AFYON_Kizioren**	**3.39**	**134**	*i* P	**Pn**	**05 07 54.2**	**+0.4**		
KZIL				*i* S	**Sg**	**05 08 47.5**	**-2.5**		
KZIL				IAML		05 08 55.0			
	comp=N,75nm,0.6s								
KZIL				IAML		05 08 57.0			
	comp=E,57nm,0.7s								
VAY	**Valandovo**	**3.45**	**283**	*e*Pn	**Pn**	**05 07 55.2**	**+0.7**		
VAY				*e*Sg	**Sg**	**05 08 50.7**	**-1.1**		
VAY	**Valandovo**	**3.45**	**283**	*e*Pn	**Pn**	**05 07 55.2**	**+0.7**		
VAY				*e*Sg	**Sg**	**05 08 50.7**	**-1.1**		
VTS	**Vitosha**	**3.46**	**306**	⇑P	**Pn**	**05 07 54.8**	**+0.1**		
VTS	**Vitosha**	**3.46**	**306**	*e*P	**Pn**	**05 07 55.6**	**+0.8**		
VTS				S	**Sg**	**05 08 48.4**	**-3.8**		
ICOR	**Ion Corvin**	**3.50**	**9**	⇑P	**Pn**	**05 07 54.1**	**-1.1**		
TAVA	**DENIZLI_Tavas**	**3.50**	**155**	*i* P	**Pn**	**05 07 55.2**	**-0.2**		
BOLV	**Bolvadin**	**3.58**	**121**	*i* P	**Pn**	**05 07 56.8**	**+0.3**		
BOLV				*i* S	**Sg**	**05 08 54.3**	**-1.8**		
BOLV				IAML		05 08 58.0			
	comp=E,56nm,0.6s								
BOLV				IAML		05 09 03.0			
	comp=N,61nm,0.4s								
KIBS	**BOLU**	**3.67**	**92**	*i* P	**Pn**	**05 07 58.5**	**+0.9**		
KIBS				IAML		05 09 12.0			
	comp=N,23nm,0.6s								
KIBS				IAML		05 09 18.0			
	comp=E,30nm,1.0s								
APE	**Apeiranthos**	**3.77**	**199**	⇓P	**Pn**	**05 07 58.3**	**-0.7**		
APE				⇑S	**Sn**	**05 08 44.2**	**+0.9**		
BCAM	**Yenicaga**	**3.82**	**86**	*i* P	**Pn**	**05 07 59.5**	**-0.2**		
TIRR	**Tirgusor**	**3.93**	**14**	⇓P	**Pn**	**05 08 01.7**	**+0.6**		
GOLH	**Golhisar**	**3.94**	**149**	*i* P	**Pn**	**05 08 02.1**	**+0.8**		
GOLH				IAML		05 08 51.0			
	comp=N,17nm,0.4s								
GOLH				IAML		05 10 16.0			
	comp=E,26nm,4.1s								
HARR	**Harsova**	**4.08**	**9**	⇑P	**Pn**	**05 08 04.5**	**+1.3**		
FETY	**Fethiye**	**4.32**	**158**	*i* P	**Pn**	**05 08 07.2**	**+0.7**		
BLKB	**Belogradchik**	**4.40**	**314**	⇑S	**Sn**	**05 09 02.1**	**+3.5**		
KDHN	**Kadinhani**	**4.46**	**117**	*i* P	**Pn**	**05 08 08.8**	**+0.3**		
KDHN				IAML		05 09 28.0			
	comp=N,16nm,0.7s								
KDHN				IAML		05 09 34.0			
	comp=E,11nm,0.5s								
CFR	**Carcaliu**	**4.59**	**10**	⇑P	**Pn**	**05 08 10.5**	**+0.4**		
MLR	**Muntele Rosu**	**4.90**	**351**	⇑P	**Pn**	**05 08 16.2**	**+1.7**		
VOIR		**5.00**	**344**	⇑P	**Pn**	**05 08 17.0**	**+1.2**		
ARR	**Arges**	**5.03**	**340**	⇑P	**Pn**	**05 08 17.3**	**+1.1**		
PLOR	**Plostina**	**5.20**	**357**	⇑P	**Pn**	**05 08 19.9**	**+1.4**		
VRI	**Vrincioaia**	**5.21**	**358**	⇑P	**Pn**	**05 08 20.0**	**+1.3**		
HERR	**Herculane**	**5.42**	**323**	⇑P	**Pn**	**05 08 20.6**	**-1.0**		
DOPR	**Dopca**	**5.44**	**348**	⇓P	**Pn**	**05 08 22.7**	**+0.8**		
OZUR		**5.51**	**351**	⇑P	**Pn**	**05 08 23.8**	**+1.0**		
GZR	**Gura Zlata**	**5.67**	**328**	⇑P	**Pn**	**05 08 24.9**	**-0.2**		
MDVR	**Moldovita**	**5.69**	**318**	⇑P	**Pn**	**05 08 25.0**	**-0.3**		
TESR	**Tescani**	**5.86**	**357**	⇓P	**Pn**	**05 08 28.3**	**+0.7**		
BZS	**Buzias**	**6.35**	**323**	⇓P	**Pn**	**05 08 33.2**	**-1.1**		
BURAR	**Bucovina Array**	**7.08**	**350**	⇓P	**Pn**	**05 08 45.8**	**+1.4**		

DJA 11 05:09:40.7±0.4, 8°S±4′×107°E±°, h10km, M3.9/7, mb4.0/1, MLv3.8/7, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNJI	**Cibinong**	**0.78**	**50**	P	Pb	05 09 56.2	-0.1
CNJI				S	Sg	05 10 05.7	-0.1
CISI	**Cisompet, Garu**	**1.30**	**79**	P	Pn	05 10 03.6	-1.4
LEM	**Lembang**	**1.46**	**48**	P	Pn	05 10 07.5	+0.3
PCJI	**Pacitan**	**4.62**	**95**	P	Pn	05 10 51.5	+0.9
PWJI	**Pagerwojo**	**5.23**	**93**	P	Pn	05 10 59.3	+0.3

NEIC ***11*** *05:11:08.7±0.7, 17°.46N±0°.04×101°.60W±0°.02, h22km±5km, Error ellipse: s-maj=6.4km s-min=3.0km az=184.0*
MEX ***11*** *05:11:10.6±0.4, 17°.46N×101°.61W, h5km, MD4.2*
ISC 11 05:11:09.4±1.8, 17°.44N±0°.08×101°.58W±0°.08, h18km±6km, n15, σ1s38/29, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.20**	**33**	*e*P	**Pg**	**05 11 14.3**	**0.0**
ZIIG				*e*S	**Sg**	**05 11 17.5**	**-0.1**
ZIIG	**Zihuatanejo**	**0.20**	**33**		**Pg**	**05 11 14.3**	**0.0**
ZIIG					**Sg**	**05 11 17.5**	**-0.1**
UON	**La Union**	**0.57**	**337**	*e*P	**Pb**	**05 11 20.8**	**-0.1**
UON				*e*S	**Sb**	**05 11 28.9**	**+0.2**
CAIG	**El Cayaco**	**1.31**	**107**	*e*P	**Pn**	**05 11 31.9**	**-1.0**
CAIG				*e*S	**Sb**	**05 11 49.1**	**-1.0**
CAIG	**El Cayaco**	**1.31**	**107**		**Pn**	**05 11 31.9**	**-1.0**
CAIG					**Sb**	**05 11 49.1**	**-1.0**
ARIG	**Puente Sto Nin**	**1.44**

	249nm,0.3s						
AAA	**Alma-Ata**	**0.59**	**218**	⇓	*e*P	**Pb**	**05 30 07.2 -0.3**
	baz=18						
AAA				⇓	*e*S	**Sg**	**05 30 15.9 +0.3**
	baz=18						
AAA	**Alma-Ata**	**0.59**	**218**	⇓	*e*P	**Pb**	**05 30 07.2 -0.3**
AAA	322nm,0.1s				*e*S	**Sg**	**05 30 15.9 +0.3**
	297nm,0.1s						
AAA	**Alma-Ata**	**0.59**	**218**		P	**Pb**	**05 30 07.2 -0.3**
AAA	322nm,0.1s				S	**Sg**	**05 30 15.9 +0.3**
	297nm,0.1s						
ARXS	**Arharly**	**0.62**	**29**	⇓	*e*P	**Pb**	**05 30 06.9 -1.1**
ARXS	121nm,0.1s				*e*S	**Sb**	**05 30 15.5 -0.8**
	301nm,0.1s						
ARXS	**Arharly**	**0.62**	**29**		P	**Pb**	**05 30 06.9 -1.1**
ARXS	121nm,0.1s				S	**Sb**	**05 30 15.5 -0.8**
	301nm,0.1s						
TNSS	**Tian-Shan**	**0.72**	**208**	⇑	*e*P	**Pb**	**05 30 09.1 -0.9**
TNSS	baz=9.0			⇑	*e*S	**Sb**	**05 30 19.3 -0.4**
	baz=9.0						
TNSS	**Tian-Shan**	**0.72**	**208**	⇑	*e*P	**Pb**	**05 30 09.1 -0.9**
TNSS	29nm,0.1s				*e*S	**Sb**	**05 30 19.3 -0.4**
	190nm,0.2s						
TNSS	**Tian-Shan**	**0.72**	**208**		P	**Pb**	**05 30 09.1 -0.9**
TNSS	29nm,0.1s				S	**Sb**	**05 30 19.3 -0.4**
	190nm,0.2s						
KUU	**Kurty**	**0.80**	**286**	⇑	*e*P	**Pb**	**05 30 10.5 -0.7**
KUU	baz=85			⇑	*e*S	**Sb**	**05 30 21.6 -0.1**
	baz=85						
KUU	**Kurty**	**0.80**	**286**	⇑	*e*P	**Pb**	**05 30 10.5 -0.7**
KUU	11nm,0.1s				*e*S	**Sb**	**05 30 21.6 -0.1**
	238nm,0.1s						
KUU	**Kurty**	**0.80**	**286**		P	**Pb**	**05 30 10.5 -0.7**
KUU	11nm,0.1s				S	**Sb**	**05 30 21.6 -0.1**
	238nm,0.1s						
MNBS	**Baschi**	**0.82**	**60**	⇑	*e*P	**Pb**	**05 30 10.7 -1.0**
MNBS	baz=70			⇑	*e*S	**Sb**	**05 30 22.1 -0.3**
	baz=70						
MNBS	**Baschi**	**0.82**	**60**	⇑	*e*P	**Pb**	**05 30 10.7 -1.0**
MNBS	99nm,0.1s				*e*S	**Sb**	**05 30 22.1 -0.3**
	356nm,0.1s						
MNBS	**Baschi**	**0.82**	**60**		P	**Pb**	**05 30 10.7 -1.0**
MNBS	99nm,0.1s				S	**Sb**	**05 30 22.1 -0.3**
	356nm,0.1s						
IZV	**Izvestkoviy**	**0.86**	**222**	⇑	*e*P	**Pb**	**05 30 11.6 -0.7**
IZV	baz=23			⇑	*e*S	**Sb**	**05 30 23.7 +0.2**
	baz=23						
IZV	**Izvestkoviy**	**0.86**	**222**	⇑	*e*P	**Pb**	**05 30 11.6 -0.7**
IZV	49nm,0.1s				*e*S	**Sb**	**05 30 23.8 +0.2**
	92nm,0.1s						
IZV	**Izvestkoviy**	**0.86**	**222**		P	**Pb**	**05 30 11.6 -0.7**
IZV	49nm,0.1s				S	**Sb**	**05 30 23.7 +0.2**
	92nm,0.1s						
MTBS	**Maitube**	**0.90**	**233**	⇑	*e*P	**Pb**	**05 30 12.2 -0.7**
MTBS	baz=33			⇑	*e*S	**Sb**	**05 30 24.7 +0.2**
	baz=33						
MTBS	**Maitube**	**0.90**	**233**	⇑	*e*P	**Pb**	**05 30 12.2 -0.7**
MTBS	138nm,0.1s				*e*S	**Sb**	**05 30 24.7 +0.2**
	151nm,0.3s						
MTBS	**Maitube**	**0.90**	**233**		P	**Pb**	**05 30 12.2 -0.7**
MTBS	138nm,0.1s				S	**Sb**	**05 30 24.7 +0.2**
	151nm,0.3s						
ANVS	**Anan'yevo**	**0.91**	**168**	⇑	*i*P	**Pb**	**05 30 11.7 -1.5**
ANVS	baz=69			⇑	*i*S	**Sb**	**05 30 24.8 -0.2**
	baz=69						
SATY	**Saty**	**0.96**	**130**	⇓	*e*P	**Pb**	**05 30 12.4 -1.4**
SATY	144nm,0.1s				*e*S	**Sb**	**05 30 24.9 -1.2**
	1µm,0.1s						
SATY	**Saty**	**0.96**	**130**		P	**Pb**	**05 30 12.4 -1.4**
SATY	144nm,0.1s				S	**Sb**	**05 30 25.0 -1.2**
	1µm,0.1s						
KST	**Kastek**	**1.23**	**239**	⇑	*e*P	**Pn**	**05 30 17.7 -0.4**
KST	baz=40			⇑	*e*S	**Sn**	**05 30 34.5 +0.3**
	baz=40						
KST	**Kastek**	**1.23**	**239**	⇑	*e*P	**Pn**	**05 30 17.7 -0.4**
KST	139nm,0.2s				*e*S	**Sn**	**05 30 34.5 +0.3**
	43nm,0.4s						
KST	**Kastek**	**1.23**	**239**		P	**Pn**	**05 30 17.7 -0.4**
KST	139nm,0.2s				S	**Sn**	**05 30 34.5 +0.3**
	43nm,0.4s						
KRBS	**Karabastau**	**1.26**	**271**	⇑	*e*P	**Pn**	**05 30 18.1 -0.3**
KRBS	29nm,0.1s				*e*S	**Sn**	**05 30 35.1 +0.3**
	54nm,0.2s						
KRBS	**Karabastau**	**1.26**	**271**		P	**Pn**	**05 30 18.1 -0.3**
KRBS	29nm,0.1s				S	**Sn**	**05 30 35.1 +0.3**
	54nm,0.2s						
DGS	**Degeres**	**1.27**	**250**	⇓	*e*P	**Pn**	**05 30 18.2 -0.4**
DGS	baz=51			⇓	*e*S	**Sn**	**05 30 35.3 +0.2**
	baz=51						
DGS	**Degeres**	**1.27**	**250**	⇓	*e*P	**Pn**	**05 30 18.2 -0.4**
DGS	44nm,0.2s				*e*S	**Sn**	**05 30 35.3 +0.2**
	97nm,0.3s						
DGS	**Degeres**	**1.27**	**250**		P	**Pn**	**05 30 18.3 -0.4**
DGS	44nm,0.2s				S	**Sn**	**05 30 35.3 +0.2**
	97nm,0.3s						
UZB	**Uzynbulak**	**1.29**	**114**	⇑	*e*P	**Pn**	**05 30 18.0 -1.0**
UZB	11nm,0.1s				*e*S	**Sn**	**05 30 34.4 -1.4**
	248nm,0.2s						
UZB	**Uzynbulak**	**1.29**	**114**		P	**Pn**	**05 30 18.0 -1.0**
UZB	11nm,0.1s				S	**Sn**	**05 30 34.4 -1.4**
	248nm,0.2s						
PRZ	**Przheval'sk**	**1.40**	**148**	⇑	*i*P	**Pb**	**05 30 20.9 -0.6**
PRZ	baz=48			⇑	*i*S	**Sg**	**05 30 40.0 -1.2**
	baz=48						
TKM2	**Tokmak 2**	**1.52**	**241**	⇓	*i*P	**Pn**	**05 30 22.7 +0.5**
TKM2	baz=41			⇓	*i*S	**Sb**	**05 30 43.4 +0.9**
	baz=41						
TKM2	**Tokmak 2**	**1.52**	**241**		P	**Pn**	**05 30 22.7 +0.5**
	SNR=70						
TKM2	**Tokmak 2**	**1.52**	**241**	⇑	P	**Pn**	**05 30 22.6 +0.5**
TKM2	9.5nm,0.2s			⇑	S	**Sb**	**05 30 43.8 +1.3**
	16nm,0.3s						
KDJ	**Kajisay**	**1.56**	**186**	⇑	*i*P	**Pb**	**05 30 23.5 -0.6**
KDJ	baz=86			⇑	*i*S	**Sb**	**05 30 44.3 +0.8**
	baz=86						
PDGK	**Podgornoye**	**1.56**	**102**		P	**Pn**	**05 30 22.1 -0.5**
PDGK	7.1nm,0.2s				S	**Sn**	**05 30 41.9 -0.4**
	21nm,0.2s						
PDGK	**Podgornoye**	**1.56**	**102**	⇓	P	**Pn**	**05 30 21.9 -0.7**
PDGK	3.8nm,0.3s			⇑	S	**Sn**	**05 30 42.0 -0.3**
	85nm,0.5s						
SHLS	**Shalkode**	**1.59**	**108**		*e*P	**Pg**	**05 30 28.2 +1.8**
SHLS	baz=5.0				*e*S	**Sg**	**05 30 52.3 +5.2**
	baz=5.0						
SHLS	**Shalkode**	**1.59**	**108**		*e*P	**Pg**	**05 30 28.2 +1.8**
SHLS	9.5nm,0.1s				*e*S	**Sg**	**05 30 52.4 +5.2**
	68nm,0.3s						
SHLS	**Shalkode**	**1.59**	**108**		P	**Pg**	**05 30 28.2 +1.8**
SHLS	9.5nm,0.1s				S	**Sg**	**05 30 52.4 +5.2**
	68nm,0.3s						
BOOM	**Boomskoye usch**	**1.60**	**223**	⇑	*i*P	**Pn**	**05 30 24.0 +0.7**
BOOM	baz=23			⇑	*i*S	**Sb**	**05 30 45.6 +0.8**
	baz=23						
ULHL	**Ulahol**	**1.67**	**211**	⇑	*i*P	**Pb**	**05 30 25.5 -0.6**
ULHL	baz=12			⇑	*i*S	**Sb**	**05 30 47.6 +0.9**
	baz=12						
ULHL	**Ulahol**	**1.67**	**211**		P	**Pb**	**05 30 25.5 -0.6**
	SNR=32						
DJR	**Jarkent**	**1.84**	**68**		*e*P	**Pb**	**05 30 27.5 -1.4**
DJR	24nm,0.1s				*e*S	**Sb**	**05 30 51.0 -0.6**
	15nm,0.3s						
DJR	**Jarkent**	**1.84**	**68**		P	**Pb**	**05 30 27.5 -1.4**
DJR	24nm,0.1s				S	**Sb**	**05 30 51.0 -0.6**
	15nm,0.3s						
CHMS	**Chumysh**	**2.05**	**252**	⇑	*i*P	**Pn**	**05 30 30.7 +1.4**
CHMS	baz=52			⇑	*i*S	**Sb**	**05 30 56.5 -1.1**
	baz=52						
CHMS	**Chumysh**	**2.05**	**252**		P	**Pn**	**05 30 30.1 +0.8**
	SNR=8.2						
KBK	**Karagaybulak**	**2.07**	**241**	⇑	*i*P	**Pb**	**05 30 31.3 -1.6**
KBK	baz=41			⇑	*i*S	**Sb**	**05 30 57.4 -0.8**
	baz=41						
KBK	**Karagaybulak**	**2.07**	**241**		P	**Pb**	**05 30 32.4 -0.5**
	SNR=8.9						
KAPS	**Kapalarasan**	**2.13**	**40**		*e*P	**Pb**	**05 30 32.4 -1.5**
KAPS	5.7nm,0.1s				*e*S	**Sb**	**05 30 59.5 -0.4**
	48nm,0.2s						
KAPS	**Kapalarasan**	**2.13**	**40**		Pg	**Pb**	**05 30 32.4 -1.5**
	5.7nm,0.1s						
KAPS					Lg	Lg	05 31 00.1
	48nm,0.2s						
KTMS	**Ketmen**	**2.15**	**95**		*e*P	**Pb**	**05 30 32.8 -1.5**
KTMS	3.9nm,0.1s				*e*S	**Sb**	**05 30 59.9 -0.7**
	26nm,0.3s						
KTMS	**Ketmen**	**2.15**	**95**		Pg	**Pb**	**05 30 32.8 -1.5**
	3.9nm,0.1s						
KTMS					Lg	Lg	05 30 59.9
	26nm,0.3s						
USP	**Ospenovka**	**2.15**	**260**		P	**Sb**	**05 31 01.7 +1.1**
	SNR=5.6						
KZA	**Kyzart**	**2.25**	**225**	⇑	*i*P	**Pb**	**05 30 34.4 -1.7**
KZA	baz=26			⇑	*i*S	**Sb**	**05 31 02.0 -1.7**
	baz=26						
KZA	**Kyzart**	**2.25**	**225**		P	**Pb**	**05 30 35.9 -0.2**
	SNR=15						
AAK	**Ala-Archa**	**2.37**	**245**	⇑	*i*P	**Pn**	**05 30 35.4 +1.6**
AAK	baz=45			⇑	*i*S	**Sn**	**05 31 04.6 +2.2**
	baz=45						
AAK	**Ala-Archa**	**2.37**	**245**		P	**Pb**	**05 30 37.0 -1.0**
	SNR=6.2						
AAK	**Ala-Archa**	**2.37**	**245**	⇑	P	**Pb**	**05 30 36.7 -1.4**
AAK	2.2nm,0.3s			⇑	S	**Sb**	**05 31 08.6 +1.7**
	5.2nm,0.4s						
UCH	**Uchtor**	**2.57**	**237**	⇑	*i*P	**Pn**	**05 30 38.6 +1.7**
UCH	baz=37			⇑	*i*S	**Sn**	**05 31 09.7 +1.9**
	baz=37						
UCH	**Uchtor**	**2.57**	**237**		P	**Pb**	**05 30 41.0 -0.6**
	SNR=13						
BTLS	**Baital**	**2.77**	**301**		*e*P	**Pb**	**05 30 44.3 -0.4**
BTLS	0.9nm,0.1s				*e*S	**Sb**	**05 31 19.9 +1.6**
	8.1nm,0.5s						
BTLS	**Baital**	**2.77**	**301**		Pg	**Pb**	**05 30 44.3 -0.4**
	0.9nm,0.1s						
BTLS					Lg	Lg	05 31 19.8
	8.1nm,0.5s						
EKS2	**Erkin-Say**	**2.84**	**250**	⇑	*i*P	**Pn**	**05 30 42.1 +1.8**
EKS2	baz=50			⇑	*i*S	**Sn**	**05 31 15.8 +1.8**
	baz=50						
AML	**Almayashu**	**3.13**	**242**	⇑	*i*P	**Pn**	**05 30 46.3 +1.7**
AML	baz=42			⇑	*i*S	**Sn**	**05 31 23.2 +1.6**
	baz=42						
MRKS	**Merke**	**3.19**	**254**		*e*P	**Pb**	**05 30 53.5 +1.4**
MRKS	5.6nm,0.2s				*e*S	**Sg**	**05 31 35.3 -3.2**
	8.7nm,0.2s						
MRKS	**Merke**	**3.19**	**254**		Pg	**Pb**	**05 30 53.5 +1.4**
MRKS	5.6nm,0.2s				Lg	Lg	05 31 35.3
	8.7nm,0.2s						
MAKZ	**Makanchi**	**4.50**	**44**	⇑	Lg	Lg	05 32 16.1
	2.7nm,0.7s						
MK31	**Makanchi Array**	**4.65**	**46**	⇑	Pn	**Pn**	**05 31 05.8 +0.8**
	0.2nm,0.3s,baz=222,slow=16,SNR=5.1						
MK31				⇑	Lg	Lg	05 32 19.6
	0.4nm,0.3s,baz=232,slow=28,SNR=4.6						
KK31	**Karatay Array**	**5.06**	**266**		Pg	**Pg**	**05 31 29.0 -3.7**
	0.7nm,0.4s,baz=82,slow=18,SNR=5.0						
KK31				⇓	Lg	Lg	05 32 36.1
	1.3nm,0.4s,baz=74,slow=30,SNR=8.0						
OTUK	**Ortayu**	**5.77**	**324**	⇑	Lg	Lg	05 32 58.5
	1.5nm,0.4s						
KURBB	**Kurchatov Arra**	**6.99**	**6**	⇑	Lg	Lg	05 33 37.3
	6.1nm,0.7s						
KURK	**Kurchatov**	**7.09**	**6**	⇓	Lg	Lg	05 33 40.2
	3.8nm,0.9s						

*NEIC **11** 05:33:29.6±1.8,23.7°S±0.2°×179.7°W±0.2°,h513km±13km, mb4.2/22, Error ellipse: s-maj=23.5km s-min=22.3km az=119.0*

*IDC **11** 05:33:30.5±8.0,23.82°S×179.78°W,h516km±99km, mb3.4/5, mb1 3.6/6, mb1mx3.2/30, mbtmp4.3/6, Error ellipse: s-maj=65.2km s-min=27.9km az=9.0*

ISC 11 05:33:30.0±0.9,23.85°S±0.1×179.7°W±0.1,h512km,n28, σ1°06/29,mb4.2/17,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
URZ	**Urewera**	**14.64**	**190**	P		**P**	**05 36 36.9**	**+0.8**
	0.7nm,0.3s,baz=216,slow=2.6,SNR=7.2							
URZ				S		**S**	**05 39 06.9**	**-2.6**
	0.2nm,0.3s,baz=30,slow=21,SNR=1.9							
QRZ	**Quartz Range**	**18.16**	**199**	P		**P**	**05 37 12.1**	**+1.1**
ARMA	**Armidale**	**26.29**	**249**	P		**P**	**05 38 26.5**	**+2.1**
ARMA				IAmb		IAmb	05 38 27.1	
	comp=Z,16nm,1.4s							
EIDS	**Eidsvold**	**26.58**	**261**	P		**P**	**05 38 27.3**	**+0.5**
EIDS				IAmb		IAmb	05 38 35.3	
	comp=Z,9.9nm,1.4s							
CTA	**Charters Tower**	**31.73**	**270**	P		**P**	**05 39 12.0**	**+0.3**
	comp=Z,8.1nm,0.4s,baz=98,slow=11,SNR=17							
CTAO	**Charters Tower**	**31.73**	**270**	P		**P**	**05 39 12.2**	**+0.5**
STKA	**Stephens Creek**	**34.99**	**248**	P		**P**	**05 39 39.6**	**+0.6**
COEN	**Coen**	**36.36**	**279**	P		**P**	**05 39 51.0**	**+0.3**
COEN				IAmb		IAmb	05 39 51.8	
	comp=Z,9.5nm,1.1s							
BBOO	**Buckleboo**	**39.71**	**247**	P		**P**	**05 40 17.2**	**-0.6**
AS31	**Alice Springs**	**42.30**	**260**	P		**P**	**05 40 38.5**	**-0.1**
ASAR	**Alice Springs**	**42.30**	**260**	P		**P**	**05 40 38.1**	**-0.4**
	comp=Z,2.1nm,0.5s,baz=101,slow=7.2,SNR=24							
WR0	**Warramunga Arr**	**42.48**	**266**	P		**P**	**05 40 39.1**	**-0.9**
WR0				IAmb		IAmb	05 40 53.3	
	comp=Z,5.8nm,1.1s							
WB2	**Warramunga Arr**	**42.66**	**266**	P		**P**	**05 40 40.4**	**-1.0**
WB2				IAmb		IAmb	05 40 40.7	
	comp=Z,4.9nm,0.5s							
WB0	**Warramunga Arr**	**42.66**	**266**	P		**P**	**05 40 40.4**	**-1.0**
WB0				IAmb		IAmb	05 40 41.0	
	comp=Z,7.7nm,0.7s							
WRAB	**Tennant Creek**	**42.66**	**266**	P		**P**	**05 40 40.8**	**-0.7**
WRAB				IAmb		IAmb	05 40 40.9	
	comp=Z,4.7nm,0.8s							
WRA	**Warramunga Arr**	**42.67**	**266**	P		**P**	**05 40 40.6**	**-0.9**
	comp=Z,4.0nm,0.5s,baz=94,slow=8.4,SNR=22							
FORT	**Forrest**	**46.58**	**249**	P		**P**	**05 41 10.9**	**-0.6**
MTN	**Manton Dam**	**47.71**	**274**	P		**P**	**05 41 18.9**	**-1.3**
MTN				IAmb		IAmb	05 41 30.8	
	comp=Z,9.7nm,1.2s							
KNRA	**Kununurra**	**48.95**	**270**	P		**P**	**05 41 29.0**	**-0.4**
KNRA				IAmb		IAmb	05 41 29.7	
	comp=Z,5.0nm,0.9s							
FITZ	**Fitzroy Crossi**	**51.09**	**265**	P		**P**	**05 41 45.3**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=98,slow=3.4,SNR=9.6							
FITZ	**Fitzroy Crossi**	**51.09**	**265**	P		**P**	**05 41 45.3**	**+0.1**
PSA00	**Pilbara Seismi**	**55.43**	**259**	P		**P**	**05 42 14.8**	**-1.2**
PSA00				IAmb		IAmb	05 42 27.0	
	comp=Z,16nm,1.2s							
PSAA2	**Pilbara Seismi**	**55.43**	**259**	P		**P**	**05 42 15.2**	**-0.8**
PSAA2				IAmb		IAmb	05 42 26.8	
	comp=Z,22nm,1.5s							
MORW	**Morawa**	**57.14**	**250**	P		**P**	**05 42 27.3**	**-0.4**
CASY	**Casey**	**60.29**	**206**	P		**P**	**05 42 49.0**	**+0.8**
CASY				IAmb		IAmb	05 42 58.8	
	comp=Z,16nm,1.4s							
QSPA	**South Pole Qui**	**66.26**	**180**	P		**P**	**05 43 28.4**	**+1.6**
UNM	**Universidad Na**	**89.43**	**69**	P		**P**	**05 45 31.4**	**-1.4**
TXAR	**Lajitas Array**	**90.17**	**58**	P		**P**	**05 45 36.0**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=224,slow=7.0,SNR=5.3							

IDC 11 05:52:38.6±5.2,9.15S×124.17E,h62km±62km,mb3.3/1, mb1 3.6/4,mb1mx3.3/31,mbtmp3.6/4,ML3.6/3,Error ellipse: s-maj=59.9km s-min=32.4km az=27.0,Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BATI	**Baumata**	**1.16**	**205**	P		Pn	05 53 00.2	+1.3
	37nm,0.3s,baz=278,slow=1.2,SNR=31							
BATI				S		Sn	05 53 13.9	-0.1
	104nm,0.3s,baz=178,slow=22,SNR=11							
FITZ	**Fitzroy Crossi**	**9.01**	**171**	P		Pn	05 54 44.2	-1.9
	0.5nm,0.3s,baz=353,slow=9.2,SNR=22							
FITZ				S		Sn	05 56 14.7	-11
	3.4nm,0.3s,baz=150,slow=4.8,SNR=21							
WRA	**Warramunga Arr**	**14.55**	**139**	P		Pn	05 56 01.3	0.0
	0.3nm,0.3s,baz=320,slow=12,SNR=7.4							
WRA				S		Sn	05 58 32.3	-9.2
	0.6nm,0.3s,baz=317,slow=25,SNR=3.6							
ASAR	**Alice Springs**	**17.18**	**148**	P		P	05 56 36.1	+0.7
	0.2nm,0.3s,baz=318,slow=12,SNR=14							
ASAR				S		Sn	05 59 36.1	-9.0
	0.3nm,0.3s,baz=322,slow=22,SNR=9.8							
MKAR	**Makanchi Array**	**67.02**	**330**	P		P	06 03 24.9	-0.3
	0.3nm,0.5s,baz=122,slow=7.0,SNR=4.9							

*NAO **11** 06:01:52.3±2.8,72.81N×5.01E,ML2.5*

*BER **11** 06:01:55.3±2.1,72.88N×4.77E,h15km±39km,ML1.9, ML2.5(NAO),Confirmed Earthquake*

ISC 11 06:01:51.6±1.0,72.87N±0.06×5.06E±0.08,h10km,n18, σ2°59/26,Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BJO1	**Bjornoya**	**4.25**	**61**	*e*P		**Pn**	**06 02 58.9**	**+2.7**
BJO1				*e*S		**Sn**	**06 03 44.4**	**-1.4**
BJO1				IAML			06 03 45.8	
	comp=Z,12nm,0.7s							
HSPB	**Hornsund (broa**	**4.96**	**28**	Pn		**Pn**	**06 03 07.4**	**+1.5**
HSPB	**Hornsund (broa**	**4.96**	**28**	*e*P		**Pn**	**06 03 07.4**	**+1.5**
TRO	**Tromso**	**5.52**	**119**	*e*P		**Pn**	**06 03 15.9**	**+2.3**
TRO				*e*S		**Sn**	**06 04 13.3**	**-3.7**
TRO				IAML			06 04 16.3	
	comp=Z,1.8nm,0.4s							
LOF	**Lofoten**	**5.54**	**145**	*e*P		**Pn**	**06 03 16.0**	**+2.1**
LOF				*e*S		**Sn**	**06 04 13.0**	**-4.6**
LOF				IAML			06 04 19.8	
	comp=Z,2.1nm,0.4s							
SPA0	**Spitsbergen Ar**	**6.02**	**23**	Pn		**Pn**	**06 03 22.6**	**+2.1**
	baz=206,slow=14							
SPA0	**Spitsbergen Ar**	**6.02**	**23**	Pn		**Pn**	**06 03 22.6**	**+2.1**
	baz=206,slow=14							
STEI	**Steigen**	**6.02**	**140**	*e*P		**Pn**	**06 03 22.5**	**+2.0**
STEI				*e*S		**Sn**	**06 04 26.8**	**-2.5**
STEI				IAML			06 04 29.2	
	comp=Z,1.4nm,0.4s							
KBS	**Kingsbay**	**6.31**	**12**	Pn		**Pn**	**06 03 26.7**	**+2.2**
KBS	**Kingsbay**	**6.31**	**12**	*e*P		**Pn**	**06 03 25.9**	**+1.5**
KBS				*e*S		**Sn**	**06 04 30.1**	**-6.2**
KBS				IAML			06 04 39.2	
	comp=Z,4.4nm,0.6s							
KONS	**Konsvik**	**6.98**	**152**	*e*P		**Pn**	**06 03 35.6**	**+1.9**
KONS				IAML			06 04 54.4	
	comp=Z,2.1nm,0.6s							
ARA0	**ARCESS Array S**	**7.38**	**107**	Pn		**Pn**	**06 03 40.9**	**+1.8**
	baz=314,slow=12							
ARA0				Sn		**Sn**	**06 05 02.0**	**-0.7**
	baz=301,slow=22							
ARA0	**ARCESS Array S**	**7.38**	**107**	Pn		**Pn**	**06 03 40.9**	**+1.8**
	baz=314,slow=12							
ARA0				Sn		**Sn**	**06 05 02.0**	**-0.7**
	baz=301,slow=22							
SCO	**Scoresbysund**	**8.79**	**267**	*i* P		**Pn**	**06 03 57.2**	**-1.2**
SCO				*i* S		**Pn**	**06 03 59.1**	**+0.7**
HFS	**Hagfors**	**13.22**	**161**	Pn		**Pn**	**06 05 00.4**	**+1.3**
	baz=347,slow=12							
HFS	**Hagfors**	**13.22**	**161**	Pn		**Pn**	**06 05 00.4**	**+1.3**
	baz=347,slow=12							
FIA0	**FINESS Array S**	**13.95**	**134**	Pn		**Pn**	**06 05 11.6**	**+2.7**
	baz=328,slow=18							
FIA0	**FINESS Array S**	**13.95**	**134**	Pn		**Pn**	**06 05 11.6**	**+2.7**
	baz=328,slow=18							

*JMA **11** 06:34:34.8±0.1,23.48N×122.12E,h39km,M2.4*

*TAP **11** 06:34:35.2,23.45N×122.15E,h43km,ML2.8,C*

ISC 11 06:34:32.3±1.4,23.41N±0.03×122.22E±0.02,h21km±4km, n52,σ0°84/100,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
HGSD	**Ruisui**	**0.73**	**276**	P		**Pn**	**06 34 47.3**	**-0.1**
	baz=274							
HGSD				*e*S		**Sb**	**06 34 55.9**	**-0.1**
	baz=274							
EGFH	**Guangfu**	**0.77**	**289**	P		**Pn**	**06 34 47.8**	**-0.1**
	baz=297							
EGFH				S		**Sb**	**06 34 57.6**	**+0.6**
	baz=297							
ESL	**Shilin**	**0.82**	**299**	P		**Pn**	**06 34 48.3**	**-0.4**
	baz=294							
ESL				*e*S		**Sb**	**06 34 58.4**	**-0.2**
	baz=294							
EHY	**Hungye**	**0.83**	**277**	*e*P		**Pn**	**06 34 49.3**	**+0.5**
	baz=275							
EHY				*e*S		**Sb**	**06 34 59.6**	**+0.9**
	baz=275							
CHKT	**Chengkung**	**0.84**	**248**	P		**Pn**	**06 34 49.3**	**+0.4**
	baz=239							
CHKT				S		**Sb**	**06 34 59.1**	**0.0**
	baz=239							
YULB	**Yu-li**	**0.84**	**269**	*e*P		**Pn**	**06 34 49.4**	**+0.3**
	baz=263							
YULB				*e*S		**Sb**	**06 35 00.1**	**+0.9**
	baz=263							
TWF1	**Yuli**	**0.85**	**266**	P		**Pn**	**06 34 49.4**	**+0.3**
	baz=260							
TWF1				*e*S		**Sn**	**06 35 00.4**	**-0.5**
	baz=260							
TWD	**Chiawan**	**0.87**	**320**	*e*P		**Pn**	**06 34 49.2**	**-0.2**
	baz=322							
TWD				*e*S		**Sb**	**06 34 59.8**	**-0.3**
	baz=322							
FULB	**Fuli**	**0.88**	**256**	*e*P		**Pn**	**06 34 49.6**	**+0.2**
	baz=245							
FULB				*e*S		**Sb**	**06 35 00.4**	**+0.3**
	baz=245							
NACB	**Ninganchiao**	**0.95**	**323**	P		**Pn**	**06 34 50.3**	**-0.1**
	baz=325							
NACB				S		**Sb**	**06 35 01.2**	**-0.9**

OWD				eS		Sb	06 35 05.4	-1.2
	baz=300							
ELDTW	**Lidau**	1.12	259	eP		Pb	06 34 53.4	+0.2
	baz=249							
ELDTW				eS		Sb	06 35 06.2	-1.1
	baz=249							
EOS1	**EOS1**	1.13	356	eP		Pb	06 34 54.5	+1.2
	baz=359							
EOS1				eS		Sn	06 35 07.9	0.0
	baz=359							
WHF	**Hehuan Shan**	1.14	310	P		Pb	06 34 53.6	+0.1
	baz=312							
WHF				eS		Sb	06 35 07.0	-1.0
	baz=312							
CHGB	**Renai**	1.15	304	P		Pb	06 34 54.0	+0.3
	baz=305							
CHGB				eS		Sb	06 35 07.4	-0.9
	baz=305							
SSLB	**Suanglung**	1.22	288	eP		Pb	06 34 54.9	+0.2
	baz=288							
JYNG	**Yonaguni jima**	1.23	33	P		Pb	06 34 56.1	+1.2
JYNG				S		Sn	06 35 11.2	+0.9
TWC	**Suao**	1.24	344	eP		Pb	06 34 55.8	+0.8
	baz=357							
TWC				eS		Sb	06 35 10.1	-0.4
	baz=357							
NNSB	**Datong**	1.27	323	eP		Pb	06 34 55.8	+0.2
	baz=316							
NNSB				eS		Sn	06 35 10.5	-0.9
	baz=316							
NNSH	**Datong**	1.27	323	P		Pb	06 34 55.8	+0.2
	baz=316							
NNSH				eS		Sn	06 35 10.2	-1.2
	baz=316							
TWT	**Tachien**	1.27	311	eP		Pb	06 34 56.7	+1.1
	baz=312							
TWT				eS		Sn	06 35 10.8	-0.7
	baz=312							
YOJ	**Yonaguni jima**	1.27	35	eP		Pb	06 34 56.9	+1.3
	baz=47							
YOJ				eS		Sb	06 35 12.9	+1.4
	baz=47							
YOJ	**Yonaguni jima**	1.27	35	P		Pb	06 34 56.9	+1.3
YOJ				S		Sb	06 35 13.1	+1.6
TDCB	**Techi**	1.28	311	eP		Pb	06 34 55.8	0.0
	baz=312							
TDCB				eS		Sn	06 35 10.4	-1.3
	baz=312							
NNS	**Nan Shan**	1.28	323	eP		Pb	06 34 55.9	+0.1
	baz=316							
NNS				eS		Sn	06 35 11.0	-0.7
	baz=316							
SMLT	**Sun Moon Lake**	1.29	291	eP		Pb	06 34 56.3	+0.3
	baz=297							
SMLT				eS		Sn	06 35 11.6	-0.4
	baz=297							
ALS	**Alishan**	1.30	275	P		Pb	06 34 57.1	+0.9
	baz=281							
ALS				eS		Sn	06 35 12.4	0.0
	baz=281							
TYC	**Yuchr**	1.34	292	P		Pb	06 34 57.1	+0.4
	baz=300							
TYC				eS		Sn	06 35 12.7	-0.3
	baz=300							
NDT	**Datong Townshi**	1.35	332	eP		Pb	06 34 57.8	+0.9
	baz=334							
NDT				eS		Sn	06 35 13.1	-0.1
	baz=334							
ENTT	**Nioudou**	1.36	334	eP		Pb	06 34 57.5	+0.5
	baz=328							
ENTT				eS		Sn	06 35 13.3	-0.1
	baz=328							
STYT	**Tauyuan**	1.36	260	eP		Pb	06 34 57.2	0.0
	baz=252							
ECL	**Taimali**	1.42	235	eP		Pb	06 34 57.6	-0.5
	baz=242							
ECL				eS		Sn	06 35 14.3	-0.6
	baz=242							
CHN5	**Tsauling**	1.42	278	eP		Pb	06 34 59.6	+1.4
	baz=283							
CHN5				eS		Sn	06 35 15.8	+0.5
	baz=283							
WHP	**Taichung City**	1.45	307	eP		Pb	06 34 59.0	+0.4
	baz=316							
WHP				eS		Sn	06 35 15.8	+0.1
	baz=316							
TPUB	**Ta-pu**	1.46	266	eS		Sb	06 35 17.1	0.0
	baz=265							
YHNB	**Yeheng**	1.47	329	eP		Pb	06 34 58.5	-0.5
	baz=331							
YHNB				eS		Sn	06 35 15.3	-1.0
	baz=331							
WTP	**Ta-pu**	1.48	264	eP		Pb	06 35 00.2	+1.0
	baz=263							
WTP				eS		Sb	06 35 18.1	+0.5
	baz=263							
SLGT	**Liugui**	1.50	254	eP		Pb	06 35 00.1	+0.5
	baz=253							
SLGT				eS		Sb	06 35 17.9	-0.3
	baz=253							
CHN1	**Nanshi**	1.57	262	eS		Sb	06 35 21.5	+1.4
	baz=261							
HATJ	**Hateruma jima**	1.59	66	P		Pb	06 35 01.7	+0.7
HATJ				eS		Sb	06 35 21.7	+1.0
TIPB	**Shuangxi**	1.59	347	eP		Pb	06 35 01.8	+0.7
	baz=357							
TIPB				eS		Sn	06 35 19.6	+0.3
	baz=357							
LIOB	**Emei**	1.65	318	eP		Pb	06 35 02.6	+0.6
	baz=320							
LIOB				eS		Sn	06 35 20.1	-0.6
	baz=320							
IRIF	**Iriomote-Funau**	1.66	56	P		Pb	06 35 03.3	+1.1
IRIF				S		Sb	06 35 23.9	+1.2
MASBT	**Mashibuluo**	1.66	242	eP		Pb	06 35 02.1	-0.2
	baz=238							
MASBT				eS		Sn	06 35 21.5	+0.5
	baz=238							
SCZT	**Fangliau**	1.80	235	eP		Pb	06 35 03.6	-1.0
	baz=230							
SCZT				eS		Sn	06 35 24.7	+0.3
	baz=230							
JKRS	**Kuro-shima**	1.83	63	P		Pb	06 35 05.4	+0.2
JKRS				S		Sb	06 35 28.0	+0.3
JIJ	**Ishigaki jima**	2.00	61	P		Pb	06 35 07.6	-0.4
JIJ				S		Sb	06 35 30.4	-2.1
JISG	**Ishigakijimahi**	2.24	58	P		Pb	06 35 10.7	-1.5
JISG				eS		Sb	06 35 37.2	-2.3
JTJ	**Tarama**	2.58	61	P		Pb	06 35 17.8	-0.1
JTJ				S		Sb	06 35 46.4	-2.8

IDC 11 06:43:08.0±48.0, 15°22S×172°06W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/29, mbtmp4.1/3, Error ellipse: s-maj=933.6km s-min=195.6km az=79.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**45.25**	**240**	P	P	06 51 27.5	+0.1
	0.9nm,0.5s,baz=95,slow=10,SNR=4.7						
WRA	**Warramunga Arr**	**51.15**	**257**	P	P	06 52 12.9	-0.4
	0.8nm,0.3s,baz=93,slow=7.1,SNR=6.9						
ASAR	**Alice Springs**	**51.40**	**252**	P	P	06 52 15.1	-0.1
	3.1nm,0.5s,baz=88,slow=8.1,SNR=69						

IDC 11 06:54:09.8±1.8, 52°46N×172°39W, h0km, mb3.2/4, mb1 3.5/6, mb1mx3.3/37, mbtmp3.2/6, ML2.9/2, Error ellipse: s-maj=77.1km s-min=28.7km az=142.0
AEIC 11 06:54:16.0±1.4, 51°9N±0°2×171°94W±0°07, h25km±8km, ML3.1, Error ellipse: s-maj=23.6km s-min=5.3km az=172.0
NEIC 11 06:54:17.7±1.8, 52°3N±0°4×172°1W±0°2, h53km±45km, Error ellipse: s-maj=55.9km s-min=6.8km az=167.0

ISC 11 06:54:15.7±2.2, 52°2N±0°2×172°02W±0°07, h31km±15km, n43, σ1°38/39, mb3.2/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOSE	**Korovin Southe**	**1.26**	**278**		**Pb**	**06 54 38.4**	**-0.5**
KOFP	**Korovin Flat P**	**1.28**	**275**		**Pb**	**06 54 38.3**	**-1.0**
KOFP					**Sb**	**06 54 55.8**	**+0.4**
ATKA	**Atka Island**	**1.34**	**272**		**Pn**	**06 54 38.4**	**0.0**
ATKA				Sn	**Sn**	**06 54 55.2**	**+0.1**
KOKL	**Mount Kliuchef**	**1.35**	**277**		**Pb**	**06 54 39.2**	**-1.2**
NIKH	**Nikolski High**	**2.09**	**66**		**Pn**	**06 54 49.0**	**+0.4**
NIKH	**Nikolski High**	**2.09**	**66**		**Sn**	**06 55 14.2**	**+0.7**
NIKH	**Nikolski High**	**2.09**	**66**		**Sn**	**06 55 14.5**	**+1.0**
GSTR	**Great Sitkin T**	**2.49**	**270**		**Pn**	**06 54 55.3**	**+1.1**
GSTR				Sn	**Sn**	**06 55 25.8**	**+2.2**
GSMY	**Great Sitkin M**	**2.49**	**268**		**Pn**	**06 54 54.7**	**+0.5**
GSTD	**Great Sitkin T**	**2.55**	**269**		**Pn**	**06 54 55.5**	**+0.5**
GSTD					**Sn**	**06 55 25.8**	**+0.9**
OKWE	**Okmok W'ng Wal**	**2.63**	**59**		**Pn**	**06 54 57.8**	**+1.7**
OKFG	**Magazine Ridge**	**2.78**	**62**		**Pn**	**06 55 00.1**	**+2.0**
ADAG	**Mount Adagdak**	**2.84**	**268**		**Pn**	**06 55 00.0**	**+1.1**
ADK	**Adak**	**2.90**	**266**		**Pn**	**06 54 59.9**	**+0.2**
ADK				Sn	**Sn**	**06 55 34.6**	**+1.1**
KINC	**Kanaga Island**	**3.17**	**267**		**Pn**	**06 55 04.2**	**+0.8**
KIKV	**Kanaga Island**	**3.20**	**267**		**Pn**	**06 55 04.5**	**+0.7**
KICM	**Kanaga Island**	**3.21**	**267**		**Pn**	**06 55 05.0**	**+1.0**
KIMD	**Kanaga Island**	**3.25**	**265**		**Pn**	**06 55 04.8**	**+0.2**
MREP	**Makushin Rep't**	**3.58**	**61**		**Pn**	**06 55 11.4**	**+2.2**
TAPA	**Tanaga Point A**	**3.60**	**266**		**Pn**	**06 55 10.3**	**+0.9**
MSW	**Makushin Switc**	**3.60**	**59**		**Pn**	**06 55 11.6**	**+2.2**
MNAT	**Makushin Natee**	**3.64**	**60**		**Pn**	**06 55 11.3**	**+1.3**
UNV	**Unalaska Valle**	**3.72**	**61**		**Pn**	**06 55 13.4**	**+2.4**
TASE	**Tanaga Southea**	**3.74**	**267**		**Pn**	**06 55 12.4**	**+1.1**
AKBBA	**Akutan Broad B**	**4.14**	**60**		**Pn**	**06 55 18.1**	**+1.4**
AKGG	**Akutan Green G**	**4.15**	**58**		**Pn**	**06 55 19.0**	**+2.0**
CNBA	**Chernabura Isl**	**7.87**	**65**	Pn	**Pn**	**06 56 09.4**	**+1.4**
KDAK	**Kodiak Island**	**12.47**	**56**	Pn	**Pn**	**06 57 10.6**	**-0.2**
	0.2nm,0.3s,baz=92,slow=16,SNR=1.7						
CNPM	**China Poot**	**13.75**	**50**	Pn	**Pn**	**06 57 30.6**	**+2.2**
ILAR	**Eielson Array**	**18.04**	**36**	P	**Pn**	**06 58 21.4**	**-2.4**
	0.0nm,0.3s,baz=237,slow=9.2,SNR=1.4						
YKA	**Yellowknife Ar**	**31.59**	**48**	P	**P**	**07 00 33.2**	**-1.9**
	0.3nm,0.9s,baz=277,slow=7.6,SNR=3.2						
H11N2	**WAKE ISLAND Hy**	**36.33**	**215**	T	T	07 39 39.4	
	baz=22,slow=76,SNR=30						
H11N3	**WAKE ISLAND Hy**	**36.34**	**215**	T	T	07 39 41.3	
	baz=22,slow=76,SNR=34						
H11N1	**WAKE ISLAND Hy**	**36.35**	**215**	T	T	07 39 37.4	
	baz=22,slow=76,SNR=33						
H11S1	**WAKE ISLAND Hy**	**37.53**	**214**	T	T	07 41 02.4	
	baz=21,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**37.54**	**214**	T	T	07 41 07.4	
	baz=21,slow=76,SNR=9.5						
H11S3	**WAKE ISLAND Hy**	**37.55**	**214**	T	T	07 41 05.3	
	baz=21,slow=76,SNR=8.8						
PDAR	**Pinedale Array**	**42.03**	**77**	P	**P**	**07 02 04.7**	**+0.2**
	0.5nm,0.7s,baz=336,slow=3.3,SNR=4.4						
TXAR	**Lajitas Array**	**54.38**	**87**	P	**P**	**07 03 39.7**	**0.0**
	0.1nm,0.6s,baz=332,slow=5.5,SNR=1.8						
ASAR	**Alice Springs**	**89.04**	**228**	P	**P**	**07 07 06.6**	**-1.0**
	0.3nm,0.7s,baz=31,slow=4.3,SNR=4.8						
H03N2	**Juan Fernandez**	**117.38**	**110**	T	T	09 21 20.8	
H03N1	**Juan Fernandez**	**117.39**	**110**	T	T	09 21 20.8	
H03N3	**Juan Fernandez**	**117.40**	**110**	T	T	09 21 19.6	
	SNR=6.6						

JMA 11 06:56:03.0±0.2, 22°93N×122°39E, h52km, M2.8
TAP 11 06:56:03.9, 22°91N×122°40E, h51km±1km, ML3.3, D

ISC 11 06:56:00.3±1.2, 22°97N±0°03×122°42E±0°02, h10km±9km, n70, σ0°65/120, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWH	**Lutao**	**0.91**	**254**	eP	**Pn**	**06 56 19.2**	**+0.1**
	baz=254						
TWH				eS	**Sg**	**06 56 29.8**	**+0.3**
	baz=254						
CHKT	**Chengkung**	**0.98**	**278**	eP	**Pn**	**06 56 20.5**	**+0.3**
	baz=284						
CHKT				eS	**Sb**	**06 56 32.3**	**-0.1**
	baz=284						
HGSD	**Ruisui**	**1.05**	**300**	P	**Pn**	**06 56 21.5**	**+0.3**
	baz=303						
HGSD				eS	**Sg**	**06 56 34.1**	**-0.1**
	baz=303						
FULB	**Fuli**	**1.06**	**283**	eP	**Pn**	**06 56 21.6**	**+0.3**
	baz=293						
FULB				eS	**Sg**	**06 56 34.2**	**-0.3**
	baz=293						
TWF1	**Yuli**	**1.10**	**290**	P	**Pn**	**06 56 22.5**	**+0.7**
	baz=293						
TWF1				eS	**Sb**	**06 56 36.2**	**+0.3**
	baz=293						
YULB	**Yu-li**	**1.11**	**292**	eP	**Pn**	**06 56 22.8**	**+0.7**
	baz=295						
YULB				eS	**Sb**	**06 56 36.8**	**+0.5**
	baz=295						
EHY	**Hungye**	**1.14**	**298**	P	**Pn**	**06 56 23.1**	**+0.7**
	baz=301						
EHY				eS	**Sn**	**06 56 38.1**	**-0.1**
	baz=301						
EGFH	**Guangfu**	**1.14**	**308**	eP	**Pn**	**06 56 23.4**	**+0.9**
	baz=310						
EGFH				eS	**Sn**	**06 56 38.1**	**-0.2**
	baz=310						
TTN	**Taitung**	**1.19**	**260**	eS	**Sb**	**06 56 38.5**	**0.0**
	baz=257						
LAY	**Lan-yu**	**1.23**	**221**	eP	**Pn**	**06 56 23.5**	**-0.2**
	baz=229						
LAY				eS	**Sb**	**06 56 38.9**	**-0.7**
	baz=229						
ESL	**Shilin**	**1.23**	**313**	P	**Pg**	**06 56 24.3**	**+0.2**
	baz=315						
ESL				eS	**Sb**	**06 56 39.5**	**-0.2**
	baz=315						
TWGBT	**Beinan**	**1.24**	**263**	eS	**Sb**	**06 56 39.8**	**-0.2**
	baz=265						
TWG	**Pinlang**	**1.25**	**263**	eS	**Sb**	**06 56 40.1**	**-0.2**
	baz=265						
ELDTW	**Lidau**	**1.31**	**280**	P	**Pg**	**06 56 25.5**	**+0.1**
	baz=290						
ELDTW				eS	**Sb**	**06 56 40.7**	**-1.3**
	baz=290						
TWD	**Chiawan**	**1.34**	**326**	eP	**Pg**	**06 56 26.1**	**+0.1**
	baz=337						
TWD				eS	**Sb**	**06 56 42.0**	**-0.7**
	baz=337						
ECL	**Taimali**	**1.40**	**255**	*i* P	**Pb**	**06 56 26.8**	**+0.2**
	baz=256						
ECL				eS	**Sn**	**06 56 42.8**	**-1.7**
	baz=256						
VWDT	**VWDT**	**1.41**	**304**	*i* P	**Pg**	**06 56 27.9**	**+0.5**
	baz=306						
VWDT				eS	**Sg**	**06 56 45.4**	**-0.2**
	baz=306						
NACB	**Ninganchiao**	**1.42**	**328**	eP	**Pb**	**06 56 26.9**	**0.0**
	baz=330						
NACB				eS	**Sb**	**06 56 43.8**	**-1.2**
	baz=330						
YUS	**Yu-Shan**	**1.44**	**291**	eP	**Pg**	**06 56 28.5**	**+0.4**
	baz=294						
ETLH	**Xiulin Townshi**	**1.50**	**325**	eP	**Pg**	**06 56 28.8**	**-0.4**
	baz=327						
ETLH				eS	**Sn**	**06 56 47.0**	**-0.1**
	baz=327						
OWD	**Renai**	**1.50**	**311**	eP	**Pg**	**06 56 28.9**	**-0.3**
	baz=312						
OWD				eS	**Sn**	**06 56 46.7**	**-0.6**
	baz=312						
STYT	**Tauyuan**	**1.54**	**277**	eS	**Sn**	**06 56 48.2**	**+0.1**
	baz=287						
JYNG	**Yonagunijimaku**	**1.55**	**18**	P	**Pg**	**06 56 30.2**	**+0.1**
JYNG				S	**Sb**	**06 56 49.0**	**+0.1**
EAST	**Anshuo**	**1.56**	**248**	eP	**Pb**	**06 56 29.5**	**+0.1**
	baz=258						
EAST				eS	**Sn**	**06 56 48.4**	**-0.2**
	baz=258						
SSLB	**Suanglung**	**1.57**	**301**	eP	**Pg**	**06 56 30.3**	**-0.2**
	baz=304						
CHGB	**Renai**	**1.57**	**314**	P	**Pg**	**06 56 30.4**	**-0.2**
	baz=324						
CHGB				eS	**Sb**	**06 56 49.7**	**-0.1**
	baz=324						
WHF	**Hehuan Shan**	**1.58**	**318**	P	**Pb**	**06 56 30.0**	**+0.1**
	baz=320						
WHF				eS	**Sn**	**06 56 48.9**	**-0.6**
	baz=320						
ALS	**Alishan**	**1.58**	**290**	P	**Pg**	**06 56 31.2**	**+0.6**
	baz=292						
ALS				eS	**Sg**	**06 56 50.5**	**-0.6**
	baz=292						
YOJ	**Yonaguni jima**	**1.58**	**20**	eP	**Pg**	**06 56 30.8**	**+0.1**
	baz=11						
YOJ				eS	**Sb**	**06 56 49.8**	**0.0**
	baz=11						
YOJ	**Yonaguni jima**	**1.58**	**20**	P	**Pg**	**06 56 30.4**	**-0.3**
YOJ				S	**Sb**	**06 56 49.8**	**0.0**
EOS1	**EOS1**	**1.59**	**351**	eS	**Sg**	**06 56 50.4**	**-1.2**
	baz=343						
SLGT	**Liugui**	**1.63**	**271**	eP	**Pg**	**06 56 31.6**	**-0.1**
	baz=271						
SLGT				eS	**Sb**	**06 56 51.9**	**+0.6**
	baz=271						
SMLT	**Sun Moon Lake**	**1.66**	**303**	eP	**Pg**	**06 56 31.9**	**-0.3**
	baz=313						
HATJ	**Hateruma jima**	**1.67**	**49**	P	**Pb**	**06 56 31.1**	**-0.1**
HATJ				S	**Sn**	**06 56 50.5**	**-0.7**
TPUB	**Ta-pu**	**1.68**	**282**	eP	**Pg**	**06 56 32.8**	**+0.3**
	baz=290						
TPUB				eS	**Sb**	**06 56 53.1**	**+0.6**
	baz=290						
WTP	**Ta-pu**	**1.68**	**280**	eP	**Pg**	**06 56 33.8**	**+1.1**
	baz=288						
WTP				eS	**Sg**	**06 56 55.2**	**+0.7**
	baz=288						
MASBT	**Mashibuluo**	**1.69**	**258**	eP	**Pb**	**06 56 31.5**	**0.0**
	baz=255						
SGST	**Jiashian**	**1.69**	**274**	eS	**Sb**	**06 56 53.3**	**+0.3**
	baz=281						
TYC	**Yuchr**	**1.71**	**303**	eP	**Pg**	**06 56 32.6**	**-0.5**
	baz=312						
TWT	**Tachien**	**1.71**	**319**	eS	**Sn**	**06 56 52.8**	**+0.4**
	baz=319						
TWC	**Suao**	**1.71**	**342**	eS	**Sb**	**06 56 53.1**	**-0.4**
	baz=352						
CHN5	**Tsauling**	**1.72**	**292**	eP	**Pg**	**06 56 33.7**	**+0.4**
	baz=293						
CHN5				eS	**Sg**	**06 56 55.4**	**-0.2**
	baz=293						
NNSB	**Datong**	**1.73**	**327**	eP	**Pb**	**06 56 32.7**	**+0.3**
	baz=328						
NNSB				eS	**Sn**	**06 56 53.1**	**+0.1**
	baz=328						
NNSH	**Datong**	**1.73**	**327**	eP	**Pg**	**06 56 32.9**	**-0.7**
	baz=328						
NNSH				eS	**Sn**	**06 56 52.8**	**-0.1**
	baz=328						
NNS	**Nan Shan**	**1.75**	**327**	eS	**Sb**	**06 56 54.0**	**-0.7**
	baz=328						
CHN1	**Nanshi**	**1.75**	**277**	eP	**Pg**	**06 56 34.7**	**+0.7**
	baz=285						
CHN1				eS	**Sg**	**06 56 56.2**	**-0.5**
	baz=285						
TSEB	**Hengchuen, Pin**	**1.76**	**233**	eS	**Sg**	**06 56 56.5**	**-0.6**
	baz=234						
SCZT	**Fangliau**	**1.76**	**251**	eP	**Pb**	**06 56 32.5**	**-0.3**
	baz=256						
SCZT				eS	**Sn**	**06 56 53.0**	**-0.5**
	baz=256						
WJS	**Zhushan**	**1.77**	**299**	eP	**Pg**	**06 56 34.7**	**+0.5**
	baz=304						
TWK	**Hsinying**	**1.80**	**280**	eP	**Pg**	**06 56 35.0**	**+0.2**
	baz=290						
TWK				eS	**Sg**	**06 56 57.2**	**-1.1**
	baz=290						
TWKBT	**Hengchun**	**1.80**	**236**	eP	**Pb**	**06 56 33.5**	**0.0**
	baz=236						
TWKBT				eS	**Sn**	**06 56 54.4**	**-0.1**
	baz=236						
TWK1	**Hengchun**	**1.81**	**236**	eP	**Pb**	**06 56 33.5**	**-0.1**
	baz=236						
TWK1				eS	**Sn**	**06 56 53.5**	**-1.1**
	baz=236						
IRIF	**Iriomote-Funau**	**1.81**	**41**	P	**Pb**	**06 56 33.4**	**-0.3**
IRIF				S	**Sn**	**06 56 54.3**	**-0.5**
NDT	**Datong Townshi**	**1.82**	**333**	eP	**Pb**	**06 56 34.0**	**+0.1**
	baz=342						
NDT				eS	**Sb**	**06 56 55.6**	**-1.2**
	baz=342						
ENTT	**Nioudou**	**1.83**	**335**	eP	**Pg**	**06 56 34.6**	**-0.9**
	baz=336						
ENTT				eS	**Sb**	**06 56 56.5**	**-0.6**
	baz=336						
TWM1	**Shoushan**	**1.84**	**266**	eP	**Pg**	**06 56 35.4**	**-0.3**
	baz=264						
TWM1				eS	**Sg**	**06 56 59.0**	**-0.7**
	baz=264						
WDLH	**Douliu**	**1.87**	**293**	eP	**Pg**	**06 56 36.5**	**+0.3**
	baz=294						
WDLH				eS	**Sg**	**06 57 00.4**	**-0.1**
	baz=294						
WHP	**Taichung City**	**1.87**	**314**	eP	**Pg**	**06 56 36.0**	**-0.3**
	baz=315						
WHP				eS	**Sb**	**06 56 57.4**	**-1.0**
	baz=315						
CHN3	**Shinhua**	**1.89**	**274**	eS	**Sg**	**06 57 03.6**	**+2.3**
	baz=274						
JKRS	**Kuro-shima**	**1.93**	**49**	P	**Pb**	**06 56 34.9**	**-0.7**
JKRS				S	**Sn**	**06 56 57.0**	**-0.6**
YHNB	**Yeheng**	**1.94**	**331**	eP	**Pb**	**06 56 35.9**	**0.0**
	baz=332						
YHNB				eS	**Sn**	**06 56 58.3**	**+0.3**
	baz=332						
NSK	**Sanguang**	**1.96**	**330**	eP	**Pb**	**06 56 36.1**	**0.0**
	baz=332						
NSK				eS	**Sn**	**06 56 58.7**	**+0.3**
	baz=332						
WCHH	**Zhanghua**	**2.03**	**303**	eP	**Pg**	**06 56 38.6**	**-0.7**
	baz=304						
WCHH				eS	**Sg**	**06 57 05.5**	**-0.2**
	baz=304						
TWQ1	**Liyutan**	**2.04**	**313**	eP	**Pg**	**06 56 38.8**	**-0.7**
	baz=320						
TWQ1				eS	**Sb**	**06 57 03.6**	**+0.7**
	baz=320						
TIPB	**Shuangxi**	**2.06**	**345**	eP	**Pb**	**06 56 38.6**	**+0.6**
	baz=354						
TIPB				eS	**Sb**	**06 57 02.5**	**-1.2**
	baz=354						
JIJ	**Ishigaki jima**	**2.10**	**48**	P	**Pn**	**06 56 36.9**	**+1.2**
JIJ				S	**Sn**	**06 57 00.7**	**-1.2**
JISG	**Ishigakijimahi**	**2.37**	**47**	P	**Pn**	**06 56 40.2**	**+0.9**
JISG				S	**Sn**	**06 57 07.8**	**-0.6**
JTJ	**Tarama**	**2.67**	**51**	P	**Pn**	**06 56 45.2**	**+1.7**
JIRB	**Irabujima**	**3.13**	**53**	eS	**Sn**	**06 57 28.5**	**+1.3**
JMJ2	**Miyako jima3**	**3.19**	**56**	P	**Pn**	**06 56 52.3**	**+1.6**

DDA 11 07:03:57.7, 35°80N×27°77E, h7km±3km, ML2.3
ATH 11 07:03:59.5, 35°88N×27°82E, h62km±3km, ML2.8/3, Error ellipse: s-maj=3.9km s-min=1.6km az=137.0
NIC 11 07:03:59.9±0.0, 35°66N×28°00E, h23km±2km, Ml3.1/2
ISK 11 07:04:00.2, 35°85N×27°83E, h55km±1km, ML2.2/10

ISC 11 07:03:59.6±1.3, 35°81N±0°04×27°88E±0°03, h64km±9km, n43, σ0°85/57, 2D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.45**	**26**	P	**Pn**	**07 04 11.7**	**+0.2**
ARG				S	**Sn**	**07 04 19.8**	**-0.2**
ARG				AML	AML	07 04 20.4	
	comp=N,830μm,0.4s						
ARG				AML	AML	07 04 20.5	
	comp=E,1123μm,0.3s						
ARG	**Arkhangelos**	**0.45**	**26**	PG	**Pn**	**07 04 11.6**	**+0.2**
ARG				SG	**Sn**	**07 04 19.9**	**-0.2**
ARG	**Arkhangelos**	**0.45**	**26**	P	**Pn**	**07 04 11.7**	**+0.2**
ARG				S	**Sn**	**07 04 19.8**	**-0.2**
KARP	**Karpathos**	**0.64**	**246**	P	**Pn**	**07 04 13.8**	**+0.3**
KARP				S	**Sn**	**07 04 23.5**	**-0.1**
KARP				AML	AML	07 04 24.1	
	comp=N,1945μm,0.1s						
KARP				AML	AML	07 04 24.3	
	comp=E,1817μm,0.1s						
KARP	**Karpathos**	**0.64**	**246**	PG	**Pn**	**07 04 13.8**	**+0.3**

DALY	**Dalyan (Mula)**	**1.18**	**32**	PN	**Pn**	**07 04 21.3**	**+1.1**
DALY	**Dalyan (Mula)**	**1.18**	**32**	*i* P	**Pn**	**07 04 21.1**	**+1.0**
DALY				*i* S	**Sn**	**07 04 36.4**	**+0.9**
TURN	**Turunc**	**1.21**	**29**	PG	**Pn**	**07 04 18.7**	**-1.8**
TURN	**Turunc**	**1.21**	**29**	*i* P	**Pn**	**07 04 18.9**	**-1.6**
FETY	**Fethiye**	**1.27**	**50**	PN	**Pn**	**07 04 22.5**	**+1.1**
FETY	**Fethiye**	**1.27**	**50**	*i* P	**Pn**	**07 04 21.7**	**+0.3**
BDRM	**Kayabasi**	**1.30**	**344**	*i* P	**Pn**	**07 04 21.2**	**-0.6**
BDRM				*i* S	**Sn**	**07 04 37.3**	**-1.0**
BDRM				IAML		07 04 38.0	
	comp=E,73nm,0.3s						
BODT	**Bodrum**	**1.33**	**340**	PN	**Pn**	**07 04 21.9**	**-0.3**
YER	**Yerkesik**	**1.36**	**14**	PN	**Pn**	**07 04 23.4**	**+0.8**
KSL	**Kastellorizon**	**1.42**	**76**	P	**Pn**	**07 04 24.5**	**+1.1**
KSL	**Kastellorizon**	**1.42**	**76**	P	**Pn**	**07 04 23.9**	**+0.5**
KSL				S	**Sn**	**07 04 41.4**	**+0.2**
AKAS	**Kas**	**1.46**	**73**	PN	**Pn**	**07 04 25.2**	**+1.2**
AKAS	**Kas**	**1.46**	**73**	*i* P	**Pn**	**07 04 24.6**	**+0.6**
AKAS				*i* S	**Sn**	**07 04 41.4**	**-0.9**
AKAS				IAML		07 04 46.0	
	comp=N,24nm,0.5s						
ZKR	**Zakros**	**1.52**	**243**	P	**Pn**	**07 04 26.3**	**+1.6**
ZKR	**Zakros**	**1.52**	**243**	P	**Pn**	**07 04 26.4**	**+1.7**
ANAF	**Anafi Island**	**1.79**	**288**	P	**Pn**	**07 04 28.4**	**+0.1**
ANAF				AML	AML	07 04 50.9	
	comp=E,566µm,0.3s						
ANAF				AML	AML	07 04 51.1	
	comp=N,364µm,0.3s						
AYDN	**Tasoluk**	**1.84**	**0**	*i* P	**Pn**	**07 04 29.5**	**+0.4**
TAVA	**DENIZLI_Tavas**	**1.85**	**26**	*i* P	**Pn**	**07 04 29.9**	**+0.8**
ELL	**Elmali**	**1.89**	**60**	PN	**Pn**	**07 04 31.6**	**+1.8**
ELL	**Elmali**	**1.89**	**60**	P	**Pn**	**07 04 31.3**	**+1.6**
AMGA	**Amorgos Island**	**1.90**	**303**	P	**Pn**	**07 04 29.8**	**0.0**
GOLH	**Golhisar**	**1.96**	**43**	*i* P	**Pn**	**07 04 32.6**	**+1.8**
LAST	**Lasithi**	**2.06**	**252**	P	**Pn**	**07 04 32.6**	**+0.5**
SMG	**Samos**	**2.07**	**336**	P	**Pn**	**07 04 32.1**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**2.13**	**0**	PN	**Pn**	**07 04 34.0**	**+1.0**
APE	**Apeiranthos**	**2.27**	**304**	P	**Pn**	**07 04 35.2**	**+0.3**
IOSP	**Ios island**	**2.28**	**294**	P	**Pn**	**07 04 35.1**	**+0.1**
OSC1	**CSNet OBS 1**	**3.63**	**129**	P	**Pn**	**07 04 52.9**	**-0.5**
OSC1				S	**Sn**	**07 05 33.4**	**-1.6**
AKMS	**Akamas**	**3.73**	**101**	P	**Pn**	**07 04 54.5**	**-0.2**
ALFC	**Alefka**	**3.91**	**98**	⇓P	**Pn**	**07 04 56.8**	**-0.4**
ALFC				S	**Sn**	**07 05 41.1**	**-0.7**
ALFC				AML	AML	07 05 41.6	
	comp=N,0.2nm,0.2s						
ALFC				AML	AML	07 05 41.6	
	comp=N,0.2nm,0.2s						
ALFC				AML	AML	07 05 41.6	
	comp=N,0.1nm,0.2s						
ALFC				AML	AML	07 05 41.6	
	comp=N,0.1nm,0.2s						
NATA	**Nata**	**3.97**	**104**	P	**Pn**	**07 04 58.5**	**+0.4**
SZAC	**Soumi**	**4.23**	**103**	⇓P	**Pn**	**07 05 01.7**	**+0.2**
ASGA	**Asgata**	**4.51**	**102**	P	**Pn**	**07 05 05.4**	**0.0**
OSC2	**CSNet OBS 4**	**4.54**	**126**	P	**Pn**	**07 05 05.6**	**-0.2**

*IDC **11** 07:26:45.3±10.0, 12°.45S×167°.28E, h170km±93km, mb3.7/10, mb1 3.9/10, mb1mx3.6/35, mbtmp4.1/10, Error ellipse: s-maj=55.3km s-min=33.3km az=144.0*
*NEIC **11** 07:26:55.1±1.2, 12°.3S±0°.1×167°.0E±0°.1, h251km±8km, mb4.3/24, Error ellipse: s-maj=16.1km s-min=15.2km az=203.0*
ISC 11 07:26:51.5±0.5, 12°.3S±0°.1×167°.05E±0°.08, h220km, n41, σ0§94/41, mb4.2/21, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**11.91**	**118**	Pn	**P**	**07 29 38.8**	**-0.2**
FUNA	**Funafuti**	**12.52**	**74**	Pn	**P**	**07 29 45.5**	**-0.3**
EIDS	**Eidsvold**	**19.90**	**227**	P	**P**	**07 31 08.0**	**+1.5**
AFI	**Afiamalu**	**20.68**	**97**	P	**P**	**07 31 16.9**	**+1.9**
CTA	**Charters Tower**	**21.40**	**246**	P	**P**	**07 31 22.4**	**0.0**
	3.6nm,0.5s,baz=53,slow=14,SNR=2.7						
CTAO	**Charters Tower**	**21.40**	**246**	P	**P**	**07 31 23.2**	**+0.9**
CTAO				IAmb	IAmb	07 31 26.4	
	comp=Z,13nm,1.1s						
ARMA	**Armidale**	**22.99**	**216**	P	**P**	**07 31 37.6**	**+0.4**
ARMA				IAmb	IAmb	07 31 40.0	
	comp=Z,7.7nm,0.8s						
NIUE	**Niue**	**23.14**	**110**	P	**P**	**07 31 38.0**	**-0.5**
COEN	**Coen**	**23.31**	**263**	P	**P**	**07 31 40.7**	**+0.5**
COEN				IAmb	IAmb	07 31 41.9	
	comp=Z,6.7nm,0.8s						
STKA	**Stephens Creek**	**30.45**	**226**	P	**P**	**07 32 43.1**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=85,slow=7.9,SNR=3.6						
FOZ	**Fox Glacier**	**31.20**	**176**		P	07 32 44.5	-5.6
WR0	**Warramunga Arr**	**32.10**	**252**	P	**P**	**07 32 57.4**	**-0.9**
WB0	**Warramunga Arr**	**32.21**	**252**	P	**P**	**07 32 58.5**	**-0.8**
WB0				IAmb	IAmb	07 32 59.2	
	comp=Z,4.4nm,0.8s						
WB2	**Warramunga Arr**	**32.27**	**252**	P	**P**	**07 32 58.4**	**-1.5**
WRA	**Warramunga Arr**	**32.28**	**252**	P	**P**	**07 32 58.2**	**-1.7**
	comp=Z,2.2nm,0.7s,baz=84,slow=8.5,SNR=15						
AS31	**Alice Springs**	**33.40**	**246**	P	**P**	**07 33 09.3**	**-0.3**
ASAR	**Alice Springs**	**33.40**	**246**	P	**P**	**07 33 09.0**	**-0.7**
	comp=Z,2.9nm,0.7s,baz=71,slow=9.5,SNR=48						
ASAR				sP	**pwP**	**07 33 55.6**	**-2.4**
	comp=Z,1.5nm,0.8s,baz=72,slow=9.3,SNR=5.4						
BBOO	**Buckleboo**	**34.94**	**229**	P	**P**	**07 33 23.2**	**+0.5**
BBOO				IAmb	IAmb	07 33 42.2	
	comp=Z,16nm,1.5s						
KNRA	**Kununurra**	**37.27**	**260**	P	**P**	**07 33 42.6**	**0.0**
KNRA				IAmb	IAmb	07 33 43.7	
	comp=Z,12nm,1.1s						
FITZ	**Fitzroy Crossi**	**40.31**	**257**	P	**P**	**07 34 08.5**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=55,slow=7.7,SNR=13						
FITZ	**Fitzroy Crossi**	**40.31**	**257**	P	**P**	**07 34 08.4**	**+0.6**
FITZ				IAmb	IAmb	07 34 09.5	
	comp=Z,12nm,1.4s						
FORT	**Forrest**	**40.39**	**237**	P	**P**	**07 34 09.1**	**+0.7**
FORT				IAmb	IAmb	07 34 09.5	
	comp=Z,13nm,0.7s						
ATKA	**Atka Island**	**66.26**	**12**	P	**P**	**07 37 16.4**	**+0.6**
NIKH	**Nikolski High**	**68.23**	**15**	P	**P**	**07 37 29.2**	**+1.0**
NIKH				IAmb	IAmb	07 37 47.9	
	comp=Z,9.6nm,0.8s						
CHGN	**Chignik**	**74.17**	**19**	P	**P**	**07 38 02.1**	**-1.6**
CHGN				IAmb	IAmb	07 38 03.2	
	comp=Z,3.0nm,0.8s						
OHAK	**Old Harbor**	**76.62**	**21**	P	**P**	**07 38 18.0**	**+0.5**
QSPA	**South Pole Qui**	**77.70**	**180**	P	**P**	**07 38 24.5**	**+0.8**
SONM	**Songino Array**	**80.44**	**323**	P	**P**	**07 38 40.1**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=153,slow=4.8,SNR=2.2						
RND	**Reindeer**	**82.72**	**18**	P	**P**	**07 38 50.9**	**+0.5**
WRH	**Wood River Hil**	**83.73**	**18**	P	**P**	**07 38 55.5**	**+0.2**
WRH				IAmb	IAmb	07 38 56.0	
	comp=Z,6.0nm,1.1s						
IL31		**84.31**	**18**	P	**P**	**07 38 58.5**	**+0.2**
IL31				IAmb	IAmb	07 38 58.9	
	comp=Z,5.1nm,0.7s						
ILAR	**Eielson Array**	**84.31**	**18**	P	**P**	**07 38 58.0**	**-0.3**
	comp=Z,4.4nm,0.6s,baz=246,slow=5.1,SNR=79						
EGAK	**Eagle**	**86.13**	**20**	P	**P**	**07 39 08.3**	**+1.0**
EGAK				IAmb	IAmb	07 39 09.1	
	comp=Z,2.7nm,0.7s						
TXAR	**Lajitas Array**	**95.31**	**61**	P	**P**	**07 39 50.0**	**-1.1**
	comp=Z,0.2nm,0.8s,baz=260,slow=5.4,SNR=2.3						
MKAR	**Makanchi Array**	**95.32**	**317**	P	**P**	**07 39 50.9**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=96,slow=6.8,SNR=4.7						
YKA	**Yellowknife Ar**	**95.51**	**27**	P	**P**	**07 39 50.1**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=254,slow=4.7,SNR=11						
ARCES	**ARCESS Array B**	**117.87**	**346**	PKP	**PKPdf**	**07 45 11.1**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=80,slow=2.1,SNR=24						
FINES	**FINESS Array B**	**123.41**	**339**	PKP	**PKPdf**	**07 45 21.1**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=75,slow=2.2,SNR=7.8						
NOA	**NORSAR Array B**	**128.25**	**345**	PKP	**PKiKP**	**07 45 31.9**	**-0.1**
	comp=Z,0.1nm,0.6s,baz=22,slow=17,SNR=2.3						
GERES	**GERESS Array B**	**137.40**	**334**	PKP	**PKiKP**	**07 45 50.1**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=48,slow=2.0,SNR=3.8						
ESDC	**Sonseca Array**	**151.61**	**345**	PKPbc	**PKiKP**	**07 46 20.5**	**0.0**
	comp=Z,0.2nm,0.5s,baz=348,slow=20,SNR=5.2						

*IDC **11** 08:10:59.5±0.8, 7°.96N×127°.38E, h0km, mb3.9/12, mb1 4.0/12, mb1mx3.8/46, mbtmp3.9/12, MS3.1/3, Ms1 3.1/3, ms1mx2.6/35, Error ellipse: s-maj=27.0km s-min=15.5km az=81.0*
*NEIC **11** 08:11:00.7±0.9, 7°.97N±0°.08×127°.44E±0°.08, h10km±1km, mb4.4/20, Error ellipse: s-maj=14.0km s-min=12.5km az=46.0*

*MAN **11** 08:11:06.0, 7°.72N×127°.03E, h12km, MS3.3*
ISC 11 08:11:00.0±2.9, 7°.94N±0°.04×127°.33E±0°.06, h4km±18km, n51, σ1§50/60, mb4.3/20, MS3.0/3, 2C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.45**	**227**	*e*P	**Pn**	**08 11 26.1**	**-0.8**
MATI				*e*S	**Sn**	**08 11 41.6**	**-4.8**
DAV	**Davao City (W)**	**1.94**	**244**	Pn	**Pn**	**08 11 35.2**	**+1.5**
	52nm,0.3s,baz=20,slow=3.7,SNR=6.0						
DAV				Sn	**Sb**	**08 12 02.3**	**+1.9**
	30nm,0.3s,baz=290,slow=21,SNR=4.4						
DAV				LR	LR	08 12 40.7	
	comp=Z,642nm,20.8s,baz=54,slow=51						
DAV	**Davao City (W)**	**1.94**	**244**		**Pn**	**08 11 35.3**	**+1.5**
DAV					**Sn**	**08 12 00.8**	**+2.3**
BUTP	**Butuan**	**1.98**	**301**	*e*P	**Pb**	**08 11 36.8**	**+0.3**
BUTP				*e*S	**Sb**	**08 12 02.7**	**+1.2**
DMPH	**Davao City--Mi**	**1.99**	**245**	⇑*e*P	**Pb**	**08 11 37.0**	**+0.2**
DMPH				*i* S	**Sn**	**08 12 01.4**	**+1.5**
KCP	**Kidapawan**	**2.40**	**248**	⇓*e*P	**Pn**	**08 11 41.1**	**+0.9**
KCP				*i* S	**Sb**	**08 12 14.5**	**+0.6**
DDMP	**Don Marcelino,**	**2.43**	**222**	*e*P	**Pn**	**08 11 41.2**	**+0.8**
DDMP				*e*S	**Sn**	**08 12 07.3**	**-3.3**
CGP	**Cagayan de Oro**	**2.66**	**281**	⇑*e*P	**Pn**	**08 11 46.2**	**+2.6**
CGP				*e*S	**Sn**	**08 12 16.0**	**-0.3**
SKMP	**Bagumbayan, Su**	**3.10**	**243**	*e*P	**Pn**	**08 11 49.7**	**0.0**
SKMP				*e*S	**Sn**	**08 12 24.1**	**-3.1**
CTBH	**Cotabato--PC H**	**3.14**	**257**	⇓*i*P	**Pn**	**08 11 51.8**	**+1.6**
MSLP	**Maasin**	**3.27**	**312**	*e*P	**Pb**	**08 11 56.3**	**-2.4**
MSLP				*e*S	**Sb**	**08 12 36.0**	**-2.9**
TBP	**Tagbilaran**	**3.84**	**297**	*e*P	**Pb**	**08 12 05.8**	**-2.7**
LLP	**Lapu-Lapu**	**4.08**	**306**	⇓*e*P	**Pn**	**08 12 06.2**	**+3.1**
LLP				*e*S	**Sn**	**08 12 50.3**	**-1.0**
TNTI	**Ternate**	**7.12**	**180**	Pn	**Pn**	**08 12 46.6**	**+1.6**
TNTI				Sn	**Sn**	**08 14 06.2**	**-0.2**
FAKI	**Fak Fak**	**11.85**	**155**	Pn	**Pn**	**08 13 49.9**	**0.0**
SAUI	**Saumlaki**	**16.30**	**166**	Pn	**Pn**	**08 14 49.6**	**-0.3**
YOJ	**Yonaguni jima**	**16.95**	**346**	Pn	**Pn**	**08 14 57.6**	**-0.4**
SOEI	**Soe**	**17.84**	**190**	P	**P**	**08 15 11.1**	**+0.9**
MTN	**Manton Dam**	**20.99**	**170**	P	**P**	**08 15 43.1**	**-1.4**
MTN				IAmb	IAmb	08 15 60.0	
	comp=Z,24nm,1.5s						
KNRA	**Kununurra**	**23.50**	**177**	P	**P**	**08 16 11.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**25.92**	**184**	P	**P**	**08 16 34.1**	**+0.7**
	comp=Z,1.8nm,0.4s,baz=10,slow=7.2,SNR=14						
FITZ	**Fitzroy Crossi**	**25.92**	**184**	P	**P**	**08 16 35.0**	**+1.6**
FITZ				IAmb	IAmb	08 16 48.3	
	comp=Z,8.5nm,1.4s						
KRVT	**Keravat (AS076**	**27.48**	**115**	LR	LR	08 27 06.2	
	comp=Z,55nm,18.8s,baz=268,slow=35						
JHJ	**Hachijo jima 2**	**27.59**	**23**	LR	LR	08 29 52.4	
	comp=Z,40nm,18.1s,baz=346,slow=41						
WRA	**Warramunga Arr**	**28.55**	**166**	P	**P**	**08 16 57.1**	**0.0**
	comp=Z,0.4nm,0.5s,baz=347,slow=9.8,SNR=1.9						
WB2	**Warramunga Arr**	**28.55**	**166**	P	**P**	**08 16 59.2**	**+2.1**
WR0	**Warramunga Arr**	**28.61**	**166**	P	**P**	**08 16 57.9**	**+0.3**
WR0				IAmb	IAmb	08 17 03.9	
	comp=Z,4.1nm,0.8s						
KSRS	**Korea Array**	**29.39**	**1**	LR	LR	08 29 40.3	
	comp=Z,26nm,19.1s,baz=175,slow=38						
ASAR	**Alice Springs**	**32.06**	**169**	P	**P**	**08 17 27.6**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=341,slow=7.2,SNR=7.0						
FORT	**Forrest**	**38.50**	**179**	P	**P**	**08 18 23.6**	**+0.2**
BBOO	**Buckleboo**	**41.36**	**169**	P	**P**	**08 18 47.8**	**+0.5**
BBOO				IAmb	IAmb	08 19 00.6	
	comp=Z,16nm,1.4s						
STKA	**Stephens Creek**	**41.87**	**162**	P	**P**	**08 18 51.7**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=327,slow=10,SNR=3.1						
STKA	**Stephens Creek**	**41.87**	**162**	P	**P**	**08 18 50.8**	**-0.7**
SONM	**Songino Array**	**43.56**	**340**	P	**P**	**08 19 05.2**	**+0.1**
	comp=Z,1.2nm,1.1s,baz=153,slow=7.4,SNR=3.2						
MK31	**Makanchi Array**	**54.51**	**323**	P	**P**	**08 20 29.9**	**+0.9**
MK31				IAmb	IAmb	08 20 30.6	
	comp=Z,2.8nm,0.8s						
MKAR	**Makanchi Array**	**54.51**	**323**	P	**P**	**08 20 29.3**	**+0.3**
	comp=Z,3.0nm,0.7s,baz=125,slow=7.8,SNR=26						
MAKZ	**Makanchi**	**54.70**	**323**	P	**P**	**08 20 30.6**	**+0.2**
MAKZ				IAmb	IAmb	08 20 32.0	
	comp=Z,3.0nm,0.8s						
NIL	**Nilore**	**55.91**	**305**	P	**P**	**08 20 38.2**	**-1.2**
ZAA0	**Zalesovo Array**	**57.16**	**332**	P	**P**	**08 20 48.8**	**+0.9**
ZALV	**Zalesovo Beam**	**57.16**	**332**	P	**P**	**08 20 48.0**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=104,slow=6.3,SNR=6.9						
AAK	**Ala-Archa**	**57.71**	**316**	P	**P**	**08 20 52.1**	**-0.1**
KURK	**Kurchatov**	**58.57**	**326**	P	**P**	**08 20 57.0**	**-0.8**
KK31	**Karatay Array**	**60.63**	**315**	P	**P**	**08 21 12.2**	**-0.1**
KK31				IAmb	IAmb	08 21 12.8	
	comp=Z,2.2nm,0.8s						
KKAR	**Karatay Array**	**60.63**	**315**	P	**P**	**08 21 12.3**	**0.0**
KKAR				IAmb	IAmb	08 21 12.9	
	comp=Z,2.2nm,0.8s						
BRVK	**Borovoye**	**64.24**	**326**	P	**P**	**08 21 36.6**	**+0.5**
BRVK				IAmb	IAmb	08 21 37.7	
	comp=Z,2.8nm,0.9s						
RAYN	**Ar Rayn**	**79.41**	**292**	P	**P**	**08 23 07.0**	**-1.0**
RAYN				IAmb	IAmb	08 23 08.3	
	comp=Z,3.5nm,1.1s						
ILAR	**Eielson Array**	**81.08**	**26**	P	**P**	**08 23 17.1**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=248,slow=4.8,SNR=3.6						
ARCES	**ARCESS Array B**	**86.73**	**340**	P	**P**	**08 23 44.9**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=68,slow=7.0,SNR=5.1						
FINES	**FINESS Array B**	**88.43**	**332**	P	**P**	**08 23 52.5**	**-0.7**
	comp=Z,2.5nm,1.0s,baz=83,slow=6.0,SNR=8.5						
AKASG	**Malin Array Be**	**89.02**	**321**	P	**P**	**08 23 55.9**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=246,slow=44,SNR=2.1						
YKA	**Yellowknife Ar**	**95.45**	**24**	P	**P**	**08 24 26.7**	**+1.0**
	comp=Z,0.2nm,0.7s,baz=304,slow=4.3,SNR=3.0						

*IDC **11** 08:15:23.7±4.5, 16°.68S×177°.39W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.7/38, mbtmp4.2/3, Error ellipse: s-maj=188.0km s-min=51.6km az=140.0*
*NEIC **11** 08:15:44.6±0.9, 17°.1S±0°.2×176°.5W±0°.1, h254km±8km, mb4.1/13, Error ellipse: s-maj=33.7km s-min=14.5km az=174.0*
ISC 11 08:15:44.7±0.8, 17°.2S±0°.2×176°.5W±0°.1, h250km, n20, σ1§62/20, mb4.0/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.24**	**263**	Pn	**Pn**	**08 17 04.3**	**+0.8**
NIUE	**Niue**	**6.53**	**108**	Pn	**Pn**	**08 17 19.1**	**-0.4**
TUWZ	**Tuamarina**	**25.55**	**197**	P	**P**	**08 20 51.5**	**+0.7**
ARMA	**Armidale**	**31.89**	**240**	P	**P**	**08 21 47.0**	**-0.1**
STKA	**Stephens Creek**	**40.59**	**241**	P	**P**	**08 23 01.4**	**+1.0**
	1.3nm,0.4s,baz=73,slow=11,SNR=3.6						
BBOO	**Buckleboo**	**45.36**	**241**	P	**P**	**08 23 39.0**	**+0.4**
BBOO				IAmb	IAmb	08 23 57.6	
	comp=Z,21nm,1.5s						
WR0	**Warramunga Arr**	**46.38**	**259**	P	**P**	**08 23 47.0**	**+0.4**
WR0				IAmb	IAmb	08 23 50.6	
	comp=Z,7.8nm,1.4s						
WB0	**Warramunga Arr**	**46.53**	**259**	P	**P**	**08 23 47.8**	**0.0**
WB0				IAmb	IAmb	08 23 52.5	
	comp=Z,8.1nm,1.4s						
WB2	**Warramunga Arr**	**46.55**	**259**	P	**P**	**08 23 47.3**	**-0.7**
WRA	**Warramunga Arr**	**46.57**	**259**	P	**P**	**08 23 47.7**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=93,slow=8.1,SNR=21						
AS31	**Alice Springs**	**46.75**	**253**	P	**P**	**08 23 49.5**	**0.0**
ASAR	**Alice Springs**	**46.75**	**253**	P	**P**	**08 23 49.5**	**0.0**
	comp=Z,6.6nm,0.6s,baz=88,slow=8.4,SNR=129						
MTN	**Manton Dam**	**50.65**	**267**	P	**P**	**08 24 19.4**	**+0.2**
MTN				IAmb	IAmb	08 24 31.4	
	comp=Z,4.1nm,0.9s						
FORT	**Forrest**	**51.98**	**244**	P	**P**	**08 24 28.1**	**-0.7**
FORT				IAmb	IAmb	08 24 30.5	
	comp=Z,25nm,1.5s						
FAKI	**Fak Fak**	**52.24**	**280**	P	**P**	**08 24 27.7**	**-3.2**
FAKI				IAmb	IAmb	08 24 42.3	
	comp=Z,12nm,1.1s						
FITZ	**Fitzroy Crossi**	**54.95**	**260**	P	**P**	**08 24 50.9**	**+0.4**
SOEI	**Soe**	**57.90**	**269**	P	**P**	**08 25 10.9**	**-0.5**
KNK	**Knik Glacier**	**81.44**	**13**	P	**P**	**08 27 33.1**	**-0.5**
KNK				IAmb	IAmb	08 27 40.1	
	comp=Z,6.0nm,0.8s						
KSU1	**Kansas State U**	**93.07**	**50**	P	**P**	**08 28 29.5**	**-0.7**
GERES	**GERESS Array B**	**147.32**	**347**	PKPbc	**PKPab**	**08 35 06.8**	**+5.4**
	comp=Z,0.3nm,0.5s,baz=23,slow=5.3,SNR=2.7						

*IDC **11** 08:22:14.3±0.8, 8°.09N×127°.36E, h0km, mb3.8/12, mb1 4.0/13, mb1mx3.8/41, mbtmp3.8/13, ML4.1/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/27, Error ellipse: s-maj=26.4km s-min=15.3km az=92.0*
*NEIC **11** 08:22:15.6±0.9, 7°.9N±0°.1×127°.2E±0°.1, h10km±1km, mb4.3/16, Error ellipse: s-maj=22.3km s-min=20.4km az=104.0*
*MAN **11** 08:22:15.2, 7°.77N×127°.43E, h22km, MS3.4*
ISC 11 08:22:15.5±2.9, 7°.85N±0°.05×127°.35E±0°.07, h14km±17km, n38, σ1§57/44, mb4.2/21, 4D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.41**	**230**	*e*P	**Pn**	**08 22 39.1**	**-1.7**
MATI				*e*S	**Sn**	**08 22 57.4**	**-1.9**
DAV	**Davao City (W)**	**1.92**	**246**	Pn	**Pb**	**08 22 50.8**	**+0.4**
	73nm,0.3s,baz=90,slow=3.8,SNR=5.8						
DAV				Sn	**Sb**	**08 23 15.7**	**+1.5**
	37nm,0.3s,baz=247,slow=19,SNR=9.4						
DAV				LR	LR	08 23 55.1	
	comp=Z,505nm,20.8s,baz=70,slow=50						
DMPH	**Davao City--Mi**	**1.98**	**247**	⇓*e*P	**Pb**	**08 22 52.3**	**+0.9**
DMPH				*i* S	Sg	08 23 23.4	+4.1
BUTP	**Butuan**	**2.04**	**303**	*e*P	**Pn**	**08 22 50.2**	**+0.7**
BUTP				*e*S	**Sb**	**08 23 16.5**	**-1.2**
DDMP	**Don Marcelino,**	**2.38**	**223**	*e*P	**Pn**	**08 22 52.8**	**-1.4**
DDMP				*e*S	**Sn**	**08 23 22.9**	**-0.3**
KCP	**Kidapawan**	**2.39**	**250**	⇓*e*P	**Pn**	**08 22 56.2**	**+1.8**
KCP				*i* S	**Sb**	**08 23 28.2**	**+0.2**
CGP	**Cagayan de Oro**	**2.70**	**283**	⇓*e*P	**Pn**	**08 22 59.8**	**+1.2**
CGP				*e*S	**Sg**	**08 23 39.6**	**-2.7**
SKMP	**Bagumbayan, Su**	**3.08**	**245**	*e*P	**Pn**	**08 23 03.7**	**-0.2**
SKMP				*e*S	**Sn**	**08 23 41.3**	**+0.6**
CTBH	**Cotabato--PC H**	**3.14**	**259**	⇓*i*P	**Pn**	**08 23 06.7**	**+2.0**
TBP	**Tagbilaran**	**3.90**	**298**	*e*P	**Pn**	**08 23 18.7**	**+3.5**
MTN	**Manton Dam**	**20.90**	**170**	P	**P**	**08 26 59.2**	**+1.4**
KNRA	**Kununurra**	**23.42**	**177**	P	**P**	**08 27 25.2**	**+0.8**
FITZ	**Fitzroy Crossi**	**25.84**	**184**	P	**P**	**08 27 49.1**	**+2.3**
	1.0nm,0.5s,baz=6.3,slow=4.3,SNR=8.8						
FITZ	**Fitzroy Crossi**	**25.84**	**184**	P	**P**	**08 27 47.0**	**+0.2**
WB0	**Warramunga Arr**	**28.31**	**166**	P	**P**	**08 28 10.6**	**+1.5**
WRAB	**Tennant Creek**	**28.46**	**166**	P	**P**	**08 28 13.0**	**+2.6**
WRAB				IAmb	IAmb	08 28 17.6	
	comp=Z,3.2nm,0.7s						
WRA	**Warramunga Arr**	**28.46**	**166**	P	**P**	**08 28 14.5**	**+4.1**
	comp=Z,2.1nm,0.7s,baz=348,slow=11,SNR=10						
WR0	**Warramunga Arr**	**28.53**	**166**	P	P	08 28 15.4	+4.4
WR0				IAmb	IAmb	08 28 19.3	
	comp=Z,5.3nm,1.1s						
ASAR	**Alice Springs**	**31.98**	**169**	P	**P**	**08 28 43.2**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=348,slow=7.4,SNR=5.4						
ASAR				LR	LR	08 45 03.2	
	comp=Z,36nm,18.4s,baz=168,slow=42						
CTAO	**Charters Tower**	**33.42**	**146**	P	**P**	**08 28 54.5**	**+0.4**
USRK	**Ussuriysk Ar.**	**36.43**	**6**	P	**P**	**08 29 16.8**	**-3.0**
	comp=Z,0.7nm,0.7s,baz=202,slow=10,SNR=2.2						
SONM	**Songino Array**	**43.64**	**340**	P	**P**	**08 30 20.4**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=128,slow=11,SNR=2.0						
PETK	**Petropavlovsk-**	**51.41**	**23**	P	**P**	**08 31 19.6**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=147,slow=3.0,SNR=2.4						
MK31	**Makanchi Array**	**54.59**	**323**	P	**P**	**08 31 43.6**	**-0.1**
MK31				IAmb	IAmb	08 31 44.8	
	comp=Z,2.0n

HLRZ	Highlands Stat	0.27	166	P		Pn	09 23 24.5	+0.3
KMRZ	Kaimai	0.29	299	P		Pn	09 23 24.2	-0.1
KMRZ				S		S	09 23 44.4	-0.7
TARZ	Mount Tarawera	0.31	143	P		Pn	09 23 24.5	+0.1
HSRZ	Hossack Road	0.32	183	P		Pn	09 23 24.6	+0.3
MARZ	Manawahe	0.32	90	P		Pn	09 23 23.9	-0.4
GRRZ	Galatos Road	0.38	199	P		Pn	09 23 24.9	+0.4
EDRZ	Edgecumbe	0.39	108	P		Pn	09 23 24.1	-0.5
HRRZ	Handcock Road	0.40	178	P		Pn	09 23 24.8	+0.3
RRRZ	Republican Roa	0.40	151	P		Pn	09 23 24.4	-0.1
PRRZ	Plateau Road	0.52	169	P		Pn	09 23 25.0	+0.1
WPRZ	Whakapapatarin	0.54	189	P		Pn	09 23 25.4	+0.4
ALRZ	Allen Road	0.58	174	P		Pn	09 23 25.1	0.0
WHRZ	Whale Island	0.58	177	P		Pn	09 23 25.0	-0.6
KUTZ	Kaahu Road	0.61	215	P		Pn	09 23 25.9	+0.6
MUGZ	Murupara	0.63	141	P		Pn	09 23 25.0	-0.4
TOZ	Tahuroa Road	0.66	293	P		Pn	09 23 25.6	+0.1
TLZ	Tolley Road	0.67	239	P		Pn	09 23 26.3	+0.7
WHTZ	Whakaora	0.72	200	P		Pn	09 23 26.7	+0.8
URZ	Urewera	0.72	112	P		Pn	09 23 24.7	-1.1
	398nm,0.3s,baz=257,slow=5.0,SNR=3498							
URZ				S		S	09 23 44.4	-3.3
	322nm,0.3s,baz=189,slow=23,SNR=14							
URZ	Urewera	0.72	112	P		Pn	09 23 24.9	-0.8
URZ	Urewera	0.72	112			Pn	09 23 24.9	-0.8
URZ				Sn		S	09 23 45.2	-2.5
WATZ	Wairara	0.83	210	P		Pn	09 23 27.3	+0.8
RTZ	Ruatahuna	0.84	138	P		Pn	09 23 26.4	-0.2
MRHZ	Matea Rd	0.85	172	P		Pn	09 23 26.8	+0.2
WIZ	White Island	0.86	58	P		Pn	09 23 25.4	-1.2
HATZ	Hinemaiaia	0.91	189	P		Pn	09 23 27.3	+0.4
RATZ	Rangitukua	0.96	204	P		Pn	09 23 27.9	+0.7
MTHZ	Maungataniwha	0.97	153	P		Pn	09 23 27.5	+0.1
RAGZ	Rawiri	1.04	120	P		Pn	09 23 27.7	-0.1
RITZ	Rihia Road	1.04	198	P		Pn	09 23 28.6	+0.9
MWZ	Matawai	1.05	110	P		Pn	09 23 27.1	-0.8
KATZ	Kakaramea	1.08	204	P		Pn	09 23 28.9	+0.7
RUGZ	Raukumara Rang	1.12	89	P		Pn	09 23 26.5	-2.0
RAHZ	Arahi	1.13	145	P		Pn	09 23 29.0	+0.6
SNGZ	Shannon Statio	1.16	134	P		Pn	09 23 29.0	+0.4
NMHZ	Naumai	1.19	159	P		Pn	09 23 30.0	+1.1
BKZ	Black Stump Fm	1.19	171	P		Pn	09 23 29.2	+0.4
BKZ	Black Stump Fm	1.19	171			Pn	09 23 29.3	+0.4
BKZ				Sn		S	09 23 52.4	-0.8
KRVZ	Karewarewa	1.21	204	P		Pn	09 23 29.7	+0.6
HAZ	Te Kaha	1.22	80	P		Pn	09 23 27.9	-1.8
HIZ	Hauiti	1.23	244	P		Pn	09 23 30.2	+1.1
HIZ	Hauiti	1.23	244			Pn	09 23 30.2	+1.1
WTVZ	West Tongariro	1.24	205	P		Pn	09 23 30.1	+0.7
MKAZ	Moumakai	1.25	315	P		Pn	09 23 29.0	-0.2
TWVZ	Taurewa	1.26	211	P		Pn	09 23 30.3	+0.8
NGZ	Ngauruhoe	1.29	204	P		Pn	09 23 30.4	+0.6
KUZ	Kuaotunu	1.31	341	P		Pn	09 23 28.7	-1.2
TKGZ	Te Karaka	1.33	110	P		Pn	09 23 29.7	-0.1
WHHZ	Waihua	1.33	145	P		Pn	09 23 30.6	+0.8
TUVZ	Tukino	1.36	200	P		Pn	09 23 31.2	+0.8
RIGZ	Rimuhau	1.38	122	P		Pn	09 23 30.8	+0.5
FWVZ	Far West T-bar	1.38	204	P		Pn	09 23 31.1	+0.4
ARHZ	Aropaoanui	1.40	156	P		Pn	09 23 31.5	+1.0
WHVZ	Whangaehu Hut	1.40	202	P		Pn	09 23 31.3	+0.5
DRZ	Dome Shelter	1.40	203	P		Pn	09 23 31.6	+0.7
KBAZ	Karaka Road Bo	1.41	309	P		Pn	09 23 30.5	-0.1
TRVZ	Turoa	1.43	203	P		Pn	09 23 31.5	+0.6
PKZ	Pakihiroa	1.44	87	P		Pn	09 23 29.9	-1.0
KWHZ	Kaweka Forest	1.44	175	P		Pn	09 23 31.6	+0.7
MOVZ	Moawhango	1.47	196	P		Pn	09 23 31.5	+0.3
ETAZ	East Tamaki Re	1.48	314	P		Pn	09 23 30.9	-0.3
PKVZ	Pokaka	1.48	209	P		Pn	09 23 32.1	+0.8
MCHZ	McNeill Hill	1.49	167	P		Pn	09 23 32.6	+1.3
WIAZ	Waiheke Island	1.50	323	P		Pn	09 23 30.9	-0.5
BHHZ	Black Hill Sta	1.51	186	P		Pn	09 23 32.0	+0.5
KNZ	Kokohu	1.51	133	P		Pn	09 23 31.8	+0.4
MTVZ	Mangateitei	1.53	204	P		Pn	09 23 32.4	+0.7
PUZ	Puketiti	1.57	94	P		Pn	09 23 30.9	-1.1
PRGZ	Paritu Road	1.58	127	P		Pn	09 23 32.2	+0.2
AWAZ	Awhitu Peninsu	1.59	305	P		Pn	09 23 31.9	-0.2
CNGZ	Carnagh Statio	1.61	109	P		Pn	09 23 32.7	+0.3
MBAZ	Motutapu North	1.63	318	P		Pn	09 23 32.2	-0.4
VRZ	Vera Road	1.64	226	P		Pn	09 23 34.0	+1.5
EPAZ	Eden Park BICE	1.64	312	P		Pn	09 23 32.3	-0.4
KRHZ	Kereru	1.66	177	P		Pn	09 23 33.5	+0.7
HBAZ	Herne Bay Bore	1.67	312	P		Pn	09 23 32.5	+0.4
MXZ	Matakaoa Point	1.67	76	P		Pn	09 23 31.7	-1.3
MXZ	Matakaoa Point	1.67	76			Pn	09 23 31.9	-1.0
MXZ				Sn		S	09 23 56.5	-3.5
WMGZ	Waiomatatini S	1.71	85	P		Pn	09 23 32.3	-1.0
WTAZ	Waiatarua	1.71	308	P		Pn	09 23 33.2	-0.1
MHGZ	Mahia Peninsul	1.73	133	P		Pn	09 23 34.1	+0.6
CKHZ	Cape Kidnapper	1.78	159	P		Pn	09 23 35.0	+1.1
ABAZ	Army Bay	1.80	320	P		Pn	09 23 33.9	-0.2
RVAZ	Riverhead Bore	1.81	312	P		Pn	09 23 33.8	-0.5
GRZ	Great Barrier	1.85	339	P		Pn	09 23 33.5	-1.2
KAHZ	Kahuranaki	1.87	165	P		Pn	09 23 35.9	+1.1
MHEZ	Mangahewa	1.87	234	P		Pn	09 23 36.8	+2.0
PNHZ	Pukenui	1.92	182	P		Pn	09 23 35.9	+0.5
DREZ	Durham Road	2.01	233	P		Pn	09 23 38.0	+1.8
WAZ	Wanganui	2.03	209	P		Pn	09 23 37.1	+0.7
LREZ	Lake Rotokare	2.07	224	P		Pn	09 23 38.4	+1.6
WPHZ	Waipukurau	2.08	176	P		Pn	09 23 37.6	+0.6
TSZ	Takapari Road	2.08	186	P		Pn	09 23 37.5	+0.5
PXZ	Pawanui	2.09	167	P		Pn	09 23 37.6	+0.6
PREZ	Palmer Road	2.13	230	P		Pn	09 23 39.2	+1.7
PKE	Pukeiti	2.15	235	P		Pn	09 23 39.4	+1.7
KHEZ	Kahui Hut	2.19	233	P		Pn	09 23 39.8	+1.5
NBEZ	Newall Road No	2.27	235	P		Pn	09 23 40.8	+1.9
PRHZ	Porangahau	2.29	173	P		Pn	09 23 39.6	+0.4
DVHZ	Dannevirke	2.31	182	P		Pn	09 23 39.6	+0.2
OHWZ	Ohakea	2.33	198	P		Pn	09 23 40.5	+0.9
NMEZ	Namu Road	2.35	232	P		Pn	09 23 41.4	+1.6
POWZ	Post Office Ro	2.43	189	P		Pn	09 23 40.9	+0.2
ANWZ	Angora Road	2.47	176	P		Pn	09 23 41.7	+0.5
WCZ	Waipu Caves	2.56	322	P		Pn	09 23 41.7	-0.5
PRWZ	Pori Road	2.57	185	P		Pn	09 23 42.6	+0.3
BFZ	Birch Farm	2.69	180	P		Pn	09 23 43.6	0.0
BFZ	Birch Farm	2.69	180			Pn	09 23 43.5	0.0
BFZ				Sn		S	09 24 17.9	-1.3
MRZ	Mangatainoka R	2.72	191	P		Pn	09 23 43.8	-0.1
TIWZ	Tintock	2.80	186	P		Pn	09 23 44.9	0.0
CPWZ	Castlepoint	2.92	181	P		Pn	09 23 46.7	+0.5
OGWZ	Otaki Gorge	2.95	196	P		Pn	09 23 46.4	-0.1
HOWZ	Holdsworth Sta	2.96	191	P		Pn	09 23 46.3	-0.5
KIW	Kapiti Island	3.06	200	P		Pn	09 23 47.2	-0.6
TMWZ	Te Maipa	3.13	185	P		Pn	09 23 48.2	-0.6
MTW	Mount Morrison	3.22	190	P		Pn	09 23 48.9	-0.9
CAW	Cannon Point	3.25	196	P		Pn	09 23 49.5	-0.6
DUWZ	D'Urville Isla	3.35	212	P		Pn	09 23 50.5	-0.8
TRWZ	Traveller	3.44	187	P		Pn	09 23 51.6	-0.7
PAWZ	Paruwai Farm	3.45	191	P		Pn	09 23 51.6	-1.0
WEL	Wellington	3.49	199	P		Pn	09 23 52.3	-0.7
OUZ	Omahuta	3.50	321	P		Pn	09 23 52.6	-0.6
OUZ	Omahuta	3.50	321			Pn	09 23 52.5	-0.7
MSWZ	Moikau Station	3.51	193	P		Pn	09 23 52.2	-1.1
MSWZ	Moikau Station	3.51	193			Pn	09 23 52.1	-1.1
MSWZ				Sn		S	09 24 34.6	-2.2
SNZO	South Karori	3.53	199			Pn	09 23 52.4	-1.1
SNZO				Sn		S	09 24 35.7	-1.2
TCW	Tory Channel	3.57	205	P		Pn	09 23 53.0	-0.9
BHW	Baring Head	3.58	197	P		Pn	09 23 53.2	-0.9
BHW	Baring Head	3.58	197			Pn	09 23 52.9	-1.2
BHW				Sn		S	09 24 35.9	-2.2
PLWZ	Palliser	3.66	192	P		Pn	09 23 53.9	-1.2
PLWZ	Palliser	3.66	192			Pn	09 23 54.0	-1.2
TUWZ	Tuamarina	3.88	207	P		Pn	09 23 56.6	-1.1
TUWZ	Tuamarina	3.88	207			Pn	09 23 56.5	-1.2
TUWZ				Sn		S	09 24 42.9	-1.6
NNZ	Nelson	3.92	214	P		Pn	09 23 56.8	-1.4
NNZ	Nelson	3.92	214			Pn	09 23 56.9	-1.4
NNZ				Sn		S	09 24 44.6	-1.0
QRZ	Quartz Range	4.05	224	P		Pn	09 23 58.2	-1.7
QRZ	Quartz Range	4.05	224			Pn	09 23 58.5	-1.4
QRZ				Sn		S	09 24 46.9	-1.7
CMWZ	Cape Campbell	4.08	202	P		Pn	09 24 00.0	-0.2
CMWZ	Cape Campbell	4.08	202			Pn	09 23 60.0	-0.2
CMWZ				Sn		S	09 24 49.0	0.0
BSWZ	Blackbirch Sta	4.15	206	P		Pn	09 24 00.1	-1.1
BSWZ	Blackbirch Sta	4.15	206			Pn	09 24 00.0	-1.1
THZ	Tophouse	4.57	213	P		Pn	09 24 04.9	-1.6
THZ	Tophouse	4.57	213			Pn	09 24 04.9	-1.6
KHZ	Kahutara	4.89	204	P		Pn	09 24 09.3	-1.2
KHZ	Kahutara	4.89	204			Pn	09 24 09.1	-1.4
DSZ	Denniston Nort	5.08	221	P		Pn	09 24 10.9	-2.1
GVZ	Greta Valley S	5.55	205	P		Pn	09 24 17.4	-1.5
LTZ	Lake Taylor	5.68	211	P		Pn	09 24 19.1	-1.4
LTZ	Lake Taylor	5.68	211			Pn	09 24 18.8	-1.7
AMCZ	Amberley	5.87	207	P		Pn	09 24 21.1	-1.8
INZ	Inchbonnie	5.99	216	P		Pn	09 24 22.1	-2.4
OKCZ	Okains Bay	6.22	202	P		Pn	09 24 25.7	-1.9
OXZ	Oxford	6.22	210	P		Pn	09 24 25.1	-2.5
OXZ	Oxford	6.22	210			Pn	09 24 25.0	-2.5
MQZ	McQueen's Vall	6.33	204	P		Pn	09 24 26.2	-2.8
MQZ	McQueen's Vall	6.33	204			Pn	09 24 25.9	-3.1
AKCZ	Akaroa Harbour	6.40	202	P		Pn	09 24 28.0	-1.9
RPZ	Rata Peaks	6.95	215	P		Pn	09 24 34.7	-2.3
	11nm,0.3s,baz=228,slow=3.0,SNR=97							
RPZ				S		S	09 25 50.6	-5.3
	28nm,0.3s,baz=241,slow=15,SNR=22							
RPZ	Rata Peaks	6.95	213	P		Pn	09 24 34.8	-2.3
RPZ	Rata Peaks	6.95	213			Pn	09 24 34.9	-2.1
FOZ	Fox Glacier	7.39	219	P		Pn	09 24 40.4	-2.3
FOZ	Fox Glacier	7.39	219	Pn		Pn	09 24 39.6	-3.0
LBZ	Lake Benmore	7.86	214	P		Pn	09 24 46.1	-2.8
LBZ	Lake Benmore	7.86	214	Pn		Pn	09 24 46.4	-2.4
ODZ	Otahua Downs	8.21	209	P		Pn	09 24 51.7	-1.6
ODZ	Otahua Downs	8.21	209			Pn	09 24 51.3	-2.0
JCZ	Jackson Bay	8.30	221	P		Pn	09 24 51.1	-3.5
WKZ	Wanaka	8.73	216	P		Pn	09 24 56.6	-3.5
WKZ	Wanaka	8.73	216	Pn		Pn	09 24 56.7	-3.4
EAZ	Earnscleugh	8.91	214	P		Pn	09 24 59.9	-2.6
MSZ	Milford Sound	9.16	221	P		Pn	09 25 03.3	-2.3
TUZ	Tuapeka	9.37	210	P		Pn	09 25 07.7	-0.5
MLZ	Mavora Lakes	9.56	217	P		Pn	09 25 08.9	-2.0
MLZ	Mavora Lakes	9.56	217	Pn		Pn	09 25 09.4	-1.5
WHZ	Wether Hill Ro	10.03	215	P		Pn	09 25 14.3	-2.7
WHZ	Wether Hill Ro	10.03	215	Pn		Pn	09 25 14.5	-2.5
SYZ	Scrubby Hill	10.04	209	P		Pn	09 25 16.0	-1.0
DCZ	Deep Cove	10.10	219	Pn		Pn	09 25 14.9	-2.9
APZ	The Paps	10.74	212	P		Pn	09 25 23.7	-2.4
PYZ	Puysegur Point	10.83	218	P		Pn	09 25 26.1	-1.2
PYZ	Puysegur Point	10.83	218	Pn		Pn	09 25 25.4	-1.9
LHI	Lord Howe Isla	15.53	289			P	09 26 23.1	-3.0
LHI				PcP		PcP	09 31 15.2	+0.8
DZM	Mont Dzumac	17.98	329	P		P	09 26 53.3	+0.2
	1.0nm,0.3s,baz=190,slow=10.0,SNR=10							
MSVF	Nonsavu	20.24	5	P		P	09 27 16.2	-1.2
MSVF				IAmb		IAmb	09 27 24.3	
	comp=Z,9.9nm,0.8s							
AS31	Alice Springs	38.74	279	P		P	09 30 02.7	+0.4
ASAR	Alice Springs	38.74	279	P		P	09 30 02.7	+0.4
	comp=Z,1.2nm,0.6s,baz=122,slow=8.5,SNR=34							
ASAR				S		S	09 35 45.8	+1.4
	comp=Z,0.2nm,0.6s,baz=130,slow=14,SNR=4.6							
VNDA	Vanda	40.12	185	P		P	09 30 15.6	+2.6
	comp=Z,1.8nm,0.8s,baz=356,slow=4.7,SNR=4.3							
WB2	Warramunga Arr	40.45	284	P		P	09 30 16.5	+0.1
WB2				IAmb		IAmb	09 30 24.5	
	comp=Z,4.5nm,1.1s							
WRA	Warramunga Arr	40.46	284	P		P	09 30 15.6	-0.9
	comp=Z,0.7nm,0.5s,baz=120,slow=8.5,SNR=17							
WB0	Warramunga Arr	40.52	285	P		P	09 30 16.5	-0.5
WB0				IAmb		IAmb	09 30 25.6	
	comp=Z,5.5nm,1.2s							
CASY	Casey	46.22	211	P		P	09 31 04.3	+2.5
CASY				IAmb		IAmb	09 31 08.6	
	comp=Z,13nm,1.5s							
KNRA	Kununurra	47.25	285	P		P	09 31 11.3	+0.8
KNRA				IAmb		IAmb	09 31 16.2	
	comp=Z,14nm,1.4s							
FITZ	Fitzroy Crossi	48.24	280	P		P	09 31 18.6	+0.6
QSPA	South Pole Qui	52.14	180	P		P	09 31 50.1	+3.2
	comp=Z,11nm,0.6s,baz=2.1,slow=0.9,SNR=84							
QSPA	South Pole Qui	52.14	180	P		P	09 31 50.4	+3.6
SNAA	Sanae	70.64	180	P		P	09 33 51.4	+0.9
SNAA				IAmb		IAmb	09 33 59.2	
	comp=Z,5.3nm,1.4s							
LL01	San Ignacio de	78.54	135	P		P	09 34 35.6	-0.7
LL01				IAmb		IAmb	09 34 35.9	
	comp=Z,3.8nm,0.7s							
HHC	Hu-ho-hao-te	98.23	316	eP		Pdif	09 36 14.2	+2.7
HHC				pmax		pmax		
	comp=Z,11nm,0.9s							
HHC				pmax		pmax		
	comp=Z,41nm,6.2s							
LZH	Lanzhou	99.56	308	eP		Pdif	09 36 17.4	-0.2
LZH				pP		pP	09 37 03.6	-4.2
LZH				sP		sP	09 37 25.3	-3.5
LZH				PP		PP	09 40 31.7	+7.1
LZH				pmax		pmax		
	comp=Z,17nm,1.1s							
LZH				pmax		pmax		
	comp=Z,63nm,4.9s							
KSH	Kashi	119.84	299	PKP		PKPdf	09 41 22.6	-0.9
KSH				sPKP			09 41 44.2	
ARCES	ARCESS Array B	144.71	343	PKP		PKPbc	09 42 06.8	-1.5
	comp=Z,1.7nm,0.7s,baz=46,slow=3.7,SNR=19							
DBIC	Dimbokro	148.81	178	PKPbc		PKPbc	09 42 20.4	-1.1
	comp=Z,1.5nm,0.6s,baz=22,slow=11,SNR=1.8							
DBIC	Dimbokro	148.81	178			PKPbc	09 42 20.2	-1.3
FINES	FINESS Array B	150.11	331	PKPbc		PKPbc	09 42 21.6	-1.6
	comp=Z,1.5nm,0.8s,baz=135,slow=35,SNR=1.8							

JMA 11 09:28:03.2,33.99N×133.78E,h11km±1km,M1.7,Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMN	Monobe	0.27	162	P	Pg	09 28 09.0	+0.2
JMN				S	Sg	09 28 12.7	+0.1
JMAF	Mimaanabuki	0.31	80	S	Sg	09 28 13.7	-0.1
JJS	Sakaide	0.40	18	P	Pg	09 28 11.3	+0.1
JJS				S	Sg	09 28 16.8	+0.2
JAI	Aioi	0.59	109	P	Pg	09 28 14.7	0.0
JET	Tanbara	0.64	251	P	Pg	09 28 15.5	-0.2
JET				S	Sg	09 28 24.5	+0.3
JKU	Kubokawa	0.90	222	P	Pg	09 28 20.6	0.0
JKU				S	Sg	09 28 32.1	-0.3
JAD	Aida	1.00	19	S	Sg	09 28 34.9	-0.6

IDC 11 09:28:17.4±2.1,34.62N×138.87E,h0km,mb3.3/2, mb1 3.6/2,mb1mx3.1/41,mbtmp3.3/2,Error ellipse: s-maj=104.2km s-min=28.5km az=83.0,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	1.99	345	Pn	Pn	09 28 52.0	-0.3
	0.1nm,0.3s,baz=163,slow=12,SNR=6.3						
WRA	Warramunga Arr	54.43	185	P	P	09 37 46.9	+0.5
	0.5nm,0.8s,baz=2.9,slow=7.5,SNR=2.4						
ASAR	Alice Springs	58.16	185	P	P	09 38 12.4	-0.6
	0.2nm,0.7s,baz=358,slow=6.1,SNR=2.2						

IDC 11 09:28:36.9±2.1,34.36N×138.52E,h0km,mb3.4/3, mb1 3.6/3,mb1mx3.2/42,mbtmp3.4/3,ML1.4/1,Error ellipse: s-maj=103.5km s-min=25.1km az=80.0,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	2.19	353	Pn	Pn	09 29 14.1	-0.5
	0.1nm,0.3s,baz=157,slow=12,SNR=6.1						
KURBB	Kurchatov Arra	45.84	310	P	P	09 37 00.6	+0.1
	0.2nm,0.3s,baz=86,slow=7.2,SNR=1.4						
WRA	Warramunga Arr	54.15	185	P	P	09 38 03.1	-0.8
	0.2nm,0.4s,baz=0.9,slow=7.5,SNR=5.4						
ASAR	Alice Springs	57.87	185	P	P	09 38 31.2	+0.7
	0.4nm,1.0s,baz=10,slow=5.8,SNR=2.4						

NEIC 11 09:42:53.5±1.0,60.22N±0.03×152.35W±0.07,h99km±4km, Error ellipse: s-maj=5.1km s-min=3.8km az=74.0
AEIC 11 09:42:54±1.3,60.218N±0.009×152.31W±0.07, h91km±5km,ML3.0,Error ellipse: s-maj=4.9km s-min=1.3km az=84.0
IDC 11 09:42:56.0±6.5,60.51N×152.56W,h111km±63km,mb3.5/2, mb1 3.2/5,mb1mx2.9/43,mbtmp3.5/5,Error ellipse: s-maj=58.5km s-min=37.6km az=174.0
ISC 11 09:42:53.3±0.9,60.21N±0.04×152.31W±0.04, h102km±6km,n122,σ0s76/137,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RED	Redoubt Volcan	0.31	313		Pn	09 43 07.9	-0.3
RED					Sn	09 43 18.4	-1.1
RSO	Redoubt South	0.34	319		Pn	09 43 08.2	-0.4
RDT	Redoubt	0.37	352		Pn	09 43 08.1	-0.4
RDWB	Redoubt West	0.39	317		Pn	09 43 08.2	-0.5
DFR	Drift River	0.43	334		Pn	09 43 08.6	-0.3
DFR					Sn	09 43 19.7	-0.8
ILW	Iliamna West	0.44	251		Pn	09 43 08.9	-0.1
ILW					Sn	09 43 20.2	-0.7
ILS	Iliamna Low So	0.46	237		Pn	09 43 08.8	-0.3
RDJH	Redoubt Jeurge	0.46	328		Pn	09 43 08.7	-0.5
HOM	Homer	0.65	148		Pn	09 43 10.6	+0.3
CAPN	Captain Cook N	0.80	45		Pn	09 43 13.7	+2.0
BRLK	Bradley Lake	0.84	121		Pn	09 43 12.3	+0.1
BRLK					Sn	09 43 26.7	+0.2
CNPM	China Poot	0.87	141		Pn	09 43 12.7	+0.2
CNPM					Sn	09 43 26.9	0.0
BRSE	Bradley Lake S	0.92	120		Pn	09 43 13.2	+0.2
BRSE					Sn	09 43 27.9	+0.2
CKL	Chakachamna La	0.99	359		Pn	09 43 13.9	0.0
AU22	Augustine Moun	0.99	213		Pn	09 43 14.0	+0.2
AU22					Sn	09 43 28.9	-0.1
SPCR	Spurr Chakacha	1.00	3		Pn	09 43 13.8	-0.1
SPCR					Sn	09 43 29.1	-0.3
AU2	Augustine Isla	1.00	213		Pn	09 43 14.0	+0.3
AUL	Augustine Lava	1.00	215		Pn	09 43 14.2	+0.3
AUP	Augustine Pinn	1.02	214		Pn	09 43 14.5	+0.4
AUH	Augustine H	1.02	215		Pn	09 43 14.5	+0.3
AUW	Augustine West	1.03	216		Pn	09 43 14.4	+0.4
SPBG	Spurr Blockage	1.06	358		Pn	09 43 14.7	+0.2
SPBG					Sn	09 43 30.0	-0.5
SPWE	Spurr West	1.08	354		Pn	09 43 15.1	+0.3
SLKM	Skilak Lake	1.08	73		Pn	09 43 14.9	+0.2
SLKM					Sn	09 43 30.9	0.0
STLK	Strandline Lak	1.32	10		Pn	09 43 17.9	+0.5
FIS	Fire Island	1.39	47		Pn	09 43 18.9	+0.7
SEW	Seward	1.43	93		Pn	09 43 18.4	-0.3
RC01	Rabbit Creek A	1.54	54		Pn	09 43 21.0	+0.8
RC01					Sn	09 43 40.5	0.0
KAHG	Katmai Hook Gl	2.07	215		Pn	09 43 27.5	+0.7
PWL	Port Wells	2.07	70		Pn	09 43 26.5	-0.3
PWL					Sn	09 43 51.5	-0.9
PMR	Palmer	2.08	47		Pn	09 43 26.7	-0.2
PMR					Sn	09 43 51.0	-1.6
KAHC	Katmai Hardscr	2.09	223		Pn	09 43 27.4	+0.3
KNK	Knik Glacier	2.24	56		Pn	09 43 28.9	-0.1
GHO	Glory Hole Cre	2.28	45		Pn	09 43 29.9	+0.3
GHO					Sn	09 43 56.1	-1.2
KCG	Knife Ck. Glac	2.39	218		Pn	09 43 31.5	+0.6
KDAK	Kodiak Island	2.44	183		Pn	09 43 30.8	-0.7
KABU	Katmai Buttres	2.47	219		Pn	09 43 33.0	+0.8
SML	Sawmill	2.52	49		Pn	09 43 32.4	-0.2
ANCK	Angle Creek	2.60	221		Pn	09 43 34.6	+0.8
CAHL	Cahill	2.66	217		Pn	09 43 35.5	+1.0
GLI	Glacier Island	2.66	73		Pn	09 43 33.2	-1.3
PPLA	Purkeypile	2.70	1		Pn	09 43 36.0	+0.8
HIN	Hinchinbrook I	2.90	84		Pn	09 43 36.1	-1.5
SCM	Sheep Creek Mo	2.92	54		Pn	09 43 38.2	+0.2
FID	Port Fidalgo	2.94	77		Pn	09 43 36.3	-1.8
JPK	Jack Peak	2.94	71		Pn	09 43 37.4	-0.8
OHAK	Old

NIUE	**Niue**	**4.59**	**129**			**Pn**	**10 05 01.4**	**+1.6**
NIUE					Sn	**Sn**	**10 05 49.5**	**-2.3**
OUZ	**Omahuta**	**22.11**	**209**		P	**P**	**10 08 46.0**	**+4.2**
URZ	**Urewera**	**23.44**	**198**		P	**P**	**10 08 56.5**	**+1.3**
	8.7nm,1.0s,baz=186,slow=5.8,SNR=2.2							
URZ					S	**S**	**10 12 56.9**	**-5.5**
	3.1nm,0.9s,baz=64,slow=20,SNR=1.0							
CAN	**Canberra**	**38.34**	**233**		P	**P**	**10 11 05.7**	**-0.6**
BBOO	**Buckleboo**	**48.19**	**240**		P	**P**	**10 12 24.6**	**-1.0**
BBOO					IAmb	IAmb	10 12 33.5	
	comp=Z,8.6nm,1.2s							
WB0	**Warramunga Arr**	**49.37**	**258**		P	**P**	**10 12 33.6**	**-1.3**
WB2	**Warramunga Arr**	**49.40**	**257**		P	**P**	**10 12 33.6**	**-1.4**
WB2					IAmb	IAmb	10 12 37.8	
	comp=Z,5.0nm,1.2s							
WRA	**Warramunga Arr**	**49.41**	**257**		P	**P**	**10 12 33.8**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=98,slow=6.2,SNR=22							
AS31	**Alice Springs**	**49.62**	**253**		P	**P**	**10 12 35.4**	**-1.3**
ASAR	**Alice Springs**	**49.62**	**253**		P	**P**	**10 12 35.2**	**-1.5**
	comp=Z,1.2nm,0.4s,baz=89,slow=7.8,SNR=87							
ASAR					PcP	**PcP**	**10 13 56.8**	**-0.5**
	comp=Z,0.6nm,0.9s,baz=98,slow=5.6,SNR=1.3							
FORT	**Forrest**	**54.83**	**244**		P	**P**	**10 13 17.8**	**+2.7**
KNRA	**Kununurra**	**55.19**	**262**		P	**P**	**10 13 17.3**	**-0.7**
KNRA					IAmb	IAmb	10 13 18.2	
	comp=Z,4.2nm,0.7s							
CHGN	**Chignik**	**73.34**	**9**		P	**P**	**10 15 16.1**	**+0.4**
CHGN					IAmb	IAmb	10 15 23.8	
	comp=Z,10.0nm,1.4s							
YBH	**Yreka Blue Hor**	**74.38**	**37**		P	**P**	**10 15 23.6**	**+1.2**
YBH					IAmb	IAmb	10 15 26.5	
	comp=Z,5.6nm,1.4s							
HUMO	**Hull Mountain**	**74.80**	**36**		P	**P**	**10 15 26.2**	**+1.5**
NVAR	**Mina Array Bea**	**75.09**	**42**		P	**P**	**10 15 27.7**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=260,slow=4.5,SNR=2.4							
K05A	**Summer Lake**	**76.06**	**37**		P	**P**	**10 15 33.6**	**+1.5**
K05A					IAmb	IAmb	10 15 40.3	
	comp=Z,9.8nm,1.5s							
PINE	**Pine Mountain**	**76.69**	**36**		P	**P**	**10 15 37.1**	**+1.5**
PSUT	**Pine Spring**	**78.06**	**44**		P	**P**	**10 15 44.5**	**+1.1**
GHO	**Glory Hole Cre**	**80.15**	**12**		P	**P**	**10 15 55.5**	**+1.3**
GHO					IAmb	IAmb	10 16 10.0	
	comp=Z,11nm,1.4s							
PPLA	**Purkeypile**	**80.61**	**10**		P	**P**	**10 15 54.5**	**-2.2**
PPLA					IAmb	IAmb	10 16 07.0	
	comp=Z,4.2nm,1.0s							
TX31	**Lajitas Ar. Si**	**81.27**	**56**		P	**P**	**10 16 00.4**	**-0.5**
TX32	**Lajitas Array**	**81.27**	**56**		P	**P**	**10 16 00.7**	**-0.2**
TX32					IAmb	IAmb	10 16 02.8	
	comp=Z,4.4nm,1.3s							
TXAR	**Lajitas Array**	**81.27**	**56**		P	**P**	**10 16 01.3**	**+0.5**
	comp=Z,0.9nm,1.0s,baz=230,slow=7.7,SNR=7.2							
CCB	**Clear Creek Bu**	**82.98**	**11**		P	**P**	**10 16 08.9**	**+0.1**
CCB					IAmb	IAmb	10 16 20.1	
	comp=Z,4.5nm,1.4s							
PDAR	**Pinedale Array**	**83.03**	**42**		P	**P**	**10 16 09.9**	**0.0**
	comp=Z,0.7nm,0.5s,baz=225,slow=3.1,SNR=9.7							
SMCO	**Snowmass**	**83.05**	**46**		P	**P**	**10 16 11.0**	**+0.6**
SMCO					IAmb	IAmb	10 16 12.0	
	comp=Z,4.4nm,1.5s							
ILAR	**Eielson Array**	**83.27**	**11**		P	**P**	**10 16 11.8**	**+1.4**
	comp=Z,0.2nm,0.7s,baz=204,slow=5.4,SNR=4.1							
BRTR	**Keskin Array B**	**146.59**	**320**		PKPbc	**PKPab**	**10 23 26.6**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=46,slow=8.3,SNR=6.0							

NAO ***11*** *10:07:38.4±2.6, 78°.93N×5°.78E, ML3.3*
IDC ***11*** *10:07:40.4±6.8, 78°.90N×6°.43E, h0km, mb3.5/1, mb1 3.4/3, mb1mx3.1/29, mbtmp3.3/3, ML2.7/2, MS2.5/1, Ms1 2.5/1, ms1mx2.1/26, Error ellipse: s-maj=111.2km s-min=44.4km az=102.0*
BER ***11*** *10:07:40.7±3.0, 78°.79N×5°.51E, h20km±17km, ML2.7, ML3.3(NAO), Confirmed Earthquake*
IEPN ***11*** *10:07:42.0, 78°.78N×6°.45E, h15km*
ISC 11 10:07:38.4±1.6, 78°.81N±0°.07×5°.68E±0°.05, h11km±11km, n39, σ2s35/53, 5C, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.22**	**81**	Pg		**Pg**	**10 08 01.7**	**-0.1**
KBS				Lg		Lg	10 08 17.6	
KBS	**Kingsbay**	**1.22**	**81**	↑*i* P		**Pg**	**10 08 01.7**	**-0.1**
KBS				*e*S		**Sb**	**10 08 15.6**	**-1.5**
KBS	**Kingsbay**	**1.22**	**81**	↑*i* P		**Pg**	**10 08 01.8**	**-0.1**
KBS				↑*i* P		**Pn**	**10 08 01.8**	**+0.6**
KBS				*e*S		**Sg**	**10 08 17.1**	**-0.6**
KBS				IAML			10 08 20.7	
	comp=Z,224nm,0.3s							
BRBA	**Barentsburg A**	**1.88**	**109**	Pn		**Pn**	**10 08 10.4**	**+0.1**
BRBA				Pg		**Pb**	**10 08 11.8**	**-0.8**
BRBA				Sn		**Sn**	**10 08 31.8**	**-2.1**
BRBA	**Barentsburg A**	**1.88**	**109**	Pn		**Pn**	**10 08 10.4**	**+0.1**
BRBA				Pg		**Pb**	**10 08 11.8**	**-0.8**
BRBA				Sn		**Sn**	**10 08 31.8**	**-2.1**
SPA0	**Spitsbergen Ar**	**2.23**	**101**	Pn		**Pn**	**10 08 16.3**	**+1.2**
	baz=292,slow=16							
SPA0				Sn		**Sn**	**10 08 42.2**	**-0.5**
	baz=286,slow=14							
SPA0	**Spitsbergen Ar**	**2.23**	**101**	↑*i* P		**Pn**	**10 08 16.4**	**+1.2**
SPA0				*i* S		**Sn**	**10 08 42.0**	**-0.7**
SPA0	**Spitsbergen Ar**	**2.23**	**101**	Pn		**Pn**	**10 08 16.3**	**+1.2**
	baz=292,slow=16							
SPA0				Sn		**Sn**	**10 08 42.2**	**-0.5**
	baz=286,slow=14							
SPA0				IAML			10 08 46.2	
	comp=Z,128nm,0.7s							
HSPB	**Hornsund (broa**	**2.75**	**126**	Pn		**Pn**	**10 08 23.0**	**+0.7**
HSPB				Sn		**Sn**	**10 08 51.4**	**-4.0**
HSPB	**Hornsund (broa**	**2.75**	**126**	*e*P		**Pn**	**10 08 22.1**	**-0.2**
HSPB				*e*S		**Sn**	**10 08 51.3**	**-4.2**
HSPB	**Hornsund (broa**	**2.75**	**126**	*e*P		**Pn**	**10 08 23.2**	**+0.9**
HSPB				*e*S		**Sn**	**10 08 51.7**	**-3.7**
HSPB				IAML			10 08 54.6	
	comp=Z,44nm,0.4s							
NOR	**Nord**	**4.70**	**317**	Pn		**Pn**	**10 08 48.5**	**-0.5**
NOR				Sn		**Sn**	**10 09 39.8**	**-3.6**
NOR	**Nord**	**4.70**	**317**	*i* P		**Pn**	**10 08 48.2**	**-0.8**
NOR				*i*			10 09 39.2	
NOR	**Nord**	**4.70**	**317**	*e*P		**Pn**	**10 08 48.4**	**-0.5**
NOR				*i*			10 09 39.3	
NOR				Sn		**Sn**	**10 09 39.8**	**-3.6**
NOR				IAML			10 09 42.5	
	comp=Z,11nm,0.3s							
HOPEN	**Hopen**	**4.72**	**109**	Pn		**Pn**	**10 08 49.2**	**-0.1**
HOPEN				Sn		**Sn**	**10 09 40.1**	**-3.9**
HOPEN	**Hopen**	**4.72**	**109**	*e*P		**Pn**	**10 08 49.2**	**-0.1**
HOPEN				*e*S		**Sn**	**10 09 40.2**	**-3.8**
HOPEN	**Hopen**	**4.72**	**109**	*e*P		**Pn**	**10 08 49.2**	**-0.1**
HOPEN				*e*S		**Sn**	**10 09 40.5**	**-3.5**
HOPEN				IAML			10 09 42.2	
	comp=Z,22nm,0.4s							
DAG	**Danmarks Havn**	**5.52**	**261**	*i* P		**Pn**	**10 08 57.5**	**-2.7**
DAG				*i* S		Sn	10 09 55.2	-8.3
DAG	**Danmarks Havn**	**5.52**	**261**	*e*		Pn	10 08 56.3	-4.0
	baz=62,slow=18							
DAG				*i* P		**Pn**	**10 08 57.5**	**-2.7**
DAG				*i* S		Sn	10 09 55.2	-8.3
DAG				IAML			10 09 59.2	
	comp=Z,16nm,0.4s							
DBG	**Daneborg**	**7.46**	**246**	*e*P		Pn	10 09 23.6	-3.3
DBG				*e*S		Sn	10 10 39.5	-12
DBG				IAML			10 10 48.7	
	comp=Z,9.9nm,0.3s							
ZFI2	**Zemlya Franca-**	**7.55**	**55**	↑*i* P		**Pn**	**10 09 29.4**	**+1.4**
ZFI2				*i* S		**Sn**	**10 10 48.5**	**-4.9**
	comp=Z,40nm,0.5s							
JNW	**Jan Mayen West**	**8.60**	**212**	*e*P		**Pn**	**10 09 41.4**	**-1.1**
JNE	**Jan Mayen East**	**8.62**	**212**	*e*P		**Pn**	**10 09 41.9**	**-0.8**
JMI	**Jan Mayen**	**8.73**	**213**	*e*P		**Pn**	**10 09 43.3**	**-0.9**
ARA0	**ARCESS Array S**	**10.67**	**140**	Pn		**Pn**	**10 10 11.0**	**+0.2**
	baz=333,slow=16							
ARA0	**ARCESS Array S**	**10.67**	**140**	Pn		**Pn**	**10 10 11.0**	**+0.2**
	baz=333,slow=16							
ARCES	**ARCESS Array B**	**10.67**	**140**	Pn		**Pn**	**10 10 10.8**	**0.0**
	comp=Z,0.1nm,0.3s,baz=347,slow=12,SNR=1.9							
SUMG	**Summit**	**12.20**	**263**	*i* P		**Pn**	**10 10 29.3**	**-2.8**
SUMG	**Summit**	**12.20**	**263**	*i* P		**Pn**	**10 10 29.3**	**-2.8**
SUMG				IAML			10 12 45.5	
	comp=Z,5.0nm,0.4s							
KULLO	**Kullorsuaq**	**14.35**	**286**	IAML			10 10 58.6	
	comp=Z,4.3nm,0.3s							
UPNV	**Upernavik**	**15.48**	**280**	*i* P		Pn	10 11 09.6	-6.6
UPNV				*i* S		Sn	10 13 46.5	-21
UPNV				IAML			10 13 53.0	
	comp=Z,3.7nm,0.4s							
NUUG	**Nuugaatsiaq**	**15.89**	**275**	*i* P		Pn	10 11 14.7	-6.7
NUUG				*i* S		Sn	10 13 58.4	-19
NB2	**NORSAR Subarra**	**17.94**	**171**	P		**P**	**10 11 52.1**	**+4.2**
NB2	**NORSAR Subarra**	**17.94**	**171**	P		**P**	**10 11 52.1**	**+4.2**
NOA	**NORSAR Array B**	**17.94**	**171**	P		**P**	**10 11 52.3**	**+4.4**
	comp=Z,0.0nm,0.3s,baz=349,slow=12,SNR=3.5							
FIA0	**FINESS Array S**	**18.55**	**148**	P		**Pn**	**10 11 57.5**	**+2.8**
	baz=344,slow=10							
FIA0	**FINESS Array S**	**18.55**	**148**	P		**Pn**	**10 11 57.5**	**+2.8**
	baz=344,slow=10							
FINES	**FINESS Array B**	**18.55**	**148**	LR		LR	10 19 32.0	
	comp=Z,16nm,21.4s,baz=336,slow=38							
MKAR	**Makanchi Array**	**41.95**	**91**	P		**P**	**10 15 31.1**	**+2.5**
	comp=Z,0.5nm,0.7s,baz=344,slow=7.6,SNR=5.6							

NIED ***11*** *10:32:00, 36°.20N×142°.50E, h8km, Mw4.4 Best double couple: M0≈4.56000×10^15 NP1:φs=6.00000°, δ56.00000°, λ67.00000°. NP2:φs=223.00000°, δ40.00000°, λ120.00000°.*
IDC ***11*** *10:32:09.5±0.6, 36°.11N×142°.48E, h0km, mb4.1/24, mb1 4.2/30, mb1mx4.2/45, mbtmp4.1/30, ML3.4/5, MS3.6/20, Ms1 3.6/20, ms1mx3.4/53, Error ellipse: s-maj=15.8km s-min=12.2km az=114.0*
JMA ***11*** *10:32:11.8±0.2, 36°.16N×142°.51E, h55km, M3.9*
MOS ***11*** *10:32:14.6±1.1, 36°.42N×142°.33E, h32km, mb4.9/39, Error ellipse: s-maj=8.8km s-min=5.5km az=111.7*
NEIC ***11*** *10:32:15.4±2.3, 36°.15N±0°.05×142°.36E±0°.09, h32km±5km, mb4.7/64, Error ellipse: s-maj=10.9km s-min=7.6km az=109.0*
BJI ***11*** *10:32:15.1±0.0, 36°.45N×142°.16E, h33km, mB4.9/42, mb4.7/54, Ms4.4/39, Ms7 4.1/37*
ISC 11 10:32:15.0±0.6, 36°.22N±0°.04×142°.35E±0°.05, h30km±3km, n224, σ1s73/225, mb4.6/87, MS3.9/29, 11C-5D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.31**	**247**	P		**Pn**	**10 32 35.7**	**-1.6**
CHOJ				*e*S		**Sn**	**10 32 53.6**	**-0.3**
JHYU	**Hitachinakayam**	**1.43**	**275**	P		**Pn**	**10 32 38.2**	**-0.7**
JHO	**Hitachi**	**1.49**	**286**	P		**Pn**	**10 32 38.7**	**-1.0**
JHO				*e*S		**Sn**	**10 32 58.5**	**+0.3**
JIHU	**Itakohorinouch**	**1.50**	**261**	P		**Pn**	**10 32 39.1**	**-0.8**
ONAJ	**Iwakimizuishiy**	**1.52**	**306**	P		**Pn**	**10 32 39.2**	**-1.1**
JFK	**Kawauchi**	**1.65**	**314**	P		**Pn**	**10 32 40.5**	**-1.4**
JFK				S		**Sn**	**10 33 02.0**	**-0.1**
BSO1	**Boso 1**	**1.92**	**216**	P		**Pn**	**10 32 43.3**	**-1.9**
JMM	**Marumori**	**2.06**	**323**	P		**Pn**	**10 32 46.0**	**-1.6**
JMM				S		**Sn**	**10 33 12.4**	**+0.1**
BSO3	**Boso 3**	**2.06**	**227**	P		**Pn**	**10 32 45.8**	**-1.6**
JFT	**Otama**	**2.07**	**309**	P		**Pn**	**10 32 47.8**	**+0.1**
JFT				S		**Sn**	**10 33 14.1**	**+1.6**
JAG	**Ashikaga**	**2.35**	**276**	P		**Pn**	**10 32 50.7**	**-0.9**
JRY	**Ryogami san**	**2.80**	**267**	P		**Pn**	**10 32 57.0**	**-0.8**
JOD2	**Odawara 2**	**2.82**	**251**	P		**Pn**	**10 32 57.3**	**-0.8**
JMK	**Ichinoseki**	**2.87**	**342**	P		**Pn**	**10 32 56.9**	**-1.8**
JMK				S		**Sn**	**10 33 31.7**	**-0.5**
JYK	**Kaneyama**	**3.12**	**330**	P		**Pn**	**10 33 01.2**	**-1.0**
JYN	**Shimob**	**3.17**	**258**	P		**Pn**	**10 33 02.3**	**-0.7**
JOM	**Ohasama**	**3.35**	**346**	P		**Pn**	**10 33 03.3**	**-2.1**
MJAR	**Matsushiro Arr**	**3.36**	**277**	Pn		**Pn**	**10 33 05.7**	**+0.3**
	1.2nm,0.3s,baz=98,slow=9.6,SNR=220							
MJAR				Sn		**Sn**	**10 33 44.8**	**+0.5**
	0.9nm,0.3s,baz=79,slow=13,SNR=5.9							
MJAR				LR		LR	10 34 44.3	
	comp=Z,721nm,19.7s,baz=95,slow=45							
MAJO	**Matsushiro**	**3.36**	**277**	P		**Pn**	**10 33 05.9**	**+0.4**
MAJO	**Matsushiro**	**3.36**	**277**			**Pn**	**10 33 05.9**	**+0.4**
MAT	**Matsushiro**	**3.36**	**277**	P		**Pn**	**10 33 05.6**	**+0.1**
MAT				*e*S		**Sn**	**10 33 43.5**	**-0.8**
MAT	**Matsushiro**	**3.36**	**277**	P		**Pn**	**10 33 05.5**	**+0.1**
MJB9	**Matsu-Tunnel**	**3.36**	**277**			**Pn**	**10 33 06.1**	**+0.6**
JHJ2	**Mitsune**	**3.74**	**215**	Pn		**Pn**	**10 33 10.4**	**-0.3**
JHJ2				Sn		**Sn**	**10 33 49.2**	**-4.5**
JHJ	**Hachijo jima 2**	**3.75**	**215**	Pn		**Pn**	**10 33 08.9**	**-1.9**
	15nm,0.3s,baz=334,slow=22,SNR=17							
JHJ				Sn		**Sn**	**10 33 49.3**	**-4.7**
	79nm,0.3s,baz=57,slow=22,SNR=7.7							
INU	**Inuyama**	**4.42**	**260**			**Pn**	**10 33 20.4**	**+0.3**
ERM	**Erimo**	**5.82**	**6**	*e*P		**Pn**	**10 33 35.5**	**-3.7**
ERM				pmax	pmax			
	comp=Z,77nm,0.7s							
ERM	**Erimo**	**5.82**	**6**			**Pn**	**10 33 35.9**	**-3.4**
ERM				Sn		**Sn**	**10 34 43.0**	**-1.9**
NMR	**Nemuro--Hokkai**	**7.60**	**19**	*i* P		Pn	10 33 58.4	-5.2
NMR				*e*S		Sn	10 35 18.6	-10
JKA	**Kamikawa-asahi**	**7.89**	**1**			**Pn**	**10 34 05.3**	**-2.3**
JKA						**Sn**	**10 35 31.5**	**-4.4**
ASAJ	**Asahikawa**	**7.89**	**1**	Pn		**Pn**	**10 34 05.3**	**-2.4**
	comp=Z,1.2nm,0.3s,baz=217,slow=21,SNR=7.9							
ASAJ				Sn		**Sn**	**10 35 31.5**	**-4.4**
	comp=Z,1.3nm,0.3s,baz=206,slow=26,SNR=1.4							
ASAJ				LR		LR	10 37 03.4	
	comp=Z,81nm,20.8s,baz=187,slow=37							
JCJ	**Chichijima**	**9.10**	**181**	Pn		Pn	10 34 18.6	-5.7
	comp=Z,9.0nm,0.3s,baz=282,slow=21,SNR=14							
JCJ				Sn		Sn	10 35 53.6	-12
	comp=Z,27nm,0.3s,baz=211,slow=23,SNR=8.2							
TEY	**Ternei**	**9.82**	**335**	↑*e*P		**Pn**	**10 34 33.1**	**-1.1**
TEY				pmax	pmax			
	comp=N,10.0nm,0.8s							
TEY				pmax	pmax			
	comp=Z,10.0nm,0.8s							
JNU	**Nakatsue**	**9.94**	**255**	LR		LR	10 38 57.0	
	comp=Z,466nm,19.1s,baz=68,slow=41							
YSS	**Yuzh-Sakhalins**	**10.73**		1↑*e*P		**Pn**	**10 34 44.3**	**-2.2**
YSS				*e*S		**Sn**	**10 36 39.9**	**-5.6**
YSS				pmax	pmax			
	comp=Z,20nm,0.8s							
YSS				pmax	pmax			
	comp=Z,100nm,2.8s							
YSS				MLR	MLR			
	comp=N,500nm,12.0s							
YSS				MLR	MLR			
	comp=Z,500nm,12.0s							
YSS				MLR	MLR			
	comp=E,500nm,14.0s							
USA0B	**Ussuriysk Arra**	**11.23**	**318**	P		**Pn**	**10 34 54.9**	**+1.5**
USA0B	**Ussuriysk Arra**	**11.23**	**318**	Pn		**Pn**	**10 34 54.9**	**+1.5**
USRK	**Ussuriysk Ar.**	**11.23**	**318**	Pn		**Pn**	**10 34 54.9**	**+1.5**
	baz=125,slow=14,SNR=18							
USRK				LR		LR	10 39 01.7	
	comp=E,481nm,18.7s,baz=132,slow=36							
KSRS	**Korea Array**	**11.63**	**280**	Pn		**Pn**	**10 35 01.5**	**+2.6**
	comp=E,0.2nm,0.3s,baz=96,slow=14,SNR=13							
KSRS				LR		LR	10 39 19.6	
	comp=E,118nm,19.6s,baz=83,slow=36							
KS19	**Wonju Array Si**	**11.67**	**281**			**Pn**	**10 35 02.3**	**+2.8**
CN2	**Changchun**	**14.98**	**305**	*e*P		**Pn**	**10 35 41.7**	**-2.9**
CN2				*e*S		**Sn**	**10 38 26.8**	**-2.7**
CN2				pmax	pmax			
	comp=E,10.0nm,0.5s							
CN2				LR		LR		
	comp=E,900nm,12.0s							
CN2				LR		LR		
	comp=E,600nm,12.0s							
CN2				LR		LR		
	comp=E,800nm,13.0s							
KLR	**Kul'dur**	**15.13**	**332**	Pn		**Pn**	**10 35 44.5**	**-2.0**
	comp=E,0.2nm,0.3s,baz=134,slow=7.6,SNR=4.6							
KLR	**Kul'dur**	**15.13**	**332**	*i* P		**Pn**	**10 35 46.5**	**0.0**
OKH	**Okha**	**17.33**	**1**	*de*P		**Pn**	**10 36 09.4**	**-5.1**
OKH				pmax	pmax			
	comp=Z,100nm,14.7s							
OKH				MLR	MLR			
	comp=E,300nm,23.0s							
OKH				MLR	MLR			
	comp=Z,300nm,16.0s							
SKR	**Severo-Kuril's**	**17.53**	**30**	*e*P		**Pn**	**10 36 17.0**	**0.0**
SKR				pmax	pmax			
	comp=Z,100nm,2.9s							
SKR				MLR	MLR			
	comp=Z,200nm,19.0s							
NJ2	**Nanjing**	**19.88**	**265**	*e*P		**Pn**	**10 36 45.6**	**+0.1**
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
NJ2				LR		LR		
	comp=Z,950nm,18.0s							
NJ2				LR		LR		
	comp=Z,1μm,15.9s							
NJ2				LR		LR		
	comp=Z,1μm,18.5s							
PEA0B	**Petropavlovsk-**	**20.03**	**28**	P		Pn	10 36 50.5	+3.2
PEA0B				pmax	pmax			
	comp=Z,20nm,1.2s							
PEA0B	**Petropavlovsk-**	**20.03**	**28**	P		Pn	10 36 50.5	+3.3
PETK	**Petropavlovsk-**	**20.03**	**28**	P		**P**	**10 36 44.8**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=210,slow=11,SNR=2.2							
PETK				LR		LR	10 46 01.0	
	comp=Z,91nm,18.6s,baz=238,slow=41							
PET	**Petropavlovsk**	**20.34**	**29**	*e*P		Pn	10 36 52.7	+1.9
PET				*e*S		**S**	**10 40 34.2**	**-0.6**
PET				MLR	MLR			
	comp=Z,200nm,19.0s							
ZEA	**Zeya**	**20.44**	**334**	*e*P		**P**	**10 36 48.8**	**-0.9**
ZEA				pmax	pmax			
	comp=N,20nm,0.6s							
ZEA				pmax	pmax			
	comp=Z,24nm,0.6s							
ZEA				MLR	MLR			
	comp=E,200nm,14.0s							
ZEA				MLR	MLR			
	comp=Z,600nm,14.0s							
ZEA				MLR	MLR			
	comp=N,500nm,15.0s							
BJI	**Beijing**	**20.91**	**288**	P		**P**	**10 36 53.7**	**-1.3**
BJI				pmax	pmax			
	comp=N,8.0nm,0.9s							
BJI				pmax	pmax			
	comp=N,120nm,3.1s							
BJI				LR	LR			
	comp=N,170nm,6.6s							
BJI				LR	LR			
	comp=N,260nm,12.3s							
YHNB	**Yeheng**	**21.39**	**243**	P		**P**	**10 36 58.6**	**-1.7**
TPUB	**Ta-pu**	**22.77**	**242**	P		**P**	**10 37 12.6**	**-2.4**
TIY	**Taiyuan**	**23.91**	**283**	*e*P		**P**	**10 37 29.8**	**+3.5**
TIY				PP		**PnPn**	**10 38 01.7**	**+6.7**
TIY				SS		Sn	10 42 28.8	+24
TIY				LR	LR			
	comp=N,250nm,11.8s							
TIY				LR	LR			
	comp=N,440nm,13.6s							
TIY				LR	LR			
	comp=N,560nm,12.9s							
MA2	**Magadan**	**24.00**	**11**	P		**P**	**10 37 26.6**	**-0.2**
	comp=N,4.4nm,0.8s,baz=334,slow=20,SNR=2.3							
MA2	**Magadan**	**24.00**	**11**	*ce*P		**P**	**10 37 27.8**	**+1.0**
MA2				pmax	pmax			
	comp=Z,18nm,2.5s							
MA2	**Magadan**	**24.00**	**11**	P		**P**	**10 37 26.8**	**0.0**
MA2				IAmb	IAmb		10 37 45.6	
	comp=Z,24nm,1.3s							
WHN	**Wuhan**	**24.01**	**264**	↓P		**P**	**10 37 27.6**	**+0.4**
WHN				S		**S**	**10 41 46.9**	**+4.5**
WHN				LR	LR			
	comp=Z,1μm,15.0s							
WHN				LR	LR			
	comp=Z,980nm,11.0s							
WHN				LR	LR			
	comp=Z,1μm,11.8s							
HHC	**Hu-ho-hao-te**	**24.45**	**290**	*e*P		**P**	**10 37 31.3**	**0.0**
HHC				PP		**PnPn**	**10 38 07.0**	**+4.5**
HHC				S		**S**	**10 41 46.0**	**-3.5**
HHC				pmax	pmax			
	comp=Z,13nm,0.8s							
HHC				pmax	pmax			
	comp=Z,53nm,5.4s							
HHC				LR	LR			
	comp=Z,190nm,13.7s							
HHC				LR	LR			
	comp=Z,210nm,12.0s							
HHC				LR	LR			
	comp=Z,200nm,13.5s							
YAK	**Yakutsk**	**27.03**	**347**	P		**P**	**10 37 53.9**	**-0.3**
	comp=Z,7.8nm,0.5s,baz=175,slow=2.9,SNR=1.2							
YAK	**Yakutsk**	**27.03**	**347**	*e*P		**P**	**10 37 55.5**	**+1.3**
YAK				*e**PP		**pwP**	**10 38 05.8**	**-0.9**
YAK				*e*			10 38 37.6	
YAK				*e*S		**S**	**10 42 30.8**	**+1.1**
YAK				*e*SS		**SnSn**	**10 43 41.6**	**+4.6**
YAK				*e*SSS		SSS	10 43 56.7	
YAK				*e*			10 48 45.8	
YAK				pmax	pmax			
	comp=Z,14nm,0.9s							
YAK				pmax	pmax			
	comp=E,3.0nm,1.1s							
YAK				pmax	pmax			
	comp=N,11nm,1.4s							
YAK				pmax	pmax			
	comp=Z,14nm,0.6s							
YAK				pmax	pmax			
	comp=E,6.0nm,1.0s							
YAK				pmax	pmax			
	comp=N,30nm,2.0s							
YAK				smax	smax			
	comp=N,96nm,4.2s							
YAK				smax	smax			
	comp=E,24nm,2.2s							
YAK				MLR	MLR			
	comp=E,232nm,15.0s							
YAK				MLR	MLR			
	comp=Z,422nm,17.0s							
YAK				MLR	MLR			
	comp=N,434nm,17.0s							
YAK	**Yakutsk**	**27.03**	**347**	P		**P**	**10 37 53.3**	**-0.9**
H11N2	**WAKE ISLAND Hy**	**27.09**	**121**	T		T	11 06 04.8

comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,150nm,4.0s
GYA LR LR
comp=Z,280nm,13.4s
GYA LR LR
comp=Z,210nm,13.0s
GYA LR LR
comp=Z,340nm,15.3s
CD2 Chengdu 32.44 272 P **P** **10 38 41.1 -1.5**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
GTA Gaotai 33.53 289 ⇑P **P** **10 38 52.8 +0.7**
GTA pP pwP 10 39 03.9 -1.0
GTA sP sP 10 39 08.3 +5.5
GTA S **S** **10 44 10.6 -1.7**
GTA sS sS 10 44 26.1 +0.6
GTA pmax pmax
comp=Z,12nm,1.4s
GTA pmax pmax
comp=Z,46nm,5.6s
GTA LR LR
comp=Z,220nm,15.2s
GTA LR LR
comp=Z,200nm,14.6s
GTA LR LR
comp=Z,180nm,15.5s
BILL Bilibino 34.60 16 *i* P **P** **10 38 57.8 -3.1**
BILL *i* 10 39 08.8
BILL *i* 10 40 15.3
BILL *i* SS SS 10 46 43.9 -14
BILL pmax pmax
comp=Z,6.0nm,1.1s
BILL MLR MLR
comp=Z,102nm,17.0s
KMI Kunming 35.60 263 P **P** **10 39 10.4 +0.1**
KMI pmax pmax
comp=Z,18nm,0.5s
TIXI Tiksi 36.19 353 LR LR 10 54 53.8
comp=Z,116nm,18.6s,baz=210,slow=38
TIXI Tiksi 36.19 353 *i* P **P** **10 39 13.7 -0.8**
TIXI pmax pmax
comp=Z,2.0nm,1.0s
SLVN Son La 36.56 257 P **P** **10 39 18.5 +0.1**
SLVN IAmb IAmb 10 39 19.7
comp=Z,10nm,1.3s
DGZ Jazzator, Alta 41.48 307 *c i* P **P** **10 40 00.0 +0.7**
DGZ pmax pmax
comp=Z,13nm,0.9s
PBKT Sadao Pong 41.53 253 P **P** **10 39 59.4 -0.5**
PBKT IAmb IAmb 10 40 01.3
comp=Z,12nm,1.1s
CHTO Chiang Mai 41.84 257 P **P** **10 40 02.1 -0.3**
CHTO pmax pmax
comp=Z,4.0nm,0.9s
CHTO Chiang Mai 41.84 257 P **P** **10 40 02.1 -0.3**
WMQ Urumqi 41.88 298 *e*P **P** **10 40 03.6 +1.0**
WMQ pmax pmax
comp=Z,15nm,0.7s
WMQ pmax pmax
comp=Z,100nm,4.7s
WMQ LR LR
comp=Z,1μm,29.1s
WMQ LR LR
comp=Z,1μm,29.0s
WMQ LR LR
comp=Z,79nm,28.8s
CMAR Chiang Mai Arr 42.03 257 P **P** **10 40 03.8 -0.2**
comp=Z,1.0nm,0.6s,baz=50,slow=8.4,SNR=7.5
CMAR LR LR 10 59 29.4
comp=Z,63nm,18.6s,baz=55,slow=39
ZAA0 Zalesovo Array 43.02 313 P **P** **10 40 11.4 -0.2**
ZAA0 IAmb IAmb 10 40 23.1
comp=Z,12nm,0.9s
ZALV Zalesovo Beam 43.02 313 P **P** **10 40 11.7 +0.1**
comp=Z,4.5nm,0.8s,baz=94,slow=6.8,SNR=11
ZALV LR LR 10 57 55.8
comp=Z,67nm,18.3s,baz=66,slow=36
ZALV Zalesovo Beam 43.02 313 *i* P **P** **10 40 12.1 +0.5**
ZALV pmax pmax
comp=Z,5.0nm,0.8s
MK31 Makanchi Array 45.19 303 P **P** **10 40 28.8 -0.3**
MK31 pmax pmax
comp=Z,9.0nm,0.8s
MK31 Makanchi Array 45.19 303 P **P** **10 40 28.8 -0.3**
MK31 IAmb IAmb 10 40 33.6
comp=Z,8.6nm,0.8s
MKAR Makanchi Array 45.19 303 P **P** **10 40 27.8 -1.3**
comp=Z,4.9nm,0.7s,baz=95,slow=7.8,SNR=26
MAKZ Makanchi 45.40 303 P **P** **10 40 30.6 -0.2**
MAKZ pmax pmax
comp=Z,10.0nm,0.8s
MAKZ Makanchi 45.40 303 P **P** **10 40 30.6 -0.2**
MAKZ IAmb IAmb 10 40 35.0
comp=Z,9.5nm,0.8s
KSM Kuching 45.55 228 P **P** **10 40 32.6 +0.3**
KSM IAmb IAmb 10 40 34.1
comp=Z,6.0nm,0.7s
PMG Port Moresby 45.61 173 LR LR 11 05 18.4
comp=Z,50nm,18.4s,baz=259,slow=44
KURK Kurchatov 47.02 309 *c i* P **P** **10 40 43.1 -0.4**
KURK pmax pmax
comp=Z,12nm,1.0s
KURK Kurchatov 47.02 309 P **P** **10 40 43.5 0.0**
KDAK Kodiak Island 47.20 41 P **P** **10 40 43.2 -1.5**
comp=Z,1.5nm,0.5s,baz=237,slow=2.3,SNR=5.6
KDAK Kodiak Island 47.20 41 P **P** **10 40 45.8 +1.1**
KDAK pmax pmax
comp=Z,17nm,1.5s
KDAK Kodiak Island 47.20 41 P **P** **10 40 45.8 +1.1**
KDAK IAmb IAmb 10 41 02.7
comp=Z,17nm,1.4s
MLY Manley 48.14 32 P **P** **10 40 54.3 +2.3**
HNR Honiara 48.34 156 LR LR 11 01 14.1
comp=Z,41nm,18.5s,baz=336,slow=36
NEA Nenana 48.84 32 P **P** **10 40 58.5 +1.2**
COLA College 49.37 32 *i* P **P** **10 41 01.5 +0.2**
COLA pmax pmax
comp=Z,2.0nm,0.8s
IPM Ipoh 49.38 240 P **P** **10 41 01.9 -0.2**
IPM IAmb IAmb 10 41 13.6
comp=Z,6.9nm,1.0s
IL31 49.78 32 P **P** **10 41 04.6 +0.1**
ILAR Eielson Array 49.78 32 P **P** **10 41 03.2 -1.2**
comp=Z,1.2nm,0.8s,baz=275,slow=6.6,SNR=13
MTN Manton Dam 49.94 194 P **P** **10 41 06.8 +0.6**
MTN IAmb IAmb 10 41 09.1
comp=Z,12nm,1.0s
KSH Kashi 51.43 295 P **P** **10 41 18.1 +0.6**
KSH pP pwP 10 41 31.1 +0.6
KSH sP sP 10 41 38.2 +10
KSH pmax pmax
comp=Z,20nm,1.2s
KSH pmax pmax
comp=Z,100nm,4.8s
AAK Ala-Archa 51.54 299 LR LR 11 04 09.8
comp=Z,67nm,19.9s,baz=48,slow=37
AAK Ala-Archa 51.54 299 P **P** **10 41 18.4 +0.1**
AAK pmax pmax
comp=Z,5.0nm,0.9s
AAK Ala-Archa 51.54 299 P **P** **10 41 18.4 +0.1**
AAK IAmb IAmb 10 41 24.6
comp=Z,5.1nm,0.8s
BRVK Borovoye 51.73 313 P **P** **10 41 20.1 +0.7**
BRVK pmax pmax
comp=Z,9.0nm,1.2s
BRVK Borovoye 51.73 313 P **P** **10 41 20.1 +0.7**
BRVK IAmb IAmb 10 41 31.1
comp=Z,8.8nm,1.1s
MCARA McCarthy VSAT 51.77 36 P **P** **10 41 21.2 +1.6**
MCARA IAmb IAmb 10 41 40.3
comp=Z,5.2nm,0.8s
PSI Prapat 52.04 241 P **P** **10 41 21.4 -0.8**
PSI pmax pmax
comp=Z,5.0nm,0.8s
RPSI Rantau Prapat 52.11 240 P **P** **10 41 21.4 -1.3**
RPSI IAmb IAmb 10 41 35.6
comp=Z,5.2nm,0.8s
ARSB Arslanbob 53.01 298 P **P** **10 41 30.0 +0.7**
ARSB pmax pmax
comp=Z,23nm,1.1s
ARSB Arslanbob 53.01 298 P **P** **10 41 30.0 +0.7**
KNRA Kununurra 53.19 196 P **P** **10 41 32.4 +1.9**
KNRA IAmb IAmb 10 41 45.1
comp=Z,11nm,0.9s
EPYK Eagle Plains 53.86 30 P **P** **10 41 36.6 +1.7**
EPYK IAmb IAmb 10 41 46.8
comp=Z,5.3nm,0.8s
KK31 Karatay Array 54.18 301 P **P** **10 41 37.2 -0.5**
KK31 pmax pmax
comp=Z,27nm,1.3s
KK31 Karatay Array 54.18 301 P **P** **10 41 37.2 -0.5**
KKAR Karatay Array 54.18 301 P **P** **10 41 37.3 -0.3**
KKAR pmax pmax
comp=Z,27nm,1.3s
KKAR Karatay Array 54.18 301 P **P** **10 41 37.3 -0.3**
HYT Haines Junctio 54.50 36 P **P** **10 41 43.7 +3.8**
INK Inuvik 54.77 27 P **P** **10 41 41.0 -0.4**
comp=Z,1.4nm,0.8s,baz=295,slow=5.1,SNR=7.4
INK Inuvik 54.77 27 P **P** **10 41 43.4 +2.0**
INK pmax pmax
comp=Z,3.0nm,0.9s
INK Inuvik 54.77 27 P **P** **10 41 43.4 +2.0**
GAR Garm 55.73 296 P **P** **10 41 48.9 -0.2**
WB0 Warramunga Arr 56.19 189 P **P** **10 41 50.1 -2.1**
WB0 IAmb IAmb 10 42 02.5
comp=Z,11nm,0.9s
SVE Sverdlovsk 56.25 319 *e*P P 10 42 02.8 +11
SVE pmax pmax
comp=Z,24nm,1.3s
FITZ Fitzroy Crossi 56.29 199 P **P** **10 41 51.8 -1.1**
comp=Z,1.5nm,0.7s,baz=0.0,slow=12,SNR=3.3
FITZ Fitzroy Crossi 56.29 199 P **P** **10 41 53.6 +0.7**
WRAB Tennant Creek 56.36 189 *i* P **P** **10 41 50.5 -2.9**
WRAB pmax pmax
comp=Z,8.0nm,1.1s
WR0 Warramunga Arr 56.36 189 P **P** **10 41 54.0 +0.5**
WR0 IAmb IAmb 10 42 03.7
comp=Z,14nm,1.1s
WB2 Warramunga Arr 56.37 189 P **P** **10 41 54.3 +0.8**
WB2 IAmb IAmb 10 42 03.8
comp=Z,10nm,1.0s
WRA Warramunga Arr 56.37 189 P **P** **10 41 51.3 -2.2**
comp=Z,4.4nm,0.9s,baz=7.1,slow=7.3,SNR=13
CHGR Chuyangaron 56.70 296 P **P** **10 41 56.2 +0.3**
ARU Arti 57.47 319 *d i* P **P** **10 42 00.8 -0.1**
ARU *e*PP **sP** **10 42 11.0 -0.7**
ARU 10 42 48.9
ARU 10 44 09.4
ARU S **S** **10 49 58.6 +2.6**
ARU SS **SS** **10 53 43.9 -1.4**
ARU pmax pmax
comp=Z,11nm,1.4s
ARU MLR MLR
comp=Z,136nm,14.0s
ARU Arti 57.47 319 P **P** **10 42 01.1 +0.2**
KBL Kabul 58.41 292 P **P** **10 42 08.4 +0.2**
KBL pmax pmax
comp=Z,13nm,1.3s
KBL Kabul 58.41 292 P **P** **10 42 08.4 +0.2**
KBL IAmb IAmb 10 42 19.2
comp=Z,13nm,1.2s
AKTO Aktyubinsk 59.78 313 LR LR 11 08 52.4
comp=Z,57nm,18.4s,baz=65,slow=37
AS31 Alice Springs 60.09 189 P **P** **10 42 21.1 +1.5**
ASAR Alice Springs 60.10 189 P **P** **10 42 17.9 -1.6**
comp=Z,3.0nm,0.9s,baz=11,slow=6.2,SNR=13
KBS Kingsbay 61.58 350 *i* P **P** **10 42 29.4 +0.4**
KBS pmax pmax
comp=Z,21nm,1.1s
TMCR Tamitsa 63.82 332 *e*P P 10 42 54.9 +11
TMCR pmax pmax
comp=Z,24nm,0.9s
YKA Yellowknife Ar 64.13 30 P **P** **10 42 46.6 +0.5**
comp=Z,0.6nm,0.8s,baz=299,slow=6.2,SNR=7.7
KLMR Klimovskoe 64.84 328 *e*P **P** **10 42 49.4 -1.3**
KLMR *e* 10 45 12.4
KLMR pmax pmax
comp=Z,15nm,0.9s
KLMR Klimovskoe 64.84 328 *e*P **P** **10 42 49.5 -1.3**
KLMR AMP 10 43 02.2
comp=Z,15nm,0.9s
KLMR *e*PP **PP** **10 45 12.5 -0.6**
GEYT Alibeck 64.89 300 LR LR 11 12 57.3
comp=Z,29nm,18.3s,baz=60,slow=38
ARCES ARCESS Array B 65.02 340 LR LR 11 14 49.0
comp=Z,38nm,18.4s,baz=7.5,slow=39
DAG Danmarks Havn 66.64 355 *i* P P 10 43 12.4 +10
comp=Z,6.7nm,0.9s
FORT Forrest 67.99 193 P **P** **10 43 13.5 +2.4**
MOS Moscow 68.35 324 *e*P P 10 43 23.6 +10
OBN Obninsk 69.19 324 *i* P **P** **10 43 17.8 -0.7**
OBN pmax pmax
comp=Z,5.0nm,0.7s
FINES FINESS Array B 69.88 333 P **P** **10 43 22.7 +0.1**
comp=Z,0.8nm,0.6s,baz=46,slow=5.5,SNR=5.1
FINES LR LR 11 18 50.5
comp=Z,97nm,18.6s,baz=34,slow=40
FINES FINESS Array B 69.88 333 *i* P **P** **10 43 23.3 +0.6**
FINES pmax pmax
comp=Z,1.0nm,0.6s
VSR Storozhevoye 70.04 319 *i* P **P** **10 43 22.7 -1.1**
VSR pmax pmax
comp=Z,11nm,1.1s
PINE Pine Mountain 70.29 50 P **P** **10 43 27.2 +1.4**
PINE IAmb IAmb 10 43 42.3
comp=Z,9.2nm,1.1s
K05A Summer Lake 70.88 51 P **P** **10 43 30.5 +1.1**
VSU Vasula 71.53 330 *i* P **P** **10 43 32.4 -0.3**
VSU pmax pmax
comp=Z,17nm,1.0s
KBZ Khabaz 72.00 311 P **P** **10 43 36.4 +0.5**
comp=Z,2.7nm,0.8s,baz=93,slow=3.6,SNR=6.1
KIV Kislovodsk 72.01 312 P **P** **10 43 37.0 +1.0**
KIV pmax pmax
comp=Z,15nm,0.8s
KIV Kislovodsk 72.01 312 P **P** **10 43 37.0 +1.0**
FFC Flin Flon 73.98 33 P **P** **10 43 51.1 +3.7**
FFC pmax pmax
comp=Z,6.0nm,1.0s
FFC Flin Flon 73.98 33 P **P** **10 43 51.1 +3.7**
FFC IAmb IAmb 10 44 03.2
comp=Z,5.7nm,0.9s
LRM Limekiln Ridge 74.20 45 P **P** **10 43 48.9 -0.3**
KVN Kaiserville 74.65 53 P **P** **10 43 51.6 -0.2**
KVN pmax pmax
comp=Z,7.0nm,1.0s
KVN Kaiserville 74.65 53 P **P** **10 43 51.6 -0.2**
KVN IAmb IAmb 10 44 07.8
comp=Z,6.5nm,1.0s
NVAR Mina Array Bea 74.87 53 P **P** **10 43 53.5 +0.4**
comp=Z,1.7nm,0.7s,baz=293,slow=6.2,SNR=7.8
NB2 NORSAR Subarra 75.22 338 P **P** **10 43 54.6 +0.1**
comp=Z,9.5nm,1.1s,baz=38,slow=6.2
NOA NORSAR Array B 75.22 338 P **P** **10 43 54.4 -0.2**
comp=Z,0.5nm,0.7s,baz=39,slow=5.8,SNR=2.6
NOA LR LR 11 23 12.1
comp=Z,66nm,18.5s,baz=30,slow=41
AKASG Malin Array Be 75.40 323 P **P** **10 43 55.3 -0.3**
comp=Z,0.9nm,0.5s,baz=45,slow=6.3,SNR=8.7
AKASG Malin Array Be 75.40 323 *i* P **P** **10 43 55.2 -0.5**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
YNE Yellowstone No 76.06 44 P **P** **10 44 01.4 +1.5**
H17A Grant Village 76.11 45 P **P** **10 44 02.7 +2.5**
H17A IAmb IAmb 10 44 18.3
comp=Z,10nm,1.0s
IMW Indian Meadow 76.21 45 P **P** **10 44 02.8 +2.0**
IMW IAmb IAmb 10 44 17.7
comp=Z,7.1nm,1.2s
DUG Dugway, Tooele 77.31 49 P **P** **10 44 07.8 +0.8**
DUG pmax pmax
comp=Z,6.0nm,0.8s
DUG Dugway, Tooele 77.31 49 P **P** **10 44 07.8 +0.8**
DUG IAmb IAmb 10 44 22.7
comp=Z,6.3nm,0.8s
SORM Soroca 77.49 321 ⇑P P 10 44 18.2 +11
PDAR Pinedale Array 77.69 46 P **P** **10 44 07.5 -1.6**
comp=Z,0.8nm,0.7s,baz=300,slow=3.2,SNR=7.9
MPU Maple Canyon 78.14 49 P **P** **10 44 12.9 +1.2**
P17A Butcher Ranch, 79.02 49 P **P** **10 44 17.6 +1.1**
SRU San Rafael Swe 79.38 49 P **P** **10 44 19.1 +0.7**
SRU pmax pmax
comp=Z,7.0nm,0.8s
SRU San Rafael Swe 79.38 49 P **P** **10 44 19.1 +0.7**
BUR08 Bucovina Ar. S 79.40 322 P **P** **10 44 18.3 0.0**
VRI Vrincioaia 79.83 320 ⇑P P 10 44 32.9 +12
BRTR Keskin Array B 79.95 312 P **P** **10 44 21.8 +0.3**
comp=Z,0.8nm,0.7s,baz=57,slow=5.3,SNR=3.6
PV21 Cone Mtn., Par 80.66 49 P **P** **10 44 25.7 +0.2**
PV21 IAmb IAmb 10 44 41.5
comp=Z,6.7nm,0.8s
PV14 Lion Creek, Pa 80.75 49 P **P** **10 44 25.0 -1.0**
PV14 IAmb IAmb 10 44 42.0
comp=Z,11nm,0.9s
PV17 East Wray Mesa 80.85 49 P **P** **10 44 26.3 -0.1**
PV01 Paradox Valley 81.18 49 P **P** **10 44 29.7 +1.5**
PV01 IAmb IAmb 10 44 44.3
comp=Z,6.5nm,0.9s
ARR Arges 81.25 321 ⇑P P 10 44 40.4 +12
PSZ Piszkesteto 81.75 325 ⇓P P 10 44 42.4 +12
JAVC Velka Javorina 82.07 327 *e*P P 10 44 44.5 +12
CLL Collm 82.17 331 *i* pP pP 10 44 44.2 +3.2
comp=Z,9.0nm,1.0s
CLL Collm 82.17 331 *e*P **P** **10 44 35.0 +2.1**
CLL *i* *PP **pP** **10 44 44.2 +3.2**
CLL Collm 82.17 331 *e*P **P** **10 44 35.0 +2.1**
VRAC Vranov 82.21 328 *e*P P 10 44 44.3 +11
VRAC Vranov 82.21 328 ⇓P P 10 44 44.7 +12
KRUC Moravsky 82.48 328 *e*P P 10 44 45.2 +11
PPT Papeete 83.60 117 LR LR 11 16 34.2
comp=Z,38nm,19.2s,baz=329,slow=32
KHC Kasperske Hory 83.63 329 *i* P **P** **10 44 40.2 -0.3**
KHC pmax pmax
comp=Z,13nm,1.0s
KHC Kasperske Hory 83.63 329 *e*P **P** **10 44 40.0 -0.5**
KHC *e*pP **sP** **10 44 51.0 -0.6**
GERES GERESS Array B 83.80 329 P **P** **10 44 40.8 -0.7**
comp=Z,0.5nm,0.6s,baz=32,slow=6.3,SNR=4.6
GERES LR LR 11 24 33.5
comp=Z,51nm,18.7s,baz=323,slow=38
ANMO Albuquerque 84.53 50 P **P** **10 44 46.5 +0.9**
ANMO pmax pmax
comp=Z,4.0nm,1.2s
ANMO Albuquerque 84.53 50 P **P** **10 44 46.5 +0.9**
TXAR Lajitas Array 90.01 53 P **P** **10 45 11.7 -0.4**
comp=Z,0.6nm,0.6s,baz=310,slow=3.6,SNR=9.8
ESDC Sonseca Array 98.35 334 LR LR 11 34 41.7
comp=Z,77nm,18.9s,baz=15,slow=38
LPAZ La Paz 146.43 62 PKIKP **PKPdf** **10 51 50.5 -2.5**
LPAZ La Paz 146.43 62 **PKPdf** **10 51 50.5 -2.5**
PB07 IPOC Station P 148.49 72 **PKPdf** **10 51 56.2 +0.4**

BUC ***11*** *10:41:43.8±0.3, 44.62N×21.75E, h3km, ml1.5/5, Error ellipse: s-maj=2.6km s-min=1.4km az=62.0*
BEO 11 10:41:45.5±0.7, 44.58N×21.78E, h0km, ML1.6/8, 16C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUBS	**Kucevo**	**0.18**	**203**	*e*Pg	Pg	10 41 47.8	-1.2
KUBS				*e*Sg	Sg	10 41 50.8	-0.6
MDVR	**Moldovita**	**0.20**	**347**	⇑P	Pg	10 41 46.7	-2.7
MDVR				⇑S	Sg	10 41 49.3	-2.8
MDVR	**Moldovita**	**0.20**	**347**	⇑P	Pg	10 41 46.7	-2.7
MDVR				⇑S	Sg	10 41 49.3	-2.8
HERR	**Herculane**	**0.55**	**57**	⇑P	Pg	10 41 54.3	-1.6
HERR				⇑S	Sg	10 42 02.0	-1.0
HERR	**Herculane**	**0.55**	**57**	⇑P	Pg	10 41 54.0	-1.6
HERR				⇑S	Sg	10 42 02.0	-1.0
ZAGS	**Zajecar**	**0.84**	**157**	*e*Pg	Pg	10 42 00.3	-1.2
ZAGS				*e*Sg	Sg	10 42 12.5	+0.1
GRUS	**Gruza**	**1.03**	**228**	*e*Pg	Pg	10 42 04.6	-0.6
GRUS				*e*Sg	Sg	10 42 18.7	+0.1
BZS	**Buzias**	**1.04**	**354**	⇑P	Pg	10 42 03.4	-2.1
BZS				⇓S	Sg	10 42 17.2	-1.8
BZS	**Buzias**	**1.04**	**354**	⇑P	Pg	10 42 03.4	-2.1
BZS				⇓S	Sg	10 42 17.2	-1.8
TRUS	**Trudelj**	**1.04**	**250**	*e*Pg	Pg	10 42 05.0	-0.5
TRUS				*e*Sg	Sg	10 42 18.5	-0.6
GZR	**Gura Zlata**	**1.08**	**41**	⇑P	Pg	10 42 04.0	-2.2
GZR				⇑S	Sg	10 42 18.5	-1.7
GZR	**Gura Zlata**	**1.08**	**41**	⇑P	Pg	10 42 04.0	-2.2
GZR				⇑S	Sg	10 42 18.5	-1.7
BLKB	**Belogradchik**	**1.16**	**146**	⇑S	Sb	10 42 23.5	-0.5
BLKB	**Belogradchik**	**1.16**	**146**	⇑S	Sb	10 42 23.5	-0.5
DIVS	**Divibare**	**1.37**	**250**	*e*Pg	Pg	10 42 10.0	-1.7
DIVS				*e*Sg	Sg	10 42 28.5	-1.0
SELS	**Selova**	**1.44**	**199**	*e*Pg	Pn	10 42 12.2	-0.7
SELS				*e*Sg	Sg	10 42 32.0	+0.2
ZAPS	**Zavoj**	**1.45**	**154**	*e*Pg	Pn	10 42 12.0	-1.0
ZAPS				*e*Sg	Sg	10 42 30.9	-1.1
BARS	**Barje**	**1.77**	**179**	*e*Pg	Pn	10 42 16.9	-0.4
BARS				*e*Sg	Sb	10 42 41.8	+0.3
BBLS	**Lazići**	**1.85**	**248**	*e*Pg	Pn	10 42 19.0	+0.5
BBLS				*e*Sg	Sb	10 42 43.7	-0.2
BOSS	**Bosilegrad**	**2.15**	**166**	*e*Pg	Pb	10 42 24.2	-1.1
BOSS				*e*Sg	Sg	10 42 54.4	-0.1

ATH ***11*** *10:47:57.3, 38.21N×26.31E, h33km±2km, ML2.4/7, Error ellipse: s-maj=2.9km s-min=1.3km az=264.0*
DDA ***11*** *10:47:57.8, 38.23N×26.37E, h7km±2km, ML2.4*
ISK ***11*** *10:47:57.7, 38.26N×26.34E, h5km, ML2.6/12*
THE ***11*** *10:47:58.0, 38.22N×26.30E, h14km±1km, ML2.6/4, Error ellipse: s-maj=2.5km s-min=0.9km az=242.0*
ISC 11 10:47:57.4±0.8, 38.23N±0.02×26.35E±0.02, h12km±6km, n47, σ0.72/70, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CESE	**eme**	**0.11**	**340**	PG	**Pg**	**10 47 59.9**	**-0.4**
CESE				SG	**Sg**	**10 48 01.5**	**-0.9**
URLA	**Izmir**	**0.24**	**56**	PG	**Pg**	**10 48 02.7**	**+0.4**
URLA				SG	**Sg**	**10 48 06.3**	**+0.6**
URLA	**Izmir**	**0.24**	**56**	*i* P	**Pg**	**10 48 02.5**	**+0.2**
URLA				*i* S	**Sg**	**10 48 06.2**	**+0.6**
CHOS	**Chios island**	**0.28**	**305**	P	**Pg**	**10 48 03.6**	**+0.5**
CHOS				S	**Sg**	**10 48 07.7**	**+0.7**
	2μm,0.2s						
CHOS	**Chios island**	**0.28**	**305**	P	**Pg**	**10 48 03.7**	**+0.5**
CHOS				AML	AML	10 48 08.4	
	comp=E,5256μm,0.2s						
CHOS				AML	AML	10 48 08.4	
	comp=N,3763μm,0.3s						
CHOS	**Chios island**	**0.28**	**305**	PG	**Pg**	**10 48 03.4**	**+0.3**
CHOS				SG	**Sg**	**10 48 07.5**	**+0.5**
KRBN	**Karaburun**	**0.40**	**24**	PG	**Pg**	**10 48 05.1**	**-0.2**
KRBN				SG	**Sg**	**10 48 11.1**	**+0.5**
DGB	**zmir**	**0.46**	**113**	*i* P	**Pg**	**10 48 06.2**	**-0.2**
DGB				*i* S	**Sg**	**10 48 12.8**	**+0.3**
SMG	**Samos**	**0.65**	**143**	P	**Pb**	**10 48 10.8**	**+0.1**
SMG				S	**Sb**	**10 48 20.1**	**+0.4**
	comp=N,542nm,0.2s						
SMG	**Samos**	**0.65**	**143**	P	**Pb**	**10 48 11.3**	**+0.6**
SMG				S	**Sb**	**10 48 20.5**	**+0.8**
SMG				AML	AML	10 48 23.0	
	comp=E,1174μm,0.3s						
SMG				AML	AML	10 48 24.2	
	comp=N,976μm,0.2s						
PSRA	**Psara**	**0.69**	**297**	P	**Pb**	**10 48 11.9**	**+0.5**
GCAM	**G?zelcaml?**	**0.88**	**127**	PG	**Pn**	**10 48 15.4**	**-0.2**
GCAM				SG	**Sn**	**10 48 28.1**	**-0.2**
GCAM	**G?zelcaml?**	**0.88**	**127**	*i* P	**Pb**	**10 48 14.9**	**+0.4**
GCAM				*i* S	**Sb**	**10 48 27.2**	**+0.9**
ZEDA	**zmir-Bergama**	**0.93**	**38**	*i* P	**Pb**	**10 48 15.3**	**-0.2**
ZEDA				*i* S	**Sg**	**10 48 28.3**	**+0.8**
DKL	**Dikili**	**0.95**	**27**	PG	**Pb**	**10 48 15.8**	**0.0**
DKL				SG	**Sg**	**10 48 28.9**	**+0.9**
PRK	**Paraskevi**	**1.02**	**357**	P	**Pn**	**10 48 17.9**	**+0.4**
PRK				S	**Sg**	**10 48 31.1**	**+0.9**
	comp=N,342nm,0.4s						
PRK	**Paraskevi**	**1.02**	**357**	P	**Pn**	**10 48 17.7**	**+0.2**
PRK				S	**Sg**	**10 48 30.9**	**+0.7**
PRK				AML	AML	10 48 33.6	
	comp=E,844μm,0.6s						
PRK				AML	AML	10 48 34.6	
	comp=N,491μm,0.3s						
SIGR	**SIGRI**	**1.05**	**339**	P	**Pb**	**10 48 17.4**	**-0.2**
SIGR				S	**Sb**	**10 48 31.3**	**0.0**
	comp=N,312nm,0.4s						
SIGR	**SIGRI**	**1.05**	**339**	P	**Pb**	**10 48 17.2**	**-0.3**
SIGR				S	**Sb**	**10 48 31.5**	**+0.2**
SIGR				AML	AML	10 48 33.6	
	comp=N,560μm,0.4s						
SIGR				AML	AML	10 48 33.7	
	comp=E,713μm,0.4s						
SIGR	**SIGRI**	**1.05**	**339**	PG	**Pb**	**10 48 17.6**	**0.0**
AYVA	**Ayvalik**	**1.11**	**14**	*i* P	**Pb**	**10 48 18.8**	**+0.3**
AYVA				*i* S	**Sb**	**10 48 33.5**	**+0.5**
AYVA				IAML		10 48 36.0	
	comp=E,79nm,0.7s						

TNSA	**Tinos**	**1.16**	**234**	P	**Pb**	**10 48 18.4**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**1.25**	**103**	PN	**Pg**	**10 48 22.1**	**+0.7**
AKHS	**Akhisar**	**1.32**	**60**	*i* P	**Pn**	**10 48 21.2**	**-0.5**
APE	**Apeiranthos**	**1.33**	**209**	P	**Pn**	**10 48 20.6**	**-1.2**
APE				AML	AML	10 48 45.7	
	comp=N,91μm,0.2s						
APE				AML	AML	10 48 45.8	
	comp=E,77μm,0.2s						
APE	**Apeiranthos**	**1.33**	**209**	PN	**Pn**	**10 48 21.9**	**+0.1**
BODT	**Bodrum**	**1.39**	**146**	PN	**Pg**	**10 48 24.8**	**+0.7**
AMGA	**Amorgos Island**	**1.44**	**195**	P	**Pn**	**10 48 22.2**	**-1.1**
AMGA	**Amorgos Island**	**1.44**	**195**	P	**Pn**	**10 48 22.2**	**-1.1**
AMGA				AML	AML	10 48 49.3	
	comp=N,122μm,0.3s						
AMGA				AML	AML	10 48 49.7	
	comp=E,135μm,0.4s						
BDRM	**Kayabasi**	**1.45**	**143**	*i* P	**Pg**	**10 48 26.0**	**+0.7**
BAYC	**CANAKKALE_Bayr**	**1.52**	**6**	*i* P	**Pn**	**10 48 23.1**	**-1.3**
BAYC				*i* S	**Sn**	**10 48 42.5**	**-1.6**
STEP	**BALIKESIR_Sava**	**1.57**	**43**	*i* P	**Pb**	**10 48 26.4**	**+0.1**
STEP				*i* S	**Sg**	**10 48 49.0**	**+1.1**
STEP				IAML		10 48 55.0	
	comp=N,81nm,1.0s						
BOZC	**Bozcaada**	**1.63**	**352**	*i* P	**Pn**	**10 48 26.4**	**+0.6**
IOSP	**Ios island**	**1.72**	**210**	P	**Pn**	**10 48 26.3**	**-0.9**
IOSP	**Ios island**	**1.72**	**210**	P	**Pn**	**10 48 26.0**	**-1.2**
IOSP				AML	AML	10 49 01.1	
	comp=E,152μm,0.4s						
IOSP				AML	AML	10 49 06.2	
	comp=N,128μm,0.3s						
MANT	**Manisa**	**1.76**	**81**	*i* P	**Pg**	**10 48 30.9**	**-0.2**
MANT				*i* S	**Sb**	**10 48 51.8**	**-0.1**
BALY	**Balya**	**1.81**	**33**	*i* P	**Pb**	**10 48 31.2**	**+0.8**
BALY				*i* S	**Sb**	**10 48 53.9**	**+0.9**
BALY				IAML		10 48 59.0	
	comp=N,52nm,0.4s						
KULA	**Kula-Manisa**	**1.84**	**80**	PN	**Pb**	**10 48 30.7**	**-0.3**
BALB	**Balikesir**	**1.85**	**40**	PN	**Pb**	**10 48 30.5**	**-0.6**
YER	**Yerkesik**	**1.89**	**125**	PN	**Pb**	**10 48 31.9**	**+0.1**
LIA	**Limnos Island**	**1.90**	**332**	P	**Pn**	**10 48 29.5**	**-0.1**
DION	**Dionisos Attik**	**1.91**	**266**	P	**Pn**	**10 48 29.8**	**0.0**
ANAF	**Anafi Island**	**1.92**	**194**	P	**Pn**	**10 48 29.1**	**-0.9**
ANAF	**Anafi Island**	**1.92**	**194**	P	**Pn**	**10 48 29.1**	**-0.9**
VLY	**Voula,Athens**	**2.05**	**260**	P	**Pn**	**10 48 31.6**	**-0.1**
AOS	**Alonnisos**	**2.15**	**297**	P	**Pn**	**10 48 33.1**	**0.0**
DURS	**Dursunbey**	**2.15**	**50**	*i* P	**Pn**	**10 48 30.9**	**-2.3**
DURS				*i* S	**Sn**	**10 48 59.0**	**-0.9**

*IDC **11** 10:51:57.5±0.7, 67°.78N×162°.59W, h0km, mb4.0/24, mb1 4.1/27, mb1mx3.9/67, mbtmp4.0/27, ML3.9/3, MS3.6/2, Ms1 3.6/2, ms1mx2.7/42, Error ellipse: s-maj=18.9km s-min=11.6km az=13.0*

*AEIC **11** 10:51:58±1.9, 67°.70N±0°.04×162°.6W±0°.1, h22km±4km, ML4.0, mb4.3/27(NEIC), Error ellipse: s-maj=8.0km s-min=4.6km az=109.0*

*NEIC **11** 10:51:59.0±1.7, 67°.69N±0°.06×162°.5W±0°.1, h14km±3km, Error ellipse: s-maj=9.4km s-min=6.4km az=152.0*

ISC 11 10:51:58.5±0.4, 67°.75N±0°.05×162°.38W±0°.04, h10km, n139, σ1§49/152, mb4.2/37, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.37**	**327**		**Pg**	**10 52 06.4**	**+0.6**
RDOG				Sg	**Sg**	**10 52 12.2**	**+1.5**
ANM	**Nome**	**3.42**	**202**		**Pn**	**10 52 50.2**	**-1.6**
ANM				Sn	**Sn**	**10 53 28.2**	**-4.1**
IM03		**3.84**	**113**		**Pn**	**10 52 57.5**	**0.0**
IM03					**Sn**	**10 53 42.4**	**-0.1**
PS05	**TAPS Pump Stn5**	**4.64**	**96**		**Pn**	**10 53 08.7**	**+0.2**
COLD	**Coldfoot**	**4.71**	**91**		**Pn**	**10 53 11.2**	**+1.8**
TOLK	**Toolik Lake Re**	**4.86**	**73**	P	**Pn**	**10 53 13.5**	**+1.9**
	baz=265						
TOLK				S	**Sn**	**10 54 08.1**	**+0.3**
	baz=265						
TOLK	**Toolik Lake Re**	**4.86**	**73**		**Pn**	**10 53 13.5**	**+1.9**
TOLK				Sn	**Sn**	**10 54 08.2**	**+0.3**
MLY	**Manley**	**5.41**	**115**		**Pn**	**10 53 18.6**	**-0.6**
MLY					**Sn**	**10 54 21.8**	**+0.4**
TTA	**Tatalina**	**5.52**	**148**		**Pn**	**10 53 20.5**	**-0.2**
GAMB	**Gambell**	**5.53**	**228**		**Pn**	**10 53 18.4**	**-2.3**
TT01	**Tatalina**	**5.54**	**148**		**Pn**	**10 53 20.4**	**-0.5**
PS01	**TAPS Pump Stn**	**5.55**	**57**		**Pn**	**10 53 21.8**	**+0.9**
CHUM	**Lake Minchumin**	**5.67**	**128**		**Pn**	**10 53 22.8**	**+0.2**
BPAW	**Bear Paw Mtn.**	**5.92**	**123**		**Pn**	**10 53 26.3**	**+0.2**
PS07	**TAPS Pump Stn7**	**6.14**	**107**		**Pn**	**10 53 29.5**	**+0.5**
NEA	**Nenana**	**6.25**	**114**		**Pn**	**10 53 30.8**	**+0.1**
KTH	**Kantishna Hill**	**6.33**	**126**		**Pn**	**10 53 32.5**	**+0.7**
MDM	**Murphy Dome**	**6.34**	**110**		**Pn**	**10 53 32.7**	**+0.9**
BWN	**Browne**	**6.37**	**118**		**Pn**	**10 53 33.0**	**+0.7**
PPLA	**Purkeypile**	**6.47**	**134**		**Pn**	**10 53 34.0**	**+0.3**
TCOL	**CIGO, UAF Yank**	**6.51**	**109**	P	**Pn**	**10 53 34.9**	**+0.7**
	baz=302						
TCOL				S	**Sn**	**10 54 49.1**	**+0.6**
	baz=302						
TCOL	**CIGO, UAF Yank**	**6.51**	**109**		**Pn**	**10 53 34.9**	**+0.7**
COLA	**College**	**6.52**	**109**		**Pn**	**10 53 34.9**	**+0.6**
POKR	**Poker Plat Res**	**6.54**	**107**	P	**Pn**	**10 53 34.7**	**+0.1**
	baz=300						
POKR				S	**Sn**	**10 54 49.4**	**+0.2**
	baz=300						
POKR	**Poker Plat Res**	**6.54**	**107**		**Pn**	**10 53 34.6**	**0.0**
TRF	**Thorofare Moun**	**6.60**	**125**		**Pn**	**10 53 35.5**	**-0.1**
CCB	**Clear Creek Bu**	**6.66**	**111**		**Pn**	**10 53 36.5**	**+0.3**
WRH	**Wood River Hil**	**6.66**	**113**		**Pn**	**10 53 35.9**	**-0.3**
FYU	**Fort Yukon**	**6.78**	**92**		**Pn**	**10 53 38.3**	**+0.5**
BM03	**Burnt Mountain**	**6.80**	**85**		**Pn**	**10 53 38.6**	**+0.4**
MCK	**McKinley**	**6.84**	**120**		**Pn**	**10 53 38.8**	**0.0**
IL31		**6.92**	**108**		**Pn**	**10 53 39.8**	**0.0**
ILAR	**Eielson Array**	**6.92**	**108**	Pn	**Pn**	**10 53 39.6**	**-0.2**
	11nm,0.3s,baz=305,slow=14,SNR=579						
ILAR				Sn	**Sn**	**10 54 53.3**	**-5.2**
	baz=307,slow=16,SNR=2.9						
PRP	**Porcupine Dome**	**7.06**	**101**		**Pn**	**10 53 41.3**	**-0.5**
PS08	**TAPS Pump Stn8**	**7.07**	**110**		**Pn**	**10 53 42.4**	**+0.5**
RND	**Reindeer**	**7.09**	**121**		**Pn**	**10 53 42.0**	**-0.1**
HDA	**Harding Lake**	**7.10**	**111**	P	**Pn**	**10 53 42.9**	**+0.6**
	baz=304						
HDA				S	**Sn**	**10 55 01.6**	**-1.3**
	baz=304						
HDA				S	**Sn**	**10 55 01.6**	**-1.3**
	baz=304						
HDA	**Harding Lake**	**7.10**	**111**		**Pn**	**10 53 42.2**	**-0.1**
WAT1	**Susitna Watana**	**7.60**	**124**		**Pn**	**10 53 49.5**	**+0.4**
STLK	**Strandline Lak**	**7.72**	**139**		**Pn**	**10 53 51.5**	**+0.6**
SPWE	**Spurr West**	**7.75**	**142**		**Pn**	**10 53 51.3**	**+0.1**
SPBG	**Spurr Blockage**	**7.80**	**142**		**Pn**	**10 53 52.7**	**+0.7**
DHY	**Denali Highway**	**7.80**	**120**		**Pn**	**10 53 52.6**	**+0.6**
GHO	**Glory Hole Cre**	**8.29**	**130**		**Pn**	**10 53 59.4**	**+0.8**
DFR	**Drift River**	**8.32**	**145**		**Pn**	**10 53 57.6**	**-1.5**
PMR	**Palmer**	**8.37**	**131**		**Pn**	**10 54 00.6**	**+1.0**
RDWB	**Redoubt West**	**8.38**	**146**		**Pn**	**10 53 58.8**	**-1.2**
SML	**Sawmill**	**8.44**	**128**		**Pn**	**10 54 01.3**	**+0.7**
RED	**Redoubt Volcan**	**8.46**	**146**		**Pn**	**10 54 00.4**	**-0.6**
DOT	**Dot Lake**	**8.58**	**110**		**Pn**	**10 54 02.3**	**-0.3**
RC01	**Rabbit Creek A**	**8.62**	**135**		**Pn**	**10 54 04.9**	**+1.9**
KNK	**Knik Glacier**	**8.71**	**130**		**Pn**	**10 54 05.7**	**+1.4**
SCM	**Sheep Creek Mo**	**8.72**	**126**		**Pn**	**10 54 04.4**	**-0.1**
EGAK	**Eagle**	**9.04**	**99**		**Pn**	**10 54 08.5**	**-0.3**
MENT	**Mentasta**	**9.14**	**113**		**Pn**	**10 54 11.7**	**+1.5**
PWL	**Port Wells**	**9.19**	**132**		**Pn**	**10 54 10.9**	**0.0**
HOM	**Homer**	**9.39**	**145**	Pn	**Pn**	**10 54 15.0**	**+1.4**
BRLK	**Bradley Lake**	**9.47**	**142**	Pn	**Pn**	**10 54 15.6**	**+0.8**
BRSE	**Bradley Lake S**	**9.52**	**142**		**Pn**	**10 54 15.3**	**-0.2**
CNPM	**China Poot**	**9.60**	**144**		**Pn**	**10 54 17.4**	**+0.9**
BC03		**9.75**	**109**		**Pn**	**10 54 17.5**	**-1.0**
FID	**Port Fidalgo**	**9.82**	**128**	Pn	**Pn**	**10 54 21.0**	**+1.5**
DAWY	**Dawson**	**10.06**	**101**		**Pn**	**10 54 22.6**	**-0.2**
EPYK	**Eagle Plains**	**10.08**	**86**	P	**Pn**	**10 54 23.7**	**+0.7**
	baz=289						
EPYK	**Eagle Plains**	**10.08**	**86**		**Pn**	**10 54 23.6**	**+0.5**
HIN	**Hinchinbrook I**	**10.10**	**129**	Pn	**Pn**	**10 54 25.6**	**+2.2**
INK	**Inuvik**	**10.77**	**74**	Pn	**Pn**	**10 54 31.4**	**-1.1**
	0.9nm,0.3s,baz=296,slow=11,SNR=36						
INK				Sn	**Sn**	**10 56 25.4**	**-7.5**
	1.0nm,0.3s,baz=118,slow=27,SNR=7.6						
INK	**Inuvik**	**10.77**	**74**		**Pn**	**10 54 30.6**	**-1.9**
KDAK	**Kodiak Island**	**10.94**	**151**	Pn	**Pn**	**10 54 35.7**	**+0.9**
	0.3nm,0.3s,baz=22,slow=8.6,SNR=12						
KDAK				Sn	**Sn**	**10 56 40.1**	**+3.1**
	0.1nm,0.3s,baz=68,slow=16,SNR=2.0						

KDAK	**Kodiak Island**	**10.94**	**151**			**Pn**	**10 54 35.8**	**+1.0**
OHAK	**Old Harbor**	**11.35**	**154**	Pn		**Pn**	**10 54 41.8**	**+1.4**
CHGN	**Chignik**	**11.63**	**169**	Pn		**Pn**	**10 54 47.5**	**+3.2**
BILL	**Bilibino**	**11.74**	**286**			**Pn**	**10 54 44.2**	**-1.5**
HYT	**Haines Junctio**	**12.75**	**111**			**Pn**	**10 55 01.1**	**+1.4**
CNBA	**Chernabura Isl**	**13.04**	**173**	Pn		**Pn**	**10 55 03.3**	**-0.2**
A36M	**Sachs Harbour**	**13.29**	**55**	P		**Pn**	**10 55 05.0**	**-1.9**
	baz=270							
WHY	**Whitehorse**	**13.81**	**108**	Pn		**Pn**	**10 55 15.8**	**+1.8**
SIT	**Sitka**	**16.31**	**118**	P		**P**	**10 55 50.6**	**+0.4**
DLBC	**Dease Lake**	**17.13**	**107**	P		**Pn**	**10 55 57.6**	**-0.1**
	0.0nm,0.3s,baz=254,slow=6.10,SNR=3.4							
DLBC	**Dease Lake**	**17.13**	**107**	P		**Pn**	**10 55 57.3**	**-0.4**
SEY	**Seymchan**	**19.11**	**277**	P		**P**	**10 56 20.2**	**-0.9**
	0.4nm,0.3s,baz=195,slow=23,SNR=1.4							
YKA	**Yellowknife Ar**	**20.32**	**82**	P		**P**	**10 56 34.4**	**+0.2**
	2.0nm,0.6s,baz=302,slow=9.8,SNR=31							
RES	**Resolute Bay**	**21.54**	**42**	P		**P**	**10 56 48.2**	**+0.9**
	0.9nm,0.6s,baz=282,slow=13,SNR=4.3							
RES				S		**S**	**11 00 37.4**	**-8.2**
	1.4nm,0.8s,baz=96,slow=20,SNR=1.5							
RES	**Resolute Bay**	**21.54**	**42**	P		**P**	**10 56 48.8**	**+1.5**
TIXI	**Tiksi**	**22.97**	**311**	P		**P**	**10 57 02.1**	**-0.4**
	0.6nm,0.3s,baz=78,slow=9.9,SNR=5.6							
TIXI	**Tiksi**	**22.97**	**311**	P		**P**	**10 57 01.8**	**-0.7**
PETK	**Petropavlovsk-**	**23.96**	**252**	P		**P**	**10 57 12.4**	**-0.1**
	1.9nm,0.8s,baz=77,slow=14,SNR=3.7							
SPA0	**Spitsbergen Ar**	**34.29**	**0**	P		**P**	**10 58 45.3**	**+1.2**
YNE	**Yellowstone No**	**35.25**	**103**	P		**P**	**10 58 53.9**	**+0.9**
SNOW	**Snow King Moun**	**36.30**	**105**	P		**P**	**10 59 03.6**	**+1.6**
SNOW				IAmb		IAmb	10 59 04.9	
	comp=Z,2.5nm,0.8s							
KLR	**Kul'dur**	**36.84**	**274**	P		**P**	**10 59 05.3**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=6.3,slow=9.2,SNR=2.4							
PDAR	**Pinedale Array**	**37.34**	**105**	P		**P**	**10 59 12.3**	**+1.4**
	comp=Z,1.2nm,0.5s,baz=340,slow=7.2,SNR=14							
NVAR	**Mina Array Bea**	**38.07**	**118**	P		**P**	**10 59 18.6**	**+1.5**
	comp=Z,1.7nm,0.8s,baz=320,slow=6.3,SNR=8.8							
MSU	**Marysvale**	**40.12**	**111**	P		**P**	**10 59 36.0**	**+1.7**
Q16A	**Castle Valley**	**40.12**	**109**	P		**P**	**10 59 35.8**	**+1.5**
USRK	**Ussuriysk Ar.**	**40.94**	**269**	LR		LR	11 17 36.8	
	comp=Z,29nm,18.4s,baz=63,slow=38							
PV22	**Blue Mesa, Par**	**41.33**	**107**	P		**P**	**10 59 45.0**	**+0.8**
PV22				IAmb		IAmb	10 59 46.3	
	comp=Z,5.4nm,0.9s							
ISCO	**Idaho Springs**	**41.38**	**103**	P		**P**	**10 59 45.4**	**+0.6**
PV12	**Saucer Basin,**	**41.51**	**107**	P		**P**	**10 59 46.3**	**+0.5**
PV12				IAmb		IAmb	10 59 48.0	
	comp=Z,4.0nm,0.9s							
PV15	**Paradox Valley**	**41.61**	**107**	P		**P**	**10 59 46.9**	**+0.4**
PV15				IAmb		IAmb	10 59 48.6	
	comp=Z,6.1nm,0.9s							
PV13	**Radium Mtn., P**	**41.65**	**107**	P		**P**	**10 59 47.8**	**+0.9**
PV13				IAmb		IAmb	10 59 49.2	
	comp=Z,5.6nm,1.1s							
PV01	**Paradox Valley**	**41.76**	**107**	P		**P**	**10 59 48.7**	**+0.9**
PV01				IAmb		IAmb	10 59 49.7	
	comp=Z,6.1nm,0.9s							
ARCES	**ARCESS Array B**	**42.88**	**356**	PcP		**PcP**	**11 01 46.6**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=345,slow=4.1,SNR=5.7							
WUAZ	**Wupatki**	**43.09**	**112**	P		**P**	**10 59 59.3**	**+0.8**
WUAZ				IAmb		IAmb	11 00 00.8	
	comp=Z,5.7nm,0.9s							
MJAR	**Matsushiro Ar**	**45.23**	**258**	P		**P**	**11 00 15.8**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=2.2,slow=6.3,SNR=5.3							
ANMO	**Albuquerque**	**45.37**	**107**	P		**P**	**11 00 18.2**	**+1.4**
ANMO				IAmb		IAmb	11 00 19.5	
	comp=Z,3.1nm,1.1s							
KSRS	**Korea Array**	**48.31**	**268**	P		**P**	**11 00 40.4**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=25,slow=6.9,SNR=5.3							
MNTX	**Cornudas Mount**	**48.67**	**108**	P		**P**	**11 00 42.9**	**+0.4**
MNTX				IAmb		IAmb	11 00 44.2	
	comp=Z,1.7nm,0.8s							
ZAA0	**Zalesovo Array**	**48.81**	**314**	P		**P**	**11 00 42.5**	**-0.7**
ZALV	**Zalesovo Beam**	**48.81**	**314**	P		**P**	**11 00 42.5**	**-0.7**
	comp=Z,6.6nm,0.6s,baz=33,slow=7.2,SNR=12							
KLMR	**Klimovskoe**	**50.71**	**346**	*eP*		**P**	**11 00 57.0**	**-0.5**
KLMR					AMP		11 01 05.7	
	comp=Z,5.0nm,1.2s							
FINES	**FINESS Array B**	**50.96**	**355**	P		**P**	**11 00 59.5**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=10,slow=12,SNR=7.6							
TX31	**Lajitas Ar. Si**	**51.44**	**107**	P		**P**	**11 01 03.4**	**-0.1**
TX32	**Lajitas Array**	**51.44**	**107**	P		**P**	**11 01 04.2**	**+0.7**
TXAR	**Lajitas Array**	**51.44**	**107**	P		**P**	**11 01 04.6**	**+1.1**
	comp=Z,3.3nm,0.8s,baz=331,slow=6.0,SNR=41							
HHC	**Hu-ho-hao-te**	**51.52**	**285**	*eP*		**P**	**11 01 06.6**	**+2.6**
HHC					pmax	pmax		
	comp=Z,6.0nm,0.6s							
HHC					pmax	pmax		
	comp=Z,39nm,5.6s							
JCT	**Junction City**	**51.82**	**103**	P		**P**	**11 01 06.0**	**-0.3**
OXF	**Oxford**	**52.15**	**91**	P		**P**	**11 01 08.5**	**-0.1**
ARU	**Arti**	**52.49**	**333**	P		**P**	**11 01 10.9**	**0.0**
	comp=Z,0.8nm,0.4s,baz=66,slow=2.6,SNR=4.2							
ARU	**Arti**	**52.49**	**333**	P		**P**	**11 01 09.9**	**-0.9**
ARU				IAmb		IAmb	11 01 11.5	
	comp=Z,3.5nm,0.7s							
HPIG		**52.90**	**111**	P		**P**	**11 01 14.9**	**+0.4**
HPIG				IAmb		IAmb	11 01 16.3	
	comp=Z,5.8nm,1.2s							
BVAR	**Borovoye Array**	**53.30**	**323**	P		**P**	**11 01 16.7**	**-0.2**
	comp=Z,2.3nm,0.6s,baz=37,slow=7.6,SNR=10							
KURK	**Kurchatov**	**53.39**	**316**	P		**P**	**11 01 17.3**	**-0.4**
KURK				IAmb		IAmb	11 01 19.2	
	comp=Z,3.9nm,0.8s							
KURBB	**Kurchatov Arra**	**53.50**	**316**	P		**P**	**11 01 18.2**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=27,slow=7.1,SNR=15							
MK31	**Makanchi Array**	**55.95**	**311**	P		**P**	**11 01 34.2**	**-2.1**
MKAR	**Makanchi Array**	**55.95**	**311**	P		**P**	**11 01 35.5**	**-0.9**
	comp=Z,1.6nm,0.7s,baz=42,slow=6.7,SNR=15							
EKA	**Eskdalemuir Ar**	**56.27**	**14**	P		**P**	**11 01 38.8**	**+0.4**
	comp=Z,2.1nm,0.6s,baz=357,slow=5.8,SNR=9.2							
WMQ	**Urumqi**	**57.04**	**306**	*eP*		**P**	**11 01 43.7**	**-0.5**
WMQ					pmax	pmax		
	comp=Z,14nm,0.7s							
WMQ					pmax	pmax		
	comp=Z,42nm,4.9s							
WMQ					LR	LR		
	comp=N,2μm,29.0s							
WMQ					LR	LR		
	comp=E,2μm,29.0s							
WMQ					LR	LR		
	comp=Z,970nm,28.9s							
AKTO	**Aktyubinsk**	**58.31**	**331**	P		**P**	**11 01 53.0**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=21,slow=7.2,SNR=11							
LZH	**Lanzhou**	**58.54**	**289**	*eP*		**P**	**11 01 53.5**	**-1.4**
LZH					pP	sP	11 02 00.6	+1.2
LZH					sP	pP	11 02 03.6	+5.5
LZH					PP	**PP**	**11 04 08.2**	**+4.2**
LZH					pmax	pmax		
	comp=Z,15nm,1.0s							
LZH					pmax	pmax		
	comp=Z,71nm,4.3s							
AKASG	**Malin Array Be**	**61.56**	**352**	P		**P**	**11 02 15.1**	**0.0**
	comp=Z,0.7nm,0.4s,baz=3.7,slow=6.4,SNR=7.9							
AAK	**Ala-Archa**	**61.94**	**316**	P		**P**	**11 02 18.6**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=75,slow=3.6,SNR=4.3							
AAK	**Ala-Archa**	**61.94**	**316**	P		**P**	**11 02 17.6**	**-0.5**
AAK				IAmb		IAmb	11 02 19.4	
	comp=Z,2.2nm,0.8s							
GERES	**GERESS Array B**	**63.70**	**3**	P		**P**	**11 02 30.7**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=2.9,slow=5.3,SNR=7.1							
DAVOX	**Davos/Dischmat**	**65.65**	**6**	P		**P**	**11 02 44.0**	**+1.5**
	comp=Z,1.6nm,0.6s,baz=331,slow=13,SNR=4.5							
CHGR	**Chuyangaron**	**67.06**	**318**	P		**P**	**11 02 51.2**	**-0.4**
ESDC	**Sonseca Array**	**71.67**	**17**	P		**P**	**11 03 20.4**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=352,slow=6.1,SNR=7.0							
CMAR	**Chiang Mai Ar**	**76.33**	**285**	P		**P**	**11 03 47.5**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=6.7,slow=7.0,SNR=4.8							
PSI	**Prapat**	**90.72**	**279**	LR		LR	11 49 28.2	
	comp=Z,64nm,19.4s,baz=94,slow=38							

*IDC **11** 11:11:25.9±3.0, 7°.78N×94°.30E, h69km±28km, mb3.7/20, mb1 3.8/22, mb1mx3.6/49, mbtmp4.0/22, MS3.4/8, Ms1 3.4/8, ms1mx3.1/43, Error ellipse: s-maj=26.3km s-min=12.4km az=65.0*

*NEIC **11** 11:11:26.0±1.9, 7°.78N±0°.07×94°.3E±0°.1, h72km±7km, mb4.4/30, Error ellipse: s-maj=18.0km s-min=5.2km az=57.0*

*DJA **11** 11:11:28.9±0.8, 8°N±4°×94°.9E±1°.1, h126km±12km, M4.2/12, mb4.3/12, mB5.0/5, MLv4.2/7, Mw(mB)4.3/5*

ISC 11 11:11:28.6±0.4, 7.83N±0°.06×94°.45E±0°.07, h100km, n93, σ1§54/88, mb4.2/31, 3C-1D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**3.58**	**136**		**Pn**	**11 12 18.9**	**-3.3**
LHMI					**Sn**	**11 13 04.3**	**+0.7**
MLSI	**Meulaboh, Aceh**	**4.04**	**151**	P	**Pn**	**11 12 26.5**	**-1.9**
PBA	**Port Blair**	**4.16**	**336**	*i* x	Pn	11 12 28.8	-1.1
PBA	**Port Blair**	**4.16**	**336**	Pn	Pn	11 12 27.6	-2.3
TPTI		**5.29**	**149**	P	**Pn**	**11 12 42.6**	**-2.7**
	0.1nm306nm34nm,0.8s						
KCSI	**Kotacane, Aceh**	**5.41**	**142**	P	**Pn**	**11 12 46.1**	**-0.8**
	0.3nm770nm85nm,0.8s						
KULM	**Kulim**	**6.66**	**112**		**Pn**	**11 13 00.3**	**-3.6**
PSI	**Prapat**	**6.70**	**138**	P	**Pn**	**11 13 05.4**	**+0.9**
	1.4nm,0.3s,baz=360,slow=5.9,SNR=14						
PSI				S	**Sn**	**11 14 19.2**	**-0.2**
	0.4nm,0.3s,baz=0.6,slow=20,SNR=1.6						
RPSI	**Rantau Prapat**	**6.77**	**139**		**Pn**	**11 13 06.4**	**+0.9**
RPSI	**Rantau Prapat**	**6.77**	**139**		**Pn**	**11 13 05.4**	**-0.1**
RPSI					**Sn**	**11 14 19.2**	**-2.0**
IPM	**Ipoh**	**7.34**	**117**		**Pn**	**11 13 08.9**	**-4.3**
MNSI	**Mandailing Nat**	**8.66**	**144**	P	**Pn**	**11 13 28.5**	**-2.6**
	24nm,0.5s						
PBKT	**Sadao Pong**	**10.78**	**36**		**Pn**	**11 13 59.0**	**-0.9**
MYKOM	**Kota Tinggi**	**11.12**	**122**	Pn	**Pn**	**11 14 03.2**	**-1.4**
CM31	**Chiang Mai Arr**	**11.44**	**22**		**Pn**	**11 14 09.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**11.44**	**22**	P	**Pn**	**11 14 07.9**	**-0.9**
	0.6nm,0.3s,baz=210,slow=14,SNR=30						
CMAR				LR	LR	11 18 37.4	
	comp=Z,167nm,18.5s,baz=216,slow=37						
CHTO	**Chiang Mai**	**11.76**	**21**		**Pn**	**11 14 12.4**	**-0.8**
MDSI	**Maura Dua**	**15.62**	**141**	P	**Pn**	**11 15 00.8**	**-2.4**
	1μm12nm,1.1s						
SLVN	**Son La**	**16.24**	**33**	P	**P**	**11 15 15.7**	**+3.5**
KSM	**Kuching**	**17.02**	**111**	P	**P**	**11 15 24.0**	**+3.1**
SHL	**Shillong**	**17.81**	**352**	P	**Pn**	**11 15 28.0**	**-1.7**
SBUM	**Sibu**	**18.49**	**106**	P	**Pn**	**11 15 37.2**	**-1.1**
KMI	**Kunming**	**18.93**	**24**	P	**Pn**	**11 15 45.2**	**+1.4**
KMI				IAmb	IAmb	11 15 50.0	
	comp=Z,17nm,0.6s						
LEM	**Lembang**	**19.61**	**138**	LR	LR	11 23 56.6	
	comp=Z,149nm,21.5s,baz=276,slow=38						
ODAN	**Odare**	**20.08**	**341**	*eP*	**P**	**11 15 52.9**	**-1.5**
RAMN	**Ramite**	**20.42**	**340**	*eP*	**P**	**11 15 55.8**	**-2.4**
	comp=Z,42nm,0.6s						
TAPN	**Taplejung**	**20.44**	**343**	*eP*	**P**	**11 15 57.8**	**-0.6**
JIRN	**Jiri**	**21.22**	**339**	*eP*	**P**	**11 16 05.8**	**-1.0**
	comp=Z,60nm,0.9s						
PKI	**Pulchoki**	**21.42**	**338**	*eP*	**P**	**11 16 07.4**	**-1.6**
	comp=Z,36nm,0.9s						
PKIN	**Phulchoki**	**21.43**	**338**	*eP*	**P**	**11 16 07.5**	**-1.5**
GUN	**Gumba**	**21.55**	**339**	*eP*	**P**	**11 16 09.3

comp=Z,20nm,18.7s,baz=142,slow=37
ARCES ARCESS Array B 75.41 340 P **P** **11 23 02.2 +1.1**
comp=Z,1.0nm,0.6s,baz=91,slow=6.6,SNR=6.3
BOSA Boshof 75.82 238 P **P** **11 23 05.8 +1.4**
comp=Z,2.1nm,0.9s,baz=97,slow=16,SNR=1.4
BOSA Boshof 75.82 238 P **P** **11 23 06.3 +1.9**
GERES GERESS Array B 78.06 318 P **P** **11 23 17.7 +1.1**
comp=Z,1.0nm,0.8s,baz=76,slow=5.6,SNR=7.1
NC405 NORSAR Array S 79.68 331 P **P** **11 23 26.2 +1.1**
NC602 NORSAR Array S 79.75 330 P **P** **11 23 26.5 +1.1**
NB2 NORSAR Subarra 79.92 331 P **P** **11 23 27.0 +0.6**
comp=Z,1.3nm,0.7s,baz=95,slow=5.1
NOA NORSAR Array B 79.92 331 P **P** **11 23 25.3 -1.1**
comp=Z,1.0nm,0.7s,baz=93,slow=5.6,SNR=5.5
NOA LR LR 12 02 38.1
comp=Z,13nm,18.5s,baz=180,slow=38
TORD Torodi Ar. Bea 90.90 283 P **P** **11 24 22.8 +0.9**
comp=Z,0.4nm,0.8s,baz=80,slow=3.8,SNR=2.8
PDAR Pinedale Array 125.10 21 PKP **PKiKP** **11 30 20.7 +2.3**
comp=Z,0.2nm,0.4s,baz=320,slow=4.0,SNR=2.1
PLCA Paso Flores 144.61 200 PKP **PKPdf** **11 30 52.4 -1.6**
comp=Z,1.8nm,0.9s,baz=256,slow=4.2,SNR=2.6
PLCA Paso Flores 144.61 200 **PKiKP** **11 30 54.7 -3.0**
CPUP Villa Florida 147.47 232 PKPbc **PKPab** **11 31 03.3 -0.7**
comp=Z,0.5nm,0.4s,baz=154,slow=3.6,SNR=1.0

DJA 11 11:38:14.8±0.3, 9°S±5.7°×11°8E±°, h10km, M3.6/8, MLv3.6/8, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.40**	**245**	P	Pg	11 38 23.1	+0.5
PLAI				S	Sg	11 38 28.7	+0.8
WBSI	**Waikabubak, Su**	**1.57**	**128**	P	Pn	11 38 41.4	-1.5
BASI	**Baing, Sumba**	**2.86**	**123**	P	Pn	11 39 01.0	+0.5
SRBI	**Singaraja**	**2.95**	**281**	P	Pn	11 39 01.6	-0.2
EDFI	**Ende, Flores**	**3.51**	**92**	P	Pn	11 39 10.7	+1.1
BKSI	**Bulukumba**	**3.86**	**31**	P	Pn	11 39 13.9	-0.3
PCI	**Palu**	**7.89**	**12**	P	Pn	11 40 05.9	-3.8
CBJI	**Citeko**	**11.41**	**280**	P	Pn	11 41 00.4	+2.4

*IDC **11** 11:51:40.9±1.6, 18°.83N×64°.22W, h0km, mb3.5/6, mb1 3.8/6, mb1mx3.5/43, mbtmp3.5/6, MS2.9/1, Ms1 2.9/1, ms1mx2.4/25, Error ellipse: s-maj=54.0km s-min=28.5km az=9.0*
*TRN **11** 11:51:46.2, 18°.81N×64°.44W, h23km, M3.7(RSPR)*
*NEIC **11** 11:51:47.1±1.8, 18°.92N±0°.09×64°.34W±0°.04, h40km±10km, Error ellipse: s-maj=13.1km s-min=6.0km az=187.0*
*OSPL **11** 11:51:47.0±0.8, 19°.11N×64°.47W, h0km±999km, ML3.4*
*RSPR **11** 11:51:48.0, 18°.87N×64°.31W, h22km±10km, MD3.7/15*
ISC 11 11:51:45.0±0.7, 18°.96N±0°.07×64°.33W±0°.04, h21km±5km, n81, σ0°89/107, mb3.7/8, 20C-8D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBVI	**Tortola**	**0.61**	**207**	↑*iP*	**Pb**	**11 51 57.5**	**+0.5**
TBVI				*eS*	**Sb**	11 52 05.2	-0.1
TBVI	**Tortola**	**0.61**	**207**	↑*iP*	**Pb**	**11 51 57.5**	**+0.5**
TBVI	**Tortola**	**0.61**	**207**		**Pb**	**11 51 57.5**	**+0.5**
TBVI					**Sb**	11 52 05.2	-0.1
STVI	**Saint Thomas**	**0.85**	**224**	↑*eP*	**Pb**	**11 52 01.4**	**+0.3**
STVI				*eS*	**Sb**	11 52 11.6	-0.5
STVI	**Saint Thomas**	**0.85**	**224**	↑*eP*	**Pb**	**11 52 01.4**	**+0.3**
STVI				*eS*	**Sb**	11 52 11.8	-0.2
STVI	**Saint Thomas**	**0.85**	**224**	↑*iP*	**Pb**	**11 52 01.4**	**+0.3**
STVI	**Saint Thomas**	**0.85**	**224**		**Pb**	**11 52 01.3**	**+0.3**
STVI				Sn	**Sb**	11 52 11.7	-0.3
CDVI	**St. Croix**	**1.27**	**199**		**Pn**	**11 52 07.9**	**+0.3**
CDVI				Sn	**Sn**	11 52 23.9	-0.2
MTP	**Monte Pirata**	**1.45**	**234**	↑*eP*	**Pn**	**11 52 09.9**	**-0.1**
MTP				*eS*	**Sn**	11 52 27.1	-1.3
MTP	**Monte Pirata**	**1.45**	**234**	↑*eP*	**Pn**	**11 52 09.9**	**-0.1**
MTP	**Monte Pirata**	**1.45**	**234**		**Pn**	**11 52 09.9**	**-0.1**
MTP				Sn	**Sn**	11 52 27.3	-1.0
SMRT	**St. Maarten**	**1.50**	**127**		**Pn**	**11 52 10.6**	**-0.1**
SMRT				Sn	**Sn**	11 52 29.3	-0.3
CBYP	**Canovanas**	**1.60**	**245**	↑*eP*	**Pn**	**11 52 12.0**	**-0.2**
CBYP	**Canovanas**	**1.60**	**245**	↑*eP*	**Pn**	**11 52 12.0**	**-0.2**
CBYP	**Canovanas**	**1.60**	**245**	↑*eP*	**Pn**	**11 52 12.3**	**0.0**
CBYP	**Canovanas**	**1.60**	**245**		**Pn**	**11 52 11.9**	**-0.3**
HUMP	**Col San Antoni**	**1.66**	**241**	↑*eP*	**Pn**	**11 52 12.9**	**0.0**
HUMP				*eS*	**Sn**	11 52 32.5	-1.0
HUMP	**Col San Antoni**	**1.66**	**241**	↑*eP*	**Pn**	**11 52 12.9**	**0.0**
HUMP				*eS*	**Sn**	11 52 32.6	-1.0
HUMP	**Col San Antoni**	**1.66**	**241**	↑*eP*	**Pn**	**11 52 12.9**	**0.0**
HUMP	**Col San Antoni**	**1.66**	**241**		**Pn**	**11 52 12.8**	**0.0**
HUMP				Sn	**Sn**	11 52 33.2	-0.4
SABA	**Saba**	**1.69**	**142**		**Pn**	**11 52 13.8**	**+0.5**
GCPR	**Guaynabo City**	**1.79**	**249**	↑*eP*	**Pn**	**11 52 14.6**	**-0.1**
GCPR	**Guaynabo City**	**1.79**	**249**	*eS*	**Sn**	**11 52 36.0**	**-0.7**
GCPR	**Guaynabo City**	**1.79**	**249**		**Pn**	**11 52 14.5**	**-0.1**
GCPR				Sn	**Sn**	11 52 35.8	-1.0
PDPR	**Patillas Dam,**	**1.86**	**240**	||*eP*	**Pn**	**11 52 15.8**	**+0.2**
PDPR	**Patillas Dam,**	**1.86**	**240**	*eS*	**Sn**	**11 52 37.9**	**-0.8**
PDPR	**Patillas Dam,**	**1.86**	**240**		**Pn**	**11 52 15.9**	**+0.2**
PDPR					**Sn**	11 52 38.1	-0.5
SJG	**San Juan**	**1.93**	**244**	*eP*	**Pn**	**11 52 17.8**	**+1.2**
SJG	**San Juan**	**1.93**	**244**		**Pn**	**11 52 16.6**	**+0.1**
IGPR	**InterUniversit**	**1.96**	**240**	↑*eP*	**Pn**	**11 52 17.4**	**+0.4**
IGPR	**InterUniversit**	**1.96**	**240**	↑*eP*	**Pn**	**11 52 17.5**	**+0.4**
IGPR	**InterUniversit**	**1.96**	**240**	*eS*	**Sn**	**11 52 39.8**	**-1.1**
IGPR	**InterUniversit**	**1.96**	**240**		**Pn**	**11 52 17.4**	**+0.4**
IGPR				Sn	**Sn**	**11 52 40.5**	**-0.5**
SKI	**Saint Kitts**	**2.22**	**137**		**Pn**	**11 52 21.4**	**+0.8**
ICMP	**Isla Caja de M**	**2.35**	**243**		**Pn**	**11 52 23.7**	**+1.3**
ICMP				Sn	**Sb**	11 52 54.0	-1.1
OBIP	**Obispado Ponce**	**2.35**	**247**	↑*eP*	**Pn**	**11 52 22.9**	**+0.5**
OBIP				*eS*	**Sn**	11 52 50.2	-0.4
OBIP	**Obispado Ponce**	**2.35**	**247**	↑*eP*	**Pn**	**11 52 22.9**	**+0.5**
OBIP	**Obispado Ponce**	**2.35**	**247**		**Pn**	**11 52 22.9**	**+0.5**
OBIP				Sn	**Sn**	11 52 50.5	-0.1
AOPR	**Arecibo Observ**	**2.38**	**255**	↑*eP*	**Pn**	**11 52 23.8**	**+0.9**
AOPR				*eS*	**Sn**	11 52 51.3	-0.1
AOPR	**Arecibo Observ**	**2.38**	**255**	↑*eP*	**Pn**	**11 52 23.8**	**+0.9**
AOPR	**Arecibo Observ**	**2.38**	**255**		**Pn**	**11 52 23.7**	**+0.8**
AGPR	**Aguadilla, PR**	**2.68**	**260**	||*eP*	**Pn**	**11 52 27.8**	**+0.8**
AGPR				*eS*	**Sn**	11 52 59.3	+0.4
AGPR	**Aguadilla, PR**	**2.68**	**260**	||*eP*	**Pn**	**11 52 27.8**	**+0.8**
AGPR	**Aguadilla, PR**	**2.68**	**260**		**Pn**	**11 52 27.5**	**+0.5**
AGPR	**Aguadilla, PR**	**2.68**	**260**	*i* P	**Pn**	**11 52 27.8**	**+0.8**
AGPR				*eS*	**Sn**	11 52 58.4	-0.5
AGPR				IAML		11 53 13.9	
	comp=Z,170nm,0.3s						
LSP	**Las Mesas**	**2.73**	**254**	||*eP*	**Pn**	**11 52 28.6**	**+0.9**
LSP	**Las Mesas**	**2.73**	**254**	||*eP*	**Pn**	**11 52 28.6**	**+0.9**
LSP	**Las Mesas**	**2.73**	**254**		**Pn**	**11 52 28.6**	**+0.9**
ANWB	**Willy Bob**	**2.74**	**118**	Pn	**Pn**	**11 52 27.1**	**-0.7**
MLPR	**Magueyes Islan**	**2.76**	**249**	||*eP*	**Pn**	**11 52 29.2**	**+1.2**
MLPR	**Magueyes Islan**	**2.76**	**249**	*eS*	**Sn**	**11 53 00.9**	**+0.1**
MLPR	**Magueyes Islan**	**2.76**	**249**		**Pn**	**11 52 28.8**	**+0.7**
MLPR				Sn	**Sn**	**11 53 02.4**	**+1.6**
MPR	**Mayaguez**	**2.77**	**255**		**Pn**	**11 52 29.3**	**+1.1**
MPR	**Mayaguez**	**2.77**	**255**	*i* P	**Pn**	**11 52 29.6**	**+1.4**
MPR				*eS*	**Sn**	**11 53 01.3**	**+0.3**
MPR				IAML		11 53 14.9	
	comp=Z,130nm,0.6s						
CRPR	**Cabo Rojo, PR**	**2.81**	**251**	||*eP*	**Pn**	**11 52 29.7**	**+1.0**
CRPR				*eS*	**Sn**	11 53 01.8	-0.1
CRPR	**Cabo Rojo, PR**	**2.81**	**251**	||*eP*	**Pn**	**11 52 29.7**	**+1.0**
CRPR	**Cabo Rojo, PR**	**2.81**	**251**		**Pn**	**11 52 29.6**	**+0.9**
CRPR				Sn	**Sn**	**11 53 03.9**	**+2.0**
IDE	**Isla Desecheo**	**3.04**	**260**	||*eP*	**Pn**	**11 52 33.0**	**+1.2**
IDE				*eS*	**Sn**	11 53 08.1	+0.5
IDE	**Isla Desecheo**	**3.04**	**260**	||*eP*	**Pn**	**11 52 33.0**	**+1.2**
IDE	**Isla Desecheo**	**3.04**	**260**		**Pn**	**11 52 33.0**	**+1.2**
IDE				Sn	**Sn**	**11 53 08.1**	**+0.5**
PCDR	**Punta Cana, DR**	**3.87**	**264**	*i* P	**Pn**	**11 52 44.8**	**+1.5**
PCDR				IAML		11 53 15.7	
	comp=Z,87nm,1.0s						
DR12	**Loma Pena Alta**	**4.79**	**269**		**Pn**	**11 52 56.1**	**+0.1**
SDDR	**Presa de Saban**	**6.59**	**271**		**Pn**	**11 53 22.8**	**+2.0**
GRTK	**Grand Turk**	**6.87**	**293**	Pn	**Pn**	**11 53 24.4**	**-0.2**
GRGR	**Grenville**	**7.26**	**159**	Pn	**Pn**	**11 53 31.0**	**+1.0**
TOSP	**Speyside**	**8.45**	**154**	Pn	**Pn**	**11 53 49.2**	**+2.9**
RUSC	**La Rusia**	**15.54**	**214**	*eP*	**Pn**	**11 55 24.6**	**+1.1**
PTBC	**PUERTO BERRIO,**	**15.80**	**220**	*eP*	**P**	**11 55 28.9**	**-1.3**
CHIC	**Chingaza**	**16.95**	**214**	*eP*	**P**	**11 55 43.5**	**+0.2**
CBOC	**Ciudad Bolivar**	**17.30**	**223**	*eP*	**Pn**	**11 55 44.2**	**-1.4**
RREF	**El Recreo**	**17.63**	**219**	*eP*	**P**	**11 55 50.8**	**-0.3**
APG	**El Apazote**	**25.29**	**265**	LR	LR	12 06 02.4	
	comp=Z,31nm,21.4s,baz=70,slow=34						
TXAR	**Lajitas Array**	**37.20**	**294**	P	**P**	**11 58 56.6**	**+1.5**
	comp=Z,0.5nm,0.6s,baz=112,slow=11,SNR=8.7						
TX31	**Lajitas Ar. Si**	**37.20**	**294**	P	**P**	**11 58 57.1**	**+1.9**
TX31				IAmb	IAmb	11 58 58.8	
	comp=Z,3.4nm,1.1s						
TX32	**Lajitas Array**	**37.20**	**294**	P	**P**	**11 58 56.9**	**+1.8**
TX32				IAmb	IAmb	11 58 58.8	
	comp=Z,1.1nm,1.0s						
PDAR	**Pinedale Array**	**44.82**	**312**	P	**P**	**11 59 58.8**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=115,slow=10,0,SNR=7.3						
YKA	**Yellowknife Ar**	**55.47**	**334**	P	**P**	**12 01 17.2**	**-0.8**
	comp=Z,0.2nm,0.7s,baz=113,slow=8.4,SNR=2.9						
TORD	**Torodi Ar. Bea**	**63.41**	**84**	P	**P**	**12 02 12.7**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=293,slow=5.1,SNR=2.6						
ILAR	**Eielson Array**	**69.86**	**333**	P	**P**	**12 02 52.9**	**-1.1**
	comp=Z,0.2nm,0.7s,baz=88,slow=3.1,SNR=2.1						
FINES	**FINESS Array B**	**73.74**	**30**	P	**P**	**12 03 17.7**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=248,slow=5.7,SNR=3.6						
ASAR	**Alice Springs**	**162.38**	**251**	PKPab	**PKPab**	**12 12 31.8**	**-1.8**
	comp=Z,0.3nm,0.7s,baz=107,slow=4.5,SNR=5.2						

*AEIC **11** 11:53:01±1.2, 68°.05N±0°.07×156°.27W±0°.09, h10km±6km, ML2.9, Error ellipse: s-maj=10.6km s-min=4.9km az=187.0*
*NEIC **11** 11:53:03.3±1.3, 68°.05N±0°.07×156°.30W±0°.05, h18km±7km, Error ellipse: s-maj=10.7km s-min=1.7km az=192.0*
*IDC **11** 11:53:11.9±8.5, 68°.26N×153°.70W, h0km, mb3.1/1, mb1 3.6/4, mb1mx3.2/47, mbtmp3.2/4, ML3.3/3, Error ellipse: s-maj=118.7km s-min=54.4km az=111.0*
ISC 11 11:53:02.7±1.1, 68°.10N±0°.06×156°.21W±0°.06, h10km, n33, σ1°63/36, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IM03		**2.33**	**154**		**Pn**	**11 53 40.1**	**-0.9**
COLD	**Coldfoot**	**2.45**	**108**		**Pn**	**11 53 42.6**	**-0.2**
COLD	**Coldfoot**	**2.45**	**108**		**Sn**	**11 54 14.3**	**+1.5**
PS05	**TAPS Pump Stn5**	**2.50**	**119**		**Pn**	**11 53 42.6**	**-0.8**
RDOG	**Red Dog Mine**	**2.52**	**272**		**Pn**	**11 53 43.0**	**-0.6**
RDOG					**Sn**	11 54 13.5	-0.8
TOLK	**Toolik Lake Re**	**2.52**	**74**		**Pn**	**11 53 43.7**	**0.0**
PS01	**TAPS Pump Stn**	**3.48**	**48**		**Pn**	**11 53 57.5**	**+0.7**
MLY	**Manley**	**3.77**	**142**		**Pn**	**11 54 00.0**	**-0.9**
BM03	**Burnt Mountain**	**4.46**	**93**		**Pn**	**11 54 10.3**	**-0.1**
MDM	**Murphy Dome**	**4.48**	**131**	Pn	**Pn**	**11 54 09.6**	**-1.1**
FYU	**Fort Yukon**	**4.51**	**105**		**Pn**	**11 54 10.6**	**-0.4**
BPAW	**Bear Paw Mtn.**	**4.54**	**150**		**Pn**	**11 54 10.7**	**-0.7**
NEA	**Nenana**	**4.55**	**138**		**Pn**	**11 54 10.5**	**-1.1**
TCOL	**CIGO, UAF Yank**	**4.65**	**130**		**Sn**	**11 55 07.7**	**+0.9**
CCB	**Clear Creek Bu**	**4.84**	**132**		**Pn**	**11 54 14.5**	**-1.0**
WRH	**Wood River Hil**	**4.89**	**134**		**Pn**	**11 54 15.8**	**-0.5**
PRP	**Porcupine Dome**	**4.95**	**116**		**Pn**	**11 54 17.2**	**0.0**
IL31		**5.01**	**127**		**Pn**	**11 54 16.4**	**-1.4**
ILAR	**Eielson Array**	**5.01**	**127**	Pn	**Pn**	**11 54 17.6**	**-0.2**
	0.4nm,0.3s,baz=310,slow=13,SNR=23						
ILAR				Sn	**Sn**	**11 55 14.0**	**-1.7**
	1.2nm,0.3s,baz=163,slow=4.2,SNR=8.6						
KTH	**Kantishna Hill**	**5.05**	**152**		**Pn**	**11 54 17.7**	**-0.8**
TTA	**Tatalina**	**5.19**	**179**		**Pn**	**11 54 18.7**	**-1.7**
TT01	**Tatalina**	**5.21**	**179**		**Pn**	**11 54 19.4**	**-1.3**
HDA	**Harding Lake**	**5.26**	**130**		**Pn**	**11 54 20.8**	**-0.5**
TRF	**Thorofare Moun**	**5.26**	**150**		**Pn**	**11 54 21.1**	**-0.4**
PPLA	**Purkeypile**	**5.48**	**160**		**Pn**	**11 54 23.7**	**-0.8**
RND	**Reindeer**	**5.60**	**144**		**Pn**	**11 54 25.2**	**-0.8**
WAT2	**Susitna Watana**	**6.04**	**145**		**Pn**	**11 54 32.6**	**+0.5**
DHY	**Denali Highway**	**6.22**	**140**		**Pn**	**11 54 34.7**	**0.0**
BC03		**7.81**	**123**		**Pn**	**11 54 55.4**	**-0.8**
INK	**Inuvik**	**8.43**	**78**	Pn	**Pn**	**11 55 01.8**	**-2.8**
	0.7nm,0.3s,baz=287,slow=12,SNR=42						
INK				Sn	**Sn**	**11 56 34.4**	**-5.2**
	0.2nm,0.3s,baz=202,slow=12,SNR=2.7						
INK	**Inuvik**	**8.43**	**78**		**Pn**	**11 55 03.6**	**-1.0**
YKA	**Yellowknife Ar**	**17.96**	**88**	P	**Pn**	**11 57 09.9**	**-2.2**
	0.1nm,0.3s,baz=306,slow=11,SNR=12						
TXAR	**Lajitas Array**	**49.38**	**114**	P	**P**	**12 01 56.9**	**+4.7**
	0.2nm,0.7s,baz=338,slow=7.0,SNR=3.5						

*IDC **11** 12:07:49.4±1.8, 68°.14N×162°.45W, h0km, mb3.5/5, mb1 3.9/7, mb1mx3.5/37, mbtmp3.6/7, ML3.8/2, Error ellipse: s-maj=68.1km s-min=24.7km az=25.0*
*AEIC **11** 12:07:49±1.6, 67°.70N±0°.06×162°.4W±0°.1, h18km±5km, ML3.2, Error ellipse: s-maj=9.8km s-min=6.2km az=138.0*
*NEIC **11** 12:07:50.2±1.1, 67°.70N±0°.07×162°.6W±0°.2, h19km±5km, Error ellipse: s-maj=12.7km s-min=7.9km az=132.0*
ISC 11 12:07:49.9±0.8, 67°.70N±0°.05×162°.42W±0°.06, h10km, n38, σ1°20/42, mb3.4/4, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RDOG	**Red Dog Mine**	**0.40**	**332**		**Pg**	**12 07 57.4**	**-0.4**
RDOG					**Sg**	**12 08 03.4**	**+0.3**
ANM	**Nome**	**3.37**	**202**		**Pn**	**12 08 41.1**	**-1.5**
ANM					**Sn**	**12 09 20.5**	**-2.1**
IM03		**3.83**	**113**		**Pn**	**12 08 48.9**	**0.0**
COLD	**Coldfoot**	**4.72**	**90**		**Pn**	**12 09 01.3**	**+0.2**
TOLK	**Toolik Lake Re**	**4.88**	**73**		**Pn**	**12 09 03.9**	**+0.5**
TOLK					**Sn**	**12 09 58.6**	**-1.3**
MLY	**Manley**	**5.41**	**114**		**Pn**	**12 09 11.0**	**+0.4**
TTA	**Tatalina**	**5.49**	**148**		**Pn**	**12 09 11.5**	**-0.2**
TT01	**Tatalina**	**5.51**	**148**		**Pn**	**12 09 12.2**	**+0.2**
PS01	**TAPS Pump Stn**	**5.59**	**56**		**Pn**	**12 09 13.1**	**+0.1**
BPAW	**Bear Paw Mtn.**	**5.91**	**122**		**Pn**	**12 09 17.0**	**-0.4**
NEA	**Nenana**	**6.25**	**114**		**Pn**	**12 09 21.8**	**-0.3**
KTH	**Kantishna Hill**	**6.32**	**126**		**Pn**	**12 09 23.0**	**0.0**
PPLA	**Purkeypile**	**6.45**	**134**		**Pn**	**12 09 25.7**	**+0.8**
PPLA	**Purkeypile**	**6.45**	**134**		**Sn**	**12 10 38.2**	**-0.3**
TCOL	**CIGO, UAF Yank**	**6.51**	**109**		**Pn**	**12 09 25.8**	**+0.1**
COLA	**College**	**6.52**	**109**		**Pn**	**12 09 25.2**	**-0.5**
POKR	**Poker Plat Res**	**6.54**	**106**		**Pn**	**12 09 25.3**	**-0.8**
TRF	**Thorofare Moun**	**6.59**	**125**		**Pn**	**12 09 26.2**	**-0.7**
WRH	**Wood River Hil**	**6.66**	**112**		**Pn**	**12 09 27.7**	**+0.1**
CCB	**Clear Creek Bu**	**6.66**	**111**		**Pn**	**12 09 28.2**	**+0.5**
BM03	**Burnt Mountain**	**6.82**	**84**		**Pn**	**12 09 29.4**	**-0.5**
IL31		**6.92**	**108**		**Pn**	**12 09 30.4**	**-0.9**
ILAR	**Eielson Array**	**6.92**	**108**	Pn	**Pn**	**12 09 31.3**	**0.0**
	3.3nm,0.3s,baz=303,slow=12,SNR=201						
ILAR				Sn	**Sn**	**12 10 45.3**	**-4.7**
	baz=144,slow=46,SNR=3.9						
PRP	**Porcupine Dome**	**7.07**	**100**		**Pn**	**12 09 32.8**	**-0.6**
RND	**Reindeer**	**7.08**	**121**		**Pn**	**12 09 33.6**	**+0.1**
HDA	**Harding Lake**	**7.10**	**110**		**Pn**	**12 09 34.0**	**+0.2**
WAT2	**Susitna Watana**	**7.48**	**123**		**Pn**	**12 09 39.0**	**-0.1**
STLK	**Strandline Lak**	**7.70**	**139**		**Pn**	**12 09 42.1**	**+0.1**
DHY	**Denali Highway**	**7.79**	**119**		**Pn**	**12 09 43.9**	**+0.5**
DOT	**Dot Lake**	**8.58**	**110**		**Pn**	**12 09 53.9**	**-0.1**
EPYK	**Eagle Plains**	**10.10**	**86**		**Pn**	**12 10 14.9**	**+0.1**
INK	**Inuvik**	**10.80**	**73**	Pn	**Pn**	**12 10 22.2**	**-2.1**
	0.3nm,0.3s,baz=300,slow=13,SNR=22						
INK				Sn	**Sn**	12 12 15.3	-10
	0.1nm,0.3s,baz=166,slow=10,SNR=3.3						
INK	**Inuvik**	**10.80**	**73**		**Pn**	**12 10 22.5**	**-1.9**
YKA	**Yellowknife Ar**	**20.34**	**82**	P	**P**	**12 12 25.9**	**-0.1**
	0.8nm,0.7s,baz=303,slow=9.4,SNR=13						
PDAR	**Pinedale Array**	**37.34**	**105**	P	**P**	**12 15 04.2**	**+1.7**
	0.1nm,0.4s,baz=324,slow=5.9,SNR=3.5						
NVAR	**Mina Array Bea**	**38.06**	**118**	P	**P**	**12 15 11.0**	**+2.5**
	0.2nm,0.3s,baz=324,slow=9.0,SNR=2.6						
ZALV	**Zalesovo Beam**	**48.83**	**314**	P	**P**	**12 16 33.8**	**-1.1**
	0.7nm,0.4s,baz=31,slow=9.0,SNR=4.0						
TXAR	**Lajitas Array**	**51.44**	**107**	P	**P**	**12 16 56.5**	**+1.5**
	0.4nm,0.6s,baz=330,slow=5.6,SNR=7.9						

*MOS **11** 12:34:55.9±1.6, 47°.83S×99°.71E, h10km, mb5.4/18, Error ellipse: s-maj=22.4km s-min=11.7km az=78.9*
*IDC **11** 12:34:55.6±0.4, 47°.77S×99°.72E, h0km, mb4.7/19, mb1 4.7/20, mb1mx4.5/39, mbtmp4.6/20, ML1.9/1, MS5.6/24, Ms1 5.7/24, ms1mx5.5/28, Error ellipse: s-maj=18.7km s-min=12.6km az=129.0*
*NEIC **11** 12:34:58.2±2.8, 47°.78S±0°.10×99°.7E±0°.2, h10km±1km, mb5.2/48, Error ellipse: s-maj=19.8km s-min=16.4km az=292.0*
*NEIC **11** 12:35:17.5, 47°.86S×99°.70E, h4km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.02; $M_{\theta\theta}$6.08; $M_{\phi\phi}$-6.10; $M_{r\theta}$1.03; $M_{\theta\phi}$2.57; $M_{r\phi}$1.26; Fault plane solution: $M_0$6.81000×10^{17} NP1:ϕ_s33.42000°, δ88.76000°, λ166.25000°. NP2:ϕ_s123.73000°, δ76.25000°, λ1.28000°. Principal axes: T 6.8372, Plg11.0000°, Azm348.0000°; N -0.0558, Plg76.0000°, Azm208.0000°; P -6.7814, Plg9.0000°, Azm79.0000°;*
*NEIC **11** 12:35:20.4, 47°.72S×99°.88E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.47; $M_{\theta\theta}$6.78; $M_{\phi\phi}$-6.31; $M_{r\theta}$1.17; $M_{\theta\phi}$1.03; $M_{r\phi}$-1.56; Fault plane solution: $M_0$6.92000×10^{17} NP1:ϕ_s310.00000°, δ85.00000°, λ-16.00000°. NP2:ϕ_s41.00000°, δ74.00000°, λ-175.00000°. Principal axes: T 7.0101, Plg8.0000°, Azm357.0000°; N -0.1887, Plg73.0000°, Azm115.0000°; P -6.8214, Plg15.0000°, Azm264.0000°;*
*NEIC **11** 12:35:20, 47°.78S×99°.72E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.23; $M_{\theta\theta}$8.48; $M_{\phi\phi}$-8.71; $M_{r\theta}$0.60; $M_{\theta\phi}$3.73; $M_{r\phi}$-0.35; Fault plane solution: $M_0$9.40000×10^{17} NP1:ϕ_s123.00000°, δ90.00000°, λ4.00000°. NP2:ϕ_s33.00000°, δ86.00000°, λ180.00000°. Principal axes: T 9.2840, Plg3.0000°, Azm348.0000°; N 0.2227, Plg86.0000°, Azm128.0000°; P -9.5067, Plg3.0000°, Azm258.0000°;*
ISC 11 12:34:57.8±0.3, 47°.90S±0°.05×99°.66E±0°.07, h12km, n326, σ1°86/293, mb5.1/64, MS5.6/47, 3C-3D, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**16.89**	**45**	T	T	12 56 14.5	
	baz=215,slow=74,SNR=880						
H01W1	**Cape Leeuwin H**	**16.90**	**45**	T	T	12 56 15.3	
	baz=215,slow=74,SNR=4989						
H01W3	**Cape Leeuwin H**	**16.90**	**45**	T	T	12 56 13.8	
	baz=215,slow=74,SNR=1148						
CASY	**Casey**	**19.30**	**167**	P	**Pn**	**12 39 24.1**	**+0.8**
CASY				IAmb	IAmb	12 39 27.2	
	comp=Z,335nm,1.8s						
NWAO	**Narrogin (SRO)**	**20.00**	**48**	P	**P**	**12 39 29.2**	**-1.0**
	baz=20,SNR=3.9						
NWAO	**Narrogin (SRO)**	**20.00**	**48**	P	**P**	**12 39 28.6**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=219,slow=11,SNR=5.9						
NWAO				S	Sn	12 43 17.4	+0.8
	comp=Z,0.2nm,0.3s,baz=239,slow=23,SNR=1.0						
NWAO				LR	LR	12 45 32.8	
	comp=Z,25μm,20.7s,baz=218,slow=32						
NWAO	**Narrogin (SRO)**	**20.00**	**48**	P	**P**	**12 39 30.9**	**+0.8**
NWAO				pmax	pmax		
	comp=Z,284nm,1.9s						
NWAO	**Narrogin (SRO)**	**20.00**	**48**	P	**P**	**12 39 30.9**	**+0.8**
NWAO				IAmb	IAmb	12 39 33.8	
	comp=Z,284nm,1.9s						
NWAO	**Narrogin (SRO)**	**20.00**	**48**	P	**P**	**12 39 30.5**	**+0.3**
NWAO				IAmb	IAmb	12 39 33.8	
	comp=Z,231nm,1.9s						
MUN	**Mundaring**	**20.27**	**44**	P	**P**	**12 39 33.3**	**+0.1**

baz=43,SNR=4.1
MTN Manton Dam 43.69 47 P P 12 43 01.8 -0.8
KDU Kakadu 44.49 49 P P 12 43 08.0 -1.0
baz=44,SNR=4.8
PMBI Palembang 45.02 7 P P 12 43 13.8 +0.6
comp=Z,13µmcomp=Z,187nm,0.9s
PMBI Palembang 45.02 7 P P 12 43 14.3 +1.2
NVL N'lazarevskaya 45.06 208 ⇓ *iP* **P 12 43 12.4 -0.6**
NVL *e* 12 44 59.2
NVL *eS* **S 12 49 49.9 -1.3**
NVL *eSS* **ScS 12 53 03.7 -5.5**
NVL pmax pmax
comp=Z,49nm,0.9s
EIDS Eidsvold 45.99 80 P P 12 43 20.3 -0.6
EIDS lAmb lAmb 12 43 23.0
comp=Z,45nm,1.4s
H08S2 Diego Garcia H 46.27 321 T T 13 33 00.6
baz=154,slow=76,SNR=297
H08S1 Diego Garcia H 46.28 321 T T 13 33 00.9
baz=154,slow=76,SNR=144
H08S3 Diego Garcia H 46.30 321 T T 13 33 01.5
baz=154,slow=76,SNR=382
CTA Charters Tower 46.59 70 P P 12 43 23.2 -2.4
comp=Z,16nm,0.9s,baz=233,slow=9.7,SNR=8.3
CTAO Charters Tower 46.59 70 P P 12 43 23.8 -1.9
CTAO pmax pmax
comp=Z,55nm,1.3s
CTAO Charters Tower 46.59 70 P P 12 43 23.8 -1.9
SPSI Sidrap Palu 47.06 28 P P 12 43 29.1 -0.2
comp=Z,1µmcomp=Z,46nm,1.2s
BKNI Bangkinang 48.05 2 P P 12 43 37.1 +0.1
comp=Z,4µmcomp=Z,41µmcomp=Z,206nm,1.1s
BKNI Bangkinang 48.05 2 P P 12 43 37.4 +0.5
RPZ Rata Peaks 48.31 113 LR LR 12 58 38.7
comp=Z,2µm,18.0s,baz=260,slow=29
BKB Balikpapan 48.80 23 P P 12 43 45.1 +2.4
SNAA Sanae 49.03 204 P P 12 43 45.0 +1.0
comp=Z,26nm,1.2s,baz=127,slow=8.8,SNR=22
SNAA Sanae 49.03 204 *c iP* **P 12 43 43.8 -0.3**
SNAA Sanae 49.03 204 P P 12 43 44.7 +0.6
SNAA lAmb lAmb 12 43 52.5
comp=Z,47nm,1.1s
GSI Gunungsitoli 49.04 357 P P 12 43 45.1 +0.6
GSI lAmb lAmb 12 43 53.3
comp=Z,31nm,1.1s
MYKOM Kota Tinggi 49.62 6 P P 12 43 48.3 -0.7
MYKOM Kota Tinggi 49.62 6 P P 12 43 49.0 0.0
KSM Kuching 50.04 14 P P 12 43 51.2 -1.1
KSM lAmb lAmb 12 44 04.6
comp=Z,70nm,2.0s
KSM Kuching 50.04 14 P P 12 43 52.0 -0.3
RPSI Rantau Prapat 50.39 359 P P 12 43 54.7 -0.2
PSI Prapat 50.49 359 LR LR 13 02 03.8
comp=Z,6µm,19.3s,baz=92,slow=32
PSI Prapat 50.49 359 P P 12 43 54.7 -1.1
PSI pmax pmax
comp=Z,20nm,1.1s
MPSI Mapaga 51.17 26 P P 12 44 00.3 -0.5
comp=Z,900nmcomp=Z,40nm,1.0s
KCSI Kotacane, Aceh 51.23 358 P P 12 44 00.8 -0.4
comp=Z,974nmcomp=Z,46nm,1.0s
SBUM Sibu 51.33 16 P P 12 44 01.4 -0.5
SBUM Sibu 51.33 16 P P 12 44 02.0 0.0
IPM Ipoh 52.17 2 P P 12 44 06.6 -1.6
IPM Ipoh 52.17 2 P P 12 44 09.0 +0.7
KMSI Cibinong 52.71 31 P P 12 44 12.4 +0.1
comp=Z,60nm,0.9s
LBMI Labuha 52.90 36 P P 12 44 13.5 -0.2
comp=Z,2µmcomp=Z,115nm,1.2s
KULM Kulim 52.97 1 P P 12 44 13.8 -0.3
BKZ Black Stump Fm 54.23 111 P P 12 44 28.8 +5.5
BKZ lAmb lAmb 12 44 34.0
comp=Z,28nm,1.0s
URZ Urewera 55.16 111 LR LR 13 03 41.4
comp=Z,3µm,19.8s,baz=242,slow=31
GENI Geneyen 57.02 51 P P 12 44 38.5 -5.0
JAY Jayapura 57.37 51 P P 12 44 46.3 +0.3
comp=Z,468nmcomp=Z,28nm,1.2s
DZM Mont Dzumac 58.51 89 *e* LR LR 13 02 23.0
comp=Z,16µm,27.7s,baz=233
BOSA Boshof 59.24 260 P P 12 44 59.6 +0.5
comp=Z,2.3nm,0.8s,baz=224,slow=12,SNR=2.2
BOSA LR LR 13 05 52.5
comp=Z,8µm,19.0s,baz=141,slow=31
SUR Sutherland 59.71 254 P P 12 45 03.1 +0.7
comp=Z,9.9nm,0.9s,baz=271,slow=16,SNR=2.1
LBTB Lobatse 61.40 264 P P 12 45 16.4 +2.4
LBTB pmax pmax
comp=Z,25nm,1.6s
LBTB Lobatse 61.40 264 P P 12 45 16.4 +2.4
LBTB lAmb lAmb 12 45 23.0
comp=Z,25nm,1.6s
SKHT Srikalahasti 63.89 338 *eP* **P 12 45 29.6 -0.7**
PBKT Sadao Pong 64.18 1 P P 12 45 31.4 -0.7
PBKT lAmb lAmb 12 45 43.8
comp=Z,15nm,0.9s
URV Uravakonda 65.68 336 *eP* **P 12 45 41.1 -1.0**
ADKI Addanki 65.85 339 *eP* **P 12 45 43.9 +0.9**
CM31 Chiang Mai Arr 66.05 359 P P 12 45 43.6 -0.7
CMAR Chiang Mai Arr 66.05 359 P P 12 45 43.8 -0.5
comp=Z,16nm,1.0s,baz=197,slow=5.9,SNR=53
CMAR LR LR 13 11 41.8
comp=Z,11µm,19.5s,baz=201,slow=34
SRLM Srisailam 66.36 338 *eP* **P 12 45 46.1 -0.3**
CHTO Chiang Mai 66.41 359 P P 12 45 45.6 -1.0
CHTO pmax pmax
comp=Z,15nm,1.1s
CHTO Chiang Mai 66.41 359 P P 12 45 45.6 -1.0
CHTO lAmb lAmb 12 45 58.0
comp=Z,15nm,1.1s
LSZ Lusaka 66.42 273 P P 12 45 44.6 -2.5
LSZ pmax pmax
comp=Z,27nm,1.5s
LSZ Lusaka 66.42 273 P P 12 45 44.6 -2.5
LSZ lAmb lAmb 12 45 54.5
comp=Z,27nm,1.5s
MYLAV Mylavaram 66.57 340 *eP* **P 12 45 47.4 -0.2**
NJS Nagarjunasagar 66.69 339 *eP* **P 12 45 48.5 0.0**
PVM Polavaram 66.83 341 *eP* **P 12 45 49.1 -0.2**
HYB Hyderabad 67.71 338 *iP* **P 12 45 54.5 -0.5**
HYBB Hyderabad (bro 67.71 338 *eP* **P 12 45 55.7 +0.7**
KLRI Killari 68.84 336 *eP* **P 12 46 02.6 +0.6**
SRSP Sriramsagar 69.21 338 *eP* **P 12 46 02.7 -1.6**
MSVF Nonsavu 69.33 94 *i P* **P 12 46 04.9 -0.4**
MSVF pmax pmax
comp=Z,12nm,1.0s
TSUM Tsumeb 70.76 262 LR LR 13 12 35.3
comp=Z,9µm,19.9s,baz=148,slow=32
KMBO Kilima Mbogo 70.97 290 P P 12 46 15.0 -0.6
comp=Z,3.1nm,0.9s,baz=49,slow=12,SNR=3.8
KMBO LR LR 13 13 03.8
comp=Z,2µm,18.1s,baz=107,slow=32
NGP Nagpur 71.18 340 *ex* **P 12 46 15.7 -0.7**
BOK Bokaro 72.43 347 *ex* **P 12 46 22.6 -1.2**
BOK *i* x x 13 08 48.1
BOK lAMs_20 lAMs_20 13 14 28.9
comp=Z,8µm,17.3s
KMI Kunming 72.73 3 P P 12 46 26.7 +0.9
KMI pP sP 12 46 31.0 +1.3
KMI sP pwP 12 46 32.3 -0.8
KMI S S **12 55 54.8 +3.6**
KMI pmax pmax
comp=Z,14nm,1.1s
KMI pmax pmax
comp=Z,170nm,7.0s
KMI LR LR
comp=N,3µm,20.3s
KMI LR LR
comp=E,4µm,22.1s
KMI LR LR
comp=Z,7µm,23.1s
KMI Kunming 72.73 3 pmax pmax
comp=Z,53nm,1.1s
KMI pmax pmax
comp=Z,670nm,8.8s
KMI LR LR
comp=N,3µm,20.4s
KMI LR LR
comp=E,4µm,18.9s
KMI LR LR
comp=Z,5µm,18.1s
SHL Shillong 73.46 353 *ex* **P 12 46 28.9 -1.1**
SHL lAMs_20 lAMs_20 13 15 41.1
comp=Z,7µm,19.1s
SHL Shillong 73.46 353 P P 12 46 29.1 -1.0
SHL Shillong 73.46 353 P P 12 46 29.1 -1.0
GYA Guiyang 74.28 7 ⇓ *iP* **P 12 46 35.3 +0.5**
GYA PP **PP 12 49 26.0 +4.9**
GYA S **S 12 56 12.0 +3.6**
GYA Guiyang 74.28 7 SKS **SKSac 12 56 41.8 -0.4**
GYA Guiyang 74.28 7 SS SS 13 01 01.3 +6.4
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,5.4s
GYA LR LR
comp=N,2µm,19.7s
GYA LR LR
comp=E,2µm,18.7s
GYA LR LR
comp=Z,3µm,19.7s
GYA Guiyang 74.28 7 pmax pmax
comp=Z,30nm,1.1s
GYA pmax pmax
comp=Z,390nm,6.4s
GYA LR LR
comp=N,3µm,19.7s
GYA LR LR
comp=E,3µm,18.7s
GYA LR LR
comp=Z,5µm,19.7s
RAMN Ramite 75.42 348 *eP* **P 12 46 40.9 -0.6**
MBAR Mbarara 75.54 286 LR LR 13 16 45.6
comp=Z,3µm,18.5s,baz=144,slow=33
MBAR Mbarara 75.54 286 ⇑ *eP* P 12 46 51.3 +8.8
MBAR *eS* **PcP 12 46 56.1 +0.6**
TAPN Taplejung 75.67 349 *eP* **P 12 46 41.8 -1.2**
comp=Z,76nm,1.0s
JIRN Jiri 76.18 348 *eP* **P 12 46 45.4 -0.6**
comp=Z,68nm,1.0s
PKI Pulchoki 76.21 347 *eP* **P 12 46 45.0 -1.1**
comp=Z,120nm,1.3s
PKIN Phulchoki 76.22 347 *eP* **P 12 46 44.7 -1.4**
DMN Daman 76.29 347 *eP* **P 12 46 45.2 -1.3**
comp=Z,81nm,1.1s
KKN Kakani 76.44 347 *eP* **P 12 46 45.6 -1.7**
GUN Gumba 76.47 347 *eP* **P 12 46 46.2 -1.4**
GKN Gorkha 76.75 346 *eP* **P 12 46 47.8 -1.2**
DANN Dangsing 77.23 346 *eP* **P 12 46 50.2 -1.7**
comp=Z,54nm,0.7s
ATD Arta Tunnel 77.64 303 LR LR 13 16 28.5
comp=Z,2µm,18.2s,baz=135,slow=32
EFI East Falkland 78.99 194 *i P* **P 12 47 00.6 -0.5**
EFI pmax pmax
comp=Z,21nm,1.0s
NJ2 Nanjing 81.43 16 *eP* **P 12 47 15.9 +1.6**
BHK Bhakra 81.67 340 *ex* P 12 47 26.2 +11
XAN Xi'an 81.99 8 P **P 12 47 15.7 -1.6**
XAN pmax pmax
comp=Z,12nm,1.0s
XAN Xi'an 81.99 8 P P 12 47 15.7 -1.6
LZH Lanzhou 83.69 3 *eP* **P 12 47 29.2 +3.0**
LZH pP pwP 12 47 33.8 +0.3
LZH sP PcP 12 47 38.0 +7.7
LZH PP **PP 12 50 32.5 -7.1**
LZH Lanzhou 83.69 3 S **S 12 57 52.3 +3.9**
LZH Lanzhou 83.69 3 sS sS 12 58 01.8 +8.6
LZH pmax pmax
comp=Z,25nm,1.1s
LZH pmax pmax
comp=Z,360nm,6.0s
LZH LR LR
comp=N,540nm,17.3s
LZH LR LR
comp=E,570nm,18.0s
LZH LR LR
comp=Z,590nm,18.4s
NIL Nilore 84.56 338 P **P 12 47 28.3 -2.2**
NIL pmax pmax
comp=Z,42nm,1.0s
NIL Nilore 84.56 338 P P 12 47 28.3 -2.2
TIY Taiyuan 85.99 10 S S 12 58 13.2 +2.2
RAYN Ar Rayn 86.09 312 P P 12 47 38.3 -0.2
RAYN pmax pmax
comp=Z,23nm,1.7s
RAYN Ar Rayn 86.09 312 P P 12 47 38.3 -0.2
RAYN lAmb lAmb 12 47 51.6
comp=Z,23nm,1.7s
KBL Kabul 86.53 335 P P 12 47 40.4 -0.2
KBL Kabul 86.53 335 P P 12 47 40.4 -0.2
GTA Gaotai 86.93 0 P P 12 47 41.8 -0.5
GTA pP sP 12 47 47.5 +1.3
GTA sP pwP 12 47 50.2 +0.6
GTA Gaotai 86.93 0 SKS **SKSac 12 58 04.4 -4.4**
GTA Gaotai 86.93 0 S **S 12 58 19.5 -0.7**
GTA Gaotai 86.93 0 sS sS 12 58 29.1 +4.2
GTA Gaotai 86.93 0 SS SS 13 04 11.2 +7.4
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,91nm,5.7s
GTA LR LR
comp=N,4µm,20.6s
GTA LR LR
comp=E,2µm,22.2s
GTA LR LR
comp=Z,5µm,21.6s
KSRS Korea Array 88.64 22 P **P 12 47 49.7 -0.6**
comp=Z,1.2nm,0.9s,baz=213,slow=6.6,SNR=4.2
KSRS LR LR 13 25 11.5
comp=Z,2µm,22.0s,baz=212,slow=34
BJI Beijing 88.78 13 P P 12 47 55.4 +4.5
BJI Beijing 88.78 13 S S 12 58 43.6 +6.1
BJI Beijing 88.78 13 sS sS 12 59 00.2 +18
BJI Beijing 88.78 13 SS SS 13 04 35.7 +5.3
BJI pmax pmax
comp=Z,8.0nm,1.3s
BJI LR LR
comp=N,2µm,22.2s
HHC Hu-ho-hao-te 89.00 9 LR LR
comp=Z,1µm,18.4s
KSH Kashi 89.55 342 PP PP 12 51 26.7 -0.2
KSH Kashi 89.55 342 S S 12 58 35.7 -9.4
KSH Kashi 89.55 342 SS SS 13 04 34.9 -7.1
KSH pmax pmax
comp=Z,12nm,1.0s
KSH pmax pmax
comp=Z,160nm,4.6s
KSH LR LR
comp=N,210nm,6.6s
KSH LR LR
comp=E,210nm,5.3s
KSH LR LR
comp=Z,3µm,15.8s
KSH Kashi 89.55 342 P P 12 47 55.3 +0.6
PPT Papeete 90.32 117 LR LR 13 19 45.7
comp=Z,1µm,21.7s,baz=222,slow=30
GAR Garm 90.38 338 P P 12 47 56.9 -1.7
GAR lAmb lAmb 12 48 00.1
comp=Z,32nm,1.5s
MAT Matsushiro 90.84 30 P P 12 47 58.9 -1.8
MJAR Matsushiro Arr 90.84 30 P P 12 48 00.2 -0.5
comp=Z,1.4nm,0.8s,baz=203,slow=7.0,SNR=8.2
PLCA Paso Flores 91.32 187 P P 12 48 03.1 -0.2
comp=Z,4.6nm,1.2s,baz=190,slow=2.7,SNR=3.4
PLCA LR LR 13 27 55.4
comp=Z,10µm,20.7s,baz=170,slow=35
ARSB Arslanbob 91.93 340 P P 12 48 05.8 0.0
ARSB pmax pmax
comp=Z,10.0nm,1.0s
ARSB Arslanbob 91.93 340 P P 12 48 05.8 0.0
ARSB lAmb lAmb 12 48 08.5
comp=Z,10nm,1.0s
WMQ Urumqi 91.94 351 *eP* **P 12 48 06.5 +0.8**
WMQ PP **PP 12 51 49.5 +3.8**
WMQ Urumqi 91.94 351 SKS **SKSac 12 58 43.5 +5.6**
WMQ Urumqi 91.94 351 S **S 12 59 02.4 -4.3**
WMQ pmax pmax
comp=Z,10.0nm,0.7s
WMQ pmax pmax
comp=Z,190nm,4.7s
WMQ LR LR
comp=N,2µm,21.9s
WMQ LR LR
comp=E,2µm,17.3s
WMQ LR LR
comp=Z,5µm,25.1s
WMQ Urumqi 91.94 351 P P 12 48 06.1 +0.4
WMQ pmax pmax
comp=Z,112nm,0.3s
WMQ Urumqi 91.94 351 P P 12 48 06.1 +0.4
AAK Ala-Archa 92.85 342 *i* P **P 12 48 09.5 -0.5**
AAK pmax pmax
comp=Z,3.0nm,1.1s
GEYT Alibeck 93.13 328 P P 12 48 10.1 -1.1
comp=Z,1.9nm,0.8s,baz=230,slow=6.9,SNR=5.3
GEYT LR LR 13 25 47.1
comp=Z,2µm,19.7s,baz=160,slow=33
MKAR Makanchi Array 95.52 348 P P 12 48 20.1 -1.9
comp=Z,0.2nm,0.6s,baz=144,slow=5.4,SNR=1.3
MKAR LR LR 13 28 28.8
comp=Z,4µm,21.2s,baz=168,slow=34
SONM Songino Array 95.53 5 P P 12 48 19.9 -2.2
comp=Z,0.3nm,0.3s,baz=63,slow=35,SNR=4.2
SONM LR LR 13 32 27.8
comp=Z,4µm,18.7s,baz=180,slow=36
ULN Ulaanbaatar 95.60 5 *i P* **P 12 48 23.1 +0.6**
ULN pmax pmax
comp=Z,3.0nm,1.3s
USRK Ussuriysk Ar. 96.02 23 LR LR 13 32 08.4
comp=Z,858nm,20.1s,baz=199,slow=36
EIL Elat 96.55 308 LR LR 13 25 51.8
comp=Z,5µm,19.8s,baz=144,slow=32
ASF Jabal al Asfar 97.52 310 LR LR 13 27 36.1
comp=Z,2µm,18.8s,baz=104,slow=32
DGZ Jazzator, Alta 97.79 352 *i P* Pdif 12 48 32.5 +0.1
DGZ pmax pmax
comp=Z,1.0nm,0.8s
KURBB Kurchatov Arra 99.81 347 P **Pdif 12 48 40.3 -0.9**
comp=Z,0.5nm,0.7s,baz=177,slow=3.8,SNR=3.7
KURBB PP **PP 12 52 42.7 -3.8**
comp=Z,0.1nm,0.3s,baz=165,slow=7.5,SNR=4.1
MAK Makhachkala 101.49 324 *eP* **Pdif 12 48 45.4 -3.4**
MAK *e* 12 52 55.8
MAK *e* 12 59 24.8
MAK *eSS* SS 13 07 28.2 -3.0
MAK pmax pmax
comp=Z,152nm,1.9s
GO02 Mina Guanaco 106.64 190 Pdif 12 49 14.0 +1.2
OBN Obninsk 115.50 325 *i* PKIKP **PKiKP 12 53 43.2 +4.7**
OBN *i* 12 54 42.7
OBN *i* 13 00 53.6
OBN *i* SS SS 13 10 45.6 +5.7
OBN pmax pmax
comp=Z,5.0nm,1.2s
KLMR Klimovskoe 118.75 331 *e*PKIKP **PKiKP 12 53 46.6 +2.0**
KLMR *ePS* **PS 13 04 51.3 +1.2**
KLMR *eSS* SS 13 11 23.8 +1.7
KLMR pmax pmax
comp=Z,11nm,1.5s
KLMR MLR MLR
comp=Z,1µm,20.0s
KLMR Klimovskoe 118.75 331 *e*PKPdf **PKiKP 12 53 46.7 +2.1**
KLMR AMP 12 53 51.3
comp=Z,11nm,1.5s
KLMR *e*PKKP **PKKPdf 13 04 25.5 -5.7**
KLMR *ePS* **PS 13 04 51.4 +1.3**
KLMR *ePS* **PS 13 04 51.4 +1.3**
KLMR *eSS* **SS 13 11 23.8 +1.7**
KLMR *eSS* **SS 13 11 23.8 +1.7**
KLMR LQ LQ 13 35 00.9
KLMR LQ LQ 13 35 00.9
KLMR LR LR 13 36 27.4
KLMR AMP 13 42 23.0
comp=Z,1µm,20.1s
SOKA Soboth 119.54 308 sPKPdf sPKPdf 12 53 52.9 +2.2
comp=Z,5.2nm,0.9s
ARSA Arzberg 119.65 309 *e*PKiKP **PKiKP 12 53 48.9 +2.0**
comp=Z,5.9nm,1.1s
OKC Ostrava-Krasne 119.96 312 AMS AMS 13 42 50.0
comp=Z,1µm,19.4s
KRLC Kraliky 120.79 312 AMS AMS 13 41 10.0
comp=Z,1µm,21.3s
ABTA Abfaltersbach 120.93 307 *e*PKiKP **PKiKP 12 53 51.4 +1.9**
comp=Z,5.0nm,1.1s
TIXI Tiksi 121.04 10 PKP **PKPdf 12 53 47.1 -1.6**
comp=Z,1.5nm,0.5s,baz=113,slow=3.6,SNR=9.9
TIXI Tiksi 121.04 10 PKIKP **PKiKP 12 53 48.8 0.0**
TIXI Tiksi 121.04 10 PKiKP 12 53 48.8 0.0
DPC Dobruska-Polom 121.20 312 AMS AMS 13 43 40.0
comp=Z,800nm,18.0s
OSTC Ostas 121.38 312 AMS AMS 13 43 50.0
comp=Z,1µm,22.3s
UPC Upice 121.45 312 AMS AMS 13 44 00.0
comp=Z,900nm,16.1s
CHVC Chvalec 121.48 312 AMS AMS 13 44 00.0
comp=Z,1µm,17.8s
GEC2 GERESS Array S 121.60 309 PKPdf **PKiKP 12 53 51.7 +1.0**
GERES GERESS Array B 121.60 309 PKP **PKPdf 12 53 49.6 -1.1**
comp=Z,0.9nm,0.7s,baz=152,slow=27,SNR=4.4
GOPC GO Pecny, Ondr 121.70 311 AMS AMS 13 47 40.0
comp=Z,1µm,18.2s
WTTA Wattenberg 121.72 307 *e*PKPdf **PKiKP 12 53 52.5 +1.3**
comp=Z,9.1nm,1.3s
WATA Walderalm 121.80 307 *i* PKPdf **PKiKP 12 53 52.5 +1.2**
comp=Z,4.5nm,0.8s
KHC Kasperske Hory 121.84 310 AMS AMS 13 42 40.0
comp=Z,1µm,23.0s
PRU Pruhonice 121.87 311 AMS AMS 13 47 50.0
comp=Z,1µm,17.2s
SQTA Sankt Quirin 121.93 307 PKPdf **PKiKP 12 53 52.7 +1.2**
comp=Z,3.4nm,0.7s
MOTA Moosalm 122.06 307 PKPdf **PKiKP 12 53 52.1 +0.3**
comp=Z,4.7nm,1.1s
FETA Feichten 122.07 306 *e*PKiKP **PKiKP 12 53 53.2 +1.4**
comp=Z,7.3nm,1.1s
PVCC Panska Ves 122.19 311 AMS AMS 13 51 00.0
comp=Z,1µm,19.8s
NKC Novy Kostel 123.09 310 AMS AMS 13 51 50.0
comp=Z,1µm,18.5s
CLL Collm 123.45 311 *e*PKPdf **PKPdf 12 53 53.0 -0.9**
CLL Collm 123.45 311 *e*(sPKPdf) 12 54 22.0
CLL *e* 13 06 12.0
CLL *ePPS* PPS 13 07 18.0
CLL *e*SKKSacre **SKKSdf 13 11 42.0 +8.3**
CLL *eSS* SS 13 12 36.0 +13
CLL *eSSS* SSS 13 17 00.0
CLL *e* 13 23 54.0
CLL LmV 13 45 00.0
comp=Z,1µm,21.2s
CLL LmH 13 50 00.0
comp=Z,900nm,21.8s
CLL Collm 123.45 311 *e*PKIKP **PKPdf 12 53 53.0 -0.9**
CLL MLR MLR
comp=Z,1µm,21.2s
FINES FINESS Array B 123.87 326 PKP **PKPdf 12 53 53.4 -1.0**
comp=Z,2.7nm,1.1s,baz=129,slow=5.4,SNR=3.9
BILL Bilibino 125.80 25 *i* PKIKP **PKPdf 12 53 58.0 +0.1**
BILL *i* 12 55 52.3
BILL *i* SS SS 13 12 54.8 +3.3
BILL pmax pmax
comp=Z,2.0nm,1.0s
ESDC Sonseca Array 126.35 291 PKP **PKPdf 12 53 59.3 -0.7**
comp=Z,1.1nm,0.9s,baz=70,slow=2.0,SNR=6.4
ARCES ARCESS Array B 128.89 334 PKP **PKPdf 12 54 02.7 -1.2**
comp=Z,1.3nm,0.8s,baz=71,slow=3.3,SNR=2.3
NOR Nord 140.86 349 *e*PKIKP **PKiKP 12 54 29.0 +0.5**
NOR Nord 140.86 348 *i* P **PKiKP 12 54 29.0 +0.5**
DOT Dot Lake 142.65 41 PKPdf 12 54 30.7 +1.1
BARN Barnard Glacie 143.46 46 PKPdf 12 54 31.4 +0.1
EGAK Eagle 143.99 40 PKPdf 12 54 32.5 +0.6
DAWY Dawson 144.74 41 PKPdf PKPbc 12 54 32.5 +0.3
DHAK Deception Hill 144.91 50 PKPdf 12 54 35.1 +1.4
HYT Haines Junctio 145.45 47 PKPab 12 54 35.3 +0.3
TGUH Tegucigalpa,Un 145.77 168 PKPbc 12 54 36.9 -0.1
EPYK Eagle Plains 145.81 37 P **PKPbc 12 54 35.3 -0.2**
baz=274
EPYK Eagle Plains 145.81 37 PKPab 12 54 37.0 +1.0
SIT Sitka 146.15 53 PKP2 **PKPab 12 54 37.5 0.0**
SIT Sitka 146.15 53 PKPab 12 54 37.5 0.0
TLIG Tlapa 146.26 148 PKPab 12 54 40.0 +0.8
BESE Bessie Mountai 146.59 51 PKPbc 12 54 37.8 -0.4
WHY Whitehorse 146.72 47 PKPbc 12 54 38.2 -0.4
INK Inuvik 146.78 33 PKIKP **PKPdf 12 54 35.3 -1.2**
INK Inuvik 146.78 33 PKPdf 12 54 35.3 -1.2
JIS Juneau Island 146.80 51 PKPbc 12 54 38.3 -0.4
WRAK Wrangell Islan 147.69 55 PKPab 12 54 44.5 +1.0
A36M Sachs Harbour 148.35 25 P **PKPbc 12 54 41.1 -1.4**
baz=295
SUMG Summit 148.90 337 *i* PKP2 **PKPab 12 54 48.0 -0.5**
SUMG Summit 148.90 337 PKiKP 12 54 47.0 +1.3
SUMG Summit 148.90 337 *i* P **PKPab 12 54 48.0 -0.5**
DLBC Dease Lake 149.10 51 PKPbc **PKPbc 12 54 45.4 +0.4**
comp=Z,5.6nm,1.0s,baz=310,slow=3.1,SNR=8.6
DLBC Dease Lake 149.10 51 PKiKP 12 54 46.1 -0.1

WDC	Whiskeytown Da	149.20	88	PKP2	PKiKP	12 54 47.2	+0.3		
WDC	Whiskeytown Da	149.20	88		PKiKP	12 54 47.2	+0.3		
ZAIG	Zacatecas	149.27	137		PKPbc	12 54 46.6	-0.1		
ISA	Isabella, Lake	149.36	99	PKP2	PKPbc	12 54 46.1	-0.2		
ISA	Isabella, Lake	149.36	99		PKPbc	12 54 46.1	-0.2		
ORV	Oroville	149.41	90	PKP2	PKiKP	12 54 48.2	+0.9		
ORV	Oroville	149.41	90		PKiKP	12 54 48.2	+0.9		
PFO	Pinyon Flats O	149.45	105	PKPbc	PKPbc	12 54 46.5	-0.1		
	comp=Z,5.1nm,0.9s,baz=287,slow=4.5,SNR=2.4								
BBB	Bella Bella	149.47	64	PKPbc	PKiKP	12 54 46.5	-0.4		
	comp=Z,4.2nm,1.0s,baz=168,slow=7.6,SNR=1.9								
O03E	Paynes Creek	149.57	89	P	PKPbc	12 54 46.7	0.0		
	baz=242								
YBH	Yreka Blue Hor	149.62	86	PKPbc	PKiKP	12 54 47.5	-0.3		
	comp=Z,3.0nm,0.9s,baz=171,slow=21,SNR=4.9								
YBH	Yreka Blue Hor	149.62	86	PKP2	PKiKP	12 54 47.4	-0.4		
YBH	Yreka Blue Hor	149.62	86		PKiKP	12 54 47.4	-0.4		
C36M	Paulatuk	149.78	29		PKPbc	12 54 45.6	-0.5		
HUMO	Hull Mountain	149.83	84		PKPbc	12 54 47.1	0.0		
I03D	Drain, OR	150.01	82	P	PKPbc	12 54 47.8	+0.3		
	baz=247								
CWC	Cottonwood Cre	150.06	98	P	PKiKP	12 54 49.2	+0.2		
	baz=236								
GSC	Goldstone, Bar	150.25	102	PKIKP	PKiKP	12 54 50.2	+0.9		
GSC	Goldstone, Bar	150.25	102		PKiKP	12 54 50.2	+0.9		
BEKR	Beckworth	150.33	91		PKiKP	12 54 51.5	+2.0		
PNTR	Pine Nut	150.46	93		PKiKP	12 54 50.0	+0.1		
VCNR	Virginia City	150.53	92		PKiKP	12 54 52.0	+2.1		
J04D	Umpqua Nationa	150.66	83	P	PKiKP	12 54 50.1	0.0		
	baz=246								
Y12C	Blythe	150.79	106		PKiKP	12 54 52.3	+1.9		
E03A	Lebam	150.89	76		PKiKP	12 54 52.1	+2.0		
PAHR	Pah Rah Range	150.91	92		PKiKP	12 54 52.1	+1.5		
RYN	Ryan	150.95	94		PKiKP	12 54 53.0	+2.3		
NVAR	Mina Array Bea	150.99	95	PKPbc	PKPbc	12 54 49.8	-0.6		
	comp=Z,8.6nm,0.9s,baz=227,slow=4.2,SNR=18								
NV11	Mina Array Sit	151.09	95		PKiKP	12 54 52.9	+1.9		
J05D	Fort Rock, OR	151.26	84	P	PKiKP	12 54 51.3	0.0		
	baz=247								
K05A	Summer Lake	151.26	85		PKiKP	12 54 53.4	+2.1		
MOD	Modoc Plateau	151.31	87		PKiKP	12 54 51.6	+0.2		
KULLO	Kullorsuaq	151.44	347	*i* P	PKPab	12 54 55.3	-3.1		
KVN	Kaiserville	151.45	94	PKIKP	PKiKP	12 54 52.3	+0.5		
KVN	Kaiserville	151.45	94		PKiKP	12 54 52.3	+0.5		
PINE	Pine Mountain	151.66	83		PKiKP	12 54 52.2	+0.2		
Y14A	Wickenburg	151.89	108		PKiKP	12 54 53.5	+0.8		
W13A	Hualapai Mount	152.04	105		PKiKP	12 54 54.4	+1.2		
TUC	Tucson	152.22	113	PKIKP	PKiKP	12 54 54.1	+0.6		
TUC	Tucson	152.22	113		PKiKP	12 54 54.1	+0.6		
RES	Resolute Bay	152.40	8	PKPbc	PKPbc	12 54 50.9	-1.2		
	comp=Z,6.1nm,0.7s,baz=336,slow=3.6,SNR=14								
RES	Resolute Bay	152.40	8	PKIKP	PKPbc	12 54 51.5	-0.7		
RES	Resolute Bay	152.40	8		PKPbc	12 54 51.5	-0.7		
WVOR	Wild Horse Val	152.65	87	PKIKP	PKiKP	12 54 57.0	+2.9		
WVOR	Wild Horse Val	152.65	87		PKiKP	12 54 57.0	+2.9		
R11A	Troy Canyon, C	152.77	97		PKiKP	12 54 54.9	+0.3		
J08A	Circle Bar Ran	153.14	85		PKiKP	12 54 56.5	+1.5		
X16A	Lo Mia Camp, P	153.19	109		PKiKP	12 54 57.3	+1.8		
G08A	Pilot Rock	153.52	81		PKiKP	12 54 56.9	+1.1		
LCMT	Little Creek M	153.59	102		PKiKP	12 54 57.9	+1.6		
PSUT	Pine Spring	154.02	99		PKPbc	12 54 56.4	-0.8		
TX31	Lajitas Ar. Si	154.17	127		PKiKP	12 54 58.8	+1.2		
TX32	Lajitas Array	154.17	127		PKiKP	12 54 59.8	+2.2		
TXAR	Lajitas Array	154.17	127	PKPbc	PKPbc	12 54 57.5	-0.1		
	comp=Z,1.6nm,1.0s,baz=214,slow=2.3,SNR=7.7								
PNT	Penticton	154.19	72	PKIKP	PKPdf	12 54 50.0	+1.3		
ILULI	Ilulissat	154.24	336	*e*PKP2	PKPab	12 55 16.7	+6.4		
ILULI	Ilulissat	154.24	336	*i* P	PKPab	12 55 16.7	+6.4		
BMO	Blue Mountains	154.47	83	PKP2	PKPab	12 55 12.4	+0.1		
BMO	Blue Mountains	154.47	83		PKPab	12 55 12.4	+0.1		
MNTX	Cornudas Mount	155.02	121	P	PKPdf	12 54 58.6	+8.2		
	baz=222								
MNTX	Cornudas Mount	155.02	121		PKPdf	12 54 57.4	+7.0		
PDAR	Pinedale Array	158.90	93	PKP	PKPdf	12 54 55.8	+0.5		
	comp=Z,0.1nm,0.4s,baz=78,slow=41,SNR=3.5								

*NEIC **11** 12:35:17.5±2.4,47.85S±0.10×99.7E±0.2,h10km±1km, mb5.5/52,Ms_20 5.8/522,Mwb5.8/40,Mww5.8, Mwc5.9(GCMT),Error ellipse: s-maj=19.0km s-min=15.5km az=301.0*

*GCMT **11** 12:35:18.5±0.1,47.76S×99.75E,h12km,MW5.9/166, Moment Tensor Solution. s149,c301; s166,c544; Duration: 2s2 Moment tensor: Scale 10^18^Nm; Mrr-0.00±.01; Mθθ0.85±.01; Mϕϕ-0.84±.01; Mrθ-0.03±.01; Mθϕ0.35±.01; Mϕr0.03±.01; Best double couple: Mo0.91400×10^18^ NP1:ϕs214.00000°,δ87.00000°, λ-180.00000°. NP2:ϕs124.00000°,δ90.00000°, λ-3.00000°. Principal axes: T 0.9160, Plg2.0000°, Azm169.0000°; N -0.0040, Plg87.0000°, Azm297.0000°; P -0.9120, Plg2.0000°, Azm79.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 11 12:35:17.6±0.3,47.99S±0.06×99.77E±0.07,h10km,n534, σ1§81/160,mb5.5/37,7C-3D,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASY	Casey	19.19	167	P	Pn	12 39 42.5	+0.6
CASY				IAmb	IAmb	12 39 51.2	
	comp=Z,329nm,1.3s						
MORW	Morawa	22.70	39	P	P	12 40 20.3	+1.0
MAW	Mawson	27.11	210	P	P	12 41 00.7	+0.5
FORT	Forrest	27.59	62	P	P	12 41 04.6	-0.3
FORT				IAMs_20	IAMs_20	12 49 23.6	
	comp=Z,33µm,20.0s						
PSA00	Pilbara Seismi	30.91	38	P	P	12 41 33.1	-1.2
PSA00				IAmb	IAmb	12 41 45.0	
	comp=Z,56nm,1.2s						
BBOO	Buckleboo	31.19	74	P	P	12 41 37.0	+0.2
BBOO				IAMs_20	IAMs_20	12 51 32.5	
	comp=Z,19µm,20.0s						
CRZF	Crozet Islands	32.17	255	IAMs_20	IAMs_20	12 51 14.9	
	comp=Z,16µm,20.0s						
TAU	Tasmania Unive	33.31	99	IAMs_20	IAMs_20	12 51 54.6	
	comp=Z,17µm,20.0s						
TOO	Toolangi	34.67	90	IAMs_20	IAMs_20	12 52 35.1	
	comp=Z,21µm,22.0s						
STKA	Stephens Creek	35.40	78	P	P	12 42 13.9	+0.4
SYO	Syowa Base	35.76	212	‖ *i*P	P	12 42 16.0	-0.2
SYO	Syowa Base	35.76	212	‖ pP	pP	12 42 18.8	+0.6
SYO	Syowa Base	35.76	212	‖ sP	sP	12 42 23.0	+4.0
SYO	Syowa Base	35.76	212	‖ *e*PnPn	PnPn	12 43 42.0	+6.2
COCO	West Island	35.78	355	IAMs_20	IAMs_20	12 52 41.3	
	comp=Z,21µm,20.0s						
AS31	Alice Springs	36.35	60	P	P	12 42 21.1	-0.6
FITZ	Fitzroy Crossi	36.53	44	P	P	12 42 22.5	-0.7
FITZ				IAmb	IAmb	12 42 26.0	
	comp=Z,65nm,1.1s						
FITZ				IAMs_20	IAMs_20	12 56 21.4	
	comp=Z,18µm,18.0s						
VNDA	Vanda	37.67	162	P	P	12 42 34.0	+1.7
VNDA				IAmb	IAmb	12 42 35.9	
	comp=Z,132nm,1.6s						
XMIS	Christmas Isla	37.72	9	IAMs_20	IAMs_20	12 53 35.0	
	comp=Z,20µm,22.0s						
CAN	Canberra	38.27	89	IAMs_20	IAMs_20	12 54 46.3	
	comp=Z,15µm,21.0s						
WB2	Warramunga Arr	39.52	57	P	P	12 42 46.7	-1.8
WB2				IAmb	IAmb	12 42 49.5	
	comp=Z,162nm,1.1s						
WRAB	Tennant Creek	39.52	57	P	P	12 42 47.8	-0.7
WRAB				IAmb	IAmb	12 42 49.6	
	comp=Z,143nm,1.1s						
WR0	Warramunga Arr	39.61	57	P	P	12 42 48.0	-1.2
WR0				IAmb	IAmb	12 42 50.2	
	comp=Z,151nm,1.2s						
WB0	Warramunga Arr	39.68	57	P	P	12 42 48.2	-1.6
WB0				IAmb	IAmb	12 42 50.7	
	comp=Z,146nm,1.1s						
KNRA	Kununurra	40.10	46	P	P	12 42 51.7	-1.6
KNRA				IAmb	IAmb	12 42 53.9	
	comp=Z,143nm,1.9s						
KNRA				IAMs_20	IAMs_20	12 57 50.4	
	comp=Z,13µm,18.0s						
PCJI	Pacitan	40.83	17	P	P	12 43 01.7	+2.4
UGM	Wanagama	40.97	16	IAMs_20	IAMs_20	12 56 18.5	
	comp=Z,14µm,20.0s						
WOJI	Wonogiri, Jawa	41.12	17	P	P	12 43 07.2	+5.5
SMRI	Semarang	41.80	16	IAMs_20	IAMs_20	12 55 39.0	
	comp=Z,17µm,22.0s						
PLAI	Plampang	41.90	27	P	P	12 43 18.9	+11
BATI	Baumata	42.70	36	P	P	12 43 18.8	+4.1
ARMA	Armidale	42.98	85	P	P	12 43 17.9	+0.9
ARMA				IAMs_20	IAMs_20	12 58 32.5	
	comp=Z,13µm,20.0s						
SOEI	Soe	43.35	37	P	P	12 43 21.6	+1.6
SOEI	Soe	43.35	37	IAMs_20	IAMs_20	13 01 23.9	
	comp=Z,15µm,18.0s						
MNAI	Manna	43.56	5	IAMs_20	IAMs_20	12 58 44.1	
	comp=Z,9µm,19.0s						
MMRI	Maumere	43.59	33	P	P	12 43 22.9	+1.0
MTN	Manton Dam	43.70	47	P	P	12 43 21.4	-1.3
MTN				IAmb	IAmb	12 43 23.2	
	comp=Z,208nm,1.8s						
KAPI	Kappang	46.12	28	P	P	12 43 41.0	-1.0
KAPI				IAmb	IAmb	12 44 05.8	
	comp=Z,50nm,1.4s						
CTAO	Charters Tower	46.55	70	P	P	12 43 45.4	-0.1
CTAO	Charters Tower	46.55	70	IAMs_20	IAMs_20	13 01 05.5	
	comp=Z,10µm,21.0s						
DGAR	Diego Garcia	46.62	321	IAMs_20	IAMs_20	12 58 19.7	
	comp=Z,11µm,18.0s						
LHI	Lord Howe Isla	47.29	92	P	P	12 43 52.0	+1.0
BKNI	Bangkinang	48.14	2	P	P	12 43 58.6	+0.9
BKNI				IAMs_20	IAMs_20	12 59 56.5	
	comp=Z,13µm,20.0s						
BKB	Balikpapan	48.86	23	P	P	12 44 04.9	+1.7
SNAA	Sanae	48.97	204	P	P	12 44 04.4	+0.7
GSI	Gunungsitoli	49.14	357	P	P	12 44 07.6	+2.2
COEN	Coen	49.36	62	P	P	12 44 06.1	-1.0
COEN				IAmb	IAmb	12 44 08.2	
	comp=Z,49nm,1.2s						
LTZ	Lake Taylor	49.45	112	P	P	12 44 09.1	+1.4
MYKOM	Kota Tinggi	49.71	5	P	P	12 44 09.6	-0.1
MYKOM				IAmb	IAmb	12 44 20.9	
	comp=Z,56nm,1.2s						
MYKOM				IAMs_20	IAMs_20	13 02 01.8	
	comp=Z,9µm,20.0s						
KSM	Kuching	50.12	14	IAMs_20	IAMs_20	13 01 48.9	
	comp=Z,11µm,20.0s						
RPSI	Rantau Prapat	50.49	359	P	P	12 44 16.5	+0.8
RPSI				IAmb	IAmb	12 44 18.4	
	comp=Z,66nm,1.4s						
RPSI				IAMs_20	IAMs_20	13 03 27.1	
	comp=Z,9µm,19.0s						
QRZ	Quartz Range	50.69	110	IAMs_20	IAMs_20	13 00 52.1	
	comp=Z,7µm,20.0s						
ABPO	Ambohimpanom	51.21	286	IAMs_20	IAMs_20	13 00 16.7	
	comp=Z,7µm,20.0s						
IPM	Ipoh	52.26	2	P	P	12 44 28.3	-0.7
IPM				IAMs_20	IAMs_20	13 01 55.4	
	comp=Z,11µm,21.0s						
KULM	Kulim	53.06	1	IAMs_20	IAMs_20	13 01 50.5	
	comp=Z,10µm,22.0s						
BKZ	Black Stump Fm	54.13	111	IAMs_20	IAMs_20	13 03 16.1	
	comp=Z,8µm,20.0s						
OUZ	Omahuta	54.65	105	IAMs_20	IAMs_20	13 03 22.8	
	comp=Z,8µm,19.0s						
PMG	Port Moresby	55.32	62	P	P	12 44 51.3	-0.1
PMG				IAmb	IAmb	12 44 54.5	
	comp=Z,89nm,1.2s						
PMG	Port Moresby	55.32	62	IAMs_20	IAMs_20	13 06 57.9	
	comp=Z,8µm,18.0s						
MXZ	Matakaoa Point	56.23	110	IAMs_20	IAMs_20	13 05 07.7	
	comp=Z,8µm,20.0s						
SMPI	Sarmi	56.79	49	P	P	12 45 00.7	-1.2
MSEY	Mahe Island	57.37	304	IAMs_20	IAMs_20	13 03 53.5	
	comp=Z,7µm,20.0s						
DZM	Mont Dzumac	58.43	89	*e*S	S	12 53 16.9	+0.1
	comp=Z,5µm,30.1s						
DZM	Mont Dzumac	58.43	89	*e*P	P	12 45 13.0	-0.6
	comp=Z,108nm,1.2s						
BOSA	Boshof	59.29	260	P	P	12 45 20.5	+0.9
BOSA				IAmb	IAmb	12 45 21.8	
	comp=Z,33nm,1.2s						
DAV	Davao City (W)	59.37	30	‖ *i*P	P	12 45 21.0	+1.1
PBA	Port Blair	59.71	352	IAMs_20	IAMs_20	13 09 36.0	
	comp=Z,13µm,15.8s						
PBA	Port Blair	59.71	352	*e*x	P	12 45 20.7	-1.6
PBA	Port Blair	59.71	352	*i* x	x	13 05 55.2	
TRD	Trivandrum	59.77	334	*i* x	x	13 02 37.8	
TRD	Trivandrum	59.77	334	*e*P	P	12 45 21.0	-1.7
TRD	Trivandrum	59.77	334	IAMs_20	IAMs_20	13 05 45.2	
	comp=Z,10µm,19.4s						
LBTB	Lobatse	61.46	264	P	P	12 45 33.4	-1.0
LBTB				IAmb	IAmb	12 45 41.2	
	comp=Z,56nm,1.8s						
HNR	Honiara	63.24	73	P	P	12 45 46.2	0.0
SKHT	Srikalahasti	64.01	338	IVmB_BB		12 45 53.0	
	comp=Z,194nm,2.6s						
SKHT	Srikalahasti	64.01	338	IVMs_BB	IVMs_BB	13 05 51.8	
	comp=Z,756nm,25.2s						
SKHT	Srikalahasti	64.01	338	*e*P	P	12 45 50.2	-0.9
PBKT	Sadao Pong	64.28	1	P	P	12 45 53.5	+0.6
PBKT				IAmb	IAmb	12 45 55.0	
	comp=Z,67nm,1.4s						
URV	Uravakonda	65.80	336	IVmB_BB		12 46 18.1	
	comp=Z,409nm,2.9s						
URV	Uravakonda	65.80	336	*e*P	P	12 46 02.3	-0.6
URV	Uravakonda	65.80	336	IVMs_BB	IVMs_BB	13 07 14.5	
	comp=Z,2µm,22.3s						
ADKI	Addanki	65.97	339	*e*P	P	12 46 02.7	-1.2
ADKI	Addanki	65.97	339	IVmBBB		12 46 20.2	
	comp=Z,255nm,3.2s						
ADKI	Addanki	65.97	339	IVMs_BB	IVMs_BB	13 07 59.1	
	comp=Z,978nm,21.4s						
CM31	Chiang Mai Arr	66.15	359	P	P	12 46 04.8	-0.2
SRLM	Srisailam	66.48	338	*e*P	P	12 46 06.3	-0.9
SRLM	Srisailam	66.48	338	IVmB_BB		12 46 23.1	
	comp=Z,230nm,3.6s						
SRLM	Srisailam	66.48	338	IVMs_BB	IVMs_BB	13 06 30.8	
	comp=Z,746nm,35.4s						
LSZ	Lusaka	66.50	273	IAMs_20	IAMs_20	13 09 36.2	
	comp=Z,6µm,20.0s						
CHTO	Chiang Mai	66.50	359	P	P	12 46 07.3	+0.1
CHTO				IAmb	IAmb	12 46 09.4	
	comp=Z,45nm,1.4s						
MYLAV	Mylavaram	66.68	340	IVmB_BB		12 46 25.6	
	comp=Z,171nm,3.5s						
MYLAV	Mylavaram	66.68	340	*e*P	P	12 46 06.7	-1.7
MYLAV	Mylavaram	66.68	340	IVMs_BB	IVMs_BB	13 10 12.3	
	comp=Z,1µm,21.0s						
NJS	Nagarjunasagar	66.81	339	IVMs_BB	IVMs_BB	13 11 44.6	
	comp=Z,944nm,16.6s						
NJS	Nagarjunasagar	66.81	339	IVmB_BB		12 46 13.7	
	comp=Z,223nm,3.6s						
NJS	Nagarjunasagar	66.81	339	*e*P	P	12 46 07.0	-2.3
NJS	Nagarjunasagar	66.81	339	IVmBBB		12 46 11.8	
	comp=Z,225nm,3.7s						
PVM	Polavaram	66.95	341	*e*P	P	12 46 09.8	-0.4
PVM	Polavaram	66.95	341	IVMs_BB	IVMs_BB	13 08 09.4	
	comp=Z,1µm,20.6s						
PVM	Polavaram	66.95	341	IVmB_BB		12 46 27.1	
	comp=Z,203nm,3.3s						
QIZ	Qiongzhong	67.32	10	P	P	12 46 13.4	+0.9
QIZ	Qiongzhong	67.32	10	LR	LR		
	comp=N,6µm,20.2s						
QIZ	Qiongzhong	67.32	10	S	S	12 55 10.8	+3.1
QIZ	Qiongzhong	67.32	10	SS	SS	12 59 31.9	+3.8
QIZ	Qiongzhong	67.32	10	LR	LR		
	comp=Z,7µm,19.4s						
QIZ	Qiongzhong	67.32	10	LR	LR		
	comp=E,2µm,17.6s						
QIZ	Qiongzhong	67.32	10	pmax	pmax		
	comp=Z,440nm,7.6s						
HYB	Hyderabad	67.83	338	*e*S	S	12 55 16.0	+2.1
HYB	Hyderabad	67.83	338	*i* P	P	12 46 15.0	-0.8
HYB	Hyderabad	67.83	338	*e*PcP	PcP	12 46 41.0	-1.3
HYBB	Hyderabad (bro	67.83	338	IVMs_BB	IVMs_BB	13 14 20.7	
	comp=Z,918nm,16.3s						
HYBB	Hyderabad (bro	67.83	338	*e*P	P	12 46 14.6	-1.2
HYBB	Hyderabad (bro	67.83	338	IVmB_BB		12 46 34.5	
	comp=Z,252nm,2.8s						
KLRI	Killari	68.96	336	IVMs_BB	IVMs_BB	13 11 01.7	
	comp=Z,2µm,18.2s						
KLRI	Killari	68.96	336	*e*P	P	12 46 22.4	-0.4
KLRI	Killari	68.96	336	IVmB_BB		12 46 23.2	
	comp=Z,302nm,1.9s						
BWNR	Bhubaneshwar	69.12	346	IAMs_20	IAMs_20	13 08 50.1	
	comp=Z,11µm,20.0s						
BWNR	Bhubaneshwar	69.12	346	*e*P	P	12 46 22.9	-0.8
BWNR	Bhubaneshwar	69.12	346	*i* x	x	13 07 03.4	
MSVF	Nonsavu	69.25	94	IAMs_20	IAMs_20	13 15 01.0	
	comp=Z,4µm,18.0s						
SRSP	Sriramsagar	69.33	338	IVMs_BB	IVMs_BB	13 10 47.3	
	comp=Z,786nm,20.3s						
SRSP	Sriramsagar	69.33	338	*e*P	P	12 46 24.0	-1.1
SRSP	Sriramsagar	69.33	338	IVmB_BB		12 46 39.6	
	comp=Z,241nm,3.4s						
TSUM	Tsumeb	70.82	262	P	P	12 46 36.2	+1.6
HKPS	Hong Kong Po S	71.13	14	IAMs_20	IAMs_20	13 18 15.6	
	comp=Z,5µm,21.0s						
SOCY	Socotra	72.39	313	IAMs_20	IAMs_20	13 12 11.0	
	comp=Z,6µm,18.0s						
KMI	Kunming	72.83	3	P	P	12 46 47.6	+1.1
KMI	Kunming	72.83	3	P	P	12 46 48.0	+1.6
KMI	Kunming	72.83	3	pP	pP	12 46 52.4	+3.7
KMI	Kunming	72.83	3	sP	sP	12 46 53.7	+4.2
KMI	Kunming	72.83	3	S	SKiKP	12 56 17.8	-2.2
TPUB	Ta-pu	73.40	20	P	P	12 46 49.1	-0.5
SHL	Shillong	73.56	353	P	P	12 46 49.8	-1.0
SHL	Shillong	73.56	353	pmax	pmax		
	comp=Z,80nm,1.9s						
BHPL	Bhopal	73.69	339	IAMs_20	IAMs_20	13 15 04.2	
	comp=Z,9µm,20.0s						
BHPL	Bhopal	73.69	339	*e*P	P	12 46 50.4	-1.0
BHPL	Bhopal	73.69	339	*i* x	x	13 09 22.8	
BHPL	Bhopal	73.69	339	*i* x	x	13 09 29.1	
BHPL	Bhopal	73.69	339	*e*x	x	13 13 31.7	
BHPL	Bhopal	73.69	339	*e*x	x	13 13 40.7	
SSLB	Suanglung	73.94	20	P	P	12 46 52.9	0.0
GYA	Guiyang	74.37	6	S	S	12 56 33.2	+3.6
GYA	Guiyang	74.37	6	SKS	SKSac	12 57 01.8	-1.3
GYA	Guiyang	74.37	6	⇑ *i*P	P	12 46 56.0	+0.6
GYA	Guiyang	74.37	6	PP	PP	12 49 47.6	+5.7
GYA	Guiyang	74.37	6	SS	SS	13 01 23.0	+6.5
QZH	Quanzhou	74.55	18	S	S	12 56 32.2	+0.8
QZH	Quanzhou	74.55	18	pmax	pmax		
	comp=Z,310nm,6.2s						
QZH	Quanzhou	74.55	18	LR	LR		
	comp=Z,2µm,17.6s						
QZH	Quanzhou	74.55	18	LR	LR		
	comp=E,1µm,18.7s						
QZH	Quanzhou	74.55	18	LR	LR		
	comp=N,1µm,19.0s						
QZH	Quanzhou	74.55	18	⇑ *i*P	P	12 46 56.5	+0.3
FURI	Furi	78.05	298	IAMs_20	IAMs_20	13 15 30.9	
	comp=Z,4µm,20.0s						
ENH	Enshi	78.40	9	P	P	12 47 17.7	-0.3
ENH				IAmb	IAmb	12 47 40.7	
	comp=Z,68nm,1.3s						
ENH				IAMs_20	IAMs_20	13 18 03.0	
	comp=Z,7µm,22.0s						
CD2	Chengdu	78.62	3	PP	PP	12 50 20.9	+3.2
CD2	Chengdu	78.62	3	SKS	SKSac	12 57 34.6	+0.5
CD2	Chengdu	78.62	3	pmax	pmax		
	comp=Z,30nm,1.2s						
CD2	Chengdu	78.62	3	‖ *i*P	P	12 47 19.2	-0.1
CD2	Chengdu	78.62	3	sP	sP	12 47 25.1	+2.8
CD2	Chengdu	78.62	3	S	S	12 57 18.2	+2.2
CD2	Chengdu	78.62	3	ScS	ScS	12 57 42.6	+2.4
CD2	Chengdu	78.62	3	LR	LR		
	comp=Z,10µm,22.1s						
CD2	Chengdu	78.62	3	LR	LR		
	comp=E,5µm,17.4s						
CD2	Chengdu	78.62	3	LR	LR		
	comp=N,9µm,22.2s						
CD2	Chengdu	78.62	3	pmax	pmax		
	comp=Z,740nm,6.2s						
AFI	Afiamalu	78.78	98	P	P	12 47 21.5	+0.8
EFI	East Falkland	78.91	194	P	P	12 47 20.6	-0.1
EFI				IAmb	IAmb	12 47 24.2	
	comp=Z,65nm,1.1s						
WHN	Wuhan	79.27	13	⇑ P	P	12 47 21.7	-1.0
WHN	Wuhan	79.27	13	S	S	12 57 26.0	+3.3
WHN	Wuhan	79.27	13	pmax	pmax		
	comp=Z,520nm,3.7s						
WHN	Wuhan	79.27	13	pmax	pmax		
	comp=Z,560nm,10.6s						
WHN	Wuhan	79.27	13	LR	LR		
	comp=N,3µm,13.3s						
WHN	Wuhan	79.27	13	LR	LR		
	comp=E,5µm,19.7s						
WHN	Wuhan	79.27	13	LR	LR		
	comp=Z,8µm,23.8s						
DAMY	Dhamar	79.38	306	P	P	12 47 22.8	-1.3
DAMY				IAmb	IAmb	12 47 45.9	
	comp=Z,82nm,1.6s						
DDI	Dehra Dun	80.36	341	*i* x	x	13 12 18.8	
DDI	Dehra Dun	80.36	341	*e*P	P	12 47 28.0	-0.8
DDI	Dehra Dun	80.36	341	IAMs_20	IAMs_20	13 18 38.8	
	comp=Z,9µm,18.3s						
SSE	Sheshan	81.04	18	P	P	12 47 32.6	+0.3
SSE	Sheshan	81.04	18	S	S	12 57 42.3	+0.9
SSE	Sheshan	81.04	18	pmax	pmax		
	comp=Z,21nm,0.8s						
SSE	Sheshan	81.

HRA Herat 88.62 330 IAMs_20 IAMs_20 13 21 02.2
comp=Z,5µm,22.0s
BTO Baotou 88.69 8 eP P 12 48 03.3 -7.4
BJT Baijiatuau 88.83 13 P **P** **12 48 09.9 -1.3**
BJT IAmb IAmb 12 48 13.7
comp=Z,36nm,1.2s
BJT Baijiatuau 88.83 13 IAMs_20 IAMs_20 13 27 04.4
comp=Z,3µm,20.0s
BJI Beijing 88.86 13 P **P** **12 48 11.0 -0.3**
BJI Beijing 88.86 13 S **S** **12 59 03.6 +5.1**
BJI Beijing 88.86 13 pmax pmax
comp=Z,26nm,1.2s
BJI Beijing 88.86 13 pmax pmax
comp=Z,120nm,3.1s
BJI Beijing 88.86 13 LR LR
comp=N,2µm,19.4s
BJI Beijing 88.86 13 SS SS 13 04 56.6 +4.8
HHC Hu-ho-hao-te 89.08 9 PP PP 12 51 48.0 +4.9
HHC Hu-ho-hao-te 89.08 9 S **S** **12 59 02.8 +2.0**
HHC Hu-ho-hao-te 89.08 9 eP **P** **12 48 12.6 +0.1**
HHC Hu-ho-hao-te 89.08 9 pmax pmax
comp=Z,7.0nm,0.8s
HHC Hu-ho-hao-te 89.08 9 pmax pmax
comp=Z,87nm,5.2s
HHC Hu-ho-hao-te 89.08 9 LR LR
comp=N,1µm,19.0s
HHC Hu-ho-hao-te 89.08 9 LR LR
comp=E,2µm,16.7s
HHC Hu-ho-hao-te 89.08 9 SS SS 13 05 04.7 +9.4
KSH Kashi 89.66 342 PP PP 12 51 49.6 +1.8
KSH Kashi 89.66 342 S **S** **12 59 02.7 -3.7**
KSH Kashi 89.66 342 sP sP 12 48 23.7 +5.3
KSH Kashi 89.66 342 P **P** **12 48 15.2 -0.1**
PPT2 Papeete2 90.20 117 eLR LR 13 17 15.6
comp=E,4µm,24.2s,baz=212
PPT2 Papeete2 90.20 117 eS **S** **12 59 10.7 -1.8**
comp=E,1µm,24.8s
PPT2 Papeete2 90.20 117 eSS SS 13 05 12.3 +1.5
comp=E,1µm,26.2s
PPT2 Papeete2 90.20 117 eLQ LQ 13 13 23.7
comp=E,5µm,30.0s
CHGR Chuyangaron 90.47 337 P **P** **12 48 18.9 -0.2**
CHGR IAmb IAmb 12 48 35.8
comp=Z,46nm,1.1s
MAT Matsushiro 90.89 30 P **P** **12 48 20.2 -0.8**
PLCA Paso Flores 91.24 187 P **P** **12 48 23.9 +0.9**
ARSB Arslanbob 92.05 340 IAMs_20 IAMs_20 13 26 11.9
comp=Z,5µm,21.0s
WMQ Urumqi 92.05 351 PP PP 12 52 07.4 +0.8
WMQ Urumqi 92.05 351 SKS **SKSac** **12 59 00.8 +2.0**
WMQ Urumqi 92.05 351 pmax pmax
comp=Z,12nm,0.7s
WMQ Urumqi 92.05 351 IAMs_20 IAMs_20 13 31 36.6
comp=Z,4µm,18.0s
WMQ Urumqi 92.05 351 eP **P** **12 48 27.8 +1.6**
WMQ Urumqi 92.05 351 pP pP 12 48 32.5 +4.0
WMQ Urumqi 92.05 351 S **S** **12 59 30.8 +2.9**
WMQ Urumqi 92.05 351 LR LR
comp=Z,6µm,21.9s
WMQ Urumqi 92.05 351 LR LR
comp=E,1µm,20.7s
WMQ Urumqi 92.05 351 LR LR
comp=N,2µm,21.9s
WMQ Urumqi 92.05 351 pmax pmax
comp=Z,97nm,5.9s
BOOM Boomskoye usch 92.53 343 IAMs_20 IAMs_20 13 27 48.5
comp=Z,4µm,19.0s
AAK Ala-Archa 92.97 342 P **P** **12 48 31.1 +0.5**
AAK Ala-Archa 92.97 342 IAMs_20 IAMs_20 13 26 36.2
comp=Z,3µm,20.0s
FRU1 Bishkek 93.11 342 IAMs_20 IAMs_20 13 26 43.8
comp=Z,4µm,20.0s
GYA0B ALIBECK ARRAY 93.25 328 P **P** **12 48 31.3 -0.6**
GYA0B IAmb IAmb 12 48 39.8
comp=Z,28nm,1.4s
GYA0B IAMs_20 IAMs_20 13 25 36.7
comp=Z,3µm,21.0s
RKT Rikitea 93.88 131 eSS SS 13 06 07.2 +4.2
comp=Z,943nm,27.8s
RKT Rikitea 93.88 131 eLR LR 13 18 55.9
comp=Z,2µm,24.0s
RKT Rikitea 93.88 131 eT T 14 32 41.2
comp=Z,18nm,0.3s
RKT Rikitea 93.88 131 eS **S** **12 59 43.4 -1.9**
comp=Z,1µm,28.5s
CN2 Changchun 94.17 18 eP **P** **12 48 35.4 -0.5**
CN2 Changchun 94.17 18 eS **S** **12 59 37.6 -8.9**
CN2 Changchun 94.17 18 pmax pmax
comp=Z,300nm,4.0s
CN2 Changchun 94.17 18 SS SS 13 06 06.0 -2.3
CN2 Changchun 94.17 18 pmax pmax
comp=Z,10.0nm,0.7s
CN2 Changchun 94.17 18 LR LR
comp=N,800nm,18.0s
CN2 Changchun 94.17 18 LR LR
comp=E,2µm,18.0s
CN2 Changchun 94.17 18 LR LR
comp=Z,1µm,18.0s
ULN Ulaanbaatar 95.69 5 IAMs_20 IAMs_20 13 29 39.4
comp=Z,4µm,22.0s
MAKZ Makanchi 95.69 348 P **P** **12 48 42.7 -0.2**
MAKZ IAMs_20 IAMs_20 13 28 18.1
comp=Z,4µm,22.0s
HIA Hailar 98.41 13 IAMs_20 IAMs_20 13 31 25.8
comp=Z,3µm,21.0s
KURK Kurchatov 100.00 347 IAMs_20 IAMs_20 13 30 38.2
comp=Z,4µm,21.0s
CSS Mathiatis 101.66 310 IAMs_20 IAMs_20 13 29 56.0
comp=Z,3µm,20.0s
GO04 Tololo Observa 101.73 188 IAMs_20 IAMs_20 13 31 53.4
comp=Z,4µm,22.0s
SPB Sao Paulo 102.89 211 IAMs_20 IAMs_20 13 41 36.0
comp=Z,3µm,19.0s
BRVK Borovoye 103.75 342 IAMs_20 IAMs_20 13 33 39.5
comp=Z,3µm,20.0s
ANTO Ankara 105.72 313 IAMs_20 IAMs_20 13 33 21.1
comp=Z,2µm,19.0s
MIDW Midway 105.95 66 IAMs_20 IAMs_20 13 34 52.9
comp=Z,4µm,20.0s
ILGA Ilgaz 106.17 314 IAMs_20 IAMs_20 13 32 14.2
comp=Z,4µm,20.0s
GO02 Mina Guanaco 106.56 190 IAMs_20 IAMs_20 13 33 43.2
comp=Z,4µm,21.0s
PB04 IPOC Station P 109.41 190 IAMs_20 IAMs_20 13 37 25.9
comp=Z,3µm,21.0s
ARU Arti 109.59 337 IAMs_20 IAMs_20 13 37 14.9
comp=Z,2µm,19.0s
PB01 IPOC Station P 110.61 191 IAMs_20 IAMs_20 13 41 50.5
comp=Z,3µm,19.0s
PATCX Punta Patache 110.91 190 IAMs_20 IAMs_20 13 37 57.5
comp=Z,3µm,21.0s
TIRR Tirgusor 111.31 313 IAMs_20 IAMs_20 13 34 57.2
comp=Z,4µm,22.0s
PB08 IPOC Station P 111.45 191 IAMs_20 IAMs_20 13 38 46.9
comp=Z,4µm,22.0s
PB11 IPOC Station P 111.89 191 IAMs_20 IAMs_20 13 39 37.6
comp=Z,3µm,21.0s
GO01 Chusmiza 111.92 191 IAMs_20 IAMs_20 13 39 58.5
comp=Z,3µm,20.0s
PSGCX Pisagua 112.11 190 IAMs_20 IAMs_20 13 39 18.4
comp=Z,2µm,20.0s
MNMC Minye Minye 112.51 191 IAMs_20 IAMs_20 13 39 35.8
comp=Z,4µm,21.0s
WDD Wied Dalam 112.74 299 IAMs_20 IAMs_20 13 35 53.0
comp=Z,2µm,22.0s
PB16 IPOC Station P 113.28 191 IAMs_20 IAMs_20 13 40 01.3
comp=Z,3µm,22.0s
RCBR Riachuelo 113.79 229 IAMs_20 IAMs_20 13 31 18.9
comp=Z,3µm,21.0s
AKBB Malin Array Si 115.44 318 IAMs_20 IAMs_20 13 42 35.2
comp=Z,3µm,20.0s
KEST Kesra 115.77 295 IAMs_20 IAMs_20 13 45 04.3
comp=Z,3µm,19.0s
CMAH Djebel Manchou 117.53 295 P **PKiKP** **12 54 05.0 +1.7**
PRMA PARMA 121.02 304 IAMs_20 IAMs_20 13 48 03.8
comp=Z,2µm,19.0s
SAML Samuel 121.33 200 IAMs_20 IAMs_20 13 43 56.3
comp=Z,3µm,21.0s
FUORN Ofenpass-Fuorn 122.19 305 IAMs_20 IAMs_20 13 51 37.6
comp=Z,2µm,20.0s
ADK Adak 122.31 47 IAMs_20 IAMs_20 13 41 33.4
comp=Z,2µm,22.0s
BRG Berggiesshubel 122.83 311 eP **PKiKP** **12 54 17.1 +4.0**
comp=Z,4.3nm,1.0s
LVZ Lovozero 125.37 335 IAMs_20 IAMs_20 13 49 10.0
comp=Z,3µm,20.0s
BILL Bilibino 125.85 25 IAMs_20 IAMs_20 13 52 39.9
comp=Z,2µm,20.0s
SFS San Fernando 125.97 287 IAMs_20 IAMs_20 13 52 48.9
comp=Z,2µm,18.0s
PAB San Pablo 126.62 291 IAMs_20 IAMs_20 13 45 27.7
comp=Z,2µm,21.0s
PTGA Pitinga 128.37 206 **PKiKP** **12 54 26.7 +1.3**
SPIA Saint Paul Isl 128.41 44 IAMs_20 IAMs_20 13 47 02.2
comp=Z,2µm,20.0s
KEV Kevo 128.70 335 IAMs_20 IAMs_20 13 53 13.2
comp=Z,2µm,20.0s
MTE Manteigas 129.12 290 IAMs_20 IAMs_20 13 47 23.9
comp=Z,3µm,21.0s
COI Coimbra 129.56 289 IAMs_20 IAMs_20 13 55 34.7
comp=Z,1µm,18.0s
KONO Kongsberg 129.73 319 IAMs_20 IAMs_20 13 53 04.3
comp=Z,2µm,19.0s
SDPT Sand Point 132.31 50 IAMs_20 IAMs_20 13 51 23.9
comp=Z,2µm,20.0s
CNBA Chernabura Isl 132.53 51 IAMs_20 IAMs_20 13 47 43.0
comp=Z,2µm,22.0s
CHGN Chignik 133.77 49 IAMs_20 IAMs_20 13 48 53.5
comp=Z,2µm,21.0s
ANM Nome 133.85 37 IAMs_20 IAMs_20 14 04 43.4
comp=Z,2µm,18.0s
ESK Eskdalemuir 133.95 309 IAMs_20 IAMs_20 13 59 16.5
comp=Z,2µm,20.0s
RDOG Red Dog Mine 135.95 32 IAMs_20 IAMs_20 14 02 54.4
comp=Z,2µm,20.0s
OHAK Old Harbor 136.73 49 IAMs_20 IAMs_20 13 50 54.8
comp=Z,2µm,21.0s
KDAK Kodiak Island 137.28 49 IAMs_20 IAMs_20 13 52 15.3
comp=Z,2µm,21.0s
HOM Homer 138.33 46 IAMs_20 IAMs_20 13 51 17.7
comp=Z,2µm,21.0s
CNPM China Poot 138.49 47 IAMs_20 IAMs_20 13 49 06.0
comp=Z,2µm,22.0s
BRLK Bradley Lake 138.72 46 IAMs_20 IAMs_20 13 51 28.0
comp=Z,2µm,22.0s
PPLA Purkeypile 138.92 42 IAMs_20 IAMs_20 13 54 34.0
comp=Z,2µm,20.0s
RC01 Rabbit Creek A 139.62 45 IAMs_20 IAMs_20 14 09 28.7
comp=Z,1µm,19.0s
KTH Kantishna Hill 139.63 41 IAMs_20 IAMs_20 13 54 50.6
comp=Z,2µm,20.0s
BPAW Bear Paw Mtn. 139.71 40 IAMs_20 IAMs_20 14 06 23.7
comp=Z,2µm,21.0s
TRF Thorofare Moun 139.89 41 IAMs_20 IAMs_20 13 54 35.4
comp=Z,2µm,22.0s
MLY Manley 139.99 38 IAMs_20 IAMs_20 14 06 37.8
comp=Z,1µm,22.0s
GHO Glory Hole Cre 140.16 44 IAMs_20 IAMs_20 13 51 34.8
comp=Z,2µm,20.0s
KNK Knik Glacier 140.29 44 IAMs_20 IAMs_20 14 10 58.6
comp=Z,2µm,20.0s
BWN Browne 140.38 40 IAMs_20 IAMs_20 14 07 09.3
comp=Z,2µm,19.0s
SML Sawmill 140.44 44 IAMs_20 IAMs_20 13 51 29.3
comp=Z,1µm,22.0s
RND Reindeer 140.51 41 IAMs_20 IAMs_20 14 07 08.9
comp=Z,2µm,21.0s
COLD Coldfoot 140.53 35 IAMs_20 IAMs_20 13 56 17.8
comp=Z,2µm,20.0s
MCK McKinley 140.53 41 IAMs_20 IAMs_20 14 07 10.5
comp=Z,2µm,20.0s
TOLK Toolik Lake Re 140.91 33 IAMs_20 IAMs_20 14 02 55.6
comp=Z,2µm,20.0s
SCM Sheep Creek Mo 140.91 44 IAMs_20 IAMs_20 14 10 30.8
comp=Z,1µm,19.0s
GRGR Grenville 141.02 210 IAMs_20 IAMs_20 14 00 22.5
comp=Z,2µm,20.0s
WRH Wood River Hil 141.02 40 IAMs_20 IAMs_20 13 56 56.2
comp=Z,2µm,20.0s
FID Port Fidalgo 141.10 46 IAMs_20 IAMs_20 14 05 57.3
comp=Z,2µm,20.0s
DHY Denali Highway 141.11 42 IAMs_20 IAMs_20 13 54 22.9
comp=Z,2µm,21.0s
CCB Clear Creek Bu 141.17 39 IAMs_20 IAMs_20 13 57 11.1
comp=Z,2µm,20.0s
COLA College 141.18 39 IAMs_20 IAMs_20 14 06 37.3
comp=Z,2µm,20.0s
BCIP Isla Barro Col 141.30 181 IAMs_20 IAMs_20 13 48 13.1
comp=Z,2µm,21.0s
EYAK Cordova Ski Ar 141.41 46 IAMs_20 IAMs_20 14 11 09.2
comp=Z,2µm,18.0s
HDA Harding Lake 141.50 40 IAMs_20 IAMs_20 14 08 10.0
comp=Z,1µm,21.0s
RAGM Ragged Mountai 141.90 47 IAMs_20 IAMs_20 14 06 48.2
comp=Z,2µm,20.0s
PAX Paxson 141.96 42 IAMs_20 IAMs_20 14 08 25.2
comp=Z,2µm,20.0s
PRP Porcupine Dome 142.23 38 IAMs_20 IAMs_20 14 04 29.2
comp=Z,2µm,21.0s
FYU Fort Yukon 142.42 36 IAMs_20 IAMs_20 14 03 54.0
comp=Z,1µm,20.0s
GLB Gilahina Butte 142.50 45 PKPpre 12 54 45.0
VRDI Verde Repeater 142.63 45 PKPpre 12 54 45.0
VRDI IAMs_20 IAMs_20 14 09 05.5
comp=Z,1µm,20.0s
DOT Dot Lake 142.67 41 IAMs_20 IAMs_20 13 53 36.0
comp=Z,2µm,22.0s
MENT Mentasta 142.74 43 IAMs_20 IAMs_20 14 09 31.1
comp=Z,2µm,19.0s
MCARA McCarthy VSAT 142.86 45 IAMs_20 IAMs_20 14 09 26.5
comp=Z,2µm,21.0s
BALM Baldy 143.14 46 IAMs_20 IAMs_20 14 09 39.8
comp=Z,2µm,20.0s
FDF Fort de France 143.26 212 IAMs_20 IAMs_20 14 02 01.0
comp=Z,1µm,20.0s
YAH Yahtse 143.33 47 IAMs_20 IAMs_20 14 09 52.0
comp=Z,2µm,20.0s
CTGM Chitina Glacie 143.62 46 PKPbc 12 54 49.1 0.0
CTGM IAMs_20 IAMs_20 14 07 36.5
comp=Z,2µm,20.0s
ACON Acoyapa 143.85 172 **PKPdf** **12 54 52.2 -1.0**
EGAK Eagle 144.02 40 IAMs_20 IAMs_20 14 07 44.6
comp=Z,2µm,21.0s
CRIN San Cristobal 144.36 169 IAMs_20 IAMs_20 13 49 43.4
comp=Z,2µm,21.0s
SCO Scoresbysund 144.73 330 IAMs_20 IAMs_20 14 01 28.9
comp=Z,2µm,22.0s
SCO Scoresbysund 144.73 330 iP **PKPab** **12 54 51.4 -0.5**
DAWY Dawson 144.76 41 IAMs_20 IAMs_20 13 55 55.3
comp=Z,2µm,22.0s
DHAK Deception Hill 144.92 50 IAMs_20 IAMs_20 13 57 58.4
comp=Z,1µm,20.0s
TGUH Tegucigalpa,Un 145.66 168 **PKPdf** **12 54 55.3 -1.2**
TGUH IAMs_20 IAMs_20 13 52 00.0
comp=Z,2µm,20.0s
EPYK Eagle Plains 145.84 37 IAMs_20 IAMs_20 14 04 37.3
comp=Z,2µm,20.0s
ANWB Willy Bob 146.20 213 IAMs_20 IAMs_20 13 59 42.8
comp=Z,2µm,22.0s
SKI Saint Kitts 146.23 211 IAMs_20 IAMs_20 14 05 25.5
comp=Z,1µm,22.0s
SKAG Skagway 146.43 49 IAMs_20 IAMs_20 13 54 50.3
comp=Z,2µm,21.0s
BESE Bessie Mountai 146.59 51 IAMs_20 IAMs_20 13 56 26.7
comp=Z,2µm,20.0s
WHY Whitehorse 146.74 47 IAMs_20 IAMs_20 13 54 10.2
comp=Z,2µm,22.0s
JIS Juneau Island 146.81 51 IAMs_20 IAMs_20 13 55 31.5
comp=Z,2µm,20.0s
INK Inuvik 146.82 33 IAMs_20 IAMs_20 14 02 41.0
comp=Z,2µm,21.0s
CCIG Comitan 146.89 159 **PKPbc** **12 54 59.9 -0.5**
CCIG IAMs_20 IAMs_20 13 54 57.0
comp=Z,1µm,19.0s
DIB Dawson Inlet, 147.05 61 IAMs_20 IAMs_20 13 50 56.2
comp=Z,2µm,22.0s
CRAG Craig 147.11 57 **PKPdf** **12 54 56.5 -0.9**
MOBC Moresby Island 147.34 61 **PKPdf** **12 54 57.9 -0.1**
MOBC IAMs_20 IAMs_20 13 50 40.8
comp=Z,2µm,22.0s
UNM Universidad Na 147.53 145 IAMs_20 IAMs_20 14 01 23.6
comp=Z,1µm,18.0s
SRIG Santa Rosalia 147.67 118 IAMs_20 IAMs_20 13 51 07.2
comp=Z,1µm,19.0s
WRAK Wrangell Islan 147.69 55 IAMs_20 IAMs_20 13 51 05.2
comp=Z,2µm,22.0s
MCCM Marconi Confer 147.69 92 IAMs_20 IAMs_20 13 56 37.5
comp=Z,2µm,20.0s
SAO San Andreas Ge 147.91 95 IAMs_20 IAMs_20 13 55 11.5
comp=Z,2µm,21.0s
HUMP Col San Antoni 147.99 206 **PKiKP** **12 55 05.2 +0.2**
KCPM Cahto Peak 148.00 89 IAMs_20 IAMs_20 13 50 28.6
comp=Z,2µm,21.0s
SJG San Juan 148.05 206 IAMs_20 IAMs_20 14 09 11.8
comp=Z,1µm,20.0s
GDXM Geysers 148.09 91 **PKPdf** **12 54 58.2 -1.7**
KMRM Mail Ridge 148.18 88 IAMs_20 IAMs_20 13 48 33.0
comp=Z,2µm,22.0s
JCC Jacoby Creek, 148.25 87 IAMs_20 IAMs_20 13 49 40.9
comp=Z,2µm,22.0s
KHMM Horse Mountain 148.47 87 IAMs_20 IAMs_20 13 50 48.9
comp=Z,2µm,20.0s
109C Camp Elliot, M 148.48 105 IAMs_20 IAMs_20 13 54 04.8
comp=Z,2µm,20.0s
PASC Pasadena Art C 148.57 102 IAMs_20 IAMs_20 13 58 55.2
comp=Z,2µm,18.0s
BAR Barrett 148.63 106 IAMs_20 IAMs_20 14 04 51.7
comp=Z,2µm,18.0s
MWC Mount Wilson 148.69 102 IAMs_20 IAMs_20 13 50 16.2
comp=Z,2µm,22.0s
SUMG Summit 149.02 337 IAMs_20 IAMs_20 14 03 24.0
comp=Z,2µm,21.0s
WDC Whiskeytown Da 149.13 88 IAMs_20 IAMs_20 13 49 47.5
comp=Z,1µm,22.0s
ZAIG Zacatecas 149.15 137 IAMs_20 IAMs_20 13 52 56.9
comp=Z,2µm,19.0s
CMB Columbia Colle 149.31 94 IAMs_20 IAMs_20 13 52 07.4
comp=Z,2µm,21.0s
ORV Oroville 149.34 91 IAMs_20 IAMs_20 13 51 01.0
comp=Z,2µm,22.0s
PFO Pinyon Flats O 149.35 105 **PKPbc** **12 55 06.3 -0.2**
PFO Pinyon Flats O 149.35 105 IAMs_20 IAMs_20 13 52 37.0
comp=Z,2µm,20.0s
XPFO Pion Flat 149.36 105 **PKPbc** **12 55 06.4 -0.1**
XPFO Pion Flat 149.36 105 IAMs_20 IAMs_20 13 52 26.0
comp=Z,2µm,20.0s
AFDM Forest Hills D 149.39 92 IAMs_20 IAMs_20 13 58 46.5
comp=Z,1µm,19.0s
HSIG 149.69 118 IAMs_20 IAMs_20 13 51 49.7
comp=Z,2µm,20.0s
HUMO Hull Mountain 149.76 84 IAMs_20 IAMs_20 13 51 35.0
comp=Z,2µm,22.0s
C36M Paulatuk 149.83 29 IAMs_20 IAMs_20 14 05 23.0
comp=Z,1µm,20.0s
MDPB Devils Postpil 149.97 96 IAMs_20 IAMs_20 13 54 11.9
comp=Z,2µm,21.0s
GLA Glamis 150.05 107 IAMs_20 IAMs_20 13 55 15.5
comp=Z,1µm,19.0s
GSC Goldstone, Bar 150.16 102 IAMs_20 IAMs_20 13 51 10.2
comp=Z,2µm,22.0s
MTDJ Mount Denham 150.23 185 IAMs_20 IAMs_20 13 53 28.6
comp=Z,1µm,20.0s
COR Corvallis 150.33 80 **PKPab** **12 55 13.9 -0.8**
COR Corvallis 150.33 80 IAMs_20 IAMs_20 13 51 50.5
comp=Z,2µm,21.0s
113A Mohawk Valley, 150.55 109 **PKiKP** **12 55 09.8 -0.1**
113A IAMs_20 IAMs_20 13 54 36.7
comp=Z,1µm,20.0s
214A Organ Pipe Nat 150.61 111 IAMs_20 IAMs_20 14 00 27.2
comp=Z,1µm,19.0s
F03A Seaside 150.64 78 IAMs_20 IAMs_20 13 53 02.7
comp=Z,2µm,21.0s
Y12C Blythe 150.69 106 **PKiKP** **12 55 10.7 +0.4**
Y12C IAMs_20 IAMs_20 13 58 10.4
comp=Z,2µm,18.0s
E03A Lebam 150.84 76 IAMs_20 IAMs_20 13 57 50.9
comp=Z,2µm,19.0s
NLWA Neilton Lookou 150.91 75 IAMs_20 IAMs_20 13 59 00.5
comp=Z,1µm,19.0s
HPIG 151.08 128 IAMs_20 IAMs_20 13 58 15.4
comp=Z,2µm,20.0s
H04A Detroit Lake 151.10 81 **PKPbc** **12 55 07.8 -2.4**
H04A IAMs_20 IAMs_20 13 58 34.2
comp=Z,1µm,19.0s
MOD Modoc Plateau 151.24 87 IAMs_20 IAMs_20 13 53 01.1
comp=Z,2µm,22.0s
F04A Amboy 151.39 78 IAMs_20 IAMs_20 13 53 25.5
comp=Z,1µm,21.0s
TPNV Topopah Spring 151.48 99 **PKiKP** **12 55 12.0 0.0**
TPNV IAMs_20 IAMs_20 13 50 57.0
comp=Z,2µm,21.0s
TEIG Tepich 151.54 164 IAMs_20 IAMs_20 13 52 41.0
comp=Z,2µm,21.0s
GTBY Guantanamo Bay 151.69 190 IAMs_20 IAMs_20 14 07 54.4
comp=Z,1µm,18.0s
Y14A Wickenburg 151.79 108 IAMs_20 IAMs_20 13 56 15.6
comp=Z,2µm,20.0s
SHPR Sheep Range 151.94 101 IAMs_20 IAMs_20 13 55 37.5
comp=Z,2µm,21.0s
W13A Hualapai Mount 151.95 105 IAMs_20 IAMs_20 14 00 24.7
comp=Z,1µm,19.0s
LON Longmire 152.05 77 IAMs_20 IAMs_20 13 57 15.0
comp=Z,2µm,20.0s
D05A Enumclaw 152.07 76 IAMs_20 IAMs_20 13 53 20.3
comp=Z,2µm,22.0s
TUC Tucson 152.11 113 IAMs_20 IAMs_20 13 59 26.0
comp=Z,2µm,18.0s
G06A Carlson Farm, 152.33 80 **PKiKP** **12 55 13.8 +0.5**
G06A IAMs_20 IAMs_20 13 52 51.6
comp=Z,2µm,22.0s
319A Douglas 152.38 116 IAMs_20 IAMs_20 13 59 16.2
comp=Z,2µm,20.0s
RES Resolute Bay 152.48 8 IAMs_20 IAMs_20 14 06 42.5
comp=Z,2µm,20.0s
WVOR Wild Horse Val 152.59 87 IAMs_20 IAMs_20 13 57 17.8
comp=Z,2µm,20.0s
I07A Izee 152.66 83 IAMs_20 IAMs_20 13 56 04.6
comp=Z,2µm,20.0s
R11A Troy Canyon, C 152.68 98 IAMs_20 IAMs_20 13 56 04.9
comp=Z,2µm,21.0s
LTY Liberty 152.95 76 IAMs_20 IAMs_20 13 58 02.7
comp=Z,2µm,20.0s
LLLB Lillooet 152.97 69 IAMs_20 IAMs_20 14 00 06.4
comp=Z,2µm,20.0s
F07A Phinny Hill Vi 153.02 80 IAMs_20 IAMs_20 14 05 38.8
comp=Z,2µm,18.0s
J08A Circle Bar Ran 153.07 86 IAMs_20 IAMs_20 13 52 28.6
comp=Z,2µm,22.0s
X16A Lo Mia Camp, P 153.09 109 IAMs_20 IAMs_20 13 51 55.1
comp=Z,1µm,22.0s
E07A Sunnyside 153.28 78 IAMs_20 IAMs_20 13 54 34.4
comp=Z,1µm,21.0s
HAWA Hanford 153.44 79 IAMs_20 IAMs_20 14 02 28.7
comp=Z,1µm,19.0s
G08A Pilot Rock 153.46 81 IAMs_20 IAMs_20 13 58 13.5
comp=Z,1µm,19.0s
KNB Kanab 153.77 103 PKP2 **PKPbc** **12 55 15.0 -1.7**
KNB Kanab 153.77 103 **PKPbc** **12 55 15.0 -1.7**
U15A North Rim 153.78 104 **PKiKP** **12 55 17.9 +1.0**
U15A IAMs_20 IAMs_20 14 03 16.2
comp=Z,1µm,20.0s
E08A Dider Farm, El 153.78 79 **PKiKP** **12 55 17.2 +1.0**
E08A IAMs_20 IAMs_20 14 03 04.8
comp=Z,1µm,18.0s
WUAZ Wupatki 153.82 107 IAMs_20 IAMs_20 14 01 50.3
comp=Z,2µm,20.0s
D08A Wollman Farm, 154.04 77 IAMs_20 IAMs_20 13 58 16.5
comp=Z,2µm,20.0s
121A Cookes Peak, D 154.10 117 IAMs_20 IAMs_20 14 01 11.5
comp=Z,1µm,19.0s
X18A Snowflake 154.11 110 **PKPdf** **12 55 11.2 +1.8**
X18A IAMs_20 IAMs_20 13 54 38.0
comp=Z,1µm,21.0s
B08A Colville Reser 154.11 74 IAMs_20 IAMs_20 13 55 29.2
comp=Z,2µm,21.0s
ELK Elko 154.11 93 IAMs_20 IAMs_20 13 52 39.6
comp=Z,2µm,22.0s
EPT El Paso 154.31 120 IAMs_20 IAMs_20 13 55 16.3
comp=Z,1µm,20.0s
E09A Wood Farm, Sta 154.39 79 IAMs_20 IAMs_20 14 16 39.9
comp=Z,1µm,20.0s
BMO Blue Mountains 154.41 83 IAMs_20 IAMs_20 13 54 37.8
comp=Z,2µm,21.0s
W18A Petrified Fore 154.62 110 IAMs_20 IAMs_20 14 01 50.4
comp=Z,2µm,19.0s
C09A Chrisman Ranch 154.66 76 IAMs_20 IAMs_20 14 18 46.9
comp=Z,2µm,20.0s
MTPU Mount Pierson 154.77 101 **PKPbc** **12 55 17.6 -1.4**
F10A Beach Ranch, E 154.83 81 IAMs_20 IAMs_20 14 19 37.8
comp=Z,1µm,21.0s
MFID Camas Ranch 154.87 87 IAMs_20 IAMs_20 13 54 32.2
comp=Z,2µm,21.0s
MNTX Cornudas Mount 154.91 121 IAMs_20 IAMs_20 14 04 34.9
comp=Z,1µm,20.0s
KVTX Kingsville 155.38 140 IAMs_20 IAMs_20 13 54 21.7
comp=Z,2µm,20.0s
DUG Dugway, Tooele 155.47 96 IAMs_20 IAMs_20 13 58 47.7
comp=Z,1µm,20.0s
NEW Newport 155.52 75 IAMs_20 IAMs_20 13 55 49.6
comp=Z,2µm,22.0s
Y22D IRIS PASSCAL I 155.68 115 IAMs_20 IAMs_20 14 09 43.6
comp=Z,2µm,19.0s
NRS Narsarsuaq 156.25 317 iP **PKPab** **12 55 33.8 -5.4**

735A	**Kenedy**	**156.55**	**138**	IAMs_20	IAMs_20	14 06 09.8		
	comp=Z,1µm,18.0s							
ANMO	**Albuquerque**	**156.55**	**114**	IAMs_20	IAMs_20	13 56 24.6		
	comp=Z,2µm,20.0s							
MVCO	**Mesa Verde**	**156.69**	**107**	IAMs_20	IAMs_20	13 57 36.4		
	comp=Z,1µm,20.0s							
JCT	**Junction City**	**156.96**	**132**	IAMs_20	IAMs_20	13 59 25.1		
	comp=Z,1µm,20.0s							
HWUT	**Hardware Ranch**	**156.97**	**94**	IAMs_20	IAMs_20	14 00 14.5		
	comp=Z,2µm,20.0s							
PV19	**Morning Glory**	**157.01**	**104**	IAMs_20	IAMs_20	14 03 01.8		
	comp=Z,2µm,20.0s							
PV18	**Skein Mesa, Pa**	**157.03**	**104**	IAMs_20	IAMs_20	13 59 27.1		
	comp=Z,2µm,22.0s							
PV16	**Nyswonger Mesa**	**157.06**	**104**	IAMs_20	IAMs_20	13 59 38.0		
	comp=Z,2µm,21.0s							
PV03	**Paradox Valley**	**157.07**	**105**	IAMs_20	IAMs_20	13 59 38.3		
	comp=Z,2µm,21.0s							
PV04	**Paradox Valley**	**157.11**	**104**	IAMs_20	IAMs_20	13 59 48.4		
	comp=Z,2µm,20.0s							
PV01	**Paradox Valley**	**157.18**	**105**	IAMs_20	IAMs_20	13 56 14.3		
	comp=Z,2µm,20.0s							
MSO	**Missoula**	**157.26**	**80**	IAMs_20	IAMs_20	14 22 49.1		
	comp=Z,2µm,20.0s							
DLMT	**Dillon**	**157.72**	**85**	IAMs_20	IAMs_20	13 56 34.8		
	comp=Z,2µm,22.0s							
061Z	**Ochoppi**	**157.91**	**178**	IAMs_20	IAMs_20	13 59 51.0		
	comp=Z,1µm,19.0s							
MSTX	**Muleshoe**	**158.06**	**121**	IAMs_20	IAMs_20	13 59 05.6		
	comp=Z,1µm,19.0s							
TPAW	**Teton Pass**	**158.17**	**90**	IAMs_20	IAMs_20	14 17 46.0		
	comp=Z,1µm,20.0s							
FXWY	**Fox Creek**	**158.18**	**90**		**PKPdf**	**12 55 15.1**	**+0.6**	
FXWY				IAMs_20	IAMs_20	13 55 14.2		
	comp=Z,2µm,22.0s							
SNOW	**Snow King Moun**	**158.29**	**91**	IAMs_20	IAMs_20	13 55 16.2		
	comp=Z,2µm,21.0s							
IMW	**Indian Meadow**	**158.33**	**89**	IAMs_20	IAMs_20	13 55 19.2		
	comp=Z,2µm,22.0s							
HKT	**Hockley**	**158.35**	**141**	IAMs_20	IAMs_20	14 16 29.7		
	comp=Z,2µm,21.0s							
O20A	**White River Ci**	**158.48**	**101**	IAMs_20	IAMs_20	13 56 42.5		
	comp=Z,2µm,22.0s							
ABTX	**Abilene, Hawle**	**158.76**	**129**	IAMs_20	IAMs_20	13 58 15.8		
	comp=Z,2µm,20.0s							
SMCO	**Snowmass**	**158.80**	**105**	IAMs_20	IAMs_20	14 02 09.1		
	comp=Z,1µm,22.0s							
BW06	**Boulder Array**	**158.82**	**93**	IAMs_20	IAMs_20	14 03 59.3		
	comp=Z,2µm,20.0s							
SDCO	**Great Sand Dun**	**158.92**	**110**	IAMs_20	IAMs_20	13 58 29.4		
	comp=Z,1µm,20.0s							
060A	**Indiantown**	**159.08**	**180**	IAMs_20	IAMs_20	14 16 09.0		
	comp=Z,2µm,21.0s							
AMTX	**Amarillo**	**159.35**	**122**	IAMs_20	IAMs_20	14 17 11.5		
	comp=Z,2µm,21.0s							
WHTX	**Lake Whitney,**	**159.35**	**134**	IAMs_20	IAMs_20	14 23 44.1		
	comp=Z,2µm,22.0s							
RLMT	**Red Lodge**	**159.88**	**87**		**PKPdf**	**12 55 16.9**	**+0.5**	
154A	**Montrose**	**164.48**	**171**		**PKPab**	**12 56 16.0**	**+0.2**	
FCAR	**Ozark Folk Cen**	**165.04**	**140**		**PKPab**	**12 56 19.0**	**+0.8**	
GOGA	**Godfrey**	**165.23**	**169**		**PKPab**	**12 56 19.0**	**0.0**	
X51A	**Calhoun**	**166.14**	**164**		**PKPab**	**12 56 22.1**	**-0.9**	
FCC	**Fort Churchill**	**166.44**	**32**		**PKPab**	**12 56 21.4**	**-2.4**	
PAULI	**Pauline**	**166.78**	**174**		**PKPab**	**12 56 25.1**	**-0.7**	
V48A	**Smith Brothers**	**166.81**	**156**		**PKPab**	**12 56 25.7**	**-0.3**	
W52A	**Murphy**	**166.82**	**167**		**PKPab**	**12 56 25.6**	**-0.5**	
BG3	**Lake Jocassee**	**166.85**	**170**		**PKPab**	**12 56 25.6**	**-0.6**	
CPCT	**Cooper Cave**	**167.06**	**164**	PKPdf	**PKPdf**	**12 55 23.9**	**+0.7**	
CPCT					**PKPab**	**12 56 26.5**	**-0.6**	
V58A	**Windy Hill, Pi**	**167.78**	**184**		**PKPab**	**12 56 29.9**	**-0.3**	
T50A	**Nancy**	**168.52**	**161**		**PKPab**	**12 56 33.1**	**-0.4**	
S57A	**Dark Hollow, R**	**169.73**	**186**		**PKPab**	**12 56 39.0**	**+0.2**	
R50A	**Paris**	**169.84**	**161**		**PKPab**	**12 56 38.6**	**-0.8**	
Q51A	**Peebles**	**170.75**	**165**		**PKPab**	**12 56 43.0**	**-0.4**	
P51A	**Williamsport**	**171.25**	**165**		**PKPab**	**12 56 44.9**	**-0.6**	
ALLY	**Alegheny Colle**	**173.66**	**181**		**PKPab**	**12 56 55.2**	**-0.9**	

*NEIC **11** 12:40:07.6±2.9, 19°.6S±0°.1×173°.1W±0°.1, h10km±1km, mb4.7/24, Error ellipse: s-maj=20.8km s-min=16.1km az=185.0*
*IDC **11** 12:40:09.0±1.3, 19°.52S×173°.54W, h0km, mb4.2/11, mb1 4.4/11,mb1mx4.1/44,mbtmp4.2/11,MS3.4/1, Ms1 3.4/1,ms1mx3.0/30,Error ellipse: s-maj=54.6km s-min=20.6km az=145.0*

ISC 11 12:40:13.3±0.8, 19°.4S±0°.2×173°.6W±0°.1, h25km, n45, σ1§30/40, mb4.6/24, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**3.53**	**85**		Pn	12 40 53.8	-13
NIUE				Sn	Sn	12 41 25.7	-22
AFI	**Afiamalu**	**5.78**	**18**	Pn	Pn	12 41 31.3	-6.2
FUNA	**Funafuti**	**12.88**	**326**	Pn	P	12 43 20.3	-5.0
RAR	**Rarotonga**	**13.13**	**100**	Pn	Pn	12 43 05.4	-13
	3.5nm,0.3s,baz=250,slow=9.1,SNR=8.1						
RAR				Sn	Sn	12 45 15.2	-28
	0.9nm,0.3s,baz=137,slow=20,SNR=1.0						
RAR				LR	LR	12 47 55.6	
	comp=Z,153nm,19.4s,baz=262,slow=36						
RAR	**Rarotonga**	**13.13**	**100**		Pn	12 43 05.0	-13
DZM	**Mont Dzumac**	**18.81**	**259**	P	**P**	**12 44 26.7**	**-4.6**
	0.1nm,0.3s,baz=319,slow=17,SNR=1.5						
OUZ	**Omahuta**	**19.36**	**213**	P	**Pn**	**12 44 37.4**	**-0.8**
URZ	**Urewera**	**20.41**	**201**	P	P	12 44 31.7	-17
	11nm,0.9s,baz=27,slow=6.9,SNR=3.3						
URZ				S	S	12 48 18.6	-17
	9.6nm,1.1s,baz=137,slow=9.3,SNR=2.1						
RPZ	**Rata Peaks**	**27.40**	**205**	P	**P**	**12 45 58.5**	**+1.7**
	6.3nm,0.6s,baz=12,slow=18,SNR=1.7						
RPZ	**Rata Peaks**	**27.40**	**205**	P	**P**	**12 45 58.9**	**+2.1**
EIDS	**Eidsvold**	**33.08**	**253**	P	**P**	**12 46 48.0**	**+0.8**
ARMA	**Armidale**	**33.22**	**244**	P	**P**	**12 46 48.3**	**-0.2**
ARMA				IAmb	IAmb	12 46 55.6	
	comp=Z,12nm,1.2s						
CAN	**Canberra**	**36.51**	**237**	P	**P**	**12 47 17.0**	**+0.2**
CAN				IAmb	IAmb	12 47 34.0	
	comp=Z,13nm,1.0s						
CTAO	**Charters Tower**	**37.69**	**262**	P	**P**	**12 47 26.8**	**-0.2**
TOO	**Toolangi**	**39.84**	**234**	P	**P**	**12 47 44.8**	**0.0**
COEN	**Coen**	**41.64**	**271**	P	**P**	**12 48 00.4**	**+0.5**
COEN				IAmb	IAmb	12 48 00.8	
	comp=Z,13nm,0.8s						
STKA	**Stephens Creek**	**41.94**	**244**	P	**P**	**12 48 01.6**	**-0.6**
	comp=Z,1.8nm,0.3s,baz=83,slow=9.5,SNR=4.1						
STKA	**Stephens Creek**	**41.94**	**244**	P	**P**	**12 48 01.1**	**-1.0**
BBOO	**Buckleboo**	**46.69**	**243**	P	**P**	**12 48 39.2**	**-0.9**
BBOO				IAmb	IAmb	12 48 57.0	
	comp=Z,6.0nm,1.0s						
WR0	**Warramunga Arr**	**48.63**	**260**	P	**P**	**12 48 54.6**	**-0.8**
WR0				IAmb	IAmb	12 49 13.1	
	comp=Z,13nm,1.4s						
AS31	**Alice Springs**	**48.75**	**255**	P	**P**	**12 48 56.2**	**-0.2**
ASAR	**Alice Springs**	**48.75**	**255**	P	**P**	**12 48 56.0**	**-0.3**
	comp=Z,10nm,0.9s,baz=96,slow=8.4,SNR=65						
ASAR				PcP	**PcP**	**12 50 22.2**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=105,slow=4.6,SNR=2.5						
WB0	**Warramunga Arr**	**48.79**	**260**	P	**P**	**12 48 55.7**	**-1.0**
WB0				IAmb	IAmb	12 48 56.4	
	comp=Z,5.4nm,0.5s						
WB2	**Warramunga Arr**	**48.80**	**260**	P	**P**	**12 48 55.9**	**-0.9**
WRAB	**Tennant Creek**	**48.81**	**260**	P	**P**	**12 48 55.7**	**-1.1**
WRAB				IAmb	IAmb	12 48 56.8	
	comp=Z,5.5nm,0.8s						
WRA	**Warramunga Arr**	**48.82**	**260**	P	**P**	**12 48 55.8**	**-1.1**
	comp=Z,3.1nm,0.5s,baz=98,slow=7.9,SNR=45						
WRA				PcP	**PcP**	**12 50 22.1**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=100,slow=3.1,SNR=2.4						
FORT	**Forrest**	**53.47**	**246**	P	**P**	**12 49 30.8**	**-0.9**
KNRA	**Kununurra**	**54.83**	**264**	P	**P**	**12 49 41.4**	**-0.4**
FAKI	**Fak Fak**	**55.30**	**280**	P	**P**	**12 49 45.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**57.24**	**261**	P	**P**	**12 49 59.1**	**+0.1**
FITZ				IAmb	IAmb	12 50 03.6	
	comp=Z,10nm,1.4s						
SOEI	**Soe**	**60.59**	**270**	P	**P**	**12 50 23.6**	**+1.2**
PSA00	**Pilbara Seismi**	**61.90**	**255**	P	**P**	**12 50 31.3**	**+0.1**
PSA00				IAmb	IAmb	12 50 35.1	
	comp=Z,6.4nm,0.8s						
MORW	**Morawa**	**64.02**	**246**	P	**P**	**12 50 44.7**	**-0.4**
MORW				IAmb	IAmb	12 50 53.0	
	comp=Z,6.1nm,1.1s						
MJAR	**Matsushiro Arr**	**71.88**	**321**	P	**P**	**12 51 35.0**	**+0.7**
	comp=Z,2.0nm,0.7s,baz=146,slow=5.5,SNR=4.7						
PAGB	**Antelope Grade**	**74.60**	**43**	P	**P**	**12 51 47.2**	**-3.2**
PAGB				IAmb	IAmb	12 52 05.5	

	comp=Z,8.0nm,1.0s							
PETK	**Petropavlovsk-**	**76.39**	**343**	P	**P**	**12 52 00.5**	**+0.3**	
	comp=Z,1.1nm,0.5s,baz=113,slow=8.9,SNR=6.8							
KSM	**Kuching**	**77.35**	**276**	P	**P**	**12 52 08.4**	**+1.9**	
KSM				IAmb	IAmb	12 52 09.1		
	comp=Z,7.5nm,0.9s							
NVAR	**Mina Array Bea**	**77.48**	**41**	P	**P**	**12 52 06.0**	**-0.9**	
	comp=Z,1.1nm,0.8s,baz=224,slow=7.6,SNR=4.4							
TXAR	**Lajitas Array**	**83.05**	**56**	P	**P**	**12 52 37.6**	**+0.5**	
	comp=Z,0.6nm,0.9s,baz=205,slow=8.3,SNR=4.8							
SEY	**Seymchan**	**86.33**	**345**	P	**P**	**12 52 53.4**	**+0.7**	
	comp=Z,1.7nm,0.8s,baz=140,slow=7.4,SNR=5.2							
ILAR	**Eielson Array**	**86.42**	**11**	P	**P**	**12 52 52.8**	**-0.3**	
	comp=Z,0.8nm,0.6s,baz=228,slow=6.4,SNR=5.0							
CMAR	**Chiang Mai Arr**	**93.65**	**288**	P	**P**	**12 53 30.3**	**+2.1**	
	comp=Z,0.5nm,0.3s,baz=119,slow=2.6,SNR=5.5							
YKA	**Yellowknife Ar**	**93.87**	**24**	P	**P**	**12 53 26.9**	**-1.2**	
	comp=Z,0.2nm,0.8s,baz=236,slow=4.9,SNR=5.0							
AKASG	**Malin Array Be**	**143.92**	**335**	PKP	PKPbc	12 59 44.3	+0.1	
	comp=Z,0.5nm,0.4s,baz=30,slow=3.9,SNR=2.3							
BRTR	**Keskin Array B**	**149.03**	**317**	PKPbc	**PKPbc**	**12 59 60.0**	**+0.3**	
	comp=Z,0.9nm,0.7s,baz=64,slow=2.9,SNR=6.2							

*TIR **11** 12:46:07.5, 40°.97N×19°.87E, h9km, Md2.8/7*
*BEO **11** 12:46:08.9±0.6, 40°.93N×19°.76E, h0km, ML2.4/8*
*SKO **11** 12:46:09.2, 41°.01N×19°.78E, h0km*
*PDG **11** 12:46:09.0±0.2, 41°.01N×19°.87E, h15km, ML2.7/12, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
*THE **11** 12:46:09.2, 41°.00N×19°.97E, h8km±13km, ML2.1/1, Error ellipse: s-maj=14.4km s-min=0.6km az=39.0*

ISC 11 12:46:09.3±0.9, 41°.03N±0°.02×19°.87E±0°.03, h22km±6km, n55, σ2§08/93, 8C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.32**	**360**	*e*Pg	**Pb**	**12 46 15.9**	**-0.5**
TIR				*e*Sg	**Sn**	**12 46 22.9**	**-1.8**
TIR	**Tirane**	**0.32**	**360**	P	**Pb**	**12 46 15.9**	**-0.5**
TIR				S	**Sb**	**12 46 21.5**	**+0.2**
	448nm,0.5s						
TIR	**Tirane**	**0.32**	**360**	*i* PG	**Pb**	**12 46 15.2**	**-1.2**
TIR				*i* SG	**Sb**	**12 46 21.4**	**+0.2**
OHR	**Ohrid**	**0.71**	**83**	↑*i* Pg	**Pb**	**12 46 22.2**	**-0.8**
OHR				*i* Sg	**Sn**	**12 46 33.6**	**-0.8**
OHR				*e*Lg	Lg	12 46 36.1	
	comp=N,46nm,0.5s						
OHR	**Ohrid**	**0.71**	**83**	↑*i* Pg	**Pb**	**12 46 22.2**	**-0.8**
OHR				*i* Sg	**Sn**	**12 46 33.6**	**-0.8**
OHR				*e*Lg	Lg	12 46 36.1	
	comp=N,46nm,0.5s						
PUK	**Puka**	**1.01**	**1**	*i* PG	**Pn**	**12 46 28.6**	**+0.3**
PUK				*i* SG	**Sn**	**12 46 45.0**	**+3.0**
ULC	**Ulcinj**	**1.05**	**334**	↓*i* Pg	**Pb**	**12 46 28.7**	**-0.1**
ULC				*i* Sg	**Sn**	**12 46 44.6**	**+2.0**
SRN	**Sarande**	**1.15**	**175**	P	**Pb**	**12 46 29.7**	**-0.8**
SRN				S	**Sn**	**12 46 47.2**	**+2.1**
SRN	**Sarande**	**1.15**	**175**	*i* PG	**Pb**	**12 46 30.0**	**-0.5**
SRN				*i* SG	**Sn**	**12 46 45.0**	**-0.1**
FNA	**Florina**	**1.17**	**102**	P	**Pb**	**12 46 29.8**	**-1.0**
FNA	**Florina**	**1.17**	**102**	*i* PG	**Pb**	**12 46 30.4**	**-0.5**
FNA				*i* SG	**Sn**	**12 46 47.5**	**+1.8**
DRME	**Dracevica, Mon**	**1.27**	**336**	↓*i* Pg	**Pb**	**12 46 32.8**	**+0.3**
DRME				*i* Sg	**Sb**	**12 46 52.5**	**+4.1**
KEK	**Kerkira**	**1.31**	**182**	P	**Pb**	**12 46 32.7**	**-0.6**
BCI	**Bajram Curri**	**1.35**	**6**	*i* PN	**Pb**	**12 46 34.9**	**+1.0**
BCI				*i* SN	**Sb**	**12 46 54.9**	**+4.2**
SCTE	**Santa Cesarea**	**1.43**	**229**	*i* PN	**Pb**	**12 46 37.1**	**+1.9**
BUM	**Brajici-Budva**	**1.47**	**330**	↑*i* Pg	**Pb**	**12 46 35.7**	**-0.2**
BUM				*i* Sg	**Sb**	**12 46 57.6**	**+3.4**
PDG	**Podgorica**	**1.48**	**342**	*e*Pg	**Pb**	**12 46 36.3**	**+0.2**
PDG				*e*Sg	**Sb**	**12 46 57.4**	**+3.1**
TTG	**Podgorica**	**1.48**	**342**	↓*i* Pg	**Pb**	**12 46 36.2**	**+0.2**
TTG				*i* Sg	**Sb**	**12 46 57.9**	**+3.6**
SKO	**Skopje**	**1.51**	**51**	*i* Pn	**Pb**	**12 46 38.1**	**+1.4**
SKO				*i* Sn	**Sb**	**12 47 00.5**	**+5.1**
SKO				*e*Lg	Lg	12 47 00.6	
	comp=N,5.2nm,0.3s						
SKO	**Skopje**	**1.51**	**51**	*i* Pn	**Pb**	**12 46 38.1**	**+1.4**
SKO				*i* Sn	**Sb**	**12 47 00.5**	**+5.1**
SKO				*e*Lg	Lg	12 47 00.6	
	comp=N,5.2nm,0.3s						
IGT	**Igoumenitsa**	**1.54**	**166**	P	**Pb**	**12 46 36.3**	**-0.8**
IGT	**Igoumenitsa**	**1.54**	**166**	*i* PN	**Pb**	**12 46 36.7**	**-0.4**
IGT				*i* SN	**Sb**	**12 46 57.5**	**+1.4**
JAN	**Janina**	**1.56**	**151**	P	**Pb**	**12 46 35.7**	**-1.8**
KPRO	**Kipourio**	**1.56**	**133**	P	**Pb**	**12 46 35.5**	**-2.1**
PVY	**Plav**	**1.57**	**2**	↑*i* Pn	**Pb**	**12 46 37.8**	**+0.1**
PVY				*i* Sn	**Sb**	**12 47 00.1**	**+3.0**
CEME	**Cevo**	**1.68**	**335**	↓*i* Pn	**Pb**	**12 46 38.5**	**-1.0**
CEME				*i* Sn	**Sb**	**12 47 02.5**	**+2.3**
HCY	**Herceg Novi**	**1.75**	**325**	↓*i* Pn	**Pb**	**12 46 40.3**	**-0.5**
HCY				*i* Sn	**Sb**	**12 47 04.5**	**+2.2**
KOME	**Kolasin**	**1.84**	**352**	↑*i* Pn	**Pb**	**12 46 41.2**	**-0.7**
KOME				*i* Sn	**Sb**	**12 47 06.6**	**+1.8**
IVA	**Berane**	**1.84**	**1**	↓*i* Pn	**Pb**	**12 46 41.6**	**-0.8**
IVA				*i* Sn	**Sb**	**12 47 06.6**	**+1.6**
NKME	**Niksic**	**1.87**	**339**	↑*i* Pn	**Pb**	**12 46 41.7**	**-1.1**
NKME				*i* Sn	**Sb**	**12 47 07.5**	**+1.8**
TREB	**Trebinje**	**2.03**	**327**	*e*Pn	**Pb**	**12 46 45.7**	**+0.1**
TREB				*e*Sg	**Sb**	**12 47 13.5**	**+3.1**
VAY	**Valandovo**	**2.06**	**81**	*e*Pn	**Pb**	**12 46 46.4**	**+0.4**
VAY	**Valandovo**	**2.06**	**81**	↑*i* Pn	**Pb**	**12 46 47.6**	**+1.6**
VAY				*i* Sn	**Sb**	**12 47 09.6**	**-1.6**
VAY	**Valandovo**	**2.06**	**81**	↑*i* Pn	**Pb**	**12 46 47.6**	**+1.6**
VAY				*i* Sn	**Sb**	**12 47 09.6**	**-1.6**
DBRK	**Dubrovnik**	**2.08**	**322**	*e*Pn	**Pn**	**12 46 42.5**	**-0.4**
DBRK				Sn	**Sn**	**12 47 07.9**	**-0.3**
BRY	**Bratogost**	**2.12**	**333**	↓*i* Pn	**Pb**	**12 46 45.0**	**-2.1**
BRY				*i* Sn	**Sb**	**12 47 13.2**	**+0.2**
SJES	**Sjenica**	**2.23**	**2**	*e*Pn	**Pb**	**12 46 48.9**	**-0.1**
SJES				*e*Sg	**Sb**	**12 47 23.4**	**+7.1**
UPM	**Unac-Piva**	**2.29**	**342**	↓*i* Pn	**Pb**	**12 46 47.6**	**-2.4**
UPM				*i* Sn	**Sb**	**12 47 17.2**	**-0.8**
BARS	**Barje**	**2.30**	**38**	*e*Pn	**Pb**	**12 46 49.0**	**-1.2**
PLE	**Pljevlja**	**2.33**	**351**	↓*i* Pn	**Pb**	**12 46 48.3**	**-2.4**
PLE				*i* Sn	**Sb**	**12 47 18.3**	**-0.7**
SELS	**Selova**	**2.38**	**23**	*e*Pn	**Pb**	**12 46 50.8**	**-0.7**
BOSS	**Bosilegrad**	**2.44**	**52**	*e*Pn	**Pb**	**12 46 50.4**	**-2.2**
STON	**Ston**	**2.45**	**319**	*e*Pn	**Pn**	**12 46 47.2**	**-0.7**
STON				Sn	**Sn**	**12 47 15.8**	**-1.5**
IVAS	**Ivanjica**	**2.56**	**5**	*e*Pn	**Pb**	**12 46 53.4**	**-1.1**
BBLS	**Lazići**	**2.86**	**353**	*e*Pn	**Pb**	**12 46 56.1**	**-3.5**
GRUS	**Gruza**	**2.93**	**12**	*e*Pn	**Pb**	**12 46 58.2**	**-2.6**
ZAPS	**Zavoj**	**3.04**	**42**	*e*Pn	**Pb**	**12 46 59.2**	**-3.6**
DIVS	**Divibare**	**3.07**	**2**	*e*Pn	**Pb**	**12 47 00.7**	**-2.6**
MAKA	**Makarska**	**3.10**	**318**	*e*Pn	**Pn**	**12 46 56.4**	**-0.4**
MAKA				Sn	**Sn**	**12 47 32.0**	**-1.1**
TRUS	**Trudelj**	**3.22**	**7**	*e*Pn	**Pb**	**12 47 03.8**	**-2.0**
ZAGS	**Zajecar**	**3.29**	**31**	*e*Pn	**Pb**	**12 47 02.4**	**-4.5**
KIJV	**Kijevo**	**3.92**	**320**	*e*Pn	**Pn**	**12 47 08.4**	**+0.2**
KIJV				Sn	**Sn**	**12 47 52.9**	**-0.7**
ZIRJ	**Zirje**	**4.08**	**311**	*e*Pn	**Pn**	**12 47 09.2**	**-1.2**
ZIRJ				Sn	**Sn**	**12 47 54.8**	**-2.8**
DUGI	**Dugi Otok**	**4.63**	**311**	*e*Pn	**Pn**	**12 47 16.8**	**-1.1**
DUGI				Sn	**Sn**	**12 48 09.4**	**-1.5**
NVLJ	**Novalja**	**5.10**	**316**	*e*Pn	**Pn**	**12 47 24.2**	**-0.2**
NVLJ				Sn	**Sn**	**12 48 19.7**	**-2.8**

*AEIC **11** 12:50:05±1.3, 67°.69N±0°.06×162°.5W±0°.1, h20km±7km, ML3.2, Error ellipse: s-maj=10.3km s-min=6.5km az=146.0*
*NEIC **11** 12:50:06.6±1.3, 67°.71N±0°.02×162°.6W±0°.2, h22km±6km, Error ellipse: s-maj=9.9km s-min=3.5km az=90.0*
*IDC **11** 12:50:11.7±7.6, 67°.00N×160°.63W, h0km, mb3.6/2, mb1 3.9/4,mb1mx3.3/51,mbtmp3.5/4,ML3.4/2,Error ellipse: s-maj=142.5km s-min=52.6km az=132.0*

ISC 11 12:50:05.9±0.9, 67°.67N±0°.06×162°.42W±0°.06, h10km, n33, σ0§91/37, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RDOG	**Red Dog Mine**	**0.39**	**338**		**Pg**	**12 50 13.8**	**-0.4**
RDOG					**Sg**	**12 50 20.0**	**+0.1**
ANM	**Nome**	**3.34**	**202**		**Pn**	**12 50 58.0**	**-0.1**
ANM					**Sn**	**12 51 36.9**	**-0.9**
IM03		**3.82**	**112**		**Pn**	**12 51 04.7**	**0.0**
COLD	**Coldfoot**	**4.73**	**90**		**Pn**	**12 51 18.0**	**+0.9**
TOLK	**Toolik Lake Re**	**4.90**	**73**		**Pn**	**12 51 20.3**	**+0.8**
TOLK					**Sn**	**12 52 15.7**	**-0.4**

MLY	**Manley**	**5.39**	**114**		**Pn**	**12 51 26.8**	**+0.5**	
TTA	**Tatalina**	**5.46**	**148**		**Pn**	**12 51 27.1**	**-0.2**	
TT01	**Tatalina**	**5.48**	**148**		**Pn**	**12 51 27.9**	**+0.4**	
BPAW	**Bear Paw Mtn.**	**5.89**	**122**		**Pn**	**12 51 33.4**	**+0.2**	
NEA	**Nenana**	**6.24**	**114**		**Pn**	**12 51 37.7**	**-0.1**	
KTH	**Kantishna Hill**	**6.30**	**126**		**Pn**	**12 51 39.5**	**+0.7**	
MDM	**Murphy Dome**	**6.33**	**109**		**Pn**	**12 51 39.0**	**-0.1**	
PPLA	**Purkeypile**	**6.43**	**133**		**Pn**	**12 51 41.8**	**+1.2**	
COLA	**College**	**6.51**	**109**		**Pn**	**12 51 41.9**	**+0.4**	
POKR	**Poker Plat Res**	**6.54**	**106**		**Pn**	**12 51 42.3**	**+0.4**	
TRF	**Thorofare Moun**	**6.57**	**124**		**Pn**	**12 51 43.1**	**+0.5**	
WRH	**Wood River Hil**	**6.65**	**112**		**Pn**	**12 51 43.4**	**0.0**	
CCB	**Clear Creek Bu**	**6.65**	**110**		**Pn**	**12 51 43.5**	**0.0**	
BM03	**Burnt Mountain**	**6.83**	**84**		**Pn**	**12 51 46.0**	**+0.1**	
IL31		**6.92**	**108**		**Pn**	**12 51 46.8**	**-0.3**	
ILAR	**Eielson Array**	**6.92**	**108**	Pn	**Pn**	**12 51 47.7**	**+0.6**	
	2.0nm,0.3s,baz=301,slow=14,SNR=196							
ILAR				Sn	**Sn**	**12 53 02.9**	**-2.8**	
	0.2nm,0.3s,baz=24,slow=29,SNR=3.6							
PRP	**Porcupine Dome**	**7.06**	**100**		**Pn**	**12 51 49.0**	**-0.3**	
RND	**Reindeer**	**7.07**	**121**		**Pn**	**12 51 49.1**	**-0.1**	
HDA	**Harding Lake**	**7.09**	**110**		**Pn**	**12 51 49.2**	**-0.3**	
WAT2	**Susitna Watana**	**7.46**	**123**		**Pn**	**12 51 55.9**	**+1.2**	
DHY	**Denali Highway**	**7.78**	**119**		**Pn**	**12 51 59.0**	**-0.1**	
DOT	**Dot Lake**	**8.57**	**109**		**Pn**	**12 52 11.9**	**+2.1**	
EPYK	**Eagle Plains**	**10.10**	**85**		**Pn**	**12 52 31.3**	**+0.5**	
INK	**Inuvik**	**10.81**	**73**	Pn	**Pn**	**12 52 39.3**	**-1.1**	
	0.3nm,0.3s,baz=293,slow=8.4,SNR=13							
INK				Sn	Sn	12 54 31.7	-10	
	0.1nm,0.3s,baz=348,slow=8.1,SNR=3.6							
INK	**Inuvik**	**10.81**	**73**		**Pn**	**12 52 38.2**	**-2.2**	
YKA	**Yellowknife Ar**	**20.35**	**82**	P	**P**	**12 54 42.0**	**+0.1**	
	0.1nm,0.3s,baz=304,slow=9.7,SNR=18							
PDAR	**Pinedale Array**	**37.34**	**105**	P	**P**	**12 57 18.9**	**+0.6**	
	0.4nm,0.6s,baz=334,slow=7.5,SNR=1.1							
TXAR	**Lajitas Array**	**51.43**	**107**	P	**P**	**12 59 11.9**	**+1.1**	
	0.6nm,0.6s,baz=322,slow=4.7,SNR=5.7							

*GCG **11** 13:16:19.9±0.8, 12°.90N×88°.51W, h21km, MD4.2*
*SNET **11** 13:16:22.9±0.8, 12°.98N×88°.81W, h61km±7km, ML3.7*
*UCR **11** 13:16:23.1±0.8, 12°.98N×88°.80W, h61km±7km, ML3.7*
*INET **11** 13:16:24.0, 12°.98N×88°.76W, h29km, ML3.4*

ISC 11 13:16:25.4±1.9, 13°.0N±0°.1×88°.76W±0°.05, h51km±13km, n42, σ1§43/51, 2C-16D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALJI	**Alcalda de J**	**0.35**	**31**	↓*i* P	**Pn**	**13 16 34.4**	**-0.7**
ALJI				*e*S	**Sn**	**13 16 43.5**	**+1.5**
ALJI	**Alcalda de J**	**0.35**	**31**	↓*i* P	**Pn**	**13 16 34.4**	**-0.7**
ALJI				*e*S	**Sn**	**13 16 43.5**	**+1.5**
COEB	**Comit de Eme**	**0.52**	**25**	↓*i* P	**P

ILAR	**Eielson Array**	**6.95 108**	Pn	**Pn**	**13 23 53.9**	**+0.3**
	2.5nm,0.3s,baz=301,slow=14,SNR=181						
ILAR			Sn	**Sn**	13 25 09.3	-3.2
	0.6nm,0.3s,baz=299,slow=22,SNR=9.8						
PRP	**Porcupine Dome**	**7.10 100**		**Pn**	**13 23 54.7**	**-1.0**
RND	**Reindeer**	**7.11 121**		**Pn**	**13 23 56.0**	**+0.2**
HDA	**Harding Lake**	**7.13 110**		**Pn**	**13 23 55.9**	**-0.1**
WAT2	**Susitna Watana**	**7.50 123**		**Pn**	**13 24 02.0**	**+0.8**
STLK	**Strandline Lak**	**7.72 139**		**Pn**	**13 24 04.4**	**+0.3**
SPWE	**Spurr West**	**7.73 142**		**Pn**	**13 24 04.3**	**-0.1**
DHY	**Denali Highway**	**7.82 119**		**Pn**	**13 24 05.5**	**-0.1**
GHO	**Glory Hole Cre**	**8.29 129**	Pn	**Pn**	**13 24 12.4**	**+0.4**
PMR	**Palmer**	**8.38 131**	Pn	**Pn**	**13 24 13.6**	**+0.6**
SML	**Sawmill**	**8.44 128**	Pn	**Pn**	**13 24 13.6**	**-0.4**
DOT	**Dot Lake**	**8.61 109**		**Pn**	**13 24 16.2**	**-0.1**
SCM	**Sheep Creek Mo**	**8.73 125**	Pn	**Pn**	**13 24 17.2**	**-0.8**
EGAK	**Eagle**	**9.08 99**	Pn	**Pn**	**13 24 21.8**	**-0.9**
BC03		**9.78 108**		**Pn**	**13 24 30.7**	**-1.6**
DAWY	**Dawson**	**10.10 100**	Pn	**Pn**	**13 24 36.5**	**-0.2**
EPYK	**Eagle Plains**	**10.13 85**		**Pn**	**13 24 36.9**	**-0.2**
YUK1	**Sand Pete Hill**	**10.81 110**		**Pn**	**13 24 46.5**	**+0.1**
INK	**Inuvik**	**10.84 73**	Pn	**Pn**	**13 24 44.9**	**-1.8**
	0.4nm,0.3s,baz=289,slow=11,SNR=19						
INK			Sn	Sn	13 26 37.2	-11
	0.1nm,0.3s,baz=221,slow=3.3,SNR=3.4						
INK	**Inuvik**	**10.84 73**		**Pn**	**13 24 45.8**	**-0.9**
KDAK	**Kodiak Island**	**10.92 151**	Pn	Pn	13 24 51.3	+3.6
	0.2nm,0.3s,baz=0.0,slow=10,SNR=1.9						
YKA	**Yellowknife Ar**	**20.38 82**	P	Pn	13 26 48.0	-2.2
	0.7nm,0.6s,baz=304,slow=9.5,SNR=16						
PDAR	**Pinedale Array**	**37.37 104**	P	**P**	**13 29 25.8**	**+1.2**
	0.3nm,0.5s,baz=343,slow=7.7,SNR=4.4						
TXAR	**Lajitas Array**	**51.47 107**	P	**P**	**13 31 18.1**	**+1.0**
	0.6nm,0.6s,baz=332,slow=6.1,SNR=12						

*MOS **11** 13:30:27.4±1.0,5˙.55N×126˚.55E,h61km,mb5.4/52, Error ellipse: s-maj=8.0km s-min=4.5km az=110.6*

*NEIC **11** 13:30:28.6±1.7,5˙.54N±0˙.06×126˚.58E±0˙.06,h61km±3km, mb5.3/179, Error ellipse: s-maj=9.6km s-min=8.3km az=50.0*

*MAN **11** 13:30:28.2,5˙.41N×126˚.67E,h46km, MS5.7*

*IDC **11** 13:30:29.5±1.0,5˙.54N×126˚.64E,h62km±8km, mb4.8/30, mb1 4.9/34,mb1mx4.8/40,mbtmp5.1/34, MS4.3/13, Ms1 4.3/13,ms1mx4.0/38, Error ellipse: s-maj=13.0km s-min=6.9km az=79.0*

*GCMT **11** 13:30:29.6±0.2,5˙.60N±0˙.01×126˚.60E±0˙.02,h53km±1km, MW5.2/89,Moment Tensor Solution. s67,c93; s89,c118; Duration: 1§0 Moment tensor: Scale 10^16^Nm; Mrr5.53±.32; Mθθ-1.78±.23; Mϕϕ-3.74±.26; Mrθ-2.19±.20; Mθϕ-6.33±.17; Mϕr1.28±.26; Best double couple: M=8.22200×10^16^ NP1:ϕ±11.00000°,δ53.00000°, λ45.00000°. NP2:ϕ±250.00000°,δ56.00000°,λ133.00000°. Principal axes: T 7.2640, Plg55.0000°, Azm218.0000°; N 1.9260, Plg35.0000°, Azm42.0000°; P -9.1800, Plg2.0000°, Azm311.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **11** 13:30:30.6±0.0,5˙.60N×126˚.70E,h80km,mB5.5/31, mb4.9/65,Ms4.8/37,Ms7 4.6/36*

*DJA **11** 13:30:30.9±0.3,6˚N±2˚×12˚7E±˚,h69km±2km,M5.3/104, mB5.7/62,mb5.5/104,MLv5.9/13,Mw(mB)5.3/62,Mwp5.4/3*

ISC 11 13:30:30.5±0.4,5˚.49N±0˚.03×126˚.58E±0˚.04,h75km±3km, h75km:pP-P,n754,σ1§31/820,mb5.2/193,49C-10D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.05**	**305**	*eP*		**Pn**	**13 30 49.0**	**-1.0**
DDMP				*eS*		**Sn**	**13 31 04.0**	**-0.5**
MATI	**Mati**	**1.48**	**348**	*eP*		**Pn**	**13 30 53.7**	**-1.7**
MATI				*eS*		**Sn**	**13 31 16.1**	**+2.0**
DAV	**Davao City (W)**	**1.85**	**328**	P		**Pn**	**13 31 00.3**	**-0.1**
	642nm,0.3s,baz=112,slow=1.3,SNR=250							
DAV				LR		LR	13 31 54.5	
	comp=Z,12µm,21.0s,baz=120,slow=46							
DAV	**Davao City (W)**	**1.85**	**328**	*eP*		Pn	13 30 52.9	-7.5
DAV	**Davao City (W)**	**1.85**	**328**			**Pn**	**13 31 00.2**	**-0.2**
DMPH	**Davao City--Mi**	**1.90**	**326**	*iP*		**Pn**	**13 31 00.5**	**-0.6**
DMPH				*i S*		**Sn**	**13 31 29.9**	**+5.7**
KCP	**Kidapawan**	**2.11**	**316**	*eP*		**Pn**	**13 31 03.7**	**-0.1**
KCP				*i S*		**Sn**	**13 31 35.7**	**+6.4**
SKMP	**Bagumbayan, Su**	**2.27**	**297**	*eP*		**Pn**	**13 31 05.8**	**-0.1**
SKMP				*eS*		**Sn**	**13 31 34.5**	**+1.5**
CTBH	**Cotabato--PC H**	**2.88**	**307**	*iP*		**Pn**	**13 31 14.4**	**+0.2**
CGP	**Cagayan de Oro**	**3.49**	**328**	*iP*		**Pn**	**13 31 23.1**	**+0.6**
CGP				*i S*		**Sn**	**13 32 04.5**	**+1.9**
BUTP	**Butuan**	**3.58**	**345**	*eP*		**Pn**	**13 31 25.3**	**+1.5**
BUTP				*eS*		**Sn**	**13 32 10.7**	**+5.8**
PAGZ	**Pagadian**	**3.94**	**307**	*eP*		**Pn**	**13 31 28.9**	**+0.2**
PAGZ				*eS*		**Sn**	**13 32 13.7**	**-0.1**
DCPH	**Dipolog City**	**4.43**	**314**	*eP*		**Pn**	**13 31 39.4**	**+4.0**
ZCP	**Zamboanga City**	**4.70**	**288**	*iP*		**Pn**	**13 31 40.0**	**+1.0**
ZCP				*i S*		**Sn**	**13 32 35.2**	**+2.9**
TNTI	**Ternate**	**4.76**	**170**	P		**Pn**	**13 31 39.9**	**+0.1**
TNTI				S		**Sn**	**13 32 33.7**	**0.0**
TNTI	**Ternate**	**4.76**	**170**			**Pn**	**13 31 39.3**	**-0.5**
MSLP	**Maasin**	**4.92**	**340**	*eP*		**Pn**	**13 31 42.3**	**+0.3**
MSLP				*eS*		**Sn**	**13 32 40.0**	**+2.4**
TBP	**Tagbilaran**	**4.96**	**327**	*iP*		**Pn**	**13 31 46.6**	**+4.0**
SNPH	**Sibulan**	**5.06**	**319**	*eP*		**Pn**	**13 31 46.0**	**+2.0**
LLP	**Lapu-Lapu**	**5.45**	**332**	*eP*		**Pn**	**13 31 49.8**	**+0.5**
LLP				*eS*		**Sn**	**13 32 57.1**	**+6.5**
KMSI	**Cibinong**	**5.53**	**208**	P		**Pn**	**13 31 52.0**	**+1.6**
	9.6nm11µm1µm,0.6s							
CNOP	**Candoni, Negro**	**5.81**	**318**	*eP*		**Pn**	**13 31 55.0**	**+0.8**
CNOP				*eS*		**Sn**	**13 32 57.9**	**-1.7**
OCLP	**Ormoc**	**5.86**	**341**	*eP*		**Pn**	**13 31 56.8**	**+2.0**
OCLP				*eS*		Sn	13 33 10.8	+10
LBMI	**Labuha**	**6.16**	**171**	P		**Pn**	**13 31 59.4**	**+0.4**
	7.3nm12µm2µm,1.0s							
GUIM	**Jordan**	**6.45**	**322**	*eP*		**Pn**	**13 32 02.9**	**-0.1**
MRSI	**Marisa**	**6.80**	**223**	P		**Pn**	**13 32 08.8**	**+1.0**
	6.3nm15µm2µm,0.6s							
JAP	**San Jose, Anti**	**6.95**	**319**	*eP*		**Pn**	**13 32 12.1**	**+2.4**
RCP	**Roxas**	**7.12**	**328**	*eP*		**Pn**	**13 32 13.3**	**+1.2**
CNP	**Catarman**	**7.22**	**345**	*eP*		**Pn**	**13 32 14.8**	**+1.3**
CNP				*eS*		**Sn**	**13 33 35.7**	**+1.6**
SANI	**Sanana**	**7.52**	**185**	P		**Pn**	**13 32 14.6**	**-2.9**
	3.1nm8µm451nm,0.7s							
LUWI	**Luwuk**	**7.52**	**210**	P		**Pn**	**13 32 21.6**	**+4.0**
	5.7nm16µm2µm,0.7s							
LUWI	**Luwuk**	**7.52**	**210**			**Pn**	**13 32 15.8**	**-1.8**
CUYO	**Cuyo Island**	**7.66**	**314**	*eP*		**Pn**	**13 32 19.8**	**+0.4**
SIJI	**Sorong**	**7.87**	**143**	P		**Pn**	**13 32 20.8**	**-1.5**
	22nm,0.3s,baz=335,slow=11,SNR=114							
SIJI				S		**Sn**	**13 33 45.8**	**-4.1**
	2.4nm,0.3s,baz=352,slow=23,SNR=1.4							
APSI	**Ampana**	**8.04**	**218**	P		**Pn**	**13 32 28.5**	**+3.8**
	7µm946nm,1.1s							
MPSI	**Mapaga**	**8.41**	**233**	P		**Pn**	**13 32 29.4**	**-0.3**
	2µm262nm,0.8s							
NLAI	**Namlea**	**8.69**	**177**	P		**Pn**	**13 32 32.3**	**-1.3**
	8µm333nm,0.5s							
SJMP	**San Jose**	**8.77**	**322**	*eP*		**Pn**	**13 32 37.3**	**+2.7**
ENPP	**El Nido**	**9.07**	**309**	*eP*		**Pn**	**13 32 38.0**	**-0.8**
MSAI	**Masohi**	**9.09**	**165**	P		**Pn**	**13 32 40.5**	**+1.5**
	2µm163nm,1.6s							
AAI	**Ambon**	**9.26**	**170**	P		**Pn**	**13 32 41.2**	**-0.2**
	4µm268nm,1.5s							
BATP	**Bataraza**	**9.31**	**291**	*eP*		**Pn**	**13 32 39.2**	**-2.8**
PGP	**Puerto Galera**	**9.70**	**326**	*eP*		**Pn**	**13 32 50.0**	**+2.7**
LQP	**Lukban**	**9.90**	**330**	*eP*		**Pn**	**13 32 52.5**	**+2.3**
FAKI	**Fak Fak**	**10.10**	**146**	P		**Pn**	**13 32 54.1**	**+1.3**
	4µm329nm,0.9s							
FAKI	**Fak Fak**	**10.10**	**146**			**Pn**	**13 32 50.4**	**-2.4**
TGY	**Tagaytay City**	**10.20**	**327**	P		**Pn**	**13 32 54.9**	**+0.7**
	102nm,0.3s,baz=303,slow=5.3,SNR=7.7							
TGY				LR		LR	13 37 29.6	
	comp=Z,2µm,20.8s,baz=114,slow=41							
LUBP	**Lubang**	**10.29**	**323**	*eP*		**Pn**	**13 32 57.7**	**+2.3**
RKPI	**Ransiki, Papua**	**10.30**	**132**	P		**Pn**	**13 32 58.4**	**+2.9**
	11µm593nm,1.2s							
KKM	**Kota Kinabalu**	**10.33**	**274**			**Pn**	**13 32 58.4**	**+2.4**
BNDI	**Bandanaira**	**10.49**	**161**	P		**Pn**	**13 32 59.6**	**+1.5**
	9µm688nm,1.2s							
TTSI	**Tana Toraja**	**10.84**	**219**	P		**Pn**	**13 33 06.7**	**+3.8**
	3µm371nm,0.9s							
SMKI	**Samarinda**	**11.06**	**238**	P		**Pn**	**13 33 09.1**	**+3.1**
	6µm554nm,1.0s							
BALP	**Baler**	**11.31**	**335**	*eP*		**Pn**	**13 33 09.3**	**+0.1**
SPSI	**Sidrap Palu**	**11.60**	**216**	P		**Pn**	**13 33 15.2**	**+1.9**
	2µm163nm,0.8s							
BNSI	**Bone**	**11.76**	**213**	P		**Pn**	**13 33 18.0**	**+2.5**
	2µm189nm,1.0s							
BKB	**Balikpapan**	**11.77**	**236**	P		**Pn**	**13 33 16.3**	**+0.7**
	9µm1µm,1.1s							
BKB	**Balikpapan**	**11.77**	**236**			**Pn**	**13 33 15.8**	**+0.2**
SMPP	**San Manuel, Pa**	**12.07**	**332**	*eP*		**Pn**	**13 33 23.0**	**+3.3**
SRPI	**Serui, Papua**	**12.11**	**127**	P		**Pn**	**13 33 20.8**	**+0.6**
	1.2nm,0.9s							
KAPI	**Kappang**	**12.47**	**213**	P		**Pn**	**13 33 26.1**	**+1.0**
	3.6nm,0.3s,baz=16,slow=8.7,SNR=56							
KAPI				LR		LR	13 38 39.5	
	comp=Z,992nm,21.6s,baz=42,slow=39							
KAPI	**Kappang**	**12.47**	**213**	P		**Pn**	**13 33 25.5**	**+0.4**
KAPI	**Kappang**	**12.47**	**213**			**Pn**	**13 33 25.5**	**+0.4**
BKSI	**Bulukumba**	**12.53**	**211**	P		**Pn**	**13 33 25.7**	**-0.2**
	862nm116nm,1.0s							
APYP	**Conner**	**13.35**	**337**	*eP*		**Pn**	**13 33 38.1**	**+1.2**
KBKI	**Kotabaru**	**13.58**	**230**	P		**P**	**13 33 43.7**	**-2.7**
	1µm151nm,1.0s							
SMPI	**Sarmi**	**14.22**	**121**	P		**Pn**	**13 33 48.9**	**+0.6**
	2µm143nm,1.2s							
SBUM	**Sibu**	**14.64**	**259**	P		**P**	**13 33 57.0**	**-1.2**
MMRI	**Maumere**	**14.69**	**197**	P		**Pn**	**13 33 54.5**	**0.0**
	5µm552nm,0.8s							
MMRI	**Maumere**	**14.69**	**197**	Pn		**Pn**	**13 33 52.8**	**-1.7**
EDFI	**Ende, Flores**	**14.96**	**199**	P		**Pn**	**13 33 55.9**	**-2.2**
	2µm187nm,0.9s							
SOEI	**Soe**	**15.32**	**189**	P		**P**	**13 34 07.5**	**+1.6**
	4µm456nm,0.8s							
SOEI	**Soe**	**15.32**	**189**	Pn		**Pn**	**13 34 01.2**	**-1.5**
GENI	**Genyem**	**15.77**	**120**	P		**Pn**	**13 34 09.0**	**+0.7**
	3µm178nm,1.4s							
BATI	**Baumata**	**15.87**	**191**	P		**Pn**	**13 34 10.1**	**+0.6**
	39nm,0.3s,baz=316,slow=0.5,SNR=68							
BATI				S		**Sn**	**13 37 07.4**	**+2.6**
	1.2nm,0.3s,baz=284,slow=23,SNR=1.7							
BATI	**Baumata**	**15.87**	**191**	P		**P**	**13 34 12.0**	**+0.2**
	3µm466nm,0.9s							
JAY	**Jayapura**	**16.20**	**119**	P		**Pn**	**13 34 12.1**	**-1.7**
	0.2nm,0.3s,baz=2.8,slow=17,SNR=2.3							
JAY				LR		LR	13 40 14.4	
	comp=Z,869nm,20.0s,baz=324,slow=36							
JAY	**Jayapura**	**16.20**	**119**	P		**P**	**13 34 16.9**	**+1.3**
	682nm44nm,0.9s							
WBSI	**Waikabubak, Su**	**16.65**	**205**	P		**Pn**	**13 34 19.9**	**+0.5**
	4µm578nm,0.8s							
BASI	**Baing, Sumba**	**16.71**	**201**	P		**P**	**13 34 26.9**	**+5.7**
PLAI	**Plampang**	**16.71**	**212**	P		**Pn**	**13 34 20.4**	**+0.3**
	4µm504nm,0.9s							
KSM	**Kuching**	**16.72**	**257**			**P**	**13 34 22.3**	**+1.0**
KSM					IAmb	IAmb	13 34 27.9	
	comp=Z,237nm,0.7s							
SRBI	**Singaraja**	**17.62**	**220**	P		**Pn**	**13 34 31.3**	**+0.1**
	comp=Z,3µmcomp=Z,409nm,1.0s							
KMMI	**Kalianget**	**17.71**	**225**	P		**Pn**	**13 34 34.8**	**+2.5**
	comp=Z,250nm,0.9s							
TWG	**Pinlang**	**18.03**	**343**	P		**P**	**13 34 35.3**	**-0.4**
DNP	**Denpasar**	**18.07**	**219**	P		**Pn**	**13 34 39.3**	**+2.6**
	comp=Z,2µm,1.1s							
YULB	**Yu-li**	**18.51**	**345**	P		**P**	**13 34 40.1**	**-0.9**
JAGI	**Jajag, Banyuwa**	**18.60**	**222**	P		**Pn**	**13 34 43.7**	**+0.6**
	comp=Z,3µmcomp=Z,254nm,0.9s							
JAGI	**Jajag, Banyuwa**	**18.60**	**222**	P		**P**	**13 34 42.2**	**+0.2**
JAGI					IAmb	IAmb	13 34 49.5	
	comp=Z,192nm,0.8s							
TPUB	**Ta-pu**	**18.61**	**343**	P		**P**	**13 34 41.2**	**-0.8**
GRJI	**Gresik**	**18.71**	**229**	P		**Pn**	**13 34 44.8**	**+0.5**
	comp=Z,2µmcomp=Z,288nm,0.8s							
MTN	**Manton Dam**	**18.77**	**166**	P		**P**	**13 34 43.0**	**-0.8**
	baz=19,SNR=27							
MTN	**Manton Dam**	**18.77**	**166**	P		**P**	**13 34 42.7**	**-1.2**
MTN					IAmb	IAmb	13 34 51.3	
	comp=Z,137nm,0.9s							
SSLB	**Suanglung**	**18.98**	**344**	P		**P**	**13 34 43.8**	**-2.3**
KDU	**Kakadu**	**18.99**	**162**	P		**P**	**13 34 45.8**	**-0.4**
	baz=19,SNR=40							
UWJI	**Ujung Watu**	**19.58**	**233**	P		**Pn**	**13 34 55.2**	**+0.5**
	comp=Z,3µmcomp=Z,324nm,1.0s							
YHNB	**Yeheng**	**19.71**	**346**	P		**P**	**13 34 52.3**	**-1.8**
PWJI	**Pagerwojo**	**19.94**	**228**	P		**P**	**13 34 57.3**	**+0.7**
	comp=Z,137nm,1.0s							
SMRI	**Semarang**	**20.36**	**232**	P		Pn	13 35 04.0	+0.1
	comp=Z,488nm,1.0s							
SMRI	**Semarang**	**20.36**	**232**	Pn		Pn	13 35 02.7	-1.2
WOJI	**Wonogiri, Jawa**	**20.48**	**230**	P		**P**	**13 35 03.7**	**+1.3**
	comp=Z,2µmcomp=Z,148nm,1.0s							
PCJI	**Pacitan**	**20.52**	**229**	P		**P**	**13 35 04.0**	**+1.2**
	comp=Z,196nm,0.7s							
QZH	**Quanzhou**	**20.80**	**339**	P		Pn	13 35 10.6	+1.6
QZH					pmax	pmax		
	comp=Z,59nm,0.8s							
QZH					LR	LR		
	comp=Z,1µm,15.6s							
QZH					LR	LR		
	comp=Z,700nm,16.4s							
QZH					LR	LR		
	comp=Z,1µm,19.7s							
UGM	**Wanagama**	**20.83**	**230**	P		Pn	13 35 08.7	-0.7
	comp=Z,258nm,1.1s							
UGM	**Wanagama**	**20.83**	**230**	P		**P**	**13 35 06.3**	**0.0**
KNRA	**Kununurra**	**21.14**	**174**	P		**P**	**13 35 10.4**	**+0.8**
	baz=21,SNR=159							
KNRA	**Kununurra**	**21.14**	**174**	P		**P**	**13 35 10.1**	**+0.6**
QIZ	**Qiongzhong**	**21.14**	**311**	P		**P**	**13 35 08.5**	**-1.1**
QIZ					S	**S**	**13 39 00.4**	**-0.4**
QIZ					pmax	pmax		
	comp=Z,14nm,1.4s							
QIZ	**Qiongzhong**	**21.14**	**311**	P		**P**	**13 35 08.4**	**-1.1**
JOW	**Kunigarsi**	**21.28**	**4**	P		**P**	**13 35 08.2**	**-2.8**
TPRI	**Tanjung Pinang**	**22.48**	**259**	P		**P**	**13 35 25.0**	**+1.1**
	comp=Z,31µmcomp=Z,87nm,1.0s							
LEM	**Lembang**	**22.54**	**237**	P		**P**	**13 35 25.6**	**+0.9**
	comp=Z,325nm,0.9s,baz=66,slow=8.1,SNR=50							
LEM					LR	LR	13 46 23.6	
	comp=Z,586nm,19.2s,baz=61,slow=42							
LEM	**Lembang**	**22.54**	**237**	P		**P**	**13 35 25.5**	**+0.8**
	comp=Z,2µmcomp=Z,174nm,0.8s							
CISI	**Cisompet, Garu**	**22.77**	**235**	P		**P**	**13 35 26.1**	**-1.0**
	comp=Z,3µmcomp=Z,420nm,0.9s							
CISI	**Cisompet, Garu**	**22.77**	**235**	P		**P**	**13 35 25.8**	**-1.3**
CBJI	**Citeko**	**22.98**	**239**	P		**P**	**13 35 29.7**	**+0.6**
	comp=Z,8µmcomp=Z,746nm,0.9s							
MYKOM	**Kota Tinggi**	**22.98**	**262**	P		**P**	**13 35 29.3**	**+0.2**
CNJI	**Cibinong**	**23.20**	**237**	P		**P**	**13 35 30.5**	**-0.8**
	comp=Z,4µmcomp=Z,378nm,1.1s							
PMBI	**Palembang**	**23.33**	**250**	P		**P**	**13 35 35.3**	**+2.8**
	comp=Z,15µmcomp=Z,2µm,0.9s							
PMBI	**Palembang**	**23.33**	**250**	P		**P**	**13 35 33.6**	**+1.1**
FITZ	**Fitzroy Crossi**	**23.46**	**182**	P		**P**	**13 35 33.3**	**-0.3**
	baz=24,SNR=166							
FITZ	**Fitzroy Crossi**	**23.46**	**182**	P		**P**	**13 35 34.2**	**+0.6**
	comp=Z,43nm,0.6s,baz=5.6,slow=6.9,SNR=210							
FITZ					S	**S**	**13 39 42.9**	**+1.4**
	comp=Z,11nm,0.8s,baz=162,slow=21,SNR=2.4							
FITZ					ScP	**ScP**	**13 42 51.9**	**+2.5**
	comp=Z,5.9nm,0.9s,baz=349,slow=5.2,SNR=2.6							
FITZ	**Fitzroy Crossi**	**23.46**	**182**	P		**P**	**13 35 33.4**	**-0.2**
FITZ					IAmb	IAmb	13 36 12.3	
	comp=Z,89nm,0.9s							
BLSI	**Bandar Lampung**	**23.88**	**243**	P		**P**	**13 35 38.6**	**+1.2**
	comp=Z,173nm,1.0s							
MDSI	**Maura Dua**	**24.47**	**247**	P		**P**	**13 35 43.2**	**+0.4**
	comp=Z,1µmcomp=Z,154nm,1.1s							
KASI	**Kota Agung**	**24.61**	**244**	P		**P**	**13 35 45.5**	**+1.4**
	comp=Z,355nm,0.9s							
LWLI	**Liwa**	**24.79**	**245**	P		**P**	**13 35 46.1**	**+0.2**
	comp=Z,12µmcomp=Z,249nm,0.8s							
COEN	**Coen**	**25.39**	**140**	P		**P**	**13 35 51.3**	**+0.2**
	baz=25,SNR=11							
COEN	**Coen**	**25.39**	**140**	P		**P**	**13 35 49.7**	**-1.5**
IPM	**Ipoh**	**25.48**	**269**	P		**P**	**13 35 51.7**	**-0.3**
IPM					IAmb	IAmb	13 35 55.4	
	comp=Z,136nm,1.3s							
MNAI	**Manna**	**25.54**	**248**	P		**P**	**13 35 54.0**	**+1.4**
	comp=Z,5µmcomp=Z,369nm,1.1s							
MNAI	**Manna**	**25.54**	**248**	P		**P**	**13 35 52.7**	**+0.1**
KSI	**Kapahiang**	**25.62**	**250**	P		**P**	**13 35 54.7**	**+1.4**
	comp=Z,8µmcomp=Z,288nm,1.3s							
MASI	**Maura Aman, Be**	**25.78**	**251**	P		**P**	**13 35 57.5**	**+2.7**
	comp=Z,7µmcomp=Z,701nm,0.8s							
KULM	**Kulim**	**25.81**	**271**	P		**P**	**13 35 54.5**	**-0.6**
SDSI	**Sungai Dareh**	**25.92**	**256**	P		**P**	**13 35 57.3**	**+1.4**
	comp=Z,2µmcomp=Z,158nm,1.1s							
BKNI	**Bangkinang**	**26.01**	**259**	P		**P**	**13 35 57.2**	**+0.4**
	comp=Z,4µmcomp=Z,185nm,1.0s							
BKNI	**Bangkinang**	**26.01**	**259**	P		**P**	**13 35 56.5**	**-0.3**
BKNI					IAmb	IAmb	13 36 24.8	
	comp=Z,141nm,0.9s							
JCJ	**Chichijima**	**26.13**	**33**	P		**P**	**13 35 55.6**	**-2.1**
	comp=Z,60nm,0.5s,baz=292,slow=15,SNR=16							
KRJI	**Kerinci**	**26.19**	**254**	P		**P**	**13 36 00.0**	**+1.4**
	comp=Z,4µmcomp=Z,207nm,1.2s							
XMIS	**Christmas Isla**	**26.19**	**233**	P		**P**	**13 35 57.4**	**-1.0**
XMIS					IAmb	IAmb	13 36 02.6	
	comp=Z,102nm,0.8s							
WB0	**Warramunga Arr**	**26.25**	**163**	P		**P**	**13 35 58.0**	**-0.9**
WB0					IAmb	IAmb	13 36 32.0	
	comp=Z,116nm,0.8s							
WRAB	**Tennant Creek**	**26.40**	**163**	P		**P**	**13 35 59.8**	**-0.4**
WRAB					pmax	pmax		
	comp=Z,93nm,0.8s							
WRAB	**Tennant Creek**	**26.40**	**163**	P		**P**	**13 35 59.8**	**-0.4**
WRAB					IAmb	IAmb	13 36 33.2	
	comp=Z,93nm,0.8s							
WRA	**Warramunga Arr**	**26.40**	**163**	P		**P**	**13 35 59.9**	**-0.4**
	comp=Z,22nm,1.0s,baz=340,slow=10,SNR=92							
WRA					PcP	**PcP**	**13 39 25.4**	**+1.2**
	comp=Z,12nm,0.7s,baz=336,slow=2.9,SNR=4.7							
WRA					S	**S**	**13 40 28.9**	**+0.4**
	comp=Z,1.7nm,0.9s,baz=285,slow=32,SNR=1.8							
WRA					ScP	**ScP**	**13 42 58.7**	**+1.0**
	comp=Z,6.5nm,0.8s,baz=343,slow=3.4,SNR=5.5							
WRA					LR	LR	13 47 57.7	
	comp=Z,385nm,20.6s,baz=35,slow=40							
WB2	**Warramunga Arr**	**26.41**	**163**	P		**P**	**13 35 59.8**	**-0.5**
WB2					IAmb	IAmb	13 36 18.4	
	comp=Z,94nm,0.8s							
WR0	**Warramunga Arr**	**26.48**	**163**	P		**P**	**13 36 00.2**	**-0.7**
WR0					IAmb	IAmb	13 36 10.1	
	comp=Z,81nm,0.8s							
PDSI	**Padang**	**26.85**	**257**	P		**P**	**13 36 07.0**	**+2.6**
	comp=Z,1µmcomp=Z,104nm,1.1s							
MBWA	**Marble Bar**	**27.33**	**194**	P		**P**	**13 36 08.9**	**+0.4**
MNSI	**Mandailing Nat**	**27.35**	**261**	P		**P**	**13 36 09.3**	**+0.4**
	comp=Z,62nm,0.8s							
NJ2	**Nanjing**	**27.39**	**346**	*eP*		**P**	**13 36 09.0**	**0.0**
NJ2					pmax	pmax		
	comp=Z,28nm,0.6s							
NJ2					LR	LR		
	comp=Z,640nm,16.4s							
NJ2					LR	LR		
	comp=Z,1µm,16.2s							
NJ2					LR	LR		
	comp=Z,750nm,18.0s							
PBKT	**Sadao Pong**	**27.40**	**296**	P		**P**	**13 36 08.7**	**-0.6**
WHN	**Wuhan**	**27.45**	**337**	*iP*		**P**	**13 36 12.0**	**+2.5**
WHN					LR	LR		
	comp=Z,2µm,13.1s							
WHN					LR	LR		
	comp=Z,1µm,17.7s							
WHN					LR	LR		
	comp=Z,2µm,16.9s							
PSAA2	**Pilbara Seismi**	**27.69**	**194**	P		**P**	**13 36 11.7**	**0.0**
PSA00	**Pilbara Seismi**	**27.70**	**194**	P		**P**	**13 36 11.7**	**-0.1**
PSA00					IAmb	IAmb	13 36 14.5	
	comp=Z,115nm,0.8s							
PSI	**Prapat**	**27.71**	**266**	P		**P**	**13 36 12

MAT Matsushiro 32.69 17 P **P** 13 36 54.1 -1.7
MAT *eS* **S** 13 42 06.0 -0.8
MJAR Matsushiro Arr 32.69 17 P **P** 13 36 54.8 -1.0
comp=Z,1.2nm,0.6s,baz=196,slow=9.4,SNR=10
MJAR PcP **PcP** 13 39 40.8 +0.7
comp=Z,1.1nm,0.8s,baz=187,slow=4.4,SNR=2.9
MJAR ScP **ScP** 13 43 20.6 +3.0
comp=Z,1.9nm,0.8s,baz=193,slow=3.1,SNR=6.6
MJAR LR LR 13 48 30.2
comp=Z,419nm,21.8s,baz=200,slow=33
XAN Xi'an 32.79 332 P **P** 13 36 55.6 -1.1
XAN pmax pmax
comp=Z,48nm,0.7s
XAN Xi'an 32.79 332 P **P** 13 36 55.6 -1.1
XAN IAmb IAmb 13 37 24.2
comp=Z,48nm,0.7s
MEEK Meekatharra 32.86 193 P **P** 13 36 57.8 +0.4
baz=33,SNR=66
CD2 Chengdu 33.15 322⇑ *i*P **P** 13 36 59.7 -0.3
CD2 S **S** 13 42 14.0 -0.2
CD2 pmax pmax
comp=Z,20nm,0.7s
CD2 LR LR
comp=Z,1μm,18.8s
CD2 LR LR
comp=Z,1μm,15.9s
CD2 LR LR
comp=Z,1μm,19.0s
PBA Port Blair 33.99 283 P P 13 37 06.3 -1.1
BJT Baijiatuau 35.63 346 P **P** 13 37 20.6 -0.6
BJT pmax pmax
comp=Z,51nm,1.0s
BJT Baijiatuau 35.63 346 P **P** 13 37 20.6 -0.6
BJT IAmb IAmb 13 37 38.0
comp=Z,51nm,1.0s
BJI Beijing 35.65 346 P **P** 13 37 22.1 +0.8
BJI pmax pmax
comp=Z,27nm,0.9s
MORW Morawa 35.83 196 P **P** 13 37 23.5 +0.6
baz=36,SNR=32
MORW Morawa 35.83 196 P **P** 13 37 23.2 +0.2
FORT Forrest 36.09 178 P **P** 13 37 26.0 +0.8
baz=36,SNR=16
FORT Forrest 36.09 178 P **P** 13 37 25.6 +0.4
QLP Quilpie 36.19 153 P **P** 13 37 26.6 +0.6
baz=36,SNR=9.7
SNY Shenyang 36.28 356⇓ P P 13 37 35.2 +8.5
SNY pmax pmax
comp=Z,380nm,1.1s
LZH Lanzhou 36.92 329⇑ P **P** 13 37 33.3 +0.8
LZH pP pP 13 37 52.6 +2.5
LZH sP sP 13 37 58.8 +0.1
LZH PP **PnPn** 13 39 00.8 +1.9
LZH pmax pmax
comp=Z,27nm,1.1s
LZH pmax pmax
comp=Z,650nm,4.3s
LZH LR LR
comp=Z,770nm,16.1s
LZH LR LR
comp=Z,1μm,17.1s
LZH LR LR
comp=Z,2μm,17.7s
KMBL Kambalda 36.93 187 P **P** 13 37 33.2 +0.9
baz=37,SNR=22
BLDU Ballidu 37.13 194 P **P** 13 37 34.6 +0.6
baz=37,SNR=36
HHC Hu-ho-hao-te 37.69 341 *e*P **P** 13 37 39.5 +0.7
HHC pmax pmax
comp=Z,13nm,0.6s
HHC pmax pmax
comp=Z,430nm,6.3s
KLBR Kellerberrin 37.83 192 P **P** 13 37 40.6 +0.7
baz=38,SNR=4.9
BTO Baotou 37.99 339 *e*P **P** 13 37 39.9 -1.4
CN2 Changchun 38.16 359 *e*P **P** 13 37 43.2 +0.6
CN2 pmax pmax
comp=Z,10.0nm,0.7s
RMQ Roma 38.37 147 P **P** 13 37 45.1 +0.4
baz=38,SNR=5.6
MUN Mundaring 38.55 194 P **P** 13 37 46.8 +0.8
baz=39,SNR=37
EIDS Eidsvold 38.84 143 P **P** 13 37 48.6 +0.1
baz=39,SNR=6.7
EIDS Eidsvold 38.84 143 P **P** 13 37 47.8 -0.7
EIDS IAmb IAmb 13 37 56.3
comp=Z,38nm,1.1s
USA0B Ussuriysk Arra 38.84 6 P **P** 13 37 47.3 -1.0
USA0B pmax pmax
comp=Z,12nm,0.8s
USA0B Ussuriysk Arra 38.84 6 P **P** 13 37 47.3 -1.0
USRK Ussuriysk Ar. 38.84 6 P **P** 13 37 47.5 -0.8
comp=Z,4.0nm,0.6s,baz=187,slow=9.1,SNR=10
USRK LR LR 13 52 23.4
comp=Z,666nm,21.7s,baz=192,slow=34
MDJ Mudanjiang 39.06 3 P **P** 13 37 49.1 -1.0
MDJ IAmb IAmb 13 37 59.9
comp=Z,36nm,1.0s
BBOO Buckleboo 39.14 167 P **P** 13 37 52.0 +1.0
baz=39,SNR=76
BBOO Buckleboo 39.14 167 P **P** 13 37 51.0 +0.1
NWAO Narrogin (SRO) 39.23 192 P **P** 13 37 52.8 +1.1
baz=40,SNR=43
NWAO Narrogin (SRO) 39.23 192 PcP **PcP** 13 40 00.3 +0.8
comp=Z,22nm,0.7s,baz=112,slow=3.5,SNR=3.7
NWAO Narrogin (SRO) 39.23 192 P **P** 13 37 52.0 +0.3
NWAO 13 40 00.4
NWAO pmax pmax
comp=Z,64nm,0.7s
NWAO Narrogin (SRO) 39.23 192 P **P** 13 37 52.0 +0.3
STKA Stephens Creek 39.82 160 P **P** 13 37 57.7 +1.1
baz=40,SNR=28
STKA Stephens Creek 39.82 160 P **P** 13 37 57.7 +1.1
comp=Z,67nm,0.8s,baz=335,slow=8.4,SNR=144
STKA PcP **PcP** 13 40 02.6 +1.2
comp=Z,13nm,0.6s,baz=327,slow=3.9,SNR=3.2
STKA Stephens Creek 39.82 160 P **P** 13 37 57.0 +0.3
TEY Ternei 40.35 11⇑ *e*P **P** 13 38 02.1 +1.3
TEY pmax pmax
comp=N,10.0nm,0.8s
TEY pmax pmax
comp=Z,10.0nm,0.8s
HTT Hallett 40.44 164 P **P** 13 38 03.2 +1.4
baz=41,SNR=32
RKGY Rocky Gully 40.90 192 P **P** 13 38 07.9 +2.4
baz=41,SNR=14
CMSA Cobar Meteorol 41.09 155 P **P** 13 38 08.2 +1.1
baz=41,SNR=14
LSA Lhasa 41.18 310 P **P** 13 38 09.4 +0.9
LSA Lhasa 41.18 310 P **P** 13 38 07.3 -1.2
LSA pmax pmax
comp=Z,14nm,0.5s
LSA Lhasa 41.18 310 P **P** 13 38 07.3 -1.2
H11S3 WAKE ISLAND Hy 41.19 68 T T 14 22 12.9
baz=257,slow=75,SNR=37
H11S1 WAKE ISLAND Hy 41.21 68 T T 14 22 14.0
baz=257,slow=75,SNR=21
H11S2 WAKE ISLAND Hy 41.21 68 T T 14 22 13.4
baz=257,slow=75,SNR=22
GTA Gaotai 41.52 328⇑ P **P** 13 38 11.1 +0.4
GTA pP pP 13 38 28.2 -0.5
GTA sP sP 13 38 36.3 -0.9
GTA PcP **PcP** 13 40 09.2 +2.2
GTA ScP **ScP** 13 43 53.6 +2.9
GTA PcS **PcS** 13 43 58.4 -0.1
GTA ScS **ScS** 13 48 08.5 +1.2
GTA pmax pmax
comp=Z,6.0nm,0.9s
GTA LR LR
comp=Z,450nm,18.4s
GTA LR LR
comp=Z,970nm,19.0s
GTA LR LR
comp=Z,1μm,20.9s
H11N1 WAKE ISLAND Hy 41.67 66 T T 14 22 47.5
baz=254,slow=75,SNR=49
H11N2 WAKE ISLAND Hy 41.68 66 T T 14 22 48.7
baz=254,slow=75,SNR=51
H11N3 WAKE ISLAND Hy 41.69 66 T T 14 22 50.5
baz=254,slow=75,SNR=42
TAPN Taplejung 42.87 305 *e*P **P** 13 38 22.0 -0.1
ODAN Odare 42.95 304 *e*P **P** 13 38 22.9 +0.3
comp=Z,113nm,0.9s
ARMA Armidale 43.02 148 P **P** 13 38 24.5 +1.5
baz=43,SNR=6.8
ARMA Armidale 43.02 148 P **P** 13 38 23.3 +0.3
ARMA IAmb IAmb 13 38 31.1
comp=Z,31nm,0.7s
BOK Bokaro 43.15 299 *ex* **P** 13 38 25.4 +1.4
BOK IAmb IAmb 13 38 37.0
comp=Z,18nm,1.1s
BOK *i* x x 13 40 12.9
YSS Yuzh-Sakhalins 43.60 16 *e*P **P** 13 38 27.8 +0.6
YSS *e* 13 38 46.4
YSS *e**PP **pwP** 13 38 50.4 +1.1
YSS *eS* **S** 13 44 50.7 -0.4
YSS pmax pmax
comp=Z,20μm,0.7s
YSS MLR MLR
comp=Z,500nm,15.0s
YSS Yuzh-Sakhalins 43.60 16 P **P** 13 38 25.8 -1.5
RAMN Ramite 43.63 304 *e*P **P** 13 38 28.3 +0.1
comp=Z,104nm,0.8s
KLR Kul'dur 43.80 5*ce*P **P** 13 38 28.1 -0.8
KLR pmax pmax
comp=Z,11nm,0.8s
HIA Hailar 44.00 354 P **P** 13 38 30.3 -0.2
HIA pmax pmax
comp=Z,34nm,1.3s
HIA Hailar 44.00 354 P **P** 13 38 30.2 -0.2
JIRN Jiri 44.24 305 *e*P **P** 13 38 33.0 -0.2
ARPS Mount Arapiles 44.40 162 P **P** 13 38 35.6 +1.8
baz=45,SNR=46
GUN Gumba 44.59 305 *e*P **P** 13 38 35.8 -0.1
comp=Z,132nm,0.8s
PKI Pulchoki 44.85 304 *e*P **P** 13 38 37.1 -0.9
PKIN Phulchoki 44.86 304 *e*P **P** 13 38 37.1 -0.9
KKN Kakani 45.03 304 *e*P **P** 13 38 39.0 -0.3
comp=Z,119nm,1.0s
DMN Daman 45.11 304 *e*P **P** 13 38 39.4 -0.6
comp=Z,118nm,1.0s
ULN Ulaanbaatar 45.41 342*ce*P **P** 13 38 43.2 +1.3
ULN pmax pmax
comp=Z,28nm,1.7s
ULN Ulaanbaatar 45.41 342 P **P** 13 38 40.7 -1.2
ULN IAmb IAmb 13 38 52.4
comp=Z,42nm,0.9s
SONM Songino Array 45.59 341 P **P** 13 38 44.0 +0.7
comp=Z,5.2nm,0.8s,baz=158,slow=7.9,SNR=20
SONM PcP **PcP** 13 40 21.5 +0.9
comp=Z,8.2nm,0.8s,baz=153,slow=3.4,SNR=5.6
SONM ScP **ScP** 13 44 09.2 +2.1
comp=Z,0.6nm,0.7s,baz=143,slow=1.2,SNR=4.0
GKN Gorkha 45.64 304 *e*P **P** 13 38 43.4 -0.7
comp=Z,99nm,1.0s
CAN Canberra 45.75 154 P **P** 13 38 44.0 -0.6
CAN pmax pmax
comp=Z,31nm,0.8s
CAN Canberra 45.75 154 P **P** 13 38 44.0 -0.6
CAN IAmb IAmb 13 39 08.4
comp=Z,31nm,0.8s
CNB Canberra Magne 45.91 154 P **P** 13 38 48.3 +2.5
baz=46,SNR=4.2
TOO Toolangi 46.33 159 P **P** 13 38 50.9 +1.8
baz=46,SNR=7.4
TOO Toolangi 46.33 159 P **P** 13 38 49.1 0.0
TOO pmax pmax
comp=Z,28nm,0.9s
TOO Toolangi 46.33 159 P **P** 13 38 49.1 0.0
TOO IAmb IAmb 13 39 18.0
comp=Z,28nm,0.9s
KOLN Koldanda 46.41 303 *e*P **P** 13 38 49.6 -0.6
DANN Dangsing 46.49 304 *e*P **P** 13 38 50.5 -0.4
comp=Z,229nm,0.7s
PYUN Piuthan 47.04 304 *e*P **P** 13 38 54.9 -0.2
comp=Z,329nm,0.9s
DZM Mont Dzumac 47.68 126 P **P** 13 39 00.3 +0.3
comp=Z,7.9nm,0.7s,baz=178,slow=4.8,SNR=2.8
ZEA Zeya 48.10 1 *e*P **P** 13 39 03.0 +0.4
ZEA pmax pmax
comp=Z,36nm,1.2s
HYB Hyderabad 48.40 288 *i*P **P** 13 39 05.0 -0.6
HYB *e*PcP **sP** 13 39 30.0 -1.8
ZAK Zakamensk 48.82 340 *e*P **P** 13 39 11.5 +3.2
ZAK *e* 13 40 32.4
ZAK pmax pmax
comp=Z,8.0nm,1.2s
ZAK pmax pmax
comp=Z,8.0nm,1.0s
TLY Talaya 49.82 341 *i*P **P** 13 39 13.0 -2.8
TLY pmax pmax
comp=Z,18nm,0.9s
TLY Talaya 49.82 341 P **P** 13 39 15.7 -0.2
TLY IAmb IAmb 13 39 24.6
comp=Z,27nm,1.0s
BHPL Bhopal 50.49 296 *e*P **P** 13 39 21.6 +0.1
BHPL IAmb IAmb 13 39 23.1
comp=Z,27nm,0.5s
MOY Mondy 50.69 340 *e*P **P** 13 39 24.7 +2.2
MOY pmax pmax
comp=Z,62nm,2.0s
WMQ Urumqi 51.21 324 *e*P **P** 13 39 28.5 +2.0
WMQ sP sP 13 39 55.1 +2.0
WMQ PcP **PcP** 13 40 42.3 +1.4
WMQ pmax pmax
comp=Z,31nm,0.8s
WMQ pmax pmax
comp=Z,690nm,11.9s
WMQ LR LR
comp=Z,600nm,17.9s
WMQ LR LR
comp=Z,310nm,16.5s
WMQ LR LR
comp=Z,1μm,28.9s
DDI Dehra Dun 51.84 305 *ex* **P** 13 39 31.4 -0.1
DDI IAmb IAmb 13 39 42.6
comp=Z,104nm,0.4s
BOD Bodaibo 53.11 352 *e*P **P** 13 39 40.4 +0.2
BOD pmax pmax
comp=Z,26nm,1.0s
BHK Bhakra 53.52 305 *ex* **P** 13 39 44.8 +1.0
PEA0B Petropavlovsk- 53.87 23 *i*P **P** 13 39 46.1 +0.2
PEA0B Petropavlovsk- 53.87 23 P **P** 13 39 45.1 -0.8
PEA0B IAmb IAmb 13 40 15.0
comp=Z,55nm,1.1s
PETK Petropavlovsk- 53.87 23 P **P** 13 39 47.0 +1.1
comp=Z,23nm,0.9s,baz=194,slow=5.5,SNR=29
PET Petropavlovsk 54.17 23 *e*P **P** 13 39 49.1 +1.0
PET pmax pmax
comp=Z,36nm,1.0s
DGZ Jazzator, Alta 55.00 330 *i*P **P** 13 39 54.0 -0.4
DGZ pmax pmax
comp=Z,11nm,1.1s
MK31 Makanchi Array 56.03 325 *e*P **P** 13 40 01.5 -0.2
MK31 Makanchi Array 56.03 325 P **P** 13 40 01.0 -0.7
MK31 IAmb IAmb 13 41 00.8
comp=Z,26nm,0.8s
MKAR Makanchi Array 56.03 325 P **P** 13 40 01.9 +0.2
comp=Z,16nm,0.6s,baz=120,slow=8.2,SNR=92
MKAR PcP **PcP** 13 41 00.0 +0.9
comp=Z,36nm,0.8s,baz=122,slow=4.4,SNR=12
MKAR ScP **ScP** 13 44 53.4 +1.6
comp=Z,5.5nm,1.0s,baz=116,slow=5.5,SNR=5.9
MKAR LR LR 14 05 20.5
comp=Z,488nm,21.8s,baz=82,slow=37
MKAR PKPPKP **P'P'df** 14 09 57.1 -4.1
comp=Z,1.0nm,1.0s,baz=335,slow=5.4,SNR=3.9
MKAR PKP2bc PKPPKPbc 14 10 13.4
comp=Z,1.3nm,1.0s,baz=281,slow=1.9,SNR=3.6
MAKZ Makanchi 56.22 325 P **P** 13 40 02.4 -0.6
MAKZ pmax pmax
comp=Z,24nm,0.8s
MAKZ Makanchi 56.22 325 P **P** 13 40 02.4 -0.6
MAKZ IAmb IAmb 13 41 01.3
comp=Z,24nm,0.8s
YAK Yakutsk 56.46 2 P **P** 13 40 04.6 +0.2
comp=Z,12nm,0.7s,baz=13,slow=2.5,SNR=17
YAK Yakutsk 56.46 2 *e*P **P** 13 40 04.4 0.0
YAK *e**PP **pP** 13 40 23.1 +0.7
YAK *e* 13 42 11.0
YAK *e*PPP PPP 13 43 26.4
YAK *eS* **S** 13 47 49.5 -0.1
YAK *e*SSS SSS 13 53 53.5
YAK pmax pmax
comp=Z,54nm,1.3s
YAK pmax pmax
comp=N,36nm,1.4s
YAK pmax pmax
comp=E,6.0nm,1.1s
YAK pmax pmax
comp=Z,1μm,16.5s
YAK pmax pmax
comp=N,848nm,17.5s
YAK pmax pmax
comp=E,826nm,16.8s
YAK smax smax
comp=N,642nm,15.0s
YAK smax smax
comp=E,695nm,13.8s
YAK Yakutsk 56.46 2 P **P** 13 40 03.8 -0.5
KSH Kashi 56.70 314 P **P** 13 40 08.8 +2.1
KSH pP pwP 13 40 28.3 +0.4
KSH PP **PP** 13 42 17.2 +3.6
KSH S **S** 13 47 54.1 +0.2
KSH SS **SS** 13 51 42.7 -0.1
KSH pmax pmax
comp=E,48nm,0.7s
KSH pmax pmax
comp=E,410nm,5.0s
KSH LR LR
comp=E,690nm,9.6s
KSH LR LR
comp=E,270nm,13.0s
KSH LR LR
comp=E,460nm,10.1s
NIL Nilore 56.74 307 P **P** 13 40 06.3 -0.7
NIL pmax pmax
comp=Z,135nm,1.0s
NIL Nilore 56.74 307 P **P** 13 40 06.3 -0.7
KDJ Kajisay 56.94 318 P **P** 13 40 07.7 -0.7
KDJ pmax pmax
comp=Z,53nm,1.1s
KDJ Kajisay 56.94 318 P **P** 13 40 07.7 -0.7
MA2 Magadan 57.04 14 P **P** 13 40 07.6 -0.9
MA2 pmax pmax
comp=Z,16nm,0.8s
MA2 Magadan 57.04 14 P **P** 13 40 07.6 -0.9
MA2 IAmb IAmb 13 40 26.2
comp=Z,16nm,0.8s
ZAA0 Zalesovo Array 58.96 333 P **P** 13 40 20.7 -1.3
ZAA0 IAmb IAmb 13 40 39.7
comp=Z,22nm,1.0s
ZALV Zalesovo Beam 58.96 333 P **P** 13 40 21.7 -0.3
comp=Z,8.2nm,0.6s,baz=125,slow=6.9,SNR=29
ZALV PKP2bc PKPPKPbc 14 10 06.4
comp=Z,1.9nm,0.8s,baz=289,slow=4.5,SNR=9.8
AAK Ala-Archa 58.96 317 P **P** 13 40 21.9 -0.6
KURK Kurchatov 60.19 327 P **P** 13 40 29.9 -0.6
KURK Kurchatov 60.19 327 P **P** 13 40 29.2 -1.3
KBL Kabul 60.34 307 P **P** 13 40 30.6 -1.7
KBL pmax pmax
comp=Z,36nm,0.9s
KBL Kabul 60.34 307 P **P** 13 40 30.6 -1.7
KBL IAmb IAmb 13 40 32.8
comp=Z,36nm,0.9s
SEY Seymchan 60.36 13 *i*P **P** 13 40 31.5 0.0
BTK Batken 60.60 313 P **P** 13 40 33.1 -0.6
BTK pmax pmax
comp=Z,99nm,1.6s
BTK Batken 60.60 313 P **P** 13 40 33.1 -0.6
GAR Garm 60.63 312 P **P** 13 40 33.1 -0.9
CHGR Chuyangaron 61.39 311 P **P** 13 40 38.1 -1.0
KK31 Karatay Array 61.85 316 *i*P **P** 13 40 41.3 -0.7
KK31 Karatay Array 61.85 316 P **P** 13 40 40.5 -1.5
KK31 IAmb IAmb 13 40 43.7
comp=Z,25nm,1.2s
KKAR Karatay Array 61.85 316 P **P** 13 40 40.3 -1.7
KKAR pmax pmax
comp=Z,25nm,1.2s
KKAR Karatay Array 61.85 316 P **P** 13 40 40.3 -1.7
KKAR IAmb IAmb 13 40 43.7
comp=Z,25nm,1.2s
DCZ Deep Cove 62.32 149 P **P** 13 40 46.0 +1.1
QRZ Quartz Range 62.40 142 P **P** 13 40 46.7 +1.0
QRZ IAmb IAmb 13 40 54.8
comp=Z,45nm,1.3s
HIZ Hauiti 62.56 139 P **P** 13 40 45.8 -1.0
NNZ Nelson 63.15 142 P **P** 13 40 50.2 -0.4
NNZ IAmb IAmb 13 41 45.6
comp=Z,59nm,1.3s
THZ Tophouse 63.18 143 P **P** 13 40 50.2 -0.7
LBZ Lake Benmore 63.22 146 P **P** 13 40 49.9 -1.1
LTZ Lake Taylor 63.41 144 P **P** 13 40 52.4 0.0
LTZ IAmb IAmb 13 41 22.7
comp=Z,49nm,1.3s
URZ Urewera 63.93 137 P **P** 13 40 55.7 -0.1
comp=Z,9.0nm,0.9s,baz=3.9,slow=15,SNR=2.6
URZ Urewera 63.93 137 P **P** 13 40 54.5 -1.3
URZ IAmb IAmb 13 41 13.3
comp=Z,42nm,1.4s
KHZ Kahutara 63.95 143 P **P** 13 40 54.7 -1.1
BKZ Black Stump Fm 63.99 139 P **P** 13 40 56.4 +0.1
BKZ IAmb IAmb 13 41 09.7
comp=Z,21nm,0.7s
ADK Adak 65.60 35 P **P** 13 41 06.9 +0.4
ADK pmax pmax
comp=Z,25nm,1.0s
ADK Adak 65.60 35 P **P** 13 41 06.9 +0.4
ADK IAmb IAmb 13 41 36.0
comp=Z,25nm,1.0s
HRA Herat 65.79 305 P **P** 13 41 07.0 -1.4
HRA IAmb IAmb 13 41 08.8
comp=Z,68nm,1.8s
BRVK Borovoye 65.84 327 P **P** 13 41 07.6 -0.4
BRVK Borovoye 65.84 327 P **P** 13 41 07.6 -0.4
BRVK IAmb IAmb 13 41 17.5
comp=Z,36nm,0.8s
GSTR Great Sitkin T 66.04 35 P **P** 13 41 08.7 -0.7
TIXI Tiksi 66.09 1*d i*P **P** 13 41 09.0 -0.2
TIXI pmax pmax
comp=Z,28nm,1.1s
TIXI Tiksi 66.09 1 P **P** 13 41 08.8 -0.5
TIXI IAmb IAmb 13 41 32.8
comp=Z,24nm,0.9s
ATKA Atka Island 67.14 35 P **P** 13 41 15.2 -1.1
ATKA IAmb IAmb 13 41 17.5
comp=Z,37nm,0.9s
BILL Bilibino 67.90 15*c i*P **P** 13 41 20.2 -0.6
BILL *i* 13 41 47.2
BILL pmax pmax
comp=Z,8.0nm,1.0s
BILL Bilibino 67.90 15 P **P** 13 41 20.2 -0.6
GEYT Alibeck 69.68 308 P **P** 13 41 32.8 +0.2
comp=Z,7.9nm,0.8s,baz=130,slow=4.4,SNR=16
GEYT LR LR 14 15 34.7
comp=Z,220nm,20.7s,baz=240,slow=39
GYA0B ALIBECK ARRAY 69.68 308 P **P** 13 41 30.7 -1.8
SOCY Socotra 71.87 281 P **P** 13 41 44.2 -2.1
SOCY IAmb IAmb 13 41 45.1
comp=Z,31nm,0.9s
UNV Unalaska Valle 72.07 35 P **P** 13 41 45.3 -1.3
UNV IAmb IAmb 13 42 02.7
comp=Z,33nm,0.8s
AKTO Aktyubinsk 72.19 321 P **P** 13 41 46.9 -0.6
SVE Sverdlovsk 72.39 328 *e*P **P** 13 41 48.8 +0.3
SVE pmax pmax
comp=Z,62nm,1.4s
CASY Casey 72.54 187 P **P** 13 41 50.8 +1.7
AKUT Akutan 72.56 35 P **P** 13 41 48.3 -1.2
ARU Arti 73.38 327*c i*P **P** 13 41 53.6 -0.7
ARU 13 42 09.2
ARU 13 44 34.5
ARU S **S** 13 51 19.9 +2.5
ARU pmax pmax
comp=Z,17nm,0.7s
ARU Arti 73.38 327 P **P** 13 41 52.3 -2.0
ARU IAmb IAmb 13 42 20.2
comp=Z,28nm,0.9s
SDPT Sand Point 75.83 34 P **P** 13 42 07.8 -0.6
SDPT IAmb IAmb 13 42 31.9
comp=Z,32nm,0.9s
CNBA Chernabura Isl 76.23 35 P **P** 13 42 10.9 +0.1
CHGN Chignik 77.14 34 P **P** 13 42 15.9 0.0
CHGN IAmb IAmb 13 42 46.0
comp=Z,20nm,1.0s
RDOG Red Dog Mine 77.70 21 P **P** 13 42 19.3 +0.4
AKT Akhty 78.03 311 *e*P **P** 13 42 21.2 -0.2
AKT *e* 13 42 30.7
AKT *e**PP **pP** 13 42 39.6 -1.2
AKT *e**SP **sP** 13 42 49.1 +0.4
AKT pmax pmax
comp=Z,16nm,0.8s
TTA Tatalina 79.41 27 P **P** 13 42 28.0 -0.4
TTA Tatalina 79.41 27 P **P** 13 42 28.0 -0.4
GROC Groznyy 79.54 313 *e*P **P** 13 42 28.3 -1.2
GROC *e**PP **pP** 13 42 47.8 -1.2

GROC eS S 13 52 24.0 -1.4
GROC pmax pmax
comp=Z,80nm,1.0s
RAYN Ar Rayn 79.66 293 P P 13 42 28.1 -2.5
RAYN pmax pmax
comp=Z,20nm,1.2s
RAYN Ar Rayn 79.66 293 P P 13 42 28.1 -2.5
OHAK Old Harbor 80.06 33 P P 13 42 31.9 -0.1
KDAK Kodiak Island 80.49 32 P P 13 42 33.8 -0.4
KDAK Kodiak Island 80.49 32 P P 13 42 33.8 -0.4
RSO Redoubt South 80.64 30 P P 13 42 34.5 -0.7
PRGR Permogore 80.89 331 eP P 13 42 36.2 -0.1
PRGR pmax pmax
comp=Z,14nm,0.9s
ZEI Tsey 80.92 312 eP P 13 42 35.8 -1.4
ZEI pmax pmax
comp=Z,26nm,0.6s
AKH Akhalkalaki 81.21 311 ⇑P P 13 42 39.6 +0.9
AKH Akhalkalaki 81.21 311 P P 13 42 38.0 -0.7
AKH pmax pmax
comp=Z,22nm,0.7s
AKH Akhalkalaki 81.21 311 P P 13 42 38.0 -0.7
AKH IAmb IAmb 13 42 40.5
comp=Z,22nm,0.7s
CNPM China Poot 81.33 31 P P 13 42 37.7 -1.0
CNPM IAmb IAmb 13 43 08.9
comp=Z,28nm,1.0s
BRLK Bradley Lake 81.52 30 P P 13 42 38.8 -1.0
BRLK IAmb IAmb 13 42 42.5
comp=Z,23nm,1.0s
KBZ Khabaz 81.67 313 P P 13 42 40.3 -0.5
comp=Z,9.0nm,0.9s,baz=129,slow=4.0,SNR=10
ABPO Ambohimpanom 81.77 250 P P 13 42 40.9 -1.1
ABPO pmax pmax
comp=Z,22nm,1.0s
ABPO Ambohimpanom 81.77 250 P P 13 42 40.9 -1.1
ABPO IAmb IAmb 13 42 44.4
comp=Z,22nm,1.0s
KTH Kantishna Hill 81.77 27 P P 13 42 40.8 -0.2
KTH IAmb IAmb 13 43 12.3
comp=Z,45nm,1.3s
BPAW Bear Paw Mtn. 81.78 26 P P 13 42 41.1 +0.1
BPAW IAmb IAmb 13 42 43.4
comp=Z,41nm,1.0s
KIV Kislovodsk 81.82 313 ⇑P P 13 42 42.8 +1.0
KIV Kislovodsk 81.82 313 P P 13 42 39.4 -2.3
KIV pmax pmax
comp=Z,19nm,0.8s
KIV Kislovodsk 81.82 313 P P 13 42 39.4 -2.3
KIV IAmb IAmb 13 42 44.9
comp=Z,19nm,0.8s
MLY Manley 81.96 25 P P 13 42 40.5 -1.5
MLY IAmb IAmb 13 43 13.0
comp=Z,28nm,1.0s
TRF Thorofare Moun 82.04 27 P P 13 42 42.1 -0.5
TRF IAmb IAmb 13 43 13.0
comp=Z,30nm,1.1s
RC01 Rabbit Creek A 82.17 29 P P 13 42 42.0 -1.0
RC01 IAmb IAmb 13 43 13.2
comp=Z,23nm,1.0s
SEW Seward 82.26 30 P P 13 42 43.2 -0.3
SEW IAmb IAmb 13 43 14.0
comp=Z,23nm,0.9s
COLD Coldfoot 82.34 23 P P 13 42 43.9 0.0
PMR Palmer 82.48 29 P P 13 42 43.8 -0.8
PMR pmax pmax
comp=Z,28nm,1.0s
PMR Palmer 82.48 29 P P 13 42 43.8 -0.8
PMR IAmb IAmb 13 43 14.9
comp=Z,28nm,1.0s
VRH Novokhopyorsk 82.53 321 eP P 13 42 45.1 0.0
VRH pmax pmax
comp=Z,80nm,0.8s
GHO Glory Hole Cre 82.58 29 P P 13 42 44.7 -0.7
GHO IAmb IAmb 13 43 15.8
comp=Z,24nm,1.1s
BCA Borcka 82.62 311 ⇑P P 13 42 45.4 -0.4
MCK McKinley 82.66 27 P P 13 42 45.2 -0.4
MCK pmax pmax
comp=Z,48nm,1.0s
MCK McKinley 82.66 27 P P 13 42 45.2 -0.4
MCK IAmb IAmb 13 42 47.4
comp=Z,48nm,1.0s
TOLK Toolik Lake Re 82.67 22 P P 13 42 47.3 +1.7
baz=266
TOLK Toolik Lake Re 82.67 22 P P 13 42 45.4 -0.3
TOLK IAmb IAmb 13 42 48.1
comp=Z,21nm,0.9s
RND Reindeer 82.68 27 P P 13 42 45.5 -0.3
RND pmax pmax
comp=Z,40nm,1.2s
RND Reindeer 82.68 27 P P 13 42 45.5 -0.3
RND IAmb IAmb 13 42 47.3
comp=Z,40nm,1.2s
KNK Knik Glacier 82.80 29 P P 13 42 46.2 -0.1
KNK IAmb IAmb 13 43 17.2
comp=Z,40nm,1.0s
SML Sawmill 82.87 28 P P 13 42 46.5 -0.3
SML IAmb IAmb 13 43 17.5
comp=Z,46nm,1.0s
MDM Murphy Dome 83.02 25 P P 13 42 47.5 0.0
WRH Wood River Hil 83.06 26 P P 13 42 46.7 -0.9
WRH IAmb IAmb 13 42 49.3
comp=Z,34nm,1.1s
TCOL CIGO, UAF Yank 83.17 25 P P 13 42 48.4 +0.2
baz=268,SNR=7.9
COLA College 83.18 25 P P 13 42 47.4 -0.8
COLA pmax pmax
comp=Z,14nm,1.0s
COLA College 83.18 25 P P 13 42 47.4 -0.8
CCB Clear Creek Bu 83.19 26 P P 13 42 47.7 -0.6
CCB IAmb IAmb 13 42 49.7
comp=Z,27nm,1.1s
DHY Denali Highway 83.34 27 P P 13 42 48.8 -0.6
SCM Sheep Creek Mo 83.34 28 P P 13 42 49.1 -0.2
SCM pmax pmax
comp=Z,66nm,1.2s
SCM Sheep Creek Mo 83.34 28 P P 13 42 49.1 -0.2
SCM IAmb IAmb 13 43 20.3
comp=Z,66nm,1.2s
POKR Poker Plat Res 83.36 25 P P 13 42 51.5 +2.4
baz=269,SNR=6.3
HDA Harding Lake 83.55 26 P P 13 42 49.9 -0.3
baz=269,SNR=22
HDA Harding Lake 83.55 26 P P 13 42 48.7 -1.5
HDA IAmb IAmb 13 42 50.6
comp=Z,20nm,1.0s
IL31 83.59 25 P P 13 42 49.1 -1.2
ILAR Eielson Array 83.59 25 P P 13 42 49.5 -0.8
comp=Z,12nm,1.0s,baz=253,slow=3.8,SNR=57
ILAR PKKPbc **PKKPbc** 14 01 08.5 -2.1
comp=Z,1.3nm,0.9s,baz=74,slow=1.2,SNR=8.6
HIN Hinchinbrook I 83.74 30 P P 13 42 51.5 +0.3
FID Port Fidalgo 83.75 30 P P 13 42 51.3 0.0
FID IAmb IAmb 13 43 22.1
comp=Z,37nm,0.9s
KLMR Klimovskoe 83.80 331 eP P 13 42 49.3 -2.2
KLMR e 13 46 04.9
KLMR pmax pmax
comp=Z,117nm,1.3s
KLMR Klimovskoe 83.80 331 eP P 13 42 49.4 -2.1
KLMR AMP 13 42 53.8
comp=Z,117nm,1.3s
KLMR ePP PP 13 46 04.9 -0.5
VORD Divnogorie 84.06 321 eP P 13 42 52.6 -0.4
VORD pmax pmax
comp=Z,30nm,0.6s
EYAK Cordova Ski Ar 84.11 30 P P 13 42 51.6 -1.4
EYAK IAmb IAmb 13 43 23.9
comp=Z,21nm,1.0s
VSR Storozhevoye 84.13 321 eP P 13 42 52.1 -1.3
VSR pmax pmax
comp=Z,30nm,0.6s
PRP Porcupine Dome 84.16 25 P P 13 42 51.7 -1.8
PAX Paxson 84.21 27 P P 13 42 53.2 -0.5
PAX pmax pmax
comp=Z,25nm,1.1s
PAX Paxson 84.21 27 P P 13 42 53.2 -0.5
PAX IAmb IAmb 13 42 55.4
comp=Z,25nm,1.1s
LPSR Galich'ya Gora 84.25 322 eP P 13 42 54.4 +0.5
LPSR pmax pmax
comp=Z,60nm,0.9s
FYU Fort Yukon 84.28 24 P P 13 42 53.8 0.0
TMCR Tamitsa 84.46 334 eP P 13 42 54.6 -0.1
TMCR pmax pmax
comp=Z,72nm,0.9s
RAGM Ragged Mountai 84.64 30 P P 13 42 55.6 -0.3
RAGM IAmb IAmb 13 42 58.5
comp=Z,58nm,1.2s
DOT Dot Lake 84.83 27 P P 13 42 56.1 -0.6
MOS Moscow 84.91 325 eP P 13 42 52.8 -4.4
MOS e 13 43 10.9
MOS eS S 13 53 12.5 -7.2
MOS pmax pmax
comp=Z,41nm,0.7s
MENT Mentasta 85.01 27 P P 13 42 58.1 +0.4
MENT IAmb IAmb 13 43 37.7
comp=Z,16nm,0.8s
GLB Gilahina Butte 85.03 29 P P 13 42 57.8 0.0
GLB IAmb IAmb 13 43 00.2
comp=Z,42nm,1.0s
VNDA Vanda 85.18 173 P P 13 42 59.0 +0.9
comp=Z,17nm,0.9s,baz=312,slow=5.8,SNR=39
VNDA Vanda 85.18 173 P P 13 42 59.1 +0.9
VNDA pmax pmax
comp=Z,29nm,1.1s
VNDA Vanda 85.18 173 P P 13 42 59.0 +0.9
VNDA IAmb IAmb 13 43 00.3
comp=Z,28nm,1.1s
VRDI Verde Repeater 85.21 29 P P 13 42 58.8 -0.1
VRDI IAmb IAmb 13 43 01.1
comp=Z,23nm,1.0s
MAW Mawson 85.35 200 P P 13 43 00.5 +1.5
baz=86,SNR=21
MAW Mawson 85.35 200 P P 13 43 00.5 +1.5
comp=Z,31nm,0.9s,baz=52,slow=6.3,SNR=33
MAW LR LR 14 19 45.0
comp=Z,126nm,20.9s,baz=62,slow=35
MAW Mawson 85.35 200 P P 13 42 59.9 +0.8
MCARA McCarthy VSAT 85.41 29 P P 13 42 59.7 +0.1
MCARA IAmb IAmb 13 43 39.2
comp=Z,26nm,0.9s
OBN Obninsk 85.54 325 ⇑P P 13 43 00.5 +0.2
OBN Obninsk 85.54 325 *c* iP P 13 42 59.2 -1.1
OBN *i* 13 43 21.0
OBN pmax pmax
comp=Z,31nm,1.0s
OBN Obninsk 85.54 325 P P 13 42 59.9 -0.4
ANN Anapa 85.56 314 eP P 13 42 59.5 -1.2
ANN e*PP pP 13 43 17.1 -3.2
ANN pmax pmax
comp=Z,80nm,0.7s
LVZ Lovozero 85.68 338 P P 13 43 00.1 -0.7
LVZ pmax pmax
comp=Z,29nm,1.0s
LVZ Lovozero 85.68 338 P P 13 43 00.1 -0.7
LVZ IAmb IAmb 13 43 07.6
comp=Z,29nm,1.0s
BALM Baldy 85.76 29 P P 13 43 01.1 -0.3
BALM IAmb IAmb 13 43 33.0
comp=Z,22nm,0.9s
EGAK Eagle 86.04 25 P P 13 43 02.6 0.0
BARN Barnard Glacie 86.09 29 P P 13 43 03.3 +0.1
BARN IAmb IAmb 13 43 35.6
comp=Z,19nm,0.8s
YAH Yahtse 86.10 30 P P 13 43 03.6 +0.3
YAH IAmb IAmb 13 43 06.5
comp=Z,30nm,1.2s
APA Apatity 86.18 337 ⇑ *i* P P 13 43 02.2 -1.1
APA pmax pmax
comp=Z,17nm,0.9s
GAZ Gaziantep 86.22 307 P P 13 43 03.4 -0.9
GAZ IAmb IAmb 13 43 05.5
comp=Z,24nm,0.8s
CTGM Chitina Glacie 86.25 29 P P 13 43 04.0 0.0
CTGM IAmb IAmb 13 43 36.0
comp=Z,32nm,0.9s
DAWY Dawson 86.87 26 P P 13 43 06.3 -0.5
DIKM Dikmen 87.38 311 ⇑P P 13 43 09.3 -0.4
EPYK Eagle Plains 87.70 24 P P 13 43 11.3 +0.5
baz=278
EPYK Eagle Plains 87.70 24 P P 13 43 10.4 -0.3
SIM Simferopol' 87.90 315 eP P 13 43 11.4 -0.7
SIM pmax pmax
comp=Z,11nm,0.8s
HYT Haines Junctio 88.13 29 P P 13 43 12.2 -0.8
INK Inuvik 88.59 21 P P 13 43 13.8 -1.0
INK pmax pmax
comp=Z,13nm,1.1s
INK Inuvik 88.59 21 P P 13 43 13.8 -1.0
INK IAmb IAmb 13 43 16.3
comp=Z,13nm,1.1s
ILGA Ilgaz 88.59 311 P P 13 43 14.7 -1.0
SPA0 Spitsbergen Ar 88.73 349 eP P 13 43 15.4 +0.1
ARCES ARCESS Array B 88.75 340 P P 13 43 15.9 +0.3
comp=Z,24nm,0.7s,baz=77,slow=6.4,SNR=86
ARCES PKKPbc **PKKPbc** 14 00 59.4 +1.0
comp=Z,2.1nm,1.0s,baz=282,slow=1.8,SNR=3.8
ARE0 ARCESS Array S 88.75 340 P P 13 43 15.3 -0.3
ARE0 ARCESS Array S 88.75 340 eP P 13 43 16.4 +0.8
BR131 Keskin Array S 88.79 310 P P 13 43 15.2 -1.4
BR131 pmax pmax
comp=Z,9.0nm,0.9s
BR131 Keskin Array S 88.79 310 P P 13 43 15.2 -1.4
BR131 IAmb IAmb 13 43 19.2
comp=Z,9.3nm,0.8s
BRTR Keskin Array B 88.79 310 P P 13 43 15.3 -1.3
comp=Z,6.4nm,0.8s,baz=103,slow=5.3,SNR=29
BRTR Keskin Array B 88.79 310 *i* P P 13 43 15.8 -0.8
BRTR pmax pmax
comp=Z,6.0nm,0.7s
HAMF Hammerfest 89.11 341 eP P 13 43 17.7 +0.5
WHY Whitehorse 89.43 29 P P 13 43 18.5 -0.7
KMBO Kilima Mbogo 89.44 269 P P 13 43 21.2 +0.9
comp=Z,3.0nm,0.7s,baz=79,slow=4.8,SNR=6.8
KMBO Kilima Mbogo 89.44 269 *i* P P 13 43 22.6 +2.3
KMBO pmax pmax
comp=Z,3.0nm,0.7s
KMBO Kilima Mbogo 89.44 269 P P 13 43 17.7 -2.6
KTK1 Kautokeino 89.66 339 eP P 13 43 20.6 +0.7
FIA1 FINESS Array S 90.22 332 P P 13 43 21.8 -0.7
FINES FINESS Array B 90.22 332 P P 13 43 22.7 +0.1
comp=Z,8.1nm,0.7s,baz=66,slow=5.1,SNR=32
FINES PKKPbc **PKKPbc** 14 00 52.2 -2.3
comp=Z,0.8nm,0.6s,baz=212,slow=1.3,SNR=3.8
A36M Sachs Harbour 90.36 17 P P 13 43 23.5 +0.5
baz=289
AKASG Malin Array Be 90.44 321 P P 13 43 22.7 -1.2
comp=Z,3.0nm,0.7s,baz=71,slow=4.3,SNR=14
AKASG Malin Array Be 90.44 321 *i* P P 13 43 22.8 -1.1
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKBB Malin Array Si 90.44 321 P P 13 43 22.5 -1.4
AKBB pmax pmax
comp=Z,13nm,1.0s
AKBB Malin Array Si 90.44 321 P P 13 43 22.5 -1.4
AKBB IAmb IAmb 13 43 47.4
comp=Z,13nm,1.0s
TRO Tromso 90.95 341 eP P 13 43 26.1 +0.2
SORM Soroca 91.42 318 ⇑P P 13 43 26.7 -1.8
SORM Soroca 91.42 318 ⇑P P 13 43 26.7 -1.8
ISP Isparta 91.44 308 P P 13 43 27.2 -1.7
ISP pmax pmax
comp=Z,10.0nm,0.9s
ISP Isparta 91.44 308 P P 13 43 27.2 -1.7
ISP IAmb IAmb 13 43 28.1
comp=Z,9.5nm,0.9s
TLCR 91.60 315 ⇑P P 13 43 29.3 -0.1
TLCR 91.60 315 ⇑P P 13 43 29.3 -0.1
C36M Paulatuk 91.61 20 P P 13 43 28.9 0.0
baz=290,SNR=7.2
C36M Paulatuk 91.61 20 P P 13 43 27.9 -0.9
C36M IAmb IAmb 13 43 45.9
comp=Z,16nm,1.2s
TOPG Topolog 91.95 315 ⇑P P 13 43 30.3 -0.7
TIRR Tirgusor 92.00 315 P P 13 43 29.7 -1.5
TIRR pmax pmax
comp=Z,33nm,1.2s
TIRR Tirgusor 92.00 315 P P 13 43 29.7 -1.5
CFR Carcaliu 92.07 316 ⇑P P 13 43 30.8 -0.7
CFR Carcaliu 92.07 316 ⇑P P 13 43 30.8 -0.7
ELL Elmali 92.08 307 P P 13 43 30.6 -1.4
ELL pmax pmax
comp=Z,23nm,1.0s
ELL Elmali 92.08 307 P P 13 43 30.6 -1.4
HARR Harsova 92.30 315 ⇑P P 13 43 31.9 -0.7
HARR Harsova 92.30 315 ⇑P P 13 43 31.9 -0.7
STEI Steigen 92.80 339 eP P 13 43 34.4 0.0
TESR Tescani 92.85 317 ⇑P P 13 43 34.8 -0.4
VRI Vrincioaia 92.92 316 ⇑P P 13 43 35.7 +0.2
VRI Vrincioaia 92.92 316 ⇑P P 13 43 35.7 +0.2
PLOR Plostina 92.98 316 ⇑P P 13 43 35.8 0.0
PLOR Plostina 92.98 316 ⇑P P 13 43 35.8 0.0
SUW Suwalki 93.40 325 P P 13 43 36.2 -1.3
SUW pmax pmax
comp=Z,60nm,1.2s
SUW Suwalki 93.40 325 P P 13 43 36.2 -1.3
MLR Muntele Rosu 93.53 316 ⇑P P 13 43 38.8 +0.3
MLR Muntele Rosu 93.53 316 P P 13 43 36.9 -1.6
MLR pmax pmax
comp=Z,16nm,1.1s
MLR Muntele Rosu 93.53 316 P P 13 43 36.9 -1.6
MLR IAmb IAmb 13 44 08.5
comp=Z,16nm,1.1s
BURAR Bucovina Array 93.59 318 ⇑P P 13 43 38.9 +0.2
BURAR Bucovina Array 93.59 318 ⇑P P 13 43 38.9 +0.2
BUR08 Bucovina Ar. S 93.60 318 P P 13 43 37.6 -1.1
BUR08 IAmb IAmb 13 44 08.3
comp=Z,7.8nm,1.1s
MOR8 Moi Rana 93.76 338 eP P 13 43 37.4 -1.5
DOPR Dopca 93.82 317 ⇑P P 13 43 39.1 -0.5
SYO Syowa Base 94.01 201 ⇓ *i* P P 13 43 40.0 +0.1
SYO Syowa Base 94.01 201 ⇓ pP pP 13 43 56.6 -3.2
ARR Arges 94.46 316 ⇑P P 13 43 42.0 -0.7
UZH Uzhgorod 95.27 320 eP P 13 43 42.4 -3.8
UZH *e* 13 44 01.6
UZH *e* 13 44 07.2
QSPA South Pole Qui 95.39 180 P P 13 43 47.7 +1.3
comp=Z,14nm,0.9s,baz=334,slow=2.3,SNR=33
QSPA South Pole Qui 95.39 180 P P 13 43 47.4 +0.9
DAG Danmarks Havn 95.50 352 *i* P P 13 43 46.2 -0.5
DAG pmax pmax
comp=Z,8.0nm,0.8s
DAG Danmarks Havn 95.50 352 *i* P P 13 43 46.2 -0.5
comp=Z,7.8nm,0.8s
GZR Gura Zlata 95.73 317 ⇑P P 13 43 48.1 -0.4
GZR Gura Zlata 95.73 317 ⇑P P 13 43 48.1 -0.4
VTS Vitosha 96.05 314 ⇑P P 13 43 49.2 -0.9
VTS Vitosha 96.05 314 ⇑P P 13 43 49.2 -0.9
MDVR Moldovita 96.61 316 ⇑P P 13 43 51.9 -0.6
NC405 NORSAR Array S 96.90 334 P P 13 43 52.5 -0.9
NC602 NORSAR Array S 97.13 333 eP P 13 43 53.4 -1.0
NB2 NORSAR Subarra 97.15 334 P P 13 43 53.6 -0.9
comp=Z,16nm,1.0s,baz=66,slow=4.6
NB2 NORSAR Subarra 97.15 334 P P 13 43 53.6 -0.9
baz=66,slow=4.6
NOA NORSAR Array B 97.15 334 P P 13 43 54.0 -0.5
comp=Z,7.6nm,0.8s,baz=66,slow=4.6,SNR=45
NOA PKKPbc **PKKPbc** 14 00 34.0 -2.4
comp=Z,0.6nm,0.6s,baz=242,slow=2.1,SNR=4.7
NOA LR LR 14 32 19.5
comp=Z,287nm,20.6s,baz=285,slow=38
NC204 NORSAR Array S 97.25 334 P P 13 43 53.7 -1.3
NAO01 NORSAR Array S 97.38 334 P P 13 43 54.0 -1.5
DOMB Dombas 97.63 335 eP P 13 43 55.8 -0.9
MORC Moravsky Berou 97.94 322 ePDIFF Pdif 13 43 58.8 +0.4
YKA Yellowknife Ar 97.96 24 P P 13 43 58.0 -0.1
comp=Z,2.1nm,1.0s,baz=294,slow=4.1,SNR=14
YKA PKKPbc **PKKPbc** 14 00 31.7 -2.4
comp=Z,3.0nm,0.8s,baz=120,slow=2.9,SNR=40
YKA Yellowknife Ar 97.96 24 P P 13 43 58.0 -0.1
VRAC Vranov 98.67 322 ePDIFF Pdif 13 44 01.7 +0.1
VRAC Vranov 98.67 322 ⇑P P 13 44 01.5 -0.1
VRAC Vranov 98.67 322 ⇑P P 13 44 01.5 -0.1
KRUC Moravsky 98.88 321 ePDIFF Pdif 13 44 02.8 +0.3
D03D Eldon 99.47 40 Pdiff **Pdif** 13 44 06.8 +1.7
baz=289
BRG Berggiesshubel 99.74 324 eP **Pdif** 13 44 06.8 +0.5
comp=Z,6.2nm,0.9s
BRG Berggiesshubel 99.74 324 eP **Pdif** 13 44 06.8 +0.5
BRG pmax pmax
comp=Z,6.0nm,0.9s
CLL Collm 100.13 324 ePdif **Pdif** 13 44 09.0 +1.0
CLL *e*(PP) PP 13 48 04.0 -10
CLL LmV 14 42 00.0
comp=Z,600nm,18.5s
CLL Collm 100.13 324 eP **Pdif** 13 44 09.0 +1.0
GERES GERESS Array B 100.62 322 P **Pdif** 13 44 10.9 +0.5
comp=Z,1.0nm,0.8s,baz=76,slow=5.6,SNR=6.5
NVAR Mina Array Bea 105.84 48 PKKPbc PKKPbc 14 00 10.1 -0.5
comp=Z,0.7nm,0.7s,baz=131,slow=4.1,SNR=4.4
NVAR PKKPab **PKKPab** 14 00 27.4 0.0
comp=Z,1.3nm,0.7s,baz=127,slow=5.7,SNR=4.8
SNAA Sanae 106.87 195 PP **PP** 13 49 04.1 +0.2
comp=Z,4.8nm,1.0s,baz=119,slow=11,SNR=5.2
SNAA Sanae 106.87 195 **PP** 13 49 04.8 +0.8
PDAR Pinedale Array 110.13 41 PKKPbc PKKPbc 13 59 55.1 -2.2
comp=Z,0.5nm,0.7s,baz=142,slow=5.1,SNR=4.4
PDAR PKKPab **PKKPab** 14 00 07.2 -1.2
comp=Z,1.0nm,0.7s,baz=103,slow=4.1,SNR=8.0
O20A White River Ci 112.25 43 PKiKP **PKiKP** 13 49 00.2 +1.8
baz=299
ISCO Idaho Springs 114.17 42 P **PKiKP** 13 49 04.0 +1.8
baz=301
ANMO Albuquerque 115.94 47 *i* PKiKP **PKPdf** 13 49 04.3 -1.3
ANMO Albuquerque 115.94 47 P **PKiKP** 13 49 07.6 +2.0
baz=298
ESDC Sonseca Array 116.03 319 PKP **PKiKP** 13 49 05.5 0.0
comp=Z,0.4nm,0.7s,baz=13,slow=1.2,SNR=4.3
T25A Trinidad 116.33 44 P **PKiKP** 13 49 08.5 +2.2
baz=300
ECSD EROS Data Cent 117.42 34 P **PKiKP** 13 49 08.6 +0.6
baz=310
MNTX Cornudas Mount 118.24 50 P **PKiKP** 13 49 11.0 +1.2
baz=297
D41A Chassel 119.15 27 **PKiKP** 13 49 11.5 +0.3
G40A Rib Lake 119.72 29 **PKiKP** 13 49 12.4 +0.1
TXAR Lajitas Array 120.63 51 PKP **PKiKP** 13 49 15.7 +0.9
comp=Z,0.9nm,0.8s,baz=294,slow=0.3,SNR=9.7
TXAR PKKPbc **PKKPbc** 13 59 20.8 +0.3
comp=Z,0.6nm,0.7s,baz=137,slow=5.8,SNR=6.9
MATQ Matagami 121.09 18 P **PKiKP** 13 49 15.0 +0.1
baz=332
D46A Sault St. Mari 121.22 24 P **PKiKP** 13 49 16.4 +1.2
baz=324
JFWS Jewell Farm 121.39 31 P **PKiKP** 13 49 15.9 +0.2
baz=316
D47A Chapleau 121.46 23 P **PKiKP** 13 49 16.6 +0.9
baz=325
WMOK Wichita Mounta 121.47 43 P **PKiKP** 13 49 17.1 +0.9
baz=304
L40A Anamosa 121.48 32 **PKPdf** 13 49 14.8 -1.0
E46A Sault Ste Mari 121.53 25 **PKPdf** 13 49 15.3 -0.5
P38A Dawn 121.84 36 **PKPdf** 13 49 16.4 -0.1
D48A Paudash Townsh 121.87 22 P **PKiKP** 13 49 17.1 +0.6
baz=326
E47A Iron Bridge 121.88 24 P **PKiKP** 13 49 17.3 +0.8
baz=324
CHGQ Chibougamau 121.90 16 P **PKPdf** 13 49 16.4 0.0
baz=335
G46A Petoskey 122.13 26 P **PKiKP** 13 49 18.2 +1.1
baz=322
TOA0 Torodi Ar. Sit 122.22 289 **PKiKP** 13 49 18.0 0.0
TORD Torodi Ar. Bea 122.22 289 PKP **PKiKP** 13 49 18.1 +0.1
comp=Z,14nm,0.8s,baz=52,slow=2.1,SNR=55
TORD PKKPbc **PKKPbc** 13 59 14.1 +0.2
comp=Z,2.5nm,0.9s,baz=269,slow=4.1,SNR=8.3
E48A Lockeyer 122.30 23 P **PKiKP** 13 49 18.3 +0.9
baz=326
D50A G1974 Best Tow 122.60 21 P **PKiKP** 13 49 18.3 +0.4
baz=328
G47A Hillman 122.68 25 P **PKiKP** 13 49 19.2 +1.1
baz=323
E50A Wahnapitae 122.90 22 P **PKiKP** 13 49 19.9 +1.4
baz=327
F49A Sandfield 122.94 24 P **PKiKP** 13 49 19.4 +0.7
baz=326
JCT Junction City 123.02 48 PKiKP **PKPdf** 13 49 19.0 -0.1
JCT Junction City 123.02 48 P **PKiKP** 13 49 20.4 +1.1
baz=301
JCT Junction City 123.02 48 **PKPdf** 13 49 19.0 -0.1
E51A G1948 Merrick 123.27 21 P **PKiKP** 13 49 19.6 +0.3
baz=329
U38A Gravette 123.36 39 **PKPdf** 13 49 19.1 -0.4
D53A Lac Vacive, Po 123.42 20 P **PKPdf** 13 49 19.3 0.0
baz=331
D53A Lac Vacive, Po 123.42 20 **PKPdf** 13 49 19.3 0.0
R40A Maddies Statio 123.46 36 **PKPdf** 13 49 19.7 0.0
F51A Arnstein 123.62 22 P **PKiKP** 13 49 20.7 +0.7
baz=328
D54A Lac Fusel, La 123.70 19 P **PKiKP** 13 49 20.1 0.0
baz=332
HHAR Hobbs 123.74 39 **PKPdf** 13 49 19.5 -0.8

K46A	Dorr	123.76	28	P		PKiKP	13 49 21.0	+0.6
	baz=320							
E52A	Mattawa	123.78	21	P		PKiKP	13 49 20.9	+0.6
	baz=329							
F52A	Sundridge	123.95	22	P		PKiKP	13 49 21.4	+0.8
	baz=328							
E53A	Dumoine, Ponti	124.04	20	P		PKiKP	13 49 21.3	+0.5
	baz=331							
I49A	Point Hope	124.11	25	P		PKiKP	13 49 22.0	+1.0
	baz=324							
K47A	Vermontville	124.14	28	P		PKiKP	13 49 21.7	+0.5
	baz=321							
D55A	Sainte-Anne-du	124.19	18	P		PKiKP	13 49 21.4	+0.3
	baz=333							
J48A	Bridge Port	124.20	27	P		PKiKP	13 49 21.9	+0.7
	baz=323							
J48A	Bridge Port	124.20	27			PKPdf	13 49 20.2	-0.7
CCM	Cathedral Cave	124.22	36	PKIKP		PKPdf	13 49 20.3	-0.8
CCM	Cathedral Cave	124.22	36	P		PKiKP	13 49 22.0	+0.6
	baz=313							
CCM	Cathedral Cave	124.22	36			PKPdf	13 49 20.3	-0.8
ALGO	Algonquin Park	124.28	21	P		PKiKP	13 49 21.5	+0.2
	baz=330							
U40A	Yellville	124.37	38	P		PKiKP	13 49 22.1	+0.3
	baz=310,SNR=12							
U40A	Yellville	124.37	38			PKPdf	13 49 20.7	-0.8
D56A	ZEC Mazanza, M	124.38	18	P		PKiKP	13 49 21.9	+0.4
	baz=334							
J49A	Marlette	124.44	26	P		PKiKP	13 49 22.3	+0.6
	baz=323							
W39A	Magazine	124.52	40	P		PKiKP	13 49 22.6	+0.5
	baz=309,SNR=5.3							
W39A	Magazine	124.52	40			PKPdf	13 49 21.8	0.0
D57A	Chemin Vers le	124.67	17	P		PKiKP	13 49 22.4	+0.4
	baz=335							
G54A	Lake Saint Pet	124.74	21	P		PKiKP	13 49 22.7	+0.4
	baz=330							
E56A	St. Veronique	124.75	18	P		PKiKP	13 49 22.6	+0.4
	baz=334							
SFIN	Lafayette	124.85	31	P		PKiKP	13 49 23.7	+1.1
	baz=318							
I51A	Listowel	124.97	24	P		PKiKP	13 49 23.3	+0.6
	baz=326							
T42A	Van Buren	125.00	37			PKPdf	13 49 22.5	-0.1
MIAR	Mount Ida	125.05	41	PKIKP		PKPdf	13 49 22.2	-0.6
MIAR	Mount Ida	125.05	41	P		PKiKP	13 49 24.8	+1.6
	baz=308,SNR=7.6							
MIAR	Mount Ida	125.05	41			PKPdf	13 49 22.2	-0.6
FCAR	Ozark Folk Cen	125.12	38			PKPdf	13 49 22.5	-0.5
E57A	Chemin Saint G	125.14	17	P		PKiKP	13 49 23.5	+0.5
	baz=335							
N47A	Urbana	125.18	30	P		PKiKP	13 49 23.5	+0.2
	baz=320							
N47A	Urbana	125.18	30			PKPdf	13 49 22.2	-0.7
H53A	Bobcaygeon	125.27	22	P		PKiKP	13 49 23.2	-0.2
	baz=329							
G55A	Calabogie	125.34	20	P		PKiKP	13 49 24.0	+0.6
	baz=331							
PLVO	Plevna	125.41	20			PKPdf	13 49 22.2	-1.0
OLIL	Olney	125.52	33			PKPdf	13 49 23.6	+0.1
N48A	Decatur	125.53	29	P		PKiKP	13 49 24.5	+0.6
	baz=320							
M49A	Liberty Center	125.55	28	P		PKiKP	13 49 24.8	+0.8
	baz=322							
PBMO	Poplar Bluff	125.56	36			PKPdf	13 49 22.5	-1.2
ORIO	Orleans, Innes	125.57	19	P		PKiKP	13 49 24.2	+0.3
	baz=333							
L50A	Kingsville	125.64	27	P		PKiKP	13 49 24.2	+0.1
	baz=323							
J52A	Paris	125.66	24	P		PKiKP	13 49 24.4	+0.2
	baz=326							
H55A	Tweed	125.80	21	P		PKiKP	13 49 24.7	+0.4
	baz=330							
D62A	Allapoint, All	125.85	13	P		PKiKP	13 49 25.2	+0.8
	baz=341							
N49A	Columbus Grove	125.89	29	P		PKiKP	13 49 25.0	+0.4
	baz=321							
N49A	Columbus Grove	125.89	29			PKPdf	13 49 24.0	-0.3
G57A	Newington	126.05	19	P		PKiKP	13 49 25.3	+0.5
	baz=333							
E61A	Lac Etchemin	126.12	15	P		PKiKP	13 49 26.2	+1.2
	baz=339							
P48A	Milroy	126.39	31			PKPdf	13 49 24.6	-0.7
N50A	Nevada	126.49	28	P		PKiKP	13 49 26.3	+0.4
	baz=322							
J55A	Hilton	126.68	22	P		PKiKP	13 49 26.3	+0.2
	baz=329							
O50A	Cable	126.76	29	P		PKiKP	13 49 27.2	+0.8
	baz=322							
WCI	Wyandotte Cave	126.86	32	PKIKP		PKPdf	13 49 25.9	-0.3
WCI	Wyandotte Cave	126.86	32	P		PKiKP	13 49 27.6	+1.0
	baz=318							
WCI	Wyandotte Cave	126.86	32			PKPdf	13 49 25.9	-0.3
I57A	Carthage	126.86	20	P		PKiKP	13 49 27.2	+0.7
	baz=332							
L54A	Sinclairville	126.97	24	P		PKiKP	13 49 27.6	+0.8
	baz=327							
ACSO	Alum Creek Sta	126.99	28	P		PKiKP	13 49 27.4	+0.5
	baz=322,SNR=5.1							
ACSO	Alum Creek Sta	126.99	28			PKPdf	13 49 25.8	-0.6
K55A	Perry	127.04	23	P		PKiKP	13 49 27.7	+0.7
	baz=329							
M53A	WI Miller and	127.06	26	P		PKiKP	13 49 27.5	+0.5
	baz=325							
P50A	Jamestown	127.09	29	P		PKiKP	13 49 27.4	+0.3
	baz=321							
J57A	Williamstown	127.21	21	P		PKiKP	13 49 27.8	+0.6
	baz=331							
O51A	Pataskala	127.24	28	P		PKiKP	13 49 28.1	+0.7
	baz=323							
I58A	Old Forge	127.31	20	P		PKiKP	13 49 27.7	+0.3
	baz=333							
K56A	Middlesex	127.35	22	P		PKiKP	13 49 28.3	+0.8
	baz=330							
L55A	Hinsdale	127.36	23	P		PKiKP	13 49 27.9	+0.2
	baz=328							
M54A	Oil Creek Stat	127.43	25	P		PKiKP	13 49 28.0	+0.2
	baz=326							
M54A	Oil Creek Stat	127.43	25			PKiKP	13 49 27.7	-0.1
J58A	Remsen	127.50	20	P		PKiKP	13 49 28.4	+0.6
	baz=332,SNR=5.8							
J58A	Remsen	127.50	20	PKPdf		PKPdf	13 49 27.0	-0.3
WVT	Waverly	127.52	35	PKIKP		PKPdf	13 49 26.6	-0.9
WVT	Waverly	127.52	35	P		PKiKP	13 49 28.9	+0.8
	baz=315							
WVT	Waverly	127.52	35			PKPdf	13 49 26.6	-0.9
P51A	Williamsport	127.55	29	P		PKiKP	13 49 28.4	+0.4
	baz=322							
K57A	Scipio Center	127.62	21	P		PKiKP	13 49 28.9	+0.8
	baz=331							
O52A	Adamsville	127.62	27	P		PKiKP	13 49 28.5	+0.3
	baz=323							
O52A	Adamsville	127.62	27			PKPdf	13 49 26.6	-1.0
J59A	Piesco	127.67	19	P		PKiKP	13 49 28.8	+0.7
	baz=333							
OXF	Oxford	127.70	38	P		PKiKP	13 49 28.4	-0.1
	baz=312							
I60A	Shoreham	127.72	18	P		PKPdf	13 49 27.9	+0.3
	baz=335							
L56A	Greenwood	127.74	23	P		PKiKP	13 49 29.0	+0.6
	baz=329							
N54A	Moraine State	127.75	25	P		PKiKP	13 49 29.1	+0.7
	baz=326							
M55A	Ridgway	127.83	24	P		PKiKP	13 49 28.8	+0.2
	baz=328							
P52A	Corning	127.86	28	P		PKPdf	13 49 28.1	+0.1
	baz=323,SNR=5.2							
M56A	Emporium	128.06	24	P		PKiKP	13 49 29.6	+0.6
	baz=328							
M56A	Emporium	128.06	24			PKPdf	13 49 26.6	-1.9
L57A	Andrews Acres	128.13	22	P		PKiKP	13 49 30.0	+0.9
	baz=330							
PLAL	Pickwick Lake	128.18	36			PKPdf	13 49 28.9	+0.1
O54A	Avella	128.22	26	P		PKiKP	13 49 30.6	+1.2
	baz=325							
BINY	Binghamton	128.27	21	P		PKPdf	13 49 29.0	+0.2
	baz=331							
P53A	Whipple	128.33	28	P		PKiKP	13 49 30.7	+1.1
	baz=324							
Q52A	Bidwell	128.33	29	P		PKiKP	13 49 30.0	+0.4
	baz=322							
U49A	Red Boiling Sp	128.40	33			PKPdf	13 49 27.8	-1.4
N56A	West Decatur	128.49	24	P		PKiKP	13 49 30.1	+0.2
	baz=328							
P54A	Burton	128.65	27	P		PKiKP	13 49 31.3	+1.0
	baz=325							
SSPA	Standing Stone	128.89	24	P		PKiKP	13 49 31.6	+0.9
	baz=328							
N57A	Milroy	128.93	24	P		PKiKP	13 49 30.4	-0.3
	baz=329							
Q54A	Coxs Mills	128.99	27	P		PKiKP	13 49 31.9	+1.0
	baz=324							
P55A	Reedsville	129.01	26	P		PKiKP	13 49 32.0	+1.0
	baz=325							
Q55A	Buckhannon	129.32	27	P		PKiKP	13 49 32.7	+1.1
	baz=325							
O57A	Amberson	129.35	24	P		PKiKP	13 49 32.5	+0.9
	baz=328							
S53A	Williamson	129.41	30	P		PKiKP	13 49 32.4	+0.6
	baz=322							
P56A	Dayton Farm, R	129.45	25	P		PKiKP	13 49 32.8	+1.0
	baz=327							
N59A	State Game Lan	129.47	22	P		PKiKP	13 49 32.9	+1.0
	baz=331							
R54A	Victor	129.56	28	P		PKiKP	13 49 32.8	+0.7
	baz=324							
S54A	Dingess, Beckl	129.71	29	P		PKiKP	13 49 33.4	+0.9
	baz=323							
S54A	Dingess, Beckl	129.71	29			PKPdf	13 49 29.5	-2.2
N60A	Cedar Hill Far	129.76	21	P		PKiKP	13 49 33.3	+0.9
	baz=332							
O59A	Robesonia	129.84	23	P		PKiKP	13 49 33.4	+0.8
	baz=330							
KIC	Kosan Boka	130.00	283	*e*PKIKP		PKiKP	13 49 33.4	-0.2
	comp=Z,72nm,1.2s							
KIC	Kosan Boka	130.00	283	*e*PKP1		SKPbc	13 52 51.2	+2.1
	comp=Z,206nm,1.4s							
DBIC	Dimbokro	130.04	283	PKP		PKPdf	13 49 32.7	-0.2
	comp=Z,12nm,0.9s,baz=67,slow=2.9,SNR=13							
DBIC				SKPbc		SKPbc	13 52 51.5	+2.2
	comp=Z,54nm,1.1s,baz=53,slow=4.7,SNR=17							
DBIC	Dimbokro	130.04	283			PKPdf	13 49 30.4	-2.5
V52A	Sevierville	130.07	32			PKPdf	13 49 31.1	-1.3
T54A	Tazewell	130.17	30	P		PKiKP	13 49 34.3	+0.9
	baz=322							
LRAL	Lakeview Retre	130.17	37	P		PKiKP	13 49 34.5	+1.0
	baz=314							
TIC	Toumodi	130.21	283	*e*PKIKP		PKiKP	13 49 33.7	-0.4
TIC	Toumodi	130.21	283	*e*PKP1		SKPbc	13 52 51.9	+2.0
LIC	Lamto	130.31	283	*e*PKIKP		PKPdf	13 49 33.8	+0.4
	comp=Z,62nm,0.9s							
LIC	Lamto	130.31	283	*e*PKP1		SKPbc	13 52 52.3	+2.1
	comp=Z,185nm,1.6s							
Q58A	Fox Den Farm,	130.41	25	P		PKiKP	13 49 34.5	+0.8
	baz=328							
Z50A	Ashland	130.66	36	P		PKiKP	13 49 34.9	+0.4
	baz=315							
R58A	Rapidan	130.81	26	P		PKiKP	13 49 35.3	+0.8
	baz=327							
R58B	Mineral	131.14	26	P		PKiKP	13 49 35.2	-0.1
	baz=327							
Y52A	Lilburn	131.29	34	P		PKiKP	13 49 37.2	+1.5
	baz=318							
Y52A	Lilburn	131.29	34	PKPdf		PKPdf	13 49 32.5	-2.2
X54A	Belton	131.71	32	P		PKiKP	13 49 38.3	+1.8
	baz=320							
KMSC	Kings Mountain	131.79	31	P		PKiKP	13 49 37.1	+0.4
	baz=322							
KMSC	Kings Mountain	131.79	31			PKPdf	13 49 33.1	-2.6
V57A	Coltrane Farms	131.98	29	P		PKiKP	13 49 37.5	+0.4
	baz=324							
U58A	Oxford	132.14	28	P		PKiKP	13 49 38.7	+1.4
	baz=325							
W58A	Raeford	132.94	29	P		PKiKP	13 49 40.0	+1.0
	baz=324							
PLCA	Paso Flores	141.70	159	PKhKP		PKPpre	13 49 48.9	
	comp=Z,8.7nm,1.0s,baz=199,slow=5.5,SNR=12							
LC01	Cunco	142.78	156			PKPpre	13 49 49.8	
BI02	San Fabin de	144.93	155			PKPdf	13 49 59.6	-0.1
GO05	Huala	146.02	152	PKPbc		PKPbc	13 50 02.0	-0.4
BO02	Sierra Bellavi	146.72	153			PKPbc	13 50 03.8	-0.8
MT01	Popeta	147.28	152			PKPdf	13 50 04.7	+1.0
MT01				PKPab		PKPab	13 50 07.2	-0.7
ROC1	El Roble	148.12	151			PKiKP	13 50 10.0	-0.4
PEL	Peldehue	148.14	152	PKP2		PKiKP	13 50 09.7	-0.5
PEL	Peldehue	148.14	152			PKiKP	13 50 09.7	-0.5
VA03	San Esteban	148.51	152			PKPdf	13 50 07.4	+1.5
VA03						PKiKP	13 50 10.9	-0.1
CO04	Los Peladeros	148.90	150			PKPdf	13 50 08.7	+1.9
CO04						PKiKP	13 50 11.9	-0.2
CO02	Combarbal	149.56	149			PKiKP	13 50 13.6	+0.3
BCIP	Isla Barro Col	149.91	61	PKP2		PKiKP	13 50 14.1	-0.2
BCIP	Isla Barro Col	149.91	61			PKiKP	13 50 14.1	-0.2
CO03	El Pedregal	150.01	149			PKPbc	13 50 11.4	-1.9
CFA	Coronel Fontan	150.54	154	PKP		PKPdf	13 50 09.5	+0.4
	comp=Z,4.8nm,0.7s,baz=296,slow=4.3,SNR=9.9							
CFA				PKPbc		PKiKP	13 50 15.2	0.0
	comp=Z,75nm,0.8s,baz=238,slow=2.5,SNR=110							
GO02	Mina Guanaco	155.04	143			PKPdf	13 50 13.3	-2.9
ROSC	El Rosal	156.74	64	PKP		PKPdf	13 50 18.7	-0.1
	comp=Z,2.1nm,0.3s,baz=67,slow=22,SNR=1.3							
LVC	Limon Verde	157.34	140	PKP		PKPdf	13 50 19.2	-0.1
	comp=Z,1.7nm,0.7s,baz=184,slow=12,SNR=3.3							
CPUP	Villa Florida	158.95	170	PKP		PKPdf	13 50 20.0	-0.7
	comp=Z,3.5nm,0.9s,baz=194,slow=16,SNR=4.6							
CPUP				PKPab		PKPab	13 50 58.5	+1.6
	comp=Z,16nm,1.0s,baz=200,slow=3.9,SNR=9.8							
CPUP	Villa Florida	158.95	170	PKIKP		PKPdf	13 50 20.0	-0.7
SIV	San Ignacio	167.15	145	PKP		PKPdf	13 50 27.8	-1.1
	comp=Z,7.8nm,1.0s,baz=167,slow=1.5,SNR=25							
BDFB	Brasilia	168.60	207	PKP		PKPdf	13 50 29.1	-0.8
	comp=Z,8.9nm,1.0s,baz=356,slow=9.0,SNR=5.8							
BDFB				PKPab		PKPab	13 51 41.2	+1.5
	comp=Z,11nm,0.9s,baz=60,slow=6.4,SNR=6.4							
SAML	Samuel	169.73	110	PKIKP		PKPdf	13 50 28.4	-2.2
SAML	Samuel	169.73	110			PKPdf	13 50 28.4	-2.2

KRNET ***11*** *13:37:01.6±0.1, 41.01°N×70.34°E, mb2.6*
ISC 11 13:37:02.6±2.2, 41.01°N±0.06°×70.0°E±0.1, h35km, n8, σ0.97/15, 14C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BTK	Batken	1.15	146	⇑	*i*P		Pn	13 37 22.0	-0.3
BTK	baz=60			⇑	*i*S		Sn	13 37 36.8	0.0
ARK	Arkit	1.69	62	⇓	*i*P		Pn	13 37 28.4	-1.3
ARK	baz=59			⇓	*i*S		Sn	13 37 48.0	-2.2
KK31	Karatay Array	2.13	11	⇑	Pn		Pn	13 37 36.0	+0.2
KK31	0.7nm,0.2s,baz=188,slow=15,SNR=11			⇑	Lg		Lg	13 38 03.9	
ARSB	Arslanbob	2.29	81	⇑	*i*P		Pn	13 37 38.5	+0.4
ARSB	baz=82			⇑	*i*S		Sn	13 38 05.5	+0.4
AML	Almayashu	3.00	67	⇑	*i*P		Pn	13 37 48.8	+0.7
AML	baz=66			⇑	*i*S		Sn	13 38 23.1	0.0
EKS2	Erkin-Say	3.28	59	⇑	*i*P		Pn	13 37 52.6	+0.9
EKS2	baz=57			⇑	*i*S		Sn	13 38 29.9	+0.3
UCH	Uchtor	3.61	69	⇑	*i*P		Pn	13 37 57.4	+0.9
UCH	baz=68			⇑	*i*S		Sn	13 38 37.9	-0.2
KZA	Kyzart	4.10	73	⇑	*i*P		Pn	13 38 04.2	+1.1
KZA	baz=73			⇑	*i*S		Sn	13 38 49.2	-0.9

SOME ***11*** *13:45:11.8, 39.88°N×77.92°E, h15km*
KRNET ***11*** *13:45:13.2±0.1, 39.93°N×78.12°E, mb3.4*
NNC ***11*** *13:45:14.7±1.3, 40.02°N×77.87°E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=8.4km s-min=7.2km az=174.0*
ISC 11 13:45:19.0±2.7, 39.9°N±0.1°×77.92°E±0.06, h23km, n34, σ2.80/54, 14C-8D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KDJ	Kajisay	2.29	346	⇑	*i*P		Pn	13 45 54.7	-1.0
KDJ	baz=43			⇑	*i*S		Sn	13 46 25.0	+1.7
PRZ	Przheval'sk	2.60	8	⇓	*i*P		Pn	13 45 58.2	-1.7
PRZ	baz=5.0			⇓	*i*S		Sn	13 46 31.7	+0.8
ULHL	Ulahol	2.66	332	⇑	*i*P		Pn	13 46 00.8	+0.1
ULHL	baz=29			⇑	*i*S		Sn	13 46 35.3	+2.9
ANVS	Anan'yevo	2.88	356	⇑	*i*P		Pn	13 46 02.6	-1.2
ANVS	baz=53			⇑	*i*S		Sn	13 46 38.5	+0.7
KZA	Kyzart	2.97	318	⇑	*i*P		Pn	13 46 05.7	+0.6
KZA	baz=16			⇑	*i*S		Sn	13 46 44.0	+3.8
BOOM	Boomskoye usch	2.99	331	⇑	*i*P		Pn	13 46 05.2	0.0
BOOM	baz=28			⇑	*i*S		Sn	13 46 43.1	+2.8
SATY	Saty	3.17	6	*e*	P		Pb	13 46 11.2	-3.7
SATY	5.9nm,0.3s			*e*	S		Sb	13 46 53.3	+0.2
SATY	17nm,0.3s	3.17	6	Pg			Pb	13 46 11.2	-3.7
SATY	5.9nm,0.3s			Lg			Lg	13 46 53.3	
TNSS	Tian-Shan	3.22	347	*e*	P		Pn	13 46 11.2	+2.7
TNSS	9.2nm,0.7s			*e*	S		Sb	13 46 53.5	-1.1
TNSS	27nm,0.6s	3.22	347	Pg			Pn	13 46 11.2	+2.7
TNSS	9.2nm,0.7s			Lg			Lg	13 46 53.5	
IZV	Izvestkoviy	3.28	343	*e*	P		Pn	13 46 12.7	+3.5
IZV	4.9nm,0.5s			*e*	S		Sb	13 46 56.1	-0.2
IZV	16nm,0.5s	3.28	343	Pg			Pn	13 46 12.7	+3.5
IZV	5.9nm,0.5s			Lg			Lg	13 46 56.1	
MDOK	Medeo	3.32	349	*e*	P		Pb	13 46 13.5	-3.9
MDOK	9.0nm,0.4s			*e*	S		Sb	13 46 57.1	-0.3
MDOK	19nm,0.6s	3.32	349	⇓	Pg		Pn	13 46 12.6	+2.9
MDOK	28nm,1.3s			⇓	Lg		Lg	13 46 56.9	
KOTS	Kotyrbulak	3.38	350	*e*	P		Pb	13 46 14.9	-3.5
KOTS	9.7nm,0.4s			*e*	S		Sb	13 46 59.9	+0.7
MTBS	Maitube	3.41	341	*e*	P		Pb	13 46 14.8	-4.0
MTBS	5.8nm,0.3s			*e*	S		Sb	13 46 59.8	-0.1
MTBS	10nm,0.4s	3.41	341	Pg			Pb	13 46 14.8	-4.0
MTBS	5.8nm,0.3s			Lg			Lg	13 46 59.8	
KST	Kastek	3.46	336	*e*	P		Pn	13 46 15.0	+3.3
KST	4.0nm,0.5s			*e*	S		Sb	13 47 00.3	-1.2
KST	14nm,0.6s	3.46	336	Pg			Pn	13 46 15.0	+3.3
KST	7.0nm,0.6s			Lg			Lg	13 47 00.3	
UCH	Uchtor	3.47	313	⇑	*i*P		Pn	13 46 12.7	+0.7
UCH	baz=11			⇑	*i*S		Sn	13 46 56.4	+3.8
TKM2	Tokmak 2	3.48	331	⇓	Pg		Pn	13 46 15.5	+3.5
TKM2	3.1nm,0.6s			⇑	Lg		Lg	13 47 01.6	
PDGK	7.2nm,0.9s	3.62	18	Pg			Pn	13 46 17.2	+3.4
PDGK	1.0nm,0.4s			Lg			Lg	13 47 03.8	
PDGK	4.8nm,0.8s	3.62	18	⇑	Pg		Pb	13 46 19.1	-3.3
PDGK	7.5nm,1.2s			⇓	Lg		Lg	13 47 03.7	
DGS	13nm,0.9s	3.71	335	*e*	P		Pb	13 46 19.7	-4.1
DGS	Degeres			*e*	S		Sb	13 47 08.1	-0.2
AAK	3.1nm,0.6s	3.76	318	⇓	Pg		Pb	13 46 22.0	-2.8
AAK	Ala-Archa			⇓	Lg		Lg	13 47 11.0	
KTBS	11nm,0.5s	3.92	347	*e*	P		Pb	13 46 23.5	-3.9
KTBS	Karatobe			*e*	S		Sb	13 47 14.5	+0.1
CHKK	3.1nm,1.0s	4.01	350	*e*	P		Pb	13 46 25.6	-3.3
CHKK	7.7nm,0.7s			*e*	S		Sb	13 47 18.3	+1.3
CHKK	Chushkaly	4.01	350	Pg			Pb	13 46 25.7	-3.3
CHKK	3.3nm,0.3s			Lg			Lg	13 47 18.3	
KUU	10.0nm,0.3s	4.16	344	*e*	P		Pb	13 46 26.9	-4.6
KUU	Kurty			*e*	S		Sb	13 47 20.8	-0.5
KUU	0.7nm,0.1s	4.16	344	Pg			Pb	13 46 26.9	-4.6
KUU	12nm,0.6s			Lg			Lg	13 47 20.8	
MNBS	Kurty	4.19	5	*e*	P		Pb	13 46 28.9	-3.2
MNBS	1.0nm,0.5s			*e*	S		Sb	13 47 24.0	+1.7
MNBS	12nm,0.6s	4.19	5	Pg			Pb	13 46 28.5	-3.6
MNBS	Baschi			Lg			Lg	13 47 23.4	
DJR	3.3nm,0.7s	4.64	17	*e*	P		Pb	13 46 37.4	-2.4
DJR	9.0nm,0.3s			*e*	S		Sb	13 47 38.1	+2.9
DJR	Jarkent	4.64	17	Pg			Pb	13 46 37.4	-2.4
DJR	2.8nm,0.5s			Lg			Lg	13 47 38.1	
	3.7nm,1.0s								

MDD ***11*** *13:46:37.0±1.6, 37.22°N×12.72°W, h0km, mb4.2/5, Error ellipse: s-maj=14.7km s-min=10.7km az=59.0, PRXIMO*
IGIL ***11*** *13:46:37.0, 37.26°N×12.75°W, h0km, ML2.0*
INMG ***11*** *13:46:38.4±1.0, 36.92°N×13.07°W, h10km, ML2.1, Error ellipse: s-maj=6.1km s-min=5.3km az=104.0*
NEIC ***11*** *13:46:40.1±1.5, 37.3°N±0.1°×12.5°W±0.2, h15km±9km, mb4.2/2, Error ellipse: s-maj=20.4km s-min=13.8km az=60.0*
ISC 11 13:46:39.1±1.3, 37.32°N±0.06°×12.51°W±0.08, h10km, n82, σ1.28/142, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.94	93	P			Pn	13 47 25.2	-0.6
PFVI	3.4nm,0.1s,SNR=7.0			S			Sn	13 48 01.6	+0.3
PFVI	0.8nm,0.7s,SNR=7.9	2.94	93	*e*	Pn		Pn	13 47 25.3	-0.6
PFVI	Vila Bisbo			*e*	Sn		Sn	13 48 01.5	+0.3
PFVI				A			A	13 48 05.5	
PTEO	8.7nm,0.7s	2.94	93				Pn	13 47 25.1	-0.8
PTEO	Vila Bisbo	3.02	85	P			Pn	13 47 27.0	+0.1
PTEO	Sao Teotonio			S			Sn	13 48 04.9	+1.8
PTEO	Sao Teotonio	3.02	85	*e*	Pn		Pn	13 47 27.0	+0.1
PTEO				*e*	Sn		Sn	13 48 04.9	+1.8
PMAFR	Mafra	3.02	56	P			Pn	13 47 27.7	+0.7
PMAFR	2.7nm,0.2s,SNR=7.9			S			Sn	13 48 05.3	+2.0
PMAFR	14nm,0.8s,SNR=7.9	3.02	56	*e*	Pn		Pn	13 47 29.0	+2.0
PMAFR	Mafra			*e*	Sn		Sb	13 48 06.5	-3.4
P

PMAFR						Sn	13 48 05.3	+2.0
MORF	**Marmelete**	**3.07**	**89**	*e*P		**Pn**	**13 47 27.4**	**-0.3**
MORF				*e*S		**Sn**	**13 48 04.5**	**-0.1**
MORF				AML		AML	13 48 08.9	
	comp=N,8.4nm,0.2s							
MORF	**Marmelete**	**3.07**	**89**	P		**Pn**	**13 47 27.4**	**-0.3**
MORF				S		**Sn**	**13 48 04.5**	**-0.1**
	comp=N,8.4nm,0.2s							
MORF	**Marmelete**	**3.07**	**89**	*e*Pn		**Pn**	**13 47 27.5**	**-0.3**
PNCL	**Nicolau / Gran**	**3.25**	**75**	P		**Pn**	**13 47 31.2**	**+1.1**
PNCL				S		**Sn**	**13 48 10.3**	**+1.4**
	comp=N,1.8nm,0.1s							
PNCL	**Nicolau / Gran**	**3.25**	**75**	*e*Pn		**Pn**	**13 47 31.2**	**+1.1**
PNCL				*e*Sn		**Sn**	**13 48 10.3**	**+1.4**
PNCL				A		A	13 48 17.5	
	comp=N,1.8nm,0.1s							
MESJ	**Messejana**	**3.44**	**80**	*e*P		**Pn**	**13 47 32.8**	**+0.1**
MESJ				*e*S		**Sn**	**13 48 13.5**	**-0.1**
MESJ				AML		AML	13 48 17.1	
	comp=N,2.2nm,0.2s							
MESJ	**Messejana**	**3.44**	**80**	P		**Pn**	**13 47 32.8**	**+0.1**
MESJ				S		**Sn**	**13 48 13.5**	**-0.1**
	comp=N,2.2nm,0.2s							
MESJ	**Messejana**	**3.44**	**80**	*e*Pn		**Pn**	**13 47 32.9**	**+0.1**
MESJ				*e*Sn		**Sn**	**13 48 13.9**	**+0.3**
MESJ				A		A	13 48 20.3	
	comp=N,2.1nm,0.2s							
PCVE	**Castro Verde**	**3.57**	**84**	P		**Pn**	**13 47 34.9**	**+0.4**
PCVE				S		**Sn**	**13 48 17.3**	**+0.6**
	comp=N,1.1nm,0.1s							
PCVE	**Castro Verde**	**3.57**	**84**	*e*Pn		**Pn**	**13 47 34.9**	**+0.4**
PCVE				*e*Sn		**Sn**	**13 48 17.3**	**+0.6**
PCVE				A		A	13 48 20.4	
	comp=N,1.1nm,0.1s							
PSBE	**So Bento**	**3.65**	**52**	*e*Pn		**Pn**	**13 47 38.0**	**+2.4**
PSBE				*e*Sn		**Sn**	**13 48 22.5**	**+3.8**
PSBE				A		A	13 48 26.9	
	comp=N,2.3nm,0.2s							
PBDV	**Barranco-do-Ve**	**3.65**	**90**	P		**Pn**	**13 47 35.9**	**+0.3**
PBDV	**Barranco-do-Ve**	**3.65**	**90**	*e*Pn		**Pn**	**13 47 35.9**	**+0.3**
PBEJ	**Beja**	**3.75**	**78**	P		**Pn**	**13 47 37.9**	**+0.9**
PBEJ				S		**Sn**	**13 48 22.4**	**+1.2**
	comp=N,1.1nm,0.5s							
PBEJ	**Beja**	**3.75**	**78**	*e*Pn		**Pn**	**13 47 37.9**	**+0.9**
PBEJ				*e*Sn		**Sn**	**13 48 22.4**	**+1.2**
PBEJ				A		A	13 48 26.0	
	comp=N,2.1nm,0.5s							
EVO	**Evora**	**3.75**	**70**	P		**Pn**	**13 47 37.4**	**+0.3**
EVO				S		**Sn**	**13 48 18.8**	**-2.5**
EVO	**Evora**	**3.75**	**70**	*e*P		**Pn**	**13 47 37.4**	**+0.3**
EVO				*e*S		**Sn**	**13 48 18.8**	**-2.5**
EVO	**Evora**	**3.75**	**70**	*e*Pn		**Pn**	**13 47 38.2**	**+1.2**
PMTG	**Montargil**	**3.80**	**61**	P		**Pn**	**13 47 38.5**	**+0.9**
PMTG				S		**Sn**	**13 48 24.6**	**+2.2**
	comp=N,1.6nm,0.1s							
PMTG	**Montargil**	**3.80**	**61**	*e*Pn		**Pn**	**13 47 38.5**	**+0.9**
PMTG				*e*Sn		**Sn**	**13 48 24.6**	**+2.2**
PMTG				A		A	13 48 31.0	
	comp=N,1.6nm,0.1s							
PVAQ	**Vaqueiros**	**3.82**	**87**	P		**Pn**	**13 47 38.0**	**+0.1**
PVAQ				S		**Sn**	**13 48 22.7**	**-0.1**
	comp=N,2.1nm,0.2s							
PVAQ	**Vaqueiros**	**3.82**	**87**	*e*Pn		**Pn**	**13 47 38.0**	**+0.1**
PVAQ				*e*Sn		**Sn**	**13 48 22.7**	**-0.1**
PVAQ				A		A	13 48 31.1	
	comp=N,2.1nm,0.2s							
PVAQ	**Vaqueiros**	**3.82**	**87**	Pn		**Pn**	**13 47 37.8**	**-0.1**
EGRO	**El Granado**	**4.00**	**85**	P		**Pn**	**13 47 40.8**	**+0.3**
	comp=N,1.2nm,0.1s,SNR=7.9							
EGRO				S		**Sn**	**13 48 28.4**	**+0.9**
	comp=N,10nm,0.6s,SNR=7.9							
EGRO	**El Granado**	**4.00**	**85**			**Pn**	**13 47 40.8**	**+0.3**
EGRO						**Sn**	**13 48 28.8**	**+1.3**
PCAS	**Casmilo, Conde**	**4.16**	**48**	P		**Pn**	**13 47 44.3**	**+1.7**
PCAS				S		**Sn**	**13 48 33.4**	**+2.2**
	comp=N,2.1nm,0.2s							
PCAS	**Casmilo, Conde**	**4.16**	**48**	*e*Pn		**Pn**	**13 47 44.3**	**+1.7**
PCAS				*e*Sn		**Sn**	**13 48 33.4**	**+2.2**
PCAS				A		A	13 48 42.3	
	comp=N,2.1nm,0.2s							
PESTR	**Estremoz**	**4.17**	**67**	*e*Pn		**Pn**	**13 47 44.4**	**+1.6**
PESTR				*e*Sn		**Sn**	**13 48 33.0**	**+1.3**
PMRV	**Marv??o**	**4.54**	**61**	P		**Pn**	**13 47 48.5**	**+0.7**
PMRV				S		**Sn**	**13 48 41.7**	**+1.1**
	comp=N,2.3nm,0.3s							
PMRV	**Marv??o**	**4.54**	**61**	*e*Pn		**Pn**	**13 47 48.5**	**+0.7**
PMRV				*e*Sn		**Sn**	**13 48 41.7**	**+1.1**
PMRV				A		A	13 48 45.2	
	comp=N,2.3nm,0.3s							
EBAD	**Badajoz**	**4.57**	**70**	P		**Pn**	**13 47 48.9**	**+0.7**
	comp=N,0.9nm,0.1s,SNR=13							
EBAD				S		**Sn**	**13 48 41.5**	**+0.1**
	comp=N,6.2nm,0.6s,SNR=7.9							
EBAD	**Badajoz**	**4.57**	**70**			**Pn**	**13 47 48.9**	**+0.7**
EBAD						**Sn**	**13 48 41.5**	**+0.1**
EMIN	**Mina Concepcio**	**4.66**	**83**	P		**Pn**	**13 47 49.6**	**+0.1**
	comp=N,0.4nm,0.1s,SNR=11							
EMIN				S		**Sn**	**13 48 43.0**	**-0.6**
	comp=N,5.2nm,0.8s,SNR=7.9							
EMIN	**Mina Concepcio**	**4.66**	**83**			**Pn**	**13 47 49.6**	**+0.1**
EMIN						**Sn**	**13 48 43.0**	**-0.6**
PCBR	**Castelo Branco**	**4.67**	**56**	P		**Pn**	**13 47 51.1**	**+1.4**
PCBR	**Castelo Branco**	**4.67**	**56**	*e*Pn		**Pn**	**13 47 51.1**	**+1.4**
PVIS	**Viseu**	**4.94**	**45**	S		**Sn**	**13 48 51.9**	**+1.3**
PVIS	**Viseu**	**4.94**	**45**	*e*Sn		**Sn**	**13 48 51.9**	**+1.3**
ESPR	**Espera**	**5.33**	**93**	P		**Pn**	**13 47 58.7**	**0.0**
	comp=N,1.0nm,0.1s,SNR=8.2							
ESPR				S		**Sn**	**13 48 59.2**	**-1.0**
	comp=N,1.6nm,0.4s,SNR=7.9							
ESPR	**Espera**	**5.33**	**93**			**Pn**	**13 47 58.8**	**0.0**
ESPR						**Sn**	**13 48 59.2**	**-1.0**
EZAM	**Zamans**	**5.65**	**30**	P		**Pn**	**13 48 03.1**	**+0.1**
	comp=N,0.3nm,0.1s,SNR=4.0							
EZAM				S		**Sn**	**13 49 06.1**	**-1.9**
	comp=N,33nm,1.8s,SNR=7.9							
EZAM	**Zamans**	**5.65**	**30**			**Pn**	**13 48 03.1**	**+0.1**
EZAM						**Sn**	**13 49 06.1**	**-1.9**
ECAB	**El Cabril**	**5.67**	**80**	P		**Pn**	**13 48 03.6**	**+0.2**
	comp=N,0.6nm,0.1s,SNR=14							
ECAB				S		**Sn**	**13 49 07.9**	**-0.7**
	comp=N,6.7nm,1.1s,SNR=7.1							
ECAB	**El Cabril**	**5.67**	**80**			**Pn**	**13 48 03.6**	**+0.2**
ECAB						**Sn**	**13 49 07.9**	**-0.7**
PGAV	**Gavieira, Arco**	**5.67**	**34**	P		**Pn**	**13 48 04.9**	**+1.4**
PGAV				S		**Sn**	**13 49 09.4**	**+0.6**
	comp=N,3.6nm,0.6s							
PGAV	**Gavieira, Arco**	**5.67**	**34**	*e*Pn		**Pn**	**13 48 04.9**	**+1.4**
PGAV				*e*Sn		**Sn**	**13 49 09.4**	**+0.6**
PGAV				A		A	13 49 09.9	
	comp=N,3.6nm,0.6s							
ELOB	**Lobios**	**5.69**	**36**	P		**Pn**	**13 48 04.1**	**+0.3**
	comp=N,0.3nm,0.1s,SNR=7.9							
ELOB				S		**Sn**	**13 49 08.1**	**-1.1**
	comp=N,2.2nm,1.0s,SNR=7.9							
ELOB	**Lobios**	**5.69**	**36**			**Pn**	**13 48 04.1**	**+0.3**
ELOB						**Sn**	**13 49 08.1**	**-1.1**
EPLA	**Plasencia**	**5.72**	**59**	P		**Pn**	**13 48 04.8**	**+0.7**
	comp=N,0.5nm,0.1s,SNR=7.9							
EPLA				S		**Sn**	**13 49 09.5**	**-0.4**
	comp=N,18nm,1.1s,SNR=7.9							
EPLA	**Plasencia**	**5.72**	**59**			**Pn**	**13 48 04.8**	**+0.7**
EPLA						**Sn**	**13 49 09.5**	**-0.4**
MVO	**Moncorvo**	**5.73**	**46**	P		**Pn**	**13 48 04.9**	**+0.7**
	comp=N,1.3nm,0.1s,SNR=5.7							
MVO				S		**Sn**	**13 49 08.9**	**-1.1**
	comp=N,16nm,1.1s,SNR=7.9							
MVO	**Moncorvo**	**5.73**	**46**	*e*Pn		**Pn**	**13 48 05.6**	**+1.4**
MVO				*e*Sn		**Sn**	**13 49 11.5**	**+1.4**
MVO				A		A	13 49 14.2	
	comp=N,1.5nm,0.2s							
MVO	**Moncorvo**	**5.73**	**46**			**Pn**	**13 48 04.9**	**+0.7**
MVO						**Sn**	**13 49 08.9**	**-1.1**
EMAZ	**Mazaricos**	**6.24**	**25**	S		**Sn**	**13 49 19.8**	**-2.7**
	comp=N,20nm,1.0s,SNR=7.9							
EMAZ	**Mazaricos**	**6.24**	**25**			**Pn**	**13 48 11.1**	**-0.1**
EMAZ						**Sn**	**13 49 19.8**	**-2.7**
PBRG	**Braganca**	**6.32**	**43**	P		**Pn**	**13 48 13.5**	**+1.2**
PBRG	**Braganca**	**6.32**	**43**	*e*Pn		**Pn**	**13 48 13.5**	**+1.2**
EADA	**Adamuz**	**6.34**	**80**	P		**Pn**	**13 48 13.0**	**+0.4**
	comp=N,0.6nm,0.1s,SNR=7.9							
EADA				S		**Sn**	**13 49 21.9**	**-3.2**
	comp=N,3.5nm,1.0s,SNR=7.9							
EADA	**Adamuz**	**6.34**	**80**			**Pn**	**13 48 13.0**	**+0.4**
EADA						**Sn**	**13 49 22.6**	**-2.5**
ECAL	**Calabor**	**6.41**	**42**	P		**Pn**	**13 48 14.0**	**+0.4**
	comp=N,1.0nm,0.2s,SNR=6.1							
ECAL				S		**Sn**	**13 49 24.6**	**-2.3**
	comp=N,21nm,1.6s,SNR=7.9							
ECAL	**Calabor**	**6.41**	**42**			**Pn**	**13 48 14.0**	**+0.4**
ECAL						**Sn**	**13 49 24.9**	**-2.1**
EAGO	**Agolada(Pontev**	**6.44**	**30**	P		**Pn**	**13 48 13.8**	**-0.1**
	comp=N,0.6nm,0.1s,SNR=7.9							
EAGO				S		**Sn**	**13 49 24.2**	**-3.3**
	comp=N,13nm,0.9s,SNR=7.9							
EAGO	**Agolada(Pontev**	**6.44**	**30**			**Pn**	**13 48 13.8**	**-0.1**
EAGO						**Sn**	**13 49 24.2**	**-3.3**
PAB	**San Pablo**	**6.78**	**68**	P		**Pn**	**13 48 19.1**	**+0.4**
	comp=N,0.3nm,0.2s,SNR=7.9							
PAB				S		**Sn**	**13 49 34.7**	**-1.2**
	comp=N,6.4nm,1.1s,SNR=7.9							
PAB	**San Pablo**	**6.78**	**68**			**Pn**	**13 48 19.5**	**+0.8**
ESDC	**Sonseca Array**	**7.10**	**68**	P		**Pn**	**13 48 23.4**	**+0.4**
	comp=N,2.2nm,0.3s,baz=255,slow=13,SNR=6.7							
ESDC	**Sonseca Array**	**7.10**	**68**			**Pn**	**13 48 23.4**	**+0.4**
ETOR	**Torete**	**8.85**	**64**	P		**Pn**	**13 48 47.5**	**+0.4**
	comp=N,4.7nm,0.2s,SNR=10							
MURB	**Monte Urbino**	**19.96**	**65**	P		**P**	**13 51 09.6**	**-1.7**
CORL	**Corleone**	**20.44**	**80**	P		**P**	**13 51 16.7**	**+0.1**
CORL				IAmb		IAmb	13 51 20.7	
	comp=Z,12nm,1.1s							
KSH	**Kashi**	**66.49**	**57**	P		**P**	**13 57 28.7**	**-0.3**
KSH				pP		pwP	13 57 34.9	-2.5
KSH				sP		sP	13 57 37.8	+6.6
KSH				pmax		pmax		
	comp=Z,36nm,1.3s							
KSH				pmax		pmax		
	comp=Z,120nm,4.8s							
WMQ	**Urumqi**	**71.68**	**49**	*e*P		**P**	**13 58 02.2**	**+1.1**
WMQ				sP		pwP	13 58 10.2	+0.7
WMQ				pmax		pmax		
	comp=Z,15nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,240nm,11.7s							
WMQ				LR		LR		
	comp=N,170nm,16.1s							
WMQ				LR		LR		
	comp=E,200nm,13.7s							
WMQ				LR		LR		
	comp=Z,230nm,21.7s							
LZH	**Lanzhou**	**86.14**	**47**	*e*P		**P**	**13 59 21.7**	**+1.0**
LZH				pP		PcP	13 59 25.7	+2.4
LZH				sP		pwP	13 59 27.8	-1.3
LZH				PP		**PP**	**14 02 41.5**	**+1.0**
LZH				pmax		pmax		
	comp=Z,15nm,1.0s							
LZH				pmax		pmax		
	comp=Z,67nm,4.3s							
HHC	**Hu-ho-hao-te**	**86.87**	**39**	*e*P		**P**	**13 59 25.0**	**+0.8**
HHC				pmax		pmax		
	comp=Z,11nm,0.6s							
HHC				pmax		pmax		
	comp=Z,65nm,5.9s							

*IDC **11** 14:12:44.4±1.1, 11°.12S×161°.71E, h0km, mb4.0/11, mb1 4.2/14, mb1mx4.0/33, mbtmp4.0/14, ML3.9/3, MS3.7/7, Ms1 3.7/7, ms1mx3.5/34, Error ellipse: s-maj=26.1km s-min=20.2km az=108.0*

*NEIC **11** 14:12:49.5±1.3, 11°.1S±0°.1×161°.7E±0°.1, h36km±9km, mb4.3/9, Error ellipse: s-maj=22.4km s-min=11.6km az=53.0*

ISC 11 14:12:49.1±0.8, 11°.21S±0°.08×161°.8E±0°.1, h35km, n32, σ1§49/23, mb4.0/13, MS3.9/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**2.51**	**315**	Pn		**Pn**	**14 13 26.5**	**-0.9**
	19nm,0.3s,baz=204,slow=6.1,SNR=2.6							
HNR				Sn		**Sn**	**14 13 55.2**	**-1.6**
	193nm,0.3s,baz=216,slow=13,SNR=11							
HNR				LR		LR	14 14 13.2	
	comp=Z,300nm,20.4s,baz=104,slow=37							
DZM	**Mont Dzumac**	**11.69**	**158**	Pn		**Pn**	**14 15 35.6**	**+1.9**
	0.4nm,0.3s,baz=216,slow=20,SNR=1.2							
DZM				Sn		**Sn**	**14 17 38.4**	**-4.7**
	0.2nm,0.3s,baz=250,slow=21,SNR=1.1							
DZM				LR		LR	14 18 45.6	
	comp=Z,258nm,19.6s,baz=359,slow=31							
PMG	**Port Moresby**	**14.47**	**276**	LR		LR	14 21 22.0	
	comp=Z,250nm,18.5s,baz=115,slow=36							
CTA	**Charters Tower**	**17.32**	**237**	P		**P**	**14 16 49.4**	**0.0**
	0.4nm,0.3s,baz=80,slow=11,SNR=5.0							
EIDS	**Eidsvold**	**17.33**	**214**	P		**P**	**14 16 49.7**	**+0.3**
EIDS				IAmb		IAmb	14 16 53.3	
	comp=Z,9.4nm,0.9s							
JAY	**Jayapura**	**22.59**	**291**	P		**P**	**14 17 45.2**	**-1.7**
	comp=Z,11nm,1.0s,baz=128,slow=12,SNR=2.7							
WB0	**Warramunga Arr**	**27.67**	**249**	P		**P**	**14 18 34.3**	**+0.3**
WB0				IAmb		IAmb	14 19 01.2	
	comp=Z,22nm,1.4s							
STKA	**Stephens Creek**	**27.73**	**219**	P		**P**	**14 18 35.1**	**+0.7**
	comp=Z,4.5nm,1.1s,baz=52,slow=12,SNR=4.2							
STKA				LR		LR	14 29 18.5	
	comp=Z,395nm,19.0s,baz=37,slow=36							
STKA	**Stephens Creek**	**27.73**	**219**	IAmb		IAmb	14 18 47.2	
	comp=Z,4.5nm,1.6s							
WB2	**Warramunga Arr**	**27.75**	**248**	P		**P**	**14 18 34.8**	**+0.1**
WB2				IAmb		IAmb	14 18 45.1	
	comp=Z,14nm,1.4s							
WRA	**Warramunga Arr**	**27.76**	**248**	P		**P**	**14 18 34.8**	**-0.1**
	comp=Z,6.5nm,1.2s,baz=77,slow=9.3,SNR=8.7							
WRA				LR		LR	14 28 53.3	
	comp=Z,140nm,18.8s,baz=100,slow=35							
AS31	**Alice Springs**	**29.24**	**241**	P		**P**	**14 18 47.3**	**-0.7**
ASAR	**Alice Springs**	**29.24**	**241**	P		**P**	**14 18 47.8**	**-0.3**
	comp=Z,17nm,0.9s,baz=67,slow=9.8,SNR=15							
H11S2	**WAKE ISLAND Hy**	**29.92**	**9**	T		T	14 49 52.2	
	baz=189,slow=76,SNR=18							
H11S3	**WAKE ISLAND Hy**	**29.92**	**9**	T		T	14 49 51.2	
	baz=189,slow=76,SNR=11							
H11S1	**WAKE ISLAND Hy**	**29.93**	**9**	T		T	14 49 53.7	
	baz=189,slow=76,SNR=16							
H11N1	**WAKE ISLAND Hy**	**31.15**	**9**	T		T	14 51 23.4	
	baz=188,slow=76,SNR=6.4							
H11N3	**WAKE ISLAND Hy**	**31.15**	**9**	T		T	14 51 25.0	
	baz=188,slow=76,SNR=6.6							
H11N2	**WAKE ISLAND Hy**	**31.16**	**9**	T		T	14 51 25.8	
	baz=188,slow=76,SNR=5.8							
BBOO	**Buckleboo**	**31.92**	**224**	P		**P**	**14 19 12.3**	**+0.7**
KNRA	**Kununurra**	**32.37**	**258**	P		**P**	**14 19 16.1**	**+0.5**
FITZ	**Fitzroy Crossi**	**35.55**	**255**	P		**P**	**14 19 43.6**	**+0.3**
	comp=Z,1.9nm,1.0s,baz=74,slow=11,SNR=2.5							
FITZ	**Fitzroy Crossi**	**35.55**	**255**	IAmb		IAmb	14 19 48.7	
	comp=Z,12nm,1.5s							
FORT	**Forrest**	**36.77**	**233**	P		**P**	**14 19 54.5**	**+0.8**
JCJ	**Chichijima**	**42.55**	**334**	LR		LR	14 36 43.8	
	comp=Z,119nm,19.7s,baz=70,slow=34							
MJAR	**Matsushiro Arr**	**52.42**	**336**	P		**P**	**14 21 57.3**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=137,slow=8.4,SNR=2.6							
CMAR	**Chiang Mai Arr**	**68.60**	**295**	P		**P**	**14 23 50.8**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=97,slow=4.6,SNR=1.9							
SONM	**Songino Array**	**76.52**	**325**	P		**P**	**14 24 38.0**	**+2.2**
	comp=Z,0.9nm,0.7s,baz=133,slow=10,SNR=3.7							
ILAR	**Eielson Array**	**84.95**	**20**	P		**P**	**14 25 20.6**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=251,slow=5.4,SNR=4.4							
MKAR	**Makanchi Array**	**90.98**	**318**	P		**P**	**14 25 49.1**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=96,slow=7.2,SNR=2.2							
NEW	**Newport**	**92.44**	**41**	LR		LR	14 59 24.2	
	comp=Z,89nm,20.6s,baz=102,slow=30							
YKA	**Yellowknife Ar**	**96.93**	**28**	P		**P**	**14 26 16.0**	**-0.6**
	comp=Z,0.1nm,0.5s,baz=259,slow=4.3,SNR=5.1							

IDC 11 14:18:15.6±20.0, 6°.47S×152°.81E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/28, mbtmp3.5/3, Error ellipse: s-maj=324.3km s-min=100.1km az=26.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.38**	**232**	P		P	14 23 16.7	+0.9
	0.6nm,0.6s,baz=57,slow=11,SNR=3.5							
ASAR	**Alice Springs**	**24.95**	**225**	P		P	14 23 40.2	-0.8
	0.5nm,0.8s,baz=57,slow=10,SNR=5.1							
STKA	**Stephens Creek**	**27.36**	**201**	P		P	14 24 02.7	+0.1
	0.8nm,0.5s,baz=15,slow=12,SNR=3.9							

*IDC **11** 14:31:56.1±0.7, 51°.18N×178°.23W, h0km, mb3.9/25, mb1 4.1/27, mb1mx4.0/44, mbtmp3.9/27, ML3.5/2, Error ellipse: s-maj=20.5km s-min=12.3km az=158.0*

*AEIC **11** 14:32:00.1±1.6, 51°.09N±0°.08×178°.22W±0°.08, h43km±4km, Error ellipse: s-maj=10.9km s-min=7.6km az=172.0*

*MOS **11** 14:32:01.4±1.0, 51°.29N×178°.15W, h49km, mb4.5/17, Error ellipse: s-maj=10.8km s-min=7.6km az=89.6*

*NEIC **11** 14:32:02.6±1.4, 51°.18N±0°.07×178°.18W±0°.06, h44km±5km, mb4.6/158, ML3.9(AEIC), Error ellipse: s-maj=9.8km s-min=5.2km az=192.0*

ISC 11 14:32:01.4±0.5, 51°.16N±0°.07×178°.14W±0°.04, h34km, n283, σ1§00/276, mb4.7/106, 6C-1D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TASE	**Tanaga Southea**	**0.68**	**5**			**Pb**	**14 32 15.3**	**+0.4**
TAPA	**Tanaga Point A**	**0.69**	**17**			**Pn**	**14 32 15.1**	**+0.4**
GAEA	**Gareloi East**	**0.73**	**329**			**Pn**	**14 32 15.8**	**+0.6**
TAFP	**Tanaga Falls P**	**0.74**	**8**			**Pn**	**14 32 16.1**	**+0.6**
GASW	**Gareloi Southw**	**0.76**	**324**			**Pn**	**14 32 15.6**	**-0.1**
KIMD	**Kanaga Island**	**0.82**	**43**			**Pn**	**14 32 16.7**	**+0.1**
KIWB	**Kanaga Island**	**0.93**	**41**	Pn		**Pn**	**14 32 18.5**	**+0.5**
KIKV	**Kanaga Island**	**0.94**	**40**			**Pn**	**14 32 18.6**	**+0.4**
KICM	**Kanaga Island**	**0.96**	**38**			**Pb**	**14 32 19.1**	**-0.5**
ADK	**Adak**	**1.16**	**51**	P		**Pn**	**14 32 21.3**	**+0.1**
ADK	**Adak**	**1.16**	**51**			**Pn**	**14 32 21.3**	**+0.1**
GSTD	**Great Sitkin T**	**1.53**	**54**			**Pn**	**14 32 27.2**	**+0.8**
GSTD						**Sb**	**14 32 48.0**	**-0.4**
GSMY	**Great Sitkin M**	**1.57**	**55**			**Pn**	**14 32 27.5**	**+0.7**
GSTR	**Great Sitkin T**	**1.60**	**53**			**Pn**	**14 32 28.2**	**+0.9**
ATKA	**Atka Island**	**2.67**	**65**			**Pn**	**14 32 41.7**	**-0.1**
ATKA	**Atka Island**	**2.67**	**65**			**Sb**	**14 33 17.1**	**-3.6**
KOKL	**Mount Kliuchef**	**2.71**	**63**			**Pn**	**14 32 44.7**	**+2.1**
KOFP	**Korovin Flat P**	**2.75**	**65**			**Pn**	**14 32 45.1**	**+2.0**
SMY	**Shemya**	**5.05**	**291**	P		**Pn**	**14 33 16.5**	**+1.9**
SMY	**Shemya**	**5.05**	**291**	Pn		**Pn**	**14 33 16.5**	**+1.9**
NIKH	**Nikolski High**	**6.01**	**69**	Pn		**Pn**	**14 33 29.5**	**+1.8**
MREP	**Makushin Rep't**	**7.45**	**65**			**Pn**	**14 33 50.1**	**+2.5**
MSW	**Makushin Switc**	**7.46**	**64**			**Pn**	**14 33 49.7**	**+2.1**
UNV	**Unalaska Valle**	**7.59**	**65**	Pn		**Pn**	**14 33 51.2**	**+1.7**
SPIA	**Saint Paul Isl**	**7.60**	**34**			**Pn**	**14 33 52.5**	**+3.0**
SDPT	**Sand Point**	**11.37**	**62**			**Pn**	**14 34 42.2**	**+1.0**
CNBA	**Chernabura Isl**	**11.76**	**65**			**Pn**	**14 34 46.3**	**-0.2**
CHGN	**Chignik**	**12.74**	**59**	Pn		**Pn**	**14 35 00.1**	**+0.2**
GAMB	**Gambell**	**13.10**	**13**	Pn		**Pn**	**14 35 06.8**	**+2.0**
PEA0B	**Petropavlovsk-**	**14.95**	**287**	P		**Pn**	**14 35 25.9**	**-4.0**
PEA0B	**Petropavlovsk-**	**14.95**	**287**	Pn		**Pn**	**14 35 25.9**	**-4.0**
PETK	**Petropavlovsk-**	**14.95**	**287**	Pn		**P**	**14 35 34.0**	**-1.1**
	0.2nm,0.3s,baz=105,slow=13,SNR=9.1							
OHAK	**Old Harbor**	**15.71**	**58**			**Pn**	**14 35 37.1**	**-2.7**
OHAK				IAmb		IAmb	14 35 46.0	
	comp=Z,32nm,1.4s							
KDAK	**Kodiak Island**	**16.20**	**56**	Pn		**Pn**	**14 35 43.6**	**-2.5**
	comp=Z,0.6nm,0.3s,baz=219,slow=2.2,SNR=24							
KDAK				Sn		**Sn**	**14 38 43.6**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=241,slow=2.8,SNR=1.4							
KDAK	**Kodiak Island**	**16.20**	**56**			**Pn**	**14 35 43.8**	**-2.3**
RSO	**Redoubt South**	**16.93**	**47**	Pn		**Pn**	**14 35 55.4**	**-0.2**
HOM	**Homer**	**17.18**	**50**	Pn		**Pn**	**14 35 57.6**	**-0.8**
HOM				IAmb		IAmb	14 36 06.4	
	comp=Z,30nm,0.9s							
CNPM	**China Poot**	**17.34**	**51**	Pn		**Pn**	**14 36 00.5**	**+0.1**
BRLK	**Bradley Lake**	**17.57**	**50**	Pn		**Pn**	**14 36 03.0**	**-0.4**
PPLA	**Purkeypile**	**18.21**	**40**	P		**Pn**	**14 36 12.0**	**+0.6**
SEW	**Seward**	**18.36**	**50**	P		**Pn**	**14 36 13.2**	**+0.2**
RDOG	**Red Dog Mine**	**18.51**	**18**	P		**Pn**	**14 36 17.1**	**+2.3**
RC01	**Rabbit Creek A**	**18.54**	**47**	P		**Pn**	**14 36 16.6**	**+1.4**
**BILL

YSS pmax pmax
comp=Z,10.0nm,0.7s
YSS MLR MLR
comp=Z,200nm,17.0s
YSS Yuzh-Sakhalins 25.75 276 P P **14 37 28.0 -0.5**
YSS IAmb IAmb 14 37 30.8
comp=Z,6.7nm,0.7s
JKA Kamikawa-asahi 27.12 270 P P **14 37 38.6 -2.4**
ASAJ Asahikawa 27.12 270 P P **14 37 38.6 -2.4**
comp=Z,5.8nm,1.1s,baz=330,slow=20,SNR=1.9
INK Inuvik 27.40 35 P P **14 37 42.9 -0.3**
comp=Z,1.3nm,0.7s,baz=242,slow=9.9,SNR=12
INK Inuvik 27.40 35 P P **14 37 43.3 +0.1**
DLBC Dease Lake 28.13 56 P P **14 37 49.2 -0.8**
comp=Z,0.9nm,0.5s,baz=152,slow=15,SNR=3.3
DLBC Dease Lake 28.13 56 IAmb IAmb 14 37 49.4
comp=Z,9.5nm,1.6s
C36M Paulatuk 30.97 34 P P **14 38 14.9 0.0**
TIXI Tiksi 31.03 331 P P **14 38 16.3 +0.9**
comp=Z,0.8nm,0.4s,baz=130,slow=11,SNR=4.0
TIXI Tiksi 31.03 331 P P **14 38 16.3 +0.9**
TIXI pmax pmax
comp=Z,9.0nm,2.0s
KLR Kul'dur 31.64 286 *ce*P P **14 38 21.0 0.0**
KLR pmax pmax
comp=Z,4.0nm,0.8s
H11N2 WAKE ISLAND Hy 33.51 206 T T 15 14 25.5
baz=17,slow=76,SNR=194
H11N3 WAKE ISLAND Hy 33.52 206 T T 15 14 27.0
baz=17,slow=76,SNR=203
H11N1 WAKE ISLAND Hy 33.53 206 T T 15 14 26.1
baz=17,slow=76,SNR=204
USRK Ussuriysk Ar. 33.73 278 P P **14 38 37.8 -1.6**
comp=Z,1.4nm,0.6s,baz=59,slow=11,SNR=7.6
MJAR Matsushiro Arr 34.16 262 P P **14 38 42.8 -0.3**
comp=Z,1.3nm,0.7s,baz=50,slow=7.9,SNR=6.8
H11S1 WAKE ISLAND Hy 34.73 206 T T 15 15 57.5
baz=17,slow=76,SNR=260
H11S2 WAKE ISLAND Hy 34.75 206 T T 15 15 58.7
baz=17,slow=76,SNR=186
H11S3 WAKE ISLAND Hy 34.75 206 T T 15 16 02.5
baz=17,slow=76,SNR=153
YKA Yellowknife Ar 35.08 46 P P **14 38 49.5 -1.3**
comp=Z,1.0nm,0.7s,baz=274,slow=9.3,SNR=3.3
YKA PcP **PcP** **14 41 22.8 +1.0**
comp=Z,0.2nm,0.4s,baz=287,slow=2.9,SNR=4.1
B08A Colville Reser 37.22 71 P P **14 39 10.3 +1.0**
B08A IAmb IAmb 14 39 26.8
comp=Z,2.8nm,0.8s
NEW Newport 38.57 70 P P **14 39 21.2 +0.5**
NEW pmax pmax
comp=Z,5.0nm,1.0s
NEW Newport 38.57 70 P P **14 39 21.2 +0.5**
NEW IAmb IAmb 14 39 37.2
comp=Z,4.8nm,0.9s
I07A Izee 39.22 77 P P **14 39 27.9 +1.7**
I07A IAmb IAmb 14 39 54.4
comp=Z,12nm,1.8s
KSRS Korea Array 40.06 272 P P **14 39 33.3 +0.2**
comp=Z,1.3nm,0.8s,baz=56,slow=8.1,SNR=2.8
WALA Waterton Lakes 40.07 67 P P **14 39 34.3 +1.0**
MSO Missoula 41.15 70 P P **14 39 43.0 +0.8**
MCMT McKenzie Canyo 42.85 72 P P **14 39 56.7 +0.4**
RLMT Red Lodge 44.82 70 P P **14 40 12.2 +0.2**
RLMT IAmb IAmb 14 40 29.0
comp=Z,4.5nm,0.9s
BW06 Boulder Array 45.98 72 P P **14 40 21.5 +0.2**
BW06 IAmb IAmb 14 40 23.7
comp=Z,4.7nm,1.1s
PDAR Pinedale Array 45.98 72 P P **14 40 22.6 +1.3**
comp=Z,2.1nm,0.6s,baz=318,slow=3.7,SNR=23
ULN Ulaanbaatar 46.73 297 *ce*P P **14 40 27.6 +0.6**
ULN pmax pmax
comp=Z,5.0nm,1.0s
ULN Ulaanbaatar 46.73 297 P P **14 40 26.9 -0.1**
ULN IAmb IAmb 14 40 28.8
comp=Z,8.2nm,1.3s
SONM Songino Array 47.11 297 P P **14 40 30.2 +0.2**
comp=Z,2.1nm,0.7s,baz=60,slow=9.1,SNR=10
HHC Hu-ho-hao-te 48.15 287 *e*P P **14 40 41.0 +2.9**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,100nm,5.7s
HHC LR LR
comp=N,110nm,14.5s
HHC LR LR
comp=E,120nm,18.2s
HHC LR LR
comp=Z,100nm,13.9s
O20A White River Ci 48.34 75 P P **14 40 40.2 +0.6**
O20A IAmb IAmb 14 40 41.3
comp=Z,5.7nm,0.7s
PV09 Paradox Valley 48.81 77 P P **14 40 43.8 +0.4**
PV04 Paradox Valley 49.01 77 P P **14 40 44.2 -0.7**
PV04 IAmb IAmb 14 41 00.8
comp=Z,18nm,1.7s
PV17 East Wray Mesa 49.05 77 P P **14 40 46.2 +1.0**
PV17 IAmb IAmb 14 40 54.2
comp=Z,12nm,1.3s
PV16 Nyswonger Mesa 49.06 77 P P **14 40 46.1 +0.9**
PV16 IAmb IAmb 14 40 50.9
comp=Z,9.5nm,1.5s
PV05 Paradox Valley 49.09 77 P P **14 40 45.3 -0.2**
PV05 IAmb IAmb 14 42 05.9
comp=Z,22nm,1.8s
PV11 David Mesa, Pa 49.09 77 P P **14 40 46.1 +0.7**
PV11 IAmb IAmb 14 40 53.0
comp=Z,7.5nm,0.6s
PV03 Paradox Valley 49.13 77 P P **14 40 46.4 +0.6**
PV03 IAmb IAmb 14 40 51.8
comp=Z,3.6nm,0.8s
PV13 Radium Mtn., P 49.21 77 P P **14 40 47.3 +0.8**
PV13 IAmb IAmb 14 41 02.8
comp=Z,6.5nm,0.6s
PV02 Paradox Valley 49.23 77 P P **14 40 47.5 +0.9**
PV02 IAmb IAmb 14 41 06.6
comp=Z,8.0nm,1.0s
NJ2 Nanjing 49.23 273 *e*P P **14 40 46.5 +0.2**
NJ2 pmax pmax
comp=Z,12nm,0.5s
PV01 Paradox Valley 49.38 77 P P **14 40 48.4 +0.7**
PV01 IAmb IAmb 14 40 54.1
comp=Z,3.1nm,0.7s
EYMN Ely 53.14 57 P P **14 41 15.6 +0.1**
EYMN IAmb IAmb 14 41 36.1
comp=Z,20nm,1.9s
SUMG Summit 53.41 14 P P **14 41 17.5 -0.1**
SUMG pmax pmax
comp=Z,27nm,2.0s
SUMG Summit 53.41 14 P P **14 41 17.5 -0.1**
SUMG IAmb IAmb 14 43 02.4
comp=Z,27nm,2.0s
ZALV Zalesovo Beam 54.48 314 PcP **PcP** **14 42 29.0 +0.8**
comp=Z,1.7nm,0.6s,baz=39,slow=3.0,SNR=9.1
D41A Chassel 55.24 56 P P **14 41 31.6 +0.8**
N35A Tabor 55.34 66 P P **14 41 31.1 -0.5**
LZH Lanzhou 55.84 287 *e*P P **14 41 37.6 +2.1**
LZH pP pwP 14 41 49.2 +1.2
LZH sP sP 14 41 55.2 +6.8
LZH PP **PP** **14 43 39.0 -0.9**
LZH pmax pmax
comp=Z,17nm,1.1s
LZH pmax pmax
comp=Z,58nm,4.3s
LZH LR LR
comp=N,220nm,17.3s
LZH LR LR
comp=E,330nm,17.4s
LZH LR LR
comp=Z,210nm,17.9s
DGZ Jazzator, Alta 55.99 309 *i* P P **14 41 36.9 +0.5**
DGZ pmax pmax
comp=Z,1.0nm,1.0s
GTA Gaotai 56.03 292 ⇓P P **14 41 37.6 +0.9**
GTA pP pwP 14 41 50.1 +0.8
GTA sP sP 14 41 55.3 +5.6
GTA pmax pmax
comp=Z,7.0nm,1.0s
GTA pmax pmax
comp=Z,37nm,5.4s
GTA LR LR
comp=N,190nm,20.6s
GTA LR LR
comp=E,180nm,19.7s
GTA LR LR

comp=Z,260nm,20.3s
E43A Lone Tree Farm 56.51 56 P P **14 41 40.1 +0.2**
N38A Joes South For 56.77 65 P P **14 41 42.0 +0.2**
N38A IAmb IAmb 14 41 42.6
comp=Z,7.1nm,0.6s
H43A Windswept, Lux 57.35 58 P P **14 41 45.8 0.0**
P38A Dawn 57.37 66 P P **14 41 45.8 -0.3**
P38A IAmb IAmb 14 41 46.8
comp=Z,5.4nm,0.7s
TXAR Lajitas Array 58.28 82 P P **14 41 53.0 +0.4**
comp=Z,0.3nm,0.5s,baz=306,slow=4.1,SNR=5.3
P40A Paris 58.29 65 P P **14 41 52.1 -0.4**
ARCES ARCESS Array B 58.37 350 P P **14 41 52.2 -0.5**
comp=Z,0.5nm,0.4s,baz=23,slow=7.9,SNR=11
R40A Maddies Statio 59.00 66 P P **14 41 56.2 -1.2**
CD2 Chengdu 59.42 282 P P **14 41 59.7 -0.9**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CCM Cathedral Cave 59.75 66 P P **14 42 02.2 -0.5**
CCM pmax pmax
comp=Z,19nm,2.0s
CCM Cathedral Cave 59.75 66 P P **14 42 02.1 -0.5**
CCM IAmb IAmb 14 43 19.0
comp=Z,19nm,1.9s
WMQ Urumqi 59.81 303 *e*P P **14 42 07.0 +4.0**
WMQ pP sP 14 42 16.7 +1.3
WMQ PcP **PcP** **14 42 50.9 +1.5**
WMQ pmax pmax
comp=Z,11nm,0.8s
WMQ pmax pmax
comp=Z,58nm,6.3s
WMQ LR LR
comp=N,240nm,26.5s
WMQ LR LR
comp=E,220nm,20.3s
WMQ LR LR
comp=Z,600nm,18.7s
U40A Yellville 59.98 68 P P **14 42 03.5 -0.8**
U40A IAmb IAmb 14 42 19.2
comp=Z,4.5nm,1.1s
SFIN Lafayette 60.49 61 P P **14 42 07.3 -0.4**
SFIN IAmb IAmb 14 42 09.6
comp=Z,6.8nm,0.9s
MK31 Makanchi Array 60.49 309 P P **14 42 06.6 -1.0**
MK31 pmax pmax
comp=Z,2.0nm,1.2s
MK31 Makanchi Array 60.49 309 P P **14 42 06.6 -1.0**
MKAR Makanchi Array 60.49 309 P P **14 42 06.6 -1.1**
comp=Z,1.5nm,0.6s,baz=43,slow=6.9,SNR=16
MAKZ Makanchi 60.63 309 P P **14 42 06.9 -1.7**
MAKZ pmax pmax
comp=Z,3.0nm,1.0s
MAKZ Makanchi 60.63 309 P P **14 42 06.9 -1.7**
MAKZ IAmb IAmb 14 43 00.9
comp=Z,2.5nm,0.9s
D53A Lac Vacive, Po 60.72 50 P P **14 42 08.6 -0.5**
FCAR Ozark Folk Cen 60.73 68 P P **14 42 08.3 -1.1**
FCAR IAmb IAmb 14 43 34.8
comp=Z,14nm,1.3s
WHAR Wooly Hollow 61.05 69 P P **14 42 10.9 -0.7**
WHAR IAmb IAmb 14 42 36.8
comp=Z,17nm,1.7s
SIUC Southern Illin 61.14 65 P P **14 42 12.6 +0.5**
SIUC IAmb IAmb 14 42 16.2
comp=Z,6.5nm,0.6s
LCAR Lake Charles 61.17 67 P P **14 42 11.8 -0.6**
LCAR IAmb IAmb 14 42 12.2
comp=Z,3.2nm,0.7s
BRVK Borovoye 61.34 320 P P **14 42 12.6 -0.7**
BRVK pmax pmax
comp=Z,13nm,2.0s
BRVK Borovoye 61.34 320 P P **14 42 12.6 -0.7**
BRVK IAmb IAmb 14 44 09.6
comp=Z,13nm,2.0s
SADO Sadowa 61.63 53 P P **14 42 15.2 -0.2**
P48A Milroy 62.05 61 P P **14 42 17.8 -0.4**
DELO Deloro Mine 62.58 52 P P **14 42 21.4 -0.3**
T47A Sharon Grove 62.85 64 P P **14 42 23.4 -0.2**
T47A IAmb IAmb 14 42 30.0
comp=Z,4.9nm,0.9s
ARU Arti 63.01 329 *c i* P P **14 42 23.0 -1.3**
ARU S S 14 50 42.9 -9.0
ARU pmax pmax
comp=Z,3.0nm,0.6s
MEDO Medina 63.13 54 P P **14 42 26.1 +0.7**
PECO Prince Edward 63.31 53 P P **14 42 27.1 +0.5**
PECO IAmb IAmb 14 42 39.5
comp=Z,14nm,1.3s
P51A Williamsport 63.33 60 P P **14 42 26.8 0.0**
P51A IAmb IAmb 14 42 28.2
comp=Z,5.2nm,0.5s
J55A Hilton 63.38 54 P P **14 42 26.5 -0.5**
J55A IAmb IAmb 14 43 24.2
comp=Z,7.7nm,1.1s
Q51A Peebles 63.50 60 P P **14 42 28.7 +0.7**
Q51A IAmb IAmb 14 42 29.6
comp=Z,14nm,1.4s
O52A Adamsville 63.54 58 P P **14 42 28.4 +0.2**
O52A IAmb IAmb 14 42 29.5
comp=Z,8.6nm,0.7s
WVNY West Valley, N 63.59 55 P P **14 42 28.7 +0.1**
M54A Oil Creek Stat 63.69 56 P P **14 42 29.4 +0.2**
J56A Wolcott 63.85 53 P P **14 42 30.5 +0.4**
J56A IAmb IAmb 14 42 31.4
comp=Z,7.8nm,0.8s
V48A Smith Brothers 63.90 65 P P **14 42 30.9 +0.3**
V48A IAmb IAmb 14 42 36.7
comp=Z,2.8nm,0.8s
N54A Moraine State 63.91 57 P P **14 42 31.2 +0.6**
U49A Red Boiling Sp 63.94 64 P P **14 42 31.2 +0.4**
U49A IAmb IAmb 14 43 36.1
comp=Z,13nm,1.6s
T50A Nancy 64.11 63 P P **14 42 32.2 +0.3**
T50A IAmb IAmb 14 42 33.5
comp=Z,5.2nm,0.9s
J57A Williamstown 64.19 52 P P **14 42 32.7 +0.4**
M55A Ridgway 64.19 55 P P **14 42 32.6 +0.2**
M55A IAmb IAmb 14 43 31.0
comp=Z,24nm,1.6s
P53A Whipple 64.23 59 P P **14 42 33.2 +0.5**
O54A Avella 64.27 57 P P **14 42 33.4 +0.4**
L56A Greenwood 64.33 54 P P **14 42 33.9 +0.6**
S51A Beattyville 64.36 61 P P **14 42 33.8 +0.2**
S51A IAmb IAmb 14 42 35.0
comp=Z,5.8nm,0.8s
M56A Emporium 64.48 55 P P **14 42 34.5 +0.2**
J58A Remsen 64.58 52 P P **14 42 34.4 -0.5**
X48A Hartselle 64.69 66 P P **14 42 35.7 -0.1**
X48A IAmb IAmb 14 44 26.1
comp=Z,15nm,1.6s
R53A Hurricane 64.76 60 P P **14 42 36.6 +0.4**
R53A IAmb IAmb 14 42 57.2
comp=Z,8.6nm,0.8s
BINY Binghamton 65.08 53 P P **14 42 38.7 +0.5**
M57A Sunshine Farm, 65.13 55 P P **14 42 39.2 +0.7**
O56A Blue Knob Stat 65.16 56 P P **14 42 39.4 +0.5**
SSPA Standing Stone 65.25 56 P P **14 42 39.7 +0.4**
SSPA IAmb IAmb 14 44 55.8
comp=Z,18nm,1.4s
V51A Loudon 65.25 63 P P **14 42 39.6 +0.2**
V51A IAmb IAmb 14 44 55.9
comp=Z,11nm,1.2s
CPCT Cooper Cave 65.41 64 P P **14 42 40.7 +0.2**
CPCT IAmb IAmb 14 43 29.3
comp=Z,22nm,1.7s
FPAL Fort Paine 65.45 65 P P **14 42 40.5 -0.3**
FPAL IAmb IAmb 14 42 41.7
comp=Z,5.9nm,0.8s
G62A West of Eustis 65.48 48 P P **14 42 40.6 -0.2**
S54A Dingess, Beckl 65.49 60 P P **14 42 40.5 -0.5**
E63A Oxbow 65.54 46 P P **14 42 41.4 +0.3**
L59A Walton 65.56 53 P P **14 42 41.7 +0.3**
V52A Sevierville 65.65 63 P P **14 42 42.3 +0.3**
V52A IAmb IAmb 14 42 43.7
comp=Z,16nm,1.4s
KSPA Keystone Colle 65.66 54 P P **14 42 42.1 +0.2**
H62A Milan 65.67 49 P P **14 42 41.5 -0.5**
TKL Tuckaleechee C 65.68 63 P P **14 42 41.2 -1.0**
TKL pmax pmax
comp=Z,17nm,1.6s
TKL Tuckaleechee C 65.68 63 P P **14 42 41.1 -1.0**
TKL IAmb IAmb 14 43 11.9
comp=Z,17nm,1.6s
N58A Sunbury 65.70 55 P P **14 42 42.4 +0.2**

LRAL Lakeview Retre 65.73 67 P P **14 42 42.6 +0.1**
LRAL IAmb IAmb 14 42 47.0
comp=Z,24nm,1.8s
R55A Marlinton 65.78 59 P P **14 42 43.2 +0.3**
R55A IAmb IAmb 14 43 11.3
comp=Z,17nm,1.4s
FINES FINESS Array B 66.08 348 P P **14 42 43.2 -1.1**
comp=Z,1.0nm,0.6s,baz=38,slow=7.0,SNR=9.4
FINES FINESS Array B 66.08 348 *ce*P P **14 42 44.2 -0.1**
FINES pmax pmax
comp=Z,1.0nm,0.6s
N59A State Game Lan 66.13 54 P P **14 42 45.4 +0.3**
U54A Nelsons Funny 66.14 61 P P **14 42 46.0 +0.8**
Z50A Ashland 66.20 66 P P **14 42 45.3 -0.3**
Z50A IAmb IAmb 14 42 46.6
comp=Z,9.9nm,0.9s
V53A Saluda 66.21 62 P P **14 42 46.1 +0.4**
V53A IAmb IAmb 14 44 42.9
comp=Z,15nm,1.6s
LUPA Lehigh Univers 66.57 54 P P **14 42 47.9 +0.1**
BG3 Lake Jocassee 66.64 63 P P **14 42 48.8 +0.5**
BG3 IAmb IAmb 14 43 19.9
comp=Z,12nm,1.7s
Y52A Lilburn 66.82 65 P P **14 42 50.1 +0.5**
Y52A IAmb IAmb 14 43 32.1
comp=Z,10nm,1.4s
V55A Taylorsville 66.96 61 P P **14 42 50.5 0.0**
PAL Palisades 67.01 53 P P **14 42 51.0 +0.4**
PAL pmax pmax
comp=Z,52nm,1.7s
PAL Palisades 67.01 53 P P **14 42 51.0 +0.4**
T57A Hurt 67.19 59 P P **14 42 52.2 +0.4**
T57A IAmb IAmb 14 43 20.0
comp=Z,14nm,1.5s
KMSC Kings Mountain 67.42 62 P P **14 42 53.5 +0.2**
KMSC IAmb IAmb 14 42 54.6
comp=Z,6.5nm,0.7s
GOGA Godfrey 67.49 64 P P **14 42 53.7 -0.1**
GOGA pmax pmax
comp=Z,5.0nm,0.8s
GOGA Godfrey 67.49 64 P P **14 42 53.7 -0.1**
GOGA IAmb IAmb 14 42 55.3
comp=Z,4.6nm,0.8s
HODGE Hodges 67.57 63 P P **14 42 54.6 +0.4**
HODGE IAmb IAmb 14 42 55.9
comp=Z,5.0nm,0.5s
LMN Caledonia Moun 67.59 44 P P **14 42 53.8 -0.4**
NC204 NORSAR Array S 67.69 355 P P **14 42 54.9 +0.3**
NB201 NORSAR Array S 67.88 355 P P **14 42 55.6 -0.2**
NB2 NORSAR Subarra 67.90 355 P P **14 42 56.1 +0.1**
comp=Z,1.7nm,0.8s,baz=7.2,slow=6.5
NOA NORSAR Array B 67.90 355 P P **14 42 55.3 -0.7**
comp=Z,0.4nm,0.6s,baz=332,slow=4.5,SNR=3.9
W57A Gilead 68.15 61 P P **14 42 58.3 +0.4**
W57A IAmb IAmb 14 44 02.3
comp=Z,16nm,1.4s
KSH Kashi 68.96 307 P P **14 43 06.2 +3.1**
KSH pP pwP 14 43 20.5 +4.6
KSH sP PcP 14 43 26.3 -0.9
KSH pmax pmax
comp=Z,88nm,2.0s
KSH pmax pmax
comp=Z,150nm,3.9s
OBN Obninsk 70.22 340 *ce*P P **14 43 08.5 -1.8**
OBN pmax pmax
comp=Z,4.0nm,0.7s
CMAR Chiang Mai Arr 71.45 276 P P **14 43 18.6 +0.2**
comp=Z,0.6nm,0.6s,baz=22,slow=7.7,SNR=5.2
TAPN Taplejung 71.67 291 *e*P P **14 43 21.1 +1.1**
GAR Garm 72.14 310 P P **14 43 22.2 -0.2**
GAR IAmb IAmb 14 43 57.1
comp=Z,33nm,1.9s
GUN Gumba 72.32 293 *e*P P **14 43 25.1 +1.1**
comp=Z,36nm,0.4s
JIRN Jiri 72.33 292 *e*P P **14 43 24.5 +0.5**
comp=Z,60nm,0.8s
RAMN Ramite 72.62 291 *e*P P **14 43 26.4 +0.7**
comp=Z,26nm,0.5s
PKI Pulchoki 72.85 293 *e*P P **14 43 27.7 +0.6**
PKIN Phulchoki 72.85 293 *e*P P **14 43 27.7 +0.7**
GKN Gorkha 72.97 293 *e*P P **14 43 28.1 +0.5**
DANN Dangsing 73.21 294 *e*P P **14 43 29.9 +0.7**
comp=Z,29nm,0.8s
KOLN Koldanda 73.75 294 *e*P P **14 43 32.6 +0.4**
PYUN Piuthan 73.84 295 *e*P P **14 43 32.9 +0.1**
AKASG Malin Array Be 75.88 342 P P **14 43 43.8 -0.1**
comp=Z,0.7nm,0.3s,baz=21,slow=5.7,SNR=9.3
AKBB Malin Array Si 75.88 342 P P **14 43 42.9 -1.0**
AKBB pmax pmax
comp=Z,4.0nm,0.9s
AKBB Malin Array Si 75.88 342 P P **14 43 42.9 -1.0**
AKBB IAmb IAmb 14 43 44.8
comp=Z,3.9nm,0.9s
KWP Kalwaria Pacla 78.02 346 P P **14 43 56.5 +0.5**
KWP pmax pmax
comp=Z,16nm,0.3s
KWP Kalwaria Pacla 78.02 346 P P **14 43 56.5 +0.5**
KBZ Khabaz 79.00 331 P P **14 44 02.0 +0.5**
comp=Z,1.5nm,0.7s,baz=155,slow=3.2,SNR=3.9
KBZ Khabaz 79.00 331 P P **14 44 02.0 +0.5**
BUR08 Bucovina Ar. S 79.55 344 P P **14 44 05.0 +0.5**
BUR08 IAmb IAmb 14 44 06.2
comp=Z,8.1nm,1.4s
VYHS Vyhne 79.66 349 *e*P P **14 44 05.8 +0.8**
VYHS Vyhne 79.66 349 *e*P P **14 44 05.8 +0.8**
GERES GERESS Array B 79.86 352 P P **14 44 06.0 -0.2**
comp=Z,0.4nm,0.6s,baz=116,slow=3.1,SNR=4.1
GERES GERESS Array B 79.86 352 P P **14 44 06.0 -0.2**
WRA Warramunga Arr 82.15 224 P P **14 44 17.0 -1.5**
comp=Z,0.6nm,0.7s,baz=31,slow=5.9,SNR=6.1
WRA Warramunga Arr 82.15 224 P P **14 44 17.0 -1.5**
BRTR Keskin Array B 85.31 336 P P **14 44 35.0 +0.2**
comp=Z,1.4nm,0.7s,baz=35,slow=4.5,SNR=9.1
BRTR Keskin Array B 85.31 336 *ce*P P **14 44 35.0 +0.2**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
ASAR Alice Springs 85.61 223 P P **14 44 36.4 +0.2**
comp=Z,1.0nm,0.7s,baz=24,slow=5.6,SNR=17
ESDC Sonseca Array 89.40 4 P P **14 44 53.5 -0.9**
comp=Z,0.4nm,0.5s,baz=352,slow=4.1,SNR=7.0
STKA Stephens Creek 89.97 213 P P **14 44 57.3 +0.5**
comp=Z,1.1nm,0.6s,baz=355,slow=6.4,SNR=4.8
STKA Stephens Creek 89.97 213 P P **14 44 57.3 +0.5**
STKA pmax pmax
comp=Z,4.0nm,1.8s
STKA Stephens Creek 89.97 213 IAmb IAmb 14 46 38.7
comp=Z,3.7nm,1.8s
TORD Torodi Ar. Bea 115.96 0 PKP **PKiKP** **14 50 40.1 -0.6**
comp=Z,0.1nm,0.4s,baz=22,slow=1.8,SNR=1.7
H03N2 Juan Fernandez 120.69 106 T T 17 03 18.0
baz=317,slow=78,SNR=6.2
H03N1 Juan Fernandez 120.70 106 T T 17 03 18.6
baz=317,slow=78,SNR=18
H03N3 Juan Fernandez 120.70 106 T T 17 03 17.9
baz=317,slow=78,SNR=18
BOSA Boshof 151.43 313 PKPbc **PKPbc** **14 51 51.4 -0.1**
comp=Z,3.4nm,0.6s,baz=44,slow=2.8,SNR=11

MEX ***11*** *14:37:47.0±0.5, 14°.49N×92°.50W, h70km±9km, MD3.8*
GCG ***11*** *14:37:50.7±0.5, 14°.93N×92°.27W, h34km±999km, MD3.9*
ISC 11 14:37:48.2±1.8, **14°.6N**±0°.1×**92°.55W**±0°.09, **h53**km±17km, **n8, s0966/15, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.41**	**42**	*i* P	**Pn**	**14 37 58.3**	**-0.5**
THIG				*i* S	**Sn**	**14 38 07.2**	**+0.9**
STG3	**Santiaguito 3,**	**0.96**	**83**	*e*P	**Pn**	**14 38 04.9**	**-0.7**
PCIG		**1.28**	**330**	*e*P	**Pn**	**14 38 09.3**	**-0.4**
PCIG				*i* S	**Sn**	**14 38 26.2**	**+0.4**
FUG	**Fuego 3**	**1.66**	**95**	*e*P	**Pn**	**14 38 15.5**	**+0.4**
FUG				*e*S	**Sn**	**14 38 34.3**	**-1.1**
CCIG	**Comitan**	**1.72**	**13**	*i* P	**Pn**	**14 38 16.3**	**+0.4**
CCIG				*i* S	**Sn**	**14 38 36.6**	**-0.3**
IXG	**Ixpaco**	**2.09**	**101**	*e*P	**Pn**	**14 38 21.5**	**+0.6**
IXG				*e*S	**Sn**	**14 38 46.1**	**+0.2**
TGIG		**2.24**	**346**	*i* P	**Pn**	**14 38 22.4**	**-0.5**
TGIG				*i* S	**Sn**	**14 38 49.9**	**+0.5**
CMIG	**Matias Romero**	**3.35**	**318**	*e*P	**Pn**	**14 38 37.7**	**-0.4**
CMIG				*i* S	**Sn**	**14 39 17.0**	**+0.4**

NEIC ***11*** *14:56:36.2±1.8, 55°.47N±0°.05×135°.86W±0°.10, h11km±6km,*

ML3.5(AEIC), Error ellipse: s-maj=9.3km s-min=6.5km az=47.0

*AEIC **11** 14:56:36.2±2.4, 55.46°N±0.06°×136.60°W±0.1°, h23km±7km, Error ellipse: s-maj=9.6km s-min=6.7km az=46.0*

*IDC **11** 14:56:37.0±1.4, 55.55°N×135.65W, h0km, mb3.1/2, mb1 3.6/8, mb1mx3.3/54, mbtmp3.4/8, ML3.2/6, Error ellipse: s-maj=18.9km s-min=14.4km az=57.0*

ISC 11 14:56:36.6±0.9, 55.46°N±0.06°×135.84°W±0.07°, h10km, n56, σ1§38/64, Off coast of southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRAG	**Craig**	**1.55**	**88**		**Pn**	**14 57 02.9**	**-1.3**
CRAG					**Sn**	**14 57 24.2**	**-0.1**
SIT	**Sitka**	**1.63**	**10**		**Pn**	**14 57 03.1**	**-2.2**
WRAK	**Wrangell Islan**	**2.19**	**62**		**Pn**	**14 57 11.6**	**-1.4**
WRAK					**Sn**	**14 57 40.0**	**-0.1**
NDB	**Naden**	**2.26**	**131**		**Pn**	**14 57 14.1**	**+0.1**
MASB	**Masset**	**2.65**	**122**		**Pn**	**14 57 19.0**	**-0.3**
H02N1	**VAN INLET T-PH**	**2.94**	**138**	Pn	**Pn**	**14 57 23.8**	**+0.5**
H02N1				Sn	**Sn**	**14 57 56.9**	**-1.8**
VIB	**Van Inlet**	**2.94**	**137**		**Pn**	**14 57 23.6**	**+0.2**
JIS	**Juneau Island**	**2.94**	**15**		**Pn**	**14 57 21.5**	**-1.7**
DIB	**Dawson Inlet,**	**3.00**	**138**		**Pn**	**14 57 24.4**	**+0.3**
DIB					**Sn**	**14 57 59.6**	**-0.5**
H02S1	**DAWSON INLET T**	**3.00**	**138**	Pn	**Pn**	**14 57 24.6**	**+0.5**
H02S1				Sn	**Sn**	**14 57 57.9**	**-2.2**
BESE	**Bessie Mountai**	**3.18**	**9**		**Pn**	**14 57 25.4**	**-1.2**
MOBC	**Moresby Island**	**3.25**	**134**		**Pn**	**14 57 26.8**	**-0.8**
MOBC					**Sn**	**14 58 06.0**	**-0.2**
RUBB	**Prince Rupert**	**3.42**	**107**		**Pn**	**14 57 28.8**	**-1.1**
BNAB	**Bonilla**	**3.62**	**121**		**Pn**	**14 57 31.6**	**-1.0**
BNB	**Barry Inlet**	**3.76**	**138**		**Pn**	**14 57 34.4**	**-0.3**
DHAK	**Deception Hill**	**3.86**	**342**		**Pn**	**14 57 35.4**	**-0.7**
DHAK					**Sn**	**14 58 20.4**	**-1.0**
SKAG	**Skagway**	**4.02**	**4**		**Pn**	**14 57 37.6**	**-0.6**
DLBC	**Dease Lake**	**4.37**	**44**	Pn	**Pn**	**14 57 42.8**	**-0.2**
	1.3nm,0.3s,baz=216,slow=13,SNR=29						
DLBC				Lg	Lg	14 58 50.1	
	8.5nm,0.3s,baz=141,slow=26,SNR=5.1						
DLBC	**Dease Lake**	**4.37**	**44**		**Pn**	**14 57 42.5**	**-0.5**
PNL	**Peninsula**	**4.63**	**337**		**Pn**	**14 57 45.5**	**-1.1**
YUK7	**Dusty Glacier**	**5.23**	**347**		**Pn**	**14 57 54.0**	**-1.0**
WHY	**Whitehorse**	**5.24**	**5**		**Pn**	**14 57 54.3**	**-0.7**
CHX	**Chaix Hills**	**5.41**	**331**		**Pn**	**14 57 56.3**	**-1.1**
HYT	**Haines Junctio**	**5.45**	**351**		**Pn**	**14 57 57.5**	**-0.4**
BBB	**Bella Bella**	**5.63**	**122**	Pn	**Pn**	**14 58 00.3**	**+0.1**
	1.2nm,0.3s,baz=307,slow=14,SNR=56						
BBB				Sn	**Sn**	**14 59 01.8**	**-3.1**
	1.6nm,0.3s,baz=334,slow=11,SNR=3.9						
BBB				Lg	Lg	14 59 37.1	
	1.4nm,0.3s,baz=28,slow=20,SNR=2.1						
YUK6	**Outpost Mounta**	**5.66**	**347**		**Pn**	**14 58 00.3**	**-0.5**
YAH	**Yahtse**	**5.84**	**330**	Pn	**Pn**	**14 58 04.8**	**+1.4**
CTGM	**Chitina Glacie**	**6.24**	**335**		**Pn**	**14 58 10.7**	**+2.0**
BARN	**Barnard Glacie**	**6.40**	**334**		**Pn**	**14 58 13.1**	**+2.1**
KIAG	**Kiagna River**	**6.47**	**331**		**Pn**	**14 58 11.0**	**-1.0**
BALM	**Baldy**	**6.56**	**331**		**Pn**	**14 58 15.9**	**+2.7**
HOLB	**Holberg**	**6.70**	**133**		**Pn**	**14 58 14.3**	**-0.7**
PTPK	**Patty Peak**	**6.72**	**331**		**Pn**	**14 58 14.4**	**-1.0**
VRDI	**Verde Repeater**	**7.03**	**328**		**Pn**	**14 58 18.9**	**-0.8**
MCARA	**McCarthy VSAT**	**7.03**	**331**	Pn	**Pn**	**14 58 19.4**	**-0.1**
GLB	**Gilahina Butte**	**7.31**	**328**		**Pn**	**14 58 22.1**	**-1.2**
FID	**Port Fidalgo**	**7.73**	**318**	Pn	**Pn**	**14 58 26.2**	**-2.9**
MENT	**Mentasta**	**8.51**	**335**	Pn	**Pn**	**14 58 38.2**	**-1.7**
SEW	**Seward**	**8.63**	**308**	Pn	**Pn**	**14 58 39.3**	**-2.1**
DAWY	**Dawson**	**8.82**	**350**		**Pn**	**14 58 44.7**	**+0.7**
BRLK	**Bradley Lake**	**9.15**	**304**	Pn	**Pn**	**14 58 46.4**	**-2.1**
CNPM	**China Poot**	**9.23**	**302**	Pn	**Pn**	**14 58 49.5**	**-0.1**
KDAK	**Kodiak Island**	**9.52**	**291**	Pn	**Pn**	**14 58 54.3**	**+0.8**
	0.5nm,0.3s,baz=90,slow=8.7,SNR=7.5						
EGAK	**Eagle**	**9.71**	**346**		**Pn**	**14 58 56.8**	**+0.6**
OHAK	**Old Harbor**	**9.85**	**288**	Pn	**Pn**	**14 58 58.0**	**0.0**
RND	**Reindeer**	**10.34**	**326**	Pn	**Pn**	**14 59 07.8**	**+2.9**
IL31		**10.82**	**334**	Pn	**Pn**	**14 59 11.2**	**-0.2**
ILAR	**Eielson Array**	**10.82**	**334**	Pn	**Pn**	**14 59 11.8**	**+0.4**
	0.1nm,0.3s,baz=148,slow=12,SNR=4.7						
WRH	**Wood River Hil**	**10.90**	**331**	Pn	**Pn**	**14 59 11.4**	**-1.0**
CCB	**Clear Creek Bu**	**10.96**	**332**	Pn	**Pn**	**14 59 12.6**	**-0.7**
BPAW	**Bear Paw Mtn.**	**11.51**	**325**	Pn	**Pn**	**14 59 19.4**	**-1.4**
INK	**Inuvik**	**12.94**	**4**	Pn	**Pn**	**14 59 41.4**	**+1.1**
	0.1nm,0.3s,baz=179,slow=10,SNR=5.2						
INK				Lg	Lg	15 03 29.2	
	0.0nm,0.3s,baz=233,slow=20,SNR=1.6						
YKA	**Yellowknife Ar**	**12.98**	**49**	Pn	**Pn**	**14 59 39.9**	**-0.9**
	0.1nm,0.3s,baz=246,slow=12,SNR=9.9						
YKA				Lg	Lg	15 03 22.6	
	0.0nm,0.3s,baz=247,slow=29,SNR=4.9						
GCMT	**Greycliff**	**19.11**	**109**		**P**	**15 00 58.2**	**-1.4**
PDAR	**Pinedale Array**	**21.23**	**116**	P	**P**	**15 01 25.7**	**+3.0**
	0.8nm,0.9s,baz=324,slow=5.6,SNR=4.2						
TXAR	**Lajitas Array**	**34.76**	**125**	P	**P**	**15 03 29.4**	**+2.4**
	0.2nm,0.8s,baz=347,slow=7.4,SNR=2.6						

*NEIC **11** 15:29:10.8, 20.07°S×70.98W, h19km, Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr2.38; Mθθ-0.12; Mϕϕ-2.27; Mrθ0.16; Mθϕ0.44; Mϕr-0.16; Fault plane solution: M0 2.38000×10^15^ NP1:ϕs351.79000°, δ42.85000°, λ94.42000°. NP2:ϕs165.77000°, δ47.31000°, λ85.91000°. Principal axes: T 2.3962, Plg86.0000°, Azm25.0000°; N -0.0344, Plg3.0000°, Azm169.0000°; P -2.3618, Plg2.0000°, Azm259.0000°;*

*IDC **11** 15:29:10.3±0.8, 19.94°S×70.70W, h0km, mb4.0/8, mb1 4.1/13, mb1mx4.0/36, mbtmp4.0/13, ML3.8/5, MS3.4/8, Ms1 3.4/8, ms1mx3.2/25 Error ellipse: s-maj=22.2km s-min=13.8km az=59.0*

*NEIC **11** 15:29:11.5±2.2, 20.07°S±0.03°×70.93W±0.06°, h14km±3km, mb4.5/7, Mwr4.2/50, Error ellipse: s-maj=7.3km s-min=2.6km az=116.0*

*GUC **11** 15:29:12.1±0.7, 20.08°S×70.95W, h39km±1km, ML4.1*

ISC 11 15:29:11.2±1.4, 20.06°S±0.02°×70.93W±0.05°, h13km±8km, n81, σ1§22/83, MS3.5/4, 7C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TA02	**Huaiquique**	**0.78**	**106**	*eP*	**Pb**	**15 29 26.8**	**+0.2**
TA02				*i* S	**Sb**	**15 29 37.4**	**+0.3**
TA02				IAML		15 29 40.0	
	comp=N,19μm,0.1s						
TA01	**Diego Aracena**	**0.87**	**126**	↓*i* P	**Pb**	**15 29 28.5**	**+0.5**
TA01				*i* S	**Sb**	**15 29 40.1**	**+0.6**
TA01				IAML		15 29 41.6	
	comp=N,11μm,0.4s						
TA01	**Diego Aracena**	**0.87**	**126**		**Pb**	**15 29 28.4**	**+0.3**
PSGC	**Pisagua**	**0.89**	**59**	↓*i* P	**Pb**	**15 29 28.8**	**+0.3**
PSGC				*i* S	**Sb**	**15 29 40.3**	**0.0**
PSGC				IAML		15 29 42.0	
	comp=N,7μm,0.2s						
PSGCX	**Pisagua**	**0.89**	**59**		**Pg**	**15 29 28.3**	**-0.1**
PATCX	**Punta Patache**	**1.05**	**136**	*i* P	**Pg**	**15 29 31.5**	**0.0**
PATCX				*i* S	**Sg**	**15 29 45.2**	**-0.1**
PATCX				IAML		15 29 52.0	
	comp=N,5μm,0.4s						
PATCX	**Punta Patache**	**1.05**	**136**		**Pg**	**15 29 31.6**	**0.0**
PB11	**IPOC Station P**	**1.24**	**76**	↓*i* P	**Pn**	**15 29 34.3**	**0.0**
PB11				*i* S	**Sg**	**15 29 51.4**	**+0.2**
PB11				IAML		15 29 52.0	
	comp=N,9μm,0.3s						
PB11	**IPOC Station P**	**1.24**	**76**	Pn	**Pn**	**15 29 34.2**	**0.0**
PB12	**IPOC Station P**	**1.55**	**22**	↑*i* P	**Pn**	**15 29 38.9**	**+0.5**
PB12				*i* S	**Sb**	**15 29 59.8**	**+0.6**
PB12				IAML		15 30 03.9	
	comp=E,4μm,0.5s						
PB12	**IPOC Station P**	**1.55**	**22**		**Pn**	**15 29 39.0**	**+0.5**
MNMC	**Minye Minye**	**1.56**	**54**	*i* P	**Pb**	**15 29 39.7**	**-0.4**
MNMC				*i* S	**Sg**	**15 30 01.0**	**-0.6**
MNMC	**Minye Minye**	**1.56**	**54**		**Pb**	**15 29 39.5**	**-0.6**
PB02	**IPOC Station P**	**1.59**	**142**	*i* P	**Pn**	**15 29 39.4**	**+0.4**
PB02				*i* S	**Sb**	**15 30 00.2**	**-0.2**
PB02				IAML		15 30 10.7	
	comp=E,6μm,0.5s						
PB01	**IPOC Station P**	**1.67**	**126**	↑*i* P	**Pn**	**15 29 40.7**	**+0.6**
PB01				*i* S	**Sn**	**15 30 02.0**	**+0.5**
PB01				IAML		15 30 08.8	
	comp=E,3μm,0.4s						
PB01	**IPOC Station P**	**1.67**	**126**		**Pn**	**15 29 40.8**	**+0.6**
PB08	**IPOC Station P**	**1.67**	**93**	↑*i* P	**Pn**	**15 29 41.1**	**+0.6**
PB08				*i* S	**Sb**	**15 30 03.7**	**+0.5**
PB08				IAML		15 30 09.6	
	comp=N,3μm,0.6s						
PB08	**IPOC Station P**	**1.67**	**93**		**Pn**	**15 29 41.1**	**+0.6**
GO01	**Chusmiza**	**1.68**	**77**	*e*P	**Pn**	**15 29 41.4**	**+0.7**
GO01				*i* S	**Sb**	**15 30 04.3**	**+0.8**
GO01	**Chusmiza**	**1.68**	**77**		**Pn**	**15 29 41.4**	**+0.7**
AP01	**Chacalluta**	**1.77**	**18**	*e*P	**Pb**	**15 29 43.3**	**-0.1**
AP01				*i* S	**Sb**	**15 30 06.4**	**+0.9**
AP01	**Chacalluta**	**1.77**	**18**		**Pb**	**15 29 43.2**	**-0.2**
PB07	**IPOC Station P**	**1.93**	**150**	*e*P	**Pn**	**15 29 44.3**	**+0.5**
PB07				*i* S	**Sg**	**15 30 13.6**	**+0.4**
PB07				IAML		15 30 23.9	
	comp=E,2μm,0.8s						
PB07	**IPOC Station P**	**1.93**	**150**		**Pn**	**15 29 44.0**	**+0.2**
PB16	**IPOC Station P**	**2.18**	**38**	↑*i* P	**Pn**	**15 29 48.6**	**+1.0**
PB16	**IPOC Station P**	**2.18**	**38**		**Pn**	**15 29 48.7**	**+1.1**
PB03	**IPOC Station P**	**2.27**	**151**	↑*i* P	**Pn**	**15 29 48.6**	**+0.2**
PB03				*i* S	**Sb**	**15 30 21.8**	**+1.8**
PB03				IAML		15 30 33.9	
	comp=E,1μm,0.7s						
PB09	**IPOC Station P**	**2.34**	**138**	↑*i* P	**Pn**	**15 29 51.1**	**+1.6**
PB09				*i* S	**Sg**	**15 30 25.4**	**-1.1**
PB09				IAML		15 30 31.7	
	comp=N,2μm,0.5s						
PB09	**IPOC Station P**	**2.34**	**138**		**Pn**	**15 29 50.9**	**+1.4**
PB04	**IPOC Station P**	**2.38**	**162**	↑*i* P	**Pn**	**15 29 49.8**	**-0.3**
PB04				*i* S	**Sn**	**15 30 16.2**	**-2.9**
PB04				IAML		15 30 39.2	
	comp=N,2μm,0.7s						
PB04	**IPOC Station P**	**2.38**	**162**		**Pn**	**15 29 49.7**	**-0.3**
PB06	**IPOC Station P**	**2.92**	**155**		**Pn**	**15 29 57.1**	**-0.3**
LVC	**Limon Verde**	**3.16**	**144**	Pn	**Pn**	**15 30 02.7**	**+1.8**
	comp=N,7.9nm,0.3s,baz=312,slow=10.0,SNR=46						
LVC				LR	LR	15 30 37.6	
	comp=N,111nm,20.7s,baz=316,slow=28						
LVC				Sn	**Sn**	**15 30 39.5**	**+0.8**
	comp=N,26nm,0.3s,baz=48,slow=20,SNR=8.1						
LVC				Lg	Lg	15 30 49.5	
	comp=N,23nm,0.3s,baz=74,slow=11,SNR=5.0						
LVC	**Limon Verde**	**3.16**	**144**		**Pn**	**15 30 02.4**	**+1.4**
PB15	**IPOC Station P**	**3.42**	**157**		**Pn**	**15 30 02.0**	**-2.3**
PB10	**IPOC Station P**	**3.46**	**174**		**Pn**	**15 30 03.9**	**-0.8**
LPAZ	**La Paz**	**4.60**	**36**		**Pn**	**15 30 22.1**	**+1.1**
GO02	**Mina Guanaco**	**5.23**	**167**		**Pn**	**15 30 29.1**	**-0.2**
NNA	**Nana**	**9.83**	**324**	Pn	**Pn**	**15 31 34.9**	**+2.6**
	comp=N,2.2nm,0.3s,baz=183,slow=18,SNR=5.3						
NNA	**Nana**	**9.83**	**324**	Pn	**Pn**		
SIV	**San Ignacio**	**10.21**	**68**	Pn	**Pn**	**15 31 36.2**	**-1.4**
	comp=N,2.9nm,0.3s,baz=270,slow=9.7,SNR=41						
SIV				LR	LR	15 36 07.5	
	comp=N,324nm,18.6s,baz=279,slow=42						
CFA	**Coronel Fontan**	**11.75**	**169**	Pn	**Pn**	**15 32 01.0**	**+2.5**
	comp=N,0.2nm,0.3s,baz=336,slow=13,SNR=1.4						
CFA				LR	LR	15 36 31.9	
	comp=N,93nm,21.8s,baz=20,slow=37						
MT05	**Renca**	**13.28**	**179**	Pn	**Pn**	**15 32 17.8**	**-1.7**
SAML	**Samuel**	**13.35**	**35**	Pn	**Pn**	**15 32 18.7**	**-1.6**
CPUP	**Villa Florida**	**13.97**	**119**	Pn	**Pn**	**15 32 29.7**	**+0.8**
	comp=N,0.1nm,0.3s,baz=311,slow=3,SNR=1.6						
CPUP				LR	LR	15 38 38.2	
	comp=N,95nm,21.6s,baz=291,slow=41						
H03N1	**Juan Fernandez**	**15.11**	**206**	T	T	15 48 34.7	
	baz=33,slow=72						
H03N2	**Juan Fernandez**	**15.11**	**207**	T	T	15 48 27.8	
	baz=33,slow=72						
H03N3	**Juan Fernandez**	**15.12**	**206**	T	T	15 48 31.2	
	baz=33,slow=72						
PLCA	**Paso Flores**	**20.61**	**179**	P	Pn	15 33 52.3	-0.2
	comp=N,1.9nm,0.7s,baz=358,slow=13,SNR=6.1						
PLCA	**Paso Flores**	**20.61**	**179**	Pn	Pn	15 33 52.3	-0.1
PLCA				IAmb	IAmb	15 34 07.5	
	comp=Z,17nm,1.5s						
PTGA	**Pitinga**	**22.00**	**31**	P	**P**	**15 34 03.8**	**-1.4**
	comp=Z,4.4nm,0.5s,baz=203,slow=15,SNR=12						
PTGA				LR	LR	15 43 26.1	
	comp=Z,154nm,19.4s,baz=250,slow=39						
PTGA	**Pitinga**	**22.00**	**31**	P	**P**	**15 34 03.6**	**-1.7**
BDFB	**Brasilia**	**22.25**	**82**	P	**P**	**15 34 06.6**	**-1.4**
	comp=Z,0.9nm,0.4s,baz=214,slow=9.6,SNR=1.5						
BDFB				LR	LR	15 43 49.8	
	comp=Z,189nm,18.1s,baz=296,slow=40						
BDFB	**Brasilia**	**22.25**	**82**	IAmb	IAmb	15 34 12.8	
	comp=Z,8.0nm,0.9s						
RUSC	**La Rusia**	**25.88**	**355**	P	**P**	**15 34 43.5**	**+0.2**
RCBR	**Riachuelo**	**36.85**	**72**	P	**P**	**15 36 18.6**	**-0.8**
	comp=Z,10nm,0.9s,baz=227,slow=5.7,SNR=5.3						
LPIG	**La Paz**	**58.29**	**317**	LR	LR	15 59 00.1	
	comp=Z,45nm,21.2s,baz=0.5,slow=31						
TXAR	**Lajitas Array**	**58.38**	**326**	P	**P**	**15 39 07.6**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=150,slow=9.4,SNR=3.2						
QSPA	**South Pole Qui**	**70.12**	**180**	P	**P**	**15 40 25.4**	**+2.3**
NVAR	**Mina Array Bea**	**73.20**	**323**	P	**P**	**15 40 44.1**	**+2.0**
	comp=Z,0.5nm,0.6s,baz=160,slow=6.7,SNR=2.1						
TOA0	**Torodi Ar. Sit**	**78.67**	**71**	P	**P**	**15 41 12.7**	**-0.9**
TOA0				IAmb	IAmb	15 41 13.8	
	comp=Z,7.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**78.67**	**71**	P	**P**	**15 41 12.7**	**-0.8**
	comp=Z,5.3nm,0.7s,baz=253,slow=5.2,SNR=21						
YKA	**Yellowknife Ar**	**89.21**	**341**	P	**P**	**15 42 07.1**	**+0.9**
	comp=Z,1.5nm,0.9s,baz=138,slow=5.4,SNR=20						
YKA				LR	LR	16 27 16.9	
	comp=Z,93nm,19.9s,baz=0.0,slow=39						
H11S2	**WAKE ISLAND Hyl**	**25.81**	**279**	T	T	18 07 36.0	
	baz=101,slow=74						
H11S1	**WAKE ISLAND Hyl**	**25.81**	**279**	T	T	18 07 40.9	
	baz=101,slow=74						
H11S3	**WAKE ISLAND Hyl**	**25.82**	**279**	T	T	18 07 41.9	
	baz=101,slow=74						
H11N3	**WAKE ISLAND Hyl**	**25.86**	**280**	T	T	18 07 36.2	
	baz=101,slow=74						
H11N2	**WAKE ISLAND Hyl**	**25.87**	**280**	T	T	18 07 41.0	
	baz=101,slow=74						
H11N1	**WAKE ISLAND Hyl**	**25.87**	**280**	T	T	18 07 39.0	
	baz=101,slow=74						
ASAR	**Alice Springs**	**130.25**	**210**	PKP	**PKiKP**	**15 48 22.9**	**+0.1**
	comp=Z,0.9nm,1.0s,baz=147,slow=1.9,SNR=3.8						
WRA	**Warramunga Arr**	**133.17**	**213**	PKP	**PKiKP**	**15 48 28.6**	**-0.1**
	comp=Z,0.5nm,1.0s,baz=154,slow=1.8,SNR=1.6						
ZALV	**Zalesovo Beam**	**141.41**	**23**	PKP	**PKPdf**	**15 48 41.6**	**0.0**
	comp=Z,1.0nm,0.7s,baz=318,slow=3.9,SNR=3.9						
MK31	**Makanchi Array**	**145.52**	**33**		**PKPab**	**15 48 49.6**	**+0.2**
MKAR	**Makanchi Array**	**145.52**	**33**	PKPbc	**PKPab**	**15 48 50.2**	**+0.8**
	comp=Z,4.5nm,0.8s,baz=323,slow=3.8,SNR=19						
KSH	**Kashi**	**145.62**	**48**	PKPbc	**PKPdf**	**15 48 48.8**	**-0.8**
MJAR	**Matsushiro Arr**	**149.70**	**309**	PKPbc	**PKiKP**	**15 49 02.4**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=86,slow=1.5,SNR=5.8						
SONM	**Songino Array**	**152.21**	**4**	PKPbc	**PKiKP**	**15 49 07.5**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=11,slow=1.5,SNR=4.8						
LZH	**Lanzhou**	**163.38**	**15**	sPKP		15 49 20.5	
LZH	**Lanzhou**	**163.38**	**15**	*e*PKP	**PKPdf**	**15 49 08.9**	**-5.3**
LZH	**Lanzhou**	**163.38**	**15**	pPKP	pPKPdf	15 49 17.3	-0.3
CD2	**Chengdu**	**168.18**	**23**	PKP	**PKPdf**	**15 49 16.2**	**-1.9**

IDC 11 15:30:49.4±2.3, 4.39°S×152.26E, h112km±10km, mb2.8/2, mb1 3.0/2, mb1mx2.8/28, mbtmp3.1/2, Error ellipse: s-maj=68.6km s-min=9.3km az=110.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.24**	**289**	P	Pn	15 31 06.0	+0.8
	67nm,0.3s,baz=171,slow=1.3,SNR=71						
KRVT				S	Sn	15 31 18.6	+1.5
	46nm,0.3s,baz=109,slow=23,SNR=22						
WRA	**Warramunga Arr**	**23.32**	**227**	P	P	15 35 48.3	+0.5
	0.4nm,0.5s,baz=53,slow=10.0,SNR=11						
ASAR	**Alice Springs**	**26.09**	**221**	P	P	15 36 12.8	-0.1
	0.2nm,0.7s,baz=54,slow=8.6,SNR=5.6						
TORD	**Torodi Ar. Bea**	**149.66**	**289**	PKPbc	PKPbc	15 50 25.9	-1.1
	0.4nm,0.6s,baz=77,slow=3.1,SNR=2.9						

*IDC **11** 15:32:22.1±0.5, 6.55°S×155.05E, h42km±3km, mb4.5/23, mb1 4.7/26, mb1mx4.6/33, mbtmp4.7/26, ML3.9/3, MS4.1/23, Ms1 4.1/23, ms1mx4.1/29, Error ellipse: s-maj=14.4km s-min=10.4km az=87.0*

*NEIC **11** 15:32:22.8±1.7, 6.56°S±0.07°×155.02E±0.07°, h50km±4km, mb5.1/160, Error ellipse: s-maj=10.9km s-min=9.8km az=198.0*

*BJI **11** 15:32:22.1±0.0, 6.25°S×155.26E, h54km, mB5.1/41, mb4.9/56, Ms4.6/22, Ms7 4.4/23*

*MOS **11** 15:32:23.6±1.0, 6.46°S×154.95E, h66km, mb5.2/38, Error ellipse: s-maj=8.5km s-min=7.0km az=68.7*

*GCMT **11** 15:32:23.8±0.2, 6.84°S±0.01°×154.95E±0.02°, h42km, MW5.2/90, Moment Tensor Solution. s90,c114; s73,c107; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr6.41±.21; Mθθ-3.64±.14; Mϕϕ-2.77±.14; Mrθ1.04±.14; Mθϕ3.61±.10; Mϕr-1.20±.13; Best double couple: M0 6.81400×10^16^ NP1:ϕs310.00000°, δ38.00000°, λ87.00000°. NP2:ϕs133.00000°, δ52.00000°, λ92.00000°. Principal axes: T 6.6010, Plg83.0000°, Azm58.0000°; N 0.4240, Plg2.0000°, Azm312.0000°; P -7.0260, Plg7.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **11** 15:32:26.7±0.5, 7.75°S±3.15°×155.45E±., h72km±5km, M5.0/58, mb5.1/58, mB5.5/25, MLv5.0/1, Mw(mB)5.0/25, Mwp4.3/1*

ISC 11 15:32:22.9±0.4, 6.57°S±0.04×155.04°E±0.04°, h50km±3km, h50km:pP-P, n542, σ1§04/562, mb5.1/152, MS4.2/31, 12C-1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.75**	**307**	P	**Pn**	**15 33 20.0**	**+1.8**
	26nm,0.3s,baz=126,slow=1.8,SNR=9.0						
KRVT				S	**Sn**	**15 34 06.0**	**+4.8**
	129nm,0.3s,baz=24,slow=15,SNR=4.8						
KRVT				LR	LR	15 34 17.3	
	comp=Z,877nm,18.7s,baz=98,slow=31						
HNR	**Honiara**	**5.63**	**121**	P	**Pn**	**15 33 47.4**	**+3.3**
	39nm,0.3s,baz=220,slow=4.1,SNR=19						
HNR				S	**Sn**	**15 34 52.8**	**+5.4**
	85nm,0.3s,baz=347,slow=4.6,SNR=3.9						
HNR				LR	LR	15 35 57.8	
	comp=Z,6μm,18.7s,baz=287,slow=38						
HNR	**Honiara**	**5.63**	**121**		**Pn**	**15 33 47.0**	**+2.9**
PMG	**Port Moresby**	**8.30**	**250**	P	**Pn**	**15 34 22.7**	**+2.0**
	36nm,0.3s,baz=70,slow=7.6,SNR=41						
PMG				S	**Sn**	**15 35 58.5**	**+5.3**
	9.9nm,0.3s,baz=79,slow=21,SNR=7.9						
PMG				LR	LR	15 37 37.0	
	comp=Z,3μm,19.7s,baz=44,slow=38						
PMG	**Port Moresby**	**8.30**	**250**	*ce*P	**Pn**	**15 34 22.3**	**+1.6**
PMG				pmax	pmax		
	comp=Z,839nm,0.8s						
PATS	**Pohnpei**	**13.71**	**14**		**Pn**	**15 35 34.1**	**-0.6**
COEN	**Coen**	**13.79**	**237**		**Pn**	**15 35 35.2**	**-0.6**
JAY	**Jayapura**	**14.85**	**285**	P	**Pn**	**15 35 50.5**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=21,slow=15,SNR=4.4						
JAY	**Jayapura**	**14.85**	**285**	P	**Pn**	**15 35 51.7**	**+1.8**
	comp=Z,346nmcomp=Z,13nm,1.0s						
GENI	**Genyem**	**15.34**	**284**	P	**P**	**15 35 58.7**	**-1.5**
	comp=Z,23nm,1.4s						
CTA	**Charters Tower**	**15.92**	**212**	P	**P**	**15 36 05.6**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=34,slow=15,SNR=5.6						
CTA				LR	LR	15 41 37.7	
	comp=Z,1μm,20.7s,baz=22,slow=35						
CTAO	**Charters Tower**	**15.92**	**212**	P	**Pn**	**15 36 05.1**	**+1.4**
CTAO				pmax	pmax		
	comp=Z,55nm,1.0s						
CTAO	**Charters Tower**	**15.92**	**212**		**Pn**	**15 36 05.1**	**+1.4**
SMPI	**Sarmi**	**16.91**	**285**	P	P	15 36 29.9	+12
DZM	**Mont Dzumac**	**18.94**	**146**	*e*Pn	**P**	**15 36 37.2**	**-2.8**
	comp=Z,42nm,0.6s						
DZM				*e*S	Sn	15 40 01.6	-11
	comp=Z,591nm,25.5s						
DZM				*e*LQ	LQ	15 40 17.7	
	comp=Z,2μm,32.6s						
DZM				*e*LR	LR	15 41 01.0	
	comp=Z,2μm,26.5s						
DZM	**Mont Dzumac**	**18.94**	**146**	P	**Pn**	**15 36 41.7**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=132,slow=22,SNR=3.1						
EIDS	**Eidsvold**	**19.08**	**191**	P	**P**	**15 36 41.6**	**+0.3**
KWAJ	**Kwajalein Atol**	**19

KAPI pmax pmax
comp=Z,44nm,1.4s
KAPI Kappang 35.14 271 P **P** **15 39 12.2 +0.1**
KAPI IAmb IAmb 15 39 14.5
comp=Z,44nm,1.4s
MPSI Mapaga 35.74 280 P **P** **15 39 17.7 +0.5**
comp=Z,421nmcomp=Z,23nm,0.9s
CNOP Candoni, Negro 36.16 296 *eP* **P** **15 39 18.8 -2.0**
HIZ Hauiti 36.51 153 P **P** **15 39 25.0 +1.5**
TAU Tasmania Unive 36.83 189 P **P** **15 39 27.8 +1.7**
TAU pmax pmax
comp=Z,111nm,1.5s
TAU Tasmania Unive 36.83 189 P **P** **15 39 27.8 +1.7**
PLAI Plampang 36.99 264 P **P** **15 39 27.3 -0.6**
comp=Z,1µmcomp=Z,144nm,0.6s
PSA00 Pilbara Seismi 37.13 243 P **P** **15 39 29.6 +0.6**
URZ Urewera 37.35 151 P **P** **15 39 31.3 +0.6**
comp=Z,8.3nm,0.3s,baz=293,slow=3.1,SNR=15
URZ LR LR 15 54 05.9
comp=Z,474nm,18.5s,baz=170,slow=35
URZ Urewera 37.35 151 P **P** **15 39 31.2 +0.6**
URZ IAmb IAmb 15 39 40.2
comp=Z,27nm,0.9s
MXZ Matakaoa Point 37.41 149 P **P** **15 39 32.4 +1.3**
QRZ Quartz Range 37.52 158 P **P** **15 39 32.9 +0.8**
QRZ IAmb IAmb 15 39 34.6
comp=Z,36nm,1.0s
BKZ Black Stump Fm 37.78 152 P **P** **15 39 34.8 +0.4**
BKZ IAmb IAmb 15 39 48.1
comp=Z,23nm,0.9s
NNZ Nelson 38.18 157 P **P** **15 39 37.1 -0.5**
NNZ IAmb IAmb 15 40 09.5
comp=Z,51nm,1.3s
THZ Tophouse 38.48 158 P **P** **15 39 40.0 -0.2**
THZ IAmb IAmb 15 39 41.5
comp=Z,35nm,0.9s
TUWZ Tuamarina 38.58 157 P **P** **15 39 41.5 +0.5**
SNZO South Karori 38.78 156 P **P** **15 39 42.4 -0.2**
BSWZ Blackbirch Sta 38.80 157 P **P** **15 39 42.6 -0.2**
BFZ Birch Farm 38.90 154 P **P** **15 39 43.8 +0.1**
BFZ IAmb IAmb 15 39 56.0
comp=Z,36nm,1.0s
BHW Baring Head 38.93 156 P **P** **15 39 43.1 -0.8**
FOZ Fox Glacier 39.04 163 P **P** **15 39 44.6 -0.1**
FOZ IAmb IAmb 15 39 45.6
comp=Z,40nm,1.3s
MSWZ Moikau Station 39.09 156 P **P** **15 39 45.0 -0.2**
LTZ Lake Taylor 39.15 160 P **P** **15 39 45.6 -0.2**
LTZ IAmb IAmb 15 39 58.2
comp=Z,34nm,1.0s
PLWZ Palliser 39.22 156 P **P** **15 39 46.1 -0.2**
KHZ Kahutara 39.28 158 P **P** **15 39 45.8 -0.9**
KHZ IAmb IAmb 15 39 47.5
comp=Z,40nm,0.9s
OXZ Oxford 39.55 160 P **P** **15 39 48.6 -0.5**
OXZ IAmb IAmb 15 39 49.9
comp=Z,64nm,1.4s
RPZ Rata Peaks 39.58 162 P **P** **15 39 49.4 +0.2**
comp=Z,23nm,0.8s,baz=8.4,slow=8.3,SNR=8.6
RPZ LR LR 15 55 24.4
comp=Z,808nm,18.1s,baz=320,slow=35
RPZ Rata Peaks 39.58 162 P **P** **15 39 49.5 +0.2**
RPZ IAmb IAmb 15 39 53.5
comp=Z,28nm,0.9s
LBZ Lake Benmore 39.93 163 P **P** **15 39 52.5 +0.3**
LBZ IAmb IAmb 15 39 53.7
comp=Z,47nm,1.3s
MQZ McQueen's Vall 40.09 160 P **P** **15 39 54.3 +0.8**
BATP Bataraza 40.14 292 *eP* **P** **15 39 54.3 -0.1**
MLZ Mavora Lakes 40.29 166 P **P** **15 39 55.1 0.0**
MLZ IAmb IAmb 15 40 13.6
comp=Z,83nm,1.5s
CAUP Cauayan 40.31 306 *eP* **P** **15 39 56.6 +1.0**
JAGI Jajag, Banyuwa 40.57 265 P **P** **15 39 57.1 -0.8**
comp=Z,78nm,1.2s
JAGI Jajag, Banyuwa 40.57 265 P **P** **15 39 56.6 -1.4**
KKM Kota Kinabalu 40.73 287 P **P** **15 39 58.9 -0.4**
KKM IAmb IAmb 15 40 01.8
comp=Z,49nm,1.1s
SMPP San Manuel, Pa 40.82 304 *eP* **P** **15 39 59.0 -0.9**
JOW Kunigami 42.13 323 P **P** **15 40 09.6 -0.9**
JOW IAmb IAmb 15 41 40.1
comp=Z,37nm,1.1s
PWJI Pagerwojo 42.90 265 P **P** **15 40 17.1 +0.1**
comp=Z,55nm,1.3s
MORW Morawa 43.05 234 P **P** **15 40 18.0 +0.1**
PCJI Pacitan 43.52 265 P P 15 40 35.3 +13
SBUM Sibu 43.68 280 P **P** **15 40 23.9 +0.6**
SBUM Sibu 43.68 280 P **P** **15 40 24.0 +0.7**
YOJ Yonaguni jima 43.88 316 P **P** **15 40 25.2 +0.5**
YOJ pmax pmax
comp=Z,44nm,1.0s
YOJ Yonaguni jima 43.88 316 P **P** **15 40 25.2 +0.5**
YOJ IAmb IAmb 15 41 16.0
comp=Z,44nm,1.0s
UGM Wanagama 44.17 265 P **P** **15 40 26.5 -0.7**
YULB Yu-li 44.43 313 P **P** **15 40 28.9 -0.2**
YULB IAmb IAmb 15 41 23.4
comp=Z,39nm,1.5s
NACB Ninganchiao 44.70 314 P **P** **15 40 31.3 +0.1**
NACB IAmb IAmb 15 41 16.7
comp=Z,20nm,0.9s
TPUB Ta-pu 44.86 313 P **P** **15 40 32.3 -0.2**
TPUB IAmb IAmb 15 40 39.9
comp=Z,16nm,0.5s
SSLB Suanglung 44.92 313 P **P** **15 40 33.1 +0.1**
SSLB IAmb IAmb 15 40 38.7
comp=Z,13nm,0.5s
KSM Kuching 45.36 279 P **P** **15 40 36.7 0.0**
KSM IAmb IAmb 15 40 38.8
comp=Z,39nm,1.4s
KSM Kuching 45.36 279 P **P** **15 40 38.0 +1.3**
JNU Nakatsue 45.66 331 P **P** **15 40 38.7 -0.1**
MJAR Matsushiro Arr 45.70 341 P **P** **15 40 38.1 -0.8**
comp=Z,1.4nm,0.4s,baz=149,slow=7.3,SNR=13
MJAR pP **pP** **15 40 54.4 +1.9**
comp=Z,0.9nm,0.5s,baz=151,slow=7.3,SNR=3.3
MJAR LR LR 16 01 17.2
comp=Z,52nm,18.0s,baz=195,slow=38
MAJO Matsushiro 45.70 341 P **P** **15 40 38.4 -0.6**
MAJO pmax pmax
comp=Z,17nm,1.6s
MAJO Matsushiro 45.70 341 P **P** **15 40 38.4 -0.6**
MAT Matsushiro 45.70 341 P **P** **15 40 38.6 -0.4**
MAT *eS* **S** **15 47 16.0 -2.7**
MJB9 Matsu-Tunnel 45.70 341 P **P** **15 40 38.4 -0.6**
RAR Rarotonga 46.03 113 LR LR 15 56 15.8
comp=Z,481nm,21.2s,baz=247,slow=31
CISI Cisompet, Garu 46.86 266 P **P** **15 40 48.1 -0.5**
comp=Z,73nm,1.2s
CISI Cisompet, Garu 46.86 266 P **P** **15 40 47.3 -1.3**
LEM Lembang 47.09 267 LR LR 16 03 26.9
comp=Z,173nm,20.2s,baz=116,slow=40
LEM Lembang 47.09 267 P **P** **15 40 51.2 +0.7**
comp=Z,23nm,1.4s
CNJI Cibinong 47.55 266 P **P** **15 40 54.1 +0.2**
comp=Z,2µmcomp=Z,150nm,1.3s
KASI Kota Agung 50.26 268 P P 15 41 25.9 +11
KSRS Korea Array 50.59 332 P **P** **15 41 15.0 -1.7**
comp=Z,5.0nm,1.0s,baz=140,slow=8.2,SNR=6.7
KSRS pP **pP** **15 41 28.8 -1.5**
comp=Z,6.5nm,1.1s,baz=148,slow=8.6,SNR=4.6
KSRS LR LR 15 57 58.6
comp=Z,68nm,21.8s,baz=139,slow=30
MDSI Maura Dua 50.66 270 P **P** **15 41 17.4 -0.2**
comp=Z,22nm,1.4s
TPRI Tanjung Pinang 50.96 277 P **P** **15 41 21.0 +1.0**
comp=Z,4µmcomp=Z,19nm,0.9s
NJ2 Nanjing 51.62 320 *eP* **P** **15 41 25.1 +0.6**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
MYKOM Kota Tinggi 51.77 277 P **P** **15 41 26.0 0.0**
WHN Wuhan 53.67 316 ⇑P **P** **15 41 40.4 +0.7**
YSS Yuzh-Sakhalins 54.39 350 *eP* **P** **15 41 44.8 +0.1**
YSS pmax pmax
comp=Z,10.0nm,1.0s
YSS MLR MLR
comp=Z,200nm,12.0s
USRK Ussuriysk Ar. 54.65 340 P **P** **15 41 46.5 -0.1**
comp=Z,4.5nm,0.9s,baz=147,slow=4.2,SNR=9.2
USRK pP **pP** **15 41 59.3 -1.0**
comp=Z,4.2nm,0.9s,baz=194,slow=6.9,SNR=4.6
USRK LR LR 16 01 30.7
comp=Z,116nm,21.4s,baz=159,slow=32
KHU Kahuku 54.95 61 P **P** **15 41 50.4 +0.9**

KHU pmax pmax
comp=Z,434nm,1.9s
KHU Kahuku 54.95 61 P **P** **15 41 50.4 +0.9**
HLK Haleakala 55.00 59 P **P** **15 41 50.6 +0.6**
IPM Ipoh 55.03 280 P **P** **15 41 48.9 -1.0**
IPM **PcP** **15 42 51.5 +0.3**
IPM Ipoh 55.03 280 P **P** **15 41 50.0 0.0**
PPT Papeete 55.07 107 LR LR 16 00 58.3
comp=Z,148nm,20.8s,baz=285,slow=31
PPT2 Papeete2 55.07 107 *eS* S 15 49 20.4 -9.3
comp=Z,160nm,25.5s
PPT2 *eLQ* LQ 15 55 14.0
comp=Z,393nm,26.8s
PPT2 *eLR* LR 15 57 31.1
comp=Z,267nm,22.5s
KULM Kulim 55.56 281 P **P** **15 41 53.1 -0.6**
KULM IAmb IAmb 15 41 54.9
comp=Z,38nm,1.3s
KULM Kulim 55.56 281 P **P** **15 41 54.0 +0.3**
TBI Tubuai 55.80 114 *eS* S 15 49 28.9 -10
comp=Z,132nm,29.0s
TBI *eLQ* LQ 15 55 34.0
comp=Z,446nm,38.5s
TBI *eLR* LR 15 57 53.3
comp=Z,842nm,28.8s
MNSI Mandailing Nat 55.83 275 P **P** **15 41 54.8 -0.9**
comp=Z,987nmcomp=Z,20nm,0.6s
RPSI Rantau Prapat 56.77 278 P **P** **15 42 01.6 -0.9**
PSI Prapat 56.79 278 P **P** **15 42 01.6 -1.1**
PSI pmax pmax
comp=Z,7.0nm,0.6s
CN2 Changchun 56.83 335 *eP* **P** **15 42 01.7 -0.5**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
ENH Enshi 56.99 313 P **P** **15 42 02.8 -0.9**
ENH IAmb IAmb 15 42 53.2
comp=Z,22nm,1.1s
GYA Guiyang 57.23 307 *eP* **P** **15 42 06.5 +0.9**
GYA pP pP 15 42 18.3 -1.1
GYA PP **PP** **15 44 15.0 +1.8**
GYA S **S** **15 49 57.5 -0.7**
GYA sS sS 15 50 25.0 +4.4
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,110nm,4.9s
GSI Gunungsitoli 57.89 276 P **P** **15 42 10.2 -0.1**
comp=Z,160nm,1.0s
GSI Gunungsitoli 57.89 276 P **P** **15 42 08.9 -1.4**
KCSI Kotacane, Aceh 58.05 278 P **P** **15 42 11.3 -0.1**
comp=Z,11nm,0.8s
PBKT Sadao Pong 58.21 294 P **P** **15 42 12.8 +0.4**
KLR Kul'dur 59.18 342 *ceP* **P** **15 42 18.5 -0.1**
XAN Xi'an 59.44 316 P **P** **15 42 20.2 -0.5**
XAN pmax pmax
comp=Z,27nm,1.5s
XAN Xi'an 59.44 316 P **P** **15 42 20.2 -0.5**
XAN IAmb IAmb 15 42 21.8
comp=Z,27nm,1.5s
PET Petropavlovsk 59.44 3 *eP* **P** **15 42 21.0 +0.7**
PET *eS* **S** **15 50 28.0 +2.3**
PET 15 56 45.1
PET pmax pmax
comp=Z,18nm,0.9s
PET MLR MLR
comp=Z,200nm,18.0s
PET Petropavlovsk 59.44 3 P **P** **15 42 20.8 +0.5**
PEA0B Petropavlovsk- 59.49 2 *ceP* **P** **15 42 20.9 +0.2**
PEA0B Petropavlovsk- 59.49 2 P **P** **15 42 21.1 +0.4**
PETK Petropavlovsk- 59.49 2 P **P** **15 42 21.6 +0.9**
comp=Z,9.1nm,0.5s,baz=134,slow=6.1,SNR=32
PETK pP **pP** **15 42 34.5 -0.1**
comp=Z,15nm,1.0s,baz=174,slow=7.4,SNR=6.3
PETK LR LR 16 04 04.6
comp=Z,205nm,21.7s,baz=226,slow=32
KMI Kunming 59.82 304 P **P** **15 42 25.4 +1.6**
KMI pP sP 15 42 42.2 -1.2
KMI pmax pmax
comp=Z,26nm,0.9s
KMI LR LR
comp=Z,170nm,14.6s
KMI LR LR
comp=Z,220nm,22.0s
KMI LR LR
comp=Z,240nm,28.0s
CM31 Chiang Mai Arr 60.65 295 P **P** **15 42 28.7 -0.6**
CMAR Chiang Mai Arr 60.65 295 P **P** **15 42 30.8 +1.5**
comp=Z,21nm,0.7s,baz=114,slow=5.0,SNR=89
CMAR pP **pP** **15 42 42.5 -0.6**
comp=Z,16nm,0.8s,baz=117,slow=5.0,SNR=15
CMAR LR LR 16 08 10.3
comp=Z,69nm,20.6s,baz=131,slow=35
CHTO Chiang Mai 60.76 296 P **P** **15 42 30.4 +0.4**
CHTO pmax pmax
comp=Z,76nm,1.5s
CHTO Chiang Mai 60.76 296 P **P** **15 42 30.4 +0.4**
CD2 Chengdu 61.58 310 ⇑*iP* **P** **15 42 36.9 +1.5**
CD2 pmax pmax
comp=Z,40nm,0.6s
CD2 LR LR
comp=Z,260nm,16.7s
CD2 LR LR
comp=Z,300nm,22.1s
CD2 LR LR
comp=Z,380nm,19.6s
HHC Hu-ho-hao-te 61.78 324 *eP* **P** **15 42 37.5 +0.8**
HHC pmax pmax
comp=Z,11nm,0.7s
HHC pmax pmax
comp=Z,52nm,5.0s
ADK Adak 63.05 19 P **P** **15 42 45.2 +0.5**
ADK pmax pmax
comp=Z,79nm,1.5s
ADK Adak 63.05 19 P **P** **15 42 45.2 +0.5**
LZH Lanzhou 64.05 315 *eP* **P** **15 42 53.9 +2.0**
LZH PP **PP** **15 45 12.2 -1.2**
LZH pmax pmax
comp=Z,42nm,1.0s
LZH pmax pmax
comp=Z,63nm,5.4s
LZH LR LR
comp=Z,210nm,18.4s
LZH LR LR
comp=Z,190nm,16.3s
LZH LR LR
comp=Z,170nm,16.8s
ZEA Zeya 64.49 342 *eP* **P** **15 42 54.6 +0.4**
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=Z,28nm,1.2s
MA2 Magadan 66.02 358 P **P** **15 43 03.9 -0.1**
MA2 pmax pmax
comp=Z,23nm,1.2s
MA2 Magadan 66.02 358 P **P** **15 43 03.9 -0.1**
MA2 IAmb IAmb 15 43 34.0
comp=Z,22nm,1.1s
CASY Casey 67.01 198 P **P** **15 43 10.3 0.0**
CASY IAmb IAmb 15 43 23.2
comp=Z,36nm,1.5s
UNV Unalaska Valle 68.31 23 P **P** **15 43 18.5 -0.1**
UNV IAmb IAmb 15 45 01.9
comp=Z,34nm,1.2s
GTA Gaotai 68.46 317 ⇑P **P** **15 43 21.1 +1.0**
GTA pP pP 15 43 32.9 -1.3
GTA sP sP 15 43 36.6 -3.3
GTA PP **PP** **15 45 54.2 +2.4**
GTA pmax pmax
comp=Z,10.0nm,1.2s
GTA pmax pmax
comp=Z,76nm,4.9s
GTA LR LR
comp=Z,81nm,20.0s
GTA LR LR
comp=Z,110nm,21.0s
GTA LR LR
comp=Z,170nm,21.6s
ULN Ulaanbaatar 68.67 328 *ceP* **P** **15 43 21.1 -0.2**
ULN pmax pmax
comp=Z,15nm,1.7s
ULN Ulaanbaatar 68.67 328 P **P** **15 43 20.7 -0.6**
SONM Songino Array 69.01 327 P **P** **15 43 23.7 +0.4**
comp=Z,3.8nm,0.4s,baz=133,slow=6.1,SNR=23
SONM pP **pP** **15 43 35.6 -1.9**
comp=Z,4.1nm,0.7s,baz=132,slow=6.3,SNR=6.5
SONM PKPPKP **P'P'df** **16 11 35.1 +0.9**

comp=Z,0.5nm,0.4s,baz=264,slow=2.9,SNR=4.7
SONM LR LR 16 15 05.0
comp=Z,56nm,18.1s,baz=134,slow=37
SEY Seymchan 69.33 359 *i* P **P** **15 43 24.7 -0.1**
SPIA Saint Paul Isl 69.54 19 P **P** **15 43 27.6 +1.4**
VNDA Vanda 71.00 178 P **P** **15 43 34.9 0.0**
comp=Z,5.5nm,1.0s,baz=331,slow=8.7,SNR=12
VNDA LR LR 16 08 46.7
comp=Z,132nm,21.3s,baz=324,slow=31
VNDA Vanda 71.00 178 P **P** **15 43 34.9 0.0**
VNDA pmax pmax
comp=Z,18nm,1.4s
VNDA Vanda 71.00 178 P **P** **15 43 34.9 0.0**
YAK Yakutsk 71.15 348 *eP* **P** **15 43 35.1 -0.8**
YAK *e* 15 48 02.4
YAK pmax pmax
comp=Z,8.0nm,1.4s
YAK pmax pmax
comp=N,7.0nm,1.5s
YAK pmax pmax
comp=E,4.0nm,1.5s
YAK Yakutsk 71.15 348 P **P** **15 43 35.8 -0.1**
SDPT Sand Point 71.84 25 P **P** **15 43 40.1 -0.2**
SDPT IAmb IAmb 15 43 41.5
comp=Z,51nm,1.6s
CNBA Chernabura Isl 71.86 26 P **P** **15 43 40.1 -0.3**
CNBA IAmb IAmb 15 43 54.1
comp=Z,35nm,1.5s
ZAK Zakamensk 72.16 328 *eP* **P** **15 43 42.5 +0.1**
ZAK *e* 15 43 54.0
ZAK pmax pmax
comp=Z,10.0nm,1.2s
ZAK pmax pmax
comp=Z,11nm,1.1s
BOD Bodaibo 72.24 338 *eP* **P** **15 43 42.2 -0.4**
BOD pmax pmax
comp=Z,7.0nm,1.5s
TAPN Taplejung 73.22 301 *eP* **P** **15 43 49.8 +0.3**
comp=Z,12nm,0.4s
CHGN Chignik 73.35 25 P **P** **15 43 48.7 -0.4**
ODAN Odare 73.36 300 *eP* **P** **15 43 50.4 +0.2**
comp=Z,61nm,0.5s
RAMN Ramite 74.06 300 *eP* **P** **15 43 54.6 +0.3**
comp=Z,11nm,0.5s
JIRN Jiri 74.61 301 *eP* **P** **15 43 57.7 0.0**
BILL Bilibino 74.86 4 *c iP* **P** **15 43 57.7 -0.1**
BILL *i* 15 44 09.9
BILL pmax pmax
comp=Z,24nm,1.0s
BILL MLR MLR
comp=Z,101nm,18.0s
BILL Bilibino 74.86 4 P **P** **15 43 58.0 +0.2**
BILL IAmb IAmb 15 44 00.4
comp=Z,19nm,0.9s
GUN Gumba 74.94 301 *eP* **P** **15 43 59.6 0.0**
comp=Z,51nm,0.9s
PKI Pulchoki 75.25 301 *eP* **P** **15 44 01.1 -0.2**
comp=Z,181nm,1.6s
PKIN Phulchoki 75.26 301 *eP* **P** **15 44 01.1 -0.2**
comp=Z,9.9nm,0.4s
KKN Kakani 75.42 301 *eP* **P** **15 44 01.7 -0.4**
DMN Daman 75.52 301 *eP* **P** **15 44 03.7 +0.9**
comp=Z,20nm,0.6s
GKN Gorkha 76.02 301 *eP* **P** **15 44 05.4 -0.1**
OHAK Old Harbor 76.12 26 P **P** **15 44 05.3 +0.1**
OHAK IAmb IAmb 15 44 18.7
comp=Z,20nm,1.0s
KDAK Kodiak Island 76.76 26 P **P** **15 44 09.3 +0.5**
KDAK pmax pmax
comp=Z,22nm,1.3s
KDAK Kodiak Island 76.76 26 P **P** **15 44 09.3 +0.5**
KDAK IAmb IAmb 15 44 10.7
comp=Z,22nm,1.3s
ANM Nome 76.81 16 P **P** **15 44 09.4 +0.4**
ANM pmax pmax
comp=Z,37nm,1.5s
ANM Nome 76.81 16 P **P** **15 44 09.4 +0.4**
ANM IAmb IAmb 15 44 25.6
comp=Z,37nm,1.5s
KOLN Koldanda 76.85 300 *eP* **P** **15 44 10.7 +0.4**
comp=Z,9.9nm,0.4s
DANN Dangsing 76.86 301 *eP* **P** **15 44 10.3 -0.1**
comp=Z,23nm,0.5s
HOM Homer 78.26 25 P **P** **15 44 17.7 +0.5**
RSO Redoubt South 78.29 24 P **P** **15 44 17.1 -0.5**
CNPM China Poot 78.35 25 P **P** **15 44 18.4 +0.7**
WMQ Urumqi 78.55 317 *eP* **P** **15 44 20.5 +1.3**
WMQ PcP **PcP** **15 44 29.1 +1.0**
WMQ sP sP 15 44 41.9 +2.7
WMQ pmax pmax
comp=Z,11nm,0.7s
WMQ pmax pmax
comp=Z,69nm,3.7s
WMQ LR LR
comp=Z,380nm,28.9s
WMQ LR LR
comp=Z,1µm,29.2s
BRLK Bradley Lake 78.64 25 P **P** **15 44 19.6 +0.3**
HYB Hyderabad 79.18 289 *i* P **P** **15 44 22.5 -0.7**
SEW Seward 79.42 25 P **P** **15 44 24.1 +0.6**
SEW IAmb IAmb 15 44 27.9
comp=Z,38nm,1.3s
RC01 Rabbit Creek A 79.86 24 P **P** **15 44 26.3 +0.4**
TIXI Tiksi 79.94 352 *ceP* **P** **15 44 25.5 -0.6**
TIXI pmax pmax
comp=Z,5.0nm,1.3s
TIXI Tiksi 79.94 352 P **P** **15 44 26.1 -0.1**
PPLA Purkeypile 79.96 22 P **P** **15 44 26.2 -0.4**
PPLA IAmb IAmb 15 44 43.7
comp=Z,25nm,1.6s
RDOG Red Dog Mine 80.09 15 P **P** **15 44 27.1 0.0**
RDOG IAmb IAmb 15 44 44.3
comp=Z,27nm,1.2s
PMR Palmer 80.38 24 P **P** **15 44 28.6 0.0**
PMR pmax pmax
comp=Z,13nm,0.8s
PMR Palmer 80.38 24 P **P** **15 44 28.6 0.0**
KNK Knik Glacier 80.55 24 P **P** **15 44 30.0 +0.3**
KNK IAmb IAmb 15 44 31.7
comp=Z,20nm,1.1s
GHO Glory Hole Cre 80.56 24 P **P** **15 44 30.2 +0.4**
GHO IAmb IAmb 15 44 34.4
comp=Z,13nm,0.8s
KTH Kantishna Hill 80.81 22 P **P** **15 44 29.8 -1.3**
SML Sawmill 80.82 24 P **P** **15 44 31.4 +0.3**
HIN Hinchinbrook I 80.83 25 P **P** **15 44 31.3 +0.2**
GLI Glacier Island 80.83 25 P **P** **15 44 31.4 +0.3**
DGZ Jazzator, Alta 80.83 323 *i* P **P** **15 44 30.1 -1.5**
DGZ pmax pmax
comp=Z,8.0nm,1.1s
TRF Thorofare Moun 80.98 22 P **P** **15 44 31.5 -0.6**
BPAW Bear Paw Mtn. 81.11 21 P **P** **15 44 32.1 -0.5**
EYAK Cordova Ski Ar 81.22 25 P **P** **15 44 33.8 +0.6**
SCM Sheep Creek Mo 81.23 24 P **P** **15 44 34.1 +0.7**
SCM pmax pmax
comp=Z,29nm,1.2s
SCM Sheep Creek Mo 81.23 24 P **P** **15 44 34.1 +0.7**
SCM IAmb IAmb 15 44 35.5
comp=Z,29nm,1.2s
RND Reindeer 81.50 22 P **P** **15 44 34.6 -0.1**
RND pmax pmax
comp=Z,10.0nm,0.8s
RND Reindeer 81.50 22 P **P** **15 44 34.6 -0.1**
RAGM Ragged Mountai 81.61 26 P **P** **15 44 36.0 +0.7**
RAGM IAmb IAmb 15 44 37.6
comp=Z,16nm,1.0s
MCK McKinley 81.64 22 P **P** **15 44 35.1 -0.3**
MCK pmax pmax
comp=Z,20nm,0.8s
MCK McKinley 81.64 22 P **P** **15 44 35.1 -0.3**
MCK IAmb IAmb 15 44 39.0
comp=Z,20nm,0.8s
MLY Manley 81.74 20 P **P** **15 44 36.0 +0.1**
DHY Denali Highway 81.88 23 P **P** **15 44 37.0 +0.2**
DHY IAmb IAmb 15 44 50.9
comp=Z,50nm,1.8s
NEA Nenana 82.06 21 P **P** **15 44 36.1 -1.4**
GLB Gilahina Butte 82.49 25 P **P** **15 44 40.4 +0.5**
VRDI Verde Repeater 82.54 25 P **P** **15 44 40.8 +0.4**
VRDI IAmb IAmb 15 44 42.5
comp=Z,42nm,1.4s
CCB Clear Creek Bu 82.56 21 P **P** **15 44 39.3 -0.9**
TCOL CIGO, UAF Yank 82.66 21 P **P** **15 44 40.4 -0.2**
baz=237
COLA College 82.67 21 P **P** **15 44 39.6 -1.1**

COLA pmax pmax
comp=Z,28nm,1.4s
COLA College 82.67 21 P P 15 44 39.6 -1.1
COLA IAmb IAmb 15 44 41.6
comp=Z,28nm,1.4s
HDA Harding Lake 82.75 22 P P 15 44 41.4 +0.3
baz=238
HDA Harding Lake 82.75 22 P P 15 44 40.8 -0.4
HDA IAmb IAmb 15 44 42.5
comp=Z,11nm,0.4s
MCARA McCarthy VSAT 82.79 25 P P 15 44 42.1 +0.7
MCARA IAmb IAmb 15 44 55.8
comp=Z,26nm,1.1s
BALM Baldy 82.92 26 P P 15 44 42.6 +0.4
BALM IAmb IAmb 15 44 44.4
comp=Z,32nm,1.4s
POKR Poker Plat Res 82.95 21 P P 15 44 42.0 -0.2
baz=238
IL31 82.96 21 P P 15 44 41.9 -0.3
ILAR Eielson Array 82.96 21 P P 15 44 41.5 -0.7
comp=Z,2.3nm,0.4s,baz=236,slow=5.7,SNR=48
ILAR LR LR 16 17 03.5
comp=Z,404nm,21.7s,baz=239,slow=32
MK31 Makanchi Array 83.12 319 P P 15 44 42.7 -0.8
MK31 pmax pmax
comp=Z,9.0nm,1.0s
MK31 Makanchi Array 83.12 319 P P 15 44 42.6 -0.8
MKAR Makanchi Array 83.12 319 P P 15 44 43.3 -0.2
comp=Z,7.9nm,1.0s,baz=100,slow=6.4,SNR=34
MKAR pP **pP 15 44 56.2 -1.8**
comp=Z,9.9nm,0.9s,baz=92,slow=7.4,SNR=13
MKAR LR LR 16 22 03.6
comp=Z,68nm,19.8s,baz=108,slow=36
MKAR Makanchi Array 83.12 319 *i* P **P 15 44 43.5 0.0**
MKAR pmax pmax
comp=Z,7.0nm,0.9s
BARN Barnard Glacie 83.23 26 P P 15 44 43.9 -0.1
BARN IAmb IAmb 15 44 46.9
comp=Z,16nm,0.7s
MENT Mentasta 83.25 24 P P 15 44 44.5 +0.7
MENT IAmb IAmb 15 44 46.1
comp=Z,9.4nm,0.6s
MAKZ Makanchi 83.33 319 P P 15 44 44.0 -0.6
MAKZ pmax pmax
comp=Z,17nm,1.1s
MAKZ Makanchi 83.33 319 P P 15 44 44.0 -0.6
MAKZ IAmb IAmb 15 44 57.9
comp=Z,17nm,1.1s
CTGM Chitina Glacie 83.33 26 P P 15 44 45.3 +0.9
CTGM IAmb IAmb 15 44 47.3
comp=Z,21nm,0.7s
QSPA South Pole Qui 83.40 180 P P 15 44 45.2 +0.4
QSPA IAmb IAmb 15 44 46.6
comp=Z,28nm,0.9s
DOT Dot Lake 83.45 23 P P 15 44 45.1 +0.2
DOT IAmb IAmb 15 44 46.9
comp=Z,45nm,1.5s
ZAA0 Zalesovo Array 83.86 326 P P 15 44 45.5 -1.5
ZALV Zalesovo Beam 83.86 326 P P 15 44 45.8 -1.3
comp=Z,2.0nm,0.5s,baz=119,slow=5.2,SNR=13
ZALV pP **pP 15 44 58.1 -3.5**
comp=Z,7.8nm,0.9s,baz=104,slow=6.3,SNR=7.7
ZALV LR LR 16 22 50.8
comp=Z,53nm,21.7s,baz=81,slow=36
ZALV Zalesovo Beam 83.86 326 *i* P **P 15 44 46.0 -1.1**
ZALV pmax pmax
comp=Z,2.0nm,0.4s
TOLK Toolik Lake Re 84.20 18 P P 15 44 49.9 +1.3
baz=235
TOLK Toolik Lake Re 84.20 18 P P 15 44 49.0 +0.4
FYU Fort Yukon 84.48 20 P P 15 44 50.9 +0.9
FYU IAmb IAmb 15 45 05.4
comp=Z,31nm,1.6s
SIT Sitka 84.62 31 P P 15 44 51.6 +0.8
SIT pmax pmax
comp=Z,15nm,1.3s
SIT Sitka 84.62 31 P P 15 44 51.6 +0.8
SIT IAmb IAmb 15 44 53.3
comp=Z,15nm,1.3s
MAW Mawson 84.81 203 P P 15 44 51.3 -0.3
comp=Z,12nm,1.0s,baz=83,slow=5.4,SNR=12
MAW pP **pP 15 45 03.6 -2.1**
comp=Z,8.1nm,0.8s,baz=82,slow=6.2,SNR=6.4
MAW Mawson 84.81 203 P P 15 44 51.8 +0.2
DIB Dawson Inlet, 84.89 35 P P 15 44 52.5 +0.3
DIB IAmb IAmb 15 44 57.8
comp=Z,27nm,1.3s
HYT Haines Junctio 84.97 27 P P 15 44 53.5 +0.8
EGAK Eagle 85.11 23 P P 15 44 54.1 +0.9
EGAK IAmb IAmb 15 44 56.8
comp=Z,11nm,0.8s
BESE Bessie Mountai 85.39 30 P P 15 44 55.7 +0.9
BESE IAmb IAmb 15 44 57.5
comp=Z,23nm,1.3s
SKAG Skagway 85.47 29 P P 15 44 56.0 +0.9
SKAG IAmb IAmb 15 44 57.8
comp=Z,22nm,1.3s
DAWY Dawson 85.49 24 P P 15 44 56.3 +1.2
JIS Juneau Island 85.52 30 P P 15 44 56.3 +1.0
JIS IAmb IAmb 15 44 57.4
comp=Z,16nm,1.4s
KSH Kashi 85.77 310 P P 15 45 00.7 +3.5
KSH sP sP 15 45 24.9 +7.5
KSH PP **PP 15 48 21.4 +4.2**
KSH SKS **SKSac 15 55 17.7 -1.3**
KSH S **S 15 55 26.9 +0.3**
KSH SS **SS 16 01 09.6 +5.1**
KSH pmax pmax
comp=Z,19nm,0.7s
KSH pmax pmax
comp=Z,170nm,5.3s
KSH LR LR
comp=Z,230nm,6.9s
KSH LR LR
comp=Z,84nm,8.9s
KSH LR LR
comp=Z,140nm,13.1s
WRAK Wrangell Islan 85.95 32 P P 15 44 58.1 +0.6
WHY Whitehorse 86.11 28 P P 15 44 59.0 +0.6
KURK Kurchatov 86.53 322 *ce* P **P 15 44 59.2 -1.3**
KURK pmax pmax
comp=Z,8.0nm,1.3s
KURK Kurchatov 86.53 322 P P 15 44 59.8 -0.7
NIL Nilore 86.81 304 P P 15 45 01.5 -0.8
NIL pmax pmax
comp=Z,9.0nm,1.0s
NIL Nilore 86.81 304 P P 15 45 01.5 -0.8
NIL IAmb IAmb 15 45 28.4
comp=Z,8.6nm,1.0s
EPYK Eagle Plains 87.45 22 P P 15 45 06.1 +1.4
baz=248
EPYK Eagle Plains 87.45 22 P P 15 45 04.7 0.0
AAK Ala-Archa 87.50 313 *i* P **P 15 45 03.1 -2.5**
AAK pmax pmax
comp=Z,3.0nm,1.0s
DLBC Dease Lake 87.75 31 P P 15 45 06.6 +0.2
YBH Yreka Blue Hor 88.57 48 P P 15 45 12.0 +1.3
comp=Z,1.9nm,0.8s,baz=277,slow=3.8,SNR=5.6
YBH Yreka Blue Hor 88.57 48 P P 15 45 12.0 +1.3
YBH pmax pmax
comp=Z,5.0nm,1.1s
YBH Yreka Blue Hor 88.57 48 IAmb IAmb 15 45 17.4
comp=Z,4.8nm,1.1s
J04D Umpqua Nationa 89.27 46 P P 15 45 15.7 +1.7
baz=260
INK Inuvik 89.30 21 P P 15 45 13.4 +0.1
INK pmax pmax
comp=Z,22nm,1.6s
INK Inuvik 89.30 21 P P 15 45 13.4 +0.1
INK IAmb IAmb 15 45 15.1
comp=Z,22nm,1.6s
AFDM Forest Hills D 89.42 51 P P 15 45 14.4 -0.3
J05D Fort Rock, OR 89.90 47 P P 15 45 18.0 +1.1
baz=261
BEKR Beckworth 90.03 50 P P 15 45 18.2 +0.5
BEKR IAmb IAmb 15 47 49.8
comp=Z,11nm,1.0s
PAHR Pah Rah Range 90.75 50 P P 15 45 21.5 +0.5
PAHR IAmb IAmb 15 45 23.4
comp=Z,6.8nm,1.1s
NVAR Mina Array Bea 91.42 52 P P 15 45 25.3 +1.0
comp=Z,3.5nm,0.7s,baz=255,slow=6.4,SNR=14
NV11 Mina Array Sit 91.54 52 P P 15 45 25.3 +0.7
NV11 IAmb IAmb 15 45 27.2
comp=Z,14nm,1.2s

KVN Kaiserville 91.66 51 P P 15 45 26.1 +0.8
KVN pmax pmax
comp=Z,17nm,1.3s
KVN Kaiserville 91.66 51 P P 15 45 26.1 +0.8
KVN IAmb IAmb 15 45 27.6
comp=Z,17nm,1.3s
MPMC Manual Prospec 91.78 54 P P 15 45 28.0 +2.1
baz=263
G08A Pilot Rock 91.81 45 P P 15 45 25.5 -0.2
G08A IAmb IAmb 15 45 27.3
comp=Z,8.0nm,1.5s
J08A Circle Bar Ran 91.91 47 P P 15 45 25.7 -0.5
J08A IAmb IAmb 15 45 27.9
comp=Z,6.8nm,1.3s
BRVK Borovoye 92.05 323 *ce* P **P 15 45 24.9 -1.6**
BRVK pmax pmax
comp=Z,2.0nm,1.0s
PFO Pinyon Flats O 92.34 57 P P 15 45 29.3 +0.8
comp=Z,2.9nm,0.7s,baz=312,slow=2.9,SNR=4.9
PFO Pinyon Flats O 92.34 57 P P 15 45 29.3 +0.8
PFO pmax pmax
comp=Z,25nm,1.6s
PFO Pinyon Flats O 92.34 57 IAmb IAmb 15 45 30.9
comp=Z,25nm,1.6s
BELC Belle Mtn. Jos 92.77 56 P P 15 45 31.4 +1.0
baz=264
C36M Paulatuk 92.89 21 P P 15 45 30.1 +0.1
baz=259
C36M Paulatuk 92.89 21 P P 15 45 29.9 -0.1
C36M IAmb IAmb 15 45 31.5
comp=Z,19nm,1.5s
BMO Blue Mountains 92.92 45 P P 15 45 30.1 -0.7
BMO pmax pmax
comp=Z,17nm,1.9s
BMO Blue Mountains 92.92 45 P P 15 45 30.1 -0.7
BMO IAmb IAmb 15 45 34.1
comp=Z,17nm,1.9s
A36M Sachs Harbour 93.03 18 P P 15 45 30.8 +0.3
baz=258
GMRC Granite Mounta 93.12 56 P P 15 45 33.1 +1.0
baz=264
NEW Newport 93.41 42 P P 15 45 32.5 -0.5
comp=Z,2.5nm,0.9s,baz=113,slow=4.3,SNR=4.3
NEW Newport 93.41 42 P P 15 45 32.5 -0.5
NEW pmax pmax
comp=Z,5.0nm,1.1s
NEW Newport 93.41 42 IAmb IAmb 15 45 34.2
comp=Z,4.5nm,1.1s
R11A Troy Canyon, C 93.53 52 P P 15 45 35.7 +1.8
baz=264
R11A Troy Canyon, C 93.53 52 P P 15 45 34.4 +0.4
R11A IAmb IAmb 15 45 36.4
comp=Z,8.0nm,1.2s
ELK Elko 94.02 50 P P 15 45 36.6 +0.4
ELK pmax pmax
comp=Z,5.0nm,1.2s
ELK Elko 94.02 50 P P 15 45 36.6 +0.4
PSUT Pine Spring 94.90 52 P P 15 45 40.4 +0.2
YKA Yellowknife Ar 95.94 28 P P 15 45 44.5 +0.4
comp=Z,9.4nm,0.9s,baz=262,slow=4.3,SNR=73
YKA pP **pP 15 45 56.9 -1.9**
comp=Z,2.8nm,0.8s,baz=262,slow=4.5,SNR=5.7
YKA PKKP **PKKPbc 16 02 31.6 -3.5**
comp=Z,0.4nm,0.4s,baz=90,slow=2.9,SNR=20
PDAR Pinedale Array 98.38 48 P P 15 45 54.3 -1.7
comp=Z,1.0nm,0.7s,baz=212,slow=3.2,SNR=9.2
GEYT Alibeck 99.46 307 LR LR 16 33 55.7
comp=Z,40nm,18.9s,baz=205,slow=37
TXAR Lajitas Array 103.02 62 PKKPbc PKKPbc 16 02 13.6 -0.4
comp=Z,3.9nm,0.6s,baz=117,slow=2.7,SNR=3.8
ARCES ARCESS Array B 109.20 343 PKKPbc PKKPbc 16 01 52.3 -3.9
comp=Z,1.3nm,0.8s,baz=298,slow=1.9,SNR=7.5
KIV Kislovodsk 110.58 314 *i* PKIKP **PKiKP 15 50 47.0 -3.3**
KIV pmax pmax
comp=Z,13nm,1.0s
U40A Yellville 111.64 54 PKiKP **PKiKP 15 50 52.1 -0.4**
baz=278
FINES FINESS Array B 113.57 336 PKKPbc PKKPbc 16 01 38.8 -2.7
comp=Z,0.9nm,0.5s,baz=210,slow=1.8,SNR=11
FRB Frobisher Bay 114.95 20 PKP **PKiKP 15 50 57.2 -0.6**
comp=Z,2.8nm,0.5s,baz=4.9,slow=1.0,SNR=10
SFIN Lafayette 115.34 48 P PKiKP 15 50 58.9 -0.5
baz=284
E46A Sault Ste Mari 115.64 41 PKiKP 15 50 59.1 -0.6
T47A Sharon Grove 116.09 52 PKPdf 15 50 59.9 -1.0
D47A Chapleau 116.19 40 P PKPdf 15 51 00.5 -0.3
baz=290
K47A Vermontville 116.27 45 P PKPdf 15 51 00.7 -0.4
baz=286
E47A Iron Bridge 116.28 41 P PKPdf 15 50 59.8 -1.2
baz=290
WCI Wyandotte Cave 116.44 51 PKIKP **PKPdf 15 51 00.7 -0.8**
WCI Wyandotte Cave 116.44 51 P PKPdf 15 51 01.2 -0.4
baz=283
WCI Wyandotte Cave 116.44 51 PKPdf 15 51 00.7 -0.8
N48A Decatur 116.75 47 P PKPdf 15 51 01.8 -0.2
baz=286
K48A Perry 116.86 45 P PKPdf 15 51 01.7 -0.5
baz=287
L48A N Adams 116.88 46 P PKPdf 15 51 02.2 -0.1
baz=286
CLTN Cedars of Leba 116.88 53 PKPdf 15 51 01.3 -1.2
F48A Evansville 116.93 41 P PKPdf 15 51 01.8 -0.4
baz=290
LRAL Lakeview Retre 116.93 56 P PKPdf 15 51 01.9 -0.7
baz=280
D48A Paudash Townsh 116.98 40 P PKPdf 15 51 01.6 -0.7
baz=291
E48A Lockeyer 117.00 41 P PKPdf 15 51 02.1 -0.2
baz=290
PLCA Paso Flores 117.03 142 PKP **PKPdf 15 51 02.5 -0.3**
comp=Z,0.7nm,0.6s,baz=234,slow=2.0,SNR=5.0
AKASG Malin Array Be 117.22 325 PKP **PKPdf 15 51 02.3 -0.3**
comp=Z,0.7nm,0.6s,baz=117,slow=1.8,SNR=4.7
AKASG PKKPbc **PKKPbc 16 01 26.8 -1.8**
comp=Z,1.0nm,0.3s,baz=259,slow=3.8,SNR=6.8
F49A Sandfield 117.33 41 P PKPdf 15 51 02.4 -0.5
baz=290
M49A Liberty Center 117.34 46 P PKPdf 15 51 02.8 -0.4
baz=287
T50A Nancy 117.85 52 PKPdf 15 51 03.3 -1.0
E50A Wahnapitae 117.94 40 P PKPdf 15 51 04.1 0.0
baz=292
BRTR Keskin Array B 118.14 312 PKP **PKPdf 15 51 03.8 -1.2**
comp=Z,0.7nm,0.6s,baz=169,slow=3.1,SNR=3.9
D50A G1974 Best Tow 118.23 39 P PKPdf 15 51 04.1 -0.6
baz=293
P51A Williamsport 118.57 48 P PKPdf 15 51 05.0 -0.6
baz=286
F51A Arnstein 118.66 41 P PKPdf 15 51 05.1 -0.5
baz=292
N51A Ashland 118.66 47 P PKPdf 15 51 05.4 -0.3
baz=288
N51A Ashland 118.66 47 PKPdf 15 51 04.8 -1.0
S51A Beattyville 118.66 51 PKPdf 15 51 04.9 -1.0
O51A Pataskala 118.72 48 P PKPdf 15 51 05.3 -0.6
baz=287
TKL Tuckaleechee C 119.00 53 PKP **PKPdf 15 51 06.0 -0.6**
comp=Z,4.0nm,0.6s,baz=151,slow=7.9,SNR=7.9
TKL Tuckaleechee C 119.00 53 PKIKP **PKPdf 15 51 06.0 -0.6**
F52A Sundridge 119.09 41 P PKPdf 15 51 05.9 -0.5
baz=293
V52A Sevierville 119.10 53 PKPdf 15 51 06.0 -0.7
I52A Shelburne 119.16 43 P PKPdf 15 51 06.4 -0.2
baz=291
Y52A Lilburn 119.18 55 P PKPdf 15 51 06.7 -0.2
baz=283
N52A McGinn's Farm, 119.19 47 P PKPdf 15 51 06.3 -0.4
baz=288
LSQQ Lebel-sur-Quev 119.19 36 P PKPdf 15 51 04.7 -1.8
baz=296
M52A Chesterland 119.20 46 P PKPdf 15 51 06.4 -0.4
baz=289
P52A Corning 119.22 48 P PKPdf 15 51 06.0 -0.9
baz=287
O52A Adamsville 119.29 47 P PKPdf 15 51 06.3 -0.6
baz=288
Q52A Bidwell 119.31 49 P PKPdf 15 51 06.6 -0.4
baz=287
NAO01 NORSAR Array S 119.57 341 PKPdf 15 51 06.8 -0.1
SADO Sadowa 119.60 42 PKP **PKPdf 15 51 06.5 -0.9**
comp=Z,3.8nm,0.6s,baz=284,slow=3.1,SNR=4.6
D53A Lac Vacive, Po 119.61 39 P PKPdf 15 51 06.8 -0.5
baz=295
T53A Wise 119.64 51 P PKPdf 15 51 07.9 0.0
baz=285,SNR=6.2
O53A New Philadelph 119.70 47 P PKPdf 15 51 07.5 -0.3
baz=288
M53A WI Miller and 119.71 46 P PKPdf 15 51 07.3 -0.4
baz=289
V53A Saluda 119.76 53 PKPdf 15 51 07.7 -0.4
G53A Haliburton 119.80 41 P PKPdf 15 51 07.5 -0.3
baz=293
N53A Lisbon 119.80 46 P PKiKP 15 51 08.1 +0.1
baz=289
N53A Lisbon 119.80 46 PKPdf 15 51 07.6 -0.4
P53A Whipple 119.81 48 P PKPdf 15 51 07.7 -0.2
baz=288
P53A Whipple 119.81 48 PKPdf 15 51 07.3 -0.6
L53A Girard 119.84 45 P PKiKP 15 51 08.3 +0.2
baz=290
ALGO Algonquin Park 119.84 40 P PKPdf 15 51 07.3 -0.5
baz=294
Q53A Leroy 119.89 49 P PKPdf 15 51 07.7 -0.4
baz=287
H53A Bobcaygeon 120.04 42 P PKPdf 15 51 07.8 -0.4
baz=293
G54A Lake Saint Pet 120.04 41 P PKPdf 15 51 07.8 -0.5
baz=294
D54A Lac Fusel, La 120.22 38 P PKPdf 15 51 07.5 -1.1
baz=296
CHGQ Chibougamau 120.30 35 P PKPdf 15 51 07.5 -1.1
baz=299
BOSA Boshof 120.32 232 PKP **PKPdf 15 51 08.7 -0.8**
comp=Z,3.4nm,0.8s,baz=343,slow=0.8,SNR=8.9
O54A Avella 120.33 47 P PKPdf 15 51 09.0 0.0
baz=289
O54A Avella 120.33 47 PKPdf 15 51 08.5 -0.4
S54A Dingess, Beckl 120.36 50 P PKPdf 15 51 08.6 -0.6
baz=287
S54A Dingess, Beckl 120.36 50 PKPdf 15 51 08.4 -0.7
N54A Moraine State 120.36 46 P PKPdf 15 51 08.8 -0.2
baz=290
N54A Moraine State 120.36 46 PKPdf 15 51 08.4 -0.6
T54A Tazewell 120.36 51 P PKPdf 15 51 08.8 -0.4
baz=286
Q54A Coxs Mills 120.37 48 P PKPdf 15 51 08.6 -0.4
baz=288,SNR=6.6
Q54A Coxs Mills 120.37 48 PKPdf 15 51 08.4 -0.7
X54A Belton 120.38 54 P PKPdf 15 51 09.1 -0.1
baz=284
L54A Sinclairville 120.40 44 P PKPdf 15 51 08.6 -0.4
baz=291
W54A Cherokee Point 120.40 53 P PKPdf 15 51 09.3 0.0
baz=284
M54A Oil Creek Stat 120.41 45 P PKPdf 15 51 08.6 -0.5
baz=290
M54A Oil Creek Stat 120.41 45 PKPdf 15 51 08.3 -0.8
V54A Nebo 120.41 52 P PKPdf 15 51 09.2 -0.1
baz=285
P54A Burton 120.44 48 P PKPdf 15 51 08.9 -0.4
baz=288
K54A Basiliko Farm, 120.70 44 P PKPdf 15 51 08.8 -0.8
baz=291
PAULI Pauline 120.76 53 PKPdf 15 51 09.4 -0.6
Q55A Buckhannon 120.92 48 P PKPdf 15 51 09.9 -0.3
baz=288
U55A TA2, Sparta 120.92 51 P PKPdf 15 51 10.2 -0.1
baz=286
Y55A Saluda 120.94 54 P PKPdf 15 51 10.2 -0.1
baz=284
H55A Tweed 120.97 41 P PKPdf 15 51 09.6 -0.4
baz=294
G55A Calabogie 120.98 40 P PKPdf 15 51 09.5 -0.5
baz=295
X55A Gracelyn & Ava 120.99 54 P PKiKP 15 51 10.6 +0.1
baz=285
D55A Sainte-Anne-du 121.00 38 P PKPdf 15 51 09.6 -0.5
baz=297
L55A Hinsdale 121.03 44 P PKPdf 15 51 10.1 -0.2
baz=291
J55A Hilton 121.05 43 P PKPdf 15 51 09.4 -0.8
baz=293
M55A Ridgway 121.06 45 P PKPdf 15 51 10.0 -0.3
baz=291
KMSC Kings Mountain 121.06 53 P PKPdf 15 51 10.5 -0.1
baz=285
KMSC Kings Mountain 121.06 53 PKPdf 15 51 09.7 -0.8
K55A Perry 121.08 43 P PKPdf 15 51 09.9 -0.5
baz=292
O55A Ligonier 121.10 47 P PKPdf 15 51 10.3 -0.1
baz=290,SNR=5.3
R55A Marlinton 121.11 49 P PKPdf 15 51 10.4 -0.2
baz=288
R55A Marlinton 121.11 49 PKPdf 15 51 09.6 -1.0
N55A Marion Center 121.14 46 P PKPdf 15 51 09.9 -0.7
baz=290
BLA Blacksburg 121.20 50 PKIKP **PKPdf 15 51 10.0 -0.8**
BLA Blacksburg 121.20 50 P PKPdf 15 51 10.3 -0.5
baz=287
BLA Blacksburg 121.20 50 PKPdf 15 51 10.0 -0.8
D56A ZEC Mazanza, M 121.43 38 P PKPdf 15 51 10.2 -0.7
baz=297
M56A Emporium 121.46 45 P PKPdf 15 51 10.9 -0.3
baz=291
M56A Emporium 121.46 45 PKPdf 15 51 10.7 -0.4
X56A White Oak 121.47 53 P PKPdf 15 51 11.4 +0.1
baz=285
E56A St. Veronique 121.49 38 P PKPdf 15 51 11.0 0.0
baz=297
H56A Elgin 121.55 41 P PKPdf 15 51 10.8 -0.3
baz=295
T56A Rocky Mt 121.56 50 P PKPdf 15 51 11.0 -0.4
baz=287
N56A West Decatur 121.58 46 P PKPdf 15 51 11.3 -0.1
baz=291,SNR=5.3
O56A Blue Knob Stat 121.61 46 P PKPdf 15 51 11.5 0.0
baz=290,SNR=5.3
O56A Blue Knob Stat 121.61 46 PKPdf 15 51 11.1 -0.4
L56A Greenwood 121.65 44 P PKPdf 15 51 11.1 -0.4
baz=292
P56A Dayton Farm, R 121.67 47 P PKPdf 15 51 11.1 -0.5
baz=290
J56A Wolcott 121.69 42 P PKPdf 15 51 10.8 -0.7
baz=293
S56A Natural Bridge 121.72 49 P PKPdf 15 51 11.1 -0.6
baz=288
D57A Chemin Vers le 121.97 37 P PKPdf 15 51 11.4 -0.5
baz=298
SSPA Standing Stone 121.97 46 P PKPdf 15 51 12.0 -0.1
baz=291
SSPA Standing Stone 121.97 46 PKPdf 15 51 11.6 -0.5
KOLS Kolonicke sedl 122.03 325 *e* PKIKP **PKiKP 15 51 13.0 +0.9**
KOLS Kolonicke sedl 122.03 325 *e* PKP **PKiKP 15 51 13.0 +0.9**
V57A Coltrane Farms 122.08 52 P PKPdf 15 51 12.3 -0.1
baz=287
W57A Gilead 122.12 52 P PKPdf 15 51 12.3 -0.2
baz=286
W57A Gilead 122.12 52 PKPdf 15 51 11.9 -0.6
K57A Scipio Center 122.14 43 P PKPdf 15 51 11.9 -0.5
baz=293
Q57A Strasburg 122.14 48 P PKPdf 15 51 11.8 -0.7
baz=290
G57A Newington 122.16 40 P PKPdf 15 51 12.1 -0.2
baz=296
N57A Milroy 122.17 45 P PKPdf 15 51 12.3 -0.1
baz=291,SNR=5.3
L57A Andrews Acres 122.19 44 P PKPdf 15 51 12.3 -0.2
baz=293,SNR=5.3
J57A Williamstown 122.21 42 P PKPdf 15 51 12.2 -0.2
baz=294
I57A Carthage 122.22 41 P PKPdf 15 51 12.2 -0.3
baz=295
M57A Sunshine Farm, 122.25 45 P PKPdf 15 51 12.6 -0.1
baz=292,SNR=5.2
M57A Sunshine Farm, 122.25 45 PKPdf 15 51 12.3 -0.3
O57A Amberson 122.30 46 P PKPdf 15 51 12.6 -0.2
baz=291
D58A Chemin du LacG 122.54 37 P PKPdf 15 51 11.6 -1.4
baz=299
V58A Windy Hill, Pi 122.62 51 P PKPdf 15 51 12.9 -0.5
baz=287
LONY Lake Ozonia 122.62 40 P PKPdf 15 51 12.6 -0.6
baz=296
M58A Price's Panora 122.70 44 P PKPdf 15 51 13.4 -0.1
baz=293
J58A Remsen 122.71 42 P PKPdf 15 51 13.2 -0.3
baz=295
Q58A Fox Den Farm, 122.71 48 P PKPdf 15 51 13.1 -0.4
baz=290
K58A Earlville 122.71 43 P PKPdf 15 51 13.2 -0.3
baz=294
N58A Sunbury 122.72 45 P PKPdf 15 51 13.2 -0.3
baz=292,SNR=6.0

N58A	**Sunbury**	**122.72**	**45**			**PKPdf**	**15 51 13.0**	**-0.5**
T58A	**Grand View Acr**	**122.72**	**50**	P		**PKPdf**	**15 51 13.3**	**-0.3**
	baz=288							
W58A	**Raeford**	**122.75**	**52**	P		**PKPdf**	**15 51 13.7**	**0.0**
	baz=287							
P58A	**Pank, Wackersv**	**122.80**	**47**	P		**PKPdf**	**15 51 13.5**	**-0.2**
	baz=291							
O58A	**Lewisberry**	**122.84**	**46**	P		**PKPdf**	**15 51 13.4**	**-0.4**
	baz=292,SNR=5.8							
L58A	**Harry Jones Me**	**122.86**	**43**	P		**PKPdf**	**15 51 13.7**	**-0.1**
	baz=294							
S58A	**Poland Farm, P**	**122.88**	**49**	P		**PKPdf**	**15 51 13.7**	**-0.2**
	baz=289							
U58A	**Oxford**	**122.88**	**51**	P		**PKPdf**	**15 51 13.9**	**-0.1**
	baz=288							
R58B	**Mineral**	**122.89**	**49**	P		**PKPdf**	**15 51 13.5**	**-0.4**
	baz=289							
H58A	**Gabriels**	**122.97**	**40**	P		**PKPdf**	**15 51 13.5**	**-0.4**
	baz=296							
J59A	**Piesco**	**123.18**	**41**	P		**PKPdf**	**15 51 14.2**	**-0.2**
	baz=296							
MVL	**Millersville**	**123.30**	**46**			**PKPdf**	**15 51 14.4**	**-0.3**
O59A	**Robesonia**	**123.30**	**46**	P		**PKPdf**	**15 51 14.7**	**0.0**
	baz=292							
V59A	**Middlesex**	**123.31**	**51**	P		**PKiKP**	**15 51 15.2**	**+0.2**
	baz=288							
M59A	**Waymart**	**123.35**	**44**	P		**PKiKP**	**15 51 14.9**	**0.0**
	baz=294,SNR=5.1							
L59A	**Walton**	**123.35**	**43**	P		**PKPdf**	**15 51 14.5**	**-0.3**
	baz=294							
N59A	**State Game Lan**	**123.36**	**45**	P		**PKPdf**	**15 51 14.8**	**0.0**
	baz=293							
I59A	**Olmsteadville**	**123.44**	**41**	P		**PKPdf**	**15 51 14.9**	**0.0**
	baz=296							
T59A	**Double "B" Far**	**123.46**	**50**	P		**PKPdf**	**15 51 15.1**	**+0.1**
	baz=289							
F60A	**Warwick**	**123.65**	**38**	P		**PKPdf**	**15 51 14.9**	**-0.2**
	baz=299							
I60A	**Shoreham**	**123.80**	**41**	P		**PKPdf**	**15 51 15.3**	**-0.2**
	baz=297,SNR=6.1							
N60A	**Cedar Hill Far**	**123.84**	**45**	P		**PKPdf**	**15 51 15.3**	**-0.4**
	baz=294							
O60A	**Telford**	**123.85**	**45**	P		**PKPdf**	**15 51 15.6**	**-0.1**
	baz=293							
X60A	**Albert Glenn T**	**123.87**	**53**	P		**PKPdf**	**15 51 16.0**	**+0.1**
	baz=287							
P60A	**Greenville**	**123.88**	**46**	P		**PKPdf**	**15 51 15.6**	**-0.2**
	baz=292							
W60A	**Pink Hill**	**123.94**	**52**	P		**PKPdf**	**15 51 15.7**	**-0.3**
	baz=288							
PSUB	**Penn St. - Bra**	**123.96**	**46**			**PKPdf**	**15 51 15.6**	**-0.4**
ODNJ	**Ogdensburg**	**124.10**	**44**			**PKPdf**	**15 51 15.9**	**-0.2**
VYHS	**Vyhne**	**124.19**	**326**	*e*PKIKP		**PKiKP**	**15 51 16.5**	**+0.1**
VYHS	**Vyhne**	**124.19**	**326**	*e*PKP		**PKiKP**	**15 51 16.5**	**+0.1**
F61A	**St Evariste**	**124.22**	**37**	P		**PKiKP**	**15 51 16.8**	**+0.3**
	baz=300							
E61A	**Lac Etchemin**	**124.29**	**37**	P		**PKiKP**	**15 51 16.7**	**-0.1**
	baz=301,SNR=6.2							
K61A	**Williamstown**	**124.34**	**42**	P		**PKiKP**	**15 51 17.1**	**+0.2**
	baz=296							
H61A	**Lyndonville**	**124.35**	**39**	P		**PKiKP**	**15 51 16.8**	**-0.1**
	baz=298							
M61A	**Granite Spring**	**124.58**	**44**	P		**PKPdf**	**15 51 17.1**	**+0.1**
	baz=295							
PAL	**Palisades**	**124.61**	**44**	P		**PKPdf**	**15 51 17.0**	**-0.1**
	baz=295							
D62A	**Allapoint, All**	**124.79**	**35**	P		**PKPdf**	**15 51 16.9**	**-0.4**
	baz=303							
CLL	**Collm**	**125.46**	**332**	*e*PKPdf		**PKiKP**	**15 51 20.0**	**+1.2**
CLL				Lm		MLR	16 48 00.0	
	comp=Z,100nm,19.4s							
CLL	**Collm**	**125.46**	**332**	*e*PKIKP		**PKiKP**	**15 51 20.0**	**+1.2**
FNA	**Florina**	**126.50**	**317**	PKIKP		**PKPdf**	**15 51 20.1**	**-0.8**
FNA	**Florina**	**126.50**	**317**			**PKPdf**	**15 51 20.1**	**-0.8**
KHC	**Kasperske Hory**	**126.59**	**329**	*e*PKIKP		**PKiKP**	**15 51 21.0**	**-0.2**
KHC	**Kasperske Hory**	**126.59**	**329**	*e*PKPDF		**PKiKP**	**15 51 21.0**	**-0.2**
GERES	**GERESS Array B**	**126.71**	**329**	PKP		**PKPdf**	**15 51 20.8**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=48,slow=1.4,SNR=11							
PB11	**IPOC Station P**	**128.82**	**122**			**PKPdf**	**15 51 25.5**	**-0.5**
LPAZ	**La Paz**	**131.62**	**118**	PKIKP		**PKPdf**	**15 51 30.7**	**-1.3**
LPAZ	**La Paz**	**131.62**	**118**			**PKPdf**	**15 51 30.7**	**-1.3**
RUSC	**La Rusia**	**132.17**	**88**			**PKPdf**	**15 51 31.9**	**-1.0**
SDV	**Santo Domingo**	**134.70**	**84**			**PKPdf**	**15 51 36.3**	**-1.0**
HUMP	**Col San Antoni**	**138.53**	**70**	PKPdf		**PKPdf**	**15 51 43.7**	**-0.3**
ESDC	**Sonseca Array**	**142.01**	**333**	PKhKP		PKPpre	15 51 45.0	
	comp=Z,0.2nm,0.5s,baz=16,slow=4.0,SNR=2.3							
PTGA	**Pitinga**	**144.31**	**100**			**PKPab**	**15 51 52.2**	**-0.4**
BDFB	**Brasilia**	**148.24**	**134**	PKPbc		**PKPbc**	**15 52 03.7**	**-0.9**
	comp=Z,19nm,0.9s,baz=220,slow=2.8,SNR=9.0							
BDFB	**Brasilia**	**148.24**	**134**	PKIKP		**PKPdf**	**15 52 02.6**	**+1.3**
BDFB							16 51 59.4	
BDFB	**Brasilia**	**148.24**	**134**			**PKPdf**	**15 51 59.4**	**-1.9**
BDFB						**PKPdf**	**15 52 02.6**	**+1.3**
TOA0	**Torodi Ar. Sit**	**152.96**	**286**			**PKPbc**	**15 52 14.9**	**-0.9**
TORD	**Torodi Ar. Bea**	**152.96**	**286**	PKP		**PKPdf**	**15 52 07.2**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=13,slow=1.5,SNR=5.8							
TORD				PKPbc		**PKPbc**	**15 52 15.2**	**-0.5**
	comp=Z,8.4nm,0.6s,baz=61,slow=2.0,SNR=48							
TORD				PKPab		**PKPab**	**15 52 27.1**	**0.0**
	comp=Z,7.1nm,0.6s,baz=57,slow=2.9,SNR=12							
KIC	**Kosan Boka**	**159.91**	**271**	*e*P		**PKPab**	**15 52 56.8**	**-0.3**
	comp=Z,26nm,0.8s							
DBIC	**Dimbokro**	**160.03**	**271**	PKPab		**PKPab**	**15 52 57.6**	**+0.1**
	comp=Z,7.5nm,0.6s,baz=77,slow=3.2,SNR=10.0							
DBIC	**Dimbokro**	**160.03**	**271**	PKP2		**PKPab**	**15 52 57.5**	**-0.1**
DBIC	**Dimbokro**	**160.03**	**271**			**PKPab**	**15 52 57.5**	**-0.1**
LIC	**Lamto**	**160.19**	**270**	*e*P		**PKPab**	**15 52 58.2**	**-0.1**
	comp=Z,70nm,1.2s							
TIC	**Toumodi**	**160.19**	**271**	*e*P		**PKPab**	**15 52 58.4**	**+0.1**

*JMA **11** 15:33:53.3±0.1,43.01N×145.75E,h42km±1km,M3.0*
*SKHL **11** 15:33:53.7±0.3,43.01N×145.76E,h35km±2km,mb3.7/5*
ISC 11 15:33:53.7±1.8,43.02N±0.08×145.76E±0.07,h35km±7km,
n15,σ0°51/29,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
NEM2	**Nemuro 2**	**0.35**	**358**	P			**Pb**	**15 34 02.2**	**0.0**
NEM2					*e*S		**Sb**	**15 34 08.5**	**+0.5**
NMR	**Nemuro--Hokkai**	**0.35**	**356**	*i* P			**Pb**	**15 34 01.8**	**-0.5**
NMR				*i* S			**Sn**	**15 34 08.0**	**0.0**
JKHN	**Kushirohamanak**	**0.44**	**278**	P			**Pb**	**15 34 03.3**	**-0.2**
JKHN				*e*S			**Sn**	**15 34 10.8**	**+0.5**
GLVR	**Golovnino**	**0.74**	**346**	*i* P			**Pn**	**15 34 07.6**	**0.0**
GLVR				AMB		AMB		15 34 07.9	
	30nm,0.3s								
GLVR				*i* S			**Sb**	**15 34 18.1**	**0.0**
GLVR				A		A		15 34 22.0	
	340nm,0.3s								
GLVR				A		A		15 34 22.0	
	740nm,0.3s								
JAK	**Akkeshi**	**0.78**	**269**	P			**Pn**	**15 34 07.7**	**-0.5**
JNSB	**Nemuroshibetsu**	**0.94**	**324**	P			**Pn**	**15 34 10.3**	**0.0**
JNSB				*e*S			**Sn**	**15 34 22.8**	**+0.3**
JNK	**Nakash**	**0.95**	**307**	P			**Pn**	**15 34 10.2**	**-0.3**
JNK				*e*S			**Sn**	**15 34 22.0**	**-0.8**
GRPR	**Tuman**	**0.97**	**1**	*i* P			**Pn**	**15 34 10.6**	**-0.2**
GRPR				AMB		AMB		15 34 10.8	
	40nm,0.3s								
GRPR				*i* S			**Sn**	**15 34 22.8**	**-0.6**
GRPR				A		A		15 34 23.0	
	670nm,0.2s								
GRPR				A		A		15 34 23.0	
	390nm,0.2s								
YUK	**Yuzh-Kuril'sk**	**1.02**	**4**	*i* P			**Pn**	**15 34 11.1**	**-0.3**
YUK				AMB		AMB		15 34 12.0	
	30nm,0.3s								
YUK				*i* S			**Sn**	**15 34 24.3**	**-0.2**
YUK				A		A		15 34 26.0	
	660nm,0.3s								
YUK				A		A		15 34 26.0	
	450nm,0.3s								
JRA	**Rausu**	**1.03**	**333**	P			**Pn**	**15 34 11.7**	**+0.1**
JRA				*e*S			**Sn**	**15 34 24.9**	**+0.1**
LAGR	**Lagunnoye**	**1.04**	**1**	*e*P			**Pn**	**15 34 11.0**	**-0.7**
LAGR				AMB		AMB		15 34 11.2	
	20nm,0.2s								
LAGR				*i* S			**Sn**	**15 34 24.2**	**-0.8**
LAGR				A		A		15 34 24.7	
	640nm,0.3s								
LAGR				A		A		15 34 24.7	
	990nm,0.3s								
JOB	**Onbets**	**1.42**	**266**	P			**Pn**	**15 34 16.6**	**-0.3**
JOB				*e*S			**Sn**	**15 34 34.2**	**-0.1**
JAR	**Ashorobuto**	**1.48**	**281**	P			**Pn**	**15 34 17.9**	**+0.1**
JAR				*e*S			**Sn**	**15 34 36.1**	**+0.1**
JTKR	**Abashiri--Toko**	**1.65**	**306**	P			**Pn**	**15 34 20.9**	**+0.8**
JTKR				*e*S			**Sn**	**15 34 41.2**	**+1.1**
KUR	**Kuril'sk**	**2.68**	**34**	*i* P			**Pn**	**15 34 34.8**	**+0.5**
KUR				AMB		AMB		15 34 37.0	
	10.0nm,0.2s								
KUR				*i* S			**Sn**	**15 35 06.5**	**+0.9**
KUR				A		A		15 35 12.0	
	40nm,0.2s								
KUR				A		A		15 35 12.0	
	40nm,0.2s								

*IDC **11** 15:52:05.1±1.1,15.69S×168.41E,h0km,mb4.2/12,*
mb1 4.4/13,mb1mx4.1/42,mbtmp4.2/13,ML4.4/1,MS3.5/4,
Ms1 3.5/4,ms1mx3.1/27,Error ellipse: s-maj=28.8km
s-min=19.1km az=116.0
*BJI **11** 15:52:12.2±0.0,15.70S×168.00E,h40km,mB4.9/9,*
mb4.5/17,Ms4.7/1,Ms7 4.4/1
*NEIC **11** 15:52:13.9±1.6,15.70S±0.09×168.1E±0.1,h52km±8km,*
mb4.7/24,Error ellipse: s-maj=17.3km s-min=12.4km
az=111.0
ISC 11 15:52:12.3±0.6,15.69S±0.07×168.11E±0.10,h35km,n48,
σ1°24/43,mb4.6/26,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
DZM	**Mont Dzumac**	**6.54**	**194**	Pn			**Pn**	**15 53 45.3**	**-0.8**
	8.1nm,0.3s,baz=96,slow=7.9,SNR=107								
DZM				Sn			**Sn**	**15 55 00.3**	**+0.7**
	2.5nm,0.3s,baz=115,slow=23,SNR=3.9								
MSVF	**Nonsavu**	**9.73**	**103**				**Pn**	**15 54 32.2**	**+2.3**
HNR	**Honiara**	**10.11**	**307**	LR			LR	15 58 24.3	
	comp=Z,346nm,18.7s,baz=152,slow=37								
LHI	**Lord Howe Isla**	**17.79**	**206**	Pn			**Pn**	**15 56 15.8**	**-1.4**
LHI				IAmb		IAmb		15 56 29.9	
	comp=Z,110nm,1.6s								
OUZ	**Omahuta**	**20.06**	**167**	P			Pn	15 56 44.1	-0.4
OUZ				IAmb		IAmb		15 56 46.2	
	comp=Z,100nm,2.0s								
ARMA	**Armidale**	**21.05**	**223**	P			**P**	**15 56 52.8**	**-0.6**
CTA	**Charters Tower**	**21.25**	**255**	P			**P**	**15 56 57.2**	**+1.6**
	comp=Z,13nm,1.2s,baz=71,slow=14,SNR=2.7								
PMG	**Port Moresby**	**21.38**	**284**	LR			LR	16 03 40.5	
	comp=Z,173nm,20.1s,baz=293,slow=32								
URZ	**Urewera**	**23.84**	**162**	P			**P**	**15 57 18.9**	**-3.3**
	comp=Z,7.5nm,0.9s,baz=333,slow=6.8,SNR=2.3								
URZ	**Urewera**	**23.84**	**162**	P			**P**	**15 57 22.9**	**+0.7**
URZ				IAmb		IAmb		15 58 02.6	
	comp=Z,16nm,1.0s								
COEN	**Coen**	**24.17**	**271**	P			**P**	**15 57 26.8**	**+1.3**
BKZ	**Black Stump Fm**	**24.52**	**164**	P			**P**	**15 57 29.2**	**+0.7**
BKZ				IAmb		IAmb		15 57 35.3	
	comp=Z,48nm,1.6s								
LTZ	**Lake Taylor**	**27.23**	**173**	P			**P**	**15 57 53.3**	**+0.2**
LTZ				IAmb		IAmb		15 58 09.6	
	comp=Z,36nm,1.5s								
LBZ	**Lake Benmore**	**28.66**	**177**	P			**P**	**15 58 05.6**	**-0.1**
STKA	**Stephens Creek**	**29.02**	**232**	P			**P**	**15 58 09.3**	**+0.3**
	comp=Z,5.0nm,0.8s,baz=50,slow=7.4,SNR=13								
STKA	**Stephens Creek**	**29.02**	**232**	P			**P**	**15 58 09.3**	**+0.3**
TOO	**Toolangi**	**29.59**	**218**	P			**P**	**15 58 15.1**	**+1.0**
TOO				IAmb		IAmb		15 58 43.9	
	comp=Z,15nm,1.3s								
JAY	**Jayapura**	**30.00**	**293**	LR			LR	16 09 45.7	
	comp=Z,114nm,21.7s,baz=192,slow=35								
WR0	**Warramunga Arr**	**32.21**	**257**	P			**P**	**15 58 37.7**	**+0.4**
WR0				IAmb		IAmb		15 59 03.7	
	comp=Z,14nm,1.7s								
WB0	**Warramunga Arr**	**32.34**	**258**	P			**P**	**15 58 38.0**	**-0.5**
WB2	**Warramunga Arr**	**32.39**	**257**	P			**P**	**15 58 37.8**	**-1.2**
WB2				IAmb		IAmb		15 59 16.9	
	comp=Z,19nm,1.8s								
WRAB	**Tennant Creek**	**32.39**	**257**	P			**P**	**15 58 38.0**	**-0.9**
WRA	**Warramunga Arr**	**32.40**	**257**	P			**P**	**15 58 37.9**	**-1.1**
	comp=Z,2.2nm,0.7s,baz=88,slow=8.9,SNR=22								
AS31	**Alice Springs**	**33.11**	**251**	P			**P**	**15 58 45.3**	**0.0**
ASAR	**Alice Springs**	**33.11**	**251**	P			**P**	**15 58 45.0**	**-0.3**
	comp=Z,4.5nm,0.8s,baz=77,slow=8.9,SNR=62								
BBOO	**Buckleboo**	**33.65**	**234**	P			**P**	**15 58 50.3**	**+0.5**
KNRA	**Kununurra**	**37.85**	**265**	P			**P**	**15 59 25.4**	**-0.6**
FORT	**Forrest**	**39.52**	**240**	P			**P**	**15 59 40.2**	**+0.3**
FITZ	**Fitzroy Crossi**	**40.65**	**260**	P			**P**	**15 59 49.7**	**+0.3**
	comp=Z,12nm,0.8s,baz=93,slow=8.0,SNR=39								
FITZ	**Fitzroy Crossi**	**40.65**	**260**	P			**P**	**15 59 49.5**	**+0.1**
FITZ				IAmb		IAmb		15 59 50.4	
	comp=Z,12nm,0.8s								
MJAR	**Matsushiro Arr**	**59.13**	**332**	P			**P**	**16 02 09.1**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=99,slow=8.0,SNR=4.3								
MAJO	**Matsushiro**	**59.13**	**332**	P			**P**	**16 02 10.0**	**+0.5**
MAJO				IAmb		IAmb		16 02 16.5	
	comp=Z,16nm,1.8s								
MJB9	**Matsu-Tunnel**	**59.13**	**332**	P			**P**	**16 02 10.0**	**+0.5**
CISI	**Cisompet, Garu**	**59.45**	**270**	P			**P**	**16 02 11.4**	**-0.8**
NJ2	**Nanjing**	**66.93**	**316**	*e*P			**P**	**16 03 02.6**	**+1.3**
NJ2				pmax		pmax			
	comp=Z,7.0nm,0.5s								
PETK	**Petropavlovsk-**	**69.10**	**353**	LR			LR	16 26 15.0	
	comp=Z,22nm,20.7s,baz=241,slow=30								
QSPA	**South Pole Qui**	**74.34**	**180**	P			**P**	**16 03 45.7**	**-0.5**
QSPA				IAmb		IAmb		16 03 47.3	
	comp=Z,9.9nm,1.2s								
CMAR	**Chiang Mai Arr**	**76.08**	**294**	P			**P**	**16 03 57.5**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=124,slow=4.8,SNR=2.4								
HHC	**Hu-ho-hao-te**	**76.84**	**319**	*e*P			**P**	**16 04 02.7**	**+1.9**
HHC				pmax		pmax			
	comp=Z,18nm,0.8s								
HHC				pmax		pmax			
	comp=Z,34nm,5.0s								
CD2	**Chengdu**	**77.24**	**307**	P			**P**	**16 04 03.1**	**-0.1**
CD2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
LZH	**Lanzhou**	**79.57**	**312**	*e*P			**P**	**16 04 16.8**	**+0.7**
LZH				pP		sP		16 04 32.3	+2.0
LZH				pmax		pmax			
	comp=Z,16nm,1.1s								
LZH				pmax		pmax			
	comp=Z,53nm,4.3s								
LZH				LR		LR			
	comp=Z,130nm,16.2s								
LZH				LR		LR			
	comp=Z,140nm,16.4s								
LZH				LR		LR			
	comp=Z,170nm,18.0s								
ULN	**Ulaanbaatar**	**83.39**	**324**	P			**P**	**16 04 36.0**	**0.0**
ULN				IAmb		IAmb		16 04 42.0	
	comp=Z,14nm,1.5s								
SONM	**Songino Array**	**83.75**	**323**	P			**P**	**16 04 37.2**	**-0.7**
	comp=Z,1.9nm,1.0s,baz=150,slow=5.4,SNR=6.2								
GTA	**Gaotai**	**83.92**	**314**	*e*P			P	16 04 44.1	+5.2
GTA				pP		pwP		16 04 50.9	-0.9
GTA				sP		sP		16 04 54.2	+1.0
GTA				pmax		pmax			
	comp=Z,3.0nm,1.2s								
ILAR	**Eielson Array**	**87.19**	**18**	P			**P**	**16 04 51.7**	**-2.7**
	comp=Z,0.5nm,0.6s,baz=241,slow=5.1,SNR=7.0								
WMQ	**Urumqi**	**93.98**	**314**	*e*P			**P**	**16 05 29.6**	**+2.8**
WMQ				pP		sP		16 05 43.9	+2.9
WMQ				pmax		pmax			
	comp=Z,11nm,0.6s								
WMQ				pmax		pmax			
	comp=Z,63nm,4.5s								
YKA	**Yellowknife Ar**	**98.02**	**27**	P			**P**	**16 05 42.6**	**-2.0**
	comp=Z,0.5nm,0.9s,baz=247,slow=4.5,SNR=5.7								
ZALV	**Zalesovo Beam**	**98.64**	**324**	P			**P**	**16 05 45.8**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=142,slow=7.5,SNR=3.5								

MAN 11 16:11:09.5,11.92N×125.13E,h12km,MS3.5,1D,Samar

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
CNP	**Catarman**	**0.75**	**322**	*e*P			Pg	16 11 23.9	-0.2
CNP				*e*S			Sn	16 11 37.2	0.0
OCLP	**Ormoc**	**1.00**	**211**	*e*P			Pb	16 11 28.5	-0.3
OCLP				*e*S			Sn	16 11 44.0	+0.6
MSLP	**Maasin**	**1.79**	**189**	*e*P			Pn	16 11 39.8	-0.5
MSLP				*e*S			Sb	16 12 05.1	+0.4
PVCP	**Virac**	**1.92**	**330**	*e*P			Pn	16 11 42.8	+0.7
PVCP				*e*S			Sn	16 12 07.4	+1.1
RCP	**Roxas**	**2.36**	**262**	*e*P			Pn	16 11 49.4	+1.2
CNOP	**Candoni, Negro**	**3.21**	**230**	*e*P			Pn	16 11 59.9	+0.1
CNOP				*e*S			Sn	16 12 39.5	+1.5
BALP	**Baler**	**5.14**	**318**	*e*P			Pn	16 12 25.1	-1.2
BALP				*e*S			Sn	16 13 18.3	-7.3

*IDC **11** 16:28:57.8±0.7,6.49N×73.35W,h145km±8km,mb3.5/7,*
mb1 3.8/10,mb1mx3.5/31,mbtmp4.1/10,Error ellipse:
s-maj=23.7km s-min=8.4km az=133.0
*NEIC **11** 16:28:57.9±2.0,6.45N±0.07×73.26W±0.08,h149km±6km,*
mb4.3/5,Error ellipse: s-maj=12.2km s-min=9.0km
az=131.0
*RSNC **11** 16:28:58.5±1.1,6.55N×73.48W,h136km±5km,ML4.0,*
Mw4.0
ISC 11 16:28:57.2±0.6,6.58N±0.03×73.43W±0.03,h143km±5km,
n72,σ1°76/112,5C-5D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
BRRC	**Barranca, Sant**	**0.60**	**332**	*i* P			**Pn**	**16 29 18.8**	**+0.4**
BRRC				*e*S			**Sn**	**16 29 34.6**	**+0.1**
BRRC				*i*				16 29 38.5	
	comp=Z,2μm,0.1s								
RUSC	**La Rusia**	**0.76**	**153**	*i* P			**Pn**	**16 29 20.3**	**+0.3**
RUSC				*e*S			**Sn**	**16 29 36.8**	**-0.5**
RUSC				*i*				16 29 38.4	
	comp=Z,1μm,0.3s								
RUSC	**La Rusia**	**0.76**	**153**				**Pn**	**16 29 20.1**	**+0.1**
PTBC	**PUERTO BERRIO,**	**1.02**	**268**	*e*P			**Pn**	**16 29 20.7**	**-0.8**
PTBC				*e*S			**Sn**	**16 29 37.8**	**-2.3**
PTBC				*i*				16 29 40.1	
	comp=Z,3μm,0.1s								
PAMC	**Pamplona, Colo**	**1.05**	**44**	*i* P			**Pn**	**16 29 23.2**	**+0.9**
PAMC				*e*S			**Sn**	**16 29 42.3**	**+0.9**
PAMC				*i*				16 29 44.8	
	comp=Z,2μm,0.3s								
SPBC	**San Pablo de B**	**1.12**	**215**	*i* P			**Pn**	**16 29 22.6**	**0.0**
SPBC				*e*S			**Sn**	**16 29 40.3**	**-1.6**
SPBC				*i*				16 29 43.6	
	comp=Z,3μm,0.2s								
TAMC	**Tame, Arauca**	**1.63**	**95**	*i* P			**Pn**	**16 29 29.0**	**+1.2**
TAMC				*e*S			**Sn**	**16 29 50.5**	**-0.6**
TAMC				*i*				16 29 52.7	
	comp=Z,766nm,0.4s								
OCAC	**Ocana**	**1.65**	**4**	*i* P			**Pn**	**16 29 28.8**	**+0.7**
OCAC				*e*S			**Sn**	**16 29 52.2**	**+0.4**
ZARC	**Zaragoza, Cauc**	**1.69**	**303**	*e*P			**Pn**	**16 29 27.7**	**-0.6**
ZARC				*e*S			**Sn**	**16 29 52.0**	**-0.1**
ZARC				*i*				16 29 56.0	
	comp=Z,1μm,0.4s								
NORC	**Norcasia**	**1.75**	**235**	*e*P			**Pn**	**16 29 28.6**	**-0.5**
NORC				*e*S			**Sn**	**16 29 51.5**	**-2.0**
NORC				*i*				16 29 57.0	
	comp=Z,1μm,0.4s								
ROSC	**El Rosal**	**1.94**	**207**	P			**Pn**	**16 29 33.0**	**+1.3**
	comp=Z,129nm,0.3s,baz=313,slow=6.8,SNR=140								
ROSC				S			**Sn**	**16 29 58.0**	**0.0**
	comp=Z,164nm,0.3s,baz=72,slow=12,SNR=9.0								
ROSC	**El Rosal**	**1.94**	**207**	*e*P			**Pn**	**16 29 33.0**	**+1.3**
ROSC				*e*S			**Sn**	**16 29 59.6**	**+1.6**
ROSC				*i*				16 30 01.8	
	comp=Z,2μm,0.6s								
ROSC	**El Rosal**	**1.94**	**207**	Pn			**Pn**	**16 29 32.7**	**+1.1**
CHIC	**Chingaza**	**1.96**	**189**	*e*P			**Pn**	**16 29 32.5**	**+0.6**
CHIC				*e*S			**Sn**	**16 29 58.7**	**+0.3**
CHIC				*i*				16 30 02.3	
	comp=Z,475nm,0.4s								
HELC	**Santa Helena**	**2.12**	**260**	*e*P			**Pn**	**16 29 33.6**	**-0.2**
HELC				*e*S			**Sn**	**16 30 01.9**	**+0.1**
HELC				*i*				16 30 05.1	
	comp=Z,879nm,0.2s								
SMLC	**San Martn de**	**2.30**	**344**	*e*P			**Pn**	**16 29 35.4**	**-0.1**
SMLC				*e*S			**Sn**	**16 30 05.5**	**+0.4**
SMLC				*i*				16 30 09.8	
	comp=Z,974nm,0.1s								
UREC	**San Jos de Ur**	**2.39**	**299**	*e*P			**Pn**	**16 29 35.6**	**-1.1**
UREC				*e*S			**Sn**	**16 30 03.8**	**-3.3**
UREC				*i*				16 30 06.5	
	comp=Z,1μm,0.2s								
VILC	**Villavicencio,**	**2.46**	**186**	*i* P			**Pn**	**16 29 38.2**	**+0.5**
VILC				*e*S			**Sn**	**16 30 09.1**	**+0.2**
VILC				*i*				16 30 14.1	
	comp=Z,913nm,0.3s								
RREF	**El

comp=Z,3.4nm,0.3s,baz=284,slow=2.1,SNR=20
PCRV S **Sn** **16 32 49.6 -4.2**
comp=Z,0.3nm,0.3s,baz=343,slow=19,SNR=1.1
PLCV Puerto La Cruz 9.44 67 **Pn** **16 31 11.1 +1.1**
PLCV **Sn** **16 32 49.6 -5.1**
ESPN Las Esperanzas 12.09 298 Pn **P** **16 31 50.8 -0.8**
BANI BANI 12.12 14 Pn **Pn** **16 31 46.7 +1.4**
MTDJ Mount Denham 12.25 341 Pn **P** **16 31 51.8 -1.7**
SDDR Presa de Saban 12.51 9 Pn **Pn** **16 31 52.1 +1.7**
DR12 Loma Pena Alta 12.76 18 Pn **Pn** **16 31 53.8 +0.1**
CDVI St. Croix 13.96 37 Pn **Pn** **16 32 09.0 +0.1**
PTGA Pitinga 15.27 118 P **P** **16 32 26.2 -0.8**
comp=Z,0.6nm,0.3s,baz=306,slow=17,SNR=4.2
PTGA S **Sn** **16 35 09.5 -5.7**
comp=Z,0.4nm,0.3s,baz=0.0,slow=20,SNR=5.4
PTGA Pitinga 15.27 118 IAmb IAmb 16 32 30.3
comp=Z,11nm,1.4s
SAML Samuel 18.50 146 **P** **16 33 01.4 -1.1**
PB12 IPOC Station P 25.22 173 P **P** **16 34 09.6 -0.3**
PB12 IAmb IAmb 16 34 17.8
comp=Z,7.3nm,0.7s
GO02 Mina Guanaco 31.77 173 P **P** **16 35 06.4 -2.0**
U38A Gravette 35.37 330 P **P** **16 35 41.0 +1.9**
U38A IAmb IAmb 16 35 44.0
comp=Z,11nm,1.2s
TXAR Lajitas Array 36.40 312 P **P** **16 35 51.0 +2.9**
comp=Z,0.3nm,0.8s,baz=131,slow=9.7,SNR=2.2
TXAR PcP **PcP** **16 38 11.2 +1.8**
comp=Z,0.3nm,0.5s,baz=138,slow=5.6,SNR=5.8
YKA Yellowknife Ar 63.39 340 P **P** **16 39 11.7 +0.7**
comp=Z,2.7nm,0.5s,baz=134,slow=6.9,SNR=7.8
TORD Torodi Ar. Bea 74.09 78 P **P** **16 40 17.6 -0.6**
comp=Z,0.2nm,0.4s,baz=278,slow=5.1,SNR=1.4
ILAR Eielson Array 77.05 335 P **P** **16 40 34.2 -0.1**
comp=Z,0.4nm,0.7s,baz=123,slow=5.1,SNR=4.4
NB2 NORSAR Subarra 81.69 29 P **P** **16 41 00.6 +1.2**
comp=Z,1.3nm,0.6s,baz=268,slow=5.3
NOA NORSAR Array B 81.69 29 P **P** **16 41 00.9 +1.5**
comp=Z,1.7nm,0.6s,baz=268,slow=5.3,SNR=8.7
ARCES ARCESS Array B 87.00 20 P **P** **16 41 26.8 +0.7**
comp=Z,1.3nm,0.7s,baz=276,slow=4.2,SNR=12
FINES FINESS Array B 88.80 28 P **P** **16 41 35.5 +0.9**
comp=Z,1.0nm,0.6s,baz=252,slow=3.8,SNR=8.0
MKAR Makanchi Array 122.65 20 PKP **PKPdf** **16 47 36.1 -0.1**
comp=Z,0.5nm,0.5s,baz=296,slow=2.9,SNR=7.4
ASAR Alice Springs 148.72 234 PKP **PKPdf** **16 48 24.7 +0.1**
comp=Z,1.5nm,0.6s,baz=117,slow=3.7,SNR=13
ASAR PKPbc **PKPbc** **16 48 27.9 -0.7**
comp=Z,1.6nm,0.5s,baz=117,slow=3.7,SNR=52
WRA Warramunga Arr 149.95 241 PKP **PKPdf** **16 48 26.1 -0.5**
comp=Z,2.8nm,0.8s,baz=108,slow=2.3,SNR=5.0
WRA PKPbc **PKPbc** **16 48 31.0 -0.6**
comp=Z,2.3nm,0.6s,baz=109,slow=2.5,SNR=11
CMAR Chiang Mai Arr 154.01 17 PKP **PKPdf** **16 48 33.0 +0.3**
comp=Z,0.3nm,0.5s,baz=319,slow=2.4,SNR=2.3
CMAR PKPbc **PKiKP** **16 48 41.5 +0.6**
comp=Z,0.7nm,0.6s,baz=322,slow=3.4,SNR=6.8
CMAR PKPab **PKPab** **16 48 54.9 +0.3**
comp=Z,0.4nm,0.5s,baz=336,slow=5.1,SNR=3.3

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*IDC **11** 16:47:21.2±3.3, 7.°02S×155.°02E, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.5/27, mbtmp3.7/3, ML3.2/1, Error ellipse: s-maj=68.8km s-min=40.7km az=94.0*
*NEIC **11** 16:47:24.6±0.7, 7.°4S±0.°1×155.°5E±0.°1, h35km±2km, mb4.4/2, Error ellipse: s-maj=29.6km s-min=8.9km az=323.0*
ISC 11 16:47:29.6±2.8, 7.°1S±0.°1×154.°3E±0.°4, h10km, n7, σ1§25/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.55**	**321**	Pn	**Pn**	**16 48 24.6**	**-0.3**
	1.5nm,0.3s,baz=138,slow=2.1,SNR=11						
KRVT				Sn	**Sn**	**16 49 08.3**	**+1.5**
	3.0nm,0.3s,baz=94,slow=13,SNR=1.8						
RABL	**Rabaul**	**3.56**	**324**	Pn	**Pb**	**16 48 31.6**	**-1.1**
WB0	**Warramunga Arr**	**23.02**	**235**	P	**P**	**16 52 35.2**	**+0.2**
WB0				IAmb	IAmb	16 53 16.4	
	comp=Z,32nm,2.0s						
WB2	**Warramunga Arr**	**23.14**	**235**	P	**P**	**16 52 36.8**	**+0.5**
WB2				IAmb	IAmb	16 52 38.7	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**23.15**	**235**	P	**P**	**16 52 36.5**	**0.0**
	comp=Z,2.4nm,0.9s,baz=60,slow=9.8,SNR=6.2						
ASAR	**Alice Springs**	**25.55**	**229**	P	**P**	**16 52 57.5**	**-1.5**
	comp=Z,1.0nm,0.8s,baz=59,slow=9.1,SNR=10						
TORD	**Torodi Ar. Bea**	**152.33**	**285**	PKPbc	**PKPdf**	**17 07 21.6**	**+1.4**
	comp=Z,0.8nm,0.9s,baz=66,slow=1.7,SNR=3.5						

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*NEIC **11** 17:06:26.8±2.8, 17.°30N±0.°02×101.°52W±0.°03, h24km±11km, Error ellipse: s-maj=5.4km s-min=1.3km az=57.0*
*MEX **11** 17:06:29.5±0.8, 17.°33N×101.°49W, h5km, MD4.1*
ISC 11 17:06:27.5±1.2, 17.°39N±0.°05×101.°46W±0.°05, h26km±8km, n26, σ1§44/47, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.21**	**358**	*eP*	**Pn**	**17 06 34.1**	**-1.0**
ZIIG				*eS*	**Sb**	**17 06 38.6**	**+1.1**
ZIIG	**Zihuatanejo**	**0.21**	**358**		**Pn**	**17 06 34.1**	**-1.0**
ZIIG					**Sb**	**17 06 38.6**	**+1.1**
UON	**La Union**	**0.67**	**329**	*eP*	**Pn**	**17 06 42.1**	**+0.8**
UON				*eS*	**Sn**	**17 06 52.9**	**+1.9**
CAIG	**El Cayaco**	**1.19**	**107**	*i* P	**Pn**	**17 06 47.6**	**-0.8**
CAIG				*eS*	**Sn**	**17 07 04.1**	**+0.3**
CAIG	**El Cayaco**	**1.19**	**107**		**Pn**	**17 06 48.3**	**-0.1**
CAIG					**Sn**	**17 07 04.1**	**+0.3**
ARIG	**Puente Sto Nin**	**1.38**	**50**	*eP*	**Pb**	**17 06 51.9**	**-0.8**
ARIG				*eS*	**Sb**	**17 07 09.7**	**-0.2**
ARIG	**Puente Sto Nin**	**1.38**	**50**		**Pb**	**17 06 51.9**	**-0.8**
ARIG					**Sb**	**17 07 09.7**	**-0.2**
ACP2	**Acapulco**	**1.59**	**109**	*eP*	**Pb**	**17 06 55.8**	**-0.5**
ACP2				*eS*	**Sb**	**17 07 16.0**	**+0.1**
ACP2	**Acapulco**	**1.59**	**109**		**Pb**	**17 06 55.8**	**-0.5**
ACP2					**Sb**	**17 07 16.0**	**+0.1**
MEIG	**Mezcala**	**1.83**	**73**	*eP*	**Pb**	**17 06 59.3**	**-1.1**
MEIG				*eS*	**Sb**	**17 07 22.0**	**-1.0**
MEIG	**Mezcala**	**1.83**	**73**		**Pb**	**17 06 59.3**	**-1.1**
MEIG					**Sb**	**17 07 22.0**	**-1.0**
PLIG	**Platanillo**	**2.11**	**62**	*eP*	**Pb**	**17 07 03.6**	**-1.5**
PLIG				*i* S	**Sb**	**17 07 29.3**	**-1.7**
PLIG	**Platanillo**	**2.11**	**62**		**Pb**	**17 07 04.3**	**-0.8**
PLIG					**Sb**	**17 07 32.0**	**+1.0**
MOIG	**Morelia**	**2.29**	**6**	*eP*	**Pb**	**17 07 06.9**	**-1.4**
MOIG				*i* S	**Sb**	**17 07 35.6**	**-0.6**
MOIG	**Morelia**	**2.29**	**6**		**Pb**	**17 07 07.6**	**-0.7**
MOIG					**Sb**	**17 07 38.0**	**+1.8**
YAIG	**Yautepec**	**2.70**	**57**	*eP*	**Pn**	**17 07 11.8**	**+2.3**
YAIG				*eS*	**Sb**	**17 07 45.8**	**-2.3**
YAIG	**Yautepec**	**2.70**	**57**		**Pb**	**17 07 13.2**	**-2.1**
YAIG					**Sb**	**17 07 49.2**	**+1.1**
TLIG	**Tlapa**	**2.76**	**86**	*eP*	**Pn**	**17 07 12.2**	**+1.9**
TLIG				*i* S	**Sb**	**17 07 46.9**	**-3.0**
TLIG	**Tlapa**	**2.76**	**86**		**Pb**	**17 07 15.2**	**-1.2**
TLIG					**Sb**	**17 07 52.0**	**+2.1**
PNIG	**Pinotepa**	**3.34**	**107**	*eP*	**Pn**	**17 07 19.0**	**+0.8**
PNIG				*eS*	**Sn**	**17 07 59.1**	**+2.1**
PNIG	**Pinotepa**	**3.34**	**107**		**Pn**	**17 07 18.9**	**+0.7**
HLIG	**Huajuapan de L**	**3.51**	**82**	*eP*	**Pn**	**17 07 22.9**	**+2.2**
HLIG				*i* S	**Sn**	**17 08 05.1**	**+3.6**
SRIG	**Santa Rosalia**	**14.03**	**317**	Pn	**Pn**	**17 09 43.6**	**-1.1**
TGUH	**Tegucigalpa,Un**	**14.05**	**102**	Pn	**Pn**	**17 09 44.4**	**-0.8**
ABTX	**Abilene, Hawle**	**15.25**	**6**		**P**	**17 10 06.3**	**+0.4**
ABTX				IAmb	IAmb	17 10 44.3	
	comp=Z,9.6nm,1.1s						
ETX02	**Prairie Street**	**15.80**	**23**	P	**P**	**17 10 12.3**	**+0.4**

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*NEIC **11** 17:11:39.6±1.6, 12.°5N±0.°1×143.°1E±0.°1, h117km±9km, mb4.1/13, Error ellipse: s-maj=17.8km s-min=14.4km az=108.0*
*IDC **11** 17:11:40.3±11.0, 12.°50N×143.°12E, h124km±116km, mb3.4/11, mb1 3.5/11, mb1mx3.3/41, mbtmp3.8/11, Error ellipse: s-maj=37.8km s-min=14.2km az=85.0*
ISC 11 17:11:38.1±0.6, 12.°45N±0.°09×143.°05E±0.°09, h100km, n25, σ1§09/23, mb3.9/18, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.11**	**57**	Pn	**Pn**	**17 12 11.8**	**-0.2**
GUMO				Sn	**Sn**	**17 12 40.5**	**+2.5**
PATS	**Pohnpei**	**16.05**	**109**	Pn	**Pn**	**17 15 15.7**	**-2.4**
INU	**Inuyama**	**23.44**	**348**	P	**P**	**17 16 37.9**	**-0.6**
INU				IAmb	IAmb	17 16 39.8	
	comp=Z,5.1nm,1.0s						
SSLB	**Suanglung**	**23.79**	**301**	P	**P**	**17 16 42.0**	**+0.2**
SSLB				IAmb	IAmb	17 16 43.2	
	comp=Z,9.4nm,0.6s						
TPUB	**Ta-pu**	**23.87**	**300**	P	**P**	**17 16 43.3**	**+0.8**
TPUB				IAmb	IAmb	17 17 02.6	
	comp=Z,7.3nm,0.9s						
MJAR	**Matsushiro Arr**	**24.38**	**351**	P	**P**	**17 16 46.3**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=97,slow=15,SNR=4.4						
MAJO	**Matsushiro**	**24.38**	**351**	P	**P**	**17 16 48.3**	**+1.3**
MJB9	**Matsu-Tunnel**	**24.38**	**351**	P	**P**	**17 16 48.4**	**+1.4**
KNRA	**Kununurra**	**31.32**	**207**	P	P	17 17 46.4	-2.7
KNRA				IAmb	IAmb	17 17 48.6	
	comp=Z,2.6nm,0.9s						
CTAO	**Charters Tower**	**32.49**	**174**	P	**P**	**17 18 00.5**	**+1.2**
WB0	**Warramunga Arr**	**33.13**	**195**	P	**P**	**17 18 05.5**	**+0.6**
WB0				IAmb	IAmb	17 18 11.3	
	comp=Z,2.8nm,0.9s						
WR0	**Warramunga Arr**	**33.28**	**195**	P	**P**	**17 18 07.0**	**+0.8**
WR0				IAmb	IAmb	17 18 08.4	
	comp=Z,6.8nm,1.1s						
WB2	**Warramunga Arr**	**33.31**	**195**	P	**P**	**17 18 07.3**	**+0.8**
WB2				IAmb	IAmb	17 18 08.0	
	comp=Z,1.9nm,0.9s						
WRA	**Warramunga Arr**	**33.31**	**195**	P	**P**	**17 18 06.8**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=16,slow=9.6,SNR=6.2						
ASAR	**Alice Springs**	**36.99**	**194**	P	**P**	**17 18 39.2**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=19,slow=12,SNR=12						
KLR	**Kul'dur**	**37.84**	**348**	P	**P**	**17 18 45.3**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=132,slow=12,SNR=4.0						
CMAR	**Chiang Mai Arr**	**42.84**	**284**	P	**P**	**17 19 26.6**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=94,slow=6.0,SNR=7.2						
STKA	**Stephens Creek**	**44.10**	**182**	P	**P**	**17 19 35.9**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=2.2,slow=9.1,SNR=6.8						
STKA	**Stephens Creek**	**44.10**	**182**	IAmb	IAmb	17 19 37.8	
	comp=Z,0.3nm,0.5s						
SONM	**Songino Array**	**46.66**	**326**	P	**P**	**17 19 56.5**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=150,slow=8.5,SNR=3.4						
YAK	**Yakutsk**	**50.43**	**352**	P	**P**	**17 20 24.2**	**-0.9**
	comp=Z,2.3nm,0.6s,baz=76,slow=1.1						
YAK	**Yakutsk**	**50.43**	**352**	IAmb	IAmb	17 20 26.4	
	comp=Z,3.9nm,0.7s						
MKAR	**Makanchi Array**	**61.08**	**317**	P	**P**	**17 21 41.7**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=98,slow=7.6,SNR=3.9						
ZALV	**Zalesovo Beam**	**61.52**	**325**	P	**P**	**17 21 43.8**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=119,slow=7.2,SNR=6.2						
YKA	**Yellowknife Ar**	**84.68**	**27**	P	**P**	**17 23 59.7**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=286,slow=4.0,SNR=2.3						

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*NIED **11** 17:20:00, 38.°30N×141.°70E, h53km, Mw3.8 Best double couple: M0:5.92000×10^14 NP1:φ,δ,λ 17.00000°, 68.00000°, 92.00000°. NP2:φ,δ,λ 191.00000°, 22.00000°, 4.00000°.*
*IDC **11** 17:20:34.3±1.8, 38.°35N×141.°78E, h62km±16km, mb3.4/13, mb1 3.6/18, mb1mx3.4/59, mbtmp3.7/18, MS2.7/2, Ms1 2.7/2, ms1mx2.3/35, Error ellipse: s-maj=21.5km s-min=11.6km az=96.0*
*JMA **11** 17:20:34.3, 38.°36N×141.°67E, h53km±1km, M3.8*
JMA Felt II J1.
ISC 11 17:20:33.4±0.9, 38.°35N±0.°04×141.°79E±0.°07, h51km±7km, n41, σ1§48/50, mb3.8/13, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakiboku**	**0.26**	**262**	P	**Pn**	**17 20 42.9**	**+0.6**
JIKH				S	**Sn**	**17 20 48.8**	**+0.1**
JIO	**Ouri**	**0.36**	**287**	P	**Pn**	**17 20 43.6**	**+0.3**
JIO				S	**Sn**	**17 20 49.8**	**-0.5**
JKMT	**Kesennumamotoy**	**0.52**	**332**	P	**Pn**	**17 20 45.5**	**+0.5**
JKMT				S	**Sn**	**17 20 53.2**	**-0.2**
JOFO	**Osakifurukawao**	**0.74**	**290**	P	**Pn**	**17 20 47.7**	**0.0**
JOFO				*eS*	**Sn**	**17 20 57.8**	**-0.2**
OFUJ	**Ofunato**	**0.74**	**353**	P	**Pn**	**17 20 48.3**	**+0.6**
OFUJ				S	**Sn**	**17 20 58.2**	**+0.1**
JMK	**Ichinoseki**	**0.75**	**324**	P	**Pn**	**17 20 48.3**	**+0.4**
JMK				S	**Sn**	**17 20 58.0**	**-0.4**
JOU	**Okura**	**0.89**	**271**	P	**Pn**	**17 20 49.4**	**-0.3**
JOU				S	**Sn**	**17 21 00.6**	**-1.0**
JMM	**Marumori**	**0.92**	**239**	P	**Pn**	**17 20 49.7**	**-0.4**
JMM				S	**Sn**	**17 21 01.0**	**-1.4**
JOM	**Ohasama**	**1.19**	**341**	P	**Pn**	**17 20 54.2**	**+0.5**
JOM				S	**Sn**	**17 21 09.5**	**+0.7**
JFK	**Kawauchi**	**1.22**	**217**	P	**Pn**	**17 20 54.3**	**+0.1**
JFK				S	**Sn**	**17 21 08.7**	**-0.9**
JYK	**Kaneyama**	**1.26**	**297**	P	**Pn**	**17 20 54.5**	**-0.2**
JYS	**Shirataka**	**1.36**	**265**	P	**Pn**	**17 20 56.0**	**-0.1**
JYS				S	**Sn**	**17 21 12.4**	**-0.7**
JRG	**Rokugo**	**1.38**	**320**	P	**Pn**	**17 20 56.8**	**+0.5**
JFT	**Otama**	**1.42**	**235**	P	**Pn**	**17 20 57.0**	**+0.1**
JFT				S	**Sn**	**17 21 13.9**	**-0.5**
MJAR	**Matsushiro Arr**	**3.37**	**239**	P	**Pn**	**17 21 25.2**	**+1.6**
	1.1nm,0.3s,baz=38,slow=14,SNR=94						
MJAR				S	**Sn**	**17 22 09.8**	**+7.4**
	0.4nm,0.3s,baz=14,slow=16,SNR=4.6						
MJAR				LR	LR	17 23 06.2	
	comp=Z,75nm,20.3s,baz=35,slow=45						
MAT	**Matsushiro**	**3.38**	**239**	P	**Pn**	**17 21 25.1**	**+1.5**
MAT				S	**Sn**	**17 22 06.6**	**+4.2**
JHJ	**Hachijo jima 2**	**5.47**	**198**	P	**Pn**	**17 21 52.5**	**+0.1**
	6.7nm,0.3s,baz=149,slow=23,SNR=8.3						
JHJ				S	**Sn**	**17 22 52.0**	**-1.9**
	13nm,0.3s,baz=60,slow=20,SNR=2.5						
ASAJ	**Asahikawa**	**5.79**	**6**	P	**Pn**	**17 21 57.1**	**+0.3**
	0.8nm,0.3s,baz=234,slow=11,SNR=10						
ASAJ				S	**Sn**	**17 23 02.7**	**+0.9**
	0.8nm,0.3s,baz=270,slow=19,SNR=1.8						
USRK	**Ussuriysk Ar.**	**9.41**	**311**	P	**Pn**	**17 22 47.2**	**+0.9**
	baz=127,slow=14,SNR=9.9						
JNU	**Nakatsue**	**10.29**	**243**	LR	LR	17 27 25.9	
	comp=Z,57nm,18.4s,baz=22,slow=40						
KSRS	**Korea Array**	**11.00**	**270**	P	**Pn**	**17 23 10.6**	**+2.6**
	0.4nm,0.3s,baz=79,slow=14,SNR=6.9						
JCJ	**Chichijima**	**11.23**	**178**	P	**Pn**	**17 23 11.3**	**+0.1**
	2.4nm,0.3s,baz=294,slow=20,SNR=1.4						
SONM	**Songino Array**	**27.32**	**302**	P	**P**	**17 26 13.3**	**-0.2**
	0.3nm,0.5s,baz=101,slow=6.0,SNR=2.1						
H11N2	**WAKE ISLAND Hy**	**28.59**	**123**	T	T	17 56 43.0	
	baz=316,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.60**	**123**	T	T	17 56 51.5	
	baz=316,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.61**	**123**	T	T	17 56 40.9	
	baz=316,slow=75						
H11S1	**WAKE ISLAND Hy**	**29.35**	**125**	T	T	17 57 38.9	
	baz=318,slow=76						
H11S3	**WAKE ISLAND Hy**	**29.35**	**125**	T	T	17 57 40.2	
	baz=318,slow=76						
H11S2	**WAKE ISLAND Hy**	**29.36**	**125**	T	T	17 57 40.0	
	baz=318,slow=76						
ZALV	**Zalesovo Beam**	**41.26**	**311**	P	**P**	**17 28 12.9**	**-0.4**
	1.6nm,0.4s,baz=81,slow=7.1,SNR=8.7						
CMAR	**Chiang Mai Arr**	**42.13**	**254**	P	**P**	**17 28 19.4**	**-1.4**
	0.2nm,0.5s,baz=48,slow=8.7,SNR=2.9						
MKAR	**Makanchi Array**	**43.69**	**301**	P	**P**	**17 28 32.6**	**-0.5**
	2.4nm,0.8s,baz=86,slow=10.0,SNR=16						
ILAR	**Eielson Array**	**48.23**	**33**	P	**P**	**17 29 08.9**	**+0.3**
	0.3nm,0.8s,baz=265,slow=7.2,SNR=1.9						
WRA	**Warramunga Arr**	**58.40**	**188**	P	**P**	**17 30 23.1**	**-0.6**
	0.6nm,0.4s,baz=4.9,slow=7.1,SNR=25						
ASAR	**Alice Springs**	**62.13**	**188**	P	**P**	**17 30 49.1**	**0.0**
	0.7nm,0.8s,baz=9.5,slow=5.0,SNR=10						
YKA	**Yellowknife Ar**	**62.52**	**31**	P	**P**	**17 30 51.5**	**+0.2**
	0.1nm,0.7s,baz=302,slow=5.9,SNR=3.6						
ARCES	**ARCESS Array B**	**62.87**	**339**	P	**P**	**17 30 53.6**	**-0.1**
	0.6nm,0.8s,baz=50,slow=8.4,SNR=4.4						
FINES	**FINESS Array B**	**67.79**	**332**	P	**P**	**17 31 25.0**	**-0.5**
	0.8nm,0.7s,baz=80,slow=8.6,SNR=3.6						
HFS	**Hagfors**	**73.02**	**336**	P	**P**	**17 31 57.2**	**-0.2**
	1.2nm,0.8s,baz=85,slow=6.3,SNR=5.3						
NOA	**NORSAR Array B**	**73.09**	**337**	P	**P**	**17 31 57.6**	**-0.2**
	0.3nm,0.7s,baz=39,slow=5.9,SNR=3.4						
AKASG	**Malin Array Be**	**73.44**	**322**	P	**P**	**17 31 59.2**	**-0.8**
	0.4nm,0.3s,baz=45,slow=6.1,SNR=4.9						

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*NNC **11** 17:24:02.4±4.1, 40.°82N×71.°33E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=32.6km s-min=15.1km az=4.0*
*SOME **11** 17:24:04.3, 40.°90N×71.°50E, h5km*
*KRNET **11** 17:24:05.9±0.1, 40.°94N×71.°56E, h2km, mb2.5*

ISC 11 17:24:05.2±1.6, 40.°94N±0.°07×71.°59E±0.°03, h15km±14km, n19, σ1§61/31, 10C-12D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARK	**Arkit**	**0.90**	**18**	↓*iP*	**Pg**	**17 24 22.9**	**+0.3**
	baz=21						
ARK				↓*iS*	**Sg**	**17 24 35.1**	**+0.6**
	baz=21						
BTK	**Batken**	**1.06**	**214**	↑*iP*	**Pn**	**17 24 26.0**	**+0.4**
	baz=13						
BTK				↑*iS*	**Sn**	**17 24 40.2**	**0.0**
	baz=13						
ARSB	**Arslanbob**	**1.12**	**70**	↓*iP*	**Pg**	**17 24 27.7**	**+0.9**
	baz=70						
ARSB				↓*iS*	**Sg**	**17 24 42.9**	**+1.4**
	baz=70						
IUG	**Iuzhnay**	**1.68**	**316**	*eP*	**Pg**	**17 24 36.3**	**-1.1**
	7.3nm,0.3s						
IUG				*eS*	**Sg**	**17 24 58.8**	**-0.4**
	45nm,0.4s						
AML	**Almayashu**	**1.98**	**52**	↓*iP*	**Pb**	**17 24 42.2**	**+1.1**
	baz=53						
AML				↓*iS*	**Sg**	**17 25 09.3**	**+0.4**
	baz=53						
MRKS	**Merke**	**2.18**	**34**	*eP*	**Pg**	**17 24 46.4**	**-0.6**
	6.8nm,0.2s						
MRKS				*eS*	**Sg**	**17 25 15.6**	**+0.4**
	18nm,0.3s						
MRKS	**Merke**	**2.18**	**34**	Pg	**Pg**	**17 24 46.4**	**-0.6**
	6.4nm,0.3s						
MRKS				Lg	Lg	17 25 15.6	
	18nm,0.5s						
KK31	**Karatay Array**	**2.30**	**340**	⇑Pg	**Pb**	**17 24 47.0**	**+0.5**
	0.7nm,0.3s,baz=163,slow=14,SNR=4.6						
KK31				⇑Lg	Lg	17 25 16.9	
	2.4nm,0.3s,baz=171,slow=31,SNR=12						
EKS2	**Erkin-Say**	**2.37**	**43**	↓*iP*	**Pb**	**17 24 47.4**	**-0.3**
	baz=43						
EKS2				↓*iS*	**Sb**	**17 25 18.1**	**+1.3**
	baz=43						
UCH	**Uchtor**	**2.54**	**59**	↓*iP*	**Pb**	**17 24 50.1**	**-0.7**
	baz=59						
UCH				↓*iS*	**Sb**	**17 25 22.7**	**+0.7**
	baz=59						
AAK	**Ala-Archa**	**2.75**	**51**	⇑*iP*	**Pb**	**17 24 52.8**	**-1.4**
	baz=51						
AAK				⇑*iS*	**Sb**	**17 25 27.4**	**-0.5**
	baz=51						
AAK	**Ala-Archa**	**2.75**	**51**	⇓Pg	**Pb**	**17 24 56.7**	**+2.5**
	1.3nm,0.4s						
AAK				⇑Lg	Lg	17 25 37.7	
	18nm,1.3s						
KZA	**Kyzart**	**2.98**	**66**	⇑*iP*	**Pb**	**17 24 56.1**	**-2.0**
	baz=67						
KZA				⇑*iS*	**Sb**	**17 25 33.4**	**-1.0**
	baz=67						
TKM2	**Tokmak 2**	**3.58**	**55**	⇑Pg	**Pg**	**17 25 12.7**	**-1.2**
	12nm,1.4s						
TKM2				⇓Lg	Lg	17 26 04.4	
	17nm,1.4s						
DGS	**Degeres**	**3.87**	**52**	*eP*	**Pb**	**17 25 16.7**	**+3.5**
	3.2nm,0.8s						
DGS				*eS*	**Sg**	**17 26 07.4**	**-2.0**
	4.6nm,0.6s						
DGS	**Degeres**	**3.87**	**52**	Pg	**Pb**	**17 25 16.7**	**+3.5**
	3.2nm,0.8s						
DGS				Lg	Lg	17 26 07.4	
	4.6nm,0.6s						
KST	**Kastek**	**3.88**	**56**	Pg	**Pg**	**17 25 17.6**	**-1.9**
	1.8nm,0.7s						
KST				Lg	Lg	17 26 09.1	
	3.2nm,0.4s						
KRBS	**Karabastau**	**4.09**	**46**	*eP*	**Pg**	**17 25 21.3**	**-2.3**
	0.9nm,0.5s						
KRBS				*eS*	**Sg**	**17 26 15.0**	**-1.6**
	2.3nm,0.9s						
KRBS	**Karabastau**	**4.09**	**46**	Pg	**Pg**	**17 25 21.3**	**-2.3**
	0.9nm,0.5s						
KRBS				Lg	Lg	17 26 15.0	
	2.3nm,0.9s						

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*IDC **11** 17:26:04.7±3.0, 30.°50S×177.°57W, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/32, mbtmp3.7/4, ML2.8/1, Error ellipse: s-maj=65.7km s-min=28.0km az=110.0*
*NEIC **11** 17:26:06.2±2.3, 30.°55S±0.°04×177.°5W±0.°2, h41km±15km, mb4.4/11, Error ellipse: s-maj=22.4km s-min=5.1km az=90.0*
ISC 11 17:26:06.1±1.6, 30.°55S±0.°07×177.°4W±0.°2, h33km, n18, σ1§88/20, mb4.4/9, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.36**	**342**	Pn	**Pn**	**17 26 29.6**	**+0.8**
	58nm,0.3s,baz=270,slow=20,SNR=1.5						
RAO				Sn	**Sn**	**17 26 44.3**	**-1.3**
	148nm,0.3s,baz=155,slow=22,SNR=5.9						
OUZ	**Omahuta**	**8.86**	**236**	Pn	**Pn**	**17 28 11.5**	**-0.3**
URZ	**Urewera**	**8.91**	**209**	Pn	**Pn**	**17 28 13.5**	**+1.1**
	0.1nm,0.3

ANX				S	Sg	17 34 14.9	-0.1	
ANX				AML	AML	17 34 15.9		
	comp=E,57663µm,0.4s							
ANX				AML	AML	17 34 16.2		
SERG	**Sergoula**	**0.29**	**100**	P	**Pg**	**17 34 12.6**	**-0.3**	
SERG	**Sergoula**	**0.29**	**100**	P	**Pg**	**17 34 12.7**	**-0.3**	
SERG				S	**Sg**	**17 34 17.1**	**+0.1**	
SERG				AML	AML	17 34 21.9		
	comp=N,24424µm,0.4s							
SERG				AML	AML	17 34 23.5		
	comp=E,19788µm,0.5s							
TRIZ	**Trizonia**	**0.32**	**108**	P	**Pg**	**17 34 13.1**	**-0.3**	
TRIZ	**Trizonia**	**0.32**	**108**	P	**Pg**	**17 34 13.1**	**-0.3**	
TRIZ				S	**Sg**	**17 34 17.2**	**-0.5**	
LAKA	**Lakka**	**0.32**	**135**	P	**Pg**	**17 34 13.2**	**-0.3**	
LAKA				S	**Sg**	**17 34 18.1**	**+0.3**	
	comp=E,5µm,0.6s							
LAKA	**Lakka**	**0.32**	**135**	P	**Pg**	**17 34 13.2**	**-0.3**	
LAKA				S	**Sg**	**17 34 18.3**	**+0.5**	
LAKA				AML	AML	17 34 18.4		
	comp=N,9915µm,0.4s							
LAKA				AML	AML	17 34 22.3		
	comp=E,10626µm,0.7s							
KALE	**Kalithea**	**0.36**	**102**	P	**Pg**	**17 34 13.8**	**-0.4**	
KALE	**Kalithea**	**0.36**	**102**	P	**Pg**	**17 34 13.7**	**-0.6**	
KALE				S	**Sg**	**17 34 18.8**	**-0.3**	
KALE				AML	AML	17 34 22.9		
	comp=N,13802µm,0.3s							
KALE				AML	AML	17 34 25.2		
	comp=E,7859µm,0.5s							
ALIK	**Aliki, Aigiali**	**0.39**	**121**	P	**Pg**	**17 34 14.8**	**+0.1**	
PDO	**Prodromos**	**0.42**	**289**	P	**Pg**	**17 34 15.0**	**-0.2**	
PDO				S	**Sb**	**17 34 22.2**	**-0.5**	
RLS	**Riolos of Patr**	**0.44**	**203**	P	**Pg**	**17 34 15.9**	**+0.2**	
RLS				S	**Sb**	**17 34 23.3**	**0.0**	
	comp=E,21µm,0.3s							
RLS	**Riolos of Patr**	**0.44**	**203**	P	**Pg**	**17 34 15.8**	**+0.1**	
RLS				S	**Sg**	**17 34 22.2**	**+0.7**	
RLS				AML	AML	17 34 24.8		
	comp=E,59329µm,0.4s							
RLS				AML	AML	17 34 24.9		
	comp=N,26765µm,0.3s							
EVR	**Evrytania**	**0.46**	**12**	P	**Pg**	**17 34 15.8**	**-0.3**	
EVR				S	**Sb**	**17 34 23.8**	**-0.2**	
	comp=N,7µm,0.4s							
EVR	**Evrytania**	**0.46**	**12**	P	**Pg**	**17 34 15.6**	**-0.5**	
EVR				S	**Sg**	**17 34 22.9**	**+0.7**	
EVR				AML	AML	17 34 26.9		
	comp=E,15279µm,0.3s							
EVR				AML	AML	17 34 27.5		
	comp=N,14592µm,0.5s							
DRO	**Drossia**	**0.51**	**178**	P	**Pg**	**17 34 16.6**	**-0.4**	
DRO	**Drossia**	**0.51**	**178**	P	**Pg**	**17 34 16.7**	**-0.3**	
DRO				S	**Sg**	**17 34 24.6**	**+0.8**	
DRO				AML	AML	17 34 30.6		
	comp=E,17582µm,0.3s							
DRO				AML	AML	17 34 32.5		
	comp=N,19218µm,0.3s							
KLV	**Kalavryta, Ach**	**0.56**	**139**	P	**Pg**	**17 34 17.2**	**-0.7**	
KLV	**Kalavryta, Ach**	**0.56**	**139**	P	**Pg**	**17 34 17.1**	**-0.7**	
KLV				S	**Sg**	**17 34 24.6**	**-0.7**	
KLV				AML	AML	17 34 28.2		
	comp=N,2608µm,0.4s							
KLV				AML	AML	17 34 28.6		
	comp=E,3614µm,0.4s							
DLFA	**Delphi**	**0.63**	**89**	P	**Pg**	**17 34 18.4**	**-0.9**	
MAKR	**Makrakomi, Fth**	**0.65**	**32**	P	**Pg**	**17 34 19.4**	**-0.2**	
MAKR	**Makrakomi, Fth**	**0.65**	**32**	P	**Pg**	**17 34 19.3**	**-0.3**	
MAKR				S	**Sb**	**17 34 28.8**	**-0.5**	
MAKR				AML	AML	17 34 31.2		
	comp=E,21779µm,0.3s							
MAKR				AML	AML	17 34 31.7		
	comp=N,16026µm,0.3s							
VTN	**Vitineika**	**0.68**	**216**	P	**Pb**	**17 34 20.5**	**-0.2**	
VTN	**Vitineika**	**0.68**	**216**	P	**Pb**	**17 34 20.8**	**+0.1**	
MGNA	**Meganis**	**0.73**	**285**	P	**Pg**	**17 34 20.8**	**-0.2**	
MGNA				S	**Sb**	**17 34 32.0**	**+0.5**	
MGNA				AML	AML	17 34 33.5		
	comp=N,5254µm,0.4s							
MGNA				AML	AML	17 34 33.6		
	comp=E,4853µm,0.3s							
KFL	**Anninata**	**0.79**	**244**	P	**Pg**	**17 34 21.8**	**-0.5**	
KFL	**Anninata**	**0.79**	**244**	P	**Pg**	**17 34 22.0**	**-0.3**	
KFL				S	**Sb**	**17 34 34.1**	**+0.6**	
KFL				AML	AML	17 34 38.6		
	comp=E,8688µm,0.3s							
KFL				AML	AML	17 34 39.4		
	comp=N,10679µm,0.6s							
EVGI	**Lefkada island**	**0.82**	**281**	P	**Pg**	**17 34 22.3**	**-0.6**	
EVGI	**Lefkada island**	**0.82**	**281**	P	**Pg**	**17 34 22.3**	**-0.6**	
LKD2	**Lefkada island**	**0.87**	**292**	P	**Pg**	**17 34 23.2**	**-0.6**	
LKD2	**Lefkada island**	**0.87**	**292**	P	**Pg**	**17 34 23.3**	**-0.4**	
LKD2				AML	AML	17 34 44.6		
	comp=N,9826µm,0.5s							
LKD2				AML	AML	17 34 47.4		
	comp=E,8737µm,0.3s							
FSK	**Fiskardo**	**0.88**	**270**	P	**Pg**	**17 34 23.0**	**-1.0**	
FSK	**Fiskardo**	**0.88**	**270**	P	**Pg**	**17 34 23.0**	**-1.0**	
VSK1	**VASILIKIADES**	**0.89**	**267**	P	**Pg**	**17 34 23.0**	**-1.0**	
VLS	**Valsamata**	**0.91**	**252**	P	**Pg**	**17 34 23.4**	**-1.1**	
VLS	**Valsamata**	**0.91**	**252**	P	**Pg**	**17 34 23.5**	**-1.1**	
VLS				S	**Sb**	**17 34 37.5**	**+0.7**	
VLS				AML	AML	17 34 41.7		
	comp=N,4745µm,0.3s							
VLS				AML	AML	17 34 44.9		
	comp=E,3573µm,0.3s							
VLS	**Valsamata**	**0.91**	**252**	P	**Pg**	**17 34 23.4**	**-1.1**	
VLS				S	**Sn**	**17 34 38.8**	**0.0**	
VLS				AML	AML			
	comp=N,1028µm,0.8s							
VLS				AML	AML			
	comp=E,605µm,0.3s							
AMT	**Artemida-Makis**	**0.93**	**179**	P	**Pg**	**17 34 24.6**	**-0.3**	
AMT	**Artemida-Makis**	**0.93**	**179**	P	**Pg**	**17 34 24.7**	**-0.2**	
AMT				AML	AML	17 34 43.0		
	comp=N,10425µm,0.6s							
AMT				AML	AML	17 34 44.4		
	comp=E,6634µm,0.7s							
KEF1	**Kardakata, Kep**	**0.97**	**259**	P	**Pg**	**17 34 24.8**	**-1.0**	
PROD	**Prodromos**	**0.97**	**102**	P	**Pg**	**17 34 24.8**	**-1.0**	
PROD	**Prodromos**	**0.97**	**102**	P	**Pg**	**17 34 24.6**	**-1.2**	
PROD				AML	AML	17 34 42.8		
	comp=E,5806µm,0.8s							
PROD				AML	AML	17 34 44.9		
	comp=N,3716µm,0.7s							
KEF2	**Argostoli. Kep**	**0.99**	**253**	P	**Pg**	**17 34 24.8**	**-1.2**	
ARGA	**Argostoli. Kep**	**0.99**	**254**	P	**Pg**	**17 34 25.0**	**-1.1**	
KEF4	**Livadi, Kephal**	**1.01**	**259**	P	**Pg**	**17 34 25.4**	**-1.1**	
LXRA	**Lixouri, Kepha**	**1.02**	**255**	P	**Pb**	**17 34 25.9**	**-0.7**	
TRIP	**Tripoli**	**1.04**	**154**	P	**Pb**	**17 34 25.8**	**-1.2**	
TRIP	**Tripoli**	**1.04**	**154**	P	**Pb**	**17 34 26.2**	**-0.8**	
TRIP				S	**Sg**	**17 34 40.2**	**-0.4**	
TRIP				AML	AML	17 34 46.1		
	comp=N,3130µm,0.7s							
TRIP				AML	AML	17 34 49.9		
	comp=E,2818µm,0.7s							
LKR	**Lokris**	**1.04**	**79**	P	**Pb**	**17 34 25.5**	**-1.5**	
LKR	**Lokris**	**1.04**	**79**	P	**Pb**	**17 34 25.2**	**-1.8**	
LKR				S	**Sg**	**17 34 39.6**	**-1.0**	
LKR				AML	AML	17 34 44.4		
	comp=N,2109µm,0.3s							
LKR				AML	AML	17 34 48.6		
	comp=E,1576µm,0.5s							
KRI1	**kERI**	**1.06**	**221**	P	**Pb**	**17 34 26.9**	**-0.3**	
KEF3	**Kipouria, Keph**	**1.09**	**256**	P	**Pb**	**17 34 26.7**	**-1.0**	
LOUT	**Loutraki**	**1.12**	**115**	P	**Pb**	**17 34 27.8**	**-0.5**	
LOUT				S	**Sb**	**17 34 42.7**	**-0.1**	
LOUT				AML	AML	17 34 46.7		
	comp=N,1005µm,0.6s							
LOUT				AML	AML	17 34 47.8		
	comp=E,749µm,0.8s							
THL	**Klokotos Trika**	**1.13**	**13**	P	**Pb**	**17 34 27.9**	**-0.5**	
THL	**Klokotos Trika**	**1.13**	**13**	P	**Pn**	**17 34 28.6**	**0.0**	
THL				S	**Sg**	**17 34 43.6**	**+0.3**	
THL				AML	AML	17 34 47.9		
	comp=N,2578µm,0.6s							
THL				AML	AML	17 34 50.8		
	comp=E,2636µm,0.6s							
VLX	**Vlachokerasia**	**1.22**	**153**	P	**Pn**	**17 34 29.1**	**-0.9**	
VLX	**Vlachokerasia**	**1.22**	**153**	P	**Pn**	**17 34 29.5**	**-0.5**	
VLX				S	**Sb**	**17 34 46.1**	**+0.2**	
VLX				AML	AML	17 34 49.5		
	comp=N,3911µm,0.8s							
VLX				AML	AML	17 34 56.5		
	comp=E,5532µm,0.6s							
VIL2	**Platees**	**1.27**	**101**	P	**Pg**	**17 34 31.5**	**+0.2**	
VIL2				S	**Sg**	**17 34 49.2**	**+1.4**	
VIL2				AML	AML	17 34 53.7		
	comp=N,2272µm,0.5s							
VIL2				AML	AML	17 34 59.2		
	comp=E,5403µm,0.6s							
ITM	**Ithomi**	**1.30**	**172**	P	**Pn**	**17 34 30.4**	**-0.6**	
ITM	**Ithomi**	**1.30**	**172**	P	**Pn**	**17 34 30.8**	**-0.2**	
ITM				S	**Sb**	**17 34 47.6**	**-0.4**	
ITM				AML	AML	17 34 59.0		
	comp=E,1902µm,0.8s							
ITM				AML	AML	17 35 00.8		
	comp=N,1825µm,0.7s							
JAN	**Janina**	**1.36**	**332**	P	**Pg**	**17 34 32.7**	**-0.3**	
JAN	**Janina**	**1.36**	**332**	P	**Pg**	**17 34 33.3**	**+0.2**	
JAN				AML	AML	17 34 57.4		
	comp=E,3443µm,1.0s							
JAN				AML	AML	17 34 59.8		
	comp=N,2094µm,0.4s							
NEO	**Neokhori**	**1.46**	**54**	P	**Pb**	**17 34 33.8**	**-0.4**	
NEO				AML	AML	17 34 53.9		
	comp=E,1326µm,0.8s							
NEO				AML	AML	17 34 55.4		
	comp=N,1962µm,0.6s							
XOR	**Xorichti**	**1.48**	**52**	P	**Pn**	**17 34 33.6**	**+0.1**	
XOR				S	**Sg**	**17 34 55.0**	**+0.5**	
XOR				AML	AML	17 34 55.7		
	comp=N,2444µm,0.9s							
XOR				AML	AML	17 34 59.2		
	comp=E,1299µm,0.6s							
IGT	**Igoumenitsa**	**1.50**	**316**	P	**Pb**	**17 34 34.3**	**-0.5**	
IGT	**Igoumenitsa**	**1.50**	**316**	P	**Pb**	**17 34 35.1**	**+0.3**	
KPRO	**Kipourio**	**1.51**	**350**	P	**Pg**	**17 34 35.6**	**-0.4**	
KPRO				S	**Sg**	**17 34 56.0**	**+0.4**	
KPRO				AML	AML	17 35 04.0		
	comp=N,3571µm,0.4s							
KPRO				AML	AML	17 35 08.3		
	comp=E,2319µm,0.5s							
MRKA	**Markates**	**1.51**	**80**	P	**Pn**	**17 34 33.9**	**0.0**	
DID	**Didima**	**1.55**	**128**	P	**Pb**	**17 34 35.3**	**-0.5**	
DID				S	**Sb**	**17 34 55.6**	**+0.2**	
DID				AML	AML	17 34 59.5		
	comp=N,4369µm,0.7s							
DID				AML	AML	17 34 59.8		
	comp=E,2679µm,0.8s							
SKIA	**Skiathos**	**1.56**	**63**	P	**Pn**	**17 34 34.9**	**+0.4**	
SKIA				S	**Sb**	**17 34 55.4**	**0.0**	
SKIA				AML	AML	17 35 03.9		
	comp=N,728µm,0.5s							
SKIA				AML	AML	17 35 04.5		
	comp=E,1295µm,0.6s							
PYL	**PYLOS**	**1.57**	**178**	P	**Pn**	**17 34 34.2**	**-0.5**	
PYL	**PYLOS**	**1.57**	**178**	P	**Pb**	**17 34 35.7**	**-0.3**	
KRND	**KRANIDI**	**1.58**	**133**	P	**Pn**	**17 34 35.3**	**+0.4**	
KRND				S	**Sb**	**17 34 55.9**	**-0.2**	
KRND				AML	AML	17 35 02.4		
	comp=E,2977µm,0.7s							
KRND				AML	AML	17 35 04.4		
	comp=N,3020µm,0.8s							
ATH	**Athens Observa**	**1.67**	**107**	P	**Pn**	**17 34 36.7**	**+0.6**	
ATH				AML	AML	17 35 04.3		
	comp=N,1729µm,1.0s							
ATH				AML	AML	17 35 05.6		
	comp=E,2573µm,0.8s							
ATHU	**Athens Univers**	**1.73**	**106**	P	**Pn**	**17 34 37.3**	**+0.5**	
ATHU				S	**Sn**	**17 34 59.2**	**+0.3**	
ATHU				AML	AML	17 35 06.2		
	comp=E,305µm,0.5s							
ATHU				AML	AML	17 35 08.4		
	comp=N,590µm,0.5s							
LIT	**Litokhoron**	**1.75**	**21**	P	**Pn**	**17 34 38.0**	**+0.8**	
LIT				S	**Sb**	**17 35 00.3**	**-0.7**	
LIT				AML	AML	17 35 08.1		
	comp=N,1448µm,0.5s							
LIT				AML	AML	17 35 10.4		
	comp=E,1405µm,0.6s							
PTL	**Penteli**	**1.76**	**103**	P	**Pn**	**17 34 37.9**	**+0.5**	
VLY	**Voula,Athens**	**1.77**	**110**	P	**Pn**	**17 34 38.0**	**+0.5**	
DION	**Dionisos Attik**	**1.81**	**102**	P	**Pn**	**17 34 38.6**	**+0.6**	
KZN	**Kozani**	**1.84**	**2**	P	**Pb**	**17 34 40.5**	**-0.1**	
AOS	**Alonnisos**	**1.85**	**67**	P	**Pn**	**17 34 38.5**	**-0.1**	
KYMI	**Kymi, Euboea I**	**1.90**	**84**	P	**Pn**	**17 34 39.2**	**-0.1**	
KEK	**Kerkira**	**1.93**	**311**	P	**Pb**	**17 34 41.7**	**-0.4**	
VLI	**Veliai**	**2.01**	**150**	P	**Pn**	**17 34 41.2**	**+0.5**	
PAIG	**Paliouri**	**2.13**	**46**	P	**Pn**	**17 34 42.4**	**0.0**	
KARY	**Karystos**	**2.21**	**100**	P	**Pn**	**17 34 44.2**	**+0.7**	
FNA	**Florina**	**2.33**	**354**	⇓Pd2	**Pn**	**17 34 47.8**	**+2.6**	
HORT	**Hortiatis**	**2.39**	**27**	P	**Pn**	**17 34 47.1**	**+1.0**	
SERI	**Serifos**	**2.57**	**120**	P	**Pn**	**17 34 49.3**	**+0.8**	
OHR	**Ohrid**	**2.73**	**346**	*i* Pn	**Pb**	**17 34 54.0**	**-1.8**	
OHR	**Ohrid**	**2.73**	**346**	*i* Pn	**Pb**	**17 34 54.0**	**-1.8**	
VAY	**Valandovo**	**2.93**	**13**	*i* Pn	**Pn**	**17 34 56.1**	**+2.7**	
VAY				*i* Sn	**Sb**	**17 35 32.8**	**-2.2**	
VAY	**Valandovo**	**2.93**	**13**	*i* Pn	**Pn**	**17 34 56.1**	**+2.7**	
VAY				*i* Sn	**Sb**	**17 35 32.8**	**-2.2**	
SCTE	**Santa Cesarea**	**2.97**	**304**	P	**Pn**	**17 34 55.5**	**+1.6**	
SCTE				S	**Sn**	**17 35 29.0**	**-0.6**	
TIR	**Tirane**	**3.20**	**335**	⇑P	**Pn**	**17 34 58.7**	**+1.6**	
APE	**Apeiranthos**	**3.35**	**113**	P	**Pn**	**17 35 00.0**	**+0.8**	
APE	**Apeiranthos**	**3.35**	**113**	⇓P	**Pn**	**17 35 00.1**	**+0.8**	
SKO	**Skopje**	**3.51**	**357**	*i* Pn	**Pn**	**17 35 02.1**	**+0.7**	
SKO	**Skopje**	**3.51**	**357**	*i* Pn	**Pn**	**17 35 02.1**	**+0.7**	
SANT	**Santorini**	**3.66**	**124**	⇑P	**Pn**	**17 35 04.7**	**+1.3**	
TIP	**Timpagrande**	**3.92**	**282**	⇑P	**Pn**	**17 35 08.3**	**+1.3**	
TIP	**Timpagrande**	**3.92**	**282**	P	**Pn**	**17 35 07.9**	**+0.9**	
TIP				S	**Sn**	**17 35 54.2**	**+1.2**	
TIP				AML	AML			
	comp=E,63µm,0.7s							
TIP				AML	AML			
	comp=N,42µm,0.6s							
TIP	**Timpagrande**	**3.92**	**282**	P	**Pn**	**17 35 07.9**	**+0.9**	
PIPA	**Pietrapaola**	**3.93**	**287**	P	**Pn**	**17 35 08.4**	**+1.2**	
PIPA				S	**Sn**	**17 35 53.9**	**+0.6**	
PIPA				AML	AML			
	comp=E,73µm,0.3s							
PIPA				AML	AML			
	comp=N,63µm,0.4s							
PIPA				AML	AML			
	comp=N,101µm,0.3s							
PIPA				AML	AML			
	comp=E,140µm,0.6s							
ULC	**Ulcinj**	**3.96**	**333**	⇑*i* Pn	**Pn**	**17 35 08.8**	**+1.1**	
ULC				*i* Sn	**Sn**	**17 35 56.1**	**+2.0**	
TAR1	**Taranto**	**3.98**	**303**	*e*Pn	**Pn**	**17 35 09.3**	**+1.5**	
IDI	**Anoyia**	**4.08**	**140**	Pn	**Pn**	**17 35 11.0**	**+1.7**	
	comp=E,1.5nm,0.3s,baz=322,slow=15,SNR=15							
IDI				Sn	**Sn**	**17 35 57.5**	**+0.4**	
	comp=E,2.1nm,0.3s,baz=305,slow=9.5,SNR=4.1							
IDI	**Anoyia**	**4.08**	**140**	⇓P	**Pn**	**17 35 11.6**	**+2.3**	
PLAC	**Placanica**	**4.12**	**271**	P	**Pn**	**17 35 10.7**	**+0.8**	
PLAC				AML	AML			
	comp=E,77µm,0.4s							
PLAC				AML	AML			
	comp=N,76µm,0.5s							
PLAC	**Placanica**	**4.12**	**271**	P	**Pn**	**17 35 10.7**	**+0.8**	
CELI	**Celico**	**4.15**	**285**	P	**Pn**	**17 35 11.5**	**+1.2**	
CELI				AML	AML			
	comp=E,68µm,1.5s							
CELI				AML	AML			
	comp=N,68µm,1.6s							
CELI				AML	AML			
	comp=N,133µm,1.3s							
CELI				AML	AML			
	comp=E,128µm,1.2s							
DRME	**Dracevica, Mon**	**4.18**	**334**	*e*Pn	**Pn**	**17 35 12.4**	**+1.8**	
DRME	**Dracevica, Mon**	**4.18**	**334**	⇑*i* Pn	**Pn**	**17 35 12.1**	**+1.5**	
DRME				*i* Sn	**Sn**	**17 36 01.5**	**+2.1**	
VTS	**Vitosha**	**4.31**	**15**	⇓P	**Pn**	**17 35 14.2**	**+1.7**	
PVY	**Plav**	**4.33**	**343**	⇓*i* Pn	**Pn**	**17 35 14.0**	**+1.2**	
PVY				*i* Sn	**Sn**	**17 36 04.9**	**+1.6**	
CAR1	**CAROLEI**	**4.35**	**282**	P	**Pn**	**17 35 15.4**	**+2.4**	
CAR1				S	**Sn**	**17 36 06.4**	**+2.8**	
CAR1				AML	AML			
	comp=E,143µm,0.3s							
CAR1				AML	AML			
	comp=N,88µm,0.3s							
CAR1				AML	AML			
	comp=N,284µm,0.8s							
CAR1				AML	AML			
	comp=N,174µm,0.4s							
CAR1				AML	AML			
	comp=E,242µm,0.8s							
CAR1				AML	AML			
	comp=E,241µm,0.9s							
PDG	**Podgorica**	**4.37**	**336**	⇑P	**Pn**	**17 35 15.3**	**+2.1**	
PDG	**Podgorica**	**4.37**	**336**	*e*Pn	**Pn**	**17 35 13.6**	**+0.4**	
TTG	**Podgorica**	**4.37**	**336**	⇑*i* Pn	**Pn**	**17 35 14.8**	**+1.6**	
TTG				*i* Sn	**Sn**	**17 36 06.0**	**+1.9**	
BUM	**Brajici-Budva**	**4.38**	**332**	⇑*i* Pn	**Pn**	**17 35 14.8**	**+1.3**	
BUM				*i* Sn	**Sn**	**17 36 06.6**	**+2.1**	
SALB	**San Lorenzo Be**	**4.38**	**290**	P	**Pn**	**17 35 14.8**	**+1.3**	
SALB				S	**Sn**	**17 36 05.4**	**+0.8**	
SALB				AML	AML			
	comp=N,106µm,0.3s							
SALB				AML	AML			
	comp=E,146µm,1.2s							
SG1	**Sgolgore (BA)**	**4.54**	**303**	*e*Pn	**Pn**	**17 35 16.6**	**+1.1**	
SG1				Sn	**Sn**	**17 36 07.8**	**-0.4**	
BAI	**Bari**	**4.55**	**307**	*e*Pn	**Pn**	**17 35 16.7**	**+1.1**	
JOPP	**Joppolo**	**4.55**	**274**	P	**Pn**	**17 35 16.8**	**+1.1**	
JOPP				AML	AML			
	comp=E,105µm,0.5s							
JOPP				AML	AML			
	comp=N,83µm,0.4s							
MIGL	**Miglionico**	**4.58**	**299**	P	**Pn**	**17 35 17.2**	**+1.1**	
MIGL				AML	AML			
	comp=E,154µm,1.3s							
MIGL				AML	AML			
	comp=N,212µm,1.2s							
MIGL				AML	AML			
	comp=E,360µm,1.2s							
MIGL				AML	AML			
	comp=N,380µm,1.1s							
CEME	**Cevo**	**4.59**	**333**	⇓*i* Pn	**Pn**	**17 35 17.7**	**+1.4**	
CEME				*i* Sn	**Sn**	**17 36 11.6**	**+2.0**	
CET2	**Cetraro**	**4.59**	**285**	P	**Pn**	**17 35 18.3**	**+2.0**	
CET2				AML	AML			
	comp=E,131µm,0.8s							
CET2				AML	AML			
	comp=N,190µm,0.7s							
CET2				AML	AML			
	comp=E,225µm,0.6s							
CET2				AML	AML			
	comp=N,204µm,0.7s							
IVA	**Berane**	**4.61**	**343**	⇑*i* Pn	**Pn**	**17 35 18.0**	**+1.4**	
IVA				*i* Sn	**Sn**	**17 36 11.7**	**+1.6**	
AMUR	**Altamura**	**4.62**	**303**	P	**Pn**	**17 35 17.6**	**+1.0**	
AMUR				S	**Sn**	**17 36 08.2**	**-2.0**	
AMUR				AML	AML			
	comp=E,152µm,0.3s							
AMUR				AML	AML			
	comp=N,110µm,0.5s							
HCY	**Herceg Novi**	**4.66**	**330**	*e*Pn	**Pn**	**17 35 17.4**	**+0.1**	
HCY	**Herceg Novi**	**4.66**	**330**	⇓*i* Pn	**Pn**	**17 35 18.0**	**+0.7**	
HCY				*i* Sn	**Sn**	**17 36 13.4**	**+2.1**	
KOME	**Kolasin**	**4.68**	**340**	⇓*i* Pn	**Pn**	**17 35 19.0**	**+1.4**	
KOME				*i* Sn	**Sn**	**17 36 13.9**	**+2.0**	
NKME	**Niksic**	**4.77**	**335**	⇓*i* Pn	**Pn**	**17 35 20.3**	**+1.5**	
NKME				*i* Sn	**Sn**	**17 36 15.7**	**+1.6**	
NKY	**Niksic**	**4.80**	**336**	⇑*i* Pn	**Pn**	**17 35 20.6**	**+1.3**	
NKY				*i* Sn	**Sn**	**17 36 16.4**	**+1.5**	
SIRI	**Monte Sirino -**	**4.83**	**293**	P	**Pn**	**17 35 19.6**	**-0.1**	
SIRI				AML	AML			
	comp=N,71µm,0.4s							
SIRI				AML	AML			
	comp=E,87µm,0.4s							
MSRU	**Castanea**	**4.86**	**270**	P	**Pn**	**17 35 22.0**	**+2.1**	
MSRU	**Castanea**	**4.86**	**270**	P	**Pn**	**17 35 22.0**	**+2.1**	
MSRU				AML	AML			
	comp=E,126µm,1.6s							
MSRU				AML	AML			
	comp=N,102µm,1.4s							
MCEL	**Monticello**	**4.92**	**294**	P	**Pn**	**17 35 22.9**	**+2.0**	
MTSN	**Montesano sull**	**4.94**	**293**	P	**Pn**	**17 35 21.7**	**+0.5**	
MTSN				AML	AML			
	comp=E,90µm,1.1s							
MTSN				AML	AML			
	comp=N,98µm,0.4s							
TREB	**Trebinje**	**4.95**	**330**	*e*Pn	**Pn**	**17 35 21.8**	**+0.6**	
MRVN	**Minervino Murg**	**4.96**	**303**	P	**Pn**	**17 35 22.5**	**+1.1**	
MRVN				AML	AML			
	comp=E,65µm,0.8s							
MRVN				AML	AML			
	comp=N,69µm,0.4s							
DBRK	**Dubrovnik**	**4.99**	**328**	*e*Pn	**Pn**	**17 35 22.0**	**+0.3**	
BRY	**Bratogost**	**5.04**	**333**	*e*Pn	**Pn**	**17 35 24.1**	**+1.6**	
BRY	**Bratogost**	**5.04**	**333**	⇑*i* Pn	**Pn**	**17 35 24.0**	**+1.6**	
BRY				*i* Sn	**Sn**	**17 36 22.1**	**+1.4**	
MGR	**Morigerati**	**5.04**	**291**	P	**Pn**	**17 35 24.0**	**+1.6**	
MGR				AML	AML			
	comp=N,61µm,0.4s							
MGR				AML	AML			
	comp=E,52µm,0.5s							
PALZ	**Palazzo San Ge**	**5.06**	**301**	P	**Pn**	**17 35 23.7**	**+0.9**	
PALZ				AML	AML			
	comp=N,200µm,1.0s							
PALZ				AML	AML			
	comp=E,250µm,0.9s							
SLCN	**Sala Consilina**	**5.07**	**294**	P	**Pn**	**17 35 25.2**	**+2.3**	
SLCN				AML	AML			
	comp=E,339µm,1.4s							
SLCN				AML	AML			
	comp=N,149µm,0.4s							
SLCN				AML	AML			
	comp=N,338µm,1.1s							
SLCN				AML	AML			
	comp=E,213µm,0.4s							
MCSR	**Castroreale**	**5.08**	**267**	P	**Pn**	**17 35 23.7**	**+0.6**	
MCSR	**Castroreale**	**5.08**	**267**	P	**Pn**	**17 35 23.7**	**+0.6**	
MCSR				AML	AML			
	comp=E,368µm,0.4s							
MCSR				AML	AML			
	comp=N,316µm,0.3s							
AIO	**Antillo**	**5.11**	**266**	P	**Pn**	**17 35 25.3**	**+1.9**	
AIO				AML	AML			
	comp=E,80µm,1.4s							
AIO				AML	AML			
	comp=N,66µm,0.4s							
AIO	**Antillo**	**5.11**	**266**	P	**Pn

MAKA	**Makarska**	**5.98**	**325**	*e*Pn		**Pn**	**17 35 36.0**	**+0.7**
MAKA				Sn		**Sn**	**17 36 41.2**	**-2.4**
HAPS	**Han Pijesak,BI**	**5.98**	**341**	*e*Pn		**Pn**	**17 35 35.4**	**-0.1**
PETRA	**Petralia Sopra**	**6.00**	**266**	P		**Pn**	**17 35 38.4**	**+2.6**
PETRA				AML	AML			
	comp=E,64μm,0.3s							
PETRA				AML	AML			
	comp=N,52μm,0.3s							
PETRA	**Petralia Sopra**	**6.00**	**266**	P		**Pn**	**17 35 38.4**	**+2.6**
RICI	**Ricice**	**6.09**	**327**	*e*Pn		**Pn**	**17 35 37.5**	**+0.6**
SACR	**S. Croce Del S**	**6.11**	**301**	P		**Pn**	**17 35 39.6**	**+2.4**
SACR				AML	AML			
	comp=E,68μm,1.4s							
SACR				AML	AML			
	comp=N,53μm,1.4s							
SACR	**S. Croce Del S**	**6.11**	**301**	P		**Pn**	**17 35 39.6**	**+2.4**
TRIV	**Trivento**	**6.39**	**303**	P		**Pn**	**17 35 38.8**	**-2.2**
TRIV				AML	AML			
	comp=N,99μm,0.6s							
TRIV				AML	AML			
	comp=E,81μm,1.0s							
TRIV	**Trivento**	**6.39**	**303**	P		**Pn**	**17 35 38.8**	**-2.2**
HERR	**Herculane**	**6.43**	**5**	⇑P		**Pn**	**17 35 42.8**	**+1.3**
KIJV	**Kijevo**	**6.82**	**326**	*e*Pn		**Pn**	**17 35 47.3**	**+0.5**
FRGS	**Fruska Gora**	**6.83**	**349**	*e*Pn		**Pn**	**17 35 47.7**	**+0.7**
ZIRJ	**Zirje**	**6.91**	**321**	*e*Pn		**Pn**	**17 35 48.1**	**0.0**
GZR	**Gura Zlata**	**6.97**	**6**	⇑P		**Pn**	**17 35 50.9**	**+1.9**
MORI	**Morici**	**7.03**	**322**	*e*Pn		**Pn**	**17 35 50.3**	**+0.5**
BZS	**Buzias**	**7.15**	**360**	⇑P		**Pn**	**17 35 53.8**	**+2.4**
ARR	**Arges**	**7.24**	**17**	⇑P		**Pn**	**17 35 54.5**	**+1.9**
DUGI	**Dugi Otok**	**7.44**	**320**	*e*Pn		**Pn**	**17 35 56.4**	**+0.9**
MLR	**Muntele Rosu**	**7.70**	**23**	Pn		**Pn**	**17 36 00.1**	**+1.1**
	comp=E,0.1nm,0.3s,baz=328,slow=13,SNR=2.7							
MLR				Sn		**Sn**	**17 37 28.6**	**+2.3**
	baz=279,slow=19,SNR=1.0							
MLR	**Muntele Rosu**	**7.70**	**23**	⇑P		**Pn**	**17 36 01.2**	**+2.2**
NVLJ	**Novalja**	**7.95**	**322**	*e*Pn		**Pn**	**17 36 02.9**	**+0.6**
FDMO	**Fiordimonte**	**7.96**	**308**	P		**Pb**	**17 36 22.0**	**-2.9**
FDMO	**Fiordimonte**	**7.96**	**308**	P		**Pb**	**17 36 22.0**	**-2.9**
DOPR	**Dopca**	**7.98**	**19**	⇑P		**Pn**	**17 36 04.0**	**+1.2**
MOSL	**Moslavina**	**8.03**	**334**	*i* Pn		**Pn**	**17 36 02.2**	**-1.2**
EL6	**Elcito**	**8.12**	**309**	P		Pn	17 36 14.5	+10
EL6	**Elcito**	**8.12**	**309**	P		Pn	17 36 14.5	+10
PLOR	**Plostina**	**8.25**	**25**	⇑P		**Pn**	**17 36 09.2**	**+2.8**
VRI	**Vrincioaia**	**8.29**	**25**	⇓P		**Pn**	**17 36 09.0**	**+2.0**
FOSV	**Fossato di Vic**	**8.30**	**308**	P		**Pn**	**17 36 08.2**	**+1.0**
FOSV	**Fossato di Vic**	**8.30**	**308**	P		**Pn**	**17 36 08.2**	**+1.0**
FRON	**Frontone**	**8.45**	**310**	P		**Pn**	**17 36 13.2**	**+4.0**
CRES	**Cresnjev**	**8.69**	**330**	*e*Pn		**Pn**	**17 36 12.1**	**-0.4**
CEY	**Cerknica**	**9.05**	**326**	*e*Pn		**Pn**	**17 36 17.8**	**+0.3**
BRTR	**Keskin Array B**	**9.38**	**79**	Pn		**Pn**	**17 36 24.2**	**+2.1**
	comp=E,0.4nm,0.3s,baz=264,slow=13,SNR=8.8							
BRTR				LR		LR	17 39 41.0	
	comp=E,13nm,20.0s,baz=188,slow=36							
BURAR	**Bucovina Array**	**9.50**	**15**	⇑P		**Pn**	**17 36 25.2**	**+1.5**
SOKA	**Soboth**	**9.56**	**331**	*e*Pn		**Pn**	**17 36 25.1**	**+0.6**
	comp=E,0.9nm,0.2s							
OBKA	**Obir**	**9.61**	**329**	*e*Pn		**Pn**	**17 36 23.8**	**-1.4**
	comp=E,1.4nm,0.4s							
ARSA	**Arzberg**	**9.87**	**335**	*e*Pn		**Pn**	**17 36 28.9**	**+0.1**
	comp=E,1.0nm,0.5s							
VYHS	**Vyhne**	**10.23**	**349**	*e*PN		Pn	17 36 39.7	+6.0
MOA	**Molln**	**10.83**	**332**	*e*Pn		**Pn**	**17 36 41.7**	**-0.1**
	comp=E,0.6nm,0.3s							
VRAC	**Vranov**	**11.44**	**343**	LR		LR	17 41 12.1	
	comp=E,32nm,21.1s,baz=240,slow=38							
WTTA	**Wattenberg**	**11.47**	**323**	*e*Pn		**Pn**	**17 36 51.2**	**+0.5**
	comp=E,2.4nm,0.4s							
WATA	**Walderalm**	**11.55**	**323**	*e*Pn		**Pn**	**17 36 52.2**	**+0.4**
	comp=E,2.8nm,0.5s							
SQTA	**Sankt Quirin**	**11.64**	**322**	*e*Pn		**Pn**	**17 36 50.9**	**-2.1**
	comp=E,0.5nm,0.2s							
MOTA	**Moosalm**	**11.78**	**322**	*e*Pn		**Pn**	**17 36 55.1**	**+0.2**
	comp=E,1.8nm,0.5s							
GERES	**GERESS Array B**	**11.87**	**333**	Pn		**Pn**	**17 36 56.3**	**+0.2**
	comp=E,0.1nm,0.3s,baz=151,slow=12,SNR=2.5							
GERES				Sn		**Sn**	**17 39 08.1**	**-0.5**
	comp=E,0.2nm,0.3s,baz=148,slow=24,SNR=6.4							
GERES				LR		LR	17 42 35.2	
	comp=E,60nm,19.2s,baz=163,slow=43							
AKASG	**Malin Array Be**	**13.35**	**21**	Pn		**Pn**	**17 37 14.8**	**-1.4**
	comp=E,0.6nm,0.3s,baz=210,slow=11,SNR=5.1							
ESDC	**Sonseca Array**	**19.94**	**282**	P		**P**	**17 38 39.1**	**+0.2**
	comp=E,0.1nm,0.3s,baz=80,slow=11,SNR=3.1							
HFS	**Hagfors**	**22.27**	**349**	P		**P**	**17 39 03.0**	**-0.8**
	comp=E,1.2nm,0.5s,baz=163,slow=12,SNR=9.1							
FINES	**FINESS Array B**	**23.16**	**5**	P		**P**	**17 39 12.2**	**-0.9**
	comp=E,0.7nm,0.5s,baz=157,slow=12,SNR=5.5							
NB2	**NORSAR Subarra**	**23.53**	**347**	P		**P**	**17 39 16.2**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=160,slow=11							
NOA	**NORSAR Array B**	**23.53**	**347**	P		**P**	**17 39 15.4**	**-1.4**
	comp=Z,1.4nm,1.0s,baz=144,slow=9.4,SNR=4.0							
EKA	**Eskdalemuir Ar**	**23.73**	**323**	P		**P**	**17 39 18.6**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=123,slow=9.5,SNR=3.7							
TORD	**Torodi Ar. Bea**	**30.84**	**221**	P		**P**	**17 40 24.1**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=19,slow=10,SNR=3.0							
ARCES	**ARCESS Array B**	**31.20**	**3**	P		**P**	**17 40 25.0**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=191,slow=9.2,SNR=5.5							
MKAR	**Makanchi Array**	**44.37**	**59**	P		**P**	**17 42 17.7**	**+0.5**
	comp=Z,1.8nm,0.5s,baz=277,slow=7.4,SNR=26							
ZALV	**Zalesovo Beam**	**44.81**	**48**	P		**P**	**17 42 20.7**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=277,slow=8.1,SNR=5.7							

*THR **11** 17:40:20.5±0.3,27.°15N×53.°13E,h14km±5km,ML3.6*
*DSN **11** 17:40:21.8±0.8,27.°65N×53.°04E,h10km,ML4.3/8,Error ellipse: s-maj=12.3km s-min=5.2km az=9.0*
*TEH **11** 17:40:23.1,27.°33N×53.°01E,h12km,ML3.9*
*IDC **11** 17:40:27.3±2.1,27.°22N×53.°11E,h43km±21km,mb3.6/23, mb1 3.8/27,mb1mx3.6/58,mbtmp3.9/27,ML3.6/4,Error ellipse: s-maj=18.2km s-min=12.1km az=24.0*
*OMAN **11** 17:40:28.2±0.3,27.°11N×52.°95E,h33km,ml3.8/13,Error ellipse: s-maj=14.6km s-min=10.4km az=337.0*

ISC 11 17:40:23.5±0.9,27.°29N±0.°04×53.°06E±0.°05,h12km±6km, n119,σ1s72/135,mb3.9/29,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
LMD1	**Lamerd**	**0.11**	**60**	*e*Pg		**Pg**	**17 40 26.5**	**0.0**
LMD1				*e*Sg		**Sg**	**17 40 27.8**	**-0.8**
LMD1				*e*			17 40 28.9	
LAR1	**LAR**	**1.23**	**72**	*e*Pg		**Pg**	**17 40 47.6**	**+0.4**
JHRM	**Jahrom**	**1.30**	**21**	*e*Pg		**Pb**	**17 40 48.1**	**+0.1**
JHRM				*e*			17 41 14.4	
AHBU	**AHRAM**	**2.21**	**316**	*e*Pn		**Pn**	**17 41 00.8**	**+0.7**
JRN	**Qarnain Island**	**2.34**	**185**	*e*Pn		**Pb**	**17 41 06.1**	**+0.4**
BNDS	**Bandar-Abbas**	**2.77**	**87**	IAML			17 41 56.1	
	comp=N,180nm,0.4s							
GENO	**Geno**	**2.77**	**87**	*e*Pn		**Pn**	**17 41 08.9**	**+0.9**
GENO				*e*			17 42 04.2	
SHME	**Shamm**	**3.02**	**113**	P		**Pn**	**17 41 12.1**	**+0.8**
SHME	**Shamm**	**3.02**	**113**	*e*Pn		**Pn**	**17 41 12.5**	**+1.2**
IBND	**Bandar-abas**	**3.10**	**86**	*e*Pn		**Pn**	**17 41 14.1**	**+1.8**
IBND				*e*			17 42 36.3	
BANOM	**Banah**	**3.20**	**114**	*i* P		**Pn**	**17 41 14.4**	**+0.7**
	SNR=28							
BANOM				S		**Sn**	**17 41 55.9**	**+3.9**
BANOM	**Banah**	**3.20**	**114**	P		**Pn**	**17 41 15.4**	**+1.7**
	SNR=27							
BANOM				S		**Sn**	**17 41 56.2**	**+4.2**
BANOM	**Banah**	**3.20**	**114**	*e*Pn		**Pn**	**17 41 15.8**	**+2.0**
AJN	**Ajban**	**3.22**	**147**	*i* P		**Pn**	**17 41 16.6**	**+2.6**
	SNR=7.1							
AJN	**Ajban**	**3.22**	**147**	P		**Pb**	**17 41 17.8**	**-2.9**
	SNR=7.1							
AJN	**Ajban**	**3.22**	**147**	*e*Pn		**Pn**	**17 41 17.4**	**+3.4**
NAZ	**Nazwa, Dubai**	**3.27**	**134**	*i* P		**Pn**	**17 41 17.3**	**+2.6**
	SNR=14							
NAZ	**Nazwa, Dubai**	**3.27**	**134**	P		**Pn**	**17 41 17.8**	**+3.1**
	SNR=11							
NAZ				S		**Sn**	**17 41 56.0**	**+2.3**
NAZ	**Nazwa, Dubai**	**3.27**	**134**	*e*Pn		**Pn**	**17 41 17.6**	**+2.9**
GHWR	**Ruwais**	**3.31**	**183**	*e*Pn		**Pn**	**17 41 17.7**	**+2.5**
MSFE	**Esma-Masafi**	**3.38**	**124**	*i* P		**Pn**	**17 41 18.2**	**+2.0**
	SNR=14							
MSFE	**Esma-Masafi**	**3.38**	**124**	*e*Pn		**Pn**	**17 41 18.2**	**+2.0**
FAQ	**Al Faqa, Dubai**	**3.41**	**137**	P		**Pn**	**17 41 19.9**	**+3.3**
SLWR	**Sila**	**3.43**	**201**	*e*Pn		**Pn**	**17 41 19.3**	**+2.4**
MDH	**Madha**	**3.52**	**124**	P		**Pn**	**17 41 19.8**	**+1.7**
MDH	**Madha**	**3.52**	**124**	P		**Pn**	**17 41 20.0**	**+1.9**
MDH				S		**Sn**	**17 42 00.9**	**+1.3**
MDH	**Madha**	**3.52**	**124**	*e*Pn		**Pn**	**17 41 19.8**	**+1.7**
MZWR	**Madinat Zayed**	**3.59**	**168**	*e*Pn		**Pn**	**17 41 22.1**	**+3.1**
UOSS	**Minazif**	**3.67**	**129**	*i* P		**Pn**	**17 41 21.8**	**+1.7**
	SNR=17							
UOSS	**Minazif**	**3.67**	**129**	P		**Pn**	**17 41 21.9**	**+1.8**
UOSS				S		**Sn**	**17 42 04.0**	**+0.7**
UOSS	**Minazif**	**3.67**	**129**	*e*Pn		**Pn**	**17 41 21.8**	**+1.7**
HATD	**Hatta, Dubai**	**3.69**	**131**	*i* P		**Pn**	**17 41 22.2**	**+1.7**
	SNR=6.4							
HATD	**Hatta, Dubai**	**3.69**	**131**	P		**Pn**	**17 41 22.7**	**+2.2**
	SNR=6.4							
HATD				S		**Sn**	**17 42 05.8**	**+1.7**
HATD	**Hatta, Dubai**	**3.69**	**131**	*e*Pn		**Pn**	**17 41 22.5**	**+2.0**
ASHO	**Ashiyiah**	**3.74**	**133**	*i* P		**Pn**	**17 41 23.3**	**+2.1**
	SNR=43							
ASHO	**Ashiyiah**	**3.74**	**133**	P		**Pn**	**17 41 23.3**	**+2.1**
	SNR=43							
ASHO				S		**Sn**	**17 42 06.2**	**+0.9**
ASHO	**Ashiyiah**	**3.74**	**133**	*e*Pn		**Pn**	**17 41 23.2**	**+2.1**
KLNJ	**Kolanjah**	**3.92**	**341**	*e*Pn		**Pn**	**17 41 24.9**	**+0.9**
NGRK	**Negar Kerman**	**4.00**	**53**	*e*Pn		**Pn**	**17 41 27.2**	**+2.2**
NGRK				*e*			17 42 48.1	
ALNE	**Al Ain**	**4.03**	**142**	*i* P		**Pn**	**17 41 28.1**	**+2.9**
	SNR=9.4							
ALNE	**Al Ain**	**4.03**	**142**	*e*Pn		**Pn**	**17 41 28.3**	**+3.2**
KHNJ	**Kahnooj**	**4.17**	**80**	*e*Pn		**Pn**	**17 41 27.7**	**+0.6**
KRBR	**Kerman**	**4.22**	**50**	*e*Pn		**Pn**	**17 41 27.2**	**-0.8**
KRBR				*e*S		**Sn**	**17 42 16.1**	**-1.3**
KRBR				IAML			17 42 23.8	
	comp=N,45nm,0.3s							
KRBR				IAML			17 42 25.5	
	comp=E,53nm,0.5s							
KRBR	**Kerman**	**4.22**	**50**	*e*Pn		**Pn**	**17 41 27.2**	**-0.8**
TVBK	**TV Kerman**	**4.22**	**50**	*e*Pn		**Pn**	**17 41 31.0**	**+2.9**
TVBK				*e*			17 41 39.1	
KHGB	**Koh Gabri**	**4.30**	**43**	*e*Pn		**Pn**	**17 41 31.1**	**+2.1**
KHGB				*e*			17 42 29.9	
IMEH	**Mehriz**	**4.31**	**18**	*e*Pn		**Pn**	**17 41 32.4**	**+3.2**
SOHO	**SOHO**	**4.43**	**134**	P		**Pn**	**17 41 32.4**	**+1.7**
SOHO				S		**Sn**	**17 42 23.2**	**+0.9**
SOHO	**SOHO**	**4.43**	**134**	*e*Pn		**Pn**	**17 41 32.3**	**+1.6**
IRAM	**Ramesheh**	**4.55**	**353**	*e*Pn		**Pn**	**17 41 33.4**	**+1.0**
ISAD	**Sadrabad**	**4.64**	**7**	*e*Pn		**Pn**	**17 41 36.2**	**+2.4**
CHMN	**Cheshme madani**	**4.70**	**56**	*e*Pn		**Pn**	**17 41 37.1**	**+2.4**
CHMN				*e*			17 41 43.3	
IBAF	**Bafgh**	**4.81**	**26**	*e*Pn		**Pn**	**17 41 38.4**	**+2.4**
UMZA	**Um Al Zommool**	**4.94**	**157**	*e*Pn		**Pn**	**17 41 39.7**	**+2.1**
ARQ	**Araqi**	**5.03**	**141**	P		**Pn**	**17 41 40.9**	**+2.1**
	SNR=60							
ICHK	**Chekchek**	**5.08**	**13**	*e*Pn		**Pn**	**17 41 41.3**	**+1.6**
HOQ	**Hoqain**	**5.33**	**133**	P		**Pn**	**17 41 43.7**	**+0.7**
IZEF	**Zefreh**	**5.63**	**354**	*e*Pn		**Pn**	**17 41 49.3**	**+2.0**
BSY	**Bisya**	**5.88**	**139**	P		**Pn**	**17 41 52.6**	**+2.1**
BSY				S		**Sn**	**17 42 57.5**	**-0.4**
ANAR	**Anarak**	**5.91**	**5**	*e*Pn		**Pn**	**17 41 52.4**	**+1.3**
BIDO	**Bidbid**	**5.92**	**128**	P		**Pn**	**17 41 51.6**	**+0.5**
BIDO				S		**Sn**	**17 42 59.0**	**+0.1**
BIDO	**Bidbid**	**5.92**	**128**	*e*Pn		**Pn**	**17 41 52.1**	**+1.0**
SMDO	**Samad**	**6.18**	**132**	P		**Pn**	**17 41 56.5**	**+1.8**
SMDO				S		**Sn**	**17 43 05.8**	**+0.4**
WSAR	**Wadi Sarin**	**6.46**	**127**	P		**Pn**	**17 41 59.0**	**+0.5**
	comp=E,2.4nm,0.3s,baz=310,slow=11,SNR=31							
WSAR				S		**Sn**	**17 43 09.3**	**-2.8**
	comp=E,1.5nm,0.3s,baz=41,slow=20,SNR=2.0							
WSAR	**Wadi Sarin**	**6.46**	**127**	P		**Pn**	**17 41 59.8**	**+1.3**
TPRV	**Parvadeh(Tabas**	**6.53**	**28**	*e*Pn		**Pn**	**17 42 01.1**	**+1.6**
JMDO	**Jabal Madar**	**6.70**	**136**	P		**Pn**	**17 42 02.9**	**+1.0**
KHMZ	**Khomeyn**	**6.96**	**338**	*e*Pn		**Pn**	**17 42 06.6**	**+0.9**
KHMZ	**Khomeyn**	**6.96**	**338**	*e*Pn		**Pn**	**17 42 06.6**	**+0.9**
BSRN	**Basiran**	**7.04**	**47**	*e*Pn		**Pn**	**17 42 06.3**	**-0.3**
BSRN	**Basiran**	**7.04**	**47**	*e*Pn		**Pn**	**17 42 06.3**	**-0.3**
WBK	**Wadi Bani Khal**	**7.10**	**130**	P		**Pn**	**17 42 08.4**	**+1.0**
	SNR=17							
WBK				S		**Sn**	**17 43 26.5**	**-1.6**
TABS	**Tabas**	**7.25**	**28**	*e*Pn		**Pn**	**17 42 09.7**	**+0.3**
TABS	**Tabas**	**7.25**	**28**	*e*Pn		**Pn**	**17 42 09.7**	**+0.3**
MHTO	**MHTO**	**7.71**	**143**	P		**Pn**	**17 42 17.1**	**+1.4**
IDOB	**Doab**	**7.73**	**328**	*e*Pn		**Pn**	**17 42 17.4**	**+1.3**
HSAM	**Samen**	**7.89**	**332**	*e*Pn		**Pn**	**17 42 18.5**	**0.0**
IANJ	**Anjilo**	**8.19**	**5**	*e*Pn		**Pn**	**17 42 23.8**	**+1.3**
IKOM	**Komasi**	**8.36**	**327**	*e*Pn		**Pn**	**17 42 25.0**	**+0.2**
IRAZ	**Razeghan**	**8.52**	**342**	*e*Pn		**Pn**	**17 42 29.0**	**+2.0**
SHRT	**Shahrakht**	**8.89**	**43**	*e*Pn		**Pn**	**17 42 31.9**	**-0.1**
SHRT	**Shahrakht**	**8.89**	**43**	*e*Pn		**Pn**	**17 42 31.9**	**-0.1**
WHFO	**Wadi Hawf**	**9.35**	**176**	P		**Pn**	**17 42 38.5**	**+0.3**
DMTO	**DMTO**	**9.68**	**169**	P		**Pn**	**17 42 42.5**	**-0.3**
	SNR=22							
ABTO	**Aybut**	**9.89**	**179**	P		**Pn**	**17 42 46.4**	**+0.7**
GEYT	**Alibeck**	**11.44**	**21**	P		**Pn**	**17 43 09.2**	**+2.4**
	comp=E,0.2nm,0.3s,baz=163,slow=5.3,SNR=3.8							
MMAI	**Mount Meron Ar**	**16.30**	**295**	P		**P**	**17 44 15.8**	**+0.4**
	comp=E,0.3nm,0.3s,baz=122,slow=15,SNR=5.8							
KBZ	**Khabaz**	**18.35**	**336**	P		**P**	**17 44 40.2**	**+2.4**
	comp=E,1.0nm,0.3s,baz=151,slow=6.9,SNR=3.3							
BRTR	**Keskin Array B**	**20.35**	**312**	P		Pn	17 45 01.2	-0.8
	comp=E,1.0nm,0.7s,baz=134,slow=11,SNR=7.6							
AAK	**Ala-Archa**	**23.21**	**43**	P		**P**	**17 45 36.1**	**+5.5**
	comp=E,1.8nm,0.6s,baz=249,slow=4.2,SNR=5.1							
AKTO	**Aktyubinsk**	**23.43**	**8**	P		**P**	**17 45 33.6**	**+1.2**
	comp=E,0.7nm,0.3s,baz=232,slow=17,SNR=1.7							
IDI	**Anoyia**	**25.30**	**295**	P		**P**	**17 45 51.1**	**+1.0**
	comp=E,2.6nm,0.6s,baz=80,slow=13,SNR=1.7							
MLR	**Muntele Rosu**	**28.20**	**317**	P		**P**	**17 46 17.5**	**+1.3**
	comp=E,1.0nm,0.7s,baz=154,slow=12,SNR=2.8							
BVAR	**Borovoye Array**	**28.77**	**22**	P		**P**	**17 46 21.7**	**+0.7**
	comp=E,1.0nm,0.5s,baz=222,slow=7.1,SNR=15							
BVAR				PcP		**PcP**	**17 49 30.3**	**-0.5**
	comp=E,0.3nm,0.3s,baz=184,slow=4.3,SNR=4.3							
AKASG	**Malin Array Be**	**29.59**	**329**	P		**P**	**17 46 27.5**	**-0.8**
	comp=E,0.6nm,0.5s,baz=132,slow=8.3,SNR=6.3							
MKAR	**Makanchi Array**	**30.12**	**42**	P		**P**	**17 46 33.7**	**+0.5**
	comp=E,0.7nm,0.7s,baz=224,slow=8.1,SNR=6.1							
MKAR				PcP		**PcP**	**17 49 34.1**	**-0.4**
	comp=E,0.4nm,0.8s,baz=262,slow=1.0,SNR=2.3							
ZALV	**Zalesovo Beam**	**35.40**	**32**	P		**P**	**17 47 18.9**	**-0.2**
	comp=E,1.4nm,0.5s,baz=236,slow=9.6,SNR=8.5							
ZALV				PcP		**PcP**	**17 49 48.0**	**-0.9**
	comp=E,0.3nm,0.3s,baz=274,slow=5.6,SNR=1.9							
WTTA	**Wattenberg**	**37.96**	**313**	*e*P		**P**	**17 47 41.6**	**+0.3**
	comp=E,0.8nm,0.3s							
WATA	**Walderalm**	**38.02**	**313**	*e*P		**P**	**17 47 41.0**	**-0.8**
	comp=E,3.8nm,0.8s							
SQTA	**Sankt Quirin**	**38.23**	**313**	*e*P		**P**	**17 47 43.0**	**-0.5**
	comp=E,2.9nm,0.5s							
MOTA	**Moosalm**	**38.33**	**313**	*e*P		**P**	**17 47 43.8**	**-0.6**
	comp=E,0.4nm,0.3s							
FETA	**Feichten**	**38.49**	**312**	*e*P		**P**	**17 47 46.0**	**+0.3**
	comp=E,1.4nm,0.5s							
FINES	**FINESS Array B**	**38.65**	**340**	P		**P**	**17 47 46.3**	**-0.3**
	comp=E,1.3nm,0.5s,baz=141,slow=9.0,SNR=11							
DAVA	**Damuels**	**39.12**	**312**	*e*P		**P**	**17 47 50.8**	**-0.2**
	comp=E,4.4nm,0.5s							
HFS	**Hagfors**	**42.34**	**332**	P		**P**	**17 48 16.9**	**-0.3**
	comp=E,1.7nm,0.7s,baz=120,slow=11,SNR=7.9							
CMAR	**Chiang Mai Arr**	**42.98**	**92**	P		**P**	**17 48 22.7**	**-0.3**
	comp=E,0.3nm,0.5s,baz=282,slow=8.9,SNR=2.5							
NB2	**NORSAR Subarra**	**43.86**	**332**	P		**P**	**17 48 28.7**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=123,slow=8.6							
NOA	**NORSAR Array B**	**43.86**	**332**	P		**P**	**17 48 29.0**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=122,slow=8.4,SNR=3.1							
ARCES	**ARCESS Array B**	**45.22**	**347**	P		**P**	**17 48 39.4**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=145,slow=8.6,SNR=6.3							
ESDC	**Sonseca Array**	**48.41**	**300**	P		**P**	**17 49 05.4**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=78,slow=8.0,SNR=3.4							
EKA	**Eskdalemuir Ar**	**48.93**	**321**	P		**P**	**17 49 08.8**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=94,slow=9.5,SNR=1.9							
TORD	**Torodi Ar. Bea**	**49.88**	**264**	P		**P**	**17 49 16.8**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=57,slow=6.7,SNR=5.7							
DBIC	**Dimbokro**	**58.52**	**261**	P		**P**	**17 50 19.7**	**-0.5**
	comp=Z,2.3nm,0.8s,baz=38,slow=4.5,SNR=3.7							
TIXI	**Tiksi**	**59.89**	**21**	P		**P**	**17 50 27.1**	**-1.8**
	comp=Z,0.8nm,0.2s,baz=328,slow=5.5,SNR=3.4							
KSRS	**Korea Array**	**62.54**	**60**	P		**P**	**17 50 45.4**	**-2.0**
	comp=Z,1.2nm,0.6s,baz=283,slow=7.2,SNR=6.1							
SEY	**Seymchan**	**70.15**	**29**	P		**P**	**17 51 35.8**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=283,slow=11,SNR=8.2							
ILAR	**Eielson Array**	**86.94**	**8**	P		**P**	**17 53 07.0**	**-1.2**
	comp=Z,0.4nm,0.8s,baz=82,slow=8.5,SNR=2.0							
YKA	**Yellowknife Ar**	**89.99**	**354**	P		**P**	**17 53 22.7**	**0.0**
	comp=Z,0.7nm,0.7s,baz=12,slow=4.9,SNR=13							
WRA	**Warramunga Arr**	**91.59**	**112**	P		**P**	**17 53 30.2**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=315,slow=4.3,SNR=1.7							

*NIED **11** 17:45:00,45.°70N×151.°70E,h20km,Mw4.0 Best double couple: M0 1.10000×10^15 NP1:φs48.00000°,δ63.00000°,*
λ87.00000°. NP2:φs235.00000°,δ27.00000°,λ97.00000°.
*JMA **11** 17:45:28.4±0.7,45.°67N×151.°65E,h30km,M4.0*
*SKHL **11** 17:45:31.9±0.8,45.°48N×151.°69E,h61km±3km,mb4.4/5*
*NEIC **11** 17:45:31.9±2.8,45.°5N±0.°1×151.°5E±0.°2,h40km±7km, mb4.4/6,Error ellipse: s-maj=21.5km s-min=10.6km az=137.0*
*MOS **11** 17:45:35.4±2.6,46.°36N×150.°54E,h57km,mb4.6/4,Error ellipse: s-maj=14.5km s-min=8.1km az=53.9*
*IDC **11** 17:45:35.8±2.8,45.°99N×151.°28E,h49km±25km,mb3.7/9, mb1 3.7/12,mb1mx3.4/50,mbtmp3.8/12,ML2.9/3,MS3.0/5, Ms1 3.0/5,ms1mx2.7/44,Error ellipse: s-maj=54.9km s-min=19.8km az=155.0*

ISC 11 17:45:30.5±0.7,45.°42N±0.°09×151.°51E±0.°07,h32km,n76, σ2s91/69,mb4.1/15,MS3.2/4,3D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.58**	**267**	*i* P		**Pn**	**17 46 12.4**	**+2.4**
KUR					AMB	AMB	17 46 12.7	
	10.0nm,0.3s							
KUR					AMB	AMB	17 46 12.7	
	10.0nm,0.3s							
KUR					AMB	AMB	17 46 12.7	
	30nm,0.3s							
KUR				*i* S		**Sn**	**17 46 43.4**	**+3.2**
KUR					A	A	17 46 52.0	
	250nm,0.4s							
KUR					A	A	17 46 52.0	
	230nm,0.4s							
KUR	**Kuril'sk**	**2.58**	**267**	⇓*i* PN		**Pn**	**17 46 11.6**	**+1.6**
KUR					pmax	pmax		
	comp=Z,45nm,0.5s							
KUR					pmax	pmax		
	comp=N,14nm,0.2s		

comp=Z,14nm,1.2s
KDAK Kodiak Island 35.81 49 P P 17 52 27.5 +0.9
comp=Z,3.2nm,0.7s,baz=283,slow=8.2,SNR=4.4
KDAK Kodiak Island 35.81 49 IAmb IAmb 17 52 28.8
comp=Z,4.1nm,0.8s
ILAR Eielson Array 38.28 37 LR LR 18 08 39.8
comp=Z,28nm,20.0s,baz=114,slow=36
VRDI Verde Repeater 40.08 43 P P 17 53 04.1 +1.3
VRDI IAmb IAmb 17 53 09.7
comp=Z,3.0nm,1.2s
DAWY Dawson 41.57 38 P P 17 53 13.7 -1.2
ZALV Zalesovo Beam 42.50 307 LR LR 18 12 05.8
comp=Z,36nm,18.3s,baz=44,slow=38
MKAR Makanchi Array 46.57 298 P P 17 53 54.6 -0.5
comp=Z,0.3nm,0.5s,baz=67,slow=6.9,SNR=4.1
MKAR PcP **PcP 17 55 29.3 +0.5**
comp=Z,0.3nm,0.6s,baz=102,slow=1.8,SNR=2.1
YKA Yellowknife Ar 52.65 96 P P 17 54 42.0 +0.9
comp=Z,0.3nm,0.7s,baz=299,slow=5.7,SNR=4.2
ARU Arti 55.24 318 *d* iP P 17 54 53.2 -6.9
ARU S S 18 02 26.0 -15
ARU SS **SKiKP 18 06 09.2 +7.0**
ARU pmax pmax
comp=Z,2.0nm,1.0s
FINES FINESS Array B 64.76 334 P P 17 56 04.9 -0.4
comp=Z,1.1nm,0.5s,baz=39,slow=9.0,SNR=9.2
GEYT Alibeck 66.32 300 P P 17 56 16.6 +0.7
comp=Z,1.2nm,0.7s,baz=20,slow=4.7,SNR=4.3
WRAB Tennant Creek 66.89 198 P P 17 56 20.3 +0.8
WRAB pmax pmax
comp=Z,12nm,1.5s
WRAB Tennant Creek 66.89 198 P P 17 56 20.3 +0.8
NB2 NORSAR Subarra 69.12 341 P P 17 56 33.1 -0.1
comp=Z,0.5nm,0.6s,baz=27,slow=6.9
NOA NORSAR Array B 69.12 341 P P 17 56 33.0 -0.1
comp=Z,1.4nm,0.8s,baz=29,slow=6.3,SNR=5.0
NOA LR LR 18 32 16.8
comp=Z,6.0nm,18.5s,baz=85,slow=41
NOA NORSAR Array B 69.12 341 P P 17 56 33.0 -0.1
KIV Kislovodsk 70.92 314 *eP* P 17 56 38.9 -5.6
KIV pmax pmax
comp=Z,14nm,1.0s
KIV MLR MLR
comp=Z,76nm,17.0s
KBZ Khabaz 70.97 313 P P 17 56 46.0 +1.4
comp=Z,3.3nm,0.7s,baz=69,slow=4.6,SNR=7.4
AKASG Malin Array Be 72.02 326 P P 17 56 50.7 -0.2
comp=Z,1.4nm,0.7s,baz=35,slow=5.7,SNR=4.3

GCG ***11*** *17:45:42.9±0.7, 13.˚98N×90.˚78W, h83km±12km, MD3.8*
SNET ***11*** *17:45:42.2±0.7, 13.˚96N×90.˚75W, h79km±7km, ML3.6*
UCR ***11*** *17:45:42.4±0.9, 13.˚97N×90.˚75W, h79km±9km, ML3.5*
IDC ***11*** *17:45:43.6±1.3, 14.˚28N×90.˚35W, h120km±5km, mb3.5/7, mb1 3.6/9, mb1mx3.4/36, mbtmp3.8/9, Error ellipse: s-maj=38.5km s-min=13.3km az=46.0*
ISC 11 17:45:40.5±0.9, 13.˚91N±0.˚07×90.˚79W±0.˚05, h104km±6km, n45, σ1s00/55, mb4.1/6, 8C-5D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.42**	**53**	*i* P	**P**	**Pn**	**17 45 55.7**	**-0.8**
IXG	**Ixpaco**	**0.42**	**53**	*i* P	**P**	**Pn**	**17 45 56.6**	**0.0**
IXG	**Ixpaco**	**0.42**	**53**	*i* P	**P**	**Pn**	**17 45 55.7**	**-0.8**
PCG	**Pacaya**	**0.51**	**20**	*eP*	**P**	**Pn**	**17 45 57.5**	**+0.3**
FUG	**Fuego 3**	**0.53**	**354**	*eP*	**P**	**Pn**	**17 45 57.3**	**0.0**
NBG	**Las Nubes**	**0.79**	**32**	*eP*	**P**	**Pn**	**17 46 00.4**	**+0.8**
NBG				eS		**Sn**	**17 46 15.7**	**+1.9**
ERG	**Entre ros, C**	**0.92**	**305**	*eP*	**P**	**Pn**	**17 46 01.5**	**+1.0**
RTAL	**Retalhuleu**	**1.07**	**305**	*eP*	**P**	**Pn**	**17 46 02.0**	**-0.1**
RTAL				eS		**Sn**	**17 46 17.9**	**-0.4**
RTAL				IAML			17 46 31.6	
comp=Z,615nm,0.4s								
STG3	**Santiaguito 3,**	**1.10**	**316**	*eP*	**P**	**Pn**	**17 46 03.1**	**+0.5**
RTR	**El Retiro**	**1.11**	**91**	*eP*	**P**	**Pn**	**17 46 03.1**	**+0.5**
RTR	**El Retiro**	**1.11**	**91**	*eP*	**P**	**Pn**	**17 46 03.1**	**+0.5**
APG	**El Apazote**	**1.13**	**16**	P	**P**	**Pn**	**17 46 02.8**	**-0.1**
comp=Z,226nm,0.3s,baz=199,slow=5.8,SNR=305								
APG				S		**Sn**	**17 46 19.6**	**-0.2**
comp=Z,57nm,0.3s,baz=344,slow=18,SNR=14								
SBLS	**San Blas**	**1.13**	**94**	iP	**P**	**Pn**	**17 46 03.4**	**+0.5**
SBLS				eS		**Sn**	**17 46 19.4**	**-0.5**
SBLS	**San Blas**	**1.13**	**94**	iP	**P**	**Pn**	**17 46 03.4**	**+0.5**
SBLS				eS		**Sn**	**17 46 19.4**	**-0.5**
SNJE	**San Jose**	**1.15**	**92**	*e*P	**P**	**Pn**	**17 46 03.3**	**+0.1**
SNJE	**San Jose**	**1.15**	**92**	*e*P	**P**	**Pn**	**17 46 03.3**	**+0.1**
MTO3	**Montecristo**	**1.47**	**71**	iP	**P**	**Pn**	**17 46 06.8**	**-0.1**
MTO3	**Montecristo**	**1.47**	**71**	iP	**P**	**Pn**	**17 46 06.8**	**-0.1**
BOQS	**Boqueron**	**1.47**	**97**	*e*P	**P**	**Pn**	**17 46 07.5**	**+0.5**
BOQS	**Boqueron**	**1.47**	**97**	*e*P	**P**	**Pn**	**17 46 07.5**	**+0.5**
SNET	**Serv Nac Est T**	**1.53**	**98**	*e*P	**P**	**Pn**	**17 46 07.8**	**+0.4**
SNET				IAML			17 46 34.9	
comp=Z,979nm,0.3s								
SNET	**Serv Nac Est T**	**1.53**	**98**	*e*P	**P**	**Pn**	**17 46 07.8**	**+0.4**
SNET				IAML			17 46 34.9	
comp=Z,979nm,0.3s								
ESQI	**Esquipulas**	**1.54**	**65**	iP	**P**	**Pn**	**17 46 08.1**	**+0.4**
HUEH	**Huehuetenango**	**1.56**	**334**	*e*P	**P**	**Pn**	**17 46 08.7**	**+0.7**
HUEH				eS		**Sn**	**17 46 29.5**	**+0.7**
MRL	**Marmol**	**1.58**	**42**	iP	**P**	**Pn**	**17 46 08.7**	**+0.5**
MRL	**Marmol**	**1.58**	**42**	*i* P	**P**	**Pn**	**17 46 09.5**	**+1.3**
MRL				eS		**Sn**	**17 46 30.4**	**+1.2**
MRL	**Marmol**	**1.58**	**42**	iP	**P**	**Pn**	**17 46 08.7**	**+0.5**
LFRS	**El Faro**	**1.70**	**100**	*e*P	**P**	**Pn**	**17 46 10.4**	**+0.8**
LFRS	**El Faro**	**1.70**	**100**	*e*P	**P**	**Pn**	**17 46 10.4**	**+0.8**
LBRS	**Las Brisas**	**1.70**	**96**	*e*P	**P**	**Pn**	**17 46 10.4**	**+0.8**
LBRS	**Las Brisas**	**1.70**	**96**	*e*P	**P**	**Pn**	**17 46 10.4**	**+0.8**
CMIG	**Matias Romero**	**5.06**	**309**	P	**P**	**Pn**	**17 46 54.9**	**+0.8**
comp=Z,1.2nm,0.3s,baz=91,slow=10,SNR=16								
CMIG				S		**Sn**	**17 47 49.8**	**-1.6**
comp=Z,0.8nm,0.3s,baz=67,slow=13,SNR=2.0								
TEIG	**Tepich**	**6.72**	**21**	P	**P**	**Pn**	**17 47 16.9**	**+0.2**
baz=251,slow=0.0								
JTS	**Las Juntas de**	**6.75**	**122**	P	**P**	**Pn**	**17 47 19.9**	**+2.8**
comp=Z,1.2nm,0.3s,baz=359,slow=12,SNR=5.8								
JTS				S		**Sn**	**17 48 32.7**	**+0.3**
comp=Z,0.7nm,0.3s,baz=336,slow=20,SNR=1.4								
TXAR	**Lajitas Array**	**19.44**	**324**	P	**P**	**Pn**	**17 50 01.3**	**+0.2**
comp=Z,0.2nm,0.3s,baz=150,slow=11,SNR=12								
SDV	**Santo Domingo**	**20.37**	**102**	P	**P**	**P**	**17 50 07.0**	**-2.3**
comp=Z,3.3nm,0.4s,baz=344,slow=17,SNR=3.5								
TKL	**Tuckaleechee C**	**22.55**	**15**	P	**P**	**P**	**17 50 30.8**	**-1.2**
comp=Z,2.6nm,0.3s,baz=182,slow=5.3,SNR=11								
NVAR	**Mina Array Bea**	**34.48**	**320**	P	**P**	**P**	**17 52 21.4**	**+2.6**
comp=Z,1.8nm,0.6s,baz=131,slow=7.8,SNR=11								
NVAR				PcP		**PcP**	**17 54 53.7**	**+1.8**
comp=Z,0.5nm,0.5s,baz=96,slow=3.6,SNR=2.6								
YKA	**Yellowknife Ar**	**51.39**	**346**	P	**P**	**P**	**17 54 33.6**	**-0.7**
comp=Z,0.3nm,0.5s,baz=142,slow=7.4,SNR=9.0								
RES	**Resolute Bay**	**60.81**	**359**	P	**P**	**P**	**17 55 39.5**	**-1.7**
comp=Z,2.0nm,0.9s,baz=212,slow=5.0,SNR=4.0								
INK	**Inuvik**	**60.86**	**343**	P	**P**	**P**	**17 55 40.5**	**-1.1**
comp=Z,1.2nm,0.6s,baz=133,slow=6.7,SNR=8.6								
ILAR	**Eielson Array**	**63.38**	**337**	P	**P**	**P**	**17 55 58.0**	**-0.6**
comp=Z,0.1nm,0.5s,baz=170,slow=5.7,SNR=5.1								
WRA	**Warramunga Arr**	**136.51**	**256**	PKP	**P**	**PKiKP**	**18 04 53.8**	**+0.9**
comp=Z,0.3nm,0.8s,baz=84,slow=2.0,SNR=1.6								
ASAR	**Alice Springs**	**136.75**	**250**	PKP	**P**	**PKiKP**	**18 04 53.9**	**+0.6**
comp=Z,0.5nm,1.0s,baz=90,slow=2.7,SNR=2.6								
CMAR	**Chiang Mai Arr**	**146.43**	**343**	PKPbc	**P**	**PKPdf**	**18 05 09.8**	**+0.8**
comp=Z,0.6nm,0.4s,baz=335,slow=3.0,SNR=2.8								

DJA 11 17:47:38.4±1.0, 2.˚5±3.˚3×12.˚8E±.˚1, h28km±12km, M3.9/11, mB4.8/1, mb4.5/2, MLv3.6/11, Mw(mB)4.1/1, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.02**	**147**	P	P	Pn	17 47 57.0	+0.2
MSAI				S	S	Sb	17 48 11.5	+1.1
AAI	**Ambon**	**1.20**	**188**	P	P	Pb	17 48 00.1	-0.5
NLAI	**Namlea**	**1.47**	**240**	P	P	Pn	17 48 03.2	+0.1
NLAI				S	S	Sn	17 48 21.4	0.0
LBMI	**Labuha**	**2.04**	**335**	P	P	Pn	17 48 11.6	+0.8
SANI	**Sanana**	**2.42**	**280**	P	P	Pn	17 48 15.0	-1.1
FAKI	**Fak Fak**	**3.90**	**96**	P	P	Pn	17 48 35.1	-1.4
APSI	**Ampana**	**6.90**	**283**	P	P	Pn	17 49 18.0	+0.3
0.2nm683nm47nm,1.1s								
MRSI	**Marisa**	**7.07**	**295**	P	P	Pn	17 49 21.0	+0.9

IDC 11 18:01:30.1±6.2, 6.˚46S×155.˚02E, h68km±44km, mb3.2/3, mb1 3.6/5, mb1mx3.3/25, mbtmp3.7/5, ML2.6/2, Error ellipse: s-maj=50.8km s-min=23.2km az=90.0,

Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.66**	**306**	P	P	Pn	18 02 23.7	-0.6
1.7nm,0.3s,baz=161,slow=0.5,SNR=8.0								
KRVT				S	S	Sn	18 03 07.1	+0.7
8.1nm,0.3s,baz=190,slow=23,SNR=4.1								
PMG	**Port Moresby**	**8.31**	**249**	P	P	Pn	18 03 29.7	+1.7
1.9nm,0.3s,baz=28,slow=5.6,SNR=8.2								
PMG				S	S	Sn	18 05 01.1	+0.6
0.4nm,0.3s,baz=288,slow=20,SNR=1.0								
WRA	**Warramunga Arr**	**24.14**	**234**	P	P		18 06 39.7	-0.2
0.9nm,0.5s,baz=58,slow=9.8,SNR=21								
WRA				PcP	PcP		18 10 20.5	+0.9
0.4nm,0.9s,baz=57,slow=2.7,SNR=4.6								
ASAR	**Alice Springs**	**26.55**	**228**	P	P		18 07 01.1	-0.7
0.3nm,0.9s,baz=57,slow=9.2,SNR=7.5								
ASAR				PcP	PcP		18 10 23.7	-1.3
0.4nm,0.9s,baz=47,slow=1.5,SNR=4.1								
H11S3	**WAKE ISLAND Hy**	**27.34**	**25**	T	T		18 35 31.6	
baz=204,slow=75,SNR=14								
H11S2	**WAKE ISLAND Hy**	**27.34**	**25**	T	T		18 35 22.5	
baz=204,slow=75,SNR=14								
H11S1	**WAKE ISLAND Hy**	**27.35**	**25**	T	T		18 35 19.3	
baz=204,slow=75,SNR=11								
CMAR	**Chiang Mai Arr**	**60.57**	**295**	P	P		18 11 34.2	+0.2
0.5nm,0.5s,baz=114,slow=5.3,SNR=7.2								

IDC 11 18:14:47.9±6.1, 29.˚23S×176.˚29W, h61km±36km, mb3.3/3, mb1 3.6/4, mb1mx3.3/41, mbtmp3.7/4, ML3.4/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/14, Error ellipse: s-maj=53.7km s-min=31.7km az=56.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.42**	**269**	P	P	Pn	18 15 11.1	-0.4
81nm,0.3s,baz=99,slow=22,SNR=2.2								
RAO				S	S	Sn	18 15 29.6	+0.2
166nm,0.3s,baz=254,slow=21,SNR=4.1								
URZ	**Urewera**	**10.54**	**210**	P	P	Pn	18 17 15.2	-0.9
0.3nm,0.3s,baz=102,slow=20,SNR=1.5								
URZ				S	S	Sn	18 19 13.3	+0.6
0.3nm,0.3s,baz=211,slow=15,SNR=1.6								
DZM	**Mont Dzumac**	**17.11**	**291**	LR	LR		18 24 02.9	
comp=Z,62nm,20.0s,baz=284,slow=32								
STKA	**Stephens Creek**	**36.20**	**255**	P	P		18 21 46.0	+1.1
1.1nm,0.8s,baz=116,slow=13,SNR=3.1								
ASAR	**Alice Springs**	**44.67**	**265**	P	P		18 22 53.9	-1.0
0.5nm,0.6s,baz=94,slow=6.9,SNR=12								
ASAR				PcP	PP		18 24 38.5	-1.6
0.4nm,0.9s,baz=112,slow=3.9,SNR=4.5								
WRA	**Warramunga Arr**	**45.56**	**270**	P	P		18 23 00.2	-1.8
0.4nm,0.5s,baz=110,slow=7.5,SNR=4.8								

IDC ***11*** *18:24:16.1±7.7, 7.˚03S×155.˚11E, h182km±47km, mb3.1/4, mb1 3.2/6, mb1mx3.0/35, mbtmp3.6/6, Error ellipse: s-maj=85.2km s-min=25.0km az=99.0*
ISC 11 18:24:10.9±2.3, 7.˚1S±0.˚1×155.˚5E±0.˚2, h150km, n12, σ1s26/7, mb3.5/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**4.44**	**308**	P	P	**Pn**	**18 25 18.1**	**+1.1**
1.2nm,0.3s,baz=222,slow=22,SNR=1.3								
KRVT				S	S	**Sn**	**18 26 07.4**	**-1.1**
1.3nm,0.3s,baz=104,slow=19,SNR=1.9								
PMG	**Port Moresby**	**8.60**	**254**	P	P	**Pn**	**18 26 13.8**	**+1.4**
0.9nm,0.3s,baz=156,slow=0.2,SNR=1.7								
WRA	**Warramunga Arr**	**24.21**	**236**	P	P		**18 29 13.8**	**-0.1**
0.5nm,0.4s,baz=61,slow=9.8,SNR=10								
ASAR	**Alice Springs**	**26.52**	**229**	P	P		**18 29 33.5**	**-1.2**
0.2nm,0.9s,baz=58,slow=10,SNR=6.2								
H11S3	**WAKE ISLAND Hy**	**27.69**	**23**	T	T		18 57 51.3	
baz=202,slow=76,SNR=103								
H11S2	**WAKE ISLAND Hy**	**27.70**	**23**	T	T		18 57 51.4	
baz=202,slow=76,SNR=119								
H11S1	**WAKE ISLAND Hy**	**27.71**	**23**	T	T		18 57 52.4	
baz=202,slow=76,SNR=58								
H11N1	**WAKE ISLAND Hy**	**28.88**	**23**	T	T		18 59 26.7	
baz=212,slow=79,SNR=10								
H11N3	**WAKE ISLAND Hy**	**28.89**	**23**	T	T		18 59 36.7	
baz=212,slow=79,SNR=7.0								
H11N2	**WAKE ISLAND Hy**	**28.90**	**23**	T	T		18 59 28.6	
baz=212,slow=79,SNR=4.5								
FITZ	**Fitzroy Crossi**	**31.11**	**247**	P	P		**18 30 14.7**	**-0.7**
1.5nm,1.1s,baz=68,slow=10,SNR=1.6								
MKAR	**Makanchi Array**	**83.82**	**319**	P	P		**18 36 23.9**	**+0.3**
0.7nm,0.6s,baz=93,slow=5.6,SNR=5.9								

JMA ***11*** *18:24:36.8±0.3, 30.˚53N×138.˚73E, h499km, M3.7*
IDC ***11*** *18:24:39.2±1.0, 30.˚46N×138.˚17E, h452km±12km, mb3.1/14, mb1 3.3/20, mb1mx3.2/45, mbtmp4.0/20, Error ellipse: s-maj=14.9km s-min=9.8km az=96.0*
NEIC ***11*** *18:24:39.2±1.6, 30.˚42N±0.˚09×138.˚2E±0.˚1, h452km±8km, mb4.0/29, Error ellipse: s-maj=16.0km s-min=12.6km az=103.0*
ISC 11 18:24:38.8±0.5, 30.˚49N±0.˚06×138.˚27E±0.˚07, h450km, n84, σ1s46/94, mb3.9/28, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.89**	**26**	P	**P**	**P**	**18 25 46.3**	**+1.4**
JHCJ				eS	**S**		**18 26 41.0**	**+2.3**
JHJ	**Hachijo jima 2**	**2.92**	**26**	P	**P**		**18 25 46.9**	**+1.7**
23nm,0.3s,baz=314,slow=19,SNR=2.1								
JHJ				S	**S**		**18 26 37.7**	**-1.5**
46nm,0.3s,baz=72,slow=23,SNR=7.0								
JHJ2	**Mitsune**	**2.93**	**26**	P	**P**		**18 25 47.0**	**+1.8**
JHJ2	**Mitsune**	**2.93**	**26**	P	**P**		**18 25 47.4**	**+2.2**
JMKN	**Mikurajimanish**	**3.58**	**18**	P	**P**		**18 25 51.6**	**+1.4**
JMKN				eS	**S**		**18 26 50.4**	**+2.0**
JIE	**Ise**	**4.11**	**342**	P	**P**		**18 25 57.9**	**+3.1**
HMMJ	**Hamamatsu 2**	**4.38**	**354**	P	**P**		**18 25 59.7**	**+2.5**
BSO3	**Boso 3**	**4.70**	**23**	P	**P**		**18 26 00.3**	**+0.4**
BSO3				eS	**S**		**18 27 05.3**	**-0.8**
BSO1	**Boso 1**	**4.74**	**28**	P	**P**		**18 26 01.3**	**+1.3**
BSO1				eS	**S**		**18 27 06.5**	**+0.2**
JOD2	**Odawara 2**	**4.81**	**8**	P	**P**		**18 26 02.0**	**+0.7**
JOD2				eS	**S**		**18 27 08.7**	**+0.1**
BSO4	**Boso 4**	**4.82**	**21**	P	**P**		**18 26 01.4**	**+0.2**
BSO4				eS	**S**		**18 27 08.2**	**-0.2**
CBIJ	**Chichi jima**	**4.82**	**134**	P	**P**		**18 26 00.3**	**-1.3**
CBIJ				eS	**S**		**18 27 05.6**	**-3.3**
JCJ	**Chichijima**	**4.82**	**134**	P	**P**		**18 26 00.7**	**-0.9**
10.0nm,0.3s,baz=12,slow=18,SNR=18								
JCJ				S	**S**		**18 27 04.5**	**-4.4**
73nm,0.3s,baz=270,slow=22,SNR=20								
JNY	**Yasuok**	**4.87**	**356**	P	**P**		**18 26 04.0**	**+2.1**
INU	**Inuyama**	**4.96**	**348**	P	**P**		**18 26 04.1**	**+1.4**
JHU	**Hanno**	**5.42**	**9**	P	**P**		**18 26 07.3**	**+0.2**
JHU				eS	**S**		**18 27 15.7**	**-3.6**
JRY	**Ryogami san**	**5.54**	**5**	P	**P**		**18 26 09.2**	**+0.8**
JYT	**Yasato**	**5.95**	**15**	P	**P**		**18 26 11.2**	**-1.2**
JAG	**Ashikaga**	**6.00**	**9**	P	**P**		**18 26 12.4**	**-0.6**
JAG				eS	**S**		**18 27 24.0**	**-6.1**
MJAR	**Matsushiro Arr**	**6.04**	**360**	P	**P**		**18 26 12.6**	**-0.8**
0.1nm,0.3s,baz=159,slow=11,SNR=5.9								
MJAR				S	**S**		**18 27 28.6**	**-2.2**
0.1nm,0.3s,baz=292,slow=17,SNR=5.1								
MAJO	**Matsushiro**	**6.04**	**360**	P	**P**		**18 26 15.4**	**+1.9**
MJB9	**Matsu-Tunnel**	**6.04**	**359**	P	**P**		**18 26 15.5**	**+2.0**
JHO	**Hitachi**	**6.40**	**17**	P	**P**		**18 26 16.7**	**-0.4**
JNU	**Nakatsue**	**6.82**	**295**	P	**P**		**18 26 23.9**	**+2.3**
1.1nm,0.3s,baz=99,slow=3.4,SNR=9.9								
KSRS	**Korea Array**	**11.04**	**312**	P	**P**		**18 27 08.1**	**+1.0**
0.1nm,0.3s,baz=130,slow=9.6,SNR=2.0								
USA0B	**Ussuriysk Arra**	**14.56**	**342**	P	**P**		**18 27 46.0**	**+0.9**
USRK	**Ussuriysk Ar.**	**14.56**	**342**	P	**P**		**18 27 46.0**	**+0.9**
baz=147,slow=10,SNR=37								
YHNB	**Yeheng**	**16.05**	**253**	P	**P**		**18 27 59.3**	**-2.0**
YULB	**Yu-li**	**16.69**	**249**	P	**P**		**18 28 06.7**	**-1.3**
YULB					IAmb	IAmb	18 28 21.6	
comp=Z,4.0nm,0.7s								
SSLB	**Suanglung**	**16.79**	**251**	P	**P**		**18 28 08.2**	**-0.8**
TPUB	**Ta-pu**	**17.28**	**250**	P	**P**		**18 28 12.7**	**-1.5**
KLR	**Kul'dur**	**19.36**	**347**	P	**P**		**18 28 35.6**	**+1.5**
comp=Z,0.6nm,0.3s,baz=154,slow=6.6,SNR=24								
ENH	**Enshi**	**24.81**	**277**	P	**P**		**18 29 22.7**	**-0.9**
PETK	**Petropavlovsk-**	**26.68**	**27**	P	**P**		**18 29 41.9**	**+2.0**
comp=Z,1.8nm,0.9s,baz=193,slow=4.9,SNR=9.9								
SONM	**Songino Array**	**29.89**	**314**	P	**P**		**18 30 07.2**	**-1.1**
comp=Z,0.4nm,0.6s,baz=128,slow=5.9,SNR=2.5								

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
YAK	**Yakutsk**	**32.05**	**352**	P	**P**		**18 30 26.4**	**-0.1**
YAK				IAmb	IAmb		18 30 27.2	
comp=Z,9.4nm,1.1s								
SLVN	**Son La**	**32.12**	**262**	P	**P**		**18 30 28.4**	**+0.6**
SLVN				IAmb	IAmb		18 30 28.9	
comp=Z,4.0nm,0.7s								
PBKT	**Sadao Pong**	**36.72**	**256**	P	**P**		**18 31 06.9**	**+0.4**
PBKT				IAmb	IAmb		18 31 07.5	
comp=Z,5.5nm,0.6s								
CHTO	**Chiang Mai**	**37.41**	**261**	P	**P**		**18 31 12.0**	**-0.3**
CM31	**Chiang Mai Arr**	**37.56**	**261**	P	**P**		**18 31 13.2**	**-0.3**
CM31				IAmb	IAmb		18 31 15.0	
comp=Z,4.1nm,0.6s								
CMAR	**Chiang Mai Arr**	**37.56**	**261**	P	**P**		**18 31 13.6**	**0.0**
comp=Z,2.4nm,0.7s,baz=60,slow=6.3,SNR=30								
KSM	**Kuching**	**39.19**	**228**	P	**P**		**18 31 27.2**	**+0.4**
KSM				IAmb	IAmb		18 31 28.4	
comp=Z,5.7nm,0.9s								
ADK	**Adak**	**39.27**	**44**	P	**P**		**18 31 25.2**	**-1.7**
ADK				IAmb	IAmb		18 31 37.3	
comp=Z,9.3nm,1.1s								
ATKA	**Atka Island**	**40.84**	**44**	P	**P**		**18 31 40.1**	**+0.6**
ATKA				IAmb	IAmb		18 31 57.8	
comp=Z,8.4nm,0.9s								
TIXI	**Tiksi**	**41.53**	**356**	P	**P**		**18 31 45.0**	**+0.1**
SOEI	**Soe**	**42.21**	**201**	P	**P**		**18 31 50.6**	**-0.6**
KULM	**Kulim**	**43.36**	**242**	P	**P**		**18 32 00.2**	**+0.1**
KULM				IAmb	IAmb		18 32 01.3	
comp=Z,4.1nm,0.9s								
IPM	**Ipoh**	**43.59**	**241**	P	**P**		**18 32 00.7**	**-1.3**
MTN	**Manton Dam**	**43.62**	**190**	P	**P**		**18 32 01.7**	**-0.4**
MTN				IAmb	IAmb		18 32 02.5	
comp=Z,4.4nm,0.8s								
TAPN	**Taplejung**	**44.07**	**279**	*eP*	**P**		**18 32 06.0**	**0.0**
ODAN	**Odare**	**44.49**	**278**	*eP*	**P**		**18 32 09.1**	**0.0**
RAMN	**Ramite**	**45.13**	**279**	*eP*	**P**		**18 32 13.9**	**-0.2**
comp=Z,8.2nm,0.7s								
JIRN	**Jiri**	**45.28**	**280**	*eP*	**P**		**18 32 15.7**	**+0.3**
comp=Z,15nm,0.3s								
GUN	**Gumba**	**45.47**	**280**	*eP*	**P**		**18 32 17.2**	**+0.4**
comp=Z,7.0nm,0.4s								
MKAR	**Makanchi Array**	**45.68**	**307**	P	**P**		**18 32 17.6**	**-0.2**
comp=Z,0.5nm,0.7s,baz=98,slow=8.7,SNR=4.0								
PKI	**Pulchoki**	**45.97**	**280**	*eP*	**P**		**18 32 20.0**	**-0.6**
KKN	**Kakani**	**46.01**	**280**	*eP*	**P**		**18 32 20.5**	**-0.4**
GKN	**Gorkha**	**46.50**	**281**	*eP*	**P**		**18 32 24.6**	**+0.1**
KNRA	**Kununurra**	**46.80**	**193**	P	**P**		**18 32 26.7**	**+0.1**
KNRA				IAmb	IAmb		18 32 28.5	
comp=Z,3.7nm,0.8s								
DANN	**Dangsing**	**47.14**	**282**	*eP*	**P**		**18 32 29.2**	**-0.3**
comp=Z,8.2nm,0.4s								
KOLN	**Koldanda**	**47.44**	**281**	*eP*	**P**		**18 32 31.4**	**-0.3**
comp=Z,4.1nm,0.4s								
PYUN	**Piuthan**	**47.86**	**282**	*eP*	**P**		**18 32 35.1**	**+0.2**
comp=Z,22nm,0.4s								
GSI	**Gunungsitoli**	**48.26**	**241**	P	**P**		**18 32 37.8**	**0.0**
FITZ	**Fitzroy Crossi**	**49.81**	**196**	P	**P**		**18 32 49.2**	**+0.1**
WB0	**Warramunga Arr**	**50.10**	**185**	P	**P**		**18 32 51.3**	**0.0**
WRAB	**Tennant Creek**	**50.27**	**185**		P		18 32 46.7	-5.9
WRAB				IAmb	IAmb		18 32 48.8	
comp=Z,6.5nm,1.1s								
WB2	**Warramunga Arr**	**50.28**	**185**	P	**P**		**18 32 52.5**	**-0.1**
WRA	**Warramunga Arr**	**50.28**	**185**	P	**P**		**18 32 52.5**	**-0.1**
comp=Z,1.2nm,0.6s,baz=360,slow=7.6,SNR=23								
WR0	**Warramunga Ar

RIGZ	Rimuhau	1.01 167	P	Pn	18 35 59.4	+0.6
KARZ	Kaharoa	1.02 253	P	Pn	18 35 59.2	+0.4
HLRZ	Highlands Stat	1.03 239	P	Pn	18 35 59.8	+0.7
SNGZ	Shannon Statio	1.06 186	P	Pn	18 36 00.4	+0.9
NGRZ	Ngongotaha	1.08 249	P	Pn	18 36 00.6	+0.8
HSRZ	Hossack Road	1.13 238	P	Pn	18 36 01.3	+0.9
KMRZ	Kaimai	1.22 264	P	Pn	18 36 01.7	+0.1
ALRZ	Allen Road	1.22 226	P	Pn	18 36 02.0	+0.4
RAHZ	Arahi	1.23 194	P	Pn	18 36 03.2	+1.5
MTHZ	Maungataniwha	1.23 204	P	Pn	18 36 01.8	0.0
PRGZ	Paritu Road	1.24 165	P	Pn	18 36 02.1	+0.2
MRHZ	Matea Rd	1.39 216	P	Pn	18 36 04.1	+0.2
MHGZ	Mahia Peninsul	1.47 167	P	Pn	18 36 04.7	-0.2
TOZ	Tahuroa Road	1.56 269	P	Pn	18 36 06.4	+0.3
BKZ	Black Stump Fm	1.63 208	P	Pn	18 36 07.4	+0.2
TLZ	Tolley Road	1.64 248	P	Pn	18 36 07.7	+0.4
KUZ	Kuaotunu	1.70 304	P	Pn	18 36 07.8	-0.2
RATZ	Rangitukua	1.76 229	P	Pn	18 36 09.6	+0.8
RITZ	Rihia Road	1.78 225	P	Pn	18 36 10.1	+0.9
MCHZ	McNeill Hill	1.82 199	P	Pn	18 36 12.2	+2.5
MKAZ	Moumakai	1.94 288	P	Pn	18 36 11.5	+0.3
KRVZ	Karewarewa	1.99 226	P	Pn	18 36 12.9	+0.9
WTVZ	West Tongariro	2.03 226	P	Pn	18 36 13.6	+1.0
NGZ	Ngauruhoe	2.06 225	P	Pn	18 36 14.0	+0.8
BHHZ	Black Hill Sta	2.08 212	P	Pn	18 36 13.6	+0.3
WIAZ	Waiheke Island	2.08 296	P	Pn	18 36 13.5	+0.3
TWVZ	Taurewa	2.09 229	P	Pn	18 36 14.2	+0.7
TUVZ	Tukino	2.10 222	P	Pn	18 36 14.4	+0.8
KRHZ	Kereru	2.10 204	P	Pn	18 36 13.2	-0.4
KAHZ	Kahuranaki	2.12 192	P	Pn	18 36 13.5	-0.3
FWVZ	Far West T-bar	2.15 224	P	Pn	18 36 15.2	+0.9
WHVZ	Whangaehu Hut	2.15 223	P	Pn	18 36 15.3	+0.9
MOVZ	Moawhango	2.16 218	P	Pn	18 36 14.5	+0.2
ETAZ	East Tamaki Re	2.17 290	P	Pn	18 36 15.0	+0.6
GRZ	Great Barrier	2.18 312	P	Pn	18 36 14.6	0.0
TRVZ	Turoa	2.18 223	P	Pn	18 36 15.6	+0.9
HIZ	Hauiti	2.21 248	P	Pn	18 36 16.0	+1.0
MBAZ	Motutapu North	2.26 294	P	Pn	18 36 16.3	+0.6
MTVZ	Mangateitei	2.28 223	P	Pn	18 36 16.8	+0.8
PKVZ	Pokaka	2.29 226	P	Pn	18 36 17.1	+1.0
AWAZ	Awhitu Peninsu	2.35 285	P	Pn	18 36 17.5	+0.7
PXZ	Pawanui	2.35 191	P	Pn	18 36 16.1	-0.8
VRZ	Vera Road	2.55 236	P	Pn	18 36 20.8	+1.2
WCZ	Waipu Caves	3.08 304	P	Pn	18 36 27.9	+1.2
PKE	Pukeiti	3.10 241	P	Pn	18 36 28.7	+1.5
OUZ	Omahuta	4.00 307	P	Pn	18 36 41.3	+1.9

*IDC **11** 18:58:36.1±1.2, 12°.55N×85°.65W, h0km, mb3.4/4, mb1 3.8/6, mb1mx3.6/29, mbtmp3.4/6, ML3.1/2, MS2.6/3, Ms1 2.6/3, ms1mx2.4/28, Error ellipse: s-maj=64.6km s-min=20.2km az=65.0*

*INET **11** 18:58:37.2, 11°.30N×87°.01W, h16km, ML3.4*

*UCR **11** 18:58:37.8±2.2, 11°.45N×86°.85W, h2km±148km, MD4.3*

ISC 11 18:58:37.1±0.8, 11°.7N±0°.1×86°.66W±0°.09, h10km, n26, σ2s30/27, mb3.5/4, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CRIN	San Cristobal	1.11	340	eP		Pn		18 59 01.1	+2.3
ACON	Acoyapa	1.49	78	eP		Pg		18 59 07.3	+1.6
CSGN	Cosiguina Volc	1.58	326	eP		Pb		18 59 07.9	+1.4
LIM1	Limonal	1.68	124	iP		Pn		18 59 08.5	+1.9
GUAB	Guayabo de Bag	1.69	124	iP		Pn		18 59 08.9	+2.0
COLC	Colonia	1.74	124	iP		Pn		18 59 09.7	+2.3
CUI	Cuipilapa	1.77	124	iP		Pn		18 59 09.5	+1.6
GUAI	GUAI	1.78	141	iP		Pn		18 59 07.0	-1.0
PLVR	Palo Verde	1.83	135	eP		Pn		18 59 11.7	+2.9
JTS	Las Juntas de	2.16	129	Pn		Pn		18 59 16.0	+2.8
	12nm,0.3s,baz=20,slow=20,SNR=36								
JTS				Sn		Sg		18 59 47.8	+1.3
	21nm,0.3s,baz=354,slow=14,SNR=14								
JTS				LR		LR		18 59 55.0	
	comp=Z,45nm,19.2s,baz=355,slow=34								
JTS	Las Juntas de	2.16	129	eP		Pn		18 59 14.9	+1.7
CEDE	Laguna Cedeo	2.25	121	eP		Pn		18 59 16.4	+1.9
ARE1	Arenal 1	2.25	122	eP		Pb		18 59 18.1	+0.2
FORC	Fortuna	2.28	121	iP		Pn		18 59 17.5	+2.5
ESPN	Las Esperanzas	2.37	77	eP		Pg		18 59 21.5	-1.1
APG	El Apazote	4.98	312	Pn		Pn		18 59 57.8	+5.6
	0.2nm,0.3s,baz=83,slow=16,SNR=1.4								
APG				Sn		Sn		19 00 51.2	+1.2
	0.4nm,0.3s,baz=322,slow=17,SNR=3.8								
TEIG	Tepich	8.66	350	LR		LR		19 04 15.2	
	comp=Z,52nm,19.4s,baz=76,slow=42								
CMIG	Matias Romero	9.62	305	Pn		Pn		19 00 56.4	+0.5
	0.4nm,0.3s,baz=164,slow=12,SNR=2.3								
CMIG				Sn		Sn		19 02 49.6	+5.4
	0.3nm,0.3s,baz=59,slow=18,SNR=1.3								
TXAR	Lajitas Array	23.68	321	P		P		19 03 48.1	-1.1
	1.1nm,0.7s,baz=137,slow=9.8,SNR=15								
PDAR	Pinedale Array	36.84	331	P		P		19 05 44.5	-1.4
	0.3nm,0.5s,baz=125,slow=10,SNR=4.0								
NVAR	Mina Array Bea	38.81	319	PcP		PcP		19 08 13.2	-0.7
	0.9nm,0.6s,baz=138,slow=5.9,SNR=3.7								
YKA	Yellowknife Ar	54.58	345	P		P		19 08 02.6	-2.8
	0.5nm,0.8s,baz=139,slow=7.9,SNR=9.5								
YKA				PcP		PcP		19 09 05.3	-3.1
	0.3nm,0.6s,baz=143,slow=4.5,SNR=7.2								
ILAR	Eielson Array	67.06	336	P		P		19 09 28.3	-2.1
	0.2nm,0.6s,baz=122,slow=4.4,SNR=2.7								
NOA	NORSAR Array B	83.68	29	LR		LR		19 47 11.9	
	comp=Z,5.0nm,18.5s,baz=195,slow=35								
WRA	Warramunga Arr	139.78	253	PKhKP		PKPdf		19 18 04.8	-1.6
	0.3nm,0.7s,baz=92,slow=2.5,SNR=1.5								
CMAR	Chiang Mai Arr	149.57	349	PKPbc		PKPdf		19 18 26.4	+3.0
	0.6nm,0.7s,baz=336,slow=2.0,SNR=1.4								

*IDC **11** 19:24:57.5±2.2, 6°.26S×130°.42E, h136km±22km, mb3.4/3, mb1 3.5/8, mb1mx3.2/45, mbtmp3.9/8, Error ellipse: s-maj=25.9km s-min=16.6km az=88.0*

ISC 11 19:24:56.0±0.8, 6°.39S±0°.06×130°.6E±0°.1, h150km, n8, σ3s99/13, mb3.6/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.53	7	P		Pn		19 26 16.4	-0.2
	2.6nm,0.3s,baz=189,slow=18,SNR=31								
SIJI				S		Sn		19 27 14.1	-5.4
	4.9nm,0.3s,baz=320,slow=22,SNR=28								
BATI	Baumata	7.80	240	P		Pn		19 26 48.6	+1.7
	1.0nm,0.3s,baz=53,slow=20,SNR=2.1								
BATI				S		Sn		19 28 14.3	+0.4
	1.5nm,0.3s,baz=254,slow=19,SNR=2.2								
FITZ	Fitzroy Crossi	12.59	202	P		P		19 27 51.8	-3.7
	0.3nm,0.3s,baz=23,slow=12,SNR=7.9								
FITZ				S		Sn		19 30 02.1	-7.1
	0.5nm,0.3s,baz=194,slow=17,SNR=8.4								
WRA	Warramunga Arr	13.96	165	P		P		19 28 09.9	-1.0
	0.4nm,0.3s,baz=347,slow=13,SNR=13								
WRA				S		Sn		19 30 38.3	-4.2
	0.9nm,0.3s,baz=3.8,slow=20,SNR=7.9								
ASAR	Alice Springs	17.48	170	P		Pn		19 28 55.1	+4.4
	0.5nm,0.3s,baz=349,slow=11,SNR=53								
ASAR				S		Sn		19 32 06.3	-0.4
	0.2nm,0.3s,baz=360,slow=27,SNR=5.8								
STKA	Stephens Creek	27.38	159	P		P		19 30 31.7	+4.3
	0.9nm,0.7s,baz=359,slow=11,SNR=3.9								
MKAR	Makanchi Array	68.02	326	P		P		19 35 41.0	+1.8
	0.9nm,0.4s,baz=120,slow=8.2,SNR=16								
KURBB	Kurchatov Arra	72.28	328	P		P		19 36 06.7	+1.7
	0.3nm,0.6s,baz=132,slow=4.3,SNR=4.5								

*CERI **11** 19:29:34.0, 36°.91N×97°.66W, h5km*

*TUL **11** 19:29:34.5±1.7, 36°.91N±0°.03×97°.66W±0°.02, h5km±2km, ML3.0, Error ellipse: s-maj=4.9km s-min=3.0km az=336.0*

*NEIC **11** 19:29:35.1±1.5, 36°.88N±0°.02×97°.65W±0°.02, h3km±7km, Error ellipse: s-maj=3.7km s-min=2.2km az=160.0*

*ANF **11** 19:29:36.5±1.1, 36°.82N×97°.62W, h5km±7km, ML3.6/6, Error ellipse: s-maj=4.8km s-min=2.1km az=55.0*

ISC 11 19:29:35.2±1.0, 36°.90N±0°.06×97°.69W±0°.04, h10km, n16, σ1s05/20, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.94	88			Pg		19 29 52.1	-1.2
T35A				Sg		Sg		19 30 04.3	-1.3
U32A	Winter Ranch,	1.17	244			Pn		19 29 56.9	-0.8
ADOK	Arcadia Dam	1.27	168	Pg		Pn		19 29 58.4	-0.5
OKCSW	OKLAHOMA CITY	1.50	172			Pn		19 30 02.2	+0.1
R32A	Long Quarter,	1.73	332			Pb		19 30 06.8	-0.2
TUL1	Leonard	1.82	122	P		Pn		19 30 07.0	+0.4
	baz=304								
TUL1				S		Sb		19 30 31.3	0.0
	baz=304								
TUL1	Leonard	1.82	122			Pn		19 30 06.9	+0.4
WMOK	Wichita Mounta	2.33	203	P		Pn		19 30 14.7	+1.2
	baz=22								
WMOK	Wichita Mounta	2.33	203			Pn		19 30 14.7	+1.2
KSU1	Kansas State U	2.36	21	P		Pb		19 30 17.1	-0.7
	baz=201								
KSU1				S		Sb		19 30 47.5	+0.4
	baz=201								
CBKS	Cedar Bluff	2.51	320	S		Sb		19 30 52.7	+1.4
	baz=139								
W39A	Magazine	3.59	117	S		Sn		19 31 14.4	+1.1
	baz=300								
W39A	Magazine	3.59	117			Pn		19 30 31.8	+0.9
U40A	Yellville	3.93	96			Pn		19 30 36.7	+1.2
MIAR	Mount Ida	4.08	124	P		Pn		19 30 38.9	+1.2
	baz=307								
MIAR				S		Sn		19 31 26.2	+0.7
	baz=307								
MIAR	Mount Ida	4.08	124			Pn		19 30 39.5	+1.9

*IDC **11** 19:39:22.3±3.1, 6°.13S×147°.39E, h0km, mb4.3/3, mb1 4.4/6, mb1mx3.8/31, mbtmp4.2/6, ML4.1/2, Error ellipse: s-maj=45.6km s-min=35.7km az=128.0*

ISC 11 19:39:31.9±3.3, 6°.5S±0°.2×147°.8E±0°.4, h100km, n6, σ2s81/7, mb4.1/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	2.92	193	Pn		Pn		19 40 16.0	-0.6
	28nm,0.3s,baz=4.9,slow=8.6,SNR=79								
PMG				Sn		Sn		19 40 52.1	+1.2
	21nm,0.3s,baz=200,slow=18,SNR=5.7								
CTA	Charters Tower	13.55	186	Pn		P		19 42 42.9	-2.7
	0.6nm,0.3s,baz=344,slow=13,SNR=7.4								
WRA	Warramunga Arr	18.66	223	P		Pn		19 43 42.0	-1.7
	0.6nm,0.3s,baz=48,slow=11,SNR=31								
ASAR	Alice Springs	21.64	217	P		P		19 44 15.0	+0.7
	5.5nm,0.5s,baz=53,slow=9.0,SNR=155								
ASAR				S		Sn		19 48 17.6	-6.3
	1.5nm,0.9s,baz=36,slow=19,SNR=6.6								
FITZ	Fitzroy Crossi	24.47	240	P		P		19 44 42.2	+0.4
	3.0nm,0.3s,baz=55,slow=12,SNR=36								
STKA	Stephens Creek	25.86	192	P		P		19 44 58.6	+4.4
	2.6nm,0.4s,baz=9.5,slow=12,SNR=12								

*INET **11** 20:06:26.7, 11°.31N×86°.91W, h41km, ML3.5*

UCR 11 20:06:24.5±1.6, 11°.40N×86°.91W, h0km±9km, MD4.2, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CRIN	San Cristobal	1.30	354	eP		Pg		20 06 49.2	-0.3
NY14	Universidad de	1.54	119	eP		Pn		20 06 52.6	-0.6
GBS3	Finca Las Img	1.55	113	eP		Pn		20 06 52.7	-0.7
LAPC	Finca la Perla	1.57	113	eP		Pn		20 06 52.6	-1.1
BUEV	Buena Vista	1.59	112	eP		Pn		20 06 53.6	-0.4
GB1A	Borinquen Arri	1.59	111	eP		Pn		20 06 53.7	-0.3
BUAI	Buenos Aires	1.63	108	eP		Pn		20 06 54.5	0.0
GPS1	Guardaparques	1.65	112	eP		Pn		20 06 54.6	-0.2
GPS2	Hotel Rincn d	1.65	113	eP		Pn		20 06 55.0	+0.1
CSGN	Cosiguina Volc	1.69	338	eP		Pn		20 06 55.5	+0.1
LIM1	Limonal	1.77	113	eP		Pn		20 06 56.3	-0.1
GUAI	GUAI	1.77	129	eP		Pn		20 06 55.1	-1.3
ACON	Acoyapa	1.79	71	eP		Pn		20 06 55.0	-1.6
COLC	Colonia	1.82	113	eP		Pn		20 06 57.5	+0.3
PLVR	Palo Verde	1.85	124	eP		Pn		20 06 56.8	-0.8
CUI	Cuipilapa	1.86	113	eP		Pn		20 06 57.6	-0.1
CUI				eS		Sg		20 07 25.8	+1.5
ACAL	Aguas Claras	1.99	112	eP		Pn		20 06 59.5	0.0
ACAL				eS		Sb		20 07 27.1	+0.1
PTEN	Parque Tenorio	2.00	110	eP		Pn		20 06 59.3	-0.4
JTS	Las Juntas de	2.21	120	eP		Pn		20 07 03.9	+1.4
ARE1	Arenal 1	2.34	113	eP		Pb		20 07 06.5	-1.1
CEDE	Laguna Cedeo	2.34	113	eP		Pb		20 07 06.9	-0.8
CEDE				eS		Sg		20 07 41.8	+1.9

*NEIC **11** 20:42:30.4±1.8, 13°.88S±0°.08×167°.24E±0°.09, h189km±4km, mb5.3/229, Mwb5.7/41, Mww5.6, Mwc5.7(GCMT), Error ellipse: s-maj=12.1km s-min=11.2km az=84.0*

*MOS **11** 20:42:30.8±1.2, 13°.85S×167°.21E, h201km, mb5.3/25, Error ellipse: s-maj=7.7km s-min=6.7km az=118.4*

*IDC **11** 20:42:31.2±0.3, 13°.97S×167°.22E, h195km±2km, mb5.0/30, mb1 5.0/33, mb1mx5.0/36, mbtmp5.5/33, MS4.2/12, Ms1 4.2/12, ms1mx4.0/37, Error ellipse: s-maj=6.8km s-min=6.5km az=177.0*

*NEIC **11** 20:42:31.6, 13°.89S×167°.25E, h192km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.62; $M_{\theta\theta}$-0.48; $M_{\phi\phi}$-3.14; $M_{r\theta}$-1.30; $M_{\theta\phi}$1.40; $M_{\phi r}$-0.56; Fault plane solution: M_o3.95000×10^{17} NP1:ϕ_s318.38000°, δ48.16000°, λ63.34000°. NP2:ϕ_s175.35000°, δ48.26000°, λ116.62000°. Principal axes: T 4.1239, Plg70.0000°, Azm157.0000°; N -0.3832, Plg20.0000°, Azm337.0000°; P -3.7407, Plg0.0000°, Azm247.0000°;*

*BJI **11** 20:42:32.6±0.0, 13°.50S×167°.24E, h210km, mB5.3/54, mb5.3/78*

*GCMT **11** 20:42:32.4±0.1, 14°.01S±0°.01×167°.13E±0°.01, h198km, MW5.6/162, Moment Tensor Solution. s149,c257; s162,c323; Duration: 1s6 Moment tensor: Scale 10^{17} Nm; M_{rr}3.21±.03; $M_{\theta\theta}$-0.46±.04; $M_{\phi\phi}$-2.76±.04; $M_{r\theta}$-1.30±.03; $M_{\theta\phi}$1.46±.04; $M_{\phi r}$-0.50±.03; Best double couple: M_o3.61500×10^{17} NP1:ϕ_s174.00000°, δ48.00000°, λ120.00000°. NP2:ϕ_s314.00000°, δ50.00000°, λ61.00000°. Principal axes: T 3.7600, Plg68.0000°, Azm157.0000°; N -0.2960, Plg22.0000°, Azm333.0000°; P -3.4700, Plg1.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **11** 20:42:33, 13°.96S×167°.10E, h199km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.07; $M_{\theta\theta}$-0.27; $M_{\phi\phi}$-2.80; $M_{r\theta}$-1.39; $M_{\theta\phi}$1.44; $M_{\phi r}$-0.41; Fault plane solution: M_o3.58000×10^{17} NP1:ϕ_s314.00000°, δ51.00000°, λ59.00000°. NP2:ϕ_s177.00000°, δ48.00000°, λ122.00000°. Principal axes: T 3.6972, Plg67.0000°, Azm159.0000°; N -0.2390, Plg23.0000°, Azm334.0000°; P -3.4582, Plg2.0000°, Azm65.0000°;*

*NEIC **11** 20:42:35, 13°.71S×166°.94E, h200km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.73; $M_{\theta\theta}$-0.50; $M_{\phi\phi}$-2.23; $M_{r\theta}$-1.19; $M_{\theta\phi}$1.12; $M_{\phi r}$-0.84; Fault plane solution: M_o3.12000×10^{17} NP1:ϕ_s176.00000°, δ52.00000°, λ120.00000°. NP2:ϕ_s312.00000°, δ47.00000°, λ57.00000°. Principal axes: T 3.3640, Plg66.0000°, Azm149.0000°; N -0.5721, Plg23.0000°, Azm336.0000°; P -2.7919, Plg3.0000°, Azm245.0000°;*

ISC 11 20:42:31.5±0.3, 13°.94S±0°.03×167°.30E±0°.03, h204km±2km, h204km:pP-P,n823,σ1s65/860, mb5.3/224, 82C-16D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.13	186	ePn		Pn		20 44 27.3	+0.8
	835nm,1.2s								
DZM				eSn		S		20 45 53.3	-4.9
	1µm,1.2s								
DZM	Mont Dzumac	8.13	186	P		Pn		20 44 27.6	+1.1
	24nm,0.3s,baz=42,slow=19,SNR=79								
DZM				S		S		20 45 58.3	+0.1
	12nm,0.3s,baz=301,slow=22,SNR=8.8								
HNR	Honiara	8.48	301	P		Pn		20 44 32.0	+1.0
	20nm,0.3s,baz=216,slow=2.9,SNR=24								
HNR				S		S		20 46 06.8	+0.3
	baz=150,slow=20,SNR=1.3								
HNR				LR		LR		20 47 28.9	
	comp=Z,2µm,20.8s,baz=126,slow=35								
MSVF	Nonsavu	11.01	111	c iP		P		20 45 08.8	-1.2
MSVF	Nonsavu	11.01	111			P		20 45 09.7	-0.3
FUNA	Funafuti	12.85	66	P		P		20 45 29.1	-1.3
KRVT	Keravat (AS076	17.84	301	P		P		20 46 25.8	+0.2
	2.3nm,0.3s,baz=72,slow=23,SNR=3.9								
KRVT				S		S		20 49 40.4	+0.3
	0.1nm,0.3s,baz=241,slow=19,SNR=0.7								
EIDS	Eidsvold	19.02	231	P		P		20 46 37.5	-0.7
	baz=19,SNR=124								
EIDS	Eidsvold	19.02	231	P		Pn		20 46 40.0	-1.3
LHI	Lord Howe Isla	19.06	202	P		P		20 46 38.6	+0.1
	baz=19,SNR=33								
LHI	Lord Howe Isla	19.06	202	P		Pn		20 46 40.3	-1.5
PMG	Port Moresby	20.23	281	P		P		20 46 52.1	+0.9
	139nm,1.0s,baz=94,slow=9.5,SNR=17								
PMG				S		S		20 50 29.4	+2.4
	14nm,0.9s,baz=135,slow=20,SNR=1.3								
PMG	Port Moresby	20.23	281	P		P		20 46 52.2	+1.0
PMG				IAmb		IAmb		20 46 55.9	
	comp=Z,218nm,1.1s								
AFI	Afiamalu	20.31	92	P		P		20 46 53.9	+1.7
AFI				pmax		pmax			
	comp=Z,549nm,1.1s								
AFI	Afiamalu	20.31	92	P		P		20 46 53.9	+1.7
CTA	Charters Tower	21.02	250	P		P		20 47 00.1	+0.4
	comp=Z,148nm,0.8s,baz=80,slow=12,SNR=58								
CTA				S		S		20 50 40.3	-1.4
	comp=Z,17nm,1.1s,baz=30,slow=20,SNR=1.8								
CTA				PcP		PcP		20 50 58.9	+0.8
	comp=Z,13nm,0.9s,baz=297,slow=2.3,SNR=2.2								
CTA				ScP		ScP		20 54 16.9	+1.3
	comp=Z,8.2nm,0.9s,baz=0.0,slow=2.0,SNR=2.5								
CTAO	Charters Tower	21.02	250	P		P		20 47 00.2	+0.6
CTAO				pmax		pmax			
	comp=Z,169nm,0.9s								
CTAO	Charters Tower	21.02	250	P		P		20 47 00.2	+0.6
CTAO				IAmb		IAmb		20 47 03.3	
	comp=Z,169nm,0.8s								
RMQ	Roma	21.38	231	P		P		20 47 04.5	+1.2
	baz=22,SNR=159								
ARMA	Armidale	21.85	219	P		P		20 47 09.9	+1.8
	baz=22,SNR=74								
ARMA	Armidale	21.85	219	P		P		20 47 09.4	+1.3
OUZ	Omahuta	21.94	166	P		P		20 47 09.8	+1.1
OUZ				IAmb		IAmb		20 47 11.7	
	comp=Z,359nm,1.8s								
NIUE	Niue	22.42	106	P		P		20 47 14.1	+0.7
	baz=22,SNR=5.7								
NIUE	Niue	22.42	106	P		P		20 47 14.0	+0.5
MTSU	Mount Surprise	22.47	256	P		P		20 47 14.7	+0.7
	baz=23,SNR=117								
PATS	Pohnpei	22.49	336	P		P		20 47 15.9	+1.8
	baz=23,SNR=4.7								
PATS	Pohnpei	22.49	336	P		P		20 47 14.1	+0.1
PATS				IAmb		IAmb		20 47 16.0	
	comp=Z,102nm,0.8s								
COEN	Coen	23.41	267	P		P		20 47 23.6	+1.1
	baz=24,SNR=27								
COEN	Coen	23.41	267	P		P		20 47 23.3	+0.9
KNTN	Kanton	23.51	64	P		P		20 47 23.1	-0.2
MGCD	Mangrove Creek	24.19	215	P		P		20 47 31.0	+1.7
	baz=24,SNR=20								
QLP	Quilpie	24.97	236	P		P		20 47 37.3	+0.8
	baz=25,SNR=26								
HIZ	Hauiti	25.38	166	P		P		20 47 40.5	+0.5
HIZ				IAmb		IAmb		20 47 42.7	
	comp=Z,121nm,1.1s								
MXZ	Matakaoa Point	25.49	159	P		P		20 47 41.9	+0.9
URZ	Urewera	25.74	162	P		P		20 47 43.5	+0.3
	comp=Z,18nm,0.6s,baz=348,slow=4.8,SNR=9.4								
URZ				S		S		20 51 59.5	+2.6
	comp=Z,3.9nm,0.5s,baz=68,slow=11,SNR=1.1								
URZ	Urewera	25.74	162	IAmb		IAmb		20 47 56.1	
	comp=Z,36nm,0.8s								
BKZ	Black Stump Fm	26.41	164	P		P		20 47 49.1	-0.3
BKZ				IAmb		IAmb		20 47 51.5	
	comp=Z,55nm,0.6s								
CMSA	Cobar Meteorol	26.44	225	P		P		20 47 50.4	+0.8
	baz=27,SNR=66								
YNG	Young	26.52	217	P		P		20 47 51.8	+1.4
	baz=27,SNR=27								
CNB	Canberra Magne	26.72	214	P		P		20 47 53.2	+1.0
	baz=27,SNR=30								
CAN	Canberra	26.92	215	P		P		20 47 53.6	-0.4
CAN				pmax		pmax			
	comp=Z,185nm,1.3s								
CAN	Canberra	26.92	215	P		P		20 47 53.6	-0.4
QRZ	Quartz Range	27.17	171	P		P		20 47 57.7	+1.6
QRZ				IAmb		IAmb		20 48 04.7	
	comp=Z,42nm,0.9s								
QIS	Mount Isa	27.23	252	P		P		20 47 56.5	-0.3
	baz=27,SNR=33								
NNZ	Nelson	27.69	170	P		P		20 48 01.6	+0.9
NNZ				IAmb		IAmb		20 48 10.4	
	comp=Z,75nm,1.4s								
TUWZ	Tuamarina	27.99	169	P		P		20 48 03.7	+0.4
SNZO	South Karori	28.02	168	P		P		20 48 03.6	0.0
SNZO				IAmb		IAmb		20 48 45.4	
	comp=Z,119nm,1.1s								
MILA	Mila	28.14	212	P		P		20 48 06.0	+1.2
	baz=28,SNR=6.4					

ASAR PKiKP **PKiKP** **20 58 51.6 -1.0**
comp=Z,1.0nm,0.6s,baz=98,slow=1.4,SNR=7.6
ASAR LR LR 21 01 52.1
comp=Z,949nm,20.6s,baz=62,slow=35
ASAR P3KPbc 21 20 02.2
comp=Z,0.3nm,0.7s,baz=261,slow=3.7,SNR=4.7
MOO Moorlands 33.30 208 P **P** **20 48 51.1 +1.3**
baz=33,SNR=27
TAU Tasmania Unive 33.61 207 P **P** **20 48 53.9 +1.3**
TAU pmax pmax
comp=Z,243nm,0.9s
TAU Tasmania Unive 33.61 207 P **P** **20 48 53.9 +1.3**
KDU Kakadu 33.89 268 P **P** **20 48 55.0 -0.4**
baz=34,SNR=28
BBOO Buckleboo 34.09 231 P **P** **20 48 56.9 +0.1**
baz=34,SNR=139
BBOO Buckleboo 34.09 231 P **P** **20 48 57.1 +0.2**
MTN Manton Dam 35.18 267 P **P** **20 49 07.0 +0.6**
baz=35,SNR=7.0
MTN Manton Dam 35.18 267 P **P** **20 49 06.9 +0.5**
KNRA Kununurra 37.26 262 P **P** **20 49 23.3 -0.7**
baz=37,SNR=95
KNRA Kununurra 37.26 262 P **P** **20 49 23.3 -0.7**
SIJI Sorong 37.94 287 pP **pP** **20 50 10.8 -0.7**
baz=100,slow=11
SIJI S **S** **20 55 03.2 -3.2**
comp=Z,1.3nm,0.4s,baz=217,slow=20,SNR=1.8
BNDI Bandanaira 38.02 281 P **P** **20 49 30.6 +0.2**
comp=Z,7μmcomp=Z,410nm,1.0s
WRKA Warakurna 38.26 247 P **P** **20 49 31.5 -0.9**
baz=38,SNR=456
FORT Forrest 39.73 238 P **P** **20 49 44.0 -0.4**
baz=40,SNR=91
FORT Forrest 39.73 238 P **P** **20 49 43.9 -0.4**
FITZ Fitzroy Crossi 40.19 258 P **P** **20 49 47.7 -0.7**
baz=40,SNR=53
FITZ Fitzroy Crossi 40.19 258 P **P** **20 49 48.4 0.0**
comp=Z,44nm,0.9s,baz=92,slow=11
FITZ S **S** **20 55 38.6 -1.5**
comp=Z,3.6nm,0.9s,baz=0.0,slow=20,SNR=0.9
FITZ LR LR 21 05 42.7
comp=Z,937nm,21.2s,baz=98,slow=35
FITZ Fitzroy Crossi 40.19 258 P **P** **20 49 48.4 0.0**
FITZ IAmb IAmb 20 49 49.9
comp=Z,71nm,1.1s
NLAI Namlea 41.07 281 P **P** **20 49 56.3 +0.7**
comp=Z,4μmcomp=Z,167nm,1.1s
LBMI Labuha 41.53 285 P **P** **20 49 59.9 +0.5**
comp=Z,3μmcomp=Z,96nm,1.1s
PAE Paea 41.59 101 *eP* **P** **20 50 01.2 +1.4**
comp=Z,10nm,1.0s
PPT2 Papeete2 41.60 101 *eP* **P** **20 50 01.7 +1.7**
comp=Z,158nm,1.3s
PPT2 *eS* **S** **20 56 00.7 -0.3**
comp=Z,671nm,31.0s
TIAR Tiarei 41.82 101 *eP* **P** **20 50 03.4 +1.7**
comp=Z,35nm,1.2s
TBI Tubuai 41.89 109 *eS* **S** **20 56 04.0 -1.0**
comp=Z,580nm,27.0s
TVO Taravao 41.91 101 *eP* **P** **20 50 04.0 +1.6**
comp=Z,44nm,1.2s
SOEI Soe 42.27 271 P **P** **20 50 06.1 +0.6**
comp=Z,2μmcomp=Z,98nm,0.9s
SANI Sanana 42.49 282 P **P** **20 50 07.5 +0.4**
comp=Z,2μmcomp=Z,120nm,1.0s
BATI Baumata 42.79 270 P **P** **20 50 10.6 +1.1**
comp=Z,135nm,0.8s,baz=142,slow=1.0,SNR=18
BATI pP **pP** **20 50 52.1 -0.4**
comp=Z,42nm,0.7s,baz=298,slow=22,SNR=1.8
BATI Baumata 42.79 270 P **P** **20 50 10.4 +0.9**
comp=Z,1μmcomp=Z,108nm,0.9s
MEH Mehetia 43.03 101 *eP* **P** **20 50 13.0 +1.6**
comp=Z,50nm,1.0s
PMOR Pomariorio Ree 43.34 97 *eP* **P** **20 50 15.9 +2.0**
comp=Z,229nm,1.2s
VAH Vaihoa 43.59 98 *eP* **P** **20 50 17.5 +1.7**
comp=Z,132nm,1.2s
MMRI Maumere 44.45 272 P **P** **20 50 22.7 -0.1**
comp=Z,2μmcomp=Z,150nm,1.1s
MMRI Maumere 44.45 272 P **P** **20 50 23.6 +0.8**
MMRI IAmb IAmb 20 50 24.1
comp=Z,176nm,1.1s
BBSI Bau Bau 44.81 276 P **P** **20 50 26.7 +1.1**
comp=Z,595nmcomp=Z,26nm,1.1s
EDFI Ende, Flores 44.96 272 P **P** **20 50 25.9 -1.0**
comp=Z,581nmcomp=Z,61nm,1.1s
KMSI Cibinong 45.25 285 P **P** **20 50 29.4 +0.3**
comp=Z,2μmcomp=Z,113nm,1.1s
PSA00 Pilbara Seismi 45.68 253 P **P** **20 50 32.5 +0.1**
PSA00 IAmb IAmb 20 50 34.1
comp=Z,123nm,1.0s
MBWA Marble Bar 45.78 254 P **P** **20 50 33.2 0.0**
LUWI Luwuk 45.86 282 P **P** **20 50 34.6 +0.8**
comp=Z,2μmcomp=Z,115nm,1.2s
APSI Ampana 46.97 282 P **P** **20 50 43.5 +1.0**
comp=Z,856nmcomp=Z,72nm,1.1s
WBSI Waikabubak, Su 47.03 270 P **P** **20 50 43.2 +0.2**
comp=Z,125nm,1.0s
MEEK Meekatharra 47.12 247 P **P** **20 50 43.1 -0.4**
baz=47,SNR=86
MRSI Marisa 47.14 284 P **P** **20 50 42.8 -1.0**
comp=Z,66nm,1.0s
BNSI Bone 47.46 277 P **P** **20 50 46.5 +0.2**
comp=Z,1μmcomp=Z,152nm,1.1s
KAPI Kappang 47.65 276 P **P** **20 50 48.4 +0.7**
comp=Z,54nm,0.9s,baz=90,slow=8.5,SNR=9.2
KAPI Kappang 47.65 276 P **P** **20 50 48.3 +0.6**
SPSI Sidrap Palu 47.90 277 P **P** **20 50 49.3 -0.3**
comp=Z,64nm,1.0s
TTSI Tana Toraja 48.09 279 P **P** **20 50 51.7 +0.6**
comp=Z,634nmcomp=Z,33nm,1.0s
KEKH Kekaha 48.18 43 P **P** **20 50 52.2 +0.6**
KLBR Kellerberrin 48.51 240 P **P** **20 50 53.6 -0.5**
baz=49,SNR=31
PLAI Plampang 48.74 270 P **P** **20 50 56.3 +0.2**
comp=Z,2μmcomp=Z,167nm,1.0s
KIP Kipapa 48.94 45 *ceP* **P** **20 50 57.4 0.0**
KIP pmax pmax
comp=Z,73nm,1.1s
MPSI Mapaga 49.02 283 P **P** **20 50 57.6 -0.6**
comp=Z,1μmcomp=Z,90nm,1.0s
OPA Opana 49.12 44 P **P** **20 50 59.5 +0.8**
OPA pmax pmax
comp=Z,197nm,0.8s
OPA Opana 49.12 44 P **P** **20 50 59.5 +0.8**
NWAO Narrogin (SRO) 49.18 238 P **P** **20 50 58.3 -0.9**
baz=49,SNR=85
NWAO Narrogin (SRO) 49.18 238 P **P** **20 50 58.4 -0.7**
NWAO Narrogin (SRO) 49.18 238 P **P** **20 50 58.5 -0.7**
NWAO pmax pmax
comp=Z,223nm,0.9s
NWAO Narrogin (SRO) 49.18 238 P **P** **20 50 58.3 -0.9**
NWAO Narrogin (SRO) 49.18 238 P **P** **20 50 58.5 -0.7**
NWAO IAmb IAmb 20 51 00.0
comp=Z,223nm,0.9s
KHU Kahuku 49.21 49 P **P** **20 51 00.5 +0.7**
KHU pmax pmax
comp=Z,84nm,0.8s
KHU Kahuku 49.21 49 P **P** **20 51 00.5 +0.7**
KHU IAmb IAmb 20 51 01.1
comp=Z,84nm,0.8s
BLDU Ballidu 49.25 242 P **P** **20 50 58.8 -1.0**
baz=49,SNR=15
AIN Ainahou 49.40 49 P **P** **20 51 01.6 +0.4**
HMH Humu'ula Sheep 49.53 49 P **P** **20 51 03.5 +1.2**
HMH IAmb IAmb 20 51 04.7
comp=Z,158nm,1.0s
MLH Mauna Loa 49.53 49 P **P** **20 51 02.1 -0.1**
MLH IAmb IAmb 20 51 05.5
comp=Z,163nm,1.3s
POHA Pohakuloa 49.59 48 P **P** **20 51 03.6 +0.9**
POHA IAmb IAmb 20 51 04.7
comp=Z,88nm,1.0s
MORW Morawa 49.63 244 P **P** **20 51 01.9 -0.7**
baz=50,SNR=63
MORW Morawa 49.63 244 P **P** **20 51 02.1 -0.6**
RKGY Rocky Gully 49.71 236 P **P** **20 51 03.6 +0.4**
baz=50,SNR=7.8
HLK Haleakala 49.72 47 P **P** **20 51 04.2 +0.5**
MUN Mundaring 49.88 240 P **P** **20 51 03.8 -0.7**
baz=50,SNR=26
GIRL Giralia 50.90 252 P **P** **20 51 14.6 +2.4**
baz=51,SNR=7.2
DNP Denpasar 51.26 270 P **P** **20 51 17.7 +2.7**
comp=Z,18μmcomp=Z,400nm,1.1s
SMKI Samarinda 51.33 281 P **P** **20 51 18.8 +3.2**
BKB Balikpapan 51.39 280 P **P** **20 51 19.8 +3.8**

KBKI Kotabaru 51.54 277 P **P** **20 51 17.9 +0.8**
comp=Z,368nmcomp=Z,47nm,1.0s
TAOE Nuku Hiva Isla 51.69 90 *eS* **S** **20 58 22.5 -1.8**
comp=Z,748nm,33.7s
JAGI Jajag, Banyuwa 52.33 270 P **P** **20 51 22.3 -0.6**
comp=Z,109nm,1.3s
KKM Kota Kinabalu 54.44 288 P **P** **20 51 38.5 +0.1**
RKT Rikitea 55.20 109 *eS* **S** **20 59 10.0 -1.2**
comp=Z,877nm,27.5s
PCJI Pacitan 55.27 270 P **P** **20 51 44.9 +0.7**
comp=Z,334nm,1.2s
WOJI Wonogiri, Jawa 55.59 270 P **P** **20 51 46.9 +0.4**
comp=Z,125nm,1.0s
UGM Wanagama 55.96 270 P **P** **20 51 50.7 +1.5**
comp=Z,291nm,1.1s
SMRI Semarang 56.22 271 P **P** **20 51 52.5 +1.5**
comp=Z,187nm,1.2s
SBUM Sibu 56.96 282 P **P** **20 51 57.0 +0.8**
MJAR Matsushiro Arr 57.22 332 P **P** **20 51 57.0 -0.6**
comp=Z,16nm,0.6s,baz=160,slow=7.9,SNR=80
MJAR pP **pP** **20 52 41.3 -2.0**
comp=Z,6.7nm,0.8s,baz=157,slow=8.0,SNR=2.2
MJAR PKP2bc PKPPKPbc 21 21 54.5
comp=Z,1.7nm,0.8s,baz=5.4,slow=1.4,SNR=5.3
MJAR Matsushiro Arr 57.22 332 P **P** **20 51 57.0 -0.6**
MAJO Matsushiro 57.22 332 P **P** **20 51 57.3 -0.3**
MAJO pmax pmax
comp=Z,39nm,0.9s
MAJO Matsushiro 57.22 332 P **P** **20 51 57.2 -0.3**
MAJO IAmb IAmb 20 51 58.5
comp=Z,39nm,0.9s
MAT Matsushiro 57.22 332 P **P** **20 51 57.0 -0.6**
MJB9 Matsu-Tunnel 57.23 332 P **P** **20 51 57.4 -0.3**
MJB9 IAmb IAmb 20 51 58.7
comp=Z,28nm,0.5s
YOJ Yonaguni jima 57.67 311 P **P** **20 52 01.1 +0.2**
YOJ pmax pmax
comp=Z,149nm,1.2s
YOJ Yonaguni jima 57.67 311 P **P** **20 52 01.1 +0.2**
TWG Pinlang 58.17 308 P **P** **20 52 03.7 -0.7**
JNU Nakatsue 58.30 324 P **P** **20 52 05.6 +0.4**
JNU IAmb IAmb 20 52 06.5
comp=Z,80nm,0.9s
YULB Yu-li 58.32 309 P **P** **20 52 05.5 0.0**
YULB IAmb IAmb 20 52 08.2
comp=Z,38nm,1.0s
KSM Kuching 58.49 280 P **P** **20 52 07.3 +0.4**
KSM IAmb IAmb 20 52 08.7
comp=Z,68nm,1.1s
KSM Kuching 58.49 280 P **P** **20 52 08.0 +1.1**
NACB Ninganchiao 58.55 310 P **P** **20 52 06.7 -0.3**
NACB IAmb IAmb 20 52 09.2
comp=Z,105nm,1.0s
CISI Cisompet, Garu 58.66 270 P **P** **20 52 07.6 -0.5**
comp=Z,152nm,1.0s
CISI Cisompet, Garu 58.66 270 P **P** **20 52 06.9 -1.2**
TPUB Ta-pu 58.77 309 P **P** **20 52 08.0 -0.7**
TPUB IAmb IAmb 20 52 10.1
comp=Z,98nm,0.9s
SSLB Suanglung 58.80 309 P **P** **20 52 08.3 -0.6**
SSLB IAmb IAmb 20 52 09.7
comp=Z,149nm,1.5s
YHNB Yeheng 58.99 310 P **P** **20 52 10.4 +0.2**
LEM Lembang 59.00 270 P **P** **20 52 11.6 +1.0**
comp=Z,134nm,1.0s,baz=80,slow=5.5,SNR=27
LEM pP **pP** **20 52 55.8 +0.8**
comp=Z,60nm,0.8s,baz=94,slow=7.6,SNR=3.1
LEM S **S** **21 00 01.7 +0.2**
comp=Z,4.1nm,0.4s,baz=315,slow=20,SNR=1.2
TATO Taipei 59.09 311 P **P** **20 52 10.4 -0.3**
CNJI Cibinong 59.38 270 P **P** **20 52 13.5 +0.5**
comp=Z,2μmcomp=Z,165nm,1.0s
DBJI Dramaga 59.90 270 P **P** **20 52 17.1 +0.5**
comp=Z,91nm,1.4s
ERM Erimo 59.96 339 *ceP* **P** **20 52 16.6 +0.3**
ERM pmax pmax
comp=Z,25nm,0.8s
ERM Erimo 59.96 339 P **P** **20 52 17.1 +0.7**
ERM IAmb IAmb 20 52 19.1
comp=Z,35nm,0.8s
YUK Yuzh-Kuril'sk 60.92 342 *i* P **P** **20 52 22.7 -0.1**
QZH Quanzhou 61.23 309 ⇑*i* P **P** **20 52 26.3 +1.0**
QZH S **S** **21 00 28.7 -0.4**
QZH sS **sS** **21 01 51.7 +2.9**
QZH pmax pmax
comp=Z,220nm,4.5s
KUR Kuril'sk 61.47 344 *eP* **P** **20 52 25.7 -0.7**
KUR pmax pmax
comp=Z,184nm,1.2s
KUR pmax pmax
comp=Z,495nm,3.6s
ASAJ Asahikawa 62.01 340 LR LR 21 14 03.8
comp=Z,198nm,21.2s,baz=84,slow=30
TJN Taejon 62.65 324 *ceP* **P** **20 52 35.2 +0.7**
LWLI Liwa 62.85 271 P **P** **20 52 36.6 +0.2**
comp=Z,3μmcomp=Z,82nm,1.3s
KSRS Korea Array 63.11 326 P **P** **20 52 38.0 +0.5**
comp=Z,18nm,0.9s,baz=140,slow=7.4,SNR=31
KSRS PcP **PcP** **20 53 14.0 +0.8**
comp=Z,10.0nm,1.0s,baz=142,slow=4.2,SNR=7.3
KSRS pP **pP** **20 53 22.8 -1.4**
comp=Z,3.2nm,0.8s,baz=141,slow=4.7,SNR=2.0
KSRS LR LR 21 17 22.1
comp=Z,106nm,21.7s,baz=133,slow=33
VNDA Vanda 63.65 181 P **P** **20 52 41.0 +0.6**
comp=Z,37nm,0.9s,baz=354,slow=7.6,SNR=61
VNDA S **S** **21 00 59.4 +1.7**
comp=Z,0.9nm,1.1s,baz=135,slow=7.1,SNR=1.1
VNDA Vanda 63.65 181 P **P** **20 52 40.9 +0.5**
TPRI Tanjung Pinang 63.87 278 P **P** **20 52 44.4 +1.4**
comp=Z,2μmcomp=Z,65nm,1.1s
CASY Casey 64.26 202 P **P** **20 52 44.6 0.0**
YSS Yuzh-Sakhalins 64.49 342 *keP* **P** **20 52 47.1 +0.8**
YSS *e* 20 53 17.9
YSS *e**PP **pwP** **20 53 38.4 +3.2**
YSS *e* 20 55 12.4
YSS *e*PPP PPP 20 56 48.0
YSS *e*S **S** **21 01 07.9 -0.9**
YSS *e* 21 02 22.2
YSS *e*SS **SS** **21 05 21.0 -2.5**
YSS pmax pmax
comp=Z,160nm,1.2s
YSS pmax pmax
comp=N,60μm,0.7s
YSS pmax pmax
comp=E,80μm,0.9s
YSS pmax pmax
comp=Z,600nm,3.7s
YSS pmax pmax
comp=N,300nm,3.9s
YSS pmax pmax
comp=E,100nm,2.0s
YSS smax smax
comp=N,400nm,7.3s
YSS smax smax
comp=E,200nm,8.2s
YSS MLR MLR
comp=Z,200nm,18.0s
KSI Kapahiang 64.58 273 P **P** **20 52 49.8 +2.1**
comp=Z,28nm,1.0s
MYKOM Kota Tinggi 64.76 279 P **P** **20 52 49.0 +0.2**
TEY Ternei 64.97 336 ⇑*eP* **P** **20 52 50.4 +1.0**
TEY *e* 20 53 35.6
TEY pmax pmax
comp=Z,20nm,2.2s
TEY pmax pmax
comp=E,10.0nm,1.9s
TEY pmax pmax
comp=N,10.0nm,2.0s
SKR Severo-Kuril's 65.09 352 *eP* **P** **20 52 49.4 -0.6**
SKR *e*PPP PPP 20 55 21.0
SKR *eS* **S** **21 01 12.1 -3.8**
SKR pmax pmax
comp=Z,100nm,3.3s
SKR pmax pmax
comp=Z,300nm,3.2s
SKR pmax pmax
comp=Z,49nm,0.9s
SKR MLR MLR
comp=Z,100nm,19.0s
NJ2 Nanjing 65.13 316 ⇑*i*P **P** **20 52 51.7 +0.9**
NJ2 pP **pP** **20 53 37.3 -0.7**
NJ2 S **S** **21 01 18.1 +0.9**
NJ2 pmax pmax
comp=Z,61nm,1.1s
MSHR Mys Shultsa 65.31 331 *ceP* **P** **20 52 52.0 +0.3**

QIZ Qiongzhong 65.38 299 P **P** **20 52 52.2 -0.5**
QIZ S **S** **21 01 18.3 -2.4**
QIZ LR LR
comp=Z,210nm,19.6s
USRK Ussuriysk Ar. 66.20 333 P **P** **20 52 58.6 +1.3**
comp=Z,48nm,1.0s,baz=142,slow=6.0,SNR=60
USRK pP **pP** **20 53 42.6 -1.7**
comp=Z,15nm,1.0s,baz=160,slow=7.4,SNR=2.9
BKNI Bangkinang 67.07 276 P **P** **20 53 04.6 +1.1**
comp=Z,2μmcomp=Z,172nm,1.0s
PET Petropavlovsk 67.10 354 *eP* **P** **20 53 01.7 -1.1**
PET *e**PP **pwP** **20 53 52.3 0.0**
PET *e**SP **sP** **20 54 15.0 +3.6**
PET *eS* **S** **21 01 37.4 -2.7**
PET *e*SS **SS** **21 06 06.3 +2.5**
PET pmax pmax
comp=Z,82nm,1.2s
PET pmax pmax
comp=Z,200nm,10.4s
PET MLR MLR
comp=Z,100nm,14.0s
PET MLR MLR
comp=Z,100nm,16.0s
PEA0B Petropavlovsk- 67.28 354 *ciP* **P** **20 53 04.5 +0.5**
PEA0B Petropavlovsk- 67.28 354 P **P** **20 53 04.8 +0.8**
PETK Petropavlovsk- 67.28 354 P **P** **20 53 05.0 +1.0**
comp=Z,47nm,0.8s,baz=154,slow=9.4,SNR=98
PETK Petropavlovsk- 67.28 354 P **P** **20 53 05.0 +1.0**
PDSI Padang 67.31 275 P **P** **20 53 05.0 -0.1**
comp=Z,24nm,1.0s
WHN Wuhan 67.44 312 ⇑P **P** **20 53 06.1 +0.7**
WHN S **S** **21 01 44.0 -1.0**
WHN pmax pmax
comp=Z,290nm,1.5s
WHN LR LR
comp=Z,690nm,13.1s
DL2 Dalian 67.69 323 P **P** **20 53 07.9 +1.1**
DL2 pmax pmax
comp=Z,97nm,0.7s
ATKA Atka Island 67.79 12 P **P** **20 53 08.8 +1.7**
ATKA IAmb IAmb 20 53 54.5
comp=Z,92nm,1.4s
TYV Tymovskoe 68.03 343 *eP* **P** **20 53 10.2 +1.5**
TYV *eS* **S** **21 01 49.6 -1.7**
TYV pmax pmax
comp=Z,42nm,1.0s
TYV pmax pmax
comp=Z,600nm,3.8s
TYV smax smax
comp=N,200nm,6.1s
IPM Ipoh 68.22 281 P **P** **20 53 11.0 +0.2**
MNSI Mandailing Nat 68.60 276 P **P** **20 53 12.7 -0.4**
comp=N,2μmcomp=N,109nm,0.9s
TIA Tai'an 68.77 318 P **P** **20 53 13.2 -0.4**
TIA pmax pmax
comp=N,63nm,1.2s
KULM Kulim 68.82 281 IAmb IAmb 20 53 16.3
comp=Z,77nm,1.2s
KULM Kulim 68.82 281 P **P** **20 53 15.0 +0.6**
CN2 Changchun 68.99 329 *eP* **P** **20 53 15.4 +0.6**
CN2 *ep*P pP 20 54 00.8 -1.5
CN2 *eS* **S** **21 02 03.0 +0.1**
CN2 pmax pmax
comp=Z,80nm,0.7s
CN2 pmax pmax
comp=Z,500nm,3.0s
RPSI Rantau Prapat 69.74 278 P **P** **20 53 19.4 -0.7**
RPSI IAmb IAmb 20 53 21.2
comp=Z,84nm,1.1s
PSI Prapat 69.77 278 P **P** **20 53 19.8 -0.6**
comp=Z,46nm,0.9s,baz=180,slow=3.9,SNR=45
PSI pP **pP** **20 54 06.3 -0.4**
comp=Z,19nm,0.9s,baz=179,slow=1.0,SNR=3.1
GRNR Gornyy 69.86 340 ⇓*iP* P 20 53 35.9 +16
GRNR pmax pmax
comp=Z,20nm,1.1s
GRNR MLR MLR
comp=Z,5μm,20.0s
KLR Kul'dur 70.30 336 *ceP* **P** **20 53 22.0 -0.7**
KLR pmax pmax
comp=Z,46nm,1.3s
NKL Nikolayevsk 70.63 343 *eP* **P** **20 53 23.0 -1.5**
NKL *e* 20 54 10.6
NKL *eS* **S** **21 02 18.9 -2.6**
NKL pmax pmax
comp=N,5.0nm,0.9s
NKL pmax pmax
comp=E,2.0nm,0.9s
NKL pmax pmax
comp=Z,67nm,0.9s
NKL pmax pmax
comp=Z,39nm,4.0s
GSI Gunungsitoli 70.67 276 P **P** **20 53 27.4 +1.7**
comp=Z,485nm,1.0s
GSI Gunungsitoli 70.67 276 P **P** **20 53 26.8 +1.1**
ENH Enshi 70.89 309 P **P** **20 53 26.5 -0.2**
KCSI Kotacane, Aceh 71.07 279 P **P** **20 53 27.6 -0.6**
comp=Z,604nmcomp=Z,43nm,1.2s
GYA Guiyang 71.29 304 ⇑*iP* **P** **20 53 30.2 +0.9**
GYA PcP **PcP** **20 53 49.0 +1.1**
GYA PP **PP** **20 56 14.4 +3.9**
GYA S **S** **21 02 28.5 -2.1**
GYA SKS **SKSac** **21 03 07.3 -5.9**
GYA pmax pmax
comp=Z,60nm,1.2s
GYA pmax pmax
comp=Z,250nm,4.0s
SLVN Son La 71.41 298 IAmb IAmb 20 53 32.9
comp=Z,76nm,1.6s
BJI Beijing 71.67 321 P **P** **20 53 32.3 +1.2**
BJI pP **pP** **20 54 18.3 -0.8**
BJI sP **sP** **20 54 45.2 +4.4**
BJI S **S** **21 02 35.9 +1.8**
BJI pmax pmax
comp=Z,41nm,1.2s
BJI pmax pmax
comp=Z,330nm,3.0s
PBKT Sadao Pong 72.18 293 IAmb IAmb 20 53 37.3
comp=Z,81nm,1.2s
MLSI Meulaboh, Aceh 72.59 279 P **P** **20 53 37.2 0.0**
comp=Z,3μmcomp=Z,232nm,1.2s
KMI Kunming 73.92 302 P **P** **20 53 46.2 +1.2**
KMI S **S** **21 02 59.7 -0.8**
KMI pmax pmax
comp=Z,100nm,1.4s
KMI pmax pmax
comp=Z,390nm,3.1s
KMI LR LR
comp=Z,170nm,14.2s
KMI LR LR
comp=Z,150nm,12.0s
KMI LR LR
comp=Z,190nm,27.0s
MA2 Magadan 74.48 351 *ceP* **P** **20 53 46.1 -1.0**
MA2 pmax pmax
comp=Z,24nm,0.9s
CM31 Chiang Mai Arr 74.66 294 P **P** **20 53 51.1 +2.0**
CM31 Chiang Mai Arr 74.66 294 P **P** **20 53 49.6 +0.5**
CM31 IAmb IAmb 20 53 52.0
comp=Z,144nm,1.2s
CMAR Chiang Mai Arr 74.66 294 P **P** **20 53 50.4 +1.3**
comp=Z,54nm,1.0s,baz=121,slow=4.2,SNR=180
CMAR pP **pP** **20 54 37.8 +1.5**
comp=Z,18nm,1.0s,baz=120,slow=4.2,SNR=3.8
CMAR Chiang Mai Arr 74.66 294 *ceP* **P** **20 53 50.0 +0.9**
CMAR pmax pmax
comp=Z,38nm,0.8s
CHTO Chiang Mai 74.78 294 P **P** **20 53 50.6 +0.7**
CHTO Chiang Mai 74.78 294 P **P** **20 53 50.5 +0.7**
CHTO pmax pmax
comp=Z,149nm,1.4s
CHTO Chiang Mai 74.78 294 P **P** **20 53 50.5 +0.7**
CHTO IAmb IAmb 20 53 52.4
comp=Z,149nm,1.4s
HHC Hu-ho-hao-te 75.00 320 *eP* **P** **20 53 54.5 +3.7**
HHC PP **PP** **20 56 47.5 +5.7**
HHC S **S** **21 03 12.2 +0.4**
HHC pmax pmax
comp=Z,12nm,0.9s
HHC pmax pmax
comp=Z,120nm,6.3s
HHC LR LR
comp=Z,210nm,19.0s
HHC LR LR
comp=Z,82nm,19.2s

HHC LR LR
comp=Z,92nm,18.5s
CD2 Chengdu 75.55 307 ⇑ *iP* **P 20 53 53.7 -0.3**
CD2 pP pwP 20 54 50.3 +5.9
CD2 PP **PP 20 56 46.1 -0.4**
CD2 S **S 21 03 17.6 -0.5**
CD2 SKS **SKSac 21 03 40.2 -4.6**
CD2 SS **SS 21 08 12.7 -1.3**
CD2 pmax pmax
comp=Z,30nm,1.0s
CD2 pmax pmax
comp=Z,460nm,4.8s
ZEA Zeya 75.58 337 *e*P **P 20 53 55.0 +1.4**
ZEA *e*S **S 21 03 22.0 +4.7**
ZEA pmax pmax
comp=N,93nm,1.4s
ZEA pmax pmax
comp=Z,100nm,1.2s
ZEA pmax pmax
comp=Z,200nm,4.0s
ZEA smax smax
comp=N,400nm,12.0s
CHGN Chignik 75.62 19 IAmb IAmb 20 54 44.1
comp=Z,600nm,1.2s
BTO Baotou 75.85 319 *e*P **P 20 53 57.4 +1.8**
QSPA South Pole Qui 76.08 180 P **P 20 53 57.1 +0.5**
comp=Z,125nm,0.9s,baz=8.8,slow=1.4,SNR=368
QSPA pP **pP 20 54 43.4 -1.2**
comp=Z,31nm,0.8s,baz=93,slow=0.7,SNR=1.7
QSPA South Pole Qui 76.08 180 P **P 20 53 56.9 +0.4**
SEY Seymchan 77.51 353 *i* P **P 20 54 04.1 -0.1**
LZH Lanzhou 77.81 312 ⇑ P **P 20 54 08.8 +2.1**
LZH pP pP 20 54 55.8 +0.4
LZH S **S 21 03 44.0 +1.4**
LZH SKS **SKSac 21 03 54.1 -7.2**
LZH pmax pmax
comp=Z,36nm,1.5s
LZH pmax pmax
comp=Z,250nm,6.0s
PBA Port Blair 78.16 285 P P 20 54 09.4 +0.6
BRLK Bradley Lake 80.81 20 IAmb IAmb 20 55 13.3
comp=Z,53nm,0.9s
YAK Yakutsk 81.29 343 *d* iP **P 20 54 25.1 +0.5**
YAK *e* 20 55 11.4
YAK *e* 20 57 35.3
YAK *e*S **S 21 04 17.4 -0.2**
YAK *e*SS **SS 21 09 42.1 +3.5**
YAK *e*SSS SSS 21 12 56.9
YAK pmax pmax
comp=Z,102nm,0.9s
YAK pmax pmax
comp=N,40nm,1.3s
YAK pmax pmax
comp=E,34nm,1.4s
YAK pmax pmax
comp=Z,91nm,3.5s
YAK pmax pmax
comp=N,63nm,3.0s
YAK pmax pmax
comp=E,67nm,2.3s
YAK smax smax
comp=E,88nm,2.7s
YAK smax smax
comp=N,253nm,4.4s
YAK Yakutsk 81.29 343 P **P 20 54 24.1 -0.4**
ULN Ulaanbaatar 81.52 324 P **P 20 54 26.9 +0.5**
ULN Ulaanbaatar 81.52 324 *ce* P **P 20 54 26.9 +0.5**
ULN pmax pmax
comp=Z,70nm,1.4s
ULN Ulaanbaatar 81.52 324 P **P 20 54 27.3 +1.0**
BILL Bilibino 81.76 360 *c* iP **P 20 54 26.7 -0.3**
BILL *i* *PP **pP 20 55 13.4 -2.4**
BILL *i* 20 57 34.9
BILL *i* *SS **S 21 04 26.6 +4.3**
BILL *i* SS **SS 21 09 40.8 -4.6**
BILL pmax pmax
comp=Z,52nm,0.8s
BILL Bilibino 81.76 360 P **P 20 54 27.4 +0.4**
SONM Songino Array 81.88 324 P **P 20 54 28.9 +0.6**
comp=Z,12nm,0.6s,baz=130,slow=4.0,SNR=72
SONM pP **pP 20 55 15.9 -1.5**
comp=Z,8.7nm,0.9s,baz=138,slow=6.9,SNR=3.8
SONM PKKPbc **PKKPbc 21 12 58.2 -1.7**
comp=Z,1.9nm,1.0s,baz=225,slow=1.9,SNR=5.8
SONM LR LR 21 30 42.6
comp=Z,98nm,18.6s,baz=122,slow=35
GTA Gaotai 82.14 314 ⇑ P **P 20 54 30.0 +0.2**
GTA pP pP 20 55 18.5 -0.6
GTA sP sP 20 55 38.1 -2.5
GTA S **S 21 04 29.6 +1.9**
GTA sS sS 21 05 57.8 +6.9
GTA pmax pmax
comp=Z,68nm,1.2s
GTA pmax pmax
comp=Z,430nm,6.4s
GTA LR LR
comp=Z,94nm,18.7s
GTA LR LR
comp=Z,110nm,18.4s
GTA LR LR
comp=Z,130nm,18.1s
RC01 Rabbit Creek A 82.18 20 IAmb IAmb 20 55 20.7
comp=Z,86nm,1.3s
BRDH Bariadhala 82.51 296 P **P 20 54 33.4 +1.5**
comp=Z,82nm,0.3s,baz=60,slow=2.6,SNR=5.7
MAW Mawson 82.62 202 P **P 20 54 32.3 +0.8**
baz=83,SNR=48
MAW Mawson 82.62 202 P **P 20 54 32.2 +0.6**
comp=Z,116nm,1.1s,baz=109,slow=6.4,SNR=89
MAW LR LR 21 25 20.9
comp=Z,306nm,21.7s,baz=69,slow=31
MAW Mawson 82.62 202 P **P 20 54 32.4 +0.8**
MAW pmax pmax
comp=Z,44nm,1.2s
MAW Mawson 82.62 202 P **P 20 54 32.4 +0.8**
PMR Palmer 82.75 19 IAmb IAmb 20 55 23.6
comp=Z,83nm,1.3s
HIN Hinchinbrook I 82.77 21 IAmb IAmb 20 55 24.5
comp=Z,148nm,1.3s
KNK Knik Glacier 82.84 20 IAmb IAmb 20 55 25.1
comp=Z,184nm,1.6s
GLI Glacier Island 82.91 21 IAmb IAmb 20 55 22.9
comp=Z,154nm,1.4s
FID Port Fidalgo 83.03 21 IAmb IAmb 20 55 25.6
comp=Z,111nm,1.2s
SHL Shillong 83.22 298 *e*P **P 20 54 35.7 0.0**
SHL *i* x x 20 55 24.6
SHL Shillong 83.22 298 P **P 20 54 35.8 0.0**
KCPM Cahto Peak 83.41 47 IAmb IAmb 20 55 27.5
comp=Z,62nm,1.1s
SCM Sheep Creek Mo 83.52 20 IAmb IAmb 20 55 28.0
comp=Z,88nm,1.0s
KMRM Mail Ridge 83.54 46 IAmb IAmb 20 55 32.9
comp=Z,60nm,1.1s
KTH Kantishna Hill 83.68 17 IAmb IAmb 20 54 37.8
comp=Z,46nm,1.1s
BOD Bodaibo 83.78 334 *e*P **P 20 54 37.2 -0.4**
BOD pmax pmax
comp=Z,66nm,1.6s
KHMM Horse Mountain 83.79 45 IAmb IAmb 20 55 30.3
comp=Z,46nm,1.2s
BPAW Bear Paw Mtn. 84.08 17 P **P 20 54 38.7 -0.3**
PAF Port-aux-Franc 84.10 221 P **P 20 54 40.5 +1.0**
PAF pmax pmax
comp=Z,458nm,1.2s
PAF Port-aux-Franc 84.10 221 P **P 20 54 40.5 +1.0**
O02D Mt. Diablo Mer 84.17 46 P **P 20 54 41.3 +1.2**
baz=246,SNR=15
DIB Dawson Inlet, 84.33 32 P **P 20 54 41.2 +0.8**
PKM Mcpherson Peak 84.35 52 P **P 20 54 41.7 +0.4**
baz=249,SNR=5.4
DHY Denali Highway 84.40 19 IAmb IAmb 20 55 30.9
comp=Z,116nm,1.4s
VRDI Verde Repeater 84.43 22 IAmb IAmb 20 55 30.3
comp=Z,88nm,1.6s
GLB Gilahina Butte 84.44 21 IAmb IAmb 20 55 31.0
comp=Z,71nm,1.3s
YAH Yahtse 84.48 23 IAmb IAmb 20 55 31.1
comp=Z,108nm,1.5s
N02D Trinity Center 84.54 46 P **P 20 54 43.2 +1.2**
baz=246,SNR=12
K02D Willamette Mer 84.59 44 P **P 20 54 43.3 +1.2**
baz=246,SNR=5.6
J01E Myrtle Point 84.60 43 P **P 20 54 43.3 +1.2**
baz=245
M02C Callahan 84.61 45 P **P 20 54 43.5 +1.2**
baz=246,SNR=8.6
BALM Baldy 84.70 22 IAmb IAmb 20 55 31.7
comp=Z,78nm,1.5s
MLY Manley 84.86 17 IAmb IAmb 20 55 32.0
comp=Z,81nm,1.4s
PCA Pinnacle 84.87 24 IAmb IAmb 20 55 38.0
comp=Z,46nm,1.1s
O03E Paynes Creek 84.91 47 P **P 20 54 44.6 +0.8**
baz=247,SNR=13
ZAK Zakamensk 84.93 325 *e*P **P 20 54 43.4 -0.3**
ZAK *e* 20 55 31.6
ZAK pmax pmax
comp=Z,65nm,1.2s
ZAK pmax pmax
comp=Z,32nm,1.4s
BARN Barnard Glacie 84.97 22 IAmb IAmb 20 55 34.0
comp=Z,80nm,1.2s
NEA Nenana 84.98 17 IAmb IAmb 20 55 35.1
comp=Z,84nm,1.3s
CTGM Chitina Glacie 85.03 22 IAmb IAmb 20 55 34.2
comp=Z,68nm,1.2s
DHAK Deception Hill 85.06 25 IAmb IAmb 20 55 34.2
comp=Z,50nm,1.0s
LSA Lhasa 85.17 302 *i* P **P 20 54 46.5 +0.7**
LSA SNR=47 *i* P **P 20 54 47.6 +1.8**
SNR=8.9
LSA Lhasa 85.17 302 P **P 20 54 46.5 +0.7**
LSA Lhasa 85.17 302 IAmb IAmb 20 54 48.5
comp=Z,122nm,1.5s
ARVC Arvin 85.19 52 P **P 20 54 46.2 +1.1**
baz=249
WRH Wood River Hil 85.20 18 IAmb IAmb 20 55 36.2
comp=Z,96nm,1.2s
I03D Drain, OR 85.21 43 P **P 20 54 46.2 +1.1**
baz=246,SNR=5.3
VES Vestal, Richgr 85.24 51 P **P 20 54 46.0 +0.6**
baz=249
IRK Irkutsk 85.30 327 *e*P **P 20 54 45.4 +0.1**
IRK pmax pmax
comp=Z,79nm,1.8s
L04D Klamath Falls 85.31 45 P **P 20 54 46.6 +0.7**
baz=247,SNR=13
TLY Talaya 85.36 326 P **P 20 54 46.6 +0.9**
TLY Talaya 85.36 326 *e*P **P 20 54 45.4 -0.3**
TLY *e* 20 55 31.5
TLY *e*S **S 21 04 52.1 -6.9**
TLY pmax pmax
comp=Z,157nm,1.2s
TLY Talaya 85.36 326 P **P 20 54 46.3 +0.7**
TLY IAmb IAmb 20 54 47.5
comp=Z,46nm,0.9s
CCB Clear Creek Bu 85.41 18 P **P 20 54 44.9 -0.6**
CCB IAmb IAmb 20 55 34.2
comp=Z,114nm,1.6s
M04C Macdoel 85.46 45 P **P 20 54 47.4 +0.9**
baz=247,SNR=9.2
HDA Harding Lake 85.49 18 P **P 20 54 46.1 +0.1**
baz=224,SNR=19
MDM Murphy Dome 85.51 17 IAmb IAmb 20 55 35.5
comp=Z,126nm,1.3s
TCOL CIGO, UAF Yank 85.56 18 P **P 20 54 47.1 +0.8**
baz=223,SNR=9.1
COLA College 85.56 18 *i* P **P 20 54 45.3 -1.0**
COLA pmax pmax
comp=Z,12nm,0.9s
ISA Isabella, Lake 85.64 52 P **P 20 54 48.1 +0.6**
baz=250,SNR=8.6
EDW2 Edwards Air Fo 85.74 53 P **P 20 54 48.9 +0.8**
baz=250,SNR=14
109C Camp Elliot, M 85.77 55 P **P 20 54 49.5 +1.5**
baz=250
IL31 85.77 18 IAmb IAmb 20 55 36.9
comp=Z,107nm,1.4s
ILAR Eielson Array 85.77 18 P **P 20 54 46.9 -0.5**
comp=Z,11nm,0.7s,baz=236,slow=4.8,SNR=98
ILAR pP **pP 20 55 34.9 -1.8**
comp=Z,26nm,1.0s,baz=232,slow=5.6,SNR=8.1
ILAR PKKPbc **PKKPdf 21 12 46.1 +2.1**
comp=Z,0.5nm,0.9s,baz=30,slow=2.1,SNR=4.4
ILAR LR LR 21 30 46.6
comp=Z,114nm,19.0s,baz=230,slow=34
BFSC Mount Baldy Ra 85.78 53 P **P 20 54 48.6 +0.3**
baz=250,SNR=10
K04D Chiloquin, OR 85.85 44 P **P 20 54 49.2 +0.8**
baz=247
J04D Umpqua Nationa 85.85 44 P **P 20 54 49.6 +1.1**
baz=247,SNR=8.5
POKR Poker Plat Res 85.86 18 P **P 20 54 48.4 +0.6**
baz=224
DOT Dot Lake 85.87 20 IAmb IAmb 20 55 40.4
comp=Z,45nm,1.2s
I04A Tendick Farm, 85.87 43 P **P 20 54 48.9 +0.5**
baz=246,SNR=6.9
MDPB Devils Postpil 85.88 50 IAmb IAmb 20 55 42.8
comp=Z,78nm,1.3s
G03D McMinnville, O 85.89 42 P **P 20 54 49.7 +1.3**
baz=246,SNR=5.5
MURC Murrieta 85.93 54 P **P 20 54 49.8 +0.9**
baz=250
WAKR Walker 85.93 49 IAmb IAmb 20 55 43.3
comp=Z,67nm,1.3s
H04D Lebanon 85.95 42 P **P 20 54 50.0 +1.3**
baz=246
PNTR Pine Nut 86.03 48 IAmb IAmb 20 55 41.3
comp=Z,35nm,1.0s
BAR Barrett 86.04 55 IAmb IAmb 20 55 42.3
comp=Z,189nm,1.9s
MLAC Mammoth, Mammo 86.06 50 P **P 20 54 51.7 +2.0**
baz=249
BESE Bessie Mountai 86.17 26 IAmb IAmb 20 55 40.3
comp=Z,51nm,1.3s
CWC Cottonwood Cre 86.21 51 P **P 20 54 51.4 +1.0**
baz=250
E03A Lebam 86.25 40 IAmb IAmb 20 54 52.2
comp=Z,39nm,0.8s
YERR Yerington 86.25 48 IAmb IAmb 20 55 44.6
comp=Z,108nm,1.8s
MONP2 Monument Peak 86.31 55 P **P 20 54 52.0 +1.0**
baz=251,SNR=7.7
PAHR Pah Rah Range 86.41 48 IAmb IAmb 20 55 43.0
comp=Z,34nm,1.0s
J05D Fort Rock, OR 86.46 44 P **P 20 54 52.3 +0.9**
baz=247,SNR=33
K05A Summer Lake 86.47 45 IAmb IAmb 20 55 43.4
comp=Z,55nm,1.2s
IKP In-Ko-Pah, Jac 86.48 55 P **P 20 54 52.7 +1.0**
baz=251,SNR=5.4
PFO Pinyon Flats O 86.52 54 P **P 20 54 52.4 +0.5**
baz=251,SNR=5.4
XPFO Pion Flat 86.52 54 P **P 20 54 52.5 +0.5**
XPFO IAmb IAmb 20 55 45.0
comp=Z,126nm,1.8s
MPMC Manual Prospec 86.53 52 P **P 20 54 52.9 +0.8**
baz=250,SNR=9.1
GTK Tadong 86.56 299 *e*P **P 20 54 52.7 +0.4**
RYN Ryan 86.65 49 IAmb IAmb 20 55 46.7
comp=Z,143nm,2.0s
F04A Amboy 86.72 41 IAmb IAmb 20 55 44.4
comp=Z,50nm,1.2s
NVAR Mina Array Bea 86.74 49 P **P 20 54 53.7 +0.7**
comp=Z,8.1nm,0.9s,baz=235,slow=7.1,SNR=20
NVAR pP **pP 20 55 41.5 -0.8**
comp=Z,14nm,0.9s,baz=238,slow=3.1,SNR=9.6
I05D Terrebonne, OR 86.80 43 P **P 20 54 53.7 +0.8**
baz=247,SNR=8.6
GSC Goldstone, Bar 86.80 53 P **P 20 54 54.0 +0.8**
baz=251
MOY Mondy 86.81 325 *e*P **P 20 54 53.7 +0.8**
MOY pmax pmax
comp=Z,85nm,3.0s
SWSC Sam W. Stewart 86.82 55 P **P 20 54 54.6 +1.4**
baz=251
E04D Cinebar 86.88 41 P **P 20 54 54.3 +1.2**
baz=246,SNR=7.3
D03D Eldon 86.95 39 P **P 20 54 54.9 +1.4**
baz=246,SNR=11
BWNR Bhubaneshwar 87.00 292 *ex* **P 20 54 53.3 -1.1**
BWNR *i* x x 20 55 45.4
BELC Belle Mtn. Jos 87.01 54 P **P 20 54 55.6 +1.3**
baz=251,SNR=12
HEC Hector Ludlow 87.01 53 P **P 20 54 54.7 +0.5**
baz=251,SNR=7.7
KVN Kaiserville 87.11 49 IAmb IAmb 20 55 48.8
comp=Z,119nm,1.9s
FURC Furnace Creek, 87.15 51 P **P 20 54 55.6 +1.0**
baz=250,SNR=5.7
G05D Wamic, OR 87.16 42 P **P 20 54 55.2 +0.6**
baz=247
PGC Sidney 87.20 38 IAmb IAmb 20 55 45.3
comp=Z,90nm,1.6s
F05D White Salmon 87.32 41 P **P 20 54 56.7 +1.3**
baz=247
BC3 Big Chuckawall 87.32 55 P **P 20 54 57.1 +1.3**
baz=251,SNR=8.0
TAPN Taplejung 87.32 299 *e*P **P 20 54 55.9 -0.3**
comp=Z,210nm,1.2s
SHOC Shoshone, Teco 87.41 52 P **P 20 54 57.1 +1.1**
baz=251
ODAN Odare 87.45 298 *e*P **P 20 54 56.4 -0.3**
comp=Z,179nm,0.8s
GMRC Granite Mounta 87.52 53 P **P 20 54 57.5 +0.8**
baz=251,SNR=11
EGAK Eagle 87.57 20 IAmb IAmb 20 55 48.9
comp=Z,47nm,1.2s
GLA Glamis 87.63 55 P **P 20 54 59.0 +1.8**
baz=252,SNR=8.3
A04D Lummi Island 87.67 39 P **P 20 54 58.5 +1.7**
baz=246,SNR=9.8
IRM Iron Mountain 87.73 54 P **P 20 54 59.1 +1.6**
baz=252,SNR=6.7
TPNV Topopah Spring 87.77 51 P **P 20 54 58.5 +0.6**
baz=251
TPNV Topopah Spring 87.77 51 IAmb IAmb 20 55 52.2
comp=Z,37nm,1.1s
B05A Bryant 87.86 39 P **P 20 54 58.9 +1.1**
baz=246,SNR=8.6
TOLK Toolik Lake Re 87.89 15 P **P 20 54 58.6 +1.0**
baz=222
TOLK Toolik Lake Re 87.89 15 IAmb IAmb 20 55 50.8
comp=Z,74nm,1.4s
BOK Bokaro 87.89 295 *ex* **P 20 54 58.0 -0.5**
BOK *i* x x 20 55 49.1
Y12C Blythe 88.09 55 P **P 20 55 00.7 +1.4**
baz=252,SNR=7.8
RAMN Ramite 88.16 298 *e*P **P 20 54 59.6 -0.4**
comp=Z,57nm,0.6s
J08A Circle Bar Ran 88.36 45 IAmb IAmb 20 55 03.0
comp=Z,26nm,0.9s
PDMCI Parker Dam,Lak 88.56 54 P **P 20 55 03.0 +1.6**
baz=252,SNR=7.2
E07A Sunnyside 88.61 41 IAmb IAmb 20 55 03.4
comp=Z,21nm,0.7s
JIRN Jiri 88.70 299 *e*P **P 20 55 01.8 -1.0**
comp=Z,135nm,0.7s
G08A Pilot Rock 88.72 43 IAmb IAmb 20 55 04.1
comp=Z,27nm,1.0s
R11A Troy Canyon, C 88.72 50 P **P 20 55 03.3 +0.9**
baz=251
R11A Troy Canyon, C 88.72 50 IAmb IAmb 20 55 55.7
comp=Z,72nm,1.8s
HAWA Hanford 88.75 42 IAmb IAmb 20 55 53.9
comp=Z,47nm,1.4s
214A Organ Pipe Nat 88.92 57 P **P 20 55 04.5 +1.3**
baz=253,SNR=7.5
GUN Gumba 89.04 299 *e*P **P 20 55 03.9 -0.4**
comp=Z,137nm,1.0s
E08A Dider Farm, El 89.09 42 IAmb IAmb 20 55 55.6
comp=Z,102nm,1.5s
PKI Pulchoki 89.35 298 *e*P **P 20 55 06.0 +0.3**
comp=Z,226nm,1.1s
Y14A Wickenburg 89.35 55 IAmb IAmb 20 55 58.8
comp=Z,117nm,1.9s
PKIN Phulchoki 89.36 298 *e*P **P 20 55 05.0 -0.7**
comp=Z,101nm,0.8s
D08A Wollman Farm, 89.39 41 IAmb IAmb 20 55 56.0
comp=Z,48nm,1.6s
SYO Syowa Base 89.46 197 ⇑ *i* P **P 20 55 03.4 -1.6**
SYO Syowa Base 89.46 197 ⇓ *i* PcP **PcP 20 55 07.0 +0.8**
SYO Syowa Base 89.46 197 ⇑ *i* sP sP 20 56 12.8 -3.0
KKN Kakani 89.52 299 *e*P **P 20 55 05.8 -0.6**
comp=Z,93nm,0.8s
B08A Colville Reser 89.60 40 IAmb IAmb 20 55 56.5
comp=Z,38nm,1.5s
DMN Daman 89.61 298 *e*P **P 20 55 06.5 -0.4**
comp=Z,274nm,1.1s
HSIG 89.63 60 IAmb IAmb 20 55 59.8
comp=Z,88nm,1.5s
EPYK Eagle Plains 90.01 20 P **P 20 55 07.4 -0.2**
baz=234
EPYK Eagle Plains 90.01 20 IAmb IAmb 20 56 03.7
comp=Z,40nm,1.6s
F10A Beach Ranch, E 90.10 42 IAmb IAmb 20 55 10.0
comp=Z,33nm,0.8s
GKN Gorkha 90.12 299 *e*P **P 20 55 08.1 -1.0**
TUC Tucson 90.67 57 P **P 20 55 12.5 +1.0**
TUC pmax pmax
comp=Z,87nm,1.4s
TUC Tucson 90.67 57 P **P 20 55 12.7 +1.2**
baz=254
TUC Tucson 90.67 57 P **P 20 55 12.5 +1.0**
TUC IAmb IAmb 20 56 05.5
comp=Z,87nm,1.4s
X16A Lo Mia Camp, P 90.73 55 IAmb IAmb 20 56 05.9
comp=Z,59nm,1.2s
KOLN Koldanda 90.94 298 *e*P **P 20 55 11.9 -1.1**
comp=Z,22nm,0.6s
NEW Newport 90.95 40 P **P 20 55 13.0 +0.7**
baz=250,SNR=7.6
DANN Dangsing 90.96 299 *e*P **P 20 55 11.8 -1.4**
comp=Z,45nm,0.6s
DUG Dugway, Tooele 91.34 49 P **P 20 55 15.8 +1.3**
baz=253
PYUN Piuthan 91.55 298 *e*P **P 20 55 14.6 -1.2**
comp=Z,98nm,1.2s
X18A Snowflake 91.95 55 IAmb IAmb 20 56 11.3
comp=Z,59nm,1.2s
WMQ Urumqi 92.20 315 *e*P **P 20 55 18.9 +0.7**
WMQ pP pP 20 56 07.0 -1.2
WMQ PP **PP 20 58 59.1 -2.5**
WMQ pmax pmax
comp=Z,25nm,1.3s
WMQ pmax pmax
comp=Z,130nm,3.6s
WMQ LR LR
comp=Z,180nm,18.1s
WMQ LR LR
comp=Z,150nm,22.7s
WMQ LR LR
comp=Z,150nm,26.1s
W18A Petrified Fore 92.27 55 P **P 20 55 20.3 +1.4**
baz=255,SNR=6.1
W18A Petrified Fore 92.27 55 IAmb IAmb 20 56 12.7
comp=Z,54nm,1.2s
MSO Missoula 92.53 42 P **P 20 55 20.8 +1.0**
baz=252
HWUT Hardware Ranch 92.65 48 P **P 20 55 20.0 -0.5**
P17A Butcher Ranch, 92.67 50 **P 20 55 19.0 -1.6**
HYB Hyderabad 92.92 287 *i* P **P 20 55 21.5 -0.6**
comp=Z,50nm,1.0s
HYB *es*P **sP 20 56 29.0 -3.1**
HYB *e*SKS **SKSac 21 05 36.0 -1.0**
121A Cookes Peak, D 93.18 57 P **P 20 55 24.5 +1.3**
baz=256
121A Cookes Peak, D 93.18 57 IAmb IAmb 20 56 17.1
comp=Z,65nm,1.4s
PV23 Carpenter Ridg 93.70 51 IAmb IAmb 20 55 27.2
comp=Z,18nm,0.8s
PV16 Nyswonger Mesa 93.73 52 P **P 20 55 25.3 -0.3**
PV11 David Mesa, Pa 93.77 52 IAmb IAmb 20 55 27.3
comp=Z,28nm,1.6s
PV03 Paradox Valley 93.77 52 IAmb IAmb 20 56 19.2
comp=Z,31nm,1.9s
NVL N'lazarevskaya 93.83 188 ⇓ *i* P **P 20 55 24.0 -1.2**
NVL pmax pmax
comp=Z,81nm,0.9s
PV22 Blue Mesa, Par 93.89 51 IAmb IAmb 20 55 27.9
comp=Z,14nm,0.8s
DGZ Jazzator, Alta 94.08 320 *c* iP **P 20 55 25.2 -1.7**
DGZ pmax pmax
comp=Z,43nm,1.2s
SNAA Sanae 94.33 183 P **P 20 55 27.3 -0.3**
SNAA pmax pmax
comp=Z,89nm,1.2s
SNAA Sanae 94.33 183 P **P 20 55 27.3 -0.3**
BW06 Boulder Array 94.39 47 P **P 20 55 28.7 +0.1**
baz=255
PDAR Pinedale Array 94.39 47 P **P 20 55 28.9 +0.3**
comp=Z,1.0nm,0.6s,baz=236,slow=3.9,SNR=11
PDAR pP **pP 20 56 17.6 -0.7**
comp=Z,2.7nm,1.1s,baz=278,slow=4.3,SNR=3.2
PDAR PP **PP 20 59 13.4 -5.6**
comp=Z,0.5nm,0.8s,baz=237,slow=6.9,SNR=4.0
PDAR PKKPbc **PKKPdf 21 12 27.1 -1.2**
comp=Z,1.4nm,0.8s,baz=98,slow=5.2,SNR=10

O20A	White River Ci	94.70	50	P		P		20 55 31.0	+1.0	
	baz=256									
ANMO	Albuquerque	94.83	55	*ce*P		P		20 55 28.7	-2.0	
ANMO				pmax	pmax					
	comp=Z,7.0nm,1.1s									
ANMO	Albuquerque	94.83	55	P		P		20 55 31.5	+0.7	
	baz=256									
EGMT	Eagleton	95.59	42	P		P		20 55 34.3	+0.6	
	baz=256									
C36M	Paulatuk	95.64	19	P		P		20 55 32.2	-1.1	
	baz=245									
C36M	Paulatuk	95.64	19	IAmb		IAmb		20 56 21.6		
	comp=Z,15nm,1.2s									
TX32	Lajitas Array	95.88	61	IAmb		IAmb		20 56 29.1		
	comp=Z,52nm,1.8s									
TXAR	Lajitas Array	95.88	61	P		P		20 55 36.0	+0.5	
	comp=Z,1.8nm,0.7s,baz=225,slow=4.9,SNR=26									
TXAR				pP		pP		20 56 25.4	-0.1	
	comp=Z,2.8nm,1.0s,baz=234,slow=4.2,SNR=5.9									
TXAR				PP		PP		20 59 22.7	-7.9	
	comp=Z,0.6nm,0.9s,baz=224,slow=3.3,SNR=3.4									
TXAR				PKKPbc		PKKPbc		21 12 24.1	0.0	
	comp=Z,1.1nm,0.8s,baz=105,slow=4.9,SNR=7.3									
TXAR				LR		LR		21 34 13.0		
	comp=Z,92nm,19.1s,baz=0.0,slow=32									
TXAR	Lajitas Array	95.88	61	P		P		20 55 36.0	+0.5	
SDCO	Great Sand Dun	96.22	53	P		P		20 55 36.4	-0.7	
A36M	Sachs Harbour	96.41	17	P		P		20 55 36.8	0.0	
	baz=244									
N23A	Red Feather La	96.58	50	P		P		20 55 39.7	+1.1	
	baz=257									
ISCO	Idaho Springs	96.58	51	P		P		20 55 39.7	+0.9	
	baz=258									
MKAR	Makanchi Array	96.65	316	P		P		20 55 38.7	+0.2	
	comp=Z,30nm,0.8s,baz=96,slow=6.4,SNR=165									
MKAR				pP		pP		20 56 26.9	-1.5	
	comp=Z,8.4nm,1.0s,baz=98,slow=6.2,SNR=2.5									
MKAR				PKiKP		PKiKP		21 00 14.4	0.0	
	comp=Z,1.7nm,0.6s,baz=228,slow=1.2,SNR=16									
MKAR				PKKPbc		PKKPbc		21 12 20.4	-2.4	
	comp=Z,1.5nm,0.6s,baz=264,slow=4.0,SNR=12									
MKAR				LR		LR		21 42 02.6		
	comp=Z,40nm,19.3s,baz=102,slow=37									
ZAA0	Zalesovo Array	96.77	324	P		P		20 55 38.8	0.0	
ZALV	Zalesovo Beam	96.77	324	P		P		20 55 38.3	-0.5	
	comp=Z,21nm,0.8s,baz=117,slow=4.2,SNR=82									
ZALV				pP		pP		20 56 27.1	-1.7	
	comp=Z,3.3nm,0.7s,baz=104,slow=4.7,SNR=3.2									
ZALV				PKiKP		PKiKP		21 00 14.7	+0.4	
	comp=Z,1.7nm,0.7s,baz=15,slow=1.2,SNR=4.2									
ZALV				LR		LR		21 36 57.7		
	comp=Z,130nm,21.9s,baz=82,slow=34									
YKA	Yellowknife Ar	96.84	27	P		P		20 55 38.1	-0.8	
	comp=Z,3.7nm,0.6s,baz=249,slow=4.4,SNR=52									
YKA				pP		pP		20 56 26.7	-2.2	
	comp=Z,4.1nm,0.9s,baz=248,slow=4.6,SNR=5.9									
YKA				PKiKP		PKiKP		21 00 15.9	+1.7	
	comp=Z,0.6nm,0.8s,baz=240,slow=1.2,SNR=4.4									
YKA				PKKPbc		PKKPbc		21 12 19.6	-3.2	
	comp=Z,0.5nm,0.7s,baz=80,slow=3.0,SNR=6.6									
YKA				LR		LR		21 34 51.7		
	comp=Z,68nm,19.0s,baz=0.0,slow=32									
MAKZ	Makanchi	96.87	316	P		P		20 55 40.9	+1.4	
MAKZ				pmax	pmax					
	comp=Z,54nm,1.2s									
MAKZ	Makanchi	96.87	316	P		P		20 55 40.9	+1.4	
KSH	Kashi	99.73	308	P		Pdif		20 55 54.8	+2.2	
KSH				sP		sP		20 57 12.6	+8.9	
KSH				PP		PP		21 00 07.8	+7.9	
KSH				S		S		21 07 02.1	-6.4	
KSH				SS		SS		21 14 08.3	+2.9	
KSH				pmax	pmax					
	comp=Z,14nm,1.0s									
KSH				pmax	pmax					
	comp=Z,280nm,6.2s									
KSH				LR		LR				
	comp=Z,190nm,4.0s									
KSH				LR		LR				
	comp=Z,120nm,10.8s									
KSH				LR		LR				
	comp=Z,190nm,10.7s									
KURK	Kurchatov	99.82	320	P		Pdif		20 55 51.9	-0.6	
KURK	Kurchatov	99.82	320	*ce*P		Pdif		20 55 51.5	-1.0	
KURK				pmax	pmax					
	comp=Z,10.0nm,1.2s									
KURBB	Kurchatov Arra	99.86	320	PKiKP		PKiKP		21 00 20.4	+0.5	
	comp=Z,1.4nm,0.5s,baz=118,slow=1.8,SNR=3.6									
KURBB				PKKPbc		PKKPbc		21 12 11.8	-2.0	
	comp=Z,2.4nm,1.1s,baz=286,slow=3.3,SNR=8.2									
AAK	Ala-Archa	101.34	311	PKKPbc		PKKPbc		21 12 09.0	-0.6	
	comp=Z,1.5nm,0.5s,baz=247,slow=7.7,SNR=5.8									
BRVK	Borovoye	105.21	322	P		Pdif		20 56 16.5	+0.1	
SVE	Sverdlovsk	110.67	326	*e*PKiKP		PKiKP		21 00 40.2	+0.5	
SVE				pmax	pmax					
	comp=Z,21nm,1.6s									
ARU	Arti	111.86	325	*i* PKiKP		PKiKP		21 00 41.6	-0.3	
ARU								21 01 25.9		
ARU								21 07 31.4		
ARU				SS		SS		21 16 48.2	-0.5	
MHTO	MHTO	112.68	287	P		PKiKP		21 00 44.7	+0.2	
GEYT	Alibeck	113.50	305	PKiKP		PKiKP		21 00 46.4	+0.6	
	comp=Z,6.3nm,0.8s,baz=248,slow=2.7,SNR=16									
BSY	Bisya	113.58	289	P		PKiKP		21 00 45.5	-0.8	
SPA0	Spitsbergen Ar	114.16	354	*e*PKPdf		PKiKP		21 00 45.9	0.0	
BANOM	Banah	114.67	292	P		PKPdf		21 00 48.2	-0.1	
BANOM	Banah	114.67	292	P		PKPdf		21 00 48.3	0.0	
UOSS	Minazif	114.68	291	P		PKPdf		21 00 47.7	-0.6	
HATD	Hatta, Dubai	114.74	291	*i* P		PKiKP		21 00 48.4	0.0	
	SNR=10.0									
ASHO	Ashiyiah	114.80	291	*i* P		PKPdf		21 00 48.0	-0.6	
	SNR=9.0									
ASHO	Ashiyiah	114.80	291	P		PKPdf		21 00 48.0	-0.5	
ALNE	Al Ain	115.02	290	P		PKPdf		21 00 49.2	+0.2	
DMTO	DMTO	115.11	283	P		PKiKP		21 00 49.1	-0.2	
NAZ	Nazwa, Dubai	115.18	291	*i* P		PKPdf		21 00 49.3	0.0	
	SNR=7.6									
SOCY	Socotra	115.20	277	P		PKiKP		21 00 49.7	+0.1	
RBK	Rabkut	115.78	283	P		PKiKP		21 00 51.2	+0.6	
WHFO	Wadi Hawf	116.24	283	P		PKPdf		21 00 51.4	-0.1	
DAG	Danmarks Havn	117.09	2	*i* PKiKP		PKPdf		21 00 50.0	-1.4	
DAG				pmax	pmax					
	comp=Z,8.0nm,0.7s									
DAG	Danmarks Havn	117.09	2	*i* P		PKPdf		21 00 50.0	-1.4	
	comp=Z,8.1nm,0.7s									
LPAZ	La Paz	117.54	117	PKKPbc		PKKPbc		21 11 17.2	-0.3	
	comp=Z,2.9nm,0.9s,baz=19,slow=3.4,SNR=8.6									
LVZ	Lovozero	118.07	342	*c i* PKiKP		PKPdf		21 00 52.8	-0.8	
LVZ				pmax	pmax					
	comp=Z,18nm,1.3s									
KEV	Kevo	118.97	345	PKiKP		PKiKP		21 00 55.6	+0.3	
KEV	Kevo	118.97	345			PKiKP		21 00 55.6	+0.3	
TMCR	Tamitsa	118.97	337	*e*PKiKP		PKPdf		21 00 54.0	-1.3	
HAMF	Hammerfest	119.10	347	*e*PKPdf		PKPdf		21 00 55.1	-0.4	
ARCES	ARCESS Array B	119.50	346	PKP		PKPdf		21 00 56.1	-0.2	
	comp=Z,25nm,0.6s,baz=70,slow=1.1,SNR=134									
ARCES				pPKP		pPKPdf		21 01 47.2	-1.4	
	comp=Z,4.3nm,0.7s,baz=120,slow=1.3,SNR=2.1									
ARCES				PKKPbc		PKKPab		21 11 07.5	-2.7	
	comp=Z,6.3nm,0.8s,baz=213,slow=2.5,SNR=17									
ARE0	ARCESS Array S	119.50	346	*e*PKPdf		PKiKP		21 00 56.6	+0.2	
KLMR	Klimovskoe	120.00	333	*e*PKiKP		PKPdf		21 00 54.9	-2.5	
KLMR				pmax	pmax					
	comp=Z,72nm,1.3s									
KLMR	Klimovskoe	120.00	333	*e*PKPdf		PKPdf		21 00 55.0	-2.5	
KLMR				AMP				21 00 59.4		
	comp=Z,72nm,1.3s									
KTK1	Kautokeino	120.43	346	*e*PKPdf		PKPdf		21 00 56.5	-1.5	
TRO	Tromso	120.91	348	*e*PKPdf		PKPdf		21 00 58.9	0.0	
CPUP	Villa Florida	120.97	133	PKP		PKPdf		21 01 00.3	-0.1	
	comp=Z,6.6nm,0.7s,baz=308,slow=2.0,SNR=16									
CPUP				PKKPbc		PKKPbc		21 11 04.0	-0.6	
	comp=Z,4.0nm,1.1s,baz=79,slow=5.2,SNR=3.9									
CPUP	Villa Florida	120.97	133			PKPdf		21 01 00.4	0.0	
MAK	Makhachkala	121.11	312	*e*P		Pdif		20 57 26.8	-0.6	
MAK				*i*				21 00 58.4		
MAK				*e*				21 02 28.3		
MAK				pmax	pmax					
	comp=Z,149nm,1.6s									
AKT	Akhty	121.19	310	*e*PKiKP		PKiKP		21 01 01.7	+1.1	
AKT				*e*				21 01 57.0		
AKT				*e*				21 02 33.4		
AKT				pmax	pmax					
	comp=Z,64nm,1.4s									
SFJD	Kangerlussuaq	121.41	16	*i* PKiKP		PKiKP		21 01 00.3	+0.2	
SFJD	Kangerlussuaq	121.41	16	*i* P		PKiKP		21 01 00.3	+0.2	
SCHQ	Schefferville	121.63	33	PKKPbc		PKKPbc		21 11 01.9	-0.9	
	comp=Z,8.2nm,0.6s,baz=106,slow=5.4,SNR=6.9									
GROC	Groznyy	122.29	312	*i* PKiKP		PKPdf		21 01 01.6	-0.8	
GROC				*e*				21 02 40.9		
GROC				pmax	pmax					
	comp=Z,53nm,0.9s									
VRH	Novokhopyorsk	122.78	323	*e*PKiKP		PKPdf		21 01 03.0	0.0	
VRH				pmax	pmax					
	comp=Z,70nm,0.6s									
STEI	Steigen	123.08	348	*e*PKPdf		PKPdf		21 01 03.2	+0.1	
SDV	Santo Domingo	123.10	88			PKPdf		21 01 05.0	0.0	
SCO	Scoresbysund	123.20	4	⇑*i* PKiKP		PKiKP		21 01 04.0	+0.5	
SCO				pmax	pmax					
	comp=Z,16nm,0.9s									
SCO	Scoresbysund	123.20	4			PKiKP		21 01 04.1	+0.5	
SCO	Scoresbysund	123.20	4	⇑*i* P		PKiKP		21 01 04.0	+0.5	
	comp=Z,16nm,0.9s									
MOS	Moscow	123.23	329	*i* PKiKP		PKPdf		21 01 03.4	-0.4	
MOS				*e*				21 02 44.3		
MOS				pmax	pmax					
	comp=Z,73nm,1.2s									
LOF	Lofoten	123.24	349	*e*PKPdf		PKPdf		21 01 02.7	-0.7	
ZEI	Tsey	123.74	312	*i* PKiKP		PKiKP		21 01 05.7	-0.1	
ZEI				pmax	pmax					
	comp=Z,25nm,0.9s									
GOF	Gofitskoye	123.79	315⇑	*e*PKiKP		PKiKP		21 01 05.9	+0.4	
GOF				pmax	pmax					
	comp=Z,50nm,1.3s									
LPSR	Galich'ya Gora	123.87	325	*e*PKiKP		PKiKP		21 01 05.6	+0.2	
LPSR				pmax	pmax					
	comp=Z,100nm,1.0s									
BOSA	Boshof	123.99	221	PKP		PKiKP		21 01 06.7	+0.1	
	comp=Z,20nm,0.9s,baz=150,slow=2.0,SNR=16									
BOSA				PKKPbc		PKKPbc		21 10 52.8	-0.6	
	comp=Z,1.9nm,0.7s,baz=284,slow=4.2,SNR=4.8									
BOSA	Boshof	123.99	221	PKiKP		PKiKP		21 01 06.6	0.0	
BOSA	Boshof	123.99	221			PKiKP		21 01 06.6	0.0	
OBN	Obninsk	124.05	328	*c i* PKiKP		PKiKP		21 01 05.8	+0.2	
OBN				*i*				21 02 52.0		
OBN				pmax	pmax					
	comp=Z,108nm,1.3s									
OBN	Obninsk	124.05	328			PKiKP		21 01 06.6	+1.0	
KBZ	Khabaz	124.23	314	PKP		PKiKP		21 01 06.7	+0.3	
	comp=Z,14nm,1.1s,baz=124,slow=4.3,SNR=11									
KBZ	Khabaz	124.23	314	*c i* PKiKP		PKPdf		21 01 07.6	+1.2	
VSR	Storozhevoye	124.28	323	*i* PKiKP		PKPdf		21 01 05.6	-0.3	
VORD	Divnogorie	124.30	323	*e*PKiKP		PKPdf		21 01 06.0	0.0	
VORD				pmax	pmax					
	comp=Z,70nm,1.6s									
KIV	Kislovodsk	124.32	314	*i* P		PKiKP		21 01 07.2	+0.5	
	SNR=12									
KIV	Kislovodsk	124.32	314	P		PKiKP		21 01 07.8	+1.1	
KIV	Kislovodsk	124.32	314	*i* PKiKP		PKiKP		21 01 07.2	+0.5	
KIV				*e*				21 02 54.6		
KIV				*e*PS		PS		21 12 55.9	-0.6	
KIV				pmax	pmax					
	comp=Z,103nm,1.0s									
KIV				MLR		MLR				
	comp=Z,144nm,22.0s									
RAYN	Ar Rayn	124.37	289	*i* P		PKiKP		21 01 07.6	+0.3	
	SNR=35									
PUL	Pulkovo	124.44	335	*i* PKiKP		PKPdf		21 01 06.1	+0.1	
MOR8	Moi Rana	124.73	347	*e*PKPdf		PKPdf		21 01 05.5	-0.9	
KONS	Konsvik	124.73	348	*e*PKPdf		PKiKP		21 01 06.6	-0.1	
DAMY	Dhamar	124.79	278	P		PKiKP		21 01 10.6	+1.9	
SAML	Samuel	124.99	112	PKiKP		PKPdf		21 01 08.2	-0.2	
SAML	Samuel	124.99	112			PKPdf		21 01 08.2	-0.2	
FINES	FINESS Array B	125.00	338	PKhKP		PKPre		21 00 56.5		
	comp=Z,1.6nm,0.9s,baz=195,slow=30,SNR=4.2									
FINES				PKP		PKiKP		21 01 07.2	-0.2	
	comp=Z,39nm,1.0s,baz=24,slow=3.6,SNR=65									
FINES				PKKPbc		PKKPab		21 10 46.4	-0.1	
	comp=Z,0.7nm,0.7s,baz=212,slow=4.9,SNR=3.4									
FINES	FINESS Array B	125.00	338	*c i* PKiKP		PKiKP		21 01 07.3	-0.1	
FINES				pmax	pmax					
	comp=Z,39nm,1.0s									
BATM	Batumi	125.61	311	⇑P		PKiKP		21 01 09.8	+0.6	
BATM	Batumi	125.61	311	⇑PKiKP		PKiKP		21 01 09.8	+0.6	
BCA	Borcka	125.70	311	⇓P		PKiKP		21 01 10.0	+0.6	
ATD	Arta Tunnel	125.86	274	P		PKiKP		21 01 13.0	+2.4	
	SNR=9.6									
LBTB	Lobatse	126.20	224	PKiKP		PKiKP		21 01 11.3	+0.2	
LBTB	Lobatse	126.20	224			PKiKP		21 01 11.3	+0.2	
SOC	Sochi	126.50	314	*i* PKiKP		PKPdf		21 01 08.1	-2.3	
SOC				*e*				21 07 59.7		
NSS	Namsos	126.68	347	*e*PKPdf		PKiKP		21 01 10.4	-0.2	
VSU	Vasula	126.71	335	*e*P		PKPdf		21 01 10.6	+0.2	
VSU	Vasula	126.71	335	*i* PKiKP		PKPdf		21 01 10.2	-0.1	
KIBK	Kibwezi	127.16	256	P		PKiKP		21 01 14.4	+1.2	
	SNR=8.5									
TBLU	Trondheim	128.17	347	*e*PKPdf		PKiKP		21 01 13.4	-0.2	
KMBO	Kilima Mbogo	128.31	257	PKP		PKiKP		21 01 17.6	+1.8	
	comp=Z,14nm,1.0s,baz=69,slow=1.1,SNR=20									
KMBO	Kilima Mbogo	128.31	257	*i* P		PKiKP		21 01 16.6	+0.8	
	SNR=15									
KMBO	Kilima Mbogo	128.31	257	P		PKiKP		21 01 16.7	+0.9	
SJG	San Juan	128.60	78	PKiKP		PKPdf		21 01 15.4	+0.2	
SJG	San Juan	128.60	78			PKPdf		21 01 15.4	+0.2	
IZAR	Zarasai	128.64	333	*e*P		PKiKP		21 01 15.3	+0.5	
ISAL	Salakas	128.80	333	*e*P		PKiKP		21 01 15.2	+0.1	
HUMP	Col San Antoni	128.89	78			PKiKP		21 01 16.5	+0.1	
IIGN	Ignalina	128.90	333	*e*P		PKiKP		21 01 15.7	+0.3	
NACGM	Naroch	128.92	332	*e*		PKiKP		21 01 16.0	+0.6	
SLIT	Slitere, Latvi	129.03	337	*e*P		PKPdf		21 01 12.0	-2.8	
MOL	Molde	129.35	348	*e*PKPdf		PKiKP		21 01 16.4	+0.4	
DOMB	Dombas	129.50	347	*e*PKPdf		PKPdf		21 01 15.6	0.0	
PABE	Paberze	129.79	334	*e*P		PKiKP		21 01 16.9	-0.2	
AKN	Aaknes	129.81	348	*e*PKPdf		PKiKP		21 01 17.3	+0.2	
SIM	Simferopol'	129.82	318	*e*PKiKP		PKiKP		21 01 17.9	+0.4	
SIM				pmax	pmax					
	comp=Z,19nm,0.9s									
NB2	NORSAR Subarra	129.87	345	PKPdf		PKPdf		21 01 16.8	+0.4	
	comp=Z,26nm,0.9s,baz=31,slow=1.9									
NB2	NORSAR Subarra	129.87	345	PKPdf		PKPdf		21 01 16.8	+0.4	
	baz=31,slow=1.9									
NOA	NORSAR Array B	129.87	345	PKP		PKPdf		21 01 16.8	+0.4	
	comp=Z,9.7nm,0.7s,baz=33,slow=2.0,SNR=48									
NOA				pPKP		pPKPdf		21 02 07.1	-1.6	
	comp=Z,1.7nm,0.7s,baz=32,slow=2.1,SNR=2.6									
NOA				SKPbc		SKPbc		21 04 21.9	+2.3	
	comp=Z,2.7nm,0.8s,baz=32,slow=3.1,SNR=11									
NC602	NORSAR Array S	130.05	345	*e*PKPdf		PKPdf		21 01 16.8	+0.2	
AKASG	Malin Array Be	130.10	326	PKP		PKPdf		21 01 17.4	+0.4	
	comp=Z,9.3nm,0.6s,baz=51,slow=2.1,SNR=66									
AKASG				pPKP		pPKPdf		21 02 09.3	+0.1	
	comp=Z,2.8nm,0.7s,baz=54,slow=1.5,SNR=2.2									
AKASG				SKPbc		SKPab		21 04 21.3	+0.6	
	comp=Z,2.7nm,0.7s,baz=48,slow=4.8,SNR=9.0									
PBUR	Paburge	130.29	335	*e*P		PKiKP		21 01 18.2	+0.1	
FOO	Floro	130.72	349	*e*PKPdf		PKiKP		21 01 19.1	+0.3	
SKAR	Skarslia	130.88	347	*e*PKPdf		PKPdf		21 01 17.6	-0.7	
OSL	Oslo	130.95	345	*e*PKPdf		PKiKP		21 01 19.8	+0.5	
PTGA	Pitinga	130.98	103			PKPdf		21 01 19.8	-0.1	
LODK	Lodwar	131.44	262	P		PKiKP		21 01 21.9	0.0	
	SNR=5.4									
SORM	Soroca	131.93	324	⇑P		PKPdf		21 01 15.4	-5.2	
SORM	Soroca	131.93	324	⇑PKiKP		PKPdf		21 01 15.4	-5.2	
BR131	Keskin Array S	132.01	311	P		PKPdf		21 01 21.7	+0.5	
	SNR=9.6									
BRTR	Keskin Array B	132.01	311	PKhKP		PKPre		21 01 07.9		
	comp=Z,0.7nm,0.5s,baz=116,slow=2.9,SNR=5.7									
BRTR				PKP		PKPdf		21 01 21.5	+0.2	
	comp=Z,9.9nm,1.0s,baz=145,slow=3.4,SNR=24									
BRTR				PP		PP		21 03 44.3	-0.8	
	comp=Z,1.5nm,0.7s,baz=120,slow=5.0,SNR=5.1									
BRTR				SKPbc		SKPab		21 04 30.1	+0.6	
	comp=Z,5.3nm,0.7s,baz=83,slow=4.8,SNR=12									
MILM	Milestii Mici	132.27	322	⇑P		PKPdf		21 01 21.6	+0.3	
BLS5	Blasjo	132.42	347	*e*PKPdf		PKPdf		21 01 20.6	-0.7	
ANTO	Ankara	132.58	312	P		PKiKP		21 01 23.3	0.0	
ANTO	Ankara	132.58	312	PKiKP		PKiKP		21 01 23.6	+0.2	
ANTO	Ankara	132.58	312			PKiKP		21 01 23.6	+0.2	
LEOM	Leova	132.83	322	⇑P		PKPdf		21 01 22.8	+0.4	
LEOM	Leova	132.83	322	⇑PKiKP		PKPdf		21 01 22.8	+0.4	
KMY	Karmoy	132.88	348	*e*PKPdf		PKiKP		21 01 23.6	+0.4	
HOMB	Homborsund	132.97	345	*e*PKPdf		PKiKP		21 01 23.5	+0.1	
TLCR		133.11	320	⇑P		PKPdf		21 01 23.3	+0.4	
TLCR		133.11	320	⇑PKiKP		PKPdf		21 01 23.3	+0.4	
JURR	Jurilovca	133.26	320	⇓P		PKiKP		21 01 23.9	-0.6	
LVV	L'vov	133.34	328	*e*PKiKP		PKPdf		21 01 19.6	-3.7	
CFR	Carcaliu	133.53	320	⇑P		PKiKP		21 01 24.4	-0.6	
CFR	Carcaliu	133.53	320	⇑PKiKP		PKiKP		21 01 24.4	-0.6	
BEL	Belsk	133.64	332	*e*PKP		PKiKP		21 01 25.0	0.0	
TIRR	Tirgusor	133.70	319	⇑P		PKPdf		21 01 16.4	-7.7	
TIRR	Tirgusor	133.70	319	⇑PKiKP		PKPdf		21 01 16.4	-7.7	
TESR	Tescani	133.76	323	⇑P		PKPdf		21 01 16.2	-8.0	
MFTR	Murfatlar	133.83	319	⇑P		PKiKP		21 01 25.3	-0.3	
MANR	Mangalia	133.89	318	⇑P		PKiKP		21 01 25.7	-0.1	
TLBR	Topalu	133.89	320	⇓P		PKPdf		21 01 22.4	-2.0	
HARR	Harsova	133.90	320	⇑P		PKPdf		21 01 24.9	+0.5	
HARR	Harsova	133.90	320	⇑PKiKP		PKPdf		21 01 24.9	+0.5	
LEF	Lefka	133.95	306	⇑P		PKiKP		21 01 26.5	+0.3	
BURAR	Bucovina Array	133.99	325	⇑P		PKiKP		21 01 26.5	+0.5	
BURAR	Bucovina Array	133.99	325	⇑PKiKP		PKiKP		21 01 26.5	+0.5	
VRI	Vrincioaia	134.05	322	⇑P		PKPdf		21 01 16.3	-8.4	
VRI	Vrincioaia	134.05	322	⇑PKHKP		PKPpre		21 01 16.3		
PLOR	Plostina	134.10	322	⇑P		PKPdf		21 01 25.2	+0.4	
PLOR	Plostina	134.10	322	⇑PKiKP		PKPdf		21 01 25.2	+0.4	
KWP	Kalwaria Pacla	134.14	328	*e*PKP		PKiKP		21 01 25.7	-0.4	
ORH	Orhaniye	134.15	314	P		PKiKP		21 01 30.9	+4.5	
GKP	Gorka Klasztor	134.17	335	*e*PKP		PKiKP		21 01 25.7	-0.3	
PSN	Preselentsi	134.21	319	*i* P		PKiKP		21 01 25.8	-0.6	
BDFB	Brasilia	134.36	129	PKP		PKPdf		21 01 26.6	+0.3	
	comp=Z,9.0nm,0.7s,baz=226,slow=4.1,SNR=11									
BDFB	Brasilia	134.36	129	PKiKP		PKPdf		21 01 27.0	+0.7	
BDFB	Brasilia	134.36	129			PKPdf		21 01 27.0	+0.7	
OZUR		134.49	323	⇑P		PKPdf		21 01 24.1	-1.5	
RASA	Rasa	134.62	320	⇑P		PKiKP		21 01 27.7	+0.4	
MBAR	Mbarara	134.62	255	*i* PKiKP		PKPdf		21 01 26.5	-0.5	
MLR	Muntele Rosu	134.71	322	⇑P		PKPdf		21 01 26.2	+0.1	
MLR	Muntele Rosu	134.71	322	⇑PKiKP		PKPdf		21 01 26.2	+0.1	
ARCR	ARCALIA	134.77	325	⇓P		PKPdf		21 01 26.7	+0.7	
DOPR	Dopca	134.79	323	⇑P		PKiKP		21 01 27.1	-0.5	
KOLS	Kolonicke sedl	134.80	328	*e*PKiKP		PKPdf		21 01 27.8	+0.3	
KOLS	Kolonicke sedl	134.80	328	*e*PKP		PKiKP		21 01 27.8	+0.3	
PRD	Provadia	134.94	318	*i* P		PKiKP		21 01 27.3	-0.6	
SULR		134.94	321	⇓P		PKiKP		21 01 28.7

PRU				*e*PP	**PP**	21 04 21.8	+1.8
SIGR	**SIGRI**	**137.78**	**314**	P	**PKPdf**	**21 01 31.7**	**-0.1**
VTS	**Vitosha**	**137.88**	**320**	*i* P	**PKPdf**	**21 01 31.6**	**-0.5**
VTS	**Vitosha**	**137.88**	**320**	⇑P	PKPpre	21 01 22.3	
VTS	**Vitosha**	**137.88**	**320**	*i* P	**PKPdf**	**21 01 32.5**	**+0.4**
VTS	**Vitosha**	**137.88**	**320**	⇑PKHKP	PKPpre	21 01 22.3	
CLZ	**Clausthal**	**137.90**	**339**	*e*PKPdf	**PKiKP**	**21 01 33.0**	**-0.7**
	baz=37,slow=1.8						
NEUB	**Neuenburg**	**137.90**	**337**	*e*PKPdf	**PKiKP**	**21 01 32.8**	**-0.9**
	baz=37,slow=1.8						
CHOS	**Chios Island**	**137.99**	**313**	P	**PKPdf**	**21 01 31.8**	**-0.6**
MMB	**Musomiste**	**138.10**	**318**	*i* P	**PKPdf**	**21 01 32.0**	**-0.4**
NVR	**Nevrokopi**	**138.13**	**318**	P	**PKPdf**	**21 01 31.6**	**-0.9**
PBCC	**Pribram**	**138.19**	**334**	*e*PKPDF	**PKPdf**	**21 01 32.9**	**+0.6**
TANN	**Tannenbergstha**	**138.26**	**336**	*e*PKPdf	**PKiKP**	**21 01 33.6**	**-0.9**
	baz=37,slow=1.8						
PLN	**Plauen**	**138.33**	**336**	*e*PKPdf	**PKiKP**	**21 01 33.6**	**-1.0**
	baz=37,slow=1.8						
GUNZ	**Gunzen**	**138.35**	**336**	*e*PKPdf	**PKiKP**	**21 01 33.7**	**-1.0**
	baz=37,slow=1.8						
KKB	**Krupnik**	**138.37**	**319**	*i* P	**PKPdf**	**21 01 33.2**	**+0.3**
IBBN	**Ibbenburen**	**138.37**	**341**	*e*PKPdf	**PKiKP**	**21 01 33.6**	**-1.0**
	baz=37,slow=1.8						
WERN	**Wernitzgruen**	**138.40**	**336**	*e*PKPdf	**PKiKP**	**21 01 33.9**	**-0.9**
	baz=37,slow=1.8						
MOX	**Moxa**	**138.41**	**337**	*e*PKPdf	**PKPdf**	**21 01 33.4**	**+0.8**
	baz=37,slow=1.8						
MOX				*e*L	L	22 04 49.5	
	comp=Z,94nm,20.2s						
NKC	**Novy Kostel**	**138.41**	**336**	*e*PKIKP	**PKiKP**	**21 01 33.9**	**-0.9**
NKC	**Novy Kostel**	**138.41**	**336**	*e*PKPDF	**PKiKP**	**21 01 33.9**	**-0.9**
NKC				*e*SKP	**SKiKP**	**21 04 51.2**	**-0.5**
CONA	**Conrad Observa**	**138.65**	**331**	*e*PKPdf	**PKPdf**	**21 01 28.1**	**-5.2**
	comp=Z,20nm,1.0s,SNR=8.0						
AMGA	**Amorgos Island**	**138.74**	**311**	P	**PKPdf**	**21 01 32.4**	**-1.3**
KHC	**Kasperske Hory**	**138.79**	**334**	*i* PKIKP	**PKPdf**	**21 01 33.4**	**-0.1**
KHC	**Kasperske Hory**	**138.79**	**334**	*e*PKPpre	PKPpre	21 01 26.9	
KHC				*e*PKPDF	**PKPdf**	**21 01 34.5**	**+1.0**
KHC				*e*pPKP	pPKPdf	21 02 23.0	-2.8
KHC				*e*PP	**PP**	**21 04 19.6**	**-7.1**
KHC				*e*SKP	**SKiKP**	**21 04 52.0**	**-0.5**
UBBA	**Unterbreizbach**	**138.87**	**338**	*e*PKPdf	**PKPdf**	**21 01 33.6**	**+0.3**
	baz=37,slow=1.8						
ROTZ	**Rotzenmuhle**	**138.87**	**335**	*e*PKPdf	**PKPdf**	**21 01 34.4**	**+0.8**
	baz=37,slow=1.8						
APE	**Apeiranthos**	**138.91**	**311**	*i* PKIKP	**PKPdf**	**21 01 31.7**	**-2.4**
GEC2	**GERESS Array S**	**138.96**	**333**	*e*PKPdf	**PKPdf**	**21 01 34.3**	**+0.5**
	baz=37,slow=1.8						
GERES	**GERESS Array B**	**138.96**	**333**	PKhKP	PKPpre	21 01 25.1	
	comp=Z,2.5nm,0.6s,baz=45,slow=3.7,SNR=20						
GERES				PKP	**PKPdf**	**21 01 34.7**	**+0.8**
	comp=Z,9.8nm,0.6s,baz=52,slow=2.0,SNR=27						
GERES				SKPbc	**SKiKP**	**21 04 51.5**	**-1.4**
	comp=Z,2.9nm,0.7s,baz=40,slow=2.7,SNR=10						
VAY	**Valandovo**	**138.98**	**318**	*i* P	**PKPdf**	**21 01 31.3**	**-2.7**
VAY	**Valandovo**	**138.98**	**318**	*i* P	**PKPdf**	**21 01 31.3**	**-2.7**
WET	**Wettzell**	**139.08**	**334**	*e*PKPdf	**PKPdf**	**21 01 34.9**	**+0.9**
	baz=37,slow=1.8						
BUG	**Bochum--Univer**	**139.27**	**341**	*e*PKPdf	**PKPdf**	**21 01 35.0**	**+0.8**
	baz=37,slow=1.8						
ARSA	**Arzberg**	**139.29**	**330**	*e*PKPdf	**PKPdf**	**21 01 29.9**	**-4.6**
	comp=Z,5.8nm,1.0s						
GRF	**Grafenberg Arr**	**139.32**	**336**	*e*PKPdf	**PKPdf**	**21 01 35.4**	**+1.0**
	baz=37,slow=1.8						
GRF				*e*L	L	22 07 20.4	
	comp=Z,90nm,20.8s						
SKO	**Skopje**	**139.35**	**320**	*i* P	PKPdf	21 01 26.8	-7.9
SKO	**Skopje**	**139.35**	**320**	*i* P	PKPdf	21 01 26.8	-7.9
MOA	**Molln**	**139.45**	**332**	*e*PKPdf	**PKPdf**	**21 01 28.8**	**-5.9**
	comp=Z,7.0nm,1.1s						
DION	**Dionisos Attik**	**139.63**	**313**	P	**PKPdf**	**21 01 35.0**	**-0.3**
LAST	**Lasithi**	**139.69**	**308**	P	**PKPdf**	**21 01 35.9**	**+0.3**
PTL	**Penteli**	**139.69**	**313**	P	**PKPdf**	**21 01 34.8**	**-0.6**
TNS	**Taunus Mts**	**139.92**	**339**	*e*PKPdf	**PKPdf**	**21 01 36.6**	**+1.1**
	baz=37,slow=1.8						
SOKA	**Soboth**	**139.93**	**330**	*e*PKPdf	**PKPdf**	**21 01 28.7**	**-6.9**
	comp=Z,37nm,1.3s						
FNA	**Florina**	**140.03**	**319**	P	**PKPdf**	**21 01 35.9**	**-0.1**
AHRW	**Bad Neuenahr-A**	**140.11**	**340**	*e*PKPdf	**PKPdf**	**21 01 36.9**	**+1.1**
	baz=37,slow=1.8						
OHR	**Ohrid**	**140.22**	**319**	*i* P	**PKPdf**	**21 01 30.1**	**-6.2**
OHR	**Ohrid**	**140.22**	**319**	*i* P	**PKPdf**	**21 01 30.1**	**-6.2**
THL	**Klokotos Trika**	**140.24**	**316**	P	**PKPdf**	**21 01 35.2**	**-1.1**
DID	**Didima**	**140.38**	**313**	P	**PKPdf**	**21 01 35.8**	**-0.9**
MEM	**Membach**	**140.39**	**341**	PKiKP	**PKPdf**	**21 01 37.0**	**+0.8**
MEM				x	x	21 01 39.4	
KBA	**Koelnbreinsper**	**140.44**	**332**	*e*PKPdf	**PKPdf**	**21 01 29.7**	**-7.0**
	comp=Z,7.5nm,1.4s						
MYKA	**Terra Mystica**	**140.63**	**331**	*e*PKPdf	**PKPdf**	**21 01 30.3**	**-6.6**
	comp=Z,26nm,1.5s						
STU	**Stuttgart**	**140.85**	**337**	*e*PKPdf	**PKPdf**	**21 01 38.4**	**+1.2**
	baz=37,slow=1.8						
WATA	**Walderalm**	**141.03**	**334**	*e*PKPdf	**PKPdf**	**21 01 32.2**	**-5.6**
	comp=Z,35nm,1.2s,SNR=8.3						
WATA				*i* SKPbc	**SKiKP**	**21 04 57.8**	**+0.5**
	comp=Z,1.4nm,0.4s						
BMRD	**Maredsous**	**141.04**	**342**	PKPdf	**PKPdf**	**21 01 33.5**	**-3.9**
BMRD				PKiKP	**PKiKP**	**21 01 37.7**	**-2.5**
BMRD				sPKP		21 02 28.6	
WTTA	**Wattenberg**	**141.06**	**333**	*e*PKPdf	**PKPdf**	**21 01 32.1**	**-5.7**
	comp=Z,40nm,0.9s,SNR=8.1						
WTTA				*i* SKPbc	**SKiKP**	**21 04 58.1**	**+0.7**
	comp=Z,2.6nm,0.5s						
ABTA	**Abfaltersbach**	**141.06**	**332**	*e*PKPdf	**PKPdf**	**21 01 31.4**	**-6.3**
	comp=Z,45nm,1.1s						
WLF	**Walferdange**	**141.17**	**340**	PKPdf	**PKPdf**	**21 01 32.4**	**-5.3**
WLF	**Walferdange**	**141.17**	**340**	*e*PKPdf	**PKPdf**	**21 01 39.0**	**+1.4**
	baz=37,slow=1.8						
MOTA	**Moosalm**	**141.22**	**334**	*e*PKPdf	**PKPdf**	**21 01 33.3**	**-4.8**
	comp=Z,17nm,0.8s						
DOU	**Dourbes**	**141.28**	**342**	PKPdf	**PKPdf**	**21 01 33.0**	**-4.8**
SQTA	**Sankt Quirin**	**141.28**	**334**	*e*PKPdf	**PKPdf**	**21 01 33.4**	**-4.7**
	comp=Z,26nm,1.5s						
SQTA				*e*SKPbc	**SKiKP**	**21 04 58.7**	**+1.0**
	comp=Z,3.3nm,0.4s						
ITM	**Ithomi**	**141.46**	**313**	P	**PKPdf**	**21 01 32.6**	**-6.0**
FETA	**Feichten**	**141.64**	**334**	*e*PKPdf	**PKPdf**	**21 01 35.6**	**-3.3**
	comp=Z,48nm,1.4s						
FETA				*e*SKPbc	**SKiKP**	**21 04 59.8**	**+1.2**
	comp=Z,4.6nm,0.7s						
DAVA	**Damuels**	**141.78**	**335**	*e*PKPdf	**PKPdf**	**21 01 34.0**	**-5.0**
	comp=Z,22nm,1.0s						
CTI	**Castel Tesino**	**141.98**	**332**	PKiKP	**PKPdf**	**21 01 37.5**	**-1.9**
CTI	**Castel Tesino**	**141.98**	**332**		**PKPdf**	**21 01 37.5**	**-1.9**
TIP	**Timpagrande**	**143.87**	**320**	P	PKPbc	21 01 41.5	+0.3
TIP	**Timpagrande**	**143.87**	**320**		**PKPdf**	**21 01 42.4**	**-0.5**
SHEL	**Horse Pasture**	**149.51**	**193**	PKP2	**PKiKP**	**21 01 59.7**	**+1.0**
SHEL	**Horse Pasture**	**149.51**	**193**		**PKiKP**	**21 01 59.7**	**+1.0**
KEST	**Kesra**	**150.62**	**321**	PKP	**PKPdf**	**21 01 54.5**	**+0.3**
	comp=Z,21nm,0.8s,baz=247,slow=0.6,SNR=10						
KEST				PKPbc	**PKiKP**	**21 02 00.5**	**0.0**
	comp=Z,130nm,0.7s,baz=260,slow=0.9,SNR=106						
CMAH	**Djebel Manchou**	**151.12**	**325**	P	pPKPbc	21 02 55.6	+2.6
CAEH	**'Ain El Ouahch**	**151.32**	**326**	P	pPKPbc	21 02 55.7	+2.3
ABSA	**Djebel Ababsia**	**151.34**	**324**	P	pPKPbc	21 02 56.9	+3.4
CKFL	**Kef-Lekhel**	**151.67**	**326**	P	pPKPbc	21 02 56.9	+2.6
PBRG	**Braganca**	**151.76**	**351**	*e*PKPbc	**PKiKP**	**21 02 03.0**	**+0.4**
PBRG	**Braganca**	**151.76**	**351**	*e*PKPab	**PKPab**	**21 02 12.9**	**+1.1**
PGAV	**Gavieira, Arco**	**151.81**	**353**	*e*PKPbc	**PKiKP**	**21 02 03.3**	**+0.5**
CASM	**Ain Smara**	**151.89**	**326**	P	pPKPbc	21 02 57.3	+2.5
DFRA	**Djebel Bou Aff**	**152.01**	**327**	P	pPKPbc	21 02 58.3	+3.2
CTEI	**Djebel Teioual**	**152.09**	**325**	P	pPKPbc	21 02 58.1	+2.8
PVRL	**Vila Real**	**152.42**	**352**	*e*PKPbc	**PKiKP**	**21 02 04.9**	**+0.9**
PVRL	**Vila Real**	**152.42**	**352**	*e*PKPab	**PKPab**	**21 02 16.1**	**+1.5**
MVO	**Moncorvo**	**152.43**	**351**	*e*PKPbc	**PKiKP**	**21 02 04.8**	**+0.8**
MVO	**Moncorvo**	**152.43**	**351**	*e*PKPab	**PKPab**	**21 02 15.1**	**+0.5**
SET	**Setif**	**152.53**	**327**	P	pPKPab	21 03 03.0	-2.6
PVIS	**Viseu**	**153.00**	**352**	*e*PKPbc	**PKiKP**	**21 02 05.9**	**+0.7**
PVIS	**Viseu**	**153.00**	**352**	*e*PKPab	**PKPab**	**21 02 18.5**	**+1.5**
ESDC	**Sonseca Array**	**153.24**	**345**	PKP	**PKPdf**	**21 01 58.5**	**+0.5**
	comp=Z,3.4nm,1.0s,baz=2.5,slow=2.7,SNR=15						
ESDC				PKPbc	**PKiKP**	**21 02 06.4**	**+0.7**
	comp=Z,12nm,0.8s,baz=11,slow=3.3,SNR=50						
ESDC				pPKPbc	**pPKPbc**	**21 02 56.4**	**-1.3**
	comp=Z,2.2nm,0.9s,baz=351,slow=4.0,SNR=1.9						
MTE	**Manteigas**	**153.26**	**351**	*e*PKPdf	**PKPdf**	**21 01 59.1**	**+1.1**
MTE	**Manteigas**	**153.26**	**351**	*e*PKPbc	**PKiKP**	**21 02 06.8**	**+1.1**
MTE	**Manteigas**	**153.26**	**351**	*e*PKPab	**PKPab**	**21 02 19.5**	**+1.4**
PAB	**San Pablo**	**153.45**	**345**	PKiKP	**PKiKP**	**21 02 07.3**	**+1.1**
PAB	**San Pablo**	**153.45**	**345**		**PKiKP**	**21 02 07.3**	**+1.1**
PSET	**Sete Cidades**	**153.55**	**24**	*e*PKP	**PKPdf**	**21 01 57.9**	**-0.5**
CMLA	**Cha da Macela**	**153.68**	**23**	*e*PKP	**PKPdf**	**21 01 56.0**	**-2.6**
PCAS	**Casmilo, Conde**	**153.73**	**353**	*e*PKPbc	**PKiKP**	**21 02 07.8**	**+1.2**
PCBR	**Castelo Branco**	**153.79**	**351**	*e*PKPdf	**PKPdf**	**21 01 59.7**	**+1.0**
PCBR	**Castelo Branco**	**153.79**	**351**	*e*PKPbc	**PKiKP**	**21 02 07.6**	**+0.8**
PCBR	**Castelo Branco**	**153.79**	**351**	*e*PKPab	**PKPab**	**21 02 21.7**	**+1.4**
PMRV	**Marv??o**	**154.18**	**351**	*e*PKPbc	**PKiKP**	**21 02 08.8**	**+1.2**
PSBE	**So Bento**	**154.29**	**353**	*e*PKPbc	**PKiKP**	**21 02 08.9**	**+1.0**
PSBE	**So Bento**	**154.29**	**353**	*e*PKPab	**PKPab**	**21 02 24.3**	**+1.8**
PSMN	**Pico do Norte,**	**154.52**	**23**	*e*PKP	**PKPdf**	**21 01 56.0**	**-3.8**
PMTG	**Montargil**	**154.66**	**352**	*e*PKPbc	**PKiKP**	**21 02 08.7**	**+0.1**
PMTG	**Montargil**	**154.66**	**352**	*e*PKPab	**PKPab**	**21 02 24.7**	**+0.7**
EVO	**Evora**	**155.16**	**351**	*e*PKPbc	PKPdf	21 02 10.4	+10
EVO	**Evora**	**155.16**	**351**	*e*PKPab	**PKPab**	**21 02 27.6**	**+1.4**
PBEJ	**Beja**	**155.63**	**351**	*e*PKPdf	**PKPdf**	**21 02 02.4**	**+1.1**
PBEJ	**Beja**	**155.63**	**351**	*e*PKPab	**PKPab**	**21 02 29.8**	**+1.6**
PNCL	**Nicolau / Gran**	**155.64**	**352**	*e*PKPab	**PKPab**	**21 02 30.2**	**+1.9**
MESJ	**Messejana**	**155.87**	**351**	*e*PKPdf	**PKPdf**	**21 02 00.3**	**-1.2**
MESJ	**Messejana**	**155.87**	**351**	*e*PKPab	**PKPab**	**21 02 30.7**	**+1.5**
PCVE	**Castro Verde**	**156.04**	**351**	*e*PKPab	**PKPab**	**21 02 31.8**	**+1.8**
PVAQ	**Vaqueiros**	**156.21**	**350**	*e*PKPdf	**PKPdf**	**21 02 03.0**	**+1.0**
PVAQ	**Vaqueiros**	**156.21**	**350**	*e*PKPab	**PKPab**	**21 02 32.2**	**+1.4**
PBDV	**Barranco-do-Ve**	**156.41**	**350**	*e*PKPab	**PKPab**	**21 02 33.7**	**+2.1**
MORF	**Marmelete**	**156.45**	**352**	*e*PKPdf	**PKPdf**	**21 02 01.2**	**-1.3**
PFVI	**Vila Bisbo**	**156.65**	**352**	*e*PKPab	**PKPab**	**21 02 34.8**	**+2.2**
KIC	**Kosan Boka**	**169.13**	**227**	*e*PKIKP	**PKPdf**	**21 02 14.6**	**-0.7**
	comp=Z,80nm,1.1s						
KIC	**Kosan Boka**	**169.13**	**227**	*e*P	**PKPab**	**21 03 28.0**	**-0.1**
	comp=Z,84nm,1.1s						
LIC	**Lamto**	**169.24**	**225**	*e*PKIKP	**PKPdf**	**21 02 14.6**	**-0.7**
	comp=Z,104nm,1.3s						
LIC	**Lamto**	**169.24**	**225**	*e*P	**PKPab**	**21 03 28.6**	**+0.1**
	comp=Z,126nm,1.4s						
DBIC	**Dimbokro**	**169.43**	**228**	PKP	**PKPdf**	**21 02 15.3**	**-0.1**
	comp=Z,13nm,0.9s,baz=22,slow=0.5,SNR=12						
DBIC				PKPab	**PKPab**	**21 03 29.7**	**+0.3**
	comp=Z,19nm,1.0s,baz=144,slow=4.8,SNR=9.2						
DBIC				PP	**PP**	**21 07 25.1**	**+6.3**
	comp=Z,13nm,1.0s,baz=150,slow=6.1,SNR=6.6						
TIC	**Toumodi**	**169.53**	**227**	*e*PKIKP	**PKPdf**	**21 02 14.7**	**-0.8**
TIC	**Toumodi**	**169.53**	**227**	*e*P	**PKPab**	**21 03 29.9**	**0.0**

*IDC **11** 20:57:20.2±2.9, 29°.54S×174°.69W, h0km, mb3.7/2, mb1 4.1/3, mb1mx3.7/35, mbtmp3.9/3, ML4.8/1, Error ellipse: s-maj=161.9km s-min=33.5km az=165.0*
*NEIC **11** 20:57:22.1±1.8, 29°.7S±0°.2×174°.7W±0°.2, h15km±6km, mb4.6/7, Error ellipse: s-maj=29.0km s-min=21.1km az=181.0*

ISC 11 20:57:25.6±1.3, 29°.7S±0°.2×174°.9W±0°.1, h35km, n16, σ0s92/17, mb4.4/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.66**	**279**	Pn		**Pn**	**Pn**	**20 58 06.7**	**+0.8**
	145nm,0.3s,baz=38,slow=23,SNR=7.6								
RAO				Sn		**Sn**	**Sn**	**20 58 35.9**	**-1.0**
	610nm,0.3s,baz=128,slow=21,SNR=10								
HIZ	**Hauiti**	**12.21**	**221**	Pn		**Pn**	**Pn**	**21 00 16.8**	**-0.2**
ARMA	**Armidale**	**28.91**	**260**	P		**P**	**P**	**21 03 21.1**	**-0.4**
ARMA				IAmb		IAmb	IAmb	21 03 26.6	
	comp=Z,23nm,1.5s								
EIDS	**Eidsvold**	**30.39**	**270**	P		**P**	**P**	**21 03 34.1**	**-0.4**
EIDS				IAmb		IAmb	IAmb	21 03 45.9	
	comp=Z,16nm,1.4s								
TOO	**Toolangi**	**33.70**	**246**	P		**P**	**P**	**21 04 03.2**	**-0.3**
TOO				IAmb		IAmb	IAmb	21 04 14.1	
	comp=Z,4.4nm,0.9s								
STKA	**Stephens Creek**	**37.24**	**255**	P		**P**	**P**	**21 04 32.8**	**-1.2**
ASAR	**Alice Springs**	**45.83**	**265**	P		**P**	**P**	**21 05 46.0**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=101,slow=6.7,SNR=7.4								
WR0	**Warramunga Arr**	**46.58**	**270**	P		**P**	**P**	**21 05 51.3**	**+1.0**
WB2	**Warramunga Arr**	**46.75**	**270**	P		**P**	**P**	**21 05 52.9**	**+1.2**
WB2				IAmb		IAmb	IAmb	21 05 55.3	
	comp=Z,5.2nm,1.1s								
WRA	**Warramunga Arr**	**46.76**	**270**	P		**P**	**P**	**21 05 52.7**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=109,slow=7.3,SNR=17								
WB0	**Warramunga Arr**	**46.78**	**270**	P		**P**	**P**	**21 05 53.0**	**+1.0**
WB0				IAmb		IAmb	IAmb	21 06 07.0	
	comp=Z,5.2nm,1.1s								
MKAR	**Makanchi Array**	**119.37**	**310**	PKP		**PKiKP**	**PKiKP**	**21 16 10.9**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=108,slow=0.4,SNR=3.7								
FINES	**FINESS Array B**	**145.34**	**342**	PKPbc		**PKPbc**	**PKPbc**	**21 16 57.9**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=86,slow=2.5,SNR=8.8								
NB2	**NORSAR Subarra**	**148.38**	**354**	PKP		**PKPbc**	**PKPbc**	**21 17 07.4**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=8.7,slow=2.9								
NOA	**NORSAR Array B**	**148.38**	**354**	PKPbc		**PKPbc**	**PKPbc**	**21 17 07.1**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=13,slow=4.5,SNR=4.3								
AKASG	**Malin Array Be**	**152.28**	**326**	PKPbc		**PKiKP**	**PKiKP**	**21 17 17.8**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=44,slow=3.3,SNR=4.4								

RSNC 11 20:59:02.6±1.1, 6°.74N×73°.13W, h159km±11km, ML1.5, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BRRC	**Barranca, Sant**	**0.68**	**302**	*e*P		Pn		20 59 25.1	-0.9
BRRC				*e*S		Sn		20 59 43.8	-0.1
BRRC				*i*				20 59 50.8	
	comp=Z,5.9nm,0.5s								
RUSC	**La Rusia**	**0.85**	**177**	*e*P		Pn		20 59 28.0	+0.3
RUSC				*e*S		Sn		20 59 46.2	-0.7
RUSC				*i*				20 59 48.0	
	comp=Z,3.9nm,0.8s								
RUSC	**La Rusia**	**0.85**	**177**	*e*P		Pn		20 59 27.9	+0.1
RUSC				*e*S		Sn		20 59 46.7	-0.2
RUSC				*i*				20 59 48.0	
	comp=Z,4.1nm,0.9s								
PTBC	**PUERTO BERRIO,**	**1.33**	**261**	*e*P		Pn		20 59 30.3	-0.9
PTBC				*e*S		Sn		20 59 52.2	-0.9
PTBC				*i*				20 59 55.7	
	comp=Z,3.1nm,0.1s								
PTBC	**PUERTO BERRIO,**	**1.33**	**261**	*e*P		Pn		20 59 31.9	+0.7
PTBC				*e*S		Sn		20 59 52.5	-0.6
PTBC				*i*				20 59 55.7	
	comp=Z,3.1nm,0.1s								
SPBC	**San Pablo de B**	**1.43**	**221**	*e*S		Sn		20 59 54.6	-0.5
SPBC	**San Pablo de B**	**1.43**	**221**	*e*P		Pn		20 59 34.0	+1.6
SPBC				*e*S		Sn		20 59 54.8	-0.3
SPBC				*i*				21 00 00.3	
	comp=Z,6.0nm,0.2s								
NORC	**Norcasia**	**2.09**	**236**	*e*P		Pn		20 59 40.6	+1.2
NORC				*e*S		Sn		21 00 08.2	+0.5
NORC				*i*				21 00 15.1	
	comp=Z,3.1nm,1.6s								
NORC	**Norcasia**	**2.09**	**236**	*e*P		Pn		20 59 41.1	+1.7
NORC				*e*S		Sn		21 00 08.0	+0.3
NORC				*i*				21 00 15.1	
	comp=Z,3.1nm,1.6s								
SMLC	**San Martn de**	**2.25**	**336**	*e*S		Sn		21 00 09.1	-1.9

AEIC 11 21:49:23±0.9, 59°.16N±0°.04×136°.78W±0°.06, h5km±2km, ML3.0, Error ellipse: s-maj=5.7km s-min=3.8km az=218.0, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PLBC	**Pleasant Camp**	**0.37**	**36**				Pb	21 49 31.4	-0.6
PLBC							Sg	21 49 36.3	+1.4
DHAK	**Deception Hill**	**0.74**	**265**				Pg	21 49 37.7	+0.5
SKAG	**Skagway**	**0.81**	**67**				Pn	21 49 39.2	-0.3
SKAG							Sg	21 49 49.9	-0.7
BESE	**Bessie Mountai**	**1.16**	**119**				Pb	21 49 45.5	0.0
BESE							Sb	21 50 01.4	+0.5
PNL	**Peninsula**	**1.43**	**292**				Pn	21 49 49.0	-0.6
PNL							Sg	21 50 09.4	+0.5
YKU2	**Yakutat**	**1.52**	**285**				Pb	21 49 51.8	+0.2
YKU2							Sg	21 50 13.3	+1.5
JIS	**Juneau Island**	**1.54**	**124**				Pn	21 49 51.4	+0.4
JIS							Sg	21 50 13.1	+0.9
YUK7	**Dusty Glacier**	**1.54**	**334**				Pn	21 49 51.1	-0.2
YUK7							Sn	21 50 11.5	-0.1
HYT	**Haines Junctio**	**1.71**	**348**				Pn	21 49 54.1	+0.6
HYT							Sb	21 50 17.3	+0.5
WHY	**Whitehorse**	**1.78**	**32**				Pb	21 49 55.7	-0.5
WHY							Sg	21 50 20.0	-0.3
YUK6	**Outpost Mounta**	**1.96**	**337**				Pn	21 49 57.4	+0.3
YUK6							Sb	21 50 24.5	+0.5
YUK5	**Granite Creek**	**2.05**	**345**				Pn	21 49 59.1	+0.8
SIT	**Sitka**	**2.25**	**159**				Pb	21 50 03.1	-0.9
YUK4	**Talbot Arm**	**2.38**	**338**				Pn	21 50 04.6	+1.7
CHX	**Chaix Hills**	**2.38**	**294**				Pn	21 50 04.1	+1.4
YAH	**Yahtse**	**2.79**	**298**				Pn	21 50 10.0	+1.6
CTGM	**Chitina Glacie**	**2.91**	**310**				Pn	21 50 11.5	+1.4
BARN	**Barnard Glacie**	**3.10**	**310**				Pn	21 50 13.6	+1.0
YUK3	**Moose Creek**	**3.19**	**327**				Pn	21 50 15.3	+1.3
KIAG	**Kiagna River**	**3.31**	**305**				Pn	21 50 16.8	+1.2
YUK2	**White River**	**3.31**	**324**				Pn	21 50 16.9	+1.4
BALM	**Baldy**	**3.36**	**306**				Pn	21 50 17.5	+1.3
PTPK	**Patty Peak**	**3.49**	**308**				Pn	21 50 19.9	+1.8
YUK1	**Sand Pete Hill**	**3.52**	**330**				Pn	21 50 19.6	+1.1
DLBC	**Dease Lake**	**3.59**	**99**				Pn	21 50 20.5	+1.2
BERG	**Berg Lake**	**3.71**	**292**				Pn	21 50 22.1	+1.2
BVCY	**Beaver Creek**	**3.83**	**330**				Pn	21 50 23.8	+1.2
VRDI	**Verde Repeater**	**3.92**	**305**				Pn	21 50 25.1	+1.1
RAGM	**Ragged Mountai**	**4.17**	**291**				Pn	21 50 27.9	+0.6
GLB	**Gilahina Butte**	**4.18**	**306**				Pn	21 50 28.5	+1.1
CRAG	**Craig**	**4.20**	**150**				Pn	21 50 28.4	+0.9
GOAT	**Goat Mountain**	**4.25**	**293**				Pn	21 50 29.5	+1.1
BC03		**4.61**	**330**				Pn	21 50 34.0	+0.8
HIN	**Hinchinbrook I**	**5.07**	**288**				Pn	21 50 40.3	+0.8
DAWY	**Dawson**	**5.08**	**347**				Pn	21 50 40.8	+1.1
FID	**Port Fidalgo**	**5.13**	**292**				Pn	21 50 42.4	+2.0
GLI	**Glacier Island**	**5.45**	**293**				Pn	21 50 46.0	+1.2
DOT	**Dot Lake**	**5.70**	**325**				Pn	21 50 49.0	+0.7
EGAK	**Eagle**	**6.00**	**342**				Pn	21 50 53.4	+1.1
SLKM	**Skilak Lake**	**6.91**	**287**				Pn	21 51 06.3	+1.5
BRSE	**Bradley Lake S**	**7.14**	**281**				Pn	21 51 07.9	-0.1
TRF	**Thorofare Moun**	**7.79**	**309**				Pn	21 51 18.4	+1.4

**NNC 11 21:55:07.2±7.1, 37°.07N×70°.78E, h0km, mb4.0, mpv3.6, 3C

1.0nm,0.4s,baz=346,slow=9.3,SNR=3.8

PETK	**Petropavlovsk-**	**65.15**	**20**	P		**P**	**22 14 35.5**	**+0.8**
	0.4nm,0.4s,baz=175,slow=3.2,SNR=4.2							
MKAR	**Makanchi Array**	**66.50**	**328**	P		**P**	**22 14 43.0**	**-0.4**
	0.3nm,0.6s,baz=139,slow=5.8,SNR=2.1							
ZALV	**Zalesovo Beam**	**70.16**	**335**	P		**P**	**22 15 04.4**	**-1.2**
	0.5nm,0.4s,baz=143,slow=6.8,SNR=2.5							

IDC ***11*** *22:07:16.9±0.7, 17°.91S×173°.38W, h0km, mb4.4/15, mb1 4.6/16, mb1mx4.3/40, mbtmp4.4/16, ML3.9/1, MS3.5/8, Ms1 3.5/8, ms1mx3.2/31, Error ellipse: s-maj=33.5km s-min=15.0km az=138.0*

BJI ***11*** *22:07:21.8±0.0, 17°.98S×172°.84W, h25km, mB5.0/2, mb5.0/7*

NEIC ***11*** *22:07:23.2±1.4, 17°.92S±0°.07×172°.93W±0°.08, h41km±6km, mb4.6/105, Error ellipse: s-maj=11.0km s-min=10.1km az=222.0*

ISC 11 22:07:20.7±0.4, 18°.01S±0°.06×172°.90W±0°.06, h26km, n174, σ1$47/155, mb4.6/63, MS3.5/9, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.01**	**111**				**Pn**	**22 08 07.9**	**+1.2**
NIUE						Sn	**Sn**	**22 08 41.9**	**0.0**
AFI	**Afiamalu**	**4.22**	**15**				**Pn**	**22 08 21.9**	**-1.5**
AFI						Sn	**Sn**	**22 09 11.7**	**-0.1**
MSVF	**Nonsavu**	**8.62**	**270**				**Pn**	**22 09 24.9**	**+1.0**
FUNA	**Funafuti**	**12.16**	**320**	Pn			**Pn**	**22 10 13.1**	**+0.7**
RAR	**Rarotonga**	**12.77**	**107**	Pn			**Pn**	**22 10 21.5**	**+0.8**
	4.8nm,0.3s,baz=245,slow=8.5,SNR=20								
RAR				Sn			**Sn**	**22 12 36.3**	**-5.8**
	0.5nm,0.3s,baz=186,slow=18,SNR=2.1								
RAR	**Rarotonga**	**12.77**	**107**				**Pn**	**22 10 21.3**	**+0.7**
KNTN	**Kanton**	**15.19**	**5**				**P**	**22 10 57.0**	**-1.3**
DZM	**Mont Dzumac**	**19.82**	**255**	*e*LR			LR	22 16 38.9	
	comp=Z,427nm,25.6s								
DZM	**Mont Dzumac**	**19.82**	**255**	P			**P**	**22 11 46.6**	**-3.0**
	0.3nm,0.3s,baz=83,slow=12,SNR=2.5								
DZM				LR			LR	22 18 17.8	
	comp=Z,192nm,20.1s,baz=60,slow=34								
OUZ	**Omahuta**	**20.93**	**212**	P			**P**	**22 12 02.4**	**+1.1**
MXZ	**Matakaoa Point**	**20.95**	**200**	P			**P**	**22 12 03.4**	**+1.7**
MXZ				IAmb		IAmb	IAmb	22 12 05.4	
	comp=Z,26nm,1.0s								
URZ	**Urewera**	**21.98**	**201**	P			**P**	**22 12 12.5**	**-0.2**
	comp=Z,22nm,0.4s,baz=306,slow=2.8,SNR=20								
URZ				S			S	22 16 04.4	-10
	comp=Z,4.7nm,0.7s,baz=94,slow=19,SNR=2.6								
URZ	**Urewera**	**21.98**	**201**	P			**P**	**22 12 14.0**	**+1.3**
PAE	**Paea**	**22.20**	**93**	*e*T			T	22 35 08.0	
	comp=Z,3.8nm,0.3s								
PPT2	**Papeete2**	**22.21**	**93**	*e*LR			LR	22 17 35.5	
	comp=Z,262nm,26.0s								
PPT2	**Papeete2**	**22.21**	**93**	*e*T			T	22 35 09.7	
	comp=Z,2.4nm,0.2s								
PPT	**Papeete**	**22.21**	**92**	LR			LR	22 18 29.5	
	comp=Z,74nm,21.5s,baz=196,slow=30								
TVO	**Taravao**	**22.50**	**93**	*e*T			T	22 35 31.2	
	comp=Z,1.2nm,0.3s								
TBI	**Tubuai**	**22.55**	**108**	*e*LR			LR	22 17 47.3	
	comp=Z,223nm,26.0s								
TBI	**Tubuai**	**22.55**	**108**	*e*T			T	22 35 31.4	
	comp=Z,5.5nm,0.3s								
BKZ	**Black Stump Fm**	**23.01**	**201**	P			**P**	**22 12 23.1**	**-0.6**
BKZ				IAmb		IAmb	IAmb	22 12 31.4	
	comp=Z,12nm,0.5s								
HIZ	**Hauiti**	**23.06**	**205**	P			**P**	**22 12 25.9**	**+1.9**
BFZ	**Birch Farm**	**24.45**	**200**	P			**P**	**22 12 38.6**	**+1.2**
BFZ				IAmb		IAmb	IAmb	22 12 43.5	
	comp=Z,16nm,0.8s								
TUWZ	**Tuamarina**	**25.93**	**203**	P			**P**	**22 12 52.6**	**+1.9**
NNZ	**Nelson**	**25.96**	**204**	P			**P**	**22 12 52.8**	**+1.8**
NNZ				IAmb		IAmb	IAmb	22 13 00.4	
	comp=Z,15nm,0.8s								
QRZ	**Quartz Range**	**25.97**	**206**	P			**P**	**22 12 52.8**	**+1.7**
QRZ				IAmb		IAmb	IAmb	22 12 55.9	
	comp=Z,16nm,0.7s								
THZ	**Tophouse**	**26.61**	**204**	P			**P**	**22 12 58.2**	**+1.2**
THZ				IAmb		IAmb	IAmb	22 13 05.3	
	comp=Z,13nm,1.1s								
KHZ	**Kahutara**	**26.93**	**203**	P			**P**	**22 13 03.9**	**+4.1**
KHZ				IAmb		IAmb	IAmb	22 13 14.2	
	comp=Z,21nm,1.2s								
LTZ	**Lake Taylor**	**27.72**	**204**	P			**P**	**22 13 08.4**	**+1.4**
RPZ	**Rata Peaks**	**28.98**	**204**	P			**P**	**22 13 21.7**	**+3.5**
	comp=Z,9.6nm,0.5s,baz=2.4,slow=1.8,SNR=11								
RPZ	**Rata Peaks**	**28.98**	**204**	P			**P**	**22 13 23.0**	**+4.8**
RPZ				IAmb		IAmb	IAmb	22 13 24.8	
	comp=Z,13nm,0.7s								
FOZ	**Fox Glacier**	**29.34**	**206**	P			**P**	**22 13 24.6**	**+3.4**
LBZ	**Lake Benmore**	**29.89**	**205**	P			**P**	**22 13 29.8**	**+3.6**
LBZ				IAmb		IAmb	IAmb	22 13 46.6	
	comp=Z,12nm,1.1s								
TAOE	**Nuku Hiva Isla**	**33.08**	**78**	*e*T			T	22 48 46.0	
	comp=Z,33nm,0.3s								
KRVT	**Keravat (AS076**	**36.91**	**287**	LR			LR	22 28 02.6	
	comp=Z,84nm,18.5s,baz=80,slow=34								
PMG	**Port Moresby**	**39.66**	**277**	LR			LR	22 28 09.4	
	comp=Z,81nm,18.1s,baz=84,slow=32								
STKA	**Stephens Creek**	**43.21**	**242**	P			**P**	**22 15 16.8**	**-3.0**
	comp=Z,1.7nm,0.7s,baz=104,slow=13,SNR=2.9								
WRA	**Warramunga Arr**	**49.77**	**259**	P			P	22 16 07.4	-4.0
	comp=Z,1.6nm,0.6s,baz=98,slow=6.0,SNR=24								
ASAR	**Alice Springs**	**49.81**	**254**	P			**P**	**22 16 08.3**	**-3.4**
	comp=Z,8.7nm,0.7s,baz=88,slow=8.4,SNR=103								
KNRA	**Kununurra**	**55.69**	**263**	P			**P**	**22 16 55.5**	**+0.3**
FITZ	**Fitzroy Crossi**	**58.18**	**260**	P			**P**	**22 17 09.8**	**-3.1**
	comp=Z,1.3nm,0.8s,baz=131,slow=8.2,SNR=1.7								
FITZ	**Fitzroy Crossi**	**58.18**	**260**	P			**P**	**22 17 09.6**	**-3.3**
MJAR	**Matsushiro Arr**	**71.23**	**320**	LR			LR	22 43 46.2	
	comp=Z,29nm,21.5s,baz=120,slow=31								
CMB	**Columbia Colle**	**74.41**	**41**	P			**P**	**22 18 55.6**	**-0.9**
CMB				IAmb		IAmb	IAmb	22 18 59.2	
	comp=Z,6.6nm,1.1s								
AFDM	**Forest Hills D**	**74.62**	**40**	P			**P**	**22 18 57.7**	**0.0**
AFDM				IAmb		IAmb	IAmb	22 19 00.2	
	comp=Z,6.4nm,1.1s								
WDC	**Whiskeytown Da**	**74.73**	**37**	P			**P**	**22 18 57.9**	**-0.4**
MDPB	**Devils Postpil**	**74.98**	**42**	P			**P**	**22 18 59.9**	**-0.2**
PETK	**Petropavlovsk-**	**75.25**	**342**	P			**P**	**22 19 00.9**	**-0.1**
	comp=Z,4.1nm,0.7s,baz=127,slow=8.8,SNR=12								
YBH	**Yreka Blue Hor**	**75.39**	**36**	P			**P**	**22 19 04.4**	**+2.2**
	comp=Z,6.5nm,0.8s,baz=178,slow=3.3,SNR=16								
YBH	**Yreka Blue Hor**	**75.39**	**36**	P			**P**	**22 19 03.4**	**+1.3**
YBH				IAmb		IAmb	IAmb	22 19 05.3	
	comp=Z,11nm,1.0s								
YERR	**Yerington**	**75.70**	**40**	P			**P**	**22 19 04.1**	**0.0**
YERR				IAmb		IAmb	IAmb	22 19 06.9	
	comp=Z,8.7nm,1.2s								
KVN	**Kaiserville**	**76.45**	**41**	P			**P**	**22 19 08.9**	**+0.5**
MOD	**Modoc Plateau**	**76.88**	**38**	P			**P**	**22 19 11.8**	**+1.1**
MOD				IAmb		IAmb	IAmb	22 19 12.9	
	comp=Z,5.4nm,0.8s								
K05A	**Summer Lake**	**77.06**	**37**	P			**P**	**22 19 12.4**	**+0.6**
KDAK	**Kodiak Island**	**77.38**	**11**	P			**P**	**22 19 13.1**	**+0.2**
	comp=Z,3.5nm,0.6s,baz=80,slow=6.1,SNR=12								
KDAK	**Kodiak Island**	**77.38**	**11**	P			**P**	**22 19 13.7**	**+0.8**
KDAK				IAmb		IAmb	IAmb	22 19 23.8	
	comp=Z,8.6nm,1.1s								
PINE	**Pine Mountain**	**77.72**	**36**	P			**P**	**22 19 15.4**	**0.0**
WVOR	**Wild Horse Val**	**78.18**	**38**	P			**P**	**22 19 18.0**	**+0.1**
WVOR				IAmb		IAmb	IAmb	22 19 20.6	
	comp=Z,5.7nm,1.0s								
KSRS	**Korea Array**	**78.35**	**316**	LR			LR	22 47 05.4	
	comp=Z,19nm,21.4s,baz=162,slow=31								
I07A	**Izee**	**78.70**	**36**	P			**P**	**22 19 20.9**	**+0.1**
I07A				IAmb		IAmb	IAmb	22 19 23.6	
	comp=Z,6.6nm,1.0s								
J08A	**Circle Bar Ran**	**78.84**	**37**	P			**P**	**22 19 21.5**	**0.0**
J08A				IAmb		IAmb	IAmb	22 19 24.2	
	comp=Z,9.1nm,1.2s								
ELK	**Elko**	**79.22**	**41**	P			**P**	**22 19 23.9**	**+0.1**
G08A	**Pilot Rock**	**79.76**	**35**	P			**P**	**22 19 26.5**	**0.0**
G08A				IAmb		IAmb	IAmb	22 19 29.0	
	comp=Z,8.2nm,1.0s								
RSO	**Redoubt South**	**79.88**	**10**	P			**P**	**22 19 27.3**	**+0.4**
MFID	**Camas Ranch**	**80.42**	**38**	P			**P**	**22 19 30.1**	**0.0**
MFID				IAmb		IAmb	IAmb	22 19 43.7	
	comp=Z,7.8nm,1.1s								
BMO	**Blue Mountains**	**80.42**	**37**	P			**P**	**22 19 30.2**	**+0.1**
RC01	**Rabbit Creek A**	**80.99**	**11**	P			**P**	**22 19 33.1**	**+0.5**
RC01				IAmb		IAmb	IAmb	22 19 34.5	
	comp=Z,7.2nm,1.1s								
TMUT	**Trail Mountain**	**81.01**	**44**	P			**P**	**22 19 33.6**	**-0.1**
MNTX	**Cornudas Mount**	**81.40**	**53**	P			**P**	**22 19 35.6**	**+0.1**
KNK	**Knik Glacier**	**81.53**	**12**	P			**P**	**22 19 35.6**	**+0.1**
KNK				IAmb			IAmb	22 19 36.9	
	comp=Z,9.7nm,1.0s								
PMR	**Palmer**	**81.57**	**11**	P			**P**	**22 19 36.2**	**+0.5**
TX31	**Lajitas Ar. Si**	**81.67**	**56**	P			**P**	**22 19 37.7**	**+0.6**
TX32	**Lajitas Array**	**81.67**	**56**	P			**P**	**22 19 37.2**	**+0.1**
TXAR	**Lajitas Array**	**81.67**	**56**	P			**P**	**22 19 39.5**	**+2.4**
	comp=Z,5.3nm,1.2s,baz=224,slow=5.2,SNR=12								
C09A	**Chrisman Ranch**	**81.69**	**34**	P			**P**	**22 19 37.7**	**+1.0**
C09A				IAmb		IAmb	IAmb	22 19 39.0	
	comp=Z,5.4nm,1.1s								
TTA	**Tatalina**	**81.76**	**8**	P			**P**	**22 19 36.8**	**0.0**
GHO	**Glory Hole Cre**	**81.78**	**11**	P			**P**	**22 19 36.8**	**-0.1**
PV05	**Paradox Valley**	**81.79**	**46**	P			**P**	**22 19 38.4**	**+0.7**
PV05				IAmb		IAmb	IAmb	22 19 44.3	
	comp=Z,4.3nm,0.8s								
PV10	**Paradox Valley**	**81.98**	**45**	P			**P**	**22 19 38.3**	**-0.5**
PV10				IAmb		IAmb	IAmb	22 19 40.8	
	comp=Z,7.6nm,0.8s								
PV17	**East Wray Mesa**	**81.98**	**46**	P			**P**	**22 19 40.2**	**+1.5**
PV17				IAmb		IAmb	IAmb	22 19 42.2	
	comp=Z,7.5nm,1.1s								
PV14	**Lion Creek, Pa**	**81.99**	**45**	P			**P**	**22 19 39.7**	**+0.9**
PV14				IAmb		IAmb	IAmb	22 19 41.6	
	comp=Z,5.3nm,0.9s								
PV18	**Skein Mesa, Pa**	**82.00**	**46**	P			**P**	**22 19 39.9**	**+1.1**
PV18				IAmb		IAmb	IAmb	22 19 41.0	
	comp=Z,4.2nm,0.9s								
PV20	**West Nyswonger**	**82.01**	**46**	P			**P**	**22 19 40.0**	**+1.2**
PV20				IAmb		IAmb	IAmb	22 19 41.6	
	comp=Z,6.2nm,1.0s								
PV13	**Radium Mtn., P**	**82.02**	**46**	P			**P**	**22 19 39.7**	**+0.8**
PV16	**Nyswonger Mesa**	**82.03**	**46**	P			**P**	**22 19 40.0**	**+1.1**
PV23	**Carpenter Ridg**	**82.04**	**45**	P			**P**	**22 19 39.9**	**+0.8**
PV23				IAmb		IAmb	IAmb	22 19 42.0	
	comp=Z,8.4nm,0.9s								
PV03	**Paradox Valley**	**82.05**	**46**	P			**P**	**22 19 40.2**	**+1.2**
PV11	**David Mesa, Pa**	**82.05**	**46**	P			**P**	**22 19 39.6**	**+0.5**
PV11				IAmb		IAmb	IAmb	22 19 56.1	
	comp=Z,3.8nm,0.8s								
PV04	**Paradox Valley**	**82.08**	**45**	P			**P**	**22 19 40.4**	**+1.2**
PV12	**Saucer Basin,**	**82.11**	**46**	P			**P**	**22 19 39.8**	**+0.4**
ANMO	**Albuquerque**	**82.11**	**49**	P			**P**	**22 19 39.2**	**-0.2**
SCM	**Sheep Creek Mo**	**82.14**	**12**	IAmb		IAmb	IAmb	22 19 40.7	
	comp=Z,8.7nm,0.9s								
PV01	**Paradox Valley**	**82.18**	**46**	P			**P**	**22 19 41.2**	**+1.4**
PV01				IAmb		IAmb	IAmb	22 19 42.4	
	comp=Z,7.0nm,1.1s								
PV22	**Blue Mesa, Par**	**82.23**	**45**	P			**P**	**22 19 41.2**	**+1.2**
PV15	**Paradox Valley**	**82.34**	**46**	P			**P**	**22 19 41.5**	**+0.9**
PV15				IAmb		IAmb	IAmb	22 19 43.4	
	comp=Z,6.8nm,1.0s								
JIS	**Juneau Island**	**82.39**	**19**	P			**P**	**22 19 41.1**	**+1.1**
VRDI	**Verde Repeater**	**82.42**	**14**	P			**P**	**22 19 40.8**	**+0.4**
VRDI				IAmb		IAmb	IAmb	22 19 41.9	
	comp=Z,4.8nm,1.1s								
BALM	**Baldy**	**82.50**	**14**	IAmb		IAmb	IAmb	22 19 42.4	
	comp=Z,4.3nm,1.0s								
CTGM	**Chitina Glacie**	**82.69**	**15**	P			**P**	**22 19 41.9**	**+0.1**
BARN	**Barnard Glacie**	**82.69**	**15**	P			**P**	**22 19 41.9**	**+0.1**
BARN				IAmb		IAmb	IAmb	22 19 43.6	
	comp=Z,6.9nm,1.1s								
MCMT	**McKenzie Canyo**	**82.98**	**38**	P			**P**	**22 19 44.6**	**+0.8**
SKAG	**Skagway**	**83.05**	**18**	P			**P**	**22 19 45.0**	**+1.6**
KTH	**Kantishna Hill**	**83.09**	**10**	IAmb		IAmb	IAmb	22 19 45.3	
	comp=Z,5.7nm,1.0s								
DHY	**Denali Highway**	**83.26**	**11**	P			**P**	**22 19 44.9**	**+0.2**
DHY				IAmb		IAmb	IAmb	22 19 46.0	
	comp=Z,4.6nm,1.1s								
REDW	**Red Top Meadow**	**83.39**	**40**	P			**P**	**22 19 46.7**	**+0.7**
O20A	**White River Ci**	**83.40**	**44**	P			**P**	**22 19 46.3**	**+0.3**
O20A				IAmb		IAmb	IAmb	22 19 59.8	
	comp=Z,4.1nm,1.0s								
TPAW	**Teton Pass**	**83.40**	**40**	P			**P**	**22 19 44.9**	**-1.2**
TPAW				IAmb		IAmb	IAmb	22 19 48.6	
	comp=Z,5.4nm,0.9s								
DLMT	**Dillon**	**83.43**	**38**	P			**P**	**22 19 46.9**	**+0.9**
DLMT				IAmb		IAmb	IAmb	22 19 48.5	
	comp=Z,5.8nm,1.0s								
FXWY	**Fox Creek**	**83.43**	**40**	P			**P**	**22 19 47.2**	**+1.0**
MSO	**Missoula**	**83.48**	**36**	P			**P**	**22 19 45.8**	**-0.4**
SNOW	**Snow King Moun**	**83.50**	**40**	P			**P**	**22 19 46.6**	**0.0**
MCK	**McKinley**	**83.58**	**10**	P			**P**	**22 19 46.2**	**0.0**
IMW	**Indian Meadow**	**83.62**	**40**	P			**P**	**22 19 48.0**	**+0.8**
IMW				IAmb		IAmb	IAmb	22 19 49.8	
	comp=Z,5.0nm,0.8s								
LRM	**Limekiln Ridge**	**83.77**	**38**	P			**P**	**22 19 49.0**	**+1.2**
SMCO	**Snowmass**	**83.78**	**46**	P			**P**	**22 19 49.6**	**+1.4**
SMCO				IAmb		IAmb	IAmb	22 19 51.0	
	comp=Z,4.9nm,1.1s								
QLMT	**Earthquake Lak**	**83.83**	**39**	P			**P**	**22 19 49.9**	**+1.8**
FLWY	**Flagg Ranch**	**83.87**	**40**	P			**P**	**22 19 49.3**	**+0.9**
FLWY				IAmb		IAmb	IAmb	22 19 51.3	
	comp=Z,6.6nm,0.8s								
PDAR	**Pinedale Array**	**83.89**	**41**	P			**P**	**22 19 49.5**	**+1.0**
	comp=Z,2.7nm,0.8s,baz=204,slow=3.3,SNR=17								
YPP	**Pitchstone Pla**	**83.91**	**40**	P			**P**	**22 19 49.9**	**+1.2**
YHB	**Horse Butte**	**83.93**	**39**	P			**P**	**22 19 49.9**	**+1.2**
YHL	**Hebgen Lake**	**83.99**	**39**	P			**P**	**22 19 49.9**	**+0.8**
SDCO	**Great Sand Dun**	**84.11**	**47**	P			**P**	**22 19 50.4**	**+0.5**
YHH	**Holmes Hill**	**84.15**	**39**	P			**P**	**22 19 51.4**	**+1.5**
YNR	**Norris Junctio**	**84.22**	**39**	P			**P**	**22 19 52.2**	**+2.0**
WRH	**Wood River Hil**	**84.41**	**11**	P			**P**	**22 19 50.7**	**+0.3**
DOT	**Dot Lake**	**84.43**	**12**	P			**P**	**22 19 50.5**	**0.0**
DOT				IAmb		IAmb	IAmb	22 19 52.2	
	comp=Z,7.8nm,1.0s								
MLY	**Manley**	**84.50**	**9**	P			**P**	**22 19 51.1**	**+0.2**
MLY				IAmb		IAmb	IAmb	22 19 51.7	
	comp=Z,5.5nm,1.0s								
HDA	**Harding Lake**	**84.56**	**11**	P			**P**	**22 19 51.1**	**0.0**
CCB	**Clear Creek Bu**	**84.62**	**11**	P			**P**	**22 19 51.6**	**+0.2**
WALA	**Waterton Lakes**	**84.78**	**34**	P			**P**	**22 19 53.1**	**+0.4**
YNE	**Yellowstone No**	**84.78**	**39**	P			**P**	**22 19 53.9**	**+0.9**
COLA	**College**	**84.83**	**10**	P			**P**	**22 19 52.4**	**0.0**
MDM	**Murphy Dome**	**84.84**	**10**	P			**P**	**22 19 52.2**	**-0.3**
IL31		**84.90**	**11**	P			**P**	**22 19 52.4**	**-0.4**
IL31				IAmb		IAmb	IAmb	22 19 54.8	
	comp=Z,5.2nm,1.1s								
ILAR	**Eielson Array**	**84.90**	**11**	P			**P**	**22 19 52.4**	**-0.4**
	comp=Z,2.0nm,0.8s,baz=219,slow=6.0,SNR=14								
SEY	**Seymchan**	**85.15**	**345**	P			**P**	**22 19 52.7**	**-1.4**
	comp=Z,2.3nm,0.4s,baz=142,slow=6.8,SNR=7.9								
MAW	**Mawson**	**85.48**	**199**	P			**P**	**22 19 55.4**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=113,slow=3.4,SNR=2.9								
MAW				LR			LR	22 58 04.8	
	comp=Z,28nm,18.1s,baz=80,slow=36								
MAW	**Mawson**	**85.48**	**199**	P			**P**	**22 19 55.9**	**0.0**
DAWY	**Dawson**	**85.82**	**14**	P			**P**	**22 19 57.6**	**+0.2**
PRP	**Porcupine Dome**	**85.83**	**11**	P			**P**	**22 19 57.7**	**+0.1**
ABTX	**Abilene, Hawle**	**86.19**	**54**	P			**P**	**22 19 59.2**	**-0.9**
HHC	**Hu-ho-hao-te**	**91.14**	**313**	*e*P			**P**	**22 20 26.0**	**+2.5**
HHC				pmax			pmax		
	comp=Z,7.0nm,0.8s								
HHC				pmax			pmax		
	comp=Z,27nm,6.5s								
YKA	**Yellowknife Ar**	**92.29**	**23**	P			**P**	**22 20 28.6**	**+0.5**
	comp=Z,1.1nm,1.0s,baz=230,slow=4.2,SNR=9.9								
CMAR	**Chiang Mai Arr**	**93.88**	**288**	P			**P**	**22 20 35.7**	**-0.8**
	comp=Z,1.0nm,0.9s,baz=106,slow=2.0,SNR=5.5								
LZH	**Lanzhou**	**95.15**	**306**	*e*P			**P**	**22 20 44.8**	**+2.7**
LZH				pP			pwP	22 20 54.2	0.0
LZH				sP			sP	22 20 58.9	+6.9
LZH				PP			**PP**	**22 24 34.5**	**+2.2**
LZH				pmax			pmax		
	comp=Z,12nm,1.1s								
ULM	**Lac du Bonnet**	**95.65**	**39**	LR			LR	22 59 36.5	
	comp=Z,29nm,18.9s,baz=59,slow=33								
GTA	**Gaotai**	**99.17**	**308**	*e*P			**Pdif**	**22 21 06.7**	**+6.5**
GTA				pP			pwP	22 21 13.4	+1.1
GTA				sP			sP	22 21 16.9	+6.8
GTA				pmax			pmax		
	comp=Z,2.0nm,1.1s								
AKASG	**Malin Array Be**	**142.92**	**337**	PKP			**PKPdf**	**22 26 51.9**	**0.0**
	comp=Z,0.3nm,0.4s,baz=42,slow=3.2,SNR=4.4								
RETH	**Rethem/Aller,**	**145.30**	**358**	*e*PKPdf			**PKPbc**	**22 26 55.9**	**+0.2**
	baz=7.2,slow=0.0								
IBBN	**Ibbenburen**	**145.77**	**359**	*e*PKPdf			**PKPab**	**22 26 58.1**	**+0.5**
	baz=7.2,slow=0.0								
CLZ	**Clausthal**	**146.14**	**356**	*e*PKPdf			**PKPbc**	**22 26 59.0**	**+0.6**
	baz=7.2,slow=0.0								
CLL	**Collm**	**146.45**	**353**	*i* PKPbc			**PKPab**	**22 27 00.7**	**+0.5**
	comp=Z,23nm,1.2s								
CLL				*ep*PKPbc		sPKPbc		22 27 10.0	+1.2
CLL	**Collm**	**146.45**	**353**	*e*PKPdf		**PKPab**		**22 27 00.7**	**+0.5**
	baz=7.2,slow=0.0								
OSTC	**Ostas**	**146.72**	**349**	*e*PKP		**PKPab**		**22 27 01.4**	**+0.1**
FBE	**Freiberg**	**146.79**	**353**	*e*PKPdf		**PKPab**		**22 27 01.4**	**-0.2**
	baz=7.2,slow=0.0								
KOLS	**Kolonicke sedl**	**146.79**	**342**	*e*PKP		**PKPab**		**22 27 02.3**	**+0.7**
DPC	**Dobruska-Polom**	**146.90**	**349**	*e*PKP		**PKPab**		**22 27 01.9**	**-0.2**
KRLC	**Kraliky**	**147.08**	**349**	*e*PKP		**PKPbc**		**22 27 02.2**	**+1.0**
KRLC				*ep*PKP		sPKPbc		22 27 11.8	+1.0
MOX	**Moxa**	**147.24**	**355**	*e*L		L		23 31 22.6	
	comp=Z,22nm,21.3s								
LANS	**Liptovska Anna**	**147.36**	**345**	*e*PKP		**PKiKP**		**22 27 05.6**	**+1.3**
PRU	**Pruhonice**	**147.54**	**351**	*e*PKP		**PKPbc**		**22 27 02.8**	**+0.3**
GRF	**Grafenberg Arr**	**148.22**	**355**	*e*L		L		23 33 17.2	
	comp=Z,14nm,20.6s								
BRTR	**Keskin Array B**	**148.45**	**319**	PKPbc		**PKPbc**		**22 27 04.8**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=140,slow=3.3,SNR=12								
KHC	**Kasperske Hory**	**148.52**	**352**	*e*PKP		**PKPbc**		**22 27 05.5**	**+0.4**
WET	**Wettzell**	**148.59**	**353**	*e*L		L		23 34 41.3	
	comp=Z,24nm,20.2s								
GEC2	**GERESS Array S**	**148.78**	**352**	*e*L		L		23 34 30.7	
	comp=Z,41nm,20.7s								
GERES	**GERESS Array B**	**148.78**	**352**	PKPbc		**PKPbc**		**22 27 06.0**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=25,slow=3.5,SNR=4.5								
CONA	**Conrad Observa**	**149.31**	**348**	*e*PKiKP		**PKPbc**		**22 27 08.3**	**+1.0**
	comp=Z,5.2nm,1.0s								
BFO	**Black Forest**	**149.74**	**358**	*e*L		L		23 29 30.1	
	comp=Z,54nm,21.5s								
MOTA	**Moosalm**	**150.56**	**354**	*e*PKiKP		**PKiKP**		**22 27 11.5**	**+0.4**
	comp=Z,8.6nm,1.1s								
WTTA	**Wattenberg**	**150.59**	**354**	*e*PKiKP		**PKiKP**		**22 27 11.7**	**+0.5**
	comp=Z,15nm,1.5s								
SQTA	**Sankt Quirin**	**150.67**	**354**	*e*PKiKP		**PKPbc**		**22 27 11.3**	**+0.6**
	comp=Z,8.8nm,1.4s								
DAVA	**Damuels**	**150.71**	**356**	*e*PKiKP		**PKPbc**		**22 27 11.3**	**+0.5**
	comp=Z,15nm,1.2s								
ESDC	**Sonseca Array**	**156.38**	**22**	PKPab		**PKPab**		**22 27 42.1**	**+0.4**
	comp=Z,0.9nm,1.1s,baz=342,slow=2.7,SNR=4.1								

GCG ***11*** *22:38:33.7±2.0, 13°.37N×92°.11W, h31km±499km, MD4.6*

MEX ***11*** *22:38:33.0±0.6, 13°.06N×92°.19W, h20km, MD4.2*

UCR ***11*** *22:38:36.6±

comp=Z,0.5nm,0.3s,baz=156,slow=12,SNR=68
LGNH Logne 19.07 73 P P 22 42 59.5 +0.2
LGNH IAmb IAmb 22 43 17.9
comp=Z,45nm,0.9s
ROSC El Rosal 19.37 115 P Pn 22 43 05.5 +1.1
comp=Z,0.8nm,0.3s,baz=70,slow=22,SNR=8.6
ROSC El Rosal 19.37 115 eP Pn 22 43 06.0 +1.6
PRAC Prado 19.43 119 eP Pn 22 43 04.3 -0.6
LRAL Lakeview Retre 19.76 12 P Pn 22 43 07.3 -1.2
baz=194,SNR=6.7
LRAL Lakeview Retre 19.76 12 P P 22 43 06.0 -0.7
LRAL IAmb IAmb 22 43 13.7
comp=Z,17nm,0.9s
PAMC Pamplona, Colo 19.82 107 eP P 22 43 07.6 -0.5
CHIC Chingaza 19.98 115 eP Pn 22 43 11.4 -0.3
RUSC La Rusia 20.01 111 eP P 22 43 11.0 +0.9
RUSC La Rusia 20.01 111 P P 22 43 10.6 +0.5
255A Hazlehurst 20.08 24 P Pn 22 43 11.3 -1.0
255A IAmb IAmb 22 43 17.0
comp=Z,19nm,0.8s
ABTX Abilene, Hawle 20.16 341 P Pn 22 43 12.7 -0.7
baz=157
Y45A Yeager Farm, C 20.20 6 P P 22 43 12.2 +0.8
Y45A IAmb IAmb 22 43 18.5
comp=Z,24nm,0.8s
Z50A Ashland 20.21 14 P P 22 43 12.0 +0.4
baz=196
Z50A Ashland 20.21 14 P P 22 43 10.3 -1.3
LPIG La Paz 20.30 303 LR LR 22 51 17.8
comp=Z,126nm,19.8s,baz=185,slow=37
X40A Basin Creek Fa 20.73 358 P P 22 43 18.0 +0.8
MIAR Mount Ida 20.83 356 P P 22 43 19.3 +1.0
baz=175,SNR=6.2
MIAR Mount Ida 20.83 356 IAmb IAmb 22 43 25.5
comp=Z,15nm,0.8s
OXF Oxford 20.85 6 P P 22 43 18.3 -0.2
OXF IAmb IAmb 22 43 26.8
comp=Z,29nm,0.9s
GOGA Godfrey 21.06 20 P P 22 43 20.9 +0.1
baz=203,SNR=9.5
GOGA Godfrey 21.06 20 P P 22 43 20.1 -0.6
GOGA IAmb IAmb 22 43 22.7
comp=Z,17nm,1.0s
MACC Macarena, Meta 21.15 121 eP P 22 43 25.1 +3.2
Y52A Lilburn 21.29 18 P P 22 43 23.3 +0.1
baz=201,SNR=12
SDV Santo Domingo 21.32 101 P P 22 43 21.5 -2.4
comp=Z,4.3nm,0.6s,baz=289,slow=6.2,SNR=8.4
SDV LR LR 22 53 43.9
comp=Z,107nm,18.5s,baz=230,slow=43
SDV Santo Domingo 21.32 101 eP P 22 43 20.3 -3.5
SDV Santo Domingo 21.32 101 P P 22 43 20.4 -3.4
W41B Gary Mavity, V 21.40 359 P P 22 43 24.4 0.0
baz=178
W39A Magazine 21.50 356 P P 22 43 26.4 +1.1
baz=174
MNTX Cornudas Mount 21.82 327 P P 22 43 30.7 +1.8
baz=142,SNR=26
MNTX Cornudas Mount 21.82 327 P P 22 43 28.9 -0.1
MNTX IAmb IAmb 22 43 34.9
comp=Z,20nm,0.8s
WMOK Wichita Mounta 21.89 344 P P 22 43 30.1 +0.4
baz=161
NHSC New Hope 22.06 27 P P 22 43 31.4 -0.1
NHSC IAmb IAmb 22 43 38.9
comp=Z,36nm,1.1s
SWET Sewanee 22.09 13 IAmb IAmb 22 43 34.2
comp=Z,11nm,0.8s
Y55A Saluda 22.10 22 P P 22 43 32.2 +0.3
baz=206
W50A Signal Mountai 22.22 14 IAmb IAmb 22 43 42.7
comp=Z,11nm,0.8s
HODGE Hodges 22.22 21 P P 22 43 32.2 -0.9
Z58A St. Stephen 22.41 27 P P 22 43 35.5 +0.2
baz=212
X54A Belton 22.47 21 P P 22 43 36.0 +0.1
baz=204
MSTX Muleshoe 22.51 336 P P 22 43 36.4 -0.1
baz=151
U40A Yellville 22.60 358 P P 22 43 36.8 -0.5
baz=177
GLAT Glass 22.61 5 P P 22 43 36.0 -1.3
WVT Waverly 22.64 8 P P 22 43 37.0 -0.6
baz=190
WVT Waverly 22.64 8 P P 22 43 37.1 -0.6
X55A Gracelyn & Ava 22.66 22 P P 22 43 37.1 -0.8
baz=206
Y57A Sumter 22.75 25 P P 22 43 38.5 -0.3
baz=210
X56A White Oak 22.91 23 P P 22 43 40.0 -0.4
baz=208
AMTX Amarillo 22.91 339 P P 22 43 41.5 +0.9
baz=154
W54A Cherokee Point 23.02 21 P P 22 43 41.0 -0.6
baz=204,SNR=6.0
V51A Loudon 23.03 16 P P 22 43 42.6 +1.0
V51A IAmb IAmb 22 43 52.3
comp=Z,12nm,0.8s
PBMO Poplar Bluff 23.04 3 IAmb IAmb 22 43 41.5
comp=Z,21nm,0.7s
TKL Tuckaleechee C 23.05 17 P P 22 43 41.5 -0.4
comp=Z,12nm,0.7s,baz=183,slow=9.8,SNR=29
TKL LR LR 22 53 38.4
comp=Z,200nm,20.5s,baz=204,slow=39
TKL Tuckaleechee C 23.05 17 P P 22 43 40.5 -1.4
TKL IAmb IAmb 22 43 43.2
comp=Z,12nm,0.8s
V52A Sevierville 23.27 17 IAmb IAmb 22 43 45.2
comp=Z,13nm,0.9s
KMSC Kings Mountain 23.37 22 P P 22 43 45.3 +0.2
baz=206
KMSC Kings Mountain 23.37 22 IAmb IAmb 22 44 04.2
comp=Z,19nm,0.9s
T47A Sharon Grove 23.59 9 P P 22 43 46.5 -0.6
T47A IAmb IAmb 22 43 47.1
comp=Z,14nm,0.6s
W56A Indian Trail 23.65 23 P P 22 43 46.8 -0.8
baz=208
V54A Nebo 23.73 20 P P 22 43 47.8 -0.6
baz=204,SNR=10
121A Cookes Peak, D 23.77 325 P P 22 43 52.4 +3.5
baz=138,SNR=7.8
319A Douglas 23.82 321 IAmb IAmb 22 43 54.2
comp=Z,24nm,1.1s
W57A Gilead 23.90 25 P P 22 43 47.9 -2.0
baz=209
S44A Carbondale 24.02 5 P P 22 43 49.9 -1.2
S44A IAmb IAmb 22 43 51.5
comp=Z,22nm,0.8s
V55A Taylorsville 24.05 22 P P 22 43 50.6 -0.7
baz=206
W58A Raeford 24.10 26 P P 22 43 50.6 -1.1
baz=211
V56A Mocksville 24.28 23 P P 22 43 52.0 -1.3
baz=207
CCM Cathedral Cave 24.28 1 P P 22 43 51.7 -1.7
baz=181
CCM Cathedral Cave 24.28 1 P P 22 43 51.8 -1.6
CCM IAmb IAmb 22 43 53.5
comp=Z,6.9nm,0.6s
X60A Albert Glenn T 24.29 29 P P 22 43 51.9 -1.6
baz=214
U54A Nelsons Funny 24.45 20 P P 22 43 54.4 -0.6
baz=204
USIN University of 24.47 8 IAmb IAmb 22 43 56.3
comp=Z,19nm,0.8s
ATAH Atahualpa 24.61 146 P P 22 43 58.5 +1.4
comp=Z,11nm,0.9s,baz=332,slow=7.9,SNR=4.0
V57A Coltrane Farms 24.62 24 P P 22 43 55.3 -1.2
baz=209,SNR=6.0
T53A Wise 24.65 18 P P 22 43 55.8 -1.0
baz=202
U55A TA2, Sparta 24.69 21 P P 22 43 56.5 -0.8
baz=205,SNR=8.6
U56A King 24.80 22 P P 22 43 58.0 -0.1
baz=207
U56A King 24.80 22 IAmb IAmb 22 43 59.2
comp=Z,8.9nm,0.6s
V58A Windy Hill, Pi 24.81 25 P P 22 43 57.1 -1.1
baz=210,SNR=8.6
V58A Windy Hill, Pi 24.81 25 IAmb IAmb 22 43 57.9
comp=Z,17nm,0.7s
CNNC Cliffs of the 24.88 28 P P 22 43 57.5 -1.4
baz=213
WCI Wyandotte Cave 24.94 10 P P 22 43 59.1 -0.3
baz=192
WCI Wyandotte Cave 24.94 10 P P 22 43 58.5 -0.8

ANMO Albuquerque 24.96 331 P P 22 44 01.9 +2.1
comp=Z,4.1nm,0.7s,baz=145,slow=12,SNR=11
ANMO Albuquerque 24.96 331 P P 22 44 01.9 +2.1
baz=144
T54A Tazewell 25.02 20 P P 22 43 59.1 -1.1
baz=204
SJG San Juan 25.07 77 LR LR 22 54 41.9
comp=Z,235nm,19.4s,baz=275,slow=39
V59A Middlesex 25.16 27 P P 22 43 59.5 -1.9
baz=212,SNR=5.6
U57A Blanch 25.27 24 P P 22 44 01.7 -0.7
baz=209
TUC Tucson 25.39 320 P P 22 44 06.9 +3.3
baz=132
TUC Tucson 25.39 320 P P 22 44 05.1 +1.5
S53A Williamson 25.42 18 P P 22 44 03.0 -0.8
baz=202
U58A Oxford 25.56 25 P P 22 44 03.8 -1.3
baz=211
V60A Jim Taylor Roa 25.60 28 P P 22 44 04.5 -0.9
baz=214
V60A Jim Taylor Roa 25.60 28 P P 22 44 03.5 -1.8
V60A IAmb IAmb 22 44 10.6
comp=Z,13nm,0.7s
S54A Dingess, Beckl 25.78 19 P P 22 44 05.9 -1.1
baz=204,SNR=5.7
T57A Hurt 25.80 24 P P 22 44 06.6 -0.6
baz=209
T25A Trinidad 25.93 337 P P 22 44 11.5 +2.9
baz=151,SNR=6.6
S55A Lewisburg 26.02 21 P P 22 44 08.5 -0.8
baz=205
T58A Grand View Acr 26.04 25 P P 22 44 08.3 -1.0
baz=210
R53A Hurricane 26.07 18 P P 22 44 09.4 -0.2
baz=202
P46A Rosedale 26.15 8 IAmb IAmb 22 44 11.2
comp=Z,13nm,0.7s
U60A Pendleton 26.23 28 P P 22 44 10.0 -1.1
baz=214,SNR=5.9
R54A Victor 26.23 20 P P 22 44 10.0 -1.2
baz=204
P48A Milroy 26.29 11 IAmb IAmb 22 44 11.2
comp=Z,6.2nm,0.7s
Q51A Peebles 26.33 15 P P 22 44 11.4 -0.6
baz=198,SNR=6.0
X18A Snowflake 26.46 325 P P 22 44 15.1 +1.7
T59A Double "B" Far 26.47 26 P P 22 44 12.1 -1.2
baz=212,SNR=6.8
P49A Miami Univ. Ec 26.50 12 P P 22 44 12.1 -1.5
baz=195
O44A Mansfield 26.53 6 P P 22 44 12.4 -1.4
O44A IAmb IAmb 22 44 13.6
comp=Z,12nm,1.1s
Q52A Bidwell 26.56 17 P P 22 44 12.9 -1.2
baz=201,SNR=5.0
R55A Marlinton 26.61 21 P P 22 44 14.0 -0.7
baz=206
Q53A Leroy 26.68 18 P P 22 44 13.6 -1.5
baz=202
W18A Petrified Fore 26.77 326 P P 22 44 14.8 -1.5
P50A Jamestown 26.78 14 P P 22 44 15.4 -0.6
baz=197
P51A Williamsport 26.84 15 P P 22 44 14.7 -1.8
P51A IAmb IAmb 22 44 16.9
comp=Z,7.9nm,0.8s
Q54A Coxs Mills 27.01 19 P P 22 44 17.3 -0.8
baz=204,SNR=5.4
Q54A Coxs Mills 27.01 19 IAmb IAmb 22 44 18.9
comp=Z,9.9nm,0.8s
R57A Stanardsville 27.21 23 P P 22 44 19.3 -0.6
baz=209
P53A Whipple 27.30 18 P P 22 44 20.1 -0.7
baz=202
P53A Whipple 27.30 18 IAmb IAmb 22 44 21.5
comp=Z,12nm,1.1s
S22A 4UR Ranch, Cre 27.44 334 P P 22 44 24.6 +2.3
baz=147,SNR=6.4
ACSO Alum Creek Sta 27.57 15 P P 22 44 22.1 -1.0
baz=198
O51A Pataskala 27.58 15 P P 22 44 22.4 -0.8
baz=199
Q56A Snyder Ridge, 27.62 22 P P 22 44 23.4 -0.2
baz=207
P54A Burton 27.69 19 P P 22 44 23.2 -1.0
baz=204
N48A Decatur 27.72 11 P P 22 44 22.8 -1.7
baz=194
O52A Adamsville 27.76 17 P P 22 44 23.6 -1.2
baz=201
MVCO Mesa Verde 27.76 331 P P 22 44 27.9 +2.8
baz=143,SNR=7.2
M44A Midewin, Midew 27.80 6 P P 22 44 23.2 -1.9
M44A IAmb IAmb 22 44 24.2
comp=Z,8.4nm,1.0s
P55A Reedsville 27.82 20 P P 22 44 24.1 -1.3
baz=205
Q57A Strasburg 27.90 23 P P 22 44 25.6 -0.5
baz=208
WUAZ Wupatki 27.98 324 P P 22 44 30.3 +3.3
baz=136
O53A New Philadelph 28.06 17 P P 22 44 26.6 -0.8
baz=202
P56A Dayton Farm, R 28.16 22 P P 22 44 28.8 +0.4
baz=207
O54A Avella 28.25 19 P P 22 44 28.0 -1.2
baz=204
O54A Avella 28.25 19 IAmb IAmb 22 44 28.9
comp=Z,7.0nm,0.6s
L40A Anamosa 28.28 1 P P 22 44 29.6 +0.1
N51A Ashland 28.36 15 P P 22 44 29.3 -0.9
N51A IAmb IAmb 22 44 45.0
comp=Z,7.9nm,0.9s
P57A Homestead Farm 28.44 23 P P 22 44 30.7 -0.2
baz=209
P57A Homestead Farm 28.44 23 P P 22 44 30.4 -0.5
P57A IAmb IAmb 22 44 31.7
comp=Z,5.9nm,0.6s
N52A McGinn's Farm, 28.45 16 P P 22 44 30.0 -0.9
baz=201
L44A Lake County Fo 28.60 6 P P 22 44 31.0 -1.2
L44A IAmb IAmb 22 44 32.7
comp=Z,17nm,0.8s
O55A Ligonier 28.62 20 P P 22 44 31.5 -1.0
baz=206
PV15 Paradox Valley 28.66 332 P P 22 44 33.8 +0.6
PV02 Paradox Valley 28.67 331 P P 22 44 34.9 +1.6
PV13 Radium Mtn., P 28.67 331 P P 22 44 34.4 +1.2
PV13 IAmb IAmb 22 44 38.7
comp=Z,7.3nm,0.9s
N53A Lisbon 28.68 18 P P 22 44 32.2 -0.8
baz=202,SNR=5.4
ISCO Idaho Springs 28.71 338 P P 22 44 36.8 +3.1
baz=151
PV05 Paradox Valley 28.74 331 P P 22 44 35.4 +1.5
PV05 IAmb IAmb 22 44 37.9
comp=Z,7.9nm,0.9s
PV03 Paradox Valley 28.76 331 P P 22 44 35.9 +1.9
PV18 Skein Mesa, Pa 28.79 331 P P 22 44 35.7 +1.5
PV18 IAmb IAmb 22 44 38.3
comp=Z,10nm,1.1s
PV12 Saucer Basin, 28.79 332 P P 22 44 34.9 +0.5
PV12 IAmb IAmb 22 44 38.0
comp=Z,6.7nm,0.8s
PV11 David Mesa, Pa 28.81 331 P P 22 44 35.2 +0.7
PV11 IAmb IAmb 22 44 42.0
comp=Z,7.3nm,0.9s
PV07 Paradox Valley 28.82 332 P P 22 44 35.2 +0.7
PV17 East Wray Mesa 28.84 331 P P 22 44 34.8 +0.1
PV17 IAmb IAmb 22 44 40.8
comp=Z,10.0nm,1.1s
PV16 Nyswonger Mesa 28.84 331 P P 22 44 33.8 -1.0
PV19 Morning Glory 28.87 331 P P 22 44 34.6 -0.4
PV20 West Nyswonger 28.89 331 P P 22 44 36.1 +1.0
O56A Blue Knob Stat 28.93 21 P P 22 44 35.7 +0.4
baz=207
O56A Blue Knob Stat 28.93 21 P P 22 44 33.9 -1.4
O56A IAmb IAmb 22 44 35.9
comp=Z,11nm,1.1s
PV14 Lion Creek, Pa 28.94 331 P P 22 44 36.0 +0.4
PV22 Blue Mesa, Par 28.96 332 P P 22 44 35.1 -0.7
PV23 Carpenter Ridg 29.00 331 P P 22 44 37.0 +0.8
PV23 IAmb IAmb 22 44 42.4
comp=Z,9.0nm,0.9s
N54A Moraine State 29.08 19 P P 22 44 35.5 -1.0
baz=204,SNR=5.6
N54A Moraine State 29.08 19 IAmb IAmb 22 44 36.3

comp=Z,8.8nm,0.8s
U15A North Rim 29.15 325 P P 22 44 38.8 +1.3
W13A Hualapai Mount 29.17 321 P P 22 44 38.9 +1.2
O57A Amberson 29.21 23 P P 22 44 37.2 -0.6
baz=209
N55A Marion Center 29.24 20 P P 22 44 36.6 -1.4
baz=206
M53A Wt Miller and 29.31 17 P P 22 44 37.6 -1.0
baz=202
SSPA Standing Stone 29.50 22 P P 22 44 39.1 -1.1
baz=208
NNA Nana 29.51 149 LR LR 22 54 02.7
comp=Z,71nm,21.7s,baz=317,slow=31
N56A West Decatur 29.60 21 P P 22 44 40.3 -0.9
baz=207
N57A Milroy 29.72 22 P P 22 44 42.0 -0.3
baz=209
KNB Kanab 29.86 325 P P 22 44 44.8 +1.0
M55A Ridgway 29.93 20 P P 22 44 42.8 -1.4
baz=206
LCMT Little Creek M 30.10 324 P P 22 44 46.8 +1.0
LCMT PcP 22 47 45.6 -1.0
M56A Emporium 30.14 21 P P 22 44 45.4 -0.6
baz=207
ECSD EROS Data Cent 30.23 353 P P 22 44 47.4 +0.6
baz=170
MTPU Mount Pierson 30.26 327 P P 22 44 48.0 +0.4
M57A Sunshine Farm, 30.39 22 P P 22 44 47.3 -0.8
baz=209
Q16A Castle Valley 30.40 329 P P 22 44 48.9 +0.3
L54A Sinclairville 30.45 19 P P 22 44 47.7 -0.9
baz=204
J49A Marlette 30.50 13 P P 22 44 47.0 -2.2
baz=196
N59A State Game Lan 30.55 24 P P 22 44 49.0 -0.5
baz=212
CCUT Cedar City 30.55 325 P P 22 44 50.2 +0.3
P17A Butcher Ranch, 30.62 330 P P 22 44 50.8 +0.3
M58A Price's Panora 30.67 23 P P 22 44 50.2 -0.5
baz=210
TMUT Trail Mountain 30.71 330 P P 22 44 51.8 +0.4
WVNY West Valley, N 30.83 19 P P 22 44 49.9 -2.1
WVNY IAmb IAmb 22 44 51.7
comp=Z,6.1nm,0.7s
SHPR Sheep Range 30.88 322 P P 22 44 53.1 +0.4
L56A Greenwood 30.93 21 P P 22 44 52.8 -0.2
baz=208
L57A Andrews Acres 31.07 22 P P 22 44 53.3 -0.9
baz=209
M59A Waymart 31.21 24 P P 22 44 55.0 -0.5
baz=212
M60A Port Jervis 31.36 25 P P 22 44 55.6 -1.1
baz=213
PAL Palisades 31.40 27 P P 22 44 55.8 -1.2
PAL IAmb IAmb 22 44 59.8
comp=Z,12nm,0.9s
I51A Listowel 31.42 15 P P 22 44 55.6 -1.6
baz=200
L58A Harry Jones Me 31.48 23 P P 22 44 57.4 -0.4
baz=210
K56A Middlesex 31.51 21 P P 22 44 56.7 -1.3
baz=207
BINY Binghamton 31.56 23 P P 22 44 57.8 -0.6
baz=210
M61A Granite Spring 31.71 26 P P 22 44 58.4 -1.4
baz=215
K57A Scipio Center 31.82 22 P P 22 44 59.7 -1.1
baz=209
I52A Shelburne 31.88 16 P P 22 44 59.6 -1.7
baz=202
L59A Walton 31.91 24 P P 22 45 01.1 -0.6
baz=212
L59A Walton 31.91 24 P P 22 45 01.0 -0.6
L59A IAmb IAmb 22 45 01.6
comp=Z,8.2nm,0.8s
MPMC Manual Prospec 32.05 319 P P 22 45 06.2 +3.2
baz=127
L60A Shokan 32.08 25 P P 22 45 02.0 -1.0
baz=213
RSSD Black Hills 32.09 343 P P 22 45 04.1 +0.7
baz=157
KSCT Kent School, K 32.17 26 P P 22 45 02.2 -1.6
K58A Earlville 32.17 23 P P 22 45 02.4 -1.4
baz=210,SNR=6.6
K58A Earlville 32.17 23 P P 22 45 02.3 -1.5
J56A Wolcott 32.18 21 P P 22 45 02.8 -1.1
baz=208,SNR=7.0
J57A Williamstown 32.60 22 P P 22 45 06.1 -1.4
baz=209
J57A Williamstown 32.60 22 IAmb IAmb 22 45 07.5
comp=Z,9.4nm,0.9s
HWUT Hardware Ranch 32.70 332 P P 22 45 09.0 +0.3
HWUT IAmb IAmb 22 45 12.9
comp=Z,6.7nm,0.8s
I55A Frankford 32.75 19 P P 22 45 07.5 -1.3
baz=206,SNR=5.2
PDAR Pinedale Array 32.78 336 P P 22 45 10.7 +1.3
comp=Z,1.3nm,0.5s,baz=135,slow=10,SNR=11
H53A Bobcaygeon 32.80 18 P P 22 45 07.7 -1.6
baz=204,SNR=7.4
J58A Remsen 32.82 23 P P 22 45 08.3 -1.2
baz=210,SNR=5.5
TRY Troy 32.92 25 P P 22 45 08.8 -1.6
F48A Evansville 32.98 12 P P 22 45 09.0 -1.8
baz=196
K61A Williamstown 33.04 26 P P 22 45 11.2 -0.2
baz=214
J59A Piesco 33.20 23 P P 22 45 11.7 -1.2
baz=212
H55A Tweed 33.21 19 P P 22 45 10.6 -2.2
baz=206
I58A Old Forge 33.22 23 P P 22 45 11.6 -1.4
baz=211,SNR=11
G53A Haliburton 33.29 17 P P 22 45 11.7 -1.9
baz=204
J60A Lant Hill Farm 33.45 25 P P 22 45 14.6 -0.4
baz=214
E47A Iron Bridge 33.45 11 P P 22 45 13.2 -1.8
baz=195
H56A Elgin 33.55 20 P P 22 45 15.0 -0.7
baz=208
G54A Lake Saint Pet 33.69 18 P P 22 45 14.7 -2.4
baz=204
F52A Sundridge 33.71 16 P P 22 45 15.3 -1.9
baz=202
I59A Olmsteadville 33.73 24 P P 22 45 16.2 -1.2
baz=212
NCB Newcomb 33.74 23 P P 22 45 14.9 -2.6
D46A Sault St. Mari 33.74 10 P P 22 45 15.9 -1.6
baz=193
REDW Red Top Meadow 33.80 335 P P 22 45 19.3 +0.9
ELK Elko 33.85 327 IAmb IAmb 22 45 24.0
comp=Z,3.2nm,0.6s
TPAW Teton Pass 33.95 335 IAmb IAmb 22 45 23.8
comp=Z,7.2nm,0.7s
G55A Calabogie 33.98 19 P P 22 45 18.5 -1.1
baz=207
I60A Shoreham 34.00 24 P P 22 45 18.9 -0.8
baz=213
D47A Chapleau 34.06 11 P P 22 45 18.5 -1.8
baz=195
H58A Gabriels 34.14 23 P P 22 45 19.7 -1.2
baz=211
LONY Lake Ozonia 34.16 22 P P 22 45 20.2 -0.9
baz=211
KVN Kaiserville 34.30 322 P P 22 45 24.0 +1.4
KVN IAmb IAmb 22 45 28.4
comp=Z,5.4nm,0.7s
E51A G1948 Merrick 34.35 15 P P 22 45 20.7 -2.1
baz=201
RLMT Red Lodge 34.67 338 P P 22 45 27.2 +1.5
baz=149,SNR=6.2
H60A Morristown 34.83 24 P P 22 45 25.8 -1.2
baz=214
E54A Lac Daplat, Po 34.90 18 P P 22 45 25.8 -1.7
baz=205
YERR Yerington 34.94 321 P P 22 45 29.9 +1.7
YERR IAmb IAmb 22 45 34.2
comp=Z,5.3nm,0.7s
YHL Hebgen Lake 35.17 336 P P 22 45 30.8 +0.6
I63A Otisfield 35.31 27 P P 22 45 30.3 -0.7
baz=217
D53A Lac Vacive, Po 35.34 17 P P 22 45 29.7 -1.5
baz=204
D53A Lac Vacive, Po 35.34 17 P P 22 45 29.8 -1.5
D53A IAmb IAmb 22 45 30.7
comp=Z,6.2nm,0.7s

PAHR	Pah Rah Range	35.48	322	P		P	22 45 33.9 +1.1
E56A	St. Veronique	35.67	20	P		P	22 45 33.1 -1.1
	baz=208						
D54A	Lac Fusel, La	35.70	18	P		P	22 45 32.5 -1.9
	baz=206						
MCMT	McKenzie Canyo	35.83	334	P		P	22 45 36.2 +0.4
E57A	Chemin Saint G	35.86	21	P		P	22 45 34.8 -1.0
	baz=210						
D55A	Sainte-Anne-du	35.95	19	P		P	22 45 35.0 -1.6
	baz=208,SNR=6.5						
MFID	Camas Ranch	36.10	330	P		P	22 45 39.1 +1.0
MFID				IAmb	IAmb		22 45 45.3
	comp=Z,4.3nm,0.8s						
E58A	La Victoria	36.13	22	P		P	22 45 36.8 -1.3
	baz=211						
DLMT	Dillon	36.16	335	P		P	22 45 39.8 +1.3
DLMT				IAmb	IAmb		22 45 48.2
	comp=Z,4.0nm,1.0s						
BEKR	Beckworth	36.17	321	P		P	22 45 41.0 +2.2
D56A	ZEC Mazanza, M	36.21	20	P		P	22 45 37.1 -1.6
	baz=209						
G62A	West of Eustis	36.26	26	P		P	22 45 38.0 -1.2
	baz=216						
F60A	Warwick	36.30	24	P		P	22 45 38.4 -1.0
	baz=214,SNR=8.4						
H64A	Troy	36.37	28	P		P	22 45 38.7 -1.5
	baz=219						
D57A	Chemin Vers le	36.47	21	P		P	22 45 39.6 -1.4
	baz=210						
G63A	Kingsbury	36.57	27	P		P	22 45 40.4 -1.5
	baz=218						
E60A	Ste Agathe de	36.82	24	P		P	22 45 42.7 -1.2
	baz=214						
PKME	Peaks-Kenny Pk	36.83	27	P		P	22 45 42.6 -1.4
	baz=218						
WVOR	Wild Horse Val	36.85	326	P		P	22 45 46.6 +2.2
WVOR				IAmb	IAmb		22 45 51.9
	comp=Z,7.0nm,1.1s						
D58A	Chemin du LacG	36.89	22	P		P	22 45 43.6 -1.0
	baz=211						
F63A	Nahmakanta, Br	37.26	27	P		P	22 45 45.4 -2.2
	baz=218						
LSQQ	Lebel-sur-Quev	37.34	16	P		P	22 45 46.3 -2.0
	baz=204						
EGMT	Eagleton	37.34	340	P		P	22 45 49.7 +1.2
	baz=150						
MOD	Modoc Plateau	37.42	324	P		P	22 45 50.9 +1.5
MOD				IAmb	IAmb		22 45 55.5
	comp=Z,3.0nm,0.7s						
MATQ	Matagami	37.81	15	P		P	22 45 50.3 -1.9
	baz=203,SNR=8.2						
BMO	Blue Mountains	37.88	330	P		P	22 45 54.1 +1.1
BMO				IAmb	IAmb		22 45 56.0
	comp=Z,4.1nm,1.0s						
LPAZ	La Paz	37.88	141	P		P	22 45 53.1 -0.9
MSO	Missoula	37.89	335	P		P	22 45 54.5 +1.3
	baz=143						
MSO	Missoula	37.89	335	P		P	22 45 54.0 +0.8
E63A	Oxbow	38.11	26	P		P	22 45 54.0 -0.9
	baz=218						
D62A	Allapoint, All	38.37	25	P		P	22 45 55.6 -1.4
	baz=217						
E64A	Bridgewater	38.37	27	P		P	22 45 57.3 +0.3
	baz=219						
I07A	Izee	38.44	327	IAmb	IAmb		22 46 02.4
	comp=Z,4.8nm,0.9s						
JTMT	Jette	38.77	336	P		P	22 46 00.9 +0.4
JTMT				IAmb	IAmb		22 46 04.6
	comp=Z,3.9nm,0.8s						
L04D	Klamath Falls	38.78	323	P		P	22 46 02.9 +2.2
	baz=128						
CHGQ	Chibougamau	38.85	18	P		P	22 45 59.0 -2.0
	baz=207						
PINE	Pine Mountain	39.01	326	IAmb	IAmb		22 46 07.2
	comp=Z,7.0nm,0.8s						
MNMC	Minye Minye	39.28	146	P		P	22 46 05.6 +0.4
MNMC				IAmb	IAmb		22 46 17.1
	comp=Z,9.7nm,0.9s						
J04D	Umpqua Nationa	39.30	324	P		P	22 46 07.8 +2.6
	baz=129						
PB11	IPOC Station P	39.76	146	P		P	22 46 07.5 -1.6
PB11				IAmb	IAmb		22 46 18.2
	comp=Z,9.7nm,1.1s						
GO01	Chusmiza	39.93	146	P		P	22 46 11.7 +0.8
GO01				IAmb	IAmb		22 46 12.8
	comp=Z,5.8nm,1.1s						
G05D	Wamic, OR	40.18	327	P		P	22 46 15.7 +3.5
	baz=132						
D08A	Wollman Farm,	40.26	331	P		P	22 46 13.7 +0.9
D08A				IAmb	IAmb		22 46 16.0
	comp=Z,6.5nm,1.1s						
H04A	Detroit Lake	40.27	326	P		P	22 46 14.1 +1.1
I03D	Drain, OR	40.29	324	P		P	22 46 15.2 +2.1
	baz=128						
J01E	Myrtle Point	40.30	323	P		P	22 46 16.0 +2.8
	baz=127						
PB08	IPOC Station P	40.34	146	P		P	22 46 14.7 +0.5
NEW	Newport	40.36	334	P		P	22 46 15.0 +1.3
	baz=140						
NEW	Newport	40.36	334	P		P	22 46 13.6 0.0
H04D	Lebanon	40.47	326	P		P	22 46 16.4 +1.9
	baz=130						
C09A	Chrisman Ranch	40.51	332	P		P	22 46 15.4 +0.5
C09A				IAmb	IAmb		22 46 17.7
	comp=Z,7.6nm,0.8s						
F05D	White Salmon	40.68	328	P		P	22 46 20.1 +3.7
	baz=132						
LTY	Liberty	41.24	330	P		P	22 46 22.1 +1.1
LTY				IAmb	IAmb		22 46 24.7
	comp=Z,4.6nm,0.7s						
B08A	Colville Reser	41.40	332	P		P	22 46 22.4 +0.2
LON	Longmire	41.45	329	P		P	22 46 23.3 +0.6
LON				IAmb	IAmb		22 46 27.1
	comp=Z,8.0nm,0.8s						
FFC	Flin Flon	41.72	351	P		P	22 46 24.9 +0.3
D05A	Enumclaw	41.84	329	P		P	22 46 26.1 +0.3
D05A				IAmb	IAmb		22 46 30.1
	comp=Z,10nm,1.0s						
E03A	Lebam	42.22	327	P		P	22 46 29.6 +0.7
SIV	San Ignacio	42.35	133	P		P	22 46 30.1 -0.2
	comp=Z,1.0nm,0.7s,baz=320,slow=10.0,SNR=5.1						
B06A	Marblemount	42.51	331	P		P	22 46 32.9 +1.7
D03D	Eldon	42.62	329	P		P	22 46 34.0 +1.8
	baz=132						
B05A	Bryant	42.63	330	P		P	22 46 33.8 +1.6
	baz=134						
NLWA	Neilton Lookou	42.93	328	P		P	22 46 34.8 +0.1
NLWA				IAmb	IAmb		22 46 39.5
	comp=Z,7.0nm,0.8s						
A05A	Maple Falls	43.13	331	P		P	22 46 37.9 +1.7
A04D	Lummi Island	43.24	330	P		P	22 46 39.1 +2.0
	baz=133						
PGC	Sidney	43.55	330	P		P	22 46 41.7 +2.1
PGC				IAmb	IAmb		22 46 43.9
	comp=Z,9.1nm,0.8s						
LLLB	Lillooet	44.18	333	P		P	22 46 45.2 +0.5
LLLB				IAmb	IAmb		22 46 47.7
	comp=Z,6.8nm,0.6s						
GO02	Mina Guanaco	44.28	151	P		P	22 46 47.3 +1.2
GO02				IAmb	IAmb		22 46 57.5
	comp=Z,5.0nm,0.7s						
FCC	Fort Churchill	45.03	358	IAmb	IAmb		22 46 51.6
	comp=Z,7.4nm,0.8s						
SCHQ	Schefferville	45.46	20	P		P	22 46 52.9 -2.0
	comp=Z,12nm,0.5s,baz=222,slow=6.9,SNR=40						
SCHQ				LR	LR		23 06 55.1
	comp=Z,228nm,20.0s,baz=233,slow=37						
SCHQ	Schefferville	45.46	20	P		P	22 46 53.0 -1.8
YKA	Yellowknife Ar	51.37	347	P		P	22 47 40.3 +0.1
	comp=Z,3.0nm,0.6s,baz=148,slow=7.8,SNR=53						
YKA				PcP		PcP	22 48 55.3 +1.0
	comp=Z,1.4nm,0.8s,baz=148,slow=4.1,SNR=9.7						
YKA				LR	LR		23 13 46.0
	comp=Z,74nm,19.1s,baz=0.0,slow=41						
CPUP	Villa Florida	52.03	140	LR	LR		23 11 17.7
	comp=Z,58nm,18.5s,baz=238,slow=38						
TAOE	Nuku Hiva Isla	52.93	248	*e*T	T		23 44 41.6
	comp=Z,24nm,0.2s						
RKT	Rikitea	55.87	230	*e*T	T		23 48 20.9
	comp=Z,5.4nm,0.3s						
WHY	Whitehorse	56.34	336	P		P	22 48 17.1 +0.5
WHY				IAmb	IAmb		22 48 19.2
	comp=Z,4.6nm,0.9s						
HYT	Haines Junctio	57.48	335	IAmb	IAmb		22 48 28.3
	comp=Z,4.0nm,1.1s						
GLB	Gilahina Butte	60.41	334	IAmb	IAmb		22 48 48.3
	comp=Z,4.5nm,1.0s						
INK	Inuvik	60.79	344	P		P	22 48 47.8 +0.5
INK				IAmb	IAmb		22 48 49.3
	comp=Z,4.8nm,0.8s						
EGAK	Eagle	61.07	338	IAmb	IAmb		22 48 50.6
	comp=Z,3.4nm,0.8s						
PMR	Palmer	62.77	333	IAmb	IAmb		22 49 20.2
	comp=Z,3.6nm,0.7s						
RC01	Rabbit Creek A	62.85	332	IAmb	IAmb		22 49 18.8
	comp=Z,4.1nm,0.7s						
HDA	Harding Lake	63.06	336	P		P	22 49 03.8 +1.1
	baz=116						
HDA	Harding Lake	63.06	336	IAmb	IAmb		22 49 04.8
	comp=Z,7.7nm,1.2s						
ILAR	Eielson Array	63.20	337	P		P	22 49 04.7 +1.1
	comp=Z,7.1nm,1.0s,baz=130,slow=4.6,SNR=45						
CCB	Clear Creek Bu	63.50	336	IAmb	IAmb		22 49 08.0
	comp=Z,3.4nm,0.7s						
WRH	Wood River Hil	63.53	336	IAmb	IAmb		22 49 09.9
	comp=Z,5.1nm,1.1s						
POKR	Poker Plat Res	63.56	337	P		P	22 49 07.3 +1.3
	baz=116						
NEA	Nenana	63.96	336	IAmb	IAmb		22 49 11.2
	comp=Z,6.6nm,1.0s						
KTH	Kantishna Hill	64.30	335	IAmb	IAmb		22 49 13.6
	comp=Z,7.5nm,1.0s						
BPAW	Bear Paw Mtn.	64.53	335	P		P	22 49 12.9 +0.6
PPLA	Purkeypile	64.59	334	IAmb	IAmb		22 49 14.7
	comp=Z,3.5nm,0.5s						
PPT	Papeete	64.90	243	LR	LR		23 10 03.8
	comp=Z,90nm,20.6s,baz=3.0,slow=29						
PPT2	Papeete2	64.91	243	*e*LR	LR		23 08 23.1
	comp=Z,77nm,22.2s						
COLD	Coldfoot	65.49	339	IAmb	IAmb		22 49 21.7
	comp=Z,6.1nm,1.2s						
TOLK	Toolik Lake Re	65.88	340	P		P	22 49 22.6 +1.6
	baz=116,SNR=7.9						
TOLK	Toolik Lake Re	65.88	340	P		P	22 49 21.1 +0.1
TOLK				IAmb	IAmb		22 49 23.5
	comp=Z,6.0nm,0.8s						
SUMG	Summit	66.50	15	P		P	22 49 23.9 -1.4
SUMG				IAmb	IAmb		22 49 25.8
	comp=Z,5.8nm,0.8s						
SUMG	Summit	66.50	15	*i* P		P	22 49 23.7 -1.6
	comp=Z,13nm,0.7s						
DAG	Danmarks Havn	72.93	13	⇓*i* P		P	22 50 02.4 -2.0
	comp=Z,6.0nm,0.5s						
ESDC	Sonseca Array	79.78	52	P		P	22 50 41.8 -2.2
	comp=Z,0.4nm,0.6s,baz=278,slow=5.0,SNR=2.9						
BILL	Bilibino	81.82	338	P		P	22 50 53.9 -0.4
NOA	NORSAR Array B	84.34	28	P		P	22 51 06.5 -1.0
	comp=Z,0.3nm,0.6s,baz=291,slow=4.5,SNR=3.3						
NOA				LR	LR		23 27 10.3
	comp=Z,20nm,20.1s,baz=265,slow=35						
ARCES	ARCESS Array B	86.38	18	P		P	22 51 16.5 -0.9
	comp=Z,2.6nm,0.9s,baz=291,slow=4.7,SNR=9.9						
PETK	Petropavlovsk-	91.00	326	LR	LR		23 34 54.5
	comp=Z,14nm,18.5s,baz=54,slow=37						
KSH	Kashi	125.87	12	sPKP			22 57 53.4
KSH	Kashi	125.87	12	PKP		PKiKP	22 57 39.9 +1.8
LZH	Lanzhou	128.33	344	*e*PKP		PKiKP	22 57 44.3 +1.1
LZH				pPKP		pPKPdf	22 57 54.6 -2.9
LZH				sPKP			22 57 58.4
CD2	Chengdu	133.20	342	PKP		PKPdf	22 57 50.3 -1.5
WRA	Warramunga Arr	135.48	255	PKP		PKiKP	22 57 57.2 -0.6
	comp=Z,0.6nm,0.8s,baz=80,slow=1.9,SNR=1.7						
ASAR	Alice Springs	135.72	250	PKP		PKPdf	22 57 57.6 +0.9
	comp=Z,0.4nm,0.6s,baz=83,slow=2.9,SNR=2.0						
FITZ	Fitzroy Crossi	143.74	259	PKP		PKPdf	22 58 11.0 -0.2
	comp=Z,2.4nm,1.1s,baz=45,slow=4.3,SNR=2.1						
FITZ	Fitzroy Crossi	143.74	258			PKPdf	22 58 10.8 -0.5
CMAR	Chiang Mai Arr	146.35	341	PKPbc		PKPab	22 58 17.5 -0.3
	comp=Z,4.8nm,0.6s,baz=333,slow=3.2,SNR=24						

DDA **11** *22:41:54.4,37.°01N×27.°46E,h11km,ML2.2*
ISC 11 22:41:54.2,37.°03N×27.°50E,h1km,ML2.1/8,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BDRM	Kayabasi	0.06	307	*i* P	Pg	22 41 56.9	+1.6
BDRM				*i* P		22 41 57.0	
BDRM				IAML		22 41 58.0	
	comp=E,2μm,0.2s						
BDRM				IAML		22 41 58.0	
	comp=E,1μm,0.2s						
BDRM				*i* S	Sg	22 41 58.3	+2.1
BDRM				*i* S		22 41 58.3	
BODT	Bodrum	0.16	282	PG	Pg	22 41 58.4	+1.2
BODT				SG	Sg	22 42 00.9	+1.6
YKAV	Yalikavak-Bodr	0.20	298	PG	Pg	22 41 58.6	+0.5
DAT	Datca	0.31	169	PG	Pg	22 42 01.2	+1.1
DAT				SG	Sb	22 42 06.6	-1.5
DAT	Datca	0.31	169	*i* P	Pg	22 42 00.8	+0.7
KOSK	Kos Island	0.50	237	PG	Pb	22 42 05.4	-0.4
YER	Yerkesik	0.63	80	PG	Pb	22 42 07.5	-0.6
AYDN	Tasoluk	0.70	25	*i* P	Pg	22 42 07.9	+0.4
AYDN				*i* S	Sg	22 42 17.0	+0.4
AYDN				IAML		22 42 18.0	
	comp=E,30nm,0.4s						
GCAM	G?zelcaml?	0.70	342	PG	Pb	22 42 09.1	-0.1
GCAM	G?zelcaml?	0.70	342	*i* P	Pg	22 42 08.3	+0.6
GCAM				*i* S	Sb	22 42 18.6	-0.8
TURN	Turunc	0.90	100	PG	Pg	22 42 07.7	-3.7
TURN	Turunc	0.90	100	*i* P	Pg	22 42 07.3	-4.1
TURN				*i* S	Sg	22 42 17.1	-5.8
DALY	Dalyan (Mula)	0.95	103	PG	Pb	22 42 13.8	+0.4
DALY	Dalyan (Mula)	0.95	103	*i* P	Pb	22 42 13.7	+0.3
DALY				*i* S	Sb	22 42 27.6	+1.1
ARG	Arkhangelos	0.96	148	PG	Pb	22 42 13.6	0.0

ISK **11** *22:42:11.8,38.°65N×26.°62E,h5km,ML2.5/15*
DDA **11** *22:42:11.5,38.°65N×26.°63E,h7km±2km,ML2.4*
ATH **11** *22:42:11.7,38.°63N×26.°54E,h37km±3km,ML2.4/5,Error ellipse: s-maj=4.6km s-min=1.3km az=267.0*
THE **11** *22:42:13.3,38.°66N×26.°52E,h14km±1km,ML2.3/3,Error ellipse: s-maj=1.7km s-min=0.4km az=262.0*
ISC 11 22:42:11.5±0.8,38.°65N±0.°02×26.°63E±0.°02,h13km±6km, n42,σ0°50/64,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBN	Karaburun	0.09	227	PG	Pg	22 42 14.0	-0.2
KRBN				SG	Sg	22 42 15.6	-0.6
URLA	Izmir	0.29	186	PG	Pg	22 42 18.0	+0.5
URLA				SG	Sg	22 42 22.5	+0.9
URLA	Izmir	0.29	186	*i* P	Pg	22 42 17.6	+0.1
URLA				*i* S	Sb	22 42 23.1	-0.4
URLA	Izmir	0.29	186	*i* P	Pg	22 42 17.7	+0.1
URLA				*i* S	Sg	22 42 22.6	+1.0
ZEDA	zmir-Bergama	0.47	48	*i* P	Pg	22 42 20.7	0.0
ZEDA				*i* S	Sg	22 42 27.2	+0.3
DKL	Dikili	0.47	27	PG	Pg	22 42 20.8	+0.1
CHOS	Chios island	0.53	240	P	Pg	22 42 22.3	+0.5
CHOS				S	Sg	22 42 29.4	+0.6
	690nm,0.3s						
CHOS	Chios island	0.53	240	P	Pg	22 42 22.3	+0.5
CHOS				S	Sg	22 42 29.5	+0.6
CHOS				AML	AML	22 42 30.1	
	comp=N,1169μm,0.3s						
CHOS				AML	AML	22 42 35.0	
	comp=E,1620μm,0.3s						
CHOS	Chios island	0.53	240	PG	Pg	22 42 22.3	+0.5
CHOS				SG	Sb	22 42 29.7	-0.5
DGB	zmir	0.63	162	*i* P	Pg	22 42 23.4	-0.3
DGB	zmir	0.63	162	*i* P	Pg	22 42 23.4	-0.4
AYVA	Ayvalik	0.66	4	*i* P	Pg	22 42 24.0	-0.2
AYVA				*i* S	Sb	22 42 33.9	0.0
AYVA	Ayvalik	0.66	4	*i* P	Pg	22 42 23.6	-0.6
PRK	Paraskevi	0.66	335	P	Pb	22 42 25.2	+0.4
PRK				S	Sb	22 42 34.4	+0.5
	comp=E,318nm,0.6s						
PRK	Paraskevi	0.66	335	P	Pb	22 42 25.3	+0.4
PRK				S	Sb	22 42 34.6	+0.7
PRK				AML	AML	22 42 38.5	
	comp=N,887μm,0.8s						
PRK				AML	AML	22 42 42.9	
	comp=E,521μm,0.4s						
SIGR	SIGRI	0.82	313	P	Pg	22 42 27.4	0.0
SIGR				S	Sb	22 42 38.8	+0.1
	comp=E,180nm,0.5s						
SIGR	SIGRI	0.82	313	P	Pg	22 42 27.4	0.0
SIGR				S	Sg	22 42 38.4	+0.1
SIGR				AML	AML	22 42 40.5	
	comp=E,302μm,0.6s						
SIGR				AML	AML	22 42 42.9	
	comp=N,443μm,0.5s						
SIGR	SIGRI	0.82	313	PG	Pb	22 42 27.9	+0.2
SIGR				SG	Sn	22 42 39.9	-1.0
AKHS	Akhisar	0.95	76	*i* P	Pb	22 42 30.0	+0.2
AKHS				*i* S	Sb	22 42 42.1	-0.2
SMG	Samos	0.96	170	P	Pb	22 42 29.6	-0.4
SMG				AML	AML	22 42 45.7	
	comp=N,519μm,0.4s						
SMG				AML	AML	22 42 46.1	
	comp=E,708μm,0.4s						
GCAM	G?zelcaml?	1.06	153	PG	Pn	22 42 32.3	+0.2
GCAM				SG	Sn	22 42 47.3	+0.6
GCAM	G?zelcaml?	1.06	153	*i* P	Pb	22 42 31.9	+0.1
GCAM				*i* S	Sb	22 42 45.6	+0.1
GCAM				IAML		22 42 48.0	
	comp=E,94nm,0.4s						
BAYC	CANAKKALE_Bayr	1.09	356	*i* P	Pb	22 42 31.8	-0.4
BAYC				*i* S	Sb	22 42 46.4	0.0
BAYC				IAML		22 42 48.0	
	comp=N,88nm,0.3s						
STEP	BALIKESIR_Sava	1.11	49	*i* P	Pb	22 42 31.6	-1.0
STEP				*i* S	Sb	22 42 47.4	+0.4
STEP				IAML		22 42 51.0	
	comp=N,240nm,0.7s						
EZN	Ezine	1.20	349	PN	Pg	22 42 35.1	+0.6
AYDB	Zeytinkoy-Aydi	1.21	125	PN	Pg	22 42 35.4	+0.5
BALY	Balya	1.33	35	*i* P	Pn	22 42 35.7	-0.2
BALY				*i* S	Sg	22 42 54.5	+0.2
BALY				IAML		22 42 57.0	
	comp=N,154nm,0.8s						
BALB	Balikesir	1.38	44	PN	Pg	22 42 38.2	+0.2
AYDN	Tasoluk	1.39	135	*i* P	Pn	22 42 36.6	-0.1
AYDN				*i* S	Sn	22 42 53.9	-1.2
AYDN				IAML		22 42 58.0	
	comp=N,64nm,0.5s						
KULA	Kula-Manisa	1.59	94	PN	Pb	22 42 41.8	+0.9
GADA	Gvkgeada	1.64	340	PN	Pb	22 42 41.8	+0.2
LIA	Limnos Island	1.68	318	P	Pn	22 42 40.4	-0.2
LIA	Limnos Island	1.68	318	P	Pn	22 42 40.4	-0.2
LPK	Lapseki	1.72	3	PN	Pb	22 42 43.2	+0.2
GELI	Tayfur-Gelibol	1.75	356	PN	Pb	22 42 43.6	+0.2
KNL	Balıkesir	1.76	23	*i* P	Pb	22 42 43.0	-0.6
KNL				*i* S	Sn	22 43 04.1	+0.2
KNL				IAML		22 43 15.0	
	comp=N,42nm,0.7s						
APE	Apeiranthos	1.81	209	P	Pn	22 42 41.2	-1.2
KRBG	Karabiga-Canak	1.81	16	PN	Pb	22 42 44.6	+0.1
EDC	Edincik	1.94	29	PN	Pb	22 42 46.6	-0.1
SMTH	Samothraki Isl	2.01	335	P	Pn	22 42 44.9	-0.3
ERIK	Erikli-Kesan	2.02	357	PN	Pb	22 42 47.6	-0.4
ALN	Alexandroupoli	2.29	349	P	Pn	22 42 49.2	+0.2
ALN				AML	AML	22 43 26.4	
	comp=E,44μm,0.9s						
ALN				AML	AML	22 43 27.7	
	comp=N,70μm,0.9s						

IDC **11** *22:55:49.5±5.0,39.°51N×68.°57E,h0km,mb1 3.4/3, mb1mx3.2/40,mbtmp3.4/3,ML2.9/3,Error ellipse: s-maj=144.2km s-min=28.8km az=155.0*
ISC 11 22:55:42.3±1.9,38.°1N±0.°1×69.°4E±0.°1,h12km,n5,σ1°48/7, 3C-1D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	5.09	9	⇑Pn	Pn	22 56 58.4	0.0
	1.1nm,0.6s,baz=195,slow=16,SNR=9.4						
KK31				⇓Sn	Sg	22 58 26.7	+1.0
	5.0nm,0.6s,baz=205,slow=26,SNR=5.0						
AAK	Ala-Archa	5.99	39	⇑Pn	Pn	22 57 13.4	+2.4
	3.8nm,0.5s						
AAK				⇑Sn	Sg	22 58 55.1	+0.4
	8.8nm,0.8s						
GEYT	Alibeck	8.90	272	Pn	Pn	22 57 51.4	+0.7
	0.4nm,0.3s,baz=75,slow=11,SNR=6.2						
MKAR	Makanchi Array	12.89	43	Pn	Pn	22 58 44.6	-0.7
	0.0nm,0.3s,baz=235,slow=13,SNR=3.9						
ZALV	Zalesovo Beam	19.08	29	P	P	23 00 03.5	-1.0
	0.1nm,0.3s,baz=230,slow=11,SNR=5.6						

IDC **11** *23:11:04.1±1.3,29.°68S×178.°05W,h72km±11km,mb3.9/5, mb1 4.1/7,mb1mx3.8/38,mbtmp4.4/7,Error ellipse: s-maj=36.6km s-min=23.0km az=153.0*
NEIC **11** *23:11:04.4±0.7,29.°8S±0.°1×178.°0W±0.°2,h78km±8km, mb4.3/11,Error ellipse: s-maj=26.1km s-min=13.4km az=109.0*
ISC 11 23:11:02.6±0.7,29.°90S±0.°09×178.°2W±0.°1,h50km,n25, σ2°20/27,mb4.2/7,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	0.67	18	P	Pn	23 11 18.0	+2.0
	2μm,0.3s,baz=72,slow=20,SNR=68						
RAO				S	Sn	23 11 28.0	+2.3
	3μm,0.3s,baz=37,slow=20,SNR=13						
RAO	Raoul Island	0.67	18		Pn	23 11 17.9	+2.0
URZ	Urewera	9.22	204	P	Pn	23 13 12.8	-0.1
	0.7nm,0.3s,baz=73,slow=7.7,SNR=2.4						
URZ				S	Sn	23 14 60.0	+4.8
	11nm,0.3s,baz=312,slow=22,SNR=24						
URZ	Urewera	9.22	204		Sn	23 14 59.8	+4.7
RPZ	Rata Peaks	16.25	209	P	P	23 14 50.0	+0.2
	2.0nm,0.3s,baz=60,slow=9.2,SNR=7.6						
RPZ				S	Sn	23 17 41.0	-5.8
	0.5nm,0.3s,baz=295,slow=19,SNR=1.6						
RPZ	Rata Peaks	16.25	209	IAmb	IAmb	23 14 51.2	
	comp=Z,9.2nm,0.9s						
FOZ	Fox Glacier	16.66	212	P	P	23 14 55.1	+0.9
FOZ				IAmb	IAmb	23 15 02.4	
	comp=Z,27nm,1.2s						
RAR	Rarotonga	18.68	67	P	P	23 15 15.1	-1.6
	comp=Z,1.0nm,0.3s,baz=216,slow=18,SNR=1.8						
RAR				S	Sn	23 18 24.4	-21
	comp=Z,1.5nm,0.3s,baz=112,slow=16,SNR=1.8						
RAR	Rarotonga	18.68	67	IAmb	IAmb	23 15 30.8	
	comp=Z,20nm,0.9s						
MLZ	Mavora Lakes	18.84	211	P	Pn	23 15 19.5	+0.1
MLZ				IAmb	IAmb	23 15 30.6	
	comp=Z,24nm,1.2s						
STKA	Stephens Creek	34.47	256	P	P	23 17 46.8	+1.1
	comp=Z,4.2nm,0.6s,baz=91,slow=8.1,SNR=9.2						
STKA	Stephens Creek	34.47	256	IAmb	IAmb	23 17

s-min=6.4km az=91.0
*GUC **11** 23:14:28.6±0.7, 18°.94S×69°.47W, h107km±3km, ML4.0*
*VAO **11** 23:14:29.0±0.8, 18°.75S×69°.38W, h111km±7km, mb4.1*
ISC 11 23:14:27.7±0.6,**18°.98S**±0°.04×**69°.50W**±0°.06,**h108**km±5km,
n92,σ1§37/98,mb4.2/8,2C-5D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MNMC	**Minye Minye**	**0.18**	**210**	⇓	*iP*	**Pn**	**23 14 43.7**	**+0.5**
MNMC					*i*S	**Sn**	**23 14 55.2**	**+0.5**
MNMC					IAML		23 14 59.8	
	comp=E,17μm,0.2s							
MNMC	**Minye Minye**	**0.18**	**210**			**Pn**	**23 14 42.8**	**-0.4**
PB16	**IPOC Station P**	**0.64**	**359**	⇓	*iP*	**Pn**	**23 14 46.8**	**+0.7**
PB16					*i*S	**Sn**	**23 15 00.1**	**+0.4**
PB16					IAML		23 15 01.2	
	comp=N,6μm,0.5s							
PB16	**IPOC Station P**	**0.64**	**359**			**Pn**	**23 14 46.4**	**+0.3**
GO01	**Chusmiza**	**0.75**	**157**	⇓	*iP*	**Pn**	**23 14 48.1**	**+1.2**
GO01					*i*S	**Sn**	**23 15 02.9**	**+1.7**
GO01					IAML		23 15 05.0	
	comp=E,7μm,0.1s							
GO01	**Chusmiza**	**0.75**	**157**			**Pn**	**23 14 47.2**	**+0.4**
PB11	**IPOC Station P**	**0.80**	**191**	⇓	*iP*	**Pn**	**23 14 47.9**	**+1.0**
PB11					*i*S	**Sn**	**23 15 02.4**	**+1.1**
PB11					IAML		23 15 03.3	
	comp=E,11μm,0.4s							
PB11	**IPOC Station P**	**0.80**	**191**			**Pn**	**23 14 47.0**	**+0.1**
PSGC	**Pisagua**	**0.85**	**223**	⇑	*iP*	**Pn**	**23 14 48.1**	**+0.7**
PSGC					*i*S	**Sn**	**23 15 02.7**	**+0.5**
PSGC					IAML		23 15 07.1	
	comp=E,3μm,0.5s							
PSGCX	**Pisagua**	**0.85**	**223**			**Pn**	**23 14 47.3**	**-0.1**
PB12	**IPOC Station P**	**0.86**	**295**	*eP*		**Pn**	**23 14 47.9**	**+0.5**
PB12					*i*S	**Sn**	**23 15 02.6**	**+0.3**
PB12					IAML		23 15 04.3	
	comp=N,5μm,0.1s							
PB12	**IPOC Station P**	**0.86**	**295**			**Pn**	**23 14 47.5**	**+0.1**
AP01	**Chacalluta**	**1.00**	**307**	⇑	*iP*	**Pn**	**23 14 49.5**	**+0.8**
AP01					*i*S	**Sn**	**23 15 05.1**	**+0.6**
AP01	**Chacalluta**	**1.00**	**307**	Pn		**Pn**	**23 14 49.1**	**+0.4**
PB08	**IPOC Station P**	**1.21**	**164**	⇓	*iP*	**Pn**	**23 14 53.0**	**+1.6**
PB08					*i*S	**Sn**	**23 15 10.9**	**+1.7**
PB08					IAML		23 15 12.6	
	comp=E,2μm,0.1s							
PB08	**IPOC Station P**	**1.21**	**164**			**Pn**	**23 14 52.6**	**+1.3**
TA01	**Diego Aracena**	**1.71**	**202**	*eP*		**Pn**	**23 14 57.6**	**+0.7**
TA01					*i*S	**Sn**	**23 15 18.9**	**-0.3**
TA01					IAML		23 15 24.2	
	comp=N,1μm,0.3s							
TA01	**Diego Aracena**	**1.71**	**202**			**Pn**	**23 14 57.4**	**+0.5**
PATCX	**Punta Patache**	**1.94**	**198**	*eP*		**Pn**	**23 15 01.0**	**+1.1**
PATCX					*i*S	**Sn**	**23 15 23.3**	**-1.1**
PATCX					IAML		23 15 31.5	
	comp=E,1μm,0.5s							
PATCX	**Punta Patache**	**1.94**	**198**			**Pn**	**23 15 01.0**	**+1.1**
PB01	**IPOC Station P**	**2.06**	**180**	*eP*		**Pn**	**23 15 02.5**	**+1.1**
PB01					*i*S	**Sn**	**23 15 28.0**	**+0.8**
PB01					IAML		23 15 33.0	
	comp=E,822nm,0.5s							
PB01	**IPOC Station P**	**2.06**	**180**			**Pn**	**23 15 02.6**	**+1.1**
PB02	**IPOC Station P**	**2.36**	**189**	*eP*		**Pn**	**23 15 06.5**	**+1.1**
PB02					*i*S	**Sn**	**23 15 30.3**	**-3.9**
PB02					IAML		23 15 41.1	
	comp=E,1μm,0.5s							
PB07	**IPOC Station P**	**2.76**	**187**	*eP*		**Pn**	**23 15 12.7**	**+2.0**
PB07					IAML		23 15 53.8	
	comp=E,727nm,0.4s							
PB07	**IPOC Station P**	**2.76**	**187**			**Pn**	**23 15 11.3**	**+0.6**
LPAZ	**La Paz**	**2.98**	**26**			**Pn**	**23 15 16.2**	**+2.3**
LPAZ	**La Paz**	**2.98**	**26**			Pn	23 15 19.6	+5.6
PB04	**IPOC Station P**	**3.40**	**190**	*eP*		**Pn**	**23 15 20.4**	**+1.3**
PB04	**IPOC Station P**	**3.40**	**190**	Pn		**Pn**	**23 15 20.4**	**+1.3**
LVC	**Limon Verde**	**3.66**	**171**	Pn		**Pn**	**23 15 24.2**	**+1.4**
LVC	**Limon Verde**	**3.66**	**171**	*eP*		**Pn**	**23 15 26.7**	**+3.9**
PB06	**IPOC Station P**	**3.71**	**181**			**Pn**	**23 15 24.3**	**+0.9**
PB15	**IPOC Station P**	**4.21**	**180**			**Pn**	**23 15 31.3**	**+1.2**
PB10	**IPOC Station P**	**4.62**	**192**	Pn		**Pn**	**23 15 35.1**	**-0.3**
PB14	**IPOC Station P**	**5.69**	**188**	Pn		**Pn**	**23 15 50.1**	**0.0**
GO02	**Mina Guanaco**	**6.16**	**181**			**Pn**	**23 15 56.8**	**+0.3**
AC02	**Maricunga**	**7.83**	**178**	Pn		**Pn**	**23 16 18.7**	**-0.7**
SIV	**San Ignacio**	**8.57**	**71**	Pn		**Pn**	**23 16 27.2**	**-1.9**
	comp=E,2.8nm,0.3s,baz=250,slow=12,SNR=63							
AC05	**El Transito**	**9.84**	**184**	Pn		**Pn**	**23 16 43.7**	**-2.7**
NNA	**Nana**	**9.91**	**313**	Pn		**Pn**	**23 16 46.9**	**-0.4**
LCO	**Las Campanas**	**10.05**	**186**	Pn		**Pn**	**23 16 50.0**	**+0.7**
PTLB	**Pontes e Lacer**	**10.51**	**72**	*eP*		**Pn**	**23 16 53.5**	**-1.8**
VILB	**Vilhena**	**10.76**	**58**	*eP*		**Pn**	**23 16 57.2**	**-1.5**
CO01	**Juntas del Tor**	**10.97**	**183**	Pn		**Pn**	**23 17 01.4**	**-0.3**
GO04	**Tololo Observa**	**11.21**	**186**	Pn		**Pn**	**23 17 01.6**	**-3.4**
SAML	**Samuel**	**11.70**	**32**	Pn		**Pn**	**23 17 09.3**	**-2.0**
CLDB	**Colider**	**15.49**	**61**	*eP*		**Pn**	**23 17 58.6**	**-1.8**
TRCB	**Terra Rica**	**16.21**	**106**	*eP*		**P**	**23 18 10.5**	**0.0**
PTGB	**Pitanga**	**17.16**	**113**	*eP*		**Pn**	**23 18 22.6**	**+1.6**
ARAG	**Araguaiana, MT**	**17.20**	**82**	*eP*		**P**	**23 18 19.8**	**-1.5**
MACA	**Manacapuru-AM**	**17.93**	**30**	*eP*		**P**	**23 18 27.6**	**-1.8**
ITAB	**Concordia**	**17.95**	**120**	*eP*		**Pn**	**23 18 31.1**	**+0.7**
NPGB	**Novo Progresso**	**18.16**	**51**	*eP*		**P**	**23 18 30.0**	**-1.9**
CPSB	**Cacapava Do Su**	**18.48**	**131**	*eP*		**Pn**	**23 18 36.3**	**-0.4**
FRTB	**Fartura**	**19.09**	**107**	*eP*		**Pn**	**23 18 42.1**	**-2.0**
PLTB	**Pedras Altas**	**19.16**	**135**	*eP*		**Pn**	**23 18 44.3**	**-0.5**
BB19B	**Bebedouro**	**19.82**	**100**	*eP*		**P**	**23 18 49.6**	**-0.4**
CNLB	**Canela**	**19.86**	**125**	*eP*		**Pn**	**23 18 51.5**	**-1.5**
IPMB	**Ipameri, GO**	**20.22**	**91**	*eP*		**P**	**23 18 54.5**	**+0.1**
PTGA	**Pitinga**	**20.40**	**28**	P		**P**	**23 18 54.7**	**-1.5**
	comp=E,4.0nm,0.3s,baz=259,slow=23,SNR=15							
PTGA	**Pitinga**	**20.40**	**28**	P		**P**	**23 18 54.5**	**-1.8**
PTGA	**Pitinga**	**20.40**	**28**	*eP*		**P**	**23 18 54.5**	**-1.8**
BDFB	**Brasilia**	**20.78**	**84**	P		Pn	23 19 02.6	-1.3
	comp=E,5.7nm,0.5s,baz=266,slow=9.1,SNR=16							
BDFB	**Brasilia**	**20.78**	**84**	P		Pn	23 19 02.4	-1.5
BDFB					IAmb	IAmb	23 19 03.5	
	comp=Z,5.9nm,0.6s							
BSCB	**Bom Sucesso**	**23.32**	**99**	*eP*		**P**	**23 19 25.8**	**-0.8**
SMTB	**Santa Maria do**	**23.50**	**68**	*eP*		**P**	**23 19 27.4**	**-0.7**
JANB	**Januaria**	**24.39**	**85**	*eP*		**P**	**23 19 35.8**	**-0.5**
RUSC	**La Rusia**	**24.96**	**352**	P		**P**	**23 19 42.5**	**+0.7**
SDV	**Santo Domingo**	**27.71**	**358**	*eP*		**P**	**23 20 04.8**	**-1.5**
NBPN	**Ponto Novo - B**	**29.41**	**78**	*eP*		**P**	**23 20 21.0**	**-0.3**
NBLA	**Lagarto - SE**	**31.60**	**80**	*eP*		**P**	**23 20 39.7**	**-0.9**
NBTA	**Tacaratu-PE**	**31.98**	**77**	*eP*		**P**	**23 20 43.4**	**-0.5**
NBMA	**Muriti-CE**	**32.01**	**73**	*eP*		**P**	**23 20 43.6**	**-0.6**
NBPB	**Pedra_Branca-C**	**32.06**	**69**	*eP*		**P**	**23 20 44.8**	**+0.2**
NBAN	**Anadia - AL**	**33.44**	**79**	*eP*		**P**	**23 20 56.1**	**-0.5**
OBIP	**Obispado Ponce**	**36.90**	**5**	P		**P**	**23 21 26.0**	**-0.1**
V55A	**Taylorsville**	**55.65**	**348**	P		**P**	**23 23 53.7**	**+1.2**
V53A	**Saluda**	**55.79**	**347**			P	23 24 03.4	+10
V53A					IAmb	IAmb	23 24 11.4	
	comp=Z,1.8nm,0.9s							
TKL	**Tuckaleechee C**	**55.99**	**346**	P		**P**	**23 23 55.8**	**+0.7**
TKL					IAmb	IAmb	23 23 55.9	
	comp=Z,2.7nm,0.8s							
SWET	**Sewanee**	**56.11**	**344**	P		**P**	**23 23 56.2**	**+0.3**
SWET					IAmb	IAmb	23 23 56.7	
	comp=Z,3.6nm,0.7s							
V52A	**Sevierville**	**56.13**	**346**	P		**P**	**23 23 56.4**	**+0.4**
V52A					IAmb	IAmb	23 24 04.2	
	comp=Z,2.1nm,0.9s							
U54A	**Nelsons Funny**	**56.41**	**348**	P		**P**	**23 23 57.8**	**-0.2**
U54A					IAmb	IAmb	23 24 01.2	
	comp=Z,4.4nm,0.9s							
DBIC	**Dimbokro**	**68.58**	**75**	P		**P**	**23 25 22.7**	**+3.2**
	comp=Z,0.7nm,0.3s,baz=223,slow=7.0,SNR=8.0							
DBIC	**Dimbokro**	**68.58**	**75**	IAmb		IAmb	23 25 29.3	
	comp=Z,4.8nm,1.1s							
KNB	**Kanab**	**69.07**	**324**			**PcP**	**23 25 44.5**	**-1.1**
QSPA	**South Pole Qui**	**71.20**	**180**	P		**P**	**23 25 37.3**	**+2.5**
	comp=Z,1.2nm,1.0s,baz=324,slow=2.7,SNR=5.7							
QSPA	**South Pole Qui**	**71.20**	**180**	IAmb		IAmb	23 25 41.2	
	comp=Z,0.6nm,0.8s							
YNE	**Yellowstone No**	**73.58**	**331**	P		**P**	**23 25 51.7**	**+2.3**
YKA	**Yellowknife Ar**	**88.63**	**341**	P		**P**	**23 27 09.5**	**+1.3**
	comp=Z,2.2nm,0.7s,baz=135,slow=5.2,SNR=50							
WRA	**Warramunga Arr**	**134.81**	**212**	PKP		**PKiKP**	**23 33 36.4**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=156,slow=1.6,SNR=6.4							
KLR	**Kul'dur**	**145.31**	**335**	PKPbc		**PKiKP**	**23 33 54.4**	**-2.4**
	baz=349,slow=3.8							
SONM	**Songino Array**	**151.02**	**6**	PKPbc		**PKiKP**	**23 34 09.8**	**+1.0**
	comp=Z,1.5nm,0.4s,baz=334,slow=1.1,SNR=6.1							

*KRNET **11** 23:15:32.3±0.1, 42°.56N×79°.69E, h23km, mb3.4*

*SOME **11** 23:15:32.5, 42°.62N×79°.60E, h10km*
*NNC **11** 23:15:32.6±0.7, 42°.61N×79°.62E, h0km, mb3.8, mpv3.6,*
Error ellipse: s-maj=4.5km s-min=2.4km az=137.0
ISC 11 23:15:33.6±1.2,**42°.59N**±0°.05×**79°.66E**±0°.04,**h10**km,**n66,**
σ1§48/111,40C-20D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SHLS	**Shalkode**	**0.58**	**346**	⇑	*eP*	**Pg**	**23 15 44.7**	**-0.2**
	baz=13							
SHLS				⇑	*e*S	**Sb**	**23 15 53.4**	**-1.0**
	baz=13							
SHLS	**Shalkode**	**0.58**	**346**	⇑	*eP*	**Pg**	**23 15 44.7**	**-0.2**
	91nm,0.1s							
SHLS					*e*S	**Sb**	**23 15 53.3**	**-1.0**
	710nm,0.2s							
SHLS	**Shalkode**	**0.58**	**346**	P		**Pg**	**23 15 44.7**	**-0.2**
	91nm,0.1s							
SHLS					S	**Sb**	**23 15 53.3**	**-1.0**
	710nm,0.2s							
PDGK	**Podgornoye**	**0.75**	**351**	P		**Pg**	**23 15 46.9**	**-1.1**
	25nm,0.1s							
PDGK					S	**Sg**	**23 15 57.2**	**-0.6**
	37nm,0.1s							
PDGK	**Podgornoye**	**0.75**	**351**	⇑	P	**Pg**	**23 15 46.8**	**-1.1**
	22nm,0.4s							
PDGK				⇑	S	**Sg**	**23 15 56.9**	**-0.9**
	25nm,0.3s							
PRZ	**Przheval'sk**	**0.93**	**264**	⇑	*iP*	**Pg**	**23 15 50.0**	**-1.6**
	baz=66							
PRZ				⇑	*i*S	**Sg**	**23 16 02.7**	**-1.0**
	baz=66							
KTMS	**Ketmen**	**0.99**	**31**		*eP*	**Pg**	**23 15 51.2**	**-1.5**
	baz=28							
KTMS					*e*S	**Sg**	**23 16 04.5**	**-1.2**
	baz=28							
KTMS	**Ketmen**	**0.99**	**31**		*eP*	**Pg**	**23 15 51.2**	**-1.5**
	56nm,0.1s							
KTMS					*e*S	**Sg**	**23 16 04.5**	**-1.2**
	68nm,0.2s							
KTMS	**Ketmen**	**0.99**	**31**	P		**Pg**	**23 15 51.2**	**-1.5**
	56nm,0.1s							
KTMS					S	**Sg**	**23 16 04.5**	**-1.2**
	68nm,0.2s							
SATY	**Saty**	**1.03**	**297**	*eP*		**Pg**	**23 15 52.1**	**-1.2**
	14nm,0.1s							
SATY					*e*S	**Sg**	**23 16 06.3**	**-0.5**
	175nm,0.1s							
SATY	**Saty**	**1.03**	**297**	P		**Pg**	**23 15 52.2**	**-1.2**
	14nm,0.1s							
SATY					S	**Sg**	**23 16 06.3**	**-0.5**
	175nm,0.1s							
KURS	**Kuram**	**1.41**	**310**	⇑	*eP*	**Pn**	**23 15 59.1**	**-0.3**
	baz=10.0							
KURS				⇑	*e*S	**Sb**	**23 16 17.9**	**-0.2**
	baz=10.0							
KURS	**Kuram**	**1.41**	**310**	⇑	*eP*	**Pn**	**23 15 59.1**	**-0.3**
	3.9nm,0.1s							
KURS					*e*S	**Sb**	**23 16 17.9**	**-0.2**
	57nm,0.4s							
ANVS	**Anan'yevo**	**1.48**	**278**	⇑	*iP*	**Pn**	**23 15 59.9**	**-0.5**
	baz=79							
ANVS				⇑	*i*S	**Sg**	**23 16 20.6**	**-0.5**
	baz=79							
MNBS	**Baschi**	**1.75**	**329**	⇓	*eP*	**Pb**	**23 16 04.7**	**-1.0**
	0.7nm,0.1s							
MNBS					*e*S	**Sb**	**23 16 28.1**	**+0.3**
	2.4nm,0.1s							
KDJ	**Kajisay**	**1.89**	**257**	⇑	*iP*	**Pn**	**23 16 06.3**	**+0.2**
	baz=58							
KDJ				⇑	*i*S	**Sn**	**23 16 30.7**	**+0.6**
	baz=58							
KOTS	**Kotyrbulak**	**1.98**	**290**	⇓	*eP*	**Pb**	**23 16 09.2**	**-0.5**
	27nm,0.1s							
KOTS					*e*S	**Sg**	**23 16 35.7**	**-1.4**
	290nm,0.5s							
KOTS	**Kotyrbulak**	**1.98**	**290**	Pg		**Pb**	**23 16 09.2**	**-0.5**
	27nm,0.1s							
KOTS				Lg		Lg	23 16 35.7	
	290nm,0.5s							
MDOK	**Medeo**	**2.00**	**287**	⇑	*eP*	**Pb**	**23 16 08.9**	**-1.3**
	baz=88							
MDOK				⇑	*e*S	**Sb**	**23 16 34.7**	**-0.4**
	baz=88							
MDOK	**Medeo**	**2.00**	**287**	⇑	*eP*	**Pb**	**23 16 08.8**	**-1.3**
	8.1nm,0.4s							
MDOK					*e*S	**Sb**	**23 16 34.7**	**-0.4**
	93nm,0.5s							
MDOK	**Medeo**	**2.00**	**287**	⇑	Pg	**Pb**	**23 16 08.8**	**-1.3**
	7.3nm,0.4s							
MDOK				⇓	Lg	Lg	23 16 36.0	
	66nm,0.6s							
MDOK	**Medeo**	**2.00**	**287**	Pg		**Pb**	**23 16 08.8**	**-1.3**
	8.1nm,0.4s							
MDOK				Lg		Lg	23 16 34.7	
	93nm,0.5s							
TNSS	**Tian-Shan**	**2.04**	**283**	⇓	*eP*	**Pb**	**23 16 09.6**	**-1.4**
	baz=84							
TNSS				⇓	*e*S	**Sb**	**23 16 36.2**	**-0.4**
	baz=84							
TNSS	**Tian-Shan**	**2.04**	**283**	⇓	*eP*	**Pb**	**23 16 09.6**	**-1.4**
	18nm,0.3s							
TNSS					*e*S	**Sb**	**23 16 36.2**	**-0.4**
	48nm,0.2s							
TNSS	**Tian-Shan**	**2.04**	**283**	Pg		**Pb**	**23 16 09.5**	**-1.4**
	18nm,0.3s							
TNSS				Lg		Lg	23 16 36.2	
	48nm,0.2s							
KNDC	**Almaty**	**2.07**	**288**	⇓	Pg	**Pb**	**23 16 11.2**	**-0.1**
	9.9nm,0.2s							
KNDC				⇓	Lg	Lg	23 16 40.1	
	171nm,0.5s							
ARXS	**Arharly**	**2.10**	**321**	⇑	*eP*	**Pb**	**23 16 10.4**	**-1.4**
	43nm,0.2s							
ARXS					*e*S	**Sb**	**23 16 37.7**	**-0.2**
	109nm,0.3s							
ARXS	**Arharly**	**2.10**	**321**	Pg		**Pb**	**23 16 10.4**	**-1.4**
	55nm,0.4s							
ARXS				Lg		Lg	23 16 37.7	
	109nm,0.3s							
AAA	**Alma-Ata**	**2.11**	**288**		*eP*	**Pb**	**23 16 11.8**	**0.0**
	30nm,0.3s							
AAA					*e*S	**Sg**	**23 16 39.9**	**-1.3**
	163nm,0.5s							
AAA	**Alma-Ata**	**2.11**	**288**	Pg		**Pb**	**23 16 11.8**	**0.0**
	30nm,0.3s							
AAA				Lg		Lg	23 16 39.9	
	163nm,0.5s							
IZV	**Izvestkoviy**	**2.28**	**282**		*eP*	**Pb**	**23 16 13.4**	**-1.5**
	baz=83							
IZV					*e*S	**Sb**	**23 16 42.5**	**-0.8**
	baz=83							
IZV	**Izvestkoviy**	**2.28**	**282**		*eP*	**Pb**	**23 16 13.4**	**-1.5**
	22nm,0.2s							
IZV					*e*S	**Sb**	**23 16 42.5**	**-0.8**
	69nm,0.1s							
IZV	**Izvestkoviy**	**2.28**	**282**	Pg		**Pb**	**23 16 13.4**	**-1.5**
	22nm,0.2s							
IZV				Lg		Lg	23 16 42.5	
	69nm,0.1s							
CHKK	**Chushkaly**	**2.32**	**304**		*eP*	**Pb**	**23 16 14.7**	**-0.8**
	3.2nm,0.1s							
CHKK					*e*S	**Sb**	**23 16 44.7**	**+0.5**
	72nm,0.2s							
CHKK	**Chushkaly**	**2.32**	**304**	Pg		**Pb**	**23 16 14.7**	**-0.8**
	3.2nm,0.1s							
CHKK				Lg		Lg	23 16 44.7	
	72nm,0.2s							
MTBS	**Maitube**	**2.43**	**284**		*eP*	**Pb**	**23 16 16.8**	**-0.6**
	18nm,0.3s							
MTBS					*e*S	**Sb**	**23 16 48.8**	**+1.3**
	68nm,0.3s							
MTBS	**Maitube**	**2.43**	**284**	Pg		**Pb**	**23 16 16.8**	**-0.6**
	18nm,0.3s							
MTBS				Lg		Lg	23 16 48.8	
	68nm,0.3s							
KTBS	**Karatobe**	**2.45**	**298**		*eP*	**Pb**	**23 16 16.2**	**-1.5**
	4.9nm,0.2s							
KTBS					*e*S	**Sb**	**23 16 47.3**	**-0.6**
	92nm,0.3s							
KTBS	**Karatobe**	**2.45**	**298**	Pg		**Pb**	**23 16 16.2**	**-1.5**
	4.9nm,0.2s							
KTBS				Lg		Lg	23 16 47.3	
	92nm,0.3s							
ULHL	**Ulahol**	**2.55**	**263**	⇑	*iP*	**Pn**	**23 16 17.0**	**+1.8**
	baz=64							
ULHL				⇑	*i*S	**Sb**	**23 16 49.9**	**-1.2**
	baz=64							
TDK	**Taldyqorghan**	**2.57**	**340**	⇓	*eP*	**Pb**	**23 16 18.9**	**-0.9**
	41nm,0.1s							
TDK					*e*S	**Sb**	**23 16 52.1**	**+0.6**
	54nm,0.4s							
TDK	**Taldyqorghan**	**2.57**	**340**	Pg		**Pb**	**23 16 18.9**	**-0.9**
	41nm,0.1s							
TDK				Lg		Lg	23 16 52.1	
	80nm,0.5s							
KAPS	**Kapalarasan**	**2.70**	**356**		*eP*	**Pb**	**23 16 21.4**	**-0.6**
	5.4nm,0.2s							
KAPS					*e*S	**Sb**	**23 16 56.2**	**+1.0**
	24nm,0.3s							
KAPS	**Kapalarasan**	**2.70**	**356**	Pg		**Pb**	**23 16 21.4**	**-0.6**
	5.4nm,0.2s							
KAPS				Lg		Lg	23 16 56.2	
	24nm,0.3s							
BOOM	**Boomskoye usch**	**2.75**	**269**	⇑	*iP*	**Pn**	**23 16 19.6**	**+1.8**
	baz=70							
BOOM				⇑	*i*S	**Sb**	**23 16 54.2**	**-2.5**
	baz=70							
KUU	**Kurty**	**2.75**	**299**		*eP*	**Pb**	**23 16 21.9**	**-1.0**
	2.3nm,0.2s							
KUU					*e*S	**Sb**	**23 16 57.3**	**+0.7**
	40nm,0.4s							
KUU	**Kurty**	**2.75**	**299**	Pg		**Pb**	**23 16 21.8**	**-1.0**
	2.3nm,0.2s							
KUU				Lg		Lg	23 16 57.3	
	40nm,0.4s							
KST	**Kastek**	**2.75**	**281**		*eP*	**Pb**	**23 16 21.3**	**-1.7**
	20nm,0.2s							
KST					*e*S	**Sb**	**23 16 56.0**	**-0.8**
	30nm,0.4s							
KST	**Kastek**	**2.75**	**281**	Pg		**Pb**	**23 16 21.3**	**-1.7**
	20nm,0.2s							
KST				Lg		Lg	23 16 56.0	
	30nm,0.4s							
TKM2	**Tokmak 2**	**3.01**	**278**	⇓	*iP*	**Pn**	**23 16 23.3**	**+1.9**
	baz=78							
TKM2				⇓	*i*S	**Sn**	**23 17 00.6**	**+3.0**
	baz=78							
TKM2	**Tokmak 2**	**3.01**	**278**	⇑	Pg	**Pb**	**23 16 24.6**	**-2.7**
	4.9nm,0.4s							
TKM2				⇑	Lg	Lg	23 17 05.8	
	12nm,0.4s							
KRBS	**Karabastau**	**3.12**	**292**		*eP*	**Pb**	**23 16 28.5**	**-0.5**
	3.3nm,0.2s							
KRBS					*e*S	**Sb**	**23 17 08.6**	**+1.4**
	15nm,0.2s							
KRBS	**Karabastau**	**3.12**	**292**	Pg		**Pb**	**23 16 28.5**	**-0.5**
	3.3nm,0.2s							
KRBS				Lg		Lg	23 17 08.6	
	15nm,0.2s							
KZA	**Kyzart**	**3.31**	**263**	⇓	*iP*	**Pn**	**23 16 27.8**	**+2.1**
	baz=63							
KZA				⇓	*i*S	**Sn**	**23 17 08.2**	**+2.9**
	baz=63							
KBK	**Karagaybulak**	**3.48**	**273**	⇑	*iP*	**Pn**	**23 16 29.5**	**+1.7**
	baz=73							
KBK				⇑	*i*S	**Sn**	**23 17 11.9**	**+2.8**
	baz=73							
CHMS	**Chumysh**	**3.63**	**278**	⇑	*iP*	**Pn**	**23 16 31.8**	**+1.9**
	baz=79							
CHMS				⇑	*i*S	**Sn**	**23 17 15.3**	**+2.5**
	baz=79							
AAK	**Ala-Archa**	**3.81**	**272**	⇓	*iP*	**Pn**	**23 16 34.5**	**+2.1**
	baz=73							
AAK				⇓	*i*S	**Sn**	**23 17 19.8**	**+2.4**
	baz=73							
AAK	**Ala-Archa**	**3.81**	**272**	⇑	Pg	**Pb**	**23 16 41.1**	**+0.1**
	1.7nm,0.3s							
AAK				⇓	Lg	Lg	23 17 30.4	
	11nm,0.6s							
UCH	**Uchtor**	**3.83**	**266**	⇑	*iP*	**Pn**	**23 16 35.0**	**+2.1**
	baz=67							
UCH				⇑	*i*S	**Sn**	**23 17 20.5**	**+2.3**
	baz=67							
EKS2	**Erkin-Say**	**4.34**	**273**	⇑	*eP*	**Pn**	**23 16 41.3**	**+1.6**
	baz=73							
EKS2				⇑	*i*S	**Sn**	**23 17 32.6**	**+2.2**
	baz=73							
AML	**Almayashu**	**4.44**	**266**	⇓	*eP*	**Pn**	**23 16 43.7**	**+2.4**
	baz=67							
AML				⇓	*i*S	**Sn**	**23 17 36.0**	**+2.7**
	baz=67							
MAKZ	**Makanchi**	**4.53**	**21**	⇑	Pn	**Pn**	**23 16 43.0**	**+0.9**
	4.2nm,0.9s							
MAKZ				⇑	Sn	**Sn**	**23 17 37.0**	**+2.2**
	1.0nm,0.5s							
MAKZ				⇓	Lg	Lg	23 17 53.2	
	2.8nm,0.5s							
MK31	**Makanchi Array**	**4.60**	**23**	⇓	Pn	**Pn**	**23 16 44.1

mb4.2/39,Error ellipse: s-maj=18.3km s-min=14.6km az=116.0
*IDC **11** 23:18:45.8±2.8,25°26S×179°88W,h514km±31km,mb3.5/9, mb1 3.7/10,mb1mx3.4/38,mbtmp4.4/10,Error ellipse: s-maj=23.4km s-min=16.9km az=2.0*

ISC 11 23:18:41.8±0.6,25°30S±0.07×179°89W±0.08,h464km, n62,σ1§29/61,mb4.1/26,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
RAO	**Raoul Island**	**4.31**	**156**	P		**P**	**23**	**20**	**03.9**	**+3.4**
MSVF	**Nonsavu**	**7.76**	**345**	P		**P**	**23**	**20**	**35.7**	**+0.6**
NIUE	**Niue**	**11.11**	**58**	P		**P**	**23**	**21**	**12.9**	**+1.9**
OUZ	**Omahuta**	**11.38**	**208**	P		**P**	**23**	**21**	**15.7**	**+2.0**
MXZ	**Matakaoa Point**	**12.32**	**187**	P		**P**	**23**	**21**	**24.0**	**+0.1**
DZM	**Mont Dzumac**	**12.93**	**282**	P		**P**	**23**	**21**	**34.3**	**+3.6**
	1.5nm,0.3s,baz=81,slow=17,SNR=8.7									
URZ	**Urewera**	**13.17**	**190**	P		**P**	**23**	**21**	**32.0**	**-1.0**
	2.7nm,0.3s,baz=261,slow=4.3,SNR=11									
URZ				S		**S**	**23**	**23**	**53.8**	**-0.5**
	1.3nm,0.3s,baz=130,slow=24,SNR=9.8									
URZ	**Urewera**	**13.17**	**190**			**S**	**23**	**23**	**55.0**	**+0.8**
PLWZ	**Palliser**	**16.72**	**193**	P		**P**	**23**	**22**	**09.4**	**-1.3**
QRZ	**Quartz Range**	**16.73**	**200**	P		**P**	**23**	**22**	**09.1**	**-1.6**
NNZ	**Nelson**	**16.84**	**198**	P		**P**	**23**	**22**	**10.4**	**-1.4**
TUWZ	**Tuamarina**	**16.89**	**196**	P		**P**	**23**	**22**	**10.5**	**-1.8**
BSWZ	**Blackbirch Sta**	**17.17**	**196**	P		**P**	**23**	**22**	**15.5**	**+0.1**
THZ	**Tophouse**	**17.48**	**198**	P		**P**	**23**	**22**	**17.2**	**-1.3**
THZ				IAmb		IAmb	23	22	17.8	
	comp=Z,7.6nm,0.9s									
KHZ	**Kahutara**	**17.92**	**196**	P		**P**	**23**	**22**	**21.4**	**-1.5**
LHI	**Lord Howe Isla**	**19.51**	**247**	P		**P**	**23**	**22**	**39.1**	**+1.2**
RPZ	**Rata Peaks**	**19.81**	**200**	P		**P**	**23**	**22**	**39.8**	**-0.7**
FOZ	**Fox Glacier**	**20.05**	**202**	P		**P**	**23**	**22**	**41.8**	**-0.8**
FOZ				IAmb		IAmb	23	22	53.5	
	comp=Z,10nm,0.9s									
LBZ	**Lake Benmore**	**20.68**	**200**	P		**P**	**23**	**22**	**45.1**	**-3.3**
LBZ				IAmb		IAmb	23	23	00.7	
	comp=Z,5.0nm,1.2s									
WKZ	**Wanaka**	**21.46**	**202**	P		**P**	**23**	**22**	**54.7**	**-0.7**
MLZ	**Mavora Lakes**	**22.24**	**203**	P		**P**	**23**	**23**	**01.7**	**-0.8**
MLZ				IAmb		IAmb	23	23	12.7	
	comp=Z,11nm,1.0s									
ARMA	**Armidale**	**25.66**	**252**	P		**P**	**23**	**23**	**32.3**	**-1.1**
ARMA				IAmb		IAmb	23	23	51.7	
	comp=Z,5.3nm,0.9s									
EIDS	**Eidsvold**	**26.22**	**264**	P		**P**	**23**	**23**	**39.0**	**+0.8**
EIDS				IAmb		IAmb	23	23	40.5	
	comp=Z,9.5nm,0.8s									
CAN	**Canberra**	**28.55**	**242**	P		**P**	**23**	**23**	**59.1**	**+0.4**
CAN				IAmb		IAmb	23	23	59.9	
	comp=Z,9.3nm,1.0s									
CTA	**Charters Tower**	**31.61**	**272**	P		**P**	**23**	**24**	**26.7**	**+1.3**
	comp=Z,12nm,0.4s,baz=99,slow=10,SNR=25									
CTAO	**Charters Tower**	**31.61**	**272**	P		**P**	**23**	**24**	**26.1**	**+0.7**
TOO	**Toolangi**	**31.80**	**239**	P		**P**	**23**	**24**	**27.3**	**+0.4**
TOO				IAmb		IAmb	23	24	28.9	
	comp=Z,4.3nm,0.7s									
STKA	**Stephens Creek**	**34.32**	**250**	P		**P**	**23**	**24**	**49.0**	**+0.7**
	comp=Z,4.5nm,0.6s,baz=98,slow=12,SNR=10									
STKA	**Stephens Creek**	**34.32**	**250**	P		**P**	**23**	**24**	**48.0**	**-0.3**
COEN	**Coen**	**36.45**	**281**	P		**P**	**23**	**25**	**06.4**	**0.0**
COEN				IAmb		IAmb	23	25	08.4	
	comp=Z,5.8nm,0.8s									
BBOO	**Buckleboo**	**39.01**	**248**	P		**P**	**23**	**25**	**26.0**	**-1.2**
BBOO				IAmb		IAmb	23	25	27.5	
	comp=Z,12nm,1.0s									
AS31	**Alice Springs**	**41.92**	**262**	P		**P**	**23**	**25**	**51.0**	**+0.2**
ASAR	**Alice Springs**	**41.92**	**262**	P		**P**	**23**	**25**	**51.0**	**+0.3**
	comp=Z,2.8nm,0.5s,baz=91,slow=7.2,SNR=30									
ASAR				S		**S**	**23**	**31**	**33.1**	**-1.7**
	comp=Z,0.5nm,0.6s,baz=93,slow=14,SNR=3.2									
WR0	**Warramunga Arr**	**42.24**	**268**	P		**P**	**23**	**25**	**53.0**	**-0.2**
WR0				IAmb		IAmb	23	25	53.8	
	comp=Z,3.9nm,0.6s									
WB2	**Warramunga Arr**	**42.42**	**268**	P		**P**	**23**	**25**	**54.0**	**-0.7**
WB2				IAmb		IAmb	23	25	55.3	
	comp=Z,6.3nm,0.7s									
WB0	**Warramunga Arr**	**42.43**	**268**	P		**P**	**23**	**25**	**54.4**	**-0.4**
WB0				IAmb		IAmb	23	25	55.3	
	comp=Z,8.0nm,0.7s									
WRA	**Warramunga Arr**	**42.43**	**268**	P		**P**	**23**	**25**	**54.8**	**0.0**
	comp=Z,5.6nm,0.6s,baz=100,slow=6.9,SNR=19									
FORT	**Forrest**	**45.93**	**251**	P		**P**	**23**	**26**	**19.9**	**-1.9**
KNRA	**Kununurra**	**48.80**	**271**	P		**P**	**23**	**26**	**43.0**	**-0.7**
FITZ	**Fitzroy Crossi**	**50.84**	**267**	P		**P**	**23**	**26**	**59.1**	**+0.4**
	comp=Z,4.4nm,0.5s,baz=107,slow=7.4,SNR=26									
FITZ	**Fitzroy Crossi**	**50.84**	**267**	P		**P**	**23**	**26**	**58.1**	**-0.6**
FITZ				IAmb		IAmb	23	27	00.0	
	comp=Z,5.1nm,0.6s									
PSA00	**Pilbara Seismi**	**55.02**	**261**	P		**P**	**23**	**27**	**27.8**	**-0.9**
PSAA2	**Pilbara Seismi**	**55.02**	**261**	P		**P**	**23**	**27**	**27.9**	**-0.9**
PSAA2				IAmb		IAmb	23	27	47.6	
	comp=Z,9.6nm,1.1s									
PSAC3	**Pilbara Seismi**	**55.02**	**260**	P		**P**	**23**	**27**	**27.6**	**-1.1**
PSAA1	**Pilbara Seismi**	**55.03**	**261**	P		**P**	**23**	**27**	**27.1**	**-1.7**
PSAB1	**Pilbara Seismi**	**55.05**	**261**	P		**P**	**23**	**27**	**27.8**	**-1.1**
PSAD3	**Pilbara Seismi**	**55.06**	**260**	P		**P**	**23**	**27**	**28.1**	**-1.0**
PSAC1	**Pilbara Seismi**	**55.07**	**261**	P		**P**	**23**	**27**	**28.5**	**-0.6**
PSAC1				IAmb		IAmb	23	27	32.5	
	comp=Z,8.5nm,1.1s									
PSAD1	**Pilbara Seismi**	**55.07**	**261**	P		**P**	**23**	**27**	**28.1**	**-1.0**
PSAD1				IAmb		IAmb	23	27	44.8	
	comp=Z,9.3nm,1.1s									
MORW	**Morawa**	**56.50**	**251**	P		**P**	**23**	**27**	**38.3**	**-0.6**
MORW				IAmb		IAmb	23	27	39.2	
	comp=Z,7.5nm,0.9s									
CASY	**Casey**	**58.91**	**206**	P		**P**	**23**	**27**	**53.2**	**-1.5**
QSPA	**South Pole Qui**	**64.79**	**180**	P		**P**	**23**	**28**	**33.5**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=38,slow=0.9,SNR=12									
MAW	**Mawson**	**76.48**	**201**	P		**P**	**23**	**29**	**42.4**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=90,slow=1.0,SNR=1.7									
MAW	**Mawson**	**76.48**	**201**	IAmb		IAmb	23	29	51.5	
	comp=Z,0.4nm,1.0s									
ADK	**Adak**	**76.89**	**2**	P		**P**	**23**	**29**	**43.7**	**-1.1**
ADK				IAmb		IAmb	23	29	52.4	
	comp=Z,13nm,1.1s									
PINE	**Pine Mountain**	**87.42**	**38**	P		**P**	**23**	**30**	**38.4**	**-0.6**
PINE				IAmb		IAmb	23	30	40.6	
	comp=Z,5.6nm,1.0s									
I07A	**Izee**	**88.41**	**39**	P		**P**	**23**	**30**	**42.5**	**-1.0**
I07A				IAmb		IAmb	23	30	44.3	
	comp=Z,3.1nm,0.9s									
TXAR	**Lajitas Array**	**91.08**	**58**	P		**P**	**23**	**30**	**55.9**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=211,slow=5.6,SNR=7.1									
ILAR	**Eielson Array**	**93.36**	**14**	P		**P**	**23**	**31**	**04.2**	**-1.5**
	comp=Z,0.3nm,0.8s,baz=213,slow=5.8,SNR=4.7									
NB2	**NORSAR Subarra**	**143.47**	**351**	PKP		PKPab	23	37	19.1	-1.2
	comp=Z,0.8nm,0.6s,baz=13,slow=3.6									
NOA	**NORSAR Array B**	**143.47**	**351**	PKP		PKPab	23	37	19.2	-1.1
	comp=Z,0.4nm,0.6s,baz=14,slow=2.4,SNR=6.9									
AKASG	**Malin Array Be**	**146.19**	**326**	PKPbc		**PKPbc**	**23**	**37**	**27.6**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=41,slow=3.8,SNR=5.9									

*ISN **11** 23:33:03.9±0.6,35°27N×46°49E,h14km±23km,ML2.6*
*TEH **11** 23:33:04.4,35°26N×46°50E,h10km,ML2.8*

ISC 11 23:33:05.7±1.1,35°22N±0.05×46°51E±0.05,h10km,n18, σ0§66/20,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
ILIN	**Lien**	**0.48**	**129**	*e*Pg		**Pg**	**23**	**33**	**14.4**	**-0.7**
ILIN				*e*			23	33	15.1	
IDHR	**Dehrash**	**0.53**	**191**	*e*Pg		**Pg**	**23**	**33**	**16.0**	**-0.1**
IDHR				*e*			23	33	26.8	
IVIS	**Veis**	**0.75**	**158**	*e*Pg		**Pg**	**23**	**33**	**19.2**	**-1.0**
IVIS				*e*			23	33	41.7	
IGHG	**Ghaleghazi**	**0.89**	**177**	*e*Pg		**Pg**	**23**	**33**	**22.9**	**0.0**
IGHG				*e*			23	33	40.9	
KER	**Kermanshah**	**0.98**	**148**	*e*Pg		**Pg**	**23**	**33**	**23.8**	**-0.8**
KER				*e*			23	33	49.9	
KCHF	**Cheshme Sefid,**	**1.04**	**155**	*e*Pg		**Pg**	**23**	**33**	**25.3**	**-0.5**
KCHF				*e*			23	33	45.3	
IKOM	**Komasi**	**1.33**	**141**	*e*Pn		**Pn**	**23**	**33**	**30.5**	**0.0**
IKOM				*e*			23	33	57.4	
IBZA	**Bozab**	**1.34**	**124**	*e*Pn		**Pn**	**23**	**33**	**30.2**	**-0.6**
IBZA				*e*			23	33	58.2	
IALM	**Almabolaq**	**1.41**	**104**	*e*Pn		**Pn**	**23**	**33**	**31.3**	**-0.4**
MAHB	**Mahabad**	**1.67**	**337**	*e*Pn		**Pn**	**23**	**33**	**34.3**	**-0.9**
MAHB				*e*			23	34	03.8	
IKRK	**Kirkuk**	**1.78**	**276**	*e*Pg		**Pn**	**23**	**33**	**36.0**	**-0.6**
IKRK				*e*Sg		**Sn**	**23**	**33**	**59.2**	**-0.1**
IKRK				AML		AML	23	34	06.7	
	comp=E,55nm,0.6s									
IKRK				AML		AML	23	34	07.9	
	comp=N,100nm,0.4s									
IKFM	**Kafar-mosalman**	**2.02**	**146**	*e*		**Pg**	**23**	**33**	**46.0**	**+1.5**
IBDR	**Badra**	**2.16**	**193**	*e*Pn		**Pn**	**23**	**33**	**42.0**	**+0.2**
IBDR				*e*Sn		**Sn**	**23**	**34**	**09.2**	**+0.6**
IAZR	**Azarshahr**	**2.49**	**350**	*e*Pn		**Pn**	**23**	**33**	**46.9**	**+0.4**
IAZR				*e*			23	34	32.7	
BHD	**Baghdad**	**2.63**	**223**	*e*Pn		**Pn**	**23**	**33**	**48.0**	**-0.1**
BHD				*e*Sn		**Sn**	**23**	**34**	**10.5**	**+0.4**
ISRB	**Sarab**	**2.76**	**19**	*e*Pn		**Pn**	**23**	**33**	**51.0**	**+0.8**
ISRB				*e*			23	34	39.6	
IHSH	**Hashtrud**	**3.14**	**11**	*e*Pn		Pn	23	33	41.6	-14
IHSH				*e*			23	34	22.1	
ISHB	**Shabestar**	**3.14**	**347**	*e*Pn		**Pn**	**23**	**33**	**55.5**	**+0.1**
ISHB				*e*			23	34	46.3	

*SCB **11** 23:54:25.2±1.6,18°71S×67°10W,h308km±14km,ML4.4/3, Error ellipse: s-maj=8.8km s-min=5.4km az=1.0*
*VAO **11** 23:54:26.7±0.7,18°66S×67°02W,h252km,mb4.4*
*IDC **11** 23:54:27.4±1.7,18°69S×66°90W,h255km±16km,mb3.8/8, mb1 3.9/14,mb1mx3.7/35,mbtmp4.4/14,Error ellipse: s-maj=15.0km s-min=13.0km az=59.0*
*NEIC **11** 23:54:28.1±1.5,18°68S±0.07×67°18W±0.10,h276km±7km, mb4.4/109,Error ellipse: s-maj=13.6km s-min=9.9km az=88.0*

ISC 11 23:54:26.9±0.3,18°72S±0.04×67°06W±0.05,h266km, n192,σ1§22/206,mb4.4/52,Central Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
BBOJ	**La Paz, Jacaqu**	**2.04**	**328**	P		**Pn**	**23**	**55**	**13.6**	**+1.8**
BBOE	**La Paz, Chanca**	**2.09**	**335**	P		**Pn**	**23**	**55**	**13.9**	**+1.7**
GO01	**Chusmiza**	**2.22**	**245**	Pn		**Pn**	**23**	**55**	**14.7**	**+1.5**
PB16	**IPOC Station P**	**2.35**	**279**	Pn		**Pn**	**23**	**55**	**16.0**	**+1.5**
PB08	**IPOC Station P**	**2.42**	**234**	P		**Pn**	**23**	**55**	**16.2**	**+1.2**
PB08				S		**S**	**23**	**55**	**54.0**	**+0.9**
PB08	**IPOC Station P**	**2.42**	**234**	Pn		**Pn**	**23**	**55**	**16.6**	**+1.6**
MNMC	**Minye Minye**	**2.43**	**260**	P		**Pn**	**23**	**55**	**16.0**	**+1.1**
MNMC				S		**S**	**23**	**55**	**52.4**	**-0.6**
MNMC				AML		AML	23	55	55.8	
	570nm,0.6s									
MNMC	**Minye Minye**	**2.43**	**260**	Pn		**Pn**	**23**	**55**	**16.5**	**+1.6**
BBOD	**La Paz, Gloria**	**2.54**	**325**	P		**Pn**	**23**	**55**	**17.8**	**+1.5**
LPAZ	**La Paz**	**2.63**	**337**	P		**Pn**	**23**	**55**	**18.1**	**+0.8**
LPAZ	**La Paz**	**2.63**	**337**			**Pn**	**23**	**55**	**18.1**	**+0.8**
LPAZ				S		**S**	**23**	**55**	**55.2**	**-2.0**
PB11	**IPOC Station P**	**2.66**	**247**	P		**Pn**	**23**	**55**	**17.8**	**+0.8**
PB11	**IPOC Station P**	**2.66**	**247**	Pn		**Pn**	**23**	**55**	**17.6**	**+0.6**
BBOB	**La Paz, Bander**	**2.76**	**338**	P		**Pn**	**23**	**55**	**19.2**	**+0.6**
MOCB	**Mochara**	**2.85**	**152**	P		**Pn**	**23**	**55**	**20.7**	**+1.4**
BS09	**Huarina**	**2.92**	**329**	P		**Pn**	**23**	**55**	**21.5**	**+1.3**
PSGC	**Pisagua**	**3.02**	**253**	P		**Pn**	**23**	**55**	**20.7**	**0.0**
PSGC				S		**S**	**23**	**56**	**01.6**	**-1.8**
PSGC				AML		AML	23	56	03.5	
	429nm,0.3s									
PSGCX	**Pisagua**	**3.02**	**253**	Pn		**Pn**	**23**	**55**	**21.1**	**+0.5**
PB12	**IPOC Station P**	**3.10**	**271**	Pn		**Pn**	**23**	**55**	**21.6**	**+0.1**
AP01	**Chacalluta**	**3.13**	**276**	Pn		**Pn**	**23**	**55**	**22.2**	**+0.5**
PB01	**IPOC Station P**	**3.25**	**224**	P		**Pn**	**23**	**55**	**23.6**	**+0.5**
PB01				S		**S**	**23**	**56**	**06.1**	**-1.7**
PB01				AML		AML	23	56	07.3	
PB01	**IPOC Station P**	**3.25**	**224**	Pn		**Pn**	**23**	**55**	**24.6**	**+1.5**
TA01	**Diego Aracena**	**3.46**	**238**	Pn		**Pn**	**23**	**55**	**26.3**	**+0.9**
TA01				S		**S**	**23**	**56**	**09.2**	**-2.7**
PATCX	**Punta Patache**	**3.58**	**234**	Pn		**Pn**	**23**	**55**	**27.9**	**+1.1**
PB09	**IPOC Station P**	**3.68**	**213**	Pn		**Pn**	**23**	**55**	**30.8**	**+2.9**
PB09				S		**S**	**23**	**56**	**17.6**	**+1.1**
PB02	**IPOC Station P**	**3.71**	**225**	P		**Pn**	**23**	**55**	**29.9**	**+1.7**
PB02				S		**S**	**23**	**56**	**15.4**	**-1.7**
PB02				AML		AML	23	56	16.1	
	339nm,0.1s									
YJA	**Yavi**	**3.73**	**157**	P		**Pn**	**23**	**55**	**30.1**	**+1.3**
PB07	**IPOC Station P**	**3.99**	**221**	Pn		**Pn**	**23**	**55**	**32.4**	**+0.9**
PB07				S		**S**	**23**	**56**	**21.1**	**-1.9**
LVC	**Limon Verde**	**4.24**	**204**	*e*P		**Pn**	**23**	**55**	**35.2**	**+0.7**
LVC				*e*S		**S**	**23**	**56**	**28.3**	**-0.1**
PB06	**IPOC Station P**	**4.61**	**210**	P		**Pn**	**23**	**55**	**39.6**	**+1.0**
PB06	**IPOC Station P**	**4.61**	**210**	Pn		**Pn**	**23**	**55**	**40.0**	**+1.4**
PB04	**IPOC Station P**	**4.61**	**218**	P		**Pn**	**23**	**55**	**39.5**	**+0.8**
PB04	**IPOC Station P**	**4.61**	**218**	Pn		**Pn**	**23**	**55**	**39.5**	**+0.8**
PB15	**IPOC Station P**	**5.00**	**206**	Pn		**Pn**	**23**	**55**	**44.6**	**+1.3**
PB15				S		**S**	**23**	**56**	**44.1**	**-0.4**
PB10	**IPOC Station P**	**5.77**	**214**			**Pn**	**23**	**55**	**52.3**	**-0.3**
SIV	**San Ignacio**	**6.33**	**66**	P		**Pn**	**23**	**55**	**58.0**	**-1.6**
	5.7nm,0.3s,baz=253,slow=13,SNR=192									
SIV				S		**S**	**23**	**57**	**08.1**	**-5.9**
	0.7nm,0.3s,baz=267,slow=14,SNR=11									
SIV	**San Ignacio**	**6.33**	**66**	P		**Pn**	**23**	**55**	**58.9**	**-0.7**
GO02	**Mina Guanaco**	**6.82**	**200**			**Pn**	**23**	**56**	**06.0**	**+0.2**
PTLB	**Pontes e Lacer**	**8.25**	**68**	*e*P		**Pn**	**23**	**56**	**22.0**	**-1.4**
PTLB				*e*S		**S**	**23**	**57**	**57.1**	**-0.6**
VILB	**Vilhena**	**8.75**	**50**	*e*P		**Pn**	**23**	**56**	**28.7**	**-1.1**
AQDB	**Aquidauana**	**10.85**	**101**	*e*P		**Pn**	**23**	**56**	**56.0**	**+0.1**
NNA	**Nana**	**11.56**	**304**	P		**Pn**	**23**	**57**	**06.8**	**+2.0**
	6.3nm,0.3s,baz=131,slow=10.0,SNR=13									
NNA				S		**S**	**23**	**59**	**09.3**	**-4.8**
	0.9nm,0.3s,baz=230,slow=18,SNR=4.3									
NNA	**Nana**	**11.56**	**304**	P		**Pn**	**23**	**57**	**06.9**	**+2.0**
NNA	**Nana**	**11.56**	**304**	P		**Pn**	**23**	**57**	**05.7**	**+0.8**
CPUP	**Villa Florida**	**11.75**	**132**	P		**Pn**	**23**	**57**	**07.1**	**+0.1**
	0.1nm,0.3s,baz=269,slow=11,SNR=3.7									
GO04	**Tololo Observa**	**11.89**	**196**	P		**Pn**	**23**	**57**	**09.4**	**+0.4**
CO03	**El Pedregal**	**12.50**	**195**	P		**P**	**23**	**57**	**18.3**	**+0.1**
CFA	**Coronel Fontan**	**12.87**	**185**	P		**P**	**23**	**57**	**21.9**	**-0.3**
	3.4nm,0.3s,baz=359,slow=11,SNR=66									
CFA				S		**S**	**23**	**59**	**38.2**	**-5.6**
	1.0nm,0.3s,baz=280,slow=18,SNR=3.2									
CLDB	**Colider**	**13.39**	**56**	*e*P		**Pn**	**23**	**57**	**26.5**	**-0.9**
ARAG	**Araguaiana, MT**	**14.88**	**81**	*e*P		**Pn**	**23**	**57**	**44.7**	**-0.5**
MT02	**Curacav**	**14.93**	**193**	P		**Pn**	**23**	**57**	**47.5**	**+1.9**
MT05	**Renca**	**14.97**	**192**	P		**Pn**	**23**	**57**	**47.5**	**+1.3**
PCMB	**Pacaembu**	**15.11**	**104**	*e*P		**Pn**	**23**	**57**	**47.7**	**-0.2**
PTGB	**Pitanga**	**15.15**	**116**	*e*P		**Pn**	**23**	**57**	**48.8**	**+0.4**
MT01	**Popeta**	**15.54**	**193**	P		**Pn**	**23**	**57**	**53.4**	**+0.6**
ITAB	**Concordia**	**16.14**	**124**	*e*P		**Pn**	**23**	**57**	**59.2**	**-0.8**
GO05	**Huala**	**16.79**	**194**	P		**Pn**	**23**	**58**	**08.3**	**+0.8**
GO05				IAmb		IAmb	23	59	04.4	
	comp=Z,46nm,1.6s									
CPSB	**Cacapava Do Su**	**16.98**	**136**	*e*P		**Pn**	**23**	**58**	**08.5**	**-1.3**
PLTB	**Pedras Altas**	**17.78**	**140**	*e*P		**P**	**23**	**58**	**16.2**	**+0.1**
IPMB	**Ipameri, GO**	**17.91**	**91**	*e*P		**P**	**23**	**58**	**18.0**	**+0.2**
CNLB	**Canela**	**18.16**	**129**	*e*P		**P**	**23**	**58**	**19.9**	**-0.4**
BI02	**San Fabin de**	**18.25**	**191**	P		**Pn**	**23**	**58**	**24.2**	**-0.4**
BI02				IAmb		IAmb	23	58	27.9	
	comp=Z,12nm,0.6s									
BDFB	**Brasilia**	**18.46**	**83**	P		**P**	**23**	**58**	**23.6**	**-0.1**
	comp=Z,2.1nm,0.3s,baz=267,slow=10,SNR=18									
BDFB	**Brasilia**	**18.46**	**83**	P		**Pn**	**23**	**58**	**27.1**	**-0.2**
BDFB				IAmb		IAmb	23	58	30.4	
	comp=Z,11nm,0.8s									
RCLB	**Rio Claro- Sao**	**18.65**	**105**	*e*P		**P**	**23**	**58**	**26.2**	**+0.5**
PTGA	**Pitinga**	**19.19**	**22**	P		**P**	**23**	**58**	**31.5**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=196,slow=15,SNR=8.5									
PTGA	**Pitinga**	**19.19**	**22**	P		**P**	**23**	**58**	**31.8**	**+0.4**
PTGA				IAmb		IAmb	23	58	55.6	
	comp=Z,24nm,1.9s									
LC01	**Cunco**	**20.53**	**191**	P		**P**	**23**	**58**	**46.2**	**+0.8**
LC01				IAmb		IAmb	23	58	56.1	
	comp=Z,21nm,1.6s									
BSCB	**Bom Sucesso**	**21.09**	**100**	*e*P		**P**	**23**	**58**	**50.8**	**-0.5**
JANB	**Januaria**	**22.07**	**84**	*e*P		**P**	**23**	**59**	**00.5**	**0.0**
PLCA	**Paso Flores**	**22.14**	**187**	P		**P**	**23**	**59**	**02.6**	**+1.7**
	comp=Z,5.4nm,0.7s,baz=2,slow=12,SNR=15									
PLCA	**Paso Flores**	**22.14**	**187**	P		**P**	**23**	**59**	**02.0**	**+1.2**
PLCA	**Paso Flores**	**22.14**	**187**	*e*P		**P**	**23**	**59**	**02.8**	**+1.9**
TUMC	**Tumaco**	**23.42**	**329**	P		**P**	**23**	**59**	**12.9**	**+0.2**
LL01	**San Ignacio de**	**24.02**	**190**	P		**P**	**23**	**59**	**17.6**	**-0.1**
ROSC	**El Rosal**	**24.48**	**342**	P		**P**	**23**	**59**	**22.8**	**+0.1**
SDV	**Santo Domingo**	**27.66**	**352**	P		**P**	**23**	**59**	**52.0**	**+1.1**
MLPR	**Magueyes Islan**	**36.46**	**0**	P		**P**	**00**	**01**	**06.1**	**-0.8**
CRPR	**Cabo Rojo, PR**	**36.50**	**360**	P		**P**	**00**	**01**	**05.2**	**-2.1**
OBIP	**Obispado Ponce**	**36.54**	**1**	P		**P**	**00**	**01**	**08.8**	**+1.2**
MTP	**Monte Pirata**	**36.62**	**2**	P		**P**	**00**	**01**	**08.3**	**0.0**
GCPR	**Guaynabo City**	**36.81**	**2**	P		**P**	**00**	**01**	**08.2**	**-1.7**
CRIN	**San Cristobal**	**36.92**	**326**	P		**P**	**00**	**01**	**11.0**	**0.0**
BANI	**BANI**	**37.03**	**355**			**PcP**	**00**	**03**	**28.1**	**+1.5**
SDD	**Santo Domingo**	**37.05**	**356**	P		**P**	**00**	**01**	**11.6**	**-0.3**
APG	**El Apazote**	**40.67**	**324**	P		**P**	**00**	**01**	**44.5**	**+2.3**
	comp=Z,15nm,0.7s,baz=114,slow=12,SNR=12									

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
BBSR	**BB Station**	**50.85**	**3**	P		**P**	**00**	**03**	**00.3**	**-0.6**
BBSR				IAmb		IAmb	00	04	38.7	
	comp=Z,51nm,1.8s									
Y60A	**Bolivia**	**53.50**	**348**	P		**P**	**00**	**03**	**20.0**	**-0.2**
GOGA	**Godfrey**	**54.16**	**343**	P		**P**	**00**	**03**	**24.3**	**-0.7**
BIRD	**Birdtown, Kers**	**54.58**	**346**	P		**P**	**00**	**03**	**28.7**	**+0.7**
BIRD				IAmb		IAmb	00	03	29.4	
	comp=Z,11nm,0.9s									
HODGE	**Hodges**	**54.61**	**345**	P		**P**	**00**	**03**	**28.4**	**+0.2**
Z50A	**Ashland**	**54.73**	**341**	P		**P**	**00**	**03**	**28.3**	**-0.9**
Z50A				IAmb		IAmb	00	03	35.3	
	comp=Z,22nm,1.8s									
W57A	**Gilead**	**54.97**	**347**	P		**P**	**00**	**03**	**31.4**	**+0.6**
U61A	**Possum Corner**	**55.47**	**351**	P		**P**	**00**	**03**	**34.4**	**+0.1**
V55A	**Taylorsville**	**55.91**	**346**	P		**P**	**00**	**03**	**37.3**	**-0.1**
V55A				IAmb		IAmb	00	03	39.3	
	comp=Z,12nm,0.9s									
V53A	**Saluda**	**56.12**	**345**	P		**P**	**00**	**03**	**38.7**	**-0.3**
V53A				IAmb		IAmb	00	03	40.1	
	comp=Z,18nm,1.7s									
T59A	**Double "B"

	comp=Z,4.2nm,0.8s						
FCC	**Fort Churchill**	**80.35**	**346**	P	**P**	**00 06 07.8**	**-0.4**
FCC				IAmb	IAmb	00 06 10.3	
	comp=Z,6.8nm,1.1s						
D08A	**Wollman Farm,**	**80.36**	**327**	P	**P**	**00 06 08.3**	**-0.3**
C09A	**Chrisman Ranch**	**80.52**	**328**	P	**P**	**00 06 10.1**	**+0.7**
C09A				IAmb	IAmb	00 06 12.8	
	comp=Z,7.8nm,0.8s						
B08A	**Colville Reser**	**81.43**	**328**	P	**P**	**00 06 13.9**	**-0.3**
B08A				IAmb	IAmb	00 06 16.9	
	comp=Z,9.1nm,1.6s						
F04A	**Amboy**	**81.52**	**325**	P	**P**	**00 06 14.3**	**-0.4**
LON	**Longmire**	**81.69**	**325**	P	**P**	**00 06 14.8**	**-0.9**
D05A	**Enumclaw**	**82.06**	**326**	P	**P**	**00 06 16.8**	**-0.7**
D05A				IAmb	IAmb	00 06 21.1	
	comp=Z,12nm,0.9s						
PAB	**San Pablo**	**82.32**	**44**	P	**P**	**00 06 20.3**	**+1.1**
E03A	**Lebam**	**82.52**	**325**	P	**P**	**00 06 20.7**	**+0.8**
ESDC	**Sonseca Array**	**82.64**	**44**	P	**P**	**00 06 22.0**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=250,slow=4.8,SNR=9.3						
YKA	**Yellowknife Ar**	**89.17**	**340**	P	**P**	**00 06 53.4**	**+1.5**
	comp=Z,2.6nm,0.7s,baz=130,slow=5.0,SNR=57						
SEY	**Seymchan**	**128.21**	**338**	PKP	**PKiKP**	**00 13 03.4**	**+1.7**
	comp=Z,2.7nm,0.8s,baz=98,slow=0.9,SNR=5.6						
ASAR	**Alice Springs**	**133.16**	**207**	PKP	**PKiKP**	**00 13 13.4**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=137,slow=2.0,SNR=16						
WRA	**Warramunga Arr**	**136.21**	**210**	PKhKP	PKPpre	00 13 07.0	
	comp=Z,0.4nm,0.5s,baz=146,slow=3.2,SNR=4.6						
WRA				PKP	**PKiKP**	**00 13 19.6**	**+0.4**
	comp=Z,1.8nm,0.5s,baz=157,slow=1.7,SNR=18						
KURBB	**Kurchatov Arra**	**138.08**	**33**	PKP	**PKiKP**	**00 13 21.7**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=308,slow=3.1,SNR=4.5						
ZALV	**Zalesovo Beam**	**138.72**	**25**	PKP	**PKPdf**	**00 13 22.1**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=291,slow=3.5,SNR=5.9						
MKAR	**Makanchi Array**	**142.38**	**35**	PKP	**PKPdf**	**00 13 27.1**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=337,slow=0.8,SNR=3.0						
ASAJ	**Asahikawa**	**144.54**	**322**	PKP	**PKPdf**	**00 13 32.6**	**+0.9**
	comp=Z,6.6nm,0.6s,baz=297,slow=4.8,SNR=5.8						
KLR	**Kul'dur**	**146.00**	**338**	PKPbc	**PKPab**	**00 13 36.5**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=144,slow=2.8,SNR=6.4						
USRK	**Ussuriysk Ar.**	**150.00**	**332**	PKPbc	**PKiKP**	**00 13 47.6**	**+0.9**
	comp=Z,4.3nm,0.7s,baz=274,slow=3.3,SNR=9.1						
SONM	**Songino Array**	**150.48**	**9**	PKPbc	**PKiKP**	**00 13 48.9**	**+1.1**
	comp=Z,3.0nm,0.7s,baz=282,slow=1.1,SNR=18						
MJAR	**Matsushiro Ar**	**151.56**	**314**	PKPbc	**PKiKP**	**00 13 51.9**	**+1.7**
	comp=Z,1.4nm,0.4s,baz=141,slow=1.6,SNR=2.5						
LZH	**Lanzhou**	**160.93**	**23**	*e*PKP	**PKPdf**	**00 13 50.7**	**-5.1**
LZH				pPKP	pPKPdf	00 15 07.6	+2.6
LZH				sPKP		00 15 34.0	
CD2	**Chengdu**	**165.29**	**33**	PKP	**PKPdf**	**00 13 58.6**	**-1.3**

TUL ***12*** *00:13:03.6±2.9, 36.31N±0.04°×96.67W±0.05, h5km±2km, ML3.0, Error ellipse: s-maj=0.0km s-min=0.0km az=214.0*
NEIC ***12*** *00:13:04.7±2.6, 36.27N±0.03°×96.80W±0.05, h5km±2km, Error ellipse: s-maj=7.0km s-min=2.2km az=118.0*
ANF ***12*** *00:13:05.2±0.6, 36.19N×96.67W, h1km±3km, ML3.8/8, Error ellipse: s-maj=4.4km s-min=3.0km az=19.0*

ISC 12 00:13:04.4±0.8, 36.30N±0.03°×96.76W±0.03, h10km, n37, σ1959/40, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	**0.64**	**18**	Pg	**Pg**	**00 13 15.3**	**-1.6**
T35A				Sg	**Sg**	**00 13 24.1**	**-1.3**
ADOK	**Arcadia Dam**	**0.82**	**218**	Pg	**Pg**	**00 13 19.4**	**-0.8**
TUL1	**Leonard**	**0.87**	**116**	P	**Pg**	**00 13 19.6**	**-1.6**
	baz=294						
TUL1				S	**Sg**	**00 13 30.4**	**-2.1**
	baz=294						
TUL1	**Leonard**	**0.87**	**116**	Pg	**Pg**	**00 13 19.2**	**-2.0**
OKCSW	**OKLAHOMA CITY**	**1.05**	**212**		**Pg**	**00 13 23.9**	**-0.8**
U32A	**Winter Ranch,**	**1.81**	**273**	Pn	**Pn**	**00 13 36.1**	**+0.4**
U38A	**Gravette**	**1.92**	**85**		**Pn**	**00 13 37.2**	**+0.1**
X37A	**Clayton**	**2.05**	**146**		**Pn**	**00 13 39.3**	**+0.4**
WMOK	**Wichita Mounta**	**2.27**	**227**	P	**Pn**	**00 13 43.3**	**+1.2**
	baz=46						
WMOK	**Wichita Mounta**	**2.27**	**227**		**Pn**	**00 13 41.4**	**-0.7**
HHAR	**Hobbs**	**2.27**	**90**		**Pn**	**00 13 42.6**	**+0.5**
R32A	**Long Quarter,**	**2.63**	**324**		**Pn**	**00 13 46.9**	**-0.1**
W39A	**Magazine**	**2.66**	**114**	P	**Pn**	**00 13 48.2**	**+0.9**
	baz=294						
KSU1	**Kansas State U**	**2.80**	**2**	S	**Sb**	**00 14 29.8**	**+0.9**
	baz=183						
KSU1	**Kansas State U**	**2.80**	**2**	Pn	**Pn**	**00 13 50.6**	**+1.3**
Z35A	**Perchaven, San**	**2.99**	**188**	Pn	**Pn**	**00 13 51.2**	**-0.7**
MIAR	**Mount Ida**	**3.13**	**123**	P	**Pn**	**00 13 54.0**	**+0.2**
	baz=304						
MIAR				S	**Sn**	**00 14 32.0**	**+0.7**
	baz=304						
MIAR	**Mount Ida**	**3.13**	**123**		**Pn**	**00 13 54.5**	**+0.6**
U40A	**Yellville**	**3.15**	**88**	S	**Sn**	**00 14 32.8**	**+1.0**
	baz=270						
CBKS	**Cedar Bluff**	**3.45**	**318**		**Pb**	**00 14 07.9**	**+2.2**
X40A	**Basin Creek Fa**	**3.68**	**118**	P	**Pn**	**00 14 02.1**	**+0.7**
	baz=300						
FCAR	**Ozark Folk Cen**	**3.77**	**95**		**Pn**	**00 14 02.8**	**+0.1**
W41B	**Gary Mavity, V**	**3.83**	**106**	P	**Pn**	**00 14 03.7**	**+0.2**
	baz=288						
W41B				S	**Sn**	**00 14 49.0**	**+0.4**
	baz=288						
UALR	**University of**	**3.91**	**112**		**Pn**	**00 14 06.0**	**+1.5**
WLAR	**White Oak Lake**	**3.97**	**130**		**Pn**	**00 14 06.0**	**+0.7**
R40A	**Maddies Statio**	**4.09**	**60**		**Pn**	**00 14 07.1**	**+0.1**
P38A	**Dawn**	**4.18**	**37**		**Pb**	**00 14 21.3**	**+3.2**
237A	**Washetta, Mont**	**4.36**	**169**	Pg	**Pg**	**00 14 26.6**	**-1.4**
ABTX	**Abilene, Hawle**	**4.38**	**214**	Pg	**Pb**	**00 14 21.9**	**+0.4**
CCM	**Cathedral Cave**	**4.74**	**67**		**Pb**	**00 14 29.7**	**+2.1**
P40A	**Paris**	**4.92**	**48**		**Pb**	**00 14 31.3**	**+0.6**
N38A	**Joes South For**	**5.26**	**31**		**Pb**	**00 14 40.7**	**+4.1**
KSCO	**Kaye Shedlock'**	**5.39**	**302**		**Pg**	**00 14 45.6**	**-2.0**
OGNE	**Ogallala**	**6.21**	**320**		**Pg**	**00 15 00.9**	**-2.5**
SCIA	**State Center**	**6.24**	**25**	Pg	**Pg**	**00 15 00.0**	**-3.9**
JCT	**Junction City**	**6.34**	**205**		Pg	00 15 01.1	-4.7
TCRU	**Three Creeks R**	**12.68**	**285**		**Pn**	**00 16 04.2**	**-0.9**

NEIC ***12*** *00:27:41.6±1.8, 32.1S±0.1×179.9E±0.2, h340km±7km, mb4.5/4, Error ellipse: s-maj=25.9km s-min=13.4km az=122.0*
IDC ***12*** *00:27:42.3±0.9, 32.14S×179.72E, h337km±10km, mb3.8/4, mb1 4.0/6, mb1mx3.6/22, mbtmp4.6/6, Error ellipse: s-maj=18.6km s-min=12.5km az=118.0*
WEL ***12*** *00:27:47.6±0.5, 32.2S±8.1°×18.0E±2.0, h245km±11km, M4.6/16, mB4.7/8, ML5.0/13, MLv5.2/16, Mw(mB)4.0/8*

ISC 12 00:27:41.9±0.7, 32.22S±0.07°×180.0E±0.1, h350km, n53, σ2521/65, mb4.1/6, 2C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.46**	**32**	P	**Pn**	**00 28 45.8**	**+0.2**
GLKZ				S	**S**	**00 29 32.2**	**-4.7**
RAO	**Raoul Island**	**3.47**	**32**	P	**Pn**	**00 28 45.3**	**-0.4**
	38nm,0.3s,baz=8.8,slow=21,SNR=1.3						
RAO				S	**S**	**00 29 37.1**	**+0.1**
	139nm,0.3s,baz=38,slow=21,SNR=3.5						
RAO	**Raoul Island**	**3.47**	**32**		**Pn**	**00 28 45.1**	**-0.6**
RAO					**S**	**00 29 34.7**	**-2.3**
RIZ	**Raoul Island**	**3.47**	**32**	P	**Pn**	**00 28 46.8**	**+1.1**
RIZ				S	**S**	**00 29 34.7**	**-2.3**
MXZ	**Matakaoa Point**	**5.50**	**194**	P	**Pn**	**00 29 07.1**	**+0.2**
MXZ				S	**S**	**00 30 12.5**	**-3.3**
MXZ	**Matakaoa Point**	**5.50**	**194**		**Pn**	**00 29 08.2**	**+1.3**
WMGZ	**Waiomatatini S**	**5.73**	**193**	P	**Pn**	**00 29 09.6**	**+0.1**
WMGZ				S	**S**	**00 30 20.1**	**-0.4**
HAZ	**Te Kaha**	**5.81**	**198**	P	**Pn**	**00 29 11.3**	**+0.9**
HAZ				S	**S**	**00 30 19.7**	**-2.4**
PKGZ	**Pakihiroa**	**5.87**	**195**	P	**Pn**	**00 29 11.0**	**-0.1**
PKGZ				S	**S**	**00 30 20.9**	**-2.5**
PUZ	**Puketiti**	**6.00**	**193**	P	**Pn**	**00 29 12.4**	**-0.2**
PUZ				S	**S**	**00 30 23.6**	**-2.7**
RUGZ	**Raukumara Rang**	**6.03**	**198**	S	**S**	**00 30 23.8**	**-3.2**
OUZ	**Omahuta**	**6.11**	**239**	Pn	**Pn**	**00 29 14.5**	**+0.7**
WHRZ	**Whale Island**	**6.14**	**203**	P	**Pn**	**00 29 18.9**	**+4.7**
MARZ	**Manawahe**	**6.36**	**204**	P	**Pn**	**00 29 20.6**	**+3.9**
CNGZ	**Carnagh Statio**	**6.41**	**193**	P	**Pn**	**00 29 18.8**	**+1.5**
MWZ	**Matawai**	**6.42**	**198**	P	**Pn**	**00 29 20.0**	**+2.6**
TKGZ	**Te Karaka**	**6.44**	**195**	P	**Pn**	**00 29 19.7**	**+2.0**
URZ	**Urewera**	**6.46**	**201**	P	**Pn**	**00 29 19.7**	**+1.8**
	6.7nm,0.3s,baz=274,slow=5.0,SNR=52						
URZ				S	**S**	**00 30 32.1**	**-3.8**
	11nm,0.3s,baz=46,slow=23,SNR=14						
URZ	**Urewera**	**6.46**	**201**	P	**Pn**	**00 29 18.9**	**+0.9**
URZ				S	**S**	**00 30 31.5**	**-4.4**
URZ	**Urewera**	**6.46**	**201**		**Pn**	**00 29 20.1**	**+2.2**
RAGZ	**Rawiri**	**6.60**	**198**	P	**Pn**	**00 29 22.7**	**+3.1**
RIGZ	**Rimuhau**	**6.72**	**195**	P	**Pn**	**00 29 23.1**	**+2.2**
RIGZ				S	**S**	**00 30 39.4**	**-2.0**
MUGZ	**Murupara**	**6.77**	**202**	P	**Pn**	**00 29 22.5**	**+1.0**
MUGZ				S	**S**	**00 30 38.8**	**-3.6**
RTZ	**Ruatahuna**	**6.83**	**200**	P	**Pn**	**00 29 23.8**	**+1.5**
HRRZ	**Handcock Road**	**6.86**	**205**	P	**Pn**	**00 29 26.1**	**+3.6**
GRRZ	**Galatos Road**	**6.88**	**206**	P	**Pn**	**00 29 26.9**	**+4.0**
PRGZ	**Paritu Road**	**6.90**	**194**	P	**Pn**	**00 29 26.4**	**+3.4**
KNZ	**Kokohu**	**7.04**	**195**	P	**Pn**	**00 29 26.1**	**+1.5**
RAHZ	**Arahi**	**7.08**	**199**	P	**Pn**	**00 29 27.7**	**+2.5**
MTHZ	**Maungataniwha**	**7.09**	**200**	P	**Pn**	**00 29 27.8**	**+2.6**
MHGZ	**Mahia Peninsul**	**7.12**	**193**	P	**Pn**	**00 29 28.2**	**+2.7**
MRHZ	**Matea Rd**	**7.21**	**203**	P	**Pn**	**00 29 28.5**	**+1.8**
NMHZ	**Naumai**	**7.33**	**200**	P	**Pn**	**00 29 30.5**	**+2.4**
ARHZ	**Aropaoanui**	**7.43**	**198**	P	**Pn**	**00 29 30.7**	**+1.5**
BKZ	**Black Stump Fm**	**7.49**	**201**	P	**Pn**	**00 29 31.1**	**+1.2**
MCHZ	**McNeill Hill**	**7.68**	**199**	P	**Pn**	**00 29 34.2**	**+2.0**
KWHZ	**Kaweka Forest**	**7.75**	**201**	P	**Pn**	**00 29 34.1**	**+1.2**
KAHZ	**Kahuranaki**	**7.96**	**198**	P	**Pn**	**00 29 36.2**	**+0.7**
DZM	**Mont Dzumac**	**15.72**	**307**	P	**Pn**	**00 31 08.1**	**+0.8**
	0.3nm,0.3s,baz=156,slow=20,SNR=4.0						
STKA	**Stephens Creek**	**32.43**	**260**	P	**P**	**00 33 41.3**	**+0.8**
	2.7nm,0.7s,baz=100,slow=9.5,SNR=5.2						
AS31	**Alice Springs**	**41.34**	**270**	P	**P**	**00 34 54.7**	**-0.2**
ASAR	**Alice Springs**	**41.34**	**270**	P	**P**	**00 34 54.9**	**-0.1**
	2.9nm,0.5s,baz=104,slow=7.4,SNR=46						
ASAR				S	**S**	**00 40 41.0**	**-1.9**
	0.6nm,0.9s,baz=123,slow=14,SNR=4.5						
WR0	**Warramunga Arr**	**42.32**	**275**	P	**P**	**00 35 01.6**	**-1.2**
WR0				IAmb	IAmb	00 35 02.9	
	comp=Z,8.7nm,0.4s						
WB2	**Warramunga Arr**	**42.48**	**275**	P	**P**	**00 35 03.8**	**-0.4**
WB2				IAmb	IAmb	00 35 04.4	
	comp=Z,18nm,0.4s						
WRA	**Warramunga Arr**	**42.49**	**275**	P	**P**	**00 35 04.0**	**-0.3**
	comp=Z,10nm,0.3s,baz=112,slow=8.0,SNR=148						
WB0	**Warramunga Arr**	**42.53**	**275**	P	**P**	**00 35 04.0**	**-0.5**
QSPA	**South Pole Qui**	**57.89**	**180**	P	**P**	**00 37 00.6**	**+2.6**
	comp=Z,3.2nm,0.7s,baz=335,slow=0.6,SNR=13						
SYO	**Syowa Base**	**74.95**	**194**	*I*eX	P	00 38 36.0	-8.8
SYO	**Syowa Base**	**74.95**	**194**	*I*epP	pP	00 40 02.6	+0.2
FINES	**FINESS Array B**	**146.22**	**338**	PKPbc	**PKPbc**	**00 46 41.2**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=50,slow=4.5,SNR=21						
NB2	**NORSAR Subarra**	**150.25**	**349**	PKP	**PKiKP**	**00 46 51.8**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=15,slow=2.6						
NOA	**NORSAR Array B**	**150.25**	**349**	PKPbc	**PKiKP**	**00 46 52.0**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=17,slow=4.2,SNR=4.4						
HFS	**Hagfors**	**150.64**	**346**	PKPbc	**PKiKP**	**00 46 52.6**	**0.0**
	comp=Z,1.6nm,0.7s,baz=33,slow=5.5,SNR=6.3						

IDC ***12*** *00:30:01.3±1.9, 40.60S×174.07E, h78km±19km, mb3.9/3, mb1 4.1/5, mb1mx3.8/21, mbtmp4.1/5, Error ellipse: s-maj=24.5km s-min=14.8km az=135.0*
NEIC ***12*** *00:30:02.7±1.6, 40.70S±0.06°×174.08E±0.02, h98km±7km, Error ellipse: s-maj=8.3km s-min=2.4km az=185.0*
WEL ***12*** *00:30:02.8, 41.5S±2.1°×174.4E±, h92km±4km, M4.3/30, MLv4.3/30, Error ellipse: s-maj=0.0km s-min=0.0km az=99.8*

ISC 12 00:30:02.9±0.7, 40.71S±0.03°×174.09E±0.03, h99km±5km, n100, σ0996/122, mb4.3/9, 1C, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUWZ	**D'Urville Isla**	**0.16**	**234**	P	**Pn**	**00 30 16.3**	**-0.6**
DUWZ				S	**Sn**	**00 30 25.7**	**-1.7**
TCW	**Tory Channel**	**0.52**	**165**	P	**Pn**	**00 30 19.3**	**+0.6**
TCW				S	**Sn**	**00 30 29.6**	**-1.1**
KIW	**Kapiti Island**	**0.64**	**104**	P	**Pn**	**00 30 19.6**	**-0.1**
KIW				S	**Sn**	**00 30 30.5**	**-1.8**
TUWZ	**Tuamarina**	**0.73**	**189**	P	**Pn**	**00 30 20.5**	**0.0**
TUWZ	**Tuamarina**	**0.73**	**189**	Pn	**Pn**	**00 30 20.4**	**0.0**
TUWZ				Sn	**Sn**	**00 30 32.2**	**-1.5**
NNZ	**Nelson**	**0.74**	**226**	P	**Pn**	**00 30 20.6**	**0.0**
NNZ	**Nelson**	**0.74**	**226**	Pn	**Pn**	**00 30 20.8**	**+0.2**
NNZ				Sn	**Sn**	**00 30 33.0**	**-0.9**
SNZO	**South Karori**	**0.76**	**143**		**Pn**	**00 30 21.1**	**+0.3**
SNZO					Pn	00 30 21.2	+0.4
SNZO				Sn	**Sn**	**00 30 33.6**	**-0.6**
OGWZ	**Otaki Gorge**	**0.83**	**98**	P	**Pn**	**00 30 21.4**	**0.0**
OGWZ				S	**Sn**	**00 30 34.2**	**-1.2**
CAW	**Cannon Point**	**0.84**	**119**	P	**Pn**	**00 30 22.0**	**+0.5**
CAW				S	**Sn**	**00 30 34.6**	**-1.0**
BHW	**Baring Head**	**0.92**	**140**		**Pn**	**00 30 22.4**	**0.0**
BHW				Sn	**Sn**	**00 30 35.8**	**-1.2**
BSWZ	**Blackbirch Sta**	**1.02**	**189**	P	**Pn**	**00 30 24.3**	**+0.8**
BSWZ	**Blackbirch Sta**	**1.02**	**189**		**Pn**	**00 30 24.2**	**+0.7**
CMWZ	**Cape Campbell**	**1.05**	**175**		**Pn**	**00 30 24.4**	**+0.6**
HOWZ	**Holdsworth Sta**	**1.10**	**100**	P	**Pn**	**00 30 23.9**	**-0.4**
HOWZ				S	**Sn**	**00 30 39.6**	**-0.9**
MSWZ	**Moikau Station**	**1.13**	**129**	P	**Pn**	**00 30 24.8**	**+0.1**
MSWZ	**Moikau Station**	**1.13**	**129**		**Pn**	**00 30 24.8**	**+0.1**
MRZ	**Mangatainoka R**	**1.13**	**88**	P	**Pn**	**00 30 24.2**	**-0.5**
MRZ				S	**Sn**	**00 30 40.5**	**-0.7**
MTW	**Mount Morrison**	**1.16**	**113**	P	**Pn**	**00 30 25.2**	**+0.1**
MTW				S	**Sn**	**00 30 40.8**	**-0.9**
WAZ	**Wanganui**	**1.17**	**36**	P	**Pn**	**00 30 25.4**	**+0.2**
WAZ				S	**Sn**	**00 30 42.6**	**+0.6**
QRZ	**Quartz Range**	**1.19**	**264**	P	**Pn**	**00 30 24.6**	**-0.8**
QRZ	**Quartz Range**	**1.19**	**264**		**Pn**	**00 30 24.6**	**-0.8**
PLWZ	**Palliser**	**1.23**	**135**	P	**Pn**	**00 30 26.3**	**+0.4**
PLWZ	**Palliser**	**1.23**	**135**		**Pn**	**00 30 26.3**	**+0.4**
THZ	**Tophouse**	**1.38**	**220**	P	**Pn**	**00 30 28.0**	**+3.3**
THZ	**Tophouse**	**1.38**	**220**	Pn	**Pn**	**00 30 28.1**	**+0.3**
TMWZ	**Te Maipa**	**1.42**	**107**	P	**Pn**	**00 30 28.0**	**-0.1**
PKE	**Pukeiti**	**1.51**	**357**	P	**Pn**	**00 30 29.5**	**+0.2**
PKE				S	**Sn**	**00 30 49.2**	**-0.1**
TSZ	**Takapari Road**	**1.57**	**66**	P	**Pn**	**00 30 29.3**	**-0.6**
BFZ	**Birch Farm**	**1.64**	**90**	P	**Pn**	**00 30 30.4**	**-0.3**
BFZ				S	**Sn**	**00 30 49.6**	**-2.4**
BFZ	**Birch Farm**	**1.64**	**90**		**Pn**	**00 30 30.6**	**-0.2**
VRZ	**Vera Road**	**1.66**	**18**	P	**Pn**	**00 30 31.4**	**+0.3**
KHZ	**Kahutara**	**1.76**	**193**	P	**Pn**	**00 30 33.1**	**+0.9**
KHZ				S	**Sn**	**00 30 53.7**	**-0.9**
KHZ	**Kahutara**	**1.76**	**193**		**Pn**	**00 30 33.2**	**+0.9**
PNHZ	**Pukenui**	**1.80**	**65**	P	**Pn**	**00 30 31.8**	**-1.0**
PNHZ				S	**Sn**	**00 30 54.5**	**-1.1**
TRVZ	**Turoa**	**1.80**	**39**	P	**Pn**	**00 30 32.6**	**-0.4**
MOVZ	**Moawhango**	**1.82**	**45**	P	**Pn**	**00 30 32.7**	**-0.5**
WHVZ	**Whangaehu Hut**	**1.83**	**39**	P	**Pn**	**00 30 33.6**	**+0.2**
FWVZ	**Far West T-bar**	**1.83**	**38**	P	**Pn**	**00 30 33.2**	**-0.3**
TUVZ	**Tukino**	**1.87**	**40**	P	**Pn**	**00 30 33.8**	**-0.2**
NGZ	**Ngauruhoe**	**1.92**	**38**	P	**Pn**	**00 30 34.0**	**-0.5**
TWVZ	**Taurewa**	**1.93**	**33**	P	**Pn**	**00 30 34.2**	**-0.4**
BHHZ	**Black Hill Sta**	**1.94**	**52**	P	**Pn**	**00 30 33.9**	**-0.8**
WTVZ	**West Tongariro**	**1.96**	**36**	P	**Pn**	**00 30 34.5**	**-0.5**
PRHZ	**Porangahau**	**1.99**	**78**	P	**Pn**	**00 30 34.4**	**-0.9**
PRHZ				S	**Sn**	**00 30 59.3**	**-0.7**
KRVZ	**Karewarewa**	**2.00**	**37**	P	**Pn**	**00 30 35.2**	**-0.4**
DSZ	**Denniston Nort**	**2.01**	**238**	P	**Pn**	**00 30 35.1**	**-0.5**
DSZ				S	**Sn**	**00 30 59.0**	**-1.6**
KRHZ	**Kereru**	**2.04**	**59**	P	**Pn**	**00 30 34.9**	**-1.1**
KWHZ	**Kaweka Forest**	**2.20**	**55**	P	**Pn**	**00 30 37.0**	**-1.0**
PXZ	**Pawanui**	**2.22**	**73**	S	**Sn**	**00 31 04.8**	**-0.6**
HIZ	**Hauiti**	**2.27**	**15**	P	**Pn**	**00 30 38.7**	**-0.2**
HIZ	**Hauiti**	**2.27**	**15**		**Pn**	**00 30 38.8**	**-0.2**
KAHZ	**Kahuranaki**	**2.32**	**68**	P	**Pn**	**00 30 38.8**	**-0.8**
BKZ	**Black Stump Fm**	**2.40**	**51**	Pn	**Pn**	**00 30 39.5**	**-1.2**
LTZ	**Lake Taylor**	**2.48**	**213**	Pn	**Pn**	**00 30 41.5**	**-0.2**
TLZ	**Tolley Road**	**2.62**	**26**	P	**Pn**	**00 30 43.3**	**-0.4**
OXZ	**Oxford**	**3.03**	**210**	Pn	**Pn**	**00 30 47.5**	**-1.5**
MQZ	**McQueen's Vall**	**3.18**	**199**		**Pn**	**00 30 49.5**	**-1.4**
URZ	**Urewera**	**3.38**	**45**	P	**Pn**	**00 30 50.9**	**-2.8**
	7.5nm,0.3s,baz=240,slow=3.9,SNR=8.0						
URZ				S	**Sn**	**00 31 30.0**	**-3.0**
	59nm,0.3s,baz=345,slow=19,SNR=14						
RPZ	**Rata Peaks**	**3.76**	**216**	P	**Pn**	**00 30 56.6**	**-2.2**
	5.3nm,0.3s,baz=219,slow=2.2,SNR=14						
RPZ				S	**Sn**	**00 31 37.9**	**-4.1**
	19nm,0.3s,baz=198,slow=21,SNR=3.7						
RPZ	**Rata Peaks**	**3.76**	**216**		**Pn**	**00 30 58.5**	**-0.2**
FOZ	**Fox Glacier**	**4.25**	**227**		**Pn**	**00 31 04.7**	**-0.7**
MXZ	**Matakaoa Point**	**4.54**	**48**	Pn	**Pn**	**00 31 07.3**	**-2.0**
LBZ	**Lake Benmore**	**4.67**	**217**	Pn	**Pn**	**00 31 10.9**	**-0.2**
ODZ	**Otahua Downs**	**5.02**	**209**	Pn	**Pn**	**00 31 15.1**	**-0.7**
OUZ	**Omahuta**	**5.49**	**356**		**Pn**	**00 31 22.4**	**+0.2**
WKZ	**Wanaka**	**5.56**	**221**	Pn	**Pn**	**00 31 23.0**	**-0.2**
MLZ	**Mavora Lakes**	**6.39**	**221**	Pn	**Pn**	**00 31 34.3**	**-0.1**
WHZ	**Wether Hill Ro**	**6.85**	**219**	Pn	**Pn**	**00 31 40.7**	**+0.1**
DCZ	**Deep Cove**	**6.96**	**225**	Pn	**Pn**	**00 31 42.5**	**+0.5**
BBOO	**Buckleboo**	**31.28**	**272**	P	**P**	**00 36 14.0**	**+0.6**
BBOO				IAmb	IAmb	00 36 16.7	
	comp=Z,6.8nm,1.1s						
AS31	**Alice Springs**	**37.65**	**284**	P	**P**	**00 37 08.1**	**-0.3**
ASAR	**Alice Springs**	**37.65**	**284**	P	**P**	**00 37 09.1**	**+0.7**
	comp=Z,1.0nm,0.3s,baz=118,slow=6.8,SNR=14						
ASAR				PcP	**PcP**	**00 39 25.2**	**+1.3**
	comp=Z,0.6nm,0.4s,baz=127,slow=4.0,SNR=6.7						
COEN	**Coen**	**37.92**	**306**	P	**P**	**00 37 10.9**	**+0.3**
COEN				IAmb	IAmb	00 37 29.5	
	comp=Z,6.1nm,1.1s						
WB2	**Warramunga Arr**	**39.63**	**289**	P	**P**	**00 37 24.9**	**0.0**
WB2				IAmb	IAmb	00 37 26.1	
	comp=Z,4.2nm,0.6s						
WRA	**Warramunga Arr**	**39.63**	**289**	P	**P**	**00 37 25.1**	**+0.1**
	comp=Z,2.4nm,0.5s,baz=127,slow=8.0,SNR=18						
WB0	**Warramunga Arr**	**39.71**	**290**	P	**P**	**00 37 25.4**	**-0.2**
WB0				IAmb	IAmb	00 37 26.9	
	comp=Z,3.6nm,0.6s						
CASY	**Casey**	**43.02**	**212**	P	**P**	**00 37 52.8**	**+0.7**
CASY				IAmb	IAmb	00 37 55.5	
	comp=Z,4.5nm,1.1s						
MTN	**Manton Dam**	**46.68**	**294**	P	**P**	**00 38 22.4**	**+0.8**
FITZ	**Fitzroy Crossi**	**47.14**	**284**	P	**P**	**00 38 26.1**	**+0.8**
MORW	**Morawa**	**48.23**	**265**	P	**P**	**00 38 34.0**	**+0.4**
MORW				IAmb	IAmb	00 38 50.3	
	comp=Z,9.5nm,1.1s						
PSAC2	**Pilbara Seismi**	**49.35**	**276**	P	**P**	**00 38 41.5**	**-0.7**
PSAB3	**Pilbara Seismi**	**49.37**	**276**	P	**P**	**00 38 41.5**	**-0.9**
PSAC3	**Pilbara Seismi**	**49.37**	**276**	P	**P**	**00 38 42.0**	**+0.2**
PSAA3	**Pilbara Seismi**	**49.38**	**276**	P	**P**	**00 38 42.0**	**-0.5**
PSA00	**Pilbara Seismi**	**49.39**	**276**	P	**P**	**00 38 41.5**	**-1.0**
PSAA1	**Pilbara Seismi**	**49.39**	**276**	P	**P**	**00 38 42.3**	**-0.3**
PSAA2	**Pilbara Seismi**	**49.39**	**276**	P	**P**	**

	98µm,0.6s								
PENT	**Pentalofos**	**0.79**	**57**		P		**Pn**	**00 54 48.1**	**-0.8**
PENT					S		**Sb**	**00 54 59.4**	**+1.1**
PENT					AML		AML	00 55 03.8	
PENT					AML		AML	00 55 09.0	
NEST	**Nestorio**	**0.88**	**42**		P		**Pn**	**00 54 49.8**	**-0.3**
NEST					S		**Sn**	**00 55 03.2**	**+0.5**
	102µm,0.8s								
NEST	**Nestorio**	**0.88**	**42**		P		**Pn**	**00 54 49.8**	**-0.3**
NEST					S		**Sn**	**00 55 02.4**	**-0.3**
NEST					AML		AML	00 55 06.7	
NEST					AML		AML	00 55 10.3	
VLO	**Vlora**	**0.92**	**320**		P		**Pn**	**00 54 51.0**	**+0.4**
VLO					S		**Sn**	**00 55 04.5**	**+0.9**
	142µm,0.4s								
VLO	**Vlora**	**0.92**	**320**	*i*	PG		**Pn**	**00 54 51.0**	**+0.4**
VLO				*i*	SG		**Sn**	**00 55 04.4**	**+0.9**
TSLK	**Tsoukalades, L**	**0.98**	**162**		P		**Pn**	**00 54 51.3**	**-0.2**
TSLK					S		**Sn**	**00 55 06.5**	**+1.4**
	40µm,0.8s								
TSLK	**Tsoukalades, L**	**0.98**	**162**		P		**Pn**	**00 54 51.5**	**+0.1**
LKD2	**Lefkada island**	**1.02**	**163**		P		**Pb**	**00 54 51.5**	**0.0**
LKD2					S		**Sn**	**00 55 07.5**	**+1.5**
	44µm,0.7s								
LKD2	**Lefkada island**	**1.02**	**163**		P		**Pn**	**00 54 51.9**	**0.0**
MGNA	**Meganis**	**1.18**	**160**		P		**Pn**	**00 54 54.6**	**+0.5**
EVGl	**Lefkada island**	**1.18**	**165**		P		**Pn**	**00 54 55.1**	**+1.0**
KZN	**Kozani**	**1.27**	**64**		P		**Pg**	**00 54 55.9**	**-0.7**
KZN					S		**Sn**	**00 55 15.5**	**+3.2**
	64µm,0.7s								
KZN	**Kozani**	**1.27**	**64**		P		**Pg**	**00 54 56.2**	**-0.4**
KZN					S		**Sn**	**00 55 15.2**	**+2.8**
KZN					AML		AML	00 55 21.7	
	comp=N,92318µm,0.8s								
KZN					AML		AML	00 55 24.3	
FNA	**Florina**	**1.32**	**39**		P		**Pg**	**00 54 57.2**	**-0.4**
FNA					S		**Sn**	**00 55 16.8**	**+3.2**
	comp=N,90µm,0.6s								
FNA	**Florina**	**1.32**	**39**	*i*	PN		**Pg**	**00 54 57.3**	**-0.4**
FNA				*i*	SN		**Sn**	**00 55 16.3**	**+2.7**
FNA	**Florina**	**1.32**	**39**		P		**Pg**	**00 54 57.3**	**-0.4**
FNA					AML		AML	00 55 20.8	
FNA					AML		AML	00 55 20.9	
FNA	**Florina**	**1.32**	**39**		P		**Pg**	**00 54 57.4**	**-0.2**
FNA	**Florina**	**1.32**	**39**				**Pg**	**00 54 57.4**	**-0.2**
FSK	**Fiskardo**	**1.32**	**170**		P		**Pg**	**00 54 57.4**	**-0.2**
FSK	**Fiskardo**	**1.32**	**170**		P		**Pg**	**00 54 57.3**	**-0.3**
FSK					AML		AML	00 55 20.9	
	comp=N,71495µm,0.9s								
FSK					AML		AML	00 55 26.9	
	comp=E,67206µm,0.8s								
THL	**Klokotos Trika**	**1.36**	**98**		P		**Pb**	**00 54 57.1**	**-0.2**
THL					S		**Sg**	**00 55 17.9**	**+1.9**
	comp=E,52µm,0.7s								
THL	**Klokotos Trika**	**1.36**	**98**		P		**Pb**	**00 54 57.2**	**-0.2**
THL					AML		AML	00 55 19.9	
	comp=N,99203µm,0.7s								
THL					AML		AML	00 55 22.4	
VSK1	**VASILIKIADES**	**1.37**	**170**		P		**Pg**	**00 54 58.2**	**-0.4**
AST1	**Astakos**	**1.38**	**152**		P		**Pg**	**00 54 59.0**	**+0.4**
OHR	**Ohrid**	**1.40**	**16**	*i*	Pn		**Pg**	**00 54 59.4**	**+0.2**
OHR				*i*	Sn		**Sg**	**00 55 20.9**	**+3.5**
OHR				*e*	Lg		Lg	00 55 22.0	
	comp=E,34µm,0.6s								
OHR	**Ohrid**	**1.40**	**16**	*i*	Pn		**Pg**	**00 54 59.4**	**+0.2**
OHR				*i*	Sn		**Sg**	**00 55 20.9**	**+3.5**
OHR				*e*	Lg		Lg	00 55 22.0	
	comp=E,34µm,0.6s								
SCTE	**Santa Cesarea**	**1.42**	**283**	*i*	PN		**Pg**	**00 54 58.7**	**-0.9**
SCTE	**Santa Cesarea**	**1.42**	**283**		P		**Pg**	**00 54 58.7**	**-0.9**
SCTE	**Santa Cesarea**	**1.42**	**283**				**Pg**	**00 54 58.4**	**-1.1**
EVR	**Evrytania**	**1.46**	**125**		P		**Pg**	**00 54 59.7**	**-0.6**
EVR					S		**Sg**	**00 55 20.3**	**+1.0**
	comp=E,52µm,0.6s								
EVR	**Evrytania**	**1.46**	**125**		P		**Pg**	**00 54 59.8**	**-0.4**
EVR					AML		AML	00 55 27.6	
EVR					AML		AML	00 55 27.6	
KEF1	**Kardakata, Kep**	**1.49**	**174**		P		**Pb**	**00 54 59.3**	**-0.3**
KEF4	**Livadi, Kephal**	**1.51**	**176**		P		**Pb**	**00 54 59.6**	**-0.2**
KEF3	**Kipouria, Keph**	**1.56**	**178**		P		**Pb**	**00 55 00.5**	**-0.2**
LXRA	**Lixouri, Kepha**	**1.57**	**175**		P		**Pb**	**00 55 00.7**	**-0.2**
CHV1	**Chavriata, Kef**	**1.58**	**177**		P		**Pb**	**00 55 01.2**	**+0.1**
ARG2	**Argostoli**	**1.59**	**174**		P		**Pb**	**00 55 01.2**	**-0.1**
ARGA	**Argostoli. Kep**	**1.59**	**174**		P		**Pb**	**00 55 00.9**	**-0.4**
VLS	**Valsamata**	**1.60**	**171**		P		**Pb**	**00 55 01.1**	**-0.4**
VLS	**Valsamata**	**1.60**	**171**		P		**Pb**	**00 55 01.0**	**-0.4**
VLS					AML		AML	00 55 27.3	
	comp=E,32772µm,0.4s								
VLS					AML		AML	00 55 35.9	
	comp=N,34783µm,0.5s								
KEF2	**Argostoli. Kep**	**1.61**	**174**		P		**Pb**	**00 55 01.1**	**-0.4**
TIR	**Tirane**	**1.61**	**349**	*e*	Pg		**Pg**	**00 55 03.4**	**+0.3**
TIR				*e*	Sn		**Sg**	**00 55 22.5**	**-1.6**
TIR	**Tirane**	**1.61**	**349**		P		**Pg**	**00 55 02.0**	**-1.1**
TIR					S		**Sg**	**00 55 24.2**	**+0.1**
	comp=N,19µm,0.5s								
TIR	**Tirane**	**1.61**	**349**	*i*	PN		**Pg**	**00 55 02.5**	**-0.6**
TIR				*i*	SN		**Sg**	**00 55 25.8**	**+1.7**
TIR	**Tirane**	**1.61**	**349**		P		**Pg**	**00 55 02.5**	**-0.6**
TIR	**Tirane**	**1.61**	**349**	⇑	P		**Pg**	**00 55 02.5**	**-0.6**
TIR				⇑	S		**Sg**	**00 55 23.1**	**-1.0**
TIR	**Tirane**	**1.61**	**349**		P		**Pg**	**00 55 02.2**	**-0.9**
TIR	**Tirane**	**1.61**	**349**				**Pg**	**00 55 02.2**	**-0.9**
MAKR	**Makrakomi, Fth**	**1.62**	**117**		P		**Pg**	**00 55 03.3**	**0.0**
MAKR					S		**Sg**	**00 55 24.4**	**0.0**
	comp=N,77µm,0.6s								
MAKR	**Makrakomi, Fth**	**1.62**	**117**		P		**Pg**	**00 55 02.9**	**-0.5**
MAKR					AML		AML	00 55 28.4	
MAKR					AML		AML	00 55 34.7	
LRSO	**Larissa Observ**	**1.64**	**93**		P		**Pg**	**00 55 02.7**	**-0.9**
LRSO	**Larissa Observ**	**1.64**	**93**		P		**Pg**	**00 55 02.3**	**-1.3**
KFL	**Anninata**	**1.70**	**166**		P		**Pb**	**00 55 02.5**	**-0.6**
KFL	**Anninata**	**1.70**	**166**		P		**Pb**	**00 55 02.6**	**-0.5**
ANX	**Ano Chora**	**1.73**	**132**		P		**Pg**	**00 55 04.6**	**-0.9**
ANX	**Ano Chora**	**1.73**	**132**		P		**Pg**	**00 55 04.4**	**-1.0**
LIT	**Litokhoron**	**1.74**	**78**		P		**Pg**	**00 55 04.1**	**-1.4**
LIT					S		**Sg**	**00 55 27.5**	**-0.6**
	comp=N,58µm,0.6s								
LIT	**Litokhoron**	**1.74**	**78**		P		**Pg**	**00 55 04.3**	**-1.2**
LIT					AML		AML	00 55 33.6	
LIT					AML		AML	00 55 33.8	
	comp=E,86414µm,0.5s								
LIT	**Litokhoron**	**1.74**	**78**		P		**Pg**	**00 55 04.7**	**-0.8**
LIT	**Litokhoron**	**1.74**	**78**				**Pg**	**00 55 04.7**	**-0.8**
EFP	**Efpalio**	**1.84**	**136**		P		**Pg**	**00 55 06.5**	**-1.0**
EFP	**Efpalio**	**1.84**	**136**		P		**Pb**	**00 55 05.8**	**+0.3**
EFP					AML		AML	00 55 46.2	
	comp=E,77958µm,0.9s								
EFP					AML		AML	00 55 46.6	
	comp=N,64386µm,0.5s								
PHP	**Peshkopia**	**1.92**	**4**		P		**Pg**	**00 55 06.9**	**-2.2**
PHP					S		**Sg**	**00 55 31.8**	**-2.2**
	comp=N,29µm,0.9s								
PHP	**Peshkopia**	**1.92**	**4**	*i*	PN		**Pg**	**00 55 07.3**	**-1.8**
PHP				*i*	SN		**Sg**	**00 55 33.7**	**-0.3**
SERG	**Sergoula**	**1.94**	**134**		P		**Pg**	**00 55 07.8**	**-1.5**
SERG	**Sergoula**	**1.94**	**134**		P		**Pb**	**00 55 07.4**	**+0.2**
RLS	**Riolos of Patr**	**1.94**	**151**		P		**Pb**	**00 55 07.0**	**-0.2**
RLS	**Riolos of Patr**	**1.94**	**151**		P		**Pb**	**00 55 07.0**	**-0.2**
TRIZ	**Trizonia**	**1.98**	**134**		P		**Pb**	**00 55 08.4**	**+0.6**
TRIZ	**Trizonia**	**1.98**	**134**		P		**Pb**	**00 55 08.4**	**+0.6**
VTN	**Vitineika**	**1.98**	**159**		P		**Pb**	**00 55 07.7**	**-0.2**
VTN	**Vitineika**	**1.98**	**159**		P		**Pb**	**00 55 07.9**	**0.0**
KALE	**Kalithea**	**2.00**	**133**		P		**Pb**	**00 55 08.7**	**+0.5**
KALE	**Kalithea**	**2.00**	**133**		P		**Pb**	**00 55 08.0**	**-0.3**
KALE					AML		AML	00 55 41.6	
	comp=N,57865µm,0.8s								
KALE					AML		AML	00 55 43.1	
	comp=E,38815µm,0.5s								
LAKA	**Lakka**	**2.02**	**138**		P		**Pb**	**00 55 08.5**	**-0.1**
LAKA	**Lakka**	**2.02**	**138**		P		**Pb**	**00 55 08.3**	**-0.3**
LAKA					AML		AML	00 55 48.1	
	comp=E,18108µm,0.8s								
LAKA					AML		AML	00 55 55.9	
	comp=N,18531µm,0.8s								
ZAK2	**Zakynthos**	**2.03**	**166**		P		**Pb**	**00 55 07.9**	**-0.9**
DRO	**Drossia**	**2.13**	**148**		P		**Pb**	**00 55 09.7**	**-0.7**
DRO	**Drossia**	**2.13**	**148**		P		**Pb**	**00 55 09.7**	**-0.7**
THE	**Thessaloniki**	**2.24**	**66**		P		**Pb**	**00 55 10.6**	**-1.6**
THE	**Thessaloniki**	**2.24**	**66**		P		**Pb**	**00 55 10.6**	**-1.6**
THE					AML		AML	00 55 41.3	
	comp=E,11279µm,0.7s								
THE					AML		AML	00 55 41.8	
	comp=N,11658µm,0.5s								
KLV	**Kalavryta, Ach**	**2.26**	**139**		P		**Pb**	**00 55 11.2**	**-1.5**
KLV	**Kalavryta, Ach**	**2.26**	**139**		P		**Pb**	**00 55 11.7**	**-1.0**
KLV					AML		AML	00 56 01.9	
	comp=E,14505µm,1.2s								
KLV					AML		AML	00 56 03.0	
	comp=N,19500µm,0.9s								
XOR	**Xorichti**	**2.29**	**99**		P		**Pb**	**00 55 12.1**	**-1.1**
XOR					AML		AML	00 55 46.6	
	comp=N,44509µm,0.7s								
XOR					AML		AML	00 55 47.1	
	comp=E,27106µm,0.7s								
PUK	**Puka**	**2.29**	**353**	*i*	PN		**Pb**	**00 55 11.6**	**-1.7**
HORT	**Hortiatis**	**2.32**	**68**		P		**Pb**	**00 55 11.8**	**-2.0**
HORT	**Hortiatis**	**2.32**	**68**		P		**Pb**	**00 55 11.7**	**-2.0**
HORT					AML		AML	00 55 45.5	
	comp=E,13787µm,0.5s								
HORT					AML		AML	00 55 46.3	
	comp=N,13091µm,0.4s								
NEO	**Neokhori**	**2.33**	**100**		P		**Pb**	**00 55 12.3**	**-1.5**
NEO	**Neokhori**	**2.33**	**100**		P		**Pb**	**00 55 12.3**	**-1.5**
NEO					AML		AML	00 55 50.2	
	comp=N,45021µm,0.7s								
NEO					AML		AML	00 55 56.5	
	comp=E,33958µm,0.7s								
ULC	**Ulcinj**	**2.33**	**341**	⇑	iPn		**Pn**	**00 55 11.2**	**+1.2**
ULC				*i*	Sn		**Sb**	**00 55 41.5**	**-1.0**
VAY	**Valandovo**	**2.34**	**48**	*e*	Pn		**Pb**	**00 55 12.9**	**-1.1**
VAY				*e*	Sn		**Sb**	**00 55 43.5**	**+0.7**
VAY	**Valandovo**	**2.34**	**48**	⇑	iPn		**Pb**	**00 55 12.6**	**-1.4**
VAY				*i*	Sn		**Sb**	**00 55 42.9**	**+0.1**
VAY				*e*	Lg		Lg	00 55 56.4	
	comp=E,14µm,0.9s								
VAY	**Valandovo**	**2.34**	**48**	⇑	iPn		**Pb**	**00 55 12.6**	**-1.4**
VAY				*i*	Sn		**Sb**	**00 55 42.9**	**+0.1**
VAY				*e*	Lg		Lg	00 55 56.4	
	comp=E,14µm,0.9s								
SKO	**Skopje**	**2.38**	**21**	*e*	Pn		**Pb**	**00 55 13.2**	**-1.5**
SKO				*e*	Sn		**Sg**	**00 55 45.3**	**-3.2**
SKO	**Skopje**	**2.38**	**21**	⇑	iPn		**Pb**	**00 55 13.4**	**-1.3**
SKO				*i*	Sn		**Sb**	**00 55 43.7**	**-0.1**
SKO	**Skopje**	**2.38**	**21**	⇑	iPn		**Pb**	**00 55 13.4**	**-1.3**
SKO				*i*	Sn		**Sb**	**00 55 43.7**	**-0.1**
LKR	**Lokris**	**2.39**	**117**		P		**Pb**	**00 55 13.5**	**-1.5**
LKR					AML		AML	00 55 58.7	
	comp=N,12780µm,0.7s								
LKR					AML		AML	00 56 06.3	
	comp=E,13226µm,0.9s								
TAR1	**Taranto**	**2.41**	**289**	⇓	iPn		**Pn**	**00 55 11.7**	**+0.6**
KNT	**Kendrikon**	**2.44**	**54**		P		**Pb**	**00 55 13.6**	**-2.2**
KNT	**Kendrikon**	**2.44**	**54**		P		**Pb**	**00 55 13.6**	**-2.2**
KNT					AML		AML	00 56 01.1	
	comp=N,20201µm,1.1s								
KNT					AML		AML	00 56 03.2	
	comp=E,10218µm,1.1s								
KNT	**Kendrikon**	**2.44**	**54**		P		**Pn**	**00 55 13.1**	**+1.6**
AMT	**Artemida-Makis**	**2.50**	**153**		P		**Pb**	**00 55 14.8**	**-1.9**
AMT	**Artemida-Makis**	**2.50**	**153**		P		**Pb**	**00 55 14.6**	**-2.1**
PLG	**Polygyros**	**2.51**	**75**		P		**Pn**	**00 55 14.2**	**+1.7**
PLG	**Polygyros**	**2.51**	**75**		P		**Pn**	**00 55 14.2**	**+1.7**
PROD	**Prodromos**	**2.54**	**125**		P		**Pb**	**00 55 15.2**	**-2.3**
PROD	**Prodromos**	**2.54**	**125**		P		**Pb**	**00 55 15.2**	**-2.3**
PROD					AML		AML	00 56 00.9	
	comp=E,18065µm,1.0s								
PROD					AML		AML	00 56 01.0	
	comp=N,23798µm,0.7s								
SKIA	**Skiathos**	**2.54**	**103**		P		**Pb**	**00 55 15.6**	**-1.9**
SKIA					AML		AML	00 55 48.2	
	comp=E,11734µm,0.7s								
SKIA					AML		AML	00 55 53.1	
	comp=N,25096µm,0.9s								
DRME	**Dracevica, Mon**	**2.56**	**342**	⇑	iPn		**Pn**	**00 55 14.5**	**+1.4**
DRME	**Dracevica, Mon**	**2.56**	**342**	⇑	iPn		**Pn**	**00 55 14.5**	**+1.4**
DRME				*i*	Sn		**Sb**	**00 55 46.4**	**-2.6**
BCI	**Bajram Curri**	**2.60**	**357**	*i*	PN		**Pb**	**00 55 17.1**	**-1.5**
BCI				*i*	SN		**Sb**	**00 55 51.0**	**+0.7**
PAIG	**Paliouri**	**2.63**	**85**		P		**Pn**	**00 55 15.9**	**+1.9**
PAIG	**Paliouri**	**2.63**	**85**		P		**Pn**	**00 55 15.9**	**+1.9**
PAIG					AML		AML	00 55 50.2	
	comp=N,20560µm,0.4s								
PAIG					AML		AML	00 55 52.2	
	comp=E,27540µm,0.5s								
NOCI	**Noci**	**2.66**	**294**		P		**Pn**	**00 55 15.3**	**+0.8**
TRIP	**Tripoli**	**2.73**	**144**		P		**Pb**	**00 55 18.5**	**-2.2**
BUM	**Brajici-Budva**	**2.74**	**338**	⇑	iPn		**Pn**	**00 55 16.6**	**+0.9**
BUM				*i*	Sn		**Sn**	**00 55 50.6**	**+2.0**
LOUT	**Loutraki**	**2.75**	**129**		P		**Pn**	**00 55 18.1**	**+2.3**
LOUT	**Loutraki**	**2.75**	**129**		P		**Pn**	**00 55 18.1**	**+2.3**
PDG	**Podgorica**	**2.77**	**344**	*e*	Pn		**Pb**	**00 55 18.1**	**-3.3**
PDG				*e*	Sn		**Sn**	**00 55 51.4**	**+2.2**
PDG	**Podgorica**	**2.77**	**344**	⇑	P		**Pn**	**00 55 17.4**	**+1.3**
PDG				⇓	S		**Sn**	**00 55 51.5**	**+2.2**
PDG	**Podgorica**	**2.77**	**344**	⇑	iPn		**Pn**	**00 55 17.3**	**+1.3**
PDG	**Podgorica**	**2.77**	**344**				**Pn**	**00 55 15.8**	**-0.2**
TTG	**Podgorica**	**2.77**	**344**	⇑	iPn		**Pn**	**00 55 17.4**	**+1.3**
TTG				*i*	Sn		**Sn**	**00 55 51.5**	**+2.2**
MRKA	**Markates**	**2.78**	**111**		P		**Pn**	**00 55 18.6**	**+2.4**
MRKA	**Markates**	**2.78**	**111**		P		**Pb**	**00 55 18.8**	**-2.8**
MRKA					AML		AML	00 55 57.6	
	comp=E,16216µm,0.8s								
MRKA					AML		AML	00 56 04.2	
	comp=N,21909µm,0.7s								
TIP	**Timpagrande**	**2.78**	**259**		P		**Pn**	**00 55 17.0**	**+0.7**
TIP	**Timpagrande**	**2.78**	**259**		P		**Pn**	**00 55 16.9**	**+0.6**
TIP	**Timpagrande**	**2.78**	**259**	⇓	P		**Pn**	**00 55 17.2**	**+0.9**
TIP				⇑	S		**Sn**	**00 55 48.5**	**-1.2**
TIP	**Timpagrande**	**2.78**	**259**				**Pn**	**00 55 16.8**	**+0.6**
VIL2	**Platees**	**2.80**	**123**		P		**Pb**	**00 55 19.8**	**-2.1**
PVY	**Plav**	**2.84**	**355**	⇓	iPn		**Pn**	**00 55 18.1**	**+1.0**
PVY				*i*	Sn		**Sn**	**00 55 53.4**	**+2.3**
ALNA	**Alonissos**	**2.85**	**101**		P		**Pn**	**00 55 19.5**	**+2.4**
AOS	**Alonnisos**	**2.85**	**101**		P		**Pn**	**00 55 19.4**	**+2.3**
AOS	**Alonnisos**	**2.85**	**101**		P		**Pn**	**00 55 19.4**	**+2.3**
AOS	**Alonnisos**	**2.85**	**101**		P		**Pn**	**00 55 19.5**	**+2.3**
VILL	**Villia**	**2.86**	**123**		P		**Pn**	**00 55 19.6**	**+2.3**
SRS	**Serrai**	**2.87**	**61**		P		**Pn**	**00 55 19.2**	**+1.8**
SRS	**Serrai**	**2.87**	**61**		P		**Pn**	**00 55 19.2**	**+1.8**
MATE	**Matera**	**2.87**	**289**	⇓	P		**Pn**	**00 55 18.1**	**+0.6**
MATE				⇓	S		**Sn**	**00 55 50.1**	**-1.6**
ITM	**Ithomi**	**2.89**	**153**		P		**Pn**	**00 55 19.9**	**+2.2**
ITM	**Ithomi**	**2.89**	**153**		P		**Pn**	**00 55 19.9**	**+2.2**
ITM	**Ithomi**	**2.89**	**153**		P		**Pn**	**00 55 19.9**	**+2.2**
ITM	**Ithomi**	**2.89**	**153**				**Pn**	**00 55 20.0**	**+2.2**
OUR	**Ouranopolis**	**2.90**	**78**		P		**Pn**	**00 55 20.1**	**+2.2**
OUR	**Ouranopolis**	**2.90**	**78**		P		**Pn**	**00 55 20.0**	**+2.2**
OUR					AML		AML	00 55 57.2	
	comp=N,35576µm,0.4s								
OUR					AML		AML	00 55 58.0	
	comp=E,32775µm,0.4s								
OUR	**Ouranopolis**	**2.90**	**78**		P		**Pn**	**00 55 20.2**	**+2.4**
VLX	**Vlachokerasia**	**2.91**	**145**		P		**Pn**	**00 55 20.5**	**+2.5**
BAI	**Bari**	**2.92**	**298**	⇓	iPn		**Pn**	**00 55 18.7**	**+0.7**
SG1	**Sgolgore (BA)**	**2.95**	**292**	⇓	iPn		**Pn**	**00 55 19.3**	**+0.8**
CEME	**Cevo**	**2.96**	**340**	⇑	iPn		**Pn**	**00 55 19.6**	**+0.9**
CEME				*i*	Sn		**Sn**	**00 55 56.0**	**+1.9**
HCY	**Herceg Novi**	**3.00**	**334**	*e*	Pn		**Pn**	**00 55 19.5**	**+0.4**
HCY	**Herceg Novi**	**3.00**	**334**	⇑	iPn		**Pn**	**00 55 19.6**	**+0.4**
HCY				*i*	Sn		**Sn**	**00 55 56.9**	**+2.0**
PYL	**PYLOS**	**3.09**	**158**		P		**Pn**	**00 55 22.2**	**+1.8**
IVA	**Berane**	**3.12**	**355**	⇓	iPn		**Pn**	**00 55 22.2**	**+1.3**
IVA				*i*	Sn		**Sn**	**00 56 00.0**	**+2.1**
KOME	**Kolasin**	**3.13**	**350**	⇑	iPn		**Pn**	**00 55 22.1**	**+1.0**
KOME				*i*	Sn		**Sn**	**00 56 00.7**	**+2.3**
NVR	**Nevrokopi**	**3.16**	**59**		P		**Pn**	**00 55 23.4**	**+2.0**
NVR	**Nevrokopi**	**3.16**	**59**		P		**Pn**	**00 55 23.4**	**+2.0**
NKME	**Niksic**	**3.16**	**342**	⇑	iPn		**Pn**	**00 55 22.4**	**+1.0**
NKME				*i*	Sn		**Sn**	**00 56 00.4**	**+1.5**
KYMI	**Kymi, Euboea I**	**3.18**	**110**		P		**Pn**	**00 55 24.1**	**+2.4**
KYMI	**Kymi, Euboea I**	**3.18**	**110**		P		**Pn**	**00 55 23.9**	**+2.3**
NKY	**Níksic**	**3.19**	**343**	⇓	iPn		**Pn**	**00 55 22.8**	**+0.8**
NKY				*i*	Sn		**Sn**	**00 56 01.2**	**+1.3**
BOSS	**Bosilegrad**	**3.20**	**31**	*e*	Pn		**Pn**	**00 55 24.4**	**+2.5**
BOSS				*e*	Sn		**Sb**	**00 56 04.8**	**-2.6**
ATH	**Athens Observa**	**3.23**	**123**		P		**Pn**	**00 55 25.0**	**+2.7**
ATH	**Athens Observa**	**3.23**	**123**		P		**Pn**	**00 55 24.8**	**+2.5**
DID	**Didima**	**3.23**	**133**		P		**Pn**	**00 55 24.3**	**+1.9**
DID	**Didima**	**3.23**	**133**		P		**Pn**	**00 55 24.3**	**+1.9**
BARS	**Barje**	**3.26**	**20**	*e*	Pn		**Pn**	**00 55 25.2**	**+2.4**
BARS	**Barje**	**3.26**	**20**	*e*	Pg			00 55 42.7	+8.0
ATHU	**Athens Univers**	**3.28**	**122**		P		**Pn**	**00 55 25.4**	**+2.4**
ATHU	**Athens Univers**	**3.28**	**122**		P		**Pn**	**00 55 25.4**	**+2.4**
KRND	**KRANIDI**	**3.28**	**136**		P		**Pn**	**00 55 24.9**	**+1.9**
KRND	**KRANIDI**	**3.28**	**136**		P		**Pn**	**00 55 24.9**	**+1.9**
PTL	**Penteli**	**3.28**	**120**		P		**Pn**	**00 55 25.7**	**+2.6**
PTL	**Penteli**	**3.28**	**120**		P		**Pn**	**00 55 25.7**	**+2.6**
TREB	**Trebinje**	**3.29**	**334**	*e*	Pn		**Pn**	**00 55 23.8**	**+0.7**
TREB				*e*	Sn		**Sn**	**00 56 01.3**	**-0.7**
TREB	**Trebinje**	**3.29**	**334**	*e*	Pn		**Pn**	**00 55 23.3**	**+0.2**
DION	**Dionisos Attik**	**3.31**	**119**		P		**Pn**	**00 55 26.1**	**+2.6**
DION	**Dionisos Attik**	**3.31**	**119**		P		**Pn**	**00 55 26.2**	**+2.6**
DBRK	**Dubrovnik**	**3.32**	**332**	*i*	Pn		**Pn**	**00 55 23.8**	**+0.3**
DBRK					Sn		**Sn**	**00 56 01.6**	**-1.1**
VLY	**Voula,Athens**	**3.35**	**124**		P		**Pn**	**00 55 26.3**	**+2.3**
VLY	**Voula,Athens**	**3.35**	**124**		P		**Pn**	**00 55 26.3**	**+2.3**
KVA	**Kavala**	**3.35**	**68**		P		**Pn**	**00 55 25.9**	**+1.9**
BRY	**Bratogost**	**3.40**	**338**	*e*	Pn		**Pn**	**00 55 25.3**	**+0.5**
BRY	**Bratogost**	**3.40**	**338**	⇑	iPn		**Pn**	**00 55 25.3**	**+0.5**
BRY				*i*	Sn		**Sn**	**00 56 06.1**	**+1.3**
SKY	**Skiros Island**	**3.43**	**104**		P		**Pn**	**00 55 28.1**	**+3.0**
KAVA	**Kavala**	**3.46**	**68**		P		**Pn**	**00 55 27.5**	**+2.0**
KAVA	**Kavala**	**3.46**	**68**		P		**Pn**	**00 55 27.5**	**+2.0**
SJES	**Sjenica**	**3.50**	**356**	*e*	Pn		**Pn**	**00 55 28.4**	**+2.2**
SELS	**Selova**	**3.51**	**10**	*e*	Pn		**Pn**	**00 55 27.9**	**+1.7**
UPM	**Unac-Piva**	**3.59**	**344**	*e*	Pn		**Pn**	**00 55 29.8**	**+2.4**
UPM	**Unac-Piva**	**3.59**	**344**	⇓	iPn		**Pn**	**00 55 28.4**	**+1.0**
UPM				*i*	Sn		**Sn**	**00 56 10.9**	**+1.3**
VTS	**Vitosha**	**3.62**	**37**	*e*	Pn		**Pn**	**00 55 30.8**	**+2.9**
VTS	**Vitosha**	**3.62**	**37**		P		**Pn**	**00 55 30.4**	**+2.5**
VTS	**Vitosha**	**3.62**	**37**	⇑	P		**Pn**	**00 55 30.4**	**+2.5**
VTS				⇓	S		**Sb**	**00 56 14.9**	**-4.9**
VTS	**Vitosha**	**3.62**	**37**		P		**Pn**	**00 55 30.4**	**+2.5**
VTS	**Vitosha**	**3.62**	**37**				**Pn**	**00 55 30.4**	**+2.5**
PLE	**Pljevlja**	**3.62**	**350**	⇓	iPn		**Pn**	**00 55 29.8**	**+1.1**
PLE				*i*	Sn		**Sn**	**00 56 12.1**	**+1.7**
STON	**Ston**	**3.66**	**329**	*e*	Pn		**Pn**	**00 55 28.4**	**+0.2**
STON				*e*	Sn		**

SGRR Singureni 6.15 42 ⇑P Pn 00 56 05.4 +2.9
AYDB Zeytinkoy-Aydi 6.22 105 eP Pn 00 56 07.5 +4.0
SLVT Silivri 6.22 74 eP Pn 00 56 05.8 +2.3
NVLJ Novalja 6.25 322 i Pn Pn 00 56 04.1 +0.3
NVLJ Sn Sn 00 57 12.9 -2.1
BUC1 Bucharest 6.27 41 ⇑P Pn 00 56 07.2 +3.1
CTYL Yalikoy Yolu 6.33 72 eP Pn 00 56 07.7 +2.7
MOSL Moslavina 6.39 337 ePn Pn 00 56 05.3 -0.5
DEV Deva 6.41 17 ⇑P Pn 00 56 10.1 +4.1
CTKS Kestanelik-??a 6.45 74 eP Pn 00 56 09.7 +3.2
ARR Arges 6.46 28 ⇑P Pn 00 56 09.7 +2.9
DAT Datca 6.50 116 eP Pn 00 56 10.6 +3.2
MTUR Matau 6.50 31 ⇑P Pn 00 56 10.4 +3.0
MORH Mrgy, Hungar 6.56 350 ⇑iPn Pn 00 56 07.6 -0.4
MANT Manisa 6.56 99 Pn 00 56 12.0 +3.6
SIRR Siria 6.58 8 ⇑P Pn 00 56 09.6 +1.3
SULR 6.62 40 ⇑P Pn 00 56 12.2 +3.4
ZKR Zakros 6.62 133 eP Pn 00 56 12.9 +3.9
ARMT Armutlu 6.63 80 eP Pn 00 56 11.9 +2.9
MDNY Mudanya-Bursa 6.63 82 eP Pn 00 56 12.5 +3.4
KULA Kula-Manisa 6.64 98 eP Pn 00 56 13.5 +4.2
VOIR 6.67 30 ⇑P Pn 00 56 13.0 +3.3
SIMA Simav-Kutahya 6.78 93 eP Pn 00 56 15.8 +4.6
RASA Rasa 6.78 47 ⇑P Pn 00 56 14.2 +3.2
MURB Monte Urbino 6.79 304 Pn Pn 00 56 15.8 +4.6
SECR 6.79 37 ⇑P Pn 00 56 15.4 +4.1
YER Yerkesik 6.81 110 eP Pn 00 56 15.7 +4.1
BOJS Bojanci 6.83 329 ⇑ePn Pn 00 56 12.2 +0.5
BOJS eSn Sn 00 57 25.2 -4.0
comp=Z,2µm,1.9s
ISK Istanbul-Kandi 6.83 76 eP Pn 00 56 15.0 +3.2
KAVV Kandilli-Istan 6.83 76 eP Pn 00 56 14.9 +3.1
ZAG Zagreb 6.83 334 ⇑iPn Pn 00 56 11.8 +0.1
ZAG Zagreb 6.83 334 ePn Pn 00 56 11.8 +0.1
ZAG Sn Sn 00 57 25.4 -3.9
OZLJ Ozalj 6.83 330 ePn Pn 00 56 11.9 +0.1
KLYT Kilyos 6.84 75 eP Pn 00 56 15.0 +3.0
KARP Karpathos 6.90 125 eP Pn 00 56 16.9 +4.1
PTJ Puntijarka 6.91 334 i Pn Pn 00 56 12.5 -0.4
PTJ Sn Sn 00 57 26.9 -4.4
KALN Kalnik 6.95 338 ePn Pn 00 56 13.0 -0.5
RIY Rijeka 7.01 324 ⇑iPn Pn 00 56 14.6 +0.4
RIY Rijeka 7.01 324 ePn Pn 00 56 14.5 +0.2
CRES Cresnjev 7.02 331 ⇑iPn Pn 00 56 14.6 +0.2
CRES eSn Sn 00 57 29.1 -4.8
comp=Z,550nm,0.8s
CRES Cresnjev 7.02 331 ⇑iPn Pn 00 56 14.6 +0.2
GBRS Gornja Briga 7.03 327 ⇑iPn Pn 00 56 15.5 +1.0
GBRS eSn Sn 00 57 29.8 -4.4
comp=Z,381nm,0.7s
MDB Medias 7.05 24 ⇑P Pn 00 56 18.2 +3.4
ISR Istrita 7.08 39 ⇑P Pn 00 56 18.3 +3.0
MLR Muntele Rosu 7.09 34 Pn Pn 00 56 17.4 +1.9
comp=Z,12nm,0.3s,baz=231,slow=6.8,SNR=73
MLR LR LR 00 59 40.0
comp=Z,7µm,19.3s,baz=190,slow=44
MLR Muntele Rosu 7.09 34 ⇓P Pn 00 56 18.8 +3.4
MLR Muntele Rosu 7.09 34 P Pn 00 56 18.3 +2.9
MLR Muntele Rosu 7.09 34 Pn 00 56 18.3 +2.9
ICOR Ion Corvin 7.10 50 ⇑P Pn 00 56 18.2 +2.7
TVSB Tavsanli 7.10 90 eP Pn 00 56 19.5 +3.9
GEDZ Gediz 7.11 93 eP Pn 00 56 20.3 +4.5
AMRR Amara 7.13 45 ⇑P Pn 00 56 19.3 +3.4
ARG Arkhangelos 7.14 117 eP Pn 00 56 20.7 +4.6
PGOR Pogoanele 7.15 42 ⇑P Pn 00 56 20.2 +4.0
TURN Turunc 7.16 111 eP Pn 00 56 17.2 +0.9
DALY Dalyan (Mula) 7.22 111 eP Pn 00 56 21.3 +4.2
VISS Visnje 7.24 328 ⇑iPn Pn 00 56 17.8 +0.4
VISS eSn Sn 00 57 34.3 -5.0
comp=Z,1µm,1.7s
DOPR Dopca 7.25 30 ⇓P Pn 00 56 20.2 +2.6
HRT Hereke 7.26 79 eP Pn 00 56 21.3 +3.6
SILT Sile 7.28 76 eP Pn 00 56 20.5 +2.6
ADVT Abdulvahap 7.29 82 eP Pn 00 56 22.3 +4.2
KOGS Kog 7.30 338 ⇑iPn Pn 00 56 18.1 -0.2
CJR Cluj-Napoca 7.36 18 ⇑P Pn 00 56 22.3 +3.3
CEY Cerknica 7.36 326 ⇑iPn Pn 00 56 19.4 +0.3
CAVI Cavuskoy 7.36 84 eP Pn 00 56 22.9 +3.8
CVDA Cernavoda 7.36 49 ⇓P Pn 00 56 22.4 +3.3
SKDS Skadanscina 7.39 323 ⇑iPn Pn 00 56 19.3 -0.3
SKDS eSn Sn 00 57 37.6 -5.5
comp=Z,152nm,0.2s
MANR Mangalia 7.41 54 ⇑P Pn 00 56 23.0 +3.2
BISRR Bisoca 7.47 37 ⇓P Pn 00 56 24.6 +4.0
GRER 7.48 39 ⇓P Pn 00 56 25.5 +4.9
TLBR Topalu 7.49 48 ⇓P Pn 00 56 24.1 +3.3
MFTR Murfatlar 7.50 51 ⇑P Pn 00 56 24.1 +3.1
OZUR 7.51 31 ⇓P Pn 00 56 24.1 +3.0
HARR Harsova 7.51 47 ⇓P Pn 00 56 24.0 +2.8
LJU Ljubljana 7.56 326 ⇑iPn Pn 00 56 21.8 0.0
FETY Fethiye 7.61 111 eP Pn 00 56 25.6 +3.1
TIRR Tirgusor 7.65 50 ⇓P Pn 00 56 25.4 +2.4
TIRR Tirgusor 7.65 50 ⇓P Pn 00 56 25.4 +2.4
TIRR Tirgusor 7.65 50 P Pn 00 56 25.0 +2.0
TIRR Tirgusor 7.65 50 Pn 00 56 25.0 +2.0
PLOR Plostina 7.68 36 ⇑P Pn 00 56 26.8 +3.3
CASP Castiglione de 7.70 296 Pn Pn 00 56 24.9 +1.1
VRI Vrincioaia 7.72 36 ⇑P Pn 00 56 27.5 +3.4
SAUV Serdivan-Sakar 7.75 80 eP Pn 00 56 27.7 +3.3
ODBI Odobesti 7.80 38 ⇑P Pn 00 56 29.4 +4.4
VOJS Vojsko 7.82 325 eSn Sn 00 57 49.4 -4.5
comp=Z,401nm,0.8s
PERS Pernice 7.83 333 ⇑iPn Pn 00 56 25.4 -0.2
PERS eSn Sn 00 57 47.9 -6.1
comp=Z,122nm,0.7s
BORA Eskisehir 7.84 86 eP Pn 00 56 29.0 +3.3
BASM Basmaki-Afyon 7.85 100 eP Pn 00 56 29.6 +3.7
PETR Petresti 7.85 38 ⇓P Pn 00 56 29.3 +3.5
GULT Gulveren 7.88 82 eP Pn 00 56 29.5 +3.2
TOPG Topolog 7.88 47 ⇓P Pn 00 56 28.6 +2.4
ARCR ARCALIA 7.89 21 ⇑P Pn 00 56 29.2 +2.8
SOKA Soboth 7.90 333 ePn Pn 00 56 26.3 -0.2
comp=Z,102nm,0.4s,SNR=174
SOKA eSn Sn 00 57 49.1 -6.6
comp=Z,76nm,0.5s
OBKA Obir 7.93 330 ePn Pn 00 56 26.6 -0.4
SNR=42
OBKA eSn Sn 00 57 52.2 -4.4
SNR=3.9
OBKA Obir 7.93 330 ePn Pn 00 56 26.7 -0.3
comp=Z,47nm,0.3s,SNR=44
OBKA eSn Sn 00 57 52.1 -4.4
comp=Z,216nm,0.5s
CFR Carcaliu 7.94 44 ⇑P Pn 00 56 29.3 +2.4
SRCK Saricakaya, Es 7.96 85 eP Pn 00 56 30.8 +3.4
TUDR 7.97 41 ⇑P Pn 00 56 31.2 +3.7
SCHL Schela 7.99 42 ⇑P Pn 00 56 31.8 +4.1
SHUT Suhut-Afyon 8.00 95 eP Pn 00 56 31.3 +4.3
JURR Jurilovca 8.10 49 ⇓P Pn 00 56 31.8 +2.6
SRO2 Moca 8.11 351 eP Pn 00 56 29.8 +0.5
SRO2 e 00 57 58.9
SRO2 Moca 8.11 351 ePN Pn 00 56 29.8 +0.5
SRO2 eSN Sn 00 57 58.9 -1.8
ELL Elmali 8.15 109 eP Pn 00 56 34.1 +4.0
ELL Elmali 8.15 109 P Pn 00 56 34.2 +4.0
ELL Elmali 8.15 109 Pn 00 56 34.2 +4.0
PSZ Piszkesteto 8.16 358 ⇓P Pn 00 56 30.8 +0.7
PSZ Piszkesteto 8.16 358 P Pn 00 56 30.1 +0.1
PSZ Piszkesteto 8.16 358 Pn 00 56 30.1 +0.1
AKAS Kas 8.17 113 eP Pn 00 56 34.3 +4.0
TESR Tescani 8.20 33 ⇑P Pn 00 56 33.2 +2.7
ISP Isparta 8.23 100 eP Pn 00 56 35.6 +4.4
ISP Isparta 8.23 100 P Pn 00 56 34.7 +3.5
ISP Isparta 8.23 100 Pn 00 56 34.7 +3.5
ARSA Arzberg 8.24 337 ePn Pn 00 56 31.0 -0.1
SNR=39
ARSA Arzberg 8.24 337 i Pn Pn 00 56 30.8 -0.3
comp=Z,33nm,0.4s,SNR=51
ARSA Sn Sn 00 57 59.8 -4.1
comp=Z,21nm,0.5s
BMR Baia Mare 8.24 15 ⇑P Pn 00 56 33.3 +2.2
VARL Varlezi 8.28 40 ⇑P Pn 00 56 35.2 +3.6
ZCCA Zocca 8.29 307 Pn 00 56 33.0 +1.1
TLCR 8.31 47 ⇓P Pn 00 56 35.4 +3.3
CIFT Cifteler, Eski 8.34 89 eP Pn 00 56 35.6 +2.9
KORT Korkueli 8.38 106 eP Pn 00 56 37.4 +4.2
BCK Bucak 8.40 103 eP Pn 00 56 37.4 +4.0
MYKA Terra Mystica 8.40 327 ePn Pn 00 56 33.4 0.0
comp=Z,30nm,0.4s,SNR=25
MYKA eSn Sn 00 58 04.0 -3.9
comp=Z,94nm,0.8s

MDUB Mudurnu 8.40 82 eP Pn 00 56 36.8 +3.3
BIR Birlad 8.44 37 ⇑P Pn 00 56 37.3 +3.5
GIRR Girov 8.49 30 ⇑P Pn 00 56 38.3 +3.7
VLC Villacollemand 8.57 304 Pn Pn 00 56 36.0 +0.3
BUR AR Bucovina Array 8.62 23 ⇑P Pn 00 56 39.4 +2.9
ANTB Antalya 8.64 106 eP Pn 00 56 40.9 +4.2
BUR08 Bucovina Ar. S 8.64 23 Pn 00 56 39.8 +3.0
AUSIV SIVRIHISAR 8.70 89 eP Pn 00 56 41.9 +4.3
KECS Kecovo 8.72 1 eP Pn 00 56 39.6 +1.9
KECS e 00 58 12.5
KECS Kecovo 8.72 1 ePN Pn 00 56 39.6 +1.9
KECS eSN Sn 00 58 12.5 -3.2
ZST Bratislava 8.73 346 eP Pn 00 56 38.0 +0.1
ZST e 00 58 10.6
ZST MLR MLR
comp=Z,900nm,12.9s
ZST Bratislava 8.73 346 ePN Pn 00 56 38.0 +0.1
ZST eSN Sn 00 58 10.6 -5.4
ZST eL L 01 00 41.3
CONA Conrad Observa 8.76 340 ePn Pn 00 56 37.8 -0.5
comp=Z,7.4nm,0.4s,SNR=23
VYHS Vyhne 8.79 354 eP Pn 00 56 39.7 +1.1
VYHS e 00 58 12.5
VYHS MLR MLR
comp=Z,4µm,18.1s
VYHS Vyhne 8.79 354 ePN Pn 00 56 39.7 +1.1
VYHS eSN Sn 00 58 12.5 -4.9
VYHS eL L 01 00 33.1
MODS Modra-Piesok 8.87 347 eP Pn 00 56 39.4 -0.4
MODS MLR MLR
comp=Z,6µm,16.2s
MODS Modra-Piesok 8.87 347 ePN Pn 00 56 39.4 -0.4
MODS eL L 01 00 48.5
KBA Koelnbreinsper 8.88 328 ePn Pn 00 56 40.5 +0.5
SNR=14
KBA eSn Sn 00 58 14.8 -5.1
SNR=2.7
KBA Koelnbreinsper 8.88 328 i Pn Pn 00 56 40.0 -0.1
comp=Z,17nm,0.3s,SNR=16
KBA Sn Sn 00 58 13.8 -6.1
comp=Z,73nm,0.7s
LEOM Leova 8.88 38 ⇑P Pn 00 56 42.2 +2.3
PGF Pioggiola 8.95 292 ePn Pn 00 56 40.3 -0.7
PGF eSn Sn 00 58 11.3 -10
comp=Z,141nm,1.2s
UZH Uzhgorod 8.98 9 ⇑iP Pn 00 56 43.0 +1.7
UZH eS Sn 00 58 23.3 +1.2
UZH MLR MLR
comp=Z,300nm,11.0s
UZH MLR MLR
comp=N,600nm,11.0s
UZH MLR MLR
comp=E,270nm,11.0s
ABTA Abfaltersbach 8.98 324 ePn Pn 00 56 41.2 -0.2
comp=E,39nm,0.4s,SNR=24
ABTA eSn Sn 00 58 17.4 -4.9
comp=E,235nm,0.7s
MOA Molln 9.17 334 ePn Pn 00 56 44.4 +0.5
SNR=98
MOA eSn Sn 00 58 23.9 -2.9
SNR=4.0
MOA Molln 9.17 334 i Pn Pn 00 56 44.6 +0.6
comp=E,37nm,0.3s,SNR=22
MOA eSn Sn 00 58 22.8 -4.1
comp=E,63nm,0.5s
SLUM Salum 9.18 153 P Pn 00 56 42.9 -1.1
baz=160
SLUM AMP 00 58 00.0
baz=160
SLUM S Sn 00 58 14.0 -13
baz=160
MSSA Maissana 9.20 303 Pn Pn 00 56 44.3 -0.1
KOLS Kolonicke sedl 9.28 8 eP Pn 00 56 47.3 +1.9
KOLS MLR MLR
comp=Z,4µm,15.0s
KOLS Kolonicke sedl 9.28 8 ePN Pn 00 56 47.3 +1.9
KOLS eL L 01 00 45.0
JAVC Velka Javorina 9.28 349 ePN Pn 00 56 47.0 +1.6
LANS Liptovska Anna 9.40 357 eP Pn 00 56 50.6 +3.5
LANS Liptovska Anna 9.40 357 ePN Pn 00 56 50.6 +3.5
MILM Milestii Mici 9.47 38 ⇑P Pn 00 56 49.5 +1.5
KIS Kishinev 9.53 38 ⇓iP Pn 00 56 52.0 +3.2
KIS Kishinev 9.53 38 i PP Pn 00 56 59.0 +10
KIS i Li 00 59 48.0
KIS i LQ LQ 01 30 28.0
KIS i LR LR 01 30 48.0
comp=Z,4µm,14.0s
KIS Kishinev 9.53 38 ⇑P Pn 00 56 50.7 +1.9
KIS Kishinev 9.53 38 ⇓iP Pn 00 56 52.0 +3.2
KIS pmax pmax
comp=Z,210nm,2.0s
KIS pmax pmax
comp=N,300nm,2.0s
KEST Kesra 9.54 248 Pn Pn 00 56 49.7 +0.6
comp=N,1.4nm,0.3s,baz=338,slow=2.0,SNR=60
KEST LR LR 01 01 39.3
comp=N,1µm,18.5s,baz=12,slow=44
BR231 Keskin MP Arra 9.62 86 Pn 00 56 53.5 +3.3
RJOB Jochberg 9.63 328 ePn Pn 00 56 50.4 +0.2
SNR=86
RJOB eSn Sn 00 58 35.0 -3.1
SNR=3.8
ANTO Ankara 9.63 85 ⇑P Pn 00 56 52.4 +2.1
ANTO Ankara 9.63 85 P Pn 00 56 54.3 +3.9
ANTO Ankara 9.63 85 Pn 00 56 54.2 +3.9
KRUC Moravsky 9.70 345 ePN Pn 00 56 51.6 +0.5
WTTA Wattenberg 9.77 323 ePn Pn 00 56 52.4 +0.1
SNR=77
WTTA eSn Sn 00 58 37.5 -4.3
SNR=3.7
WTTA Wattenberg 9.77 323 i Pn Pn 00 56 52.1 -0.1
comp=N,59nm,0.4s,SNR=47
WTTA eSn Sn 00 58 37.9 -3.8
comp=N,56nm,0.6s
WATA Walderalm 9.85 323 i Pn Pn 00 56 53.5 +0.2
comp=N,31nm,0.5s,SNR=42
WATA Sn Sn 00 58 37.7 -5.9
comp=N,123nm,0.9s
VRAC Vranov 9.89 346 Pn Pn 00 56 53.0 -0.8
comp=N,0.8nm,0.3s,baz=174,slow=12,SNR=31
VRAC LR LR 01 01 18.5
comp=N,1µm,22.0s,baz=172,slow=41
VRAC Vranov 9.89 346 ePN Pn 00 56 53.9 +0.1
VRAC Vranov 9.89 346 ⇑P Pn 00 56 54.0 +0.2
VRAC Vranov 9.89 346 P Pn 00 56 53.0 -0.8
SQTA Sankt Quirin 9.94 322 ePn Pn 00 56 55.5 +0.9
comp=N,44nm,0.4s,SNR=19
SQTA eSn Sn 00 58 43.6 -2.2
comp=N,122nm,0.6s
KWP Kalwaria Pacla 10.02 9 eP Pn 00 56 58.8 +3.3
FETA Feichten 10.04 319 ePn Pn 00 56 56.4 +0.5
comp=N,8.2nm,0.3s
FETA Sn Sn 00 58 42.9 -5.4
comp=N,41nm,0.5s
MOTA Moosalm 10.08 322 ePn Pn 00 56 56.8 +0.4
comp=N,41nm,0.5s,SNR=38
MOTA Sn Sn 00 58 44.6 -4.7
comp=N,84nm,0.6s
TREC Trest 10.12 342 AMS AMS 01 01 10.0
comp=N,3µm,14.4s
MATC Matruh 10.13 144 P Pn 00 56 54.3 -2.7
baz=150
MATC AMP 00 58 00.0
baz=150
MATC S Sn 00 58 34.6 -16
baz=150
OKC Ostrava-Krasne 10.18 352 eP Pn 00 56 58.6 +0.9
OKC e 00 58 46.5
OKC MLR MLR
comp=Z,3µm,10.7s
OKC Ostrava-Krasne 10.18 352 ePN Pn 00 56 58.6 +0.9
OKC eSN Sn 00 58 46.5 -5.1
OKC AMS AMS 01 02 00.0
comp=Z,3µm,10.7s
SORM Soroca 10.19 32 ⇓P Pn 00 56 59.6 +1.8
MORC Moravsky Berou 10.20 350 ePN Pn 00 56 58.2 +0.2
MORC Moravsky Berou 10.20 350 ⇑P Pn 00 56 58.7 +0.7
GEC2 GERESS Array S 10.22 335 ePn Pn 00 56 57.7 -0.7
SNR=20
GEC2 eSn Sn 00 58 49.2 -3.6
SNR=2.4
GEC2 GERESS Array S 10.22 335 Pn 00 56 58.0 -0.3
GERES GERESS Array B 10.22 335 Pn Pn 00 56 57.6 -0.7
comp=Z,5.5nm,0.3s,baz=155,slow=13,SNR=100
GERES Sn Sn 00 58 48.5 -4.3
comp=Z,8.0nm,0.3s,baz=148,slow=23,SNR=7.9
GERES LR LR 01 02 05.0
comp=Z,2µm,18.3s,baz=151,slow=44
GERES ScP ScP 01 06 35.6 -2.3
comp=Z,0.2nm,0.3s,baz=139,slow=1.9,SNR=5.9
BR131 Keskin Array S 10.29 86 i P Pn 00 57 01.7 +2.2
BR131 Keskin Array S 10.29 86 Pn 00 57 02.5 +3.0
BRTR Keskin Array B 10.29 86 Pn Pn 00 57 02.2 +2.7
comp=Z,2.3nm,0.3s,baz=267,slow=12,SNR=59
BRTR LR LR 01 01 39.4
comp=Z,2µm,18.4s,baz=250,slow=42
DAVOX Davos/Dischmat 10.32 316 Pn Pn 00 57 01.2 +1.4
comp=Z,6.4nm,0.3s,baz=124,slow=9.6,SNR=37
DAVOX Sn Sn 00 58 53.8 -1.5
comp=Z,5.6nm,0.3s,baz=8.4,slow=10,SNR=4.0
DAVOX LR LR 01 02 30.0
comp=Z,226nm,21.3s,baz=126,slow=46
RETA Reutte 10.34 321 ePn Pn 00 56 59.9 -0.1
comp=Z,13nm,0.3s
RETA eSn Sn 00 58 51.8 -3.9
comp=Z,71nm,0.6s
LVV L'vov 10.40 14 eP Pn 00 57 04.8 +4.1
LVV eS Sn 00 59 01.9 +5.0
LVV MLR MLR
comp=Z,3µm,11.0s
SBF Sospel 10.42 297 eP Pn 00 57 04.8 +3.7
SBF eSn Sn 00 58 54.0 -3.6
comp=Z,24nm,0.3s
TUE Stuetta 10.42 314 Pn 00 57 01.4 +0.2
OJC Ojcow 10.46 358 eP Pn 00 57 02.6 +1.1
KHC Kasperske Hory 10.51 335 ceP Pn 00 57 00.1 -2.2
KHC pmax pmax
comp=Z,55nm,1.0s
KHC Kasperske Hory 10.51 335 ePN Pn 00 57 01.6 -0.6
KHC eSN Sn 00 58 51.5 -8.2
KHC AMS AMS 01 01 40.0
comp=Z,3µm,22.1s
KHC Kasperske Hory 10.51 335 Pn 00 57 01.7 -0.6
KRLC Kraliky 10.60 348 eP Pn 00 57 04.8 +1.3
KRLC MLR MLR
comp=Z,4µm,12.8s
KRLC Kraliky 10.60 348 ePN Pn 00 57 04.8 +1.3
KRLC AMS AMS 01 01 50.0
comp=Z,4µm,12.8s
FUR Furstenfeldbru 10.60 325 ePn Pn 00 57 02.9 -0.7
SNR=6.4
FUR eSn Sn 00 58 54.6 -7.4
SNR=1.9
BZK Bozkurt 10.63 74 ⇑P Pn 00 57 05.9 +2.1
DAVA Damuels 10.64 318 ePn Pn 00 57 05.5 +1.3
SNR=13
DAVA eSn Sn 00 59 01.0 -2.2
SNR=4.6
DAVA Damuels 10.64 318 ePn Pn 00 57 05.0 +0.8
comp=Z,9.9nm,0.3s
DAVA Sn Sn 00 58 59.5 -3.7
PLONS Plons/SG 10.75 316 ePn Pn 00 57 07.1 +1.4
SNR=18
PLONS eSn Sn 00 59 01.8 -3.9
SNR=3.8
WET Wettzell 10.76 333 ePn Pn 00 57 04.4 -1.2
SNR=14
WET eSn Sn 00 59 01.1 -4.7
SNR=2.6
UBR Ueberruh 10.80 320 ePn Pn 00 57 06.3 +0.1
SNR=12
GOPC GO Pecny, Ondr 10.87 341 eP Pn 00 57 07.3 +0.2
GOPC MLR MLR
comp=Z,3µm,12.3s
GOPC GO Pecny, Ondr 10.87 341 ePN Pn 00 57 07.3 +0.2
GOPC AMS AMS 01 01 40.0
comp=Z,3µm,12.3s
PBCC Pribram 10.87 338 ePN Pn 00 57 07.3 +0.1
PBCC eSN Sn 00 59 00.2 -8.4
FRF La Foret Royal 10.88 295 eP Pn 00 57 11.5 +4.2
FRF eSn Sn 00 58 57.7 -11
comp=Z,10.0nm,0.5s
LMR La Mourre 10.91 294 eP Pn 00 57 11.3 +3.5
LMR eSn Sn 00 58 59.4 -10
comp=Z,3.0nm,0.3s
DPC Dobruska-Polom 10.95 347 eP Pn 00 57 08.5 +0.3
DPC MLR MLR
comp=Z,4µm,14.7s
DPC Dobruska-Polom 10.95 347 ePN Pn 00 57 08.5 +0.3
DPC AMS AMS 01 01 50.0
comp=Z,4µm,14.7s
PRU Pruhonice 11.00 340 eP Pn 00 57 09.1 +0.2
PRU MLR MLR
comp=Z,3µm,12.6s
PRU Pruhonice 11.00 340 ePN Pn 00 57 09.1 +0.2
PRU AMS AMS 01 01 40.0
comp=Z,3µm,12.6s
LEF Lefka 11.05 111 ⇑P Pn 00 57 12.0 +2.4
UPC Upice 11.15 346 eP Pn 00 57 11.7 +0.7
UPC MLR MLR
comp=Z,3µm,13.5s
UPC Upice 11.15 346 ePN Pn 00 57 11.7 +0.7
UPC AMS AMS 01 02 10.0
comp=Z,3µm,13.5s
OSTC Ostas 11.16 347 ePN Pn 00 57 10.8 -0.4
OSTC AMS AMS 01 02 10.0
comp=Z,4µm,15.1s
MBDF Montbardon 11.17 301 ePn Pn 00 57 10.6 -0.8
MBDF eSn Sn 00 59 09.0 -7.0
comp=Z,17nm,0.4s
CHVC Chvalec 11.22 346 ePN Pn 00 57 12.4 +0.4
CHVC AMS AMS 01 02 10.0
comp=Z,3µm,15.0s
WILA Wila 11.23 317 ePn Pn 00 57 14.2 +1.9
SNR=6.6
SWA2 11.33 156 P Pn 00 57 11.4 -2.1
baz=163
SWA2 AMP 00 59 00.0
baz=163
SWA2 S Sn 00 59 07.2 -13
baz=163
BNI Bardonecchia 11.35 302 P Pn 00 57 15.6 +1.7
BNI Bardonecchia 11.35 302 Pn 00 57 15.6 +1.7
CSS Mathiatis 11.44 111 Pn 00 57 17.6 +2.6
SIM Simferopol' 11.47 59 ceP Pn 00 57 16.9 +1.5
SIM S Sn 00 59 23.0 -0.2
SIM pmax pmax
comp=Z,21nm,0.9s
SIM MLR MLR
comp=Z,800nm,12.3s
LPG La Plagne 11.48 304 ePn Pn 00 57 15.1 -0.8
LPG La Plagne 11.48 304 eP Pn 00 57 20.3 +4.4
LPG eSn Sn 00 59 12.6 -11
comp=Z,101nm,0.7s
PVCC Panska Ves 11.49 341 eP Pn 00 57 15.5 -0.1
PVCC MLR MLR
comp=Z,2µm,14.4s
PVCC Panska Ves 11.49 341 ePN Pn 00 57 15.5 -0.1
PVCC AMS AMS 01 02 00.0
comp=Z,2µm,14.4s
LPL La Plagne 11.51 304 ePn Pn 00 57 15.6 -0.5
LPL La Plagne 11.51 304 eP Pn 00 57 20.3 +4.2
LPL eSn Sn 00 59 14.0 -10
comp=Z,105nm,0.4s
ROTZ Rotzenmuhle 11.52 333 ePn Pn 00 57 14.1 -1.9
SNR=8.8
DIKM Dikmen 11.53 76 ⇑P Pn 00 57 19.5 +3.3
SLE Schleitheim 11.67 317 ePn Pn 00 57 18.7 +0.5
SNR=10
SULZ Cheisacher 11.73 315 ePn Pn 00 57 18.4 -0.6
SNR=8.2
SMRF Simiane la Rot 11.74 296 eP Pn 00 57 22.7 +3.6
SMRF eSn Sn 00 59 21.0 -8.8
comp=Z,7.1nm,0.7s
MANZ Manzenberg 11.74 333 ePn Pn 00 57 17.3 -1.7
SNR=9.6
ORIF Oris-en-Rattie 11.83 300 ePn Pn 00 57 20.1 -0.2
ORIF eSn Sn 00 59 20.9 -11
comp=Z,23nm,0.5s
NKC Novy Kostel 11.83 335 eP Pn 00 57 19.8 -0.5
NKC e 00 59 23.7
NKC MLR MLR
comp=Z,2µm,13.7s
NKC Novy Kostel 11.83 335 ePN Pn 00 57 19.8 -0.5
NKC eSN Sn 00 59 23.7 -8.4
NKC AMS AMS 01 02 20.0
comp=Z,2µm,13.7s
BALST Balsthal 11.85 314 ePn Pn 00 57 20.2 -0.3
SNR=10.0
WERN Wernitzgruen 11.90 335 ePn Pn 00 57 20.7 -0.6
SNR=9.4

BRG	**Berggiesshubel**	**11.96**	**340**	*e*P		**Pn**	**00 57 22.6**	**+0.6**
	comp=Z,10nm,1.2s							
BRG				*i* PP		**PnPn**	**00 57 27.0**	**-2.8**
	comp=Z,18nm,1.4s							
	comp=N,807nm,10.7s							
	comp=E,807nm,10.7s							
	comp=Z,2µm,14.2s							
BRG	**Berggiesshubel**	**11.96**	**340**	*e*P		**Pn**	**00 57 22.6**	**+0.6**
BRG				pmax	pmax			
	comp=Z,10.0nm,1.2s							
BRG				pmax	pmax			
	comp=Z,18nm,1.4s							
BRG				MLR	MLR			
	comp=N,807nm,10.7s							
BRG				MLR	MLR			
	comp=E,807nm,10.7s							
BRG				MLR	MLR			
	comp=Z,2µm,14.2s							
TANN	**Tannenbergstha**	**11.99**	**335**	*e*Pn		**Pn**	**00 57 22.9**	**+0.5**
	SNR=7.7							
BFO	**Black Forest**	**12.12**	**319**	*e*Pn		**Pn**	**00 57 23.5**	**-0.8**
	SNR=15							
BFO	**Black Forest**	**12.12**	**319**	P		**Pn**	**00 57 22.7**	**-1.6**
BFO	**Black Forest**	**12.12**	**319**			**Pn**	**00 57 22.7**	**-1.6**
CABF	**La Chapelle**	**12.40**	**308**	*e*Pn		**Pn**	**00 57 26.7**	**-1.5**
CABF				*e*Sn		**Sn**	**00 59 37.5**	**-8.6**
	comp=Z,197nm,1.0s							
CABF				*e*Sg			01 00 55.5	
MOX	**Moxa**	**12.46**	**334**	*e*Pn		**Pn**	**00 57 27.9**	**-1.1**
	SNR=19							
HINF	**Hinteralfeld**	**12.59**	**314**	*e*Pn		**Pn**	**00 57 29.7**	**-1.0**
HINF				*e*Sn		Sn	00 59 39.7	-11
	comp=Z,29nm,0.3s							
HINF				*e*Sg			01 01 04.6	
CLL	**Collm**	**12.61**	**339**	*e*P		**Pn**	**00 57 34.0**	**+3.1**
CLL				*e*PP		**PnPn**	**00 57 41.0**	**+2.3**
CLL				*i* sPP			00 57 44.0	
	comp=Z,47nm,1.1s							
CLL				*i* sPPP			00 57 53.4	
	comp=Z,90nm,1.2s							
CLL				*e*(S)		**Sn**	**00 59 52.0**	**+1.0**
CLL				*e*			01 01 15.0	
CLL				*e*			01 01 28.0	
CLL				Lmax			01 03 00.0	
CLL	**Collm**	**12.61**	**339**	*e*P		**Pn**	**00 57 34.0**	**+3.1**
CLL				*e*S		**Sn**	**00 59 52.0**	**+1.0**
CLL	**Collm**	**12.61**	**339**			**Pn**	**00 57 31.5**	**+0.6**
AKASG	**Malin Array Be**	**12.61**	**27**	Pn		**Pn**	**00 57 31.1**	**+0.2**
	comp=Z,2.4nm,0.3s,baz=211,slow=12,SNR=40							
AKASG				LR		LR	01 02 53.7	
	comp=Z,2µm,18.6s,baz=205,slow=40							
AKASG				ScP		**ScP**	**01 06 37.7**	**-3.3**
	comp=Z,0.3nm,0.3s,baz=249,slow=1.5,SNR=7.3							
AKASG	**Malin Array Be**	**12.61**	**27**	*i* P		**Pn**	**00 57 31.1**	**+0.2**
AKASG				pmax	pmax			
	comp=Z,18nm,0.8s							
AKBB	**Malin Array Si**	**12.61**	**27**	*ce*P		**Pn**	**00 57 31.0**	**+0.1**
AKBB	**Malin Array Si**	**12.61**	**27**			**Pn**	**00 57 32.5**	**+1.6**
VIVF	**Saint-Julien-l**	**12.62**	**299**	*e*Pn		**Pn**	**00 57 31.8**	**+0.7**
VIVF	**Saint-Julien-l**	**12.62**	**299**	*e*P		Pn	00 57 35.4	+4.3
VIVF				*e*Sn		**Sn**	**00 59 43.1**	**-8.2**
	comp=Z,3.6nm,0.3s							
ECH	**Echery**	**12.66**	**316**	P		**Pn**	**00 57 31.1**	**-0.5**
ECH	**Echery**	**12.66**	**316**			**Pn**	**00 57 31.1**	**-0.5**
CDF	**Champ du Feu**	**12.71**	**317**	*e*Pn		**Pn**	**00 57 31.9**	**-0.5**
CDF				*e*Sn		**Sn**	**00 59 45.3**	**-8.4**
	comp=Z,38nm,0.7s							
SSB	**Saint Sauveur**	**12.84**	**301**	P		**Pn**	**00 57 34.8**	**+0.7**
SSB	**Saint Sauveur**	**12.84**	**301**			**Pn**	**00 57 34.8**	**+0.7**
LASF	**Ste Croix**	**12.96**	**295**	*e*P		**Pn**	**00 57 39.6**	**+3.8**
LASF				*e*Sn		Sn	00 59 47.2	-12
	comp=Z,2.1nm,0.5s							
HAU	**Haudompre**	**12.97**	**314**	*e*Pn		**Pn**	**00 57 35.2**	**-0.8**
HAU				*e*Sn		Sn	00 59 48.3	-12
	comp=Z,157nm,0.7s							
HMYD	**Mayadein**	**13.17**	**136**	P		**Pn**	**00 57 34.9**	**-3.8**
	baz=140							
HNAT	**Natroun**	**13.20**	**137**	P		**Pn**	**00 57 36.0**	**-3.1**
	baz=141							
TNS	**Taunus Mts**	**13.37**	**325**	*e*Pn		**Pn**	**00 57 41.3**	**-0.1**
	SNR=11							
GAZ	**Gaziantep**	**13.52**	**96**			**Pn**	**00 57 45.8**	**+2.3**
PAGF	**Fort de Pagny**	**13.63**	**315**	*e*Pn		**Pn**	**00 57 44.7**	**-0.1**
PAGF				*e*Sn		Sn	01 00 05.4	-11
	comp=Z,11nm,0.4s							
KOT	**Kottamia**	**13.64**	**132**	P		**Pn**	**00 57 40.8**	**-4.3**
	baz=137							
ANN	**Anapa**	**13.66**	**63**	*e*P		**Pn**	**00 57 42.6**	**-2.6**
ANN				pmax	pmax			
	comp=Z,43nm,1.0s							
HWQ	**Hawqa**	**13.66**	**109**	*e*P		**Pn**	**00 57 46.9**	**+1.4**
HSAF	**As Saff**	**13.72**	**134**	P		**Pn**	**00 57 41.6**	**-4.5**
	baz=138							
SMF	**Signal de Mont**	**13.80**	**305**	*e*Pn		**Pn**	**00 57 46.8**	**-0.5**
SMF				*e*Sn		Sn	01 00 07.8	-12
	comp=Z,18nm,0.4s							
SFTF	**Sexfontaines**	**13.82**	**313**	*e*Pn		**Pn**	**00 57 47.1**	**-0.3**
	baz=129							
SFTF				*e*Sn		Sn	01 00 11.0	-10
	comp=Z,15nm,0.4s							
GLL	**Jalalah**	**13.84**	**134**	P		**Pn**	**00 57 43.8**	**-4.0**
	baz=138							
MMA0B	**Mount Meron ar**	**13.91**	**114**	Pn		**Pn**	**00 57 47.7**	**-1.2**
MMAI	**Mount Meron Ar**	**13.91**	**114**	Pn		**Pn**	**00 57 48.1**	**-0.8**
	comp=Z,5.2nm,0.3s,baz=295,slow=12,SNR=26							
MMAI				Sn		**Sn**	**01 00 17.8**	**-5.4**
	comp=Z,3.0nm,0.3s,baz=303,slow=24,SNR=3.5							
RCY	**Rachaya**	**13.97**	**112**	*e*P		**Pn**	**00 57 50.0**	**+0.3**
MEZF	**Maizieres J'vi**	**13.97**	**314**	*e*Pn		**Pn**	**00 57 49.1**	**-0.4**
	baz=132							
MEZF				*e*Sn		Sn	01 00 15.5	-8.8
	comp=Z,7.8nm,0.3s							
SHBL	**Chebaa**	**13.98**	**112**	*e*P		**Pn**	**00 57 49.9**	**+0.1**
MTLF	**Montolieu**	**13.98**	**291**	*e*P		**P**	**00 57 53.7**	**-4.0**
GEM	**Giv'at Ha'Em**	**13.99**	**113**	Pn		**Pn**	**00 57 48.8**	**-1.1**
KSDI	**Kefar Szold**	**14.00**	**113**	Pn		**Pn**	**00 57 48.6**	**-1.4**
NATI	**Neve Ativ**	**14.02**	**113**	Pn		**Pn**	**00 57 49.6**	**-0.6**
LOR	**Lormes**	**14.06**	**308**	*e*Pn		**Pn**	**00 57 50.0**	**-0.7**
	baz=125							
LOR	**Lormes**	**14.06**	**308**	*e*P		**Pn**	**00 57 54.1**	**+3.4**
LOR				*e*Sn		Sn	01 00 14.3	-12
	comp=Z,30nm,0.3s							
WLF	**Walferdange**	**14.07**	**319**	Pn		**Pn**	**00 57 51.7**	**+0.8**
WLF				PnPn		**P**	**00 58 00.1**	**+1.4**
WLF	**Walferdange**	**14.07**	**319**	P		**Pn**	**00 57 51.4**	**+0.5**
WLF	**Walferdange**	**14.07**	**319**			**Pn**	**00 57 51.4**	**+0.5**
AVF	**Avril sur Loir**	**14.17**	**305**	*e*Pn		**Pn**	**00 57 51.7**	**-0.6**
AVF	**Avril sur Loir**	**14.17**	**305**	*e*P		**P**	**00 57 55.8**	**-3.9**
AVF				*e*Sn		Sn	01 00 16.6	-13
	comp=Z,8.1nm,0.4s							
SSF	**Saint Saulge**	**14.19**	**306**	*e*Pn		**Pn**	**00 57 50.8**	**-1.7**
SSF				*e*Sn		Sn	01 00 15.4	-14
	comp=Z,9.5nm,0.4s							
HFRF	**Wahat Farafira**	**14.25**	**150**	P		**Pn**	**00 57 49.4**	**-4.0**
	baz=154							
HFRF				AMP			01 00 12.1	
	baz=154							
MMLI	**Mount Malkishu**	**14.25**	**116**	Pn		**Pn**	**00 57 52.5**	**-1.0**
NBNS	**Bani Suef**	**14.36**	**137**	P		**Pn**	**00 57 51.5**	**-3.5**
	baz=142							
NBNS				AMP			01 00 12.1	
	baz=142							
SUW	**Suwalki**	**14.39**	**7**	*e*P		**Pn**	**00 57 56.0**	**+0.8**
SUW	**Suwalki**	**14.39**	**7**	P		**Pn**	**00 57 56.2**	**+1.0**
SUW	**Suwalki**	**14.39**	**7**			**Pn**	**00 57 56.2**	**+1.0**
BGF	**Bois d'Agland**	**14.40**	**304**	*e*Pn		**Pn**	**00 57 54.2**	**-1.2**
BGF				*e*Sn		Sn	01 00 22.9	-12
	comp=Z,13nm,0.3s							
CAF	**Calviac**	**14.41**	**297**	*e*Pn		**Pn**	**00 57 54.5**	**-1.1**
CAF				*e*Sn		Sn	01 00 26.0	-9.1
	comp=Z,1.1nm,0.3s							
HMDT	**Nahal Hemdat**	**14.43**	**117**	Pn		**Pn**	**00 57 54.1**	**-1.8**
AMAZ	**Amatzia**	**14.45**	**120**	Pn		**Pn**	**00 57 54.3**	**-1.9**
KZIT	**Kziot**	**14.51**	**123**	Pn		**Pn**	**00 57 54.3**	**-2.7**
YTIR	**Yattir**	**14.69**	**120**	Pn		**Pn**	**00 57 57.0**	**-2.5**
TCF	**Toulx Ste Croi**	**14.72**	**302**	*e*Pn		**Pn**	**00 57 59.0**	**-0.8**
TCF				*e*Sn		Sn	01 00 30.6	-12
	comp=Z,5.0nm,0.3s							
DSI	**Dead Sea**	**14.74**	**119**	Pn		**Pn**	**00 57 58.0**	**-2.1**
MEM	**Membach**	**14.76**	**322**	pPn		**Pn**	**00 58 01.5**	**+1.2**
MEM				pP		**P**	**00 58 08.1**	**+1.9**
MEM				PbPb		**PbPb**	**00 58 43.0**	**-5.7**
HYF	**Humbligny**	**14.81**	**306**	*e*Pn		**Pn**	**00 57 59.8**	**-1.2**
HYF	**Humbligny**	**14.81**	**306**	*e*P		**P**	**00 58 04.2**	**-2.7**
HYF				*e*Sn		Sn	01 00 32.3	-12
RJF	**Les Rejaudoux**	**14.88**	**298**	*e*P		**P**	**00 58 06.1**	**-1.6**
RJF				*e*Sn		Sn	01 00 33.7	-13
	comp=Z,0.8nm,0.3s							
TAMRE	**El Minia**	**14.94**	**141**	P		**Pn**	**00 58 00.3**	**-2.5**
	baz=145							
SOC	**Sochi**	**15.02**	**69**	*e*P		**P**	**00 58 09.2**	**0.0**
SOC				pmax	pmax			
	comp=Z,88nm,0.9s							
SOC				MLR	MLR			
	comp=Z,207nm,16.0s							
GIVF	**Givet**	**15.02**	**319**	*e*P		**P**	**00 58 07.2**	**-2.0**
GIVF				*e*Sn		Sn	01 00 40.2	-10
	comp=Z,2.9nm,0.5s							
GHAJ	**Ghor Haditha**	**15.03**	**119**	Pn		**Pn**	**00 58 01.9**	**-2.1**
EBNR	**Beni Rached**	**15.17**	**263**	P		**P**	**00 58 09.0**	**-2.0**
ZFRI	**Zfri**	**15.25**	**122**	Pn		**Pn**	**00 58 04.4**	**-2.5**
KRMI	**Paran Flat**	**15.25**	**125**	Pn		**Pn**	**00 58 04.1**	**-2.9**
PRNI	**Paran**	**15.27**	**123**	Pn		**Pn**	**00 58 05.3**	**-1.9**
EPF	**Esparros**	**15.31**	**289**	*e*Sn		Sn	01 00 43.9	-13
	comp=Z,58nm,1.6s							
BAIF	**Baives**	**15.31**	**318**	*e*Pn		**Pn**	**00 58 08.2**	**+0.6**
BAIF				*e*Sn		**Sn**	**01 00 46.9**	**-10**
	comp=Z,0.9nm,0.3s							
LFF	**La Frestale**	**15.33**	**296**	*e*Pn		**Pn**	**00 58 07.7**	**-0.2**
LFF				*e*Sn		Sn	01 00 46.1	-11
	comp=Z,2.1nm,0.4s							
ECHA	**Ech Chlef**	**15.34**	**262**	P		**P**	**00 58 11.0**	**-1.8**
CLF	**Chambon-Foret**	**15.36**	**308**	P		**Pn**	**00 58 09.9**	**+1.6**
ASF	**Jabal al Asfar**	**15.43**	**114**	Pn		**Pn**	**00 58 10.0**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=262,slow=11,SNR=20							
GRB	**Gharib**	**15.44**	**134**	P		**Pn**	**00 58 05.8**	**-3.7**
	baz=138							
HRFI	**Mount Harif**	**15.50**	**124**	Pn		**Pn**	**00 58 08.5**	**-1.8**
MBRI	**Mt Berech**	**15.59**	**125**	Pn		**Pn**	**00 58 08.8**	**-2.7**
MICGM	**Minsk**	**15.61**	**17⇑**	*i*P		**Pn**	**00 58 09.0**	**-2.5**
MICGM				PM			00 58 10.0	
	comp=Z,0.3nm,1.0s							
MICGM				*e*PP		**PnPn**	**00 58 20.0**	**+0.2**
MICGM				*e*PPP		PPP	00 58 27.0	
MICGM				*e*S		**Sn**	**01 01 01.0**	**-3.1**
MICGM				*e*SS		**SnSn**	**01 01 12.0**	**-4.9**
MICGM				*e*LQ		LQ	01 03 06.0	
MICGM				*e*LR		LR	01 03 40.0	
MICGM				LRM		MLR	01 04 32.0	
	comp=Z,6.6nm,12.0s							
MNK	**Minsk**	**15.61**	**17**	*i* P		**Pn**	**00 58 09.0**	**-2.5**
MNK				*e*S		**Sn**	**01 01 01.0**	**-3.1**
MNK				pmax	pmax			
	comp=Z,320nm,1.0s							
MNK				MLR	MLR			
	comp=Z,7µm,12.0s							
ETRT	**Tiaret**	**15.66**	**260**	P		**Pn**	**00 58 13.0**	**+0.6**
EIL	**Elat**	**15.70**	**125**	Pn		**Pn**	**00 58 11.2**	**-1.6**
	comp=Z,0.8nm,0.3s,baz=215,slow=4.7,SNR=16							
EIL				Sn		Sn	01 00 55.8	-11
	comp=Z,3.7nm,0.3s,baz=356,slow=11,SNR=6.2							
EIL				LR		LR	01 06 26.0	
	comp=Z,207nm,18.2s,baz=318,slow=45							
EIL	**Elat**	**15.70**	**125**	Pn		**Pn**	**00 58 10.4**	**-2.4**
NACGM	**Naroch**	**15.76**	**14**	*e*P		**Pn**	**00 58 14.0**	**+0.5**
NACGM				PM			00 58 19.0	
	comp=Z,0.8nm,1.0s							
NACGM				*e*S		**Sn**	**01 01 03.0**	**-4.8**
NACGM				*e*LQ		LQ	01 03 09.0	
NACGM				*e*LR		LR	01 04 23.0	
NACGM				LRM		MLR	01 04 40.0	
	comp=Z,12nm,14.0s							
HBST	**Basata**	**15.88**	**127**	P		**Pn**	**00 58 12.0**	**-3.1**
	baz=130							
PABE	**Paberze**	**15.94**	**8**	*e*P		**Pn**	**00 58 15.3**	**-0.4**
ETSF	**Etsaut**	**15.96**	**288**	*e*P		**P**	**00 58 19.9**	**+0.2**
ETSF				*e*Sn		Sn	01 01 02.3	-10
	comp=Z,0.6nm,0.2s							
IIGN	**Ignalina**	**16.09**	**12**	*e*P		**Pn**	**00 58 18.4**	**+0.7**
ISAL	**Salakas**	**16.29**	**12**	*e*P		**Pn**	**00 58 20.6**	**+0.4**
BCA	**Borcka**	**16.30**	**77**	⇑P		**P**	**00 58 22.9**	**-0.5**
PBUR	**Paburge**	**16.31**	**3**	*e*P		**Pn**	**00 58 19.4**	**-1.0**
MFF	**Saint Martin d**	**16.36**	**301**	*e*Pn		**Pn**	**00 58 21.6**	**+0.4**
MFF				*e*Sn		Sn	01 01 10.1	-12
	comp=Z,1.6nm,0.4s							
SJPF	**Ste Jean**	**16.46**	**289**	*e*P		**P**	**00 58 25.5**	**+0.3**
SJPF				*e*Sn		Sn	01 01 13.2	-12
	comp=Z,0.2nm,0.3s							
IZAR	**Zarasai**	**16.48**	**12**	*e*P		**Pn**	**00 58 22.3**	**-0.4**
LDF	**La Druitiere**	**17.05**	**308**	*e*Pn		**P**	**00 58 30.9**	**-0.7**
LDF				*e*Sn		Sn	01 01 28.5	-10
	comp=Z,3.7nm,0.4s							
KIV	**Kislovodsk**	**17.20**	**69**	⇑P		**P**	**00 58 34.5**	**+1.0**
KIV	**Kislovodsk**	**17.20**	**69**	*i* P		**P**	**00 58 34.3**	**+0.9**
	SNR=23							
KIV	**Kislovodsk**	**17.20**	**69**	*e*P		**P**	**00 58 33.5**	**0.0**
KIV				*e*S		**Sn**	**01 01 46.6**	**+3.7**
KIV				pmax	pmax			
	comp=Z,186nm,1.1s							
KIV				MLR	MLR			
	comp=Z,623nm,14.0s							
KIV	**Kislovodsk**	**17.20**	**69**	P		**P**	**00 58 34.0**	**+0.6**
KVAR	**Kislovodsk Arr**	**17.20**	**69**	P		**Pn**	**00 58 30.9**	**-1.1**
	baz=271,slow=23,SNR=14							
KBZ	**Khabaz**	**17.33**	**69**	P		**P**	**00 58 35.1**	**+0.4**
	comp=Z,2.3nm,0.3s,baz=272,slow=9.4,SNR=56							
KBZ	**Khabaz**	**17.33**	**69**	*ce*P		**P**	**00 58 35.4**	**+0.7**
FLN	**La Foliniere**	**17.33**	**308**	*e*Pn		**P**	**00 58 34.3**	**-0.5**
	baz=128							
FLN	**La Foliniere**	**17.33**	**308**	*e*P		**P**	**00 58 37.3**	**+2.5**
FLN				*e*Sn		Sn	01 01 34.7	-11
	comp=Z,1.7nm,0.2s							
VORD	**Divnogorie**	**17.38**	**44**	*e*P		**Pn**	**00 58 32.8**	**-1.2**
VORD				pmax	pmax			
	comp=Z,170nm,0.9s							
VORD				MLR	MLR			
	comp=Z,2µm,11.0s							
GRR	**Gorron**	**17.42**	**307**	*e*P		**P**	**00 58 38.0**	**+2.3**
GRR				*e*Sn		Sn	01 01 35.6	-12
	comp=Z,2.8nm,0.3s							
VSR	**Storozhevoye**	**17.45**	**43**	*e*P		**Pn**	**00 58 32.8**	**-2.1**
VSR				pmax	pmax			
	comp=Z,230nm,1.6s							
VSR				MLR	MLR			
	comp=Z,3µm,12.0s							
GOF	**Gofitskoye**	**17.60**	**65⇓**	*i* P		**P**	**00 58 38.3**	**+0.5**
GOF				pmax	pmax			
	comp=Z,138nm,0.8s							
AKH	**Akhalkalaki**	**17.71**	**77**	P		**P**	**00 58 41.0**	**+1.8**
AKH				pmax	pmax			
	comp=Z,28nm,1.0s							
AKH	**Akhalkalaki**	**17.71**	**77**	P		**P**	**00 58 41.0**	**+1.8**
VORR	**Voronezh**	**17.73**	**42**	*e*P		**Pn**	**00 58 37.0**	**-1.3**
VORR				pmax	pmax			
	comp=Z,300nm,1.4s							
SLIT	**Slitere, Latvi**	**17.93**	**4**	*e*P		**Pn**	**00 58 40.4**	**-0.3**
ZEI	**Tsey**	**18.00**	**73**	*e*P		**Pn**	**00 58 41.5**	**-0.5**
ZEI				pmax	pmax			
	comp=Z,37nm,0.8s							
UCM	**Universidad Co**	**18.01**	**279**	*e*P		**P**	**00 58 45.1**	**+2.7**
LPSR	**Galich'ya Gora**	**18.14**	**39**	*e*P		**Pn**	**00 58 41.8**	**-1.6**
LPSR				pmax	pmax			
	comp=Z,130nm,0.9s							
LPSR				MLR	MLR			
	comp=Z,2µm,13.0s							
MUD	**Monsted U'grnd**	**18.23**	**340**	*i* P		**Pn**	**00 58 43.8**	**-0.6**
MUD	**Monsted U'grnd**	**18.23**	**340**	*i* P		**Pn**	**00 58 43.8**	**-0.6**
SGMF	**Saint Gilles**	**18.43**	**305**	*e*Pn		**Pn**	**00 58 50.7**	**+3.7**
SGMF				*e*Sn		**Sn**	**01 02 13.1**	**+0.5**
	comp=Z,2.9nm,0.4s							
TBLG	**Delisi**	**18.63**	**76**	P		**Pn**	**00 58 50.7**	**+1.2**
TBLG				pmax	pmax			
	comp=Z,30nm,1.0s							
TBLG	**Delisi**	**18.63**	**76**	P		**Pn**	**00 58 50.7**	**+1.2**
ESDC	**Sonseca Array**	**18.64**	**278**	P		**Pn**	**00 58 49.8**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=72,slow=11,SNR=68							
ESDC				LR		LR	01 05 47.4	
	comp=Z,210nm,20.3s,baz=80,slow=36							
QUIF	**Quistinic**	**18.72**	**304**	*e*Pn		**Pn**	**00 58 52.5**	**+2.1**
QUIF				*e*Sn		**Sn**	**01 02 16.0**	**-3.4**
	comp=Z,1.7nm,0.4s							
VRH	**Novokhopyorsk**	**18.82**	**45**	*e*P		**Pn**	**00 58 51.2**	**-0.4**
VRH				pmax	pmax			
	comp=Z,140nm,0.6s							
VRH				MLR	MLR			
	comp=Z,2µm,14.0s							
OBN	**Obninsk**	**18.83**	**30**	P		**P**	**00 58 49.4**	**-1.7**
	comp=Z,2.5nm,0.3s,baz=260,slow=0.5,SNR=24							
OBN				LR		LR	01 07 09.3	
	comp=Z,714nm,18.0s,baz=210,slow=40							
OBN	**Obninsk**	**18.83**	**30***c*	*i*P		**P**	**00 58 49.0**	**-2.1**
OBN				*e*S		**Sn**	**01 02 21.9**	**0.0**
OBN				pmax	pmax			
	comp=Z,180nm,1.3s							
OBN				MLR	MLR			
	comp=Z,3µm,17.0s							
OBN	**Obninsk**	**18.83**	**30**	P		**P**	**00 58 49.5**	**-1.7**
ROSF	**Rostrenen**	**18.91**	**305**	*e*Pn		**Pn**	**00 58 56.1**	**+3.3**
ROSF				*e*Sn		**Sn**	**01 02 24.7**	**+0.5**
	comp=Z,0.2nm,0.2s							
MELI	**Melilla**	**18.93**	**264**	*e*P		**P**	**00 58 51.2**	**-1.2**
PAB	**San Pablo**	**18.95**	**277**	P		**Pn**	**00 58 53.5**	**0.0**
PAB				pmax	pmax			
	comp=Z,54nm,1.0s							
PAB	**San Pablo**	**18.95**	**277**	P		**Pn**	**00 58 53.5**	**0.0**
GOG	**Mont Gurugu**	**19.00**	**264**	P		**Pn**	**00 58 54.0**	**-0.1**
	SNR=16							
VSU	**Vasula**	**19.17**	**10**	*e*P		**P**	**00 58 55.0**	**+0.1**
VSU	**Vasula**	**19.17**	**10***c*	*i*P		**P**	**00 58 54.5**	**-0.4**
VSU				pmax	pmax			
	comp=Z,638nm,0.8s							
GROC	**Groznyy**	**19.40**	**72**	*e*P		**Pn**	**00 58 59.4**	**+0.6**
GROC				pmax	pmax			
	comp=Z,73nm,0.8s							
EMAL	**Malaga-Limoner**	**19.61**	**269**	*e*P		**Pn**	**00 59 00.3**	**-1.0**
EMAL				*e*S		**Sn**	**01 02 42.1**	**+0.9**
STRD	**Stroud**	**19.64**	**315**	*e*P		**Pn**	**00 59 01.2**	**-0.2**
STRD				IAmb	IAmb		00 59 07.2	
	comp=Z,165nm,1.4s							
CWF	**Charnwood Fore**	**19.68**	**318**	*e*P		**Pn**	**00 59 01.0**	**-0.9**
CWF				IAmb	IAmb		00 59 02.1	
	comp=Z,20nm,0.8s							
MOS	**Moscow**	**19.69**	**30**	*e*P		**P**	**00 58 56.8**	**-3.8**
MOS				*e*S		**S**	**01 02 37.0**	**-5.1**
MOS				pmax	pmax			
	comp=Z,176nm,0.7s							
MOS				MLR	MLR			
	comp=N,2µm,17.0s							
MOS				MLR	MLR			
	comp=E,2µm,17.0s							
MOS				MLR	MLR			
	comp=Z,3µm,17.0s							
AKLM	**AKL**	**19.92**	**262**	P		**Pn**	**00 59 04.3**	**-0.8**
	SNR=15							
HORN	**Hornachuelos**	**19.97**	**273**	P		**Pn**	**00 59 04.6**	**-1.0**
	SNR=51							
PVLZ	**Peæn de**	**20.02**	**265**	*e*P		Pn	00 59 04.9	-1.1
MCH1	**Michaelchurch**	**20.20**	**315**	*e*P		**P**	**00 59 06.6**	**+0.5**
MCH1				IAmb	IAmb		00 59 07.5	
	comp=Z,53nm,1.2s							
LBWR	**Ladybower, Pea**	**20.25**	**320**	*e*P		**P**	**00 59 07.3**	**+0.5**
REAL	**Reales**	**20.29**	**269**	*e*P		**P**	**00 59 07.0**	**-0.5**
STNC	**Stoke**	**20.33**	**318**	*e*P		Pn	00 59 08.9	-0.7
HLM1	**Long Mynd**	**20.39**	**316**	*e*P		Pn	00 59 08.9	-1.4
SNART	**Snartemo**	**20.40**	**340**	*e*P		Pn	00 59 09.9	-0.5
HPK	**Haverah Park**	**20.51**	**321**	*e*P		**P**	**00 59 10.0**	**+0.4**
HPK				IAmb	IAmb		00 59 14.7	
	comp=Z,99nm,0.8s							
PBRG	**Braganca**	**20.53**	**284**	*e*P		Pn	00 59 12.8	+0.6
	comp=Z,37nm,1.4s							
CEU	**Ceuta**	**20.60**	**267**	*e*P		**P**	**00 59 10.5**	**-0.1**
MAK	**Makhachkala**	**20.65**	**72**	*e*P		**P**	**00 59 10.9**	**-0.3**
MAK				*e*S		**S**	**01 03 03.7**	**+2.3**
MAK				pmax	pmax			
	comp=Z,357nm,0.8s							
MAK				MLR	MLR			
	comp=Z,584nm,14.0s							
SMIR	**Smir Dam**	**20.67**	**267**	P		Pn	00 59 13.0	-0.9
	SNR=12							
FOEL	**Foel Wylfa**	**20.74**	**317**	*e*P		**P**	**00 59 12.6**	**+0.6**
FOEL				IAmb	IAmb		00 59 14.0	
	comp=Z,40nm,0.7s							
MVO	**Moncorvo**	**20.79**	**283**	*e*P		**P**	**00 59 13.6**	**+0.8**
	comp=Z,36nm,1.1s							
HFS	**Hagfors**	**20.80**	**351**	P		**P**	**00 59 12.2**	**-0.5**
	comp=Z,32nm,0.4s,baz=155,slow=11,SNR=120							
HFS				LR		LR	01 08 21.4	
	comp=Z,440nm,19.3s,baz=172,slow=40							
AKT	**Akhty**	**20.88**	**76**	*e*P		**P**	**00 59 14.8**	**+1.0**
AKT				*e*			00 59 32.8	

NOA LR LR 01 09 05.1
comp=Z,444nm,20.5s,baz=170,slow=40
EKA Eskdalemuir Ar 22.04 323 P **P** **00 59 26.3 +0.3**
comp=Z,39nm,0.6s,baz=122,slow=10.0,SNR=75
EKA S **S** **01 03 24.8 -3.7**
comp=Z,1.0nm,0.7s,baz=121,slow=12,SNR=1.8
PCAS Casmilo, Conde 22.04 280 *eP* **P** **00 59 27.5 +1.4**
ESK Eskdalemuir 22.05 323 *eP* **P** **00 59 25.9 -0.2**
ESK IAmb IAmb 00 59 28.9
comp=Z,59nm,0.7s
ESK Eskdalemuir 22.05 323 P **P** **00 59 26.2 +0.1**
ESK pmax pmax
comp=Z,58nm,0.7s
ESK Eskdalemuir 22.05 323 P **P** **00 59 26.2 +0.1**
WIM Isle of Man 22.13 319 *eP* **P** **00 59 26.7 -0.3**
IOMK Kirk Michael 22.14 319 *eP* **P** **00 59 27.1 0.0**
IOMK IAmb IAmb 00 59 29.1
comp=Z,71nm,0.6s
PCVE Castro Verde 22.16 274 *eP* **P** **00 59 27.6 +0.1**
comp=Z,108nm,1.4s
PBDV Barranco-do-Ve 22.18 272 *eP* **P** **00 59 27.9 +0.2**
comp=Z,153nm,1.2s
SKAR Skarslia 22.23 344 *eP* **P** **00 59 28.7 +0.7**
MESJ Messejana 22.25 274 *eP* **P** **00 59 28.8 +0.3**
MESJ AMb AMB 00 59 36.2
comp=Z,126nm,1.8s
MESJ Messejana 22.25 274 *eP* **P** **00 59 28.7 +0.3**
MESJ pmax pmax
comp=Z,126nm,1.8s
MESJ Messejana 22.25 274 *eP* **P** **00 59 28.8 +0.3**
comp=Z,128nm,1.4s
NC204 NORSAR Array S 22.32 348 P **P** **00 59 28.7 -0.4**
PSBE So Bento 22.35 279 *eP* **P** **00 59 29.9 +0.4**
comp=Z,93nm,1.8s
EDI Edinburgh 22.39 324 *eP* **P** **00 59 29.8 0.0**
EDI IAmb IAmb 00 59 32.2
comp=Z,40nm,0.6s
PNCL Nicolau / Gran 22.43 275 *eP* **P** **00 59 30.5 +0.2**
comp=Z,97nm,1.5s
BER Bergen 22.65 341 *eP* **P** **00 59 32.8 +0.3**
EDU Dundee 22.70 325 *eP* **P** **00 59 32.8 -0.3**
PTEO Sao Teotonio 22.71 274 *eP* **P** **00 59 33.7 +0.3**
comp=Z,130nm,1.6s
ASK Askoy 22.77 341 *eP* **P** **00 59 34.0 +0.3**
TZRR Tazzarine 22.86 255 P **P** **00 59 36.0 +0.9**
SNR=14
PFVI Vila Bisbo 22.90 273 *eP* **P** **00 59 35.2 -0.1**
comp=Z,110nm,1.9s
PFVI Vila Bisbo 22.90 273 P **P** **00 59 35.2 -0.1**
PFVI IAmb IAmb 00 59 36.8
comp=Z,51nm,0.9s
EAB Aberfoyle 23.07 324 *eP* **P** **00 59 37.3 +0.4**
INVG Invergeldie, C 23.08 324 *eP* **P** **00 59 35.9 -1.1**
INVG IAmb IAmb 00 59 40.1
comp=Z,23nm,0.9s
AVE Averroes 23.11 262 *eP* **P** **00 59 35.9 -1.7**
HYA Hoyanger 23.13 343 *eP* **P** **00 59 37.6 +0.2**
ZGR Zagora 23.24 254 P **P** **00 59 40.0 +1.0**
SNR=9.5
CLGH Cloghs, Cushen 23.32 320 *eP* **P** **00 59 38.9 -0.6**
DOMB Dombas 23.33 347 *eP* **P** **00 59 39.9 +0.3**
LAWE Loch Awe, Argy 23.61 323 *eP* **P** **00 59 42.3 0.0**
OUZM OUZ 23.69 257 P **P** **00 59 46.0 +2.5**
SNR=8.2
AKN Aaknes 23.85 345 *eP* **P** **00 59 44.4 -0.3**
MOL Molde 24.10 346 *eP* **P** **00 59 45.9 -1.0**
KLMR Klimovskoe 24.25 23 *eP* **P** **00 59 45.7 -2.6**
KLMR pmax pmax
comp=Z,140nm,1.0s
KLMR Klimovskoe 24.25 23 *eP* **P** **00 59 45.7 -2.6**
KLMR AMP 01 00 03.8
comp=Z,140nm,1.0s
KLMR LQ LQ 01 07 30.5
KLMR LQ LQ 01 07 30.5
KLMR LR LR 01 08 35.3
KAC Achnashellach 24.27 325 *eP* **P** **00 59 47.2 -1.3**
TBLU Trondheim 24.27 349 *eP* **P** **00 59 48.9 +0.4**
BIGH Upper Bighouse 24.30 328 *eP* **P** **00 59 47.8 -0.9**
KPL Plockton 24.33 325 *eP* **P** **00 59 48.3 -0.8**
KPL IAmb IAmb 00 59 51.7
comp=Z,25nm,0.7s
NSS Namsos 25.28 352 *eP* **P** **00 59 56.5 -1.1**
LEWI Lewis, Hebride 25.33 326 *eP* **P** **00 59 57.7 -0.4**
LEWI IAmb IAmb 00 59 59.0
comp=Z,38nm,1.0s
KIRV Kirov 26.45 35 P **P** **01 00 07.4 -0.8**
comp=Z,35nm,0.6s,baz=250,slow=6.0,SNR=14
KIRV LR LR 01 11 37.3
comp=Z,2μm,18.8s,baz=232,slow=39
TMCR Tamitsa 26.58 17 *eP* **P** **01 00 07.2 -2.1**
TMCR pmax pmax
comp=Z,51nm,0.5s
MOR8 Moi Rana 26.66 355 *eP* **P** **01 00 09.6 -0.5**
RAYN Ar Rayn 26.77 120 P **P** **01 00 12.9 +1.4**
RAYN pmax pmax
comp=Z,7.0nm,0.9s
RAYN Ar Rayn 26.77 120 P **P** **01 00 12.9 +1.4**
PRGR Permogore 26.82 27 *eP* **P** **01 00 09.2 -2.4**
PRGR pmax pmax
comp=Z,29nm,0.7s
KONS Konsvik 27.09 354 *eP* **P** **01 00 13.2 -0.7**
STEI Steigen 28.36 356 *eP* **P** **01 00 24.3 -1.0**
AKTO Aktyubinsk 28.41 55 P **P** **01 00 25.1 -0.8**
comp=Z,9.7nm,0.4s,baz=258,slow=7.1,SNR=50
AKTO LR LR 01 13 47.1
comp=Z,721nm,20.4s,baz=272,slow=41
APA Apatity 28.79 10 *i*/*P* **P** **01 00 28.0 -1.1**
APA pmax pmax
comp=Z,12nm,0.7s
APA MLR MLR
comp=Z,2μm,11.0s
LVZ Lovozero 29.28 11 *ceP* **P** **01 00 32.5 -1.0**
LVZ pmax pmax
comp=Z,26nm,0.7s
LVZ Lovozero 29.28 11 P **P** **01 00 32.7 -0.8**
KTK1 Kautokeino 29.35 2 *eP* **P** **01 00 33.4 -0.7**
GEYT Alibeck 29.39 81 P **P** **01 00 34.9 +0.1**
comp=Z,6.2nm,0.4s,baz=285,slow=7.8,SNR=22
GEYT LR LR 01 15 12.4
comp=Z,191nm,20.6s,baz=215,slow=42
AB31 Akbulak array 29.54 58 *i* P **P** **01 00 34.9 -1.1**
TRO Tromso 29.94 359 *eP* **P** **01 00 38.0 -1.3**
ARE0 ARCESS Array S 29.96 4 *eP* **P** **01 00 38.1 -1.4**
ARCES ARCESS Array B 29.96 4 P **P** **01 00 38.1 -1.4**
comp=Z,8.3nm,0.5s,baz=187,slow=9.6,SNR=114
ARCES LR LR 01 13 39.6
comp=Z,1μm,18.3s,baz=180,slow=38
ARU Arti 30.02 43 P **P** **01 00 38.5 -1.6**
comp=Z,2.4nm,0.4s,baz=232,slow=9.3,SNR=19
ARU LR LR 01 13 30.9
comp=Z,737nm,21.6s,baz=254,slow=38
ARU Arti 30.02 43 *c*/*P* **P** **01 00 38.9 -1.3**
ARU PPP PPP 01 01 43.7
ARU 01 03 37.3
ARU S **S** **01 05 39.0 +1.5**
ARU SS **SnSn** **01 07 10.7 +1.2**
ARU pmax pmax
comp=Z,35nm,1.4s
ARU MLR MLR
comp=Z,1μm,15.0s
ARU Arti 30.02 43 P **P** **01 00 39.1 -1.1**
ARU IAmb IAmb 01 00 51.2
comp=Z,21nm,0.9s
KEV Kevo 30.27 5 P **P** **01 00 41.2 -1.0**
KEV pmax pmax
comp=Z,11nm,0.7s
KEV Kevo 30.27 5 P **P** **01 00 41.2 -1.0**
KEV IAmb IAmb 01 00 45.4
comp=Z,10nm,0.7s
SVE Sverdlovsk 31.23 43 *deP* **P** **01 00 50.5 -0.4**
SVE *eS* **S** **01 05 54.7 -1.8**
SVE pmax pmax
comp=Z,61nm,1.1s
SVE MLR MLR
comp=Z,1μm,14.0s
DAMY Dhamar 32.81 133 P **P** **01 01 06.6 +1.2**
DAMY IAmb IAmb 01 01 15.9
comp=Z,17nm,0.9s
BANOM Banah 33.03 104 P **P** **01 01 05.6 -1.3**
BANOM Banah 33.03 104 P **P** **01 01 05.7 -1.3**
NAZ Nazwa, Dubai 33.08 106 *i* P **P** **01 01 06.3 -1.1**
SNR=13
NAZ Nazwa, Dubai 33.08 106 P **P** **01 01 06.7 -0.8**
SNR=13
MSFE Esma-Masafi 33.24 105 P **P** **01 01 07.4 -1.5**

UOSS Minazif 33.51 105 P **P** **01 01 09.0 -2.1**
UOSS Minazif 33.51 105 P **P** **01 01 09.8 -1.3**
UOSS Minazif 33.51 105 P **P** **01 01 10.3 -0.8**
UOSS IAmb IAmb 01 01 22.0
comp=Z,17nm,1.0s
HATD Hatta, Dubai 33.52 105 P **P** **01 01 09.6 -1.7**
HATD Hatta, Dubai 33.52 105 P **P** **01 01 09.8 -1.5**
ASHO Ashiyiah 33.55 106 *i* P **P** **01 01 09.2 -2.4**
SNR=9.6
ASHO Ashiyiah 33.55 106 P **P** **01 01 10.4 -1.2**
SNR=5.8
ALNE Al Ain 33.69 107 *i* P **P** **01 01 11.2 -1.5**
SNR=19
SOHO SOHO 34.22 106 P **P** **01 01 16.3 -1.0**
SNR=22
ATD Arta Tunnel 34.50 138 P **P** **01 01 21.1 +1.3**
comp=Z,12nm,0.9s,baz=356,slow=6.3,SNR=7.1
ATD Arta Tunnel 34.50 138 P **P** **01 01 21.9 +2.0**
ATD IAmb IAmb 01 01 26.3
comp=Z,14nm,0.9s
ARQ Araqi 34.68 107 P **P** **01 01 20.6 -0.8**
SNR=14
FURI Furi 34.86 147 P **P** **01 01 25.8 +2.5**
HOQ Hoqain 35.12 106 P **P** **01 01 23.5 -1.6**
BSY Bisya 35.54 107 P **P** **01 01 27.4 -1.3**
SMDO Samad 35.98 106 P **P** **01 01 30.8 -1.7**
SNR=5.6
BRVK Borovoye 36.20 52 P **P** **01 01 34.0 -0.1**
BRVK pmax pmax
comp=Z,22nm,1.0s
BRVK Borovoye 36.20 52 P **P** **01 01 34.0 -0.1**
BRVK IAmb IAmb 01 01 41.5
comp=Z,22nm,0.9s
WHFO Wadi Hawf 36.22 117 P **P** **01 01 34.2 -0.4**
ABTO Aybut 36.28 118 P **P** **01 01 35.2 0.0**
WSAR Wadi Sarin 36.30 105 P **P** **01 01 34.5 -0.8**
comp=Z,7.5nm,0.7s,baz=297,slow=7.1,SNR=7.2
WSAR Wadi Sarin 36.30 105 P **P** **01 01 33.7 -1.6**
JMDO Jabal Madar 36.43 107 P **P** **01 01 35.1 -1.3**
RBK Rabkut 36.80 117 P **P** **01 01 40.2 +0.6**
SNR=7.3
WBK Wadi Bani Khal 36.92 106 P **P** **01 01 40.0 -0.6**
SNR=7.6
DMTO DMTO 37.16 116 P **P** **01 01 42.0 -0.7**
SNR=26
MHTO MHTO 37.18 109 P **P** **01 01 42.2 -0.5**
KK31 Karatay Array 37.36 68 P **P** **01 01 43.4 -0.7**
KKAR Karatay Array 37.36 68 P **P** **01 01 43.6 -0.5**
KKAR pmax pmax
comp=Z,30nm,0.6s
KKAR Karatay Array 37.36 68 P **P** **01 01 43.5 -0.5**
SCO Scoresbysund 37.64 338 *i*/*P* **P** **01 01 47.4 +1.3**
SCO pmax pmax
comp=Z,14nm,0.8s
SCO Scoresbysund 37.64 338 P **P** **01 01 47.0 +0.9**
SCO IAmb IAmb 01 01 57.3
comp=Z,23nm,1.0s
SCO Scoresbysund 37.64 338 *i*/*P* **P** **01 01 47.4 +1.3**
comp=Z,14nm,0.8s
OTUK Ortayu 37.76 59 P **P** **01 01 46.6 -0.8**
SPITS Spitsbergen Ar 38.56 359 P **P** **01 01 53.7 -0.1**
comp=Z,4.3nm,0.6s,baz=149,slow=12,SNR=13
KBL Kabul 38.84 82 P **P** **01 01 57.3 +0.4**
KBL pmax pmax
comp=Z,7.0nm,0.6s
KBL Kabul 38.84 82 P **P** **01 01 57.3 +0.4**
EKS2 Erkin-Say 39.80 68 P **P** **01 02 04.9 +0.2**
SNR=28
AML Almayashu 39.87 69 P **P** **01 02 03.9 -1.8**
SNR=11
DBIC Dimbokro 39.94 221 P **P** **01 02 06.6 +0.6**
comp=Z,23nm,0.8s,baz=9.4,slow=9.6,SNR=27
DBIC LR LR 01 19 55.8
comp=Z,633nm,19.6s,baz=9.0,slow=38
DBIC Dimbokro 39.94 221 P **P** **01 02 06.3 +0.3**
DBIC pmax pmax
comp=Z,26nm,0.9s
DBIC Dimbokro 39.94 221 P **P** **01 02 06.3 +0.3**
DBIC IAmb IAmb 01 02 07.3
comp=Z,26nm,0.8s
TIC Toumodi 40.05 221 *eP* **P** **01 02 06.4 -0.5**
KIC Kosan Boka 40.15 221 *eP* **P** **01 02 07.1 -0.6**
comp=Z,47nm,0.9s
USP Ospenovka 40.16 67 P **P** **01 02 09.5 +1.9**
SNR=5.1
AAK Ala-Archa 40.31 68 P **P** **01 02 08.8 -0.3**
comp=Z,20nm,0.6s,baz=231,slow=3.5,SNR=31
AAK Ala-Archa 40.31 68 P **P** **01 02 09.2 +0.2**
SNR=17
AAK Ala-Archa 40.31 68 *i* P **P** **01 02 08.7 -0.3**
SNR=20
AAK Ala-Archa 40.31 68 P **P** **01 02 09.1 0.0**
AAK IAmb IAmb 01 02 12.5
comp=Z,23nm,0.6s
CHMS Chumysh 40.40 67 P **P** **01 02 09.8 +0.2**
SNR=8.7
LIC Lamto 40.41 221 *eP* **P** **01 02 09.1 -0.8**
comp=Z,170nm,1.1s
UCH Uchtor 40.43 68 P **P** **01 02 10.6 +0.2**
SNR=10.0
SOCY Socotra 40.49 123 P **P** **01 02 08.9 -1.7**
SOCY Socotra 40.49 123 P **P** **01 02 09.0 -1.6**
KBK Karagaybulak 40.63 68 P **P** **01 02 12.1 +0.4**
SNR=7.0
DAG Danmarks Havn 40.71 347 *i* P **P** **01 02 11.5 -0.1**
DAG pmax pmax
comp=Z,6.0nm,0.8s
DAG Danmarks Havn 40.71 347 *i* P **P** **01 02 11.5 -0.1**
comp=Z,6.1nm,0.8s
KZA Kyzart 41.00 68 P **P** **01 02 15.6 +0.5**
SNR=8.8
TKM2 Tokmak 2 41.02 67 P **P** **01 02 14.5 -0.5**
SNR=7.6
MBAR Mbarara 41.30 164 P **P** **01 02 18.0 +0.7**
comp=Z,2.6nm,0.2s,baz=320,slow=7.3,SNR=5.2
MBAR Mbarara 41.30 164 *c*/*P* **P** **01 02 16.8 -0.6**
MBAR pmax pmax
comp=Z,5.0nm,1.0s
MBAR Mbarara 41.30 164 P **P** **01 02 17.7 +0.4**
KURK Kurchatov 41.50 55 P **P** **01 02 17.2 -1.3**
KURK Kurchatov 41.50 55 P **P** **01 02 17.6 -0.9**
KSH Kashi 42.29 72 P **P** **01 02 24.2 -1.1**
KSH sP sP 01 02 31.4 -0.5
KSH PP **PP** **01 04 03.3 +0.2**
KSH S **S** **01 08 41.3 -4.3**
KSH SS **SS** **01 11 44.3 -10**
KSH pmax pmax
comp=Z,130nm,1.7s
KSH pmax pmax
comp=Z,240nm,5.2s
KSH LR LR
comp=Z,250nm,13.4s
KSH LR LR
comp=Z,180nm,16.3s
NIL Nilore 42.39 81 P **P** **01 02 25.9 -0.2**
NIL pmax pmax
comp=Z,17nm,0.8s
NIL Nilore 42.39 81 P **P** **01 02 25.9 -0.2**
NIL IAmb IAmb 01 02 34.9
comp=Z,17nm,0.8s
SUMG Summit 43.28 338 *i*/*P* **P** **01 02 33.5 +0.3**
SUMG pmax pmax
comp=Z,26nm,1.0s
SUMG Summit 43.28 338 P **P** **01 02 33.2 +0.1**
SUMG Summit 43.28 338 *i*/*P* **P** **01 02 33.5 +0.3**
comp=Z,26nm,1.0s
KMBO Kilima Mbogo 43.56 155 P **P** **01 02 35.5 -0.4**
comp=Z,1.0nm,0.7s,baz=60,slow=20,SNR=1.5
NOR Nord 43.88 353 *i*/*P* **P** **01 02 37.2 -0.3**
NOR pmax pmax
comp=Z,14nm,0.6s
NOR Nord 43.88 353 *i*/*P* **P** **01 02 37.2 -0.3**
comp=Z,14nm,0.6s
MAKZ Makanchi 44.44 60 P **P** **01 02 41.8 -0.6**
MAKZ pmax pmax
comp=Z,20nm,0.9s
MAKZ Makanchi 44.44 60 P **P** **01 02 41.8 -0.6**
MAKZ IAmb IAmb 01 02 42.8
comp=Z,20nm,0.9s
MK31 Makanchi Array 44.65 60 P **P** **01 02 43.3 -0.8**
MKAR Makanchi Array 44.65 60 P **P** **01 02 43.5 -0.6**
comp=Z,32nm,0.5s,baz=280,slow=7.3,SNR=275
MKAR LR LR 01 23 27.1
comp=Z,470nm,21.6s,baz=278,slow=39
ZALV Zalesovo Beam 44.79 49 P **P** **01 02 44.2 -0.8**
comp=Z,26nm,0.5s,baz=278,slow=8.8,SNR=185

ZALV LR LR 01 23 37.1
comp=Z,472nm,19.7s,baz=276,slow=39
ZALV Zalesovo Beam 44.79 49 *i* P **P** **01 02 44.2 -0.8**
ZALV pmax pmax
comp=Z,27nm,0.4s
IVI Ivigtut 46.01 321 P **P** **01 02 55.1 +0.5**
DGZ Jazzator, Alta 47.25 55 *c*/*P* **P** **01 03 04.0 -0.7**
DGZ pmax pmax
comp=Z,15nm,0.8s
WMQ Urumqi 49.17 62 *eP* **P** **01 03 22.4 +2.9**
WMQ pP sP 01 03 28.5 +2.3
WMQ sP pP 01 03 29.9 +5.5
WMQ pmax pmax
comp=Z,11nm,1.1s
WMQ pmax pmax
comp=Z,65nm,3.9s
WMQ LR LR
comp=Z,170nm,16.5s
WMQ LR LR
comp=Z,190nm,15.9s
WMQ LR LR
comp=Z,140nm,17.3s
WMQ Urumqi 49.17 62 P **P** **01 03 19.0 -0.5**
WMQ pmax pmax
comp=Z,18nm,0.6s
WMQ Urumqi 49.17 62 P **P** **01 03 19.0 -0.5**
PYUN Piuthan 52.36 83 *eP* **P** **01 03 42.5 -1.5**
comp=Z,63nm,0.6s
DANN Dangsing 52.83 82 *eP* **P** **01 03 46.0 -1.5**
comp=Z,68nm,0.6s
KOLN Koldanda 52.99 83 *eP* **P** **01 03 46.6 -2.0**
comp=Z,24nm,0.5s
GKN Gorkha 53.67 82 *eP* **P** **01 03 51.6 -1.9**
DRLN Deer Lake 53.97 308 P **P** **01 03 56.0 +0.8**
DMN Daman 54.23 82 *eP* **P** **01 03 56.0 -1.7**
comp=Z,32nm,0.8s
KKN Kakani 54.27 82 *eP* **P** **01 03 56.0 -2.0**
comp=Z,31nm,0.7s
PKIN Phulchoki 54.46 82 *eP* **P** **01 03 57.5 -2.0**
comp=Z,21nm,0.6s
PKI Pulchoki 54.48 82 *eP* **P** **01 03 57.6 -2.1**
comp=Z,20nm,0.8s
GUN Gumba 54.66 81 *eP* **P** **01 03 59.2 -1.8**
comp=Z,69nm,0.9s
MOY Mondy 54.84 49 *eP* **P** **01 04 01.9 +0.2**
MOY pmax pmax
comp=Z,24nm,1.5s
JIRN Jiri 55.03 81 *eP* **P** **01 04 02.0 -1.7**
comp=Z,64nm,0.8s
RAMN Ramite 55.70 82 *eP* **P** **01 04 06.3 -2.1**
comp=Z,54nm,0.7s
TLY Talaya 56.36 48 *c*/*P* **P** **01 04 12.7 +0.2**
TLY pmax pmax
comp=Z,20nm,0.9s
TLY Talaya 56.36 48 P **P** **01 04 13.4 +0.9**
ZAK Zakamensk 56.67 50 *eP* **P** **01 04 14.0 -0.8**
ZAK pmax pmax
comp=Z,9.0nm,1.0s
SCHQ Schefferville 57.17 317 P **P** **01 04 18.3 +0.1**
comp=Z,8.7nm,0.6s,baz=36,slow=3.3,SNR=10
SCHQ LR LR 01 30 10.5
comp=Z,97nm,18.3s,baz=32,slow=37
SCHQ Schefferville 57.17 317 P **P** **01 04 18.6 +0.4**
RES Resolute Bay 58.19 344 P **P** **01 04 25.8 +0.8**
RES pmax pmax
comp=Z,6.0nm,0.9s
RES Resolute Bay 58.19 344 P **P** **01 04 25.8 +0.8**
TSUM Tsumeb 58.71 183 P **P** **01 04 29.5 +0.1**
BOD Bodaibo 59.25 38 *eP* **P** **01 04 31.8 -0.8**
BOD pmax pmax
comp=Z,22nm,1.0s
GTA Gaotai 59.25 62 *eP* **P** **01 04 32.2 -0.9**
GTA pP sP 01 04 36.8 -3.1
GTA sP pP 01 04 39.2 +1.1
GTA S **S** **01 12 39.0 -1.8**
GTA sS sS 01 12 49.8 +1.0
GTA pmax pmax
comp=Z,9.0nm,0.8s
GTA pmax pmax
comp=Z,74nm,6.0s
GTA LR LR
comp=Z,160nm,21.6s
GTA LR LR
comp=Z,310nm,22.2s
GTA LR LR
comp=Z,340nm,22.5s
SONM Songino Array 59.61 51 P **P** **01 04 34.6 -0.9**
comp=Z,3.0nm,0.9s,baz=276,slow=9.1,SNR=4.4
SONM LR LR 01 32 52.6
comp=Z,497nm,19.0s,baz=282,slow=39
HAL Halifax 59.67 305 P **P** **01 04 36.9 +1.2**
HAL pmax pmax
comp=Z,42nm,1.1s
HAL Halifax 59.67 305 P **P** **01 04 36.9 +1.2**
LMN Caledonia Moun 59.88 306 P **P** **01 04 37.4 +0.2**
LMN IAmb IAmb 01 04 55.2
comp=Z,14nm,1.0s
ULN Ulaanbaatar 59.99 51 *ceP* **P** **01 04 37.6 -0.5**
ULN pmax pmax
comp=Z,7.0nm,0.7s
ULN Ulaanbaatar 59.99 51 P **P** **01 04 37.4 -0.7**
ULN IAmb IAmb 01 04 41.5
comp=Z,7.7nm,0.8s
BATG Bathurst New B 59.99 308 P **P** **01 04 38.6 +0.6**
GGN Saint George 61.49 306 P **P** **01 04 49.5 +1.4**
GGN IAmb IAmb 01 04 56.5
comp=Z,12nm,0.9s
E63A Oxbow 61.82 308 P **P** **01 04 50.8 +0.4**
D62A Allapoint, All 61.88 309 P **P** **01 04 51.7 +0.9**
D62A IAmb IAmb 01 05 02.6
comp=Z,9.2nm,0.9s
G65A Princeton 61.89 307 P **P** **01 04 51.9 +1.1**
F64A Sherman 62.05 308 P **P** **01 04 52.3 +0.4**
F64A IAmb IAmb 01 05 01.6
comp=Z,9.3nm,1.1s
F63A Nahmakanta, Br 62.59 308 P **P** **01 04 56.3 +0.8**
F63A IAmb IAmb 01 05 08.7
comp=Z,8.5nm,1.0s
PKME Peaks-Kenny Pk 62.92 308 P **P** **01 04 58.3 +0.5**
PKME IAmb IAmb 01 05 05.6
comp=Z,12nm,1.1s
LZH Lanzhou 63.67 64 *eP* **P** **01 05 04.4 +1.3**
LZH pP sP 01 05 07.6 -2.3
LZH sP pP 01 05 09.9 +1.8
LZH pmax pmax
comp=Z,17nm,1.0s
LZH pmax pmax
comp=Z,66nm,4.3s
LZH LR LR
comp=Z,400nm,16.8s
LZH LR LR
comp=Z,410nm,17.9s
LZH LR LR
comp=Z,350nm,16.3s
YAK Yakutsk 63.83 30 *eP* **P** **01 05 01.8 -1.6**
YAK pmax pmax
comp=Z,15nm,0.9s
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK pmax pmax
comp=E,4.0nm,1.4s
H62A Milan 64.41 308 P **P** **01 05 08.7 +1.0**
LBTB Lobatse 64.64 175 P **P** **01 05 10.3 +1.1**
LBTB pmax pmax
comp=Z,11nm,0.9s
LBTB Lobatse 64.64 175 P **P** **01 05 10.3 +1.1**
LBTB IAmb IAmb 01 05 11.6
comp=Z,11nm,0.9s
I62A Tamworth 64.89 307 P **P** **01 05 11.5 +0.7**
VLDQ Val d'Or 66.21 313 P **P** **01 05 20.9 +1.7**
VLDQ IAmb IAmb 01 05 33.0
comp=Z,6.4nm,0.8s
HHC Hu-ho-hao-te 66.30 56 *eP* **P** **01 05 22.6 +2.5**
HHC pmax pmax
comp=Z,7.0nm,0.7s
HHC pmax pmax
comp=Z,29nm,5.9s
HHC LR LR
comp=Z,160nm,17.5s
HHC LR LR
comp=Z,170nm,14.1s
HHC LR LR
comp=Z,170nm,12.6s
CD2 Chengdu 66.37 69 P **P** **01 05 19.9 -0.7**
CD2 S **S** **01 14 09.4 -0.7**
CD2 pmax pmax

comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,110nm,6.9s
CD2 LR LR
comp=Z,360nm,16.5s
CD2 LR LR
comp=Z,430nm,15.1s
HIA Hailar 66.53 45 P **P 01 05 20.9 -0.4**
HIA pmax pmax
comp=Z,9.0nm,0.8s
HIA Hailar 66.53 45 P **P 01 05 20.9 -0.4**
HIA IAmb IAmb 01 05 36.2
comp=Z,9.0nm,0.8s
ORIO Orleans, Innes 66.56 310 P **P 01 05 23.4 +1.9**
ACCN Adirondack Com 66.58 308 P **P 01 05 23.0 +1.3**
ACCN IAmb IAmb 01 05 33.3
comp=Z,9.7nm,1.0s
ZEA Zeya 67.74 38 *e*P **P 01 05 28.9 +0.1**
ZEA pmax pmax
comp=Z,32nm,1.2s
ZEA MLR MLR
comp=Z,800nm,15.0s
ZEA MLR MLR
comp=E,500nm,14.0s
FCC Fort Churchill 67.79 329 IAmb IAmb 01 05 41.1
comp=Z,8.9nm,0.8s
J57A Williamstown 67.98 309 P **P 01 05 31.4 +0.9**
J57A IAmb IAmb 01 05 35.4
comp=Z,9.6nm,0.9s
BOSA Boshof 68.19 175 P **P 01 05 31.6 -0.4**
comp=Z,11nm,0.7s,baz=355,slow=5.6,SNR=25
BOSA LR LR 01 38 07.2
comp=Z,646nm,18.7s,baz=352,slow=38
BOSA Boshof 68.19 175 P **P 01 05 33.3 +1.3**
BOSA pmax pmax
comp=Z,16nm,0.9s
BOSA Boshof 68.19 175 P **P 01 05 33.2 +1.3**
XAN Xi'an 68.28 63 P **P 01 05 31.8 -0.8**
XAN pmax pmax
comp=Z,12nm,1.0s
XAN Xi'an 68.28 63 P **P 01 05 31.8 -0.8**
XAN IAmb IAmb 01 05 40.4
comp=Z,12nm,1.0s
KMI Kunming 68.86 74 P **P 01 05 39.2 +2.6**
KMI pP sP 01 05 43.7 +0.2
KMI sP pP 01 05 47.7 +6.1
KMI pmax pmax
comp=Z,15nm,0.5s
KMI pmax pmax
comp=Z,81nm,4.3s
N59A State Game Lan 69.26 306 P **P 01 05 39.8 +1.2**
N59A IAmb IAmb 01 05 43.7
comp=Z,13nm,1.1s
BILL Bilibino 69.52 13 *de*P **P 01 05 38.3 -1.4**
BILL *e**SP **pP 01 05 42.7 -2.0**
BILL *e* 01 05 54.1
BILL *e* 01 06 02.4
BILL 01 08 14.0
BILL *e*S S 01 15 03.1 +17
BILL pmax pmax
comp=Z,6.0nm,0.7s
BILL Bilibino 69.52 13 P **P 01 05 39.5 -0.2**
BILL IAmb IAmb 01 05 55.3
comp=Z,9.3nm,1.0s
CHTO Chiang Mai 69.66 82 P **P 01 05 39.7 -1.6**
CHTO pmax pmax
comp=Z,6.0nm,0.9s
CHTO Chiang Mai 69.66 82 P **P 01 05 39.7 -1.6**
CHTO IAmb IAmb 01 05 48.9
comp=Z,6.1nm,0.9s
BJI Beijing 69.67 55 P **P 01 05 40.0 -1.1**
BJI pmax pmax
comp=Z,8.0nm,0.6s
CMAR Chiang Mai Arr 69.86 82 P **P 01 05 40.7 -1.9**
comp=Z,2.0nm,0.4s,baz=299,slow=7.3,SNR=9.6
CMAR LR LR 01 43 01.7
comp=Z,78nm,18.8s,baz=208,slow=42
WVNY West Valley, N 70.12 309 P **P 01 05 44.5 +0.6**
WVNY IAmb IAmb 01 05 52.1
comp=Z,12nm,0.9s
M56A Emporium 70.41 308 pP 01 05 49.8 -0.8
INK Inuvik 70.47 350 IAmb IAmb 01 05 55.3
comp=Z,7.0nm,0.8s
SEY Seymchan 70.72 21 *i*P **P 01 05 47.4 +0.2**
SSPA Standing Stone 70.73 307 P **P 01 05 48.9 +1.3**
SSPA IAmb IAmb 01 05 55.8
comp=Z,10nm,1.0s
M55A Ridgway 70.77 308 P **P 01 05 48.3 +0.4**
M55A IAmb IAmb 01 05 52.7
comp=Z,11nm,0.9s
SDMD Soldier's Deli 70.80 306 P **P 01 05 47.6 -0.4**
GYA Guiyang 70.98 71 *e*P **P 01 05 52.1 +2.6**
GYA pmax pmax
comp=Z,10.0nm,0.8s
E46A Sault Ste Mari 71.02 315 P **P 01 05 50.0 +0.7**
E46A IAmb IAmb 01 06 03.7
comp=Z,8.8nm,0.8s
ERPA Erie 71.12 309 P **P 01 05 51.0 +1.0**
ERPA IAmb IAmb 01 05 58.1
comp=Z,11nm,0.8s
M54A Oil Creek Stat 71.29 309 P **P 01 05 52.3 +1.3**
M54A IAmb IAmb 01 06 08.4
comp=Z,9.4nm,0.9s
O56A Blue Knob Stat 71.36 307 IAmb IAmb 01 05 56.3
comp=Z,9.7nm,1.1s
TOLK Toolik Lake Re 71.65 356 IAmb IAmb 01 06 02.8
comp=Z,8.5nm,0.8s
E44A Grand Marais A 71.74 316 P **P 01 05 55.0 +1.4**
N54A Moraine State 71.82 308 P **P 01 05 55.0 +0.8**
N54A IAmb IAmb 01 05 59.1
comp=Z,8.4nm,0.9s
YKA Yellowknife Ar 71.84 340 P **P 01 05 54.0 +0.2**
comp=Z,6.6nm,0.9s,baz=41,slow=5.2,SNR=49
YKA LR LR 01 39 24.2
comp=Z,78nm,18.6s,baz=0.0,slow=38
N53A Lisbon 72.42 309 P **P 01 05 58.7 +0.9**
N53A IAmb IAmb 01 06 02.5
comp=Z,11nm,1.0s
E43A Lone Tree Farm 72.47 316 P **P 01 05 59.4 +1.4**
E43A IAmb IAmb 01 06 12.0
comp=Z,6.2nm,0.8s
MCWV Mont Chateau 72.52 307 P **P 01 05 59.9 +1.5**
O54A Avella 72.52 308 P **P 01 05 59.8 +1.4**
O54A IAmb IAmb 01 06 15.8
comp=Z,9.3nm,1.1s
PBKT Sadao Pong 72.54 83 P **P 01 05 56.9 -1.9**
KLR Kul'dur 72.78 40 *ce*P **P 01 05 59.0 -0.7**
KLR pmax pmax
comp=Z,12nm,0.9s
MA2 Magadan 72.92 24 *ce*P **P 01 06 00.9 +0.5**
MA2 pmax pmax
comp=Z,19nm,1.3s
MA2 Magadan 72.92 24 P **P 01 06 01.3 +0.8**
CN2 Changchun 72.94 47 *e*P **P 01 06 00.0 -0.8**
CN2 *e*PP **PP 01 08 43.1 +0.4**
CN2 *e*S **S 01 15 24.6 -2.3**
CN2 *e*SS **SS 01 20 05.3 -1.2**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 LR LR
comp=Z,280nm,15.0s
CN2 LR LR
comp=Z,320nm,15.0s
CN2 LR LR
comp=Z,460nm,16.0s
COLD Coldfoot 73.09 356 IAmb IAmb 01 06 18.6
comp=Z,12nm,1.1s
U59A Littleton 73.22 303 P **P 01 06 02.6 0.0**
U59A IAmb IAmb 01 06 11.3
comp=Z,8.7nm,0.9s
O52A Adamsville 73.45 309 pP 01 06 08.2 -0.6
R55A Marlinton 73.52 306 P **P 01 06 05.3 +0.9**
R55A IAmb IAmb 01 06 24.5
comp=Z,11nm,1.0s
P53A Whipple 73.56 308 pP 01 06 08.8 -0.8
FFC Flin Flon 73.72 329 P **P 01 06 05.7 +0.5**
FFC pmax pmax
comp=Z,8.0nm,0.8s
FFC Flin Flon 73.72 329 P **P 01 06 05.7 +0.5**
FFC IAmb IAmb 01 06 16.1
comp=Z,8.0nm,0.8s
ACSO Alum Creek Sta 74.06 309 P **P 01 06 07.8 +0.3**
H43A Windswept, Lux 74.11 315 P **P 01 06 07.7 0.0**
H43A IAmb IAmb 01 06 22.0
comp=Z,16nm,1.1s

ULM Lac du Bonnet 74.31 323 P **P 01 06 09.2 +0.4**
comp=Z,6.2nm,0.7s,baz=51,slow=6.6,SNR=6.4
ULM LR LR 01 38 27.7
comp=Z,147nm,21.0s,baz=46,slow=36
ULM Lac du Bonnet 74.31 323 IAmb IAmb 01 06 20.0
comp=Z,14nm,0.8s
R53A Hurricane 74.63 307 P **P 01 06 11.5 +0.7**
R53A IAmb IAmb 01 06 25.5
comp=Z,9.6nm,0.8s
Q51A Peebles 75.04 308 P **P 01 06 13.9 +0.7**
Q51A IAmb IAmb 01 06 17.2
comp=Z,8.0nm,0.8s
SVB Belmont 75.17 275 P **P 01 06 14.5 +0.2**
MDM Murphy Dome 75.22 355 P **P 01 06 14.1 +0.2**
MDM IAmb IAmb 01 06 23.9
comp=Z,12nm,1.0s
COLA College 75.28 355 *i*P **P 01 06 13.7 -0.4**
COLA pmax pmax
comp=Z,6.0nm,1.0s
COLA College 75.28 355 P **P 01 06 14.8 +0.7**
COLA IAmb IAmb 01 06 24.1
comp=Z,8.2nm,0.9s
MLY Manley 75.30 356 IAmb IAmb 01 06 19.2
comp=Z,10nm,1.0s
ILAR Eielson Array 75.31 354 P **P 01 06 14.6 +0.3**
comp=Z,2.2nm,0.7s,baz=1.1,slow=5.4,SNR=20
ILAR LR LR 01 40 42.9
comp=Z,136nm,19.9s,baz=4.5,slow=37
NEA Nenana 75.66 355 IAmb IAmb 01 06 25.4
comp=Z,10nm,1.2s
U54A Nelsons Funny 75.68 306 P **P 01 06 17.5 +0.5**
U54A IAmb IAmb 01 06 21.8
comp=Z,12nm,0.9s
WRH Wood River Hil 75.70 355 IAmb IAmb 01 06 26.2
comp=Z,16nm,1.1s
V55A Taylorsville 75.71 305 P **P 01 06 17.3 +0.1**
V55A IAmb IAmb 01 06 32.1
comp=Z,10nm,1.1s
R50A Paris 76.11 308 P **P 01 06 19.3 0.0**
DOT Dot Lake 76.18 353 IAmb IAmb 01 06 24.1
comp=Z,16nm,1.1s
NJ2 Nanjing 76.18 60 *e*P **P 01 06 19.7 -0.1**
NJ2 pmax pmax
comp=Z,13nm,0.5s
F36A Milaca 76.21 319 IAmb IAmb 01 06 33.1
comp=Z,9.4nm,1.0s
KMSC Kings Mountain 76.23 304 P **P 01 06 21.0 +0.9**
USA0B Ussuriysk Arra 76.26 43 P **P 01 06 19.3 -0.8**
USA0B pmax pmax
comp=Z,13nm,1.0s
USA0B Ussuriysk Arra 76.26 43 P **P 01 06 19.3 -0.8**
USA0B IAmb IAmb 01 06 20.4
comp=Z,13nm,1.0s
USRK Ussuriysk Ar. 76.26 43 P **P 01 06 19.2 -0.8**
comp=Z,6.7nm,0.8s,baz=294,slow=4.7,SNR=14
USRK LR LR 01 43 29.9
comp=Z,340nm,18.4s,baz=323,slow=38
JFWS Jewell Farm 76.48 315 P **P 01 06 20.2 -1.2**
JFWS pmax pmax
comp=Z,6.0nm,1.1s
JFWS Jewell Farm 76.48 315 P **P 01 06 20.2 -1.2**
MCK McKinley 76.49 355 IAmb IAmb 01 06 28.3
comp=Z,11nm,0.9s
R49A Shelbyville 76.61 309 P **P 01 06 22.4 +0.3**
R49A IAmb IAmb 01 06 25.7
comp=Z,11nm,1.1s
TYV Tymovskoe 76.63 33 *e*P **P 01 06 23.8 +1.8**
TYV pmax pmax
comp=Z,200nm,3.6s
TYV pmax pmax
comp=Z,17nm,1.1s
PAULI Pauline 76.74 304 P **P 01 06 23.7 +0.8**
PAULI IAmb IAmb 01 06 31.5
comp=Z,7.3nm,0.9s
MENT Mentasta 76.84 353 P **P 01 06 24.0 +0.9**
MENT IAmb IAmb 01 06 39.4
comp=Z,6.9nm,0.8s
BLO Bloomington 76.84 310 P **P 01 06 23.2 -0.3**
BLO pmax pmax
comp=Z,11nm,0.8s
BLO Bloomington 76.84 310 P **P 01 06 23.2 -0.3**
BLO IAmb IAmb 01 06 27.5
comp=Z,11nm,0.8s
TRF Thorofare Moun 76.85 356 IAmb IAmb 01 06 41.0
comp=Z,10nm,1.1s
WCI Wyandotte Cave 77.32 309 P **P 01 06 27.3 +1.1**
WCI pmax pmax
comp=Z,10.0nm,0.8s
WCI Wyandotte Cave 77.32 309 P **P 01 06 27.3 +1.1**
WCI IAmb IAmb 01 06 40.2
comp=Z,9.7nm,0.8s
PPLA Purkeypile 77.50 356 IAmb IAmb 01 06 36.6
comp=Z,12nm,0.8s
L40A Anamosa 77.59 315 P **P 01 06 28.2 +0.6**
L40A IAmb IAmb 01 06 42.2
comp=Z,9.0nm,0.8s
F33A 5 Mile Ranch, 77.61 320 P **P 01 06 27.4 -0.3**
OLIL Olney 78.05 311 P **P 01 06 30.3 0.0**
OLIL IAmb IAmb 01 06 41.0
comp=Z,8.8nm,0.9s
TEY Ternei 78.06 41 *e*P **P 01 06 29.1 -1.0**
TEY pmax pmax
comp=Z,20nm,0.8s
TEY pmax pmax
comp=N,150nm,0.3s
TEY pmax pmax
comp=Z,80nm,0.4s
HYT Haines Junctio 78.13 349 IAmb IAmb 01 06 47.8
comp=Z,10nm,0.9s
U49A Red Boiling Sp 78.13 308 P **P 01 06 31.4 +0.6**
U49A IAmb IAmb 01 06 47.4
comp=Z,7.3nm,0.9s
SCM Sheep Creek Mo 78.25 354 IAmb IAmb 01 06 50.2
comp=Z,14nm,0.9s
MCARA McCarthy VSAT 78.29 352 IAmb IAmb 01 06 41.6
comp=Z,9.9nm,1.0s
GLB Gilahina Butte 78.31 352 P **P 01 06 32.0 +0.6**
SML Sawmill 78.36 355 IAmb IAmb 01 06 48.9
comp=Z,10.0nm,0.8s
GHO Glory Hole Cre 78.43 355 IAmb IAmb 01 06 41.1
comp=Z,12nm,0.9s
BARN Barnard Glacie 78.45 351 P **P 01 06 33.5 +1.2**
KSRS Korea Array 78.47 51 P **P 01 06 32.3 -0.3**
comp=Z,4.2nm,0.7s,baz=309,slow=4.4,SNR=7.4
KSRS LR LR 01 44 49.1
comp=Z,202nm,18.1s,baz=314,slow=38
BALM Baldy 78.55 351 IAmb IAmb 01 06 42.5
comp=Z,14nm,1.0s
PMR Palmer 78.63 355 IAmb IAmb 01 06 46.2
comp=Z,13nm,1.1s
W50A Signal Mountai 78.70 306 IAmb IAmb 01 06 48.4
comp=Z,11nm,0.8s
CLTN Cedars of Leba 78.74 308 IAmb IAmb 01 06 38.3
comp=Z,11nm,1.1s
KNK Knik Glacier 78.76 355 IAmb IAmb 01 06 37.9
comp=Z,7.4nm,0.7s
Y52A Lilburn 78.78 305 P **P 01 06 34.7 +0.4**
Y52A IAmb IAmb 01 06 39.0
comp=Z,12nm,0.9s
DLBC Dease Lake 79.07 345 P **P 01 06 36.6 +1.0**
SKAG Skagway 79.09 348 P **P 01 06 36.6 +1.0**
YAH Yahtse 79.14 351 P **P 01 06 36.3 +0.2**
YAH IAmb IAmb 01 06 46.1
comp=Z,12nm,0.9s
RC01 Rabbit Creek A 79.17 355 IAmb IAmb 01 06 38.9
comp=Z,10nm,0.7s
KULM Kulim 79.24 92 P **P 01 06 37.7 +0.6**
KULM IAmb IAmb 01 06 51.0
comp=Z,6.9nm,0.7s
FID Port Fidalgo 79.25 353 P **P 01 06 37.8 +1.3**
FID IAmb IAmb 01 06 55.6
comp=Z,8.7nm,0.9s
FPAL Fort Paine 79.31 306 P **P 01 06 37.9 +0.5**
SIUC Southern Illin 79.39 310 P **P 01 06 37.4 -0.2**
S44A Carbondale 79.43 310 P **P 01 06 37.2 -0.6**
YSS Yuzh-Sakhalins 79.60 36 *e*P **P 01 06 38.8 +0.2**
YSS *e* 01 06 44.3
YSS *e*SP **PcP 01 06 46.0 -0.4**
YSS *e*S **S 01 16 39.0 -0.8**
YSS *e* 01 16 48.7
YSS pmax pmax
comp=Z,50nm,1.1s
YSS pmax pmax
comp=Z,100nm,2.5s
YSS MLR MLR
comp=Z,700nm,15.0s

YSS Yuzh-Sakhalins 79.60 36 P **P 01 06 39.3 +0.7**
HIN Hinchinbrook I 79.60 353 P **P 01 06 38.4 0.0**
HIN IAmb IAmb 01 06 49.1
comp=Z,15nm,0.9s
WVT Waverly 79.62 309 P **P 01 06 39.8 +0.9**
WVT pmax pmax
comp=Z,6.0nm,1.1s
WVT Waverly 79.62 309 P **P 01 06 39.8 +0.9**
BESE Bessie Mountai 79.84 347 P **P 01 06 40.8 +1.0**
BESE IAmb IAmb 01 06 50.5
comp=Z,10.0nm,0.9s
RSO Redoubt South 79.96 356 P **P 01 06 40.7 +0.1**
152A Waverly Hall 79.97 304 P **P 01 06 41.7 +0.8**
X48A Hartselle 80.26 307 IAmb IAmb 01 06 46.6
comp=Z,16nm,0.9s
CCM Cathedral Cave 80.33 312 P **P 01 06 43.3 +0.6**
CCM pmax pmax
comp=Z,5.0nm,0.8s
CCM Cathedral Cave 80.33 312 P **P 01 06 43.3 +0.6**
PETK Petropavlovsk- 80.44 24 P **P 01 06 41.8 -1.3**
comp=Z,3.6nm,0.7s,baz=343,slow=1.5,SNR=11
PETK LR LR 01 46 38.6
comp=Z,290nm,20.2s,baz=247,slow=39
P38A Dawn 80.54 314 IAmb IAmb 01 06 58.6
comp=Z,8.7nm,0.8s
R40A Maddies Statio 80.76 313 IAmb IAmb 01 06 49.1
comp=Z,8.7nm,0.8s
LRAL Lakeview Retre 81.17 306 IAmb IAmb 01 06 51.6
comp=Z,16nm,0.9s
SIT Sitka 81.37 347 P **P 01 06 48.5 +0.6**
SIT pmax pmax
comp=Z,10.0nm,1.0s
SIT Sitka 81.37 347 P **P 01 06 48.5 +0.6**
SIT IAmb IAmb 01 06 57.5
comp=Z,9.7nm,1.0s
WRAK Wrangell Islan 81.41 345 P **P 01 06 49.8 +1.7**
WRAK IAmb IAmb 01 06 58.8
comp=Z,11nm,0.8s
GTBY Guantanamo Bay 81.50 289 P **P 01 06 49.9 +0.7**
ASAJ Asahikawa 81.66 38 LR LR 01 47 10.8
comp=Z,417nm,18.8s,baz=355,slow=39
Y45A Yeager Farm, C 82.19 308 P **P 01 06 53.7 +1.0**
U40A Yellville 82.44 312 P **P 01 06 54.8 +0.9**
RSSD Black Hills 82.58 323 P **P 01 06 55.6 +0.8**
RSSD pmax pmax
comp=Z,6.0nm,1.1s
RSSD Black Hills 82.58 323 P **P 01 06 55.6 +0.8**
KDAK Kodiak Island 82.63 356 P **P 01 06 55.7 +1.2**
KDAK pmax pmax
comp=Z,14nm,0.9s
KDAK Kodiak Island 82.63 356 P **P 01 06 55.7 +1.2**
WALA Waterton Lakes 82.73 332 P **P 01 06 55.9 +0.5**
WALA IAmb IAmb 01 07 11.6
comp=Z,7.7nm,0.8s
WHAR Wooly Hollow 82.85 310 IAmb IAmb 01 07 00.5
comp=Z,12nm,1.0s
PTGA Pitinga 82.96 263 P **P 01 06 59.1 +2.2**
PTGA IAmb IAmb 01 07 08.1
comp=Z,7.2nm,0.9s
ERM Erimo 83.51 39 P **P 01 07 00.2 +0.9**
ERM pmax pmax
comp=Z,27nm,0.9s
ERM Erimo 83.51 39 P **P 01 07 00.2 +0.9**
BDFB Brasilia 84.03 244 P **P 01 07 03.3 +0.8**
comp=Z,3.0nm,0.7s,baz=71,slow=2.4,SNR=3.9
BDFB LR LR 01 46 22.3
comp=Z,201nm,19.2s,baz=106,slow=37
BDFB Brasilia 84.03 244 IAmb IAmb 01 07 05.3
comp=Z,10nm,1.2s
RLMT Red Lodge 84.11 327 IAmb IAmb 01 07 16.8
comp=Z,7.4nm,1.0s
MIAR Mount Ida 84.12 311 IAmb IAmb 01 07 07.4
comp=Z,7.8nm,0.9s
TUL1 Leonard 84.43 313 IAmb IAmb 01 07 09.7
comp=Z,8.9nm,0.9s
NEW Newport 84.55 333 IAmb IAmb 01 07 09.0
comp=Z,5.3nm,0.8s
MSO Missoula 84.60 330 IAmb IAmb 01 07 09.7
comp=Z,8.9nm,1.1s
MAT Matsushiro 85.01 46 P **P 01 07 06.4 -0.8**
MJAR Matsushiro Arr 85.02 46 P **P 01 07 07.0 -0.2**
comp=Z,6.9nm,0.8s,baz=328,slow=4.6,SNR=12
MJAR LR LR 01 48 31.7
comp=Z,112nm,18.4s,baz=30,slow=38
LKWY Lake 85.04 327 IAmb IAmb 01 07 23.6
comp=Z,8.1nm,0.9s
SDV Santo Domingo 85.08 277 *e*P **P 01 07 08.1 0.0**
SDV Santo Domingo 85.08 277 P **P 01 07 09.3 +1.3**
SDV IAmb IAmb 01 07 26.3
comp=Z,9.0nm,0.9s
X37A Clayton 85.14 312 IAmb IAmb 01 07 12.7
comp=Z,12nm,1.1s
H17A Grant Village 85.25 327 IAmb IAmb 01 07 15.5
comp=Z,7.0nm,0.9s
C09A Chrisman Ranch 85.35 333 IAmb IAmb 01 07 13.8
comp=Z,10nm,0.9s
PHWY Pilot Hill 85.42 322 IAmb IAmb 01 07 20.8
comp=Z,8.8nm,1.1s
BW06 Boulder Array 86.13 325 IAmb IAmb 01 07 28.4
comp=Z,8.5nm,1.1s
PDAR Pinedale Array 86.13 325 P **P 01 07 12.6 -0.3**
comp=Z,1.3nm,0.9s,baz=78,slow=5.1,SNR=7.4
PDAR PP **PP 01 10 32.5 -0.1**
comp=Z,0.7nm,0.8s,baz=46,slow=6.4,SNR=3.9
E09A Wood Farm, Sta 86.41 333 IAmb IAmb 01 07 34.4
comp=Z,9.0nm,0.9s
F10A Beach Ranch, E 86.55 332 IAmb IAmb 01 07 33.5
comp=Z,8.6nm,1.1s
E08A Dider Farm, El 86.75 333 P **P 01 07 16.0 +0.5**
AHID Auburn Hatcher 86.80 326 P **P 01 07 15.8 -0.3**
WMOK Wichita Mounta 86.96 314 P **P 01 07 17.3 +0.5**
WMOK pmax pmax
comp=Z,9.0nm,0.8s
WMOK Wichita Mounta 86.96 314 P **P 01 07 17.2 +0.5**
WMOK IAmb IAmb 01 07 22.0
comp=Z,9.1nm,0.8s
HAWA Hanford 87.00 333 IAmb IAmb 01 07 21.5
comp=Z,9.6nm,0.9s
BMO Blue Mountains 87.53 331 IAmb IAmb 01 07 37.3
comp=Z,4.5nm,0.8s
SMLC San Martn de 87.76 279 *e*P **P 01 07 21.8 +0.9**
I07A Izee 89.00 332 P **P 01 07 27.1 +0.7**
KSM Kuching 89.09 89 P **P 01 07 26.7 -0.6**
PV22 Blue Mesa, Par 89.18 322 IAmb IAmb 01 07 31.3
comp=Z,6.8nm,0.8s
PV15 Paradox Valley 89.19 322 IAmb IAmb 01 07 31.8
comp=Z,7.4nm,1.0s
PV21 Cone Mtn., Par 89.25 323 P **P 01 07 27.5 -0.5**
PV21 IAmb IAmb 01 07 31.7
comp=Z,6.3nm,0.7s
PV04 Paradox Valley 89.35 322 IAmb IAmb 01 07 32.2
comp=Z,9.8nm,1.0s
PV12 Saucer Basin, 89.36 322 IAmb IAmb 01 07 45.2
comp=Z,9.6nm,0.9s
PV01 Paradox Valley 89.39 322 IAmb IAmb 01 07 32.4
comp=Z,5.1nm,0.8s
PV02 Paradox Valley 89.42 322 P **P 01 07 29.4 +0.7**
PV02 IAmb IAmb 01 07 32.5
comp=Z,4.6nm,0.7s
PV16 Nyswonger Mesa 89.42 322 IAmb IAmb 01 07 33.5
comp=Z,8.2nm,1.0s
PV20 West Nyswonger 89.42 322 IAmb IAmb 01 07 32.4
comp=Z,6.4nm,0.7s
PV14 Lion Creek, Pa 89.42 323 P **P 01 07 29.4 +0.7**
PV10 Paradox Valley 89.42 323 P **P 01 07 28.5 -0.3**
PV03 Paradox Valley 89.43 322 IAmb IAmb 01 07 32.5
comp=Z,5.9nm,1.0s
PV18 Skein Mesa, Pa 89.47 322 P **P 01 07 29.1 +0.1**
PV18 IAmb IAmb 01 07 32.7
comp=Z,7.3nm,1.0s
PV13 Radium Mtn., P 89.49 322 IAmb IAmb 01 07 32.8
comp=Z,5.7nm,0.8s
DUG Dugway, Tooele 89.64 326 IAmb IAmb 01 07 34.1
comp=Z,7.3nm,1.1s
SBUM Sibu 89.95 87 P **P 01 07 32.6 +1.3**
Q16A Castle Valley 89.97 324 P **P 01 07 31.6 +0.3**
WVOR Wild Horse Val 90.10 331 P **P 01 07 32.1 +0.4**
WVOR pmax pmax
comp=Z,3.0nm,1.0s
WVOR Wild Horse Val 90.10 331 P **P 01 07 32.1 +0.4**
ELK Elko 90.20 328 P **P 01 07 32.4 0.0**
ELK pmax pmax
comp=Z,2.0nm,0.7s
ELK Elko 90.20 328 P **P 01 07 32.4 0.0**
ROSC El Rosal 90.47 277 LR LR 01 44 58.9
comp=Z,64nm,21.7s,baz=26,slow=33

K05A	**Summer Lake**	**90.67 332**	IAmb	IAmb	01 07 50.7	
	comp=Z,7.4nm,1.0s					
TCRU	**Three Creeks R**	**90.79 325**	P	**P**	**01 07 35.4**	**+0.2**
CCUT	**Cedar City**	**92.07 325**	P	**P**	**01 07 41.2**	**+0.1**
U15A	**North Rim**	**92.51 324**	P	**P**	**01 07 43.8**	**+0.6**
U15A			IAmb	IAmb	01 07 47.1	
	comp=Z,4.8nm,1.0s					
YOTC	**Yotoco, Valle**	**92.56 277**	*eP*	**P**	**01 07 44.8**	**+1.3**
MNTX	**Cornudas Mount**	**92.86 316**	IAmb	IAmb	01 07 48.2	
	comp=Z,4.2nm,0.9s					
SHPR	**Sheep Range**	**93.73 325**	P	**P**	**01 07 49.2**	**+0.5**
TX31	**Lajitas Ar. Si**	**93.74 313**	P	**P**	**01 07 49.2**	**+0.5**
TX32	**Lajitas Array**	**93.74 313**	IAmb	IAmb	01 07 53.4	
	comp=Z,5.1nm,0.9s					
TXAR	**Lajitas Array**	**93.74 313**	P	**P**	**01 07 49.8**	**+1.0**
	comp=Z,3.1nm,0.8s,baz=63,slow=4.4,SNR=17					
X16A	**Lo Mia Camp, P**	**93.76 322**	P	**P**	**01 07 49.3**	**+0.4**
CPUP	**Villa Florida**	**97.62 242**	LR	LR	01 54 23.8	
	comp=Z,130nm,18.3s,baz=55,slow=37					
WRA	**Warramunga Arr**	**120.78 91**	PKP	**PKPdf**	**01 13 22.2**	**-1.7**
	comp=Z,1.3nm,0.7s,baz=323,slow=1.9,SNR=9.1					
ASAR	**Alice Springs**	**122.52 95**	PKP	**PKPdf**	**01 13 26.4**	**-0.9**
	comp=Z,5.0nm,0.3s,baz=324,slow=1.6,SNR=20					
STKA	**Stephens Creek**	**132.51 100**	PKP	**PKPdf**	**01 13 45.4**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=186,slow=5.5,SNR=3.2					
DZM	**Mont Dzumac**	**146.30 69**	PKPbc	**PKPbc**	**01 14 13.0**	**+0.4**
	comp=Z,9.0nm,0.6s,baz=164,slow=5.9,SNR=6.4					
URZ	**Urewera**	**161.94 93**	PKPab	**PKPab**	**01 15 17.0**	**-1.8**
	comp=Z,12nm,0.8s,baz=206,slow=9.3,SNR=7.2					
URZ	**Urewera**	**161.94 93**		**PKPab**	**01 15 17.2**	**-1.6**

NEIC ***12*** *01:12:34.7±1.6,6°.0S±0°.1×149°.8E±0°.1,h44km±10km, mb4.1/7, Error ellipse: s-maj=23.6km s-min=9.5km az=143.0*

IDC ***12*** *01:12:36.1±2.2,6°.03S×149°.73E,h44km±24km,mb3.7/5, mb1 4.1/7,mb1mx3.7/29,mbtmp4.1/7,ML2.3/1,Error ellipse: s-maj=52.7km s-min=15.5km az=130.0*

ISC 12 01:12:36.7±0.7,6°.1S±0°.2×149°.7E±0°.1,h58km,n17, σ2§12/18,mb3.6/5,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.91**	**53**	P	**Pn**	**01 13 19.2**	**-1.5**
	59nm,0.3s,baz=333,slow=1.4,SNR=34						
KRVT				S	**Sn**	**01 13 60.0**	**+5.5**
	11nm,0.3s,baz=138,slow=22,SNR=2.7						
RABL	**Rabaul**	**3.09**	**53**		**Pn**	**01 13 18.9**	**-4.2**
PMG	**Port Moresby**	**4.16**	**217**	P	**Pn**	**01 13 38.0**	**+0.3**
	12nm,0.3s,baz=32,slow=7.7,SNR=22						
PMG				S	**Sn**	**01 14 25.8**	**+0.8**
	35nm,0.3s,baz=151,slow=21,SNR=13						
COEN	**Coen**	**10.13**	**219**	Pn	**Pn**	**01 14 59.3**	**-0.2**
WB0	**Warramunga Arr**	**20.16**	**226**	P	**P**	**01 17 07.6**	**+1.1**
WB0				IAmb	IAmb	01 17 26.4	
	comp=Z,13nm,1.2s						
WB2	**Warramunga Arr**	**20.31**	**226**	P	**P**	**01 17 08.7**	**+0.6**
WRA	**Warramunga Arr**	**20.32**	**226**	P	**P**	**01 17 09.4**	**+1.2**
	comp=Z,3.6nm,0.5s,baz=51,slow=11,SNR=20						
KNRA	**Kununurra**	**22.64**	**243**	P	**P**	**01 17 33.2**	**0.0**
KNRA				IAmb	IAmb	01 17 45.9	
	comp=Z,12nm,1.2s						
ASAR	**Alice Springs**	**23.17**	**219**	P	**P**	**01 17 40.4**	**+1.8**
	comp=Z,1.6nm,0.7s,baz=54,slow=10,SNR=11						
FITZ	**Fitzroy Crossi**	**26.34**	**241**	P	**P**	**01 18 08.8**	**+1.3**
	comp=Z,1.7nm,0.6s,baz=53,slow=7.7,SNR=13						
FITZ	**Fitzroy Crossi**	**26.34**	**241**	IAmb	IAmb	01 18 16.4	
	comp=Z,7.4nm,1.3s						
STKA	**Stephens Creek**	**26.77**	**195**	P	**P**	**01 18 12.3**	**+1.1**
	comp=Z,0.9nm,0.5s,baz=5.2,slow=11,SNR=1.7						
PSAB2	**Pilbara Seismi**	**32.71**	**239**	P	**P**	**01 19 03.2**	**-0.8**
KULM	**Kulim**	**50.24**	**282**	P	**P**	**01 21 27.1**	**-0.4**
OPA	**Opana**	**58.19**	**60**	P	**P**	**01 22 23.2**	**-2.1**
MKAR	**Makanchi Array**	**79.27**	**320**	P	**P**	**01 24 37.4**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=121,slow=11,SNR=1.8						
GERES	**GERESS Array B**	**123.46**	**327**	PKP	**PKPdf**	**01 31 27.4**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=49,slow=6.2,SNR=3.5						

REN ***12*** *01:14:42.7±2.5,40°.25N±0°.03×121°.19W±0°.04,h10km±5km, Error ellipse: s-maj=4.9km s-min=4.0km az=212.0*

NCEDC ***12*** *01:14:43.6,40°.23N×121°.17W,h7km*

NEIC ***12*** *01:14:44.2±2.4,40°.20N±0°.03×121°.19W±0°.03,h8km±5km, Error ellipse: s-maj=5.0km s-min=1.4km az=213.0*

IDC ***12*** *01:14:46.0±3.4,40°.31N×121°.12W,h0km,mb3.3/2, mb1 3.6/4,mb1mx3.4/31,mbtmp3.2/4,ML3.3/2,Error ellipse: s-maj=59.9km s-min=26.4km az=27.0*

ANF ***12*** *01:14:48.6±0.4,40°.47N×121°.67W,h0km,ML3.3/15,Error ellipse: s-maj=5.3km s-min=2.5km az=113.0*

ISC 12 01:14:43.5±1.1,40°.24N±0°.02×121°.22W±0°.02,h5km±9km, n177,σ1§28/193,Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCMM	**Colby Mountain**	**0.24**	**249**		**Pg**	**01 14 49.5**	**+1.2**
LRDM	**Redding Peak**	**0.29**	**322**		**Pg**	**01 14 50.1**	**+0.8**
LMEM	**Manzanita Entr**	**0.40**	**319**		**Pg**	**01 14 52.2**	**+0.8**
O03E	**Paynes Creek**	**0.45**	**278**	P	**Pg**	**01 14 52.7**	**+0.5**
	baz=97,SNR=1000						
O03E				S	**Sg**	**01 14 56.1**	**-1.9**
	baz=97						
O03E	**Paynes Creek**	**0.45**	**278**		**Pg**	**01 14 52.6**	**+0.5**
O03E					**Sg**	**01 14 59.6**	**+1.5**
LDBM	**Digger Butte**	**0.47**	**295**		**Pg**	**01 14 53.2**	**+0.5**
MGL	**Magalia**	**0.49**	**212**		**Pg**	**01 14 53.4**	**+0.3**
HATC	**Hat Creek Radi**	**0.61**	**343**		**Pg**	**01 14 55.5**	**+0.3**
HATC					**Sb**	**01 15 04.9**	**-0.8**
LBCM	**Butte Creek Ri**	**0.61**	**351**		**Pg**	**01 14 55.3**	**0.0**
LTCM	**Tuscan Springs**	**0.69**	**268**		**Pg**	**01 14 57.5**	**+0.7**
ORV	**Oroville**	**0.71**	**198**	Pg	**Pg**	**01 14 56.6**	**-0.5**
ORV	**Oroville**	**0.71**	**198**		**Pg**	**01 14 56.6**	**-0.5**
ORV					**Sg**	**01 15 06.4**	**-0.1**
BMRR	**Black Mountain**	**0.72**	**100**		**Pg**	**01 14 56.1**	**-1.4**
BEKR	**Beckworth**	**0.76**	**119**		**Pg**	**01 14 56.9**	**-1.1**
BEKR					**Sg**	**01 15 06.4**	**-1.5**
PAM	**Palermo**	**0.82**	**196**		**Pg**	**01 14 58.5**	**-0.7**
PAM					**Sg**	**01 15 09.5**	**-0.3**
LSHM	**Sage Hen Hill**	**0.84**	**312**		**Pg**	**01 14 59.2**	**-0.4**
OHCM	**Honcut**	**0.92**	**193**		**Pg**	**01 15 00.3**	**-0.8**
LTIM	**Timbered Crate**	**0.96**	**348**		**Pg**	**01 15 01.9**	**-0.1**
KBF	**Kyburz Flat**	**1.06**	**133**		**Pg**	**01 15 02.6**	**-1.3**
WDC	**Whiskeytown Da**	**1.06**	**289**		**Pg**	**01 15 02.8**	**-1.1**
WDC	**Whiskeytown Da**	**1.06**	**289**		**Pg**	**01 15 03.1**	**-0.9**
IND	**Independence**	**1.07**	**138**		**Pg**	**01 15 03.1**	**-1.0**
OSUM	**Sutter Buttes**	**1.08**	**207**		**Pg**	**01 15 04.0**	**-0.2**
SUTB	**Sutter Butte**	**1.09**	**204**		**Pg**	**01 15 03.8**	**-0.7**
DONR	**Donner Summit**	**1.12**	**141**		**Pg**	**01 15 03.5**	**-1.6**
PEAR	**Peavine Mounta**	**1.15**	**122**		**Pg**	**01 15 04.4**	**-1.3**
GROM	**Round Mountain**	**1.16**	**255**		**Pg**	**01 15 05.2**	**-0.5**
GCK	**Clark Valley**	**1.16**	**234**		**Pb**	**01 15 06.3**	**+0.2**
VPK	**Verdi Peak**	**1.19**	**129**		**Pg**	**01 15 04.8**	**-1.5**
O02D	**Mt. Diablo Mer**	**1.20**	**268**	P	**Pb**	**01 15 05.7**	**-1.2**
	baz=87,SNR=294						
O02D				S	**Sg**	**01 15 17.8**	**-4.3**
	baz=87						
O02D	**Mt. Diablo Mer**	**1.20**	**268**		**Pb**	**01 15 05.6**	**-1.2**
GVV	**Valley View**	**1.21**	**248**		**Pb**	**01 15 06.1**	**-0.8**
LBFM	**Black Fox Moun**	**1.22**	**336**		**Pg**	**01 15 06.4**	**-0.5**
GFC	**Funks Creek**	**1.22**	**223**		**Pn**	**01 15 07.1**	**-0.1**
M03C	**McCloud**	**1.24**	**327**		**Pb**	**01 15 06.8**	**-0.7**
LBPM	**Beegum Peak**	**1.27**	**274**		**Pn**	**01 15 06.4**	**-1.6**
AFDM	**Forest Hills D**	**1.30**	**171**		**Pn**	**01 15 06.6**	**-1.8**
MPK	**Martis Peak**	**1.31**	**135**		**Pn**	**01 15 07.2**	**-1.5**
LGBM	**Gray Butte**	**1.33**	**327**		**Pn**	**01 15 08.2**	**-0.9**
N02D	**Trinity Center**	**1.35**	**304**	P	**Pn**	**01 15 07.5**	**-1.6**
	baz=122,SNR=256						
N02D	**Trinity Center**	**1.35**	**304**		**Pn**	**01 15 07.5**	**-1.6**
TAHR	**Tahoe**	**1.36**	**143**		**Pn**	**01 15 08.2**	**-1.2**
LMHM	**Little Mount H**	**1.38**	**346**		**Pn**	**01 15 09.0**	**-0.7**
LBKM	**Bonanza King**	**1.39**	**308**		**Pn**	**01 15 08.5**	**-1.1**
LASM	**Arnica Sink**	**1.39**	**349**		**Pn**	**01 15 08.9**	**-0.9**
LGPM	**Granite Peak**	**1.40**	**299**		**Pn**	**01 15 08.2**	**-1.6**
GTSM	**Trough Springs**	**1.41**	**230**		**Pn**	**01 15 09.3**	**-0.6**
RUBR	**Rubicon Trail**	**1.44**	**145**		**Pn**	**01 15 09.6**	**-0.8**
LGMM	**Garner Mountai**	**1.44**	**341**		**Pn**	**01 15 10.1**	**-0.3**
LMPM	**Military Pass**	**1.44**	**331**		**Pn**	**01 15 10.4**	**-0.1**
GBMM	**Baldy Mountain**	**1.47**	**222**		**Pn**	**01 15 10.4**	**-0.3**
LCSM	**College of the**	**1.48**	**323**		**Pn**	**01 15 10.8**	**-0.1**
GHMM	**Hull Mountain**	**1.51**	**241**		**Pn**	**01 15 11.1**	**-0.3**
PAHR	**Pah Rah Range**	**1.51**	**110**		**Pn**	**01 15 10.2**	**-1.1**
PAHR	**Pah Rah Range**	**1.51**	**110**		**Sn**	**01 15 30.1**	**-1.3**
VCNR	**Virginia City**	**1.53**	**127**		**Pn**	**01 15 11.6**	**-0.2**
GWKM	**Walker Ridge**	**1.54**	**220**		**Pn**	**01 15 11.2**	**-0.4**
KBNM	**Bluenose Ridge**	**1.55**	**258**		**Pn**	**01 15 11.8**	**-0.1**
NDHM	**Dunnigan Hills**	**1.56**	**200**		**Pn**	**01 15 12.4**	**+0.5**
KHBM	**Hayfork Bally**	**1.58**	**286**		**Pn**	**01 15 11.5**	**-0.9**
LHEM	**Herd Peak**	**1.58**	**332**		**Pb**	**01 15 13.0**	**-0.4**
M04C	**Macdoel**	**1.62**	**343**	P	**Pb**	**01 15 13.4**	**-0.5**
	baz=162,SNR=35						
M04C				S	**Sn**	**01 15 31.7**	**-2.4**
	baz=162						
M04C	**Macdoel**	**1.62**	**343**		**Pb**	**01 15 13.5**	**-0.4**
KPPM	**Pickett Peak**	**1.64**	**275**		**Pn**	**01 15 13.0**	**-0.2**
MNRC	**McLaughlin Min**	**1.65**	**215**		**Pn**	**01 15 12.9**	**-0.3**
M02C	**Callahan**	**1.69**	**314**	P	**Pn**	**01 15 13.4**	**-0.4**
	baz=132,SNR=106						
M02C				S	**Sn**	**01 15 30.8**	**-5.1**
	baz=132						
M02C	**Callahan**	**1.69**	**314**		**Pn**	**01 15 13.9**	**0.0**
PNTR	**Pine Nut**	**1.70**	**132**		**Pn**	**01 15 13.9**	**-0.1**
GRTM	**Round Top Moun**	**1.71**	**221**		**Pn**	**01 15 13.7**	**-0.3**
NMTM	**Middletown**	**1.71**	**214**		**Pn**	**01 15 13.4**	**-0.6**
NBPM	**Berryessa Peak**	**1.74**	**206**		**Pn**	**01 15 14.3**	**0.0**
LAMM	**Antelope Mount**	**1.74**	**323**		**Pn**	**01 15 14.6**	**0.0**
GMKM	**Mount Konoctai**	**1.75**	**224**		**Pn**	**01 15 14.5**	**-0.1**
KCSM	**Cold Springs**	**1.78**	**281**		**Pb**	**01 15 16.2**	**+0.5**
GSGM	**Seigler Mounta**	**1.79**	**221**		**Pn**	**01 15 15.5**	**+0.2**
KIPM	**Iron Peak**	**1.79**	**257**		**Pn**	**01 15 16.1**	**+1.0**
KFPM	**Farley Peak**	**1.79**	**251**		**Pn**	**01 15 15.9**	**+0.8**
AASM	**Arroyo Seco**	**1.80**	**177**		**Pn**	**01 15 15.2**	**0.0**
MOD	**Modoc Plateau**	**1.81**	**22**		**Pn**	**01 15 15.2**	**-0.3**
MOD	**Modoc Plateau**	**1.81**	**22**		**Pn**	**01 15 15.4**	**0.0**
GBGM	**Boggs Mountain**	**1.81**	**219**		**Pn**	**01 15 15.3**	**-0.1**
BFC	**Buffalo Canyon**	**1.83**	**137**		**Pn**	**01 15 15.9**	**+0.1**
GHLM	**Highland Sprin**	**1.83**	**230**		**Pn**	**01 15 15.8**	**+0.1**
B040	**Montague**	**1.83**	**331**		**Pb**	**01 15 16.7**	**-0.9**
KBSM	**Bell Springs**	**1.85**	**261**		**Pn**	**01 15 17.3**	**+1.3**
GACM	**Adobe Creek**	**1.86**	**224**		**Pn**	**01 15 16.0**	**-0.1**
NADM	**Allendale**	**1.86**	**198**		**Pn**	**01 15 16.6**	**+0.5**
YBH	**Yreka Blue Hor**	**1.87**	**323**	Pn	**Pn**	**01 15 17.1**	**+0.8**
GDXM	**Geysers**	**1.87**	**221**		**Pn**	**01 15 16.5**	**+0.2**
HOPS	**Hopland Field**	**1.89**	**230**		**Pn**	**01 15 16.7**	**+0.3**
HOPS	**Hopland Field**	**1.89**	**230**		**Pn**	**01 15 17.0**	**+0.6**
KCPM	**Cahto Peak**	**1.90**	**254**		**Pn**	**01 15 17.8**	**+1.2**
GWRM	**Wonder Ranch**	**1.90**	**238**		**Pn**	**01 15 17.3**	**+0.7**
KMRM	**Mail Ridge**	**1.90**	**270**		**Pn**	**01 15 16.2**	**-0.5**
NHSM	**Mount Saint He**	**1.91**	**215**		**Pn**	**01 15 16.3**	**-0.5**
GAXM	**Alexander Vall**	**1.93**	**218**		**Pn**	**01 15 16.4**	**-0.6**
YERR	**Yerington**	**1.98**	**129**		**Pn**	**01 15 17.8**	**0.0**
GTC	**Three Chop Rid**	**1.98**	**246**		**Pn**	**01 15 18.1**	**+0.4**
KOMM	**Orleans Mounta**	**1.99**	**302**		**Pn**	**01 15 18.5**	**+0.6**
KCRM	**Chalk Rock**	**2.00**	**276**		**Pn**	**01 15 19.2**	**+1.2**
GSNM	**Snow Mountain**	**2.00**	**230**		**Pn**	**01 15 18.2**	**+0.2**
GCVM	**Cloverdale**	**2.02**	**224**		**Pn**	**01 15 18.3**	**+0.2**
KHMM	**Horse Mountain**	**2.02**	**289**		**Pn**	**01 15 19.3**	**+1.0**
NSHM	**Saint Helena R**	**2.02**	**213**		**Pn**	**01 15 17.8**	**-0.5**
HOG	**Hogback Mounta**	**2.04**	**350**		**Pb**	**01 15 20.7**	**-0.5**
MAC	**Mark West Spri**	**2.04**	**215**		**Pn**	**01 15 19.6**	**+1.0**
GSSM	**Skaggs Springs**	**2.06**	**223**		**Pn**	**01 15 19.2**	**+0.4**
LKVW	**Lakeview**	**2.09**	**18**		**Pn**	**01 15 20.1**	**+0.8**
NMCNC	**Mill Creek, So**	**2.10**	**219**		**Pn**	**01 15 19.6**	**+0.3**
CVS	**Carmenet Viney**	**2.12**	**207**		**Pn**	**01 15 19.9**	**-0.7**
GNAM	**Nacimiento Ridge**	**2.13**	**242**		**Pn**	**01 15 19.2**	**-0.6**
GDCM	**Dry Creek**	**2.14**	**227**		**Pn**	**01 15 20.3**	**+0.3**
L04D	**Klamath Falls**	**2.14**	**338**	P	**Pn**	**01 15 21.1**	**+1.0**
	baz=156,SNR=42						
L04D	**Klamath Falls**	**2.14**	**338**		**Pb**	**01 15 22.0**	**-0.9**
GHOM	**Hamilton Openi**	**2.15**	**237**		**Pn**	**01 15 20.3**	**+0.3**
NTYM	**Taylor**	**2.15**	**212**		**Pn**	**01 15 19.8**	**-0.2**
WAKR	**Walker**	**2.21**	**141**		**Pn**	**01 15 21.5**	**+0.4**
JCC	**Jacoby Creek,**	**2.22**	**286**		**Pn**	**01 15 21.6**	**+0.6**
NLHM	**Lake Herman**	**2.23**	**199**		**Pn**	**01 15 20.7**	**-0.4**
GHCM	**House Creek**	**2.23**	**224**		**Pn**	**01 15 21.4**	**+0.2**
GGUM	**Gualala**	**2.23**	**233**		**Pn**	**01 15 21.6**	**+0.4**
SNT	**Sears Point**	**2.26**	**205**		**Pn**	**01 15 21.7**	**+0.2**
KSMM	**Slide Mountain**	**2.26**	**270**		**Pn**	**01 15 22.4**	**+0.8**
CTAM	**Taylor**	**2.29**	**196**		**Pn**	**01 15 22.9**	**+0.9**
CMB	**Columbia Colle**	**2.29**	**163**		**Pn**	**01 15 22.0**	**0.0**
CMB	**Columbia Colle**	**2.29**	**163**	Pn	**Pn**	**01 15 21.4**	**-0.6**
MCUB	**Copperopolis B**	**2.30**	**168**		**Pn**	**01 15 22.6**	**+0.4**
KTRM	**Thompson Ridge**	**2.33**	**316**		**Pb**	**01 15 24.9**	**-1.3**
CPIM	**Pinole Ridge**	**2.37**	**199**		**Pn**	**01 15 24.6**	**+1.5**
KRMB	**Red Mountain**	**2.41**	**303**		**Pn**	**01 15 24.9**	**+1.2**
K04D	**Chiloquin, OR**	**2.42**	**351**	P	**Pb**	**01 15 26.4**	**-1.3**
	baz=169,SNR=9.5						
BRIB	**Briones**	**2.42**	**198**		**Pn**	**01 15 24.5**	**+0.8**
CSPM	**San Pablo Ridg**	**2.43**	**201**		**Pn**	**01 15 24.9**	**+1.1**
MCCM	**Marconi Confer**	**2.45**	**212**		**Pn**	**01 15 25.0**	**+0.8**
CMOB	**Morgan Territo**	**2.46**	**191**		**Pn**	**01 15 25.9**	**+1.5**
CVPM	**Vollmer Peak**	**2.47**	**199**		**Pn**	**01 15 24.7**	**+0.2**
BKS	**Berkeley--Byer**	**2.48**	**199**		**Pn**	**01 15 25.0**	**+0.4**
VAK	**Adit at Lawren**	**2.49**	**199**		**Pn**	**01 15 25.2**	**+0.6**
K05A	**Summer Lake**	**2.50**	**6**		**Pn**	**01 15 26.1**	**+1.1**
BGC	**Bolinger Road**	**2.50**	**195**		**Pn**	**01 15 26.2**	**+1.3**
KSXB	**Camp Six Broad**	**2.56**	**309**		**Pn**	**01 15 27.3**	**+1.5**
CLCB	**Lake Chabot**	**2.58**	**195**		**Pn**	**01 15 26.9**	**+1.0**
RYN	**Ryan**	**2.63**	**127**		**Pn**	**01 15 26.8**	**-0.1**
KVN	**Kaiserville**	**2.69**	**115**		**Pn**	**01 15 27.2**	**-0.3**
KVN					**Sn**	**01 15 55.7**	**-4.9**
WVOR	**Wild Horse Val**	**2.94**	**41**	Pn	**Pn**	**01 15 29.7**	**-1.2**
J05D	**Fort Rock, OR**	**3.05**	**360**	P	**Pn**	**01 15 34.3**	**+1.8**
	baz=179,SNR=117						
J05D				Sb	**Sg**	**01 16 18.2**	**-3.2**
	baz=179						
K02D	**Willamette Mer**	**3.07**	**324**	P	**Pn**	**01 15 33.6**	**+0.9**
	baz=142,SNR=12						
K02D				S	**Sn**	**01 16 05.8**	**-4.1**
	baz=142						
J04D	**Umpqua Nationa**	**3.08**	**348**	P	**Pn**	**01 15 34.9**	**+1.9**
	baz=166,SNR=8.2						
MDPB	**Devils Postpil**	**3.09**	**147**	Pn	**Pn**	**01 15 33.3**	**+0.2**
SAO	**San Andreas Ge**	**3.47**	**183**	Pn	**Pn**	**01 15 40.0**	**+1.8**
SAO					**Pg**	**01 15 50.9**	**+0.9**
J01E	**Myrtle Point**	**3.56**	**326**	Pb	**Pb**	**01 15 45.3**	**-1.6**
	baz=144						
PINE	**Pine Mountain**	**3.56**	**3**		**Pn**	**01 15 41.4**	**+1.7**
BJOM	**Mount Johnson**	**3.60**	**181**		**Pn**	**01 15 37.2**	**-2.8**
I04A	**Tendick Farm,**	**3.67**	**346**	P	**Pn**	**01 15 43.5**	**+2.6**
	baz=165						
J08A	**Circle Bar Ran**	**3.74**	**32**		**Pn**	**01 15 41.7**	**-0.3**
J08A				Pg	**Pb**	**01 15 49.7**	**-0.3**
I03D	**Drain, OR**	**3.81**	**336**	P	**Pn**	**01 15 44.0**	**+1.2**
	baz=154						
I07A	**Izee**	**4.05**	**18**		**Pn**	**01 15 46.8**	**+0.6**
I07A				Pg	**Pb**	**01 15 57.3**	**+1.9**
I05D	**Terrebonne, OR**	**4.10**	**359**	P	**Pn**	**01 15 49.6**	**+2.7**
	baz=178						
H04D	**Lebanon**	**4.43**	**346**	P	**Pn**	**01 15 53.1**	**+1.8**
	baz=164						
H04A	**Detroit Lake**	**4.50**	**351**		**Pn**	**01 15 54.3**	**+1.9**
ELK	**Elko**	**4.59**	**82**		**Pn**	**01 15 53.4**	**-0.4**
ELK				Pg	**Pb**	**01 16 07.1**	**+2.4**
R11A	**Troy Canyon, C**	**4.76**	**111**		**Pn**	**01 15 56.4**	**+0.3**
ISA	**Isabella, Lake**	**5.05**	**154**	Pn	**Pn**	**01 15 59.7**	**-0.3**
TPNV	**Topopah Spring**	**5.09**	**129**		**Pn**	**01 16 00.9**	**+0.3**
ARVC	**Arvin**	**5.44**	**159**	S	**Sb**	**01 17 24.0**	**-0.6**
	baz=341						
BMO	**Blue Mountains**	**5.45**	**31**	Pn	**Pn**	**01 16 05.2**	**-0.2**
PSUT	**Pine Spring**	**5.96**	**104**	Pn	**Pn**	**01 16 13.8**	**+1.3**
SHPR	**Sheep Range**	**6.04**	**126**		**Pn**	**01 16 15.1**	**+1.4**
DUG	**Dugway, Tooele**	**6.44**	**88**	Pn	**Pn**	**01 16 19.5**	**+0.4**
CCUT	**Cedar City**	**6.69**	**111**		**Pn**	**01 16 23.3**	**+0.6**
SZCU	**Shurtz Canyon**	**6.87**	**110**	Pn	**Pn**	**01 16 27.1**	**+2.0**
NLU	**North Lily Min**	**7.02**	**89**	Pn	**Pn**	**01 16 26.3**	**-0.8**
U15A	**North Rim**	**7.98**	**116**	Pn	**Pn**	**01 16 41.2**	**+0.8**
PDAR	**Pinedale Array**	**9.11**	**70**	Pn	**Pn**	**01 16 59.9**	**+4.0**
	0.0nm,0.3s,baz=260,slow=16,SNR=1.9						
TXAR	**Lajitas Array**	**18.03**	**122**	P	**P**	**01 18 57.9**	**+2.5**
	0.1nm,0.3s,baz=317,slow=11,SNR=3.0						
YKA	**Yellowknife Ar**	**22.64**	**8**	P	**P**	**01 19 48.1**	**+2.9**
	0.6nm,0.9s,baz=195,slow=11,SNR=5.4						
ILAR	**Eielson Array**	**28.71**	**337**	P	**P**	**01 20 43.9**	**+2.6**
	0.8nm,0.9s,baz=151,slow=9.4,SNR=7.7						

MDD ***12*** *01:31:44.0±2.2,37°.69N×15°.22W,h0km,mb4.1/3,Error ellipse: s-maj=22.1km s-min=15.5km az=31.0,PRIXIMO*

INMG ***12*** *01:31:44.6±1.8,37°.37N×15°.65W,h10km,ML2.5, Error ellipse: s-maj=7.8km s-min=3.2km az=120.0*

ISC 12 01:31:43.9±3.8,37°.72N±0°.10×15°.1W±0°.2,h10km,n58, σ1§82/84,Azores-Cape St. Vincent Ridge

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

PMPST	**Porto Santo, M**	**4.73**	**193**	*eS*	Sn	01 33 28.4 -22
PMAFR	**Mafra**	**4.74**	**73**	P	**Pn**	**01 32 57.6 +2.1**
	3.0nm,0.2s,SNR=7.9					
PMAFR				S	**Sn**	**01 33 51.7 +1.1**
	5.2nm,0.1s,SNR=7.9					
PMAFR	**Mafra**	**4.74**	**73**	*eP*	**Pn**	**01 32 57.6 +2.1**
PMAFR				*eS*	**Sn**	**01 33 51.7 +1.1**
PMAFR				A	A	01 33 58.2
	11nm,0.8s					
PMPS	**Porto Santo**	**4.75**	**193**	S	Sn	01 33 28.4 -22
PMPS	**Porto Santo**	**4.75**	**193**	*eS*	Sn	01 33 29.8 -21
PFVI	**Vila Bisbo**	**5.03**	**95**	S	**Sn**	**01 33 55.6 -2.1**
	1.1nm,0.2s,SNR=7.9					
PFVI	**Vila Bisbo**	**5.03**	**95**	*eS*	**Sn**	**01 33 55.8 -1.8**
PFVI				A	A	01 34 01.0
	5.0nm,1.0s					
PTEO	**Sao Teotonio**	**5.07**	**90**	S	**Sn**	**01 33 56.4 -2.1**
	3.3nm,0.6s					
PTEO	**Sao Teotonio**	**5.07**	**90**	*eS*	**Sn**	**01 33 56.4 -2.1**
PTEO				A	A	01 34 07.7
	6.7nm,0.6s					
PMAR	**Madeira**	**5.20**	**197**	S	Sn	01 33 39.7 -22
PMAR	**Madeira**	**5.20**	**197**	*eS*	Sn	01 33 39.7 -22
PNCL	**Nicolau / Gran**	**5.22**	**84**	P	**Pn**	**01 33 02.8 +0.8**
PNCL				S	**Sn**	**01 34 01.5 -0.7**
	3.4nm,0.7s					
PNCL	**Nicolau / Gran**	**5.22**	**84**	*eP*	**Pn**	**01 33 02.8 +0.8**
PNCL				*eS*	**Sn**	**01 34 01.5 -0.7**
PNCL				A	A	01 34 04.8
	3.4nm,0.7s					
PSBE	**So Bento**	**5.26**	**68**	*eP*	**Pn**	**01 33 04.3 +1.7**
PSBE				*eS*	**Sn**	**01 34 04.3 +1.0**
PSBE				A	A	01 34 08.1
	4.0nm,0.9s					
MESJ	**Messejana**	**5.46**	**87**	S	**Sn**	**01 34 08.6 +0.5**
	1.6nm,0.3s					
MESJ	**Messejana**	**5.46**	**87**	*eS*	**Sn**	**01 34 08.6 +0.5**
MESJ				A	A	01 34 10.5
	1.6nm,0.3s					
PMTG	**Montargil**	**5.57**	**74**	P	**Pn**	**01 33 08.6 +1.8**
PMTG		

DZM	**Mont Dzumac**	**4.63 189**	Pn		**Pn**	**01 33 41.1**	**-0.4**
	1.9nm,0.3s,baz=84,slow=11,SNR=19						
DZM			Sn		**Sn**	**01 34 36.0**	**+0.7**
	4.2nm,0.3s,baz=138,slow=23,SNR=2.3						
CTA	**Charters Tower**	**20.01 259**	P		Pn	01 37 07.4	+1.3
	2.5nm,0.3s,baz=59,slow=15,SNR=4.2						
URZ	**Urewera**	**22.46 159**	LR		LR	01 44 04.3	
	comp=Z,334nm,21.1s,baz=42,slow=31						
STKA	**Stephens Creek**	**27.25 233**	P		**P**	**01 38 17.4**	**+1.7**
	4.0nm,1.0s,baz=53,slow=8.5,SNR=8.2						
STKA	**Stephens Creek**	**27.25 233**	P		**P**	**01 38 15.7**	**0.0**
WRA	**Warramunga Arr**	**31.20 260**	P		**P**	**01 38 51.1**	**+0.1**
	0.5nm,0.6s,baz=90,slow=9.2,SNR=5.7						
ASAR	**Alice Springs**	**31.73 253**	P		**P**	**01 38 54.6**	**-1.0**
	1.4nm,0.6s,baz=79,slow=8.2,SNR=17						
KNRA	**Kununurra**	**36.85 267**	P		**P**	**01 39 40.4**	**+0.4**
KNRA			IAmb		IAmb	01 39 40.8	
	comp=Z,3.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**39.53 263**	P		**P**	**01 40 02.2**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=79,slow=5.2,SNR=6.8						
FITZ	**Fitzroy Crossi**	**39.53 263**	IAmb		IAmb	01 40 03.7	
	comp=Z,3.4nm,0.9s						
RPSI	**Rantau Prapat**	**70.19 279**	P		**P**	**01 43 42.9**	**-2.0**
PETK	**Petropavlovsk-**	**70.76 354**	P		**P**	**01 43 47.6**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=153,slow=8.1,SNR=2.7						
QSPA	**South Pole Qui**	**72.57 180**	P		**P**	**01 43 57.9**	**-0.6**
	comp=Z,3.8nm,1.0s,baz=340,slow=2.8,SNR=4.8						
QSPA			LR		LR	02 12 17.0	
	comp=Z,226nm,19.0s,baz=255,slow=33						
QSPA	**South Pole Qui**	**72.57 180**	P		**P**	**01 43 58.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**76.02 295**	P		**P**	**01 44 21.1**	**+1.9**
	comp=Z,1.0nm,0.3s,baz=138,slow=5.6,SNR=2.0						
ILAR	**Eielson Array**	**89.14 18**	LR		LR	02 22 02.7	
	comp=Z,31nm,18.2s,baz=248,slow=33						

IDC ***12*** *01:35:34.3±1.1,6.11S×149.86E,h49km±14km,mb3.8/11, mb1 4.1/12,mb1mx3.8/43,mbtmp4.2/12,ML2.8/1,MS3.6/9, Ms1 3.6/9,ms1mx3.3/29,Error ellipse: s-maj=27.7km s-min=7.9km az=131.0*

NEIC ***12*** *01:35:35.0±2.0,6.13S±0.07×149.85E±0.09,h59km±6km, mb4.3/10,Error ellipse: s-maj=13.0km s-min=9.5km az=118.0*

DJA ***12*** *01:35:51.7±3.8,7.5S±22.5×14.9E±2.3,h97km±18km,M4.6/7, mb4.7/7,mB5.0/2,MLv4.6/1,Mw(mB)4.2/2*

ISC 12 01:35:34.2±0.6,6.15S±0.09×149.88E±0.10,h52km,n35,
σ1815/35,mb4.0/13,MS3.6/6,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.82**	**50**	**P**	**Pn**	**01 36 17.5**	**+0.7**
	152nm,0.3s,baz=23,slow=1.0,SNR=37						
KRVT				S	**Sn**	**01 36 49.9**	**+0.3**
	41nm,0.3s,baz=194,slow=22,SNR=6.2						
KRVT				LR	LR	01 37 17.8	
	comp=Z,530nm,19.6s,baz=221,slow=37						
RABL	**Rabaul**	**3.00**	**50**		**Pn**	**01 36 19.9**	**+0.6**
PMG	**Port Moresby**	**4.21**	**220**	P	**Pn**	**01 36 37.0**	**+1.1**
	36nm,0.3s,baz=42,slow=7.0,SNR=58						
PMG				S	**Sn**	**01 37 24.5**	**+0.6**
	78nm,0.3s,baz=152,slow=22,SNR=12						
PMG				LR	LR	01 38 25.9	
	comp=Z,940nm,18.8s,baz=46,slow=40						
PMG	**Port Moresby**	**4.21**	**220**		**Pn**	**01 36 37.2**	**+1.2**
JAY	**Jayapura**	**9.83**	**291**	LR	LR	01 41 18.4	
	comp=Z,154nm,20.1s,baz=9.0,slow=35						
COEN	**Coen**	**10.18**	**220**	Pn	**Pn**	**01 37 58.0**	**+0.2**
COEN				Sn	**Sn**	**01 39 46.8**	**-3.9**
EIDS	**Eidsvold**	**19.15**	**177**	P	**P**	**01 39 53.0**	**-0.3**
EIDS				IAmb	IAmb	01 39 55.0	
	comp=Z,14nm,0.8s						
MTN	**Manton Dam**	**19.64**	**249**	P	**P**	**01 39 57.5**	**-1.2**
MTN				IAmb	IAmb	01 40 02.9	
	comp=Z,7.1nm,0.8s						
WB0	**Warramunga Arr**	**20.24**	**227**	P	**P**	**01 40 04.8**	**-0.6**
WR0	**Warramunga Arr**	**20.26**	**226**	P	**P**	**01 40 05.2**	**-0.3**
WR0				IAmb	IAmb	01 40 07.2	
	comp=Z,18nm,0.8s						
WB2	**Warramunga Arr**	**20.39**	**226**	P	**P**	**01 40 07.8**	**+0.9**
WRA	**Warramunga Arr**	**20.39**	**226**	P	**P**	**01 40 07.5**	**+0.5**
	comp=Z,23nm,0.8s,baz=52,slow=11,SNR=49						
WRA				LR	LR	01 48 38.9	
	comp=Z,168nm,21.6s,baz=80,slow=38						
KNRA	**Kununurra**	**22.77**	**244**	P	**P**	**01 40 30.5**	**-2.0**
KNRA				IAmb	IAmb	01 40 36.0	
	comp=Z,13nm,0.8s						
AS31	**Alice Springs**	**23.23**	**220**	P	**P**	**01 40 38.1**	**+1.1**
ASAR	**Alice Springs**	**23.23**	**220**	P	**P**	**01 40 37.4**	**+0.3**
	comp=Z,4.3nm,0.7s,baz=57,slow=9.3,SNR=21						
ASAR				LR	LR	01 50 34.5	
	comp=Z,170nm,20.9s,baz=61,slow=39						
ARMA	**Armidale**	**24.20**	**176**	P	**P**	**01 40 47.0**	**+0.9**
ARMA				IAmb	IAmb	01 40 55.1	
	comp=Z,4.8nm,0.8s						
BATI	**Baumata**	**26.25**	**259**	P	**P**	**01 41 04.7**	**-0.1**
	comp=Z,20nm,0.4s,baz=194,slow=4.2,SNR=1.7						
FITZ	**Fitzroy Crossi**	**26.46**	**241**	P	**P**	**01 41 07.4**	**+0.8**
	comp=Z,5.8nm,0.7s,baz=39,slow=8.0,SNR=28						
FITZ				LR	LR	01 53 00.5	
	comp=Z,122nm,18.5s,baz=41,slow=40						
FITZ	**Fitzroy Crossi**	**26.46**	**241**	P	**P**	**01 41 07.6**	**+0.9**
FITZ				IAmb	IAmb	01 41 15.4	
	comp=Z,6.6nm,0.8s						
STKA	**Stephens Creek**	**26.74**	**196**	P	**P**	**01 41 09.8**	**+0.8**
	comp=Z,4.8nm,0.7s,baz=7.2,slow=9.3,SNR=10						
STKA	**Stephens Creek**	**26.74**	**196**	P	**P**	**01 41 11.3**	**+2.2**
EDFI	**Ende, Flores**	**28.06**	**263**	P	**P**	01 41 28.3	+7.1
MQZ	**McQueen's Vall**	**42.43**	**155**	P	**P**	**01 43 23.1**	**-0.7**
MJAR	**Matsushiro Arr**	**43.85**	**346**	P	**P**	**01 43 35.6**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=156,slow=8.1,SNR=2.0						
KSRS	**Korea Array**	**47.97**	**336**	P	**P**	**01 44 08.6**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=152,slow=8.1,SNR=2.2						
PETK	**Petropavlovsk-**	**59.40**	**5**	P	**P**	**01 45 30.3**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=166,slow=8.5,SNR=5.3						
PETK				LR	LR	02 06 13.6	
	comp=Z,93nm,21.5s,baz=240,slow=31						
SONM	**Songino Array**	**65.95**	**329**	P	**P**	**01 46 16.7**	**+1.6**
	comp=Z,0.7nm,0.5s,baz=129,slow=4.1,SNR=2.4						
MKAR	**Makanchi Array**	**79.44**	**320**	P	**P**	**01 47 34.7**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=123,slow=10,SNR=1.9						
ZALV	**Zalesovo Beam**	**80.67**	**327**	P	**P**	**01 47 40.4**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=112,slow=6.4,SNR=2.2						
ZALV				LR	LR	02 23 52.5	
	comp=Z,28nm,18.6s,baz=76,slow=36						
ILAR	**Eielson Array**	**84.50**	**23**	P	**P**	**01 48 01.2**	**0.0**
	comp=Z,0.7nm,0.8s,baz=248,slow=4.6,SNR=4.3						
YKA	**Yellowknife Ar**	**97.97**	**28**	LR	LR	02 30 01.1	
	comp=Z,32nm,21.5s,baz=0.0,slow=33						
GERES	**GERESS Array B**	**123.62**	**327**	PKP	**PKiKP**	**01 54 26.6**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=357,slow=5.6,SNR=4.6						
ESDC	**Sonseca Array**	**139.15**	**329**	PKP	**PKiKP**	**01 54 57.0**	**-1.0**
	comp=Z,0.3nm,0.8s,baz=37,slow=1.6,SNR=2.1						
BDFB	**Brasilia**	**152.03**	**141**	PKPbc	**PKiKP**	**01 55 25.5**	**+0.3**
	comp=Z,4.2nm,0.7s,baz=239,slow=3.2,SNR=4.9						
DBIC	**Dimbokro**	**154.88**	**273**	PKPbc	**PKPbc**	**01 55 31.0**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=144,slow=2.9,SNR=4.5						

BJI ***12*** *01:37:21.0±0.0,30.40S×177.50W,h6km,mB5.3/3, mb5.0/4,Ms4.8/2,Ms7 4.6/3*

NEIC ***12*** *01:37:22.8±2.5,30.30S±0.04×177.58W±0.10,h6km±3km, mb4.7/52,Error ellipse: s-maj=12.1km s-min=6.0km az=82.0*

IDC ***12*** *01:37:29.3±1.6,30.02S×177.71W,h40km±11km,mb4.5/18, mb1 4.6/19,mb1mx4.4/42,mbtmp4.7/19,ML4.7/1,MS3.7/10, Ms1 3.7/10,ms1mx3.5/20,Error ellipse: s-maj=20.0km s-min=12.7km az=99.0*

ISC 12 01:37:24.3±0.3,30.25S±0.04×177.69W±0.07,h10km,
n237,σ2810/233,mb4.8/42,MS3.9/13,1C-2D,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**1.00**	**348**	P	**Pb**	**01 37 44.1**	**+0.4**
GLKZ				S	**Sg**	**01 37 55.6**	**-0.9**
RAO	**Raoul Island**	**1.01**	**348**	P	**Pn**	**01 37 44.5**	**0.0**
	3μm,0.3s,baz=39,slow=18,SNR=92						
RAO				S	**Sg**	**01 37 55.5**	**-1.3**
	13μm,0.3s,baz=102,slow=14,SNR=23						
RAO				LR	LR	01 38 07.3	
	comp=Z,2μm,19.2s,baz=237,slow=48						
RAO	**Raoul Island**	**1.01**	**348**		**Pn**	**01 37 44.6**	**+0.1**
RAO				Sg	**Sg**	**01 37 55.7**	**-1.2**
RIZ	**Raoul Island**	**1.02**	**348**	P	**Pn**	**01 37 44.8**	**+0.2**
RIZ				S	**Sg**	**01 37 55.6**	**-1.5**
MXZ	**Matakaoa Point**	**8.02**	**203**	P	**Pn**	**01 39 19.6**	**-1.3**
MXZ				S	**Sn**	**01 40 51.3**	**-0.3**
MXZ	**Matakaoa Point**	**8.02**	**203**	Pn	**Pn**	**01 39 20.1**	**-0.7**
MXZ					**Sn**	**01 40 48.8**	**-2.8**
WMGZ	**Waiomatatini S**	**8.22**	**202**	P	**Pn**	**01 39 24.2**	**+0.7**
WMGZ				S	**Sn**	**01 40 57.3**	**+0.8**
HAZ	**Te Kaha**	**8.38**	**205**	P	**Pn**	**01 39 26.1**	**+0.3**
HAZ				S	**Sn**	**01 41 01.5**	**+1.0**
PKGZ	**Pakihiroa**	**8.39**	**204**	P	**Pn**	**01 39 24.9**	**-1.2**
PKGZ				S	**Sn**	**01 40 58.9**	**-2.0**
PUZ	**Puketiti**	**8.50**	**202**	P	**Pn**	**01 39 27.0**	**-0.5**
PUZ				S	**Sn**	**01 41 02.6**	**-0.8**
RUGZ	**Raukumara Rang**	**8.61**	**205**	P	**Pn**	**01 39 27.7**	**-1.3**
RUGZ				S	**Sn**	**01 41 04.0**	**-2.2**
OUZ	**Omahuta**	**8.86**	**234**		Pn	01 39 41.4	+9.0
CNGZ	**Carnagh Statio**	**8.89**	**201**	P	**Pn**	**01 39 31.9**	**-0.9**
CNGZ				S	**Sn**	**01 41 13.4**	**+0.3**
MWZ	**Matawai**	**8.99**	**205**	P	**Pn**	**01 39 33.1**	**-1.1**
MWZ				S	**Sn**	**01 41 14.1**	**-1.4**
URZ	**Urewera**	**9.08**	**207**	P	**Pn**	**01 39 33.8**	**-1.5**
	1.8nm,0.3s,baz=275,slow=6.3,SNR=13						
URZ				S	**Sn**	**01 41 13.0**	**-4.6**
	5.1nm,0.3s,baz=168,slow=22,SNR=3.0						
URZ	**Urewera**	**9.08**	**207**	P	**Pn**	**01 39 33.9**	**-1.5**
URZ				S	**Sn**	**01 41 16.7**	**-0.9**
URZ	**Urewera**	**9.08**	**207**		**Pn**	**01 39 33.4**	**-1.9**
RIGZ	**Rimuhau**	**9.24**	**203**	P	**Pn**	**01 39 36.6**	**-1.0**
RIGZ				S	**Sn**	**01 41 20.0**	**-1.6**
NGRZ	**Ngongotaha**	**9.33**	**211**	S	Sn	01 41 35.8	+12
MUGZ	**Murupara**	**9.40**	**208**	P	**Pn**	**01 39 38.2**	**-1.6**
RAHZ	**Arahi**	**9.66**	**205**	P	**Pn**	**01 39 45.3**	**+1.9**
RAHZ				S	**Sn**	**01 41 31.3**	**-0.7**
MTHZ	**Maungataniwha**	**9.70**	**206**	P	**Pn**	**01 39 43.3**	**-0.6**
MTHZ				S	**Sn**	**01 41 32.1**	**-0.8**
BKZ	**Black Stump Fm**	**10.10**	**207**	Pn	**Pn**	**01 39 50.1**	**+0.6**
MCHZ	**McNeill Hill**	**10.27**	**205**	P	**Pn**	**01 39 51.8**	**+0.1**
MCHZ				S	**Sn**	**01 41 44.9**	**-2.0**
HIZ	**Hauiti**	**10.29**	**215**	P	Pn	01 39 58.1	+6.1
HIZ	**Hauiti**	**10.29**	**215**		Pn	01 39 58.6	+6.5
BHHZ	**Black Hill Sta**	**10.55**	**207**	P	**Pn**	**01 39 57.3**	**+1.7**
BHHZ				S	**Sn**	**01 41 51.4**	**-2.5**
FWVZ	**Far West T-bar**	**10.56**	**210**	P	**Pn**	**01 39 58.8**	**+2.8**
TSZ	**Takapari Road**	**11.08**	**206**	P	**Pn**	**01 39 59.7**	**-3.1**
TSZ				S	**Sn**	**01 42 00.8**	**-6.1**
BFZ	**Birch Farm**	**11.52**	**204**	Pn	**Pn**	**01 40 08.5**	**-0.5**
MRZ	**Mangatainoka R**	**11.75**	**206**	P	**Pn**	**01 40 08.0**	**-4.0**
MRZ				S	**Sn**	**01 42 15.1**	**-8.0**
OGWZ	**Otaki Gorge**	**12.04**	**207**	P	**Pn**	**01 40 12.6**	**-3.4**
OGWZ				S	**Sn**	**01 42 22.7**	**-7.6**
MSWZ	**Moikau Station**	**12.53**	**205**	Pn	**Pn**	**01 40 21.2**	**-1.4**
SNZO	**South Karori**	**12.64**	**207**	Pn	**Pn**	**01 40 21.3**	**-2.9**
PLWZ	**Palliser**	**12.66**	**205**	Pn	**Pn**	**01 40 19.8**	**-4.6**
PLWZ					**Sn**	**01 42 37.5**	**-7.9**
MSVF	**Nonsavu**	**13.05**	**342**	Pn	**Pn**	**01 40 30.6**	**+0.7**
TUWZ	**Tuamarina**	**13.05**	**209**	Pn	Pn	01 40 24.5	-5.3
NNZ	**Nelson**	**13.12**	**211**	Pn	**Pn**	**01 40 33.0**	**+2.2**
NIUE	**Niue**	**13.16**	**34**	P	**Pn**	**01 40 26.9**	**-4.4**
	baz=13,SNR=3.5						
NIUE	**Niue**	**13.16**	**34**	Pn	**Pn**	**01 40 27.6**	**-3.7**
QRZ	**Quartz Range**	**13.21**	**214**	P	**Pn**	**01 40 31.6**	**-0.4**
QRZ	**Quartz Range**	**13.21**	**214**	Pn	**Pn**	**01 40 33.6**	**+2.6**
BSWZ	**Blackbirch Sta**	**13.32**	**208**	Pn	Pn	01 40 26.1	-7.3
THZ	**Tophouse**	**13.78**	**211**	P	**Pn**	**01 40 37.6**	**-2.1**
THZ	**Tophouse**	**13.78**	**211**		**Pn**	**01 40 36.0**	**-3.7**
KHZ	**Kahutara**	**14.04**	**208**	P	**Pn**	**01 40 39.7**	**-3.5**
KHZ	**Kahutara**	**14.04**	**208**		**Pn**	**01 40 41.2**	**-2.0**
DSZ	**Denniston Nort**	**14.27**	**214**	P	**P**	**01 40 52.1**	**-1.7**
GVZ	**Greta Valley S**	**14.71**	**208**	P	**Pn**	**01 40 50.2**	**-2.2**
LTZ	**Lake Taylor**	**14.88**	**210**	P	**Pn**	**01 40 52.7**	**-2.0**
LTZ	**Lake Taylor**	**14.88**	**210**	Pn	**Pn**	**01 40 53.3**	**-1.4**
INZ	**Inchbonnie**	**15.20**	**212**	P	**Pn**	**01 41 00.0**	**+1.1**
OXZ	**Oxford**	**15.42**	**209**	P	**Pn**	**01 41 02.6**	**+0.8**
OXZ	**Oxford**	**15.42**	**209**		**Pn**	**01 41 00.9**	**-0.9**
OXZ				IAmb	IAmb	01 41 05.6	
	comp=Z,28nm,0.9s						
MQZ	**McQueen's Vall**	**15.48**	**207**	P	**Pn**	**01 41 00.6**	**-2.1**
MQZ	**McQueen's Vall**	**15.48**	**207**	Pn	**Pn**	**01 41 01.6**	**-1.1**
RPZ	**Rata Peaks**	**16.15**	**211**	P	**P**	**01 41 13.9**	**-0.8**
	comp=Z,2.6nm,0.3s,baz=6.3,slow=2.8,SNR=9.1						
RPZ				S	Sn	01 43 58.2	-12
	comp=Z,1.5nm,0.3s,baz=13,slow=9.6,SNR=3.1						
RPZ	**Rata Peaks**	**16.15**	**211**	P	**P**	**01 41 13.9**	**-0.8**
RPZ	**Rata Peaks**	**16.15**	**211**	Pn	**Pn**	**01 41 06.1**	**-5.3**
DZM	**Mont Dzumac**	**16.40**	**296**	*eP*	P	01 41 29.4	+12
	comp=Z,117nm,1.2s						
DZM				*e*LR	LR	01 45 09.9	
	comp=Z,748nm,24.8s						
DZM	**Mont Dzumac**	**16.40**	**296**	P	**P**	**01 41 21.3**	**+3.7**
	comp=Z,0.4nm,0.3s,baz=66,slow=20,SNR=2.6						
DZM				LR	LR	01 46 23.9	
	comp=Z,439nm,18.3s,baz=194,slow=33						
FOZ	**Fox Glacier**	**16.58**	**213**	Pn	**Pn**	**01 41 14.3**	**-2.5**
LBZ	**Lake Benmore**	**17.07**	**211**	Pn	**Pn**	**01 41 21.2**	**-1.8**
AFI	**Afiamalu**	**17.15**	**20**	Pn	**Pn**	**01 41 21.7**	**-2.5**
AFI				IAmb	IAmb	01 41 38.9	
	comp=Z,58nm,1.1s						
ODZ	**Otahua Downs**	**17.40**	**209**	Pn	**Pn**	**01 41 25.0**	**-2.1**
WKZ	**Wanaka**	**17.94**	**212**	Pn	**Pn**	**01 41 31.8**	**-2.0**
RAR	**Rarotonga**	**18.46**	**65**	P	**P**	**01 41 37.7**	**-2.7**
MLZ	**Mavora Lakes**	**18.76**	**213**	P	**P**	**01 41 41.3**	**-2.2**
LHI	**Lord Howe Isla**	**19.99**	**260**	P	Pn	01 42 03.6	+4.8
	baz=20,SNR=3.2						
TBI	**Tubuai**	**26.07**	**82**	*eS*	**S**	**01 47 40.0**	**+11**
	comp=Z,102nm,27.5s						
TBI				*e*LR	LR	01 49 33.9	
	comp=Z,416nm,26.8s,baz=247						
TBI	**Tubuai**	**26.07**	**82**	*eT*	T	02 09 52.6	
	comp=Z,39nm,0.3s						
ARMA	**Armidale**	**26.45**	**262**	P	**P**	**01 43 05.4**	**+3.7**
	baz=27,SNR=5.4						
ARMA	**Armidale**	**26.45**	**262**	P	**P**	**01 43 00.8**	**-0.8**
ARMA				IAmb	IAmb	01 43 06.7	
	comp=Z,14nm,0.7s						
MGCD	**Mangrove Creek**	**26.66**	**255**	P	**P**	**01 43 07.2**	**+3.9**
	baz=27,SNR=5.3						
EIDS	**Eidsvold**	**28.00**	**272**	P	**P**	**01 43 18.1**	**+2.6**
	baz=28,SNR=4.9						
EIDS	**Eidsvold**	**28.00**	**272**	P	**P**	**01 43 14.2**	**-1.3**
EIDS				IAmb	IAmb	01 43 18.8	
	comp=Z,13nm,0.7s						
CNB	**Canberra Magne**	**28.08**	**251**	P	**P**	**01 43 20.1**	**+3.9**
	baz=29,SNR=7.1						
MILA	**Mila**	**28.33**	**247**	P	**P**	**01 43 22.4**	**+4.0**
	baz=29,SNR=7.3						
CAN	**Canberra**	**28.38**	**251**	P	**P**	**01 43 18.0**	**-0.9**
CAN				IAmb	IAmb	01 43 23.4	
	comp=Z,19nm,0.8s						
PAE	**Paea**	**28.49**	**70**	*eT*	T	02 12 40.1	
	comp=Z,8.8nm,0.2s						
PPT2	**Papeete2**	**28.53**	**70**	*e*LR	LR	01 50 36.8	
	comp=Z,371nm,26.2s,baz=234						
PPT2	**Papeete2**	**28.53**	**70**	*eT*	T	02 12 43.7	
	comp=Z,7.0nm,0.2s						
PPT	**Papeete**	**28.54**	**70**	LR	LR	01 51 43.1	
	comp=Z,72nm,21.8s,baz=230,slow=30						
TVO	**Taravao**	**28.70**	**71**	*eT*	T	02 12 57.0	
	comp=Z,2.7nm,0.3s						
YNG	**Young**	**28.88**	**253**	P	**P**	**01 43 27.2**	**+3.9**
	baz=29,SNR=10						
MEH	**Mehetia**	**29.62**	**72**	*eT*	T	02 14 07.6	
	comp=Z,17nm,0.2s						
RMQ	**Roma**	**29.70**	**269**	P	**P**	**01 43 34.4**	**+3.7**
	baz=30,SNR=18						
TAU	**Tasmania Unive**	**30.59**	**236**	P	**P**	**01 43 36.8**	**-1.5**
TAU				IAmb	IAmb	01 43 48.3	
	comp=Z,16nm,1.1s						
TOO	**Toolangi**	**31.27**	**247**	P	**P**	**01 43 47.5**	**+3.0**
	baz=32,SNR=7.5						
TOO	**Toolangi**	**31.27**	**247**	P	**P**	**01 43 45.1**	**+0.7**
PMOR	**Pomariorio Ree**	**31.28**	**68**	*eT*	T	02 16 05.8	
	comp=Z,4.0nm,0.3s						
CMSA	**Cobar Meteorol**	**31.36**	**258**	P	**P**	**01 43 48.2**	**+2.9**
	baz=32,SNR=21						
VAH	**Vaihoa**	**31.37**	**68**	*eT*	T	02 16 13.5	
	comp=Z,58nm,0.2s						
QLP	**Quilpie**	**33.59**	**267**	P	**P**	**01 44 06.9**	**+2.1**
	baz=34,SNR=4.7						
CTA	**Charters Tower**	**34.04**	**279**	P	**P**	**01 44 09.9**	**+1.1**
	comp=Z,50nm,0.5s,baz=103,slow=10,SNR=56						
CTAO	**Charters Tower**	**34.04**	**279**	P	**P**	**01 44 10.7**	**+1.9**
ARPS	**Mount Arapiles**	**34.18**	**248**	P	**P**	**01 44 12.8**	**+3.0**
	baz=35,SNR=7.0						
STKA	**Stephens Creek**	**34.78**	**257**	P	**P**	**01 44 17.6**	**+2.5**
	baz=35,SNR=38						
STKA	**Stephens Creek**	**34.78**	**257**	P	**P**	**01 44 17.1**	**+2.0**
	comp=Z,24nm,0.6s,baz=100,slow=11,SNR=52						
STKA				LR	LR	01 56 49.0	
	comp=Z,138nm,19.7s,baz=30,slow=33						
STKA	**Stephens Creek**	**34.78**	**257**	P	**P**	**01 44 17.8**	**+2.7**
STKA				IAmb	IAmb	01 44 18.6	
	comp=Z,5.4nm,0.6s						
MTSU	**Mount Surprise**	**36.53**	**280**	P	**P**	**01 44 32.7**	**+2.4**
	baz=37,SNR=19						
HTT	**Hallett**	**36.80**	**254**	P	**P**	**01 44 34.5**	**+2.0**
	baz=37,SNR=32						
RKT	**Rikitea**	**38.65**	**90**	*eT*	T	02 25 44.9	
	comp=Z,4.0nm,0.3s						
BBOO	**Buckleboo**	**39.27**	**254**	P	**P**	**01 44 55.0**	**+1.7**
	baz=40,SNR=31						
BBOO	**Buckleboo**	**39.27**	**254**	P	**P**	**01 44 55.0**	**+1.7**
COEN	**Coen**	**39.49**	**286**	P	**P**	**01 44 57.6**	**+2.3**
	baz=40,SNR=11						
COEN	**Coen**	**39.49**	**286**	P	**P**	**01 44 56.0**	**+0.7**
COEN				IAmb	IAmb	01 45 07.7	
	comp=Z,14nm,1.1s						
QIS	**Mount Isa**	**39.57**	**274**	P	**P**	**01 44 57.6**	**+1.7**
	baz=40,SNR=6.6						
TAOE	**Nuku Hiva Isla**	**41.00**	**67**	*e*LR	LR	01 56 20.8	
	comp=Z,198nm,25.4s						
AS31	**Alice Springs**	**43.39**	**267**	P	**P**	**01 45 28.3**	**+1.1**
AS31				IAmb	IAmb	01 45 28.9	
	comp=Z,6.7nm,0.5s						
ASAR	**Alice Springs**	**43.39**	**267**	P	**P**	**01 45 27.4**	**+0.2**
	comp=Z,15nm,0.5s,baz=103,slow=7.4,SNR=89						
ASAR				ScP	**ScP**	**01 51 05.5**	**-1.7**
	comp=Z,0.7nm,0.8s,baz=124,slow=4.6,SNR=3.4						
ASAR				LR	LR	02 03 09.7	
	comp=Z,211nm,19.1s,baz=121,slow=36						
WR0	**Warramunga Arr**	**44.18**	**272**	P	**P**	**01 45 34.0**	**+0.3**
WB4	**Warramunga Arr**	**44.36**	**272**	P	**P**	**01 45 36.6**	**+1.5**
	baz=45						
WRA	**Warramunga Arr**	**44.36**	**272**	P	**P**	**01 45 35.0**	**-0.1**
	comp=Z,35nm,0.7s,baz=110,slow=8.2,SNR=195						
WRA				LR	LR	02 04 02.1	
	comp=Z,142nm,18.1s,baz=325,slow=36						
WB0	**Warramunga Arr**	**44.38**	**272**	P	**P**	**01 45 35.5**	**+0.2**
FORT	**Forrest**	**46.35**	**255**	P	**P**	**01 45 50.1**	**-0.6**
	baz=47,SNR=10						
FORT	**Forrest**	**46.35**	**255**	P	**P**	**01 45 49.9**	**-0.9**
WRKA	**Warakurna**	**47.77**	**262**	P	**P**	**01 46 02.0**	**+0.1**
	baz=48,SNR=20						
JAY	**Jayapura**	**48.07**	**297**	P	**P**	**01 46 04.4**	**+0.1**
	comp=Z,5.7nm,0.6s,baz=173,slow=12,SNR=4.4						
VNDA	**Vanda**	**48.28**	**186**	P	**P**	**01 46 08.6**	**+3.5**
	comp=Z,2.7nm,0.7s,baz=1.6,slow=8.4,SNR=5.5						
KDU	**Kakadu**	**49.16**	**280**	P	**P**	**01 46 13.3**	**+0.6**
	baz=50,SNR=4.4						
KNRA	**Kununurra**	**50.96**	**274**	P	**P**	**01 46 27.4**	**+1.1**
	baz=51,SNR=3.3						
FITZ	**Fitzroy Crossi**	**52.63**	**270**	P	**P**	**01 46 38.5**	**-0.3**
	baz=53,SNR=27						
FITZ	**Fitzroy Crossi**	**52.63**	**270**	P	**P**	**01 46 38.4**	**-0.4**
	comp=Z,13nm,0.7s,baz=151,slow=8.9,SNR=29						
FITZ	**Fitzroy Crossi**	**52.63**	**270**	P	**P**	**01 46 39.1**	**+0.3**
FITZ				IAmb	IAmb	01 46 41.3	
	comp=Z,12nm,0.7s			

ELK					IAmb	IAmb	01 50 31.8		
	comp=Z,5.4nm,1.5s								
G06A	**Carlson Farm,**	**91.27**	**36**	P	**P**	**P**	**01 50 29.8**	**0.0**	
G06A					IAmb	IAmb	01 50 31.2		
	comp=Z,4.7nm,0.9s								
G08A	**Pilot Rock**	**92.17**	**37**	P	**P**	**P**	**01 50 32.9**	**-1.2**	
G08A					IAmb	IAmb	01 50 36.5		
	comp=Z,4.2nm,1.1s								
PDAR	**Pinedale Array**	**95.84**	**43**	P	**P**	**P**	**01 50 50.0**	**-1.2**	
	comp=Z,0.4nm,0.8s,baz=200,slow=2.4,SNR=2.4								
PDAR					PKKPbc	**PKKPbc**	**02 07 41.2**	**-0.1**	
	comp=Z,0.5nm,0.6s,baz=98,slow=5.8,SNR=6.4								
SEY	**Seymchan**	**95.89**	**347**	P	**P**	**P**	**01 50 50.6**	**+0.1**	
	comp=Z,2.2nm,0.6s,baz=75,slow=3.5,SNR=5.2								
CD2	**Chengdu**	**96.23**	**302**	P	**P**	**P**	**01 50 52.2**	**-0.8**	
HHC	**Hu-ho-hao-te**	**96.32**	**314**	*eP*	**P**	**P**	**01 50 52.7**	**-0.5**	
HHC					pmax	pmax			
	comp=Z,39nm,5.7s								
ILAR	**Eielson Array**	**97.72**	**13**	P	**P**	**P**	**01 50 58.8**	**0.0**	
	comp=Z,0.2nm,0.5s,baz=219,slow=5.6,SNR=1.9								
LPAZ	**La Paz**	**97.96**	**114**	LR	LR	LR	02 24 54.3		
	comp=Z,18nm,21.8s,baz=162,slow=29								
LZH	**Lanzhou**	**98.85**	**307**	*eP*	**P**	**P**	**01 51 01.6**	**-3.2**	
LZH					PP	**PP**	**01 55 10.6**	**+3.8**	
LZH					LR	LR			
	comp=Z,180nm,17.2s								
LZH					LR	LR			
	comp=Z,200nm,19.6s								
YKA	**Yellowknife Ar**	**105.19**	**25**	PKKPbc	PKKPbc		02 07 12.7	-1.8	
	comp=Z,0.4nm,0.9s,baz=45,slow=2.7,SNR=4.6								
WMQ	**Urumqi**	**113.34**	**308**	*e*PKP	**PKiKP**		**01 56 02.2**	**-0.1**	
MKAR	**Makanchi Array**	**117.88**	**310**	PKP	**PKPdf**		**01 56 09.8**	**-1.1**	
	comp=Z,1.5nm,0.6s,baz=194,slow=1.4,SNR=11								
ZALV	**Zalesovo Beam**	**118.10**	**318**	PKP	**PKPdf**		**01 56 09.8**	**-1.2**	
	comp=Z,0.7nm,0.4s,baz=142,slow=5.6,SNR=5.1								
KSH	**Kashi**	**120.39**	**301**	PKP	**PKPdf**		**01 56 16.2**	**+0.1**	
KURK	**Kurchatov**	**121.14**	**314**		**PKPdf**		**01 56 16.1**	**-0.8**	
KURK				PP	PP		01 57 39.6	-7.9	
KURBB	**Kurchatov Arra**	**121.17**	**314**	PKP	**PKPdf**		**01 56 15.9**	**-1.1**	
	comp=Z,4.6nm,0.6s,baz=109,slow=1.8,SNR=54								
AAK	**Ala-Archa**	**122.25**	**304**	PKP	**PKPdf**		**01 56 19.1**	**-0.5**	
	comp=Z,2.4nm,0.6s,baz=110,slow=3.9,SNR=6.9								
KBL	**Kabul**	**124.41**	**293**		**PKiKP**		**01 56 24.7**	**+0.4**	
BVAR	**Borovoye Array**	**126.48**	**316**	PKP	**PKPdf**		**01 56 26.8**	**-0.3**	
	comp=Z,5.9nm,0.7s,baz=111,slow=1.1,SNR=42								
BRVK	**Borovoye**	**126.55**	**316**		**PKPdf**		**01 56 26.9**	**-0.4**	
ARU	**Arti**	**133.14**	**321**	PKP	**PKPdf**		**01 56 39.9**	**+0.2**	
	comp=Z,1.5nm,0.6s,baz=200,slow=6.1,SNR=6.4								
GEYT	**Alibeck**	**133.74**	**295**	PKP	**PKPdf**		**01 56 41.4**	**-0.1**	
	comp=Z,3.2nm,0.8s,baz=132,slow=2.2,SNR=7.3								
AKTO	**Aktyubinsk**	**134.23**	**313**	PKP	**PKPdf**		**01 56 41.4**	**-0.5**	
	comp=Z,3.0nm,0.6s,baz=98,slow=4.3,SNR=13								
ARCES	**ARCESS Array B**	**138.50**	**348**	PKhKP	PKPpre		01 56 40.6		
	comp=Z,1.7nm,0.7s,baz=29,slow=2.8,SNR=6.6								
ARCES					PKP	**PKiKP**	**01 56 50.9**	**-0.5**	
	comp=Z,2.9nm,0.8s,baz=42,slow=2.0,SNR=7.0								
FIA1	**FINESS Array S**	**145.09**	**340**			**PKPbc**	**01 57 00.0**	**-0.7**	
FINES	**FINESS Array B**	**145.09**	**340**	PKP	**PKPbc**		**01 56 60.0**	**-0.7**	
	comp=Z,45nm,0.5s,baz=64,slow=3.2,SNR=370								
AKH	**Akhalkalaki**	**145.10**	**300**		**PKPdf**		**01 57 02.4**	**+0.2**	
OBN	**Obninsk**	**145.20**	**325**	PKPbc	**PKPbc**		**01 57 00.7**	**-0.6**	
	comp=Z,7.4nm,0.4s,baz=151,slow=6.3,SNR=7.9								
KBZ	**Khabaz**	**145.25**	**304**	PKPbc	**PKPbc**		**01 57 01.7**	**-0.1**	
	comp=Z,3.7nm,0.8s,baz=30,slow=4.7,SNR=6.5								
VSU	**Vasula**	**147.19**	**336**	*eP*	**PKPbc**		**01 57 07.0**	**-0.1**	
NC405	**NORSAR Array S**	**148.50**	**351**		**PKPbc**		**01 57 10.2**	**-0.5**	
NB2	**NORSAR Subarra**	**148.64**	**352**	PKPdf	**PKPdf**		**01 57 09.1**	**+1.8**	
	comp=Z,3.8nm,0.8s,baz=44,slow=1.9								
NOA	**NORSAR Array B**	**148.64**	**352**	PKPbc	**PKPbc**		**01 57 10.3**	**-0.7**	
	comp=Z,3.8nm,0.6s,baz=16,slow=4.3,SNR=25								
IZAR	**Zarasai**	**149.38**	**333**	*eP*	**PKPbc**		**01 57 13.4**	**+0.4**	
ISAL	**Salakas**	**149.56**	**333**	*eP*	**PKPbc**		**01 57 13.5**	**+0.1**	
IIGN	**Ignalina**	**149.68**	**333**	*eP*	**PKPbc**		**01 57 14.1**	**+0.4**	
PABE	**Paberze**	**150.43**	**335**	*eP*	**PKPbc**		**01 57 15.6**	**+0.1**	
ASF	**Jabal al Asfar**	**150.43**	**283**	PKPbc	**PKPbc**		**01 57 16.1**	**-0.4**	
	comp=Z,4.5nm,0.9s,baz=48,slow=1.3,SNR=8.3								
PBUR	**Paburge**	**150.74**	**337**	*eP*	**PKPbc**		**01 57 16.2**	**0.0**	
AKASG	**Malin Array Be**	**151.34**	**323**	PKPbc	**PKPbc**		**01 57 17.0**	**-0.9**	
	comp=Z,14nm,0.6s,baz=48,slow=2.7,SNR=8.3								
MMAI	**Mount Meron Ar**	**151.75**	**284**	PKPbc	**PKiKP**		**01 57 20.3**	**+0.4**	
	comp=Z,1.9nm,0.3s,baz=74,slow=6.2,SNR=25								
EIL	**Elat**	**151.77**	**277**	PKPbc	**PKPbc**		**01 57 19.1**	**-0.4**	
	comp=Z,9.2nm,0.8s,baz=289,slow=6.0,SNR=6.4								
BRTR	**Keskin Array B**	**152.76**	**299**	PKPbc	**PKPbc**		**01 57 20.3**	**-1.4**	
	comp=Z,2.8nm,0.6s,baz=134,slow=4.6,SNR=17								
ANTO	**Ankara**	**153.37**	**299**		**PKPbc**		**01 57 22.6**	**-0.3**	
ANTO				PKPab	**PKPab**		**01 57 31.9**	**-3.2**	
CSS	**Mathiatis**	**153.51**	**288**	PKPdf	**PKPdf**		**01 57 14.4**	**-1.2**	
CSS					**PKPbc**		**01 57 22.8**	**-0.4**	
CHVC	**Chvalec**	**157.22**	**337**	*e*PKPAB	**PKPab**		**01 57 50.3**	**-0.6**	
CHVC				*ex*	x		01 57 55.0		
DPC	**Dobruska-Polom**	**157.32**	**336**	*e*PKPAB	**PKPab**		**01 57 51.8**	**+0.4**	
CLL	**Collm**	**157.50**	**342**	*i* PKPab	**PKPab**		**01 57 52.5**	**+0.4**	
	comp=Z,9.0nm,0.7s								
BRG	**Berggiesshubel**	**157.63**	**340**	*i* PKP	**PKPab**		**01 57 52.4**	**-0.3**	
	comp=Z,5.8nm,0.7s								
BRG				*e*			01 57 58.5		
	comp=Z,11nm,1.6s								
VYHS	**Vyhne**	**157.83**	**330**	*e*PKP	**PKPab**		**01 57 53.7**	**0.0**	
PRU	**Pruhonice**	**158.23**	**338**	*e*PKPAB	**PKPab**		**01 57 54.9**	**-0.4**	
NKC	**Novy Kostel**	**158.63**	**342**	*e*PKPAB	**PKPab**		**01 57 57.2**	**+0.2**	
KHC	**Kasperske Hory**	**159.28**	**339**	*e*PKPAB	**PKPab**		**01 57 59.6**	**-0.3**	
KHC				*ep*PKP	**sPKPab**		**01 58 03.3**	**+0.4**	
KHC				*ex*	x		01 58 13.8		
GERES	**GERESS Array B**	**159.50**	**338**	PKPab	**PKPab**		**01 58 00.4**	**-0.5**	
	comp=Z,0.8nm,0.5s,baz=44,slow=5.8,SNR=3.4								
WATA	**Walderalm**	**161.49**	**340**	*e*PKPab	**PKPab**		**01 58 09.5**	**-0.3**	
	comp=Z,3.2nm,0.6s,SNR=4.2								
WTTA	**Wattenberg**	**161.54**	**340**	*e*PKPab	**PKPab**		**01 58 09.8**	**-0.2**	
	comp=Z,4.9nm,0.6s,SNR=6.5								
RETA	**Reutte**	**161.59**	**342**	*e*PKPab	**PKPab**		**01 58 09.9**	**-0.2**	
	comp=Z,3.0nm,0.5s								
MOTA	**Moosalm**	**161.62**	**341**	*e*PKPab	**PKPab**		**01 58 10.1**	**-0.2**	
	comp=Z,1.6nm,0.3s								
SQTA	**Sankt Quirin**	**161.71**	**340**	*e*PKPab	**PKPab**		**01 58 10.1**	**-0.6**	
	comp=Z,1.1nm,0.3s								
DAVA	**Damuels**	**162.00**	**343**	*e*PKPab	**PKPab**		**01 58 11.7**	**-0.3**	
	comp=Z,4.4nm,0.6s,SNR=4.9								

IDC ***12*** *01:37:38.5±1.2, 33.°72N×141.°83E, h0km, mb3.6/6, mb1 3.9/8, mb1mx3.6/54, mbtmp3.7/8, ML3.7/2, Error ellipse: s-maj=24.7km s-min=20.7km az=132.0*

NEIC ***12*** *01:37:40.6±2.8, 33.°86N±0.°07×141.°85E±0.°08, h18km±6km, mb4.1/2, Error ellipse: s-maj=11.9km s-min=6.9km az=135.0*

JMA ***12*** *01:37:44.4±0.5, 33.°89N×141.°41E, h23km, M3.4*

ISC 12 01:37:41.1±0.8, 33.°79N±0.°06×141.°80E±0.°08, h21km, n27, σ1°67/34, mb3.7/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BSO1	**Boso 1**	**1.10**	**322**	P		**Pn**	**01 38 00.2**	**-0.6**
BSO3	**Boso 3**	**1.47**	**314**	P		**Pn**	**01 38 06.1**	**-0.1**
BSO4	**Boso 4**	**1.70**	**315**	P		**Pn**	**01 38 09.8**	**+0.3**
JHJ2	**Mitsune**	**1.79**	**248**	P		**Pn**	**01 38 11.3**	**+0.5**
JHJ2	**Mitsune**	**1.79**	**248**			**Pn**	**01 38 11.2**	**+0.5**
JHJ	**Hachijo jima 2**	**1.82**	**249**	Pn		**Pn**	**01 38 11.4**	**+0.3**
	131nm,0.3s,baz=86,slow=22,SNR=26							
JHJ				Sn		**Sn**	**01 38 34.3**	**+0.8**
	101nm,0.3s,baz=242,slow=23,SNR=12							
JHCJ	**Hachijojimakas**	**1.82**	**247**	P		**Pn**	**01 38 11.6**	**+0.4**
JMKN	**Mikurajimanish**	**1.84**	**274**	P		**Pn**	**01 38 11.1**	**-0.4**
JAOM	**Aogashimamukai**	**2.16**	**233**	P		**Pn**	**01 38 16.3**	**+0.4**
JIM2	**Oshima 3**	**2.17**	**296**	P		**Pn**	**01 38 15.2**	**-0.9**
JIM2				S		**Sn**	**01 38 38.0**	**-4.3**
JIZS	**Izushimoda**	**2.59**	**292**	P		**Pn**	**01 38 21.8**	**0.0**
JIZS				*eS*		**Sn**	**01 38 46.8**	**-3.9**
JOD2	**Odawara 2**	**2.68**	**304**	P		**Pn**	**01 38 22.1**	**-1.0**
MJAR	**Matsushiro Arr**	**4.03**	**314**	Pn		**Pn**	**01 38 41.5**	**0.0**
	0.7nm,0.3s,baz=155,slow=10.0,SNR=14							
MJAR				Sn		**Sn**	**01 39 27.3**	**-0.8**
	0.9nm,0.3s,baz=132,slow=12,SNR=3.0							
MAJO	**Matsushiro**	**4.03**	**314**	Pn		**Pn**	**01 38 39.4**	**-2.2**
MAT	**Matsushiro**	**4.03**	**314**	P		**Pn**	**01 38 41.7**	**+0.1**
MAT				S		**Sn**	**01 39 27.2**	**-0.9**
MJB9	**Matsu-Tunnel**	**4.03**	**314**	Pn		**Pn**	**01 38 40.2**	**-1.4**
MJB9				Sn		**Sn**	**01 39 30.7**	**+2.5**
INU	**Inuyama**	**4.24**	**293**	Pn		**Pn**	**01 38 46.2**	**+1.7**
JCJ	**Chichijima**	**6.68**	**177**	Pn		**Pn**	**01 39 18.9**	**+0.9**
	10nm,0.3s,baz=94,slow=23,SNR=4.6							
JCJ				Sn		**Sn**	**01 40 29.4**	**-4.2**
	10nm,0.3s,baz=104,slow=23,SNR=1.7							
ERM	**Erimo**	**8.28**	**7**	Pn		**Pn**	**01 39 37.9**	**-2.0**
SONM	**Songino Array**	**29.96**	**309**	P		**P**	**01 43 49.6**	**+1.7**
	1.2nm,1.0s,baz=88,slow=8.9,SNR=3.6							
ZALV	**Zalesovo Beam**	**44.38**	**315**	P		**P**	**01 45 50.7**	**+0.9**
	0.4nm,0.3s,baz=110,slow=8.4,SNR=1.6							
MKAR	**Makanchi Array**	**46.17**	**305**	P		**P**	**01 46 05.1**	**+0.9**
	0.6nm,0.7s,baz=82,slow=10,SNR=5.0							
KURK	**Kurchatov**	**48.23**	**310**	P		**P**	**01 46 20.0**	**-0.1**
DHY	**Denali Highway**	**51.87**	**33**	P		**P**	**01 46 48.1**	**+0.3**
DHY					IAmb	IAmb	01 46 55.7	
	comp=Z,2.5nm,1.1s							
ILAR	**Eielson Array**	**52.08**	**31**	P		**P**	**01 46 50.5**	**+1.4**
	comp=Z,0.8nm,0.9s,baz=272,slow=6.4,SNR=5.1							
WRA	**Warramunga Arr**	**53.90**	**189**	P		**P**	**01 47 01.8**	**-1.2**
	comp=Z,1.2nm,0.7s,baz=4.5,slow=7.4,SNR=1.9							
YKA	**Yellowknife Ar**	**66.46**	**29**	P		**P**	**01 48 29.5**	**+0.9**
	comp=Z,0.2nm,0.8s,baz=294,slow=6.0,SNR=2.6							

NEIC ***12*** *01:44:19.4±2.6, 18.°14N±0.°08×76.°80W±0.°05, h10km±2km, ML3.3/9, Error ellipse: s-maj=13.7km s-min=7.5km az=349.0*

JSN ***12*** *01:44:21.0±1.2, 18.°11N×76.°68W, h1km±5km, MD3.3*

ISC 12 01:44:20.2±1.0, 18.°10N±0.°06×76.°71W±0.°03, h16km±7km, n21, σ1°39/24, 6C-4D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GWJ	**Greenwich**	**0.03**	**215**	*i*	P	**Pg**	**01 44 23.1**	**-0.2**
STH	**Stony Hill**	**0.10**	**256**	*i*	P	**Pg**	**01 44 23.9**	**+0.2**
HOJ	**Hope**	**0.10**	**202**	*i*	P	**Pg**	**01 44 23.9**	**+0.2**
YHJ	**Yallahs**	**0.29**	**135**	*i*	P	**Pg**	**01 44 26.6**	**+0.1**
BNJ	**Bonny Gate**	**0.32**	**314**	*i*	P	**Pb**	**01 44 27.5**	**0.0**
CMJ	**Castle Mountai**	**0.32**	**84**	*i*	P	**Pb**	**01 44 27.5**	**-0.1**
PCJ	**Portland Cotta**	**0.56**	**230**	*i*	P	**Pb**	**01 44 31.5**	**-0.1**
BBJ	**Bamboo Saint A**	**0.60**	**298**	*i*	P	**Pb**	**01 44 32.7**	**+0.3**
MTDJ	**Mount Denham**	**0.80**	**279**			**Pg**	**01 44 35.8**	**+0.1**
MTDJ						**Sb**	**01 44 47.0**	**+0.7**
MTDJ					IAML		01 44 50.5	
	887nm,0.6s							
MTDJ					IAML		01 44 53.5	
	995nm,0.4s							
MCJ	**Malvern**	**0.95**	**260**	*i*	P	**Pg**	**01 44 38.6**	**0.0**
MCJ				*i*	S	**Sn**	**01 44 53.2**	**+1.1**
MBJ	**Montego Bay**	**1.14**	**286**	*i*	P	**Pn**	**01 44 41.7**	**+0.2**
GTBY	**Guantanamo Bay**	**2.36**	**40**		Pn	**Pn**	**01 44 57.5**	**-0.9**
CBCY	**The Bluff, Cay**	**3.31**	**300**		Pn	**Pn**	**01 45 11.9**	**+0.5**
JAKH	**Jacmel**	**3.99**	**87**		Pn	**Pn**	**01 45 22.6**	**+2.0**
SDDR	**Presa de Saban**	**5.22**	**79**		Pn	**Pn**	**01 45 38.6**	**+1.0**
SDDR						Sn	**01 46 36.4**	**-1.1**
SDDR					IAML		01 46 52.5	
	29nm,2.2s							
SDDR					IAML		01 47 01.3	
	21nm,2.7s							
BANI	**BANI**	**6.04**	**86**		Pn	**Pn**	**01 45 45.6**	**-3.4**
URIC	**Uribia, Colomb**	**7.83**	**144**		Pn	**Pn**	**01 46 14.4**	**+1.0**
AGPR	**Aguadilla, PR**	**9.13**	**86**		Pn	**Pn**	**01 46 32.9**	**+1.6**
ESPN	**Las Esperanzas**	**9.39**	**232**		Pn	**Pn**	**01 46 31.6**	**-3.3**
CBYP	**Canovanas**	**10.32**	**87**		Pn	**Pn**	**01 46 49.4**	**+1.7**
SDV	**Santo Domingo**	**10.90**	**146**		Pn	**Pn**	**01 46 56.4**	**+0.6**

MDD ***12*** *01:54:48.9±1.2, 36.°68N×9.°81W, h19km±7km, mbLg2.2/25, Error ellipse: s-maj=11.3km s-min=7.1km az=39.0, PRXIMO*

SFS ***12*** *01:54:48.0, 36.°69N×9.°83W, h19km, ML2.5, SW. CABO DE SAN VICENTE*

INMG ***12*** *01:54:49.5±1.0, 36.°65N×9.°76W, h16km±3km, ML1.9, Error ellipse: s-maj=4.0km s-min=2.6km az=49.0*

IGIL ***12*** *01:54:49.2, 36.°66N×9.°77W, h14km, ML1.7*

CNRM ***12*** *01:54:50.0±0.8, 36.°36N×9.°18W, h0km, Error ellipse: s-maj=8.3km s-min=2.0km az=83.0*

ISC 12 01:54:46.2±2.4, 36.°60N±0.°07×9.°79W±0.°08, h25km±14km, n69, σ1°41/124, 2D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PFVI	**Vila Bisbo**	**0.94**	**55**	P		**Pn**	**01 55 05.4**	**+1.7**
	0.3nm,0.1s,SNR=6.6							
PFVI				S		**Sn**	**01 55 17.8**	**+1.4**
	12nm,0.1s,SNR=13							
PFVI	**Vila Bisbo**	**0.94**	**55**	P		**Pn**	**01 55 05.2**	**+1.4**
PFVI				S		**Sn**	**01 55 17.7**	**+1.3**
PFVI	**Vila Bisbo**	**0.94**	**55**	*i*	P	**Pn**	**01 55 05.5**	**+1.7**
PFVI				*eS*		**Sn**	**01 55 17.5**	**+1.1**
PFVI				A		A	01 55 18.5	
	17nm,0.1s							
MORF	**Marmelete**	**1.15**	**52**	*e*P		**Pb**	**01 55 08.5**	**+1.0**
MORF				*e*S		**Sn**	**01 55 22.8**	**+1.0**
MORF					AML	AML	01 55 24.4	
	comp=N,21nm,0.1s							
MORF	**Marmelete**	**1.15**	**52**	P		**Pb**	**01 55 08.6**	**+1.1**
MORF				S		**Sn**	**01 55 23.1**	**+1.3**
	comp=N,20nm,0.1s							
MORF	**Marmelete**	**1.15**	**52**	*i*	P	**Pb**	**01 55 08.6**	**+1.1**
MORF				*eS*		**Sn**	**01 55 23.1**	**+1.3**
MORF				A		A	01 55 24.4	
	comp=N,20nm,0.1s							
PTEO	**Sao Teotonio**	**1.27**	**42**	P		**Pb**	**01 55 10.0**	**+0.5**
PTEO				S		**Sb**	**01 55 26.0**	**+0.6**
	comp=N,4.1nm,0.5s							
PTEO	**Sao Teotonio**	**1.27**	**42**	*eP*		**Pb**	**01 55 10.0**	**+0.5**
PTEO				*eS*		**Sb**	**01 55 26.0**	**+0.6**
PTEO				A		A	01 55 27.5	
	comp=N,8.2nm,0.5s							
PBDV	**Barranco-do-Ve**	**1.62**	**66**	P		**Pb**	**01 55 15.1**	**-0.3**
PBDV				S		**Sb**	**01 55 34.5**	**-1.0**
	comp=N,4.6nm,0.9s							
PBDV	**Barranco-do-Ve**	**1.62**	**66**	*eP*		**Pb**	**01 55 15.1**	**-0.3**
PBDV				*eS*		**Sb**	**01 55 34.5**	**-1.0**
PBDV				A		A	01 55 35.3	
	comp=N,4.6nm,0.9s							
PCVE	**Castro Verde**	**1.74**	**53**	P		**Pb**	**01 55 16.9**	**-0.5**
PCVE				S		**Sn**	**01 55 37.2**	**+1.1**
	comp=N,7.1nm,0.4s							
PCVE	**Castro Verde**	**1.74**	**53**	*e*Pn		**Pb**	**01 55 16.9**	**-0.5**
PCVE				*e*Sn		**Sn**	**01 55 37.2**	**+1.1**
PCVE				A		A	01 55 39.3	
	comp=N,7.1nm,0.4s							
MESJ	**Messejana**	**1.76**	**45**	*e*P		**Pb**	**01 55 16.7**	**-1.1**
MESJ				*e*S		**Sn**	**01 55 37.2**	**+0.5**
MESJ					AML	AML	01 55 37.7	
	comp=N,4.8nm,0.2s							
MESJ	**Messejana**	**1.76**	**45**	P		**Pb**	**01 55 17.0**	**-0.8**
MESJ				S		**Sn**	**01 55 37.5**	**+0.8**
	comp=N,4.6nm,0.2s							
MESJ	**Messejana**	**1.76**	**45**	*e*Pn		**Pb**	**01 55 17.0**	**-0.8**
MESJ				*e*Sn		**Sn**	**01 55 37.5**	**+0.8**
MESJ				A		A	01 55 47.1	
	comp=N,4.6nm,0.2s							
PNCL	**Nicolau / Gran**	**1.81**	**33**	P		**Pn**	**01 55 17.5**	**+1.7**
PNCL				S		**Sn**	**01 55 38.6**	**+0.6**
	comp=N,5.4nm,0.5s							
PNCL	**Nicolau / Gran**	**1.81**	**33**	*e*Pn		**Pn**	**01 55 17.5**	**+1.7**
PNCL				*e*Sn		**Sn**	**01 55 38.6**	**+0.6**
PNCL				A		A	01 55 41.1	
	comp=N,5.4nm,0.5s							
PVAQ	**Vaqueiros**	**1.84**	**63**	P		**Pb**	**01 55 18.0**	**-1.2**
PVAQ				S		**Sb**	**01 55 39.6**	**-2.2**
	comp=N,3.9nm,0.2s							
PVAQ	**Vaqueiros**	**1.84**	**63**	P		**Pb**	**01 55 18.8**	**-0.4**
PVAQ				S		**Sb**	**01 55 41.2**	**-0.6**
PVAQ	**Vaqueiros**	**1.84**	**63**	*e*Pn		**Pb**	**01 55 18.0**	**-1.2**
PVAQ				*e*Sn		**Sb**	**01 55 39.6**	**-2.2**
PVAQ				A		A	01 55 50.0	
	comp=N,3.9nm,0.2s							
EGRO	**El Granado**	**2.07**	**62**	P		**Pb**	**01 55 21.5**	**-1.5**
	comp=N,0.1nm,0.1s,SNR=7.9							
EGRO				S		**Sn**	**01 55 45.1**	**+0.9**
	comp=N,2.6nm,0.1s,SNR=7.9							
PBEJ	**Beja**	**2.09**	**46**	S		**Sn**	**01 55 45.2**	**+0.3**
PBEJ	**Beja**	**2.09**	**46**	*e*Sn		**Sn**	**01 55 45.2**	**+0.3**
PMAFR	**Mafra**	**2.39**	**9**	P		**Pn**	**01 55 25.1**	**+1.4**
	comp=N,3.1nm,0.2s,SNR=6.6							
PMAFR				S		**Sn**	**01 55 52.0**	**-0.2**
	comp=N,16nm,0.2s,SNR=13							
PMAFR	**Mafra**	**2.39**	**9**	*e*Pn		**Pn**	**01 55 25.3**	**+1.6**
PMAFR				*e*Sn		**Sn**	**01 55 52.4**	**+0.2**
PMAFR				A		A	01 55 55.0	
	comp=N,19nm,0.2s							
EVO	**Evora**	**2.39**	**36**	P		**Pn**	**01 55 25.1**	**+1.3**
EVO				S		**Sn**	**01 55 52.3**	**0.0**
	comp=N,7.6nm,0.1s							
EVO	**Evora**	**2.39**	**36**	*e*P		Pb	01 55 35.8	+7.3
EVO				*e*S		**Sn**	**01 55 51.8**	**-0.5**
EVO	**Evora**	**2.39**	**36**	*e*Pn		**Pn**	**01 55 25.1**	**+1.3**
EVO				*e*Sn		**Sn**	**01 55 52.3**	**0.0**
EVO				A		A	01 55 53.0	
	comp=N,7.6nm,0.1s							
EMIN	**Mina Concepcio**	**2.75**	**64**	P		**Pn**	**01 55 30.5**	**+1.8**
	comp=N,0.3nm,0.2s,SNR=7.9							
EMIN				S		**Sn**	**01 56 01.3**	**+0.3**
	comp=N,1.0nm,0.1s,SNR=7.4							
PMTG	**Montargil**	**2.76**	**26**	P		**Pn**	**01 55 30.2**	**+1.4**
PMTG				S		**Sn**	**01 56 00.8**	**-0.6**
	comp=N,4.1nm,0.3s							
PMTG	**Montargil**	**2.76**	**26**	*e*Pn		**Pn**	**01 55 30.2**	**+1.4**
PMTG				*e*Sn		**Sn**	**01 56 00.8**	**-0.6**
PMTG				A		A	01 56 03.0	
	comp=N,4.1nm,0.3s							
PESTR	**Estremoz**	**2.86**	**37**	*e*Sn		**Sn**	**01 56 03.8**	**0.0**
PSBE	**So Bento**	**3.02**	**15**	*e*Pn		**Pn**	**01 55 34.0**	**+1.6**
PSBE				*e*Sn		**Sn**	**01 56 07.2**	**-0.5**
PSBE				A		A	01 56 11.2	
	comp=N,2.7nm,0.3s							
EBAD	**Badajoz**	**3.08**	**45**	P		**Pn**	**01 55 34.7**	**+1.5**
	comp=N,0.5nm,0.1s,SNR=7.9							
EBAD				S		**Sn**	**01 56 08.8**	**-0.4**
	comp=N,3.2nm,0.2s,SNR=7.8							
ESPR	**Espera**	**3.17**	**84**	P		**Pn**	**01 55 36.4**	**+2.0**
	comp=N,0.1nm,0.2s,SNR=7.9							
ESPR				S		**Sn**	**01 56 11.5**	**+0.1**
	comp=N,14nm,0.3s,SNR=6.0							
PMRV	**Marv??o**	**3.40**	**33**	P		**Pn**	**01 55 39.4**	**+1.7**
PMRV				S		**Sn**	**01 56 16.1**	**-1.1**
	comp=N,2.5nm,0.2s							
PMRV	**Marv??o**	**3.40**	**33**	*e*Pn		**Pn**	**01 55 39.4**	**+1.7**
PMRV				*e*Sn		**Sn**	**01 56 16.1**	**-1.1**
PMRV				A		A	01 56 18.5	
	comp=N,2.5nm,0.2s							
PCAS	**Casmilo, Conde**	**3.60**	**16**	S		**Sn**	**01 56 22.1**	**+0.1**
	comp=N,3.2nm,0.3s							
PCAS	**Casmilo, Conde**	**3.60**	**16**	*e*Sn		**Sn**	**01 56 22.1**	**+0.1**
PCAS				A		A	01 56 24.1	
	comp=N,3.2nm,0.3s							
PCBR	**Castelo Branco**	**3.71**	**29**	P		**Pn**	**01 55 43.6**	**+1.7**
PCBR				S		**Sn**	**01 56 24.4**	**-0.5**
	comp=N,0.9nm,0.9s							
PCBR	**Castelo Branco**	**3.71**	**29**	*e*Pn		**Pn**	**01 55 43.6**	**+1.7**
PCBR				*e

ILAR				Sn		**Sn**	**02 06 52.3**	**-1.5**
	0.2nm,0.3s,baz=310,slow=27,SNR=7.5								
PRP	**Porcupine Dome**	**7.02**	**101**	Pn		**Pn**	**02 05 37.6**	**+0.2**
RND	**Reindeer**	**7.07**	**122**	Pn		**Pn**	**02 05 38.5**	**+0.6**
DHY	**Denali Highway**	**7.78**	**120**	Pn		**Pn**	**02 05 49.3**	**+1.5**
RSO	**Redoubt South**	**8.42**	**146**	Pn		**Pn**	**02 05 56.0**	**-0.5**
INK	**Inuvik**	**10.73**	**74**	Pn		**Pn**	**02 06 28.1**	**+0.1**
	0.1nm,0.3s,baz=295,slow=11,SNR=5.2								
INK				Sn		**Sn**	**02 08 22.4**	**-5.5**
	0.1nm,0.3s,baz=190,slow=17,SNR=2.7								
YKA	**Yellowknife Ar**	**20.28**	**82**	P		**P**	**02 08 32.2**	**+2.4**
	0.0nm,0.3s,baz=303,slow=9.9,SNR=2.3								
NEW	**Newport**	**29.85**	**108**	LR		LR	02 23 21.8		
	comp=Z,35nm,20.2s,baz=222,slow=39								
PDAR	**Pinedale Array**	**37.30**	**105**	P		P	02 11 14.5	+7.8	
	0.1nm,0.4s,baz=351,slow=10.0,SNR=1.6								

IDC ***12*** *02:05:13.9±0.8, 7.°01N×33.°65W, h0km, mb3.9/10, mb1 4.1/10, mb1mx3.8/38, mbtmp3.9/10, MS3.2/2, Ms1 3.2/2, ms1mx2.7/27, Error ellipse: s-maj=27.2km s-min=19.7km az=145.0*

NEIC ***12*** *02:05:15.1±1.5, 6.°9N±0.°2×33.°7W±0.°1, h10km±4km, mb4.1/5, Error ellipse: s-maj=23.6km s-min=15.4km az=152.0*

ISC 12 02:05:15.2±0.8, 7.°0N±0.°2×33.°7W±0.°1, h10km, n23, σ0s81/15, mb3.9/10, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H10N3	**ASCENSION HYDR**	**24.12**	**127**	T		T		02 35 46.9	
	baz=307,slow=75,SNR=40								
H10N2	**ASCENSION HYDR**	**24.12**	**127**	T		T		02 35 50.7	
	baz=307,slow=75,SNR=40								
H10N1	**ASCENSION HYDR**	**24.14**	**127**	T		T		02 35 46.5	
	baz=307,slow=75,SNR=37								
H10S3	**ASCENSION HYDR**	**24.67**	**130**	T		T		02 36 30.6	
	baz=307,slow=74,SNR=40								
H10S2	**ASCENSION HYDR**	**24.69**	**130**	T		T		02 36 32.0	
	baz=273,slow=74,SNR=16								
BDFB	**Brasilia**	**26.59**	**212**	P		**P**		**02 10 55.6**	**+1.6**
	3.4nm,0.9s,baz=45,slow=10.0,SNR=2.4								
BDFB	**Brasilia**	**26.59**	**212**	P		**P**		**02 10 52.9**	**-1.1**
BDFB				IAmb		IAmb		02 10 60.0	
	comp=Z,6.0nm,1.0s								
PTGA	**Pitinga**	**27.34**	**255**	P		**P**		**02 11 00.6**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=105,slow=20,SNR=2.9								
PTGA	**Pitinga**	**27.34**	**255**	P		**P**		**02 11 01.1**	**+0.3**
PTGA				IAmb		IAmb		02 11 05.9	
	comp=Z,3.9nm,1.1s								
SIV	**San Ignacio**	**35.45**	**230**	P		**P**		**02 12 11.6**	**-0.6**
	comp=Z,0.8nm,0.9s,baz=38,slow=6.8,SNR=2.4								
BANI	**BANI**	**37.48**	**291**	P		**P**		**02 12 28.9**	**-0.6**
ROSC	**El Rosal**	**40.49**	**269**	LR		LR		02 29 59.2	
	comp=Z,87nm,18.4s,baz=113,slow=37								
LPAZ	**La Paz**	**41.20**	**236**	P		**P**		**02 13 01.9**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=63,slow=2.3,SNR=4.2								
LPAZ	**La Paz**	**41.20**	**236**	P		**P**		**02 13 00.0**	**-1.2**
NOA	**NORSAR Array B**	**63.40**	**23**	LR		LR		02 42 47.8	
	comp=Z,5.4nm,18.2s,baz=0.0,slow=36								
MLR	**Muntele Rosu**	**63.96**	**42**	P		**P**		**02 15 48.2**	**-0.7**
BOSA	**Boshof**	**66.85**	**125**	P		**P**		**02 16 08.2**	**+0.2**
	comp=Z,4.2nm,0.7s,baz=306,slow=5.9,SNR=9.8								
BOSA	**Boshof**	**66.85**	**125**	IAmb		IAmb		02 16 16.3	
	comp=Z,1.7nm,0.8s								
AKASG	**Malin Array Be**	**67.62**	**38**	P		**P**		**02 16 12.4**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=251,slow=6.8,SNR=6.1								
BRTR	**Keskin Array B**	**68.15**	**50**	P		**P**		**02 16 16.1**	**0.0**
	comp=Z,0.9nm,0.8s,baz=234,slow=4.2,SNR=6.5								
TXAR	**Lajitas Array**	**69.20**	**299**	P		**P**		**02 16 23.6**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=104,slow=6.6,SNR=2.9								
PDAR	**Pinedale Array**	**74.95**	**312**	P		**P**		**02 16 57.2**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=102,slow=6.2,SNR=4.3								
YKA	**Yellowknife Ar**	**79.67**	**332**	P		**P**		**02 17 23.0**	**+0.1**
	comp=Z,1.0nm,1.0s,baz=100,slow=5.6,SNR=8.4								

ISC 12 02:46:17.0±1.2, 45.°00N±0.°02×14.°86E±0.°05, h8km±11km, n11, σ0s75/20, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RIY	**Rijeka**	**0.42**	**321**	*i* P	g	**Pg**		**02 46 25.2**	**0.0**
RIY					S	**Sg**		**02 46 33.3**	**0.0**
NVLJ	**Novalja**	**0.43**	**179**	*i* P	g	**Pg**		**02 46 25.0**	**-0.5**
NVLJ					S	**Sg**		**02 46 32.0**	**+0.8**
GBRS	**Gornja Briga**	**0.53**	**356**	*i* P	g	**Pg**		**02 46 27.3**	**0.0**
GBRS				*i*	S	**Sb**		**02 46 35.8**	**-0.7**
BOJS	**Bojanci**	**0.57**	**28**	*i* P	g	**Pg**		**02 46 27.6**	**-0.5**
BOJS				*i*	S	**Sg**		**02 46 35.7**	**+0.1**
	comp=Z,2.0nm,0.1s								
OZLJ	**Ozalj**	**0.75**	**34**	*e*P	g	**Pg**		**02 46 31.4**	**0.0**
OZLJ					S	**Sg**		**02 46 41.0**	**-0.2**
VISS	**Visnje**	**0.81**	**359**	*i* P	g	**Pg**		**02 46 32.0**	**-0.5**
VISS				*i*	S	**Sb**		**02 46 43.7**	**-0.6**
SKDS	**Skadanscina**	**0.81**	**313**	*i*	S	**Sb**		**02 46 45.6**	**+1.1**
	comp=Z,2.0nm,0.1s								
DUGI	**Dugi Otok**	**1.02**	**172**	*e*P	g	**Pg**		**02 46 35.0**	**-1.6**
DUGI					S	**Sb**		**02 46 50.6**	**+0.3**
PTJ	**Puntijarka**	**1.20**	**40**	*e*P	g	**Pn**		**02 46 40.3**	**+0.2**
MORI	**Morici**	**1.28**	**152**	*e*P	g	**Pn**		**02 46 40.8**	**-0.4**
MORI					S	**Sn**		**02 46 58.8**	**+0.2**
KIJV	**Kijevo**	**1.48**	**131**	*e*Pn		**Pg**		**02 46 45.5**	**0.0**
KIJV					Sn	**Sg**		**02 47 06.3**	**+1.6**

BER ***12*** *03:14:48.7±2.2, 81.°61N×4.°26W, h15km±43km, ML2.3, ML2.9(DNK), Confirmed Earthquake*

IEPN ***12*** *03:14:51.0, 81.°59N×2.°18W, h15km*

ISC 12 03:14:43.4±1.1, 81.°65N±0.°08×3.°95W±0.°05, h11km, n16, σ2s65/28, 1C-2D, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**1.86**	**275**	*i* P		**Pb**		**03 15 17.4**	**0.0**
NOR	**Nord**	**1.86**	**275**	*e*P		**Pb**		**03 15 17.4**	**0.0**
NOR				IAML				03 15 41.1	
	comp=Z,23nm,0.4s								
KBS	**Kingsbay**	**3.82**	**127**	⇑ *i* P		**Pn**		**03 15 44.9**	**+2.8**
KBS				*e*S		**Sn**		**03 16 24.8**	**-2.1**
KBS	**Kingsbay**	**3.82**	**127**	*e*P		**Pn**		**03 15 44.6**	**+2.5**
KBS				*e*S		**Sn**		**03 16 25.3**	**-1.6**
KBS				IAML				03 16 30.1	
	comp=Z,11nm,0.2s								
SPA0	**Spitsbergen Ar**	**4.95**	**124**	⇓ *i* P		**Pn**		**03 16 00.7**	**+3.0**
SPA0				*e*S		**Sn**		**03 16 52.5**	**-2.3**
SPA0	**Spitsbergen Ar**	**4.95**	**124**	*e*P		**Pn**		**03 16 00.7**	**+3.0**
SPA0				*e*S		**Sn**		**03 16 53.6**	**-1.2**
SPA0				IAML				03 17 02.6	
	comp=Z,5.1nm,0.6s								
DAG	**Danmarks Havn**	**5.60**	**217**	*i* P		**Pn**		**03 16 08.2**	**+1.8**
DAG	**Danmarks Havn**	**5.60**	**217**	*e*		**Pn**		**03 16 07.5**	**+1.1**
	baz=32,slow=16								
DAG				*i* P		**Pn**		**03 16 08.2**	**+1.8**
DAG				*i* S		**Sn**		**03 17 08.3**	**-2.3**
DAG				IAML				03 17 21.3	
	comp=Z,5.8nm,0.3s								
HSPB	**Hornsund (broa**	**5.86**	**132**	⇓ *i* P		**Pn**		**03 16 13.8**	**+3.8**
HSPB				*e*S		**Sn**		**03 17 17.0**	**0.0**
HSPB	**Hornsund (broa**	**5.86**	**132**	*e*P		**Pn**		**03 16 13.5**	**+3.5**
HSPB				*e*S		**Sn**		**03 17 16.3**	**-0.7**
HSPB				IAML				03 17 18.9	
	comp=Z,2.4nm,0.3s								
HOPEN	**Hopen**	**7.42**	**118**	*e*P		**Pn**		**03 16 33.9**	**+2.6**
HOPEN				*e*S		**Sn**		**03 17 50.5**	**-4.7**
HOPEN	**Hopen**	**7.42**	**118**	*e*P		**Pn**		**03 16 34.1**	**+2.8**
HOPEN				*e*S		**Sn**		**03 17 52.3**	**-3.0**
HOPEN				IAML				03 18 03.6	
	comp=Z,7.2nm,0.5s								
ZFI2	**Zemlya Franca-**	**7.70**	**70**	*e*P		**Pn**		**03 16 37.6**	**+2.4**
ZFI2				*e*S		**Sn**		**03 17 57.1**	**-5.1**
	comp=Z,9.3nm,0.5s								
DBG	**Daneborg**	**8.07**	**213**	*i* P		**Pn**		**03 16 41.5**	**+1.2**
DBG				*i* S		**Sn**		**03 18 08.2**	**-3.1**
DBG				IAML				03 18 16.0	
	comp=Z,5.3nm,0.4s								
SUMG	**Summit**	**11.60**	**238**	*i* P		**Pn**		**03 17 29.7**	**+0.8**
SUMG				*e*S		Sn		03 19 28.0	-10
SUMG	**Summit**	**11.60**	**238**	*i* P		**Pn**		**03 17 29.7**	**+0.8**
SUMG				*e*S		Sn		03 19 28.0	-10
SUMG				IAML				03 19 33.3	
	comp=Z,4.4nm,0.4s								

IDC 12 03:18:21.4±2.2, 39.°18N×106.°48E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.3/50, mbtmp3.5/5, ML3.3/1, MS3.6/2, Ms1 3.6/2, ms1mx2.6/46, Error ellipse: s-maj=177.3km s-min=22.4km az=50.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.21**	**301**	P		Pn		03 22 47.6	-0.1
	0.1nm,0.3s,baz=111,slow=11,SNR=2.0								
ZALV	**Zalesovo Beam**	**20.85**	**322**	P		P		03 23 05.1	+0.4
	0.6nm,0.3s,baz=120,slow=10,SNR=3.7								
KURBB	**Kurchatov Arra**	**22.72**	**309**	P		P		03 23 24.2	-0.5
	1.2nm,0.6s,baz=108,slow=12,SNR=4.8								
AAK	**Ala-Archa**	**24.34**	**288**	LR		LR		03 33 09.8	
	comp=Z,33nm,18.5s,baz=173,slow=36								
BVAR	**Borovoye Array**	**28.26**	**311**	P		P		03 24 15.8	-0.3
	0.6nm,0.5s,baz=116,slow=10,SNR=5.0								
SEY	**Seymchan**	**36.21**	**34**	LR		LR		03 40 30.1	
	comp=Z,464nm,21.8s,baz=294,slow=37								
ASAR	**Alice Springs**	**67.58**	**153**	P		P		03 29 19.8	0.0
	0.6nm,0.6s,baz=336,slow=6.6,SNR=10								

IDC 12 03:24:06.7±2.6, 17.°36S×167.°58E, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.8/36, mbtmp4.0/4, MLS.7/1, MS3.4/2, Ms1 3.3/2, ms1mx2.8/31, Error ellipse: s-maj=55.5km s-min=35.8km az=100.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.81**	**193**	Pn		Pn		03 25 20.6	+0.1
	3.2nm,0.3s,baz=271,slow=22,SNR=12								
DZM				Sn		Sn		03 26 15.3	-1.7
	2.8nm,0.3s,baz=119,slow=21,SNR=2.1								
RPZ	**Rata Peaks**	**26.44**	**174**	LR		LR		03 37 30.3	
	comp=Z,97nm,21.4s,baz=116,slow=30								
STKA	**Stephens Creek**	**27.60**	**234**	P		P		03 29 56.5	+0.7
	1.8nm,0.4s,baz=70,slow=7.7,SNR=5.7								
STKA				LR		LR		03 39 26.8	
	comp=Z,56nm,19.6s,baz=206,slow=33								
WRA	**Warramunga Arr**	**31.57**	**260**	P		P		03 30 30.9	-0.3
	0.5nm,0.6s,baz=89,slow=8.9,SNR=5.4								
ASAR	**Alice Springs**	**32.11**	**253**	P		P		03 30 35.8	-0.2
	1.5nm,0.6s,baz=77,slow=8.3,SNR=16								
ARCES	**ARCESS Array B**	**122.86**	**345**	PKP		PKPdf		03 43 03.9	-0.3
	1.1nm,0.8s,baz=48,slow=1.8,SNR=3.7								

MEX ***12*** *03:24:07.9±0.4, 16.°98N×100.°93W, h17km±4km, MD4.0*

NEIC ***12*** *03:24:08.2±2.3, 17.°18N±0.°03×100.°79W±0.°05, h1km±7km, Error ellipse: s-maj=7.7km s-min=2.4km az=67.0*

ISC 12 03:24:07.9±2.0, 17.°14N±0.°05×100.°70W±0.°07, h7km±11km, n16, σ1s31/29, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.42**	**102**	*i* P		**Pb**		**03 24 18.1**	**+0.6**
CAIG				*i* S		**Sb**		**03 24 26.2**	**+2.1**
CAIG	**El Cayaco**	**0.42**	**102**			**Pb**		**03 24 18.1**	**+0.6**
CAIG						**Sb**		**03 24 26.2**	**+2.1**
ACP2	**Acapulco**	**0.82**	**109**	*i* P		**Pg**		**03 24 22.9**	**-0.7**
ACP2				*i* S		**Sb**		**03 24 35.4**	**-0.2**
ACP2	**Acapulco**	**0.82**	**109**			**Sn**		**03 24 37.2**	**-0.9**
ARIG	**Puente Sto Nin**	**1.18**	**16**	*e*P		**Pb**		**03 24 29.5**	**-1.2**
ARIG				*e*S		**Sn**		**03 24 45.7**	**-1.6**
ARIG	**Puente Sto Nin**	**1.18**	**16**			**Pb**		**03 24 29.5**	**-1.2**
ARIG						**Sn**		**03 24 45.7**	**-1.6**
MEIG	**Mezcala**	**1.29**	**52**	*i* P		**Pb**		**03 24 32.0**	**-0.5**
MEIG				*i* S		**Sn**		**03 24 50.3**	**+0.3**
MEIG	**Mezcala**	**1.29**	**52**			**Pg**		**03 24 33.0**	**+0.3**
MEIG						**Sn**		**03 24 51.9**	**+1.9**
CRIG	**Cruz Grande**	**1.55**	**105**	*i* P		**Pn**		**03 24 34.3**	**-1.5**
CRIG				*i* S		**Sn**		**03 24 54.1**	**-2.1**
PLIG	**Platanillo**	**1.69**	**42**	*e*P		**Pn**		**03 24 37.7**	**-0.2**
PLIG				*i* S		**Sb**		**03 24 59.9**	**-0.9**
PLIG	**Platanillo**	**1.69**	**42**			**Pn**		**03 24 37.7**	**-0.2**
PLIG						**Sg**		**03 25 04.2**	**+2.0**
TLIG	**Tlapa**	**2.08**	**78**	*i* P		**Pn**		**03 24 43.8**	**+0.6**
TLIG				*i* S		**Sb**		**03 25 11.0**	**-1.0**
TLIG	**Tlapa**	**2.08**	**78**			**Pb**		**03 24 45.1**	**-0.8**
TLIG						**Sg**		**03 25 13.1**	**-1.6**
MOIG	**Morelia**	**2.57**	**350**	Pn		**Pn**		**03 24 50.2**	**+0.1**
MOIG				Sn		**Sn**		**03 25 21.8**	**0.0**
TX31	**Lajitas Ar. Si**	**12.44**	**348**	Pn		**Pn**		**03 27 06.9**	**+1.4**
TX32	**Lajitas Array**	**12.44**	**348**	Pn		**Pn**		**03 27 06.7**	**+1.2**

BJI ***12*** *03:35:58.9±0.0, 5.°51S×68.°21E, h28km, mB5.3/52, mb5.1/68, Ms4.8/55, Ms7 4.5/47*

IDC ***12*** *03:36:01.7±0.4, 4.°87S×68.°52E, h0km, mb4.6/27, mb1 4.7/27, mb1mx4.6/35, mbtmp4.6/27, MS4.4/32, Ms1 4.4/32, ms1mx4.4/38, Error ellipse: s-maj=13.6km s-min=12.4km az=27.0*

MOS ***12*** *03:36:01.1±1.0, 4.°89S×68.°55E, h10km, mb5.3/42, MS4.5/5, Error ellipse: s-maj=7.6km s-min=5.3km az=102.7*

NEIC ***12*** *03:36:02.8±2.1, 4.°96S±0.°07×68.°52E±0.°06, h10km±1km, mb5.2/77, Mwb5.2/22, Error ellipse: s-maj=11.8km s-min=9.5km az=150.0*

GCMT ***12*** *03:36:04.8±0.1, 4.°97S±0.°01×68.°43E±0.°01, h12km, MW5.2/149, Moment Tensor Solution. s93,c122; s149,c279; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.24±.01; $M_{\theta\theta}$-0.68±.01; $M_{\phi\phi}$0.91±.01; $M_{r\theta}$0.03±.03; $M_{\theta\phi}$-0.15±.01; $M_{\phi r}$-0.03±.03; Best double couple: $M_0$0.81600×10^{17} NP1:ϕ_s219.00000°, δ87.00000°, λ-1.00000°. NP2:ϕ_s310.00000°, δ89.00000°, λ-177.00000°. Principal axes: T 0.9350, Plg1.0000°, Azm84.0000°; N -0.2380, Plg86.0000°, Azm331.0000°; P -0.6960, Plg3.0000°, Azm175.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***12*** *03:36:06.5, 4.°97S×68.°57E, h9km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.75; $M_{\theta\theta}$-7.75; $M_{\phi\phi}$6.00; $M_{r\theta}$-1.89; $M_{\theta\phi}$-2.69; $M_{\phi r}$1.78; Fault plane solution: $M_0$7.97000×10^{16} NP1:ϕ_s302.27000°, δ81.51000°, λ158.47000°. NP2:ϕ_s35.60000°, δ68.72000°, λ9.12000°. Principal axes: T 7.3217, Plg21.0000°, Azm257.0000°; N 1.1685, Plg67.0000°, Azm102.0000°; P -8.4902, Plg9.0000°, Azm351.0000°;*

BGR ***12*** *03:36:12.0±0.0, 3.°43S×68.°89E, h33km, mb5.3, Ms4.0*

ISC 12 03:36:03.8±0.3, 4.°86S±0.°05×68.°54E±0.°04, h13km, n347, σ1s46/348, mb5.2/142, MS4.5/51, 38C-7D, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**4.64**	**123**	*e*P		**Pn**		**03 37 12.3**	**-1.4**
DGAR				pmax		pmax			
	comp=Z,1μm,1.0s								
DGAR	**Diego Garcia**	**4.64**	**123**	Pn		**Pn**		**03 37 12.6**	**-1.1**
DGAR				Sn		**Sn**		**03 38 04.5**	**-3.1**
H08S3	**Diego Garcia H**	**4.79**	**125**	T		T		03 42 07.4	
	baz=311,slow=75,SNR=466								
H08S1	**Diego Garcia H**	**4.79**	**125**	T		T		03 42 14.8	
	baz=311,slow=75,SNR=599								
H08S2	**Diego Garcia H**	**4.81**	**125**	T		T		03 42 21.9	
	baz=311,slow=75,SNR=621								
MSEY	**Mahe Island**	**13.02**	**270**	P		**Pn**		**03 39 09.0**	**+0.3**
MSEY								03 41 31.1	
MSEY	**Mahe Island**	**13.02**	**270**			**Pn**		**03 39 09.0**	**+0.3**
MSEY						**Sn**		**03 41 31.1**	**-2.4**
RER	**Riviere de l'E**	**20.42**	**216**	P		**P**		**03 40 38.2**	**-2.8**
SOCY	**Socotra**	**22.27**	**320**	P		**P**		**03 41 03.0**	**+2.0**
POO	**Poona**	**23.82**	**13**	*e*P		**P**		**03 41 18.0**	**+1.2**
BOM	**Bombay**	**23.98**	**10**	*e*P		P		03 41 10.5	-7.6
BOM				*e*S		Sn		03 45 59.6	+1.2
HYB	**Hyderabad**	**24.24**	**24**	*i* P		**P**		**03 41 20.5**	**-0.2**
	comp=Z,46nm,0.8s								
HYB				*e*S		**S**		**03 45 40.0**	**+0.8**
OPO	**Ambohidratompo**	**24.91**	**235**	P		**P**		**03 41 27.7**	**+0.7**
	comp=Z,2.9nm,0.3s,baz=71,slow=12,SNR=5.0								
ABPO	**Ambohimpanom**	**25.11**	**234**	P		**P**		**03 41 29.3**	**+0.6**
ABPO				pmax		pmax			
	comp=Z,23nm,1.1s								
ABPO	**Ambohimpanom**	**25.11**	**234**	P		**P**		**03 41 29.3**	**+0.6**
WSAR	**Wadi Sarin**	**29.55**	**341**	P		**P**		**03 42 09.1**	**+0.6**
	comp=Z,7.1nm,0.9s,baz=120,slow=8.1,SNR=2.9								
WSAR				LR		LR		03 51 10.6	
	comp=Z,1μm,21.1s,baz=167,slow=31								
GSI	**Gunungsitoli**	**29.65**	**79**	P		**P**		**03 42 09.2**	**-0.2**
GSI				IAmb		IAmb		03 43 05.4	
	comp=Z,90nm,1.5s								
LHMI	**Lhok Sumawe**	**30.09**	**71**	P		**P**		**03 42 11.3**	**-1.9**
LHMI				IAmb		IAmb		03 42 18.4	
	comp=Z,49nm,0.7s								
ATD	**Arta Tunnel**	**30.31**	**303**	P		**P**		**03 42 15.0**	**-0.3**
KCSI	**Kotacane, Aceh**	**30.37**	**75**	P		**P**		**03 42 17.8**	**+2.0**
	comp=Z,966nmcomp=Z,86nm,1.1s								
RPSI	**Rantau Prapat**	**31.27**	**77**	P		**P**		**03 42 23.4**	**-0.4**
RPSI				IAmb		IAmb		03 42 27.0	
	comp=Z,27nm,1.3s								
RPSI				PP		**PnPn**		**03 43 28.8**	**+2.9**
RPSI	**Rantau Prapat**	**31.27**	**77**	P		**P**		**03 42 24.8**	**+1.0**
PSI	**Prapat**	**31.30**	**77**	P		**P**		**03 42 24.8**	**+0.7**
	comp=Z,3.2nm,0.6s,baz=180,slow=4.4,SNR=11								
PSI				LR		LR		03 53 26.5	
	comp=Z,2μm,19.1s,baz=270,slow=33								
PSI	**Prapat**	**31.30**	**77**	P		**P**		**03 42 23.4**	**-0.7**
PSI								03 43 28.8	
PSI				pmax		pmax			
	comp=Z,27nm,1.3s								
KMBO	**Kilima Mbogo**	**31.46**	**276**	P		**P**		**03 42 26.8**	**+1.1**
	comp=Z,5.3nm,1.0s,baz=51,slow=7.8,SNR=7.4								
KMBO				LR		LR		03 52 34.0	
	comp=Z,2μm,21.9s,baz=92,slow=32								
KMBO	**Kilima Mbogo**	**31.46**	**276**	P		**P**		**03 42 24.1**	**-1.6**
MNSI	**Mandailing Nat**	**31.51**	**81**	P		**P**		**03 42 28.1**	**+2.2**
FURI	**Furi**	**32.76**	**295**	P		**P**		**03 42 35.0**	**-2.1**
BKNI	**Bangkinang**	**32.87**	**82**	P		**P**		**03 42 37.1**	**-0.7**
KULM	**Kulim**	**33.62**	**73**	P		**P**		**03 42 44.4**	**+0.1**
KULM	**Kulim**	**33.62**	**73**	P		**P**		**03 42 45.0**	**+0.7**
IPM	**Ipoh**	**33.75**	**75**	P		**P**		**03 42 46.3**	**+0.8**
IPM				IAmb		IAmb		03 42 47.5	
	comp=Z,28nm,1.1s								
IPM	**Ipoh**	**33.75**	**75**	P		**P**		**03 42 47.0**	**+1.5**
KOLN	**Koldanda**	**35.55**	**23**	*e*P		**P**		**03 43 02.1**	**+1.0**
	comp=Z,94nm,1.1s								
PYUN	**Piuthan**	**35.61**	**22**	*e*P		**P**		**03 43 02.2**	**+0.6**
	comp=Z,173nm,1.0s								
MYKOM	**Kota Tinggi**	**35.89**	**80**	P		**P**		**03 43 04.9**	**+0.9**
MYKOM				IAmb		IAmb		03 43 06.3	
	comp=Z,63nm,1.0s								
MYKOM	**Kota Tinggi**	**35.89**	**80**	P		**P**		**03 43 06.0**	**+2.0**
DMN	**Daman**	**36.02**	**25**	*e*P		**P**		**03 43 06.4**	**+1.2**
	comp=Z,152nm,1.0s								
RAYN	**Ar Rayn**	**36.07**	**322**	P		**P**		**03 43 05.5**	**0.0**
RAYN				pmax		pmax			
	comp=Z,9.0nm,1.1s								
RAYN	**Ar Rayn**	**36.07**	**322**	P		**P**		**03 43 05.5**	**0.0**
PKI	**Pulchoki**	**36.12**	**26**	*e*P		**P**		**03 43 06.9**	**+0.7**
	comp=Z,97nm,1.1s								
PKIN	**Phulchoki**	**36.12**	**26**	*e*P		**P**		**03 43 06.8**	**+0.7**
	comp=Z,77nm,1.1s								
DANN	**Dangsing**	**36.13**	**23**	*e*P		**P**		**03 43 06.8**	**+0.6**
	comp=Z,79nm,0.9s								
RAMN	**Ramite**	**36.13**	**28**	*e*P		**P**		**03 43 07.6**	**+1.5**
	comp=Z,120nm,1.1s								
GKN	**Gorkha**	**36.17**	**25**	*e*P		**P**		**03 43 07.5**	**+1.1**
KKN	**Kakani**	**36.26**	**26**	*e*P		**P**		**03 43 08.2**	**+1.0**
	comp=Z,87nm,0.8s								
ODAN	**Odare**	**36.43**	**29**	*e*P		**P**		**03 43 10.1**	**+1.4**
	comp=Z,152nm,1.1s								
JIRN	**Jiri**	**36.55**	**27**	*e*P		**P**		**03 43 10.8**	**+1.0**
	comp=Z,162nm,1.2s								
GUN	**Gumba**	**36.62**	**26**	*e*P		**P**		**03 43 11.7**	**+1.2**
	comp=Z,278nm,1.1s								
TAPN	**Taplejung**	**36.99**	**29**	*e*P		**P**		**03 43 14.7**	**+1.1**
	comp=Z,123nm,1.0s								
SHL	**Shillong**	**37.79**	**36**	P		**P**		**03 43 20.6**	**+0.3**
SHL				pmax		pmax			
	comp=Z,74nm,1.3s								
SHL	**Shillong**	**37.79**	**36**	P		**P**		**03 43 20.6**	**+0.3**
SHL				IAmb		IAmb		03 43 22.3	
	comp=Z,74nm,1.3s								
CM31	**Chiang Mai Arr**	**37.88**	**51**	P		**P**		**03 43 21.3**	**+0

comp=Z,89nm,0.9s
SRBI Singaraja 46.47 96 P **P** **03 44 31.7 +0.7**
comp=Z,3µmcomp=Z,174nm,1.2s
AML Almayashu 47.00 5 P **P** **03 44 37.8 +2.5**
SNR=9.7
QIZ Qiongzhong 47.09 58 P **P** **03 44 36.4 +0.6**
QIZ S **S** **03 51 30.4 +2.4**
QIZ LR LR
comp=Z,440nm,17.5s
QIZ LR LR
comp=Z,510nm,18.2s
QIZ LR LR
comp=Z,540nm,19.6s
KZA Kyzart 47.11 7 P **P** **03 44 37.2 +1.1**
SNR=44
UCH Uchtor 47.18 6 P **P** **03 44 38.2 +1.5**
SNR=20
BOSA Boshof 47.32 235 P **P** **03 44 35.4 -2.3**
comp=Z,19nm,1.1s,baz=59,slow=7.4,SNR=12
BOSA LR LR 04 01 41.2
comp=Z,692nm,21.2s,baz=349,slow=32
BOSA Boshof 47.32 235 P **P** **03 44 35.4 -2.3**
BOSA pmax pmax
comp=Z,39nm,1.4s
BOSA Boshof 47.32 235 P **P** **03 44 35.4 -2.3**
BOSA IAmb IAmb 03 44 39.1
comp=Z,39nm,1.4s
KBKI Kotabaru 47.52 90 P **P** **03 44 41.0 +1.7**
comp=Z,30nm,1.3s
EKS2 Erkin-Say 47.53 5 P **P** **03 44 40.3 +1.2**
SNR=16
AAK Ala-Archa 47.58 6 P **P** **03 44 41.0 +1.6**
SNR=15
AAK Ala-Archa 47.58 6 P **P** **03 44 40.1 +0.6**
AAK Ala-Archa 47.58 6 P **P** **03 44 40.7 +1.2**
KBK Karagaybulak 47.65 6 P **P** **03 44 41.7 +1.7**
SNR=16
KK31 Karatay Array 47.77 2 P **P** **03 44 41.6 +0.9**
KK31 PcP **PcP** **03 46 07.1 -2.7**
TKM2 Tokmak 2 47.98 7 P **P** **03 44 43.7 +1.0**
SNR=16
TKM2 Tokmak 2 47.98 7 P **P** **03 44 42.7 +0.1**
GYA Guiyang 48.28 48⇑*iP* **P** **03 44 44.9 -0.3**
GYA pP pwP 03 44 56.0 +3.3
GYA PP **PP** **03 46 40.5 +2.7**
GYA ScP **ScP** **03 50 05.2 -1.5**
GYA S **S** **03 51 45.5 +0.5**
GYA sS sS 03 52 00.8 +10
GYA SS **SS** **03 55 10.9 -3.9**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,170nm,4.2s
GYA LR LR
comp=Z,310nm,17.0s
GYA LR LR
comp=Z,260nm,16.0s
GYA LR LR
comp=Z,440nm,15.5s
KKM Kota Kinabalu 48.82 78 P **P** **03 44 49.1 -0.4**
CD2 Chengdu 48.95 41⇑*iP* **P** **03 44 50.0 -0.1**
CD2 sP pwP 03 45 04.0 +6.3
CD2 PP **PP** **03 46 43.3 -0.4**
CD2 S **S** **03 51 55.4 +1.2**
CD2 sS sS 03 52 09.0 +10
CD2 SS **SS** **03 55 26.8 +1.5**
CD2 pmax pmax
comp=Z,100nm,0.7s
CD2 pmax pmax
comp=Z,470nm,4.3s
CD2 LR LR
comp=Z,680nm,16.7s
CD2 LR LR
comp=Z,1µm,20.6s
CD2 LR LR
comp=Z,750nm,13.2s
PDGK Podgornoye 48.98 11 P **P** **03 44 49.7 -0.5**
AKT Akhty 49.88 340 *eP* **P** **03 44 58.2 +1.1**
AKT *e* 03 46 17.2
AKT pmax pmax
comp=Z,31nm,1.0s
WBSI Waikabubak, Su 50.63 98 P **P** **03 45 03.6 +0.4**
comp=Z,50nm,1.0s
BATP Bataraza 50.95 75 *eP* **P** **03 45 05.9 +0.4**
TTSI Tana Toraja 51.18 90 P **P** **03 45 08.3 +1.0**
comp=Z,1µmcomp=Z,45nm,1.3s
MAK Makhachkala 51.27 340 *eP* **P** **03 45 09.1 +1.7**
MAK *eS* **S** **03 52 28.0 +2.0**
MAK pmax pmax
comp=Z,135nm,0.9s
MAK MLR MLR
comp=Z,189nm,15.0s
BKSI Bulukumba 51.37 93 P **P** **03 45 09.2 +0.5**
comp=Z,781nmcomp=Z,62nm,1.1s
BNSI Bone 51.39 92 P **P** **03 45 10.4 +1.5**
comp=Z,48nm,1.1s
AKH Akhalkalaki 51.42 336 P **P** **03 45 09.7 +0.9**
AKH pmax pmax
comp=Z,7.0nm,0.9s
AKH Akhalkalaki 51.42 336 P **P** **03 45 09.7 +0.9**
WMQ Urumqi 51.45 18 *eP* **P** **03 45 10.8 +2.0**
WMQ pP pwP 03 45 21.0 +4.7
WMQ pmax pmax
comp=Z,48nm,1.1s
WMQ pmax pmax
comp=Z,240nm,3.8s
WMQ LR LR
comp=Z,480nm,19.7s
WMQ LR LR
comp=Z,360nm,14.9s
WMQ LR LR
comp=Z,620nm,19.7s
MPSI Mapaga 51.56 86 P **P** **03 45 10.8 +0.7**
comp=Z,628nmcomp=Z,58nm,1.1s
H01W3 Cape Leeuwin H 51.60 131 T T 04 40 34.8
baz=295,slow=75,SNR=56
H01W2 Cape Leeuwin H 51.61 131 T T 04 40 44.0
baz=295,slow=75,SNR=61
H01W1 Cape Leeuwin H 51.62 131 T T 04 40 46.2
baz=295,slow=75,SNR=55
GROC Groznyy 52.08 339 *eP* **P** **03 45 15.2 +1.7**
GROC *e* 03 46 24.3
GROC *e* 03 47 13.2
GROC *eS* **S** **03 52 36.3 -0.8**
GROC pmax pmax
comp=Z,69nm,1.5s
PSA00 Pilbara Seismi 52.37 113 IAmb IAmb 03 45 19.1
comp=Z,84nm,1.9s
ZEI Tsey 52.42 337 *eP* **P** **03 45 17.6 +1.3**
ZEI pmax pmax
comp=Z,18nm,1.4s
LZH Lanzhou 52.46 36⇑P **P** **03 45 16.7 +0.1**
LZH pP pwP 03 45 27.6 +3.4
LZH sP sP 03 45 32.3 +11
LZH S **S** **03 52 41.6 -1.3**
LZH pmax pmax
comp=Z,32nm,1.2s
LZH pmax pmax
comp=Z,200nm,4.9s
LZH LR LR
comp=Z,360nm,17.4s
LZH LR LR
comp=Z,410nm,17.3s
LZH LR LR
comp=Z,300nm,18.1s
GTA Gaotai 52.66 30⇑P **P** **03 45 18.2 +0.2**
GTA pP pwP 03 45 25.7 +0.1
GTA sP sP 03 45 29.1 +6.8
GTA S **S** **03 52 44.6 -0.9**
GTA sS sS 03 52 59.8 +9.3
GTA pmax pmax
comp=Z,17nm,1.1s
GTA pmax pmax
comp=Z,140nm,5.1s
GTA LR LR
comp=Z,200nm,20.3s
GTA LR LR
comp=Z,360nm,22.2s
GTA LR LR
comp=Z,270nm,21.6s
MAKZ Makanchi 52.80 12 P **P** **03 45 18.0 -0.8**
MAKZ Makanchi 52.80 12 P **P** **03 45 18.3 -0.5**
MAKZ IAmb IAmb 03 45 21.1
comp=Z,31nm,1.2s
MAKZ PcP **PcP** **03 46 30.0 +1.9**
MK31 Makanchi Array 52.85 12 *iP* **P** **03 45 18.1 -1.1**
comp=Z,21nm,1.1s
MKAR Makanchi Array 52.85 12 P **P** **03 45 18.5 -0.7**
comp=Z,10nm,0.9s,baz=187,slow=7.1,SNR=34
MKAR PcP **PcP** **03 46 28.4 0.0**
comp=Z,3.7nm,0.8s,baz=238,slow=2.7,SNR=3.9
MKAR LR LR 04 06 53.0
comp=Z,214nm,21.6s,baz=188,slow=35
EDFI Ende, Flores 52.88 97 P **P** **03 45 19.3 -0.8**
comp=Z,21nm,1.4s
OTUK Ortayu 52.98 3 P **P** **03 45 20.5 +0.4**
ENPP El Nido 53.09 72 *eP* **P** **03 45 20.2 -1.3**
APSI Ampana 53.17 88 P **P** **03 45 22.0 -0.1**
comp=Z,601nmcomp=Z,56nm,1.3s
MRSI Marisa 53.60 86 P **P** **03 45 26.4 +1.1**
comp=Z,20nm,1.0s
KBZ Khabaz 53.61 337 P **P** **03 45 25.2 +0.5**
comp=Z,24nm,0.9s,baz=162,slow=5.7,SNR=37
KBZ LR LR 04 09 06.4
comp=Z,163nm,18.2s,baz=154,slow=37
KBZ Khabaz 53.61 337*ceP* **P** **03 45 25.8 +1.1**
KBZ pmax pmax
comp=Z,29nm,0.9s
KIV Kislovodsk 53.88 337 *eP* **P** **03 45 27.6 +0.7**
KIV *eS* **S** **03 53 01.4 -0.5**
KIV pmax pmax
comp=Z,32nm,1.0s
KIV pmax pmax
comp=Z,16nm,2.6s
XAN Xi'an 54.31 41 IAmb IAmb 03 45 30.5
comp=Z,42nm,0.9s
GOF Gofitskoye 54.68 338⇓*eP* **P** **03 45 34.0 +1.4**
GOF pmax pmax
comp=Z,22nm,0.6s
BR131 Keskin Array S 54.78 327 *i* P **P** **03 45 34.0 +0.4**
BRTR Keskin Array B 54.78 327 P **P** **03 45 34.0 +0.4**
comp=Z,3.6nm,0.9s,baz=148,slow=10,SNR=16
BRTR LR LR 04 08 53.2
comp=Z,242nm,18.7s,baz=114,slow=36
BRTR Keskin Array B 54.78 327 P **P** **03 45 34.0 +0.4**
BATI Baumata 54.85 99 P **P** **03 45 35.6 +1.2**
comp=Z,791nmcomp=Z,51nm,1.1s
ELL Elmali 54.89 322 P **P** **03 45 33.4 -1.0**
ELL pmax pmax
comp=Z,132nm,1.9s
ELL Elmali 54.89 322 P **P** **03 45 33.4 -1.0**
SOEI Soe 55.44 98 P **P** **03 45 40.0 +1.2**
comp=Z,2µmcomp=Z,104nm,1.0s
SMPP San Manuel, Pa 55.63 67 *eP* **P** **03 45 39.6 -0.4**
AKTO Aktyubinsk 55.82 352 P **P** **03 45 40.6 -0.1**
KURK Kurchatov 56.03 8 P **P** **03 45 41.4 -0.8**
KURK Kurchatov 56.03 8 P **P** **03 45 41.9 -0.3**
KURK IAmb IAmb 03 45 44.8
comp=Z,32nm,1.2s
KURK PcP **PcP** **03 46 42.0 +1.6**
PAGZ Pagadian 56.15 77 *eP* **P** **03 45 42.6 -1.1**
WHN Wuhan 56.17 48⇓P **P** **03 45 43.9 +0.3**
WHN pmax pmax
comp=Z,160nm,1.6s
ANN Anapa 56.75 334 *eP* P 03 45 37.7 -10
ANN pmax pmax
comp=Z,64nm,1.5s
ANN pmax pmax
comp=Z,39nm,1.4s
DGZ Jazzator, Alta 56.76 15 *iP* **P** **03 45 47.1 -0.5**
DGZ pmax pmax
comp=Z,9.0nm,0.9s
SKMP Bagumbayan, Su 57.04 79 *eP* **P** **03 45 48.4 -1.7**
IDI Anoyia 57.22 318⇓P **P** **03 45 52.5 +1.5**
FITZ Fitzroy Crossi 57.26 108 P **P** **03 45 50.2 -1.4**
FITZ IAmb IAmb 03 46 00.4
comp=Z,17nm,1.1s
KCP Kidapawan 57.66 79⇓*iP* **P** **03 45 54.6 +0.1**
BRVK Borovoye 57.72 1 P **P** **03 45 54.5 +0.4**
BRVK Borovoye 57.72 1 P **P** **03 45 53.8 -0.4**
BRVK IAmb IAmb 03 45 56.8
comp=Z,43nm,1.5s
SSLB Suanglung 58.47 58 IAmb IAmb 03 46 06.1
comp=Z,37nm,1.3s
TNTI Ternate 59.03 86 P **P** **03 46 04.7 +0.6**
comp=Z,1µmcomp=Z,91nm,1.4s
TNTI Ternate 59.03 86 P **P** **03 46 04.1 +0.1**
BTO Baotou 59.08 36 *eP* **P** **03 46 04.2 +0.2**
YHNB Yeheng 59.15 58 IAmb IAmb 03 46 07.1
comp=Z,33nm,1.0s
KNRA Kununurra 60.05 105 P **P** **03 46 09.3 -1.8**
HHC Hu-ho-hao-te 60.15 37 *eP* **P** **03 46 13.1 +1.7**
HHC pmax pmax
comp=Z,12nm,0.8s
HHC pmax pmax
comp=Z,110nm,6.1s
HHC LR LR
comp=Z,93nm,17.5s
HHC LR LR
comp=Z,140nm,15.1s
ZAA0 Zalesovo Array 60.16 11 IAmb IAmb 03 46 13.0
comp=Z,20nm,0.8s
ZALV Zalesovo Beam 60.16 11 P **P** **03 46 10.2 -0.9**
comp=Z,14nm,0.7s,baz=217,slow=7.1,SNR=40
ZALV LR LR 04 11 14.9
comp=Z,268nm,21.8s,baz=214,slow=35
NJ2 Nanjing 60.27 49 *eP* **P** **03 46 12.7 +0.4**
NJ2 pmax pmax
comp=Z,35nm,0.9s
VRH Novokhopyorsk 60.39 341 *eP* **P** **03 46 12.4 -0.3**
VRH pmax pmax
comp=Z,10.0nm,0.8s
VORD Divnogorie 61.01 339 *eP* **P** **03 46 16.2 -0.7**
VORD pmax pmax
comp=Z,10.0nm,0.7s
TIA Tai'an 61.08 44 P **P** **03 46 17.8 +0.1**
TIA pmax pmax
comp=Z,28nm,1.0s
VSR Storozhevoye 61.27 339 *eP* **P** **03 46 17.1 -1.6**
VSR pmax pmax
comp=Z,20nm,1.3s
HARR Harsova 61.27 328⇑P **P** **03 46 20.0 +1.2**
HARR Harsova 61.27 328⇑P **P** **03 46 20.0 +1.2**
CFR Carcaliu 61.50 329⇓P **P** **03 46 21.1 +0.8**
CFR Carcaliu 61.50 329⇓P **P** **03 46 21.1 +0.8**
ARU Arti 61.62 354 LR LR 04 11 35.4
comp=Z,132nm,21.6s,baz=155,slow=35
ARU Arti 61.62 354*diP* **P** **03 46 21.7 +0.7**
ARU 03 48 35.6
ARU S **S** **03 54 43.2 +0.4**
ARU SS **SS** **03 58 44.6 +0.2**
ARU pmax pmax
comp=Z,31nm,0.9s
ARU Arti 61.62 354 P **P** **03 46 20.5 -0.5**
ARU IAmb IAmb 03 46 23.1
comp=Z,29nm,0.9s
SVE Sverdlovsk 61.81 355 *eP* **P** **03 46 23.4 +1.1**
SVE pmax pmax
comp=Z,39nm,1.8s
SONM Songino Array 62.10 28 P **P** **03 46 25.6 +1.0**
comp=Z,23nm,0.8s,baz=220,slow=6.4,SNR=24
SONM LR LR 04 12 57.9
comp=Z,406nm,21.3s,baz=278,slow=36
ULN Ulaanbaatar 62.43 28*ceP* **P** **03 46 26.6 -0.2**
ULN pmax pmax
comp=Z,38nm,1.7s
ULN Ulaanbaatar 62.43 28 P **P** **03 46 26.4 -0.4**
ULN IAmb IAmb 03 46 30.2
comp=Z,21nm,1.1s
BJT Baijiatuau 62.49 40 IAmb IAmb 03 46 29.0
comp=Z,22nm,1.0s
LPSR Galich'ya Gora 62.50 340 *eP* **P** **03 46 26.8 -0.1**
LPSR pmax pmax
comp=Z,20nm,1.0s
BJI Beijing 62.51 40*iP* **P** **03 46 28.1 +0.8**
BJI S **S** **03 54 59.1 +4.5**
BJI sS sS 03 55 11.8 +12
BJI SS **SS** **03 58 59.1 +0.2**
BJI pmax pmax
comp=Z,22nm,0.8s
BJI LR LR
comp=Z,160nm,11.4s
VTS Vitosha 62.58 324⇑P **P** **03 46 27.3 -0.5**
VTS Vitosha 62.58 324⇑P **P** **03 46 27.3 -0.5**
ZAK Zakamensk 62.64 24 *eP* **P** **03 46 27.5 -0.6**
ZAK pmax pmax
comp=Z,9.0nm,1.6s
VRI Vrincioaia 62.69 328⇑P **P** **03 46 28.2 -0.2**
VRI Vrincioaia 62.69 328⇑P **P** **03 46 28.2 -0.2**
MAW Mawson 62.76 182 P **P** **03 46 28.4 0.0**
comp=Z,5.4nm,0.8s,baz=12,slow=9.9,SNR=9.6
MAW LR LR 04 07 08.4
comp=Z,406nm,21.5s,baz=31,slow=30
MAW Mawson 62.76 182 P **P** **03 46 27.0 -1.4**
MLR Muntele Rosu 62.86 328⇑P **P** **03 46 30.0 +0.3**
MLR Muntele Rosu 62.86 328⇑P **P** **03 46 30.0 +0.3**
MLR Muntele Rosu 62.86 328 P **P** **03 46 29.6 -0.1**
MLR IAmb IAmb 03 46 36.3
comp=Z,21nm,1.4s
TESR Tescani 63.16 329⇑P **P** **03 46 32.4 +0.9**
VOIR 63.30 327⇑P **P** **03 46 31.8 -0.8**
VOIR 63.30 327⇑P **P** **03 46 31.8 -0.8**
SORM Soroca 63.42 331⇑P **P** **03 46 32.7 -0.4**
SORM Soroca 63.42 331⇑P **P** **03 46 32.7 -0.4**
ARR Arges 63.49 327⇑P **P** **03 46 33.8 +0.1**
FAKI Fak Fak 63.57 91 P **P** **03 46 36.8 +1.9**
comp=Z,626nmcomp=Z,59nm,1.2s
TLY Talaya 63.79 24 LR LR 04 14 06.3
comp=Z,290nm,18.5s,baz=213,slow=36
TLY Talaya 63.79 24 *eP* **P** **03 46 37.1 +1.5**
TLY *eS* **S** **03 55 14.6 +4.4**
TLY pmax pmax
comp=Z,69nm,1.6s
TLY MLR MLR
comp=Z,598nm,18.0s
TLY Talaya 63.79 24 P **P** **03 46 34.5 -1.1**
TLY IAmb IAmb 03 46 39.8
comp=Z,37nm,1.5s
HERR Herculane 64.42 325⇑P **P** **03 46 38.6 -1.2**
GZR Gura Zlata 64.53 326⇑P **P** **03 46 41.0 +0.4**
GZR Gura Zlata 64.53 326⇑P **P** **03 46 41.0 +0.4**
MDVR Moldovita 64.76 325⇑P **P** **03 46 42.4 +0.3**
AKASG Malin Array Be 64.83 334 P **P** **03 46 41.1 -1.2**
comp=Z,2.9nm,0.7s,baz=131,slow=5.4,SNR=16
AKASG LR LR 04 15 07.8
comp=Z,135nm,21.9s,baz=95,slow=36
AKASG Malin Array Be 64.83 334 *iP* **P** **03 46 42.2 -0.1**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKBB Malin Array Si 64.83 334*ceP* **P** **03 46 41.4 -0.9**
AKBB Malin Array Si 64.83 334 IAmb IAmb 03 46 43.3
comp=Z,16nm,1.3s
BZS Buzias 65.31 326⇑P **P** **03 46 45.9 +0.3**
BZS Buzias 65.31 326⇑P **P** **03 46 45.9 +0.3**
OBN Obninsk 65.37 340⇓*eP* **P** **03 46 46.6 +0.9**
OBN *e* 03 47 20.3
OBN *eS* **S** **03 55 26.0 -3.4**
OBN *e* 03 55 57.5
OBN pmax pmax
comp=Z,9.0nm,1.0s
OBN MLR MLR
comp=Z,131nm,20.0s
ASAR Alice Springs 65.52 114 P **P** **03 46 47.2 -0.3**
comp=Z,3.7nm,0.8s,baz=283,slow=5.8,SNR=26
ASAR LR LR 04 12 04.4
comp=Z,608nm,21.1s,baz=277,slow=33
AS31 Alice Springs 65.52 114 P **P** **03 46 47.3 -0.2**
MOS Moscow 65.54 341 *eP* **P** **03 46 47.0 +0.2**
MOS *e* 03 49 11.2
MOS pmax pmax
comp=Z,36nm,0.7s
WRA Warramunga Arr 65.62 110 P **P** **03 46 48.5 +0.3**
comp=Z,8.0nm,0.8s,baz=284,slow=6.1,SNR=19
WRA LR LR 04 11 35.3
comp=Z,450nm,21.9s,baz=270,slow=32
WRAB Tennant Creek 65.63 110*ceP* **P** **03 46 46.3 -1.9**
WRAB pmax pmax
comp=Z,39nm,1.7s
WB2 Warramunga Arr 65.63 110 P **P** **03 46 48.9 +0.7**
WR0 Warramunga Arr 65.81 110 P **P** **03 46 48.6 -0.8**
WR0 IAmb IAmb 03 46 58.4
comp=Z,24nm,1.1s
SYO Syowa Base 66.88 191⇑*eP* P 03 46 45.4 -10
SYO Syowa Base 66.88 191⇑*eP* **P** **03 46 55.8 +0.5**
KOLS Kolonicke sedl 66.98 329 *eP* **P** **03 46 57.2 +0.9**
KOLS Kolonicke sedl 66.98 329 *eP* **P** **03 46 57.2 +0.9**
KEST Kesra 68.51 311 LR LR 04 17 23.2
comp=Z,129nm,18.9s,baz=330,slow=36
VYHS Vyhne 68.54 327 *eP* **P** **03 47 06.5 +0.4**
VYHS Vyhne 68.54 327 *eP* **P** **03 47 06.5 +0.4**
LANS Liptovska Anna 68.58 328 *eP* **P** **03 47 07.1 +0.7**
LANS Liptovska Anna 68.58 328 *eP* **P** **03 47 07.1 +0.7**
KLMR Klimovskoe 69.32 345 *eP* **P** **03 47 09.8 -0.9**
KLMR pmax pmax
comp=Z,50nm,1.3s
KLMR Klimovskoe 69.32 345 *eP* **P** **03 47 09.9 -0.8**
KLMR AMP 03 47 12.3
comp=Z,50nm,1.3s
KLMR LQ LQ 04 12 54.8
KLMR LQ LQ 04 12 54.8
KLMR LR LR 04 14 50.1
KSRS Korea Array 69.33 47 P **P** **03 47 11.0 -0.3**
comp=Z,3.9nm,0.7s,baz=259,slow=7.4,SNR=7.1
KSRS LR LR 04 19 17.2
comp=Z,390nm,18.1s,baz=238,slow=37
CONA Conrad Observa 69.88 325 *eP* **P** **03 47 14.6 +0.1**
comp=Z,3.8nm,0.9s
CN2 Changchun 70.37 40 *eP* **P** **03 47 15.8 -1.8**
CN2 *ep*P sP 03 47 23.6 +1.7
CN2 *eS* **S** **03 56 25.6 -4.3**
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 LR LR
comp=Z,170nm,16.0s
CN2 LR LR
comp=Z,240nm,17.0s
MOA Molln 70.75 325 *eP* **P** **03 47 20.8 +1.0**
comp=Z,7.0nm,1.5s
GEC2 GERESS Array S 71.58 325 *eL* L 04 17 37.1
comp=Z,77nm,21.4s
GERES GERESS Array B 71.58 325 LR LR 04 17 47.5
comp=Z,72nm,21.1s,baz=150,slow=35
KHC Kasperske Hory 71.80 326 *eP* **P** **03 47 25.6 -0.6**
KHC Kasperske Hory 71.80 326 *eP* **P** **03 47 25.6 -0.6**
WTTA Wattenberg 72.00 323 *eP* **P** **03 47 27.9 +0.3**
comp=Z,13nm,1.4s
WET Wettzell 72.20 325 *eL* L 04 20 47.6
comp=Z,70nm,21.9s
SQTA Sankt Quirin 72.24 323 *eP* **P** **03 47 29.0 +0.1**
comp=Z,4.6nm,0.7s
MOTA Moosalm 72.36 323 *eP* **P** **03 47 28.5 -1.2**
comp=Z,18nm,1.1s
BOD Bodaibo 72.37 24 *eP* P 03 47 24.4 -4.9
BOD pmax pmax
comp=Z,13nm,1.9s
FETA Feichten 72.43 323 *eP* **P** **03 47 30.8 +0.6**
comp=Z,5.4nm,1.0s
BRG Berggiesshubel 72.50 327 *eP* P 03 47 41.0 +11
comp=Z,5.2nm,1.0s
RETA Reutte 72.63 323 P **P** **03 47 31.2 0.0**
comp=Z,12nm,1.2s
FUR Furstenfeldbru 72.65 324 *eL* L 04 19 30.2
comp=Z,82nm,22.0s
NKC Novy Kostel 72.99 326 *eP* **P** **03 47 34.2 +1.0**
NKC *e* 03 47 45.3
NKC Novy Kostel 72.99 326 *eP* **P** **03 47 34.2 +1.0**
NKC *ex* x 03 47 45.3
STKA Stephens Creek 73.06 122 P **P** **03 47 34.1 0.0**
comp=Z,1.5nm,0.4s,baz=303,slow=7.7,SNR=4.9
STKA LR LR 04 16 40.9
comp=Z,496nm,19.8s,baz=259,slow=33
STKA Stephens Creek 73.06 122 IAmb IAmb 03 47 38.5
comp=Z,2.2nm,1.2s
DAVA Damuels 73.07 323 *eP* **P** **03 47 34.2 +0.3**
comp=Z,16nm,0.9s
CLL Collm 73.23 327 *eP* **P** **03 47 37.0 +2.4**
CLL *e* 03 47 47.0
CLL *eS* **S** **03 57 00.0 -2.6**
CLL *e* 04 00 30.0
CLL *eSSS* SSS 04 05 30.0
CLL *eSSSS* 04 06 48.0
CLL Collm 73.23 327 *eL* L 04 21 25.1
comp=Z,93nm,20.6s
CLL Collm 73.23 327 *eP* **P** **03 47 37.0 +2.4**
CLL *e* 03 47 47.0
MDJ Mudanjiang 73.41 41 P **P** **03 47 34.2 -1.6**
MDJ IAmb IAmb 03 47 37.5
comp=Z,36nm,1.0s
GRF Grafenberg Arr 73.41 325 *eP* **P** **03 47 36.2 +0.5**
comp=Z,46nm,1.8s,baz=118,slow=7.4
GRF *eL* L 04 12 35.6
comp=Z,67nm,18.8s
MOX Moxa 73.66 326 *eL* L 04 07 18.4
comp=Z,101nm,20.9s
FIA1 FINESS Array S 73.77 340 P **P** **03 47 37.8 +0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FIA1				IAmb	IAmb	03 47 49.4	
	comp=Z,21nm,1.4s						
FINES	**FINESS Array B**	**73.77**	**340**	P	**P**	**03 47 38.0**	**+0.4**
	comp=Z,6.6nm,1.0s,baz=72,slow=6.2,SNR=11						
FINES				LR	LR	04 22 34.7	
	comp=Z,118nm,18.9s,baz=131,slow=38						
FINES	**FINESS Array B**	**73.77**	**340**	P	**P**	**03 47 38.0**	**+0.4**
KIC	**Kosan Boka**	**74.00**	**278**	*e*P	**P**	**03 47 38.8**	**-1.1**
	comp=Z,46nm,1.2s						
DBIC	**Dimbokro**	**74.15**	**278**	P	**P**	**03 47 39.8**	**-1.0**
	comp=Z,8.8nm,0.8s,baz=79,slow=6.3,SNR=8.9						
DBIC				LR	LR	04 19 12.2	
	comp=Z,281nm,20.8s,baz=78,slow=35						
DBIC	**Dimbokro**	**74.15**	**278**	P	**P**	**03 47 38.5**	**-2.2**
DBIC				IAmb	IAmb	03 47 41.7	
	comp=Z,21nm,1.1s						
LIC	**Lamto**	**74.27**	**278**	*e*P	**P**	**03 47 41.9**	**+0.5**
	comp=Z,46nm,1.1s						
TIC	**Toumodi**	**74.31**	**278**	*e*P	**P**	**03 47 41.2**	**-0.5**
BFO	**Black Forest**	**74.47**	**323**	*e*L	L	04 18 39.0	
	comp=Z,74nm,21.2s						
USRK	**Ussuriysk Ar.**	**74.82**	**42**	P	**P**	**03 47 42.6**	**-1.4**
	comp=Z,5.6nm,0.8s,baz=327,slow=1.3,SNR=5.8						
USRK				LR	LR	04 20 44.7	
	comp=Z,194nm,22.0s,baz=224,slow=36						
NVL	**N'lazarevskaya**	**74.89**	**197**	*e*P	**P**	**03 47 42.2**	**-1.7**
NVL				*e*S	**S**	**03 57 27.0**	**+6.4**
NVL				*e*SS	**SS**	**04 02 13.9**	**+5.2**
NVL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NRIK	**Noril'sk**	**75.19**	**7**	P	**P**	**03 47 45.2**	**-0.4**
	comp=Z,3.0nm,0.7s,baz=194,slow=4.4,SNR=16						
NRIK				LR	LR	04 23 10.5	
	comp=Z,257nm,18.1s,baz=194,slow=38						
TNS	**Taunus Mts**	**75.25**	**325**	*e*L	L	04 20 12.4	
	comp=Z,68nm,22.0s						
BSEG	**Bad Segeberg**	**75.97**	**329**	*e*L	L	04 22 37.4	
	comp=Z,125nm,20.0s						
ZEA	**Zeya**	**76.13**	**32**	*e*P	**P**	**03 47 51.2**	**-0.1**
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,900nm,17.0s						
ZEA				MLR	MLR		
	comp=E,400nm,15.0s						
KLR	**Kul'dur**	**76.65**	**37**	*ce*P	**P**	**03 47 52.9**	**-1.5**
KLR				pmax	pmax		
	comp=Z,15nm,1.0s						
MAT	**Matsushiro**	**76.76**	**51**	P	**P**	**03 47 55.1**	**-0.3**
MAJO	**Matsushiro**	**76.77**	**51**	P	**P**	**03 47 53.5**	**-1.9**
MAJO				pmax	pmax		
	comp=Z,29nm,1.4s						
MAJO	**Matsushiro**	**76.77**	**51**	P	**P**	**03 47 53.5**	**-1.9**
MAJO				IAmb	IAmb	03 47 57.7	
	comp=Z,29nm,1.4s						
MJAR	**Matsushiro Arr**	**76.77**	**51**	P	**P**	**03 47 55.0**	**-0.4**
	comp=Z,6.3nm,0.8s,baz=257,slow=6.4,SNR=14						
MJAR				LR	LR	04 23 49.7	
	comp=Z,278nm,18.2s,baz=260,slow=37						
MJAR	**Matsushiro Arr**	**76.77**	**51**	P	**P**	**03 47 55.0**	**-0.4**
TEY	**Ternei**	**78.19**	**42**	⇑*e*P	**P**	**03 48 02.1**	**-1.0**
TEY				pmax	pmax		
	comp=Z,20nm,0.9s						
KONO	**Kongsberg**	**79.13**	**334**	*ce*P	**P**	**03 48 06.7**	**-1.3**
KONO				pmax	pmax		
	comp=Z,75nm,2.5s						
NB2	**NORSAR Subarra**	**79.14**	**335**	P	**P**	**03 48 08.7**	**+0.6**
	comp=Z,42nm,2.5s,baz=120,slow=6.2						
NB2	**NORSAR Subarra**	**79.14**	**335**	P	**P**	**03 48 08.7**	**+0.6**
	baz=120,slow=6.2						
NOA	**NORSAR Array B**	**79.14**	**335**	P	**P**	**03 48 08.8**	**+0.6**
	comp=Z,2.6nm,0.9s,baz=112,slow=5.8,SNR=4.5						
NOA				LR	LR	04 23 29.3	
	comp=Z,122nm,21.6s,baz=115,slow=36						
SNAA	**Sanae**	**79.60**	**198**	P	**P**	**03 48 10.3**	**-0.2**
SNAA	**Sanae**	**79.60**	**198**	P	**P**	**03 48 08.9**	**-1.6**
SNAA				pmax	pmax		
	comp=Z,20nm,1.6s						
SNAA	**Sanae**	**79.60**	**198**	P	**P**	**03 48 08.9**	**-1.6**
ESDC	**Sonseca Array**	**79.76**	**312**	P	**P**	**03 48 12.6**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=86,slow=4.0,SNR=16						
ESDC				LR	LR	04 22 52.9	
	comp=Z,67nm,19.5s,baz=155,slow=35						
ARCES	**ARCESS Array B**	**79.78**	**346**	P	**P**	**03 48 11.7**	**+0.4**
	comp=Z,7.2nm,0.9s,baz=115,slow=5.8,SNR=14						
ARCES				LR	LR	04 24 31.0	
	comp=Z,213nm,20.9s,baz=151,slow=36						
VNA2	**Neumayer--Watz**	**80.85**	**199**	P	**P**	**03 48 17.6**	**+0.4**
VNA1	**Neumayer--Stat**	**81.07**	**199**	P	**P**	**03 48 18.7**	**+0.4**
VNA3	**Neumayer Olymp**	**81.64**	**199**	P	**P**	**03 48 21.7**	**+0.3**
YSS	**Yuzh-Sakhalins**	**82.85**	**42**	*e*P	**P**	**03 48 23.6**	**-4.5**
YSS				*e*		03 48 27.4	
YSS				*e*S	**S**	**03 58 38.8**	**-7.6**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
QSPA	**South Pole Qui**	**85.16**	**180**	P	**P**	**03 48 38.4**	**-1.3**
QSPA				IAmb	IAmb	03 48 48.9	
	comp=Z,27nm,1.6s						
TIXI	**Tiksi**	**85.62**	**16**	*i* P	**P**	**03 48 40.4**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,22nm,1.0s						
TIXI	**Tiksi**	**85.62**	**16**	P	**P**	**03 48 40.7**	**-0.9**
TIXI				IAmb	IAmb	03 48 44.0	
	comp=Z,22nm,0.9s						
TIXI				PP	**PP**	**03 52 00.1**	**-0.4**
VNDA	**Vanda**	**86.01**	**167**	P	**P**	**03 48 43.5**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=310,slow=6.6,SNR=1.8						
VNDA				LR	LR	04 22 27.6	
	comp=Z,272nm,20.7s,baz=236,slow=32						
MA2	**Magadan**	**90.22**	**30**	*ce*P	**P**	**03 49 03.4**	**-0.6**
MA2				pmax	pmax		
	comp=Z,12nm,0.9s						
SEY	**Seymchan**	**91.48**	**27**	*i* P	**P**	**03 49 08.8**	**-0.9**
PETK	**Petropavlovsk-**	**93.34**	**37**	LR	LR	04 33 49.4	
	comp=Z,172nm,19.6s,baz=242,slow=37						
DZM	**Mont Dzumac**	**95.49**	**113**	*e*SS	SS	04 07 19.2	+4.9
	comp=Z,220nm,29.9s						
DZM	**Mont Dzumac**	**95.49**	**113**	*e*LR	LR	04 20 24.7	
	comp=Z,1μm,21.9s						
BILL	**Bilibino**	**97.38**	**22**	⇑*e*P	**P**	**03 49 35.7**	**-1.0**
BILL				*e*		03 49 38.9	
BILL				*e**PP	**pwP**	**03 49 44.0**	**-0.3**
BILL				S	**SKSac**	**04 00 14.0**	**+0.5**
BILL				SS	SS	04 07 50.0	+11
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,285nm,20.0s						
INK	**Inuvik**	**114.93**	**9**	PKP	PKPdf	03 54 44.2	+0.2
	comp=Z,0.7nm,0.7s,baz=341,slow=4.5,SNR=5.7						
INK				PP	**PP**	**03 55 41.4**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=7.4,slow=11,SNR=3.3						
ILAR	**Eielson Array**	**115.09**	**16**	PKP	**PKPdf**	**03 54 45.2**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=217,slow=2.8,SNR=1.7						
ILAR				PP	**PP**	**03 55 44.2**	**+0.6**
	comp=Z,1.1nm,1.1s,baz=306,slow=3.2,SNR=4.3						
YKA	**Yellowknife Ar**	**122.44**	**2**	PKP	**PKPdf**	**03 54 57.8**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=352,slow=1.6,SNR=22						
YKA				PP	**PP**	**03 56 35.8**	**+1.6**
	comp=Z,1.5nm,1.0s,baz=1.6,slow=7.0,SNR=7.5						
LPAZ	**La Paz**	**132.27**	**243**	PKP	**PKPdf**	**03 55 18.7**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=33,slow=5.8,SNR=4.3						
TBI	**Tubuai**	**133.51**	**129**	*e*SS	SS	04 15 19.1	-15
	comp=Z,44nm,28.5s						
TBI	**Tubuai**	**133.51**	**129**	*e*LR	LR	04 37 57.3	
	comp=Z,142nm,29.0s						
PPT2	**Papeete2**	**136.26**	**122**	*e*SS	SS	04 16 09.0	+1.4
	comp=Z,90nm,27.0s						
PPT2	**Papeete2**	**136.26**	**122**	*e*LR	LR	04 39 19.1	
	comp=Z,348nm,23.5s						
PDAR	**Pinedale Array**	**142.21**	**358**	PKP	**PKPdf**	**03 55 35.8**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=69,slow=3.4,SNR=8.4						
LRAL	**Lakeview Retre**	**143.86**	**324**	P	**PKPdf**	**03 55 39.1**	**-0.4**
	baz=44						
U40A	**Yellville**	**144.29**	**334**	P	**PKPab**	**03 55 38.2**	**+0.2**
	baz=33						
O20A	**White River Ci**	**144.76**	**356**	P	**PKPdf**	**03 55 42.0**	**+0.8**
	baz=5.5						
DUG	**Dugway, Tooele**	**144.80**	**2**	PKIKP	**PKPdf**	**03 55 42.2**	**+1.0**
DUG	**Dugway, Tooele**	**144.80**	**2**	P	**PKPdf**	**03 55 42.1**	**+1.0**
	baz=358						
DUG	**Dugway, Tooele**	**144.80**	**2**		**PKPdf**	**03 55 42.2**	**+1.0**
ISCO	**Idaho Springs**	**144.82**	**352**	P	**PKPdf**	**03 55 42.2**	**+0.8**
	baz=10						
AFDM	**Forest Hills D**	**144.99**	**13**		**PKPdf**	**03 55 42.8**	**+1.4**
W41B	**Gary Mavity, V**	**145.00**	**332**	P	**PKPdf**	**03 55 41.6**	**+0.1**
	baz=35						
Q24A	**Divide**	**145.57**	**351**	P	**PKPab**	**03 55 44.3**	**+1.3**
	baz=11						
W39A	**Magazine**	**145.67**	**334**	P	**PKPab**	**03 55 44.2**	**+1.1**
	baz=32						
X40A	**Basin Creek Fa**	**145.83**	**332**	P	**PKiKP**	**03 55 45.5**	**-1.5**
	baz=34						
TUL1	**Leonard**	**145.89**	**337**	P	**PKPab**	**03 55 45.5**	**+1.5**
	baz=29						
MIAR	**Mount Ida**	**146.13**	**333**	P	**PKiKP**	**03 55 46.9**	**-0.8**
	baz=33						
R11A	**Troy Canyon, C**	**146.45**	**6**	P	**PKPab**	**03 55 46.7**	**+0.5**
	baz=352						
S22A	**4UR Ranch, Cre**	**146.99**	**353**	P	**PKPbc**	**03 55 47.3**	**+0.1**
	baz=8.4						
T25A	**Trinidad**	**147.23**	**350**	P	**PKPbc**	**03 55 47.5**	**-0.2**
	baz=13						
MVCO	**Mesa Verde**	**147.69**	**356**	P	**PKiKP**	**03 55 50.4**	**-0.7**
	baz=5.5						
CWC	**Cottonwood Cre**	**147.99**	**10**	P	**PKiKP**	**03 55 51.0**	**-0.7**
	baz=347						
SHPR	**Sheep Range**	**148.32**	**6**		**PKiKP**	**03 55 52.2**	**-0.2**
MPMC	**Manual Prospec**	**148.46**	**9**	P	**PKPbc**	**03 55 50.4**	**-0.6**
	baz=348						
ANMO	**Albuquerque**	**149.71**	**352**	PKP2	**PKPbc**	**03 55 53.7**	**-0.5**
ANMO	**Albuquerque**	**149.71**	**352**	P	**PKiKP**	**03 55 55.3**	**+0.1**
	baz=9.8						
ANMO	**Albuquerque**	**149.71**	**352**		**PKPbc**	**03 55 53.7**	**-0.5**
MSTX	**Muleshoe**	**149.93**	**345**	P	**PKiKP**	**03 55 55.5**	**-0.1**
	baz=17						
121A	**Cookes Peak, D**	**152.25**	**353**	P	**PKiKP**	**03 56 00.8**	**+0.2**
	baz=7.8						
TUC	**Tucson**	**152.68**	**359**	PKIKP	**PKPbc**	**03 56 00.5**	**-0.6**
TUC	**Tucson**	**152.68**	**359**	P	**PKPbc**	**03 56 00.8**	**-0.3**
	baz=1.4						
TUC	**Tucson**	**152.68**	**359**		**PKPbc**	**03 56 00.5**	**-0.6**
MNTX	**Cornudas Mount**	**152.70**	**349**	P	**PKPbc**	**03 56 00.8**	**-0.2**
	baz=13						
TXAR	**Lajitas Array**	**154.56**	**344**	PKP	**PKPdf**	**03 55 58.7**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=180,slow=1.4,SNR=6.7						
TXAR				PKPbc	**PKiKP**	**03 56 06.9**	**+1.6**
	comp=Z,0.8nm,0.6s,baz=40,slow=3.0,SNR=10						
TXAR				PP	**PP**	**04 00 00.0**	**+6.5**
	comp=Z,0.3nm,0.8s,baz=345,slow=4.3,SNR=3.4						

CNRM ***12*** *03:53:19.8, 32°.20N×6°.19W, h4*^{km}
MDD ***12*** *03:53:19.4±1.2, 32°.20N×6°.26W, h1*^{km}*±13*^{km}*, mb4.8/45, Error ellipse: s-maj=12.7km s-min=7.1km az=156.0, PRXIMO*
INMG ***12*** *03:53:19.6±2.4, 32°.14N×6°.31W, h16*^{km}*±11*^{km}*, ML3.5, Error ellipse: s-maj=6.4km s-min=5.0km az=169.0*
NEIC ***12*** *03:53:20.0±1.1, 32°.29N±0°.09×6°.25W±0°.09, h10*^{km}*±2*^{km}*, mb4.0/3, Error ellipse: s-maj=16.3km s-min=11.5km az=141.0*
IGIL ***12*** *03:53:20.6, 32°.31N×5°.92W, h0*^{km}*, ML3.6*
CRAAG ***12*** *03:53:21.1, 32°.29N×6°.28W, Mb4.3*
LDG ***12*** *03:53:21.6±0.7, 32°.27N×5°.95W, h30*^{km}*, Ml3.5/4, Error ellipse: s-maj=13.8km s-min=13.5km az=144.0*
ISC 12 03:53:20.1±0.7**, 32°.29N**±0°.02×**6°.24W**±0°.03**, h22**^{km}±5^{km}**, n169, σ2.30**/294**, 14C-10D, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLM	**Goulmima**	**1.24**	**118**	⇓P	**Pn**	**03 53 42.3**	**0.0**
GOLM				S	**Sn**	**03 53 58.7**	**+0.3**
CZD	**Col de Zad**	**1.25**	**53**	⇑P	**Pn**	**03 53 42.8**	**+0.2**
CZD				S	**Sn**	**03 54 02.6**	**+3.7**
AVE	**Averroes**	**1.41**	**316**	⇑P	**Pb**	**03 53 47.4**	**+1.6**
AVE				S	**Sb**	**03 54 08.1**	**+4.7**
AVE	**Averroes**	**1.41**	**316**	*i* P	**Pb**	**03 53 47.4**	**+1.6**
AVE				*i* S	**Sb**	**03 54 08.9**	**+5.5**
SRHM	**Skhour des Reh**	**1.42**	**278**	⇓P	**Pb**	**03 53 47.0**	**+1.1**
SRHM				S	**Sb**	**03 54 07.9**	**+4.3**
OUZM	**OUZ**	**1.45**	**198**	⇑P	**Pb**	**03 53 46.1**	**-0.3**
OUZM				S	**Sb**	**03 54 06.0**	**+1.5**
MDT	**Midelt**	**1.47**	**69**	⇑P	**Pn**	**03 53 46.3**	**+0.8**
MDT				S	**Sb**	**03 54 05.9**	**+0.7**
IFR	**Ifrane**	**1.54**	**37**	*i* P	**Pb**	**03 53 47.5**	**-0.6**
IFR				*i* S	**Sb**	**03 54 10.2**	**+2.9**
TZRR	**Tazzarine**	**1.60**	**159**	⇓P	**Pn**	**03 53 48.4**	**+1.1**
TZRR				S	**Sb**	**03 54 09.4**	**+0.4**
OUK	**Oukaimeden**	**1.76**	**233**	⇓P	**Pb**	**03 53 51.4**	**-0.5**
OUK				S	**Sb**	**03 54 16.5**	**+2.9**
ARF	**Arif**	**1.92**	**116**	⇑P	**Pn**	**03 53 52.8**	**+1.2**
ARF				S	**Sb**	**03 54 17.7**	**-0.3**
ZGR	**Zagora**	**2.23**	**166**	⇓P	**Pn**	**03 53 56.9**	**+1.0**
ZGR				S	**Sb**	**03 54 27.1**	**+0.2**
TTIG	**Tnine Tigouga,**	**2.56**	**228**	⇑P	**Pn**	**03 54 01.4**	**+1.0**
TTIG				S	**Sb**	**03 54 37.3**	**+0.7**
RSA	**Sarsar**	**2.61**	**8**	⇑P	**Pb**	**03 54 04.2**	**-2.1**
PVLZ	**Peæn de**	**3.30**	**29**	P	**Pn**	**03 54 12.9**	**+2.5**
PVLZ				S	**Sb**	**03 54 57.4**	**-0.2**
PVLZ	**Peæn de**	**3.30**	**29**	*i* P	**Pn**	**03 54 12.9**	**+2.5**
PVLZ				*i* S	**Sb**	**03 54 57.4**	**-0.2**
ECEU	**Ceuta**	**3.67**	**11**	P	**Pn**	**03 54 17.8**	**+2.2**
	7.2nm,0.1s,SNR=8.0						
ECEU				S	**Sn**	**03 55 00.3**	**+2.1**
	55nm,0.7s,SNR=7.9						
ECEU	**Ceuta**	**3.67**	**11**		**Pn**	**03 54 17.4**	**+1.8**
CEU	**Ceuta**	**3.67**	**11**	P	**Pn**	**03 54 18.2**	**+2.6**
CEU				S	**Sn**	**03 54 59.3**	**+1.1**
CEU	**Ceuta**	**3.67**	**11**	*e*P	**Pn**	**03 54 18.2**	**+2.6**
CEU				*i* S	**Sn**	**03 54 59.3**	**+1.1**
EMEL	**Melilla**	**4.06**	**41**	P	**Pn**	**03 54 22.1**	**+1.2**
	130nm,0.4s,SNR=13						
EMEL				S	**Sn**	**03 55 08.2**	**+0.5**
	24nm,0.2s,SNR=7.9						
EMLI	**Melilla**	**4.06**	**41**		**Pn**	**03 54 22.1**	**+1.2**
MELI	**Melilla**	**4.07**	**42**	P	**Pn**	**03 54 22.4**	**+1.4**
	97nm,0.4s,SNR=7.9						
MELI				S	**Sn**	**03 55 07.9**	**0.0**
	669nm,1.1s,SNR=7.9						
MELI	**Melilla**	**4.07**	**42**	*e*P	**Pn**	**03 54 22.1**	**+1.1**
MELI				*i* S	**Sb**	**03 55 27.7**	**+7.9**
MELI	**Melilla**	**4.07**	**42**		**Pn**	**03 54 22.4**	**+1.4**
SFS	**San Fernando**	**4.17**	**0**	P	Pn	03 54 11.5	-11
SFS	**San Fernando**	**4.17**	**0**	*e*P	Pn	03 54 11.5	-11
SFS	**San Fernando**	**4.17**	**0**		Pn	03 54 10.3	-12
EJIF	**Jimena Fronter**	**4.20**	**8**	⇑P	**Pn**	**03 54 25.5**	**+2.7**
	2μm,0.6s,SNR=18						
EJIF				S	**Sn**	**03 55 09.9**	**-1.4**
	444nm,0.3s,SNR=7.9						
EJIF	**Jimena Fronter**	**4.20**	**8**		**Pn**	**03 54 25.7**	**+2.8**
EJIF					**Sn**	**03 55 09.9**	**-1.4**
REAL	**Reales**	**4.27**	**11**	P	**Pn**	**03 54 26.0**	**+2.0**
REAL				S	**Sb**	**03 55 20.0**	**-5.8**
REAL	**Reales**	**4.27**	**11**	*e*P	**Pn**	**03 54 26.0**	**+2.0**
REAL				*i* S	**Sb**	**03 55 20.0**	**-5.8**
EMIJ	**Mijas**	**4.43**	**15**	⇓P	**Pn**	**03 54 26.3**	**+0.2**
	8.7nm,0.2s,SNR=18						
EMIJ				S	**Sn**	**03 55 18.8**	**+1.7**
	8.4nm,0.3s						
EMIJ	**Mijas**	**4.43**	**15**		**Pn**	**03 54 26.4**	**+0.4**
EMIJ					**Sn**	**03 55 18.8**	**+1.7**
EALB	**Alboran**	**4.51**	**35**	P	**Pn**	**03 54 27.7**	**+0.6**
	41nm,0.8s,SNR=7.9						
EALB				S	**Sn**	**03 55 20.1**	**+1.3**
	2.1nm,0.3s,SNR=7.9						
EALB	**Alboran**	**4.51**	**35**		**Pn**	**03 54 28.4**	**+1.3**
EALB					**Sn**	**03 55 21.2**	**+2.4**
ESPR	**Espera**	**4.58**	**4**	P	**Pn**	**03 54 30.0**	**+1.9**
	12nm,0.3s,SNR=22						
ESPR				S	**Sn**	**03 55 22.4**	**+1.8**
	14nm,0.5s						
ESPR	**Espera**	**4.58**	**4**		**Pn**	**03 54 30.0**	**+1.9**
ESPR					**Sn**	**03 55 22.4**	**+1.8**
EMAL	**Malaga-Limoner**	**4.71**	**18**	*e*P	**Pn**	**03 54 30.0**	**+0.2**
EMAL				*i* S	**Sn**	**03 55 23.4**	**-0.3**
ELGU	**Los Guajares,**	**5.05**	**25**	P	**Pn**	**03 54 34.6**	**0.0**
	12nm,0.4s,SNR=7.9						
ELGU				S	**Sn**	**03 55 32.3**	**0.0**
	0.4nm,0.4s,SNR=7.9						
ELGU	**Los Guajares,**	**5.05**	**25**		**Pn**	**03 54 34.6**	**0.0**
ELGU					**Sn**	**03 55 32.3**	**0.0**
EGOR	**Sierra Gorda,**	**5.12**	**19**	P	**Pn**	**03 54 36.6**	**+1.0**
	24nm,0.7s,SNR=7.9						
EGOR				S	**Sn**	**03 55 36.3**	**+2.2**
	3.8nm,0.3s,SNR=7.9						
EGOR	**Sierra Gorda,**	**5.12**	**19**		**Pn**	**03 54 36.6**	**+1.0**
EGOR					**Sn**	**03 55 36.3**	**+2.2**
PBDV	**Barranco-do-Ve**	**5.13**	**345**	P	**Pn**	**03 54 37.1**	**+1.4**
PBDV				S	**Sn**	**03 55 34.5**	**+0.2**
	37nm,0.3s						
PBDV	**Barranco-do-Ve**	**5.13**	**345**	⇑*e*Pn	**Pn**	**03 54 37.1**	**+1.4**
PBDV				*e*Sn	**Sn**	**03 55 34.5**	**+0.2**
PBDV				A	A	03 55 37.5	
	37nm,0.3s						
PVAQ	**Vaqueiros**	**5.25**	**347**	P	**Pn**	**03 54 38.6**	**+1.4**
PVAQ				S	**Sn**	**03 55 36.3**	**-0.7**
	53nm,0.3s						
PVAQ	**Vaqueiros**	**5.25**	**347**	*e*Pn	**Pn**	**03 54 38.6**	**+1.4**
PVAQ				*e*Sn	**Sn**	**03 55 36.3**	**-0.7**
PVAQ				A	A	03 55 39.4	
	53nm,0.3s						
PVAQ	**Vaqueiros**	**5.25**	**347**		**Pn**	**03 54 38.4**	**+1.2**
PVAQ				Sn	**Sn**	**03 55 37.0**	**0.0**
PFVI	**Vila Bisbo**	**5.28**	**337**	P	**Pn**	**03 54 39.2**	**+1.5**
	21nm,0.2s,SNR=19						
PFVI				S	**Sn**	**03 55 37.9**	**+0.1**
	12nm,0.3s,SNR=7.9						
PFVI	**Vila Bisbo**	**5.28**	**337**	*e*Pn	**Pn**	**03 54 39.4**	**+1.7**
PFVI				*e*Sn	**Sn**	**03 55 38.4**	**+0.5**
PFVI				A	A	03 55 44.2	
	42nm,0.4s						
PFVI	**Vila Bisbo**	**5.28**	**337**	Pn	**Pn**	**03 54 38.6**	**+0.9**
PFVI				Sn	**Sn**	**03 55 39.8**	**+1.9**
EGRO	**El Granado**	**5.33**	**349**	⇑P	**Pn**	**03 54 39.9**	**+1.5**
	37nm,0.2s,SNR=18						
EGRO				S	**Sn**	**03 55 38.9**	**-0.2**
	30nm,0.2s,SNR=7.9						
EBER	**Berja**	**5.36**	**30**	P	**Pn**	**03 54 40.2**	**+1.2**
	10nm,0.4s,SNR=21						
EBER				S	**Sn**	**03 55 40.8**	**+0.6**
	4.1nm,0.3s,SNR=7.9						
MORF	**Marmelete**	**5.38**	**339**	*e*P	**Pn**	**03 54 40.7**	**+1.4**
MORF				*e*S	**Sn**	**03 55 40.0**	**-0.5**
MORF				AML	AML	03 55 45.3	
	comp=E,116nm,0.3s						
MORF	**Marmelete**	**5.38**	**339**	P	**Pn**	**03 54 40.6**	**+1.4**
MORF				S	**Sn**	**03 55 40.6**	**+0.1**
	comp=E,44nm,0.2s						
MORF	**Marmelete**	**5.38**	**339**	⇑*e*Pn	**Pn**	**03 54 40.6**	**+1.4**
MORF				*e*Sn	**Sn**	**03 55 40.6**	**+0.1**
MORF				A	A	03 55 45.4	
	comp=E,44nm,0.2s						
EQUE	**Quentar**	**5.42**	**24**	P	**Pn**	**03 54 41.7**	**+2.0**
	comp=E,11nm,0.6s,SNR=13						
EQUE				S	**Sn**	**03 55 42.4**	**+1.0**
	comp=E,14nm,0.5s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.48**	**356**	P	**Pn**	**03 54 41.6**	**+1.2**
	comp=E,6.8nm,0.2s,SNR=57						
EMIN				S	**Sn**	**03 55 41.6**	**-1.2**
	comp=E,4.9nm,0.1s,SNR=7.9						
PCVE	**Castro Verde**	**5.53**	**345**	P	**Pn**	**03 54 42.9**	**+1.8**
PCVE				S	**Sn**	**03 55 43.4**	**-0.7**
	comp=E,53nm,0.7s						
PCVE	**Castro Verde**	**5.53**	**345**	*e*Pn	**Pn**	**03 54 42.9**	**+1.8**
PCVE				*e*Sn	**Sn**	**03 55 43.4**	**-0.7**
PCVE				A	A	03 55 52.2	
	comp=E,53nm,0.7s						
PTEO	**Sao Teotonio**	**5.63**	**339**	P	**Pn**	**03 54 44.3**	**+1.8**
PTEO				S	**Sn**	**03 55 46.5**	**+0.1**
	comp=E,16nm,0.3s						
PTEO	**Sao Teotonio**	**5.63**	**339**	*e*Pn	**Pn**	**03 54 44.3**	**+1.8**
PTEO				*e*Sn	**Sn**	**03 55 46.5**	**+0.1**
PTEO				A	A	03 55 51.2	
	comp=E,33nm,0.3s						
ENIJ	**Nijar**	**5.73**	**34**	P	**Pn**	**03 54 45.5**	**+1.5**
	comp=E,4.1nm,0.2s,SNR=7.9						
ENIJ				S	**Sn**	**03 55 49.7**	**+0.7**
	comp=E,41nm,1.2s,SNR=7.9						
MESJ	**Messejana**	**5.77**	**344**	*e*P	**Pn**	**03 54 45.8**	**+1.4**
MESJ				*e*S	**Sn**	**03 55 48.4**	**-1.5**
MESJ				AML	AML	03 55 52.1	
	comp=N,52nm,0.3s						
MESJ	**Messejana**	**5.77**	**344**	P	**Pn**	**03 54 45.9**	**+1.4**
MESJ				S	**Sn**	**03 55 49.0**	**-1.0**
	comp=N,40nm,0.4s						
MESJ	**Messejana**	**5.77**	**344**	*e*Pn	**Pn**	**03 54 45.9**	**+1.4**
MESJ				*e*Sn	**Sn**	**03 55 49.0**	**-1.0**
MESJ				A	A	03 55 57.7	
	comp=N,40nm,0.4s						
GORA	**Gorafe**	**5.81**	**26**	P	**Pn**	**03 54 47.2**	**+2.3**
	comp=N,20nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**5.81**	**6**	P	**Pn**	**03 54 46.5**	**+1.5**
	comp=N,7.2nm,0.2s,SNR=57						
ECAB				S	**Sn**	**03 55 50.2**	**-0.8**
	comp=N,10nm,0.4s						
PBEJ	**Beja**	**5.88**	**347**	P	**Pn**	**03 54 47.4**	**+1.5**
PBEJ				S	**Sn**	**03 55 51.6**	**-1.0**
	comp=N,22nm,0.3s						
PBEJ	**Beja**	**5.88**	**347**	⇓*e*Pn	**Pn**	**03 54 47.4**	**+1.5**
PBEJ				*e*Sn	**Sn**	**03 55 51.6**	**-1.0**
PBEJ				A	A	03 55 56.1	
	comp=N,44nm,0.3s						
EADA	**Adamuz**	**6.02**	**13**	⇑P	**Pn**	**03 54 48.9**	**+1.0**
	comp=N,5.8nm,0.2s,SNR=18						
EADA				S	**Sn**	**03 55 54.1**	**-2.0**
	comp=N,4.9nm,0.4s,SNR=4.7						
EQES	**Quesada**	**6.08**	**24**	P	**Pn**	**03 54 51.5**	**+2.7**
	comp=N,12nm,0.4s,SNR=12						
EQES				S	**Sn**	**03 55 58.6**	**+0.8**
	comp=N,11nm,0.5s,SNR=5.7						
PNCL	**Nicolau / Gran**	**6.11**	**343**	P	**Pn**	**03 54 50.5**	**+1.5**
PNCL				S	**Sn**	**03 55 56.6**	**-1.5**
	comp=N,25nm,0.2s						
PNCL	**Nicolau / Gran**	**6.11**	**343**	⇓*e*Pn	**Pn**	**03 54 50.5**	**+1.5**
PNCL				*e*Sn	**Sn**	**03 55 56.6**	**-1.5**
PNCL				A	A	03 56 02.7	
	comp=N,25nm,0.2s						
EVO	**Evora**	**6.40**	**347**	P	**Pn**	**03 54 54.6**	**+1.6**
EVO				S	**Sn**	**03 56 04.4**	**-0.9**
	comp=N,26nm,0.7s						
EVO	**Evora**	**6.40**	**347**	*e*P	**Pn**	**03 54 54.7**	**+1.6**
EVO				*i* S	**Sn**	**03 56 04.0**	**-1.4**
EVO	**Evora**	**6.40**	**347**	*e*Pn	**Pn**	**03 54 54.6**	**+1.6**
EVO				*e*Sn	**Sn**	**03 56 04.4**	**-0.9**
EVO				A	A	03 56 11.3	
	comp=N,26nm,0.7s						
EBAD	**Badajoz**	**6.48**	**355**	P	**Pn**	**03 54 55.5**	**+1.3**
	comp=N,18nm,0.2s,SNR=181						
EBAD				S	**Sn**	**03 56 05.8**	**-1.7**
	comp=N,37nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**6.48**	**355**		**Pn**	**03 54 55.6**	**+1.4**
SESP	**Santiago Espad**	**6.56**	**26**	P	**Pn**	**03 54 58.0**	**+2.7**
	comp=N,8.1nm,0.4s,SNR=7.9						
SESP				S	**Sn**	**03 56 09.1**	**-0.4**
	comp=N,45nm,0.9s,SNR=7.9						
PESTR	**Estremoz**	**6.66**	**351**	*e*Pn	**Pn**	**03 54 57.9**	**+1.3**
PESTR				*e*Sn	**Sn**	**03 56 10.2**	**-1.6**
PESTR	**Estremoz**	**6.66**	**351**	Pn	**Pn**	**03 54 58.0**	**+1.4**
PESTR				Sn	**Sn**	**03 56 10.7**	**-1.1**
EMUR	**La Murta**	**6.89**	**35**	P	**Pn**	**03 55 02.1**	**+2.2**
	comp=N,4.4nm,0.3s,SNR=6.5						
PMTG	**Montargil**	**6.96**	**347**	P	**Pn**	**03 55 02.2**	**+1.5**
PMTG				S	**Sn**	**03 56 19.7**	**+0.6**
	comp=N,18nm,0.8s						
PMTG	**Montargil**	**6.96**	**347**	⇓*e*Pn	**Pn**	**03 55 02.2**	**+1.5**
PMTG				*e*Sn	**Sn**	**03 56 19.7**	**+0.6**
PMTG				A	A	03 56 30.3	
	comp=N,18nm,0.8s						
ETRT	**Tiaret**	**6.99**	**62**	P	Sn	03 56 33.0	+13
EFAM	**Famara**	**7.02**	**245**	P	**Pn**	**03 55 00.5**	**-1.2**
	comp=N,16nm,0.4s,SNR=7.9						
EFAM				S	**Sn**	**03 56 16.2**	**-4.6**
	comp=N,15nm,0.3s,SNR=7.9						
EFAM	**Famara**	**7.02**	**245**		**Pn**	**03 55 00.5**	**-1.2**
PMAFR	**Mafra**	**7.10**	**340**	⇑P	**Pn**	**03 55 04.8**	**+2.2**
	comp=N,65nm,0.3s,SNR=18						
PMAFR				S	**Sn**	**03 56 22.1**	**-0.5**
	comp=N,59nm,0.4s,SNR=11						
PMAFR	**Mafra**	**7.10**	**340**	*e*Pn	**Pn**	**03 55 04.6**	**+1.9**
PMAFR				*e*Sn	**Sn**	**03 56 22.8**	**+0.1**
PMAFR				A	A	03 56 33.9	
	comp=N,43nm,0.6s						
PMRV	**Marv??o**	**7.19**	**353**	P	**Pn**	**03 55 05.3**	**+1.4**
PMRV				S	**Sn**	**03 56 23.7**	**-1.1**
	comp=N,27nm,0.6s						
PMRV	**Marv??o**	**7.19**	**353**	⇓*e*Pn	**Pn**	**03 55 05.3**	**+1.4**
PMRV				*e*Sn	**Sn**	**03 56 23.7**	**-1.1**
PMRV				A	A	03 56 28.1	
	comp=N,27nm,0.6s						
ECHA	**Ech Chlef**	**7.38**	**56**	P	**Sn**	**03 56 36.0**	**+6.4**
PAB	**San Pablo**	**7.40**	**11**	P	**Pn**	**03 55 07.5**	**+0.6**

	comp=N,2.3nm,0.2s,SNR=7.9								
PAB					S		Sn	03 56 27.3	-2.9
	comp=N,4.4nm,0.2s,SNR=7.9								
PAB	**San Pablo**	**7.40**	**11**		Pn		**Pn**	**03 55 07.4**	**+0.5**
PAB					Sn		**Sn**	**03 56 28.3**	**-1.9**
ETOB	**Tobarra**	**7.41**	**30**		P		**Pn**	**03 55 09.0**	**+2.1**
	comp=N,13nm,0.4s,SNR=30								
PSBE	**So Bento**	**7.50**	**345**		*e*Pn		**Pn**	**03 55 10.2**	**+2.0**
PSBE					*e*Sn		**Sn**	**03 56 31.8**	**-0.8**
PSBE					A		A	03 56 37.2	
	comp=N,15nm,0.4s								
EBNR	**Beni Rached**	**7.57**	**56**		P		**Sn**	**03 56 38.0**	**+3.8**
ESDC	**Sonseca Array**	**7.60**	**13**		P		**Pn**	**03 55 10.2**	**+0.6**
	comp=N,4.9nm,0.6s,baz=195,slow=13,SNR=44								
ESDC					S		**Sn**	**03 56 32.7**	**-2.3**
	comp=N,2.4nm,0.2s,baz=197,slow=22,SNR=7.0								
ESDC	**Sonseca Array**	**7.60**	**13**				**Pn**	**03 55 10.2**	**+0.6**
PCBR	**Castelo Branco**	**7.60**	**353**		P		**Pn**	**03 55 11.0**	**+1.4**
PCBR					S		**Sn**	**03 56 32.9**	**-2.1**
	comp=N,7.2nm,0.4s								
PCBR	**Castelo Branco**	**7.60**	**353**		*e*Pn		**Pn**	**03 55 11.0**	**+1.4**
PCBR					*e*Sn		**Sn**	**03 56 32.9**	**-2.1**
PCBR					A		A	03 56 39.6	
	comp=N,14nm,0.4s								
EPLA	**Plasencia**	**7.76**	**1**		P		**Pn**	**03 55 13.2**	**+1.4**
	comp=N,8.0nm,0.2s,SNR=58								
EPLA					S		**Sn**	**03 56 36.6**	**-2.3**
	comp=N,5.3nm,0.3s,SNR=8.0								
PCAS	**Casmilo, Conde**	**7.96**	**347**		P		**Pn**	**03 55 16.8**	**+2.3**
PCAS					S		**Sn**	**03 56 42.5**	**-1.3**
	comp=N,13nm,0.4s								
PCAS	**Casmilo, Conde**	**7.96**	**347**		*e*Pn		**Pn**	**03 55 16.8**	**+2.3**
PCAS					*e*Sn		**Sn**	**03 56 42.5**	**-1.3**
PCAS					A		A	03 57 02.0	
	comp=N,13nm,0.4s								
COI	**Coimbra**	**8.10**	**348**		Pn		**Pn**	**03 55 17.4**	**+1.1**
MTE	**Manteigas**	**8.16**	**353**		P		**Pn**	**03 55 18.8**	**+1.5**
MTE					S		**Sn**	**03 56 46.4**	**-2.5**
	comp=N,8.9nm,0.7s								
MTE	**Manteigas**	**8.16**	**353**		*e*Pn		**Pn**	**03 55 18.8**	**+1.5**
MTE					*e*Sn		**Sn**	**03 56 46.4**	**-2.5**
MTE					A		A	03 56 51.5	
	comp=N,18nm,0.7s								
MTE	**Manteigas**	**8.16**	**353**				**Pn**	**03 55 18.5**	**+1.2**
MTE					Sn		**Sn**	**03 56 45.8**	**-3.2**
UCM	**Universidad Co**	**8.36**	**16**		*e*P		**Pn**	**03 55 20.6**	**+0.6**
UCM					*e*S		**Sn**	**03 56 50.4**	**-3.3**
GUD	**Guadarrama**	**8.51**	**11**		P		**Pn**	**03 55 22.5**	**+0.4**
	comp=N,1.3nm,0.2s,SNR=18								
GUD					S		**Sn**	**03 56 54.0**	**-3.5**
	comp=N,3.5nm,0.5s,SNR=7.8								
PVIS	**Viseu**	**8.52**	**351**		P		**Pn**	**03 55 23.7**	**+1.6**
PVIS					S		**Sn**	**03 56 56.3**	**-1.3**
	comp=N,3.6nm,0.9s								
PVIS	**Viseu**	**8.52**	**351**		*e*Pn		**Pn**	**03 55 23.7**	**+1.6**
PVIS					*e*Sn		**Sn**	**03 56 56.3**	**-1.3**
PVIS					A		A	03 56 56.8	
	comp=N,7.1nm,0.9s								
PMPS	**Porto Santo**	**8.55**	**278**		P		**Pn**	**03 55 24.1**	**+1.6**
PMPS					S		**Sn**	**03 56 54.5**	**-3.7**
	comp=N,14nm,0.5s								
PMPS	**Porto Santo**	**8.55**	**278**		*e*Pn		**Pn**	**03 55 23.9**	**+1.4**
PMPS					*e*Sn		**Sn**	**03 56 53.3**	**-4.9**
PMPST	**Porto Santo, M**	**8.55**	**278**		*e*Pn		**Pn**	**03 55 24.1**	**+1.5**
PMPST					*e*Sn		**Sn**	**03 56 54.5**	**-3.8**
PMPST					A		A	03 57 15.6	
	comp=N,28nm,0.5s								
MVO	**Moncorvo**	**8.88**	**356**		P		**Pn**	**03 55 29.0**	**+1.8**
	comp=N,10nm,0.2s,SNR=40								
MVO					S		**Sn**	**03 57 03.9**	**-2.7**
	comp=N,8.9nm,0.3s,SNR=6.8								
MVO	**Moncorvo**	**8.88**	**356**		*e*Pn		**Pn**	**03 55 28.7**	**+1.5**
MVO					*e*Sn		**Sn**	**03 57 03.9**	**-2.7**
MVO					A		A	03 57 08.8	
	comp=N,17nm,0.6s								
PMAR	**Madeira**	**9.03**	**276**		P		**Pn**	**03 55 31.8**	**+2.5**
PMAR					S		**Sn**	**03 57 08.4**	**-2.0**
	comp=N,23nm,0.4s								
PMAR	**Madeira**	**9.03**	**276**		*e*Pn		**Pn**	**03 55 31.8**	**+2.5**
PMAR					*e*Sn		**Sn**	**03 57 08.4**	**-2.0**
PMAR					A		A	03 57 17.3	
	comp=N,46nm,0.4s								
PVRL	**Vila Real**	**9.05**	**353**		P		**Pn**	**03 55 30.8**	**+1.4**
PVRL					S		**Sn**	**03 57 07.0**	**-3.6**
	comp=N,6.7nm,0.4s								
PVRL	**Vila Real**	**9.05**	**353**‖		*e*Pn		**Pn**	**03 55 30.8**	**+1.4**
PVRL					*e*Sn		**Sn**	**03 57 07.0**	**-3.6**
PVRL					A		A	03 57 10.5	
	comp=N,13nm,0.4s								
EOSO	**Osorio**	**9.09**	**245**		P		**Pn**	**03 55 28.1**	**-2.0**
	comp=N,1.2nm,0.2s,SNR=7.9								
EOSO					S		**Sn**	**03 57 06.5**	**-5.3**
	comp=N,1.3nm,0.2s,SNR=7.9								
EIBI	**Ibiza**	**9.12**	**40**		P		**Pn**	**03 55 32.9**	**+2.5**
	comp=N,0.8nm,0.2s,SNR=7.9								
EIBI	**Ibiza**	**9.12**	**40**				**Pn**	**03 55 32.9**	**+2.5**
ETOR	**Torete**	**9.15**	**20**		P		**Pn**	**03 55 31.4**	**+0.5**
	comp=N,23nm,0.3s,SNR=35								
ETOR					S		**Sn**	**03 57 09.9**	**-3.4**
	comp=N,17nm,0.3s,SNR=17								
PMOZ	**Porto Moniz, M**	**9.27**	**276**		P		**Pn**	**03 55 34.7**	**+2.2**
	comp=N,18nm,0.3s,SNR=7.9								
PMOZ					S		**Sn**	**03 57 12.8**	**-3.3**
	SNR=7.9								
PMOZ	**Porto Moniz, M**	**9.27**	**276**		P		**Pn**	**03 55 34.7**	**+2.2**
PMOZ	**Porto Moniz, M**	**9.27**	**276**		*e*Pn		**Pn**	**03 55 35.8**	**+3.3**
PMOZ	**Porto Moniz, M**	**9.27**	**276**		Pn		**Pn**	**03 55 35.8**	**+3.3**
EMOS	**Mosqueruela**	**9.30**	**28**		P		**Pn**	**03 55 34.6**	**+1.6**
	comp=N,6.3nm,0.5s,SNR=13								
EBAJ	**Bajamar**	**9.49**	**249**		P		**Pn**	**03 55 35.8**	**+0.3**
	comp=N,3.4nm,0.3s,SNR=7.9								
PBRG	**Braganca**	**9.51**	**358**		P		**Pn**	**03 55 37.4**	**+1.7**
PBRG					S		**Sn**	**03 57 18.0**	**-3.9**
	comp=N,3.7nm,0.6s								
PBRG	**Braganca**	**9.51**	**358**		*e*Pn		**Pn**	**03 55 37.4**	**+1.7**
PBRG					*e*Sn		**Sn**	**03 57 18.0**	**-3.9**
PBRG					A		A	03 57 25.8	
	comp=N,7.4nm,0.6s								
PCAB	**Cabril**	**9.51**	**352**		P		**Pn**	**03 55 37.1**	**+1.3**
PCAB					S		**Sn**	**03 57 22.1**	**+0.1**
PCAB	**Cabril**	**9.51**	**352**		*e*Pn		**Pn**	**03 55 37.1**	**+1.3**
PCAB					*e*Sn		**Sn**	**03 57 22.1**	**+0.1**
ECAL	**Calabor**	**9.64**	**358**		P		**Pn**	**03 55 39.5**	**+1.8**
	comp=N,6.6nm,0.2s,SNR=10								
ECAL					S		**Sn**	**03 57 22.1**	**-3.2**
	comp=N,7.4nm,0.4s,SNR=4.6								
ELOB	**Lobios**	**9.67**	**352**		P		**Pn**	**03 55 39.3**	**+1.3**
	comp=N,5.3nm,0.3s,SNR=5.4								
ELOB					S		**Sn**	**03 57 21.7**	**-4.3**
	comp=N,4.2nm,0.3s,SNR=4.8								
ELOB	**Lobios**	**9.67**	**352**				**Pn**	**03 55 39.3**	**+1.3**
PGAV	**Gavieira, Arco**	**9.79**	**351**		P		**Pn**	**03 55 41.6**	**+1.9**
PGAV					S		**Sn**	**03 57 24.3**	**-4.7**
	comp=N,7.1nm,0.6s								
PGAV	**Gavieira, Arco**	**9.79**	**351**		*e*Pn		**Pn**	**03 55 41.6**	**+1.9**
PGAV					*e*Sn		**Sn**	**03 57 24.3**	**-4.7**
PGAV					A		A	03 57 40.3	
	comp=N,7.1nm,0.6s								
EZAM	**Zamans**	**10.04**	**349**		P		**Pn**	**03 55 44.3**	**+1.3**
	comp=N,6.9nm,0.5s,SNR=7.9								
EZAM	**Zamans**	**10.04**	**349**				**Pn**	**03 55 44.3**	**+1.3**
ERTA	**Horta de San J**	**10.13**	**30**		P		**Pn**	**03 55 46.7**	**+2.4**
	comp=N,4.0nm,0.5s,SNR=7.9								
EAGO	**Agolada(Pontev**	**10.60**	**353**		P		**Pn**	**03 55 52.2**	**+1.5**
	comp=N,2.1nm,0.3s,SNR=7.9								
EAGO					S		**Sn**	**03 57 42.1**	**-6.5**
	comp=N,2.3nm,0.2s,SNR=7.9								
EAGO	**Agolada(Pontev**	**10.60**	**353**				**Pn**	**03 55 52.2**	**+1.5**
EARI	**Arriondas**	**11.02**	**4**		P		**Pn**	**03 55 58.4**	**+1.9**
	comp=N,1.7nm,0.3s,SNR=7.9								
EARI					S		**Sn**	**03 57 54.6**	**-4.5**
	comp=N,10nm,1.0s,SNR=4.5								
EPON	**Pontenova**	**11.04**	**357**		P		**Pn**	**03 55 59.1**	**+2.4**
	comp=N,2.3nm,0.4s,SNR=7.9								
EPON					S		**Sn**	**03 57 57.1**	**-2.4**
	SNR=7.9								
EPON	**Pontenova**	**11.04**	**357**				**Pn**	**03 55 59.1**	**+2.4**
ELAN	**Lanestosa**	**11.15**	**11**		P		**Pn**	**03 55 59.4**	**+1.3**
	comp=N,1.6nm,0.2s,SNR=7.9								
ELAN	**Lanestosa**	**11.15**	**11**				**Pn**	**03 55 59.4**	**+1.3**
ETSF	**Etsaut**	**11.51**	**21**		*e*P		**Pn**	**03 56 05.5**	**+2.4**
ETSF					*e*Sn		**Sn**	**03 58 03.5**	**-7.4**
	comp=N,1.0nm,0.3s								
ETSF					*e*S		**Sn**	**03 58 13.9**	**+3.0**
SJPF	**Ste Jean**	**11.51**	**19**		*e*P		**Pn**	**03 56 06.7**	**+3.6**
SJPF					*e*Sn		**Sn**	**03 58 02.9**	**-8.0**
	comp=N,2.1nm,0.4s								
SJPF					*e*S		**Sn**	**03 58 15.6**	**+4.7**
EALK	**Alkurruntz**	**11.53**	**18**		P		**Pn**	**03 56 05.0**	**+1.5**
	comp=N,3.6nm,0.3s,SNR=7.9								
EALK					S		**Sn**	**03 58 06.2**	**-5.5**
	comp=N,6.1nm,0.4s,SNR=10								
EALK	**Alkurruntz**	**11.53**	**18**				**Pn**	**03 56 05.0**	**+1.5**
ATE	**Arette**	**11.63**	**21**		P		**Pn**	**03 56 06.3**	**+1.5**
	comp=N,3.4nm,0.6s,SNR=7.9								
ATE	**Arette**	**11.63**	**21**				**Pn**	**03 56 06.3**	**+1.5**
EPF	**Esparros**	**11.92**	**24**		*e*P		**Pn**	**03 56 11.6**	**+2.9**
EPF					*e*Sn		**Sn**	**03 58 12.1**	**-8.9**
	comp=N,3.3nm,0.6s								
EPF					*e*S		**Sn**	**03 58 23.7**	**+2.7**
MTLF	**Montolieu**	**12.89**	**29**		*e*Pn		**Pn**	**03 56 19.6**	**-2.4**
MTLF					*e*Sn		Sn	03 58 32.7	-12
	comp=N,1.3nm,0.6s								
KEST	**Kesra**	**13.38**	**71**		Pn		**Pn**	**03 56 32.1**	**+3.4**
INTR	**Introdacqua**	**18.72**	**53**		P		**P**	**03 57 36.6**	**-0.7**
INTR					IAmb		IAmb	03 57 43.3	
	comp=Z,5.7nm,0.9s								
BFO	**Black Forest**	**19.44**	**30**		P		**Pn**	**03 57 47.0**	**+0.7**
BFO					IAmb		IAmb	03 57 53.4	
	comp=Z,5.9nm,0.8s								
WLF	**Walferdange**	**19.67**	**24**		P		**P**	**03 57 48.1**	**+0.6**
WLF					pP		**pP**	**03 57 53.0**	**-1.0**
WLF					sP		**sP**	**03 57 55.2**	**-1.9**
DBIC	**Dimbokro**	**25.52**	**177**		P		**P**	**03 58 47.7**	**+0.6**
DBIC					IAmb		IAmb	03 58 50.6	
	comp=Z,6.7nm,0.8s								
KSH	**Kashi**	**64.80**	**58**		P		**P**	**04 03 58.5**	**+1.1**
KSH					pP		pP	04 04 04.2	-0.7
KSH					sP		sP	04 04 07.2	-0.6
KSH					pmax		pmax		
	comp=Z,38nm,1.9s								
KSH					pmax		pmax		
	comp=Z,970nm,6.5s								
WMQ	**Urumqi**	**71.05**	**50**		*e*P		**P**	**04 04 38.7**	**+2.2**
WMQ					pmax		pmax		
	comp=Z,12nm,0.8s								
WMQ					pmax		pmax		
	comp=Z,610nm,11.8s								
WMQ					LR		LR		
	comp=N,630nm,28.9s								
WMQ					LR		LR		
	comp=E,990nm,28.9s								
WMQ					LR		LR		
	comp=Z,700nm,28.8s								
LZH	**Lanzhou**	**85.63**	**50**		*e*P		**P**	**04 05 56.9**	**-0.5**
LZH					pP		PcP	04 06 00.7	+0.4
LZH					sP		pP	04 06 03.2	-1.9
LZH					PP		**PP**	**04 09 13.0**	**-2.8**
LZH					pmax		pmax		
	comp=Z,25nm,1.0s								
LZH					pmax		pmax		
	comp=Z,110nm,4.8s								
HHC	**Hu-ho-hao-te**	**87.32**	**42**		*e*P		**P**	**04 06 07.9**	**+2.4**
HHC					pmax		pmax		
	comp=Z,8.0nm,0.7s								
HHC					pmax		pmax		
	comp=Z,51nm,6.5s								
CD2	**Chengdu**	**88.69**	**54**		P		**P**	**04 06 11.5**	**-0.6**
CD2					pmax		pmax		
	comp=Z,10.0nm,0.5s								

TIR ***12*** *03:56:03.0, 41°.22N×20°.09E, h9km, Md2.5/5*
BEO ***12*** *03:56:04.2±0.9, 41°.08N×19°.99E, h0km, ML2.0/5*
SKO ***12*** *03:56:05.1, 41°.20N×19°.99E, h3km*

ISC 12 03:56:05.0±1.3, 41°.22N±0°.05×20°.06E±0°.04, h5km±13km, n14, σ1§27/24, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.20**	**312**	*e*Pg	**Pg**	**03 56 08.4**	**-0.5**
TIR				*e*Sg	**Sg**	**03 56 12.7**	**+1.1**
TIR	**Tirane**	**0.20**	**312**	*i* PG	**Pg**	**03 56 07.9**	**-1.0**
TIR				*i* SG	**Sg**	**03 56 12.0**	**+0.5**
PHP	**Peshkopia**	**0.55**	**31**	*i* PG	**Pg**	**03 56 14.7**	**-0.9**
PHP				*i* SG	**Sg**	**03 56 22.7**	**-0.1**
OHR	**Ohrid**	**0.57**	**100**	*i* Pg	**Pg**	**03 56 16.3**	**+0.3**
OHR				*i* Sg	**Sb**	**03 56 24.9**	**-1.0**
OHR				*e*Lg	Lg	03 56 26.4	
	comp=N,20nm,0.4s						
OHR	**Ohrid**	**0.57**	**100**	*i* Pg	**Pg**	**03 56 16.3**	**+0.3**
OHR				*i* Sg	**Sb**	**03 56 24.9**	**-1.0**
OHR				*e*Lg	Lg	03 56 26.4	
	comp=N,20nm,0.4s						
PUK	**Puka**	**0.83**	**351**	*i* PG	**Pg**	**03 56 20.3**	**-0.8**
PUK				*i* SG	**Sb**	**03 56 32.9**	**-0.8**
FNA	**Florina**	**1.08**	**113**	*i* PG	**Pg**	**03 56 24.9**	**-1.0**
FNA				*i* SG	**Sb**	**03 56 41.1**	**+0.3**
BCI	**Bajram Curri**	**1.15**	**0**	*i* PN	**Pb**	**03 56 25.8**	**-1.6**
PDG	**Podgorica**	**1.35**	**334**	*e*Pg	**Pg**	**03 56 31.7**	**+0.7**
PDG				*e*Sg	**Sg**	**03 56 51.6**	**+3.0**
TREB	**Trebinje**	**1.97**	**320**	*e*Pg	**Pb**	**03 56 40.2**	**-1.2**
TREB				*e*Sg	**Sg**	**03 57 08.9**	**+0.6**
SJES	**Sjenica**	**2.04**	**358**	*e*Pg	**Pg**	**03 56 43.6**	**-0.6**
SJES				*e*Sg	**Sg**	**03 57 13.1**	**+2.4**
SELS	**Selova**	**2.15**	**21**	*e*Pn	**Pb**	**03 56 43.5**	**-1.0**
VTS	**Vitosha**	**2.75**	**58**	*e*Pn	**Pn**	**03 56 51.5**	**+1.5**
ZAPS	**Zavoj**	**2.81**	**42**	*e*Pn	**Pn**	**03 56 51.4**	**+0.8**

IDC ***12*** *04:12:16.9±2.5, 8°.98S×112°.38E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/29, mbtmp3.5/4, MS3.5/1, Ms1 3.5/1, ms1mx2.7/23, Error ellipse: s-maj=144.5km s-min=28.2km az=49.0*
DJA ***12*** *04:12:23.5±1.3, 9°.5S±5°×11°.2E±°, h31km±19km, M4.0/5, mb4.8/1, MLv3.6/5*

ISC 12 04:12:22.5±1.1, 9°.4S±0°.1×112°.18E±0°.06, h35km, n12, σ1§20/14, mb3.4/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PWJI	**Pagerwojo**	**1.38**	**344**	P	**Pn**	**04 12 46.2**	**+0.8**
PWJI				S	**Sn**	**04 13 03.1**	**+0.7**
PCJI	**Pacitan**	**1.53**	**320**	P	**Pn**	**04 12 47.9**	**+0.6**
WOJI	**Wonogiri, Jawa**	**1.96**	**321**	P	**Pn**	**04 12 54.4**	**+1.1**
JAGI	**Jajag, Banyuwa**	**2.14**	**66**	P	**Pn**	**04 12 56.9**	**+1.1**
JAGI				S	**Sn**	**04 13 22.6**	**+1.4**
UGM	**Wanagama**	**2.18**	**311**	P	**Pn**	**04 12 57.8**	**+1.4**
UGM				S	**Sn**	**04 13 23.5**	**+1.3**
GRJI	**Gresik**	**2.45**	**7**	P	**Pn**	**04 12 59.4**	**-0.7**
DNP	**Denpasar**	**3.07**	**77**	P	**Pn**	**04 13 09.7**	**+1.1**
WRA	**Warramunga Arr**	**23.85**	**119**	P	**P**	**04 17 32.3**	**-0.5**
	0.5nm,0.7s,baz=295,slow=11,SNR=6.6						
ASAR	**Alice Springs**	**25.17**	**127**	P	**P**	**04 17 45.6**	**+0.8**
	0.3nm,0.6s,baz=304,slow=9.7,SNR=5.0						
STKA	**Stephens Creek**	**35.29**	**134**	P	**P**	**04 19 13.6**	**-0.7**
	0.9nm,0.3s,baz=315,slow=13,SNR=3.1						
ASAJ	**Asahikawa**	**59.95**	**25**	LR	LR	04 48 06.7	
	comp=Z,38nm,18.8s,baz=14,slow=36						
MKAR	**Makanchi Array**	**61.94**	**337**	P	**P**	**04 22 36.9**	**-1.9**
	0.2nm,0.4s,baz=148,slow=8.3,SNR=1.5						

IGQ ***12*** *04:15:27.8±0.8, 4°.5S±5°×8°.0W±°, h30km, M4.7*
NEIC ***12*** *04:15:27.8±1.8, 4°.08S±0°.08×80°.43W±0°.09, h52km±5km, Error ellipse: s-maj=14.5km s-min=8.8km az=53.0*
ARE ***12*** *04:15:27±2.7, 4°.21S±0°.07×80°.46W±0°.09, h34km±2km, ML4.8, mb4.5/32(NEIC), Error ellipse: s-maj=14.2km s-min=8.0km az=55.0*
IDC ***12*** *04:15:28.2±0.6, 3°.98S×80°.37W, h54km±5km, mb3.7/12, mb1 4.0/14, mb1mx3.8/30, mbtmp4.0/14, MS3.7/2, Ms1 3.7/2, ms1mx3.1/20, Error ellipse: s-maj=25.8km s-min=8.7km az=58.0*

ISC 12 04:15:28.2±0.4, 4°.11S±0°.04×80°.48W±0°.05, h57km, n98, σ1§28/106, mb4.4/27, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GONZ	**Gonzanam**	**1.09**	**97**	P	**Pn**	**04 15 46.3**	**-1.3**
GONZ				S	**Sn**	**04 16 00.2**	**-1.8**
MORR	**Playas El Morr**	**1.46**	**5**	P	**Pn**	**04 15 51.7**	**-0.7**
MORR				S	**Sn**	**04 16 13.9**	**+3.4**
SALI	**Salinas**	**1.98**	**345**	P	**Pn**	**04 15 58.6**	**-0.7**
SALI				S	**Sn**	**04 16 21.4**	**-1.6**
COHC	**Cochancay**	**2.04**	**37**	P	**Pn**	**04 15 59.4**	**-0.7**
AGUAY	**Guayaquil**	**2.11**	**14**	P	**Pn**	**04 15 59.7**	**-1.4**
BOSC	**San Juan Bosco**	**2.19**	**64**	P	**Pn**	**04 16 03.4**	**+1.0**
PPLP	**Puerto Lpez**	**2.56**	**353**	P	**Pn**	**04 16 06.3**	**-1.1**
SANGA	**Volcan Sangay**	**2.93**	**46**	P	**Pn**	**04 16 13.2**	**+0.4**
ARRY	**Arrayan**	**3.28**	**38**	P	**Pn**	**04 16 17.4**	**0.0**
BBIL	**Ulba Tungurahu**	**3.30**	**37**	P	**Pn**	**04 16 19.3**	**+1.5**
RETU	**Refugio**	**3.33**	**38**	P	**Pn**	**04 16 19.4**	**+1.1**
BULB	**Ulba Tungurahu**	**3.36**	**38**	P	**Pn**	**04 16 19.2**	**+0.6**
RUN5	**Runtun**	**3.37**	**38**	P	**Pn**	**04 16 22.8**	**+4.1**
BRUN	**Tungurahua Vol**	**3.37**	**38**	P	**Pn**	**04 16 19.1**	**+0.4**
AAM2	**Ambato 2 (Merc**	**3.38**	**34**	P	Pn	04 16 10.6	-8.2
ATAH	**Atahualpa**	**3.65**	**146**	P	**Pn**	**04 16 24.6**	**+2.0**
	54nm,0.3s,baz=1.3,slow=8.0,SNR=222						
ATAH				S	**Sn**	**04 17 07.7**	**+3.0**
	157nm,0.3s,baz=351,slow=12,SNR=8.3						
PIS1	**Pisayambo**	**3.68**	**35**	P	**Pn**	**04 16 23.9**	**+0.8**
PISA	**Pisayambo**	**3.68**	**35**	P	**Pn**	**04 16 24.3**	**+1.3**
PKYU	**Pakayacu**	**3.77**	**50**	P	**Pn**	**04 16 24.0**	**+0.1**
ILLI	**Illinizas Sur**	**3.80**	**27**	P	**Pn**	**04 16 25.1**	**+0.4**
VCES	**Cotopaxi**	**3.89**	**32**	P	**Pn**	**04 16 27.9**	**+1.9**
BMOR	**Cotopaxi Volca**	**3.91**	**31**	P	**Pn**	**04 16 27.6**	**+1.3**
BNAS	**Cotopaxi Volca**	**3.95**	**30**	P	**Pn**	**04 16 28.6**	**+1.8**
BREF	**Cotopaxi Volca**	**3.98**	**31**	P	**Pn**	**04 16 29.2**	**+2.0**
BTAM	**Cotopaxi Volca**	**3.99**	**31**	P	**Pn**	**04 16 27.8**	**+0.4**
VC1	**Cotopaxi 1**	**4.02**	**31**	P	**Pn**	**04 16 28.4**	**+0.7**
ATEN	**Tena**	**4.07**	**41**	P	**Pn**	**04 16 28.6**	**+0.6**
ANTM	**Antisana-La Mi**	**4.20**	**32**	P	**Pn**	**04 16 32.4**	**+2.1**
ANTG	**Antisana-Guama**	**4.21**	**32**	P	**Pn**	**04 16 31.0**	**+0.5**
ANTS	**Antisana-Sarah**	**4.26**	**33**	P	**Pn**	**04 16 31.6**	**+0.4**
GGPC	**Guagua Pichinc**	**4.33**	**26**	P	**Pn**	**04 16 32.6**	**+0.5**
PINO	**Pino**	**4.34**	**25**	P	**Pn**	**04 16 32.6**	**+0.3**
YANA	**Yana**	**4.40**	**26**	P	**Pn**	**04 16 33.4**	**+0.5**
PULU	**Pululahua**	**4.55**	**26**	P	**Pn**	**04 16 35.7**	**+0.7**
PAC1	**Pacto, Paraso**	**4.66**	**21**	P	**Pn**	**04 16 35.1**	**-1.1**
PAC1				S	**Sn**	**04 17 30.9**	**+1.8**
CAYA	**Cayambe**	**4.84**	**31**	P	**Pn**	**04 16 39.7**	**+0.7**
CUSE	**Cuicocha Este**	**4.85**	**25**	P	**Pn**	**04 16 39.1**	**+0.1**
CUSW	**Cuicocha Oeste**	**4.85**	**26**	P	**Pn**	**04 16 39.8**	**+0.7**
CUIC	**Cuicocha-Domo**	**4.87**	**26**	P	**Pn**	**04 16 39.6**	**+0.3**
CUIC				S	**Sn**	**04 17 37.5**	**+3.0**
COTA	**Cotacachi**	**4.90**	**26**	P	**Pn**	**04 16 40.2**	**+0.3**
IMBA	**Imbabura, San**	**4.91**	**28**	P	**Pn**	**04 16 40.7**	**+0.8**
URCU	**Urcuqui**	**5.03**	**26**	P	**Pn**	**04 16 42.4**	**+0.9**
YAHU	**Yahuarcocha**	**5.05**	**28**	P	**Pn**	**04 16 42.3**	**+0.4**
NNA	**Nana**	**8.62**	**156**	P	**Pn**	**04 17 29.6**	**-0.7**
	9.7nm,0.3s,baz=322,slow=14,SNR=20						
NNA	**Nana**	**8.62**	**156**		**Pn**	**04 17 29.9**	**-0.5**
NNA				Sn	**Sn**	**04 19 03.2**	**-2.9**
PAYG	**Puerto Ayora**	**10.38**	**289**	Pn	**Pn**	**04 17 57.0**	**+2.6**
PAYG					**Sn**	**04 19 48.2**	**-1.1**
RUSC	**La Rusia**	**12.38**	**37**	Pn	**Pn**	**04 18 23.1**	**+0.9**
BCIP	**Isla Barro Col**	**13.20**	**3**	Pn	**Pn**	**04 18 35.3**	**+2.3**
JTS	**Las Juntas de**	**14.98**	**343**	LR	LR	04 24 00.6	
	comp=Z,78nm,18.3s,baz=219,slow=34						
SDV	**Santo Domingo**	**16.21**	**37**	P	**Pn**	**04 19 12.0**	**-0.6**
	0.7nm,0.3s,baz=251,slow=7.4,SNR=8.3						
SDV	**Santo Domingo**	**16.21**	**37**		**P**	**04 19 14.3**	**-0.5**
LPAZ	**La Paz**	**17.14**	**136**	P	**P**	**04 19 27.1**	**+1.7**
SAML	**Samuel**	**17.84**	**107**	P	**Pn**	**04 19 31.5**	**-1.1**
PTGA	**Pitinga**	**20.76**	**81**	P	**P**	**04 20 02.4**	**-2.2**
	3.7nm,0.6s,baz=270,slow=13,SNR=6.8						
PTGA	**Pitinga**	**20.76**	**81**	P	**P**	**04 20 03.7**	**-0.8**
**SI

ASAR	**Alice Springs**	**136.59**	**229**	PKP	**PKPdf**	**04 34 44.8**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=111,slow=1.9,SNR=7.1						
ASAR				pPKP	**pPKPdf**	**04 34 60.0**	**-2.1**
	comp=Z,0.9nm,0.6s,baz=127,slow=2.4,SNR=4.9						

IDC ***12*** *04:40:38.6±1.2, 1°.33N×126°.52E, h0km, mb4.1/4, mb1 4.1/6, mb1mx3.8/36, mbtmp4.0/6, ML3.6/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/38, Error ellipse: s-maj=55.8km s-min=19.4km az=62.0*

NEIC ***12*** *04:40:44.5±1.0, 1°.29N±0°.09×126°.57E±0°.08, h49km±5km, mb4.1/9, Error ellipse: s-maj=14.4km s-min=10.0km az=207.0*

DJA ***12*** *04:40:44.6±1.7,2°.N±4°×12°.7E±°, h15km±20km, M4.1/6, MLv4.1/6*

ISC 12 04:40:40.0±0.7,**1°.33N**±0°.09×**126°.57E**±0°.06,**h10**km,**n21,** σ1§**58**/23,**mb4.2**/8,**1C,Northern Moluca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.97**	**125**	P	**Pn**	**04 41 01.4**	**+1.6**
TNTI				S	**Sb**	**04 41 13.4**	**+1.5**
TNTI	**Ternate**	**0.97**	**125**		**Pn**	**04 41 01.5**	**+1.7**
KMSI	**Cibinong**	**2.69**	**254**	P	**Pg**	**04 41 33.8**	**+2.1**
LUWI	**Luwuk**	**4.47**	**238**	Pn	**Pn**	**04 41 48.0**	**+0.2**
LUWI					**Sn**	**04 42 39.8**	**-0.2**
SIJI	**Sorong**	**5.18**	**115**	Pn	**Pn**	**04 41 57.3**	**-0.4**
	1.7nm,0.3s,baz=270,slow=20,SNR=3.7						
SIJI				LR	LR	04 44 12.7	
	comp=Z,205nm,18.4s,baz=293,slow=41						
KCP	**Kidapawan**	**5.83**	**345**¶	*eP*	**Pn**	**04 42 11.4**	**+4.7**
FITZ	**Fitzroy Crossi**	**19.33**	**183**	P	**Pn**	**04 45 06.8**	**+0.1**
	0.1nm,0.3s,baz=3.1,slow=6.7,SNR=9.4						
FITZ	**Fitzroy Crossi**	**19.33**	**183**	P	**P**	**04 45 05.5**	**-0.1**
WB0	**Warramunga Arr**	**22.33**	**160**	P	**P**	**04 45 37.3**	**-0.9**
WB0				IAmb	IAmb	04 45 40.0	
	comp=Z,3.4nm,0.6s						
WRA	**Warramunga Arr**	**22.47**	**161**	P	**P**	**04 45 38.6**	**-1.1**
	comp=Z,2.8nm,0.8s,baz=336,slow=10,SNR=7.6						
WB2	**Warramunga Arr**	**22.48**	**161**	P	**P**	**04 45 39.3**	**-0.4**
WB2				IAmb	IAmb	04 45 45.8	
	comp=Z,4.7nm,1.1s						
AS31	**Alice Springs**	**25.85**	**164**	P	**P**	**04 46 11.4**	**-0.6**
ASAR	**Alice Springs**	**25.85**	**164**	P	**P**	**04 46 12.6**	**+0.6**
	comp=Z,1.8nm,0.9s,baz=347,slow=12,SNR=11						
MK31	**Makanchi Array**	**59.43**	**326**	P	**P**	**04 50 42.7**	**-0.3**
MKAR	**Makanchi Array**	**59.43**	**326**	P	**P**	**04 50 43.4**	**+0.4**
	comp=Z,3.5nm,0.7s,baz=123,slow=8.5,SNR=23						
KURK	**Kurchatov**	**63.67**	**328**	P	**P**	**04 51 11.3**	**-0.2**
KK31	**Karatay Array**	**64.88**	**318**	P	**P**	**04 51 17.4**	**-2.3**
KK31				IAmb	IAmb	04 51 21.3	
	comp=Z,3.7nm,1.1s						
KKAR	**Karatay Array**	**64.88**	**318**	P	**P**	**04 51 17.7**	**-1.9**
KKAR				IAmb	IAmb	04 51 21.3	
	comp=Z,3.7nm,1.1s						
GEYT	**Alibeck**	**72.27**	**309**	P	**P**	**04 52 05.4**	**-0.6**
	comp=Z,2.2nm,0.8s,baz=122,slow=5.4,SNR=3.5						
RAYN	**Ar Rayn**	**81.28**	**293**	P	**P**	**04 52 56.1**	**-1.1**
PDPR	**Patillas Dam,**	**157.12**	**32**		**PKPdf**	**05 00 35.9**	**-1.2**

GCG ***12*** *04:54:58.9±0.6, 14°.98N×93°.21W, h35km±999km, MD3.8*

MEX ***12*** *04:54:59.4±0.5, 14°.54N×93°.28W, h22km±30km, MD3.9*

ISC 12 04:54:56.1±2.7,**14°.61N**±0°.07×**93°.29W**±0°.05,**h10**km±17km, **n9,**σ0§**76**/18,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.03**	**73**	*eP*	**Pb**	**04 55 15.9**	**-0.2**
THIG				*eS*	**Sb**	**04 55 28.6**	**-1.0**
PCIG		**1.09**	**3**	*eP*	**Pb**	**04 55 17.1**	**0.0**
PCIG				*i* S	**Sg**	**04 55 31.1**	**-0.3**
STG3	**Santiaguito 3,**	**1.66**	**86**	*eP*	**Pn**	**04 55 25.4**	**-0.1**
STG3				*eS*	**Sn**	**04 55 46.0**	**-1.0**
CCIG	**Comitan**	**2.00**	**33**	*i* P	**Pn**	**04 55 30.6**	**+0.5**
CCIG				*i* S	**Sn**	**04 55 55.0**	**-0.2**
TGIG		**2.16**	**4**	*eP*	**Pn**	**04 55 33.7**	**+1.4**
TGIG				*i* S	**Sn**	**04 55 59.2**	**0.0**
FUG	**Fuego 3**	**2.37**	**94**	*eP*	**Pn**	**04 55 35.9**	**+0.7**
FUG				*eS*	**Sn**	**04 56 04.8**	**+0.4**
IXG	**Ixpaco**	**2.79**	**99**	*eP*	**Pn**	**04 55 41.8**	**+0.8**
IXG				*eS*	**Sn**	**04 56 15.4**	**+0.7**
CMIG	**Matias Romero**	**2.91**	**328**	*eP*	**Pn**	**04 55 42.8**	**+0.3**
CMIG				*i* S	**Sn**	**04 56 17.4**	**-0.1**
HUIG	**Huatulco**	**2.96**	**293**	*i* P	**Pn**	**04 55 43.8**	**+0.7**
HUIG				*i* S	**Sn**	**04 56 17.6**	**-1.2**

IDC 12 05:02:11.0±3.6,**26°.32N**×**45°.00W**,**h0**km,**mb3.4**/4, **mb1 3.8**/4,**mb1mx3.4**/58,**mbtmp3.4**/4,**MS3.4**/14, **Ms1 3.5**/14,**ms1mx3.2**/34,**Error ellipse: s-maj=167.4km s-min=33.4km az=27.0,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJG	**San Juan**	**21.20**	**252**	LR	LR	05 13 18.6	
	comp=Z,76nm,21.7s,baz=92,slow=32						
MDP	**Montagnes des**	**22.33**	**200**	LR	LR	05 13 22.2	
	comp=Z,53nm,21.5s,baz=46,slow=30						
SADO	**Sadowa**	**33.00**	**313**	LR	LR	05 20 00.9	
	comp=Z,91nm,21.6s,baz=144,slow=32						
TKL	**Tuckaleechee C**	**34.33**	**295**	LR	LR	05 21 26.5	
	comp=Z,92nm,20.1s,baz=51,slow=34						
ROSC	**El Rosal**	**35.24**	**238**	LR	LR	05 22 45.6	
	comp=Z,80nm,20.6s,baz=5.5,slow=35						
ESDC	**Sonseca Array**	**36.59**	**58**	LR	LR	05 21 01.8	
	comp=Z,36nm,20.8s,baz=280,slow=31						
TEIG	**Tepich**	**40.07**	**271**	LR	LR	05 25 02.9	
	comp=Z,85nm,19.4s,baz=13,slow=34						
FRB	**Frobisher Bay**	**40.45**	**344**	LR	LR	05 24 55.7	
	comp=Z,52nm,19.4s,baz=156,slow=34						
BORG	**Borgarnes**	**41.32**	**15**	LR	LR	05 22 54.1	
	comp=Z,24nm,19.1s,baz=260,slow=30						
DBIC	**Dimbokro**	**42.92**	**110**	LR	LR	05 24 36.4	
	comp=Z,114nm,22.0s,baz=278,slow=31						
H10N2	**ASCENSION HYDR**	**45.06**	**135**	T	T	05 57 57.3	
	baz=319,slow=75,SNR=151						
H10N3	**ASCENSION HYDR**	**45.06**	**135**	T	T	05 57 57.3	
	baz=319,slow=75,SNR=132						
H10N1	**ASCENSION HYDR**	**45.08**	**135**	T	T	05 57 58.5	
	baz=319,slow=75,SNR=165						
ULM	**Lac du Bonnet**	**45.43**	**316**	LR	LR	05 27 42.5	
	comp=Z,79nm,19.9s,baz=99,slow=34						
TORD	**Torodi Ar. Bea**	**45.63**	**97**	P	P	05 10 33.4	-0.1
	0.5nm,0.8s,baz=288,slow=8.9,SNR=2.8						
TORD				LR	LR	05 28 21.3	
	comp=Z,89nm,19.5s,baz=305,slow=34						
H10S3	**ASCENSION HYDR**	**45.81**	**136**	T	T	05 58 53.5	
	baz=318,slow=74,SNR=38						
H10S2	**ASCENSION HYDR**	**45.82**	**136**	T	T	05 58 55.4	
	baz=318,slow=74,SNR=15						
LPAZ	**La Paz**	**47.96**	**211**	LR	LR	05 29 35.1	
	comp=Z,47nm,19.8s,baz=340,slow=34						
NOA	**NORSAR Array B**	**51.08**	**31**	LR	LR	05 29 26.6	
	comp=Z,28nm,20.9s,baz=245,slow=32						
PDAR	**Pinedale Array**	**54.38**	**305**	P	P	05 11 39.9	-0.2
	0.3nm,0.3s,baz=91,slow=6.6,SNR=2.5						
YKA	**Yellowknife Ar**	**57.60**	**329**	P	P	05 12 02.3	-0.2
	0.1nm,0.5s,baz=95,slow=7.6,SNR=5.2						
ILAR	**Eielson Array**	**71.38**	**334**	P	P	05 13 32.9	+0.2
	0.3nm,0.7s,baz=90,slow=4.5,SNR=2.6						

NEIC ***12*** *05:07:58.2±1.7, 6°.92S±0°.08×155°.38E±0°.01, h35km±1km, mb5.1/134, Error ellipse: s-maj=13.6km s-min=2.8km az=183.0*

MOS ***12*** *05:08:00.2±1.0, 6°.90S×155°.33E, h64km, mb5.2/40, Error ellipse: s-maj=8.1km s-min=6.9km az=91.9*

GCMT ***12*** *05:08:01.2±0.2, 7°.23S±0°.01×155°.38E±0°.02, h36km, MW5.2/89, Moment Tensor Solution. s85,c112; s89,c121; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr6.07±.20; Mθθ-4.31±.14; Mϕϕ-1.76±.13; Mrθ2.25±.16; Mθϕ3.07±.11; Mϕr-0.78±.16; Best double couple: Mo6.65700×10¹⁶ NP1:ϕs309.00000°, δ35.00000°, λ99.00000°. NP2:ϕs118.00000°, δ55.00000°, λ84.00000°. Principal axes: T 6.5390, Plg79.0000°, Azm5.0000°; N 0.2350, Plg5.0000°, Azm122.0000°; P -6.7750, Plg10.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***12*** *05:08:01.6±0.0, 6°.80S×155°.44E, h76km, mB5.0/42, mb4.9/58, Ms4.7/24, Ms7 4.3/22*

IDC ***12*** *05:08:02.1±1.7, 6°.95S×155°.35E, h68km±14km, mb4.5/26, mb1 4.6/32, mb1mx4.5/43, mbtmp4.8/32, MS4.1/25, Ms1 4.1/25, ms1mx4.0/33, Error ellipse: s-maj=13.7km s-min=10.8km az=88.0*

DJA ***12*** *05:08:02.2±0.5, 7°.S±3°×15°.5E±°, h54km±5km, M4.8/41, mb5.1/41, mB5.3/12, MLv4.9/1, Mw(mB)4.7/12*

ISC 12 05:08:03.6±0.6,**6°.99S**±0°.04×**155°.37E**±0°.04,**h85**km±4km, **n440,**σ1§**26**/447,**mb4.9**/131,**16C-3D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**4.23**	**311**		**Pn**	**05 09 06.2**	**+0.4**
KRVT	**Keravat (AS076**	**4.26**	**309**	P	**Pn**	**05 09 05.4**	**-0.9**
	20nm,0.3s,baz=207,slow=2.3,SNR=4.6						
HNR	**Honiara**	**5.14**	**118**	P	**Pn**	**05 09 18.6**	**+0.4**
	22nm,0.3s,baz=261,slow=7.1,SNR=4.8						
HNR				LR	LR	05 11 17.9	
	comp=Z,7μm,18.8s,baz=293,slow=38						
HNR	**Honiara**	**5.14**	**118**	P	**Pn**	**05 09 16.4**	**-1.8**
HNR						05 10 16.2	
HNR	**Honiara**	**5.14**	**118**		**Pn**	**05 09 16.4**	**-1.8**
HNR				Sn	**Sn**	**05 10 16.2**	**0.0**
PMG	**Port Moresby**	**8.47**	**253**	P	**Pn**	**05 10 02.4**	**-1.2**
	13nm,0.3s,baz=58,slow=10.0,SNR=22						
PMG				S	**Sn**	**05 11 38.9**	**+1.2**
	4.0nm,0.3s,baz=6.4,slow=20,SNR=15						
PMG				LR	LR	05 13 18.8	
	comp=Z,2μm,19.4s,baz=60,slow=37						
PMG	**Port Moresby**	**8.47**	**253**	*ce*P	**Pn**	**05 10 03.5**	**-0.1**
PMG				pmax	pmax		
	comp=Z,428nm,0.7s						
PMG	**Port Moresby**	**8.47**	**253**		**Pn**	**05 10 01.2**	**-2.5**
PMG				Sn	**Sn**	**05 11 37.1**	**-0.6**
COEN	**Coen**	**13.84**	**239**	P	**Pn**	**05 11 15.7**	**-0.5**
	baz=14,SNR=4.5						
COEN	**Coen**	**13.84**	**239**		**Pn**	**05 11 14.6**	**-1.6**
PATS	**Pohnpei**	**14.05**	**12**	P	**Pn**	**05 11 18.9**	**+0.1**
	baz=14,SNR=3.3						
PATS	**Pohnpei**	**14.05**	**12**	Pn	**Pn**	**05 11 15.4**	**-3.5**
JAY	**Jayapura**	**15.27**	**286**	P	**Pn**	**05 11 32.6**	**-2.1**
	comp=Z,0.5nm,0.3s,baz=123,slow=6.0,SNR=3.6						
JAY	**Jayapura**	**15.27**	**286**	P	**Pn**	**05 11 34.6**	**-0.1**
	comp=Z,534nmcomp=Z,21nm,0.9s						
MTSU	**Mount Surprise**	**15.45**	**223**	P	**Pn**	**05 11 36.7**	**-0.2**
	baz=15,SNR=9.2						
CTA	**Charters Tower**	**15.74**	**213**	P	**Pn**	**05 11 40.0**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=16,slow=23,SNR=3.8						
CTA				LR	LR	05 17 26.7	
	comp=Z,1μm,18.3s,baz=29,slow=36						
CTAO	**Charters Tower**	**15.74**	**213**	P	**Pn**	**05 11 39.7**	**-0.8**
CTAO				pmax	pmax		
	comp=Z,54nm,1.0s						
CTAO	**Charters Tower**	**15.74**	**213**	Pn	**Pn**	**05 11 39.7**	**-0.8**
SMPI	**Sarmi**	**17.33**	**286**	P	**P**	**05 12 00.7**	**+0.3**
	comp=Z,1μmcomp=Z,47nm,0.7s						
DZM	**Mont Dzumac**	**18.41**	**146**	*e*Pn	**Pn**	**05 12 13.4**	**0.0**
	comp=Z,36nm,0.7s						
DZM				*e*S	S	05 15 25.8	-12
	comp=Z,515nm,24.4s						
DZM				*e*LR	LR	05 16 32.0	
	comp=Z,2μm,26.1s						
DZM	**Mont Dzumac**	**18.41**	**146**	P	**P**	**05 12 12.8**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=344,slow=17,SNR=4.3						
DZM				LR	LR	05 18 26.1	
	comp=Z,729nm,21.4s,baz=286,slow=34						
EIDS	**Eidsvold**	**18.73**	**192**	P	**Pn**	**05 12 18.8**	**+1.7**
	baz=19,SNR=3.7						
EIDS	**Eidsvold**	**18.73**	**192**	P	**P**	**05 12 15.5**	**-0.2**
QIS	**Mount Isa**	**20.37**	**227**	P	**P**	**05 12 34.1**	**+0.4**
	baz=20,SNR=13						
RMQ	**Roma**	**20.38**	**197**	P	**P**	**05 12 34.5**	**+0.9**
	baz=20,SNR=10						
QLP	**Quilpie**	**22.18**	**207**	P	**P**	**05 12 52.8**	**-0.1**
	baz=22						
KDU	**Kakadu**	**23.25**	**254**	P	**P**	**05 13 03.4**	**-0.5**
	baz=23,SNR=7.1						
FAKI	**Fak Fak**	**23.38**	**279**	P	**P**	**05 13 05.2**	**0.0**
	comp=Z,580ncomp=Z,50nm,1.1s						
FAKI	**Fak Fak**	**23.38**	**279**	P	**P**	**05 13 03.8**	**-1.4**
FAKI				IAmb	IAmb	05 13 15.4	
	comp=Z,33nm,0.9s						
ARMA	**Armidale**	**23.57**	**188**	P	**P**	**05 13 07.4**	**+0.6**
	baz=23,SNR=3.8						
ARMA	**Armidale**	**23.57**	**188**	P	**P**	**05 13 04.9**	**-1.9**
WR0	**Warramunga Arr**	**23.97**	**235**	P	**P**	**05 13 10.4**	**0.0**
WR0				IAmb	IAmb	05 13 19.1	
	comp=Z,90nm,1.1s						
WB0	**Warramunga Arr**	**23.99**	**236**	P	**P**	**05 13 10.8**	**+0.1**
WR8	**Warramunga Arr**	**24.00**	**235**	P	**P**	**05 13 11.2**	**+0.5**
	baz=24						
WRAB	**Tennant Creek**	**24.11**	**236**	*ce*P	**P**	**05 13 10.8**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,94nm,2.5s						
WRAB	**Tennant Creek**	**24.11**	**236**	P	**P**	**05 13 11.9**	**+0.3**
WRAB				IAmb	IAmb	05 13 20.4	
	comp=Z,82nm,1.1s						
WB2	**Warramunga Arr**	**24.11**	**236**	P	**P**	**05 13 10.2**	**-1.5**
WB2				IAmb	IAmb	05 13 20.5	
	comp=Z,108nm,1.2s						
WRA	**Warramunga Arr**	**24.12**	**236**	P	**P**	**05 13 11.6**	**-0.2**
	comp=Z,16nm,0.8s,baz=60,slow=9.6,SNR=20						
WRA				PcP	**PcP**	**05 16 52.4**	**+1.3**
	comp=Z,2.4nm,0.7s,baz=60,slow=2.2,SNR=4.6						
WRA				ScP	**ScP**	**05 20 24.4**	**+2.1**
	comp=Z,1.1nm,0.9s,baz=68,slow=2.0,SNR=1.8						
WRA				LR	LR	05 22 41.9	
	comp=Z,681nm,18.1s,baz=55,slow=36						
MSVF	**Nonsavu**	**24.56**	**118**	*i* P	**P**	**05 13 15.5**	**-0.4**
MSVF				pmax	pmax		
	comp=Z,81nm,0.9s						
MSVF	**Nonsavu**	**24.56**	**118**	P	**P**	**05 13 15.7**	**-0.2**
MTN	**Manton Dam**	**24.56**	**254**	P	**P**	**05 13 17.3**	**+1.5**
	baz=24,SNR=4.8						
MTN	**Manton Dam**	**24.56**	**254**	P	**P**	**05 13 14.6**	**-1.1**
SIJI	**Sorong**	**24.79**	**283**	P	**P**	**05 13 17.0**	**-0.9**
	comp=Z,41nm,0.8s,baz=55,slow=6.8,SNR=9.2						
SIJI				LR	LR	05 23 03.5	
	comp=Z,268nm,20.1s,baz=156,slow=36						
CMSA	**Cobar Meteorol**	**26.04**	**199**	P	**P**	**05 13 31.1**	**+2.0**
	baz=26,SNR=11						
AS31	**Alice Springs**	**26.45**	**229**	P	**P**	**05 13 32.1**	**-0.8**
ASAR	**Alice Springs**	**26.45**	**229**	P	**P**	**05 13 32.3**	**-0.6**
	comp=Z,2.3nm,0.7s,baz=60,slow=9.3,SNR=4.7						
ASAR				PcP	**PcP**	**05 16 57.8**	**+1.5**
	comp=Z,2.9nm,0.7s,baz=55,slow=2.5,SNR=7.0						
ASAR				ScP	**ScP**	**05 20 32.6**	**+3.7**
	comp=Z,0.8nm,0.8s,baz=55,slow=3.0,SNR=3.2						
KNRA	**Kununurra**	**27.45**	**249**	P	**P**	**05 13 44.6**	**+2.7**
	baz=27,SNR=4.0						
KNRA	**Kununurra**	**27.45**	**249**	P	**P**	**05 13 40.6**	**-1.2**
KNRA				IAmb	IAmb	05 13 55.3	
	comp=Z,31nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**27.68**	**24**	T	T	05 42 08.5	
	baz=203,slow=75,SNR=185						
H11S2	**WAKE ISLAND Hy**	**27.68**	**24**	T	T	05 42 10.2	
	baz=203,slow=75,SNR=239						
H11S1	**WAKE ISLAND Hy**	**27.70**	**24**	T	T	05 42 06.9	
	baz=203,slow=75,SNR=203						
STKA	**Stephens Creek**	**27.89**	**206**	P	**P**	**05 13 46.2**	**+0.5**
	baz=28,SNR=8.0						
STKA	**Stephens Creek**	**27.89**	**206**	P	**P**	**05 13 45.9**	**+0.2**
	comp=Z,3.0nm,0.6s,baz=32,slow=13,SNR=8.4						
STKA				LR	LR	05 24 60.0	
	comp=Z,1μm,18.1s,baz=36,slow=36						
STKA	**Stephens Creek**	**27.89**	**206**	P	**P**	**05 13 46.0**	**+0.4**
HTT	**Hallett**	**30.41**	**208**	P	P	05 14 15.0	+7.0
	baz=30,SNR=4.0						
FITZ	**Fitzroy Crossi**	**30.99**	**246**	P	**P**	**05 14 13.4**	**+0.1**
	baz=31,SNR=23						
FITZ	**Fitzroy Crossi**	**30.99**	**246**	P	**P**	**05 14 13.3**	**+0.1**
	comp=Z,13nm,0.7s,baz=101,slow=7.1,SNR=49						
FITZ				PcP	**PcP**	**05 17 08.9**	**+1.2**
	comp=Z,9.2nm,0.8s,baz=138,slow=0.9,SNR=4.5						
FITZ				LR	LR	05 26 40.5	
	comp=Z,601nm,20.0s,baz=72,slow=36						
FITZ	**Fitzroy Crossi**	**30.99**	**246**	P	**P**	**05 14 13.4**	**+0.1**
FITZ				IAmb	IAmb	05 14 21.4	
	comp=Z,32nm,1.1s						
WRKA	**Warakurna**	**31.49**	**232**	P	**P**	**05 14 17.1**	**-0.6**
	baz=31,SNR=7.8						
BATI	**Baumata**	**31.50**	**262**	LR	LR	05 29 12.0	
	comp=Z,928nm,18.3s,baz=106,slow=40						
MMRI	**Maumere**	**32.86**	**265**	P	**P**	**05 14 30.1**	**+0.4**
KCP	**Kidapawan**	**33.25**	**294**⇓	*eP*	P	05 14 40.1	+6.9
EDFI	**Ende, Flores**	**33.40**	**265**	P	**P**	**05 14 34.1**	**-0.5**
	comp=Z,36nm,0.8s						
BKSI	**Bulukumba**	**35.08**	**271**	P	**P**	**05 14 52.7**	**+3.8**
	comp=Z,47nm,1.0s						
BNSI	**Bone**	**35.18**	**272**	P	**P**	**05 14 50.6**	**+0.8**
	comp=Z,43nm,1.0s						
KAPI	**Kappang**	**35.47**	**271**	P	**P**	**05 14 50.7**	**-1.6**
KAPI				pmax	pmax		
	comp=Z,54nm,0.8s						
KAPI	**Kappang**	**35.47**	**271**	P	**P**	**05 14 50.7**	**-1.6**
PSA00	**Pilbara Seismi**	**37.23**	**243**	P	**P**	**05 15 05.9**	**-1.4**
THZ	**Tophouse**	**37.97**	**159**	P	**P**	**05 15 13.2**	**0.0**
THZ				IAmb	IAmb	05 15 21.6	
	comp=Z,62nm,1.5s						
TUWZ	**Tuamarina**	**38.07**	**157**	P	**P**	**05 15 14.1**	**+0.1**
RPZ	**Rata Peaks**	**39.08**	**162**	P	**P**	**05 15 23.4**	**+0.9**
	comp=Z,9.2nm,0.8s,baz=102,slow=9.1,SNR=3.9						
RPZ				LR	LR	05 29 29.7	
	comp=Z,594nm,20.2s,baz=326,slow=33						
RPZ	**Rata Peaks**	**39.08**	**162**	P	**P**	**05 15 22.7**	**+0.2**
RPZ				IAmb	IAmb	05 15 34.6	
	comp=Z,23nm,1.0s						
MEEK	**Meekatharra**	**40.02**	**236**	P	**P**	**05 15 32.5**	**+1.9**
	baz=40,SNR=8.5						
KKM	**Kota Kinabalu**	**41.16**	**287**	P	**P**	**05 15 39.6**	**-0.5**
KKM				IAmb	IAmb	05 15 55.1	
	comp=Z,25nm,0.9s						
MORW	**Morawa**	**43.06**	**234**	P	**P**	**05 15 56.9**	**+1.5**
	baz=43,SNR=3.6						
NACB	**Ninganchiao**	**45.22**	**314**	P	**P**	**05 16 11.1**	**-1.5**
NACB				IAmb	IAmb	05 16 28.3	
	comp=Z,34nm,0.9s						
TPUB	**Ta-pu**	**45.38**	**313**	P	**P**	**05 16 11.7**	**-2.2**
TPUB				IAmb	IAmb	05 16 28.0	
	comp=Z,17nm,0.8s						
YHNB	**Yeheng**	**45.69**	**315**	P	**P**	**05 16 16.9**	**+0.4**
YHNB				IAmb	IAmb	05 16 20.9	
	comp=Z,20nm,0.9s						
KSM	**Kuching**	**45.74**	**279**	P	**P**	**05 16 13.8**	**-3.2**
MJAR	**Matsushiro Arr**	**46.20**	**341**	P	**P**	**05 16 18.8**	**-1.4**
	comp=Z,5.0nm,0.8s,baz=157,slow=7.9,SNR=8.0						
MJAR				PcP	**PcP**	**05 17 55.2**	**+0.5**
	comp=Z,13nm,0.8s,baz=154,slow=3.8,SNR=11						
MJAR				LR	LR	05 36 10.7	
	comp=Z,50nm,18.1s,baz=135,slow=37						
MAJO	**Matsushiro**	**46.20**	**341**	P	**P**	**05 16 19.4**	**-0.8**
MAJO						05 17 53.4	
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MAJO	**Matsushiro**	**46.20**	**341**	P	**P**	**05 16 19.4**	**-0.8**
MAJO				IAmb	IAmb	05 16 23.7	
	comp=Z,9.8nm,0.7s						
MAJO					**PcP**	**05 17 53.4**	**-1.4**
MAT	**Matsushiro**	**46.20**	**341**	P	**P**	**05 16 19.8**	**-0.4**
MJB9	**Matsu-Tunnel**	**46.21**	**341**	P	**P**	**05 16 19.4**	**-0.8**
MJB9					**PcP**	**05 17 54.2**	**-0.5**
ERM	**Erimo**	**50.03**	**348**	P	**P**	**05 16 48.7**	**-0.9**
ERM				pmax	pmax		
	comp=Z,22nm,1.3s						
ERM	**Erimo**	**50.03**	**348**	P	**P**	**05 16 48.7**	**-0.9**
ERM				IAmb	IAmb	05 16 52.5	
	comp=Z,22nm,1.3s						
DLV	**T Lat**	**50.27**	**292**	P	**P**	**05 16 49.0**	**-3.1**
DLV				IAmb	IAmb	05 16 56.3	
	comp=Z,24nm,0.8s						
KASI	**Kota Agung**	**50.57**	**269**	P	**P**	**05 16 55.2**	**+1.0**
	comp=Z,38nm,1.0s						
MDSI	**Maura Dua**	**50.98**	**270**	P	**P**	**05 16 56.1**	**-1.1**
	comp=Z,16nm,1.0s						
KSRS	**Korea Array**	**51.11**	**332**	P	**P**	**05 16 57.2**	**-0.5**
	comp=Z,6.2nm,0.9s,baz=147,slow=8.8,SNR=12						
KSRS				LR	LR	05 36 55.5	
	comp=Z,48nm,21.5s,baz=137,slow=34						
QIZ	**Qiongzhong**	**51.78**	**301**	P	**P**	**05 17 01.6**	**-1.5**
QIZ				S	**S**	**05 24 17.9**	**-1.2**
QIZ				LR	LR		
	comp=Z,250nm,25.0s						
QIZ				LR	LR		
	comp=Z,250nm,21.1s						
QIZ				LR	LR		
	comp=Z,250nm,23.0s						
QIZ	**Qiongzhong**	**51.78**	**301**	P	**P**	**05 17 04.6**	**+1.5**
NJ2	**Nanjing**	**52.15**	**320**	*eP*	**P**	**05 17 06.2**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
WHN	**Wuhan**	**54.20**	**316**	⇑P	**P**	**05 17 21.1**	**+0.4**
TEY	**Ternei**	**54.47**	**344**	*eP*	P	05 17 16.5	-5.9
PPT	**Papeete**	**54.64**	**107**	LR	LR	05 37 09.6	
	comp=Z,128nm,19.0s,baz=274,slow=32						
PPT2	**Papeete2**	**54.64**	**107**	*e*LQ	LQ	05 31 04.0	
	comp=Z,375nm,27.2s						
PPT2				*e*LR	LR	05 33 26.6	
	comp=Z,144nm,21.8s,baz=256						
YSS	**Yu

XAN Xi'an 59.96 316 P **P** 05 18 01.0 -0.4
XAN IAmb IAmb 05 18 02.5
comp=Z,16nm,0.7s
KMI Kunming 60.32 304 P **P** 05 18 06.4 +2.1
KMI pmax pmax
comp=Z,26nm,0.7s
KMI pmax pmax
comp=Z,110nm,4.0s
KMI LR LR
comp=Z,170nm,12.0s
KMI LR LR
comp=Z,120nm,10.5s
KMI LR LR
comp=Z,220nm,15.5s
KMI Kunming 60.32 304 P **P** 05 18 06.3 +2.0
KMI pmax pmax
comp=Z,20nm,0.6s
KMI Kunming 60.32 304 P **P** 05 18 06.3 +2.0
CM31 Chiang Mai Arr 61.12 295 P **P** 05 18 10.3 +0.8
CMAR Chiang Mai Arr 61.12 295 P **P** 05 18 11.2 +1.6
comp=Z,37nm,0.8s,baz=120,slow=5.2,SNR=148
CMAR LR LR 05 45 17.3
comp=Z,51nm,19.3s,baz=135,slow=37
CHTO Chiang Mai 61.23 296 P **P** 05 18 10.3 0.0
CHTO pmax pmax
comp=Z,27nm,0.8s
CHTO Chiang Mai 61.23 296 P **P** 05 18 10.3 0.0
CD2 Chengdu 62.09 310 P **P** 05 18 15.4 -0.5
CD2 S **S** 05 26 34.4 -0.3
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,250nm,5.3s
CD2 LR LR
comp=Z,380nm,23.5s
CD2 LR LR
comp=Z,430nm,23.3s
CD2 LR LR
comp=Z,420nm,19.0s
HHC Hu-ho-hao-te 62.31 324 *e*P **P** 05 18 18.9 +1.7
HHC pmax pmax
comp=Z,13nm,0.8s
HHC pmax pmax
comp=Z,44nm,5.9s
ADK Adak 63.35 19 P **P** 05 18 24.0 +0.3
ADK pmax pmax
comp=Z,42nm,0.8s
ADK Adak 63.35 19 P **P** 05 18 24.0 +0.3
TAOE Nuku Hiva Isla 63.83 96 *e*LR LR 05 37 37.4
comp=Z,247nm,22.3s
HIA Hailar 64.08 335 P **P** 05 18 29.4 +0.8
HIA pmax pmax
comp=Z,16nm,1.1s
HIA Hailar 64.08 335 P **P** 05 18 29.4 +0.8
HIA IAmb IAmb 05 18 46.3
comp=Z,16nm,1.1s
ATKA Atka Island 64.44 20 P **P** 05 18 30.5 -0.4
ATKA IAmb IAmb 05 18 31.7
comp=Z,18nm,0.8s
LZH Lanzhou 64.57 315 ⇑P **P** 05 18 33.2 +0.9
LZH pP pP 05 18 55.7 +1.8
LZH sP sP 05 19 02.8 -0.5
LZH pmax pmax
comp=Z,18nm,1.1s
LZH pmax pmax
comp=Z,74nm,4.9s
LZH LR LR
comp=Z,200nm,16.6s
LZH LR LR
comp=Z,200nm,17.2s
LZH LR LR
comp=Z,250nm,17.1s
ZEA Zeya 64.99 342 *e*P **P** 05 18 35.9 +1.5
ZEA pmax pmax
comp=N,35nm,1.0s
ZEA pmax pmax
comp=Z,35nm,1.0s
MA2 Magadan 66.46 357 *ce*P **P** 05 18 43.8 +0.1
MA2 pmax pmax
comp=Z,19nm,0.8s
MA2 Magadan 66.46 357 P **P** 05 18 43.3 -0.5
UNV Unalaska Valle 68.58 23 P **P** 05 18 57.3 +0.1
UNV IAmb IAmb 05 19 12.1
comp=Z,24nm,1.0s
RKT Rikitea 68.60 112 *e*LR LR 05 39 53.6
comp=Z,490nm,24.2s
GTA Gaotai 68.99 317 ⇓P **P** 05 19 01.4 +1.1
GTA pP pP 05 19 21.1 -1.1
GTA sP sP 05 19 30.8 -0.6
GTA pmax pmax
comp=Z,5.0nm,0.9s
GTA pmax pmax
comp=Z,67nm,6.8s
GTA LR LR
comp=Z,98nm,20.3s
GTA LR LR
comp=Z,220nm,22.5s
GTA LR LR
comp=Z,150nm,23.8s
ULN Ulaanbaatar 69.20 327 *ce*P **P** 05 19 02.3 +0.9
ULN pmax pmax
comp=Z,15nm,1.0s
ULN Ulaanbaatar 69.20 327 P **P** 05 19 02.4 +0.9
ULN IAmb IAmb 05 19 03.5
comp=Z,15nm,1.1s
SONM Songino Array 69.53 327 P **P** 05 19 04.2 +0.7
comp=Z,14nm,0.8s,baz=136,slow=6.7,SNR=10
SEY Seymchan 69.76 359 P **P** 05 19 05.3 +0.9
comp=Z,8.1nm,0.9s,baz=164,slow=6.9,SNR=15
SEY Seymchan 69.76 359 *i* P **P** 05 19 04.2 -0.2
VNDA Vanda 70.57 179 P **P** 05 19 10.3 +1.1
comp=Z,3.8nm,0.8s,baz=331,slow=6.7,SNR=8.4
VNDA LR LR 05 44 51.2
comp=Z,137nm,20.2s,baz=2.5,slow=31
VNDA Vanda 70.57 179 P **P** 05 19 10.3 +1.1
VNDA pmax pmax
comp=Z,6.0nm,0.9s
VNDA Vanda 70.57 179 P **P** 05 19 10.3 +1.1
LSA Lhasa 71.58 304 P **P** 05 19 18.2 +1.5
YAK Yakutsk 71.64 348 *e*P **P** 05 19 16.0 +0.3
YAK *e**PP **PcP** 05 19 28.3 -6.2
YAK *e* 05 19 44.1
YAK *e*PPP PPP 05 23 37.6
YAK *e*S **S** 05 28 28.9 +0.6
YAK *e**SS **sS** 05 29 07.5 +1.3
YAK *e*SS **SS** 05 33 00.3 -5.3
YAK pmax pmax
comp=Z,46nm,1.3s
YAK pmax pmax
comp=N,14nm,1.4s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK pmax pmax
comp=Z,134nm,2.8s
YAK pmax pmax
comp=N,72nm,3.5s
YAK pmax pmax
comp=E,118nm,3.2s
YAK smax smax
comp=N,142nm,3.2s
YAK smax smax
comp=E,82nm,3.2s
YAK Yakutsk 71.64 348 P **P** 05 19 16.4 +0.7
ZAK Zakamensk 72.69 328 *e*P **P** 05 19 22.2 -0.2
ZAK pmax pmax
comp=Z,10.0nm,1.0s
BOD Bodaibo 72.75 338 *e*P **P** 05 19 22.5 0.0
BOD pmax pmax
comp=Z,13nm,1.8s
TLY Talaya 73.25 329 *i* P **P** 05 19 26.1 +0.5
TLY pmax pmax
comp=Z,6.0nm,0.9s
CHGN Chignik 73.59 25 P **P** 05 19 26.9 -0.5
CHGN IAmb IAmb 05 19 31.7
comp=Z,11nm,0.8s
TAPN Taplejung 73.72 301 *e*P **P** 05 19 30.0 +0.7
comp=Z,74nm,0.8s
ODAN Odare 73.85 300 *e*P **P** 05 19 30.8 +0.8
comp=Z,149nm,0.7s
RAMN Ramite 74.55 300 *e*P **P** 05 19 35.0 +0.9
comp=Z,24nm,0.6s
MOY Mondy 74.61 328 *e*P **P** 05 19 34.6 +0.9
MOY pmax pmax
comp=Z,17nm,2.4s
JIRN Jiri 75.10 301 *e*P **P** 05 19 38.5 +1.1
comp=Z,56nm,0.7s

BILL Bilibino 75.25 4 ⇑*i*P **P** 05 19 37.6 +0.7
BILL *e* 05 19 51.0
BILL *e**PP **pP** 05 20 01.3 +2.3
BILL pmax pmax
comp=Z,21nm,1.0s
BILL MLR MLR
comp=Z,150nm,19.0s
BILL Bilibino 75.25 4 P **P** 05 19 37.1 +0.2
BILL IAmb IAmb 05 19 39.1
comp=Z,15nm,0.8s
GUN Gumba 75.43 301 *e*P **P** 05 19 40.1 +0.9
comp=Z,88nm,0.7s
PKI Pulchoki 75.74 301 *e*P **P** 05 19 41.4 +0.4
comp=Z,74nm,1.1s
PKIN Phulchoki 75.75 301 *e*P **P** 05 19 41.6 +0.6
comp=Z,25nm,0.7s
KKN Kakani 75.91 301 *e*P **P** 05 19 42.8 +1.0
comp=Z,51nm,0.8s
DMN Daman 76.01 301 *e*P **P** 05 19 43.4 +1.0
comp=Z,97nm,0.9s
GKN Gorkha 76.52 301 *e*P **P** 05 19 46.1 +0.9
KDAK Kodiak Island 77.00 26 P **P** 05 19 47.2 +0.2
KDAK pmax pmax
comp=Z,11nm,0.8s
KDAK Kodiak Island 77.00 26 P **P** 05 19 47.2 +0.2
KDAK IAmb IAmb 05 19 51.3
comp=Z,10nm,0.8s
ANM Nome 77.12 16 P **P** 05 19 48.4 +0.8
ANM pmax pmax
comp=Z,18nm,0.8s
ANM Nome 77.12 16 P **P** 05 19 48.4 +0.8
ANM IAmb IAmb 05 19 49.9
comp=Z,18nm,0.8s
KOLN Koldanda 77.34 300 *e*P **P** 05 19 50.1 +0.2
comp=Z,22nm,0.5s
DANN Dangsing 77.36 301 *e*P **P** 05 19 50.3 +0.3
comp=Z,24nm,0.6s
PYUN Piuthan 77.95 301 *e*P **P** 05 19 53.7 +0.5
CNPM China Poot 78.60 25 P **P** 05 19 56.9 +1.0
BRLK Bradley Lake 78.89 25 P **P** 05 19 58.1 +0.6
BRLK IAmb IAmb 05 19 58.7
comp=Z,12nm,0.8s
WMQ Urumqi 79.08 317 *e*P **P** 05 19 59.6 +0.7
WMQ pP pP 05 20 21.8 +0.7
WMQ sP sP 05 20 31.0 +0.7
WMQ pmax pmax
comp=Z,8.0nm,0.7s
WMQ pmax pmax
comp=Z,130nm,4.7s
WMQ LR LR
comp=Z,710nm,29.0s
WMQ LR LR
comp=Z,930nm,29.0s
WMQ LR LR
comp=Z,140nm,29.2s
HYB Hyderabad 79.62 289 *i* P **P** 05 20 03.0 +0.6
HYB *e*PcP **PcP** 05 20 10.5 +0.5
SEW Seward 79.67 25 P **P** 05 20 01.8 +0.1
SEW IAmb IAmb 05 20 11.3
comp=Z,15nm,0.9s
RC01 Rabbit Creek A 80.11 24 P **P** 05 20 04.3 +0.2
RC01 IAmb IAmb 05 20 07.0
comp=Z,19nm,1.0s
PPLA Purkeypile 80.23 22 P **P** 05 20 05.1 +0.2
TIXI Tiksi 80.41 352 *ce*P **P** 05 20 05.6 +0.2
TIXI pmax pmax
comp=Z,9.0nm,1.3s
TIXI Tiksi 80.41 352 P **P** 05 20 05.3 -0.1
RDOG Red Dog Mine 80.42 15 P **P** 05 20 05.8 +0.2
PMR Palmer 80.64 24 P **P** 05 20 06.3 -0.5
PMR pmax pmax
comp=Z,19nm,0.8s
PMR Palmer 80.64 24 P **P** 05 20 06.3 -0.5
PMR IAmb IAmb 05 20 08.0
comp=Z,19nm,0.8s
KNK Knik Glacier 80.81 24 P **P** 05 20 08.2 +0.3
KNK IAmb IAmb 05 20 10.9
comp=Z,15nm,1.0s
GHO Glory Hole Cre 80.82 23 P **P** 05 20 07.5 -0.4
GHO IAmb IAmb 05 20 16.6
comp=Z,23nm,0.8s
HIN Hinchinbrook I 81.07 25 P **P** 05 20 09.4 +0.2
HIN IAmb IAmb 05 20 11.1
comp=Z,14nm,0.8s
GLI Glacier Island 81.08 25 P **P** 05 20 09.4 +0.2
GLI IAmb IAmb 05 20 10.6
comp=Z,17nm,0.8s
SML Sawmill 81.08 24 P **P** 05 20 09.4 +0.2
KTH Kantishna Hill 81.09 21 P **P** 05 20 08.7 -0.6
KTH IAmb IAmb 05 20 09.8
comp=Z,16nm,0.8s
TRF Thorofare Moun 81.26 22 P **P** 05 20 10.0 -0.3
TRF IAmb IAmb 05 20 12.5
comp=Z,20nm,0.8s
FID Port Fidalgo 81.26 25 P **P** 05 20 10.1 -0.1
FID IAmb IAmb 05 20 11.5
comp=Z,9.4nm,0.8s
DGZ Jazzator, Alta 81.37 323 *i* P **P** 05 20 09.8 -1.4
DGZ pmax pmax
comp=Z,5.0nm,0.8s
BPAW Bear Paw Mtn. 81.39 21 P **P** 05 20 10.2 -0.6
SCM Sheep Creek Mo 81.49 24 P **P** 05 20 12.5 +1.0
SCM pmax pmax
comp=Z,23nm,0.8s
SCM Sheep Creek Mo 81.49 24 P **P** 05 20 12.4 +1.0
SCM IAmb IAmb 05 20 13.2
comp=Z,23nm,0.8s
RND Reindeer 81.76 22 P **P** 05 20 12.6 -0.3
RND pmax pmax
comp=Z,23nm,0.8s
RND Reindeer 81.76 22 P **P** 05 20 12.6 -0.3
RND IAmb IAmb 05 20 13.6
comp=Z,23nm,0.8s
RAGM Ragged Mountai 81.84 26 P **P** 05 20 13.4 0.0
RAGM IAmb IAmb 05 20 15.2
comp=Z,26nm,1.4s
MCK McKinley 81.92 22 P **P** 05 20 13.4 -0.2
MCK pmax pmax
comp=Z,42nm,0.8s
MCK McKinley 81.92 22 P **P** 05 20 13.4 -0.2
MLY Manley 82.02 20 P **P** 05 20 14.3 +0.1
MLY IAmb IAmb 05 20 15.5
comp=Z,12nm,0.6s
DHY Denali Highway 82.14 23 P **P** 05 20 15.2 +0.3
DHY IAmb IAmb 05 20 24.1
comp=Z,18nm,0.9s
WRH Wood River Hil 82.64 21 P **P** 05 20 16.9 -0.5
WRH IAmb IAmb 05 20 17.9
comp=Z,9.4nm,0.8s
HARP HAARP 82.66 24 P **P** 05 20 16.5 -1.0
GLB Gilahina Butte 82.73 25 P **P** 05 20 18.3 +0.3
GLB IAmb IAmb 05 20 19.7
comp=Z,23nm,0.9s
VRDI Verde Repeater 82.78 25 P **P** 05 20 18.4 0.0
VRDI IAmb IAmb 05 20 20.0
comp=Z,15nm,0.9s
CCB Clear Creek Bu 82.84 21 P **P** 05 20 17.6 -0.7
CCB IAmb IAmb 05 20 18.3
comp=Z,9.3nm,0.7s
MDM Murphy Dome 82.86 21 P **P** 05 20 18.3 -0.2
COLA College 82.94 21 *c* *i*P **P** 05 20 18.4 -0.5
COLA pmax pmax
comp=Z,20nm,0.9s
COLA College 82.94 21 P **P** 05 20 18.5 -0.4
COLA IAmb IAmb 05 20 19.4
comp=Z,22nm,0.8s
QSPA South Pole Qui 82.98 180 P **P** 05 20 19.9 +0.5
HDA Harding Lake 83.02 22 P **P** 05 20 19.0 -0.3
HDA IAmb IAmb 05 20 29.0
comp=Z,11nm,0.9s
YAH Yahtse 83.11 26 IAmb IAmb 05 20 22.1
comp=Z,12nm,0.8s
BALM Baldy 83.16 26 P **P** 05 20 20.9 +0.7
BALM IAmb IAmb 05 20 21.9
comp=Z,15nm,0.8s
IL31 83.24 21 P **P** 05 20 19.4 -0.9
IL31 IAmb IAmb 05 20 20.7
comp=Z,8.5nm,0.8s
ILAR Eielson Array 83.24 21 P **P** 05 20 19.6 -0.8
comp=Z,7.6nm,0.7s,baz=250,slow=5.3,SNR=63
ILAR LR LR 05 52 24.8
comp=Z,334nm,21.9s,baz=256,slow=32
BARN Barnard Glacie 83.47 26 P **P** 05 20 22.7 +0.7
COLD Coldfoot 83.49 19 P **P** 05 20 22.8 +1.1
MENT Mentasta 83.50 24 IAmb IAmb 05 20 31.4

comp=Z,10nm,0.8s
CTGM Chitina Glacie 83.57 26 P **P** 05 20 22.2 -0.2
MK31 Makanchi Array 83.65 319 P **P** 05 20 23.3 +0.3
MK31 pmax pmax
comp=Z,9.0nm,0.8s
MK31 Makanchi Array 83.65 319 P **P** 05 20 23.3 +0.3
MK31 IAmb IAmb 05 20 29.8
comp=Z,9.3nm,0.8s
MKAR Makanchi Array 83.65 319 P **P** 05 20 23.3 +0.3
comp=Z,9.4nm,0.8s,baz=105,slow=5.4,SNR=47
MKAR PKKPbc **PKKPbc** 05 38 40.6 -1.4
comp=Z,0.7nm,0.7s,baz=274,slow=3.2,SNR=4.3
MKAR LR LR 05 56 21.8
comp=Z,47nm,21.9s,baz=112,slow=35
MKAR Makanchi Array 83.65 319 *i* P **P** 05 20 23.2 +0.2
MKAR pmax pmax
comp=Z,9.0nm,0.8s
DOT Dot Lake 83.72 23 P **P** 05 20 23.2 +0.2
MAKZ Makanchi 83.86 319 P **P** 05 20 24.2 +0.2
MAKZ pmax pmax
comp=Z,11nm,0.7s
MAKZ Makanchi 83.86 319 P **P** 05 20 24.2 +0.2
MAKZ IAmb IAmb 05 20 30.5
comp=Z,11nm,0.7s
ZAA0 Zalesovo Array 84.39 326 P **P** 05 20 25.8 -0.7
ZALV Zalesovo Beam 84.39 326 P **P** 05 20 26.1 -0.5
comp=Z,5.9nm,0.8s,baz=116,slow=5.5,SNR=14
ZALV LR LR 05 59 41.0
comp=Z,68nm,20.2s,baz=80,slow=37
TOLK Toolik Lake Re 84.51 18 P **P** 05 20 27.9 +1.0
MAW Mawson 84.54 203 P **P** 05 20 28.3 +1.2
baz=84,SNR=28
MAW Mawson 84.54 203 P **P** 05 20 27.2 +0.1
comp=Z,13nm,0.7s,baz=93,slow=5.8,SNR=40
MAW LR LR 05 56 49.7
comp=Z,72nm,18.0s,baz=60,slow=35
MAW Mawson 84.54 203 P **P** 05 20 28.2 +1.2
FYU Fort Yukon 84.77 20 P **P** 05 20 28.6 +0.5
FYU IAmb IAmb 05 20 31.4
comp=Z,13nm,0.6s
HYT Haines Junctio 85.20 27 P **P** 05 20 31.6 +0.9
EGAK Eagle 85.37 23 P **P** 05 20 32.1 +0.9
EGAK IAmb IAmb 05 20 33.2
comp=Z,13nm,0.7s
BESE Bessie Mountai 85.60 30 P **P** 05 20 33.7 +1.2
BESE IAmb IAmb 05 20 40.1
comp=Z,6.5nm,0.9s
SKAG Skagway 85.69 29 P **P** 05 20 34.0 +1.2
DAWY Dawson 85.75 24 P **P** 05 20 34.2 +1.0
DAWY IAmb IAmb 05 20 36.6
comp=Z,8.2nm,0.7s
WRAK Wrangell Islan 86.14 32 P **P** 05 20 35.6 +0.4
WRAK IAmb IAmb 05 20 38.4
comp=Z,8.9nm,0.9s
KSH Kashi 86.29 310 P **P** 05 20 38.5 +2.0
KSH sP sP 05 21 08.8 +0.6
KSH PP **PP** 05 24 04.3 +5.6
KSH SKS **SKSac** 05 30 55.3 -0.3
KSH S **S** 05 31 03.6 -1.8
KSH SS **SS** 05 36 50.1 +3.4
KSH pmax pmax
comp=Z,9.0nm,0.7s
KSH pmax pmax
comp=Z,200nm,4.5s
KSH LR LR
comp=Z,230nm,13.0s
KSH LR LR
comp=Z,190nm,15.0s
KSH LR LR
comp=Z,150nm,13.5s
WHY Whitehorse 86.33 28 P **P** 05 20 36.9 +0.7
KURK Kurchatov 87.06 322 *ce*P **P** 05 20 40.0 +0.2
KURK pmax pmax
comp=Z,5.0nm,1.7s
KURK Kurchatov 87.06 322 P **P** 05 20 39.1 -0.7
KURBB Kurchatov Arra 87.09 322 P **P** 05 20 39.3 -0.7
comp=Z,1.2nm,0.7s,baz=108,slow=3.5,SNR=9.2
KURBB PKKPbc **PKKPbc** 05 38 33.3 -0.7
comp=Z,1.0nm,0.7s,baz=293,slow=3.0,SNR=12
NIL Nilore 87.31 304 P **P** 05 20 41.1 -0.4
NIL pmax pmax
comp=Z,8.0nm,0.7s
NIL Nilore 87.31 304 P **P** 05 20 41.1 -0.4
NIL IAmb IAmb 05 20 44.0
comp=Z,7.8nm,0.7s
EPYK Eagle Plains 87.72 22 P **P** 05 20 41.6 -1.1
DLBC Dease Lake 87.95 30 P **P** 05 20 43.8 -0.2
DLBC IAmb IAmb 05 20 46.4
comp=Z,10nm,1.1s
AAK Ala-Archa 88.02 313 *i* P **P** 05 20 45.4 +0.5
AAK pmax pmax
comp=Z,2.0nm,0.8s
AAK Ala-Archa 88.02 313 P **P** 05 20 42.6 -2.2
YBH Yreka Blue Hor 88.61 48 P **P** 05 20 48.1 +0.5
comp=Z,1.9nm,0.8s,baz=180,slow=6.1,SNR=2.8
NRIK Noril'sk 88.86 341 P **P** 05 20 47.6 -0.4
comp=Z,10nm,0.8s,baz=102,slow=4.6,SNR=15
NRIK LR LR 05 58 36.9
comp=Z,77nm,21.9s,baz=82,slow=34
AFDM Forest Hills D 89.44 51 P **P** 05 20 51.3 -0.1
INK Inuvik 89.59 21 P **P** 05 20 51.9 +0.5
INK pmax pmax
comp=Z,13nm,0.7s
INK Inuvik 89.59 21 P **P** 05 20 51.9 +0.5
PINE Pine Mountain 90.25 46 P **P** 05 20 55.7 +0.4
PINE IAmb IAmb 05 20 57.7
comp=Z,6.8nm,1.0s
PNTR Pine Nut 90.52 51 P **P** 05 20 56.1 -0.7
PNTR IAmb IAmb 05 21 02.1
comp=Z,5.2nm,0.8s
I07A Izee 91.32 46 P **P** 05 21 00.2 0.0
NVAR Mina Array Bea 91.43 52 P **P** 05 21 01.4 +0.4
comp=Z,1.7nm,0.8s,baz=250,slow=7.1,SNR=9.4
NVAR LR LR 05 56 38.8
comp=Z,162nm,20.2s,baz=231,slow=32
NV11 Mina Array Sit 91.55 52 P **P** 05 21 01.9 +0.5
NV11 IAmb IAmb 05 21 03.6
comp=Z,8.3nm,1.3s
WVOR Wild Horse Val 91.72 48 P **P** 05 21 02.0 -0.1
WVOR pmax pmax
comp=Z,4.0nm,0.9s
WVOR Wild Horse Val 91.72 48 P **P** 05 21 02.0 -0.1
WVOR IAmb IAmb 05 21 04.4
comp=Z,4.1nm,0.8s
G08A Pilot Rock 91.88 45 P **P** 05 21 01.8 -1.0
J08A Circle Bar Ran 91.96 47 P **P** 05 21 02.2 -1.0
J08A IAmb IAmb 05 21 05.2
comp=Z,4.9nm,0.9s
PNT Penticton 92.01 41 P P 05 20 56.1 -7.0
SYO Syowa Base 92.45 199 ⇑*e*P **P** 05 21 04.0 -0.7
SYO Syowa Base 92.45 199 ⇑*e*PcP **P** 05 21 04.8 +0.1
SYO Syowa Base 92.45 199 ⇑*ep*P pP 05 21 17.4 -9.3
BVAR Borovoye Array 92.52 323 P **P** 05 21 04.6 -0.8
comp=Z,2.8nm,0.8s,baz=119,slow=5.2,SNR=13
BRVK Borovoye 92.58 323 *i* P **P** 05 21 04.6 -1.1
BRVK pmax pmax
comp=Z,2.0nm,0.8s
TPNV Topopah Spring 92.86 53 P **P** 05 21 05.2 -2.4
TPNV pmax pmax
comp=Z,4.0nm,0.9s
TPNV Topopah Spring 92.86 53 P **P** 05 21 05.2 -2.4
BMO Blue Mountains 92.98 45 P **P** 05 21 07.7 -0.1
BMO pmax pmax
comp=Z,2.0nm,1.0s
BMO Blue Mountains 92.98 45 P **P** 05 21 07.7 -0.1
C36M Paulatuk 93.17 21 P **P** 05 21 07.8 -0.1
F10A Beach Ranch, E 93.17 44 P **P** 05 21 07.8 -0.9
NEW Newport 93.51 42 P **P** 05 21 10.2 +0.1
comp=Z,3.0nm,0.9s,baz=216,slow=6.7,SNR=5.4
R11A Troy Canyon, C 93.54 52 P **P** 05 21 09.2 -1.5
SHPR Sheep Range 93.69 54 P **P** 05 21 11.4 +0.1
YKA Yellowknife Ar 96.16 28 P **P** 05 21 22.3 +0.5
comp=Z,6.3nm,0.8s,baz=261,slow=4.3,SNR=66
YKA PKiKP **PKiKP** 05 26 00.2 +0.5
comp=Z,0.2nm,0.6s,baz=256,slow=1.3,SNR=7.1
YKA PKKPbc **PKKPbc** 05 38 08.2 -2.9
comp=Z,0.4nm,0.7s,baz=95,slow=2.9,SNR=8.0
YKA LR LR 05 59 25.7
comp=Z,86nm,21.7s,baz=0.0,slow=32
BW06 Boulder Array 98.42 48 P **P** 05 21 31.7 -1.2
PDAR Pinedale Array 98.42 48 P **P** 05 21 32.5 -0.3
comp=Z,2.0nm,0.8s,baz=255,slow=1.7,SNR=18
GEYT Alibeck 99.97 307 LR LR 06 09 38.1
comp=Z,29nm,19.9s,baz=195,slow=37
AKTO Aktyubinsk 100.03 320 LR LR 06 08 15.6

comp=Z,46nm,20.8s,baz=88,slow=36
RES Resolute Bay 101.87 15 P Pdif 05 21 48.2 +1.1
comp=Z,2.4nm,0.7s,baz=107,slow=0.6,SNR=6.0
RES Resolute Bay 101.87 15 P Pdif 05 21 47.3 +0.2
RES Resolute Bay 101.87 15 Pdif 05 21 47.3 +0.2
TXAR Lajitas Array 102.93 62 PKKPbc PKKPbc 05 37 51.2 +0.4
comp=Z,0.2nm,0.7s,baz=132,slow=1.9,SNR=3.5
KIV Kislovodsk 111.11 314 *i* PKIKP **PKiKP 05 26 26.0 -1.8**
KIV pmax pmax
comp=Z,13nm,0.9s
KIV MLR MLR
comp=Z,109nm,21.0s
OBN Obninsk 111.95 327⇑ *i* PKIKP **PKiKP 05 26 28.5 -0.3**
OBN pmax pmax
comp=Z,15nm,0.4s
FINES FINESS Array B 114.09 336 PKP **PKiKP 05 26 33.0 +0.2**
comp=Z,2.4nm,0.7s,baz=122,slow=9.3,SNR=7.4
FINES FINESS Array B 114.09 336 *i* PKIKP **PKiKP 05 26 33.0 +0.2**
FRB Frobisher Bay 115.24 20 PKP **PKPdf 05 26 35.0 +0.1**
comp=Z,5.0nm,0.5s,baz=270,slow=2.1,SNR=24
FRB Frobisher Bay 115.24 20 *i* PKIKP **PKPdf 05 26 35.0 +0.1**
PLCA Paso Flores 116.50 142 PKP **PKiKP 05 26 39.2 +1.0**
comp=Z,3.4nm,0.6s,baz=264,slow=1.7,SNR=18
PLCA Paso Flores 116.50 142 PKIKP **PKiKP 05 26 38.4 +0.2**
PLCA Paso Flores 116.50 142 PKiKP 05 26 38.4 +0.2
LC01 Cunco 116.76 140 PKiKP 05 26 39.3 +0.6
AKASG Malin Array Be 117.75 325 PKP **PKiKP 05 26 40.8 +0.6**
comp=Z,0.5nm,0.3s,baz=149,slow=30,SNR=6.2
AKASG Malin Array Be 117.75 325 *i* PKIKP **PKPdf 05 26 38.0 -2.1**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKBB Malin Array Si 117.75 325 PKIKP **PKPdf 05 26 39.5 -0.7**
AKBB Malin Array Si 117.75 325 PKPdf 05 26 39.5 -0.7
BRTR Keskin Array B 118.66 312 PKP **PKiKP 05 26 42.5 +0.1**
comp=Z,0.9nm,0.8s,baz=209,slow=2.6,SNR=2.2
S51A Beattyville 118.68 51 PKPdf 05 26 42.0 -0.3
TKL Tuckaleechee C 119.00 53 PKP **PKPdf 05 26 42.3 -0.7**
comp=Z,3.4nm,0.9s,baz=207,slow=4.5,SNR=4.7
TKL Tuckaleechee C 119.00 53 PKIKP **PKPdf 05 26 42.0 -1.1**
TKL Tuckaleechee C 119.00 53 PKiKP 05 26 42.0 -1.1
SADO Sadowa 119.70 42 PKP **PKPdf 05 26 43.0 -1.0**
comp=Z,4.9nm,0.7s,baz=328,slow=3.5,SNR=7.7
NB2 NORSAR Subarra1 119.82 341 PKPdf **PKiKP 05 26 44.3 +0.3**
comp=Z,3.7nm,0.7s,baz=43,slow=1.9
NOA NORSAR Array B 119.82 341 PKP **PKPdf 05 26 43.5 -0.4**
comp=Z,2.4nm,0.7s,baz=45,slow=1.9,SNR=16
BOSA Boshof 120.31 231 PKP **PKPdf 05 26 45.6 -0.3**
comp=Z,3.0nm,0.9s,baz=109,slow=3.2,SNR=5.6
M54A Oil Creek Stat 120.47 46 PKPdf 05 26 45.2 -0.5
VA03 San Esteban 121.11 135 PKiKP 05 26 47.8 +0.3
M55A Ridgway 121.12 45 PKPdf 05 26 46.9 -0.1
L56A Greenwood 121.73 44 PKPdf 05 26 47.9 -0.2
SSPA Standing Stone 122.03 46 PKPdf 05 26 48.5 -0.2
J57A Williamstown 122.31 42 PKiKP 05 26 49.5 +0.1
KOLS Kolonicke sedl 122.56 325 *e*PKIKP **PKiKP 05 26 51.2 +1.5**
KOLS Kolonicke sedl 122.56 325 *e*PKP **PKiKP 05 26 51.2 +1.5**
J59A Piesco 123.28 42 PKPdf 05 26 50.2 -0.8
MVL Millersville 123.36 46 PKPdf 05 26 51.2 -0.1
MORC Moravsky Berou 124.68 328 *e*PKP **PKiKP 05 26 55.3 +1.4**
VYHS Vyhne 124.72 326 *e*PKIKP **PKiKP 05 26 54.4 +0.4**
VYHS Vyhne 124.72 326 *e*PKP **PKiKP 05 26 54.4 +0.4**
OSTC Ostas 124.90 329 *e*PKPDF **PKiKP 05 26 56.2 +1.9**
KRLC Kraliky 124.90 329 *e*PKIKP **PKiKP 05 26 55.5 +1.2**
KRLC Kraliky 124.90 329 *e*PKPDF **PKiKP 05 26 55.5 +1.2**
DPC Dobruska-Polom 124.97 329 *e*PKIKP **PKiKP 05 26 57.5 +3.0**
DPC Dobruska-Polom 124.97 329 *e*PKPDF **PKiKP 05 26 57.5 +3.0**
JAVC Velka Javorina 125.15 327 *e*PKP **PKiKP 05 26 56.7 +1.8**
AC02 Maricunga 125.33 130 PKPdf 05 26 54.1 -2.0
BSEG Bad Segeberg 125.36 335 *e*PKPdf **PKiKP 05 26 56.4 +1.4**
baz=48,slow=1.8
BSEG *e*L L 06 25 04.9
comp=Z,101nm,19.3s
KRUC Moravsky 125.71 328 *e*PKP **PKiKP 05 26 57.1 +1.2**
PVCC Panska Ves 125.74 330 *e*PKIKP **PKiKP 05 26 57.4 +1.5**
PVCC Panska Ves 125.74 330 *e*PKPDF **PKiKP 05 26 57.4 +1.5**
BRG Berggiesshubel 125.82 331 *e*PKP **PKiKP 05 26 57.0 +0.9**
comp=Z,9.8nm,1.0s
BRG Berggiesshubel 125.82 331 *e*PKPdf **PKiKP 05 26 56.9 +0.9**
baz=48,slow=1.8
BRG Berggiesshubel 125.82 331 *e*PKIKP **PKiKP 05 26 57.0 +0.9**
BRG pmax pmax
comp=Z,10.0nm,1.0s
CLL Collm 125.99 332 *e*PKPdf **PKiKP 05 26 59.0 +2.6**
comp=Z,10.0nm,0.7s
CLL *e* 05 27 17.0
CLL *e*PPP PPP 05 31 36.0
CLL Collm 125.99 332 *e*PKPdf **PKiKP 05 26 58.2 +1.8**
baz=48,slow=1.8
CLL *e*L L 06 23 47.0
comp=Z,72nm,20.6s
CLL Collm 125.99 332 *e*PKIKP **PKiKP 05 26 59.0 +2.6**
CLL *e* 05 27 17.0
CLL pmax pmax
comp=Z,10.0nm,0.7s
FBE Freiberg 126.08 331 *e*PKPdf **PKiKP 05 26 57.7 +1.2**
baz=48,slow=1.8
NRDL Niedersach Rie 126.47 334 *e*PKPdf **PKiKP 05 26 58.4 +1.2**
baz=48,slow=1.8
CLZ Clausthal 126.82 334 *e*PKPdf **PKiKP 05 26 59.1 +1.0**
baz=48,slow=1.8
TANN Tannenbergstha 126.84 331 *e*PKPdf **PKiKP 05 26 58.6 +0.4**
baz=48,slow=1.8
GUNZ Gunzen 126.93 331 *e*PKPdf **PKiKP 05 26 59.3 +1.0**
baz=48,slow=1.8
PLN Plauen 126.93 331 *e*PKPdf **PKiKP 05 26 59.1 +0.8**
baz=48,slow=1.8
WERN Wernitzgruen 126.96 331 *e*PKPdf **PKiKP 05 26 59.2 +0.7**
baz=48,slow=1.8
NKC Novy Kostel 126.96 331 *e*PKIKP **PKiKP 05 26 59.7 +1.3**
NKC Novy Kostel 126.96 331 *e*PKPDF **PKiKP 05 26 59.7 +1.3**
PB06 IPOC Station P 127.04 125 PKiKP 05 26 59.8 +0.2
MOX Moxa 127.08 332 *e*L L 06 26 49.4
comp=Z,71nm,21.4s
KHC Kasperske Hory 127.12 329 *e*PKIKP **PKiKP 05 26 59.6 +0.8**
KHC Kasperske Hory 127.12 329 *e*PKPDF **PKiKP 05 26 59.6 +0.8**
KHC *ex* x 05 27 07.7
GCUF Volcan Galeras 127.14 94 *e*P **PKiKP 05 27 00.3 -0.1**
GEC2 GERESS Array S 127.24 329 *e*PKPdf **PKiKP 05 26 59.7 +0.6**
baz=48,slow=1.8
GEC2 *e*L L 06 22 54.7
comp=Z,108nm,20.6s
GEC2 GERESS Array S 127.24 329 PKPdf 05 26 58.6 0.0
GERES GERESS Array B 127.24 329 PKP **PKiKP 05 26 59.9 +0.7**
comp=Z,4.3nm,0.7s,baz=54,slow=2.3,SNR=17
MANZ Manzenberg 127.29 331 *e*PKPdf **PKiKP 05 26 60.0 +0.9**
baz=48,slow=1.8
WET Wettzell 127.47 330 *e*PKPdf **PKiKP 05 27 00.3 +0.8**
baz=48,slow=1.8
WET *e*L L 06 23 28.8
comp=Z,75nm,21.8s
MOA Molln 127.57 328 *e*PKiKP **PKiKP 05 27 02.5 +2.8**
comp=Z,3.0nm,0.6s
IBBN Ibbenburen 127.60 335 *e*PKPdf **PKiKP 05 27 00.6 +1.1**
baz=48,slow=1.8
PUAC Puerto Asis, P 127.81 95 *e*P **PKPdf 05 27 00.8 +0.2**
GRF Grafenberg Arr 127.91 331 *e*L L 06 23 50.5
comp=Z,88nm,20.0s
PB11 IPOC Station P 128.33 122 PKiKP 05 27 02.7 +0.5
TNS Taunus Mts 128.83 333 *e*L L 06 21 47.3
comp=Z,95nm,21.6s
FUR Furstenfeldbru 128.91 330 *e*L L 06 29 18.5
comp=Z,107nm,20.4s
CBOC Ciudad Bolivar 128.95 88 *e*P **PKPdf 05 27 00.3 -2.6**
WATA Walderalm 129.31 329 *e*PKiKP **PKiKP 05 27 03.5 +0.1**
comp=Z,7.1nm,0.8s
WTTA Wattenberg 129.32 329 *e*PKiKP **PKiKP 05 27 03.6 +0.1**
comp=Z,14nm,1.1s
HELC Santa Helena 129.45 88 *e*P **PKPdf 05 27 01.2 -2.9**
PTLC Puerto Leguiza 129.51 96 *e*P **PKPdf 05 27 03.8 0.0**
RREF El Recreo 129.53 89 *e*P **PKiKP 05 27 05.6 +0.2**
ORTC Ortega, Tolima 129.54 91 *e*P **PKPdf 05 27 02.6 -1.3**
MOTA Moosalm 129.54 329 *e*PKiKP **PKiKP 05 27 05.1 +1.2**
comp=Z,5.9nm,0.9s
GUY2C Guyana, Caldas 129.54 89 *e*P **PKPdf 05 27 04.6 +0.2**
SQTA Sankt Quirin 129.57 329 *e*PKiKP **PKiKP 05 27 05.2 +1.4**
comp=Z,6.0nm,0.7s
RETA Reutte 129.62 329 *e*PKiKP **PKiKP 05 27 04.4 +0.5**
comp=Z,2.2nm,0.4s
PRAC Prado 129.88 91 *e*P **PKPdf 05 27 04.0 -0.5**
FETA Feichten 129.95 329 *e*PKiKP **PKiKP 05 27 06.0 +1.4**
comp=Z,5.3nm,0.8s
BFO Black Forest 130.23 332 *e*L L 06 27 59.0
comp=Z,66nm,19.1s
FUORN Ofenpass-Fuorn 130.45 329 PKiKP 05 27 06.1 +0.3
ROSC El Rosal 130.55 90 PKP **PKiKP 05 27 06.8 -0.4**
comp=Z,6.0nm,0.7s,baz=76,slow=6.5,SNR=8.2
ROSC El Rosal 130.55 90 *e*P **PKPdf 05 27 04.8 -1.5**
ROSC El Rosal 130.55 90 PKPdf 05 27 04.7 -1.5
MACC Macarena, Meta 130.73 93 *e*P **PKPdf 05 27 06.3 +0.1**
SPBC San Pablo de B 130.86 89 *e*P **PKPdf 05 27 05.5 -1.0**
CHIC Chingaza 131.11 90 *e*P **PKPdf 05 27 07.0 -0.3**
LPAZ La Paz 131.13 119 PKP **PKiKP 05 27 08.2 -0.3**
comp=Z,4.9nm,0.9s,baz=308,slow=1.2,SNR=15
LPAZ La Paz 131.13 119 PKiKP 05 27 08.4 -0.1
RUSC La Rusia 131.86 88 *e*P **PKPdf 05 27 04.8 -4.0**
CPUP Villa Florida 134.13 138 PKP **PKiKP 05 27 13.3 -0.3**
comp=Z,6.9nm,0.7s,baz=299,slow=1.4,SNR=23
CPUP Villa Florida 134.13 138 PKIKP **PKiKP 05 27 13.0 -0.5**
CPUP Villa Florida 134.13 138 PKiKP 05 27 13.0 -0.5
SDV Santo Domingo 134.42 84 *e*P **PKPdf 05 27 10.0 -3.2**
SDV Santo Domingo 134.42 84 PKPdf 05 27 13.3 0.0
KEST Kesra 137.74 317 PKP **PKiKP 05 27 20.1 -0.5**
comp=Z,2.9nm,0.8s,baz=305,slow=8.0,SNR=3.6
MVO Moncorvo 142.53 338 *e*PKP **PKPdf 05 27 24.3 -2.9**
ESDC Sonseca Array 142.53 333 PKhKP **PKPdf 05 27 24.6 -2.7**
comp=Z,2.3nm,0.8s,baz=30,slow=2.6,SNR=15
PVIS Viseu 143.24 339 *e*PKP PKPbc 05 27 26.8 +1.1
MTE Manteigas 143.39 338 *e*PKP **PKPdf 05 27 27.8 -1.0**
PCBR Castelo Branco 143.85 337 *e*PKP **PKPdf 05 27 28.8 -0.7**
PCAS Casmilo, Conde 144.04 339 *e*PKP **PKPdf 05 27 29.4 -0.4**
PMRV Marv??o 144.17 337 *e*PKP PKPbc 05 27 29.2 +0.8
PSBE So Bento 144.63 339 *e*PKP **PKPdf 05 27 31.4 +0.5**
PMTG Montargil 144.81 338 *e*PKP **PKPdf 05 27 31.5 +0.3**
EVO Evora 145.19 337 *e*PKP **PKPdf 05 27 33.1 +1.2**
PMAFR Mafra 145.30 339 *e*PKP **PKPab 05 27 33.4 +1.3**
PBEJ Beja 145.57 336 *e*PKP **PKPab 05 27 34.5 +1.4**
PNCL Nicolau / Gran 145.75 337 *e*PKP **PKPab 05 27 35.0 +1.2**
MESJ Messejana 145.87 337 *e*PKPdf **PKPdf 05 27 32.9 -0.1**
MESJ Messejana 145.87 337 *e*PKP **PKPab 05 27 35.5 +1.3**
PCVE Castro Verde 145.98 336 *e*PKP **PKPab 05 27 35.9 +1.2**
PVAQ Vaqueiros 146.04 335 *e*PKP **PKPab 05 27 35.9 +1.0**
PVAQ Vaqueiros 146.04 335 PKPbc 05 27 34.0 -0.3
PBDV Barranco-do-Ve 146.27 336 *e*PKP **PKiKP 05 27 37.1 -1.0**
PTEO Sao Teotonio 146.32 337 *e*PKP **PKiKP 05 27 37.2 -0.9**
MORF Marmelete 146.50 337 *e*PKPdf **PKPdf 05 27 33.8 -0.4**
MORF Marmelete 146.50 337 *e*PKP **PKPab 05 27 37.5 +0.7**
TDRA Tendrara 146.66 324 P **PKiKP 05 27 39.1 -0.1**
SNR=8.3
PFVI Vila Bisbo 146.72 337 *e*PKP **PKPab 05 27 38.0 +0.5**
CHEFC Chefchaouen 146.87 330 P **PKPab 05 27 38.0 -0.3**
SNR=19
TAM Tamanrasset 147.00 302 PKP2 **PKPbc 05 27 37.9 +0.2**
TAM Tamanrasset 147.00 302 PKPbc **PKPbc 05 27 37.9 +0.2**
RSA Sarsar 147.28 331 P **PKPab 05 27 40.0 +0.1**
SNR=15
BDFB Brasilia 147.72 134 PKPbc **PKPbc 05 27 38.6 -1.2**
comp=Z,41nm,0.7s,baz=249,slow=2.3,SNR=57
BDFB Brasilia 147.72 134 PKPdf 05 27 38.0 +1.1
BDFB **PKPbc 05 27 40.7 +0.9**
CZD Col de Zad 148.34 328 P **PKPab 05 27 44.0 -0.5**
SNR=11
GOLM Goulmima 149.31 326 P **PKiKP 05 27 46.0 +1.3**
SNR=6.1
TZRR Tazzarine 150.35 325 P **PKiKP 05 27 48.0 +1.2**
SNR=10
OUZM OUZ 150.91 327 P **PKiKP 05 27 49.3 +1.3**
SNR=12
TORD Torodi Ar. Bea 153.38 285 PKP **PKPdf 05 27 45.4 -0.2**
comp=Z,1.2nm,0.7s,baz=37,slow=0.9,SNR=6.4
TORD PKPbc **PKPbc 05 27 53.0 -0.2**
comp=Z,4.7nm,0.7s,baz=49,slow=2.1,SNR=21
KIC Kosan Boka 160.23 269 *e*PKP1 **PKPab 05 28 35.5 +0.3**
comp=Z,22nm,0.9s
LIC Lamto 160.51 269 *e*PKP1 **PKPab 05 28 36.2 -0.2**
comp=Z,27nm,1.3s
TIC Toumodi 160.52 270 *e*PKP1 **PKPab 05 28 36.5 +0.1**

WEL 12 05:12:12.8±0.7, 36°S±13°×17°9E±1°9, h259km±8km, M3.5/13, ML3.7/7, MLv3.5/13, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.11**	**193**	P	Pn	05 12 55.4	-1.4
MXZ				S	S	05 13 31.1	-0.7
HAZ	**Te Kaha**	**2.42**	**202**	P	Pn	05 12 59.2	-0.5
HAZ				S	S	05 13 36.8	-0.2
PKGZ	**Pakihiroa**	**2.47**	**195**	P	Pn	05 13 00.7	+0.4
RUGZ	**Raukumara Rang**	**2.64**	**202**	P	Pn	05 13 01.9	-0.2
RUGZ				S	S	05 13 42.8	+1.4
CNGZ	**Carnagh Statio**	**3.02**	**190**	P	Pn	05 13 07.2	+1.2
MWZ	**Matawai**	**3.03**	**201**	P	Pn	05 13 06.8	+0.8
MWZ				S	S	05 13 50.1	+1.7
URZ	**Urewera**	**3.10**	**207**	P	Pn	05 13 06.8	+0.1
URZ				S	S	05 13 49.8	+0.1
MUGZ	**Murupara**	**3.42**	**209**	P	Pn	05 13 10.7	+0.4
MUGZ				S	S	05 13 56.7	+0.6
RTZ	**Ruatahuna**	**3.46**	**206**	P	Pn	05 13 10.8	-0.1
KAHZ	**Kahuranaki**	**4.57**	**200**	P	Pn	05 13 24.6	+1.0
KRHZ	**Kereru**	**4.59**	**205**	P	Pn	05 13 23.7	-0.2
KRHZ				S	S	05 14 21.7	+1.0
FWVZ	**Far West T-bar**	**4.59**	**215**	P	Pn	05 13 24.5	+0.4
PNHZ	**Pukenui**	**4.89**	**205**	P	Pn	05 13 27.2	-0.2
PNHZ				S	S	05 14 28.0	+0.9
TSZ	**Takapari Road**	**5.11**	**206**	P	Pn	05 13 29.7	-0.4
MRZ	**Mangatainoka R**	**5.77**	**206**	P	Pn	05 13 37.3	-0.8
MRZ				S	S	05 14 45.0	-1.7

NNC 12 05:37:50.5±2.0, 53°.66N×87°.79E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=14.6km s-min=13.4km az=8.0, Suspected Mining explosion.

KRAR 12 05:37:48.9±0.1, 53°.66N×88°.05E, M2.3, 4C-5D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**6.50**	**247**	⇓P	Pn	05 39 25.7	-0.1
KURK	1.9nm,0.7s			⇑S	Sn	05 40 40.7	+0.1
KURK	0.9nm,0.6s			⇓Lg	Lg	05 41 13.5	
KURBB	**Kurchatov Arra**	**6.60**	**246**	⇑P	Pn	05 39 26.4	-0.7
KURBB	3.1nm,0.3s			⇓S	Sn	05 40 41.4	-1.6
KURBB	4.5nm,0.7s			⇑Lg	Lg	05 41 15.5	
MK31	**Makanchi Array**	**7.80**	**211**	⇑P	Pn	05 39 44.6	+1.0
MK31	0.5nm,0.6s,baz=28,slow=13,SNR=7.2			⇓S	Sn	05 41 13.2	+0.6
MK31	0.7nm,0.6s			⇓Lg	Lg	05 41 57.4	
	2.5nm,0.8s						

PRU 12 05:44:26.7±0.0, 51°.54N×16°.03E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHVC	**Chvalec**	**0.95**	**179**	*e*PG	Pg	05 44 44.9	0.0
CHVC				*e*SG	Sg	05 44 57.7	+0.4
	comp=Z,2.3nm,0.4s						
OSTC	**Ostas**	**0.99**	**173**	*e*PG	Pg	05 44 44.4	-1.3
OSTC				*e*SG	Sg	05 44 58.8	+0.3
	comp=Z,3.0nm,0.5s						
UPC	**Upice**	**1.03**	**181**	*e*PG	Pg	05 44 46.7	+0.2
UPC				*e*SG	Sg	05 44 59.7	-0.2
	comp=Z,5.3nm,0.8s						
DPC	**Dobruska-Polom**	**1.21**	**171**	*e*PG	Pg	05 44 49.1	-0.7
DPC				*e*SG	Sg	05 45 04.7	-0.7
	comp=Z,1.7nm,0.3s						
BRG	**Berggiesshubel**	**1.47**	**244**	SG	Sn	05 45 16.4	+1.9
	4.4nm,0.3s						
KHC	**Kasperske Hory**	**2.88**	**214**	*e*SG	Sg	05 45 58.4	-0.7

DJA 12 05:52:47.9±2.7, 8°S±5°×10°9E±°, h29km±31km, M3.9/11, mB5.6/1, mb4.0/1, MLv3.9/11, Mw(mB)5.1/1, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**1.42**	**71**	P	Pn	05 53 12.1	+0.3
UGM				S	Sn	05 53 28.4	-1.1
CISI	**Cisompet, Garu**	**1.57**	**301**	P	Pn	05 53 14.2	+0.3
WOJI	**Wonogiri, Jawa**	**1.82**	**73**	P	Pn	05 53 16.8	-0.4
SMRI	**Semarang**	**1.83**	**44**	P	Pn	05 53 17.6	+0.2
PCJI	**Pacitan**	**2.00**	**85**	P	Pn	05 53 20.3	+0.6
CNJI	**Cibinong**	**2.28**	**298**	P	Pn	05 53 23.4	-0.3
UWJI	**Ujung Watu**	**2.63**	**42**	P	Pn	05 53 27.8	-0.6
PWJI	**Pagerwojo**	**2.63**	**82**	P	Pn	05 53 28.7	+0.3
GRJI	**Gresik**	**3.59**	**66**	P	Pn	05 53 41.9	+0.3
KASI	**Kota Agung**	**5.44**	**301**	P	Pn	05 54 06.7	-0.4

IDC 12 06:10:48.9±55.0, 16°.41S×176°.71W, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.6/37, mbtmp3.9/3, Error ellipse: s-maj=1026.0km s-min=178.1km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.77**	**240**	P	P	06 18 32.3	+0.2
	0.4nm,0.3s,baz=90,slow=9.1,SNR=1.6						
WRA	**Warramunga Arr**	**46.52**	**258**	P	P	06 19 18.4	-0.1
	0.4nm,0.4s,baz=95,slow=7.2,SNR=9.8						
ASAR	**Alice Springs**	**46.77**	**253**	P	P	06 19 20.1	-0.4
	2.1nm,0.6s,baz=86,slow=8.6,SNR=28						

NEIC 12 06:17:00.1±2.0, 6°.31S±0°.08×128°.08E±0°.08, h353km±13km, mb4.2/3, Error ellipse: s-maj=12.6km s-min=10.3km az=58.0
IDC 12 06:17:01.9±3.5, 6°.38S×128°.07E, h368km±37km, mb2.9/1, mb1 3.3/5, mb1mx3.0/36, mbtmp4.0/5, Error ellipse: s-maj=56.9km s-min=15.9km az=67.0

ISC 12 06:17:00.1±0.9, 6°.33S±0°.08×128°.16E±0°.08, h353km, n15, σ1°9 14/20, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**5.14**	**228**	Pn	Pn	**06 18 21.6**	**0.0**
SOEI					**S**	**06 19 25.6**	**-1.8**
FAKI	**Fak Fak**	**5.30**	**50**	Pn	**Pn**	**06 18 24.7**	**+1.5**
FAKI				S	**S**	**06 19 28.2**	**-2.3**
BATI	**Baumata**	**5.88**	**229**	P	**Pn**	**06 18 30.5**	**+0.8**
	12nm,0.3s,baz=49,slow=9.3,SNR=2.9						
MTN	**Manton Dam**	**7.11**	**156**		**Pn**	**06 18 44.1**	**+0.3**
KNRA	**Kununurra**	**9.31**	**176**		**P**	**06 19 11.0**	**-0.7**
FITZ	**Fitzroy Crossi**	**11.95**	**192**	P	**Pn**	**06 19 41.1**	**-0.2**
	0.3nm,0.3s,baz=19,slow=12,SNR=12						
FITZ				S	**S**	**06 21 55.4**	**+1.3**
	0.1nm,0.3s,baz=56,slow=15,SNR=1.5						
FITZ	**Fitzroy Crossi**	**11.95**	**192**	P	**P**	**06 19 40.9**	**-0.2**
WRA	**Warramunga Arr**	**14.80**	**157**	P	**P**	**06 20 13.8**	**+1.2**
	1.3nm,0.3s,baz=334,slow=12,SNR=36						
WRA				S	**S**	**06 22 50.4**	**-1.7**
	0.2nm,0.3s,baz=334,slow=21,SNR=2.1						
WB2	**Warramunga Arr**	**14.81**	**157**	P	**P**	**06 20 13.8**	**+1.3**
WR0	**Warramunga Arr**	**14.90**	**156**	P	**P**	**06 20 14.1**	**+0.6**
COEN	**Coen**	**16.60**	**118**	P	**Pn**	**06 20 35.0**	**-0.6**
COEN				IAmb	IAmb	06 20 45.7	
	comp=Z,19nm,1.4s						
PSAB2	**Pilbara Seismi**	**17.13**	**207**	P	**P**	**06 20 37.6**	**-0.1**
PSAB2				IAmb	IAmb	06 20 43.0	
	comp=Z,13nm,1.2s						
PSAA3	**Pilbara Seismi**	**17.16**	**207**	P	**P**	**06 20 37.7**	**-0.3**
PSAA3				IAmb	IAmb	06 20 51.5	
	comp=Z,22nm,1.4s						
ASAR	**Alice Springs**	**18.10**	**163**	P	**P**	**06 20 49.2**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=344,slow=12,SNR=21						
ASAR				S	**S**	**06 23 57.6**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=347,slow=20,SNR=4.1						
MKAR	**Makanchi Array**	**66.67**	**328**	P	**P**	**06 27 14.2**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=116,slow=8.2,SNR=4.3						

SOME 12 06:19:22.6, 39°.68N×77°.40E, h0km
NNC 12 06:19:24.3±1.3, 39°.68N×77°.32E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=9.1km s-min=8.3km az=122.0
KRNET 12 06:19:26.2±0.1, 39°.79N×77°.31E, mb2.9

ISC 12 06:19:27.7±2.6, 39°.6N±0°.1×77°.34E±0°.06, h17km, n28, σ1°69/48, 20C-11D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**2.54**	**357**	⇓*i*P	**Pn**	**06 20 08.1**	**-0.3**
KDJ	baz=58			⇓*i*S	**Sn**	**06 20 38.9**	**-0.2**
	baz=58						
ULHL	**Ulahol**	**2.78**	**343**	⇑*i*P	**Pn**	**06 20 11.9**	**+0.2**
ULHL	baz=42			⇑*e*S	**Sn**	**06 20 44.3**	**-0.8**
	baz=42						
KZA	**Kyzart**	**2.95**	**328**	⇑*i*P	**Pn**	**06 20 14.3**	**+0.1**
KZA	baz=26			⇑*i*S	**Sn**	**06 20 49.3**	**-0.2**
	baz=26						
PRZ	**Przheval'sk**	**3.00**	**15**	⇓*i*P	**Pn**	**06 20 15.0**	**+0.3**
PRZ	baz=17			⇓*i*S	**Sn**	**06 20 50.4**	**0.0**
	baz=17						
BOOM	**Boomskoye usch**	**3.09**	**340**	⇓*i*P	**Pn**	**06 20 16.1**	**+0.2**
BOOM	baz=40			⇓*i*S	**Sn**	**06 20 52.0**	**-0.5**
	baz=40						
ANVS	**Anan'yevo**	**3.20**	**4**	⇓*i*P	**Pn**	**06 20 17.5**	**0.0**
ANVS	baz=5.0			⇓*i*S	**Sn**	**06 20 55.3**	**0.0**
	baz=5.0						
UCH	**Uchtor**	**3.40**	**322**	⇑*i*P	**Pn**	**06 20 20.6**	**+0.2**
UCH	baz=20			⇑*i*S	**Sn**	**06 20 59.9**	**-0.7**
	baz=20						
TNSS	**Tian-Shan**	**3.46**	**355**	*e*P	**Pb**	**06 20 26.0**	**-2.8**
TNSS	1.3nm,0.0s			*e*S	**Sb**	**06 21 11.9**	**+1.2**
	4.3nm,0.0s						
TNSS	**Tian-Shan**	**3.46**	**355**	Pg	**Pb**	**06 20 26.0**	**-2.8**
	1.3nm,0.0s						
TNSS				Lg	Lg	06 21 12.1	
	4.3nm,0.0s						
KBK	**Karagaybulak**	**3.56**	**330**	⇑*i*P	**Pn**	**06 20 22.5**	**+0.1**
KBK	baz=29			⇑*i*S	**Sn**	**06 21 03.4**	**-0.7**
	baz=29						
MDOK	**Medeo**	**3.58**	**357**	*e*P	**Pb**	**06 20 28.8**	**-1.9**
MDOK	5.5nm,0.3s			*e*S	**Sb**	**06 21 16.1**	**+2.2**
	16nm,0.9s						
MDOK	**Medeo**	**3.58**	**357**	Pg	**Pb**	**06 20 27.6**	**-3.0**
	4.2nm,0.4s						
MDOK				⇓Lg	Lg	06 21 15.5	
	16nm,0.6s						
MDOK	**Medeo**	**3.58**	**357**	Pg	**Pb**	**06 20 28.7**	**-1.9**
	5.5nm,0.3s						
MDOK				Lg	Lg	06 21 16.1	
	16nm,0.9s						
TKM2	**Tokmak 2**	**3.58**	**339**	⇑*i*P	**Pn**	**06 20 23.0**	**+0.3**
TKM2	baz=38			⇑*i*S	**Sn**	**06 21 03.9**	**-0.8**
	baz=38						
TKM2	**Tokmak 2**	**3.58**	**339**	⇑Pg	**Pb**	**06 20 28.1**	**-2.7**
	1.3nm,0.3s						
TKM2				⇑Lg	Lg	06 21 15.1	
	4.9nm,0.4s						
AAK	**Ala-Archa**	**3.73**	**326**	⇑*e*P	**Pn**	**06 20 25.0**	**+0.3**
AAK	baz=24			⇑*i*S	**Sn**	**06 21 07.4

	1.1nm,0.2s							
CHKK				Lg	Lg	06 21 36.6		
	6.6nm,0.5s							
KUU	**Kurty**	**4.37**	**350**	*e*P	**Pb**	**06 20 41.6**	**-2.5**	
	1.1nm,0.7s							
KUU				*e*S	**Sb**	**06 21 38.4**	**+2.0**	
	12nm,0.8s							
KUU	**Kurty**	**4.37**	**350**	Pg	**Pb**	**06 20 41.6**	**-2.5**	
	1.1nm,0.7s							
KUU				Lg	Lg	06 21 38.4		
	12nm,0.8s							
MRKS	**Merke**	**4.43**	**317**	*e*P	**Pb**	**06 20 43.5**	**-1.6**	
	1.3nm,0.1s							
MRKS				*e*S	**Sb**	**06 21 41.7**	**+3.4**	
	6.6nm,0.5s							
MRKS	**Merke**	**4.43**	**317**	Pg	**Pb**	**06 20 43.5**	**-1.6**	
	1.3nm,0.1s							
MRKS				Lg	Lg	06 21 41.7		
	6.6nm,0.5s							
DJR	**Jarkent**	**5.08**	**20**	*e*P	**Pb**	**06 20 55.0**	**-1.2**	
	1.3nm,0.1s							
DJR				*e*S	**Sb**	**06 22 01.5**	**+4.6**	
	3.1nm,0.5s							
DJR	**Jarkent**	**5.08**	**20**	Pg	**Pb**	**06 20 54.9**	**-1.2**	
	1.3nm,0.1s							
DJR				Lg	Lg	06 22 01.5		
	3.1nm,0.5s							

JMA ***12*** *06:24:13.6,23˚.93N×122˚.07E,h29km±1km,M2.4*
TAP ***12*** *06:24:14.3,23˚.99N×122˚.08E,h31km,ML3.1,C*

ISC 12 06:24:13.8±1.0,23˚.96N±0˚.02×122˚.07E±0˚.02,h27km±10km, n85,σ0ᵍ65/139,4C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.43**	**273**	*e*P	**Pn**	**06 24 23.8**	**-0.5**
	baz=259						
HWA				*e*S	**Sn**	**06 24 30.5**	**-0.7**
	baz=259						
TWD	**Chiawan**	**0.45**	**286**	P	**Pb**	**06 24 23.5**	**+0.2**
	baz=281						
TWD				*e*S	**Sb**	**06 24 30.3**	**+0.5**
	baz=281						
NACB	**Ninganchiao**	**0.49**	**296**	⇑*i*P	**Pb**	**06 24 23.7**	**-0.2**
	baz=292						
NACB				*e*S	**Sb**	**06 24 30.9**	**+0.2**
	baz=292						
ENA	**Nanau**	**0.56**	**327**	*e*P	**Pb**	**06 24 24.9**	**-0.1**
	baz=325						
EOS1	**EOS1**	**0.59**	**5**	P	**Pb**	**06 24 25.3**	**-0.3**
	baz=12						
EOS1				*e*S	**Sb**	**06 24 34.2**	**+0.6**
	baz=12						
ETLH	**Xiulin Townshi**	**0.59**	**295**	P	**Pb**	**06 24 25.3**	**-0.4**
	baz=291						
ETLH				*e*S	**Sb**	**06 24 34.1**	**+0.3**
	baz=291						
ESL	**Shilin**	**0.60**	**256**	*e*P	**Pb**	**06 24 25.6**	**-0.2**
	baz=248						
ESL				*e*S	**Sb**	**06 24 34.3**	**+0.4**
	baz=248						
EGFH	**Guangfu**	**0.66**	**244**	*e*P	**Pb**	**06 24 26.6**	**-0.1**
	baz=241						
EGFH				*e*S	**Sn**	**06 24 36.2**	**-0.6**
	baz=241						
HGSD	**Ruisui**	**0.76**	**232**	*e*P	**Pb**	**06 24 28.3**	**-0.1**
	baz=222						
HGSD				*e*S	**Sn**	**06 24 38.9**	**-0.3**
	baz=222						
WHF	**Hehuan Shan**	**0.76**	**284**	*e*P	**Pb**	**06 24 28.4**	**-0.4**
	baz=271						
WHF				*e*S	**Sb**	**06 24 38.7**	**-0.2**
	baz=271						
NNSB	**Datong**	**0.79**	**307**	⇑*i*P	**Pb**	**06 24 28.7**	**-0.3**
	baz=304						
NNSB				*e*S	**Sb**	**06 24 39.2**	**-0.1**
	baz=304						
NNSH	**Datong**	**0.79**	**307**	⇑*i*P	**Pb**	**06 24 28.6**	**-0.3**
	baz=304						
NNSH				*e*S	**Sb**	**06 24 39.2**	**-0.1**
	baz=304						
NNS	**Nan Shan**	**0.80**	**307**	*e*P	**Pb**	**06 24 28.8**	**-0.4**
	baz=305						
NNS				*e*S	**Sn**	**06 24 40.3**	**-0.3**
	baz=305						
NDT	**Datong Townshi**	**0.82**	**322**	*e*P	**Pb**	**06 24 29.1**	**-0.4**
	baz=320						
OWD	**Renai**	**0.82**	**270**	*e*P	**Pb**	**06 24 29.6**	**+0.1**
	baz=267						
OWD				*e*S	**Sb**	**06 24 40.0**	**-0.3**
	baz=267						
ENTT	**Nioudou**	**0.82**	**326**	*e*P	**Pb**	**06 24 29.1**	**-0.3**
	baz=314						
ENTT				*e*S	**Sn**	**06 24 41.1**	**+0.1**
	baz=314						
EHY	**Hungye**	**0.82**	**237**	*e*P	**Pb**	**06 24 29.2**	**-0.3**
	baz=249						
CHGB	**Renai**	**0.83**	**277**	⇑*i*P	**Pb**	**06 24 29.8**	**0.0**
	baz=265						
CHGB				*e*S	**Sb**	**06 24 40.7**	**+0.1**
	baz=265						
TWE	**Neicheng**	**0.84**	**334**	*e*P	**Pn**	**06 24 29.8**	**-0.2**
	baz=333						
TWE				*e*S	**Sn**	**06 24 41.5**	**0.0**
	baz=333						
TWT	**Tachien**	**0.87**	**290**	*e*P	**Pb**	**06 24 30.9**	**+0.4**
	baz=287						
TWT				*e*S	**Sn**	**06 24 42.5**	**0.0**
	baz=287						
VWDT	**VWDT**	**0.88**	**257**	*e*P	**Pb**	**06 24 30.8**	**+0.4**
	baz=245						
VWDT				*e*S	**Sb**	**06 24 40.4**	**-1.3**
	baz=245						
TDCB	**Techi**	**0.89**	**290**	*e*P	**Pn**	**06 24 30.6**	**0.0**
	baz=287						
TDCB				*e*S	**Sb**	**06 24 41.6**	**-0.5**
	baz=287						
SLBB	**Yuanshan**	**0.89**	**333**	*e*P	**Pn**	**06 24 30.5**	**-0.1**
	baz=322						
YULB	**Yu-li**	**0.91**	**232**	*e*P	**Pn**	**06 24 30.6**	**-0.3**
	baz=244						
YULB				*e*S	**Sb**	**06 24 42.6**	**0.0**
	baz=244						
NTC	**Toucheng**	**0.92**	**346**	*e*P	**Pn**	**06 24 30.5**	**-0.5**
	baz=355						
TWF1	**Yuli**	**0.93**	**230**	P	**Pn**	**06 24 31.0**	**-0.2**
	baz=242						
TWF1				S	**Sb**	**06 24 43.5**	**+0.1**
	baz=242						
JYNG	**Yonaguni jima**	**0.94**	**58**	P	**Pn**	**06 24 30.9**	**-0.3**
JYNG				*e*S	**Sb**	**06 24 43.4**	**0.0**
YHNB	**Yeheng**	**0.95**	**318**	*e*P	**Pn**	**06 24 31.4**	**-0.2**
	baz=316						
YHNB				*e*S	**Sb**	**06 24 42.4**	**-1.7**
	baz=316						
NWLT	**Wulai**	**0.97**	**328**	*e*P	**Pn**	**06 24 31.8**	**+0.1**
	baz=326						
YOJ	**Yonaguni jima**	**0.99**	**59**	*e*P	**Pn**	**06 24 32.0**	**0.0**
	baz=61						
YOJ				*e*S	**Sb**	**06 24 45.4**	**+0.4**
	baz=61						
YOJ	**Yonaguni jima**	**0.99**	**59**	P	**Pn**	**06 24 31.6**	**-0.4**
YOJ				S	**Sb**	**06 24 45.6**	**+0.6**
TIPB	**Shuangxi**	**1.03**	**347**	*e*P	**Pn**	**06 24 32.7**	**+0.1**
	baz=354						
TIPB				*e*S	**Sn**	**06 24 45.7**	**-0.6**
	baz=354						
SSLB	**Suanglung**	**1.04**	**261**	*e*P	**Pn**	**06 24 32.8**	**+0.1**
	baz=259						
SSLB				*e*S	**Sn**	**06 24 45.2**	**-1.1**
	baz=259						
FULB	**Fuli**	**1.04**	**224**	*e*P	**Pn**	**06 24 32.2**	**-0.5**
	baz=210						
FULB				*e*S	**Sn**	**06 24 45.9**	**-0.5**
	baz=210						
TWB1	**Santiao Chiao**	**1.05**	**356**	*e*P	**Pn**	**06 24 32.2**	**-0.6**
	baz=356						
TWB1				*e*S	**Sn**	**06 24 44.4**	**-2.1**
	baz=356						
DPDB	**Guoxing**	**1.05**	**274**	*e*P	**Pb**	**06 24 33.6**	**+0.2**
	baz=272						
DPDB				*e*S	**Sn**	**06 24 45.5**	**-1.3**
	baz=272						
CHKT	**Chengkung**	**1.07**	**217**	*e*P	**Pn**	**06 24 32.4**	**-0.8**
	baz=205						
CHKT				*e*S	**Sn**	**06 24 45.6**	**-1.6**
	baz=205						
SMLT	**Sun Moon Lake**	**1.08**	**266**	*e*P	**Pb**	**06 24 33.7**	**-0.2**
	baz=264						
SMLT				*e*S	**Sn**	**06 24 47.3**	**-0.1**
	baz=264						
WHP	**Taichung City**	**1.08**	**287**	*e*P	**Pb**	**06 24 34.7**	**+0.9**
	baz=276						
WHP				*e*S	**Sn**	**06 24 46.7**	**-0.7**
	baz=276						
TWA	**Mucha**	**1.11**	**336**	*e*P	**Pn**	**06 24 34.0**	**+0.3**
	baz=336						
TWA				*e*S	**Sb**	**06 24 48.9**	**+0.4**
	baz=336						
TYC	**Yuchr**	**1.11**	**267**	*e*P	**Pb**	**06 24 34.3**	**-0.1**
	baz=265						
NWF	**Wu-fen Shan**	**1.14**	**347**	*e*P	**Pn**	**06 24 34.2**	**+0.1**
	baz=1.0						
WFSB	**Wu-fen Shan**	**1.14**	**347**	*e*P	**Pn**	**06 24 33.9**	**-0.2**
	baz=346						
WFSB				*e*S	**Sn**	**06 24 48.6**	**-0.2**
	baz=346						
TATO	**Taipei**	**1.15**	**332**	*e*P	**Pb**	**06 24 34.7**	**-0.3**
	baz=331						
LIOB	**Emei**	**1.18**	**306**	*e*P	**Pb**	**06 24 35.8**	**+0.2**
	baz=293						
LIOB				*e*S	**Sb**	**06 24 51.4**	**+0.8**
	baz=293						
NSTT	**Nanjuang**	**1.19**	**305**	*e*P	**Pb**	**06 24 35.8**	**+0.1**
	baz=292						
NSTT				*e*S	**Sb**	**06 24 51.1**	**+0.5**
	baz=292						
ELDTW	**Lidau**	**1.23**	**232**	*e*P	**Pn**	**06 24 35.0**	**-0.4**
	baz=218						
ELDTW				*e*S	**Sn**	**06 24 50.7**	**-0.6**
	baz=218						
ALS	**Alishan**	**1.25**	**249**	*e*P	**Pb**	**06 24 36.7**	**-0.1**
	baz=247						
ALS				*e*S	**Sn**	**06 24 51.6**	**-0.2**
	baz=247						
YM01	**YM01**	**1.27**	**339**	*e*P	**Pn**	**06 24 36.2**	**+0.3**
	baz=338						
YM10	**YM10**	**1.28**	**339**	*e*P	**Pn**	**06 24 36.2**	**+0.2**
	baz=338						
NSY	**Sanyi**	**1.28**	**291**	*e*P	**Pb**	**06 24 38.0**	**+0.7**
	baz=289						
NSY				*e*S	**Sb**	**06 24 55.6**	**+2.3**
	baz=289						
YM11	**YM11**	**1.28**	**339**	*e*P	**Pn**	**06 24 36.1**	**0.0**
	baz=338						
YM04	**YM04**	**1.29**	**338**	*e*P	**Pn**	**06 24 36.1**	**0.0**
	baz=337						
YM08	**YM08**	**1.30**	**340**	*e*P	**Pn**	**06 24 36.0**	**-0.3**
	baz=339						
NMLH	**Miaoli**	**1.30**	**296**	*e*P	**Pb**	**06 24 38.2**	**+0.5**
	baz=294						
ANP	**Anpu**	**1.32**	**338**	*e*P	**Pn**	**06 24 36.3**	**-0.3**
	baz=337						
CHN5	**Tsauling**	**1.33**	**255**	P	**Pb**	**06 24 38.3**	**+0.2**
	baz=253						
CHN5				*e*S	**Sb**	**06 24 55.4**	**+0.6**
	baz=253						
TWH	**Lutao**	**1.36**	**204**	*e*P	**Pn**	**06 24 36.7**	**-0.3**
	baz=202						
TWH				*e*S	**Sn**	**06 24 52.8**	**-1.4**
	baz=202						
TWGBT	**Beinan**	**1.46**	**219**	*e*P	**Pn**	**06 24 38.0**	**-0.4**
	baz=217						
TWGBT				*e*S	**Sb**	**06 24 57.8**	**-0.6**
	baz=217						
TWG	**Pinlang**	**1.46**	**219**	*e*P	**Pn**	**06 24 38.2**	**-0.2**
	baz=217						
TWG				*e*S	**Sn**	**06 24 55.9**	**-0.8**
	baz=217						
TPUB	**Ta-pu**	**1.48**	**244**	*e*P	**Pb**	**06 24 40.4**	**-0.2**
	baz=242						
TPUB				*e*S	**Sb**	**06 25 00.4**	**+1.4**
	baz=242						
CHN4	**Tsaushan**	**1.49**	**246**	*e*P	**Pb**	**06 24 41.1**	**+0.4**
	baz=244						
WTP	**Ta-pu**	**1.52**	**242**	*e*P	**Pb**	**06 24 41.0**	**-0.3**
	baz=240						
WTP				*e*S	**Sb**	**06 25 00.7**	**+0.6**
	baz=240						
IRIF	**Iriomote-Funau**	**1.56**	**76**	P	**Pn**	**06 24 40.2**	**+0.4**
IRIF				*e*S	**Sn**	**06 24 59.2**	**+0.1**
RLNB	**Erlin**	**1.57**	**268**	*e*S	**Sb**	**06 25 02.9**	**+1.3**
	baz=279						
HATJ	**Hateruma jima**	**1.59**	**86**	P	**Pn**	**06 24 40.3**	**+0.1**
HATJ				*e*S	**Sn**	**06 24 59.8**	**0.0**
TWK	**Hsinying**	**1.61**	**245**	*e*P	**Pb**	**06 24 42.6**	**-0.3**
	baz=243						
TWK				*e*S	**Sb**	**06 25 04.1**	**+1.3**
	baz=243						
CHN1	**Nanshi**	**1.61**	**242**	*e*P	**Pb**	**06 24 43.4**	**+0.4**
	baz=240						
CHN1				*e*S	**Sb**	**06 25 04.6**	**+1.7**
	baz=240						
SGST	**Jiashian**	**1.62**	**238**	*e*P	**Pn**	**06 24 41.4**	**+0.7**
	baz=236						
SLGT	**Liugui**	**1.62**	**234**	*e*P	**Pb**	**06 24 42.3**	**-0.8**
	baz=222						
SLGT				*e*S	**Sb**	**06 25 04.6**	**+1.4**
	baz=222						
ECL	**Taimali**	**1.70**	**217**	*e*P	**Pn**	**06 24 41.4**	**-0.4**
	baz=216						
JKRS	**Kuro-shima**	**1.79**	**81**	P	**Pn**	**06 24 44.0**	**+1.0**
JKRS				*e*S	**Sn**	**06 25 06.0**	**+1.1**
SSD	**Sandimen**	**1.79**	**228**	*e*P	**Pb**	**06 24 46.1**	**+0.1**
	baz=226						
MASBT	**Mashibuluo**	**1.88**	**225**	*e*P	**Pn**	**06 24 45.1**	**+0.9**
	baz=215						
EAST	**Anshuo**	**1.93**	**216**	*e*P	**Pn**	**06 24 46.0**	**+1.0**
	baz=214						
JIJ	**Ishigaki jima**	**1.93**	**78**	P	**Pn**	**06 24 45.3**	**+0.4**
JIJ				*e*S	**Sn**	**06 25 07.8**	**-0.6**
SCZT	**Fangliau**	**2.07**	**221**	*e*P	**Pb**	**06 24 49.4**	**-1.3**
	baz=214						
JISG	**Ishigakijimahi**	**2.14**	**72**	P	**Pn**	**06 24 47.7**	**0.0**
PHUB	**P'eng-hu**	**2.33**	**260**	*e*P	**Pn**	**06 24 51.3**	**+0.8**
	baz=258						
PHUB				*e*S	**Sn**	**06 25 19.3**	**+1.0**
	baz=258						
PNG	**Penghu**	**2.34**	**261**	*e*P	**Pn**	**06 24 52.0**	**+1.4**
	baz=259						
VWUC	**VWUC**	**2.60**	**294**	*e*P	**Pn**	**06 24 54.1**	**-0.1**
	baz=292						
PTMZ	**Houxiangcun**	**2.90**	**292**	*e*P	**Pn**	**06 24 58.2**	**0.0**
	baz=291						
MATB	**Ma-tsu**	**2.91**	**319**	*e*P	**Pn**	**06 24 58.0**	**-0.4**
	baz=318						
KNMB	**Chin-men Tao**	**3.40**	**279**	*e*P	**Pn**	**06 25 05.4**	**+0.3**
	baz=277						
AXDP	**Jialang**	**3.86**	**285**	*e*P	**Pn**	**06 25 11.8**	**+0.4**
	baz=283						

IDC ***12*** *06:43:00.2±3.7,54˚.30N×161˚.42W,h0km,mb3.3/2, mb1 3.4/5,mb1mx3.2/63,mbtmp3.2/5,ML3.1/3,Error ellipse: s-maj=86.9km s-min=24.9km az=157.0*
AEIC ***12*** *06:43:05±2.3,54˚.34N±0˚.03×161˚.48W±0˚.05,h28km±6km, ML3.1,mb3.7/5(NEIC),Error ellipse: s-maj=4.4km s-min=3.7km az=143.0*
NEIC ***12*** *06:43:06.3±1.6,54˚.31N±0˚.06×161˚.43W±0˚.06, h47km±16km,Error ellipse: s-maj=9.3km s-min=5.1km az=170.0*

ISC 12 06:43:06.1±1.4,54˚.3N±0˚.1×161˚.39W±0˚.05,h55km±16km, n48,σ1ᵍ15/48,mb3.7/4,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**1.16**	**27**	Pn	**Pn**	**06 43 25.6**	**-0.4**
SDPT					**Sn**	**06 43 40.4**	**-0.5**
CNBA	**Chernabura Isl**	**1.16**	**64**	Pn	**Pn**	**06 43 25.9**	**-0.1**
CNBA					**Sn**	**06 43 41.4**	**+0.5**
PNTA	**Pavlof North-7**	**1.17**	**343**		**Pn**	**06 43 25.7**	**-0.5**
BALA	**Baldy Mountain**	**1.19**	**318**		**Pn**	**06 43 25.8**	**-0.7**
FALS	**False Pass**	**1.30**	**295**		**Pn**	**06 43 26.6**	**-1.3**
FALS	**False Pass**	**1.30**	**295**		**Sn**	**06 43 42.1**	**-2.1**
BLHA	**Black Hill**	**1.44**	**345**		**Pn**	**06 43 29.8**	**-0.1**
BLHA					**Sn**	**06 43 47.7**	**0.0**
ISNN	**Isanotski Nort**	**1.48**	**291**		**Pn**	**06 43 30.2**	**-0.2**
SSLW	**Shishaldin Wes**	**1.66**	**287**		**Pn**	**06 43 32.8**	**0.0**
SSBA	**Shishaldin**	**1.66**	**287**		**Pn**	**06 43 32.8**	**-0.1**
SSBA					**Sn**	**06 43 53.0**	**-0.1**
WESP	**Westdahl Peak**	**1.96**	**276**		**Pn**	**06 43 37.0**	**+0.1**
VNWF	**Veniaminof 8**	**2.11**	**29**		**Pn**	**06 43 40.5**	**+1.4**
VNSS	**Veniaminof 8**	**2.21**	**29**		**Pn**	**06 43 42.2**	**+1.7**
VNFG	**Fog Glacier, M**	**2.23**	**27**		**Pn**	**06 43 42.4**	**+1.8**
AKSA	**Akutan Strait**	**2.54**	**268**		**Pn**	**06 43 45.0**	**+0.3**
AKUT	**Akutan**	**2.58**	**268**	Pn	**Pn**	**06 43 46.1**	**+0.8**
AKUT				Sn	**Sn**	**06 44 15.5**	**+0.1**
CHGN	**Chignik**	**2.61**	**39**	Pn	**Pn**	**06 43 47.6**	**+1.9**
CHGN				Sn	**Sn**	**06 44 18.4**	**+2.2**
AKLV	**Akutan Long Va**	**2.69**	**268**		**Pn**	**06 43 47.1**	**+0.2**
UNV	**Unalaska Valle**	**3.05**	**263**		**Pn**	**06 43 51.2**	**-0.5**
MSW	**Makushin Switc**	**3.20**	**265**		**Pn**	**06 43 53.9**	**+0.1**
OHAK	**Old Harbor**	**5.42**	**54**	Pn	**Pn**	**06 44 24.5**	**+0.3**
SPIA	**Saint Paul Isl**	**5.76**	**303**	Pn	**Pn**	**06 44 29.7**	**+0.8**
KDAK	**Kodiak Island**	**6.03**	**51**	Pn	**Pn**	**06 44 32.1**	**-0.4**
	0.5nm,0.3s,baz=238,slow=19,SNR=13						
KDAK				Sn	**Sn**	**06 45 36.8**	**-3.3**
	baz=233,slow=17,SNR=1.0						
KDAK				Lg	Lg	06 46 02.8	
	1.0nm,0.3s,baz=257,slow=19,SNR=6.4						
KDAK	**Kodiak Island**	**6.03**	**51**		**Pn**	**06 44 34.1**	**+1.6**
CNPM	**China Poot**	**7.62**	**43**	Pn	**Pn**	**06 44 56.2**	**+1.9**
SEW	**Seward**	**8.68**	**43**	Pn	**Pn**	**06 45 09.8**	**+1.0**
RC01	**Rabbit Creek A**	**9.20**	**38**	Pn	**Pn**	**06 45 16.4**	**+0.4**
GHO	**Glory Hole Cre**	**9.96**	**36**	Pn	**Pn**	**06 45 25.7**	**-0.7**
HIN	**Hinchinbrook I**	**10.07**	**47**	Pn	**Pn**	**06 45 28.4**	**+0.5**
FID	**Port Fidalgo**	**10.27**	**45**	Pn	**Pn**	**06 45 31.4**	**+0.9**
SCM	**Sheep Creek Mo**	**10.57**	**39**	Pn	**Pn**	**06 45 34.3**	**-0.4**
RAGM	**Ragged Mountai**	**10.86**	**49**	Pn	**Pn**	**06 45 40.0**	**+1.3**
DHY	**Denali Highway**	**11.38**	**34**	Pn	**Pn**	**06 45 45.4**	**-0.4**
ILAR	**Eielson Array**	**12.76**	**29**	Pn	Pn	06 45 58.3	-6.1
	0.0nm,0.3s,baz=219,slow=14,SNR=1.7						
TOLK	**Toolik Lake Re**	**15.39**	**16**	Pn	**Pn**	**06 46 40.0**	**+0.7**
INK	**Inuvik**	**19.11**	**32**	P	**P**	**06 47 23.8**	**-0.2**
	0.1nm,0.3s,baz=222,slow=12,SNR=4.9						
INK	**Inuvik**	**19.11**	**32**	P	**Pn**	**06 47 24.5**	**-0.8**
INK				IAmb	IAmb	06 47 33.4	
	comp=Z,2.0nm,1.2s						
C36M	**Paulatuk**	**22.63**	**34**	P	**P**	**06 47 59.2**	**-2.7**
C36M				IAmb	IAmb	06 47 59.4	
	comp=Z,4.7nm,1.4s						
PEA0B	**Petropavlovsk-**	**24.01**	**284**	P	**P**	**06 48 16.4**	**+1.1**
PETK	**Petropavlovsk-**	**24.01**	**284**	P	**P**	**06 48 16.2**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=87,slow=12,SNR=4.2						
PGC	**Sidney**	**24.08**	**88**	P	**P**	**06 48 15.1**	**-0.9**
PGC				IAmb	IAmb	06 48 32.9	
	comp=Z,10nm,1.2s						
YKA	**Yellowknife Ar**	**25.31**	**52**	P	**P**	**06 48 28.0**	**+1.0**
	comp=Z,0.1nm,0.6s,baz=264,slow=8.6,SNR=3.0						
H11N2	**WAKE ISLAND Hy**	**42.15**	**228**	T	T	07 35 45.1	
	baz=27,slow=76,SNR=8.3						
H11N3	**WAKE ISLAND Hy**	**42.15**	**228**	T	T	07 35 42.6	
	baz=27,slow=76,SNR=9.6						
H11N1	**WAKE ISLAND Hy**	**42.16**	**228**	T	T	07 35 46.9	
	baz=27,slow=76,SNR=7.4						
H11S1	**WAKE ISLAND Hy**	**43.31**	**227**	T	T	07 37 11.8	
	baz=26,slow=76,SNR=16						
H11S2	**WAKE ISLAND Hy**	**43.33**	**227**	T	T	07 37 12.9	
	baz=26,slow=76,SNR=10						
H11S3	**WAKE ISLAND Hy**	**43.33**	**227**	T	T	07 37 13.1	
	baz=26,slow=76,SNR=9.0						

IDC ***12*** *06:45:40.8±2.0,30˚.24N×57˚.06E,h0km,mb3.6/4, mb1 3.7/5,mb1mx3.4/52,mbtmp3.7/5,ML3.5/1,MS3.0/3, Ms1 3.0/3,ms1mx2.6/43,Error ellipse: s-maj=44.1km s-min=23.7km az=139.0*
THR ***12*** *06:45:40.5±0.7,30˚.43N×56˚.84E,h15km±5km,ML4.1*
TEH ***12*** *06:45:42.4,30˚.59N×56˚.90E,h10km,ML4.1*
DSN ***12*** *06:45:48.8±1.6,30˚.41N×57˚.48E,h15km,ML4.0/5,Error ellipse: s-maj=196.4km s-min=14.7km az=103.0*

ISC 12 06:45:40.1±0.6,30˚.31N±0˚.03×57˚.11E±0˚.03,h10km,n68, σ1ᵍ87/64,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVBK	**TV Kerman**	**0.44**	**223**	*e*Pg	**Pn**	**06 45 54.7**	**+1.9**
KRBR	**Kerman**	**0.44**	**223**	*e*Pg	**Pb**	**06 45 50.2**	**0.0**
KRBR				*e*Sg	**Sb**	**06 45 56.2**	**-0.7**
KRBR	**Kerman**	**0.44**	**223**	*e*Pn	**Pb**	**06 45 50.2**	**0.0**
KHGB	**Koh Gabri**	**0.55**	**277**	*e*Pg	**Pg**	**06 45 50.5**	**-0.3**
KHGB				*e*Sg	**Sg**	**06 45 56.4**	**-1.7**
CHMN	**Cheshme madani**	**0.58**	**140**	*e*Pg	Pn	06 45 59.5	+4.7
NGRK	**Negar Kerman**	**0.73**	**206**	*e*Pg	**Pn**	**06 46 01.0**	**+4.1**
NGRK				*e*		06 46 15.6	
IBAF	**Bafgh**	**1.84**	**314**	*e*Pn	**Pn**	**06 46 10.0**	**-1.9**
IBAF				*e*		06 46 36.1	
BSRN	**Basiran**	**2.40**	**46**	*e*Pn	**Pb**	**06 46 22.6**	**-0.9**
BSRN				IAML		06 47 05.2	
	comp=N,756nm,0.9s						
BSRN	**Basiran**	**2.40**	**46**	*e*Pn	**Pb**	**06 46 22.6**	**-0.9**
IMEH	**Mehriz**	**2.40**	**297**	*e*Pn	**Pn**	**06 46 19.5**	**-0.2**
IMEH				*e*		06 46 52.1	
IKOO	**Kooshah**	**2.66**	**37**	*e*Pn	**Pb**	**06 46 25.5**	**-2.6**
IKOO				*e*		06 47 12.5	
TPRV	**Parvadeh(Tabas**	**2.74**	**353**	*e*Pn	**Pn**	**06 46 23.5**	**-0.7**
NHDN	**Nehbandan**	**2.75**	**66**	*e*Pn	**Pb**	**06 46 29.0**	**-0.6**
ITEG	**Tejag**	**2.94**	**28**	*e*Pn	**Pn**	**06 46 28.2**	**+1.1**
ITEG				*e*		06 47 22.3	
YZKH	**Yazd**	**2.99**	**315**	IAML		06 47 07.4	
	comp=N,609nm,0.3s						
YZKH				IAML		06 47 08.3	
	comp=E,783nm,0.6s						
GENO	**Geno**	**3.01**	**196**	*e*Pn	**Pb**	**06 46 35.2**	**+1.3**
BNDS	**Bandar-Abbas**	**3.01**	**196**	*e*Pn	**Pb**	**06 46 30.9**	**-3.0**
BNDS	**Bandar-Abbas**	**3.01**	**196**	*e*Pn	**Pb**	**06 46 30.9**	**-3.0**
ICHK	**Chekchek**	**3.01**	**311**	*e*Pn	**Pn**	**06 46 28.3**	**+0.2**
ICHK				*e*		06 47 10.9	
ZHSF	**Zahedan**	**3.26**	**101**	*e*Pn	**Pb**	**06 46 36.5**	**-1.7**
ZHSF	**Zahedan**	**3.26**	**101**	*e*Pn	**Pb**	**06 46 36.5**	**-1.7**
TKDS	**Kouhdasht(Taba**	**3.30**	**0**	*e*Pn	**Pb**	**06 46 31.4**	**-0.6**
TABS	**Tabas**	**3.33**	**0**	*e*Pn	**Pn**	**06 46 32.2**	**-0.2**
TABS	**Tabas**	**3.33**	**0**	*e*Pn	**Pn**	**06 46 32.2**	**-0.2**
ISAD	**Sadrabad**	**3.34**	**300**	*e*Pn	**Pn**	**06 46 33.0**	**+0.3**
ISAD				*e*		06 47 19.8	
SZD1	**Zahaedan-tmp**	**3.37**	**103**	*e*Pn	**Pb**	**06 46 40.5**	**+0.5**
IDAH	**Dahanechah**	**3.38**	**43**	*e*Pn	**Pb**	**06 46 37.0**	**-3.4

baz=200,slow=33,SNR=2.1
GEYT LR LR 06 51 01.7
comp=E,58nm,18.8s,baz=220,slow=42
BRTR Keskin Array B 21.34 302 P **P** **06 50 30.6 +3.0**
comp=E,0.6nm,0.6s,baz=118,slow=12,SNR=5.2
MKAR Makanchi Array 25.51 43 P **P** **06 51 11.7 +3.0**
comp=E,0.3nm,0.5s,baz=226,slow=9.1,SNR=3.4
ZALV Zalesovo Beam 30.96 32 P **P** **06 52 00.4 +3.1**
comp=E,0.6nm,0.3s,baz=234,slow=8.8,SNR=1.4
TORD Torodi Ar. Bea 53.72 264 P **P** **06 55 04.2 +1.5**
comp=E,1.1nm,0.6s,baz=58,slow=7.7,SNR=10
JNU Nakatsue 61.59 66 LR LR 07 28 38.0
comp=E,48nm,21.2s,baz=88,slow=42

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*DJA **12** 06:46:59.1±1.0,0°S±3°×12°4E±°, h12km±9km, M4.5/11, mB5.2/1, mb4.8/1, MLv4.3/11, Mw(mB)4.5/1*
*IDC **12** 06:47:03.3±5.6, 0.52S×124.06E, h75km±63km, mb3.7/7, mb1 3.9/9, mb1mx3.6/42, mbtmp4.1/9, ML3.7/2, Error ellipse: s-maj=49.6km s-min=19.1km az=71.0*
*NEIC **12** 06:47:03.8±2.7, 0.53S±0.06×124.40E±0.07, h76km±6km, mb4.3/14, Error ellipse: s-maj=9.7km s-min=8.8km az=91.0*
ISC 12 06:47:02.6±0.6,**0.40S**±0.05×**124.45E**±0.06,**h60**km,**n37**, σ2**36**/41,**mb4.2**/15,**Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.07**	**334**	P	**Pn**	**06 47 18.3**	**-3.3**
KMSI				S	**Sn**	**06 47 32.1**	**-3.6**
LUWI	**Luwuk**	**1.80**	**249**	P	**Pn**	**06 47 31.4**	**0.0**
LUWI	**Luwuk**	**1.80**	**249**	Pn	**Pn**	**06 47 31.9**	**+0.5**
LUWI				Sn	**Sn**	**06 47 56.0**	**+2.8**
SANI	**Sanana**	**2.25**	**137**	P	**Pn**	**06 47 35.5**	**-2.0**
MRSI	**Marisa**	**2.66**	**289**	P	**Pn**	**06 47 38.9**	**-4.2**
APSI	**Ampana**	**2.85**	**260**	P	**Pn**	**06 47 45.4**	**-0.3**
TNTI	**Ternate**	**3.14**	**68**	P	**Pn**	**06 47 48.5**	**-1.1**
TNTI	**Ternate**	**3.14**	**68**	Pn	**Pn**	**06 47 52.6**	**+3.0**
NLAI	**Namlea**	**3.87**	**137**	P	**Pn**	**06 47 59.0**	**-0.7**
MPSI	**Mapaga**	**4.61**	**279**	P	**Pn**	**06 48 14.3**	**+4.5**
TTSI	**Tana Toraja**	**5.33**	**240**	P	**Pn**	**06 48 18.6**	**-1.0**
KAPI	**Kappang**	**6.56**	**226**	P	**Pn**	**06 48 33.9**	**-2.7**
	1.6nm,0.3s,baz=112,slow=11,SNR=1.2						
KAPI				S	**Sn**	**06 49 48.4**	**-1.7**
	baz=250,slow=18,SNR=1.4						
FAKI	**Fak Fak**	**8.19**	**108**	Pn	**Pn**	**06 48 57.4**	**-1.5**
KNRA	**Kununurra**	**15.77**	**165**	P	**Pn**	**06 50 41.5**	**+0.4**
KNRA				IAmb	IAmb	06 50 45.1	
	comp=Z,14nm,0.6s						
FITZ	**Fitzroy Crossi**	**17.63**	**176**	P	**Pn**	**06 51 02.2**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=16,slow=10,SNR=8.4						
FITZ	**Fitzroy Crossi**	**17.63**	**176**	P	**Pn**	**06 51 03.0**	**-1.3**
WB0	**Warramunga Arr**	**21.57**	**154**	P	**P**	**06 51 46.3**	**-1.1**
WB0				IAmb	IAmb	06 51 51.7	
	comp=Z,13nm,0.8s						
WRAB	**Tennant Creek**	**21.70**	**154**	P	**P**	**06 51 45.6**	**-3.2**
WRAB				IAmb	IAmb	06 51 49.3	
	comp=Z,7.9nm,0.7s						
WRA	**Warramunga Arr**	**21.71**	**154**	P	**P**	**06 51 47.4**	**-1.4**
	comp=Z,8.0nm,0.8s,baz=334,slow=11,SNR=16						
WB2	**Warramunga Arr**	**21.71**	**154**	P	**P**	**06 51 47.7**	**-1.2**
WB2				IAmb	IAmb	06 51 53.3	
	comp=Z,8.5nm,0.7s						
WR0	**Warramunga Arr**	**21.81**	**154**	P	**P**	**06 51 48.1**	**-1.9**
WR0				IAmb	IAmb	06 51 54.9	
	comp=Z,13nm,1.0s						
COEN	**Coen**	**22.91**	**127**	P	**P**	**06 52 02.1**	**+0.3**
COEN				IAmb	IAmb	06 52 06.0	
	comp=Z,7.5nm,1.1s						
AS31	**Alice Springs**	**24.89**	**159**	P	**P**	**06 52 20.3**	**+0.3**
ASAR	**Alice Springs**	**24.89**	**159**	P	**P**	**06 52 20.3**	**+0.3**
	comp=Z,4.7nm,0.7s,baz=324,slow=6.7,SNR=50						
JOW	**Kunigami**	**27.32**	**7**	P	**P**	**06 52 44.0**	**+2.1**
FORT	**Forrest**	**30.41**	**174**	P	**P**	**06 53 08.6**	**-0.7**
BBOO	**Buckleboo**	**34.05**	**162**	P	**P**	**06 53 42.1**	**+0.9**
MJAR	**Matsushiro Arr**	**38.91**	**18**	P	**P**	**06 54 22.8**	**+0.2**
	comp=Z,2.5nm,0.5s,baz=194,slow=9.0,SNR=6.3						
USRK	**Ussuriysk Ar.**	**44.91**	**8**	P	**P**	**06 55 12.1**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=191,slow=8.5,SNR=4.5						
KLR	**Kul'dur**	**49.83**	**6**	P	**P**	**06 55 49.9**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=217,slow=5.1,SNR=2.0						
KSH	**Kashi**	**59.44**	**318**	P	**P**	**06 57 01.8**	**+2.3**
KSH				sP	sP	06 57 26.8	+6.0
KSH				PP	**PP**	**06 59 18.6**	**+7.2**
KSH				S	**S**	**07 05 04.0**	**-0.5**
KSH	**Kashi**	**59.44**	**318**	SS	SS	07 09 00.1	-0.5
KSH				pmax	pmax		
	comp=Z,17nm,1.1s						
KSH				pmax	pmax		
	comp=Z,150nm,4.7s						
KSH				LR	LR		
	comp=N,99nm,9.9s						
KSH				LR	LR		
	comp=E,100nm,7.2s						
KSH				LR	LR		
	comp=Z,340nm,5.6s						
MKAR	**Makanchi Array**	**59.72**	**328**	P	**P**	**06 56 58.3**	**-2.9**
	comp=Z,0.9nm,0.5s,baz=124,slow=8.9,SNR=4.8						
PETK	**Petropavlovsk-**	**60.08**	**22**	P	**P**	**06 57 05.8**	**+2.3**
	comp=Z,0.9nm,0.5s,baz=214,slow=2.1,SNR=5.2						
CHGR	**Chuyangaron**	**63.80**	**314**	P	**P**	**06 57 26.5**	**-2.4**
CHGR				IAmb	IAmb	06 57 28.4	
	comp=Z,4.9nm,0.8s						
KURK	**Kurchatov**	**64.05**	**330**	P	**P**	**06 57 27.4**	**-2.7**
KURK				IAmb	IAmb	06 57 29.0	
	comp=Z,3.1nm,0.5s						
TIXI	**Tiksi**	**71.98**	**1**	P	**P**	**06 58 19.8**	**+0.3**

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*NEIC **12** 06:59:49.4±3.0, 17.25N±0.07×95.52W±0.02, h101km±12km, Error ellipse: s-maj=9.6km s-min=2.7km az=179.0*
*MEX **12** 06:59:50.5±1.0, 17.24N×95.51W, h105km±7km, MD4.0*
ISC 12 06:59:49.1±1.4,**17.24N**±0.05×**95.51W**±0.03, **h106**km±11**km**,**n22**,σ1**25**/39,**Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.62**	**104**	*eP*	**Pn**	**07 00 06.7**	**+0.3**
CMIG				*i* S	**Sn**	**07 00 18.8**	**-0.5**
CMIG	**Matias Romero**	**0.62**	**104**		**Pn**	**07 00 06.7**	**+0.3**
CMIG					**Sn**	**07 00 18.8**	**-0.5**
VHO	**Vista Hermosa**	**1.18**	**262**	*eP*	**Pn**	**07 00 12.3**	**+0.2**
VHO				*i* S	**Sn**	**07 00 29.2**	**-0.2**
TUIG	**Tuzandepetl**	**1.31**	**53**	*i* P	**Pn**	**07 00 13.6**	**+0.2**
TUIG				*i* S	**Sn**	**07 00 31.8**	**+0.1**
TUIG	**Tuzandepetl**	**1.31**	**53**		**Pn**	**07 00 13.6**	**+0.2**
TUIG					**Sn**	**07 00 31.1**	**-0.5**
HUIG	**Huatulco**	**1.57**	**201**	*eP*	**Pn**	**07 00 16.5**	**-0.1**
HUIG				*i* S	**Sn**	**07 00 37.9**	**+0.5**
HUIG	**Huatulco**	**1.57**	**201**		**Pn**	**07 00 16.5**	**-0.1**
HUIG					**Sn**	**07 00 37.9**	**+0.5**
TOIG	**Toxpalan**	**1.71**	**300**	*eP*	**Pn**	**07 00 19.4**	**+1.1**
TOIG				*i* S	**Sn**	**07 00 41.2**	**+0.7**
YOIG	**Yosondua**	**1.98**	**259**	*eP*	**Pn**	**07 00 22.6**	**+0.7**
YOIG				*i* S	**Sn**	**07 00 48.2**	**+1.3**
PEIG	**Puerto Escondi**	**2.00**	**232**	*i* P	**Pn**	**07 00 21.0**	**-0.9**
TGIG		**2.33**	**101**	*eP*	**Pn**	**07 00 26.5**	**+0.2**
TGIG				*i* S	**Sn**	**07 00 53.8**	**-1.0**
TGIG		**2.33**	**101**		**Pn**	**07 00 26.5**	**+0.2**
TGIG					**Sn**	**07 00 53.8**	**-1.0**
PNIG	**Pinotepa**	**2.64**	**252**	*eP*	**Pn**	**07 00 29.3**	**-1.0**
PNIG				*i* S	**Sn**	**07 01 01.7**	**-0.2**
PNIG	**Pinotepa**	**2.64**	**252**		**Pn**	**07 00 29.2**	**-1.0**
PNIG					**Sn**	**07 01 00.7**	**-1.2**
PCIG		**2.68**	**124**	*eP*	**Pn**	**07 00 31.4**	**+0.7**
PCIG				*eS*	**Sn**	**07 01 02.7**	**0.0**
PCIG		**2.68**	**124**		**Sn**	**07 01 04.1**	**+1.4**
TLIG	**Tlapa**	**2.93**	**277**		**Pn**	**07 00 35.5**	**+1.3**
TLIG				Sn	**Sn**	**07 01 05.1**	**-3.8**
CCIG	**Comitan**	**3.37**	**106**	*i* S	**Sn**	**07 01 19.8**	**+0.3**
CCIG				*i* S	**Sn**	**07 01 20.1**	**+0.6**
CCIG	**Comitan**	**3.37**	**106**		**Pn**	**07 00 41.6**	**+1.5**
CCIG				Sn	**Sn**	**07 01 15.3**	**-4.2**
TEIG	**Tepich**	**7.47**	**65**	Pn	**Pn**	**07 01 36.3**	**+0.9**
TGUH	**Tegucigalpa,Un**	**8.54**	**111**	Pn	**Pn**	**07 01 51.5**	**+1.3**
CRIN	**San Cristobal**	**9.34**	**118**	Pn	**Pn**	**07 02 00.1**	**-0.8**

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*IDC **12** 07:22:15.1±14.0, 15.99S×174.86W, h208km±143km, mb3.5/10, mb1 3.8/10, mb1mx3.6/38, mbtmp4.1/10, Error ellipse: s-maj=33.6km s-min=23.4km az=171.0*

*NEIC **12** 07:22:23.8±1.3, 16.0S±0.1×175.1W±0.1, h290km±8km, mb4.1/14, Error ellipse: s-maj=18.4km s-min=13.4km az=127.0*
ISC 12 07:22:22.8±0.6,**16.00S**±0.09×**175.11W**±0.09,**h278**km, **n27**,σ1**04**/29,**mb3.9**/19,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.83**	**58**		**Pn**	**07 23 27.4**	**+1.2**
AFI				S	**S**	**07 24 17.2**	**+0.5**
NIUE	**Niue**	**5.81**	**122**		**Pn**	**07 23 49.7**	**+0.4**
NIUE				S	**S**	**07 24 59.7**	**+1.0**
URZ	**Urewera**	**23.21**	**196**	P	**P**	**07 27 03.7**	**-1.7**
	4.6nm,0.6s,baz=294,slow=3.4,SNR=5.7						
BKZ	**Black Stump Fm**	**24.22**	**196**	P	**P**	**07 27 13.6**	**-1.1**
BKZ				IAmb	IAmb	07 27 31.5	
	comp=Z,14nm,1.3s						
LTZ	**Lake Taylor**	**28.79**	**200**	P	**P**	**07 27 53.4**	**-2.0**
STKA	**Stephens Creek**	**42.31**	**240**	P	**P**	**07 29 51.0**	**+1.1**
	comp=Z,2.7nm,0.5s,baz=97,slow=11,SNR=7.1						
STKA	**Stephens Creek**	**42.31**	**240**	P	**P**	**07 29 51.0**	**+1.1**
BBOO	**Buckleboo**	**47.09**	**240**	P	**P**	**07 30 27.8**	**+0.3**
BBOO				IAmb	IAmb	07 30 46.7	
	comp=Z,13nm,1.2s						
WR0	**Warramunga Arr**	**47.92**	**257**	P	**P**	**07 30 31.8**	**-2.2**
WB0	**Warramunga Arr**	**48.07**	**258**	P	**P**	**07 30 36.0**	**+0.9**
WB2	**Warramunga Arr**	**48.10**	**257**	P	**P**	**07 30 36.1**	**+0.7**
WB2				IAmb	IAmb	07 30 36.9	
	comp=Z,5.7nm,0.8s						
WRA	**Warramunga Arr**	**48.11**	**257**	P	**P**	**07 30 35.9**	**+0.4**
	comp=Z,3.2nm,0.6s,baz=91,slow=6.8,SNR=17						
AS31	**Alice Springs**	**48.36**	**252**	P	**P**	**07 30 37.9**	**+0.5**
AS31				IAmb	IAmb	07 30 39.5	
	comp=Z,8.9nm,0.8s						
ASAR	**Alice Springs**	**48.36**	**252**	P	**P**	**07 30 38.1**	**+0.8**
	comp=Z,38nm,0.5s,baz=87,slow=7.9,SNR=526						
FORT	**Forrest**	**53.68**	**243**	P	**P**	**07 31 17.0**	**+0.4**
FITZ	**Fitzroy Crossi**	**56.48**	**259**	P	**P**	**07 31 38.0**	**+1.3**
	comp=Z,1.5nm,0.7s,baz=190,slow=8.4,SNR=2.3						
FITZ	**Fitzroy Crossi**	**56.48**	**259**	P	**P**	**07 31 37.8**	**+1.1**
PETK	**Petropavlovsk-**	**72.72**	**343**	P	**P**	**07 33 20.3**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=114,slow=18,SNR=5.3						
QSPA	**South Pole Qui**	**74.04**	**180**	P	**P**	**07 33 28.6**	**+0.3**
QSPA				IAmb	IAmb	07 33 43.6	
	comp=Z,4.0nm,1.3s						
YBH	**Yreka Blue Hor**	**75.08**	**38**	P	**P**	**07 33 34.5**	**0.0**
YBH				IAmb	IAmb	07 33 35.1	
	comp=Z,2.0nm,0.7s						
YERR	**Yerington**	**75.59**	**42**	P	**P**	**07 33 36.7**	**-0.9**
YERR				IAmb	IAmb	07 33 37.7	
	comp=Z,1.4nm,0.6s						
NVAR	**Mina Array Bea**	**75.88**	**43**	P	**P**	**07 33 38.6**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=226,slow=8.7,SNR=10						
TXAR	**Lajitas Array**	**82.31**	**57**	P	**P**	**07 34 13.5**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=204,slow=5.5,SNR=5.2						
CCB	**Clear Creek Bu**	**83.07**	**11**	P	**P**	**07 34 16.4**	**-0.5**
CCB				IAmb	IAmb	07 34 16.9	
	comp=Z,6.8nm,1.4s						
ILAR	**Eielson Array**	**83.36**	**12**	P	**P**	**07 34 17.6**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=231,slow=5.7,SNR=7.8						
PDAR	**Pinedale Array**	**83.81**	**42**	P	**P**	**07 34 20.3**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=202,slow=3.3,SNR=10						
MAW	**Mawson**	**86.69**	**199**	P	**P**	**07 34 35.2**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=102,slow=3.2,SNR=2.2						

TRN 12 08:02:21.5,18.16N×61.78W,h20km,MD3.5,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANWB	**Willy Bob**	**0.49**	**180**	*eP*	Pn	08 02 33.8	+0.4
ANWB				*eS*	Sn	08 02 41.4	+0.1
SKI	**Saint Kitts**	**1.23**	**228**	*eP*	Pg	08 02 45.3	0.0
SKI				*eS*	Sg	08 03 02.2	+0.8
SMRT	**St. Maarten**	**1.23**	**265**	*eP*	Pg	08 02 45.2	-0.2
SMRT				*eS*	Sg	08 03 02.6	+1.0
SKOC	**St. Kitts, UWI**	**1.25**	**226**	*eP*	Pg	08 02 45.7	-0.1
SKOC				*eS*	Sg	08 03 03.1	+1.0
NVDO	**Nevis, Disaste**	**1.31**	**218**	*eP*	Pg	08 02 46.5	-0.4
NVDO				*eS*	Sg	08 03 04.8	+0.8
SEUS	**St. Eustatius**	**1.32**	**240**	*eP*	Pb	08 02 46.2	+0.6
SEUS				*eS*	Sg	08 03 05.1	+0.7
MLYT	**Lee's Yard**	**1.48**	**195**	*eP*	Pb	08 02 49.2	+0.8
MLYT				*eS*	Sg	08 03 09.5	0.0
SABA	**Saba**	**1.49**	**249**	*eP*	Pb	08 02 49.3	+0.8
SABA				*eS*	Sg	08 03 08.5	-1.3
ABD	**La Joyeuse, An**	**1.70**	**170**	*eP*	Pb	08 02 52.1	0.0
ABD				*eS*	Sb	08 03 14.0	+1.0
CBE	**Ff, Capester**	**2.09**	**175**	*eP*	Pn	08 02 56.6	+1.2
CBE				*eS*	Sb	08 03 23.6	-0.7
MAGL	**Barre de l'ile**	**2.25**	**168**	*eP*	Pb	08 02 59.9	-1.6
MAGL				*eS*	Sb	08 03 27.9	-1.1
TDBA	**Terre de Bas,**	**2.30**	**176**	*eP*	Pb	08 03 00.6	-1.8
TDBA				*eS*	Sb	08 03 28.4	-2.0
BIM	**Bigot**	**3.69**	**169**	*eP*	Pn	08 03 20.0	+2.6
BIM				*eS*	Sn	08 04 02.0	+1.6
MPOM	**Morne Pois Mar**	**3.80**	**166**	*eP*	Pn	08 03 20.7	+1.8
MPOM				*eS*	Sn	08 04 04.2	+1.1

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*IDC **12** 08:11:07.1±13.0, 14.87S×165.80E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.6/42, mbtmp3.8/4, ML3.6/1, Error ellipse: s-maj=237.6km s-min=37.6km az=56.0*
*NEIC **12** 08:11:07.3±1.7, 14.8S±0.1×165.9E±0.2, h10km±1km, mb4.1/2, Error ellipse: s-maj=34.7km s-min=18.5km az=297.0*
ISC 12 08:11:07.5±1.5,**14.8S**±0.1×**165.9E**±0.2,**h10**km,**n8**, σ0**58**/10,**mb3.7**/4,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.24**	**176**	Pn	**Pn**	**08 12 53.8**	**+0.4**
	1.0nm,0.3s,baz=7.1,slow=16,SNR=20						
DZM				Sn	**Sn**	**08 14 16.0**	**+0.2**
	0.5nm,0.3s,baz=322,slow=19,SNR=0.9						
DZM	**Mont Dzumac**	**7.24**	**176**		**Pn**	**08 12 53.9**	**+0.4**
DZM					**Sn**	**08 14 14.8**	**-1.0**
STKA	**Stephens Creek**	**27.93**	**228**	P	**P**	**08 16 58.5**	**+0.4**
	0.9nm,0.4s,baz=32,slow=13,SNR=4.3						
STKA	**Stephens Creek**	**27.93**	**228**	P	**P**	**08 16 57.3**	**-0.8**
STKA				IAmb	IAmb	08 17 03.8	
	comp=Z,1.3nm,1.5s						
WRA	**Warramunga Arr**	**30.51**	**256**	P	**P**	**08 17 20.9**	**-0.2**
	comp=Z,0.5nm,0.9s,baz=85,slow=8.8,SNR=1.9						
ASAR	**Alice Springs**	**31.40**	**249**	P	**P**	**08 17 29.4**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=79,slow=8.8,SNR=7.3						
BBOO	**Buckleboo**	**32.48**	**231**	P	**P**	**08 17 38.2**	**-0.1**
BBOO				IAmb	IAmb	08 17 46.5	
	comp=Z,14nm,1.2s						
RSO	**Redoubt South**	**82.01**	**19**	P	**P**	**08 23 27.5**	**-0.1**

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*NIED **12** 08:19:00,28.30N×139.10E,h480km,Mw4.8 Best double couple: M0 2.00000×10^16 NP1:φs13.0000°, δ73.00000°, λ155.00000°. NP2:φs110.00000°, δ66.00000°, λ19.00000°.*
*BJI **12** 08:19:32.7±0.0,28.17N×139.09E,h518km,mB4.7/39, mb4.9/61*
*JMA **12** 08:19:35.2±0.3,28.32N×139.15E,h544km±5km,M4.9*
*IDC **12** 08:19:36.9±0.6,28.33N×138.87E,h534km±7km,mb4.1/42, mb1 4.2/49,mb1mx4.2/57,mbtmp5.0/49, Error ellipse: s-maj=7.8km s-min=5.6km az=87.0*
*NEIC **12** 08:19:36.3±1.7,28.29N±0.07×138.84E±0.10, h529km±4km,mb4.5/199, Error ellipse: s-maj=12.4km s-min=10.4km az=107.0*
ISC 12 08:19:36.5±0.4,**28.31N**±0.04×**138.95E**±0.04,**h534**km±4km, **n328**,σ1**37**/366,**mb4.5**/153,**3C-3D**,**Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.11**	**112**	P	**P**	**08 20 49.8**	**-1.1**
CBIJ				S	**S**	**08 21 48.9**	**-2.6**
JCJ	**Chichijima**	**3.11**	**112**	P	**P**	**08 20 50.0**	**-0.9**
	194nm,0.3s,baz=9.1,slow=12,SNR=251						
JCJ				S	**S**	**08 21 48.1**	**-3.4**
	181nm,0.3s,baz=268,slow=23,SNR=20						
JHH2	**Haha-jima-NKT2**	**3.32**	**119**	P	**P**	**08 20 51.5**	**-0.8**
JHH2				S	**S**	**08 21 51.9**	**-2.1**
JHJ2	**Mitsune**	**4.84**	**9**	P	**P**	**08 21 04.1**	**+0.2**
JHJ2	**Mitsune**	**4.84**	**9**	P	**P**	**08 21 04.0**	**+0.1**
JHJ2				S	**S**	**08 22 14.1**	**-1.4**
JHJ	**Hachijo jima 2**	**4.85**	**8**	P	**P**	**08 21 04.3**	**+0.4**
	168nm,0.3s,baz=13,slow=9.6,SNR=89						
JHJ				S	**S**	**08 22 12.1**	**-3.4**
	119nm,0.3s,baz=75,slow=21,SNR=4.9						
TTO1	**TONANKAI O.B.S**	**5.61**	**341**	P	**P**	**08 21 12.4**	**+2.1**
JTNC	**Tanabenakahech**	**6.19**	**333**	P	**P**	**08 21 17.3**	**+1.3**
JTNC				*eS*	**S**	**08 22 38.0**	**+0.5**
JIE	**Ise**	**6.36**	**343**	P	**P**	**08 21 18.4**	**+0.9**
JIE				*eS*	**S**	**08 22 40.1**	**-0.2**
BSO1	**Boso 1**	**6.56**	**15**	P	**P**	**08 21 18.9**	**+0.1**
BSO1				S	**S**	**08 22 41.1**	**-1.7**
JOD2	**Odawara 2**	**6.94**	**1**	P	**P**	**08 21 22.1**	**-0.9**
JOD2				S	**S**	**08 22 48.4**	**-2.1**
JTO	**Tosashimizu**	**6.97**	**312**	P	**P**	**08 21 24.9**	**+1.4**
INU	**Inuyama**	**7.21**	**347**	P	**P**	**08 21 26.4**	**+0.7**
INU				S	**S**	**08 22 53.0**	**-2.3**
JRY	**Ryogami san**	**7.69**	**360**	P	**P**	**08 21 29.7**	**-0.7**
JRY				S	**S**	**08 22 59.2**	**-4.8**
MJAR	**Matsushiro Arr**	**8.23**	**356**	P	**P**	**08 21 34.7**	**-1.2**
	9.9nm,0.3s,baz=169,slow=11,SNR=361						
MJAR				S	**S**	**08 23 12.2**	**-1.8**
	0.6nm,0.3s,baz=142,slow=14,SNR=6.3						
MAJO	**Matsushiro**	**8.23**	**356**	P	**P**	**08 21 34.9**	**-1.1**
MAJO				S	**S**	**08 23 09.6**	**-4.5**
MAT	**Matsushiro**	**8.23**	**356**	P	**P**	**08 21 34.8**	**-1.1**
MAT				S	**S**	**08 23 09.9**	**-4.2**
MJB9	**Matsu-Tunnel**	**8.24**	**356**	P	**P**	**08 21 35.0**	**-1.0**
MJB9				S	**S**	**08 23 09.3**	**-4.9**
JHS	**Saijyo**	**8.32**	**325**	P	**P**	**08 21 37.8**	**+1.0**
JHS				S	**S**	**08 23 15.7**	**+0.1**
JNU	**Nakatsue**	**8.44**	**307**	P	**P**	**08 21 38.9**	**+0.7**
	7.4nm,0.3s,baz=46,slow=4.2,SNR=50						
JNU				S	**S**	**08 23 17.6**	**-0.4**
	0.2nm,0.3s,baz=45,slow=22,SNR=1.6						
JNU	**Nakatsue**	**8.44**	**307**	P	**P**	**08 21 39.1**	**+0.9**
JSJ	**Shimokoshiki**	**8.68**	**295**	P	**P**	**08 21 40.8**	**+0.3**
JOI	**OKI**	**9.30**	**330**	P	**P**	**08 21 47.1**	**+0.3**
JOW	**Kunigami**	**9.59**	**264**	P	**P**	**08 21 50.9**	**+1.0**
	2.1nm,0.3s,baz=85,slow=16,SNR=17						
JOW	**Kunigami**	**9.59**	**264**	P	**P**	**08 21 50.4**	**+0.5**
JMK	**Ichinoseki**	**10.78**	**10**	P	**P**	**08 22 02.3**	**+0.2**
JMK				*eS*	**S**	**08 23 59.4**	**-2.5**
KSRS	**Korea Array**	**12.99**	**317**	P	**P**	**08 22 23.9**	**-1.3**
	1.7nm,0.3s,baz=138,slow=10,SNR=34						
KS19	**Wonju Array Si**	**13.06**	**317**	P	**P**	**08 22 24.0**	**-1.8**
JOT	**Ohata**	**13.15**	**7**	P	**P**	**08 22 27.1**	**+0.3**
JKB	**Kayabe**	**13.65**	**7**	P	**P**	**08 22 32.1**	**+0.2**
JOSM	**Okushiri--Mats**	**13.75**	**2**	P	**P**	**08 22 33.1**	**+0.2**
INCN	**Inchon**	**13.80**	**315**	P	**P**	**08 22 32.5**	**-1.0**
ERM	**Erimo**	**14.10**	**13**	P	**P**	**08 22 37.3**	**+0.8**
JCH	**Churui**	**14.72**	**13**	P	**P**	**08 22 43.5**	**+0.5**
YOJ	**Yonaguni jima**	**14.79**	**259**	P	**P**	**08 22 42.0**	**-2.1**
YOJ	**Yonaguni jima**	**14.79**	**259**	P	**P**	**08 22 41.9**	**-2.1**
JHR	**Hokuryu**	**15.56**	**8**	P	**P**	**08 22 52.8**	**+1.0**
GUMO	**Guam**	**15.65**	**158**	P	**P**	**08 22 52.3**	**-0.8**
TATO	**Taipei**	**15.96**	**262**	P	**P**	**08 22 51.6**	**-4.5**
ASAJ	**Asahikawa**	**16.05**	**10**	P	**P**	**08 22 56.8**	**+0.2**
	2.8nm,0.3s,baz=231,slow=14,SNR=38						
ASAJ				S	**S**	**08 25 42.7**	**+2.2**
	0.1nm,0.3s,baz=22,slow=25,SNR=1.8						
JKA	**Kamikawa-asahi**	**16.05**	**10**	P	**P**	**08 22 56.8**	**+0.2**
JKA				S	**S**	**08 25 42.7**	**+2.2**
NACB	**Ninganchiao**	**16.10**	**259**	P	**P**	**08 22 54.2**	**-3.3**
JTKR	**Abashiri--Toko**	**16.13**	**13**	P	**P**	**08 22 58.4**	**+1.0**
YHNB	**Yeheng**	**16.14**	**261**	P	**P**	**08 22 54.9**	**-3.1**
YUJ	**Yu-ji**	**16.62**	**257**	P	**P**	**08 23 00.1**	**-1.6**
SSLB	**Suanglung**	**16.78**	**259**	P	**P**	**08 23 02.9**	**-1.2**
USA0B	**Ussuriysk Arra**	**16.81**	**342**	P	**P**	**08 23 04.0**	**0.0**
USRK	**Ussuriysk Ar.**	**16.81**	**342**	P	**P**	**08 23 04.3**	**+0.4**
	baz=159,slow=9.7,SNR=129						
TWG	**Pinlang**	**17.02**	**255**	P	**P**	**08 23 04.7**	**-1.6**
JWK2	**Keihoku**	**17.14**	**7**	P	**P**	**08 23 08.8**	**+1.9**
TPUB	**Ta-pu**	**17.23**	**257**	P	**P**	**08 23 07.2**	**-1.0**
NJ2	**Nanjing**	**17.77**	**287**	*eP*	**P**	**08 23 10.8**	**-2.1**
NJ2					pmax	pmax	
	comp=Z,16nm,0.5s						
MDJ	**Mudanjiang**	**17.91**	**338**	P	**P**	**08 23 14.0**	**-0.1**
QZH	**Quanzhou**	**18.50**	**264**	↑*iP*	**P**	**08 23 19.8**	**0.0**
QZH				S	**S**	**08 26 18.0**	**-

comp=Z,9.3nm,0.6s
SANI Sanana 32.65 205 P P 08 25 23.5 -1.2
comp=Z,1µmcomp=Z,109nm,0.6s
APSI Ampana 33.46 213 P P 08 25 31.5 0.0
comp=Z,986nmcomp=Z,96nm,0.5s
GTA Gaotai 34.09 299 ⇑P P 08 25 36.6 -0.1
GTA pP pP 08 27 05.7 -0.6
GTA sP sP 08 28 08.3 +1.0
GTA ScP **ScP** **08 30 53.0 -0.1**
GTA pmax pmax
comp=Z,21nm,1.0s
YAK Yakutsk 34.28 352 P P 08 25 37.4 -0.3
comp=Z,31nm,0.4s,baz=280,slow=1.0,SNR=14
YAK S **S** **08 30 22.3 -4.3**
comp=Z,8.0nm,0.4s,baz=185,slow=22,SNR=12
YAK Yakutsk 34.28 352 P P 08 25 37.4 -0.3
TLY Talaya 35.20 321 P P 08 25 46.2 +0.6
comp=Z,12nm,0.6s,baz=170,slow=3.6,SNR=14
TLY ScP **ScP** **08 30 56.0 -0.6**
comp=Z,2.9nm,0.7s,baz=63,slow=13,SNR=3.2
TLY Talaya 35.20 321 P P 08 25 46.0 +0.4
TLY IAmb IAmb 08 25 46.9
comp=Z,13nm,0.6s
SEY Seymchan 35.73 10 P P 08 25 50.5 +0.7
comp=Z,23nm,0.9s,baz=197,slow=6.3,SNR=37
SBUM Sibu 36.21 230 P P 08 25 53.0 -1.5
PBKT Sadao Pong 36.85 260 P P 08 25 58.8 -0.9
PBKT **S** **08 31 04.7 -1.6**
SPSI Sidrap Palu 37.02 213 P P 08 26 00.7 -0.4
comp=Z,23nm,0.6s
CHTO Chiang Mai 37.72 264 P P 08 26 05.5 -1.4
CHTO IAmb IAmb 08 26 07.2
comp=Z,12nm,0.8s
CMAR Chiang Mai Arr 37.86 264 P P 08 26 08.4 +0.5
comp=Z,4.8nm,0.4s,baz=86,slow=4.7,SNR=15
CMAR PcP **PcP** **08 28 11.2 +0.8**
comp=Z,1.0nm,0.3s,baz=38,slow=1.1,SNR=4.6
CMAR ScP **ScP** **08 31 08.3 +1.0**
comp=Z,1.3nm,0.3s,baz=93,slow=2.2,SNR=5.1
KSM Kuching 38.22 231 P P 08 26 07.8 -3.1
KSM Kuching 38.22 231 P P 08 26 12.0 +1.1
PMG Port Moresby 38.32 167 P P 08 26 12.4 +0.7
comp=Z,13nm,0.4s,baz=200,slow=12,SNR=2.6
SOEI Soe 40.42 203 P P 08 26 29.1 +0.4
comp=Z,51nm,0.8s
SOEI Soe 40.42 203 P P 08 26 27.8 -1.0
EDFI Ende, Flores 40.44 207 P P 08 26 28.8 -0.1
comp=Z,18nm,0.8s
MTN Manton Dam 41.60 192 P P 08 26 37.7 -0.3
ATKA Atka Island 42.02 42 P P 08 26 41.5 +0.7
PLAI Plampang 42.21 212 P P 08 26 42.2 -0.6
comp=Z,95nm,0.9s
COEN Coen 42.22 174 P P 08 26 44.2 +1.4
COEN IAmb IAmb 08 26 44.8
comp=Z,24nm,0.8s
KULM Kulim 42.92 245 P P 08 26 48.7 +0.3
BILL Bilibino 42.97 15 P P 08 26 49.1 +1.1
IPM Ipoh 43.11 244 P P 08 26 49.7 -0.2
WMQ Ürumqi 43.53 305 P P 08 26 54.3 +1.4
WMQ pmax pmax
comp=Z,18nm,1.3s
WMQ pmax pmax
comp=Z,54nm,4.7s
JAGI Jajag, Banyuwa 43.72 217 P P 08 26 53.1 -1.5
JAGI IAmb IAmb 08 26 55.1
comp=Z,28nm,0.8s
TIXI Tiksi 43.74 355 P P 08 26 53.8 -0.2
comp=Z,16nm,0.6s,baz=140,slow=6.3,SNR=47
TIXI PcP **PcP** **08 28 28.0 -0.9**
comp=Z,2.5nm,0.4s,baz=137,slow=11,SNR=1.8
TIXI Tiksi 43.74 355 P P 08 26 53.2 -0.8
TIXI IAmb IAmb 08 26 54.7
comp=Z,19nm,0.7s
PWJI Pagerwojo 44.63 220 P P 08 27 01.1 -0.5
comp=Z,103nm,0.7s
KNRA Kununurra 44.82 194 P P 08 27 02.9 -0.2
TAPN Taplejung 45.04 281 eP P 08 27 05.4 +0.3
comp=Z,20nm,0.3s
NIKH Nikolski High 45.37 42 P P 08 27 07.5 +0.7
ODAN Odare 45.44 281 eP P 08 27 08.4 +0.4
comp=Z,67nm,0.4s
RAMN Ramite 46.10 281 eP P 08 27 13.4 +0.3
comp=Z,56nm,0.4s
KCSI Kotacane, Aceh 46.27 245 P P 08 27 14.7 +0.4
comp=Z,15nm,0.7s
JIRN Jiri 46.28 282 eP P 08 27 15.4 +0.8
comp=Z,89nm,0.4s
GUN Gumba 46.49 283 eP P 08 27 16.8 +0.6
comp=Z,80nm,0.3s
MNSI Mandailing Nat 46.52 241 P P 08 27 15.7 -0.4
comp=Z,70nm,0.7s
CISI Cisompet, Garu 46.63 225 P P 08 27 15.1 -1.9
ZAA0 Zalesovo Array 46.69 319 P P 08 27 16.4 -0.5
ZAA0 IAmb IAmb 08 27 17.1
comp=Z,13nm,0.9s
ZALV Zalesovo Beam 46.69 319 P P 08 27 16.1 -0.7
comp=Z,7.1nm,0.4s,baz=99,slow=7.3,SNR=32
ZALV PcP **PcP** **08 28 39.2 -0.4**
comp=Z,4.7nm,0.4s,baz=130,slow=4.1,SNR=8.8
ZALV ScP **ScP** **08 31 40.4 -1.9**
comp=Z,3.9nm,0.6s,baz=122,slow=4.5,SNR=12
LHSI Lahat 46.71 233 P P 08 27 18.8 +1.2
comp=Z,2µmcomp=Z,61nm,0.9s
MDSI Maura Dua 46.73 231 P P 08 27 17.4 -0.3
PKI Pulchoki 46.97 282 eP P 08 27 19.8 0.0
comp=Z,14nm,0.4s
PKIN Phulchoki 46.98 282 eP P 08 27 19.8 0.0
comp=Z,16nm,0.4s
KKN Kakani 47.03 283 eP P 08 27 20.3 +0.2
comp=Z,20nm,0.4s
DMN Daman 47.22 283 eP P 08 27 21.9 +0.3
comp=Z,29nm,0.4s
MKAR Makanchi Array 47.49 309 P P 08 27 23.1 +0.1
comp=Z,6.6nm,0.5s,baz=92,slow=9.5,SNR=75
MKAR PcP **PcP** **08 28 42.9 +0.2**
comp=Z,2.3nm,0.7s,baz=87,slow=7.8,SNR=4.8
MKAR ScP **ScP** **08 31 44.6 -1.2**
comp=Z,3.1nm,0.7s,baz=87,slow=6.2,SNR=11
MKAR S **S** **08 33 39.2 +0.9**
comp=Z,0.8nm,0.9s,baz=73,slow=22,SNR=3.7
GKN Gorkha 47.53 283 eP P 08 27 24.1 +0.3
comp=Z,24nm,0.3s
GSI Gunungsitoli 47.77 243 P P 08 27 25.5 0.0
FITZ Fitzroy Crossi 47.90 197 P P 08 27 26.9 +0.5
WRAB Tennant Creek 48.16 186 P P 08 27 25.6 -2.7
WRA Warramunga Arr 48.17 186 P P 08 27 28.3 -0.1
comp=Z,28nm,0.4s,baz=0.8,slow=7.7,SNR=505
WRA PcP **PcP** **08 28 46.4 +0.9**
comp=Z,2.5nm,0.5s,baz=357,slow=4.0,SNR=4.6
WRA ScP **ScP** **08 31 48.8 -0.2**
comp=Z,3.5nm,0.8s,baz=359,slow=4.4,SNR=8.6
WRA S **S** **08 33 46.9 -1.4**
comp=Z,0.9nm,0.6s,baz=355,slow=14,SNR=6.9
DANN Dangsing 48.20 284 eP P 08 27 29.7 +0.7
comp=Z,54nm,0.4s
KOLN Koldanda 48.48 283 eP P 08 27 31.3 +0.4
comp=Z,20nm,0.3s
PYUN Piuthan 48.92 284 eP P 08 27 34.8 +0.6
comp=Z,104nm,0.3s
KURK Kurchatov 50.09 314 P P 08 27 42.0 -0.1
KURK IAmb IAmb 08 27 43.8
comp=Z,32nm,0.7s
KURK Kurchatov 50.09 314 PcP 08 28 51.9 -0.3
KURBB Kurchatov Arra 50.14 314 P P 08 27 42.4 -0.1
comp=Z,32nm,0.4s,baz=91,slow=8.2,SNR=670
KURBB PcP **PcP** **08 28 51.9 -0.5**
comp=Z,2.1nm,0.6s,baz=97,slow=3.9,SNR=4.3
ANM Nome 50.19 28 P P 08 27 44.5 +1.8
ANM IAmb IAmb 08 27 45.5
comp=Z,18nm,1.0s
NRIK Noril'sk 50.48 339 P P 08 27 44.8 0.0
comp=Z,36nm,0.5s,baz=112,slow=8.8,SNR=105
NRIK PcP **PcP** **08 28 53.1 -0.1**
comp=Z,3.4nm,0.5s,baz=138,slow=7.0,SNR=1.3
NRIK S **S** **08 34 17.4 -1.1**
comp=Z,2.6nm,0.8s,baz=11,slow=24,SNR=26
KDJ Kajisay 51.28 303 IAmb IAmb 08 27 52.6
comp=Z,7.7nm,0.7s
AS31 Alice Springs 51.90 186 IAmb IAmb 08 27 57.5
comp=Z,7.4nm,0.5s
ASAR Alice Springs 51.90 186 P P 08 27 55.7 0.0
comp=Z,7.0nm,0.5s,baz=16,slow=11,SNR=177
ASAR PcP **PcP** **08 28 59.5 +0.2**
comp=Z,2.6nm,0.7s,baz=6.7,slow=3.4,SNR=7.3
ASAR ScP **ScP** **08 32 05.3 +0.3**
comp=Z,1.0nm,0.7s,baz=23,slow=5.6,SNR=5.1
ASAR S **S** **08 34 40.4 +1.7**

comp=Z,0.4nm,0.8s,baz=4.3,slow=22,SNR=4.4
ULHL Ulahol 51.96 303 P P 08 27 57.1 +0.9
SNR=9.4
BOOM Boomskoye usch 52.16 303 P P 08 27 58.2 +0.6
BOOM IAmb IAmb 08 27 59.0
comp=Z,21nm,0.6s
RDOG Red Dog Mine 52.26 24 P P 08 27 59.0 +1.4
RDOG IAmb IAmb 08 28 00.1
comp=Z,29nm,0.8s
TKM2 Tokmak 2 52.37 304 P P 08 27 59.9 +0.8
SNR=10
KSH Kashi 52.49 300 P P 08 28 04.1 +4.2
KSH PP **PP** **08 30 12.1 +6.0**
KSH sP sP 08 30 35.8 -2.4
KSH S **S** **08 34 49.8 +3.3**
KSH SS **SS** **08 38 39.1 +4.9**
KSH pmax pmax
comp=Z,44nm,0.7s
KSH pmax pmax
comp=Z,150nm,5.6s
KZA Kyzart 52.71 303 P P 08 28 03.4 +1.5
SNR=6.0
KBK Karagaybulak 52.87 304 P P 08 28 03.5 +0.8
SNR=16
PSA00 Pilbara Seismi 52.91 202 P P 08 28 03.0 +0.1
PSA00 IAmb IAmb 08 28 03.9
comp=Z,32nm,0.7s
USP Ospenovka 53.13 305 P P 08 28 04.8 +0.5
SNR=10.0
AAK Ala-Archa 53.20 304 P P 08 28 05.4 +0.3
SNR=10
AAK Ala-Archa 53.20 304 P P 08 28 05.3 +0.3
AAK IAmb IAmb 08 28 06.2
comp=Z,11nm,0.8s
UCH Uchtor 53.24 303 P P 08 28 06.8 +1.2
SNR=36
EKS2 Erkin-Say 53.73 304 P P 08 28 09.0 +0.3
SNR=10
AML Almayashu 53.85 303 P P 08 28 10.7 +0.8
SNR=31
ARSB Arslanbob 54.49 302 P P 08 28 14.4 +0.3
ARSB IAmb IAmb 08 28 15.7
comp=Z,19nm,0.5s
KDAK Kodiak Island 55.13 37 P P 08 28 18.7 +0.7
comp=Z,28nm,0.8s,baz=274,slow=1.7,SNR=37
KDAK PcP **PcP** **08 29 10.9 -0.4**
comp=Z,6.6nm,0.9s,baz=106,slow=8.2,SNR=1.5
KDAK Kodiak Island 55.13 37 P P 08 28 18.8 +0.7
KDAK IAmb IAmb 08 28 19.6
comp=Z,23nm,0.8s
RSO Redoubt South 55.16 34 P P 08 28 19.4 +1.0
BVAR Borovoye Array 55.20 317 P P 08 28 18.9 +0.2
comp=Z,68nm,0.5s,baz=92,slow=8.9,SNR=254
BVAR PcP **PcP** **08 29 11.6 -0.1**
comp=Z,3.9nm,0.5s,baz=97,slow=6.0,SNR=2.3
BRVK Borovoye 55.27 317 P P 08 28 19.0 -0.1
PPLA Purkeypile 55.60 31 P P 08 28 22.6 +1.2
NIL Nilore 55.74 293 P P 08 28 23.0 +0.1
NIL IAmb IAmb 08 28 24.7
comp=Z,38nm,0.7s
CNPM China Poot 55.88 35 P P 08 28 23.2 -0.1
CNPM IAmb IAmb 08 28 24.3
comp=Z,15nm,0.7s
KK31 Karatay Array 56.05 305 P P 08 28 25.1 +0.4
KK31 IAmb IAmb 08 28 25.9
comp=Z,32nm,0.7s
KKAR Karatay Array 56.05 305 P P 08 28 25.1 +0.4
KKAR IAmb IAmb 08 28 25.9
comp=Z,32nm,0.7s
BRLK Bradley Lake 56.06 35 P P 08 28 24.8 +0.2
BRLK IAmb IAmb 08 28 27.0
comp=Z,14nm,0.6s
KTH Kantishna Hill 56.22 30 P P 08 28 26.9 +1.2
BPAW Bear Paw Mtn. 56.23 30 P P 08 28 27.2 +1.6
BPAW IAmb IAmb 08 28 28.0
comp=Z,12nm,0.5s
MLY Manley 56.41 29 P P 08 28 28.5 +1.6
MLY IAmb IAmb 08 28 28.9
comp=Z,9.4nm,0.6s
TRF Thorofare Moun 56.50 31 P P 08 28 28.3 +0.6
RC01 Rabbit Creek A 56.66 33 P P 08 28 29.0 +0.4
RC01 IAmb IAmb 08 28 29.8
comp=Z,15nm,0.6s
SEW Seward 56.79 35 IAmb IAmb 08 28 30.8
comp=Z,26nm,1.1s
COLD Coldfoot 56.83 26 P P 08 28 29.3 -0.4
BWN Browne 56.90 30 IAmb IAmb 08 28 33.9
comp=Z,26nm,1.0s
PMR Palmer 56.96 33 IAmb IAmb 08 28 31.9
comp=Z,21nm,1.0s
NEA Nenana 57.09 29 IAmb IAmb 08 28 33.6
comp=Z,17nm,0.8s
MCK McKinley 57.12 30 P P 08 28 32.3 +0.6
MCK IAmb IAmb 08 28 33.4
comp=Z,30nm,0.9s
RND Reindeer 57.14 31 IAmb IAmb 08 28 33.2
comp=Z,17nm,0.7s
TOLK Toolik Lake Re 57.21 24 IAmb IAmb 08 28 34.9
comp=Z,17nm,1.1s
KNK Knik Glacier 57.28 33 IAmb IAmb 08 28 34.5
comp=Z,29nm,0.8s
MDM Murphy Dome 57.47 29 IAmb IAmb 08 28 36.1
comp=Z,40nm,1.0s
WRH Wood River Hil 57.51 29 P P 08 28 34.7 +0.3
COLA College 57.63 29 P P 08 28 35.2 0.0
COLA IAmb IAmb 08 28 36.9
comp=Z,12nm,0.7s
SCM Sheep Creek Mo 57.82 33 P P 08 28 37.1 +0.5
SCM IAmb IAmb 08 28 38.5
comp=Z,26nm,0.8s
GLI Glacier Island 57.95 34 P P 08 28 37.8 +0.4
GLI IAmb IAmb 08 28 39.0
comp=Z,20nm,0.7s
HDA Harding Lake 58.01 30 P P 08 28 37.6 -0.1
HDA IAmb IAmb 08 28 38.2
comp=Z,14nm,0.5s
IL31 58.04 29 P P 08 28 37.4 -0.5
ILAR Eielson Array 58.04 29 P P 08 28 37.7 -0.3
comp=Z,4.2nm,0.6s,baz=248,slow=5.6,SNR=88
ILAR S **S** **08 35 56.2 -1.3**
comp=Z,0.2nm,0.8s,baz=261,slow=9.2,SNR=4.6
FID Port Fidalgo 58.26 34 P P 08 28 39.9 +0.4
FID IAmb IAmb 08 28 40.6
comp=Z,11nm,0.6s
HIN Hinchinbrook I 58.26 34 IAmb IAmb 08 28 41.1
comp=Z,14nm,0.6s
EYAK Cordova Ski Ar 58.62 34 P P 08 28 42.6 +0.7
EYAK IAmb IAmb 08 28 43.5
comp=Z,8.7nm,0.5s
PRP Porcupine Dome 58.62 28 P P 08 28 41.8 -0.3
FYU Fort Yukon 58.75 27 IAmb IAmb 08 28 47.1
comp=Z,13nm,1.0s
KBL Kabul 58.91 295 P P 08 28 44.3 -0.4
KBL IAmb IAmb 08 28 45.9
comp=Z,26nm,1.4s
RAGM Ragged Mountai 59.16 34 P P 08 28 46.4 +0.7
RAGM IAmb IAmb 08 28 48.5
comp=Z,10nm,0.5s
DOT Dot Lake 59.29 30 P P 08 28 47.0 +0.6
DOT IAmb IAmb 08 28 47.8
comp=Z,16nm,0.7s
MENT Mentasta 59.47 31 IAmb IAmb 08 28 49.8
comp=Z,14nm,0.6s
GLB Gilahina Butte 59.52 33 IAmb IAmb 08 28 50.1
comp=Z,14nm,1.0s
VRDI Verde Repeater 59.70 33 P P 08 28 50.0 +0.6
MCARA McCarthy VSAT 59.90 33 P P 08 28 51.2 +0.7
MCARA IAmb IAmb 08 28 52.6
comp=Z,15nm,0.8s
STKA Stephens Creek 59.91 177 P P 08 28 51.3 +0.4
comp=Z,10nm,0.6s,baz=345,slow=7.2,SNR=36
STKA Stephens Creek 59.91 177 P P 08 28 50.8 -0.1
BALM Baldy 60.26 33 P P 08 28 53.8 +0.8
BALM IAmb IAmb 08 28 54.7
comp=Z,8.5nm,0.7s
EGAK Eagle 60.49 29 P P 08 28 54.8 +0.4
EGAK IAmb IAmb 08 28 56.1
comp=Z,6.1nm,0.6s
YAH Yahtse 60.62 34 P P 08 28 57.0 +1.5
YAH IAmb IAmb 08 29 16.0
comp=Z,6.3nm,0.6s
CTGM Chitina Glacie 60.75 33 P P 08 28 57.6 +1.3
ARU Arti 61.70 322 P P 08 29 02.1 -0.4
comp=Z,9.6nm,0.5s,baz=109,slow=3.1,SNR=27
ARU PcP **PcP** **08 29 37.3 -0.3**
comp=Z,2.5nm,0.2s,baz=265,slow=6.3,SNR=1.4

ARU Arti 61.70 322 P P 08 29 02.0 -0.4
ARU IAmb IAmb 08 29 03.0
comp=Z,24nm,0.7s
EPYK Eagle Plains 62.17 27 P P 08 29 06.5 +1.1
ABKAR Akbulak array 62.19 313 P P 08 29 03.4 -2.4
HYT Haines Junctio 62.63 33 IAmb IAmb 08 29 11.2
comp=Z,14nm,1.2s
INK Inuvik 63.12 25 P P 08 29 11.9 +0.5
comp=Z,6.3nm,0.4s,baz=285,slow=5.5,SNR=101
INK S **S** **08 36 60.0 -0.6**
comp=Z,1.1nm,0.9s,baz=231,slow=16,SNR=6.0
INK Inuvik 63.12 25 P P 08 29 11.6 +0.2
INK IAmb IAmb 08 29 12.3
comp=Z,7.8nm,0.5s
AKTO Aktyubinsk 63.16 315 P P 08 29 11.7 -0.3
comp=Z,11nm,0.7s,baz=91,slow=8.8,SNR=26
WHY Whitehorse 63.92 33 P P 08 29 18.0 +1.2
WHY IAmb IAmb 08 29 18.9
comp=Z,6.0nm,0.8s
SKAG Skagway 63.95 35 P P 08 29 18.1 +1.2
SKAG IAmb IAmb 08 29 19.0
comp=Z,5.4nm,0.6s
HRA Herat 64.35 297 P P 08 29 20.3 +0.1
HRA IAmb IAmb 08 29 21.9
comp=Z,12nm,0.9s
BESE Bessie Mountai 64.38 35 P P 08 29 21.1 +1.4
JIS Juneau Island 64.69 36 P P 08 29 22.9 +1.4
JIS IAmb IAmb 08 29 24.2
comp=Z,11nm,0.8s
TOO Toolangi 65.82 174 P P 08 29 30.3 +1.4
TOO IAmb IAmb 08 29 30.7
comp=Z,5.8nm,0.7s
KIRV Kirov 66.07 325 P P 08 29 30.3 +0.1
comp=Z,47nm,0.6s,baz=139,slow=3.7,SNR=12
C36M Paulatuk 66.23 23 P P 08 29 31.2 +0.2
C36M IAmb IAmb 08 29 32.4
comp=Z,16nm,0.6s
GEYT Alibeck 66.43 302 P P 08 29 33.3 +0.4
comp=Z,4.0nm,0.6s,baz=37,slow=3.7,SNR=7.4
DLBC Dease Lake 66.86 35 P P 08 29 36.6 +1.4
SPA0 Spitsbergen Ar 68.57 349 eP P 08 29 46.5 +0.6
HSPB Hornsund (broa 69.54 348 eP P 08 29 51.9 +0.9
KLMR Klimovskoe 70.08 329 eP P 08 29 53.3 -1.3
KLMR AMP 08 29 54.8
comp=Z,12nm,0.7s
KEV Kevo 70.88 340 P P 08 29 59.5 +0.4
KEV IAmb IAmb 08 30 00.2
comp=Z,15nm,0.7s
HAMF Hammerfest 71.38 341 eP P 08 30 02.2 +0.2
ARCES ARCESS Array B 71.44 340 P P 08 30 02.8 +0.4
comp=Z,18nm,0.6s,baz=66,slow=8.1,SNR=117
ARE0 ARCESS Array S 71.44 340 P P 08 30 02.9 +0.5
ARE0 ARCESS Array S 71.44 340 eP P 08 30 02.8 +0.3
RES Resolute Bay 71.55 13 P P 08 30 03.1 +0.2
comp=Z,12nm,0.7s,baz=323,slow=6.5,SNR=43
RES Resolute Bay 71.55 13 P P 08 30 03.4 +0.5
RES IAmb IAmb 08 30 04.5
comp=Z,13nm,0.8s
KTK1 Kautokeino 72.41 340 eP P 08 30 08.4 +0.4
YKA Yellowknife Ar 72.43 28 P P 08 30 08.6 +0.3
comp=Z,7.5nm,0.6s,baz=296,slow=5.5,SNR=163
TRO Tromso 73.29 342 eP P 08 30 13.2 +0.1
LLLB Lillooet 74.09 41 P P 08 30 19.6 +1.5
LLLB IAmb IAmb 08 30 20.4
comp=Z,5.9nm,0.7s
NLWA Neilton Lookou 74.26 44 P P 08 30 21.4 +2.3
NLWA IAmb IAmb 08 30 22.2
comp=Z,9.9nm,0.9s
KBZ Khabaz 75.07 312 P P 08 30 24.1 +0.4
comp=Z,19nm,0.7s,baz=89,slow=4.4,SNR=43
URZ Urewera 75.23 150 P P 08 30 24.2 -0.2
comp=Z,6.0nm,0.7s,baz=258,slow=4.4,SNR=6.9
STEI Steigen 75.41 341 eP P 08 30 25.1 0.0
STEI eP PcP 08 30 25.2 -10
FIA1 FINESS Array S 75.58 333 P P 08 30 25.9 -0.2
FINES FINESS Array B 75.58 333 P P 08 30 25.9 -0.2
comp=Z,25nm,0.4s,baz=70,slow=5.1,SNR=262
F04A Amboy 75.79 45 P P 08 30 29.4 +1.8
F04A IAmb IAmb 08 30 30.1
comp=Z,9.0nm,0.9s
B08A Colville Reser 76.58 42 IAmb IAmb 08 30 34.0
comp=Z,8.0nm,0.8s
MOR8 Moi Rana 76.81 340 eP P 08 30 31.8 -1.1
MOR8 eP PcP 08 30 31.9 -10
YBH Yreka Blue Hor 77.46 49 P P 08 30 38.7 +1.7
comp=Z,1.7nm,0.6s,baz=336,slow=4.1,SNR=13
YBH Yreka Blue Hor 77.46 49 IAmb IAmb 08 30 39.3
comp=Z,2.0nm,0.8s
C09A Chrisman Ranch 77.47 42 IAmb IAmb 08 30 38.8
comp=Z,8.5nm,0.5s
OXZ Oxford 77.49 156 P P 08 30 36.6 -0.1
OXZ IAmb IAmb 08 30 47.3
comp=Z,32nm,1.5s
PINE Pine Mountain 77.69 47 P P 08 30 40.1 +1.8
PINE IAmb IAmb 08 30 41.2
comp=Z,15nm,0.8s
NEW Newport 77.93 42 P P 08 30 40.5 +1.2
comp=Z,4.9nm,0.7s,baz=286,slow=4.4,SNR=11
K05A Summer Lake 78.21 48 P P 08 30 42.7 +1.5
NSS Namsos 78.69 339 eP P 08 30 42.8 -0.2
MOD Modoc Plateau 78.98 48 P P 08 30 46.4 +1.2
ORV Oroville 79.27 51 P P 08 30 47.3 +0.7
SUMG Summit 79.37 359 P P 08 30 47.8 +0.8
SUMG IAmb IAmb 08 30 48.6
comp=Z,18nm,1.1s
J08A Circle Bar Ran 79.47 46 IAmb IAmb 08 30 50.2
comp=Z,13nm,1.2s
JTMT Jette 79.84 41 IAmb IAmb 08 30 51.8
comp=Z,8.0nm,0.7s
BEKR Beckworth 79.90 50 P P 08 30 51.4 +1.3
AKASG Malin Array Be 79.93 323 P P 08 30 49.4 -0.4
comp=Z,5.4nm,0.4s,baz=53,slow=5.5,SNR=37
AKBB Malin Array Si 79.93 323 IAmb IAmb 08 30 50.1
comp=Z,14nm,0.7s
MSO Missoula 80.51 42 P P 08 30 54.2 +1.1
SCO Scoresbysund 80.54 354 P P 08 30 53.2 +0.6
SCO IAmb IAmb 08 30 54.5
comp=Z,9.1nm,0.9s
PAHR Pah Rah Range 80.64 50 P P 08 30 55.4 +1.4
CMB Columbia Colle 80.76 52 P P 08 30 55.8 +1.3
PNTR Pine Nut 80.79 51 IAmb IAmb 08 30 57.6
comp=Z,5.8nm,0.7s
MFID Camas Ranch 81.12 45 P P 08 30 58.3 +2.0
MFID IAmb IAmb 08 30 58.7
comp=Z,6.1nm,0.6s
NC303 NORSAR Array S 81.22 337 P P 08 30 55.7 -0.6
NC303 IAmb IAmb 08 30 56.6
comp=Z,15nm,0.7s
NB201 NORSAR Array S 81.37 337 IAmb IAmb 08 30 57.1
comp=Z,19nm,0.6s
NB2 NORSAR Subarra 81.40 337 P P 08 30 56.4 -0.9
comp=Z,10nm,0.6s,baz=47,slow=5.1
NB2 NORSAR Subarra 81.40 337 P P 08 30 56.4 -0.9
baz=47,slow=5.1
NOA NORSAR Array B 81.40 337 P P 08 30 56.4 -0.9
comp=Z,10nm,0.5s,baz=46,slow=5.1,SNR=49
NOA PP **PP** **08 34 09.5 -2.8**
comp=Z,1.5nm,0.8s,baz=46,slow=8.3,SNR=6.2
MOL Molde 81.48 339 eP P 08 30 57.9 +0.3
NBO00 NORSAR Array S 81.56 337 IAmb IAmb 08 31 16.0
comp=Z,26nm,1.2s
NAO01 NORSAR Array S 81.66 337 IAmb IAmb 08 31 11.7
comp=Z,22nm,1.1s
NAO01 NORSAR Array S 81.66 337 eP P 08 30 57.7 -0.9
KVN Kaiserville 81.83 50 P P 08 31 01.4 +1.3
GAZ Gaziantep 81.92 308 IAmb IAmb 08 31 02.3
comp=Z,20nm,0.6s
NVAR Mina Array Bea 82.00 51 P P 08 31 02.5 +1.5
comp=Z,2.1nm,0.6s,baz=296,slow=5.5,SNR=29
RAYN Ar Rayn 82.03 292 P P 08 31 01.9 +0.6
RAYN IAmb IAmb 08 31 03.5
comp=Z,20nm,0.9s
FFC Flin Flon 82.20 31 P P 08 31 02.4 +1.0
EGMT Eagleton 82.26 39 P P 08 31 03.2 +1.2
EGMT IAmb IAmb 08 31 03.9
comp=Z,8.3nm,0.8s
ELK Elko 82.87 47 P P 08 31 06.6 +1.2
BRTR Keskin Array B 83.06 311 P P 08 31 05.9 -0.4
comp=Z,4.0nm,0.7s,baz=101,slow=3.5,SNR=22
YHL Hebgen Lake 83.20 42 P P 08 31 08.7 +1.6
YHB Horse Butte 83.25 42 P P 08 31 07.9 +0.7
LKWY Lake 83.82 42 P P 08 31 11.8 +1.6
LKWY IAmb IAmb 08 31 14.2
comp=Z,8.5nm,0.7s
R11A Troy Canyon, C 83.88 50 P P 08 31 10.8 +0.3

FLWY	**Flagg Ranch**	**83.91**	**43**	IAmb	IAmb	08 31 13.7	
	comp=Z,4.5nm,0.7s						
RLMT	**Red Lodge**	**84.17**	**41**	P	**P**	**08 31 12.8**	**+0.9**
RLMT				IAmb	IAmb	08 31 14.2	
	comp=Z,9.3nm,0.6s						
SFJD	**Kangerlussuaq**	**84.72**	**4**	P	**P**	**08 31 13.8**	**+0.1**
SFJD				IAmb	IAmb	08 31 14.4	
	comp=Z,15nm,0.7s						
DUG	**Dugway, Tooele**	**84.73**	**47**	P	**P**	**08 31 16.0**	**+1.4**
HWUT	**Hardware Ranch**	**84.75**	**45**	P	**P**	**08 31 14.8**	**+0.1**
PDAR	**Pinedale Array**	**85.34**	**43**	P	**P**	**08 31 18.4**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=261,slow=0.8,SNR=11						
KNB	**Kanab**	**86.44**	**50**	P	**P**	**08 31 23.5**	**+0.6**
VYHS	**Vyhne**	**86.67**	**325**	*eP*	**P**	**08 31 23.6**	**+0.1**
BRG	**Berggiesshubel**	**87.45**	**329**	*eP*	**P**	**08 31 26.4**	**-0.7**
	comp=Z,4.5nm,0.7s						
CLL	**Collm**	**87.57**	**329**	*i*P	**P**	**08 31 25.4**	**-2.2**
	comp=Z,5.0nm,0.4s						
CLL				*es*P	**sP**	**08 34 20.0**	**+3.1**
CLL				*e*PP	**PP**	**08 35 04.0**	**+2.3**
RSSD	**Black Hills**	**87.77**	**40**	P	**P**	**08 31 29.8**	**+0.7**
RSSD				IAmb	IAmb	08 31 31.9	
	comp=Z,2.7nm,0.6s						
PV13	**Radium Mtn., P**	**88.44**	**47**	P	**P**	**08 31 33.5**	**+1.2**
PV13				IAmb	IAmb	08 31 34.0	
	comp=Z,3.3nm,0.5s						
GERES	**GERESS Array B**	**88.97**	**327**	P	**P**	**08 31 33.4**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=57,slow=4.9,SNR=9.4						
LIT	**Litokhoron**	**89.92**	**317**	P	**P**	**08 31 37.8**	**-1.0**
LIT				IAmb	IAmb	08 31 38.5	
	comp=Z,6.4nm,0.7s						
IDI	**Anoyia**	**91.30**	**312**	P	**P**	**08 31 45.0**	**-0.3**
	comp=Z,3.0nm,0.5s,baz=9.5,slow=12,SNR=1.9						
ANMO	**Albuquerque**	**91.86**	**48**	P	**P**	**08 31 48.6**	**+0.5**
ANMO				IAmb	IAmb	08 31 50.9	
	comp=Z,2.7nm,0.8s						
TXAR	**Lajitas Array**	**97.13**	**51**	P	Pdif	08 32 13.2	+1.1
	comp=Z,0.5nm,0.6s,baz=312,slow=2.9,SNR=9.0						
LBTB	**Lobatse**	**121.03**	**256**	PKP	**PKPdf**	**08 37 28.7**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=197,slow=0.6,SNR=2.7						
TORD	**Torodi Ar. Bea**	**121.61**	**309**	PKP	**PKPdf**	**08 37 29.7**	**-0.6**
	comp=Z,1.5nm,0.5s,baz=47,slow=1.0,SNR=29						
TORD				PKKPbc	**PKKPab**	**08 47 33.5**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=230,slow=3.1,SNR=5.6						
BOSA	**Boshof**	**122.43**	**253**	PKP	**PKiKP**	**08 37 32.0**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=91,slow=22,SNR=1.5						
DBIC	**Dimbokro**	**130.72**	**309**	PKP	**PKPdf**	**08 37 48.1**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=155,slow=14,SNR=1.8						
DBIC	**Dimbokro**	**130.72**	**309**		**PKPdf**	**08 37 44.4**	**-3.2**
SDV	**Santo Domingo**	**133.26**	**42**		**PKPdf**	**08 37 52.3**	**-0.4**
MDP	**Montagnes des**	**144.96**	**20**	PKP	**PKPab**	**08 38 15.1**	**+0.1**
	comp=Z,3.9nm,0.5s,baz=278,slow=8.2,SNR=1.6						
PTGA	**Pitinga**	**147.14**	**37**		**PKPbc**	**08 38 20.5**	**+0.1**
SAML	**Samuel**	**151.62**	**52**	PKPdf	**PKPdf**	**08 38 21.4**	**-2.9**
SAML					**PKPbc**	**08 38 30.6**	**-0.6**
SAML				PKPab	**PKPab**	**08 38 40.7**	**-1.6**
LPAZ	**La Paz**	**152.31**	**70**	PKPbc	**PKiKP**	**08 38 34.7**	**+1.2**
	comp=Z,1.8nm,0.4s,baz=348,slow=4.8,SNR=22						
LPAZ	**La Paz**	**152.31**	**70**	PKPdf	**PKPdf**	**08 38 23.7**	**-2.3**
LPAZ					**PKiKP**	**08 38 34.1**	**+0.6**
PLCA	**Paso Flores**	**152.85**	**125**	PKPbc	**PKiKP**	**08 38 34.5**	**+1.2**
	comp=Z,1.6nm,0.4s,baz=244,slow=2.8,SNR=16						

IDC ***12*** *08:33:26.8±1.2, 12°.22N×95°.25E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.7/37, mbtmp3.8/8, ML3.9/1, MS3.2/4, Ms1 3.2/4, ms1mx2.8/47, Error ellipse: s-maj=44.8km s-min=22.0km az=51.0*

NEIC ***12*** *08:33:30.6±2.4, 12°.19N±0°.07×95°.3E±0°.1, h29km±7km, mb4.5/6, Error ellipse: s-maj=15.9km s-min=8.7km az=117.0*

ISC 12 08:33:27.9±0.9, 12°.2N±0°.1×95°.2E±0°.1, h10km, n17, σ1§11/14, mb4.2/11, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**2.50**	**259**	*eP*	Pn	08 34 07.2	-1.4
PBKT	**Sadao Pong**	**7.08**	**51**		**Pn**	**08 35 12.3**	**+0.7**
CMAR	**Chiang Mai Arr**	**7.21**	**29**	Pn	**Pn**	**08 35 14.6**	**+1.1**
	0.5nm,0.3s,baz=219,slow=15,SNR=14						
CMAR				LR	LR	08 38 30.3	
	comp=Z,101nm,18.2s,baz=195,slow=42						
PSI	**Prapat**	**9.98**	**158**	LR	LR	08 40 33.7	
	comp=Z,81nm,20.7s,baz=269,slow=42						
LSA	**Lhasa**	**17.87**	**348**	Pn	**Pn**	**08 37 35.6**	**-1.5**
KAPI	**Kappang**	**29.74**	**124**	P	**P**	**08 39 34.2**	**-0.6**
KAPI				IAmb	IAmb	08 39 43.4	
	comp=Z,23nm,1.5s						
MKAR	**Makanchi Array**	**36.22**	**345**	P	**P**	**08 40 30.0**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=144,slow=9.0,SNR=3.0						
GEYT	**Alibeck**	**41.88**	**314**	P	P	08 41 17.1	-1.4
	comp=Z,2.7nm,0.5s,baz=139,slow=9.9,SNR=4.9						
GEYT				LR	LR	09 02 13.2	
	comp=Z,30nm,18.6s,baz=185,slow=41						
ZALV	**Zalesovo Beam**	**42.51**	**351**	P	**P**	**08 41 22.0**	**-1.3**
	comp=Z,1.0nm,0.3s,baz=158,slow=9.3,SNR=1.1						
WB0	**Warramunga Arr**	**49.92**	**129**	P	**P**	**08 42 22.1**	**0.0**
WB0				IAmb	IAmb	08 42 40.8	
	comp=Z,6.1nm,1.2s						
WRA	**Warramunga Arr**	**49.98**	**129**	P	**P**	**08 42 23.4**	**+0.8**
	comp=Z,1.6nm,1.1s,baz=309,slow=8.4,SNR=3.6						
WB2	**Warramunga Arr**	**49.99**	**129**	P	**P**	**08 42 21.7**	**-1.0**
WB2				IAmb	IAmb	08 42 31.0	
	comp=Z,3.8nm,1.1s						
ASAR	**Alice Springs**	**51.93**	**133**	P	**P**	**08 42 37.5**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=323,slow=7.1,SNR=2.0						
BRTR	**Keskin Array B**	**60.54**	**309**	P	**P**	**08 43 40.9**	**+2.1**
	comp=Z,0.8nm,0.7s,baz=132,slow=6.1,SNR=5.1						
FIA1	**FINESS Array S**	**69.48**	**331**	P	**P**	**08 44 36.2**	**-0.1**
FIA1				IAmb	IAmb	08 44 37.0	
	comp=Z,4.7nm,0.9s						
FINES	**FINESS Array B**	**69.48**	**331**	P	**P**	**08 44 37.0**	**+0.7**
	comp=Z,1.8nm,0.9s,baz=128,slow=11,SNR=1.8						
FINES				LR	LR	09 19 25.2	
	comp=Z,33nm,18.1s,baz=308,slow=40						
ITM	**Ithomi**	**69.51**	**305**	P	**P**	**08 44 36.6**	**-0.4**

TRN 12 08:35:56.4, 16°.80N×61°.20W, h29km, MD3.6, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABD	**La Joyeuse, An**	**0.43**	**221**	*eP*	Pn	08 36 07.8	+1.1
ABD				*eS*	Sn	08 36 15.0	+1.4
CBE	**Ff, Capester**	**0.83**	**208**	*eP*	Pb	08 36 13.5	+1.2
CBE				*eS*	Sn	08 36 26.5	+3.0
MAGL	**Barre de l'île**	**0.85**	**186**	*eP*	Pb	08 36 14.2	+1.5
MAGL				*eS*	Sn	08 36 27.2	+3.2
MLYT	**Lee's Yard**	**0.96**	**265**	*eP*	Pb	08 36 15.5	+1.1
MLYT				*eS*	Sb	08 36 30.6	+3.9
ANWB	**Willy Bob**	**1.03**	**327**	*eP*	Pb	08 36 16.4	+0.8
ANWB				*eS*	Sb	08 36 30.2	+1.4
TDBA	**Terre de Bas,**	**1.04**	**204**	*eP*	Pb	08 36 16.2	+0.5
TDBA				*eS*	Sb	08 36 30.7	+1.7
NVDO	**Nevis, Disaste**	**1.40**	**283**	*eP*	Pb	08 36 22.2	+0.4
NVDO				*eS*	Sb	08 36 40.1	+0.8
SKOC	**St. Kitts, UWI**	**1.55**	**289**	*eP*	Pb	08 36 23.6	-0.7
SKOC				*eS*	Sb	08 36 44.1	+0.5
SKI	**Saint Kitts**	**1.57**	**290**	*eP*	Pb	08 36 23.8	-1.0
SKI				*eS*	Sb	08 36 44.0	-0.1
BIM	**Bigot**	**2.28**	**177**	*eP*	Pn	08 36 34.0	+1.9
BIM				*eS*	Sn	08 37 01.3	+2.1
MPOM	**Morne Pois Mar**	**2.37**	**172**	*eP*	Pn	08 36 35.4	+2.1
MPOM				*eS*	Sn	08 37 03.4	+2.0

NEIC ***12*** *08:47:08.0±1.9, 1°.38N±0°.08×127°.15E±0°.06, h87km±5km, mb4.6/32, Error ellipse: s-maj=11.8km s-min=8.2km az=206.0*

DJA ***12*** *08:47:08.9±0.6, 1°N±3°×12°7E±°, h20km±6km, M4.3/17, mB4.8/6, mb4.5/7, MLv4.4/17, Mw(mB)4.0/6*

IDC ***12*** *08:47:09.9±2.2, 1°.35N×127°.26E, h103km±19km, mb4.0/15, mb1 4.0/17, mb1mx3.9/37, mbtmp4.3/17, Error ellipse: s-maj=28.3km s-min=9.3km az=81.0*

ISC 12 08:47:09.5±0.4, 1°.41N±0°.04×127°.16E±0°.05, h103km, n76, σ1§40/83, mb4.5/32, 1C-1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.66**	**162**	P	**Pn**	**08 47 24.3**	**-2.6**
TNTI				S	Sn	08 47 30.2	-10
TNTI	**Ternate**	**0.66**	**162**		**Pn**	**08 47 25.1**	**-1.8**
TNTI					Sn	**08 47 34.8**	**-5.0**
LBMI	**Labuha**	**2.06**	**170**	P	**Pn**	**08 47 42.7**	**-0.2**
KMSI	**Cibinong**	**3.28**	**255**	P	**Pn**	**08 47 58.2**	**-0.9**
KMSI				S	**Sn**	**08 48 36.2**	**-1.2**
SANI	**Sanana**	**3.62**	**199**	P	**Pn**	**08 48 02.7**	**-1.0**
NLAI	**Namlea**	**4.61**	**181**	P	**Pn**	**08 48 17.7**	**+0.7**
SIJI	**Sorong**	**4.69**	**119**	P	**Pn**	**08 48 18.5**	**+0.4**
	3.4nm,0.3s,baz=299,slow=9.5,SNR=8.9						
DDMP	**Don Marcelino,**	**4.89**	**343**	*eP*	**Pn**	**08 48 17.4**	**-3.3**
DDMP				*eS*	**Sn**	**08 49 10.2**	**-5.9**
LUWI	**Luwuk**	**5.01**	**241**	P	**Pn**	**08 48 22.8**	**+0.4**
LUWI	**Luwuk**	**5.01**	**241**	Pn	**Pn**	**08 48 22.0**	**-0.4**
LUWI				Sn	**Sn**	**08 49 18.2**	**-1.0**
MSAI	**Masohi**	**5.04**	**159**	P	**Pn**	**08 48 23.5**	**+0.7**
	0.1nm905nm12nm,0.5s						
AAI	**Ambon**	**5.16**	**168**	P	**Pn**	**08 48 24.9**	**+0.4**
	0.6nm120nm,0.5s						
MRSI	**Marisa**	**5.30**	**260**	P	**Pn**	**08 48 26.3**	**0.0**
	0.2nm1μm39nm,0.6s						
SKMP	**Bagumbayan, Su**	**5.71**	**333**	*eP*	**Pn**	**08 48 29.8**	**-2.1**
SKMP				*eS*	Sn	08 49 28.3	-7.8
DMPH	**Davao City--Mi**	**5.88**	**344**	*i*P	**Pn**	**08 48 36.4**	**+2.2**
KCP	**Kidapawan**	**5.94**	**340**	*eP*	**Pn**	**08 48 35.2**	**+0.1**
KCP				*i* S	**Sn**	**08 49 41.1**	**-0.7**
APSI	**Ampana**	**5.97**	**247**	P	**Pn**	**08 48 36.0**	**+0.6**
	0.7nm986nm34nm,0.5s						
FAKI	**Fak Fak**	**6.66**	**130**	P	**Pn**	**08 48 46.9**	**+2.1**
PAGZ	**Pagadian**	**7.42**	**330**	*eP*	**Pn**	**08 48 52.8**	**-2.4**
MTN	**Manton Dam**	**14.70**	**165**		**Pn**	**08 50 30.8**	**-1.5**
SBUM	**Sibu**	**14.96**	**274**	Pn	**Pn**	**08 50 33.5**	**-2.2**
KNRA	**Kununurra**	**17.05**	**175**		**Pn**	**08 50 59.8**	**-1.8**
FITZ	**Fitzroy Crossi**	**19.44**	**184**	P	**P**	**08 51 27.4**	**-0.5**
	1.7nm,0.3s,baz=22,slow=10.0,SNR=45						
FITZ	**Fitzroy Crossi**	**19.44**	**184**	P	**P**	**08 51 26.9**	**-1.0**
COEN	**Coen**	**22.02**	**134**	P	**P**	**08 51 56.8**	**+1.1**
WB0	**Warramunga Arr**	**22.21**	**162**	P	**P**	**08 51 56.9**	**-0.7**
WRAB	**Tennant Creek**	**22.35**	**162**	P	**P**	**08 51 58.3**	**-0.8**
WRAB				IAmb	IAmb	08 52 00.3	
	comp=Z,15nm,0.4s						
WRA	**Warramunga Arr**	**22.35**	**162**	P	**P**	**08 51 58.2**	**-1.0**
	comp=Z,9.1nm,0.4s,baz=337,slow=10,SNR=128						
WRA				S	**S**	**08 55 57.6**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=201,slow=28,SNR=1.7						
WB2	**Warramunga Arr**	**22.36**	**162**	P	**P**	**08 51 58.5**	**-0.7**
WB2				IAmb	IAmb	08 51 59.1	
	comp=Z,15nm,0.8s						
WR0	**Warramunga Arr**	**22.43**	**162**	P	**P**	**08 51 59.2**	**-0.8**
TPUB	**Ta-pu**	**22.67**	**344**	P	**P**	**08 52 01.8**	**-0.6**
TPUB				IAmb	IAmb	08 52 19.6	
	comp=Z,12nm,0.8s						
PSA00	**Pilbara Seismi**	**23.93**	**197**	P	**P**	**08 52 14.3**	**+0.2**
PSA00				IAmb	IAmb	08 52 25.9	
	comp=Z,26nm,1.4s						
JOW	**Kunigami**	**25.30**	**2**	P	**P**	**08 52 26.7**	**+0.1**
JOW				IAmb	IAmb	08 52 38.4	
	comp=Z,42nm,1.2s						
AS31	**Alice Springs**	**25.77**	**166**	P	**P**	**08 52 30.1**	**-0.7**
AS31				IAmb	IAmb	08 52 33.8	
	comp=Z,11nm,0.2s						
ASAR	**Alice Springs**	**25.77**	**166**	P	**P**	**08 52 30.4**	**-0.5**
	comp=Z,4.6nm,0.5s,baz=349,slow=7.3,SNR=88						
ASAR				ScP	**ScP**	**08 59 29.9**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=353,slow=2.5,SNR=6.1						
JCJ	**Chichijima**	**29.33**	**28**	P	**P**	**08 53 03.0**	**+0.4**
	comp=Z,43nm,0.8s,baz=260,slow=21,SNR=1.7						
FORT	**Forrest**	**32.02**	**179**	P	**P**	**08 53 25.9**	**-0.3**
FORT				IAmb	IAmb	08 53 27.7	
	comp=Z,26nm,1.1s						
MORW	**Morawa**	**32.12**	**199**	P	**P**	**08 53 26.2**	**-0.9**
MORW				IAmb	IAmb	08 53 36.1	
	comp=Z,12nm,1.1s						
BBOO	**Buckleboo**	**35.05**	**167**	P	**P**	**08 53 52.6**	**+0.1**
EIDS	**Eidsvold**	**35.28**	**141**	P	**P**	**08 53 55.6**	**+1.0**
NWAO	**Narrogin (SRO)**	**35.41**	**194**	P	**P**	**08 53 55.3**	**-0.3**
STKA	**Stephens Creek**	**35.82**	**159**	P	**P**	**08 53 59.0**	**-0.1**
	comp=Z,4.1nm,0.4s,baz=344,slow=8.5,SNR=16						
STKA	**Stephens Creek**	**35.82**	**159**	P	**P**	**08 53 59.2**	**+0.1**
KSRS	**Korea Array**	**35.88**	**1**	P	**P**	**08 54 00.6**	**+1.0**
	comp=Z,3.6nm,0.6s,baz=177,slow=9.8,SNR=16						
MJAR	**Matsushiro Arr**	**36.43**	**15**	P	**P**	**08 54 03.8**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=181,slow=9.8,SNR=5.8						
ARMA	**Armidale**	**39.31**	**146**	P	**P**	**08 54 30.1**	**+1.4**
ARMA				IAmb	IAmb	08 54 31.2	
	comp=Z,11nm,0.8s						
CAN	**Canberra**	**41.86**	**153**	P	**P**	**08 54 51.0**	**+1.5**
CAN				IAmb	IAmb	08 54 51.9	
	comp=Z,13nm,0.8s						
TOO	**Toolangi**	**42.33**	**158**	P	**P**	**08 54 54.3**	**+0.9**
TOO				IAmb	IAmb	08 55 08.9	
	comp=Z,14nm,1.4s						
USRK	**Ussuriysk Ar.**	**42.83**	**5**	P	**P**	**08 54 57.5**	**+0.3**
	comp=Z,3.0nm,0.8s,baz=203,slow=8.6,SNR=4.6						
ASAJ	**Asahikawa**	**44.69**	**16**	P	**P**	**08 55 12.3**	**+0.2**
	comp=Z,1.6nm,0.3s,baz=242,slow=22,SNR=2.0						
JKA	**Kamikawa-asahi**	**44.69**	**16**	P	**P**	**08 55 12.3**	**+0.2**
SONM	**Songino Array**	**49.62**	**342**	P	**P**	**08 55 52.6**	**+2.0**
	comp=Z,2.8nm,0.5s,baz=353,slow=11,SNR=2.1						
PEA0B	**Petropavlovsk-**	**57.42**	**21**	P	**P**	**08 56 46.7**	**-0.6**
PETK	**Petropavlovsk-**	**57.42**	**21**	P	**P**	**08 56 48.6**	**+1.4**
	comp=Z,1.9nm,0.6s,baz=188,slow=5.0,SNR=6.5						
LBZ	**Lake Benmore**	**59.53**	**145**	P	**P**	**08 57 02.7**	**+0.6**
THZ	**Tophouse**	**59.62**	**142**	P	**P**	**08 57 02.9**	**+0.1**
MK31	**Makanchi Array**	**59.70**	**326**	P	**P**	**08 57 04.4**	**+1.2**
MK31				IAmb	IAmb	08 57 05.9	
	comp=Z,4.3nm,0.8s						
MKAR	**Makanchi Array**	**59.70**	**326**	P	**P**	**08 57 04.7**	**+1.4**
	comp=Z,3.7nm,0.3s,baz=121,slow=8.5,SNR=56						
MAKZ	**Makanchi**	**59.89**	**326**	P	**P**	**08 57 05.9**	**+1.4**
MAKZ				IAmb	IAmb	08 57 06.6	
	comp=Z,4.4nm,0.8s						
TUWZ	**Tuamarina**	**60.09**	**141**	P	**P**	**08 57 04.8**	**-1.1**
KDJ	**Kajisay**	**60.36**	**319**	P	**P**	**08 57 09.7**	**+1.6**
KDJ				IAmb	IAmb	08 57 11.2	
	comp=Z,3.7nm,0.6s						
BKZ	**Black Stump Fm**	**60.59**	**137**	P	**P**	**08 57 09.8**	**+0.3**
ZALV	**Zalesovo Beam**	**62.84**	**333**	P	**P**	**08 57 25.3**	**+1.1**
	comp=Z,0.6nm,0.4s,baz=103,slow=6.2,SNR=1.3						
GAR	**Garm**	**63.81**	**313**	P	**P**	**08 57 32.5**	**+1.3**
GAR				IAmb	IAmb	08 57 35.5	
	comp=Z,5.5nm,0.7s						
KURK	**Kurchatov**	**63.92**	**328**	P	**P**	**08 57 32.5**	**+1.0**
BRVK	**Borovoye**	**69.56**	**327**	P	**P**	**08 58 07.4**	**+0.2**
NRIK	**Noril'sk**	**72.78**	**346**	P	**P**	**08 58 26.2**	**0.0**
	comp=Z,3.5nm,0.6s,baz=116,slow=5.1,SNR=7.4						
VNDA	**Vanda**	**81.08**	**173**	P	**P**	**08 59 12.8**	**0.0**
	comp=Z,1.2nm,0.7s,baz=329,slow=7.4,SNR=5.0						
VNDA	**Vanda**	**81.08**	**173**	P	**P**	**08 59 12.9**	**+0.2**
MAW	**Mawson**	**81.74**	**200**	P	**P**	**08 59 17.0**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=252,slow=22,SNR=1.6						
MAW	**Mawson**	**81.74**	**200**		**P**	**08 59 16.9**	**+0.6**
PPLA	**Purkeypile**	**84.49**	**27**	P	**P**	**08 59 31.4**	**+0.6**
PPLA				IAmb	IAmb	08 59 49.0	
	comp=Z,6.5nm,1.3s						
ILAR	**Eielson Array**	**87.01**	**25**	P	**P**	**08 59 42.5**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=253,slow=5.6,SNR=4.5						
TXAR	**Lajitas Array**	**122.65**	**54**	PKP	**PKPdf**	**09 05 53.8**	**-0.2**
	comp=Z,0.1nm,0.5s,baz=169,slow=0.9,SNR=2.0						
TORD	**Torodi Ar. Bea**	**124.02**	**287**	PKP	**PKPdf**	**09 05 57.1**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=102,slow=1.6,SNR=2.2						
PLCA	**Paso Flores**	**137.69**	**160**	PKP	**PKPdf**	**09 06 22.4**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=297,slow=4.5,SNR=3.0						

DJA 12 08:50:40.2±0.5, 4°S±5°×12°6E±°, h54km±21km, M3.8/9, mB5.1/2, mb4.6/1, MLv3.6/9, MLv3.7/3, Mw(mB)4.5/2, Buru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**1.01**	**54**	P	Pn	08 50 57.9	-0.2
NLAI				S	Sn	08 51 12.3	+0.9
SANI	**Sanana**	**1.79**	**351**	P	Pn	08 51 08.8	0.0
SANI				S	Sn	08 51 30.1	-0.3
AAI	**Ambon**	**1.92**	**86**	P	Pn	08 51 09.7	-0.7
MSAI	**Masohi**	**2.69**	**80**	P	Pn	08 51 20.8	-0.2
LBMI	**Labuha**	**3.40**	**21**	P	Pn	08 51 30.7	-0.1
LBMI				S	Sn	08 52 10.1	+0.3
LUWI	**Luwuk**	**4.47**	**308**	P	Pn	08 51 44.9	-0.5
APSI	**Ampana**	**5.46**	**302**	P	Pn	08 51 59.3	+0.2

AUST 12 08:52:17.1±1.5, 33°.32S×148°.75E, h10km, Error ellipse: s-maj=14.8km s-min=4.5km az=131.0, New South Wales

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YNG	**Young**	**1.02**	**197**	P	Pg	08 52 36.6	0.0
	baz=1.0						
YNG				S	Sn	08 52 51.4	-0.5
	baz=1.0						
YNG	**Young**	**1.02**	**197**	P	Pg	08 52 36.6	0.0
	baz=0.9						
YNG				S	Sn	08 52 51.4	-0.5
	baz=0.9						
MGCD	**Mangrove Creek**	**1.98**	**87**	P	Pn	08 52 51.0	+0.3
	baz=2.0						
MGCD				S	Sn	08 53 16.2	+0.6
	baz=2.0						
MGCD	**Mangrove Creek**	**1.98**	**87**	P	Pn	08 52 51.0	+0.3
	baz=1.8						
MGCD				S	Sn	08 53 16.2	+0.6
	baz=1.8						
CAN	**Canberra**	**2.01**	**174**	P	Pn	08 52 51.5	+0.5
	baz=2.0						
CAN				S	Sn	08 53 16.9	+0.6
	baz=2.0						
CAN	**Canberra**	**2.01**	**174**	P	Pn	08 52 51.5	+0.5
	baz=1.8						
CAN				S	Sn	08 53 16.9	+0.6
	baz=1.8						
CNB	**Canberra Magne**	**2.05**	**166**	P	Pn	08 52 52.3	+0.6
	baz=2.1						
CNB				S	Sn	08 53 18.6	+1.1
	baz=2.1						
CNB	**Canberra Magne**	**2.05**	**166**	P	Pn	08 52 52.3	+0.6
	baz=1.8						
CNB				S	Sn	08 53 18.6	+1.1
	baz=1.8						

IDC 12 08:58:18.5±8.8, 15°.78S×174°.63W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.6/35, mbtmp3.7/2, MS3.6/8, Ms1 3.6/8, ms1mx3.3/25, Error ellipse: s-maj=378.8km s-min=65.6km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**18.96**	**248**	LR	LR	09 09 11.1	
	comp=Z,185nm,20.3s,baz=170,slow=34						
HNR	**Honiara**	**25.58**	**281**	LR	LR	09 11 52.8	
	comp=Z,54nm,18.6s,baz=2.5,slow=32						
RPZ	**Rata Peaks**	**30.39**	**201**	LR	LR	09 15 25.9	
	comp=Z,110nm,20.4s,baz=3.5,slow=34						
WRA	**Warramunga Arr**	**48.60**	**257**	P	P	09 07 04.2	-0.2
	0.9nm,0.8s,baz=92,slow=6.7,SNR=5.6						
WRA				LR	LR	09 26 16.0	
	comp=Z,93nm,19.2s,baz=240,slow=34						
ASAR	**Alice Springs**	**48.87**	**252**	P	P	09 07 06.2	-0.2
	0.7nm,0.6s,baz=88,slow=8.1,SNR=13						
ASAR				LR	LR	09 25 49.7	
	comp=Z,93nm,21.2s,baz=127,slow=34						
NVAR	**Mina Array Bea**	**75.41**	**42**	LR	LR	09 36 53.6	
	comp=Z,27nm,19.6s,baz=281,slow=31						
TXAR	**Lajitas Array**	**81.81**	**57**	LR	LR	09 40 49.1	
	comp=Z,20nm,18.2s,baz=0.0,slow=31						
SONM	**Songino Array**	**94.34**	**318**	LR	LR	09 49 58.4	
	comp=Z,55nm,21.6s,baz=282,slow=33						
BRTR	**Keskin Array B**	**145.69**	**320**	PKPbc	PKPdf	09 17 59.0	-0.5
	1.1nm,0.9s,baz=93,slow=2.9,SNR=4.0						

IDC ***12*** *09:09:21.8±1.5, 11°.29S×161°.70E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.8/33, mbtmp3.8/7, ML3.6/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/29, Error ellipse: s-maj=35.8km s-min=29.8km az=142.0*

ISC 12 09:09:27.1±1.5, 11°.3S±0°.2×161°.7E±0°.2, h35km, n8, σ0§97/7, mb3.6/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.52**	**317**	Pn	**Pn**	**09 10 04.7**	**-0.8**
	12nm,0.3s,baz=134,slow=5.8,SNR=8.0						
HNR				Sn	**Sn**	**09 10 35.5**	**+0.6**
	60nm,0.3s,baz=186,slow=23,SNR=6.9						
PMG	**Port Moresby**	**14.40**	**276**	LR	LR	09 18 29.3	
	comp=

HAPS	**Han Pijesak,BI**	**2.08**	**336**	*e*Pg	**Pg**	09 30 29.6	**-1.0**
HAPS				*e*Sg	**Sg**	09 30 57.0	**-0.5**
MAKA	**Makarska**	**2.53**	**297**	*e*Pn	**Pb**	09 30 35.2	**-1.5**
RICI	**Ricice**	**2.56**	**302**	*e*Pn	**Pb**	09 30 35.5	**-1.5**
RICI				Sn	**Sb**	09 31 09.4	**+0.7**
KIJV	**Kijevo**	**3.27**	**305**	*e*Pn	**Pb**	09 30 45.8	**-3.5**
KIJV				Sn	**Sb**	09 31 28.0	**-1.3**
ZIRJ	**Zirje**	**3.60**	**295**	*e*Pn	**Pn**	09 30 49.2	**+2.1**
ZIRJ				Sn	**Sb**	09 31 34.0	**-4.7**
MORI	**Morici**	**3.64**	**299**	*e*Pn	**Pn**	09 30 49.7	**+2.0**
MORI				Sn	**Sb**	09 31 35.6	**-4.4**
DUGI	**Dugi Otok**	**4.12**	**298**	*e*Pn	**Pn**	09 30 56.4	**+2.1**
NVLJ	**Novalja**	**4.50**	**304**	*e*Pn	**Pn**	09 31 02.0	**+2.6**
NVLJ				Sn	**Sn**	09 31 56.0	**+3.8**

*KRAR **12** 09:43:28.2±0.1,53°.62N×88°.11E,M1.9,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC 12 09:43:21.7±3.4,53°.58N×87°.94E,h0km,mb1 2.6/2, mb1mx2.6/50,mbtmp2.6/2,ML2.5/2,Error ellipse: s-maj=32.9km s-min=19.5km az=47.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.89**	**283**	*i*		09 55 27.4	
	baz=98,slow=322,SNR=4.8						
ZALV	**Zalesovo Beam**	**1.89**	**283**	Pn	Pn	09 43 55.8	+0.6
	1.8nm,0.3s,baz=100,slow=14,SNR=12						
ZALV				Lg	Lg	09 44 21.9	
	4.1nm,0.3s,baz=108,slow=26,SNR=14						
KURBB	**Kurchatov Arra**	**6.51**	**247**	Pn	Pn	09 44 58.9	+0.3
	0.1nm,0.3s,baz=62,slow=14,SNR=5.5						
KURBB				Lg	Lg	09 46 46.5	
	0.0nm,0.3s,baz=56,slow=34,SNR=2.7						
MKAR	**Makanchi Array**	**7.70**	**210**	Pn	Pn	09 45 16.1	+1.2
	0.1nm,0.3s,baz=27,slow=12,SNR=2.2						

*IDC **12** 09:58:08.5±0.8,25°.5N±0°.2×45°.3W±0°.1,h11km,n23, σ0s64/10,mb3.9/9,MS3.4/12,Northern Mid-Atlantic Ridge*

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJG	**San Juan**	**20.73**	**253**	LR	LR	10 09 04.9	
	comp=Z,59nm,21.2s,baz=82,slow=32						
SCHQ	**Schefferville**	**33.31**	**337**	LR	LR	10 17 18.5	
	comp=Z,34nm,21.2s,baz=347,slow=34						
ESDC	**Sonseca Array**	**37.21**	**57**	LR	LR	10 17 39.0	
	comp=Z,22nm,19.8s,baz=160,slow=32						
DBIC	**Dimbokro**	**42.87**	**109**	LR	LR	10 20 25.5	
	comp=Z,63nm,21.1s,baz=270,slow=31						
H10N2	**ASCENSION HYDR**	**44.67**	**134**	T	T	10 54 06.2	
	baz=319,slow=75,SNR=92						
H10N3	**ASCENSION HYDR**	**44.67**	**134**	T	T	10 54 06.5	
	baz=319,slow=75,SNR=90						
H10N1	**ASCENSION HYDR**	**44.69**	**134**	T	T	10 54 07.8	
	baz=319,slow=75,SNR=107						
H10S3	**ASCENSION HYDR**	**45.40**	**135**	T	T	10 55 01.9	
	baz=319,slow=74,SNR=24						
H10S2	**ASCENSION HYDR**	**45.42**	**135**	T	T	10 55 03.0	
	baz=261,slow=74,SNR=12						
TORD	**Torodi Ar. Bea**	**45.76**	**96**	P	**P**	**10 06 32.4**	**+0.3**
	0.8nm,0.7s,baz=305,slow=6.8,SNR=5.4						
TORD				LR	LR	10 24 03.6	
	comp=Z,46nm,19.9s,baz=185,slow=34						
ULM	**Lac du Bonnet**	**45.84**	**316**	LR	LR	10 22 35.2	
	comp=Z,41nm,20.9s,baz=61,slow=32						
LPAZ	**La Paz**	**47.16**	**211**	P	**P**	**10 06 42.9**	**-0.7**
	3.1nm,0.9s,baz=15,slow=8.4,SNR=10						
TXAR	**Lajitas Array**	**51.52**	**288**	P	**P**	**10 07 16.0**	**-0.4**
	0.4nm,0.9s,baz=95,slow=11,SNR=2.6						
TXAR				PcP	**PcP**	**10 08 31.4**	**+0.8**
	0.3nm,0.9s,baz=90,slow=3.9,SNR=2.6						
TXAR				LR	LR	10 29 36.1	
	comp=Z,15nm,19.4s,baz=0.0,slow=37						
NOA	**NORSAR Array B**	**51.88**	**31**	LR	LR	10 25 29.0	
	comp=Z,15nm,21.1s,baz=100,slow=32						
PDAR	**Pinedale Array**	**54.66**	**306**	P	**P**	**10 07 39.8**	**+0.3**
	0.8nm,0.8s,baz=86,slow=11,SNR=7.8						
YKA	**Yellowknife Ar**	**58.16**	**329**	P	**P**	**10 08 03.4**	**-0.4**
	0.8nm,0.7s,baz=97,slow=7.9,SNR=13						
AKASG	**Malin Array Be**	**61.02**	**44**	P	**P**	**10 08 23.8**	**+0.1**
	0.6nm,0.5s,baz=280,slow=5.5,SNR=1.7						
BRTR	**Keskin Array B**	**65.98**	**56**	P	**P**	**10 08 56.3**	**-0.7**
	0.5nm,0.7s,baz=280,slow=8.6,SNR=2.0						
PLCA	**Paso Flores**	**69.99**	**200**	P	**P**	**10 09 22.4**	**+0.6**
	5.0nm,1.2s,baz=41,slow=10,SNR=3.4						
KIRV	**Kirov**	**70.94**	**34**	LR	LR	10 38 11.1	
	comp=Z,20nm,19.6s,baz=193,slow=34						
ILAR	**Eielson Array**	**71.99**	**334**	P	**P**	**10 09 34.2**	**+0.6**
	1.1nm,0.8s,baz=68,slow=4.8,SNR=14						
ILAR				LR	LR	10 40 50.6	
	comp=Z,33nm,18.9s,baz=234,slow=36						
ARU	**Arti**	**76.32**	**34**	LR	LR	10 39 10.5	
	comp=Z,33nm,21.9s,baz=206,slow=32						
BOSA	**Boshof**	**86.52**	**124**	LR	LR	10 45 41.5	
	comp=Z,31nm,19.1s,baz=44,slow=33						

DDA 12 10:30:04.0,39°.11N×27°.48E,h7km±7km,ML1.3,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STEP	**BALIKESIR_Sava**	**0.32**	**35**	*i* P	Pg	10 30 09.7	-0.6
STEP				*i* S	Sb	10 30 16.4	-1.2
STEP				IAML		10 30 17.0	
	comp=E,30nm,0.5s						
STEP				IAML		10 30 19.0	
	comp=N,43nm,0.9s						
ZEDA	**zmir-Bergama**	**0.34**	**245**	*i* P	Pg	10 30 10.1	-0.6
ZEDA				IAML		10 30 18.0	
	comp=E,16nm,0.4s						
ZEDA				*i* S	Sb	10 30 18.2	0.0
ZEDA				IAML		10 30 22.0	
	comp=N,18nm,0.7s						
AKHS	**Akhisar**	**0.35**	**132**	*i* P	Pg	10 30 05.5	-5.4
AKHS				*i* S	Sg	10 30 11.6	-3.9
DURS	**Dursunbey**	**0.91**	**57**	*i* P	Pg	10 30 21.0	-0.6
DURS				*i* S	Sb	10 30 34.2	-0.4
DURS				IAML		10 30 55.0	
	comp=E,5.8nm,0.4s						
DURS				IAML		10 31 03.0	
	comp=N,5.0nm,0.9s						
BAYC	**CANAKKALE_Bayr**	**0.96**	**311**	*i* P	Pb	10 30 22.9	0.0
BAYC				*i* S	Sn	10 30 40.0	+2.2
BAYC				IAML		10 30 52.0	
	comp=N,32nm,0.4s						
BAYC				IAML		10 30 52.0	
	comp=E,30nm,0.5s						
DEMI	**Demirci**	**0.97**	**94**	*i* P	Pg	10 30 22.4	-0.1
DEMI				IAML		10 30 36.0	
	comp=E,26nm,1.2s						
DEMI				*i* S	Sb	10 30 37.0	+0.8
DEMI				IAML		10 31 05.0	
	comp=N,39nm,1.4s						
MANT	**Manisa**	**1.05**	**126**	*i* P	Pg	10 30 22.9	-1.2
MANT				IAML		10 30 37.0	
	comp=E,6.8nm,1.1s						
MANT				*i* S	Sn	10 30 40.1	-0.2
MANT				IAML		10 31 06.0	
	comp=N,11nm,1.6s						

ISK 12 10:30:27.5,40°.44N×26°.25E,h18km,ML1.9/12,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GELI	**Tayfur-Gelibol**	**0.18**	**105**	PG	Pg	10 30 32.5	+0.4
GELI				SG	Sg	10 30 35.5	+0.3
ENEZ	**Enez**	**0.30**	**346**	PG	Pb	10 30 35.1	+0.7
ENEZ				SG	Sb	10 30 39.7	+0.7
ERIK	**Erikli-Kesan**	**0.30**	**41**	PG	Pb	10 30 34.7	+0.3
ERIK				SG	Sb	10 30 39.4	+0.3
GADA	**Gvkgeada**	**0.37**	**227**	PG	Pb	10 30 35.4	-0.1
GADA				SG	Sb	10 30 41.5	+0.6
LPK	**Lapseki**	**0.40**	**100**	PG	Pb	10 30 36.3	+0.3
LPK				SG	Sb	10 30 42.5	+0.7
ALN	**Alexandroupoli**	**0.48**	**341**	PG	Pb	10 30 37.9	+0.5
ALN				SG	Sb	10 30 44.2	0.0
UKOP	**Uzunkopru-Edir**	**0.74**	**23**	PG	Pb	10 30 42.0	+0.1
RKY	**Sarkoy-Tekirda**	**0.75**	**71**	PG	Pg	10 30 42.3	+0.1
KRBG	**Karabiga-Canak**	**0.80**	**93**	PG	Pg	10 30 43.4	+0.2
RDO	**Rodhopi**	**0.89**	**323**	PG	Pg	10 30 44.9	+0.1
MRMT	**Marmara Adasi**	**1.04**	**81**	PG	Pn	10 30 47.3	+0.1
GONE	**Gonen-Balikesi**	**1.17**	**109**	PN	Pn	10 30 48.6	-0.3
EDC	**Edincik**	**1.24**	**94**	PN	Pb	10 30 50.4	+0.1
SIGR	**SIGRI**	**1.27**	**194**	PN	Pb	10 30 50.8	0.0

*IDC **12** 10:32:00.9±0.9,34°.21N×74°.28E,h0km,mb3.7/11, mb1 3.9/15,mb1mx3.7/55,mbtmp3.7/15,ML3.5/4, Error ellipse: s-maj=28.0km s-min=16.7km az=60.0*

ISC 12 10:32:07.1±0.7,34°.43N±0°.09×74°.5E±0°.1,h35km,n24, σ1s77/26,mb3.6/9,Southwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**2.24**	**152**	*e*P	**Pn**	**10 32 43.0**	**+1.3**
THN				*e*S	**Sn**	**10 33 13.5**	**+5.4**
AAK	**Ala-Archa**	**8.20**	**0**	Pn	**Pn**	**10 34 06.3**	**+2.6**
	0.2nm,0.3s,baz=180,slow=20,SNR=1.6						
PYUN	**Piuthan**	**9.63**	**129**	*e*P	**Pn**	**10 34 23.2**	**-0.2**
	20nm,0.3s						
DANN	**Dangsing**	**9.97**	**125**	*e*P	**Pn**	**10 34 27.6**	**-0.6**
	14nm,0.3s						
DANN				*e*S	**Sn**	**10 36 16.8**	**-2.2**
DMN	**Daman**	**11.36**	**124**	*e*P	**Pn**	**10 34 46.2**	**-1.0**
	5.8nm,0.2s						
PKIN	**Phulchoki**	**11.58**	**123**	*e*P	**Pn**	**10 34 49.5**	**-0.7**
	8.4nm,0.2s						
PKI	**Pulchoki**	**11.60**	**123**	*e*P	**Pn**	**10 34 49.7**	**-0.7**
	4.9nm,0.2s						
GUN	**Gumba**	**11.72**	**121**	*e*P	**Pn**	**10 34 50.9**	**-1.2**
	13nm,0.4s						
JIRN	**Jiri**	**12.09**	**121**	*e*P	**Pn**	**10 34 55.2**	**-2.0**
	19nm,0.3s						
RAMN	**Ramite**	**12.81**	**122**	*e*P	**Pn**	**10 35 05.2**	**-1.8**
	4.8nm,0.2s						
MKAR	**Makanchi Array**	**13.69**	**23**	Pn	**Pn**	**10 35 20.4**	**+1.8**
	0.1nm,0.3s,baz=202,slow=10,SNR=2.1						
KURBB	**Kurchatov Arra**	**16.45**	**9**	Pn	**Pn**	**10 35 54.8**	**-0.3**
	0.2nm,0.3s,baz=199,slow=10,SNR=2.0						
BVAR	**Bovovye Array**	**18.82**	**352**	P	**P**	**10 36 23.8**	**+0.2**
	1.0nm,0.3s,baz=154,slow=9.6,SNR=15						
AKTO	**Aktyubinsk**	**20.02**	**328**	P	**P**	**10 36 36.5**	**-0.2**
	1.4nm,0.4s,baz=131,slow=6.8,SNR=6.0						
ZALV	**Zalesovo Beam**	**20.83**	**17**	P	**P**	**10 36 46.4**	**+0.9**
	3.3nm,0.5s,baz=216,slow=10.0,SNR=10						
CMAR	**Chiang Mai Arr**	**26.96**	**120**	P	**P**	**10 37 44.7**	**-0.8**
	0.9nm,0.6s,baz=303,slow=9.9,SNR=5.3						
FINES	**FINESS Array B**	**40.78**	**327**	P	**P**	**10 39 45.8**	**+1.2**
	1.5nm,0.9s,baz=106,slow=9.2,SNR=2.0						
ARCES	**ARCESS Array B**	**44.14**	**338**	P	**P**	**10 40 12.9**	**+1.1**
	2.8nm,0.9s,baz=112,slow=8.9,SNR=12						
HFS	**Hagfors**	**46.44**	**323**	P	**P**	**10 40 28.2**	**-1.9**
	1.4nm,0.6s,baz=106,slow=5.1,SNR=1.8						
TORD	**Torodi Ar. Bea**	**68.56**	**272**	P	**P**	**10 43 04.1**	**-2.5**
	0.3nm,0.4s,baz=44,slow=6.0,SNR=5.6						
ILAR	**Eielson Array**	**75.96**	**17**	P	**P**	**10 43 50.2**	**+0.2**
	0.4nm,0.6s,baz=307,slow=5.0,SNR=6.0						
WRA	**Warrarnga Arr**	**78.48**	**124**	P	**P**	**10 44 04.1**	**-0.7**
	0.3nm,0.6s,baz=327,slow=5.6,SNR=5.7						
ASAR	**Alice Springs**	**80.74**	**127**	P	**P**	**10 44 16.9**	**-0.1**
	0.3nm,0.6s,baz=311,slow=5.5,SNR=7.6						
YKA	**Yellowknife Ar**	**83.14**	**4**	P	**P**	**10 44 29.4**	**+0.4**
	0.2nm,0.5s,baz=347,slow=4.6,SNR=2.6						

*ATH **12** 10:33:48.4,38°.31N×20°.41E,h17km±1km,ML2.8/4, Error ellipse: s-maj=2.2km s-min=0.8km az=261.0*
*THE **12** 10:33:48.5,38°.31N×20°.35E,h8km±3km,mb2.8/4, Error ellipse: s-maj=4.2km s-min=0.4km az=84.0*

ISC 12 10:33:47.9±0.9,38°.31N±0°.03×20°.36E±0°.04,h18km±4km, n34,σ0s76/57,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.08**	**137**	P	**Pg**	**10 33 51.3**	**-0.1**
KEF4				S	**Sg**	**10 33 53.1**	**-0.5**
KEF1	**Kardakata, Kep**	**0.10**	**112**	P	**Pg**	**10 33 51.3**	**-0.2**
KEF1				S	**Sg**	**10 33 53.1**	**-0.8**
KEF3	**Kipouria, Keph**	**0.11**	**184**	P	**Pg**	**10 33 52.0**	**+0.3**
KEF3				S	**Sg**	**10 33 54.5**	**+0.3**
LXRA	**Lixouri, Kepha**	**0.13**	**151**	P	**Pg**	**10 33 52.2**	**+0.3**
LXRA				S	**Sg**	**10 33 55.0**	**+0.4**
ARGA	**Argostoli. Kep**	**0.17**	**145**	P	**Pg**	**10 33 52.5**	**+0.1**
ARGA				S	**Sg**	**10 33 55.3**	**0.0**
KEF2	**Argostoli. Kep**	**0.18**	**145**	P	**Pg**	**10 33 52.7**	**+0.2**
KEF2				S	**Sg**	**10 33 55.6**	**0.0**
VSK1	**VASILIKIADES**	**0.19**	**60**	P	**Pg**	**10 33 52.5**	**-0.2**
VSK1				S	**Sg**	**10 33 55.7**	**-0.2**
FSK	**Fiskardo**	**0.22**	**48**	P	**Pg**	**10 33 53.0**	**-0.1**
FSK				S	**Sg**	**10 33 56.1**	**-0.5**
	3μm,0.3s						
FSK	**Fiskardo**	**0.22**	**48**	P	**Pg**	**10 33 53.0**	**-0.1**
FSK				S	**Sg**	**10 33 55.9**	**-0.8**
FSK				AML	AML	10 33 56.6	
	comp=N,4449μm,0.3s						
FSK				AML	AML	10 33 56.7	
	comp=E,5926μm,0.3s						
VLS	**Valsamata**	**0.23**	**127**	P	**Pg**	**10 33 53.2**	**-0.1**
VLS				S	**Sg**	**10 33 56.7**	**-0.2**
	comp=E,18μm,0.1s						
VLS	**Valsamata**	**0.23**	**127**	P	**Pg**	**10 33 53.2**	**-0.1**
VLS				S	**Sg**	**10 33 56.8**	**-0.2**
VLS				AML	AML	10 33 56.8	
	comp=N,30127μm,0.1s						
VLS				AML	AML	10 33 56.9	
	comp=E,38920μm,0.1s						
EVGI	**Lefkada island**	**0.39**	**37**	P	**Pg**	**10 33 56.0**	**+0.1**
EVGI				S	**Sg**	**10 34 01.9**	**+0.5**
EVGI	**Lefkada island**	**0.39**	**37**	P	**Pg**	**10 33 56.1**	**+0.1**
EVGI				S	**Sg**	**10 34 01.7**	**+0.3**
KFL	**Anninata**	**0.40**	**121**	P	**Pg**	**10 33 56.0**	**-0.1**
KFL				S	**Sg**	**10 34 02.1**	**+0.5**
	comp=E,2μm,0.3s						
KFL	**Anninata**	**0.40**	**121**	P	**Pg**	**10 33 56.0**	**-0.1**
KFL				S	**Sg**	**10 34 01.9**	**+0.3**
KFL				AML	AML	10 34 02.6	
	comp=N,3412μm,0.3s						
KFL				AML	AML	10 34 02.8	
	comp=E,4811μm,0.3s						
MGNA	**Meganis**	**0.48**	**45**	P	**Pg**	**10 33 57.6**	**-0.1**
MGNA				S	**Sg**	**10 34 04.8**	**+0.6**
MGNA				AML	AML	10 34 05.4	
	comp=N,1322μm,0.1s						
MGNA				AML	AML	10 34 05.5	
	comp=E,1269μm,0.2s						
LKD2	**Lefkada island**	**0.53**	**26**	P	**Pg**	**10 33 58.5**	**-0.1**
LKD2				S	**Sg**	**10 34 06.7**	**+1.0**
	comp=E,312nm,0.2s						
LKD2	**Lefkada island**	**0.53**	**26**	P	**Pg**	**10 33 58.4**	**-0.1**
LKD2				S	**Sb**	**10 34 07.1**	**+1.0**
TSLK	**Tsoukalades, L**	**0.56**	**24**	P	**Pg**	**10 33 59.2**	**+0.1**
TSLK	**Tsoukalades, L**	**0.56**	**24**	P	**Pg**	**10 33 59.2**	**+0.1**
RLS	**Riolos of Patr**	**0.91**	**106**	P	**Pg**	**10 34 05.3**	**-0.4**
DRO	**Drossia**	**1.13**	**108**	P	**Pb**	**10 34 09.3**	**+0.4**
IGT	**Igoumenitsa**	**1.22**	**359**	P	**Pn**	**10 34 11.6**	**+1.5**
EFP	**Éfpalio**	**1.22**	**84**	P	**Pn**	**10 34 10.4**	**+0.2**
ANX	**Ano Chora**	**1.26**	**77**	P	**Pn**	**10 34 11.3**	**+0.6**
LAKA	**Lakka**	**1.28**	**93**	P	**Pn**	**10 34 11.2**	**+0.3**
SERG	**Sergoula**	**1.34**	**85**	P	**Pn**	**10 34 12.4**	**+0.7**
TRIZ	**Trizonia**	**1.35**	**87**	P	**Pn**	**10 34 12.3**	**+0.4**
KLV	**Kalavryta, Ach**	**1.44**	**100**	P	**Pn**	**10 34 14.0**	**+0.9**
STON	**Ston**	**4.98**	**337**	*e*Pn	**Pn**	**10 35 01.8**	**0.0**
STON				Sn	**Sn**	**10 35 57.0**	**-2.0**
RICI	**Ricice**	**5.72**	**336**	*e*Pn	**Pn**	**10 35 12.7**	**+0.7**
RICI				Sn	**Sn**	**10 36 15.8**	**-1.4**
KIJV	**Kijevo**	**6.42**	**334**	*e*Pn	**Pn**	**10 35 22.7**	**+1.1**
KIJV				Sn	**Sn**	**10 36 33.2**	**-1.2**
MORI	**Morici**	**6.56**	**329**	*i* Pn	**Pn**	**10 35 24.1**	**+0.6**
MORI				Sn	**Sn**	**10 36 36.5**	**-1.5**
DUGI	**Dugi Otok**	**6.94**	**327**	*e*Pn	**Pn**	**10 35 29.7**	**+1.0**
DUGI				Sn	**Sn**	**10 36 44.3**	**-2.8**

*BJI **12** 11:05:29.0±0.0,19°.60N×99°.80E,h10km,mB4.4/22, mb4.5/26,ML4.7/4,Ms4.4/22,Ms7 4.1/12*
*IDC **12** 11:05:29.6±0.7,19°.74N×99°.71E,h0km,mb4.0/11, mb1 4.1/11,mb1mx3.9/38,mbtmp4.0/11,MS3.5/17, Ms1 3.5/17,ms1mx3.4/33,Error ellipse: s-maj=20.0km s-min=12.1km az=98.0*
*NEIC **12** 11:05:30.3±1.7,19°.67N±0°.04×99°.71E±0°.06,h10km±1km, mb4.3/17,Error ellipse: s-maj=9.5km s-min=6.5km az=121.0*
*MOS **12** 11:05:30.8±1.4,19°.66N×99°.72E,h21km,mb4.4/15,Error ellipse: s-maj=13.0km s-min=7.3km az=93.4*

ISC 12 11:05:31.2±0.4,19°.66N±0°.03×99°.71E±0°.05,h10km,n83, σ1s70/80,mb4.3/28,MS3.5/19,6C-5D,Thailand

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMMT	**Chiang Mai**	**1.11**	**221**	P	**Pb**	**11 05 52.2**	**-0.4**
CMMT				S	**Sg**	**11 06 09.1**	**+2.1**
CHTO	**Chiang Mai**	**1.11**	**221**	P	**Pb**	**11 05 51.7**	**-0.8**
CHTO				S	**Sb**	**11 06 06.9**	**-0.2**
CHTO	**Chiang Mai**	**1.11**	**221**		**Pb**	**11 05 51.7**	**-0.8**
CHTO				Sg	**Sb**	**11 06 06.8**	**-0.2**
LAMP	**Lampang**	**1.14**	**184**	P	**Pb**	**11 05 52.8**	**-0.2**
LAMP				S	**Sg**	**11 06 10.9**	**+3.0**
PHRA	**Phrae**	**1.26**	**157**	P	**Pn**	**11 05 54.8**	**-0.1**
NANT	**Nan**	**1.27**	**132**	P	Pn	11 05 52.8	-2.3
CM09	**Chiang Mai Arr**	**1.39**	**209**	P	**Pn**	**11 05 57.0**	**+0.3**
CM31	**Chiang Mai Arr**	**1.40**	**211**		**Pn**	**11 05 56.3**	**-0.6**
CM31					**Sn**	**11 06 15.5**	**+0.1**
CMAR	**Chiang Mai Arr**	**1.40**	**211**	Pg	**Pn**	**11 05 56.1**	**-0.8**
	415nm,0.3s,baz=18,slow=17,SNR=875						
CMAR				Lg	Lg	11 06 17.9	
	395nm,0.3s,baz=31,slow=30,SNR=4.3						
CMAR				LR	LR	11 06 32.1	
	comp=Z,1μm,21.8s,baz=78,slow=43						
CMAR	**Chiang Mai Arr**	**1.40**	**211**	*i* P	**Pn**	**11 05 56.0**	**-0.8**
CMAR				pmax	pmax		
	comp=Z,2μm,0.7s						
CM04	**Chiang Mai Arr**	**1.43**	**209**	P	**Pn**	**11 05 57.5**	**+0.2**
CM05	**Chiang Mai Arr**	**1.45**	**210**	P	**Pn**	**11 05 57.6**	**+0.1**
MHMT	**Maesarieng**	**2.24**	**229**	P	**Pn**	**11 06 09.0**	**+0.6**
SLVN	**Son La**	**4.27**	**66**		**Pn**	**11 06 34.4**	**-2.0**
KMI	**Kunming**	**6.12**	**27**	Pn	Pn	11 07 08.1	+6.2
KMI				Pg	**Pg**	**11 07 27.0**	**-1.4**
KMI				Sn	**Sb**	**11 08 33.0**	**+1.6**
KMI				Sg	**Sg**	**11 08 51.4**	**+3.7**
KMI				smax	smax		
	comp=N,100nm,1.6s						
KMI				smax	smax		
	comp=E,88nm,1.3s						
KMI				LR	LR		
	comp=N,930nm,5.2s						
KMI				LR	LR		
	comp=E,1μm,5.4s						
KMI				LR	LR		
	comp=Z,1μm,10.5s						
KMI	**Kunming**	**6.12**	**27**	P	**Pn**	**11 07 02.0**	**+0.1**
KMI	**Kunming**	**6.12**	**27**		**Pn**	**11 07 02.0**	**+0.1**
SHL	**Shillong**	**9.31**	**311**	P	Pn	11 07 43.0	-2.8
SHL	**Shillong**	**9.31**	**311**	Pn	Pn	11 07 43.0	-2.8
CD2	**Chengdu**	**11.78**	**17**	⇑*i* P	**Pn**	**11 08 19.1**	**-0.4**
CD2				S	**Sn**	**11 10 31.3**	**+0.2**
CD2				pmax	pmax		
	comp=Z,30nm,1.9s						
CD2				pmax	pmax		
	comp=Z,180nm,7.3s						
CD2				LR	LR		
	comp=Z,2μm,10.4s						
CD2				LR	LR		
	comp=Z,1μm,9.2s						
CD2				LR	LR		
	comp=Z,3μm,9.2s						
LSA	**Lhasa**	**12.66**	**324**	P	**Pn**	**11 08 32.1**	**+0.2**
LSA	**Lhasa**	**12.66**	**324**	Pn	**Pn**	**11 08 32.1**	**+0.2**
LZH	**Lanzhou**	**16.76**	**12**	*e*P	**Pn**	**11 09 26.7**	**+0.4**
LZH				pP	P	11 09 31.0	+2.4
LZH				sP	pP	11 09 33.8	+2.3
LZH				PP	**PnPn**	**11 09 43.4**	**+7.5**
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,69nm,5.4s						
LZH				LR	LR		
	comp=Z,430nm,9.2s						
LZH				LR	LR		
	comp=Z,450nm,10.8s						
LZH				LR	LR		
	comp=Z,330nm,9.2s						
PSI	**Prapat**	**16.77**	**183**	Pn	**P**	**11 09 32.8**	**+4.0**
	comp=Z,0.5nm,0.3s,baz=357,slow=1.2,SNR=4.0						
PSI				LR	LR	11 16 02.4	
	comp=Z,273nm,18.9s,baz=270,slow=37						
PSI	**Prapat**	**16.77**	**183**	P	**Pn**	**11 09 27.3**	**+0.8**
PSI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
RPSI	**Rantau Prapat**	**16.88**	**183**	Pn	**Pn**	**11 09 27.3**	**-0.5**
WHN	**Wuhan**	**17.10**	**48**	P	**Pn**	**11 09 31.6**	**+1.1**
GTA	**Gaotai**	**19.68**	**0**	⇑P	**P**	**11 10 02.3**	**+1.6**
GTA				pP	pP	11 10 06.4	+2.8
GTA				sP	sP	11 10 09.3	+4.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,86nm,5.4s						
GTA				LR	LR		
	comp=Z,240nm,14.9s						
GTA				LR	LR		
	comp=Z,1μm,14.9s						
KSM	**Kuching**	**20.84**	**149**	P	**P**	**11 10 10.6**	**-2.7**
KSM				IAmb	IAmb	11 10 19.1	
	comp=Z,6.3nm,0.8s						
TGY	**Tagaytay City**	**21.04**	**102**	LR	LR	11 18 52.6	
	comp=Z,279nm,19.3s,baz=268,slow=38						
HHC	**Hu-ho-hao-te**	**23.42**	**23**	*e*P	**P**	**11 10 38.2**	**-2.4**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC			

DGZ	**Jazzator, Alta**	**31.54**	**345**⇑	*eP*		**P**		**11 11 53.7**	**0.0**
DGZ				pmax		pmax			
	comp=Z,4.0nm,1.7s								
GAR	**Garm**	**31.85**	**314**	P		**P**		**11 11 55.0**	**-1.5**
KURK	**Kurchatov**	**35.20**	**337**⇑	*eP*		**P**		**11 12 28.0**	**+2.6**
KURK				pmax		pmax			
	comp=Z,4.0nm,1.3s								
KURK	**Kurchatov**	**35.20**	**337**	P		**P**		**11 12 24.0**	**-1.4**
KURK				IAmb		IAmb		11 12 28.4	
	comp=Z,3.0nm,0.9s								
ZAA0	**Zalesovo Array**	**36.09**	**345**	P		**P**		**11 12 31.7**	**-1.3**
ZAA0				IAmb		IAmb		11 12 34.4	
	comp=Z,5.6nm,0.9s								
ZALV	**Zalesovo Beam**	**36.09**	**345**	P		**P**		**11 12 32.9**	**-0.1**
	comp=Z,6.0nm,0.9s,baz=148,slow=8.7,SNR=11								
ZALV				LR		LR		11 28 56.2	
	comp=Z,33nm,19.2s,baz=100,slow=39								
ZALV	**Zalesovo Beam**	**36.09**	**345**	*i* P		**P**		**11 12 33.7**	**+0.7**
ZALV				pmax		pmax			
	comp=Z,6.0nm,0.9s								
USRK	**Ussuriysk Ar.**	**36.35**	**40**	LR		LR		11 28 49.5	
	comp=Z,70nm,19.3s,baz=214,slow=39								
MJB9	**Matsu-Tunnel**	**37.60**	**55**	P		P		11 12 44.0	-2.2
MJB9				IAmb		IAmb		11 13 01.9	
	comp=Z,4.4nm,0.8s								
MJAR	**Matsushiro Arr**	**37.60**	**55**	P		**P**		**11 12 46.5**	**+0.2**
	comp=Z,2.7nm,0.9s,baz=263,slow=10.0,SNR=5.7								
MJAR				LR		LR		11 28 36.1	
	comp=Z,65nm,18.2s,baz=270,slow=37								
KLR	**Kul'dur**	**39.08**	**33**⇑	*eP*		**P**		**11 12 57.3**	**-1.1**
KLR				pmax		pmax			
	comp=Z,6.0nm,1.6s								
BRVK	**Borovoye**	**40.35**	**333**⇓	*eP*		**P**		**11 13 10.6**	**+1.6**
BRVK				pmax		pmax			
	comp=Z,3.0nm,1.0s								
BRVK	**Borovoye**	**40.35**	**333**	P		**P**		**11 13 07.8**	**-1.2**
GEYT	**Alibeck**	**40.35**	**306**	LR		LR		11 32 13.5	
	comp=Z,36nm,19.5s,baz=220,slow=40								
ARU	**Arti**	**47.75**	**330**	*c iP*		**P**		**11 14 09.5**	**+1.2**
ARU								11 15 56.7	
ARU				S		**S**		**11 21 06.2**	**+1.7**
ARU				SS		**SS**		**11 24 30.8**	**-1.9**
ARU				pmax		pmax			
	comp=Z,5.0nm,1.0s								
ARU	**Arti**	**47.75**	**330**	P		**P**		**11 14 07.8**	**-0.5**
NRIK	**Noril'sk**	**50.23**	**354**	P		**P**		**11 14 26.7**	**-0.4**
	comp=Z,3.2nm,0.8s,baz=157,slow=6.0,SNR=3.8								
NRIK				LR		LR		11 37 15.4	
	comp=Z,59nm,18.7s,baz=158,slow=38								
WRA	**Warramunga Arr**	**51.97**	**137**	P		**P**		**11 14 40.9**	**0.0**
	comp=Z,0.9nm,0.6s,baz=325,slow=7.9,SNR=9.0								
WRA	**Warramunga Arr**	**51.97**	**137**	*i* P		**P**		**11 14 41.9**	**+1.1**
WRA				pmax		pmax			
	comp=Z,1.0nm,0.6s								
WB2	**Warramunga Arr**	**51.98**	**137**	P		P		11 14 38.8	-2.1
WB2				IAmb		IAmb		11 14 39.3	
	comp=Z,7.1nm,1.3s								
KBZ	**Khabaz**	**52.82**	**310**	LR		LR		11 42 16.1	
	comp=Z,43nm,18.7s,baz=87,slow=42								
AS31	**Alice Springs**	**54.46**	**141**	P		**P**		**11 14 57.6**	**-1.6**
ASAR	**Alice Springs**	**54.46**	**141**	P		**P**		**11 14 59.2**	**0.0**
	comp=Z,0.9nm,0.9s,baz=321,slow=7.2,SNR=17								
TIXI	**Tiksi**	**54.70**	**11**	*eP*		**P**		**11 14 59.2**	**-1.0**
TIXI				pmax		pmax			
	comp=Z,3.0nm,1.0s								
TIXI	**Tiksi**	**54.70**	**11**	P		**P**		**11 14 58.7**	**-1.5**
TIXI				IAmb		IAmb		11 14 59.7	
	comp=Z,3.1nm,1.0s								
PETK	**Petropavlovsk-**	**55.39**	**38**	LR		LR		11 40 53.7	
	comp=Z,47nm,18.5s,baz=241,slow=38								
BRTR	**Keskin Array B**	**59.49**	**305**	P		**P**		**11 15 33.6**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=113,slow=11,SNR=2.2								
BRTR				LR		LR		11 47 02.7	
	comp=Z,18nm,19.0s,baz=51,slow=42								
ELL	**Elmali**	**62.57**	**302**	P		**P**		**11 15 54.5**	**-1.4**
ELL	**Elmali**	**62.57**	**302**	P		**P**		**11 15 54.5**	**-1.4**
BILL	**Bilibino**	**63.20**	**23**⇓	*eP*		**P**		**11 15 58.3**	**-1.0**
BILL				pmax		pmax			
	comp=Z,5.0nm,1.3s								
BILL				MLR		MLR			
	comp=Z,173nm,19.0s								
STKA	**Stephens Creek**	**65.09**	**141**	P		**P**		**11 16 12.2**	**0.0**
	comp=Z,2.1nm,0.9s,baz=317,slow=10.0,SNR=3.0								
STKA				LR		LR		11 47 18.2	
	comp=Z,61nm,18.9s,baz=218,slow=38								
FINES	**FINESS Array B**	**65.11**	**329**	P		**P**		**11 16 10.9**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=87,slow=7.8,SNR=5.6								
FINES				LR		LR		11 48 48.1	
	comp=Z,37nm,18.5s,baz=42,slow=40								
FINES	**FINESS Array B**	**65.11**	**329**	*i* P		**P**		**11 16 10.8**	**-1.1**
FINES				pmax		pmax			
	comp=Z,1.0nm,0.5s								
NOA	**NORSAR Array B**	**72.29**	**329**	P		**P**		**11 16 55.2**	**-1.6**
	comp=Z,0.8nm,0.7s,baz=83,slow=5.9,SNR=3.4								
NOA				LR		LR		11 51 02.9	
	comp=Z,29nm,20.4s,baz=130,slow=38								
GERES	**GERESS Array B**	**72.88**	**316**	LR		LR		11 52 27.0	
	comp=Z,27nm,20.8s,baz=71,slow=39								
ILAR	**Eielson Array**	**81.85**	**23**	LR		LR		11 58 17.3	
	comp=Z,31nm,18.4s,baz=326,slow=39								

*ATA **12** 11:46:43.0±1.8,38.°75N×42.°50E,h12km±26km,ML3.1, MW3.5*
*ISK **12** 11:46:43.6,38.°73N×42.°53E,h4km,ML3.3/23*
*NSSP **12** 11:46:43.5,38.°72N×42.°50E,h12km,Ms3.1*
*DDA **12** 11:46:44.0,38.°72N×42.°52E,h12km±1km,ML3.0*

ISC 12 11:46:44.3±0.9,38.°74N±0.°02×42.°52E±0.°02,h15km±7km, n72,σ1§25/100,4D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADCV	**BITLIS_Adilcev**	**0.17**	**66**	*i* P	**Pg**	**11 46 48.2**	**-0.5**
ADCV				IAML		11 46 51.0	
	comp=N,8μm,0.2s						
ADCV				IAML		11 46 51.0	
	comp=E,15μm,0.3s						
ADCV				*i* S	**Sg**	**11 46 51.3**	**-0.4**
MLAZ	**Malazgirt-MUS**	**0.40**	**3**	PG	**Pg**	**11 46 52.3**	**-0.2**
MLAZ				SG	**Sb**	**11 46 58.7**	**-0.5**
GURO	**Guroymak-BITLI**	**0.43**	**244**	PG	**Pb**	**11 46 52.7**	**-0.9**
GURO				SG	**Sb**	**11 46 59.2**	**-0.7**
BLIS	**Bitlis-Merkez**	**0.46**	**225**	*eP*	**Pb**	**11 46 53.4**	**-0.7**
BLIS				*eS*	**Sb**	**11 47 00.0**	**-0.7**
BLIS				IAML		11 47 01.2	
	comp=Z,4μm,0.3s						
BLIS	**Bitlis-Merkez**	**0.46**	**225**	*i* P	**Pb**	**11 46 53.4**	**-0.7**
BLIS				*i* S	**Sb**	**11 46 59.9**	**-0.8**
BLIS				IAML		11 47 00.0	
	comp=N,5μm,0.4s						
BLIS				IAML		11 47 00.0	
	comp=E,5μm,0.5s						
AKDM	**Akdamar-Van**	**0.54**	**139**	PG	**Pg**	**11 46 54.5**	**-0.6**
GEVA	**Gevas**	**0.60**	**135**	*eP*	**Pg**	**11 46 55.7**	**-0.4**
GEVA				*eS*	**Sb**	**11 47 04.7**	**-0.1**
GEVA				IAML		11 47 05.4	
	comp=Z,885nm,0.6s						
GEVA	**Gevas**	**0.60**	**135**	*i* P	**Pg**	**11 46 55.5**	**-0.6**
GEVA				*i* S	**Sg**	**11 47 04.1**	**+0.1**
GEVA				IAML		11 47 05.0	
	comp=N,3μm,0.6s						
GEVA				IAML		11 47 06.0	
	comp=E,1μm,0.4s						
VANB	**Van**	**0.69**	**102**	PG	**Pb**	**11 46 58.2**	**+0.1**
VANB				SG	**Sn**	**11 47 08.8**	**-1.3**
TVAN	**Van**	**0.72**	**107**	*eP*	**Pg**	**11 46 58.3**	**-0.1**
TVAN				*eS*	**Sb**	**11 47 09.0**	**+0.6**
TVAN				IAML		11 47 09.9	
	comp=Z,808nm,0.4s						
TVAN	**Van**	**0.72**	**107**	*i* P	**Pg**	**11 46 58.0**	**-0.4**
TVAN				*i* S	**Sb**	**11 47 08.9**	**+0.5**
TVAN				IAML		11 47 10.0	
	comp=E,2μm,0.4s						
TVAN				IAML		11 47 11.0	
	comp=N,1μm,0.4s						
MUSM	**Mu-Merkez**	**0.79**	**269**	*eP*	**Pg**	**11 46 58.9**	**-0.8**
MUSM				*eS*	**Sb**	**11 47 09.3**	**-1.0**
MUSM				IAML		11 47 10.7	
	comp=Z,264nm,0.3s						
MUSM	**Mu-Merkez**	**0.79**	**269**	*i* P	**Pb**	**11 46 59.0**	**-0.8**
MUSM				*i* S	**Sb**	**11 47 09.5**	**-0.8**
MUSM				IAML		11 47 12.0	
	comp=N,336nm,0.3s						
VMUR	**Van-Muradiye**	**0.86**	**73**	*i* P	**Pb**	**11 47 00.0**	**-0.9**
VMUR				*i* S	**Sg**	**11 47 12.8**	**+0.6**
VMUR				IAML		11 47 15.0	
	comp=E,502nm,0.4s						
VMUR				IAML		11 47 15.0	
	comp=N,526nm,0.4s						
SRTM	**Siirt_Merkez**	**0.88**	**213**	*i* P	**Pn**	**11 47 02.4**	**+0.1**
SRTM				*i* S	**Sn**	**11 47 13.6**	**-1.2**
SRTM				IAML		11 47 17.0	
	comp=E,740nm,0.7s						
SRTM				IAML		11 47 21.0	
	comp=N,815nm,0.7s						
AGRB	**Hanur-Agry**	**0.91**	**23**	PG	**Pg**	**11 47 01.9**	**-0.1**
VRTB	**Varto-Mus**	**0.93**	**297**	PG	**Pn**	**11 47 02.4**	**-0.6**
VRTB	**Varto-Mus**	**0.93**	**297**	*i* P	**Pn**	**11 47 02.7**	**-0.3**
VRTB				*i* S	**Sn**	**11 47 15.8**	**-0.3**
VRTB				IAML		11 47 24.0	
	comp=E,401nm,0.6s						
VRTB				IAML		11 47 27.0	
	comp=N,580nm,0.7s						
BNGL	**BINGOL**	**1.09**	**282**	*eP*	**Pn**	**11 47 04.5**	**-0.8**
BNGL				*eS*	**Sn**	**11 47 19.0**	**-1.2**
BNGL				IAML		11 47 23.3	
	comp=Z,1μm,0.4s						
BNGL	**BINGOL**	**1.09**	**282**	*i* P	**Pg**	**11 47 04.6**	**-0.8**
BNGL				*i* S	**Sn**	**11 47 21.7**	**+1.5**
EATA	**Eleskirt**	**1.12**	**359**	*eP*	**Pb**	**11 47 05.0**	**-0.6**
EATA				*eS*	**Sn**	**11 47 21.0**	**0.0**
EATA				IAML		11 47 28.8	
	comp=Z,41nm,0.3s						
EATA	**Eleskirt**	**1.12**	**359**	*i* S	**Sn**	**11 47 21.1**	**0.0**
CLDR	**Caldiran**	**1.16**	**69**	PN	**Pb**	**11 47 06.1**	**0.0**
CLDR	**Caldiran**	**1.16**	**69**	*i* P	**Pn**	**11 47 05.2**	**-1.0**
CLDR				*i* S	**Sn**	**11 47 21.5**	**-0.4**
CLDR				IAML		11 47 24.0	
	comp=E,173nm,0.6s						
CLDR				IAML		11 47 26.0	
	comp=N,216nm,0.4s						
SVAN	**Silvan-Diyarba**	**1.19**	**241**	PN	**Pg**	**11 47 07.2**	**-0.1**
SVAN	**Silvan-Diyarba**	**1.19**	**241**	*i* P	**Pg**	**11 47 07.2**	**-0.1**
SVAN				*i* S	**Sg**	**11 47 23.9**	**+1.1**
SVAN				IAML		11 47 24.0	
	comp=N,160nm,0.6s						
SVAN				IAML		11 47 34.0	
	comp=E,124nm,0.5s						
DYDN	**Diyadin**	**1.21**	**48**	*eP*	**Pn**	**11 47 06.6**	**-0.2**
DYDN	**Diyadin**	**1.21**	**48**	*i* P	**Pg**	**11 47 07.2**	**-0.5**
DYDN				*i* S	**Sn**	**11 47 23.2**	**+0.1**
DYDN				IAML		11 47 27.0	
	comp=N,200nm,0.8s						
DYDN				IAML		11 47 29.0	
	comp=E,152nm,0.8s						
SIRT	**Sirnak**	**1.24**	**183**	PN	**Pg**	**11 47 07.9**	**-0.2**
SIRN	**Sırnak**	**1.24**	**184**	*i* S	**Sg**	**11 47 26.3**	**+1.9**
KARO	**Karliova-Bingo**	**1.28**	**297**	PN	**Pg**	**11 47 08.9**	**-0.1**
BTMN	**Batman**	**1.30**	**230**	*i* P	**Pg**	**11 47 09.6**	**+0.3**
BTMN				IAML		11 47 28.0	
	comp=N,770nm,0.4s						
KOPR	**Koprukoy-ERZUR**	**1.35**	**338**	PN	**Pg**	**11 47 10.1**	**-0.3**
HOMI	**Horasan**	**1.39**	**340**	*eP*	**Pg**	**11 47 10.7**	**-0.4**
BNGB	**Bingl**	**1.46**	**281**	PN	**Pb**	**11 47 10.9**	**-0.3**
AKDA	**Akdag**	**1.63**	**327**	*i* P	**Pg**	**11 47 15.1**	**-0.5**
IGDI	**IGDIR**	**1.65**	**46**	*i* P	**Pb**	**11 47 14.8**	**+0.4**
IGDI				*i* S	**Sg**	**11 47 37.8**	**+0.3**
IGDI				IAML		11 47 39.0	
	comp=E,81nm,0.9s						
IGDI				IAML		11 47 39.0	
	comp=N,101nm,0.8s						
YEDI	**Yedisu-Bingol**	**1.69**	**295**	PN	**Pb**	**11 47 15.1**	**0.0**
VNNZ	**Vanand**	**1.69**	**36**	*i* P	**Pg**	**11 47 16.7**	**-0.1**
VNNZ				*i* S	**Sg**	**11 47 41.2**	**+2.4**
CUKT	**Cukurca**	**1.72**	**150**	PN	**Pb**	**11 47 15.1**	**-0.5**
CUKT	**Cukurca**	**1.72**	**150**	*i* P	**Pg**	**11 47 16.9**	**-1.1**
CUKT				*i* S	**Sg**	**11 47 42.7**	**+3.1**
CUKT				IAML		11 47 57.0	
	comp=E,195nm,0.6s						
EMRE	**Erzurum,Aziziy**	**1.76**	**318**	*i* P	**Pg**	**11 47 17.8**	**-0.4**
DIGO	**Kars**	**1.80**	**21**	*eP*	**Pb**	**11 47 16.5**	**-0.6**
YOVA	**Hakkari_Yksek**	**1.81**	**129**	*i* P	**Pg**	**11 47 18.0**	**-1.0**
TASB	**TASBURUN-IGDIR**	**1.82**	**46**	PN	**Pb**	**11 47 16.7**	**-0.6**
SENK	**Senkaya-Erzuru**	**1.82**	**356**	PN	**Pb**	**11 47 16.8**	**-0.7**
KARS	**Kars**	**1.94**	**13**	PN	**Pb**	**11 47 18.3**	**-1.0**
ARUZ	**Aruch**	**1.96**	**38**⇓	*iP*	**Pb**	**11 47 20.1**	**+0.3**
ARUZ				⇓*iS*	**Sg**	**11 47 46.8**	**-0.6**
MARD	**Mardin**	**1.98**	**225**	*i* P	**Pb**	**11 47 18.5**	**-1.5**
KRIK	**Erzurum-spir**	**2.02**	**323**	*i* P	**Pg**	**11 47 22.6**	**-0.4**
DYBB	**Diyarbakir**	**2.03**	**248**	PN	**Pb**	**11 47 19.3**	**-1.6**
MAZI	**Mazidag**	**2.08**	**233**	PN	**Pb**	**11 47 20.5**	**-1.2**
NRKZ	**NAREK**	**2.08**	**52**	*i* P	**Pg**	**11 47 23.2**	**-1.0**
NRKZ				*i* S	**Sg**	**11 47 52.8**	**+1.6**
DDEM	**Demirkent**	**2.23**	**345**	*i* P	**Pg**	**11 47 21.9**	**+1.1**
KAPZ	**Kaputan**	**2.31**	**46**⇓	*iP*	**Pg**	**11 47 27.4**	**-1.2**
KAPZ				⇓*iS*	**Sg**	**11 47 59.9**	**+1.4**
BAYB	**BAYBURT**	**2.32**	**312**	*eP*	**Pb**	**11 47 24.9**	**-0.9**
BAYB	**BAYBURT**	**2.32**	**312**	*i* P	**Pg**	**11 47 27.5**	**-1.3**
TNCL	**Tunceli-Merkez**	**2.35**	**280**	*eP*	**Pb**	**11 47 24.7**	**-1.8**
TNCL				*eS*	**Sg**	**11 48 05.5**	**+5.5**
TNCL				IAML		11 48 06.5	
	comp=Z,21nm,0.5s						
TNCL	**Tunceli-Merkez**	**2.35**	**280**	*i* P	**Pg**	**11 47 27.3**	**-2.2**
DBAD	**Bademkaya**	**2.37**	**345**	*i* P	**Pb**	**11 47 24.9**	**-1.7**
DAGI	**Agillar**	**2.38**	**349**	*i* P	**Pb**	**11 47 26.2**	**-0.7**
EUZM	**Uzumlu**	**2.40**	**295**	*i* P	**Pg**	**11 47 28.4**	**-1.9**
PTK	**Pertek**	**2.45**	**275**	PN	**Pb**	**11 47 26.1**	**-2.0**
SVRC	**Sivrice-ELAZID**	**2.55**	**263**	PN	**Pb**	**11 47 27.2**	**-2.5**
DBOC	**Borcka**	**2.69**	**346**	*i* P	**Pn**	**11 47 28.8**	**+1.8**
ELZG	**Elazig**	**2.78**	**266**	*i* P	**Pb**	**11 47 32.4**	**-1.3**
KELT	**Kelkit**	**2.90**	**300**	*eP*	**Pb**	**11 47 34.2**	**-1.5**
KELT	**Kelkit**	**2.90**	**300**	*i* P	**Pg**	**11 47 37.8**	**-2.0**
KEMA	**Kemaliye**	**3.18**	**281**	*eP*	**Pn**	**11 47 36.3**	**+2.4**
KEMA	**Kemaliye**	**3.18**	**281**	*i* P	**Pb**	**11 47 42.0**	**+1.5**
URFA	**Urfa**	**3.19**	**247**	PN	**Pn**	**11 47 36.4**	**+2.4**
MALT	**Malatya**	**3.24**	**264**	PN	**Pn**	**11 47 37.1**	**+2.5**

*IDC **12** 11:54:27.2±0.6,20.°55S×70.°61W,h0km,mb4.2/15, mb1 4.4/16,mb1mx4.3/27,mbtmp4.3/16,ML4.1/1,MS4.0/14, Ms1 3.9/14,ms1mx3.8/22,Error ellipse: s-maj=18.9km s-min=16.9km az=63.0*
*NEIC **12** 11:54:28.5±1.6,20.°60S±0.°04×70.°92W±0.°03,h13km±3km, mb4.7/53,Mwr4.6/54,Error ellipse: s-maj=5.1km s-min=4.7km az=188.0*
*NEIC **12** 11:54:28.5,20.°60S×70.°92W,h19km,Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr0.42; Mθθ0.16; Mφφ-0.58; Mrθ-0.01; Mrφ0.38; Mθφ-0.80; Fault plane solution: M0 1.03000×10^16^ NP1:ϕs180.65000°, δ74.71000°,λ111.42000°. NP2:ϕs304.56000°,δ26.11000°, λ36.82000°. Principal axes: T 0.9179, Plg55.0000°, Azm118.0000°; N 0.1935, Plg21.0000°, Azm355.0000°; P -1.1114, Plg27.0000°, Azm254.0000°;*
*GUC **12** 11:54:30.2±0.8,20.°65S×70.°92W,h36km±3km,ML4.6*
*VAO **12** 11:54:32.4±0.8,20.°41S×70.°75W,h33km,mb4.8*

ISC 12 11:54:28.8±2.5,20.°61S±0.°03×70.°93W±0.°04,h17km±15km, n174,σ1§42/169,mb4.6/36,MS4.0/11,14C-3D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA01	**Diego Aracena**	**0.70**	**86**⇓	*eP*	**Pb**	**11 54 42.5**	**-0.1**
TA01				*eS*	**Sb**	**11 54 51.8**	**-0.1**
TA01				IAML		11 54 53.4	
	comp=N,49μm,0.6s						
TA01	**Diego Aracena**	**0.70**	**86**	Pg	**Pb**	**11 54 42.5**	**-0.1**
TA01				Sg	**Sb**	**11 54 51.5**	**-0.4**
TA02	**Huaiquique**	**0.82**	**65**⇑	*iP*	**Pb**	**11 54 44.6**	**0.0**
TA02				*eS*	**Sb**	**11 54 55.5**	**+0.1**
PB02	**IPOC Station P**	**1.19**	**126**⇑	*iP*	**Pn**	**11 54 50.5**	**-0.3**
PB02				*i* S	**Sb**	**11 55 05.0**	**-1.1**
PB02				IAML		11 55 08.0	
	comp=E,33μm,0.2s						
PSGC	**Pisagua**	**1.26**	**37**⇑	*iP*	**Pn**	**11 54 51.0**	**-0.8**
PSGC				*i* S	**Sb**	**11 55 07.7**	**-0.5**
PSGCX	**Pisagua**	**1.26**	**37**		**Pn**	**11 54 50.9**	**-0.9**
PSGCX					**Sb**	**11 55 08.0**	**-0.2**
PB01	**IPOC Station P**	**1.41**	**108**⇑	*iP*	**Pn**	**11 54 53.5**	**-0.3**
PB01				*eS*	**Sn**	**11 55 11.5**	**-0.6**
PB01	**IPOC Station P**	**1.41**	**108**		**Pn**	**11 54 53.5**	**-0.3**
PB01				Sn	**Sn**	**11 55 12.2**	**+0.1**
PB11	**IPOC Station P**	**1.46**	**55**⇑	*iP*	**Pn**	**11 54 54.3**	**-0.3**
PB11				*eS*	**Sn**	**11 55 13.2**	**-0.2**
PB11				IAML		11 55 16.9	
	comp=N,24μm,0.6s						
PB11	**IPOC Station P**	**1.46**	**55**		**Pn**	**11 54 54.3**	**-0.3**
PB11				Sn	**Sn**	**11 55 12.8**	**-0.6**
PB07	**IPOC Station P**	**1.47**	**139**⇑	*iP*	**Pn**	**11 54 54.4**	**-0.4**
PB07				*eS*	**Sn**	**11 55 13.0**	**-0.7**
PB07				IAML		11 55 33.2	
	comp=E,10μm,0.8s						
PB07	**IPOC Station P**	**1.47**	**139**		**Pn**	**11 54 54.1**	**-0.6**
PB08	**IPOC Station P**	**1.73**	**74**⇑	*iP*	**Pn**	**11 54 58.5**	**+0.1**
PB08				*eS*	**Sn**	**11 55 20.7**	**+0.4**
PB08				IAML		11 55 23.6	
	comp=N,9μm,0.5s						
PB08	**IPOC Station P**	**1.73**	**74**		**Pn**	**11 54 58.5**	**+0.1**
PB08				Sn	**Sn**	**11 55 20.5**	**+0.2**
PB03	**IPOC Station P**	**1.80**	**143**⇑	*iP*	**Pn**	**11 54 58.9**	**-0.4**
PB03				*i* S	**Sn**	**11 55 20.4**	**-1.3**
PB03				IAML		11 55 31.7	
	comp=E,9μm,0.9s						
PB04	**IPOC Station P**	**1.86**	**157**	IAML		11 55 31.7	
	comp=N,7μm,0.4s						
PB04	**IPOC Station P**	**1.86**	**157**		**Pn**	**11 54 59.3**	**-0.7**
GO01	**Chusmiza**	**1.88**	**60**⇑	*iP*	**Pn**	**11 55 00.7**	**0.0**
GO01				*eS*	**Sn**	**11 55 25.2**	**+1.1**
GO01	**Chusmiza**	**1.88**	**60**		**Pn**	**11 55 00.4**	**-0.2**
MNMC	**Minye Minye**	**1.93**	**41**⇑	*iP*	**Pn**	**11 55 01.2**	**0.0**
MNMC				*i* S	**Sn**	**11 55 26.7**	**+1.4**
MNMC				IAML		11 55 32.6	
	comp=E,15μm,0.5s						
MNMC	**Minye Minye**	**1.93**	**41**		**Pn**	**11 55 01.2**	**0.0**
PB09	**IPOC Station P**	**1.96**	**127**⇑	*iP*	**Pn**	**11 55 02.5**	**+1.0**
PB09				*i* S	**Sn**	**11 55 26.5**	**+0.7**
PB09				IAML		11 55 40.9	
	comp=N,7μm,0.6s						
PB09	**IPOC Station P**	**1.96**	**127**		**Pn**	**11 55 02.4**	**+0.9**
PB12	**IPOC Station P**	**2.07**	**16**⇑	*iP*	**Pn**	**11 55 02.6**	**-0.3**
PB12				*i* S	**Sb**	**11 55 32.3**	**+0.9**
PB12				IAML		11 55 38.9	
	comp=N,3μm,0.3s						
PB12	**IPOC Station P**	**2.07**	**16**		**Pn**	**11 55 02.5**	**-0.3**
AP01	**Chacalluta**	**2.30**	**14**		**Pn**	**11 55 06.0**	**0.0**
PB05	**IPOC Station P**	**2.33**	**163**⇓	*eP*	**Pn**	**11 55 05.4**	**-1.0**
PB06	**IPOC Station P**	**2.43**	**149**⇑	*iP*	**Pn**	**11 55 07.4**	**-0.5**
PB06				*i* S	**Sn**	**11 55 36.4**	**-1.0**
PB06				IAML		11 56 01.1	
	comp=N,4μm,0.4s						
PB06	**IPOC Station P**	**2.43**	**149**		**Pn**	**11 55 07.5**	**-0.4**
PB16	**IPOC Station P**	**2.63**	**31**		**Pn**	**11 55 11.2**	**+0.1**
LVC	**Limon Verde**	**2.73**	**137**	*i* S	**Sn**	**11 55 45.3**	**+0.2**
LVC	**Limon Verde**	**2.73**	**137**		**Pn**	**11 55 13.5**	**+1.3**
LVC	**Limon Verde**	**2.73**	**137**	*eP*	**Pn**	**11 55 13.5**	**+1.3**
PB10	**IPOC Station P**	**2.91**	**173**		**Pn**	**11 55 12.8**	**-1.5**
PB15	**IPOC Station P**	**2.91**	**153**		**Pn**	**11 55 14.0**	**-0.6**
PB14	**IPOC Station P**	**4.02**	**173**		**Pn**	**11 55 28.2**	**-1.8**
GO02	**Mina Guanaco**	**4.69**	**165**		**Pn**	**11 55 38.3**	**-0.9**
LPAZ	**La Paz**	**5.05**	**32**	Pn	Pn	11 55 49.5	+5.1
	comp=N,2.5nm,0.3s,baz=182,slow=6.3,SNR=52						
LPAZ				LR	LR	11 57 44.2	
	comp=N,612nm,18.1s,baz=220,slow=41						
AC02	**Maricunga**	**6.41**	**165**		**Pn**	**11 56 02.8**	**-0.1**
GO03	**Copiap**	**6.98**	**175**		**Pn**	**11 56 08.8**	**-1.5**
AC05	**El Transito**	**8.21**	**176**		**Pn**	**11 56 26.3**	**-1.0**
CO01	**Juntas del Tor**	**9.35**	**176**	Pn	**Pn**	**11 56 43.0**	**-0.1**
NNA	**Nana**	**10.29**	**326**	Pn	Pn	11 57 04.0	+8.2
	comp=N,2.3nm,0.3s,baz=172,slow=10,SNR=3.6						
NNA				Sn	**Sn**	**11 58 44.8**	**-6.0**
	comp=N,1.0nm,0.3s,baz=207,slow=14,SNR=2.1						
NNA	**Nana**	**10.29**	**326**	Pn	**Pn**	**11 56 56.0**	**+0.2**
SIV	**San Ignacio**	**10.43**	**65**	Pn	**Pn**	**11 56 55.3**	**-2.4**
	comp=N,1.6nm,0.3s,baz=268,slow=10.0,SNR=31						
SIV				LR	LR	12 01 35.0	
	comp=N,734nm,18.9s,baz=270,slow=42						
CFA	**Coronel Fontan**	**11.21**	**168**	Pn	Pn	11 57 14.6	+6.3
	comp=N,0.6nm,0.3s,baz=355,slow=14,SNR=5.8						
CFA				LR	LR	12 01 11.0	
	comp=N,331nm,19.6s,baz=330,slow=36						
PTLB	**Pontes e Lacer**	**12.33**	**67**	*eP*	**Pn**	**11 57 22.8**	**-0.9**

TXAR	**Lajitas Array**	**58.84**	**327**	P		**P**	**12 04 28.1**	**+1.3**
	comp=Z,1.3nm,0.9s,baz=147,slow=8.4,SNR=12							
TXAR				LR		LR	12 28 43.2	
	comp=Z,48nm,18.8s,baz=0.0,slow=35							
MIAR	**Mount Ida**	**58.93**	**338**	P		**P**	**12 04 27.6**	**+0.4**
MIAR				IAmb		IAmb	12 04 35.0	
	comp=Z,8.6nm,0.9s							
T47A	**Sharon Grove**	**59.29**	**345**	P		**P**	**12 04 30.8**	**+1.2**
W39A	**Magazine**	**59.59**	**338**	IAmb		IAmb	12 04 47.4	
	comp=Z,8.2nm,0.9s							
ABTX	**Abilene, Hawle**	**59.64**	**332**	P		**P**	**12 04 32.6**	**+0.5**
ABTX				IAmb		IAmb	12 04 34.5	
	comp=Z,5.6nm,0.7s							
U40A	**Yellville**	**60.34**	**340**	P		**P**	**12 04 37.0**	**+0.2**
U40A				IAmb		IAmb	12 04 51.0	
	comp=Z,9.7nm,0.9s							
MNTX	**Cornudas Mount**	**61.62**	**327**	P		**P**	**12 04 46.0**	**+0.4**
MNTX				IAmb		IAmb	12 04 58.2	
	comp=Z,3.3nm,1.0s							
MSTX	**Muleshoe**	**62.18**	**330**	P		**P**	**12 04 50.1**	**+0.6**
MSTX				IAmb		IAmb	12 05 01.6	
	comp=Z,8.3nm,0.9s							
319A	**Douglas**	**63.45**	**324**	IAmb		IAmb	12 05 12.3	
	comp=Z,10.0nm,1.2s							
SNAA	**Sanae**	**63.73**	**161**	P		**P**	**12 05 00.6**	**+1.3**
	comp=Z,3.8nm,0.6s,baz=258,slow=7.0,SNR=12							
SNAA	**Sanae**	**63.73**	**161**	P		**P**	**12 05 00.2**	**+1.0**
WUAZ	**Wupatki**	**67.72**	**325**	P		**P**	**12 05 26.2**	**+0.6**
WUAZ				IAmb		IAmb	12 05 29.3	
	comp=Z,6.0nm,1.0s							
PV01	**Paradox Valley**	**68.31**	**329**	IAmb		IAmb	12 05 38.0	
	comp=Z,4.1nm,1.1s							
SMCO	**Snowmass**	**68.38**	**331**	P		**P**	**12 05 30.5**	**+0.5**
SMCO				IAmb		IAmb	12 05 45.9	
	comp=Z,3.6nm,0.9s							
U15A	**North Rim**	**68.90**	**325**	IAmb		IAmb	12 05 42.5	
	comp=Z,5.7nm,1.1s							
QSPA	**South Pole Qui**	**69.57**	**180**	P		**P**	**12 05 38.6**	**+1.8**
KNB	**Kanab**	**69.62**	**325**	P		**P**	**12 05 38.4**	**+1.0**
SRU	**San Rafael Swe**	**70.02**	**328**	P		**P**	**12 05 41.0**	**+1.1**
MTPU	**Mount Pierson**	**70.05**	**326**	P		**P**	**12 05 40.6**	**+0.3**
DBIC	**Dimbokro**	**70.30**	**75**	P		**P**	**12 05 41.2**	**-0.8**
	comp=Z,3.5nm,0.7s,baz=236,slow=5.1,SNR=6.4							
DBIC				LR		LR	12 34 59.5	
	comp=Z,164nm,20.6s,baz=221,slow=35							
DBIC	**Dimbokro**	**70.30**	**75**	P		**P**	**12 05 41.1**	**-0.8**
CCUT	**Cedar City**	**70.30**	**325**	P		**P**	**12 05 41.7**	**0.0**
MSU	**Marysvale**	**70.40**	**327**	P		**P**	**12 05 41.9**	**-0.4**
SHPR	**Sheep Range**	**70.52**	**323**	P		**P**	**12 05 43.8**	**+0.8**
TPNV	**Topopah Spring**	**71.45**	**323**	IAmb		IAmb	12 06 05.4	
	comp=Z,5.2nm,1.1s							
ISA	**Isabella, Lake**	**71.84**	**321**	P		**P**	**12 05 51.4**	**+0.5**
ISA				IAmb		IAmb	12 06 00.1	
	comp=Z,4.2nm,0.9s							
PDAR	**Pinedale Array**	**72.42**	**331**	P		**P**	**12 05 56.4**	**+2.0**
	comp=Z,0.6nm,0.8s,baz=125,slow=5.1,SNR=5.0							
NVAR	**Mina Array Bea**	**73.65**	**323**	P		**P**	**12 06 04.3**	**+2.6**
	comp=Z,1.1nm,0.8s,baz=146,slow=7.1,SNR=9.3							
FXWY	**Fox Creek**	**73.77**	**331**	P		**P**	**12 06 03.0**	**+0.7**
ULM	**Lac du Bonnet**	**73.92**	**344**	LR		LR	12 40 46.3	
	comp=Z,53nm,19.4s,baz=192,slow=38							
FLWY	**Flagg Ranch**	**73.97**	**331**	IAmb		IAmb	12 06 18.0	
	comp=Z,9.5nm,1.1s							
YHH	**Holmes Hill**	**74.59**	**332**	P		**P**	**12 06 08.6**	**+1.4**
PAHR	**Pah Rah Range**	**75.14**	**323**	IAmb		IAmb	12 06 26.8	
	comp=Z,5.4nm,1.0s							
VNDA	**Vanda**	**77.39**	**190**	P		**P**	**12 06 23.4**	**+1.0**
	comp=Z,1.1nm,0.8s,baz=90,slow=1.0,SNR=1.7							
SYO	**Syowa Base**	**77.98**	**160**⇓	*e*pP		P	**12 06 27.0**	**+1.2**
SYO	**Syowa Base**	**77.98**	**160**⇓	*e*sP		P	12 06 31.0	+5.2
TOA0	**Torodi Ar. Sit**	**78.84**	**71**	P		**P**	**12 06 30.7**	**-0.8**
TORD	**Torodi Ar. Bea**	**78.84**	**71**	P		**P**	**12 06 30.8**	**-0.8**
	comp=Z,5.9nm,0.6s,baz=250,slow=5.4,SNR=39							
TORD				LR		LR	12 41 04.1	
	comp=Z,251nm,18.6s,baz=245,slow=36							
TSUM	**Tsumeb**	**82.10**	**107**	P		**P**	**12 06 48.5**	**-0.6**
TSUM				IAmb		IAmb	12 07 00.4	
	comp=Z,6.9nm,0.9s							
MAW	**Mawson**	**85.71**	**164**	P		**P**	**12 07 07.9**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=195,slow=7.4,SNR=2.0							
MAW				LR		LR	12 46 45.9	
	comp=Z,84nm,18.1s,baz=226,slow=37							
MAW	**Mawson**	**85.71**	**164**	P		**P**	**12 07 07.7**	**+1.2**
ESDC	**Sonseca Array**	**86.54**	**45**	P		**P**	**12 07 09.7**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=168,slow=6.6,SNR=1.8							
ESDC				LR		LR	12 41 49.6	
	comp=Z,57nm,21.9s,baz=205,slow=33							
YKA	**Yellowknife Ar**	**89.74**	**341**	P		**P**	**12 07 26.6**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=137,slow=5.2,SNR=29							
YKA				LR		LR	12 49 25.6	
	comp=Z,39nm,22.0s,baz=0.0,slow=37							
H11S2	**WAKE ISLAND Hyl**	**25.89**	**278**	T		T	14 32 47.0	
	baz=102,slow=74,SNR=154							
H11S1	**WAKE ISLAND Hyl**	**25.90**	**278**	T		T	14 32 49.1	
	baz=102,slow=74,SNR=106							
H11S3	**WAKE ISLAND Hyl**	**25.91**	**278**	T		T	14 32 49.2	
	baz=102,slow=74,SNR=105							
H11N3	**WAKE ISLAND Hyl**	**25.96**	**280**	T		T	14 32 57.6	
	baz=102,slow=75,SNR=63							
H11N2	**WAKE ISLAND Hyl**	**25.97**	**280**	T		T	14 32 58.7	
	baz=102,slow=75,SNR=53							
H11N1	**WAKE ISLAND Hyl**	**25.97**	**280**	T		T	14 32 58.8	
	baz=102,slow=75,SNR=52							
ARU	**Arti**	**128.46**	**33**	PKP		**PKiKP**	**12 13 35.6**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=207,slow=9.7,SNR=3.6							
ASAR	**Alice Springs**	**129.78**	**210**	PKP		**PKiKP**	**12 13 39.4**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=132,slow=2.0,SNR=8.5							
WRA	**Warramunga Arr**	**132.71**	**213**	PKP		**PKiKP**	**12 13 44.9**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=158,slow=1.9,SNR=7.3							
BVAR	**Borovoye Array**	**136.10**	**33**	PKP		**PKiKP**	**12 13 50.0**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=290,slow=4.2,SNR=2.6							
KURK	**Kurchatov**	**141.58**	**31**			**PKiKP**	**12 14 01.1**	**-0.7**
KURBB	**Kurchatov Arra**	**141.60**	**31**	PKP		**PKiKP**	**12 14 01.1**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=307,slow=3.1,SNR=3.9							
ZALV	**Zalesovo Beam**	**141.92**	**23**	PKP		**PKiKP**	**12 14 01.4**	**-1.0**
	comp=Z,1.6nm,0.5s,baz=282,slow=1.9,SNR=6.8							
KDJ	**Kajisay**	**145.64**	**44**			**PKPbc**	**12 14 07.0**	**+0.1**
NIL	**Nilore**	**145.75**	**60**			**PKPbc**	**12 14 07.5**	**+0.2**
MAKZ	**Makanchi**	**145.81**	**34**			**PKPab**	**12 14 07.7**	**+0.2**
KSH	**Kashi**	**145.98**	**49**	PKPbc		**PKPab**	**12 14 09.8**	**+1.3**
KSH				PP		**PP**	**12 17 29.5**	**0.0**
KSH				SS		SS	12 36 18.3	-5.8
KSH				LR		LR		
	comp=Z,55nm,10.1s							
KSH				LR		LR		
	comp=Z,56nm,8.2s							
KSH				LR		LR		
	comp=Z,150nm,19.9s							
MK31	**Makanchi Array**	**145.98**	**34**			**PKPbc**	**12 14 07.7**	**0.0**
MKAR	**Makanchi Array**	**145.98**	**34**	PKPbc		**PKPab**	**12 14 08.4**	**+0.3**
	comp=Z,2.2nm,0.6s,baz=333,slow=2.8,SNR=23							
MJAR	**Matsushiro Arr**	**150.05**	**308**	PKPbc		**PKiKP**	**12 14 20.1**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=93,slow=1.7,SNR=8.2							
MAT	**Matsushiro**	**150.05**	**309**	PKP		**PKiKP**	**12 14 20.3**	**+0.6**
WMQ	**Urumqi**	**150.79**	**33**	*e*PKPbc		**PKPdf**	**12 14 14.9**	**0.0**
HHC	**Hu-ho-hao-te**	**159.72**	**355**	*e*PKP		**PKPdf**	**12 14 24.0**	**-3.1**
LZH	**Lanzhou**	**163.92**	**15**	*e*PKP		**PKPdf**	**12 14 26.4**	**-5.3**
LZH				pPKP		pPKPdf	12 14 37.1	+0.9
NJ2	**Nanjing**	**165.64**	**324**	*e*PKP		**PKPdf**	**12 14 33.1**	**+0.1**
CD2	**Chengdu**	**168.69**	**24**	PKP		**PKPdf**	**12 14 34.3**	**-1.1**

*SOME **12** 12:06:07.2,44.62N×82.03E,h0km*
*NNC **12** 12:06:13.0±4.7,44.85N×82.39E,h0km,mb3.4,mpv3.0,*
Error ellipse: s-maj=65.3km s-min=13.4km az=114.0
ISC 12 12:06:09.8±1.5,**44.63N**±0.07×**82.37E**±0.08,**h19**km±4km,
n15,σ2.8**47**/30,**4C-2D**,**Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DJR	**Jarkent**	**1.87**	**262**	*e*P		**Pn**	**12 06 39.0**	**-1.8**
	16nm,0.2s							
DJR				*e*S		**Sn**	**12 07 01.5**	**-2.5**
	10nm,0.3s							
KTMS	**Ketmen**	**1.87**	**232**	*e*P		**Pn**	**12 06 40.2**	**-0.7**
	3.4nm,0.1s							
KTMS				*e*S		**Sn**	**12 07 03.9**	**-0.2**
	45nm,0.6s							
MK31	**Makanchi Array**	**2.17**	**359**	⇑Pn		**Pn**	**12 06 46.3**	**+1.4**
	3.7nm,0.3s,baz=187,slow=14,SNR=240							
MK31				⇑Sn		**Sb**	**12 07 14.5**	**-0.4**
	3.2nm,0.2s,baz=183,slow=27,SNR=22							
MAKZ	**Makanchi**	**2.20**	**353**	⇓Pn		**Pn**	**12 06 45.7**	**+0.4**
	6.7nm,0.6s							
MAKZ				⇓Sn		**Sb**	**12 07 14.4**	**-1.5**
	6.6nm,0.3s							
KAPS	**Kapalarasan**	**2.24**	**288**	*e*P		**Pn**	**12 06 45.1**	**-0.7**
	2.0nm,0.2s							
KAPS				*e*S		**Sn**	**12 07 12.5**	**-0.6**
	19nm,0.4s							
PDGK	**Podgornoye**	**2.45**	**239**	⇑Pn		**Pg**	**12 06 58.0**	**+1.2**
	2.1nm,0.2s							
PDGK				⇑Sn		**Sg**	**12 07 29.1**	**+0.5**
	6.4nm,0.4s							
SHLS	**Shalkode**	**2.56**	**236**	*e*P		**Pn**	**12 06 47.3**	**-3.1**
	14nm,0.1s							
SHLS				*e*S		**Sn**	**12 07 16.5**	**-4.6**
	43nm,0.3s							
MNBS	**Baschi**	**2.90**	**261**	*e*P		**Pn**	**12 06 55.7**	**+0.7**
MNBS				*e*S		**Sn**	**12 07 30.7**	**+1.3**
SATY	**Saty**	**3.27**	**243**	*e*P		**Pn**	**12 07 02.3**	**+2.2**
	6.7nm,0.2s							
SATY				*e*S		**Sn**	**12 07 42.2**	**+3.7**
	12nm,0.2s							
ARXS	**Arharly**	**3.28**	**264**	*e*P		**Pn**	**12 07 02.8**	**+2.6**
	7.1nm,0.4s							
ARXS				*e*S		**Sn**	**12 07 42.8**	**+4.0**
	17nm,0.4s							
ZSN	**Zaisan**	**3.32**	**31**	*e*P		**Pb**	**12 07 09.2**	**+1.2**
	4.3nm,0.1s							
ZSN				*e*S		**Sg**	**12 07 53.5**	**-2.8**
	7.2nm,0.3s							
KOTS	**Kotyrbulak**	**4.04**	**252**	*e*P		**Pb**	**12 07 19.8**	**-0.6**
	9.5nm,0.2s							
KOTS				*e*S		**Sb**	**12 08 12.0**	**+3.0**
	20nm,0.4s							
KTBS	**Karatobe**	**4.19**	**259**	*e*P		**Pb**	**12 07 18.4**	**-4.6**
KTBS				*e*S		**Sb**	**12 08 09.9**	**-3.3**
KST	**Kastek**	**4.90**	**253**	*e*P		**Pb**	**12 07 34.1**	**-0.9**
	1.3nm,0.4s							
KST				*e*S		**Sb**	**12 08 36.7**	**+3.2**
	2.3nm,0.5s							
KRBS	**Karabastau**	**4.91**	**261**	*e*P		**Pb**	**12 07 33.6**	**-1.5**
	1.0nm,0.3s							
KRBS				*e*S		**Sb**	**12 08 35.8**	**+2.1**
	0.8nm,0.4s							

*IDC **12** 12:32:24.2±3.8,22.80N×11.51W,h0km,mb3.6/1,*
mb1 3.9/3,mb1mx3.3/47,mbtmp3.8/3,ML3.4/2,Error
ellipse: s-maj=112.8km s-min=38.8km az=83.0
ISC 12 12:32:25.6±1.6,**22.84N**±0.06×**11.2W**±0.2,**h10**km,**n11**,
σ2.**57**/14,**Mauritania**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TTIG	**Tnine Tigouga,**	**8.07**	**17**	P		Pn	12 34 18.1	-4.9
TTIG				S		**Sg**	**12 36 44.8**	**+0.2**
ZGR	**Zagora**	**8.82**	**34**	P		**Pn**	**12 34 36.6**	**+3.3**
ZGR				S		**Sg**	**12 37 09.0**	**+0.4**
OUK	**Oukaimeden**	**8.86**	**19**	P		**Pn**	**12 34 31.2**	**-2.8**
OUK				S		**Sg**	**12 37 05.1**	**-4.8**
OUZM	**OUZ**	**8.97**	**25**	P		**Pn**	**12 34 37.1**	**+1.7**
OUZM				S		**Sg**	**12 37 11.6**	**-1.9**
TZRR	**Tazzarine**	**9.39**	**31**	P		**Pn**	**12 34 43.6**	**+2.6**
TZRR				S		Sn	12 37 23.4	+57
MD31	**MD31**	**11.51**	**28**	P		**Pn**	**12 35 12.4**	**+2.4**
MD31				S		Sn	12 38 07.9	+49
TORD	**Torodi Ar. Bea**	**15.61**	**126**	Pn		**P**	**12 36 09.7**	**-0.3**
	0.1nm,0.3s,baz=314,slow=13,SNR=5.5							
TORD				Sn		**Sn**	**12 38 56.1**	**-2.9**
	0.0nm,0.3s,baz=315,slow=23,SNR=3.0							
DBIC	**Dimbokro**	**17.21**	**158**	P		**Pn**	**12 36 25.0**	**-1.2**
	0.2nm,0.3s,baz=324,slow=15,SNR=2.6							
I17CI	**DIMBOKRO INFRA**	**17.21**	**158**	*i*			14 28 50.0	
	baz=344,slow=318,SNR=2.6							
GERES	**GERESS Array B**	**32.61**	**31**	P		**P**	**12 38 58.7**	**+1.3**
	0.6nm,0.7s,baz=228,slow=10,SNR=1.8							
ASAR	**Alice Springs**	**148.00**	**98**	PKPbc		**PKPbc**	**12 52 12.8**	**+0.7**
	0.5nm,1.1s,baz=278,slow=2.7,SNR=5.2							

*TAP **12** 12:40:42.4,24.80N×122.36E,h14km,ML2.5,C*
*JMA **12** 12:40:43.8±0.1,24.67N×122.38E,h40km±4km,M1.6*
ISC 12 12:40:42.8±1.0,**24.78N**±0.03×**122.37E**±0.02,**h17**km±8km,
n40,σ0.**53**/74,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EOS1	**EOS1**	**0.31**	**224**	P		**Pg**	**12 40 49.7**	**+0.3**
	baz=211							
EOS1				S		**Sb**	**12 40 55.4**	**+0.7**
	baz=211							
TWB1	**Santiao Chiao**	**0.41**	**304**	*i* P		**Pg**	**12 40 51.0**	**-0.3**
	baz=302							
TWB1				*i* S		**Sg**	**12 40 56.0**	**-0.9**
	baz=302							
TWC	**Suao**	**0.50**	**251**	*e*P		**Pg**	**12 40 52.1**	**-0.6**
	baz=255							
TWC				S		**Sg**	**12 40 59.5**	**0.0**
	baz=255							
TIPB	**Shuangxi**	**0.53**	**292**	P		**Pg**	**12 40 53.3**	**-0.1**
	baz=289							
TIPB				*e*S		**Sg**	**12 41 00.6**	**+0.1**
	baz=289							
NWF	**Wu-fen Shan**	**0.61**	**299**	*e*P		**Pb**	**12 40 55.2**	**+0.1**
	baz=297							
NWF				*e*S		**Sb**	**12 41 03.6**	**+0.2**
	baz=297							
JYNG	**Yonagunijimaku**	**0.62**	**121**	P		**Pg**	**12 40 55.2**	**+0.2**
JYNG				*e*S		**Sb**	**12 41 03.6**	**+0.1**
TWE	**Neicheng**	**0.64**	**265**	P		**Pg**	**12 40 54.7**	**-0.7**
	baz=262							
TWE				S		**Sb**	**12 41 04.4**	**+0.3**
	baz=262							
YOJ	**Yonaguni jima**	**0.66**	**118**	P		**Pg**	**12 40 55.8**	**-0.1**
	baz=119							
YOJ				S		**Sb**	**12 41 05.1**	**+0.2**
	baz=119							
YOJ	**Yonaguni jima**	**0.66**	**118**	P		**Pb**	**12 40 56.1**	**+0.2**
YOJ				*e*S		**Sg**	**12 41 04.8**	**+0.1**
SLBB	**Yuanshan**	**0.67**	**268**	*e*P		**Pg**	**12 40 55.7**	**-0.2**
	baz=266							
SLBB				*e*S		**Sg**	**12 41 05.0**	**+0.2**
	baz=266							
ENA	**Nanau**	**0.67**	**239**	*e*P		**Pg**	**12 40 55.2**	**-0.7**
	baz=236							
ENA				*e*S		**Sg**	**12 41 04.5**	**-0.3**
	baz=236							
TWA	**Mucha**	**0.74**	**286**	*e*S		**Sg**	**12 41 07.8**	**+0.7**
	baz=284							
ENTT	**Nioudou**	**0.74**	**260**	*e*P		**Pb**	**12 40 56.9**	**-0.4**
	baz=265							
ENTT				S		**Sb**	**12 41 07.1**	**-0.1**
	baz=265							
NWLT	**Wulai**	**0.79**	**270**	*e*P		**Pb**	**12 40 57.7**	**-0.3**
	baz=268							
NWLT				*e*S		**Sb**	**12 41 06.6**	**-1.8**
	baz=268							
NDT	**Datong Townshi**	**0.80**	**258**	P		**Pb**	**12 40 58.3**	**+0.1**
	baz=263							
NDT				S		**Sn**	**12 41 09.9**	**-0.8**
	baz=263							
YM01	**YM01**	**0.81**	**297**	*e*P		**Pb**	**12 40 58.3**	**-0.2**
	baz=296							
YM01				*e*S		**Sg**	**12 41 09.6**	**+0.2**
	baz=296							
YM11	**YM11**	**0.82**	**299**	P		**Pg**	**12 40 59.2**	**+0.5**
	baz=297							
YM11				*e*S		**Sg**	**12 41 10.1**	**+0.5**
	baz=297							
TATO	**Taipei**	**0.82**	**284**	P		**Pn**	**12 40 60.0**	**+0.4**
	baz=282							
TATO				S		**Sg**	**12 41 10.2**	**+0.5**
	baz=282							
YM10	**YM10**	**0.82**	**298**	P		**Pn**	**12 40 59.8**	**+0.1**
	baz=296							
YM10				S		**Sg**	**12 41 10.5**	**+0.7**
	baz=296							
YM04	**YM04**	**0.84**	**297**	*e*P		**Pb**	**12 40 59.1**	**+0.1**
	baz=295							
YM04				*e*S		**Sg**	**12 41 10.4**	**0.0**
	baz=295							
TWY	**Chenhua**	**0.86**	**306**	S		**Sg**	**12 41 11.4**	**+0.6**
	baz=304							
YHNB	**Yeheng**	**0.91**	**264**	*e*P		**Pb**	**12 41 00.1**	**0.0**
	baz=261							
YHNB				*e*S		**Sb**	**12 41 11.4**	**-0.6**
	baz=261							
NACB	**Ninganchiao**	**0.92**	**230**	P		**Pb**	**12 41 00.1**	**-0.3**
	baz=239							
NACB				S		**Sb**	**12 41 12.2**	**-0.2**
	baz=239							
NNSB	**Datong**	**0.96**	**249**	*e*P		**Pb**	**12 41 00.1**	**-0.9**
	baz=247							
NNSB				S		**Sb**	**12 41 12.8**	**-0.8**
	baz=247							
NNSH	**Datong**	**0.96**	**249**	P		**Pb**	**12 41 00.6**	**-0.5**
	baz=236							
NNSH				S		**Sg**	**12 41 14.0**	**-0.1**
	baz=236							
NNS	**Nan Shan**	**0.96**	**250**	P		**Pn**	**12 41 01.9**	**+0.2**
	baz=236							
NNS				S		**Sb**	**12 41 13.1**	**-0.6**
	baz=236							
ETLH	**Xiulin Townshi**	**0.98**	**235**	*e*P		**Pb**	**12 41 01.0**	**-0.5**
	baz=233							
ETLH				*e*S		**Sg**	**12 41 15.0**	**+0.1**
	baz=233							
TWD	**Chiawan**	**0.99**	**226**	*e*S		**Sg**	**12 41 15.2**	**+0.3**
	baz=231							
WHF	**Hehuan Shan**	**1.18**	**238**	P		**Pb**	**12 41 05.4**	**+0.3**
	baz=246							
WHF				S		**Sb**	**12 41 19.8**	**-0.4**
	baz=246							
TDCB	**Techi**	**1.22**	**245**	*e*P		**Pb**	**12 41 05.8**	**+0.4**
	baz=243							
TDCB				*e*S		**Sb**	**12 41 20.8**	**-0.2**
	baz=243							
LIOB	**Emei**	**1.24**	**264**	*e*P		**Pg**	**12 41 07.7**	**+1.0**
	baz=262							
LIOB				S		**Sg**	**12 41 23.9**	**+1.1**
	baz=262							
NSTT	**Nanjuang**	**1.25**	**264**	*e*P		**Pg**	**12 41 07.5**	**+0.6**
	baz=261							
NSTT				S		**Sg**	**12 41 24.1**	**+0.8**
	baz=261							
CHGB	**Renai**	**1.30**	**237**	*e*P		**Pb**	**12 41 07.0**	**+0.1**
	baz=244							
CHGB				*e*S		**Sg**	**12 41 24.7**	**-0.3**
	baz=244							
OWD	**Renai**	**1.36**	**233**	*e*P		**Pb**	**12 41 08.0**	**+0.1**
	baz=240							
OWD				*e*S		**Sb**	**12 41 25.7**	**+0.7**
	baz=240							
WHP	**Taichung City**	**1.39**	**249**	P		**Pb**	**12 41 08.7**	**+0.4**
	baz=247							
WHP				S		**Sb**	**12 41 26.0**	**+0.2**
	baz=247							
HATJ	**Hateruma jima**	**1.49**	**118**	P		**Pn**	**12 41 08.8**	**0.0**
VWDT	**VWDT**	**1.51**	**228**	*e*P		**Pg**	**12 41 11.6**	**-0.3**
	baz=231							
VWDT				S		**Sg**	**12 41 32.0**	**+0.4**
	baz=231							
JKRS	**Kuro-shima**	**1.59**	**109**	P		**Pn**	**12 41 09.6**	**-0.5**
SSLB	**Suanglung**	**1.62**	**233**	*e*P		**Pn**	**12 41 11.6**	**+0.9**
	baz=238							
SSLB				*e*S		**Sb**	**12 41 33.4**	**+0.9**
	baz=238							
JIJ	**Ishigaki jima**	**1.67**	**104**	P		**Pn**	**12 41 11.0**	**-0.2**

*ISK **12** 13:01:58.8,37.01N×29.90E,h9km,ML2.5/4*
*DDA **12** 13:02:00.3,36.87N×30.01E,h7km±6km,ML1.6*
ISC 12 13:02:00.6±1.2,**36.91N**±0.04×**30.01E**±0.04,**h15**km±10km,
n9,σ1.**77**/17,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ELL	**Elmali**	**0.18**	**207**	PG		**Pb**	**13 02 04.5**	**-1.3**
ELL				SG		**Sb**	**13 02 08.7**	**-0.5**
KORT	**Korkueli**	**0.29**	**72**	PG		**Pg**	**13 02 06.4**	**-0.3**
KORT				SG		**Sb**	**13 02 11.9**	**-0.4**
KORT	**Korkueli**	**0.29**	**72**	*i* P		**Pg**	**13 02 06.1**	**-0.6**
KORT				*i* S		**Sb**	**13 02 11.8**	**-0.4**
KORT				IAML			13 02 13.0	
	comp=E,250nm,0.6s							
KORT				IAML			13 02 13.0	
	comp=N,148nm,0.5s							
GOLH	**Golhisar**	**0.48**	**312**	*i* P		**Pb**	**13 02 09.9**	**-1.0**
GOLH				*i* S		**Sn**	**13 02 18.9**	**-2.6**
ANTB	**Antalya**	**0.52**	**91**	PG		**Pb**	**13 02 11.1**	**-0.3**
ANTB				SG		**Sg**	**13 02 20.1**	**+2.5**
AKUM	**Antalya-Kumluc**	**0.65**	**155**	*i* P		**Pb**	**13 02 11.0**	**-2.6**
AKUM				*i* S		**Sb**	**13 02 22.4**	**0.0**
AKUM				IAML			13 02 29.0	
	comp=N,25nm,0.2s							
AKAS	**Kas**	**0.75**	**206**	PG		**Pb**	**13 02 14.8**	**-0.7**
AKAS	**Kas**	**0.75**	**206**	*i* P		**Pb**	**13 02 14.7**	**-0.7**
AKAS				*i* S		**Sn**	**13 02 30.7**	**+2.7**
AKAS				IAML			13 02 33.0	
	comp=N,22nm,0.4s							
TAVA	**DENIZLI_Tavas**	**1.04**	**303**	*i* P		**Pg**	**13 02 20.8**	**+0.2**
TAVA				*i* S		**Sn**	**13 02 38.2**	**+3.1**
TAVA				IAML			13 02 53.0	
	comp=E,13nm,0.6s							

*MAN **12** 13:03:26.3,5.08N×125.53E,h57km,mb4.7,ML3.6,MS3.5*
*IDC **12** 13:03:29.1±0.8,5.06N×125.47E,h62km±8km,mb3.6/9,*
mb1 3.7/10,mb1mx3.5/43,mbtmp3.9/10,MS3.2/3,
*Ms1 3.2/3,ms1mx2.7/37,Error ellipse: s-maj=32.

AS31	**Alice Springs**	**29.76**	**164**	P		**P**	**13 09 30.1**	**+0.3**
ASAR	**Alice Springs**	**29.76**	**164**	P		**P**	**13 09 30.5**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=342,slow=6.9,SNR=16							
ASAR				pP		**pP**	**13 09 42.9**	**-1.3**
	comp=Z,0.7nm,0.5s,baz=342,slow=7.2,SNR=5.6							
ASAR				ScP		**ScP**	**13 16 08.8**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=345,slow=3.0,SNR=6.2							
KSRS	**Korea Array**	**32.24**	**4**	P		**P**	**13 09 51.4**	**0.0**
	comp=Z,1.1nm,0.7s,baz=175,slow=10,SNR=3.2							
SHL	**Shillong**	**38.11**	**306**	P		**P**	**13 10 42.8**	**+0.5**
BBOO	**Buckleboo**	**39.03**	**166**	P		**P**	**13 10 51.3**	**+1.6**
USRK	**Ussuriysk Ar.**	**39.32**	**7**	P		**P**	**13 10 51.4**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=202,slow=8.1,SNR=3.1							
STKA	**Stephens Creek**	**39.85**	**158**	P		**P**	**13 10 57.8**	**+1.2**
	comp=Z,1.1nm,0.5s,baz=333,slow=6.8,SNR=4.8							
ARMA	**Armidale**	**43.27**	**146**	P		**P**	**13 11 24.1**	**-0.6**
MK31	**Makanchi Array**	**55.74**	**325**	P		**P**	**13 12 58.3**	**-1.1**
MK31				IAmb	IAmb		13 12 59.1	
	comp=Z,1.8nm,0.8s							
MKAR	**Makanchi Array**	**55.74**	**325**	P		**P**	**13 12 58.4**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=126,slow=8.3,SNR=19							
MAKZ	**Makanchi**	**55.93**	**325**	P		**P**	**13 12 59.9**	**-0.8**
MAKZ				IAmb	IAmb		13 13 00.4	
	comp=Z,2.8nm,1.0s							
ILAR	**Eielson Array**	**84.35**	**25**	P		**P**	**13 15 52.9**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=260,slow=5.8,SNR=5.8							

*IDC **12** 13:05:27.8±1.5, 7.°24S×154.°89E, h0km, mb4.0/6, mb1 4.1/7, mb1mx3.8/37, mbtmp4.0/7, ML3.9/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/28, Error ellipse: s-maj=49.6km s-min=23.6km az=122.0*
*NEIC **12** 13:05:33.5±2.0, 6.°8S±0.°1×154.°4E±0.°2, h34km±8km, mb4.5/6, Error ellipse: s-maj=24.8km s-min=14.2km az=107.0*

ISC 12 13:05:34.6±1.0, 7.°08S±0.°09×154.°7E±0.°1, h39km, n21, σ1°43/16, mb4.2/9, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.79**	**319**		Pn	13 06 24.4	-6.2
KRVT	**Keravat (AS076**	**3.80**	**316**	Pn	**Pn**	**13 06 29.5**	**-1.1**
	7.2nm,0.3s,baz=256,slow=1.8,SNR=16						
KRVT				Sn	**Sn**	**13 07 15.0**	**+1.0**
	8.0nm,0.3s,baz=83,slow=22,SNR=1.9						
PMG	**Port Moresby**	**7.76**	**252**	LR	LR	13 10 11.8	
	comp=Z,80nm,19.3s,baz=92,slow=36						
PMG	**Port Moresby**	**7.76**	**252**	Pn	**Pn**	**13 07 24.4**	**-0.6**
DZM	**Mont Dzumac**	**18.75**	**144**	LR	LR	13 15 40.8	
	comp=Z,120nm,18.1s,baz=226,slow=33						
WR0	**Warramunga Arr**	**23.33**	**235**	P	**P**	**13 10 37.8**	**-1.7**
WB0	**Warramunga Arr**	**23.35**	**235**	P	**P**	**13 10 39.8**	**+0.1**
WB0				IAmb	IAmb	13 10 43.4	
	comp=Z,18nm,1.6s						
WB2	**Warramunga Arr**	**23.47**	**235**	P	**P**	**13 10 41.4**	**+0.5**
WB2				IAmb	IAmb	13 10 52.8	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**23.48**	**235**	P	**P**	**13 10 40.7**	**-0.3**
	comp=Z,2.4nm,0.6s,baz=60,slow=9.7,SNR=7.1						
WRA				PcP	**PcP**	**13 14 25.8**	**-0.5**
	comp=Z,0.8nm,1.0s,baz=55,slow=2.1,SNR=3.3						
MTN	**Manton Dam**	**23.85**	**254**	P	**P**	**13 10 42.9**	**-1.6**
MTN				IAmb	IAmb	13 11 17.8	
	comp=Z,32nm,1.6s						
ASAR	**Alice Springs**	**25.86**	**228**	P	**P**	**13 11 02.9**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=59,slow=8.8,SNR=14						
H11S3	**WAKE ISLAND Hy**	**28.05**	**25**	T	T	13 39 41.2	
	baz=203,slow=75,SNR=17						
H11S2	**WAKE ISLAND Hy**	**28.06**	**25**	T	T	13 39 50.6	
	baz=203,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy**	**28.07**	**25**	T	T	13 39 48.6	
	baz=203,slow=75,SNR=9.7						
FITZ	**Fitzroy Crossi**	**30.30**	**246**	P	**P**	**13 11 42.2**	**-0.3**
	comp=Z,1.8nm,0.6s,baz=37,slow=12,SNR=9.0						
FITZ	**Fitzroy Crossi**	**30.30**	**246**	IAmb	IAmb	13 12 43.5	
	comp=Z,26nm,2.0s						
TOO	**Toolangi**	**31.47**	**194**	P	**P**	**13 11 54.0**	**+1.4**
PETK	**Petropavlovsk-**	**60.02**	**2**	P	**P**	**13 15 38.7**	**+1.5**
	comp=Z,1.4nm,0.8s,baz=198,slow=14,SNR=2.3						
MKAR	**Makanchi Array**	**83.24**	**319**	P	**P**	**13 17 59.5**	**+2.4**
	comp=Z,0.5nm,0.6s,baz=98,slow=6.6,SNR=4.7						
YKA	**Yellowknife Ar**	**96.58**	**28**	P	**P**	**13 18 57.9**	**-2.1**
	comp=Z,0.3nm,0.7s,baz=266,slow=3.5,SNR=1.9						
TORD	**Torodi Ar. Bea**	**152.72**	**285**	PKPbc	**PKPbc**	**13 25 26.4**	**-1.9**
	comp=Z,0.8nm,0.7s,baz=51,slow=2.6,SNR=5.9						

*NEIC **12** 13:27:40.0±0.9, 19.°4N±0.°3×68.°97W±0.°08, h47km±69km, Error ellipse: s-maj=39.6km s-min=5.5km az=193.0*
*RSPR **12** 13:27:41.5, 19.°48N×68.°89W, h44km, 7km, MD3.4/4*

ISC 12 13:27:40.0±1.9, 19.°5N±0.°1×68.°95W±0.°06, h35km, n22, σ0°31/25, 5C-1D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**0.77**	**212**		**Pn**	**13 27 54.4**	**-0.1**
PCDR	**Punta Cana, DR**	**1.07**	**150**	*iP*	**Pn**	**13 27 58.9**	**+0.3**
PCDR	**Punta Cana, DR**	**1.07**	**150**	*eS*	**Sn**	**13 28 12.7**	**+0.4**
PCDR	**Punta Cana, DR**	**1.07**	**150**		**Pn**	**13 27 57.9**	**-0.7**
PCDR	**Punta Cana, DR**	**1.07**	**150**		**Sn**	**13 28 12.7**	**+0.4**
AGPR	**Aguadilla, PR**	**2.00**	**119**	*iP*	**Pn**	**13 28 11.4**	**+0.1**
AGPR	**Aguadilla, PR**	**2.00**	**119**		**Pn**	**13 28 11.4**	**+0.1**
MPR	**Mayaguez**	**2.11**	**125**		**Pn**	**13 28 13.1**	**+0.3**
SDDR	**Presa de Saban**	**2.26**	**258**	Pn	**Pn**	**13 28 15.0**	**+0.1**
CRPR	**Cabo Rojo, PR**	**2.26**	**129**	*iP*	**Pn**	**13 28 15.2**	**+0.3**
CRPR	**Cabo Rojo, PR**	**2.26**	**129**		**Pn**	**13 28 15.2**	**+0.3**
MLPR	**Magueyes Islan**	**2.33**	**129**	*iP*	**Pn**	**13 28 16.3**	**+0.4**
MLPR	**Magueyes Islan**	**2.33**	**129**	*eS*	**Sn**	**13 28 43.1**	**-0.2**
MLPR	**Magueyes Islan**	**2.33**	**129**		**Pn**	**13 28 16.3**	**+0.4**
MLPR					**Sn**	**13 28 43.1**	**-0.2**
AOPR	**Arecibo Observ**	**2.35**	**117**	*iP*	**Pn**	**13 28 16.1**	**-0.1**
AOPR	**Arecibo Observ**	**2.35**	**117**	*eS*	**Sn**	**13 28 43.6**	**-0.3**
AOPR	**Arecibo Observ**	**2.35**	**117**		**Pn**	**13 28 16.1**	**-0.1**
AOPR					**Sn**	**13 28 43.6**	**-0.3**
PDPR	**Patillas Dam,**	**3.12**	**117**	*eS*	**Sn**	**13 29 02.6**	**-0.2**
PDPR	**Patillas Dam,**	**3.12**	**117**		**Sn**	**13 29 02.6**	**-0.2**
MTP	**Monte Pirata**	**3.49**	**112**	*iP*	**Pn**	**13 28 32.2**	**+0.3**
MTP	**Monte Pirata**	**3.49**	**112**	*eS*	**Sn**	**13 29 11.7**	**-0.3**
MTP	**Monte Pirata**	**3.49**	**112**		**Pn**	**13 28 32.2**	**+0.3**
MTP					**Sn**	**13 29 11.7**	**-0.3**

DJA 12 13:33:38.5±0.3, 3.°N±3.°×97.°8E±.°, h10km, M3.4/6, MLv3.4/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCSI	**Kotacane, Aceh**	**0.48**	**295**	P	Pg	13 33 48.4	+0.5
KCSI				S	Sg	13 33 55.2	+0.9
TPTI		**1.03**	**267**	P	Pb	13 33 58.6	+0.2
TPTI				S	Sb	13 34 12.7	+0.7
MLSI	**Meulaboh, Aceh**	**2.03**	**298**	Pg	Pg	13 34 19.6	+2.1
GSI	**Gunungsitoli**	**2.10**	**198**	Pg	Pg	13 34 19.0	+0.2
MNSI	**Mandailing Nat**	**2.86**	**151**	P	Pg	13 34 36.6	+3.3

*ISK **12** 13:34:31.4, 36.°16N×36.°71E, h8km, ML2.4/7*
*DDA **12** 13:34:32.1, 36.°17N×36.°76E, h6km±3km, ML2.5*

ISC 12 13:34:32.1±1.7, 36.°18N±0.°08×36.°73E±0.°03, h6km±10km, n14, σ0°46/26, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAHT	**Tahtakopru-Hat**	**0.48**	**294**	PG	**Pg**	**13 34 41.2**	**-0.2**
TAHT				SG	**Sg**	**13 34 48.3**	**+0.6**
KUZU	**Kuzuini**	**0.66**	**25**	*iP*	**Pg**	**13 34 44.5**	**-0.3**
KUZU				*iS*	**Sb**	**13 34 54.6**	**-0.7**
KUZU				IAML		13 34 59.0	
	comp=E,312nm,0.4s						
KUZU				IAML		13 35 02.0	
	comp=N,180nm,0.2s						
KAMA	**Osmaniye**	**1.01**	**357**	*iP*	**Pg**	**13 34 51.5**	**+0.1**
KAMA				*iS*	**Sg**	**13 35 04.1**	**-0.4**
GAZ	**Gaziantep**	**1.06**	**21**	PN	**Pb**	**13 34 52.8**	**-0.2**
GAZ				SN	**Sn**	**13 35 08.3**	**-0.5**
KRTS	**Karatas**	**1.16**	**290**	PN	**Pg**	**13 34 53.9**	**-0.5**
KRTS				SN	**Sb**	**13 35 10.1**	**+0.3**
HCB	**Kahramanmara**	**1.17**	**7**	*iP*	**Pg**	**13 34 54.4**	**-0.2**
AYKD	**Aykdinkavak**	**1.23**	**3**	*iP*	**Pg**	**13 34 56.5**	**+0.7**
AYKD				*iS*	**Sn**	**13 35 13.2**	**+0.3**
AYKD				IAML		13 35 15.0	
	comp=E,196nm,0.4s						
KMRS	**Kahramanmaras**	**1.33**	**6**	PN	**Pb**	**13 34 57.3**	**-0.2**
KMRS				SN	**Sn**	**13 35 16.2**	**+0.9**
GZT	**Gaziantep**	**1.35**	**30**	*iP*	**Pn**	**13 34 57.3**	**-0.4**
GZT				*iS*	**Sn**	**13 35 16.6**	**+0.7**
GZT				IAML		13 35 19.0	
	comp=E,46nm,0.3s						
GZT				IAML		13 35 20.0	
	comp=N,65nm,0.4s						
ANDN	**Andirin**	**1.43**	**348**	*iP*	**Pb**	**13 34 59.4**	**+0.1**
ANDN				*iS*	**Sn**	**13 35 17.2**	**-0.7**
KOZT	**Kozan**	**1.49**	**331**	PN	**Pn**	**13 34 59.3**	**-0.1**
KOZT				SN	**Sg**	**13 35 20.3**	**+0.4**
SURC	**SANLIURFA_SURC**	**1.67**	**65**	*iP*	**Pg**	**13 35 04.1**	**-0.1**
SURC				*iS*	**Sg**	**13 35 26.1**	**+0.3**
SURC				IAML		13 35 28.0	
	comp=N,49nm,0.6s						
SURC				IAML		13 35 31.0	
	comp=E,64nm,0.5s						
CMRD	**Camardi-Nigde**	**2.03**	**317**	PN	**Pn**	**13 35 07.0**	**0.0**
CMRD				SN	**Sn**	**13 35 32.9**	**+0.2**
URFA	**Urfa**	**2.10**	**53**	PN	**Pn**	**13 35 08.2**	**+0.3**

IDC 12 13:55:26.4±6.7, 8.°14S×130.°36E, h0km, mb3.6/1, mb1 3.7/4, mb1mx3.4/30, mbtmp3.5/4, ML3.6/3, Error ellipse: s-maj=83.4km s-min=53.6km az=149.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.91**	**204**	Pn	Pn	13 58 04.2	+0.3
	0.6nm,0.3s,baz=40,slow=13,SNR=26						
FITZ				Sn	Sn	14 00 09.3	+2.6
	0.5nm,0.3s,baz=180,slow=20,SNR=8.9						
WRA	**Warramunga Arr**	**12.35**	**162**	Pn	Pn	13 58 22.6	-1.0
	0.3nm,0.3s,baz=349,slow=13,SNR=6.3						
WRA				Sn	Sn	14 00 44.5	+2.4
	0.5nm,0.3s,baz=335,slow=23,SNR=5.3						
ASAR	**Alice Springs**	**15.81**	**168**	Pn	Pn	13 59 09.3	-1.1
	0.1nm,0.3s,baz=337,slow=8.5,SNR=14						
STKA	**Stephens Creek**	**25.83**	**158**	P	P	14 00 59.8	+0.3
	0.6nm,0.5s,baz=351,slow=13,SNR=1.6						

*IDC **12** 13:58:17.2±0.9, 41.°95S×88.°29E, h0km, mb3.9/10, mb1 4.1/10, mb1mx3.9/48, mbtmp3.9/10, MS4.1/22, Ms1 4.1/22, ms1mx4.0/33, Error ellipse: s-maj=32.0km s-min=18.6km az=114.0*
*NEIC **12** 13:58:18.7±1.2, 42.°0S±0.°1×88.°3E±0.°2, h10km±1km, mb4.2/8, Error ellipse: s-maj=21.4km s-min=17.6km az=249.0*
*GCMT **12** 13:58:20.7±0.3, 41.°99S±0.°01×88.°41E±0.°02, h15km±1km, MW5.0/102, Moment Tensor Solution. s30,c33; s102,c141; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-0.77±.12; Mθθ3.62±.14; Mϕϕ-2.85±.11; Mrθ-0.61±.21; Mθϕ0.14±.09; Mϕr0.82±.23; Best double couple: Mo3.42700×10^16^ NP1:ϕ±225.00000°, δ71.00000°, λ-171.00000°. NP2:ϕ±132.00000°, δ82.00000°, λ-20.00000°. Principal axes: T 3.7040, Plg8.0000°, Azm180.0000°; N -0.5570, Plg69.0000°, Azm290.0000°; P -3.1500, Plg20.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 13:58:19.6±0.6, 42.°0S±0.°1×88.°3E±0.°1, h15km, n47, σ0°49/24, mb3.9/10, MS4.2/25, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**21.36**	**79**	T	T	14 25 11.7	
	baz=243,slow=74,SNR=445						
H01W3	**Cape Leeuwin H**	**21.37**	**79**	T	T	14 25 12.4	
	baz=243,slow=74,SNR=358						
H01W1	**Cape Leeuwin H**	**21.38**	**79**	T	T	14 25 13.1	
	baz=243,slow=74,SNR=451						
NWAO	**Narrogin (SRO)**	**24.56**	**78**	LR	LR	14 11 01.1	
	comp=Z,588nm,21.7s,baz=238,slow=31						
MAW	**Mawson**	**29.15**	**200**	P	**P**	**14 04 19.0**	**-0.7**
	5.8nm,1.2s,baz=44,slow=13,SNR=5.1						
MAW				LR	LR	14 13 23.9	
	comp=Z,1μm,20.6s,baz=44,slow=31						
MAW	**Mawson**	**29.15**	**200**	P	**P**	**14 04 19.2**	**-0.5**
MAW				IAmb	IAmb	14 04 26.2	
	comp=Z,3.3nm,1.1s						
H08S2	**Diego Garcia H**	**36.94**	**333**	T	T	14 44 34.3	
	baz=160,slow=76,SNR=716						
H08S1	**Diego Garcia H**	**36.94**	**333**	T	T	14 44 34.9	
	baz=160,slow=76,SNR=434						
H08S3	**Diego Garcia H**	**36.96**	**333**	T	T	14 44 35.8	
	baz=160,slow=76,SNR=740						
ASAR	**Alice Springs**	**41.88**	**79**	P	**P**	**14 06 09.4**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=228,slow=6.5,SNR=12						
ASAR				PcP	**PcP**	**14 08 04.8**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=219,slow=2.2,SNR=7.5						
ASAR				LR	LR	14 21 28.1	
	comp=Z,703nm,21.5s,baz=234,slow=33						
AS31	**Alice Springs**	**41.88**	**79**	P	**P**	**14 06 09.4**	**0.0**
STKA	**Stephens Creek**	**43.15**	**94**	P	**P**	**14 06 19.6**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=307,slow=6.5,SNR=3.4						
STKA				LR	LR	14 22 09.7	
	comp=Z,255nm,18.9s,baz=215,slow=33						
STKA	**Stephens Creek**	**43.15**	**94**	P	**P**	**14 06 20.2**	**+0.7**
STKA				IAmb	IAmb	14 06 40.9	
	comp=Z,3.3nm,1.6s						
KNRA	**Kununurra**	**43.47**	**65**	P	**P**	**14 06 22.6**	**+0.4**
WRA	**Warramunga Arr**	**44.51**	**75**	P	**P**	**14 06 30.5**	**-0.1**
	comp=Z,0.9nm,0.9s,baz=231,slow=10,SNR=5.1						
WRA				PcP	**PcP**	**14 08 12.9**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=234,slow=2.6,SNR=1.7						
WRA				LR	LR	14 22 54.0	
	comp=Z,410nm,21.8s,baz=225,slow=33						
VNDA	**Vanda**	**45.88**	**163**	P	**P**	**14 06 41.0**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=296,slow=9.0,SNR=6.4						
VNDA				LR	LR	14 23 28.8	
	comp=Z,354nm,20.8s,baz=285,slow=33						
VNDA	**Vanda**	**45.88**	**163**	P	**P**	**14 06 41.1**	**+0.3**
QSPA	**South Pole Qui**	**48.19**	**180**	P	**P**	**14 06 58.9**	**-0.3**
	comp=Z,3.8nm,0.6s,baz=290,slow=0.8,SNR=46						
QSPA	**South Pole Qui**	**48.19**	**180**	P	**P**	**14 06 58.6**	**-0.6**
SNAA	**Sanae**	**51.16**	**204**	P	**P**	**14 07 22.4**	**+0.7**
	comp=Z,2.3nm,1.0s,baz=128,slow=15,SNR=3.0						
SNAA	**Sanae**	**51.16**	**204**	P	**P**	**14 07 21.9**	**+0.3**
SNAA				IAmb	IAmb	14 07 28.6	
	comp=Z,20nm,1.4s						
BOSA	**Boshof**	**52.10**	**263**	LR	LR	14 25 33.8	
	comp=Z,324nm,18.6s,baz=152,slow=31						
SUR	**Sutherland**	**53.39**	**257**	LR	LR	14 24 56.1	
	comp=Z,146nm,21.1s,baz=134,slow=30						
SUR	**Sutherland**	**53.39**	**257**	P	**P**	**14 07 39.6**	**+0.7**
CMAR	**Chiang Mai Arr**	**60.91**	**12**	P	**P**	**14 08 31.8**	**0.0**
	comp=Z,0.3nm,0.3s,baz=206,slow=9.6,SNR=2.0						
CMAR				LR	LR	14 30 23.0	
	comp=Z,120nm,21.5s,baz=188,slow=32						
JAY	**Jayapura**	**61.06**	**65**	LR	LR	14 34 23.5	
	comp=Z,122nm,21.4s,baz=198,slow=36						
KMBO	**Kilima Mbogo**	**61.21**	**297**	LR	LR	14 29 25.9	
	comp=Z,48nm,20.8s,baz=98,slow=30						
URZ	**Urewera**	**64.96**	**120**	LR	LR	14 30 43.5	
	comp=Z,110nm,21.7s,baz=250,slow=30						
DZM	**Mont Dzumac**	**66.96**	**99**	eLR	LR	14 29 06.8	
	comp=Z,244nm,23.1s						
GEYT	**Alibeck**	**84.15**	**336**	LR	LR	14 43 15.8	
	comp=Z,86nm,21.5s,baz=180,slow=32						
KSRS	**Korea Array**	**86.90**	**31**	P	**P**	**14 11 03.9**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=221,slow=2.3,SNR=2.1						
MKAR	**Makanchi Array**	**88.53**	**356**	P	**P**	**14 11 10.4**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=186,slow=3.4,SNR=2.2						
MKAR				LR	LR	14 49 51.2	
	comp=Z,107nm,18.4s,baz=182,slow=35						
MJAR	**Matsushiro Arr**	**90.45**	**38**	LR	LR	14 50 48.2	
	comp=Z,20nm,20.3s,baz=195,slow=35						
TLY	**Talaya**	**94.21**	**9**	LR	LR	14 53 00.3	
	comp=Z,163nm,20.7s,baz=188,slow=35						
KBZ	**Khabaz**	**94.55**	**329**	LR	LR	14 50 11.8	
	comp=Z,72nm,20.3s,baz=146,slow=33						
BRTR	**Keskin Array B**	**95.25**	**321**	LR	LR	14 51 24.4	
	comp=Z,48nm,18.8s,baz=134,slow=34						
PLCA	**Paso Flores**	**95.49**	**196**	LR	LR	14 55 40.3	
	comp=Z,242nm,18.3s,baz=170,slow=36						
ZALV	**Zalesovo Beam**	**95.58**	**358**	LR	LR	14 53 23.8	
	comp=Z,65nm,19.9s,baz=208,slow=35						
TBI	**Tubuai**	**95.91**	**129**	eLR	LR	14 42 27.9	
	comp=Z,129nm,24.0s						
TORD	**Torodi Ar. Bea**	**96.19**	**282**	LR	LR	14 52 19.5	
	comp=Z,88nm,19.8s,baz=140,slow=34						
DBIC	**Dimbokro**	**96.78**	**273**	LR	LR	14 51 56.3	
	comp=Z,95nm,19.1s,baz=127,slow=33						

PPT2	**Papeete2**	**100.25**	**125**	*e*LR	LR	14 44 32.4		
	comp=Z,119nm,23.0s							
INK	**Inuvik**	**145.58**	**26**	PKPbc	**PKPdf**	**14 17 55.6**	**-0.3**	
	comp=Z,2.2nm,0.7s,baz=320,slow=4.5,SNR=13							
INK	**Inuvik**	**145.58**	**26**		**PKPdf**	**14 17 55.9**	**0.0**	
RES	**Resolute Bay**	**147.15**	**2**	PKPbc	**PKPbc**	**14 18 00.1**	**-0.5**	
	comp=Z,3.6nm,0.9s,baz=52,slow=2.7,SNR=2.2							
RES	**Resolute Bay**	**147.15**	**2**	PKPdf	**PKPdf**	**14 17 58.8**	**+0.4**	
YKA	**Yellowknife Ar**	**155.35**	**26**	PKPbc	PKPbc	14 18 19.6		
	comp=Z,0.2nm,0.8s,baz=321,slow=0.9,SNR=2.7							

*JMA **12** 14:11:00.0, 39.°67N×142.°13E, h48km±1km, M3.7*
JMA Felt I J1.
*NIED **12** 14:11:00, 39.°70N×142.°10E, h53km, Mw3.8 Best double couple: Mo4.80000×10^14^ NP1:ϕ±24.00000°, δ69.00000°, λ92.00000°. NP2:ϕ±198.00000°, δ21.00000°, λ85.00000°.*
*NEIC **12** 14:11:01.6±2.0, 39.°67N±0.°07×142.°3E±0.°2, h71km±7km, mb4.5/5, Error ellipse: s-maj=17.7km s-min=9.0km az=112.0*
*IDC **12** 14:11:02.7±2.2, 39.°64N×142.°18E, h77km±19km, mb3.4/10, mb1 3.5/14, mb1mx3.4/42, mbtmp3.7/14, MS4.0/2, Ms1 4.0/2, ms1mx2.5/37, Error ellipse: s-maj=26.0km s-min=13.6km az=109.0*

ISC 12 14:10:59.8±0.8, 39.°64N±0.°03×142.°12E±0.°07, h46km±6km, n46, σ1°56/48, mb3.8/11, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.24**	**256**	P	**Pn**	**14 11 08.5**	**+0.5**
MIYJ				S	**Sn**	**14 11 14.4**	**+0.6**
JTH	**Tanohata**	**0.36**	**327**	P	**Pn**	**14 11 09.3**	**+0.1**
JTH				*e*S	**Sn**	**14 11 15.7**	**-0.2**
JKEN	**Kujiedanarisaw**	**0.65**	**331**	P	**Pn**	**14 11 12.5**	**-0.3**
JKEN				S	**Sn**	**14 11 21.5**	**-0.6**
OFUJ	**Ofunato**	**0.66**	**212**	P	**Pn**	**14 11 13.3**	**+0.5**
OFUJ				*e*S	**Sn**	**14 11 22.5**	**+0.3**
JOM	**Ohasama**	**0.66**	**256**	P	**Pn**	**14 11 13.5**	**+0.6**
JOM				S	**Sn**	**14 11 23.2**	**+0.9**
JKZ	**Kuzumaki**	**0.70**	**300**	P	**Pn**	**14 11 13.7**	**+0.2**
JKZ				S	**Sn**	**14 11 23.4**	**+0.1**
JANG	**Nango**	**0.87**	**328**	P	**Pn**	**14 11 15.4**	**-0.3**
JANG				*e*S	**Sn**	**14 11 26.3**	**-1.0**
JMK	**Ichinoseki**	**0.98**	**226**	P	**Pn**	**14 11 17.8**	**+0.7**
JMK				S	**Sn**	**14 11 30.7**	**+0.9**
JRG	**Rokugo**	**1.18**	**259**	P	**Pn**	**14 11 20.4**	**+0.6**
JAH	**Hinai**	**1.27**	**296**	P	**Pn**	**14 11 21.5**	**+0.4**
JAH				*e*S	**Sn**	**14 11 37.8**	**+0.8**
JIO	**Ouri**	**1.32**	**207**	P	**Pn**	**14 11 22.3**	**+0.5**
JIO				*e*S	**Sn**	**14 11 38.6**	**+0.3**
JTM	**Tenmabayashi**	**1.41**	**325**	P	**Pn**	**14 11 23.0**	**+0.1**
ERM	**Erimo**	**2.50**	**18**	Pn	**Pn**	**14 11 38.4**	**+0.4**
MAJO	**Matsushiro**	**4.37**	**226**		**Pn**	**14 12 07.2**	**+3.6**
MAT	**Matsushiro**	**4.37**	**226**	P	**Pn**	**14 12 03.9**	**+0.3**
MAT				*e*S	**Sn**	**14 12 54.1**	**+0.9**
MJAR	**Matsushiro Arr**	**4.37**	**226**	P	**Pn**	**14 12 07.5**	**+3.9**
	0.3nm,0.3s,baz=33,slow=13,SNR=23						
MJB9	**Matsu-Tunnel**	**4.37**	**226**		**Pn**	**14 12 07.1**	**+3.5**
JKA	**Kamikawa-asahi**	**4.49**	**4**		**Pn**	**14 12 05.8**	**+0.5**
JKA					**Sn**	**14 12 59.9**	**+3.7**
ASAJ	**Asahikawa**	**4.49**	**4**	P	**Pn**	**14 12 05.8**	**+0.5**
	1.9nm,0.3s,baz=226,slow=7.1,SNR=15						
ASAJ				S	**Sn**	**14 12 59.9**	**+3.7**
	1.4nm,0.3s,baz=289,slow=28,SNR=2.0						
INU	**Inuyama**	**5.90**	**225**	Pn	**Pn**	**14 12 28.1**	**+3.5**
USRK	**Ussuriysk Ar.**	**8.82**	**304**	P	**Pn**	**14 13 07.8**	**+3.2**
	baz=111,slow=17,SNR=5.3						
KSRS	**Korea Array**	**11.33**	**263**	P	Pn	14 13 44.5	+5.5
	0.5nm,0.3s,baz=72,slow=14,SNR=6.5						
KS19	**Wonju Array Si**	**11.36**	**264**	Pn	Pn	14 13 44.5	+5.1
SSE	**Sheshan**	**19.05**	**250**	P	**P**	**14 15 18.6**	**+0.5**
SSE				IAmb	IAmb	14 15 25.4	
	comp=Z,38nm,0.7s						
SEY	**Seymchan**	**24.13**	**11**	P	**P**	**14 16 11.1**	**0.0**
	comp=Z,2.8nm,0.9s,baz=174,slow=3.7,SNR=4.4						
H11N2	**WAKE ISLAND Hy**	**29.11**	**126**	T	T	14 47 32.1

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.77**	**277**	Pn	**Pn**	**14 20 15.5**	**-0.2**
VNA1	**Neumayer--Stat**	**16.71**	**161**	P	**P**	**14 22 31.9**	**0.0**
VNA3	**Neumayer Olymp**	**16.96**	**163**	P	**P**	**14 22 34.0**	**-0.7**
VNA2	**Neumayer--Watz**	**17.10**	**160**	P	**P**	**14 22 36.6**	**+0.4**
SNAA	**Sanae**	**18.60**	**158**	P	**Pn**	**14 22 52.9**	**-0.4**
SNAA	**Sanae**	**18.60**	**158**	P	**Pn**	**14 22 53.2**	**-0.2**
	1.4nm,0.3s,baz=315,slow=9.4,SNR=51						
SNAA	**Sanae**	**18.60**	**158**	P	**Pn**	**14 22 52.7**	**-0.6**
SNAA				IAmb	IAmb	14 22 55.6	
	comp=Z,32nm,0.7s						
PMSA	**Palmer Station**	**21.09**	**229**	LR	LR	14 30 20.8	
	comp=Z,264nm,19.8s,baz=85,slow=33						
SYO	**Syowa Base**	**31.09**	**141**	*e*P	**P**	**14 24 52.0**	**-1.3**
SYO	**Syowa Base**	**31.09**	**141**	*e*pP	pP	14 25 05.4	+3.8
QSPA	**South Pole Qui**	**34.58**	**180**	P	**P**	**14 25 24.3**	**+0.2**
CPUP	**Villa Florida**	**37.53**	**308**	P	**P**	**14 25 49.5**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=180,slow=6.1,SNR=1.5						
CPUP	**Villa Florida**	**37.53**	**308**	IAmb	IAmb	14 26 07.0	
	comp=Z,9.0nm,1.1s						
MAW	**Mawson**	**39.71**	**143**	P	**P**	**14 26 07.4**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=230,slow=5.9,SNR=11						
MAW	**Mawson**	**39.71**	**143**	IAmb	IAmb	14 26 08.4	
	comp=Z,0.6nm,0.8s						
BDFB	**Brasilia**	**43.69**	**327**	LR	LR	14 42 02.2	
	comp=Z,82nm,19.3s,baz=134,slow=32						
BOSA	**Boshof**	**44.67**	**74**	LR	LR	14 41 14.8	
	comp=Z,107nm,20.4s,baz=212,slow=30						
VNDA	**Vanda**	**47.00**	**182**	P	**P**	**14 27 07.0**	**+1.1**
	comp=Z,10nm,0.7s,baz=185,slow=6.3,SNR=51						
VNDA				LR	LR	14 45 26.3	
	comp=Z,76nm,20.3s,baz=163,slow=34						
VNDA	**Vanda**	**47.00**	**182**	P	**P**	**14 27 06.8**	**+0.9**
VNDA				IAmb	IAmb	14 27 07.5	
	comp=Z,12nm,0.8s						
H10S2	**ASCENSION HYDR**	**47.30**	**14**	T	T	15 20 14.7	
	baz=188						
H10S3	**ASCENSION HYDR**	**47.31**	**14**	T	T	15 20 20.8	
	baz=32						
LBTB	**Lobatse**	**47.70**	**71**	P	**P**	**14 27 12.2**	**+0.1**
TSUM	**Tsumeb**	**48.41**	**59**	P	**P**	**14 27 17.5**	**-0.2**
TSUM				IAmb	IAmb	14 27 20.2	
	comp=Z,7.3nm,1.2s						
H10N1	**ASCENSION HYDR**	**48.42**	**14**	T	T	15 21 44.9	
	baz=197						
H10N3	**ASCENSION HYDR**	**48.42**	**14**	T	T	15 21 44.6	
	baz=197,SNR=4.0						
H10N2	**ASCENSION HYDR**	**48.44**	**14**	T	T	15 21 46.2	
	baz=197						
CASY	**Casey**	**53.84**	**159**	P	**P**	**14 27 58.3**	**+0.7**
DBIC	**Dimbokro**	**64.32**	**22**	P	**P**	**14 29 11.1**	**+0.3**
	comp=Z,2.6nm,0.6s,baz=185,slow=5.7,SNR=3.9						
DBIC	**Dimbokro**	**64.32**	**22**	IAmb	IAmb	14 29 18.4	
	comp=Z,6.4nm,1.1s						
TOA0	**Torodi Ar. Sit**	**72.13**	**27**	P	**P**	**14 30 00.4**	**+0.7**
TOA0				IAmb	IAmb	14 30 01.3	
	comp=Z,9.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**72.13**	**27**	P	**P**	**14 30 00.5**	**+0.9**
	comp=Z,10nm,0.6s,baz=201,slow=6.3,SNR=72						
ASAR	**Alice Springs**	**98.95**	**160**	P	Pdif	14 32 14.1	-1.6
	comp=Z,0.4nm,0.6s,baz=181,slow=3.9,SNR=13						
ARCES	**ARCESS Array B**	**130.14**	**21**	PKP	**PKiKP**	**14 37 42.8**	**-1.4**
	comp=Z,1.2nm,0.7s,baz=215,slow=1.1,SNR=4.9						
YKA	**Yellowknife Ar**	**136.73**	**317**	PKP	**PKiKP**	**14 37 56.6**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=127,slow=2.4,SNR=5.6						
ILAR	**Eielson Array**	**150.79**	**312**	PKPbc	**PKiKP**	**14 38 26.1**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=121,slow=1.7,SNR=8.2						
RND	**Reindeer**	**151.40**	**309**		**PKiKP**	**14 38 28.1**	**+0.2**
TOLK	**Toolik Lake Re**	**152.20**	**320**		**PKiKP**	**14 38 29.5**	**+0.1**
BPAW	**Bear Paw Mtn.**	**152.45**	**310**		**PKiKP**	**14 38 29.7**	**-0.3**

IDC ***12*** *14:27:19.1±1.6,6.94S×155.51E, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.7/22, mbtmp3.6/6, ML3.3/1, MS3.1/1, Ms1 3.1/1, ms1mx2.6/34, Error ellipse: s-maj=46.9km s-min=28.1km az=129.0*

NEIC ***12*** *14:27:26.2±0.9,6.9S±0.2×155.3E±0.1, h46km±10km, mb4.3/1, Error ellipse: s-maj=29.7km s-min=21.2km az=198.0*

ISC 12 14:27:26.6±0.9, 6.9S±0.2×155.3E±0.1, h50km, n14, σ0s56/10, mb3.7/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**4.11**	**310**	Pn	**Pn**	**14 28 27.0**	**0.0**
KRVT	**Keravat (AS076**	**4.15**	**307**	Pn	**Pn**	**14 28 26.9**	**-0.6**
	1.6nm,0.3s,baz=135,slow=1.4,SNR=1.6						
HNR	**Honiara**	**5.24**	**120**	Pn	**Pn**	**14 28 42.4**	**-0.1**
WB2	**Warramunga Arr**	**24.16**	**235**	P	**P**	**14 32 38.8**	**+0.4**
WB2				IAmb	IAmb	14 33 23.4	
	comp=Z,17nm,1.6s						
WRA	**Warramunga Arr**	**24.17**	**235**	P	**P**	**14 32 38.9**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=58,slow=9.8,SNR=7.0						
ASAR	**Alice Springs**	**26.51**	**229**	P	**P**	**14 32 59.2**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=58,slow=9.3,SNR=8.6						
H11S3	**WAKE ISLAND Hy**	**27.57**	**24**	T	T	15 01 37.5	
	baz=203,slow=75,SNR=14						
H11S2	**WAKE ISLAND Hy**	**27.57**	**24**	T	T	15 01 35.5	
	baz=203,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**27.58**	**24**	T	T	15 01 34.9	
	baz=203,slow=75,SNR=5.4						
PETK	**Petropavlovsk-**	**59.76**	**2**	LR	LR	15 00 24.9	
	comp=Z,19nm,21.7s,baz=241,slow=33						
CMAR	**Chiang Mai Arr**	**61.02**	**295**	P	**P**	**14 37 36.2**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=116,slow=5.0,SNR=9.5						
ILAR	**Eielson Array**	**83.12**	**21**	P	**P**	**14 39 46.5**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=262,slow=4.5,SNR=1.3						
YKA	**Yellowknife Ar**	**96.06**	**28**	P	**P**	**14 40 49.0**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=262,slow=4.3,SNR=3.0						
TORD	**Torodi Ar. Bea**	**153.31**	**286**	PKPbc	**PKPbc**	**14 47 19.7**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=42,slow=2.3,SNR=1.7						

ISC 12 14:34:58.6±1.7, 51.59N±0.08×16.25E±0.05, h0km, n17, σ0s75/36, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHVC	**Chvalec**	**1.01**	**187**	*e*PG	**Pg**	**14 35 17.8**	**-0.1**
CHVC				*e*SG	**Sg**	**14 35 30.8**	**-0.1**
	comp=Z,33nm,0.5s						
OSTC	**Ostas**	**1.03**	**181**	*e*PG	**Pg**	**14 35 18.6**	**+0.3**
OSTC				*e*SG	**Sg**	**14 35 31.9**	**+0.2**
	comp=Z,27nm,0.7s						
UPC	**Upice**	**1.09**	**188**	*e*PG	**Pg**	**14 35 19.1**	**-0.4**
UPC				*e*SG	**Sg**	**14 35 33.0**	**-0.6**
	comp=Z,26nm,0.3s						
DPC	**Dobruska-Polom**	**1.24**	**178**	*e*PG	**Pg**	**14 35 21.9**	**-0.4**
DPC				*e*SG	**Sg**	**14 35 37.5**	**-0.8**
	comp=Z,18nm,0.6s						
PVCC	**Panska Ves**	**1.50**	**226**	*e*PG	**Pn**	**14 35 26.3**	**-0.4**
PVCC				*e*SG	**Sg**	**14 35 45.6**	**-1.0**
	comp=Z,57nm,0.2s						
KRLC	**Kraliky**	**1.55**	**167**	*e*PG	**Pn**	**14 35 27.6**	**+0.1**
KRLC				*e*SG	**Sn**	**14 35 47.8**	**-0.5**
	comp=Z,18nm,0.5s						
BRG	**Berggiesshubel**	**1.61**	**245**	PG	**Pn**	**14 35 28.1**	**-0.2**
BRG				SG	**Sn**	**14 35 48.6**	**-1.2**
	58nm,0.4s						
GOPC	**GO Pecny, Ondr**	**1.91**	**210**	*e*PG	**Pn**	**14 35 33.4**	**+1.0**
GOPC				*e*SG	**Sn**	**14 35 57.8**	**+0.6**
	comp=Z,10nm,0.5s						
PRU	**Pruhonice**	**1.93**	**215**	*e*PG	**Pn**	**14 35 33.3**	**+0.6**
PRU				*e*SG	**Sn**	**14 35 57.9**	**+0.3**
	comp=Z,14nm,0.5s						
MORC	**Moravsky Berou**	**1.99**	**155**	*e*PN	**Pn**	**14 35 33.3**	**-0.2**
MORC				*e*SG	**Sb**	**14 36 01.4**	**+0.4**
CLL	**Collm**	**2.05**	**263**	*e*Pn	**Pn**	**14 35 34.0**	**-0.3**
CLL				*e*Pg	**Pb**	**14 35 37.0**	**+0.4**
CLL				*i* Sg	**Sb**	**14 36 03.6**	**+1.0**
	comp=Z,18nm,0.4s						
OKC	**Ostrava-Krasne**	**2.13**	**145**	*e*PG	**Pb**	**14 35 37.9**	**-0.1**
OKC				*e*SG	**Sg**	**14 36 07.3**	**+0.4**
	comp=Z,11nm,0.5s						
VRAC	**Vranov**	**2.29**	**174**	*e*PN	**Pn**	**14 35 38.1**	**+0.5**
VRAC				*e*SG	**Sb**	**14 36 09.7**	**0.0**
KRUC	**Moravsky**	**2.53**	**178**	*e*PN	**Pn**	**14 35 41.2**	**+0.3**
KRUC				*e*SG	**Sb**	**14 36 17.1**	**+0.6**
NKC	**Novy Kostel**	**2.76**	**242**	*e*PN	**Pn**	**14 35 43.7**	**-0.4**
NKC				*e*PG	**Pb**	**14 35 48.0**	**-0.8**
NKC				*e*SG	**Sb**	**14 36 25.5**	**+2.4**
	comp=Z,31nm,0.4s						
KHC	**Kasperske Hory**	**2.99**	**216**	*e*PN	**Pn**	**14 35 46.6**	**-0.7**
KHC				*e*PG	**Pb**	**14 35 51.9**	**-0.9**
KHC				*e*SG	**Sb**	**14 36 31.5**	**+1.6**
	comp=Z,6.9nm,0.4s						
MODS	**Modra-Piesok**	**3.29**	**168**	*e*SG	**Sg**	**14 36 44.0**	**0.0**

NEIC ***12*** *14:40:30.0±1.2,0.32N±0.10×123.79E±0.08, h199km±7km, mb4.6/22, Error ellipse: s-maj=13.9km s-min=12.2km az=166.0*

IDC ***12*** *14:40:31.1±2.7,0.18N×123.50E, h208km±27km, mb3.7/13, mb1 3.7/14, mb1mx3.4/46, mbtmp4.2/14, Error ellipse: s-maj=36.4km s-min=10.2km az=66.0*

DJA ***12*** *14:40:31.3±0.2,0.7N±3.1×12.4E±1.1, h196km±3km, M4.2/13, mB4.8/2, mb4.3/7, MLv4.2/13, Mw(mB)4.1/2*

ISC 12 14:40:30.6±0.5, 0.24N±0.05×123.85E±0.04, h200km, n62, σ1s22/67, mb4.4/32, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.36**	**22**	P	**Pn**	**14 40 58.8**	**+1.5**
LUWI	**Luwuk**	**1.67**	**220**	P	**Pn**	**14 41 05.8**	**-0.1**
LUWI				S	**Sn**	**14 41 31.6**	**-1.7**
LUWI	**Luwuk**	**1.67**	**220**		**Pn**	**14 41 05.9**	**-0.1**
MRSI	**Marisa**	**1.92**	**277**	P	**Pn**	**14 41 08.0**	**-0.4**
APSI	**Ampana**	**2.48**	**243**	P	**Pn**	**14 41 14.3**	**0.0**
APSI				S	**Sn**	**14 41 47.0**	**-1.3**
SANI	**Sanana**	**3.12**	**137**	P	**Pn**	**14 41 20.3**	**-1.4**
TNTI	**Ternate**	**3.56**	**81**	P	**Pn**	**14 41 27.5**	**+0.5**
TNTI	**Ternate**	**3.56**	**81**		**Pn**	**14 41 27.0**	**0.0**
LBMI	**Labuha**	**3.75**	**103**	P	**Pn**	**14 41 29.3**	**-0.1**
LBMI				S	**Sn**	**14 42 14.3**	**-1.2**
MPSI	**Mapaga**	**3.95**	**271**	P	**Pn**	**14 41 33.1**	**+1.3**
NLAI	**Namlea**	**4.74**	**137**	P	**Pn**	**14 41 42.8**	**+1.0**
NLAI				S	**Sn**	**14 42 35.8**	**-2.1**
TTSI	**Tana Toraja**	**5.18**	**231**	P	**Pn**	**14 41 49.0**	**+1.6**
	0.2nm822nm95nm,1.1s						
SPSI	**Sidrap Palu**	**5.83**	**224**	P	**Pn**	**14 41 56.6**	**+0.8**
	0.1nm21nm,0.8s						
KAPI	**Kappang**	**6.63**	**218**	Pn	**Pn**	**14 42 05.3**	**-0.9**
SBUM	**Sibu**	**11.83**	**281**	Pn	**Pn**	**14 43 11.9**	**-1.6**
KSM	**Kuching**	**13.59**	**275**	P	**Pn**	**14 43 36.7**	**+1.0**
MTN	**Manton Dam**	**14.87**	**151**	P	**Pn**	**14 43 52.1**	**+0.7**
KNRA	**Kununurra**	**16.54**	**163**	P	**P**	**14 44 11.7**	**+1.0**
KNRA				IAmb	IAmb	14 44 12.2	
	comp=Z,17nm,0.5s						
FITZ	**Fitzroy Crossi**	**18.31**	**175**	P	**P**	**14 44 30.1**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=349,slow=6.1,SNR=45						
FITZ	**Fitzroy Crossi**	**18.31**	**175**	P	**P**	**14 44 29.9**	**0.0**
WB0	**Warramunga Arr**	**22.41**	**153**	P	**P**	**14 45 12.8**	**0.0**
WB0				IAmb	IAmb	14 45 14.2	
	comp=Z,8.7nm,0.5s						
WRAB	**Tennant Creek**	**22.53**	**153**	P	**P**	**14 45 14.7**	**+0.7**
WRAB				IAmb	IAmb	14 45 15.5	
	comp=Z,6.4nm,0.6s						
WRA	**Warramunga Arr**	**22.54**	**153**	P	**P**	**14 45 13.9**	**-0.1**
	comp=Z,7.1nm,0.5s,baz=334,slow=10,SNR=63						
WB2	**Warramunga Arr**	**22.54**	**153**	P	**P**	**14 45 14.5**	**+0.5**
WB2				IAmb	IAmb	14 45 15.6	
	comp=Z,9.6nm,0.6s						
WR0	**Warramunga Arr**	**22.64**	**153**	P	**P**	**14 45 14.6**	**-0.3**
WR0				IAmb	IAmb	14 45 31.7	
	comp=Z,21nm,1.6s						
AS31	**Alice Springs**	**25.69**	**158**	P	**P**	**14 45 42.9**	**+0.4**
ASAR	**Alice Springs**	**25.69**	**158**	P	**P**	**14 45 43.1**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=332,slow=7.8,SNR=28						
ASAR				ScP	**ScP**	**14 52 27.2**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=339,slow=2.3,SNR=6.9						
CMAR	**Chiang Mai Arr**	**30.43**	**308**	P	**P**	**14 46 24.2**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=133,slow=6.6,SNR=1.7						
FORT	**Forrest**	**31.11**	**173**	P	**P**	**14 46 30.4**	**0.0**
FORT				IAmb	IAmb	14 47 22.8	
	comp=Z,21nm,1.1s						
NJ2	**Nanjing**	**31.99**	**352**	*e*P	**P**	**14 46 38.2**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI	**Kunming**	**32.07**	**322**	P	**P**	**14 46 39.6**	**+0.4**
KMI				pP	pP	14 47 19.8	+0.7
KMI				sP	sP	14 47 43.7	+1.1
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
KMI				pmax	pmax		
	comp=Z,96nm,5.3s						
BBOO	**Buckleboo**	**34.83**	**162**	P	**P**	**14 47 02.8**	**+0.1**
BBOO				IAmb	IAmb	14 47 10.2	
	comp=Z,34nm,1.5s						
CD2	**Chengdu**	**35.97**	**330**	P	**P**	**14 47 10.5**	**-2.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
STKA	**Stephens Creek**	**36.09**	**154**	P	**P**	**14 47 13.9**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=315,slow=11,SNR=5.7						
STKA	**Stephens Creek**	**36.09**	**154**	P	**P**	**14 47 14.0**	**+0.5**
KSRS	**Korea Array**	**37.22**	**5**	P	**P**	**14 47 24.2**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=186,slow=10,SNR=4.7						
LZH	**Lanzhou**	**40.22**	**335**	*e*P	**P**	**14 47 46.3**	**-1.7**
LZH				pP	pP	14 48 23.1	-6.5
LZH				sP	sP	14 48 51.7	-0.2
LZH				PP	**PP**	**14 49 27.8**	**+2.7**
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,61nm,4.9s						
LZH				LR	LR		
	comp=N,250nm,13.0s						
LZH				LR	LR		
	comp=E,260nm,13.2s						
LZH				LR	LR		
	comp=Z,380nm,16.5s						
ARMA	**Armidale**	**40.34**	**142**	P	**P**	**14 47 50.8**	**+1.7**
ARMA				IAmb	IAmb	14 48 22.3	
	comp=Z,54nm,2.0s						
HHC	**Hu-ho-hao-te**	**41.93**	**346**	*e*P	**P**	**14 48 01.5**	**-0.4**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,65nm,5.7s						
CAN	**Canberra**	**42.45**	**149**	P	**P**	**14 48 07.8**	**+1.8**
CAN				IAmb	IAmb	14 49 28.7	
	comp=Z,41nm,1.6s						
USRK	**Ussuriysk Ar.**	**44.37**	**8**	P	**P**	**14 48 21.4**	**+0.2**
	comp=Z,2.8nm,0.9s,baz=177,slow=9.7,SNR=2.7						
GTA	**Gaotai**	**44.75**	**333**	*e*P	**P**	**14 48 24.2**	**-0.2**
GTA				pP	pwP	14 49 14.8	+5.1
GTA				sP	sP	14 49 32.5	+3.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WMQ	**Urumqi**	**54.03**	**328**	*e*P	**P**	**14 49 34.6**	**+0.1**
WMQ				pP	pP	14 50 18.9	0.0
WMQ				PcP	**PcP**	**14 50 37.0**	**+0.1**
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,180nm,5.1s						
KSH	**Kashi**	**58.57**	**318**	P	**P**	**14 50 08.4**	**+1.7**
KSH				pP	pP	14 50 53.8	+1.6
KSH				sP	sP	14 51 16.5	+2.4
KSH				pmax	pmax		
	comp=Z,21nm,1.1s						
KSH				pmax	pmax		
	comp=Z,140nm,4.2s						
MK31	**Makanchi Array**	**58.86**	**328**	P	**P**	**14 50 06.8**	**-1.6**
MK31				IAmb	IAmb	14 50 09.5	
	comp=Z,3.7nm,0.7s						
MKAR	**Makanchi Array**	**58.86**	**328**	P	**P**	**14 50 06.8**	**-1.6**
	comp=Z,5.9nm,0.6s,baz=128,slow=8.0,SNR=51						
MAKZ	**Makanchi**	**59.04**	**328**	P	**P**	**14 50 08.1**	**-1.6**
MAKZ				IAmb	IAmb	14 50 10.6	
	comp=Z,3.8nm,0.6s						
KDJ	**Kajisay**	**59.12**	**321**	P	**P**	**14 50 11.6**	**+1.1**
KDJ				IAmb	IAmb	14 50 12.1	
	comp=Z,3.4nm,0.7s						
MLZ	**Mavora Lakes**	**59.88**	**145**	P	**P**	**14 50 15.8**	**+0.4**
WKZ	**Wanaka**	**60.08**	**144**	P	**P**	**14 50 16.9**	**+0.1**
AAK	**Ala-Archa**	**61.09**	**320**	P	**P**	**14 50 21.6**	**-2.3**
	comp=Z,1.1nm,0.3s,baz=170,slow=8.2,SNR=4.1						
AAK	**Ala-Archa**	**61.09**	**320**	IAmb	IAmb	14 50 26.6	
	comp=Z,2.1nm,0.9s						
YAK	**Yakutsk**	**61.79**	**3**	P	**P**	**14 50 27.1**	**-0.8**
BKZ	**Black Stump Fm**	**62.02**	**136**	P	**P**	**14 50 30.4**	**+0.4**
ZALV	**Zalesovo Beam**	**62.45**	**335**	P	**P**	**14 50 29.6**	**-2.9**
	comp=Z,0.6nm,0.4s,baz=108,slow=4.8,SNR=4.8						
KURBB	**Kurchatov Arra**	**63.19**	**330**	P	**P**	**14 50 35.4**	**-2.0**
	comp=Z,5.2nm,0.8s,baz=131,slow=6.1,SNR=43						
KURK	**Kurchatov**	**63.20**	**330**	P	**P**	**14 50 35.1**	**-2.3**
BVAR	**Borovoye Array**	**68.72**	**329**	P	**P**	**14 51 12.4**	**-0.2**
	comp=Z,2.8nm,0.8s,baz=129,slow=3.9,SNR=11						
TIXI	**Tiksi**	**71.37**	**2**	P	**P**	**14 51 26.9**	**-1.4**
AKTO	**Aktyubinsk**	**74.63**	**323**	P	**P**	**14 51 46.0**	**-1.9**
	comp=Z,1.5nm,0.5s,baz=101,slow=6.2,SNR=8.1						
KLMR	**Klimovskoe**	**87.02**	**331**	*e*P	P	14 52 48.5	-4.7
KLMR				AMP		14 52 54.9	
ARCES	**ARCESS Array B**	**92.70**	**340**	P	**P**	**14 53 20.5**	**+0.9**
	comp=Z,2.1nm,0.8s,baz=95,slow=3.9,SNR=3.7						

PRU ***12*** *15:14:40.5±0.0,50.14N×19.10E, h0km*

VIE ***12*** *15:14:40.0±0.4,50.22N×19.09E, h0km, mb2.0/3, ml2.6/3, Error ellipse: s-maj=8.1km s-min=2.2km az=167.0 6 km SSW of Sosnowice Suspected Mining induced.*

IPEC ***12*** *15:14:40.3±0.2,50.17N×19.11E, h0km, ML2.4/3, Error ellipse: s-maj=2.4km s-min=1.1km az=166.0*

ISC 12 15:14:40.2±1.2, 50.09N±0.05×19.13E±0.04, h0km, n28, σ0s85/45, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.69**	**248**	*e*PG	**Pg**	**15 14 53.9**	**+0.6**
OKC				*e*SG	**Sb**	**15 15 03.4**	**-1.6**
	comp=Z,58nm,0.8s						
LANS	**Liptovska Anna**	**0.97**	**167**	*e*PG	**Pb**	**15 15 00.0**	**+0.2**
LANS				*e*SG	**Sb**	**15 15 13.8**	**+0.6**
LANS				*e*LG	Lg	15 15 17.5	
MORC	**Moravsky Berou**	**1.07**	**253**	*e*PG	**Pg**	**15 15 01.1**	**+0.3**
MORC				*e*SG	**Sg**	**15 15 14.6**	**-0.1**
MORC	**Moravsky Berou**	**1.07**	**253**	*e*Pg	**Pg**	**15 15 01.0**	**+0.3**
	baz=68						
MORC				*e*Sg	**Sg**	**15 15 14.6**	**-0.1**
	92nm,0.5s,baz=68						
KRLC	**Kraliky**	**1.52**	**270**	*e*SG	**Sg**	**15 15 28.0**	**-0.8**
	comp=Z,40nm,0.3s						
JAVC	**Velka Javorina**	**1.56**	**218**	*e*PG	**Pb**	**15 15 09.8**	**-0.2**
JAVC	**Velka Javorina**	**1.56**	**218**	*e*Pg	**Pb**	**15 15 09.7**	**-0.2**
	baz=35						
VYHS	**Vyhne**	**1.61**	**187**	*e*PN	**Pn**	**15 15 09.8**	**-0.1**
VYHS				*e*SN	**Sb**	**15 15 31.6**	**-0.1**
DPC	**Dobruska-Polom**	**1.82**	**279**	*e*PG	**Pn**	**15 15 13.1**	**+0.3**
DPC				*e*SG	**Sb**	**15 15 37.7**	**-0.1**
	comp=Z,48nm,0.5s						
VRAC	**Vranov**	**1.83**	**245**	*e*PN	**Pn**	**15 15 13.3**	**+0.5**
VRAC				*e*SG	**Sg**	**15 15 38.0**	**-0.8**
VRAC	**Vranov**	**1.83**	**245**	*e*Pn	**Pn**	**15 15 13.3**	**+0.5**
	baz=61						
VRAC				*e*Sg	**Sg**	**15 15 37.9**	**-0.8**
	24nm,0.3s,baz=61						
KECS	**Kecovo**	**1.84**	**151**	*e*PN	**Pn**	**15 15 12.8**	**-0.2**
KECS				*e*SN	**Sn**	**15 15 36.3**	**-0.6**
KECS				*e*LG	Lg	15 15 44.4	
OSTC	**Ostas**	**1.93**	**285**	*e*PG	**Pb**	**15 15 15.6**	**-0.6**
OSTC				*e*SG	**Sb**	**15 15 41.1**	**+0.4**
	comp=Z,23nm,0.6s						
CHVC	**Chvalec**	**2.03**	**285**	*e*PG	**Pn**	**15 15 16.1**	**+0.4**
CHVC				*e*SG	**Sg**	**15 15 44.9**	**-0.6**
	comp=Z,22nm,0.9s						
UPC	**Upice**	**2.04**	**283**	*e*SG	**Sg**	**15 15 45.6**	**-0.2**
	comp=Z,23nm,0.8s						
KRUC	**Moravsky**	**2.06**	**241**	*e*PN	**Pn**	**15 15 16.7**	**+0.7**
KRUC				*e*SG	**Sg**	**15 15 45.5**	**-0.8**
KRUC	**Moravsky**	**2.06**	**241**	*e*Pn	**Pn**	**15 15 16.7**	**+0.7**
	baz=57						
KRUC				*e*Sg	**Sg**	**15 15 45.5**	**-0.8**
	15nm,0.5s,baz=57						
MODS	**Modra-Piesok**	**2.11**	**216**	*e*SN	**Sn**	**15 15 42.3**	**-1.3**
KOLS	**Kolonicke sedl**	**2.35**	**118**	*e*SN	**Sn**	**15 15 49.5**	**-0.1**
GOPC	**GO Pecny, Ondr**	**2.81**	**268**	*e*SG	**Sg**	**15 16 08.9**	**-1.5**
	comp=Z,14nm,0.6s						
PVCC	**Panska Ves**	**2.96**	**280**	*e*SG	**Sg**	**15 16 14.6**	**-0.5**
	comp=Z,31nm,0.6s						
PRU	**Pruhonice**	**2.96**	**270**	*e*SG	**Sg**	**15 16 13.7**	**-1.6**
	comp=Z,13nm,0.7s						
CONA	**Conrad Observa**	**3.06**	**226**	*e*Pn	**Pn**	**15 15 30.7**	**+0.9**
	0.6nm,0.2s						
CONA				*e*Sn	**Sn**	**15 16 08.7**	**+1.7**
	1.7nm,0.4s						
PBCC	**Pribram**	**3.35**	**265**	*e*SG	**Sg**	**15 16 27.3**	**-0.3**
	comp=Z,2.5nm,0.5s						
BRG	**Berggiesshubel**	**3.41**	**285**	PG	**Pg**	**15 15 45.9**	**+0.5**
BRG				SG	**Sg**	**15 16 28.1**	**-1.4**
	6.9nm,0.5s						
KHC	**Kasperske Hory**	**3.74**	**257**	*e*PN	**Pn**	**15 15 38.5**	**-0.6**
KHC				*e*P

JMA ***12*** *15:24:09.3±0.2,38°.52N×144°.63E, h46km, M4.2*

ISC 12 15:24:09.8±0.7, 38°.52N±0'.05×144°.80E±0'.07, h35km, n57, σ1.994/64, mb3.8/13, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.51**	**284**	P	**Pn**	**15 24 47.2**	**-0.9**
MIYJ	**Miyakonagasawa**	**2.55**	**295**	P	**Pn**	**15 24 47.6**	**-1.0**
MIYJ				S	**Sn**	**15 25 15.7**	**-2.7**
JKMT	**Kesennumamotoy**	**2.62**	**277**	P	**Pn**	**15 24 48.5**	**-1.1**
JIKH	**Ishinomakikobu**	**2.63**	**266**	P	**Pn**	**15 24 48.4**	**-1.3**
JIKH				*eS*	**Sn**	**15 25 17.3**	**-3.1**
JMK	**Ichinoseki**	**2.83**	**280**	P	**Pn**	**15 24 51.9**	**-0.6**
JMK				S	**Sn**	**15 25 24.0**	**-1.4**
JOM	**Ohasama**	**2.89**	**290**	P	**Pn**	**15 24 52.9**	**-0.5**
JOM				S	**Sn**	**15 25 25.5**	**-1.4**
JANG	**Nango**	**3.14**	**307**	P	**Pn**	**15 24 55.6**	**-1.2**
JYK	**Kaneyama**	**3.50**	**278**	P	**Pn**	**15 25 01.5**	**-0.2**
JYK				S	**Sn**	**15 25 40.9**	**-0.9**
JFT	**Otama**	**3.66**	**255**	P	**Pn**	**15 25 03.8**	**-0.2**
JFT				S	**Sn**	**15 25 44.0**	**-2.0**
ERM	**Erimo**	**3.71**	**341**		**Pn**	**15 25 04.3**	**-0.2**
JOT	**Ohata**	**4.06**	**316**	P	**Pn**	**15 25 09.0**	**-0.4**
JOT				S	**Sn**	**15 25 53.1**	**-2.5**
JCH	**Churui**	**4.23**	**345**	P	**Pn**	**15 25 10.6**	**-1.1**
JCH				*eS*	**Sn**	**15 25 56.2**	**-3.7**
JKB	**Kayabe**	**4.43**	**321**	P	**Pn**	**15 25 14.0**	**-0.4**
NEM2	**Nemuro 2**	**4.89**	**8**	P	**Pn**	**15 25 18.3**	**-2.5**
NEM2				*eS*	**Sn**	**15 26 10.0**	**-6.1**
JRY	**Ryogami san**	**5.33**	**244**	P	**Pn**	**15 25 25.8**	**-1.1**
JRY				S	**Sn**	**15 26 21.6**	**-5.4**
JOSM	**Okushiri--Mats**	**5.40**	**313**	P	**Pn**	**15 25 29.1**	**+1.2**
JTKR	**Abashiri--Toko**	**5.48**	**353**	P	**Pn**	**15 25 28.0**	**-0.9**
JTKR				S	**Sn**	**15 26 26.9**	**-3.8**
MJAR	**Matsushiro Arr**	**5.60**	**251**	Pn	**Pn**	**15 25 30.5**	**-0.1**
	0.5nm,0.3s,baz=86,slow=15,SNR=24						
MJAR				Sn	**Sn**	**15 26 34.9**	**+1.2**
	0.1nm,0.3s,baz=90,slow=32,SNR=2.2						
MJAR				LR	LR	15 27 58.4	
	comp=Z,58nm,18.8s,baz=120,slow=41						
MAJO	**Matsushiro**	**5.60**	**251**	Pn	**Pn**	**15 25 30.8**	**+0.2**
MAT	**Matsushiro**	**5.60**	**251**	P	**Pn**	**15 25 31.1**	**+0.5**
MAT				S	**Sn**	**15 26 33.5**	**-0.2**
MJB9	**Matsu-Tunnel**	**5.60**	**251**	Pn	**Pn**	**15 25 30.9**	**+0.3**
JOD2	**Odawara 2**	**5.62**	**236**	P	**Pn**	**15 25 29.6**	**-1.2**
JOD2				*eS*	**Sn**	**15 26 28.5**	**-5.6**
JKA	**Kamikawa-asahi**	**5.83**	**344**		**Pn**	**15 25 33.9**	**+0.2**
JKA					**Sn**	**15 26 37.5**	**-1.7**
ASAJ	**Asahikawa**	**5.83**	**344**	Pn	**Pn**	**15 25 33.9**	**+0.2**
	2.2nm,0.3s,baz=185,slow=15,SNR=33						
ASAJ				Sn	**Sn**	**15 26 37.5**	**-1.7**
	3.0nm,0.3s,baz=333,slow=31,SNR=5.9						
ASAJ				LR	LR	15 28 26.2	
	comp=Z,42nm,18.7s,baz=175,slow=43						
JHJ2	**Mitsune**	**6.75**	**218**	Pn	**Pn**	**15 25 44.5**	**-1.9**
JHJ	**Hachijo jima 2**	**6.76**	**219**	Pn	**Pn**	**15 25 44.2**	**-2.3**
	11nm,0.3s,baz=60,slow=16,SNR=1.6						
JHJ				Sn	Sn	15 26 52.0	-10
	10nm,0.3s,baz=60,slow=18,SNR=1.5						
INU	**Inuyama**	**6.99**	**245**	Pn	**Pn**	**15 25 48.7**	**-1.0**
YSS	**Yuzh-Sakhalins**	**8.56**	**351**	Pn	**Pn**	**15 26 12.2**	**+1.1**
USA0B	**Ussuriysk Arra**	**11.17**	**305**	Pn	**Pn**	**15 26 49.0**	**+2.1**
USRK	**Ussuriysk Ar.**	**11.17**	**305**	Pn	**Pn**	**15 26 49.2**	**+2.3**
	baz=105,slow=13,SNR=13						
KSRS	**Korea Array**	**13.36**	**271**	LR	LR	15 32 30.6	
	comp=Z,31nm,20.1s,baz=134,slow=37						
KLR	**Kul'dur**	**14.23**	**323**	LR	LR	15 32 32.5	
	comp=Z,62nm,20.2s,baz=125,slow=35						
YAK	**Yakutsk**	**25.31**	**343**	P	**P**	**15 29 34.3**	**+1.6**
	4.2nm,0.7s,baz=171,slow=3.2,SNR=4.9						
YAK	**Yakutsk**	**25.31**	**343**	P	**P**	**15 29 34.4**	**+1.6**
YAK				IAmb	IAmb	15 29 44.8	
	comp=Z,7.9nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**26.77**	**128**	T	T	15 57 44.0	
	baz=320,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**26.78**	**128**	T	T	15 57 44.0	
	baz=320,slow=75,SNR=11						
H11N3	**WAKE ISLAND Hy**	**26.79**	**128**	T	T	15 57 39.2	
	baz=320,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hy**	**27.59**	**130**	T	T	15 58 44.8	
	baz=321,slow=76,SNR=5.3						
H11S3	**WAKE ISLAND Hy**	**27.59**	**130**	T	T	15 58 40.6	
	baz=321,slow=76,SNR=4.5						
H11S2	**WAKE ISLAND Hy**	**27.60**	**130**	T	T	15 58 45.0	
	baz=321,slow=76,SNR=4.4						
TIXI	**Tiksi**	**34.18**	**351**	P	**P**	**15 30 52.4**	**+1.0**
	comp=Z,0.9nm,0.5s,baz=143,slow=3.5,SNR=6.0						
ZALV	**Zalesovo Beam**	**42.92**	**311**	P	**P**	**15 32 07.0**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=83,slow=8.1,SNR=1.4						
ZALV				PcP	**PcP**	**15 33 55.8**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=95,slow=3.2,SNR=5.4						
KDAK	**Kodiak Island**	**44.19**	**43**	P	**P**	**15 32 14.2**	**-0.8**
	comp=Z,4.6nm,0.8s,baz=286,slow=9.2,SNR=2.7						
KDAK				LR	LR	15 49 54.6	
	comp=Z,230nm,18.8s,baz=244,slow=35						
KDAK	**Kodiak Island**	**44.19**	**43**	IAmb	IAmb	15 32 17.1	
	comp=Z,29nm,1.4s						
CMAR	**Chiang Mai Arr**	**44.46**	**257**	LR	LR	15 50 27.8	
	comp=Z,18.8nm,20.9s,baz=190,slow=36						
MKAR	**Makanchi Array**	**45.62**	**301**	P	**P**	**15 32 27.8**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=86,slow=8.2,SNR=2.6						
ILAR	**Eielson Array**	**46.79**	**33**	P	**P**	**15 32 35.5**	**0.0**
	comp=Z,1.0nm,0.9s,baz=266,slow=7.1,SNR=6.4						
WR0	**Warramunga Arr**	**58.96**	**191**	P	**P**	**15 34 05.0**	**-0.7**
WB2	**Warramunga Arr**	**58.98**	**191**	P	**P**	**15 34 05.2**	**-0.7**
WRA	**Warramunga Arr**	**58.98**	**191**	P	**P**	**15 34 04.9**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=11,slow=7.2,SNR=8.3						
YKA	**Yellowknife Ar**	**61.16**	**31**	P	**P**	**15 34 19.9**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=296,slow=6.0,SNR=4.5						
ASAR	**Alice Springs**	**62.70**	**191**	P	**P**	**15 34 30.4**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=13,slow=7.9,SNR=7.5						
FINES	**FINESS Array B**	**68.72**	**333**	P	**P**	**15 35 11.0**	**+1.5**
	comp=Z,1.2nm,0.7s,baz=7.1,slow=7.7,SNR=4.1						
NVAR	**Mina Array Bea**	**71.94**	**55**	P	**P**	**15 35 30.1**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=292,slow=4.8,SNR=5.4						
PDAR	**Pinedale Array**	**74.70**	**47**	P	**P**	**15 35 45.0**	**-1.1**
	comp=Z,0.8nm,0.8s,baz=257,slow=1.7,SNR=5.1						
TXAR	**Lajitas Array**	**87.08**	**54**	P	**P**	**15 36 51.9**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=263,slow=3.5,SNR=3.1						
SIV	**San Ignacio**	**148.06**	**53**	PKPbc	**PKPdf**	**15 43 51.1**	**+2.1**
	comp=Z,0.7nm,0.7s,baz=75,slow=4.6,SNR=4.3						

IDC ***12*** *15:25:08.7±0.7,52°.38N×168°.33W, h0km, mb4.0/22, mb1 4.2/23,mb1mx4.0/55,mbtmp4.0/23,ML3.6/1,MS3.3/2, Ms1 3.3/2,ms1mx2.7/46,Error ellipse: s-maj=19.7km s-min=13.8km az=168.0*

AEIC ***12*** *15:25:11.1±2.2,52°.19N±0'.04×168°.21W±0'.07, h13km±2km, ML3.4, mb4.1/42(NEIC), Error ellipse: s-maj=6.6km s-min=6.3km az=136.0*

NEIC ***12*** *15:25:11.8±2.0,52°.26N±0'.04×168°.25W±0'.07, h21km±5km, Error ellipse: s-maj=8.2km s-min=3.7km az=130.0*

ISC 12 15:25:12.8±2.3, 52°.24N±0'.08×168°.24W±0'.05, h31km±15km, n122, σ1.934/124, mb4.1/26, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.83**	**333**		**Pn**	**15 25 27.5**	**-0.8**
NIKH					**Sb**	**15 25 39.9**	**+0.4**
OKSP	**Okmok Steeple**	**1.02**	**358**		**Pn**	**15 25 30.8**	**-0.2**
OKFG	**Magazine Ridge**	**1.19**	**9**		**Pn**	**15 25 33.5**	**+0.2**
OKFG					**Sb**	**15 25 50.4**	**+0.6**
OKWE	**Okmok W'ng Wal**	**1.24**	**360**		**Pn**	**15 25 34.3**	**+0.3**
MREP	**Makushin Rep't**	**1.82**	**29**		**Pn**	**15 25 42.1**	**+0.2**
MSW	**Makushin Switc**	**1.90**	**27**		**Pn**	**15 25 43.3**	**+0.3**
MNAT	**Makushin Natee**	**1.90**	**29**		**Pn**	**15 25 43.4**	**+0.4**
MNAT					**Sn**	**15 26 07.8**	**+1.9**
UNV	**Unalaska Valle**	**1.92**	**32**		**Pn**	**15 25 43.4**	**+0.1**
UNV					**Sn**	**15 26 07.9**	**+1.5**
AKMO	**Akutan Morgan**	**2.29**	**35**		**Pn**	**15 25 49.0**	**+0.6**
AKRB	**Akutan Reef Bi**	**2.30**	**34**		**Pn**	**15 25 49.7**	**+1.1**
AKBBA	**Akutan Broad B**	**2.33**	**36**		**Pn**	**15 25 49.4**	**+0.5**
AKGG	**Akutan Green G**	**2.38**	**34**		**Pn**	**15 25 51.2**	**+1.6**
AKUT	**Akutan**	**2.41**	**37**		**Pn**	**15 25 50.4**	**+0.4**
AKUT					**Sn**	**15 26 20.3**	**+1.9**
WESP	**Westdahl Peak**	**3.09**	**42**		**Pn**	**15 26 00.5**	**+1.1**
WESP					**Sn**	**15 26 37.3**	**+2.0**
SSBA	**Shishaldin**	**3.53**	**42**		**Pn**	**15 26 06.5**	**+1.0**
KOFP	**Korovin Flat P**	**3.60**	**273**		**Pn**	**15 26 07.4**	**+1.0**
ATKA	**Atka Island**	**3.66**	**272**		**Pn**	**15 26 07.5**	**+0.3**
ATKA					**Sn**	**15 26 49.7**	**+0.3**
FALS	**False Pass**	**3.89**	**46**		**Pn**	**15 26 11.5**	**+1.1**
FALS					**Sn**	**15 26 56.9**	**+2.0**
GSTR	**Great Sitkin T**	**4.82**	**271**	Pn	**Pn**	**15 26 23.9**	**+0.8**
GSMY	**Great Sitkin M**	**4.82**	**271**		**Pn**	**15 26 23.8**	**+0.7**
GSTD	**Great Sitkin T**	**4.87**	**271**		**Pn**	**15 26 24.2**	**+0.2**
SPIA	**Saint Paul Isl**	**5.08**	**348**		**Pn**	**15 26 28.6**	**+1.9**
ADK	**Adak**	**5.22**	**269**		**Pn**	**15 26 29.1**	**+0.4**
SDPT	**Sand Point**	**5.56**	**53**		**Pn**	**15 26 34.1**	**+0.9**
KIMD	**Kanaga Island**	**5.58**	**269**		**Pn**	**15 26 34.2**	**+0.6**
CNBA	**Chernabura Isl**	**5.77**	**60**		**Pn**	**15 26 36.0**	**-0.2**
CHGN	**Chignik**	**7.05**	**51**		**Pn**	**15 26 52.9**	**-0.8**
OHAK	**Old Harbor**	**9.98**	**54**	Pn	**Pn**	**15 27 33.1**	**-0.7**
KDAK	**Kodiak Island**	**10.55**	**52**	Pn	**Pn**	**15 27 40.9**	**-0.8**
	1.3nm,0.3s,baz=155,slow=5.0,SNR=48						
KDAK				Sn	**Sn**	**15 29 31.0**	**-7.7**
	0.1nm,0.3s,baz=345,slow=12,SNR=1.3						
KDAK	**Kodiak Island**	**10.55**	**52**		**Pn**	**15 27 40.6**	**-1.1**
SVW2	**Sparrevohn**	**11.26**	**33**	Pn	**Pn**	**15 27 51.0**	**-0.4**
CNPM	**China Poot**	**11.99**	**46**	Pn	**Pn**	**15 28 00.2**	**-1.2**
BRLK	**Bradley Lake**	**12.27**	**45**	Pn	**Pn**	**15 28 04.7**	**-0.4**
SPU	**Mount Spurr**	**12.59**	**38**	Pn	**Pn**	**15 28 08.8**	**-0.7**
SEW	**Seward**	**13.06**	**46**		**Pn**	**15 28 15.2**	**-0.7**
RC01	**Rabbit Creek A**	**13.45**	**42**	Pn	**Pn**	**15 28 20.0**	**-1.2**
PPLA	**Purkeypile**	**13.67**	**32**		**Pn**	**15 28 27.6**	**+3.3**
KNK	**Knik Glacier**	**14.14**	**42**		**Pn**	**15 28 30.3**	**-0.5**
GHO	**Glory Hole Cre**	**14.15**	**40**	Pn	**Pn**	**15 28 30.2**	**-0.7**
MID	**Middleton Isla**	**14.21**	**51**	Pn	**Pn**	**15 28 30.3**	**-1.3**
SML	**Sawmill**	**14.41**	**41**	Pn	**Pn**	**15 28 32.2**	**-2.2**
GLI	**Glacier Island**	**14.46**	**45**	Pn	**Pn**	**15 28 32.0**	**-2.9**
HIN	**Hinchinbrook I**	**14.51**	**47**		**Pn**	**15 28 33.1**	**-2.6**
KTH	**Kantishna Hill**	**14.54**	**32**		**Pn**	**15 28 37.5**	**+1.4**
FID	**Port Fidalgo**	**14.67**	**46**		**Pn**	**15 28 34.9**	**-3.0**
TRF	**Thorofare Moun**	**14.68**	**33**	Pn	**Pn**	**15 28 35.7**	**-2.5**
SCM	**Sheep Creek Mo**	**14.82**	**41**		**Pn**	**15 28 37.7**	**-2.3**
BPAW	**Bear Paw Mtn.**	**14.90**	**30**		**Pn**	**15 28 42.5**	**+1.6**
EYAK	**Cordova Ski Ar**	**14.91**	**47**	Pn	**Pn**	**15 28 39.5**	**-1.5**
RND	**Reindeer**	**15.15**	**35**	Pn	**Pn**	**15 28 44.2**	**-0.1**
RND				IAmb	IAmb	15 28 49.3	
	comp=Z,15nm,1.7s						
RAGM	**Ragged Mountai**	**15.34**	**49**		**Pn**	**15 28 45.2**	**-1.6**
RAGM				IAmb	IAmb	15 28 57.4	
	comp=Z,10nm,0.5s						
DHY	**Denali Highway**	**15.48**	**37**		**Pn**	**15 28 48.8**	**0.0**
DHY				IAmb	IAmb	15 29 06.3	
	comp=Z,18nm,1.7s						
MLY	**Manley**	**15.65**	**28**	Pn	**Pn**	**15 28 51.7**	**+0.9**
MLY				IAmb	IAmb	15 28 56.2	
	comp=Z,15nm,1.0s						
WRH	**Wood River Hil**	**16.09**	**33**		**Pn**	**15 28 55.1**	**-1.3**
GLB	**Gilahina Butte**	**16.14**	**46**		**Pn**	**15 28 55.9**	**-1.2**
VRDI	**Verde Repeater**	**16.21**	**47**	P	**Pn**	**15 28 57.1**	**-1.1**
CCB	**Clear Creek Bu**	**16.29**	**32**		**Pn**	**15 28 58.3**	**-0.7**
MDM	**Murphy Dome**	**16.36**	**31**	P	**P**	**15 29 01.4**	**-1.1**
MDM				IAmb	IAmb	15 29 02.5	
	comp=Z,10nm,1.5s						
HDA	**Harding Lake**	**16.43**	**34**	Pn	**Pn**	**15 28 59.4**	**-1.4**
MCARA	**McCarthy VSAT**	**16.46**	**46**	P	**P**	**15 29 03.1**	**-0.5**
MCARA				IAmb	IAmb	15 29 20.4	
	comp=Z,8.6nm,0.9s						
BALM	**Baldy**	**16.64**	**48**		**Pn**	**15 29 02.7**	**-0.8**
BALM				IAmb	IAmb	15 29 09.6	
	comp=Z,5.5nm,0.5s						
IL31		**16.68**	**33**		**Pn**	**15 29 02.6**	**-1.2**
ILAR	**Eielson Array**	**16.68**	**33**	Pn	**Pn**	**15 29 01.9**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=236,slow=11,SNR=11						
ILAR				LR	LR	15 35 59.3	

IDC ***12*** *15:35:01.0±5.8,4°.55S×103°.15E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.3/34, mbtmp3.5/4, Error ellipse: s-maj=295.6km s-min=24.8km az=52.0*

DJA ***12*** *15:35:06.7±0.6,5°.S±3°×10°.3E±°, h25km±7km, M3.4/9, MLv3.4/9*

ISC 12 15:35:06.8±2.0, 5°.0S±0°.1×102°.8E±0°.1, h54km±18km, n11, σ0.968/17, mb3.5/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.68**	**18**	P	**Pn**	**15 35 19.5**	**-1.0**
LWLI	**Liwa**	**1.31**	**90**	P	**Pn**	**15 35 28.8**	**-0.1**
LWLI				S	**Sn**	**15 35 45.2**	**-0.2**
KSI	**Kapahiang**	**1.36**	**354**	P	**Pn**	**15 35 29.4**	**-0.1**
KSI				S	**Sn**	**15 35 46.8**	**+0.3**
LHSI	**Lahat**	**1.41**	**33**	P	**Pn**	**15 35 30.2**	**+0.1**
LHSI				S	**Sn**	**15 35 48.0**	**+0.4**
MDSI	**Maura Dua**	**1.52**	**70**	P	**Pn**	**15 35 31.8**	**+0.2**
MDSI				S	**Sn**	**15 35 50.8**	**+0.5**
KASI	**Kota Agung**	**1.82**	**106**	P	**Pn**	**15 35 36.1**	**+0.4**
KASI				S	**Sn**	**15 35 57.9**	**+0.3**
MASI	**Maura Aman, Be**	**1.92**	**345**	P	**Pn**	**15 35 37.8**	**+0.6**
MASI				S	**Sn**	**15 36 01.4**	**+1.2**
WRA	**Warramunga Arr**	**34.13**	**119**	P	**P**	**15 41 47.7**	**+0.8**
	0.2nm,0.5s,baz=297,slow=8.8,SNR=5.5						
ASAR	**Alice Springs**	**35.29**	**125**	P	**P**	**15 41 56.5**	**-0.3**
	0.1nm,0.4s,baz=300,slow=7.6,SNR=6.0						
MKAR	**Makanchi Array**	**54.67**	**343**	P	**P**	**15 44 29.0**	**-1.3**
	0.3nm,0.4s,baz=151,slow=9.0,SNR=5.2						
ZALV	**Zalesovo Beam**	**60.64**	**348**	P	**P**	**15 45 11.8**	**-0.2**
	0.5nm,0.3s,baz=144,slow=6.1,SNR=2.2						

WEL 12 15:24:46.9, 41°S±1°×17°6E±°, h86km±6km, M3.2/54, ML3.5/50, MLv3.2/54, Error ellipse: s-maj=0.0km s-min=0.0km az=87.3, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPWZ	**Castlepoint**	**0.06**	**175**	P	Pn	15 24 59.8	+0.7
BFZ	**Birch Farm**	**0.17**	**14**	P	Pn	15 24 57.5	-1.8
TIWZ	**Tintock**	**0.24**	**287**	P	Pn	15 24 56.3	-3.4
PRWZ	**Pori Road**	**0.34**	**330**	P	Pn	15 24 55.8	-4.4
TMWZ	**Te Maipa**	**0.35**	**221**	P	Pn	15 25 01.0	+0.8
ANWZ	**Angora Road**	**0.44**	**29**	P	Pn	15 25 00.6	-0.2
MRZ	**Mangatainoka R**	**0.50**	**291**	P	Pn	15 24 57.2	-4.1
HOWZ	**Holdsworth Sta**	**0.52**	**264**	P	Pn	15 24 59.5	-2.0
DVHZ	**Dannevirke**	**0.55**	**358**	P	Pn	15 24 58.9	-2.8
POWZ	**Post Office Ro**	**0.56**	**324**	P	Pn	15 24 57.2	-4.6
MTW	**Mount Morrison**	**0.61**	**239**	P	Pn	15 25 02.6	+0.4
PRHZ	**Porangahau**	**0.67**	**30**	P	Pn	15 25 03.5	+0.7
TRWZ	**Traveller**	**0.67**	**215**	P	Pn	15 25 05.0	+2.2
OGWZ	**Otaki Gorge**	**0.78**	**272**	P	Pn	15 25 02.4	-1.4
PAWZ	**Paruwai Farm**	**0.79**	**227**	P	Pn	15 25 05.7	+1.7
WPHZ	**Waipukurau**	**0.80**	**14**	P	Pn	15 25 04.3	+0.1
TSZ	**Takapari Road**	**0.81**	**347**	P	Pn	15 25 01.8	-2.4
CAW	**Cannon Point**	**0.89**	**253**	P	Pn	15 25 05.4	+0.3
MSWZ	**Moikau Station**	**0.91**	**231**	P	Pn	15 25 06.7	+1.3
OHWZ	**Ohakea**	**0.93**	**313**	P	Pn	15 25 03.6	-1.9
PNHZ	**Pukenui**	**0.93**	**0**	P	Pn	15 25 04.8	-0.9
PXZ	**Pawanui**	**0.96**	**32**	P	Pn	15 25 07.1	+1.2
KIW	**Kapiti Island**	**0.97**	**269**	P	Pn	15 25 05.6	-0.4
PLWZ	**Palliser**	**1.01**	**224**	P	Pn	15 25 08.3	+1.8
BHW	**Baring Head**	**1.15**	**240**	P	Pn	15 25 09.1	+1.1
WEL	**Wellington**	**1.16**	**247**	P	Pn	15 25 09.1	+0.9
KAHZ	**Kahuranaki**	**1.17**	**27**	P	Pn	15 25 09.7	+1.3
KRHZ	**Kereru**	**1.21**	**6**	P	Pn	15 25 09.0	+0.1
BHHZ	**Black Hill Sta**	**1.36**	**356**	P	Pn	15 25 10.7	-0.1
WAZ	**Wanganui**	**1.43**	**319**	P	Pn	15 25 11.5	-0.1
KWHZ	**Kaweka Forest**	**1.43**	**7**	P	Pn	15 25 12.2	+0.5
MCHZ	**McNeill Hill**	**1.45**	**16**	P	Pn	15 25 12.9	+1.0
MOVZ	**Moawhango**	**1.48**	**347**	P	Pn	15 25 12.1	-0.1
TCW	**Tory Channel**	**1.50**	**255**	P	Pn	15 25 13.0	+0.6
MTVZ	**Mangateitei**	**1.56**	**339**	P	Pn	15 25 13.8	+0.4

TRVZ	**Turoa**	**1.62**	**342**	P	Pn	15 25 14.6	+0.3
WHVZ	**Whangaehu Hut**	**1.63**	**343**	P	Pn	15 25 14.9	+0.6
TUVZ	**Tukino**	**1.63**	**345**	P	Pn	15 25 15.0	+0.7
DRZ	**Dome Shelter**	**1.64**	**343**	P	Pn	15 25 15.3	+0.6
FWVZ	**Far West T-bar**	**1.66**	**343**	P	Pn	15 25 15.1	+0.3
PKVZ	**Pokaka**	**1.69**	**337**	P	Pn	15 25 15.2	+0.2
BKZ	**Black Stump Fm**	**1.69**	**8**	P	Pn	15 25 15.5	+0.4
DUWZ	**D'Urville Isla**	**1.73**	**271**	P	Pn	15 25 15.6	+0.2
NGZ	**Ngauruhoe**	**1.73**	**345**	P	Pn	15 25 16.1	+0.5
CMWZ	**Cape Campbell**	**1.74**	**238**	P	Pn	15 25 23.0	+7.4
WTVZ	**West Tongariro**	**1.79**	**345**	P	Pn	15 25 16.8	+0.5
TUWZ	**Tuamarina**	**1.80**	**250**	P	Pn	15 25 16.8	+0.5
KRVZ	**Karearewana**	**1.80**	**346**	P	Pn	15 25 17.2	+0.7
NMHZ	**Naumai**	**1.81**	**15**	P	Pn	15 25 18.2	+1.7
TWVZ	**Taurewa**	**1.87**	**342**	P	Pn	15 25 17.7	+0.3
RITZ	**Rihia Road**	**1.89**	**352**	P	Pn	15 25 18.3	+0.8
KATZ	**Kakaramea**	**1.91**	**348**	P	Pn	15 25 19.2	+1.3
LREZ	**Lake Rotokare**	**1.95**	**315**	P	Pn	15 25 19.8	+1.5
BSWZ	**Blackbirch Sta**	**1.95**	**243**	P	Pn	15 25 19.5	+1.2
HATZ	**Hinemaiaia**	**1.96**	**358**	P	Pn	15 25 18.8	+0.4
RATZ	**Rangitukua**	**2.00**	**351**	P	Pn	15 25 22.1	+3.0
MRHZ	**Matea Rd**	**2.02**	**5**	P	Pn	15 25 19.7	+0.5
VRZ	**Vera Road**	**2.04**	**327**	P	Pn	15 25 19.8	+0.2
RAHZ	**Arahi**	**2.05**	**20**	P	Pn	15 25 20.8	+1.2
MTHZ	**Maungataniwha**	**2.05**	**14**	P	Pn	15 25 20.6	+0.8
NNZ	**Nelson**	**2.16**	**259**	P	Pn	15 25 22.0	+0.9
PREZ	**Palmer Road**	**2.17**	**313**	P	Pn	15 25 23.1	+1.9
SNGZ	**Shannon Statio**	**2.24**	**24**	P	Pn	15 25 23.5	+1.2
DREZ	**Durham Road**	**2.25**	**317**	P	Pn	15 25 23.8	+1.5
MHEZ	**Mangahewa**	**2.28**	**320**	P	Pn	15 25 26.2	+3.6
KHEZ	**Kahui Hut**	**2.28**	**312**	P	Pn	15 25 24.0	+1.3
NMEZ	**Namu Road**	**2.28**	**308**	P	Pn	15 25 23.8	+1.1
RTZ	**Ruatahuna**	**2.31**	**15**	P	Pn	15 25 24.1	+1.0
PKE	**Pukeiti**	**2.37**	**314**	P	Pn	15 25 25.8	+2.0
NBEZ	**Newall Road No**	**2.38**	**311**	P	Pn	15 25 26.4	+2.4
MUGZ	**Murupara**	**2.41**	**11**	P	Pn	15 25 24.8	+0.4
RIGZ	**Rimuhau**	**2.46**	**30**	P	Pn	15 25 26.4	+1.3
KHZ	**Kahutara**	**2.53**	**231**	P	Pn	15 25 27.3	+1.2
HIZ	**Hauiti**	**2.55**	**336**	P	Pn	15 25 26.8	+0.5
TLZ	**Tolley Road**	**2.56**	**348**	P	Pn	15 25 27.1	+0.5
THZ	**Tophouse**	**2.64**	**249**	P	Pn	15 25 28.3	+0.8
URZ	**Urewera**	**2.68**	**16**	P	Pn	15 25 28.0	0.0
MWZ	**Matawai**	**2.71**	**23**	P	Pn	15 25 28.8	+0.3
QRZ	**Quartz Range**	**2.78**	**269**	P	Pn	15 25 29.6	+0.3
KMRZ	**Kaimai**	**3.00**	**356**	P	Pn	15 25 36.8	+4.4
RUGZ	**Raukumara Rang**	**3.10**	**22**	P	Pn	15 25 34.2	+0.4
TOZ	**Tahuroa Road**	**3.16**	**350**	P	Pn	15 25 41.6	+7.1
GVZ	**Greta Valley S**	**3.17**	**227**	P	Pn	15 25 36.0	+1.3
PKGZ	**Pakihiroa**	**3.29**	**27**	P	Pn	15 25 37.6	+1.2
DSZ	**Denniston Nort**	**3.43**	**253**	P	Pn	15 25 39.3	+1.1
LTZ	**Lake Taylor**	**3.51**	**235**	P	Pn	15 25 40.2	+0.9
OKCZ	**Okains Bay**	**3.70**	**218**	P	Pn	15 25 43.6	+1.8
MQZ	**McQueen's Vall**	**3.88**	**221**	P	Pn	15 25 45.1	+0.9
CTZ	**Chatham Island**	**6.06**	**121**	P	Pn	15 26 20.9	+7.1

s-min=6.5km az=152.0
ISC 12 15:40:05.3±0.5,**52°22N**±0°06×**168°24W**±0°05,**h25**km,
n114,σ**1**°**33**/119,**mb4.2**/31,**Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.84**	**334**		**Pb**	**15 40 20.8**	**-0.4**
NIKH					**Sn**	**15 40 34.4**	**+1.3**
OKSP	**Okmok Steeple**	**1.03**	**358**		**Pn**	**15 40 24.0**	**-0.2**
OKFG	**Magazine Ridge**	**1.21**	**9**		**Pn**	**15 40 26.9**	**+0.3**
OKFG					**Sb**	**15 40 44.4**	**+1.8**
OKWE	**Okmok W'ng Wal**	**1.25**	**360**		**Pn**	**15 40 27.6**	**+0.4**
MREP	**Makushin Rep't**	**1.83**	**29**		**Pn**	**15 40 35.5**	**+0.4**
MSW	**Makushin Switc**	**1.91**	**27**		**Pn**	**15 40 36.6**	**+0.4**
MSW					**Sn**	**15 41 00.8**	**+1.4**
MNAT	**Makushin Natee**	**1.91**	**29**		**Pn**	**15 40 36.7**	**+0.5**
UNV	**Unalaska Valle**	**1.93**	**32**		**Pn**	**15 40 36.6**	**+0.1**
UNV					**Sn**	**15 41 00.8**	**+0.8**
AKMO	**Akutan Morgan**	**2.30**	**35**		**Pn**	**15 40 42.6**	**+1.0**
AKRB	**Akutan Reef Bi**	**2.31**	**33**		**Pn**	**15 40 42.9**	**+1.1**
AKBBA	**Akutan Broad B**	**2.34**	**36**		**Pn**	**15 40 42.8**	**+0.7**
AKLV	**Akutan Long Va**	**2.38**	**34**		**Pn**	**15 40 43.6**	**+0.9**
AKGG	**Akutan Green G**	**2.40**	**33**		**Pn**	**15 40 44.3**	**+1.4**
AKUT	**Akutan**	**2.42**	**37**		**Pn**	**15 40 43.8**	**+0.5**
AKSA	**Akutan Strait**	**2.45**	**38**		**Pn**	**15 40 43.9**	**+0.2**
WESP	**Westdahl Peak**	**3.10**	**41**		**Pn**	**15 40 53.9**	**+1.2**
WESP					**Sn**	**15 41 30.1**	**+1.2**
KOFP	**Korovin Flat P**	**3.60**	**273**		**Pn**	**15 41 00.9**	**+1.4**
ATKA	**Atka Island**	**3.67**	**272**		**Pn**	**15 41 00.8**	**+0.5**
ATKA					**Sn**	**15 41 43.2**	**+0.5**
FALS	**False Pass**	**3.90**	**46**		**Pn**	**15 41 04.4**	**+0.8**
FALS					**Sn**	**15 41 50.9**	**+2.4**
GSTR	**Great Sitkin T**	**4.82**	**272**		**Pn**	**15 41 17.5**	**+1.3**
GSMY	**Great Sitkin M**	**4.82**	**271**		**Pn**	**15 41 17.0**	**+0.8**
GSTD	**Great Sitkin T**	**4.87**	**271**		**Pn**	**15 41 17.6**	**+0.6**
SPIA	**Saint Paul Isl**	**5.10**	**348**		**Pn**	**15 41 22.4**	**+2.4**
SDPT	**Sand Point**	**5.56**	**53**		**Pn**	**15 41 28.0**	**+1.6**
KIMD	**Kanaga Island**	**5.58**	**269**		**Pn**	**15 41 27.4**	**+0.8**
CNBA	**Chernabura Isl**	**5.78**	**60**		**Pn**	**15 41 29.4**	**+0.1**
TASE	**Tanaga Southea**	**6.06**	**270**		**Pn**	**15 41 34.8**	**+1.5**
VNWF	**Veniaminof 8**	**6.43**	**49**		**Pn**	**15 41 41.9**	**+3.4**
VNFG	**Fog Glacier, M**	**6.51**	**48**		**Pn**	**15 41 43.1**	**+3.5**
OHAK	**Old Harbor**	**9.98**	**54**	Pn	**Pn**	**15 42 27.1**	**+0.1**
KDAK	**Kodiak Island**	**10.56**	**52**	Pn	**Pn**	**15 42 33.4**	**-1.5**
	1.4nm,0.3s,baz=169,slow=3.5,SNR=49						
KDAK				Sn	**Sn**	**15 44 24.9**	**-7.3**
	0.1nm,0.3s,baz=44,slow=14,SNR=1.4						
KDAK	**Kodiak Island**	**10.56**	**52**		**Pn**	**15 42 35.1**	**+0.2**
SEW	**Seward**	**13.07**	**46**		**Pn**	**15 43 08.4**	**-0.8**
RC01	**Rabbit Creek A**	**13.46**	**41**	Pn	**Pn**	**15 43 14.8**	**+0.4**
KNK	**Knik Glacier**	**14.15**	**42**	Pn	**Pn**	**15 43 23.4**	**-0.5**
GHO	**Glory Hole Cre**	**14.16**	**40**		**Pn**	**15 43 23.9**	**-0.2**
MID	**Middleton Isla**	**14.22**	**51**	Pn	**Pn**	**15 43 24.1**	**-0.6**
SML	**Sawmill**	**14.42**	**41**		**Pn**	**15 43 26.9**	**-0.6**
GLI	**Glacier Island**	**14.47**	**45**	Pn	**Pn**	**15 43 26.8**	**-1.4**
HIN	**Hinchinbrook I**	**14.52**	**47**		**Pn**	**15 43 27.0**	**-1.9**
FID	**Port Fidalgo**	**14.68**	**46**		**Pn**	**15 43 27.9**	**-3.2**
TRF	**Thorofare Moun**	**14.69**	**33**	Pn	**Pn**	**15 43 31.1**	**-0.3**
SCM	**Sheep Creek Mo**	**14.84**	**41**	Pn	**Pn**	**15 43 32.2**	**-1.0**
BPAW	**Bear Paw Mtn.**	**14.91**	**30**	Pn	**Pn**	**15 43 34.6**	**+0.4**
RAGM	**Ragged Mountai**	**15.35**	**49**		**Pn**	**15 43 38.9**	**-1.1**
RAGM				IAmb	IAmb	15 43 51.4	
	comp=Z,9.2nm,0.5s						
DHY	**Denali Highway**	**15.49**	**37**	Pn	**Pn**	**15 43 39.9**	**-2.1**
DHY				IAmb	IAmb	15 43 46.8	
	comp=Z,3.7nm,0.8s						
WRH	**Wood River Hil**	**16.10**	**33**	Pn	**Pn**	**15 43 48.5**	**-1.1**
GLB	**Gilahina Butte**	**16.15**	**46**		**Pn**	**15 43 49.3**	**-1.0**
VRDI	**Verde Repeater**	**16.22**	**47**	P	**Pn**	**15 43 50.1**	**-1.3**
VRDI				IAmb	IAmb	15 44 09.5	
	comp=Z,8.2nm,1.2s						
CCB	**Clear Creek Bu**	**16.30**	**32**		**Pn**	**15 43 50.1**	**-2.1**
CCB				IAmb	IAmb	15 43 53.2	
	comp=Z,8.7nm,1.4s						
HDA	**Harding Lake**	**16.44**	**34**	Pn	**Pn**	**15 43 53.1**	**-0.9**
BALM	**Baldy**	**16.65**	**48**	Pn	**Pn**	**15 43 56.5**	**-0.3**
BALM				IAmb	IAmb	15 44 03.2	
	comp=Z,19nm,1.3s						
IL31		**16.69**	**33**	P	**Pn**	**15 43 56.9**	**-0.2**
ILAR	**Eielson Array**	**16.69**	**33**	Pn	**Pn**	**15 43 54.1**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=238,slow=11,SNR=12						
YAH	**Yahtse**	**16.71**	**50**	Pn	**Pn**	**15 43 57.2**	**-0.4**
YAH				IAmb	IAmb	15 44 05.0	
	comp=Z,17nm,0.9s						
MENT	**Mentasta**	**16.84**	**41**	Pn	**Pn**	**15 43 58.6**	**-0.5**
BARN	**Barnard Glacie**	**16.97**	**48**	Pn	**Pn**	**15 44 00.2**	**-0.7**
BARN				IAmb	IAmb	15 44 18.5	
	comp=Z,18nm,1.4s						
DOT	**Dot Lake**	**17.06**	**39**	Pn	**Pn**	**15 44 01.5**	**-0.4**
DOT				IAmb	IAmb	15 44 33.5	
	comp=Z,15nm,1.9s						
PRP	**Porcupine Dome**	**17.61**	**32**	Pn	**Pn**	**15 44 07.9**	**-0.8**
EGAK	**Eagle**	**18.73**	**37**	P	**P**	**15 44 21.7**	**-0.1**
DAWY	**Dawson**	**19.09**	**40**		**Pn**	**15 44 26.7**	**+0.1**
PET	**Petropavlovsk**	**20.02**	**285**	P	**P**	**15 44 36.0**	**0.0**
PET				IAmb	IAmb	15 44 36.7	
	comp=Z,11nm,0.9s						
PEA0B	**Petropavlovsk-**	**20.57**	**286**	P	**P**	**15 44 42.3**	**+0.3**
PEA0B				IAmb	IAmb	15 44 43.5	
	comp=Z,41nm,1.5s						
PETK	**Petropavlovsk-**	**20.57**	**286**	P	**P**	**15 44 42.0**	**+0.1**
	comp=Z,8.7nm,0.4s,baz=92,slow=13,SNR=20						
EPYK	**Eagle Plains**	**21.11**	**36**	P	**P**	**15 44 47.0**	**-0.7**
EPYK				IAmb	IAmb	15 44 49.1	
	comp=Z,16nm,0.9s						
INK	**Inuvik**	**23.09**	**33**	P	**P**	**15 45 07.3**	**-1.3**
	comp=Z,2.7nm,0.3s,baz=236,slow=7.6,SNR=22						
INK				PcP	**PcP**	**15 48 56.8**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=282,slow=22,SNR=1.6						
INK	**Inuvik**	**23.09**	**33**	P	**P**	**15 45 07.3**	**-1.3**
INK				IAmb	IAmb	15 45 12.5	
	comp=Z,10nm,1.4s						
SEY	**Seymchan**	**23.28**	**313**	P	**P**	**15 45 09.3**	**-1.4**
	comp=Z,3.9nm,0.7s,baz=63,slow=23,SNR=12						
SEY				PcP	**PcP**	**15 48 57.6**	**+0.4**
	comp=Z,1.6nm,1.0s,baz=348,slow=23,SNR=2.2						
MA2	**Magadan**	**23.80**	**304**	P	**P**	**15 45 14.7**	**-1.0**
	comp=Z,4.5nm,0.8s,baz=154,slow=17,SNR=2.3						
YKA	**Yellowknife Ar**	**29.82**	**49**	P	**P**	**15 46 09.8**	**0.0**
	comp=Z,0.3nm,0.5s,baz=275,slow=7.3,SNR=6.1						
YKA				PcP	**PcP**	**15 49 13.4**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=288,slow=2.2,SNR=3.7						
TIXI	**Tiksi**	**33.22**	**329**	P	**P**	**15 46 38.5**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=120,slow=7.7,SNR=6.0						
NVAR	**Mina Array Bea**	**36.97**	**92**	P	**P**	**15 47 14.7**	**+2.1**
	comp=Z,0.4nm,0.8s,baz=309,slow=10,SNR=2.7						
H11N2	**WAKE ISLAND Hy**	**37.78**	**220**	T	T	16 28 35.6	
	baz=24,slow=76,SNR=8.9						
H11N3	**WAKE ISLAND Hy**	**37.79**	**220**	T	T	16 28 31.2	
	baz=24,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy**	**37.80**	**220**	T	T	16 28 24.4	
	baz=24,slow=76,SNR=10						
H11S1	**WAKE ISLAND Hy**	**38.96**	**220**	T	T	16 29 33.9	
	baz=23,slow=76,SNR=47						
H11S2	**WAKE ISLAND Hy**	**38.98**	**220**	T	T	16 29 29.3	
	baz=23,slow=76,SNR=42						
H11S3	**WAKE ISLAND Hy**	**38.98**	**220**	T	T	16 29 36.0	
	baz=23,slow=76,SNR=42						
USRK	**Ussuriysk Ar.**	**39.60**	**283**	P	**P**	**15 47 33.5**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=56,slow=10,SNR=5.2						
PDAR	**Pinedale Array**	**39.75**	**80**	P	**P**	**15 47 36.8**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=296,slow=3.6,SNR=6.6						
LCMT	**Little Creek M**	**40.97**	**89**	P	**P**	**15 47 45.0**	**-1.0**
PV09	**Paradox Valley**	**42.56**	**85**	P	**P**	**15 47 57.6**	**-1.6**
PV14	**Lion Creek, Pa**	**42.70**	**85**	P	**P**	**15 47 57.7**	**-2.6**
PV14				IAmb	IAmb	15 48 09.1	
	comp=Z,6.6nm,0.9s						
KSRS	**Korea Array**	**46.11**	**278**	P	**P**	**15 48 27.4**	**+0.3**
	comp=Z,3.5nm,0.9s,baz=59,slow=7.2,SNR=9.3						
KSRS				LR	LR	16 05 34.0	
	comp=Z,26nm,21.8s,baz=230,slow=33						
NRIK	**Noril'sk**	**46.88**	**332**	P	**P**	**15 48 31.8**	**-1.0**
	comp=Z,1.0nm,0.4s,baz=166,slow=4.7,SNR=2.6						
TXAR	**Lajitas Array**	**52.05**	**90**	P	**P**	**15 49 14.7**	**+1.8**
	comp=Z,0.8nm,0.8s,baz=307,slow=7.5,SNR=2.6						
SCHQ	**Schefferville**	**55.06**	**44**	P	**P**	**15 49 34.1**	**-0.4**
ZALV	**Zalesovo Beam**	**58.00**	**318**	P	**P**	**15 49 53.9**	**-1.5**
	comp=Z,0.5nm,0.4s,baz=72,slow=4.7,SNR=3.7						
ZALV				LR	LR	16 15 31.3	
	comp=Z,42nm,19.9s,baz=80,slow=37						
ARCES	**ARCESS Array B**	**58.14**	**354**	P	**P**	**15 49 55.6**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=16,slow=9.2,SNR=6.1						
KURK	**Kurchatov**	**62.94**	**319**	P	**P**	**15 50 29.2**	**0.0**
KURK				IAmb	IAmb	15 50 29.7	
	comp=Z,3.1nm,1.2s						
BRVK	**Borovoye**	**64.23**	**325**	P	**P**	**15 50 38.0**	**+0.3**
BRVK				IAmb	IAmb	15 50 39.2	
	comp=Z,4.8nm,1.1s						
MK31	**Makanchi Array**	**64.41**	**314**	P	**P**	**15 50 38.4**	**-0.6**
MK31				IAmb	IAmb	15 50 44.7	
	comp=Z,2.6nm,1.1s						
MKAR	**Makanchi Array**	**64.41**	**314**	P	**P**	**15 50 38.1**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=51,slow=6.4,SNR=14						
MAKZ	**Makanchi**	**64.54**	**314**	P	**P**	**15 50 39.5**	**-0.3**
MAKZ				IAmb	IAmb	15 51 13.9	
	comp=Z,10nm,1.9s						
ARU	**Arti**	**65.06**	**333**	P	**P**	**15 50 43.6**	**+0.5**
FIA1	**FINESS Array S**	**66.11**	**353**	P	**P**	**15 50 49.4**	**-0.3**
FINES	**FINESS Array B**	**66.11**	**353**	P	**P**	**15 50 49.5**	**-0.2**
	comp=Z,3.1nm,0.5s,baz=12,slow=6.8,SNR=30						
NC303	**NORSAR Array S**	**66.90**	**0**	P	**P**	**15 50 55.3**	**+0.6**
NC405	**NORSAR Array S**	**67.01**	**0**	P	**P**	**15 50 55.7**	**+0.2**
NB2	**NORSAR Subarra**	**67.09**	**0**	P	**P**	**15 50 56.7**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=358,slow=6.2						
NOA	**NORSAR Array B**	**67.09**	**0**	P	**P**	**15 50 56.4**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=0.1,slow=6.2,SNR=4.4						
AAK	**Ala-Archa**	**71.09**	**316**	P	**P**	**15 51 22.0**	**+0.7**
AAK				IAmb	IAmb	15 51 23.0	
	comp=Z,3.2nm,0.9s						
GAR	**Garm**	**75.87**	**317**	P	**P**	**15 51 50.1**	**+0.7**
AKASG	**Malin Array Be**	**76.39**	**349**	P	**P**	**15 51 51.9**	**-0.1**
	comp=Z,2.8nm,0.3s,baz=16,slow=6.1,SNR=9.8						
AKBB	**Malin Array Si**	**76.39**	**349**	P	**P**	**15 51 52.0**	**0.0**
CHGR	**Chuyangaron**	**76.65**	**317**	P	**P**	**15 51 54.3**	**+0.5**
CMAR	**Chiang Mai Arr**	**77.33**	**284**	P	**P**	**15 51 59.2**	**+1.4**
	comp=Z,2.6nm,0.9s,baz=30,slow=6.1,SNR=14						
KBZ	**Khabaz**	**80.72**	**338**	P	**P**	**15 52 15.9**	**0.0**
	comp=Z,3.2nm,0.9s,baz=34,slow=1.7,SNR=5.8						
GEYT	**Alibeck**	**81.56**	**325**	P	**P**	**15 52 21.0**	**+0.3**
	comp=Z,4.4nm,1.0s,baz=284,slow=1.2,SNR=8.6						
BRTR	**Keskin Array B**	**86.47**	**343**	P	**P**	**15 52 46.3**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=46,slow=3.6,SNR=7.6						
ESDC	**Sonseca Array**	**87.46**	**12**	P	**P**	**15 52 51.0**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=346,slow=5.8,SNR=4.9						
ESDC	**Sonseca Array**	**87.46**	**12**	P	**P**	**15 52 51.0**	**+0.5**
WRA	**Warramunga Arr**	**87.46**	**233**	P	**P**	**15 52 51.0**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=39,slow=6.2,SNR=2.4						
ASAR	**Alice Springs**	**90.84**	**231**	P	**P**	**15 53 06.5**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=31,slow=4.9,SNR=6.4						

IDC ***12*** *16:27:06.0±2.3,9.4°N×122.7°E,h0km,mb3.5/3, mb1 3.7/3,mb1mx3.4/55,mbtmp3.5/3,MS3.6/1,Ms1 3.6/1, ms1mx2.7/23,Error ellipse: s-maj=210.3km s-min=28.9km az=63.0*

MAN ***12*** *16:27:06.9,9.2°N×122.2°E,h5km,mb4.8,ML3.7,MS3.6*

ISC 12 16:27:05.9±1.3,**9°36N**±0°04×**122°10E**±0°04,**h11**km±10km,
n20,σ**2**°**32**/29,**mb3.5**/3,**3C-4D,Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	**0.71**	**49**	*eP*	**Pn**	**16 27 21.2**	**-0.6**
CNOP				*eS*	**Sn**	**16 27 31.4**	**-1.2**
SNPH	**Sibulan**	**1.12**	**91**	*iP*	**Pb**	**16 27 26.3**	**-1.0**
SNPH				*i S*	**Sb**	**16 27 40.1**	**-1.8**
GUIM	**Jordan**	**1.35**	**21**	*eP*	**Pg**	**16 27 32.2**	**+0.4**
GUIM				*eS*	**Sg**	**16 27 52.8**	**+3.4**
JAP	**San Jose, Anti**	**1.39**	**354**	*eP*	Pg	16 27 38.9	+6.2
DCPH	**Dipolog City**	**1.46**	**122**	*eP*	**Pn**	**16 27 31.2**	**-0.9**
DCPH				*eS*	**Sg**	**16 27 54.2**	**+1.3**
TBP	**Tagbilaran**	**1.77**	**79**	*eP*	**Pg**	**16 27 40.6**	**+0.7**
CUYO	**Cuyo Island**	**1.83**	**324**	*eP*	**Pg**	**16 27 40.6**	**-0.3**
CUYO				*eS*	**Sg**	**16 28 05.0**	**+0.3**
LLP	**Lapu-Lapu**	**2.07**	**62**	*eP*	**Pb**	**16 27 42.3**	**-1.2**
RCP	**Roxas**	**2.28**	**16**	*eP*	**Pg**	**16 27 48.8**	**-0.8**
RCP				*i S*	**Sg**	**16 28 20.8**	**+1.6**
CGP	**Cagayan de Oro**	**2.71**	**109**	*eP*	**Pg**	**16 27 56.2**	**-1.8**
CGP				*eS*	**Sb**	**16 28 25.7**	**-2.1**
MSLP	**Maasin**	**2.83**	**74**	*eP*	**Pb**	**16 27 53.9**	**-2.5**
MSLP				*eS*	**Sb**	**16 28 27.7**	**-3.3**
OTRP	**Odiongan**	**2.99**	**359**	*eP*	**Pb**	**16 27 59.1**	**-0.1**
OCLP	**Ormoc**	**2.99**	**56**	*eP*	**Pn**	**16 27 54.6**	**+1.4**
OCLP				*eS*	**Sn**	**16 28 29.9**	**+0.9**
CTBH	**Cotabato--PC H**	**3.00**	**135**	*iP*	**Pn**	**16 27 55.4**	**+2.0**
ENPP	**El Nido**	**3.21**	**305**	*eP*	**Pb**	**16 27 59.8**	**-3.2**
ENPP				*eS*	**Sn**	**16 28 36.7**	**+2.1**
SJMP	**San Jose**	**3.23**	**343**	*eP*	**Pb**	**16 28 00.7**	**-2.6**
SJMP				*eS*	**Sn**	**16 28 28.9**	**-6.1**
WRA	**Warramunga Arr**	**31.51**	**158**	P	**P**	**16 33 28.3**	**+0.2**
	0.7nm,1.1s,baz=338,slow=9.8,SNR=2.0						
ASAR	**Alice Springs**	**34.79**	**161**	P	**P**	**16 33 57.6**	**+0.8**
	0.6nm,0.8s,baz=340,slow=7.0,SNR=11						
SONM	**Songino Array**	**40.59**	**344**	LR	LR	16 54 22.3	
	comp=Z,66nm,18.1s,baz=280,slow=40						
MKAR	**Makanchi Array**	**50.34**	**325**	P	**P**	**16 36 06.9**	**+4.0**
	0.5nm,0.8s,baz=117,slow=8.0,SNR=3.6						

BJI ***12*** *16:27:18.7±0.0,20.4°N×145.6°E,h95km,mB5.0/43, mb5.0/67*

JMA ***12*** *16:27:21.2±0.2,20.4°N×145.8°E,h97km±2km,M5.2*

GCMT ***12*** *16:27:21.8±0.3,20.1°N±0.0°×145.7°E±0.0°,02, h114km±2km,MW5.0/101,Moment Tensor Solution. s38,c42; s101,c144; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.76±.11; Mθθ2.58±.12; Mφφ-1.82±.13; Mrθ0.32±.08; Mφ2.33±.11; Mrr1.81±.08; Best double couple: M=3.75000×10^16 NP1:φ109.00000°,δ60.00000°, λ-12.00000°. NP2:φ205.00000°,δ80.00000°, λ-149.00000°. Principal axes: T 3.8260, Plg13.0000°, Azm334.0000°; N -0.1500, Plg58.0000°, Azm221.0000°; P -3.6740, Plg29.0000°, Azm71.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***12*** *16:27:22.3±1.3,20.0°N×145.6°E,h128km±10km, mb4.5/46,mb1 4.6/49,mb1mx4.5/61,mbtmp4.9/49, MS3.4/18,Ms1 3.4/18,ms1mx3.3/34 Error ellipse: s-maj=10.5km s-min=7.0km az=105.0*

NEIC ***12*** *16:27:22.8±1.4,20.05°N±0.07°×145.62°E±0.10, h132km±4km,mb4.9/280,Error ellipse: s-maj=13.4km s-min=10.3km az=83.0*

ISC 12 16:27:21.5±0.8,**20.13N**±0°04×**145°66E**±0°05,**h120**km±6km,
n539,σ**1**°**18**/565,**mb4.9**/183,**2C-2D,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.55**	**187**		**Pn**	**16 28 54.9**	**-0.5**
JHH2	**Haha-jima-NKT2**	**7.22**	**334**	P	**Pn**	**16 29 02.6**	**-1.7**
JHH2				*eS*	**Sn**	**16 30 21.5**	**-3.3**
JCJ	**Chichijima**	**7.63**	**336**	P	**Pn**	**16 29 08.5**	**-1.4**
	186nm,0.3s,baz=200,slow=6.3,SNR=348						
JCJ				S	**Sn**	**16 30 31.4**	**-3.4**
	228nm,0.3s,baz=131,slow=23,SNR=10						
CBIJ	**Chichi jima**	**7.63**	**336**	P	**Pn**	**16 29 08.0**	**-1.9**
CBIJ				S	**Sn**	**16 30 30.7**	**-4.1**
JHJ2	**Mitsune**	**13.94**	**339**	Pn	**Pn**	**16 30 33.7**	**-0.1**
JHJ	**Hachijo jima 2**	**13.96**	**339**	P	**Pn**	**16 30 34.7**	**+0.6**
	16nm,0.3s,baz=91,slow=23,SNR=7.2						
JHJ				S	Sn	16 32 58.9	-9.1
	6.6nm,0.3s,baz=54,slow=19,SNR=1.7						
JMKN	**Mikurajimanish**	**14.73**	**340**	P	**Pn**	**16 30 41.9**	**-1.9**
BSO1	**Boso 1**	**15.05**	**345**	P	**Pn**	**16 30 48.5**	**+1.2**
BSO3	**Boso 3**	**15.31**	**344**	P	**Pn**	**16 30 50.8**	**0.0**
JOD2	**Odawara 2**	**16.15**	**340**	P	**Pn**	**16 31 00.2**	**-1.4**
JOD2				*eS*	Sn	16 33 51.0	-10
HMMJ	**Hamamatsu 2**	**16.26**	**336**	P	**Pn**	**16 31 01.5**	**-1.4**
JIE	**Ise**	**16.27**	**333**	P	**Pn**	**16 31 02.3**	**-0.7**
JTNC	**Tanabenakahech**	**16.30**	**329**	P	**Pn**	**16 31 02.7**	**-0.7**
JKN2	**Miekihoku**	**16.33**	**331**	P	**Pn**	**16 31 02.4**	**-1.4**
JHU	**Hanno**	**16.64**	**342**	P	**Pn**	**16 31 06.2**	**-1.3**
JHU				*eS*	Sn	16 34 04.0	-8.5
JNY	**Yasuok**	**16.65**	**337**	P	**Pn**	**16 31 06.6**	**-1.2**
JAO	**Obara**	**16.80**	**336**	P	**P**	**16 31 08.6**	**-1.1**
JRY	**Ryogami san**	**16.90**	**341**	P	**P**	**16 31 09.8**	**-1.0**
JRY				*eS*	Sn	16 34 10.5	-8.5
INU	**Inuyama**	**16.97**	**335**	P	**P**	**16 31 10.4**	**-1.0**
JTO	**Tosashimizu**	**17.10**	**320**	P	**Pn**	**16 31 14.6**	**+1.4**
JOW	**Kunigami**	**17.28**	**296**	P	**Pn**	**16 31 16.3**	**+0.9**
	0.8nm,0.3s,baz=74,slow=9.9,SNR=24						
JOW	**Kunigami**	**17.28**	**296**	P	**P**	**16 31 15.6**	**+0.6**
JOW	**Kunigami**	**17.28**	**296**	P	**Pn**	**16 31 15.9**	**+0.5**
MJAR	**Matsushiro Arr**	**17.60**	**340**	P	**P**	**16 31 18.8**	**+0.2**
	1.7nm,0.3s,baz=157,slow=9.8,SNR=96						
MJAR				S	**S**	**16 34 28.4**	**-7.0**
	0.1nm,0.3s,baz=158,slow=13,SNR=2.1						
MJAR				LR	LR	16 37 38.8	
	comp=Z,98nm,21.4s,baz=155,slow=35						
MAJO	**Matsushiro**	**17.61**	**340**	P	**P**	**16 31 18.9**	**+0.4**
MAJO				IAmb	IAmb	16 31 24.4	
	comp=Z,85nm,0.8s						
MAT	**Matsushiro**	**17.61**	**340**	P	**P**	**16 31 19.1**	**+0.5**
MAT				S	**S**	**16 34 27.6**	**-7.9**
MJB9	**Matsu-Tunnel**	**17.61**	**340**	P	**P**	**16 31 19.0**	**+0.4**
MJB9				IAmb	IAmb	16 31 24.2	
	comp=Z,71nm,0.8s						
PATS	**Pohnpei**	**18.04**	**135**	P	**P**	**16 31 24.0**	**+0.6**
JSJ	**Shimokoshiki**	**18.36**	**312**	P	**P**	**16 31 27.7**	**+0.9**
JNU	**Nakatsue**	**18.46**	**317**	P	**P**	**16 31 28.9**	**+0.9**
	comp=Z,6.5nm,0.3s,baz=100,slow=3.0,SNR=60						
JNU	**Nakatsue**	**18.46**	**317**	P	**P**	**16 31 28.5**	**+0.4**
JHS	**Saijyo**	**18.49**	**326**	P	**P**	**16 31 29.2**	**+0.9**
PVCP	**Virac**	**21.57**	**256**	*eP*	**P**	**16 32 03.6**	**+1.9**
ERM	**Erimo**	**21.92**	**355**	P	**P**	**16 32 07.5**	**+2.4**
ERM				IAmb	IAmb	16 32 43.6	
	comp=Z,54nm,0.9s						
SGCP	**Mt. Cagua**	**22.38**	**269**	*eP*	**P**	**16 32 11.4**	**+1.3**
YULB	**Yu-li**	**22.85**	**283**	P	**P**	**16 32 14.5**	**-0.2**
YHNB	**Yeheng**	**22.89**	**286**	P	**P**	**16 32 14.4**	**-0.8**
YHNB				IAmb	IAmb	16 32 16.2	
	comp=Z,52nm,0.9s						
SMPI	**Sarmi**	**23.02**	**198**	P	**P**	**16 32 15.3**	**-1.0**
	comp=Z,13nm,1.0s						
JAY	**Jayapura**	**23.02**	**193**	P	**P**	**16 32 15.1**	**-1.3**
	comp=Z,25nm,0.9s,baz=309,slow=6.4,SNR=5.6						
JAY	**Jayapura**	**23.02**	**193**	P	**P**	**16 32 17.0**	**+0.6**
KSRS	**Korea Array**	**23.16**	**322**	P	**P**	**16 32 17.1**	**-0.2**
	comp=Z,57nm,0.8s,baz=149,slow=8.6,SNR=113						
KSRS				ScP	**ScP**	**16 39 28.9**	**-0.3**
	comp=Z,3.1nm,0.8s,baz=124,slow=2.8,SNR=9.8						
KSRS				LR	LR	16 40 09.2	
	comp=Z,76nm,18.8s,baz=136,slow=33						
SSLB	**Suanglung**	**23.19**	**284**	P	**P**	**16 32 18.2**	**+0.3**
SSLB				IAmb	IAmb	16 32 45.9	
	comp=Z,124nm,1.7s						
APYP	**Conner**	**23.19**	**269**	*eP*	**P**	**16 32 17.2**	**-0.7**
GENI	**Genyem**	**23.22**	**194**	P	P	16 32 27.5	+9.4
KS19	**Wonju Array Si**	**23.22**	**322**	P	**P**	**16 32 17.9**	**-0.1**
BALP	**Baler**	**23.32**	**263**	*eP*	**P**	**16 32 19.7**	**+0.6**
TPUB	**Ta-pu**	**23.46**	**282**	P	**P**	**16 32 20.4**	**0.0**
TPUB				IAmb	IAmb	16 33 13.1	
	comp=Z,51nm,1.4s						
BOAC	**Boac**	**23.73**	**257**	*eP*	**P**	**16 32 24.4**	**+1.5**
LQP	**Lukban**	**23.80**	**259**	*eP*	**P**	**16 32 22.1**	**-1.6**
INCN	**Inchon**	**23.94**	**320**	P

KMI LR LR
comp=Z,130nm,11.3s
KMI LR LR
comp=Z,140nm,10.3s
KMI LR LR
comp=Z,140nm,10.4s
LZH Lanzhou 39.83 303 *e*P **P 16 34 45.0 +1.6**
LZH pmax pmax
comp=Z,26nm,1.1s
LZH pmax pmax
comp=Z,100nm,5.0s
LZH LR LR
comp=Z,130nm,15.2s
LZH LR LR
comp=Z,140nm,15.4s
LZH LR LR
comp=Z,170nm,16.0s
WB0 Warramunga Arr 41.16 196 P **P 16 34 53.4 -0.8**
WR0 Warramunga Arr 41.31 196 P **P 16 34 54.0 -1.4**
WRAB Tennant Creek 41.33 196 P **P 16 34 54.5 -1.2**
WB2 Warramunga Arr 41.34 196 P **P 16 34 54.6 -1.1**
WB2 IAmb IAmb 16 35 04.1
comp=Z,17nm,0.9s
WRA Warramunga Arr 41.34 196 P **P 16 34 55.0 -0.7**
comp=Z,5.9nm,0.6s,baz=18,slow=8.8,SNR=49
WRA ScP **ScP 16 40 27.7 -3.3**
comp=Z,0.8nm,0.8s,baz=14,slow=4.3,SNR=3.1
WRA S **S 16 41 00.0 -1.4**
comp=Z,0.7nm,0.8s,baz=24,slow=16,SNR=3.7
ULN Ulaanbaatar 41.63 321 P **P 16 34 57.5 -0.5**
ULN IAmb IAmb 16 34 59.5
comp=Z,48nm,1.8s
SONM Songino Array 42.01 320 P **P 16 35 01.4 +0.3**
comp=Z,5.3nm,0.4s,baz=133,slow=7.8,SNR=6.9
SONM PcP **PcP 16 36 53.5 -0.5**
comp=Z,3.5nm,0.5s,baz=112,slow=3.9,SNR=3.5
FITZ Fitzroy Crossi 42.77 209 P **P 16 35 07.0 -0.3**
comp=Z,3.7nm,0.6s,baz=27,slow=11,SNR=19
FITZ Fitzroy Crossi 42.77 209 P **P 16 35 06.7 -0.6**
SEY Seymchan 43.02 5 P **P 16 35 10.2 +1.4**
comp=Z,8.1nm,0.7s,baz=183,slow=8.3,SNR=28
YAK Yakutsk 43.31 349 P **P 16 35 11.7 +0.5**
GTA Gaotai 43.66 306 ⇑P **P 16 35 14.8 +0.3**
GTA pP pP 16 35 35.9 -5.4
GTA sP pwP 16 35 48.2 +4.8
GTA PcP **PcP 16 37 01.3 +1.6**
GTA ScP **ScP 16 40 41.3 +1.0**
GTA pmax pmax
comp=Z,23nm,1.2s
GTA pmax pmax
comp=Z,97nm,5.7s
GTA LR LR
comp=Z,140nm,19.0s
GTA LR LR
comp=Z,86nm,18.4s
GTA LR LR
comp=Z,77nm,17.1s
SMRI Semarang 43.93 236 P **P 16 35 15.7 -1.1**
CHTO Chiang Mai 43.95 277 P **P 16 35 16.3 -0.7**
CM31 Chiang Mai Arr 44.01 276 P **P 16 35 18.3 +0.9**
CM31 IAmb IAmb 16 35 19.9
comp=Z,28nm,1.4s
CMAR Chiang Mai Arr 44.01 276 P **P 16 35 18.3 +0.9**
comp=Z,5.1nm,0.7s,baz=64,slow=6.8,SNR=44
CMAR LR LR 16 51 34.5
comp=Z,24nm,21.3s,baz=85,slow=33
UGM Wanagama 44.40 235 P **P 16 35 20.1 -0.4**
ATKA Atka Island 44.62 34 P **P 16 35 22.8 +1.0**
ATKA IAmb IAmb 16 35 23.7
comp=Z,39nm,0.8s
MYKOM Kota Tinggi 44.71 251 P **P 16 35 25.0 +2.0**
AS31 Alice Springs 45.01 195 P **P 16 35 24.1 -1.1**
ASAR Alice Springs 45.02 195 P **P 16 35 24.1 -1.1**
comp=Z,2.2nm,0.6s,baz=18,slow=7.7,SNR=40
ASAR ScP **ScP 16 40 43.5 -2.3**
comp=Z,0.5nm,0.9s,baz=19,slow=4.1,SNR=2.8
ASAR S **S 16 41 54.0 -1.1**
comp=Z,1.6nm,0.8s,baz=16,slow=18,SNR=7.7
ASAR LR LR 16 53 37.1
comp=Z,78nm,21.3s,baz=356,slow=35
TLY Talaya 45.38 324 LR LR 16 53 47.3
comp=Z,64nm,19.2s,baz=122,slow=35
TLY Talaya 45.38 324 P **P 16 35 28.0 +0.2**
IPM Ipoh 46.12 256 P **P 16 35 34.9 +0.7**
KULM Kulim 46.14 258 P **P 16 35 35.6 +1.3**
KULM IAmb IAmb 16 36 32.7
comp=Z,41nm,1.4s
KULM Kulim 46.14 258 P **P 16 35 36.0 +1.7**
DZM Mont Dzumac 46.60 153 P **P 16 35 37.6 -0.1**
DZM IAmb IAmb 16 35 38.4
comp=Z,45nm,1.3s
NIKH Nikolski High 47.86 36 P **P 16 35 47.4 +0.3**
PSI Prapat 48.71 255 P **P 16 35 54.2 -0.1**
comp=Z,5.9nm,0.6s,baz=178,slow=1.3,SNR=5.3
RPSI Rantau Prapat 48.76 255 P **P 16 35 55.0 +0.5**
RPSI Rantau Prapat 48.76 255 P **P 16 35 54.2 -0.3**
SPIA Saint Paul Isl 49.12 30 P **P 16 35 57.6 +0.9**
SHL Shillong 49.58 287 P **P 16 36 00.3 -0.6**
BILL Bilibino 49.62 10 P **P 16 36 01.5 +1.2**
BILL IAmb IAmb 16 36 03.0
comp=Z,14nm,0.8s
LSA Lhasa 49.96 292 P **P 16 36 05.9 +1.8**
AKUT Akutan 50.02 35 P **P 16 36 03.8 +0.3**
GSI Gunungsitoli 50.56 254 P **P 16 36 08.6 +0.4**
GSI IAmb IAmb 16 36 39.4
comp=Z,28nm,0.8s
ARMA Armidale 50.59 173 P **P 16 36 07.3 -0.9**
ARMA IAmb IAmb 16 36 44.3
comp=Z,25nm,1.2s
STKA Stephens Creek 51.86 184 P **P 16 36 17.0 -0.6**
comp=Z,0.8nm,0.5s,baz=3.6,slow=7.5,SNR=3.6
STKA LR LR 17 00 41.5
comp=Z,48nm,18.9s,baz=208,slow=39
STKA Stephens Creek 51.86 184 P **P 16 36 16.7 -0.8**
TIXI Tiksi 52.45 353 P **P 16 36 21.7 +0.3**
TAPN Taplejung 53.14 290 *e*P **P 16 36 28.6 +1.0**
comp=Z,68nm,0.5s
SDPT Sand Point 53.32 35 P **P 16 36 28.4 +0.3**
WMQ Urumqi 53.35 310 *e*P **P 16 36 30.3 +1.7**
WMQ PcP **PcP 16 37 38.3 +3.7**
WMQ pmax pmax
comp=Z,47nm,1.3s
WMQ pmax pmax
comp=Z,110nm,4.5s
WMQ LR LR
comp=Z,1μm,29.3s
WMQ LR LR
comp=Z,1μm,28.8s
WMQ LR LR
comp=Z,170nm,28.9s
FORT Forrest 53.37 199 P **P 16 36 28.2 -0.4**
FORT IAmb IAmb 16 37 00.4
comp=Z,26nm,0.9s
ODAN Odare 53.47 289 *e*P **P 16 36 31.0 +1.0**
comp=Z,58nm,0.4s
RAMN Ramite 54.16 289 *e*P **P 16 36 35.8 +0.8**
comp=Z,40nm,0.5s
JIRN Jiri 54.45 290 *e*P **P 16 36 38.5 +1.3**
comp=Z,151nm,0.5s
GUN Gumba 54.70 290 *e*P **P 16 36 40.1 +1.1**
comp=Z,49nm,0.4s
PKI Pulchoki 55.15 290 *e*P **P 16 36 42.8 +0.6**
comp=Z,24nm,0.3s
PKIN Phulchoki 55.16 290 *e*P **P 16 36 42.7 +0.5**
comp=Z,33nm,0.4s
KKN Kakani 55.24 290 *e*P **P 16 36 43.5 +0.8**
comp=Z,58nm,0.7s
DMN Daman 55.41 290 *e*P **P 16 36 44.9 +0.9**
comp=Z,33nm,0.4s
GKN Gorkha 55.78 291 *e*P **P 16 36 47.5 +1.0**
comp=Z,56nm,0.4s
DANN Dangsing 56.51 291 *e*P **P 16 36 53.2 +1.3**
comp=Z,561nm,0.5s
MORW Morawa 56.65 211 P **P 16 36 51.8 -0.6**
KOLN Koldanda 56.72 291 *e*P **P 16 36 54.0 +0.7**
comp=Z,68nm,0.7s
ZAA0 Zalesovo Array 56.87 322 P **P 16 36 53.4 -0.2**
ZALV Zalesovo Beam 56.87 322 P **P 16 36 53.6 0.0**
comp=Z,33nm,0.6s,baz=105,slow=7.1,SNR=159
ZALV ScP **ScP 16 41 35.8 -0.5**
comp=Z,0.8nm,0.6s,baz=117,slow=5.0,SNR=3.8
ZALV LR LR 17 00 38.3
comp=Z,25nm,21.6s,baz=75,slow=35
PYUN Piuthan 57.22 291 *e*P **P 16 36 57.6 +0.8**
comp=Z,59nm,0.4s
MK31 Makanchi Array 57.45 313 P **P 16 36 58.3 +0.4**
MK31 IAmb IAmb 16 36 59.8
comp=Z,14nm,1.0s
MKAR Makanchi Array 57.45 313 P **P 16 36 58.6 +0.7**
comp=Z,7.6nm,0.6s,baz=91,slow=8.2,SNR=52
MKAR PcP **PcP 16 37 50.7 +0.4**
comp=Z,5.9nm,0.5s,baz=82,slow=3.8,SNR=9.2
MKAR ScP **ScP 16 41 38.5 -0.7**
comp=Z,0.6nm,0.7s,baz=90,slow=6.5,SNR=4.2
SVW2 Sparrevohn 57.60 29 P **P 16 36 59.6 +1.0**
MAKZ Makanchi 57.67 313 P **P 16 36 60.0 +0.6**
MAKZ IAmb IAmb 16 37 01.4
comp=Z,22nm,0.9s
OHAK Old Harbor 57.69 34 P **P 16 37 00.4 +1.1**
KDAK Kodiak Island 58.19 34 P **P 16 37 01.6 -1.2**
comp=Z,8.6nm,0.9s,baz=280,slow=2.4,SNR=9.1
KDAK Kodiak Island 58.19 34 P **P 16 37 03.4 +0.6**
KDAK IAmb IAmb 16 37 04.7
comp=Z,12nm,1.0s
CNPM China Poot 59.27 32 P **P 16 37 10.4 +0.1**
CNPM IAmb IAmb 16 37 11.5
comp=Z,21nm,1.0s
BRLK Bradley Lake 59.49 32 P **P 16 37 11.9 +0.1**
BRLK IAmb IAmb 16 37 12.7
comp=Z,16nm,0.9s
PPLA Purkeypile 59.66 28 P **P 16 37 13.8 +0.8**
PPLA IAmb IAmb 16 37 26.1
comp=Z,14nm,1.1s
PRZ Przheval'sk 60.07 308 P **P 16 37 18.2 +1.9**
KURK Kurchatov 60.19 318 P **P 16 37 16.7 +0.1**
SEW Seward 60.27 31 P **P 16 37 17.5 +0.4**
SEW IAmb IAmb 16 37 18.6
comp=Z,18nm,0.9s
RC01 Rabbit Creek A 60.34 30 P **P 16 37 17.9 +0.3**
RC01 IAmb IAmb 16 37 25.8
comp=Z,43nm,1.7s
KTH Kantishna Hill 60.38 27 P **P 16 37 18.6 +0.8**
KTH IAmb IAmb 16 37 20.4
comp=Z,19nm,1.1s
BPAW Bear Paw Mtn. 60.50 27 P **P 16 37 19.5 +0.9**
BPAW IAmb IAmb 16 37 20.9
comp=Z,16nm,1.0s
TRF Thorofare Moun 60.63 28 P **P 16 37 20.0 +0.3**
TRF IAmb IAmb 16 37 21.2
comp=Z,18nm,0.9s
PMR Palmer 60.73 30 P **P 16 37 20.4 +0.2**
PMR IAmb IAmb 16 37 21.4
comp=Z,9.4nm,0.8s
MLY Manley 60.85 26 P **P 16 37 21.9 +0.9**
GHO Glory Hole Cre 60.87 30 P **P 16 37 21.4 +0.3**
GHO IAmb IAmb 16 37 22.7
comp=Z,8.1nm,0.8s
KDJ Kajisay 60.98 308 P **P 16 37 23.5 +1.0**
KNK Knik Glacier 61.01 30 P **P 16 37 22.8 +0.7**
KNK IAmb IAmb 16 37 23.8
comp=Z,18nm,0.9s
SML Sawmill 61.15 30 P **P 16 37 23.5 +0.4**
RND Reindeer 61.25 28 P **P 16 37 23.9 +0.1**
RND IAmb IAmb 16 38 07.3
comp=Z,24nm,1.8s
MCK McKinley 61.29 27 P **P 16 37 24.3 +0.4**
NEA Nenana 61.42 27 P **P 16 37 25.7 +0.9**
GLI Glacier Island 61.56 31 P **P 16 37 26.1 +0.3**
GLI IAmb IAmb 16 37 27.6
comp=Z,45nm,1.6s
SCM Sheep Creek Mo 61.62 30 P **P 16 37 27.0 +0.7**
HIN Hinchinbrook I 61.77 31 P **P 16 37 28.4 +1.2**
HIN IAmb IAmb 16 37 29.5
comp=Z,15nm,0.9s
WRH Wood River Hil 61.81 27 P **P 16 37 27.7 +0.2**
DHY Denali Highway 61.84 28 P **P 16 37 28.5 +0.7**
FID Port Fidalgo 61.84 31 P **P 16 37 28.1 +0.5**
FID IAmb IAmb 16 37 29.5
comp=Z,38nm,1.4s
MDM Murphy Dome 61.86 26 P **P 16 37 29.2 +1.4**
MDM IAmb IAmb 16 38 33.4
comp=Z,27nm,1.7s
BOOM Boomskoye usch 61.89 308 P **P 16 37 29.7 +1.1**
CCB Clear Creek Bu 61.97 27 P **P 16 37 28.4 0.0**
COLA College 62.00 26 P **P 16 37 29.1 +0.4**
KSH Kashi 62.02 305 P **P 16 37 33.5 +4.1**
KSH PP **PP 16 39 53.7 +6.6**
KSH S **S 16 45 45.9 +1.1**
KSH ScS **ScS 16 47 09.0 -1.3**
KSH SS **SS 16 49 51.1 +1.9**
KSH pmax pmax
comp=Z,77nm,0.8s
KSH pmax pmax
comp=Z,250nm,3.8s
KSH LR LR
comp=Z,150nm,4.6s
KSH LR LR
comp=Z,86nm,8.8s
KSH LR LR
comp=Z,200nm,4.9s
TKM2 Tokmak 2 62.13 309 P **P 16 37 31.6 +1.4**
SNR=24
EYAK Cordova Ski Ar 62.16 31 P **P 16 37 30.7 +0.9**
EYAK IAmb IAmb 16 37 32.1
comp=Z,13nm,1.0s
POKR Poker Plat Res 62.23 26 P **P 16 37 30.4 +0.2**
baz=258
TOLK Toolik Lake Re 62.28 22 P **P 16 37 32.3 +1.8**
baz=254
TOLK Toolik Lake Re 62.28 22 P **P 16 37 32.0 +1.5**
TOLK IAmb IAmb 16 37 32.8
comp=Z,7.5nm,0.5s
HDA Harding Lake 62.28 27 P **P 16 37 30.5 -0.1**
baz=258
HDA Harding Lake 62.28 27 P **P 16 37 30.4 -0.1**
IL31 62.38 27 P **P 16 37 30.6 -0.6**
ILAR Eielson Array 62.38 27 P **P 16 37 30.9 -0.3**
comp=Z,5.8nm,0.8s,baz=259,slow=5.4,SNR=51
KZA Kyzart 62.42 308 P **P 16 37 34.6 +2.2**
SNR=34
BHK Bhakra 62.47 296 *ex* **P 16 37 33.0 +0.6**
KBK Karagaybulak 62.62 308 P **P 16 37 34.8 +1.4**
SNR=16
RAGM Ragged Mountai 62.67 32 P **P 16 37 33.8 +0.5**
CHMS Chumysh 62.74 309 P **P 16 37 35.1 +1.0**
SNR=5.6
USP Ospenovka 62.91 309 P **P 16 37 36.3 +1.1**
SNR=5.9
AAK Ala-Archa 62.95 308 P **P 16 37 36.8 +1.2**
SNR=9.7
AAK Ala-Archa 62.95 308 P **P 16 37 36.4 +0.8**
AAK IAmb IAmb 16 37 37.7
comp=Z,8.0nm,0.7s
UCH Uchtor 62.96 308 P **P 16 37 38.0 +1.9**
SNR=33
PRP Porcupine Dome 63.09 26 P **P 16 37 35.4 -0.7**
GLB Gilahina Butte 63.22 30 P **P 16 37 37.7 +0.8**
GLB IAmb IAmb 16 37 39.2
comp=Z,21nm,1.2s
VRDI Verde Repeater 63.37 31 P **P 16 37 38.5 +0.5**
VRDI IAmb IAmb 16 37 40.1
comp=Z,9.4nm,0.8s
DOT Dot Lake 63.41 28 P **P 16 37 38.5 +0.4**
FYU Fort Yukon 63.41 25 P **P 16 37 38.8 +0.8**
FYU IAmb IAmb 16 37 41.6
comp=Z,39nm,1.6s
MENT Mentasta 63.46 29 P **P 16 37 39.0 +0.6**
MENT IAmb IAmb 16 38 15.9
comp=Z,26nm,1.9s
EKS2 Erkin-Say 63.48 308 P **P 16 37 40.4 +1.3**
SNR=5.1
AML Almayashu 63.57 308 P **P 16 37 41.7 +1.7**
SNR=8.3
MCARA McCarthy VSAT 63.59 31 P **P 16 37 40.3 +1.1**
MCARA IAmb IAmb 16 37 41.5
comp=Z,17nm,0.8s
BALM Baldy 63.88 31 P **P 16 37 41.9 +0.6**
BALM IAmb IAmb 16 37 43.2
comp=Z,11nm,0.8s
YAH Yahtse 64.11 32 P **P 16 37 44.1 +1.1**
ARSB Arslanbob 64.16 307 P **P 16 37 44.7 +1.1**
BARN Barnard Glacie 64.21 31 P **P 16 37 44.5 +0.8**
CTGM Chitina Glacie 64.36 31 P **P 16 37 45.6 +1.1**
CTGM IAmb IAmb 16 37 46.9
comp=Z,15nm,0.9s
HIZ Hauiti 64.45 155 P **P 16 37 45.4 +0.3**
EGAK Eagle 64.81 27 P **P 16 37 47.8 +0.6**
NIL Nilore 64.81 299 P **P 16 37 48.8 +1.0**
BVAR Borovoye Array 65.36 320 P **P 16 37 51.6 +0.7**
comp=Z,61nm,0.7s,baz=89,slow=7.3,SNR=382
BRVK Borovoye 65.42 320 P **P 16 37 51.7 +0.4**
DAWY Dawson 65.51 28 P **P 16 37 52.3 +0.6**
QRZ Quartz Range 65.59 158 P **P 16 37 52.4 0.0**
BKZ Black Stump Fm 65.67 154 P **P 16 37 51.6 -1.5**
BKZ IAmb IAmb 16 37 52.9
comp=Z,13nm,0.7s
KK31 Karatay Array 65.83 309 P **P 16 37 54.8 +0.6**
KK31 IAmb IAmb 16 37 56.2
comp=Z,37nm,1.2s
KKAR Karatay Array 65.83 309 P **P 16 37 54.6 +0.4**
KKAR IAmb IAmb 16 37 56.2
comp=Z,37nm,1.2s
DHAK Deception Hill 65.84 33 P **P 16 37 55.4 +1.5**
DHAK IAmb IAmb 16 37 57.9
comp=Z,16nm,1.1s
BTK Batken 65.93 306 P **P 16 37 55.4 +0.4**
HYT Haines Junctio 66.23 31 P **P 16 37 57.8 +1.3**
HYT IAmb IAmb 16 37 59.5
comp=Z,21nm,0.9s
NNZ Nelson 66.24 157 P **P 16 37 55.7 -0.8**
GAR Garm 66.44 305 P **P 16 37 58.8 +0.5**
THZ Tophouse 66.55 158 P **P 16 37 57.4 -1.2**
TUWZ Tuamarina 66.63 157 P **P 16 37 57.3 -1.7**
EPYK Eagle Plains 66.78 25 P **P 16 38 01.1 +1.3**
baz=267
EPYK Eagle Plains 66.78 25 P **P 16 38 00.4 +0.6**
EPYK IAmb IAmb 16 38 02.0
comp=Z,16nm,1.1s
SNZO South Karori 66.81 157 P **P 16 37 58.5 -1.7**
BFZ Birch Farm 66.86 155 P **P 16 37 59.6 -0.9**
BHW Baring Head 66.95 156 P **P 16 37 59.8 -1.3**
LTZ Lake Taylor 67.23 159 P **P 16 38 01.3 -1.6**
PLWZ Palliser 67.24 156 P **P 16 38 01.4 -1.5**
SKAG Skagway 67.32 33 P **P 16 38 04.6 +1.4**
KHZ Kahutara 67.35 158 P **P 16 38 01.2 -2.3**
CHGR Chuyangaron 67.38 304 P **P 16 38 04.7 +0.4**
WHY Whitehorse 67.52 32 P **P 16 38 06.0 +1.3**
WHY IAmb IAmb 16 38 07.4
comp=Z,26nm,1.6s
BESE Bessie Mountai 67.59 34 P **P 16 38 06.1 +1.0**
BESE IAmb IAmb 16 38 07.8
comp=Z,15nm,1.0s
JIS Juneau Island 67.85 34 P **P 16 38 08.0 +1.4**
JIS IAmb IAmb 16 38 09.4
comp=Z,26nm,1.2s
INK Inuvik 68.08 23 P **P 16 38 08.0 +0.2**
comp=Z,5.9nm,0.9s,baz=277,slow=6.1,SNR=17
INK Inuvik 68.08 23 P **P 16 38 07.9 +0.1**
KBL Kabul 68.12 300 P **P 16 38 09.4 +0.4**
DLBC Dease Lake 70.12 34 P **P 16 38 21.1 +0.3**
comp=Z,20nm,0.9s,baz=285,slow=4.9,SNR=27
DLBC Dease Lake 70.12 34 P **P 16 38 22.5 +1.6**
DLBC IAmb IAmb 16 38 23.7
comp=Z,21nm,0.9s
C36M Paulatuk 71.44 22 P **P 16 38 29.1 +0.7**
baz=278
C36M Paulatuk 71.44 22 P **P 16 38 28.7 +0.3**
C36M IAmb IAmb 16 38 30.2
comp=Z,34nm,1.8s
ARU Arti 71.89 324 P **P 16 38 31.3 -0.1**
comp=Z,9.4nm,0.7s,baz=93,slow=2.3,SNR=45
ARU Arti 71.89 324 P **P 16 38 31.1 -0.2**
BBB Bella Bella 72.08 40 P **P 16 38 32.1 -0.4**
comp=Z,14nm,0.8s,baz=295,slow=8.7,SNR=6.6
BBB Bella Bella 72.08 40 P **P 16 38 33.5 +1.0**
BBB IAmb IAmb 16 41 13.2
comp=Z,44nm,1.3s
AKTO Aktyubinsk 73.28 318 P **P 16 38 39.8 0.0**
comp=Z,10nm,0.6s,baz=89,slow=7.9,SNR=43
PPT Papeete 73.77 116 LR LR 17 02 57.6
comp=Z,79nm,20.8s,baz=306,slow=29
PGC Sidney 75.73 43 P **P 16 38 55.1 +1.1**
NLWA Neilton Lookou 75.77 45 P **P 16 38 55.6 +1.4**
NLWA IAmb IAmb 16 38 57.3
comp=Z,22nm,1.0s
GEYT Alibeck 76.04 306 P **P 16 38 56.5 +0.6**
comp=Z,14nm,0.9s,baz=96,slow=1.5,SNR=34
GEYT LR LR 17 15 28.3
comp=Z,24nm,20.9s,baz=245,slow=38
GYA0B ALIBECK ARRAY 76.04 306 P **P 16 38 56.5 +0.5**
GYA0B IAmb IAmb 16 38 58.1
comp=Z,18nm,0.8s
E03A Lebam 76.19 45 P **P 16 38 58.1 +1.5**
E03A IAmb IAmb 16 38 59.7
comp=Z,40nm,1.1s
A04D Lummi Island 76.19 43 P **P 16 38 58.3 +1.7**
baz=285
LLLB Lillooet 76.23 41 P **P 16 38 58.0 +1.2**
KIRV Kirov 76.23 328 P **P 16 38 57.2 +0.7**
comp=Z,49nm,0.6s,baz=88,slow=3.5,SNR=18
D03D Eldon 76.25 44 P **P 16 38 59.0 +2.1**
baz=285
I02D Swisshome 76.62 48 P **P 16 39 00.5 +1.5**
baz=285
B05A Bryant 76.70 43 P **P 16 39 01.0 +1.5**
baz=285,SNR=7.1
YKA Yellowknife Ar 76.75 28 P **P 16 39 00.0 +0.6**
comp=Z,9.3nm,0.7s,baz=287,slow=5.2,SNR=137
J01E Myrtle Point 76.80 49 P **P 16 39 01.8 +1.7**
baz=285
E04D Cinebar 76.85 45 P **P 16 39 02.2 +1.9**
baz=285,SNR=7.7
D05A Enumclaw 77.06 44 P **P 16 39 03.4 +1.9**
D05A IAmb IAmb 16 39 04.4
comp=Z,26nm,0.9s
I03D Drain, OR 77.07 48 P **P 16 39 03.1 +1.5**
baz=285,SNR=5.9
F04A Amboy 77.11 46 P **P 16 39 03.2 +1.4**
F04A IAmb IAmb 16 39 04.2
comp=Z,23nm,0.8s
K02D Willamette Mer 77.11 49 P **P 16 39 03.3 +1.3**
baz=286
KRMB Red Mountain 77.25 50 P **P 16 39 04.5 +1.6**
KRMB IAmb IAmb 16 39 08.2
comp=Z,25nm,1.2s
LON Longmire 77.30 45 P **P 16 39 03.9 +0.9**
KHMM Horse Mountain 77.56 51 P **P 16 39 06.2 +1.6**
KHMM IAmb IAmb 16 39 07.5
comp=Z,29nm,1.0s
H04A Detroit Lake 77.61 47 P **P 16 39 05.9 +1.2**
H04A IAmb IAmb 16 39 06.7
comp=Z,20nm,0.9s
I04A Tendick Farm, 77.70 48 P **P 16 39 06.4 +1.2**
baz=286,SNR=5.6
KMRM Mail Ridge 77.75 52 P **P 16 39 07.6 +2.0**
KMRM IAmb IAmb 16 39 09.0
comp=Z,22nm,1.1s
SPA0 Spitsbergen Ar 77.75 351 P **P 16 39 06.2 +1.4**
SPA0 Spitsbergen Ar 77.75 351 *e*P **P 16 39 06.3 +1.4**
F05D White Salmon 77.77 46 P **P 16 39 06.9 +1.4**
baz=286
LTY Liberty 77.91 44 P **P 16 39 07.0 +0.7**
KCPM Cahto Peak 77.99 52 P **P 16 39 08.6 +1.5**
G05D Wamic, OR 78.05 46 P **P 16 39 08.6 +1.5**
baz=286
RES Resolute Bay 78.05 14 P **P 16 39 07.6 +1.2**
M02C Callahan 78.05 50 P **P 16 39 08.8 +1.5**
baz=286,SNR=6.7
YBH Yreka Blue Hor 78.06 50 P **P 16 39 08.6 +1.3**
comp=Z,14nm,0.9s,baz=326,slow=3.8,SNR=26
YBH Yreka Blue Hor 78.06 50 P **P 16 39 08.7 +1.3**
J04D Umpqua Nationa 78.06 48 P **P 16 39 08.7 +1.3**
baz=286,SNR=11
L04D Klamath Falls 78.21 49 P **P 16 39 09.2 +1.0**
baz=286,SNR=9.5
N02D Trinity Center 78.28 51 P **P 16 39 10.1 +1.6**
baz=286,SNR=6.1
I05D Terrebonne, OR 78.29 47 P **P 16 39 09.6 +1.1**
baz=287
O02D Mt. Diablo Mer 78.44 51 P **P 16 39 11.0 +1.6**
baz=286
B08A Colville Reser 78.45 43 P **P 16 39 10.1 +0.9**
WDC Whiskeytown Da 78.51 51 P **P 16 39 10.7 +1.0**
G06A Carlson Farm, 78.51 46 P **P 16 39 10.6 +1.0**
E07A Sunnyside 78.64 45 P **P 16 39 11.2 +0.9**
E07A IAmb IAmb 16 39 12.8
comp=Z,20nm,0.9s
J05D Fort Rock, OR 78.66 48 P **P 16 39 12.2 +1.5**
baz=287,SNR=5.3
M04C Macdoel 78.67 50 P **P 16 39 12.0 +1.3**
baz=287,SNR=9.4
PINE Pine Mountain 78.72 47 P **P 16 39 12.2 +1.2**
HAWA Hanford 78.91 45 P **P 16 39 13.0 +1.3**
HAWA IAmb IAmb 16 39 14.1
comp=Z,20nm,1.1s
K05A Summer Lake 79.07 49 P **P 16 39 14.3 +1.4**

LVZ	**Lovozero**	79.09	339	P		P		16 39 12.3	-0.1
LVZ				IAmb		IAmb		16 39 13.7	
	comp=Z,20nm,0.9s								
D08A	**Wollman Farm,**	79.11	44	P		P		16 39 13.4	+0.6
D08A				IAmb		IAmb		16 39 15.0	
	comp=Z,16nm,1.0s								
O03E	**Paynes Creek**	79.13	51	P		P		16 39 13.8	+0.6
	baz=287,SNR=7.9								
E08A	**Dider Farm, El**	79.19	44	P		P		16 39 14.2	+1.0
E08A				IAmb		IAmb		16 39 15.6	
	comp=Z,25nm,1.3s								
C09A	**Chrisman Ranch**	79.30	43	P		P		16 39 14.7	+0.9
ORV	**Oroville**	79.57	52	P		P		16 39 15.8	+0.4
ORV				IAmb		IAmb		16 39 17.2	
	comp=Z,16nm,0.9s								
G08A	**Pilot Rock**	79.62	46	P		P		16 39 16.3	+0.5
I07A	**Izee**	79.62	47	P		P		16 39 16.7	+0.9
MOD	**Modoc Plateau**	79.73	49	P		P		16 39 17.1	+0.6
MOD				IAmb		IAmb		16 39 18.5	
	comp=Z,17nm,1.1s								
E09A	**Wood Farm, Sta**	79.78	44	P		P		16 39 17.6	+1.2
E09A				IAmb		IAmb		16 39 18.7	
	comp=Z,23nm,0.8s								
NEW	**Newport**	79.88	42	P		P		16 39 17.9	+0.8
	comp=Z,15nm,0.9s,baz=277,slow=5.0,SNR=15								
NEW	**Newport**	79.88	42	P		P		16 39 18.1	+1.0
	baz=289								
NEW	**Newport**	79.88	42	P		P		16 39 17.8	+0.8
NEW				IAmb		IAmb		16 39 19.1	
	comp=Z,19nm,0.9s								
AFDM	**Forest Hills D**	80.15	52	P		P		16 39 19.1	+0.5
KLMR	**Klimovskoe**	80.19	331	*e*P		P		16 39 16.0	-2.3
KLMR				AMP				16 39 19.4	
	comp=Z,42nm,1.1s								
KLMR				*e*PP		PP		16 42 19.6	-2.2
KLMR				*e*S		S		16 49 14.0	+0.7
KLMR				*e*S		S		16 49 14.0	+0.7
F10A	**Beach Ranch, E**	80.56	45	P		P		16 39 21.4	+0.6
J08A	**Circle Bar Ran**	80.56	47	P		P		16 39 21.6	+0.8
J08A				IAmb		IAmb		16 39 23.1	
	comp=Z,16nm,0.9s								
WVOR	**Wild Horse Val**	80.74	48	P		P		16 39 22.3	+0.4
WVOR				IAmb		IAmb		16 39 24.0	
	comp=Z,17nm,1.0s								
CMB	**Columbia Colle**	80.86	53	P		P		16 39 23.0	+0.5
CMB				IAmb		IAmb		16 39 24.5	
	comp=Z,23nm,1.1s								
BMO	**Blue Mountains**	80.87	46	P		P		16 39 23.1	+0.6
BMO				IAmb		IAmb		16 39 24.5	
	comp=Z,23nm,1.1s								
HAMF	**Hammerfest**	80.99	343	*e*P		P		16 39 22.3	-0.2
VCNR	**Virginia City**	81.01	52	P		P		16 39 24.0	+0.5
VCNR				IAmb		IAmb		16 39 25.7	
	comp=Z,18nm,1.1s								
PAHR	**Pah Rah Range**	81.08	51	P		P		16 39 24.3	+0.5
PNTR	**Pine Nut**	81.12	52	P		P		16 39 24.8	+0.8
PNTR				IAmb		IAmb		16 39 26.3	
	comp=Z,31nm,0.8s								
ARCES	**ARCESS Array B**	81.12	342	P		P		16 39 23.8	+0.6
	comp=Z,12nm,0.7s,baz=74,slow=8.2,SNR=52								
ARCES				LR		LR		17 20 51.9	
	comp=Z,18nm,19.6s,baz=298,slow=40								
ARE0	**ARCESS Array S**	81.12	342	*e*P		P		16 39 24.0	+0.8
YERR	**Yerington**	81.42	52	P		P		16 39 26.4	+0.8
YERR				IAmb		IAmb		16 39 27.7	
	comp=Z,23nm,1.0s								
WAKR	**Walker**	81.42	52	P		P		16 39 26.6	+0.9
WAKR				IAmb		IAmb		16 39 28.0	
	comp=Z,14nm,0.8s								
WALA	**Waterton Lakes**	81.61	41	P		P		16 39 27.1	+0.7
WALA				IAmb		IAmb		16 39 28.9	
	comp=Z,21nm,1.1s								
PAGB	**Antelope Grade**	81.70	55	P		P		16 39 27.8	+0.8
PAGB				IAmb		IAmb		16 39 28.8	
	comp=Z,16nm,0.9s								
JTMT	**Jette**	81.85	42	P		P		16 39 28.3	+0.6
JTMT				IAmb		IAmb		16 39 29.7	
	comp=Z,20nm,1.1s								
OMMB	**Old Mammoth Mi**	82.04	53	P		P		16 39 29.4	+0.4
RYN	**Ryan**	82.06	52	P		P		16 39 29.7	+0.7
RYN				IAmb		IAmb		16 39 31.1	
	comp=Z,24nm,1.0s								
KTK1	**Kautokeino**	82.09	342	*e*P		P		16 39 28.8	+0.6
MLAC	**Mammoth, Mammo**	82.16	53	P		P		16 39 30.8	+1.2
	baz=289								
KVN	**Kaiserville**	82.23	51	P		P		16 39 30.4	+0.5
KVN				IAmb		IAmb		16 39 31.9	
	comp=Z,24nm,1.0s								
NVAR	**Mina Array Bea**	82.29	52	P		P		16 39 31.4	+1.2
	comp=Z,20nm,0.7s,baz=265,slow=6.0,SNR=132								
PKM	**Mcpherson Peak**	82.31	56	P		P		16 39 31.5	+1.1
	baz=289								
MFID	**Camas Ranch**	82.36	47	P		P		16 39 31.2	+0.8
MFID				IAmb		IAmb		16 39 32.5	
	comp=Z,22nm,1.1s								
VES	**Vestal, Richgr**	82.56	55	P		P		16 39 31.8	+0.5
	baz=289								
TIN	**Tinemaha, Big**	82.80	53	P		P		16 39 34.0	+1.2
	baz=290								
TRO	**Tromso**	82.89	344	*e*P		P		16 39 32.3	-0.1
ARVC	**Arvin**	82.99	55	P		P		16 39 34.1	+0.5
	baz=290								
SNCC	**San Nicolas Is**	83.07	57	P		P		16 39 34.6	+0.5
	baz=289								
ISA	**Isabella, Lake**	83.09	55	P		P		16 39 34.6	+0.4
	baz=290								
CWC	**Cottonwood Cre**	83.12	54	P		P		16 39 34.9	+0.4
	baz=290								
GRAC	**Grapevine Rang**	83.47	53	P		P		16 39 36.9	+0.8
	baz=290								
MPMC	**Manual Prospec**	83.70	54	P		P		16 39 38.3	+0.8
	baz=290,SNR=14								
ELK	**Elko**	83.71	49	P		P		16 39 38.0	+0.4
ELK				IAmb		IAmb		16 39 39.6	
	comp=Z,17nm,0.9s								
EDW2	**Edwards Air Fo**	83.72	55	P		P		16 39 38.4	+0.9
	baz=290								
LRM	**Limekiln Ridge**	83.73	44	P		P		16 39 37.9	+0.3
LRMC	**Laurel Mtn Rad**	83.75	55	P		P		16 39 38.4	+0.7
	baz=290								
DLMT	**Dillon**	83.81	44	P		P		16 39 38.0	+0.2
MCMT	**McKenzie Canyo**	83.85	45	P		P		16 39 38.7	+0.5
CIS	**Catalina Islan**	83.90	57	P		P		16 39 38.6	+0.2
	baz=290								
FURC	**Furnace Creek,**	84.04	53	P		P		16 39 39.8	+0.9
	baz=290								
OBN	**Obninsk**	84.06	327	P		P		16 39 38.4	-0.3
	comp=Z,12nm,0.6s,baz=70,slow=2.1,SNR=16								
OBN	**Obninsk**	84.06	327	P		P		16 39 38.6	0.0
OBN				P		P		16 39 38.7	+0.1
R11A	**Troy Canyon, C**	84.32	51	P		P		16 39 41.6	+1.0
	baz=291								
R11A	**Troy Canyon, C**	84.32	51	P		P		16 39 40.7	+0.1
TPNV	**Topopah Spring**	84.33	53	P		P		16 39 41.6	+0.9
	baz=291								
TPNV	**Topopah Spring**	84.33	53	P		P		16 39 40.8	+0.1
TPNV				IAmb		IAmb		16 39 42.5	
	comp=Z,17nm,0.8s								
GSC	**Goldstone, Bar**	84.49	55	P		P		16 39 42.3	+0.9
	baz=291								
GSC	**Goldstone, Bar**	84.49	55	P		P		16 39 41.8	+0.4
EGMT	**Eagleton**	84.56	41	P		P		16 39 42.3	+0.8
	baz=294								
EGMT	**Eagleton**	84.56	41	P		P		16 39 42.1	+0.6
TBLG	**Delisi**	84.63	312	P		P		16 39 42.3	+0.5
SHOC	**Shoshone, Teco**	84.68	54	P		P		16 39 43.0	+0.7
	baz=291								
QLMT	**Earthquake Lak**	84.78	44	P		P		16 39 43.9	+1.1
MURC	**Murrieta**	84.78	56	P		P		16 39 43.2	+0.3
	baz=291								
YHL	**Hebgen Lake**	84.93	44	P		P		16 39 44.8	+1.1
YHB	**Horse Butte**	84.96	44	P		P		16 39 44.9	+1.1
HEC	**Hector,Ludlow**	85.02	55	P		P		16 39 44.7	+0.6
	baz=291,SNR=5.6								
STEI	**Steigen**	85.03	343	*e*P		P		16 39 43.6	+0.3
HVU	**Hansel Valley**	85.06	47	P		P		16 39 44.7	+0.5
KBZ	**Khabaz**	85.11	315	P		P		16 39 44.2	+0.1
	comp=Z,7.4nm,0.7s,baz=77,slow=6.1,SNR=19								
KBZ				LR		LR		17 19 57.6	
	comp=Z,26nm,20.9s,baz=74,slow=37								
TUQ	**Turquoise Moun**	85.11	54	P		P		16 39 45.3	+0.8
	baz=291								
YMR	**Madison River**	85.15	44	P		P		16 39 45.5	+0.8
KIV	**Kislovodsk**	85.16	315	P		P		16 39 44.5	-0.1
YHH	**Holmes Hill**	85.17	44	P		P		16 39 45.8	+0.8

BGU	**Big Grassy Mou**	85.20	48	P		P		16 39 45.2	+0.3
SHPR	**Sheep Range**	85.30	53	P		P		16 39 46.3	+0.7
YNR	**Norris Junctio**	85.31	44	P		P		16 39 46.3	+0.7
PFO	**Pinyon Flats O**	85.35	56	P		P		16 39 46.3	+0.5
	baz=291								
PFO	**Pinyon Flats O**	85.35	56	P		P		16 39 46.1	+0.3
XPFO	**Pion Flat**	85.36	56	P		P		16 39 46.1	+0.3
IMW	**Indian Meadow**	85.47	45	P		P		16 39 47.4	+1.0
IMW				IAmb		IAmb		16 39 48.9	
	comp=Z,18nm,0.8s								
H17A	**Grant Village**	85.51	44	P		P		16 39 49.6	+3.1
	baz=294								
FXWY	**Fox Creek**	85.52	45	P		P		16 39 47.5	+0.9
FXWY				IAmb		IAmb		16 39 49.0	
	comp=Z,13nm,1.1s								
PSUT	**Pine Spring**	85.52	51	P		P		16 39 45.2	-1.4
GCMT	**Greycliff**	85.53	43	P		P		16 39 47.2	+0.7
GMRC	**Granite Mounta**	85.55	55	P		P		16 39 47.4	+0.6
	baz=291,SNR=8.7								
FLWY	**Flagg Ranch**	85.56	45	P		P		16 39 48.1	+1.4
BELC	**Belle Mtn. Jos**	85.57	56	P		P		16 39 47.3	+0.4
	baz=291								
FIA1	**FINESS Array S**	85.57	335	P		P		16 39 45.3	-0.8
FINES	**FINESS Array B**	85.57	335	P		P		16 39 45.4	-0.7
	comp=Z,11nm,0.4s,baz=68,slow=4.8,SNR=142								
FINES				PP		PP		16 43 05.7	-0.1
	comp=Z,2.5nm,0.8s,baz=46,slow=10.0,SNR=4.2								
FINES				LR		LR		17 20 49.4	
	comp=Z,26nm,19.8s,baz=68,slow=38								
AKH	**Akhalkalaki**	85.61	312	P		P		16 39 47.1	+0.1
TPAW	**Teton Pass**	85.63	45	P		P		16 39 47.9	+0.8
TPAW				IAmb		IAmb		16 39 49.5	
	comp=Z,20nm,1.3s								
DUG	**Dugway, Tooele**	85.64	49	P		P		16 39 47.9	+0.8
	baz=293								
DUG	**Dugway, Tooele**	85.64	49	P		P		16 39 47.1	+0.1
DUG				IAmb		IAmb		16 39 49.0	
	comp=Z,16nm,0.8s								
MONP2	**Monument Peak**	85.64	57	P		P		16 39 47.9	+0.6
	baz=291								
YMP	**Mirror Lake Pl**	85.65	44	P		P		16 39 48.8	+1.5
REDW	**Red Top Meadow**	85.74	45	P		P		16 39 48.0	+0.3
REDW				IAmb		IAmb		16 39 49.9	
	comp=Z,29nm,1.8s								
AHID	**Auburn Hatcher**	85.81	46	P		P		16 39 48.3	+0.3
AHID				IAmb		IAmb		16 39 50.0	
	comp=Z,16nm,0.9s								
FFC	**Flin Flon**	85.91	33	P		P		16 39 48.0	0.0
FFC				IAmb		IAmb		16 39 49.8	
	comp=Z,20nm,0.8s								
HWUT	**Hardware Ranch**	85.96	47	P		P		16 39 49.0	+0.3
IKP	**In-Ko-Pah, Jac**	85.97	57	P		P		16 39 49.5	+0.6
	baz=291								
RLMT	**Red Lodge**	86.06	43	P		P		16 39 50.9	+1.7
	baz=295								
RLMT	**Red Lodge**	86.06	43	P		P		16 39 50.5	+1.3
RLMT				IAmb		IAmb		16 39 52.8	
	comp=Z,18nm,0.7s								
SWSC	**Sam W. Stewart**	86.11	56	P		P		16 39 50.4	+1.0
	baz=291								
BC3	**Big Chuckawall**	86.12	56	P		P		16 39 50.6	+1.0
	baz=292								
IRM	**Iron Mountain**	86.18	55	P		P		16 39 50.3	+0.6
	baz=292,SNR=6.3								
CCUT	**Cedar City**	86.25	51	P		P		16 39 50.7	+0.4
NLU	**North Lily Min**	86.25	49	P		P		16 39 50.8	+0.5
TCUT	**Toone Canyon**	86.26	48	P		P		16 39 50.9	+0.6
JLU	**Jordanelle**	86.43	48	P		P		16 39 51.4	+0.2
SZCU	**Shurtz Canyon**	86.43	51	P		P		16 39 51.4	+0.2
MOR8	**Moi Rana**	86.50	342	*e*P		P		16 39 49.4	-1.2
LCMT	**Little Creek M**	86.54	52	P		P		16 39 52.5	+0.8
MSU	**Marysvale**	86.74	50	P		P		16 39 53.2	+0.5
Y12C	**Blythe**	86.81	55	P		P		16 39 53.5	+0.7
	baz=292								
Y12C	**Blythe**	86.81	55	P		P		16 39 53.1	+0.3
Y12C				IAmb		IAmb		16 39 54.6	
	comp=Z,17nm,1.2s								
GLA	**Glamis**	86.83	56	P		P		16 39 53.9	+0.9
	baz=292								
BW06	**Boulder Array**	86.85	45	P		P		16 39 53.6	+0.4
	baz=294								
KNB	**Kanab**	86.85	52	P		P		16 39 53.6	+0.4
PDAR	**Pinedale Array**	86.85	45	P		P		16 39 53.6	+0.5
	comp=Z,6.2nm,0.7s,baz=225,slow=2.2,SNR=22								
PDMCI	**Parker Dam,Lak**	86.89	55	P		P		16 39 54.0	+0.9
	baz=292,SNR=6.3								
MTPU	**Mount Pierson**	86.92	51	P		P		16 39 53.9	+0.2
VSU	**Vasula**	87.01	333	*e*P		P		16 39 52.6	-0.6
TMUT	**Trail Mountain**	87.12	49	P		P		16 39 54.8	+0.2
LAO	**LASA Array**	87.31	41	P		P		16 39 56.3	+1.3
	baz=297								
LAO	**LASA Array**	87.31	41	P		P		16 39 55.4	+0.4
FCC	**Fort Churchill**	87.41	27	P		P		16 39 55.4	+0.3
FCC				IAmb		IAmb		16 39 56.6	
	comp=Z,21nm,1.1s								
U15A	**North Rim**	87.47	52	P		P		16 39 56.5	+0.2
U15A				IAmb		IAmb		16 39 58.5	
	comp=Z,12nm,1.0s								
SRU	**San Rafael Swe**	87.69	49	P		P		16 39 57.1	0.0
RDMU	**Red Mountain**	87.75	47	P		P		16 39 57.4	-0.1
113A	**Mohawk Valley,**	87.76	56	P		P		16 39 57.2	-0.2
Y14A	**Wickenburg**	87.90	55	P		P		16 39 58.2	+0.1
WUAZ	**Wupatki**	88.52	53	P		P		16 40 02.5	+1.4
	baz=294								
WUAZ	**Wupatki**	88.52	53	P		P		16 40 01.8	+0.7
WUAZ				IAmb		IAmb		16 40 03.5	
	comp=Z,21nm,0.9s								
IZAR	**Zarasai**	88.78	330	*e*P		P		16 40 02.1	+0.4
214A	**Organ Pipe Nat**	88.82	56	P		P		16 40 03.7	+1.2
	baz=293								
214A	**Organ Pipe Nat**	88.82	56	P		P		16 40 02.6	+0.2
214A				IAmb		IAmb		16 40 04.7	
	comp=Z,16nm,0.9s								
O20A	**White River Ci**	88.86	47	P		P		16 40 03.3	+0.6
	baz=296								
O20A	**White River Ci**	88.86	47	P		P		16 40 02.7	0.0
O20A				IAmb		IAmb		16 40 04.2	
	comp=Z,13nm,0.9s								
PV09	**Paradox Valley**	88.93	49	P		P		16 40 03.8	+0.7
ISAL	**Salakas**	88.94	330	*e*P		P		16 40 02.7	+0.3
NACGM	**Naroch**	89.01	330	*e*		P		16 40 02.0	-0.8
IIGN	**Ignalina**	89.02	330	*e*P		P		16 40 03.1	+0.3
PV23	**Carpenter Ridg**	89.03	49	P		P		16 40 03.0	-0.7
PV10	**Paradox Valley**	89.05	49	P		P		16 40 03.1	-0.6
PV20	**West Nyswonger**	89.11	49	P		P		16 40 03.4	-0.5
PV19	**Morning Glory**	89.11	49	P		P		16 40 03.8	-0.2
PV05	**Paradox Valley**	89.13	50	P		P		16 40 03.9	-0.1
PV05				IAmb		IAmb		16 40 05.9	
	comp=Z,14nm,0.9s								
PV04	**Paradox Valley**	89.14	49	P		P		16 40 03.8	-0.1
PV22	**Blue Mesa, Par**	89.16	49	P		P		16 40 03.8	-0.3
PV22				IAmb		IAmb		16 40 06.0	
	comp=Z,14nm,1.2s								
PV16	**Nyswonger Mesa**	89.16	49	P		P		16 40 03.3	-0.9
PV18	**Skein Mesa, Pa**	89.19	49	P		P		16 40 03.8	-0.6
PV18				IAmb		IAmb		16 40 06.0	
	comp=Z,21nm,1.0s								
PV03	**Paradox Valley**	89.23	49	P		P		16 40 03.9	-0.6
PV03				IAmb		IAmb		16 40 06.2	
	comp=Z,20nm,1.0s								
PV12	**Saucer Basin,**	89.24	49	P		P		16 40 03.6	-0.9
PV13	**Radium Mtn., P**	89.30	49	P		P		16 40 04.4	-0.4
PV13				IAmb		IAmb		16 40 06.3	
	comp=Z,13nm,0.9s								
PV02	**Paradox Valley**	89.33	49	P		P		16 40 04.3	-0.7
PV02				IAmb		IAmb		16 40 06.6	
	comp=Z,10nm,0.8s								
PV01	**Paradox Valley**	89.48	49	P		P		16 40 04.9	-0.8
PV01				IAmb		IAmb		16 40 07.2	
	comp=Z,11nm,0.9s								
MVCO	**Mesa Verde**	89.93	50	P		P		16 40 08.5	+0.7
	baz=295								
MVCO	**Mesa Verde**	89.93	50	P		P		16 40 07.1	-0.7
PABE	**Paberze**	89.97	331	*e*P		P		16 40 07.3	+0.1
N23A	**Red Feather La**	90.10	46	P		P		16 40 10.1	+1.5
	baz=297								
AKASG	**Malin Array Be**	90.11	325	P		P		16 40 06.8	-1.1
	comp=Z,13nm,0.4s,baz=51,slow=5.1,SNR=23								
AKBB	**Malin Array Si**	90.11	325	P		P		16 40 06.6	-1.4
PHWY	**Pilot Hill**	90.24	45	P		P		16 40 09.0	-0.2
TUC	**Tucson**	90.26	55	P		P		16 40 10.6	+1.4
	baz=294								
TUC	**Tucson**	90.26	55	P		P		16 40 09.2	0.0
TUC				IAmb		IAmb		16 40 11.8	
	comp=Z,14nm,1.2s								

PBUR	**Paburge**	90.56	332	*e*P		P		16 40 09.8	-0.1
S22A	**4UR Ranch, Cre**	90.89	49	P		P		16 40 13.7	+1.3
	baz=296								
HFS	**Hagfors**	91.05	338	P		P		16 40 11.0	-1.2
	comp=Z,1.8nm,0.4s,baz=83,slow=4.6,SNR=22								
HFS				PP		PP		16 43 49.2	-0.2
	comp=Z,3.5nm,0.7s,baz=63,slow=6.8,SNR=7.1								
NB2	**NORSAR Subarra**	91.22	340	P		P		16 40 12.0	-1.0
	comp=Z,2.8nm,0.8s,baz=45,slow=5.1								
NB2	**NORSAR Subarra**	91.22	340	P		P		16 40 12.0	-1.0
	baz=45,slow=5.1								
NOA	**NORSAR Array B**	91.22	340	P		P		16 40 11.8	-1.2
	comp=Z,0.4nm,0.6s,baz=51,slow=4.2,SNR=6.7								
NOA				PP		PP		16 43 50.5	-0.4
	comp=Z,1.9nm,0.8s,baz=40,slow=7.8,SNR=5.0								
NOA				LR		LR		17 23 36.0	
	comp=Z,20nm,22.0s,baz=20,slow=37								
SUW	**Suwalki**	91.24	330	P		P		16 40 12.3	-0.8
ULM	**Lac du Bonnet**	91.44	34	P		P		16 40 13.9	-0.3
	comp=Z,8.6nm,0.8s,baz=282,slow=4.7,SNR=7.5								
ULM	**Lac du Bonnet**	91.44	34	P		P		16 40 14.1	-0.1
ULM						PcP		16 40 14.4	-0.7
ULM				IAmb		IAmb		16 40 15.4	
	comp=Z,10nm,0.8s								
GAZ	**Gaziantep**	91.81	311	P		P		16 40 15.6	-0.8
GAZ				IAmb		IAmb		16 40 17.3	
	comp=Z,13nm,1.2s								
SDCO	**Great Sand Dun**	91.83	49	P		P		16 40 17.7	+1.1
	baz=297								
SDCO	**Great Sand Dun**	91.83	49	P		P		16 40 17.4	+0.7
ANMO	**Albuquerque**	92.40	51	P		P		16 40 20.7	+1.4
	baz=296								
ANMO	**Albuquerque**	92.40	51	P		P		16 40 19.4	+0.2
ANMO				IAmb		IAmb		16 40 21.9	
	comp=Z,6.0nm,0.9s								
121A	**Cookes Peak, D**	92.47	54	P		P		16 40 20.8	+1.3
	baz=296								
121A	**Cookes Peak, D**	92.47	54	P		P		16 40 19.4	-0.1
121A				IAmb		IAmb		16 40 22.4	
	comp=Z,10.0nm,0.9s								
AGMN	**Agassiz Nation**	92.55	36	P		P		16 40 20.0	+0.6
	baz=304								
AGMN	**Agassiz Nation**	92.55	36	P		P		16 40 19.6	+0.2
AGMN				IAmb		IAmb		16 40 20.9	
	comp=Z,7.4nm,0.9s								
T25A	**Trinidad**	92.88	49	P		P		16 40 22.1	+0.7
	baz=298								
BR131	**Keskin Array S**	93.09	314	P		P		16 40 21.2	-1.0
BR131				IAmb		IAmb		16 40 23.0	
	comp=Z,7.7nm,1.1s								
BRTR	**Keskin Array B**	93.09	314	P		P		16 40 21.1	-1.2
	comp=Z,4.6nm,0.9s,baz=96,slow=3.7,SNR=25								
BRTR				PP		PP		16 44 07.8	+1.4
	comp=Z,0.5nm,0.5s,baz=38,slow=6.3,SNR=3.6								
BUR08	**Bucovina Ar. S**	94.02	324	P		P		16 40 25.5	-0.8
MNTX	**Cornudas Mount**	94.66	54	P		P		16 40 30.5	+1.0
	baz=297,SNR=8.1								
MNTX	**Cornudas Mount**	94.66	54	P		P		16 40 29.3	-0.1
MNTX				IAmb		IAmb		16 40 31.5	
	comp=Z,5.5nm,1.0s								
MMAI	**Mount Meron Ar**	95.04	308	P		P		16 40 30.6	-0.7
	comp=Z,1.3nm,0.6s,baz=93,slow=4.3,SNR=4.7								
SPMN	**Marine on St.**	96.04	37	P		P		16 40 36.1	+0.6
TXAR	**Lajitas Array**	97.06	55	P		Pdif		16 40 41.2	+0.7
	comp=Z,0.6nm,0.7s,baz=288,slow=2.1,SNR=6.4								
BRG	**Berggiesshubel**	97.55	332	*e*P		P		16 40 41.7	-0.5
	comp=Z,3.7nm,0.9s								
CLL	**Collm**	97.66	332	⇓*i*Pdif		Pdif		16 40 43.1	+0.5
CLL				*i* PP		PP		16 44 44.2	+3.2
KHC	**Kasperske Hory**	98.95	330	*e*PDIFF		Pdif		16 40 47.5	-1.0
GERES	**GERESS Array B**	99.10	330	P		Pdif		16 40 47.3	-2.0
	comp=Z,0.5nm,0.8s,baz=53,slow=5.0,SNR=5.3								
GERES				PP		PP		16 44 53.5	+1.3
	comp=Z,0.6nm,0.7s,baz=51,slow=7.0,SNR=5.1								
GERES				LR		LR		17 27 46.5	
	comp=Z,22nm,21.6s,baz=63,slow=37								
EKA	**Eskdalemuir Ar**	100.28	343	PP		PP		16 45 00.4	-0.3
	comp=Z,3.7nm,0.9s,baz=36,slow=7.2,SNR=6.5								
ESDC	**Sonseca Array**	114.08	335	P

CLCH				*i* S		**Sn**	**16 29 10.1**	**-1.4**
MT01	**Popeta**	**4.33**	**173**			**Pn**	**16 28 30.1**	**+0.3**
GO02	**Mina Guanaco**	**4.81**	**25**			**Pn**	**16 28 36.1**	**-0.7**
ACAN	**Cantantal**	**4.85**	**125**	*i* P		**Pn**	**16 28 36.8**	**-0.2**
BO02	**Sierra Bellavi**	**5.31**	**170**			**Pn**	**16 28 42.7**	**-0.6**
CYA	**Choya**	**5.42**	**80**	*i* P		**Pn**	**16 28 44.4**	**-0.5**
CYA				*i* S		**Sn**	**16 29 46.1**	**-0.6**
GO05	**Huala**	**5.45**	**181**			**Pn**	**16 28 44.0**	**-1.1**
MRA	**San Martin**	**6.00**	**120**	*i* P		**Pn**	**16 28 51.5**	**-1.4**
MRA				*i* S		**Sn**	**16 30 04.1**	**+3.1**
TCA	**Tanti**	**6.53**	**108**	*i* P		**Pn**	**16 28 57.8**	**-2.3**
TCA				*i* S		**Sn**	**16 30 14.9**	**+1.1**
PB15	**IPOC Station P**	**6.67**	**19**			**Pn**	**16 29 02.8**	**+0.6**
BI02	**San Fabin de**	**7.11**	**176**			**Pn**	**16 29 07.6**	**-0.5**
PB06	**IPOC Station P**	**7.12**	**17**	Pn		**Pn**	**16 29 07.9**	**-0.5**
H03N1	**Juan Fernandez**	**7.16**	**235**	T		T	16 36 52.5	
	baz=64,slow=72,SNR=3176							
H03N2	**Juan Fernandez**	**7.17**	**235**	T		T	16 36 53.0	
	baz=64,slow=72,SNR=2367							
H03N3	**Juan Fernandez**	**7.17**	**235**	T		T	16 36 51.7	
	baz=64,slow=72,SNR=1914							
BI03	**Tigo**	**7.34**	**187**	Pn		**Pn**	**16 29 10.4**	**-0.7**
LVC	**Limon Verde**	**7.40**	**22**	Pn		**Pn**	**16 29 11.8**	**-0.6**
PB07	**IPOC Station P**	**7.99**	**13**	Pn		**Pn**	**16 29 20.5**	**+0.2**
PB09	**IPOC Station P**	**8.07**	**18**	Pn		**Pn**	**16 29 21.9**	**+0.5**
PB01	**IPOC Station P**	**8.74**	**15**	Pn		**Pn**	**16 29 28.1**	**-2.3**
LC01	**Cunco**	**9.32**	**180**			**Pn**	**16 29 37.6**	**-0.8**
PB08	**IPOC Station P**	**9.69**	**15**	Pn		**Pn**	**16 29 42.9**	**-0.8**
PLCA	**Paso Flores**	**11.21**	**175**	Pn		Pn	16 29 59.3	-4.9
	baz=17,slon=18,SNR=2.4							
PLCA				LR		LR	16 34 44.5	
	comp=Z,160nm,21.4s,baz=359,slow=40							
PLCA	**Paso Flores**	**11.21**	**175**			**Pn**	**16 30 04.0**	**-0.3**
AP01	**Chacalluta**	**11.21**	**7**	Pn		**Pn**	**16 30 05.5**	**+1.2**
CPUP	**Villa Florida**	**13.24**	**79**	Pn		**Pn**	**16 30 31.3**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=264,slow=6.2,SNR=2.9							
CPUP				LR		LR	16 35 57.0	
	comp=Z,272nm,20.1s,baz=234,slow=39							
LPAZ	**La Paz**	**13.64**	**15**	Pn		**Pn**	**16 30 42.8**	**+4.8**
SIV	**San Ignacio**	**16.75**	**39**	Pn		**Pn**	**16 31 19.3**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=224,slow=13,SNR=8.2							
BDFB	**Brasilia**	**25.94**	**63**	LR		LR	16 44 07.4	
	comp=Z,114nm,18.5s,baz=40,slow=39							
QSPA	**South Pole Qui**	**60.67**	**180**	P		**P**	**16 37 34.4**	**-0.1**
TXAR	**Lajitas Array**	**65.95**	**330**	P		**P**	**16 38 12.0**	**+2.2**
	comp=Z,0.9nm,0.8s,baz=141,slow=8.1,SNR=8.2							
DBIC	**Dimbokro**	**73.65**	**72**	LR		LR	17 09 29.5	
	comp=Z,34nm,20.0s,baz=138,slow=34							
ECSD	**EROS Data Cent**	**76.37**	**342**	P		**P**	**16 39 13.3**	**+0.7**
ECSD				IAmb		IAmb	16 39 15.3	
	comp=Z,6.6nm,1.2s							
MAW	**Mawson**	**77.40**	**164**	P		**P**	**16 39 17.8**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=43,slow=6.5,SNR=2.4							
PDAR	**Pinedale Array**	**79.88**	**333**	P		**P**	**16 39 33.1**	**+0.8**
	comp=Z,0.6nm,0.9s,baz=141,slow=5.8,SNR=4.2							
NVAR	**Mina Array Bea**	**80.33**	**325**	LR		LR	17 11 35.7	
	comp=Z,26nm,18.1s,baz=175,slow=33							
TORD	**Torodi Ar. Bea**	**82.57**	**70**	P		**P**	**16 39 45.5**	**-1.5**
	comp=Z,0.7nm,0.7s,baz=251,slow=4.6,SNR=4.3							
TORD				LR		LR	17 13 59.2	
	comp=Z,32nm,21.0s,baz=105,slow=34							
ASAR	**Alice Springs**	**121.58**	**208**	PKP		**PKPdf**	**16 46 15.9**	**-1.9**
	comp=Z,0.4nm,0.8s,baz=142,slow=3.5,SNR=3.0							
WRA	**Warramunga Arr**	**124.69**	**210**	PKP		**PKPdf**	**16 46 23.2**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=155,slow=1.7,SNR=1.3							
H11S2	**WAKE ISLAND Hyl**	**25.86**	**272**	T		T	19 05 24.4	
	baz=115,slow=75,SNR=41							
H11S1	**WAKE ISLAND Hyl**	**25.88**	**272**	T		T	19 05 23.1	
	baz=115,slow=75,SNR=51							
H11S3	**WAKE ISLAND Hyl**	**25.88**	**272**	T		T	19 05 28.5	
	baz=115,slow=75,SNR=41							
YAK	**Yakutsk**	**144.57**	**343**			PKPbc	16 46 58.8	+0.8
KURBB	**Kurchatov Arra**	**149.41**	**38**	PKPbc		**PKPbc**	**16 47 12.1**	**0.0**
	comp=Z,1.9nm,0.7s,baz=298,slow=3.4,SNR=12							
AAK	**Ala-Archa**	**150.05**	**55**	PKPbc		**PKPbc**	**16 47 14.9**	**+0.6**
	comp=Z,2.0nm,0.5s,baz=253,slow=17,SNR=5.8							
ZAA0	**Zalesovo Array**	**150.32**	**28**			**PKPbc**	**16 47 14.1**	**-0.1**
ZALV	**Zalesovo Beam**	**150.32**	**28**	PKPbc		**PKPbc**	**16 47 14.6**	**+0.3**
	comp=Z,9.5nm,0.7s,baz=296,slow=3.4,SNR=41							
MKAR	**Makanchi Array**	**153.55**	**42**	PKP		**PKPdf**	**16 47 14.3**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=294,slow=3.3,SNR=3.5							
MKAR				PKPbc		**pPKPdf**	**16 47 21.4**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=325,slow=1.8,SNR=6.1							
MKAR				PKPab		**PKPab**	**16 47 34.3**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=300,slow=2.4,SNR=5.7							

DDA ***12*** *16:41:12.0,36.°77N×45.°24E,h12km±3km, MW3.5*
TEH ***12*** *16:41:13.6,36.°99N×45.°23E,h8km, ML3.4*
ISN ***12*** *16:41:17.3±4.7,36.°97N×45.°10E,h21km±43km, ML3.6*
ATA ***12*** *16:41:20.4±0.3,37.°65N×45.°33E,h13km±4km, ML3.0*

ISC 12 16:41:14.6±1.2,36.°96N±0.°03×45.°21E±0.°02,h0km±12km, n55,σ1°§44/63,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MAHB	**Mahabad**	**0.44**	**116**	*e*Pg	**Pg**		**16 41 22.3**	**-0.8**
IAZR	**Azarshahr**	**0.95**	**40**	*e*Pg	**Pg**		**16 41 32.4**	**-0.3**
YOVA	**Hakkari_Yksek**	**0.96**	**311**	*i* P	**Pg**		**16 41 32.5**	**-0.6**
YOVA				*i* S	**Sn**		**16 41 49.4**	**-0.6**
YOVA				IAML			16 41 53.0	
	comp=N,371nm,0.9s							
YOVA				IAML			16 41 57.0	
	comp=E,192nm,0.7s							
YOVA	**Hakkari_Yksek**	**0.96**	**311**	*e*Pg	**Pg**		**16 41 32.4**	**-0.6**
CUKT	**Cukurca**	**1.31**	**283**	P	**Pg**		**16 41 39.1**	**-0.6**
CUKT				S	**Sg**		**16 41 57.0**	**+0.3**
CUKT	**Cukurca**	**1.31**	**283**	*i* P	**Pg**		**16 41 38.3**	**-1.4**
CUKT				*i* S	**Sb**		**16 41 57.9**	**+0.4**
CUKT				IAML			16 42 03.0	
	comp=N,1μm,0.7s							
CUKT	**Cukurca**	**1.31**	**283**	*e*Pg	**Pg**		**16 41 38.3**	**-1.4**
HAKT	**HAKKARI**	**1.34**	**297**	*i* P	**Pg**		**16 41 39.2**	**-1.0**
HAKT				*i* S	**Sn**		**16 42 00.3**	**+1.0**
HAKT				IAML			16 42 03.0	
	comp=E,217nm,0.4s							
HAKT				IAML			16 42 03.0	
	comp=N,223nm,0.4s							
HAKT	**HAKKARI**	**1.34**	**297**	*e*Pg	**Pg**		**16 41 39.2**	**-1.0**
ISHB	**Shabestar**	**1.36**	**14**	*e*Pn	**Pg**		**16 41 39.2**	**-1.5**
ISHB				*e*			16 42 02.6	
BASK	**Baskale_VAN**	**1.45**	**319**	*e*P	**Pb**		**16 41 42.3**	**-0.3**
BASK	**Baskale_VAN**	**1.45**	**319**	*i* P	**Pg**		**16 41 42.4**	**0.0**
BASK				IAML			16 42 11.0	
	comp=E,79nm,0.9s							
BASK				IAML			16 42 12.0	
	comp=N,82nm,0.7s							
BASK	**Baskale_VAN**	**1.45**	**319**	*e*Pg	**Pg**		**16 41 42.4**	**0.0**
ITBZ	**Tabriz**	**1.48**	**30**	*e*Pg	**Pn**		**16 41 40.7**	**-1.8**
ITBZ				*e*			16 42 08.6	
IKRK	**Kirkuk**	**1.71**	**205**	*e*Pn	**Pn**		**16 41 44.0**	**-1.6**
IKRK				Sn	**Sg**		**16 42 11.4**	**+2.0**
IKRK				AML	AML		16 42 12.7	
	comp=N,757nm,0.4s							
IKRK				AML	AML		16 42 13.1	
	comp=E,758nm,0.6s							
MSL	**Mosul**	**1.78**	**252**	*e*Pg	**Pn**		**16 41 47.5**	**+1.0**
	baz=70							
MSL				*e*Sg	**Sb**		**16 42 11.3**	**+0.6**
MSL				AML	AML		16 42 11.9	
	comp=E,689nm,0.4s							
MSL				AML	AML		16 42 12.8	
	comp=N,741nm,0.4s							
MSL	**Mosul**	**1.78**	**252**	*e*Pn	**Pn**		**16 41 47.5**	**+1.0**
IMRD	**Marand**	**1.79**	**12**	*e*Pg	**Pb**		**16 41 47.7**	**-0.7**
IMRD				*e*			16 41 55.5	
TVRZ	**Varzaqan**	**1.93**	**36**	*e*	**Sg**		**16 42 21.7**	**+5.1**
IHRS	**Heris**	**1.99**	**46**	*e*Pn	**Pn**		**16 41 49.6**	**-0.1**
IHRS				*e*			16 41 52.6	
AHAR	**Ahar**	**2.12**	**43**	*e*	**Sg**		**16 42 25.0**	**+2.4**
TVAN	**Van**	**2.12**	**318**	*e*P	**Pb**		**16 41 53.6**	**-0.4**
TVAN	**Van**	**2.12**	**318**	*i* P	**Pg**		**16 41 55.4**	**+0.2**
TVAN				IAML			16 42 31.0	
	comp=N,102nm,0.7s							
TVAN				IAML			16 42 46.0	
	comp=E,86nm,0.8s							
ISRB	**Sarab**	**2.14**	**65**	*e*Pn	**Pb**		**16 41 53.2**	**-1.1**
ISRB				*e*			16 42 27.3	
GEVA	**Gevas**	**2.18**	**309**	*e*P	**Pg**		**16 41 56.1**	**-0.2**
GEVA				*e*S	**Sg**		**16 42 23.9**	**-0.6**
GEVA				IAML			16 42 36.7	
	comp=Z,40nm,0.7s							
GEVA	**Gevas**	**2.18**	**309**	*i* P	**Pb**		**16 41 54.7**	**-0.2**
GEVA				IAML			16 42 31.0	
	comp=N,73nm,0.9s							
GEVA				IAML			16 42 33.0	
	comp=E,84nm,1.1s							
VANB	**Van**	**2.18**	**319**	*e*P	**Pb**		**16 41 53.8**	**-1.1**
VANB	**Van**	**2.18**	**319**	*e*Pn	**Pb**		**16 41 53.8**	**-1.1**
AKDM	**Akdamar-Van**	**2.23**	**308**	*e*P	**Pb**		**16 41 54.8**	**-1.1**
SIRT	**Sirnak**	**2.27**	**285**	*e*P	**Pn**		**16 41 52.9**	**-0.5**
SIRT	**Sirnak**	**2.27**	**285**	*e*Pn	**Pn**		**16 41 52.8**	**-0.6**
CLDR	**Caldiran**	**2.41**	**335**	*e*P	**Pb**		**16 41 59.2**	**+0.3**
MAKU	**Maku**	**2.43**	**350**	*e*Pn	**Pb**		**16 41 57.1**	**-2.1**
IDHR	**Dehrash**	**2.45**	**157**	*e*Pn	**Pn**		**16 41 57.2**	**+1.3**
IDHR				*e*			16 42 42.4	
ZNJK	**Zanjan**	**2.81**	**95**	*e*Pn	**Pb**		**16 42 03.6**	**-2.1**
SRTM	**Siirt_Merkez**	**2.81**	**293**	*i* P	**Pb**		**16 42 05.3**	**-0.4**
SRTM				*i* S	**Sg**		**16 42 45.5**	**+0.7**
SRTM				IAML			16 42 50.0	
	comp=E,88nm,1.1s							
SRTM				IAML			16 42 59.0	
	comp=N,119nm,0.7s							
GRMI	**Germi**	**2.81**	**48**	*e*Pn	**Pb**		**16 42 03.0**	**-2.8**
DYDN	**Diyadin**	**2.84**	**336**	*e*P	**Pn**		**16 42 01.2**	**-0.2**
GURO	**Guroymak-BITLI**	**2.98**	**303**	*e*P	**Pn**		**16 42 04.3**	**+1.2**
TASB	**TASBURUN-IGDIR**	**3.12**	**346**	*e*P	**Pb**		**16 42 09.6**	**-1.2**
AGRB	**Hanur-Agry**	**3.14**	**327**	*e*P	**Pb**		**16 42 08.6**	**-2.8**
IKOM	**Komasi**	**3.35**	**145**	*e*Pn	**Pn**		**16 42 09.3**	**+1.0**
SVAN	**Sivan-Diyarba**	**3.40**	**292**	*e*P	**Pn**		**16 42 09.2**	**+0.3**
MUSM	**Mu-Merkez**	**3.42**	**302**	*e*P	**Pb**		**16 42 15.9**	**-0.1**
EATA	**Eleskirt**	**3.60**	**324**	*e*P	**Pb**		**16 42 15.6**	**-3.7**
QABG	**Abgarm-Qazvin**	**3.75**	**108**	*e*Pn	**Pn**		**16 42 14.0**	**+0.2**
MAZI	**Mazidag**	**3.83**	**279**	*e*P	**Pn**		**16 42 14.2**	**-0.7**
KOPR	**Koprukoy-ERZUR**	**4.01**	**320**	*e*P	**Pn**		**16 42 20.6**	**+3.2**
IKFM	**Kafar-mosalman**	**4.05**	**147**	*e*Pn	**Pn**		**16 42 19.2**	**+1.5**
DYBB	**Diyarbakir**	**4.15**	**285**	*e*P	**Pn**		**16 42 19.3**	**+0.1**
QALM	**Alamut, Qazvin**	**4.40**	**95**	*e*Pn	**Pn**		**16 42 23.5**	**+0.7**
SVRC	**Sivrice-ELAZID**	**4.89**	**289**	*e*P	**Pn**		**16 42 30.1**	**+0.6**
PTK	**Pertek**	**4.99**	**295**	*e*P	**Pn**		**16 42 31.9**	**+1.1**
URFA	**Urfa**	**5.12**	**277**	*e*P	**Pn**		**16 42 32.3**	**-0.3**
MALT	**Malatya**	**5.55**	**286**	*e*P	**Pn**		**16 42 39.2**	**+0.8**

DSN ***12*** *16:42:19.8±1.7,28.°28N×58.°96E,h10km, ML4.5/7, Error ellipse: s-maj=53.7km s-min=12.1km az=143.0*
THR ***12*** *16:42:21.7±0.6,28.°40N×58.°22E,h15km, ML4.3*
IDC ***12*** *16:42:22.1±0.9,28.°27N×58.°33E,h0km, mb3.9/13, mb1 4.0/16, mb1mx3.7/48, mbtmp3.9/16, ML4.4/3, MS3.1/5, Ms1 3.1/5, ms1mx2.7/43, Error ellipse: s-maj=18.5km s-min=16.4km az=113.0*
TEH ***12*** *16:42:22.9,28.°44N×58.°36E,h10km, ML4.3*
OMAN ***12*** *16:42:23.2±17.0,28.°49N×58.°69E,h48km±36km, ml4.0/10, Error ellipse: s-maj=253.2km s-min=20.0km az=332.0*
NEIC ***12*** *16:42:23.7±1.2,28.°29N±0.°07×58.°18E±0.°09,h10km±1km, mb4.1/6, Error ellipse: s-maj=15.1km s-min=10.8km az=125.0*

ISC 12 16:42:23.3±0.6,28.°36N±0.°03×58.°26E±0.°05,h10km,n93, σ1°§60/96,mb4.0/13,MS3.2/5,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CHMN	**Cheshme madani**	**1.62**	**337**	*e*Pg	**Pn**		**16 42 51.6**	**-0.7**
CHMN				*e*Sg	**Sn**		**16 43 13.3**	**-0.2**
IBND	**Bandar-abas**	**1.77**	**240**	*e*Pn	**Pb**		**16 42 57.3**	**+1.4**
IBND				*e*			16 43 30.4	
NGRK	**Negar Kerman**	**1.85**	**314**	*e*Pn	**Pn**		**16 42 55.8**	**+0.3**
NGRK				*e*			16 43 21.4	
GENO	**Geno**	**2.08**	**243**	*e*Pn	**Pb**		**16 43 01.8**	**+0.5**
GENO				*e*			16 43 40.8	
BNDS	**Bandar-Abbas**	**2.08**	**243**	*e*Pn	**Pn**		**16 42 58.2**	**-0.3**
BNDS	**Bandar-Abbas**	**2.08**	**243**	*e*Pn	**Pn**		**16 42 58.2**	**-0.3**
KRBR	**Kerman**	**2.08**	**321**	IAML			16 43 26.1	
	comp=E,2μm,0.3s							
TVBK	**TV Kerman**	**2.09**	**321**	*e*Pn	**Pn**		**16 42 59.8**	**+1.1**
TVBK				*e*			16 43 31.7	
ZHSF	**Zahedan**	**2.53**	**60**	*e*Pn	**Pn**		**16 43 05.0**	**+0.4**
ZHSF	**Zahedan**	**2.53**	**60**	*e*Pn	**Pn**		**16 43 05.0**	**+0.4**
KHGB	**Koh Gabri**	**2.54**	**323**	*e*			16 43 45.8	
KHGB				*e*Pn	**Pb**		**16 43 07.5**	**-1.7**
SHME	**Shamm**	**2.98**	**220**	*i* P	**Pn**		**16 43 12.7**	**+2.1**
	SNR=24							
SHME	**Shamm**	**2.98**	**220**	*e*Pn	**Pn**		**16 43 12.8**	**+2.1**
BANOM	**Banah**	**2.99**	**216**	*i* P	**Pn**		**16 43 12.7**	**+1.9**
	SNR=136							
BANOM				S	**Sb**		**16 43 52.7**	**-0.6**
BANOM	**Banah**	**2.99**	**216**	P	**Pn**		**16 43 12.7**	**+1.9**
BANOM				S	**Sb**		**16 43 52.8**	**-0.6**
BANOM	**Banah**	**2.99**	**216**	*e*Pn	**Pn**		**16 43 12.6**	**+1.8**
CHBR	**Chabahar**	**3.39**	**144**	*e*Pn	**Pn**		**16 43 16.6**	**+0.3**
CHBR	**Chabahar**	**3.39**	**144**	*e*Pn	**Pn**		**16 43 16.6**	**+0.3**
NHDH	**Nekbandan**	**3.40**	**27**	*e*Pn	**Pn**		**16 43 17.0**	**+0.5**
LAR1	**LAR**	**3.51**	**260**	*e*Pn	**Pn**		**16 43 20.7**	**+2.8**
MDH	**Madha**	**3.52**	**210**	*i* P	**Pn**		**16 43 17.8**	**-0.2**
	SNR=12							
MDH	**Madha**	**3.52**	**210**	P	**Pn**		**16 43 18.3**	**+0.3**
MDH				S	**Sn**		**16 44 01.1**	**+1.4**
MDH	**Madha**	**3.52**	**210**	*e*Pn	**Pn**		**16 43 18.3**	**+0.3**
MSFE	**Esma-Masafi**	**3.53**	**213**	*i* P	**Pn**		**16 43 18.9**	**+0.7**
	SNR=9.9							
MSFE	**Esma-Masafi**	**3.53**	**213**	*e*Pn	**Pn**		**16 43 20.2**	**+2.0**
UMQ	**Umm Al-Quwin**	**3.65**	**220**	*e*Pn	**Pn**		**16 43 22.6**	**+2.7**
BSRN	**Basiran**	**3.67**	**12**	*e*Pn	**Pn**		**16 43 19.4**	**-0.9**
BSRN	**Basiran**	**3.67**	**12**	*e*Pn	**Pn**		**16 43 19.4**	**-0.9**
UOSS	**Minazif**	**3.87**	**209**	*i* P	**Pn**		**16 43 23.0**	**+0.2**
	SNR=8.7							
UOSS	**Minazif**	**3.87**	**209**	P	**Pn**		**16 43 22.9**	**+0.1**
UOSS	**Minazif**	**3.87**	**209**	*e*Pn	**Pn**		**16 43 23.0**	**+0.2**
UOSS	**Minazif**	**3.87**	**209**		**Pn**		**16 43 23.0**	**+0.2**
HATD	**Hatta, Dubai**	**4.00**	**209**	P	**Pn**		**16 43 24.2**	**-0.6**
HATD	**Hatta, Dubai**	**4.00**	**209**	P	**Pn**		**16 43 25.1**	**+0.4**
HATD	**Hatta, Dubai**	**4.00**	**209**	*e*Pn	**Pn**		**16 43 25.3**	**+0.6**
NAZ	**Nazwa, Dubai**	**4.08**	**215**	P	**Pn**		**16 43 26.2**	**+0.3**
NAZ	**Nazwa, Dubai**	**4.08**	**215**	*e*Pn	**Pn**		**16 43 28.7**	**+2.9**
IKOO	**Kooshah**	**4.10**	**9**	*e*Pn	**Pn**		**16 43 26.4**	**+0.1**
IKOO				*e*			16 44 35.1	
JHRM	**Jahrom**	**4.13**	**273**	*e*Pn	**Pn**		**16 43 28.8**	**+2.3**
ASHO	**Ashiyiah**	**4.16**	**209**	*i* P	**Pn**		**16 43 28.0**	**+1.1**
	SNR=32							
ASHO	**Ashiyiah**	**4.16**	**209**	P	**Pn**		**16 43 29.6**	**+2.8**
	SNR=20							
ASHO	**Ashiyiah**	**4.16**	**209**	*e*Pn	**Pn**		**16 43 28.5**	**+1.6**
IMEH	**Mehriz**	**4.38**	**315**	*e*Pn	**Pn**		**16 43 32.0**	**+1.9**
SOHO	**SOHO**	**4.49**	**201**	P	**Pn**		**16 43 30.6**	**-0.7**
	SNR=32							
SOHO	**SOHO**	**4.49**	**201**	*e*Pn	**Pn**		**16 43 30.7**	**-0.7**
ITEG	**Tejag**	**4.54**	**5**	*e*Pn	**Pn**		**16 43 32.7**	**+0.4**
ITEG				*e*			16 45 00.7	
BIDO	**Bidbid**	**4.82**	**181**	P	**Pn**		**16 43 35.8**	**-0.1**
BIDO				S	**Sn**		**16 44 31.5**	**-0.3**
BIDO	**Bidbid**	**4.82**	**181**	*e*Pn	**Pn**		**16 43 35.8**	**-0.1**
HOQ	**Hoqain**	**4.83**	**190**	P	**Pn**		**16 43 35.4**	**-0.8**
	SNR=31							
ALNE	**Al Ain**	**4.84**	**208**	*i* P	**Pn**		**16 43 37.8**	**+1.5**
	SNR=5.4							
TPRV	**Parvadeh(Tabas**	**4.85**	**344**	*e*Pn	**Pn**		**16 43 38.1**	**+1.7**
AFRZ	**Afriz**	**5.09**	**7**	*e*Pn	**Pn**		**16 43 40.0**	**+0.2**
WSAR	**Wadi Sarin**	**5.11**	**176**	Pn	**Pn**		**16 43 40.4**	**+0.5**
	comp=E,61nm,0.3s,baz=9.9,slow=12,SNR=511							
WSAR				Sn	**Sn**		**16 44 37.5**	**-1.5**
	comp=E,15nm,0.3s,baz=357,slow=11,SNR=12							
WSAR	**Wadi Sarin**	**5.11**	**176**	P	**Pn**		**16 43 40.3**	**+0.3**
WSAR				S	**Sn**		**16 44 39.1**	**+0.1**
ARAQ	**Araqi**	**5.24**	**198**	P	**Pn**		**16 43 44.0**	**+2.2**
SMDO	**Samad**	**5.28**	**182**	P	**Pn**		**16 43 43.0**	**+0.7**
	SNR=19							
TKDS	**Koohdasht(Taba**	**5.33**	**350**	*e*Pn	**Pn**		**16 43 45.1**	**+2.1**
WBK	**Wadi Bani Khal**	**5.76**	**173**	P	**Pn**		**16 43 49.2**	**+0.3**
WBK				S	**Sn**		**16 44 53.7**	**-1.4**
IRAM	**Ramesheh**	**6.15**	**305**	*e*Pn	**Pn**		**16 43 57.0**	**+2.6**
ANAR	**Anarak**	**6.20**	**322**	*e*Pn	**Pn**		**16 43 56.3**	**+1.3**
UMZA	**Um Al Zommool**	**6.28**	**207**	*e*Pn	**Pn**		**16 43 57.0**	**+1.0**
KLNJ	**Kolanjah**	**6.38**	**296**	*e*Pn	**Pn**		**16 44 00.7**	**+3.1**
GHWR	**Ruwais**	**6.53**	**229**	*e*Pn	**Pn**		**16 44 00.3**	**+0.9**
HRA	**Herat**	**6.91**	**29**		**Pn**		**16 44 06.6**	**+1.8**
MHTO	**MHTO**	**7.34**	**182**	P	**Pn**		**16 44 12.3**	**+1.6**
JHBN	**Jahan bin**	**7.62**	**302**	*e*Pn	**Pn**		**16 44 16.9**	**+2.2**
IPAY	**Payeh**	**8.09**	**4**	*e*Pn	**Pn**		**16 44 23.1**	**+2.0**
IAKL	**Akhelmad**	**8.23**	**3**	*e*Pn	**Pn**		**16 44 24.5**	**+1.5**
GEYT	**Alibeck**	**9.55**	**359**	Pn	**Pn**		**16 44 42.4**	**+1.6**
	comp=E,0.2nm,0.3s,baz=165,slow=12,SNR=2.6							
GEYT				Lg	Lg		16 47 26.0	
	comp=E,0.3nm,0.3s,baz=185,slow=26,SNR=1.7							
GEYT				LR	LR		16 48 12.5	
	comp=E,37nm,20.5s,baz=25,slow=36							
RAYN	**Ar Rayn**	**12.45**	**250**			**Pn**	**16 45 18.4**	**-2.3**
ASF	**Jabal al Asfar**	**18.84**	**287**	P		**Pn**	**16 46 44.8**	**+0.8**
	comp=E,0.8nm,0.3s,baz=33,slow=14,SNR=4.9							
ASF				S		**Sn**	**16 50 06.0**	**-8.9**
	comp=E,0.4nm,0.3s,baz=254,slow=4.0,SNR=3.0							
AAK	**Ala-Archa**	**19.38**	**38**	P		**Pn**	**16 46 50.3**	**-0.3**
	comp=E,0.5nm,0.3s,baz=223,slow=8.1,SNR=6.5							
AAK	**Ala-Archa**	**19.38**	**38**	P		**Pn**	**16 46 51.0**	**+0.5**
AAK				IAmb		IAmb	16 47 37.9	
	comp=Z,5.7nm,0.8s							
MMAI	**Mount Meron Ar**	**20.19**	**289**	P		Pn	16 47 00.4	+0.3
	comp=Z,2.1nm,0.6s,baz=102,slow=13,SNR=3.2							
EIL	**Elat**	**20.43**	**279**	P		Pn	16 47 03.6	+0.8
	comp=Z,4.5nm,0.7s,baz=5.2,slow=2.2,SNR=4.2							
EIL				LR		LR	16 56 56.3	
	comp=Z,93nm,18.1s,baz=106,slow=43							
KDJ	**Kajisay**	**20.61**	**43**	P		Pn	16 47 04.3	-0.9
KDJ				IAmb		IAmb	16 47 06.5	
	comp=Z,8.4nm,1.1s							
AKTO	**Aktyubinsk**	**22.05**	**360**	P		**P**	**16 47 18.6**	**+0.6**
	comp=Z,5.7nm,0.6s,baz=176,slow=8.5,SNR=15							
AKTO				LR		LR	16 57 09.5	
	comp=Z,40nm,18.6s,baz=173,slow=40							
BRTR	**Keskin Array B**	**23.27**	**306**	P		**P**	**16 47 32.0**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=119,slow=10.0,SNR=6.9							
BVAR	**Borovoye Array**	**26.23**	**17**	P		**P**	**16 47 59.4**	**+1.2**
	comp=Z,5.5nm,0.9s,baz=201,slow=7.9,SNR=24							
BRVK	**Borovoye**	**26.23**	**17**	P		**P**	**16 48 00.1**	**+1.9**
BRVK				IAmb		IAmb	16 48 01.7	
	comp=Z,3.8nm,0.9s							
MK31	**Makanchi Array**	**26.31**	**39**	P		**P**	**16 48 00.3**	**+1.1**
MKAR	**Makanchi Array**	**26.31**	**39**	P		**P**	**16 48 00.5**	**+1.3**
	comp=Z,1.0nm,0.7s,baz=228,slow=11,SNR=5.2							
MKAR				LR		LR	16 59 26.9	
	comp=Z,44nm,20.1s,baz=112,slow=39							
VTS	**

HAWA	**Hanford**	**6.56**	**63**		**Pn**	**Pn**	**16 47 26.0 +0.1**
B06A	**Marblemount**	**6.60**	**41**	Pn	**Pn**	**Pn**	**16 47 26.3 0.0**
G08A	**Pilot Rock**	**6.64**	**73**		**Pn**	**Pn**	**16 47 26.7 -0.4**
E08A	**Dider Farm, El**	**6.90**	**63**		**Pn**	**Pn**	**16 47 30.6 +0.1**
J08A	**Circle Bar Ran**	**6.92**	**90**	Pn	**Pn**	**Pn**	**16 47 30.3 -0.6**
WVOR	**Wild Horse Val**	**6.96**	**97**	Pn	**Pn**	**Pn**	**16 47 30.4 -1.1**
AFDM	**Forest Hills D**	**7.10**	**130**			**Pn**	**16 47 35.1 +1.8**
D08A	**Wollman Farm,**	**7.21**	**59**			**Pn**	**16 47 34.9 +0.2**
E09A	**Wood Farm, Sta**	**7.50**	**65**			**Pn**	**16 47 38.4 -0.4**
B08A	**Colville Reser**	**7.61**	**49**			**Pn**	**16 47 39.4 -0.9**
BMO	**Blue Mountains**	**7.75**	**78**			**Pn**	**16 47 41.4 -0.8**
PNTR	**Pine Nut**	**7.80**	**123**			**Pn**	**16 47 45.2 +2.0**
C09A	**Chrisman Ranch**	**7.93**	**56**			**Pn**	**16 47 44.6 0.0**
F10A	**Beach Ranch, E**	**7.97**	**70**			**Pn**	**16 47 44.9 -0.4**
LLLB	**Lillooet**	**8.06**	**29**			**Pn**	**16 47 47.0 +0.6**
CMB	**Columbia Colle**	**8.07**	**132**	Pn		**Pn**	**16 47 49.0 +2.3**
YERR	**Yerington**	**8.09**	**123**			**Pn**	**16 47 48.5 +1.5**
WAKR	**Walker**	**8.28**	**126**			**Pn**	**16 47 52.2 +2.5**
BBB	**Bella Bella**	**8.49**	**359**	Pn		**Pn**	**16 47 52.2 0.0**
	0.7nm,0.3s,baz=183,slow=13,SNR=7.1						
BBB				Sn		**Sn**	**16 49 25.6 -2.4**
	0.3nm,0.3s,baz=293,slow=4.0,SNR=1.6						
BBB				LR		LR	16 49 54.0
	comp=Z,38nm,20.1s,baz=170,slow=29						
BBB	**Bella Bella**	**8.49**	**359**	Pn		**Pn**	**16 47 54.0 +1.8**
NEW	**Newport**	**8.82**	**55**	Pn		**Pn**	**16 47 56.7 -0.3**
	1.1nm,0.3s,baz=273,slow=4.7,SNR=11						
NEW				LR		LR	16 51 19.9
	comp=Z,275nm,20.1s,baz=252,slow=38						
NEW	**Newport**	**8.82**	**55**	P		**Pn**	**16 47 56.5 -0.5**
	baz=243						
NEW	**Newport**	**8.82**	**55**			**Pn**	**16 47 56.4 -0.5**
NVAR	**Mina Array Bea**	**9.01**	**123**	Pn		**Pn**	**16 48 02.0 +2.4**
	0.2nm,0.3s,baz=297,slow=13,SNR=11						
NVAR				LR		LR	16 51 26.2
	comp=Z,222nm,18.8s,baz=334,slow=37						
MSO	**Missoula**	**10.38**	**68**	P		**Pn**	**16 48 17.6 -0.7**
	baz=258						
MSO	**Missoula**	**10.38**	**68**			**Pn**	**16 48 17.6 -0.7**
ISA	**Isabella, Lake**	**10.86**	**134**			**Pn**	**16 48 25.8 +0.9**
WALA	**Waterton Lakes**	**11.09**	**56**			**Pn**	**16 48 28.4 +0.4**
GSC	**Goldstone, Bar**	**12.03**	**130**	Pn		**Pn**	**16 48 42.6 +1.7**
YHL	**Hebgen Lake**	**12.10**	**79**			**Pn**	**16 48 43.3 +1.3**
YHH	**Holmes Hill**	**12.34**	**79**			**Pn**	**16 48 44.8 -0.5**
PDAR	**Pinedale Array**	**13.47**	**88**	Pn		**Pn**	**16 49 03.6 +3.0**
	0.0nm,0.3s,baz=277,slow=12,SNR=8.2						
PFO	**Pinyon Flats O**	**13.50**	**134**	Pn		**Pn**	**16 49 03.8 +2.8**
	0.1nm,0.3s,baz=259,slow=6.6,SNR=2.4						
PFO				LR		LR	16 53 58.8
	comp=Z,140nm,19.2s,baz=286,slow=36						
DLBC	**Dease Lake**	**14.81**	**356**	Pn		**Pn**	**16 49 18.9 +0.2**
	0.1nm,0.3s,baz=208,slow=14,SNR=2.7						
SDCO	**Great Sand Dun**	**18.02**	**102**	P		**P**	**16 50 01.5 +0.8**
YAH	**Yahtse**	**18.64**	**338**	P		**P**	**16 50 05.3 -1.9**
YAH				IAmb		IAmb	16 50 19.3
	comp=Z,17nm,1.2s						
ANMO	**Albuquerque**	**18.77**	**110**	LR		LR	16 56 53.5
	comp=Z,65nm,21.5s,baz=292,slow=36						
CTGM	**Chitina Glacie**	**19.05**	**340**	P		**P**	**16 50 10.9 -0.7**
CTGM				IAmb		IAmb	16 50 21.7
	comp=Z,11nm,1.1s						
BARN	**Barnard Glacie**	**19.21**	**340**	P		**P**	**16 50 13.8 +0.4**
BALM	**Baldy**	**19.37**	**339**	P		**P**	**16 50 15.1 0.0**
BALM				IAmb		IAmb	16 50 31.7
	comp=Z,15nm,1.6s						
MCARA	**McCarthy VSAT**	**19.84**	**338**	P		**P**	**16 50 20.5 +0.4**
GLB	**Gilahina Butte**	**20.10**	**338**	P		**P**	**16 50 23.8 +0.8**
FFC	**Flin Flon**	**20.12**	**48**	P		**P**	**16 50 22.9 -0.4**
YKA	**Yellowknife Ar**	**20.38**	**18**	P		**P**	**16 50 25.5 -0.5**
	comp=Z,1.6nm,0.8s,baz=204,slow=11,SNR=6.0						
BRLK	**Bradley Lake**	**21.27**	**327**	P		**P**	**16 50 35.9 +0.3**
BRLK				IAmb		IAmb	16 50 36.5
	comp=Z,11nm,1.0s						
SCM	**Sheep Creek Mo**	**21.45**	**335**	P		**P**	**16 50 37.5 0.0**
SCM				IAmb		IAmb	16 51 03.9
	comp=Z,15nm,1.3s						
KNK	**Knik Glacier**	**21.50**	**333**	P		**P**	**16 50 37.7 -0.4**
KNK				IAmb		IAmb	16 50 39.6
	comp=Z,14nm,1.3s						
SML	**Sawmill**	**21.75**	**334**	P		**P**	**16 50 40.4 -0.4**
SML				IAmb		IAmb	16 50 46.3
	comp=Z,8.8nm,1.1s						
PMR	**Palmer**	**21.86**	**332**	P		**P**	**16 50 41.5 -0.3**
PMR				IAmb		IAmb	16 50 43.0
	comp=Z,8.7nm,1.2s						
GHO	**Glory Hole Cre**	**21.92**	**333**	P		**P**	**16 50 42.6 0.0**
GHO				IAmb		IAmb	16 50 59.5
	comp=Z,9.4nm,1.0s						
DHY	**Denali Highway**	**22.42**	**337**	P		**P**	**16 50 47.9 -0.1**
DHY				IAmb		IAmb	16 51 01.4
	comp=Z,8.7nm,1.2s						
RSO	**Redoubt South**	**22.43**	**327**	P		**P**	**16 50 48.7 +0.4**
AGMN	**Agassiz Nation**	**22.68**	**67**	P		**P**	**16 50 50.0 -0.8**
AGMN				IAmb		IAmb	16 50 59.3
	comp=Z,9.0nm,0.9s						
ULM	**Lac du Bonnet**	**22.74**	**62**	P		**P**	**16 50 50.6 -0.8**
	comp=Z,12nm,0.8s,baz=282,slow=8.7,SNR=8.7						
ULM				LR		LR	16 59 55.7
	comp=Z,132nm,19.5s,baz=302,slow=38						
ULM	**Lac du Bonnet**	**22.74**	**62**	P		**P**	**16 50 50.1 -1.2**
ILAR	**Eielson Array**	**23.64**	**340**	P		**P**	**16 51 00.0 -0.4**
	comp=Z,0.5nm,0.7s,baz=149,slow=9.1,SNR=8.6						
PPLA	**Purkeypile**	**23.79**	**332**	P		**P**	**16 51 02.1 0.0**
PPLA				IAmb		IAmb	16 51 06.8
	comp=Z,8.0nm,1.0s						
SVW2	**Sparrevohn**	**23.93**	**326**	P		**P**	**16 51 02.6 -0.7**
NEA	**Nenana**	**24.06**	**338**	P		**P**	**16 51 04.4 -0.1**
TXAR	**Lajitas Array**	**24.12**	**118**	P		**P**	**16 51 05.5 +0.1**
	comp=Z,0.3nm,0.6s,baz=321,slow=7.0,SNR=2.8						
WMOK	**Wichita Mounta**	**24.23**	**102**	P		**P**	**16 51 05.6 -0.7**
WMOK				IAmb		IAmb	16 51 17.9
	comp=Z,6.7nm,1.1s						
BPAW	**Bear Paw Mtn.**	**24.26**	**335**	P		**P**	**16 51 05.2 -1.1**
INK	**Inuvik**	**24.84**	**355**	P		**P**	**16 51 11.7 +0.3**
	comp=Z,0.9nm,0.7s,baz=154,slow=6.5,SNR=4.1						
INK	**Inuvik**	**24.84**	**355**	IAmb		IAmb	16 51 25.7
	comp=Z,7.6nm,1.4s						
SCHQ	**Schefferville**	**40.18**	**52**	LR		LR	17 10 08.5
	comp=Z,46nm,18.1s,baz=287,slow=36						
H11N3	**WAKE ISLAND Hy**	**58.77**	**268**	T		T	17 59 08.3
	baz=49,slow=75,SNR=318						
H11N2	**WAKE ISLAND Hy**	**58.77**	**268**	T		T	17 59 00.9
	baz=49,slow=75,SNR=289						
H11N1	**WAKE ISLAND Hy**	**58.79**	**268**	T		T	17 59 06.1
	baz=49,slow=75,SNR=190						
H11S1	**WAKE ISLAND Hy**	**59.70**	**267**	T		T	18 00 15.3
	baz=50,slow=75,SNR=201						
H11S2	**WAKE ISLAND Hy**	**59.70**	**267**	T		T	18 00 23.8
	baz=50,slow=75,SNR=84						
H11S3	**WAKE ISLAND Hy**	**59.71**	**267**	T		T	18 00 15.0
	baz=50,slow=75,SNR=138						
ZALV	**Zalesovo Beam**	**78.75**	**341**	LR		LR	17 36 27.3
	comp=Z,21nm,18.5s,baz=51,slow=39						
HHC	**Hu-ho-hao-te**	**80.23**	**318**	*eP*		**P**	**16 58 00.4 +0.2**
HHC				pmax		pmax	
	comp=Z,6.0nm,0.6s						
HHC				pmax		pmax	
	comp=Z,62nm,6.6s						
GERES	**GERESS Array B**	**81.89**	**24**	P		**P**	**16 58 08.8 -0.1**
	comp=Z,0.1nm,0.3s,baz=320,slow=4.5,SNR=1.7						
KURK	**Kurchatov**	**83.15**	**343**	P		**P**	**16 58 17.2 +1.9**
KURBB	**Kurchatov Arra**	**83.26**	**343**	P		**P**	**16 58 17.2 +1.4**
	comp=Z,0.5nm,0.6s,baz=20,slow=4.6,SNR=4.2						
WMQ	**Urumqi**	**87.21**	**335**	*eP*		**P**	**16 58 37.1 +1.2**
WMQ				pmax		pmax	
	comp=Z,16nm,0.7s						
LZH	**Lanzhou**	**87.67**	**320**	*eP*		**P**	**16 58 36.8 -1.5**
LZH				pP		PcP	16 58 41.4 +1.1
LZH				sP		pwP	16 58 44.5 -0.3
LZH				PP		**PP**	**17 02 01.1 -1.7**
LZH				pmax		pmax	
	comp=Z,27nm,1.3s						
LZH				pmax		pmax	
	comp=Z,120nm,4.9s						
KSH	**Kashi**	**94.38**	**342**	P		**P**	**16 59 07.6 -1.8**
KSH				pP		sP	16 59 14.2 +1.6
KSH				sP		pwP	16 59 16.8 +0.9
KSH				pmax		pmax	
	comp=Z,16nm,1.2s						
KSH				pmax		pmax	
	comp=Z,110nm,4.4s						

KRSC ***12*** *16:59:01.5±1.2,54.°14N×159.°73E,h148km±12km,ML3.7*

IDC ***12*** *16:59:03.9±1.0,54.°29N×159.°11E,h150km±11km, mb3.1/11,mb1 3.4/13,mb1mx3.2/39,mbtmp3.7/13,Error ellipse: s-maj=17.0km s-min=16.1km az=106.0*

ISC 12 16:59:02.9±0.7,54.°18N±0.°04×159.°55E±0.°06,h144km±6km, n51,σ1s11/74,mb3.5/11,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.15**	**203**	*eP*		**Pn**	**16 59 22.2**	**-0.2**
KRX	**Arik**	**0.98**	**214**	*eP*		**Pn**	**16 59 27.7**	**+0.7**
KRX				*eS*		**Sn**	**16 59 47.1**	**+1.7**
SDLR	**Sedlovina**	**0.98**	**204**	*eP*		**Pn**	**16 59 27.3**	**+0.2**
SDLR				*eS*		**Sn**	**16 59 45.8**	**+0.4**
KRER	**Koryakskii**	**1.00**	**209**	*eP*		**Pn**	**16 59 27.8**	**+0.5**
KRER				*eS*		**Sn**	**16 59 46.3**	**+0.5**
NLC	**Nalytchevo**	**1.01**	**187**	*eP*		**Pn**	**16 59 27.0**	**-0.1**
NLC				*eS*		**Sn**	**16 59 45.3**	**-0.3**
SMAR	**Somma**	**1.02**	**206**	*eP*		**Pn**	**16 59 27.7**	**+0.2**
SMAR				*eS*		**Sn**	**16 59 46.6**	**+0.5**
KZV	**Kizimen**	**1.03**	**24**	*eP*		**Pn**	**16 59 27.4**	**-0.1**
KZV				*eS*		**Sn**	**16 59 45.7**	**-0.6**
AVH	**Avacha**	**1.03**	**208**	*eP*		**Pn**	**16 59 28.2**	**+0.8**
AVH				*eS*		**Sn**	**16 59 47.8**	**+1.7**
KOK	**Koryaka**	**1.04**	**212**	*eP*		**Pn**	**16 59 28.3**	**+0.8**
KOK				*eS*		**Sn**	**16 59 47.8**	**+1.6**
UGLR	**Uglovaya**	**1.06**	**204**	*eP*		**Pn**	**16 59 28.1**	**+0.4**
UGLR				*eS*		**Sn**	**16 59 47.5**	**+0.9**
SPN	**Mys Shipunski**	**1.12**	**165**	*eP*		**Pn**	**16 59 27.2**	**-0.9**
SPN				*eS*		**Sn**	**16 59 45.1**	**-2.2**
TUMD	**Tumrok D**	**1.14**	**25**	*eP*		**Pn**	**16 59 28.2**	**-0.1**
TUMR	**Tumrok**	**1.16**	**17**	*eP*		**Pn**	**16 59 29.0**	**+0.4**
DALK	**Dalny**	**1.24**	**203**	*eP*		**Pn**	**16 59 29.4**	**+0.1**
DALK				*eS*		**Sn**	**16 59 49.6**	**+0.2**
PET	**Petropavlovsk**	**1.27**	**205**	*eP*		**Pn**	**16 59 29.8**	**+0.2**
PET				*eS*		**Sn**	**16 59 50.2**	**+0.3**
PETK	**Petropavlovsk-**	**1.54**	**227**	P		**Pn**	**16 59 32.6**	**+0.3**
	15nm,0.3s,baz=72,slow=16,SNR=540							
PETK				S		**Sn**	**16 59 55.3**	**+0.4**
	2.8nm,0.3s,baz=54,slow=16,SNR=2.3							
KRMR	**Karymshinskiy**	**1.59**	**213**	*eP*		**Pn**	**16 59 33.0**	**+0.1**
KRMR				*eS*		**Sn**	**16 59 56.1**	**+0.2**
KMNR	**Kamenistaya**	**1.63**	**14**	*eP*		**Pn**	**16 59 34.2**	**+0.8**
ESO	**Esso**	**1.82**	**345**	*eP*		**Pn**	**16 59 35.6**	**+0.1**
ESO				*eS*		**Sn**	**17 00 00.2**	**-0.4**
KPT	**Kopyto**	**1.83**	**12**	*eP*		**Pn**	**16 59 36.2**	**+0.5**
KIRR	**Kirishev**	**1.84**	**14**	*eP*		**Pn**	**16 59 36.2**	**+0.4**
GRL	**Gorelyy**	**1.85**	**209**	*eP*		**Pn**	**16 59 36.9**	**+0.9**
GRL				*eS*		**Sn**	**17 00 02.7**	**+1.3**
RUS	**Russkaya**	**1.85**	**200**	*eP*		**Pn**	**16 59 35.8**	**-0.1**
RUS				*eS*		**Sn**	**17 00 00.5**	**-0.7**
MTVR	**Mutnovka**	**1.89**	**206**	*eP*		**Pn**	**16 59 37.4**	**+1.0**
MTVR				*eS*		**Sn**	**17 00 04.2**	**+2.1**
KOZ	**Kozyrevsk**	**1.90**	**5**	*eP*		**Pn**	**16 59 37.1**	**+0.8**
APC	**Apacha**	**1.90**	**230**	*eP*		**Pn**	**16 59 37.3**	**+0.9**
APC				*eS*		**Sn**	**17 00 03.3**	**+1.2**
ZLN	**Zelenaya**	**1.98**	**21**	*eP*		**Pn**	**16 59 39.0**	**+1.6**
LGNR	**Loginova**	**2.02**	**18**	*eP*		**Pn**	**16 59 39.3**	**+1.2**
LGNR				*eS*		**Sn**	**17 00 06.7**	**+1.6**
ASAK	**Asacha**	**2.05**	**210**	*eP*		**Pn**	**16 59 39.5**	**+1.2**
CIRR	**Tsirk**	**2.06**	**19**	*eP*		**Pn**	**16 59 40.1**	**+1.7**
KRSR	**Krestovskiy**	**2.13**	**15**	*eP*		**Pn**	**16 59 39.6**	**+0.5**
SRDR	**Sredinnyy**	**2.15**	**2**	*eP*		**Pn**	**16 59 39.8**	**+0.4**
KLY	**Klyuchi**	**2.23**	**16**	*eP*		**Pn**	**16 59 41.6**	**+1.3**
KLY				*eS*		**Sn**	**17 00 10.6**	**+1.5**
KDTR	**Khodutka, Kamc**	**2.53**	**201**	*eP*		**Pn**	**16 59 43.9**	**-0.1**
KDTR				*eS*		**Sn**	**17 00 14.0**	**-1.7**
MIPR	**Malaya Ipel'ka**	**2.54**	**223**	*eP*		**Pn**	**16 59 45.6**	**+1.5**
KBG	**Krutoberegovo**	**2.76**	**40**	*eP*		**Pn**	**16 59 46.9**	**+0.1**
KBG				*eS*		**Sn**	**17 00 19.1**	**-1.6**
KBTR	**Krutoberegovo**	**2.77**	**41**	*eP*		**Pn**	**16 59 47.2**	**+0.3**
SKR	**Severo-Kuril's**	**4.08**	**212**	*eP*		**Pn**	**17 00 02.5**	**-1.4**
MA2	**Magadan**	**7.24**	**322**	P		**Pn**	**17 00 44.0**	**-1.9**
	0.2nm,0.3s,baz=127,slow=20,SNR=2.4							
YAK	**Yakutsk**	**17.50**	**309**	P		**P**	**17 02 54.2**	**-2.4**
	0.2nm,0.3s,baz=93,slow=1.3,SNR=2.5							
TIXI	**Tiksi**	**21.96**	**334**	P		**P**	**17 03 42.6**	**-2.0**
	1.7nm,0.3s,baz=114,slow=14,SNR=11							
MJAR	**Matsushiro Arr**	**23.00**	**229**	P		**P**	**17 03 54.1**	**-0.8**
	0.5nm,0.5s,baz=25,slow=9.3,SNR=1.7							
YKA	**Yellowknife Ar**	**42.59**	**43**	P		**P**	**17 06 45.2**	**+1.2**
	0.1nm,0.4s,baz=304,slow=9.3,SNR=1.7							
MKAR	**Makanchi Array**	**47.40**	**294**	P		**P**	**17 07 20.8**	**-1.5**
	0.7nm,0.5s,baz=56,slow=6.4,SNR=12							
NVAR	**Mina Array Bea**	**55.68**	**70**	P		**P**	**17 08 26.2**	**+2.1**
	0.3nm,0.5s,baz=312,slow=7.2,SNR=4.8							
PDAR	**Pinedale Array**	**57.28**	**61**	P		**P**	**17 08 36.2**	**+0.9**
	0.5nm,0.6s,baz=302,slow=3.4,SNR=5.3							
FINES	**FINESS Array B**	**59.00**	**336**	P		**P**	**17 08 45.7**	**-1.0**
	1.2nm,0.9s,baz=44,slow=11,SNR=4.2							
AKASG	**Malin Array Be**	**67.52**	**328**	P		**P**	**17 09 41.8**	**-1.2**
	0.3nm,0.3s,baz=29,slow=6.6,SNR=3.4							
TXAR	**Lajitas Array**	**70.51**	**67**	P		**P**	**17 10 04.1**	**+2.2**
	0.5nm,0.6s,baz=300,slow=6.7,SNR=6.6							
WRA	**Warramunga Arr**	**76.93**	**204**	P		**P**	**17 10 39.7**	**+0.6**
	0.2nm,0.5s,baz=21,slow=6.1,SNR=1.5							
ASAR	**Alice Springs**	**80.62**	**204**	P		**P**	**17 10 59.5**	**+0.3**
	0.2nm,0.5s,baz=15,slow=4.0,SNR=5.3							

ATH ***12*** *17:36:55.5,38.°42N×20.°50E,h15km±1km,ML2.5/7,Error ellipse: s-maj=1.9km s-min=0.6km az=269.0*
THE ***12*** *17:36:55.6,38.°41N×20.°43E,h6km±2km,ML2.4/9,Error ellipse: s-maj=2.7km s-min=0.3km az=87.0*

ISC 12 17:36:55.7±0.9,38.°42N±0.°02×20.°49E±0.°03,h10km±5km, n39,σ0s66/63,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.06**	**103**	P		**Pg**	**17 36 57.9**	**0.0**
VSK1				S		**Sg**	**17 36 59.6**	**+0.2**
	21μm,0.3s							
FSK	**Fiskardo**	**0.07**	**57**	P		**Pg**	**17 36 58.0**	**+0.1**
FSK				S		**Sg**	**17 36 59.6**	**+0.1**
	7μm,0.2s							
FSK	**Fiskardo**	**0.07**	**57**	P		**Pg**	**17 36 58.0**	**+0.1**
FSK				S		**Sg**	**17 36 59.7**	**+0.2**
FSK				AML		AML	17 36 59.8	
	comp=N,9533μm,0.2s							
FSK				AML		AML	17 36 60.0	
	comp=E,15871μm,0.1s							
KEF1	**Kardakata, Kep**	**0.14**	**186**	P		**Pg**	**17 36 59.0**	**0.0**
KEF1				S		**Sg**	**17 37 01.6**	**+0.4**
KEF4	**Livadi, Kephal**	**0.17**	**197**	P		**Pg**	**17 36 59.4**	**0.0**
KEF4				S		**Sg**	**17 37 02.7**	**+0.7**
LXRA	**Lixouri, Kepha**	**0.23**	**191**	P		**Pg**	**17 37 00.5**	**+0.1**
LXRA				S		**Sg**	**17 37 04.6**	**+1.1**
EVGI	**Lefkada island**	**0.24**	**33**	P		**Pg**	**17 37 00.8**	**+0.2**
EVGI				S		**Sg**	**17 37 04.9**	**+1.0**
EVGI	**Lefkada island**	**0.24**	**33**	P		**Pg**	**17 37 00.8**	**+0.2**
EVGI				S		**Sg**	**17 37 04.9**	**+1.0**
ARGA	**Argostoli. Kep**	**0.24**	**182**	P		**Pg**	**17 37 00.6**	**-0.2**
ARGA				S		**Sg**	**17 37 04.7**	**+0.6**
ARGA				AML		AML	17 37 05.1	
	comp=E,2978μm,0.1s							
ARGA				AML		AML	17 37 05.2	
	comp=N,3344μm,0.1s							
KEF3	**Kipouria, Keph**	**0.25**	**207**	P		**Pg**	**17 37 00.6**	**-0.1**
KEF3				S		**Sg**	**17 37 05.0**	**+0.9**
KEF2	**Argostoli. Kep**	**0.26**	**181**	P		**Pg**	**17 37 00.8**	**-0.2**
KEF2				S		**Sg**	**17 37 05.1**	**+0.6**
VLS	**Valsamata**	**0.26**	**162**	P		**Pg**	**17 37 00.8**	**-0.2**
VLS				S		**Sg**	**17 37 05.0**	**+0.5**
	comp=N,1μm,0.1s							
VLS	**Valsamata**	**0.26**	**162**	P		**Pg**	**17 37 00.8**	**-0.2**
VLS				S		**Sg**	**17 37 05.3**	**+0.9**
VLS				AML		AML	17 37 06.0	
	comp=N,1670μm,0.2s							
VLS				AML		AML	17 37 06.8	
	comp=E,3321μm,0.1s							
MGNA	**Meganis**	**0.33**	**45**	P		**Pg**	**17 37 02.4**	**0.0**
MGNA				S		**Sg**	**17 37 07.8**	**+1.0**
MGNA				AML		AML	17 37 08.0	
	comp=E,3911μm,0.1s							
MGNA				AML		AML	17 37 08.2	
	comp=N,3738μm,0.1s							
LKD2	**Lefkada island**	**0.39**	**20**	P		**Pg**	**17 37 03.3**	**-0.1**
LKD2				S		**Sg**	**17 37 09.8**	**+1.2**
	comp=N,482nm,0.2s							
LKD2	**Lefkada island**	**0.39**	**20**	P		**Pg**	**17 37 03.4**	**-0.1**
LKD2				S		**Sg**	**17 37 09.8**	**+1.2**
LKD2				AML		AML	17 37 10.7	
	comp=N,948μm,0.3s							
LKD2				AML		AML	17 37 11.1	
	comp=E,988μm,0.2s							
KFL	**Anninata**	**0.39**	**143**	P		**Pg**	**17 37 03.3**	**-0.1**
KFL				S		**Sg**	**17 37 09.5**	**+0.9**
	comp=E,1μm,0.3s							
KFL	**Anninata**	**0.39**	**143**	P		**Pg**	**17 37 03.3**	**-0.1**
KFL				S		**Sg**	**17 37 09.5**	**+0.9**
KFL				AML		AML	17 37 10.2	
	comp=E,2994μm,0.4s							
KFL				AML		AML	17 37 10.3	
	comp=N,2702μm,0.3s							
TSLK	**Tsoukalades, L**	**0.42**	**18**	P		**Pg**	**17 37 04.0**	**0.0**
TSLK				S		**Sb**	**17 37 11.2**	**-0.6**
	comp=N,520nm,0.4s							
TSLK	**Tsoukalades, L**	**0.42**	**18**	P		**Pg**	**17 37 04.1**	**0.0**
TSLK				S		**Sg**	**17 37 10.7**	**+1.1**
TSLK				AML		AML	17 37 11.8	
	comp=N,1196μm,0.2s							
TSLK				AML		AML	17 37 12.8	
	comp=E,1227μm,0.3s							
PDO	**Prodromos**	**0.57**	**72**	P		**Pg**	**17 37 06.8**	**-0.1**
RLS	**Riolos of Patr**	**0.85**	**115**	P		**Pb**	**17 37 12.4**	**-0.2**
DRO	**Drossia**	**1.07**	**116**	P		**Pb**	**17 37 15.6**	**-0.8**
DRO				S		**Sn**	**17 37 32.6**	**+0.8**
	comp=E,170nm,0.3s							
DRO	**Drossia**	**1.07**	**116**	P		**Pb**	**17 37 16.1**	**-0.2**
EFP	**Efpalio**	**1.11**	**89**	P		**Pb**	**17 37 16.0**	**-1.1**
IGT	**Igoumenitsa**	**1.11**	**354**	P		**Pb**	**17 37 16.1**	**-1.0**
IGT				S		**Sn**	**17 37 33.1**	**+0.2**
	comp=E,82nm,0.3s							
IGT	**Igoumenitsa**	**1.11**	**354**	P		**Pb**	**17 37 17.0**	**-0.1**
ANX	**Ano Chora**	**1.14**	**81**	P		**Pb**	**17 37 16.9**	**-0.6**
ANX				S		**Sn**	**17 37 34.9**	**+1.4**
	comp=E,138nm,0.5s							
ANX	**Ano Chora**	**1.14**	**81**	P		**Pb**	**17 37 17.0**	**-0.5**
EVR	**Evrytania**	**1.14**	**64**	P		**Pb**	**17 37 16.4**	**-1.3**
LAKA	**Lakka**	**1.19**	**98**	P		**Pb**	**17 37 17.3**	**-1.0**
SERG	**Sergoula**	**1.23**	**90**	P		**Pn**	**17 37 18.2**	**-0.8**
TRIZ	**Trizonia**	**1.25**	**92**	P		**Pn**	**17 37 18.2**	**-0.9**
KALE	**Kalithea**	**1.30**	**91**	P		**Pn**	**17 37 19.1**	**-0.9**
KALE				S		**Sb**	**17 37 37.3**	**+0.3**
AMT	**Artemida-Makis**	**1.31**	**132**	P		**Pn**	**17 37 19.8**	**-0.3**
KLV	**Kalavryta, Ach**	**1.36**	**106**	P		**Pn**	**17 37 20.3**	**-0.6**
KEK	**Kerkira**	**1.40**	**338**	P		**Pb**	**17 37 21.6**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.41**	**65**	P		**Pb**	**17 37 22.1**	**-0.1**
ITM	**Ithomi**	**1.68**	**137**	P		**Pb**	**17 37 27.0**	**+0.2**

JMA 12 17:43:25.0,37.°13N×139.°35E,h8km±1km,M2.7,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JHK	**Hiroka**	**0.29**	**294**	P		Pg	17 43 31.0	+0.2
JHK				S		Sg	17 43 35.1	+0.4
JKT	**Katashina**	**0.37**	**193**	P		Pg	17 43 32.4	+0.1
JKT				S		Sg	17 43 37.2	0.0
JFY	**Yanaizu**	**0.40**	**46**	P		Pg	17 43 33.0	+0.2
JFY				S		Sg	17 43 38.1	+0.1
JSB	**Shiboa**	**0.48**	**109**	P		Pg	17 43 34.8	+0.4
JSB				*eS*		Sg	17 43 41.3	+0.6
JIZZ	**Izumozaki**	**0.65**	**308**	P		Pb	17 43 38.9	+0.3
JNS	**Sasagawa**	**0.69**	**358**	P		Pg	17 43 38.1	-0.2
JNS				S		Sg	17 43 47.3	+0.1
JAG	**Ashikaga**	**0.71**	**173**	P		P

MENT	**Mentasta**	**9.03 113**	Pn	**Pn**	**18 20 35.1**	**+0.2**
GLI	**Glacier Island**	**9.44 130**	Pn	**Pn**	**18 20 41.6**	**+1.3**
CNPM	**China Poot**	**9.52 145**	Pn	**Pn**	**18 20 42.3**	**+0.8**
FID	**Port Fidalgo**	**9.72 129**	Pn	**Pn**	**18 20 44.4**	**+0.1**
DAWY	**Dawson**	**9.95 101**	Pn	**Pn**	**18 20 48.3**	**+0.9**
EPYK	**Eagle Plains**	**9.97 86**		**Pn**	**18 20 48.5**	**+0.9**
HIN	**Hinchinbrook I**	**10.00 130**	Pn	**Pn**	**18 20 49.7**	**+1.6**
GLB	**Gilahina Butte**	**10.03 120**		**Pn**	**18 20 49.9**	**+1.4**
RAGM	**Ragged Mountai**	**10.56 126**		Pn	18 21 01.8	+6.1
INK	**Inuvik**	**10.67 74**	Pn	**Pn**	**18 20 56.9**	**-0.3**
	0.8nm,0.3s,baz=290,slow=3.6,SNR=25					
INK			Sn	**Sn**	**18 22 51.2**	**-5.2**
	0.3nm,0.3s,baz=329,slow=10,SNR=6.1					
INK	**Inuvik**	**10.67 74**		**Pn**	**18 20 55.8**	**-1.4**
KDAK	**Kodiak Island**	**10.87 152**	Pn	**Pn**	**18 21 01.8**	**+1.8**
	0.4nm,0.3s,baz=48,slow=8.5,SNR=5.5					
KDAK	**Kodiak Island**	**10.87 152**		**Pn**	**18 20 58.5**	**-1.4**
BILL	**Bilibino**	**11.86 286**		Pn	18 21 07.8	-5.6
HYT	**Haines Junctio**	**12.64 111**	Pn	**Pn**	**18 21 24.3**	**+0.1**
YKU2	**Yakutat**	**12.84 119**	Pn	**Pn**	**18 21 26.0**	**-0.9**
C36M	**Paulatuk**	**13.85 66**	Pn	Pn	18 21 36.3	-4.3
DLBC	**Dease Lake**	**17.02 107**	P	**Pn**	**18 22 23.6**	**+1.2**
	0.2nm,0.3s,baz=326,slow=7.3,SNR=2.7					
DLBC	**Dease Lake**	**17.02 107**	IAmb	IAmb	18 22 54.4	
	comp=Z,17nm,1.8s					
SEY	**Seymchan**	**19.23 277**	P	**Pn**	**18 22 49.0**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=319,slow=20,SNR=1.2					
YKA	**Yellowknife Ar**	**20.21 82**	P	**P**	**18 22 59.4**	**+0.3**
	comp=Z,4.2nm,0.8s,baz=304,slow=11,SNR=24					
RES	**Resolute Bay**	**21.48 42**	P	**P**	**18 23 12.5**	**-0.2**
	comp=Z,3.6nm,1.0s,baz=290,slow=8.3,SNR=2.6					
RES			LR	LR	18 32 52.9	
	comp=Z,44nm,20.8s,baz=152,slow=41					
RES	**Resolute Bay**	**21.48 42**	P	**P**	**18 23 12.3**	**-0.4**
TIXI	**Tiksi**	**23.07 311**	P	**P**	**18 23 31.0**	**+1.4**
	comp=Z,0.6nm,0.6s,baz=88,slow=8.4,SNR=3.7					
TIXI	**Tiksi**	**23.07 311**	P	**P**	**18 23 26.0**	**-3.6**
TIXI			IAmb	IAmb	18 23 59.0	
	comp=Z,9.3nm,1.9s					
PDAR	**Pinedale Array**	**37.23 105**	P	**P**	**18 25 37.0**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=322,slow=7.3,SNR=7.5					
NVAR	**Mina Array Bea**	**37.96 118**	P	**P**	**18 25 42.7**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=319,slow=6.0,SNR=5.8					
KSRS	**Korea Array**	**48.42 268**	P	**P**	**18 27 08.1**	**+1.6**
	comp=Z,1.6nm,0.9s,baz=25,slow=7.0,SNR=4.0					
ZALV	**Zalesovo Beam**	**48.91 314**	P	**P**	**18 27 10.2**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=24,slow=8.1,SNR=4.8					
FCAR	**Ozark Folk Cen**	**49.78 93**	P	**P**	**18 27 13.8**	**-3.1**
FINES	**FINESS Array B**	**50.99 355**	P	**P**	**18 27 26.6**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=21,slow=12,SNR=4.4					
TX31	**Lajitas Ar. Si**	**51.32 108**	P	**P**	**18 27 29.8**	**+1.0**
TX31			IAmb	IAmb	18 27 30.2	
	comp=Z,5.2nm,0.8s					
TX32	**Lajitas Array**	**51.32 108**	P	**P**	**18 27 29.6**	**+0.8**
TX32			IAmb	IAmb	18 27 30.5	
	comp=Z,1.7nm,0.7s					
TXAR	**Lajitas Array**	**51.32 108**	P	**P**	**18 27 29.8**	**+1.1**
	comp=Z,1.7nm,0.7s,baz=338,slow=5.9,SNR=22					
HHC	**Hu-ho-hao-te**	**51.63 285**	*e*P	**P**	**18 27 29.4**	**-1.5**
HHC			pmax	pmax		
	comp=Z,16nm,0.9s					
HHC			pmax	pmax		
	comp=Z,35nm,6.4s					
KURK	**Kurchatov**	**53.48 316**	P	**P**	**18 27 45.4**	**+1.0**
KURK			IAmb	IAmb	18 27 50.2	
	comp=Z,3.1nm,1.0s					
KURBB	**Kurchatov Arra**	**53.59 316**	P	**P**	**18 27 44.9**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=25,slow=7.3,SNR=7.2					
MKAR	**Makanchi Array**	**56.05 312**	P	**P**	**18 28 03.4**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=50,slow=6.1,SNR=4.0					
EKA	**Eskdalemuir Ar**	**56.26 14**	P	**P**	**18 28 05.5**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=347,slow=5.8,SNR=4.0					
AKASG	**Malin Array Be**	**61.59 352**	P	**P**	**18 28 40.5**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=5.4,slow=6.9,SNR=4.4					
ESDC	**Sonseca Array**	**71.65 18**	P	**P**	**18 29 46.7**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=351,slow=5.0,SNR=1.9					
BRTR	**Keskin Array B**	**72.21 347**	P	**P**	**18 29 50.6**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=52,slow=5.7,SNR=2.3					
CMAR	**Chiang Mai Arr**	**76.44 285**	P	**P**	**18 30 15.6**	**+1.5**
	comp=Z,0.4nm,0.8s,baz=1.6,slow=5.8,SNR=4.5					

NIED ***12*** *18:22:00,23˙90N×122˙40E,h8km,Mw4.1 Best double couple: M₀1.80000×10¹⁵ NP1:φ₀66.00000°,δ85.00000°, λ84.00000°. NP2:φ₀301.00000°,δ8.00000°,λ145.00000°.*
NEIC ***12*** *18:22:43.7±2.3,23˙98N±0˙06×122˙55E±0˙05,h30km±5km, mb4.2/9,Error ellipse: s-maj=8.9km s-min=5.4km az=149.0*
TAP ***12*** *18:22:43.8,23˙96N×122˙46E,h30km,ML4.3,D*
JMA ***12*** *18:22:43.1±0.3,23˙92N×122˙42E,h19km±5km,M3.9*
BJI ***12*** *18:22:43.1±0.0,23˙97N×122˙56E,h45km,mB4.0/3, mb3.7/6,ML3.5/3*
IDC ***12*** *18:22:47.4±4.4,24˙14N×122˙72E,h61km±42km,mb3.7/15, mb1 3.8/15,mb1mx3.6/43,mbtmp4.0/15,ML2.6/1,MS2.9/2, Ms1 2.9/2,ms1mx2.7/53,Error ellipse: s-maj=32.8km s-min=16.2km az=64.0*

ISC 12 18:22:42.5±0.5,23.88N±0˙02×122.48E±0˙02,h21km±2km, n150,σ0:87/255,mb4.0/21,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.71**	**37**	P	**Pn**	**18 22 56.7**	**-0.6**
JYNG				e*S*	**Sb**	**18 23 05.1**	**-0.4**
EOS1	**EOS1**	**0.74**	**334**	P	**Pb**	**18 22 56.9**	**+0.3**
	baz=324						
EOS1				e*S*	**Sb**	**18 23 06.3**	**0.0**
	baz=324						
YOJ	**Yonaguni jima**	**0.75**	**40**	P	**Pn**	**18 22 57.6**	**-0.3**
	baz=44						
YOJ				S	**Sb**	**18 23 05.7**	**-1.0**
	baz=44						
YOJ	**Yonaguni jima**	**0.75**	**40**	P	**Pn**	**18 22 57.6**	**-0.3**
YOJ				e*S*	**Sb**	**18 23 06.5**	**-0.2**
YOJ	**Yonaguni jima**	**0.75**	**40**	Pn	**Pn**	**18 22 57.3**	**-0.6**
HWA	**Hwalien**	**0.81**	**277**	P	**Pn**	**18 22 58.5**	**-0.2**
	baz=259						
HWA				e*S*	**Sb**	**18 23 09.3**	**+1.0**
	baz=259						
TWD	**Chiawan**	**0.83**	**284**	P	**Pb**	**18 22 58.4**	**+0.2**
	baz=279						
TWD				S	**Sb**	**18 23 09.2**	**+0.2**
	baz=279						
NACB	**Ninganchiao**	**0.86**	**290**	e*P*	**Pb**	**18 22 58.8**	**+0.1**
	baz=272						
NACB				e*S*	**Sb**	**18 23 09.8**	**0.0**
	baz=272						
NACB	**Ninganchiao**	**0.86**	**290**	Pn	**Pb**	**18 22 58.7**	**0.0**
ENA	**Nanau**	**0.87**	**309**	P	**Pb**	**18 22 58.8**	**-0.1**
	baz=314						
ENA				e*S*	**Sb**	**18 23 07.9**	**-2.1**
	baz=314						
TWC	**Suao**	**0.93**	**322**	e*P*	**Pb**	**18 22 59.3**	**-0.5**
	baz=320						
TWC				e*S*	**Sb**	**18 23 10.9**	**-0.8**
	baz=320						
ESL	**Shilin**	**0.96**	**266**	P	**Pb**	**18 23 00.3**	**-0.1**
	baz=261						
ESL				S	**Sb**	**18 23 12.1**	**-0.6**
	baz=261						
ETLH	**Xiulin Townshi**	**0.97**	**290**	P	**Pb**	**18 23 00.6**	**-0.1**
	baz=274						
ETLH				e*S*	**Sb**	**18 23 12.8**	**-0.3**
	baz=274						
EGFH	**Guangfu**	**0.99**	**258**	e*P*	**Pn**	**18 23 01.3**	**+0.2**
	baz=253						
EGFH				e*S*	**Sb**	**18 23 11.6**	**-1.9**
	baz=253						
HGSD	**Ruisui**	**1.04**	**248**	e*P*	**Pn**	**18 23 02.1**	**+0.2**
	baz=244						
HGSD				e*S*	**Sb**	**18 23 14.5**	**-0.5**
	baz=244						
ILA	**Ilan**	**1.11**	**323**	e*P*	**Pb**	**18 23 02.9**	**+0.1**
	baz=310						
ILA				e*S*	**Sn**	**18 23 17.5**	**+0.2**
	baz=310						
TWE	**Neicheng**	**1.12**	**319**	e*P*	**Pb**	**18 23 03.1**	**0.0**
	baz=317						
TWE				e*S*	**Sb**	**18 23 16.7**	**-0.5**
	baz=317						
EHY	**Hungye**	**1.13**	**251**	P	**Pb**	**18 23 03.4**	**+0.2**
	baz=246						
EHY				S	**Sb**	**18 23 17.3**	**-0.1**
	baz=246						
ENTT	**Nioudou**	**1.13**	**312**	e*P*	**Pb**	**18 23 03.3**	**0.0**
	baz=297						
ENTT				e*S*	**Sb**	**18 23 17.6**	**+0.1**
	baz=297						
NTC	**Toucheng**	**1.14**	**329**	e*P*	**Pb**	**18 23 03.6**	**+0.2**
	baz=327						
NTC				e*S*	**Sb**	**18 23 16.7**	**-1.0**
	baz=327						
NDT	**Datong Townshi**	**1.14**	**309**	e*P*	**Pb**	**18 23 03.5**	**+0.1**
	baz=306						
NDT				e*S*	**Sb**	**18 23 17.6**	**-0.2**
	baz=306						
NNSB	**Datong**	**1.14**	**299**	P	**Pn**	**18 23 03.4**	**+0.1**
	baz=284						
NNSB				e*S*	**Sb**	**18 23 18.0**	**0.0**
	baz=284						
NNSH	**Datong**	**1.14**	**299**	P	**Pn**	**18 23 03.5**	**+0.2**
	baz=285						
NNSH				S	**Sb**	**18 23 18.6**	**+0.6**
	baz=285						
WHF	**Hehuan Shan**	**1.14**	**284**	P	**Pn**	**18 23 03.4**	**-0.2**
	baz=279						
WHF				e*S*	**Sb**	**18 23 17.4**	**-1.0**
	baz=279						
NNS	**Nan Shan**	**1.16**	**299**	P	**Pn**	**18 23 03.7**	**+0.2**
	baz=284						
NNS				e*S*	**Sb**	**18 23 17.8**	**-0.6**
	baz=284						
SLBB	**Yuanshan**	**1.16**	**319**	P	**Pb**	**18 23 04.4**	**+0.5**
	baz=316						
SLBB				e*S*	**Sb**	**18 23 17.9**	**-0.6**
	baz=316						
YULB	**Yu-li**	**1.19**	**246**	P	**Pb**	**18 23 04.5**	**+0.2**
	baz=232						
YULB				S	**Sb**	**18 23 18.7**	**-0.6**
	baz=232						
YULB	**Yu-li**	**1.19**	**246**	Pn	**Pb**	**18 23 04.3**	**0.0**
OWD	**Renai**	**1.20**	**274**	e*P*	**Pn**	**18 23 04.2**	**0.0**
	baz=270						
OWD				e*S*	**Sb**	**18 23 18.1**	**-1.5**
	baz=270						
TWF1	**Yuli**	**1.21**	**244**	P	**Pb**	**18 23 04.8**	**+0.2**
	baz=240						
TWF1				e*S*	**Sn**	**18 23 20.4**	**+0.5**
	baz=240						
CHGB	**Renai**	**1.21**	**279**	e*P*	**Pn**	**18 23 04.6**	**+0.2**
	baz=275						
CHGB				e*S*	**Sb**	**18 23 19.0**	**-1.0**
	baz=275						
TWB1	**Santiao Chiao**	**1.21**	**338**	e*P*	**Pn**	**18 23 04.1**	**0.0**
	baz=353						
TWB1				e*S*	**Sb**	**18 23 19.3**	**-0.5**
	baz=353						
HATJ	**Hateruma jima**	**1.22**	**81**	P	**Pb**	**18 23 06.3**	**+1.4**
HATJ				e*S*	**Sn**	**18 23 22.8**	**+2.6**
IRIF	**Iriomote-Funau**	**1.23**	**68**	P	**Pb**	**18 23 06.0**	**+1.1**
IRIF				e*S*	**Sn**	**18 23 22.4**	**+2.1**
VWDT	**VWDT**	**1.23**	**264**	P	**Pb**	**18 23 05.0**	**0.0**
	baz=260						
VWDT				S	**Sn**	**18 23 20.3**	**-0.2**
	baz=260						
TIPB	**Shuangxi**	**1.24**	**331**	P	**Pn**	**18 23 04.7**	**+0.1**
	baz=330						
TIPB				e*S*	**Sn**	**18 23 19.2**	**-1.5**
	baz=330						
TWT	**Tachien**	**1.25**	**288**	e*P*	**Pb**	**18 23 05.7**	**+0.3**
	baz=273						
TWT				e*S*	**Sn**	**18 23 21.4**	**+0.3**
	baz=273						
NWLT	**Wulai**	**1.26**	**315**	P	**Pn**	**18 23 05.4**	**+0.5**
	baz=301						
NWLT				e*S*	**Sb**	**18 23 21.9**	**+0.5**
	baz=301						
TDCB	**Techi**	**1.27**	**287**	e*P*	**Pn**	**18 23 05.4**	**+0.4**
	baz=273						
TDCB				e*S*	**Sn**	**18 23 19.9**	**-1.6**
	baz=273						
YHNB	**Yeheng**	**1.28**	**308**	e*P*	**Pn**	**18 23 05.6**	**+0.4**
	baz=305						
YHNB				e*S*	**Sn**	**18 23 21.6**	**-0.1**
	baz=305						
YHNB	**Yeheng**	**1.28**	**308**	Pn	**Pn**	**18 23 05.5**	**+0.3**
FULB	**Fuli**	**1.28**	**238**	P	**Pn**	**18 23 05.4**	**+0.2**
	baz=224						
FULB				e*S*	**Sn**	**18 23 21.4**	**-0.4**
	baz=224						
CHKT	**Chengkung**	**1.29**	**233**	e*P*	**Pn**	**18 23 05.4**	**+0.2**
	baz=219						
CHKT				e*S*	**Sn**	**18 23 20.3**	**-1.5**
	baz=219						
NWF	**Wu-fen Shan**	**1.35**	**332**	P	**Pn**	**18 23 06.4**	**+0.3**
	baz=331						
NWF				S	**Sn**	**18 23 23.4**	**0.0**
	baz=331						
WFSB	**Wu-fen Shan**	**1.35**	**332**	P	**Pn**	**18 23 06.3**	**+0.2**
	baz=331						
WFSB				S	**Sn**	**18 23 23.8**	**+0.6**
	baz=331						
TWA	**Mucha**	**1.37**	**323**	P	**Pb**	**18 23 07.1**	**-0.2**
	baz=322						
TWA				e*S*	**Sn**	**18 23 24.0**	**+0.1**
	baz=322						
NHDH	**Xindian Distri**	**1.39**	**321**	e*P*	**Pb**	**18 23 07.8**	**+0.2**
	baz=319						
NHDH				e*S*	**Sn**	**18 23 24.4**	**+0.1**
	baz=319						
SSLB	**Suanglung**	**1.40**	**267**	e*P*	**Pn**	**18 23 07.5**	**+0.6**
	baz=263						
SSLB				e*S*	**Sn**	**18 23 23.4**	**-1.3**
	baz=263						
SSLB	**Suanglung**	**1.40**	**267**	Pn	**Pn**	**18 23 07.2**	**+0.4**
TATO	**Taipei**	**1.42**	**320**	P	**Pb**	**18 23 07.8**	**-0.3**
	baz=303						
TATO				e*S*	**Sn**	**18 23 24.3**	**-0.8**
	baz=303						
TATO	**Taipei**	**1.42**	**320**		**Pb**	**18 23 08.1**	**-0.1**
DPDB	**Guoxing**	**1.43**	**276**	P	**Pb**	**18 23 08.2**	**-0.2**
	baz=273						
DPDB				e*S*	**Sb**	**18 23 26.6**	**+0.3**
	baz=273						
JKRS	**Kuro-shima**	**1.44**	**75**	P	**Pb**	**18 23 09.5**	**+0.9**
JKRS				e*S*	**Sb**	**18 23 28.7**	**+2.2**
TAP1	**Taipei**	**1.45**	**323**	P	**Pn**	**18 23 07.9**	**+0.5**
	baz=321						
TAP1				e*S*	**Sb**	**18 23 27.7**	**+1.1**
	baz=321						
SMLT	**Sun Moon Lake**	**1.45**	**270**	e*P*	**Pb**	**18 23 08.4**	**-0.3**
	baz=267						
SMLT				e*S*	**Sn**	**18 23 26.4**	**+0.5**
	baz=267						
TAP	**Taipei**	**1.46**	**323**	P	**Pb**	**18 23 08.6**	**-0.2**
	baz=321						
TAP				e*S*	**Sb**	**18 23 27.5**	**+0.6**
	baz=321						
WHP	**Taichung City**	**1.46**	**286**	e*P*	**Pb**	**18 23 10.0**	**+1.0**
	baz=272						
WHP				e*S*	**Sn**	**18 23 26.5**	**+0.3**
	baz=272						
WLTB	**Daxi**	**1.48**	**311**	e*P*	**Pb**	**18 23 09.2**	**-0.1**
	baz=296						
WLTB				e*S*	**Sn**	**18 23 27.2**	**+0.6**
	baz=296						
TWH	**Lutao**	**1.49**	**219**	P	**Pb**	**18 23 08.7**	**-0.6**
	baz=215						
TWH				S	**Sn**	**18 23 25.8**	**-1.0**
	baz=215						
WHYT	**Xinyi Township**	**1.50**	**263**	e*P*	**Pb**	**18 23 09.8**	**+0.1**
	baz=248						
WHYT				e*S*	**Sn**	**18 23 28.0**	**+0.7**
	baz=248						
YM01	**YM01**	**1.51**	**327**	e*P*	**Pn**	**18 23 08.6**	**+0.3**
	baz=341						
YM01				e*S*	**Sn**	**18 23 27.1**	**-0.3**
	baz=341						
ELDTW	**Lidau**	**1.51**	**243**	e*P*	**Pn**	**18 23 08.8**	**+0.4**
	baz=240						
ELDTW				e*S*	**Sn**	**18 23 26.7**	**-0.8**
	baz=240						
YM10	**YM10**	**1.52**	**327**	P	**Pn**	**18 23 08.5**	**0.0**
	baz=341						
YM10				e*S*	**Sn**	**18 23 27.9**	**+0.2**
	baz=341						
YM11	**YM11**	**1.52**	**327**	e*P*	**Pn**	**18 23 08.4**	**-0.1**
	baz=326						
YM11				e*S*	**Sb**	**18 23 29.9**	**+1.0**
	baz=326						
LIOB	**Emei**	**1.54**	**300**	P	**Pb**	**18 23 10.3**	**0.0**
	baz=297						
LIOB				e*S*	**Sb**	**18 23 29.5**	**+0.2**
	baz=297						
NSTT	**Nanjuang**	**1.54**	**299**	P	**Pb**	**18 23 10.3**	**-0.1**
	baz=285						
NSTT				e*S*	**Sn**	**18 23 28.9**	**+0.7**
	baz=285						
TWS1	**Kuangyinshan**	**1.55**	**322**	e*P*	**Pn**	**18 23 09.6**	**+0.7**
	baz=337						
TWS1				e*S*	**Sb**	**18 23 29.9**	**+0.2**
	baz=337						
ANP	**Anpu**	**1.57**	**326**	e*P*	**Pn**	**18 23 10.0**	**+0.9**
	baz=325						
ANP				e*S*	**Sn**	**18 23 28.6**	**-0.3**
	baz=325						
ALS	**Alishan**	**1.58**	**257**	e*P*	**Pb**	**18 23 11.0**	**-0.1**
	baz=253						
ALS				e*S*	**Sn**	**18 23 30.4**	**+0.9**
	baz=253						
NTST	**Danshui**	**1.59**	**324**	e*P*	**Pn**	**18 23 09.6**	**+0.3**
	baz=339						
NTST				e*S*	**Sb**	**18 23 32.4**	**+1.7**
	baz=339						
JIJ	**Ishigaki jima**	**1.59**	**72**	P	**Pb**	**18 23 10.8**	**-0.4**
JIJ				e*S*	**Sb**	**18 23 30.2**	**-0.6**
NCU	**National Centr**	**1.60**	**313**	e*P*	**Pn**	**18 23 10.5**	**+0.9**
	baz=311						
NCU				e*S*	**Sb**	**18 23 32.8**	**+1.7**
	baz=311						
NCUH	**Zhongli**	**1.60**	**313**	e*P*	**Pb**	**18 23 10.8**	**-0.5**
	baz=310						
NCUH				e*S*	**Sb**	**18 23 32.8**	**+1.7**
	baz=310						
TWY	**Chenhua**	**1.60**	**330**	e*P*	**Pb**	**18 23 11.2**	**-0.2**
	baz=329						
TWY				e*S*	**Sn**	**18 23 30.2**	**+0.6**
	baz=329						
WJS	**Zhushan**	**1.61**	**268**	e*P*	**Pb**	**18 23 11.7**	**+0.2**
	baz=265						
WJS				e*S*	**Sb**	**18 23 31.8**	**+0.5**
	baz=265						
TWQ1	**Liyutan**	**1.63**	**287**	P	**Pb**	**18 23 12.0**	**+0.2**
	baz=283						
TWQ1				S	**Sb**	**18 23 32.3**	**+0.4**
	baz=283						
SBCB	**Hsinchu**	**1.64**	**304**	P	**Pb**	**18 23 11.5**	**-0.5**
	baz=301						
SBCB				e*S*	**Sn**	**18 23 31.1**	**+0.6**
	baz=301						
WNT	**Mingjian**	**1.65**	**270**	e*P*	**Pb**	**18 23 12.5**	**+0.4**
	baz=267						
WNT				e*S*	**Sb**	**18 23 32.7**	**+0.3**
	baz=267						
HSN	**Hsinchu**	**1.66**	**304**	e*P*	**Pn**	**18 23 11.2**	**+0.9**
	baz=303						
HSN				e*S*	**Sn**	**18 23 32.0**	**+1.0**
	baz=303						
NSY	**Sanyi**	**1.66**	**289**	e*P*	**Pb**	**18 23 12.4**	**+0.1**
	baz=286						
NSY				e*S*	**Sn**	**18 23 32.4**	**+1.3**
	baz=286						
TTN	**Taitung**	**1.66**	**228**	e*P*	**Pb**	**18 23 13.2**	**+0.9**
	baz=225						
TTN				e*S*	**Sn**	**18 23 30.9**	**-0.2**
	baz=225						
TWGBT	**Beinan**	**1.67**	**231**	e*P*	**Pn**	**18 23 10.9**	**+0.5**
	baz=240						
TWGBT				e*S*	**Sn**	**18 23 30.4**	**-0.8**
	baz=240						
TWG	**Pinlang**	**1.67**	**231**	e*P*	**Pn**	**18 23 11.4**	**+0.9**
	baz=240						
TWG				e*S*	**Sn**	**18 23 30.1**	**-1.2**
	baz=240						
TWG	**Pinlang**	**1.67**	**231**	Pn	**Pn**	**18 23 10.8**	**+0.3**
TCU	**Taichung**	**1.67**	**280**	e*P*	**Pb**	**18 23 12.8**	**+0.3**
	baz=276						
TCU				e*S*	**Sb**	**18 23 34.0**	**+0.8**
	baz=276						
NMLH	**Miaoli**	**1.68**	**293**	e*P*	**Pb**	**18 23 12.4**	**-0.2**
	baz=290						
NMLH				e*S*	**Sb**	**18 23 33.9**	**+0.6**
	baz=290						
CHN5	**Tsauling**	**1.68**	**261**	e*P*	**Pb**	**18 23 12.8**	**+0.2**
	baz=248						
CHN5				e*S*	**Sb**	**18 23 33.7**	**+0.4**
	baz=248						
PTSB	**Yuanli**	**1.72**	**290**	e*P*	**Pb**	**18 23 13.1**	**-0.2**
	baz=286						
PTSB				e*S*	**Sb**	**18 23 34.9**	**+0.4**
	baz=286						
STYT	**Tauyuan**	**1.74**	**246**	e*P*	**Pb**	**18 23 13.2**	**-0.5**
	baz=235						
STYT				e*S*	**Sb**	**18 23 35.0**	**-0.1**
	baz=235						
WDJ	**Dajia District**	**1.75**	**286**	P	**Pb**	**18 23 13.2**	**-0.5**
	baz=282						
WDJ				S	**Sn**	**18 23 34.7**	**+1.5**
	baz=282						
WGK	**Gukeng**	**1.77**	**264**	P	**Pb**	**18 23 14.1**	**-0.1**
	baz=260						
WGK				e*S*	**Sb**	**18 23 36.1**	**+0.2**
	baz=260						
WCHH	**Zhanghua**	**1.77**	**277**	P	**Pb**	**18 23 14.2**	**0.0**
	baz=288						
WCHH				S	**Sb**	**18 23 36.6**	**+0.6**
	baz=288						
PCYT	**Pengchaiyu**	**1.78**	**348**	e*P*	**Pb**	**18 23 12.0**	**0.0**
	baz=348						
PCYT				e*S*	**Sn**	**18 23 32.9**	**-1.1**
	baz=348						
WDLH	**Douliu**	**1.79**	**264**	e*P*	**Pb**	**18 23 14.5**	**-0.1**
	baz=261						
WDLH				S	**Sb**	**18 23 37.4**	**+0.8**
	baz=261						
TPUB	**Ta-pu**	**1.79**	**252**	P	**Pb**	**18 23 14.3**	**-0.3**
	baz=248						
TPUB				e*S*	**Sb**	**18 23 36.1**	**-0.6**
	baz=248						
TPUB	**Ta-pu**	**1.79**	**252**	Pn	**Pb**	**18 23 14.4**	**-0.2**
CHN4	**Tsaushan**	**1.81**	**253**	P	**Pb**	**18 23 14.8**	**0.0**
	baz=250						
CHN4				e*S*	**Sb**	**18 23 37.9**	**+0.7**
	baz=250						
JISG	**Ishigakijimahi**	**1.81**	**67**	P	**Pb**	**18 23 13.1**	**-1.8**
JISG				S	**Sb**	**18 23 36.5**	**-0.7**
WTP	**Ta-pu**	**1.83**	**250**	e*P*	**Pb**	**18 23 14.8**	**-0.4**
	baz=237						
WTP				e*S*	**Sb**	**18 23 37.9**	**+0.2**
	baz=237						
CHN2	**Minshiung**	**1.87**	**260**	e*P*	**Pb**	**18 23 16.6**	**+0.6**
	baz=256						
CHN2				e*S*	**Sb**	**18 23 40.6**	**+1.7**
	baz=256						
ECL	**Taimali**	**1.90**	**228**	e*P*	**Pn**	**18 23 14.1**	**+0.4**
	baz=236						
ECL				e*S*	**Sn**	**18 23 34.4**	**-2.5**
	baz=236						
SLGT	**Liugui**	**1.90**	**243**	e*P*	**Pb**	**18 23 16.0**	**-0.5**
	baz=233						
SLGT				e*S*	**Sb**	**18 23 41.7**	**+1.9**
	baz=233						
SGST	**Jiashian**	**1.92**	**246**	e*P*	**Pb**	**18 23 15.8**	**-0.8**
	baz=234						
SGST				e*S*	**Sb**	**18 23 39.8**	**-0.4**
	baz=234						
CHN1	**Nanshi**	**1.92**	**249**	e*P*	**Pb**	**18 23 16.7**	**-0.2**
	baz=246

LAY				*e*S		**Sn**	**18 23 38.0**	**-2.0**
	baz=203								
WLGB	**Puzi**	**2.04**	**259**	*e*P		**Pb**	**18 23 17.4**	**-1.4**
	baz=256								
WLGB				*e*S		**Sb**	**18 23 43.5**	**-0.2**
	baz=256								
SSD	**Sandimen**	**2.04**	**237**	*e*P		**Pb**	**18 23 18.2**	**-0.6**
	baz=229								
SSD				*e*S		**Sb**	**18 23 43.8**	**0.0**
	baz=229								
WMLT	**Mailiao**	**2.07**	**268**	*e*S		**Sb**	**18 23 44.8**	**+0.2**
	baz=280								
WSF	**Szhu**	**2.08**	**264**	*e*P		**Pb**	**18 23 18.5**	**-1.1**
	baz=260								
WSF				*e*S		**Sb**	**18 23 44.8**	**-0.2**
	baz=260								
JTJ	**Tarama**	**2.16**	**69**	P		**Pb**	**18 23 18.9**	**-2.0**
JTJ				*e*S		**Sb**	**18 23 46.5**	**-0.8**
QZH	**Quanzhou**	**3.70**	**287**	*i* P		**Pn**	**18 23 38.5**	**+0.1**
QZH				S		**Sn**	**18 24 18.6**	**-2.8**
QZH				smax		smax			
	comp=N,74nm,0.3s								
QZH				smax		smax			
	comp=E,86nm,0.4s								
KNMB	**Chin-men Tao**	**3.78**	**280**	Pn		**Pn**	**18 23 39.6**	**0.0**
JOW	**Kunigami**	**6.01**	**60**	P		**Pn**	**18 24 10.3**	**+0.1**
	0.4nm,0.3s,baz=61,slow=13,SNR=9.8								
JOW	**Kunigami**	**6.01**	**60**			**Pn**	**18 24 07.4**	**-2.7**
SSE	**Sheshan**	**7.28**	**351**	Pn		**Pn**	**18 24 25.1**	**-2.5**
JNU	**Nakatsue**	**11.80**	**37**	LR		LR	18 29 48.4		
	comp=Z,50nm,19.6s,baz=208,slow=37								
KSRS	**Korea Array**	**14.31**	**18**	P		**Pn**	**18 26 06.1**	**+2.3**
	0.6nm,0.3s,baz=197,slow=11,SNR=16								
KSRS				LR		LR	18 31 55.5		
	comp=Z,61nm,18.5s,baz=190,slow=39								
GTA	**Gaotai**	**24.64**	**314**	⇑P		**P**	**18 28 02.2**	**+0.5**
GTA				pP		sP	18 28 08.2	-1.1	
GTA				pmax		pmax			
	comp=Z,4.0nm,1.1s								
SONM	**Songjino Array**	**27.12**	**336**	P		**P**	**18 28 24.5**	**+0.5**
	1.5nm,0.4s,baz=139,slow=9.5,SNR=3.3								
WMQ	**Urumqi**	**34.72**	**314**	*e*P		**P**	**18 29 30.7**	**-0.4**
MK31	**Makanchi Array**	**39.38**	**316**	P		**P**	**18 30 10.5**	**-0.1**
MK31				IAmb		IAmb	18 30 11.3		
	comp=Z,4.7nm,1.4s								
MKAR	**Makanchi Array**	**39.38**	**316**	P		**P**	**18 30 10.4**	**-0.2**
	comp=Z,1.7nm,0.4s,baz=102,slow=9.5,SNR=42								
MAKZ	**Makanchi**	**39.59**	**316**	P		**P**	**18 30 12.2**	**0.0**
MAKZ				IAmb		IAmb	18 30 13.0		
	comp=Z,4.6nm,1.1s								
ZAA0	**Zalesovo Array**	**41.15**	**327**	P		**P**	**18 30 23.6**	**-1.4**
ZAA0				IAmb		IAmb	18 30 24.3		
	comp=Z,3.2nm,0.7s								
ZALV	**Zalesovo Beam**	**41.15**	**327**	P		**P**	**18 30 23.8**	**-1.2**
	comp=Z,4.0nm,0.6s,baz=110,slow=7.7,SNR=14								
KURK	**Kurchatov**	**43.09**	**320**	P		**P**	**18 30 40.4**	**-0.5**
KURBB	**Kurchatov Arra**	**43.10**	**320**	P		**P**	**18 30 40.5**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=111,slow=10,SNR=17								
AAK	**Ala-Archa**	**43.63**	**307**	P		**P**	**18 30 46.1**	**+0.4**
WRA	**Warramunga Arr**	**45.06**	**164**	P		**P**	**18 30 59.0**	**+1.9**
	comp=Z,1.5nm,0.8s,baz=347,slow=8.8,SNR=6.6								
GAR	**Garm**	**46.38**	**302**	P		**P**	**18 31 08.3**	**+0.8**
KK31	**Karatay Array**	**46.60**	**307**	P		**P**	**18 31 09.4**	**+0.4**
KK31				IAmb		IAmb	18 31 10.7		
	comp=Z,1.8nm,0.7s								
KKAR	**Karatay Array**	**46.60**	**307**	P		**P**	**18 31 09.4**	**+0.4**
KKAR				IAmb		IAmb	18 31 10.7		
	comp=Z,1.8nm,0.7s								
TIXI	**Tiksi**	**47.93**	**3**	P		**P**	**18 31 15.3**	**-3.7**
	comp=Z,0.5nm,0.3s,baz=199,slow=2.1,SNR=5.3								
TIXI	**Tiksi**	**47.93**	**3**	P		**P**	**18 31 16.4**	**-2.5**
ASAR	**Alice Springs**	**48.55**	**166**	P		**P**	**18 31 25.5**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=352,slow=13,SNR=8.6								
GEYT	**Alibeck**	**55.97**	**301**	P		**P**	**18 32 21.2**	**+1.7**
	comp=Z,2.1nm,0.8s,baz=144,slow=2.7,SNR=5.8								
KBZ	**Khabaz**	**66.59**	**309**	P		**P**	**18 33 31.9**	**+0.6**
	comp=Z,2.5nm,1.0s,baz=189,slow=6.5,SNR=4.7								
ARCES	**ARCESS Array B**	**70.26**	**338**	P		**P**	**18 33 52.8**	**-1.0**
	comp=Z,2.6nm,1.0s,baz=80,slow=7.4,SNR=1.9								
FINES	**FINESS Array B**	**72.30**	**330**	P		**P**	**18 34 05.1**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=45,slow=4.3,SNR=5.2								
BRTR	**Keskin Array B**	**74.31**	**307**	P		**P**	**18 34 18.4**	**-0.2**
	comp=Z,1.9nm,0.9s,baz=101,slow=5.2,SNR=10								
NOA	**NORSAR Array B**	**79.04**	**332**	P		**P**	**18 34 44.3**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=61,slow=6.5,SNR=2.5								
YKA	**Yellowknife Ar**	**82.78**	**23**	P		**P**	**18 35 03.9**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=306,slow=4.5,SNR=6.8								
CLL	**Collm**	**83.00**	**323**	*e*P		**P**	**18 35 07.0**	**+0.9**
GERES	**GERESS Array B**	**83.83**	**321**	P		**P**	**18 35 11.3**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=45,slow=4.0,SNR=3.8								
VAE	**Valguarnera**	**88.97**	**311**	LR		LR	19 20 59.0		
	comp=Z,289nm,18.5s,baz=344,slow=39								

IDC 12 18:35:37.9±6.7, 18°40S×176°45W, h0km, mb4.1/2, mb1 4.4/2, mb1mx3.6/41, mbtmp4.1/2, Error ellipse: s-maj=350.2km s-min=52.6km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.37**	**260**	P	P	18 44 05.5	-0.8
	0.6nm,0.5s,baz=97,slow=7.0,SNR=7.1						
ASAR	**Alice Springs**	**46.45**	**255**	P	P	18 44 07.3	+0.4
	4.9nm,0.6s,baz=89,slow=8.2,SNR=114						
GERES	**GERESS Array B**	**148.53**	**347**	PKPbc	PKPbc	18 55 26.2	-0.6
	0.4nm,0.6s,baz=15,slow=4.1,SNR=4.3						

*BGR **12** 18:38:35.8±0.0, 52°.07S×115°.53W, h33km, Ms6.1*

*IDC **12** 18:38:35.4±0.3, 49°.93S×115°.11W, h0km, mb4.7/20, mb1 4.8/20, mb1mx4.8/29, mbtmp4.7/20, MS6.1/27, Ms1 6.1/27, ms1mx6.1/27, Error ellipse: s-maj=16.8km s-min=12.6km az=138.0*

*NEIC **12** 18:38:36.7±2.4, 49°.9S±0°.1×114°.8W±0°.1, h10km±3km, mb5.8/375, Ms_20 6.2/837, Mwb6.3/33, Mww6.5, Mwc6.4(GCMT), Error ellipse: s-maj=15.7km s-min=12.9km az=150.0*

*NEIC **12** 18:38:37.5, 49°.97S×114°.67W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}=0.14; $M_{\theta\theta}$=1.78; $M_{\phi\phi}$=-1.64; $M_{r\theta}$=-0.31; $M_{r\phi}$=3.64; $M_{\theta\phi}$=-0.25; Fault plane solution: M_0=4.04000×10^{18} NP1:ϕ_s=282.74000°, δ85.78000°, λ3.29000°. NP2:ϕ_s=192.49000°, δ86.72000°, λ175.77000°. Principal axes: T 4.1290, Plg5.0000°, Azm148.0000°; N -0.1774, Plg85.0000°, Azm335.0000°; P -3.9516, Plg1.0000°, Azm238.0000°;*

*MOS **12** 18:38:39.4±2.3, 49°.03S×116°.24W, h10km, mb5.5/8, MS6.2/64 Error ellipse: s-maj=20.3km s-min=8.6km az=79.8*

*GCMT **12** 18:38:45.7±0.0, 49°.90S×115°.06W, h13km, MW6.4/173, Moment Tensor Solution. s173,c435; s162,c692; Duration: 3ᵊ9 Moment tensor: Scale 10^{18}Nm; M_{rr}=0.04±.02; $M_{\theta\theta}$=2.38±.02; $M_{\phi\phi}$=-2.43±.02; $M_{r\theta}$=-0.16±.05; $M_{r\phi}$=4.52±.02; $M_{\theta\phi}$=0.44±.05; Best double couple: M_0=5.14100×10^{18} NP1:ϕ_s=104.00000°, δ86.00000°, λ-3.00000°. NP2:ϕ_s=194.00000°, δ87.00000°, λ-176.00000°. Principal axes: T 5.0970, Plg1.0000°, Azm329.0000°; N 0.0830, Plg85.0000°, Azm228.0000°; P -5.1860, Plg5.0000°, Azm59.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **12** 18:38:46, 49°.93S×115°.10W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}=0.19; $M_{\theta\theta}$=2.36; $M_{\phi\phi}$=-2.55; $M_{r\theta}$=0.29; $M_{r\phi}$=4.66; $M_{\theta\phi}$=0.46; Fault plane solution: M_0=5.30000×10^{18} NP1:ϕ_s=14.00000°, δ88.00000°, λ174.00000°. NP2:ϕ_s=104.00000°, δ84.00000°, λ2.00000°. Principal axes: T 5.2191, Plg6.0000°, Azm329.0000°; N 0.1546, Plg84.0000°, Azm173.0000°; P -5.3737, Plg3.0000°, Azm59.0000°;*

*NEIC **12** 18:38:49, 49°.87S×114°.83W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}=0.42; $M_{\theta\theta}$=3.97; $M_{\phi\phi}$=-3.56; $M_{r\theta}$=-1.88; $M_{r\phi}$=5.95; $M_{\theta\phi}$=0.93; Fault plane solution: M_0=7.35000×10^{18} NP1:ϕ_s=106.00000°, δ86.00000°, λ-16.00000°. NP2:ϕ_s=197.00000°, δ73.00000°, λ-176.00000°. Principal axes: T 7.4372, Plg9.0000°, Azm152.0000°; N -0.1688, Plg73.0000°, Azm273.0000°; P -7.2683, Plg14.0000°, Azm60.0000°;*

ISC 12 18:38:36.8±0.4, 49°.93S±0°.06×114°.76W±0°.04, h7km±2km, h7km:pP-P,n1544,σ1$80/1248, mb5.8/207, MS6.2/497, 82C-35D, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**23.14**	**12**	LR	LR	18 50 20.1	
	comp=Z,23μm,20.0s,baz=188,slow=30						
RPN	**Rapa Nui**	**23.14**	**12**	P	**P**	**18 43 43.7**	**+0.1**
RPN				pmax	pmax		
	comp=Z,579nm,1.5s						
RPN				MLR	MLR		
	comp=Z,17μm,21.0s						
RPN	**Rapa Nui**	**23.14**	**12**	P	**P**	**18 43 43.7**	**+0.1**
RPN				IAmb	IAmb	18 43 51.4	
	comp=Z,579nm,1.4s						
GO09	**Cerro Castillo**	**26.70**	**109**	IAMs_20	IAMs_20	18 52 00.5	
	comp=Z,48μm,18.0s						
GO10	**Punta Arenas**	**27.06**	**114**	P	**P**	**18 44 19.0**	**-0.6**
GO10				IAMs_20	IAMs_20	18 52 02.2	
	comp=Z,50μm,20.0s						
USHA	**Ushuaia**	**28.29**	**118**	LR	LR	18 53 26.6	
	comp=Z,42μm,18.2s,baz=260,slow=31						
LL01	**San Ignacio de**	**29.96**	**92**	P	**P**	**18 44 44.0**	**-1.5**
PMSA	**Palmer Station**	**30.14**	**139**	LR	LR	18 53 45.8	
	comp=Z,61μm,19.9s,baz=261,slow=30						
PMSA	**Palmer Station**	**30.14**	**139**	IAMs_20	IAMs_20	18 53 24.3	
	comp=Z,67μm,22.0s						
H03S2	**Juan Fernandez**	**30.79**	**72**	T	T	19 17 24.9	
	baz=226,slow=74,SNR=5825						
H03S1	**Juan Fernandez**	**30.80**	**72**	T	T	19 17 26.2	
	baz=226,slow=74,SNR=5454						
H03S3	**Juan Fernandez**	**30.81**	**72**	T	T	19 17 32.7	
	baz=226,slow=74,SNR=5685						
H03N3	**Juan Fernandez**	**31.05**	**72**	T	T	19 17 44.9	
	baz=229,slow=71						
H03N2	**Juan Fernandez**	**31.05**	**72**	T	T	19 17 46.4	
	baz=229,slow=71						
H03N1	**Juan Fernandez**	**31.07**	**72**	T	T	19 17 43.9	
	baz=229,slow=71						
RKT	**Rikitea**	**31.10**	**322**	*e*S	**S**	**18 50 01.3**	**0.0**
	comp=Z,10μm,27.0s						
RKT				*e*LR	LR	18 53 01.3	
	comp=Z,131μm,26.8s						
RKT	**Rikitea**	**31.10**	**322**	*e*T	T	19 17 01.9	
	comp=Z,25nm,0.3s						
PLCA	**Paso Flores**	**32.00**	**90**	P	**P**	**18 45 03.4**	**-0.2**
	comp=Z,16nm,1.0s,baz=242,slow=8.8,SNR=14						
PLCA				LR	LR	18 54 52.0	
	comp=Z,30μm,21.6s,baz=238,slow=30						
PLCA	**Paso Flores**	**32.00**	**90**	P	**P**	**18 45 02.9**	**-0.7**
PLCA				IAmb	IAmb	18 45 27.1	
	comp=Z,225nm,1.9s						
PLCA	**Paso Flores**	**32.00**	**90**	*e*P	**P**	**18 45 03.4**	**-0.2**
PLCA				*e*pP	**sP**	**18 45 06.4**	**+1.1**
LC01	**Cunco**	**32.14**	**87**	P	P	18 45 11.0	+6.2
LC01				IAMs_20	IAMs_20	18 54 39.9	
	comp=Z,29μm,18.0s						
BI03	**Tigo**	**32.60**	**82**	P	**P**	**18 45 07.0**	**-1.8**
BI03				IAmb	IAmb	18 45 22.1	
	comp=Z,186nm,1.6s						
BI03				IAMs_20	IAMs_20	18 54 34.9	
	comp=Z,53μm,20.0s						
BI02	**San Fabin de**	**33.83**	**84**	P	**P**	**18 45 18.1**	**-1.6**
BI02				IAmb	IAmb	18 45 31.2	
	comp=Z,230nm,1.8s						
BI02				IAMs_20	IAMs_20	18 55 27.4	
	comp=Z,39μm,18.0s						
GO05	**Huala**	**34.42**	**81**	P	**P**	**18 45 23.6**	**-1.1**
GO05				IAmb	IAmb	18 45 58.5	
	comp=Z,134nm,1.3s						
GO05				IAMs_20	IAMs_20	18 55 28.3	
	comp=Z,46μm,21.0s						
BO02	**Sierra Bellavi**	**35.29**	**82**	P	**P**	**18 45 30.6**	**-1.8**
BO02				IAmb	IAmb	18 45 43.2	
	comp=Z,214nm,1.5s						
BO02				IAMs_20	IAMs_20	18 56 06.3	
	comp=Z,37μm,20.0s						
MT01	**Popeta**	**35.59**	**80**	P	**P**	**18 45 34.8**	**+0.1**
MT01				IAmb	IAmb	18 45 44.4	
	comp=Z,151nm,1.5s						
MT01				IAMs_20	IAMs_20	18 56 19.1	
	comp=Z,28μm,19.0s						
MT02	**Curacav**	**36.05**	**79**	P	**P**	**18 45 39.9**	**+1.1**
MT02				IAMs_20	IAMs_20	18 56 14.3	
	comp=Z,41μm,22.0s						
MT05	**Renca**	**36.22**	**80**	P	**P**	**18 45 39.8**	**-0.4**
MT05				IAmb	IAmb	18 46 01.9	
	comp=Z,291nm,1.3s						
ROC1	**El Roble**	**36.31**	**79**	P	**P**	**18 45 41.5**	**+0.2**
PEL	**Peldehue**	**36.41**	**79**	P	**P**	**18 45 41.4**	**-0.5**
PEL				pmax	pmax		
	comp=Z,337nm,1.8s						
PEL				MLR	MLR		
	comp=Z,30μm,21.0s						
PEL	**Peldehue**	**36.41**	**79**	P	**P**	**18 45 41.4**	**-0.5**
PEL				IAmb	IAmb	18 45 52.9	
	comp=Z,338nm,1.8s						
PEL				IAMs_20	IAMs_20	18 56 09.9	
	comp=Z,30μm,21.0s						
VA03	**San Esteban**	**36.74**	**79**	P	**P**	**18 45 43.8**	**-1.0**
VA03				IAMs_20	IAMs_20	18 56 45.5	
	comp=Z,25μm,18.0s						
CO04	**Los Peladeros**	**36.95**	**78**	P	**P**	**18 45 46.8**	**0.0**
CO04				IAMs_20	IAMs_20	18 56 38.0	
	comp=Z,28μm,21.0s						
CO02	**Combarbal**	**37.50**	**77**	P	**P**	**18 45 50.7**	**-0.6**
CO02				IAMs_20	IAMs_20	18 56 52.5	
	comp=Z,32μm,21.0s						
TBI	**Tubuai**	**37.90**	**302**	*e*S	**S**	**18 51 44.8**	**-1.4**
	comp=Z,5μm,35.0s						
TBI				*e*LQ	LQ	18 54 23.8	
	comp=Z,45μm,26.5s						
TBI				*e*LR	LR	18 56 00.2	
	comp=Z,103μm,27.5s,baz=147						
TBI	**Tubuai**	**37.90**	**302**	*e*T	T	19 25 39.6	
	comp=Z,18nm,0.3s						
CO03	**El Pedregal**	**37.94**	**77**	P	**P**	**18 45 56.7**	**+1.8**
CO03				IAMs_20	IAMs_20	18 57 05.3	
	comp=Z,33μm,21.0s						
GO04	**Tololo Observa**	**38.33**	**76**	P	**P**	**18 45 59.7**	**+1.2**
GO04				IAmb	IAmb	18 46 08.8	
	comp=Z,238nm,1.6s						
GO04				IAMs_20	IAMs_20	18 57 15.5	
	comp=Z,27μm,20.0s						
CFA	**Coronel Fontan**	**38.98**	**80**	P	**P**	**18 46 01.6**	**-2.0**
	comp=Z,19nm,1.0s,baz=198,slow=4.3,SNR=15						
CFA				LR	LR	18 58 24.0	
	comp=Z,27μm,21.2s,baz=226,slow=30						
AC05	**El Transito**	**39.59**	**75**	IAMs_20	IAMs_20	18 57 52.8	
	comp=Z,27μm,21.0s						
QSPA	**South Pole Qui**	**40.28**	**180**	P	**P**	**18 46 14.6**	**+0.4**
	comp=Z,32nm,1.0s,baz=107,slow=4.1,SNR=29						
QSPA	**South Pole Qui**	**40.28**	**180**	P	**P**	**18 46 14.4**	**+0.2**
QSPA				IAmb	IAmb	18 46 31.8	
	comp=Z,160nm,1.1s						
VNDA	**Vanda**	**40.45**	**199**	P	**P**	**18 46 11.3**	**-3.9**
	comp=Z,1.5nm,1.0s,baz=90,slow=7.1,SNR=2.4						
VNDA				LR	LR	18 59 38.1	
	comp=Z,10μm,21.1s,baz=100,slow=31						
VNDA	**Vanda**	**40.45**	**199**	P	**P**	**18 46 16.0**	**+0.7**
VNDA				pmax	pmax		
	comp=Z,122nm,1.7s						
VNDA	**Vanda**	**40.45**	**199**	P	**P**	**18 46 16.0**	**+0.7**
GO03	**Copiap**	**40.49**	**73**	P	**P**	**18 46 15.6**	**-0.6**
MEH	**Mehetia**	**41.65**	**308**	*e*P	**P**	**18 46 25.8**	**0.0**
	comp=Z,62nm,1.2s						
MEH	**Mehetia**	**41.65**	**308**	*e*T	T	19 30 18.1	
	comp=Z,254nm,0.3s						
AC02	**Maricunga**	**41.72**	**74**	P	**P**	**18 46 25.0**	**-1.8**
AC02				IAmb	IAmb	18 46 49.3	
	comp=Z,260nm,1.9s						
TVO	**Taravao**	**42.34**	**307**	*e*T	T	19 31 07.2	
	comp=Z,16nm,0.3s						
PB14	**IPOC Station P**	**42.54**	**70**	P	**P**	**18 46 33.6**	**+0.2**
PB14				IAMs_20	IAMs_20	18 59 46.1	
	comp=Z,22μm,20.0s						
TIAR	**Tiarei**	**42.57**	**307**	*e*T	T	19 31 10.6	
	comp=Z,17nm,0.3s						
PAE	**Paea**	**42.61**	**306**	*e*T	T	19 31 18.9	
	comp=Z,11nm,0.3s						
GO02	**Mina Guanaco**	**42.65**	**72**	P	**P**	**18 46 34.3**	**+0.1**
PPTF	**Pamatai, Papee**	**42.66**	**307**	IAMs_20	IAMs_20	18 59 15.3	
	comp=Z,53μm,21.0s						
PPT2	**Papeete2**	**42.66**	**307**	*e*S	**S**	**18 52 55.6**	**-2.1**
PPT2				*e*LQ	LQ	18 56 33.6	
	comp=Z,183μm,27.8s						
PPT2				*e*LR	LR	18 58 11.4	
	comp=Z,192μm,27.0s,baz=148						
PPT2	**Papeete2**	**42.66**	**307**	*e*T	T	19 31 21.1	
	comp=Z,23nm,0.3s						
PPT	**Papeete**	**42.68**	**307**	LR	LR	19 00 04.0	
	comp=Z,51μm,18.4s,baz=140,slow=30						
PB10	**IPOC Station P**	**43.28**	**69**	IAMs_20	IAMs_20	19 00 06.0	
	comp=Z,25μm,20.0s						
LPA	**La Plata**	**43.50**	**92**	*e*P	**P**	**18 46 36.4**	**-4.3**
LPA				PCP	**PcP**	**18 48 27.6**	**-1.0**
LPA				PPP	PPP	18 48 52.5	
LPA				PSP	PSP	18 53 00.0	
LPA				S	**S**	**18 53 05.9**	**-3.7**
LPA				PKIKP	**PKiKP**	**18 55 25.7**	**-5.1**
LPA				SCS	**ScS**	**18 56 37.4**	**-3.4**
LPA				SSS	SSS	18 57 04.0	
LPA				SKIKP		18 59 02.9	
LPA				SKIKS		19 02 36.0	
VAH	**Vaihoa**	**43.67**	**311**	*e*T	T	19 32 48.3	
	comp=Z,50nm,0.2s						
PMOR	**Pomariorio Ree**	**44.00**	**311**	*e*T	T	19 33 13.4	
	comp=Z,17nm,0.2s						
PB15	**IPOC Station P**	**44.17**	**70**	P	**P**	**18 46 47.0**	**+0.6**
PB15				IAmb	IAmb	18 47 07.8	
	comp=Z,128nm,1.1s						
PB15				IAMs_20	IAMs_20	19 00 34.4	
	comp=Z,23μm,21.0s						
PB04	**IPOC Station P**	**44.41**	**68**	P	**P**	**18 46 49.0**	**+0.6**
PB04				IAMs_20	IAMs_20	19 00 41.0	
	comp=Z,22μm,22.0s						
PB06	**IPOC Station P**	**44.48**	**69**	P	**P**	**18 46 48.6**	**-0.2**
PB06				IAmb	IAmb	18 47 09.9	
	comp=Z,187nm,1.2s						
PB06				IAMs_20	IAMs_20	19 00 42.8	
	comp=Z,23μm,21.0s						
LVC	**Limon Verde**	**44.95**	**70**	P	**P**	**18 46 53.8**	**+0.9**
LVC				pmax	pmax		
	comp=Z,139nm,1.2s						
LVC				MLR	MLR		
	comp=Z,29μm,21.0s						
LVC	**Limon Verde**	**44.95**	**70**	P	**P**	**18 46 53.8**	**+0.9**
LVC				IAmb	IAmb	18 47 14.8	
	comp=Z,139nm,1.1s						
LVC	**Limon Verde**	**44.95**	**70**	IAMs_20	IAMs_20	19 00 42.9	
	comp=Z,29μm,21.0s						
LVC	**Limon Verde**	**44.95**	**70**	*e*P	**P**	**18 46 51.4**	**-1.5**
PB07	**IPOC Station P**	**45.03**	**68**	P	**P**	**18 46 50.7**	**-2.7**
PB07				IAmb	IAmb	18 47 14.8	
	comp=Z,141nm,1.3s						
PB07				IAMs_20	IAMs_20	19 00 42.2	
	comp=Z,21μm,19.0s						
PB09	**IPOC Station P**	**45.37**	**69**	P	**P**	**18 46 56.9**	**+1.0**
PB09				IAmb	IAmb	18 47 19.7	
	comp=Z,144nm,1.3s						
PB09				IAMs_20	IAMs_20	19 01 10.1	
	comp=Z,24μm,20.0s						
RAR	**Rarotonga**	**45.51**	**292**	P	**P**	**18 46 52.2**	**-4.7**
	comp=Z,12nm,0.9s,baz=196,slow=12,SNR=3.8						
RAR	**Rarotonga**	**45.51**	**292**	P	**P**	**18 46 53.8**	**-3.0**
RAR				pmax	pmax		
	comp=Z,111nm,1.6s						
RAR				MLR	MLR		
	comp=Z,22μm,18.0s						
RAR	**Rarotonga**	**45.51**	**292**	P	**P**	**18 46 53.8**	**-3.0**
RAR	**Rarotonga**	**45.51**	**292**	IAMs_20	IAMs_20	19 00 03.5	
	comp=Z,22μm,18.0s						
TA01	**Diego Aracena**	**45.75**	**67**	P	**P**	**18 46 59.9**	**+1.2**
TA01				IAmb	IAmb	18 47 20.2	
	comp=Z,161nm,1.1s						
TA01				IAMs_20	IAMs_20	19 01 19.1	
	comp=Z,30μm,20.0s						
PB01	**IPOC Station P**	**45.79**	**68**	P	**P**	**18 47 00.2**	**+1.0**
PB01				IAmb	IAmb	18 47 20.2	
	comp=Z,303nm,1.8s						
PB01				IAMs_20	IAMs_20	19 01 05.3	
	comp=Z,26μm,20.0s						
HOPE	**Hope Point**	**45.96**	**127**	IAMs_20	IAMs_20	19 00 52.9	
	comp=Z,43μm,22.0s						
TAOE	**Nuku Hiva Isla**	**46.07**	**324**	*e*S	**S**	**18 53 44.8**	**-2.5**
	comp=Z,12μm,25.2s						
TAOE				*e*LQ	LQ	18 57 45.0	
	comp=Z,29μm,24.9s						
TAOE				*e*LR	LR	18 59 59.1	
	comp=Z,171μm,26.6s,baz=173						
TAOE	**Nuku Hiva Isla**	**46.07**	**324**	*e*T	T	19 35 44.3	
	comp=Z,46nm,0.2s						
PSGCX	**Pisagua**	**46.53**	**66**	P	**P**	**18 47 07.3**	**+2.3**
PSGCX				IAmb	IAmb	18 47 26.4	
	comp=Z,142nm,1.2s						
PSGCX				IAMs_20	IAMs_20	19 01 40.7	
	comp=Z,30μm,20.0s						
PB11	**IPOC Station P**	**46.68**	**67**	P	**P**	**18 47 07.5**	**+1.2**
PB11				IAmb	IAmb	18 47 27.5	
	comp=Z,147nm,1.1s						
PB11				IAMs_20	IAMs_20	19 01 46.7	
	comp=Z,31μm,20.0s						
PB08	**IPOC Station P**	**46.69**	**67**	P	**P**	**18 47 06.8**	**+0.2**
PB08				IAMs_20	IAMs_20	19 01 31.8	
	comp=Z,32μm,21.0s						
GO01	**Chusmiza**	**47.02**	**67**	P	**P**	**18 47 07.8**	**-1.6**
PB12	**IPOC Station P**	**47.18**	**65**	P	**P**	**18 47 08.8**	**-1.3**
PB12				IAmb	IAmb	18 47 31.1	
	comp=Z,138nm,1.2s						
PB12				IAMs_20	IAMs_20	19 02 00.8	
	comp=Z,25μm,21.0s						
MNMC	**Minye Minye**	**47.20**	**66**	P	**P**	**18 47 09.2**	**-1.3**
MNMC				IAMs_20	IAMs_20	19 02 02.6	
	comp=Z,28μm,20.0s						
AP01	**Chacalluta**	**47.36**	**65**	IAMs_20	IAMs_20	19 02 06.7	
	comp=Z,21μm,21.0s						
MHGZ	**Mahia Peninsul**	**47.66**	**256

OXZ IAMs_20 IAMs_20 19 02 42.5
comp=Z,45µm,21.0s
MOVZ Moawhango 48.86 254 P **P** **18 47 27.6 +4.7**
VNA2 Neumayer--Watz 48.91 155 P **P** **18 47 23.8 +1.0**
NNA Nana 48.98 53‖ *e*P **P** **18 47 26.7 +2.7**
NNA pmax pmax
comp=Z,97nm,1.1s
NNA MLR MLR
comp=Z,20µm,16.0s
NNA Nana 48.98 53 P **P** **18 47 25.1 +1.1**
NNA Nana 48.98 53 IAMs_20 IAMs_20 19 03 06.8
comp=Z,32µm,18.0s
ALRZ Allen Road 48.99 256 P P 18 47 14.7 -9.2
PRRZ Plateau Road 49.00 256 P P 18 47 14.1 -10
TUVZ Tukino 49.00 255 P **P** **18 47 27.9 +3.8**
RRRZ Republican Roa 49.02 256 P P 18 47 14.3 -10
LTZ Lake Taylor 49.02 249 P **P** **18 47 23.4 -0.7**
LTZ IAmb IAmb 18 47 41.0
comp=Z,118nm,1.3s
WHVZ Whangaehu Hut 49.03 255 P **P** **18 47 28.5 +4.1**
RITZ Rihia Road 49.05 255 P **P** **18 47 23.0 -1.3**
TRVZ Turoa 49.05 254 P **P** **18 47 29.1 +4.5**
FWVZ Far West T-bar 49.07 255 P **P** **18 47 28.7 +3.9**
TARZ Mount Tarawera 49.09 256 P P 18 47 16.2 -8.5
NGZ Ngauruhoe 49.09 255 P **P** **18 47 27.4 +2.7**
KRVZ Karewarewa 49.11 255 P **P** **18 47 26.3 +1.4**
WPRZ Whakapapaitarin 49.13 256 P **P** **18 47 21.7 -3.2**
MARZ Manawahe 49.13 257 P P 18 47 19.6 -5.3
WTVZ West Tongariro 49.13 255 P **P** **18 47 27.0 +2.0**
HRRZ Handcock Road 49.13 256 P P 18 47 16.7 -8.3
KATZ Kakaramea 49.15 255 P **P** **18 47 26.0 +0.8**
RATZ Rangitukua 49.17 255 P **P** **18 47 24.7 -0.5**
MKRZ Makatiti 49.17 256 P P 18 47 18.9 -6.4
HLRZ Highlands Stat 49.17 256 P P 18 47 17.5 -7.8
PKVZ Pokaka 49.18 254 P P 18 47 31.4 +6.0
HSRZ Hossack Road 49.20 256 P P 18 47 18.1 -7.5
RPZ Rata Peaks 49.22 247 P **P** **18 47 21.6 -4.0**
comp=Z,6.9nm,0.9s,baz=353,slow=8.1,SNR=1.5
RPZ Rata Peaks 49.22 247 P **P** **18 47 23.3 -2.3**
RPZ IAmb IAmb 18 47 36.4
comp=Z,122nm,1.5s
RPZ IAMs_20 IAMs_20 19 03 24.4
comp=Z,36µm,20.0s
THZ Tophouse 49.23 250 P **P** **18 47 25.6 -0.1**
THZ IAmb IAmb 18 47 36.5
comp=Z,160nm,1.4s
THZ IAMs_20 IAMs_20 19 02 55.5
comp=Z,39µm,21.0s
OMRZ Omania 49.25 256 P P 18 47 19.2 -6.7
TWVZ Taurewa 49.25 255 P **P** **18 47 29.4 +3.4**
NNZ Nelson 49.25 251 P **P** **18 47 29.4 +3.6**
NNZ IAmb IAmb 18 47 36.6
comp=Z,136nm,1.4s
NNZ IAMs_20 IAMs_20 19 03 29.3
comp=Z,37µm,21.0s
GRRZ Galatos Road 49.27 256 P P 18 47 20.7 -5.3
LBZ Lake Benmore 49.35 246 P **P** **18 47 26.7 +0.2**
LBZ IAmb IAmb 18 48 01.7
comp=Z,220nm,1.9s
KUTZ Kaahu Road 49.36 255 P **P** **18 47 23.0 -3.7**
CPUP Villa Florida 49.55 84 P **P** **18 47 26.4 -1.8**
comp=Z,11nm,1.0s,baz=246,slow=7.4,SNR=10
CPUP LR LR 19 05 09.0
comp=Z,22µm,20.6s,baz=232,slow=32
CPUP Villa Florida 49.55 84 P **P** **18 47 26.3 -1.9**
CPUP pmax pmax
comp=Z,67nm,1.2s
CPUP Villa Florida 49.55 84 **P** **18 47 26.3 -1.9**
TLZ Tolley Road 49.64 255 P **P** **18 47 26.7 -2.2**
SNAA Sanae 49.65 157 P **P** **18 47 29.0 +0.5**
SNAA Sanae 49.65 157 P **P** **18 47 27.2 -1.3**
comp=Z,5.5nm,1.0s,baz=200,slow=8.0,SNR=7.0
SNAA Sanae 49.65 157‖ *e*P **P** **18 47 28.8 +0.3**
SNAA Sanae 49.65 157 P **P** **18 47 26.5 -2.0**
SNAA IAmb IAmb 18 47 54.3
comp=Z,120nm,1.5s
SNAA IAMs_20 IAMs_20 19 06 04.5
comp=Z,18µm,21.0s
WKZ Wanaka 49.78 245 P **P** **18 47 32.1 +2.2**
WKZ IAmb IAmb 18 48 13.5
comp=Z,153nm,1.4s
WHZ Wether Hill Ro 49.80 243 P **P** **18 47 30.0 0.0**
WHZ IAmb IAmb 18 47 43.5
comp=Z,148nm,1.3s
WHZ IAMs_20 IAMs_20 19 03 22.9
comp=Z,36µm,20.0s
HIZ Hauiti 49.95 255 P **P** **18 47 35.7 +4.5**
HIZ Hauiti 49.95 255 P **P** **18 47 31.4 +0.2**
MLZ Mavora Lakes 50.00 244 P **P** **18 47 34.9 +3.4**
MLZ IAmb IAmb 18 47 35.4
comp=Z,178nm,2.0s
QRZ Quartz Range 50.00 251 P **P** **18 47 34.5 +2.9**
QRZ IAMs_20 IAMs_20 19 03 53.1
comp=Z,32µm,21.0s
LPAZ La Paz 50.29 65 P **P** **18 47 33.8 -0.8**
comp=Z,30nm,1.1s,baz=200,slow=5.4,SNR=27
LPAZ LR LR 19 04 04.2
comp=Z,14µm,19.1s,baz=216,slow=30
LPAZ La Paz 50.29 65 P **P** **18 47 33.2 -1.4**
PYZ Puysegur Point 50.37 242 IAMs_20 IAMs_20 19 04 08.0
comp=Z,39µm,20.0s
DCZ Deep Cove 50.50 243 IAMs_20 IAMs_20 19 05 14.4
comp=Z,26µm,18.0s
RAO Raoul Island 51.24 269 IAMs_20 IAMs_20 19 03 20.8
comp=Z,23µm,20.0s
CNLB Canela 51.69 92 *e*P **P** **18 47 45.0 +0.5**
ITAB Concordia 52.27 89 *e*P **P** **18 47 50.6 +1.9**
ATAH Atahualpa 52.37 48 P **P** **18 47 50.4 +0.4**
comp=Z,12nm,0.6s,baz=305,slow=5.9,SNR=5.5
OUZ Omahuta 52.79 257 P **P** **18 47 50.5 -1.9**
OUZ IAmb IAmb 18 48 02.1
comp=Z,109nm,1.2s
NIUE Niue 53.34 285 P P 18 48 03.3 +6.6
baz=54,SNR=3.7
NIUE Niue 53.34 285 IAMs_20 IAMs_20 19 02 47.0
comp=Z,15µm,20.0s
NVL N'lazarevskaya 53.68 161 *e*P **P** **18 47 57.6 -0.9**
NVL pmax pmax
comp=Z,55nm,1.1s
NVL MLR MLR
comp=Z,26µm,16.0s
PTGB Pitanga 54.06 86 *e*P **P** **18 48 01.6 -0.5**
SIV San Ignacio 54.76 72 LR LR 19 07 46.2
comp=Z,16µm,21.4s,baz=244,slow=32
TRCB Terra Rica 55.06 84 *e*P **P** **18 48 08.9 -0.3**
TRCB *e*pP **pP** **18 48 10.4 -0.1**
PTLB Pontes e Lacer 56.37 73 *e*P **P** **18 48 16.4 -2.2**
FRTB Fartura 56.65 87 *e*P **P** **18 48 19.3 -1.4**
FRTB *e*pP **sP** **18 48 22.2 -0.1**
PCMB Pacaembu 56.79 84 *e*P **P** **18 48 21.3 -0.3**
VILB Vilhena 57.64 70 *e*P **P** **18 48 26.2 -1.5**
SPB Sao Paulo 57.85 89 *e*P **P** **18 48 29.5 +0.4**
SALV Santo Antonio 58.17 76 *e*P **P** **18 48 29.8 -1.7**
VAO Valinhos 58.56 89 *e*P **P** **18 48 34.0 -0.2**
BB19B Bebedouro 58.94 86 *e*P **P** **18 48 36.4 -0.5**
SAML Samuel 59.02 65 P **P** **18 48 35.5 -1.9**
SAML pmax pmax
comp=Z,63nm,1.3s
SAML MLR MLR
comp=Z,12µm,20.0s
SAML Samuel 59.02 65 P **P** **18 48 35.5 -1.9**
SAML Samuel 59.02 65 IAMs_20 IAMs_20 19 09 47.7
comp=Z,12µm,20.0s
SAML Samuel 59.02 65 *e*P **P** **18 48 35.0 -2.4**
CASY Casey 59.07 200 P **P** **18 48 37.4 +0.4**
SYO Syowa Base 59.88 170‖ *i*P **P** **18 48 40.0 -2.5**
SYO Syowa Base 59.88 170‖ *i*pP pP 18 48 43.2 -0.6
SYO Syowa Base 59.88 170‖ *i*sP sP 18 48 45.4 +1.1
SYO Syowa Base 59.88 170‖ *i*PcP **PcP** **18 49 25.6 -3.2**
TUMC Tumaco 60.12 43 *e*P P 18 48 39.7 -5.2
TUMC Tumaco 60.12 43 P **P** **18 48 44.4 -0.4**
GCUF Volcan Galeras 60.20 44 *e*P **P** **18 48 45.0 -1.0**
PTLC Puerto Leguiza 60.46 48 *e*P **P** **18 48 43.1 -4.1**
MAN01 Angra dos Reis 60.67 91 *e*P **P** **18 48 48.2 0.0**
ARAG Araguaiana, MT 60.77 79 *e*P **P** **18 48 48.3 -1.0**
VAS01 Vassouras-RJ 61.36 91 *e*P **P** **18 48 53.3 0.0**
IPMB Ipameri, GO 61.38 84 *e*P **P** **18 48 52.9 -0.7**
BSCB Bom Sucesso 61.41 89 *e*P **P** **18 48 53.7 -0.1**
PCON Cinco Dias 61.60 45 *e*P **P** **18 48 54.3 -1.3**
POPC Popayan, Colom 61.67 44 *e*P **P** **18 48 52.6 -3.0**
GARC Garzon, Huila 61.90 46 *e*P **P** **18 48 55.5 -1.7**
MSVF Nonsavu 61.98 276 P **P** **18 48 58.0 +0.4**
MSVF pmax pmax
comp=Z,46nm,0.8s
MSVF Nonsavu 61.98 276 P **P** **18 48 58.0 +0.4**
MSVF IAmb IAmb 18 49 08.9
comp=Z,46nm,0.8s
BETC Betania 62.35 46 *e*P **P** **18 48 59.5 -0.5**
MACC Macarena, Meta 62.63 47 *i* P **P** **18 49 00.6 -1.3**
MAW Mawson 62.78 179 P **P** **18 49 02.0 -0.1**
baz=62,SNR=19
MAW Mawson 62.78 179 P **P** **18 49 01.7 -0.5**
comp=Z,11nm,0.9s,baz=169,slow=6.3,SNR=20
MAW LR LR 19 15 26.6
comp=Z,14µm,18.2s,baz=176,slow=35
MAW Mawson 62.78 179 P **P** **18 49 00.8 -1.4**
YOTC Yotoco, Valle 63.09 44 *e*P P 18 48 58.4 -6.7
BDFB Brasilia 63.24 82 P **P** **18 49 06.8 +0.7**
comp=Z,4.1nm,0.7s,baz=215,slow=4.4,SNR=2.1
BDFB LR LR 19 13 55.7
comp=Z,14µm,19.5s,baz=213,slow=33
BDFB Brasilia 63.24 82 P **P** **18 49 05.7 -0.5**
BDFB IAmb IAmb 18 49 26.2
comp=Z,83nm,1.3s
BDFB IAMs_20 IAMs_20 19 14 44.5
comp=Z,18µm,18.0s
PRAC Prado 63.52 46 *e*P **P** **18 49 04.3 -3.5**
ORTC Ortega, Tolima 63.53 45 *e*P **P** **18 49 05.2 -2.7**
ANIL Santa Ana 63.97 45 *e*P **P** **18 49 12.3 +1.2**
LHI Lord Howe Isla 64.29 251 IAMs_20 IAMs_20 19 13 12.4
comp=Z,17µm,18.0s
RREF El Recreo 64.36 45 *e*P **P** **18 49 13.2 -0.9**
ROSC El Rosal 64.77 46 P **P** **18 49 17.4 +1.0**
comp=Z,7.0nm,0.4s,baz=104,slow=14,SNR=8.2
ROSC LR LR 19 12 51.9
comp=Z,12µm,18.8s,baz=216,slow=32
ROSC El Rosal 64.77 46 *e*P **P** **18 49 15.2 -1.3**
ROSC El Rosal 64.77 46 P **P** **18 49 17.8 +1.3**
ROSC IAMs_20 IAMs_20 19 13 41.5
comp=Z,13µm,18.0s
CHIC Chingaza 64.86 46 *e*P **P** **18 49 14.8 -2.2**
CBOC Ciudad Bolivar 64.91 43 *e*P **P** **18 49 14.8 -2.3**
MACA Manacapuru-AM 65.14 63 *e*P **P** **18 49 16.2 -2.2**
NORC Norcasia 65.16 45 *e*P **P** **18 49 15.6 -3.0**
NPGB Novo Progresso 65.20 70 *e*P **P** **18 49 17.1 -1.7**
PTGC Puerto Gaitan, 65.24 48 *e*P **P** **18 49 16.2 -2.9**
JTS Las Juntas de 65.39 33‖ *e*P **P** **18 49 21.0 +1.0**
JTS pmax pmax
comp=Z,28nm,1.3s
JTS MLR MLR
comp=Z,3µm,14.0s
JTS Las Juntas de 65.39 33 P **P** **18 49 21.1 +1.2**
SJMB Sao Joao De Ma 65.39 90 *e*P **P** **18 49 19.7 -0.4**
HDC Heredia 65.42 34 P **P** **18 49 19.1 -1.1**
HELC Santa Helena 65.42 44 *e*P **P** **18 49 19.4 -1.2**
BSFB Barra de Sao F 65.52 90 *e*P **P** **18 49 20.8 -0.1**
SPBC San Pablo de B 65.60 45 *e*P **P** **18 49 18.9 -2.6**
JANB Januaria 66.05 85 *e*P **P** **18 49 23.7 -0.8**
PTBC PUERTO BERRIO, 66.21 45 *e*P **P** **18 49 22.3 -3.0**
MILA Mila 66.23 240 P **P** **18 49 24.8 -0.5**
baz=66
BCIP Isla Barro Col 66.27 38 IAMs_20 IAMs_20 19 11 33.0
comp=Z,11µm,21.0s
RUSC La Rusia 66.27 46 *e*P P 18 49 20.8 -5.5
RUSC La Rusia 66.27 46 P **P** **18 49 25.4 -0.9**
DZM Mont Dzumac 66.32 263 *e*P **P** **18 49 25.9 -0.3**
comp=Z,156nm,1.4s
DZM *e*S **S** **18 58 15.4 -0.8**
comp=Z,18µm,30.8s
DZM *e*LQ LQ 19 06 30.3
comp=Z,68µm,29.1s
DZM *e*LR LR 19 09 17.6
comp=Z,81µm,23.9s,baz=136
DZM Mont Dzumac 66.32 263 P **P** **18 49 24.9 -1.3**
comp=Z,9.4nm,1.0s,baz=174,slow=20,SNR=4.2
DZM LR LR 19 11 24.4
comp=Z,35µm,21.5s,baz=120,slow=30
DZM Mont Dzumac 66.32 263 P **P** **18 49 27.7 +1.5**
DZM IAmb IAmb 18 49 48.0
comp=Z,69nm,1.2s
UREC San Jos de Ur 66.80 43 *e*P **P** **18 49 26.3 -2.8**
ZARC Zaragoza, Cauc 66.87 44 *e*P **P** **18 49 26.8 -2.8**
ACON Acoyapa 66.87 32 P **P** **18 49 30.3 +0.8**
ACON IAmb IAmb 18 49 46.9
comp=Z,156nm,1.7s
ACON IAMs_20 IAMs_20 19 12 48.1
comp=Z,10µm,18.0s
BRRC Barranca, Sant 67.05 45 *e*P **P** **18 49 26.1 -4.5**
KNTN Kanton 67.13 295 P **P** **18 49 32.6 +1.5**
KNTN IAMs_20 IAMs_20 19 13 28.5
comp=Z,17µm,21.0s
SNET Serv Nac Est T 67.20 27 P **P** **18 49 33.6 +2.0**
CNB Canberra Magne 67.35 242 P **P** **18 49 32.4 -0.2**
baz=67,SNR=5.9
ESPN Las Esperanzas 67.39 32 P **P** **18 49 32.7 0.0**
ESPN IAmb IAmb 18 49 40.2
comp=Z,95nm,1.1s
MATN Matagalpa 67.52 31 P **P** **18 49 32.5 -1.1**
MATN IAmb IAmb 18 49 51.1
comp=Z,136nm,1.6s
PTGA Pitinga 67.53 62 P **P** **18 49 30.9 -2.8**
PTGA IAMs_20 IAMs_20 19 14 15.2
comp=Z,11µm,21.0s
PTGA Pitinga 67.53 62 *e*P **P** **18 49 30.7 -3.1**
CAN Canberra 67.56 242 P **P** **18 49 33.6 -0.2**
CAN pmax pmax
comp=Z,51nm,1.2s
CAN MLR MLR
comp=Z,14µm,21.0s
CAN Canberra 67.56 242 P **P** **18 49 33.5 -0.2**
CAN IAMs_20 IAMs_20 19 11 41.7
comp=Z,14µm,21.0s
PAMC Pamplona, Colo 67.72 46 *e*P **P** **18 49 32.7 -2.7**
TOO Toolangi 67.89 238 P **P** **18 49 35.6 -0.2**
baz=68,SNR=6.1
TOO Toolangi 67.89 238 P **P** **18 49 35.2 -0.6**
TOO pmax pmax
comp=Z,75nm,1.2s
TOO MLR MLR
comp=Z,21µm,19.0s
TOO Toolangi 67.89 238 P **P** **18 49 35.2 -0.6**
TOO IAmb IAmb 18 49 54.7
comp=Z,75nm,1.1s
TOO IAMs_20 IAMs_20 19 13 06.4
comp=Z,21µm,19.0s
SMLC San Martn de 68.39 44 *e*P **P** **18 49 35.0 -4.0**
YNG Young 68.64 242 P **P** **18 49 40.3 -0.3**
baz=69
TLIG Tlapa 68.70 17 P **P** **18 49 39.8 -1.2**
TLIG IAmb IAmb 18 49 48.6
comp=Z,96nm,1.5s
TLIG IAMs_20 IAMs_20 19 13 21.3
comp=Z,10µm,20.0s
CCIG Comitan 68.88 23 P **P** **18 49 43.3 +1.1**
CCIG IAmb IAmb 18 50 47.3
comp=Z,141nm,2.0s
CMIG Matias Romero 69.00 20 P **P** **18 49 42.8 0.0**
comp=Z,2.3nm,0.8s,baz=349,slow=5.2,SNR=2.9
CMIG LR LR 19 12 56.7
comp=Z,3µm,19.4s,baz=174,slow=30
ARMA Armidale 69.56 247 P **P** **18 49 46.6 +0.1**
baz=70,SNR=4.5
ARMA Armidale 69.56 247 P **P** **18 49 45.1 -1.3**
ARMA IAMs_20 IAMs_20 19 13 43.9
comp=Z,16µm,22.0s
SDV Santo Domingo 70.04 47 *e*P P 18 49 44.7 -4.9
SDV Santo Domingo 70.04 47 P **P** **18 49 47.7 -1.9**
SDV IAmb IAmb 18 50 07.7
comp=Z,77nm,1.3s
SDV Santo Domingo 70.04 47 IAMs_20 IAMs_20 19 17 37.0
comp=Z,12µm,18.0s
SDV Santo Domingo 70.04 47 *e*P **P** **18 49 45.6 -4.0**
UNM Universidad Na 70.32 16 IAMs_20 IAMs_20 19 14 46.2
comp=Z,10µm,22.0s
MOIG Morelia 70.33 14 P **P** **18 49 51.3 +0.1**
SMRC Santa Marta, M 70.41 43 *e*P **P** **18 49 48.8 -2.8**
ARPS Mount Arapiles 70.45 236 P **P** **18 49 49.3 -2.4**
baz=70
URIC Uribia, Colomb 71.88 44 *e*P P 18 49 54.2 -6.2
URIC Uribia, Colomb 71.88 44 P **P** **18 49 58.7 -1.8**
CMSA Cobar Meteorol 72.20 242 P **P** **18 50 01.3 -1.1**
baz=72,SNR=8.2
ZAIG Zacatecas 73.17 12 P **P** **18 50 08.8 +0.5**
ZAIG IAmb IAmb 18 50 27.9
comp=Z,169nm,2.0s
ZAIG IAMs_20 IAMs_20 19 15 48.0
comp=Z,25µm,21.0s
EIDS Eidsvold 73.57 250 P **P** **18 50 09.2 -1.4**
LPIG La Paz 73.80 4 LR LR 19 15 31.1
comp=Z,21µm,21.0s,baz=190,slow=30
RMQ Roma 74.15 248 P **P** **18 50 13.3 -0.7**
baz=74,SNR=6.8
STKA Stephens Creek 74.26 239 P **P** **18 50 13.9 -0.6**
baz=74,SNR=7.2
STKA Stephens Creek 74.26 239 P **P** **18 50 13.1 -1.4**
comp=Z,7.2nm,0.7s,baz=135,slow=8.8,SNR=8.6
STKA LR LR 19 17 38.9
comp=Z,23µm,19.6s,baz=138,slow=32
STKA Stephens Creek 74.26 239 P **P** **18 50 13.1 -1.4**
STKA pmax pmax
comp=Z,22nm,1.6s
STKA MLR MLR
comp=Z,5µm,20.0s
STKA Stephens Creek 74.26 239 P **P** **18 50 13.1 -1.4**
HTT Hallett 74.54 236 P **P** **18 50 16.1 -0.1**
baz=74,SNR=7.7
MTDJ Mount Denham 75.41 36 IAMs_20 IAMs_20 19 17 41.3
comp=Z,9µm,18.0s
MDP Montagnes des 76.49 65 P **P** **18 50 29.6 +2.1**
comp=Z,12nm,0.8s,baz=217,slow=5.0,SNR=2.0
BBOO Buckleboo 76.54 235 P **P** **18 50 26.2 -1.4**
BBOO IAmb IAmb 18 50 37.4
comp=Z,82nm,1.3s
QLP Quilpie 76.75 245 P **P** **18 50 28.3 -0.6**
baz=77,SNR=16
SRIG Santa Rosalia 76.93 2 IAMs_20 IAMs_20 19 17 09.6
comp=Z,16µm,19.0s
HPIG 76.94 8 P **P** **18 50 29.5 -0.4**
HPIG IAmb IAmb 18 50 36.8
comp=Z,90nm,1.4s
KHU Kahuku 77.77 321 IAMs_20 IAMs_20 19 16 24.9
comp=Z,23µm,21.0s
PAPH Port-au-Prince 77.79 41 P **P** **18 50 34.9 +0.3**
GTBY Guantanamo Bay 77.90 38 P **P** **18 50 36.2 +1.1**
GTBY IAmb IAmb 18 50 52.4
comp=Z,168nm,1.4s
POHA Pohakuloa 78.19 321 IAMs_20 IAMs_20 19 16 38.2
comp=Z,22µm,21.0s
RCBR Riachuelo 78.39 85 IAMs_20 IAMs_20 19 22 27.1
comp=Z,19µm,20.0s
HPAH Hawaii Prepara 78.51 321 IAMs_20 IAMs_20 19 17 25.4
comp=Z,21µm,20.0s
SDDR Presa de Saban 78.63 42 P **P** **18 50 37.9 -1.4**
SDDR IAmb IAmb 18 50 58.4
comp=Z,148nm,1.4s
SDDR IAMs_20 IAMs_20 19 23 30.7
comp=Z,7µm,18.0s
HSIG 78.67 3 P **P** **18 50 40.8 +1.6**
HSIG IAMs_20 IAMs_20 19 17 13.5
comp=Z,16µm,22.0s
SDD Santo Domingo 78.77 43 IAMs_20 IAMs_20 19 23 47.3
comp=Z,15µm,18.0s
833A Chaparral WMA, 79.09 14 P **P** **18 50 42.6 +1.0**
baz=190
BBGH Gun Hill 79.23 55 IAMs_20 IAMs_20 19 25 59.5
comp=Z,8µm,19.0s
TX31 Lajitas Ar. Si 79.52 10 P **P** **18 50 42.4 -1.6**
TX32 Lajitas Array 79.52 10 P **P** **18 50 42.7 -1.3**
TX32 IAmb IAmb 18 51 01.9
comp=Z,192nm,2.0s
TXAR Lajitas Array 79.52 10 P **P** **18 50 43.0 -1.0**
comp=Z,3.3nm,1.0s,baz=187,slow=7.6,SNR=15
TXAR PKKPbc **PKKPbc** **19 09 35.2 +2.6**
comp=Z,0.6nm,1.0s,baz=46,slow=7.2,SNR=3.6
TXAR LR LR 19 19 02.9
comp=Z,10µm,21.7s,baz=0.0,slow=30
TXAR Lajitas Array 79.52 10 P **P** **18 50 43.0 -1.0**
FDF Fort de France 79.74 52 IAMs_20 IAMs_20 19 22 30.2
comp=Z,14µm,20.0s
HNR Honiara 79.83 267 LR LR 19 19 38.7
comp=Z,6µm,21.8s,baz=142,slow=31
HNR Honiara 79.83 267 IAMs_20 IAMs_20 19 23 44.6
comp=Z,8µm,19.0s
735A Kenedy 79.87 15 P **P** **18 50 46.1 +0.4**
735A IAmb IAmb 18 51 49.7
comp=Z,54nm,0.7s
735A IAMs_20 IAMs_20 19 20 07.2
comp=Z,14µm,22.0s
OBIP Obispado Ponce 79.90 46 P **P** **18 50 49.9 +3.7**
GCPR Guaynabo City 80.38 46 P **P** **18 50 48.2 -0.5**
CTA Charters Tower 80.46 250 LR LR 19 22 40.7
comp=Z,12µm,18.1s,baz=140,slow=33
CTAO Charters Tower 80.46 250 P **P** **18 50 49.2 -0.3**
CTAO pmax pmax
comp=Z,63nm,1.1s
CTAO MLR MLR
comp=Z,17µm,18.0s
CTAO Charters Tower 80.46 250 P **P** **18 50 49.2 -0.3**
CTAO Charters Tower 80.46 250 IAMs_20 IAMs_20 19 23 13.7
comp=Z,17µm,18.0s
319A Douglas 81.09 5 P **P** **18 50 53.2 +0.7**
319A IAmb IAmb 18 51 11.2
comp=Z,219nm,2.0s
319A IAMs_20 IAMs_20 19 19 15.8
comp=Z,15µm,21.0s
SABA Saba 81.14 49 IAMs_20 IAMs_20 19 23 34.3
comp=Z,8µm,19.0s
JCT Junction City 81.15 13 P **P** **18 50 51.8 -0.9**
JCT pmax pmax
comp=Z,175nm,1.4s
JCT MLR MLR
comp=Z,8µm,22.0s
JCT Junction City 81.15 13 P **P** **18 50 53.1 +0.4**
baz=190,SNR=15
JCT Junction City 81.15 13 P **P** **18 50 51.8 -0.9**
JCT IAmb IAmb 18 51 05.3
comp=Z,175nm,1.4s
JCT IAMs_20 IAMs_20 19 20 29.1
comp=Z,8µm,22.0s
HKT Hockley 81.28 17 P **P** **18 50 54.6 +1.4**
HKT pmax pmax
comp=Z,72nm,1.5s
HKT MLR MLR
comp=Z,12µm,20.0s
HKT Hockley 81.28 17 P **P** **18 50 54.6 +1.4**
HKT Hockley 81.28 17 IAMs_20 IAMs_20 19 22 36.9
comp=Z,12µm,20.0s
214A Organ Pipe Nat 81.54 2 P **P** **18 50 55.8 +1.1**
baz=181
214A Organ Pipe Nat 81.54 2 P **P** **18 50 54.8 +0.1**
214A IAmb IAmb 18 51 13.6
comp=Z,138nm,1.8s
214A IAMs_20 IAMs_20 19 18 27.8
comp=Z,13µm,22.0s
SMRT St. Maarten 81.59 49 IAMs_20 IAMs_20 19 24 47.5
comp=Z,9µm,18.0s
EPT El Paso 81.67 7 IAMs_20 IAMs_20 19 19 34.4
comp=Z,15µm,20.0s
MNTX Cornudas Mount 81.69 8 P **P** **18 50 55.6 +0.1**
baz=186
MNTX Cornudas Mount 81.69 8 P **P** **18 50 55.0 -0.5**
MNTX IAMs_20 IAMs_20 19 20 10.7
comp=Z,14µm,21.0s
435B Jarrell 81.79 15 P **P** **18 50 56.8 +0.8**
baz=191
KEKH Kekaha 81.92 319 IAMs_20 IAMs_20 19 20 18.9
comp=Z,16µm,19.0s
TUC Tucson 81.95 3 P **P** **18 50 56.2 -0.7**
TUC pmax pmax
comp=Z,105nm,1.6s
TUC MLR MLR
comp=Z,15µm,22.0s
TUC Tucson 81.95 3 P **P** **18 50 57.5 +0.6**
baz=183
TUC Tucson 81.95 3 P **P** **18 50 56.2 -0.7**
TUC IAmb IAmb 18 51 14.5
comp=Z,105nm,1.6s
TUC Tucson 81.95 3 IAMs_20 IAMs_20 19 19 02.6
comp=Z,15µm,22.0s
JOHN Johnston Islan 82.01 308 IAMs_20 IAMs_20 19 17 17.3
comp=Z,14µm,22.0s
IKP In-Ko-Pah, Jac 82.22 359 P **P** **18 50 58.9 +0.6**
baz=179
BAR Barrett 82.26 358 P **P** **18 50 59.1 +0.7**
BAR IAMs_20 IAMs_20 19 18 19.6
comp=Z,18µm,22.0s
FORT Forrest 82.27 231 P **P** **18 50 59.4 +0.5**
FORT IAmb IAmb 18 51 10.1
comp=Z,144nm,1.4s
FORT IAMs_20 IAMs_20 19 24 09.9
comp=Z,14µm,18.0s
GDL2 Guadalupe Moun 82.28 9 P **P** **18 50 57.3 -1.4**
121A Cookes Peak, D 82.33 6 P **P** **18 50 59.7 +0.7**
baz=184
121A Cookes Peak, D 82.33 6 P **P** **18 50 59.8 +0.8**
121A IAMs_20 IAMs_20 19 20 30.6

comp=Z,13µm,21.0s
113A Mohawk Valley, 82.33 1 P **P** **18 50 58.8 0.0**
CLNB Carlsbad 82.40 9 P **P** **18 50 58.9 -0.4**
MONP2 Monument Peak 82.47 359 P **P** **18 51 01.2 +1.5**
baz=179
109C Camp Elliot, M 82.48 358 P **P** **18 51 00.3 +0.7**
baz=178
109C Camp Elliot, M 82.48 358 P **P** **18 51 01.0 +1.5**
109C IAmb IAmb 18 51 10.7
comp=Z,109nm,1.6s
109C IAMs_20 IAMs_20 19 18 23.7
comp=Z,21µm,22.0s
SWSC Sam W. Stewart 82.51 359 P **P** **18 51 00.2 +0.5**
baz=179
SCI2 San Clemente I 82.61 357 P **P** **18 51 00.7 +0.5**
baz=178
GLA Glamis 82.61 360 P **P** **18 51 01.2 +0.9**
GLA pmax pmax
comp=Z,157nm,1.8s
GLA MLR MLR
comp=Z,15µm,20.0s
GLA Glamis 82.61 360 P **P** **18 51 01.7 +1.4**
baz=180
GLA Glamis 82.61 360 P **P** **18 51 01.2 +0.9**
GLA IAmb IAmb 18 51 11.8
comp=Z,157nm,1.8s
GLA IAMs_20 IAMs_20 19 19 48.3
comp=Z,15µm,20.0s
SNCC San Nicolas Is 82.92 356 P **P** **18 51 02.3 +0.5**
baz=177
WHTX Lake Whitney, 82.99 15 P **P** **18 51 02.3 0.0**
baz=191
WHTX Lake Whitney, 82.99 15 P **P** **18 51 03.6 +1.3**
WHTX IAMs_20 IAMs_20 19 22 11.0
comp=Z,9µm,20.0s
CIS Catalina Islan 83.02 357 P **P** **18 51 02.6 +0.2**
baz=178
MTSU Mount Surprise 83.13 250 P **P** **18 51 04.8 +1.3**
baz=83,SNR=3.7
DWPF Disney Wildern 83.14 29 P **P** **18 51 02.8 -0.4**
baz=201
CPRX Cap Rock 83.16 9 P **P** **18 51 02.9 -0.4**
XPFO Pion Flat 83.18 359 P **P** **18 51 04.4 +1.0**
XPFO IAmb IAmb 18 51 21.1
comp=Z,152nm,1.6s
XPFO Pion Flat 83.18 359 IAMs_20 IAMs_20 19 19 14.4
comp=Z,16µm,21.0s
PFO Pinyon Flats O 83.18 359 P **P** **18 51 03.4 0.0**
comp=Z,2.4nm,0.9s,baz=198,slow=4.3,SNR=6.9
PFO LR LR 19 19 10.2
comp=Z,16µm,21.4s,baz=179,slow=29
PFO Pinyon Flats O 83.18 359⇑*eP* **P** **18 51 03.8 +0.4**
PFO pmax pmax
comp=Z,96nm,1.5s
PFO MLR MLR
comp=Z,3µm,15.0s
PFO Pinyon Flats O 83.18 359 P **P** **18 51 04.5 +1.1**
baz=179,SNR=7.5
PFO Pinyon Flats O 83.18 359 P **P** **18 51 04.3 +0.9**
PFO IAmb IAmb 18 51 21.1
comp=Z,140nm,1.6s
PFO Pinyon Flats O 83.18 359 IAMs_20 IAMs_20 19 19 14.4
comp=Z,16µm,21.0s
MURC Murrieta 83.19 358 P **P** **18 51 03.7 +0.4**
baz=178
BC3 Big Chuckawall 83.22 359 P **P** **18 51 04.6 +1.1**
baz=180
NATX Nacogdoches 83.26 17 P **P** **18 51 03.9 +0.2**
baz=193
NATX Nacogdoches 83.26 17 P **P** **18 51 04.8 +1.2**
NATX IAmb IAmb 18 51 10.9
comp=Z,64nm,1.1s
NATX IAMs_20 IAMs_20 19 23 06.1
comp=Z,9µm,21.0s
ABTX Abilene, Hawle 83.28 13 P **P** **18 51 04.3 +0.6**
baz=190,SNR=5.6
ABTX Abilene, Hawle 83.28 13 P **P** **18 51 04.4 +0.6**
ABTX IAmb IAmb 18 51 15.8
comp=Z,170nm,1.7s
ABTX IAMs_20 IAMs_20 19 21 29.5
comp=Z,11µm,21.0s
237A Washetta, Mont 83.29 16 P **P** **18 51 03.2 -0.5**
237A IAmb IAmb 18 51 10.6
comp=Z,113nm,1.6s
237A IAMs_20 IAMs_20 19 23 24.7
comp=Z,10µm,18.0s
Y12C Blythe 83.31 0 P **P** **18 51 04.6 +0.7**
baz=180
Y12C Blythe 83.31 0 P **P** **18 51 03.2 -0.6**
Y12C IAmb IAmb 18 51 22.8
comp=Z,137nm,1.9s
Y12C IAMs_20 IAMs_20 19 20 11.7
comp=Z,15µm,20.0s
CRZF Crozet Islands 83.33 171 IAMs_20 IAMs_20 19 27 49.3
comp=Z,11µm,19.0s
FMP Fort Macarthur 83.33 357 P **P** **18 51 02.4 -1.5**
baz=178
342A Flagon Creek P 83.36 19 P **P** **18 51 04.5 +0.4**
Y14A Wickenburg 83.51 1 P **P** **18 51 04.7 -0.3**
Y14A IAmb IAmb 18 51 23.6
comp=Z,76nm,1.4s
BELC Belle Mtn. Jos 83.56 359 P **P** **18 51 06.4 +1.0**
baz=179,SNR=18
SCZ2 Santa Cruz Isl 83.67 356 P **P** **18 51 06.4 +0.7**
baz=177
IRM Iron Mountain 83.72 360 P **P** **18 51 07.1 +1.1**
baz=180,SNR=19
PASC Pasadena Art C 83.78 357 P **P** **18 51 06.2 -0.1**
344A Westbrook Farm 83.78 20 P **P** **18 51 05.5 -0.8**
344A IAmb IAmb 18 51 26.4
comp=Z,69nm,1.0s
MWC Mount Wilson 83.83 357 P **P** **18 51 06.6 -0.2**
MWC pmax pmax
comp=Z,51nm,1.3s
MWC MLR MLR
comp=Z,26µm,21.0s
MWC Mount Wilson 83.83 357 P **P** **18 51 06.6 -0.2**
BFSC Mount Baldy Ra 83.83 358 P **P** **18 51 07.1 +0.3**
baz=178,SNR=5.6
BBRC Big Bear Solar 83.84 358 P **P** **18 51 07.5 +0.7**
baz=179
PDMCI Parker Dam,Lak 83.86 1 P **P** **18 51 06.9 +0.2**
baz=180
DECC Green Verdugo 83.87 357 P **P** **18 51 07.7 +0.9**
baz=178
Y22D IRIS PASSCAL I 83.92 7 P **P** **18 51 07.9 +0.7**
baz=185
Y22D IRIS PASSCAL I 83.92 7 IAMs_20 IAMs_20 19 21 25.8
comp=Z,10µm,21.0s
656A Willston 83.98 28 P **P** **18 51 06.4 -1.0**
656A IAmb IAmb 18 51 25.0
comp=Z,142nm,1.6s
346A Big Creek Wild 84.02 22 P **P** **18 51 06.2 -1.3**
X16A Lo Mia Camp, P 84.03 3 P **P** **18 51 06.6 -1.1**
X16A IAMs_20 IAMs_20 19 20 01.0
comp=Z,9µm,21.0s
QIS Mount Isa 84.08 245 P **P** **18 51 07.5 -0.9**
baz=84,SNR=8.3
SBC Santa Barbara 84.11 356 P **P** **18 51 08.7 +0.7**
baz=177
X18A Snowflake 84.19 4 P **P** **18 51 07.6 -1.0**
X18A IAmb IAmb 18 51 21.0
comp=Z,130nm,1.5s
X18A IAMs_20 IAMs_20 19 20 47.1
comp=Z,16µm,22.0s
MSTX Muleshoe 84.20 10 P **P** **18 51 08.5 -0.1**
MSTX IAmb IAmb 18 51 21.3
comp=Z,91nm,1.6s
MSTX IAMs_20 IAMs_20 19 21 39.0
comp=Z,9µm,22.0s
OSI Osito Audit: C 84.24 357 P **P** **18 51 09.1 +0.4**
baz=178
OSI Osito Audit: C 84.24 357 P **P** **18 51 09.3 +0.6**
OSI IAmb IAmb 18 54 05.2
comp=Z,77nm,1.4s
NEE2 Needles Airpor 84.32 0 P **P** **18 51 09.7 +0.7**
baz=180
Z35A Perchaven, San 84.34 15 P **P** **18 51 08.6 -0.5**
Z35A IAmb IAmb 18 51 15.5
comp=Z,137nm,1.8s
GMRC Granite Mounta 84.34 359 P **P** **18 51 10.5 +1.2**
baz=179,SNR=19
HEC Hector,Ludlow 84.40 359 P **P** **18 51 10.2 +0.7**
baz=179,SNR=22
RRX Edison Barstow 84.45 358 P **P** **18 51 10.4 +0.7**
baz=179
EDW2 Edwards Air Fo 84.48 357 P **P** **18 51 10.3 +0.4**
baz=178,SNR=7.4
PKM Mcpherson Peak 84.56 356 P **P** **18 51 11.0 +0.5**
baz=177,SNR=7.5
VBMS Vicksburg 84.57 20 P **P** **18 51 10.5 +0.1**
baz=195
W13A Hualapai Mount 84.66 1 P **P** **18 51 10.3 -0.7**
W13A IAmb IAmb 18 51 29.7
comp=Z,78nm,1.4s
W13A IAMs_20 IAMs_20 19 21 21.8
comp=Z,17µm,19.0s
Z38A Mt. Pleasant 84.66 17 IAMs_20 IAMs_20 19 24 11.1
comp=Z,11µm,19.0s
ARVC Arvin 84.76 357 P **P** **18 51 12.2 +0.9**
baz=177
KMBL Kambalda 84.76 226 P **P** **18 51 10.8 -0.9**
baz=85,SNR=4.7
W18A Petrified Fore 84.79 4 P **P** **18 51 12.5 +0.9**
baz=183
W18A Petrified Fore 84.79 4 P **P** **18 51 11.8 +0.2**
W18A IAmb IAmb 18 51 28.9
comp=Z,86nm,1.6s
W18A IAMs_20 IAMs_20 19 20 42.8
comp=Z,14µm,22.0s
ANMO Albuquerque 84.82 7 P **P** **18 51 10.5 -1.3**
comp=Z,3.8nm,0.9s,baz=172,slow=6.7,SNR=13
ANMO Albuquerque 84.82 7‖*eP* **P** **18 51 10.3 -1.5**
ANMO pmax pmax
comp=Z,50nm,1.5s
ANMO MLR MLR
comp=Z,2µm,16.0s
ANMO Albuquerque 84.82 7 P **P** **18 51 12.7 +0.9**
baz=185
ANMO Albuquerque 84.82 7 P **P** **18 51 10.8 -1.0**
ANMO Albuquerque 84.82 7 IAMs_20 IAMs_20 19 22 07.6
comp=Z,9µm,21.0s
143A Socs Landing, 84.84 20 P **P** **18 51 12.1 +0.5**
GSC Goldstone, Bar 84.88 358 P **P** **18 51 11.6 -0.3**
GSC pmax pmax
comp=Z,100nm,1.5s
GSC MLR MLR
comp=Z,17µm,20.0s
GSC Goldstone, Bar 84.88 358 P **P** **18 51 12.5 +0.6**
baz=179,SNR=16
GSC Goldstone, Bar 84.88 358 P **P** **18 51 11.6 -0.3**
GSC IAmb IAmb 18 51 29.7
comp=Z,100nm,1.5s
GSC IAMs_20 IAMs_20 19 20 19.3
comp=Z,17µm,20.0s
AS31 Alice Springs 84.89 239 P **P** **18 51 09.4 -3.1**
ASAR Alice Springs 84.89 239 P **P** **18 51 09.8 -2.7**
comp=Z,14nm,1.1s,baz=147,slow=4.5,SNR=38
ASAR PKKPbc **PKKPbc 19 09 20.3 +2.3**
comp=Z,0.4nm,0.9s,baz=302,slow=2.1,SNR=2.1
ASAR LR LR 19 22 45.9
comp=Z,15µm,21.9s,baz=148,slow=31
SMMC Simmler 85.00 356 P **P** **18 51 13.4 +0.9**
baz=177
TUQ Turquoise Moun 85.00 359 P **P** **18 51 13.2 +0.7**
baz=179,SNR=8.0
LRMC Laurel Mtn Rad 85.07 358 P **P** **18 51 13.5 +0.5**
baz=178,SNR=5.3
Z41A Richland Creek 85.08 18 P **P** **18 51 13.6 +0.7**
baz=194
H01W1 Cape Leeuwin H 85.10 218 T T 20 26 11.3
baz=150,slow=76,SNR=5459
H01W2 Cape Leeuwin H 85.10 218 T T 20 26 14.2
baz=150,slow=76,SNR=5985
H01W3 Cape Leeuwin H 85.12 218 T T 20 26 15.2
baz=150,slow=76,SNR=5567
WUAZ Wupatki 85.12 3 P **P** **18 51 13.9 +0.6**
baz=182,SNR=8.3
WUAZ Wupatki 85.12 3 P **P** **18 51 12.7 -0.6**
WUAZ IAMs_20 IAMs_20 19 21 34.7
comp=Z,11µm,21.0s
AMTX Amarillo 85.23 11 P **P** **18 51 14.2 +0.4**
baz=188
AMTX Amarillo 85.23 11 P **P** **18 51 13.0 -0.7**
AMTX IAMs_20 IAMs_20 19 22 46.4
comp=Z,7µm,21.0s
352A Blakely 85.27 25 P **P** **18 51 13.8 -0.1**
ISA Isabella, Lake 85.28 357 P **P** **18 51 12.4 -1.5**
ISA pmax pmax
comp=Z,93nm,1.3s
ISA MLR MLR
comp=Z,33µm,21.0s
ISA Isabella, Lake 85.28 357 P **P** **18 51 14.5 +0.6**
baz=178,SNR=9.7
ISA Isabella, Lake 85.28 357 P **P** **18 51 12.4 -1.5**
ISA IAmb IAmb 18 53 53.6
comp=Z,93nm,1.3s
146A Union 85.31 22 P **P** **18 51 13.6 -0.5**
PAGB Antelope Grade 85.42 356 P **P** **18 51 16.2 +1.6**
WLAR White Oak Lake 85.44 18 P **P** **18 51 13.7 -0.9**
WLAR IAmb IAmb 18 51 21.8
comp=Z,76nm,1.2s
WMOK Wichita Mounta 85.48 13 P **P** **18 51 14.8 -0.1**
WMOK Wichita Mounta 85.48 13 P **P** **18 51 15.6 +0.7**
baz=190
WMOK Wichita Mounta 85.48 13 P **P** **18 51 14.8 -0.1**
WMOK Wichita Mounta 85.48 13 IAMs_20 IAMs_20 19 22 49.8
comp=Z,9µm,22.0s
X34A Smith Ranch, M 85.49 14 P **P** **18 51 15.7 +0.8**
NWAO Narrogin (SRO) 85.52 222 P **P** **18 51 13.9 -1.5**
NWAO pmax pmax
comp=Z,146nm,1.6s
NWAO MLR MLR
comp=Z,15µm,22.0s
NWAO Narrogin (SRO) 85.52 222 P **P** **18 51 13.8 -1.7**
NWAO Narrogin (SRO) 85.52 222 P **P** **18 51 13.9 -1.5**
NWAO IAmb IAmb 18 51 24.9
comp=Z,146nm,1.6s
NWAO IAMs_20 IAMs_20 19 20 36.5
comp=Z,15µm,22.0s
TIGA Tifton 85.61 26 P **P** **18 51 16.0 +0.5**
baz=200
TIGA Tifton 85.61 26 P **P** **18 51 15.5 0.0**
MPMC Manual Prospec 85.64 358 P **P** **18 51 16.6 +0.7**
baz=178,SNR=24
X37A Clayton 85.89 16 P **P** **18 51 17.5 +0.7**
X37A IAMs_20 IAMs_20 19 24 19.5
comp=Z,11µm,20.0s
CCAR Cane Creek 85.93 19 P **P** **18 51 16.6 -0.5**
PMPB Monarch Peak 85.94 355 P **P** **18 51 17.3 +0.1**
VOG Valley Oaks Go 85.97 356 P **P** **18 51 17.4 +0.2**
baz=177
U15A North Rim 86.01 2 P **P** **18 51 16.2 -1.6**
U15A IAmb IAmb 18 51 36.4
comp=Z,177nm,1.6s
U15A IAMs_20 IAMs_20 19 21 46.5
comp=Z,15µm,20.0s
FURC Furnace Creek, 86.04 358 P **P** **18 51 18.3 +0.8**
baz=179,SNR=5.4
CWC Cottonwood Cre 86.04 357 P **P** **18 51 19.0 +1.2**
baz=178
SHPR Sheep Range 86.06 360 P **P** **18 51 17.5 -0.4**
SHPR IAmb IAmb 18 51 36.8
comp=Z,158nm,1.7s
SHPR IAMs_20 IAMs_20 19 21 04.5
comp=Z,16µm,21.0s
Z47A Carrollton 86.08 22 P **P** **18 51 16.6 -1.2**
MIAR Mount Ida 86.17 17 P **P** **18 51 17.3 -1.0**
MIAR pmax pmax
comp=Z,68nm,1.8s
MIAR MLR MLR
comp=Z,8µm,18.0s
MIAR Mount Ida 86.17 17 P **P** **18 51 20.0 +1.7**
baz=194
MIAR Mount Ida 86.17 17 P **P** **18 51 17.3 -1.0**
MIAR IAMs_20 IAMs_20 19 25 42.2
comp=Z,7µm,18.0s
LRAL Lakeview Retre 86.19 23 P **P** **18 51 19.5 +1.1**
baz=198
LRAL Lakeview Retre 86.19 23 P **P** **18 51 18.7 +0.3**
LRAL IAmb IAmb 18 51 37.4
comp=Z,82nm,1.4s
FNO Franklin 86.20 14 P **P** **18 51 16.9 -1.5**
X40A Basin Creek Fa 86.27 18 P **P** **18 51 20.4 +1.7**
baz=194
X40A Basin Creek Fa 86.27 18 P **P** **18 51 17.4 -1.3**
X40A IAmb IAmb 18 51 25.5
comp=Z,104nm,2.0s
X40A IAMs_20 IAMs_20 19 24 37.6
comp=Z,9µm,22.0s
Y45A Yeager Farm, C 86.37 21 P **P** **18 51 19.9 +0.7**
Y45A IAmb IAmb 18 51 27.2
comp=Z,123nm,1.3s
255A Hazlehurst 86.39 27 P **P** **18 51 19.0 -0.4**
255A IAmb IAmb 18 51 26.0
comp=Z,79nm,1.4s
KLBR Kellerberrin 86.44 223 P **P** **18 51 18.3 -1.7**
baz=86,SNR=4.4
152A Waverly Hall 86.45 25 P **P** **18 51 18.9 -0.8**
152A IAmb IAmb 18 51 27.2
comp=Z,64nm,1.3s
TPNV Topopah Spring 86.51 359 P **P** **18 51 18.6 -1.5**
TPNV pmax pmax
comp=Z,54nm,1.1s
TPNV MLR MLR
comp=Z,19µm,22.0s
TPNV Topopah Spring 86.51 359 P **P** **18 51 21.6 +1.5**
baz=179,SNR=26
TPNV Topopah Spring 86.51 359 P **P** **18 51 18.6 -1.5**
TPNV IAmb IAmb 18 54 21.5
comp=Z,54nm,1.1s
TPNV IAMs_20 IAMs_20 19 21 13.5
comp=Z,19µm,22.0s
LCMT Little Creek M 86.57 1 P **P** **18 51 18.3 -2.1**
GRAC Grapevine Rang 86.58 358 P **P** **18 51 21.9 +1.6**
baz=178
KNB Kanab 86.58 2 P **P** **18 51 18.5 -2.0**
KNB pmax pmax
comp=Z,86nm,1.4s
KNB Kanab 86.58 2 P **P** **18 51 18.5 -2.0**
UALR University of 86.64 18 P **P** **18 51 19.0 -1.6**
UALR IAmb IAmb 18 51 27.7
comp=Z,85nm,1.4s
UALR IAMs_20 IAMs_20 19 25 23.8
comp=Z,7µm,20.0s
TIN Tinemaha, Big 86.66 357 P **P** **18 51 21.8 +1.0**
baz=178
Z50A Ashland 86.68 24 P **P** **18 51 21.6 +0.8**
baz=198
Z50A Ashland 86.68 24 P **P** **18 51 19.8 -1.0**
X43A Marvell 86.70 20 P **P** **18 51 22.3 +1.4**
baz=195
W39A Magazine 86.77 17 P **P** **18 51 22.4 +1.2**
baz=193
W39A Magazine 86.77 17 P **P** **18 51 19.7 -1.5**
W39A IAmb IAmb 18 51 28.4
comp=Z,147nm,1.8s
W39A IAMs_20 IAMs_20 19 25 19.9
comp=Z,8µm,20.0s
WRKA Warakurna 86.82 234 P **P** **18 51 20.3 -1.8**
baz=87,SNR=10
154A Montrose 86.85 26 P **P** **18 51 20.5 -1.1**
257A Skidaway Islan 86.87 28 P **P** **18 51 21.9 +0.1**
Z51A Franklin 86.94 24 P **P** **18 51 21.5 -0.6**
Z51A IAmb IAmb 18 51 40.8
comp=Z,58nm,1.3s
MVCO Mesa Verde 86.94 5 P **P** **18 51 22.5 +0.2**
baz=184,SNR=7.5
MVCO Mesa Verde 86.94 5 P **P** **18 51 21.7 -0.6**
MVCO IAmb IAmb 18 51 33.4
comp=Z,142nm,1.4s
MVCO IAMs_20 IAMs_20 19 22 29.7
comp=Z,14µm,22.0s
PKCU Pink Cliffs 87.02 2 P **P** **18 51 22.9 +0.1**
OXF Oxford 87.02 21 P **P** **18 51 21.8 -0.6**
OXF pmax pmax
comp=Z,169nm,1.6s
OXF MLR MLR
comp=Z,3µm,21.0s
OXF Oxford 87.02 21 P **P** **18 51 23.1 +0.6**
baz=196
OXF Oxford 87.02 21 P **P** **18 51 21.8 -0.6**
COEN Coen 87.03 252 IAMs_20 IAMs_20 19 27 40.9
comp=Z,15µm,18.0s
W41B Gary Mavity, V 87.05 18 P **P** **18 51 23.5 +0.9**
baz=194
U32A Winter Ranch, 87.06 13 P **P** **18 51 21.1 -1.5**
TUL1 Leonard 87.10 15 P **P** **18 51 22.8 0.0**
baz=192
TUL1 Leonard 87.10 15 P **P** **18 51 20.9 -1.9**
CCUT Cedar City 87.11 1 P **P** **18 51 21.8 -1.3**
Y49A Blount Mountai 87.12 23 P **P** **18 51 22.0 -1.0**
WHAR Wooly Hollow 87.15 18 P **P** **18 51 22.9 -0.1**
WHAR IAmb IAmb 18 51 42.2
comp=Z,97nm,1.6s
WHAR IAMs_20 IAMs_20 19 26 41.0
comp=Z,6µm,18.0s
SZCU Shurtz Canyon 87.16 1 P **P** **18 51 21.5 -1.8**
T25A Trinidad 87.17 8 P **P** **18 51 24.0 +0.5**
baz=187
OMMB Old Mammoth Mi 87.24 357 P **P** **18 51 23.7 -0.2**
OMMB IAmb IAmb 18 53 26.2
comp=Z,52nm,1.0s
MLAC Mammoth, Mammo 87.25 357 P **P** **18 51 24.7 +0.9**
baz=177
MDPB Devils Postpil 87.27 357 P **P** **18 51 20.9 -3.0**
WR0 Warramunga Arr 87.47 242 P **P** **18 51 23.1 -2.2**
GOGA Godfrey 87.49 26 P **P** **18 51 22.6 -2.2**
GOGA pmax pmax
comp=Z,88nm,1.5s
GOGA MLR MLR
comp=Z,3µm,18.0s
GOGA Godfrey 87.49 26 P **P** **18 51 25.2 +0.5**
baz=200
GOGA S **S** **19 02 10.6 +4.7**
baz=200
GOGA Godfrey 87.49 26 P **P** **18 51 22.6 -2.2**
GOGA IAmb IAmb 18 51 43.5
comp=Z,88nm,1.4s
157A Early Branch 87.53 28 P **P** **18 51 25.6 +0.7**
baz=201
X48A Hartselle 87.53 23 P **P** **18 51 24.8 -0.1**
S22A 4UR Ranch, Cre 87.58 6 P **P** **18 51 25.9 +0.5**
baz=185
WRA Warramunga Arr 87.60 242 P **P** **18 51 23.1 -2.8**
comp=Z,3.1nm,1.1s,baz=149,slow=3.8,SNR=7.8
WRA LR LR 19 26 32.1
comp=Z,13µm,18.1s,baz=150,slow=33
WRAB Tennant Creek 87.60 242⇑*eP* **P** **18 51 29.3 +3.4**
WRAB pmax pmax
comp=Z,21nm,1.4s
WRAB MLR MLR
comp=Z,9µm,16.0s
WRAB Tennant Creek 87.60 242 P **P** **18 51 26.3 +0.4**
MTPU Mount Pierson 87.62 2 P **P** **18 51 25.0 -0.7**
SDCO Great Sand Dun 87.68 7 P **P** **18 51 26.4 +0.4**
baz=186
SDCO Great Sand Dun 87.68 7 P **P** **18 51 23.9 -2.0**
SDCO IAmb IAmb 18 51 43.5
comp=Z,93nm,1.8s
SDCO IAMs_20 IAMs_20 19 24 12.2
comp=Z,6µm,19.0s
W45A Hickory Valley 87.69 21 P **P** **18 51 23.0 -2.7**
W45A IAmb IAmb 18 51 43.1
comp=Z,72nm,1.2s
WB0 Warramunga Arr 87.71 242 P **P** **18 51 25.3 -1.1**
CMB Columbia Colle 87.72 356 P **P** **18 51 25.1 -0.7**
CMB pmax pmax
comp=Z,170nm,1.3s
CMB MLR MLR
comp=Z,24µm,21.0s
CMB Columbia Colle 87.72 356 P **P** **18 51 25.1 -0.7**
BLDU Ballidu 87.73 222 P **P** **18 51 25.8 -0.5**
baz=88,SNR=4.3
HBAR Harrisburg 87.75 19 P **P** **18 51 26.2 +0.3**
HBAR IAMs_20 IAMs_20 19 27 35.9
comp=Z,7µm,18.0s
Y52A Lilburn 87.75 25 P **P** **18 51 26.5 +0.5**
baz=199
Y52A S **S** **19 02 13.8 +5.4**
baz=199
Y52A Lilburn 87.75 25 P **P** **18 51 25.3 -0.7**
Y52A IAmb IAmb 18 51 44.9
comp=Z,140nm,1.8s
FCAR Ozark Folk Cen 87.76 18 P **P** **18 51 25.2 -0.8**
PV05 Paradox Valley 87.77 4 P **P** **18 51 26.4 +0.1**
PV05 IAMs_20 IAMs_20 19 22 18.7
comp=Z,10µm,22.0s
PLAL Pickwick Lake 87.78 22 P **P** **18 51 23.7 -2.4**
PLAL IAmb IAmb 18 51 44.5
comp=Z,80nm,1.6s
HHAR Hobbs 87.79 17 P **P** **18 51 25.1 -1.1**
HHAR IAmb IAmb 18 51 44.9
comp=Z,61nm,1.4s
HHAR IAMs_20 IAMs_20 19 25 43.0
comp=Z,7µm,20.0s
158A Hollywood 87.83 29 P **P** **18 51 26.5 +0.1**
baz=201
PV01 Paradox Valley 87.85 5 P **P** **18 51 24.6 -2.1**

PV01 IAMs_20 IAMs_20 19 22 21.3
comp=Z,9µm,21.0s
U38A Gravette 87.86 16 P **P** **18 51 26.2 -0.3**
U38A IAmb IAmb 18 51 45.3
comp=Z,51nm,1.3s
PV13 Radium Mtn., P 87.86 5 P **P** **18 51 25.6 -1.1**
PV13 IAmb IAmb 18 51 37.4
comp=Z,70nm,1.8s
PV13 IAMs_20 IAMs_20 19 22 20.2
comp=Z,10µm,22.0s
LPAR Lepanto 87.87 20 P **P** **18 51 26.0 -0.5**
R11A Troy Canyon, C 87.90 359 P **P** **18 51 27.5 +0.6**
baz=180
R11A Troy Canyon, C 87.90 359 P **P** **18 51 25.6 -1.2**
R11A IAmb IAmb 18 51 45.8
comp=Z,84nm,1.7s
R11A IAMs_20 IAMs_20 19 22 11.3
comp=Z,18µm,20.0s
PV02 Paradox Valley 87.92 5 P **P** **18 51 24.1 -2.9**
PV18 Skein Mesa, Pa 87.95 5 P **P** **18 51 24.1 -3.0**
PV18 IAMs_20 IAMs_20 19 22 22.4
comp=Z,10µm,21.0s
PV03 Paradox Valley 87.96 5 P **P** **18 51 25.4 -1.8**
PV03 IAMs_20 IAMs_20 19 22 22.7
comp=Z,9µm,22.0s
T35A Sooner Cattle 87.96 15 P **P** **18 51 25.9 -1.1**
T35A IAMs_20 IAMs_20 19 24 49.6
comp=Z,9µm,22.0s
PV17 East Wray Mesa 87.98 5 P **P** **18 51 27.5 +0.3**
PV17 IAmb IAmb 18 51 33.4
comp=Z,46nm,1.3s
PV17 IAMs_20 IAMs_20 19 22 23.2
comp=Z,10µm,21.0s
FPAL Fort Paine 87.98 24 P **P** **18 51 26.2 -0.9**
PV11 David Mesa, Pa 88.00 5 P **P** **18 51 26.3 -1.1**
PV11 IAMs_20 IAMs_20 19 22 23.8
comp=Z,11µm,22.0s
PV19 Morning Glory 88.01 5 P **P** **18 51 27.0 -0.4**
PV19 IAmb IAmb 18 51 44.2
comp=Z,116nm,1.8s
PV19 IAMs_20 IAMs_20 19 23 01.0
comp=Z,10µm,22.0s
PV16 Nyswonger Mesa 88.01 5 P **P** **18 51 27.4 0.0**
Z56A Williston 88.02 27 P **P** **18 51 27.7 +0.4**
baz=201
Z56A Williston 88.02 27 P **P** **18 51 25.8 -1.5**
PV12 Saucer Basin, 88.02 5 P **P** **18 51 26.5 -1.0**
PV12 IAmb IAmb 18 54 50.1
comp=Z,78nm,1.5s
PV12 IAMs_20 IAMs_20 19 22 24.4
comp=Z,11µm,22.0s
NV11 Mina Array Sit 88.03 357 P **P** **18 51 26.8 -0.6**
NVAR Mina Array Bea 88.03 357 LR LR 19 22 18.2
comp=Z,34µm,21.0s,baz=178,slow=30
PMG Port Moresby 88.03 258*c i* P **P** **18 51 30.1 +2.1**
PMG pmax pmax
comp=Z,362nm,2.0s
PMG MLR MLR
comp=Z,27µm,16.0s
PMG Port Moresby 88.03 258 P **P** **18 51 29.0 +1.1**
PV20 West Nyswonger 88.04 5 P **P** **18 51 26.5 -1.0**
PV20 IAMs_20 IAMs_20 19 23 01.8
comp=Z,11µm,22.0s
PV15 Paradox Valley 88.07 5 P **P** **18 51 25.2 -2.5**
PV15 IAmb IAmb 18 54 52.5
comp=Z,52nm,1.4s
PV15 IAMs_20 IAMs_20 19 24 41.5
comp=Z,8µm,18.0s
PV14 Lion Creek, Pa 88.07 5 P **P** **18 51 25.4 -2.3**
PV14 IAmb IAmb 18 51 34.0
comp=Z,56nm,1.3s
PV14 IAMs_20 IAMs_20 19 23 02.6
comp=Z,13µm,22.0s
PV10 Paradox Valley 88.07 4 P **P** **18 51 25.8 -2.0**
PV10 IAmb IAmb 18 51 45.4
comp=Z,82nm,1.5s
PV10 IAMs_20 IAMs_20 19 22 22.3
comp=Z,11µm,22.0s
U40A Yellville 88.07 18 P **P** **18 51 28.6 +1.1**
baz=194
U40A Yellville 88.07 18 P **P** **18 51 26.4 -1.1**
U40A IAmb IAmb 18 51 45.2
comp=Z,112nm,1.6s
U40A IAMs_20 IAMs_20 19 26 21.7
comp=Z,9µm,20.0s
PSUT Pine Spring 88.09 1 P **P** **18 51 26.1 -1.6**
MSU Marysvale 88.09 2 P **P** **18 51 26.8 -1.0**
MSU Marysvale 88.09 2 P **P** **18 51 26.8 -1.0**
PV04 Paradox Valley 88.09 5 P **P** **18 51 25.6 -2.1**
PV04 IAmb IAmb 18 51 44.8
comp=Z,127nm,1.7s
PV04 IAMs_20 IAMs_20 19 22 27.2
comp=Z,11µm,22.0s
CSU Charleston Sou 88.10 29 P **P** **18 51 26.5 -1.1**
PV23 Carpenter Ridg 88.15 5 P **P** **18 51 27.9 -0.2**
PV23 IAMs_20 IAMs_20 19 23 05.7
comp=Z,13µm,22.0s
WAKR Walker 88.15 356 P **P** **18 51 28.2 +0.1**
PV07 Paradox Valley 88.15 5 P **P** **18 51 28.6 +0.6**
PV07 IAMs_20 IAMs_20 19 22 30.9
comp=Z,9µm,22.0s
NHSC New Hope 88.18 28 P **P** **18 51 28.7 +0.7**
baz=202
NHSC New Hope 88.18 28 P **P** **18 51 27.6 -0.5**
TCRU Three Creeks R 88.18 2 P **P** **18 51 29.3 +1.0**
PV09 Paradox Valley 88.19 4 P **P** **18 51 26.8 -1.6**
Z57A Bowman 88.19 28 P **P** **18 51 25.7 -2.4**
baz=201
X51A Calhoun 88.20 24 P **P** **18 51 26.9 -1.3**
X51A IAmb IAmb 18 51 47.0
comp=Z,116nm,1.5s
RYN Ryan 88.24 357 P **P** **18 51 28.6 +0.2**
PV22 Blue Mesa, Par 88.24 5 P **P** **18 51 27.1 -1.3**
PV22 IAmb IAmb 18 54 48.9
comp=Z,42nm,1.1s
PV22 IAMs_20 IAMs_20 19 25 16.2
comp=Z,6µm,18.0s
PV21 Cone Mtn., Par 88.26 5 IAMs_20 IAMs_20 19 23 08.6
comp=Z,11µm,22.0s
HALT Halls 88.38 20 P **P** **18 51 27.6 -1.3**
Y55A Saluda 88.45 27 P **P** **18 51 26.7 -2.6**
baz=200
Y55A S **S** **19 02 19.5 +4.6**
baz=200
PEBM Pemiscott Bayo 88.46 20 P **P** **18 51 28.6 -0.7**
Z58A St. Stephen 88.50 29 P **P** **18 51 28.2 -1.4**
baz=202
LNXT Lenox 88.53 20 P **P** **18 51 29.5 -0.1**
SWET Sewanee 88.54 23 P **P** **18 51 29.4 -0.4**
Z59A Georgetown, SC 88.58 29 P **P** **18 51 29.3 -0.6**
baz=202
HODGE Hodges 88.61 26 P **P** **18 51 30.1 +0.1**
YERR Yerington 88.62 357 P **P** **18 51 29.6 -0.7**
KVN Kaiserville 88.65 357 P **P** **18 51 29.2 -1.2**
KVN pmax pmax
comp=Z,178nm,2.0s
KVN MLR MLR
comp=Z,32µm,20.0s
KVN Kaiserville 88.65 357 P **P** **18 51 29.2 -1.2**
AFDM Forest Hills D 88.67 355 P **P** **18 51 30.7 +0.5**
AFDM IAmb IAmb 18 52 50.2
comp=Z,46nm,0.8s
W50A Signal Mountai 88.68 24 P **P** **18 51 30.6 +0.2**
W50A IAmb IAmb 18 51 37.0
comp=Z,70nm,1.8s
GLAT Glass 88.73 20 P **P** **18 51 27.2 -3.4**
SRU San Rafael Swe 88.74 3 P **P** **18 51 29.3 -1.5**
SRU pmax pmax
comp=Z,41nm,0.9s
SRU San Rafael Swe 88.74 3 P **P** **18 51 29.3 -1.5**
PNTR Pine Nut 88.74 356 P **P** **18 51 29.7 -1.1**
KWAJ Kwajalein Atol 88.80 285 IAMs_20 IAMs_20 19 25 35.8
comp=Z,7µm,19.0s
RABL Rabaul 88.81 265 P **P** **18 51 28.3 -3.3**
RABL IAMs_20 IAMs_20 19 28 20.6
comp=Z,8µm,19.0s
KRVT Keravat (AS076 88.81 265 LR LR 19 27 13.2
comp=Z,2µm,18.1s,baz=141,slow=33
V48A Smith Brothers 88.81 22 P **P** **18 51 30.1 -0.8**
V48A IAmb IAmb 18 51 49.5
comp=Z,120nm,1.4s
X54A Belton 88.87 26 P **P** **18 51 31.7 +0.4**
baz=200
X54A S **S** **19 02 24.2 +5.3**
baz=200

TMUT Trail Mountain 88.90 3 P **P** **18 51 31.1 -0.6**
Q24A Divide 88.92 7 P **P** **18 51 32.5 +0.7**
baz=186
WVT Waverly 88.94 22 P **P** **18 51 29.7 -1.9**
WVT pmax pmax
comp=Z,125nm,1.5s
WVT MLR MLR
comp=Z,4µm,20.0s
WVT Waverly 88.94 22 P **P** **18 51 31.6 +0.1**
baz=197
WVT S **S** **19 02 25.2 +5.8**
baz=197
WVT Waverly 88.94 22 P **P** **18 51 29.6 -1.9**
WVT IAmb IAmb 18 51 50.1
comp=Z,125nm,1.4s
VCNR Virginia City 88.95 356 P **P** **18 51 30.6 -1.2**
W52A Murphy 88.95 25 P **P** **18 51 31.3 -0.3**
W52A IAmb IAmb 18 51 50.4
comp=Z,63nm,1.3s
Y57A Sumter 88.96 28 P **P** **18 51 31.8 +0.2**
baz=201
Y57A Sumter 88.96 28 P **P** **18 51 31.2 -0.4**
PBMO Poplar Bluff 88.97 19 P **P** **18 51 31.0 -0.7**
PBMO IAmb IAmb 18 52 34.9
comp=Z,62nm,1.4s
SMCO Snowmass 88.99 6 P **P** **18 51 32.3 +0.1**
SMCO IAMs_20 IAMs_20 19 23 55.7
comp=Z,19µm,22.0s
X55A Gracelyn & Ava 89.01 27 P **P** **18 51 31.9 -0.1**
baz=201
SUR Sutherland 89.08 144 IAMs_20 IAMs_20 19 24 43.0
comp=Z,10µm,19.0s
Y58A Scranton 89.08 29 P **P** **18 51 32.1 -0.1**
baz=202
R32A Long Quarter, 89.11 13 P **P** **18 51 30.6 -1.8**
R32A IAmb IAmb 18 51 39.1
comp=Z,128nm,1.8s
R32A IAMs_20 IAMs_20 19 24 59.2
comp=Z,10µm,22.0s
HENM Henderson Moun 89.12 20 IAMs_20 IAMs_20 19 26 46.3
comp=Z,6µm,21.0s
CPCT Cooper Cave 89.12 24 P **P** **18 51 31.9 -0.6**
CPCT IAmb IAmb 18 51 51.1
comp=Z,100nm,1.6s
BG3 Lake Jocassee 89.13 26 P **P** **18 51 31.4 -1.1**
KSCO Kaye Shedlock' 89.20 9 P **P** **18 51 33.3 +0.4**
KSCO IAMs_20 IAMs_20 19 24 23.4
comp=Z,17µm,22.0s
X56A White Oak 89.21 27 P **P** **18 51 33.3 +0.4**
baz=201
X56A S **S** **19 02 25.9 +3.9**
baz=201
CLTN Cedars of Leba 89.27 23 P **P** **18 51 32.7 -0.4**
CLTN IAmb IAmb 18 51 51.6
comp=Z,58nm,1.2s
S39A Bolivar 89.28 17 P **P** **18 51 32.2 -0.9**
S39A IAmb IAmb 18 51 40.5
comp=Z,68nm,1.3s
S39A IAMs_20 IAMs_20 19 26 07.6
comp=Z,7µm,21.0s
PAULI Pauline 89.29 27 P **P** **18 51 33.2 0.0**
ORV Oroville 89.30 355 P **P** **18 51 33.9 +0.7**
ORV pmax pmax
comp=Z,99nm,0.8s
ORV MLR MLR
comp=Z,21µm,21.0s
ORV Oroville 89.30 355 P **P** **18 51 33.9 +0.7**
PAHR Pah Rah Range 89.35 356 P **P** **18 51 34.1 +0.5**
PAHR IAmb IAmb 18 53 05.2
comp=Z,92nm,1.3s
CBKS Cedar Bluff 89.35 12 P **P** **18 51 33.9 +0.4**
CBKS pmax pmax
comp=Z,101nm,1.5s
CBKS MLR MLR
comp=Z,4µm,18.0s
CBKS Cedar Bluff 89.35 12 P **P** **18 51 34.4 +1.0**
baz=190
CBKS Cedar Bluff 89.35 12 P **P** **18 51 33.9 +0.4**
CBKS IAmb IAmb 18 51 40.4
comp=Z,101nm,1.4s
Y59A Loris 89.40 29 P **P** **18 51 33.6 -0.1**
baz=202
W54A Cherokee Point 89.43 26 P **P** **18 51 34.3 +0.4**
baz=200
W54A S **S** **19 02 27.8 +3.7**
baz=200
X57A Johnson Farm, 89.46 28 P **P** **18 51 33.9 -0.1**
baz=202
V51A Loudon 89.50 24 P **P** **18 51 33.0 -1.2**
V51A IAmb IAmb 18 51 52.9
comp=Z,76nm,1.6s
BIRD Birdtown, Kers 89.52 28 P **P** **18 51 33.3 -1.0**
BIRD IAmb IAmb 18 51 52.5
comp=Z,83nm,1.6s
TKL Tuckaleechee C 89.52 25 P **P** **18 51 34.9 +0.6**
comp=Z,1.8nm,0.7s,baz=185,slow=2.8,SNR=4.6
TKL LR LR 19 25 55.7
comp=Z,3µm,21.6s,baz=204,slow=32
TKL Tuckaleechee C 89.52 25 P **P** **18 51 32.5 -1.8**
TKL pmax pmax
comp=Z,25nm,1.3s
TKL MLR MLR
comp=Z,4µm,20.0s
TKL Tuckaleechee C 89.52 25 P **P** **18 51 32.5 -1.8**
NLU North Lily Min 89.53 2 P **P** **18 51 32.5 -2.0**
T45A Paducah 89.60 21 P **P** **18 51 35.3 +0.7**
T45A IAmb IAmb 18 51 41.8
comp=Z,56nm,0.8s
MPU Maple Canyon 89.60 2 P **P** **18 51 34.9 +0.1**
Y60A Bolivia 89.62 30 P **P** **18 51 34.4 -0.4**
baz=203
ISCO Idaho Springs 89.71 7 P **P** **18 51 34.9 -0.6**
ISCO pmax pmax
comp=Z,13nm,0.9s
ISCO MLR MLR
comp=Z,15µm,20.0s
ISCO Idaho Springs 89.71 7 P **P** **18 51 34.9 -0.6**
ISCO IAMs_20 IAMs_20 19 25 18.0
comp=Z,15µm,20.0s
KMSC Kings Mountain 89.72 27 P **P** **18 51 34.8 -0.4**
V52A Sevierville 89.74 25 P **P** **18 51 35.7 +0.4**
DUG Dugway, Tooele 89.76 1 P **P** **18 51 34.4 -1.1**
DUG pmax pmax
comp=Z,29nm,1.2s
DUG MLR MLR
comp=Z,10µm,18.0s
DUG Dugway, Tooele 89.76 1 P **P** **18 51 35.9 +0.4**
baz=181
DUG Dugway, Tooele 89.76 1 P **P** **18 51 34.4 -1.1**
DUG IAMs_20 IAMs_20 19 25 04.8
comp=Z,10µm,18.0s
X58A Rowland 89.78 29 P **P** **18 51 34.5 -1.0**
X58A IAmb IAmb 18 51 52.6
comp=Z,67nm,1.4s
V53A Saluda 89.80 26 P **P** **18 51 35.8 +0.2**
V53A IAmb IAmb 18 51 54.1
comp=Z,74nm,1.4s
U49A Red Boiling Sp 89.80 23 P **P** **18 51 33.8 -1.8**
U49A IAmb IAmb 18 51 54.2
comp=Z,61nm,1.1s
O20A White River Ci 89.86 5 P **P** **18 51 35.6 -0.4**
baz=184
O20A White River Ci 89.86 5 P **P** **18 51 36.8 +0.7**
O20A IAmb IAmb 18 55 03.8
comp=Z,114nm,1.4s
T47A Sharon Grove 89.93 22 P **P** **18 51 34.7 -1.5**
T47A IAmb IAmb 18 51 43.4
comp=Z,106nm,1.6s
T47A IAMs_20 IAMs_20 19 28 47.7
comp=Z,6µm,19.0s
W56A Indian Trail 89.94 27 P **P** **18 51 36.2 -0.1**
baz=201
W56A S **S** **19 02 32.8 +3.9**
baz=201
O02D Mt. Diablo Mer 90.00 354 P **P** **18 51 37.6 +1.0**
baz=175,SNR=5.3
X59A McDuffie Farm, 90.03 29 P **P** **18 51 37.1 +0.4**
baz=202
CCM Cathedral Cave 90.03 18 P **P** **18 51 35.2 -1.4**
CCM pmax pmax
comp=Z,48nm,1.3s
CCM MLR MLR
comp=Z,7µm,20.0s
CCM Cathedral Cave 90.03 18 P **P** **18 51 37.3 +0.7**
baz=195
CCM Cathedral Cave 90.03 18 P **P** **18 51 35.2 -1.4**

CCM Cathedral Cave 90.03 18 IAMs_20 IAMs_20 19 26 57.6
comp=Z,7µm,20.0s
O03E Paynes Creek 90.05 355 P **P** **18 51 38.3 +1.5**
baz=176,SNR=7.6
R40A Maddies Statio 90.06 18 P **P** **18 51 35.9 -0.8**
R40A IAMs_20 IAMs_20 19 27 08.3
comp=Z,8µm,21.0s
KSU1 Kansas State U 90.08 14 P **P** **18 51 37.1 +0.2**
baz=192
KSU1 Kansas State U 90.08 14 P **P** **18 51 37.9 +1.1**
KSU1 IAmb IAmb 18 51 49.0
comp=Z,140nm,1.6s
KSU1 Kansas State U 90.08 14 IAMs_20 IAMs_20 19 25 49.0
comp=Z,10µm,22.0s
S44A Carbondale 90.11 20 P **P** **18 51 36.7 -0.3**
S44A IAmb IAmb 18 51 56.0
comp=Z,56nm,1.3s
S44A IAMs_20 IAMs_20 19 27 53.5
comp=Z,6µm,20.0s
W57A Gilead 90.13 28 P **P** **18 51 36.8 -0.3**
baz=202
W57A Gilead 90.13 28 P **P** **18 51 36.9 -0.3**
W57A IAmb IAmb 18 51 53.9
comp=Z,82nm,1.6s
SIUC Southern Illin 90.14 20 P **P** **18 51 36.9 -0.2**
SIUC IAmb IAmb 18 51 56.1
comp=Z,66nm,1.4s
SIUC IAMs_20 IAMs_20 19 27 43.0
comp=Z,6µm,20.0s
V54A Nebo 90.14 26 P **P** **18 51 37.9 +0.7**
baz=200
JLU Jordanelle 90.19 3 P **P** **18 51 36.9 -0.8**
X60A Albert Glenn T 90.23 30 P **P** **18 51 38.0 +0.4**
baz=203
RDMU Red Mountain 90.23 4 P **P** **18 51 35.4 -2.4**
W58A Raeford 90.24 28 P **P** **18 51 37.3 -0.3**
baz=202
CTU Camp Tracy 90.28 2 P **P** **18 51 36.2 -1.8**
ELK Elko 90.29 360 P **P** **18 51 37.3 -0.8**
ELK pmax pmax
comp=Z,14nm,0.9s
ELK MLR MLR
comp=Z,14µm,21.0s
ELK Elko 90.29 360 P **P** **18 51 37.3 -0.8**
ELK IAMs_20 IAMs_20 19 23 45.9
comp=Z,14µm,21.0s
WDC Whiskeytown Da 90.39 354 P **P** **18 51 38.8 +0.6**
WDC pmax pmax
comp=Z,44nm,1.0s
WDC MLR MLR
comp=Z,21µm,21.0s
WDC Whiskeytown Da 90.39 354 P **P** **18 51 38.8 +0.6**
WDC IAmb IAmb 18 52 23.5
comp=Z,44nm,0.9s
V55A Taylorsville 90.42 27 P **P** **18 51 38.4 -0.1**
baz=201
V55A S **S** **19 02 35.7 +2.4**
baz=201
V55A Taylorsville 90.42 27 P **P** **18 51 36.6 -1.9**
V55A IAmb IAmb 18 51 56.7
comp=Z,72nm,1.7s
BGU Big Grassy Mou 90.48 1 P **P** **18 51 38.6 -0.3**
T50A Nancy 90.53 24 P **P** **18 51 38.2 -0.8**
T50A IAmb IAmb 18 51 57.3
comp=Z,63nm,1.5s
V56A Mocksville 90.59 27 P **P** **18 51 38.5 -0.8**
baz=201
W59A Clinton 90.62 29 P **P** **18 51 39.6 +0.2**
baz=202
ASCN Ascension 90.63 103 IAMs_20 IAMs_20 19 28 37.6
comp=Z,15µm,18.0s
TCUT Toone Canyon 90.71 3 P **P** **18 51 38.2 -1.9**
JCC Jacoby Creek, 90.73 353 IAMs_20 IAMs_20 19 22 17.7
comp=Z,17µm,21.0s
W60A Pink Hill 90.75 30 P **P** **18 51 39.6 -0.4**
baz=203
KHMM Horse Mountain 90.76 353 P **P** **18 51 39.6 -0.5**
N02D Trinity Center 90.79 354 P **P** **18 51 40.5 +0.3**
baz=175
SLM Saint Louis 90.80 19 P **P** **18 51 38.5 -1.7**
SLM pmax pmax
comp=Z,100nm,1.6s
SLM MLR MLR
comp=Z,6µm,21.0s
SLM Saint Louis 90.80 19 P **P** **18 51 38.5 -1.7**
SLM IAmb IAmb 18 51 55.5
comp=Z,100nm,1.6s
SLM IAMs_20 IAMs_20 19 27 28.9
comp=Z,7µm,21.0s
CNNC Cliffs of the 90.86 29 P **P** **18 51 40.4 -0.1**
baz=203
CNNC Cliffs of the 90.86 29 P **P** **18 51 40.0 -0.5**
U54A Nelsons Funny 90.87 26 P **P** **18 51 40.8 +0.1**
baz=200
U54A Nelsons Funny 90.87 26 P **P** **18 51 38.8 -1.8**
U54A IAmb IAmb 18 51 58.9
comp=Z,57nm,1.4s
V57A Coltrane Farms 90.88 28 P **P** **18 51 41.1 +0.4**
baz=202
V58A Windy Hill, Pi 90.99 28 P **P** **18 51 41.6 +0.4**
baz=202
U55A TA2, Sparta 91.08 27 P **P** **18 51 42.2 +0.6**
baz=201
W61A Ground Anchor 91.10 30 P **P** **18 51 42.3 +0.6**
baz=203
T53A Wise 91.10 25 P **P** **18 51 42.6 +0.9**
baz=200
P38A Dawn 91.11 16 P **P** **18 51 40.4 -1.3**
U56A King 91.13 27 P **P** **18 51 42.5 +0.7**
baz=201
U56A King 91.13 27 P **P** **18 51 39.8 -2.0**
U56A IAmb IAmb 18 51 60.0
comp=Z,72nm,1.6s
OGNE Ogallala 91.18 10 P **P** **18 51 43.0 +1.0**
baz=188
OGNE Ogallala 91.18 10 P **P** **18 51 43.1 +1.1**
OGNE IAMs_20 IAMs_20 19 25 46.2
comp=Z,15µm,21.0s
HWUT Hardware Ranch 91.19 2 P **P** **18 51 40.2 -2.0**
HWUT IAMs_20 IAMs_20 19 25 15.8
comp=Z,14µm,20.0s
M02C Callahan 91.21 354 P **P** **18 51 43.2 +1.1**
baz=175
PHWY Pilot Hill 91.21 7 P **P** **18 51 39.3 -3.1**
PHWY IAMs_20 IAMs_20 19 25 46.1
comp=Z,12µm,19.0s
V59A Middlesex 91.24 29 P **P** **18 51 42.2 -0.1**
baz=203
P40A Paris 91.30 17 P **P** **18 51 43.4 +0.9**
WCI Wyandotte Cave 91.31 22 P **P** **18 51 42.6 +0.1**
baz=198
Q44A Meyer Farm, Va 91.32 20 P **P** **18 51 43.8 +1.2**
Q44A IAmb IAmb 18 52 01.5
comp=Z,116nm,1.6s
Q44A IAMs_20 IAMs_20 19 28 14.6
comp=Z,6µm,20.0s
HVU Hansel Valley 91.34 1 P **P** **18 51 43.1 +0.3**
HVU pmax pmax
comp=Z,39nm,1.2s
HVU Hansel Valley 91.34 1 P **P** **18 51 43.1 +0.3**
S51A Beattyville 91.43 24 P **P** **18 51 42.1 -1.0**
T54A Tazewell 91.45 26 P **P** **18 51 43.2 -0.1**
baz=201
RWWY Rawlins 91.47 6 P **P** 18 51 37.9 -5.7
RWWY IAMs_20 IAMs_20 19 25 18.4
comp=Z,7µm,22.0s
U57A Blanch 91.52 28 P **P** **18 51 43.2 -0.3**
baz=202
M04C Macdoel 91.54 355 P **P** **18 51 44.5 +0.7**
baz=176
YBH Yreka Blue Hor 91.54 354 P **P** **18 51 44.4 +0.7**
comp=Z,3.6nm,1.1s,baz=112,slow=5.4,SNR=1.9
YBH Yreka Blue Hor 91.54 354 P **P** **18 51 42.0 -1.7**
V60A Jim Taylor Roa 91.55 30 P **P** **18 51 44.6 +0.9**
baz=203
MOD Modoc Plateau 91.58 356 P **P** **18 51 41.8 -2.1**
MOD IAmb IAmb 18 53 56.4
comp=Z,45nm,1.1s
R49A Shelbyville 91.64 23 P **P** **18 51 43.1 -1.0**
R49A IAMs_20 IAMs_20 19 29 50.0
comp=Z,6µm,20.0s
U58A Oxford 91.72 28 P **P** **18 51 43.9 -0.6**
baz=202
T55A Pulaski 91.72 27 P **P** **18 51 44.7 +0.1**
baz=201
V62A Hyde County Ai 91.79 31 P **P** **18 51 44.9 +0.1**

baz=204
V61A Roper 91.79 30 P P 18 51 45.2 +0.4
baz=204
R50A Paris 91.85 24 P P 18 51 44.4 -0.6
T56A Rocky Mt 91.86 27 P P 18 51 45.4 +0.2
baz=202
S53A Williamson 91.87 25 P P 18 51 45.2 -0.1
baz=200
BLA Blacksburg 91.92 27 P P 18 51 44.9 -0.6
baz=201
P43A Skaggs, Pawnee 91.92 19 IAMs_20 IAMs_20 19 28 23.5
comp=Z,8µm,20.0s
U59A Littleton 91.92 29 P P 18 51 45.1 -0.3
baz=203
U59A Littleton 91.92 29 P P 18 51 45.2 -0.2
U59A IAmb IAmb 18 52 03.1
comp=Z,92nm,1.9s
N35A Tabor 91.96 14 P P 18 51 43.6 -1.9
N35A IAMs_20 IAMs_20 19 27 10.6
comp=Z,10µm,21.0s
L04D Klamath Falls 92.00 354 P P 18 51 46.6 +0.7
baz=175
WVOR Wild Horse Val 92.04 357 P P 18 51 44.2 -1.8
WVOR pmax pmax
comp=Z,42nm,0.9s
WVOR MLR MLR
comp=Z,20µm,22.0s
WVOR Wild Horse Val 92.04 357 P P 18 51 44.2 -1.8
WVOR IAmb IAmb 18 53 10.5
comp=Z,42nm,0.9s
T57A Hurt 92.07 28 P P 18 51 45.8 -0.3
baz=202
BGNE Belgrade 92.12 12 P P 18 51 46.5 +0.2
baz=191
BGNE Belgrade 92.12 12 IAMs_20 IAMs_20 19 26 40.2
comp=Z,6µm,21.0s
BLO Bloomington 92.15 22 IAMs_20 IAMs_20 19 28 51.3
comp=Z,6µm,21.0s
S54A Dingess, Beckl 92.21 26 P P 18 51 47.2 +0.4
baz=201
S54A Dingess, Beckl 92.21 26 P P 18 51 43.1 -3.7
S54A IAmb IAmb 18 52 05.0
comp=Z,49nm,1.6s
U60A Pendleton 92.23 29 P P 18 51 46.5 -0.3
baz=203
T58A Grand View Acr 92.23 28 P P 18 51 46.0 -0.8
baz=202
N38A Joes South For 92.30 16 IAMs_20 IAMs_20 19 27 30.7
comp=Z,8µm,22.0s
U61A Possum Corner 92.33 30 P P 18 51 45.9 -1.4
baz=204
AHID Auburn Hatcher 92.36 3 P P 18 51 46.3 -1.4
AHID IAmb IAmb 18 51 59.0
comp=Z,105nm,1.6s
K04D Chiloquin, OR 92.37 355 P P 18 51 48.3 +0.8
baz=176
P46A Rosedale 92.41 21 P P 18 51 46.1 -1.5
P46A IAmb IAmb 18 51 53.9
comp=Z,35nm,1.1s
P46A IAMs_20 IAMs_20 19 29 11.3
comp=Z,5µm,19.0s
S55A Lewisburg 92.42 27 P P 18 51 46.9 -0.9
baz=201
BW06 Boulder Array 92.42 4 P P 18 51 47.7 -0.2
baz=183
BW06 Boulder Array 92.42 4 P P 18 51 46.1 -1.8
BW06 IAmb IAmb 18 52 00.2
comp=Z,50nm,1.3s
BW06 IAMs_20 IAMs_20 19 25 27.2
comp=Z,12µm,22.0s
PDAR Pinedale Array 92.42 4 P P 18 51 45.2 -2.7
comp=Z,3.0nm,1.0s,baz=188,slow=4.5,SNR=14
K05A Summer Lake 92.43 355 P P 18 51 49.2 +1.4
K05A IAMs_20 IAMs_20 19 25 36.5
comp=Z,13µm,18.0s
R53A Hurricane 92.53 25 P P 18 51 48.7 +0.5
baz=200
T59A Double "B" Far 92.56 29 P P 18 51 48.0 -0.3
baz=203
T59A Double "B" Far 92.56 29 IAMs_20 IAMs_20 19 28 59.5
comp=Z,6µm,18.0s
S56A Natural Bridge 92.60 27 P P 18 51 48.8 +0.2
baz=202
O44A Mansfield 92.64 20 P P 18 51 48.6 0.0
O44A IAMs_20 IAMs_20 19 28 52.5
comp=Z,7µm,20.0s
R54A Victor 92.66 26 P P 18 51 50.6 +1.8
baz=201
HDIL Hopedale 92.84 19 IAMs_20 IAMs_20 19 28 38.0
comp=Z,7µm,20.0s
S57A Dark Hollow, R 92.86 28 P P 18 51 49.4 -0.3
baz=202
L34A Svendsen Farm, 92.92 14 P P 18 51 49.2 -0.7
L34A IAmb IAmb 18 54 08.0
comp=Z,66nm,1.3s
J08A Circle Bar Ran 92.96 357 P P 18 51 49.9 -0.3
J08A IAmb IAmb 18 53 15.9
comp=Z,51nm,0.9s
MFID Camas Ranch 92.96 359 P P 18 51 48.2 -2.1
MFID IAmb IAmb 18 54 10.1
comp=Z,38nm,1.2s
MFID IAMs_20 IAMs_20 19 25 23.7
comp=Z,17µm,21.0s
REDW Red Top Meadow 92.97 3 P P 18 51 49.7 -0.7
REDW IAmb IAmb 18 52 03.3
comp=Z,68nm,1.4s
T60A Surry 92.98 30 P P 18 51 51.8 +1.5
baz=203
S58A Poland Farm, P 93.00 28 P P 18 51 49.0 -1.4
J05D Fort Rock, OR 93.00 355 P P 18 51 50.9 +0.5
baz=176
J04D Umpqua Nationa 93.01 355 P P 18 51 51.1 +0.6
baz=175
Q52A Bidwell 93.03 25 P P 18 51 50.7 +0.2
baz=200
SNOW Snow King Moun 93.07 3 P P 18 51 48.7 -2.2
SNOW IAmb IAmb 18 54 16.0
comp=Z,63nm,1.3s
TPAW Teton Pass 93.09 3 P P 18 51 49.2 -1.8
TPAW IAmb IAmb 18 54 08.4
comp=Z,38nm,0.9s
TPAW IAMs_20 IAMs_20 19 26 29.0
comp=Z,15µm,19.0s
Q53A Leroy 93.14 25 P P 18 51 49.7 -1.3
baz=201
SFIN Lafayette 93.16 21 P P 18 51 50.6 -0.4
baz=197
SFIN Lafayette 93.16 21 P P 18 51 50.5 -0.6
SFIN IAMs_20 IAMs_20 19 29 30.2
comp=Z,7µm,20.0s
PATS Pohnpei 93.20 277 IAMs_20 IAMs_20 19 24 31.6
comp=Z,8µm,22.0s
K31A O'Neill 93.23 12 P P 18 51 50.8 -0.6
K31A IAmb IAmb 18 55 26.8
comp=Z,42nm,0.7s
K31A IAMs_20 IAMs_20 19 27 25.3
comp=Z,6µm,21.0s
P50A Jamestown 93.23 23 P P 18 51 53.8 +2.3
baz=199
FXWY Fox Creek 93.24 3 P P 18 51 50.4 -1.3
FXWY IAMs_20 IAMs_20 19 26 32.9
comp=Z,13µm,19.0s
P51A Williamsport 93.31 24 P 18 51 48.4 -3.4
R58B Mineral 93.37 28 P P 18 51 55.0 +2.9
baz=203
R58B Mineral 93.37 28 P P 18 51 51.0 -1.1
SCIA State Center 93.39 16 P P 18 51 54.6 +2.5
baz=194
SCIA State Center 93.39 16 P P 18 51 50.9 -1.1
SCIA IAmb IAmb 18 51 58.6
comp=Z,34nm,0.9s
SCIA IAMs_20 IAMs_20 19 28 23.4
comp=Z,6µm,21.0s
Q54A Coxs Mills 93.45 26 IAMs_20 IAMs_20 19 32 14.9
comp=Z,5µm,18.0s
PINE Pine Mountain 93.49 356 P P 18 51 51.8 -1.0
PINE IAMs_20 IAMs_20 19 24 10.7
comp=Z,8µm,21.0s
IMW Indian Meadow 93.50 3 P P 18 51 50.9 -2.0
IMW IAMs_20 IAMs_20 19 26 31.8
comp=Z,12µm,20.0s
O48A Farmland 93.51 22 S S 19 03 06.6 +5.8
baz=199
FLWY Flagg Ranch 93.69 3 P P 18 51 52.5 -1.3
FLWY IAmb IAmb 18 54 09.3
comp=Z,49nm,1.1s
FLWY IAMs_20 IAMs_20 19 27 06.9
comp=Z,14µm,18.0s
P52A Corning 93.70 25 P P 18 51 57.3 +3.7
baz=200
I07A Izee 93.72 357 P P 18 51 53.0 -0.7
CBN Corbin Frederi 93.75 29 IAMs_20 IAMs_20 19 29 53.9
comp=Z,5µm,18.0s
P53A Whipple 93.76 25 P P 18 51 53.5 -0.4
P53A IAMs_20 IAMs_20 19 31 48.2
comp=Z,6µm,19.0s
S61A Accomac 93.81 30 P P 18 51 53.4 -0.7
baz=204
YPP Pitchstone Pla 93.88 3 P P 18 51 55.8 +1.1
FITZ Fitzroy Crossi 93.90 236 P P 18 51 52.6 -2.6
M44A Midewin, Midew 93.91 20 IAMs_20 IAMs_20 19 29 26.2
comp=Z,6µm,20.0s
H17A Grant Village 94.01 3 P P 18 51 54.5 -0.8
BOSA Boshof 94.12 146 P P 18 51 59.2 +2.9
comp=Z,3.0nm,1.0s,baz=264,slow=9.2,SNR=1.9
BOSA LR LR 19 28 35.8
comp=Z,5µm,18.2s,baz=184,slow=32
RSSD Black Hills 94.13 8 IAMs_20 IAMs_20 19 27 32.7
comp=Z,7µm,21.0s
K38A Parkersburg 94.18 16 P P 18 51 54.1 -1.7
K38A IAmb IAmb 18 52 11.6
comp=Z,65nm,1.6s
K38A IAMs_20 IAMs_20 19 29 07.5
comp=Z,6µm,20.0s
LKWY Lake 94.19 3 P P 18 51 56.0 -0.1
LKWY pmax pmax
comp=Z,125nm,1.7s
LKWY MLR MLR
comp=Z,20µm,18.0s
LKWY Lake 94.19 3 P P 18 51 56.0 -0.1
O52A Adamsville 94.23 25 P P 18 51 56.3 +0.3
O52A IAmb IAmb 18 52 09.6
comp=Z,53nm,1.6s
O52A IAMs_20 IAMs_20 19 32 08.5
comp=Z,6µm,18.0s
YMR Madison River 94.27 3 P P 18 51 55.9 -0.4
YNR Norris Junctio 94.33 3 P P 18 51 58.1 +1.4
YUF Upper Falls 94.33 3 P P 18 51 58.5 +1.8
YHB Horse Butte 94.35 3 P P 18 51 54.8 -1.9
YMP Mirror Lake Pl 94.37 3 P P 18 51 55.6 -1.4
MCMT McKenzie Canyo 94.39 1 P P 18 51 55.1 -1.8
YHH Holmes Hill 94.39 3 P P 18 51 55.8 -1.2
QLMT Earthquake Lak 94.42 2 P P 18 51 56.5 -0.6
BMO Blue Mountains 94.42 358 P P 18 51 57.0 +0.1
BMO pmax pmax
comp=Z,30nm,0.7s
BMO MLR MLR
comp=Z,21µm,19.0s
BMO Blue Mountains 94.42 358 P P 18 51 57.0 +0.1
BMO IAmb IAmb 18 53 15.1
comp=Z,30nm,0.7s
COR Corvallis 94.42 354 IAMs_20 IAMs_20 19 25 38.4
comp=Z,9µm,21.0s
YHL Hebgen Lake 94.45 3 P P 18 51 57.3 0.0
H04A Detroit Lake 94.45 355 IAMs_20 IAMs_20 19 24 53.1
comp=Z,17µm,22.0s
ECSD EROS Data Cent 94.62 13 P P 18 51 56.0 -1.7
ECSD IAmb IAmb 18 52 03.6
comp=Z,67nm,1.7s
YNE Yellowstone No 94.64 3 P P 18 51 56.1 -2.0
O54A Avella 94.69 26 IAMs_20 IAMs_20 19 32 38.8
comp=Z,6µm,19.0s
L44A Lake County Fo 94.69 20 IAMs_20 IAMs_20 19 30 06.3
comp=Z,6µm,20.0s
RLMT Red Lodge 94.79 4 P P 18 51 59.6 +0.9
RLMT IAmb IAmb 18 54 27.2
comp=Z,29nm,0.9s
L46A Eue Claire 94.90 21 IAMs_20 IAMs_20 19 30 29.0
comp=Z,7µm,20.0s
G08A Pilot Rock 94.90 357 P P 18 51 59.2 +0.1
JFWS Jewell Farm 94.92 18 P P 18 51 58.4 -0.7
JFWS pmax pmax
comp=Z,23nm,1.3s
JFWS MLR MLR
comp=Z,5µm,22.0s
JFWS Jewell Farm 94.92 18 P P 18 51 58.4 -0.7
G06A Carlson Farm, 94.92 356 P P 18 51 60.0 +0.9
G06A IAMs_20 IAMs_20 19 25 49.4
comp=Z,10µm,21.0s
DLMT Dillon 94.92 2 P P 18 52 00.6 +1.3
DLMT IAmb IAmb 18 53 45.7
comp=Z,36nm,0.9s
DLMT IAMs_20 IAMs_20 19 27 05.0
comp=Z,11µm,21.0s
SUSD Miller 94.99 11 IAMs_20 IAMs_20 19 28 16.0
comp=Z,9µm,20.0s
I37A Lemond, Waseca 95.40 15 IAMs_20 IAMs_20 19 29 21.7
comp=Z,10µm,21.0s
N54A Moraine State 95.52 26 P P 18 52 00.2 -1.7
N54A IAmb IAmb 18 52 20.1
comp=Z,83nm,1.7s
N54A IAMs_20 IAMs_20 19 32 31.2
comp=Z,6µm,19.0s
MIDW Midway 95.54 308 IAMs_20 IAMs_20 19 24 51.5
comp=Z,15µm,21.0s
F10A Beach Ranch, E 95.54 358 P P 18 52 04.0 +2.0
F07A Phinny Hill Vi 95.54 356 P P 18 52 02.8 +1.0
F07A IAMs_20 IAMs_20 19 25 21.0
comp=Z,9µm,21.0s
F04A Amboy 95.71 355 IAMs_20 IAMs_20 19 28 10.4
comp=Z,8µm,19.0s
MVL Millersville 95.71 29 IAMs_20 IAMs_20 19 31 10.8
comp=Z,5µm,18.0s
GIRL Giralia 95.72 224 IAMs_20 IAMs_20 19 27 31.8
comp=Z,12µm,20.0s
I40A Norwalk 95.78 17 IAMs_20 IAMs_20 19 30 05.9
comp=Z,7µm,21.0s
HAWA Hanford 96.03 357 P P 18 52 03.5 -0.5
HAWA IAMs_20 IAMs_20 19 26 55.8
comp=Z,9µm,22.0s
E08A Dider Farm, El 96.11 357 IAMs_20 IAMs_20 19 27 56.9
comp=Z,9µm,19.0s
E07A Sunnyside 96.20 356 IAMs_20 IAMs_20 19 27 01.5
comp=Z,10µm,21.0s
M55A Ridgway 96.34 26 IAMs_20 IAMs_20 19 33 32.0
comp=Z,5µm,19.0s
MSO Missoula 96.38 1 IAMs_20 IAMs_20 19 27 18.9
comp=Z,8µm,21.0s
E03A Lebam 96.39 354 IAMs_20 IAMs_20 19 26 25.5
comp=Z,15µm,20.0s
J47A Sumner 96.41 22 IAMs_20 IAMs_20 19 31 17.8
comp=Z,7µm,20.0s
LON Longmire 96.49 355 IAMs_20 IAMs_20 19 25 49.0
comp=Z,11µm,20.0s
K50A Casco 96.51 23 IAMs_20 IAMs_20 19 33 07.9
comp=Z,5µm,18.0s
LAO LASA Array 96.52 6 P P 18 52 05.5 -0.9
LAO IAMs_20 IAMs_20 19 29 21.5
comp=Z,6µm,20.0s
D08A Wollman Farm, 96.67 357 IAMs_20 IAMs_20 19 28 12.7
comp=Z,8µm,19.0s
SPMN Marine on St. 96.68 15 IAMs_20 IAMs_20 19 30 00.5
comp=Z,12µm,22.0s
M57A Sunshine Farm, 96.70 28 IAMs_20 IAMs_20 19 34 14.0
comp=Z,6µm,19.0s
J48A Bridge Port 96.71 22 IAMs_20 IAMs_20 19 31 36.7
comp=Z,8µm,20.0s
F33A 5 Mile Ranch, 96.72 13 IAMs_20 IAMs_20 19 29 37.8
comp=Z,6µm,22.0s
H11S2 WAKE ISLAND Hy 96.81 290 T T 20 39 29.0
baz=140,slow=75
H11S3 WAKE ISLAND Hy 96.83 290 T T 20 39 41.2
baz=140,slow=75,SNR=5274
H11S1 WAKE ISLAND Hy 96.83 291 T T 20 39 32.6
baz=140,slow=75,SNR=6951
E28A Huff 96.89 10 IAMs_20 IAMs_20 19 29 30.3
comp=Z,10µm,21.0s
H43A Windswept, Lux 96.92 19 IAMs_20 IAMs_20 19 31 55.7
comp=Z,5µm,19.0s
D05A Enumclaw 96.93 355 IAMs_20 IAMs_20 19 29 17.8
comp=Z,10µm,18.0s
F36A Milaca 97.17 15 IAMs_20 IAMs_20 19 30 10.7
comp=Z,6µm,21.0s
I47A Gladwin 97.22 21 IAMs_20 IAMs_20 19 31 50.3
comp=Z,7µm,20.0s
ODNJ Ogdensburg 97.25 29 IAMs_20 IAMs_20 19 34 45.5
comp=Z,6µm,20.0s
WVNY West Valley, N 97.25 26 IAMs_20 IAMs_20 19 33 13.6
comp=Z,6µm,20.0s
NLWA Neilton Lookou 97.25 354 IAMs_20 IAMs_20 19 26 18.4
comp=Z,10µm,21.0s
KSPA Keystone Colle 97.31 28 IAMs_20 IAMs_20 19 33 30.2
comp=Z,5µm,18.0s
C09A Chrisman Ranch 97.39 358 IAMs_20 IAMs_20 19 27 53.9
comp=Z,10µm,20.0s
PAL Palisades 97.40 30 IAMs_20 IAMs_20 19 35 20.5
comp=Z,5µm,20.0s
WAKE Wake Island 97.45 291 IAMs_20 IAMs_20 19 28 59.1
comp=Z,8µm,21.0s
I49A Point Hope 97.55 23 IAMs_20 IAMs_20 19 32 25.1
comp=Z,7µm,20.0s
H11N3 WAKE ISLAND Hy 97.63 291 T T 20 40 40.1
baz=141,slow=75,SNR=622
H11N1 WAKE ISLAND Hy 97.64 291 T T 20 40 38.2
baz=141,slow=75,SNR=654
H11N2 WAKE ISLAND Hy 97.64 291 T T 20 40 30.8
baz=141,slow=75,SNR=567
EGMT Eagleton 97.66 3 IAMs_20 IAMs_20 19 29 08.9
comp=Z,11µm,21.0s
WSPT Westport, CT 97.73 30 IAMs_20 IAMs_20 19 36 52.5
comp=Z,6µm,18.0s
BINY Binghamton 97.83 28 IAMs_20 IAMs_20 19 34 32.0
comp=Z,6µm,20.0s
D32A Dogwood Acres, 97.89 12 IAMs_20 IAMs_20 19 30 06.7
comp=Z,8µm,20.0s
B08A Colville Reser 97.98 357 IAMs_20 IAMs_20 19 27 40.5
comp=Z,8µm,22.0s
J54A Appleton 98.04 26 IAMs_20 IAMs_20 19 33 23.8
comp=Z,6µm,20.0s
F42A Maple Grove Fa 98.07 18 IAMs_20 IAMs_20 19 31 32.3
comp=Z,6µm,22.0s
L59A Walton 98.11 29 IAMs_20 IAMs_20 19 35 45.9
comp=Z,5µm,18.0s
E38A The Farm, Brul 98.23 16 IAMs_20 IAMs_20 19 31 12.6
comp=Z,12µm,21.0s
B06A Marblemount 98.23 355 IAMs_20 IAMs_20 19 26 53.2
comp=Z,13µm,22.0s
DGMT Dagmar 98.44 7 IAMs_20 IAMs_20 19 31 34.3
comp=Z,5µm,18.0s
A04D Lummi Island 98.50 355 P Pdif 18 52 17.1 +1.9
baz=175
E43A Lone Tree Farm 98.90 19 IAMs_20 IAMs_20 19 32 23.2
comp=Z,6µm,20.0s
BRYW Bryant College 99.00 31 IAMs_20 IAMs_20 19 35 58.8
comp=Z,6µm,19.0s
TRY Troy 99.03 29 IAMs_20 IAMs_20 19 37 12.8
comp=Z,5µm,18.0s
AGMN Agassiz Nation 99.19 13 IAMs_20 IAMs_20 19 30 59.1
comp=Z,7µm,20.0s
SADO Sadowa 99.28 25 IAMs_20 IAMs_20 19 32 58.3
comp=Z,6µm,21.0s
K62A Royalston 99.44 30 IAMs_20 IAMs_20 19 37 50.9
comp=Z,5µm,18.0s
WES Weston 99.49 31 IAMs_20 IAMs_20 19 36 29.8
comp=Z,5µm,18.0s
HRV Adam Dziewonsk 99.52 31 IAMs_20 IAMs_20 19 37 45.6
comp=Z,5µm,18.0s
EYMN Ely 99.54 16 IAMs_20 IAMs_20 19 31 26.2
comp=Z,9µm,22.0s
B35A Bob, Littlefor 99.57 14 IAMs_20 IAMs_20 19 31 40.1
comp=Z,5µm,20.0s
ACCN Adirondack Com 99.62 29 IAMs_20 IAMs_20 19 36 13.4
comp=Z,6µm,20.0s
LLLB Lillooet 100.34 355 IAMs_20 IAMs_20 19 29 21.0
comp=Z,14µm,20.0s
HNH Hanover 100.35 30 IAMs_20 IAMs_20 19 37 45.6
comp=Z,6µm,18.0s
VT1 Waterbury 100.76 29 IAMs_20 IAMs_20 19 37 35.3
comp=Z,4µm,18.0s
I62A Tamworth 100.81 30 IAMs_20 IAMs_20 19 38 17.3
comp=Z,5µm,18.0s
LBNH Lisbon 100.95 30 IAMs_20 IAMs_20 19 38 01.4
comp=Z,6µm,18.0s
FRNY Flat Rock 100.96 28 IAMs_20 IAMs_20 19 35 32.6
comp=Z,5µm,20.0s
ULM Lac du Bonnet 101.10 12 IAMs_20 IAMs_20 19 32 21.6
comp=Z,11µm,19.0s
I63A Otisfield 101.22 31 IAMs_20 IAMs_20 19 37 33.0
comp=Z,6µm,19.0s
H62A Milan 101.49 30 IAMs_20 IAMs_20 19 37 18.9
comp=Z,6µm,19.0s
D53A Lac Vacive, Po 101.81 25 IAMs_20 IAMs_20 19 35 00.0
comp=Z,7µm,20.0s
G62A West of Eustis 102.27 30 IAMs_20 IAMs_20 19 37 40.4
comp=Z,6µm,20.0s
FAKI Fak Fak 102.33 250 IAMs_20 IAMs_20 19 36 05.1
comp=Z,14µm,20.0s
BBB Bella Bella 102.36 352 IAMs_20 IAMs_20 19 30 10.6
comp=Z,11µm,21.0s
PKME Peaks-Kenny Pk 102.72 31 IAMs_20 IAMs_20 19 39 15.3
comp=Z,5µm,18.0s
F63A Nahmakanta, Br 103.17 31 IAMs_20 IAMs_20 19 38 12.2
comp=Z,5µm,19.0s
G65A Princeton 103.25 32 IAMs_20 IAMs_20 19 38 08.4
comp=Z,6µm,20.0s
MOBC Moresby Island 103.72 349 IAMs_20 IAMs_20 19 29 14.6
comp=Z,11µm,21.0s
DIB Dawson Inlet, 103.84 349 IAMs_20 IAMs_20 19 30 43.7
comp=Z,10µm,19.0s
E63A Oxbow 104.03 31 IAMs_20 IAMs_20 19 38 44.9
comp=Z,5µm,20.0s
D62A Allapoint, All 104.40 30 IAMs_20 IAMs_20 19 38 15.7
comp=Z,5µm,20.0s
LMN Caledonia Moun 104.78 34 IAMs_20 IAMs_20 19 38 58.0
comp=Z,5µm,20.0s
FFC Flin Flon 104.83 8 IAMs_20 IAMs_20 19 33 52.3
comp=Z,7µm,22.0s
GUMO Guam 106.93 271 IAMs_20 IAMs_20 19 30 13.4
comp=Z,5µm,22.0s
WRAK Wrangell Islan 106.98 350 IAMs_20 IAMs_20 19 30 53.8
comp=Z,12µm,21.0s
SIT Sitka 107.97 348 IAMs_20 IAMs_20 19 30 37.9
comp=Z,12µm,20.0s
TNTI Ternate 108.20 249 IAMs_20 IAMs_20 19 41 17.6
comp=Z,4µm,19.0s
RER Riviere de l'E 108.73 171 IAMs_20 IAMs_20 19 42 33.4
comp=Z,5µm,19.0s
ABPO Ambohimpanom 109.53 162 IAMs_20 IAMs_20 19 40 48.4
comp=Z,9µm,19.0s
FCC Fort Churchill 109.64 11 IAMs_20 IAMs_20 19 36 59.5
comp=Z,12µm,22.0s
OHAK Old Harbor 111.42 339 IAMs_20 IAMs_20 19 32 56.3
comp=Z,12µm,21.0s
SCHQ Schefferville 111.83 28 IAMs_20 IAMs_20 19 43 46.2
comp=Z,4µm,18.0s
CISI Cisompet, Garu 111.85 226 IAMs_20 IAMs_20 19 40 28.3
comp=Z,9µm,20.0s
MID Middleton Isla 111.99 343 IAMs_20 IAMs_20 19 33 32.2
comp=Z,12µm,21.0s
YKA Yellowknife Ar 112.07 0 Pdiff Pdif 18 53 14.6 -0.6
comp=Z,0.4nm,0.9s,baz=226,slow=8.5,SNR=3.7
YKA PKKPbc PKKPbc 19 08 03.1 -0.6
comp=Z,0.7nm,0.8s,baz=348,slow=3.5,SNR=4.2
YKA PKKP PKKPdf 19 08 21.8 -2.1
comp=Z,0.9nm,0.7s,baz=353,slow=3.4,SNR=8.5
BKB Balikpapan 112.59 238 IAMs_20 IAMs_20 19 42 56.0
comp=Z,10µm,19.0s
DAV Davao City (W) 114.25 251 IAMs_20 IAMs_20 19 44 01.1
comp=Z,7µm,20.0s
SVW2 Sparrevohn 115.43 339 IAMs_20 IAMs_20 19 39 29.6
comp=Z,9µm,18.0s
HOR Horta 116.05 61 ePP PP 18 58 26.3 +1.1
PCED Cedros 116.08 60 ePP PP 18 58 27.6 +2.2
ROSA Rosais 116.40 61 ePP PP 18 58 26.1 -1.6
ROSA Rosais 116.40 61 ePS PS 19 08 09.7 +0.6
KTH Kantishna Hill 116.66 343 IAMs_20 IAMs_20 19 36 40.6
comp=Z,11µm,20.0s
SRBC Serra Branca 116.73 61 ePP PP 18 58 29.8 -0.2
PGRA Graciosa 116.76 61 ePP PP 18 58 29.9 -0.3
PGRA Graciosa 116.76 61 ePS PS 19 08 11.8 -0.6
MNAI Manna 116.88 223 IAMs_20 IAMs_20 19 51 49.6
comp=Z,6µm,20.0s
TOC5 Torodi Ar. Sit 116.91 102 IAMs_20 IAMs_20 19 41 49.1
comp=Z,6µm,20.0s
TOC4 Torodi Ar. Sit 116.92 102 IAMs_20 IAMs_20 19 41 48.4
comp=Z,6µm,20.0s
TOB4 Torodi Ar. Sit 116.92 102 IAMs_20 IAMs_20 19 41 49.4
comp=Z,5µm,20.0s
TOA3 Torodi Ar. Sit 116.93 102 IAMs_20 IAMs_20 19 41 49.7
comp=Z,5µm,20.0s
TOB5 Torodi Ar. Sit 116.93 102 IAMs_20 IAMs_20 19 41 49.7
comp=Z,6µm,20.0s
TOB3 Torodi Ar. Sit 116.93 102 IAMs_20 IAMs_20 19 41 49.8
comp=Z,6µm,20.0s
TOA0 Torodi Ar. Sit 116.94 102 IAMs_20 IAMs_20 19 41 49.8
comp=Z,6µm,20.0s
TORD Torodi Ar. Bea 116.94 102 PKP PKPdf 18 57 22.1 -0.3
comp=Z,0.5nm,0.9s,baz=207,slow=2.5,SNR=2.3
TORD PP PP 18 58 35.0 +3.6
comp=Z,1.0nm,0.9s,baz=209,slow=2.7,SNR=3.9
TORD PKKPbc PKKPbc 19 07 46.6 +0.7
comp=Z,1.3nm,1.0s,baz=32,slow=6.3,SNR=4.5

TOC7	**Torodi Ar. Sit**	**116.94**	**102**	IAMs_20	IAMs_20	19 41 49.9				
	comp=Z,5µm,20.0s									
TOA2	**Torodi Ar. Sit**	**116.94**	**102**	IAMs_20	IAMs_20	19 41 49.9				
	comp=Z,6µm,20.0s									
TOC3	**Torodi Ar. Sit**	**116.94**	**102**	IAMs_20	IAMs_20	19 41 50.0				
	comp=Z,6µm,20.0s									
TOB1	**Torodi Ar. Sit**	**116.94**	**102**	IAMs_20	IAMs_20	19 42 00.1				
	comp=Z,5µm,20.0s									
TOC1	**Torodi Ar. Sit**	**116.96**	**102**	IAMs_20	IAMs_20	19 41 49.4				
	comp=Z,6µm,20.0s									
TOC2	**Torodi Ar. Sit**	**116.96**	**102**	IAMs_20	IAMs_20	19 41 50.4				
	comp=Z,6µm,20.0s									
PSCM	**Serra do Cume**	**117.03**	**61**	*e*PP	PP	18 58 28.9	-3.2			
PSMN	**Pico do Norte,**	**117.04**	**64**	*e*PP	PP	18 58 27.0	-5.2			
PSMN	**Pico do Norte,**	**117.04**	**64**	*e*PS	PS	19 08 16.9	+2.0			
ILAR	**Eielson Array**	**117.06**	**345**	PKP	**PKiKP**	**18 57 21.8**	**+0.7**			
	comp=Z,2.9nm,1.0s,baz=152,slow=4.1,SNR=1.1									
BPAW	**Bear Paw Mtn.**	**117.17**	**343**	IAMs_20	IAMs_20	19 35 38.1				
	comp=Z,10µm,22.0s									
PSET	**Sete Cidades**	**117.22**	**63**	*e*PP	PP	18 58 30.3	-3.2			
CMLA	**Cha da Macela**	**117.29**	**63**	*e*PP	PP	18 58 27.8	-6.1			
CMLA	**Cha da Macela**	**117.29**	**63**	*e*PS	PS	19 08 17.6	+0.3			
PMBI	**Palembang**	**117.33**	**226**	IAMs_20	IAMs_20	19 44 25.0				
	comp=Z,8µm,20.0s									
MDM	**Murphy Dome**	**117.45**	**345**	IAMs_20	IAMs_20	19 38 27.8				
	comp=Z,9µm,19.0s									
BART	**Pico Bartolome**	**117.51**	**63**	*e*PP	PP	18 58 29.3	-6.2			
MLY	**Manley**	**117.96**	**344**	IAMs_20	IAMs_20	19 37 14.2				
	comp=Z,8µm,20.0s									
SBUM	**Sibu**	**118.22**	**236**	IAMs_20	IAMs_20	19 42 50.0				
	comp=Z,6µm,22.0s									
KSM	**Kuching**	**118.41**	**234**	IAMs_20	IAMs_20	19 43 44.7				
	comp=Z,9µm,20.0s									
INK	**Inuvik**	**118.74**	**352**	PKKPbc	PKKPbc	19 07 44.6	+4.2			
	comp=Z,1.3nm,1.1s,baz=338,slow=4.8,SNR=2.2									
KKM	**Kota Kinabalu**	**118.98**	**242**	IAMs_20	IAMs_20	19 44 01.3				
	comp=Z,10µm,22.0s									
MBAR	**Mbarara**	**121.64**	**138**	IAMs_20	IAMs_20	19 42 05.3				
	comp=Z,6µm,21.0s									
MYKOM	**Kota Tinggi**	**121.90**	**227**	IAMs_20	IAMs_20	19 45 28.9				
	comp=Z,5µm,20.0s									
BKNI	**Bangkinang**	**121.90**	**224**	IAMs_20	IAMs_20	19 47 47.7				
	comp=Z,7µm,20.0s									
DGAR	**Diego Garcia**	**122.56**	**188**	IAMs_20	IAMs_20	19 43 02.2				
	comp=Z,6µm,20.0s									
KMBO	**Kilima Mbogo**	**123.76**	**146**	IAMs_20	IAMs_20	19 45 02.9				
	comp=Z,7µm,20.0s									
GSI	**Gunungsitoli**	**124.28**	**220**	IAMs_20	IAMs_20	19 53 06.4				
	comp=Z,6µm,20.0s									
RPSI	**Rantau Prapat**	**124.95**	**223**	IAMs_20	IAMs_20	19 53 05.3				
	comp=Z,9µm,19.0s									
RES	**Resolute Bay**	**125.04**	**6**	PKP	**PKiKP**	**18 57 36.4**	**0.0**			
	comp=Z,3.7nm,0.8s,baz=125,slow=3.9,SNR=5.3									
AVE	**Averroes**	**125.34**	**79**	PP	PP	18 59 28.5	-0.3			
SZP	**Santa**	**125.48**	**254**	IAMs_20	IAMs_20	19 52 40.0				
	comp=Z,4µm,19.0s									
SFJD	**Kangerlussuaq**	**126.22**	**26**	IAMs_20	IAMs_20	19 51 18.6				
	comp=Z,6µm,18.0s									
PEA0B	**Petropavlovsk-**	**126.30**	**312**⇑	*e*PKIKP	**PKiKP**	**18 57 41.4**	**+1.8**			
PETK	**Petropavlovsk-**	**126.30**	**312**	PKP	**PKiKP**	**18 57 40.8**	**+1.2**			
	comp=Z,6.1nm,1.0s,baz=90,slow=4.3,SNR=3.9									
KULM	**Kulim**	**126.47**	**226**	IAMs_20	IAMs_20	19 49 34.9				
	comp=Z,6µm,21.0s									
TAM	**Tamanrasset**	**126.49**	**98**	IAMs_20	IAMs_20	19 51 54.3				
	comp=Z,4µm,18.0s									
KUR	**Kuril'sk**	**126.77**	**299**	*e*P	**Pdif**	**18 54 23.1**	**+2.1**			
KUR				*i*		18 57 41.5				
KUR				*e*		18 59 42.8				
KUR				*e*		19 04 45.6				
KUR				*e*SS	SS	19 16 53.4	+8.6			
KUR				MLR	MLR					
	comp=Z,12µm,18.0s									
KUR				MLR	MLR					
	comp=E,5µm,19.0s									
KUR				MLR	MLR					
	comp=N,5µm,18.0s									
MDT	**Midelt**	**126.81**	**81**	PKP	**PKiKP**	**18 57 42.4**	**+1.0**			
	comp=N,2.3nm,0.9s,baz=117,slow=2.3,SNR=3.1									
PFVI	**Vila Bisbo**	**126.91**	**74**	IAMs_20	IAMs_20	19 49 00.6				
	comp=Z,3µm,19.0s									
IFR	**Ifrane**	**126.93**	**80**	PP	PP	18 59 24.4	-15			
MORF	**Marmelete**	**127.12**	**74**	*e*PP	PP	18 59 40.6	-0.1			
MORF				*e*SS	SS	19 16 50.7	+1.1			
MORF				AMS	AMS	19 49 50.2				
	comp=Z,3µm,16.1s									
YUK	**Yuzh-Kuril'sk**	**127.19**	**297**	*i* PKIKP	**PKiKP**	**18 57 44.2**	**+2.6**			
YUK				*e*		18 59 43.1				
YUK				*e*PPP	PPP	19 02 25.8				
YUK				*e*SS	SS	19 16 54.1	+4.0			
INU	**Inuyama**	**127.21**	**283**	IAMs_20	IAMs_20	19 58 25.0				
	comp=Z,4µm,18.0s									
MJAR	**Matsushiro Arr**	**127.21**	**285**	PKP	**PKPdf**	**18 57 40.4**	**-1.1**			
	comp=Z,1.9nm,1.1s,baz=173,slow=3.0,SNR=2.1									
MAT	**Matsushiro**	**127.22**	**285**	*e*PKP	**PKiKP**	**18 57 45.4**	**+3.4**			
ILULI	**Ilulissat**	**127.62**	**24**	IAMs_20	IAMs_20	19 48 59.5				
	comp=Z,7µm,21.0s									
LIS	**Lisbon**	**127.69**	**72**	*e*PP	PP	18 59 44.4	0.0			
LIS				*e*SS	SS	19 16 57.5	+1.0			
LIS				AMS	AMS	19 50 35.3				
	comp=Z,4µm,19.5s									
MESJ	**Messejana**	**127.72**	**74**	*e*PP	PP	18 59 44.6	0.0			
MESJ				*e*SS	SS	19 16 58.0	+1.1			
MESJ				AMS	AMS	19 49 59.1				
	comp=Z,4µm,21.1s									
LHMI	**Lhok Sumawe**	**128.07**	**222**	IAMs_20	IAMs_20	19 55 46.1				
	comp=Z,5µm,21.0s									
SFS	**San Fernando**	**128.12**	**76**	PP	PP	18 59 43.9	-3.4			
DLV	**T Lat**	**128.14**	**238**	IAMs_20	IAMs_20	19 48 29.1				
	comp=Z,6µm,22.0s									
EVO	**Evora**	**128.28**	**73**	PP	PP	18 59 50.0	+1.7			
CEU	**Ceuta**	**128.29**	**77**	PP	PP	18 59 51.9	+3.5			
PVLZ	**Peæn de**	**128.51**	**79**	PP	PP	18 59 52.8	+3.0			
EMAL	**Malaga-Limoner**	**129.43**	**77**	PP	PP	18 59 54.3	-1.5			
MELI	**Melilla**	**129.46**	**80**	PP	PP	18 59 51.4	-4.6			
TULEG	**Thule**	**129.53**	**13**	IAMs_20	IAMs_20	19 49 41.2				
	comp=Z,7µm,20.0s									
TPUB	**Ta-pu**	**129.61**	**259**	IAMs_20	IAMs_20	19 48 45.7				
	comp=Z,4µm,22.0s									
NACB	**Ninganchiao**	**129.62**	**261**	IAMs_20	IAMs_20	19 48 05.1				
	comp=Z,3µm,21.0s									
MTE	**Manteigas**	**129.70**	**71**	IAMs_20	IAMs_20	19 49 55.5				
	comp=Z,3µm,20.0s									
YHNB	**Yeheng**	**130.12**	**261**	IAMs_20	IAMs_20	19 48 43.2				
	comp=Z,4µm,21.0s									
TATO	**Taipei**	**130.26**	**261**	IAMs_20	IAMs_20	19 48 38.8				
	comp=Z,6µm,22.0s									
YSS	**Yuzh-Sakhalins**	**130.66**	**298**	*e*PKIKP	**PKPdf**	**18 57 47.3**	**-0.3**			
YSS				*e*		19 00 04.2				
YSS				*e*SS	SS	19 17 36.8	+3.8			
PAB	**San Pablo**	**131.16**	**74**	IAMs_20	IAMs_20	19 51 19.3				
	comp=Z,3µm,20.0s									
BILL	**Bilibino**	**131.34**	**331**	*ce*PKIKP	**PKPdf**	**18 57 48.6**	**+0.3**			
BILL				*i*		18 57 53.6				
BILL				*e*		19 00 07.3				
BILL				*e*		19 04 53.9				
BILL				*e*PS	**PS**	**19 10 10.2**	**-11**			
BILL				*e*SSS	SSS	19 22 15.7				
BILL				pmax	pmax					
	comp=Z,13nm,1.7s									
BILL	**Bilibino**	**131.34**	**331**		**PKPdf**	**18 57 48.2**	**-0.1**			
ESDC	**Sonseca Array**	**131.48**	**74**	PKP	**PKiKP**	**18 57 50.9**	**+0.4**			
	comp=Z,1.4nm,1.0s,baz=237,slow=1.0,SNR=6.1									
ESDC				PP	**PP**	**19 00 16.1**	**+6.9**			
	comp=Z,0.8nm,0.9s,baz=248,slow=4.2,SNR=2.6									
QZH	**Quanzhou**	**132.08**	**259**	*e*PKP	**PKiKP**	**18 57 52.7**	**+0.6**			
QZH				PP	**PP**	**19 00 16.1**	**+3.2**			
QZH				SKKS		19 07 11.0				
QZH				LR	LR					
	comp=Z,2µm,18.9s									
QZH				LR	LR					
	comp=Z,2µm,18.5s									
QZH				LR	LR					
	comp=Z,3µm,21.3s									
CART	**Cartagena**	**132.09**	**78**	PP	PP	19 00 00.3	-13			
HKPS	**Hong Kong Po S**	**132.93**	**252**	IAMs_20	IAMs_20	19 47 26.2				
	comp=Z,3µm,20.0s									
SUMG	**Summit**	**132.96**	**24**	PKIKP	**PKPdf**	**18 57 51.1**	**-0.7**			
SUMG				MLR	MLR					
	comp=Z,8µm,21.0s									
SUMG	**Summit**	**132.96**	**24**		**PKPdf**	**18 57 51.1**	**-0.7**			
SUMG				IAMs_20	IAMs_20	19 51 40.7				
	comp=Z,8µm,21.0s									
QIZ	**Qiongzhong**	**133.05**	**245**	PKP	**PKPdf**	**18 57 52.5**	**-0.5**			
QIZ				SS	SS	19 17 58.4	-3.5			
QIZ				AMB	AMB					
	comp=Z,340nm,16.7s									
QIZ				LR	LR					
	comp=Z,2µm,18.6s									
QIZ				LR	LR					
	comp=Z,3µm,23.5s									
QIZ				LR	LR					
	comp=Z,4µm,25.0s									
QIZ	**Qiongzhong**	**133.05**	**245**	IAMs_20	IAMs_20	19 54 09.2				
	comp=Z,3µm,21.0s									
FURI	**Furi**	**133.51**	**142**	IAMs_20	IAMs_20	19 50 33.5				
	comp=Z,7µm,20.0s									
SEY	**Seymchan**	**133.89**	**321**	PKP	**PKPdf**	**18 57 52.2**	**-1.0**			
	comp=Z,3.4nm,0.9s,baz=130,slow=5.2,SNR=5.7									
SEY	**Seymchan**	**133.89**	**321**⇓	*e*PKIKP	**PKiKP**	**18 57 54.2**	**-0.3**			
GZH	**Guangzhou**	**134.02**	**252**	*e*PKP	**PKiKP**	**18 57 56.7**	**+0.6**			
GZH				PP	**PP**	**19 00 28.5**	**+3.2**			
GZH				PKS	**PKSdf**	**19 01 29.4**	**-1.8**			
GZH				SS	SS	19 18 17.3	+3.5			
GZH				LR	LR					
	comp=Z,1µm,16.7s									
GZH				LR	LR					
	comp=Z,2µm,18.6s									
KSRS	**Korea Array**	**134.27**	**279**	PKP	**PKPdf**	**18 57 54.1**	**-0.6**			
	comp=Z,0.7nm,0.7s,baz=180,slow=1.8,SNR=2.2									
SSE	**Sheshan**	**134.64**	**267**	PKP	**PKiKP**	**18 57 59.6**	**+2.5**			
SSE				AMB	AMB					
	comp=Z,150nm,8.9s									
SSE				LR	LR					
	comp=Z,1µm,18.4s									
SSE				LR	LR					
	comp=Z,990nm,20.2s									
BORG	**Borgarnes**	**134.90**	**37**	IAMs_20	IAMs_20	19 59 07.6				
	comp=Z,4µm,19.0s									
NKL	**Nikolayevsk**	**134.99**	**304**	*i* PKIKP	**PKPdf**	**18 57 54.9**	**-0.7**			
NKL				*e*		19 00 29.3				
NKL				*e*PPP	PPP	19 03 21.1				
INCN	**Inchon**	**135.12**	**278**	IAMs_20	IAMs_20	19 52 01.1				
	comp=Z,3µm,20.0s									
USA0B	**Ussuriysk Arra**	**135.53**	**289**	IAMs_20	IAMs_20	19 49 51.4				
	comp=Z,5µm,22.0s									
PBA	**Port Blair**	**135.62**	**220**	IAMs_20	IAMs_20	19 53 23.1				
	comp=Z,6µm,20.0s									
NJ2	**Nanjing**	**136.76**	**266**	*e*PKP	**PKiKP**	**18 58 02.0**	**+0.6**			
NJ2				PP	**PP**	**19 00 49.8**	**+7.1**			
NJ2				AMB	AMB					
	comp=Z,250nm,4.4s									
NJ2				LR	LR					
	comp=Z,2µm,25.0s									
NJ2				LR	LR					
	comp=Z,2µm,24.5s									
NJ2				LR	LR					
	comp=Z,5µm,25.0s									
SCO	**Scoresbysund**	**136.83**	**29**	IAMs_20	IAMs_20	19 57 00.2				
	comp=Z,8µm,19.0s									
MDJ	**Mudanjiang**	**137.21**	**289**	IAMs_20	IAMs_20	19 51 24.0				
	comp=Z,6µm,22.0s									
ATD	**Arta Tunnel**	**137.50**	**146**	IAMs_20	IAMs_20	19 53 55.9				
	comp=Z,5µm,20.0s									
KEST	**Kesra**	**137.61**	**88**	PKP	**PKPdf**	**18 58 01.2**	**+0.1**			
	comp=Z,3.9nm,0.9s,baz=211,slow=0.8,SNR=3.6									
KEST	**Kesra**	**137.61**	**88**	IAMs_20	IAMs_20	19 57 37.7				
	comp=Z,7µm,20.0s									
KLR	**Kul'dur**	**138.17**	**296**⇓	*e*PKIKP	**PKPdf**	**18 58 02.4**	**+0.8**			
KLR				MLR	MLR					
	comp=Z,6µm,18.0s									
SLVN	**Son La**	**138.28**	**241**	IAMs_20	IAMs_20	19 55 33.6				
	comp=Z,6µm,22.0s									
CMAR	**Chiang Mai Arr**	**138.63**	**233**	PKhKP	PKPpre	18 57 58.8				
	comp=Z,0.8nm,0.9s,baz=184,slow=5.2,SNR=4.0									
CMAR				PKP	**PKPdf**	**18 58 03.0**	**-0.5**			
	comp=Z,1.9nm,0.8s,baz=187,slow=2.4,SNR=11									
CMAR				PP	**PP**	**19 00 57.7**	**+3.8**			
	comp=Z,1.1nm,1.0s,baz=168,slow=5.4,SNR=3.1									
CMAR	**Chiang Mai Arr**	**138.63**	**233**	PKIKP	**PKPdf**	**18 58 03.0**	**-0.5**			
STRD	**Stroud**	**138.78**	**61**	IAMs_20	IAMs_20	20 00 45.5				
	comp=Z,6µm,18.6s									
LAWE	**Loch Awe, Argy**	**138.83**	**53**	*e*P	**PKPdf**	**18 58 02.4**	**-0.2**			
LAWE				IAMs_20	IAMs_20	19 45 23.6				
	comp=Z,9µm,45.8s									
CHTO	**Chiang Mai**	**138.93**	**233**	IAMs_20	IAMs_20	19 55 14.4				
	comp=Z,4µm,21.0s									
KPL	**Plockton**	**139.10**	**51**	*e*P	**PKPdf**	**18 58 02.5**	**-0.6**			
KPL				IAMs_20	IAMs_20	19 45 34.0				
	comp=Z,5µm,33.4s									
DL2	**Dalian**	**139.15**	**277**	PKP	**PKPdf**	**18 58 00.0**	**-3.8**			
DL2				PP	**PP**	**19 00 57.3**	**-0.2**			
DL2				SS	SS	19 19 14.9	-0.3			
DL2				AMB	AMB					
	comp=Z,250nm,4.2s									
DL2				LR	LR					
	comp=Z,3µm,22.1s									
DL2				LR	LR					
	comp=Z,2µm,23.2s									
DL2				LR	LR					
	comp=Z,2µm,26.4s									
DAG	**Danmarks Havn**	**139.32**	**21**	*i* P	PKiKP	18 58 23.0	+18			
CN2	**Changchun**	**139.36**	**285**	*e*PKP	**PKPdf**	**18 58 00.6**	**-3.4**			
CN2				*e*PP	**PP**	**19 00 59.1**	**+0.3**			
CN2				*e*SS	SS	19 19 11.4	-6.2			
CN2				AMB	AMB					
	comp=Z,310nm,5.0s									
CN2				LR	LR					
	comp=Z,3µm,22.0s									
CN2				LR	LR					
	comp=Z,2µm,22.0s									
CN2				LR	LR					
	comp=Z,4µm,24.0s									
SNY	**Shenyang**	**139.51**	**282**	⇑PKP	**PKiKP**	**18 58 12.1**	**+5.5**			
SNY				PP	**PP**	**19 01 04.0**	**+4.3**			
SNY				SKS	**SKSdf**	**19 05 15.7**	**+0.9**			
INVG	**Invergeldie, C**	**139.60**	**53**	*e*P	**PKPdf**	**18 58 03.5**	**-0.5**			
INVG				IAMs_20	IAMs_20	20 05 04.3				
	comp=Z,4µm,15.9s									
ESK	**Eskdalemuir**	**139.63**	**55**	IAMs_20	IAMs_20	19 55 54.8				
	comp=Z,4µm,21.0s									
CLF	**Chambon-Foret**	**139.70**	**68**	IAMs_20	IAMs_20	19 59 25.9				
	comp=Z,4µm,18.0s									
SSB	**Saint Sauveur**	**139.79**	**73**	IAMs_20	IAMs_20	19 57 59.7				
	comp=Z,3µm,20.0s									
HMNX	**Herstmonceux**	**139.82**	**63**	IAMs_20	IAMs_20	20 00 56.5				
	comp=Z,5µm,21.6s									
TIA	**Tai'an**	**140.48**	**270**	PKP	**PKPdf**	**18 58 07.2**	**+0.9**			
GYA	**Guiyang**	**140.59**	**249**	PKP	**PKPdf**	**18 58 07.1**	**+0.1**			
GYA				PP	**PP**	**19 01 09.6**	**+3.2**			
GYA				PKS	**PKSdf**	**19 01 42.0**	**-1.1**			
GYA				SKKS		19 08 00.9				
GYA				SS	**SS**	**19 19 34.2**	**+2.1**			
GYA				AMB	AMB					
	comp=Z,310nm,13.6s									
GYA				LR	LR					
	comp=Z,1µm,19.9s									
GYA				LR	LR					
	comp=Z,2µm,22.4s									
GYA				LR	LR					
	comp=Z,2µm,20.7s									
WACR	**West Acre**	**140.74**	**60**	*e*P	**PKPdf**	**18 58 05.6**	**-0.6**			
WACR				IAMs_20	IAMs_20	19 47 05.0				
	comp=Z,23µm,93.3s									
BNI	**Bardonecchia**	**141.01**	**74**	IAMs_20	IAMs_20	19 59 16.8				
	comp=Z,5µm,19.0s									
ENH	**Enshi**	**141.56**	**256**		**PKPdf**	**18 58 05.2**	**-3.3**			
ENH				IAMs_20	IAMs_20	19 59 26.9				
	comp=Z,3µm,20.0s									
KMI	**Kunming**	**141.90**	**243**	PKP	**PKPdf**	**18 58 09.5**	**0.0**			
KMI				sPKP		18 58 13.8				
KMI				PP	**PP**	**19 01 14.9**	**+0.4**			
KMI				AMB	AMB					
	comp=Z,570nm,6.8s									
KMI				LR	LR					
	comp=Z,2µm,26.2s									
KMI				LR	LR					
	comp=Z,3µm,26.7s									
KMI				LR	LR					
	comp=Z,9µm,30.5s									
KMI	**Kunming**	**141.90**	**243**	IAMs_20	IAMs_20	19 55 28.8				
	comp=Z,6µm,22.0s									
ZEA	**Zeya**	**142.56**	**300**	*e*PKHKP	PKPpre	18 58 04.0				
ZEA				pmax	pmax					
	comp=Z,600nm,6.0s									
ZEA				pmax	pmax					
	comp=Z,600nm,9.0s									
WLF	**Walferdange**	**142.73**	**67**	IAMs_20	IAMs_20	20 02 14.2				
	comp=Z,5µm,19.0s									
ECH	**Echery**	**142.74**	**70**	IAMs_20	IAMs_20	20 07 13.5				
	comp=Z,4µm,18.0s									
VLC	**Villacollemand**	**142.90**	**77**	IAMs_20	IAMs_20	20 16 06.9				
	comp=Z,3µm,20.0s									
OSSC	**Osservatorio P**	**143.13**	**79**	IAMs_20	IAMs_20	20 13 23.1				
	comp=Z,3µm,20.0s									
PRMA	**PARMA**	**143.14**	**76**	IAMs_20	IAMs_20	20 12 05.3				
	comp=Z,4µm,19.0s									
BJT	**Baijiatuan**	**143.28**	**274**	IAMs_20	IAMs_20	20 01 14.1				
	comp=Z,3µm,21.0s									
BJI	**Beijing**	**143.29**	**274**	PKP	**PKPdf**	**18 58 10.0**	**-1.2**			
BJI				PP	**PP**	**19 01 22.8**	**0.0**			
BJI				SS	SS	19 20 06.8	+3.4			
BJI				AMB	AMB					
	comp=Z,500nm,3.9s									
BJI				LR	LR					
	comp=Z,2µm,24.3s									
BJI				LR	LR					
	comp=Z,3µm,23.9s									
TUE	**Stuetta**	**143.32**	**73**		PKPbc	18 58 09.5	+1.0			
TUE				IAMs_20	IAMs_20	20 07 51.0				
	comp=Z,4µm,20.0s									
CEL	**Celeste**	**143.33**	**89**	IAMs_20	IAMs_20	19 59 38.3				
	comp=Z,5µm,21.0s									
BFO	**Black Forest**	**143.49**	**70**	*e*L	L	19 57 49.3				
	comp=Z,3µm,21.1s									
BFO	**Black Forest**	**143.49**	**70**	IAMs_20	IAMs_20	20 13 29.5				
	comp=Z,3µm,20.0s									
AHRW	**Bad Neuenahr-A**	**143.62**	**66**	*e*PKPbc	PKPbc	18 58 08.6	-0.3			
	baz=245,slow=2.9									
AQU	**L'Aquila**	**143.92**	**82**	IAMs_20	IAMs_20	19 59 46.1				
	comp=Z,4µm,21.0s									
FUORN	**Ofenpass-Fuorn**	**143.95**	**74**		PKPab	18 58 08.6	-1.2			
FUORN				IAMs_20	IAMs_20	19 59 51.8				
	comp=Z,5µm,19.0s									
PAOL	**Paolisi**	**143.99**	**84**	IAMs_20	IAMs_20	19 59 41.8				
	comp=Z,5µm,21.0s									
DAVA	**Damuels**	**144.00**	**72**	*i* PKPdf	PKPbc	18 58 11.1	+0.7			
	comp=Z,95nm,1.4s,SNR=6.2									
BUG	**Bochum--Univer**	**144.06**	**65**	*e*PKPbc	**PKPab**	**18 58 09.6**	**-0.1**			
	baz=245,slow=2.9									
INTR	**Introdacqua**	**144.07**	**83**		**PKPab**	**18 58 09.7**	**-0.4**			
STU	**Stuttgart**	**144.20**	**70**	IAMs_20	IAMs_20	20 11 31.2				
	comp=Z,4µm,20.0s									
UBR	**Ueberruh**	**144.31**	**72**	*e*PKPbc	**PKPab**	**18 58 09.4**	**-1.4**			
	baz=245,slow=2.9									
TNS	**Taunus Mts**	**144.31**	**67**	*e*PKPbc	**PKPab**	**18 58 10.4**	**-0.4**			
	baz=245,slow=2.9									
TNS				*e*L	L	20 00 24.9				
	comp=Z,4µm,21.2s									
TIY	**Taiyuan**	**144.40**	**268**	PKP	**PKPab**	**18 58 08.0**	**-3.5**			
TIY				PP	**PP**	**19 01 36.9**	**+7.3**			
TIY				SS	SS	19 20 18.0	+1.6			
TIY				AMB	AMB					
	comp=Z,380nm,4.7s									
TIY				LR	LR					
	comp=Z,3µm,17.6s									
TIY				LR	LR					
	comp=Z,2µm,16.0s									
TIY				LR	LR					
	comp=Z,2µm,17.6s									
TIP	**Timpagrande**	**144.40**	**89**	⇓P	**PKiKP**	**18 58 18.1**	**+1.2**			
TIP	**Timpagrande**	**144.40**	**89**		**PKPab**	**18 58 10.7**	**-0.7**			
TIP				IAMs_20	IAMs_20	19 59 12.8				
	comp=Z,4µm,21.0s									
FETA	**Feichten**	**144.41**	**73**	*i* PKPdf	**PKPdf**	**18 58 12.4**	**-0.7**			
	comp=Z,93nm,1.2s,SNR=11									
XAN	**Xi'an**	**144.42**	**260**	PKHKP	**PKPab**	**18 58 09.9**	**-1.8**			
XAN				MLR	MLR					
	comp=Z,3µm,19.0s									
XAN	**Xi'an**	**144.42**	**260**		**PKPab**	**18 58 09.9**	**-1.8**			
XAN	**Xi'an**	**144.42**	**260**	IAMs_20	IAMs_20	20 11 08.7				
	comp=Z,3µm,19.0s									
TIXI	**Tiksi**	**144.56**	**331**	PKP	**

baz=245,slow=2.9
SPITS Spitsbergen Ar 146.55 16 PKPbc PKPdf 18 58 15.5 -0.2
comp=Z,24nm,1.1s,baz=236,slow=7.8,SNR=2.9
OBKA Obir 146.58 76 ePKPdf PKPdf 18 58 16.1 -0.6
comp=Z,41nm,0.9s
WET Wettzell 146.58 71 ePKPbc PKPdf 18 58 16.5 -0.2
baz=245,slow=2.9
WET eL L 20 02 45.5
comp=Z,3μm,21.7s
BOJS Bojanci 146.59 78 ePKPdf PKPdf 18 58 15.9 -0.8
BOJS e 18 58 27.3
ITM Ithomi 146.59 96 IAMs_20 IAMs_20 20 06 59.6
comp=Z,3μm,19.0s
MUD Monsted U'grnd 146.62 57 i P PKiKP 18 58 26.7 +6.0
BSEG Bad Segeberg 146.62 62 eL L 19 59 09.6
comp=Z,4μm,20.4s
PLN Plauen 146.62 68 ePKPbc PKPdf 18 58 16.5 -0.1
baz=245,slow=2.9
NEUB Neuenburg 146.64 67 ePKPbc PKPbc 18 58 18.1 -0.1
baz=245,slow=2.9
KIJV Kijevo 146.65 81 eP PKPdf 18 58 15.3 -1.6
GUNZ Gunzen 146.69 68 ePKPbc PKPdf 18 58 17.0 +0.2
baz=245,slow=2.9
WERN Wernitzgruen 146.69 69 ePKPbc PKPdf 18 58 16.7 -0.1
baz=245,slow=2.9
HHC Hu-ho-hao-te 146.69 272 ePKPbc PKPdf 18 58 13.9 -3.3
HHC PP PP 19 01 43.4 +0.1
HHC SS SS 19 20 41.2 -1.5
HHC AMB AMB
comp=Z,150nm,6.1s
HHC LR LR
comp=Z,1μm,17.8s
HHC LR LR
comp=Z,2μm,17.2s
HHC LR LR
comp=Z,3μm,17.9s
MAKA Makarska 146.70 83 eP PKPbc 18 58 18.7 +0.1
LKD2 Lefkada island 146.70 92 P PKPab 18 58 20.1 0.0
NKC Novy Kostel 146.71 69 ePKHKP PKPbc 18 58 18.6 +0.1
NKC MLR MLR
comp=Z,4μm,19.4s
NKC Novy Kostel 146.71 69 ePKP PKPbc 18 58 18.6 +0.1
NKC ex x 18 58 27.8
NKC ex x 18 59 32.2
NKC eSS SS 19 20 38.2 -4.3
NKC AMS AMS 19 59 20.0
comp=Z,4μm,19.4s
GOET G??ttrup 146.77 56 i P PKiKP 18 58 22.4 +1.4
TANN Tannenbergstha 146.78 68 ePKPbc PKPdf 18 58 17.6 +0.7
baz=245,slow=2.9
CRES Cresnjev 146.86 78 eP PKPbc 18 58 18.6 -0.5
RICI Ricice 146.87 82 P PKPdf 18 58 17.9 +0.6
IGT Igoumenitsa 146.91 91 P PKiKP 18 58 27.9 +5.9
STON Ston 146.94 84 eP PKiKP 18 58 21.7 -0.1
MOA Molln 146.94 74 i PKPbc PKPdf 18 58 18.1 +0.9
comp=Z,62nm,1.2s,SNR=12
SOKA Soboth 146.95 76 i PKPbc PKPdf 18 58 18.3 +0.9
comp=Z,41nm,1.3s,SNR=9.8
GEC2 GERESS Array S 146.98 72 ePKPbc PKPdf 18 58 17.3 -0.1
baz=245,slow=2.9
GEC2 eL L 20 11 46.3
comp=Z,3μm,21.6s
GEC2 GERESS Array S 146.98 72 PKPdf 18 58 15.9 -1.5
GEC2 IAMs_20 IAMs_20 20 12 06.7
comp=Z,3μm,19.0s
GERES GERESS Array B 146.98 72 PKPbc PKPbc 18 58 19.0 -0.4
comp=Z,6.7nm,1.0s,baz=209,slow=2.4,SNR=23
PERS Pernice 146.99 76 i PKPdf PKPdf 18 58 18.1 +0.7
PERS e 18 58 28.1
PERS e 18 59 41.3
KHC Kasperske Hory 147.01 71 d iPKHKP PKPbc 18 58 18.5 -0.9
KHC MLR MLR
comp=Z,4μm,20.0s
KHC Kasperske Hory 147.01 71 ePKP PKPbc 18 58 19.0 -0.4
KHC epPKP sPKPab 18 58 25.1 +2.3
KHC ex x 18 59 37.4
KHC eSS SS 19 20 51.3 +5.4
KHC AMS AMS 20 01 10.0
comp=Z,3μm,21.7s
KHC Kasperske Hory 147.01 71 PKPbc 18 58 18.4 -1.0
MGRS Mrkonjic Grad 147.27 81 eP PKPbc 18 58 20.8 +0.5
IDI Anoyia 147.33 101 P PKiKP 18 58 23.7 +0.6
IDI Anoyia 147.33 101 ⇑P PKPab 18 58 22.0 -0.6
IDI Anoyia 147.33 101 PKPbc 18 58 19.8 -1.0
CLL Collm 147.40 67 i PKPbc PKPab 18 58 21.9 -0.5
comp=Z,49nm,1.6s
CLL e 18 58 30.0
CLL i 18 58 34.8
comp=Z,164nm,1.6s
CLL e 18 59 17.0
CLL ePP PP 19 01 43.0 -4.1
CLL ePPP PPP 19 05 00.0
CLL e 19 08 58.0
CLL ePSKS 19 12 00.0
CLL e 19 13 16.0
CLL ePPS PPS 19 14 30.0
CLL eSS SS 19 20 48.0 -2.2
CLL eSSS SSS 19 26 18.0
CLL LmV 19 28 00.0
comp=Z,3μm,21.5s
CLL eSSSS 19 30 12.0
CLL Collm 147.40 67 ePKPbc PKPbc 18 58 20.1 -0.3
baz=245,slow=2.9
CLL eL L 20 00 00.6
comp=Z,3μm,21.1s
CLL Collm 147.40 67 i PKIKP PKPab 18 58 21.9 -0.5
CLL e 18 58 30.0
CLL pmax pmax
comp=Z,49nm,1.6s
CLL Collm 147.40 67 PKPdf 18 58 18.9 +1.1
CLL IAMs_20 IAMs_20 20 18 57.8
comp=Z,3μm,21.0s
KONO Kongsberg 147.42 51 de PKIKP PKPbc 18 58 20.0 -0.1
KONO MLR MLR
comp=Z,3μm,18.0s
KONO Kongsberg 147.42 51 IAMs_20 IAMs_20 20 15 16.0
comp=Z,3μm,21.0s
BUM Brajici-Budva 147.42 85 ⇑i PKP PKiKP 18 58 23.7 +0.7
PBCC Pribram 147.46 70 ePKP PKiKP 18 58 35.0 +12
BLY Banja Luka 147.48 80 ⇑P PKiKP 18 58 23.5 +0.6
BLY Banja Luka 147.48 80 eP PKPbc 18 58 19.9 -0.9
BLY Banja Luka 147.48 80 PKPbc 18 58 20.8 0.0
BLY IAMs_20 IAMs_20 20 13 38.2
comp=Z,3μm,20.0s
FBE Freiberg 147.49 68 ePKPbc PKPbc 18 58 19.7 -0.9
baz=245,slow=2.9
BRY Bratogost 147.49 84 eP PKPbc 18 58 21.5 +0.4
BRY Bratogost 147.49 84 ⇑i PKP PKPab 18 58 23.2 0.0
ARSA Arzberg 147.49 75 i PKPdf PKPdf 18 58 18.8 +0.6
comp=Z,40nm,1.5s,SNR=7.7
EVR Evrytania 147.52 93 P PKPdf 18 58 19.3 +0.7
DRME Dracevica, Mon 147.56 86 eP PKPbc 18 58 21.3 +0.2
DRME Dracevica, Mon 147.56 86 ⇑i PKP PKPab 18 58 23.5 +0.2
CEME Cevo 147.56 85 ⇑i PKP PKPab 18 58 23.5 +0.1
BTO Baotou 147.56 271 ePKPbc PKPbc 18 58 21.0 -0.3
TIR Tirane 147.57 88 ⇑P PKPab 18 58 24.5 +1.2
TIR Tirane 147.57 88 ⇑PKIKP PKPab 18 58 24.5 +1.2
KALN Kalnik 147.62 78 eP PKPbc 18 58 21.1 -0.1
LAST Lasithi 147.62 102 P PKPab 18 58 23.8 -0.1
NKME Niksic 147.69 85 ⇓i PKP PKPab 18 58 24.2 +0.3
PDG Podgorica 147.72 86 ⇑P PKPab 18 58 25.8 +1.9
PDG Podgorica 147.72 86 eP PKPab 18 58 26.7 +2.8
TTG Podgorica 147.72 86 ⇑i PKP PKiKP 18 58 23.6 +0.1
NKY Niksic 147.74 85 ⇑i PKP PKiKP 18 58 23.3 -0.4
NPS Neapolis 147.77 102 P PKPab 18 58 25.9 +1.5
KPRO Kipourio 147.80 91 P PKPbc 18 58 21.4 -0.5
BRG Berggiesshubel 147.83 68 ePKP PKiKP 18 58 23.1 -0.4
comp=Z,25nm,1.8s
BRG Berggiesshubel 147.83 68 i PKP PKPab 18 58 36.0 +12
comp=Z,286nm,2.0s
BRG ePKS PKSdf 19 01 54.3 +0.8
comp=Z,66nm,2.0s
comp=N,4μm,20.6s
comp=E,3μm,20.8s
comp=Z,3μm,21.9s
BRG Berggiesshubel 147.83 68 ePKPbc PKPdf 18 58 19.4 +0.8
baz=245,slow=2.9
BRG Berggiesshubel 147.83 68 ePKIKP PKiKP 18 58 23.0 -0.4
BRG e 19 01 54.3
BRG pmax pmax
comp=Z,25nm,1.8s
BRG pmax pmax
comp=Z,286nm,2.0s
BRG pmax pmax
comp=Z,66nm,2.0s
BRG MLR MLR
comp=N,4μm,20.6s
BRG MLR MLR
comp=E,3μm,20.8s
BRG MLR MLR
comp=Z,3μm,21.9s
UPM Unac-Piva 147.87 84 eP PKPab 18 58 27.2 +2.5
UPM Unac-Piva 147.87 84 ⇓i PKP PKiKP 18 58 24.0 -0.1
PRU Pruhonice 147.90 70 ePKIKP PKPbc 18 58 21.7 -0.1
PRU e 18 58 26.4
PRU eSS SS 19 21 02.3 +6.5
PRU MLR MLR
comp=Z,4μm,22.2s
PRU Pruhonice 147.90 70 ePKP PKPbc 18 58 21.7 -0.1
PRU epPKP sPKPab 18 58 26.4 +0.1
PRU ex x 18 59 39.1
PRU eSS SS 19 21 02.3 +6.5
PRU AMS AMS 20 23 30.0
comp=Z,4μm,22.2s
POO Poona 147.92 196 eP PKiKP 18 58 24.0 -0.7
CONA Conrad Observa 147.97 74 i PKPbc PKPdf 18 58 20.3 +1.2
comp=Z,71nm,1.6s,SNR=16
THL Klokotos Trika 148.01 92 P PKPdf 18 58 20.6 +1.3
GOPC GO Pecny, Ondr 148.02 70 ePKIKP PKPbc 18 58 22.2 +0.1
GOPC e 18 58 27.9
GOPC GO Pecny, Ondr 148.02 70 ePKP PKPbc 18 58 22.2 +0.1
GOPC epPKP sPKPab 18 58 27.9 +1.1
OHR Ohrid 148.05 89 i P PKPbc 18 58 22.5 -0.1
OHR Ohrid 148.05 89 i P PKPbc 18 58 22.5 -0.1
PVCC Panska Ves 148.09 69 ePKP2 PKPab 18 58 26.8 +1.6
PVCC eSS SS 19 21 05.8 +7.8
PVCC MLR MLR
comp=Z,3μm,19.8s
PVCC Panska Ves 148.09 69 ePKP PKPab 18 58 26.8 +1.6
PVCC ex x 18 59 39.1
PVCC eSS SS 19 21 05.8 +7.8
PVCC AMS AMS 20 00 30.0
comp=Z,3μm,19.8s
KOME Kolasin 148.09 85 ⇑i PKP PKiKP 18 58 24.8 +0.4
SHL Shillong 148.13 230 PKHKP PKPdf 18 58 20.7 +0.5
SHL MLR MLR
comp=Z,7μm,22.0s
SHL Shillong 148.13 230 PKPdf 18 58 20.7 +0.5
SHL IAMs_20 IAMs_20 19 59 43.4
comp=Z,7μm,22.0s
NC204 NORSAR Array S 148.16 48 PKiKP 18 58 23.4 -0.5
RUE Ruedersdorf 148.21 65 eP PKPbc 18 58 21.5 -1.0
TREC Trest 148.23 72 ePKIKP PKPbc 18 58 23.2 +0.5
TREC MLR MLR
comp=Z,3μm,24.4s
TREC Trest 148.23 72 ePKP PKPbc 18 58 23.2 +0.5
TREC ex x 18 58 34.1
TREC ex x 18 59 39.1
TREC eSS SS 19 21 01.0 +1.3
TREC AMS AMS 20 06 50.0
comp=Z,3μm,24.4s
PLE Pljevlja 148.24 84 ⇑i PKP PKiKP 18 58 24.7 0.0
FNA Florina 148.25 90 P PKPdf 18 58 19.9 +0.2
FNA Florina 148.25 90 PKHKP PKPbc 18 58 22.8 -0.3
FNA Florina 148.25 90 PKPbc 18 58 22.8 -0.3
PVY Plav 148.25 86 ⇓i PKP PKPab 18 58 25.8 -0.4
HAPS Han Pijesak,Bl 148.31 83 eP PKPdf 18 58 19.0 -0.8
IVA Berane 148.35 85 ⇑i PKP PKiKP 18 58 25.0 +0.1
PTL Penteli 148.35 96 P PKPbc 18 58 22.6 -0.8
NB2 NORSAR Subarra 148.36 49 PKP PKPdf 18 58 19.2 0.0
comp=Z,272nm,2.0s,baz=264,slow=2.4
NB2 NORSAR Subarra 148.36 49 PKP PKPdf 18 58 19.2 0.0
baz=264,slow=2.4
NOA NORSAR Array B 148.36 49 PKPbc PKPbc 18 58 21.8 -1.0
comp=Z,2.8nm,1.0s,baz=267,slow=2.1,SNR=6.5
SANT Santorini 148.37 100 ⇓P PKPab 18 58 27.3 +0.6
DION Dionisos Attik 148.41 96 P PKPdf 18 58 21.1 +1.1
BOM Bombay 148.45 194 eP PKPdf 18 58 11.0 -10
BOM AMP 18 58 25.1
comp=Z,515nm,3.2s
BOM AMS AMS 19 54 42.5
comp=Z,859nm,19.6s
RGN Rugen 148.48 61 eP PKPdf 18 58 18.4 -1.1
RGN Rugen 148.48 61 IAMs_20 IAMs_20 20 00 32.8
comp=Z,5μm,20.0s
BBLS Lazići 148.50 83 eP PKPbc 18 58 23.0 -0.7
LIT Litokhoron 148.61 92 P PKPbc 18 58 22.4 -1.6
LIT Litokhoron 148.61 92 PKIKP PKPbc 18 58 23.2 -0.8
LIT MLR MLR
comp=Z,5μm,20.0s
LIT Litokhoron 148.61 92 PKPbc 18 58 23.2 -0.8
LIT IAMs_20 IAMs_20 20 04 39.0
comp=Z,5μm,20.0s
XOR Xorichti 148.66 93 P PKPdf 18 58 21.2 +0.8
KRUC Moravsky 148.71 72 ePKP PKPbc 18 58 23.8 -0.1
APE Apeiranthos 148.84 99 P PKPdf 18 58 18.7 -2.1
APE Apeiranthos 148.84 99 ⇑P PKPab 18 58 27.5 -1.1
APE Apeiranthos 148.84 99 ⇑PKHKP PKPab 18 58 27.5 -1.1
SKO Skopje 148.90 88 i P PKPbc 18 58 22.9 -1.7
SKO Skopje 148.90 88 i P PKPbc 18 58 22.9 -1.7
VRAC Vranov 148.92 72 ePKP PKPbc 18 58 24.4 -0.1
VRAC Vranov 148.92 72 ⇑P PKiKP 18 58 26.0 +0.2
VRAC Vranov 148.92 72 ⇑PKHKP PKiKP 18 58 26.0 +0.2
AMGA Amorgos Island 148.93 100 P PKPbc 18 58 24.2 -0.7
KARP Karpathos 148.93 103 P PKPdf 18 58 22.2 +1.2
KARP Karpathos 148.93 103 PKPdf 18 58 21.3 +0.3
LZH Lanzhou 148.94 258 ⇑PKPbc PKPdf 18 58 21.3 +0.2
LZH SKKS 19 08 44.2
LZH SS SS 19 21 01.7 -6.2
LZH AMB AMB
comp=Z,730nm,6.0s
LZH LR LR
comp=Z,3μm,19.5s
LZH LR LR
comp=Z,4μm,19.0s
LZH LR LR
comp=Z,3μm,20.1s
UPC Upice 148.96 70 ePKP2 PKPab 18 58 28.8 +0.1
UPC MLR MLR
comp=Z,4μm,19.9s
UPC Upice 148.96 70 ePKP PKPab 18 58 28.8 +0.1
UPC eSS SS 19 21 06.0 -1.8
UPC AMS AMS 20 25 10.0
comp=Z,4μm,19.9s
DIVS Divibare 148.99 83 eP PKPbc 18 58 23.6 -1.3
AOS Alonnisos 149.00 94 P PKPdf 18 58 21.9 +1.0
CHVC Chvalec 149.01 70 ePKP PKPbc 18 58 22.8 -1.9
CHVC ex x 18 58 30.3
CHVC AMS AMS 20 03 10.0
comp=Z,2μm,20.9s
MODS Modra-Piesok 149.01 74 ePKHKP PKPbc 18 58 24.4 -0.3
MODS Modra-Piesok 149.01 74 ePKP PKPbc 18 58 24.4 -0.3
MORH Mrgy, Hungar 149.04 79 eP PKPbc 18 58 22.9 -1.9
DPC Dobruska-Polom 149.10 70 ePKHKP PKPbc 18 58 25.5 +0.6
DPC e 18 58 30.1
DPC MLR MLR
comp=Z,3μm,19.6s
DPC Dobruska-Polom 149.10 70 ePKP PKPbc 18 58 25.5 +0.6
DPC epPKP pPKPab 18 58 30.1 -0.5
DPC ex x 18 59 37.4
DPC eSS SS 19 21 09.7 +0.3
DPC AMS AMS 20 10 20.0
comp=Z,3μm,19.6s
OSTC Ostas 149.10 70 ePKP PKPbc 18 58 25.1 +0.2
OSTC ex x 18 58 29.9
OSTC ex x 18 59 39.1
OSTC eSS SS 19 21 12.3 +2.9
OSTC AMS AMS 20 11 50.0
comp=Z,4μm,21.1s
HORT Hortiatis 149.27 91 P PKPdf 18 58 23.3 +1.9
PAIG Paliouri 149.28 93 P PKPdf 18 58 23.0 +1.7
KRLC Kraliky 149.29 71 ePKHKP PKiKP 18 58 26.0 -0.6
KRLC e 18 58 30.7
KRLC MLR MLR
comp=Z,3μm,20.7s
KRLC Kraliky 149.29 71 ePKP PKiKP 18 58 26.0 -0.6
KRLC ex x 18 58 30.7
KRLC eSS SS 19 21 06.2 -5.4
KRLC AMS AMS 20 02 40.0
comp=Z,3μm,20.7s
VAY Valandovo 149.30 90 i P PKPbc 18 58 24.1 -1.5
VAY Valandovo 149.30 90 i P PKPbc 18 58 24.1 -1.5
FRGS Fruska Gora 149.34 81 eP PKPbc 18 58 23.8 -1.9
PLG Polygyros 149.37 92 P PKPdf 18 58 23.1 +1.6
JAVC Velka Javorina 149.43 73 ePKP PKiKP 18 58 26.5 -0.4
KNT Kendrikon 149.43 90 P PKPdf 18 58 20.0 -1.6
RAYN Ar Rayn 149.46 142 PKIKP PKPdf 18 58 23.0 +0.8
RAYN MLR MLR
comp=Z,5μm,22.0s
RAYN Ar Rayn 149.46 142 PKPdf 18 58 23.0 +0.8
RAYN IAMs_20 IAMs_20 19 58 39.0
comp=Z,5μm,22.0s
BSD Bornholm Skovb 149.50 61 ePKHKP PKPbc 18 58 24.6 -1.1
BSD Bornholm Skovb 149.50 61 i P PKPbc 18 58 24.6 -1.1
MORC Moravsky Berou 149.66 72 ePKP PKiKP 18 58 27.0 -0.3
MORC Moravsky Berou 149.66 72 ⇓P PKiKP 18 58 27.7 +0.4
MORC Moravsky Berou 149.66 72 ⇓PKIKP PKiKP 18 58 27.7 +0.4
MORC Moravsky Berou 149.66 72 PKPdf 18 58 21.9 +0.2
MORC IAMs_20 IAMs_20 20 12 55.6
comp=Z,3μm,21.0s
OUR Ouranopolis 149.70 92 P PKPbc 18 58 25.7 -0.9
SRS Serrai 149.86 91 P PKPdf 18 58 23.2 +1.0
KKB Krupnik 149.91 89 P PKPbc 18 58 26.7 -0.5
CIT Chita 149.95 293 ePKIKP PKPbc 18 58 24.7 -2.3
CIT pmax pmax
comp=Z,374nm,2.4s
CHOS Chios island 149.95 97 P PKPbc 18 58 26.4 -1.1
ARG Arkhangelos 149.96 103 P PKPbc 18 58 26.0 -1.4
VYHS Vyhne 150.03 75 ePKIKP PKiKP 18 58 28.3 +0.1
VYHS Vyhne 150.03 75 ePKP PKiKP 18 58 28.2 +0.1
OKC Ostrava-Krasne 150.05 72 ePKIKP PKPbc 18 58 27.3 +0.1
OKC e 18 58 32.0
OKC eSS SS 19 21 25.1 +5.2
OKC MLR MLR
comp=Z,4μm,21.5s
OKC Ostrava-Krasne 150.05 72 ePKP PKPbc 18 58 27.3 +0.1
OKC epPKP PKPab 18 58 32.0 -1.1
OKC ex x 18 59 40.9
OKC eSS SS 19 21 25.1 +5.2
OKC AMS AMS 20 25 00.0
comp=Z,4μm,21.5s
SMG Samos 150.05 99 P PKPbc 18 58 27.2 -0.4
NVR Nevrokopi 150.15 91 P PKPdf 18 58 24.3 +1.6
MMB Musomiste 150.19 90 P PKPbc 18 58 25.8 -2.1
LIA Limnos Island 150.24 94 P PKPab 18 58 35.9 +1.7
BANR Banloc 150.28 82 ⇑P PKiKP 18 58 29.0 +0.4
VTS Vitosha 150.38 88 ⇓P PKiKP 18 58 29.4 +0.2
VTS Vitosha 150.38 88 P PKPbc 18 58 27.5 -1.0
VTS Vitosha 150.38 88 ⇓PKIKP PKiKP 18 58 29.4 +0.2
VTS Vitosha 150.38 88 PKPdf 18 58 22.8 -0.4
VTS IAMs_20 IAMs_20 20 21 29.0
comp=Z,4μm,20.0s
KAVA Kavala 150.39 92 P PKPdf 18 58 24.9 +1.9
MDVR Moldovita 150.39 83 ⇑P PKiKP 18 58 30.6 +1.6
GKP Gorka Klasztor 150.44 65 ePKP PKPbc 18 58 26.6 -1.4
GKP LMZ LR 20 31 08.3
comp=Z,5.2nm,22.5s
PSZ Piszkesteto 150.48 76 ⇑P PKPbc 18 58 28.5 +0.1
PSZ Piszkesteto 150.48 76 ⇑PKIKP PKPbc 18 58 28.5 +0.1
PSZ Piszkesteto 150.48 76 PKPdf 18 58 24.7 +1.6
PSZ IAMs_20 IAMs_20 20 15 02.3
comp=Z,4μm,21.0s
BZS Buzias 150.69 81 ⇑P PKiKP 18 58 29.5 0.0
BZS Buzias 150.69 81 ⇑PKIKP PKiKP 18 58 29.5 0.0
BOD Bodaibo 150.76 305 ePKHKP PKPdf 18 58 25.1 +2.0
BOD pmax pmax
comp=Z,170nm,1.4s
SMTH Samothraki Isl 150.77 94 P PKPbc 18 58 29.5 +0.2
RZN Rozhen 150.88 91 P PKPbc 18 58 29.2 -0.5
HERR Herculane 150.89 83 ⇑P PKiKP 18 58 29.9 -0.1
PGB Panagyurishte 150.95 89 P PKPbc 18 58 29.8 +0.1
PUNG Punghina 150.96 85 ⇑P PKiKP 18 58 30.5 +0.4
SIRI Siria 150.98 80 ⇑P PKiKP 18 58 30.1 +0.4
PLD Plovdiv 151.08 90 P PKPbc 18 58 29.8 +0.1
BAIL Bailesti 151.11 86 ⇑P PKiKP 18 58 30.9 +0.5
RDO Rodhopi 151.13 92 P PKPdf 18 58 22.8 -1.4
OJC Ojcow 151.18 72 ePKP PKPbc 18 58 29.5 -0.4
OJC LMZ LR 20 27 56.1
comp=Z,3.8nm,20.6s
OJC Ojcow 151.18 72 PKIKP PKPdf 18 58 24.3 +0.3
OJC Ojcow 151.18 72 PKPdf 18 58 24.3 +0.3
NIE Niedzica 151.24 73 ePKP PKiKP 18 58 30.6 0.0
NIE LMZ LR 20 31 17.4
comp=Z,2.6nm,23.3s
SRE Strehaia 151.30 84 ⇑P PKiKP 18 58 31.9 +1.0
SRE Strehaia 151.30 84 ⇑PKIKP PKiKP 18 58 31.9 +1.0
KDZ Kurdzhali 151.31 91 P PKPab 18 58 36.3 -2.4
GZR Gura Zlata 151.34 83 ⇑P PKiKP 18 58 31.3 +0.3
GZR Gura Zlata 151.34 83 ⇑PKIKP PKiKP 18 58 31.3 +0.3
ODAN Odare 151.36 225 eP PKPbc 18 58 30.6 -0.8
comp=Z,188nm,1.0s
ELL Elmali 151.41 104 PKIKP PKPdf 18 58 26.3 +1.3
ELL Elmali 151.41 104 PKPdf 18 58 26.3 +1.3
DIM Dimitrovgrad 151.59 91 P PKiKP 18 58 31.3 -0.2
MANT Manisa 151.61 100 PKPbc 18 58 28.5 -3.1
DEV Deva 151.62 82 ⇑P PKiKP 18 58 31.7 +0.3
DEV Deva 151.62 82 ⇑PKIKP PKiKP 18 58 31.7 +0.3
TAPN Taplejung 151.63 226 eP PKPbc 18 58 31.2 -0.9
comp=Z,298nm,1.3s
PLVB Pleven 151.64 88 ⇑P PKiKP 18 58 31.9 +0.4
RAMN Ramite 151.80 223 eP PKPbc 18 58 30.9 -1.5
comp=Z,85nm,0.8s
DRGR 151.85 80 ⇓P PKPbc 18 58 31.6 0.0
DRGR 151.85 80 ⇓PKIKP PKPbc 18 58 31.6 0.0
LSA Lhasa 151.88 234 PKIKP PKPdf 18 58 27.1 +0.8
LSA MLR MLR
comp=Z,4μm,22.0s
LSA Lhasa 151.88 234 PKPdf 18 58 27.1 +0.8
LSA IAMs_20 IAMs_20 20 03 12.9
comp=Z,4μm,22.0s
LEF Lefka 152.21 110 ⇑P PKPbc 18 58 32.1 -0.6
UZH Uzhgorod 152.23 76 i PKIKP PKPbc 18 58 29.2 -3.1
UZH i 18 58 31.7
UZH i 18 58 47.0
UZH e 19 05 29.7
UZH MLR MLR
comp=N,950nm,20.0s
UZH MLR MLR
comp=E,750nm,20.0s
UZH MLR MLR
comp=Z,350nm,20.0s
KOLS Kolonicke sedl 152.32 75 ePKIKP PKiKP 18 58 33.2 +0.4
KOLS Kolonicke sedl 152.32 75 ePKP PKiKP 18 58 33.2 +0.4
COPA Copaceanca 152.36 87 ⇓P PKiKP 18 58 33.0 0.0
CSS Mathiatis 152.37 111 PKPdf 18 58 27.3 +1.0
CSS IAMs_20 IAMs_20 20 03 05.0
comp=Z,4μm,20.0s
CJR Cluj-Napoca 152.38 80 ⇑P PKPbc 18 58 32.7 -0.1
CJR Cluj-Napoca 152.38 80 ⇑PKIKP PKPbc 18 58 32.7 -0.1
HUMR Humele 152.38 86 ⇓P PKiKP 18 58 33.4 +0.3
SZH Strazhica 152.43 89 P PKPbc 18 58 32.6 -0.4
ASF Jabal al Asfar 152.47 119 PKP PKPdf 18 58 27.6 +0.9
comp=Z,2.1nm,0.8s,baz=266,slow=3.6,SNR=5.7
ASF PKPbc PKPbc 18 58 34.4 +0.9
comp=Z,8.9nm,1.0s,baz=150,slow=3.4,SNR=12
JMB Yambol 152.47 91 P PKPbc 18 58 32.4 -0.7
ARR Arges 152.52 84 ⇑P PKPbc 18 58 32.7 -0.5
JIRN Jiri 152.59 224 eP PKPbc 18 58 32.4 -1.9
comp=Z,112nm,1.0s
ULN Ulaanbaatar 152.69 282 IAMs_20 IAMs_20 20 14 31.5
comp=Z,5μm,20.0s
ARCES ARCESS Array B 152.76 29 PKPbc PKiKP 18 58 34.5 +1.4
comp=Z,23nm,0.9s,baz=288,slow=3.1,SNR=11
KWP Kalwaria Pacla 152.80 74 ePKP PKPdf 18 58 25.4 -1.0
KWP LMZ LR 20 27 07.3
comp=Z,6.7nm,22.2s
KWP Kalwaria Pacla 152.80 74 IAMs_20 IAMs_20 20 12 04.9
comp=Z,4μm,22.0s
VOIR 152.81 84 ⇑P PKPbc 18 58 33.3 -0.6
VOIR 152.81 84 ⇑PKIKP PKPbc 18 58 33.3 -0.6
PKI Pulchoki 152.86 222 eP PKPbc 18 58 34.1 -0.7
comp=Z,950nm,2.1s
WSAR Wadi Sarin 152.86 167 PKP PKPdf 18 58 26.2 -1.2
comp=Z,2.8nm,0.8s,baz=174,slow=8.0,SNR=1.5
WSAR PKPbc PKPbc 18 58 34.3 -0.2
comp=Z,15nm,1.1s,baz=176,slow=4.2,SNR=4.8
WSAR PKPab PKPab 18 58 45.4 -0.1
comp=Z,16nm,1.1s,baz=237,slow=5.1,SNR=4.6
PKIN Phulchoki 152.87 222 eP PKPbc 18 58 33.0 -1.8
comp=Z,562nm,1.8s
GUN Gumba 152.94 223 eP PKPbc 18 58 32.8 -2.2
comp=Z,271nm,1.3s
ARCR ARCALIA 153.00 80 ⇑P PKPbc 18 58 33.4 -0.8
DMN Daman 153.02 222 eP PKPbc 18 58 34.4 -0.7
comp=Z,199nm,1.1s
SONM Songino Array 153.09 282 PKPbc PKPbc 18 58 33.4 -1.1
comp=Z,4.2nm,0.7s,baz=127,slow=3.9,SNR=7.1
SONM PKPab PKPab 18 58 42.7 -3.5
comp=Z,13nm,0.7s,baz=97,slow=0.8,SNR=8.1
KKN Kakani 153.10 222 eP PKPbc 18 58 33.5 -1.7

	comp=Z,155nm,1.1s								
DOPR	**Dopca**	**153.24**	**83**	⇑	*e*P	**PKPbc**	**18 58 34.3**	**-0.4**
SULR		**153.27**	**86**	⇑	P	**PKPbc**	**18 58 33.8**	**-0.9**
MLR	**Muntele Rosu**	**153.41**	**84**	⇑	P	**PKPbc**	**18 58 34.4**	**-0.8**
MLR	**Muntele Rosu**	**153.41**	**84**	⇑	PKIKP	**PKPbc**	**18 58 34.4**	**-0.8**
MLR	**Muntele Rosu**	**153.41**	**84**			**PKPdf**	**18 58 26.5**	**-1.1**
GTA	**Gaotai**	**153.48**	**260**	⇑	PKPbc	**PKPdf**	**18 58 28.1**	**+0.2**
GTA					pPKP	PKPbc	18 58 33.3	-2.3
GTA					sPKP		18 58 36.9	
GTA					PKPab	**sPKPab**	**18 58 50.5**	**+0.7**
GTA					PP	**PP**	**19 02 25.7**	**+3.3**
GTA					SKKS		19 09 12.8	
GTA					SS	**SS**	**19 22 02.1**	**+3.9**
GTA					AMB	AMB		
	comp=Z,560nm,7.5s							
GTA					LR	LR		
	comp=Z,2μm,21.3s							
GTA					LR	LR		
	comp=Z,4μm,20.9s							
GTA					LR	LR		
	comp=Z,6μm,20.6s							
GKN	**Gorkha**	**153.56**	**221**		*e*P	**PKPbc**	**18 58 35.6**	**-0.6**
	comp=Z,247nm,1.4s							
PBUR	**Paburge**	**153.57**	**60**		*e*P	**PKPbc**	**18 58 31.4**	**-3.6**
LVV	**L'vov**	**153.68**	**74**		*e*PKIKP	**PKPdf**	**18 58 26.6**	**-1.1**
LVV					MLR	MLR		
	comp=Z,4μm,23.0s							
BURAR	**Bucovina Array**	**153.74**	**80**	⇑	P	**PKPbc**	**18 58 34.6**	**-1.3**
BURAR	**Bucovina Array**	**153.74**	**80**	⇑	PKIKP	**PKPbc**	**18 58 34.6**	**-1.3**
KOLN	**Koldanda**	**153.79**	**219**		*e*P	**PKPbc**	**18 58 36.0**	**-0.7**
	comp=Z,121nm,1.4s							
SLIT	**Slitere, Latvi**	**153.86**	**56**		*e*P	**PKPbc**	**18 58 31.8**	**-3.8**
ORH	**Orhaniye**	**153.90**	**97**		P	**PKPdf**	**18 58 27.2**	**-1.1**
PLOR	**Plostina**	**154.01**	**84**	⇓	P	**PKPbc**	**18 58 34.8**	**-1.6**
PLOR	**Plostina**	**154.01**	**84**	⇓	PKIKP	**PKPbc**	**18 58 34.8**	**-1.6**
SUW	**Suwalki**	**154.06**	**65**		*e*PKP	**PKPdf**	**18 58 28.3**	**+0.2**
SUW					LMZ	LR	20 23 47.6	
	comp=Z,4.7nm,21.8s							
SUW	**Suwalki**	**154.06**	**65**		IAMs_20	IAMs_20	20 21 20.7	
	comp=Z,5μm,21.0s							
VRI	**Vrincioaia**	**154.06**	**84**	⇑	P	**PKPbc**	**18 58 34.3**	**-2.2**
VRI	**Vrincioaia**	**154.06**	**84**	⇑	PKIKP	**PKPbc**	**18 58 34.3**	**-2.2**
BIZ	**Bicaz**	**154.07**	**81**	⇑	P	**PKPbc**	**18 58 35.2**	**-1.3**
UOSS	**Minazif**	**154.09**	**161**		IAMs_20	IAMs_20	20 08 04.3	
	comp=Z,5μm,20.0s							
DANN	**Dangsing**	**154.24**	**220**		*e*P	**PKPbc**	**18 58 35.6**	**-2.2**
	comp=Z,129nm,0.9s							
TESR	**Tescani**	**154.26**	**83**	⇑	P	**PKPbc**	**18 58 35.5**	**-1.3**
TIRR	**Tirgusor**	**154.57**	**88**	⇑	P	**PKPbc**	**18 58 35.4**	**-2.1**
TIRR	**Tirgusor**	**154.57**	**88**	⇑	P	**PKPbc**	**18 58 35.4**	**-2.1**
TIRR	**Tirgusor**	**154.57**	**88**	⇑	PKIKP	**PKPbc**	**18 58 35.4**	**-2.1**
PABE	**Paberze**	**154.68**	**61**		*e*P	**PKPdf**	**18 58 29.1**	**+0.2**
CFR	**Carcaliu**	**154.69**	**86**	⇑	P	**PKPbc**	**18 58 35.9**	**-1.8**
CFR	**Carcaliu**	**154.69**	**86**	⇑	PKIKP	**PKPbc**	**18 58 35.9**	**-1.8**
ANTO	**Ankara**	**155.09**	**101**	⇑	P	**PKPdf**	**18 58 36.3**	**+6.2**
ANTO	**Ankara**	**155.09**	**101**	⇑	PKIKP	**PKPdf**	**18 58 36.3**	**+6.2**
ANTO	**Ankara**	**155.09**	**101**			**PKPdf**	**18 58 30.4**	**+0.3**
ANTO	**Ankara**	**155.09**	**101**		IAMs_20	IAMs_20	20 20 23.5	
	comp=Z,3μm,20.0s							
LEOM	**Leova**	**155.27**	**84**	⇓	P	**PKPdf**	**18 58 36.4**	**+6.4**
LEOM	**Leova**	**155.27**	**84**	⇓	PKIKP	**PKPdf**	**18 58 36.4**	**+6.4**
FINES	**FINESS Array B**	**155.51**	**47**		PKP	**PKPdf**	**18 58 30.5**	**+0.7**
	comp=Z,2.9nm,1.0s,baz=302,slow=13,SNR=3.9							
FINES					PKPab	**PKPab**	**18 58 56.0**	**+0.2**
	comp=Z,3.0nm,0.8s,baz=272,slow=5.3,SNR=4.6							
BR131	**Keskin Array S**	**155.55**	**103**		PKIKP	**PKPdf**	**18 58 30.7**	**-0.1**
BR131	**Keskin Array S**	**155.55**	**103**			**PKPdf**	**18 58 30.7**	**-0.1**
BRTR	**Keskin Array B**	**155.55**	**103**		PKP	**PKPdf**	**18 58 31.2**	**+0.4**
	comp=Z,2.2nm,1.0s,baz=194,slow=4.6,SNR=9.9							
BRTR					PKPab	**PKPab**	**18 58 57.9**	**+1.0**
	comp=Z,13nm,1.0s,baz=194,slow=2.5,SNR=9.8							
ZAK	**Zakamensk**	**155.79**	**286**		*e*PKIKP	**PKPdf**	**18 58 30.7**	**0.0**
ZAK					pmax	pmax		
	comp=Z,31nm,1.3s							
MILM	**Milestii Mici**	**155.79**	**83**	⇑	P	**PKPdf**	**18 58 37.4**	**+6.8**
KIS	**Kishinev**	**155.82**	**83**		*e*PKP	**PKPdf**	**18 58 32.0**	**+1.3**
KIS	**Kishinev**	**155.82**	**83**		*e*PKS		19 02 10.0	
KIS	**Kishinev**	**155.82**	**83**		*e*PP	PP	19 02 36.0	+0.6
KIS					*e*SKS	SKSdf	19 05 12.0	-25
KIS	**Kishinev**	**155.82**	**83**		*e*PPP	PPP	19 06 20.0	
KIS	**Kishinev**	**155.82**	**83**		*e*PKIKP	**PKPdf**	**18 58 32.0**	**+1.3**
KIS					*e*		18 58 40.0	
KIS					*e*		18 58 57.0	
KIS					*e*PPP	PPP	19 06 20.0	
KIS					*e*PPS	PPS	19 15 52.0	
KIS					MLR	MLR		
	comp=Z,8μm,22.0s							
TLY	**Talaya**	**155.85**	**289**		PKP	**PKPdf**	**18 58 30.5**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=230,slow=19,SNR=0.9							
TLY	**Talaya**	**155.85**	**289**		*e*PKIKP	**PKPdf**	**18 58 35.0**	**+4.4**
TLY					pmax	pmax		
	comp=Z,53nm,1.8s							
TLY	**Talaya**	**155.85**	**289**			**PKPdf**	**18 58 29.8**	**-0.8**
SORM	**Soroca**	**155.90**	**80**	⇑	P	**PKPdf**	**18 58 37.0**	**+6.2**
SORM	**Soroca**	**155.90**	**80**	⇑	PKIKP	**PKPdf**	**18 58 37.0**	**+6.2**
ISAL	**Salakas**	**155.91**	**61**		*e*P	PKPab	18 58 44.5	-13
IIGN	**Ignalina**	**155.95**	**62**		*e*P	PKPdf	18 58 43.1	+13
IZAR	**Zarasai**	**155.98**	**61**		*e*P	PKPdf	18 58 42.4	+12
VSU	**Vasula**	**156.21**	**54**		*e*P	**PKPdf**	**18 58 33.2**	**+2.4**
VSU	**Vasula**	**156.21**	**54**	⇑	*e*PKIKP	**PKPdf**	**18 58 35.7**	**+4.9**
NACGM	**Naroch**	**156.24**	**63**		*e*PKP	PKPab	18 58 46.0	-13
NACGM					*e*PP	PP	19 03 29.0	+52
NACGM					*e*SKS	SKSdf	19 06 14.0	+37
NACGM					*e*PPP	PPP	19 07 30.0	
NACGM					*e*SKKS	**SKKSac**	**19 09 26.0**	**-0.3**
NACGM					*e*SS	SS	19 23 24.0	+56
NACGM					*e*SSS	SSS	19 31 13.0	
NACGM					*e*LQ	LQ	19 53 02.0	
NACGM					*e*LR	LR	20 02 06.0	
NACGM					LRM	MLR	20 07 02.0	
	comp=Z,17nm,22.0s							
APA	**Apatity**	**156.26**	**30**	⇑	*i*PKIKP	**PKPdf**	**18 58 33.0**	**+2.4**
APA					pmax	pmax		
	comp=Z,4.0nm,0.8s							
APA					pmax	pmax		
	comp=Z,6.0nm,1.3s							
APA					MLR	MLR		
	comp=Z,6μm,21.0s							
LVZ	**Lovozero**	**156.47**	**29**		IAMs_20	IAMs_20	20 05 57.3	
	comp=Z,7μm,21.0s							
MICGM	**Minsk**	**156.85**	**64**		LRM	MLR	20 08 06.0	
	comp=Z,14nm,20.0s							
MICGM	**Minsk**	**156.85**	**64**		*e*PKP1	**PKPdf**	**18 58 38.0**	**+6.2**
MICGM	**Minsk**	**156.85**	**64**		*e*PKP2	PKPab	18 59 17.0	+15
MICGM	**Minsk**	**156.85**	**64**		*e*PP	PP	19 03 02.0	+21
MICGM	**Minsk**	**156.85**	**64**		*e*PPP	PPP	19 06 50.0	
MICGM	**Minsk**	**156.85**	**64**		*e*SS	SS	19 23 28.0	+54
MICGM	**Minsk**	**156.85**	**64**		*e*LR	LR	20 01 40.0	
MNK	**Minsk**	**156.85**	**64**		*e*PKIKP	**PKPdf**	**18 58 38.0**	**+6.2**
MNK					*e*SS	SS	19 23 28.0	+54
BZK	**Bozkurt**	**157.00**	**98**	⇓	P	**PKPdf**	**18 58 38.7**	**+6.3**
AKASG	**Malin Array Be**	**157.13**	**74**		PKP	**PKPdf**	**18 58 31.9**	**-0.4**
	comp=Z,2.8nm,0.9s,baz=279,slow=1.7,SNR=12							
AKBB	**Malin Array Si**	**157.13**	**74**		PKIKP	**PKPdf**	**18 58 31.7**	**-0.6**
AKBB					MLR	MLR		
	comp=Z,7μm,22.0s							
AKBB	**Malin Array Si**	**157.13**	**74**			**PKPdf**	**18 58 31.7**	**-0.6**
AKBB					IAMs_20	IAMs_20	20 20 19.3	
	comp=Z,7μm,22.0s							
MOY	**Mondy**	**157.47**	**288**		*e*PKIKP	**PKPdf**	**18 58 32.0**	**-0.9**
MOY					pmax	pmax		
	comp=Z,51nm,2.1s							
DIKM	**Dikmen**	**157.63**	**100**	⇓	P	**PKPdf**	**18 58 39.5**	**+6.3**
NRIK	**Noril'sk**	**157.76**	**339**		PKP	**PKPdf**	**18 58 30.9**	**-1.6**
	comp=Z,1.0nm,0.3s,baz=0.0,slow=0.0,SNR=1.1							
NRIK					PKPab	**pPKPab**	**18 59 06.0**	**-0.6**
	comp=Z,3.1nm,0.9s,baz=36,slow=2.6,SNR=2.1							
SIM	**Simferopol'**	**158.46**	**91**	*ce*	PKIKP	PKPdf	18 58 43.5	+9.4
SIM				*e*	*PP	sPKPdf	18 58 48.0	+12
SIM							18 59 16.6	
SIM				*e*			19 03 02.0	
SIM					pmax	pmax		
	comp=Z,60nm,1.3s							
SIM					pmax	pmax		
	comp=Z,120nm,8.7s							
KTUT	**Trabzon**	**160.10**	**107**	⇓	P	**PKPdf**	**18 58 42.1**	**+5.9**
SOC	**Sochi**	**161.45**	**100**		*e*PKIKP	**PKPdf**	**18 58 43.1**	**+5.6**
SOC				*e*			19 03 10.5	
SOC					pmax	pmax		
	comp=Z,24nm,1.0s							
BCA	**Borcka**	**161.51**	**108**	⇑	P	**PKPdf**	**18 58 42.8**	**+5.0**
BATM	**Batumi**	**161.64**	**108**	⇑	P	**PKPdf**	**18 58 42.7**	**+4.9**
BATM	**Batumi**	**161.64**	**108**	⇑	PKIKP	**PKPdf**	**18 58 42.7**	**+4.9**
OBN	**Obninsk**	**161.87**	**62**	⇓	P	**PKPdf**	**18 58 43.5**	**+5.9**
OBN	**Obninsk**	**161.87**	**62**	⇓	*e*PKIKP	**PKPdf**	**18 58 39.7**	**+2.1**
OBN					*e*		18 58 46.9	
OBN					*e*PPS	PPS	19 16 41.9	
OBN					*e*SSS	SSS	19 29 57.4	
OBN					pmax	pmax		
	comp=Z,40nm,3.0s							
KLMR	**Klimovskoe**	**161.89**	**43**		*e*PKIKP	**PKPdf**	**18 58 38.9**	**+1.5**
KLMR					*e*SS	SS	19 23 29.3	+2.7
KLMR					pmax	pmax		
	comp=Z,64nm,1.5s							
KLMR					MLR	MLR		
	comp=Z,6μm,19.0s							
KLMR	**Klimovskoe**	**161.89**	**43**		*e*PKPdf	**PKPdf**	**18 58 38.9**	**+1.5**
KLMR					AMP		18 58 54.3	
	comp=Z,64nm,1.5s							
KLMR					*e*SS	**SS**	**19 23 29.4**	**+2.8**
KLMR					*e*SS	**SS**	**19 23 29.4**	**+2.8**
KLMR					LQ	LQ	20 01 37.3	
KLMR					LQ	LQ	20 01 37.3	
KLMR					LR	LR	20 07 52.1	
KLMR					AMP		20 15 02.4	
	comp=Z,6μm,18.7s							
MOS	**Moscow**	**162.40**	**60**		*e*PKIKP	**PKPdf**	**18 58 36.8**	**-1.3**
MOS					*e*		19 03 21.8	
MOS					pmax	pmax		
	comp=Z,61nm,1.5s							
NIL	**Nilore**	**162.69**	**203**		PKIKP	**PKPdf**	**18 58 38.4**	**-0.8**
NIL	**Nilore**	**162.69**	**203**		PKPdf	**PKPdf**	**18 58 38.4**	**-0.8**
LPSR	**Galich'ya Gora**	**163.35**	**71**		*e*PKIKP	**PKPdf**	**18 58 39.6**	**+0.5**
LPSR					pmax	pmax		
	comp=Z,50nm,1.4s							
VSR	**Storozhevoye**	**163.41**	**76**		*e*PKIKP	**PKPdf**	**18 58 38.8**	**-0.4**
VSR					pmax	pmax		
	comp=Z,70nm,1.6s							
VORD	**Divnogorie**	**163.47**	**76**		*e*PKIKP	**PKPdf**	**18 58 39.5**	**+0.2**
VORD					pmax	pmax		
	comp=Z,20nm,1.1s							
WMQ	**Urumqi**	**163.50**	**257**		PKP	**PKPdf**	**18 58 39.8**	**+0.1**
WMQ					PKPab	**PKPab**	**18 59 30.4**	**-0.8**
WMQ					PP	**PP**	**19 03 21.7**	**+4.6**
WMQ					SS	SS	19 23 44.7	+0.1
WMQ					AMB	AMB		
	comp=Z,430nm,6.1s							
WMQ					LR	LR		
	comp=Z,4μm,18.1s							
WMQ					LR	LR		
	comp=Z,3μm,19.3s							
WMQ					LR	LR		
	comp=Z,7μm,29.7s							
KIV	**Kislovodsk**	**163.51**	**103**	⇓	P	**PKPdf**	**18 58 44.6**	**+4.8**
KIV	**Kislovodsk**	**163.51**	**103**		*e*PKIKP	**PKPdf**	**18 58 39.5**	**-0.2**
KIV					pmax	pmax		
	comp=Z,44nm,1.0s							
KIV					MLR	MLR		
	comp=Z,28μm,26.0s							
KBZ	**Khabaz**	**163.53**	**104**		PKP	**PKPdf**	**18 58 39.0**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=314,slow=4.1,SNR=6.2							
KBZ					PP	**PP**	**19 03 20.9**	**+3.8**
	comp=Z,0.7nm,0.4s,baz=194,slow=12,SNR=2.0							
KBZ	**Khabaz**	**163.53**	**104**		PKIKP	**PKPdf**	**18 58 39.0**	**-0.6**
ZEI	**Tsey**	**163.67**	**108**		*e*PKIKP	**PKPdf**	**18 58 45.1**	**+5.0**
ZEI					pmax	pmax		
	comp=Z,45nm,1.5s							
GOF	**Gofitskoye**	**164.25**	**100**	⇑	*e*PKIKP	**PKPdf**	**18 58 46.7**	**+6.5**
GOF					pmax	pmax		
	comp=Z,77nm,1.6s							
VRH	**Novokhopyorsk**	**165.01**	**76**		*e*PKIKP	**PKPdf**	**18 58 40.0**	**-0.7**
VRH					pmax	pmax		
	comp=Z,20nm,1.6s							
GROC	**Groznyy**	**165.06**	**109**		*e*PKIKP	**PKPdf**	**18 58 48.2**	**+7.2**
GROC					pmax	pmax		
	comp=Z,37nm,1.1s							
AKT	**Akhty**	**165.16**	**118**		*e*PKIKP	**PKPdf**	**18 58 46.6**	**+5.3**
AKT					*e*		19 03 34.1	
AKT					*e*		19 05 47.2	
AKT					pmax	pmax		
	comp=Z,54nm,1.6s							
DGZ	**Jazzator, Alta**	**165.67**	**278**	⇓	*e*PKIKP	**PKPdf**	**18 58 40.3**	**-1.2**
MAK	**Makhachkala**	**165.95**	**113**		*e*PKIKP	**PKPdf**	**18 58 39.6**	**-2.1**
MAK					pmax	pmax		
	comp=Z,113nm,1.0s							
MAK					pmax	pmax		
	comp=Z,832nm,3.7s							
GEYT	**Alibeck**	**166.97**	**154**		PKP	**PKPdf**	**18 58 43.5**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=247,slow=3.0,SNR=1.5							
GEYT					PP	**PP**	**19 03 37.3**	**+3.1**
	comp=Z,0.6nm,0.6s,baz=180,slow=5.8,SNR=1.5							
KSH	**Kashi**	**167.11**	**220**		PKP	**PKPdf**	**18 58 45.3**	**+2.4**
KSH					PKS	**PKSdf**	**19 02 18.4**	**+2.8**
KSH					PP	**PP**	**19 03 38.2**	**+2.9**
KSH					SKKS		19 10 25.1	
KSH					SS	**SS**	**19 24 20.9**	**+0.5**
KSH					AMB	AMB		
	comp=Z,490nm,7.2s							
KSH					LR	LR		
	comp=Z,150nm,4.4s							
KSH					LR	LR		
	comp=Z,380nm,7.2s							
KSH					LR	LR		
	comp=Z,840nm,11.0s							
ZAA0	**Zalesovo Array**	**167.27**	**296**		PKPdf	**PKPdf**	**18 58 38.9**	**-3.5**
ZALV	**Zalesovo Beam**	**167.27**	**296**		PKP	**PKPdf**	**18 58 42.1**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=349,slow=2.9,SNR=3.4							
ZALV					PKPab	**PKPab**	**18 59 44.0**	**-3.5**
	comp=Z,4.8nm,1.0s,baz=66,slow=3.7,SNR=6.0							
KIRV	**Kirov**	**167.35**	**41**		PKP	**PKPdf**	**18 58 41.9**	**-0.4**
	comp=Z,2.6nm,0.4s,baz=98,slow=7.1,SNR=1.6							
MK31	**Makanchi Array**	**168.23**	**261**		PKIKP	**PKPdf**	**18 58 41.3**	**-2.1**
MK31	**Makanchi Array**	**168.23**	**261**			**PKPdf**	**18 58 41.3**	**-2.1**
MKAR	**Makanchi Array**	**168.23**	**261**		PKP	**PKPdf**	**18 58 42.1**	**-1.3**
	comp=Z,1.6nm,1.1s,baz=119,slow=1.5,SNR=7.1							
MKAR					PKPab	**PKPab**	**18 59 51.6**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=90,slow=9.0,SNR=4.3							
MAKZ	**Makanchi**	**168.44**	**261**		PKIKP	**PKPdf**	**18 58 40.9**	**-2.6**
MAKZ	**Makanchi**	**168.44**	**261**			**PKPdf**	**18 58 40.9**	**-2.6**
GAR	**Garm**	**168.49**	**200**		PKPdf	**PKPdf**	**18 58 43.1**	**-0.8**
KDJ	**Kajisay**	**168.62**	**231**		PKIKP	**PKPdf**	**18 58 41.4**	**-2.6**
KDJ	**Kajisay**	**168.62**	**231**			**PKPdf**	**18 58 41.4**	**-2.6**
AAK	**Ala-Archa**	**170.30**	**225**		PKP	**PKPdf**	**18 58 42.8**	**-2.1**
	comp=Z,0.4nm,0.4s,baz=58,slow=0.6,SNR=6.1							
AAK					PKPab	**PKPab**	**19 00 01.4**	**+0.1**
	comp=Z,3.3nm,1.0s,baz=136,slow=0.8,SNR=4.1							
AAK					PP	**PP**	**19 03 48.9**	**-2.7**
	comp=Z,1.4nm,0.9s,baz=197,slow=5.5,SNR=2.2							
AAK	**Ala-Archa**	**170.30**	**225**		PKIKP	**PKPdf**	**18 58 44.6**	**-0.3**
AAK	**Ala-Archa**	**170.30**	**225**			**PKPdf**	**18 58 44.6**	**-0.3**
KURK	**Kurchatov**	**171.40**	**280**	*ce*	PKIKP	**PKPdf**	**18 58 42.9**	**-2.1**
KURK	**Kurchatov**	**171.40**	**280**			**PKPdf**	**18 58 42.5**	**-2.5**
KURK						**PKPab**	**19 00 06.2**	**+0.4**
KURBB	**Kurchatov Arra**	**171.45**	**280**		PKP	**PKPdf**	**18 58 40.9**	**-4.2**
	comp=Z,0.3nm,0.8s,baz=314,slow=0.6,SNR=12							
KURBB					PKPab	**PKPab**	**19 00 06.2**	**+0.2**
	comp=Z,4.1nm,1.1s,baz=77,slow=3.7,SNR=6.9							
KK31	**Karatay Array**	**172.27**	**210**		PKIKP	**PKPdf**	**18 58 44.0**	**-1.7**
KK31	**Karatay Array**	**172.27**	**210**			**PKPdf**	**18 58 44.0**	**-1.7**
KKAR	**Karatay Array**	**172.27**	**210**		PKIKP	**PKPdf**	**18 58 44.4**	**-1.3**
KKAR	**Karatay Array**	**172.27**	**210**			**PKPdf**	**18 58 44.4**	**-1.3**
ARU	**Arti**	**172.35**	**29**		PKP	**PKPdf**	**18 58 42.8**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=287,slow=19,SNR=1.2							
ARU					PKPab	**pPKPab**	**19 00 10.6**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=242,slow=1.0,SNR=1.8							
ARU					PP	**PP**	**19 04 03.1**	**+1.8**
	comp=Z,1.0nm,0.7s,baz=307,slow=5.1,SNR=1.5							
ARU	**Arti**	**172.35**	**29**	*i*	PKIKP	**PKPdf**	**18 58 43.9**	**-1.4**
ARU					MLR	MLR		
	comp=Z,11μm,24.0s							
AKTO	**Aktyubinsk**	**175.33**	**81**		PKP	**PKPdf**	**18 58 44.8**	**-1.8**
	comp=Z,0.4nm,0.2s,baz=354,slow=2.7,SNR=5.2							
AKTO					PKPab	**sPKPab**	**19 00 25.1**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=259,slow=5.2,SNR=1.6							
AKTO					PP	PP	19 04 25.8	+9.1
	comp=Z,1.0nm,0.6s,baz=339,slow=2.9,SNR=4.0							
BVAR	**Borovoye Array**	**175.53**	**316**		PKP	**PKPdf**	**18 58 44.8**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=270,slow=0.3,SNR=1.9							
BVAR					PKPab	**PKPab**	**19 00 22.6**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=98,slow=4.4,SNR=2.7							
BVAR					PP	**PP**	**19 04 18.8**	**+1.7**
	comp=Z,3.4nm,1.1s,baz=32,slow=12,SNR=0.9							
BRVK	**Borovoye**	**175.55**	**317**	*i*	PKIKP	**PKPdf**	**18 58 47.8**	**+1.3**

*BJI **12** 18:50:58.0±0.0, 43.°70N×128.°00W, h10km, mB5.8/23, mb5.1/32, Ms5.6/13, Ms7 5.3/11*

*IDC **12** 18:50:58.3±0.6, 43.°68N×128.°14W, h0km, mb4.5/36, mb1 4.6/42, mb1mx4.5/71, mbtmp4.5/42, ML4.2/6, MS4.9/7, Ms1 4.9/7, ms1mx4.3/49, Error ellipse: s-maj=16.8km s-min=8.5km az=32.0*

*MOS **12** 18:50:59.9±0.9, 43.°80N×127.°97W, h12km, mb5.2/36, Error ellipse: s-maj=7.4km s-min=5.0km az=134.2*

*ANF **12** 18:50:59.3±1.8, 43.°48N×127.°88W, h0km, ML4.6/6, Error ellipse: s-maj=18.4km s-min=15.5km az=11.0*

*NEIC **12** 18:51:00.7±1.2, 43.°71N±0.°07×128.°1W±0.°1, h10km±1km, mb5.1/290, Error ellipse: s-maj=14.2km s-min=9.8km az=235.0*

*GCMT **12** 18:51:00.8±0.3, 43.°58N±0.°02×128.°44W±0.°03, h24km±2km, MW5.5/84, Moment Tensor Solution. s14,c21; s84,c114; Duration: 1ş4 Moment tensor: Scale 10^17^Nm; Mrr-0.27±.11; Mθθ-1.61±.08; Mϕϕ1.88±.12; Mrθ-0.20±.22; Mθϕ-1.39±.09; Mϕr0.18±.23; Best double couple: M⌀2.24600×10^17 NP1:⌀s26.00000°, δ84.00000°, λ1.00000°. NP2:⌀s296.00000°, δ89.00000°, λ174.00000°. Principal axes: T 2.3880, Plg5.0000°, Azm251.0000°; N -0.2840, Plg84.0000°, Azm108.0000°; P -2.1050, Plg4.0000°, Azm341.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 18:51:00.9±0.5, 43.°70N±0.°05×128.°14W±0.°05, h14km±2km, h14km:pP-P, n778, σ1ş32/781, mb5.1/191**, 10C-10D, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
J01E	**Myrtle Point**	**3.12**	**99**	P	**Pn**	**18 51 46.1**	**-3.5**
	baz=282,SNR=146						
J01E				S	**Sn**	**18 52 22.8**	**-3.8**
	baz=282						
I02D	**Swisshome**	**3.13**	**81**	P	**Pn**	**18 51 47.3**	**-2.5**
	baz=264,SNR=205						
K02D	**Willamette Mer**	**3.43**	**106**	P	**Pn**	**18 51 50.9**	**-3.0**
	baz=289,SNR=812						
K02D				S	**Sn**	**18 52 31.0**	**-3.4**
	baz=289						
I03D	**Drain, OR**	**3.48**	**88**	P	**Pn**	**18 51 52.1**	**-2.4**
	baz=272,SNR=1000						
I03D				S	**Sn**	**18 52 33.2**	**-2.3**
	baz=272						
COR	**Corvallis**	**3.59**	**74**	P	**Pn**	**18 51 54.4**	**-1.8**
COR	**Corvallis**	**3.59**	**74**	Pn	**Pn**	**18 51 54.4**	**-1.8**
COR	**Corvallis**	**3.59**	**74**		**Pn**	**18 51 54.4**	**-1.8**
G03D	**McMinnville, O**	**3.81**	**65**	P	**Pn**	**18 51 57.7**	**-1.4**
	baz=248,SNR=255						
G03D				S	**Sn**	**18 52 44.1**	**+0.5**
	baz=248						
KRMB	**Red Mountain**	**3.81**	**123**	Pn	**Pn**	**18 51 57.0**	**-2.3**
F03A	**Seaside**	**3.95**	**54**		**Pn**	**18 51 59.9**	**-1.1**
H04D	**Lebanon**	**3.98**	**76**	P	**Pn**	**18 52 00.4**	**-1.1**
	baz=260,SNR=29						
H04D				S	**Sn**	**18 52 46.4**	**-1.5**
	baz=260						
I04A	**Tendick Farm,**	**4.16**	**87**	P	**Pn**	**18 52 02.6**	**-1.3**
	baz=271,SNR=98						
I04A				S	**Sn**	**18 52 52.5**	**+0.1**
	baz=271						
JCC	**Jacoby Creek,**	**4.20**	**132**	Pn	**Pn**	**18 52 04.4**	**-0.1**
E03A	**Lebam**	**4.31**	**47**	Pn	**Pn**	**18 52 04.8**	**-1.1**
KHMM	**Horse Mountain**	**4.33**	**129**	Pn	**Pn**	**18 52 06.7**	**+0.3**
F04D	**Rainier, OR**	**4.36**	**55**	P	**Pn**	**18 52 05.7**	**-0.9**
	baz=238,SNR=72						
H04A	**Detroit Lake**	**4.39**	**75**	Pn	**Pn**	**18 52 06

KVN Kaiserville 8.86 118 P Pn 18 53 11.3 +2.6
KVN Kaiserville 8.86 118 Pn 18 53 11.3 +2.6
NEW Newport 8.92 55 Pn Pn 18 53 08.8 -0.6
5.3nm,0.3s,baz=232,slow=11,SNR=37
NEW LR LR 18 56 32.6
comp=Z,8µm,20.0s,baz=246,slow=37
NEW Newport 8.92 55 P Pn 18 53 08.3 -1.1
NEW Newport 8.92 55 P Pn 18 53 08.6 -0.7
baz=243,SNR=16
NEW Newport 8.92 55 Pn 18 53 08.3 -1.1
MFID Camas Ranch 8.95 88 Pn 18 53 09.6 -0.2
NVAR Mina Array Bea 9.11 122 Pn Pn 18 53 12.5 +0.5
3.4nm,0.3s,baz=292,slow=12,SNR=1.9
NVAR LR LR 18 56 39.5
comp=Z,5µm,19.1s,baz=307,slow=37
MDPB Devils Postpil 9.17 128 Pn 18 53 15.2 +2.2
NV11 Mina Array Sit 9.20 122 Pn Pn 18 53 14.1 +0.8
OMMB Old Mammoth Mi 9.23 128 Pn 18 53 15.9 +2.1
PMPB Monarch Peak 9.36 141 Pn Pn 18 53 14.8 -0.6
MOBC Moresby Island 9.78 346 Pn 18 53 21.7 +0.6
DIB Dawson Inlet, 9.93 345 Pn 18 53 25.6 +2.6
H02S1 DAWSON INLET T 9.93 345 T T 19 03 21.6
ELK Elko 10.02 103 P Pn 18 53 26.6 +2.0
ELK Elko 10.02 103 Pn 18 53 26.6 +2.0
MSO Missoula 10.49 68 Pn 18 53 30.0 -0.8
JTMT Jette 10.50 63 Pn 18 53 31.0 -0.1
ISA Isabella, Lake 10.95 134 P Pn 18 53 39.3 +2.1
ISA Isabella, Lake 10.95 134 Pn 18 53 39.3 +2.1
MCMT McKenzie Canyo 11.03 79 Pn 18 53 38.8 +0.4
WALA Waterton Lakes 11.19 56 Pn 18 53 40.0 -0.5
DLMT Dillon 11.22 76 Pn 18 53 41.2 +0.3
FURC Furnace Creek, 11.26 126 P Pn 18 53 39.1 -2.2
baz=314
TPNV Topopah Spring 11.30 123 P Pn 18 53 43.7 +1.6
TPNV Topopah Spring 11.30 123 P Pn 18 53 40.0 -2.2
baz=311
TPNV Topopah Spring 11.30 123 Pn 18 53 43.7 +1.6
SBC Santa Barbara 11.33 142 P Pn 18 53 41.5 -0.7
baz=328
LRM Limekiln Ridge 11.36 74 Pn 18 53 42.8 -0.1
LRMC Laurel Mtn Rad 11.51 132 P Pn 18 53 42.0 -2.9
baz=319
BGU Big Grassy Mou 11.53 99 Pn 18 53 46.3 +1.1
OSI Osito Audit: C 11.65 138 P Pn 18 53 45.9 -0.8
baz=324
SCZ2 Santa Cruz Isl 11.74 143 P Pn 18 53 44.7 -3.2
baz=329
EDW2 Edwards Air Fo 11.80 135 P Pn 18 53 47.3 -1.5
baz=322
DUG Dugway, Tooele 11.94 102 P Pn 18 53 51.5 +0.7
DUG Dugway, Tooele 11.94 102 P Pn 18 53 50.6 -0.2
baz=292
DUG Dugway, Tooele 11.94 102 Pn 18 53 51.5 +0.7
SHOC Shoshone, Teco 11.99 127 P Pn 18 53 50.0 -1.4
baz=314
QLMT Earthquake Lak 12.04 79 Pn 18 53 53.5 +1.3
GSC Goldstone, Bar 12.12 130 P Pn 18 53 55.0 +1.8
GSC Goldstone, Bar 12.12 130 P Pn 18 53 53.0 -0.2
baz=318
GSC Goldstone, Bar 12.12 130 Pn 18 53 55.0 +1.8
DECC Green Verdugo 12.13 138 P Pn 18 53 51.6 -1.7
baz=324
YHB Horse Butte 12.21 79 Pn 18 53 54.9 +0.4
YHL Hebgen Lake 12.21 79 Pn 18 53 55.9 +1.2
MWC Mount Wilson 12.29 137 P Pn 18 53 56.6 +1.0
MWC Mount Wilson 12.29 137 Pn 18 53 56.6 +1.0
RRX Edison Barstow 12.33 132 P Pn 18 53 54.8 -1.2
baz=319
YMR Madison River 12.37 80 Pn 18 53 58.2 +1.4
HWUT Hardware Ranch 12.39 94 Pn Pn 18 53 57.4 +0.5
FXWY Fox Creek 12.40 84 Pn 18 53 58.7 +1.6
SNCC San Nicolas Is 12.42 144 P Pn 18 53 55.0 -2.3
baz=330
IMW Indian Meadow 12.44 83 Pn 18 53 59.2 +1.5
YHH Holmes Hill 12.45 79 Pn 18 53 59.2 +1.3
AHID Auburn Hatcher 12.47 88 Pn 18 53 60.0 +1.9
TPAW Teton Pass 12.47 85 Pn 18 54 00.3 +2.2
BFSC Mount Baldy Ra 12.47 136 P Pn 18 53 57.7 -0.4
baz=323
YPP Pitchstone Pla 12.51 81 Pn 18 54 00.1 +1.5
TUQ Turquoise Moun 12.52 127 P Pn 18 53 59.4 +0.7
baz=315
REDW Red Top Meadow 12.56 86 Pn 18 54 01.3 +2.0
YNR Norris Junctio 12.58 79 Pn 18 53 59.2 -0.3
FMP Fort Macarthur 12.59 139 P Pn 18 53 58.5 -0.9
baz=326
FLWY Flagg Ranch 12.59 82 Pn 18 54 00.4 +0.6
SNOW Snow King Moun 12.62 85 Pn 18 54 02.5 +2.4
TCUT Toone Canyon 12.64 96 Pn 18 54 00.2 -0.1
H17A Grant Village 12.66 81 P Pn 18 54 01.0 +0.3
baz=273
H17A Grant Village 12.66 81 Pn 18 54 02.1 +1.3
HEC Hector,Ludlow 12.73 130 P Pn 18 54 01.5 +0.1
baz=318
JLU Jordanelle 12.77 98 Pn Pn 18 54 01.8 -0.4
LKWY Lake 12.78 80 P Pn 18 54 02.0 -0.4
LKWY Lake 12.78 80 Pn Pn 18 54 01.9 -0.4
CIS Catalina Islan 12.79 140 P Pn 18 54 00.8 -1.4
baz=327
BBRC Big Bear Solar 12.84 133 P Pn 18 54 00.4 -2.7
baz=321
YMP Mirror Lake Pl 12.95 79 Pn 18 54 07.1 +2.4
SZCU Shurtz Canyon 12.95 113 Pn Pn 18 54 07.0 +2.3
WRAK Wrangell Islan 13.01 350 Pn 18 54 08.8 +3.7
YNE Yellowstone No 13.05 78 Pn 18 54 06.8 +0.8
SCI2 San Clemente I 13.08 142 P Pn 18 54 04.6 -1.6
baz=328
GMRC Granite Mounta 13.14 128 P Pn 18 54 06.3 -0.8
baz=317
MURC Murrieta 13.21 136 P Pn 18 54 07.1 -1.0
baz=323
GCMT Greycliff 13.30 75 Pn 18 54 11.4 +2.1
MTPU Mount Pierson 13.33 110 Pn Pn 18 54 12.4 +2.4
TMUT Trail Mountain 13.43 103 Pn Pn 18 54 13.3 +2.0
KNB Kanab 13.45 115 P Pn 18 54 13.8 +2.4
KNB Kanab 13.45 115 Pn 18 54 13.8 +2.4
EGMT Eagleton 13.52 65 P Pn 18 54 13.0 +0.7
baz=258
EGMT Eagleton 13.52 65 Pn 18 54 12.6 +0.4
BELC Belle Mtn. Jos 13.53 132 P Pn 18 54 10.5 -2.0
baz=320
RLMT Red Lodge 13.57 77 P Pn 18 54 13.7 +0.7
baz=271
RLMT Red Lodge 13.57 77 Pn 18 54 12.8 -0.3
PFO Pinyon Flats O 13.58 134 Pn Pn 18 54 14.0 +0.8
0.2nm,0.3s,baz=322,slow=7.7,SNR=8.9
PFO LR LR 18 59 11.6
comp=Z,4µm,18.7s,baz=302,slow=36
PFO Pinyon Flats O 13.58 134 P Pn 18 54 14.5 +1.3
PFO Pinyon Flats O 13.58 134 P Pn 18 54 11.7 -1.5
baz=322
PFO Pinyon Flats O 13.58 134 Pn 18 54 14.4 +1.3
XPFO Pion Flat 13.59 134 Pn 18 54 14.0 +0.7
BW06 Boulder Array 13.59 88 P Pn 18 54 13.7 +0.4
baz=280
BW06 Boulder Array 13.59 88 Pn 18 54 15.2 +1.9
PDAR Pinedale Array 13.59 88 Pn Pn 18 54 15.5 +2.2
0.2nm,0.3s,baz=274,slow=11,SNR=15
NEE2 Needles Airpor 13.75 126 P Pn 18 54 14.9 -0.5
baz=315
109C Camp Elliot, M 13.83 138 P Pn 18 54 14.2 -2.2
baz=325
IRM Iron Mountain 13.88 129 P Pn 18 54 15.8 -1.4
baz=318
W13A Hualapai Mount 13.96 123 Pn 18 54 21.4 +2.9
SRU San Rafael Swe 13.99 103 P Pn 18 54 20.5 +1.6
SRU San Rafael Swe 13.99 103 Pn Pn 18 54 20.5 +1.6
BC3 Big Chuckawall 14.09 131 P Pn 18 54 19.3 -0.8
baz=319
SIT Sitka 14.12 344 P Pn 18 54 21.6 +1.3
SIT Sitka 14.12 344 Pn 18 54 21.6 +1.3
RDMU Red Mountain 14.13 96 Pn 18 54 22.3 +1.5
U15A North Rim 14.13 116 Pn 18 54 23.0 +2.1
MONP2 Monument Peak 14.17 136 P Pn 18 54 19.9 -1.4
baz=323
BAR Barrett 14.21 137 Pn 18 54 23.1 +1.3
PDMCI Parker Dam,Lak 14.36 126 P Pn 18 54 22.5 -1.2
baz=315
SWSC Sam W. Stewart 14.45 134 P Pn 18 54 24.6 -0.3
baz=322
IKP In-Ko-Pah, Jac 14.52 135 P Pn 18 54 25.8 -0.2
baz=323
Y12C Blythe 14.53 129 P Pn 18 54 24.9 -1.2
baz=317
Y12C Blythe 14.53 129 Pn 18 54 29.2 +3.1
DLBC Dease Lake 14.80 356 Pn P 18 54 33.3 -2.2
0.3nm,0.3s,baz=185,slow=10.0,SNR=36
DLBC Dease Lake 14.80 356 P 18 54 32.7 -2.9
GLA Glamis 14.88 131 P Pn 18 54 32.0 +1.1
GLA Glamis 14.88 131 P Pn 18 54 29.9 -1.0
baz=320
GLA Glamis 14.88 131 Pn Pn 18 54 32.0 +1.1
JIS Juneau Island 15.10 347 P Pn 18 54 36.1 +2.5
JIS IAmb IAmb 18 54 48.3
comp=Z,111nm,1.2s
O20A White River Ci 15.23 97 P Pn 18 54 34.5 -1.2
baz=290
O20A White River Ci 15.23 97 Pn 18 54 35.7 -0.1
O20A IAmb IAmb 18 55 20.4
comp=Z,69nm,1.1s
WUAZ Wupatki 15.28 117 P Pn 18 54 34.2 -2.0
baz=308
WUAZ Wupatki 15.28 117 Pn 18 54 36.0 -0.3
Y14A Wickenburg 15.29 125 Pn 18 54 35.9 -0.3
PV23 Carpenter Ridg 15.34 103 P Pn 18 54 38.6 +1.4
PV10 Paradox Valley 15.36 104 Pn Pn 18 54 36.2 -1.2
PV14 Lion Creek, Pa 15.37 104 Pn Pn 18 54 37.9 +0.3
PV19 Morning Glory 15.43 104 Pn Pn 18 54 37.4 -0.8
PV04 Paradox Valley 15.44 104 P Pn 18 54 37.9 -0.5
PV04 IAmb IAmb 18 55 23.2
comp=Z,134nm,1.8s
PV05 Paradox Valley 15.45 105 P P 18 54 40.9 -2.2
PV17 East Wray Mesa 15.46 104 Pn 18 54 38.5 -0.1
BESE Bessie Mountai 15.47 347 Pn Pn 18 54 37.7 -0.8
BESE IAmb IAmb 18 54 44.6
comp=Z,107nm,1.2s
PV22 Blue Mesa, Par 15.47 103 Pn 18 54 38.5 -0.3
PV16 Nyswonger Mesa 15.47 104 P Pn 18 54 39.8 +0.9
PV18 Skein Mesa, Pa 15.51 104 Pn 18 54 39.2 -0.1
PV11 Davis Mesa, Pa 15.51 104 P Pn 18 54 39.7 +0.4
RWWY Rawlins 15.52 90 Pn 18 54 37.6 -1.9
RWWY IAmb IAmb 18 54 54.7
comp=Z,170nm,1.9s
PV03 Paradox Valley 15.55 104 P Pn 18 54 40.7 +0.9
PV12 Saucer Basin, 15.55 104 P Pn 18 54 39.4 -0.4
PV07 Paradox Valley 15.61 103 P Pn 18 54 42.2 +1.6
PV13 Radium Mtn., P 15.61 104 P Pn 18 54 39.4 -1.3
PV02 Paradox Valley 15.65 104 Pn 18 54 41.1 0.0
113A Mohawk Valley, 15.69 129 Pn 18 54 42.7 +1.3
LAO LASA Array 15.73 71 P Pn 18 54 41.8 -0.2
baz=267
LAO LASA Array 15.73 71 Pn 18 54 41.8 -0.2
PV15 Paradox Valley 15.77 103 Pn 18 54 42.6 -0.1
PV01 Paradox Valley 15.80 104 P P 18 54 45.6 -1.3
K22A Casper 15.81 86 P Pn 18 54 43.7 +0.6
X16A Lo Mia Camp, P 15.92 120 P P 18 54 47.2 -1.1
MVCO Mesa Verde 16.28 107 P Pn 18 54 47.3 -2.0
baz=300
MVCO Mesa Verde 16.28 107 Pn 18 54 49.9 +0.6
SKAG Skagway 16.38 347 P P 18 54 52.6 -0.4
SKAG IAmb IAmb 18 55 01.8
comp=Z,264nm,1.9s
SMCO Snowmass 16.50 99 Pn Pn 18 54 51.8 -0.4
W18A Petrified Fore 16.58 115 P Pn 18 54 52.6 -0.5
baz=307
W18A Petrified Fore 16.58 115 P P 18 54 54.8 -0.8
DHAK Deception Hill 16.61 342 Pn 18 54 54.0 +0.8
DHAK IAmb IAmb 18 55 04.8
comp=Z,118nm,1.1s
X18A Snowflake 16.80 117 P Pn 18 54 56.0 +0.1
214A Organ Pipe Nat 16.83 129 P Pn 18 54 54.8 -1.3
baz=319
214A Organ Pipe Nat 16.83 129 P P 18 54 58.1 -0.1
PHWY Pilot Hill 16.89 90 P Pn 18 54 55.8 -1.3
S22A 4UR Ranch, Cre 17.20 103 P Pn 18 55 01.0 0.0
baz=297
ISCO Idaho Springs 17.25 95 P Pn 18 55 01.2 -0.3
ISCO pmax pmax
comp=Z,64nm,1.3s
ISCO Idaho Springs 17.25 95 Pn Pn 18 55 01.2 -0.3
DGMT Dagmar 17.26 66 P Pn 18 55 01.0 -0.3
baz=263
DGMT Dagmar 17.26 66 P Pn 18 55 01.8 +0.5
RSSD Black Hills 17.37 80 P Pn 18 55 01.6 -1.4
RSSD pmax pmax
comp=Z,156nm,1.6s
RSSD Black Hills 17.37 80 P Pn 18 55 01.3 -1.6
baz=277
RSSD Black Hills 17.37 80 Pn Pn 18 55 01.6 -1.4
WHY Whitehorse 17.46 349 P Pn 18 55 03.2 -0.6
TUC Tucson 17.75 124 P Pn 18 55 06.3 -1.4
TUC pmax pmax
comp=Z,37nm,1.3s
TUC Tucson 17.75 124 P Pn 18 55 07.3 -0.4
baz=315
TUC Tucson 17.75 124 Pn Pn 18 55 06.3 -1.4
Q24A Divide 17.89 97 P Pn 18 55 09.7 +0.2
baz=293
PCA Pinnacle 17.99 340 P Pn 18 55 09.3 -1.0
PCA IAmb IAmb 18 55 28.3
comp=Z,146nm,1.1s
HYT Haines Junctio 18.05 345 P P 18 55 12.4 +0.8
SDCO Great Sand Dun 18.14 101 P Pn 18 55 12.5 -0.1
baz=296
SDCO Great Sand Dun 18.14 101 P Pn 18 55 12.6 0.0
YAH Yahtse 18.60 339 P Pn 18 55 19.4 +1.5
YAH IAmb IAmb 18 55 22.8
comp=Z,375nm,1.6s
ANMO Albuquerque 18.88 110 P Pn 18 55 22.2 +0.7
comp=Z,0.1nm,0.3s,baz=303,slow=13,SNR=9.0
ANMO Albuquerque 18.88 110 eP Pn 18 55 22.9 +1.4
ANMO pmax pmax
comp=Z,32nm,1.3s
ANMO Albuquerque 18.88 110 P Pn 18 55 21.8 +0.3
baz=304
ANMO Albuquerque 18.88 110 P Pn 18 55 21.3 -0.2
LENM Lemitar 18.98 113 P P 18 55 22.2 +0.2
CTGM Chitina Glacie 19.01 340 P Pn 18 55 24.3 +1.5
CTGM IAmb IAmb 18 55 27.4
comp=Z,225nm,1.3s
Y22D IRIS PASSCAL I 19.07 113 P Pn 18 55 23.9 +0.1
baz=307
BARN Barnard Glacie 19.17 340 P Pn 18 55 25.7 +0.9
BARN IAmb IAmb 18 55 31.7
comp=Z,206nm,1.4s
T25A Trinidad 19.19 102 P Pn 18 55 25.5 +0.2
baz=298
MID Middleton Isla 19.28 331 P Pn 18 55 26.8 +0.9
MID pmax pmax
comp=Z,233nm,1.4s
MID Middleton Isla 19.28 331 P Pn 18 55 26.8 +0.9
MID IAmb IAmb 18 55 30.0
comp=Z,233nm,1.4s
319A Douglas 19.32 123 P P 18 55 26.1 +0.4
319A IAmb IAmb 18 55 40.8
comp=Z,126nm,1.4s
BALM Baldy 19.32 339 P Pn 18 55 27.3 +0.7
BALM IAmb IAmb 18 55 30.6
comp=Z,113nm,1.3s
RAGM Ragged Mountai 19.46 335 P Pn 18 55 29.0 +0.9
RAGM IAmb IAmb 18 55 37.6
comp=Z,144nm,1.4s
121A Cookes Peak, D 19.46 118 P Pn 18 55 28.2 -0.4
baz=311
121A Cookes Peak, D 19.46 118 Pn 18 55 28.5 -0.1
121A IAmb IAmb 18 55 47.2
comp=Z,108nm,1.4s
OGNE Ogallala 19.48 89 P Pn 18 55 28.3 -0.3
baz=287
OGNE Ogallala 19.48 89 P P 18 55 27.9 +0.5
E28A Huff 19.54 72 P Pn 18 55 29.4 +0.1
KSCO Kaye Shedlock' 19.69 95 P Pn 18 55 31.5 +0.3
VRDI Verde Repeater 19.78 338 P Pn 18 55 32.0 -0.2
VRDI IAmb IAmb 18 55 48.8
comp=Z,319nm,2.0s
MCARA McCarthy VSAT 19.80 339 P Pn 18 55 32.1 -0.1
MCARA IAmb IAmb 18 55 40.1
comp=Z,123nm,1.1s
EYAK Cordova Ski Ar 19.92 334 P Pn 18 55 33.1 -0.4
HIN Hinchinbrook I 20.05 333 P Pn 18 55 35.0 -0.1
GLB Gilahina Butte 20.06 338 P Pn 18 55 34.6 -0.7
HSIG 20.10 131 P P 18 55 34.9 +0.7
HSIG IAmb IAmb 18 55 44.3
comp=Z,131nm,1.9s
FFC Flin Flon 20.21 48 P P 18 55 35.2 0.0
FFC pmax pmax
comp=Z,835nm,1.9s
FFC Flin Flon 20.21 48 P P 18 55 35.2 0.0
MDND Maddock 20.28 68 P P 18 55 36.5 +0.5
FID Port Fidalgo 20.31 334 P Pn 18 55 37.2 -1.0
FID IAmb IAmb 18 55 41.6
comp=Z,175nm,1.3s
YKA Yellowknife Ar 20.42 18 P P 18 55 38.1 +0.8
comp=Z,13nm,0.7s,baz=204,slow=11,SNR=75
YKA PcP PcP 18 59 48.2 -0.9
comp=Z,0.8nm,0.8s,baz=185,slow=2.9,SNR=3.8
GLI Glacier Island 20.61 333 P P 18 55 40.4 +1.0
KDAK Kodiak Island 20.76 321 P P 18 55 42.2 +1.2
comp=Z,34nm,1.0s,baz=139,slow=5.2,SNR=15
KDAK Kodiak Island 20.76 321 P P 18 55 41.8 +0.8
KDAK pmax pmax
comp=Z,320nm,1.8s
KDAK Kodiak Island 20.76 321 P P 18 55 41.8 +0.8
OHAK Old Harbor 20.80 319 P P 18 55 42.4 +0.9
OHAK IAmb IAmb 18 55 53.6
comp=Z,158nm,1.2s
SEW Seward 20.88 329 P P 18 55 43.3 +1.1
SEW IAmb IAmb 18 55 47.8
comp=Z,128nm,1.1s
SUSD Miller 20.94 78 P P 18 55 43.2 0.0
baz=278
SUSD Miller 20.94 78 P P 18 55 43.6 +0.5
CNPM China Poot 21.19 326 P P 18 55 45.6 -0.1
BRLK Bradley Lake 21.20 327 P P 18 55 46.7 +0.9
BRLK IAmb IAmb 18 55 48.5
comp=Z,141nm,1.0s
MENT Mentasta 21.28 340 P P 18 55 47.7 +1.0
DAWY Dawson 21.39 346 P P 18 55 48.6 +0.8
DAWY IAmb IAmb 18 55 53.3
comp=Z,96nm,1.4s
SCM Sheep Creek Mo 21.40 335 P P 18 55 49.2 +1.2
SCM pmax pmax
comp=Z,210nm,1.2s
SCM Sheep Creek Mo 21.40 335 P P 18 55 49.2 +1.2
K31A O'Neill 21.42 83 P P 18 55 48.4 0.0
HOM Homer 21.44 326 P P 18 55 50.0 +1.7
KNK Knik Glacier 21.45 333 P P 18 55 50.0 +1.6
MNTX Cornudas Mount 21.56 116 P P 18 55 49.4 -0.5
baz=310
MNTX Cornudas Mount 21.56 116 P P 18 55 49.9 +0.1
RC01 Rabbit Creek A 21.65 331 P P 18 55 51.5 +0.9
SML Sawmill 21.70 334 P P 18 55 52.5 +1.4
SML IAmb IAmb 18 55 58.3
comp=Z,152nm,1.1s
PAX Paxson 21.76 338 P P 18 55 52.6 +0.7
PAX pmax pmax
comp=Z,122nm,1.4s
PAX Paxson 21.76 338 P P 18 55 52.5 +0.7
PAX IAmb IAmb 18 56 02.6
comp=Z,122nm,1.4s
PMR Palmer 21.80 333 P P 18 55 53.5 +1.3
PMR pmax pmax
comp=Z,253nm,1.7s
PMR Palmer 21.80 333 P P 18 55 53.5 +1.3
CBKS Cedar Bluff 21.85 93 P P 18 55 52.8 -0.2
baz=292
GHO Glory Hole Cre 21.86 333 P P 18 55 54.3 +1.4
GDL2 Guadalupe Moun 21.91 114 P P 18 55 53.9 +0.1
MSTX Muleshoe 21.95 108 P P 18 55 54.2 0.0
DOT Dot Lake 21.97 341 P P 18 55 55.4 +1.3
DOT IAmb IAmb 18 56 04.0
comp=Z,74nm,1.2s
D32A Dogwood Acres, 22.04 70 P P 18 55 55.3 +0.4
D32A IAmb IAmb 18 56 12.4
comp=Z,142nm,1.1s
BGNE Belgrade 22.16 86 P P 18 55 56.5 +0.2
baz=286
AMTX Amarillo 22.22 104 P P 18 55 55.7 -1.4
baz=302
AMTX Amarillo 22.22 104 P P 18 55 57.5 +0.4
AMTX IAmb IAmb 18 56 07.4
comp=Z,112nm,1.4s
EGAK Eagle 22.35 345 P P 18 55 59.1 +1.0
EGAK IAmb IAmb 18 56 24.7
comp=Z,170nm,2.0s
DHY Denali Highway 22.37 337 P P 18 55 59.4 +1.0
DHY IAmb IAmb 18 56 02.5
comp=Z,118nm,1.1s
RSO Redoubt South 22.37 327 P P 18 55 59.4 +0.9
F33A 5 Mile Ranch, 22.64 73 P P 18 56 01.3 -0.1
F33A IAmb IAmb 18 56 08.4
comp=Z,139nm,1.4s
ECSD EROS Data Cent 22.72 79 P P 18 56 02.0 -0.3
baz=281
ECSD EROS Data Cent 22.72 79 P P 18 56 02.0 -0.3
ECSD IAmb IAmb 18 56 11.2
comp=Z,137nm,1.8s
R32A Long Quarter, 22.75 93 P P 18 56 02.0 -0.6
R32A IAmb IAmb 18 56 09.6
comp=Z,55nm,1.1s
AGMN Agassiz Nation 22.79 67 P P 18 56 02.0 -0.9
baz=270
AGMN Agassiz Nation 22.79 67 P P 18 56 01.9 -1.1
ULM Lac du Bonnet 22.84 62 P P 18 56 03.3 -0.2
comp=Z,52nm,0.9s,baz=273,slow=9.2,SNR=26
ULM LR LR 19 05 07.6
comp=Z,4µm,18.8s,baz=242,slow=37
ULM Lac du Bonnet 22.84 62 ceP P 18 56 02.9 -0.6
ULM Lac du Bonnet 22.84 62 P P 18 56 03.1 -0.4
ULM IAmb IAmb 18 56 20.9
comp=Z,95nm,1.1s
CHGN Chignik 22.96 314 P P 18 56 04.2 -0.4
RND Reindeer 23.05 336 P P 18 56 06.0 +0.4
RND pmax pmax
comp=Z,84nm,1.3s
RND Reindeer 23.05 336 P P 18 56 06.0 +0.4
RND IAmb IAmb 18 56 32.9
comp=Z,84nm,1.3s
CNBA Chernabura Isl 23.14 310 P P 18 56 07.0 +0.5
EPYK Eagle Plains 23.20 351 P P 18 56 07.6 +0.6
baz=164
EPYK Eagle Plains 23.20 351 P P 18 56 07.5 +0.5
EPYK IAmb IAmb 18 56 16.9
comp=Z,74nm,1.1s
L34A Svendsen Farm, 23.29 83 P P 18 56 08.4 +0.3
L34A IAmb IAmb 18 56 22.5
comp=Z,88nm,1.1s
HDA Harding Lake 23.32 339 P P 18 56 08.5 +0.3
HDA IAmb IAmb 18 56 28.4
comp=Z,62nm,1.4s
MCK McKinley 23.32 336 P P 18 56 09.0 +0.7
MCK pmax pmax
comp=Z,92nm,1.3s
MCK McKinley 23.32 336 P P 18 56 09.0 +0.7
MCK IAmb IAmb 18 56 46.1
comp=Z,92nm,1.3s
U32A Winter Ranch, 23.40 98 P P 18 56 09.7 +0.4
U32A IAmb IAmb 18 56 20.8
comp=Z,82nm,0.9s
TRF Thorofare Moun 23.52 335 P P 18 56 10.7 +0.3
IL31 23.59 340 P P 18 56 11.0 +0.1
ILAR Eielson Array 23.59 340 P P 18 56 11.5 +0.6
comp=Z,7.4nm,1.0s,baz=154,slow=7.9,SNR=37
ILAR PcP PcP 18 59 54.3 -1.1
comp=Z,0.5nm,0.6s,baz=154,slow=2.0,SNR=4.1
ILAR LR LR 19 03 50.5
comp=Z,2µm,21.4s,baz=146,slow=33
WRH Wood River Hil 23.66 338 P P 18 56 11.9 +0.3
WRH IAmb IAmb 18 56 22.2
comp=Z,110nm,1.3s
CCB Clear Creek Bu 23.73 339 P P 18 56 12.6 +0.4
CCB IAmb IAmb 18 56 22.5
comp=Z,71nm,1.4s
PPLA Purkeypile 23.74 332 P P 18 56 12.9 +0.4
KTH Kantishna Hill 23.79 335 P P 18 56 13.8 +0.9
KTH IAmb IAmb 18 56 42.7
comp=Z,72nm,1.3s
SVW2 Sparrevohn 23.87 326 P P 18 56 14.0 +0.4
SVW2 IAmb IAmb 18 56 18.5
comp=Z,76nm,1.1s
PRP Porcupine Dome 23.89 342 P P 18 56 15.0 +1.0
COLA College 23.92 339 deP P 18 56 14.4 +0.4
COLA pmax pmax
comp=Z,24nm,1.1s
COLA College 23.92 339 P P 18 56 14.7 +0.7
COLA IAmb IAmb 18 56 29.0
comp=Z,73nm,1.5s
TCOL CIGO, UAF Yank 23.92 339 P P 18 56 16.2 +2.1
baz=143
POKR Poker Plat Res 24.01 340 P P 18 56 15.9 +0.9
baz=144
KSU1 Kansas State U 24.01 90 P P 18 56 13.6 -1.6
baz=291

KSU1 Kansas State U 24.01 90 P P 18 56 15.9 +0.7
KSU1 lAmb lAmb 18 56 27.6
comp=Z,106nm,1.2s
MDM Murphy Dome 24.09 339 P P 18 56 16.6 +1.0
N35A Tabor 24.13 85 P P 18 56 16.5 +0.3
BPAW Bear Paw Mtn. 24.21 335 P P 18 56 16.9 +0.1
B35A Bob, Littlefor 24.21 67 P P 18 56 16.4 -0.5
B35A lAmb lAmb 18 56 21.1
comp=Z,164nm,1.9s
TX31 Lajitas Ar. Si 24.23 118 P P 18 56 18.0 +0.7
TX32 Lajitas Array 24.23 118 P P 18 56 18.2 +0.9
TXAR Lajitas Array 24.23 118 P P 18 56 18.7 +1.4
comp=Z,5.7nm,0.7s,baz=301,slow=7.4,SNR=19
WMOK Wichita Mounta 24.34 102 P P 18 56 18.4 +0.1
WMOK pmax pmax
comp=Z,56nm,1.1s
WMOK Wichita Mounta 24.34 102 P P 18 56 17.8 -0.5
baz=301
WMOK Wichita Mounta 24.34 102 P P 18 56 18.4 +0.1
WMOK lAmb lAmb 18 56 29.7
comp=Z,56nm,1.1s
F36A Milaca 24.56 73 P P 18 56 20.6 +0.5
F36A lAmb lAmb 18 56 32.1
comp=Z,31nm,0.8s
HPIG 24.70 125 P P 18 56 22.9 +1.1
HPIG lAmb lAmb 18 56 33.5
comp=Z,68nm,1.3s
FYU Fort Yukon 24.73 344 P P 18 56 22.0 +0.6
FYU lAmb lAmb 18 56 34.6
comp=Z,57nm,1.2s
MLY Manley 24.82 337 P P 18 56 22.8 +0.4
MLY lAmb lAmb 18 56 27.2
comp=Z,42nm,1.0s
INK Inuvik 24.82 355 P P 18 56 22.1 -0.2
comp=Z,30nm,1.2s,baz=163,slow=11,SNR=26
INK LR LR 19 05 39.8
comp=Z,3µm,18.1s,baz=167,slow=36
INK Inuvik 24.82 355 P P 18 56 22.4 +0.1
INK pmax pmax
comp=Z,41nm,1.3s
INK Inuvik 24.82 355 P P 18 56 22.4 +0.1
INK lAmb lAmb 18 56 25.1
comp=Z,40nm,1.2s
ABTX Abilene, Hawle 24.87 107 P P 18 56 22.6 -0.5
baz=305
I37A Lemond, Waseca 24.95 77 P P 18 56 23.1 -0.5
FNO Franklin 25.07 99 P P 18 56 25.2 +0.3
X34A Smith Ranch, M 25.09 101 P P 18 56 25.4 +0.4
SPMN Marine on St. 25.15 74 P P 18 56 26.3 +0.8
baz=279
SPMN Marine on St. 25.15 74 P P 18 56 25.9 +0.4
SPMN lAmb lAmb 18 56 45.9
comp=Z,62nm,1.0s
W35A Tecumseh 25.50 99 P P 18 56 28.7 -0.1
SCIA State Center 25.58 82 P P 18 56 29.8 +0.4
baz=286
SCIA State Center 25.58 82 P P 18 56 29.8 +0.4
SCIA lAmb lAmb 18 56 48.1
comp=Z,61nm,1.2s
K38A Parkersburg 25.70 80 P P 18 56 30.9 +0.3
EYMN Ely 25.73 68 P P 18 56 30.6 -0.1
baz=274
EYMN Ely 25.73 68 P P 18 56 31.2 +0.5
EYMN lAmb lAmb 18 56 43.0
comp=Z,37nm,1.0s
FCC Fort Churchill 25.75 42 P P 18 56 31.4 +0.7
FCC pmax pmax
comp=Z,142nm,1.6s
FCC Fort Churchill 25.75 42 P P 18 56 31.4 +0.7
C36M Paulatuk 25.79 3 P P 18 56 31.6 +0.6
baz=187
C36M Paulatuk 25.79 3 P P 18 56 31.3 +0.3
TUL1 Leonard 25.92 96 P P 18 56 33.5 +1.0
baz=298
TUL1 Leonard 25.92 96 P P 18 56 32.4 -0.2
JCT Junction City 26.04 111 P P 18 56 33.9 +0.2
JCT pmax pmax
comp=Z,34nm,1.0s
JCT Junction City 26.04 111 P P 18 56 35.1 +1.4
baz=309
JCT Junction City 26.04 111 P P 18 56 33.9 +0.2
JCT lAmb lAmb 18 56 51.4
comp=Z,34nm,1.0s
P38A Dawn 26.06 87 P P 18 56 33.8 +0.1
P38A lAmb lAmb 18 56 44.4
comp=Z,50nm,0.9s
COLD Coldfoot 26.38 341 P P 18 56 38.0 +1.6
U38A Gravette 26.70 94 P P 18 56 39.5 -0.1
WHTX Lake Whitney, 26.75 106 P P 18 56 38.1 -2.0
baz=305
UNV Unalaska Valle 26.93 306 P P 18 56 40.6 -0.8
I40A Norwalk 26.94 76 P P 18 56 42.2 +0.5
I40A lAmb lAmb 18 57 11.9
comp=Z,54nm,1.2s
G40A Rib Lake 26.95 73 P P 18 56 42.1 +0.3
L40A Anamosa 26.96 81 P P 18 56 42.1 +0.2
HHAR Hobbs 27.09 94 P P 18 56 42.4 -0.7
HHAR lAmb lAmb 18 56 54.2
comp=Z,44nm,1.2s
P40A Paris 27.17 86 P P 18 56 42.5 -1.2
P40A lAmb lAmb 18 57 24.5
comp=Z,81nm,1.9s
435B Jarrell 27.37 108 P P 18 56 45.2 -0.5
baz=307
TOLK Toolik Lake Re 27.38 343 P P 18 56 47.4 +1.9
baz=145
TOLK Toolik Lake Re 27.38 343 P P 18 56 47.1 +1.6
TOLK lAmb lAmb 18 56 58.9
comp=Z,39nm,1.1s
JFWS Jewell Farm 27.43 78 P P 18 56 45.0 -1.1
baz=285
R40A Maddies Statio 27.47 89 P P 18 56 46.1 -0.3
R40A lAmb lAmb 18 57 04.9
comp=Z,45nm,1.4s
COWI Conover 27.55 71 P P 18 56 47.5 +0.4
COWI lAmb lAmb 18 56 49.3
comp=Z,22nm,0.7s
N41A Harden Midland 27.63 83 P P 18 56 47.8 -0.1
N41A lAmb lAmb 18 56 52.3
comp=Z,89nm,1.4s
833A Chaparral WMA, 27.68 114 P P 18 56 47.4 -1.1
baz=312
W39A Magazine 27.70 96 P P 18 56 47.6 -1.0
baz=298
W39A Magazine 27.70 96 P P 18 56 48.8 +0.3
U40A Yellville 27.84 93 P P 18 56 48.2 -1.7
baz=296
U40A Yellville 27.84 93 P P 18 56 49.6 -0.3
U40A lAmb lAmb 18 57 01.9
comp=Z,46nm,1.2s
237A Washetta, Mont 27.90 104 P P 18 56 51.1 +0.7
L42A Oliver, Polo 28.09 80 P P 18 56 52.3 +0.3
MIAR Mount Ida 28.16 97 P P 18 56 52.2 -0.5
MIAR pmax pmax
comp=Z,41nm,1.2s
MIAR Mount Ida 28.16 97 P P 18 56 52.3 -0.4
baz=300
MIAR Mount Ida 28.16 97 P P 18 56 52.2 -0.5
MIAR lAmb lAmb 18 57 05.8
comp=Z,41nm,1.1s
F42A Maple Grove Fa 28.30 72 P P 18 56 53.1 -0.7
F42A lAmb lAmb 18 57 06.3
comp=Z,94nm,1.7s
CCM Cathedral Cave 28.30 89 P P 18 56 53.5 -0.4
CCM pmax pmax
comp=Z,132nm,1.9s
CCM Cathedral Cave 28.30 89 P P 18 56 53.5 -0.4
A36M Sachs Harbour 28.40 2 P P 18 56 55.1 +0.7
baz=184
X40A Basin Creek Fa 28.73 97 P P 18 56 56.3 -1.4
baz=299
WHAR Wooly Hollow 28.74 95 P P 18 56 58.2 +0.4
WHAR lAmb lAmb 18 57 08.1
comp=Z,40nm,1.0s
HDIL Hopedale 28.81 83 P P 18 56 58.1 -0.3
baz=289
E43A Lone Tree Farm 28.97 70 P P 18 57 00.4 +0.6
E43A lAmb lAmb 18 57 04.6
comp=Z,80nm,1.8s
Z41A Richland Creek 29.37 99 P P 18 56 57.8 -5.6
baz=301
E44A Grand Marais A 29.66 69 P P 18 57 06.7 +0.9
baz=280
S44A Carbondale 29.89 88 P P 18 57 07.6 -0.4
S44A lAmb lAmb 18 57 20.1
comp=Z,24nm,0.8s
SIUC Southern Illin 29.91 88 P P 18 57 07.8 -0.4
SIUC lAmb lAmb 18 57 29.4
comp=Z,25nm,0.9s
G45A Suttons Bay 30.15 72 P P 18 57 08.4 -1.9
baz=283
OLIL Olney 30.32 85 P P 18 57 11.7 -0.1
SFIN Lafayette 30.44 82 P P 18 57 10.6 -2.3
baz=290
SFIN Lafayette 30.44 82 P P 18 57 13.3 +0.5
SFIN lAmb lAmb 18 57 28.7
comp=Z,61nm,1.4s
P46A Rosedale 30.63 83 P P 18 57 14.2 -0.3
E46A Sault Ste Mari 30.80 69 P P 18 57 16.4 +0.4
D46A Sault St. Mari 30.89 68 P P 18 57 09.2 -7.5
baz=280
USIN University of 30.93 87 P P 18 57 17.2 0.0
W45A Hickory Valley 31.05 93 P P 18 57 18.9 +0.7
J47A Sunmer 31.18 76 P P 18 57 19.9 +0.5
OXF Oxford 31.19 94 P P 18 57 20.3 +0.8
OXF pmax pmax
comp=Z,89nm,1.1s
OXF Oxford 31.19 94 P P 18 57 18.1 -1.4
baz=299
OXF Oxford 31.19 94 P P 18 57 20.3 +0.8
I47A Gladwin 31.19 74 P P 18 57 20.2 +0.7
BLO Bloomington 31.29 84 P P 18 57 20.6 +0.2
BLO pmax pmax
comp=Z,29nm,0.8s
BLO Bloomington 31.29 84 P P 18 57 20.6 +0.2
BLO lAmb lAmb 18 57 37.9
comp=Z,29nm,0.8s
WVT Waverly 31.59 90 P P 18 57 23.1 +0.1
WVT pmax pmax
comp=Z,20nm,1.1s
WVT Waverly 31.59 90 P P 18 57 23.1 +0.1
WVT lAmb lAmb 18 57 30.5
comp=Z,20nm,1.1s
T47A Sharon Grove 31.74 88 P P 18 57 24.5 +0.2
T47A lAmb lAmb 18 57 34.6
comp=Z,19nm,0.8s
M48A Edgerton 31.78 79 P P 18 57 24.6 0.0
O48A Farmland 31.88 81 P P 18 57 25.2 -0.4
baz=291
J48A Bridge Port 31.89 75 P P 18 57 26.1 +0.5
PLAL Pickwick Lake 31.93 92 P P 18 57 25.9 -0.1
PLAL lAmb lAmb 18 57 31.2
comp=Z,27nm,1.1s
P48A Milroy 31.97 83 P P 18 57 26.2 -0.2
P48A lAmb lAmb 18 57 30.4
comp=Z,53nm,1.4s
F48A Evansville 32.06 70 P P 18 57 27.0 -0.1
baz=283
F49A Sandfield 32.47 70 P P 18 57 28.9 -1.8
baz=283
V48A Smith Brothers 32.49 90 P P 18 57 30.4 -0.5
CLTN Cedars of Leba 32.69 89 P P 18 57 32.9 +0.2
CLTN lAmb lAmb 18 57 40.6
comp=Z,28nm,1.2s
U49A Red Boiling Sp 32.90 88 P P 18 57 34.9 +0.3
U49A lAmb lAmb 18 57 39.2
comp=Z,63nm,1.8s
X48A Hartselle 32.93 92 P P 18 57 34.3 -0.5
O50A Cable 33.02 81 P P 18 57 34.3 -1.2
baz=291
SWET Sewanee 33.38 90 P P 18 57 38.7 -0.1
SWET lAmb lAmb 18 57 46.9
comp=Z,24nm,1.1s
ACSO Alum Creek Sta 33.44 80 P P 18 57 39.6 +0.4
N51A Ashland 33.63 79 P P 18 57 41.3 +0.4
N51A lAmb lAmb 18 57 45.1
comp=Z,35nm,1.1s
LRAL Lakeview Retre 33.66 94 P P 18 57 41.0 -0.2
LRAL lAmb lAmb 18 57 57.5
comp=Z,27nm,1.3s
P51A Williamsport 33.66 81 P P 18 57 41.1 0.0
Y49A Blount Mountai 33.68 93 P P 18 57 40.9 -0.5
W50A Signal Mountai 33.83 90 P P 18 57 42.8 +0.1
W50A lAmb lAmb 18 57 51.0
comp=Z,35nm,0.9s
F51A Arnstein 33.88 69 P P 18 57 39.5 -3.5
baz=284
FPAL Fort Paine 33.93 91 P P 18 57 43.4 -0.1
FPAL lAmb lAmb 18 57 44.5
comp=Z,27nm,0.8s
E51A G1948 Merrick 34.02 68 P P 18 57 41.6 -2.6
baz=283
CPCT Cooper Cave 34.29 89 P P 18 57 46.8 +0.1
O52A Adamsville 34.30 80 P P 18 57 46.6 -0.1
O52A lAmb lAmb 18 57 50.7
comp=Z,64nm,1.6s
Z50A Ashland 34.33 93 P P 18 57 46.9 -0.1
RES Resolute Bay 34.42 15 P P 18 57 49.1 +1.9
comp=Z,8.8nm,0.8s,baz=210,slow=12,SNR=5.6
X51A Calhoun 34.46 90 P P 18 57 48.5 +0.3
O53A New Philadelph 34.70 79 P P 18 57 49.7 -0.4
baz=292
SADO Sadowa 34.70 71 LR LR 19 12 18.3
comp=Z,3µm,18.0s,baz=345,slow=37
SADO Sadowa 34.70 71 P P 18 57 50.0 -0.1
SADO lAmb lAmb 18 58 05.3
comp=Z,26nm,0.9s
TKL Tuckaleechee C 34.74 88 P P 18 57 50.3 -0.2
comp=Z,5.0nm,0.7s,baz=255,slow=4.6,SNR=8.8
TKL Tuckaleechee C 34.74 88 P P 18 57 49.9 -0.6
TKL pmax pmax
comp=Z,50nm,1.8s
TKL Tuckaleechee C 34.74 88 P P 18 57 49.9 -0.6
TKL lAmb lAmb 18 57 54.3
comp=Z,50nm,1.8s
N53A Lisbon 34.77 78 P P 18 57 51.0 +0.3
V52A Sevierville 34.78 88 P P 18 57 50.3 -0.6
P53A Whipple 34.86 81 P P 18 57 46.9 -4.6
baz=292
W52A Murphy 34.89 89 P P 18 57 51.7 -0.1
W52A lAmb lAmb 18 57 59.5
comp=Z,27nm,1.0s
ERPA Erie 34.91 76 P P 18 57 52.4 +0.4
ERPA lAmb lAmb 18 57 53.9
comp=Z,20nm,0.7s
ALLY Alegheny Colle 34.96 76 P P 18 57 52.5 +0.1
ALLY lAmb lAmb 18 57 54.6
comp=Z,31nm,0.7s
VLDQ Val d'Or 35.02 65 P P 18 57 50.5 -2.3
S53A Williamson 35.05 84 P P 18 57 51.0 -2.2
baz=295
T53A Wise 35.05 85 P P 18 57 49.3 -4.0
baz=296
D53A Lac Vacive, Po 35.09 66 P P 18 57 53.5 +0.1
D53A lAmb lAmb 18 57 57.7
comp=Z,44nm,1.4s
N54A Moraine State 35.31 77 P P 18 57 55.6 +0.2
N54A lAmb lAmb 18 57 59.9
comp=Z,63nm,1.3s
O54A Avella 35.32 79 P P 18 57 55.5 0.0
M54A Oil Creek Stat 35.35 76 P P 18 57 56.0 +0.2
V53A Saluda 35.43 87 P P 18 57 56.6 0.0
V53A lAmb lAmb 18 58 04.3
comp=Z,31nm,1.2s
Q54A Coxs Mills 35.45 81 P P 18 57 56.8 +0.2
P54A Burton 35.46 80 P P 18 57 54.6 -2.1
baz=293
152A Waverly Hall 35.50 93 P P 18 57 57.0 -0.1
152A lAmb lAmb 18 58 04.7
comp=Z,26nm,1.2s
S54A Dingess, Beckl 35.59 83 P P 18 57 54.0 -3.9
baz=295
S54A Dingess, Beckl 35.59 83 P P 18 57 57.9 0.0
E54A Lac Daplat, Po 35.59 67 P P 18 57 53.4 -4.3
baz=285
BG3 Lake Jocassee 35.66 88 P P 18 57 58.5 0.0
T54A Tazewell 35.71 84 P P 18 57 57.5 -1.4
baz=296
U54A Nelsons Funny 35.77 85 P P 18 57 56.3 -3.1
baz=296
U54A Nelsons Funny 35.77 85 P P 18 57 59.5 +0.1
WVNY West Valley, N 35.79 74 P P 18 57 59.5 -0.1
WVNY lAmb lAmb 18 58 07.0
comp=Z,25nm,1.1s
DELO Deloro Mine 35.81 71 P P 18 57 59.7 +0.1
MCWV Mont Chateau 35.89 79 P P 18 57 53.3 -7.1
baz=293
MCWV Mont Chateau 35.89 79 P P 18 58 00.6 +0.2
MCWV lAmb lAmb 18 59 19.1
comp=Z,33nm,1.1s
P55A Reedsville 35.97 80 P P 18 57 57.3 -3.8
baz=293
Q55A Buckhannon 35.98 81 P P 18 58 00.8 -0.5
baz=293
M55A Ridgway 36.00 76 P P 18 58 01.6 +0.2
GOGA Godfrey 36.03 91 P P 18 58 01.7 0.0
GOGA pmax pmax
comp=Z,26nm,0.7s
GOGA Godfrey 36.03 91 P P 18 58 01.7 0.0
GOGA lAmb lAmb 18 58 02.6
comp=Z,26nm,0.7s
PLVO Plevna 36.04 70 P P 18 58 01.5 0.0
J55A Hilton 36.06 73 P P 18 58 01.7 0.0
J55A lAmb lAmb 18 58 02.8
comp=Z,30nm,0.7s
O55A Ligonier 36.07 78 P P 18 57 59.0 -3.0
baz=292
MMNY Mt. Morris Dam 36.17 74 P P 18 58 02.8 +0.1
S55A Lewisburg 36.18 83 P P 18 58 01.6 -1.4
baz=295
G55A Calabogie 36.22 69 P P 18 58 00.4 -2.7
baz=286
R55A Marlinton 36.24 82 P P 18 58 00.4 -3.1
baz=294
R55A Marlinton 36.24 82 P P 18 58 03.7 +0.2
R55A lAmb lAmb 18 58 11.6
comp=Z,44nm,1.1s
T55A Pulaski 36.26 84 P P 18 58 00.5 -3.1
baz=296
X54A Belton 36.27 89 P P 18 58 00.6 -3.1
baz=299
U55A TA2, Sparta 36.33 85 P P 18 58 02.9 -1.5
baz=296
M56A Emporium 36.40 76 P P 18 58 04.9 +0.1
PECO Prince Edward 36.42 71 P P 18 58 04.9 +0.1
PECO lAmb lAmb 18 58 09.2
comp=Z,75nm,1.6s
BLA Blacksburg 36.48 84 P P 18 58 05.8 +0.3
BLA pmax pmax
comp=Z,28nm,0.9s
BLA Blacksburg 36.48 84 P P 18 58 02.4 -3.1
baz=296
BLA Blacksburg 36.48 84 P P 18 58 05.8 +0.3
BLA lAmb lAmb 18 58 14.1
comp=Z,28nm,0.9s
V55A Taylorsville 36.50 86 P P 18 58 03.5 -2.2
baz=297
V55A Taylorsville 36.50 86 P P 18 58 05.9 +0.2
HODGE Hodges 36.51 89 P P 18 58 05.4 -0.3
HODGE lAmb lAmb 18 58 09.9
comp=Z,105nm,1.9s
PAULI Pauline 36.55 88 P P 18 58 06.0 -0.1
PAULI lAmb lAmb 18 58 13.5
comp=Z,34nm,1.0s
O56A Blue Knob Stat 36.57 78 P P 18 58 04.1 -2.1
baz=292
O56A Blue Knob Stat 36.57 78 P P 18 58 06.0 -0.3
O56A lAmb lAmb 18 58 10.7
comp=Z,88nm,1.8s
P56A Dayton Farm, R 36.67 79 P P 18 58 07.5 +0.4
baz=293
J56A Wolcott 36.72 72 P P 18 58 07.2 -0.2
J56A lAmb lAmb 18 58 08.4
comp=Z,39nm,0.7s
KMSC Kings Mountain 36.74 87 P P 18 58 07.2 -0.5
T56A Rocky Mt 36.84 84 P P 18 58 07.2 -1.4
baz=296
U56A King 36.88 85 P P 18 58 09.2 +0.3
U56A lAmb lAmb 18 58 13.4
comp=Z,67nm,1.6s
S56A Natural Bridge 36.89 82 P P 18 58 06.0 -3.0
baz=295
SSPA Standing Stone 36.92 77 P P 18 58 09.0 -0.1
SSPA lAmb lAmb 18 58 13.4
comp=Z,75nm,1.7s
Y55A Saluda 36.94 89 P P 18 58 03.8 -5.6
baz=299
ORIO Orleans, Innes 36.98 68 P P 18 58 09.5 0.0
M57A Sunshine Farm, 37.19 76 P P 18 58 11.9 +0.4
O57A Amberson 37.25 77 P P 18 58 10.8 -1.3
baz=292
P57A Homestead Farm 37.27 79 P P 18 58 14.2 +2.1
baz=293
P57A Homestead Farm 37.27 79 P P 18 58 12.7 +0.6
P57A lAmb lAmb 18 58 17.1
comp=Z,72nm,1.4s
J57A Williamstown 37.27 72 P P 18 58 12.1 0.0
J57A lAmb lAmb 18 58 16.1
comp=Z,26nm,0.9s
W56A Indian Trail 37.29 87 P P 18 58 09.3 -3.1
baz=298
S57A Dark Hollow, R 37.30 82 P P 18 58 12.5 +0.1
S57A lAmb lAmb 18 58 17.4
comp=Z,80nm,1.6s
T57A Hurt 37.41 83 P P 18 58 13.2 -0.2
T57A lAmb lAmb 18 58 30.5
comp=Z,50nm,2.0s
Z56A Williston 37.60 90 P P 18 58 14.5 -0.4
U57A Blanch 37.60 84 P P 18 58 13.6 -1.4
baz=297
BIRD Birdtown, Kers 37.61 87 P P 18 58 14.7 -0.4
E57A Chemin Saint G 37.62 66 P P 18 58 14.1 -1.0
baz=286
N58A Sunbury 37.67 76 P P 18 58 15.5 0.0
N58A lAmb lAmb 18 58 16.7
comp=Z,31nm,0.7s
W57A Gilead 37.71 86 P P 18 58 15.6 -0.3
K58A Earlville 37.73 73 P P 18 58 15.8 -0.3
K58A lAmb lAmb 18 58 17.0
comp=Z,26nm,0.8s
R58A Rapidan 37.75 81 P P 18 58 14.1 -2.1
baz=295
J58A Remsen 37.78 72 P P 18 58 16.3 -0.2
J58A lAmb lAmb 18 58 20.7
comp=Z,47nm,1.2s
O58A Lewisberry 37.79 77 P P 18 58 14.5 -2.1
baz=293
LONY Lake Ozonia 37.85 69 P P 18 58 16.8 -0.3
LONY lAmb lAmb 18 58 21.0
comp=Z,53nm,1.6s
T58A Grand View Acr 37.95 83 P P 18 58 17.4 -0.5
baz=296
R58B Mineral 37.98 81 P P 18 58 16.9 -1.3
baz=295
R58B Mineral 37.98 81 P P 18 58 18.9 +0.7
R58B lAmb lAmb 18 58 23.3
comp=Z,44nm,1.4s
V58A Windy Hill, Pi 38.05 85 P P 18 58 18.9 +0.1
V58A lAmb lAmb 18 58 24.1
comp=Z,107nm,1.7s
KSPA Keystone Colle 38.07 75 P P 18 58 18.7 -0.2
MVL Millersville 38.24 77 P P 18 58 20.6 +0.2
J59A Piesco 38.28 71 P P 18 58 20.6 -0.1
N59A State Game Lan 38.30 76 P P 18 58 20.8 -0.2
N59A lAmb lAmb 18 58 25.2
comp=Z,80nm,1.6s
NCB Newcomb 38.30 70 P P 18 58 20.8 -0.1
L59A Walton 38.35 73 P P 18 58 21.1 -0.2
L59A lAmb lAmb 18 58 34.0
comp=Z,97nm,1.9s
FRNY Flat Rock 38.46 69 P P 18 58 22.0 -0.1
CMIG Matias Romero 38.64 123 P P 18 58 23.8 -0.1
comp=Z,2.6nm,0.6s,baz=323,slow=7.8,SNR=3.6
T59A Double "B" Far 38.64 82 P P 18 58 22.4 -1.3
baz=296
T59A Double "B" Far 38.64 82 P P 18 58 24.0 +0.3
T59A lAmb lAmb 18 58 28.4
comp=Z,95nm,1.7s
V59A Middlesex 38.69 84 P P 18 58 22.8 -1.4
baz=298
LUPA Lehigh Univers 38.70 76 P P 18 58 24.2 0.0
Z58A St. Stephen 38.72 89 P P 18 58 23.0 -1.4
baz=300
ACCN Adirondack Com 38.88 71 P P 18 58 25.2 -0.5
ODNJ Ogdensburg 39.06 75 P P 18 58 27.0 -0.2
ODNJ lAmb lAmb 18 58 31.3
comp=Z,56nm,1.5s
TRY Troy 39.11 72 P P 18 58 27.7 +0.1
TRY lAmb lAmb 18 58 29.6
comp=Z,36nm,0.7s
U60A Pendleton 39.15 83 P P 18 58 24.2 -3.8
baz=297
VT1 Waterbury 39.19 69 P P 18 58 28.4 +0.1
KSCT Kent School, K 39.60 73 P P 18 58 31.4 -0.3
HNH Hanover 39.72 70 P P 18 58 33.3 +0.6
LBNH Lisbon 39.78 69 P P 18 58 33.8 +0.6

LBNH					pmax	pmax		
	comp=Z,33nm,1.0s							
LBNH	**Lisbon**	**39.78**	**69**	P	**P**	**18 58 33.8**	**+0.6**	
LBNH					lAmb	lAmb	18 58 35.7	
	comp=Z,33nm,1.0s							
K62A	**Royalston**	**40.12**	**71**	P	**P**	**18 58 36.5**	**+0.5**	
K62A					lAmb	lAmb	18 58 49.0	
	comp=Z,53nm,1.6s							
QUA2	**Belchertown**	**40.18**	**72**	P	**P**	**18 58 36.9**	**+0.4**	
QUA2					lAmb	lAmb	18 58 41.1	
	comp=Z,60nm,1.4s							
H62A	**Milan**	**40.19**	**68**	P	**P**	**18 58 36.9**	**+0.3**	
H62A					lAmb	lAmb	18 58 40.9	
	comp=Z,99nm,1.8s							
SCHQ	**Schefferville**	**40.27**	**52**	P	**P**	**18 58 37.9**	**+0.7**	
	comp=Z,3.5nm,0.5s,baz=264,slow=10,SNR=2.6							
G62A	**West of Eustis**	**40.39**	**67**	P	**P**	**18 58 38.2**	**-0.1**	
G62A					lAmb	lAmb	18 58 42.9	
	comp=Z,93nm,1.9s							
D62A	**Allapoint, All**	**40.78**	**64**	P	**P**	**18 58 41.1**	**-0.4**	
BRYW	**Bryant College**	**40.87**	**72**	P	**P**	**18 58 42.0**	**-0.2**	
BRYW					lAmb	lAmb	18 58 47.0	
	comp=Z,41nm,1.2s							
F63A	**Nahmakanta, Br**	**41.18**	**66**	P	**P**	**18 58 45.1**	**+0.3**	
BILL	**Bilibino**	**41.35**	**329**	*de*P	**P**	**18 58 44.7**	**-1.2**	
BILL				*e**PP	**pP**	**18 58 47.8**	**-1.4**	
BILL				*e**SP	**sP**	**18 58 50.9**	**+0.4**	
BILL				*i*		19 00 26.8		
BILL				pmax	pmax			
	comp=Z,35nm,1.3s							
BILL				MLR	MLR			
	comp=Z,3µm,23.0s							
F64A	**Sherman**	**41.63**	**65**	P	**P**	**18 58 48.6**	**+0.2**	
F64A					lAmb	lAmb	18 59 15.0	
	comp=Z,81nm,2.0s							
BATG	**Bathurst New B**	**42.66**	**63**	P	**P**	**18 58 55.9**	**-0.9**	
LMN	**Caledonia Moun**	**43.96**	**64**	P	**P**	**18 59 07.7**	**+0.3**	
LMN					lAmb	lAmb	18 59 11.9	
	comp=Z,99nm,1.9s							
SFJD	**Kangerlussuaq**	**46.00**	**32**	*e*P	P	18 59 32.1	+8.9	
SFJD	**Kangerlussuaq**	**46.00**	**32**	*i* P	P	18 59 32.1	+8.9	
MATN	**Matagalpa**	**47.41**	**117**	P	**P**	**18 59 34.8**	**-0.2**	
MATN					lAmb	lAmb	18 59 44.1	
	comp=Z,26nm,0.9s							
PET	**Petropavlovsk**	**47.52**	**308**	P	**P**	**18 59 34.7**	**-0.6**	
PET	**Petropavlovsk**	**47.52**	**308**	P	**P**	**18 59 34.7**	**-0.6**	
SEY	**Seymchan**	**47.71**	**323**	P	**P**	**18 59 36.5**	**-0.2**	
	comp=Z,13nm,0.9s,baz=92,slow=7.3,SNR=8.2							
SEY	**Seymchan**	**47.71**	**323**⇑	*e*P	**P**	**18 59 36.8**	**+0.1**	
PEA0B	**Petropavlovsk-**	**48.03**	**309**⇑	*e*P	**P**	**18 59 40.4**	**+1.0**	
PEA0B	**Petropavlovsk-**	**48.03**	**309**	P	**P**	**18 59 39.0**	**-0.3**	
PETK	**Petropavlovsk-**	**48.03**	**309**	P	**P**	**18 59 38.7**	**-0.7**	
	comp=Z,7.3nm,0.8s,baz=87,slow=11,SNR=9.5							
SUMG	**Summit**	**48.88**	**24**	P	**P**	**18 59 46.3**	**+0.2**	
SUMG				pmax	pmax			
	comp=Z,33nm,1.1s							
SUMG	**Summit**	**48.88**	**24**	P	**P**	**18 59 46.3**	**+0.2**	
SUMG				lAmb	lAmb	18 59 58.0		
	comp=Z,33nm,1.1s							
MA2	**Magadan**	**49.47**	**319**	P	**P**	**18 59 49.4**	**-0.9**	
	comp=Z,10nm,0.9s,baz=59,slow=12,SNR=3.4							
MA2	**Magadan**	**49.47**	**319**⇓	*e*P	**P**	**18 59 52.6**	**+2.3**	
MA2				pmax	pmax			
	comp=Z,34nm,1.3s							
MA2	**Magadan**	**49.47**	**319**	lAmb	lAmb	18 59 54.0		
	comp=Z,46nm,1.3s							
SPITS	**Spitsbergen Ar**	**56.50**	**8**	P	**P**	**19 00 41.2**	**-0.7**	
	comp=Z,10nm,0.9s,baz=335,slow=10.0,SNR=2.4							
H11N3	**WAKE ISLAND Hy**	**58.65**	**268**	T	T	20 04 16.4		
	baz=49,slow=75,SNR=4139							
H11N2	**WAKE ISLAND Hy**	**58.65**	**268**	T	T	20 04 19.8		
	baz=49,slow=75,SNR=4975							
H11N1	**WAKE ISLAND Hy**	**58.67**	**268**	T	T	20 04 17.3		
	baz=49,slow=75,SNR=3681							
YSS	**Yuzh-Sakhalins**	**59.38**	**307**	*e*P	**P**	**19 01 01.9**	**-0.6**	
YSS				*e*		19 01 08.4		
YSS				pmax	pmax			
	comp=Z,20nm,1.3s							
H11S1	**WAKE ISLAND Hy**	**59.58**	**267**	T	T	20 05 30.6		
	baz=49,slow=75,SNR=1564							
H11S2	**WAKE ISLAND Hy**	**59.58**	**267**	T	T	20 05 27.7		
	baz=49,slow=75,SNR=1169							
H11S3	**WAKE ISLAND Hy**	**59.59**	**267**	T	T	20 05 26.1		
	baz=49,slow=75,SNR=1001							
ASAJ	**Asahikawa**	**61.03**	**305**	P	**P**	**19 01 13.9**	**0.0**	
	comp=Z,13nm,0.8s,baz=197,slow=4.2,SNR=4.1							
RUSC	**La Rusia**	**61.09**	**111**	P	**P**	**19 01 14.4**	**-0.8**	
NRIK	**Noril'sk**	**64.24**	**347**	P	**P**	**19 01 34.9**	**+0.1**	
	comp=Z,3.9nm,0.8s,baz=66,slow=11,SNR=2.7							
ARCES	**ARCESS Array B**	**65.42**	**10**	P	**P**	**19 01 42.5**	**-0.1**	
	comp=Z,3.1nm,1.0s,baz=356,slow=10,SNR=1.4							
USRK	**Ussuriysk Ar.**	**67.11**	**310**	P	**P**	**19 01 53.6**	**-0.2**	
	comp=Z,9.3nm,1.0s,baz=72,slow=6.2,SNR=6.6							
LVZ	**Lovozero**	**67.97**	**7**⇓	*e*P	**P**	**19 01 59.6**	**+0.7**	
LVZ				pmax	pmax			
	comp=Z,26nm,1.1s							
MJAR	**Matsushiro Arr**	**68.22**	**300**	P	**P**	**19 01 59.7**	**-1.3**	
	comp=Z,2.9nm,0.9s,baz=45,slow=7.3,SNR=5.4							
MAT	**Matsushiro**	**68.22**	**300**	P	**P**	**19 01 58.4**	**-2.6**	
MJB9	**Matsu-Tunnel**	**68.22**	**300**	P	**P**	**19 01 59.4**	**-1.6**	
MJB9					lAmb	lAmb	19 02 07.8	
	comp=Z,8.3nm,0.8s							
MSHR	**Mys Shultsa**	**68.61**	**309**⇑	*e*P	**P**	**19 02 05.4**	**+2.1**	
NC303	**NORSAR Array S**	**70.39**	**19**	P	**P**	**19 02 14.9**	**+0.9**	
NB2	**NORSAR Subarra**	**70.51**	**20**	P	**P**	**19 02 14.9**	**+0.1**	
	comp=Z,20nm,1.0s,baz=334,slow=5.9							
NB2	**NORSAR Subarra**	**70.51**	**20**	P	**P**	**19 02 14.9**	**+0.1**	
	baz=334,slow=5.9							
NOA	**NORSAR Array B**	**70.51**	**20**	P	**P**	**19 02 14.7**	**0.0**	
	comp=Z,5.5nm,0.9s,baz=331,slow=6.0,SNR=14							
NAO01	**NORSAR Array S**	**70.60**	**20**	P	**P**	**19 02 15.9**	**+0.6**	
CN2	**Changchun**	**70.94**	**313**	*e*P	**P**	**19 02 14.5**	**-3.1**	
CN2				*e*S	**S**	**19 11 27.5**	**-5.2**	
CN2				pmax	pmax			
	comp=Z,10.0nm,1.1s							
FIA1	**FINESS Array S**	**73.14**	**13**	P	**P**	**19 02 30.4**	**0.0**	
FIA1				lAmb	lAmb	19 02 38.9		
	comp=Z,24nm,1.0s							
FINES	**FINESS Array B**	**73.14**	**13**	P	**P**	**19 02 31.1**	**+0.6**	
	comp=Z,8.0nm,0.9s,baz=350,slow=5.8,SNR=10							
KSRS	**Korea Array**	**73.86**	**306**	P	**P**	**19 02 34.4**	**-0.8**	
	comp=Z,3.8nm,0.9s,baz=52,slow=6.2,SNR=9.7							
PTGA	**Pitinga**	**74.88**	**106**	P	**P**	**19 02 41.6**	**+0.2**	
PTGA					lAmb	lAmb	19 02 50.6	
	comp=Z,39nm,1.1s							
PTGA	**Pitinga**	**74.88**	**106**	*e*P	**P**	**19 02 43.7**	**+2.4**	
TLY	**Talaya**	**74.96**	**330**	P	**P**	**19 02 42.7**	**+1.4**	
	comp=Z,2.2nm,0.7s,baz=96,slow=10,SNR=1.6							
TLY	**Talaya**	**74.96**	**330**⇑	*e*P	**P**	**19 02 44.2**	**+2.9**	
TLY				pmax	pmax			
	comp=Z,19nm,1.5s							
TLY	**Talaya**	**74.96**	**330**	lAmb	lAmb	19 02 58.4		
	comp=Z,34nm,1.6s							
KLMR	**Klimovskoe**	**75.31**	**6**	*e*P	**P**	**19 02 42.3**	**-0.8**	
KLMR				pmax	pmax			
	comp=Z,34nm,1.5s							
KLMR	**Klimovskoe**	**75.31**	**6**	*e*P	**P**	**19 02 42.3**	**-0.8**	
KLMR				AMP		19 02 49.9		
	comp=Z,34nm,1.5s							
MACA	**Manacapuru-AM**	**76.12**	**108**	*e*P	**P**	**19 02 50.4**	**+1.9**	
ULN	**Ulaanbaatar**	**76.69**	**325**⇑	*e*P	**P**	**19 02 51.3**	**-0.1**	
ULN				pmax	pmax			
	comp=Z,21nm,2.2s							
SONM	**Songino Array**	**76.98**	**326**	P	**P**	**19 02 53.1**	**+0.1**	
	comp=Z,5.1nm,1.0s,baz=80,slow=3.5,SNR=4.1							
BMRD	**Maredsous**	**77.78**	**29**	PcP	**PcP**	**19 03 05.0**	**-2.3**	
BSTI	**Sart Tilman**	**77.82**	**28**	PcP	**PcP**	**19 03 06.1**	**-1.3**	
BGES	**Geseves**	**77.82**	**28**	PcP	**PcP**	**19 03 05.4**	**-2.1**	
BCLA	**Clavier**	**77.87**	**28**	pP	**P**	**19 02 59.4**	**+1.6**	
BCLA				sP	**pP**	**19 03 00.6**	**-0.7**	
BCLA				PcP	**pwP**	**19 03 06.2**	**+0.9**	
DOU	**Dourbes**	**77.89**	**29**	pP	**P**	**19 02 59.1**	**+1.2**	
DOU				PcP	**pwP**	**19 03 05.6**	**+0.1**	
MEM	**Membach**	**77.95**	**28**	PcP	**PcP**	**19 03 06.6**	**-1.5**	
SAML	**Samuel**	**78.65**	**114**	P	**P**	**19 03 02.7**	**+0.1**	
SAML				pmax	pmax			
	comp=Z,6.0nm,1.0s							
SAML	**Samuel**	**78.65**	**114**	P	**P**	**19 03 02.7**	**+0.1**	
SAML	**Samuel**	**78.65**	**114**	*e*P	**P**	**19 03 03.9**	**+1.4**	
ZALV	**Zalesovo Beam**	**78.72**	**341**	P	**P**	**19 03 02.7**	**+0.3**	
	comp=Z,0.8nm,0.5s,baz=14,slow=6.4,SNR=3.6							
WLF	**Walferdange**	**78.80**	**28**	PcP	**PcP**	**19 03 10.0**	**-1.7**	
CLL	**Collm**	**79.55**	**24**	*e*P	**P**	**19 03 09.0**	**+2.0**	
CLL				*i* PcP	**PcP**	**19 03 15.9**	**+1.0**	
	comp=Z,33nm,1.1s							
CLL	**Collm**	**79.55**	**24**	*e*P	**P**	**19 03 09.0**	**+2.0**	
CLL				*i*		19 03 15.9		
SVE	**Sverdlovsk**	**79.57**	**355**	*e*P	**P**	**19 03 07.3**	**+0.3**	
SVE				pmax	pmax			
	comp=Z,21nm,1.4s							
MALB	**Monte Alegre**	**79.68**	**103**	*e*P	**P**	**19 03 11.3**	**+3.1**	
ARU	**Arti**	**80.08**	**356**	P	**P**	**19 03 09.3**	**-0.5**	
	comp=Z,1.2nm,0.6s,baz=9.8,slow=2.7,SNR=6.5							
ARU	**Arti**	**80.08**	**356**	P	**P**	**19 03 08.4**	**-1.4**	
ARU						19 06 08.6		
ARU				S	**S**	**19 13 10.8**	**-2.6**	
HHC	**Hu-ho-hao-te**	**80.15**	**318**	*e*P	**P**	**19 03 11.4**	**+0.8**	
HHC				pmax	pmax			
	comp=Z,12nm,0.8s							
HHC				pmax	pmax			
	comp=Z,64nm,5.4s							
BRG	**Berggiesshubel**	**80.20**	**23**	*e*P	**P**	**19 03 11.3**	**+0.7**	
	comp=Z,10nm,1.0s							
BRG	**Berggiesshubel**	**80.20**	**23**	*e*P	**P**	**19 03 11.3**	**+0.7**	
BRG				pmax	pmax			
	comp=Z,11nm,1.0s							
NKC	**Novy Kostel**	**80.33**	**24**	*e*P	**P**	**19 03 13.5**	**+2.2**	
NKC				*e*		19 03 19.3		
NKC	**Novy Kostel**	**80.33**	**24**	*e*P	**P**	**19 03 13.5**	**+2.2**	
NKC				*ex*	x	19 03 19.3		
NKC				*ex*	x	19 03 22.9		
PVCC	**Panska Ves**	**80.69**	**23**	*e*P	**P**	**19 03 15.0**	**+1.8**	
PVCC				*e*		19 03 21.6		
PVCC	**Panska Ves**	**80.69**	**23**	*e*P	**P**	**19 03 15.0**	**+1.8**	
PVCC				*ex*	x	19 03 21.6		
OBN	**Obninsk**	**80.70**	**9**	P	**P**	**19 03 13.0**	**-0.1**	
	comp=Z,2.1nm,0.4s,baz=133,slow=19,SNR=2.1							
OBN	**Obninsk**	**80.70**	**9**⇓	*e*P	**P**	**19 03 13.2**	**+0.1**	
OBN				*e**PP	**pP**	**19 03 15.4**	**-1.2**	
OBN				*e*		19 03 20.5		
OBN				pmax	pmax			
	comp=Z,31nm,1.3s							
OBN				MLR	MLR			
	comp=Z,799nm,21.0s							
LPAZ	**La Paz**	**81.01**	**123**	P	**P**	**19 03 15.6**	**-0.5**	
	comp=Z,9.1nm,0.8s,baz=326,slow=5.7,SNR=21							
LPAZ	**La Paz**	**81.01**	**123**	P	**P**	**19 03 15.6**	**-0.5**	
LPAZ				pmax	pmax			
	comp=Z,12nm,0.8s							
LPAZ	**La Paz**	**81.01**	**123**	lAmb	lAmb	19 03 24.2		
	comp=Z,12nm,0.8s							
LPAZ	**La Paz**	**81.01**	**123**	*e*P	**P**	**19 03 15.3**	**-0.8**	
LPAZ				*ep*P	**pP**	**19 03 18.6**	**-1.0**	
CHVC	**Chvalec**	**81.05**	**22**	*e*P	**P**	**19 03 18.5**	**+3.3**	
CHVC				*ex*	x	19 03 22.8		
OSTC	**Ostas**	**81.12**	**22**	*e*P	**P**	**19 03 16.7**	**+1.1**	
OSTC				*ex*	x	19 03 23.6		
PRU	**Pruhonice**	**81.17**	**23**	*e*P	**P**	**19 03 14.8**	**-1.0**	
PRU				*e*		19 03 23.1		
PRU	**Pruhonice**	**81.17**	**23**	*e*P	**P**	**19 03 14.8**	**-1.0**	
PRU				*ex*	x	19 03 23.1		
GOPC	**GO Pecny, Ondr**	**81.30**	**23**	*e*P	**P**	**19 03 20.0**	**+3.5**	
GOPC				*e*		19 03 24.7		
GOPC	**GO Pecny, Ondr**	**81.30**	**23**	*e*P	**P**	**19 03 20.0**	**+3.5**	
GOPC				*ex*	x	19 03 24.7		
DPC	**Dobruska-Polom**	**81.34**	**22**	*e*P	**P**	**19 03 18.0**	**+1.2**	
DPC				*e*		19 03 24.6		
DPC	**Dobruska-Polom**	**81.34**	**22**	*e*P	**P**	**19 03 18.0**	**+1.2**	
DPC				*ex*	x	19 03 24.6		
DPC				*ex*	x	19 03 31.8		
KHC	**Kasperske Hory**	**81.65**	**24**⇓	*e*P	**P**	**19 03 19.6**	**+1.2**	
KHC				pmax	pmax			
	comp=Z,35nm,2.5s							
KHC	**Kasperske Hory**	**81.65**	**24**	*e*P	**P**	**19 03 19.8**	**+1.4**	
KHC				*ex*	x	19 03 26.5		
KRLC	**Kraliky**	**81.71**	**22**	*e*P	**P**	**19 03 19.7**	**+1.0**	
KRLC				*e*		19 03 26.0		
KRLC	**Kraliky**	**81.71**	**22**	*e*P	**P**	**19 03 19.7**	**+1.0**	
KRLC				*ep*P	**pwP**	**19 03 26.0**	**-0.3**	
KRLC				*ex*	x	19 03 33.3		
DGZ	**Jazzator, Alta**	**81.92**	**338**⇓	*e*P	**P**	**19 03 20.6**	**+0.6**	
DGZ				pmax	pmax			
	comp=Z,14nm,1.7s							
GERES	**GERESS Array B**	**81.94**	**24**	P	**P**	**19 03 20.4**	**+0.4**	
	comp=Z,2.9nm,0.8s,baz=343,slow=4.2,SNR=12							
DAVA	**Damuels**	**82.11**	**27**	P	**P**	**19 03 19.9**	**-1.2**	
	comp=Z,15nm,0.9s							
RETA	**Reutte**	**82.23**	**27**	*ep*P	pP	19 03 24.1	-0.9	
	comp=Z,9.5nm,1.2s							
OKC	**Ostrava-Krasne**	**82.30**	**21**	*e*P	**P**	**19 03 22.8**	**+1.1**	
OKC				*e*		19 03 29.3		
OKC	**Ostrava-Krasne**	**82.30**	**21**	*e*P	**P**	**19 03 22.8**	**+1.1**	
OKC				*ep*P	**pwP**	**19 03 29.3**	**0.0**	
BRVK	**Borovoye**	**82.32**	**349**⇓	*e*P	**P**	**19 03 23.0**	**+1.2**	
BRVK				pmax	pmax			
	comp=Z,17nm,1.7s							
MNMC	**Minye Minye**	**82.33**	**126**	P	**P**	**19 03 22.1**	**-0.4**	
MNMC				lAmb	lAmb	19 03 26.4		
	comp=Z,20nm,0.9s							
BVAR	**Borovoye Array**	**82.34**	**349**	P	**P**	**19 03 22.0**	**+0.1**	
	comp=Z,1.6nm,0.6s,baz=355,slow=5.9,SNR=6.3							
NPGB	**Novo Progresso**	**82.58**	**107**	*e*P	**P**	**19 03 26.3**	**+2.6**	
SQTA	**Sankt Quirin**	**82.61**	**27**	*ep*P	**P**	**19 03 25.2**	**+1.6**	
	comp=Z,13nm,1.2s							
WATA	**Walderalm**	**82.62**	**26**	*ep*P	**P**	**19 03 25.4**	**+1.7**	
	comp=Z,22nm,1.8s							
WTTA	**Wattenberg**	**82.71**	**26**	*ep*P	pP	19 03 26.1	-1.6	
	comp=Z,27nm,2.2s							
FUORN	**Ofenpass-Fuorn**	**82.82**	**27**	P	**P**	**19 03 25.6**	**+0.8**	
ESDC	**Sonseca Array**	**82.92**	**40**	P	**P**	**19 03 24.1**	**-1.1**	
	comp=Z,1.6nm,1.0s,baz=310,slow=4.7,SNR=6.4							
NJ2	**Nanjing**	**82.94**	**308**	*e*P	**P**	**19 03 25.2**	**-0.2**	
NJ2				pmax	pmax			
	comp=Z,12nm,0.5s							
MOA	**Molln**	**83.00**	**24**	*es*P	sP	19 03 28.4	-1.9	
	comp=Z,18nm,1.8s							
KURK	**Kurchatov**	**83.12**	**343**	⇑P	**P**	**19 03 27.2**	**+1.2**	
KURK				pmax	pmax			
	comp=Z,12nm,1.1s							
KURBB	**Kurchatov Arra**	**83.22**	**343**	P	**P**	**19 03 25.4**	**-1.1**	
	comp=Z,4.5nm,0.8s,baz=18,slow=4.8,SNR=14							
LANS	**Liptovska Anna**	**83.27**	**21**	*e*P	**P**	**19 03 29.3**	**+2.4**	
LANS	**Liptovska Anna**	**83.27**	**21**	*e*P	**P**	**19 03 29.3**	**+2.4**	
PB08	**IPOC Station P**	**83.37**	**126**	P	**P**	**19 03 28.4**	**+0.4**	
PB08				lAmb	lAmb	19 03 33.1		
	comp=Z,14nm,1.1s							
MODS	**Modra-Piesok**	**83.40**	**22**	*e*P	**P**	**19 03 28.0**	**+0.5**	
MODS	**Modra-Piesok**	**83.40**	**22**	*e*P	**P**	**19 03 28.0**	**+0.5**	
CONA	**Conrad Observa**	**83.40**	**23**	*e*PcP	**PcP**	**19 03 30.6**	**-1.4**	
	comp=Z,17nm,1.0s							
KBA	**Koelnbreinsper**	**83.41**	**25**	*i* pP	pP	19 03 29.6	-1.7	
	comp=Z,21nm,1.2s							
LPSR	**Galich'ya Gora**	**83.43**	**8**	*e*P	**P**	**19 03 28.3**	**+0.8**	
LPSR				pmax	pmax			
	comp=Z,10.0nm,0.9s							
ABTA	**Abfaltersbach**	**83.44**	**26**	*ep*P	**P**	**19 03 29.4**	**+1.6**	
	comp=Z,21nm,1.1s							
VILB	**Vilhena**	**83.56**	**115**	*e*P	**P**	**19 03 30.3**	**+1.6**	
VYHS	**Vyhne**	**83.71**	**21**	*e*P	**P**	**19 03 30.2**	**+1.1**	
VYHS	**Vyhne**	**83.71**	**21**	*e*P	**P**	**19 03 30.2**	**+1.1**	
MYKA	**Terra Mystica**	**83.90**	**25**	*ep*P	**P**	**19 03 30.9**	**+0.7**	
	comp=Z,14nm,1.5s							
ARSA	**Arzberg**	**83.92**	**24**	*ep*P	pP	19 03 32.2	-1.5	
	comp=Z,22nm,0.9s							
AKASG	**Malin Array Be**	**83.93**	**14**	P	**P**	**19 03 29.3**	**-0.8**	
	comp=Z,2.9nm,0.7s,baz=347,slow=4.6,SNR=10							
AKBB	**Malin Array Si**	**83.93**	**14**⇓	*e*P	**P**	**19 03 29.5**	**-0.6**	
SOKA	**Soboth**	**84.28**	**25**	*ep*P	**P**	**19 03 33.4**	**+1.2**	
	comp=Z,25nm,1.1s							
OBKA	**Obir**	**84.29**	**25**	*ep*P	**P**	**19 03 33.5**	**+1.3**	
	comp=Z,34nm,0.9s							
UZH	**Uzhgorod**	**84.45**	**19**	*e*P	**P**	**19 03 30.5**	**-2.3**	
UZH				*e*		19 03 36.0		
VSR	**Storozhevoye**	**84.82**	**8**	*e*P	**P**	**19 03 35.1**	**+0.5**	
VSR				pmax	pmax			
	comp=Z,30nm,1.7s							
CLDB	**Colider**	**85.01**	**110**	*e*P	**P**	**19 03 38.4**	**+2.3**	
CLDB				*ep*P	**sP**	**19 03 42.2**	**+1.2**	
VRH	**Novokhopyorsk**	**85.06**	**6**	*e*P	**P**	**19 03 33.4**	**-2.5**	
VRH				pmax	pmax			
	comp=Z,30nm,1.8s							
SIV	**San Ignacio**	**85.22**	**117**	P	**P**	**19 03 37.1**	**-0.1**	
	comp=Z,1.8nm,0.6s,baz=301,slow=5.9,SNR=8.5							
LVC	**Limon Verde**	**85.43**	**127**	*e*P	**P**	**19 03 38.3**	**-0.1**	
LVC				*ep*P	**pP**	**19 03 42.0**	**0.0**	
KRVT	**Keravat (AS076**	**85.62**	**260**	P	**P**	**19 03 38.7**	**-0.5**	
	comp=Z,18nm,0.5s,baz=201,slow=8.6,SNR=1.1							
PRPB	**Paraupebas**	**85.85**	**103**	*e*P	**P**	**19 03 44.7**	**+4.3**	
PRPB				*ep*P	**pwP**	**19 03 47.6**	**-0.3**	
MKAR	**Makanchi Array**	**85.95**	**340**	P	**P**	**19 03 39.9**	**-0.6**	
	comp=Z,2.7nm,1.1s,baz=37,slow=3.0,SNR=3.8							
MAKZ	**Makanchi**	**86.02**	**340**	P	**P**	**19 03 39.8**	**-0.9**	
MAKZ				pmax	pmax			
	comp=Z,12nm,1.1s							
MAKZ	**Makanchi**	**86.02**	**340**	P	**P**	**19 03 39.8**	**-0.9**	
MAKZ				lAmb	lAmb	19 03 57.8		
	comp=Z,12nm,1.1s							
PTLB	**Pontes e Lacer**	**86.08**	**116**	*e*P	**P**	**19 03 43.9**	**+2.6**	
AKTO	**Aktyubinsk**	**86.09**	**356**	P	**P**	**19 03 40.5**	**-0.5**	
	comp=Z,2.1nm,0.9s,baz=307,slow=3.2,SNR=4.8							
GTA	**Gaotai**	**86.61**	**325**	*e*P	**P**	**19 03 46.0**	**+2.0**	
GTA				pP	pwP	19 03 50.3	-1.3	
GTA				sP	sP	19 03 53.1	+4.3	
GTA				pmax	pmax			
	comp=Z,5.0nm,1.9s							
GTA				pmax	pmax			
	comp=Z,140nm,5.9s							
GTA				LR	LR			
	comp=Z,860nm,22.5s							
GTA				LR	LR			
	comp=Z,760nm,21.6s							
GTA				LR	LR			
	comp=Z,1µm,20.3s							
WMQ	**Urumqi**	**87.16**	**335**	*e*P	**P**	**19 03 48.1**	**+1.6**	
WMQ				pP	pwP	19 03 53.5	-0.6	
WMQ				pmax	pmax			
	comp=Z,12nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,430nm,5.7s							
WMQ				LR	LR			
	comp=Z,8µm,29.0s							
WMQ				LR	LR			
	comp=Z,5µm,29.3s							
WMQ				LR	LR			
	comp=Z,5µm,24.9s							
LZH	**Lanzhou**	**87.59**	**320**	*e*P	**P**	**19 03 47.4**	**-1.4**	
LZH				pP	pP	19 03 52.5	+0.1	
LZH				sP	pwP	19 03 55.9	-0.5	
LZH				pmax	pmax			
	comp=Z,18nm,1.0s							
LZH				pmax	pmax			
	comp=Z,78nm,4.9s							
LZH				LR	LR			
	comp=Z,250nm,17.5s							
LZH				LR	LR			
	comp=Z,270nm,17.4s							
LZH				LR	LR			
	comp=Z,460nm,19.6s							
ROSB	**Rosrio**	**87.66**	**96**	*e*P	P	19 03 54.5	+5.4	
ROSB				*ep*P	pwP	19 03 57.8	+1.1	
SALV	**Santo Antonio**	**88.69**	**113**	*e*P	**P**	**19 03 56.5**	**+2.6**	
ARAG	**Araguaiana, MT**	**91.16**	**111**	*e*P	**P**	**19 04 08.8**	**+3.4**	
CD2	**Chengdu**	**91.87**	**317**	P	**P**	**19 04 07.2**	**-1.6**	
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
KSH	**Kashi**	**94.34**	**342**	P	**P**	**19 04 24.6**	**+4.5**	
KSH				pP	pwP	19 04 28.6	+0.8	
KSH				sP	sP	19 04 31.9	+6.9	
KSH				pmax	pmax			
	comp=Z,23nm,1.2s							
KSH				pmax	pmax			
	comp=Z,630nm,3.9s							
JANB	**Januaria**	**95.88**	**105**	*e*P	**P**	**19 04 31.8**	**+4.5**	
KMI	**Kunming**	**97.13**	**315**	P	**P**	**19 04 33.1**	**-0.1**	
KMI				pP	pP	19 04 37.1	+0.3	
KMI				sP	sP	19 04 39.1	+1.1	
KMI				pmax	pmax			
	comp=Z,13nm,0.7s							
KMI				pmax	pmax			
	comp=Z,420nm,6.4s							
KMI				LR	LR			
	comp=Z,1µm,28.0s							
KMI				LR	LR			
	comp=Z,2µm,40.3s							
KMI				LR	LR			
	comp=Z,1µm,36.6s							
NVL	**N'lazarevskaya**	**146.47**	**157**	*e*PKP2	**PKiKP**	**19 10 44.4**	**+1.2**	
NVL				pmax	pmax			
	comp=Z,23nm,0.8s							
SYO	**Syowa Base**	**153.85**	**170**⇑	*e

Ms1 4.2/1, ms1mx3.5/31, Error ellipse: s-maj=164.4km s-min=17.5km az=67.0
*DJA **12** 19:08:00.5±1.3, 2°N±4°×12°9E±°, h24km±11km, M3.3/7, MLv3.3/7*
ISC 12 19:08:01.9±1.1, 2°2N±0°.1×129°33E±0°.09, h35km, n10, σ1§24/11, mb3.5/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.42**	**234**	P	**Pn**	**19 08 38.6**	**-0.4**
LBMI	**Labuha**	**3.35**	**213**	P	**Pn**	**19 08 51.4**	**-0.4**
LBMI				S	**Sn**	**19 09 30.0**	**-0.5**
SIJI	**Sorong**	**3.60**	**147**	Pn	**Pn**	**19 08 55.1**	**-0.2**
	5.5nm,0.3s,baz=248,slow=22,SNR=20						
SIJI				Sn	**Sn**	**19 09 34.8**	**-1.8**
	2.3nm,0.3s,baz=209,slow=23,SNR=7.8						
KAPI	**Kappang**	**11.95**	**233**	LR	LR	19 15 19.4	
	comp=Z,998nm,19.3s,baz=220,slow=36						
WRA	**Warramunga Arr**	**22.54**	**168**	P	**P**	**19 13 00.0**	**+1.0**
	1.2nm,0.8s,baz=352,slow=12,SNR=9.2						
ASAR	**Alice Springs**	**26.08**	**170**	P	**P**	**19 13 34.3**	**+1.8**
	0.4nm,0.8s,baz=354,slow=9.7,SNR=9.4						
STKA	**Stephens Creek**	**35.83**	**162**	P	**P**	**19 14 59.0**	**+0.8**
	0.6nm,0.3s,baz=332,slow=12,SNR=5.9						
MKAR	**Makanchi Array**	**60.30**	**325**	P	**P**	**19 18 06.8**	**-0.4**
	0.3nm,0.5s,baz=115,slow=8.2,SNR=3.8						
KURBB	**Kurchatov Arra**	**64.43**	**327**	P	**P**	**19 18 32.9**	**-1.8**
	0.2nm,0.5s,baz=128,slow=5.9,SNR=4.8						
BVAR	**Borovoye Array**	**70.02**	**327**	P	**P**	**19 19 09.7**	**-0.3**
	0.2nm,0.4s,baz=87,slow=8.8,SNR=3.9						

*NNC **12** 19:38:38.9±0.2, 43°.26N×78°.64E, h0km, mb3.6, mpv3.8, Error ellipse: s-maj=3.7km s-min=1.3km az=173.0*
*SOME **12** 19:38:39.5, 43°.27N×78°.63E, h10km*
*KRNET **12** 19:38:41.0±0.1, 43°.24N×78°.76E, h30km, mb3.3*
ISC 12 19:38:39.5±1.1, 43°.28N±0°.02×78°.61E±0°.02, h2km±9km, n67, σ1§15/112, 36C-10D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**0.27**	**214**	*e*P	**Pg**	**19 38 45.2**	**+0.4**
	59nm,0.1s						
SATY				*e*S	**Sg**	**19 38 49.2**	**+1.0**
	6μm,0.1s						
SATY	**Saty**	**0.27**	**214**	P	**Pg**	**19 38 45.2**	**+0.4**
	88nm,0.1s						
SATY				S	**Sg**	**19 38 49.0**	**+0.7**
	6μm,0.1s						
SHLS	**Shalkode**	**0.64**	**101**	*e*P	**Pn**	**19 38 56.8**	**+1.1**
	baz=95						
SHLS				*e*S	**Sn**	**19 39 09.1**	**+2.7**
	baz=95						
SHLS	**Shalkode**	**0.64**	**101**	*e*P	**Pn**	**19 38 56.8**	**+1.1**
	138nm,0.1s						
SHLS				*e*S	**Sn**	**19 39 09.1**	**+2.7**
	147nm,0.2s						
SHLS	**Shalkode**	**0.64**	**101**	P	**Pn**	**19 38 56.8**	**+1.1**
	138nm,0.1s						
SHLS				S	**Sn**	**19 39 09.1**	**+2.7**
	147nm,0.2s						
PDGK	**Podgornoye**	**0.64**	**86**	⇑P	**Pg**	**19 38 51.3**	**-0.6**
	28nm,0.2s						
PDGK				⇑*i*S	**Sg**	**19 38 59.7**	**-0.5**
	25nm,0.2s						
MNBS	**Baschi**	**0.81**	**349**	*e*P	**Pg**	**19 38 55.5**	**+0.5**
	baz=46						
MNBS				*e*S	**Sg**	**19 39 06.8**	**+1.3**
	baz=46						
MNBS	**Baschi**	**0.81**	**349**	*e*P	**Pg**	**19 38 55.5**	**+0.5**
	1.7nm,0.1s						
MNBS				*e*S	**Sg**	**19 39 06.8**	**+1.3**
	0.9nm,0.2s						
MNBS	**Baschi**	**0.81**	**349**	P	**Pg**	**19 38 55.5**	**+0.5**
	1.7nm,0.1s						
MNBS				S	**Sg**	**19 39 06.9**	**+1.3**
	0.9nm,0.2s						
PRZ	**Przheval'sk**	**0.82**	**191**	⇑*i*P	**Pb**	**19 38 55.8**	**-0.7**
	baz=99						
PRZ				⇑*i*S	**Sb**	**19 39 07.6**	**-0.4**
	25nm,0.2s						
ANVS	**Anan'yevo**	**0.85**	**234**	⇑*i*P	**Pn**	**19 38 58.6**	**-0.1**
	baz=41						
ANVS				⇑*i*S	**Sn**	**19 39 11.3**	**-0.6**
	baz=41						
ARXS	**Arharly**	**1.09**	**329**	*e*P	**Pg**	**19 39 00.2**	**-0.2**
	66nm,0.2s						
ARXS				*e*S	**Sg**	**19 39 14.9**	**+0.4**
	53nm,0.1s						
ARXS	**Arharly**	**1.09**	**329**	P	**Pg**	**19 39 00.2**	**-0.2**
	66nm,0.2s						
ARXS				S	**Sg**	**19 39 14.9**	**+0.4**
	53nm,0.1s						
KOTS	**Kotyrbulak**	**1.10**	**268**	*e*P	**Pg**	**19 39 00.6**	**0.0**
	132nm,0.2s						
KOTS				*e*S	**Sg**	**19 39 15.4**	**+0.7**
	190nm,0.3s						
KOTS	**Kotyrbulak**	**1.10**	**268**	P	**Pg**	**19 39 00.6**	**0.0**
	132nm,0.2s						
KOTS				S	**Sg**	**19 39 15.4**	**+0.7**
	190nm,0.3s						
MDOK	**Medeo**	**1.15**	**264**	*e*P	**Pb**	**19 39 01.4**	**-0.8**
	31nm,0.1s						
MDOK				*e*S	**Sg**	**19 39 16.8**	**+0.3**
	52nm,0.2s						
MDOK	**Medeo**	**1.15**	**264**	⇑P	**Pb**	**19 39 00.8**	**-1.4**
	10nm,0.4s						
MDOK				⇓S	**Sg**	**19 39 16.7**	**+0.3**
	11nm,0.2s						
MDOK	**Medeo**	**1.15**	**264**	Pg	**Pb**	**19 39 01.4**	**-0.8**
	31nm,0.1s						
MDOK				Lg	Lg	19 39 16.8	
	52nm,0.2s						
KNDC	**Almaty**	**1.20**	**267**	⇓P	**Pn**	**19 39 01.6**	**-1.9**
	12nm,0.2s						
KNDC				⇓S	**Sn**	**19 39 19.4**	**-1.0**
	27nm,0.3s						
AAA	**Alma-Ata**	**1.24**	**267**	*e*P	**Pg**	**19 39 03.5**	**+0.2**
	27nm,0.1s						
AAA				*e*S	**Sn**	**19 39 20.5**	**-0.8**
	31nm,0.1s						
AAA	**Alma-Ata**	**1.24**	**267**	P	**Pg**	**19 39 03.5**	**+0.2**
	59nm,0.2s						
AAA				S	**Sn**	**19 39 20.5**	**-0.8**
	36nm,0.2s						
TNSS	**Tian-Shan**	**1.24**	**259**	*e*P	**Pn**	**19 39 02.6**	**-1.6**
	68nm,0.3s						
TNSS				*e*S	**Sb**	**19 39 18.9**	**-1.6**
	60nm,0.3s						
TNSS	**Tian-Shan**	**1.24**	**259**	P	**Pn**	**19 39 02.6**	**-1.6**
	68nm,0.3s						
TNSS				S	**Sb**	**19 39 18.9**	**-1.6**
	60nm,0.3s						
KTMS	**Ketmen**	**1.28**	**82**	*e*P	**Pn**	**19 39 02.6**	**-2.0**
	15nm,0.1s						
KTMS				*e*S	**Sb**	**19 39 18.6**	**-2.7**
	57nm,0.1s						
KTMS	**Ketmen**	**1.28**	**82**	P	**Pn**	**19 39 02.6**	**-2.0**
	74nm,0.1s						
KTMS				S	**Sb**	**19 39 18.9**	**-2.5**
	85nm,0.1s						
DJR	**Jarkent**	**1.35**	**39**	*e*P	**Pn**	**19 39 04.7**	**-0.8**
	34nm,0.1s						
DJR				*e*S	**Sb**	**19 39 22.5**	**-0.9**
	265nm,0.2s						
DJR	**Jarkent**	**1.35**	**39**	P	**Pn**	**19 39 04.7**	**-0.8**
	34nm,0.1s						
DJR				S	**Sb**	**19 39 22.5**	**-0.9**
	265nm,0.2s						
KTBS	**Karatobe**	**1.47**	**288**	*e*P	**Pb**	**19 39 06.9**	**-0.7**
	30nm,0.2s						
KTBS				*e*S	**Sb**	**19 39 26.5**	**-0.2**
	351nm,0.3s						
KTBS	**Karatobe**	**1.47**	**288**	P	**Pb**	**19 39 06.9**	**-0.7**
	30nm,0.2s						
KTBS				S	**Sb**	**19 39 26.5**	**-0.2**
	351nm,0.3s						
IZV	**Izvestkoviy**	**1.48**	**261**	*e*P	**Pb**	**19 39 07.2**	**-0.7**
	22nm,0.2s						
IZV				*e*S	**Sg**	**19 39 27.1**	**0.0**
	64nm,0.2s						
IZV	**Izvestkoviy**	**1.48**	**261**	P	**Pb**	**19 39 07.2**	**-0.7**
	30nm,0.2s						
IZV				S	**Sg**	**19 39 27.3**	**+0.1**
	64nm,0.2s						
KDJ	**Kajisay**	**1.56**	**223**	⇑*i*P	**Pb**	**19 39 08.6**	**-0.7**
	baz=27						
KDJ				⇑*i*S	**Sg**	**19 39 30.0**	**+0.3**
	baz=27						
TDK	**Taldyqorghan**	**1.72**	**355**	*e*P	**Pb**	**19 39 11.4**	**-0.6**
	137nm,0.4s						
TDK				*e*S	**Sb**	**19 39 33.9**	**-0.2**
	146nm,0.2s						
TDK	**Taldyqorghan**	**1.72**	**355**	P	**Pb**	**19 39 11.4**	**-0.6**
	137nm,0.4s						
TDK				S	**Sb**	**19 39 33.9**	**-0.2**
	146nm,0.2s						
KST	**Kastek**	**1.95**	**264**	*e*P	**Pb**	**19 39 15.9**	**0.0**
	32nm,0.2s						
KST				*e*S	**Sg**	**19 39 41.7**	**-0.5**
	54nm,0.3s						
KST	**Kastek**	**1.95**	**264**	Pg	**Pb**	**19 39 15.9**	**0.0**
	32nm,0.2s						
KST				Lg	Lg	19 39 41.7	
	54nm,0.3s						
ULHL	**Ulahol**	**2.03**	**240**	⇑*i*P	**Pb**	**19 39 16.6**	**-0.7**
	baz=43						
ULHL				⇑*i*S	**Sb**	**19 39 42.5**	**-0.5**
	baz=43						
ULHL	**Ulahol**	**2.03**	**240**	P	**Pb**	**19 39 16.8**	**-0.4**
	SNR=9.9						
KAPS	**Kapalarasan**	**2.07**	**15**	*e*P	**Pb**	**19 39 17.1**	**-0.7**
	16nm,0.1s						
KAPS				*e*S	**Sb**	**19 39 43.8**	**-0.2**
	73nm,0.2s						
KAPS	**Kapalarasan**	**2.07**	**15**	Pg	**Pb**	**19 39 17.1**	**-0.7**
	16nm,0.1s						
KAPS				Lg	Lg	19 39 43.8	
	73nm,0.2s						
DGS	**Degeres**	**2.07**	**270**	*e*P	**Pb**	**19 39 17.1**	**-0.8**
	41nm,0.3s						
DGS				*e*S	**Sb**	**19 39 44.0**	**-0.2**
	118nm,0.3s						
DGS	**Degeres**	**2.07**	**270**	Pg	**Pb**	**19 39 17.1**	**-0.8**
	41nm,0.3s						
DGS				Lg	Lg	19 39 44.0	
	118nm,0.3s						
BOOM	**Boomskoye usch**	**2.12**	**249**	⇑*i*P	**Pb**	**19 39 17.9**	**-0.8**
	baz=51						
BOOM				⇑*i*S	**Sb**	**19 39 44.5**	**-1.0**
	baz=51						
TKM2	**Tokmak 2**	**2.24**	**262**	⇑*i*P	**Pb**	**19 39 19.3**	**-1.5**
	baz=63						
TKM2				⇑*i*S	**Sb**	**19 39 47.9**	**-1.1**
	baz=63						
TKM2	**Tokmak 2**	**2.24**	**262**	P	**Pb**	**19 39 20.2**	**-0.6**
	SNR=36						
TKM2	**Tokmak 2**	**2.24**	**262**	⇓Pg	**Pb**	**19 39 19.9**	**-0.8**
	7.9nm,0.3s						
TKM2				⇓Lg	Lg	19 39 51.0	
	28nm,0.6s						
KZA	**Kyzart**	**2.76**	**245**	⇓*i*P	**Pb**	**19 39 26.8**	**-2.9**
	baz=47						
KZA				⇓*i*S	**Sn**	**19 39 59.7**	**+0.5**
	baz=47						
KZA	**Kyzart**	**2.76**	**245**	P	**Pb**	**19 39 29.5**	**-0.3**
	SNR=18						
KBK	**Karagaybulak**	**2.76**	**258**	⇑*i*P	**Pb**	**19 39 26.8**	**-2.9**
	baz=60						
KBK				⇑*i*S	**Sn**	**19 40 00.1**	**+1.1**
	baz=60						
KBK	**Karagaybulak**	**2.76**	**258**	P	**Pb**	**19 39 29.4**	**-0.2**
	SNR=8.1						
CHMS	**Chumysh**	**2.84**	**266**	⇓*i*P	**Pn**	**19 39 27.1**	**+1.2**
	baz=67						
CHMS				⇓*i*S	**Sn**	**19 40 02.2**	**+1.5**
	baz=67						
CHMS	**Chumysh**	**2.84**	**266**	P	**Sg**	**19 40 09.4**	**-1.3**
	SNR=6.3						
FRU1	**Bishkek**	**2.96**	**262**	⇑*i*P	**Pn**	**19 39 29.1**	**+1.6**
	baz=63						
FRU1				⇑*i*S	**Sn**	**19 40 05.2**	**+1.6**
	baz=63						
AAK	**Ala-Archa**	**3.09**	**259**	⇑*i*P	**Pn**	**19 39 30.9**	**+1.4**
	baz=61						
AAK				⇑*i*S	**Sn**	**19 40 08.3**	**+1.2**
	baz=61						
AAK	**Ala-Archa**	**3.09**	**259**	P	**Pb**	**19 39 35.4**	**+0.1**
	SNR=17						
AAK	**Ala-Archa**	**3.09**	**259**	⇑Pg	**Pb**	**19 39 35.1**	**-0.2**
	5.4nm,0.3s						
AAK				⇑Lg	Lg	19 40 16.0	
	17nm,0.6s						
UCH	**Uchtor**	**3.20**	**252**	⇑*i*P	**Pn**	**19 39 32.6**	**+1.4**
	baz=54						
UCH				⇑*i*S	**Sn**	**19 40 11.5**	**+1.4**
	baz=54						
UCH	**Uchtor**	**3.20**	**252**	P	**Pb**	**19 39 38.1**	**+0.9**
	SNR=11						
EKS2	**Erkin-Say**	**3.60**	**262**	⇑*i*P	**Pn**	**19 39 38.0**	**+1.5**
	baz=63						
EKS2				⇑*i*S	**Sn**	**19 40 20.6**	**+1.0**
	baz=63						
EKS2	**Erkin-Say**	**3.60**	**262**	P	**Pg**	**19 39 48.4**	**-0.1**
	SNR=6.3						
AML	**Almayashu**	**3.80**	**254**	⇑*e*P	**Pn**	**19 39 41.2**	**+1.7**
	baz=55						
AML				⇑*i*S	**Sn**	**19 40 26.1**	**+1.2**
	baz=55						
AML	**Almayashu**	**3.80**	**254**	P	**Pb**	**19 39 48.5**	**+0.9**
	SNR=10						
MAKZ	**Makanchi**	**4.25**	**33**	⇑Pn	**Pn**	**19 39 45.0**	**-0.3**
	4.2nm,1.4s						
MAKZ				⇑Lg	Lg	19 40 49.3	
	6.2nm,0.6s						
MK31	**Makanchi Array**	**4.37**	**35**	⇑Pn	**Pn**	**19 39 48.7**	**+1.8**
	0.2nm,0.2s,baz=213,slow=14,SNR=5.6						
MK31				⇑Sn	**Sn**	**19 40 37.9**	**-0.6**
	0.3nm,0.2s,baz=212,slow=24,SNR=3.6						
MK31				⇓Lg	Lg	19 40 53.8	
	5.2nm,0.5s,baz=212,slow=29,SNR=14						
KK31	**Karatay Array**	**5.92**	**271**	Pg	Pb	19 40 28.1	+4.6
	0.3nm,0.3s,baz=80,slow=16,SNR=7.2						
KK31				⇑Lg	Lg	19 41 45.2	
	1.0nm,0.3s,baz=76,slow=28,SNR=6.5						
OTUK	**Ortayu**	**6.62**	**321**	⇑Lg	Lg	19 42 02.3	
	6.9nm,0.8s						
KURBB	**Kurchatov Arra**	**7.34**	**360**	⇑Lg	Lg	19 42 30.0	
	8.1nm,0.7s						

MAN 12 19:47:56.8, 15°.56N×121°.43E, h35km, mb4.3, ML3.1, MS2.8, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALP	**Baler**	**0.23**	**38**	*e*P	Pn	19 48 05.3	+1.4
BALP				*e*S	Sn	19 48 10.9	+2.1
PCPH	**Palayan**	**0.32**	**271**	⇑*e*P	Pn	19 48 06.3	+1.3
PCPH				*e*S	Sn	19 48 10.8	+0.2
SMPP	**San Manuel, Pa**	**0.93**	**309**	*e*P	Pn	19 48 14.4	+1.0
SMPP				*e*S	Sn	19 48 26.0	+0.4

IDC 12 19:55:05.2±355.0, 55°.50N×56°.09E, h0km, Error ellipse: s-maj=122.2km s-min=40.3km az=145.0, Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**5.24**	**166**	*i*		20 29 15.0	
	baz=356,slow=327,SNR=6.0						
I43RU	**DUBNA INFRASON**	**10.61**	**284**	*i*		21 00 50.0	
	baz=81,slow=327,SNR=1.5						
I37NO	**I37NO**	**21.62**	**324**	*i*		22 06 30.0	
	baz=110,slow=333,SNR=1.8						

*TAP **12** 20:05:04.1, 24°.86N×122°.19E, h10km, ML3.0, C*
*JMA **12** 20:05:05.2, 24°.75N×122°.19E, h16km, M2.2*
ISC 12 20:05:04.5±1.0, 24°.80N±0°.02×122°.20E±0°.02, h8km±9km, n48, σ0§60/75, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.26**	**194**	*i* P	**Pb**	**20 05 11.0**	**-0.4**
	baz=204						
EOS1				S	**Sb**	**20 05 16.1**	**0.0**
	baz=204						
TWB1	**Santiao Chiao**	**0.28**	**317**	*i* P	**Pg**	**20 05 09.4**	**-0.7**
	baz=308						
TWB1				S	**Sg**	**20 05 12.9**	**-0.9**
	baz=308						
TWC	**Suao**	**0.37**	**239**	P	**Pg**	**20 05 11.6**	**-0.2**
	baz=226						
TIPB	**Shuangxi**	**0.38**	**296**	*i* P	**Pg**	**20 05 11.7**	**-0.2**
	baz=288						
TIPB				S	**Sg**	**20 05 17.1**	**+0.2**
	baz=288						
NWF	**Wu-fen Shan**	**0.46**	**305**	*e*P	**Pb**	**20 05 14.5**	**-0.4**
	baz=298						
NWF				*e*S	**Sg**	**20 05 19.9**	**+0.3**
	baz=298						
WFSB	**Wu-fen Shan**	**0.46**	**305**	P	**Pg**	**20 05 13.3**	**-0.2**
	baz=299						
TWE	**Neicheng**	**0.49**	**260**	*e*P	**Pg**	**20 05 13.5**	**-0.5**
	baz=247						
TWE				S	**Sg**	**20 05 20.9**	**+0.5**
	baz=247						
SLBB	**Yuanshan**	**0.51**	**265**	P	**Pg**	**20 05 15.0**	**+0.6**
	baz=252						
ENA	**Nanau**	**0.56**	**228**	*e*P	**Pg**	**20 05 15.5**	**+0.2**
	baz=214						
ENA				*e*S	**Sg**	**20 05 22.8**	**+0.1**
	baz=214						
TWA	**Mucha**	**0.58**	**288**	P	**Pb**	**20 05 17.0**	**+0.1**
	baz=283						
ENTT	**Nioudou**	**0.60**	**254**	P	**Pg**	**20 05 16.1**	**+0.1**
	baz=250						
NWLT	**Wulai**	**0.63**	**268**	P	**Pb**	**20 05 17.4**	**-0.4**
	baz=256						
NWLT				S	**Sb**	**20 05 26.1**	**-0.7**
	baz=256						
NDT	**Datong Townshi**	**0.66**	**252**	P	**Pg**	**20 05 17.3**	**+0.2**
	baz=249						
TAP1	**Taipei**	**0.66**	**291**	P	**Pb**	**20 05 18.7**	**+0.5**
	baz=286						
YM01	**YM01**	**0.67**	**301**	P	**Pg**	**20 05 17.5**	**+0.2**
	baz=296						
YM01				S	**Sb**	**20 05 27.5**	**-0.2**
	baz=296						
TATO	**Taipei**	**0.67**	**285**	P	**Pb**	**20 05 18.5**	**+0.1**
	baz=280						
TATO				S	**Sb**	**20 05 27.9**	**+0.1**
	baz=280						
YM11	**YM11**	**0.67**	**303**	*e*P	**Pg**	**20 05 17.7**	**+0.3**
	baz=298						
YM08	**YM08**	**0.67**	**305**	P	**Pg**	**20 05 17.3**	**-0.1**
	baz=300						
YM10	**YM10**	**0.68**	**301**	P	**Pg**	**20 05 17.8**	**+0.3**
	baz=296						
YM04	**YM04**	**0.69**	**300**	P	**Pg**	**20 05 18.0**	**+0.1**
	baz=295						
TWY	**Chenhua**	**0.72**	**311**	P	**Pg**	**20 05 18.3**	**0.0**
	baz=306						
JYNG	**Yonagunijimaku**	**0.77**	**117**	P	**Pg**	**20 05 19.2**	**0.0**
JYNG				*e*S	**Sb**	**20 05 30.2**	**-0.4**
YOJ	**Yonaguni jima**	**0.81**	**115**	*e*P	**Pg**	**20 05 19.9**	**-0.3**
	baz=119						
YOJ				*e*S	**Sg**	**20 05 31.3**	**+0.6**
	baz=119						
YOJ	**Yonaguni jima**	**0.81**	**115**	P	**Pg**	**20 05 20.4**	**+0.3**
YOJ				*e*S	**Sg**	**20 05 31.2**	**+0.5**
NNSB	**Datong**	**0.83**	**243**	*e*P	**Pg**	**20 05 19.4**	**-1.1**
	baz=232						
NNSB				S	**Sn**	**20 05 33.6**	**-1.4**
	baz=232						
NNSH	**Datong**	**0.83**	**243**	P	**Pg**	**20 05 20.1**	**-0.4**
	baz=232						
NNSH				*e*S	**Sg**	**20 05 31.4**	**+0.1**
	baz=232						
NNS	**Nan Shan**	**0.83**	**244**	P	**Pg**	**20 05 20.8**	**+0.2**
	baz=232						
NNS				*e*S	**Sg**	**20 05 31.6**	**+0.2**
	baz=232						
NACB	**Ninganchiao**	**0.83**	**221**	P	**Pg**	**20 05 20.4**	**-0.2**
	baz=221						
NACB				*e*S	**Sg**	**20 05 30.9**	**-0.5**
	baz=221						
WHF	**Hehuan Shan**	**1.07**	**233**	P	**Pg**	**20 05 25.4**	**+0.2**
	baz=233						
WHF				S	**Sb**	**20 05 40.0**	**+0.1**
	baz=233						
LIOB	**Emei**	**1.09**	**262**	*e*P	**Pn**	**20 05 26.6**	**+0.6**
	baz=274						
TDCB	**Techi**	**1.09**	**240**	*e*P	**Pn**	**20 05 25.9**	**-0.3**
	baz=231						
NSTT	**Nanjuang**	**1.10**	**261**	P	**Pg**	**20 05 26.8**	**+1.1**
	baz=259						
NSTT				*e*S	**Sn**	**20 05 42.2**	**+0.6**
	baz=259						
CHGB	**Renai**	**1.19**	**232**	P	**Pg**	**20 05 27.5**	**+0.1**
	baz=232						
CHGB				*e*S	**Sn**	**20 05 43.3**	**-0.8**
	baz=232						
WHP	**Taichung City**	**1.26**	**246**	P	**Pg**	**20 05 29.0**	**+0.4**
	baz=246						
WHP				S	**Sg**	**20 05 45.9**	**+1.0**
	baz=246						
OWD	**Renai**	**1.26**	**228**	P	**Pb**	**20 05 28.4**	**-0.1**
	baz=229						
OWD				*e*S	**Sg**	**20 05 45.4**	**+0.4**
	baz=229						
VWDT	**VWDT**	**1.42**	**223**	P	**Pg**	**20 05 31.6**	**-0.1**
	baz=207						
IRIF	**Iriomote-Funau**	**1.47**	**108**	S	**Sn**	**20 05 49.8**	**-0.9**
HGSD	**Ruisui**	**1.49**	**209**	P	**Pg**	**20 05 32.7**	**-0.2**
	baz=191						
SSLB	**Suanglung**	**1.52**	**229**	P	**Pb**	**20 05 33.0**	**0.0**
	baz=230						
SSLB				S	**Sg**	**20 05 53.5**	**0.0**
	baz=230						
JKRS	**Kuro-shima**	**1.74**	**109**	P	**Pn**	**20 05 35.2**	**+0.2**
JKRS				*e*S	**Sn**	**20 05 57.1**	**-0.3**
ALS	**Alishan**	**1.81**	**225**	*e*P	**Pg**	**20 05 38.8**	**-0.5**
	baz=212						
ALS				*e*S	**Sg**	**20 06 03.9**	**+1.1**
	baz=212						
JIJ	**Ishigaki jima**	**1.82**	**104**	P	**Pn**	**20 05 36.9**	**+0.8**
CHN5	**Tsauling**	**1.84**	**229**	*e*P	**Pb**	**20 05 38.8**	**+0.4**
	baz=230						
CHN5				*e*S	**Sg**	**20 06 05.7**	**+2.2**
	baz=230						
JISG	**Ishigakijimahi**	**1.93**	**96**	P	**Pn**	**20 05 38.5**	**+0.9**
CHN4	**Tsaushan**	**2.06**	**226**	*e*P	**Pb**	**20 05 41.9**	**-0.2**
	baz=226						
CHN4				*e*S	**Sg**	**20 06 12.2**	**+1.5**
	baz=226						
TPUB	**Ta-pu**	**2.07**	**224**	*e*P	**Pb**	**20 05 42.0**	**-0.4**
	baz=207						
TPUB				*e*S	**Sg**	**20 06 10.6**	**-0.5**
	baz=207						
TWK	**Hsinying**	**2.19**	**226**	P	**Pb**	**20 05 44.0**	**-0.3**
	baz=221						
SLGT	**Liugui**	**2.29**	**219**	P	**Pb**	**20 05 45.0**	**-1.2**
	baz=198						

*BGR **12** 20:07:44.7±0.0, 52°.96S×120°.53W, h33km, Ms5.2*
*IDC **12** 20:07:50.5±0.5, 49°.67S×115°.38W, h0km, mb4.4/14, mb1 4.5/14, mb1mx4.4/28, mbtmp4.4/14, MS4.9/11, Ms1 4.9/11, ms1mx4.7/17, Error ellipse: s-maj=21.2km s-min=16.2km az=112.0*
*NEIC **12** 20:07:51.7±1.6, 49°.62S±0°.07×115°.4W±0°.2, h10km±1km, mb4.9/35, Error ellipse: s-maj=24.0km s-min=9.5km az=288.0*
*BJI **12** 20:07:54.0±0.0, 49°.60S×115°.30W, h10km, mB5.6/1*
*GCMT **12** 20:07:55.7±0.3, 49°.74S±0°.02×115°.57W±0°.03, h12km, MW5.4/93, Moment Tensor Solution. s25,c33; s93,c121; Duration: 1§3 Moment tensor: Scale 10^17 Nm; Mrr 0.29±.07; Mθθ 0.41±.07; Mϕϕ -0.69±.06; Mrθ 1.09±.18; Mθϕ 1.30±.04; Mϕr 0.49±.17; Best double couple: M0 1.82200×10^17 NP1:φs 5.00000°, δ61.00000°, λ160.00000°. NP2:φs 105.00000°, δ73.00000°, λ31.00000°. Principal axes: T 2.0610, Plg34.0000°, Azm329.0000°; N -0.4770, Plg55.0000°, Azm132.0000°; P -1.5840, Plg8.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
**ISC 12 20:07:51.8±0.4, 49°.75±0°.1×115°.3W±0°.1, h10km, n158, σ1§12/133, mb4.7/29, MS5.0/16, 6C-5D, Southern East Pacific

2.5nm,0.3s
H03S2 Juan Fernandez 31.07 73 T T 20 46 52.4
baz=226,slow=74,SNR=79
H03S1 Juan Fernandez 31.08 73 T T 20 46 53.7
baz=226,slow=74,SNR=81
H03S3 Juan Fernandez 31.09 73 T T 20 46 54.3
baz=226,slow=74,SNR=70
H03N3 Juan Fernandez 31.32 73 T T 20 47 08.4
baz=229,slow=72,SNR=136
H03N2 Juan Fernandez 31.33 73 T T 20 47 07.2
baz=229,slow=72,SNR=221
H03N1 Juan Fernandez 31.34 73 T T 20 47 06.6
baz=229,slow=72,SNR=206
PLCA Paso Flores 32.38 91 LR LR 20 24 10.9
comp=Z,1μm,20.5s,baz=238,slow=30
TBI Tubuai 37.44 302 *e*LR LR 20 25 02.0
comp=Z,3μm,27.5s,baz=143
CFA Coronel Fontan 39.30 81 P **P 20 15 20.2 -0.6**
8.5nm,1.1s,baz=235,slow=10,SNR=6.2
QSPA South Pole Qui 40.55 180 P **P 20 15 32.6 +1.7**
11nm,0.9s,baz=110,slow=5.4,SNR=19
QSPA South Pole Qui 40.55 180 P **P**
QSPA IAmb IAmb 20 15 43.9
comp=Z,21nm,1.1s
VNDA Vanda 40.58 199 LR LR 20 28 33.3
comp=Z,936nm,19.6s,baz=100,slow=31
MEH Mehetia 41.19 309 *e*T T 20 59 15.0
comp=Z,30nm,0.3s
TVO Taravao 41.87 307 *e*T T 21 00 06.7
comp=Z,3.1nm,0.4s
PPT2 Papeete2 42.20 307 *e*LQ LQ 20 25 37.3
comp=Z,3μm,26.5s
PPT2 *e*LR LR 20 27 24.3
comp=Z,4μm,25.0s,baz=150
PPT Papeete 42.22 307 LR LR 20 28 09.7
comp=Z,2μm,21.8s,baz=148,slow=29
PB14 IPOC Station P 42.81 71 P **P 20 15 49.4 -0.7**
PB14 IAmb IAmb 20 15 50.4
comp=Z,31nm,1.1s
GO02 Mina Guanaco 42.92 72 P **P 20 15 50.8 -0.2**
GO02 IAmb IAmb 20 16 01.0
comp=Z,61nm,1.4s
VAH Vaihoa 43.21 311 *e*T T 21 01 46.9
comp=Z,7.6nm,0.3s
PB15 IPOC Station P 44.43 71 P **P 20 16 02.8 -0.2**
LVC Limon Verde 45.22 71 P **P 20 16 10.0 +0.5**
TAOE Nuku Hiva Isla 45.63 325 *e*LR LR 20 28 59.8
comp=Z,4μm,26.0s
MNMC Minye Minye 47.44 67 P **P 20 16 27.2 +0.3**
PB16 IPOC Station P 48.11 66 P **P 20 16 32.7 +0.3**
CPUP Villa Florida 49.89 84 P **P 20 16 44.7 -0.7**
comp=Z,11nm,1.2s,baz=239,slow=5.9,SNR=6.5
CPUP LR LR 20 34 16.6
comp=Z,1μm,21.4s,baz=233,slow=32
CPUP Villa Florida 49.89 84 P **P 20 16 43.8 -1.5**
CPUP IAmb IAmb 20 17 02.1
comp=Z,23nm,1.3s
SNAA Sanae 50.04 158 P **P 20 16 44.5 -1.5**
comp=Z,0.9nm,0.8s,baz=180,slow=20,SNR=1.8
SNAA Sanae 50.04 158 P **P 20 16 46.5 +0.5**
SNAA IAmb IAmb 20 16 57.0
comp=Z,14nm,1.3s
LPAZ La Paz 50.52 66 P **P 20 16 51.0 +0.1**
SAML Samuel 59.24 65 P **P 20 17 52.8 -0.6**
SAML IAmb IAmb 20 18 10.4
comp=Z,12nm,1.2s
SYO Syowa Base 60.21 170⇑ *e*P **P 20 17 58.0 -1.3**
MAW Mawson 63.06 179 P **P 20 18 18.6 +0.1**
comp=Z,6.2nm,0.9s,baz=205,slow=6.9,SNR=11
MAW LR LR 20 43 41.5
comp=Z,1μm,20.2s,baz=175,slow=34
MAW Mawson 63.06 179 P **P 20 18 18.1 -0.4**
BDFB Brasilia 63.58 83 LR LR 20 44 05.0
comp=Z,965nm,18.4s,baz=233,slow=34
ROSC El Rosal 64.85 46 P **P 20 18 32.3 +0.8**
comp=Z,5.8nm,0.4s,baz=103,slow=19,SNR=5.3
ROSC LR LR 20 41 39.5
comp=Z,2μm,19.4s,baz=302,slow=31
ROSC El Rosal 64.85 46 P **P 20 18 32.1 +0.7**
DZM Mont Dzumac 65.98 264 *e*LR LR 20 38 30.2
comp=Z,1μm,23.8s
ZAIG Zacatecas 72.99 12 P **P 20 19 21.0 -0.7**
ZAIG IAmb IAmb 20 19 51.2
comp=Z,3.8nm,0.6s
LPIG La Paz 73.56 5 P **P 20 19 26.1 +1.4**
comp=Z,23nm,0.5s,baz=349,slow=16,SNR=2.0
STKA Stephens Creek 74.07 240 P **P 20 19 27.0 -0.9**
comp=Z,2.0nm,0.8s,baz=197,slow=10.0,SNR=3.3
STKA LR LR 20 46 44.5
comp=Z,736nm,19.8s,baz=303,slow=32
STKA Stephens Creek 74.07 240 P **P 20 19 26.7 -1.2**
TX31 Lajitas Ar. Si 79.32 10 P **P 20 19 58.0 +0.6**
TX31 IAmb IAmb 20 20 05.4
comp=Z,32nm,1.6s
TX32 Lajitas Array 79.32 10 P **P 20 19 58.0 +0.6**
TX32 IAmb IAmb 20 20 05.4
comp=Z,11nm,1.6s
TXAR Lajitas Array 79.32 10 P **P 20 19 58.2 +0.8**
comp=Z,1.6nm,1.0s,baz=179,slow=7.0,SNR=8.5
JCT Junction City 80.97 14 P **P 20 20 02.6 -3.6**
JCT IAmb IAmb 20 20 14.4
comp=Z,17nm,1.3s
MNTX Cornudas Mount 81.47 9 P **P 20 20 08.4 -0.4**
TUC Tucson 81.70 4 P **P 20 20 08.5 -1.6**
PFO Pinyon Flats O 82.90 359 P **P 20 20 16.5 +0.1**
comp=Z,2.0nm,0.7s,baz=180,slow=8.1,SNR=2.0
Y14A Wickenburg 83.25 2 P **P 20 20 18.0 -0.1**
Y14A IAmb IAmb 20 20 22.6
comp=Z,8.0nm,1.4s
X16A Lo Mia Camp, P 83.77 3 P **P 20 20 20.3 -0.6**
X16A IAmb IAmb 20 20 38.2
comp=Z,7.7nm,1.4s
X18A Snowflake 83.95 4 P **P 20 20 21.5 -0.3**
ANMO Albuquerque 84.60 7 P **P 20 20 25.3 +0.2**
comp=Z,1.5nm,0.8s,baz=158,slow=7.8,SNR=4.0
ANMO Albuquerque 84.60 7 P **P 20 20 24.9 -0.2**
AS31 Alice Springs 84.71 239 P **P 20 20 25.0 -1.1**
ASAR Alice Springs 84.71 239 P **P 20 20 24.9 -1.1**
comp=Z,2.6nm,0.8s,baz=150,slow=3.5,SNR=22
ISA Isabella, Lake 84.99 357 P **P 20 20 27.6 +0.6**
ISA IAmb IAmb 20 20 45.5
comp=Z,17nm,1.4s
H01W1 Cape Leeuwin H 85.08 219 T T 21 55 21.1
baz=151,slow=74,SNR=63
H01W2 Cape Leeuwin H 85.08 219 T T 21 55 25.7
baz=151
H01W3 Cape Leeuwin H 85.10 219 T T 21 55 16.7
baz=151,slow=74,SNR=64
U15A North Rim 85.75 2 P **P 20 20 30.2 -0.8**
MVCO Mesa Verde 86.70 5 P **P 20 20 35.8 +0.2**
MVCO IAmb IAmb 20 20 53.0
comp=Z,14nm,1.2s
CCUT Cedar City 86.84 2 P **P 20 20 36.0 -0.3**
WRA Warramunga Arr 87.40 242 P **P 20 20 39.8 +0.4**
comp=Z,1.7nm,0.8s,baz=137,slow=4.6,SNR=5.9
WRA LR LR 20 56 11.8
comp=Z,364nm,18.2s,baz=295,slow=33
R11A Troy Canyon, C 87.62 360 P **P 20 20 39.5 -0.5**
R11A IAmb IAmb 20 21 03.1
comp=Z,10nm,1.7s
NVAR Mina Array Bea 87.74 358 P **P 20 20 42.1 +1.5**
comp=Z,0.6nm,0.8s,baz=199,slow=9.1,SNR=4.5
NVAR LR LR 20 51 13.0
comp=Z,1μm,20.5s,baz=6.0,slow=30
KVN Kaiserville 88.36 358 P **P 20 20 42.3 -1.2**
KVN IAmb IAmb 20 21 01.1
comp=Z,4.7nm,1.1s
TMUT Trail Mountain 88.64 3 P **P 20 20 44.9 -0.1**
NLU North Lily Min 89.27 3 P **P 20 20 47.4 -0.3**
BW06 Boulder Array 92.18 4 P **P 20 21 00.8 -0.4**
BW06 IAmb IAmb 20 21 04.9
comp=Z,6.3nm,1.2s
PDAR Pinedale Array 92.18 4 P **P 20 21 01.0 -0.3**
comp=Z,2.0nm,0.9s,baz=176,slow=7.0,SNR=7.2
H11S2 WAKE ISLAND Hy 96.36 291 T T 22 08 25.5
baz=140,slow=76,SNR=71
H11S3 WAKE ISLAND Hy 96.38 291 T T 22 08 32.6
baz=140,slow=76,SNR=59
H11S1 WAKE ISLAND Hy 96.38 291 T T 22 08 27.2
baz=140,slow=76,SNR=78
H11N3 WAKE ISLAND Hy 97.18 292 T T 22 09 28.1
baz=142,slow=76,SNR=23
H11N1 WAKE ISLAND Hy 97.19 292 T T 22 09 24.5
baz=142,slow=76,SNR=32
H11N2 WAKE ISLAND Hy 97.19 292 T T 22 09 29.1
baz=142,slow=76,SNR=17

ILAR Eielson Array 116.69 345 PKP **PKiKP 20 26 36.2 +1.4**
comp=Z,0.6nm,1.0s,baz=345,slow=1.6,SNR=4.2
ESDC Sonseca Array 131.77 74 PKP **PKPdf 20 27 04.8 +0.2**
comp=Z,0.9nm,1.0s,baz=246,slow=4.3,SNR=2.8
KLR Kul'dur 137.71 296 PKP **PKPdf 20 27 14.3 -0.9**
comp=Z,1.3nm,1.0s,baz=188,slow=7.1,SNR=2.3
XAN Xi'an 144.09 261 PKPdf 20 27 26.4 -0.9
TIXI Tiksi 144.14 331 PKP **PKPab 20 27 23.7 -0.2**
comp=Z,14nm,1.1s,baz=72,slow=1.9,SNR=22
TIXI Tiksi 144.14 331 PKPab 20 27 23.2 -0.6
DAVA Damuels 144.28 72 *e*PKPdf **PKPdf 20 27 28.5 +1.1**
comp=Z,19nm,1.9s
FETA Feichten 144.69 73 *e*PKPbc **PKPab 20 27 26.9 0.0**
comp=Z,16nm,1.1s
RETA Reutte 144.91 72 *e*PKPbc **PKPab 20 27 27.3 -0.3**
comp=Z,16nm,1.5s
MOTA Moosalm 145.06 73 *e*PKPbc **PKPbc 20 27 27.9 -0.3**
comp=Z,17nm,1.3s
SQTA Sankt Quirin 145.08 73 *e*PKPbc **PKPbc 20 27 28.0 -0.2**
comp=Z,17nm,1.1s
WATA Walderalm 145.35 73 *e*PKPbc **PKPbc 20 27 28.9 -0.2**
comp=Z,35nm,2.0s
WTTA Wattenberg 145.36 73 *e*PKPbc **PKPbc 20 27 29.1 -0.1**
comp=Z,21nm,1.2s
ABTA Abfaltersbach 145.69 74 PKPdf **PKPdf 20 27 29.9 +0.2**
comp=Z,25nm,1.6s
GRF Grafenberg Arr 146.03 69 *e*PKPbc **PKPab 20 27 32.4 +0.8**
baz=245,slow=2.5
GRF *e*L L 21 24 21.3
comp=Z,437nm,18.5s
NRDL Niedersach Rie 146.29 64 *e*PKPbc **PKiKP 20 27 35.1 +0.5**
baz=245,slow=2.5
KBA Koelnbreinsper 146.35 74 *e*PKPdf **PKPdf 20 27 30.9 0.0**
comp=Z,4.7nm,0.9s
MYKA Terra Mystica 146.35 75 PKPbc **PKPbc 20 27 31.7 -0.4**
comp=Z,12nm,1.1s
ASSE Asse, Remlinge 146.51 65 *e*PKPbc **PKiKP 20 27 35.6 +0.6**
baz=245,slow=2.5
MOX Moxa 146.60 68 *e*PKPbc **PKPbc 20 27 33.0 +0.4**
baz=245,slow=2.5
MOX *e*L L 21 26 43.0
comp=Z,292nm,20.1s
BSEG Bad Segeberg 146.82 61 *e*PKPbc **PKPab 20 27 34.1 -0.3**
baz=245,slow=2.5
PLN Plauen 146.87 68 *e*PKPbc **PKPab 20 27 35.1 +0.3**
baz=245,slow=2.5
OBKA Obir 146.88 76 *e*PKPbc **PKPbc 20 27 32.9 -0.8**
comp=Z,14nm,1.3s
NKC Novy Kostel 146.96 69 *e*PKP **PKiKP 20 27 36.4 +0.2**
TANN Tannenbergstha 147.03 68 *e*PKPbc **PKiKP 20 27 36.1 -0.3**
baz=245,slow=2.5
MOA Molln 147.23 73 *e*PKPbc **PKPbc 20 27 34.0 -0.5**
comp=Z,14nm,1.1s
GEC2 GERESS Array S 147.25 71 *e*PKPbc **PKPbc 20 27 34.3 -0.4**
baz=245,slow=2.5
GEC2 GERESS Array S 147.25 71 PKPdf 20 27 31.5 -0.8
GERES GERESS Array B 147.25 71 PKPbc **PKPbc 20 27 34.0 -0.7**
comp=Z,4.3nm,1.0s,baz=225,slow=3.6,SNR=20
SOKA Soboth 147.25 76 *e*PKPbc **PKPbc 20 27 34.3 -0.4**
comp=Z,11nm,1.4s
KHC Kasperske Hory 147.27 71 *e*PKP **PKPab 20 27 35.8 -0.7**
KHC *ex* x 20 27 40.8
CLL Collm 147.64 67 *e*PKiKP **PKPab 20 27 39.0 +1.2**
comp=Z,6.0nm,0.9s
CLL *i* pPKiKP **sPKPab 20 27 44.2 +3.6**
comp=Z,36nm,1.8s
CLL Collm 147.64 67 *e*PKPbc **PKiKP 20 27 36.7 -0.8**
baz=245,slow=2.5
FBE Freiberg 147.73 68 *e*PKPbc **PKPbc 20 27 36.5 +0.7**
baz=245,slow=2.5
ARSA Arzberg 147.78 75 *e*PKPdf **PKPbc 20 27 34.7 -1.4**
comp=Z,13nm,1.6s
BLY Banja Luka 147.81 80 ⇓P **PKPab 20 27 39.8 +1.1**
BRG Berggiesshubel 148.07 68 *e*PKP **PKPab 20 27 39.9 +0.3**
comp=Z,12nm,1.1s
BRG Berggiesshubel 148.07 68 *e*PKPbc **PKiKP 20 27 38.7 +0.3**
baz=245,slow=2.5
PRU Pruhonice 148.16 70 *e*PKP **PKPab 20 27 39.6 -0.3**
CONA Conrad Observa 148.25 74 *e*pPKPdf pPKPdf 20 27 36.1 -0.3
comp=Z,22nm,1.9s
PVCC Panska Ves 148.34 69 *e*PKP **PKPab 20 27 40.3 -0.3**
NB2 NORSAR Subarra 148.46 48 PKP **PKPbc 20 27 36.5 -0.9**
comp=Z,34nm,1.7s,baz=270,slow=2.5
NOA NORSAR Array B 148.46 48 PKPbc **PKPbc 20 27 36.3 -1.1**
comp=Z,3.8nm,1.1s,baz=265,slow=2.1,SNR=4.3
KRUC Moravsky 148.99 72 *e*PKP **PKPbc 20 27 38.5 -0.6**
VRAC Vranov 149.19 72 *e*PKP **PKPbc 20 27 38.7 -0.9**
UPC Upice 149.21 69 *e*PKP **PKiKP 20 27 41.0 +0.2**
CHVC Chvalec 149.26 69 *e*PKP **PKPab 20 27 42.7 -1.7**
MODS Modra-Piesok 149.30 74 *e*PKP **PKiKP 20 27 41.5 +0.4**
OSTC Ostas 149.35 69 *e*PKP **PKPbc 20 27 39.7 -0.3**
OSTC *ex* x 20 27 48.7
DPC Dobruska-Polom 149.35 70 *e*PKP **PKPab 20 27 43.5 -1.3**
KRLC Kraliky 149.55 71 *e*PKP **PKPbc 20 27 39.9 -0.6**
KRLC *ex* x 20 27 44.4
JAVC Velka Javorina 149.71 73 *e*PKP **PKiKP 20 27 41.8 -0.2**
MORC Moravsky Berou 149.93 71 *e*PKP **PKPbc 20 27 40.4 -1.0**
MORC Moravsky Berou 149.93 71 ⇓P **PKPbc 20 27 40.9 -0.6**
MORC Moravsky Berou 149.93 71 PKPdf 20 27 36.9 +0.4
VYHS Vyhne 150.31 74 *e*PKP **PKiKP 20 27 45.2 +2.0**
OKC Ostrava-Krasne 150.32 72 *e*PKP **PKiKP 20 27 45.1 +2.0**
MDVR Moldovita 150.73 83 ⇓P **PKPbc 20 27 41.2 -2.3**
VTS Vitosha 150.75 88 ⇑P **PKPbc 20 27 33.6 -4.6**
PSZ Piszkesteto 150.78 76 ⇑P **PKPbc 20 27 42.7 -0.9**
BZS Buzias 151.01 81 ⇓P **PKPdf 20 27 40.0 +1.7**
HERR Herculane 151.23 83 ⇑P **PKPdf 20 27 40.5 +1.8**
SIRR Siria 151.30 80 ⇓P **PKPbc 20 27 44.2 -0.6**
LSA Lhasa 151.73 235 PKPdf 20 27 42.0 +1.5
DRGR 152.17 80 ⇑P **PKPdf 20 27 42.8 +2.7**
ULN Ulaanbaatar 152.26 283 PKPbc 20 27 45.8 -1.3
SONM Songino Array 152.67 282 PKPbc **PKPbc 20 27 47.2 -0.8**
comp=Z,1.6nm,0.7s,baz=174,slow=1.3,SNR=2.9
ARCES ARCESS Array B 152.71 29 PKPbc **PKiKP 20 27 48.6 +1.1**
comp=Z,3.9nm,0.9s,baz=299,slow=13,SNR=5.6
ARR Arges 152.86 84 ⇑P **PKiKP 20 27 50.3 +1.7**
GTA Gaotai 153.15 261 *e*P **PKiKP 20 27 52.1 +2.6**
GTA pP sPKPbc 20 27 56.2 +3.7
GTA sP PKPab 20 27 59.0 -2.1
GTA pmax pmax
comp=Z,3.0nm,1.3s
FINES FINESS Array B 155.59 46 PKPbc PKPbc 20 27 53.2
comp=Z,1.9nm,1.0s,baz=37,slow=4.8,SNR=4.8
FINES PKPab **PKPab 20 28 10.2 -0.4**
comp=Z,0.8nm,0.8s,baz=305,slow=6.7,SNR=4.9
BRTR Keskin Array B 155.97 103 PKP **PKPdf 20 27 47.1 +1.3**
comp=Z,1.0nm,0.9s,baz=220,slow=2.9,SNR=6.2
BRTR PKPab **pPKPab 20 28 14.7 -0.5**
comp=Z,3.9nm,1.0s,baz=197,slow=3.2,SNR=8.3
NRIK Noril'sk 157.37 339 PKPab **PKPab 20 28 18.8 +0.7**
comp=Z,1.2nm,0.4s,baz=14,slow=8.8,SNR=1.8
AKASG Malin Array Be 157.41 74 PKP **PKPdf 20 27 46.2 -0.9**
comp=Z,0.4nm,0.4s,baz=267,slow=1.8,SNR=7.4
KBZ Khabaz 163.96 103 PKP **PKPdf 20 27 54.6 +0.1**
comp=Z,2.0nm,0.9s,baz=225,slow=2.9,SNR=2.7
KBZ PKPab **sPKPab 20 28 52.3 +2.0**
comp=Z,0.6nm,0.6s,baz=270,slow=2.0,SNR=0.9
ZALV Zalesovo Beam 166.81 297 PKPab **PKPab 20 29 00.3 +0.4**
comp=Z,2.4nm,0.8s,baz=52,slow=5.8,SNR=4.1
KSH Kashi 167.06 223 PKP **PKPdf 20 27 55.6 -1.8**
GEYT Alibeck 167.37 156 PKP **PKPdf 20 27 58.5 +0.9**
comp=Z,0.7nm,0.6s,baz=241,slow=1.5,SNR=2.2
GEYT PKPab **pPKPab 20 29 04.0 -1.0**
comp=Z,1.1nm,0.8s,baz=245,slow=2.7,SNR=2.0
MKAR Makanchi Array 167.90 263 PKP **PKPdf 20 27 57.5 -0.1**
comp=Z,0.7nm,1.2s,baz=78,slow=5.1,SNR=1.9
MKAR PKPab **PKPab 20 29 05.2 +0.2**
comp=Z,0.5nm,0.8s,baz=104,slow=3.7,SNR=4.0

MAN 12 20:12:05.8,10.18N×123.96E,h49km,mb3.7,ML2.4, MS1.9,1D,Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.13**	**1**	⇓*e*P	Pn	20 12 14.9	+1.3
LLP				*e*S	Sn	20 12 21.0	+1.7
TBP	**Tagbilaran**	**0.50**	**191**	*e*P	Pn	20 12 18.7	+1.7
MSLP	**Maasin**	**0.88**	**93**	*e*P	Pn	20 12 22.6	+0.7
MSLP				*e*S	Sn	20 12 35.8	+2.1

*JMA **12** 20:27:22.7,24.18N×122.11E,h42km,2km,M2.5*
*TAP **12** 20:27:23.9,24.26N×122.10E,h16km,ML3.2,D*
ISC 12 20:27:21.1±1.1,24.23N±0.03×122.22E±0.02,h11km,9km, n37,σ0.54/62,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.33**	**346**	*i* P	**Pb**	**20 27 30.0**	**+1.0**
	baz=4.0						
EOS1				*i* S	**Sb**	**20 27 35.4**	**+1.2**
	baz=4.0						
ENA	**Nanau**	**0.48**	**295**	P	**Pg**	**20 27 30.7**	**+0.3**
	baz=297						
ENA				S	**Sg**	**20 27 36.7**	**0.0**
	baz=297						
TWC	**Suao**	**0.51**	**319**	*i* P	**Pg**	**20 27 31.3**	**+0.3**
	baz=327						
TWC				S	**Sg**	**20 27 37.3**	**-0.3**
	baz=327						
NACB	**Ninganchiao**	**0.57**	**265**	P	**Pb**	**20 27 33.2**	**+0.1**
	baz=260						
NACB				*e*S	**Sb**	**20 27 41.7**	**+0.5**
	baz=260						
TWD	**Chiawan**	**0.58**	**255**	*i* P	**Pb**	**20 27 33.6**	**+0.3**
	baz=249						
TWD				*e*S	**Sb**	**20 27 42.3**	**+0.6**
	baz=249						
ETLH	**Xiulin Townshi**	**0.67**	**268**	P	**Pb**	**20 27 34.8**	**-0.1**
	baz=265						
ILA	**Ilan**	**0.68**	**322**	P	**Pb**	**20 27 35.2**	**+0.1**
	baz=328						
ILA				*e*S	**Sb**	**20 27 44.3**	**-0.2**
	baz=328						
TWE	**Neicheng**	**0.70**	**315**	P	**Pg**	**20 27 34.9**	**+0.2**
	baz=320						
JYNG	**Yonagunijimaku**	**0.70**	**71**	P	**Pn**	**20 27 37.8**	**+0.8**
JYNG				S	**Sn**	**20 27 48.3**	**+0.5**
NTC	**Toucheng**	**0.71**	**331**	P	**Pb**	**20 27 35.6**	**0.0**
	baz=337						
NTC				*e*S	**Sb**	**20 27 45.3**	**-0.2**
	baz=337						
ENTT	**Nioudou**	**0.72**	**305**	P	**Pg**	**20 27 35.3**	**+0.3**
	baz=308						
ENTT				S	**Sg**	**20 27 43.9**	**-0.5**
	baz=308						
NDT	**Datong Townshi**	**0.74**	**300**	*e*P	**Pg**	**20 27 34.7**	**-0.7**
	baz=302						
NDT				S	**Sg**	**20 27 44.6**	**-0.5**
	baz=302						
SLBB	**Yuanshan**	**0.74**	**315**	P	**Pb**	**20 27 35.9**	**-0.2**
	baz=319						
YOJ	**Yonaguni jima**	**0.76**	**72**	P	**Pn**	**20 27 38.7**	**+0.9**
YOJ				*e*S	**Sn**	**20 27 50.3**	**+1.0**
NNSB	**Datong**	**0.79**	**285**	*e*P	**Pg**	**20 27 36.5**	**+0.2**
	baz=284						
NNSB				*e*S	**Sb**	**20 27 47.3**	**-0.3**
	baz=284						
NNSH	**Datong**	**0.79**	**285**	P	**Pb**	**20 27 36.9**	**0.0**
	baz=284						
NNSH				*e*S	**Sb**	**20 27 47.5**	**-0.1**
	baz=284						
NNS	**Nan Shan**	**0.80**	**285**	P	**Pg**	**20 27 36.8**	**+0.3**
	baz=285						
NNS				*e*S	**Sg**	**20 27 46.8**	**-0.1**
	baz=285						
TWB1	**Santiao Chiao**	**0.80**	**345**	*e*P	**Pb**	**20 27 37.4**	**+0.4**
	baz=352						
TIPB	**Shuangxi**	**0.82**	**334**	P	**Pb**	**20 27 37.5**	**+0.1**
	baz=340						
TIPB				S	**Sg**	**20 27 47.5**	**-0.2**
	baz=340						
NWLT	**Wulai**	**0.85**	**310**	P	**Pg**	**20 27 37.5**	**+0.1**
	baz=313						
NWLT				*e*S	**Sb**	**20 27 49.2**	**-0.1**
	baz=313						
WHF	**Hehuan Shan**	**0.87**	**265**	P	**Pg**	**20 27 38.1**	**+0.1**
	baz=261						
WHF				*e*S	**Sg**	**20 27 49.8**	**+0.4**
	baz=261						
YHNB	**Yeheng**	**0.88**	**300**	P	**Pg**	**20 27 38.1**	**0.0**
	baz=301						
YHNB				S	**Sg**	**20 27 48.8**	**-0.9**
	baz=301						
NWF	**Wu-fen Shan**	**0.93**	**335**	P	**Pn**	**20 27 39.9**	**-0.2**
	baz=340						
NWF				S	**Sb**	**20 27 52.1**	**+0.5**
	baz=340						
WFSB	**Wu-fen Shan**	**0.93**	**335**	*e*P	**Pn**	**20 27 39.7**	**-0.4**
	baz=340						
WFSB				S	**Sn**	**20 27 52.0**	**-1.4**
	baz=340						
TWA	**Mucha**	**0.94**	**323**	P	**Pn**	**20 27 40.1**	**-0.2**
	baz=327						
NHDH	**Xindian Distri**	**0.96**	**319**	P	**Pn**	**20 27 40.3**	**-0.3**
	baz=323						
NHDH				*e*S	**Sb**	**20 27 52.0**	**-0.6**
	baz=323						
YM01	**YM01**	**1.09**	**327**	P	**Pg**	**20 27 42.7**	**+0.7**
	baz=331						
YM10	**YM10**	**1.10**	**327**	P	**Pg**	**20 27 42.8**	**+0.6**
	baz=331						
YM11	**YM11**	**1.10**	**328**	P	**Pg**	**20 27 42.6**	**+0.3**
	baz=332						
YM04	**YM04**	**1.11**	**326**	*e*P	**Pb**	**20 27 42.3**	**0.0**
	baz=330						
YM08	**YM08**	**1.11**	**329**	P	**Pg**	**20 27 42.8**	**+0.3**
	baz=333						
YM03	**YM03**	**1.13**	**327**	*e*P	**Pb**	**20 27 42.5**	**-0.2**
	baz=330						
IRIF	**Iriomote-Funau**	**1.39**	**85**	P	**Pg**	**20 27 48.0**	**+0.3**
IRIF				*e*S	**Sg**	**20 28 06.0**	**+0.3**
JKRS	**Kuro-shima**	**1.64**	**89**	P	**Pg**	**20 27 52.3**	**-0.2**
JKRS				*e*S	**Sg**	**20 28 13.6**	**-0.2**
JIJ	**Ishigaki jima**	**1.76**	**85**	P	**Pb**	**20 27 53.2**	**-0.3**
JIJ				*e*S	**Sb**	**20 28 15.6**	**-0.1**
JISG	**Ishigakijimahi**	**1.94**	**79**	P	**Pb**	**20 27 55.6**	**-0.9**
JISG				*e*S	**Sb**	**20 28 20.2**	**-0.6**
JTJ	**Tarama**	**2.30**	**79**	*e*S	**Sb**	**20 28 29.5**	**-1.7**

*SOME **12** 20:42:21.4,39.20N×75.93E,h5km*
*NNC **12** 20:42:24.2±2.2,39.35N×75.62E,h0km,mb4.3,mpv3.9, Error ellipse: s-maj=16.2km s-min=11.2km az=163.0*
*BJI **12** 20:42:25.3±0.0,39.22N×75.61E,h6km,mb3.9/1,ML3.8/5*
ISC 12 20:42:27.2±1.1,39.33N±0.06×75.65E±0.05,h10km,n50, σ2.14/62,12C-9D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.32**	**53**	Pg	Pg	20 42 25.8	-7.8
KSH				Sg	Sg	20 42 28.3	-10
KSH				smax	smax		
	comp=N,78μm,0.3s						
KSH				smax	smax		
	comp=E,110μm,0.5s						
KZA	**Kyzart**	**2.76**	**354**	P	**Pn**	**20 43 12.1**	**+0.2**
	SNR=21						
ULHL	**Ulahol**	**2.95**	**9**	P	**Pb**	**20 43 18.2**	**-1.8**
	SNR=14						
UCH	**Uchtor**	**3.02**	**344**	P	**Pn**	**20 43 16.0**	**+0.5**
	SNR=47						
AML	**Almayashu**	**3.17**	**333**	P	**Pn**	**20 43 18.2**	**+0.7**
	SNR=11						
KBK	**Karagaybulak**	**3.37**	**351**	P	**Pn**	**20 43 21.0**	**+0.9**
	SNR=19						
AAK	**Ala-Archa**	**3.42**	**346**	P	**Pn**	**20 43 21.5**	**+0.8**
	SNR=12						
AAK	**Ala-Archa**	**3.42**	**346**	⇓Pg	**Pn**	**20 43 21.5**	**+0.8**
	14nm,0.4s						
AAK				⇑Lg	Lg	20 44 06.6	
	101nm,0.8s						
TKM2	**Tokmak 2**	**3.59**	**359**	P	**Pb**	**20 43 30.4**	**-0.5**
	SNR=12						
TKM2	**Tokmak 2**	**3.59**	**359**	⇑Pn	**Pn**	**20 43 24.2**	**+1.0**
	3.7nm,0.3s						
TKM2				⇓Pg	**Pb**	**20 43 30.1**	**-0.9**
	13nm,0.5s						
TKM2				⇓Lg	Lg	20 44 18.2	
	45nm,0.5s						
KST	**Kastek**	**3.72**	**4**	*e*P	**Pb**	**20 43 32.1**	**-1.0**
	17nm,0.5s						
KST				*e*S	**Sg**	**20 44 23.1**	**-3.6**
	89nm,0.7s						
KST	**Kastek**	**3.72**	**4**	Pg	**Pb**	**20 43 32.1**	**-1.0**
	29nm,0.5s						
KST				Lg	Lg	20 44 22.9	
	89nm,0.7s						
CHMS	**Chumysh**	**3.73**	**350**	P	**Pn**	**20 43 25.8**	**+0.9**
	SNR=9.2						
IZV	**Izvestkoviy**	**3.78**	**11**	*e*P	**Pb**	**20 43 33.3**	**-0.8**
	17nm,0.5s						
IZV				*e*S	**Sg**	**20 44 25.1**	**-3.4**

	43nm,0.8s								
IZV	**Izvestkoviy**	**3.78**	**11**	Pg		**Pb**	**20 43 33.3**	**-0.8**	
	26nm,0.3s								
IZV				Lg		Lg	20 44 25.6		
	43nm,0.8s								
TNSS	**Tian-Shan**	**3.83**	**14**	*e*P		**Pb**	**20 43 34.4**	**-0.8**	
	10nm,0.3s								
TNSS				*e*S		**Sg**	**20 44 26.9**	**-3.4**	
	35nm,0.7s								
TNSS	**Tian-Shan**	**3.83**	**14**	Pg		**Pb**	**20 43 34.4**	**-0.8**	
	35nm,0.5s								
TNSS				Lg		Lg	20 44 26.9		
	35nm,0.7s								
MRKS	**Merke**	**3.87**	**333**	*e*P		**Pb**	**20 43 37.1**	**+1.4**	
	10nm,0.3s								
MRKS				*e*S		**Sg**	**20 44 31.9**	**+0.3**	
	28nm,0.6s								
MRKS	**Merke**	**3.87**	**333**	Pg		**Pb**	**20 43 37.1**	**+1.4**	
	16nm,0.6s								
MRKS				Lg		Lg	20 44 30.8		
	28nm,0.6s								
DGS	**Degeres**	**3.91**	**1**	*e*P		**Pb**	**20 43 37.5**	**+1.1**	
	7.4nm,0.3s								
DGS				*e*S		**Sg**	**20 44 32.5**	**-0.3**	
	83nm,0.4s								
DGS	**Degeres**	**3.91**	**1**	Pg		**Pb**	**20 43 37.5**	**+1.1**	
	29nm,0.5s								
DGS				Lg		Lg	20 44 33.1		
	83nm,0.4s								
MDOK	**Medeo**	**3.98**	**15**	*e*P		**Pb**	**20 43 35.5**	**-2.0**	
	3.5nm,0.3s								
MDOK				*e*S		**Sb**	**20 44 29.1**	**+3.4**	
	35nm,1.0s								
MDOK	**Medeo**	**3.98**	**15**	⇓Pg		**Pb**	**20 43 35.4**	**-2.0**	
	15nm,0.6s								
MDOK				⇓Lg		Lg	20 44 30.7		
	57nm,1.0s								
MDOK	**Medeo**	**3.98**	**15**	Pg		**Pb**	**20 43 35.5**	**-2.0**	
	19nm,0.6s								
MDOK				Lg		Lg	20 44 29.1		
	35nm,1.0s								
AAA	**Alma-Ata**	**3.99**	**13**	*e*P		**Pb**	**20 43 36.7**	**-1.0**	
	13nm,0.2s								
AAA				*e*S		**Sg**	**20 44 31.2**	**-4.2**	
	31nm,0.3s								
AAA	**Alma-Ata**	**3.99**	**13**	Pg		**Pb**	**20 43 36.7**	**-1.0**	
	20nm,0.4s								
AAA				Lg		Lg	20 44 32.1		
	38nm,0.6s								
KNDC	**Almaty**	**4.01**	**14**	⇑Pg		**Pb**	**20 43 36.1**	**-1.9**	
	23nm,0.7s								
KNDC				⇑Lg		Lg	20 44 33.5		
	56nm,0.6s								
KOTS	**Kotyrbulak**	**4.06**	**15**	*e*P		**Pb**	**20 43 37.5**	**-1.4**	
	41nm,0.4s								
KOTS				*e*S		**Sb**	**20 44 32.3**	**+4.3**	
	176nm,0.7s								
KOTS	**Kotyrbulak**	**4.06**	**15**	Pg		**Pb**	**20 43 37.5**	**-1.4**	
	41nm,0.4s								
KOTS				Lg		Lg	20 44 33.2		
	176nm,0.7s								
SATY	**Saty**	**4.27**	**28**	*e*P		**Pb**	**20 43 40.1**	**-2.3**	
	14nm,0.4s								
SATY				*e*S		**Sb**	**20 44 36.8**	**+2.7**	
	59nm,0.8s								
SATY	**Saty**	**4.27**	**28**	Pg		**Pb**	**20 43 40.1**	**-2.3**	
	15nm,0.6s								
SATY				Lg		Lg	20 44 37.5		
	59nm,0.8s								
KTBS	**Karatobe**	**4.45**	**10**	*e*P		**Pb**	**20 43 45.3**	**-0.2**	
	24nm,0.4s								
KTBS				*e*S		**Sg**	**20 44 45.8**	**-4.2**	
	108nm,0.7s								
KTBS	**Karatobe**	**4.45**	**10**	Pg		**Pb**	**20 43 45.3**	**-0.2**	
	24nm,0.4s								
KTBS				Lg		Lg	20 44 45.8		
	108nm,0.7s								
CHKK	**Chushkaly**	**4.63**	**12**	*e*P		**Pb**	**20 43 47.4**	**-1.2**	
	10nm,0.5s								
CHKK				*e*S		**Sb**	**20 44 49.5**	**+5.0**	
	24nm,0.7s								
CHKK	**Chushkaly**	**4.63**	**12**	Pg		**Pb**	**20 43 47.4**	**-1.2**	
	10nm,0.5s								
CHKK				Lg		Lg	20 44 49.5		
	24nm,0.7s								
SHLS	**Shalkode**	**4.79**	**36**	*e*P		**Pb**	**20 43 51.8**	**+0.5**	
	30nm,0.8s								
SHLS				*e*S		**Sg**	**20 44 56.7**	**-4.2**	
	56nm,0.7s								
SHLS	**Shalkode**	**4.79**	**36**	Pg		**Pb**	**20 43 51.8**	**+0.5**	
	30nm,0.8s								
SHLS				Lg		Lg	20 44 56.7		
	56nm,0.7s								
PDGK	**Podgornoye**	**4.93**	**35**	⇓Pn		**Pn**	**20 43 41.0**	**-0.6**	
	1.1nm,0.4s								
PDGK				⇓Pg		**Pb**	**20 43 54.2**	**+0.4**	
	7.6nm,0.6s								
PDGK				⇑Lg		Lg	20 44 59.2		
	62nm,0.8s								
ARXS	**Arharly**	**5.15**	**18**	*e*P		**Pb**	**20 43 57.5**	**+0.1**	
	22nm,0.7s								
ARXS				*e*S		**Sg**	**20 45 06.6**	**-5.8**	
	24nm,0.8s								
ARXS	**Arharly**	**5.15**	**18**	Pg		**Pb**	**20 43 57.5**	**+0.1**	
	22nm,0.7s								
ARXS				Lg		Lg	20 45 07.4		
	24nm,0.8s								
KK31	**Karatay Array**	**5.41**	**316**	⇑Pn		**Pn**	**20 43 46.1**	**-1.8**	
	0.7nm,0.3s,baz=142,slow=14,SNR=15								
KK31				⇑Pg		**Pb**	**20 43 57.8**	**-3.9**	
	1.5nm,0.4s,baz=143,slow=15,SNR=6.0								
KK31				⇑Sn		**Sn**	**20 44 50.1**	**-0.1**	
	2.4nm,0.3s,baz=139,slow=26								
KK31				⇑Lg		Lg	20 45 10.5		
	4.7nm,0.5s,baz=132,slow=27								
DJR	**Jarkent**	**5.88**	**30**	Pg		**Pb**	**20 44 10.4**	**+0.6**	
	13nm,0.6s								
DJR				Lg		Lg	20 45 28.7		
	19nm,0.9s								
CHCP	**Chirah Chowk**	**5.97**	**199**	P		**Pn**	**20 43 55.9**	**+0.2**	
KAPS	**Kapalarasan**	**6.56**	**24**	Pg		**Pb**	**20 44 23.1**	**+1.7**	
	4.6nm,0.4s								
KAPS				Lg		Lg	20 45 50.3		
	9.0nm,0.8s								
THW	**Thamme Wali**	**7.25**	**207**	P		**Pn**	**20 44 13.1**	**-0.1**	
MAKZ	**Makanchi**	**8.79**	**30**	⇑Pg		Pg	20 45 09.6	-5.8	
	1.4nm,0.8s								
MAKZ				⇑Lg		Lg	20 47 07.7		
	6.6nm,1.4s								
MK31	**Makanchi Array**	**8.90**	**31**	⇑Lg		Lg	20 47 10.5		
	3.0nm,0.9s,baz=208,slow=27,SNR=4.5								
OTUK	**Ortayu**	**9.23**	**346**	⇓Lg		Lg	20 47 15.9		
	17nm,0.9s								
WMQ	**Urumqi**	**10.08**	**60**	*e*P		**Pn**	**20 44 54.4**	**+2.3**	
WMQ				smax		smax			
	comp=N,15nm,0.5s								
WMQ				smax		smax			
	comp=E,15nm,0.7s								
KURBB	**Kurchatov Arra**	**11.48**	**9**	⇓Lg		Lg	20 48 29.5		
	comp=E,9.7nm,0.8s								

*TEH **12** 20:45:17.4,34.˚75N×47.˚36E,h8km,ML3.8*
*ISN **12** 20:45:18.8±1.4,34.˚32N×47.˚25E,h0km±71km,ML3.8*
*IDC **12** 20:45:19.2±4.9,34.˚41N×47.˚07E,h0km,mb3.6/3, mb1 3.7/4,mb1mx3.4/25,mbtmp3.6/4,ML2.6/1, Error ellipse: s-maj=88.2km s-min=45.6km az=106.0*
*THR **12** 20:45:21.1±0.6,34.˚74N×47.˚33E,h18km±9km,ML3.4*
ISC 12 20:45:18.0±1.2,**34.˚65N**±0.˚03×**47.˚25E**±0.˚02,**h4**km±10km, **n60**,σ1°**81**/58,**3C-7D**,**Western Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KER	**Kermanshah**	**0.28**	**200**	*e*Pg		**Pg**	**20 45 25.5**	**+2.0**
IVIS	**Veis**	**0.35**	**249**	*e*Pg		**Pb**	**20 45 26.7**	**-0.2**
IVIS				*e*			20 45 36.6	
ILIN	**Lien**	**0.35**	**319**	*e*Pg		**Pg**	**20 45 25.0**	**+0.1**
ILIN				*e*Sg		**Sg**	**20 45 30.5**	**+0.8**
ILIN				*e*			20 45 32.4	
KCHF	**Cheshme Sefid,**	**0.41**	**204**	*e*Pg		**Pb**	**20 45 28.0**	**0.0**
IKOM	**Komasi**	**0.52**	**155**	*e*Pg		**Pb**	**20 45 29.2**	**-0.7**
IBZA	**Bozab**	**0.54**	**110**	*e*Pg		**Pg**	**20 45 27.9**	**-0.5**
IGHG	**Ghaleghazi**	**0.65**	**240**	*e*Pg		**Pn**	**20 45 32.7**	**-1.5**
IGHG				*e*			20 45 50.9	
IDHR	**Dehrash**	**0.71**	**274**	*e*Pg		**Pb**	**20 45 32.8**	**-0.3**
IALM	**Almabolaq**	**0.79**	**74**	*e*Pg		**Pg**	**20 45 31.1**	**-2.0**
IALM				*e*			20 45 46.2	

IDOB	**Doab**	**1.16**	**138**	*e*Pg		**Pb**	**20 45 39.9**	**-0.8**	
HSAM	**Samen**	**1.20**	**111**	*e*Pg		**Pb**	**20 45 39.6**	**-1.9**	
IKFM	**Kafar-mosalman**	**1.23**	**156**	*e*Pg		**Pb**	**20 45 41.7**	**-0.1**	
IKMR	**Kamar-syah**	**1.47**	**140**	*e*Pg		**Pb**	**20 45 45.8**	**-0.1**	
IKMR				*e*			20 46 13.2		
HAGD	**Aghdareh**	**1.57**	**83**	*e*Pg		**Pn**	**20 45 45.0**	**-1.9**	
BMDN	**Meydan**	**1.63**	**126**	*e*Pg		**Pn**	**20 45 48.3**	**+0.6**	
IBDR	**Badra**	**1.89**	**216**	*e*Pn		**Pn**	**20 45 51.0**	**0.0**	
IBDR				*e*Sn		**Sn**	**20 46 14.0**	**-1.2**	
IBDR				AML		AML	20 46 28.2		
	comp=E,658nm,0.3s								
IBDR				AML		AML	20 46 33.5		
	comp=N,644nm,0.7s								
QABG	**Abgarm-Qazvin**	**2.19**	**60**	*e*Pn		**Pn**	**20 45 54.5**	**-0.8**	
QABG				*e*			20 46 31.9		
ASAO	**Ashtian**	**2.29**	**92**	*e*Pn		**Pb**	**20 45 59.4**	**-0.7**	
ZNJK	**Zanjan**	**2.33**	**30**	*e*Pn		**Pn**	**20 45 59.4**	**+2.1**	
ZNJK				*e*Sg		**Sb**	**20 46 31.0**	**+1.0**	
ZNJK				IAML			20 46 33.1		
	comp=E,221nm,0.8s								
KHMZ	**Khomeyn**	**2.43**	**111**	*e*Pn		**Pb**	**20 46 01.5**	**-0.9**	
KHMZ				*e*Sg		**Sg**	**20 46 36.9**	**+0.9**	
MAHB	**Mahabad**	**2.45**	**330**	*e*Pn		**Pn**	**20 45 59.3**	**+0.3**	
IKRK	**Kirkuk**	**2.50**	**288**	*e*Pn		**Pb**	**20 46 04.0**	**+0.5**	
IKRK				*e*Sn		**Sg**	**20 46 37.0**	**-1.3**	
IKRK				AML		AML	20 46 49.4		
	comp=N,1μm,0.6s								
IKRK				AML		AML	20 46 50.7		
	comp=E,1μm,0.5s								
SHGR	**Shooshtar-Gavs**	**2.85**	**152**	*e*Pn		**Pb**	**20 46 08.7**	**-0.8**	
QALM	**Alamut, Qazvin**	**3.29**	**56**	*e*Pn		**Pn**	**20 46 10.1**	**-0.5**	
QALM				*e*			20 47 03.4		
GHVR	**GHOM**	**3.35**	**92**	*e*Pn		**Pn**	**20 46 13.2**	**+2.1**	
IPIR	**Pirpir**	**3.62**	**122**	*e*Pn		**Pn**	**20 46 16.6**	**+1.5**	
IVRN	**Varamin**	**3.70**	**83**	*e*Pn		**Pn**	**20 46 15.6**	**-0.5**	
IVRN				*e*			20 46 37.4		
MSL	**Mosul**	**3.80**	**299**	*e*Pn		**Pb**	**20 46 23.0**	**-2.6**	
MSL				*e*Sn		**Sb**	**20 47 11.0**	**-0.9**	
AHAR	**Ahar**	**3.83**	**358**	*e*Pn		**Pn**	**20 46 18.4**	**+0.5**	
ISHB	**Shabestar**	**3.85**	**341**	*e*Pn		**Pn**	**20 46 19.3**	**+1.0**	
ISHB				*e*			20 47 24.2		
ROKH	**ROKH**	**3.91**	**125**	*e*Pn		**Pn**	**20 46 21.0**	**+1.9**	
CUKT	**Cukurca**	**3.93**	**312**	*e*P		**Pn**	**20 46 20.9**	**+1.7**	
GRMI	**Germi**	**4.18**	**7**	*e*Pn		**Pn**	**20 46 25.2**	**+2.5**	
IZEF	**Zefreh**	**4.58**	**111**	*e*Pn		**Pn**	**20 46 30.2**	**+1.9**	
SIRT	**Sirnak**	**4.82**	**308**	*e*P		**Pn**	**20 46 31.9**	**+0.5**	
VANB	**Van**	**5.01**	**323**	*e*P		**Pn**	**20 46 36.5**	**+2.4**	
AKDM	**Akdamar-Van**	**5.03**	**318**	*e*P		**Pn**	**20 46 36.6**	**+2.2**	
CLDR	**Caldiran**	**5.22**	**330**	*e*P		**Pn**	**20 46 41.4**	**+4.4**	
TASB	**TASBURUN-IGDIR**	**5.84**	**337**	*e*P		Pn	20 46 50.9	+5.5	
SVAN	**Silvan-Diyarba**	**6.00**	**307**	*e*P		**Pn**	**20 46 47.9**	**+0.3**	
MAZI	**Mazidag**	**6.18**	**299**	*e*P		**Pn**	**20 46 48.7**	**-1.4**	
DYBB	**Diyarbakir**	**6.62**	**302**	*e*P		**Pn**	**20 46 54.9**	**-1.2**	
URFA	**Urfa**	**7.37**	**295**	*e*P		**Pn**	**20 47 02.7**	**-3.7**	
SVRC	**Sivrice-ELAZID**	**7.39**	**302**	*e*P		**Pn**	**20 47 04.6**	**-2.3**	
PTK	**Pertek**	**7.59**	**306**	*e*P		**Pn**	**20 47 08.1**	**-1.5**	
MALT	**Malatya**	**7.99**	**300**	*e*P		**Pn**	**20 47 12.2**	**-2.7**	
BRTR	**Keskin Array B**	**11.97**	**299**	Pn		Pn	20 48 15.2	+5.6	
	comp=E,0.0nm,0.3s,baz=113,slow=11,SNR=5.1								
MLR	**Muntele Rosu**	**19.51**	**310**	⇑P		**P**	**20 49 40.6**	**-5.7**	
TESR	**Tescani**	**19.56**	**313**	⇓P		**Pn**	**20 49 47.3**	**-0.6**	
OZUR		**19.88**	**312**	⇓P		**Pn**	**20 49 51.7**	**-0.2**	
VOIR		**20.05**	**309**	⇓P		Pn	20 49 53.0	-1.0	
DOPR	**Dopca**	**20.07**	**311**	⇓P		Pn	20 49 53.8	-0.2	
BIZ	**Bicaz**	**20.10**	**314**	⇑P		Pn	20 49 54.4	0.0	
ARR	**Arges**	**20.29**	**309**	⇑P		Pn	20 49 56.1	-0.6	
VTS	**Vitosha**	**20.33**	**300**	⇓P		Pn	20 49 56.6	-0.6	
AKASG	**Malin Array Be**	**20.72**	**326**	P		Pn	20 50 01.1	-0.5	
	comp=E,0.7nm,0.4s,baz=132,slow=11,SNR=1.9								
BURAR	**Bucovina Array**	**20.96**	**315**	⇓P		**P**	**20 50 02.4**	**+0.4**	
DRGR		**22.10**	**311**	⇓P		**P**	**20 50 14.4**	**+0.2**	
FINES	**FINESS Array B**	**30.03**	**340**	P		**P**	**20 51 31.7**	**+4.0**	
	comp=E,1.6nm,0.9s,baz=142,slow=10.0,SNR=2.8								
TORD	**Torodi Ar. Bea**	**46.35**	**254**	P		**P**	**20 53 45.4**	**-0.1**	
	comp=E,0.4nm,0.7s,baz=38,slow=8.1,SNR=2.7								

*MOS **12** 21:05:27.1±1.1,50.˚30N×96.˚82E,h10km,mb3.9/4,Error ellipse: s-maj=12.2km s-min=11.0km az=110.4*
*BJI **12** 21:05:27.5±0.0,50.˚73N×96.˚52E,h28km,mB4.5/1, mb4.3/1,ML4.0/2*
*ASRS **12** 21:05:31.2±0.2,51.˚1N±1.˚1×96.˚8E±0.˚8,h10km,MLh4.6/21, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*
*IDC **12** 21:05:32.4±0.9,50.˚96N×96.˚08E,h0km,mb3.7/6, mb1 3.6/11,mb1mx3.4/52,mbtmp3.6/11,ML3.2/5,Error ellipse: s-maj=27.9km s-min=8.5km az=172.0*
ISC 12 21:05:27.4±0.6,**50.˚39N**±0.˚04×**96.˚87E**±0.˚02,**h12**km,**n72**, σ3°**14**/118,**mb3.7/7**,**4C-2D**,**Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KZLR	**Kyzyl**	**2.02**	**312**	Pn		**Pn**	**21 06 01.8**	**+0.6**
KZLR				Pg		**Pb**	**21 06 03.5**	**-0.5**
KZLR				Sg		**Sb**	**21 06 29.6**	**+0.6**
KZLR	**Kyzyl**	**2.02**	**312**	*c*iPN		**Pn**	**21 06 02.7**	**+1.5**
TDJR	**Todzha**	**2.07**	**347**	Pg		**Pb**	**21 06 03.9**	**-1.0**
TDJR				Sg		**Sn**	**21 06 28.2**	**+0.4**
TDJR	**Todzha**	**2.07**	**347**	PN		**Pb**	**21 06 04.4**	**-0.5**
TDJR							21 06 29.4	
ORL	**Orlik**	**2.83**	**39**	Pn		**Pn**	**21 06 13.4**	**+0.9**
ORL				Pg		**Pb**	**21 06 16.2**	**-1.6**
ORL				Sg		**Sb**	**21 06 54.7**	**+2.2**
ORL	**Orlik**	**2.83**	**39**	PN		**Pb**	**21 06 16.7**	**-1.2**
ORL							21 06 56.0	
MOY	**Mondy**	**2.90**	**62**	Pn		**Pn**	**21 06 15.4**	**+2.0**
MOY				Pg		**Pb**	**21 06 18.9**	**-0.1**
MOY				Sg		**Sb**	**21 06 56.6**	**+2.1**
MOY	**Mondy**	**2.90**	**62**	*e*PN		**Pn**	**21 06 15.4**	**+2.0**
MOY				*e*			21 06 55.4	
MOY				pmax		pmax		
	comp=Z,193nm,0.5s							
MOY				smax		smax		
	comp=E,951nm,0.7s							
ARDR	**Aradan**	**3.07**	**317**	Pn		**Pn**	**21 06 17.4**	**+1.6**
ARDR				Pg		**Pb**	**21 06 20.3**	**-1.7**
ARDR				Sg		**Sb**	**21 06 58.9**	**-0.6**
ARDR	**Aradan**	**3.07**	**317**	PN		**Pb**	**21 06 20.2**	**-1.7**
ARDR							21 06 59.4	
ARS	**Arshan**	**3.81**	**64**	*e*PN		**Pn**	**21 06 28.1**	**+2.1**
ARS				*e*			21 06 36.4	
ARS				*e*			21 07 22.7	
ARS				pmax		pmax		
	comp=Z,78nm,0.3s							
ARS				smax		smax		
	comp=N,826nm,0.9s							
ZAK	**Zakamensk**	**4.10**	**88**	*e*PN		**Pb**	**21 06 39.9**	**+0.4**
ZAK				*e*			21 07 34.8	
ZAK				pmax		pmax		
	comp=Z,92nm,0.4s							
ZAK				smax		smax		
	comp=N,532nm,0.4s							
DJOS	**Djoyskaya Sosn**	**4.18**	**307**	Pn		**Pn**	**21 06 32.7**	**+1.8**
DJOS				Pg		**Pb**	**21 06 43.1**	**+2.4**
DJOS				Sg		**Sb**	**21 07 33.9**	**+2.8**
CERR	**Cheremushki**	**4.20**	**308**	Pn		**Pn**	**21 06 32.9**	**+1.6**
CERR				Pg		**Pg**	**21 06 45.0**	**-2.8**
CERR				Sg		**Sb**	**21 07 33.5**	**+1.7**
DJO	**Djoy, Khakassi**	**4.26**	**306**	Pn		**Pn**	**21 06 34.3**	**+2.2**
DJO				Pg		**Pb**	**21 06 45.2**	**+3.0**
DJO				Sg		**Sb**	**21 07 37.1**	**+3.5**
TLY	**Talaya**	**4.46**	**71**	Pn		**Pb**	**21 06 46.6**	**+1.0**
	comp=N,0.1nm,0.3s,baz=247,slow=15,SNR=23							
TLY				Sn		**Sb**	**21 07 43.7**	**+4.4**
	comp=N,0.4nm,0.3s,baz=146,slow=9.2,SNR=14							
TLY	**Talaya**	**4.46**	**71**	Pn		Pb	21 06 40.7	-4.9
TLY				Pg		**Pg**	**21 06 49.9**	**-2.9**
TLY				Sg		**Sb**	**21 07 43.8**	**+4.4**
TLY	**Talaya**	**4.46**	**71**	*e*PN		**Pb**	**21 06 48.5**	**+2.9**
TLY				*e*			21 07 43.6	
TLY				pmax		pmax		
	comp=Z,52nm,0.4s							
TLY				smax		smax		
	comp=N,334nm,0.4s							
ABNR	**Abakan**	**4.73**	**317**	Pn		**Pn**	**21 06 37.8**	**-0.6**
ABNR				Pg		**Pb**	**21 06 51.3**	**+1.1**
ABNR				Sg		**Sg**	**21 07 53.9**	**-5.3**
ORY	**Orie**	**4.74**	**348**	Pn		**Pn**	**21 06 39.6**	**+0.9**
ORY				Pg		**Pb**	**21 06 51.0**	**+0.6**
ORY				Sg		**Sb**	**21 07 48.9**	**+1.5**

MINR	**Mina**	**4.80**	**341**	Pn		**Pn**	**21 06 40.6**	**+1.2**	
MINR				Pg		**Pb**	**21 06 53.1**	**+1.8**	
MINR				Sg		**Sb**	**21 07 52.1**	**+3.0**	
VEH	**Verkhnyaya Baz**	**4.97**	**308**	Pn		**Pn**	**21 06 42.7**	**+0.8**	
VEH				Pg		**Pb**	**21 06 57.1**	**+2.7**	
VEH				Sg		**Sb**	**21 08 00.7**	**+6.6**	
IRK	**Irkutsk**	**5.00**	**65**	Pg		**Pb**	**21 06 56.7**	**+2.0**	
IRK				Sg		**Sb**	**21 08 01.2**	**+6.5**	
IRK	**Irkutsk**	**5.00**	**65**	*e*PN		**Pb**	**21 06 57.0**	**+2.3**	
IRK				*e*			21 07 58.8		
IRK				pmax		pmax			
	comp=Z,112nm,0.1s								
IRK				smax		smax			
	comp=N,952nm,0.5s								
SLNR	**Muhor-Tarhata,**	**5.45**	**267**	Pn		**Pn**	**21 06 52.3**	**+3.7**	
SLNR				Pg		**Pg**	**21 07 09.1**	**-2.6**	
SLNR				Sg		**Sg**	**21 08 22.4**	**+0.3**	
CUR	**Chagan-Uzun**	**5.48**	**270**	Pn		**Pn**	**21 06 51.7**	**+2.8**	
CUR				Pg		**Pg**	**21 07 09.0**	**-3.2**	
CUR				Sg		**Sg**	**21 08 21.7**	**-1.4**	
ULGR	**Ulagan, Altay**	**5.69**	**276**	Pn		**Pn**	**21 06 55.3**	**+3.5**	
ULGR				Pg		**Pb**	**21 07 10.8**	**+4.2**	
ULGR				Sg		**Sg**	**21 08 27.2**	**-2.8**	
LUZB	**Luzhba, Kemero**	**5.91**	**307**	Pn		**Pn**	**21 06 57.6**	**+2.9**	
LUZB				Pg		**Pg**	**21 07 17.5**	**-3.0**	
LUZB				Sg		**Sb**	**21 08 26.5**	**+5.6**	
AKAR	**Aktash**	**5.92**	**273**	Pn		**Pn**	**21 06 58.2**	**+3.2**	
AKAR				Pg		**Pb**	**21 07 14.4**	**+3.8**	
AKAR				Sg		**Sg**	**21 08 32.5**	**-4.9**	
CHBI	**Chibit, Altay**	**6.00**	**273**	Pn		**Pn**	**21 06 59.0**	**+3.0**	
CHBI				Pg		**Pg**	**21 07 17.7**	**-4.5**	
CHBI				Sg		**Sg**	**21 08 38.1**	**-1.7**	
TASR	**Tashtagol**	**6.09**	**296**	Pn		**Pn**	**21 06 59.4**	**+2.3**	
TASR				Pg		**Pb**	**21 07 17.5**	**+4.2**	
TASR				Sg		**Sg**	**21 08 36.9**	**-5.7**	
DGZ	**Jazzator, Alta**	**6.12**	**267**	Pn		**Pn**	**21 07 01.0**	**+3.3**	
DGZ				Pg		**Pg**	**21 07 20.8**	**-3.7**	
DGZ				Sg		**Sg**	**21 08 43.1**	**-0.6**	
DGZ	**Jazzator, Alta**	**6.12**	**267**	*de*PN		**Pn**	**21 07 00.8**	**+3.1**	
ARTR	**Artybash**	**6.21**	**287**	Pn		**Pn**	**21 07 01.0**	**+2.3**	
ARTR				Pg		Pb	21 07 20.2	+4.9	
ARTR				Sg		**Sg**	**21 08 39.8**	**-6.6**	
GZL	**Zheleznogorsk**	**6.21**	**343**	Pg		**Pb**	**21 07 19.8**	**+4.4**	
GZL				Sg		**Sb**	**21 08 34.5**	**+4.9**	
SHTK	**Zheleznogorsk-**	**6.27**	**343**	Pg		Pn	21 07 05.9	+6.4	
SHTK				Sg		**Sb**	**21 08 25.6**	**-5.5**	
GZLN	**Zheleznogorsk**	**6.28**	**344**	Pg		**Pb**	**21 07 17.0**	**+0.5**	
GZLN				Sg		**Sb**	**21 08 36.8**	**+5.3**	
TRG	**Tyrgan**	**6.37**	**64**	Pg		Pb	21 07 23.7	+5.7	
TRG				Sg		**Sb**	**21 08 41.6**	**+7.6**	
SONM	**Songino Array**	**6.75**	**109**	Pn		**Pb**	**21 07 22.6**	**-2.1**	
	comp=N,0.5nm,0.3s,baz=296,slow=15,SNR=2.1								
SONM				Sn		**Sg**	**21 08 55.1**	**-8.9**	
	comp=N,2.2nm,0.3s,baz=298,slow=19,SNR=1.8								
TUNR	**Tungur**	**6.76**	**272**	Pn		**Pn**	**21 07 09.2**	**+2.8**	
TUNR				Pg		Pb	21 07 30.7	+5.9	
TUNR				Sg		**Sg**	**21 09 05.8**	**+1.5**	
ELDR	**Elanda**	**6.89**	**281**	Pn		**Pn**	**21 07 11.1**	**+3.0**	
ELDR				Pg		**Pg**	**21 07 35.0**	**-4.1**	
ELDR				Sg		**Sg**	**21 09 04.7**	**-3.5**	
ULN	**Ulaanbaatar**	**7.14**	**107**	Pn		**Pn**	**21 07 14.9**	**+3.2**	
ULN				Pg		**Pg**	**21 07 39.5**	**-4.5**	
ULN				Sg		**Sg**	**21 09 15.4**	**-1.0**	
ELT	**Eltsovka**	**7.19**	**298**	Pn		**Pn**	**21 07 12.6**	**+0.4**	
ELT				Pg		**Pb**	**21 07 36.6**	**+4.5**	
ELT				Sg		**Sg**	**21 09 10.0**	**-8.0**	
OGRR	**Ongureny**	**7.37**	**60**	*e*P		**Pn**	**21 07 18.7**	**+4.0**	
OGRR				pmax		pmax			
	comp=Z,11nm,0.6s								
UKR	**Ust'-Kan**	**7.71**	**279**	Pn		**Pn**	**21 07 22.3**	**+2.8**	
UKR				Pg		P

KBG	**Krutoberegovo**	**1.90**	**310**	*eP*		**Pn**	**21 15 08.2**	**-2.3**
KBG				*eS*		**Sn**	**21 15 31.5**	**-2.7**
KBG	**Krutoberegovo**	**1.90**	**310**	PN		**Pn**	**21 15 08.2**	**-2.3**
KBG				S		**Sn**	**21 15 31.5**	**-2.7**
ZLN	**Zelenaya**	**2.73**	**293**	*eP*		**Pn**	**21 15 22.7**	**+0.6**
ZLN				*eS*		**Sb**	**21 15 58.0**	**-2.5**
ZLN	**Zelenaya**	**2.73**	**293**	PN		**Pn**	**21 15 22.7**	**+0.6**
ZLN				S		**Sb**	**21 15 58.0**	**-2.5**
BDR	**Baidarnaya**	**2.76**	**305**	*eP*		**Pn**	**21 15 22.5**	**0.0**
BDR				*eS*		**Sn**	**21 15 55.0**	**-0.6**
BDR	**Baidarnaya**	**2.76**	**305**	PN		**Pn**	**21 15 22.5**	**0.0**
BDR				S		**Sn**	**21 15 55.0**	**-0.6**
BZGR	**Bezymyannyi-Gr**	**2.76**	**291**	*eP*		**Pn**	**21 15 23.2**	**+0.7**
BZGR				*eS*		**Sn**	**21 15 56.8**	**+1.1**
BZGR	**Bezymyannyi-Gr**	**2.76**	**291**	PN		**Pn**	**21 15 23.2**	**+0.7**
BZGR				S		**Sn**	**21 15 56.8**	**+1.1**
CIRR	**Tsirk**	**2.79**	**294**	*eP*		**Pn**	**21 15 23.6**	**+0.6**
CIRR	**Tsirk**	**2.79**	**294**	PN		**Pn**	**21 15 23.6**	**+0.6**
LGNR	**Loginova**	**2.81**	**293**	*eP*		**Pn**	**21 15 24.1**	**+0.8**
LGNR	**Loginova**	**2.81**	**293**	PN		**Pn**	**21 15 24.1**	**+0.8**
TUMD	**Tumrok D**	**2.81**	**275**	*eP*		**Pn**	**21 15 23.2**	**0.0**
SRKR	**Sorokina**	**2.83**	**306**	*eP*		**Pn**	**21 15 23.8**	**+0.4**
SRKR	**Sorokina**	**2.83**	**306**	PN		**Pn**	**21 15 23.8**	**+0.4**
KZV	**Kizimen**	**2.87**	**273**	*eP*		**Pn**	**21 15 24.2**	**+0.1**
KZV	**Kizimen**	**2.87**	**273**	PN		**Pn**	**21 15 24.2**	**+0.1**
BZWR	**Bezymyannyi-We**	**2.88**	**290**	*eP*		**Pn**	**21 15 25.2**	**+1.0**
BZWR				*eS*		**Sn**	**21 16 00.0**	**+1.4**
BZWR	**Bezymyannyi-We**	**2.88**	**290**	PN		**Pn**	**21 15 25.2**	**+1.0**
BZWR				S		**Sn**	**21 16 00.0**	**+1.4**
KLY	**Klyuchi**	**2.92**	**298**	*eP*		**Pn**	**21 15 23.8**	**-0.7**
KLY				*eS*		**Sn**	**21 15 58.1**	**-1.2**
KLY	**Klyuchi**	**2.92**	**298**	PN		**Pn**	**21 15 23.8**	**-0.7**
KLY				S		**Sn**	**21 15 58.1**	**-1.2**
KRSR	**Krestovskiy**	**2.92**	**295**	*eP*		**Pn**	**21 15 24.5**	**-0.2**
KRSR	**Krestovskiy**	**2.92**	**295**	PN		**Pn**	**21 15 24.5**	**-0.2**
KIRR	**Kirishev**	**2.96**	**290**	*eP*		**Pn**	**21 15 25.9**	**+0.7**
KIRR				*eS*		**Sn**	**21 16 01.8**	**+1.3**
KIRR	**Kirishev**	**2.96**	**290**	PN		**Pn**	**21 15 25.9**	**+0.7**
KIRR				S		**Sn**	**21 16 01.8**	**+1.3**
TUMR	**Tumrok**	**2.96**	**277**	*eP*		**Pn**	**21 15 25.9**	**+0.6**
TUMR	**Tumrok**	**2.96**	**277**	PN		**Pn**	**21 15 25.9**	**+0.6**
KMNR	**Kamenistaya**	**2.97**	**286**	*eP*		**Pn**	**21 15 26.2**	**+0.9**
KMNR	**Kamenistaya**	**2.97**	**286**	PN		**Pn**	**21 15 26.2**	**+0.9**
KPT	**Kopyto**	**3.02**	**290**	*eP*		**Pn**	**21 15 26.7**	**+0.6**
KPT	**Kopyto**	**3.02**	**290**	PN		**Pn**	**21 15 26.7**	**+0.6**
KOZ	**Kozyrevsk**	**3.24**	**290**	*eP*		**Pn**	**21 15 30.4**	**+1.4**
KOZ	**Kozyrevsk**	**3.24**	**290**	PN		**Pn**	**21 15 30.4**	**+1.4**
SRDR	**Sredinnyy**	**3.40**	**294**	*eP*		**Pn**	**21 15 32.2**	**+0.9**
SRDR	**Sredinnyy**	**3.40**	**294**	PN		**Pn**	**21 15 32.2**	**+0.9**
KII	**Karymskiy**	**3.55**	**256**	*eP*		**Pn**	**21 15 33.9**	**+0.5**
KII	**Karymskiy**	**3.55**	**256**	PN		**Pn**	**21 15 33.9**	**+0.5**
SPN	**Mys Shipunski**	**3.67**	**240**	*eP*		**Pn**	**21 15 34.0**	**-0.9**
SPN				*eS*		**Sn**	**21 16 15.4**	**-2.5**
SPN	**Mys Shipunski**	**3.67**	**240**	PN		**Pn**	**21 15 34.0**	**-0.9**
SPN				S		**Sn**	**21 16 15.4**	**-2.5**
NLC	**Nalytchevo**	**3.98**	**244**	*eP*		**Pn**	**21 15 38.9**	**-0.2**
NLC				*eS*		**Sn**	**21 16 23.6**	**-1.8**
NLC	**Nalytchevo**	**3.98**	**244**	PN		**Pn**	**21 15 38.9**	**-0.2**
NLC				S		**Sn**	**21 16 23.6**	**-1.8**
SDLR	**Sedlovina**	**4.17**	**247**	*eP*		**Pn**	**21 15 42.1**	**+0.3**
SDLR				*eS*		**Sn**	**21 16 30.0**	**-0.3**
SDLR	**Sedlovina**	**4.17**	**247**	PN		**Pn**	**21 15 42.1**	**+0.3**
SDLR				S		**Sn**	**21 16 30.0**	**-0.3**
SMAR	**Somma**	**4.22**	**247**	*eP*		**Pn**	**21 15 42.9**	**+0.3**
SMAR				*eS*		**Sn**	**21 16 30.7**	**-1.0**
SMAR	**Somma**	**4.22**	**247**	PN		**Pn**	**21 15 42.9**	**+0.3**
SMAR				S		**Sn**	**21 16 30.7**	**-1.0**
KRER	**Koryakskii**	**4.22**	**248**	*eP*		**Pn**	**21 15 43.5**	**+0.8**
KRER	**Koryakskii**	**4.22**	**248**	PN		**Pn**	**21 15 43.5**	**+0.8**
UGLR	**Uglovaya**	**4.23**	**247**	*eP*		**Pn**	**21 15 43.3**	**+0.6**
UGLR	**Uglovaya**	**4.23**	**247**	PN		**Pn**	**21 15 43.3**	**+0.6**
AVH	**Avacha**	**4.25**	**248**	*eP*		**Pn**	**21 15 43.7**	**+0.8**
AVH	**Avacha**	**4.25**	**248**	PN		**Pn**	**21 15 43.7**	**+0.8**
KRX	**Arik**	**4.25**	**249**	*eP*		**Pn**	**21 15 43.7**	**+0.6**
KRX				*eS*		**Sn**	**21 16 31.9**	**-0.6**
KRX	**Arik**	**4.25**	**249**	PN		**Pn**	**21 15 43.7**	**+0.6**
KRX				S		**Sn**	**21 16 31.9**	**-0.6**
KOK	**Koryaka**	**4.29**	**248**	*eP*		**Pn**	**21 15 44.2**	**+0.7**
KOK	**Koryaka**	**4.29**	**248**	PN		**Pn**	**21 15 44.2**	**+0.7**
DALK	**Dalny**	**4.35**	**245**	*eP*		**Pn**	**21 15 44.5**	**+0.2**
DALK				*eS*		**Sn**	**21 16 32.6**	**-2.1**
DALK	**Dalny**	**4.35**	**245**	PN		**Pn**	**21 15 44.5**	**+0.2**
OSSR	**Ossora**	**4.38**	**345**	*eP*		**Pn**	**21 15 44.2**	**-0.4**
OSSR				*eS*		**Sn**	**21 16 33.5**	**-1.8**
OSSR	**Ossora**	**4.38**	**345**	PN		**Pn**	**21 15 44.2**	**-0.4**
PET	**Petropavlovsk**	**4.41**	**245**	*eP*		**Pn**	**21 15 45.6**	**+0.6**
PET				*eS*		**Sn**	**21 16 35.7**	**-0.4**
PET	**Petropavlovsk**	**4.41**	**245**	*e*PN		**Pn**	**21 15 45.0**	**0.0**
PET				pmax	pmax			
	comp=Z,99nm,0.4s							
PET	**Petropavlovsk**	**4.41**	**245**			**Pn**	**21 15 45.3**	**+0.3**
PET				Sn		**Sn**	**21 16 34.4**	**-1.7**
KRMR	**Karymshinskiy**	**4.78**	**245**	*eP*		**Pn**	**21 15 51.3**	**+1.1**
KRMR				*eS*		**Sn**	**21 16 44.9**	**-0.4**
KRMR	**Karymshinskiy**	**4.78**	**245**	PN		**Pn**	**21 15 51.3**	**+1.1**
KRMR				S		**Sn**	**21 16 44.9**	**-0.4**
RUS	**Russkaya**	**4.80**	**240**	*eP*		**Pn**	**21 15 50.2**	**-0.3**
RUS				*eS*		**Sn**	**21 16 43.7**	**-2.1**
RUS	**Russkaya**	**4.80**	**240**	PN		**Pn**	**21 15 50.2**	**-0.3**
PEA0B	**Petropavlovsk-**	**4.88**	**250**	*c iP*N		**Pn**	**21 15 52.5**	**+1.0**
PEA0B	**Petropavlovsk-**	**4.88**	**250**			**Pn**	**21 15 52.5**	**+1.2**
PEA0B				Sn		**Sn**	**21 16 47.8**	**+0.1**
PETK	**Petropavlovsk-**	**4.88**	**250**	Pn		**Pn**	**21 15 52.5**	**+1.0**
	comp=Z,26nm,0.3s,baz=79,slow=18,SNR=222							
PETK				Sn		**Sn**	**21 16 48.1**	**+0.5**
	baz=329,slow=30,SNR=1.1							
MTVR	**Mutnovka**	**4.94**	**242**	*eP*		**Pn**	**21 15 53.0**	**+0.5**
MTVR				*eS*		**Sn**	**21 16 47.9**	**-1.5**
MTVR	**Mutnovka**	**4.94**	**242**	PN		**Pn**	**21 15 53.0**	**+0.5**
GRL	**Gorelyy**	**4.96**	**243**	*eP*		**Pn**	**21 15 53.6**	**+0.9**
GRL	**Gorelyy**	**4.96**	**243**	PN		**Pn**	**21 15 53.6**	**+0.9**
PALN	**Palana**	**4.98**	**326**	*eP*		**Pn**	**21 15 54.8**	**+1.9**
PALN	**Palana**	**4.98**	**326**	PN		**Pn**	**21 15 54.8**	**+1.9**
ASAK	**Asacha**	**5.14**	**242**	*eP*		**Pn**	**21 15 56.0**	**+0.8**
ASAK	**Asacha**	**5.14**	**242**	PN		**Pn**	**21 15 56.0**	**+0.8**
APC	**Apacha**	**5.25**	**249**	*eP*		**Pn**	**21 15 58.2**	**+1.6**
APC	**Apacha**	**5.25**	**249**	PN		**Pn**	**21 15 58.2**	**+1.6**
KDTR	**Khodutka, Kamc**	**5.40**	**236**	*eP*		**Pn**	**21 15 58.2**	**-0.4**
KDTR				*eS*		**Sn**	**21 16 55.6**	**-4.9**
KDTR	**Khodutka, Kamc**	**5.40**	**236**	PN		**Pn**	**21 15 58.2**	**-0.4**
TILK	**Tilichiki**	**5.43**	**4**	*eP*		**Pn**	**21 15 59.7**	**+0.7**
TILK	**Tilichiki**	**5.43**	**4**	PN		**Pn**	**21 15 59.7**	**+0.7**
MIPR	**Malaya Ipel'ka**	**5.79**	**245**	*eP*		**Pn**	**21 16 05.4**	**+1.4**
MIPR	**Malaya Ipel'ka**	**5.79**	**245**	PN		**Pn**	**21 16 05.4**	**+1.4**
SKR	**Severo-Kuril's**	**7.07**	**236**⇓	*e*PN		**Pn**	**21 16 21.4**	**-0.1**
ALID	**Alaid**	**7.22**	**239**	*eP*		**Pn**	**21 16 24.2**	**+0.4**
ALID	**Alaid**	**7.22**	**239**	PN		**Pn**	**21 16 24.2**	**+0.4**
KMSK	**Kamenskaya**	**7.45**	**3**	*eP*		**Pn**	**21 16 27.2**	**+0.5**
KMSK	**Kamenskaya**	**7.45**	**3**	PN		**Pn**	**21 16 27.2**	**+0.5**
NIKH	**Nikolski High**	**15.31**	**87**	Pn		**P**	**21 18 17.1**	**-1.7**
JKA	**Kamikawa-asahi**	**18.25**	**243**	P		**Pn**	**21 18 50.8**	**-0.4**
ASAJ	**Asahikawa**	**18.25**	**243**	P		**Pn**	**21 18 50.8**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=67,slow=13,SNR=8.7							
ASAJ				LR		LR	21 25 37.4	
	comp=Z,228nm,18.5s,baz=295,slow=36							
ERM	**Erimo**	**19.51**	**237**	P		**P**	**21 19 05.3**	**+0.1**
ERM				pmax	pmax			
	comp=Z,73nm,1.4s							
ERM	**Erimo**	**19.51**	**237**	P		**P**	**21 19 05.3**	**+0.1**
YAK	**Yakutsk**	**19.64**	**305**⇓	*e*P		**Pn**	**21 19 08.0**	**+0.1**
YAK				pmax	pmax			
	comp=Z,4.0nm,0.4s							
TTA	**Tatalina**	**21.14**	**52**	P		P	21 19 15.9	-6.9
TTA				pmax	pmax			
	comp=Z,3.0nm,1.2s							
TTA	**Tatalina**	**21.14**	**52**	P		P	21 19 15.9	-6.9
CNPM	**China Poot**	**23.58**	**61**	P		**P**	**21 19 46.8**	**-1.7**
CNPM				IAmb	IAmb	IAmb	21 19 49.0	
	comp=Z,8.2nm,0.9s							
USRK	**Ussuriysk Ar.**	**23.92**	**257**	P		**P**	**21 19 53.4**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=128,slow=2.4,SNR=4.2							
COLD	**Coldfoot**	**24.06**	**42**	P		**P**	**21 19 52.5**	**-0.5**
NEA	**Nenana**	**24.30**	**49**	P		**P**	**21 19 55.3**	**+0.2**
NEA				IAmb	IAmb	IAmb	21 19 56.4	
	comp=Z,6.7nm,0.9s							
MCK	**McKinley**	**24.35**	**51**	P		**P**	**21 19 54.4**	**-1.4**
MCK				pmax	pmax			
	comp=Z,9.0nm,1.1s							
MCK	**McKinley**	**24.35**	**51**	P		**P**	**21 19 54.4**	**-1.4**
MCK				IAmb	IAmb	IAmb	21 19 57.5	
	comp=Z,8.9nm,1.1s							

RND	**Reindeer**	**24.39**	**51**	P		**P**	**21 19 54.0**	**-2.2**
RND				pmax	pmax			
	comp=Z,6.0nm,0.9s							
RND	**Reindeer**	**24.39**	**51**	P		**P**	**21 19 54.0**	**-2.2**
GHO	**Glory Hole Cre**	**24.45**	**55**	P		**P**	**21 19 55.7**	**-1.0**
TOLK	**Toolik Lake Re**	**24.53**	**39**	P		**P**	**21 19 55.6**	**-1.7**
TOLK				IAmb	IAmb	IAmb	21 19 58.7	
	comp=Z,7.6nm,1.1s							
KNK	**Knik Glacier**	**24.71**	**56**	P		**P**	**21 19 58.0**	**-1.0**
KNK				IAmb	IAmb	IAmb	21 19 59.5	
	comp=Z,7.1nm,0.8s							
WRH	**Wood River Hil**	**24.72**	**49**	P		**P**	**21 19 57.7**	**-1.3**
SML	**Sawmill**	**24.73**	**55**	P		**P**	**21 19 58.2**	**-1.0**
SML				IAmb	IAmb	IAmb	21 19 59.9	
	comp=Z,6.3nm,0.7s							
COLA	**College**	**24.83**	**48**	*de*P		**P**	**21 19 59.8**	**-0.1**
COLA				pmax	pmax			
	comp=Z,9.0nm,0.8s							
COLA	**College**	**24.83**	**48**	P		**P**	**21 19 59.4**	**-0.6**
CCB	**Clear Creek Bu**	**24.84**	**48**	P		**P**	**21 19 59.9**	**-0.2**
IL31		**25.24**	**48**	IAmb	IAmb	IAmb	21 20 06.1	
	comp=Z,6.9nm,0.9s							
ILAR	**Eielson Array**	**25.24**	**48**	P		**P**	**21 20 03.1**	**-0.6**
	comp=Z,3.9nm,0.8s,baz=259,slow=8.7,SNR=37							
PRP	**Porcupine Dome**	**25.82**	**46**	IAmb	IAmb		21 20 10.2	
	comp=Z,9.3nm,0.9s							
FYU	**Fort Yukon**	**25.95**	**44**	IAmb	IAmb		21 20 11.3	
	comp=Z,10nm,0.8s							
MJA0	**Matsu Arr-Jizo**	**26.16**	**236**	*e*P		**P**	**21 20 13.9**	**+1.6**
MJA0				pmax	pmax			
	comp=Z,2.0nm,0.5s							
MJAR	**Matsushiro Arr**	**26.18**	**236**	P		**P**	**21 20 12.9**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=19,slow=7.0,SNR=5.4							
RAGM	**Ragged Mountai**	**26.69**	**58**	P		**P**	**21 20 15.8**	**-1.2**
RAGM				IAmb	IAmb	IAmb	21 20 25.3	
	comp=Z,9.1nm,0.9s							
EGAK	**Eagle**	**27.69**	**48**	P		**P**	**21 20 23.1**	**-2.7**
EGAK				IAmb	IAmb	IAmb	21 20 25.4	
	comp=Z,5.0nm,0.8s							
YAH	**Yahtse**	**28.12**	**57**	P		**P**	**21 20 28.0**	**-2.0**
YAH				IAmb	IAmb	IAmb	21 20 31.4	
	comp=Z,6.0nm,0.8s							
EPYK	**Eagle Plains**	**29.37**	**44**	IAmb	IAmb		21 20 42.4	
	comp=Z,7.3nm,1.1s							
HYT	**Haines Junctio**	**30.04**	**55**	IAmb	IAmb		21 20 48.1	
	comp=Z,4.4nm,1.0s							
INK	**Inuvik**	**30.42**	**40**	P		**P**	**21 20 50.1**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=275,slow=8.6,SNR=8.3							
INK	**Inuvik**	**30.42**	**40**	P		**P**	**21 20 50.4**	**+0.5**
INK				pmax	pmax			
	comp=Z,2.0nm,0.8s							
INK	**Inuvik**	**30.42**	**40**	P		**P**	**21 20 50.4**	**+0.5**
KSRS	**Korea Array**	**30.78**	**251**	P		**P**	**21 20 54.9**	**+1.5**
	comp=Z,0.9nm,0.5s,baz=36,slow=8.2,SNR=2.7							
DLBC	**Dease Lake**	**34.41**	**57**	P		**P**	**21 21 25.8**	**+0.7**
	comp=Z,1.8nm,0.4s,baz=3.2,slow=11,SNR=4.9							
DLBC	**Dease Lake**	**34.41**	**57**	P		**P**	**21 21 24.7**	**-0.4**
DLBC				IAmb	IAmb	IAmb	21 21 34.0	
	comp=Z,7.8nm,1.4s							
H11N2	**WAKE ISLAND Hy**	**35.28**	**177**	T		T	21 59 15.9	
	baz=359,slow=76,SNR=95							
H11N3	**WAKE ISLAND Hy**	**35.30**	**177**	T		T	21 59 20.0	
	baz=359,slow=76,SNR=73							
H11N1	**WAKE ISLAND Hy**	**35.30**	**177**	T		T	21 59 23.0	
	baz=359,slow=76,SNR=72							
TLY	**Talaya**	**35.89**	**291**	P		**P**	**21 21 36.8**	**-1.1**
TLY				pmax	pmax			
	comp=Z,3.0nm,0.8s							
TLY	**Talaya**	**35.89**	**291**	P		**P**	**21 21 36.8**	**-1.1**
TLY				IAmb	IAmb	IAmb	21 21 42.0	
	comp=Z,3.3nm,0.8s							
H11S1	**WAKE ISLAND Hy**	**36.50**	**178**	T		T	22 00 42.6	
	baz=359,slow=76,SNR=8.8							
H11S3	**WAKE ISLAND Hy**	**36.51**	**178**	T		T	22 00 49.4	
	baz=359,slow=76,SNR=5.3							
H11S2	**WAKE ISLAND Hy**	**36.51**	**178**	T		T	22 00 53.1	
	baz=359,slow=76,SNR=7.4							
YKA	**Yellowknife Ar**	**39.62**	**46**	P		**P**	**21 22 09.0**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=295,slow=7.7,SNR=28							
YKA	**Yellowknife Ar**	**39.62**	**46**	P		**P**	**21 22 09.0**	**-0.2**
GTA	**Gaotai**	**45.40**	**278**	*e*P		**P**	**21 22 58.0**	**+1.4**
GTA				pP	pwP		21 23 05.8	-1.5
GTA				sP	sP		21 23 09.7	+9.4
GTA				pmax	pmax			
	comp=Z,2.0nm,1.5s							
MKAR	**Makanchi Array**	**50.03**	**297**	P		**P**	**21 23 31.0**	**-1.3**
	comp=Z,0.2nm,0.6s,baz=42,slow=7.1,SNR=2.5							
NVAR	**Mina Array Bea**	**52.23**	**75**	P		**P**	**21 23 50.2**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=313,slow=8.0,SNR=3.4							
RLMT	**Red Lodge**	**52.41**	**63**	IAmb	IAmb	IAmb	21 23 53.9	
	comp=Z,5.3nm,1.1s							
PDAR	**Pinedale Array**	**53.90**	**65**	P		**P**	**21 24 01.5**	**0.0**
	comp=Z,1.0nm,0.9s,baz=342,slow=3.3,SNR=6.4							
SRU	**San Rafael Swe**	**56.00**	**69**	P		**P**	**21 24 19.7**	**+3.1**
SRU				pmax	pmax			
	comp=Z,4.0nm,0.8s							
SRU	**San Rafael Swe**	**56.00**	**69**	P		**P**	**21 24 19.7**	**+3.1**
KSH	**Kashi**	**58.42**	**295**	P		**P**	**21 24 35.4**	**+1.7**
KSH				pP	pwP		21 24 41.3	-3.1
KSH				sP	sP		21 24 43.2	+5.8
KSH				pmax	pmax			
	comp=Z,10.0nm,1.4s							
KSH				pmax	pmax			
	comp=Z,56nm,5.0s							
FINES	**FINESS Array B**	**59.47**	**339**	*i* P		**P**	**21 24 42.2**	**+1.8**
FINES				pmax	pmax			
	comp=Z,1.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**61.55**	**261**	*i* P		**P**	**21 24 56.5**	**+1.3**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
GAR	**Garm**	**61.72**	**298**	P		**P**	**21 24 55.0**	**-1.4**
TXAR	**Lajitas Array**	**67.08**	**71**	P		**P**	**21 25 31.6**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=290,slow=4.0,SNR=8.0							
ASAR	**Alice Springs**	**82.88**	**209**	P		**P**	**21 27 01.1**	**-1.4**
	comp=Z,0.2nm,0.6s,baz=26,slow=4.5,SNR=4.4							
ESDC	**Sonseca Array**	**85.19**	**352**	P		**P**	**21 27 14.7**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=336,slow=3.3,SNR=4.2							

SOME **12** *21:18:59.7,39.28N×75.42E,h20km*
KRNET **12** *21:19:00.9±0.1,39.02N×75.74E,mb2.9*
NNC **12** *21:19:03.1±2.7,39.49N×75.40E,h0km,mb3.5,mpv3.1,*
Error ellipse: s-maj=20.0km s-min=17.8km az=93.0
ISC 12 21:19:01.1±2.0,39.17N±0.10×75.48E±0.05,h10km,n28,
s25.51/43,2C-8D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**2.88**	**319**	⇓*i*	P	**Pb**	**21 19 53.9**	**+1.2**
	baz=18							
ARSB				⇓*i*	S	**Sg**	**21 20 32.6**	**-1.1**
	baz=18							
KDJ	**Kajisay**	**3.23**	**23**	⇓*i*	P	**Pn**	**21 19 56.2**	**+4.1**
	baz=19							
KDJ				⇓*i*	S	**Sb**	**21 20 36.8**	**-1.4**
	baz=19							
BOOM	**Boomskoye usch**	**3.34**	**6**	⇑*i*	P	**Pb**	**21 19 58.5**	**-2.0**
	baz=2.0							
BOOM				⇑*i*	S	**Sb**	**21 20 40.6**	**-0.7**
	baz=2.0							
AAK	**Ala-Archa**	**3.55**	**348**	Pg		**Pb**	**21 20 02.6**	**-1.5**
	2.9nm,0.5s							
AAK				Lg		Lg	21 20 43.8	
	8.7nm,0.7s							
BTK	**Batken**	**3.71**	**285**	⇓*i*	P	**Pb**	**21 20 05.3**	**-1.5**
	baz=87							
BTK				⇓*i*	S	**Sb**	**21 20 52.0**	**+0.2**
	baz=87							
TKM2	**Tokmak 2**	**3.75**	**1**	⇓Pg		**Pb**	**21 20 05.9**	**-1.7**
	1.8nm,0.5s							
TKM2				⇓Lg		Lg	21 20 48.5	
	5.1nm,0.5s							
KST	**Kastek**	**3.89**	**5**	*e*P		**Pb**	**21 20 06.5**	**-3.4**
	1.6nm,0.4s							
KST				*e*S		**Sb**	**21 20 54.8**	**-2.3**
	3.8nm,0.5s							
KST	**Kastek**	**3.89**	**5**	Pg		**Pb**	**21 20 06.6**	**-3.4**
	4.4nm,0.6s							
KST				Lg		Lg	21 20 54.8	
	11nm,0.7s							
TNSS	**Tian-Shan**	**4.02**	**16**	*e*P		**Pb**	**21 20 08.9**	**-3.4**
	1.5nm,0.4s							
TNSS				*e*S		**Sb**	**21 20 58.7**	**-2.5**
	3.9nm,0.7s							
TNSS	**Tian-Shan**	**4.02**	**16**	Pg		**Pb**	**21 20 08.9**	**-3.4**
	2.7nm,0.6s							
TNSS				Lg		Lg	21 20 59.5	
	5.7nm,0.6s							
DGS	**Degeres**	**4.08**	**3**	*e*P		**Pb**	**21 20 12.3**	**-0.8**
	2.2nm,0.5s							
DGS				*e*S		**Sb**	**21 21 04.8**	**+2.3**
	11nm,0.7s							
DGS	**Degeres**	**4.08**	**3**	Pg		**Pb**	**21 20 12.3**	**-0.8**
DGS				Lg		Lg	21 21 05.4	
	11nm,0.7s							
MDOK	**Medeo**	**4.17**	**16**	*e*P		**Pb**	**21 20 14.1**	**-0.6**
	1.6nm,0.4s							
MDOK				*e*S		**Sb**	**21 21 07.7**	**+2.6**
	5.6nm,0.7s							
MDOK	**Medeo**	**4.17**	**16**	Pg		**Pb**	**21 20 14.0**	**-0.6**
	1.9nm,0.5s							
MDOK				Lg		Lg	21 21 08.0	
	6.5nm,0.6s							
KOTS	**Kotyrbulak**	**4.25**	**16**	*e*P		**Pb**	**21 20 14.5**	**-1.5**
	2.2nm,0.3s							
KOTS				*e*S		**Sb**	**21 21 08.2**	**+0.8**
	17nm,0.5s							
KOTS	**Kotyrbulak**	**4.25**	**16**	Pg		**Pb**	**21 20 14.5**	**-1.5**
	5.0nm,0.4s							
KOTS				Lg		Lg	21 21 09.1	
	17nm,0.5s							
SATY	**Saty**	**4.47**	**29**	*e*P		**Pb**	**21 20 19.3**	**-0.6**
	1.3nm,0.4s							
SATY				*e*S		**Sb**	**21 21 16.4**	**+2.6**
	14nm,1.5s							
SATY	**Saty**	**4.47**	**29**	Pg		**Pb**	**21 20 19.3**	**-0.6**
	2.0nm,0.4s							
SATY				Lg		Lg	21 21 16.4	
	14nm,1.5s							
KRBS	**Karabastau**	**4.53**	**2**	*e*P		**Pb**	**21 20 21.6**	**+0.9**
	1.6nm,0.6s							
KRBS				*e*S		**Sb**	**21 21 20.6**	**+5.2**
	3.9nm,0.6s							
KRBS	**Karabastau**	**4.53**	**2**	Pg		**Pb**	**21 20 21.6**	**+0.9**
	2.3nm,0.5s							
KRBS				Lg		Lg	21 21 20.1	
	3.9nm,0.6s							
KUU	**Kurty**	**4.77**	**8**	*e*P		**Pb**	**21 20 25.5**	**+0.7**
	1.1nm,0.2s							
KUU				*e*S		**Sb**	**21 21 27.2**	**+5.0**
	2.9nm,0.1s							
KUU	**Kurty**	**4.77**	**8**	Pg		**Pb**	**21 20 25.5**	**+0.7**
	1.6nm,0.5s							
KUU				Lg		Lg	21 21 27.2	
	6.8nm,0.6s							
CHKK	**Chushkaly**	**4.82**	**13**	*e*P		**Pb**	**21 20 26.2**	**+0.5**
	0.3nm,0.1s							
CHKK				*e*S		**Sb**	**21 21 28.5**	**+4.8**
	3.0nm,0.4s							
CHKK	**Chushkaly**	**4.82**	**13**	Pg		**Pb**	**21 20 26.2**	**+0.5**
	1.5nm,0.6s							
CHKK				Lg		Lg	21 21 28.8	
	4.2nm,0.7s							
SHLS	**Shalkode**	**4.99**	**36**	*e*P		**Pg**	**21 20 33.8**	**-2.9**
	3.4nm,0.4s							
SHLS				*e*S		**Sg**	**21 21 41.3**	**-0.1**
	7.0nm,1.0s							
SHLS	**Shalkode**	**4.99**	**36**	Pg		**Pg**	**21 20 33.8**	**-2.9**
	2.9nm,0.6s							
SHLS				Lg		Lg	21 21 41.3	
	8.8nm,0.6s							
MNBS	**Baschi**	**5.38**	**23**	*e*P		**Pb**	**21 20 38.2**	**+3.0**
	1.5nm,0.7s							
MNBS

YM03				*eS*	**Sn**	**21 52 13.9**	**0.0**		
	baz=310								
YHNB	**Yeheng**	**0.62**	**261**	P	**Pn**	**21 52 03.4**	**+0.1**		
	baz=260								
YHNB				S	**Sn**	**21 52 14.2**	**+0.2**		
	baz=260								
ANP	**Anpu**	**0.63**	**311**	*eP*	**Pn**	**21 52 04.1**	**+0.7**		
	baz=309								
ANP				*eS*	**Sn**	**21 52 14.0**	**-0.3**		
	baz=309								
TWY	**Chenhua**	**0.65**	**321**	*eP*	**Pn**	**21 52 03.6**	**+0.2**		
	baz=319								
TWY				*eS*	**Sn**	**21 52 15.1**	**+0.8**		
	baz=319								
TWS1	**Kuangyinshan**	**0.66**	**300**	*eP*	**Pn**	**21 52 03.8**	**+0.2**		
	baz=299								
TWS1				*eS*	**Sn**	**21 52 16.6**	**+2.0**		
	baz=299								
NTST	**Danshui**	**0.67**	**306**	*eP*	**Pn**	**21 52 04.0**	**+0.3**		
	baz=304								
NTST				*eS*	**Sn**	**21 52 15.1**	**+0.4**		
	baz=304								
NNSH	**Datong**	**0.70**	**241**	*eP*	**Pn**	**21 52 04.3**	**+0.1**		
	baz=240								
NNSH				*eS*	**Sn**	**21 52 15.6**	**+0.1**		
	baz=240								
NNSB	**Datong**	**0.70**	**241**	*eP*	**Pn**	**21 52 04.2**	**+0.1**		
	baz=240								
NNSB				*eS*	**Sn**	**21 52 15.5**	**0.0**		
	baz=240								
NNS	**Nan Shan**	**0.70**	**242**	P	**Pn**	**21 52 04.3**	**+0.1**		
	baz=241								
NNS				*eS*	**Sn**	**21 52 14.6**	**-0.9**		
	baz=241								
NACB	**Ninganchiao**	**0.73**	**215**	P	**Pn**	**21 52 03.3**	**-1.0**		
	baz=215								
NACB				*eS*	**Sn**	**21 52 14.6**	**-1.2**		
	baz=215								
WLTB	**Daxi**	**0.73**	**276**	P	**Pn**	**21 52 05.0**	**+0.7**		
	baz=275								
WLTB				S	**Sn**	**21 52 17.1**	**+1.3**		
	baz=275								
ETLH	**Xiulin Townshi**	**0.77**	**223**	*eP*	**Pn**	**21 52 04.3**	**-0.6**		
	baz=223								
ETLH				*eS*	**Sn**	**21 52 15.6**	**-1.1**		
	baz=223								
TWD	**Chiawan**	**0.81**	**211**	P	**Pn**	**21 52 04.4**	**-0.8**		
	baz=211								
TWD				*eS*	**Sn**	**21 52 16.2**	**-1.2**		
	baz=211								
NCU	**National Centr**	**0.81**	**284**	*eP*	**Pn**	**21 52 05.7**	**+0.4**		
	baz=283								
NCU				*eS*	**Sn**	**21 52 18.6**	**+1.2**		
	baz=283								
NCUH	**Zhongli**	**0.81**	**284**	*eP*	**Pn**	**21 52 05.8**	**+0.5**		
	baz=283								
NCUH				*eS*	**Sn**	**21 52 18.7**	**+1.2**		
	baz=283								
PCYT	**Pengchaiyu**	**0.85**	**1**	*eP*	**Pn**	**21 52 06.4**	**+0.6**		
JYNG	**Yonagunijimaku**	**0.88**	**111**	P	**Pn**	**21 52 05.7**	**-0.3**		
JYNG				*eS*	**Sn**	**21 52 18.2**	**-0.6**		
HWA	**Hwalien**	**0.89**	**207**	*eP*	**Pn**	**21 52 06.8**	**+0.5**		
	baz=207								
HWA				*eS*	**Sn**	**21 52 19.8**	**+0.7**		
	baz=207								
YOJ	**Yonaguni jima**	**0.93**	**109**	*eP*	**Pn**	**21 52 06.4**	**-0.2**		
	baz=109								
YOJ				*eS*	**Sn**	**21 52 19.5**	**-0.4**		
	baz=109								
YOJ	**Yonaguni jima**	**0.93**	**109**	P	**Pn**	**21 52 06.3**	**-0.3**		
YOJ				*eS*	**Sn**	**21 52 19.3**	**-0.6**		
NHW	**Xinwu Township**	**0.94**	**285**	P	**Pn**	**21 52 07.2**	**+0.4**		
	baz=283								
NHW				S	**Sn**	**21 52 21.5**	**+1.3**		
	baz=283								
LIOB	**Emei**	**0.95**	**263**	*eP*	**Pn**	**21 52 07.3**	**+0.4**		
	baz=262								
LIOB				*eS*	**Sn**	**21 52 20.9**	**+0.4**		
	baz=262								
TWT	**Tachien**	**0.95**	**237**	P	**Pn**	**21 52 07.6**	**+0.5**		
	baz=237								
TWT				S	**Sn**	**21 52 20.8**	**+0.1**		
	baz=237								
WHF	**Hehuan Shan**	**0.95**	**229**	*eP*	**Pn**	**21 52 07.0**	**-0.3**		
	baz=228								
WHF				*eS*	**Sn**	**21 52 21.0**	**-0.2**		
	baz=228								
TDCB	**Techi**	**0.96**	**238**	*eP*	**Pn**	**21 52 07.5**	**+0.3**		
	baz=237								
TDCB				*eS*	**Sn**	**21 52 20.6**	**-0.4**		
	baz=237								
NSTT	**Nanjuang**	**0.96**	**262**	*eP*	**Pn**	**21 52 07.5**	**+0.5**		
	baz=261								
NSTT				*eS*	**Sn**	**21 52 21.1**	**+0.4**		
	baz=261								
SBCB	**Hsinchu**	**0.97**	**271**	*eP*	**Pn**	**21 52 07.6**	**+0.5**		
	baz=270								
SBCB				*eS*	**Sn**	**21 52 21.6**	**+0.8**		
	baz=270								
HSN	**Hsinchu**	**0.98**	**272**	*eS*	**Sn**	**21 52 21.1**	**0.0**		
	baz=273								
CHGB	**Renai**	**1.07**	**229**	*eP*	**Pn**	**21 52 08.5**	**-0.1**		
	baz=228								
CHGB				*eS*	**Sn**	**21 52 23.1**	**-0.3**		
	baz=228								
ESL	**Shilin**	**1.11**	**211**	*eP*	**Pn**	**21 52 09.1**	**+0.2**		
	baz=210								
ESL				*eS*	**Sn**	**21 52 21.5**	**-2.4**		
	baz=210								
WHP	**Taichung City**	**1.12**	**244**	*eP*	**Pn**	**21 52 09.7**	**+0.6**		
	baz=244								
WHP				*eS*	**Sn**	**21 52 24.7**	**+0.4**		
	baz=244								
OWD	**Renai**	**1.14**	**225**	*eP*	**Pn**	**21 52 09.0**	**-0.5**		
	baz=224								
OWD				*eS*	**Sn**	**21 52 23.5**	**-1.3**		
	baz=224								
NMLH	**Miaoli**	**1.17**	**259**	*eP*	**Pn**	**21 52 10.1**	**+0.5**		
	baz=258								
NMLH				*eS*	**Sn**	**21 52 25.9**	**+0.6**		
	baz=258								
EGFH	**Guangfu**	**1.24**	**207**	*eP*	**Pn**	**21 52 10.4**	**-0.1**		
	baz=207								
DPDB	**Guoxing**	**1.26**	**234**	*eP*	**Pn**	**21 52 11.5**	**+0.6**		
	baz=234								
DPDB				*eS*	**Sn**	**21 52 28.4**	**+0.9**		
	baz=234								
PTSB	**Yuanli**	**1.27**	**255**	*eP*	**Pn**	**21 52 11.4**	**+0.5**		
	baz=255								
VWDT	**VWDT**	**1.31**	**219**	*eP*	**Pn**	**21 52 11.3**	**-0.1**		
	baz=219								
VWDT				*eS*	**Sn**	**21 52 27.7**	**-0.7**		
	baz=219								
WDJ	**Dajia District**	**1.35**	**252**	*eS*	**Sn**	**21 52 29.9**	**+0.5**		
	baz=251								
SMLT	**Sun Moon Lake**	**1.37**	**230**	*eP*	**Pn**	**21 52 13.2**	**+0.8**		
	baz=229								
SMLT				*eS*	**Sn**	**21 52 31.3**	**+1.2**		
	baz=229								
HGSD	**Ruisui**	**1.40**	**204**	*eP*	**Pn**	**21 52 12.4**	**-0.2**		
	baz=204								
HGSD				*eS*	**Sn**	**21 52 29.9**	**-0.6**		
	baz=204								
TCU	**Taichung**	**1.40**	**244**	*eP*	**Pn**	**21 52 13.3**	**+0.7**		
	baz=243								
TCU				*eS*	**Sn**	**21 52 31.1**	**+0.6**		
	baz=243								
SSLB	**Suanglung**	**1.40**	**226**	P	**Pn**	**21 52 13.3**	**+0.6**		
	baz=225								
SSLB				*eS*	**Sn**	**21 52 31.2**	**+0.5**		
	baz=225								
EHY	**Hungye**	**1.43**	**208**	*eP*	**Pn**	**21 52 12.6**	**-0.4**		
	baz=207								
WCHH	**Zhanghua**	**1.52**	**243**	*eS*	**Sn**	**21 52 34.0**	**+0.6**		
	baz=243								
WHYT	**Xinyi Township**	**1.53**	**226**	*eP*	**Pn**	**21 52 15.4**	**+1.0**		
	baz=225								
WHYT				*eS*	**Sn**	**21 52 35.1**	**+1.4**		
	baz=225								
WNT	**Mingjian**	**1.53**	**235**	*eP*	**Pn**	**21 52 14.8**	**+0.5**		
	baz=234								
WNT				*eS*	**Sn**	**21 52 34.3**	**+0.6**		
	baz=234								
WJS	**Zhushan**	**1.53**	**232**	*eP*	**Pn**	**21 52 15.5**	**+1.2**		
	baz=232								
WJS				*eS*	**Sn**	**21 52 34.6**	**+0.9**		
	baz=232								
YULB	**Yu-li**	**1.54**	**207**	*eP*	**Pn**	**21 52 12.4**	**-2.0**		
	baz=207								
TWF1	**Yuli**	**1.57**	**206**	*eP*	**Pn**	**21 52 14.5**	**-0.4**		
	baz=206								
TWF1				*eS*	**Sn**	**21 52 35.2**	**+0.6**		
	baz=206								
IRIF	**Iriomote-Funau**	**1.59**	**106**	P	**Pn**	**21 52 14.7**	**-0.4**		
IRIF				*eS*	**Sn**	**21 52 34.7**	**-0.3**		
ALS	**Alishan**	**1.69**	**222**	*eP*	**Pn**	**21 52 17.4**	**+0.6**		
	baz=222								
ALS				*eS*	**Sn**	**21 52 38.6**	**+0.7**		
	baz=222								
CHN5	**Tsauling**	**1.71**	**227**	*eP*	**Pn**	**21 52 17.6**	**+0.7**		
	baz=227								
CHN5				*eS*	**Sn**	**21 52 39.6**	**+1.5**		
	baz=227								
WGK	**Gukeng**	**1.74**	**232**	*eS*	**Sn**	**21 52 39.2**	**+0.7**		
	baz=231								
HATJ	**Hateruma jima**	**1.75**	**114**	P	**Pn**	**21 52 17.3**	**+0.1**		
WDLH	**Douliu**	**1.75**	**232**	*eS*	**Sn**	**21 52 39.4**	**+0.6**		
	baz=232								
ELDTW	**Lidau**	**1.84**	**211**	*eP*	**Pn**	**21 52 19.1**	**+0.6**		
	baz=211								
JKRS	**Kuro-shima**	**1.86**	**106**	P	**Pn**	**21 52 18.8**	**+0.1**		
CHN4	**Tsaushan**	**1.94**	**224**	*eP*	**Pn**	**21 52 21.1**	**+1.3**		
	baz=223								
CHN4				*eS*	**Sn**	**21 52 46.2**	**+2.8**		
	baz=223								
JIJ	**Ishigaki jima**	**1.95**	**102**	P	**Pn**	**21 52 19.8**	**0.0**		
JIJ				*eS*	**Sn**	**21 52 43.0**	**-0.5**		
CHY	**Chiayi**	**1.95**	**230**	*eP*	**Pn**	**21 52 20.8**	**+0.9**		
	baz=229								
CHY				*eS*	**Sn**	**21 52 44.3**	**+0.7**		
	baz=229								
TPUB	**Ta-pu**	**1.96**	**222**	*eP*	**Pn**	**21 52 20.9**	**+0.9**		
	baz=221								
TPUB				*eS*	**Sn**	**21 52 45.5**	**+1.7**		
	baz=221								
STYT	**Tauyuan**	**1.99**	**217**	*eP*	**Pn**	**21 52 21.3**	**+0.8**		
	baz=216								
STYT				*eS*	**Sn**	**21 52 46.2**	**+1.6**		
	baz=216								
WTP	**Ta-pu**	**2.01**	**221**	*eP*	**Pn**	**21 52 21.7**	**+1.0**		
	baz=220								
WTP				*eS*	**Sn**	**21 52 46.7**	**+1.6**		
	baz=220								
WSF	**Szhu**	**2.02**	**236**	*eS*	**Sn**	**21 52 45.2**	**+0.1**		
	baz=235								
JISG	**Ishigakijimahi**	**2.06**	**95**	P	**Pn**	**21 52 21.8**	**+0.4**		
JISG				*eS*	**Sn**	**21 52 46.7**	**+0.4**		
TWK	**Hsinying**	**2.07**	**224**	*eP*	**Pn**	**21 52 22.7**	**+1.1**		
	baz=223								
TWK				*eS*	**Sn**	**21 52 49.0**	**+2.5**		
	baz=223								
CHN1	**Nanshi**	**2.11**	**222**	*eP*	**Pn**	**21 52 23.0**	**+1.0**		
	baz=221								
CHN1				*eS*	**Sn**	**21 52 49.0**	**+1.6**		
	baz=221								
TWH	**Lutao**	**2.12**	**194**	*eP*	**Pn**	**21 52 20.4**	**-1.8**		
	baz=194								
TWG	**Pinlang**	**2.14**	**205**	*eP*	**Pn**	**21 52 23.2**	**+0.8**		
	baz=204								
TWG				*eS*	**Sn**	**21 52 46.5**	**-1.7**		
	baz=204								
PTTC	**Pingtan**	**2.19**	**290**	*eP*	**Pn**	**21 52 22.6**	**-0.5**		
	baz=289								
PTTC				*eS*	**Sn**	**21 52 47.9**	**-1.4**		
	baz=289								
SLGT	**Liugui**	**2.19**	**216**	*eP*	**Pn**	**21 52 24.1**	**+1.0**		
	baz=216								
SLGT				*eS*	**Sn**	**21 52 50.7**	**+1.4**		
	baz=216								
MATB	**Ma-tsu**	**2.34**	**306**	*eP*	**Pn**	**21 52 25.1**	**-0.1**		
	baz=305								
MATB				*eS*	**Sn**	**21 52 53.0**	**0.0**		
	baz=305								
VWUC	**VWUC**	**2.37**	**276**	*eP*	**Pn**	**21 52 24.9**	**-0.6**		
	baz=275								
JTJ	**Tarama**	**2.42**	**93**	P	**Pn**	**21 52 27.3**	**+1.2**		
JTJ				*eS*	**Sn**	**21 52 55.7**	**+1.0**		
MASBT	**Mashibuluo**	**2.51**	**211**	*eP*	**Pn**	**21 52 28.7**	**+1.2**		
	baz=211								
MASBT				*eS*	**Sn**	**21 52 57.5**	**+0.4**		
	baz=211								
PHUB	**P'eng-hu**	**2.59**	**242**	*eP*	**Pn**	**21 52 27.5**	**-1.0**		
	baz=241								
PHUB				*eS*	**Sn**	**21 52 57.0**	**-1.9**		
	baz=241								
PTMZ	**Houxiangcun**	**2.67**	**276**	*eP*	**Pn**	**21 52 29.1**	**-0.5**		
	baz=275								
PTMZ				*eS*	**Sn**	**21 52 58.5**	**-2.5**		
	baz=275								
LYJJ	**Jianjiangzhen**	**2.72**	**311**	*eP*	**Pn**	**21 52 30.4**	**+0.1**		
	baz=310								
LYJJ				*eS*	**Sn**	**21 53 02.2**	**+0.1**		
	baz=310								
XPSS	**Dashiqiu**	**2.72**	**322**	*eP*	**Pn**	**21 52 30.9**	**+0.6**		
	baz=321								
XPSS				*eS*	**Sn**	**21 53 02.1**	**-0.1**		
	baz=321								
JIRB	**Irabujima**	**2.84**	**88**	S	**Sn**	**21 53 06.7**	**+1.7**		
JIKM	**Ikemajima**	**2.91**	**86**	*eS*	**Sn**	**21 53 07.1**	**+0.4**		
KNMB	**Chin-men Tao**	**3.35**	**265**	*eP*	**Pn**	**21 52 37.8**	**-1.0**		
	baz=264								
AXDP	**Jialang**	**3.71**	**273**	*eP*	**Pn**	**21 52 43.2**	**-0.5**		
	baz=271								
AXDP				*eS*	**Sn**	**21 53 22.9**	**-3.3**		
	baz=271								
ZPLA	**Ao Xicun**	**4.01**	**259**	*eP*	**Pn**	**21 52 47.0**	**-0.8**		
	baz=257								
ZPLA				*eS*	**Sn**	**21 53 30.5**	**-3.1**		
	baz=257								

IDC ***12*** *21:52:54.2±5.7,6˚.68S×155˚.09E,h88km±40km,mb3.4/5, mb1 3.7/7,mb1mx3.4/36,mbtmp3.8/7,Error ellipse: s-maj=58.5km s-min=27.2km az=108.0*

ISC 12 21:52:48.1±1.2,6˚.9S±0˚.1×155˚.6E±0˚.1,h50km,n8, σ1s70/10,mb3.5/5,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**4.40**	**305**	P	**Pn**	**21 53 51.1**	**-1.3**
	7.0nm,0.3s,baz=188,slow=20,SNR=2.0						
KRVT				S	**Sn**	**21 54 45.0**	**+2.5**
	11nm,0.3s,baz=115,slow=21,SNR=6.2						
PMG	**Port Moresby**	**8.75**	**253**	P	**Pn**	**21 54 52.1**	**+0.1**
	1.7nm,0.3s,baz=311,slow=9.6,SNR=3.7						
WRA	**Warramunga Arr**	**24.39**	**236**	P	**P**	**21 58 01.5**	**-0.4**
	0.6nm,0.4s,baz=56,slow=9.7,SNR=6.6						
WRA				PcP	**PcP**	**22 01 42.0**	**+1.6**
	0.5nm,0.6s,baz=51,slow=2.2,SNR=2.8						
ASAR	**Alice Springs**	**26.71**	**229**	P	**P**	**21 58 23.1**	**0.0**
	0.3nm,0.3s,baz=57,slow=9.4,SNR=8.0						
CMAR	**Chiang Mai Arr**	**61.30**	**295**	P	**P**	**22 02 57.5**	**-1.5**
	1.6nm,0.8s,baz=123,slow=5.3,SNR=14						
MKAR	**Makanchi Array**	**83.74**	**319**	P	**P**	**22 05 10.6**	**-1.3**
	0.2nm,0.6s,baz=90,slow=5.8,SNR=2.9						
YKA	**Yellowknife Ar**	**95.95**	**28**	P	**P**	**22 06 11.5**	**+2.1**
	0.4nm,0.7s,baz=268,slow=4.1,SNR=5.2						
TORD	**Torodi Ar. Bea**	**153.60**	**286**	PKPbc	**PKPbc**	**22 12 41.3**	**-1.1**
	0.5nm,0.6s,baz=58,slow=1.7,SNR=4.3						

IDC ***12*** *22:44:36.4±0.6,0˚.27N×126˚.15E,h0km,mb4.3/17, mb1 4.4/19,mb1mx4.2/48,mbtmp4.3/19,ML3.5/2,MS3.5/1, Ms1 3.5/1,ms1mx2.7/44,Error ellipse: s-maj=25.4km s-min=12.9km az=77.0*

DJA ***12*** *22:44:40.3±1.0,0˚.1N±4˚×12˚.6E±˚,h10km±9km,M4.3/12, mB5.0/1,mb4.6/6,MLv4.2/12,Mw(mB)4.3/1*

NEIC ***12*** *22:44:41.5±2.0,0˚.38N±0˚.07×126˚.44E±0˚.05,h42km±7km, mb4.5/36,Error ellipse: s-maj=10.3km s-min=7.8km az=162.0*

ISC 12 22:44:42.1±0.4,0˚.34N±0˚.05×126˚.44E±0˚.05,h47km,n81, σ1s27/82,mb4.5/37,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.02**	**65**	P	**Pn**	**22 45 00.1**	**0.0**
TNTI				S	**Sn**	**22 45 14.8**	**+1.4**
TNTI	**Ternate**	**1.02**	**65**		**Pn**	**22 44 59.9**	**-0.2**
TNTI					**Sn**	**22 45 12.3**	**-1.1**
LBMI	**Labuha**	**1.44**	**132**	P	**Pn**	**22 45 05.1**	**-0.7**
LBMI				S	**Sn**	**22 45 24.4**	**+0.9**
KMSI	**Cibinong**	**2.47**	**276**	P	**Pn**	**22 45 20.9**	**+1.0**
LUWI	**Luwuk**	**3.91**	**250**	P	**Pn**	**22 45 41.9**	**+2.1**
LUWI	**Luwuk**	**3.91**	**250**		**Pn**	**22 45 42.0**	**+2.3**

MRSI	**Marisa**	**4.50**	**272**	P	**Pn**	**22 45 54.9**	**+7.1**		
APSI	**Ampana**	**4.95**	**255**	P	**Pn**	**22 45 53.7**	**-0.3**		
SIJI	**Sorong**	**4.97**	**104**	Pn	**Pn**	**22 45 55.9**	**+1.5**		
	1.3nm,0.3s,baz=252,slow=9.3,SNR=7.5								
SIJI				Sn	**Sn**	**22 46 50.5**	**-0.1**		
	1.7nm,0.3s,baz=218,slow=19,SNR=1.8								
MPSI	**Mapaga**	**6.54**	**270**	P	**Pn**	**22 46 16.9**	**+1.0**		
	0.1nm15nm,0.7s								
FAKI	**Fak Fak**	**6.65**	**119**	P	**Pn**	**22 46 19.3**	**+2.0**		
	0.1nm25nm,1.1s								
FAKI	**Fak Fak**	**6.65**	**119**	Pn	**Pn**	**22 46 17.7**	**+0.3**		
TTSI	**Tana Toraja**	**7.42**	**243**	P	**Pn**	**22 46 28.8**	**+0.9**		
BNSI	**Bone**	**7.88**	**233**	P	**Pn**	**22 46 36.1**	**+1.8**		
SPSI	**Sidrap Palu**	**7.92**	**237**	P	**Pn**	**22 46 35.4**	**+0.7**		
	0.2nm797nm57nm,0.5s								
BKSI	**Bulukumba**	**8.45**	**228**	P	**Pn**	**22 46 44.1**	**+2.1**		
	31nm,0.7s								
KKM	**Kota Kinabalu**	**11.67**	**299**	Pn	**Pn**	**22 47 22.0**	**-4.3**		
MTN	**Manton Dam**	**13.90**	**161**	Pn	**Pn**	**22 47 54.5**	**-2.1**		
SBUM	**Sibu**	**14.37**	**279**		**Pn**	**22 48 02.0**	**-0.9**		
JAGI	**Jajag, Banyuwa**	**15.05**	**234**	Pn	**Pn**	**22 48 10.4**	**-1.5**		
JAGI				IAmb	IAmb	22 48 20.6			
	comp=Z,29nm,0.9s								
KNRA	**Kununurra**	**16.08**	**172**		**Pn**	**22 48 23.9**	**-1.1**		
KSM	**Kuching**	**16.17**	**274**		**Pn**	**22 48 26.3**	**0.0**		
SMRI	**Semarang**	**17.57**	**245**		**Pn**	**22 48 43.2**	**-0.6**		
SMRI				IAmb	IAmb	22 48 49.6			
	comp=Z,52nm,1.1s								
UGM	**Wanagama**	**17.86**	**242**		**Pn**	**22 48 46.9**	**-0.5**		
FITZ	**Fitzroy Crossi**	**18.34**	**182**	P	**P**	**22 48 51.6**	**-1.1**		
	comp=Z,0.2nm,0.3s,baz=9.7,slow=8.1,SNR=5.4								
FITZ	**Fitzroy Crossi**	**18.34**	**182**		**Pn**	**22 48 53.0**	**-0.1**		
CISI	**Cisompet, Garu**	**20.16**	**247**	P	**P**	**22 49 12.3**	**-0.5**		
DLV	**T Lat**	**21.22**	**304**	P	**P**	**22 49 24.2**	**-0.3**		
DLV				IAmb	IAmb	22 49 26.9			
	comp=Z,21nm,1.2s								
WB0	**Warramunga Arr**	**21.45**	**159**	P	**P**	**22 49 27.1**	**+0.5**		
WB0				IAmb	IAmb	22 49 32.9			
	comp=Z,13nm,0.8s								
WRA	**Warramunga Arr**	**21.59**	**159**	P	**P**	**22 49 27.3**	**-0.8**		
	comp=Z,4.4nm,0.5s,baz=338,slow=11,SNR=24								
WB2	**Warramunga Arr**	**21.59**	**159**	P	**P**	**22 49 28.4**	**+0.2**		
WR0	**Warramunga Arr**	**21.68**	**159**	P	**P**	**22 49 27.9**	**-1.1**		
COEN	**Coen**	**21.83**	**131**	P	**P**	**22 49 31.0**	**+0.3**		
PMG	**Port Moresby**	**22.79**	**116**	LR	LR	23 01 02.6			
	comp=Z,120nm,19.9s,baz=277,slow=43								
YULB	**Yu-li**	**23.46**	**348**	P	**P**	**22 49 45.9**	**-1.6**		
YULB				IAmb	IAmb	22 50 01.8			
	comp=Z,17nm,1.3s								
TPUB	**Ta-pu**	**23.51**	**347**	P	**P**	**22 49 46.1**	**-2.0**		
TPUB				IAmb	IAmb	22 49 55.3			
	comp=Z,16nm,0.9s								
RGRI	**Rengat**	**24.11**	**268**	P	P	22 49 41.9	-12		
AS31	**Alice Springs**	**24.94**	**164**	P	**P**	**22 50 02.0**	**+0.8**		
ASAR	**Alice Springs**	**24.94**	**164**	P	**P**	**22 50 01.8**	**+0.6**		
	comp=Z,12nm,0.7s,baz=351,slow=14,SNR=56								
FORT	**Forrest**	**30.98**	**177**	P	**P**	**22 50 54.5**	**-0.6**		
NJ2	**Nanjing**	**32.35**	**348**	*eP*	**P**	**22 51 07.7**	**+0.6**		
NJ2				pmax	pmax				
	comp=Z,13nm,0.6s								
CMAR	**Chiang Mai Arr**	**32.46**	**305**	P	**P**	**22 51 07.6**	**-0.7**		
	comp=Z,0.9nm,0.8s,baz=132,slow=7.2,SNR=4.9								
BBOO	**Buckleboo**	**34.20**	**165**	P	**P**	**22 51 23.4**	**+0.1**		
STKA	**Stephens Creek**	**35.10**	**157**	P	**P**	**22 51 31.6**	**+0.5**		
	comp=Z,3.0nm,0.7s,baz=326,slow=6.5,SNR=6.5								
KSRS	**Korea Array**	**36.96**	**2**	P	**P**	**22 51 48.6**	**+1.8**		
	comp=Z,2.6nm,0.5s,baz=179,slow=9.8,SNR=9.7								
CD2	**Chengdu**	**37.25**	**327**	P	**P**	**22 51 49.5**	**0.0**		
CD2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
MJAR	**Matsushiro Arr**	**37.64**	**16**	P	**P**	**22 51 53.2**	**+0.5**		
	comp=Z,1.9nm,0.5s,baz=181,slow=8.9,SNR=7.4								
BJI	**Beijing**	**40.61**	**348**	P	**P**	**22 52 18.5**	**+1.1**		
BJI				pmax	pmax				
	comp=Z,7.0nm,0.9s								
BJI				LR	LR				
	comp=N,57nm,5.2s								
BJI				LR	LR				
	comp=E,130nm,12.3s								
LZH	**Lanzhou**	**41.30**	**332**	*eP*	**P**	**22 52 23.5**	**+0.1**		
LZH				pP	pP	22 52 36.0	+0.7		
LZH				sP	sP	22 52 41.7	+1.1		
LZH				PP	**PnPn**	**22 54 03.0**	**-1.3**		
LZH				pmax	pmax				
	comp=Z,13nm,1.0s								
LZH				pmax	pmax				
	comp=Z,67nm,4.8s								
HHC	**Hu-ho-hao-te**	**42.53**	**343**	*eP*	**P**	**22 52 33.0**	**-0.3**		
HHC				pmax	pmax				
	comp=Z,8.0nm,0.8s								
HHC				pmax	pmax				
	comp=Z,58nm,6.5s								
USA0B	**Ussuriysk Arra**	**43.95**	**6**	P	**P**	**22 52 43.4**	**-1.2**		
USA0B				IAmb	IAmb	22 52 47.1			
	comp=Z,10.0nm,0.8s								
USRK	**Ussuriysk Ar.**	**43.95**	**6**	P	**P**	**22 52 46.4**	**+1.8**		
	comp=Z,6.0nm,0.6s,baz=186,slow=6.2,SNR=15								
KLR	**Kul'dur**	**48.92**	**5**	P	**P**	**22 53 25.1**	**+1.7**		
	comp=Z,2.0nm,0.5s,baz=224,slow=4.6,SNR=3.6								
ULN	**Ulaanbaatar**	**50.25**	**343**	P	**P**	**22 53 33.1**	**-0.7**		
ULN				IAmb	IAmb	22 53 36.5			
	comp=Z,4.7nm,0.8s								
WMQ	**Urumqi**	**55.35**

MAN 12 22:44:52.0, 18°.14N×119°.92E, h40km, mb4.7, ML3.6, MS3.5, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.55**	**113**	*i*P	Pn	22 45 04.8	+1.2
SIPP				*e*S	Sn	22 45 09.8	-1.9
APYP	**Conner**	**1.29**	**102**	*e*P	Pn	22 45 13.9	+0.3
APYP				*e*S	Sn	22 45 30.6	+1.1
SMPP	**San Manuel, Pa**	**2.11**	**160**	*e*P	Pn	22 45 26.0	+1.2
SMPP				*e*S	Sn	22 45 50.8	+0.9

IDC ***12*** *22:51:04.5±0.8, 67°.90N×162°.34W, h0km, mb3.9/14, mb1 4.2/15, mb1mx3.9/46, mbtmp4.0/15, ML4.7/2, MS3.4/7, Ms1 3.3/7, ms1mx3.0/43, Error ellipse: s-maj=26.3km s-min=13.2km az=32.0*

AEIC ***12*** *22:51:04.0±3.0, 67°.66N±0°.07×162°.1W±0°.1, h8km±4km, ML4.1/37, mb4.2/29(NEIC), Error ellipse: s-maj=10.0km s-min=5.7km az=161.0*

NEIC ***12*** *22:51:04.3±3.0, 67°.66N±0°.07×162°.28W±0°.09, h11km±4km, Error ellipse: s-maj=10.9km s-min=2.0km az=154.0*

ISC 12 22:51:04.3±0.5, 67°.74N±0°.05×162°.13W±0°.04, h10km, n117, σ1°.77/122, mb4.2/31, MS3.4/5, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.43**	**318**		**Pg**	**22 51 13.1**	**+0.3**
RDOG					**Sg**	**22 51 18.1**	**-0.3**
ANM	**Nome**	**3.45**	**204**		**Pn**	**22 51 57.5**	**-0.5**
ANM	**Nome**	**3.45**	**204**		**Sn**	**22 52 38.0**	**-0.9**
IM03		**3.75**	**114**		**Pn**	**22 52 02.6**	**+0.6**
PS05	**TAPS Pump Stn5**	**4.55**	**96**		**Pn**	**22 52 13.2**	**+0.2**
COLD	**Coldfoot**	**4.62**	**91**		**Pn**	**22 52 15.1**	**+1.1**
TOLK	**Toolik Lake Re** baz=264	**4.77**	**73**	P	**Pn**	**22 52 19.2**	**+3.1**
TOLK	baz=264			S	**Sn**	**22 53 14.1**	**+2.6**
TOLK	**Toolik Lake Re**	**4.77**	**73**		**Pn**	**22 52 18.1**	**+1.9**
TOLK					**Sn**	**22 53 07.8**	**-3.7**
MLY	**Manley**	**5.32**	**115**		**Pn**	**22 52 23.9**	**+0.1**
TTA	**Tatalina**	**5.46**	**149**	Pn	**Pn**	**22 52 26.3**	**+0.6**
PS01	**TAPS Pump Stn**	**5.48**	**56**		**Pn**	**22 52 27.5**	**+1.8**
TT01	**Tatalina**	**5.48**	**149**		**Pn**	**22 52 26.1**	**+0.2**
GAMB	**Gambell**	**5.60**	**229**	Pn	**Pn**	**22 52 24.4**	**-3.0**
BPAW	**Bear Paw Mtn.**	**5.84**	**123**		**Pn**	**22 52 31.5**	**+0.7**
PS07	**TAPS Pump Stn7**	**6.04**	**107**		**Pn**	**22 52 34.6**	**+1.0**
NEA	**Nenana**	**6.17**	**115**		**Pn**	**22 52 35.9**	**+0.7**
MDM	**Murphy Dome**	**6.25**	**110**		**Pn**	**22 52 37.5**	**+1.1**
KTH	**Kantishna Hill**	**6.25**	**127**		**Pn**	**22 52 37.4**	**+0.9**
BWN	**Browne**	**6.29**	**119**		**Pn**	**22 52 38.3**	**+1.4**
PPLA	**Purkeypile**	**6.39**	**135**		**Pn**	**22 52 39.5**	**+1.0**
TCOL	**CIGO, UAF Yank** baz=302	**6.42**	**110**	P	**Pn**	**22 52 40.5**	**+1.7**
TCOL	**CIGO, UAF Yank**	**6.42**	**110**		**Pn**	**22 52 39.6**	**+0.8**
COLA	**College**	**6.43**	**110**		**Pn**	**22 52 40.4**	**+1.6**
COLA	**College**	**6.43**	**110**	Pn	**Pn**	**22 52 39.6**	**+0.8**
COLA					**Sn**	**22 53 56.0**	**+3.8**
POKR	**Poker Plat Res** baz=300	**6.45**	**107**	P	**Pn**	**22 52 40.4**	**+1.2**
POKR	**Poker Plat Res**	**6.45**	**107**		**Pn**	**22 52 40.0**	**+0.8**
TRF	**Thorofare Moun**	**6.52**	**126**		**Pn**	**22 52 41.0**	**+0.7**
CCB	**Clear Creek Bu**	**6.57**	**111**		**Pn**	**22 52 41.6**	**+0.8**
WRH	**Wood River Hil**	**6.57**	**113**		**Pn**	**22 52 41.5**	**+0.7**
FYU	**Fort Yukon**	**6.68**	**92**		**Pn**	**22 52 43.1**	**+0.8**
BM03	**Burnt Mountain**	**6.71**	**85**		**Pn**	**22 52 44.0**	**+1.3**
MCK	**McKinley**	**6.75**	**120**		**Pn**	**22 52 43.5**	**+0.2**
IL31		**6.83**	**109**		**Pn**	**22 52 45.1**	**+0.8**
ILAR	**Eielson Array** 19nm,0.3s,baz=303,slow=11,SNR=609	**6.83**	**109**	Pn	**Pn**	**22 52 44.7**	**+0.4**
ILAR				Sn	**Sn**	**22 54 02.1**	**0.0**
	2.2nm,0.3s,baz=222,slow=24,SNR=4.2						
ILAR				LR	LR	22 55 06.5	
	comp=Z,66nm,22.0s,baz=208,slow=35						
PRP	**Porcupine Dome**	**6.97**	**101**		**Pn**	**22 52 46.5**	**+0.2**
RND	**Reindeer**	**7.01**	**122**		**Pn**	**22 52 48.0**	**+1.1**
HDA	**Harding Lake** baz=305	**7.01**	**111**	P	**Pn**	**22 52 48.0**	**+1.2**
HDA	**Harding Lake**	**7.01**	**111**		**Pn**	**22 52 48.0**	**+1.2**
SVW2	**Sparrevohn**	**7.24**	**154**		**Pn**	**22 52 50.5**	**+0.5**
WAT2	**Susitna Watana**	**7.41**	**124**		**Pn**	**22 52 54.0**	**+1.6**
GHO	**Glory Hole Cre**	**8.21**	**130**		**Pn**	**22 53 05.3**	**+1.9**
PMR	**Palmer**	**8.30**	**132**		**Pn**	**22 53 06.2**	**+1.8**
RSO	**Redoubt South**	**8.37**	**146**		**Pn**	**22 53 06.9**	**+1.3**
RC01	**Rabbit Creek A**	**8.54**	**135**	Pn	**Pn**	**22 53 08.5**	**+0.6**
KNK	**Knik Glacier**	**8.63**	**131**		**Pn**	**22 53 09.7**	**+0.6**
SCM	**Sheep Creek Mo**	**8.64**	**126**		**Pn**	**22 53 10.0**	**+0.8**
HARP	**HAARP**	**8.93**	**119**	Pn	**Pn**	**22 53 14.2**	**+1.1**
HOM	**Homer**	**9.33**	**145**	Pn	**Pn**	**22 53 19.0**	**+0.3**
BRLK	**Bradley Lake**	**9.41**	**143**	Pn	**Pn**	**22 53 20.5**	**+0.8**
SEW	**Seward**	**9.46**	**138**	Pn	**Pn**	**22 53 20.5**	**+0.2**
GLI	**Glacier Island**	**9.46**	**129**		**Pn**	**22 53 21.7**	**+1.3**
CNPM	**China Poot**	**9.54**	**144**	Pn	**Pn**	**22 53 22.5**	**+0.9**
FID	**Port Fidalgo**	**9.75**	**128**		**Pn**	**22 53 23.7**	**-0.6**
EPYK	**Eagle Plains** baz=289	**9.99**	**86**	P	**Pn**	**22 53 29.1**	**+1.5**
GLB	**Gilahina Butte**	**10.06**	**120**		**Pn**	**22 53 29.1**	**+0.4**
EYAK	**Cordova Ski Ar**	**10.12**	**128**	Pn	**Pn**	**22 53 27.6**	**-1.9**
VRDI	**Verde Repeater**	**10.33**	**120**		**Pn**	**22 53 30.3**	**-2.2**
MCARA	**McCarthy YSAT**	**10.36**	**119**		**Pn**	**22 53 31.9**	**-0.8**
RAGM	**Ragged Mountai**	**10.58**	**126**	Pn	**Pn**	**22 53 34.3**	**-1.5**
INK	**Inuvik** 3.1nm,0.3s,baz=307,slow=3.1,SNR=33	**10.69**	**74**	Pn	**Pn**	**22 53 36.9**	**-0.2**
INK				Sn	**Sn**	**22 55 31.0**	**-5.5**
	1.5nm,0.3s,baz=246,slow=20,SNR=8.4						
BALM	**Baldy**	**10.84**	**119**		**Pn**	**22 53 39.6**	**+0.3**
KDAK	**Kodiak Island** 0.7nm,0.3s,baz=15,slow=8.4,SNR=10	**10.89**	**152**	Pn	**Pn**	**22 53 42.5**	**+2.6**
KDAK				LR	LR	22 58 10.8	
	comp=Z,180nm,19.7s,baz=121,slow=38						
KDAK	**Kodiak Island**	**10.89**	**152**		**Pn**	**22 53 39.9**	**0.0**
CTGM	**Chitina Glacie**	**11.23**	**117**		**Pn**	**22 53 41.9**	**-2.8**
HYT	**Haines Junctio**	**12.66**	**111**		**Pn**	**22 54 04.6**	**+0.3**
A36M	**Sachs Harbour** baz=269	**13.22**	**55**	P	**Pn**	**22 54 11.5**	**-0.1**
WHY	**Whitehorse**	**13.71**	**108**		**Pn**	**22 54 17.5**	**-1.1**
C36M	**Paulatuk** baz=281	**13.87**	**66**	P	**Pn**	**22 54 17.8**	**-2.7**
C36M	**Paulatuk**	**13.87**	**66**		**Pn**	**22 54 17.6**	**-2.8**
YKA	**Yellowknife Ar** 9.7nm,0.8s,baz=304,slow=11,SNR=40	**20.23**	**82**	P	**P**	**22 55 40.0**	**+1.0**
RES	**Resolute Bay** 2.2nm,0.8s,baz=277,slow=13,SNR=3.1	**21.49**	**42**	P	**P**	**22 55 53.7**	**+1.2**
RES				S	**S**	**22 59 44.5**	**-5.8**
	2.0nm,0.8s,baz=180,slow=20,SNR=2.2						
RES				LR	LR	23 05 44.4	
	comp=Z,134nm,20.7s,baz=321,slow=41						
JTMT	**Jette**	**31.26**	**105**	P	**P**	**22 57 22.5**	**-1.4**
JTMT				IAmb	IAmb	22 57 26.4	
	comp=Z,4.6nm,1.0s						
G08A	**Pilot Rock**	**31.68**	**113**	P	**P**	**22 57 27.6**	**+0.1**
F10A	**Beach Ranch, E**	**31.70**	**110**	P	**P**	**22 57 26.9**	**-0.9**
F10A				IAmb	IAmb	22 57 37.6	
	comp=Z,2.1nm,1.1s						
MSO	**Missoula**	**32.16**	**106**	P	**P**	**22 57 31.8**	**0.0**
PINE	**Pine Mountain**	**32.30**	**117**	P	**P**	**22 57 32.7**	**-0.5**
PINE				IAmb	IAmb	22 57 37.0	
	comp=Z,4.3nm,1.1s						
I07A	**Izee**	**32.54**	**115**	P	**P**	**22 57 34.7**	**-0.5**
NRIK	**Noril'sk** comp=Z,2.6nm,0.8s,baz=47,slow=12,SNR=4.1	**35.17**	**325**	P	**P**	**22 57 58.4**	**+0.8**
FLWY	**Flagg Ranch**	**35.69**	**105**	P	**P**	**22 58 02.6**	**-0.1**
FLWY				IAmb	IAmb	22 58 17.3	
	comp=Z,4.1nm,0.8s						
ULM	**Lac du Bonnet** comp=Z,68nm,18.7s,baz=247,slow=41	**36.16**	**85**	LR	LR	23 15 38.4	
PDAR	**Pinedale Array** comp=Z,1.8nm,0.8s,baz=330,slow=6.8,SNR=16	**37.25**	**105**	P	**P**	**22 58 18.3**	**+2.4**
PDAR				PcP	**PcP**	**23 00 36.6**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=5.7,slow=1.8,SNR=3.6						
NVAR	**Mina Array Bea** comp=Z,2.1nm,0.8s,baz=316,slow=7.1,SNR=12	**37.98**	**118**	P	**P**	**22 58 24.9**	**+2.7**
NVAR				PcP	**PcP**	**23 00 41.3**	**+3.7**
	comp=Z,0.8nm,0.8s,baz=305,slow=3.2,SNR=3.8						
SAO	**San Andreas Ge**	**38.46**	**123**	P	**P**	**22 58 23.6**	**-2.4**
OMMB	**Old Mammoth Mi**	**38.49**	**119**	P	**P**	**22 58 25.7**	**-0.8**
OMMB				IAmb	IAmb	22 58 31.4	
	comp=Z,5.1nm,1.1s						
R11A	**Troy Canyon, C**	**38.98**	**115**	P	**P**	**22 58 29.0**	**-1.5**
PSUT	**Pine Spring**	**39.42**	**113**	P	**P**	**22 58 32.6**	**-1.7**
PV22	**Blue Mesa, Par**	**41.23**	**107**	P	**P**	**22 58 48.4**	**-0.8**
PV22				IAmb	IAmb	22 58 51.8	
	comp=Z,5.7nm,0.9s						
ECSD	**EROS Data Cent**	**41.29**	**91**	P	**P**	**22 58 48.2**	**-1.2**
ECSD				IAmb	IAmb	22 58 53.1	
	comp=Z,2.0nm,0.7s						
GSC	**Goldstone, Bar** comp=Z,4.5nm,1.0s	**41.32**	**118**	IAmb	IAmb	22 58 53.8	
PV03	**Paradox Valley**	**41.46**	**108**	P	**P**	**22 58 49.5**	**-1.5**
PV15	**Paradox Valley**	**41.52**	**107**	P	**P**	**22 58 49.6**	**-2.0**
PV05	**Paradox Valley**	**41.52**	**108**	P	**P**	**22 58 49.7**	**-2.0**
PV05				IAmb	IAmb	22 58 59.0	
	comp=Z,3.4nm,0.7s						
PV02	**Paradox Valley**	**41.54**	**108**	P	**P**	**22 58 50.1**	**-1.7**
PV02				IAmb	IAmb	22 59 07.1	
	comp=Z,3.9nm,0.8s						
PV01	**Paradox Valley**	**41.67**	**107**	P	**P**	**22 58 51.1**	**-1.7**
SCHQ	**Schefferville** comp=Z,80nm,19.1s,baz=311,slow=38	**42.80**	**58**	LR	LR	23 18 07.2	
ARCES	**ARCESS Array B** comp=Z,1.6nm,0.8s,baz=355,slow=3.0,SNR=3.6	**42.89**	**356**	PcP	**PcP**	**23 00 53.2**	**+0.6**
ARCES				LR	LR	23 17 49.7	
	comp=Z,43nm,18.2s,baz=340,slow=38						
WUAZ	**Wupatki**	**43.00**	**112**	P	**P**	**22 59 01.2**	**-2.4**
WUAZ				IAmb	IAmb	22 59 08.4	
	comp=Z,3.7nm,0.8s						
ANMO	**Albuquerque** comp=Z,1.2nm,0.8s,baz=337,slow=4.4,SNR=5.1	**45.27**	**107**	P	**P**	**22 59 24.4**	**+2.5**
ANMO	**Albuquerque**	**45.27**	**107**	P	**P**	**22 59 20.6**	**-1.3**
ANMO				IAmb	IAmb	22 59 25.1	
	comp=Z,2.7nm,1.1s						
KSRS	**Korea Array** comp=Z,0.5nm,0.3s,baz=23,slow=6.6,SNR=2.3	**48.41**	**268**	P	**P**	**22 59 47.6**	**+1.5**
MNTX	**Cornudas Mount**	**48.58**	**108**	P	**P**	**22 59 46.7**	**-0.8**
MNTX				IAmb	IAmb	22 59 50.7	
	comp=Z,2.4nm,0.8s						
ZALV	**Zalesovo Beam** comp=Z,2.1nm,0.8s,baz=30,slow=6.4,SNR=7.4	**48.88**	**314**	P	**P**	**22 59 49.3**	**-0.2**
FCAR	**Ozark Folk Cen** comp=Z,2.8nm,0.7s	**49.80**	**93**	IAmb	IAmb	22 59 58.5	
KLMR	**Klimovskoe**	**50.74**	**347**	*e*	**P**	**23 00 01.9**	**-1.7**
KLMR				AMP		23 00 17.4	
	comp=Z,11nm,1.4s						
FINES	**FINESS Array B** comp=Z,0.5nm,0.4s,baz=18,slow=8.0,SNR=12	**50.98**	**355**	P	**P**	**23 00 06.7**	**+1.3**
FINES				LR	LR	23 21 55.0	
	comp=Z,38nm,20.2s,baz=12,slow=36						
TXAR	**Lajitas Array** comp=Z,4.4nm,0.7s,baz=337,slow=5.9,SNR=49	**51.34**	**108**	P	**P**	**23 00 10.3**	**+1.7**
HHC	**Hu-ho-hao-te**	**51.61**	**285**	*e*P	**P**	**23 00 12.0**	**+1.5**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,24nm,6.5s						
KURK	**Kurchatov**	**53.46**	**316**	P	**P**	**23 00 24.5**	**+0.5**
KURK				IAmb	IAmb	23 00 27.4	
	comp=Z,2.8nm,0.9s						
MKAR	**Makanchi Array** comp=Z,0.3nm,0.5s,baz=42,slow=5.6,SNR=5.2	**56.03**	**312**	P	**P**	**23 00 41.5**	**-1.2**
GTA	**Gaotai**	**57.09**	**294**	*e*P	P	23 00 59.1	+8.6
GTA				pP	sP	23 01 04.2	+9.3
GTA				sP	pP	23 01 06.4	+13
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WMQ	**Urumqi**	**57.12**	**306**	*e*P	**P**	**23 00 54.2**	**+3.7**
WMQ				pmax	pmax		
	comp=Z,23nm,0.8s						
LZH	**Lanzhou**	**58.63**	**289**	*e*P	**P**	**23 01 01.9**	**+0.6**
LZH				pP	sP	23 01 05.8	0.0
LZH				sP	pP	23 01 09.4	+4.8
LZH				PP	**PP**	**23 03 03.7**	**-6.9**
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,110nm,4.8s						
AKASG	**Malin Array Be** comp=Z,0.5nm,0.4s,baz=9.4,slow=6.8,SNR=4.4	**61.58**	**352**	P	**P**	**23 01 21.4**	**+0.4**
GERES	**GERESS Array B** comp=Z,0.3nm,0.3s,baz=12,slow=6.0,SNR=4.1	**63.70**	**3**	P	**P**	**23 01 37.2**	**+1.7**
ESDC	**Sonseca Array** comp=Z,0.6nm,0.7s,baz=350,slow=6.0,SNR=6.0	**71.64**	**18**	P	**P**	**23 02 26.8**	**+1.1**
HNR	**Honiara**	**81.60**	**218**	*i* P	**P**	**23 03 22.5**	**+0.5**
VNDA	**Vanda** comp=Z,2.0nm,1.0s,baz=330,slow=4.0,SNR=4.2	**146.66**	**193**	PKPbc	**PKiKP**	**23 10 46.8**	**+0.1**

ISC 12 22:57:52.7±1.9, 51°.29N±0°.08×16°.32E±0°.06, h0km, n24, σ0°.66/24, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHVC	**Chvalec**	**0.72**	**194**	*e*SG	**Sb**	**22 58 18.3**	**-0.3**
	comp=Z,5.5nm,0.4s						
CHVC	**Chvalec**	**0.72**	**194**	*e*PG	**Pg**	**22 58 07.2**	**+0.7**
OSTC	**Ostas**	**0.73**	**185**	*e*SG	**Sb**	**22 58 19.3**	**+0.3**
	comp=Z,9.2nm,0.5s						
OSTC	**Ostas**	**0.73**	**185**	*e*PG	**Pg**	**22 58 07.8**	**+1.0**
UPC	**Upice**	**0.80**	**194**	*e*SG	**Sb**	**22 58 20.3**	**-0.7**
	comp=Z,20nm,0.3s						
UPC	**Upice**	**0.80**	**194**	*e*PG	**Pg**	**22 58 08.3**	**+0.2**
DPC	**Dobruska-Polom** comp=Z,6.7nm,0.4s	**0.94**	**180**	*e*SG	**Sb**	**22 58 24.2**	**-0.7**
DPC	**Dobruska-Polom**	**0.94**	**180**	*e*PG	**Pg**	**22 58 11.5**	**+0.8**
KRLC	**Kraliky** comp=Z,12nm,0.5s	**1.25**	**166**	*e*SG	**Sn**	**22 58 34.7**	**-0.3**
KRLC	**Kraliky**	**1.25**	**166**	*e*PG	**Pg**	**22 58 16.7**	**+0.1**
PVCC	**Panska Ves** comp=Z,37nm,0.5s	**1.34**	**236**	*e*SG	**Sg**	**22 58 36.5**	**+0.6**
PVCC	**Panska Ves**	**1.34**	**236**	*e*PG	**Pg**	**22 58 17.9**	**-0.6**
BRG	**Berggiesshubel** 7.6nm,0.3s	**1.56**	**256**	SG	**Sn**	**22 58 41.4**	**-1.1**
BRG	**Berggiesshubel**	**1.56**	**256**	PG	**Pn**	**22 58 20.5**	**-1.1**
GOPC	**GO Pecny, Ondr** comp=Z,9.2nm,0.8s	**1.69**	**216**	*e*SG	**Sg**	**22 58 47.2**	**+0.3**
MORC	**Moravsky Berou**	**1.70**	**152**	*e*PN	**Pn**	**22 58 23.0**	**-0.7**
PRU	**Pruhonice** comp=Z,9.6nm,0.7s	**1.72**	**222**	*e*SG	**Sb**	**22 58 48.1**	**+0.7**
PRU	**Pruhonice**	**1.72**	**222**	*e*PG	**Pn**	**22 58 24.2**	**+0.2**
CLL	**Collm** comp=Z,5.0nm,0.4s	**2.08**	**272**	*e*Sg	**Sb**	**22 58 58.0**	**+0.2**
CLL	**Collm**	**2.08**	**272**	*e*Pg	**Pn**	**22 58 30.0**	**+1.1**
NKC	**Novy Kostel** comp=Z,5.1nm,0.3s	**2.68**	**248**	*e*SG	**Sg**	**22 59 18.7**	**0.0**
KHC	**Kasperske Hory** comp=Z,1.9nm,0.3s	**2.79**	**220**	*e*SG	**Sg**	**22 59 21.7**	**-0.5**
KHC	**Kasperske Hory**	**2.79**	**220**	*e*PG	**Pb**	**22 58 43.5**	**+0.1**
KHC	**Kasperske Hory**	**2.79**	**220**	*e*SN	**Sn**	**22 59 12.7**	**-0.2**

THE ***12*** *23:03:47.4, 38°.43N×20°.47E, h6km±1km, ML3.0/10, Error ellipse: s-maj=1.9km s-min=0.4km az=97.0*

ATH ***12*** *23:03:47.2, 38°.42N×20°.51E, h12km±1km, ML2.6/7, Error ellipse: s-maj=1.3km s-min=0.5km az=273.0*

ISC 12 23:03:46.7±0.8, 38°.43N±0°.02×20°.48E±0°.02, h12km±4km, n68, σ0°.93/99, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.07**	**68**	P	**Pg**	**23 03 49.0**	**-0.3**
FSK				S	**Sg**	**23 03 50.6**	**-0.5**
	15μm,0.3s						
FSK	**Fiskardo**	**0.07**	**68**	P	**Pg**	**23 03 49.0**	**-0.3**
FSK				S	**Sg**	**23 03 50.6**	**-0.5**
FSK				AML	AML	23 03 50.8	
	comp=E,43579μm,0.3s						
FSK				AML	AML	23 03 50.9	
	comp=N,14098μm,0.2s						
VSK1	**VASILIKIADES**	**0.07**	**110**	P	**Pg**	**23 03 49.0**	**-0.3**
VSK1				S	**Sg**	**23 03 50.3**	**-0.9**
	comp=N,47μm,0.3s						
KEF1	**Kardakata, Kep**	**0.15**	**183**	P	**Pg**	**23 03 50.5**	**+0.2**
KEF1				S	**Sg**	**23 03 53.2**	**+0.3**
KEF4	**Livadi, Kephal**	**0.18**	**194**	P	**Pg**	**23 03 51.1**	**+0.3**
KEF4				S	**Sg**	**23 03 54.5**	**+0.9**
AGT1	**Agia Thekli**	**0.20**	**202**	P	**Pg**	**23 03 51.4**	**+0.3**
AGT1				S	**Sg**	**23 03 54.6**	**+0.6**
	comp=N,10μm,0.2s						
EVGI	**Lefkada island**	**0.23**	**36**	P	**Pg**	**23 03 52.2**	**+0.5**
EVGI				S	**Sg**	**23 03 55.7**	**+0.6**
EVGI	**Lefkada island**	**0.23**	**36**	P	**Pg**	**23 03 52.2**	**+0.5**
EVGI				S	**Sg**	**23 03 56.3**	**+1.2**
LXRA	**Lixouri, Kepha**	**0.23**	**188**	P	**Pg**	**23 03 52.1**	**+0.4**
LXRA				S	**Sg**	**23 03 56.3**	**+1.3**
KEF3	**Kipouria, Keph**	**0.25**	**204**	P	**Pg**	**23 03 52.3**	**+0.3**
KEF3				S	**Sg**	**23 03 56.8**	**+1.2**
ARG2	**Argostoli**	**0.26**	**179**	P	**Pg**	**23 03 52.2**	**+0.2**
ARG2				S	**Sg**	**23 03 56.3**	**+0.7**
	comp=N,8μm,0.5s						
ARGA	**Argostoli. Kep**	**0.26**	**180**	P	**Pg**	**23 03 52.1**	**+0.1**
ARGA				S	**Sg**	**23 03 56.7**	**+1.1**
KEF2	**Argostoli. Kep**	**0.27**	**179**	P	**Pg**	**23 03 52.3**	**0.0**
KEF2				S	**Sg**	**23 03 56.9**	**+0.9**
VLS	**Valsamata**	**0.27**	**161**	P	**Pg**	**23 03 52.3**	**0.0**
VLS	**Valsamata**	**0.27**	**161**	P	**Pg**	**23 03 52.3**	**0.0**
VLS				S	**Sg**	**23 03 56.6**	**+0.5**
VLS				AML	AML	23 03 56.8	
	comp=E,5493μm,0.2s						
VLS				AML	AML	23 03 57.8	
	comp=N,4148μm,0.2s						
MGNA	**Meganis**	**0.33**	**48**	P	**Pg**	**23 03 53.8**	**+0.3**
MGNA				S	**Sg**	**23 03 58.8**	**+0.9**
MGNA				AML	AML	23 04 00.3	
	comp=N,1893μm,0.1s						
MGNA				AML	AML	23 04 00.4	
	comp=E,1827μm,0.2s						
LKD2	**Lefkada island**	**0.38**	**21**	P	**Pg**	**23 03 54.6**	**+0.2**
LKD2				S	**Sg**	**23 04 00.2**	**+0.7**
	comp=E,735nm,0.3s						
LKD2	**Lefkada island**	**0.38**	**21**	P	**Pg**	**23 03 54.7**	**+0.3**
LKD2				S	**Sg**	**23 04 00.6**	**+1.1**
LKD2				AML	AML	23 04 02.3	
	comp=N,1493μm,0.3s						
LKD2				AML	AML	23 04 05.0	
	comp=E,1435μm,0.3s						
KFL	**Anninata**	**0.40**	**143**	P	**Pg**	**23 03 54.7**	**-0.1**
KFL				S	**Sg**	**23 04 00.9**	**+0.7**
	comp=E,3μm,0.2s						
KFL	**Anninata**	**0.40**	**143**	P	**Pg**	**23 03 54.7**	**-0.1**
KFL				S	**Sg**	**23 04 00.9**	**+0.7**
KFL				AML	AML	23 04 01.9	
	comp=E,7427μm,0.3s						
KFL				AML	AML	23 04 03.4	
	comp=N,5574μm,0.2s						
TSLK	**Tsoukalades, L**	**0.41**	**19**	P	**Pg**	**23 03 55.4**	**+0.4**
TSLK				S	**Sg**	**23 04 01.8**	**+1.3**
	comp=N,878nm,0.5s						
TSLK	**Tsoukalades, L**	**0.41**	**19**	P	**Pg**	**23 03 55.5**	**+0.5**
TSLK				S	**Sg**	**23 04 02.0**	**+1.5**
TSLK				AML	AML	23 04 03.5	
	comp=N,1565μm,0.4s						
TSLK				AML	AML	23 04 06.7	
	comp=E,1696μm,0.4s						
AST1	**Astakos**	**0.49**	**77**	P	**Pg**	**23 03 56.5**	**+0.1**
AST1				S	**Sb**	**23 04 04.6**	**+0.2**
	comp=E,2μm,0.5s						
PDO	**Prodromos**	**0.58**	**73**	P	**Pg**	**23 03 58.2**	**+0.2**
PDO				S	**Sg**	**23 04 06.1**	**+0.5**
ZAK2	**Zakynthos**	**0.72**	**153**	P	**Pg**	**23 04 00.6**	**-0.2**
ZAK2				S	**Sb**	**23 04 12.6**	**+1.5**
	comp=E,3μm,0.5s						
VTN	**Vitineika**	**0.76**	**133**	P	**Pg**	**23 04 01.5**	**+0.1**
VTN				S	**Sg**	**23 04 10.7**	**-0.7**
RLS	**Riolos of Patr**	**0.86**	**115**	P	**Pg**	**23 04 03.0**	**-0.4**
RLS	**Riolos of Patr**	**0.86**	**115**	P	**Pg**	**23 04 03.0**	**-0.4**
RLS				S	**Sb**	**23 04 15.3**	**+0.2**
RLS				AML	AML	23 04 23.8	
	comp=N,420μm,0.7s						
RLS				AML	AML	23 04 25.0	
	comp=E,440μm,0.5s						
DRO	**Drossia**	**1.08**	**116**	P	**Pg**	**23 04 06.9**	**-0.7**
DRO				S	**Sn**	**23 04 24.3**	**+1.7**
	comp=E,458nm,0.4s						
DRO	**Drossia**	**1.08**	**116**	P	**Pg**	**23 04 07.0**	**-0.5**
IGT	**Igoumenitsa**	**1.10**	**354**	P	**Pg**	**23 04 07.5**	**-0.5**
IGT	**Igoumenitsa**	**1.10**	**354**	P	**Pg**	**23 04 07.6**	**-0.5**
ANX	**Ano Chora**	**1.14**	**82**	P	**Pg**	**23 04 08.8**	**0.0**
EVR	**Evrytania**	**1.15**	**65**	P	**Pg**	**23 04 08.4**	**-0.5**
LAKA	**Lakka**	**1.19**	**99**	P	**Pb**	**23 04 08.6**	**-0.7**
SERG	**Sergoula**	**1.24**	**90**	P	**Pn**	**23 04 09.6**	**-0.3**
TRIZ	**Trizonia**	**1.25**	**93**	P	**Pn**	**23 04 09.6**	**-0.4**
JAN	**Janina**	**1.25**	**13**	P	**Pg**	**23 04 11.7**	**+0.8**
KALE	**Kalithea**	**1.30**	**91**	P	**Pn**	**23 04 10.2**	**-0.5**
AMT	**Artemida-Makis**	**1.32**	**132**	P	**Pn**	**23 04 12.0**	**+0.9**
KLV	**Kalavryta, Ach**	**1.37**	**106**	P	**Pn**	**23 04 11.4**	**-0.3**
KEK	**Kerkira**	**1.38**	**338**	P	**Pb**	**23 04 13.5**	**+1.0**
MAKR	**Makrakomi, Fth**	**1.42**	**65**	P	**Pn**	**23 04 13.0**	**+0.7**
MAKR	**Makrakomi, Fth**	**1.42**	**65**	P	**Pn**

JTJ				*e*S	Sn	23 28 29.7	+0.5		
JMJ2	**Miyako jima3**	**1.33**	**34**	P	Pn	23 28 20.8	+0.5		
JMJ2				*e*S	Sn	23 28 37.1	+0.3		
JIRB	**Irabujima**	**1.33**	**26**	P	Pn	23 28 20.2	-0.2		
JIRB				S	Sn	23 28 37.1	+0.2		
JOGS	**Gusukube**	**1.39**	**36**	P	Pn	23 28 22.0	+0.9		
JOGS				S	Sn	23 28 38.9	+0.7		
JIKM	**Ikemajima**	**1.45**	**27**	P	Pn	23 28 22.6	+0.7		
JIKM				S	Sn	23 28 40.7	+0.9		
YOJ	**Yonaguni jima**	**1.61**	**301**	P	Pn	23 28 25.1	+1.0		
YOJ				S	Sn	23 28 44.1	+0.4		
JYNG	**Yonagunijimaku**	**1.66**	**300**	P	Pn	23 28 25.7	+0.9		
JYNG				*e*S	Sn	23 28 45.2	+0.4		

MAN 12 23:32:10.7, 4°.54N × 124°.63E, h27km, mb4.4, ML3.3, MS3.0, 1C-1D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.89**	**35**	*e*P	Pn	23 32 40.8	-0.4
DDMP				*e*S	Sn	23 33 05.5	+1.3
SKMP	**Bagumbayan, Su**	**1.97**	**357**	*e*P	Pn	23 32 43.3	+1.0
SKMP				*e*S	Sn	23 33 07.6	+1.0
KCP	**Kidapawan**	**2.50**	**10** ⇑	*e*P	Pb	23 33 02.7	+7.8
KCP				*i* S	Sb	23 33 25.3	+0.1
DMPH	**Davao City--Mi**	**2.67**	**19** ⇓	*i*P	Sb	23 33 29.5	-0.8
MATI	**Mati**	**2.89**	**34**	*e*P	Pn	23 32 56.1	+1.2
MATI				*e*S	Sn	23 33 29.7	+0.9
PAGZ	**Pagadian**	**3.51**	**339**	*e*P	Pn	23 33 04.9	+1.3
PAGZ				*e*S	Sn	23 33 45.4	+1.1
TBP	**Tagbilaran**	**5.17**	**352**	*e*P	Pb	23 33 42.5	+1.9

BJI **12** *23:34:58.3±0.0, 35°.51N × 140°.40E, h61km, mB4.9/52, mb5.1/70, Ms4.2/66, Ms7 4.1/58*

BGR **12** *23:35:00.6±0.0, 35°.91N × 141°.26E, h33km, mb5.3, Ms4.0*

MOS **12** *23:35:00.9±1.3, 35°.56N × 140°.12E, h58km, mb5.5/47, MS4.0/7, Error ellipse: s-maj=6.7km s-min=3.9km az=107.7*

NIED **12** *23:35:00, 35°.60N × 140°.20E, h68km, Mw5.0 Best double couple: M0 3.10000×10*^{16} *NP1:φ*$_s$*10.00000°, δ64.00000°, λ95.00000°. NP2:φ*$_s$*178.00000°, δ27.00000°, λ80.00000°.*

JMA **12** *23:35:02.9±0.2, 35°.57N × 140°.11E, h72km±2km, M4.9 Broadband fault plane solution: P waves. NP1: φ*$_s$*229.00000°, δ19.00000°, λ114.00000°. NP2: φ*$_s$*23.00000°, δ72.00000°, λ82.00000°. Principal axes: T Plg62.0000°, Azm281.0000°; N Plg8.0000°, Azm26.0000°; P Plg27.0000°, Azm120.0000°;*

JMA Felt IV J1.

NEIC **12** *23:35:02.3±2.4, 35°.60N±0°.04 × 140°.06E±0°.07, h55km±4km, mb5.1/343 Error ellipse: s-maj=8.6km s-min=5.3km az=99.0*

IDC **12** *23:35:03.5±1.0, 35°.49N × 140°.00E, h66km±9km, mb4.7/38, mb1 4.8/40, mb1mx4.8/42, mbtmp4.9/40, MS3.8/26, Ms1 3.8/26, ms1mx3.6/49, Error ellipse: s-maj=10.6km s-min=7.1km az=87.0*

GCMT **12** *23:35:06.3±0.3, 35°.54N±0°.02 × 140°.23E±0°.03, h57km±1km, MW5.0/94, Moment Tensor Solution. s43,c49; s94,c118; Duration: 0 Moment tensor: Scale 10*^{16}*Nm; Mrr4.14±.22; Mθθ0.15±.16; Mφφ-4.29±.13; Mrθ-0.32±.10; Mrφ-0.44±.11; Mθφ1.51±.11; Best double couple: M*$_o$*4.51000×10*^{16} *NP1:φ*$_s$*192.00000°, δ36.00000°, λ100.00000°. NP2: φ*$_s$*360.00000°, δ55.00000°, λ83.00000°. Principal axes: T 4.4370, Plg79.0000°, Azm243.0000°; N 0.1500, Plg6.0000°, Azm4.0000°; P -4.5830, Plg10.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 23:35:02.5±0.3, 35°.55N±0°.03 × 140°.12E±0°.03, h58km±2km, h58km:pP-P, n961, σ1§58/923, mb5.1/309, MS4.0/40, 83C-47D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.15**	**154**	⇑P	**Pn**	**23 35 14.1**	**+2.6**
JCN				S	**Sn**	**23 35 22.4**	**+4.5**
JSMT	**Sammumatsuo**	**0.28**	**71**	⇑P	**Pn**	**23 35 14.7**	**+2.4**
JSMT				S	**Sn**	**23 35 23.8**	**+4.5**
TOK	**Tokyo**	**0.33**	**295**	⇓P	**Pn**	**23 35 15.1**	**+2.5**
TOK				S	**Sn**	**23 35 24.3**	**+4.4**
JKUC	**kamogawauchiur**	**0.40**	**171**	⇑P	**Pn**	**23 35 15.2**	**+2.0**
JKUC				S	**Sn**	**23 35 23.8**	**+2.8**
BSO3	**Boso 3**	**0.81**	**157**	⇑P	**Pn**	**23 35 19.2**	**+1.4**
JOD2	**Odawara 2**	**0.89**	**252**	⇓P	**Pn**	**23 35 20.3**	**+1.2**
JOD2				S	**Sn**	**23 35 31.9**	**+0.6**
JIM2	**Oshima 3**	**1.01**	**214**	P	**Pn**	**23 35 21.2**	**+0.6**
JIM2				S	**Sn**	**23 35 35.0**	**+1.1**
JAG	**Ashikaga**	**1.03**	**328**	⇓P	**Pn**	**23 35 22.0**	**+1.2**
JAG				S	**Sn**	**23 35 35.3**	**+0.9**
BSO1	**Boso 1**	**1.14**	**142**	⇑P	**Pn**	**23 35 22.7**	**+1.0**
JFNN	**Fujinakano**	**1.23**	**254**	⇓P	**Pn**	**23 35 24.9**	**+1.5**
JFNN				S	**Sn**	**23 35 40.1**	**+1.0**
JYN	**Shimob**	**1.29**	**268**	⇓P	**Pn**	**23 35 25.7**	**+1.4**
JYN				S	**Sn**	**23 35 42.3**	**+1.6**
JIZS	**Izushimoda**	**1.31**	**231**	⇓P	**Pn**	**23 35 25.7**	**+1.1**
JIZS				S	**Sn**	**23 35 41.8**	**+0.6**
JKT	**Katashina**	**1.40**	**330**	⇓P	**Pn**	**23 35 26.9**	**+1.0**
MJAR	**Matsushiro Arr**	**1.84**	**303**	P	**Pn**	**23 35 32.6**	**+0.9**
	119nm,0.3s,baz=93,slow=18,SNR=1508						
MJAR				S	**Sn**	**23 35 50.1**	**-3.8**
	71nm,0.3s,baz=43,slow=23,SNR=8.1						
MJAR				LR	LR	23 36 15.8	
	comp=Z,2μm,21.6s,baz=115,slow=41						
MAJO	**Matsushiro**	**1.84**	**303**	P	**Pn**	**23 35 33.6**	**+1.9**
MAJO	**Matsushiro**	**1.84**	**303**		**Pn**	**23 35 33.6**	**+1.9**
MAT	**Matsushiro**	**1.84**	**303**	P	**Pn**	**23 35 33.4**	**+1.6**
MAT				*e*S	**Sn**	**23 35 56.5**	**+2.5**
MJB9	**Matsu-Tunnel**	**1.84**	**303**		**Pn**	**23 35 33.6**	**+1.8**
JHJ	**Hachijo jima 2**	**2.44**	**187**	P	**Pn**	**23 35 41.2**	**+1.3**
	728nm,0.3s,baz=343,slow=1.3,SNR=61						
JHJ				S	**Sn**	**23 36 08.6**	**0.0**
	2μm,0.3s,baz=233,slow=20,SNR=16						
JHJ2	**Mitsune**	**2.45**	**186**		**Pn**	**23 35 40.9**	**+0.9**
JHJ2					**Sn**	**23 36 09.4**	**+0.7**
INU	**Inuyama**	**2.54**	**266**		**Pn**	**23 35 43.3**	**+2.0**
ERM	**Erimo**	**6.88**	**19**	*de*P	**Pn**	**23 36 39.9**	**-0.7**
ERM	**Erimo**	**6.88**	**19**		**Pn**	**23 36 39.5**	**-1.0**
ERM					**Sn**	**23 37 54.8**	**-2.5**
JNU	**Nakatsue**	**8.02**	**255**	P	**Pn**	**23 36 58.1**	**+1.8**
	6.4nm,0.3s,baz=58,slow=5.7,SNR=23						
JNU				LR	LR	23 40 27.1	
	comp=Z,1μm,21.2s,baz=64,slow=41						
JNU	**Nakatsue**	**8.02**	**255**		**Pn**	**23 36 57.9**	**+1.6**
JCJ	**Chichijima**	**8.61**	**168**	P	**Pn**	**23 37 02.3**	**-2.1**
	87nm,0.3s,baz=87,slow=20,SNR=31						
JCJ				S	**Sn**	**23 38 31.4**	**-8.7**
	27nm,0.3s,baz=90,slow=20,SNR=4.2						
JCJ				LR	LR	23 40 46.1	
	comp=Z,487nm,18.9s,baz=76,slow=40						
ASAJ	**Asahikawa**	**8.76**	**12**	P	**Pn**	**23 37 04.9**	**-1.5**
	8.1nm,0.3s,baz=199,slow=14,SNR=15						
ASAJ				S	**Sn**	**23 38 37.7**	**-6.0**
	5.5nm,0.3s,baz=12,slow=19,SNR=2.9						
JKA	**Kamikawa-asahi**	**8.76**	**12**		**Pn**	**23 37 04.9**	**-1.5**
JKA					**Sn**	**23 38 37.7**	**-6.0**
NMR	**Nemuro--Hokkai**	**8.93**	**27** ⇑	*i*P	**Pn**	**23 37 05.2**	**-3.5**
GLVR	**Golovnino**	**9.17**	**25**	*e*P	**Pn**	**23 37 09.0**	**-3.0**
GLVR				*i* S	**Sn**	**23 38 45.8**	**-7.9**
GLVR				pmax	pmax		
	comp=Z,299nm,0.8s						
GLVR				pmax	pmax		
	comp=N,206nm,0.7s						
GLVR				pmax	pmax		
	comp=E,122nm,0.7s						
GLVR				pmax	pmax		
	comp=Z,1μm,1.5s						
GRPR	**Tuman**	**9.48**	**26**	*e*P	**Pn**	**23 37 13.4**	**-2.9**
GRPR				pmax	pmax		
	comp=Z,159nm,0.2s						
GRPR				pmax	pmax		
	comp=E,88nm,0.3s						
GRPR				pmax	pmax		
	comp=N,50nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,209nm,1.3s						
LAGR	**Lagunnoye**	**9.54**	**25**	P	**Pn**	**23 37 15.4**	**-1.7**
LAGR				*i* S	**Sn**	**23 38 54.9**	**-7.8**
LAGR				pmax	pmax		
	comp=Z,425nm,0.4s						
LAGR				pmax	pmax		
	comp=E,364nm,0.2s						
LAGR				pmax	pmax		
	comp=N,81nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,642nm,1.7s						
YUK	**Yuzh-Kuril'sk**	**9.55**	**26**	*e*P	**Pn**	**23 37 15.4**	**-1.8**
YUK				pmax	pmax		
	comp=N,96nm,0.4s						
YUK				pmax	pmax		
	comp=Z,217nm,0.4s						
YUK				pmax	pmax		
	comp=E,82nm,0.3s						
YUK				pmax	pmax		
	comp=Z,560nm,1.4s						
YUK				MLR	MLR		
	comp=Z,399nm,16.0s						
TEY	**Ternei**	**9.85**	**345**	⇑*e*P	**Pn**	**23 37 23.8**	**+2.6**
TEY				pmax	pmax		
	comp=Z,30nm,0.6s						
VLA	**Vladivostok**	**9.89**	**322**	*c i*P	**Pn**	**23 37 25.4**	**+3.7**
VLA				pmax	pmax		
	comp=Z,197nm,1.3s						
KSRS	**Korea Array**	**10.00**	**285**	P	**Pn**	**23 37 27.2**	**+3.9**
	comp=Z,3.1nm,0.3s,baz=101,slow=14,SNR=99						
KSRS				LR	LR	23 41 10.7	
	comp=Z,1μm,21.1s,baz=127,slow=37						
KS19	**Wonju Array Si**	**10.05**	**285**		**Pn**	**23 37 26.3**	**+2.2**
TJN	**Taejon**	**10.38**	**278**	*ce*P	**Pn**	**23 37 32.4**	**+3.9**
USRK	**Ussuriysk Ar.**	**10.65**	**327**	P	**Pn**	**23 37 34.7**	**+2.4**
	baz=143,slow=13,SNR=20						
USA0B	**Ussuriysk Arra**	**10.66**	**327**	*ce*P	**Pn**	**23 37 35.1**	**+2.8**
USA0B	**Ussuriysk Arra**	**10.66**	**327**		**Pn**	**23 37 34.5**	**+2.2**
INCN	**Inchon**	**11.03**	**284**	P	**Pn**	**23 37 35.6**	**-1.8**
INCN	**Inchon**	**11.03**	**284**		**Pn**	**23 37 35.6**	**-1.8**
KUR	**Kuril'sk**	**11.32**	**29**	*e*P	**Pn**	**23 37 40.3**	**-1.1**
KUR				*e*S	**Sn**	**23 39 38.6**	**-7.7**
KUR				pmax	pmax		
	comp=N,56nm,0.7s						
KUR				pmax	pmax		
	comp=Z,99nm,0.7s						
KUR				pmax	pmax		
	comp=E,30nm,0.4s						
KUR				smax	smax		
	comp=N,221nm,0.7s						
KUR				smax	smax		
	comp=E,132nm,0.4s						
YSS	**Yuzh-Sakhalins**	**11.56**	**9** ⇓	*e*P	**Pn**	**23 37 43.8**	**-0.8**
YSS				*e*S	**Sn**	**23 39 45.0**	**-7.1**
YSS				pmax	pmax		
	comp=Z,50nm,0.4s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
YSS				MLR	MLR		
	comp=N,300nm,14.0s						
YSS	**Yuzh-Sakhalins**	**11.56**	**9**		**Pn**	**23 37 44.0**	**-0.7**
MDJ	**Mudanjiang**	**12.11**	**322**		**Pn**	**23 37 53.2**	**+1.0**
JOW	**Kunigami**	**13.35**	**233**	P	**Pn**	**23 38 12.3**	**+3.2**
	comp=N,0.5nm,0.3s,baz=86,slow=16,SNR=6.9						
JOW	**Kunigami**	**13.35**	**233**		**Pn**	**23 38 09.3**	**+0.2**
CN2	**Changchun**	**13.97**	**311**	*e*P	**Pn**	**23 38 14.8**	**-2.6**
CN2				*e*PP	**PnPn**	**23 38 27.6**	**+2.0**
CN2				*e*S	**Sn**	**23 40 49.2**	**-1.6**
CN2				*e*SS	**S**	**23 41 07.1**	**-2.3**
CN2				LR	LR		
	comp=N,350nm,15.0s						
CN2				LR	LR		
	comp=N,330nm,15.0s						
CN2				LR	LR		
	comp=N,410nm,15.0s						
KLR	**Kul'dur**	**14.99**	**338**	P	**Pn**	**23 38 28.8**	**-1.9**
	comp=N,1.7nm,0.3s,baz=163,slow=7.8,SNR=31						
KLR				LR	LR	23 44 01.3	
	comp=N,309nm,20.2s,baz=148,slow=36						
KLR	**Kul'dur**	**14.99**	**338**	*d i*P	**Pn**	**23 38 29.4**	**-1.3**
KLR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
DL2	**Dalian**	**15.11**	**288**	P	**P**	**23 38 36.6**	**+0.3**
DL2				S	**S**	**23 41 25.8**	**-7.0**
DL2				pmax	pmax		
	comp=Z,64nm,0.9s						
DL2				pmax	pmax		
	comp=Z,250nm,8.1s						
DL2				LR	LR		
	comp=Z,330nm,21.4s						
DL2				LR	LR		
	comp=Z,690nm,18.1s						
DL2				LR	LR		
	comp=Z,760nm,20.3s						
TYV	**Tymovskoe**	**15.41**	**6**	*e*P	**P**	**23 38 40.5**	**+0.9**
TYV				*e*S	**S**	**23 41 32.7**	**-6.2**
TYV				pmax	pmax		
	comp=Z,300nm,3.5s						
TYV				pmax	pmax		
	comp=Z,65nm,1.1s						
TYV				smax	smax		
	comp=E,200nm,4.1s						
NJ2	**Nanjing**	**18.01**	**265**	*e*P	**Pn**	**23 39 09.8**	**+1.1**
NJ2				pmax	pmax		
	comp=E,40nm,0.7s						
NJ2				LR	LR		
	comp=E,350nm,17.5s						
NJ2				LR	LR		
	comp=E,470nm,18.0s						
NJ2				LR	LR		
	comp=E,670nm,19.4s						
YOJ	**Yonaguni jima**	**18.46**	**238**	P	**P**	**23 39 11.0**	**-2.4**
YOJ				pmax	pmax		
	comp=Z,361nm,1.7s						
YOJ	**Yonaguni jima**	**18.46**	**238**	P	**P**	**23 39 10.9**	**-2.4**
YOJ				IAmb	IAmb	23 39 43.0	
	comp=Z,361nm,1.7s						
TIA	**Tai'an**	**18.64**	**279**	P	**P**	**23 39 15.6**	**+0.2**
TIA				sP	**sP**	**23 39 34.1**	**-1.4**
TIA				pmax	pmax		
	comp=Z,23nm,0.6s						
TIA				LR	LR		
	comp=Z,270nm,11.4s						
TIA				LR	LR		
	comp=Z,420nm,16.1s						
TIA				LR	LR		
	comp=Z,610nm,15.9s						
BJI	**Beijing**	**19.43**	**290**	P	**P**	**23 39 23.9**	**0.0**
BJI				S	**S**	**23 42 49.8**	**-11**
BJI				pmax	pmax		
	comp=Z,19nm,1.1s						
BJI				LR	LR		
	comp=Z,290nm,22.7s						
BJI				LR	LR		
	comp=Z,210nm,24.6s						
BJT	**Baijiatuan**	**19.43**	**290**	P	**P**	**23 39 23.0**	**-1.0**
BJT				pmax	pmax		
	comp=Z,59nm,1.1s						
BJT	**Baijiatuan**	**19.43**	**290**	P	**P**	**23 39 23.0**	**-1.0**
YHNB	**Yeheng**	**19.48**	**241**	P	**P**	**23 39 23.9**	**-0.7**
YHNB				IAmb	IAmb	23 39 51.9	
	comp=Z,128nm,1.5s						
NACB	**Ninganchiao**	**19.63**	**240**	P	**P**	**23 39 24.0**	**-2.3**
NACB				IAmb	IAmb	23 39 28.6	
	comp=Z,37nm,0.4s						
HIA	**Hailar**	**20.27**	**319**	P	**P**	**23 39 31.3**	**-1.8**
HIA				pmax	pmax		
	comp=Z,27nm,0.9s						
HIA	**Hailar**	**20.27**	**319**	P	**P**	**23 39 31.2**	**-1.8**
ZEA	**Zeya**	**20.30**	**338**	*e*P	**P**	**23 39 31.4**	**-1.9**
ZEA				pmax	pmax		
	comp=N,59nm,1.0s						
ZEA				pmax	pmax		
	comp=E,47nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,110nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,14.0s						
TPUB	**Ta-pu**	**20.87**	**239**	P	**P**	**23 39 37.9**	**-1.7**
TPUB				IAmb	IAmb	23 39 42.1	
	comp=Z,66nm,0.6s						
TWG	**Pinlang**	**20.87**	**238**	P	**P**	**23 39 37.9**	**-1.8**
PEA0B	**Petropavlovsk-**	**21.49**	**30** ⇓	*e*P	**P**	**23 39 47.3**	**+1.2**
PEA0B	**Petropavlovsk-**	**21.49**	**30**	P	**P**	**23 39 44.9**	**-1.2**
PEA0B				IAmb	IAmb	23 40 05.8	
	comp=Z,80nm,1.2s						
PETK	**Petropavlovsk-**	**21.49**	**30**	P	**P**	**23 39 46.7**	**+0.6**
	comp=Z,5.0nm,0.7s,baz=209,slow=12,SNR=7.6						
PETK				LR	LR	23 47 53.9	
	comp=Z,149nm,21.9s,baz=238,slow=36						
KNMB	**Chin-men Tao**	**21.78**	**245**	P	**P**	**23 39 46.3**	**-3.1**
KNMB				IAmb	IAmb	23 39 50.1	
	comp=Z,63nm,0.8s						
PET	**Petropavlovsk**	**21.82**	**31**	*e*P	**P**	**23 39 51.8**	**+2.2**
PET				*e*S	**S**	**23 43 44.1**	**-3.4**
PET				pmax	pmax		
	comp=Z,56nm,1.3s						
PET				MLR	MLR		
	comp=Z,300nm,17.0s						
PET				MLR	MLR		
	comp=Z,200nm,15.0s						
WHN	**Wuhan**	**22.15**	**264**	⇑P	**P**	**23 39 54.0**	**+0.7**
WHN				pP	**sP**	**23 40 10.4**	**-3.2**
WHN				S	**S**	**23 43 51.5**	**-2.4**
WHN				pmax	pmax		
	comp=Z,80nm,0.5s						
WHN				LR	LR		
	comp=Z,500nm,10.6s						
WHN				LR	LR		
	comp=Z,560nm,10.6s						
WHN				LR	LR		
	comp=Z,1μm,13.6s						
TIY	**Taiyuan**	**22.30**	**284**	*e*P	**P**	**23 39 53.3**	**-1.7**
TIY				S	**S**	**23 44 00.7**	**+4.1**
TIY				SS	**SnSn**	**23 44 40.2**	**+12**
TIY				pmax	pmax		
	comp=Z,110nm,4.1s						
TIY				LR	LR		
	comp=Z,200nm,12.8s						
TIY				LR	LR		
	comp=Z,250nm,12.7s						
TIY				LR	LR		
	comp=Z,410nm,14.6s						
BTO	**Baotou**	**24.16**	**291**	*e*P	**P**	**23 40 15.1**	**+1.9**
MA2	**Magadan**	**25.02**	**13**	P	**P**	**23 40 20.7**	**0.0**
	comp=Z,42nm,0.7s,baz=201,slow=9.8,SNR=11						
MA2				LR	LR	23 51 25.9	
	comp=Z,94nm,20.0s,baz=185,slow=39						
MA2	**Magadan**	**25.02**	**13**	*ce*P	**P**	**23 40 21.4**	**+0.7**
MA2				pmax	pmax		
	comp=Z,28nm,0.6s						
MA2	**Magadan**	**25.02**	**13**	IAmb	IAmb	23 40 23.9	
	comp=Z,42nm,0.7s						
SZP	**Santa**	**25.03**	**229**	P	**P**	**23 40 21.1**	**-0.1**
HKPS	**Hong Kong Po S**	**26.21**	**247**	P	**P**	**23 40 30.5**	**-1.4**
HKPS				IAmb	IAmb	23 40 32.9	
	comp=Z,45nm,0.8s						
YAK	**Yakutsk**	**27.31**	**349**	P	**P**	**23 40 40.9**	**-0.3**
	comp=Z,20nm,0.4s,baz=149,slow=6.0,SNR=13						
YAK				LR	LR	23 52 28.4	
	comp=Z,89nm,19.8s,baz=138,slow=38						
YAK	**Yakutsk**	**27.31**	**349**	*e*P	**P**	**23 40 40.0**	**-1.3**
YAK				*e**PP	**pP**	**23 40 51.9**	**-3.8**
YAK				*e*		23 41 25.5	
YAK				*e*		23 43 58.4	
YAK				*e*S	**S**	**23 45 16.3**	**-0.2**
YAK				*e*SS	**SnSn**	**23 46 30.4**	**+0.5**
YAK				*e*		23 51 24.4	
YAK				pmax	pmax		
	comp=Z,72nm,1.0s						
YAK				pmax	pmax		
	comp=E,21nm,0.9s						
YAK				pmax	pmax		
	comp=N,78nm,1.3s						
YAK				pmax	pmax		
	comp=Z,19nm,0.6s						
YAK				pmax	pmax		
	comp=N,12nm,0.6s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK				smax	smax		
	comp=E,13nm,1.0s						
YAK				smax	smax		
	comp=N,37nm,1.5s						
YAK	**Yakutsk**	**27.31**	**349**	P	**P**	**23 40 40.3**	**-0.9**
YAK				IAmb	IAmb	23 40 43.9	
	comp=Z,64nm,0.8s						
ULN	**Ulaanbaatar**	**27.37**	**307**	*ce*P	**P**	**23 40 41.5**	**-0.7**
ULN				pmax	pmax		
	comp=Z,14nm,0.8s						
ULN	**Ulaanbaatar**	**27.37**	**307**	P	**P**	**23 40 39.8**	**-2.4**
ULN				PcP	**PcP**	**23 44 00.4**	**+0.5**
SONM	**Songino Array**	**27.79**	**307**	P	**P**	**23 40 45.2**	**-0.8**
	comp=Z,12nm,0.7s,baz=108,slow=9.1,SNR=12						
SONM				LR	LR	23 52 12.6	
	comp=Z,492nm,18.8s,baz=98,slow=37						
BOD	**Bodaibo**	**28.26**	**330**	*e*P	**P**	**23 40 49.3**	**-0.6**
BOD				pmax	pmax		
	comp=Z,47nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**28.35**	**117**	T	T	00 10 22.8	
	baz=309,slow=75,SNR=146						
H11N1	**WAKE ISLAND Hy**	**28.36**	**117**	T	T	00 10 21.4	
	baz=309,slow=75,SNR=101						
H11N3	**WAKE ISLAND Hy**	**28.37**	**117**	T	T	00 10 20.5	
	baz=309,slow=75,SNR=121						
SEY	**Seymchan**	**28.45**	**12**	P	**P**	**23 40 52.5**	**+1.0**
	comp=Z,12nm,0.7s,baz=204,slow=6.8,SNR=30						
SEY	**Seymchan**	**28.45**	**12** ⇓	*i*P	**P**	**23 40 53.2**	**+1.7**
H11S3	**WAKE ISLAND Hy**	**29.00**	**119**	T	T	00 11 00.6	
	baz=312,slow=75,SNR=66						
H11S1	**WAKE ISLAND Hy**	**29.00**	**119**	T	T	00 11 03.7	
	baz=312,slow=75,SNR=103						
H11S2	**WAKE ISLAND Hy**	**29.01**	**119**	T	T	00 11 01.0	
	baz=312,slow=75,SNR=80						
LZH	**Lanzhou**	**29.32**	**282**	⇑P	**P**	**23 41 00.4**	**+0.7**
LZH				pP	pP	23 41 11.0	-3.2
LZH				sP	sP	23 41 18.1	-3.0
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
LZH				pmax	pmax		
	comp=Z,50nm,4.3s						
LZH				LR	LR		
	comp=Z,190nm,14.8s						
LZH				LR	LR		
	comp=Z,260nm,14.8s						
LZH				LR	LR		
	comp=Z,290nm,15.7s						
GYA	**Guiyang**	**29.96**	**262** ⇓	*i*P	**P**	**23 41 04.3**	**-1.1**
GYA				pP	pP	23 41 20.5	+0.6
GYA				sP	sP	23 41 26.5	-0.3
GYA				PP	**PnPn**	**23 42 06.4**	**+2.5**
GYA				PcP	**PcP**	**23 44 07.1**	**+0.3**
GYA				S	**S**	**23 46 00.2**	**+1.1**
GYA				sS	sS	23 46 23.0	-0.8
GYA				SS	**SnSn**	**23 47 38.5**	**+3.1**
GYA				ScS	**ScS**	**23 51 39.8**	**+0.3**
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,4.0s						
GYA				LR	LR		
	comp=Z,200nm,13.1s						
GYA				LR	LR		
	comp=Z,210nm,15.8s						
GYA				LR	LR		
	comp=Z,260nm,15.6s						
ZAK	**Zakamensk**	**30.41**	**311**	*e*P	**P**	**23 41 08.0**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TLY	**Talaya**	**30.55**	**313**	P	**P**	**23 41 09.8**	**-0.5**
	comp=Z,8.9nm,0.8s,baz=65,slow=6.6,SNR=6.7						
TLY	**Talaya**	**30.55**	**313**	*e*P	**P**	**23 41 12.5**	**+2.2**
TLY				*e*S	**S**	**23 46 15.7**	**+8.0**
TLY				*e*SS	**SS**	**23 48 13.9**	**-5.8**
TLY				pmax	pmax		
	comp=Z,28nm,0.9s						
TLY				MLR	MLR		
	comp=Z,279nm,11.0s						
TLY	**Talaya**	**30.55**	**313**	P	**P**	**23 41 08.9**	**-1.4**
DAV	**Davao City (W)**	**31.33**	**209**	LR	LR	23 55 41.2	
	comp=Z,77nm,18.4s,baz=351,slow=40						
QIZ	**Qiongzhong**	**31.37**	**246**	P	**P**	**23 41 17.8**	**0.0**
QIZ				S	**S**	**23 46 23.8**	**+2.7**
QIZ				LR	LR		
	comp=Z,240nm,14.7s						
QIZ

GTA pmax pmax
comp=Z,20nm,0.8s
GTA pmax pmax
comp=Z,88nm,5.2s
GTA LR LR
comp=Z,170nm,19.0s
GTA LR LR
comp=Z,240nm,18.1s
GTA LR LR
comp=Z,280nm,20.9s
MOY Mondy 32.13 312 *e*P **P** **23 41 23.7 -0.6**
KMI Kunming 33.72 262 P **P** **23 41 38.1 -0.5**
KMI pP pP 23 41 55.2 +2.0
KMI sP sP 23 42 02.7 +2.7
KMI pmax pmax
comp=Z,31nm,0.9s
KMI pmax pmax
comp=Z,97nm,4.9s
KMI LR LR
comp=Z,330nm,16.4s
KMI LR LR
comp=Z,240nm,12.1s
KMI LR LR
comp=Z,270nm,13.8s
KMI Kunming 33.72 262 P **P** **23 41 36.2 -2.4**
KMI pmax pmax
comp=Z,26nm,0.9s
KMI Kunming 33.72 262 P **P** **23 41 36.2 -2.4**
KMI IAmb IAmb 23 41 40.4
comp=Z,26nm,0.9s
ADK Adak 34.64 48 P **P** **23 41 45.8 -0.2**
ADK pmax pmax
comp=Z,52nm,1.2s
ADK Adak 34.64 48 P **P** **23 41 45.8 -0.2**
ADK IAmb IAmb 23 42 26.8
comp=Z,52nm,1.1s
SLVN Son La 34.64 256 IAmb IAmb 23 41 49.3
comp=Z,15nm,0.9s
BILL Bilibino 35.74 16 *ce*P **P** **23 41 55.2 0.0**
BILL *e**PP **pP** **23 42 12.4 +2.5**
BILL *e**SP **sP** **23 42 21.0 +4.2**
BILL *e* 23 44 23.0
BILL S **S** **23 47 36.0 +8.2**
BILL pmax pmax
comp=Z,14nm,0.9s
BILL MLR MLR
comp=Z,185nm,24.0s
BILL Bilibino 35.74 16 P **P** **23 41 54.4 -0.8**
TIXI Tiksi 36.64 354 P **P** **23 42 02.8 0.0**
comp=Z,12nm,0.5s,baz=144,slow=6.5,SNR=52
TIXI Tiksi 36.64 354 *c i*P **P** **23 42 02.9 0.0**
TIXI pmax pmax
comp=Z,18nm,1.0s
TIXI Tiksi 36.64 354 P **P** **23 42 02.8 0.0**
TIXI IAmb IAmb 23 42 03.5
comp=Z,15nm,0.6s
DLV T Lat 37.02 238 IAmb IAmb 23 42 17.6
comp=Z,55nm,1.4s
FAKI Fak Fak 38.97 193 P **P** **23 42 23.0 -0.1**
comp=Z,32nm,0.9s
FAKI Fak Fak 38.97 193 P **P** **23 42 21.7 -1.4**
FAKI IAmb IAmb 23 42 25.1
comp=Z,25nm,0.5s
LUWI Luwuk 39.85 208 P **P** **23 42 28.8 -1.6**
LUWI IAmb IAmb 23 42 30.6
comp=Z,42nm,0.8s
CHTO Chiang Mai 39.92 256 P **P** **23 42 29.8 -1.2**
CHTO **PcP** **23 44 36.5 +0.8**
CMAR Chiang Mai Arr 40.12 256 P **P** **23 42 31.6 -1.1**
comp=Z,3.8nm,0.8s,baz=56,slow=5.1,SNR=13
CMAR PcP **PcP** **23 44 37.0 +0.7**
comp=Z,4.6nm,0.7s,baz=14,slow=1.9,SNR=12
CMAR LR LR 23 59 14.3
comp=Z,197nm,20.4s,baz=70,slow=36
CMAR Chiang Mai Arr 40.12 256 *i* P **P** **23 42 32.2 -0.5**
CMAR pmax pmax
comp=Z,4.0nm,0.8s
APSI Ampana 40.16 209 P **P** **23 42 32.6 -0.4**
comp=Z,472nmcomp=Z,53nm,0.7s
DGZ Jazzator, Alta 40.43 307 *c i*P **P** **23 42 36.1 +1.0**
DGZ pmax pmax
comp=Z,119nm,0.8s
WMQ Urumqi 40.60 298 *e*P **P** **23 42 37.8 +1.3**
WMQ sP sP 23 42 55.0 -3.2
WMQ PcP **PcP** **23 44 38.0 +0.4**
WMQ pmax pmax
comp=Z,42nm,0.9s
WMQ pmax pmax
comp=Z,110nm,4.5s
WMQ LR LR
comp=Z,1μm,29.0s
WMQ LR LR
comp=Z,2μm,29.0s
WMQ LR LR
comp=Z,240nm,26.7s
SBUM Sibu 41.88 224 P **P** **23 42 44.8 -2.3**
SBUM Sibu 41.88 224 P **P** **23 42 46.0 -1.1**
ZAA0 Zalesovo Array 42.16 314 IAmb IAmb 23 42 50.3
comp=Z,48nm,0.9s
ZALV Zalesovo Beam 42.16 314 P **P** **23 42 48.8 -0.2**
comp=Z,20nm,0.4s,baz=95,slow=6.6,SNR=151
ZALV PcP **PcP** **23 44 41.9 -0.5**
comp=Z,15nm,0.5s,baz=111,slow=3.2,SNR=16
ZALV LR LR 00 00 22.9
comp=Z,61nm,21.5s,baz=74,slow=36
ZALV Zalesovo Beam 42.16 314 *i* P **P** **23 42 49.5 +0.5**
ZALV pmax pmax
comp=Z,20nm,0.4s
SHL Shillong 42.35 270 P **P** **23 42 49.4 -1.8**
SHL pmax pmax
comp=Z,20nm,0.6s
SHL Shillong 42.35 270 P **P** **23 42 49.4 -1.8**
SHL IAmb IAmb 23 42 51.4
comp=Z,20nm,0.6s
BKB Balikpapan 42.56 216 P **P** **23 42 50.9 -1.8**
KSM Kuching 43.77 226 IAmb IAmb 23 43 04.3
comp=Z,16nm,0.6s
KSM Kuching 43.77 226 P **P** **23 43 02.0 -0.5**
BNSI Bone 43.96 209 P **P** **23 43 04.8 +0.9**
comp=Z,39nm,1.0s
MK31 Makanchi Array 44.04 303 IAmb IAmb 23 43 05.9
comp=Z,42nm,0.9s
MKAR Makanchi Array 44.04 303 P **P** **23 43 04.7 +0.4**
comp=Z,37nm,0.8s,baz=90,slow=9.9,SNR=226
MKAR PcP **PcP** **23 44 49.1 +0.2**
comp=Z,5.9nm,0.7s,baz=83,slow=5.5,SNR=3.0
MKAR ScP **ScP** **23 48 33.8 -1.8**
comp=Z,0.9nm,0.6s,baz=89,slow=4.0,SNR=4.1
MKAR LR LR 00 01 55.7
comp=Z,276nm,20.0s,baz=86,slow=37
NRIK Noril'sk 44.19 336 P **P** **23 43 05.5 +0.3**
comp=Z,35nm,0.6s,baz=108,slow=8.9,SNR=72
NRIK PcP **PcP** **23 44 49.7 +0.8**
comp=Z,19nm,0.8s,baz=116,slow=5.1,SNR=4.8
NRIK LR LR 00 01 46.6
comp=Z,123nm,21.0s,baz=111,slow=36
MAKZ Makanchi 44.25 303 P **P** **23 43 06.7 +0.7**
MAKZ pmax pmax
comp=Z,40nm,0.9s
MAKZ Makanchi 44.25 303 P **P** **23 43 06.7 +0.7**
MAKZ IAmb IAmb 23 43 07.7
comp=Z,40nm,0.8s
BKSI Bulukumba 44.79 209 P **P** **23 43 09.7 -0.8**
comp=Z,31nm,0.8s
TAPN Taplejung 45.01 275 *e*P **P** **23 43 13.0 +0.3**
comp=Z,36nm,0.4s
RDOG Red Dog Mine 45.29 26 P **P** **23 43 15.1 +1.0**
ODAN Odare 45.47 274 *e*P **P** **23 43 16.0 -0.2**
comp=Z,53nm,0.9s
KURK Kurchatov 46.04 309 *c i*P **P** **23 43 20.1 0.0**
KURK pmax pmax
comp=Z,118nm,0.8s
KURK Kurchatov 46.04 309 P **P** **23 43 20.4 +0.3**
RAMN Ramite 46.08 275 *e*P **P** **23 43 21.0 0.0**
comp=Z,133nm,0.6s
KURBB Kurchatov Arra 46.10 309 P **P** **23 43 20.6 -0.1**
comp=Z,62nm,0.8s,baz=85,slow=7.8,SNR=467
KURBB PcP **PcP** **23 44 55.3 -0.6**
comp=Z,6.3nm,0.7s,baz=90,slow=3.5,SNR=4.7
JIRN Jiri 46.12 276 *e*P **P** **23 43 22.1 +0.6**
comp=Z,244nm,0.8s
GUN Gumba 46.27 276 *e*P **P** **23 43 23.0 +0.3**
comp=Z,84nm,0.6s
PKI Pulchoki 46.79 276 *e*P **P** **23 43 26.5 -0.2**
comp=Z,68nm,0.8s
PKIN Phulchoki 46.80 276 *e*P **P** **23 43 26.4 -0.3**
comp=Z,50nm,0.7s
KKN Kakani 46.81 277 *e*P **P** **23 43 26.9 +0.2**
comp=Z,86nm,0.8s
DMN Daman 47.02 276 *e*P **P** **23 43 28.4 0.0**
comp=Z,54nm,0.9s
KULM Kulim 47.17 240 P **P** **23 43 28.8 -0.6**
KULM Kulim 47.17 240 P **P** **23 43 29.0 -0.3**
TTA Tatalina 47.23 34 P **P** **23 43 30.5 +1.1**
TTA pmax pmax
comp=Z,9.0nm,1.2s
TTA Tatalina 47.23 34 P **P** **23 43 30.4 +1.1**
GKN Gorkha 47.24 277 *e*P **P** **23 43 30.2 +0.2**
comp=Z,186nm,0.8s
EDFI Ende, Flores 47.37 205 P **P** **23 43 33.1 +2.2**
comp=Z,11nm,1.1s
IPM Ipoh 47.48 239 IAmb IAmb 23 43 31.1
comp=Z,31nm,0.8s
IPM Ipoh 47.48 239 P **P** **23 43 31.0 -0.8**
SOEI Soe 47.48 201 P **P** **23 43 31.8 0.0**
comp=Z,64nm,0.9s
DANN Dangsing 47.81 278 *e*P **P** **23 43 35.2 +0.6**
comp=Z,231nm,0.5s
BATI Baumata 48.09 202 P **P** **23 43 36.7 +0.3**
comp=Z,43nm,0.8s
KOLN Koldanda 48.17 277 *e*P **P** **23 43 37.7 +0.4**
comp=Z,38nm,0.5s
KDJ Kajisay 48.49 298 P **P** **23 43 39.2 -0.3**
KDJ pmax pmax
comp=Z,22nm,0.9s
KDJ Kajisay 48.49 298 P **P** **23 43 39.2 -0.3**
KDJ IAmb IAmb 23 43 41.5
comp=Z,22nm,0.8s
PYUN Piuthan 48.53 278 *e*P **P** **23 43 40.6 +0.5**
comp=Z,207nm,0.4s
RSO Redoubt South 48.71 37 P **P** **23 43 41.7 +0.8**
KDAK Kodiak Island 48.90 41 P **P** **23 43 42.9 +0.7**
comp=Z,17nm,0.6s,baz=278,slow=3.9,SNR=27
KDAK Kodiak Island 48.90 41 P **P** **23 43 43.0 +0.9**
KDAK IAmb IAmb 23 43 43.9
comp=Z,20nm,0.8s
PPLA Purkeypile 48.98 34 IAmb IAmb 23 44 19.0
comp=Z,27nm,1.2s
ULHL Ulahol 49.13 298 P **P** **23 43 45.3 +0.8**
SNR=7.2
COEN Coen 49.32 176 P **P** **23 43 45.6 -0.2**
COEN IAmb IAmb 23 43 47.3
comp=Z,28nm,0.8s
TKM2 Tokmak 2 49.43 299 P **P** **23 43 48.0 +1.3**
SNR=58
TKM2 Tokmak 2 49.43 299 *i* P **P** **23 43 47.7 +1.0**
TKM2 pmax pmax
comp=Z,84nm,1.3s
CNPM China Poot 49.51 39 IAmb IAmb 23 43 49.8
comp=Z,11nm,0.7s
BPAW Bear Paw Mtn. 49.53 33 P **P** **23 43 47.4 +0.5**
KTH Kantishna Hill 49.56 33 P **P** **23 43 47.1 -0.2**
KTH IAmb IAmb 23 44 17.1
comp=Z,13nm,1.0s
MLY Manley 49.66 31 P **P** **23 43 49.6 +1.6**
MLY IAmb IAmb 23 44 09.8
comp=Z,13nm,0.8s
MLY PcP **PcP** **23 45 10.0 +1.5**
KZA Kyzart 49.89 298 P **P** **23 43 52.3 +1.8**
SNR=16
COLD Coldfoot 49.95 28 P **P** **23 43 49.3 -0.8**
KBK Karagaybulak 49.96 299 P **P** **23 43 51.7 +1.0**
SNR=35
CHMS Chumysh 50.01 299 P **P** **23 43 51.6 +0.7**
SNR=16
KSH Kashi 50.07 295 P **P** **23 43 55.8 +4.3**
KSH pP pP 23 44 07.4 +0.5
KSH sP sP 23 44 14.3 +0.7
KSH S **S** **23 51 02.6 +4.0**
KSH SS **SS** **23 54 35.4 +3.4**
KSH pmax pmax
comp=Z,40nm,0.9s
KSH pmax pmax
comp=Z,120nm,5.1s
KSH LR LR
comp=Z,210nm,5.9s
KSH LR LR
comp=Z,250nm,7.0s
KSH LR LR
comp=Z,370nm,8.6s
USP Ospenovka 50.12 300 P **P** **23 43 52.5 +0.7**
SNR=18
PSI Prapat 50.14 239 LR LR 00 05 46.8
comp=Z,118nm,18.8s,baz=89,slow=37
RC01 Rabbit Creek A 50.17 37 IAmb IAmb 23 43 54.2
comp=Z,22nm,1.2s
BWN Browne 50.20 32 P **P** **23 43 54.0 +2.0**
RPSI Rantau Prapat 50.21 239 IAmb IAmb 23 43 53.4
comp=Z,19nm,0.7s
TOLK Toolik Lake Re 50.26 27 P **P** **23 43 54.1 +1.6**
baz=267,SNR=7.5
AAK Ala-Archa 50.28 299 P **P** **23 43 53.9 +0.7**
SNR=17
AAK Ala-Archa 50.28 299 *i* P **P** **23 43 53.6 +0.5**
SNR=20
AAK Ala-Archa 50.28 299 *c i*P **P** **23 43 53.7 +0.5**
AAK pmax pmax
comp=Z,31nm,1.3s
AAK Ala-Archa 50.28 299 P **P** **23 43 52.2 -1.0**
AAK IAmb IAmb 23 43 55.0
comp=Z,17nm,0.8s
NEA Nenana 50.37 32 IAmb IAmb 23 44 15.0
comp=Z,17nm,0.8s
SEW Seward 50.37 38 IAmb IAmb 23 43 54.9
comp=Z,16nm,0.8s
UCH Uchtor 50.38 299 P **P** **23 43 55.4 +1.2**
SNR=16
MCK McKinley 50.44 33 IAmb IAmb 23 44 17.5
comp=Z,16nm,0.9s
BKNI Bangkinang 50.49 235 P **P** **23 43 53.6 -1.1**
RND Reindeer 50.49 33 IAmb IAmb 23 44 14.6
comp=Z,23nm,1.1s
GHO Glory Hole Cre 50.52 36 IAmb IAmb 23 44 20.4
comp=Z,18nm,0.8s
KNK Knik Glacier 50.77 36 IAmb IAmb 23 44 17.6
comp=Z,14nm,0.9s
EKS2 Erkin-Say 50.79 299 P **P** **23 43 57.5 +0.6**
SNR=16
WRH Wood River Hil 50.79 32 IAmb IAmb 23 45 14.0
comp=Z,16nm,0.8s
SML Sawmill 50.80 36 IAmb IAmb 23 44 36.9
comp=Z,14nm,0.8s
BRVK Borovoye 50.87 313 *c i*P **P** **23 43 57.2 0.0**
BRVK pmax pmax
comp=Z,26nm,1.0s
BRVK Borovoye 50.87 313 P **P** **23 43 57.8 +0.6**
BRVK IAmb IAmb 23 44 01.2
comp=Z,32nm,1.1s
TCOL CIGO, UAF Yank 50.88 32 P **P** **23 43 59.2 +2.1**
baz=271
COLA College 50.89 32 *ce*P **P** **23 43 58.6 +1.5**
COLA College 50.89 32 P **P** **23 43 58.6 +1.5**
COLA IAmb IAmb 23 44 16.8
comp=Z,24nm,0.8s
AML Almayashu 50.99 299 P **P** **23 44 00.2 +1.4**
SNR=90
POKR Poker Plat Res 51.06 31 P **P** **23 44 00.3 +1.9**
baz=272,SNR=13
MNSI Mandailing Nat 51.13 237 P **P** **23 43 58.2 -1.4**
comp=Z,33nm,0.6s
SDSI Sungai Dareh 51.17 233 P **P** **23 43 59.2 -0.7**
comp=Z,2μmcomp=Z,55nm,0.6s
HDA Harding Lake 51.29 32 P **P** **23 44 00.9 +0.7**
baz=273,SNR=16
HDA Harding Lake 51.29 32 IAmb IAmb 23 44 21.7
comp=Z,13nm,0.8s
IL31 51.30 32 IAmb IAmb 23 44 17.9
comp=Z,13nm,0.8s
ILAR Eielson Array 51.30 32 P **P** **23 44 01.0 +0.7**
comp=Z,8.0nm,0.7s,baz=270,slow=6.2,SNR=94
GLI Glacier Island 51.47 37 P **P** **23 44 02.1 +0.5**
FID Port Fidalgo 51.78 37 P **P** **23 44 03.2 -0.8**
HIN Hinchinbrook I 51.81 37 IAmb IAmb 23 44 06.7
comp=Z,21nm,0.9s
PRP Porcupine Dome 51.84 31 P **P** **23 44 05.2 +0.7**
FYU Fort Yukon 51.91 29 P **P** **23 44 04.9 +0.1**
FYU IAmb IAmb 23 44 37.3
comp=Z,42nm,1.5s
LHSI Lahat 52.06 229 P **P** **23 44 06.0 -0.5**
comp=Z,132nm,0.8s
GSI Gunungsitoli 52.14 239 P **P** **23 44 06.4 -0.8**
comp=Z,503nm,1.1s
EYAK Cordova Ski Ar 52.16 37 P **P** **23 44 08.9 +2.2**
EYAK IAmb IAmb 23 44 09.4
comp=Z,14nm,0.8s
BHK Bhakra 52.48 285 *ex* **P** **23 44 10.2 +0.7**
DOT Dot Lake 52.62 33 IAmb IAmb 23 44 30.5
comp=Z,11nm,0.7s
RAGM Ragged Mountai 52.71 37 IAmb IAmb 23 44 30.6
comp=Z,20nm,0.8s
MENT Mentasta 52.84 34 IAmb IAmb 23 44 36.6
comp=Z,16nm,0.9s
KK31 Karatay Array 52.97 301 IAmb IAmb 23 44 14.8
comp=Z,37nm,1.1s
KKAR Karatay Array 52.97 301 IAmb IAmb 23 44 14.8
comp=Z,37nm,1.1s
MCARA McCarthy VSAT 53.37 36 IAmb IAmb 23 44 37.0
comp=Z,26nm,1.0s
BALM Baldy 53.75 36 IAmb IAmb 23 44 21.0
comp=Z,11nm,0.7s
BARN Barnard Glacie 54.07 36 IAmb IAmb 23 44 23.6
comp=Z,10nm,0.7s
NIL Nilore 54.09 289 P **P** **23 44 22.2 +0.8**
NIL pmax pmax
comp=Z,42nm,0.9s
NIL Nilore 54.09 289 P **P** **23 44 22.2 +0.8**
YAH Yahtse 54.15 37 IAmb IAmb 23 44 42.1
comp=Z,13nm,0.8s
CTGM Chitina Glacie 54.25 36 IAmb IAmb 23 44 24.8
comp=Z,10.0nm,0.7s
EPYK Eagle Plains 55.33 29 P **P** **23 44 31.6 +1.8**
baz=280,SNR=35
WRAB Tennant Creek 55.45 187 *c i*P **P** **23 44 30.4 -0.7**
WRAB pmax pmax
comp=Z,38nm,0.8s
WRA Warramunga Arr 55.46 187 P **P** **23 44 30.3 -0.9**
comp=Z,23nm,0.5s,baz=1.6,slow=7.5,SNR=97
WRA ScP **ScP** **23 49 24.3 -0.2**
comp=Z,2.4nm,0.9s,baz=356,slow=4.5,SNR=6.4
SVE Sverdlovsk 55.57 319 *d i*P **P** **23 44 32.5 +0.8**
SVE pmax pmax
comp=Z,48nm,0.7s
INK Inuvik 56.18 27 P **P** **23 44 37.0 +1.3**
comp=Z,6.8nm,0.6s,baz=298,slow=6.4,SNR=50
ARU Arti 56.78 319 *c i*P **P** **23 44 40.5 +0.2**
ARU *PP **pP** **23 44 58.9 +3.0**
ARU 23 45 34.9
ARU 23 46 46.7
ARU S **S** **23 52 29.7 +0.9**
ARU pmax pmax
comp=Z,69nm,0.7s
ARU Arti 56.78 319 P **P** **23 44 40.5 +0.2**
KBL Kabul 56.98 291 P **P** **23 44 42.4 +0.1**
KBL pmax pmax
comp=Z,24nm,1.0s
KBL Kabul 56.98 291 P **P** **23 44 42.4 +0.1**
KBL IAmb IAmb 23 44 43.7
comp=Z,24nm,1.0s
HYB Hyderabad 57.12 269 *i* P **P** **23 44 43.0 -0.3**
comp=Z,77nm,0.8s
HYB *e*PcP **PcP** **23 45 37.0 -0.6**
WHY Whitehorse 57.40 36 IAmb IAmb 23 44 47.9
comp=Z,9.6nm,0.8s
SKAG Skagway 57.51 37 P **P** **23 44 47.0 +1.7**
SKAG IAmb IAmb 23 45 05.0
comp=Z,31nm,1.6s
A36M Sachs Harbour 58.02 21 P **P** **23 44 50.0 +1.2**
baz=287,SNR=8.2
ASAR Alice Springs 59.19 187 P **P** **23 44 56.8 -0.7**
comp=Z,8.9nm,0.7s,baz=15,slow=6.5,SNR=75
ASAR PKP2bc 00 14 41.6
comp=Z,2.2nm,0.8s,baz=178,slow=2.6,SNR=15
C36M Paulatuk 59.21 24 P **P** **23 44 58.2 +1.1**
baz=289,SNR=18
C36M Paulatuk 59.21 24 IAmb IAmb 23 44 59.0
comp=Z,22nm,0.8s
MBWA Marble Bar 59.62 202 P **P** **23 44 60.0 -0.5**
POO Poona 60.38 272 *e*P **P** **23 45 06.0 0.0**
DLBC Dease Lake 60.44 37 P **P** **23 45 08.0 +2.2**
comp=Z,3.1nm,0.7s,baz=308,slow=10,SNR=7.6
DLBC Dease Lake 60.44 37 IAmb IAmb 23 45 28.7
comp=Z,11nm,1.0s
HOPEN Hopen 61.22 346 *e*P **P** **23 45 11.9 +1.2**
SPA0 Spitsbergen Ar 61.77 349 *e*P **P** **23 45 15.6 +1.2**
KBS Kingsbay 61.94 350 *e*P **P** **23 45 17.2 +1.7**
HRA Herat 62.16 294 IAmb IAmb 23 45 37.9
comp=Z,13nm,0.7s
NOR Nord 62.46 356 *i* P **P** **23 45 19.3 +0.3**
NOR pmax pmax
comp=Z,8.0nm,0.7s
NOR Nord 62.46 356 *i* P **P** **23 45 19.3 +0.3**
comp=Z,8.1nm,0.7s
DZM Mont Dzumac 62.50 152 *e*LR LR 00 03 56.6
comp=Z,258nm,33.8s
HSPB Hornsund (broa 62.67 348 *e*P **P** **23 45 21.3 +0.8**
LVZ Lovozero 63.03 336 *ce*P **P** **23 45 23.1 +0.1**
LVZ pmax pmax
comp=Z,64nm,2.5s
LVZ Lovozero 63.03 336 P **P** **23 45 22.8 -0.3**
TMCR Tamitsa 63.55 331 *e*P **P** **23 45 25.0 -1.4**
TMCR pmax pmax
comp=Z,38nm,0.6s
APA Apatity 63.61 336 ⇓ *i*P **P** **23 45 26.9 +0.1**
APA pmax pmax
comp=Z,23nm,0.7s
APA MLR MLR
comp=Z,200nm,18.0s
GEYT Alibeck 63.64 299 P **P** **23 45 27.5 -0.1**
comp=Z,4.9nm,0.8s,baz=43,slow=2.8,SNR=16
GEYT LR LR 00 15 26.5
comp=Z,113nm,19.1s,baz=150,slow=38
RES Resolute Bay 64.29 14 P **P** **23 45 31.9 +0.7**
comp=Z,17nm,0.7s,baz=305,slow=6.5,SNR=55
RES LR LR 00 14 40.5
comp=Z,50nm,21.8s,baz=174,slow=37
RES Resolute Bay 64.29 14 IAmb IAmb 23 45 33.7
comp=Z,19nm,0.8s
KLMR Klimovskoe 64.45 328 *e*P **P** **23 45 31.3 -1.1**
KLMR *e* 23 47 53.6
KLMR pmax pmax
comp=Z,31nm,0.6s
KLMR Klimovskoe 64.45 328 *e*P **P** **23 45 31.4 -1.0**
KLMR AMP 23 45 33.0
comp=Z,31nm,0.6s
KLMR *e*PP **PP** **23 47 53.7 -0.5**
ARCES ARCESS Array B 65.01 339 P **P** **23 45 36.5 +0.5**
comp=Z,14nm,0.7s,baz=61,slow=7.7,SNR=51
ARCES LR LR 00 17 24.6
comp=Z,67nm,19.3s,baz=149,slow=39
ARE0 ARCESS Array S 65.01 339 *e*P **P** **23 45 36.1 +0.1**
YKA Yellowknife Ar 65.61 29 P **P** **23 45 40.3 +0.4**
comp=Z,5.0nm,0.7s,baz=300,slow=6.1,SNR=83
YKA PKPPKP **P'P'df** **00 14 16.4 -6.5**
comp=Z,0.1nm,0.3s,baz=127,slow=2.7,SNR=3.9
YKA LR LR 00 15 50.3
comp=Z,18nm,18.4s,baz=0.0,slow=37
KTK1 Kautokeino 65.98 339 *e*P **P** **23 45 42.9 +0.7**
FORT Forrest 66.95 191 P **P** **23 45 48.7 0.0**
STKA Stephens Creek 67.09 179 P **P** **23 45 49.1 -0.5**
comp=Z,8.7nm,0.8s,baz=349,slow=8.3,SNR=16
DAG Danmarks Havn 67.16 355 ⇑ *i*P **P** **23 45 50.0 +0.4**
DAG pmax pmax
comp=Z,27nm,0.9s
DAG Danmarks Havn 67.16 355 ⇑ *i*P **P** **23 45 50.0 +0.4**
comp=Z,27nm,0.9s
MOS Moscow 67.82 323 *e*P **P** **23 45 52.7 -1.3**
MOS *e* 23 46 19.8
MOS *e* 23 54 39.5
MOS *e* 23 55 12.6
MOS pmax pmax
comp=Z,59nm,0.9s
VRH Novokhopyorsk 67.98 318 *e*P **P** **23 45 54.1 -1.0**
VRH pmax pmax
comp=Z,60nm,0.7s
BBOO Buckleboo 68.11 184 IAmb IAmb 23 45 56.9
comp=Z,19nm,0.9s
NLWA Neilton Lookou 68.49 47 IAmb IAmb 23 46 21.8
comp=Z,22nm,1.0s
A04D Lummi Island 68.51 45 P **P** **23 45 60.0 +1.5**
baz=300
OBN Obninsk 68.66 323 *c i*P **P** **23 45 59.1 -0.2**
OBN *e**PP **sP** **23 46 18.9 -2.9**
OBN *i* 23 46 24.3
OBN S **S** **23 55 01.0 +3.5**
OBN *e**SS **sS** **23 55 25.4 +0.9**
OBN SS **SS** **23 59 24.0 +2.0**
OBN pmax pmax
comp=Z,29nm,0.6s
OBN MLR MLR

comp=Z,110nm,16.0s
OBN Obninsk 68.66 323 P P 23 45 59.4 +0.1
LPSR Galich'ya Gora 68.77 320 *eP* **P 23 45 59.5 -0.5**
LPSR pmax pmax
comp=Z,60nm,0.7s
D03D Eldon 68.88 46 P **P 23 46 03.0 +2.1**
baz=300,SNR=15
STEI Steigen 68.92 341 *eP* **P 23 46 01.2 +0.5**
PUL Pulkovo 68.93 329⇓ *eP* **P 23 46 01.7 +0.8**
PUL pmax pmax
comp=Z,54nm,0.6s
E03A Lebam 69.09 47 IAmb IAmb 23 46 31.0
comp=Z,24nm,1.0s
B05A Bryant 69.09 45 P **P 23 46 03.8 +1.7**
baz=300,SNR=6.1
AKT Akhty 69.12 307 *eP* **P 23 46 02.7 +0.1**
AKT *e**PP **pP 23 46 21.0 +2.4**
AKT *e* 23 46 26.7
AKT pmax pmax
comp=Z,15nm,0.6s
B06A Marblemount 69.31 45 IAmb IAmb 23 46 06.6
comp=Z,24nm,1.2s
VSR Storozhevoye 69.36 319*c iP* **P 23 46 03.1 -0.6**
VSR pmax pmax
comp=Z,85nm,0.8s
VORD Divnogorie 69.42 318 *eP* **P 23 46 03.4 -0.7**
VORD pmax pmax
comp=Z,20nm,0.8s
GROC Groznyy 69.52 309 *eP* **P 23 46 02.1 -2.8**
GROC *e**PP **pP 23 46 22.8 +1.9**
GROC *e* 23 46 27.0
GROC *e* 23 48 36.0
GROC *e**SS **sS 23 55 36.4 +1.2**
GROC pmax pmax
comp=Z,18nm,1.3s
FINES FINESS Array B 69.64 332 P **P 23 46 05.4 +0.2**
comp=Z,38nm,0.7s,baz=61,slow=6.0,SNR=211
FINES LR LR 00 18 01.2
comp=Z,70nm,21.8s,baz=58,slow=37
F04D Rainier, OR 69.65 47 P **P 23 46 07.3 +1.7**
baz=300
E04D Cinebar 69.68 47 P **P 23 46 07.9 +2.1**
baz=300,SNR=9.4
D05A Enumclaw 69.70 46 IAmb IAmb 23 46 09.3
comp=Z,25nm,1.1s
G03D McMinnville, O 69.94 48 P **P 23 46 09.3 +1.9**
baz=300
F04A Amboy 70.08 47 IAmb IAmb 23 46 36.8
comp=Z,22nm,1.0s
I02D Swisshome 70.14 50 P **P 23 46 10.3 +1.7**
baz=300
GOF Gofitskoye 70.30 312⇑ *eP* **P 23 46 09.8 +0.1**
GOF pmax pmax
comp=Z,40nm,0.9s
MOR8 Moi Rana 70.39 339 *eP* **P 23 46 08.9 -0.9**
H04D Lebanon 70.61 49 P **P 23 46 13.5 +1.9**
baz=301
B08A Colville Reser 70.62 44 IAmb IAmb 23 46 14.1
comp=Z,24nm,1.3s
I03D Drain, OR 70.66 50 P **P 23 46 14.1 +2.3**
baz=301,SNR=6.3
F05D White Salmon 70.68 47 P **P 23 46 13.8 +1.8**
baz=301
BANOM Banah 70.69 288 P **P 23 46 12.9 +0.5**
SHME Shamm 70.75 289 *i* P **P 23 46 13.1 +0.4**
SNR=7.1
H04A Detroit Lake 70.86 48 IAmb IAmb 23 46 41.5
comp=Z,17nm,1.0s
ZEI Tsey 70.93 309 *eP* **P 23 46 12.7 -1.1**
ZEI pmax pmax
comp=Z,12nm,0.9s
K02D Willamette Mer 70.97 51 P **P 23 46 15.7 +1.8**
baz=301,SNR=5.7
KBZ Khabaz 71.07 311 P **P 23 46 15.1 +0.7**
comp=Z,26nm,0.9s,baz=55,slow=1.9,SNR=50
KBZ Khabaz 71.07 311*c iP* **P 23 46 14.7 +0.4**
KBZ pmax pmax
comp=Z,37nm,1.0s
KIV Kislovodsk 71.08 311⇑P **P 23 46 15.2 +0.6**
KIV Kislovodsk 71.08 311 *i* P **P 23 46 15.0 +0.4**
SNR=8.5
KIV Kislovodsk 71.08 311 *eP* **P 23 46 14.9 +0.3**
KIV pmax pmax
comp=Z,163nm,1.1s
KIV MLR MLR
comp=Z,154nm,18.0s
KIV Kislovodsk 71.08 311 P **P 23 46 15.3 +0.6**
MSFE Esma-Masafi 71.08 288 P **P 23 46 15.7 +0.8**
G05D Wamic, OR 71.10 48 P **P 23 46 16.4 +1.8**
baz=302
I04A Tendick Farm, 71.19 49 P **P 23 46 16.7 +1.6**
baz=301,SNR=6.2
VSU Vasula 71.20 329 *eP* **P 23 46 15.1 +0.2**
VSU Vasula 71.20 329*de*P **P 23 46 14.9 +0.1**
VSU pmax pmax
comp=Z,149nm,0.8s
UOSS Minazif 71.26 288 P **P 23 46 16.0 +0.2**
UOSS Minazif 71.26 288 P **P 23 46 14.8 -1.0**
UOSS IAmb IAmb 23 46 17.0
comp=Z,16nm,0.8s
HATD Hatta, Dubai 71.38 288 P **P 23 46 17.0 +0.4**
NWAO Narrogin (SRO) 71.42 200 P **P 23 46 16.4 0.0**
NWAO pmax pmax
comp=Z,37nm,0.8s
NWAO Narrogin (SRO) 71.42 200 P **P 23 46 16.4 0.0**
NWAO Narrogin (SRO) 71.42 200 IAmb IAmb 23 46 16.9
comp=Z,29nm,0.7s
ASHO Ashiyiah 71.51 287 P **P 23 46 17.8 +0.4**
C09A Chrisman Ranch 71.52 44 IAmb IAmb 23 46 19.5
comp=Z,29nm,1.2s
D08A Wollman Farm, 71.55 45 IAmb IAmb 23 46 19.6
comp=Z,20nm,1.1s
NAZ Nazwa, Dubai 71.66 288 P **P 23 46 18.3 +0.1**
J04D Umpqua Nationa 71.67 50 P **P 23 46 19.7 +1.5**
baz=302,SNR=6.8
AKH Akhalkalaki 71.90 308⇓P **P 23 46 21.3 +1.7**
AKH Akhalkalaki 71.90 308 IAmb IAmb 23 46 21.8
comp=Z,17nm,1.0s
NEW Newport 71.92 43 P **P 23 46 20.7 +1.2**
baz=303,SNR=11
ALNE Al Ain 72.08 287 *i* P **P 23 46 20.7 0.0**
SNR=9.8
YBH Yreka Blue Hor 72.08 51 P **P 23 46 22.8 +2.2**
comp=Z,4.2nm,0.7s,baz=14,slow=2.8,SNR=9.1
L04D Klamath Falls 72.08 51 P **P 23 46 22.4 +1.8**
baz=302,SNR=9.8
PINE Pine Mountain 72.09 49 IAmb IAmb 23 46 49.8
comp=Z,34nm,1.1s
SUMG Summit 72.16 360⇑ *iP* **P 23 46 22.3 +1.4**
SUMG pmax pmax
comp=Z,91nm,0.8s
SUMG Summit 72.16 360⇑ *iP* **P 23 46 22.3 +1.4**
comp=Z,91nm,0.8s
M02C Callahan 72.17 52 P **P 23 46 23.1 +2.0**
baz=302,SNR=5.6
J05D Fort Rock, OR 72.18 49 P **P 23 46 23.3 +2.0**
baz=302,SNR=13
K04D Chiloquin, OR 72.21 50 P **P 23 46 23.1 +1.7**
baz=302
E09A Wood Farm, Sta 72.30 45 IAmb IAmb 23 46 24.3
comp=Z,25nm,1.0s
NSS Namsos 72.30 339 *eP* **P 23 46 21.5 +0.2**
N02D Trinity Center 72.48 52 P **P 23 46 25.0 +2.0**
baz=302
M04C Macdoel 72.61 51 P **P 23 46 25.6 +1.8**
baz=302,SNR=9.9
K05A Summer Lake 72.69 50 IAmb IAmb 23 46 47.0
comp=Z,24nm,1.0s
O02D Mt. Diablo Mer 72.85 53 P **P 23 46 27.2 +2.0**
baz=302
BATM Batumi 72.95 309⇓P **P 23 46 26.3 +0.6**
BCA Borcka 73.08 309⇑P **P 23 46 26.8 +0.4**
IZAR Zarasai 73.09 327 *eP* **P 23 46 27.0 +0.8**
SOC Sochi 73.10 312 *eP* **P 23 46 25.5 -1.0**
SOC *e* 23 49 07.3
SOC *e*PPP PPP 23 50 55.9
SOC *e*S **S 23 55 47.8 -1.7**
SOC pmax pmax
comp=Z,18nm,0.8s
MICGM Minsk 73.13 326 *eP* **P 23 46 27.0 +0.5**
MICGM *e* 23 46 39.0
MICGM *e* 23 46 46.0
MNK Minsk 73.13 326 *eP* **P 23 46 27.0 +0.5**
MNK *e* 23 46 39.0
MNK *e* 23 46 46.0
WALA Waterton Lakes 73.24 41 IAmb IAmb 23 46 31.6
comp=Z,47nm,1.6s
ISAL Salakas 73.26 327 *eP* **P 23 46 28.2 +1.0**
IIGN Ignalina 73.35 327 *eP* **P 23 46 28.6 +0.9**
NACGM Naroch 73.38 326 *eP* **P 23 46 27.0 -0.9**
NACGM PM 23 46 28.0
comp=Z,0.2nm,1.0s
O03E Paynes Creek 73.43 52 P **P 23 46 29.8 +1.2**
baz=303,SNR=7.7
SCO Scoresbysund 73.48 354 *i* P **P 23 46 29.8 +1.6**
SCO pmax pmax
comp=Z,19nm,0.8s
SCO Scoresbysund 73.48 354 IAmb IAmb 23 46 30.3
comp=Z,18nm,0.8s
SCO Scoresbysund 73.48 354 *i* P **P 23 46 29.8 +1.6**
comp=Z,19nm,0.8s
MOD Modoc Plateau 73.51 50 P **P 23 46 30.0 +0.8**
SLIT Slitere, Latvi 73.55 330 *eP* **P 23 46 28.5 -0.4**
JTMT Jette 73.79 43 IAmb IAmb 23 46 33.2
comp=Z,30nm,0.8s
ANN Anapa 73.80 314 *eP* **P 23 46 28.1 -2.5**
ANN *e**PP **pP 23 46 47.5 +0.8**
ANN *eS* **SKiKP 23 55 53.7 -0.6**
ANN *e*SSS SSS 00 04 03.0
ANN pmax pmax
comp=Z,49nm,1.1s
ORV Oroville 74.02 53 P **P 23 46 31.3 -0.7**
ORV pmax pmax
comp=Z,13nm,1.2s
ORV Oroville 74.02 53 P **P 23 46 31.3 -0.7**
PABE Paberze 74.24 328 *eP* **P 23 46 33.5 +0.6**
MSO Missoula 74.51 43 P **P 23 46 35.8 +1.0**
baz=306,SNR=8.6
MSO Missoula 74.51 43 IAmb IAmb 23 46 37.4
comp=Z,28nm,1.5s
AFDM Forest Hills D 74.70 53 P **P 23 46 35.7 -0.3**
PBUR Paburge 74.77 329 *eP* **P 23 46 36.3 +0.3**
AKASG Malin Array Be 74.83 322 P **P 23 46 36.1 -0.3**
comp=Z,42nm,0.7s,baz=49,slow=6.0,SNR=133
AKASG LR LR 00 21 41.9
comp=Z,106nm,19.9s,baz=45,slow=37
DOMB Dombas 75.04 338 *eP* **P 23 46 37.9 +0.4**
NB2 NORSAR Subarra 75.14 337 P **P 23 46 38.2 +0.1**
comp=Z,39nm,0.9s,baz=41,slow=5.9
NB2 NORSAR Subarra 75.14 337 P **P 23 46 38.2 +0.1**
baz=41,slow=5.9
NOA NORSAR Array B 75.14 337 P **P 23 46 38.4 +0.3**
comp=Z,9.6nm,0.5s,baz=40,slow=5.8,SNR=70
NOA LR LR 00 23 12.8
comp=Z,31nm,19.0s,baz=40,slow=38
NC602 NORSAR Array S 75.27 337 IAmb IAmb 23 46 39.9
comp=Z,39nm,1.2s
NAO01 NORSAR Array S 75.40 337 IAmb IAmb 23 46 40.2
comp=Z,43nm,1.1s
NAO01 NORSAR Array S 75.40 337 *eP* **P 23 46 39.5 -0.1**
FFC Flin Flon 75.51 32 P **P 23 46 41.1 +0.8**
FFC pmax pmax
comp=Z,17nm,0.9s
FFC Flin Flon 75.51 32 P **P 23 46 41.1 +0.8**
FFC IAmb IAmb 23 46 42.0
comp=Z,17nm,0.8s
SIM Simferopol' 75.65 315*ceP* **P 23 46 41.5 +0.2**
SIM *e**PP **pP 23 46 59.0 +1.5**
SIM pmax pmax
comp=Z,31nm,0.8s
FCC Fort Churchill 75.79 26 IAmb IAmb 23 46 43.5
comp=Z,32nm,1.4s
EGMT Eagleton 76.07 40 P **P 23 46 44.8 +1.0**
baz=308,SNR=16
EGMT Eagleton 76.07 40 IAmb IAmb 23 46 46.0
comp=Z,30nm,0.9s
DLMT Dillon 76.13 44 IAmb IAmb 23 46 46.7
comp=Z,23nm,0.8s
SKAR Skalia 76.33 338 *eP* **P 23 46 46.1 +1.2**
KVN Kaiserville 76.49 52 IAmb IAmb 23 47 09.2
comp=Z,15nm,1.0s
FOO Floro 76.57 340 *eP* **P 23 46 46.9 +0.8**
NVAR Mina Array Bea 76.72 52 P **P 23 46 49.1 +1.4**
comp=Z,6.8nm,0.7s,baz=294,slow=5.4,SNR=49
NVAR LR LR 00 13 51.4
comp=Z,42nm,21.8s,baz=196,slow=30
SORM Soroca 76.87 320⇑P **P 23 46 47.8 -0.3**
DIKM Dikmen 76.91 312⇓P **P 23 46 49.7 +1.2**
PAGB Antelope Grade 76.96 55 IAmb IAmb 23 46 51.8
comp=Z,16nm,0.9s
MILM Milestii Mici 77.39 319⇑P **P 23 46 50.3 -0.8**
ASK Askoy 77.42 339 *eP* **P 23 46 51.7 +0.8**
SFJD Kangerlussuaq 77.44 4 *i* P **P 23 46 50.6 -0.4**
SFJD Kangerlussuaq 77.44 4 *i* P **P 23 46 50.6 -0.4**
BZK Bozkurt 77.48 313⇓P **P 23 46 52.3 +0.6**
VES Vestal, Richgr 77.68 55 P **P 23 46 53.9 +1.0**
baz=305
PKM Mcpherson Peak 77.73 56 P **P 23 46 55.3 +1.8**
baz=305
H17A Grant Village 77.86 44 P **P 23 46 57.3 +3.2**
baz=308,SNR=25
BLS5 Blasjo 77.90 338 *eP* **P 23 46 54.7 +1.0**
LVV L'vov 77.95 324 *eP* **P 23 46 54.6 +0.4**
IMW Indian Meadow 77.96 44 IAmb IAmb 23 46 57.9
comp=Z,13nm,0.8s
LEOM Leova 77.97 319⇑P **P 23 46 55.1 +0.8**
FLWY Flagg Ranch 77.98 44 IAmb IAmb 23 46 58.4
comp=Z,16nm,1.1s
CWC Cottonwood Cre 78.00 54 P **P 23 46 56.4 +1.4**
baz=305
SBC Santa Barbara 78.06 56 P **P 23 46 56.8 +1.8**
baz=305
FXWY Fox Creek 78.07 45 IAmb IAmb 23 46 58.3
comp=Z,29nm,1.8s
VASR Vaslui 78.11 319⇓P **P 23 46 55.9 +0.8**
RLMT Red Lodge 78.14 43 P **P 23 46 57.0 +1.4**
baz=309,SNR=9.0
RLMT Red Lodge 78.14 43 IAmb IAmb 23 46 58.4
comp=Z,40nm,1.6s
GRAC Grapevine Rang 78.15 53 P **P 23 46 57.2 +1.7**
baz=306,SNR=6.4
HOMB Horsund 78.16 336 *eP* **P 23 46 55.6 +0.5**
ISA Isabella, Lake 78.19 55 P **P 23 46 55.0 -0.8**
ISA pmax pmax
comp=Z,8.0nm,1.2s
ISA Isabella, Lake 78.19 55 P **P 23 46 56.2 +0.4**
baz=305
ISA Isabella, Lake 78.19 55 P **P 23 46 55.0 -0.8**
TPAW Teton Pass 78.20 45 IAmb IAmb 23 46 59.0
comp=Z,12nm,0.7s
BSD Bornholm Skovb 78.25 331⇑ *iP* **P 23 46 55.6 -0.1**
BSD pmax pmax
comp=Z,42nm,0.8s
BSD Bornholm Skovb 78.25 331⇑ *iP* **P 23 46 55.6 -0.1**
comp=Z,42nm,0.8s
GAZ Gaziantep 78.30 307 IAmb IAmb 23 46 58.9
comp=Z,35nm,1.0s
SNOW Snow King Moun 78.33 45 IAmb IAmb 23 46 59.7
comp=Z,10.0nm,0.7s
BIR Birlad 78.44 319⇓P **P 23 46 57.4 +0.5**
R11A Troy Canyon, C 78.50 51 P **P 23 46 59.3 +1.6**
baz=306,SNR=21
SNART Snartemo 78.53 337 *eP* **P 23 46 57.7 +0.6**
VARL Varlezi 78.55 319⇓P **P 23 46 58.3 +0.7**
MPMC Manual Prospec 78.61 54 P **P 23 46 59.7 +1.4**
baz=306,SNR=7.5
GHRR 78.68 319⇓P **P 23 47 00.4 +2.1**
JURR Jurilovca 78.71 317⇓P **P 23 46 57.9 -0.5**
KWP Kalwaria Pacla 78.72 324 *i* P **P 23 46 59.5 +1.1**
LAO LASA Array 78.78 40 IAmb IAmb 23 47 01.3
comp=Z,14nm,0.8s
FURC Furnace Creek, 78.78 53 P **P 23 47 00.5 +1.5**
baz=306,SNR=5.7
TESR Tescani 78.80 320⇑P **P 23 46 58.7 -0.2**
BIZ Bizca 78.80 320⇑P **P 23 46 59.7 +0.8**
BUR08 Bucovina Ar. S 78.81 321 IAmb IAmb 23 47 00.7
comp=Z,18nm,0.8s
BURAR Bucovina Array 78.82 321⇓P **P 23 46 59.6 +0.5**
LRMC Laurel Mtn Rad 78.82 54 P **P 23 47 00.5 +1.1**
baz=306
CFR Carcaliu 78.86 318⇓P **P 23 46 59.5 +0.3**
GOET G??ttrup 78.88 335 *i* P **P 23 47 00.3 +1.2**
comp=Z,196nm,0.9s
TPNV Topopah Spring 78.90 53 P **P 23 47 01.1 +1.3**
baz=306,SNR=11
TOPG Topolog 78.92 318⇑P **P 23 47 00.2 +0.6**
EDW2 Edwards Air Fo 78.96 55 P **P 23 47 01.7 +1.6**
baz=306,SNR=7.7
PETR Petresti 79.00 319⇑P **P 23 47 01.4 +1.5**
HWUT Hardware Ranch 79.00 46 IAmb IAmb 23 47 03.2
comp=Z,20nm,1.1s
BRTR Keskin Array B 79.05 311 P **P 23 47 00.9 +0.3**
comp=Z,9.1nm,0.8s,baz=101,slow=3.9,SNR=53
BRTR PP **PP 23 49 55.9 -3.9**
comp=Z,1.4nm,1.0s,baz=61,slow=6.8,SNR=3.8
ODBI Odobesti 79.06 319⇓P **P 23 47 01.9 +1.6**
DUG Dugway, Tooele 79.12 48 P **P 23 47 02.7 +1.8**
baz=308,SNR=14
DUG Dugway, Tooele 79.12 48 IAmb IAmb 23 47 23.5
comp=Z,32nm,1.4s
VRI Vrincioaia 79.17 319⇑P **P 23 47 02.3 +1.3**
PLOR Plostina 79.22 319⇓P **P 23 47 02.2 +0.9**
HARR Harsova 79.28 318⇓P **P 23 47 02.2 +0.7**
TLBR Topalu 79.31 318⇑P **P 23 47 02.4 +0.7**
GRER 79.36 319⇑P **P 23 47 03.0 +1.0**
BISRR Bisoca 79.39 319⇑P **P 23 47 04.4 +2.1**
KOLS Kolonicke sedl 79.40 324 *eP* **P 23 47 02.8 +0.6**
KOLS pmax pmax
comp=Z,12nm,0.9s
KOLS Kolonicke sedl 79.40 324 *eP* **P 23 47 02.8 +0.6**
BW06 Boulder Array 79.45 45 P **P 23 47 03.7 +0.8**
baz=309,SNR=15
PDAR Pinedale Array 79.45 45 P **P 23 47 03.8 +0.9**
comp=Z,6.2nm,0.6s,baz=266,slow=2.1,SNR=97
ANTO Ankara 79.47 312⇓P **P 23 47 03.5 +0.7**
ANTO Ankara 79.47 312 P **P 23 47 02.4 -0.4**
ANTO pmax pmax
comp=Z,16nm,0.8s
ANTO Ankara 79.47 312 P **P 23 47 02.4 -0.4**
ANTO IAmb IAmb 23 47 04.1
comp=Z,16nm,0.8s
GSC Goldstone, Bar 79.50 54 P **P 23 47 04.2 +1.1**
baz=306,SNR=6.3
OZUR 79.52 320⇑P **P 23 47 03.7 +0.8**
CIS Catalina Islan 79.54 56 P **P 23 47 04.3 +1.1**
baz=306
BFSC Mount Baldy Ra 79.56 55 P **P 23 47 04.3 +0.9**
baz=306
UZH Uzhgorod 79.60 323⇑ *iP* **P 23 47 04.0 +0.8**
UZH *e* 23 47 10.7
UZH *e* 23 47 19.0
UZH *i* 23 47 23.2
ARCR ARCALIA 79.61 321⇓P **P 23 47 04.7 +1.4**
BMR Baia Mare 79.65 322⇓P **P 23 47 04.8 +1.3**
OJC Ojcow 79.68 326 *i* P **P 23 47 04.4 +0.8**
DOPR Dopca 79.81 320⇓P **P 23 47 05.5 +1.1**
MLR Muntele Rosu 79.83 319⇓P **P 23 47 05.3 +0.6**
MLR Muntele Rosu 79.83 319 IAmb IAmb 23 47 26.7
comp=Z,82nm,2.0s
SOCY Socotra 79.91 278 P **P 23 47 03.1 -2.5**
NIE Niedzica 80.01 325 *i* P **P 23 47 06.6 +1.1**
TUQ Turquoise Moun 80.01 54 P **P 23 47 07.2 +1.4**
baz=307
HEC Hector,Ludlow 80.10 54 P **P 23 47 07.7 +1.4**
baz=306,SNR=9.0
RAYN Ar Rayn 80.24 292 *i* P **P 23 47 07.5 +0.3**
SNR=37
RAYN Ar Rayn 80.24 292 P **P 23 47 06.8 -0.4**
RAYN Ar Rayn 80.24 292 P **P 23 47 06.8 -0.4**
MURC Murrieta 80.25 56 P **P 23 47 08.1 +1.0**
baz=306
VOIR 80.34 320⇑P **P 23 47 08.4 +0.4**
GMRC Granite Mounta 80.57 54 P **P 23 47 10.3 +1.4**
baz=307,SNR=17
LANS Liptovska Anna 80.58 325 *eP* **P 23 47 10.1 +1.5**
LANS pmax pmax
comp=Z,12nm,1.1s
LANS Liptovska Anna 80.58 325 *eP* **P 23 47 10.1 +1.5**
ARR Arges 80.61 320⇑P **P 23 47 10.3 +1.5**
DRGR 80.64 322⇓P **P 23 47 08.9 0.0**
RUE Ruedersdorf 80.65 330 *eP* **P 23 47 09.4 +0.6**
comp=Z,48nm,1.4s,baz=39,slow=5.1
OKC Ostrava-Krasne 80.70 326 *eP* **P 23 47 09.4 +0.3**
OKC Ostrava-Krasne 80.70 326 *eP* **P 23 47 09.4 +0.3**
109C Camp Elliot, M 80.73 56 P **P 23 47 10.8 +1.3**
baz=306
PFO Pinyon Flats O 80.73 55 P **P 23 47 10.7 +0.9**
comp=Z,7.4nm,0.7s,baz=316,slow=4.9,SNR=12
PFO LR LR 00 16 28.9
comp=Z,91nm,19.7s,baz=260,slow=31
PFO Pinyon Flats O 80.73 55 P **P 23 47 11.1 +1.3**
PFO pmax pmax
comp=Z,26nm,1.2s
PFO Pinyon Flats O 80.73 55 P **P 23 47 11.0 +1.3**
baz=307,SNR=9.7
PFO Pinyon Flats O 80.73 55 P **P 23 47 11.1 +1.3**
PFO IAmb IAmb 23 47 29.8
comp=Z,26nm,1.1s
XPFO Pion Flat 80.74 55 P **P 23 47 09.3 -0.5**
XPFO IAmb IAmb 23 47 29.8
comp=Z,26nm,1.1s
LCMT Little Creek M 80.79 51 P **P 23 47 11.5 +1.5**
LCMT PP **PP 23 50 15.4 +1.2**
KSP Ksiaz 80.80 328 *i* P **P 23 47 10.3 +0.7**
BELC Belle Mtn. Jos 80.81 55 P **P 23 47 11.1 +0.9**
baz=307,SNR=7.7
BSEG Bad Segeberg 80.90 333 *eP* **P 23 47 10.8 +0.7**
comp=Z,35nm,1.2s,baz=39,slow=5.1
BSEG *eL* L 00 18 19.5
comp=Z,60nm,19.8s
HUMR Humele 80.98 319⇑P **P 23 47 11.3 +0.5**
MORC Moravsky Berou 81.02 326 *eP* **P 23 47 11.4 +0.5**
MORC Moravsky Berou 81.02 326⇑P **P 23 47 11.5 +0.5**
MORC Moravsky Berou 81.02 326 IAmb IAmb 23 47 12.7
comp=Z,22nm,1.0s
OSTC Ostas 81.05 328 *eP* **P 23 47 11.6 +0.6**
CHVC Chvalec 81.09 328 *eP* **P 23 47 11.1 -0.2**
COPA Copaceanca 81.12 319⇓P **P 23 47 12.0 +0.5**
KRLC Kraliky 81.15 327 *eP* **P 23 47 11.7 +0.1**
KRLC *e* 23 47 31.5
KRLC Kraliky 81.15 327 *eP* **P 23 47 11.7 +0.1**
KRLC *ex* x 23 47 31.5
DPC Dobruska-Polom 81.15 327 *eP* **P 23 47 12.2 +0.6**
DPC Dobruska-Polom 81.15 327 *eP* **P 23 47 12.2 +0.6**
UPC Upice 81.17 328 *eP* **P 23 47 12.2 +0.6**
UPC Upice 81.17 328 *eP* **P 23 47 12.2 +0.6**
MONP2 Monument Peak 81.19 56 P **P 23 47 13.3 +1.0**
baz=307,SNR=5.5
K22A Casper 81.24 43 P **P 23 47 13.3 +1.0**
baz=311
PSZ Piszkesteto 81.25 324⇑P **P 23 47 13.0 +0.9**
PSZ Piszkesteto 81.25 324 IAmb IAmb 23 47 14.2
comp=Z,29nm,1.0s
IRM Iron Mountain 81.28 54 P **P 23 47 14.0 +1.4**
baz=307,SNR=7.3
ULM Lac du Bonnet 81.31 33 P **P 23 47 12.7 +0.4**
comp=Z,6.6nm,0.8s,baz=264,slow=4.5,SNR=6.2
ULM LR LR 00 23 31.3
comp=Z,23nm,20.9s,baz=334,slow=36
VYHS Vyhne 81.34 325 *eP* **P 23 47 13.5 +0.9**
VYHS pmax pmax
comp=Z,21nm,1.2s
VYHS Vyhne 81.34 325 *eP* **P 23 47 13.5 +0.9**
BC3 Big Chuckawall 81.38 55 P **P 23 47 14.4 +1.2**
baz=307,SNR=11
RWWY Rawlins 81.48 44 IAmb IAmb 23 47 14.7
comp=Z,15nm,0.8s
SIRR Siria 81.53 322⇓P **P 23 47 13.9 +0.3**
IKP In-Ko-Pah, Jac 81.54 56 P **P 23 47 15.5 +1.4**
baz=307
ELND Elena 81.56 317⇓P **P 23 47 14.6 +0.8**
GZR Gura Zlata 81.56 321⇓P **P 23 47 14.5 +0.6**
SWSC Sam W. Stewart 81.58 56 P **P 23 47 15.7 +1.6**
baz=307
JAVC Velka Javorina 81.62 326 *eP* **P 23 47 15.8 +1.7**
RSSD Black Hills 81.63 41 P **P 23 47 14.8 +0.4**
RSSD pmax pmax
comp=Z,5.0nm,0.7s
RSSD Black Hills 81.63 41 P **P 23 47 15.6 +1.1**
baz=312
RSSD Black Hills 81.63 41 P **P 23 47 14.8 +0.4**
VLAD Vladila 81.64 319⇓P **P 23 47 14.8 +0.6**
U15A North Rim 81.75 51 IAmb IAmb 23 47 18.2
comp=Z,12nm,0.7s
PVCC Panska Ves 81.78 328 *eP* **P 23 47 15.6 +0.8**
PVCC *e* 23 47 32.8
PVCC Panska Ves 81.78 328 *eP* **P 23 47 15.6 +0.8**
PVCC *ep*P **pP 23 47 32.8 +1.6**
BRG Berggiesshubel 81.79 329 *i* P **P 23 47 15.3 +0.5**
comp=Z,15nm,0.8s
BRG Berggiesshubel 81.79 329 *eP* **P 23 47 15.3 +0.5**
comp=Z,15nm,0.8s,baz=39,slow=5.1
BRG Berggiesshubel 81.79 329 *i* P **P 23 47 15.4 +0.5**
BRG pmax pmax
comp=Z,15nm,0.9s
VRAC Vranov 81.79 327 *eP* **P 23 47 15.6 +0.7**

VRAC Vranov 81.79 327 ⇑P P 23 47 15.8 +0.9
CLL Collm 81.85 330 ⇑*i*P P 23 47 16.2 +1.0
comp=Z,34nm,0.9s
CLL *i* pP **pP** 23 47 31.4 -0.2
CLL *e*(sP) **sP** 23 47 35.0 -3.1
CLL *e*PP **PP** 23 50 21.0 -1.3
CLL *e*S **S** 23 57 29.0 +5.1
CLL Collm 81.85 330 *e*P P 23 47 16.5 +1.3
comp=Z,34nm,0.9s,baz=39,slow=5.1
CLL *e*L L 00 25 33.5
comp=Z,81nm,20.2s
CLL Collm 81.85 330 ⇑*i*P P 23 47 16.2 +1.0
CLL *i* 23 47 31.4
CLL *e* 23 47 35.0
CLL *e*S **S** 23 57 29.0 +5.1
CLL pmax pmax
comp=Z,34nm,0.9s
CLL Collm 81.85 330 IAmb IAmb 23 47 17.4
comp=Z,30nm,0.8s
PDMCI Parker Dam,Lak 81.86 54 P P 23 47 17.0 +1.4
baz=308
O20A White River Ci 81.89 46 P P 23 47 17.0 +1.1
baz=310,SNR=10.0
O20A White River Ci 81.89 46 IAmb IAmb 23 47 18.0
comp=Z,14nm,0.8s
PLVB Pleven 81.94 318 ⇑P P 23 47 15.6 -0.2
Y12C Blythe 81.94 54 P P 23 47 17.7 +1.7
baz=308
Y12C Blythe 81.94 54 IAmb IAmb 23 47 36.3
comp=Z,26nm,1.1s
SMOL Smolenice 81.98 326 *e*P P 23 47 17.4 +1.4
SMOL pmax pmax
comp=Z,13nm,0.9s
SMOL Smolenice 81.98 326 *e*P P 23 47 17.4 +1.4
FBE Freiberg 82.00 329 *e*P P 23 47 16.8 +0.8
comp=Z,29nm,0.8s,baz=39,slow=5.1
BZS Buzias 82.00 321 ⇓P P 23 47 16.4 +0.3
KRUC Moravsky 82.06 326 *e*P P 23 47 16.8 +0.5
SRO2 Moca 82.07 325 *e*P P 23 47 16.5 +0.1
SRO2 pmax pmax
comp=Z,19nm,0.7s
SRO2 Moca 82.07 325 *e*P P 23 47 16.5 +0.1
SRO Srobarova 82.07 325 *e*P P 23 47 17.5 +1.1
SRO pmax pmax
comp=Z,19nm,0.7s
SRO Srobarova 82.07 325 *e*P P 23 47 17.5 +1.1
HERR Herculane 82.09 321 ⇑P P 23 47 16.6 0.0
NRDL Niedersach Rie 82.10 332 *e*P P 23 47 16.9 +0.5
comp=Z,12nm,0.8s,baz=39,slow=5.1
GOPC GO Pecny, Ondr 82.14 328 *e*P P 23 47 17.0 +0.2
GOPC *e* 23 47 34.7
GOPC GO Pecny, Ondr 82.14 328 *e*P P 23 47 17.0 +0.2
GOPC *e*pP **pP** 23 47 34.7 +1.5
CSS Mathiatis 82.14 307 IAmb IAmb 23 47 21.0
comp=Z,15nm,0.8s
MODS Modra-Piesok 82.15 326 *e*P P 23 47 17.1 +0.2
MODS pmax pmax
comp=Z,17nm,1.0s
MODS Modra-Piesok 82.15 326 *e*P P 23 47 17.1 +0.2
GLA Glamis 82.16 55 P P 23 47 19.1 +1.8
baz=307
GLA Glamis 82.16 55 IAmb IAmb 23 47 37.5
comp=Z,21nm,0.9s
PRU Pruhonice 82.19 328 *e*P P 23 47 17.1 +0.1
PRU *e* 23 47 33.5
PRU Pruhonice 82.19 328 *e*P P 23 47 17.1 +0.1
PRU *e*pP **pP** 23 47 33.5 +0.1
BAIL Bailesti 82.19 319 ⇓P P 23 47 18.6 +1.5
RETH Rethem/Aller, 82.19 332 *e*P P 23 47 17.3 +0.4
comp=Z,23nm,0.7s,baz=39,slow=5.1
TREC Trest 82.29 327 *e*P P 23 47 18.0 +0.4
TREC Trest 82.29 327 *e*P P 23 47 18.0 +0.4
NEUB Neuenburg 82.43 330 *e*P P 23 47 18.7 +0.5
comp=Z,32nm,0.9s,baz=39,slow=5.1
PV21 Cone Mtn., Par 82.46 48 IAmb IAmb 23 47 21.5
comp=Z,24nm,0.7s
CLZ Clausthal 82.50 331 *e*P P 23 47 19.3 +0.6
comp=Z,23nm,1.1s,baz=39,slow=5.1
MDVR Moldovita 82.53 321 ⇑P P 23 47 18.7 -0.2
PV22 Blue Mesa, Par 82.59 48 IAmb IAmb 23 47 42.4
comp=Z,18nm,1.0s
PV20 West Nyswonger 82.60 48 IAmb IAmb 23 47 23.7
comp=Z,24nm,0.7s
PV04 Paradox Valley 82.61 48 IAmb IAmb 23 47 25.5
comp=Z,18nm,0.8s
LEWI Lewis, Hebride 82.64 343 *e*P P 23 47 19.6 +0.4
PV16 Nyswonger Mesa 82.65 48 IAmb IAmb 23 47 23.5
comp=Z,25nm,0.9s
KDZ Kurdzhali 82.66 317 *i*P P 23 47 20.5 +0.9
PV11 David Mesa, Pa 82.69 48 IAmb IAmb 23 47 23.6
comp=Z,29nm,0.8s
PV18 Skein Mesa, Pa 82.70 48 IAmb IAmb 23 47 42.0
comp=Z,30nm,1.0s
N23A Red Feather La 82.72 44 P P 23 47 22.0 +1.7
baz=311,SNR=11
PHWY Pilot Hill 82.73 44 IAmb IAmb 23 47 22.6
comp=Z,26nm,1.9s
PV03 Paradox Valley 82.73 48 IAmb IAmb 23 47 42.2
comp=Z,37nm,1.1s
PV07 Paradox Valley 82.73 48 IAmb IAmb 23 47 23.1
comp=Z,34nm,1.6s
TANN Tannenbergstha 82.75 329 *e*P P 23 47 20.4 +0.4
comp=Z,32nm,1.5s,baz=39,slow=5.1
PV13 Radium Mtn., P 82.81 48 IAmb IAmb 23 47 23.4
comp=Z,28nm,0.9s
Y14A Wickenburg 82.83 53 IAmb IAmb 23 47 23.0
comp=Z,57nm,1.9s
PLN Plauen 82.83 329 *e*P P 23 47 20.8 +0.4
comp=Z,7.7nm,1.0s,baz=39,slow=5.1
PV02 Paradox Valley 82.83 48 IAmb IAmb 23 47 24.2
comp=Z,19nm,0.9s
KAC Achnashellach 82.83 342 *e*P P 23 47 20.8 +0.6
GUNZ Gunzen 82.85 329 *e*P P 23 47 21.0 +0.6
comp=Z,11nm,0.9s,baz=39,slow=5.1
WERN Wernitzgruen 82.89 329 *e*P P 23 47 21.3 +0.6
comp=Z,17nm,1.1s,baz=39,slow=5.1
NKC Novy Kostel 82.90 329 *e*P P 23 47 20.7 0.0
NKC Novy Kostel 82.90 329 *e*P P 23 47 20.7 0.0
PV15 Paradox Valley 82.90 48 IAmb IAmb 23 47 24.7
comp=Z,13nm,0.7s
WUAZ Wupatki 82.90 51 P P 23 47 23.0 +1.8
baz=309,SNR=8.6
WUAZ Wupatki 82.90 51 IAmb IAmb 23 47 24.0
comp=Z,20nm,1.1s
RDO Rodhopi 82.92 316 P P 23 47 21.6 +0.6
MOX Moxa 82.93 330 *e*P P 23 47 21.3 +0.4
comp=Z,11nm,0.8s,baz=39,slow=5.1
MOX *e*L L 00 24 24.8
comp=Z,43nm,21.0s
PV01 Paradox Valley 82.98 48 IAmb IAmb 23 47 43.4
comp=Z,20nm,1.0s
RZN Rozhen 83.02 317 *i*P P 23 47 22.6 +0.9
MORH Mrgy, Hungar 83.06 323 ⇑*i*P P 23 47 21.5 -0.1
KPL Plockton 83.06 342 *e*P P 23 47 22.0 +0.6
KPL IAmb IAmb 23 47 23.0
comp=Z,51nm,0.9s
CONA Conrad Observa 83.13 326 *i*PcP P 23 47 23.1 +1.0
comp=Z,18nm,1.2s,SNR=10
CONA *e*sP **sP** 23 47 43.8 -1.1
comp=Z,19nm,1.3s
IBBN Ibbenburen 83.14 333 *e*P P 23 47 22.1 +0.3
comp=Z,32nm,0.6s,baz=39,slow=5.1
VTS Vitosha 83.21 318 ⇑P P 23 47 23.6 +1.0
VTS Vitosha 83.21 318 *i*P P 23 47 23.4 +0.8
VTS Vitosha 83.21 318 IAmb IAmb 23 47 24.8
comp=Z,33nm,1.0s
MANZ Manzenberg 83.23 329 *e*P P 23 47 23.0 +0.6
comp=Z,11nm,0.7s,baz=39,slow=5.1
FRGS Fruska Gora 83.23 322 ⇑*i*P P 23 47 22.9 +0.4
KHC Kasperske Hory 83.25 328 *c i*P P 23 47 22.8 +0.2
KHC pmax pmax
comp=Z,45nm,1.2s
KHC Kasperske Hory 83.25 328 *e*P P 23 47 22.4 -0.2
KHC *e*pP **pP** 23 47 37.9 -1.1
ROTZ Rotzenmuhle 83.35 329 *e*P P 23 47 23.9 +0.8
comp=Z,19nm,1.0s,baz=39,slow=5.1
GEC2 GERESS Array S 83.41 328 *e*P P 23 47 23.7 +0.2
comp=Z,11nm,0.9s,baz=39,slow=5.1
GEC2 *e*L L 00 26 34.4
comp=Z,66nm,19.1s
GERES GERESS Array B 83.41 328 P P 23 47 23.4 -0.1
comp=Z,4.5nm,0.6s,baz=35,slow=4.9,SNR=51
GERES PP **PP** 23 50 36.0 +0.7
comp=Z,1.0nm,0.8s,baz=44,slow=7.3,SNR=3.7
GERES LR LR 00 28 19.9
comp=Z,90nm,18.1s,baz=86,slow=38

UBBA Unterbreizbach 83.44 331 *e*P P 23 47 23.6 +0.2
comp=Z,27nm,2.0s,baz=39,slow=5.1
INVG Invergeldie, C 83.45 341 *e*P P 23 47 23.4 0.0
INVG IAmb IAmb 23 47 24.8
comp=Z,23nm,0.8s
ESY Stoneypath 83.51 340 *e*P P 23 47 24.1 +0.4
WET Wettzell 83.54 328 *e*P P 23 47 24.6 +0.6
comp=Z,12nm,1.0s,baz=39,slow=5.1
WET *e*L L 00 28 26.1
comp=Z,112nm,18.0s
X16A Lo Mia Camp, P 83.54 52 IAmb IAmb 23 47 28.1
comp=Z,25nm,1.3s
MVCO Mesa Verde 83.61 48 P P 23 47 26.5 +1.5
baz=310
MVCO Mesa Verde 83.61 48 IAmb IAmb 23 47 27.4
comp=Z,20nm,1.0s
ISCO Idaho Springs 83.63 45 IAmb IAmb 23 47 27.6
comp=Z,25nm,1.7s
MMB Musomiste 83.64 317 *i*P P 23 47 25.3 +0.6
NVR Nevrokopi 83.72 317 P P 23 47 25.4 +0.2
EAB Aberfoyle 83.74 341 *e*P P 23 47 25.5 +0.6
PRK Paraskevi 83.76 314 P P 23 47 26.1 +0.8
ARSA Arzberg 83.78 326 *i*PcP P 23 47 25.8 +0.5
comp=Z,11nm,0.8s
ARSA *e*sP **sP** 23 47 46.7 -1.5
comp=Z,10nm,1.1s
KKB Krupnik 83.80 318 *i*P P 23 47 26.2 +0.7
GRF Grafenberg Arr 83.82 329 *e*P P 23 47 26.4 +0.9
comp=Z,42nm,1.0s,baz=39,slow=5.1
GRF *e*L L 00 27 08.5
comp=Z,52nm,21.5s
DIVS Divibare 83.89 321 ⇑*i*P P 23 47 26.2 +0.2
MOA Molln 83.91 327 *i*PcP P 23 47 26.4 +0.5
comp=Z,14nm,1.0s,SNR=5.5
LAWE Loch Awe, Argy 83.96 341 *e*P P 23 47 26.5 +0.6
BUG Bochum--Univer 84.01 333 *e*P P 23 47 26.3 0.0
comp=Z,57nm,1.9s,baz=39,slow=5.1
SRS Serrai 84.03 317 P P 23 47 26.7 0.0
SUSD Miller 84.05 38 P P 23 47 27.2 +0.5
baz=315
214A Organ Pipe Nat 84.18 55 P P 23 47 29.0 +1.4
baz=308,SNR=5.7
214A Organ Pipe Nat 84.18 55 IAmb IAmb 23 47 48.0
comp=Z,21nm,1.0s
W18A Petrified Fore 84.19 51 P P 23 47 29.2 +1.4
baz=310,SNR=5.0
ESK Eskdalemuir 84.20 340 *e*P P 23 47 27.7 +0.4
EDMD Edmundbyers 84.27 339 *e*P P 23 47 27.7 +0.1
S22A 4UR Ranch, Cre 84.27 47 P P 23 47 30.2 +1.9
baz=311,SNR=21
F33A 5 Mile Ranch, 84.34 36 IAmb IAmb 23 47 29.7
comp=Z,15nm,0.8s
BBLS Lazići 84.35 321 ⇑*i*P P 23 47 29.1 +0.8
GROS Grobnik 84.38 325 *i*P P 23 47 28.3 -0.1
KNT Kendrikon 84.38 318 P P 23 47 28.7 +0.2
DOB Doboj 84.39 323 *e*P P 23 47 27.6 -0.8
HAPS Han Pijesak,Bl 84.42 322 *e*P P 23 47 28.5 -0.3
PERS Pernice 84.42 325 *i*P P 23 47 29.0 +0.3
X18A Snowflake 84.43 51 IAmb IAmb 23 47 49.5
comp=Z,18nm,1.1s
SOKA Soboth 84.43 326 *i*PcP P 23 47 29.1 +0.4
comp=Z,31nm,0.9s,SNR=25
SOKA *e*sP **sP** 23 47 49.8 -1.8
comp=Z,28nm,1.2s
VAY Valandovo 84.45 318 *i*P P 23 47 29.2 +0.4
VAY Valandovo 84.45 318 *i*P P 23 47 29.2 +0.4
Q24A Divide 84.46 45 P P 23 47 30.5 +1.2
baz=312
TNS Taunus Mts 84.53 331 *e*P P 23 47 29.5 +0.4
comp=Z,16nm,1.1s,baz=39,slow=5.1
TNS *e*L L 00 29 34.4
comp=Z,52nm,18.6s
RUDO Rudo 84.54 321 ⇑*i*P P 23 47 29.1 -0.1
PMOR Pomariorio Ree 84.56 113 *e*T T 01 20 05.5
comp=Z,6.4nm,0.2s
SKO Skopje 84.62 319 *i*P P 23 47 30.7 +1.0
SKO Skopje 84.62 319 *i*P P 23 47 30.7 +1.0
PLG Polygyros 84.62 317 P P 23 47 29.8 +0.1
OBKA Obir 84.78 326 *i*P P 23 47 30.4 -0.1
comp=Z,9.6nm,0.8s
PAIG Paliouri 84.79 316 P P 23 47 30.4 -0.1
AHRW Bad Neuenahr-A 84.81 332 *e*P P 23 47 30.7 +0.3
comp=Z,20nm,1.1s,baz=39,slow=5.1
BLY Banja Luka 84.83 323 ⇓P P 23 47 30.7 +0.1
BLY Banja Luka 84.83 323 ⇑*i*P P 23 47 30.7 +0.1
BLY Banja Luka 84.83 323 IAmb IAmb 23 47 32.0
comp=Z,12nm,0.7s
LEGS Legarje 84.84 325 *i*P P 23 47 30.7 0.0
CRES Cresnjev 84.87 325 ⇑*i*P P 23 47 30.7 -0.1
OGNE Ogallala 84.87 42 P P 23 47 31.7 +0.6
baz=314
KBA Koelnbreinsper 84.90 327 *i*PcP P 23 47 31.1 -0.1
comp=Z,14nm,0.8s,SNR=10
HPK Haverah Park 84.92 338 *e*P P 23 47 31.5 +0.6
HPK IAmb IAmb 23 47 32.2
comp=Z,40nm,0.9s
PPT2 Papeete2 84.93 116 *e*LR LR 00 14 10.1
comp=Z,490nm,32.2s
FUR Furstenfeldbru 84.98 328 *e*P P 23 47 32.0 +0.7
comp=Z,32nm,0.7s,baz=39,slow=5.1
FUR *e*L L 00 29 36.7
comp=Z,100nm,18.1s
GAL1 Galloway 85.01 340 *e*P P 23 47 31.4 +0.1
GAL1 IAmb IAmb 23 47 32.6
comp=Z,36nm,0.8s
SDCO Great Sand Dun 85.06 46 P P 23 47 33.9 +1.5
baz=312
UPM Unac-Piva 85.08 321 *e*P P 23 47 32.5 +0.3
TIAR Tiarei 85.08 115 *e*T T 01 20 44.9
comp=Z,2.5nm,0.4s
MYKA Terra Mystica 85.11 326 *i*P P 23 47 31.7 -0.4
comp=Z,11nm,0.6s,SNR=8.7
MGRS Mrkonjic Grad 85.12 323 ⇑*i*P P 23 47 33.1 +1.0
LJU Ljubljana 85.14 325 *e*P P 23 47 32.0 -0.2
LJU *i*PcP **PcP** 23 47 35.3 0.0
LJU Ljubljana 85.14 325 ⇑*i*P P 23 47 31.6 -0.6
MEM Membach 85.16 333 P P 23 47 32.1 0.0
MEM pP **pP** 23 47 47.8 -0.9
VISS Visnje 85.17 325 *i*P P 23 47 32.2 -0.2
CLGH Cloghs, Cushen 85.19 341 *e*P P 23 47 33.0 +0.8
CLGH IAmb IAmb 23 47 33.7
comp=Z,56nm,1.0s
TUC Tucson 85.30 53 P P 23 47 34.2 +0.9
TUC pmax pmax
comp=Z,12nm,1.0s
TUC Tucson 85.30 53 P P 23 47 34.7 +1.4
baz=309
TUC Tucson 85.30 53 P P 23 47 34.1 +0.9
TUC IAmb IAmb 23 47 53.6
comp=Z,12nm,1.0s
LIT Litokhoron 85.34 317 P P 23 47 32.7 -0.6
BSTI Sart Tilman 85.34 333 ⇑P P 23 47 33.3 +0.2
STU Stuttgart 85.37 330 *e*P P 23 47 33.8 +0.5
comp=Z,31nm,1.1s,baz=39,slow=5.1
CEY Cerknica 85.41 325 ⇑*i*P P 23 47 33.2 -0.4
LBWR Ladybower, Pea 85.43 338 *e*P P 23 47 34.2 +0.7
LBWR IAmb IAmb 23 47 34.9
comp=Z,80nm,0.8s
PDG Podgorica 85.45 320 ⇑P P 23 47 34.0 +0.3
PDG Podgorica 85.45 320 ⇑*i*P P 23 47 33.9 +0.2
FNA Florina 85.48 318 IAmb IAmb 23 47 56.7
comp=Z,11nm,0.9s
BRY Bratogost 85.48 321 *e*P P 23 47 33.6 -0.5
WATA Walderalm 85.48 328 *i*PcP P 23 47 34.0 -0.1
comp=Z,7.6nm,1.0s
WTTA Wattenberg 85.51 328 *i*PcP P 23 47 34.3 0.0
comp=Z,3.1nm,0.6s
ABTA Abfaltersbach 85.52 327 *i*P P 23 47 33.6 -0.6
comp=Z,15nm,0.9s,SNR=5.2
OHR Ohrid 85.56 319 *i*P P 23 47 34.8 +0.4
OHR Ohrid 85.56 319 *i*P P 23 47 34.8 +0.4
BCLA Clavier 85.57 333 ⇑P P 23 47 34.1 -0.1
comp=Z,10nm,0.8s
KZN Kozani 85.59 318 P P 23 47 33.7 -0.9
WIM Isle of Man 85.64 340 *e*P P 23 47 35.3 +0.9
DRME Dracevica, Mon 85.66 320 ⇑*i*P P 23 47 35.0 +0.2
MOTA Moosalm 85.68 328 *i*PcP P 23 47 35.0 -0.1
comp=Z,10nm,1.1s
RETA Reutte 85.72 328 *i*PcP P 23 47 35.4 +0.3
comp=Z,14nm,0.8s,SNR=8.7
ECSD EROS Data Cent 85.72 37 P P 23 47 35.6 +0.4
baz=317,SNR=7.6
SQTA Sankt Quirin 85.73 328 *i*PcP P 23 47 35.2 0.0
comp=Z,7.2nm,0.9s
TRI Trieste 85.74 326 IAmb IAmb 23 47 35.4
comp=Z,17nm,0.8s
KIJV Kijevo 85.75 323 *i*P P 23 47 35.1 -0.1
KIJV Kijevo 85.75 323 Sg S 23 57 58.4 -5.0
RICI Ricice 85.76 322 P P 23 47 35.0 -0.4
HCY Herceg Novi 85.83 321 *e*P P 23 47 33.8 -1.9
STNC Stoke 85.85 338 *e*P P 23 47 36.2 +0.7
WLF Walferdange 85.86 332 ⇑P P 23 47 36.5 +0.8
comp=Z,25nm,0.0s
WLF Walferdange 85.86 332 *e*P P 23 47 36.3 +0.6
comp=Z,46nm,1.4s,baz=39,slow=5.1
BMRD Maredsous 85.86 333 ⇑P P 23 47 35.3 -0.3
comp=Z,21nm,0.9s
SNF Seneffe 85.87 334 ⇑P P 23 47 35.8 +0.1
comp=Z,23nm,1.0s
CWF Charnwood Fore 85.88 338 *e*P P 23 47 35.9 +0.2
CWF IAmb IAmb 23 47 36.6
comp=Z,38nm,0.9s
GMM Mts of Mourne 85.90 341 *e*P P 23 47 36.2 +0.4
STON Ston 85.93 322 *i*P P 23 47 35.7 -0.4
BFO Black Forest 86.08 330 *e*P P 23 47 37.0 +0.2
comp=Z,24nm,1.0s,baz=39,slow=5.1
BFO *e*L L 00 24 27.4
comp=Z,34nm,19.8s
BFO Black Forest 86.08 330 P P 23 47 36.7 -0.1
BFO pmax pmax
comp=Z,23nm,1.0s
BFO Black Forest 86.08 330 P P 23 47 36.7 -0.1
BFO IAmb IAmb 23 47 38.0
comp=Z,23nm,1.0s
NVLJ Novalja 86.08 324 *i*P P 23 47 35.8 -1.0
FETA Feichten 86.10 328 *i*PcP P 23 47 37.1 0.0
comp=Z,9.3nm,0.9s,SNR=5.6
DOU Dourbes 86.10 333 P P 23 47 36.5 -0.3
DOU pP **pP** 23 47 51.2 -2.1
T25A Trinidad 86.11 46 P P 23 47 38.8 +1.3
baz=312,SNR=16
MORI Morici 86.19 323 *i*P P 23 47 36.7 -0.7
WME Myndd Eilian 86.19 340 *e*P P 23 47 37.7 +0.5
MEH Mehetia 86.23 115 *e*T T 01 22 10.9
comp=Z,18nm,0.3s
DAVA Damuels 86.25 329 *i*PcP P 23 47 38.0 +0.2
comp=Z,13nm,0.8s,SNR=5.7
WLF1 Llynfaes 86.31 340 *e*P P 23 47 38.1 +0.3
WLF1 IAmb IAmb 23 47 39.1
comp=Z,66nm,0.9s
FOEL Foel Wylfa 86.32 339 *e*P P 23 47 38.7 +0.8
FOEL IAmb IAmb 23 47 39.3
comp=Z,68nm,1.0s
ANMO Albuquerque 86.34 49 *de*P P 23 47 40.7 +2.1
ANMO pmax pmax
comp=Z,9.0nm,1.2s
ANMO Albuquerque 86.34 49 P P 23 47 40.2 +1.5
baz=312
ANMO Albuquerque 86.34 49 P P 23 47 39.7 +1.1
ANMO IAmb IAmb 23 47 59.6
comp=Z,14nm,1.0s
ZIRJ Zirje 86.38 323 *i*P P 23 47 37.3 -1.0
YLL Llanberis 86.38 339 *e*P P 23 47 38.8 +0.7
YRC Rhoscolyn 86.40 340 *e*P P 23 47 38.4 +0.2
DUGI Dugi Otok 86.42 324 *i*P P 23 47 37.9 -0.6
SPMN Marine on St. 86.44 34 P P 23 47 39.5 +0.8
baz=319
CTI Castel Tesino 86.44 327 IAmb IAmb 23 48 00.7
comp=Z,9.5nm,1.0s
LLW Llanuwychllyn 86.49 339 *e*P P 23 47 39.1 +0.4
LLW IAmb IAmb 23 47 40.1
comp=Z,15nm,0.8s
HLM1 Long Mynd 86.55 338 *e*P P 23 47 39.4 +0.3
HLM1 IAmb IAmb 23 47 40.2
comp=Z,14nm,0.9s
ECH Echery 86.64 331 IAmb IAmb 23 47 40.4
comp=Z,15nm,0.9s
STRD Stroud 86.97 338 *e*P P 23 47 41.3 +0.3
STRD IAmb IAmb 23 47 42.3
comp=Z,84nm,0.9s
MCH1 Michaelchurch 87.04 338 *e*P P 23 47 41.8 +0.4
MCH1 IAmb IAmb 23 47 42.6
comp=Z,40nm,0.7s
SCHQ Schefferville 87.04 15 P P 23 47 42.1 +0.7
comp=Z,12nm,0.7s,baz=343,slow=4.6,SNR=11
TUE Stuetta 87.12 328 IAmb IAmb 23 47 42.7
comp=Z,14nm,1.0s
RLS Riolos of Patr 87.33 316 P P 23 47 32.1 -11
G40A Rib Lake 87.58 33 IAmb IAmb 23 47 45.6
comp=Z,14nm,0.8s
RSBS Rosebush, Pemb 87.59 339 *e*P P 23 47 44.1 +0.1
RSBS IAmb IAmb 23 47 45.5
comp=Z,18nm,1.0s
E43A Lone Tree Farm 88.08 31 P P 23 47 46.4 -0.1
E44A Grand Marais A 88.33 30 P P 23 47 47.8 +0.2
baz=324
AQU L'Aquila 88.44 324 ⇑*i*P P 23 47 48.5 +0.1
OSSC Osservatorio P 88.57 325 IAmb IAmb 23 48 18.8
comp=Z,25nm,1.2s
TBI Tubuai 88.68 120 *e*LR LR 00 15 44.5
comp=Z,180nm,34.0s
MATQ Matagami 88.71 23 P P 23 47 49.6 +0.2
baz=330
D46A Sault St. Mari 88.85 29 P P 23 47 50.5 +0.4
baz=325
D47A Chapleau 89.08 28 P P 23 47 51.7 +0.5
baz=326
KSU1 Kansas State U 89.11 41 P P 23 47 52.0 +0.4
baz=317
MNTX Cornudas Mount 89.17 51 P P 23 47 52.8 +0.9
baz=312
E46A Sault Ste Mari 89.18 29 P P 23 47 51.0 -0.6
F45A CMU Biological 89.25 30 P P 23 47 52.8 +0.8
baz=324
AMTX Amarillo 89.27 46 P P 23 47 53.5 +1.0
baz=314
JFWS Jewell Farm 89.39 34 P P 23 47 52.8 +0.1
baz=321
D48A Paudash Townsh 89.47 27 P P 23 47 53.1 +0.1
baz=327
GDL2 Guadalupe Moun 89.47 50 P P 23 47 53.4 -0.1
E47A Iron Bridge 89.51 28 P P 23 47 53.8 +0.6
baz=326
LSQQ Lebel-sur-Quev 89.53 23 P P 23 47 53.8 +0.5
baz=331
D49A Beulah Townshi 89.55 27 P P 23 47 53.9 +0.4
baz=327
CHGQ Chibougamau 89.59 21 P P 23 47 54.2 +0.6
baz=332
G45A Suttons Bay 89.71 31 P P 23 47 54.9 +0.7
baz=324
G45A Suttons Bay 89.71 31 P P 23 47 53.3 -0.9
G46A Petoskey 89.81 30 P P 23 47 55.5 +0.8
baz=325
E48A Lockeyer 89.91 28 P P 23 47 55.6 +0.5
baz=327
D50A G1974 Best Tow 90.19 26 P P 23 47 56.7 +0.3
baz=328
CEL Celeste 90.24 319 P P 23 47 54.9 -1.9
F48A Evansville 90.28 28 P P 23 47 57.2 +0.3
baz=326
I45A Fountain 90.28 31 P P 23 47 57.5 +0.6
baz=324
H46A Fife Lake 90.31 31 P P 23 47 57.9 +0.9
baz=325
GLMI Grayling 90.32 30 P P 23 47 58.2 +1.1
baz=325
G47A Hillman 90.34 29 P P 23 47 57.9 +0.8
baz=326
L42A Oliver, Polo 90.37 35 P P 23 47 54.4 -2.9
D51A Lot 18 Range I 90.42 26 P P 23 47 57.7 +0.2
baz=329
E50A Wahnapitae 90.49 27 P P 23 47 58.7 +0.8
baz=328
F49A Sandfield 90.56 28 P P 23 47 59.2 +1.1
baz=327
H47A Mio 90.67 30 P P 23 47 59.8 +1.1
baz=325
I46A Reed City 90.69 31 P P 23 47 59.6 +0.8
baz=324
E51A G1948 Merrick 90.85 26 P P 23 48 00.1 +0.6
baz=329
H48A Harrisville 90.94 29 P P 23 48 00.9 +0.9
baz=326
D53A Lac Vacive, Po 91.01 25 P P 23 48 01.0 +0.8
baz=330
I47A Gladwin 91.02 30 P P 23 48 01.2 +0.9
baz=325
L44A Lake County Fo 91.04 34 P P 23 48 00.4 0.0
baz=323
WMOK Wichita Mounta 91.06 45 P P 23 48 01.6 +0.8

baz=316,SNR=5.1
WMOK Wichita Mounta 91.06 45 IAmb IAmb 23 51 18.0
comp=Z,6.3nm,0.9s
F51A Arnstein 91.22 27 P **P** 23 48 01.5 +0.4
baz=328
E52A Mattawa 91.36 26 P **P** 23 48 02.1 +0.2
baz=329
J47A Sumner 91.53 31 P **P** 23 48 03.6 +0.9
baz=325
F52A Sundridge 91.55 26 P **P** 23 48 03.6 +0.9
baz=329
K46A Dorr 91.57 32 P **P** 23 48 03.1 +0.2
baz=324
D55A Sainte-Anne-du 91.81 23 P **P** 23 48 04.4 +0.4
baz=332
W35A Tecumseh 91.84 43 P **P** 23 48 04.7 +0.4
TX31 Lajitas Ar. Si 91.85 52 P **P** 23 48 05.4 +0.8
TX32 Lajitas Array 91.85 52 P **P** 23 48 05.3 +0.7
TX32 IAmb IAmb 23 48 24.8
comp=Z,9.8nm,0.8s
TXAR Lajitas Array 91.86 52 P **P** 23 48 05.4 +0.8
comp=Z,3.2nm,0.9s,baz=303,slow=2.7,SNR=25
TXAR LR LR 00 24 07.7
comp=Z,43nm,20.9s,baz=0.0,slow=32
L46A Eue Claire 91.89 33 P **P** 23 48 06.2 +1.9
baz=324
L46A Eue Claire 91.89 33 P **P** 23 48 04.2 -0.2
TUL1 Leonard 91.89 42 P **P** 23 48 05.4 +0.9
baz=318
TUL1 Leonard 91.89 42 P **P** 23 48 04.5 0.0
TUL1 IAmb IAmb 23 48 36.6
comp=Z,8.6nm,0.9s
J48A Bridge Port 91.91 30 P **P** 23 48 05.9 +1.4
baz=326
K47A Vermontville 91.92 32 P **P** 23 48 04.5 0.0
baz=325
D56A ZEC Mazanza, M 92.01 23 P **P** 23 48 05.1 +0.2
baz=332
J49A Marlette 92.13 30 P **P** 23 48 05.0 -0.4
baz=326
HPIG 92.16 55 P **P** 23 48 04.3 -1.9
HPIG IAmb IAmb 23 48 26.6
comp=Z,7.5nm,0.8s
K48A Perry 92.18 31 P **P** 23 48 06.2 +0.4
baz=325
U38A Gravette 92.26 41 P **P** 23 48 05.1 -1.2
D57A Chemin Vers le 92.31 23 P **P** 23 48 07.2 +0.9
baz=333
G53A Haliburton 92.38 26 P **P** 23 48 07.1 +0.5
baz=329
HHAR Hobbs 92.62 41 P **P** 23 48 06.6 -1.3
CCM Cathedral Cave 92.67 38 P **P** 23 48 08.3 +0.2
baz=320
L48A N Adams 92.75 32 P **P** 23 48 08.8 +0.4
baz=325
E57A Chemin Saint G 92.77 23 P **P** 23 48 09.0 +0.6
baz=333
SFIN Lafayette 92.84 34 P **P** 23 48 09.0 +0.2
baz=323
H53A Bobcaygeon 92.86 27 P **P** 23 48 08.8 -0.1
baz=329
U40A Yellville 93.14 40 P **P** 23 48 10.2 -0.1
baz=319
U40A Yellville 93.14 40 P **P** 23 48 08.8 -1.4
U40A IAmb IAmb 23 48 11.4
comp=Z,7.2nm,0.8s
D60A Saint Jean D'O 93.30 21 P **P** 23 48 10.4 -0.3
baz=335
M49A Liberty Center 93.33 32 P **P** 23 48 11.0 -0.1
baz=325
N48A Decatur 93.38 33 P **P** 23 48 11.0 -0.3
baz=325
H55A Tweed 93.39 26 P **P** 23 48 10.8 -0.5
baz=330
JCT Junction City 93.48 48 P **P** 23 48 10.5 -1.5
JCT pmax pmax
comp=Z,11nm,0.9s
JCT Junction City 93.48 48 P **P** 23 48 11.9 -0.1
baz=315
JCT Junction City 93.48 48 P **P** 23 48 10.4 -1.5
JCT IAmb IAmb 23 48 31.6
comp=Z,11nm,0.9s
I55A Frankford 93.50 26 P **P** 23 48 11.5 -0.3
baz=330
E60A Ste Agathe de 93.64 21 P **P** 23 48 12.3 -0.1
baz=335
G57A Newington 93.66 24 P **P** 23 48 12.9 +0.4
baz=332
D62A Allapoint, All 93.67 19 P **P** 23 48 12.7 +0.2
baz=337
H56A Elgin 93.67 25 P **P** 23 48 12.7 +0.2
baz=331
M50A Fremont 93.79 31 P **P** 23 48 13.3 +0.2
baz=326
O48A Farmland 93.81 33 P **P** 23 48 13.5 +0.1
baz=325
SIUC Southern Illin 93.94 37 P **P** 23 48 11.7 -2.2
SIUC IAmb IAmb 23 48 15.3
comp=Z,14nm,1.2s
MIAR Mount Ida 94.11 42 P **P** 23 48 14.1 -0.7
MIAR pmax pmax
comp=Z,33nm,1.9s
MIAR Mount Ida 94.11 42 P **P** 23 48 14.7 0.0
baz=319
MIAR Mount Ida 94.11 42 P **P** 23 48 14.1 -0.7
F61A St Evariste 94.13 21 P **P** 23 48 15.1 +0.4
baz=335
J55A Hilton 94.27 27 P **P** 23 48 15.2 -0.1
baz=330
I57A Carthage 94.45 25 P **P** 23 48 16.1 -0.1
baz=332
L53A Girard 94.46 29 P **P** 23 48 16.4 +0.1
baz=328
H59A Cadyville 94.49 23 P **P** 23 48 16.4 +0.1
baz=333
H58A Gabriels 94.53 24 P **P** 23 48 16.9 +0.3
baz=333
O50A Cable 94.58 32 P **P** 23 48 16.9 +0.1
baz=326
L54A Sinclairville 94.59 28 P **P** 23 48 17.2 +0.3
baz=329
E64A Bridgewater 94.61 19 P **P** 23 48 16.7 -0.1
baz=338
ACSO Alum Creek Sta 94.78 32 P **P** 23 48 17.6 -0.1
baz=326
J57A Williamstown 94.80 26 P **P** 23 48 17.4 -0.3
baz=331
WCI Wyandotte Cave 94.94 35 P **P** 23 48 18.6 +0.1
baz=324
K56A Middlesex 94.94 27 P **P** 23 48 18.5 +0.1
baz=330
P50A Jamestown 94.94 33 P **P** 23 48 18.8 +0.3
baz=326
M54A Oil Creek Stat 95.08 29 P **P** 23 48 19.4 +0.3
baz=328
J58A Remsen 95.09 25 P **P** 23 48 19.2 +0.1
baz=332
H61A Lyndonville 95.15 22 P **P** 23 48 20.1 +0.8
baz=334
I59A Olmsteadville 95.18 24 P **P** 23 48 19.4 -0.1
baz=333
N53A Lisbon 95.20 30 P **P** 23 48 19.5 -0.1
baz=328
J59A Piesco 95.27 25 P **P** 23 48 19.7 -0.2
baz=332
I60A Shoreham 95.33 24 P **P** 23 48 19.8 -0.3
baz=333
L56A Greenwood 95.34 27 P **P** 23 48 20.1 -0.2
baz=330
O52A Adamsville 95.37 31 P **P** 23 48 20.3 -0.1
baz=327
P51A Williamsport 95.37 32 P **P** 23 48 20.5 +0.1
baz=326
N54A Moraine State 95.41 29 P **P** 23 48 19.3 -1.3
baz=328
M55A Ridgway 95.46 28 P **P** 23 48 18.6 -2.2
baz=329
K58A Earlville 95.49 26 P **P** 23 48 19.0 -2.0
baz=331
KEST Kesra 95.55 322 P **P** 23 48 21.2 -0.3
comp=Z,3.0nm,0.7s,baz=215,slow=0.5,SNR=5.7
KEST Kesra 95.55 322 IAmb IAmb 23 48 27.7
comp=Z,24nm,1.9s
Q51A Peebles 95.62 33 P **P** 23 48 22.2 +0.6
baz=326
M56A Emporium 95.67 28 P **P** 23 48 21.9 +0.1
baz=330
K59A Cooperstown 95.76 25 P **P** 23 48 22.4 +0.3
baz=332
J60A Lant Hill Farm 95.83 24 P **P** 23 48 20.9 -1.6
baz=333
O54A Avella 95.91 30 P **P** 23 48 23.0 +0.1
baz=328
N55A Marion Center 95.96 29 P **P** 23 48 23.2 0.0
baz=329
L58A Harry Jones Me 96.05 26 P **P** 23 48 22.6 -0.9
baz=331
P53A Whipple 96.08 31 P **P** 23 48 23.0 -0.6
baz=327
Q52A Bidwell 96.14 32 P **P** 23 48 22.9 -1.1
baz=326
M57A Sunshine Farm, 96.19 27 P **P** 23 48 23.3 -0.9
baz=330
L59A Walton 96.21 26 P **P** 23 48 24.0 -0.2
baz=332
P54A Burton 96.36 30 P **P** 23 48 24.5 -0.4
baz=328
N57A Milroy 96.54 28 P **P** 23 48 25.5 -0.2
baz=330
Q53A Leroy 96.55 31 P **P** 23 48 25.6 -0.2
baz=327
O56A Blue Knob Stat 96.57 29 P **P** 23 48 25.7 -0.3
baz=329
T50A Nancy 96.59 35 IAmb IAmb 23 48 27.2
comp=Z,6.2nm,0.8s
M59A Waymart 96.64 26 P **P** 23 48 25.7 -0.5
baz=332
Q54A Coxs Mills 96.74 31 P **P** 23 48 26.0 -0.7
baz=328
P56A Dayton Farm, R 97.11 29 P Pdif 23 48 28.6 +0.2
baz=329
R55A Marlinton 97.63 31 P Pdif 23 48 30.9 +0.1
baz=328
T54A Tazewell 98.03 33 P **P** 23 48 32.0 -0.6
baz=327
ESDC Sonseca Array 98.14 333 P **P** 23 48 32.6 -0.4
comp=Z,0.9nm,0.9s,baz=35,slow=5.4,SNR=5.6
U54A Nelsons Funny 98.37 33 P **P** 23 48 33.6 -0.6
baz=327
T56A Rocky Mt 98.72 31 P **P** 23 48 35.1 -0.5
baz=328
Q61A Milford 99.01 27 P **Pdif** 23 48 36.4 -0.5
baz=331
W54A Cherokee Point 99.40 34 P **Pdif** 23 48 38.4 -0.3
baz=326
U58A Oxford 99.89 31 P **Pdif** 23 48 40.8 -0.1
baz=329
VNDA Vanda 113.59 175 PKiKP **PKiKP** 23 53 32.1 -0.7
comp=Z,1.6nm,1.0s,baz=324,slow=3.0,SNR=3.3
TOA0 Torodi Ar. Sit 117.61 313 **PKPdf** 23 53 42.0 -0.4
TORD Torodi Ar. Bea 117.61 313 PKP **PKPdf** 23 53 41.8 -0.6
comp=Z,3.1nm,0.5s,baz=31,slow=1.4,SNR=61
TORD PP PP 23 54 45.9 -8.7
comp=Z,1.4nm,0.9s,baz=22,slow=6.0,SNR=4.4
TORD PKKPbc **PKKPab** 00 04 09.1 -0.7
comp=Z,0.4nm,0.5s,baz=200,slow=4.1,SNR=4.8
MAW Mawson 117.75 205 PKP **PKPdf** 23 53 40.8 -0.2
comp=Z,1.9nm,0.8s,baz=25,slow=4.6,SNR=4.3
BOSA Boshof 125.26 258 PKP **PKPdf** 23 53 56.6 -0.3
comp=Z,3.8nm,0.9s,baz=300,slow=3.1,SNR=4.3
QSPA South Pole Qui 125.30 180 **PKiKP** 23 53 55.8 -0.2
SYO Syowa Base 126.42 206 *e*PKPdf **PKiKP** 23 53 56.4 -1.2
SYO Syowa Base 126.42 206 *e*pPKPdf pPKPdf 23 54 13.0 -1.8
TIC Toumodi 126.74 315 *e*PKiKP **PKPdf** 23 53 59.7 -0.3
KIC Kosan Boka 126.81 314 *e*PKiKP **PKPdf** 23 53 59.7 -0.4
comp=Z,30nm,1.0s
PTBC PUERTO BERRIO 126.98 45 *e*P **PKPdf** 23 53 59.8 -0.7
LIC Lamto 127.08 315 *e*PKiKP **PKPdf** 23 54 00.3 -0.4
comp=Z,18nm,0.4s
SDV Santo Domingo 127.13 39 **PKiKP** 23 54 01.5 0.0
SPBC San Pablo de B 127.92 45 *e*P **PKPdf** 23 54 01.9 -0.5
ROSC El Rosal 128.43 46 PKP **PKiKP** 23 54 04.2 -0.2
comp=Z,6.5nm,0.6s,baz=353,slow=8.1,SNR=2.4
CHIC Chingaza 128.95 46 *e*P **PKPdf** 23 54 04.4 -0.3
SOTA Rioblanco 129.17 50 *e*P **PKiKP** 23 54 05.8 -0.1
VILC Villavicencio, 129.39 46 *e*P **PKPdf** 23 54 04.9 -0.3
H03N2 Juan Fernandez 147.88 98 T T 02 39 43.5
baz=290,slow=76,SNR=15
H03N3 Juan Fernandez 147.89 98 T T 02 39 41.4
baz=290,slow=76,SNR=18
H03N1 Juan Fernandez 147.90 98 T T 02 39 45.0
baz=290,slow=76,SNR=22
LPAZ La Paz 148.34 60 PKPbc **PKPbc** 23 54 41.8 -1.6
comp=Z,8.6nm,0.7s,baz=340,slow=5.3,SNR=28
LPAZ **PKPdf** 23 54 40.9 +0.9
LPAZ **PKPbc** 23 54 44.2 +0.7
PB16 IPOC Station P 148.68 65 **PKPbc** 23 54 44.0 -0.2
PB11 IPOC Station P 149.44 67 PKPbc **PKiKP** 23 54 46.8 0.0
PB08 IPOC Station P 150.05 67 PKPbc **PKiKP** 23 54 49.0 +0.7
PB07 IPOC Station P 150.41 70 **PKiKP** 23 54 49.2 +0.6
LVC Limon Verde 151.66 71 PKIKP **PKiKP** 23 54 52.5 +1.0
LVC Limon Verde 151.66 71 **PKiKP** 23 54 52.5 +1.0
GO02 Mina Guanaco 152.44 76 **PKiKP** 23 54 54.0 +1.0
BI02 San Fabin de 154.66 102 PKPbc **PKiKP** 23 54 57.5 +0.6
BI02 PKPab **PKPab** 23 55 13.5 +1.5
PLCA Paso Flores 155.40 111 PKPab **PKPab** 23 55 16.2 +1.2
comp=Z,3.8nm,0.9s,baz=312,slow=0.5,SNR=3.5
BDFB Brasilia 158.88 22 PKPab **PKPab** 23 55 30.4 +0.1
comp=Z,2.9nm,0.8s,baz=256,slow=5.1,SNR=3.9

*NEIC **12** 23:49:34.9±1.6,5°.94S×0°.10×147°.9E±0°.2,h96km±11km, mb4.0/8,Error ellipse: s-maj=25.8km s-min=8.4km az=117.0*
*IDC **12** 23:49:37.7±2.3,5°.83S×147°.66E,h111km±24km,mb3.7/6, mb1 3.8/9,mb1mx3.6/42,mbtmp4.0/9,MS3.0/1,Ms1 3.0/1, ms1mx2.6/29,Error ellipse: s-maj=32.7km s-min=17.1km az=115.0*

ISC 12 23:49:35.6±0.8,**6°.0S**±0°.1×**147°.8E**±0°.1,**h100km,n22,**
σ1§**94**/21,**mb3.8/6,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.42**	**190**	P	Pn	23 50 32.6	+5.5
	4.0nm,0.3s,baz=185,slow=16,SNR=5.7						
PMG				S	**Sn**	**23 51 04.5**	**-2.2**
	9.4nm,0.3s,baz=347,slow=13,SNR=5.2						
PMG	**Port Moresby**	**3.42**	**190**		**Pn**	**23 50 27.7**	**+0.7**
KRVT	**Keravat (AS076**	**4.56**	**68**	P	**Pn**	**23 50 44.2**	**+1.8**
	8.9nm,0.3s,baz=135,slow=22,SNR=4.1						
RABL	**Rabaul**	**4.74**	**68**	Pn	**Pn**	**23 50 42.2**	**-2.6**
JAY	**Jayapura**	**7.86**	**296**	LR	LR	23 54 15.3	
	comp=Z,112nm,20.4s,baz=160,slow=36						
COEN	**Coen**	**9.10**	**209**		**Pn**	**23 51 44.8**	**+0.7**
COEN					Sn	**23 53 21.1**	**-3.6**
WB0	**Warramunga Arr**	**18.87**	**222**	P	**Pn**	**23 53 49.5**	**-0.4**
WR0	**Warramunga Arr**	**18.91**	**222**	P	**Pn**	**23 53 50.0**	**-0.2**
WR0				IAmb	IAmb	23 53 51.1	
	comp=Z,7.0nm,0.9s						
WB2	**Warramunga Arr**	**19.02**	**222**	P	**Pn**	**23 53 50.3**	**-1.3**
WB2				IAmb	IAmb	23 53 52.7	
	comp=Z,5.7nm,0.7s						
WRA	**Warramunga Arr**	**19.03**	**222**	P	**Pn**	**23 53 51.8**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=58,slow=9.9,SNR=24						
KNRA	**Kununurra**	**20.97**	**241**	P	Pn	23 54 10.8	-3.6
KNRA				IAmb	IAmb	23 54 12.7	
	comp=Z,5.1nm,0.9s						
AS31	**Alice Springs**	**22.05**	**216**	P	**P**	**23 54 23.8**	**+1.4**
ASAR	**Alice Springs**	**22.05**	**216**	P	**P**	**23 54 23.8**	**+1.4**
	comp=Z,2.9nm,0.5s,baz=54,slow=8.9,SNR=54						
ASAR				PcP	**PcP**	**23 58 18.4**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=64,slow=2.2,SNR=5.5						
FITZ	**Fitzroy Crossi**	**24.71**	**239**	P	**P**	**23 54 48.8**	**+1.1**
	comp=Z,7.8nm,0.7s,baz=70,slow=8.1,SNR=32						
FITZ	**Fitzroy Crossi**	**24.71**	**239**	P	**P**	**23 54 49.1**	**+1.4**
FITZ				IAmb	IAmb	23 54 49.6	
	comp=Z,6.7nm,0.7s						
FORT	**Forrest**	**30.82**	**215**	P	**P**	**23 55 42.6**	**+0.5**
MORW	**Morawa**	**37.74**	**229**	P	**P**	**23 56 42.9**	**+1.0**
MJAR	**Matsushiro Arr**	**43.27**	**349**	P	P	23 57 27.5	+0.1
	comp=Z,1.2nm,0.5s,baz=161,slow=7.7,SNR=5.4						
VNDA	**Vanda**	**71.85**	**177**	P	**P**	**00 00 49.1**	**+1.9**
	comp=Z,0.9nm,0.6s,baz=313,slow=6.0,SNR=6.0						
MKAR	**Makanchi Array**	**78.00**	**320**	P	**P**	**00 01 21.9**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=93,slow=7.4,SNR=5.2						
ZALV	**Zalesovo Beam**	**79.44**	**328**	P	**P**	**00 01 30.3**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=119,slow=7.2,SNR=2.9						
TORD	**Torodi Ar. Bea**	**145.84**	**285**	PKPbc	**PKiKP**	**00 09 03.4**	**-4.5**
	comp=Z,0.5nm,0.4s,baz=68,slow=3.3,SNR=25						

*IDC **12** 23:52:24.8±6.3,68°.42N×163°.45W,h0km,mb3.4/2, mb1 4.1/5,mb1mx3.4/52,mbtmp3.8/5,ML3.8/3,MS3.2/1, Ms1 3.2/1,ms1mx2.5/30,Error ellipse: s-maj=91.7km s-min=42.1km az=108.0*
*AEIC **12** 23:52:29.5±1.7,67°.7N±0°.1×162°.2W±0°.2,h16km±7km, ML3.2/25,Error ellipse: s-maj=17.8km s-min=6.9km az=144.0*
*NEIC **12** 23:52:30.6±1.4,67°.69N±0°.03×162°.5W±0°.1,h26km±5km, Error ellipse: s-maj=8.1km s-min=4.0km az=95.0*

ISC 12 23:52:28.8±0.8,**67°.67N**±0°.05×**162°.33W**±0°.05,**h10km,n37,**
σ1§**67**/40,**Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RDOG	**Red Dog Mine**	**0.44**	**330**		**Pb**	**23 52 38.5**	**-0.2**
RDOG					**Sb**	**23 52 45.2**	**-0.1**
ANM	**Nome**	**3.36**	**203**		**Pg**	**23 53 31.0**	**-2.1**
ANM	**Nome**	**3.36**	**203**		**Pn**	**23 53 21.8**	**+0.6**
ANM	**Nome**	**3.36**	**203**		**Sn**	**23 54 02.7**	**+1.6**
IM03		**3.79**	**113**		**Pn**	**23 53 28.1**	**+1.0**
IM03					**Sn**	**23 54 12.1**	**+0.4**
PS05	**TAPS Pump Stn5**	**4.61**	**95**		**Pn**	**23 53 38.8**	**+0.4**
COLD	**Coldfoot**	**4.69**	**90**		**Pn**	**23 53 40.5**	**+1.0**
TOLK	**Toolik Lake Re**	**4.86**	**73**		**Pn**	**23 53 44.5**	**+2.6**
TOLK	**Toolik Lake Re**	**4.86**	**73**		**Sn**	**23 54 38.4**	**+0.3**
MLY	**Manley**	**5.36**	**114**		**Pn**	**23 53 49.3**	**+0.5**
TTA	**Tatalina**	**5.45**	**148**		**Pn**	**23 53 51.3**	**+1.4**
TTA	**Tatalina**	**5.45**	**148**		**Sn**	**23 54 51.5**	**-1.1**
TT01	**Tatalina**	**5.47**	**148**		**Pn**	**23 53 51.4**	**+1.3**
BPAW	**Bear Paw Mtn.**	**5.87**	**122**		**Pn**	**23 53 57.2**	**+1.5**
NEA	**Nenana**	**6.21**	**114**		**Pn**	**23 54 01.3**	**+1.0**
KTH	**Kantishna Hill**	**6.27**	**126**	Sn	**Sn**	**23 55 11.2**	**-1.8**
KTH	**Kantishna Hill**	**6.27**	**126**		**Pn**	**23 54 02.3**	**+1.1**
MDM	**Murphy Dome**	**6.29**	**109**		**Pn**	**23 54 02.5**	**+1.0**
PPLA	**Purkeypile**	**6.40**	**134**		**Pn**	**23 54 04.6**	**+1.5**
COLA	**College**	**6.48**	**109**		**Pn**	**23 54 06.2**	**+2.3**
POKR	**Poker Flat Res**	**6.50**	**106**		**Pn**	**23 54 05.3**	**+0.9**
TRF	**Thorofare Moun**	**6.54**	**125**		**Pn**	**23 54 07.1**	**+2.1**
TRF				Sn	**Sn**	**23 55 20.6**	**+0.8**
WRH	**Wood River Hil**	**6.62**	**112**		**Pn**	**23 54 07.4**	**+1.5**
CCB	**Clear Creek Bu**	**6.62**	**110**		**Pn**	**23 54 07.2**	**+1.2**
FYU	**Fort Yukon**	**6.75**	**92**		**Pn**	**23 54 08.6**	**+0.9**
BM03	**Burnt Mountain**	**6.79**	**84**		**Pn**	**23 54 09.4**	**+1.1**
IL31		**6.88**	**108**		**Pn**	**23 54 10.8**	**+1.3**
ILAR	**Eielson Array**	**6.88**	**108**	Pn	**Pn**	**23 54 10.4**	**+0.9**
	6.1nm,0.3s,baz=304,slow=14,SNR=293						
ILAR				Sn	**Sn**	**23 55 26.6**	**-1.2**
	0.6nm,0.3s,baz=308,slow=26,SNR=3.9						
RND	**Reindeer**	**7.04**	**121**	Sn	**Sn**	**23 55 30.3**	**-1.4**
RND	**Reindeer**	**7.04**	**121**		**Pn**	**23 54 13.2**	**+1.5**
RSO	**Redoubt South**	**8.36**	**145**		**Pn**	**23 54 30.4**	**+0.5**
INK	**Inuvik**	**10.78**	**73**	Pn	**Pn**	**23 55 02.1**	**-0.7**
	0.4nm,0.3s,baz=288,slow=12,SNR=20						
INK				Sn	**Sn**	**23 56 56.8**	**-6.5**
	0.3nm,0.3s,baz=302,slow=19,SNR=2.8						
INK	**Inuvik**	**10.78**	**73**		**Pn**	**23 55 02.8**	**0.0**
KDAK	**Kodiak Island**	**10.87**	**151**	Pn	Pn	23 55 09.1	+5.0
	0.2nm,0.3s,baz=341,slow=16,SNR=1.3						
YKA	**Yellowknife Ar**	**20.31**	**82**	P	**P**	**23 57 05.2**	**+0.8**
	1.0nm,0.6s,baz=304,slow=10,SNR=11						
BBB	**Bella Bella**	**22.67**	**116**	LR	LR	00 08 07.4	
	comp=Z,58nm,19.1s,baz=336,slow=40						
TXAR	**Lajitas Array**	**51.40**	**107**	P	**P**	**00 01 35.6**	**+2.1**
	0.6nm,0.7s,baz=336,slow=5.9,SNR=9.8						

*IDC **12** 23:52:58.8±0.7,42°.18S×88°.55E,h0km,mb4.2/12, mb1 4.3/12,mb1mx4.1/38,mbtmp4.1/12,MS4.4/24, Ms1 4.4/24,ms1mx4.3/31,Error ellipse: s-maj=24.9km s-min=17.8km az=113.0*
*NEIC **12** 23:53:00.4±2.2,42°.3S±0°.1×88°.5E±0°.1,h14km±3km, mb4.6/17,Error ellipse: s-maj=17.3km s-min=15.0km az=174.0*
*GCMT **12** 23:53:02.4±0.2,42°.02S±0°.01×88°.41E±0°.01,h12km, MW5.2/130,Moment Tensor Solution. s56,c65; s130,c210; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}-0.59±.14; $M_{t\theta}$6.74±.12; $M_{\phi\phi}$-6.16±.13; $M_{r\theta}$-0.83±.37; $M_{\theta\phi}$-0.09±.12; $M_{r\phi}$1.45±.40; Best double couple: M₀6.67600×10¹⁶ NP1:φs226.00000°,δ76.00000°, λ-175.00000°. NP2:φs135.00000°,δ85.00000°, λ-15.00000°. Principal axes: T 6.8370, Plg7.0000°, Azm181.0000°; N -0.3280, Plg75.0000°, Azm296.0000°; P -6.5160, Plg14.0000°, Azm89.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 23:53:00.4±0.5,**42°.25S**±0°.09×**88°.5E**±0°.1,**h10km,n66,**
σ1§**15**/43,**mb4.4**/21,**MS4.5**/28,**Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAF	**Port-aux-Franc**	**14.57**	**235**	Pn	**Pn**	**23 56 25.1**	**-1.3**
H01W2	**Cape Leeuwin H**	**21.30**	**78**	T	T	00 19 50.0	
	baz=243,slow=74,SNR=760						
H01W3	**Cape Leeuwin H**	**21.31**	**78**	T	T	00 19 47.8	
	baz=243,slow=74,SNR=849						
H01W1	**Cape Leeuwin H**	**21.32**	**78**	T	T	00 19 48.4	
	baz=243,slow=74,SNR=631						
NWAO	**Narrogin (SRO)**	**24.52**	**77**	LR	LR	00 05 42.0	
	comp=Z,2μm,21.5s,baz=240,slow=31						
MAW	**Mawson**	**28.92**	**200**	P	**P**	**23 58 58.9**	**-0.2**
	5.1nm,1.1s,baz=36,slow=12,SNR=4.0						
MAW				LR	LR	00 08 05.1	
	comp=Z,2μm,20.7s,baz=37,slow=31						
MAW	**Mawson**	**28.92**	**200**	P	**P**	**23 58 59.8**	**+0.6**
RER	**Riviere de l'E**	**34.58**	**297**	P	**P**	**23 59 51.6**	**+2.1**
H08S2	**Diego Garcia H**	**37.25**	**333**	T	T	00 39 14.9	
	baz=160,slow=76,SNR=727						
H08S1	**Diego Carcia H**	**37.25**	**333**	T	T	00 39 15.4	
	baz=160,slow=76,SNR=331						
H08S3	**Diego Garcia H**	**37.27**	**333**	T	T	00 39 16.4	
	baz=160,slow=76,SNR=894						
FITZ	**Fitzroy Crossi**	**39.68**	**64**	P	**P**	**00 00 32.8**	**+0.1**
	5.0nm,1.1s,baz=229,slow=7.4,SNR=3.0						
FITZ	**Fitzroy Crossi**	**39.68**	**64**	P	**P**	**00 00 32.1**	**-0.6**
ASAR	**Alice Springs**	**41.82**	**78**	P	**P**	**00 00 49.6**	**-0.8**
	2.5nm,0.8s,baz=226,slow=7.7,SNR=20						
ASAR				PcP	**PcP**	**00 02 44.9**	**-1.5**
	1.5nm,0.7s,baz=224,slow=2.3,SNR=11						
ASAR				LR	LR	00 16 09.2	
	comp=Z,2μm,21.5s,baz=234,slow=33						
AS31	**Alice Springs**	**41.83**	**78**	P	**P**	**00 00 50.1**	**-0.3**
STKA	**Stephens Creek**	**43.01**	**94**	P	**P**	**00 01 00.7**	**+0.7**
	2.2nm,0.6s,baz=274,slow=5.2,SNR=6.6						
STKA				LR	LR	00 15 25.9	
	comp=Z,803nm,20.7s,baz=237,slow=31						
STKA	**Stephens Creek**	**43.01**	**94**	IAmb	IAmb	00 01 01.9	
	comp=Z,1.0nm,1.1s						
WRA	**Warramunga Arr**	**44.47**	**75**	P	**P**	**00 01 09.7**	**-2.1**
	comp=Z,3.2nm,1.1s,baz=230,slow=7.6,SNR=8.6						
WRA				PcP	**PcP**	**00 02 54.0**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=231,slow=2.8,SNR=1.7						
WRA				LR	LR	00 18 15.7	
	comp=Z,830nm,19.2s,baz=245,slow=34						
WB2	**Warramunga Arr**	**44.48**	**75**	P	**P**	**00 01 11.6**	**-0.4**
WB2				IAmb	IAmb	00 01 17.0	
	comp=Z,11nm,1.1s						
WB0	**Warramunga Arr**	**44.62**	**74**	P	**P**	**00 01 12.9**	**-0.2**
WB0				IAmb	IAmb	00 01 18.2	
	comp=Z,10nm,1.1s						
VNDA	**Vanda**	**45.57**	**163**	P	**P**	**00 01 21.0**	**+1.1**
	comp=Z,2.0nm,0.8s,baz=294,slow=9.0,SNR=6.0						
VNDA				LR	LR	00 18 21.2	
	comp=Z,557nm,21.4s,baz=278,slow=33						
QSPA	**South Pole Qui**	**47.90**	**180**	P	**P**	**00 01 39.5**	**+1.0**
	comp=Z,5.7nm,1.1s,baz=307,slow=2.0,SNR=14						
QSPA	**South Pole Qui**	**47.90**	**180**	P	**P**	**00 01 39.8**	**+1.3**
SNAA	**Sanae**	**50.95**	**204**	P	**P**	**00 02 01.4**	**-0.1**
	comp=Z,2.7nm,1.2s,baz=166,slow=2.3,SNR=3.4						
SNAA	**Sanae**	**50.95**	**204**	P	**P**	**00 01 59.1**	**-2.4**
BOSA	**Boshof**	**52.18**	**264**	LR	LR	00 19 27.3	
	comp=Z,863nm,21.2s,baz=120,slow=30						
CMAR	**Chiang Mai Arr**	**61.17**	**11**	P	**P**	**00 03 15.3**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=198,slow=5.7,SNR=3.1						
CMAR				LR	LR	00 28 13.4	
	comp=Z,224nm,18.1s,baz=218,slow=35						
KMBO	**Kilima Mbogo**	**61.45**	**297**	LR	LR	00 26 17.4	
	comp=Z,96nm,18.1s,baz=117,slow=32						
URZ	**Urewera**	**64.72**	**119**	LR	LR	00 27 51.8	
	comp=Z,203nm,18.5s,baz=244,slow=32						
SLVN	**Son La**	**64.85**	**16**	P	**P**	**00 03 40.4**	**+0.8**
SLVN				IAmb	IAmb	00 03 49.6	
	comp=Z,2.0nm,0.8s						
DZM	**Mont Dzumac**	**66.80**	**99**	*e*LR	LR	00 24 00.9	
	comp=Z,551nm,22.9s						

SHL	**Shillong**	**67.55**	**3**	P	**P**	**00 03 57.0**	**0.0**		
RAYN	**Ar Rayn**	**76.54**	**320**	P	**P**	**00 04 51.0**	**+0.2**		
RAYN				IAmb	IAmb	00 04 55.9			
	comp=Z,3.6nm,1.1s								
NIL	**Nilore**	**76.81**	**347**	P	**P**	**00 04 51.1**	**-1.0**		
NIL				IAmb	IAmb	00 04 59.2			
	comp=Z,9.1nm,1.1s								
XAN	**Xi'an**	**78.20**	**17**	P	**P**	**00 05 00.4**	**+0.6**		
XAN				IAmb	IAmb	00 05 05.0			
	comp=Z,16nm,1.2s								
KBL	**Kabul**	**78.47**	**344**	P	**P**	**00 05 01.0**	**-0.6**		
GEYT	**Alibeck**	**84.46**	**336**	P	**P**	**00 05 33.9**	**+0.9**		
	comp=Z,1.0nm,0.6s,baz=149,slow=6.7,SNR=2.3								
GEYT				LR	LR	00 37 56.5			
	comp=Z,222nm,21.2s,baz=165,slow=32								
JNU	**Nakatsue**	**84.50**	**35**	LR	LR	00 43 02.3			
	comp=Z,49nm,19.5s,baz=203,slow=36								
AAK	**Ala-Archa**	**85.44**	**350**	P	**P**	**00 05 36.5**	**-1.5**		
AAK				IAmb	IAmb	00 05 42.3			
	comp=Z,2.2nm,0.8s								
KSRS	**Korea Array**	**87.09**	**30**	LR	LR	00 45 47.8			
	comp=Z,96nm,18.7s,baz=235,slow=36								
MK31	**Makanchi Array**	**88.83**	**356**	P	**P**	**00 05 52.8**	**-1.3**		
MK31				IAmb	IAmb	00 05 57.9			
	comp=Z,2.7nm,1.1s								
MKAR	**Makanchi Array**	**88.83**	**356**	P	**P**	**00 05 53.4**	**-0.7**		
	comp=Z,1.0nm,0.8s,baz=143,slow=7.6,SNR=8.7								
MKAR				LR	LR	00 44 31.9			
	comp=Z,254nm,18.1s,baz=178,slow=35								
MAKZ	**Makanchi**	**88.86**	**356**	P	**P**	**00 05 52.4**	**-1.9**		
MAKZ				IAmb	IAmb	00 05 58.2			
	comp=Z,5.0nm,1.1s								
MJAR	**Matsushiro Arr**	**90.61**	**38**	LR	LR	00 47 51.0			
	comp=Z,34nm,18.1s,baz=105,slow=36								
SONM	**Songino Array**	**91.09**	**12**	LR	LR	00 46 34.3			
	comp=Z,319nm,18.8s,baz=226,slow=35								
USRK	**Ussuriysk Ar.**	**94.48**	**30**	LR	LR	00 48 55.1			
	comp=Z,89nm,19.4s,baz=208,slow=36								
KBZ	**Khabaz**	**94.86**	**329**	LR	LR	00 44 52.7			
	comp=Z,136nm,20.8s,baz=145,slow=33								
PLCA	**Paso Flores**	**95.25**	**196**	LR	LR	00 50 11.9			
	comp=Z,508nm,18.2s,baz=181,slow=36								
BRTR	**Keskin Array B**	**95.55**	**321**	LR	LR	00 45 56.2			
	comp=Z,135nm,18.9s,baz=116,slow=33								
TBI	**Tubuai**	**95.64**	**128**	*e*LR	LR	00 37 15.3			
	comp=Z,247nm,27.0s								
ZALV	**Zalesovo Beam**	**95.87**	**358**	P	**P**	**00 06 25.4**	**-1.0**		
	comp=Z,0.4nm,0.3s,baz=168,slow=7.6,SNR=4.6								
ZALV				LR	LR	00 48 04.4			
	comp=Z,148nm,20.0s,baz=202,slow=34								
TORD	**Torodi Ar. Bea**	**96.37**	**282**	LR	LR	00 48 39.8			
	comp=Z,248nm,18.0s,baz=115,slow=35								
DBIC	**Dimbokro**	**96.91**	**273**	LR	LR	00 43 47.9			
	comp=Z,219nm,21.8s,baz=115,slow=31								
PPT2	**Papeete2**	**99.99**	**125**	*e*LR	LR	00 39 25.6			
	comp=Z,224nm,23.0s								
PPT	**Papeete**	**100.01**	**125**	LR	LR	00 42 38.3			
	comp=Z,119nm,21.8s,baz=233,slow=30								
TAOE	**Nuku Hiva Isla**	**112.49**	**127**	*e*LR	LR	00 45 05.7			
	comp=Z,159nm,24.4s								
ILAR	**Eielson Array**	**141.82**	**35**	PKP	**PKPdf**	**00 12 32.4**	**+1.2**		
	comp=Z,0.4nm,0.8s,baz=260,slow=2.7,SNR=2.9								
INK	**Inuvik**	**145.79**	**26**	PKPbc	**PKPdf**	**00 12 37.1**	**-0.8**		
	comp=Z,2.2nm,0.5s,baz=342,slow=5.3,SNR=20								
INK	**Inuvik**	**145.79**	**26**		**PKPdf**	**00 12 37.3**	**-0.6**		
RES	**Resolute Bay**	**147.43**	**2**	PKPbc	**PKPbc**	**00 12 43.0**	**0.0**		
	comp=Z,3.0nm,0.8s,baz=24,slow=1.7,SNR=9.4								
RES	**Resolute Bay**	**147.43**	**2**		**PKPdf**	**00 12 38.9**	**-1.6**		
RES					**pPKPab**	**00 12 47.7**	**+0.2**		
C36M	**Paulatuk**	**148.03**	**21**		**PKPdf**	**00 12 42.0**	**+0.3**		
YKA	**Yellowknife Ar**	**155.56**	**26**	PKPbc	PKPbc	00 13 03.3			
	comp=Z,1.0nm,1.0s,baz=302,slow=1.4,SNR=6.4								
YBH	**Yreka Blue Hor**	**156.87**	**81**	PKPab	**PKPab**	**00 13 26.4**	**+0.7**		
	comp=Z,0.9nm,0.7s,baz=322,slow=11,SNR=3.1								
NVAR	**Mina Array Bea**	**159.26**	**92**	PKPab	**PKPab**	**00 13 35.6**	**-0.7**		
	comp=Z,1.0nm,0.9s,baz=256,slow=2.6,SNR=4.7								
PDAR	**Pinedale Array**	**166.68**	**82**	PKP	**PKPdf**	**00 13 08.7**	**+2.7**		
	comp=Z,0.7nm,1.0s,baz=126,slow=1.2,SNR=5.6								
PDAR				PKPab	**PKPab**	**00 14 07.9**	**-0.9**		
	comp=Z,0.4nm,0.7s,baz=268,slow=3.2,SNR=2.3								

GUC 13 00:13:35.7±0.6, 33°99S×72°02W, h13km±6km, ML3.2, 5C-5D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MT01	**Popeta**	**0.65**	**80**	⇓*i*P	Pg	00 13 47.7	-0.8
MT01				*i* S	Sg	00 13 56.0	-1.1
MT01				IAML		00 13 57.7	
	comp=N,1μm,0.3s						
GO05	**Huala**	**1.02**	**176**	⇓*i*P	Pb	00 13 53.4	-1.9
GO05				*i* S	Sb	00 14 06.8	-1.9
GO05				IAML		00 14 10.2	
	comp=E,1μm,0.2s						
MT02	**Curacav**	**1.04**	**46**	⇓*i*P	Pb	00 13 53.2	-2.3
MT02				*i* S	Sb	00 14 07.0	-2.0
MT02				IAML		00 14 14.9	
	comp=N,403nm,0.6s						
BO02	**Sierra Bellavi**	**1.30**	**128**	⇑*i*P	Pn	00 13 57.7	-2.0
BO02				*i* S	Sg	00 14 17.7	-0.2
BO02				IAML		00 14 20.8	
	comp=E,2μm,0.3s						
ROCH	**El Roble**	**1.32**	**40**	*e*P	Pn	00 13 58.0	-2.0
ROCH				*i* S	Sb	00 14 15.6	-1.7
ROCH				IAML		00 14 21.1	
	comp=N,587nm,0.5s						
MT03	**Universidad Ad**	**1.35**	**69**	⇑*i*P	Pn	00 13 58.7	-1.6
MT03				*i* S	Sb	00 14 16.4	-1.8
MT03				IAML		00 14 21.8	
	comp=E,987nm,0.2s						
CLCH	**Cerro Calan**	**1.37**	**65**	*i* P	Pn	00 13 59.3	-1.3
CLCH				IAML		00 14 28.1	
	comp=E,852nm,0.6s						
PEL	**Peldehue**	**1.40**	**53**	⇓*i*P	Pn	00 13 59.5	-1.4
PEL				*i* S	Sn	00 14 17.1	-2.1
PEL				IAML		00 14 21.2	
	comp=N,540nm,0.4s						
LMEL	**Las Melosas**	**1.52**	**85**	⇓*i*P	Pn	00 14 01.6	-1.1
LMEL				*i* S	Sn	00 14 20.8	-1.6
LMEL				IAML		00 14 26.9	
	comp=N,857nm,0.3s						
FCH	**Farellones**	**1.59**	**66**	⇑*i*P	Pn	00 14 02.4	-1.4
FCH				*i* S	Sn	00 14 24.3	-0.1
VA03	**San Esteban**	**1.73**	**46**	⇑*i*P	Pn	00 14 04.7	-0.9
VA03				*i* S	Sn	00 14 27.1	-0.6
VA03				IAML		00 14 32.6	
	comp=E,590nm,0.2s						
BI02	**San Fabin de**	**2.74**	**167**	*e*P	Pn	00 14 18.5	-1.0
BI02				IAML		00 15 03.8	
	comp=N,98nm,0.6s						
BI02	**San Fabin de**	**2.74**	**167**	IAML		00 15 03.8	
	comp=N,100nm,0.7s						
CO02	**Combarbal**	**2.91**	**18**	⇑*i*P	Pn	00 14 19.5	-2.2
CO02				IAML		00 15 08.4	
	comp=E,274nm,0.4s						

GUC 13 00:15:05.6±0.7, 33°98S×72°07W, h25km±7km, ML3.0, 1C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MT01	**Popeta**	**0.69**	**80**	⇓*i*P	Pb	00 15 18.6	-0.5
MT01				*e*S	Sb	00 15 28.1	-0.2
MT01				IAML		00 15 28.6	
	comp=N,2μm,0.2s						
GO05	**Huala**	**1.03**	**173**	*e*P	Pn	00 15 24.2	-0.3
GO05				*i* S	Sb	00 15 37.6	-0.4
GO05				IAML		00 15 38.3	
	comp=E,451nm,0.4s						
MT02	**Curacav**	**1.06**	**48**	*e*P	Pn	00 15 24.1	-0.9
MT02				*e*S	Sb	00 15 37.9	-0.9
BO02	**Sierra Bellavi**	**1.34**	**127**	*e*P	Pn	00 15 28.8	0.0
BO02				*e*S	Sb	00 15 48.4	+1.5
BO02				IAML		00 15 51.8	
	comp=E,867nm,0.3s						
ROCH	**El Roble**	**1.34**	**42**	*i* P	Pn	00 15 29.1	+0.1
ROCH				*e*S	Sb	00 15 46.7	-0.4
ROCH				IAML		00 15 57.4	
	comp=E,330nm,0.5s						
MT03	**Universidad Ad**	**1.39**	**70**	*e*P	Pn	00 15 29.4	-0.1
MT03				*e*S	Sb	00 15 49.1	+0.8
MT03				IAML		00 15 54.5	
	comp=N,682nm,0.2s						
CLCH	**Cerro Calan**	**1.41**	**66**	*i* P	Pn	00 15 30.1	+0.3
CLCH				*i* S	Sb	00 15 48.8	0.0
CLCH				IAML		00 15 58.8	
	comp=E,399nm,0.4s						
PEL	**Peldehue**	**1.43**	**55**	*e*P	Pb	00 15 30.8	-0.8
PEL				*e*S	Sb	00 15 49.0	-0.4
PEL				IAML		00 15 55.2	
	comp=N,416nm,0.7s						
LMEL	**Las Melosas**	**1.56**	**86**	*e*P	Pn	00 15 32.8	+0.8
LMEL				*e*S	Sb	00 15 53.2	-0.1
LMEL				IAML		00 15 56.0	
	comp=N,521nm,0.2s						
FCH	**Farellones**	**1.62**	**67**	⇑*i*P	Pn	00 15 33.4	+0.5
FCH				*i* S	Sb	00 15 55.8	+0.5
VA03	**San Esteban**	**1.76**	**47**	*i* P	Pn	00 15 35.6	+1.0
VA03				*i* S	Sb	00 15 58.8	-0.3
VA03				IAML		00 16 03.6	
	comp=E,395nm,0.1s						

IDC 13 00:24:11.0±6.4, 42°39N×147°47E, h0km, mb3.2/2, mb1 3.6/3, mb1mx3.2/43, mbtmp3.5/3, ML2.9/1, Error ellipse: s-maj=162.7km s-min=42.0km az=161.0, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**12.72**	**29**	Pn	Pn	00 27 13.4	+0.3
	0.4nm,0.3s,baz=224,slow=7.8,SNR=7.4						
MKAR	**Makanchi Array**	**45.43**	**299**	P	P	00 32 31.4	0.0
	0.1nm,0.4s,baz=79,slow=9.7,SNR=1.9						
YKA	**Yellowknife Ar**	**56.80**	**33**	P	P	00 33 56.4	-0.2
	0.2nm,0.5s,baz=305,slow=6.6,SNR=5.3						

IDC 13 00:29:25.7±5.3, 21°.26N×145°.41E, h67km±43km, mb3.4/7, mb1 3.5/8, mb1mx3.3/46, mbtmp3.7/8, ML4.0/1, Error ellipse: s-maj=49.9km s-min=26.2km az=85.0

ISC 13 00:29:29.6±1.2, 21°.3N±0°.1×145°.2E±0°.3, h100km, n11, σ1°71/9, mb3.6/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**6.35**	**335**	P	**Pn**	**00 30 58.6**	**-2.1**
	3.5nm,0.3s,baz=78,slow=22,SNR=1.2						
JCJ				S	**Sn**	**00 32 10.7**	**-1.1**
	5.9nm,0.3s,baz=127,slow=23,SNR=2.1						
H11S3	**WAKE ISLAND Hy 20.40**	**94**		T	T	00 54 44.3	
	baz=280,slow=74,SNR=5.6						
H11S1	**WAKE ISLAND Hy 20.41**	**94**		T	T	00 54 43.6	
	baz=280,slow=74,SNR=3.7						
H11S2	**WAKE ISLAND Hy 20.42**	**94**		T	T	00 54 45.6	
	baz=280,slow=74,SNR=4.0						
KSRS	**Korea Array**	**21.95**	**321**	P	**P**	**00 34 17.9**	**+2.8**
	3.4nm,0.8s,baz=146,slow=9.0,SNR=9.6						
KLR	**Kul'dur**	**29.82**	**342**	P	**P**	**00 35 28.4**	**+1.4**
	0.9nm,0.4s,baz=159,slow=7.3,SNR=4.4						
WRA	**Warramunga Arr**	**42.38**	**195**	P	**P**	**00 37 13.2**	**-1.1**
	0.6nm,0.9s,baz=2.1,slow=8.8,SNR=2.2						
ZALV	**Zalesovo Beam**	**55.65**	**322**	P	**P**	**00 38 55.7**	**+0.6**
	0.3nm,0.3s,baz=87,slow=7.5,SNR=2.4						
MKAR	**Makanchi Array**	**56.31**	**313**	P	**P**	**00 39 00.7**	**+0.6**
	0.4nm,0.7s,baz=91,slow=8.9,SNR=3.6						
YKA	**Yellowknife Ar**	**75.89**	**28**	P	**P**	**00 41 04.9**	**0.0**
	0.2nm,0.7s,baz=287,slow=4.5,SNR=4.4						
FINES	**FINESS Array B**	**84.30**	**335**	P	**P**	**00 41 49.7**	**-0.4**
	0.4nm,0.5s,baz=64,slow=6.6,SNR=5.3						

CNRM 13 00:52:48.9±1.5, 36°.54N×8°.33W, h4km±12km, Error ellipse: s-maj=11.3km s-min=7.1km az=93.0
INMG 13 00:52:49.6±1.9, 36°.58N×8°.29W, h8km±5km, ML2.2, Error ellipse: s-maj=6.9km s-min=4.4km az=44.0
IGIL 13 00:52:49.9, 36°.56N×8°.27W, h18km, ML2.6
MDD 13 00:52:50.4±0.8, 36°.64N×8°.31W, h13km±4km, mbLg2.3/28, Error ellipse: s-maj=6.8km s-min=4.4km az=25.0, PRXIMO SFS 13 00:52:50.0, 36°.65N×8°.26W, h10km, ML2.1, GOLFO DE CADIZ

ISC 13 00:52:49.3±1.2, 36°.63N±0°.03×8°.31W±0°.03, h19km±3km, n65, σ1°23/120, 3D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.65**	**321**	P	**Pb**	**00 53 02.0**	**+0.1**
	15nm,0.3s,SNR=15						
PFVI				S	**Sb**	**00 53 11.6**	**+0.9**
	110nm,0.1s,SNR=10						
PFVI	**Vila Bisbo**	**0.65**	**321**	P	**Pn**	**00 53 03.0**	**-0.5**
PFVI				S	**Sn**	**00 53 13.7**	**+0.4**
PFVI	**Vila Bisbo**	**0.65**	**321**	*e*P	**Pb**	**00 53 02.1**	**+0.1**
PFVI				*e*S	**Sn**	**00 53 12.5**	**-0.8**
PFVI				A	A	00 53 14.8	
	31nm,0.4s						
PBDV	**Barranco-do-Ve**	**0.68**	**26**	P	**Pg**	**00 53 02.5**	**-0.3**
PBDV				S	**Sb**	**00 53 12.6**	**+1.0**
	26nm,0.5s						
PBDV	**Barranco-do-Ve**	**0.68**	**26**	⇓*e*P	**Pg**	**00 53 02.5**	**-0.3**
PBDV				*e*S	**Sb**	**00 53 12.6**	**+1.0**
PBDV				A	A	00 53 18.3	
	26nm,0.5s						
MORF	**Marmelete**	**0.73**	**338**	*e*P	**Pn**	**00 53 04.2**	**-0.4**
MORF				*e*S	**Sn**	**00 53 14.7**	**-0.6**
MORF				AML	AML	00 53 16.5	
	comp=E,329nm,0.3s						
MORF	**Marmelete**	**0.73**	**338**	P	**Pn**	**00 53 04.2**	**-0.4**
MORF				S	**Sn**	**00 53 14.7**	**-0.6**
	comp=E,329nm,0.3s						
MORF	**Marmelete**	**0.73**	**338**	*e*P	**Pn**	**00 53 04.2**	**-0.4**
MORF				*e*S	**Sn**	**00 53 15.0**	**-0.3**
MORF				A	A	00 53 16.3	
	comp=E,189nm,0.2s						
PVAQ	**Vaqueiros**	**0.91**	**31**	P	**Pb**	**00 53 06.3**	**-0.1**
PVAQ				S	**Sg**	**00 53 19.4**	**+0.4**
	comp=E,46nm,0.5s						
PVAQ	**Vaqueiros**	**0.91**	**31**	P	**Pn**	**00 53 07.2**	**+0.2**
PVAQ				S	**Sn**	**00 53 20.8**	**+1.3**
PVAQ	**Vaqueiros**	**0.91**	**31**	*e*P	**Pb**	**00 53 06.3**	**-0.1**
PVAQ				*e*S	**Sg**	**00 53 19.4**	**+0.4**
PVAQ				A	A	00 53 21.2	
	comp=E,46nm,0.5s						
PTEO	**Sao Teotonio**	**0.97**	**340**	P	**Pn**	**00 53 07.8**	**-0.1**
PTEO				S	**Sg**	**00 53 21.0**	**-0.1**
	comp=E,17nm,0.4s						
PTEO	**Sao Teotonio**	**0.97**	**340**	⇓*e*P	**Pn**	**00 53 07.8**	**-0.1**
PTEO				*e*S	**Sg**	**00 53 21.0**	**-0.1**
PTEO				A	A	00 53 22.5	
	comp=E,35nm,0.4s						
PCVE	**Castro Verde**	**1.02**	**12**	P	**Pn**	**00 53 08.7**	**+0.1**
PCVE				S	**Sg**	**00 53 22.8**	**+0.1**
	comp=E,24nm,0.3s						
PCVE	**Castro Verde**	**1.02**	**12**	*e*P	**Pn**	**00 53 08.7**	**+0.1**
PCVE				*e*S	**Sg**	**00 53 22.8**	**+0.1**
PCVE				A	A	00 53 27.7	
	comp=E,24nm,0.3s						
EGRO	**El Granado**	**1.12**	**36**	P	**Pn**	**00 53 09.9**	**0.0**
	comp=E,25nm,0.3s,SNR=48						
EGRO				S	**Sb**	**00 53 24.3**	**+0.1**
	comp=E,42nm,0.2s,SNR=13						
MESJ	**Messejana**	**1.21**	**3**	*e*P	**Pn**	**00 53 11.2**	**0.0**
MESJ				*e*S	**Sb**	**00 53 26.9**	**0.0**
MESJ				AML	AML	00 53 28.8	
	comp=N,35nm,0.3s						
MESJ	**Messejana**	**1.21**	**3**	P	**Pn**	**00 53 11.2**	**0.0**
MESJ				S	**Sb**	**00 53 26.9**	**0.0**
	comp=N,35nm,0.3s						
MESJ	**Messejana**	**1.21**	**3**	*e*P	**Pn**	**00 53 11.2**	**0.0**
MESJ				*e*S	**Sn**	**00 53 27.9**	**+0.9**
MESJ				A	A	00 53 29.8	
	comp=N,24nm,0.3s						
PBEJ	**Beja**	**1.44**	**14**	P	**Pb**	**00 53 15.3**	**-0.2**
PBEJ				S	**Sn**	**00 53 33.0**	**+0.3**
	comp=N,6.6nm,0.2s						
PBEJ	**Beja**	**1.44**	**14**	*e*P	**Pb**	**00 53 15.3**	**-0.2**
PBEJ				*e*S	**Sn**	**00 53 33.0**	**+0.3**
PBEJ				A	A	00 53 35.9	
	comp=N,13nm,0.2s						
PNCL	**Nicolau / Gran**	**1.49**	**353**	P	**Pn**	**00 53 14.8**	**-0.2**
PNCL				S	**Sb**	**00 53 35.4**	**+0.5**
	comp=N,16nm,0.2s						
PNCL	**Nicolau / Gran**	**1.49**	**353**	*e*P	**Pn**	**00 53 14.8**	**-0.2**
PNCL				*e*S	**Sb**	**00 53 35.4**	**+0.5**
PNCL				A	A	00 53 39.9	
	comp=N,16nm,0.2s						
EMIN	**Mina Concepcio**	**1.73**	**48**	P	**Pn**	**00 53 18.8**	**+0.5**
	comp=N,2.4nm,0.3s,SNR=32						
EMIN				S	**Sn**	**00 53 40.5**	**+0.6**
	comp=N,9.9nm,0.2s,SNR=9.5						
PBAR	**Barrancos**	**1.84**	**33**	P	**Pg**	**00 53 24.2**	**-0.6**
PBAR	**Barrancos**	**1.84**	**33**	*e*Pg	**Pg**	**00 53 24.2**	**-0.6**
EVO	**Evora**	**1.92**	**7**	P	**Pg**	**00 53 27.3**	**+1.1**
EVO				S	**Sn**	**00 53 46.0**	**+1.5**
EVO	**Evora**	**1.92**	**7**	*e*P	**Pg**	**00 53 27.3**	**+1.1**
EVO				*e*S	**Sn**	**00 53 46.0**	**+1.5**
ESPR	**Espera**	**1.98**	**82**	P	**Pn**	**00 53 22.6**	**+0.8**
	comp=N,3.5nm,0.3s,SNR=16						
ESPR				S	**Sn**	**00 53 47.4**	**+1.3**
	comp=N,27nm,0.2s,SNR=8.5						
PESTR	**Estremoz**	**2.31**	**14**	P	**Pn**	**00 53 27.1**	**+0.8**
PESTR				S	**Sg**	**00 54 02.2**	**-1.4**
PESTR	**Estremoz**	**2.31**	**14**	*e*Sg	**Sg**	**00 54 01.9**	**-1.6**
EBAD	**Badajoz**	**2.36**	**25**	P	**Pn**	**00 53 26.7**	**-0.3**
	comp=N,1.3nm,0.3s,SNR=11						
EBAD				S	**Sn**	**00 53 55.8**	**+0.4**
	comp=N,8.4nm,0.2s,SNR=4.7						
PMTG	**Montargil**	**2.44**	**2**	P	**Pn**	**00 53 27.8**	**-0.2**
PMTG				Lg	Lg	00 54 04.3	
	comp=N,6.9nm,0.4s						
PMTG	**Montargil**	**2.44**	**2**	*e*Pn	**Pn**	**00 53 27.8**	**-0.2**
PMTG				*e*Sg	**Sb**	**00 54 04.3**	**+2.2**
PMTG				A	A	00 54 06.3	
	comp=N,6.9nm,0.4s						
PMAFR	**Mafra**	**2.45**	**342**	P	**Pn**	**00 53 28.7**	**+0.5**
	comp=N,1.8nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**00 53 58.2**	**+0.6**
	comp=N,15nm,0.2s,SNR=6.5						
PMAFR	**Mafra**	**2.45**	**342**	*e*Pn	**Pn**	**00 53 29.5**	**+1.3**
PMAFR				*e*Sn	**Sn**	**00 53 58.4**	**+0.8**
PMAFR				A	A	00 54 00.9	
	comp=N,19nm,0.2s						
ECEU	**Ceuta**	**2.48**	**106**	P	**Pn**	**00 53 30.5**	**+1.9**
	comp=N,2.2nm,0.1s,SNR=7.9						
SMIR	**Smir Dam**	**2.55**	**111**	P	**Pb**	**00 53 32.6**	**-1.8**
SMIR				S	**Sb**	**00 54 03.9**	**-1.5**
ECAB	**El Cabril**	**2.72**	**57**	P	**Pn**	**00 53 32.0**	**+0.1**
	comp=N,1.2nm,0.3s,SNR=22						
ECAB				S	**Sn**	**00 54 02.3**	**-2.0**
	comp=N,1.6nm,0.2s,SNR=6.6						
HORN	**Hornachuelos**	**2.72**	**63**	P	**Pn**	**00 53 32.1**	**+0.2**
HORN				S	**Sn**	**00 54 05.9**	**+1.6**
EMIJ	**Mijas**	**2.85**	**90**	P	**Pn**	**00 53 36.3**	**+2.6**
	comp=N,1.7nm,0.3s,SNR=5.5						
EMIJ				S	**Sn**	**00 54 07.4**	**-0.1**
	comp=N,4.2nm,0.3s,SNR=4.6						
CHEFC	**Chefchaouen**	**2.85**	**121**	P	**Pn**	**00 53 36.0**	**+2.2**
CHEFC				S	**Sb**	**00 54 12.4**	**-1.7**
PMRV	**Marv??o**	**2.89**	**14**	P	**Pn**	**00 53 34.0**	**-0.2**
PMRV				Lg	Lg	00 54 20.1	
	comp=N,6.7nm,0.5s						
PMRV	**Marv??o**	**2.89**	**14**	*e*Pn	**Pn**	**00 53 34.0**	**-0.2**
PMRV				*e*Sg	**Sg**	**00 54 20.1**	**-2.0**
PMRV				A	A	00 54 26.5	
	comp=N,6.7nm,0.5s						
PSBE	**So Bento**	**2.91**	**353**	*e*Pn	**Pn**	**00 53 35.0**	**+0.5**
PSBE				*e*Sn	**Sn**	**00 54 10.4**	**+1.5**
PSBE				A	A	00 54 23.9	
	comp=N,5.2nm,0.9s						
PCBR	**Castelo Branco**	**3.27**	**11**	P	**Pn**	**00 53 39.4**	**-0.1**
PCBR				S	**Sn**	**00 54 17.4**	**-0.5**
	comp=N,1.8nm,0.4s						
PCBR	**Castelo Branco**	**3.27**	**11**	*e*Pn	**Pn**	**00 53 39.4**	**-0.1**
PCBR				*e*Sn	**Sn**	**00 54 17.4**	**-0.5**
PCBR				A	A	00 54 36.7	
	comp=N,3.5nm,0.4s						
EADA	**Adamuz**	**3.34**	**62**	⇓P	**Pn**	**00 53 40.9**	**+0.4**
	comp=N,2.5nm,0.3s,SNR=18						
EADA				S	**Sn**	**00 54 18.0**	**-1.8**
	comp=N,3.6nm,0.2s						
EGOR	**Sierra Gorda,**	**3.40**	**81**	P	**Pn**	**00 53 45.0**	**+3.6**
	comp=N,0.2nm,0.1s,SNR=7.9						
EGOR				S	**Sn**	**00 54 22.6**	**+1.4**
	comp=N,4.5nm,0.4s,SNR=7.9						
ZHG	**ZHG**	**3.46**	**156**	P	**Pn**	**00 53 43.4**	**+1.2**
ZHG				S	**Sb**	**00 54 27.0**	**-4.5**
ELGU	**Los Guajares,**	**3.77**	**85**	P	**Pn**	**00 53 49.0**	**+2.6**
	comp=N,0.8nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**00 54 32.8**	**+2.5**
	comp=N,9.7nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**3.81**	**9**	P	**Pn**	**00 53 47.0**	**0.0**
MTE	**Manteigas**	**3.81**	**9**	*e*Pn	**Pn**	**00 53 47.0**	**0.0**
EQUE	**Quentar**	**3.94**	**80**	S	**Sn**	**00 54 36.0**	**+1.4**
	comp=N,2.3nm,0.4s,SNR=7.9						
AKLM	**AKL**	**4.20**	**119**	P	**Pn**	**00 53 53.1**	**+0.9**
AKLM				S	**Sn**	**00 54 43.5**	**+2.8**
PAB	**San Pablo**	**4.27**	**46**	P	**Pn**	**00 53 53.4**	**0.0**
	comp=N,0.3nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**00 54 41.1**	**-1.6**
	comp=N,1.7nm,0.2s,SNR=7.9						
EQES	**Quesada**	**4.34**	**73**	P	**Pn**	**00 53 54.5**	**+0.2**
	comp=N,0.4nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**00 54 45.0**	**+0.6**
	comp=N,1.7nm,0.3s,SNR=7.9						
EBER	**Berja**	**4.36**	**85**	P	**Pn**	**00 53

PB12	**IPOC Station P**	**1.55**	**4**	*e*P	**Pn**	**00 57 37.4**	**-0.6**
PB12				*e*S	**Sn**	**00 57 57.1**	**-0.3**
PB12				IAML		00 58 00.1	
	comp=N,2µm,0.4s						
PB07	**IPOC Station P**	**1.63**	**162**	⇓*i*P	**Pn**	**00 57 38.6**	**-0.5**
PB07				*i* S	**Sn**	**00 57 59.5**	**+0.1**
PB07				IAML		00 58 02.4	
	comp=E,805nm,0.3s						
PB09	**IPOC Station P**	**1.96**	**146**	⇓*i*P	**Pn**	**00 57 44.6**	**+1.0**
PB09				IAML		00 58 15.1	
	comp=E,2µm,0.9s						
PB03	**IPOC Station P**	**1.97**	**161**	⇓*i*P	**Pn**	**00 57 43.4**	**-0.4**
PB03				IAML		00 58 17.9	
	comp=E,477nm,0.6s						
PB16	**IPOC Station P**	**2.03**	**26**	⇑*i*P	**Pn**	**00 57 45.1**	**+0.2**
PB16				*i* S	**Sn**	**00 58 11.5**	**+1.8**
PB16				IAML		00 58 21.2	
	comp=E,344nm,0.4s						
PB04	**IPOC Station P**	**2.17**	**173**	⇓*i*P	**Pn**	**00 57 45.0**	**-1.4**
PB04				IAML		00 58 22.7	
	comp=E,859nm,0.6s						
PB06	**IPOC Station P**	**2.64**	**163**	⇓*i*P	**Pn**	**00 57 52.0**	**-1.0**
PB06				IAML		00 58 37.3	
	comp=E,273nm,0.4s						
PB05	**IPOC Station P**	**2.67**	**175**	*i* P	**Pn**	**00 57 51.5**	**-2.0**
PB05				IAML		00 58 42.8	
	comp=E,178nm,0.7s						
LVC	**Limon Verde**	**2.81**	**150**	*e*P	**Pn**	**00 57 56.6**	**+1.1**
PB15	**IPOC Station P**	**3.15**	**164**	*i* P	**Pn**	**00 57 58.9**	**-1.1**
LPAZ	**La Paz**	**4.44**	**30**	Pn	Pn	00 58 23.8	+5.6
	comp=E,1.2nm,0.3s,baz=269,slow=15,SNR=41						
LPAZ				Pg	Pb	00 58 35.2	+5.9
	comp=E,0.9nm,0.3s,baz=202,slow=16,SNR=6.1						
LPAZ				Lg	Lg	00 59 31.2	
	comp=E,0.5nm,0.3s,baz=197,slow=14,SNR=1.5						
TORD	**Torodi Ar. Bea**	**78.27**	**71**	P	P	01 09 16.1	+6.0
	comp=E,0.4nm,0.5s,baz=256,slow=6.0,SNR=9.3						
YKA	**Yellowknife Ar**	**89.47**	**341**	P	P	01 10 14.3	+8.0
	comp=E,0.1nm,0.3s,baz=137,slow=5.0,SNR=3.7						
MKAR	**Makanchi Array**	**145.36**	**34**	PKPbc	**PKiKP**	**01 16 55.1**	**+3.5**
	comp=E,0.6nm,0.6s,baz=325,slow=2.3,SNR=6.8						

MEX ***13*** *01:10:28.3±0.8, 14°.43N×92°.61W, h50km±33km, MD3.9*
GCG ***13*** *01:10:29.1±0.4, 14°.42N×92°.43W, h25km±16km, MD3.7*
ISC 13 01:10:25.7±2.4**, 14°.4N**±0°.1×**92°.66W**±0°.07**, h23**km±21km**, n9,** σ1°**11**/16**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.62**	**38**	*i* P	**Pn**	**01 10 39.8**	**+0.7**
THIG				*i* S	**Sn**	**01 10 47.3**	**-1.1**
STG3	**Santiaguito 3,**	**1.10**	**74**	*e*P	**Pb**	**01 10 45.9**	**-0.3**
PCIG		**1.39**	**337**	*i* P	**Pn**	**01 10 49.7**	**0.0**
PCIG				*i* S	**Sn**	**01 11 06.4**	**-0.8**
FUG	**Fuego 3**	**1.77**	**89**	*e*P	**Pn**	**01 10 55.4**	**+0.3**
FUG				*e*S	**Sn**	**01 11 16.0**	**-0.9**
CCIG	**Comitan**	**1.92**	**15**	*i* P	**Pn**	**01 10 57.3**	**+0.1**
CCIG				*i* S	**Sn**	**01 11 19.4**	**-1.4**
PCG	**Pacaya**	**1.99**	**90**	*e*P	**Pn**	**01 10 59.3**	**+1.0**
PCG				*e*S	**Sn**	**01 11 22.4**	**-0.2**
IXG	**Ixpaco**	**2.17**	**96**	*e*P	**Pn**	**01 11 01.1**	**+0.5**
TGIG		**2.39**	**349**	*i* P	**Pn**	**01 11 05.3**	**+1.8**
TGIG				*i* S	**Sn**	**01 11 34.2**	**+2.1**
CMIG	**Matias Romero**	**3.41**	**322**	*i* P	**Pn**	**01 11 17.1**	**-0.4**
CMIG				*i* S	**Sn**	**01 11 56.6**	**-0.7**

ISK ***13*** *01:11:48.1, 34°.57N×32°.61E, h6km, ML3.1/27*
DDA ***13*** *01:11:49.2, 34°.64N×32°.50E, h7km±1km, ML2.7*
NIC ***13*** *01:11:51.6±0.0, 34°.77N×32°.80E, h19km, Ml3.5/2*
GII ***13*** *01:11:51.1±0.0, 34°.69N×32°.70E, h18km, MD2.1/5, Mm2.6/2*
HLW ***13*** *01:11:59.3, 34°.14N×32°.27E, h26km±8km, Md3.7*
ISC 13 01:11:50.8±0.9**, 34°.63N**±0°.03×**32°.68E**±0°.03**, h15**km±6km**, n107,** σ1°**29**/129**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NATA	**Nata**	**0.18**	**329**	P	**Pg**	**01 11 55.9**	**+0.8**
NATA				S	**Sg**	**01 12 00.2**	**+2.2**
NATA				AML	AML	01 12 04.2	
	30nm,0.6s						
NATA				AML	AML	01 12 04.2	
	30nm,0.6s						
NATA				AML	AML	01 12 06.6	
	45nm,0.4s						
NATA				AML	AML	01 12 06.6	
	45nm,0.4s						
SZAC	**Souni**	**0.21**	**51**	P	**Pg**	**01 11 55.1**	**-0.5**
SZAC				AML	AML	01 11 58.2	
	36nm,0.2s						
SZAC				AML	AML	01 11 58.2	
	36nm,0.2s						
SZAC				S	**Sg**	**01 11 58.2**	**-0.6**
SZAC				AML	AML	01 11 58.2	
	47nm,0.2s						
SZAC				AML	AML	01 11 58.2	
	47nm,0.2s						
AKMS	**Akamas**	**0.49**	**324**	P	**Pb**	**01 12 01.3**	**+0.3**
ASGA	**Asgata**	**0.49**	**71**	P	**Pg**	**01 11 59.4**	**-1.2**
ASGA				S	**Sg**	**01 12 05.3**	**-1.9**
LEF	**Lefka**	**0.52**	**19**	PG	**Pg**	**01 11 59.9**	**-1.2**
LEF	**Lefka**	**0.52**	**19**	*i* P	**Pg**	**01 12 00.5**	**-0.7**
LEF				*i* S	**Sb**	**01 12 10.6**	**+1.5**
LEF				IAML		01 12 14.0	
	comp=N,736nm,0.5s						
LEF				IAML		01 12 14.0	
	comp=E,664nm,0.8s						
ALFC	**Alefka**	**0.54**	**353**	P	**Pg**	**01 12 00.3**	**-1.1**
CSS	**Mathiatis**	**0.63**	**58**	PG	**Pb**	**01 12 02.0**	**-1.5**
CSS				SG	**Sb**	**01 12 12.4**	**+0.3**
CSS	**Mathiatis**	**0.63**	**58**	P	**Pb**	**01 12 02.9**	**-0.6**
CSS	**Mathiatis**	**0.63**	**58**	Pg	**Pb**	**01 12 01.3**	**-2.2**
CSS	**Mathiatis**	**0.63**	**58**	P	**Pb**	**01 12 01.5**	**-2.0**
AKDN	**Akdeniz- Kıbrı**	**0.71**	**19**	PG	**Pb**	**01 12 03.7**	**-1.2**
EREN	**Erenkoy**	**1.52**	**53**	PN	**Pn**	**01 12 17.9**	**+0.5**
EREN	**Erenkoy**	**1.52**	**53**	*i* P	**Pb**	**01 12 19.6**	**+1.0**
EREN				*i* S	**Sg**	**01 12 43.0**	**+3.4**
EREN				IAML		01 12 47.0	
	comp=N,103nm,0.6s						
EREN				IAML		01 12 54.0	
	comp=E,132nm,0.7s						
TEKE	**Tekeli-Mersin**	**1.56**	**13**	PN	**Pn**	**01 12 17.9**	**0.0**
OSC2	**CSNet OBS 4**	**1.58**	**193**	P	**Pg**	**01 12 20.9**	**-0.4**
GAZI	**Gazipasa**	**1.63**	**350**	PN	**Pn**	**01 12 18.9**	**-0.1**
GAZI	**Gazipasa**	**1.63**	**350**	*i* P	**Pb**	**01 12 19.5**	**-1.2**
GAZI				*i* S	**Sb**	**01 12 41.6**	**+0.5**
GAZI				IAML		01 12 42.0	
	comp=N,83nm,0.8s						
GAZI				IAML		01 12 45.0	
	comp=E,88nm,0.5s						
AKKU	**Akkuyu-Mersin**	**1.69**	**25**	PN	**Pn**	**01 12 19.8**	**+0.1**
BERE	**Bereket-Mersin**	**1.77**	**14**	PN	**Pn**	**01 12 21.1**	**0.0**
IKL	**Isikli**	**1.81**	**27**	PN	**Pn**	**01 12 21.4**	**+0.1**
TEVE	**Tevekalti-Mers**	**1.91**	**19**	PN	**Pn**	**01 12 23.4**	**+0.5**
KEBE	**Keben-Mersin**	**2.00**	**24**	PN	**Pn**	**01 12 24.7**	**+0.6**
ERMK	**Ermenek**	**2.02**	**5**	*i* P	**Pb**	**01 12 26.5**	**-0.8**
KIZK	**Mersin**	**2.20**	**32**	PN	**Pn**	**01 12 27.6**	**+0.8**
KIZK	**Mersin**	**2.20**	**32**	*i* P	**Pn**	**01 12 28.0**	**+1.2**
KEPZ	**Antalya-Kepez**	**2.44**	**339**	*i* P	**Pn**	**01 12 31.0**	**+0.9**
HNTI	**Hanita**	**2.58**	**126**	Pn	**Pn**	**01 12 32.6**	**+0.6**
HNTI				Sn	**Sn**	**01 13 03.3**	**+0.2**
KRMN	**Karaman**	**2.59**	**10**	PN	**Pn**	**01 12 33.0**	**+0.8**
MERS	**Mersin**	**2.69**	**33**	PN	**Pn**	**01 12 34.4**	**+0.8**
QRWL	**Qaraoun**	**2.71**	**113**	*e*P	**Pn**	**01 12 33.9**	**0.0**
QRWL	**Qaraoun**	**2.71**	**113**	*e*P	**Pn**	**01 12 33.9**	**0.0**
HWQ	**Hawqa**	**2.72**	**96**	*e*P	**Pn**	**01 12 33.9**	**-0.1**
HWQ	**Hawqa**	**2.72**	**96**	*e*P	**Pn**	**01 12 33.9**	**-0.1**
OFRI	**`Ofer**	**2.77**	**136**	Pn	**Pn**	**01 12 34.7**	**0.0**
OFRI				Sn	**Sn**	**01 13 08.2**	**+0.3**
MMA0B	**Mount Meron ar**	**2.77**	**125**	Pn	**Pn**	**01 12 34.8**	**+0.1**
MMA0B				Sn	**Sn**	**01 13 08.7**	**+0.7**
BLGI	**Bet Lehem HaGe**	**2.82**	**131**	Pn	**Pn**	**01 12 35.9**	**+0.7**
SHBL	**Chebaa**	**2.84**	**116**	*e*P	**Pn**	**01 12 36.0**	**+0.3**
SHBL	**Chebaa**	**2.84**	**116**	*e*P	**Pn**	**01 12 36.0**	**+0.3**
GEM	**Giv'at Ha'Em**	**2.85**	**119**	Pn	**Pn**	**01 12 36.1**	**+0.4**
KSDI	**Kefar Szold**	**2.86**	**119**	Pn	**Pn**	**01 12 35.9**	**+0.1**
SEYD	**Seydisehir-KON**	**2.86**	**346**	PN	**Pn**	**01 12 36.6**	**+0.7**
NATI	**Neve Ativ**	**2.88**	**117**	Pn	**Pn**	**01 12 35.9**	**-0.2**
NATI				Sn	**Sn**	**01 13 11.3**	**+0.9**
KRTS	**Karatas**	**2.93**	**48**	PN	**Pn**	**01 12 38.1**	**+1.3**
KERG	**Konya-Eregli**	**3.02**	**22**	*i* P	**Pn**	**01 12 41.1**	**+2.9**
KERG				*i* S	**Sb**	**01 13 20.0**	**-1.0**
KERG				IAML		01 13 23.0	
	comp=N,24nm,0.7s						
KERG				IAML		01 13 27.0	
	comp=E,28nm,0.9s						
SLTI	**Sal'it**	**3.09**	**140**	Pn	**Pn**	**01 12 39.5**	**+0.5**
SLTI				Sn	**Sn**	**01 13 15.8**	**+0.2**
ELL	**Elmali**	**3.10**	**314**	PN	**Pn**	**01 12 39.1**	**-0.1**
GULE	**Gulek**	**3.15**	**32**	*i* P	**Pn**	**01 12 42.8**	**+2.8**
GULE				*i* S	**Sb**	**01 13 23.6**	**-1.2**
GULE				IAML		01 13 30.0	
	comp=E,26nm,0.4s						
GULE				IAML		01 13 33.0	
	comp=N,19nm,0.5s						
MMLI	**Mount Malkishu**	**3.16**	**133**	PN	**Pn**	**01 12 40.1**	**+0.1**
MMLI	**Mount Malkishu**	**3.16**	**133**	Pn	**Pn**	**01 12 40.5**	**+0.5**
MMLI				Sn	**Sn**	**01 13 18.0**	**+0.5**
SHMJ	**Saham**	**3.19**	**126**	P	**Pn**	**01 12 41.0**	**+0.6**
SHMJ	**Saham**	**3.19**	**126**	Pn	**Pn**	**01 12 40.8**	**+0.4**
YURE	**YUREGIR**	**3.25**	**47**	PN	**Pn**	**01 12 42.0**	**+0.7**
QRNJ	**Al-Qirein**	**3.32**	**133**	P	**Pn**	**01 12 43.5**	**+1.3**
QRNJ	**Al-Qirein**	**3.32**	**133**	Pn	**Pn**	**01 12 42.9**	**+0.7**
HMDT	**Nahal Hemdat**	**3.35**	**134**	Pn	**Pn**	**01 12 43.2**	**+0.6**
HMDT				Sn	**Sn**	**01 13 23.2**	**+1.0**
FETY	**Fethiye**	**3.55**	**305**	PN	**Pn**	**01 12 45.7**	**+0.3**
FETY	**Fethiye**	**3.55**	**305**	*i* P	**Pn**	**01 12 46.1**	**+0.7**
FETY				*i* S	**Sn**	**01 13 28.7**	**+1.6**
CMRD	**Camardi-Nigde**	**3.56**	**31**	PN	**Pn**	**01 12 46.9**	**+1.3**
DOGA	**KONYA_Doganhis**	**3.57**	**347**	*i* P	**Pb**	**01 12 49.7**	**-4.0**
AMAZ	**Amatzia**	**3.61**	**148**	Pn	**Pn**	**01 12 47.1**	**+0.9**
AKO	**Adana**	**3.61**	**38**	*i* P	**Pn**	**01 12 48.7**	**+2.5**
DSI	**Dead Sea**	**3.79**	**143**	Pn	**Pn**	**01 12 49.4**	**+0.7**
DSI				Sn	**Sn**	**01 13 34.0**	**+0.9**
KOZT	**Kozan**	**3.82**	**41**	PN	**Pn**	**01 12 50.2**	**+1.1**
YTIR	**Yattir**	**3.84**	**147**	Pn	**Pn**	**01 12 50.3**	**+0.9**
YTIR				Sn	**Sn**	**01 13 35.5**	**+1.2**
DALY	**Dalyan (Mula)**	**3.94**	**305**	PN	**Pn**	**01 12 51.0**	**+0.3**
DALY	**Dalyan (Mula)**	**3.94**	**305**	*i* P	**Pn**	**01 12 51.2**	**+0.5**
KZIT	**Kziot**	**3.98**	**158**	PN	**Pn**	**01 12 51.5**	**+0.3**
KZIT	**Kziot**	**3.98**	**158**	Pn	**Pn**	**01 12 52.0**	**+0.8**
MDSI	**Mazsada**	**4.00**	**145**	P	**Pn**	**01 12 52.8**	**+1.4**
TURN	**Turunc**	**4.01**	**305**	PN	**Pn**	**01 12 54.6**	**+3.0**
TURN	**Turunc**	**4.01**	**305**	*i* P	**Pn**	**01 12 55.0**	**+3.5**
TURN				*i* S	**Sb**	**01 13 45.5**	**-3.7**
TURN				IAML		01 13 51.0	
	comp=N,9.7nm,0.6s						
WALJ	**Wala**	**4.03**	**138**	P	**Pn**	**01 12 53.0**	**+1.1**
ARG	**Arkhangelos**	**4.05**	**294**	PN	**Pn**	**01 12 51.7**	**-0.4**
YAHY	**KAYSERI_Yahyal**	**4.08**	**31**	*i* P	**Pn**	**01 12 56.0**	**+3.3**
GHAJ	**Ghor Haditha**	**4.10**	**143**	P	**Pn**	**01 12 54.8**	**+1.9**
GHAJ	**Ghor Haditha**	**4.10**	**143**	Pn	**Pn**	**01 12 54.1**	**+1.2**
LISJ	**El Lisan**	**4.11**	**144**	P	**Pn**	**01 12 55.1**	**+2.1**
KAMA	**Osmaniye**	**4.12**	**51**	*i* P	**Pn**	**01 12 54.1**	**+0.8**
DAMI2	**DAM2**	**4.15**	**145**	Pn	**Pn**	**01 12 55.2**	**+1.7**
TAVA	**DENIZLI_Tavas**	**4.17**	**314**	*i* P	**Pn**	**01 12 54.9**	**+1.0**
KARJ	**KARJ**	**4.30**	**144**	Pn	Pn	01 12 46.2	-9.4
AYKD	**Aykdinkavak**	**4.35**	**49**	*i* P	**Pn**	**01 12 57.2**	**+1.2**
YER	**Yerkesik**	**4.36**	**306**	PN	**Pn**	**01 12 56.6**	**0.0**
HCB	**Kahramanmara**	**4.37**	**50**	*i* P	**Pn**	**01 12 57.8**	**+1.1**
HCB				*i* S	**Sn**	**01 13 48.8**	**+1.5**
HCB				IAML		01 13 50.0	
	comp=N,23nm,0.4s						
KMRS	**Kahramanmaras**	**4.46**	**49**	PN	**Pn**	**01 12 58.7**	**+0.8**
KARP	**Karpathos**	**4.62**	**283**	PN	**Pn**	**01 12 59.9**	**-0.2**
JDRJ	**Daraweish**	**4.63**	**146**	P	**Pn**	**01 13 02.0**	**+1.7**
DAT	**Datca**	**4.66**	**298**	PN	**Pn**	**01 13 00.8**	**+0.2**
PRNI	**Paran**	**4.69**	**155**	Pn	**Pn**	**01 13 02.0**	**+1.0**
PRNI				Sn	**Sn**	**01 13 56.7**	**+1.5**
SUZ	**Suez**	**4.77**	**178**	P	**Pn**	**01 13 03.2**	**+1.0**
	baz=173						
KRMI	**Paran Flat**	**4.81**	**158**	Pn	**Pn**	**01 13 03.8**	**+1.0**
SARI	**SarDiz-Kayseri**	**4.83**	**37**	PN	**Pn**	**01 13 04.8**	**+1.8**
HRFI	**Mount Harif**	**4.99**	**156**	PN	**Pn**	**01 13 05.4**	**+0.2**
HRFI	**Mount Harif**	**4.99**	**156**	Pn	**Pn**	**01 13 06.1**	**+0.9**
BODT	**Bodrum**	**5.00**	**301**	PN	**Pn**	**01 13 05.5**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**5.10**	**312**	PN	**Pn**	**01 13 07.0**	**+0.3**
GLL	**Jalalah**	**5.10**	**190**	P	**Pn**	**01 13 07.1**	**+0.4**
	baz=187						
MBRI	**Mt Berech**	**5.17**	**158**	P	**Pn**	**01 13 09.1**	**+1.4**
MBRI	**Mt Berech**	**5.17**	**158**	Pn	**Pn**	**01 13 08.5**	**+0.8**
MBRI				Sn	**Sn**	**01 14 08.9**	**+1.7**
EIL	**Elat**	**5.30**	**158**	Pn	**Pn**	**01 13 10.0**	**+0.6**
MATC	**Matruh**	**5.63**	**236**	P	**Pn**	**01 13 14.0**	**+0.1**
	baz=239						
HBST	**Basata**	**5.67**	**162**	P	**Pn**	**01 13 17.0**	**+2.6**
	baz=156						
GRB	**Gharib**	**6.33**	**179**	P	**Pn**	**01 13 24.3**	**+0.7**
	baz=175						
SLUM	**Salum**	**7.01**	**246**	P	**Pn**	**01 13 33.8**	**+0.9**
	baz=248						
SLUM				S	Sn	01 14 42.2	-10
	baz=248						
SWA2		**8.15**	**231**	P	**Pn**	**01 13 48.4**	**-0.1**
	baz=232						
HFRF	**Wahat Farafira**	**8.35**	**208**	P	**Pn**	**01 13 51.2**	**0.0**
	baz=208						

ATH 13 01:13:23.6, 38°.22N×25°.10E, h21km±3km**, ML2.3**/2**, Error ellipse: s-maj=3.1km s-min=1.1km az=105.0, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSRA	**Psara**	**0.49**	**48**	P	Pb	01 13 33.9	+0.4
PSRA				S	Sb	01 13 40.5	+0.2
PSRA				AML	AML	01 13 42.3	
	comp=E,1187µm,0.3s						
PSRA				AML	AML	01 13 42.5	
	comp=N,1155µm,0.2s						
KARY	**Karystos**	**0.55**	**251**	P	Pb	01 13 34.7	0.0
KARY				S	Sb	01 13 42.4	+0.2
TNSA	**Tinos**	**0.68**	**176**	P	Pn	01 13 37.9	-0.1
CHOS	**Chios island**	**0.77**	**77**	P	Pb	01 13 38.6	+0.2
CHOS				S	Sb	01 13 48.9	+0.5
CHOS				AML	AML	01 13 51.3	
	comp=E,319µm,0.2s						
CHOS				AML	AML	01 13 51.3	
	comp=N,357µm,0.3s						
KYMI	**Kymi, Euboea I**	**0.89**	**298**	P	Pn	01 13 41.0	+0.1
DION	**Dionisos Attik**	**0.93**	**262**	P	Pn	01 13 41.3	-0.2
DION				S	Sn	01 13 53.8	-0.4
PTL	**Penteli**	**0.99**	**261**	P	Pn	01 13 42.3	+0.1
ATHU	**Athens Univers**	**1.07**	**257**	P	Pb	01 13 44.1	+0.8
VLY	**Voula,Athens**	**1.09**	**251**	P	Pb	01 13 44.5	+0.7
ATH	**Athens Observa**	**1.12**	**258**	P	Pb	01 13 44.9	+0.7
SERI	**Serifos**	**1.16**	**205**	P	Pb	01 13 45.6	+0.6
APE	**Apeiranthos**	**1.20**	**163**	P	Pb	01 13 45.5	-0.1
APE				S	Sn	01 14 02.0	+1.2
AOS	**Alonnisos**	**1.35**	**315**	P	Pb	01 13 48.4	+0.3
VIL2	**Platees**	**1.44**	**270**	P	Pb	01 13 50.7	+0.9
LKR	**Lokris**	**1.70**	**285**	P	Pb	01 13 54.4	+0.1

DDA ***13*** *01:14:17.4, 38°.20N×25°.43E, h9km±4km, ML2.6*
ISK 13 01:14:07.6, 38°.30N×25°.10E, h15km, ML2.9/16**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOS	**Chios island**	**0.76**	**83**	PG	Pn	01 14 23.2	-0.6
CHOS				SG	Sb	01 14 33.1	+0.4
SIGR	**SIGRI**	**1.09**	**33**	PN	Pg	01 14 29.1	+0.5
URLA	**Izmir**	**1.18**	**87**	PN	Pg	01 14 30.1	-0.2
URLA	**Izmir**	**1.18**	**87**	*i* P	Pg	01 14 31.4	+1.1
URLA				*i* S	Sg	01 14 46.9	+1.2
APE	**Apeiranthos**	**1.27**	**164**	PN	Pn	01 14 31.1	+0.2
AOS	**Alonnisos**	**1.29**	**313**	PN	Pb	01 14 31.4	-0.2
DGB	**zmir**	**1.43**	**99**	*i* P	Pg	01 14 37.8	+2.8
AYVA	**Ayvalik**	**1.60**	**50**	*i* P	Pg	01 14 43.4	+5.0
AYVA				IAML		01 15 03.0	
	comp=N,57nm,0.6s						
AYVA				IAML		01 15 03.0	
	comp=E,74nm,0.6s						
AYVA				*i* S	Sg	01 15 03.0	+3.9
DKL	**Dikili**	**1.61**	**61**	PN	Pn	01 14 35.8	+0.3
GCAM	**G?zelcaml?**	**1.79**	**109**	PN	Pn	01 14 38.9	+1.0
EZN	**Ezine**	**1.80**	**32**	PN	Pn	01 14 39.0	+0.9
GADA	**Gvkgeada**	**1.99**	**18**	PN	Pn	01 14 41.3	+0.6
BODT	**Bodrum**	**2.14**	**124**	PN	Pn	01 14 43.9	+1.0
AKHS	**Akhisar**	**2.20**	**74**	*i* P	Pg	01 14 53.8	+3.9
AYDB	**Zeytinkoy-Aydi**	**2.23**	**98**	PN	Pn	01 14 45.5	+1.4
BDRM	**Kayabasi**	**2.23**	**123**	*i* P	Pg	01 14 51.5	+1.2
AYDN	**Tasoluk**	**2.29**	**105**	*i* P	Pg	01 14 51.2	-0.3
STEP	**BALIKESIR_Sava**	**2.31**	**61**	*i* P	Pg	01 14 53.5	+1.6
STEP				*i* S	Sg	01 15 24.3	+2.4
GELI	**Tayfur-Gelibol**	**2.35**	**26**	PN	Pn	01 14 47.3	+1.6
LPK	**Lapseki**	**2.44**	**31**	PN	Pn	01 14 48.0	+1.1
BALB	**Balikesir**	**2.55**	**57**	PN	Pn	01 14 49.9	+1.5
ENEZ	**Enez**	**2.57**	**18**	PN	Pn	01 14 49.7	+1.1
ERIK	**Erikli-Kesan**	**2.61**	**24**	PN	Pn	01 14 50.3	+1.1
MANT	**Manisa**	**2.72**	**85**	*i* P	Pg	01 15 00.7	+0.9
MANT				*i* S	Sg	01 15 34.7	-0.4
RDO	**Rodhopi**	**2.86**	**7**	PN	Pn	01 14 53.9	+1.2

KNET ***13*** *01:18:43.7±0.2, 42°.26N×75°.08E, h20km±4km, ml3.6, Error ellipse: s-maj=3.0km s-min=1.5km az=15.0*
IDC ***13*** *01:18:43.3±0.9, 42°.21N×75°.05E, h0km, mb3.7/12, mb1 3.8/19, mb1mx3.6/68, mbtmp3.7/19, ML3.1/6, MS3.6/2, Ms1 3.7/2, ms1mx2.6/35, Error ellipse: s-maj=11.9km s-min=8.0km az=7.0*
SOME ***13*** *01:18:44.6, 42°.23N×75°.03E, h20km*
KRNET ***13*** *01:18:44.7±0.1, 42°.26N×75°.05E, h19km, mb4.3*
NNC ***13*** *01:18:45.7±0.4, 42°.34N×75°.06E, h0km, mb4.5, mpv4.3, Error ellipse: s-maj=3.3km s-min=1.1km az=178.0*
BJI ***13*** *01:18:46.0±0.0, 42°.40N×75°.00E, h5km, mB4.2/1, mb4.3/1, ML3.9/6, Ms3.3/2*
ISC 13 01:18:44.9±1.0**, 42°.27N**±0°.02×**75°.05E**±0°.01**, h6**km±7km**, n122,** σ1°**16**/205**, mb3.7**/13**, 45C-34D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KZA	**Kyzart**	**0.24**	**143**	⇑*i*P	**Pg**	**01 18 50.0**	**+0.2**
KZA	baz=40			⇑*i*S	**Sg**	**01 18 53.8**	**+0.7**
KZA	**Kyzart**	**0.24**	**143**	⇑P	**Pg**	**01 18 49.0**	**-0.8**
KZA	2µm,0.1s,SNR=5569			⇑S	**Sg**	**01 18 54.2**	**+1.1**
KBK	**Karagaybulak**	**0.39**	**349**	⇓*i*P	**Pg**	**01 18 52.7**	**+0.2**
KBK	20µm,0.2s baz=50			⇓*i*S	**Sg**	**01 18 58.7**	**+1.0**
KBK	**Karagaybulak**	**0.39**	**349**	⇑P	**Pg**	**01 18 52.9**	**+0.4**
KBK	4µm,0.1s			⇓S	**Sb**	**01 18 59.0**	**-1.6**
UCH	**Uchtor**	**0.40**	**264**	⇓*i*P	**Pg**	**01 18 52.7**	**-0.1**
UCH	baz=65			⇓*i*S	**Sg**	**01 18 58.5**	**+0.3**
UCH	**Uchtor**	**0.40**	**264**	⇑P	**Pg**	**01 18 52.7**	**-0.1**
UCH	732nm,0.2s,SNR=2404			⇑S	**Sg**	**01 18 58.8**	**+0.6**
AAK	**Ala-Archa**	**0.55**	**312**	Pg	**Pg**	**01 18 55.7**	**+0.1**
AAK	4µm,0.2s 759nm,0.3s,baz=125,slow=6.0,SNR=4253			Lg	Lg	01 19 03.2	
AAK	922nm,0.3s,baz=123,slow=7.1,SNR=31			LR	LR	01 19 09.4	
AAK	**Ala-Archa**	**0.55**	**312**	⇓*i*P	**Pg**	**01 18 55.3**	**-0.2**
AAK	comp=Z,27nm,20.3s,baz=344,slow=44 baz=13			⇓*i*S	**Sg**	**01 19 03.1**	**+0.4**
AAK	**Ala-Archa**	**0.55**	**312**	⇓P	**Pg**	**01 18 55.6**	**+0.1**
AAK	2µm,0.2s,SNR=1220			⇓S	**Sg**	**01 19 03.2**	**+0.4**
AAK	**Ala-Archa**	**0.55**	**312**	⇑P	**Pg**	**01 18 55.6**	**+0.1**
AAK	3µm,0.2s 570nm,0.2s			⇑S	**Sg**	**01 19 03.1**	**+0.4**
FRU1	**Bishkek**	**0.62**	**330**	⇑*i*P	**Pg**	**01 18 57.0**	**+0.2**
FRU1	2µm,0.3s baz=31			⇑*i*S	**Sg**	**01 19 05.5**	**+0.6**
BOOM	**Boomskoye usch**	**0.69**	**72**	⇑*i*P	**Pg**	**01 18 57.9**	**-0.3**
BOOM	baz=71			⇑*i*S	**Sb**	**01 19 07.7**	**-1.6**
CHMS	**Chumysh**	**0.76**	**343**	⇑*i*P	**Pg**	**01 18 59.0**	**-0.4**
CHMS	baz=44			⇑*i*S	**Sg**	**01 19 09.3**	**0.0**
CHMS	**Chumysh**	**0.76**	**343**	P	**Pg**	**01 18 59.

364nm,0.3s
MTBS Maitube 1.33 49 P Pg 01 19 09.4 -1.0
148nm,0.2s
MTBS S Sb **01 19 27.2 -0.3**
364nm,0.3s
IZV Izvestkoviy 1.38 56 *e*P Pn **01 19 10.6 -0.3**
baz=56
IZV *e*S Sb **01 19 28.8 -0.3**
baz=56
IZV Izvestkoviy 1.38 56 *e*P Pn **01 19 10.6 -0.3**
100nm,0.2s
IZV *e*S Sb **01 19 28.8 -0.3**
374nm,0.2s
IZV Izvestkoviy 1.38 56 P Pn **01 19 10.6 -0.3**
152nm,0.3s
IZV S Sn **01 19 29.0 -0.5**
373nm,0.3s
MRKS Merke 1.43 290 *e*P Pn **01 19 11.5 +0.1**
baz=90
MRKS *e*S Sb **01 19 30.4 0.0**
baz=90
MRKS Merke 1.43 290 *e*P Pn **01 19 11.5 +0.1**
98nm,0.1s
MRKS *e*S Sb **01 19 30.4 0.0**
668nm,0.2s
MRKS Merke 1.43 290 P Pn **01 19 11.5 +0.1**
331nm,0.3s
MRKS S Sb **01 19 30.5 0.0**
250nm,0.3s
KRBS Karabastau 1.49 18 *e*P Pb **01 19 12.5 -0.5**
546nm,0.2s
KRBS *e*S Sg **01 19 32.4 -0.5**
817nm,0.3s
KRBS Karabastau 1.49 18 P Pb **01 19 12.5 -0.5**
546nm,0.2s
KRBS S Sg **01 19 32.3 -0.5**
817nm,0.3s
KDJ Kajisay 1.59 94⇑*i*P Pb **01 19 13.8 -0.9**
baz=94
KDJ ⇑*i*S Sg **01 19 35.0 -0.9**
baz=94
TNSS Tian-Shan 1.59 61 *e*P Pb **01 19 14.2 -0.7**
baz=61
TNSS *e*S Sg **01 19 35.7 -0.4**
baz=61
TNSS Tian-Shan 1.59 61 *e*P Pb **01 19 14.2 -0.7**
92nm,0.2s
TNSS *e*S Sg **01 19 35.8 -0.4**
352nm,0.6s
TNSS Tian-Shan 1.59 61 P Pb **01 19 14.2 -0.7**
171nm,0.3s
TNSS S Sg **01 19 35.8 -0.4**
352nm,0.6s
AAA Alma-Ata 1.66 55 *e*P Pg **01 19 16.2 -0.5**
134nm,0.1s
AAA *e*S Sg **01 19 38.6 +0.3**
666nm,0.5s
AAA Alma-Ata 1.66 55 P Pg **01 19 16.2 -0.5**
360nm,0.1s
AAA S Sg **01 19 39.1 +0.8**
666nm,0.5s
KNDC Almaty 1.70 56⇑P Pg **01 19 16.7 -0.7**
68nm,0.2s
KNDC ⇓S Sg **01 19 39.8 +0.4**
786nm,0.6s
MDOK Medeo 1.72 58 *e*P Pb **01 19 16.7 -0.3**
baz=58
MDOK *e*S Sg **01 19 39.5 -0.7**
baz=58
MDOK Medeo 1.72 58 *e*P Pb **01 19 16.7 -0.3**
107nm,0.3s
MDOK *e*S Sg **01 19 39.5 -0.7**
418nm,0.5s
MDOK Medeo 1.72 58⇑P Pb **01 19 16.3 -0.6**
130nm,0.6s
MDOK ⇑S Sg **01 19 39.0 -1.1**
280nm,0.5s
MDOK Medeo 1.72 58 Pg Pb **01 19 16.3 -0.6**
186nm,0.3s
MDOK Lg Lg 01 19 39.2
418nm,0.5s
KOTS Kotyrbulak 1.80 57 *e*P Pg **01 19 18.4 -0.9**
456nm,0.3s
KOTS *e*S Sg **01 19 42.5 0.0**
868nm,0.5s
KOTS Kotyrbulak 1.80 57 P Pb **01 19 18.1 -0.2**
456nm,0.3s
KOTS S Sg **01 19 41.7 -0.9**
868nm,0.5s
ARSB Arslanbob 1.81 239⇓*i*P Pn **01 19 17.3 +0.5**
baz=39
ARSB ⇓*i*S Sb **01 19 41.0 -0.6**
baz=39
KTBS Karatobe 1.87 39 *e*P Pb **01 19 18.8 -0.6**
246nm,0.2s
KTBS *e*S Sg **01 19 43.6 -1.3**
1μm,0.6s
KTBS Karatobe 1.87 39 P Pb **01 19 18.8 -0.6**
246nm,0.2s
KTBS S Sg **01 19 43.6 -1.3**
1μm,0.6s
KUU Kurty 1.87 30 *e*P Pb **01 19 19.0 -0.5**
baz=30
KUU *e*S Sb **01 19 43.4 +0.2**
baz=30
KUU Kurty 1.87 30 *e*P Pb **01 19 19.0 -0.5**
349nm,0.4s
KUU *e*S Sb **01 19 43.4 +0.2**
746nm,0.4s
KUU Kurty 1.87 30 P Pb **01 19 19.0 -0.5**
349nm,0.4s
KUU S Sb **01 19 43.4 +0.2**
746nm,0.4s
ANVS Anan'yevo 2.00 74⇓*i*P Pb **01 19 20.2 -1.5**
baz=74
ANVS ⇓*i*S Sb **01 19 46.3 -0.7**
baz=74
CHKK Chushkaly 2.12 41 *e*P Pb **01 19 23.9 +0.1**
144nm,0.3s
CHKK *e*S Sg **01 19 51.8 -1.3**
964nm,0.3s
CHKK Chushkaly 2.12 41 Pg Pb **01 19 23.9 +0.1**
144nm,0.3s
CHKK Lg Lg 01 19 51.8
964nm,0.3s
ARK Arkit 2.35 259⇑*i*P Pn **01 19 24.7 +0.6**
baz=59
ARK ⇑*i*S Sn **01 19 54.3 +1.0**
baz=59
PRZ Przheval'sk 2.49 84⇑*i*P Pn **01 19 27.2 +1.1**
baz=84
PRZ ⇑*i*S Sn **01 19 58.3 +1.4**
baz=84
KURS Kuram 2.59 61 *e*P Pb **01 19 32.3 +0.5**
46nm,0.4s
KURS *e*S Sg **01 20 06.2 -2.0**
466nm,0.7s
SATY Saty 2.60 71 *e*P Pb **01 19 31.6 -0.3**
124nm,0.5s
SATY *e*S Sb **01 20 05.0 +1.0**
313nm,0.4s
SATY Saty 2.60 71 Pg Pb **01 19 31.6 -0.3**
124nm,0.5s
SATY Lg Lg 01 20 05.0
313nm,0.4s
ARXS Arharly 2.81 45 *e*P Pb **01 19 35.5 +0.1**
140nm,0.5s
ARXS *e*S Sb **01 20 11.8 +1.7**
821nm,0.5s
ARXS Arharly 2.81 45 Pg Pb **01 19 35.5 +0.1**
140nm,0.5s
ARXS Lg Lg 01 20 11.8
821nm,0.5s
KSH Kashi 2.84 165 Pn Pg **01 19 38.1 -1.2**
KSH Sn **Sg 01 20 16.7 +0.6**
KSH smax smax
comp=N,420nm,0.6s
KSH smax smax
comp=E,360nm,0.5s
BTLS Baital 2.86 346 *e*P Pb **01 19 36.0 -0.3**
81nm,0.3s
BTLS *e*S Sb **01 20 12.6 +1.0**
71nm,0.3s
BTLS Baital 2.86 346 Pg Pb **01 19 36.0 -0.3**
81nm,0.3s
BTLS Lg Lg 01 20 12.6
71nm,0.3s
MNBS Baschi 3.04 53 *e*P Pb **01 19 39.5 0.0**
1.3nm,0.3s
MNBS *e*S Sb **01 20 19.1 +2.2**
5.1nm,0.3s
MNBS Baschi 3.04 53 Pg Pb **01 19 39.5 0.0**
1.3nm,0.3s
MNBS Lg Lg 01 20 19.1
5.1nm,0.3s
UZB Uzynbulak 3.05 72 *e*P Pb **01 19 39.9 +0.2**
111nm,0.3s
UZB *e*S Sb **01 20 19.1 +1.9**
225nm,0.5s
UZB Uzynbulak 3.05 72 Pg Pb **01 19 39.9 +0.2**
111nm,0.3s
UZB Lg Lg 01 20 19.1
225nm,0.5s
SHLS Shalkode 3.37 73 *e*P Pg **01 19 51.3 +1.9**
76nm,0.5s
SHLS *e*S Sg **01 20 38.8 +5.7**
210nm,0.7s
SHLS Shalkode 3.37 73 Pg Pg **01 19 51.3 +1.9**
76nm,0.5s
SHLS Lg Lg 01 20 38.8
210nm,0.7s
PDGK Podgornoye 3.43 71⇑Pg Pg **01 19 49.7 -0.9**
28nm,0.5s
PDGK ⇓Lg Lg 01 20 33.6
217nm,0.7s
KK31 Karatay Array 3.45 285⇓Pn Pn **01 19 40.5 +1.4**
1.9nm,0.2s,baz=104,slow=12,SNR=222
KK31 ⇑Pg Pb **01 19 47.9 +1.5**
11nm,0.3s,baz=104,slow=17,SNR=45
KK31 ⇓Lg Lg 01 20 35.2
25nm,0.3s,baz=107,slow=28,SNR=7.5
TDK Taldyqorghan 3.66 41 *e*P Pg **01 19 53.0 -2.0**
136nm,0.5s
TDK *e*S Sg **01 20 41.6 -0.7**
394nm,0.9s
TDK Taldyqorghan 3.66 41 Pg Pg **01 19 52.4 -2.5**
136nm,0.5s
TDK Lg Lg 01 20 41.6
394nm,0.9s
IUG Iuzhnay 3.73 270 *e*P Pg **01 19 53.9 -2.5**
23nm,0.2s
IUG *e*S Sg **01 20 43.3 -1.4**
253nm,0.4s
BRLS Borolday 3.92 283 *e*P Pg **01 19 58.1 -1.8**
0.5nm,0.1s
BRLS *e*S Sg **01 20 50.3 -0.4**
100nm,0.6s
DJR Jarkent 4.02 58 *e*P Pb **01 19 57.8 +1.6**
58nm,0.3s
DJR *e*S Sg **01 20 49.8 -4.3**
264nm,0.9s
DJR Jarkent 4.02 58 Pg Pb **01 19 57.1 +0.9**
87nm,0.6s
DJR Lg Lg 01 20 49.8
264nm,0.9s
KTMS Ketmen 4.07 71 *e*P Pb **01 19 57.3 +0.3**
4.4nm,0.1s
KTMS *e*S Sb **01 20 49.0 +2.5**
108nm,0.6s
KTMS Ketmen 4.07 71 Pg Pb **01 19 57.3 +0.3**
4.4nm,0.1s
KTMS Lg Lg 01 20 49.0
108nm,0.6s
KAPS Kapalarasan 4.33 45 *e*P Pb **01 20 01.6 +0.1**
27nm,0.3s
KAPS *e*S Sb **01 20 56.3 +2.4**
96nm,0.6s
KAPS Kapalarasan 4.33 45 Pg Pb **01 20 01.5 +0.1**
27nm,0.3s
KAPS Lg Lg 01 20 56.3
96nm,0.6s
OTUK Ortayu 6.27 343⇓Pn Pn **01 20 18.2 +0.4**
3.0nm,0.4s
OTUK ⇑Pg Pb **01 20 37.7 +3.3**
4.7nm,0.4s
OTUK ⇓Lg Lg 01 22 02.0
108nm,0.5s
MAKZ Makanchi 6.71 45⇓Pn Pn **01 20 25.4 +1.5**
2.1nm,0.4s
MAKZ ⇑Lg Lg 01 22 15.2
31nm,0.9s
MK31 Makanchi Array 6.87 46⇑Pn Pn **01 20 27.4 +1.3**
6.1nm,0.6s,baz=219,slow=13,SNR=85
MK31 Sn Sn **01 21 46.3 +1.8**
4.3nm,0.6s,baz=222,slow=25,SNR=3.6
MK31 ⇓Lg Lg 01 22 22.9
21nm,0.8s,baz=231,slow=29,SNR=5.9
MKAR Makanchi Array 6.87 46 Pn Pn **01 20 27.4 +1.3**
1.0nm,0.3s,baz=228,slow=14,SNR=38
MKAR Pg Pb **01 20 45.8 +1.3**
1.9nm,0.3s,baz=230,slow=14,SNR=5.7
MKAR Sn Sn **01 21 47.0 +2.5**
1.8nm,0.3s,baz=223,slow=25,SNR=4.3
MKAR Lg Lg 01 22 20.0
1.9nm,0.3s,baz=228,slow=27,SNR=7.9
MKAR LR LR 01 23 32.2
comp=Z,11nm,20.2s,baz=242,slow=42
KURBB Kurchatov Arra 8.69 15 Pn Pn **01 20 50.9 -0.1**
0.2nm,0.3s,baz=201,slow=13,SNR=14
KURBB Sn Sn **01 22 27.1 -2.1**
0.3nm,0.3s,baz=172,slow=38,SNR=3.0
KURBB Lg Lg 01 23 16.8
0.6nm,0.3s,baz=144,slow=45,SNR=6.9
CHCP Chirah Chowk 8.72 190 P Pn **01 20 54.6 +3.1**
KURK Kurchatov 8.79 15⇑Pn Pn **01 20 53.2 +0.8**
1.3nm,0.5s
KURK ⇑Pg Pg 01 21 24.4 -8.7
6.0nm,1.0s
KURK ⇑Lg Lg 01 23 23.8
70nm,1.0s
BVAR Borovoye Array 11.20 345 Pn Pn **01 21 23.7 -1.8**
0.4nm,0.3s,baz=158,slow=13,SNR=8.1
BVAR Lg Lg 01 24 37.5
2.6nm,0.3s,baz=163,slow=32,SNR=9.6
BRVK Borovoye 11.26 345⇓Pn Pn **01 21 25.2 -0.9**
2.2nm,0.7s
BRVK ⇓Sn Sn **01 23 34.2 +2.0**
4.1nm,0.6s
BRVK ⇑Lg Lg 01 24 40.9
51nm,0.9s
ZALV Zalesovo Beam 13.36 26 Pn Pn **01 21 55.0 +0.1**
0.7nm,0.3s,baz=220,slow=14,SNR=7.5
ZALV Sn Sn **01 24 24.9 +1.3**
0.2nm,0.3s,baz=220,slow=16,SNR=2.5
GEYT Alibeck 13.67 257 Pn Pn **01 21 57.2 -1.9**
baz=62,slow=13,SNR=2.0
AKTO Aktyubinsk 14.29 311 Pn Pn **01 22 06.8 -0.8**
0.4nm,0.3s,baz=119,slow=12,SNR=5.4
AKTO Aktyubinsk 14.29 311⇑Pn Pn **01 22 08.0 +0.3**
8.5nm,1.2s
AKTO ⇑Sn Sn **01 24 50.9 +4.5**
7.8nm,1.1s
ARU Arti 17.71 329 P P **01 22 52.9 +0.1**
0.0nm,0.3s,baz=120,slow=7.2,SNR=4.9
BRTR Keskin Array B 31.14 279 P P **01 25 05.1 +0.7**
0.6nm,0.6s,baz=81,slow=7.9,SNR=2.9
ARCES ARCESS Array B 37.18 334 P P **01 25 56.5 +0.2**
1.3nm,0.7s,baz=100,slow=8.9,SNR=9.6
TIXI Tiksi 39.24 24 P P **01 26 13.2 -0.4**
1.1nm,0.4s,baz=73,slow=4.1,SNR=2.2
KLR Kul'dur 39.35 60 P P **01 26 14.4 -0.4**
0.7nm,0.4s,baz=301,slow=5.9,SNR=2.3
HFS Hagfors 40.69 318 P P **01 26 25.6 -0.1**
0.8nm,0.6s,baz=72,slow=9.3,SNR=1.8
NOA NORSAR Array B 41.86 319 P P **01 26 34.8 -0.6**
0.5nm,0.8s,baz=86,slow=7.5,SNR=2.5
CLL Collm 42.26 304 *e*P P **01 26 42.0 +3.3**
CLL *e*PPP PPP 01 28 47.0
CLL *e*PPPP 01 28 55.0
GERES GERESS Array B 42.42 301 P P **01 26 40.2 0.0**
0.3nm,0.5s,baz=70,slow=4.7,SNR=3.4
DAVOX Davos/Dischmat 45.49 299 P P **01 27 04.7 -0.3**
1.0nm,0.6s,baz=40,slow=3.3,SNR=5.4
EKA Eskdalemuir Ar 50.46 314 P P **01 27 42.6 -0.5**
0.5nm,0.5s,baz=78,slow=7.8,SNR=5.2
ESDC Sonseca Array 57.63 296 LR LR 01 56 34.6
comp=Z,41nm,19.0s,baz=205,slow=39
ILAR Eielson Array 68.35 18 P P **01 29 45.7 -0.9**
0.2nm,0.7s,baz=309,slow=5.7,SNR=2.4
TORD Torodi Ar. Bea 68.99 269 P P **01 29 49.7 -1.6**
0.6nm,0.7s,baz=44,slow=4.8,SNR=7.0
YKA Yellowknife Ar 75.29 5 P P **01 30 27.4 -0.9**
0.2nm,0.6s,baz=352,slow=5.3,SNR=5.1
DBIC Dimbokro 78.08 268 LR LR 02 10 35.9
comp=Z,50nm,19.0s,baz=292,slow=40
STKA Stephens Creek 95.79 128 P P 01 32 23.4 +12
1.2nm,0.7s,baz=278,slow=9.2,SNR=3.2

KRSC ***13*** *01:19:17.5±0.9, 54.°57N×162.°15E, h55km±21km, ML4.1*
IDC ***13*** *01:19:22.5±2.9, 54.°74N×161.°96E, h56km±25km, mb3.5/18, mb1 3.7/20, mb1mx3.5/62, mbtmp3.8/20, ML2.9/2, MS2.7/2, Ms1 2.7/2, ms1mx2.5/53, Error ellipse: s-maj=24.3km s-min=15.7km az=127.0*
ISC 13 01:19:19.9±0.8, 54.°61N±0.°03×162.°16E±0.°04, h37km±1km, n64, σ0.°89/79, mb3.7/18, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUMD	**Tumrok D**	**1.18**	**301**	*e*P	**Pn**	**01 19 39.0**	**-0.9**
KZV	**Kizimen**	**1.19**	**296**	*e*P	**Pn**	**01 19 39.4**	**-0.7**
KZV				*e*S	**Sn**	**01 19 54.9**	**-0.2**
TUMR	**Tumrok**	**1.34**	**301**	*e*P	**Pn**	**01 19 41.9**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**1.58**	**329**	*e*P	**Pn**	**01 19 45.6**	**+0.2**
BZGR				*e*S	**Sn**	**01 20 05.3**	**+0.7**
KMNR	**Kamenistaya**	**1.59**	**317**	*e*P	**Pn**	**01 19 45.8**	**+0.2**
KMNR				*e*S	**Sn**	**01 20 05.2**	**+0.2**
ZLN	**Zelenaya**	**1.61**	**332**	*e*P	**Pn**	**01 19 46.1**	**+0.2**
KBTR	**Krutoberegovo**	**1.65**	**13**	*e*P	**Pn**	**01 19 46.9**	**+0.6**
BZWR	**Bezymyannyi-We**	**1.66**	**326**	*e*P	**Pn**	**01 19 47.2**	**+0.6**
KBG	**Krutoberegovo**	**1.68**	**10**	*e*P	**Pn**	**01 19 47.4**	**+0.7**
KII	**Karymskiy**	**1.69**	**251**	*e*P	**Pn**	**01 19 46.8**	**-0.1**
KII				*e*S	**Sn**	**01 20 06.4**	**-0.9**
LGNR	**Loginova**	**1.70**	**331**	*e*P	**Pn**	**01 19 47.9**	**+0.6**
LGNR				*e*S	**Sn**	**01 20 09.2**	**+1.3**
KIRR	**Kirishev**	**1.70**	**323**	*e*P	**Pn**	**01 19 47.7**	**+0.5**
CIRR	**Tsirk**	**1.71**	**333**	*e*P	**Pn**	**01 19 47.7**	**+0.4**
KPT	**Kopyto**	**1.75**	**322**	*e*P	**Pn**	**01 19 48.5**	**+0.7**
KRSR	**Krestovskiy**	**1.85**	**331**	*e*P	**Pn**	**01 19 49.5**	**+0.3**
KLY	**Klyuchi**	**1.91**	**334**	*e*P	**Pn**	**01 19 49.5**	**-0.4**
KLY				*e*S	**Sn**	**01 20 11.2**	**-1.5**
KOZ	**Kozyrevsk**	**1.95**	**319**	*e*P	**Pn**	**01 19 51.7**	**+1.2**
SPN	**Mys Shipunski**	**1.97**	**221**	*e*P	**Pn**	**01 19 49.8**	**-0.9**
SPN				*e*S	**Sn**	**01 20 11.2**	**-2.9**
SMKR	**Semkarok**	**2.02**	**349**	*e*P	**Pn**	**01 19 52.0**	**+0.6**
BDR	**Baidarnaya**	**2.04**	**345**	*e*P	**Pn**	**01 19 52.5**	**+0.8**
SRKR	**Sorokina**	**2.13**	**345**	*e*P	**Pn**	**01 19 53.5**	**+0.6**
NLC	**Nalytchevo**	**2.20**	**230**	*e*P	**Pn**	**01 19 54.5**	**+0.7**
NLC				*e*S	**Sn**	**01 20 20.3**	**+0.5**
SRDR	**Sredinnyy**	**2.21**	**322**	*e*P	**Pn**	**01 19 54.1**	**+0.1**
BKI	**Bering**	**2.28**	**73**	*e*P	**Pn**	**01 19 55.2**	**+0.3**
BKI				*e*S	**Sn**	**01 20 20.5**	**-1.2**
SDLR	**Sedlovina**	**2.35**	**237**	*e*P	**Pn**	**01 19 56.4**	**+0.4**
SDLR				*e*S	**Sn**	**01 20 23.5**	**-0.1**
ESO	**Esso**	**2.38**	**305**	*e*P	**Pn**	**01 19 56.7**	**+0.4**
SMAR	**Somma**	**2.40**	**237**	*e*P	**Pn**	**01 19 57.2**	**+0.4**
KRER	**Koryakskii**	**2.40**	**238**	*e*P	**Pn**	**01 19 57.6**	**+0.8**
UGLR	**Uglovaya**	**2.42**	**236**	*e*P	**Pn**	**01 19 57.3**	**+0.3**
KRX	**Arik**	**2.42**	**240**	*e*P	**Pn**	**01 19 57.5**	**+0.5**
KRX				*e*S	**Sn**	**01 20 25.9**	**+0.5**
AVH	**Avacha**	**2.43**	**238**	*e*P	**Pn**	**01 19 57.9**	**+0.8**
AVH				*e*S	**Sn**	**01 20 25.2**	**-0.3**
KOK	**Koryaka**	**2.46**	**239**	*e*P	**Pn**	**01 19 58.2**	**+0.6**
DALK	**Dalny**	**2.56**	**233**	*e*P	**Pn**	**01 19 59.1**	**+0.3**
DALK				*e*S	**Sn**	**01 20 28.9**	**+0.2**
KRMR	**Karymshinskiy**	**2.98**	**235**	*e*P	**Pn**	**01 20 06.0**	**+1.4**
KRMR				*e*S	**Sn**	**01 20 39.9**	**+0.8**
PETK	**Petropavlovsk-**	**3.04**	**242**	P	**Pn**	**01 20 06.1**	**+0.7**
	3.2nm,0.3s,baz=71,slow=17,SNR=53						
PETK				S	**Sn**	**01 20 43.2**	**+2.7**
	3.4nm,0.3s,baz=94,slow=21,SNR=5.8						
PETK				LR	LR	01 21 30.2	
	comp=Z,74nm,19.4s,baz=61,slow=42						
RUS	**Russkaya**	**3.08**	**226**	*e*P	**Pn**	**01 20 06.3**	**+0.4**
RUS				*e*S	**Sn**	**01 20 40.2**	**-1.2**
MTVR	**Mutnovka**	**3.19**	**230**	*e*P	**Pn**	**01 20 08.6**	**+1.1**
MTVR				*e*S	**Sn**	**01 20 44.7**	**+0.4**
GRL	**Gorelyy**	**3.19**	**231**	*e*P	**Pn**	**01 20 08.9**	**+1.3**
GRL				*e*S	**Sn**	**01 20 45.2**	**+0.9**
ASAK	**Asacha**	**3.38**	**231**	*e*P	**Pn**	**01 20 11.7**	**+1.5**
KDTR	**Khodutka, Kamc**	**3.73**	**223**	*e*P	**Pn**	**01 20 15.3**	**+0.5**
KDTR				*e*S	**Sn**	**01 20 56.6**	**-0.7**
MIPR	**Malaya Ipel'ka**	**3.98**	**236**	*e*P	**Pn**	**01 20 18.8**	**+0.4**
MA2	**Magadan**	**7.95**	**313**	LR	LR	01 24 47.9	
	comp=Z,72nm,19.0s,baz=134,slow=42						
KLR	**Kul'dur**	**19.42**	**266**	P	**Pn**	**01 23 44.1**	**+0.1**
	0.1nm,0.3s,baz=332,slow=13,SNR=2.3						
TIXI	**Tiksi**	**22.25**	**333**	P	**P**	**01 24 12.0**	**-1.0**
	1.0nm,0.4s,baz=116,slow=5.9,SNR=3.3						
MJAR	**Matsushiro Arr**	**24.45**	**232**	P	**P**	**01 24 35.9**	**+0.9**
	1.0nm,0.4s,baz=27,slow=8.9,SNR=2.6						
INK	**Inuvik**	**31.92**	**39**	P	**P**	**01 25 41.9**	**+0.5**
	0.4nm,0.6s,baz=252,slow=11,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	**35.00**	**172**	T	T	02 03 26.5	
	baz=355,slow=76,SNR=72						
H11N3	**WAKE ISLAND Hy**	**35.02**	**172**	T	T	02 03 27.2	
	baz=355,slow=76,SNR=80						
H11N1	**WAKE ISLAND Hy**	**35.02**	**172**	T	T	02 03 27.3	
	baz=355,slow=76,SNR=78						
YKA	**Yellowknife Ar**	**41.22**	**44**	P	**P**	**01 27 01.6**	**+1.1**
	0.4nm,0.6s,baz=297,slow=7.6,SNR=4.4						
PDAR	**Pinedale Array**	**55.73**	**63**	P	**P**	**01 28 54.0**	**+1.3**
	0.2nm,0.6s,baz=289,slow=2.8,SNR=2.6						
FINES	**FINESS Array B**	**59.21**	**337**	P	**P**	**01 29 15.8**	**-0.8**
	1.9nm,0.6s,baz=29,slow=8.3,SNR=15						
NOA	**NORSAR Array B**	**62.42**	**345**	P	**P**	**01 29 37.4**	**-1.1**
	0.4nm,0.6s,baz=133,slow=10,SNR=2.4						
HFS	**Hagfors**	**62.87**	**343**	P	**P**	**01 29 40.1**	**-1.4**
	1.6nm,0.8s,baz=87,slow=7.6,SNR=5.7						
AKASG	**Malin Array Be**	**67.93**	**330**	P	**P**	**01 30 13.0**	**-1.3**
	0.6nm,0.3s,baz=26,slow=6.6,SNR=3.1						
EKA	**Eskdalemuir Ar**	**69.76**	**351**	P	**P**	**01 30 25.1**	**-0.5**
	0.2nm,0.3s,baz=22,slow=5.7,SNR=4.0						
GERES	**GERESS Array B**	**73.56**	**339**	P	**P**	**01 30 49.2**	**+0.5**
	0.5nm,0.9s,baz=25,slow=4.9,SNR=2.0						
MLR	**Muntele Rosu**	**73.58**	**330**	P	**P**	**01 30 49.1**	**+0.2**
	1.3nm,0.6s,baz=26,slow=18,SNR=4.5						
BRTR	**Keskin Array B**	**76.21**	**322**	P	**P**	**01 31 04.1**	**-0.2**
	0.5nm,0.7s,baz=63,slow=6.3,SNR=3.3						
WRA	**Warramunga Arr**	**77.98**	**207**	P	**P**	**01 31 13.9**	**-0.2**
	0.7nm,1.0s,baz=352,slow=35,SNR=3.2						
WSAR	**Wadi Sarin**	**78.82**	**294**	P	**P**	**01 31 18.7**	**-0.1**
	1.6nm,0.4s,baz=43,slow=7.6,SNR=4.9						
MMAI	**Mount Meron Ar**	**81.45**	**317**	P	**P**	**01 31 32.7**	**-0.3**
	2.5nm,0.9s,baz=278,slow=38,SNR=2.4						
ASF	**Jabal al Asfar**	**81.59**	**316**	P	**P**	**01 31 33.0**	**-0.8**
	0.3nm,0.3s,baz=12,slow=9.3,SNR=3.8						
ASAR	**Alice Springs**	**81.65**	**206**	P	**P**	**01 31 34.9**	**+1.0**
	0.7nm,0.7s,baz=5.1,slow=5.0,SNR=6.9						

DDA ***13*** *01:24:04.2, 38.°20N×24.°82E, h6km±2km, MW3.8*
IDC ***13*** *01:24:09.3±1.1, 38.°23N×25.°16E, h0km, mb3.3/4, mb1 3.5/8, mb1mx3.3/48, mbtmp3.4/8, ML3.5/4, MS2.8/5, Ms1 2.7/5, ms1mx2.5/32, Error ellipse: s-maj=22.1km s-min=19.0km az=118.0*
ISK ***13*** *01:24:10.2, 38.°25N×25.°10E, h23km, ML3.8/40*
ATH ***13*** *01:24:10.1, 38.°25N×25.°13E, h32km±1km, ML3.8/27, Error ellipse: s-maj=1.6km s-min=0.8km az=95.0*
THE ***13*** *01:24:11.0, 38.°25N×25.°09E, h14km±1km, ML3.7/17, Error ellipse: s-maj=1.1km s-min=0.5km az=22.0*
ISC 13 01:24:10.4±1.0, 38.°24N±0.°02×25.°11E±0.°02, h11km±8km, n223, σ1.°00/263, mb3.3/4, 22C-3D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSRA	**Psara**	**0.47**	**50**	P	**Pb**	**01 24 21.0**	**+0.2**
PSRA				S	**Sb**	**01 24 26.7**	**-1.0**
PSRA				AML	AML	01 24 28.1	
	comp=N,46721μm,0.3s						
PSRA				AML	AML	01 24 28.1	
	comp=E,49662μm,0.5s						
KARY	**Karystos**	**0.57**	**249**	P	**Pb**	**01 24 21.8**	**-0.6**
KARY				S	**Sb**	**01 24 29.5**	**-1.0**
	comp=E,6μm,0.2s						
KARY	**Karystos**	**0.57**	**249**	P	**Pb**	**01 24 21.8**	**-0.6**
KARY				AML	AML	01 24 30.9	
	comp=E,12603μm,0.2s						
KARY				AML	AML	01 24 31.0	
	comp=N,12610μm,0.2s						
TNSA	**Tinos**	**0.70**	**176**	P	**Pb**	**01 24 24.6**	**0.0**
TNSA				S	**Sb**	**01 24 34.2**	**0.0**
TNSA				AML	AML	01 24 36.5	
	comp=N,16143μm,0.3s						
TNSA				AML	AML	01 24 36.9	
	comp=E,24931μm,0.4s						
CHOS	**Chios island**	**0.76**	**78**	P	**Pb**	**01 24 25.7**	**-0.1**

CHOS S Sn 01 24 37.0 -1.8
comp=E,6μm,0.5s
CHOS **Chios island** 0.76 78 P Pb 01 24 25.6 -0.1
CHOS AML AML 01 24 38.5
comp=E,15112μm,0.7s
CHOS AML AML 01 24 39.5
comp=N,8270μm,0.4s
CHOS **Chios island** 0.76 78 PG Pb 01 24 25.8 -0.1
CHOS SG Sb 01 24 36.7 +0.5
SKY **Skiros Island** 0.78 326 P Pn 01 24 25.9 -1.5
SKY S Sb 01 24 35.9 -0.7
comp=N,9μm,0.4s
SKY **Skiros Island** 0.78 326 P Pn 01 24 26.0 -1.4
SKY AML AML 01 24 40.2
comp=N,15493μm,0.4s
SKY AML AML 01 24 40.4
comp=E,20223μm,0.4s
KYMI **Kymi, Euboea I** 0.88 297 P Pn 01 24 27.6 -1.3
KYMI S Sn 01 24 39.8 -2.0
comp=E,3μm,0.5s
KYMI **Kymi, Euboea I** 0.88 297 P Pn 01 24 27.9 -1.0
KYMI S Sn 01 24 40.4 -1.4
KYMI AML AML 01 24 43.1
comp=E,5383μm,0.5s
KYMI AML AML 01 24 48.2
comp=N,5163μm,0.6s
DION **Dionisos Attik** 0.94 261 P Pg 01 24 28.4 -0.1
DION S Sg 01 24 40.6 -0.2
comp=N,11μm,0.5s
DION **Dionisos Attik** 0.94 261 P Pg 01 24 28.4 -0.1
DION S Sn 01 24 41.9 -1.2
CESE **eme** 0.94 84 PG Pn 01 24 28.9 -0.8
PTL **Penteli** 1.00 260 P Pg 01 24 29.3 -0.3
PTL S Sn 01 24 42.9 -1.6
comp=N,5μm,0.6s
PTL **Penteli** 1.00 260 P Pn 01 24 29.4 -1.0
PTL S Sn 01 24 43.0 -1.6
PTL AML AML 01 24 45.6
comp=E,8985μm,0.4s
PTL AML AML 01 24 47.8
comp=N,8599μm,0.5s
ATHU **Athens Univers** 1.08 256 P Pb 01 24 30.4 -0.7
ATHU S Sn 01 24 45.4 -1.1
comp=N,2μm,0.4s
ATHU **Athens Univers** 1.08 256 P Pb 01 24 30.4 -0.7
ATHU S Sn 01 24 45.7 -0.9
ATHU AML AML 01 24 47.3
comp=N,4745μm,0.6s
ATHU AML AML 01 24 48.3
comp=E,2128μm,0.3s
VLY **Voula,Athens** 1.10 250 P Pb 01 24 30.9 -0.7
VLY S Sn 01 24 46.2 -1.0
comp=E,10μm,0.4s
VLY **Voula,Athens** 1.10 250 P Pg 01 24 31.4 -0.3
VLY S Sn 01 24 45.9 -1.3
VLY AML AML 01 24 50.8
comp=N,22876μm,0.5s
VLY AML AML 01 24 51.3
comp=E,16968μm,0.4s
ATH **Athens Observa** 1.13 257 P Pg 01 24 32.0 -0.1
ATH S Sn 01 24 47.5 -0.2
comp=E,5μm,0.4s
ATH **Athens Observa** 1.13 257 P Pg 01 24 32.0 -0.1
ATH S Sn 01 24 48.0 +0.3
ATH AML AML 01 24 49.0
comp=N,10024μm,0.5s
ATH AML AML 01 24 51.4
comp=E,10046μm,0.3s
SIGRI **SIGRI** 1.14 31 P Pb 01 24 31.1 -1.0
SIGR S Sg 01 24 46.7 -0.4
comp=E,2μm,0.5s
SIGR **SIGRI** 1.14 31 P Pb 01 24 31.1 -1.0
SIGR S Sb 01 24 46.3 -0.6
SIGR AML AML 01 24 54.5
comp=E,4736μm,0.5s
SIGR AML AML 01 24 56.0
comp=N,4991μm,0.3s
SIGR **SIGRI** 1.14 31 PN Pb 01 24 31.2 -1.0
URLA **Izmir** 1.18 84 PN Pn 01 24 32.2 -0.8
URLA **Izmir** 1.18 84 *i* P Pb 01 24 32.3 -0.5
URLA *i* S Sg 01 24 49.6 +1.2
URLA IAML 01 24 59.0
comp=N,608nm,1.4s
URLA IAML 01 25 00.0
comp=E,362nm,0.4s
SERI **Serifos** 1.18 205 P Pn 01 24 32.0 -1.0
SERI S Sg 01 24 49.4 +0.9
comp=E,4μm,0.6s
SERI **Serifos** 1.18 205 P Pn 01 24 32.0 -1.0
SERI S Sg 01 24 49.4 +0.9
SERI AML AML 01 24 52.9
comp=E,7648μm,0.6s
SERI AML AML 01 24 53.3
comp=N,7402μm,0.6s
APE **Apeiranthos** 1.21 164 P Pn 01 24 32.6 -0.8
APE S Sb 01 24 48.3 -0.9
comp=N,2μm,0.6s
APE **Apeiranthos** 1.21 164 P Pn 01 24 32.6 -0.8
APE S Sb 01 24 48.5 -0.7
APE AML AML 01 24 52.9
comp=N,4110μm,0.4s
APE AML AML 01 24 54.3
comp=E,6212μm,0.8s
APE **Apeiranthos** 1.21 164 ⇓P Pn 01 24 32.6 -0.8
APE ⇑S Sb 01 24 48.5 -0.7
APE **Apeiranthos** 1.21 164 PN Pn 01 24 32.7 -0.8
APE SN Sb 01 24 48.6 -0.6
MRKA **Markates** 1.28 292 P Pn 01 24 33.5 -0.9
MRKA S Sg 01 24 50.8 -0.9
comp=E,2μm,0.8s
MRKA **Markates** 1.28 292 P Pn 01 24 33.3 -1.0
MRKA S Sg 01 24 50.8 -0.9
MRKA AML AML 01 24 57.5
comp=N,4881μm,0.8s
MRKA AML AML 01 24 58.1
comp=E,2974μm,0.5s
ALNA **Alonissos** 1.33 314 P Pg 01 24 35.2 -0.8
AOS **Alonnisos** 1.34 315 P Pn 01 24 34.4 -0.8
AOS **Alonnisos** 1.34 315 P Pn 01 24 34.3 -0.8
AOS **Alonnisos** 1.34 315 PN Pb 01 24 34.6 -1.0
PRK **Paraskevi** 1.36 42 P Pb 01 24 35.1 -0.8
PRK **Paraskevi** 1.36 42 P Pb 01 24 35.2 -0.7
PRK AML AML 01 25 00.7
comp=E,3712μm,0.8s
PRK AML AML 01 25 05.1
comp=N,5546μm,0.6s
DGB **zmir** 1.41 97 *i* P Pn 01 24 35.4 -0.7
DGB *i* S Sg 01 24 57.7 +1.8
DGB IAML 01 25 04.0
comp=E,125nm,0.3s
DGB IAML 01 25 05.0
comp=N,171nm,0.8s
VILL **Villia** 1.42 268 P Pn 01 24 35.5 -0.7
VIL2 **Platees** 1.45 270 P Pn 01 24 35.4 -1.3
VIL2 AML AML 01 25 01.9
comp=N,3489μm,0.5s
VIL2 AML AML 01 25 03.8
comp=E,6481μm,0.6s
SMG **Samos** 1.47 111 P Pn 01 24 35.8 -1.1
SMG **Samos** 1.47 111 P Pn 01 24 36.1 -0.8
IOSP **Ios island** 1.52 174 P Pn 01 24 36.9 -0.7
IOSP S Sn 01 24 56.6 -0.8
comp=E,4μm,0.5s
IOSP **Ios island** 1.52 174 P Pn 01 24 36.9 -0.7
IOSP S Sn 01 24 56.3 -1.1
IOSP AML AML 01 25 02.0
comp=E,8578μm,0.3s
IOSP AML AML 01 25 02.3
comp=N,8180μm,0.6s
AMGA **Amorgos Island** 1.54 156 P Pn 01 24 37.4 -0.5
AMGA **Amorgos Island** 1.54 156 P Pn 01 24 37.2 -0.6
AMGA AML AML 01 25 02.0
comp=E,3873μm,0.5s
AMGA AML AML 01 25 09.2
comp=N,3153μm,0.5s
YDRA **Hydra** 1.57 236 P Pb 01 24 38.9 -0.7
YDRA AML AML 01 25 04.0
comp=E,10629μm,0.7s
YDRA AML AML 01 25 05.5
comp=N,6699μm,0.5s
MHLA **Plaka, Milos I** 1.58 200 P Pn 01 24 37.7 -0.8
MHLA AML AML 01 25 04.6
comp=N,8114μm,0.9s
MHLA AML AML 01 25 06.5
comp=E,8568μm,0.5s

SKIA **Skiathos** 1.58 306 P Pn 01 24 38.0 -0.6
SKIA AML AML 01 25 03.2
comp=N,2332μm,0.8s
SKIA AML AML 01 25 07.5
comp=E,1852μm,0.5s
AYVA **Ayvalik** 1.64 49 *i* P Pn 01 24 38.4 -0.9
AYVA IAML 01 25 05.0
comp=N,797nm,0.7s
AYVA *i* S Sg 01 25 05.2 +2.1
AYVA IAML 01 25 06.0
comp=E,699nm,0.7s
DKL **Dikili** 1.64 59 PN Pn 01 24 38.3 -0.9
MHLO **Agia Marina, M** 1.64 200 P Pn 01 24 38.6 -0.7
MHLO **Agia Marina, M** 1.64 200 P Pn 01 24 38.6 -0.7
MHLO AML AML 01 25 06.9
comp=E,22435μm,0.6s
MHLO AML AML 01 25 09.1
comp=N,19709μm,0.5s
DID **Didima** 1.65 244 P Pn 01 24 38.9 -0.5
DID S Sb 01 25 00.7 -1.0
comp=N,2μm,0.3s
DID **Didima** 1.65 244 P Pn 01 24 38.7 -0.8
DID S Sb 01 25 01.3 -0.4
DID AML AML 01 25 07.4
comp=N,4981μm,0.8s
DID AML AML 01 25 07.8
comp=E,2917μm,0.5s
LIA **Limnos Island** 1.66 2 P Pn 01 24 38.6 -1.0
LIA S Sn 01 24 59.3 -1.6
comp=E,1μm,0.5s
LIA **Limnos Island** 1.66 2 P Pn 01 24 38.5 -1.0
LIA AML AML 01 25 05.9
comp=E,2360μm,0.6s
LIA AML AML 01 25 08.8
comp=N,1998μm,0.4s
LOUT **Loutraki** 1.70 262 P Pb 01 24 40.1 -1.6
LOUT AML AML 01 25 07.2
comp=N,567μm,0.4s
LOUT AML AML 01 25 10.7
comp=E,1364μm,0.4s
LKR **Lokris** 1.71 285 P Pn 01 24 39.8 -0.4
LKR **Lokris** 1.71 285 P Pn 01 24 39.7 -0.4
ZEDA **zmir-Bergama** 1.71 64 *i* P Pn 01 24 39.4 -0.8
ZEDA *i* S Sg 01 25 06.5 +1.2
ZEDA IAML 01 25 07.0
comp=E,276nm,0.6s
ZEDA IAML 01 25 10.0
comp=N,324nm,0.5s
PROD **Prodromos** 1.74 271 P Pn 01 24 40.4 -0.2
PROD **Prodromos** 1.74 271 P Pn 01 24 40.2 -0.5
PROD AML AML 01 25 08.3
comp=E,3131μm,0.5s
PROD AML AML 01 25 08.8
comp=N,4436μm,0.4s
GCAM **G?zlcami?** 1.76 107 PN Pn 01 24 40.5 -0.5
GCAM **G?zlcami?** 1.76 107 *i* P Pn 01 24 40.5 -0.5
GCAM IAML 01 25 08.0
comp=N,199nm,1.1s
GCAM IAML 01 25 19.0
comp=E,186nm,0.7s
KRND **KRANIDI** 1.77 242 P Pn 01 24 40.8 -0.2
KRND S Sn 01 25 03.0 -0.5
comp=E,3μm,0.5s
KRND **KRANIDI** 1.77 242 P Pn 01 24 40.8 -0.2
KRND AML AML 01 25 10.9
comp=N,4233μm,0.5s
KRND AML AML 01 25 11.3
comp=E,6080μm,0.5s
CMBO **Columbo, Santo** 1.78 172 P Pn 01 24 40.8 -0.3
SAP3 **Santorini-Thir** 1.81 174 P Pn 01 24 41.1 -0.5
THT2 **Imerovigli** 1.82 172 PN Pn 01 24 41.4 -0.3
NEO **Neokhori** 1.82 307 P Pn 01 24 41.0 -0.8
NEO **Neokhori** 1.82 307 P Pn 01 24 41.1 -0.6
EZN **Ezine** 1.85 30 PN Pn 01 24 40.9 -1.2
XOR **Xorichti** 1.87 308 P Pn 01 24 41.8 -0.7
XOR **Xorichti** 1.87 308 P Pn 01 24 41.5 -1.0
BAYC **CANAKKALE_Bayr** 1.88 36 *i* P Pn 01 24 41.1 -1.4
BAYC IAML 01 25 15.0
comp=E,269nm,0.8s
BAYC IAML 01 25 21.0
comp=N,194nm,0.7s
SANT **Santorini** 1.88 171 ⇑P Pn 01 24 42.1 -0.5
AXAR **Agios Charalam** 1.99 286 P Pn 01 24 44.2 +0.1
AXAR **Agios Charalam** 1.99 286 P Pn 01 24 43.4 -0.7
PAIG **Paliouri** 2.02 327 P Pn 01 24 43.9 -0.6
PAIG **Paliouri** 2.02 327 P Pn 01 24 43.8 -0.7
GADA **Gvkgeada** 2.05 17 PN Pn 01 24 43.8 -1.1
KOSK **Kos Island** 2.10 134 PN Pn 01 24 45.2 -0.4
BODT **Bodrum** 2.10 123 PN Pn 01 24 45.6 -0.1
BDRM **Kayabasi** 2.19 122 *i* P Pn 01 24 46.5 -0.4
BDRM IAML 01 25 23.0
comp=N,135nm,0.6s
BDRM IAML 01 25 25.0
comp=E,82nm,0.5s
AYDB **Zeytinkoy-Aydi** 2.21 97 PN Pn 01 24 47.0 -0.3
SMTH **Samothraki Isl** 2.25 8 P Pn 01 24 46.6 -1.2
AYDN **Tasoluk** 2.27 104 *i* P Pn 01 24 47.8 -0.2
AYDN IAML 01 25 26.0
comp=E,67nm,0.5s
AYDN IAML 01 25 42.0
comp=N,73nm,0.5s
OUR **Ouranopolis** 2.27 338 P Pn 01 24 47.6 -0.3
VLI **Velai** 2.30 229 P Pn 01 24 47.6 -0.8
VLX **Vlachokerasia** 2.33 249 P Pn 01 24 49.4 +0.6
STEP **BALIKESIR_Sava** 2.34 60 *i* P Pn 01 24 48.9 0.0
STEP *i* S Sg 01 25 26.8 +1.3
STEP IAML 01 25 32.0
comp=E,443nm,0.6s
STEP IAML 01 25 39.0
comp=N,470nm,0.8s
KALE **Kalithea** 2.34 275 P Pn 01 24 49.1 +0.2
KLV **Kalavryta, Ach** 2.34 266 P Pn 01 24 48.4 -0.5
TRIP **Tripoli** 2.35 253 P Pn 01 24 49.4 +0.3
THAS **Thassos island** 2.39 353 P Pn 01 24 48.3 -1.2
THAS **Thassos island** 2.39 353 P Pn 01 24 48.4 -1.2
TRIZ **Trizonia** 2.39 274 P Pn 01 24 50.4 +0.6
GELI **Tayfur-Gelibol** 2.41 26 PN Pn 01 24 49.2 -0.6
SERG **Sergoula** 2.41 275 P Pn 01 24 50.9 +1.0
MAKR **Makrakomi, Fth** 2.46 289 P Pn 01 24 51.1 +0.6
LAKA **Lakka** 2.46 271 P Pn 01 24 50.9 +0.3
LAKA **Lakka** 2.46 271 P Pn 01 24 51.0 +0.3
BALY **Balya** 2.47 52 *i* P Pn 01 24 50.5 -0.2
BALY *i* S Sg 01 25 31.4 +1.7
BALY IAML 01 25 37.0
comp=E,241nm,0.6s
BALY IAML 01 25 40.0
comp=N,373nm,1.0s
DAT **Datca** 2.48 127 PN Pn 01 24 50.6 -0.3
DAT **Datca** 2.48 127 *i* P Pn 01 24 50.5 -0.3
DAT IAML 01 25 34.0
comp=N,34nm,0.8s
DAT IAML 01 25 36.0
comp=E,31nm,0.8s
LPK **Lapseki** 2.49 30 PN Pn 01 24 50.4 -0.6
PLG **Polygyros** 2.49 329 P Pn 01 24 50.6 -0.5
KTHA **Kythira Island** 2.56 220 P Pn 01 24 51.8 -0.2
KTHA **Kythira Island** 2.56 220 P Pn 01 24 51.9 -0.1
KTHA **Kythira Island** 2.56 220 PN Pn 01 24 51.9 -0.1
BALB **Balikesir** 2.58 56 PN Pn 01 24 51.7 -0.4
ENEZ **Enez** 2.62 18 PN Pn 01 24 52.3 -0.5
ERIK **Erikli-Kesan** 2.66 24 PN Pn 01 24 52.7 -0.6
EVR **Evrytania** 2.67 286 P Pn 01 24 54.1 +0.6
DRO **Drossia** 2.69 265 P Pn 01 24 53.8 0.0
DRO **Drossia** 2.69 265 P Pn 01 24 53.8 -0.3
GONE **Gonen-Balikesi** 2.70 47 PN Pn 01 24 53.5 -0.3
MANT **Manisa** 2.72 84 *i* P Pn 01 24 54.4 -0.1
MANT *i* S Sg 01 25 35.4 -2.6
MANT IAML 01 25 40.0
comp=E,64nm,0.6s
MANT IAML 01 25 41.0
comp=N,117nm,0.7s
ITM **Ithomi** 2.73 248 P Pn 01 24 54.9 +0.6
ITM **Ithomi** 2.73 248 P Pn 01 24 54.9 +0.6
KRBG **Karabiga-Canak** 2.74 38 PN Pn 01 24 53.5 -0.9
YER **Yerkesik** 2.75 113 PN Pn 01 24 54.7 +0.1
THL **Klokotos Trika** 2.75 300 P Pn 01 24 55.0 +0.4
ALN **Alexandroupoli** 2.75 15 P Pn 01 24 53.4 -1.2
ALN **Alexandroupoli** 2.75 15 PN Pn 01 24 53.4 -1.2
LIT **Litokhoron** 2.76 313 P Pn 01 24 54.4 -0.3
KNL **Balıkesir** 2.77 42 *i* P Pn 01 24 54.2 -0.5
KNL IAML 01 25 47.0
comp=N,258nm,1.1s
KNL IAML 01 25 53.0
comp=E,255nm,0.5s
AMT **Artemida-Makis** 2.78 256 P Pn 01 24 56.6 +1.7
KAVA **Kavala** 2.79 351 P Pn 01 24 54.3 -0.9
KAVA **Kavala** 2.79 351 P Pn 01 24 54.3 -0.9
HORT **Hortiatis** 2.83 327 P Pn 01 24 55.9 +0.2
IMMV **Iera Moni Meta** 2.91 198 P Pn 01 24 56.6 -0.2
IMMV **Iera Moni Meta** 2.91 198 P Pn 01 24 56.5 -0.2
IMMV **Iera Moni Meta** 2.91 198 PN Pn 01 24 56.7 -0.1
VAM **Vamos** 2.92 195 P Pn 01 24 56.8 0.0
HRKL **Herakleio** 2.92 180 PN Pn 01 24 56.7 -0.2
RDO **Rodhopi** 2.92 6 P Pn 01 24 55.9 -1.0
RDO **Rodhopi** 2.92 6 P Pn 01 24 56.3 -1.0
RDO **Rodhopi** 2.92 6 PN Pn 01 24 56.1 -0.8
RKY **Sarkoy-Tekirda** 2.93 33 PN Pn 01 24 56.4 -0.6
SART **Tekirdag** 2.93 33 *i* P Pn 01 24 56.9 -0.2
SART IAML 01 25 56.0
comp=N,78nm,1.0s
SART IAML 01 25 56.0
comp=E,86nm,0.4s
DEMI **Demirci** 2.94 73 *i* P Pn 01 24 57.1 -0.1
DEMI IAML 01 26 02.0
comp=N,85nm,0.7s
DEMI IAML 01 26 09.0
comp=E,70nm,0.7s
IDI **Anoyia** 2.95 183 P Pn 01 24 56.8 -0.5
IDI **Anoyia** 2.95 183 Pn Pn 01 24 57.3 0.0
comp=E,3.2nm,0.3s,baz=0.0,slow=15,SNR=32
IDI Sn Sn 01 25 30.2 -2.5
comp=E,5.6nm,0.3s,baz=343,slow=11,SNR=4.3
IDI LR LR 01 26 14.4
comp=E,68nm,21.4s,baz=19,slow=43
IDI **Anoyia** 2.95 183 P Pn 01 24 56.8 -0.5
IDI **Anoyia** 2.95 183 ⇑P Pn 01 24 56.9 -0.5
IDI **Anoyia** 2.95 183 PN Pn 01 24 56.8 -0.5
DURS **Dursunbey** 2.96 62 *i* P Pn 01 24 57.0 -0.5
DURS IAML 01 25 54.0
comp=E,94nm,0.6s
DURS IAML 01 25 55.0
comp=N,93nm,0.6s
PYL **PYLOS** 2.99 244 P Pn 01 24 59.0 +1.2
EDC **Edincik** 3.00 45 PN Pn 01 24 57.5 -0.5
MRMT **Marmara Adasi** 3.05 38 PN Pn 01 24 58.2 -0.5
TURN **Turunc** 3.09 115 PN Pn 01 24 56.2 -3.0
TURN **Turunc** 3.09 115 *i* P Pn 01 24 56.6 -2.6
TURN IAML 01 25 52.0
comp=E,47nm,0.6s
TURN IAML 01 26 05.0
comp=N,42nm,0.9s
SRS **Serrai** 3.10 338 P Pn 01 24 59.0 -0.4
SRS **Serrai** 3.10 338 P Pn 01 24 59.0 -0.4
USAK **Uak-Merkez** 3.11 80 *i* P Pn 01 25 00.0 +0.5
USAK IAML 01 25 41.0
comp=E,28nm,1.0s
USAK IAML 01 26 04.0
comp=N,28nm,1.6s
TAVA **DENIZLI_Tavas** 3.11 103 *i* P Pn 01 24 59.8 +0.3
TAVA IAML 01 26 07.0
comp=N,20nm,2.0s
TAVA IAML 01 26 08.0
comp=E,23nm,1.1s
UKOP **Uzunkopru-Edir** 3.12 22 PN Pn 01 24 59.5 -0.1
ARG **Arkhangelos** 3.14 129 PN Pn 01 24 59.3 -0.6
KARP **Karpathos** 3.15 148 P Pn 01 25 00.1 +0.1
KARP **Karpathos** 3.15 148 PN Pn 01 24 59.5 -0.6
SIMA **Simav-Kutahya** 3.15 73 PN Pn 01 25 00.1 0.0
DALY **Dalyan (Mula)** 3.15 116 PN Pn 01 25 00.4 +0.3
DALY **Dalyan (Mula)** 3.15 116 *i* P Pn 01 25 01.1 +1.0
DALY IAML 01 26 15.0
comp=E,28nm,0.7s
DALY IAML 01 26 17.0
comp=N,46nm,1.0s
SIVA **Sivas** 3.22 184 P Pn 01 25 02.3 +1.3
ZKR **Zakros** 3.24 164 PN Pn 01 25 01.0 -0.3
NVR **Nevrokopi** 3.25 343 P Pn 01 25 00.9 -0.6
KPRO **Kipourio** 3.38 302 P Pn 01 25 04.0 +0.8
KNT **Kendrikon** 3.38 330 P Pn 01 25 03.7 +0.5
KDZ **Kurdzhali** 3.42 4 PN Pn 01 25 02.5 -1.2
GEDZ **Gediz** 3.46 75 PN Pn 01 25 04.7 +0.3
CRLT **Corlu** 3.53 34 PN Pn 01 25 05.2 -0.1
FETY **Fethiye** 3.55 116 PN Pn 01 25 05.8 +0.3
FETY **Fethiye** 3.55 116 *i* P Pn 01 25 07.6 +2.1
FETY IAML 01 26 00.0
comp=E,12nm,0.6s
FETY IAML 01 26 01.0
comp=N,12nm,1.1s
TVSB **Tavsanli** 3.61 69 PN Pn 01 25 06.0 -0.5
MDNY **Mudanya-Bursa** 3.62 53 PN Pn 01 25 06.2 -0.3
VAY **Valandovo** 3.65 328 *i* Pn Pb 01 25 16.5 +1.6
VAY **Valandovo** 3.65 328 *i* Pn Pb 01 25 16.5 +1.6
ULDT **Uludag** 3.66 57 *i* P Pg 01 25 18.8 -1.8
ARMT **Armutlu** 3.72 50 PN Pn 01 25 08.1 +0.1
IGD **Bursa** 3.77 56 *i* P Pg 01 25 23.5 +0.8
SLVT **Silivri** 3.83 38 PN Pn 01 25 09.6 +0.2
BASM **Basmaki-Afyon** 3.91 93 PN Pn 01 25 10.7 +0.1
BRDR **BURDUR-Merkez** 3.95 96 *i* P Pn 01 25 12.2 +1.0
BRDR IAML 01 26 31.0
comp=N,19nm,0.7s
BRDR IAML 01 26 36.0
comp=E,14nm,1.2s
KZIL **AFYON_Kizioren** 3.96 88 *i* P Pn 01 25 12.2 +0.8
KZIL IAML 01 26 29.0
comp=E,22nm,1.1s
KZIL IAML 01 26 36.0
comp=N,18nm,1.0s
OHR **Ohrid** 4.39 312 *i* Pn Pn 01 25 20.0 +2.8
OHR **Ohrid** 4.39 312 *i* Pn Pn 01 25 20.0 +2.8
VTS **Vitosha** 4.60 343 ⇑P Pn 01 25 21.2 +1.1
ELND **Elena** 4.72 7 ⇑P Pn 01 25 20.9 -0.8
PLVB **Pleven** 5.16 356 ⇑P Pn 01 25 27.6 0.0
VLAD **Vladila** 5.78 355 ⇑P Pn 01 25 35.5 -0.7
PDG **Podgorica** 6.13 315 ⇑P Pn 01 25 41.9 +1.0
ICOR **Ion Corvin** 6.22 18 ⇑P Pn 01 25 41.9 -0.2
TIP **Timpagrande** 6.60 281 ⇑P Pn 01 25 48.1 +0.6
HARR **Harsova** 6.79 17 ⇑P Pn 01 25 49.6 -0.4
BRTR **Keskin Array B** 6.81 75 Pn Pn 01 25 51.9 +1.4
comp=N,0.3nm,0.3s,baz=253,slow=14,SNR=17
BRTR LR LR 01 29 09.5
comp=N,54nm,18.7s,baz=248,slow=44
HERR **Herculane** 6.94 344 ⇑P Pn 01 25 51.5 -0.5
MDVR **Moldovita** 7.02 340 ⇑P Pn 01 25 52.9 -0.3
ARR **Arges** 7.13 357 ⇑P Pn 01 25 54.3 -0.5
MLR **Muntele Rosu** 7.28 5 Pn Pn 01 25 57.5 +0.7
comp=N,0.7nm,0.3s,baz=194,slow=4.2,SNR=13
MLR LR LR 01 29 27.9
comp=N,61nm,18.5s,baz=119,slow=44
MLR **Muntele Rosu** 7.28 5 ⇑P Pn 01 25 57.5 +0.7
CFR **Carcaliu** 7.30 17 ⇓P Pn 01 25 55.6 -1.3
GZR **Gura Zlata** 7.36 347 ⇑P Pn 01 25 58.0 +0.1
VRI **Vrincioaia** 7.72 8 ⇑P Pn 01 26 03.7 +0.9
DOPR **Dopca** 7.73 1 ⇑P Pn 01 26 03.5 +0.6
BZS **Buzias** 7.82 342 ⇑P Pn 01 26 03.4 -0.7
TESR **Tescani** 8.35 7 ⇑P Pn 01 26 12.6 +1.2
SIRR **Siria** 8.42 343 ⇑P Pn 01 26 11.8 -0.6
VAE **Valguarnera** 8.49 268 Sn Sn 01 27 56.2 +6.8
comp=N,0.3nm,0.3s,baz=143,slow=20,SNR=1.6
DRGR 8.73 349 ⇑P Pn 01 26 16.5 -0.3
BURAR **Bucovina Array** 9.37 0 ⇓P Pn 01 26 26.8 +1.2
MMAI **Mount Meron Ar** 9.87 119 Pn Pn 01 26 32.3 0.0
comp=N,0.6nm,0.3s,baz=308,slow=11,SNR=4.2
DAVOX **Davos/Dischmat** 14.09 312 LR LR 01 33 47.8
comp=N,63nm,20.0s,baz=137,slow=41
KBZ **Khabaz** 14.51 62 LR LR 01 34 13.7
comp=N,51nm,18.2s,baz=97,slow=42
ESDC **Sonseca Array** 22.61 283 P P 01 29 12.2 +1.0
comp=N,0.4nm,0.6s,baz=80,slow=11,SNR=2.6
EKA **Eskdalemuir Ar** 25.56 321 P P 01 29 40.4 +1.2
comp=N,0.8nm,0.8s,baz=141,slow=14,SNR=1.6
TORD **Torodi Ar. Bea** 32.52 226 P P 01 30 41.8 +0.3
comp=N,0.8nm,0.7s,baz=36,slow=8.6,SNR=6.6
MKAR **Makanchi Array** 42.18 59 P P 01 32 03.5 +0.4
comp=N,0.2nm,0.5s,baz=270,slow=7.2,SNR=4.3

NIED ***13*** *01:33:00.36˝10N×139˝90E,h53km,Mw3.8 Best double couple: M0 6.31000×10^14 NP1:φs130.00000°,δ74.00000°, λ-68.00000°. NP2:φs255.00000°,δ27.00000°, λ-143.00000°.*

JMA ***13*** *01:33:44.6±0.1,36˝09N×139˝88E,h47km±1km,M4.0 Broadband fault plane solution: P waves. NP1: φs245.00000°,δ19.00000°,λ-174.00000°. NP2: φs149.00000°,δ88.00000°,λ-71.00000°. Principal axes: T Plg40.0000°, Azm221.0000°; N Plg19.0000°,*

Azm328.0000°; P Plg44.0000°, Azm78.0000°;
JMA Felt III J1.
IDC **13** *01:33:45.8±1.7, 35°.93N× 139°.77E, h69km±18km, mb3.3/8, mb1 3.6/9, mb1mx3.4/28, mbtmp3.6/9, MS2.4/1, Ms1 2.4/1, ms1mx2.3/14 Error ellipse: s-maj=26.5km s-min=8.1km az=66.0*

ISC 13 01:33:44.2±0.9, **36°.07N**±0°.05× **139°.90E**±0°.05, **h50**km±8km, **n26**, σ0**89**/25, **mb3.4**/9, **1C-3D**, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.29**	**56**	⇑P	**Pn**	**01 33 53.3**	**+0.2**
JYT				S	**Sn**	**01 33 59.5**	**0.0**
JAG	**Ashikaga**	**0.51**	**315**	⇓P	**Pn**	**01 33 55.6**	**+0.1**
JAG				S	**Sn**	**01 34 03.2**	**-0.4**
JRY	**Ryogami san**	**0.81**	**267**	⇓P	**Pn**	**01 33 59.4**	**0.0**
JKT	**Katashina**	**0.87**	**323**	⇓P	**Pn**	**01 34 00.1**	**-0.2**
JKT				S	**Sn**	**01 34 11.7**	**-0.4**
JOD2	**Odawara 2**	**1.04**	**220**	P	**Pn**	**01 34 02.8**	**+0.4**
JYN	**Shimob**	**1.24**	**243**	P	**Pn**	**01 34 06.1**	**+0.9**
MJAR	**Matsushiro Arr**	**1.45**	**290**	P	**Pn**	**01 34 07.9**	**-0.1**
	11nm,0.3s,baz=36,slow=32,SNR=204						
MJAR				S	**Sn**	**01 34 26.6**	**+0.8**
	8.1nm,0.3s,baz=327,slow=11,SNR=5.3						
MJAR				LR	LR	01 34 57.1	
	comp=Z,92nm,21.7s,baz=140,slow=52						
MAT	**Matsushiro**	**1.45**	**290**	P	**Pn**	**01 34 07.5**	**-0.5**
MAT				S	**Sn**	**01 34 26.2**	**+0.4**
JHJ	**Hachijo jima 2**	**2.94**	**182**	P	**Pn**	**01 34 29.1**	**+0.7**
	53nm,0.3s,baz=322,slow=21,SNR=23						
JHJ				S	**Sn**	**01 35 01.6**	**-1.0**
	60nm,0.3s,baz=52,slow=23,SNR=8.1						
KSRS	**Korea Array**	**9.71**	**282**	LR	LR	01 38 52.9	
	comp=Z,22nm,18.1s,baz=105,slow=32						
H11N2	**WAKE ISLAND Hy 28.75**	**117**		T	T	02 09 47.5	
	baz=313,slow=75,SNR=30						
H11N1	**WAKE ISLAND Hy 28.75**	**117**		T	T	02 09 48.0	
	baz=313,slow=75,SNR=34						
H11N3	**WAKE ISLAND Hy 28.76**	**117**		T	T	02 09 49.9	
	baz=313,slow=75,SNR=25						
H11S1	**WAKE ISLAND Hy 29.40**	**119**		T	T	02 10 39.4	
	baz=314,slow=76,SNR=74						
H11S3	**WAKE ISLAND Hy 29.40**	**119**		T	T	02 10 38.6	
	baz=314,slow=76,SNR=44						
H11S2	**WAKE ISLAND Hy 29.42**	**119**		T	T	02 10 35.5	
	baz=314,slow=76,SNR=31						
ZALV	**Zalesovo Beam**	**41.67**	**313**	P	**P**	**01 41 30.0**	**+2.3**
	0.8nm,0.3s,baz=98,slow=9.3,SNR=1.7						
MKAR	**Makanchi Array**	**43.61**	**303**	P	**P**	**01 41 42.7**	**-0.8**
	0.6nm,0.8s,baz=80,slow=8.8,SNR=3.6						
WRA	**Warramunga Arr**	**55.95**	**186**	P	**P**	**01 43 16.3**	**-1.1**
	0.6nm,0.3s,baz=0.3,slow=7.6,SNR=12						
ASAR	**Alice Springs**	**59.68**	**186**	P	**P**	**01 43 41.7**	**-1.8**
	0.5nm,0.5s,baz=18,slow=10,SNR=6.8						
YKA	**Yellowknife Ar**	**65.25**	**30**	P	**P**	**01 44 20.9**	**+0.7**
	0.2nm,0.8s,baz=299,slow=6.2,SNR=5.9						
NB2	**NORSAR Subarra**	**74.60**	**337**	P	**P**	**01 45 17.0**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=40,slow=5.6						
NOA	**NORSAR Array B**	**74.60**	**337**	P	**P**	**01 45 17.0**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=36,slow=5.5,SNR=1.8						
NVAR	**Mina Array Bea**	**76.54**	**52**	P	**P**	**01 45 30.3**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=280,slow=4.5,SNR=5.2						
PDAR	**Pinedale Array**	**79.21**	**45**	P	**P**	**01 45 43.8**	**-0.5**
	comp=Z,0.1nm,0.5s,baz=14,slow=1.1,SNR=2.0						
TXAR	**Lajitas Array**	**91.67**	**51**	P	**P**	**01 46 47.1**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=298,slow=2.8,SNR=7.9						

ISK **13** *02:14:18.2, 39°.36N× 40°.92E, h4km, ML3.9/34*
IDC **13** *02:14:19.4±1.3, 39°.38N× 40°.88E, h0km, mb3.4/3, mb1 3.4/10, mb1mx3.5/34, mbtmp3.3/10, ML3.0/7, MS2.7/4, Ms1 2.7/4, ms1mx2.3/42, Error ellipse: s-maj=22.0km s-min=10.0km az=132.0*
DDA **13** *02:14:19.7, 39°.34N× 40°.91E, h7km±2km, MW3.8*

ISC 13 02:14:18.7±1.0, **39°.36N**±0°.02× **40°.93E**±0°.02, **h5**km±8km, **n84**, σ1**40**/91, **mb3.3**/3, **8C-2D**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KARO	**Karliova-Bingo**	**0.11**	**116**	PG	**Pg**	**02 14 21.6**	**+0.6**
ECAT	**Cat-ERZURUM**	**0.25**	**9**	*i* P	**Pg**	**02 14 23.8**	**+0.1**
ECAT				*i* S	**Sg**	**02 14 27.9**	**+0.9**
ECAT				IAML		02 14 29.0	
	comp=E,33μm,0.4s						
ECAT				IAML		02 14 30.0	
	comp=N,17μm,0.4s						
YEDI	**Yedisu-Bingol**	**0.31**	**285**	PG	**Pg**	**02 14 24.9**	**+0.2**
YEDI				SG	**Sg**	**02 14 29.6**	**+0.8**
BNGB	**Bingl**	**0.41**	**208**	PG	**Pg**	**02 14 26.9**	**+0.2**
BNGB				SG	**Sb**	**02 14 33.4**	**-1.7**
BNGL	**BINGOL**	**0.44**	**156**	*i* P	**Pb**	**02 14 28.0**	**-1.1**
BNGL				*i* S	**Sb**	**02 14 38.0**	**+2.0**
VRTB	**Varto-Mus**	**0.46**	**115**	PG	**Pb**	**02 14 27.9**	**-1.4**
VRTB	**Varto-Mus**	**0.46**	**115**	*i* P	**Pb**	**02 14 27.9**	**-1.4**
VRTB				IAML		02 14 45.0	
	comp=E,10μm,1.4s						
VRTB				IAML		02 14 46.0	
	comp=N,12μm,0.9s						
ATA5	**Erzurum, Merke**	**0.60**	**24**	*i* P	**Pb**	**02 14 30.7**	**-1.1**
ATA5				*i* S	**Sb**	**02 14 40.4**	**-0.3**
ATA5				IAML		02 14 41.0	
	comp=N,4μm,0.3s						
ATA5				IAML		02 14 45.0	
	comp=E,5μm,0.5s						
EMRE	**Erzurum,Aziziy**	**0.67**	**3**	*i* P	**Pb**	**02 14 31.9**	**-1.2**
EMRE				*i* S	**Sb**	**02 14 43.0**	**+0.1**
EMRE				IAML		02 14 50.0	
	comp=N,5μm,0.4s						
EMRE				IAML		02 14 52.0	
	comp=E,5μm,0.4s						
KOPT	**Kop Dagi**	**0.74**	**334**	*i* P	**Pb**	**02 14 33.1**	**-1.1**
KOPT				IAML		02 14 46.0	
	comp=N,2μm,0.5s						
KOPT				IAML		02 14 51.0	
	comp=E,2μm,0.7s						
MUSM	**Mu-Merkez**	**0.78**	**144**	*i* P	**Pg**	**02 14 33.1**	**-0.6**
MUSM				*i* S	**Sn**	**02 14 46.1**	**-2.5**
AKDA	**Akdag**	**0.82**	**24**	*i* P	**Pg**	**02 14 34.2**	**-0.2**
AKDA				*i* S	**Sn**	**02 14 49.4**	**-0.4**
KOPR	**Koprukoy-ERZUR**	**0.96**	**48**	PG	**Pg**	**02 14 36.7**	**-0.4**
ERZN	**Erzincan**	**0.96**	**284**	PG	**Pg**	**02 14 36.4**	**-0.7**
KRIK	**Erzurum-spir**	**0.98**	**0**	*i* P	**Pb**	**02 14 37.4**	**-0.9**
KRIK				*i* S	**Sn**	**02 14 52.2**	**-1.5**
EUZM	**Uzumlu**	**1.01**	**291**	*i* P	**Pg**	**02 14 37.3**	**-0.8**
EUZM				IAML		02 14 54.0	
	comp=E,988nm,0.5s						
EUZM				IAML		02 14 58.0	
	comp=N,853nm,0.5s						
HOMI	**Horasan**	**1.02**	**47**	*i* P	**Pg**	**02 14 37.6**	**-0.8**
HOMI				IAML		02 14 56.0	
	comp=N,2μm,0.4s						
HOMI				IAML		02 14 59.0	
	comp=E,4μm,0.5s						
BAYB	**BAYBURT**	**1.04**	**331**	*i* P	**Pb**	**02 14 38.5**	**-0.8**
BAYB				IAML		02 14 57.0	
	comp=E,739nm,0.6s						
TNCL	**Tunceli-Merkez**	**1.10**	**258**	*i* P	**Pg**	**02 14 38.8**	**-1.0**
TNCL				IAML		02 14 59.0	
	comp=N,3μm,0.6s						
TNCL				IAML		02 14 59.0	
	comp=E,3μm,0.6s						
GURO	**Guroymak-BITLI**	**1.18**	**133**	PN	**Pb**	**02 14 40.5**	**-1.1**
BAYT	**Aydıntepe-Bayb**	**1.20**	**330**	PN	**Pg**	**02 14 41.3**	**-0.4**
SVAN	**Silvan-Diyarba**	**1.22**	**170**	PN	**Pg**	**02 14 42.1**	**0.0**
SVAN	**Silvan-Diyarba**	**1.22**	**170**	*i* P	**Pg**	**02 14 42.3**	**+0.2**
PTK	**Pertek**	**1.28**	**249**	PN	**Pn**	**02 14 41.9**	**-1.5**
MLAZ	**Malazgirt-MUS**	**1.28**	**99**	PN	**Pn**	**02 14 42.4**	**-1.0**
BLIS	**Bitlis-Merkez**	**1.32**	**135**	*i* P	**Pn**	**02 14 42.5**	**-1.5**
BTMN	**Batman**	**1.49**	**169**	*i* P	**Pg**	**02 14 47.4**	**+0.2**
KELT	**Kelkit**	**1.51**	**302**	*i* P	**Pb**	**02 14 46.1**	**-1.2**
DYBB	**Diyarbakir**	**1.53**	**204**	PN	**Pb**	**02 14 47.1**	**-0.5**
DIYA	**Diyarbakir**	**1.56**	**204**	*i* P	**Pg**	**02 14 48.8**	**+0.2**
SRTM	**Siirt_Merkez**	**1.57**	**150**	*i* P	**Pg**	**02 14 48.2**	**-0.6**
SVRC	**Sivrice-ELAZID**	**1.60**	**233**	PN	**Pb**	**02 14 47.5**	**-1.3**
AGRB	**Hanur-Agry**	**1.61**	**82**	PN	**Pb**	**02 14 48.3**	**-0.8**
SENK	**Senkaya-Erzuru**	**1.63**	**42**	PN	**Pb**	**02 14 47.9**	**-1.4**
DDEM	**Demirkent**	**1.66**	**22**	*i* P	**Pg**	**02 14 49.4**	**-1.1**
REFA	**Refahiye_ERZN**	**1.67**	**272**	*i* P	**Pg**	**02 14 51.0**	**+0.2**
CHAY	**Cayeli-Rize**	**1.73**	**355**	PN	**Pb**	**02 14 49.8**	**-1.2**
ELZG	**Elazig**	**1.74**	**241**	*i* P	**Pb**	**02 14 50.8**	**-0.4**
CHOM	**Cayeli-Rize**	**1.74**	**356**	PN	**Pb**	**02 14 50.3**	**-0.9**
DBAD	**Bademkaya**	**1.76**	**19**	*i* P	**Pb**	**02 14 50.8**	**-0.8**
KTUT	**Trabzon**	**1.85**	**332**	PN	**Pb**	**02 14 51.6**	**-1.5**
DAGI	**Agillar**	**1.88**	**23**	*i* P	**Pb**	**02 14 52.5**	**-1.1**
KEMA	**Kemaliye**	**1.89**	**268**	*i* P	**Pb**	**02 14 52.6**	**-1.1**
AKDM	**Akdamar-Van**	**1.91**	**122**	PN	**Pb**	**02 14 52.3**	**-1.7**
MAZI	**Mazidag**	**1.93**	**191**	PN	**Pb**	**02 14 53.2**	**-1.2**
ARPR	**Arapgir-MALATY**	**2.03**	**263**	PN	**Pb**	**02 14 54.0**	**-2.1**
MARD	**Mardin**	**2.04**	**183**	*i* P	**Pb**	**02 14 56.0**	**-0.3**
VANB	**Van**	**2.07**	**111**	PN	**Pb**	**02 14 55.4**	**-1.3**
KARS	**Kars**	**2.09**	**52**	PN	**Pb**	**02 14 54.8**	**-2.3**
VMUR	**Van-Muradiye**	**2.09**	**99**	*i* P	**Pb**	**02 14 56.8**	**-0.4**
BCA	**Borcka**	**2.15**	**14**	⇑P	**Pg**	**02 15 00.4**	**+0.5**
BCA				⇑S	**Sg**	**02 15 26.9**	**-0.9**
BCA	**Borcka**	**2.15**	**14**	PN	**Pb**	**02 14 55.9**	**-2.3**
SIRT	**Sirnak**	**2.20**	**147**	PN	**Pb**	**02 14 56.7**	**-2.3**
MALT	**Malatya**	**2.21**	**243**	PN	**Pn**	**02 14 56.6**	**+0.5**
ESPY	**Espiye-Giresun**	**2.29**	**313**	PN	**Pb**	**02 14 57.9**	**-2.7**
BATM	**Batumi**	**2.32**	**14**	⇑P	**Pg**	**02 15 02.8**	**-0.4**
BATM				⇑S	**Sg**	**02 15 32.9**	**-0.3**
BATM	**Batumi**	**2.32**	**14**	PN	**Pb**	**02 14 58.2**	**-2.8**
CLDR	**Caldiran**	**2.33**	**94**	PN	**Pn**	**02 14 58.4**	**+0.5**
URFA	**Urfa**	**2.53**	**221**	PN	**Pn**	**02 15 01.5**	**+1.0**
TASB	**TASBURUN-IGDIR**	**2.63**	**75**	PN	**Pn**	**02 15 03.0**	**+1.1**
DARE	**Darende-Malaty**	**2.79**	**255**	PN	**Pn**	**02 15 05.1**	**+0.9**
AKH	**Akhalkalaki**	**2.84**	**43**	⇑P	**Pn**	**02 15 05.5**	**+0.6**
AKH	**Akhalkalaki**	**2.84**	**43**	PN	**Pn**	**02 15 05.4**	**+0.6**
RSDY	**Resadiye-TOKAT**	**2.96**	**292**	PN	**Pn**	**02 15 07.4**	**+1.1**
CUKT	**Cukurca**	**2.98**	**134**	PN	**Pn**	**02 15 08.1**	**+1.3**
SVSK	**Karacayir**	**3.08**	**282**	PN	**Pn**	**02 15 09.5**	**+1.5**
TOKT	**Tokat**	**3.51**	**287**	PN	**Pn**	**02 15 14.9**	**+1.0**
KBZ	**Khabaz**	**4.61**	**18**	Pn	Pn	02 15 32.9	+3.9
	comp=E,0.2nm,0.3s,baz=225,slow=17,SNR=1.7						
KBZ				Pg	**Pb**	**02 15 40.2**	**+0.1**
	comp=E,0.3nm,0.3s,baz=211,slow=12,SNR=4.2						
KBZ				Lg	Lg	02 16 46.7	
	comp=E,0.2nm,0.3s,baz=80,slow=21,SNR=5.8						
KVAR	**Kislovodsk Arr**	**4.78**	**16**	Pn	**Pn**	**02 15 33.6**	**+2.1**
	baz=194,slow=12,SNR=2.8						
KVAR				Pg	**Pb**	**02 15 45.8**	**+2.7**
	baz=79,slow=23,SNR=2.7						
DIKM	**Dikmen**	**4.89**	**300**	⇑P	**Pb**	**02 15 40.4**	**-4.3**
DIKM				⇓S	**Sg**	**02 16 52.8**	**-2.9**
BRTR	**Keskin Array B**	**5.64**	**276**	Pn	**Pn**	**02 15 45.2**	**+1.9**
	comp=E,0.2nm,0.3s,baz=102,slow=14,SNR=13						
BRTR				Lg	Lg	02 17 23.2	
	baz=108,slow=24,SNR=3.3						
BRTR				LR	LR	02 17 26.1	
	comp=E,15nm,19.0s,baz=156,slow=33						
MMAI	**Mount Meron Ar**	**7.74**	**217**	Pn	**Pn**	**02 16 12.5**	**+0.4**
	comp=E,0.8nm,0.3s,baz=66,slow=11,SNR=3.7						
MMAI				Lg	Lg	02 18 27.4	
	comp=E,0.9nm,0.3s,baz=35,slow=37,SNR=1.6						
ASF	**Jabal al Asfar**	**7.88**	**206**	Pn	**Pn**	**02 16 16.3**	**+2.3**
	comp=E,0.1nm,0.3s,baz=114,slow=15,SNR=1.6						
ASF				Lg	Lg	02 18 30.8	
	comp=E,0.7nm,0.3s,baz=152,slow=20,SNR=3.8						
TLCR		**10.69**	**307**	⇑P	Pn	02 16 58.6	+6.2
TOPG	**Topolog**	**10.82**	**305**	⇑P	Pn	02 16 59.5	+5.3
CFR	**Carcaliu**	**11.11**	**306**	⇓P	Pn	02 17 07.5	+9.3
AKASG	**Malin Array Be**	**14.02**	**328**	Pn	**Pn**	**02 17 39.2**	**+1.4**
	comp=E,0.5nm,0.3s,baz=132,slow=12,SNR=5.3						
AKTO	**Aktyubinsk**	**16.37**	**42**	Pn	**P**	**02 18 09.7**	**-2.3**
	comp=E,0.1nm,0.3s,baz=216,slow=5.0,SNR=5.6						
VRAC	**Vranov**	**19.97**	**308**	LR	LR	02 29 08.0	
	comp=E,5.9nm,18.5s,baz=123,slow=45						
FINES	**FINESS Array B**	**23.94**	**342**	P	**P**	**02 19 34.2**	**+0.8**
	comp=E,1.4nm,0.7s,baz=133,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	**30.83**	**62**	P	**P**	**02 20 35.9**	**+0.4**
	comp=E,0.2nm,0.7s,baz=277,slow=9.5,SNR=2.5						
ARCES	**ARCESS Array B**	**31.34**	**350**	LR	LR	02 33 47.9	
	comp=E,39nm,19.0s,baz=322,slow=37						
ESDC	**Sonseca Array**	**34.35**	**285**	P	**P**	**02 21 09.0**	**+2.6**
	comp=E,0.3nm,0.7s,baz=66,slow=8.6,SNR=2.1						
NRIK	**Noril'sk**	**38.79**	**24**	LR	LR	02 39 32.1	
	comp=E,33nm,18.8s,baz=167,slow=39						

IDC **13** *02:43:09.7±2.1, 7°.15S× 129°.23E, h0km, mb4.3/1, mb1 4.0/3, mb1mx3.6/33, mbtmp3.9/3, ML3.8/2, Error ellipse: s-maj=150.9km s-min=31.4km az=67.0*
NEIC **13** *02:43:19.2±1.7, 7°.02S× 0°.08× 130°.50E± 0°.09, h111km±12km, mb4.1/7, Error ellipse: s-maj=13.6km s-min=10.5km az=133.0*

ISC 13 02:43:17.8±0.7, **7°.03S**±0°.05× **130°.40E**±0°.08, **h100**km, **n19**, σ2**69**/26, **mb4.2**/4, **Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.30**	**137**	PN	**Pn**	**02 43 43.3**	**+1.6**
SAUI				Sn	**Sn**	**02 44 05.8**	**+6.0**
FAKI	**Fak Fak**	**4.48**	**24**		**Pn**	**02 44 25.3**	**+1.8**
FAKI				Sn	**Sn**	**02 45 13.5**	**-1.1**
MTN	**Manton Dam**	**5.82**	**173**	Pn	**Pn**	**02 44 44.6**	**+2.9**
MTN				Sn	**Sn**	**02 45 46.2**	**-1.0**
SOEI	**Soe**	**6.64**	**246**	Pn	**Pn**	**02 44 56.0**	**+3.0**
KNRA	**Kununurra**	**8.74**	**190**		**Pn**	**02 45 24.1**	**+2.6**
KNRA				Sn	**Sn**	**02 46 58.8**	**+0.5**
FITZ	**Fitzroy Crossi**	**11.94**	**202**		**Pn**	**02 46 04.3**	**-0.4**
FITZ				Sn	**Sn**	**02 48 13.9**	**-2.1**
WB0	**Warramunga Arr**	**13.24**	**163**	Pn	**Pn**	**02 46 22.6**	**+0.7**
WRA	**Warramunga Arr**	**13.39**	**164**	Pn	**Pn**	**02 46 25.5**	**+1.6**
	1.0nm,0.3s,baz=342,slow=13,SNR=5.9						
WRA				Sn	**Sn**	**02 48 45.5**	**-5.9**
	2.4nm,0.3s,baz=342,slow=21,SNR=11						
WB2	**Warramunga Arr**	**13.40**	**164**	Pn	**Pn**	**02 46 24.0**	**0.0**
COEN	**Coen**	**14.32**	**120**	Pn	**Pn**	**02 46 36.4**	**+0.4**
AS31	**Alice Springs**	**16.88**	**169**		**P**	**02 47 09.3**	**+0.8**
ASAR	**Alice Springs**	**16.88**	**169**	P	**P**	**02 47 08.5**	**0.0**
	0.1nm,0.3s,baz=345,slow=10,SNR=4.6						
ASAR				S	**Sn**	**02 50 09.2**	**-6.5**
	0.4nm,0.3s,baz=349,slow=23,SNR=10						
PSAD1	**Pilbara Seismi**	**17.61**	**214**		**Pn**	**02 47 18.4**	**+1.6**
PSAD1				IAmb	IAmb	02 47 26.6	
	comp=Z,3.7nm,0.6s						
PSA00	**Pilbara Seismi**	**17.69**	**214**		**P**	**02 47 17.6**	**+0.2**
PSA00				IAmb	IAmb	02 47 24.9	
	comp=Z,5.3nm,0.7s						
IPM	**Ipoh**	**31.47**	**290**	P	**P**	**02 49 30.2**	**0.0**
IPM				IAmb	IAmb	02 49 30.7	
	comp=Z,8.0nm,0.3s						
CAN	**Canberra**	**32.94**	**151**	P	**P**	**02 49 42.8**	**-0.2**
CAN				IAmb	IAmb	02 50 02.2	
	comp=Z,4.0nm,1.0s						
AFI	**Afiamalu**	**57.16**	**102**	P	**P**	**02 52 51.9**	**-3.0**
MK31	**Makanchi Array**	**68.47**	**327**	P	**P**	**02 54 09.6**	**+0.3**
MK31				IAmb	IAmb	02 54 10.6	
	comp=Z,0.9nm,0.5s						
MKAR	**Makanchi Array**	**68.47**	**327**	P	**P**	**02 54 10.4**	**+1.2**
	comp=Z,1.3nm,0.4s,baz=115,slow=8.2,SNR=18						

NIED **13** *02:49:00, 36°.30N× 141°.10E, h38km, Mw3.8 Best double couple: M0 5.30000×10^14 NP1:φ0 191.00000°, δ87.00000°, λ-96.00000°. NP2:φ0 77.00000°, δ7.00000°, λ-25.00000°.*
JMA **13** *02:49:16.7±0.1, 36°.23N× 141°.03E, h45km±2km, M3.8*
JMA Felt I J1.
IDC **13** *02:49:20.1±2.6, 36°.16N× 141°.01E, h61km±25km, mb3.2/8, mb1 3.5/11, mb1mx3.4/34, mbtmp3.5/11, ML2.9/3, MS2.7/2, Ms1 2.7/2, ms1mx2.4/23, Error ellipse: s-maj=23.1km s-min=11.8km az=70.0*

ISC 13 02:49:16.6±1.3, **36°.28N**±0°.03× **141°.07E**±0°.06, **h25**km±10km, **n29**, σ1**10**/33, **mb3.6**/8, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.40**	**279**	P	**Pn**	**02 49 26.3**	**-0.4**
JHYU				S	**Sn**	**02 49 32.7**	**-0.7**
JHO	**Hitachi**	**0.52**	**309**	P	**Pn**	**02 49 27.8**	**-0.7**
JHO				S	**Sn**	**02 49 35.5**	**-1.1**
JIHU	**Itakohorinouch**	**0.54**	**235**	P	**Pn**	**02 49 28.2**	**-0.5**
JIHU				S	**Sn**	**02 49 36.4**	**-0.6**
CHOJ	**Chosi**	**0.60**	**197**	P	**Pb**	**02 49 28.1**	**-0.4**
CHOJ				S	**Sb**	**02 49 35.9**	**-0.6**
JYT	**Yasato**	**0.71**	**266**	P	**Pb**	**02 49 30.0**	**-0.3**
JYT				S	**Sb**	**02 49 39.1**	**-0.6**
JSMT	**Sammumatsuo**	**0.81**	**219**	P	**Pb**	**02 49 31.5**	**-0.5**
JSMT				S	**Sb**	**02 49 42.4**	**-0.2**
ONAJ	**Iwakimizuishiy**	**0.85**	**345**	P	**Pb**	**02 49 32.5**	**-0.2**
ONAJ				S	**Sb**	**02 49 43.4**	**-0.4**
JFK	**Kawauchi**	**1.10**	**352**	P	**Pn**	**02 49 35.8**	**-0.6**
JAG	**Ashikaga**	**1.31**	**277**	P	**Pn**	**02 49 38.7**	**-0.7**
JFT	**Otama**	**1.37**	**335**	P	**Pb**	**02 49 41.1**	**-0.5**
JFT				S	**Sb**	**02 49 58.2**	**-0.4**
MJAR	**Matsushiro Arr**	**2.32**	**277**	P	**Pn**	**02 49 54.0**	**+0.7**
	2.8nm,0.3s,baz=84,slow=11,SNR=57						
MJAR				S	**Sn**	**02 50 23.1**	**+2.1**
	3.5nm,0.3s,baz=355,slow=13,SNR=4.7						
MJAR				LR	LR	02 51 08.0	
	comp=Z,119nm,20.4s,baz=105,slow=48						
MAT	**Matsushiro**	**2.33**	**277**	P	**Pn**	**02 49 53.7**	**+0.4**
MAT				S	**Sn**	**02 50 20.6**	**-0.5**
JHJ	**Hachijo jima 2**	**3.33**	**199**	P	**Pn**	**02 50 08.9**	**+1.8**
	18nm,0.3s,baz=82,slow=12,SNR=1.7						
JHJ				S	**Sn**	**02 50 44.8**	**-0.9**
	28nm,0.3s,baz=60,slow=24,SNR=2.0						
USRK	**Ussuriysk Ar.**	**10.52**	**322**	P	**Pn**	**02 51 49.5**	**+3.8**
	baz=135,slow=13,SNR=2.2						
KSRS	**Korea Array**	**10.60**	**280**	LR	LR	02 55 33.3	
	comp=Z,58nm,19.9s,baz=122,slow=35						
H11N2	**WAKE ISLAND Hy 28.01**	**119**		T	T	03 24 24.8	
	baz=312,slow=75,SNR=61						
H11N1	**WAKE ISLAND Hy 28.02**	**119**		T	T	03 24 24.0	
	baz=312,slow=75,SNR=53						
H11N3	**WAKE ISLAND Hy 28.03**	**119**		T	T	03 24 25.0	
	baz=312,slow=75,SNR=44						
H11S1	**WAKE ISLAND Hy 28.69**	**121**		T	T	03 25 18.2	
	baz=314,slow=75,SNR=230						
H11S3	**WAKE ISLAND Hy 28.69**	**121**		T	T	03 25 16.1	
	baz=314,slow=75,SNR=133						
H11S2	**WAKE ISLAND Hy 28.71**	**121**		T	T	03 25 16.4	
	baz=314,slow=75,SNR=115						
ZALV	**Zalesovo Beam**	**42.22**	**313**	P	**P**	**02 57 06.9**	**-0.4**
	0.7nm,0.4s,baz=87,slow=15,SNR=1.4						
MKAR	**Makanchi Array**	**44.29**	**303**	P	**P**	**02 57 23.2**	**-1.0**
	0.5nm,0.7s,baz=83,slow=9.9,SNR=5.5						
ILAR	**Eielson Array**	**50.28**	**32**	P	**P**	**02 58 10.9**	**+0.4**
	0.8nm,0.8s,baz=269,slow=6.3,SNR=9.7						
WRA	**Warramunga Arr**	**56.28**	**188**	P	**P**	**02 58 53.1**	**-2.0**
	0.3nm,0.4s,baz=4.6,slow=7.2,SNR=5.5						
ASAR	**Alice Springs**	**60.01**	**188**	P	**P**	**02 59 20.8**	**-0.4**
	0.3nm,0.7s,baz=16,slow=7.7,SNR=2.1						
YKA	**Yellowknife Ar**	**64.60**	**30**	P	**P**	**02 59 51.1**	**-0.4**
	0.3nm,0.7s,baz=303,slow=6.0,SNR=5.5						
NOA	**NORSAR Array B**	**74.77**	**337**	P	**P**	**03 00 54.2**	**-0.1**
	0.2nm,0.5s,baz=36,slow=6.1,SNR=1.5						
NVAR	**Mina Array Bea**	**75.66**	**53**	P	**P**	**03 01 00.3**	**+0.3**
	0.4nm,0.5s,baz=281,slow=7.0,SNR=3.7						

CNRM **13** *02:55:15.9, 34°.52N× 3°.94W, h2km*
SFS **13** *02:55:16.0, 34°.21N× 3°.70W, ML4.0, MSOUN (MARRUECOS)*
IGIL **13** *02:55:16.6, 34°.42N× 3°.85W, h0km*
MDD **13** *02:55:17.9±1.2, 34°.54N× 3°.84W, h0km, mb3.8/21, Error ellipse: s-maj=11.4km s-min=5.1km az=178.0, PRXIMO*
INMG **13** *02:55:18.4±1.4, 34°.44N× 3°.78W, h20km±10km, ML2.6, Error ellipse: s-maj=4.8km s-min=3.8km az=176.0*

ISC 13 02:55:15.8±0.9, **34°.50N**±0°.02× **3°.82W**±0°.03, **h7**km±4km, **n70**, σ1**35**/118, **Morocco**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AKLM	**AKL**	**0.04**	**289**	P	**Pb**	**02 55 16.6**	**-0.7**
AKLM				S	**Sb**	**02 55 17.5**	**-0.8**
PALE	**Palemas**	**0.72**	**352**	P	**Pb**	**02 55 30.1**	**-0.7**
PALE				S	**Sb**	**02 55 41.3**	**+0.4**
PVLZ	**Peæn de**	**0.78**	**330**	P	**Pb**	**02 55 31.1**

PVAQ	**Vaqueiros**	**4.29 314**	*e*Pn	**Pn**	**02 56 22.6**	**+1.1**
PVAQ			*e*Sn	**Sn**	**02 57 11.5**	**-0.3**
PVAQ			A	A	02 57 15.9	
	7.0nm,0.3s					
PBDV	**Barranco-do-Ve**	**4.32 311**	P	**Pn**	**02 56 23.2**	**+1.3**
PBDV			S	**Sn**	**02 57 11.5**	**-1.0**
	6.9nm,0.5s					
PBDV	**Barranco-do-Ve**	**4.32 311**	*e*Pn	**Pn**	**02 56 23.2**	**+1.3**
PBDV			*e*Sn	**Sn**	**02 57 11.5**	**-1.0**
PBDV			A	A	02 57 17.1	
	6.9nm,0.5s					
ETOB	**Tobarra**	**4.53 23**	P	**Pn**	**02 56 26.4**	**+1.5**
	4.8nm,0.4s,SNR=12					
ETOB			S	**Sn**	**02 57 16.6**	**-1.2**
	11nm,1.1s					
PCVE	**Castro Verde**	**4.63 314**	P	**Pn**	**02 56 27.2**	**+1.0**
PCVE			S	**Sn**	**02 57 20.4**	**+0.2**
	5.3nm,0.6s					
PCVE	**Castro Verde**	**4.63 314**	*e*Pn	**Pn**	**02 56 27.2**	**+1.0**
PCVE			*e*Sn	**Sn**	**02 57 20.4**	**+0.2**
PCVE			A	A	02 57 25.8	
	5.3nm,0.6s					
PBEJ	**Beja**	**4.80 318**	P	**Pn**	**02 56 30.2**	**+1.6**
PBEJ			S	**Sn**	**02 57 25.0**	**+0.5**
	2.1nm,0.5s					
PBEJ	**Beja**	**4.80 318**	*e*Pn	**Pn**	**02 56 30.2**	**+1.6**
PBEJ			*e*Sn	**Sn**	**02 57 25.0**	**+0.5**
PBEJ			A	A	02 57 29.7	
	4.2nm,0.5s					
PFVI	**Vila Bisbo**	**4.84 304**	P	**Pn**	**02 56 29.9**	**+0.8**
	3.3nm,0.2s,SNR=4.0					
PFVI			S	**Sn**	**02 57 22.9**	**-2.6**
	5.5nm,0.2s,SNR=7.9					
MESJ	**Messejana**	**4.88 314**	*e*P	**Pn**	**02 56 29.4**	**-0.1**
MESJ	**Messejana**	**4.88 314**	P	**Pn**	**02 56 29.4**	**-0.1**
MESJ			S	**Sn**	**02 57 25.3**	**-1.0**
	6.9nm,0.2s					
MESJ	**Messejana**	**4.88 314**	*e*Pn	**Pn**	**02 56 30.7**	**+1.1**
MESJ			*e*Sn	**Sn**	**02 57 25.3**	**-1.0**
MESJ			A	A	02 57 30.9	
	6.9nm,0.2s					
EBAD	**Badajoz**	**4.96 330**	P	**Pn**	**02 56 31.9**	**+1.1**
	2.0nm,0.2s,SNR=15					
EBAD			S	**Sn**	**02 57 25.5**	**-2.9**
	1.5nm,0.3s,SNR=5.9					
PTEO	**Sao Teotonio**	**5.00 309**	P	**Pn**	**02 56 32.7**	**+1.4**
PTEO			S	**Sn**	**02 57 29.1**	**-0.3**
	3.6nm,0.7s					
PTEO	**Sao Teotonio**	**5.00 309**	*e*Pn	**Pn**	**02 56 32.7**	**+1.4**
PTEO			*e*Sn	**Sn**	**02 57 29.1**	**-0.3**
PTEO			A	A	02 57 35.8	
	7.1nm,0.7s					
PAB	**San Pablo**	**5.05 355**	P	**Pn**	**02 56 33.1**	**+1.0**
	1.2nm,0.4s,SNR=7.9					
PNCL	**Nicolau / Gran**	**5.24 315**	P	**Pn**	**02 56 35.5**	**+1.0**
PNCL			S	**Sn**	**02 57 34.4**	**-0.8**
	4.8nm,0.5s					
PNCL	**Nicolau / Gran**	**5.24 315**	*e*Pn	**Pn**	**02 56 35.5**	**+1.0**
PNCL			*e*Sn	**Sn**	**02 57 34.4**	**-0.8**
PNCL			A	A	02 57 39.0	
	4.8nm,0.5s					
EVO	**Evora**	**5.25 321**	P	**Pn**	**02 56 36.7**	**+1.9**
EVO	**Evora**	**5.25 321**	*e*Pn	**Pn**	**02 56 36.7**	**+1.9**
PMRV	**Marv??o**	**5.69 331**	P	**Pn**	**02 56 42.5**	**+1.7**
PMRV	**Marv??o**	**5.69 331**	*e*Pn	**Pn**	**02 56 42.5**	**+1.7**
PMTG	**Montargil**	**5.77 324**	P	**Pn**	**02 56 42.9**	**+1.1**
PMTG			S	**Sn**	**02 57 46.6**	**-1.7**
	3.1nm,0.8s					
PMTG	**Montargil**	**5.77 324**	*e*Pn	**Pn**	**02 56 42.9**	**+1.1**
PMTG			*e*Sn	**Sn**	**02 57 46.6**	**-1.7**
PMTG			A	A	02 57 54.1	
	3.1nm,0.8s					
PCBR	**Castelo Branco**	**6.08 332**	P	**Pn**	**02 56 47.8**	**+1.7**
PCBR	**Castelo Branco**	**6.08 332**	*e*Pn	**Pn**	**02 56 47.8**	**+1.7**
PSBE	**So Bento**	**6.39 323**	*e*Pn	**Pn**	**02 56 51.8**	**+1.3**
MVO	**Moncorvo**	**7.12 340**	P	**Pn**	**02 57 01.2**	**+0.7**
	1.2nm,0.2s,SNR=5.9					
MVO	**Moncorvo**	**7.12 340**	*e*Pn	**Pn**	**02 57 02.8**	**+2.3**

ISC 13 03:18:41.8±1.5,**50°21N**±0°.07×**18°72E**±0°.06,**h0**km,**n13,** σ0°**77**/26,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.53**	**225**	*e*PG	**Pg**	**03 18 52.5**	**+0.7**
OKC				*e*SG	**Sg**	**03 19 00.2**	**+1.5**
	comp=Z,31nm,0.8s						
MORC	**Moravsky Berou**	**0.88**	**241**	*e*PG	**Pg**	**03 18 58.3**	**-0.2**
MORC				*e*SG	**Sb**	**03 19 11.2**	**-0.9**
LANS	**Liptovska Anna**	**1.17**	**155**	*e*PG	**Pg**	**03 19 04.2**	**0.0**
LANS				*e*SG	**Sg**	**03 19 19.8**	**+0.5**
LANS				*e*LG	Lg	03 19 25.8	
KRLC	**Kraliky**	**1.25**	**264**	*e*PG	**Pg**	**03 19 05.0**	**-0.8**
KRLC				*e*SG	**Sb**	**03 19 22.8**	**-0.2**
	comp=Z,16nm,0.4s						
DPC	**Dobruska-Polom**	**1.54**	**276**	*e*PG	**Pn**	**03 19 10.5**	**-0.1**
DPC				*e*SG	**Sn**	**03 19 32.7**	**+1.4**
	comp=Z,12nm,0.4s						
OSTC	**Ostas**	**1.64**	**283**	*e*PG	**Pn**	**03 19 12.3**	**+0.4**
OSTC				*e*SG	**Sg**	**03 19 35.2**	**+0.8**
	comp=Z,13nm,1.2s						
VYHS	**Vyhne**	**1.72**	**177**	*e*PN	**Pn**	**03 19 12.3**	**-0.7**
VYHS				*e*SN	**Sn**	**03 19 35.4**	**-0.3**
CHVC	**Chvalec**	**1.75**	**283**	*e*PG	**Pn**	**03 19 13.7**	**+0.4**
CHVC				*e*SG	**Sg**	**03 19 38.2**	**+0.4**
	comp=Z,9.3nm,0.9s						
UPC	**Upice**	**1.76**	**281**	*e*PG	**Pb**	**03 19 14.8**	**-0.1**
UPC				*e*SG	**Sg**	**03 19 39.4**	**+1.2**
	comp=Z,11nm,0.8s						
GOPC	**GO Pecny, Ondr**	**2.55**	**265**	*e*PG	**Pb**	**03 19 28.2**	**-0.2**
GOPC				*e*SG	**Sg**	**03 20 03.5**	**-0.2**
	comp=Z,6.2nm,0.7s						
PRU	**Pruhonice**	**2.70**	**267**	*e*PG	**Pb**	**03 19 30.1**	**-0.8**
PRU				*e*SG	**Sg**	**03 20 07.8**	**-0.6**
	comp=Z,2.9nm,0.5s						
BRG	**Berggiesshubel**	**3.12**	**284**	SG	**Sg**	**03 20 21.3**	**-0.6**
	3.6nm,0.4s						
KHC	**Kasperske Hory**	**3.51**	**254**	*e*PN	**Pn**	**03 19 37.0**	**-0.6**
KHC				*e*PG	**Pb**	**03 19 45.9**	**+1.1**
KHC				*e*SG	**Sg**	**03 20 33.6**	**-0.9**
	comp=Z,3.9nm,0.6s						

ISK ***13*** *03:31:09.9,33°.95N×33°.74E,h20km,ML2.6/7*
NIC ***13*** *03:31:12.2±0.0,34°.05N×33°.82E,h22km±2km, Md2.8/1, Ml2.6/1*
GII ***13*** *03:31:14.6±0.4,34°.01N×33°.74E,h29km±2km, MD1.5/1, Mm1.9/3*

ISC 13 03:31:11.9±1.2,**34°02N**±0°.03×**33°78E**±0°.04,**h22**km±6km, **n31,** σ0°**51**/46,**Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASGA	**Asgata**	**0.89**	**330**	P	**Pb**	**03 31 28.3**	**-0.3**
ASGA				S	**Sb**	**03 31 39.8**	**-0.2**
MVOU	**Mavrovouni**	**1.01**	**353**	P	**Pn**	**03 31 30.5**	**-0.2**
MVOU				S	**Sb**	**03 31 44.0**	**+0.5**
CSS	**Mathiatis**	**1.01**	**339**	PG	**Pb**	**03 31 30.3**	**-0.5**
CSS	**Mathiatis**	**1.01**	**339**	Pg	**Pb**	**03 31 30.9**	**+0.1**
SZAC	**Souni**	**1.05**	**315**	P	**Pn**	**03 31 30.7**	**-0.7**
SZAC				S	**Sn**	**03 31 45.2**	**-0.1**
SZAC				AML	AML	03 31 48.4	
	0.6nm,0.2s						
SZAC				AML	AML	03 31 48.4	
	0.6nm,0.2s						
SZAC				AML	AML	03 31 49.9	
	0.5nm,0.3s						
SZAC				AML	AML	03 31 49.9	
	0.5nm,0.3s						
SZAC				AMd		03 32 04.5	
SZAC				AMd		03 32 04.5	
NATA	**Nata**	**1.26**	**308**	P	**Pn**	**03 31 34.5**	**+0.3**
NATA				S	**Sb**	**03 31 51.3**	**+0.6**
LEF	**Lefka**	**1.32**	**327**	PN	**Pn**	**03 31 34.7**	**-0.4**
LEF				SN	**Sb**	**03 31 52.3**	**-0.3**
HNTI	**Hanita**	**1.49**	**128**	Sn	**Sn**	**03 31 55.6**	**-0.6**
ALFC	**Alefka**	**1.50**	**320**	P	**Pn**	**03 31 37.7**	**+0.2**
AKMS	**Akamas**	**1.56**	**310**	P	**Pn**	**03 31 38.6**	**+0.3**
OSC2	**CSNet OBS 4**	**1.57**	**234**	P	**Pn**	**03 31 39.2**	**+0.7**
OSC2				S	**Sb**	**03 31 60.0**	**+0.2**
MMA0B	**Mount Meron ar**	**1.68**	**126**	Pn	**Pn**	**03 31 40.3**	**+0.2**
MMA0B				Sn	**Sn**	**03 32 01.1**	**0.0**
GEM	**Giv'at Ha'Em**	**1.77**	**117**	Pn	**Pn**	**03 31 41.8**	**+0.6**
SHBL	**Chebaa**	**1.77**	**112**	*e*P	**Pn**	**03 31 41.9**	**+0.5**
KSDI	**Kefar Szold**	**1.77**	**117**	Pn	**Pn**	**03 31 41.6**	**+0.4**
KSDI				Sn	**Sn**	**03 32 02.7**	**-0.4**
KSDI	**Kefar Szold**	**1.77**	**117**	P	**Pn**	**03 31 41.6**	**+0.4**
KSDI				S	**Sn**	**03 32 02.8**	**-0.3**
RCY	**Rachaya**	**1.79**	**106**	*e*P	**Pn**	**03 31 42.1**	**+0.4**
NATI	**Neve Ativ**	**1.80**	**114**	Pn	**Pn**	**03 31 41.8**	**+0.2**
NATI				Sn	**Sn**	**03 32 03.6**	**-0.1**
MMLI	**Mount Malkishu**	**2.09**	**138**	PN	**Pn**	**03 31 44.8**	**-0.9**
MMLI				SN	**Sn**	**03 32 09.7**	**-1.4**
MMLI	**Mount Malkishu**	**2.09**	**138**	Pn	**Pn**	**03 31 45.7**	**0.0**
MMLI				Sn	**Sn**	**03 32 10.8**	**-0.3**
SHMJ	**Saham**	**2.10**	**127**	Pn	**Pn**	**03 31 46.5**	**+0.7**
AKKU	**Akkuyu-Mersin**	**2.15**	**355**	PN	**Pn**	**03 31 46.4**	**0.0**
AKKU				SN	**Sn**	**03 32 13.5**	**+1.1**
TEKE	**Tekeli-Mersin**	**2.19**	**346**	PN	**Pn**	**03 31 47.0**	**-0.1**
IKL	**Isikli**	**2.22**	**358**	PN	**Pn**	**03 31 47.9**	**+0.5**
HMDT	**Nahal Hemdat**	**2.29**	**140**	Pn	**Pn**	**03 31 48.9**	**+0.5**
HMDT				Sn	**Sn**	**03 32 15.8**	**-0.1**
KEBE	**Keben-Mersin**	**2.43**	**359**	PN	**Pn**	**03 31 50.5**	**+0.1**
TEVE	**Tevekalti-Mers**	**2.43**	**354**	PN	**Pn**	**03 31 50.3**	**-0.1**
DSI	**Dead Sea**	**2.79**	**151**	Pn	**Pn**	**03 31 55.7**	**+0.5**
DSI				Sn	**Sn**	**03 32 27.9**	**-0.3**
YTIR	**Yattir**	**2.88**	**157**	Sn	**Sn**	**03 32 29.6**	**-0.9**
TAHT	**Tahtakopru-Hat**	**3.07**	**39**	PN	**Pn**	**03 31 59.5**	**+0.4**
MBRI	**Mt Berech**	**4.32**	**167**	Pn	**Pn**	**03 32 17.0**	**+0.6**

KRSC ***13*** *03:44:47.5±1.6,52°.39N×159°.55E,h40km±19km,ML4.6, FELT [III] at lighthouse Krugliy.*
MOS ***13*** *03:44:48.8±1.1,52°.41N×159°.35E,h56km,mb4.1/7, Error ellipse: s-maj=8.2km s-min=4.2km az=86.5*
IDC ***13*** *03:44:53.2±2.3,52°.64N×159°.27E,h69km±22km,mb3.5/8, mb1 3.9/9,mb1mx3.5/49,mbtmp3.9/9,MS2.6/1,Ms1 2.6/1, ms1mx2.3/27,Error ellipse: s-maj=30.9km s-min=21.6km az=143.0*

ISC 13 03:44:49.5±1.0,**52°43N**±0°.04×**159°46E**±0°.04,**h42**km±10km, **n117,** σ1°**64**/139,**mb3.9**/15,**12C-3D,Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.58**	**271**	*e*P	**Pn**	**03 45 01.4**	**+0.1**
RUS				*e*S	**Sn**	**03 45 08.8**	**-0.9**
RUS	**Russkaya**	**0.58**	**271**	PN	**Pn**	**03 45 01.4**	**+0.1**
RUS				S	**Sn**	**03 45 08.8**	**-0.9**
DALK	**Dalny**	**0.74**	**325**	*e*P	**Pn**	**03 45 03.0**	**-0.5**
DALK				*e*S	**Sn**	**03 45 13.3**	**-0.2**
DALK	**Dalny**	**0.74**	**325**	PN	**Pn**	**03 45 03.0**	**-0.5**
DALK				S	**Sn**	**03 45 13.3**	**-0.2**
NLC	**Nalytchevo**	**0.74**	**355**	*e*P	**Pn**	**03 45 02.7**	**-0.9**
NLC				*e*S	**Sn**	**03 45 12.7**	**-1.0**
NLC	**Nalytchevo**	**0.74**	**355**	PN	**Pn**	**03 45 02.7**	**-0.9**
NLC				S	**Sn**	**03 45 12.7**	**-1.0**
SPN	**Mys Shipunski**	**0.75**	**27**	*e*P	**Pn**	**03 45 03.1**	**-0.6**
SPN				*e*S	**Sn**	**03 45 15.4**	**+1.5**
SPN	**Mys Shipunski**	**0.75**	**27**	PN	**Pn**	**03 45 03.1**	**-0.6**
SPN				S	**Sn**	**03 45 15.4**	**+1.5**
PET	**Petropavlovsk**	**0.77**	**321**	*e*P	**Pn**	**03 45 03.5**	**-0.3**
PET				*e*S	**Sn**	**03 45 13.3**	**-1.0**
PET	**Petropavlovsk**	**0.77**	**321**	*α i*PN	**Pn**	**03 45 03.6**	**-0.3**
PET				*e*S	**Sn**	**03 45 13.3**	**-1.0**
PET				pmax	pmax		
	comp=Z,543nm,0.4s						
PET				smax	smax		
	comp=E,4μm,0.4s						
PET				smax	smax		
	comp=N,4μm,0.4s						
MTVR	**Mutnovka**	**0.78**	**274**	*e*P	**Pn**	**03 45 04.5**	**+0.3**
MTVR	**Mutnovka**	**0.78**	**274**	PN	**Pn**	**03 45 04.5**	**+0.3**
GRL	**Gorelyy**	**0.85**	**279**	*e*P	**Pn**	**03 45 05.8**	**+0.6**
GRL				*e*S	**Sn**	**03 45 19.2**	**+2.6**
GRL	**Gorelyy**	**0.85**	**279**	PN	**Pn**	**03 45 05.8**	**+0.6**
GRL				S	**Sn**	**03 45 19.2**	**+2.6**
UGLR	**Uglovaya**	**0.87**	**334**	*e*P	**Pn**	**03 45 05.2**	**-0.2**
UGLR	**Uglovaya**	**0.87**	**334**	PN	**Pn**	**03 45 05.2**	**-0.2**
KRMR	**Karymshinskiy**	**0.90**	**297**	*e*P	**Pn**	**03 45 05.5**	**-0.2**
KRMR				*e*S	**Sn**	**03 45 17.2**	**-0.3**
KRMR	**Karymshinskiy**	**0.90**	**297**	PN	**Pn**	**03 45 05.5**	**-0.2**
KRMR				S	**Sn**	**03 45 17.2**	**-0.3**
SDLR	**Sedlovina**	**0.92**	**338**	*e*P	**Pn**	**03 45 05.6**	**-0.4**
SDLR				*e*S	**Sn**	**03 45 17.4**	**-0.7**
SDLR	**Sedlovina**	**0.92**	**338**	PN	**Pn**	**03 45 05.6**	**-0.4**
SDLR				S	**Sn**	**03 45 17.4**	**-0.7**
SMAR	**Somma**	**0.92**	**335**	*e*P	**Pn**	**03 45 05.7**	**-0.5**
SMAR	**Somma**	**0.92**	**335**	PN	**Pn**	**03 45 05.7**	**-0.5**
AVH	**Avacha**	**0.94**	**333**	*e*P	**Pn**	**03 45 06.3**	**-0.1**
AVH	**Avacha**	**0.94**	**333**	PN	**Pn**	**03 45 06.3**	**-0.1**
ASAK	**Asacha**	**0.95**	**268**	*e*P	**Pn**	**03 45 07.3**	**+0.8**
ASAK				*e*S	**Sn**	**03 45 20.6**	**+1.6**
ASAK	**Asacha**	**0.95**	**268**	PN	**Pn**	**03 45 07.3**	**+0.8**
ASAK				S	**Sn**	**03 45 20.6**	**+1.6**
KRER	**Koryakskii**	**0.97**	**334**	*e*P	**Pn**	**03 45 06.6**	**-0.3**
KRER				*e*S	**Sn**	**03 45 19.7**	**+0.1**
KRER	**Koryakskii**	**0.97**	**334**	PN	**Pn**	**03 45 06.6**	**-0.3**
KRER				S	**Sn**	**03 45 19.7**	**+0.1**
KOK	**Koryaka**	**0.99**	**330**	*e*P	**Pn**	**03 45 07.0**	**-0.1**
KOK				*e*S	**Sn**	**03 45 21.5**	**+1.5**
KOK	**Koryaka**	**0.99**	**330**	PN	**Pn**	**03 45 07.0**	**-0.1**
KOK				S	**Sn**	**03 45 21.5**	**+1.5**
KRX	**Arik**	**1.05**	**333**	*e*P	**Pn**	**03 45 07.6**	**-0.3**
KRX	**Arik**	**1.05**	**333**	PN	**Pn**	**03 45 07.6**	**-0.3**
KDTR	**Khodutka, Kamc**	**1.05**	**234**	*e*P	**Pn**	**03 45 08.2**	**+0.4**
KDTR				*e*S	**Sn**	**03 45 22.5**	**+1.3**
KDTR	**Khodutka, Kamc**	**1.05**	**234**	PN	**Pn**	**03 45 08.2**	**+0.4**
KDTR				S	**Sn**	**03 45 22.5**	**+1.3**
PEA0B	**Petropavlovsk-**	**1.26**	**303**	*d i*PN	**Pn**	**03 45 11.2**	**+0.5**
PETK	**Petropavlovsk-**	**1.26**	**303**	P	**Pn**	**03 45 11.1**	**+0.4**
	comp=N,70nm,0.3s,baz=106,slow=19,SNR=350						
PETK				S	**Sn**	**03 45 27.2**	**+0.7**
	comp=N,182nm,0.3s,baz=94,slow=30,SNR=9.7						
PETK				LR	LR	03 45 48.8	
	comp=N,192nm,18.5s,baz=215,slow=52						
APC	**Apacha**	**1.48**	**290**	*e*P	**Pn**	**03 45 15.0**	**+1.3**
APC				*e*S	**Sn**	**03 45 33.9**	**+2.1**
APC	**Apacha**	**1.48**	**290**	PN	**Pn**	**03 45 15.0**	**+1.3**
APC				S	**Sn**	**03 45 33.9**	**+2.1**
KII	**Karymskiy**	**1.61**	**360**	*e*P	**Pn**	**03 45 17.3**	**+1.8**
KII				*e*S	**Sn**	**03 45 38.9**	**+3.9**
KII	**Karymskiy**	**1.61**	**360**	PN	**Pn**	**03 45 17.3**	**+1.8**
KII				S	**Sn**	**03 45 38.9**	**+3.9**
MIPR	**Malaya Ipel'ka**	**1.66**	**266**	*e*P	**Pn**	**03 45 17.7**	**+1.6**
MIPR	**Malaya Ipel'ka**	**1.66**	**266**	PN	**Pn**	**03 45 17.7**	**+1.6**
PAU	**Pauzhetka**	**1.90**	**240**	*e*P	**Pn**	**03 45 20.5**	**+1.1**
PAU	**Pauzhetka**	**1.90**	**240**	PN	**Pn**	**03 45 20.5**	**+1.1**
SKR	**Severo-Kuril's**	**2.72**	**231**	*e*P	**Pn**	**03 45 31.8**	**+1.1**
SKR				*e*S	**Sn**	**03 46 03.3**	**+1.0**
SKR	**Severo-Kuril's**	**2.72**	**231**	*e*PN	**Pn**	**03 45 31.5**	**+0.8**
SKR				*e*S	**Sn**	**03 46 03.1**	**+0.8**
SKR				pmax	pmax		
	comp=Z,21nm,0.5s						
SKR				smax	smax		
	comp=N,305nm,0.5s						
SKR				smax	smax		
	comp=E,284nm,0.4s						
KZV	**Kizimen**	**2.73**	**10**	*e*P	**Pn**	**03 45 32.4**	**+1.4**
KZV	**Kizimen**	**2.73**	**10**	PN	**Pn**	**03 45 32.4**	**+1.4**
TUMD	**Tumrok D**	**2.83**	**11**	*e*P	**Pn**	**03 45 33.6**	**+1.4**
TUMD				*e*S	**Sn**	**03 46 07.8**	**+2.7**
TUMR	**Tumrok**	**2.89**	**8**	*e*P	**Pn**	**03 45 35.4**	**+2.4**
TUMR	**Tumrok**	**2.89**	**8**	PN	**Pn**	**03 45 33.6**	**+0.6**
TUMR				S	**Sn**	**03 46 07.8**	**+1.3**
ALID	**Alaid**	**2.89**	**239**	*e*P	**Pn**	**03 45 34.5**	**+1.3**
ALID	**Alaid**	**2.89**	**239**	PN	**Pn**	**03 45 34.5**	**+1.3**
KMNR	**Kamenistaya**	**3.36**	**8**	*e*P	**Pn**	**03 45 42.4**	**+2.8**
KMNR	**Kamenistaya**	**3.36**	**8**	PN	**Pn**	**03 45 42.4**	**+2.8**
KIRR	**Kirishev**	**3.57**	**8**	*e*P	**Pn**	**03 45 45.0**	**+2.6**
KIRR	**Kirishev**	**3.57**	**8**	PN	**Pn**	**03 45 45.0**	**+2.6**
KPT	**Kopyto**	**3.57**	**7**	*e*P	**Pn**	**03 45 44.8**	**+2.4**
KPT	**Kopyto**	**3.57**	**7**	PN	**Pn**	**03 45 44.8**	**+2.4**
BZGR	**Bezymyannyi-Gr**	**3.59**	**11**	*e*P	**Pn**	**03 45 45.1**	**+2.4**
BZGR	**Bezymyannyi-Gr**	**3.59**	**11**	PN	**Pn**	**03 45 45.1**	**+2.4**
BZWR	**Bezymyannyi-We**	**3.59**	**9**	*e*P	**Pn**	**03 45 45.8**	**+3.0**
BZWR	**Bezymyannyi-We**	**3.59**	**9**	PN	**Pn**	**03 45 45.8**	**+3.0**
KOZ	**Kozyrevsk**	**3.64**	**4**	*e*P	**Pn**	**03 45 46.8**	**+3.5**
KOZ	**Kozyrevsk**	**3.64**	**4**	PN	**Pn**	**03 45 46.8**	**+3.5**
LGNR	**Loginova**	**3.73**	**11**	*e*P	**Pn**	**03 45 47.7**	**+2.9**
LGNR	**Loginova**	**3.73**	**11**	PN	**Pn**	**03 45 47.7**	**+2.9**
CIRR	**Tsirk**	**3.77**	**11**	*e*P	**Pn**	**03 45 48.3**	**+3.1**
CIRR	**Tsirk**	**3.77**	**11**	PN	**Pn**	**03 45 48.3**	**+3.1**
KRSR	**Krestovskiy**	**3.85**	**9**	*e*P	**Pn**	**03 45 48.8**	**+2.6**
KRSR	**Krestovskiy**	**3.85**	**9**	PN	**Pn**	**03 45 48.8**	**+2.6**
KBTR	**Krutoberegovo**	**4.27**	**26**	*e*P	**Pn**	**03 45 53.8**	**+2.0**
KBTR	**Krutoberegovo**	**4.27**	**26**	PN	**Pn**	**03 45 53.8**	**+2.0**
KBG	**Krutoberegovo**	**4.28**	**25**	*e*P	Pn	03 46 00.6	+8.6
KBG	**Krutoberegovo**	**4.28**	**25**	PN	Pn	03 46 00.6	+8.6
BKI	**Bering**	**4.76**	**52**	*e*P	**Pn**	**03 45 58.4**	**-0.2**
BKI				*e*S	**Sn**	**03 46 47.9**	**-4.4**
BKI	**Bering**	**4.76**	**52**	PN	**Pn**	**03 45 58.4**	**-0.2**
MA2	**Magadan**	**8.65**	**329**	*i*PN	**Pn**	**03 46 51.0**	**-0.9**
KUR	**Kuril'sk**	**10.49**	**231**	*i*PN	**Pn**	**03 47 15.7**	**-1.5**
TYV	**Tymovskoe**	**10.56**	**268**	*e*PN	**Pn**	**03 47 17.0**	**-1.1**
TYV				pmax	pmax		
	comp=Z,16nm,0.3s						
YSS	**Yuzh-Sakhalins**	**12.11**	**250**	*e*PN	**Pn**	**03 47 43.4**	**+4.1**
YSS				MLR	MLR		
	comp=Z,200nm,17.0s						
ASAJ	**Asahikawa**	**13.95**	**240**	P	**P**	**03 48 08.9**	**-2.6**
	comp=Z,1.4nm,0.3s,baz=75,slow=13,SNR=6.4						
ERM	**Erimo**	**15.17**	**233**	*c i*P	**Pn**	**03 48 19.1**	**-1.5**
BILL	**Bilibino**	**16.00**	**9**	*i*P	**Pn**	**03 48 31.8**	**+0.6**
KLR	**Kul'dur**	**17.75**	**271**	*e*P	**Pn**	**03 48 52.5**	**-0.6**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.4s						
YAK	**Yakutsk**	**18.59**	**313**	*e*P	**P**	**03 49 01.7**	**-1.0**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
USA0B	**Ussuriysk Arra**	**19.94**	**257**	*i*P	**P**	**03 49 16.9**	**-0.7**
VLA	**Vladivostok**	**20.63**	**254**	*i*P	**P**	**03 49 25.3**	**+0.2**
VLA				pmax	pmax		
	comp=Z,13nm,0.7s						
MSHR	**Mys Shultsa**	**21.38**	**254**	*i*P	**P**	**03 49 30.9**	**-2.2**
MJA0	**Matsu Arr-Jizo**	**21.81**	**232**	*e*P	**P**	**03 49 38.3**	**+0.4**
MJA0				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MJAR	**Matsushiro Arr**	**21.83**	**232**	P	**P**	**03 49 39.7**	**+1.6**
	comp=Z,3.6nm,0.7s,baz=22,slow=8.4,SNR=9.4						
TIXI	**Tiksi**	**23.53**	**336**	*c i*P	**P**	**03 49 54.4**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.9s						
HIA	**Hailar**	**25.05**	**279**	*e*P	**P**	**03 50 07.7**	**-1.9**
HIA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KSRS	**Korea Array**	**26.61**	**248**	LR	LR	04 00 05.3	
	comp=Z,13nm,20.4s,baz=80,slow=34						
COLA	**College**	**29.14**	**44**	*i*P	**P**	**03 50 45.2**	**-0.8**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ILAR	**Eielson Array**	**29.56**	**44**	P	**P**	**03 50 49.8**	**0.0**
	comp=Z,0.5nm,0.8s,baz=266,slow=6.1,SNR=7.1						
H11N2	**WAKE ISLAND Hy**	**33.15**	**167**	T	T	04 26 30.0	
	baz=351,slow=76,SNR=912						
H11N3	**WAKE ISLAND Hy**	**33.16**	**167**	T	T	04 26 31.4	
	baz=351,slow=76,SNR=658						
H11N1	**WAKE ISLAND Hy**	**33.17**	**167**	T	T	04 26 31.5	
	baz=351,slow=76,SNR=810						
ULN	**Ulaanbaatar**	**33.27**	**283**	*i*P	**P**	**03 51 21.1**	**-1.7**
ULN				pmax	pmax		
	comp=Z,1.0nm,1.1s						
TLY	**Talaya**	**33.60**	**291**	*i*P	**P**	**03 51 25.5**	**+0.1**
TLY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
H11S1	**WAKE ISLAND Hy**	**34.33**	**168**	T	T	04 27 57.7	
	baz=351,slow=76,SNR=117						
H11S3	**WAKE ISLAND Hy**	**34.34**	**168**	T	T	04 28 03.8	
	baz=351,slow=76,SNR=182						
H11S2	**WAKE ISLAND Hy**	**34.34**	**168**	T	T	04 27 58.3	
	baz=351,slow=76,SNR=62						
NRIK	**Noril'sk**	**36.23**	**325**	*i*P	**P**	**03 51 48.2**	**+0.4**
NRIK				pmax	pmax

comp=Z,11nm,0.7s
ASAR Alice Springs 16.66 163 P **Pn** 03 56 10.4 +3.4
comp=Z,4.7nm,0.3s,baz=341,slow=10.0,SNR=161
ASAR S S 03 59 04.1 -8.2
comp=Z,1.3nm,0.3s,baz=333,slow=17,SNR=6.1
SBUM Sibu 19.16 301 P **P** **03 56 33.8 -0.5**
SBUM IAmb IAmb 03 56 37.1
comp=Z,7.5nm,0.6s
FORT Forrest 22.93 181 P **P** **03 57 13.4 +0.1**
STKA Stephens Creek 26.93 155 P **P** **03 57 54.6 +5.0**
comp=Z,3.4nm,0.6s,baz=320,slow=8.6,SNR=9.2
STKA Stephens Creek 26.93 155 P **P** **03 57 49.2 -0.3**
RPSI Rantau Prapat 31.30 288 P **P** **03 58 27.3 -1.1**
RPSI IAmb IAmb 03 58 29.8
comp=Z,6.7nm,0.6s
RPSI Rantau Prapat 31.30 288 P **P** **03 58 28.1 -0.3**
PSI Prapat 31.33 288 P **P** **03 58 28.1 -0.8**
comp=Z,5.5nm,0.5s,baz=180,slow=17,SNR=7.9
CMAR Chiang Mai Arr 39.11 312 P **P** **03 59 35.4 +0.2**
comp=Z,1.0nm,0.3s,baz=130,slow=8.4,SNR=4.9
CHTO Chiang Mai 39.33 312 P **P** **03 59 35.7 -1.4**
CHTO IAmb IAmb 03 59 38.3
comp=Z,3.8nm,1.1s
KSRS Korea Array 44.96 359 P **P** **04 00 22.6 +0.3**
comp=Z,2.2nm,0.5s,baz=177,slow=9.8,SNR=7.0
MJAR Matsushiro Arr 44.97 11 P **P** **04 00 21.2 -1.3**
comp=Z,2.8nm,0.9s,baz=186,slow=8.8,SNR=3.6
MAJO Matsushiro 44.98 11 P **P** **04 00 21.9 -0.6**
MAJO IAmb IAmb 04 00 35.7
comp=Z,4.6nm,0.7s
USRK Ussuriysk Ar. 51.79 3 P **P** **04 01 14.4 0.0**
comp=Z,3.0nm,0.6s,baz=181,slow=6.7,SNR=8.3
ODAN Odare 52.65 312 *eP* **P** **04 01 20.6 -0.9**
comp=Z,18nm,0.5s
TAPN Taplejung 52.70 313 *eP* **P** **04 01 21.3 -0.6**
comp=Z,42nm,1.0s
RAMN Ramite 53.28 312 *eP* **P** **04 01 25.9 -0.2**
comp=Z,26nm,0.6s
JIRN Jiri 53.98 312 *eP* **P** **04 01 30.2 -1.2**
comp=Z,14nm,0.6s
GUN Gumba 54.35 312 *eP* **P** **04 01 33.1 -0.9**
comp=Z,17nm,0.5s
PKI Pulchoki 54.51 312 *eP* **P** **04 01 34.0 -1.1**
comp=Z,12nm,0.5s
PKIN Phulchoki 54.52 312 *eP* **P** **04 01 34.1 -1.0**
comp=Z,9.4nm,0.5s
KKN Kakani 54.72 312 *eP* **P** **04 01 35.6 -0.9**
comp=Z,12nm,0.5s
DMN Daman 54.75 312 *eP* **P** **04 01 36.1 -0.7**
KOLN Koldanda 55.96 311 *eP* **P** **04 01 44.6 -0.8**
comp=Z,16nm,0.6s
DANN Dangsing 56.15 312 *eP* **P** **04 01 46.0 -0.8**
comp=Z,13nm,0.6s
PYUN Piuthan 56.59 311 *eP* **P** **04 01 49.2 -0.7**
comp=Z,12nm,0.4s
SONM Songino Arbay 58.69 343 P **P** **04 02 04.6 +0.6**
comp=Z,1.4nm,0.6s,baz=160,slow=9.3,SNR=4.7
PETK Petropavlovsk- 65.48 19 P **P** **04 02 50.3 +1.2**
comp=Z,2.5nm,0.5s,baz=189,slow=6.4,SNR=4.6
KSH Kashi 67.58 318 P P 04 03 07.8 +4.9
KSH pP pwP 04 03 43.8 +0.6
KSH sP sP 04 04 02.4 +8.6
KSH pmax pmax
comp=Z,15nm,1.1s
KSH pmax pmax
comp=Z,150nm,4.9s
MK31 Makanchi Array 68.05 328 P **P** **04 03 05.2 -0.4**
MKAR Makanchi Array 68.05 328 P **P** **04 03 05.2 -0.3**
comp=Z,2.3nm,0.5s,baz=120,slow=8.2,SNR=43
ZAA0 Zalesovo Array 71.60 335 P **P** **04 03 26.6 -0.4**
ZAA0 IAmb IAmb 04 03 27.0
comp=Z,4.7nm,0.6s
ZALV Zalesovo Beam 71.60 335 P **P** **04 03 26.2 -0.8**
comp=Z,4.6nm,0.5s,baz=137,slow=5.3,SNR=15
KURK Kurchatov 72.39 329 P **P** **04 03 30.9 -0.9**
TIXI Tiksi 79.22 0 P **P** **04 04 08.4 -1.7**
TIXI IAmb IAmb 04 04 10.5
comp=Z,4.4nm,0.5s
NRIK Noril'sk 81.92 346 P **P** **04 04 25.0 +0.4**
comp=Z,2.6nm,0.4s,baz=100,slow=4.0,SNR=4.9
RND Reindeer 93.56 27 P **P** **04 05 19.9 -1.0**
RND IAmb IAmb 04 05 21.8
comp=Z,2.8nm,0.8s
PDAR Pinedale Array 118.45 45 PKP **PKiKP** **04 10 54.5 +1.9**
comp=Z,0.3nm,0.6s,baz=243,slow=0.3,SNR=4.2
TORD Torodi Ar. Bea 127.51 281 PKP **PKPdf** **04 11 11.1 +0.7**
comp=Z,0.8nm,0.6s,baz=43,slow=1.4,SNR=12
LPAZ La Paz 150.99 145 PKPbc **PKiKP** **04 12 02.7 +3.0**
comp=Z,1.5nm,0.4s,baz=42,slow=2.7,SNR=13
LPAZ La Paz 150.99 145 **PKPbc** **04 11 58.5 -0.6**

IDC 13 04:21:56.1±3.3, 32°.19S×179°.34W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.7/21, mbtmp3.7/3, ML3.6/1, MS3.8/2, Ms1 3.8/2, ms1mx3.1/25, Error ellipse: s-maj=71.6km s-min=49.3km az=107.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.72**	**205**	Pn	Pn	04 23 35.1	-0.8
	1.2nm,0.3s,baz=283,slow=5.8,SNR=2.2						
URZ				Sn	Sn	04 24 47.8	-5.4
	1.1nm,0.3s,baz=232,slow=21,SNR=6.9						
ASAR	**Alice Springs**	**41.91**	**270**	P	P	04 29 48.7	+0.1
	0.4nm,0.6s,baz=104,slow=7.6,SNR=4.8						
WRA	**Warramunga Arr**	**43.06**	**275**	P	P	04 29 57.8	-0.2
	0.4nm,0.3s,baz=113,slow=8.0,SNR=8.8						
SIJI	**Sorong**	**55.96**	**294**	LR	LR	04 55 41.4	
	comp=Z,33nm,18.3s,baz=156,slow=36						
LEM	**Lembang**	**72.05**	**273**	LR	LR	05 06 07.2	
	comp=Z,168nm,19.9s,baz=140,slow=37						
FINES	**FINESS Array B**	**146.40**	**338**	PKPbc	PKPdf	04 41 37.4	+0.5
	1.7nm,0.9s,baz=60,slow=3.4,SNR=2.0						

IDC 13 04:48:22.6±24.0, 18°.69S×173°.19W, h0km, mb4.6/4, mb1 4.7/4, mb1mx3.9/40, mbtmp4.6/4, Error ellipse: s-maj=457.6km s-min=152.0km az=73.0
NEIC 13 04:48:30.5±1.0, 19°.0S×0°.5×173°.40W±0°.06, h47km±18km, mb4.4/12, Error ellipse: s-maj=71.9km s-min=5.1km az=185.0
ISC 13 04:48:29.2±1.1, 19°.2S×173°.4W±0°.1, h28km, n20, σ0s79/20, mb4.5/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.32**	**88**	Pn	**Pn**	**04 49 19.4**	**+0.2**
MSVF	**Nonsavu**	**8.22**	**279**	Pn	**Pn**	**04 50 27.1**	**+0.4**
EIDS	**Eidsvold**	**33.33**	**253**	P	**P**	**04 55 05.1**	**+0.2**
EIDS				IAmb	IAmb	04 55 05.3	
	comp=Z,5.1nm,0.9s						
ARMA	**Armidale**	**33.48**	**244**	P	**P**	**04 55 07.5**	**+1.2**
CAN	**Canberra**	**36.78**	**236**	P	**P**	**04 55 34.1**	**-0.6**
CTA	**Charters Tower**	**37.91**	**262**	P	**P**	**04 55 45.0**	**+0.7**
	comp=Z,5.1nm,0.3s,baz=92,slow=10,SNR=10.0						
CTAO	**Charters Tower**	**37.91**	**262**	P	**P**	**04 55 44.8**	**+0.5**
COEN	**Coen**	**41.84**	**270**	P	**P**	**04 56 16.4**	**-0.6**
STKA	**Stephens Creek**	**42.20**	**244**	P	**P**	**04 56 21.1**	**+1.3**
	comp=Z,2.3nm,0.4s,baz=90,slow=11,SNR=6.5						
STKA	**Stephens Creek**	**42.20**	**244**	P	**P**	**04 56 20.7**	**+0.8**
BBOO	**Buckleboo**	**46.95**	**243**	P	**P**	**04 56 57.6**	**-0.2**
BBOO				IAmb	IAmb	04 56 59.1	
	comp=Z,6.4nm,0.6s						
WR0	**Warramunga Arr**	**48.85**	**260**	P	**P**	**04 57 12.2**	**-0.5**
WR0				IAmb	IAmb	04 57 15.2	
	comp=Z,1.4nm,0.6s						
AS31	**Alice Springs**	**48.99**	**255**	P	**P**	**04 57 12.3**	**-1.5**
AS31				IAmb	IAmb	04 57 14.5	
	comp=Z,2.0nm,0.7s						
ASAR	**Alice Springs**	**48.99**	**255**	P	**P**	**04 57 13.9**	**+0.1**
	comp=Z,8.6nm,0.8s,baz=87,slow=8.4,SNR=57						
WB0	**Warramunga Arr**	**49.02**	**260**	P	**P**	**04 57 13.5**	**-0.5**
WB2	**Warramunga Arr**	**49.03**	**260**	P	**P**	**04 57 13.5**	**-0.6**
WB2				IAmb	IAmb	04 57 18.0	
	comp=Z,5.0nm,1.1s						
WRA	**Warramunga Arr**	**49.04**	**260**	P	**P**	**04 57 13.7**	**-0.5**
	comp=Z,2.0nm,0.4s,baz=99,slow=8.2,SNR=14						
FORT	**Forrest**	**53.73**	**246**	P	**P**	**04 57 49.0**	**-0.1**
MORW	**Morawa**	**64.28**	**246**	P	**P**	**04 59 03.3**	**+1.0**
MORW				IAmb	IAmb	04 59 05.6	
	comp=Z,2.8nm,0.8s						
GIRL	**Giralia**	**67.03**	**253**	P	**P**	**04 59 19.1**	**-1.0**

ISK 13 04:52:32.7, 40°.11N×45°.13E, h10km, ML2.6/4

DDA 13 04:52:33.3, 40°.16N×45°.04E, h7km±3km, ML2.3
TEH 13 04:52:35.6, 39°.91N×44°.55E, h10km, ML2.9
ISC 13 04:52:35.4±1.4, 40°.17N±0°.04×45°.00E±0°.04, h13km±12km, n13, σ1s34/21, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TASB	**TASBURUN-IGDIR**	**0.61**	**253**	PG	**Pg**	**04 52 46.6**	**-0.8**
TASB				SG	**Sb**	**04 52 56.9**	**+0.3**
IGDI	**IGDIR**	**0.77**	**248**	*i* P	**Pg**	**04 52 49.0**	**-1.4**
IGDI				*i* S	**Sg**	**04 53 00.6**	**+0.2**
IGDI				IAML		04 53 01.0	
	comp=N,190nm,0.3s						
IGDI				IAML		04 53 01.0	
	comp=E,242nm,0.3s						
EAK	**Akyaka**	**1.19**	**296**	*i* P	**Pb**	**04 52 57.3**	**-0.5**
EAK				*i* S	**Sn**	**04 53 14.5**	**+0.7**
EAK				IAML		04 53 19.0	
	comp=N,156nm,0.6s						
EAK				IAML		04 53 19.0	
	comp=E,143nm,0.6s						
CLDR	**Caldiran**	**1.32**	**220**	PN	**Pn**	**04 52 58.1**	**-1.6**
CLDR	**Caldiran**	**1.32**	**220**	*i* P	**Pn**	**04 52 58.4**	**-1.3**
CLDR				*i* S	**Sg**	**04 53 22.5**	**+4.5**
CLDR				IAML		04 53 25.0	
	comp=N,46nm,0.6s						
CLDR				IAML		04 53 25.0	
	comp=E,30nm,0.6s						
BTNK	**Botanikuri**	**1.52**	**354**	*i* P	**Pn**	**04 53 02.8**	**+0.5**
BTNK				*i* S	**Sb**	**04 53 22.9**	**+0.1**
BTNK				IAML		04 53 24.0	
	comp=E,38nm,0.1s						
BTNK				IAML		04 53 24.0	
	comp=N,35nm,0.1s						
KARS	**Kars**	**1.54**	**288**	PN	**Pn**	**04 53 01.9**	**-0.7**
IMRD	**Marand**	**1.55**	**159**	*e*Sg	**Sg**	**04 53 25.8**	**+0.6**
IMRD				*e*Pg	**Pn**	**04 53 03.1**	**+0.4**
IMRD				*e*		04 53 27.9	
TBLG	**Delisi**	**1.58**	**353**	PN	**Pn**	**04 53 02.8**	**-0.2**
TBLG				SN	**Sb**	**04 53 24.1**	**-0.1**
AGRB	**Hanur-Agry**	**1.66**	**250**	PN	**Pn**	**04 53 03.7**	**-0.6**
ISHB	**Shabestar**	**1.94**	**166**	*e*Pg	**Pb**	**04 53 10.4**	**-0.3**
ISHB				*e*		04 53 16.2	
ISHB				*e*Sg	**Sg**	**04 53 37.4**	**-0.3**
EATA	**Eleskirt**	**1.95**	**262**	*i* P	**Pb**	**04 53 11.9**	**+1.0**
IHRS	**Heris**	**2.43**	**139**	*e*Pn	**Pb**	**04 53 19.4**	**+0.4**

IDC 13 04:54:40.6±7.5, 7°.51S×128°.79E, h132km±79km, mb3.3/1, mb1 3.6/5, mb1mx3.2/44, mbtmp4.0/5, Error ellipse: s-maj=68.9km s-min=25.1km az=34.0
DJA 13 04:54:46.5±1.3, 8°.5S×10°.1×12°.9E±°, h145km±21km, M4.4/5, mb4.3/2, MLv4.4/5
ISC 13 04:54:41.8±1.5, 7°.8S±0°.1×128°.87E±0°.09, h150km, n7, σ2s28/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**4.95**	**246**	P	**Pn**	**04 55 55.7**	**+1.0**
SOEI				S	**Sn**	**04 56 50.3**	**-1.3**
BATI	**Baumata**	**5.68**	**245**	P	**Pn**	**04 56 05.5**	**+1.2**
	13nm,0.3s,baz=186,slow=1.3,SNR=8.0						
BATI				S	**Sn**	**04 57 08.2**	**-0.6**
	19nm,0.3s,baz=41,slow=20,SNR=12						
BATI	**Baumata**	**5.68**	**245**	P	**Pn**	**04 56 06.3**	**+2.0**
	0.2nm27nm,0.5s						
BATI				S	**Sn**	**04 57 07.3**	**-1.4**
	0.2nm27nm,0.5s						
FITZ	**Fitzroy Crossi**	**10.72**	**197**	P	**Pn**	**04 57 12.4**	**+1.1**
	0.5nm,0.3s,baz=22,slow=12,SNR=33						
FITZ				S	**Sn**	**04 59 08.1**	**-1.8**
	2.1nm,0.3s,baz=267,slow=19,SNR=8.5						
WRA	**Warramunga Arr**	**13.19**	**157**	P	**P**	**04 57 45.9**	**-2.1**
	1.1nm,0.3s,baz=336,slow=13,SNR=14						
WRA				S	**Sn**	**05 00 08.0**	**-1.5**
	0.9nm,0.3s,baz=340,slow=21,SNR=5.8						
ASAR	**Alice Springs**	**16.51**	**164**	P	**Pn**	**04 58 29.7**	**+4.9**
	0.3nm,0.3s,baz=342,slow=9.8,SNR=14						
MKAR	**Makanchi Array**	**68.28**	**328**	P	**P**	**05 05 25.4**	**-1.2**
	0.3nm,0.3s,baz=113,slow=8.1,SNR=6.8						

WEL 13 05:02:55.2, 40°.2S±0°.8×17°.6E±°, h53km±1km, M4.0/18, ML4.4/18, MLv4.0/18, Error ellipse: s-maj=0.0km s-min=0.0km az=76.2, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WPHZ	**Waipukurau**	**0.13**	**43**	P	Pn	05 03 03.8	+0.2
WPHZ				S	Sn	05 03 10.1	+0.6
DVHZ	**Dannevirke**	**0.18**	**221**	P	Pn	05 03 04.0	+0.1
PRHZ	**Porangahau**	**0.26**	**114**	P	Pn	05 03 04.6	+0.3
PRHZ				S	Sn	05 03 11.9	+1.0
PNHZ	**Pukenui**	**0.27**	**339**	P	Pn	05 03 04.7	+0.3
PNHZ				S	Sn	05 03 11.5	+0.5
TSZ	**Takapari Road**	**0.30**	**290**	P	Pn	05 03 05.0	+0.3
TSZ				S	Sn	05 03 11.8	+0.4
ANWZ	**Angora Road**	**0.32**	**159**	P	Pn	05 03 05.3	+0.5
ANWZ				S	Sn	05 03 12.9	+1.1
PXZ	**Pawanui**	**0.43**	**73**	P	Pn	05 03 06.1	+0.2
PXZ				S	Sn	05 03 14.4	+0.8
PRWZ	**Pori Road**	**0.48**	**214**	P	Pn	05 03 07.2	+0.8
POWZ	**Post Office Ro**	**0.48**	**241**	P	Pn	05 03 07.1	+0.6
POWZ				S	Sn	05 03 15.7	+1.0
KRHZ	**Kereru**	**0.52**	**4**	P	Pn	05 03 07.2	+0.3
KRHZ				S	Sn	05 03 16.0	+0.6
BFZ	**Birch Farm**	**0.52**	**186**	P	Pn	05 03 07.2	+0.9
BFZ				S	Sn	05 03 15.7	+0.3
KAHZ	**Kahuranaki**	**0.56**	**49**	P	Pn	05 03 08.0	+0.5
KAHZ				S	Sn	05 03 17.7	+1.4
TIWZ	**Tintock**	**0.70**	**208**	P	Pn	05 03 09.7	+0.6
BHHZ	**Black Hill Sta**	**0.70**	**343**	P	Pn	05 03 09.8	+0.6
KWHZ	**Kaweka Forest**	**0.74**	**6**	P	Pn	05 03 10.1	+0.4
CPWZ	**Castlepoint**	**0.75**	**187**	P	Pn	05 03 10.6	+0.8
MRZ	**Mangatainoka R**	**0.76**	**228**	P	Pn	05 03 10.2	+0.3
CKHZ	**Cape Kidnapper**	**0.77**	**49**	P	Pn	05 03 10.2	+0.2
MCHZ	**McNeill Hill**	**0.77**	**22**	P	Pn	05 03 10.7	+0.7
OHWZ	**Ohakea**	**0.77**	**266**	P	Pn	05 03 11.6	+1.6
MOVZ	**Moawhango**	**0.87**	**330**	P	Pn	05 03 12.5	+1.1
HOWZ	**Holdsworth Sta**	**0.96**	**220**	P	Pn	05 03 12.5	0.0
TMWZ	**Te Maipa**	**1.00**	**199**	P	Pn	05 03 12.9	-0.1
BKZ	**Black Stump Fm**	**1.00**	**8**	P	Pn	05 03 13.5	+0.3
BKZ				S	Sn	05 03 26.5	+0.2
MTVZ	**Mangateitei**	**1.02**	**319**	P	Pn	05 03 15.5	+1.7
TUVZ	**Tukino**	**1.03**	**330**	P	Pn	05 03 15.2	+1.6
ARHZ	**Aropaoanui**	**1.04**	**30**	P	Pn	05 03 13.9	+0.4
WHVZ	**Whangaehu Hut**	**1.04**	**327**	P	Pn	05 03 15.3	+1.5
TRVZ	**Turoa**	**1.05**	**325**	P	Pn	05 03 15.4	+1.5
DRZ	**Dome Shelter**	**1.06**	**326**	P	Pn	05 03 15.8	+1.6
FWVZ	**Far West T-bar**	**1.08**	**326**	P	Pn	05 03 15.7	+1.4
OGWZ	**Otaki Gorge**	**1.10**	**233**	P	Pn	05 03 14.5	+0.2
WAZ	**Wanganui**	**1.10**	**291**	P	Pn	05 03 16.5	+2.1
NMHZ	**Naumai**	**1.13**	**20**	P	Pn	05 03 15.4	+0.7
NGZ	**Ngauruhoe**	**1.13**	**330**	P	Pn	05 03 16.4	+1.5
PKVZ	**Pokaka**	**1.15**	**319**	P	Pn	05 03 16.7	+1.6
MTW	**Mount Morrison**	**1.18**	**212**	P	Pn	05 03 15.0	-0.4
KRVZ	**Karewarewa**	**1.19**	**333**	P	Pn	05 03 17.0	+1.4
WTVZ	**West Tongariro**	**1.19**	**331**	P	Pn	05 03 17.1	+1.4
RITZ	**Rihia Road**	**1.23**	**343**	P	Pn	05 03 17.6	+1.4
KATZ	**Kakaramea**	**1.28**	**338**	P	Pn	05 03 18.2	+1.2
HATZ	**Hinemaiaia**	**1.28**	**352**	P	Pn	05 03 17.6	+0.8
KIW	**Kapiti Island**	**1.28**	**232**	P	Pn	05 03 17.1	+0.2
TWVZ	**Taurewa**	**1.29**	**328**	P	Pn	05 03 18.2	+1.2
WHHZ	**Waihua**	**1.29**	**33**	P	Pn	05 03 17.1	+0.1
MRHZ	**Matea Rd**	**1.33**	**3**	P	Pn	05 03 18.1	+0.6
TRWZ	**Traveller**	**1.33**	**201**	P	Pn	05 03 16.9	-0.5
CAW	**Cannon Point**	**1.34**	**225**	P	Pn	05 03 17.3	-0.3
RATZ	**Rangitukua**	**1.36**	**342**	P	Pn	05 03 18.9	+1.0
MTHZ	**Maungataniwha**	**1.37**	**17**	P	Pn	05 03 18.0	0.0
RAHZ	**Arahi**	**1.38**	**26**	P	Pn	05 03 18.2	+0.1
PAWZ	**Paruwai Farm**	**1.40**	**209**	P	Pn	05 03 17.8	-0.6
MSWZ	**Moikau Station**	**1.50**	**213**	P	Pn	05 03 18.8	-0.9
WHTZ	**Whakaora**	**1.52**	**349**	P	Pn	05 03 21.3	+1.2
WATZ	**Wairara**	**1.52**	**342**	P	Pn	05 03 20.8	+0.7
KNZ	**Kokohu**	**1.54**	**43**	P	Pn	05 03 19.9	-0.4
MHGZ	**Mahia Peninsul**	**1.58**	**51**	P	Pn	05 03 20.7	-0.2
SNGZ	**Shannon Statio**	**1.59**	**30**	P	Pn	05 03 20.7	-0.3
VRZ	**Vera Road**	**1.59**	**310**	P	Pn	05 03 22.5	+1.5
ALRZ	**Allen Road**	**1.60**	**1**	P	Pn	05 03 21.3	+0.2
PLWZ	**Palliser**	**1.62**	**210**	P	Pn	05 03 20.4	-1.1
RTZ	**Ruatahuna**	**1.62**	**18**	P	Pn	05 03 21.5	0.0
WEL	**Wellington**	**1.63**	**226**	P	Pn	05 03 21.5	-0.1
LREZ	**Lake Rotokare**	**1.64**	**295**	P	Pn	05 03 23.8	+2.2
WPRZ	**Whakapapatarin**	**1.64**	**356**	P	Pn	05 03 22.0	+0.3
PRRZ	**Plateau Road**	**1.66**	**2**	P	Pn	05 03 22.1	+0.1
BHW	**Baring Head**	**1.66**	**221**	P	Pn	05 03 21.1	-0.8
KUTZ	**Kaahu Road**	**1.71**	**347**	P	Pn	05 03 23.4	+0.7
MUGZ	**Murupara**	**1.72**	**12**	P	Pn	05 03 22.5	-0.2
PRGZ	**Paritu Road**	**1.73**	**45**	P	Pn	05 03 22.5	-0.4
HRRZ	**Handcock Road**	**1.77**	**359**	P	Pn	05 03 24.0	+0.6
GRRZ	**Galatos Road**	**1.82**	**355**	P	Pn	05 03 24.9	+0.8
RRRZ	**Republican Roa**	**1.82**	**5**	P	Pn	05 03 24.1	-0.1
RIGZ	**Rimuhau**	**1.83**	**38**	P	Pn	05 03 23.9	-0.5
HSRZ	**Hossack Road**	**1.85**	**358**	P	Pn	05 03 24.9	+0.4
PREZ	**Palmer Road**	**1.86**	**295**	P	Pn	05 03 27.3	+2.6
RAGZ	**Rawiri**	**1.87**	**27**	P	Pn	05 03 24.4	-0.5
TCW	**Tory Channel**	**1.88**	**235**	P	Pn	05 03 24.3	-0.5
MHEZ	**Mangahewa**	**1.89**	**304**	P	Pn	05 03 27.4	+2.4
DREZ	**Durham Road**	**1.90**	**300**	P	Pn	05 03 27.8	+2.6
TARZ	**Mount Tarawera**	**1.93**	**4**	P	Pn	05 03 25.8	+0.1
TLZ	**Tolley Road**	**1.93**	**341**	P	Pn	05 03 26.0	+0.3
DUWZ	**D'Urville Isla**	**1.94**	**250**	P	Pn	05 03 25.7	-0.1
KHEZ	**Kahui Hut**	**1.98**	**295**	P	Pn	05 03 28.9	+2.6
UTU	**Utuhina**	**1.98**	**357**	P	Pn	05 03 26.9	+0.5
URZ	**Urewera**	**2.00**	**18**	P	Pn	05 03 25.7	-0.8
HIZ	**Hauiti**	**2.00**	**325**	P	Pn	05 03 27.6	+1.0
NMEZ	**Namu Road**	**2.03**	**291**	P	Pn	05 03 29.5	+2.6
PKE	**Pukeiti**	**2.04**	**297**	P	Pn	05 03 30.0	+2.8
MWZ	**Matawai**	**2.05**	**28**	P	Pn	05 03 26.5	-0.8
OMRZ	**Omania**	**2.05**	**1**	P	Pn	05 03 27.3	-0.1
TKGZ	**Te Karaka**	**2.09**	**35**	P	Pn	05 03 26.8	-0.9
NBEZ	**Newall Road No**	**2.09**	**294**	P	Pn	05 03 30.6	+2.7
TUWZ	**Tuamarina**	**2.21**	**234**	P	Pn	05 03 28.3	-1.1
CNGZ	**Carnagh Statio**	**2.22**	**42**	P	Pn	05 03 28.7	-0.9
KMRZ	**Kaimai**	**2.33**	**353**	P	Pn	05 03 31.5	+0.3
WHRZ	**Whale Island**	**2.36**	**13**	P	Pn	05 03 31.2	-0.3
BSWZ	**Blackbirch Sta**	**2.42**	**229**	P	Pn	05 03 31.3	-1.0
RUGZ	**Raukumara Rang**	**2.43**	**26**	P	Pn	05 03 31.6	-1.0
NNZ	**Nelson**	**2.47**	**244**	P	Pn	05 03 32.9	-0.1
TOZ	**Tahuroa Road**	**2.51**	**345**	P	Pn	05 03 34.1	+0.5
PUZ	**Puketiti**	**2.57**	**36**	P	Pn	05 03 32.9	-1.5
PKGZ	**Pakihiroa**	**2.65**	**32**	P	Pn	05 03 34.6	-0.9
HAZ	**Te Kaha**	**2.66**	**26**	P	Pn	05 03 34.3	-1.2
WMGZ	**Waiomatatini S**	**2.85**	**36**	P	Pn	05 03 36.8	-1.4
QRZ	**Quartz Range**	**2.97**	**256**	P	Pn	05 03 39.4	-0.5
MXZ	**Matakaoa Point**	**3.02**	**31**	P	Pn	05 03 39.6	-1.0
THZ	**Tophouse**	**3.04**	**237**	P	Pn	05 03 39.7	-1.2
KHZ	**Kahutara**	**3.08**	**222**	P	Pn	05 03 39.3	-1.9
MKAZ	**Moumakai**	**3.19**	**343**	P	Pn	05 03 43.7	+1.0
KBAZ	**Karaka Road Bo**	**3.26**	**339**	P	Pn	05 03 45.0	+1.2
AWAZ	**Awhitu Peninsu**	**3.36**	**336**	P	Pn	05 03 46.4	+1.2
KUZ	**Kuaotunu**	**3.44**	**352**	P	Pn	05 03 46.7	+0.4
WIAZ	**Waiheke Island**	**3.49**	**344**	P	Pn	05 03 48.0	+1.0
WTAZ	**Waiatarua**	**3.50**	**336**	P	Pn	05 03 48.8	+1.6
MBAZ	**Motutapu North**	**3.57**	**341**	P	Pn	05 03 48.7	+0.7
GVZ	**Greta Valley S**	**3.73**	**220**	P	Pn	05 03 49.1	-1.3
ABAZ	**Army Bay**	**3.74**	**341**	P	Pn	05 03 51.6	+1.1
DSZ	**Denniston Nort**	**3.77**	**244**	P	Pn	05 03 49.7	-1.1
GRZ	**Great Barrier**	**3.96**	**350**	P	Pn	05 03 54.1	+0.7
LTZ	**Lake Taylor**	**4.01**	**228**	P	Pn	05 03 52.2	-2.0
OKCZ	**Okains Bay**	**4.31**	**213**	P	Pn	05 03 55.7	-2.5
INZ	**Inchbonnie**	**4.47**	**233**	P	Pn	05 03 59.0	-1.4
MQZ	**McQueen's Vall**	**4.48**	**216**	P	Pn	05 03 58.3	-2.1
WCZ	**Waipu Caves**	**4.50**	**339**	P	Pn	05 04 02.0	+1.3
AKCZ	**Akaroa Harbour**	**4.50**	**213**	P	Pn	05 03 59.0	-1.8
OUZ	**Omahuta**	**5.38**	**335**	P	Pn	05 04 14.3	+1.3
FOZ	**Fox Glacier**	**5.91**	**233**	P	Pn	05 04 17.9	-2.2
LBZ	**Lake Benmore**	**6.21**	**225**	P	Pn	05 04 22.4	-1.8
CTZ	**Chatham Island**	**6.36**	**126**	P	Pn	05 04 25.7	-0.6
ODZ	**Otahua Downs**	**6.43**	**219**	P	Pn	05 04 25.0	-2.2
JCZ	**Jackson Bay**	**6.83**	**233**	P	Pn	05 04 30.1	-2.8
SYZ	**Scrubby Hill**	**8.24**	**217**	P	Pn	05 04 51.0	-1.0

GCG 13 05:09:06.0±0.5, 13°.77N×91°.90W, h22km±12km, MD3.5
MEX 13 05:09:06.1±0.9, 14°.35N×92°.13W, h153km±16km, MD3.8
ISC 13 05:09:04.2±3.2, 14°.9N±0°.7×91°.5W±0°.3, h147km±29km, n5, σ0s90/9, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.21**	**188**	*eP*	**Pn**	**05 09 24.4**	**+0.1**
STG3				*eS*	**Sn**	**05 09 38.6**	**-1.1**
THIG		**0.70**	**269**	*i* P	**Pn**	**05 09 26.9**	**+0.7**
THIG				*i* S	**Sn**	**05 09 43.0**

ISC 13 05:33:01.2±1.1, 24°84N±0°03×122°46E±0°02, h10km±9km, n44, σ0°44/74, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.42**	**226**	P	**Pb**	**05 33 10.6**	**-0.1**
	baz=212						
EOS1				S	**Sb**	**05 33 18.5**	**+1.3**
	baz=212						
TWB1	**Santiao Chiao**	**0.46**	**291**	P	**Pg**	**05 33 10.7**	**+0.5**
	baz=284						
TWB1				S	**Sg**	**05 33 16.9**	**+0.6**
	baz=284						
NTC	**Toucheng**	**0.57**	**271**	*e*P	**Pg**	**05 33 12.4**	**0.0**
	baz=280						
NTC				*e*S	**Sb**	**05 33 22.1**	**+0.4**
	baz=280						
JYNG	**Yonagunijimaku**	**0.59**	**132**	P	**Pg**	**05 33 12.9**	**+0.3**
JYNG				S	**Sg**	**05 33 20.7**	**+0.3**
TIPB	**Shuangxi**	**0.59**	**283**	*i* P	**Pb**	**05 33 13.4**	**-0.4**
	baz=277						
TIPB				S	**Sb**	**05 33 21.9**	**-0.3**
	baz=277						
TWC	**Suao**	**0.60**	**247**	*i* P	**Pg**	**05 33 12.9**	**0.0**
	baz=243						
TWC				S	**Sb**	**05 33 22.4**	**-0.1**
	baz=243						
YOJ	**Yonaguni jima**	**0.63**	**127**	P	**Pg**	**05 33 13.4**	**0.0**
	baz=122						
YOJ				S	**Sg**	**05 33 21.8**	**+0.1**
	baz=122						
YOJ	**Yonaguni jima**	**0.63**	**127**	P	**Pg**	**05 33 13.6**	**+0.2**
YOJ				*e*S	**Sg**	**05 33 21.7**	**+0.1**
NWF	**Wu-fen Shan**	**0.66**	**290**	*i* P	**Pb**	**05 33 14.8**	**-0.1**
	baz=285						
NWF				*i* S	**Sb**	**05 33 24.3**	**+0.1**
	baz=285						
WFSB	**Wu-fen Shan**	**0.66**	**290**	P	**Pb**	**05 33 14.7**	**-0.2**
	baz=285						
WFSB				S	**Sb**	**05 33 24.1**	**0.0**
	baz=285						
TWE	**Neicheng**	**0.73**	**261**	P	**Pg**	**05 33 15.7**	**+0.3**
	baz=256						
TWE				S	**Sb**	**05 33 26.1**	**-0.1**
	baz=256						
SLBB	**Yuanshan**	**0.76**	**263**	P	**Pb**	**05 33 16.7**	**+0.2**
	baz=260						
SLBB				*e*S	**Sb**	**05 33 26.9**	**0.0**
	baz=260						
ENA	**Nanau**	**0.78**	**238**	*e*P	**Pg**	**05 33 14.6**	**-1.6**
	baz=235						
ENA				*e*S	**Sb**	**05 33 27.3**	**-0.2**
	baz=235						
ENTT	**Nioudou**	**0.84**	**256**	*i* P	**Pb**	**05 33 17.8**	**-0.2**
	baz=238						
ENTT				*e*S	**Sb**	**05 33 29.3**	**0.0**
	baz=238						
PCYT	**Pengchaiyu**	**0.86**	**336**	*e*P	**Pg**	**05 33 16.9**	**-1.0**
	baz=333						
YM08	**YM08**	**0.86**	**294**	*e*P	**Pb**	**05 33 18.8**	**+0.4**
	baz=290						
YM01	**YM01**	**0.86**	**291**	P	**Pg**	**05 33 17.7**	**-0.2**
	baz=287						
YM01				*e*S	**Sb**	**05 33 29.9**	**-0.2**
	baz=287						
YM11	**YM11**	**0.87**	**292**	*e*P	**Pb**	**05 33 18.6**	**+0.1**
	baz=289						
NWLT	**Wulai**	**0.88**	**266**	*i* P	**Pb**	**05 33 18.6**	**0.0**
	baz=262						
NWLT				S	**Sb**	**05 33 30.1**	**-0.2**
	baz=262						
YM10	**YM10**	**0.88**	**291**	*e*P	**Pg**	**05 33 18.1**	**-0.1**
	baz=288						
TWY	**Chenhua**	**0.89**	**299**	P	**Pb**	**05 33 19.2**	**+0.4**
	baz=295						
TWY				*e*S	**Sb**	**05 33 31.1**	**+0.2**
	baz=295						
TATO	**Taipei**	**0.90**	**279**	*e*S	**Sb**	**05 33 30.8**	**-0.1**
	baz=275						
NDT	**Datong Townshi**	**0.90**	**255**	*i* P	**Pb**	**05 33 18.8**	**-0.1**
	baz=238						
NDT				S	**Sb**	**05 33 31.1**	**+0.1**
	baz=238						
ANP	**Anpu**	**0.92**	**292**	*e*P	**Pg**	**05 33 18.9**	**-0.1**
	baz=289						
YHNB	**Yeheng**	**1.00**	**260**	P	**Pb**	**05 33 20.9**	**+0.2**
	baz=242						
YHNB				S	**Sg**	**05 33 33.9**	**+0.2**
	baz=242						
NACB	**Ninganchiao**	**1.03**	**230**	P	**Pg**	**05 33 20.5**	**-0.6**
	baz=239						
NACB				S	**Sb**	**05 33 35.4**	**+0.5**
	baz=239						
NNSB	**Datong**	**1.07**	**247**	P	**Pg**	**05 33 21.7**	**-0.1**
	baz=234						
NNSB				S	**Sb**	**05 33 36.7**	**+0.7**
	baz=234						
NNSH	**Datong**	**1.07**	**247**	*i* P	**Pg**	**05 33 21.4**	**-0.4**
	baz=245						
NNSH				*i* S	**Sg**	**05 33 35.8**	**+0.2**
	baz=245						
NNS	**Nan Shan**	**1.07**	**248**	P	**Pg**	**05 33 21.7**	**-0.1**
	baz=233						
NNS				S	**Sb**	**05 33 36.5**	**+0.4**
	baz=233						
ETLH	**Xiulin Townshi**	**1.09**	**235**	P	**Pg**	**05 33 22.0**	**-0.3**
	baz=245						
ETLH				S	**Sn**	**05 33 37.6**	**-0.4**
	baz=245						
TWD	**Chiawan**	**1.10**	**226**	*e*P	**Pg**	**05 33 22.2**	**-0.1**
	baz=235						
IRIF	**Iriomote-Funau**	**1.26**	**113**	P	**Pg**	**05 33 25.5**	**+0.1**
IRIF				S	**Sn**	**05 33 42.0**	**+0.1**
WHF	**Hehuan Shan**	**1.29**	**238**	*i* P	**Pb**	**05 33 26.0**	**+0.1**
	baz=250						
WHF				*i* S	**Sn**	**05 33 44.4**	**+1.0**
	baz=250						
TDCB	**Techi**	**1.32**	**244**	*e*P	**Pn**	**05 33 26.1**	**+0.1**
	baz=242						
TDCB				*e*S	**Sb**	**05 33 43.6**	**+0.2**
	baz=242						
CHGB	**Renai**	**1.41**	**237**	P	**Pg**	**05 33 28.2**	**-0.2**
	baz=248						
CHGB				S	**Sg**	**05 33 47.3**	**+0.7**
	baz=248						
HATJ	**Hateruma jima**	**1.45**	**122**	P	**Pg**	**05 33 29.1**	**0.0**
OWD	**Renai**	**1.47**	**233**	*i* P	**Pb**	**05 33 28.6**	**-0.2**
	baz=244						
OWD				*e*S	**Sg**	**05 33 48.2**	**-0.4**
	baz=244						
WHP	**Taichung City**	**1.49**	**248**	P	**Pb**	**05 33 29.5**	**+0.3**
	baz=246						
WHP				*e*S	**Sg**	**05 33 49.1**	**-0.1**
	baz=246						
JIJ	**Ishigaki jima**	**1.60**	**107**	*e*S	**Sg**	**05 33 52.1**	**-0.7**
DPDB	**Guoxing**	**1.62**	**240**	*e*P	**Pb**	**05 33 31.0**	**-0.3**
	baz=239						
VWDT	**VWDT**	**1.62**	**228**	*e*P	**Pn**	**05 33 30.5**	**+0.6**
	baz=211						
SMLT	**Sun Moon Lake**	**1.72**	**236**	*e*P	**Pb**	**05 33 32.6**	**-0.4**
	baz=219						
YULB	**Yu-li**	**1.79**	**217**	*e*P	**Pn**	**05 33 31.4**	**-0.9**
	baz=216						
ALS	**Alishan**	**2.01**	**229**	*e*P	**Pb**	**05 33 37.2**	**-0.9**
	baz=211						

ASRS ***13*** *06:04:59.8, 53.72N×91.05E, M2.4, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC 13 06:05:13.9±7.7, 53.50N×90.10E, h0km, mb3.9, mpv3.6, 6C-3D, Error ellipse: s-maj=59.0km s-min=40.0km az=81.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.17**	**280**	⇑Pn	Pn	06 06 05.6	+0.7
	3.1nm,0.6s						
ZAA0				⇑Lg	Lg	06 06 55.5	
	16nm,1.1s						
KURBB	**Kurchatov Arra**	**7.69**	**253**	⇑Pn	Pn	06 07 04.8	-2.2
	7.8nm,0.6s						
KURBB				⇓Sn	Sn	06 08 35.7	+0.9
	48nm,0.8s						
KURBB				⇑Lg	Lg	06 09 20.3	
	47nm,0.7s						
MK31	**Makanchi Array**	**8.38**	**220**	⇑Sn	Sn	06 08 53.2	+1.5
	4.7nm,0.7s,baz=40,slow=24						
MK31				⇑Lg	Lg	06 09 41.9	
	14nm,0.8s,baz=29,slow=33						
MAKZ	**Makanchi**	**8.49**	**221**	⇓Sn	Sn	06 08 55.6	+1.1
	5.1nm,1.1s						
MAKZ				⇓Lg	Lg	06 09 45.3	
	9.3nm,1.1s						

IDC 13 06:10:00.7±56.0, 23°15S×174°09W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/28, mbtmp4.1/3, Error ellipse: s-maj=1052.0km s-min=178.1km az=88.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.02**	**248**	P	P	06 17 37.8	+0.2
	1.4nm,0.6s,baz=101,slow=10,SNR=5.9						
ASAR	**Alice Springs**	**47.50**	**259**	P	P	06 18 37.7	-0.2
	1.1nm,0.5s,baz=96,slow=7.6,SNR=18						
WRA	**Warramunga Arr**	**47.87**	**264**	P	P	06 18 40.5	-0.3
	3.0nm,0.6s,baz=104,slow=8.1,SNR=8.2						

NEIC ***13*** *06:21:58.9±1.6, 16°46S±0°08×70°0W±0°1, h192km±6km, mb4.2/7, Error ellipse: s-maj=17.7km s-min=8.3km az=122.0*
VAO ***13*** *06:21:59.5±0.8, 16°37S×69°96W, h183km±4km, mb3.8*
IDC ***13*** *06:22:02.5±1.4, 16°27S×69°55W, h199km±8km, mb3.6/5, mb1 3.6/7, mb1mx3.4/34, mbtmp4.1/7, Error ellipse: s-maj=24.8km s-min=21.0km az=138.0*

ISC 13 06:21:59.0±0.7, 16°48S±0°06×69°90W±0°08, h183km, n55, σ1°60/59, mb4.0/5, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**1.71**	**84**	P	**Pn**	**06 22 35.7**	**+1.7**
	84nm,0.3s,baz=290,slow=8.0,SNR=2530						
LPAZ				LR	LR	06 22 49.5	
	comp=Z,57nm,20.1s,baz=232,slow=34						
LPAZ				S	**Sn**	**06 23 01.3**	**+0.4**
	13nm,0.3s,baz=349,slow=24,SNR=10						
LPAZ	**La Paz**	**1.71**	**84**		**Pn**	**06 22 35.9**	**+1.9**
LPAZ	**La Paz**	**1.71**	**84**	*e*P	**Pn**	**06 22 35.7**	**+1.7**
LPAZ				*e*S	**Sn**	**06 23 01.3**	**+0.4**
PB16	**IPOC Station P**	**1.88**	**169**		**Pn**	**06 22 38.4**	**+2.7**
PB12	**IPOC Station P**	**2.16**	**191**		**Pn**	**06 22 39.1**	**+0.9**
MNMC	**Minye Minye**	**2.65**	**174**		**Pn**	**06 22 45.5**	**+1.5**
PSGCX	**Pisagua**	**3.11**	**184**		**Pn**	**06 22 49.8**	**+0.6**
GO01	**Chusmiza**	**3.24**	**168**		**Pn**	**06 22 52.9**	**+1.7**
PB11	**IPOC Station P**	**3.27**	**176**		**Pn**	**06 22 52.5**	**+1.2**
PB08	**IPOC Station P**	**3.71**	**169**		**Pn**	**06 22 58.7**	**+1.7**
TA01	**Diego Aracena**	**4.07**	**184**		**Pn**	**06 23 01.6**	**+0.4**
TA01					**Sn**	**06 23 47.0**	**-3.0**
PB01	**IPOC Station P**	**4.55**	**175**		**Pn**	**06 23 07.8**	**+0.4**
PB07	**IPOC Station P**	**5.22**	**180**		**Pn**	**06 23 16.4**	**+0.3**
PB09	**IPOC Station P**	**5.32**	**173**		**Pn**	**06 23 18.4**	**+1.0**
PB04	**IPOC Station P**	**5.83**	**182**		**Pn**	**06 23 23.9**	**-0.1**
PB04					**Sn**	**06 24 29.0**	**-2.0**
LVC	**Limon Verde**	**6.17**	**171**		**Pn**	**06 23 30.0**	**+1.3**
LVC	**Limon Verde**	**6.17**	**171**	*e*P	**Pn**	**06 23 29.9**	**+1.3**
PB06	**IPOC Station P**	**6.20**	**177**		**Pn**	**06 23 29.0**	**+0.1**
PB15	**IPOC Station P**	**6.71**	**177**		**Pn**	**06 23 35.8**	**+0.2**
PB10	**IPOC Station P**	**7.02**	**185**	Pn	**Pn**	**06 23 37.9**	**-1.7**
SIV	**San Ignacio**	**8.49**	**88**	P	**Pn**	**06 23 58.1**	**-0.8**
	0.6nm,0.3s,baz=264,slow=8.8,SNR=12						
SIV				S	**Sn**	**06 25 29.3**	**-4.7**
	0.2nm,0.3s,baz=298,slow=22,SNR=5.0						
GO02	**Mina Guanaco**	**8.64**	**178**		**Pn**	**06 24 00.9**	**-0.2**
SAML	**Samuel**	**9.95**	**42**	*e*P	**Pn**	**06 24 16.9**	**-1.0**
VILB	**Vilhena**	**10.02**	**71**	*e*P	**Pn**	**06 24 17.8**	**-1.1**
AC02	**Maricunga**	**10.33**	**176**	Pn	**Pn**	**06 24 24.1**	**+0.8**
PTLB	**Pontes e Lacer**	**10.40**	**86**	*e*P	**Pn**	**06 24 25.8**	**+1.9**
SALV	**Santo Antonio**	**13.66**	**90**	*e*P	**P**	**06 25 07.5**	**-0.7**
CLDB	**Colider**	**14.79**	**70**	*e*P	**P**	**06 25 21.1**	**+0.3**
MACA	**Manacapuru-AM**	**16.04**	**35**	*e*P	**Pn**	**06 25 34.4**	**-0.4**
NPGB	**Novo Progresso**	**17.03**	**58**	*e*P	**P**	**06 25 45.4**	**-0.2**
ARAG	**Araguaiana, MT**	**17.40**	**90**	*e*P	**P**	**06 25 50.1**	**+0.5**
ITTB	**Itaituba**	**18.39**	**51**	*e*P	**Pn**	**06 26 01.7**	**-1.0**
PTGA	**Pitinga**	**18.46**	**33**	P	**P**	**06 26 00.9**	**-0.2**
	1.4nm,0.3s,baz=230,slow=16,SNR=18						
PTGA	**Pitinga**	**18.46**	**33**	P	**Pn**	**06 26 01.1**	**-2.4**
PTGA	**Pitinga**	**18.46**	**33**	*e*P	**Pn**	**06 26 01.2**	**-2.3**
GO05	**Huala**	**18.54**	**185**	P	**P**	**06 26 01.1**	**-0.8**
GO05				IAmb	IAmb	06 26 06.7	
	comp=Z,13nm,1.2s						
PTGB	**Pitinga**	**18.58**	**119**	*e*P	**Pn**	**06 26 04.4**	**-0.6**
CPSB	**Cacapava Do Su**	**20.46**	**136**	*e*P	**P**	**06 26 24.5**	**+1.9**
BB19B	**Bebedouro**	**20.74**	**106**	*e*P	**P**	**06 26 27.4**	**+1.8**
BDFB	**Brasilia**	**21.05**	**91**	P	**P**	**06 26 28.9**	**-0.2**
	comp=Z,2.4nm,0.5s,baz=258,slow=13,SNR=5.2						
BDFB	**Brasilia**	**21.05**	**91**	P	**P**	**06 26 28.2**	**-0.8**
BDFB				IAmb	IAmb	06 26 43.4	
	comp=Z,8.7nm,1.2s						
MALB	**Monte Alegre**	**21.17**	**48**	*e*P	**P**	**06 26 31.2**	**+1.0**
PLTB	**Pedras Altas**	**21.23**	**139**	*e*P	**P**	**06 26 32.9**	**+2.2**
RUSC	**La Rusia**	**22.45**	**352**	P	**P**	**06 26 42.0**	**-1.6**
SMTB	**Santa Maria do**	**23.03**	**74**	*e*P	**P**	**06 26 48.8**	**+0.4**
PLCA	**Paso Flores**	**24.17**	**181**	P	**P**	**06 27 02.8**	**+4.2**
	comp=Z,3.8nm,0.9s,baz=10,slow=13,SNR=6.0						
PLCA	**Paso Flores**	**24.17**	**181**	P	**P**	**06 26 59.5**	**+0.9**
PLCA				IAmb	IAmb	06 27 11.5	
	comp=Z,9.3nm,1.2s						
PLCA	**Paso Flores**	**24.17**	**181**	*e*P	**P**	**06 26 60.0**	**+1.4**
URIC	**Uribia, Colomb**	**28.08**	**356**	P	**P**	**06 27 31.5**	**-2.2**
DBIC	**Dimbokro**	**68.31**	**76**	P	**P**	**06 32 40.4**	**-0.6**
	comp=Z,3.0nm,0.5s,baz=222,slow=8.0,SNR=6.5						
DBIC	**Dimbokro**	**68.31**	**76**	IAmb	IAmb	06 32 40.9	
	comp=Z,12nm,1.4s						
TORD	**Torodi Ar. Bea**	**76.62**	**72**	P	**P**	**06 33 29.4**	**-0.6**
	comp=Z,2.0nm,0.6s,baz=272,slow=5.3,SNR=18						
YKA	**Yellowknife Ar**	**86.17**	**341**	P	**P**	**06 34 20.1**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=130,slow=5.4,SNR=12						
WRA	**Warramunga Arr**	**136.67**	**214**	PKP	**PKiKP**	**06 41 03.3**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=149,slow=1.9,SNR=5.8						
KSH	**Kashi**	**142.47**	**45**	PKP	**PKiKP**	**06 41 16.1**	**+2.5**
KSH				pPKP	pPKPdf	06 42 00.0	+0.3

IDC ***13*** *06:27:28.3±3.0, 36°25N×70°90E, h166km±26km, mb3.6/9, mb1 3.6/15, mb1mx3.3/52, mbtmp4.1/15, MS4.4/1, Ms1 4.4/1, ms1mx2.5/58, Error ellipse: s-maj=21.9km s-min=16.1km az=24.0*
NEIC ***13*** *06:27:31.6±1.7, 36°54N±0°06×70°92E±0°1, h197km±6km, mb4.0/3, Error ellipse: s-maj=12.2km s-min=9.3km az=84.0*
NNC ***13*** *06:27:36.8±3.2, 37°01N×70°83E, h203km±35km, mb3.2, mpv4.3, Error ellipse: s-maj=28.7km s-min=17.5km az=18.0*

ISC 13 06:27:30.9±0.6, 36°55N±0°05×70°92E±0°06, h188km, n61, σ1°69/69, mb3.9/10, 5C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**2.50**	**349**		**Pn**	**06 28 15.4**	**+1.3**
KBL	**Kabul**	**2.52**	**218**		**Pn**	**06 28 15.4**	**+0.9**
CHGR	**Chuyangaron**	**2.53**	**327**		**Pn**	**06 28 15.2**	**+0.7**
CHCP	**Chirah Chowk**	**3.46**	**146**	P	**Pn**	**06 28 27.3**	**+1.7**
NIL	**Nilore**	**3.46**	**146**		**Pn**	**06 28 27.5**	**+1.9**
THW	**Thamme Wali**	**3.80**	**169**	P	**Pn**	**06 28 31.3**	**+1.4**
TAS	**Tashkent**	**4.94**	**346**	Pn	**Pn**	**06 28 45.3**	**+1.2**
TAS					**Sn**	**06 29 42.9**	**+1.0**
ARSB	**Arslanbob**	**5.03**	**18**		**Pn**	**06 28 46.3**	**+0.7**
THN	**Thein Dam**	**5.70**	**135**	*e*P	**Pn**	**06 28 55.0**	**+0.9**
THN				*e*S	**Sn**	**06 29 57.5**	**-2.2**
AML	**Almayashu**	**5.98**	**20**	P	**Pn**	**06 28 58.6**	**+0.7**
	SNR=130						
UCH	**Uchtor**	**6.32**	**25**	P	**Pn**	**06 29 03.3**	**+0.8**
	SNR=28						
KZA	**Kyzart**	**6.46**	**30**	P	**Pn**	**06 29 05.4**	**+1.1**
	SNR=13						
EKS2	**Erkin-Say**	**6.49**	**19**	P	**Pn**	**06 29 06.0**	**+1.6**
	SNR=36						
KK31	**Karatay Array**	**6.56**	**357**	P	**Pn**	**06 29 05.7**	**+0.5**
	6.0nm,0.3s,baz=186,slow=12,SNR=108						
KK31				S	**Sn**	**06 30 15.4**	**-4.4**
	30nm,0.4s,baz=187,slow=24,SNR=21						
KK31	**Karatay Array**	**6.56**	**357**		**Pn**	**06 29 05.6**	**+0.5**
KKAR	**Karatay Array**	**6.56**	**357**		**Pn**	**06 29 05.9**	**+0.7**
AAK	**Ala-Archa**	**6.68**	**23**	P	**Pn**	**06 29 07.9**	**+1.0**
	6.8nm,0.3s,baz=158,slow=5.0,SNR=44						
AAK				S	**Sn**	**06 30 21.5**	**-1.4**
	2.0nm,0.3s,baz=312,slow=22,SNR=5.8						
AAK	**Ala-Archa**	**6.68**	**23**	P	**Pn**	**06 29 08.0**	**+1.1**
	SNR=16						
AAK	**Ala-Archa**	**6.68**	**23**	P	**Pn**	**06 29 07.9**	**+1.0**
AAK				⇑S	**Sn**	**06 30 21.4**	**-1.5**
	40nm,0.6s						
AAK	**Ala-Archa**	**6.68**	**23**		**Pn**	**06 29 07.6**	**+0.7**
KBK	**Karagaybulak**	**6.85**	**26**	P	**Pn**	**06 29 10.6**	**+1.4**
	SNR=8.6						
CHMS	**Chumysh**	**7.09**	**23**	P	**Pn**	**06 29 13.1**	**+1.0**
	SNR=8.0						
BOOM	**Boomskoye usch**	**7.09**	**32**		**Pn**	**06 29 13.1**	**+0.7**
BOOM					**Sn**	**06 30 33.8**	**+1.2**
TKM2	**Tokmak 2**	**7.32**	**28**	P	**Pn**	**06 29 16.2**	**+1.0**
	SNR=38						
TKM2	**Tokmak 2**	**7.32**	**28**	⇓P	**Pn**	**06 29 15.8**	**+0.5**
	21nm,0.6s						
TKM2				⇑S	**Sn**	**06 30 35.5**	**-2.5**
	8.9nm,0.8s						
SMLA	**Simla**	**7.50**	**134**	*e*P	**Pn**	**06 29 17.6**	**0.0**
SMLA				*e*S	**Sn**	**06 30 35.4**	**-6.6**
SMLA				IAML		06 30 42.3	
	comp=N,62nm,0.3s						
SMLA				IAML		06 30 43.8	
	comp=E,63nm,0.3s						
GEYT	**Alibeck**	**10.30**	**282**	P	**Pn**	**06 29 53.0**	**-1.2**
	comp=E,0.8nm,0.3s,baz=116,slow=12,SNR=5.1						
OTUK	**Ortayu**	**11.74**	**5**	⇑P	**Pn**	**06 30 11.4**	**-1.2**
	comp=E,1.8nm,0.7s						
MAKZ	**Makanchi**	**13.15**	**35**	⇑P	**Pn**	**06 30 29.4**	**-1.1**
	comp=E,1.8nm,0.5s						
MAKZ	**Makanchi**	**13.15**	**35**		**Pn**	**06 30 30.9**	**+0.3**
MK31	**Makanchi Array**	**13.29**	**36**	⇓P	**P**	**06 30 35.6**	**+0.2**
	comp=E,0.8nm,0.6s,baz=207,slow=9.9,SNR=7.7						
MK31	**Makanchi Array**	**13.29**	**36**		**Pn**	**06 30 33.4**	**+1.1**
MKAR	**Makanchi Array**	**13.29**	**36**	P	**Pn**	**06 30 33.1**	**+0.8**
	comp=E,0.2nm,0.3s,baz=210,slow=12,SNR=5.8						
DANN	**Dangsing**	**13.57**	**123**	*e*P	**Pn**	**06 30 35.6**	**-0.6**
	comp=E,27nm,0.3s						
DMN	**Daman**	**14.95**	**123**	*e*P	**Pn**	**06 30 52.9**	**-0.4**
	comp=E,28nm,0.5s						
AB31	**Akbulak array**	**15.01**	**331**	P	**Pn**	**06 30 53.2**	**-0.3**
	comp=E,5.4nm,0.6s,baz=146,slow=12,SNR=61						
AB31				⇓S	**Sn**	**06 33 34.7**	**-6.5**
	comp=E,2.4nm,0.5s						
KURBB	**Kurchatov Arra**	**15.10**	**19**	P	**P**	**06 30 57.1**	**+1.6**
	comp=E,0.1nm,0.3s,baz=211,slow=10,SNR=5.8						
PKI	**Pulchoki**	**15.19**	**122**	*e*P	**Pn**	**06 30 56.7**	**+0.5**
	comp=E,21nm,0.4s						
GUN	**Gumba**	**15.30**	**120**	*e*P	**P**	**06 30 58.8**	**+0.6**
	comp=E,18nm,0.4s						
JIRN	**Jiri**	**15.67**	**120**	*e*P	**P**	**06 31 03.2**	**+0.9**
	comp=E,70nm,0.4s						
RAMN	**Ramite**	**16.40**	**121**	*e*P	**Pn**	**06 31 10.9**	**+0.1**
	comp=E,26nm,0.5s						
BVAR	**Borovoye Array**	**16.48**	**359**	P	**Pn**	**06 31 12.0**	**+0.7**
	comp=E,0.7nm,0.3s,baz=179,slow=13,SNR=18						
BRVK	**Borovoye**	**16.52**	**359**	⇓P	**Pn**	**06 31 11.9**	**+0.2**
	comp=E,2.0nm,0.4s						
BRVK	**Borovoye**	**16.52**	**359**	P	**Pn**	**06 31 12.5**	**+0.8**
BRVK				IAmb	IAmb	06 31 13.7	
	comp=Z,4.3nm,0.7s						
AKTO	**Aktyubinsk**	**16.71**	**330**	P	**Pn**	**06 31 15.1**	**+1.0**
	comp=Z,1.3nm,0.3s,baz=138,slow=11,SNR=30						
AKTO	**Aktyubinsk**	**16.71**	**330**	⇑P	**Pn**	**06 31 15.0**	**+1.0**
	comp=Z,13nm,0.9s						
TAPN	**Taplejung**	**16.93**	**118**	*e*P	**Pn**	**06 31 18.4**	**+1.2**
	comp=Z,23nm,0.4s						
ODAN	**Odare**	**17.00**	**120**	*e*P	**Pn**	**06 31 18.1**	**+0.1**
	comp=Z,19nm,0.5s						
ZALV	**Zalesovo Beam**	**19.90**	**25**	P	**P**	**06 31 49.1**	**+1.3**
	comp=Z,1.5nm,0.3s,baz=233,slow=11,SNR=8.3						
FINES	**FINESS Array B**	**37.41**	**326**	P	**P**	**06 34 27.1**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=120,slow=11,SNR=5.8						
ARCES	**ARCESS Array B**	**41.08**	**338**	P	**P**	**06 34 57.6**	**+1.9**
	comp=Z,1.1nm,0.5s,baz=112,slow=8.0,SNR=13						
HFS	**Hagfors**	**42.99**	**322**	P	**P**	**06 35 12.8**	**+1.5**
	comp=Z,2.2nm,0.7s,baz=103,slow=11,SNR=5.2						
NB2	**NORSAR Subarra**	**44.30**	**323**	P	**P**	**06 35 22.4**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**44.30**	**323**	P	**P**	**06 35 22.7**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=96,slow=7.7,SNR=5.3						
JNU	**Nakatsue**	**48.64**	**75**	LR	LR	06 58 09.3	
	comp=Z,396nm,19.9s,baz=66,slow=38						
TORD	**Torodi Ar. Bea**	**65.65**	**269**	P	**P**	**06 37 54.3**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=52,slow=6.1,SNR=10.0						
TOLK	**Toolik Lake Re**	**70.89**	**15**	P	**P**	**06 38 28.2**	**+1.2**
TOLK				IAmb	IAmb	06 38 29.0	
	comp=Z,2.1nm,0.7s						
INK	**Inuvik**	**73.87**	**9**	P	**P**	**06 38 46.3**	**+1.8**
INK				IAmb	IAmb	06 38 46.5	
	comp=Z,3.4nm,1.1s						
YKA	**Yellowknife Ar**	**81.20**	**3**	P	**P**	**06 39 26.5**	**+1.3**
	comp=Z,1.0nm,0.4s,baz=354,slow=5.3,SNR=51						
WRA	**Warramunga Arr**	**82.07**	**122**	P	**P**	**06 39 29.7**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=324,slow=4.9,SNR=15						
ASAR	**Alice Springs**	**84.33**	**125**	P	**P**	**06 39 41.3**	**-0.7**
	comp=Z,1.9nm,0.6s,baz=310,slow=4.9,SNR=34						

UPA ***13*** *06:35:20.9±0.9, 7°03N×82°39W, h7km±7km, MW6.7, Fault plane solution: NP1:φ276.15000°, δ72.77000°, λ10.31000°.*
IDC ***13***

N -0.5433, Plg74.0000°, Azm102.0000°; P -6.6723, Plg8.0000°, Azm224.0000°;
BGR 13 06:35:39.9-0.0,9.05N×80.65W,h33km,mb6.1, mB_BB6.5,Ms6.2

ISC 13 06:35:24.5±0.5,7.15N±0.03×82.24W±0.03,h13km±2km, n2111,c2≥24/2293,mb6.1/460,MS6.2/525,71C-49D,
South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
REME3	Remedios, Chir	1.15	21	eP	Pb	06 35 44.3	-1.9
CHIR3	Chiriqui UPA,	1.25	356	eP	Pn	06 35 45.6	-2.0
LOCO3	Loma Colorada,	1.27	352	eP	Pn	06 35 44.9	-3.1
DVD	David	1.30	351	eP	Pn	06 35 45.7	-2.7
DVD				eS	Sb	06 36 04.0	-1.4
SBAR3	San Bartolo, C	1.33	331	eP	Pn	06 35 44.7	-4.1
RSUS3	Rio de Jesus,	1.36	52	eP	Pg	06 35 51.2	+0.6
CACAO	El Cacao, Vera	1.38	82	eP	Pn	06 35 47.8	-1.7
PONU3	Ponuga, Veragu	1.45	60	⇓iP	Pn	06 35 49.1	-1.4
PONU3				eS	Sb	06 36 10.3	+0.5
STIA3	Santiago, Vera	1.57	53	⇓iP	Pn	06 35 50.9	-1.2
BCO2	Palmira	1.59	350	eP	Pn	06 35 50.2	-2.4
OCU3	Ocu, Herrera	1.66	61	⇓iP	Pn	06 35 52.3	-1.0
OCU3				eS	Sb	06 36 15.3	-0.4
SFRA3	San Francisco,	1.67	49	⇓iP	Pn	06 35 52.5	-1.0
BRU2	Volcan	1.70	345	⇑iP	Pn	06 35 50.8	-3.2
BRU2	Volcan	1.70	345	eP	Pn	06 35 50.8	-3.2
PTJ1	Puerto Jimnez	1.74	323	⇑iP	Pn	06 35 50.5	-3.9
PTJ1	Puerto Jimnez	1.74	323	⇑eP	Pn	06 35 50.4	-4.0
EDSV	San Vito	1.81	337	⇑eP	Pn	06 35 52.6	-3.0
AZU	Azuero	2.05	72	⇓iP	Pn	06 35 57.5	-1.2
AZU	Azuero	2.05	72	⇓iP	Pn	06 35 57.6	-1.2
PCRI3	Pocri, Los San	2.17	76	⇓iP	Pn	06 35 59.2	-1.1
EDPN	Palmar Norte	2.17	326	eP	Pn	06 35 56.6	-3.7
EDBA	Buenos Aires	2.25	333	⇑iP	Pn	06 35 59.0	-2.6
EDBA				eS	Sn	06 36 28.8	-0.5
PNME	Penonome	2.32	55	⇓iP	Pn	06 36 02.2	-0.1
RGM0	Gandoca	2.46	352	⇓eP	Pn	06 36 04.0	-0.3
RGM0	Gandoca	2.46	352	eP	Pn	06 36 03.9	-0.4
VTON	El Valle, Cocl	2.56	55	⇓iP	Pn	06 36 06.0	+0.2
VTON				eS	Sb	06 36 39.6	-2.2
EDDO	Dominical	2.64	323	⇑iP	Pn	06 36 03.3	-3.5
ZANG	Zanguenga, Cho	2.96	52	⇓eP	Pn	06 36 11.1	-0.1
BCIP	Isla Barro Col	3.11	50	eP	Pn	06 36 12.6	-0.7
BCIP	Isla Barro Col	3.11	50	⇓iP	Pn	06 36 12.9	-0.5
BCIP	Isla Barro Col	3.11	50	P	Pn	06 36 12.8	-0.5
BCIP	Isla Barro Col	3.11	50	⇓iP	Pn	06 36 12.9	-0.5
BCIP	Isla Barro Col	3.11	50		Pn	06 36 12.8	-0.5
LCR2	La Lucha 2	3.12	326	⇑eP	Pn	06 36 10.3	-3.3
CVTR	Volcan Turrial	3.23	332	eP	Pn	06 36 13.1	-2.3
UPA	Univ. de Panam	3.24	56	eP	Pn	06 36 14.8	-0.4
UPA	Univ. de Panam	3.24	56	eP	Pn	06 36 14.6	-0.5
UPA	Univ. de Panam	3.24	56	⇓iP	Pn	06 36 14.7	-0.4
UPA				eS	Sn	06 36 55.7	+2.1
SJS	Escuela Geolog	3.31	327	eP	Pn	06 36 13.4	-2.7
HDC	Heredia	3.39	327	⇑iP	Pn	06 36 14.9	-2.4
HDC				⇑iP	Pb	06 36 15.0	-10
HDC	Heredia	3.39	327	⇑iP	Pn	06 36 14.9	-2.4
HDC	Heredia	3.39	327		Pn	06 36 14.9	-2.4
SRA1	San Ramn	3.67	323	⇑eP	Pn	06 36 17.6	-3.5
CHPO	Chepo, Panama	3.69	57	⇓iP	Pn	06 36 20.7	-0.6
CNTA3	Canitas, Panam	3.91	58	⇓iP	Pn	06 36 23.1	-1.2
FORC	Fortuna	4.08	326	eP	Pn	06 36 25.0	-1.7
CACO	Castillo	4.09	323	eP	Pn	06 36 23.6	-1.3
ARE1	Arenal 1	4.11	324	⇑iP	Pn	06 36 24.6	-2.4
CEDE	Laguna Cedeo	4.12	324	⇑iP	Pn	06 36 24.7	-2.6
JTS	Las Juntas de	4.12	320	Pn	Pn	06 36 23.3	-3.9
	1µm,0.3s,baz=161,slow=13,SNR=1220						
JTS	Las Juntas de	4.12	320	eP	Pn	06 36 23.3	-3.9
JTS	Las Juntas de	4.12	320	⇑iP	Pn	06 36 23.4	-3.8
JTS	Las Juntas de	4.12	320	*c iP*	Pn	06 36 23.1	-4.1
JTS				MLR	MLR		
	comp=Z,765µm,18.0s						
JTS	Las Juntas de	4.12	320	⇑*i*P	Pn	06 36 23.3	-3.9
JTS	Las Juntas de	4.12	320		Pn	06 36 23.4	-3.8
PTAC	Punta Ardita,	4.40	90	eP	Pn	06 36 29.0	-2.0
UPD2	Meteti	4.41	71	eP	Pn	06 36 28.4	+0.8
UPD2	Meteti	4.41	71	⇓iP	Pn	06 36 30.7	-0.6
PLVR	Palo Verde	4.42	316	⇑eP	Pn	06 36 28.4	-3.2
ACAL	Aguas Claras	4.43	322	eP	Pn	06 36 29.9	-1.7
PTEN	Parque Tenorio	4.47	323	⇑eP	Pn	06 36 29.9	-2.2
GUAI	GUAI	4.48	314	⇑iP	Pn	06 36 28.6	-3.6
CUI	Cuipilapa	4.53	321	eP	Pn	06 36 30.1	-2.8
COLC	Colonia	4.56	320	eP	Pn	06 36 31.0	-2.4
HORNC	Hornillas	4.58	321	eP	Pn	06 36 31.1	-2.5
GUAB	Guayabo de Bag	4.61	320	⇓eP	Pn	06 36 31.8	-2.2
LIM1	Limonal	4.62	320	eP	Pn	06 36 31.5	-2.6
GPS2	Hotel Rincn d	4.72	320	⇓eP	Pn	06 36 33.7	-1.9
GPS3	Bodega del ICE	4.73	320	⇓eP	Pn	06 36 33.8	-1.9
GPS1	Guardaparques	4.74	320	⇓eP	Pn	06 36 33.6	-2.2
LAPC	Finca la Perla	4.79	319	eP	Pn	06 36 33.7	-2.7
BUEV	Buena Vista	4.79	319	eP	Pn	06 36 34.2	-2.3
GB1A	Borinquen Arri	4.80	320	eP	Pn	06 36 34.3	-2.4
BUAI	Buenos Aires	4.80	321	⇑eP	Pn	06 36 34.5	-2.2
GBS3	Finca Las Img	4.81	319	⇓eP	Pn	06 36 34.7	-2.1
CAPC	Capurgana	5.06	97	eP	Pn	06 36 38.9	-1.3
PIZC	Pizarro, Choco	5.31	114	eP	Pn	06 36 41.2	-2.5
ESPN	Las Esperanzas	5.41	338	⇑iP	Pn	06 36 42.8	-2.2
ESPN	Las Esperanzas	5.41	338		Pn	06 36 42.5	-2.5
ACON	Acoyapa	5.60	329	⇑iP	Pn	06 36 44.3	-3.2
ACON	Acoyapa	5.60	329		Pn	06 36 44.6	-2.9
GR1C	Gorgona, Isla	5.78	135	eP	Pn	06 36 46.9	-3.1
MALC	Bahia Malaga	5.79	122	eP	Pn	06 36 47.7	-2.5
DBBC	Dabeiba	5.99	91	eP	Pn	06 36 52.6	-0.4
LCBC	Los crdobas,	6.06	73	eP	Pn	06 36 56.5	+2.6
MASN	Masaya	6.17	322	⇑eP	Pn	06 36 52.0	-3.4
PRVC	Isla de Provid	6.25	8	eP	Pn	06 36 54.9	-1.6
CBOC	Ciudad Bolivar	6.32	101	eP	Pn	06 36 56.1	-1.5
TUMC	Tumaco	6.34	146	eP	Pn	06 36 53.9	-3.9
TUMC	Tumaco	6.34	146	⇑iP	Pn	06 36 54.1	-3.7
TUMC	Tumaco	6.34	146		Pn	06 36 58.0	+0.2
YOTC	Yotoco, Valle	6.66	118	eP	Pn	06 37 00.3	-1.9
HORQ	Saladito	6.67	123	eP	Pn	06 37 00.4	-1.9
UREC	San Jos de Ur	6.68	84	eP	Pn	06 37 02.3	-0.1
HELC	Santa Helena	6.73	98	eP	Pn	06 37 05.6	+2.1
MATN	Matagalpa	6.80	328	⇑eP	Pn	06 37 01.0	-3.2
MATN	Matagalpa	6.80	328		Pn	06 37 00.9	-3.2
BBAC	Balboa, Cauca	7.12	135	eP	Pn	06 37 06.3	-2.4
RREF	El Recreo	7.21	108	eP	Pn	06 37 06.2	-4.1
CRIN	San Cristobal	7.27	320	⇑iP	Pn	06 37 07.3	-3.4
CRIN	San Cristobal	7.27	320	Pn	Pn	06 37 08.4	-2.2
ANIL	Santa Ana	7.29	111	eP	Pn	06 37 10.5	-0.6
ZARC	Zaragoza, Cauc	7.33	87	eP	Pn	06 37 11.2	-0.2
NORC	Norcasia	7.49	102	eP	Pn	06 37 13.6	-0.1
SJCC	San Jacinto, C	7.50	68	eP	Pn	06 37 13.1	-0.6
SOTA	Rioblanco	7.50	131	eP	Pn	06 37 14.0	-0.1
PCON	Cinco Dias	7.54	129	eP	Pn	06 37 13.6	-1.1
GCUF	Volcan Galeras	7.64	140	eP	Pn	06 37 14.4	-1.7
CRUC	La Cruz	7.65	136	eP	Pn	06 37 15.8	-0.2
PAC1	Pacto, Paraso	7.65	153	eP	Pn	06 37 13.5	-2.4
ORTC	Ortega, Tolima	7.67	114	eP	Pn	06 37 16.2	+0.2
PTBC	PUERTO BERRIO,	7.75	94	eP	Pn	06 37 20.9	+3.7
CUSE	Cuicocha Este	7.80	150	eP	Pn	06 37 16.0	-2.2
PRAC	Prado	8.07	115	eP	Pn	06 37 22.4	+0.7
BETC	Betania	8.10	123	eP	Pn	06 37 23.1	+1.2
ROSC	El Rosal	8.20	106	Pn	Pn	06 37 25.9	+2.2
	comp=Z,12nm,0.3s,baz=234,slow=11,SNR=35						
ROSC				LR	LR	06 40 03.6	
	comp=Z,137µm,20.8s,baz=293,slow=34						
ROSC	El Rosal	8.20	106	eP	Pn	06 37 25.7	+1.9
ROSC	El Rosal	8.20	106		Pn	06 37 25.6	+1.9
SPBC	San Pablo de B	8.25	100	eP	Pn	06 37 26.0	+1.9
SMLC	San Martn de	8.26	78	eP	Pn	06 37 24.0	-0.1
LCND	La Caada	8.27	318	eP	Pn	06 37 21.2	-3.1
LCND	La Caada	8.27	318	eP	Pn	06 37 21.2	-3.1
GARC	Garzon, Huila	8.33	126	eP	Pn	06 37 25.8	+0.4
ARGC	Ariguani, Magd	8.35	71	eP	Pn	06 37 25.5	+0.1
TGUH	Tegucigalpa,Un	8.46	325	eP	Pn	06 37 24.2	-2.9
TGUH	Tegucigalpa,Un	8.46	325	eP	Pn	06 37 24.8	-2.2
TGUH	Tegucigalpa,Un	8.46	325		Pn	06 37 25.6	-1.5
TGUH	Tegucigalpa,Un	8.46	325	eP	Pn	06 37 24.8	-2.2
JUCU	Jucuarn	8.47	316	eP	Pn	06 37 24.7	-2.5
JUCU	Jucuarn	8.47	316	eP	Pn	06 37 24.7	-2.5
PUAC	Puerto Asis, P	8.65	139	eP	Pn	06 37 26.4	-3.1
PACA	Pacayal	8.68	317	eP	Pn	06 37 26.9	-3.1
PACA	Pacayal	8.68	317	eP	Pn	06 37 26.9	-3.1
ALJI	Alcalda de J	8.75	315	eP	Pn	06 37 28.8	-2.0
ALJI	Alcalda de J	8.75	315	eP	Pn	06 37 28.8	-2.0
CHIC	Chingaza	8.82	106	eP	Pn	06 37 34.4	+2.1
COEB	Comit de Eme	8.84	316	eP	Pn	06 37 29.9	-2.3
COEB	Comit de Eme	8.84	316	eP	Pn	06 37 29.9	-2.3
SMRC	Santa Marta, M	8.86	63	eP	Pn	06 37 29.8	-2.7
OCAC	Ocana	8.91	82	eP	Pn	06 37 34.9	+1.7
VILC	Villavicencio,	9.02	109	eP	Pn	06 37 38.3	+3.5
RUSC	La Rusia	9.18	97	eP	Pn	06 37 39.8	+2.6
RUSC	La Rusia	9.18	97		Pn	06 37 39.9	+2.6
LFRS	El Faro	9.30	314	eP	Pn	06 37 35.8	-2.7
LFRS	El Faro	9.30	314	eP	Pn	06 37 35.8	-2.7
SNET	Serv Nac Est T	9.46	314	eP	Pn	06 37 38.8	-1.9
SNET	Serv Nac Est T	9.46	314	Pn	Pn	06 37 37.8	-2.9
SNET	Serv Nac Est T	9.46	314	eP	Pn	06 37 38.8	-1.9
PAMC	Pamplona, Colo	9.47	88	eP	Pn	06 37 43.3	+2.1
MACC	Macarena, Meta	9.73	120	eP	Pn	06 37 44.0	-0.2
CEVE	Cerro Verde	9.84	313	eP	Pn	06 37 43.6	-2.4
CEVE	Cerro Verde	9.84	313	eP	Pn	06 37 43.6	-2.4
MTO3	Montecristo	10.04	316	eP	Pn	06 37 45.0	-3.8
MTO3	Montecristo	10.04	316	eP	Pn	06 37 45.0	-3.8
ESQI	Esquipulas	10.14	317	eP	Pn	06 37 47.7	-2.4
PTLC	Puerto Leguiza	10.15	133	eP	Pn	06 37 52.7	+2.6
TAMC	Tame, Arauca	10.40	93	eP	Pn	06 37 56.4	+2.9
PTGC	Puerto Gaitan,	10.47	106	eP	Pn	06 37 54.9	+0.4
GUVC	San Jose del G	10.61	115	eP	Pn	06 37 56.6	+0.2
IXG	Ixpaco	10.66	312	eP	Pn	06 37 56.1	-1.1
MRL	Marmol	10.75	318	eP	Pn	06 37 58.8	+0.4
NBG	Las Nubes	10.86	314	eP	Pn	06 38 02.0	+1.9
PCG	Pacaya	10.93	312	eP	Pn	06 38 01.5	+0.5
URIC	Uribia, Colomb	11.08	65	eP	Pn	06 38 00.7	-2.1
URIC	Uribia, Colomb	11.08	65		Pn	06 38 00.2	-2.6
FUG	Fuego 3	11.13	311	eP	Pn	06 38 04.6	+0.9
FUG				eP	Pn	06 38 07.2	+3.5
FUG				eS	Sn	06 40 07.1	-1.2
PAYG	Puerto Ayora	11.17	226	eP	Pn	06 38 03.4	-0.6
PAYG	Puerto Ayora	11.17	226	⇓iP	Pn	06 38 04.3	+0.2
PAYG	Puerto Ayora	11.17	226		Pn	06 38 04.5	+0.5
APG	El Apazote	11.23	315	Pn	Pn	06 38 02.7	-2.4
	comp=Z,10nm,0.3s,baz=119,slow=5.3,SNR=97						
SOCV	Socops	11.34	84	eP	Pn	06 38 04.5	-1.9
MCJ	Malvern	11.60	22	⇑iP	Pn	06 38 18.1	+8.2
SDV	Santo Domingo	11.62	81	Pn	Pn	06 38 10.1	-0.3
	comp=Z,2.3nm,0.3s,baz=251,slow=8.9,SNR=27						
SDV				Sn	Sn	06 40 18.1	-2.2
	comp=Z,37nm,0.3s,baz=4.0,slow=12,SNR=6.4						
SDV				LR	LR	06 43 53.8	
	comp=Z,147µm,18.9s,baz=268,slow=44						
SDV	Santo Domingo	11.62	81	eP	Pn	06 38 09.5	-0.9
SDV	Santo Domingo	11.62	81		Pn	06 38 09.0	-1.4
SDV	Santo Domingo	11.62	81	eP	Pn	06 38 10.1	-0.3
SDV				eS	Sn	06 40 15.7	-4.6
ERG	Entre ros, C	11.68	309	eP	Pn	06 38 14.3	+3.3
STG3	Santiaguito 3,	11.85	310	eP	Pn	06 38 14.0	+0.5
STG3				eS	Sn	06 40 24.2	-1.5
MTDJ	Mount Denham	11.93	22		Pn	06 38 14.9	+0.3
HOJ	Hope	12.05	26	⇓iP	P	06 38 24.4	-4.6
YHJ	Yallahs	12.06	27	*i* P	P	06 38 27.1	-2.1
STH	Stony Hill	12.09	25	*i* P	Pn	06 38 18.6	+2.0
FSCY	Frank Sound, G	12.14	5		Pn	06 38 20.9	+3.7
BNJ	Bonny Gate	12.24	24	⇓iP	Pn	06 38 19.9	+1.2
CMJ	Castle Mountai	12.33	27	⇓iP	P	06 38 26.5	-5.7
ELOV	Elorza	12.66	90	eP	Pn	06 38 23.4	-1.1
CBCY	The Bluff, Cay	12.75	11		Pn	06 38 24.1	+0.6
CCIG	Comitan	13.27	314	Pn	Pn	06 38 31.4	-1.6
BAUV	El Baul	14.17	82	eP	Pn	06 38 41.8	-3.3
TEIG	Tepich	14.26	336	Pn	Pn	06 38 44.9	-1.4
	comp=Z,0.9nm,0.3s,baz=353,slow=0.0,SNR=5.0						
TEIG				LR	LR	06 44 18.6	
	comp=Z,248µm,19.1s,baz=62,slow=38						
TEIG	Tepich	14.26	336	eP	Pn	06 38 44.9	-1.4
TEIG	Tepich	14.26	336		Pn	06 38 44.5	-1.8
GTBY	Guantanamo Bay	14.47	28	eP	Pn	06 38 49.3	+0.1
GTBY	Guantanamo Bay	14.47	28		Pn	06 38 50.0	+0.9
GTBY	Guantanamo Bay	14.47	28	*i* P	Pn	06 38 49.5	+0.3
GTBY				IAML		06 38 59.8	
	comp=Z,1µm,2.8s						
ATAH	Atahualpa	14.70	165	Pn	Pn	06 38 53.4	+0.7
	comp=Z,0.4nm,0.3s,baz=338,slow=18,SNR=26						
ATAH				LR	LR	06 43 59.5	
	comp=Z,69µm,21.0s,baz=351,slow=35						
CMIG	Matias Romero	15.82	310	Pn	Pn	06 39 01.6	-5.6
	comp=Z,4.4nm,0.3s,baz=143,slow=11,SNR=55						
SDDR	Presa de Saban	15.87	41		Pn	06 39 07.8	0.0
SDDR				IAmb	IAmb	06 39 38.6	
	comp=Z,1µm,1.2s						
SDDR	Presa de Saban	15.87	41	*i* P	Pn	06 39 08.0	+0.1
SDDR				eS	Sn	06 42 04.6	+0.8
BANI	BANI	16.09	45	Pn	Pn	06 39 11.9	+1.2
SC01	Santiago de lo	16.56	41	P	Pn	06 39 17.4	+0.8
SC01				IAmb	IAmb	06 39 34.3	
	comp=Z,3µm,1.2s						
DR12	Loma Pena Alta	17.04	46		Pn	06 39 23.0	+0.2
PCDR	Punta Cana, DR	17.60	49	P	Pn	06 39 28.1	-1.5
PCDR	Punta Cana, DR	17.60	49	*i* P	Pn	06 39 28.3	-1.3
PCRV	Puerto La Cruz	17.66	79	P	Pn	06 39 29.4	-1.1
	comp=Z,1.3nm,0.3s,baz=258,slow=3.8,SNR=18						
PCRV				LR	LR	06 48 33.4	
	comp=Z,95µm,19.4s,slow=45						
GRTK	Grand Turk	17.86	36	P	Pn	06 39 32.2	-0.7
CRPR	Cabo Rojo, PR	18.27	52	P	Pn	06 39 35.5	-2.5
MLPR	Magueyes Islan	18.30	53		Pn	06 39 36.0	-2.4
MPR	Mayaguez	18.37	52	P	P	06 39 39.3	+0.2
MPR	Mayaguez	18.37	52	*i* P	Pn	06 39 37.3	-1.8
AGPR	Aguadilla, PR	18.54	51	P	P	06 39 40.2	-0.8
AGPR				IAmb	IAmb	06 40 08.0	
	comp=Z,2µm,1.2s						
AGPR	Aguadilla, PR	18.54	51	*i* P	P	06 39 40.1	-0.8
061Z	Ochoppi	18.66	4	P	P	06 39 41.3	-0.9
061Z				IAmb	IAmb	06 40 02.8	
	comp=Z,1µm,1.0s						
ICMP	Isla Caja de M	18.67	54	P	P	06 39 40.3	-2.1
ICMP				IAmb	IAmb	06 40 13.4	
	comp=Z,1µm,1.2s						
OBIP	Obispado Ponce	18.69	53	P	Pn	06 39 43.8	+0.7
ORIV	Oritupano	18.74	83	eP	P	06 39 42.2	-1.1
AOPR	Arecibo Observ	18.75	52	P	Pn	06 39 44.2	+0.5
AOPR				IAmb	IAmb	06 39 49.0	
	comp=Z,998nm,0.6s						
TLIG	Tlapa	19.00	305	P	Pn	06 39 46.7	-0.3
TLIG				IAmb	IAmb	06 40 18.6	
	comp=Z,2µm,1.3s						
IGPR	InterUniversit	19.05	54	P	Pn	06 39 49.0	+1.6
PDPR	Patillas Dam,	19.15	54	P	Pn	06 39 48.3	-0.3
GCPR	Guaynabo City	19.25	53	P	Pn	06 39 49.8	-0.1
GCPR				IAmb	IAmb	06 40 01.2	
	comp=Z,1µm,1.1s						
HUMP	Col San Antoni	19.35	54	P	Pn	06 39 50.6	-0.4
HUMP				IAmb	IAmb	06 40 02.3	
	comp=Z,777nm,1.0s						
CBYP	Canovanas	19.41	54	P	P	06 39 49.5	-1.2
CBYP				IAmb	IAmb	06 40 35.3	
	comp=Z,1µm,1.6s						
MTP	Monte Pirata	19.57	55	P	P	06 39 52.2	-0.1
MTP				IAmb	IAmb	06 40 04.7	
	comp=Z,2µm,1.4s						
NNA	Nana	19.75	164	P	P	06 39 53.5	-0.9
NNA				pmax	pmax		
	comp=Z,232nm,0.9s						
NNA	Nana	19.75	164	P	P	06 39 53.5	-0.9
060A	Indiantown	19.86	5	P	Pn	06 39 58.7	+1.6
060A				IAmb	IAmb	06 40 08.9	
	comp=Z,832nm,0.8s						
CUPR	Culebra, Puert	19.89	55	P	P	06 39 55.2	-0.7
CUPR				IAmb	IAmb	06 40 34.5	
	comp=Z,2µm,1.6s						
CDVI	St. Croix	20.04	57	P	P	06 39 58.1	+0.7
GUIV	Guiria	20.08	79	eP	P	06 39 57.3	-0.7
STVI	Saint Thomas	20.18	55	P	P	06 39 59.0	-0.1
STVI				IAmb	IAmb	06 40 35.1	
	comp=Z,2µm,1.9s						
UNM	Universidad Na	20.43	308	P	Pn	06 40 03.9	-0.2
UNM				pmax	pmax		
	comp=Z,3µm,1.0s						
UNM				MLR	MLR		
	comp=Z,111µm,22.0s						
UNM	Universidad Na	20.43	308	P	Pn	06 40 03.9	-0.3
UNM				IAMs_20	IAMs_20	06 47 39.3	
	comp=Z,111µm,22.0s						
TPP	Pointe-a-Pierr	20.79	80	eP	Pn	06 40 07.7	-0.3
DWPF	Disney Wildern	20.87	2	P	P	06 40 06.2	-0.2
	baz=182						
DWPF				S	S	06 44 00.0	+1.2
	baz=182						
DWPF	Disney Wildern	20.87	2	P	Pn	06 40 08.9	0.0
DWPF				IAmb	IAmb	06 40 29.6	
	comp=Z,700nm,1.1s						
DWPF	Disney Wildern	20.87	2	IAMs_20	IAMs_20	06 48 22.5	
	comp=Z,96µm,18.0s						
TRN	Trinidad (W)	20.88	79	eP	P	06 40 06.5	-0.1
GRGR	Grenville	20.89	75	eP	P	06 40 06.0	-0.7
GRGR	Grenville	20.89	75	eP	P	06 40 07.6	+0.9
GRGR	Grenville	20.89	75	P	P	06 40 06.5	-0.3
GRHS	Sauteurs	20.92	74	eP	Pn	06 40 08.5	-1.1
GRSS	Sisters	20.96	74	eP	Pn	06 40 09.1	-1.0
SABA	Saba	21.25	59	eP	P	06 40 09.6	-1.1
SABA	Saba	21.25	59	P	P	06 40 11.4	+0.7
SABA				IAmb	IAmb	06 40 47.9	
	comp=Z,2µm,1.6s						
SVB	Belmont	21.52	72	eP	P	06 40 14.1	+0.5
SVB	Belmont	21.52	72	eP	P	06 40 16.6	+3.0
SVB	Belmont	21.52	72	P	P	06 40 14.6	+1.0
SKOC	St. Kitts, UWI	21.55	60	eP	P	06 40 12.6	-1.2
SKI	Saint Kitts	21.56	60	eP	P	06 40 11.2	-2.7
SKI	Saint Kitts	21.56	60	P	P	06 40 13.3	-0.6
SKI				pmax	pmax		
	comp=Z,529nm,0.8s						
SKI				MLR	MLR		
	comp=Z,67µm,20.0s						
SKI	Saint Kitts	21.56	60	P	P	06 40 13.3	-0.6
SKI				IAmb	IAmb	06 40 44.5	
	comp=Z,529nm,0.8s						
NVDO	Nevis, Disaste	21.57	61	eP	P	06 40 14.3	+0.3
SVV	Soufriere Volc	21.57	72	eP	P	06 40 16.0	+1.9
SMRT	St. Maarten	21.59	58	eP	P	06 40 13.0	-1.3
SMRT	St. Maarten	21.59	58	P	P	06 40 14.6	+0.3
SMRT				IAmb	IAmb	06 40 27.4	
	comp=Z,1µm,1.1s						
SSV	Crater Summit	21.59	72	eP	P	06 40 17.4	+3.0
SVCV	St. Vincent, C	21.63	72	eP	P	06 40 15.9	+1.2
MLYT	Lee's Yard	21.78	62	eP	P	06 40 14.8	-1.5
TOSP	Speyside	21.81	77	eP	P	06 40 16.8	+0.1
TOSP	Speyside	21.81	77	eP	P	06 40 20.1	+3.4
TOSP	Speyside	21.81	77	P	P	06 40 18.7	+2.0
SLB	Belfond	21.86	71	eP	P	06 40 18.3	+1.0
MCLT	Moule a Chique	21.93	71	eP	P	06 40 16.3	-1.6
MCLT	Moule a Chique	21.93	71	eP	P	06 40 18.6	+0.6
MCLT	Moule a Chique	21.93	71	P	P	06 40 18.8	+0.9
MCLT				IAmb	IAmb	06 40 41.0	
	comp=Z,2µm,1.3s						
MCLT				IAMs_20	IAMs_20	06 49 27.7	
	comp=Z,84µm,22.0s						
TDBA	Terre de Bas,	21.95	65	eP	P	06 40 14.1	-4.0
SLBI	Saint Lucia, B	21.98	70	eP	P	06 40 17.5	-1.0
PCM	Pelee Case Pet	21.99	68	eP	P	06 40 20.0	+1.4
PML	Morne Lenard	22.01	68	eP	P	06 40 20.7	+1.9
SLAC	Saint Lucia, A	22.02	71	eP	P	06 40 19.3	+0.4
FDF	Fort de France	22.02	68	eP	P	06 40 18.7	-0.3
FDF	Fort de France	22.02	68	eP	P	06 40 18.9	-0.1
FDF	Fort de

comp=Z,540nm,1.3s
HKT MLR MLR

comp=Z,31µm,20.0s
HKT Hockley 26.04 332 P **P** **06 40 56.0 -1.5**
HKT IAmb IAmb 06 41 08.2

comp=Z,540nm,1.2s
Z57A Bowman 26.06 3 P **P** **06 40 57.3 -0.4**
baz=184,SNR=20
Z57A S **S** **06 45 31.8 +3.2**

baz=184
Z56A Williston 26.06 2 P **P** **06 40 57.6 -0.2**
baz=182,SNR=26
Z56A S **S** **06 45 29.7 +1.0**

baz=182
Z56A Williston 26.06 2 P **P** **06 40 58.3 +0.5**
Z56A IAmb IAmb 06 41 07.4

comp=Z,381nm,1.1s
Z56A IAMs_20 IAMs_20 06 51 41.1

comp=Z,69µm,18.0s
VBMS Vicksburg 26.11 344 P **P** **06 40 57.2 -1.0**
baz=161,SNR=18
VBMS S **S** **06 45 31.0 +1.6**

baz=161
VBMS Vicksburg 26.11 344 P **P** **06 40 57.9 -0.4**
Z59A Georgetown, SC 26.11 6 P **P** **06 40 58.2 0.0**
baz=187,SNR=21
Z59A S **S** **06 45 31.9 +2.5**

baz=187
735A Kenedy 26.12 328 P **P** **06 40 57.8 -0.6**
LRAL Lakeview Retre 26.14 351 P **P** **06 40 57.7 -0.8**
baz=169,SNR=264
LRAL S **S** **06 45 30.7 +0.8**

baz=169
LRAL Lakeview Retre 26.14 351 P **P** **06 40 57.6 -0.8**
LRAL IAmb IAmb 06 41 02.5

comp=Z,284nm,0.8s
146A Union 26.14 347 P **P** **06 40 58.1 -0.4**
Z58A St. Stephen 26.16 5 P **P** **06 40 58.2 -0.4**
baz=186,SNR=80
Z58A S **S** **06 45 32.4 +2.3**

baz=186
GOGA Godfrey 26.16 358 P **P** **06 40 57.5 -1.2**
GOGA pmax pmax

comp=Z,433nm,1.3s
GOGA MLR MLR

comp=Z,93µm,18.0s
GOGA Godfrey 26.16 358 P **P** **06 40 57.8 -0.8**
baz=177,SNR=74
GOGA S **S** **06 45 30.3 0.0**

baz=177
GOGA Godfrey 26.16 358 P **P** **06 40 57.5 -1.2**
GOGA IAmb IAmb 06 41 21.1

comp=Z,433nm,1.2s
Z51A Franklin 26.18 354 IAMs_20 IAMs_20 06 51 23.9

comp=Z,77µm,19.0s
Z50A Ashland 26.20 353 P **P** **06 40 58.2 -0.9**
baz=172,SNR=151
Z50A S **S** **06 45 31.6 +0.6**

baz=172
Z50A Ashland 26.20 353 P **P** **06 40 58.2 -0.9**
Z50A IAmb IAmb 06 41 05.1

comp=Z,282nm,1.0s
Z47A Carrollton 26.48 349 P **P** **06 41 00.7 -0.9**
Z47A IAmb IAmb 06 41 33.1

comp=Z,671nm,1.0s
Y56A Pelion 26.53 2 P **P** **06 41 01.6 -0.4**
baz=182,SNR=12
Y56A S **S** **06 45 37.5 +1.5**

baz=182
833A Chaparral WMA, 26.59 324 P **P** **06 41 01.1 -1.5**
baz=139,SNR=182
833A S **S** **06 45 39.3 +2.2**

baz=139
Y52A Lilburn 26.64 357 P **P** **06 41 02.4 -0.6**
baz=176,SNR=81
Y52A S **S** **06 45 38.2 +0.4**

baz=176
Y52A Lilburn 26.64 357 P **P** **06 41 02.8 -0.3**
Y52A IAmb IAmb 06 41 29.9

comp=Z,408nm,1.1s
Y55A Saluda 26.66 1 P **P** **06 41 02.6 -0.6**
baz=181,SNR=52
Y55A S **S** **06 45 38.9 +0.8**

baz=181
Y58A Scranton 26.74 5 P **P** **06 41 03.6 -0.3**
baz=186,SNR=35
Y58A S **S** **06 45 41.9 +2.6**

baz=186
Y58A Scranton 26.74 5 P **P** **06 41 05.0 +1.1**
Y58A IAmb IAmb 06 41 59.2

comp=Z,419nm,1.1s
Y58A IAMs_20 IAMs_20 06 52 12.1

comp=Z,82µm,18.0s
Y57A Sumter 26.80 3 P **P** **06 41 03.9 -0.5**
baz=184,SNR=8.5
Y57A S **S** **06 45 41.7 +1.5**

baz=184
Y57A Sumter 26.80 3 P **P** **06 41 05.5 +1.1**
Y57A IAmb IAmb 06 41 37.0

comp=Z,309nm,1.1s
143A Socs Landing, 26.82 343 P **P** **06 41 02.4 -2.2**
143A IAmb IAmb 06 41 30.2

comp=Z,374nm,1.1s
Y49A Blount Mountai 26.86 352 P **P** **06 41 03.9 -1.1**
Y59A Loris 26.89 6 P **P** **06 41 05.3 0.0**
baz=188,SNR=30
Y59A S **S** **06 45 44.4 +2.7**

baz=188
Y59A Loris 26.89 6 P **P** **06 41 05.0 -0.3**
Y59A IAmb IAmb 06 41 23.3

comp=Z,308nm,0.8s
Y59A IAMs_20 IAMs_20 06 52 20.3

comp=Z,93µm,19.0s
HODGE Hodges 26.95 360 P **P** **06 41 05.7 -0.1**
HODGE IAmb IAmb 06 41 44.4

comp=Z,389nm,1.1s
HODGE IAMs_20 IAMs_20 06 51 00.6

comp=Z,58µm,20.0s
Y60A Bolivia 26.99 7 P **P** **06 41 05.9 -0.2**
baz=189,SNR=10
Y60A S **S** **06 45 45.3 +2.1**

baz=189
Y60A Bolivia 26.99 7 P **P** **06 41 07.4 +1.3**
Y60A IAmb IAmb 06 41 31.7

comp=Z,454nm,0.9s
Y60A IAMs_20 IAMs_20 06 51 31.8

comp=Z,58µm,20.0s
NATX Nacogdoches 27.10 336 P **P** **06 41 05.1 -2.1**
baz=152,SNR=12
NATX Nacogdoches 27.10 336 P **P** **06 41 05.6 -1.5**
LPAZ La Paz 27.15 149 P **P** **06 41 07.4 -1.1**
comp=Z,26nm,0.9s,baz=323,slow=9.1,SNR=37
LPAZ LR LR 06 53 23.7

comp=Z,42µm,18.6s,baz=323,slow=40
LPAZ La Paz 27.15 149 *e*P **P** **06 41 06.1 -2.3**
LPAZ La Paz 27.15 149 P **P** **06 41 07.7 -0.7**
LPAZ La Paz 27.15 149 P **P** **06 41 07.7 -0.7**
LPAZ La Paz 27.15 149 *i* P **P** **06 41 07.8 -0.7**
LPAZ La Paz 27.15 149 *e*P **P** **06 41 06.9 -1.6**
X55A Gracelyn & Ava 27.20 1 P **P** **06 41 07.5 -0.5**
baz=182,SNR=31
X55A S **S** **06 45 47.7 +1.2**

baz=182
X56A White Oak 27.24 2 P **P** **06 41 07.7 -0.6**
baz=183,SNR=27
X56A S **S** **06 45 48.9 +1.7**

baz=183
X57A Johnson Farm, 27.26 4 P **P** **06 41 08.1 -0.5**
baz=185
X57A S **S** **06 45 49.1 +1.5**

baz=185
X54A Belton 27.27 360 P **P** **06 41 07.0 -1.7**
baz=180,SNR=42
X54A S **S** **06 45 48.6 +0.9**

baz=180
X51A Calhoun 27.39 355 P **P** **06 41 09.5 -0.3**
X58A Rowland 27.41 5 P **P** **06 41 09.5 -0.4**
baz=186
X58A S **S** **06 45 51.8 +1.9**

baz=186
X58A Rowland 27.41 5 P **P** **06 41 11.9 +2.0**
X58A IAmb IAmb 06 41 35.7

comp=Z,254nm,0.9s
X58A IAMs_20 IAMs_20 06 51 09.9

comp=Z,82µm,21.0s
BIRD Birdtown, Kers 27.42 3 P **P** **06 41 10.1 +0.2**
Y45A Yeager Farm, C 27.43 347 P **P** **06 41 09.5 -0.6**

FPAL Fort Paine 27.44 354 P **P** **06 41 09.4 -0.9**
FPAL IAMs_20 IAMs_20 06 52 39.1

comp=Z,51µm,18.0s
X59A McDuffie Farm, 27.50 7 P **P** **06 41 10.5 -0.2**
baz=188,SNR=19
X59A S **S** **06 45 53.3 +2.0**

baz=188
X48A Hartselle 27.53 351 P **P** **06 41 09.6 -1.4**
PAULI Pauline 27.55 1 P **P** **06 41 11.4 +0.3**
PAULI IAmb IAmb 06 41 43.7

comp=Z,334nm,1.1s
PAULI IAMs_20 IAMs_20 06 51 37.3

comp=Z,72µm,20.0s
435B Jarrell 27.56 331 P **P** **06 41 09.6 -1.8**
baz=146,SNR=176
435B S **S** **06 45 55.9 +3.4**

baz=146
X60A Albert Glenn T 27.58 8 P **P** **06 41 11.1 -0.3**
baz=189,SNR=18
X60A S **S** **06 45 55.2 +2.7**

baz=189
BG3 Lake Jocassee 27.72 359 P **P** **06 41 13.1 +0.4**
Z41A Richland Creek 27.77 341 P **P** **06 41 11.4 -1.7**
baz=157,SNR=15
Z41A S **S** **06 45 59.3 +3.7**

baz=157
237A Washetta, Mont 27.78 335 P **P** **06 41 12.2 -1.0**
W54A Cherokee Point 27.81 0 P **P** **06 41 13.0 -0.4**
baz=180,SNR=25
W54A S **S** **06 45 57.4 +1.2**

baz=180
W52A Murphy 27.86 357 P **P** **06 41 14.2 +0.2**
W52A IAMs_20 IAMs_20 06 52 51.4

comp=Z,64µm,18.0s
KMSC Kings Mountain 27.88 2 P **P** **06 41 13.5 -0.6**
baz=182,SNR=30
KMSC S **S** **06 45 58.9 +1.7**

baz=182
KMSC Kings Mountain 27.88 2 P **P** **06 41 14.3 +0.2**
KMSC IAmb IAmb 06 41 46.8

comp=Z,465nm,1.4s
W58A Raeford 27.88 5 P **P** **06 41 13.5 -0.6**
baz=187,SNR=17
W58A S **S** **06 45 59.3 +2.0**

baz=187
W56A Indian Trail 27.90 3 P **P** **06 41 13.4 -0.8**
baz=184,SNR=27
W56A S **S** **06 45 59.4 +1.8**

baz=184
W57A Gilead 27.95 4 P **P** **06 41 13.5 -1.3**
baz=185,SNR=45
W57A S **S** **06 46 00.1 +1.7**

baz=185
W57A Gilead 27.95 4 P **P** **06 41 14.8 0.0**
W57A IAMs_20 IAMs_20 06 53 24.2

comp=Z,64µm,18.0s
OXF Oxford 28.03 347 P **P** **06 41 13.8 -1.6**
OXF pmax pmax

comp=Z,532nm,1.1s
OXF MLR MLR

comp=Z,35µm,19.0s
OXF Oxford 28.03 347 P **P** **06 41 13.4 -2.0**
baz=165,SNR=45
OXF S **S** **06 45 58.4 -1.2**

baz=165
OXF Oxford 28.03 347 P **P** **06 41 13.8 -1.6**
OXF IAmb IAmb 06 41 56.2

comp=Z,532nm,1.1s
CCAR Cane Creek 28.06 343 P **P** **06 41 14.9 -0.9**
CCAR IAmb IAmb 06 41 41.2

comp=Z,768nm,1.4s
W50A Signal Mountai 28.06 355 P **P** **06 41 14.7 -1.2**
W50A IAmb IAmb 06 42 01.1

comp=Z,228nm,1.1s
W50A IAMs_20 IAMs_20 06 52 22.7

comp=Z,54µm,19.0s
W60A Pink Hill 28.09 8 P **P** **06 41 16.0 0.0**
baz=190,SNR=12
W60A S **S** **06 46 04.0 +3.5**

baz=190
W59A Clinton 28.11 7 P **P** **06 41 15.9 -0.2**
baz=188
W59A S **S** **06 46 04.1 +3.3**

baz=188
SWET Sewanee 28.14 354 P **P** **06 41 15.2 -1.3**
SWET IAmb IAmb 06 41 25.7

comp=Z,757nm,1.7s
SWET IAMs_20 IAMs_20 06 52 43.7

comp=Z,53µm,19.0s
PB12 IPOC Station P 28.16 155 *i* P **P** **06 41 19.9 +3.0**
PB12 *i* P **P** **06 41 20.4 +3.5**
PB12 IPOC Station P 28.16 155 P **P** **06 41 16.3 -0.6**
PLAL Pickwick Lake 28.22 350 P **P** **06 41 15.2 -2.0**
PLAL IAmb IAmb 06 41 48.9

comp=Z,297nm,1.2s
CNNC Cliffs of the 28.25 8 P **P** **06 41 17.3 -0.1**
baz=189,SNR=10.0
CNNC S **S** **06 46 06.1 +3.1**

baz=189
CNNC Cliffs of the 28.25 8 P **P** **06 41 18.4 +1.0**
CNNC IAMs_20 IAMs_20 06 51 30.2

comp=Z,56µm,21.0s
CPCT Cooper Cave 28.25 356 P **P** **06 41 17.4 -0.1**
CPCT IAmb IAmb 06 41 27.3

comp=Z,751nm,1.9s
PB16 IPOC Station P 28.27 154 *i* P **P** **06 41 18.7 +0.3**
PB16 *i* P **P** **06 41 19.7 +1.3**
PB16 *i* P **P** **06 41 20.2 +1.9**
PB16 IPOC Station P 28.27 154 P **P** **06 41 19.1 +0.7**
PB16 IAmb IAmb 06 41 27.3

comp=Z,509nm,1.7s
WLAR White Oak Lake 28.27 341 P **P** **06 41 16.4 -1.2**
WLAR IAmb IAmb 06 41 53.6

comp=Z,585nm,1.1s
W61A Ground Anchor 28.31 9 P **P** **06 41 18.4 +0.4**
baz=191,SNR=9.6
W61A S **S** **06 46 07.8 +3.7**

baz=191
X43A Marvell 28.38 345 P **P** **06 41 17.2 -1.4**
baz=162,SNR=32
V53A Saluda 28.39 359 P **P** **06 41 18.6 -0.1**
TKL Tuckaleechee C 28.41 357 P **P** **06 41 17.9 -1.0**
comp=Z,28nm,1.1s,baz=170,slow=7.4,SNR=25
TKL LR LR 06 53 02.7

comp=Z,71nm,18.4s,baz=181,slow=37
TKL Tuckaleechee C 28.41 357 P **P** **06 41 18.5 -0.4**
TKL pmax pmax

comp=Z,195nm,1.3s
TKL MLR MLR

comp=Z,71µm,19.0s
TKL Tuckaleechee C 28.41 357 P **P** **06 41 18.5 -0.4**
TKL IAMs_20 IAMs_20 06 52 43.1

comp=Z,71µm,19.0s
JCT Junction City 28.46 327 P **P** **06 41 17.8 -1.7**
JCT pmax pmax

comp=Z,311nm,1.1s
JCT MLR MLR

comp=Z,30µm,22.0s
JCT Junction City 28.46 327 P **P** **06 41 17.9 -1.6**
baz=141,SNR=130
JCT S **S** **06 46 07.2 +0.4**

baz=141
JCT Junction City 28.46 327 P **P** **06 41 17.8 -1.7**
JCT IAmb IAmb 06 41 29.1

comp=Z,311nm,1.1s
V54A Nebo 28.50 0 P **P** **06 41 19.1 -0.6**
baz=181,SNR=43
V54A S **S** **06 46 08.7 +1.6**

baz=181
WHTX Lake Whitney, 28.50 332 P **P** **06 41 17.7 -2.0**
baz=147,SNR=18
WHTX Lake Whitney, 28.50 332 P **P** **06 41 18.2 -1.5**
Z38A Mt. Pleasant 28.55 337 P **P** **06 41 18.6 -1.5**
Z38A IAmb IAmb 06 41 22.6

comp=Z,362nm,1.1s
V56A Mocksville 28.57 3 P **P** **06 41 20.2 -0.1**
baz=184,SNR=32
V56A S **S** **06 46 10.4 +2.2**

baz=184
V55A Taylorsville 28.59 2 P **P** **06 41 20.0 -0.4**
baz=182,SNR=27
V55A S **S** **06 46 10.2 +1.8**

baz=182
V55A Taylorsville 28.59 2 P **P** **06 41 20.8 +0.3**
V55A IAmb IAmb 06 42 05.7

comp=Z,392nm,1.4s
V55A IAMs_20 IAMs_20 06 53 06.9

comp=Z,58µm,18.0s
V51A Loudon 28.59 356 P **P** **06 41 19.6 -0.8**
V51A IAmb IAmb 06 42 00.6

comp=Z,315nm,1.2s
V52A Sevierville 28.59 358 P **P** **06 41 20.1 -0.3**
V52A IAmb IAmb 06 41 35.8

comp=Z,588nm,1.8s
V52A IAMs_20 IAMs_20 06 52 57.7

comp=Z,78µm,18.0s
W45A Hickory Valley 28.60 348 P **P** **06 41 19.3 -1.3**
W45A IAmb IAmb 06 41 29.1

comp=Z,775nm,1.4s
V58A Windy Hill, Pi 28.66 5 P **P** **06 41 20.6 -0.4**
baz=187,SNR=93
V58A S **S** **06 46 11.0 +1.5**

baz=187
V58A Windy Hill, Pi 28.66 5 P **P** **06 41 20.8 -0.3**
V58A IAMs_20 IAMs_20 06 52 09.0

comp=Z,70µm,22.0s
V57A Coltrane Farms 28.70 4 P **P** **06 41 21.0 -0.4**
baz=185,SNR=67
V57A S **S** **06 46 10.8 +0.6**

baz=185
V59A Middlesex 28.72 7 P **P** **06 41 21.3 -0.3**
baz=188,SNR=43
V59A S **S** **06 46 13.1 +2.6**

baz=188
MET Memphis--Engin 28.73 347 P **P** **06 41 20.8 -0.9**
MET IAmb IAmb 06 41 23.6

comp=Z,336nm,0.8s
V48A Smith Brothers 28.77 352 P **P** **06 41 20.8 -1.2**
V48A IAmb IAmb 06 41 25.9

comp=Z,422nm,0.9s
V60A Jim Taylor Roa 28.85 8 P **P** **06 41 23.1 +0.4**
baz=190,SNR=37
V60A S **S** **06 46 15.4 +2.9**

baz=190
V60A Jim Taylor Roa 28.85 8 P **P** **06 41 23.1 +0.4**
V60A IAmb IAmb 06 41 40.8

comp=Z,220nm,0.9s
V60A IAMs_20 IAMs_20 06 52 11.2

comp=Z,54µm,22.0s
V62A Hyde County Ai 28.86 11 P **P** **06 41 23.6 +0.8**
baz=193
V62A S **S** **06 46 17.3 +4.5**

baz=193
V62A Hyde County Ai 28.86 11 P **P** **06 41 23.3 +0.5**
X40A Basin Creek Fa 28.91 342 P **P** **06 41 21.1 -2.2**
baz=158,SNR=40
X40A S **S** **06 46 11.7 -1.9**

baz=158
X40A Basin Creek Fa 28.91 342 P **P** **06 41 21.6 -1.7**
MNMC Minye Minye 28.93 155 P **P** **06 41 23.5 -0.4**
MNMC IAmb IAmb 06 41 54.8

comp=Z,188nm,0.9s
MNMCX Minye Minye 28.93 155 *i* P **P** **06 41 21.8 -2.1**
V61A Roper 28.98 10 P **P** **06 41 24.6 +0.8**
baz=192,SNR=12
V61A S **S** **06 46 18.6 +4.0**

baz=192
V61A Roper 28.98 10 P **P** **06 41 25.6 +1.7**
V61A IAMs_20 IAMs_20 06 52 36.7

comp=Z,68µm,20.0s
UALR University of 29.03 343 P **P** **06 41 22.3 -2.0**
UALR IAmb IAmb 06 41 27.7

comp=Z,298nm,0.8s
CLTN Cedars of Leba 29.05 353 P **P** **06 41 23.4 -1.1**
U56A King 29.12 3 P **P** **06 41 25.3 +0.2**
baz=184,SNR=20
U56A S **S** **06 46 19.2 +2.4**

baz=184
U56A King 29.12 3 P **P** **06 41 25.9 +0.7**
U56A IAmb IAmb 06 41 53.4

comp=Z,205nm,0.9s
U56A IAMs_20 IAMs_20 06 53 17.0

comp=Z,68µm,19.0s
PSGCX Pisagua 29.13 156 *i* P **P** **06 41 25.7 +0.2**
PSGCX *i* P **P** **06 41 26.5 +1.0**
PSGCX Pisagua 29.13 156 P **P** **06 41 25.4 -0.1**
MIAR Mount Ida 29.20 341 P **P** **06 41 23.8 -2.1**
MIAR pmax pmax

comp=Z,246nm,1.1s
MIAR MLR MLR

comp=Z,21µm,19.0s
MIAR Mount Ida 29.20 341 P **P** **06 41 23.6 -2.4**
baz=157,SNR=87
MIAR S **S** **06 46 17.5 -0.7**

baz=157
MIAR Mount Ida 29.20 341 P **P** **06 41 23.8 -2.1**
MIAR IAmb IAmb 06 41 35.3

comp=Z,246nm,1.1s
U55A TA2, Sparta 29.24 2 P **P** **06 41 26.1 -0.2**
baz=183,SNR=32
U55A S **S** **06 46 20.4 +1.5**

baz=183
U54A Nelsons Funny 29.24 1 P **P** **06 41 25.6 -0.7**
baz=181,SNR=28
U54A S **S** **06 46 20.4 +1.5**

baz=181
U54A Nelsons Funny 29.24 1 P **P** **06 41 26.2 -0.1**
U54A IAmb IAmb 06 42 07.0

comp=Z,236nm,1.1s
U54A IAMs_20 IAMs_20 06 52 58.2

comp=Z,66µm,20.0s
U57A Blanch 29.27 5 P **P** **06 41 25.9 -0.6**
baz=186,SNR=86
U57A S **S** **06 46 20.8 +1.7**

baz=186
LPAR Lepanto 29.27 346 P **P** **06 41 25.3 -1.2**
WVT Waverly 29.30 351 P **P** **06 41 24.5 -2.2**
WVT pmax pmax

comp=Z,223nm,0.9s
WVT Waverly 29.30 351 P **P** **06 41 24.7 -2.0**
baz=169
WVT S **S** **06 46 17.5 -2.1**

baz=169
WVT Waverly 29.30 351 P **P** **06 41 24.5 -2.2**
WVT IAmb IAmb 06 41 29.7

comp=Z,223nm,0.9s
U58A Oxford 29.31 6 P **P** **06 41 26.2 -0.7**
baz=188,SNR=34
U58A S **S** **06 46 22.2 +2.4**

baz=188
HBAR Harrisburg 29.31 346 P **P** **06 41 25.8 -1.1**
MALB Monte Alegre 29.31 107 *e*P **P** **06 41 27.9 +0.8**
U59A Littleton 29.36 7 P **P** **06 41 26.9 -0.3**
baz=189,SNR=30
U59A S **S** **06 46 21.6 +1.1**

baz=189
U59A Littleton 29.36 7 P **P** **06 41 26.4 -0.8**
U59A IAMs_20 IAMs_20 06 52 23.5

comp=Z,75µm,20.0s
HALT Halls 29.36 348 P **P** **06 41 24.7 -2.6**
HALT IAMs_20 IAMs_20 06 55 17.6

comp=Z,42µm,18.0s
W41B Gary Mavity, V 29.37 343 P **P** **06 41 25.6 -1.8**
baz=160,SNR=201
W41B S **S** **06 46 19.7 -1.2**

baz=160
U49A Red Boiling Sp 29.41 354 P **P** **06 41 26.3 -1.5**
U49A IAMs_20 IAMs_20 06 52 54.3

comp=Z,47µm,20.0s
PB11 IPOC Station P 29.47 155 *i* P **P** **06 41 28.4 -0.2**
PB11 *i* P **P** **06 41 28.7 +0.1**
PB11 *i* P **P** **06 41 29.3 +0.7**
PB11 IPOC Station P 29.47 155 P **P** **06 41 28.1 -0.5**
PB11 IAmb IAmb 06 41 37.7

comp=Z,225nm,0.9s
WHAR Wooly Hollow 29.49 343 P **P** **06 41 26.4 -2.0**
WHAR IAmb IAmb 06 41 31.7

comp=Z,382nm,0.8s
MDP Montagnes des 29.50 92 P **P** **06 41 31.3 +2.5**
comp=Z,50nm,1.1s,baz=284,slow=10,SNR=6.2
MDP LR LR 06 53 49.5

comp=Z,47µm,19.1s,baz=280,slow=38
U61A Possum Corner 29.53 10 P **P** **06 41 29.5 +0.8**
baz=192,SNR=10.0
U61A S **S** **06 46 27.0 +3.8**

baz=192
U61A Possum Corner 29.53 10 P **P** **06 41 30.4 +1.6**
U61A IAmb IAmb 06 41 57.2

comp=Z,464nm,1.3s
U61A IAMs_20 IAMs_20 06 53 04.3

comp=Z,68µm,20.0s
Z35A Perchaven, San 29.54 334 P **P** **06 41 27.1 -1.8**
Z35A IAmb IAmb 06 41 31.2

comp=Z,225nm,0.8s
GNAR Gosnell 29.56 347 P P 06 41 27.3 -1.7
GNAR IAmb IAmb 06 41 38.0
comp=Z,524nm,1.2s
U60A Pendleton 29.56 8 P P 06 41 29.1 +0.1
baz=190,SNR=22
U60A S S **06 46 26.4 +2.8**
baz=190
LNXT Lenox 29.58 348 P P 06 41 27.5 -1.7
LNXT IAmb IAmb 06 41 31.4
comp=Z,321nm,0.8s
LNXT IAMs_20 IAMs_20 06 55 25.2
comp=Z,40µm,18.0s
GO01 Chusmiza 29.58 154 P P 06 41 30.3 +0.4
VILB Vilhena 29.64 132 *e*P **P 06 41 28.3 -1.7**
PEBM Pemiscott Bayo 29.66 347 P P 06 41 28.1 -1.9
PEBM IAmb IAmb 06 41 38.8
comp=Z,356nm,1.0s
GLAT Glass 29.70 348 P P 06 41 29.9 -0.3
GLAT IAMs_20 IAMs_20 06 55 27.5
comp=Z,42µm,18.0s
T53A Wise 29.70 360 P P 06 41 30.0 -0.4
baz=180,SNR=24
T53A S S **06 46 27.1 +1.0**
baz=180
HPIG 29.71 314 P P 06 41 30.1 -0.6
HPIG IAMs_20 IAMs_20 06 52 53.1
comp=Z,65µm,20.0s
T54A Tazewell 29.78 1 P P 06 41 30.3 -0.8
baz=182,SNR=35
T54A S S **06 46 28.7 +1.3**
baz=182
T56A Rocky Mt 29.81 4 P P 06 41 31.3 0.0
baz=185,SNR=30
T56A S S **06 46 29.1 +1.4**
baz=185
T50A Nancy 29.83 356 P P 06 41 30.8 -0.7
T50A IAMs_20 IAMs_20 06 52 59.5
comp=Z,45µm,20.0s
T57A Hurt 29.84 5 P P 06 41 31.4 -0.1
baz=186,SNR=50
T57A S S **06 46 29.5 +1.4**
baz=186
T57A Hurt 29.84 5 P P 06 41 31.4 -0.1
T57A IAMs_20 IAMs_20 06 52 43.2
comp=Z,54µm,21.0s
T58A Grand View Acr 29.86 6 P P 06 41 31.1 -0.5
baz=188,SNR=38
T58A S S **06 46 30.1 +1.8**
baz=188
T55A Pulaski 29.86 2 P P 06 41 31.5 -0.3
baz=183,SNR=46
T55A S S **06 46 30.8 +2.2**
baz=183
W39A Magazine 29.87 341 P P 06 41 30.2 -1.6
baz=157,SNR=116
W39A S S **06 46 28.4 -0.1**
baz=157
W39A Magazine 29.87 341 P P 06 41 30.1 -1.7
W39A IAmb IAmb 06 41 41.8
comp=Z,330nm,1.1s
X37A Clayton 29.88 338 P P 06 41 30.0 -1.9
TXAR Lajitas Array 29.91 320 P P 06 41 32.0 -0.4
comp=Z,47nm,1.0s,baz=145,slow=6.8,SNR=97
TXAR LR LR 06 55 06.2
comp=Z,35µm,21.8s,baz=0.0,slow=40
TX31 Lajitas Ar. Si 29.91 320 P P 06 41 32.1 -0.3
TX32 Lajitas Array 29.91 320 P P 06 41 32.1 -0.2
PVMO Portageville 29.92 348 IAMs_20 IAMs_20 06 55 44.4
comp=Z,41µm,18.0s
LCAR Lake Charles 29.92 345 P P 06 41 30.3 -2.0
LCAR IAMs_20 IAMs_20 06 55 22.3
comp=Z,44µm,18.0s
PENMO Penman 29.94 348 P P 06 41 32.7 +0.3
PENMO IAMs_20 IAMs_20 06 55 44.9
comp=Z,43µm,19.0s
BBSR BB Station 29.94 31 P P 06 41 32.6 +0.1
BBSR IAmb IAmb 06 41 44.4
comp=Z,211nm,0.8s
HICK Hickman 29.95 349 P P 06 41 32.5 0.0
BLA Blacksburg 29.97 3 P P 06 41 33.1 +0.3
BLA pmax pmax
comp=Z,196nm,1.1s
BLA MLR MLR
comp=Z,73µm,19.0s
BLA Blacksburg 29.97 3 P P 06 41 32.8 +0.1
baz=184,SNR=29
BLA S S **06 46 32.8 +2.5**
baz=184
BLA Blacksburg 29.97 3 P P 06 41 33.1 +0.3
BLA IAMs_20 IAMs_20 06 53 52.7
comp=Z,73µm,19.0s
TA01 Diego Aracena 29.98 157 P P 06 41 33.3 +0.4
T59A Double "B" Far 30.00 8 P P 06 41 32.8 0.0
baz=190,SNR=53
T59A S S **06 46 32.9 +2.4**
baz=190
T59A Double "B" Far 30.00 8 P P 06 41 33.8 +0.9
T59A IAMs_20 IAMs_20 06 52 42.5
comp=Z,68µm,20.0s
FCAR Ozark Folk Cen 30.01 344 P P 06 41 30.7 -2.3
FCAR IAmb IAmb 06 41 36.1
comp=Z,281nm,0.9s
PB08 IPOC Station P 30.02 155 P P 06 41 33.9 +0.2
T47A Sharon Grove 30.04 352 P P 06 41 31.5 -1.8
T47A IAmb IAmb 06 41 42.1
comp=Z,358nm,1.1s
ABTX Abilene, Hawle 30.08 330 P P 06 41 31.7 -2.0
baz=144,SNR=31
ABTX S S **06 46 33.1 +1.1**
baz=144
ABTX Abilene, Hawle 30.08 330 P P 06 41 32.0 -1.7
ABTX IAmb IAmb 06 42 31.8
comp=Z,585nm,1.7s
HENM Henderson Moun 30.16 348 P P 06 41 32.8 -1.6
HENM IAmb IAmb 06 41 43.1
comp=Z,534nm,1.1s
PARMO Parma 30.17 348 P P 06 41 34.4 0.0
H06E1 SOCORRO T-PHAS 30.20 295 P P 06 41 35.8 +0.8
H06E1 T T 07 13 08.2
SNR=13
H06S1 SOCORRO T 30.21 295 P P 06 41 37.0 +1.9
H06S1 T T 07 13 09.7
SNR=11
T60A Surry 30.27 9 P P 06 41 35.7 +0.3
baz=191
T60A S S **06 46 38.1 +3.2**
baz=191
T60A Surry 30.27 9 P P 06 41 35.8 +0.4
T60A IAmb IAmb 06 41 54.8
comp=Z,170nm,0.8s
T60A IAMs_20 IAMs_20 06 53 04.0
comp=Z,66µm,21.0s
H06N1 SOCORRO T-PHAS 30.28 295 P P 06 41 37.2 +1.5
NPGB Novo Progresso 30.29 117 *e*P **P 06 41 34.7 -1.2**
T45A Paducah 30.30 350 P P 06 41 34.2 -1.4
S51A Beattyville 30.38 358 P P 06 41 36.1 -0.2
S51A IAmb IAmb 06 41 45.1
comp=Z,189nm,0.8s
S53A Williamson 30.40 0 P P 06 41 35.6 -0.9
baz=180,SNR=6.6
S53A S S **06 46 37.6 +0.7**
baz=180
PBMO Poplar Bluff 30.43 347 P P 06 41 34.8 -1.9
S56A Natural Bridge 30.49 4 P P 06 41 37.3 0.0
baz=185,SNR=15
S56A S S **06 46 40.3 +2.0**
baz=185
S54A Dingess, Beckl 30.53 1 P P 06 41 36.6 -1.1
baz=182,SNR=18
S54A S S **06 46 40.5 +1.5**
baz=182
S54A Dingess, Beckl 30.53 1 P P 06 41 38.1 +0.5
S54A IAmb IAmb 06 42 17.5
comp=Z,518nm,1.9s
S54A IAMs_20 IAMs_20 06 54 33.2
comp=Z,63µm,18.0s
S55A Lewisburg 30.53 3 P P 06 41 37.3 -0.4
baz=184,SNR=39
S55A S S **06 46 41.3 +2.3**
baz=184
S58A Poland Farm, P 30.57 7 P P 06 41 38.1 +0.2
baz=188,SNR=20
S58A S S **06 46 41.7 +2.2**
baz=188
S58A Poland Farm, P 30.57 7 P P 06 41 38.1 +0.2

S57A Dark Hollow, R 30.62 5 P P 06 41 38.1 -0.3
baz=187,SNR=22
S57A S S **06 46 42.5 +2.1**
baz=187
S57A Dark Hollow, R 30.62 5 P P 06 41 38.8 +0.4
S57A IAMs_20 IAMs_20 06 54 32.0
comp=Z,57µm,19.0s
U40A Yellville 30.65 343 P P 06 41 36.7 -2.1
baz=159,SNR=326
U40A S S **06 46 39.7 -1.3**
baz=159
U40A Yellville 30.65 343 P P 06 41 36.7 -2.1
U40A IAmb IAmb 06 41 42.2
comp=Z,350nm,0.9s
PB01 IPOC Station P 30.69 156 P P 06 41 39.6 +0.3
S59A Mechanicsville 30.81 8 P P 06 41 40.5 +0.4
baz=190,SNR=17
S59A S S **06 46 45.8 +2.6**
baz=190
S60A Water View 30.84 9 P P 06 41 41.0 +0.7
baz=191,SNR=24
S60A S S **06 46 48.1 +4.3**
baz=191
HHAR Hobbs 30.91 341 P P 06 41 38.7 -2.3
HHAR IAmb IAmb 06 42 04.9
comp=Z,388nm,1.6s
R54A Victor 30.92 2 P P 06 41 40.9 -0.2
baz=183,SNR=42
R54A S S **06 46 46.3 +1.2**
baz=183
R58B Mineral 30.93 7 P P 06 41 41.8 +0.6
baz=189,SNR=36
R58B S S **06 46 47.9 +2.7**
baz=189
R58B Mineral 30.93 7 P P 06 41 42.5 +1.3
R58B IAmb IAmb 06 41 56.2
comp=Z,334nm,1.9s
R58B IAMs_20 IAMs_20 06 53 39.3
comp=Z,72nm,20.0s
W35A Tecumseh 30.95 336 P P 06 41 38.6 -2.8
S61A Accomac 30.98 10 P P 06 41 42.5 +0.9
baz=193
S61A S S **06 46 50.4 +4.5**
baz=193
R53A Hurricane 31.05 0 P P 06 41 41.3 -0.9
baz=181,SNR=23
R53A S S **06 46 47.4 +0.4**
baz=181
R53A Hurricane 31.05 0 P P 06 41 42.0 -0.2
R53A IAMs_20 IAMs_20 06 54 03.9
comp=Z,62µm,18.0s
R50A Paris 31.05 357 P P 06 41 41.3 -0.9
R50A IAmb IAmb 06 41 51.6
comp=Z,451nm,1.5s
R50A IAMs_20 IAMs_20 06 54 41.0
comp=Z,61µm,18.0s
R55A Marlinton 31.06 3 P P 06 41 42.8 +0.4
baz=184,SNR=32
R55A S S **06 46 49.4 +2.1**
baz=184
R55A Marlinton 31.06 3 P P 06 41 43.0 +0.6
R55A IAmb IAmb 06 42 19.1
comp=Z,193nm,1.1s
R55A IAMs_20 IAMs_20 06 53 13.4
comp=Z,62µm,21.0s
S44A Carbondale 31.07 349 P P 06 41 40.6 -1.7
S44A IAmb IAmb 06 41 45.8
comp=Z,248nm,0.9s
USIN University of 31.07 352 P P 06 41 41.1 -1.3
USIN IAMs_20 IAMs_20 06 52 57.2
comp=Z,48µm,22.0s
SIUC Southern Illin 31.08 349 P P 06 41 41.1 -1.4
SIUC IAmb IAmb 06 41 51.1
comp=Z,338nm,1.0s
R49A Shelbyville 31.12 356 P P 06 41 41.6 -1.2
R49A IAMs_20 IAMs_20 06 53 49.6
comp=Z,53µm,21.0s
PB07 IPOC Station P 31.15 157 P P 06 41 43.4 0.0
WCI Wyandotte Cave 31.16 354 P P 06 41 41.6 -1.6
WCI pmax pmax
comp=Z,370nm,0.9s
WCI MLR MLR
comp=Z,43µm,19.0s
WCI Wyandotte Cave 31.16 354 P P 06 41 41.4 -1.8
baz=172
WCI S S **06 46 48.0 -0.8**
baz=172
WCI Wyandotte Cave 31.16 354 P P 06 41 41.6 -1.6
WCI IAmb IAmb 06 41 51.9
comp=Z,370nm,0.8s
WCI Wyandotte Cave 31.16 354 IAMs_20 IAMs_20 06 54 19.3
comp=Z,43µm,19.0s
R57A Stanardsville 31.19 6 P P 06 41 43.6 +0.2
baz=187,SNR=56
R57A S S **06 46 52.3 +3.0**
baz=187
U38A Gravette 31.20 341 P P 06 41 41.0 -2.5
TUL1 Leonard 31.21 338 P P 06 41 41.1 -2.5
baz=154,SNR=38
TUL1 S S **06 46 48.2 -1.4**
baz=154
TUL1 Leonard 31.21 338 P P 06 41 41.1 -2.5
CBN Corbin Frederi 31.23 7 P P 06 41 44.1 +0.3
baz=190,SNR=7.6
CBN S S **06 46 52.8 +2.9**
baz=190
CBN Corbin Frederi 31.23 7 P P 06 41 43.8 0.0
CBN IAMs_20 IAMs_20 06 53 29.3
comp=Z,71µm,21.0s
R58A Rapidan 31.25 6 P P 06 41 44.6 +0.6
baz=188,SNR=112
R58A S S **06 46 53.4 +3.2**
baz=188
R59A King George, V 31.26 8 P P 06 41 44.7 +0.7
baz=190,SNR=13
R59A S S **06 46 53.6 +3.3**
baz=190
WMOK Wichita Mounta 31.40 333 P P 06 41 43.0 -2.5
WMOK pmax pmax
comp=Z,129nm,1.0s
WMOK MLR MLR
comp=Z,48µm,22.0s
WMOK Wichita Mounta 31.40 333 P P 06 41 42.5 -2.9
baz=147,SNR=42
WMOK S S **06 46 50.7 -2.1**
baz=147
WMOK Wichita Mounta 31.40 333 P P 06 41 43.0 -2.5
WMOK Wichita Mounta 31.40 333 IAMs_20 IAMs_20 06 55 55.8
comp=Z,48µm,22.0s
R60A Leonardtown, M 31.41 9 P P 06 41 46.0 +0.7
baz=191,SNR=12
R60A S S **06 46 56.1 +3.6**
baz=191
PB09 IPOC Station P 31.46 156 *i* P **P 06 41 46.5 +0.4**
PB09 *i* P **P 06 41 46.5 +0.4**
PB09 *i* P **P 06 41 46.5 +0.4**
PB09 *i* P **P 06 41 47.1 +0.9**
PB09 *i* P **P 06 41 47.7 +1.5**
PB09 *i* P **P 06 41 47.7 +1.5**
PB09 IPOC Station P 31.46 156 P P 06 41 46.6 +0.4
PB09 IAmb IAmb 06 41 54.8
comp=Z,237nm,1.2s
PB03 IPOC Station P 31.49 157 *i* P **P 06 41 45.4 -1.1**
PB03 *i* P **P 06 41 46.3 -0.2**
PB03 *i* P **P 06 41 46.3 -0.2**
Q53A Leroy 31.58 1 P P 06 41 46.4 -0.5
baz=182,SNR=70
Q53A S S **06 46 56.0 +0.6**
baz=182
PB04 IPOC Station P 31.60 158 *i* P **P 06 41 48.3 +0.9**
PB04 *i* P **P 06 41 49.2 +1.8**
PB04 *i* P **P 06 41 49.5 +2.1**
PB04 IPOC Station P 31.60 158 P P 06 41 47.5 +0.1
R61A Willards 31.67 10 P P 06 41 49.6 +1.9
baz=193
R61A S S **06 47 02.2 +5.5**
baz=193
R61A Willards 31.67 10 P P 06 41 48.7 +1.0
Q52A Bidwell 31.68 360 P P 06 41 46.8 -0.9
baz=180,SNR=62
Q52A S S **06 46 57.5 +0.6**
baz=180
Q54A Coxs Mills 31.72 2 P P 06 41 47.9 -0.2
baz=183,SNR=29
Q54A S S **06 46 59.1 +1.6**
baz=183

Q54A Coxs Mills 31.72 2 P P 06 41 48.2 0.0
Q54A IAmb IAmb 06 42 13.9
comp=Z,204nm,1.1s
Q51A Peebles 31.76 358 P P 06 41 47.6 -0.9
baz=178,SNR=99
Q51A S S **06 46 59.0 +0.9**
baz=178
Q51A Peebles 31.76 358 P P 06 41 48.3 -0.2
Q51A IAmb IAmb 06 41 57.3
comp=Z,254nm,0.9s
Q55A Buckhannon 31.77 3 P P 06 41 48.5 -0.2
baz=184,SNR=120
Q55A S S **06 47 01.2 +2.8**
baz=184
CLDB Colider 31.83 124 *e*P **P 06 41 46.5 -2.9**
CCM Cathedral Cave 31.84 346 P P 06 41 46.8 -2.3
CCM pmax pmax
comp=Z,333nm,0.8s
CCM MLR MLR
comp=Z,50µm,19.0s
CCM Cathedral Cave 31.84 346 P P 06 41 47.1 -2.1
baz=163
CCM S S **06 46 56.5 -2.9**
baz=163
CCM Cathedral Cave 31.84 346 P P 06 41 46.8 -2.3
CCM Cathedral Cave 31.84 346 IAMs_20 IAMs_20 06 56 09.0
comp=Z,50µm,19.0s
Q56A Snyder Ridge, 31.87 5 P P 06 41 49.5 0.0
baz=186,SNR=51
Q56A S S **06 47 02.6 +2.6**
baz=186
Q56A Snyder Ridge, 31.87 5 P P 06 41 50.9 +1.4
Q56A IAmb IAmb 06 41 59.6
comp=Z,167nm,1.1s
Q56A IAMs_20 IAMs_20 06 55 12.1
comp=Z,63µm,18.0s
OLIL Olney 31.89 351 P P 06 41 47.9 -1.7
Q58A Fox Den Farm, 31.92 7 P P 06 41 50.3 +0.4
baz=189,SNR=35
Q58A S S **06 47 03.3 +2.6**
baz=189
Q57A Strasburg 31.94 6 P P 06 41 50.6 +0.6
baz=187,SNR=52
Q57A S S **06 47 04.3 +3.3**
baz=187
Q59A Harwood 31.98 8 P P 06 41 50.7 +0.3
baz=191,SNR=14
Q59A S S **06 47 05.3 +3.8**
baz=191
PB05 IPOC Station P 32.06 159 *i* P **P 06 41 53.0 +1.6**
PTLB Pontes e Lacer 32.06 135 *e*P **P 06 41 50.0 -1.3**
PTLB *ep*P **pwP 06 41 59.9 +1.9**
CLNB Carlsbad 32.10 324 P P 06 41 52.1 +0.4
BLO Bloomington 32.12 354 P P 06 41 50.2 -1.4
BLO pmax pmax
comp=Z,360nm,0.7s
BLO MLR MLR
comp=Z,44µm,20.0s
BLO Bloomington 32.12 354 P P 06 41 50.2 -1.4
BLO IAMs_20 IAMs_20 06 54 49.0
comp=Z,44µm,20.0s
PB06 IPOC Station P 32.16 158 *i* P **P 06 41 51.5 -0.7**
PB06 *i* P **P 06 41 53.6 +1.3**
PB06 IPOC Station P 32.16 158 P P 06 41 52.6 +0.3
SLM Saint Louis 32.17 348 P P 06 41 50.6 -1.5
SLM pmax pmax
comp=Z,438nm,0.8s
SLM MLR MLR
comp=Z,38µm,22.0s
SLM Saint Louis 32.17 348 P P 06 41 50.6 -1.5
P51A Williamsport 32.20 359 P P 06 41 51.4 -0.9
baz=179,SNR=6.3
P51A S S **06 47 05.3 +0.2**
baz=179
P51A Williamsport 32.20 359 P P 06 41 52.0 -0.4
P51A IAMs_20 IAMs_20 06 55 11.5
comp=Z,48µm,18.0s
Q44A Meyer Farm, Va 32.20 350 P P 06 41 50.5 -1.8
Q61A Milford 32.20 10 P P 06 41 54.2 +1.8
baz=193,SNR=7.4
Q61A S S **06 47 09.9 +4.8**
baz=193
P53A Whipple 32.21 1 P P 06 41 51.8 -0.6
baz=182,SNR=49
P53A S S **06 47 05.5 +0.3**
baz=182
P53A Whipple 32.21 1 P P 06 41 51.8 -0.6
P53A IAmb IAmb 06 42 01.7
comp=Z,195nm,0.9s
P53A IAMs_20 IAMs_20 06 54 50.8
comp=Z,54µm,20.0s
Q60A Greensboro 32.24 9 P P 06 41 53.6 +1.0
baz=192,SNR=13
Q60A S S **06 47 09.7 +4.1**
baz=192
Q60A Greensboro 32.24 9 P P 06 41 54.0 +1.4
P55A Reedsville 32.29 3 P P 06 41 53.6 +0.4
baz=185,SNR=22
P55A S S **06 47 08.8 +2.2**
baz=185
P48A Milroy 32.30 355 P P 06 41 52.4 -0.8
P48A IAmb IAmb 06 42 01.0
comp=Z,281nm,0.7s
P48A IAMs_20 IAMs_20 06 54 34.9
comp=Z,42µm,20.0s
R40A Maddies Statio 32.31 345 P P 06 41 51.4 -1.9
R40A IAMs_20 IAMs_20 06 56 54.4
comp=Z,38µm,18.0s
LVC Limon Verde 32.32 157 *i* P **P 06 41 54.5 +0.5**
LVC Limon Verde 32.32 157 P P 06 41 54.6 +0.6
LVC pmax pmax
comp=Z,193nm,1.2s
LVC MLR MLR
comp=Z,32µm,21.0s
LVC Limon Verde 32.32 157 P P 06 41 54.6 +0.6
LVC IAmb IAmb 06 42 02.8
comp=Z,193nm,1.1s
LVC Limon Verde 32.32 157 *i* P **P 06 41 54.5 +0.6**
LVC Limon Verde 32.32 157 *e*P **P 06 41 53.0 -1.0**
LVC *ep*P **pwP 06 42 02.4 +1.7**
P49A Miami Univ. Ec 32.33 356 P P 06 41 51.4 -2.0
baz=176,SNR=44
P49A S S **06 47 05.2 -1.8**
baz=176
GDL2 Guadalupe Moun 32.34 323 P P 06 41 53.2 -0.6
P52A Corning 32.35 0 P P 06 41 52.8 -0.8
baz=180,SNR=21
P52A S S **06 47 07.2 -0.1**
baz=180
P50A Jamestown 32.35 358 P P 06 41 52.4 -1.3
baz=177,SNR=52
P50A S S **06 47 06.3 -1.1**
baz=177
P54A Burton 32.35 3 P P 06 41 53.9 +0.2
baz=183,SNR=20
P54A S S **06 47 08.9 +1.4**
baz=183
P56A Dayton Farm, R 32.36 5 P P 06 41 53.8 0.0
baz=186,SNR=51
P56A S S **06 47 10.7 +3.2**
baz=186
T35A Sooner Cattle 32.37 338 P P 06 41 51.4 -2.5
P57A Homestead Farm 32.42 6 P P 06 41 54.9 +0.6
baz=188,SNR=47
P57A S S **06 47 11.5 +3.1**
baz=188
P57A Homestead Farm 32.42 6 P P 06 41 55.9 +1.7
P57A IAMs_20 IAMs_20 06 54 34.6
comp=Z,57µm,21.0s
MCWV Mont Chateau 32.44 3 P P 06 41 54.5 0.0
baz=185,SNR=33
MCWV S S **06 47 10.6 +1.8**
baz=185
MCWV Mont Chateau 32.44 3 P P 06 41 55.5 +1.0
SDMD Soldier's Deli 32.49 8 P P 06 41 56.4 +1.5
P58A Pank, Wackersv 32.51 7 P P 06 41 55.4 +0.4
baz=189,SNR=49
P58A S S **06 47 12.4 +2.6**
baz=189
PB10 IPOC Station P 32.54 160 P P 06 41 57.5 +2.0
PB10 IAMs_20 IAMs_20 06 57 13.1
comp=Z,42µm,19.0s
MNTX Cornudas Mount 32.60 322 P P 06 41 55.3 -0.8
baz=134,SNR=212
MNTX S S **06 47 15.7 +4.1**
baz=134

MNTX Cornudas Mount 32.60 322 P **P** **06 41 55.1 -0.9**
P46A Rosedale 32.64 353 P **P** **06 41 53.9 -2.3**
P46A IAmb IAmb 06 41 59.0
comp=Z,293nm,0.9s
P46A IAMs_20 IAMs_20 06 53 46.7
comp=Z,52µm,22.0s
PB15 IPOC Station P 32.65 158 *ij* P **P** **06 42 01.2 +4.5**
PB15 IPOC Station P 32.65 158 P **P** **06 41 57.3 +0.6**
CPRX Cap Rock 32.65 325 P **P** **06 41 57.4 +0.9**
P59A Jarrettsville 32.74 8 P **P** **06 41 57.7 +0.7**
baz=191,SNR=38
P59A S **S** **06 47 16.8 +3.4**
baz=191
MSTX Muleshoe 32.75 327 P **P** **06 41 55.1 -2.3**
baz=140,SNR=97
MSTX S **S** **06 47 15.7 +1.7**
baz=140
MSTX Muleshoe 32.75 327 P **P** **06 41 55.3 -2.1**
MSTX IAmb IAmb 06 42 01.5
comp=Z,203nm,0.9s
O52A Adamsville 32.83 1 P **P** **06 41 56.9 -0.9**
baz=181,SNR=24
O52A S **S** **06 47 14.4 -0.4**
baz=181
O52A Adamsville 32.83 1 P **P** **06 41 57.4 -0.5**
O52A IAmb IAmb 06 42 07.2
comp=Z,223nm,1.1s
O52A IAMs_20 IAMs_20 06 55 09.2
comp=Z,55µm,19.0s
O51A Pataskala 32.86 359 P **P** **06 41 56.6 -1.5**
baz=180,SNR=84
O51A S **S** **06 47 14.8 -0.5**
baz=180
O50A Cable 32.88 358 P **P** **06 41 56.8 -1.5**
baz=178,SNR=85
O50A S **S** **06 47 14.3 -1.3**
baz=178
AMTX Amarillo 32.90 330 P **P** **06 41 56.1 -2.5**
baz=143
AMTX Amarillo 32.90 330 P **P** **06 41 56.4 -2.3**
AMTX IAmb IAmb 06 42 06.8
comp=Z,121nm,0.8s
AMTX IAMs_20 IAMs_20 06 57 06.2
comp=Z,45µm,22.0s
O54A Avella 32.94 3 P **P** **06 41 58.1 -0.7**
baz=184,SNR=46
O54A S **S** **06 47 17.2 +0.7**
baz=184
O54A Avella 32.94 3 P **P** **06 41 58.8 0.0**
O54A IAmb IAmb 06 42 08.3
comp=Z,186nm,0.9s
ACSO Alum Creek Sta 32.95 359 P **P** **06 41 57.5 -1.4**
baz=179,SNR=74
ACSO S **S** **06 47 15.6 -1.1**
baz=179
ACSO Alum Creek Sta 32.95 359 P **P** **06 41 57.7 -1.2**
ACSO IAmb IAmb 06 42 08.1
comp=Z,298nm,1.0s
ACSO IAMs_20 IAMs_20 06 55 35.3
comp=Z,50µm,18.0s
O53A New Philadelph 32.98 1 P **P** **06 41 58.5 -0.6**
baz=182,SNR=42
O53A S **S** **06 47 17.3 +0.2**
baz=182
P43A Skaggs, Pawnee 33.01 350 P **P** **06 41 57.6 -1.8**
O55A Ligonier 33.02 4 P **P** **06 41 59.3 -0.2**
baz=186,SNR=47
O55A S **S** **06 47 19.8 +1.9**
baz=186
P60A Greenville 33.06 9 P **P** **06 42 00.5 +0.7**
baz=192,SNR=21
P60A S **S** **06 47 21.5 +3.1**
baz=192
P60A Greenville 33.06 9 P **P** **06 42 00.7 +0.8**
P60A IAmb IAmb 06 42 25.0
comp=Z,220nm,1.4s
P61A Hammonton 33.07 11 P **P** **06 42 01.2 +1.3**
baz=194,SNR=8.2
P61A S **S** **06 47 21.9 +3.4**
baz=194
P61A Hammonton 33.07 11 P **P** **06 42 02.1 +2.2**
P61A IAMs_20 IAMs_20 06 55 52.1
comp=Z,40µm,19.0s
O48A Farmland 33.07 356 P **P** **06 41 57.8 -2.1**
baz=175,SNR=56
O48A S **S** **06 47 16.3 -2.3**
baz=175
MVL Millersville 33.14 8 P **P** **06 42 02.0 +1.5**
MVL IAmb IAmb 06 42 19.1
comp=Z,165nm,1.0s
MVL IAMs_20 IAMs_20 06 54 38.7
comp=Z,55µm,21.0s
O56A Blue Knob Stat 33.15 5 P **P** **06 42 01.0 +0.3**
baz=187,SNR=47
O56A S **S** **06 47 22.3 +2.5**
baz=187
O56A Blue Knob Stat 33.15 5 P **P** **06 42 01.4 +0.8**
O56A IAmb IAmb 06 42 26.1
comp=Z,229nm,1.2s
O56A IAMs_20 IAMs_20 06 56 17.7
comp=Z,58µm,18.0s
O58A Lewisberry 33.18 7 P **P** **06 42 01.4 +0.5**
baz=190,SNR=48
O58A S **S** **06 47 23.7 +3.5**
baz=190
O57A Amberson 33.18 6 P **P** **06 42 01.1 +0.1**
baz=188,SNR=36
O57A S **S** **06 47 23.1 +2.8**
baz=188
O44A Mansfield 33.34 351 P **P** **06 42 00.6 -1.7**
SFIN Lafayette 33.38 353 P **P** **06 42 00.1 -2.5**
baz=171,SNR=99
SFIN S **S** **06 47 18.6 -4.7**
baz=171
SFIN Lafayette 33.38 353 P **P** **06 42 00.5 -2.1**
SFIN IAMs_20 IAMs_20 06 55 48.2
comp=Z,44µm,19.0s
P40A Paris 33.43 346 P **P** **06 42 00.6 -2.5**
P40A IAmb IAmb 06 42 04.6
comp=Z,248nm,0.9s
P40A IAMs_20 IAMs_20 06 57 18.1
comp=Z,50µm,19.0s
YJA Yavi 33.43 151 *i* P **P** **06 42 05.9 +2.1**
O59A Robesonia 33.47 8 P **P** **06 42 04.1 +0.7**
baz=191,SNR=51
O59A S **S** **06 47 28.1 +3.4**
baz=191
N50A Nevada 33.49 359 P **P** **06 42 02.1 -1.5**
baz=178,SNR=43
N50A S **S** **06 47 24.1 -1.0**
baz=178
O61A Allentown 33.52 11 P **P** **06 42 04.3 +0.5**
baz=194,SNR=6.8
O61A S **S** **06 47 28.9 +3.3**
baz=194
N52A McGinn's Farm, 33.53 1 P **P** **06 42 02.7 -1.3**
baz=181,SNR=8.8
N52A S **S** **06 47 24.7 -0.9**
baz=181
N53A Lisbon 33.54 2 P **P** **06 42 02.8 -1.3**
baz=183,SNR=20
N53A S **S** **06 47 25.2 -0.7**
baz=183
N53A Lisbon 33.54 2 P **P** **06 42 03.3 -0.8**
SSPA Standing Stone 33.57 6 S **S** **06 47 28.0 +1.7**
baz=188
O60A Telford 33.59 9 P **P** **06 42 05.3 +0.8**
baz=192,SNR=40
O60A S **S** **06 47 30.7 +4.1**
baz=192
N55A Marion Center 33.62 4 P **P** **06 42 04.5 -0.2**
baz=186,SNR=23
N55A S **S** **06 47 28.7 +1.5**
baz=186
PB14 IPOC Station P 33.62 160 *i* P **P** **06 42 03.0 -2.3**
PB14 IPOC Station P 33.62 160 P **P** **06 42 04.9 -0.4**
N51A Ashland 33.63 360 P **P** **06 42 03.0 -1.9**
baz=180,SNR=21
N51A S **S** **06 47 25.8 -1.4**
baz=180
N51A Ashland 33.63 360 P **P** **06 42 04.1 -0.8**
N51A IAmb IAmb 06 42 13.7
comp=Z,402nm,1.4s
N48A Decatur 33.66 356 P **P** **06 42 02.9 -2.2**
baz=175,SNR=32
N48A S **S** **06 47 24.6 -3.1**
baz=175

N57A Milroy 33.73 6 P **P** **06 42 05.6 -0.1**
baz=188,SNR=38
N57A S **S** **06 47 30.2 +1.5**
baz=188
N54A Moraine State 33.73 3 P **P** **06 42 04.9 -0.8**
baz=184,SNR=30
N54A S **S** **06 47 29.0 +0.2**
baz=184
N54A Moraine State 33.73 3 P **P** **06 42 05.4 -0.3**
N54A IAMs_20 IAMs_20 06 54 55.2
comp=Z,64µm,21.0s
N56A West Decatur 33.81 5 P **P** **06 42 06.4 0.0**
baz=187,SNR=33
N56A S **S** **06 47 31.3 +1.2**
baz=187
HDIL Hopedale 33.86 350 P **P** **06 42 04.4 -2.5**
baz=168,SNR=87
HDIL S **S** **06 47 26.3 -4.5**
baz=168
HDIL Hopedale 33.86 350 P **P** **06 42 04.5 -2.3**
LUPA Lehigh Univers 33.87 9 P **P** **06 42 09.2 +2.3**
P38A Dawn 33.89 344 P **P** **06 42 04.8 -2.4**
P38A IAmb IAmb 06 42 12.1
comp=Z,188nm,0.8s
N58A Sunbury 33.91 8 P **P** **06 42 07.6 +0.3**
baz=190,SNR=33
N58A S **S** **06 47 33.6 +2.0**
baz=190
N58A Sunbury 33.91 8 P **P** **06 42 08.5 +1.2**
N58A IAMs_20 IAMs_20 06 55 21.2
comp=Z,46µm,21.0s
M51A Elyria 34.04 0 P **P** **06 42 07.1 -1.3**
baz=180,SNR=5.3
M51A S **S** **06 47 30.9 -2.7**
baz=180
BRNJ Basking Ridge 34.09 10 P **P** **06 42 09.8 +1.0**
BRNJ IAmb IAmb 06 42 27.1
comp=Z,271nm,1.2s
BRNJ IAMs_20 IAMs_20 06 54 59.1
comp=Z,50µm,21.0s
N59A State Game Lan 34.12 9 P **P** **06 42 09.8 +0.7**
baz=192,SNR=26
N59A S **S** **06 47 38.0 +3.1**
baz=192
N59A State Game Lan 34.12 9 P **P** **06 42 09.5 +0.4**
M50A Fremont 34.12 359 P **P** **06 42 07.6 -1.5**
baz=179,SNR=31
M50A S **S** **06 47 33.2 -1.6**
baz=179
M50A Fremont 34.12 359 P **P** **06 42 08.2 -0.9**
M50A IAmb IAmb 06 42 17.9
comp=Z,261nm,0.9s
M50A IAMs_20 IAMs_20 06 54 18.3
comp=Z,43µm,21.0s
M53A WI Miller and 34.18 2 P **P** **06 42 08.9 -0.7**
baz=183,SNR=20
M53A S **S** **06 47 35.4 -0.4**
baz=183
N60A Cedar Hill Far 34.18 10 P **P** **06 42 10.5 +0.9**
baz=193,SNR=33
N60A S **S** **06 47 38.6 +2.8**
baz=193
M47A Cromwell 34.20 355 P **P** **06 42 07.3 -2.5**
baz=174,SNR=45
M47A S **S** **06 47 31.7 -4.4**
baz=174
N61A South Mountain 34.21 11 P **P** **06 42 10.8 +1.0**
baz=194,SNR=22
N61A S **S** **06 47 40.0 +3.9**
baz=194
M49A Liberty Center 34.22 358 P **P** **06 42 08.0 -2.0**
baz=177,SNR=19
M49A S **S** **06 47 34.5 -1.8**
baz=177
M52A Chesterland 34.26 1 P **P** **06 42 09.1 -1.2**
baz=182,SNR=8.5
M52A S **S** **06 47 36.4 -0.6**
baz=182
M52A Chesterland 34.26 1 P **P** **06 42 10.1 -0.3**
M52A IAMs_20 IAMs_20 06 56 13.0
comp=Z,60µm,20.0s
M48A Edgerton 34.27 357 P **P** **06 42 07.8 -2.6**
baz=176,SNR=8.4
M48A S **S** **06 47 33.6 -3.5**
baz=176
M48A Edgerton 34.27 357 P **P** **06 42 09.2 -1.1**
M48A IAmb IAmb 06 42 18.7
comp=Z,287nm,1.4s
M48A IAMs_20 IAMs_20 06 56 40.0
comp=Z,33µm,18.0s
N41A Harden Midland 34.30 348 P **P** **06 42 08.3 -2.3**
M54A Oil Creek Stat 34.30 3 P **P** **06 42 09.6 -1.0**
baz=185,SNR=27
M54A S **S** **06 47 37.7 +0.2**
baz=185
M54A Oil Creek Stat 34.30 3 IAmb IAmb 06 42 51.2
comp=Z,240nm,1.4s
CPNY Central Park 34.31 11 IAmb IAmb 06 42 13.6
comp=Z,581nm,1.9s
CPNY IAMs_20 IAMs_20 06 56 30.9
comp=Z,43µm,18.0s
M55A Ridgway 34.32 5 P **P** **06 42 10.4 -0.5**
baz=186,SNR=45
M55A S **S** **06 47 38.2 +0.3**
baz=186
M55A Ridgway 34.32 5 IAmb IAmb 06 42 26.6
comp=Z,665nm,1.8s
KSU1 Kansas State U 34.35 340 P **P** **06 42 08.9 -2.3**
baz=154,SNR=53
KSU1 S **S** **06 47 36.2 -2.3**
baz=154
KSU1 Kansas State U 34.35 340 P **P** **06 42 08.5 -2.6**
KSU1 IAmb IAmb 06 42 22.8
comp=Z,262nm,0.8s
M57A Sunshine Farm, 34.35 7 P **P** **06 42 11.1 0.0**
baz=189,SNR=87
M57A S **S** **06 47 40.5 +2.1**
baz=189
M57A Sunshine Farm, 34.35 7 IAmb IAmb 06 42 15.7
comp=Z,190nm,0.9s
M57A IAMs_20 IAMs_20 06 55 33.8
comp=Z,47µm,20.0s
M56A Emporium 34.38 5 P **P** **06 42 10.4 -1.0**
baz=187,SNR=54
M56A S **S** **06 47 39.9 +1.0**
baz=187
M56A Emporium 34.38 5 IAmb IAmb 06 42 31.7
comp=Z,312nm,1.3s
M56A IAMs_20 IAMs_20 06 55 44.6
comp=Z,52µm,20.0s
GO02 Mina Guanaco 34.39 159 *i* P **P** **06 42 10.6 -1.4**
GO02 Mina Guanaco 34.39 159 IAmb IAmb 06 42 29.9
comp=Z,412nm,1.8s
GO02 Mina Guanaco 34.39 159 *i* P **P** **06 42 12.4 +0.4**
ALLY Alegheny Colle 34.41 3 IAMs_20 IAMs_20 06 55 17.1
comp=Z,57µm,21.0s
M58A Price's Panora 34.47 8 P **P** **06 42 12.4 +0.2**
baz=190,SNR=28
M58A S **S** **06 47 42.3 +2.0**
baz=190
ODNJ Ogdensburg 34.47 10 IAMs_20 IAMs_20 06 55 54.2
comp=Z,54µm,20.0s
M44A Midewin, Midew 34.49 352 IAmb IAmb 06 42 19.7
comp=Z,470nm,1.4s
R32A Long Quarter, 34.52 337 IAMs_20 IAMs_20 06 58 23.5
comp=Z,42µm,22.0s
PAL Palisades 34.53 11 P **P** **06 42 13.3 +0.7**
baz=195,SNR=18
PAL S **S** **06 47 44.0 +3.0**
baz=195
PAL Palisades 34.53 11 IAmb IAmb 06 42 15.4
comp=Z,492nm,1.7s
PAL IAMs_20 IAMs_20 06 56 29.7
comp=Z,43µm,18.0s
N62A Caumsett State 34.54 12 P **P** **06 42 13.3 +0.6**
baz=196,SNR=9.1
N62A S **S** **06 47 44.3 +3.0**
baz=196
121A Cookes Peak, D 34.67 320 P **P** **06 42 15.5 +1.3**
baz=131,SNR=290
121A S **S** **06 47 51.7 +7.8**
baz=131
M60A Port Jervis 34.71 10 P **P** **06 42 14.7 +0.5**
baz=194,SNR=29
M60A S **S** **06 47 47.1 +3.2**
baz=194
L48A N Adams 34.71 357 P **P** **06 42 11.9 -2.2**
baz=176,SNR=18

L48A S **S** **06 47 41.2 -2.7**
baz=176
L53A Girard 34.71 3 P **P** **06 42 13.2 -1.0**
baz=184,SNR=16
L53A S **S** **06 47 43.3 -0.6**
baz=184
HSIG 34.72 312 P **P** **06 42 14.1 -0.4**
HSIG IAMs_20 IAMs_20 06 54 59.9
comp=Z,46µm,21.0s
KSPA Keystone Colle 34.75 9 IAmb IAmb 06 42 35.4
comp=Z,489nm,1.3s
KSPA IAMs_20 IAMs_20 06 57 02.4
comp=Z,56µm,19.0s
L50A Kingsville 34.76 359 P **P** **06 42 13.1 -1.5**
baz=179,SNR=14
L50A S **S** **06 47 42.4 -2.2**
baz=179
M59A Waymart 34.78 9 P **P** **06 42 15.5 +0.6**
baz=192,SNR=52
M59A S **S** **06 47 47.5 +2.4**
baz=192
N63A Mattituck 34.80 13 P **P** **06 42 15.9 +1.0**
baz=197
N63A S **S** **06 47 48.9 +3.6**
baz=197
WSPT Westport, CT 34.80 12 IAMs_20 IAMs_20 06 56 57.0
comp=Z,54µm,18.0s
SRIG Santa Rosalia 34.81 309 P **P** **06 42 15.9 +0.7**
M61A Granite Spring 34.85 11 P **P** **06 42 16.1 +0.8**
baz=195,SNR=12
M61A S **S** **06 47 48.9 +2.9**
baz=195
SALV Santo Antonio 34.86 131 *e* P **P** **06 42 14.4 -1.3**
ERPA Erie 34.89 3 P **P** **06 42 14.8 -0.9**
baz=184,SNR=9.1
ERPA S **S** **06 47 45.8 -0.8**
baz=184
ERPA Erie 34.89 3 IAMs_20 IAMs_20 06 56 37.7
comp=Z,57µm,19.0s
L46A Eue Claire 34.91 355 P **P** **06 42 12.8 -3.1**
baz=173,SNR=14
L46A S **S** **06 47 41.6 -5.4**
baz=173
L46A Eue Claire 34.91 355 IAmb IAmb 06 42 22.5
comp=Z,323nm,1.1s
L46A IAMs_20 IAMs_20 06 56 14.9
comp=Z,46µm,20.0s
319A Douglas 34.91 317 P **P** **06 42 17.1 +0.8**
319A IAMs_20 IAMs_20 06 56 39.1
comp=Z,39µm,18.0s
N38A Joes South For 34.91 345 IAMs_20 IAMs_20 06 58 22.4
comp=Z,40µm,19.0s
PRPB Parauapebas 34.95 111 *e* P **P** **06 42 16.0 -0.7**
YLE Yale 35.02 12 IAmb IAmb 06 42 35.2
comp=Z,170nm,0.9s
AAM Ann Arbor 35.03 358 P **P** **06 42 15.4 -1.5**
baz=178,SNR=6.0
AAM S **S** **06 47 46.3 -2.6**
baz=178
AAM Ann Arbor 35.03 358 IAmb IAmb 06 42 49.0
comp=Z,580nm,1.8s
L57A Andrews Acres 35.04 7 P **P** **06 42 16.3 -0.8**
baz=190,SNR=63
L57A S **S** **06 47 49.8 +0.7**
baz=190
L54A Sinclairville 35.04 4 P **P** **06 42 15.3 -1.7**
baz=185,SNR=28
L54A S **S** **06 47 48.4 -0.6**
baz=185
L55A Hinsdale 35.06 5 P **P** **06 42 16.6 -0.6**
baz=187,SNR=57
L55A S **S** **06 47 49.8 +0.5**
baz=187
L56A Greenwood 35.09 6 P **P** **06 42 17.5 0.0**
baz=188,SNR=24
L56A S **S** **06 47 50.7 +0.8**
baz=188
L56A Greenwood 35.09 6 IAMs_20 IAMs_20 06 56 07.4
comp=Z,49µm,20.0s
M62A Hamden 35.15 12 P **P** **06 42 18.4 +0.5**
baz=196,SNR=17
M62A S **S** **06 47 53.9 +3.2**
baz=196
Y22D IRIS PASSCAL I 35.18 323 P **P** **06 42 19.1 +0.6**
baz=134,SNR=22
L58A Harry Jones Me 35.22 8 P **P** **06 42 19.2 +0.6**
baz=191,SNR=64
L58A S **S** **06 47 53.7 +2.0**
baz=191
L44A Lake County Fo 35.25 353 P **P** **06 42 16.1 -2.7**
baz=170
L44A S **S** **06 47 47.4 -4.8**
baz=170
L44A Lake County Fo 35.25 353 IAmb IAmb 06 42 25.4
comp=Z,152nm,0.7s
L44A IAMs_20 IAMs_20 06 55 29.8
comp=Z,41µm,22.0s
CBKS Cedar Bluff 35.26 336 P **P** **06 42 17.1 -2.0**
baz=149,SNR=22
CBKS S **S** **06 47 52.8 +0.2**
baz=149
CBKS Cedar Bluff 35.26 336 IAmb IAmb 06 42 27.8
comp=Z,256nm,1.1s
WVNY West Valley, N 35.26 5 IAmb IAmb 06 42 40.0
comp=Z,186nm,1.0s
M63A Gales Ferry 35.30 13 P **P** **06 42 20.4 +1.1**
baz=198,SNR=27
M63A S **S** **06 47 56.7 +3.7**
baz=198
KSCT Kent School, K 35.30 11 IAMs_20 IAMs_20 06 56 24.3
comp=Z,36µm,20.0s
L42A Oliver, Polo 35.33 350 IAmb IAmb 06 42 27.1
comp=Z,510nm,1.1s
BINY Binghamton 35.35 8 P **P** **06 42 20.2 +0.5**
baz=191,SNR=33
BINY S **S** **06 47 55.7 +1.9**
baz=191
BINY Binghamton 35.35 8 IAmb IAmb 06 42 36.0
comp=Z,815nm,1.9s
BINY IAMs_20 IAMs_20 06 55 25.2
comp=Z,49µm,22.0s
AZAP Zapla 35.40 152 *i* P **P** **06 42 19.8 -0.8**
L60A Shokan 35.42 10 P **P** **06 42 21.3 +1.0**
baz=194,SNR=40
L60A S **S** **06 47 58.7 +3.8**
baz=194
K51A Iona Station 35.44 1 P **P** **06 42 18.8 -1.6**
baz=181,SNR=6.0
K51A S **S** **06 47 53.2 -1.9**
baz=181
K54A Basiliko Farm, 35.46 5 P **P** **06 42 20.0 -0.7**
baz=186,SNR=22
K54A S **S** **06 47 55.5 0.0**
baz=186
K47A Vermontville 35.47 356 P **P** **06 42 18.3 -2.3**
baz=175,SNR=85
K47A S **S** **06 47 51.3 -4.2**
baz=175
L59A Walton 35.48 9 P **P** **06 42 21.3 +0.5**
baz=192,SNR=22
L59A S **S** **06 47 57.9 +2.1**
baz=192
L59A Walton 35.48 9 IAmb IAmb 06 42 23.8
comp=Z,813nm,2.0s
K50A Casco 35.49 360 P **P** **06 42 19.4 -1.5**
baz=180,SNR=7.2
K50A S **S** **06 47 54.3 -1.5**
baz=180
K50A Casco 35.49 360 IAmb IAmb 06 42 52.6
comp=Z,751nm,1.9s
K49A Clarkson 35.51 358 P **P** **06 42 19.1 -2.0**
baz=178,SNR=32
K49A S **S** **06 47 54.0 -2.2**
baz=178
K52A Tillsonburg 35.52 2 P **P** **06 42 19.8 -1.4**
baz=183,SNR=15
K52A S **S** **06 47 54.6 -1.7**
baz=183
ANMO Albuquerque 35.52 325 *c i* P **P** **06 42 21.1 -0.4**
ANMO pmax pmax
comp=Z,246nm,0.9s
ANMO MLR MLR
comp=Z,31µm,20.0s
ANMO Albuquerque 35.52 325 P **P** **06 42 21.3 -0.2**
baz=136
ANMO Albuquerque 35.52 325 P **P** **06 42 20.9 -0.6**
ANMO IAmb IAmb 06 42 26.4
comp=Z,231nm,0.8s

K46A	**Dorr**	**35.53**	**356**	P	**P**	**06 42 18.0**	**-3.3**
	baz=174,SNR=55							
K46A				S	**S**	**06 47 51.1**	**-5.5**
	baz=174							
K48A	**Perry**	**35.55**	**358**	P	**P**	**06 42 19.1**	**-2.3**
	baz=177,SNR=31							
K48A				S	**S**	**06 47 53.5**	**-3.4**
	baz=177							
K55A	**Perry**	**35.63**	**5**	P	**P**	**06 42 21.4**	**-0.7**
	baz=187,SNR=36							
K55A				S	**S**	**06 47 58.7**	**+0.6**
	baz=187							
M64A	**Tiverton**	**35.64**	**14**	P	**P**	**06 42 23.6**	**+1.5**
	baz=199,SNR=8.1							
M64A				S	**S**	**06 48 01.8**	**+3.7**
	baz=199							
N35A	**Tabor**	**35.64**	**342**	IAmb	IAmb	06 42 25.1		
	comp=Z,348nm,0.8s							
N35A				IAMs_20	IAMs_20	06 59 29.5		
	comp=Z,38µm,19.0s							
MMNY	**Mt. Morris Dam**	**35.65**	**5**	IAMs_20	IAMs_20	06 55 44.0		
	comp=Z,40µm,20.0s							
K56A	**Middlesex**	**35.67**	**6**	P	**P**	**06 42 22.2**	**-0.3**
	baz=188,SNR=41							
K56A				S	**S**	**06 47 59.5**	**+0.7**
	baz=188							
L61A	**Hillsdale 1, H**	**35.74**	**11**	P	**P**	**06 42 23.7**	**+0.6**
	baz=195,SNR=43							
L61A				S	**S**	**06 48 03.2**	**+3.4**
	baz=195							
L62A	**Suffield**	**35.77**	**12**	P	**P**	**06 42 24.3**	**+1.0**
	baz=196,SNR=8.0							
L62A				S	**S**	**06 48 02.2**	**+2.1**
	baz=196							
M65A	**Busby, Falmout**	**35.79**	**15**	P	**P**	**06 42 24.4**	**+0.9**
	baz=200							
M65A				S	**S**	**06 48 04.4**	**+3.9**
	baz=200							
M65A	**Busby, Falmout**	**35.79**	**15**	IAMs_20	IAMs_20	06 56 36.3		
	comp=Z,50µm,20.0s							
K57A	**Scipio Center**	**35.80**	**7**	P	**P**	**06 42 23.5**	**-0.1**
	baz=190,SNR=47							
K57A				S	**S**	**06 48 01.4**	**+0.7**
	baz=190							
K43A	**Burlington**	**35.82**	**352**	IAmb	IAmb	06 42 31.0		
	comp=Z,306nm,1.4s							
L63A	**North Scituate**	**35.84**	**14**	P	**P**	**06 42 24.9**	**+1.0**
	baz=198,SNR=15							
L63A				S	**S**	**06 48 05.3**	**+4.0**
	baz=198							
BRYW	**Bryant College**	**35.91**	**14**	P	**P**	**06 42 25.0**	**+0.5**
BRYW				IAmb	IAmb	06 42 47.8		
	comp=Z,205nm,1.2s							
BRYW				IAMs_20	IAMs_20	06 57 46.3		
	comp=Z,54µm,19.0s							
K58A	**Earlville**	**35.95**	**8**	P	**P**	**06 42 24.7**	**-0.2**
	baz=191,SNR=38							
K58A				S	**S**	**06 48 04.4**	**+1.5**
	baz=191							
K58A	**Earlville**	**35.95**	**8**	IAmb	IAmb	06 42 45.5		
	comp=Z,308nm,1.4s							
K58A				IAMs_20	IAMs_20	06 57 49.1		
	comp=Z,48µm,20.0s							
SCIA	**State Center**	**35.96**	**346**	P	**P**	**06 42 22.6**	**-2.3**
	baz=161,SNR=44							
SCIA				S	**S**	**06 47 59.6**	**-3.5**
	baz=161							
SCIA	**State Center**	**35.96**	**346**	P	**P**	**06 42 23.0**	**-1.9**
SCIA				IAMs_20	IAMs_20	06 58 55.2		
	comp=Z,47µm,19.0s							
J52A	**Paris**	**35.98**	**2**	P	**P**	**06 42 24.0**	**-1.1**
	baz=183,SNR=37							
J52A				S	**S**	**06 48 01.2**	**-2.2**
	baz=183							
J47A	**Sunmer**	**36.02**	**357**	P	**P**	**06 42 22.5**	**-2.9**
	baz=176,SNR=16							
J47A	**Sunmer**	**36.02**	**357**	IAmb	IAmb	06 42 33.5		
	comp=Z,191nm,1.1s							
J47A				IAMs_20	IAMs_20	06 56 32.4		
	comp=Z,38µm,20.0s							
J48A	**Bridge Port**	**36.03**	**358**	P	**P**	**06 42 23.1**	**-2.4**
	baz=178,SNR=22							
J48A				S	**S**	**06 48 00.8**	**-3.4**
	baz=178							
J48A	**Bridge Port**	**36.03**	**358**	IAmb	IAmb	06 42 33.7		
	comp=Z,204nm,0.9s							
T25A	**Trinidad**	**36.04**	**329**	P	**P**	**06 42 25.3**	**-0.7**
	baz=141,SNR=175							
T25A				S	**S**	**06 48 07.5**	**+2.7**
	baz=141							
QUA2	**Belchertown**	**36.07**	**12**	IAmb	IAmb	06 42 28.6		
	comp=Z,398nm,1.9s							
QUA2				IAMs_20	IAMs_20	06 57 26.6		
	comp=Z,38µm,19.0s							
J49A	**Marlette**	**36.08**	**359**	P	**P**	**06 42 23.9**	**-2.1**
	baz=179,SNR=15							
J49A				S	**S**	**06 48 02.0**	**-2.9**
	baz=179							
K59A	**Cooperstown**	**36.08**	**9**	P	**P**	**06 42 26.2**	**+0.2**
	baz=193,SNR=30							
K59A				S	**S**	**06 48 07.8**	**+2.8**
	baz=193							
K60A	**Five Rivers En**	**36.09**	**10**	P	**P**	**06 42 26.8**	**+0.8**
	baz=194,SNR=14							
K60A				S	**S**	**06 48 08.5**	**+3.5**
	baz=194							
L64A	**Middleborough**	**36.09**	**14**	P	**P**	**06 42 27.4**	**+1.4**
	baz=200							
L64A				S	**S**	**06 48 08.8**	**+3.7**
	baz=200							
J54A	**Appleton**	**36.12**	**4**	P	**P**	**06 42 25.7**	**-0.6**
	baz=186,SNR=12							
J54A				S	**S**	**06 48 04.1**	**-1.4**
	baz=186							
L61B	**Northampton**	**36.16**	**12**	P	**P**	**06 42 26.4**	**-0.3**
	baz=196,SNR=9.2							
L61B				S	**S**	**06 48 08.5**	**+2.3**
	baz=196							
J55A	**Hilton**	**36.19**	**5**	P	**P**	**06 42 25.6**	**-1.2**
	baz=188,SNR=16							
J55A				S	**S**	**06 48 06.3**	**-0.2**
	baz=188							
J55A	**Hilton**	**36.19**	**5**	IAMs_20	IAMs_20	06 57 46.2		
	comp=Z,34µm,18.0s							
TRY	**Troy**	**36.24**	**11**	IAmb	IAmb	06 42 45.5		
	comp=Z,264nm,1.2s							
TRY				IAMs_20	IAMs_20	06 56 41.0		
	comp=Z,51µm,22.0s							
K61A	**Williamstown**	**36.26**	**11**	P	**P**	**06 42 28.2**	**+0.7**
	baz=195,SNR=19							
K61A				S	**S**	**06 48 11.6**	**+3.9**
	baz=195							
J56A	**Wolcott**	**36.30**	**7**	P	**P**	**06 42 27.3**	**-0.5**
	baz=189,SNR=72							
J56A				S	**S**	**06 48 08.8**	**+0.6**
	baz=189							
J56A	**Wolcott**	**36.30**	**7**	IAMs_20	IAMs_20	06 56 55.2		
	comp=Z,46µm,20.0s							
JFWS	**Jewell Farm**	**36.32**	**350**	P	**P**	**06 42 25.4**	**-2.6**
	baz=167,SNR=67							
JFWS				S	**S**	**06 48 03.6**	**-5.0**
	baz=167							
JFWS	**Jewell Farm**	**36.32**	**350**	IAmb	IAmb	06 42 35.1		
	comp=Z,220nm,0.7s							
J45A	**Montague**	**36.33**	**355**	P	**P**	**06 42 25.2**	**-2.8**
	baz=173							
J45A	**Montague**	**36.33**	**355**	IAmb	IAmb	06 42 34.5		
	comp=Z,241nm,0.8s							
J45A				IAMs_20	IAMs_20	06 57 17.5		
	comp=Z,36µm,20.0s							
BCX	**Boston College**	**36.39**	**14**	P	**P**	**06 42 29.2**	**+0.6**
BCX				IAmb	IAmb	06 42 32.8		
	comp=Z,603nm,1.4s							
BCX				IAMs_20	IAMs_20	06 57 50.1		
	comp=Z,43µm,19.0s							
WES	**Weston**	**36.40**	**14**	IAmb	IAmb	06 42 30.9		
	comp=Z,634nm,1.8s							
WES				IAMs_20	IAMs_20	06 57 58.4		
	comp=Z,51µm,19.0s							
HRV	**Adam Dziewonsk**	**36.46**	**13**	P	**P**	**06 42 30.3**	**+1.1**
HRV				pmax	pmax			
	comp=Z,387nm,1.7s							
HRV				MLR	MLR			
	comp=Z,45µm,18.0s							
HRV	**Adam Dziewonsk**	**36.46**	**13**	P	**P**	**06 42 30.1**	**+0.9**
	baz=198							
HRV				S	**S**	**06 48 14.1**	**+3.3**
	baz=198							
HRV	**Adam Dziewonsk**	**36.46**	**13**	P	**P**	**06 42 30.3**	**+1.1**
HRV				IAmb	IAmb	06 42 32.2		
	comp=Z,387nm,1.7s							
HRV	**Adam Dziewonsk**	**36.46**	**13**	IAMs_20	IAMs_20	06 58 00.0		
	comp=Z,45µm,18.0s							
K62A	**Royalston**	**36.46**	**12**	P	**P**	**06 42 29.7**	**+0.4**
	baz=197,SNR=19							
K62A				S	**S**	**06 48 13.6**	**+2.8**
	baz=197							
K62A	**Royalston**	**36.46**	**12**	IAMs_20	IAMs_20	06 57 57.0		
	comp=Z,41µm,19.0s							
TUC	**Tucson**	**36.50**	**317**	P	**P**	**06 42 30.0**	**+0.2**
TUC				pmax	pmax			
	comp=Z,667nm,1.1s							
TUC				MLR	MLR			
	comp=Z,60µm,19.0s							
TUC	**Tucson**	**36.50**	**317**	P	**P**	**06 42 30.4**	**+0.6**
	baz=127							
TUC				S	**S**	**06 48 18.6**	**+6.8**
	baz=127							
TUC	**Tucson**	**36.50**	**317**	P	**P**	**06 42 30.0**	**+0.2**
I51A	**Listowel**	**36.53**	**1**	P	**P**	**06 42 28.3**	**-1.5**
	baz=182,SNR=34							
I51A				S	**S**	**06 48 09.8**	**-2.0**
	baz=182							
J57A	**Williamstown**	**36.53**	**8**	P	**P**	**06 42 29.5**	**-0.3**
	baz=191,SNR=28							
J57A				S	**S**	**06 48 12.5**	**+0.7**
	baz=191							
J57A	**Williamstown**	**36.53**	**8**	IAmb	IAmb	06 42 31.9		
	comp=Z,447nm,1.9s							
J57A				IAMs_20	IAMs_20	06 56 21.6		
	comp=Z,35µm,20.0s							
K38A	**Parkersburg**	**36.56**	**347**	IAmb	IAmb	06 42 31.4		
	comp=Z,358nm,0.8s							
K38A				IAMs_20	IAMs_20	06 59 03.1		
	comp=Z,39µm,21.0s							
J58A	**Remsen**	**36.59**	**9**	P	**P**	**06 42 30.1**	**-0.2**
	baz=192,SNR=64							
J58A				S	**S**	**06 48 13.8**	**+1.2**
	baz=192							
J58A	**Remsen**	**36.59**	**9**	IAmb	IAmb	06 42 50.8		
	comp=Z,308nm,1.2s							
I53A	**Kortright Cn E**	**36.61**	**3**	P	**P**	**06 42 28.9**	**-1.6**
	baz=185							
I53A				S	**S**	**06 48 10.8**	**-2.2**
	baz=185							
K63A	**Dunstable**	**36.64**	**13**	P	**P**	**06 42 31.9**	**+1.1**
	baz=198,SNR=13							
K63A				S	**S**	**06 48 15.8**	**+2.4**
	baz=198							
I49A	**Point Hope**	**36.65**	**359**	P	**P**	**06 42 28.9**	**-2.0**
	baz=179,SNR=18							
I49A				S	**S**	**06 48 10.7**	**-2.9**
	baz=179							
I49A	**Point Hope**	**36.65**	**359**	IAmb	IAmb	06 43 02.6		
	comp=Z,544nm,1.5s							
KSCO	**Kaye Shedlock'**	**36.66**	**333**	P	**P**	**06 42 29.9**	**-1.3**
	baz=145,SNR=57							
KSCO				S	**S**	**06 48 14.4**	**+0.1**
	baz=145							
KSCO	**Kaye Shedlock'**	**36.66**	**333**	IAmb	IAmb	06 42 34.0		
	comp=Z,297nm,0.8s							
KSCO				IAMs_20	IAMs_20	06 59 25.1		
	comp=Z,61µm,22.0s							
I46A	**Reed City**	**36.76**	**356**	P	**P**	**06 42 28.5**	**-3.3**
	baz=175,SNR=10							
I46A				S	**S**	**06 48 10.3**	**-5.0**
	baz=175							
J60A	**Lant Hill Farm**	**36.78**	**11**	P	**P**	**06 42 32.7**	**+0.8**
	baz=195,SNR=31							
J60A				S	**S**	**06 48 19.1**	**+3.5**
	baz=195							
I47A	**Gladwin**	**36.78**	**357**	P	**P**	**06 42 29.6**	**-2.3**
	baz=176,SNR=12							
J59A	**Piesco**	**36.81**	**9**	P	**P**	**06 42 32.5**	**+0.3**
	baz=193,SNR=41							
J59A				S	**S**	**06 48 17.9**	**+1.7**
	baz=193							
I52A	**Shelburne**	**36.82**	**2**	P	**P**	**06 42 30.9**	**-1.4**
	baz=184							
ACCN	**Adirondack Com**	**36.87**	**10**	IAMs_20	IAMs_20	06 57 08.7		
	comp=Z,38µm,20.0s							
L34A	**Svendsen Farm,**	**36.87**	**342**	IAmb	IAmb	06 42 35.4		
	comp=Z,254nm,0.8s							
L34A				IAMs_20	IAMs_20	07 00 09.1		
	comp=Z,35µm,18.0s							
I45A	**Fountain**	**36.91**	**355**	P	**P**	**06 42 30.4**	**-2.6**
	baz=174							
I45A	**Fountain**	**36.91**	**355**	IAmb	IAmb	06 42 40.2		
	comp=Z,254nm,1.0s							
I48A	**Sherman Twp**	**36.92**	**358**	P	**P**	**06 42 31.1**	**-2.0**
	baz=178,SNR=5.9							
I48A				S	**S**	**06 48 14.3**	**-3.4**
	baz=178							
PECO	**Prince Edward**	**36.93**	**6**	IAMs_20	IAMs_20	06 57 23.0		
	comp=Z,45µm,19.0s							
BGNE	**Belgrade**	**36.94**	**340**	P	**P**	**06 42 31.3**	**-2.1**
	baz=153,SNR=16							
BGNE				S	**S**	**06 48 15.5**	**-2.7**
	baz=153							
BGNE	**Belgrade**	**36.94**	**340**	IAmb	IAmb	06 42 35.1		
	comp=Z,320nm,0.7s							
I58A	**Old Forge**	**36.95**	**9**	P	**P**	**06 42 33.7**	**+0.2**
	baz=192,SNR=18							
I58A				S	**S**	**06 48 19.8**	**+1.5**
	baz=192							
J61A	**Chester**	**37.05**	**12**	P	**P**	**06 42 35.4**	**+1.2**
	baz=196,SNR=29							
J61A				S	**S**	**06 48 24.0**	**+4.3**
	baz=196							
SDCO	**Great Sand Dun**	**37.06**	**329**	P	**P**	**06 42 34.3**	**-0.4**
	baz=140,SNR=90							
SDCO				S	**S**	**06 48 24.3**	**+3.7**
	baz=140							
SDCO	**Great Sand Dun**	**37.06**	**329**	IAmb	IAmb	06 42 47.3		
	comp=Z,394nm,1.2s							
SDCO				IAMs_20	IAMs_20	06 59 52.0		
	comp=Z,45µm,22.0s							
I42A	**Draeger Farm,**	**37.06**	**352**	IAmb	IAmb	06 42 42.2		
	comp=Z,526nm,1.1s							
J62A	**Henniker**	**37.09**	**13**	P	**P**	**06 42 35.8**	**+1.2**
	baz=197,SNR=23							
J62A				S	**S**	**06 48 24.4**	**+4.0**
	baz=197							
I57A	**Carthage**	**37.10**	**8**	P	**P**	**06 42 34.2**	**-0.4**
	baz=191,SNR=46							
I57A				S	**S**	**06 48 21.6**	**+1.1**
	baz=191							
I55A	**Frankford**	**37.14**	**5**	P	**P**	**06 42 34.0**	**-1.0**
	baz=188,SNR=36							
I55A				S	**S**	**06 48 20.2**	**-0.9**
	baz=188							
I59A	**Olmsteadville**	**37.24**	**10**	P	**P**	**06 42 36.2**	**+0.4**
	baz=194,SNR=60							
I59A				S	**S**	**06 48 24.9**	**+2.3**
	baz=194							
J63A	**Strafford**	**37.30**	**13**	P	**P**	**06 42 37.6**	**+1.2**
	baz=199,SNR=5.5							
J63A				S	**S**	**06 48 27.2**	**+3.6**
	baz=199							
I40A	**Norwalk**	**37.33**	**350**	IAmb	IAmb	06 42 43.7		
	comp=Z,218nm,1.0s							
I40A				IAMs_20	IAMs_20	06 59 03.5		
	comp=Z,28µm,18.0s							
H46A	**Fife Lake**	**37.34**	**357**	P	**P**	**06 42 33.4**	**-3.3**
	baz=175							
H46A				S	**S**	**06 48 19.5**	**-4.6**
	baz=175							
X18A	**Snowflake**	**37.34**	**321**	IAMs_20	IAMs_20	07 00 32.7		
	comp=Z,45µm,20.0s							
NCB	**Newcomb**	**37.35**	**10**	IAMs_20	IAMs_20	06 57 09.3		
	comp=Z,42µm,20.0s							
H47A	**Mio**	**37.35**	**358**	P	**P**	**06 42 34.2**	**-2.6**
	baz=177,SNR=14							
H47A				S	**S**	**06 48 20.8**	**-3.4**
	baz=177							
I60A	**Shoreham**	**37.39**	**11**	P	**P**	**06 42 37.7**	**+0.7**
	baz=195,SNR=54							
I60A				S	**S**	**06 48 27.7**	**+2.9**
	baz=195							
H52A	**Wyevale**	**37.41**	**3**	P	**P**	**06 42 35.6**	**-1.7**
	baz=184,SNR=29							
H52A				S	**S**	**06 48 22.9**	**-2.2**
	baz=184							
H53A	**Bobcaygeon**	**37.42**	**4**	P	**P**	**06 42 36.2**	**-1.1**
	baz=186,SNR=24							
H53A				S	**S**	**06 48 23.5**	**-1.8**
	baz=186							
H48A	**Harrisville**	**37.42**	**359**	P	**P**	**06 42 35.3**	**-2.1**
	baz=178,SNR=14							
H48A				S	**S**	**06 48 21.7**	**-3.6**
	baz=178							
H48A	**Harrisville**	**37.42**	**359**	IAmb	IAmb	06 42 45.7		
	comp=Z,274nm,1.1s							
H48A				IAMs_20	IAMs_20	06 56 52.6		
	comp=Z,46µm,20.0s							
DELO	**Deloro Mine**	**37.45**	**5**	IAMs_20	IAMs_20	06 58 33.6		
	comp=Z,49µm,18.0s							
HNH	**Hanover**	**37.45**	**12**	IAMs_20	IAMs_20	06 57 49.0		
	comp=Z,43µm,20.0s							
H45A	**Beulah**	**37.48**	**356**	P	**P**	**06 42 34.5**	**-3.4**
	baz=174,SNR=9.5							
H45A				S	**S**	**06 48 20.4**	**-5.8**
	baz=174							
H43A	**Windswept, Lux**	**37.49**	**353**	IAmb	IAmb	06 42 44.9		
	comp=Z,383nm,0.8s							
H43A				IAMs_20	IAMs_20	06 58 13.2		
	comp=Z,47µm,19.0s							
H55A	**Tweed**	**37.52**	**6**	P	**P**	**06 42 37.2**	**-1.0**
	baz=188,SNR=46							
H55A				S	**S**	**06 48 26.4**	**-0.5**
	baz=188							
SADO	**Sadowa**	**37.58**	**4**	LR	LR	06 58 39.7		
	comp=Z,83µm,18.2s,baz=194,slow=37							
GLMI	**Grayling**	**37.59**	**357**	P	**P**	**06 42 36.6**	**-2.2**
	baz=176,SNR=12							
GLMI				S	**S**	**06 48 24.1**	**-3.8**
	baz=176							
GLMI	**Grayling**	**37.59**	**357**	IAmb	IAmb	06 42 46.7		
	comp=Z,356nm,0.9s							
GLMI				IAMs_20	IAMs_20	06 58 43.0		
	comp=Z,45µm,18.0s							
W18A	**Petrified Fore**	**37.59**	**322**	P	**P**	**06 42 40.1**	**+0.9**
	baz=132,SNR=198							
W18A				S	**S**	**06 48 36.2**	**+7.6**
	baz=132							
W18A	**Petrified Fore**	**37.59**	**322**	IAMs_20	IAMs_20	06 59 36.2		
	comp=Z,37µm,22.0s							
H56A	**Elgin**	**37.67**	**7**	P	**P**	**06 42 39.5**	**+0.1**
	baz=190,SNR=53							
H56A				S	**S**	**06 48 29.3**	**+0.3**
	baz=190							
I61A	**Oroboro, Fairl**	**37.68**	**12**	P	**P**	**06 42 40.9**	**+1.3**
	baz=196,SNR=26							
I61A				S	**S**	**06 48 33.7**	**+4.4**
	baz=196							
214A	**Organ Pipe Nat**	**37.69**	**315**	P	**P**	**06 42 40.6**	**+0.7**
	baz=124,SNR=256							
214A				S	**S**	**06 48 37.5**	**+7.6**
	baz=124							
ARAG	**Araguaiana, MT**	**37.73**	**127**	*e*P	**P**	**06 42 38.2**	**-2.2**
S22A	**4UR Ranch, Cre**	**37.76**	**327**	P	**P**	**06 42 40.4**	**-0.3**
	baz=138							
S22A				S	**S**	**06 48 35.0**	**+3.8**
	baz=138							
H58A	**Gabriels**	**37.79**	**9**	P	**P**	**06 42 40.2**	**-0.3**
	baz=193,SNR=23							
H58A				S	**S**	**06 48 31.5**	**+0.5**
	baz=193							
I62A	**Tamworth**	**37.81**	**13**	P	**P**	**06 42 41.3**	**+0.7**
	baz=198,SNR=13							
I62A				S	**S**	**06 48 35.5**	**+4.1**
	baz=198							
I62A	**Tamworth**	**37.81**	**13**	IAmb	IAmb	06 42 43.9		
	comp=Z,417nm,1.8s							
I62A				IAMs_20	IAMs_20	06 58 56.7		
	comp=Z,31µm,20.0s							
Q24A	**Divide**	**37.82**	**330**	P	**P**	**06 42 40.3**	**-0.9**
	baz=141,SNR=61							
Q24A				S	**S**	**06 48 35.5**	**+3.3**
	baz=141							
G45A	**Suttons Bay**	**37.87**	**356**	P	**P**	**06 42 38.2**	**-2.9**
	baz=175,SNR=18							
G45A				S	**S**	**06 48 27.1**	**-5.0**
	baz=175							
G45A	**Suttons Bay**	**37.87**	**356**	IAmb	IAmb	06 42 48.2		
	comp=Z,279nm,0.8s							
G45A				IAMs_20	IAMs_20	06 57 00.2		
	comp=Z,36µm,21.0s							
AQDB	**Aquidauana**	**37.87**	**137**	*e*P	**P**	**06 42 39.9**	**-1.6**
G47A	**Hillman**	**37.91**	**358**	P	**P**	**06 42 40.3**	**-1.2**
	baz=178,SNR=21							
G47A				S	**S**	**06 48 29.3**	**-3.5**
	baz=178							
LONY	**Lake Ozonia**	**37.92**	**9**	P	**P**	**06 42 42.0**	**+0.4**
	baz=192,SNR=25							
LONY				S	**S**	**06 48 33.1**	**+0.1**
	baz=192							
VT1	**Waterbury**	**37.96**	**11**	IAMs_20	IAMs_20	06 57 54.2		
	comp=Z,55µm,21.0s							
G53A	**Haliburton**	**37.96**	**4**	P	**P**	**06 42 41.2**	**-0.8**
	baz=186,SNR=26							
G53A				S	**S**	**06 48 31.3**	**-2.3**
	baz=186							
I37A	**Lemond, Waseca**	**38.00**	**347**	IAMs_20	IAMs_20	06 59 57.3		
	comp=Z,39µm,21.0s							
LBNH	**Lisbon**	**38.03**	**12**	P	**P**	**06 42 43.7**	**+1.1**
	baz=197,SNR=23							
LBNH				S	**S**	**06 48 37.9**	**+3.2**
	baz=197							
LBNH	**Lisbon**	**38.03**	**12**	IAMs_20	IAMs_20	06 58 06.6		
	comp=Z,38µm,20.0s							
H59A	**Cadyville**	**38.09**	**10**	P	**P**	**06 42 42.9**	**-0.2**
	baz=194,SNR=21							
H59A				S	**S**	**06 48 36.5**	**+1.0**
	baz=194							
G46A	**Petoskey**	**38.10**	**357**	P	**P**	**06 42 40.9**	**-2.1**
	baz=176							
G46A				S	**S**	**06 48 31.4**	**-4.1**
	baz=176							
I63A	**Otisfield**	**38.15**	**14**	P	**P**	**06 42 44.5**	**+1.0**
	baz=199,SNR=28							
I63A				S	**S**	**06 48 40.8**	**+4.4**
	baz=199							
I63A	**Otisfield**	**38.15**	**14**	IAmb	IAmb	06 42 47.6		
	comp=Z,368nm,1.4s							
I63A				IAMs_20	IAMs_20	06 59 09.8		
	comp=Z,36µm,19.0s							
H60A	**Morristown**	**38.19**	**11**	P	**P**	**06 42 44.7**	**+0.8**
	baz=196,SNR=37							
H60A				S	**S**	**06 48 39.0**	**+2.0**
	baz=196							
X16A	**Lo Mia Camp, P**	**38.22**	**319**	P	**P**	**06 42 45.3**	**+0.8**
X16A				IAmb	IAmb	06 42 56.7		
	comp=Z,578nm,1.1s							
X16A				IAMs_20	IAMs_20	06 58 47.7		
	comp=Z,40µm,18.0s							
I64A	**Boothbay**	**38.26**	**15**	P	**P**	**06 42 45.7**	**+1.3**
	baz=201,SNR=7.7							
I64A				S	**S**	**06 48 41.9**	**+3.9**
	baz=201							
G55A	**Calabogie**	**38.27**	**6**	P	**P**	**06 42 43.5**	**-1.0**
	baz=189,SNR=69							
G55A				S	**S**	**06 48 36.6**	**-1.5**
	baz=189							
G54A	**Lake Saint Pet**	**38.28**	**5**	P	**P**	**06 42 43.9**	**-0.7**
	baz=187,SNR=31							
G54A				S	**S**	**06 48 36.2**	**-2.1**
	baz=187							
MVCO	**Mesa Verde**	**38.29**	**325**	P	**P**	**06 42 44.8**	**-0.3**
	baz=135,SNR=158							
MVCO				S	**S**	**06 48 42.9**	**+3.7**
	baz=135							
MVCO	**Mesa Verde**	**38.29**	**325**	IAMs_20	IAMs_20	07 00 26.7		
	comp=Z,39µm,20.0s							
FRNY	**Flat Rock**	**38.29**	**10**	IAMs_20	IAMs_20	06 59 03.3		
	comp=Z,43µm,19.0s							
H61A	**Lyndonville**	**38.32**	**12**	P	**P**	**06 42 45.9**	**+1.0**
	baz=197,SNR=17							
H61A				S	**S**	**06 48 43.0**	**+4.0**
	baz=197							
G57A	**Newington**	**38.34**	**8**	P	**P**	**06 42 44.8**	**-0.2**
	baz=192,SNR=33							
G57A				S	**S**	**06 48 39.3**	**+0.2**
	baz=192							
F49A	**Sandfield**	**38.47**	**0**	P	**P**	**06 42 44.0**	**-2.2**
	baz=180,SNR=12							
F49A				S	**S**	**06 48 38.0**	**-3.3**
	baz=180							
F45A	**CMU Biological**	**38.50**	**356**	P	**P**	**06 42 43.9**	**-2.6**
	baz=175

H62A S **S** **06 48 46.0 +4.0**
baz=198
H62A **Milan** **38.52 13** P **P** **06 42 47.2 +0.6**
H62A IAmb IAmb 06 42 49.8
comp=Z,469nm,1.8s
H62A IAMs_20 IAMs_20 07 00 56.4
comp=Z,28µm,18.0s
G58A **Ormstown** **38.52 9** P **P** **06 42 46.6 0.0**
baz=193,SNR=12
G58A S **S** **06 48 43.5 +1.5**
baz=193
F48A **Evansville** **38.54 360** P **P** **06 42 44.8 -1.9**
baz=180,SNR=13
F48A S **S** **06 48 38.7 -3.6**
baz=180
ECSD **EROS Data Cent** **38.56 343** P **P** **06 42 43.8 -3.2**
baz=157,SNR=168
ECSD S **S** **06 48 38.1 -4.6**
baz=157
ECSD **EROS Data Cent** **38.56 343** IAMs_20 IAMs_20 07 00 33.9
comp=Z,31µm,18.0s
F52A **Sundridge** **38.59 3** P **P** **06 42 46.3 -0.9**
baz=185,SNR=27
F52A S **S** **06 48 40.6 -2.4**
baz=185
G40A **Rib Lake** **38.60 351** IAMs_20 IAMs_20 07 00 11.5
comp=Z,36µm,19.0s
G59A **Clarenceville** **38.60 10** P **P** **06 42 47.2 -0.1**
baz=195,SNR=7.7
G59A S **S** **06 48 44.2 +1.0**
baz=195
ORIO **Orleans, Innes** **38.60 8** P **P** **06 42 46.5 -0.8**
baz=191,SNR=26
ORIO S **S** **06 48 43.6 +0.3**
baz=191
ISCO **Idaho Springs** **38.69 331** S **S** **06 48 49.9 +4.6**
baz=141
F51A **Arnstein** **38.69 3** P **P** **06 42 46.6 -1.5**
baz=184,SNR=31
F51A S **S** **06 48 41.5 -3.0**
baz=184
GO04 **Tololo Observa** **38.70 164** P **P** **06 42 49.3 +0.8**
CYA **Choya** **38.77 157** *i* P **P** **06 42 48.9 -0.1**
C2SB **Chapadao do Su** **38.78 132** *e*P **P** **06 42 47.8 -1.3**
G60A **Masonville** **38.78 11** P **P** **06 42 49.1 +0.3**
baz=196,SNR=36
G60A S **S** **06 48 49.3 +3.4**
baz=196
F42A **Maple Grove Fa** **38.81 353** IAMs_20 IAMs_20 06 58 34.4
comp=Z,41µm,20.0s
113A **Mohawk Valley,** **38.81 315** IAMs_20 IAMs_20 06 59 01.4
comp=Z,55µm,22.0s
ALGO **Algonquin Park** **38.83 5** P **P** **06 42 48.0 -1.2**
baz=187,SNR=56
ALGO S **S** **06 48 44.4 -2.3**
baz=187
H63A **New Sharon** **38.86 14** P **P** **06 42 50.7 +1.2**
baz=200,SNR=34
H63A S **S** **06 48 52.1 +5.0**
baz=200
WVL **Waterville** **38.86 14** IAmb IAmb 06 42 53.1
comp=Z,555nm,1.5s
WVL IAMs_20 IAMs_20 06 59 24.5
comp=Z,44µm,20.0s
WUAZ **Wupatki** **38.87 321** P **P** **06 42 51.0 +1.0**
baz=130,SNR=542
WUAZ S **S** **06 48 56.2 +8.3**
baz=130
WUAZ **Wupatki** **38.87 321** IAMs_20 IAMs_20 06 59 13.0
comp=Z,29µm,20.0s
F55A **Otter Lake** **38.88 7** P **P** **06 42 48.8 -0.8**
baz=190,SNR=20
F55A S **S** **06 48 47.2 -0.2**
baz=190
SMCO **Snowmass** **38.90 329** IAMs_20 IAMs_20 07 00 52.1
comp=Z,40µm,22.0s
Y14A **Wickenburg** **38.96 317** P **P** **06 42 51.4 +0.8**
Y14A IAMs_20 IAMs_20 07 01 04.0
comp=Z,41µm,19.0s
SPMN **Marine on St.** **39.03 348** P **P** **06 42 47.6 -3.3**
baz=163,SNR=166
SPMN S **S** **06 48 43.7 -6.0**
baz=163
SPMN **Marine on St.** **39.03 348** IAmb IAmb 06 42 53.5
comp=Z,372nm,0.8s
SPMN IAMs_20 IAMs_20 07 00 57.6
comp=Z,32µm,20.0s
H64A **Troy** **39.04 15** P **P** **06 42 52.1 +1.1**
baz=201,SNR=16
H64A S **S** **06 48 53.7 +3.9**
baz=201
F57A **Harrington** **39.07 8** P **P** **06 42 50.6 -0.6**
baz=192
F57A S **S** **06 48 51.1 +0.8**
baz=192
PV15 **Paradox Valley** **39.08 327** IAmb IAmb 06 42 58.7
comp=Z,391nm,0.8s
PV15 IAMs_20 IAMs_20 07 01 51.8
comp=Z,37µm,20.0s
G61A **St-Isidore-de-** **39.12 12** P **P** **06 42 52.8 +1.2**
baz=197,SNR=34
G61A S **S** **06 48 55.0 +4.0**
baz=197
E46A **Sault Ste Mari** **39.12 358** IAMs_20 IAMs_20 06 58 36.4
comp=Z,43µm,21.0s
E52A **Mattawa** **39.12 4** P **P** **06 42 49.9 -1.7**
baz=186,SNR=19
E52A S **S** **06 48 48.4 -2.5**
baz=186
PV02 **Paradox Valley** **39.13 326** IAmb IAmb 06 43 04.6
comp=Z,579nm,1.0s
PV02 IAMs_20 IAMs_20 07 01 14.0
comp=Z,34µm,19.0s
PV13 **Radium Mtn., P** **39.14 326** IAmb IAmb 06 42 57.7
comp=Z,628nm,0.9s
PV13 IAMs_20 IAMs_20 07 01 13.3
comp=Z,34µm,19.0s
E50A **Wahnapitae** **39.16 2** P **P** **06 42 50.1 -1.8**
baz=182,SNR=31
E50A S **S** **06 48 47.9 -3.6**
baz=182
E47A **Iron Bridge** **39.17 359** P **P** **06 42 50.4 -1.7**
baz=178,SNR=30
E47A S **S** **06 48 49.1 -2.7**
baz=178
E48A **Lockeyer** **39.19 0** P **P** **06 42 50.6 -1.6**
baz=180,SNR=52
E48A S **S** **06 48 49.6 -2.5**
baz=180
PV03 **Paradox Valley** **39.22 326** IAmb IAmb 06 42 57.8
comp=Z,458nm,0.9s
PV03 IAMs_20 IAMs_20 07 02 07.5
comp=Z,47µm,19.0s
PV07 **Paradox Valley** **39.24 326** P **P** **06 42 52.9 -0.1**
PV07 IAmb IAmb 06 42 57.2
comp=Z,422nm,1.0s
PV07 IAMs_20 IAMs_20 07 00 51.1
comp=Z,41µm,22.0s
PV18 **Skein Mesa, Pa** **39.25 326** IAMs_20 IAMs_20 07 02 08.2
comp=Z,43µm,19.0s
F58A **St-Lin Laurent** **39.26 9** P **P** **06 42 51.7 -1.0**
baz=193
F58A S **S** **06 48 53.6 +0.5**
baz=193
COWI **Conover** **39.27 352** IAMs_20 IAMs_20 06 59 37.4
comp=Z,42µm,18.0s
G62A **West of Eustis** **39.27 13** P **P** **06 42 54.0 +1.1**
baz=199,SNR=54
G62A S **S** **06 48 57.5 +4.1**
baz=199
G62A **West of Eustis** **39.27 13** IAmb IAmb 06 42 57.2
comp=Z,461nm,1.3s
G62A IAMs_20 IAMs_20 06 57 46.3
comp=Z,28µm,20.0s
E53A **Dumoine, Ponti** **39.29 5** P **P** **06 42 51.6 -1.4**
baz=187,SNR=13
E53A S **S** **06 48 51.8 -1.7**
baz=187
E43A **Lone Tree Farm** **39.30 355** P **P** **06 42 50.5 -2.6**
E43A IAMs_20 IAMs_20 06 58 58.1
comp=Z,32µm,20.0s
PV16 **Nyswonger Mesa** **39.30 326** IAmb IAmb 06 42 57.5
comp=Z,448nm,1.0s
PV16 IAMs_20 IAMs_20 07 02 09.6
comp=Z,42µm,19.0s
PV17 **East Wray Mesa** **39.30 326** P **P** **06 42 53.0 -0.6**
PV17 IAmb IAmb 06 42 58.3
comp=Z,620nm,0.9s
PV17 IAMs_20 IAMs_20 07 02 08.6
comp=Z,46µm,19.0s
E51A **G1948 Merrick** **39.31 3** P **P** **06 42 51.8 -1.5**
baz=184,SNR=83
E51A S **S** **06 48 51.3 -2.7**
baz=184
ROSB **Rosrio** **39.33 103** *e*P **P** **06 42 54.1 +0.3**
PV19 **Morning Glory** **39.34 326** IAmb IAmb 06 42 58.1
comp=Z,299nm,0.8s
PV19 IAMs_20 IAMs_20 07 01 19.5
comp=Z,37µm,20.0s
H65A **Eastbrook** **39.34 16** P **P** **06 42 54.7 +1.1**
baz=202,SNR=12
H65A S **S** **06 48 58.3 +3.9**
baz=202
PV20 **West Nyswonger** **39.35 326** IAmb IAmb 06 43 06.1
comp=Z,561nm,1.2s
PV20 IAMs_20 IAMs_20 07 01 19.9
comp=Z,37µm,20.0s
PV04 **Paradox Valley** **39.35 326** IAmb IAmb 06 43 05.7
comp=Z,472nm,1.0s
G63A **Kingsbury** **39.38 14** P **P** **06 42 55.0 +1.1**
baz=200,SNR=46
G63A S **S** **06 48 58.9 +3.8**
baz=200
E54A **Lac Daplat, Po** **39.38 6** P **P** **06 42 52.7 -1.2**
baz=188,SNR=27
E54A S **S** **06 48 53.5 -1.4**
baz=188
PV22 **Blue Mesa, Par** **39.39 326** IAmb IAmb 06 43 04.6
comp=Z,323nm,1.2s
PV22 IAMs_20 IAMs_20 07 01 40.9
comp=Z,33µm,19.0s
PV14 **Lion Creek, Pa** **39.40 326** IAmb IAmb 06 43 06.5
comp=Z,351nm,1.0s
PV14 IAMs_20 IAMs_20 07 01 21.3
comp=Z,43µm,20.0s
PV10 **Paradox Valley** **39.41 326** IAmb IAmb 06 43 06.1
comp=Z,583nm,1.0s
PV10 IAMs_20 IAMs_20 07 01 19.9
comp=Z,41µm,20.0s
F59A **Saint Guilaume** **39.42 10** P **P** **06 42 54.1 0.0**
baz=195,SNR=8.9
F59A S **S** **06 48 57.6 +2.2**
baz=195
PV23 **Carpenter Ridg** **39.45 326** IAmb IAmb 06 43 08.6
comp=Z,272nm,0.9s
E44A **Grand Marais A** **39.46 356** P **P** **06 42 52.8 -1.7**
baz=174
E44A S **S** **06 48 53.4 -2.6**
baz=174
E44A **Grand Marais A** **39.46 356** IAmb IAmb 06 43 02.5
comp=Z,252nm,0.8s
E44A IAMs_20 IAMs_20 07 01 32.3
comp=Z,32µm,19.0s
PV21 **Cone Mtn., Par** **39.51 326** IAMs_20 IAMs_20 07 02 16.4
comp=Z,44µm,19.0s
E55A **Montcerf-Lytto** **39.52 7** P **P** **06 42 54.3 -0.7**
baz=190,SNR=11
E55A S **S** **06 48 56.8 -0.2**
baz=190
EMMW **East Machias** **39.58 17** IAMs_20 IAMs_20 06 57 24.0
comp=Z,43µm,22.0s
PKME **Peaks-Kenny Pk** **39.60 14** P **P** **06 42 57.0 +1.4**
baz=200,SNR=31
PKME S **S** **06 49 02.4 +4.1**
baz=200
PKME **Peaks-Kenny Pk** **39.60 14** IAmb IAmb 06 42 59.1
comp=Z,1µm,1.8s
PKME IAMs_20 IAMs_20 06 59 47.2
comp=Z,38µm,20.0s
CO02 **Combarbal** **39.62 165** *i* P **P** **06 42 55.3 -0.8**
CO02 *i* P **P** **06 42 57.3 +1.2**
CO02 *i* P **P** **06 42 58.0 +1.8**
CO02 *i* P **P** **06 42 58.0 +1.8**
CO02 **Combarbal** **39.62 165** P **P** **06 42 56.2 +0.1**
D46A **Sault St. Mari** **39.63 358** P **P** **06 42 53.8 -2.1**
baz=177,SNR=12
D46A S **S** **06 48 54.7 -3.9**
baz=177
H66A **Whiting** **39.69 17** P **P** **06 42 57.3 +0.9**
baz=204,SNR=23
H66A S **S** **06 49 04.3 +4.8**
baz=204
F60A **Warwick** **39.69 11** P **P** **06 42 56.1 -0.3**
baz=196,SNR=22
F60A S **S** **06 49 00.6 +1.1**
baz=196
N23A **Red Feather La** **39.70 332** P **P** **06 42 56.1 -0.8**
baz=142,SNR=89
N23A S **S** **06 49 02.5 +2.0**
baz=142
GLA **Glamis** **39.71 315** P **P** **06 42 57.9 +1.0**
baz=123,SNR=132
GLA S **S** **06 49 08.0 +7.7**
baz=123
GLA **Glamis** **39.71 315** IAMs_20 IAMs_20 07 01 05.2
comp=Z,30µm,19.0s
G64A **Maxfield** **39.73 15** P **P** **06 42 57.5 +0.8**
baz=201,SNR=16
G64A S **S** **06 49 03.6 +3.4**
baz=201
E57A **Chemin Saint G** **39.74 9** P **P** **06 42 56.3 -0.5**
baz=193,SNR=29
E57A S **S** **06 49 00.9 +0.5**
baz=193
E56A **St. Veronique** **39.74 8** P **P** **06 42 56.2 -0.6**
baz=191,SNR=41
E56A S **S** **06 49 01.1 +0.7**
baz=191
D47A **Chapleau** **39.77 359** P **P** **06 42 54.8 -2.3**
baz=179,SNR=28
D47A S **S** **06 48 57.0 -3.9**
baz=179
F36A **Milaca** **39.79 348** P **P** **06 42 54.2 -3.1**
F36A IAMs_20 IAMs_20 07 01 40.7
comp=Z,37µm,19.0s
PHWY **Pilot Hill** **39.79 332** IAMs_20 IAMs_20 07 00 53.4
comp=Z,48µm,22.0s
E58A **La Victoria** **39.84 10** P **P** **06 42 57.3 -0.4**
baz=194,SNR=23
E58A S **S** **06 49 02.0 +0.2**
baz=194
D51A **Lot 18 Range I** **39.88 3** P **P** **06 42 56.3 -1.7**
baz=185,SNR=18
D51A S **S** **06 48 58.7 -3.7**
baz=185
D48A **Paudash Townsh** **39.89 0** P **P** **06 42 56.2 -1.9**
baz=181,SNR=58
D48A S **S** **06 48 58.4 -4.1**
baz=181
F61A **St Evariste** **39.89 12** P **P** **06 42 58.0 0.0**
baz=198,SNR=20
F61A S **S** **06 49 05.0 +2.5**
baz=198
Y12C **Blythe** **39.89 316** P **P** **06 42 59.1 +0.9**
baz=124,SNR=164
Y12C S **S** **06 49 10.7 +7.8**
baz=124
Y12C **Blythe** **39.89 316** P **P** **06 42 58.8 +0.6**
Y12C IAMs_20 IAMs_20 06 59 46.8
comp=Z,53µm,21.0s
SUSD **Miller** **39.91 341** P **P** **06 42 55.4 -2.9**
baz=154,SNR=23
SUSD S **S** **06 48 59.5 -3.6**
baz=154
SUSD **Miller** **39.91 341** IAmb IAmb 06 42 59.4
comp=Z,390nm,0.8s
SUSD IAMs_20 IAMs_20 07 01 55.9
comp=Z,25µm,18.0s
D50A **G1974 Best Tow** **39.93 3** P **P** **06 42 56.5 -1.9**
baz=184,SNR=18
D50A S **S** **06 48 59.3 -3.9**
baz=184
PDMCI **Parker Dam,Lak** **39.94 317** P **P** **06 42 59.5 +0.8**
baz=125,SNR=161
PDMCI S **S** **06 49 12.3 +8.6**
baz=125
D53A **Lac Vacive, Po** **39.98 5** P **P** **06 42 57.6 -1.2**
baz=187,SNR=42
D53A S **S** **06 49 02.4 -1.5**
baz=187
D49A **Beulah Townshi** **39.99 1** P **P** **06 42 56.9 -2.0**
baz=182,SNR=46
D49A S **S** **06 49 00.5 -3.6**
baz=182
G65A **Princeton** **40.00 16** P **P** **06 42 59.7 +0.8**
baz=203,SNR=24
G65A S **S** **06 49 08.5 +4.4**
baz=203
U15A **North Rim** **40.02 321** P **P** **06 43 00.6 +0.9**
U15A IAmb IAmb 06 43 05.4
comp=Z,499nm,1.2s
U15A IAMs_20 IAMs_20 06 59 48.4
comp=Z,31µm,19.0s
F63A **Nahmakanta, Br** **40.06 14** P **P** **06 43 00.0 +0.5**
baz=201,SNR=22
F63A S **S** **06 49 07.7 +2.5**
baz=201
F63A **Nahmakanta, Br** **40.06 14** IAmb IAmb 06 43 02.6
comp=Z,469nm,1.7s
F63A IAMs_20 IAMs_20 07 00 20.3
comp=Z,41µm,20.0s
E59A **St. Maurice** **40.08 10** P **P** **06 43 00.3 +0.7**
baz=195
E59A S **S** **06 49 06.6 +1.3**
baz=195
E38A **The Farm, Brul** **40.12 350** IAMs_20 IAMs_20 07 01 16.7
comp=Z,27µm,18.0s
GGN **Saint George** **40.13 17** IAmb IAmb 06 43 03.5
comp=Z,589nm,1.6s
GGN IAMs_20 IAMs_20 07 01 12.3
comp=Z,33µm,19.0s
D41A **Chassel** **40.14 353** IAmb IAmb 06 43 07.8
comp=Z,304nm,0.8s
D54A **Lac Fusel, La** **40.15 6** P **P** **06 42 59.0 -1.2**
baz=189,SNR=81
D54A S **S** **06 49 04.4 -2.0**
baz=189
D55A **Sainte-Anne-du** **40.15 7** P **P** **06 42 59.3 -1.0**
baz=191,SNR=94
D55A S **S** **06 49 06.3 -0.2**
baz=191
E60A **Ste Agathe de** **40.17 12** P **P** **06 43 00.7 +0.3**
baz=197,SNR=32
E60A S **S** **06 49 08.0 +1.2**
baz=197
W13A **Hualapai Mount** **40.23 318** P **P** **06 43 02.8 +1.4**
O20A **White River Ci** **40.26 329** P **P** **06 43 01.3 -0.2**
baz=138,SNR=214
O20A **White River Ci** **40.26 329** IAmb IAmb 06 43 06.2
comp=Z,282nm,0.9s
O20A IAMs_20 IAMs_20 07 02 45.8
comp=Z,33µm,20.0s
D56A **ZEC Mazanza, M** **40.27 8** P **P** **06 43 00.4 -0.9**
baz=192,SNR=37
D56A S **S** **06 49 08.1 -0.3**
baz=192
SWSC **Sam W. Stewart** **40.34 314** P **P** **06 43 02.7 +0.7**
baz=122,SNR=137
SWSC S S 06 49 25.4 +16
baz=122
D57A **Chemin Vers le** **40.37 9** P **P** **06 43 01.8 -0.3**
baz=193,SNR=29
D57A S **S** **06 49 09.9 +0.2**
baz=193
F64A **Sherman** **40.40 15** P **P** **06 43 03.2 +0.9**
baz=202,SNR=45
F64A S **S** **06 49 13.1 +2.9**
baz=202
F64A **Sherman** **40.40 15** P **P** **06 43 02.9 +0.6**
F64A IAmb IAmb 06 43 05.4
comp=Z,826nm,1.8s
F64A IAMs_20 IAMs_20 07 00 21.4
comp=Z,39µm,19.0s
IKP **In-Ko-Pah, Jac** **40.41 314** P **P** **06 43 03.5 +0.8**
baz=122,SNR=80
IKP S S 06 49 22.7 +12
baz=122
F33A **5 Mile Ranch,** **40.42 345** P **P** **06 42 59.5 -3.0**
F33A IAmb IAmb 06 43 03.8
comp=Z,338nm,0.8s
F33A IAMs_20 IAMs_20 07 01 18.3
comp=Z,26µm,19.0s
CO04 **Los Peladeros** **40.42 165** *i* P **P** **06 43 03.3 +0.3**
CO04 *i* P **P** **06 43 03.9 +0.9**
E61A **Lac Etchemin** **40.43 13** P **P** **06 43 03.5 +1.0**
baz=198,SNR=9.4
E61A S **S** **06 49 13.1 +2.4**
baz=198
BC3 **Big Chuckawall** **40.48 315** P **P** **06 43 03.9 +0.6**
baz=123,SNR=129
BC3 S **S** **06 49 20.8 +8.8**
baz=123
H03N2 **Juan Fernandez** **40.48 176** T T 07 27 07.9
baz=354,slow=76,SNR=54
H03N1 **Juan Fernandez** **40.49 176** T T 07 27 08.8
baz=354,slow=76,SNR=92
H03N3 **Juan Fernandez** **40.50 176** T T 07 27 02.5
baz=354,slow=76,SNR=76
NEE2 **Needles Airpor** **40.53 317** P **P** **06 43 04.5 +0.9**
baz=125,SNR=12
NEE2 S **S** **06 49 20.5 +8.0**
baz=125
IRM **Iron Mountain** **40.54 316** P **P** **06 43 04.4 +0.7**
baz=124,SNR=134
IRM S S 06 49 24.5 +12
baz=124
D58A **Chemin du LacG** **40.61 10** P **P** **06 43 03.7 -0.3**
baz=194,SNR=21
D58A S **S** **06 49 13.2 -0.1**
baz=194
D59A **Saint-Raymond** **40.71 11** P **P** **06 43 05.0 +0.2**
baz=196,SNR=6.5
D59A S **S** **06 49 16.4 +1.6**
baz=196
KNB **Kanab** **40.72 321** P **P** **06 43 06.3 +0.9**
KNB pmax pmax
comp=Z,796nm,1.3s
KNB **Kanab** **40.72 321** P **P** **06 43 06.2 +0.9**
HAL **Halifax** **40.73 20** IAmb IAmb 06 43 16.3
comp=Z,292nm,1.0s
MONP2 **Monument Peak** **40.76 314** P **P** **06 43 06.3 +0.6**
baz=122,SNR=92
MONP2 S S 06 49 29.9 +13
baz=122
BDFB **Brasilia** **40.77 124** P **P** **06 43 04.7 -1.2**
comp=Z,14nm,0.6s,baz=292,slow=8.1,SNR=12
BDFB LR LR 07 00 29.3
comp=Z,56µm,20.4s,baz=307,slow=37
BDFB **Brasilia** **40.77 124** P **P** **06 43 05.5 -0.4**
BDFB pmax pmax
comp=Z,107nm,1.0s
BDFB MLR MLR
comp=Z,52nm,19.0s
BDFB **Brasilia** **40.77 124** P **P** **06 43 05.5 -0.4**
CFA **Coronel Fontan** **40.79 162** P **P** **06 43 05.4 -0.3**
comp=Z,40nm,0.9s,baz=338,slow=8.3,SNR=44
D60A **Saint Jean D'O** **40.80 12** P **P** **06 43 05.7 +0.1**
baz=197,SNR=25
D60A S **S** **06 49 18.0 +1.9**
baz=197
BAR **Barrett** **40.83 313** P **P** **06 43 06.6 +0.5**
BAR IAmb IAmb 06 43 18.5
comp=Z,484nm,1.2s
E63A **Oxbow** **40.90 15** P **P** **06 43 07.4 +1.0**
baz=201,SNR=36
E63A S **S** **06 49 21.3 +3.6**
baz=201
E63A **Oxbow** **40.90 15** IAmb IAmb 06 43 09.8
comp=Z,1µm,1.9s
E63A IAMs_20 IAMs_20 07 01 03.6
comp=Z,40µm,19.0s
LATQ **La Tuque** **40.90 10** P **P** **06 43 06.3 -0.1**
baz=194,SNR=25
RWWY **Rawlins** **40.92 331** IAmb IAmb 06 43 11.1
comp=Z,265nm,0.9s
RWWY IAMs_20 IAMs_20 07 02 19.0
comp=Z,38µm,21.0s
BELC **Belle Mtn. Jos** **41.05 315** P **P** **06 43 08.8 +0.8**
baz=123,SNR=328
BELC S S 06 49 29.5 +9.0
baz=123
E64A **Bridgewater** **41.05 15** P **P** **06 43 08.8 +1.1**
baz=202,SNR=33
E64A S **S** **06 49 23.4 +3.5**
baz=202
XPFO **Pion Flat** **41.16 315** P **P** **06 43 09.1 +0.1**
XPFO IAmb IAmb 06 43 21.4
comp=Z,616nm,1.1s
XPFO **Pion Flat** **41.16 315** IAMs_20 IAMs_20 07 00 06.5
comp=Z,39µm,21.0s
PFO **Pinyon Flats O** **41.16 315***c* *i*P **P** **06 43 09.0 0.0**
PFO pmax pmax
comp=Z,624nm,0.9s
PFO MLR MLR

comp=Z,56µm,19.0s
PFO Pinyon Flats O 41.16 315 P **P** **06 43 09.4 +0.4**
baz=122,SNR=157
PFO S S 06 49 35.6 +13
baz=122
PFO Pinyon Flats O 41.16 315 P **P** **06 43 09.3 +0.4**
PFO IAmb IAmb 06 43 21.4
comp=Z,614nm,1.1s
PFO Pinyon Flats O 41.16 315 IAMs_20 IAMs_20 07 00 06.5
comp=Z,39µm,21.0s
VA03 San Esteban 41.22 165 *i* P **P** **06 43 08.6 -0.7**
VA03 *i* P **P** **06 43 08.6 -0.7**
D61A St Aubert, Com 41.23 12 P **P** **06 43 09.8 +0.7**
baz=198,SNR=45
D61A S **S** **06 49 25.5 +3.0**
baz=198
PQI Presque Isle 41.24 15 P **P** **06 43 09.8 +0.7**
PQI IAmb IAmb 06 43 12.4
comp=Z,771nm,1.7s
PQI IAMs_20 IAMs_20 07 01 33.5
comp=Z,36µm,20.0s
GMRC Granite Mounta 41.24 317 P **P** **06 43 10.7 +1.1**
baz=124,SNR=152
GMRC S S 06 49 32.4 +9.0
baz=124
109C Camp Elliot, M 41.25 313 P **P** **06 43 10.0 +0.5**
baz=121,SNR=66
109C S **S** **06 49 31.6 +8.4**
baz=121
109C Camp Elliot, M 41.25 313 P **P** **06 43 10.2 +0.7**
ROCH El Roble 41.30 166 *i* P **P** **06 43 09.2 -0.9**
ROCH *i* P **P** **06 43 09.2 -0.9**
ROCH *i* P **P** **06 43 09.9 -0.2**
ROCH *i* P **P** **06 43 09.9 -0.2**
ROCH *i* P **P** **06 43 09.9 -0.2**
ROCH *i* P **P** **06 43 10.6 +0.4**
K22A Casper 41.34 333 P **P** **06 43 09.5 -0.9**
baz=142,SNR=211
K22A Casper 41.34 333 IAmb IAmb 06 43 13.6
comp=Z,201nm,0.8s
K22A IAMs_20 IAMs_20 07 02 03.5
comp=Z,50µm,22.0s
D62A Allapoint, All 41.37 14 P **P** **06 43 11.3 +1.0**
baz=200,SNR=33
D62A S **S** **06 49 27.8 +3.3**
baz=200
D62A Allapoint, All 41.37 14 IAmb IAmb 06 43 13.3
comp=Z,492nm,1.7s
D62A IAMs_20 IAMs_20 07 00 40.9
comp=Z,34µm,18.0s
LMN Caledonia Moun 41.40 18 IAmb IAmb 06 43 21.1
comp=Z,494nm,0.9s
EYMN Ely 41.41 351 P **P** **06 43 08.0 -2.7**
baz=166,SNR=12
EYMN S **S** **06 49 19.6 -5.7**
baz=166
EYMN Ely 41.41 351 IAMs_20 IAMs_20 07 02 05.9
comp=Z,29µm,18.0s
RSSD Black Hills 41.47 336 P **P** **06 43 10.5 -0.9**
RSSD pmax pmax
comp=Z,176nm,0.9s
RSSD MLR MLR
comp=Z,31µm,20.0s
RSSD Black Hills 41.47 336 P **P** **06 43 10.6 -0.8**
baz=146
RSSD S **S** **06 49 28.7 +2.0**
baz=146
RSSD Black Hills 41.47 336 P **P** **06 43 10.5 -0.9**
RSSD Black Hills 41.47 336 IAMs_20 IAMs_20 07 03 06.8
comp=Z,31µm,20.0s
MT02 Curacav 41.54 166 P **P** **06 43 12.5 +0.6**
PEL Peldehue 41.55 165 *i* P **P** **06 43 12.6 +0.6**
PEL ⇑*i*P **P** **06 43 12.6 +0.6**
PEL *i* P **P** **06 43 12.6 +0.6**
PEL Peldehue 41.55 165 IAmb IAmb 06 43 36.0
comp=Z,404nm,1.6s
D63A Stockholm 41.55 15 P **P** **06 43 13.0 +1.2**
baz=202,SNR=43
D63A S **S** **06 49 31.0 +3.7**
baz=202
MURC Murrieta 41.68 314 P **P** **06 43 13.8 +0.7**
baz=121,SNR=58
MURC S **S** **06 49 38.6 +8.9**
baz=121
PCMB Pacaembu 41.71 134 *e*P **P** **06 43 11.6 -1.9**
HEC Hector,Ludlow 41.73 316 P **P** **06 43 14.6 +1.0**
baz=124,SNR=147
HEC S **S** **06 49 37.3 +6.8**
baz=124
MT05 Renca 41.77 165 IAmb IAmb 06 43 16.1
comp=Z,484nm,1.6s
TUQ Turquoise Moun 41.79 317 P **P** **06 43 14.9 +0.9**
baz=124,SNR=83
TUQ S **S** **06 49 39.0 +7.5**
baz=124
D32A Dogwood Acres, 41.81 345 IAmb IAmb 06 43 14.7
comp=Z,335nm,1.1s
D32A IAMs_20 IAMs_20 07 02 20.1
comp=Z,25µm,19.0s
FCH Farellones 41.82 165 *i* P **P** **06 43 14.6 +0.1**
FCH *i* P **P** **06 43 15.2 +0.7**
FCH *i* P **P** **06 43 15.2 +0.7**
CLCH Cerro Calan 41.82 165 *i* P **P** **06 43 14.6 +0.3**
CLCH *i* P **P** **06 43 15.2 +1.0**
BBRC Big Bear Solar 41.83 315 P **P** **06 43 15.8 +1.2**
baz=122,SNR=15
BBRC S S 06 49 41.4 +9.1
baz=122
IPMB Ipameri, GO 41.86 127 *e*P **P** **06 43 12.6 -2.2**
SHPR Sheep Range 41.90 319 P **P** **06 43 16.3 +1.2**
SHPR IAmb IAmb 06 43 27.3
comp=Z,699nm,1.2s
LSQQ Lebel-sur-Quev 42.01 5 P **P** **06 43 14.4 -1.1**
baz=188
GBN Guysborough 42.14 22 P **P** **06 43 17.9 +1.3**
GBN IAmb IAmb 06 43 27.5
comp=Z,365nm,1.1s
RRX Edison Barstow 42.21 316 P **P** **06 43 18.5 +1.1**
baz=123,SNR=15
RRX S **S** **06 49 45.8 +8.2**
baz=123
SHOC Shoshone, Teco 42.28 318 P **P** **06 43 18.9 +0.9**
baz=124,SNR=8.9
SHOC S S 06 49 47.8 +9.2
baz=124
GSC Goldstone, Bar 42.31 316 P **P** **06 43 19.6 +1.3**
GSC pmax pmax
comp=Z,1µm,1.1s
GSC MLR MLR
comp=Z,12µm,19.0s
GSC Goldstone, Bar 42.31 316 P **P** **06 43 19.1 +0.8**
baz=123,SNR=217
GSC S **S** **06 49 47.8 +8.7**
baz=123
GSC Goldstone, Bar 42.31 316 P **P** **06 43 19.6 +1.3**
BATG Bathurst New B 42.32 16 IAmb IAmb 06 43 28.7
comp=Z,198nm,0.8s
BATG IAMs_20 IAMs_20 06 59 07.2
comp=Z,37µm,22.0s
LMEL Las Melosas 42.34 165 *i* P **P** **06 43 15.2 -3.3**
BFSC Mount Baldy Ra 42.34 315 P **P** **06 43 19.0 +0.4**
baz=122,SNR=60
BFSC S **S** **06 49 47.8 +8.2**
baz=122
SCI2 San Clemente I 42.35 312 P **P** **06 43 18.7 +0.2**
baz=119,SNR=10
E28A Huff 42.37 341 IAMs_20 IAMs_20 07 02 43.8
comp=Z,31µm,18.0s
YCA YACYRETA 42.38 145 *i* P **P** **06 43 17.2 -1.6**
CIS Catalina Islan 42.46 313 P **P** **06 43 20.0 +0.5**
baz=120,SNR=31
CIS S S 06 49 55.7 +15
baz=120
FMP Fort Macarthur 42.52 313 P **P** **06 43 20.5 +0.6**
baz=120,SNR=8.6
AGMN Agassiz Nation 42.61 347 P **P** **06 43 17.4 -3.0**
baz=160,SNR=117
AGMN S **S** **06 49 37.2 -5.8**
baz=160
AGMN Agassiz Nation 42.61 347 IAmb IAmb 06 43 28.2
comp=Z,305nm,1.0s
MWC Mount Wilson 42.62 314 P **P** **06 43 21.7 +0.8**
MWC pmax pmax
comp=Z,3µm,2.0s
MWC MLR MLR
comp=Z,22µm,20.0s
MWC Mount Wilson 42.62 314 P **P** **06 43 21.7 +0.8**

MATQ Matagami 42.65 4 P **P** **06 43 18.4 -2.2**
baz=187,SNR=55
MATQ S **S** **06 49 39.9 -3.5**
baz=187
PASC Pasadena Art C 42.68 314 P **P** **06 43 22.3 +1.1**
DUG Dugway, Tooele 42.79 325 P **P** **06 43 22.5 +0.3**
baz=132,SNR=98
DUG S **S** **06 49 51.0 +4.9**
baz=132
DUG Dugway, Tooele 42.79 325 IAmb IAmb 06 43 25.6
comp=Z,583nm,1.9s
DECC Green Verdugo 42.83 314 P **P** **06 43 23.2 +0.8**
baz=121,SNR=27
DECC S S 06 49 56.6 +10
baz=121
TPNV Topopah Spring 42.87 319 P **P** **06 43 24.3 +1.4**
TPNV pmax pmax
comp=Z,1µm,1.1s
TPNV MLR MLR
comp=Z,40µm,21.0s
TPNV Topopah Spring 42.87 319 P **P** **06 43 24.2 +1.4**
baz=126,SNR=185
TPNV S **S** **06 49 56.3 +8.9**
baz=126
TPNV Topopah Spring 42.87 319 P **P** **06 43 24.3 +1.4**
TPNV IAMs_20 IAMs_20 07 04 00.7
comp=Z,40µm,21.0s
BW06 Boulder Array 42.87 330 P **P** **06 43 21.5 -1.5**
baz=138,SNR=109
BW06 S **S** **06 49 48.8 +1.3**
baz=138
BW06 Boulder Array 42.87 330 IAMs_20 IAMs_20 07 03 32.9
comp=Z,31µm,21.0s
PDAR Pinedale Array 42.87 330 P **P** **06 43 21.5 -1.4**
comp=Z,39nm,0.6s,baz=127,slow=9.4,SNR=117
EDW2 Edwards Air Fo 42.91 315 P **P** **06 43 23.4 +0.2**
baz=122,SNR=232
EDW2 S **S** **06 49 54.7 +6.8**
baz=122
FURC Furnace Creek, 43.00 318 P **P** **06 43 24.7 +1.0**
baz=124,SNR=199
FURC S **S** **06 49 57.8 +8.9**
baz=124
RPN Rapa Nui 43.00 217 P **P** **06 43 24.5 +0.6**
comp=Z,62nm,0.8s,baz=358,slow=4.9,SNR=3.9
RPN Rapa Nui 43.00 217 P **P** **06 43 23.7 -0.2**
RPN Rapa Nui 43.00 217 P **P** **06 43 23.7 -0.2**
LRMC Laurel Mtn Rad 43.01 316 P **P** **06 43 24.9 +0.8**
baz=123,SNR=290
LRMC S **S** **06 49 58.3 +8.8**
baz=123
GO05 Huala 43.04 168 *i* P **P** **06 43 22.5 -1.6**
GO05 *i* P **P** **06 43 23.9 -0.2**
GO05 *i* P **P** **06 43 26.5 +2.4**
HWUT Hardware Ranch 43.07 327 IAMs_20 IAMs_20 07 04 38.1
comp=Z,39µm,20.0s
BO02 Sierra Bellavi 43.09 166 *i* P **P** **06 43 23.2 -1.4**
BO02 *i* P **P** **06 43 23.2 -1.4**
BO02 *i* P **P** **06 43 23.9 -0.7**
BO02 *i* P **P** **06 43 23.9 -0.7**
BO02 *i* P **P** **06 43 23.9 -0.7**
BO02 *i* P **P** **06 43 23.9 -0.7**
CHGQ Chibougamau 43.13 7 P **P** **06 43 23.1 -1.6**
baz=192,SNR=30
CHGQ S **S** **06 49 48.5 -2.1**
baz=192
MDND Maddock 43.17 343 P **P** **06 43 23.2 -1.9**
baz=154,SNR=65
MDND S **S** **06 49 47.7 -3.6**
baz=154
MDND Maddock 43.17 343 IAMs_20 IAMs_20 07 04 32.1
comp=Z,26µm,18.0s
MPMC Manual Prospec 43.19 317 P **P** **06 43 25.9 +0.3**
baz=123,SNR=241
MPMC S S 06 50 01.9 +10
baz=123
SNCC San Nicolas Is 43.19 312 P **P** **06 43 25.7 +0.3**
baz=119,SNR=8.6
SNCC S S 06 50 06.0 +14
baz=119
SNCC San Nicolas Is 43.19 312 P **P** **06 43 25.0 -0.4**
PTGB Pitanga 43.21 138 *e*P **P** **06 43 23.8 -1.9**
R11A Troy Canyon, C 43.27 321 P **P** **06 43 27.0 +0.8**
baz=127,SNR=735
R11A S **S** **06 50 01.0 +7.6**
baz=127
R11A Troy Canyon, C 43.27 321 IAmb IAmb 06 43 38.3
comp=Z,477nm,1.1s
OSI Osito Audit: C 43.29 314 P **P** **06 43 26.5 +0.3**
baz=121,SNR=29
OSI S **S** **06 50 02.2 +8.7**
baz=121
OSI Osito Audit: C 43.29 314 P **P** **06 43 27.1 +0.9**
OSI IAmb IAmb 06 43 38.4
comp=Z,537nm,1.1s
BB19B Bebedouro 43.38 131 *e*P **P** **06 43 25.7 -1.4**
JANB Januaria 43.59 121 *e*P **P** **06 43 26.9 -1.9**
ARVC Arvin 43.62 315 P **P** **06 43 29.3 +0.5**
baz=121,SNR=113
ARVC S S 06 50 07.5 +9.2
baz=121
GRAC Grapevine Rang 43.63 318 P **P** **06 43 30.2 +1.3**
baz=124,SNR=23
GRAC S **S** **06 50 06.8 +8.5**
baz=124
SCZ2 Santa Cruz Isl 43.63 313 P **P** **06 43 29.3 +0.3**
baz=119,SNR=9.3
AHID Auburn Hatcher 43.65 329 IAMs_20 IAMs_20 07 04 09.4
comp=Z,35µm,20.0s
ISA Isabella, Lake 43.65 316 P **P** **06 43 29.8 +0.6**
ISA pmax pmax
comp=Z,737nm,1.2s
ISA MLR MLR
comp=Z,19µm,21.0s
ISA Isabella, Lake 43.65 316 P **P** **06 43 29.8 +0.6**
baz=122,SNR=152
ISA S S 06 50 08.5 +10
baz=122
ISA Isabella, Lake 43.65 316 P **P** **06 43 29.8 +0.6**
CWC Cottonwood Cre 43.80 317 P **P** **06 43 30.9 +0.5**
baz=123
CWC S **S** **06 50 09.7 +8.6**
baz=123
SBC Santa Barbara 43.91 314 P **P** **06 43 31.6 +0.5**
baz=120,SNR=5.3
SBC S S 06 50 13.2 +11
baz=120
REDW Red Top Meadow 43.95 330 IAmb IAmb 06 43 43.7
comp=Z,282nm,1.0s
REDW IAMs_20 IAMs_20 07 05 21.0
comp=Z,26µm,20.0s
SNOW Snow King Moun 43.98 330 IAmb IAmb 06 43 35.3
comp=Z,198nm,0.7s
FRTB Fartura 44.02 134 *e*P **P** **06 43 30.8 -1.4**
FRTB *e*pP **pwP** **06 43 41.5 +2.4**
TPAW Teton Pass 44.10 330 IAmb IAmb 06 43 42.7
comp=Z,210nm,0.8s
VES Vestal, Richgr 44.17 316 P **P** **06 43 34.0 +0.8**
baz=122,SNR=184
VES S S 06 50 15.5 +9.3
baz=122
PKM Mcpherson Peak 44.20 314 P **P** **06 43 34.1 +0.4**
baz=120,SNR=97
TIN Tinemaha, Big 44.24 318 P **P** **06 43 35.1 +1.2**
baz=123,SNR=33
TIN S S 06 50 16.4 +9.0
baz=123
FXWY Fox Creek 44.24 330 IAmb IAmb 06 43 44.7
comp=Z,496nm,2.0s
IMW Indian Meadow 44.39 330 IAmb IAmb 06 43 39.1
comp=Z,165nm,0.8s
FLWY Flagg Ranch 44.41 331 IAmb IAmb 06 43 40.0
comp=Z,244nm,0.8s
FLWY IAMs_20 IAMs_20 07 04 10.3
comp=Z,35µm,21.0s
ULM Lac du Bonnet 44.45 348 P **P** **06 43 32.2 -3.0**
comp=Z,521nm,0.8s,baz=159,slow=8.0,SNR=155
ULM Lac du Bonnet 44.45 348 *c*P **P** **06 43 33.5 -1.7**
ULM Lac du Bonnet 44.45 348 P **P** **06 43 32.9 -2.3**
LAO LASA Array 44.46 336 P **P** **06 43 33.8 -1.6**
baz=145,SNR=90
LAO LASA Array 44.46 336 IAmb IAmb 06 43 42.9
comp=Z,223nm,0.9s
LAO IAMs_20 IAMs_20 07 04 47.9
comp=Z,33µm,21.0s
RLMT Red Lodge 44.51 333 P **P** **06 43 34.5 -1.6**
baz=140,SNR=344

RLMT Red Lodge 44.51 333 IAmb IAmb 06 43 38.9
comp=Z,234nm,0.8s
SMMC Simmler 44.54 314 P **P** **06 43 37.0 +0.8**
baz=120,SNR=98
SMMC S **S** **06 50 20.1 +8.4**
baz=120
ELK Elko 44.55 324 IAmb IAmb 06 43 48.6
comp=Z,220nm,0.9s
H17A Grant Village 44.58 331 P **P** **06 43 36.2 -0.5**
baz=138,SNR=53
H17A S **S** **06 50 16.9 +4.5**
baz=138
H17A Grant Village 44.58 331 P **P** **06 43 36.9 +0.2**
BI03 Tigo 44.60 169 IAmb IAmb 06 43 41.4
comp=Z,230nm,0.9s
VOG Valley Oaks Go 44.63 316 P **P** **06 43 36.1 -0.7**
baz=122,SNR=8.0
YUF Upper Falls 44.78 331 P **P** **06 43 39.5 +1.2**
YNM Yellowstone No 44.88 331 P **P** **06 43 40.0 +0.9**
ITAB Concordia 44.92 141 *e*P **P** **06 43 38.1 -1.1**
PAGB Antelope Grade 44.93 315 P **P** **06 43 40.0 +0.7**
NV11 Mina Array Sit 44.95 319 P **P** **06 43 40.1 +0.5**
MLAC Mammoth, Mammo 44.95 318 P **P** **06 43 39.9 +0.2**
baz=123
MLAC S S 06 50 27.1 +9.1
baz=123
NVAR Mina Array Bea 45.05 319 P **P** **06 43 40.9 +0.4**
comp=Z,171nm,0.7s,baz=125,slow=7.6,SNR=208
NVAR LR LR 07 03 23.0
comp=Z,39µm,19.5s,baz=130,slow=37
OMMB Old Mammoth Mi 45.05 318 P **P** **06 43 41.8 +1.1**
OMMB IAMs_20 IAMs_20 07 03 07.6
comp=Z,28µm,20.0s
DGMT Dagmar 45.19 339 P **P** **06 43 39.8 -1.4**
baz=149,SNR=126
DGMT S **S** **06 50 21.2 +0.5**
baz=149
DGMT Dagmar 45.19 339 P **P** **06 43 39.3 -1.9**
DGMT Dagmar 45.19 339 IAMs_20 IAMs_20 07 04 14.4
comp=Z,30µm,21.0s
KVN Kaiserville 45.27 320 P **P** **06 43 42.3 +0.1**
KVN pmax pmax
comp=Z,562nm,1.0s
KVN MLR MLR
comp=Z,39µm,21.0s
KVN Kaiserville 45.27 320 P **P** **06 43 42.3 +0.1**
KVN IAMs_20 IAMs_20 07 05 08.3
comp=Z,39µm,21.0s
RYN Ryan 45.30 319 P **P** **06 43 42.5 +0.1**
RYN IAMs_20 IAMs_20 07 06 00.2
comp=Z,37µm,20.0s
PMPB Monarch Peak 45.56 315 P **P** **06 43 45.2 +0.8**
VAO Valinhos 45.70 132 *e*P **P** **06 43 43.8 -1.8**
SPB Sao Paulo 45.71 133 *e*P **P** **06 43 44.4 -1.2**
SPB *e*pP **pwP** **06 43 55.9 +3.5**
WAKR Walker 45.83 319 P **P** **06 43 46.9 +0.2**
WAKR IAMs_20 IAMs_20 07 03 38.2
comp=Z,35µm,21.0s
YERR Yerington 45.97 319 P **P** **06 43 47.8 +0.1**
YERR IAMs_20 IAMs_20 07 06 20.8
comp=Z,29µm,19.0s
CMB Columbia Colle 46.21 317 P **P** **06 43 49.0 -0.5**
CMB pmax pmax
comp=Z,724nm,1.6s
CMB MLR MLR
comp=Z,16µm,20.0s
CMB Columbia Colle 46.21 317 P **P** **06 43 49.0 -0.5**
BSCB Bom Sucesso 46.22 128 *e*P **P** **06 43 48.2 -1.5**
PET01 Itanhaem-SP 46.25 134 *e*P **P** **06 43 48.5 -1.4**
PNTR Pine Nut 46.26 319 P **P** **06 43 50.2 +0.2**
PNTR IAMs_20 IAMs_20 07 06 31.4
comp=Z,27µm,19.0s
DLMT Dillon 46.27 330 IAmb IAmb 06 43 57.3
comp=Z,124nm,0.9s
SAO San Andreas Ge 46.28 315 P **P** **06 43 50.5 +0.5**
SAO pmax pmax
comp=Z,1µm,1.5s
SAO MLR MLR
comp=Z,24µm,22.0s
SAO San Andreas Ge 46.28 315 P **P** **06 43 50.5 +0.5**
SAO IAMs_20 IAMs_20 07 03 29.2
comp=Z,24µm,22.0s
VCNR Virginia City 46.40 319 P **P** **06 43 52.6 +1.4**
VCNR IAMs_20 IAMs_20 07 06 36.3
comp=Z,26µm,19.0s
CPSB Cacapava Do Su 46.45 145 *e*P **P** **06 43 49.4 -1.9**
CPSB *e*pP **pwP** **06 44 00.8 +2.7**
PAHR Pah Rah Range 46.46 320 P **P** **06 43 51.6 0.0**
RUBR Rubicon Trail 46.60 319 P **P** **06 43 52.9 +0.2**
MFID Camas Ranch 46.61 326 IAMs_20 IAMs_20 07 04 39.7
comp=Z,30µm,21.0s
LC01 Cunco 46.81 169 IAmb IAmb 06 43 58.1
comp=Z,161nm,1.0s
PARB Paraibuna 46.89 131 *e*P **P** **06 43 53.6 -1.4**
PARB *e*pP **pwP** **06 44 05.3 +3.4**
EGMT Eagleton 46.97 335 P **P** **06 43 54.3 -1.0**
baz=141,SNR=61
EGMT S **S** **06 50 47.9 +1.6**
baz=141
EGMT Eagleton 46.97 335 IAmb IAmb 06 44 21.6
comp=Z,181nm,1.1s
EGMT IAMs_20 IAMs_20 07 06 39.9
comp=Z,25µm,20.0s
AFDM Forest Hills D 47.08 318 P **P** **06 43 56.6 +0.4**
BEKR Beckworth 47.18 320 P **P** **06 43 56.8 -0.3**
BEKR IAMs_20 IAMs_20 07 06 30.4
comp=Z,33µm,20.0s
CNLB Canela 47.18 142 *e*P **P** **06 43 55.7 -1.4**
PLTB Pedras Altas 47.38 146 *e*P **P** **06 43 57.4 -1.2**
PLTB *e*pP **pwP** **06 44 08.6 +3.2**
WVOR Wild Horse Val 47.59 323 IAMs_20 IAMs_20 07 04 45.6
comp=Z,28µm,20.0s
LPA La Plata 47.71 153 *e*P P 06 43 56.2 -4.9
LPA PP **PP** **06 45 53.4 +0.4**
LPA PPP PPP 06 46 41.7
LPA S S 06 50 47.5 -9.5
LPA PKIKP PKiKP 06 52 01.9 -21
LPA SCS **ScS** **06 53 55.2 +0.5**
LPA SS **SS** **06 54 29.1 +3.5**
LPA SKIKS 06 59 28.0
ORV Oroville 47.75 319 P **P** **06 44 01.3 -0.1**
ORV pmax pmax
comp=Z,2µm,1.1s
ORV MLR MLR
comp=Z,17µm,21.0s
ORV Oroville 47.75 319 P **P** **06 44 01.3 -0.1**
SJMB Sao Joao De Ma 47.94 123 *e*P **P** **06 44 01.4 -1.7**
SJMB *e*pP **pwP** **06 44 13.2 +3.2**
VAS01 Vassouras-RJ 47.95 129 *e*P **P** **06 44 01.8 -1.4**
MCCM Marconi Confer 47.95 316 P **P** **06 44 04.1 +1.1**
MSO Missoula 47.97 331 P **P** **06 44 02.3 -0.8**
baz=136,SNR=120
MSO S **S** **06 51 02.7 +2.0**
baz=136
MSO Missoula 47.97 331 IAmb IAmb 06 44 06.2
comp=Z,97nm,0.8s
RCBR Riachuelo 48.00 104 IAMs_20 IAMs_20 07 06 01.5
comp=Z,32µm,20.0s
J08A Circle Bar Ran 48.06 325 IAmb IAmb 06 44 15.5
comp=Z,262nm,1.0s
J08A IAMs_20 IAMs_20 07 06 06.7
comp=Z,31µm,21.0s
GDXM Geysers 48.23 317 IAmb IAmb 06 44 18.2
comp=Z,203nm,0.9s
MOD Modoc Plateau 48.28 322 IAMs_20 IAMs_20 07 05 34.6
comp=Z,32µm,20.0s
BSFB Barra de Sao F 48.28 123 *e*P **P** **06 44 05.5 -0.3**
O03E Paynes Creek 48.34 319 P **P** **06 44 05.1 -0.9**
baz=122,SNR=68
O03E S **S** **06 51 10.4 +4.4**
baz=122
BMO Blue Mountains 48.35 327 P **P** **06 44 04.3 -1.8**
BMO pmax pmax
comp=Z,248nm,1.6s
BMO MLR MLR
comp=Z,34µm,19.0s
BMO Blue Mountains 48.35 327 P **P** **06 44 04.3 -1.8**
BMO IAmb IAmb 06 44 08.9
comp=Z,248nm,1.6s
BMO IAMs_20 IAMs_20 07 07 08.4
comp=Z,34µm,19.0s
HOPS Hopland Field 48.51 317 P **P** **06 44 08.8 +1.5**
HOPS IAMs_20 IAMs_20 07 05 05.7
comp=Z,30µm,20.0s
JTMT Jette 48.79 332 IAMs_20 IAMs_20 07 05 56.9

comp=Z,37µm,22.0s
PLCA Paso Flores 48.84 168 P **P** **06 44 09.5 -0.3**
comp=Z,84nm,1.1s,baz=341,slow=9.0,SNR=44
PLCA Paso Flores 48.84 168 IAmb IAmb 06 44 11.7
comp=Z,473nm,1.6s
PLCA Paso Flores 48.84 168 *eP* **P** **06 44 10.0 +0.1**
O02D Mt. Diablo Mer 48.92 319 P **P** **06 44 08.7 -1.9**
baz=121
O02D S **S** **06 51 17.6 +3.3**
baz=121
WDC Whiskeytown Da 48.97 319 IAmb IAmb 06 44 19.9
comp=Z,198nm,0.9s
WDC IAMs_20 IAMs_20 07 07 26.8
comp=Z,23µm,22.0s
I07A Izee 49.09 325 IAmb IAmb 06 44 15.4
comp=Z,180nm,0.9s
I07A IAMs_20 IAMs_20 07 06 40.1
comp=Z,33µm,19.0s
K05A Summer Lake 49.11 322 P **P** **06 44 11.2 -0.9**
K05A IAmb IAmb 06 44 24.0
comp=Z,328nm,1.0s
K05A IAMs_20 IAMs_20 07 06 14.9
comp=Z,34µm,21.0s
SCHQ Schefferville 49.13 12 P **P** **06 44 10.7 -1.1**
comp=Z,92nm,1.1s,baz=200,slow=6.9,SNR=29
SCHQ LR LR 07 04 46.2
comp=Z,42µm,21.8s,baz=206,slow=36 PKP2ab
SCHQ 07 16 03.5
comp=Z,3.9nm,0.7s,baz=105,slow=9.5,SNR=3.7
SCHQ Schefferville 49.13 12 IAmb IAmb 06 44 32.8
comp=Z,122nm,0.9s
M04C Macdoel 49.16 321 P **P** **06 44 12.2 -0.3**
baz=123,SNR=340
M04C S **S** **06 51 23.5 +5.7**
baz=123
KCPM Cahto Peak 49.20 318 P **P** **06 44 13.7 +1.0**
KCPM IAMs_20 IAMs_20 07 05 30.9
comp=Z,25µm,20.0s
N02D Trinity Center 49.28 320 P **P** **06 44 11.6 -1.7**
baz=122,SNR=47
N02D S **S** **06 51 21.4 +2.0**
baz=122
G08A Pilot Rock 49.53 326 IAmb IAmb 06 44 19.8
comp=Z,154nm,1.1s
G08A IAMs_20 IAMs_20 07 08 05.0
comp=Z,31µm,20.0s
KMRM Mail Ridge 49.55 318 P **P** **06 44 16.3 +1.0**
KMRM IAMs_20 IAMs_20 07 07 15.2
comp=Z,31µm,20.0s
WALA Waterton Lakes 49.56 333 IAMs_20 IAMs_20 07 07 03.8
comp=Z,38µm,22.0s
K04D Chiloquin, OR 49.58 322 P **P** **06 44 15.0 -0.6**
baz=124,SNR=38
K04D S **S** **06 51 28.4 +4.8**
baz=124
M02C Callahan 49.60 320 P **P** **06 44 14.4 -1.3**
baz=122,SNR=45
M02C S **S** **06 51 25.9 +2.2**
baz=122
J05D Fort Rock, OR 49.64 323 P **P** **06 44 15.7 -0.4**
baz=125,SNR=149
J05D S **S** **06 51 30.2 +5.7**
baz=125
YBH Yreka Blue Hor 49.69 320 IAmb IAmb 06 44 26.4
comp=Z,194nm,0.8s
YBH IAMs_20 IAMs_20 07 09 12.1
comp=Z,30µm,20.0s
L04D Klamath Falls 49.69 321 P **P** **06 44 15.8 -0.7**
baz=123,SNR=370
L04D S **S** **06 51 29.1 +3.8**
baz=123
PINE Pine Mountain 49.76 324 IAMs_20 IAMs_20 07 07 15.9
comp=Z,31µm,20.0s
E09A Wood Farm, Sta 49.88 328 IAmb IAmb 06 44 24.5
comp=Z,178nm,0.8s
KHMM Horse Mountain 49.89 319 P **P** **06 44 18.9 +0.8**
KHMM IAMs_20 IAMs_20 07 09 20.6
comp=Z,33µm,20.0s
FFC Flin Flon 50.02 345 P **P** **06 44 16.8 -1.8**
FFC pmax pmax
comp=Z,266nm,1.1s
FFC MLR MLR
comp=Z,23µm,18.0s
FFC Flin Flon 50.02 345 P **P** **06 44 16.8 -1.8**
FFC IAmb IAmb 06 44 27.7
comp=Z,266nm,1.1s
FFC Flin Flon 50.02 345 IAMs_20 IAMs_20 07 07 53.1
comp=Z,23µm,18.0s
JCC Jacoby Creek, 50.06 319 P **P** **06 44 20.1 +1.1**
JCC IAMs_20 IAMs_20 07 09 16.0
comp=Z,25µm,18.0s
LL01 San Ignacio de 50.10 171 IAmb IAmb 06 44 29.3
comp=Z,229nm,1.6s
J04D Umpqua Nationa 50.14 322 P **P** **06 44 19.7 -0.2**
baz=124,SNR=472
J04D S **S** **06 51 36.3 +4.8**
baz=124
I05D Terrebonne, OR 50.31 324 P **P** **06 44 20.9 -0.1**
baz=126,SNR=243
I05D S **S** **06 51 38.3 +4.7**
baz=126
KRMB Red Mountain 50.34 320 P **P** **06 44 21.0 -0.4**
E08A Dider Farm, El 50.34 327 IAMs_20 IAMs_20 07 07 54.4
comp=Z,30µm,22.0s
G06A Carlson Farm, 50.43 325 IAMs_20 IAMs_20 07 07 03.8
comp=Z,26µm,21.0s
F07A Phinny Hill Vi 50.44 326 IAmb IAmb 06 44 28.2
comp=Z,287nm,0.9s
NEW Newport 50.52 330 P **P** **06 44 21.1 -1.4**
NEW pmax pmax
comp=Z,91nm,1.2s
NEW MLR MLR
comp=Z,35µm,21.0s
NEW Newport 50.52 330 P **P** **06 44 21.2 -1.4**
baz=133,SNR=55
NEW S **S** **06 51 39.1 +2.8**
baz=133
NEW Newport 50.52 330 P **P** **06 44 21.1 -1.4**
NEW Newport 50.52 330 IAMs_20 IAMs_20 07 07 53.0
comp=Z,35µm,21.0s
HAWA Hanford 50.54 327 IAmb IAmb 06 44 27.1
comp=Z,346nm,1.6s
HAWA IAMs_20 IAMs_20 07 08 24.5
comp=Z,29µm,21.0s
I04A Tendick Farm, 50.63 323 P **P** **06 44 22.4 -1.0**
baz=124
I04A S **S** **06 51 40.0 +2.0**
baz=124
D08A Wollman Farm, 50.63 328 IAMs_20 IAMs_20 07 09 13.1
comp=Z,31µm,18.0s
C09A Chrisman Ranch 50.78 329 IAMs_20 IAMs_20 07 07 54.0
comp=Z,25µm,20.0s
K02D Willamette Mer 50.80 321 P **P** **06 44 24.1 -0.7**
baz=122,SNR=123
K02D S **S** **06 51 43.2 +2.7**
baz=122
E07A Sunnyside 50.81 327 IAmb IAmb 06 44 37.3
comp=Z,120nm,0.8s
E07A IAMs_20 IAMs_20 07 08 00.8
comp=Z,31µm,21.0s
G05D Wamic, OR 50.83 325 P **P** **06 44 25.5 +0.7**
baz=126,SNR=177
G05D S **S** **06 51 46.5 +5.8**
baz=126
H04A Detroit Lake 51.00 324 IAMs_20 IAMs_20 07 07 53.9
comp=Z,29µm,21.0s
I03D Drain, OR 51.14 322 P **P** **06 44 26.4 -0.8**
baz=123,SNR=105
I03D S **S** **06 51 47.7 +2.7**
baz=123
J01E Myrtle Point 51.21 321 P **P** **06 44 27.9 +0.2**
baz=122,SNR=236
J01E S **S** **06 51 50.1 +4.2**
baz=122
H04D Lebanon 51.23 323 P **P** **06 44 26.8 -1.2**
baz=124,SNR=176
H04D S **S** **06 51 47.2 +0.9**
baz=124
F05D White Salmon 51.29 326 P **P** **06 44 28.6 +0.2**
baz=127,SNR=102
F05D S **S** **06 51 52.9 +5.9**
baz=127
COR Corvallis 51.60 323 P **P** **06 44 30.7 0.0**
COR pmax pmax
comp=Z,568nm,1.0s
COR MLR MLR
comp=Z,28µm,22.0s
COR Corvallis 51.60 323 P **P** **06 44 30.6 0.0**
comp=Z,28µm,22.0s
COR Corvallis 51.60 323 IAMs_20 IAMs_20 07 09 50.8
comp=Z,28µm,22.0s
I02D Swisshome 51.67 322 P **P** **06 44 31.5 +0.3**
baz=123,SNR=123
I02D S **S** **06 51 56.6 +4.3**
baz=123
B08A Colville Reser 51.68 329 IAMs_20 IAMs_20 07 08 19.9
comp=Z,28µm,21.0s
LTY Liberty 51.69 327 IAmb IAmb 06 44 35.2
comp=Z,370nm,1.5s
LTY IAMs_20 IAMs_20 07 07 59.8
comp=Z,29µm,21.0s
F04A Amboy 51.86 325 P **P** **06 44 32.3 -0.3**
F04A IAmb IAmb 06 44 45.5
comp=Z,198nm,0.9s
G03D McMinnville, O 51.93 324 P **P** **06 44 33.1 0.0**
baz=124,SNR=106
G03D S **S** **06 51 59.0 +3.1**
baz=124
LON Longmire 52.00 326 IAmb IAmb 06 44 38.2
comp=Z,133nm,0.8s
LON IAMs_20 IAMs_20 07 08 54.2
comp=Z,18µm,20.0s
C06D Leavenworth 52.22 328 P **P** **06 44 34.8 -0.5**
baz=128
F04D Rainier, OR 52.28 325 P **P** **06 44 35.7 0.0**
baz=125,SNR=23
F04D S **S** **06 52 04.6 +4.0**
baz=125
FCC Fort Churchill 52.30 352 P **P** **06 44 34.3 -1.2**
FCC pmax pmax
comp=Z,398nm,1.3s
FCC Fort Churchill 52.30 352 P **P** **06 44 34.3 -1.2**
FCC IAmb IAmb 06 44 44.2
comp=Z,398nm,1.2s
E04D Cinebar 52.30 326 P **P** **06 44 34.8 -1.1**
baz=126,SNR=64
D05A Enumclaw 52.36 327 IAmb IAmb 06 44 38.5
comp=Z,326nm,0.9s
D05A IAMs_20 IAMs_20 07 09 32.7
comp=Z,32µm,21.0s
F03A Seaside 52.51 324 P **P** **06 44 38.2 +0.8**
D04E Lakebay 52.78 326 P **P** **06 44 38.8 -0.6**
baz=126,SNR=98
E03A Lebam 52.86 325 IAMs_20 IAMs_20 07 10 33.7
comp=Z,29µm,20.0s
B06A Marblemount 52.90 328 IAmb IAmb 06 44 43.5
comp=Z,218nm,1.0s
B06A IAMs_20 IAMs_20 07 10 27.9
comp=Z,26µm,20.0s
B05A Bryant 53.06 328 P **P** **06 44 40.1 -1.3**
baz=127,SNR=56
D03D Eldon 53.16 326 P **P** **06 44 41.5 -0.7**
baz=126,SNR=133
NLWA Neilton Lookou 53.51 326 P **P** **06 44 45.2 +0.4**
A04D Lummi Island 53.66 328 P **P** **06 44 45.1 -0.8**
baz=127,SNR=25
PGC Sidney 54.02 327 P **P** **06 44 48.4 0.0**
PGC IAmb IAmb 06 45 03.0
comp=Z,306nm,1.4s
LLLB Lillooet 54.40 330 IAmb IAmb 06 44 57.6
comp=Z,125nm,0.9s
H07S1 FLORES T-PHASE 55.82 47 *eP* **P** **06 45 05.4 +3.6**
H07S1 *eS* **S** **06 52 57.6 +8.8**
H07S1 FLORES T-PHASE 55.82 47 P **P** **06 45 02.4 +0.7**
H07N1 FLORES T-PHASE 56.00 46 *eP* **P** **06 45 06.9 +3.9**
H07N1 *eS* **S** **06 52 56.8 +5.7**
H07N1 FLORES T-PHASE 56.00 46 P **P** **06 45 06.7 +3.7**
PCED Cedros 57.40 48 *eP* P 06 45 18.0 +5.0
comp=Z,364nm,1.5s
PCED *eS* **S** **06 53 16.6 +6.9**
HOR Horta 57.42 49 *eP* P 06 45 20.3 +7.2
comp=Z,95nm,1.7s
HOR *eS* S 06 53 19.8 +10
PCAN Candelaria 57.51 49 *eP* P 06 45 19.9 +6.1
comp=Z,336nm,1.6s
PCAN *eS* S 06 53 24.6 +13
ROSA Rosais 57.77 48 *eP* **P** **06 45 18.0 +2.4**
comp=Z,321nm,1.2s
ROSA *eS* S 06 53 28.6 +14
ROSA Rosais 57.77 48 P **P** **06 45 17.8 +2.2**
PMAN Manadas 57.86 49 *eP* P 06 45 22.5 +6.3
comp=Z,591nm,1.3s
PMAN *eS* S 06 53 30.3 +15
SRBC Serra Branca 58.02 48 *eP* **P** **06 45 21.0 +3.7**
comp=Z,448nm,1.7s
SRBC *eS* S 06 53 29.8 +12
PGRA Graciosa 58.06 48 *eP* **P** **06 45 19.5 +1.9**
comp=Z,520nm,1.8s
PGRA *eS* S 06 53 33.3 +15
BBB Bella Bella 58.48 329 IAMs_20 IAMs_20 07 14 33.4
comp=Z,22µm,20.0s
ADH Angra Heroismo 58.50 49 *eP* P 06 45 26.6 +5.9
comp=Z,252nm,1.1s
ADH *eS* S 06 53 34.5 +10
PSET Sete Cidades 59.41 50 *eP* **P** **06 45 28.8 +1.8**
comp=Z,441nm,1.1s
PSET *eS* S 06 53 55.7 +20
GRON Grota Negra 59.53 50 *eP* P 06 45 33.6 +5.7
comp=Z,740nm,1.6s
GRON *eS* S 06 53 51.7 +14
CMLA Cha da Macela 59.54 50 *eP* **P** **06 45 29.2 +1.3**
comp=Z,460nm,2.0s
CMLA *eS* S 06 53 49.2 +12
PCALD Caldeiras da R 59.58 50 *eS* **S** **06 53 42.9 +4.8**
IVI Ivigtut 59.60 18 IAMs_20 IAMs_20 07 10 12.6
comp=Z,25µm,20.0s
PSMA Santa Maria 59.64 51 *eP* **P** **06 45 32.5 +3.9**
comp=Z,147nm,1.1s
PSMA *eS* **S** **06 53 41.8 +2.9**
RKT Rikitea 59.67 238 *eP* **P** **06 45 31.6 +2.6**
comp=Z,161nm,1.3s
RKT *eS* **S** **06 53 38.7 -0.9**
comp=Z,16µm,30.5s
RKT *eLR* LR 07 02 54.5
comp=Z,25µm,32.8s
PSMN Pico do Norte, 59.69 51 *eP* **P** **06 45 30.6 +1.6**
comp=Z,300nm,1.6s
PSMN *eS* S 06 53 51.9 +12
BART Pico Bartolome 59.81 50 *eP* **P** **06 45 30.3 +0.4**
comp=Z,404nm,1.3s
BART *eS* S 06 53 57.6 +16
TAOE Nuku Hiva Isla 59.86 255 *eP* **P** **06 45 34.0 +3.4**
comp=Z,351nm,1.3s
TAOE *eS* **S** **06 53 43.4 +0.8**
comp=Z,13µm,25.8s
TAOE *eLQ* LQ 07 00 34.6
comp=Z,26µm,37.6s
TAOE *eLR* LR 07 03 02.2
comp=Z,11µm,26.5s,baz=82
TAOE Nuku Hiva Isla 59.86 255 *eT* T 07 50 00.5
comp=Z,40nm,0.2s
YKA Yellowknife Ar 60.09 343 P **P** **06 45 29.4 -1.9**
comp=Z,96nm,0.8s,baz=135,slow=7.4,SNR=293
YKA LR LR 07 13 37.3
comp=Z,16µm,18.7s,baz=0.0,slow=38
YKA PKPPKP **P'P'df** **07 15 00.2 +2.6**
comp=Z,0.8nm,1.0s,baz=339,slow=2.7,SNR=4.8
NRS Narsarsuaq 60.45 20 IAMs_20 IAMs_20 07 12 23.2
comp=Z,19µm,20.0s
MOBC Moresby Island 60.99 328 P **P** **06 45 39.2 +1.7**
MOBC IAmb IAmb 06 45 49.3
comp=Z,317nm,1.2s
MOBC IAMs_20 IAMs_20 07 13 38.6
comp=Z,14µm,21.0s
DIB Dawson Inlet, 61.28 328 P **P** **06 45 41.3 +1.8**
DIB IAmb IAmb 06 45 51.3
comp=Z,210nm,1.2s
DIB IAMs_20 IAMs_20 07 13 46.4
comp=Z,20µm,21.0s
H02S1 DAWSON INLET T 61.28 328 P **P** **06 45 41.1 +1.6**
H02N1 VAN INLET T-PH 61.34 328 P **P** **06 45 41.6 +1.6**
EFI East Falkland 62.16 163 IAMs_20 IAMs_20 07 15 57.6
comp=Z,20µm,21.0s
WRAK Wrangell Islan 62.84 331 P **P** **06 45 49.6 -0.3**
WRAK Wrangell Islan 62.84 331 IAMs_20 IAMs_20 07 17 16.7
comp=Z,16µm,18.0s
DLBC Dease Lake 62.88 334 P **P** **06 45 50.1 -0.2**
SFJD Kangerlussuaq 63.53 13 P **P** **06 45 52.9 -1.4**
comp=Z,34nm,0.8s,baz=218,slow=9.9
SFJD Kangerlussuaq 63.53 13 *i* P **P** **06 45 52.9 -1.4**
SFJD MLR MLR
comp=Z,3µm,19.0s
SFJD Kangerlussuaq 63.53 13 P **P** **06 45 52.9 -1.4**
SFJD Kangerlussuaq 63.53 13 *i* P **P** **06 45 52.9 -1.4**
comp=Z,3µm,19.0s
SIT Sitka 64.59 331 P **P** **06 46 02.2 +0.8**
SIT pmax pmax
comp=Z,121nm,1.4s
SIT MLR MLR
comp=Z,17µm,22.0s
SIT Sitka 64.59 331 P **P** **06 46 02.2 +0.8**
SIT IAmb IAmb 06 46 12.6
comp=Z,121nm,1.4s
SIT IAMs_20 IAMs_20 07 15 58.8
comp=Z,17µm,22.0s
JIS Juneau Island 64.74 333 P **P** **06 46 02.6 +0.2**
JIS IAmb IAmb 06 46 13.7
comp=Z,142nm,1.0s
BESE Bessie Mountai 65.11 333 P **P** **06 46 05.5 +0.6**
BESE IAmb IAmb 06 46 16.1
comp=Z,155nm,1.0s
PMOZ Porto Moniz, M 65.22 57 *eP* **P** **06 46 03.8 -2.4**
comp=Z,352nm,1.3s
PMOZ *eS* **S** **06 54 55.0 +5.5**
PMOZ *eLQ* LQ 07 02 45.0
PMOZ *eLR* LR 07 05 51.7
comp=Z,8µm,20.0s
ILULI Ilulissat 65.25 12 ⇑*iP* **P** **06 46 04.4 -1.1**
ILULI MLR MLR
comp=Z,31µm,20.0s
ILULI Ilulissat 65.25 12 P **P** **06 46 04.1 -1.4**
ILULI IAmb IAmb 06 46 06.0
comp=Z,198nm,1.3s
ILULI Ilulissat 65.25 12 ⇑*iP* **P** **06 46 04.4 -1.1**
comp=Z,31µm,20.0s
MACI Morro de la Ar 65.29 62 P **P** **06 46 08.9 +2.1**
PMAR Madeira 65.44 57 *eP* P 06 46 15.0 +7.3
comp=Z,246nm,1.4s
SKAG Skagway 65.76 333 P **P** **06 46 09.7 +0.8**
SKAG IAmb IAmb 06 46 21.0
comp=Z,145nm,1.1s
SKAG IAMs_20 IAMs_20 07 18 03.8
comp=Z,21µm,20.0s
PMPS Porto Santo 65.97 57 *eP* **P** **06 46 12.9 +2.0**
PMPST Porto Santo, M 65.97 57 *eP* **P** **06 46 12.7 +1.8**
comp=Z,524nm,1.4s
PMPST *eS* **S** **06 55 01.0 +2.5**
WHY Whitehorse 66.17 335 P **P** **06 46 11.9 +0.2**
WHY IAmb IAmb 06 46 22.4
comp=Z,106nm,1.1s
DHAK Deception Hill 66.89 332 P **P** **06 46 18.1 +1.8**
HYT Haines Junctio 67.37 334 P **P** **06 46 19.4 -0.1**
YKU2 Yakutat 67.75 332 IAMs_20 IAMs_20 07 19 21.4
comp=Z,17µm,18.0s
C36M Paulatuk 67.80 345 P **P** **06 46 19.5 -2.3**
baz=134,SNR=31
C36M S **S** **06 55 17.3 -2.0**
baz=134
C36M Paulatuk 67.80 345 P **P** **06 46 20.7 -1.1**
RES Resolute Bay 67.89 356 P **P** **06 46 21.2 -1.1**
RES pmax pmax
comp=Z,93nm,1.0s
RES MLR MLR
comp=Z,29µm,19.0s
RES Resolute Bay 67.89 356 P **P** **06 46 21.2 -1.1**
RES IAmb IAmb 06 46 37.1
comp=Z,93nm,1.0s
VAH Vaihoa 68.49 251 *eP* **P** **06 46 30.5 +3.4**
comp=Z,135nm,1.1s
PMOR Pomariorio Ree 68.68 251 *eP* **P** **06 46 31.8 +3.5**
comp=Z,149nm,1.1s
KULLO Kullorsuaq 68.92 7 *i* P **P** **06 46 27.3 -1.5**
KULLO MLR MLR
comp=Z,42µm,18.0s
KULLO Kullorsuaq 68.92 7 *i* P **P** **06 46 27.3 -1.5**
comp=Z,42µm,18.0s
YAH Yahtse 69.05 333 P **P** **06 46 31.4 +1.3**
CTGM Chitina Glacie 69.11 333 P **P** **06 46 31.7 +1.3**
CTGM IAmb IAmb 06 46 42.2
comp=Z,169nm,0.9s
BARN Barnard Glacie 69.30 333 P **P** **06 46 32.5 +0.9**
BARN IAmb IAmb 06 46 43.5
comp=Z,196nm,1.0s
MEH Mehetia 69.56 248 *eP* **P** **06 46 37.2 +3.5**
comp=Z,44nm,1.3s
BALM Baldy 69.59 333 P **P** **06 46 33.1 -0.2**
BALM IAmb IAmb 06 46 45.7
comp=Z,210nm,1.0s
DAWY Dawson 69.66 337 IAmb IAmb 06 46 44.3
comp=Z,165nm,0.9s
TULEG Thule 69.74 3 IAmb IAmb 06 46 34.7
comp=Z,247nm,1.2s
EPYK Eagle Plains 69.79 340 P **P** **06 46 33.9 -0.5**
baz=121,SNR=134
EPYK S **S** **06 55 45.4 +2.3**
baz=121
A36M Sachs Harbour 69.93 347 P **P** **06 46 33.3 -1.7**
baz=134,SNR=120
A36M S **S** **06 55 41.9 -2.6**
baz=134
VRDI Verde Repeater 70.16 333 IAmb IAmb 06 46 49.1
comp=Z,280nm,1.2s
GLB Gilahina Butte 70.40 333 IAmb IAmb 06 46 50.6
comp=Z,237nm,1.0s
SUMG Summit 70.51 13 *i* P **P** **06 46 38.9 -0.2**
SUMG MLR MLR
comp=Z,97µm,20.0s
SUMG Summit 70.51 13 P **P** **06 46 38.2 -0.9**
SUMG Summit 70.51 13 *i* P **P** **06 46 38.9 -0.2**
comp=Z,97µm,20.0s
TVO Taravao 70.62 248 *eP* **P** **06 46 43.7 +3.3**
comp=Z,37nm,1.5s
EGAK Eagle 70.66 337 P **P** **06 46 39.0 -0.7**
EGAK IAmb IAmb 06 46 51.3
comp=Z,306nm,1.2s
MID Middleton Isla 70.87 331 P **P** **06 46 41.2 +0.2**
MID pmax pmax
comp=Z,523nm,1.3s
MID Middleton Isla 70.87 331 P **P** **06 46 41.2 +0.2**
MID IAMs_20 IAMs_20 07 17 06.6
comp=Z,12µm,21.0s
PPTF Pamatai, Papee 70.87 249 IAMs_20 IAMs_20 07 11 00.3
comp=Z,10µm,18.0s
PPT Papeete 70.87 249 LR LR 07 11 20.0
comp=Z,10µm,18.2s,baz=70,slow=30
PPT2 Papeete2 70.88 249 *eS* **S** **06 55 58.0 +0.5**
comp=Z,12µm,26.5s
PPT2 *eLQ* LQ 07 05 12.8
comp=Z,6µm,23.5s
PPT2 *eLR* LR 07 08 09.9
comp=Z,18µm,26.5s,baz=66
PAE Paea 70.90 249 *eP* **P** **06 46 45.2 +3.3**
comp=Z,15nm,1.1s
MENT Mentasta 70.94 335 P **P** **06 46 41.3 -0.1**
MENT IAmb IAmb 06 46 52.9
comp=Z,95nm,0.8s
EYAK Cordova Ski Ar 70.96 332 P **P** **06 46 41.5 0.0**
EYAK IAmb IAmb 06 46 57.6
comp=Z,143nm,0.9s
HIN Hinchinbrook I 71.26 332 IAmb IAmb 06 46 55.5
comp=Z,237nm,1.2s
FID Port Fidalgo 71.37 332 P **P** **06 46 43.7 -0.4**
FID IAmb IAmb 06 46 56.2
comp=Z,107nm,1.0s
BORG Borgarnes 71.42 23 IAMs_20 IAMs_20 07 14 26.3
comp=Z,15µm,20.0s
BYL Byron's Ledge 71.68 288 P **P** **06 46 46.2 -0.7**
SBLHI Steaming Bluff 71.69 288 P **P** **06 46 48.0 +1.1**
RIM Rim 71.69 288 P **P** **06 46 45.7 -1.2**
UWB Uwekahuna B 71.69 288 P **P** **06 46 46.1 -0.8**
GLI Glacier Island 71.70 332 P **P** **06 46 46.2 +0.2**
OBL Observatory Le 71.70 288 P **P** **06 46 45.8 -1.2**
SCM Sheep Creek Mo 72.11 333 P **P** **06 46 47.8 -0.8**
SCM pmax pmax
comp=Z,263nm,1.1s
SCM MLR MLR
comp=Z,23µm,21.0s
SCM Sheep Creek Mo 72.11 333 P **P** **06 46 47.8 -0.8**
SCM IAmb IAmb 06 47 00.4
comp=Z,263nm,1.1s
TBI Tubuai 72.28 243 *eS* **S** **06 56 13.3 0.0**
comp=Z,10µm,30.8s
TBI *eLQ* LQ 07 05 43.1
comp=Z,6µm,47.5s
TBI *eLR* LR 07 08 47.0
comp=Z,27µm,29.2s,baz=61
PMAFR Mafra 72.29 51 *eP* **P** **06 46 51.3 +1.2**
PMAFR *eS* **S** **06 56 16.4 +3.3**
LIS Lisbon 72.38 52 *eP* **P** **06 46 50.9 +0.4**
LIS *eS* S **06 56 15.5 +1.5**
LIS AMS AMS 07 09 17.6

comp=N,14µm,22.4s
LIS Lisbon 72.38 52 *e*P **P 06 46 50.9 +0.4**
LIS *e*S **S 06 56 15.5 +1.5**
LIS Lisbon 72.38 52 *e*P **P 06 46 52.6 +2.1**
comp=N,261nm,1.3s
PFVI Vila Bisbo 72.50 53 *e*P **P 06 46 52.9 +1.6**
comp=N,244nm,1.3s
PFVI *e*S **SKiKP 06 56 22.6 -4.0**
PFVI Vila Bisbo 72.50 53 IAMs_20 IAMs_20 07 14 12.7
comp=Z,16µm,20.0s
DHY Denali Highway 72.55 334 P **P 06 46 50.0 -1.3**
SML Sawmill 72.56 333 P **P 06 46 49.8 -1.5**
SML IAmb IAmb 06 47 12.8
comp=Z,301nm,1.1s
SEW Seward 72.57 331 IAmb IAmb 06 47 02.7
comp=Z,236nm,1.1s
HLK Haleakala 72.58 289 IAMs_20 IAMs_20 07 11 20.0
comp=Z,17µm,20.0s
PTEO Sao Teotonio 72.61 53 *e*P **P 06 46 53.6 +1.6**
comp=Z,217nm,1.7s
PRP Porcupine Dome 72.65 337 IAmb IAmb 06 47 03.6
comp=Z,235nm,1.2s
MORF Marmelete 72.66 53 *e*P **P 06 46 52.9 +0.6**
MORF *e*S **S 06 56 18.9 +1.4**
MORF AMS AMS 07 14 51.8
comp=Z,13µm,21.9s
MORF Marmelete 72.66 53 *e*P **P 06 46 52.9 +0.6**
MORF *e*S **S 06 56 18.8 +1.4**
MORF Marmelete 72.66 53 *e*P **P 06 46 54.3 +2.0**
comp=Z,270nm,1.5s
MORF *e*S **S 06 56 21.8 +4.4**
PSBE So Bento 72.72 51 *e*P **P 06 46 53.8 +1.2**
comp=Z,244nm,1.9s
PSBE *e*S **S 06 56 21.8 +3.7**
KHLH Kahului Airpor 72.74 290 IAMs_20 IAMs_20 07 11 24.3
comp=Z,19µm,20.0s
PNCL Nicolau / Gran 72.81 52 *e*P **P 06 46 52.9 -0.2**
comp=Z,189nm,1.6s
PNCL *e*S **S 06 56 20.5 +1.4**
GHO Glory Hole Cre 72.82 333 IAmb IAmb 06 47 05.0
comp=Z,182nm,0.8s
HDA Harding Lake 72.82 336 P **P 06 46 51.6 -1.0**
baz=110,SNR=179
HDA S **S 06 56 20.1 +1.9**
baz=110
HDA S **S 06 56 20.1 +1.9**
baz=110
IL31 72.92 336 IAmb IAmb 06 47 04.8
comp=Z,193nm,1.0s
ILAR Eielson Array 72.92 336 P **P 06 46 52.2 -1.0**
comp=Z,113nm,1.1s,baz=117,slow=4.5,SNR=162
ILAR LR LR 07 23 34.5
comp=Z,11µm,18.6s,baz=110,slow=40
FYU Fort Yukon 72.93 338 IAmb IAmb 06 47 12.8
comp=Z,332nm,1.2s
RC01 Rabbit Creek A 72.99 332 IAmb IAmb 06 47 04.9
comp=Z,256nm,1.0s
PCAS Casmilo, Conde 73.00 50 *e*P **P 06 46 54.7 +0.5**
comp=Z,401nm,2.0s
PCAS *e*S **S 06 56 21.7 +0.6**
MESJ Messejana 73.04 53 *e*P **P 06 46 55.0 +0.5**
MESJ *e*S **S 06 56 23.1 +1.5**
MESJ AMS AMS 07 12 03.2
comp=Z,11µm,27.4s
MESJ Messejana 73.04 53 *e*P **P 06 46 55.0 +0.5**
MESJ *e*S **S 06 56 23.1 +1.5**
MESJ Messejana 73.04 53 *e*P **P 06 46 56.2 +1.7**
comp=Z,135nm,1.2s
PMTG Montargil 73.12 51 *e*P **P 06 46 56.1 +1.1**
comp=Z,198nm,1.4s
PMTG *e*S **SKiKP 06 56 26.9 -0.5**
PCVE Castro Verde 73.16 53 *e*P **P 06 46 56.9 +1.6**
comp=Z,143nm,1.6s
BRLK Bradley Lake 73.18 330 IAMs_20 IAMs_20 07 24 08.1
comp=Z,13µm,20.0s
PBDV Barranco-do-Ve 73.22 53 *e*P **P 06 46 58.0 +2.3**
comp=Z,191nm,2.6s
PBDV *e*S **SKiKP 06 56 28.8 +1.1**
EVO Evora 73.25 52⇓*i*P **P 06 46 59.0 +3.3**
EVO *e*S **S 06 56 22.3 -1.7**
EVO Evora 73.25 52 *e*P **P 06 46 57.0 +1.3**
comp=Z,135nm,1.4s
POKR Poker Flat Res 73.25 336 P **P 06 46 54.8 -0.5**
baz=110,SNR=25
POKR S **S 06 56 24.8 +1.6**
baz=110
RND Reindeer 73.28 334 P **P 06 46 56.1 +0.6**
RND pmax pmax
comp=Z,506nm,1.0s
RND MLR MLR
comp=Z,24µm,19.0s
RND Reindeer 73.28 334 P **P 06 46 56.1 +0.6**
CNPM China Poot 73.29 330 IAmb IAmb 06 47 07.4
comp=Z,174nm,0.9s
WRH Wood River Hil 73.31 336 IAmb IAmb 06 47 07.6
comp=Z,103nm,1.0s
PBEJ Beja 73.33 53 *e*P **P 06 46 58.8 +2.6**
comp=Z,99nm,1.8s
COLA College 73.34 336*c i*P **P 06 46 53.5 -2.2**
COLA pmax pmax
comp=Z,171nm,0.9s
COLA MLR MLR
comp=Z,13µm,16.0s
COLA College 73.34 336 P **P 06 46 55.2 -0.5**
COLA IAmb IAmb 06 47 07.1
comp=Z,164nm,0.8s
COLA College 73.34 336 IAMs_20 IAMs_20 07 20 52.3
comp=Z,18µm,22.0s
PGAV Gavieira, Arco 73.34 48 *e*P **P 06 46 57.6 +1.3**
comp=Z,266nm,1.9s
PGAV *e*S **S 06 56 25.5 +0.3**
PGAV Gavieira, Arco 73.34 48 eLQ LQ 07 06 44.7
PGAV eLR LR 07 08 48.1
comp=Z,17µm,22.0s
TCOL CIGO, UAF Yank 73.34 336 P **P 06 46 54.7 -1.0**
baz=109,SNR=21
TCOL S **S 06 56 25.5 +1.4**
baz=109
PVAQ Vaqueiros 73.40 53 *e*P **P 06 46 58.2 +1.5**
comp=Z,132nm,1.6s
PVAQ *e*S **SKiKP 06 56 30.1 +2.2**
PVAQ eLQ LQ 07 06 16.0
PVAQ eLR LR 07 09 46.7
comp=Z,14µm,20.0s
PVAQ Vaqueiros 73.40 53 IAmb IAmb 06 47 09.9
comp=Z,207nm,1.4s
PVAQ IAMs_20 IAMs_20 07 14 49.5
comp=Z,16µm,20.0s
MCK McKinley 73.42 335 IAmb IAmb 06 47 08.1
comp=Z,292nm,1.2s
AVE Averroes 73.44 57⇓*i*P **P 06 46 58.7 +1.7**
AVE *e*S **S 06 56 26.5 +0.1**
PCAB Cabril 73.50 49 *e*P **P 06 46 58.9 +1.7**
comp=Z,185nm,1.9s
PVIS Viseu 73.51 50 *e*P **P 06 46 58.2 +0.9**
comp=Z,190nm,1.4s
HOM Homer 73.52 330 P **P 06 46 58.2 +1.3**
HOM IAMs_20 IAMs_20 07 22 04.1
comp=Z,14µm,20.0s
MDM Murphy Dome 73.52 336 IAmb IAmb 06 47 08.4
comp=Z,132nm,0.8s
MDM IAMs_20 IAMs_20 07 22 42.0
comp=Z,13µm,19.0s
KDAK Kodiak Island 73.55 328 P **P 06 46 57.7 +0.6**
KDAK pmax pmax
comp=Z,151nm,1.2s
KDAK Kodiak Island 73.55 328 P **P 06 46 57.6 +0.6**
KDAK IAmb IAmb 06 47 09.1
comp=Z,150nm,1.1s
KDAK Kodiak Island 73.55 328 IAMs_20 IAMs_20 07 24 37.9
comp=Z,10µm,18.0s
PESTR Estremoz 73.60 52 *e*S **SKiKP 06 56 32.4 +4.2**
PESTR Estremoz 73.60 52 IAmb IAmb 06 47 10.6
comp=Z,199nm,1.1s
SCO Scoresbysund 73.64 18 *i*P **P 06 46 56.8 -0.6**
SCO *i*S **S 06 56 18.9 -8.4**
SCO MLR MLR
comp=Z,17µm,18.0s
SCO Scoresbysund 73.64 18 IAMs_20 IAMs_20 07 15 52.2
comp=Z,14µm,21.0s
SCO Scoresbysund 73.64 18 *i*P **P 06 46 56.8 -0.6**
SCO *i*S **S 06 56 18.9 -8.4**
comp=Z,17µm,18.0s
PVRL Vila Real 73.69 49 *e*P **P 06 47 00.0 +1.6**
comp=Z,230nm,1.9s
NEA Nenana 73.74 336 IAmb IAmb 06 47 09.6
comp=Z,170nm,0.8s
MTE Manteigas 73.75 50 *e*P **P 06 46 59.8 +1.0**
comp=Z,180nm,1.7s
MTE *e*S **S 06 56 30.9 +1.1**
MTE *e*LQ LQ 07 06 05.6
MTE *e*LR LR 07 09 49.8
comp=Z,23µm,22.0s
MTE Manteigas 73.75 50 IAmb IAmb 06 47 11.1
comp=Z,212nm,1.3s
PCBR Castelo Branco 73.76 51 *e*P **P 06 46 59.6 +0.9**
comp=Z,184nm,1.7s
BWN Browne 73.78 335 P **P 06 46 57.0 -1.3**
PMRV Marv??o 73.80 51 *e*P **P 06 46 59.8 +0.8**
comp=Z,146nm,1.4s
PMRV *e*S **S 06 56 33.4 +3.1**
PMRV *e*LQ LQ 07 06 10.5
PMRV *e*LR LR 07 09 46.9
comp=Z,15µm,22.0s
OHAK Old Harbor 73.80 328 IAmb IAmb 06 47 10.7
comp=Z,266nm,1.1s
OHAK IAMs_20 IAMs_20 07 19 44.5
comp=Z,15µm,22.0s
TRF Thorofare Moun 73.91 334 IAmb IAmb 06 47 10.4
comp=Z,162nm,1.0s
TRF IAMs_20 IAMs_20 07 20 38.4
comp=Z,19µm,22.0s
OPA Opana 74.20 290 IAMs_20 IAMs_20 07 11 45.9
comp=Z,14µm,20.0s
MVO Mcpcrvo 74.20 49 *e*P **P 06 47 02.8 +1.4**
comp=Z,222nm,2.1s
MVO *e*S **S 06 56 38.2 +3.4**
MVO *e*LQ LQ 07 06 27.2
MVO *e*LR LR 07 09 50.4
comp=Z,13µm,20.0s
HON Honolulu 74.20 290 IAMs_20 IAMs_20 07 11 46.9
comp=Z,15µm,20.0s
KIP Kipapa 74.21 290 *i*P **P 06 47 02.5 +0.8**
KIP pmax pmax
comp=Z,133nm,1.1s
KIP MLR MLR
comp=Z,9µm,14.0s
KIP Kipapa 74.21 290 IAMs_20 IAMs_20 07 12 15.1
comp=Z,14µm,20.0s
KTH Kantishna Hill 74.22 334 IAmb IAmb 06 47 12.4
comp=Z,119nm,0.9s
BPAW Bear Paw Mtn. 74.40 335 IAmb IAmb 06 47 13.6
comp=Z,248nm,1.1s
PBRG Braganca 74.47 49 *e*P **P 06 47 03.8 +0.9**
comp=Z,231nm,1.7s
MLY Manley 74.56 336 IAmb IAmb 06 47 14.6
comp=Z,321nm,1.2s
MLY IAMs_20 IAMs_20 07 21 26.4
comp=Z,16µm,22.0s
SFS San Fernando 74.56 54⇓*i*P **P 06 47 06.8 +3.3**
SFS *e*S **S 06 56 46.1 +7.3**
PPLA Purkeypile 74.59 333 IAmb IAmb 06 47 14.0
comp=Z,362nm,1.4s
COLD Coldfoot 75.00 338 IAmb IAmb 06 47 17.7
comp=Z,149nm,1.0s
XMAS Kiritimati 75.07 270 P **P 06 47 08.3 +1.5**
XMAS IAmb IAmb 06 47 20.8
comp=Z,369nm,1.4s
XMAS Kiritimati 75.07 270 IAMs_20 IAMs_20 07 12 23.0
comp=Z,10µm,20.0s
CEU Ceuta 75.22 55⇓*i*P **P 06 47 07.7 +0.5**
CEU *e*S **S 06 56 50.8 +4.6**
TOLK Toolik Lake Re 75.22 340 P **P 06 47 06.4 -0.4**
baz=109,SNR=40
TOLK S **S 06 56 47.6 +2.4**
baz=109
IFR Ifrane 75.36 57⇓*i*P **P 06 47 08.3 -0.1**
IFR *e*S **S 06 56 53.3 +5.0**
SVW2 Sparrevohn 75.75 331 IAmb IAmb 06 47 20.8
comp=Z,124nm,0.9s
SVW2 IAMs_20 IAMs_20 07 22 42.5
comp=Z,16µm,21.0s
KEKH Kekaha 75.77 291 IAMs_20 IAMs_20 07 13 58.5
comp=Z,11µm,20.0s
MDT Midelt 75.78 58 P **P 06 47 11.5 +0.8**
comp=Z,24nm,0.9s,baz=263,slow=5.9,SNR=20
EMAL Malaga-Limoner 76.00 54⇓*i*P **P 06 47 14.6 +2.8**
EMAL *e*S **S 06 57 00.9 +6.1**
PVLZ Peæn de 76.07 56⇓*i*P **P 06 47 11.2 -1.0**
PVLZ *e*S **S 06 56 56.8 +1.1**
PAB San Pablo 76.16 51 P **P 06 47 12.4 -0.3**
PAB pmax pmax
comp=Z,422nm,1.6s
PAB San Pablo 76.16 51 P **P 06 47 12.4 -0.3**
PAB IAmb IAmb 06 47 25.7
comp=Z,422nm,1.6s
PAB San Pablo 76.16 51 IAMs_20 IAMs_20 07 14 02.1
comp=Z,17µm,22.0s
GMM Mts of Mourne 76.23 36 *e*P **P 06 47 11.8 -0.8**
LEWI Lewis, Hebride 76.25 32 *e*P **P 06 47 12.8 +0.1**
LEWI IAMs_20 IAMs_20 07 11 48.3
comp=Z,32µm,33.7s
CHGN Chignik 76.42 326 IAMs_20 IAMs_20 07 22 28.9
comp=Z,13µm,22.0s
ESDC Sonseca Array 76.46 51 P **P 06 47 14.3 0.0**
comp=Z,37nm,0.8s,baz=276,slow=5.2,SNR=51
ESDC LR LR 07 16 04.2
comp=Z,6µm,21.9s,baz=270,slow=32
TIC Toumodi 76.57 85 *e*P **P 06 47 16.0 +0.6**
LIC Lamto 76.60 85 *e*P **P 06 47 17.0 +1.4**
comp=Z,290nm,1.1s
DBIC Dimbokro 76.73 85 P **P 06 47 16.3 0.0**
comp=Z,17nm,0.9s,baz=252,slow=4.5,SNR=14
DBIC LR LR 07 18 18.2
comp=Z,6µm,21.1s,baz=259,slow=34
DBIC Dimbokro 76.73 85 P **P 06 47 17.2 +0.9**
DBIC pmax pmax
comp=Z,145nm,1.1s
DBIC Dimbokro 76.73 85 P **P 06 47 17.2 +0.9**
DBIC IAmb IAmb 06 47 41.7
comp=Z,145nm,1.1s
KPL Plockton 76.78 33 *e*P **P 06 47 14.9 -0.8**
KPL IAMs_20 IAMs_20 07 11 42.8
comp=Z,33µm,35.6s
KIC Kosan Boka 76.87 85 *e*P **P 06 47 17.9 +0.8**
comp=Z,491nm,1.4s
CNBA Chernabura Isl 76.91 325 IAmb IAmb 06 47 28.0
comp=Z,140nm,1.1s
CNBA IAMs_20 IAMs_20 07 20 45.8
comp=Z,12µm,22.0s
YRC Rhoscolyn 76.93 37 *e*P **P 06 47 16.6 0.0**
WIM Isle of Man 76.96 36 *e*P **P 06 47 16.0 -0.9**
KAC Achnashellach 76.99 33 *e*P **P 06 47 15.6 -1.3**
GAL1 Galloway 77.02 35 *e*P **P 06 47 16.3 -0.8**
GAL1 IAMs_20 IAMs_20 07 11 47.3
comp=Z,24µm,35.5s
UCM Universidad Co 77.03 50⇓*i*P **P 06 47 19.8 +2.2**
UCM *e*S **S 06 57 12.1 +6.0**
IOMK Kirk Michael 77.04 36 *e*P **P 06 47 16.7 -0.5**
IOMK IAMs_20 IAMs_20 07 11 47.4
comp=Z,51µm,35.2s
WLF1 Llynfaes 77.04 37 *e*P **P 06 47 16.8 -0.5**
DAG Danmarks Havn 77.18 12 *i*P **P 06 47 15.8 -1.8**
DAG *i*S **S 06 56 58.8 -7.5**
DAG pmax pmax
comp=Z,77nm,1.3s
DAG MLR MLR
comp=Z,37µm,20.0s
DAG Danmarks Havn 77.18 12 *i*P **P 06 47 15.8 -1.8**
comp=Z,77nm,1.3s
DAG *i*S **S 06 56 58.8 -7.5**
comp=Z,37µm,20.0s
MELI Melilla 77.19 56⇓*i*P **P 06 47 17.3 -1.2**
MELI *e*S **S 06 57 11.6 +3.6**
NEWG New Galloway 77.32 35 *e*P **P 06 47 18.3 -0.5**
NEWG IAMs_20 IAMs_20 07 11 54.7
comp=Z,23µm,35.9s
MCH1 Michaelchurch 77.78 38 *e*P **P 06 47 21.5 0.0**
MCH1 IAMs_20 IAMs_20 07 14 17.4
comp=Z,19µm,25.9s
HLM1 Long Mynd 77.89 38 *e*P **P 06 47 21.6 -0.4**
HLM1 IAMs_20 IAMs_20 07 14 08.0
comp=Z,20µm,25.9s
ESK Eskdalemuir 77.92 35 *e*P **P 06 47 21.4 -0.8**
ESK IAMs_20 IAMs_20 07 12 11.5
comp=Z,22µm,36.1s
ESK Eskdalemuir 77.92 35 P **P 06 47 22.4 +0.2**
ESK pmax pmax
comp=Z,321nm,1.8s
ESK Eskdalemuir 77.92 35 P **P 06 47 22.4 +0.2**
ESK IAmb IAmb 06 47 40.9
comp=Z,321nm,1.8s
ESK Eskdalemuir 77.92 35 IAMs_20 IAMs_20 07 14 36.1
comp=Z,11µm,22.0s
EKA Eskdalemuir Ar 77.95 35 P **P 06 47 21.4 -0.9**
comp=Z,12nm,0.8s,baz=254,slow=4.6,SNR=24
EBL Broad Law 78.05 35 *e*P **P 06 47 22.1 -0.8**
MCD Coleburn Disti 78.10 33 *e*P **P 06 47 22.3 -0.8**
EDU Dundee 78.13 34 *e*P **P 06 47 23.2 -0.1**
STRD Stroud 78.28 39 *e*P **P 06 47 23.3 -0.9**
STRD IAMs_20 IAMs_20 07 14 46.1
comp=Z,20µm,24.9s
ESY Stoneypath 78.30 34 *e*P **P 06 47 24.4 +0.1**
STNC Stoke 78.34 37 *e*P **P 06 47 23.8 -0.7**
STNC IAMs_20 IAMs_20 07 13 14.0
comp=Z,17µm,25.8s
DRUM Mains of Drumt 78.45 33 *e*P **P 06 47 24.1 -1.0**
DRUM IAMs_20 IAMs_20 07 12 26.5
comp=Z,33µm,40.9s
TRIS Tristan da Cun 78.56 130 IAMs_20 IAMs_20 07 21 19.8
comp=Z,11µm,20.0s
LBWR Ladybower, Pea 78.65 37 *e*P **P 06 47 26.0 -0.2**
LBWR IAMs_20 IAMs_20 07 13 22.9
comp=Z,16µm,26.1s
HPK Haverah Park 78.74 36 *e*P **P 06 47 27.1 +0.3**
HPK IAMs_20 IAMs_20 07 12 35.7
comp=Z,22µm,34.8s
CART Cartagena 78.75 53⇓*i*P **P 06 47 27.4 +0.3**
CART *e*S **S 06 57 25.8 +1.1**
CWF Charnwood Fore 78.86 38 *e*P **P 06 47 26.7 -0.7**
CWF IAMs_20 IAMs_20 07 14 36.8
comp=Z,20µm,26.0s
FALS False Pass 79.12 324 IAMs_20 IAMs_20 07 27 56.2
comp=Z,11µm,20.0s
WAL1 Wallis 79.18 30 *e*P **P 06 47 28.7 -0.3**
NOR Nord 79.48 8 *i*P **P 06 47 30.0 -0.3**
NOR pmax pmax
comp=Z,280nm,1.8s
NOR MLR MLR
comp=Z,32µm,18.0s
NOR Nord 79.48 8 *i*P **P 06 47 30.0 -0.3**
comp=Z,281nm,1.8s
comp=Z,32µm,18.0s
WACR West Acre 80.04 38 *e*P **P 06 47 33.8 0.0**
WACR IAMs_20 IAMs_20 07 17 50.4
comp=Z,17µm,20.7s
AKUT Akutan 80.46 324 IAMs_20 IAMs_20 07 25 18.8
comp=Z,12µm,20.0s
UNV Unalaska Valle 80.89 323 IAmb IAmb 06 47 49.0
comp=Z,166nm,1.0s
UNV IAMs_20 IAMs_20 07 25 00.2
comp=Z,9µm,21.0s
CLF Chambon-Foret 81.06 43 IAmb IAmb 06 47 51.8
comp=Z,308nm,1.1s
CLF IAMs_20 IAMs_20 07 20 08.9
comp=Z,11µm,21.0s
ADJB Djebel Djouab 82.35 55 P **P 06 47 50.0 +3.3**
TORD Torodi Ar. Bea 82.53 78 P **P 06 47 47.2 -0.6**
comp=Z,6.8nm,0.8s,baz=300,slow=3.3,SNR=38
TORD PKKPbc **PKKPbc 07 06 14.0 +0.6**
comp=Z,0.5nm,0.9s,baz=132,slow=2.5,SNR=1.9
TORD PKPPKP **P'P'df 07 14 19.8 -1.0**
comp=Z,1.4nm,1.1s,baz=60,slow=1.7,SNR=5.2
TORD LR LR 07 23 26.7
comp=Z,8µm,20.3s,baz=270,slow=35
SSB Saint Sauveur 82.71 45 IAmb IAmb 06 48 00.8
comp=Z,142nm,1.3s
AKET Djebel Ketaf 82.72 55 P **P 06 47 51.0 +2.4**
SPIA Saint Paul Isl 82.97 327 IAMs_20 IAMs_20 07 24 49.0
comp=Z,16µm,22.0s
ATAF Djebel Tarf 83.05 55 P **P 06 47 51.0 +0.7**
GAMB Gambell 83.41 333 IAmb IAmb 06 47 54.4
comp=Z,85nm,1.0s
GAMB IAMs_20 IAMs_20 07 29 06.3
comp=Z,13µm,20.0s
WLF Walferdange 83.57 41 *e*P **P 06 47 52.4 -0.2**
comp=Z,376nm,2.1s,baz=277,slow=5.1
WLF Walferdange 83.57 41 IAmb IAmb 06 48 04.7
comp=Z,190nm,1.3s
WLF IAMs_20 IAMs_20 07 18 58.2
comp=Z,15µm,22.0s
KBS Kingsbay 83.84 11 P **P 06 47 54.4 +1.0**
KBS pmax pmax
comp=Z,152nm,1.2s
KBS MLR MLR
comp=Z,23µm,20.0s
KBS Kingsbay 83.84 11 P **P 06 47 54.4 +1.0**
KBS IAmb IAmb 06 48 24.4
comp=Z,152nm,1.2s
SET Setif 83.93 54 P **P 06 47 59.0 +4.2**
AHRW Bad Neuenahr-A 84.11 40 *e*P **P 06 47 55.2 -0.1**
comp=Z,272nm,1.8s,baz=277,slow=5.1
BUG Bochum-Sniver 84.16 39 *e*P **P 06 47 55.0 -0.5**
comp=Z,303nm,2.0s,baz=277,slow=5.1
BNI Bardonecchia 84.24 45 IAMs_20 IAMs_20 07 24 46.3
comp=Z,8µm,19.0s
DFRA Djebel Bou Aff 84.29 54 P **P 06 48 00.3 +3.6**
ECH Echery 84.33 42 IAmb IAmb 06 48 08.5
comp=Z,264nm,1.5s
ECH IAMs_20 IAMs_20 07 23 13.4
comp=Z,9µm,20.0s
IBBN Ibbenburen 84.40 38 *e*P **P 06 47 56.3 -0.4**
comp=Z,290nm,1.9s,baz=277,slow=5.1
CTEI Djebel Teioual 84.75 54 P **P 06 48 00.8 +1.8**
CASM Ain Smara 84.81 54 P **P 06 48 00.9 +1.7**
KONO Kongsberg 84.82 31 *i*P **P 06 47 57.9 -0.8**
KONO pmax pmax
comp=Z,100nm,2.5s
KONO MLR MLR
comp=Z,12µm,19.0s
KONO Kongsberg 84.82 31 P **P 06 47 59.8 +1.1**
KONO IAmb IAmb 06 48 11.5
comp=Z,194nm,1.9s
KONO Kongsberg 84.82 31 IAMs_20 IAMs_20 07 27 25.1
comp=Z,12µm,19.0s
SPA0 Spitsbergen Ar 84.82 12 IAmb IAmb 06 48 08.6
comp=Z,174nm,1.2s
SPITS Spitsbergen Ar 84.82 12 P **P 06 47 58.0 -0.4**
comp=Z,38nm,0.9s,baz=180,slow=0.1,SNR=16
HSPB Hornsund (broa 84.84 13 *e*PP PP 06 51 25.3 +11
HSPB *e*S **S 06 58 27.6 +1.6**
HSPB *e*SS **SS 07 04 04.9 +7.1**
HSPB LMZ LR 07 23 02.2
comp=Z,28nm,21.9s
GOET G??ttrup 84.86 33 *i*P **P 06 48 01.1 +2.2**
comp=Z,14µm,23.0s
MUD Monsted U'grnd 84.88 34 *i*P **P 06 47 59.9 +0.9**
MUD Monsted U'grnd 84.88 34 *i*P **P 06 47 59.9 +0.9**
CKFL Kef-Lekhel 84.98 54 P **P 06 48 02.3 +2.1**
TNS Taunus Mts 85.01 40 *e*P **P 06 47 59.6 -0.4**
comp=Z,213nm,1.8s,baz=277,slow=5.1
TNS *e*L L 07 20 59.9
comp=Z,8µm,22.0s
CAEH `Ain El Ouahch 85.05 54 P **P 06 48 02.8 +2.4**
BFO Black Forest 85.10 42 *e*P **P 06 47 59.6 -0.8**
comp=Z,150nm,2.0s,baz=277,slow=5.1
BFO *e*L L 07 23 00.1
comp=Z,10µm,19.6s
BFO Black Forest 85.10 42 P **P 06 47 59.6 -0.8**
BFO pmax pmax
comp=Z,52nm,1.0s
BFO MLR MLR
comp=Z,13µm,18.0s
BFO Black Forest 85.10 42 P **P 06 47 59.6 -0.8**
TAM Tamanrasset 85.22 68 IAmb IAmb 06 48 26.2
comp=Z,146nm,1.1s
TAM IAMs_20 IAMs_20 07 25 50.0
comp=Z,11µm,20.0s
NC204 NORSAR Array S 85.23 29 IAmb IAmb 06 48 16.9
comp=Z,109nm,1.1s
RETH Rethem/Aller, 85.34 38 *e*P **P 06 48 01.4 0.0**
comp=Z,367nm,2.0s,baz=277,slow=5.1
JOHN Johnston Islan 85.39 286 IAMs_20 IAMs_20 07 17 56.7
comp=Z,11µm,21.0s
NB2 NORSAR Subarra 85.48 29 P **P 06 48 01.1 -0.9**
comp=Z,1µm,3.3s,baz=273,slow=4.8
NB2 NORSAR Subarra 85.48 29 P **P 06 48 01.1 -0.9**
baz=273,slow=4.8
NOA NORSAR Array B 85.48 29 P **P 06 48 01.3 -0.7**
comp=Z,21nm,1.1s,baz=276,slow=4.7,SNR=19
NOA LR LR 07 24 11.2
comp=Z,5µm,19.7s,baz=275,slow=34
CMAH Djebel Manchou 85.52 54 P **P 06 48 04.4 +1.6**
NC303 NORSAR Array S 85.53 29 P **P 06 48 03.2 +1.0**
ABSA Djebel Ababsia 85.60 54 P **P 06 48 04.8 +1.6**
ATKA Atka Island 85.61 322 IAMs_20 IAMs_20 07 28 47.1
comp=Z,8µm,21.0s
STU Stuttgart 85.63 42 IAMs_20 IAMs_20 07 25 50.7

	comp=Z,10µm,19.0s									
NC405	**NORSAR Array S**	**85.71**	**29**	P		**P**		**06 48 01.7**	**-1.5**
NC405				IAmb		IAmb		06 48 24.8	
	comp=Z,291nm,1.4s									
BSEG	**Bad Segeberg**	**85.79**	**36**	*e*P		**P**		**06 48 03.2**	**-0.4**
	comp=Z,233nm,1.9s,baz=277,slow=5.1									
BSEG				*e*L		L		07 21 06.9		
	comp=Z,10µm,21.8s									
NRDL	**Niedersach Rie**	**85.82**	**38**	*e*P		**P**		**06 48 03.8**	**0.0**
	comp=Z,286nm,2.0s,baz=277,slow=5.1									
UBBA	**Unterbreizbach**	**85.93**	**39**	*e*P		**P**		**06 48 04.2**	**-0.1**
	comp=Z,168nm,1.9s,baz=277,slow=5.1									
TUE	**Stuetta**	**85.97**	**44**	IAMs_20		IAMs_20		07 25 41.0		
	comp=Z,12µm,19.0s									
CLZ	**Clausthal**	**86.05**	**38**	*e*P		**P**		**06 48 05.0**	**-0.1**
	comp=Z,264nm,2.0s,baz=277,slow=5.1									
ASSE	**Asse, Remlinge**	**86.20**	**38**	*e*P		**P**		**06 48 05.7**	**+0.1**
	comp=Z,356nm,2.0s,baz=277,slow=5.1									
DAVA	**Damuels**	**86.24**	**43**	*e*PcP		**P**		**06 48 07.1**	**+0.9**
	comp=Z,130nm,1.0s,SNR=24									
DAVOX	**Davos/Dischmat**	**86.30**	**43**	P		**P**		**06 48 06.6**	**0.0**
	comp=Z,22nm,0.9s,baz=272,slow=4.0,SNR=21									
MSSA	**Maissana**	**86.32**	**46**	IAmb		IAmb		06 48 19.2		
	comp=Z,161nm,1.3s									
UBR	**Ueberruh**	**86.35**	**43**	*e*P		**P**		**06 48 06.6**	**-0.1**
	comp=Z,294nm,1.9s,baz=277,slow=5.1									
FUORN	**Ofenpass-Fuorn**	**86.58**	**44**	IAmb		IAmb		06 48 23.4		
	comp=Z,118nm,1.1s									
FUORN				IAMs_20		IAMs_20		07 26 19.2		
	comp=Z,12µm,19.0s									
VSL	**Villasalto**	**86.76**	**51**	IAMs_20		IAMs_20		07 19 51.7		
	comp=Z,12µm,22.0s									
HFS	**Hagfors**	**86.81**	**30**	P		**P**		**06 48 07.8**	**-0.8**
	comp=Z,11nm,0.7s,baz=266,slow=2.4,SNR=14									
RETA	**Reutte**	**86.82**	**43**	*e*PcP		**P**		**06 48 09.8**	**+0.9**
	comp=Z,89nm,1.5s,SNR=12									
GRA1	**Grafenberg Arr**	**86.84**	**40**	IAmb		IAmb		06 48 22.1		
	comp=Z,194nm,1.4s									
GRF	**Grafenberg Arr**	**86.84**	**40**	*e*L		L		07 20 57.6		
	comp=Z,18µm,21.7s									
FETA	**Feichten**	**86.85**	**43**	*e*PcP		**P**		**06 48 10.1**	**+0.8**
	comp=Z,121nm,1.0s,SNR=22									
MOX	**Moxa**	**86.97**	**40**	*e*P		**P**		**06 48 09.3**	**-0.3**
	comp=Z,180nm,2.0s,baz=277,slow=5.1									
MOX				*e*L		L		07 21 25.4		
	comp=Z,9µm,21.1s									
MOTA	**Moosalm**	**87.06**	**43**	*e*PcP		**P**		**06 48 11.0**	**+0.7**
	comp=Z,59nm,0.9s,SNR=10									
FUR	**Furstenfeldbru**	**87.07**	**42**	*e*L		L		07 24 07.9		
	comp=Z,9µm,21.6s									
SQTA	**Sankt Quirin**	**87.15**	**43**	*e*PcP		**P**		**06 48 11.5**	**+0.9**
	comp=Z,72nm,0.9s,SNR=10									
KEST	**Kesra**	**87.16**	**55**	P		**P**		**06 48 12.7**	**+1.8**
	comp=Z,4.3nm,0.7s,baz=163,slow=2.5,SNR=7.3									
KEST				LR		LR		07 22 44.3		
	comp=Z,6µm,21.2s,baz=244,slow=33									
KEST	**Kesra**	**87.16**	**55**	IAmb		IAmb		06 48 52.2		
	comp=Z,156nm,1.4s									
KEST				IAMs_20		IAMs_20		07 28 32.9		
	comp=Z,8µm,20.0s									
ADK	**Adak**	**87.17**	**322**	P		**P**		**06 48 12.1**	**+1.6**
ADK	**Adak**	**87.17**	**322**	P		**P**		**06 48 12.1**	**+1.6**
ADK	**Adak**	**87.17**	**322**	IAMs_20		IAMs_20		07 30 00.4		
	comp=Z,8µm,21.0s									
PLN	**Plauen**	**87.34**	**40**	*e*P		**P**		**06 48 11.1**	**-0.2**
	comp=Z,192nm,1.9s,baz=277,slow=5.1									
MANZ	**Manzenberg**	**87.38**	**40**	*e*P		**P**		**06 48 11.6**	**0.0**
	comp=Z,163nm,2.0s,baz=277,slow=5.1									
WATA	**Walderalm**	**87.38**	**43**	*e*PcP		**P**		**06 48 12.4**	**+0.6**
	comp=Z,62nm,1.3s,SNR=7.9									
WTTA	**Wattenberg**	**87.43**	**43**	*e*PcP		**P**		**06 48 13.0**	**+0.9**
	comp=Z,105nm,1.3s,SNR=11									
RGN	**Rugen**	**87.45**	**35**	*e*P		**P**		**06 48 10.5**	**-1.2**
RGN	**Rugen**	**87.45**	**35**	IAMs_20		IAMs_20		07 32 51.3		
	comp=Z,10µm,19.0s									
GUNZ	**Gunzen**	**87.46**	**40**	*e*P		**P**		**06 48 11.9**	**-0.1**
	comp=Z,194nm,2.0s,baz=277,slow=5.1									
ROTZ	**Rotzenmuhle**	**87.47**	**40**	*e*P		**P**		**06 48 12.1**	**+0.1**
	comp=Z,209nm,2.0s,baz=277,slow=5.1									
CASP	**Castiglione de**	**87.47**	**47**	IAMs_20		IAMs_20		07 22 26.3		
	comp=Z,8µm,22.0s									
WERN	**Wernitzgruen**	**87.50**	**40**	*e*P		**P**		**06 48 12.2**	**0.0**
	comp=Z,221nm,2.0s,baz=277,slow=5.1									
TANN	**Tannenbergstha**	**87.54**	**40**	*e*P		**P**		**06 48 12.3**	**-0.1**
	comp=Z,545nm,2.1s,baz=277,slow=5.1									
NKC	**Novy Kostel**	**87.56**	**40**	*e*P		**P**		**06 48 13.6**	**+1.2**
NKC				*e*				06 48 22.0		
NKC				*e*S		**S**		**06 58 53.0**	**-0.7**
NKC				MLR		MLR				
	comp=Z,28µm,25.0s									
NKC	**Novy Kostel**	**87.56**	**40**	*e*P		**P**		**06 48 13.6**	**+1.2**
NKC				*ex*		x		06 48 22.0		
NKC				*e*S		**S**		**06 58 53.0**	**-0.7**
NKC				AMS		AMS		07 19 40.0		
	comp=Z,28µm,25.0s									
CTI	**Castel Tesino**	**87.61**	**44**	IAmb		IAmb		06 48 24.8		
	comp=Z,205nm,1.3s									
CTI				IAMs_20		IAMs_20		07 26 45.3		
	comp=Z,11µm,20.0s									
CLL	**Collm**	**87.75**	**39**	*e*P		**P**		**06 48 14.0**	**+0.8**
	comp=Z,243nm,2.0s									
CLL				*e*				06 48 24.0		
CLL				*e*(sPP)				06 51 46.0		
CLL				*e*S		**S**		**06 58 52.0**	**-3.4**
CLL				*e*PS				06 59 54.0		
CLL				*e*				07 01 30.0		
CLL				*e*				07 03 48.0		
CLL				*e*SS		**SS**		**07 04 42.0**	**+0.4**
CLL				*e*SSS		SSS		07 08 00.0		
CLL				Lm		MLR		07 38 00.0		
	comp=N,6µm,19.7s									
CLL				Lm		MLR		07 38 00.0		
	comp=E,6µm,20.3s									
CLL				Lm		MLR		07 38 00.0		
	comp=Z,8µm,20.9s									
CLL	**Collm**	**87.75**	**39**	*e*P		**P**		**06 48 14.1**	**+0.8**
	comp=Z,243nm,2.0s,baz=277,slow=5.1									
CLL				*e*L		L		07 23 49.1		
	comp=Z,9µm,20.0s									
CLL	**Collm**	**87.75**	**39**	*e*P		**P**		**06 48 14.0**	**+0.8**
CLL				*e*S		**S**		**06 58 52.0**	**-3.4**
CLL				pmax		pmax				
	comp=Z,243nm,2.0s									
CLL				MLR		MLR				
	comp=Z,8µm,20.9s									
CLL	**Collm**	**87.75**	**39**	IAMs_20		IAMs_20		07 23 58.5		
	comp=Z,9µm,20.0s									
WET	**Wettzell**	**87.99**	**41**	*e*P		**P**		**06 48 14.6**	**+0.1**
	comp=Z,260nm,2.0s,baz=277,slow=5.1									
WET				*e*L		L		07 21 31.1		
	comp=Z,13µm,21.6s									
FBE	**Freiberg**	**88.03**	**39**	*e*P		**P**		**06 48 14.8**	**+0.2**
	comp=Z,284nm,2.0s,baz=277,slow=5.1									
RUE	**Ruedersdorf**	**88.05**	**37**	*e*P		**P**		**06 48 13.9**	**-0.7**
ABTA	**Abfaltersbach**	**88.10**	**43**	PcP		**P**		**06 48 16.0**	**+0.8**
	comp=Z,100nm,1.0s,SNR=13									
BSD	**Bornholm Skovb**	**88.27**	**35**	*i* P		**P**		**06 48 15.8**	**+0.1**
BSD				MLR		MLR				
	comp=Z,7µm,20.0s									
BSD	**Bornholm Skovb**	**88.27**	**35**	*i* P		**P**		**06 48 15.8**	**+0.1**
	comp=Z,7µm,20.0s									
BRG	**Berggiesshubel**	**88.40**	**39**	*i* P		**P**		**06 48 17.4**	**+1.0**
	comp=Z,200nm,2.0s									
BRG				PP		PP		06 51 30.0	-14	
BRG				S		**S**		**06 58 56.0**	**-5.6**	
BRG				SS		**SS**		**07 04 51.0**	**-0.2**	
	comp=N,13µm,22.4s									
	comp=E,10µm,24.7s									
	comp=Z,16µm,24.4s									
BRG	**Berggiesshubel**	**88.40**	**39**	*e*P		**P**		**06 48 16.4**	**0.0**	
	comp=Z,200nm,2.0s,baz=277,slow=5.1									
BRG	**Berggiesshubel**	**88.40**	**39**	*i* P		**P**		**06 48 17.4**	**+1.0**	
BRG				S		**S**		**06 58 56.0**	**-5.6**	
BRG				SS		**SS**		**07 04 51.0**	**-0.2**	
BRG				pmax		pmax				
	comp=Z,200nm,2.0s									
BRG				MLR		MLR				
	comp=N,13µm,22.4s									
BRG				MLR		MLR				
	comp=E,10µm,24.7s									
BRG				MLR		MLR				
	comp=Z,16µm,24.4s									
KHC	**Kasperske Hory**	**88.45**	**41**	*e*P		**P**		**06 48 17.6**	**+0.9**	
KHC				*e*				06 48 24.4		
KHC				*e*S		**S**		**06 59 03.2**	**+0.9**	
KHC				MLR		MLR				
	comp=Z,28µm,23.9s									
KHC	**Kasperske Hory**	**88.45**	**41**	*e*P		**P**		**06 48 17.6**	**+0.9**	
KHC				*ex*		x		06 48 24.4		
KHC				*ex*		x		06 48 49.0		
KHC				*e*S		**S**		**06 59 03.2**	**+0.9**	
KHC				AMS		AMS		07 20 00.0		
	comp=Z,28µm,23.9s									
GEC2	**GERESS Array S**	**88.57**	**41**	*e*P		**P**		**06 48 17.2**	**-0.2**	
	comp=Z,143nm,2.0s,baz=277,slow=5.1									
GEC2				*e*L		L		07 21 58.6		
	comp=Z,9µm,20.8s									
GEC2	**GERESS Array S**	**88.57**	**41**	IAMs_20		IAMs_20		07 27 32.6		
	comp=Z,11µm,20.0s									
GERES	**GERESS Array B**	**88.57**	**41**	P		**P**		**06 48 16.9**	**-0.4**	
	comp=Z,7.2nm,0.8s,baz=298,slow=2.9,SNR=19									
GERES				LR		LR		07 25 46.5		
	comp=Z,5µm,18.2s,baz=286,slow=34									
GERES	**GERESS Array B**	**88.57**	**41**	P		**P**		**06 48 17.0**	**-0.4**	
KBA	**Koelnbreinsper**	**88.61**	**43**	PcP		**P**		**06 48 18.3**	**+0.6**	
	comp=Z,161nm,1.2s,SNR=18									
MURB	**Monte Urbino**	**88.61**	**47**	IAMs_20		IAMs_20		07 23 13.4		
	comp=Z,11µm,22.0s									
PBCC	**Pribram**	**88.63**	**40**	*e*P		**P**		**06 48 20.5**	**+3.0**	
PBCC				*ex*		x		06 48 25.0		
PBCC				*ex*		x		06 48 43.5		
PBCC				*e*S		S		06 59 18.6	+15	
PVCC	**Panska Ves**	**88.85**	**39**	*e*P		**P**		**06 48 21.7**	**+3.2**	
PVCC				*e*				06 48 26.8		
PVCC				*e*S		**S**		**06 59 08.2**	**+2.3**	
PVCC				MLR		MLR				
	comp=Z,19µm,24.0s									
PVCC	**Panska Ves**	**88.85**	**39**	*e*P		**P**		**06 48 21.7**	**+3.2**	
PVCC				*ex*		x		06 48 26.8		
PVCC				*e*S		**S**		**06 59 08.2**	**+2.3**	
PVCC				AMS		AMS		07 20 30.0		
	comp=Z,19µm,24.0s									
MYKA	**Terra Mystica**	**88.89**	**43**	*e*PcP		**P**		**06 48 19.6**	**+0.7**	
	comp=Z,132nm,1.9s,SNR=9.2									
PRU	**Pruhonice**	**88.93**	**40**	*e*P		**P**		**06 48 20.1**	**+1.2**	
PRU				*e*				06 48 26.5		
PRU				*e*S		**S**		**06 59 00.3**	**-6.3**	
PRU				MLR		MLR				
	comp=Z,27µm,24.0s									
PRU	**Pruhonice**	**88.93**	**40**	*e*P		**P**		**06 48 20.1**	**+1.2**	
PRU				*ex*		x		06 48 26.5		
PRU				*e*SKKS		**S**		**06 59 00.3**	**-6.3**	
PRU				AMS		AMS		07 20 30.0		
	comp=Z,27µm,24.0s									
CADS	**Cadrg**	**89.01**	**44**	*i* P		**P**		**06 48 20.0**	**+0.6**	
CADS				*e*SKSac		**SKSac**		**06 58 50.8**	**+1.6**	
CADS				*i* S		**S**		**06 59 09.8**	**+2.1**	
GOPC	**GO Pecny, Ondr**	**89.09**	**40**	*e*P		**P**		**06 48 29.8**	**+10**	
GOPC				*e*S		**S**		**06 58 59.7**	**-8.6**	
GOPC				MLR		MLR				
	comp=Z,30µm,24.8s									
GOPC	**GO Pecny, Ondr**	**89.09**	**40**	AMS		AMS		07 20 30.0		
	comp=Z,30µm,24.8s									
MOA	**Molln**	**89.11**	**42**	*e*PcP		**P**		**06 48 20.1**	**+0.3**	
	comp=Z,50nm,1.6s,SNR=8.3									
NRCA	**Norcia**	**89.11**	**47**	IAMs_20		IAMs_20		07 32 41.5		
	comp=Z,11µm,19.0s									
TRI	**Trieste**	**89.12**	**44**	IAMs_20		IAMs_20		07 28 02.4		
	comp=Z,8µm,20.0s									
AQU	**L'Aquila**	**89.39**	**48**	IAMs_20		IAMs_20		07 23 15.1		
	comp=Z,12µm,21.0s									
ARCES	**ARCESS Array B**	**89.47**	**20**	P		**P**		**06 48 18.9**	**-2.2**	
	comp=Z,14nm,0.7s,baz=274,slow=3.5,SNR=20									
ARCES				LR		LR		07 24 32.9		
	comp=Z,5µm,21.9s,baz=298,slow=33									
OBKA	**Obir**	**89.52**	**43**	PcP		**P**		**06 48 22.4**	**+0.5**	
	comp=Z,84nm,1.9s									
LJU	**Ljubljana**	**89.59**	**44**	*i* P		**P**		**06 48 23.2**	**+1.2**	
LJU				*e*				06 48 32.2		
LJU				*e*				06 51 04.1		
LJU				*e*PP		**PP**		**06 51 57.0**	**+3.5**	
LJU				*e*SKSac		**SKSac**		**06 58 54.0**	**+1.5**	
LJU				*e*S		**S**		**06 59 14.9**	**+1.9**	
LJU				*e*SS		SS		07 05 20.3	+12	
LJU				*e*				07 11 59.6		
TREC	**Trest**	**89.65**	**40**	*e*P		**P**		**06 48 24.3**	**+1.9**	
TREC				*e*				06 48 29.3		
TREC				*e*S		**S**		**06 59 07.3**	**-6.2**	
TREC				MLR		MLR				
	comp=Z,29µm,24.6s									
TREC	**Trest**	**89.65**	**40**	*e*P		**P**		**06 48 24.3**	**+1.9**	
TREC				*ex*		x		06 48 29.3		
TREC				*e*SKKS		**S**		**06 59 07.3**	**-6.2**	
TREC				AMS		AMS		07 20 50.0		
	comp=Z,29µm,24.6s									
UPC	**Upice**	**89.76**	**39**	*e*P		**P**		**06 48 25.3**	**+2.5**	
UPC				*e*S		**S**		**06 59 10.3**	**-4.2**	
UPC				MLR		MLR				
	comp=Z,18µm,24.5s									
UPC	**Upice**	**89.76**	**39**	*e*P		**P**		**06 48 25.3**	**+2.5**	
UPC				*e*S		**S**		**06 59 10.3**	**-4.2**	
UPC				AMS		AMS		07 21 00.0		
	comp=Z,18µm,24.5s									
CHVC	**Chvalec**	**89.77**	**39**	*e*P		**P**		**06 48 22.6**	**-0.3**	
CHVC				*ex*		x		06 48 30.1		
CHVC				AMS		AMS		07 21 10.0		
	comp=Z,16µm,24.5s									
INTR	**Introdacqua**	**89.81**	**48**	P		**P**		**06 48 22.4**	**-1.0**	
INTR				IAMs_20		IAMs_20		07 23 28.3		
	comp=Z,12µm,22.0s									
SOKA	**Soboth**	**89.82**	**43**	*e*PcP		**P**		**06 48 23.5**	**+0.2**	
	comp=Z,36nm,0.8s,SNR=6.1									
KNTN	**Kanton**	**89.82**	**267**	IAMs_20		IAMs_20		07 22 25.0		
	comp=Z,7µm,18.0s									
KSP	**Ksiaz**	**89.87**	**39**	*e*P		**P**		**06 48 24.1**	**+0.8**	
KSP				*e*PP		**PP**		**06 52 02.7**	**+7.0**	
KSP				*e*S		**S**		**06 59 18.2**	**+2.7**	
KSP				LMZ		LR		07 21 23.5		
	comp=Z,16nm,24.4s									
OSTC	**Ostas**	**89.88**	**39**	*e*P		**P**		**06 48 24.2**	**+0.8**	
OSTC				*ex*		x		06 48 30.6		
OSTC				*e*S		**S**		**06 59 07.7**	**-7.9**	
OSTC				AMS		AMS		07 21 10.0		
	comp=Z,17µm,24.9s									
GKP	**Gorka Klasztor**	**89.96**	**36**	*e*P		**P**		**06 48 24.6**	**+1.0**	
GKP				*e*S		**S**		**06 59 17.9**	**+1.8**	
GKP				*e*SS		SS		07 05 32.4	+19	
GKP				LMZ		LR		07 20 33.3		
	comp=Z,16nm,24.4s									
DPC	**Dobruska-Polom**	**89.99**	**39**	*e*P		**P**		**06 48 25.0**	**+1.1**	
DPC				*e*				06 48 31.1		
DPC				*e*S		**S**		**06 59 16.7**	**+0.1**	
DPC				MLR		MLR				
	comp=Z,18µm,24.7s									
DPC	**Dobruska-Polom**	**89.99**	**39**	*e*P		**P**		**06 48 25.0**	**+1.1**	
DPC				*ex*		x		06 48 31.1		
DPC				*ex*		x		06 48 47.6		
DPC				*e*S		**S**		**06 59 16.7**	**+0.1**	
DPC				AMS		AMS		07 21 10.0		
	comp=Z,18µm,24.7s									
CLTB	**Caltabellotta**	**90.00**	**52**	P		**P**		**06 48 25.4**	**+1.1**	
CLTB				IAmb		IAmb		06 48 37.2		
	comp=Z,188nm,1.7s									
CLTB				IAMs_20		IAMs_20		07 30 26.7		
	comp=Z,12µm,19.0s									
CORL	**Corleone**	**90.02**	**52**	IAMs_20		IAMs_20		07 21 41.2		
	comp=Z,10µm,21.0s									
ARSA	**Arzberg**	**90.05**	**42**	*e*PcP		**P**		**06 48 25.1**	**+0.8**	
	comp=Z,52nm,1.8s									
CONA	**Conrad Observa**	**90.15**	**42**	*i* PcP		**P**		**06 48 25.6**	**+0.8**	
	comp=Z,46nm,1.0s,SNR=21									
BOJS	**Bojanci**	**90.18**	**44**	*i* P		**P**		**06 48 26.1**	**+1.2**	
BOJS				*e*SKSac		**SKSac**		**06 58 58.5**	**+2.6**	
KRUC	**Moravsky**	**90.28**	**41**	*e*P		**P**		**06 48 25.0**	**-0.3**	
KRUC				*e*SKS		**SKSac**		**06 58 56.1**	**-0.3**	
KRLC	**Kraliky**	**90.33**	**40**	*e*P		**P**		**06 48 29.0**	**+3.5**	
KRLC				*e*S		**S**		**06 59 20.2**	**+0.4**	
KRLC				MLR		MLR				
	comp=Z,19µm,25.4s									
KRLC	**Kraliky**	**90.33**	**40**	*e*P		**P**		**06 48 29.0**	**+3.5**	
KRLC				*e*S		**S**		**06 59 20.2**	**+0.4**	
KRLC				AMS		AMS		07 21 20.0		
	comp=Z,19µm,25.4s									
VRAC	**Vranov**	**90.36**	**40**	P		**P**		**06 48 25.0**	**-0.7**	
	comp=Z,6.9nm,0.7s,baz=287,slow=5.9,SNR=22									
VRAC	**Vranov**	**90.36**	**40**	*e*P		**P**		**06 48 25.6**	**-0.1**	
VRAC				*e*SKS		**SKSac**		**06 58 56.1**	**-0.7**	
VRAC	**Vranov**	**90.36**	**40**	⇑P		**P**		**06 48 28.0**	**+2.4**	
VRAC	**Vranov**	**90.36**	**40**	⇑P		**P**		**06 48 28.0**	**+2.4**	
MORC	**Moravsky Berou**	**90.87**	**40**	*e*P		**P**		**06 48 27.8**	**-0.3**	
MORC				*e*SKS		**SKSac**		**06 58 58.5**	**-1.3**	
MORC	**Moravsky Berou**	**90.87**	**40**	⇑P		**P**		**06 48 30.5**	**+2.4**	
MORC	**Moravsky Berou**	**90.87**	**40**	⇑P		**P**		**06 48 30.5**	**+2.4**	
ZST	**Bratislava**	**90.91**	**41**	*e*P		**P**		**06 48 28.9**	**+0.7**	
ZST				pmax		pmax				
	comp=Z,500nm,2.4s									
ZST	**Bratislava**	**90.91**	**41**	*e*P		**P**		**06 48 28.9**	**+0.7**	
MODS	**Modra-Piesok**	**90.99**	**41**	*e*P		**P**		**06 48 29.3**	**+0.7**	
MODS				pmax		pmax				
	comp=Z,197nm,1.7s									
MODS	**Modra-Piesok**	**90.99**	**41**	*e*P		**P**		**06 48 29.3**	**+0.7**	
MODS	**Modra-Piesok**	**90.99**	**41**	*e*S		**SKKSac**		**06 59 13.6**	**-1.8**	
MODS				*e*L		L		07 20 43.6		
SMOL	**Smolenice**	**91.06**	**41**	*e*P		**P**		**06 48 30.6**	**+1.7**	
SMOL				pmax		pmax				
	comp=Z,75nm,1.8s									
SMOL	**Smolenice**	**91.06**	**41**	*e*P		**P**		**06 48 30.6**	**+1.7**	
JAVC	**Velka Javorina**	**91.15**	**41**	*e*P		**P**		**06 48 30.2**	**+0.8**	
JAVC				*e*SKS		**SKSac**		**06 59 03.2**	**+1.7**	
VNA3	**Neumayer Olymp**	**91.19**	**162**	P		**P**		**06 48 28.4**	**-0.5**	
OKC	**Ostrava-Krasne**	**91.24**	**40**	*e*SKKS		**SKKSac**		**06 59 14.6**	**-2.6**	
OKC				AMS		AMS		07 21 50.0		
	comp=Z,20µm,24.5s									
BILL	**Bilibino**	**91.28**	**340***c*	*i*P		**P**		**06 48 28.6**	**-0.9**	
BILL				*e*				06 52 04.9		
BILL				*e*S		**SKSac**		**06 59 00.2**	**-1.1**	
BILL				*e*SSS		SSS		07 09 09.1		
BILL				pmax		pmax				
	comp=Z,209nm,1.9s									
BILL	**Bilibino**	**91.28**	**340**	P		**P**		**06 48 29.4**	**-0.1**	
BLY	**Banja Luka**	**91.67**	**45**	⇑P		P		06 48 41.0	+9.2	
BLY	**Banja Luka**	**91.67**	**45**	P		**P**		**06 48 31.1**	**-0.7**	
BLY				IAMs_20		IAMs_20		07 34 06.9		
	comp=Z,12µm,19.0s									
SLIT	**Slitere, Latvi**	**91.71**	**31**	*e*P		**P**		**06 48 30.9**	**-0.8**	
PBUR	**Paburge**	**91.96**	**33**	*e*P		**P**		**06 48 33.1**	**+0.3**	
CEL	**Celeste**	**91.97**	**51**	IAMs_20		IAMs_20		07 23 21.8		
	comp=Z,10µm,21.0s									
VYHS	**Vyhne**	**91.98**	**41**	*e*P		**P**		**06 48 34.9**	**+1.7**	
VYHS				pmax		pmax				
	comp=Z,430nm,2.7s									
VYHS	**Vyhne**	**91.98**	**41**	*e*P		**P**		**06 48 34.9**	**+1.7**	
VYHS				*e*L		L		07 21 12.9		
OJC	**Ojcow**	**92.19**	**39**	*e*P		**P**		**06 48 35.1**	**+1.0**	
OJC				*e*PP		**PP**		**06 52 20.6**	**+6.6**	
OJC				*e*SKSac		**SKSac**		**06 59 09.3**	**+2.1**	
OJC				*e*S		**ScS**		**06 59 39.9**	**+0.9**	
OJC				*e*SS		SS		07 06 09.9	+24	
OJC				LMZ		LR		07 22 32.2		
	comp=Z,21nm,24.9s									
LANS	**Liptovska Anna**	**92.24**	**40**	*e*P		**P**		**06 48 37.9**	**+3.5**	
LANS				pmax		pmax				
	comp=Z,26nm,1.3s									
LANS	**Liptovska Anna**	**92.24**	**40**	*e*P		**P**		**06 48 37.9**	**+3.5**	
FINES	**FINESS Array B**	**92.38**	**27**	P		**P**		**06 48 33.3**	**-1.4**	
	comp=Z,16nm,1.2s,baz=5.7,slow=1.9,SNR=14									
FINES				LR		LR		07 23 54.2		
	comp=Z,8µm,22.0s,baz=283,slow=32									
BEL	**Belsk**	**92.40**	**37**	*e*P		**P**		**06 48 36.4**	**+1.4**	
BEL				*e*PP		**PP**		**06 52 22.4**	**+6.8**	
BEL				*e*S		**S**		**06 59 38.8**	**+0.4**	
BEL				LMZ		LR		07 22 37.8		
	comp=Z,15nm,22.8s									
TIP	**Timpagrande**	**92.46**	**50**	⇑P		P		06 48 41.2	+5.6	
TIP	**Timpagrande**	**92.46**	**50**	IAMs_20		IAMs_20		07 22 49.6		
	comp=Z,12µm,22.0s									
NIE	**Niedzica**	**92.70**	**40**	*e*P		**P**		**06 48 38.3**	**+1.8**	
NIE				*e*PP		**PP**		**06 52 21.1**	**+3.0**	
NIE				*e*SKSac		**SKSac**		**06 59 13.0**	**+2.9**	
NIE				*e*S		**ScS**	

MICGM ePP PP 06 52 38.0 -3.0
MICGM ePPP PPP 06 54 40.0
MICGM eSKS SKSac 06 59 24.0 -1.9
MICGM eS S 07 00 04.0 -2.9
MICGM ePS PS 07 01 22.0 -4.4
MICGM eSS SS 07 06 35.0 -0.2
MICGM eSSS SSS 07 10 18.0
MICGM eLQ LQ 07 20 36.0
MICGM LQM 07 22 30.0
comp=N,7.9nm,24.0s
MICGM LQM 07 23 04.0
comp=E,9.3nm,24.0s
MICGM eLR LR 07 25 18.0
MICGM LRM MLR 07 31 32.0
comp=Z,9.7nm,20.0s
MICGM LRM MLR 07 31 34.0
comp=E,6.4nm,20.0s
MICGM LRM MLR 07 31 40.0
comp=Z,11nm,20.0s
MICGM LRM MLR 07 31 52.0
comp=N,3.8nm,20.0s
MNK Minsk 95.67 33 eP P **06 48 50.0 +0.1**
MNK e 06 52 38.0
MNK e 06 59 24.0
MNK eS S **07 00 04.0 -2.9**
MNK ePS PS 07 01 22.0 -4.4
MNK eSS SS **07 06 35.0 -0.2**
MNK eSSS SSS 07 10 18.0
MNK MLR MLR
comp=N,4μm,20.0s
MNK MLR MLR
comp=E,6μm,20.0s
MNK MLR MLR
comp=Z,10μm,20.0s
TMCR Tamitsa 96.21 22 eP P **06 48 51.2 -1.0**
TMCR pmax pmax
comp=Z,29nm,0.6s
BURAR Bucovina Array 96.34 40 ⇓P P **06 48 57.2 +3.9**
BURAR Bucovina Array 96.34 40 ⇓P P **06 48 57.2 +3.9**
VTS Vitosha 96.44 46 ⇑P P 06 49 04.5 +11
VTS Vitosha 96.44 46 P P **06 48 55.0 +1.1**
VTS Vitosha 96.44 46 ⇑P P 06 49 04.5 +11
KKB Krupnik 96.53 46 P P 06 48 59.2 +5.0
ARR Arges 96.63 43 ⇑P P 06 49 04.9 +10
ITM Ithomi 96.87 51 IAmb IAmb 06 49 08.6
comp=Z,142nm,1.8s
VOIR 96.89 43 ⇑P P **06 48 59.4 +3.6**
VOIR 96.89 43 ⇑P P **06 48 59.4 +3.6**
MMB Musomiste 97.07 47 P P **06 48 54.4 -2.3**
BIZ Bicaz 97.12 41 ⇑P Pdif 06 49 07.3 +10
QSPA South Pole Qui 97.15 180 P P **06 48 55.9 -0.6**
comp=Z,4.1nm,0.7s,baz=126,slow=2.4,SNR=13
QSPA South Pole Qui 97.15 180 P Pdif 06 48 56.7 +0.1
MLR Muntele Rosu 97.47 42 P Pdif 06 48 59.2 +0.6
comp=Z,7.9nm,1.0s,baz=302,slow=6.8,SNR=8.6
MLR Muntele Rosu 97.47 42 ⇑P Pdif 06 49 00.4 +1.8
MLR Muntele Rosu 97.47 42 ⇑P Pdif 06 49 00.4 +1.8
MLR Muntele Rosu 97.47 42 IAmb IAmb 06 49 10.7
comp=Z,49nm,1.1s
MLR IAMs_20 IAMs_20 07 36 47.2
comp=Z,7μm,20.0s
AKASG Malin Array Be 97.79 37 PP PP **06 53 01.2 +3.7**
comp=Z,9.5nm,1.1s,baz=291,slow=7.1,SNR=13
AKASG LR LR 07 28 54.1
comp=Z,7μm,21.7s,baz=300,slow=33
AKBB Malin Array Si 97.79 37 *i* P P **06 48 59.1 -0.5**
AKBB Malin Array Si 97.79 37 IAMs_20 IAMs_20 07 39 16.8
comp=Z,9μm,18.0s
VRI Vrincioaia 97.87 42 ⇑P Pdif 06 49 09.3 +9.1
VRI Vrincioaia 97.87 42 ⇑P Pdif 06 49 09.3 +9.1
NVL N'lazarevskaya 98.04 160 eP Pdif 06 49 13.8 +13
NVL e 06 53 00.8
NVL pmax pmax
comp=Z,38nm,1.4s
ELND Elena 98.21 45 ⇓P Pdif 06 49 11.1 +9.3
RAO Raoul Island 98.39 242 LR LR 07 23 29.9
comp=Z,2μm,20.2s,baz=86,slow=29
KLMR Klimovskoe 98.51 25 eP P **06 49 00.5 -2.1**
KLMR e 06 53 00.4
KLMR eS SKSac **06 59 38.4 -1.9**
KLMR pmax pmax
comp=Z,42nm,1.2s
KLMR MLR MLR
comp=Z,8μm,19.0s
KLMR Klimovskoe 98.51 25 eP P **06 49 00.5 -2.1**
KLMR AMP 06 49 15.5
comp=Z,42nm,1.2s
KLMR ePP PP **06 53 00.5 -2.1**
KLMR eS SKSac **06 59 38.4 -1.9**
KLMR eS SKSac **06 59 38.4 -1.9**
KLMR LQ LQ 07 19 02.3
KLMR LQ LQ 07 19 02.3
KLMR LR LR 07 24 55.5
KLMR AMP 07 33 30.7
comp=Z,8μm,19.1s
TIXI Tiksi 98.74 350*c* *i*P P **06 49 02.9 -0.5**
TIXI pmax pmax
comp=Z,29nm,1.1s
TIXI Tiksi 98.74 350 P Pdif 06 49 03.4 -0.1
SEY Seymchan 98.80 338 eP P **06 49 03.1 -0.8**
KIS Kishinev 98.86 40 eP Pdif 06 49 14.0 +9.5
comp=Z,170nm,2.0s
KIS Kishinev 98.86 40 ePP PP **06 53 00.0 -5.8**
KIS Kishinev 98.86 40 ePKP PKiKP 06 53 22.0 -14
KIS eSKS **SKSac 06 59 40.0 -2.7**
KIS eSKKS **SKKSac 07 00 07.0 -6.2**
KIS eS S **07 00 34.0 -0.6**
KIS Kishinev 98.86 40 eP Pdif 06 49 14.0 +9.5
KIS e 06 59 40.0
KIS eS S **07 00 34.0 -0.6**
KIS pmax pmax
comp=Z,400nm,4.0s
CFR Carcaliu 99.03 42 ⇑P **Pdif 06 49 05.8 +0.5**
CFR Carcaliu 99.03 42 ⇑P **Pdif 06 49 05.8 +0.5**
PRD Provadia 99.19 44 P **Pdif 06 49 15.6 +10**
IDI Anoyia 99.67 52 ⇑P **Pdif 06 49 15.1 +6.6**
APE Apeiranthos 99.68 51 eP **Pdif 06 49 07.6 -0.9**
APE pmax pmax
comp=Z,29nm,1.2s
OBN Obninsk 100.00 31 PP PP **06 53 14.3 +0.2**
comp=Z,6.3nm,0.3s,baz=224,slow=4.6,SNR=4.6
OBN Obninsk 100.00 31 eP **Pdif 06 49 08.8 -0.6**
OBN e 06 53 13.8
OBN ePPP PPP 06 55 20.7
OBN eS **SKSac 06 59 49.8 +1.9**
OBN eSS **SS 07 07 43.9 +8.0**
OBN eSSS SSS 07 11 27.3
OBN pmax pmax
comp=Z,53nm,1.7s
OBN MLR MLR
comp=Z,7μm,19.0s
OBN Obninsk 100.00 31 IAMs_20 IAMs_20 07 35 58.3
comp=Z,7μm,19.0s
PRGR Permogore 100.50 23 eP **Pdif 06 49 15.8 +4.3**
PRGR pmax pmax
comp=Z,19nm,0.8s
PET Petropavlovsk 101.14 327 eP **Pdif 06 49 15.1 +0.6**
PET e 06 53 25.3
PET e 06 59 54.3
PET eS **Sdif 07 00 45.1 -8.3**
PET ePS **PS 07 02 25.6 +0.1**
PET ePPS PPS 07 03 08.0
PET eSS **SS 07 07 47.1 -4.8**
MA2 Magadan 101.39 336 *i* P **Pdif 06 49 14.2 -1.3**
MA2 pmax pmax
comp=Z,17nm,1.1s
MA2 MLR MLR
comp=Z,7μm,21.0s
MA2 Magadan 101.39 336 IAMs_20 IAMs_20 07 41 51.2
comp=Z,11μm,20.0s
TSUM Tsumeb 101.56 108 **Pdif 06 49 19.3 +2.0**
PEA0B Petropavlovsk- 101.60 328 IAMs_20 IAMs_20 07 39 16.2
comp=Z,10μm,22.0s
PETK Petropavlovsk- 101.60 328 PP **PP 06 53 27.3 +1.0**
comp=Z,7.7nm,1.0s,baz=87,slow=12,SNR=3.6
ORH Orhaniye 101.84 46 P **Pdif 06 49 04.4 -14**
LPSR Galich'ya Gora 102.44 32 eP **Pdif 06 49 20.5 +0.2**
LPSR pmax pmax
comp=Z,10.0nm,1.2s
LPSR MLR MLR
comp=Z,9μm,19.0s
URZ Urewera 102.74 232 IAMs_20 IAMs_20 07 27 32.7
comp=Z,6μm,20.0s
SIM Simferopol' 103.05 41 eP **Pdif 06 49 25.4 +2.1**
SIM e 06 53 41.0
SIM e 07 00 09.0
SIM eS **Sdif 07 01 06.0 -3.8**
SIM ePS PS 07 02 50.0 +3.7
SIM pmax pmax
comp=Z,600nm,9.0s
BKZ Black Stump Fm 103.21 232 IAMs_20 IAMs_20 07 27 46.9
comp=Z,8μm,20.0s
VSR Storozhevoye 103.25 33 eP **Pdif 06 49 23.8 -0.2**
VSR pmax pmax
comp=Z,5.0nm,0.4s
VSR MLR MLR
comp=Z,9μm,20.0s
BFZ Birch Farm 103.35 230 IAMs_20 IAMs_20 07 31 56.7
comp=Z,8μm,18.0s
NRIK Noril'sk 103.36 4 Pdiff **Pdif 06 49 24.0 -0.1**
comp=Z,2.1nm,0.6s,baz=17,slow=5.0,SNR=5.3
NRIK PP **PP 06 53 36.3 -2.6**
comp=Z,3.9nm,1.0s,baz=47,slow=5.0,SNR=6.1
VORD Divnogorie 103.44 34 eP **Pdif 06 49 22.9 -1.9**
VORD pmax pmax
comp=Z,30nm,0.4s
SNZO South Karori 104.48 229 IAMs_20 IAMs_20 07 28 34.8
comp=Z,8μm,20.0s
HIZ Hauiti 104.51 232 IAMs_20 IAMs_20 07 31 57.4
comp=Z,5μm,19.0s
TARA Tarawa 104.55 273 IAMs_20 IAMs_20 07 31 01.8
comp=Z,7μm,20.0s
VRH Novokhopyorsk 104.64 33 eP **Pdif 06 49 30.2 +0.1**
VRH pmax pmax
comp=Z,10.0nm,1.5s
VRH MLR MLR
comp=Z,15μm,22.0s
BRTR Keskin Array B 104.80 46 Pdiff **Pdif 06 49 31.0 -0.3**
comp=Z,0.3nm,0.5s,baz=64,slow=3.4,SNR=1.6
BRTR PP **PP 06 53 51.6 +0.7**
comp=Z,1.7nm,0.9s,baz=316,slow=8.0,SNR=2.1
BRTR PKKPbc **PKKPbc 07 05 14.5 -1.4**
comp=Z,0.7nm,0.8s,baz=144,slow=2.3,SNR=3.6
KHZ Kahutara 105.28 228 IAMs_20 IAMs_20 07 31 48.8
comp=Z,7μm,19.0s
OUZ Omahuta 105.65 236 IAMs_20 IAMs_20 07 27 57.7
comp=Z,7μm,22.0s
THZ Tophouse 105.80 229 IAMs_20 IAMs_20 07 29 48.6
comp=Z,8μm,19.0s
MQZ McQueen's Vall 105.82 227 IAMs_20 IAMs_20 07 32 21.0
comp=Z,7μm,18.0s
QRZ Quartz Range 106.16 230 IAMs_20 IAMs_20 07 33 47.1
comp=Z,5μm,18.0s
LTZ Lake Taylor 106.18 228 IAMs_20 IAMs_20 07 26 57.7
comp=Z,10μm,22.0s
YAK Yakutsk 106.75 345 IAMs_20 IAMs_20 07 43 20.5
comp=Z,9μm,20.0s
RPZ Rata Peaks 106.97 227 IAMs_20 IAMs_20 07 33 38.5
comp=Z,7μm,18.0s
ODZ Otahua Downs 107.11 225 IAMs_20 IAMs_20 07 29 33.1
comp=Z,8μm,20.0s
SOC Sochi 107.27 40 eP **Pdif 06 49 40.3 -1.7**
SOC e 06 54 08.5
SOC e 07 00 18.9
SOC ePS **PS 07 03 27.0 -3.2**
SOC pmax pmax
comp=Z,7.0nm,0.6s
WAKE Wake Island 107.28 293 IAMs_20 IAMs_20 07 34 59.7
comp=Z,7μm,18.0s
H11S2 WAKE ISLAND Hyl 107.42 292 T T 08 49 43.0
baz=77,slow=75,SNR=9.2
H11S1 WAKE ISLAND Hyl 107.42 292 T T 08 49 42.2
baz=77,slow=75,SNR=8.2
H11S3 WAKE ISLAND Hyl 107.44 292 T T 08 49 43.4
baz=77,slow=75,SNR=9.8
LBZ Lake Benmore 107.52 226 IAMs_20 IAMs_20 07 34 13.9
comp=Z,7μm,18.0s
SYO Syowa Base 107.69 161⇑ *e*Pdiff **Pdif 06 49 42.6 -0.6**
SYO Syowa Base 107.69 161⇑ *e*pPdiff pPdif 06 49 46.4 -0.4
SYO Syowa Base 107.69 161⇑ *e*PKiKP **PKiKP 06 53 52.3 +1.4**
FOZ Fox Glacier 107.89 227 IAMs_20 IAMs_20 07 28 44.8
comp=Z,7μm,21.0s
WKZ Wanaka 108.28 225 IAMs_20 IAMs_20 07 29 09.2
comp=Z,6μm,21.0s
MLZ Mavora Lakes 108.83 225 IAMs_20 IAMs_20 07 33 31.6
comp=Z,6μm,18.0s
WHZ Wether Hill Ro 108.86 224 IAMs_20 IAMs_20 07 29 40.2
comp=Z,6μm,20.0s
KIV Kislovodsk 108.96 39 eP **Pdif 06 49 47.4 -2.3**
KIV e 06 54 18.7
KIV e 07 00 26.4
KIV ePS PS 07 03 45.0 -2.6
KIV eSS SS 07 09 38.5 -1.0
KIV eSSS SSS 07 13 42.9
KIV pmax pmax
comp=Z,14nm,1.0s
KIV Kislovodsk 108.96 39 IAMs_20 IAMs_20 07 34 59.5
comp=Z,7μm,22.0s
KBZ Khabaz 109.20 39 PP **PP 06 54 25.2 +2.4**
comp=Z,1.8nm,0.8s,baz=310,slow=11,SNR=6.4
KBZ PKKPbc **PKKPbc 07 05 03.6 +1.5**
comp=Z,1.9nm,0.7s,baz=142,slow=7.6,SNR=3.8
PYZ Puysegur Point 109.69 224 IAMs_20 IAMs_20 07 29 34.3
comp=Z,6μm,22.0s
NKL Nikolayevsk 109.82 334 eP **Pdif 06 49 56.4 +3.3**
NKL e 06 54 24.6
NKL ePS PS 07 03 55.9 +0.3
NKL MLR MLR
comp=E,124nm,19.0s
NKL MLR MLR
comp=Z,11μm,19.0s
NKL MLR MLR
comp=N,98nm,13.0s
ASF Jabal al Asfar 110.14 52 PP **PP 06 54 32.9 +2.7**
comp=N,1.3nm,0.7s,baz=250,slow=5.2,SNR=3.8
KUR Kuril'sk 111.24 324 eP **Pdif 06 49 58.5 -1.1**
KUR *i* 06 53 57.7
KUR e 06 54 38.2
KUR *i* PPP PPP 06 56 56.1
KUR e 07 01 06.4
KUR e 07 05 11.9
KUR eSS SS 07 10 10.9 +1.2
KUR *i* SSS SSS 07 14 18.3
DZM Mont Dzumac 112.38 249 ePP **PP 06 54 42.5 -4.5**
comp=N,357nm,23.1s
DZM eSKSac **SKSac 07 00 45.4 +0.9**
comp=N,910nm,24.4s
DZM Mont Dzumac 112.38 249 ePS PS 07 04 21.6 +0.1
comp=N,2μm,23.8s
DZM eSS SS 07 10 22.9 -4.6
comp=N,3μm,29.3s
DZM Mont Dzumac 112.38 249 eLQ LQ 07 22 42.9
comp=N,4μm,38.0s
DZM eLR LR 07 27 23.4
comp=N,3μm,23.4s
MAK Makhachkala 112.45 38 eP **Pdif 06 49 57.5 -7.6**
MAK ePPP PPP 06 57 05.6
MAK ePS **SP 07 04 17.6 -0.8**
MAK eSSS SSS 07 14 33.2
MAK pmax pmax
comp=Z,38nm,0.4s
MBAR Mbarara 112.87 88 IAMs_20 IAMs_20 07 49 10.7
comp=Z,7μm,18.0s
YSS Yuzh-Sakhalins 113.00 328 *i* PKIKP **PKiKP 06 53 59.0 -2.7**
YUK Yuzh-Kuril'sk 113.10 324 *i* PKIKP **PKiKP 06 54 01.0 -0.9**
YUK e 06 54 49.6
YUK ePPP PPP 06 57 12.3
YUK e 07 01 13.0
YUK ePS **SP 07 04 24.6 +0.3**
YUK eSS **SS 07 10 34.9 +0.4**
YUK eSSS SSS 07 14 46.9
YUK pmax pmax
comp=Z,86nm,1.5s
YUK MLR MLR
comp=Z,3μm,19.0s
YUK MLR MLR
comp=N,4μm,18.0s
YUK MLR MLR
comp=E,2μm,16.0s
ZEA Zeya 114.44 341 ePKIKP PKPdf 06 54 16.8 +13
ZEA e 07 04 43.0
ZEA eSS SS 07 10 46.0 -5.2
ZEA pmax pmax
comp=Z,48nm,1.8s
ZEA pmax pmax
comp=Z,1μm,9.0s
ZEA MLR MLR
comp=Z,18μm,22.0s
ZEA MLR MLR
comp=E,5μm,19.0s
ZEA MLR MLR
comp=N,14μm,22.0s
ASAJ Asahikawa 114.91 326 PP **PP 06 55 04.9 +1.5**
comp=N,12nm,0.9s,baz=37,slow=10,SNR=3.7
MAW Mawson 115.22 166 PKKPbc PKKPbc 07 04 41.2 -1.6
comp=N,3.3nm,0.9s,baz=135,slow=2.9,SNR=2.7
BRVK Borovoye 115.65 18 *i* PKIKP **PKiKP 06 54 04.8 -1.8**
ERM Erimo 115.90 324 IAMs_20 IAMs_20 07 49 45.9
comp=Z,6μm,20.0s
KLR Kul'dur 116.49 336 *i* PKIKP **PKiKP 06 54 08.6 +0.3**
KLR pmax pmax
comp=Z,3.0nm,1.1s
KLR MLR MLR
comp=Z,14μm,25.0s
PATS Pohnpei 118.02 282 IAMs_20 IAMs_20 07 34 49.4
comp=Z,9μm,21.0s
ZALV Zalesovo Beam 118.17 9 PKP **PKPdf 06 54 10.7 -0.7**
comp=Z,1.8nm,0.5s,baz=3.8,slow=4.5,SNR=7.5
ZALV PP **PP 06 55 20.8 -4.7**
comp=Z,12nm,1.0s,baz=347,slow=5.0,SNR=4.3
ZALV PKKPbc **PKKPbc 07 04 32.0 -0.2**
comp=Z,0.8nm,0.6s,baz=186,slow=1.5,SNR=3.7
HNR Honiara 118.49 263 IAMs_20 IAMs_20 07 44 15.8
comp=Z,6μm,20.0s
BRZS Berezniki 119.07 18 ePP PP 06 55 30.1 -1.9
BRZS eLR LR 07 47 58.5
comp=Z,3μm,20.0s
KMBO Kilima Mbogo 119.40 87 *i* PKIKP **PKPdf 06 54 13.8 -1.4**
KMBO pmax pmax
comp=Z,1.0nm,0.4s
KMBO Kilima Mbogo 119.40 87 IAMs_20 IAMs_20 07 48 20.7
comp=Z,7μm,18.0s
KURK Kurchatov 120.04 14 PKIKP **PKiKP 06 54 17.4 +2.2**
KURK Kurchatov 120.04 14 **PKiKP 06 54 17.4 +2.2**
KURBB Kurchatov Arra 120.10 14 PKKPbc PKKPbc 07 04 21.6 -3.4
comp=Z,2.0nm,0.9s,baz=163,slow=3.0,SNR=7.4
USRK Usurisk Ar. 120.28 332 PKP **PKiKP 06 54 15.7 -0.1**
comp=Z,1.4nm,0.7s,baz=344,slow=1.3,SNR=4.0
USRK PP **PP 06 55 42.1 +1.5**
comp=Z,6.8nm,1.0s,baz=36,slow=3.5,SNR=7.8
CASY Casey 120.30 186 IAMs_20 IAMs_20 07 46 44.4
comp=Z,5μm,20.0s
TLY Talaya 121.19 356 PP PP 06 55 43.2 -3.2
comp=Z,11nm,0.9s,baz=345,slow=7.3,SNR=7.0
TLY Talaya 121.19 356 *i* PKIKP **PKiKP 06 54 24.2 +6.7**
TLY ePS **PS 07 05 38.2 -1.1**
TLY eSS SS 07 12 15.8 -2.7
TLY pmax pmax
comp=Z,21nm,1.4s
MOY Mondy 121.36 358 ePKIKP **PKiKP 06 54 18.4 +0.5**
MOY e 06 55 44.9
MOY pmax pmax
comp=Z,29nm,2.3s
GEYT Alibeck 121.91 36 PKP **PKiKP 06 54 20.2 +0.9**
comp=Z,3.0nm,0.7s,baz=318,slow=6.2,SNR=4.5
GYA0B ALIBECK ARRAY 121.91 36 IAMs_20 IAMs_20 07 52 47.0
comp=Z,8μm,20.0s
ASHT Ashkhabad 122.06 36 IAMs_20 IAMs_20 07 49 51.9
comp=Z,6μm,21.0s
ATD Arta Tunnel 122.31 72 IAMs_20 IAMs_20 07 45 44.4
comp=Z,8μm,22.0s
MAJO Matsushiro 122.34 322 IAMs_20 IAMs_20 07 55 37.4
comp=Z,5μm,20.0s
MJAR Matsushiro Arr 122.34 322 PKP **PKiKP 06 54 20.1 -0.1**
comp=Z,1.2nm,0.3s,baz=307,slow=48,SNR=1.7
MJAR PP **PP 06 55 57.5 +2.5**
comp=Z,1.4nm,0.3s,baz=47,slow=7.7,SNR=4.6
MAT Matsushiro 122.34 322 ePKP **PKPdf 06 54 19.0 -1.0**
ZAK Zakamensk 122.51 356 ePKIKP **PKiKP 06 54 21.4 +1.2**
ZAK pmax pmax
comp=Z,7.0nm,1.3s
DAMY Dhamar 122.85 68 IAMs_20 IAMs_20 07 47 46.3
comp=Z,7μm,20.0s
BTLS Baital 123.85 20 ePP PP 06 56 03.2 -1.4
BTLS eLR LR 07 50 02.7
ZSN Zaisan 124.45 11 eLR LR 07 53 43.2
comp=Z,3μm,18.2s
MAKZ Makanchi 124.48 13 PKIKP **PKPdf 06 54 23.5 -0.3**
MAKZ Makanchi 124.48 13 **PKPdf 06 54 23.4 -0.3**
MKAR Makanchi Array 124.56 13 PKP **PKPdf 06 54 23.3 -0.7**
comp=Z,3.3nm,0.8s,baz=354,slow=3.1,SNR=17
ARMA Armidale 124.59 238 IAMs_20 IAMs_20 07 36 39.3
comp=Z,8μm,21.0s
ULN Ulaanbaatar 124.62 352 PKIKP **PKiKP 06 54 25.2 +0.7**
ULN Ulaanbaatar 124.62 352 **PKiKP 06 54 25.2 +0.7**
SONM Songino Array 124.73 353 PKP **PKPdf 06 54 24.2 -0.2**
comp=Z,4.9nm,0.7s,baz=335,slow=0.3,SNR=11
SONM PP **PP 06 56 09.0 -1.4**
comp=Z,6.6nm,1.0s,baz=341,slow=2.9,SNR=3.5
IUG Iuzhnay 124.79 25 ePP PP 06 56 11.9 +0.7
TAS Tashkent 125.15 26 IAMs_20 IAMs_20 07 56 32.0
comp=Z,7μm,20.0s
TDK Taldyqorghan 125.25 17 ePP PP 06 56 12.5 -1.5
TDK eLR LR 07 51 59.0
comp=Z,12μm,20.7s
CAN Canberra 125.39 231 IAMs_20 IAMs_20 07 43 36.2
comp=Z,4μm,19.0s
SGDS Sogindy 125.44 21 ePP PP 06 56 12.1 -3.4
SGDS eLR LR 07 53 32.2
comp=Z,5μm,17.6s
KUU Kurty 125.63 19 ePKP **PKPdf 06 54 24.7 -1.4**
KUU ePP **PP 06 56 14.0 -2.5**
KUU eLR LR 07 51 54.9
comp=Z,7μm,17.6s
KUU Kurty 125.63 19 ePKIKP **PKPdf 06 54 24.7 -1.4**
KUU e 06 56 14.0
RABL Rabaul 125.81 270 IAMs_20 IAMs_20 07 48 22.6
comp=Z,7μm,20.0s
AAK Ala-Archa 126.11 21 PKIKP **PKiKP 06 54 28.6 +0.9**
AAK MLR MLR
comp=Z,16μm,22.0s
AAK Ala-Archa 126.11 21 **PKiKP 06 54 28.6 +0.9**
AAA Alma-Ata 126.42 19 ePKP **PKPdf 06 54 26.5 -1.2**
AAA ePP **PP 06 56 18.0 -3.8**
AAA eLR LR 07 52 09.2
comp=Z,4μm,18.3s
AAA Alma-Ata 126.42 19 ePKIKP **PKPdf 06 54 26.5 -1.2**
AAA e 06 56 18.0
MDOK Medeo 126.51 19 ePKP **PKiKP 06 54 29.1 +0.6**
MDOK ePP **PP 06 56 21.9 -0.6**
MDOK eLR LR 07 51 57.1
comp=Z,4μm,20.4s
MDOK Medeo 126.51 19 ePKIKP **PKiKP 06 54 29.1 +0.6**
MDOK e 06 56 21.9
UZB Uzynbulak 127.13 17 ePKP **PKPdf 06 54 28.5 -0.7**
UZB ePP **PP 06 56 26.7 +0.1**
UZB eLR LR 07 53 10.1
comp=Z,3μm,20.4s
UZB Uzynbulak 127.13 17 ePKIKP **PKPdf 06 54 28.4 -0.7**
UZB e 06 56 26.6
SHLS Shalkode 127.25 17 ePP PP 06 56 26.8 -0.5
SHLS eLR LR 07 51 32.9
comp=Z,3μm,19.7s
TOO Toolangi 127.25 228 IAMs_20 IAMs_20 07 40 58.4
comp=Z,4μm,20.0s
KSRS Korea Array 127.44 330 PKP **PKPdf 06 54 29.2 -0.5**
comp=Z,7.5nm,0.7s,baz=15,slow=1.5,SNR=21
PRZ Przheval'sk 127.55 18 PKIKP **PKiKP 06 54 31.3 +0.7**
PRZ Przheval'sk 127.55 18 **PKiKP 06 54 31.3 +0.7**
WMQ Urumqi 128.46 9 PKP **PKiKP 06 54 31.9 -0.3**
WMQ PKS **PKSdf 06 58 10.0 +1.8**
WMQ SKKS 07 03 33.8
WMQ SS **SS 07 13 54.5 +4.3**
WMQ AMB AMB
comp=Z,200nm,4.3s
WMQ LR LR
comp=Z,7μm,21.5s
WMQ LR LR
comp=Z,11μm,23.5s
WMQ LR LR
comp=Z,18μm,29.9s
GUMO Guam 128.89 294 IAMs_20 IAMs_20 07 47 56.4
comp=Z,5μm,22.0s
JNU Nakatsue 129.07 324 PP PP 06 56 40.6 +0.7
comp=Z,5.3nm,1.0s,baz=97,slow=9.2,SNR=1.6
DL2 Dalian 129.11 336 ePKP PKPdf 06 54 24.6 -8.2
DL2 PP **PP 06 56 39.8 +0.2**
DL2 Dalian 129.11 336 SS SS 07 14 02.8 +4.2
DL2 AMB AMB
comp=Z,800nm,8.0s
DL2 LR LR
comp=N,8μm,22.9s
DL2 LR LR
comp=E,7μm,20.8s

DL2 LR LR
comp=Z,12μm,28.4s
KSH Kashi 129.38 22 PKP **PKiKP** **06 54 35.6 +1.3**
KSH SKS **SKSdf** **07 01 43.9 -1.4**
KSH SKKS **SKKSac** **07 03 41.1 +1.3**
KSH AMB AMB
comp=Z,820nm,6.5s
KSH LR LR
comp=Z,5μm,15.6s
KSH LR LR
comp=Z,1μm,11.6s
KSH LR LR
comp=Z,4μm,14.8s
BJI Beijing 130.06 342 PKP **PKiKP** **06 54 35.4 0.0**
BJI AMB AMB
comp=Z,430nm,8.2s
BJI LR LR
comp=Z,6μm,23.3s
BJI LR LR
comp=Z,10μm,19.6s
KBL Kabul 130.44 31 IAMs_20 IAMs_20 08 00 35.9
comp=Z,7μm,20.0s
HHC Hu-ho-hao-te 130.58 346 *e*PKP **PKPdf** **06 54 35.3 -0.5**
HHC PKS 06 58 04.1
HHC SKS **SKSdf** **07 01 48.1 +0.7**
HHC SKKS **SKKSac** **07 03 44.3 -2.8**
HHC SS **SS** **07 14 18.4 +1.8**
HHC AMB AMB
comp=Z,400nm,7.8s
HHC LR LR
comp=Z,5μm,18.5s
HHC LR LR
comp=Z,6μm,19.4s
HHC LR LR
comp=Z,5μm,20.0s
PMG Port Moresby 131.09 264 IAMs_20 IAMs_20 08 03 45.9
comp=Z,5μm,18.0s
BTO Baotou 131.16 348 *e*PKP **PKiKP** **06 54 40.0 +2.2**
CTAO Charters Tower 131.32 250 PKIKP **PKPdf** **06 54 35.7 -1.8**
CTAO Charters Tower 131.32 250 **PKPdf** **06 54 35.7 -1.8**
STKA Stephens Creek 132.37 233 PKP **PKPdf** **06 54 38.6 -0.7**
comp=Z,3.8nm,0.7s,baz=45,slow=2.4,SNR=7.0
STKA Stephens Creek 132.37 233 PKIKP **PKPdf** **06 54 38.8 -0.4**
STKA Stephens Creek 132.37 233 **PKPdf** **06 54 38.8 -0.4**
SOCY Socotra 132.43 66 IAMs_20 IAMs_20 07 59 38.5
comp=Z,4μm,21.0s
TIA Tai'an 133.19 338 PKP **PKPdf** **06 54 38.1 -2.6**
TIA AMB AMB
comp=Z,760nm,13.2s
TIA LR LR
comp=Z,6μm,23.0s
TIA LR LR
comp=Z,7μm,23.5s
TIA LR LR
comp=Z,11μm,19.0s
NIL Nilore 133.24 28 PKIKP **PKPdf** **06 54 38.4 -2.5**
NIL Nilore 133.24 28 **PKPdf** **06 54 38.4 -2.5**
TIY Taiyuan 133.32 344 *e*PKP **PKPdf** **06 54 40.3 -0.7**
TIY PP **PP** **06 57 06.0 -0.7**
TIY AMB AMB
comp=Z,610nm,8.7s
TIY LR LR
comp=Z,11μm,18.9s
TIY LR LR
comp=Z,2μm,21.0s
TIY LR LR
comp=Z,14μm,21.0s
GTA Gaotai 133.64 358 ⇓PKP **PKiKP** **06 54 42.4 -0.5**
GTA PP **PP** **06 57 08.3 -0.4**
GTA PKS **PKSdf** **06 58 19.8 +1.7**
GTA AMB AMB
comp=Z,660nm,6.5s
GTA LR LR
comp=Z,10μm,23.2s
GTA LR LR
comp=Z,9μm,23.5s
GTA LR LR
comp=Z,13μm,24.1s
JOW Kunigami 135.11 320 IAMs_20 IAMs_20 07 58 55.7
comp=Z,5μm,20.0s
SSE Sheshan 135.86 331 PKP **PKPdf** **06 54 41.4 -4.4**
SSE PP **PP** **06 57 22.5 -0.6**
SSE SS SS 07 15 18.4 -2.6
SSE AMB AMB
comp=Z,430nm,11.2s
SSE LR LR
comp=Z,950nm,23.4s
SSE LR LR
comp=Z,6μm,22.3s
NJ2 Nanjing 136.13 334 *e*PKP PKiKP 06 54 50.7 +8.0
NJ2 PP **PP** **06 57 26.8 +2.1**
NJ2 PKS **PKSdf** **06 58 20.3 -2.3**
NJ2 SS SS 07 15 28.1 +4.0
NJ2 AMB AMB
comp=Z,1μm,4.7s
NJ2 LR LR
comp=Z,6μm,21.3s
NJ2 LR LR
comp=Z,12μm,18.9s
NJ2 LR LR
comp=Z,7μm,23.7s
LZH Lanzhou 136.62 353 *e*PKP PKiKP 06 54 57.1 +8.0
LZH pPKP sPKPdf 06 55 09.1 +17
LZH PP PKSdf 06 58 45.8 +22
SMLA Simla 137.14 26 *e*P **PKPdf** **06 54 46.6 -1.5**
SMLA IAmb IAmb 06 55 00.6
comp=Z,36nm,0.9s
WHN Wuhan 139.29 338 PKPbc **PKiKP** **06 54 58.8 +4.4**
WHN PP **PP** **06 57 44.3 +0.1**
WHN PKS 06 58 31.3
WHN SKKS 07 04 55.3
TATO Taipei 140.59 325 IAMs_20 IAMs_20 08 01 43.3
comp=Z,6μm,20.0s
AS31 Alice Springs 141.63 241 PKPpre 06 54 49.3
ASAR Alice Springs 141.63 241 PKhKP PKPpre 06 54 49.8
comp=Z,4.5nm,0.6s,baz=117,slow=3.5,SNR=31
CD2 Chengdu 141.73 352 PKP **PKPdf** **06 54 54.9 -1.7**
CD2 sPKP 06 54 59.3
CD2 PP **PP** **06 57 58.4 -0.6**
CD2 SKS **SKSdf** **07 02 04.1 -2.7**
CD2 AMB AMB
comp=Z,2μm,14.7s
CD2 LR LR
comp=Z,19μm,24.0s
SSLB Suanglung 141.81 324 **PKPdf** **06 54 53.6 -3.3**
YULB Yu-li 141.91 323 IAMs_20 IAMs_20 08 04 17.1
comp=Z,5μm,22.0s
WR0 Warramunga Arr 142.15 247 IAMs_20 IAMs_20 07 55 23.7
comp=Z,4μm,20.0s
WR9 Warramunga Arr 142.17 247 IAMs_20 IAMs_20 07 55 34.3
comp=Z,4μm,18.0s
WR8 Warramunga Arr 142.18 247 IAMs_20 IAMs_20 07 55 35.7
comp=Z,5μm,18.0s
QZH Quanzhou 142.20 328 PKP **PKPdf** **06 54 50.4 -7.1**
QZH SS SS 07 16 38.8 +2.8
QZH AMB AMB
comp=Z,710nm,10.9s
QZH LR LR
comp=Z,11μm,21.8s
QZH LR LR
comp=Z,8μm,19.3s
WR7 Warramunga Arr 142.21 247 IAMs_20 IAMs_20 07 55 44.3
comp=Z,5μm,19.0s
DANN Dangsing 142.21 20 *e*P **PKPdf** **06 54 54.9 -3.0**
comp=Z,94nm,0.7s
WR6 Warramunga Arr 142.22 247 IAMs_20 IAMs_20 07 55 45.7
comp=Z,4μm,18.0s
WR4 Warramunga Arr 142.27 247 IAMs_20 IAMs_20 07 55 46.0
comp=Z,4μm,20.0s
WC3 Warramunga Arr 142.30 247 IAMs_20 IAMs_20 07 55 47.8
comp=Z,5μm,20.0s
WR2 Warramunga Arr 142.31 247 IAMs_20 IAMs_20 07 55 48.1
comp=Z,4μm,20.5s
WC2 Warramunga Arr 142.31 247 IAMs_20 IAMs_20 07 55 49.1
comp=Z,4μm,19.0s
WB7 Warramunga Arr 142.32 247 IAMs_20 IAMs_20 07 51 06.3
comp=Z,3μm,19.0s
WB1 Warramunga Ar. 142.32 247 IAMs_20 IAMs_20 07 55 47.4
comp=Z,5μm,20.0s
WB2 Warramunga Arr 142.32 247 IAMs_20 IAMs_20 07 55 47.4
comp=Z,5μm,20.0s
WB4 Warramunga Arr 142.32 247 IAMs_20 IAMs_20 07 55 38.4
comp=Z,4μm,19.0s
WRAB Tennant Creek 142.32 247 PKHKP PKPpre 06 54 52.5
WRAB MLR MLR
comp=Z,4μm,20.0s
WRAB Tennant Creek 142.32 247 **PKPdf** **06 54 52.5 -5.4**
WRAB Tennant Creek 142.32 247 IAMs_20 IAMs_20 07 55 48.2
comp=Z,4μm,20.0s
WB0 Warramunga Arr 142.33 247 IAMs_20 IAMs_20 07 58 58.5
comp=Z,5μm,19.0s
WB8 Warramunga Arr 142.33 247 IAMs_20 IAMs_20 07 58 59.5
comp=Z,4μm,20.0s
WC4 Warramunga Arr 142.33 247 IAMs_20 IAMs_20 07 55 47.5
comp=Z,5μm,19.0s
WB6 Warramunga Arr 142.33 247 IAMs_20 IAMs_20 07 51 06.6
comp=Z,4μm,20.0s
WB9 Warramunga Arr 142.33 247 IAMs_20 IAMs_20 07 58 58.6
comp=Z,5μm,19.0s
WR1 Warramunga Arr 142.33 247 IAMs_20 IAMs_20 07 55 48.7
comp=Z,4μm,19.0s
WRA Warramunga Arr 142.33 247 PKhKP PKPpre 06 54 51.7
comp=Z,12nm,0.8s,baz=104,slow=3.2,SNR=23
WC1 Warramunga Arr 142.34 247 IAMs_20 IAMs_20 07 55 47.8
comp=Z,4μm,19.0s
TPUB Ta-pu 142.38 324 IAMs_20 IAMs_20 08 02 49.9
comp=Z,5μm,21.0s
KOLN Koldanda 142.69 21 *e*P **PKPdf** **06 54 55.2 -3.4**
comp=Z,34nm,0.8s
GKN Gorkha 142.83 19 *e*P **PKPdf** **06 54 56.5 -2.3**
comp=Z,131nm,0.8s
KKN Kakani 143.23 19 *e*P PKPbc 06 54 56.3 -0.2
comp=Z,111nm,0.8s
GUN Gumba 143.31 18 *e*P PKPbc 06 54 56.9 +0.1
comp=Z,248nm,0.9s
DMN Daman 143.35 19 *e*P PKPab 06 54 56.2 +0.4
comp=Z,131nm,1.0s
PKIN Phulchoki 143.47 19 *e*P PKPbc 06 54 56.7 -0.5
comp=Z,96nm,1.0s
PKI Pulchoki 143.48 19 *e*P PKPbc 06 54 56.9 -0.4
comp=Z,110nm,0.9s
JIRN Jiri 143.63 17 *e*P PKPbc 06 54 57.5 -0.3
comp=Z,152nm,0.9s
BHPL Bhopal 143.84 33 *e*P PKPbc 06 54 58.5 +0.4
BHPL IAmb IAmb 06 55 11.0
comp=Z,33nm,1.0s
TAPN Taplejung 144.35 15 *e*P **PKPab** **06 54 58.7 -0.9**
comp=Z,182nm,0.9s
RAMN Ramite 144.42 17 *e*P **PKPab** **06 54 58.7 -1.1**
comp=Z,102nm,0.9s
GTK Tadong 144.61 14 *e*P **PKPab** **06 54 59.9 -0.5**
GTK IAmb IAmb 06 55 10.3
comp=Z,190nm,1.0s
ODAN Odare 144.73 16 *e*P **PKPab** **06 54 59.9 -1.1**
comp=Z,314nm,1.2s
POO Poona 145.25 42 *e*P **PKPbc** **06 55 01.5 -1.2**
POO IAmb IAmb 06 55 11.7
comp=Z,74nm,0.5s
FAKI Fak Fak 145.40 275 PKP **PKPbc** **06 55 02.7 -0.6**
DIBR DIBRUGARH 145.48 4 *e*P **PKPbc** **06 55 02.5 -0.6**
GYA Guiyang 145.50 346 ⇑*i*PKPbc **PKPdf** **06 55 03.4 -0.1**
GYA PP **PP** **06 58 26.1 +4.3**
GYA PKS **PKSdf** **06 58 36.0 -3.2**
GYA SKKS 07 05 12.4
GYA SS **SS** **07 17 13.9 +0.6**
GYA AMB AMB
comp=Z,740nm,8.8s
GYA LR LR
comp=Z,9μm,21.6s
GYA LR LR
comp=Z,4μm,18.9s
GYA LR LR
comp=Z,10μm,21.9s
DHUB DHUBRI 146.18 13 *e*P **PKPdf** **06 55 03.1 -1.4**
GZH Guangzhou 146.31 334 PKPbc **PKPdf** **06 55 03.3 -1.4**
GZH PP **PP** **06 58 23.0 -3.8**
GZH LR LR
comp=Z,4μm,21.8s
GZH LR LR
comp=Z,10μm,20.8s
GUWA GUWAHATI 146.34 10 *e*P **PKPdf** **06 55 03.5 -1.2**
GUWA IAmb IAmb 06 55 16.3
comp=Z,101nm,0.6s
HKC Hong Kong Obse 146.61 332 ⇓P **PKiKP** **06 55 09.0 -0.6**
HKPS Hong Kong Po S 146.64 332 **PKPab** **06 55 07.8 -0.1**
MTN Manton Dam 146.67 258 IAMs_20 IAMs_20 07 56 11.9
comp=Z,5μm,22.0s
SZP Santa 146.76 318 IAMs_20 IAMs_20 08 06 02.7
comp=Z,5μm,22.0s
SHL Shillong 146.99 10 *e*P **PKPdf** **06 55 05.5 -0.6**
SHL IAmb IAmb 06 55 16.0
comp=Z,139nm,1.2s
SHL Shillong 146.99 10 PKP2 **PKPdf** **06 55 06.5 +0.4**
SHL MLR MLR
comp=Z,11μm,21.0s
SHL Shillong 146.99 10 **PKPdf** **06 55 06.5 +0.4**
BOK Bokaro 147.13 20 *e*P **PKPdf** **06 55 04.4 -1.7**
BOK IAmb IAmb 06 55 16.8
comp=Z,259nm,0.9s
GOA Goa 147.32 46 *e*P **PKPdf** **06 55 04.7 -1.9**
GOA IAmb IAmb 06 55 28.4
comp=Z,363nm,1.8s
KLRI Killari 147.38 40 *e*PKPab **PKPbc** **06 55 08.0 -1.1**
KLRI IVMs_BB IVMs_BB 08 13 19.2
comp=Z,2μm,21.2s
KMI Kunming 147.56 352 PKPbc **PKPdf** **06 55 07.1 0.0**
PCPH Palayan 147.70 314 ⇓*e*P PKPab 06 55 20.6 +8.4
SRSP Sriramsagar 147.79 36 *e*PKPbc **PKPdf** **06 55 07.1 -0.2**
SRSP IVMs_BB IVMs_BB 08 03 09.6
comp=Z,841nm,22.7s
BNDI Bandanaira 147.92 273 PKP **PKPbc** **06 55 09.1 -1.6**
RPR Rampur 148.39 35 *e*PKPbc **PKPdf** **06 55 09.3 +1.0**
KNRA Kununurra 148.49 252 **PKPbc** **06 55 12.0 -0.1**
AGT Agartala 148.51 11 *i* x **PKPbc** **06 55 10.9 -1.0**
H01W1 Cape Leeuwin H 148.53 206 T T 09 42 19.8
baz=144,slow=76,SNR=627
H01W2 Cape Leeuwin H 148.53 206 T T 09 42 20.1
baz=144,slow=76,SNR=624
H01W3 Cape Leeuwin H 148.55 206 T T 09 42 21.1
baz=144,slow=76,SNR=550
NWAO Narrogin (SRO) 148.61 213 PKIKP **PKPdf** **06 55 07.6 -0.7**
NWAO Narrogin (SRO) 148.61 213 **PKPdf** **06 55 07.6 -0.7**
MSAI Masohi 148.74 275 PKP **PKPdf** **06 55 10.6 +1.6**
DAV Davao City (W) 148.87 296 IAMs_20 IAMs_20 07 55 25.9
comp=Z,4μm,21.0s
RCP Roxas 148.97 307 ⇑*e*P **PKPbc** **06 55 13.5 +0.2**
CGP Cagayan de Oro 149.00 300 ⇓*e*P **PKPab** **06 55 20.4 +2.8**
HYBB Hyderabad (bro 149.08 38 *e*PKiKP **PKPbc** **06 55 12.4 -1.2**
HYBB IVMs_BB IVMs_BB 08 06 48.1
comp=Z,1μm,20.2s
HYB Hyderabad 149.08 38 *i* PKP **PKPdf** **06 55 10.5 +1.0**
comp=Z,250nm,1.2s
HYB *e* 06 55 20.5
HYB *es*PKP 06 55 25.0
HYB Hyderabad 149.08 38 *e*P **PKPdf** **06 55 08.0 -1.5**
HYB IAmb IAmb 06 55 34.3
comp=Z,112nm,1.2s
PGP Puerto Galera 149.16 312 ⇑*e*P **PKPbc** **06 55 12.0 -1.9**
TNTI Ternate 149.43 284 PKP **PKPdf** **06 55 11.5 +1.3**
TNTI Ternate 149.43 284 PKPdf **PKPdf** **06 55 08.6 -1.5**
TNTI **PKPab** **06 55 19.1 -0.3**
TNTI IAMs_20 IAMs_20 07 52 27.9
comp=Z,4μm,20.0s
AAI Ambon 149.51 275 PKP **PKPdf** **06 55 11.5 +1.2**
LBMI Labuha 149.65 281 PKP **PKPdf** **06 55 11.7 +1.2**
CTBH Cotabato--PC H 149.97 298 ⇑*i*P PKPdf 06 54 55.6 -1.5
JAP San Jose, Anti 150.07 306 ⇓*e*P **PKPdf** **06 55 06.7 -4.5**
URV Uravakonda 150.09 43 *e*PKiKP **PKPbc** **06 55 14.9 -1.2**
URV IVMs_BB IVMs_BB 08 01 58.6
comp=Z,2μm,22.7s
NJS Nagarjunasagar 150.20 38 *e*PKiKP **PKPbc** **06 55 15.3 -1.1**
NJS IVMs_BB IVMs_BB 08 07 11.3
comp=Z,1μm,21.8s
SRLM Srisailam 150.30 39 *e*PKiKP **PKPbc** **06 55 15.3 -1.3**
BWNR Bhubaneshwar 150.30 23 *e*P **PKPdf** **06 55 09.8 -1.5**
BWNR IAmb IAmb 06 55 28.4
comp=Z,71nm,1.2s
BWNR *i* x x 07 50 15.7
NLAI Namlea 150.53 276 PKP **PKPdf** **06 55 13.1 +1.2**
FITZ Fitzroy Crossi 150.74 246 **PKPdf** **06 55 11.8 -0.3**
FITZ IAMs_20 IAMs_20 07 56 14.5
comp=Z,4μm,19.0s
MYLAV Mylavaram 150.84 35 *e*PKiKP **PKPbc** **06 55 16.9 -0.9**
MYLAV IVMs_BB IVMs_BB 08 12 51.1
comp=Z,1μm,19.3s
PVM Polavaram 150.98 33 *e*PKiKP **PKPbc** **06 55 17.0 -1.2**
PVM IVMs_BB IVMs_BB 08 05 17.3
comp=Z,1μm,20.3s
ADKI Addanki 151.15 38 *e*PKiKP **PKPbc** **06 55 17.3 -1.3**
ADKI IVMs_BB IVMs_BB 08 07 38.6
comp=Z,1μm,20.5s
QIZ Qiongzhong 151.39 336 PKPbc **PKPdf** **06 55 14.8 +1.7**
QIZ PP **PP** **06 58 58.3 +1.9**
QIZ SS SS 07 18 24.3 +4.5
QIZ AMB AMB
comp=Z,2μm,7.3s
QIZ LR LR
comp=Z,6μm,20.6s
QIZ LR LR
comp=Z,8μm,22.1s
QIZ LR LR
comp=Z,9μm,27.5s
SANI Sanana 151.42 279 PKP **PKPdf** **06 55 14.4 +1.1**
SKHT Srikalahasti 152.58 41 *e*PKPbc **PKPbc** **06 55 19.5 -2.4**
SKHT IVMs_BB IVMs_BB 08 06 21.6
comp=Z,1μm,22.2s
MDRS Chennai 153.43 41 *e*P **PKPdf** **06 55 14.5 -1.7**
MDRS IAmb IAmb 06 55 29.0
comp=Z,48nm,0.8s
SOEI Soe 153.66 262 PKP **PKPdf** **06 55 17.9 +1.2**
SOEI Soe 153.66 262 PKPdf **PKPdf** **06 55 19.3 +2.6**
TRD Trivandrum 154.08 53 *e*P **PKPdf** **06 55 15.4 -1.7**
CHTO Chiang Mai 154.18 357 PKIKP **PKPdf** **06 55 19.6 +2.4**
CHTO Chiang Mai 154.18 357 **PKPdf** **06 55 19.6 +2.4**
BATI Baumata 154.22 261 PKP **PKPdf** **06 55 19.2 +1.9**
CMAR Chiang Mai Arr 154.53 357 PKP **PKPdf** **06 55 17.9 +0.3**
comp=Z,3.7nm,0.8s,baz=318,slow=2.1,SNR=8.5
CMAR PKPbc **PKiKP** **06 55 27.3 +1.2**
comp=Z,20nm,0.8s,baz=319,slow=2.3,SNR=32
APSI Ampana 155.39 284 PKP **PKPdf** **06 55 21.8 +2.8**
EDFI Ende, Flores 156.25 265 PKP **PKPdf** **06 55 22.8 +2.6**
MPSI Mapaga 156.70 288 PKP **PKPdf** **06 55 23.3 +2.6**
BASI Baing, Sumba 157.24 261 PKP **PKPdf** **06 55 24.0 +2.7**
KKM Kota Kinabalu 157.40 305 IAMs_20 IAMs_20 08 15 03.8
comp=Z,5μm,22.0s
BNSI Bone 157.60 276 PKP **PKPdf** **06 55 24.9 +3.1**
SPSI Sidrap Palu 157.87 277 PKP **PKPdf** **06 55 24.9 +2.7**
KAPI Kappang 158.03 274 IAMs_20 IAMs_20 08 23 31.6
comp=Z,4μm,22.0s
KBKI Kotabaru 161.28 281 PKP **PKPdf** **06 55 28.6 +2.5**
PSI Prapat 170.05 353 PKIKP **PKPdf** **06 55 32.4 -1.0**
RPSI Rantau Prapat 170.16 353 PKPdf **PKPdf** **06 55 32.4 -0.9**

UCR ***13*** *07:03:02.1±1.5, 7.°08N×82.°46W, h20km, mb4.4(NEIC)*
UPA ***13*** *07:03:03.4±1.7, 7.°24N×82.°42W, h18km±21km, MD3.9, ML4.1, MW4.2*
IDC ***13*** *07:03:04.3±7.4, 7.°95N×81.°88W, h0km, mb4.0/4, mb1 4.3/5, mb1mx3.8/29, mbtmp4.0/5, ML4.4/1, Error ellipse: s-maj=170.8km s-min=64.7km az=7.0*
NEIC ***13*** *07:03:07.9±2.2, 7.°8N±0.°1×82.°24W±0.°08, h10km±2km, mb4.4/16, Error ellipse: s-maj=19.9km s-min=10.8km az=205.0*

ISC 13 07:03:05.1±1.7, 7.°48N±0.°07×82.°28W±0.°04, h14km±9km, n86, σ1.946/97, mb4.3/11, 14C-5D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h	m	s	Res ISC
REME3	**Remedios, Chir**	**0.87**	**311**	⇑*iP*		**Pn**	**07**	**03**	**23.2**	**+0.3**
PVID3	**Puerto Vidal,**	**0.88**	**49**	*eP*		**Pb**	**07**	**03**	**21.8**	**-0.2**
PEDE3	**Pedregal, Chir**	**0.91**	**351**	⇑*iP*		**Pg**	**07**	**03**	**23.1**	**+0.3**
CHIR3	**Chiriqui UPA,**	**0.91**	**357**	⇑*iP*		**Pn**	**07**	**03**	**23.2**	**-0.3**
LOCO3	**Loma Colorada,**	**0.94**	**352**	*eP*		**Pg**	**07**	**03**	**23.4**	**+0.2**
LOMA3	**Las Lomas, Chi**	**0.95**	**353**	⇑*iP*		**Pg**	**07**	**03**	**23.8**	**+0.3**
DVD	**David**	**0.97**	**350**	⇓*iP*		**Pb**	**07**	**03**	**23.8**	**+0.2**
SBAR3	**San Bartolo, C**	**1.03**	**324**	⇑*eP*		**Pb**	**07**	**03**	**23.7**	**-0.9**
PSOM3	**Paja de Sombre**	**1.20**	**358**	*eP*		**Pg**	**07**	**03**	**28.7**	**+0.4**
RSUS3	**Rio de Jesus,**	**1.22**	**66**	*eP*		**Pn**	**07**	**03**	**27.7**	**-0.1**
BCO2	**Palmira**	**1.26**	**349**	⇑*iP*		**Pn**	**07**	**03**	**28.2**	**-0.2**
BCO2				*i* S		**Sg**	**07**	**03**	**45.8**	**0.0**
MESA3	**La Mesa, Verag**	**1.27**	**58**	⇑*iP*		**Pg**	**07**	**03**	**29.7**	**+0.1**
PONU3	**Ponuga, Veragu**	**1.35**	**73**	⇑*iP*		**Pn**	**07**	**03**	**29.0**	**-0.5**
PONU3				*i* S		**Sg**	**07**	**03**	**48.8**	**0.0**
BRU2	**Volcan** baz=180,slow=2.6	**1.37**	**343**	⇑*iP*		**Pn**	**07**	**03**	**29.4**	**-0.5**
BRU2				*eS*		**Sn**	**07**	**03**	**47.1**	**-0.9**
BRU2	**Volcan**	**1.37**	**343**	*eP*		**Pn**	**07**	**03**	**29.4**	**-0.5**
CACAO	**El Cacao, Vera**	**1.41**	**95**	⇓*eP*		**Pn**	**07**	**03**	**27.7**	**-2.6**
CACAO				AMP			07	03	30.4	
CACAO	comp=Z,2μm,0.0s			*eS*		**Sn**	**07**	**03**	**47.0**	**-1.9**
MLIR3	**Monte Lirio, C**	**1.41**	**338**	⇓*iP*		**Pn**	**07**	**03**	**30.5**	**0.0**
STIA3	**Santiago, Vera**	**1.44**	**64**	⇑*iP*		**Pn**	**07**	**03**	**30.8**	**+0.1**
STIA3				*eS*		**Sg**	**07**	**03**	**51.7**	**+0.2**
PTJ1	**Puerto Jimnez**	**1.46**	**316**	*eP*		**Pn**	**07**	**03**	**29.4**	**-1.6**
PTJ1				*eS*		**Sb**	**07**	**03**	**50.7**	**+0.2**
EDSV	**San Vito**	**1.50**	**333**	⇑*eP*		**Pn**	**07**	**03**	**31.3**	**-0.4**
SFRA3	**San Francisco,**	**1.51**	**59**	⇓*iP*		**Pn**	**07**	**03**	**31.9**	**+0.2**
CALO3	**Calobre, Verag**	**1.65**	**59**	*eP*		**Pg**	**07**	**03**	**34.1**	**+0.4**
CALO3				*eS*		**Sg**	**07**	**03**	**57.6**	**-0.8**
PESE3	**Pese, Herrera**	**1.71**	**75**	*eP*		**Pn**	**07**	**03**	**33.5**	**-1.0**
CRIS3	**El Cristo, Coc**	**1.82**	**65**	*eP*		**Pn**	**07**	**03**	**36.3**	**+0.3**
CRIS3				*i* S		**Sb**	**07**	**04**	**01.8**	**+1.0**
TOSI3	**Tonosi**	**1.82**	**92**	*eP*		**Pn**	**07**	**03**	**35.8**	**-0.3**
EDPN	**Palmar Norte**	**1.88**	**322**	⇑*eP*		**Pn**	**07**	**03**	**35.7**	**-1.1**
EDBA	**Buenos Aires**	**1.94**	**330**	*eP*		**Pn**	**07**	**03**	**37.9**	**+0.2**
AZU	**Azuero**	**2.01**	**81**	*eP*		**Pn**	**07**	**03**	**38.0**	**-0.6**
AZU	**Azuero**	**2.01**	**81**	⇑*iP*		**Pn**	**07**	**03**	**38.9**	**+0.2**
AZU				*eS*		**Sn**	**07**	**04**	**04.7**	**+1.1**
AZU	**Azuero**	**2.01**	**81**	*eP*		**Pn**	**07**	**03**	**38.8**	**+0.2**
ACHO3	**Achotines, Los**	**2.09**	**92**	*eP*		**Pb**	**07**	**03**	**42.1**	**-0.7**
ACHO3				*eS*		**Sn**	**07**	**04**	**04.3**	**-1.2**
PCRI3	**Pocri, Los San**	**2.15**	**85**	*eP*		**Pn**	**07**	**03**	**42.0**	**+1.5**
PNME	**Penonome**	**2.18**	**62**	*eP*		**Pn**	**07**	**03**	**42.0**	**+1.1**
EDDO	**Dominical**	**2.36**	**319**	*eP*		**Pn**	**07**	**03**	**42.7**	**-0.7**
VTON	**El Valle, Cocl**	**2.42**	**62**	⇑*eP*		**Pn**	**07**	**03**	**45.8**	**+1.5**
VTON				*i* S		**Sb**	**07**	**04**	**16.9**	**-1.5**
ZANG	**Zanguenga, Cho**	**2.81**	**58**	⇓*eP*		**Pn**	**07**	**03**	**50.8**	**+1.3**
ZANG				*i* S		**Sb**	**07**	**04**	**26.1**	**-3.1**
ZANG	**Zanguenga, Cho**	**2.81**	**58**	*eP*		**Pn**	**07**	**03**	**50.6**	**+1.1**
LCR2	**La Lucha 2**	**2.82**	**323**	*eP*		**Pn**	**07**	**03**	**49.4**	**-0.6**
CVTR	**Volcan Turrial**	**2.92**	**330**	*eP*		**Pn**	**07**	**03**	**52.1**	**+0.6**
BCIP	**Isla Barro Col**	**2.94**	**55**	*eP*		**Pb**	**07**	**03**	**58.8**	**+1.4**
BCIP	**Isla Barro Col**	**2.94**	**55**	*eP*		**Pn**	**07**	**03**	**52.5**	**+1.1**
BCIP	**Isla Barro Col**	**2.94**	**55**			**Pn**	**07**	**03**	**51.0**	**-0.5**
HDC	**Heredia**	**3.10**	**324**	*eP*		**Pn**	**07**	**03**	**53.8**	**+0.2**
HDC	**Heredia**	**3.10**	**324**	Pn		**Pn**	**07**	**03**	**53.9**	**+0.2**
HDC				Sn		**Sn**	**07**	**04**	**26.4**	**-4.2**
UPA	**Univ. de Panam**	**3.10**	**61**	*eP*		**Pn**	**07**	**03**	**55.4**	**+1.7**
CHPO	**Chepo, Panama**	**3.56**	**62**	*eP*		**Pb**	**07**	**04**	**06.9**	**-0.9**
ARE1	**Arenal 1**	**3.82**	**321**	*eP*		**Pn**	**07**	**04**	**00.4**	**+0.4**
JTS	**Las Juntas de** comp=Z,26nm,0.3s,baz=239,slow=6.4,SNR=114	**3.85**	**317**	Pn		**Pn**	**07**	**04**	**02.6**	**-1.3**
JTS	**Las Juntas de**	**3.85**	**317**	*eP*		**Pn**	**07**	**04**	**02.3**	**-1.6**
PLVR	**Palo Verde**	**4.16**	**313**	*eP*		**Pn**	**07**	**04**	**07.7**	**-0.7**
UPD2	**Meteti**	**4.36**	**76**	*eP*		**Pb**	**07**	**04**	**19.5**	**-2.0**
UPD2	**Meteti**	**4.36**	**76**	*eP*		**Pb**	**07**	**04**	**17.2**	**-4.2**
ESPN	**Las Esperanzas**	**5.09**	**337**	Pn		**Pn**	**07**	**04**	**20.7**	**-0.3**
ACON	**Acoyapa**	**5.30**	**328**			**Pn**	**07**	**04**	**24.4**	**+0.6**
CBOC	**Ciudad Bolivar**	**6.43**	**104**	*eP*		**Pn**	**07**	**04**	**39.3**	**-0.2**
MATN	**Matagalpa**	**6.50**	**327**	Pn		**Pn**	**07**	**04**	**40.5**	**+0.1**
YOTC	**Yotoco, Valle**	**6.85**	**120**	*eP*		**Pn**	**07**	**04**	**41.1**	**-4.2**
RREF	**El Recreo**	**7.35**	**110**	*eP*		**Pn**	**07**	**04**	**54.6**	**+2.0**
SOTA	**Rioblanco**	**7.75**	**133**	*eP*		**Pn**	**07**	**04**	**58.2**	**+0.2**
PCON	**Cinco Dias**	**7.78**	**131**	*eP*		**Pn**	**07**	**05**	**01.0**	**+2.5**
ORTC	**Ortega, Tolima**	**7.84**	**116**	*eP*		**Pn**	**07**	**05**	**00.1**	**+1.1**
GCUF	**Volcan Galeras**	**7.92**	**141**	*eP*		**Pn**	**07**	**04**	**59.2**	**-1.2**
TGUH	**Tegucigalpa,Un**	**8.17**	**324**	Pn		**Pn**	**07**	**05**	**05.1**	**+1.7**
CHIC	**Chingaza**	**8.96**	**108**	*eP*		**Pn**	**07**	**05**	**17.2**	**+2.6**
344A	**Westbrook Farm**	**25.13**	**343**	P		**P**	**07**	**08**	**29.8**	**+0.1**
PB12	**IPOC Station P**	**28.48**	**156**	P		**P**	**07**	**09**	**07.0**	**+6.9**
PB16	**IPOC Station P**	**28.58**	**154**	P		**P**	**07**	**09**	**06.2**	**+4.7**
PB16	comp=Z,8.3nm,1.4s			IAmb		IAmb	07	09	10.9	
WHAR	**Wooly Hollow**	**29.17**	**343**	P		**P**	**07**	**09**	**05.9**	**-0.1**
WHAR	comp=Z,3.3nm,0.9s			IAmb		IAmb	07	09	07.6	
LCAR	**Lake Charles**	**29.59**	**345**	P		**P**	**07**	**09**	**08.6**	**-1.1**
LCAR	comp=Z,5.6nm,1.0s			IAmb		IAmb	07	09	10.5	
R49A	**Shelbyville**	**30.79**	**356**	P		**P**	**07**	**09**	**18.9**	**-1.4**
R49A	comp=Z,12nm,1.3s			IAmb		IAmb	07	09	21.5	
ANMO	**Albuquerque**	**35.23**	**324**	P		**P**	**07**	**10**	**00.9**	**+1.5**
PV05	**Paradox Valley**	**38.94**	**325**	P		**P**	**07**	**10**	**31.9**	**+0.9**
PV05	comp=Z,4.6nm,0.7s			IAmb		IAmb	07	10	35.6	
SRU	**San Rafael Swe**	**40.46**	**325**	P		**P**	**07**	**10**	**45.0**	**+1.5**
PSUT	**Pine Spring**	**42.03**	**322**	P		**P**	**07**	**10**	**58.9**	**+2.3**
R11A	**Troy Canyon, C**	**42.99**	**321**	P		**P**	**07**	**11**	**06.8**	**+2.5**
ULM	**Lac du Bonnet** comp=Z,3.6nm,0.8s,baz=161,slow=9.4,SNR=2.9	**44.12**	**347**	P		**P**	**07**	**11**	**11.8**	**-1.1**

ULM	**Lac du Bonnet**	**44.12**	**347**	P	**P**	07 11 12.2	**-0.8**
ULM				IAmb	IAmb	07 11 13.3	
	comp=Z,15nm,1.5s						
RLMT	**Red Lodge**	**44.20**	**333**	P	**P**	**07 11 14.1**	**+0.1**
RLMT				IAmb	IAmb	07 11 15.8	
	comp=Z,6.3nm,1.4s						
ELK	**Elko**	**44.26**	**324**	P	**P**	**07 11 16.9**	**+2.3**
NVAR	**Mina Array Bea**	**44.77**	**319**	P	**P**	**07 11 20.8**	**+2.1**
	comp=Z,1.4nm,0.9s,baz=134,slow=6.9,SNR=12						
LRM	**Limekiln Ridge**	**46.22**	**331**	P	**P**	**07 11 30.8**	**+0.8**
WVOR	**Wild Horse Val**	**47.30**	**323**	P	**P**	**07 11 39.8**	**+1.3**
H04A	**Detroit Lake**	**50.71**	**324**	P	**P**	**07 12 05.6**	**+1.1**
H04A				IAmb	IAmb	07 12 07.4	
	comp=Z,4.4nm,1.0s						
YKA	**Yellowknife Ar**	**59.77**	**343**	P	**P**	**07 13 09.0**	**-0.4**
	comp=Z,1.4nm,0.9s,baz=135,slow=7.6,SNR=14						
ILAR	**Eielson Array**	**72.60**	**336**	P	**P**	**07 14 29.9**	**-1.8**
	comp=Z,0.7nm,0.6s,baz=114,slow=6.0,SNR=8.1						
ASAR	**Alice Springs**	**141.76**	**241**	PKhKP	PKPpre	07 22 35.3	
	comp=Z,0.8nm,0.8s,baz=129,slow=2.5,SNR=6.6						

*ATH **13** 07:09:42.9,38.43N×20.52E,h15km±1km,ML2.9/5, Error ellipse: s-maj=1.9km s-min=0.6km az=277.0*
*THE **13** 07:09:43.4,38.43N×20.49E,h6km±1km,ML2.8/15, Error ellipse: s-maj=1.0km s-min=0.5km az=173.0*
ISC 13 07:09:31.5±1.3, 38.55N±0.04×19.76E±0.04, h9km±9km, n54, σ2.5°07/83, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGT1	**Agia Thekli**	**0.58**	**121**	P	**Pn**	**07 09 47.3**	**+1.4**
AGT1				S	**Sg**	**07 09 50.5**	**+0.2**
	11μm,0.3s						
KEF3	**Kipouria, Keph**	**0.58**	**127**	P	**Pn**	**07 09 48.2**	**+2.3**
KEF3				S	**Sb**	**07 09 52.7**	**+0.5**
KEF4	**Livadi, Kephal**	**0.60**	**119**	P	**Pn**	**07 09 47.0**	**+0.8**
KEF4				S	**Sg**	**07 09 50.4**	**-0.7**
KEF1	**Kardakata, Kep**	**0.63**	**116**	P	**Pb**	**07 09 46.4**	**+1.9**
KEF1				S	**Sg**	**07 09 49.3**	**-2.5**
FSK	**Fiskardo**	**0.64**	**98**	P	**Pg**	**07 09 45.2**	**+1.3**
FSK				S	**Sg**	**07 09 46.6**	**-5.7**
	34μm,0.2s						
FSK	**Fiskardo**	**0.64**	**98**	P	**Pg**	**07 09 45.1**	**+1.3**
FSK				S	**Sg**	**07 09 46.8**	**-5.5**
FSK				AML	AML	07 09 47.0	
	comp=N,42478μm,0.2s						
FSK				AML	AML	07 09 47.3	
	comp=E,91378μm,0.3s						
LXRA	**Lixouri, Kepha**	**0.64**	**123**	P	**Pn**	**07 09 48.1**	**+1.4**
LXRA				S	**Sg**	**07 09 52.1**	**-0.2**
ARGA	**Argostoli. Kep**	**0.68**	**123**	P	**Pn**	**07 09 48.1**	**+0.9**
ARGA				S	**Sg**	**07 09 52.2**	**-1.4**
ARG2	**Argostoli**	**0.69**	**123**	P	**Pn**	**07 09 48.2**	**+0.9**
ARG2				S	**Sg**	**07 09 52.3**	**-1.4**
	comp=E,16μm,0.3s						
KEF2	**Argostoli. Kep**	**0.69**	**124**	P	**Pn**	**07 09 48.3**	**+0.8**
KEF2				S	**Sg**	**07 09 52.8**	**-1.2**
EVGI	**Lefkada island**	**0.71**	**84**	P	**Pb**	**07 09 48.1**	**+2.1**
EVGI				S	**Sg**	**07 09 52.1**	**-2.4**
EVGI	**Lefkada island**	**0.71**	**84**	P	**Pb**	**07 09 48.1**	**+2.1**
EVGI				S	**Sg**	**07 09 51.9**	**-2.6**
LKD2	**Lefkada island**	**0.74**	**71**	P	**Pn**	**07 09 50.6**	**+2.4**
LKD2				S	**Sg**	**07 09 55.6**	**0.0**
	comp=E,920nm,0.4s						
LKD2	**Lefkada island**	**0.74**	**71**	P	**Pn**	**07 09 50.6**	**+2.4**
LKD2				AML	AML	07 09 57.6	
	comp=N,2340μm,0.4s						
LKD2				AML	AML	07 10 01.9	
	comp=E,1366μm,0.4s						
TSLK	**Tsoukalades, L**	**0.76**	**69**	P	**Pn**	**07 09 51.3**	**+3.0**
TSLK				S	**Sg**	**07 09 56.9**	**+1.0**
	comp=E,1μm,0.5s						
TSLK	**Tsoukalades, L**	**0.76**	**69**	P	**Pn**	**07 09 51.4**	**+3.0**
VLS	**Valsamata**	**0.76**	**120**	P	**Pb**	**07 09 48.3**	**+1.5**
VLS				S	**Sg**	**07 09 52.5**	**-3.5**
VLS	**Valsamata**	**0.76**	**120**	P	**Pb**	**07 09 48.3**	**+1.5**
VLS				S	**Sg**	**07 09 52.5**	**-3.5**
VLS				AML	AML	07 09 52.8	
	comp=E,6512μm,0.3s						
VLS				AML	AML	07 09 53.2	
	comp=N,4610μm,0.2s						
MGNA	**Meganis**	**0.82**	**83**	P	**Pb**	**07 09 49.6**	**+1.7**
MGNA				S	**Sg**	**07 09 54.8**	**-3.2**
MGNA				AML	AML	07 09 55.2	
	comp=N,2867μm,0.2s						
MGNA				AML	AML	07 09 55.9	
	comp=E,2893μm,0.1s						
KFL	**Anninata**	**0.93**	**118**	P	**Pb**	**07 09 50.7**	**+1.0**
KFL				S	**Sg**	**07 09 57.1**	**-4.2**
	comp=E,7μm,0.3s						
KFL	**Anninata**	**0.93**	**118**	P	**Pb**	**07 09 50.7**	**+1.0**
KFL				AML	AML	07 09 58.0	
	comp=N,14816μm,0.4s						
KFL				AML	AML	07 09 58.4	
	comp=E,12636μm,0.3s						
AST1	**Astakos**	**1.05**	**90**	P	**Pb**	**07 09 52.8**	**+1.1**
AST1				S	**Sg**	**07 10 00.3**	**-4.9**
IGT	**Igoumenitsa**	**1.08**	**25**	P	Pn	07 10 04.2	+11
IGT				S	Sn	07 10 20.6	+13
	comp=E,340nm,0.5s						
PDO	**Prodromos**	**1.12**	**87**	P	**Pb**	**07 09 54.1**	**+1.1**
KEK	**Kerkira**	**1.16**	**2**	P	Pn	07 10 09.1	+15
KEK				S	Sn	07 10 28.7	+19
	comp=E,158nm,0.6s						
KEK	**Kerkira**	**1.16**	**2**	P	Pn	07 10 09.0	+15
KRI1	**kERI**	**1.22**	**136**	P	**Pn**	**07 09 58.3**	**+3.6**
KRI1				S	**Sg**	**07 10 10.3**	**-0.5**
	comp=E,2μm,0.3s						
RLS	**Riolos of Patr**	**1.44**	**110**	P	**Pn**	**07 09 59.1**	**+1.5**
RLS	**Riolos of Patr**	**1.44**	**110**	P	**Pn**	**07 09 59.0**	**+1.3**
EVR	**Evrytania**	**1.65**	**77**	P	**Pg**	**07 10 04.9**	**+1.8**
DRO	**Drossia**	**1.65**	**111**	P	**Pb**	**07 10 02.8**	**+0.7**
DRO				S	**Sn**	**07 10 18.9**	**-3.1**
	comp=E,705nm,0.5s						
DRO	**Drossia**	**1.65**	**111**	P	**Pb**	**07 10 02.7**	**+0.7**
EFP	**Efpalio**	**1.69**	**94**	P	**Pb**	**07 10 03.5**	**+0.7**
EFP				S	**Sn**	**07 10 21.4**	**-1.5**
	comp=E,535nm,0.6s						
ANX	**Ano Chora**	**1.70**	**88**	P	**Pb**	**07 10 04.5**	**+1.6**
ANX				S	**Sn**	**07 10 21.1**	**-2.1**
	comp=E,462nm,0.7s						
ANX	**Ano Chora**	**1.70**	**88**	P	**Pb**	**07 10 04.4**	**+1.4**
LAKA	**Lakka**	**1.77**	**99**	P	**Pb**	**07 10 04.8**	**+0.6**
LAKA				S	**Sn**	**07 10 23.7**	**-1.3**
	comp=E,182nm,0.7s						
LAKA	**Lakka**	**1.77**	**99**	P	**Pn**	**07 10 04.6**	**+2.3**
SERG	**Sergoula**	**1.81**	**94**	P	**Pb**	**07 10 05.6**	**+0.8**
SERG				S	**Sn**	**07 10 24.9**	**-1.0**
	comp=E,422nm,0.6s						
SERG	**Sergoula**	**1.81**	**94**	P	**Pb**	**07 10 05.4**	**+0.6**
TRIZ	**Trizonia**	**1.83**	**95**	P	**Pb**	**07 10 05.6**	**+0.5**
TRIZ	**Trizonia**	**1.83**	**95**	P	**Pb**	**07 10 05.5**	**+0.5**
KALE	**Kalithea**	**1.88**	**94**	P	**Pb**	**07 10 06.5**	**+0.5**
KALE	**Kalithea**	**1.88**	**94**	P	**Pb**	**07 10 06.5**	**+0.5**
MAKR	**Makrakomi, Fth**	**1.91**	**75**	P	**Pg**	**07 10 09.3**	**+1.1**
MAKR	**Makrakomi, Fth**	**1.91**	**75**	P	**Pg**	**07 10 09.2**	**+1.0**
KLV	**Kalavryta, Ach**	**1.95**	**104**	P	**Pb**	**07 10 07.5**	**+0.2**
KLV				S	**Sn**	**07 10 27.3**	**-2.2**
	comp=E,105nm,0.6s						
KLV	**Kalavryta, Ach**	**1.95**	**104**	P	**Pb**	**07 10 07.4**	**+0.2**
TRIP	**Tripoli**	**2.23**	**117**	P	**Pb**	**07 10 13.3**	**+1.3**
STON	**Ston**	**4.59**	**341**	*e*Pn	**Pb**	**07 10 55.6**	**+3.5**
STON				Sn	**Sb**	**07 11 49.4**	**+2.0**
RICI	**Ricice**	**5.32**	**339**	*e*Pn	**Pb**	**07 11 03.7**	**-0.9**
RICI				Sn	**Sb**	**07 12 08.9**	**+0.4**
ZIRJ	**Zirje**	**5.97**	**330**	*i* Pn	**Pb**	**07 11 15.8**	**+0.2**
ZIRJ				Sn	**Sb**	**07 12 24.7**	**-2.4**
KIJV	**Kijevo**	**6.00**	**336**	*e*Pn	**Pb**	**07 11 16.3**	**+0.1**
KIJV				Sn	**Sb**	**07 12 26.4**	**-1.7**
MORI	**Morici**	**6.12**	**331**	*e*Pn	**Pb**	**07 11 18.6**	**+0.3**
MORI				Sn	**Sb**	**07 12 29.6**	**-1.9**
DUGI	**Dugi Otok**	**6.48**	**328**	*i* Pn	**Pb**	**07 11 24.4**	**0.0**
DUGI				Sn	**Sb**	**07 12 38.2**	**-3.7**

ISC 13 07:12:11.4±1.3, 49.05N±0.05×18.66E±0.05, h10km, n5, σ0.44°/9, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOLL	**Kolacno**	**0.51**	**200**	*e*PG	**Pg**	**07 12 20.4**	**-0.8**
KOLL				*e*SG	**Sg**	**07 12 28.1**	**+0.2**
LANS	**Liptovska Anna**	**0.54**	**79**	*e*PG	**Pg**	**07 12 21.7**	**-0.2**
LANS				*e*LG	Lg	07 12 42.9	
VYHS	**Vyhne**	**0.57**	**168**	*e*PG	**Pg**	**07 12 22.7**	**+0.2**
VYHS				*e*SG	**Sb**	**07 12 32.0**	**+0.3**
JAVC	**Velka Javorina**	**0.68**	**254**	*e*PG	**Pg**	**07 12 24.6**	**0.0**
JAVC				*e*SG	**Sb**	**07 12 35.4**	**+0.4**
MORC	**Moravsky Berou**	**1.03**	**315**	*e*PG	**Pg**	**07 12 31.1**	**-0.1**
MORC				*e*SG	**Sn**	**07 12 46.3**	**-0.2**

MAN 13 07:12:60.0, 7.54N×126.90E, h1km, mb4.6, ML3.5, MS3.4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CGP	**Cagayan de Oro**	**2.37**	**293**	*e*P	Pn	07 13 40.7	+0.7
CGP				*e*S	Sg	07 14 16.8	+0.6

*TAP **13** 07:20:44.8,24.03N×122.72E,h49km±1km,ML2.6,D*
*JMA **13** 07:20:45.8±0.1,24.13N×122.65E,h47km±4km,M1.9*
ISC 13 07:20:44.5±1.3, 24.01N±0.03×122.67E±0.02, h21km±4km, n41, σ0.82°/77, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.50**	**29**	P	**Pn**	**07 20 55.8**	**-0.6**
JYNG				S	**Sn**	**07 21 03.4**	**-1.0**
YOJ	**Yonaguni jima**	**0.54**	**34**	P	**Pb**	**07 20 55.6**	**+0.3**
	baz=30						
YOJ				S	**Sn**	**07 21 04.8**	**-0.7**
	baz=30						
YOJ	**Yonaguni jima**	**0.54**	**34**	P	**Pn**	**07 20 56.5**	**-0.5**
YOJ				*e*S	**Sn**	**07 21 04.3**	**-1.1**
EOS1	**EOS1**	**0.73**	**317**	P	**Pn**	**07 20 59.9**	**+0.4**
	baz=314						
EOS1				S	**Sn**	**07 21 10.9**	**+0.9**
	baz=314						
ENA	**Nanau**	**0.95**	**296**	P	**Pb**	**07 21 02.0**	**-0.2**
	baz=294						
ENA				*e*S	**Sn**	**07 21 15.6**	**+0.2**
	baz=294						
TWC	**Suao**	**0.96**	**308**	*e*P	**Pb**	**07 21 02.0**	**-0.4**
	baz=306						
TWC				*e*S	**Sb**	**07 21 15.3**	**+0.6**
	baz=306						
NACB	**Ninganchiao**	**1.00**	**279**	P	**Pb**	**07 21 03.3**	**+0.2**
	baz=268						
NACB				S	**Sb**	**07 21 15.9**	**+0.1**
	baz=268						
IRIF	**Iriomote-Funau**	**1.02**	**71**	P	**Pn**	**07 21 03.7**	**+0.2**
IRIF				S	**Sn**	**07 21 17.0**	**-0.1**
HATJ	**Hateruma jima**	**1.03**	**87**	P	**Pn**	**07 21 05.0**	**+1.3**
HATJ				*e*S	**Sn**	**07 21 19.1**	**+1.5**
ETLH	**Xiulin Townshi**	**1.11**	**280**	P	**Pn**	**07 21 04.8**	**0.0**
	baz=280						
ETLH				S	**Sb**	**07 21 18.6**	**-0.4**
	baz=280						
ENTT	**Nioudou**	**1.19**	**302**	P	**Pb**	**07 21 06.4**	**+0.1**
	baz=300						
EGFH	**Guangfu**	**1.19**	**254**	*e*P	**Pn**	**07 21 04.9**	**-1.0**
	baz=244						
EGFH				*e*S	**Sb**	**07 21 21.0**	**-0.3**
	baz=244						
SLBB	**Yuanshan**	**1.20**	**308**	*e*P	**Pn**	**07 21 05.9**	**-0.1**
	baz=306						
NDT	**Datong Townshi**	**1.21**	**299**	P	**Pn**	**07 21 06.8**	**+0.6**
	baz=289						
NDT				S	**Sb**	**07 21 22.6**	**+0.7**
	baz=289						
TIPB	**Shuangxi**	**1.23**	**321**	*e*P	**Pn**	**07 21 06.3**	**-0.1**
	baz=330						
TIPB				*e*S	**Sn**	**07 21 21.9**	**-0.5**
	baz=330						
JKRS	**Kuro-shima**	**1.24**	**79**	P	**Pb**	**07 21 07.8**	**+0.6**
JKRS				*e*S	**Sn**	**07 21 23.9**	**+1.3**
NNSB	**Datong**	**1.25**	**290**	P	**Pn**	**07 21 07.0**	**+0.2**
	baz=289						
NNSB				S	**Sn**	**07 21 22.9**	**-0.2**
	baz=289						
NNSH	**Datong**	**1.25**	**290**	P	**Pn**	**07 21 06.9**	**+0.1**
	baz=289						
NNSH				S	**Sn**	**07 21 22.5**	**-0.5**
	baz=289						
HGSD	**Ruisui**	**1.26**	**246**	*e*P	**Pn**	**07 21 05.4**	**-1.4**
	baz=246						
HGSD				S	**Sn**	**07 21 22.8**	**-0.3**
	baz=246						
NNS	**Nan Shan**	**1.26**	**290**	*e*P	**Pn**	**07 21 07.3**	**+0.3**
	baz=289						
NNS				*e*S	**Sn**	**07 21 23.4**	**0.0**
	baz=289						
WHF	**Hehuan Shan**	**1.29**	**276**	*i* P	**Pn**	**07 21 07.5**	**-0.2**
	baz=276						
WHF				S	**Sn**	**07 21 24.0**	**-0.6**
	baz=276						
NWLT	**Wulai**	**1.31**	**306**	P	**Pn**	**07 21 07.4**	**-0.2**
	baz=293						
NWLT				*e*S	**Sn**	**07 21 24.4**	**-0.1**
	baz=293						
EHY	**Hungye**	**1.34**	**248**	*e*P	**Pn**	**07 21 08.0**	**0.0**
	baz=248						
EHY				S	**Sn**	**07 21 24.5**	**-0.6**
	baz=248						
YHNB	**Yeheng**	**1.35**	**299**	P	**Pn**	**07 21 08.7**	**+0.5**
	baz=288						
YHNB				S	**Sn**	**07 21 24.6**	**-1.0**
	baz=288						
CHGB	**Renai**	**1.37**	**272**	P	**Pn**	**07 21 09.2**	**+0.6**
	baz=272						
CHGB				S	**Sn**	**07 21 26.4**	**+0.2**
	baz=272						
OWD	**Renai**	**1.37**	**268**	P	**Pn**	**07 21 09.0**	**+0.4**
	baz=279						
OWD				*i* S	**Sn**	**07 21 25.0**	**-1.1**
	baz=279						
JIJ	**Ishigaki jima**	**1.39**	**75**	P	**Pn**	**07 21 08.7**	**+0.1**
JIJ				*e*S	**Sn**	**07 21 25.7**	**-0.6**
YULB	**Yu-li**	**1.41**	**244**	P	**Pn**	**07 21 09.1**	**+0.3**
	baz=236						
YULB				S	**Sn**	**07 21 25.9**	**-0.9**
	baz=236						
TWF1	**Yuli**	**1.42**	**243**	*e*P	**Pn**	**07 21 09.1**	**-0.1**
	baz=234						
TWF1				S	**Sn**	**07 21 26.6**	**-0.6**
	baz=234						
FULB	**Fuli**	**1.50**	**238**	*e*P	**Pn**	**07 21 10.2**	**0.0**
	baz=228						
FULB				S	**Sn**	**07 21 28.5**	**-0.7**
	baz=228						
JISG	**Ishigakijimahi**	**1.60**	**69**	P	**Pn**	**07 21 11.5**	**0.0**
JISG				*e*S	**Sn**	**07 21 29.8**	**-1.7**
WHP	**Taichung City**	**1.60**	**280**	P	**Pb**	**07 21 13.8**	**+0.4**
	baz=280						
WHP				S	**Sn**	**07 21 31.9**	**+0.2**
	baz=280						
SMLT	**Sun Moon Lake**	**1.63**	**266**	*e*P	**Pn**	**07 21 13.0**	**+1.0**
	baz=266						
SMLT				S	**Sn**	**07 21 32.4**	**0.0**
	baz=266						
TYC	**Yuchr**	**1.67**	**267**	*e*P	**Pn**	**07 21 13.1**	**+0.7**
	baz=267						
TYC				*e*S	**Sn**	**07 21 34.2**	**+1.0**
	baz=267						
TWH	**Lutao**	**1.70**	**221**	*e*P	**Pn**	**07 21 11.9**	**-1.0**
	baz=219						
TWH				*e*S	**Sn**	**07 21 32.2**	**-1.7**
	baz=219						
ALS	**Alishan**	**1.78**	**254**	P	**Pb**	**07 21 16.1**	**-0.5**
	baz=254						
ALS				*e*S	**Sn**	**07 21 36.7**	**+0.2**
	baz=254						
JTJ	**Tarama**	**1.95**	**71**	P	**Pn**	**07 21 15.4**	**-1.0**
CHN4	**Tsaushan**	**2.02**	**251**	*e*P	**Pb**	**07 21 19.6**	**-0.9**
	baz=251						
CHN4				*e*S	**Sn**	**07 21 44.1**	**+2.2**
	baz=251						
SLGT	**Liugui**	**2.12**	**242**	*e*P	**Pn**	**07 21 20.3**	**+1.6**
	baz=235						
SLGT				*e*S	**Sn**	**07 21 46.0**	**+1.6**
	baz=235						
CHN1	**Nanshi**	**2.13**	**248**	*e*S	**Sb**	**07 21 47.8**	**-0.7**
	baz=248						
TWK	**Hsinying**	**2.14**	**250**	*e*S	**Sn**	**07 21 47.3**	**+2.4**
	baz=250						

*HLW **13** 07:29:36.1,32.73N×28.79E,h12km±22km,Ml3.4*
*GII **13** 07:29:39.1±0.0,32.34N×29.06E,h7km±1km,Mm2.8/1*
*NIC **13** 07:29:41.8±0.0,32.57N×28.93E,h35km±31km,Ml3.4/2*
ISC 13 07:29:39.8±1.5, 32.41N±0.06×28.83E±0.07, h35km, n19, σ1.9°40/29, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OSC1	**CSNet OBS 1**	**2.32**	**61**	P	**Pn**	**07 30 15.8**	**+0.3**
OSC1				S	**Sn**	**07 30 42.1**	**-0.7**
OSC2	**CSNet OBS 4**	**2.97**	**76**	P	**Pn**	**07 30 24.8**	**+0.5**
OSC2				S	**Sn**	**07 30 59.9**	**+1.2**
KOT	**Kottamia**	**3.57**	**133**	P	**Pn**	**07 30 34.6**	**+1.9**
	baz=136						
KOT				AMP		07 31 00.0	
	baz=136						
HSAF	**As Saff**	**3.63**	**139**	P	**Pn**	**07 30 35.8**	**+2.2**
	baz=141						
GLL	**Jalalah**	**3.75**	**138**	P	**Pn**	**07 30 37.1**	**+1.9**
	baz=140						
AKMS	**Akamas**	**3.91**	**47**	P	**Pn**	**07 30 38.0**	**+0.7**
AKMS				AML	AML	07 31 19.6	
	0.2nm,0.9s						
AKMS				AML	AML	07 31 21.4	
	0.2nm,0.4s						
SZAC	**Souni**	**4.11**	**54**	P	**Pn**	**07 30 40.8**	**+0.7**
SZAC				S	**Sn**	**07 31 26.0**	**-0.9**
SZAC				AML	AML	07 31 26.7	
	0.1nm,0.3s						
SZAC				AML	AML	07 31 26.7	
	0.1nm,0.3s						
SZAC				AML	AML	07 31 31.0	
	0.1nm,0.4s						
SZAC				AML	AML	07 31 31.0	
	0.1nm,0.4s						
ALFC	**Alefka**	**4.16**	**48**	P	**Pn**	**07 30 41.4**	**+0.6**
SWA2		**4.29**	**223**	P	**Pn**	**07 30 44.0**	**+1.4**
	baz=221						
SWA2				AMP		07 31 00.0	
	baz=221						
SWA2				S	**Sn**	**07 31 28.4**	**-3.0**
	baz=221						
ASGA	**Asgata**	**4.38**	**56**	P	**Pn**	**07 30 44.9**	**+1.1**
ASGA				S	**Sn**	**07 31 33.4**	**-0.1**
RSH		**4.41**	**108**	P	**Pn**	**07 30 44.4**	**+0.2**
	baz=111						
KZIT	**Kziot**	**4.97**	**106**	Sn	**Sn**	**07 31 46.8**	**-1.5**
HFRF	**Wahat Farafira**	**5.26**	**185**	P	**Pn**	**07 30 58.4**	**+2.5**
	baz=185						
HFRF				AMP		07 31 00.0	
	baz=185						
HFRF				S	**Sn**	**07 31 52.1**	**-3.4**
	baz=185						
HNTI	**Hanita**	**5.38**	**81**	Pn	**Pn**	**07 30 58.1**	**+0.5**
YTIR	**Yattir**	**5.44**	**99**	Sn	**Sn**	**07 31 59.6**	**-0.4**
DSI	**Dead Sea**	**5.62**	**97**	Pn	**Pn**	**07 31 00.9**	**0.0**
DSI				Sn	**Sn**	**07 32 03.5**	**-0.8**
PRNI	**Paran**	**5.66**	**110**	Pn	**Pn**	**07 31 00.9**	**-0.5**
PRNI				Sn	**Sn**	**07 32 04.4**	**-0.8**
HMDT	**Nahal Hemdat**	**5.67**	**90**	Pn	**Pn**	**07 31 01.6**	**+0.1**
HMDT				Sn	**Sn**	**07 32 04.7**	**-0.6**
MBRI	**Mt Berech**	**5.83**	**115**	Pn	**Pn**	**07 31 03.6**	**-0.2**
MBRI				Sn	**Sn**	**07 32 09.0**	**-0.5**

*JMA **13** 07:59:37.6±0.1,23.97N×121.69E,h38km±1km,M3.4*
*TAP **13** 07:59:38.3,24.00N×121.70E,h40km,ML4.0,B*
ISC 13 07:59:38.4±0.9, 24.00N±0.02×121.73E±0.02, h33km±4km, n116, σ0.99°/210, 12C-8D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.12**	**259**	⇑*i*P	**Pb**	**07 59 45.2**	**+0.9**
	baz=252						
HWA				*e*S	**Sb**	**07 59 49.9**	**+1.7**
	baz=252						
TWD	**Chiawan**	**0.15**	**303**	⇑*i*P	**Pn**	**07 59 45.0**	**+0.9**
	baz=312						
TWD				S	**Sb**	**07 59 50.1**	**+1.4**
	baz=312						
NACB	**Ninganchiao**	**0.21**	**324**	⇑*i*P	**Pn**	**07 59 45.4**	**+0.1**
	baz=320						
NACB				S	**Sb**	**07 59 50.5**	**+0.9**
	baz=320						
ETLH	**Xiulin Townshi**	**0.31**	**312**	⇑*i*P	**Pb**	**07 59 46.3**	**-0.1**
	baz=308						
ETLH				*e*S	**Sn**	**07 59 51.6**	**-0.4**
	baz=308						
ESL	**Shilin**	**0.33**	**236**	⇑*i*P	**Pb**	**07 59 46.5**	**-0.1**
	baz=239						
ESL				*e*S	**Sb**	**07 59 52.2**	**+0.1**
	baz=239						
ENA	**Nanau**	**0.43**	**1**	P	**Pb**	**07 59 47.8**	**-0.2**
	baz=12						
ENA				*e*S	**Sb**	**07 59 55.2**	**+0.8**
	baz=12						
EGFH	**Guangfu**	**0.43**	**220**	⇑*i*P	**Pb**	**07 59 47.7**	**-0.3**
	baz=226						
EGFH				*e*S	**Sb**	**07 59 54.2**	**-0.3**
	baz=226						
WHF	**Hehuan Shan**	**0.45**	**289**	⇑*i*P	**Pb**	**07 59 48.2**	**-0.4**
	baz=283						
WHF				*e*S	**Sb**	**07 59 55.0**	**-0.5**
	baz=283						
OWD	**Renai**	**0.51**	**265**	⇑*i*P	**Pb**	**07 59 49.0**	**-0.2**
	baz=270						
OWD				*e*S	**Sb**	**07 59 55.7**	**-1.0**
	baz=270						
CHGB	**Renai**	**0.51**	**277**	⇑*i*P	**Pb**	**07 59 49.2**	**-0.2**
	baz=274						
CHGB				*e*S	**Sb**	**07 59 57.0**	**+0.1**
	baz=274						
NNSB	**Datong**	**0.53**	**323**	⇑*i*P	**Pb**	**07 59 49.3**	**-0.3**
	baz=326						
NNSB				*e*S	**Sb**	**07 59 56.8**	**-0.5**
	baz=326						
NNSH	**Datong**	**0.53**	**323**	⇑*i*P	**Pb**	**07 59 49.3**	**-0.3**
	baz=325						
NNSH				*e*S	**Sb**	**07 59 56.7**	**-0.6**
	baz=325						
NNS	**Nan Shan**	**0.55**	**323**	⇑*i*P	**Pb**	**07 59 49.5**	**-0.3**
	baz=326						
NNS				*e*S	**Sb**	**07 59 57.1**	**-0.6**
	baz=326						
TWT	**Tachien**	**0.57**	**297**	*e*P	**Pb**	**07 59 50.4**	**+0.2**
	baz=294						
TWT				*e*S	**Sb**	**07 59 57.9**	**-0.4**
	baz=294						
HGSD	**Ruisui**	**0.58**	**209**	*e*P	**Pb**	**07 59 50.5**	**+0.2**
	baz=219						
HGSD				*e*S	**Sb**	**07 59 59.4**	**+1.1**
	baz=219						
VWDT	**VWDT**	**0.59**	**246**	*e*P	**Pb**	**07 59 50.5**	**0.0**
	baz=237						
VWDT				*e*S	**Sb**	**07 59 58.9**	**+0.1**
	baz=237						
TWC	**Suao**	**0.62**	**10**	*e*P	**Pn**	**07 59 51.0**	**+0.1**
	baz=20

baz=270
YHNB Yeheng 0.74 334 ⇓ *i*P Pn 07 59 52.5 -0.2
baz=336
YHNB *e*S Sn 08 00 02.1 -0.8
baz=336
SSLB Suanglung 0.74 254 ⇓ *i*P Pn 07 59 52.2 -0.4
baz=257
SSLB *e*S Sn 08 00 01.5 -1.3
baz=257
NSK Sanguang 0.75 333 ⇓ *i*P Pn 07 59 52.6 -0.3
baz=335
NSK *e*S Sn 08 00 02.1 -1.1
baz=335
SLBB Yuanshan 0.76 353 *e*P Pn 07 59 52.8 -0.1
baz=346
SLBB *e*S Sn 08 00 03.1 -0.1
baz=346
TWF1 Yuli 0.76 212 *e*P Pn 07 59 51.8 -1.1
baz=220
TWF1 *e*S Sn 08 00 01.9 -1.3
baz=220
WHP Taichung City 0.77 291 *e*P Pn 07 59 53.2 +0.1
baz=291
WHP *e*S Sn 08 00 02.8 -0.8
baz=291
SMLT Sun Moon Lake 0.77 261 *e*P Pn 07 59 52.9 -0.2
baz=257
SMLT *e*S Sn 08 00 03.4 -0.3
baz=257
NWLT Wulai 0.80 345 *e*P Pn 07 59 53.2 -0.3
baz=340
NWLT *e*S Sn 08 00 03.8 -0.5
baz=340
TYC Yuchr 0.81 263 *e*P Pn 07 59 53.3 -0.2
baz=263
TYC *e*S Sn 08 00 03.8 -0.5
baz=263
NTC Toucheng 0.85 6 *e*P Pn 07 59 55.0 +0.8
baz=356
NTC *e*S Sn 08 00 07.3 +1.7
baz=356
WHYT Xinyi Township 0.86 250 *e*P Pn 07 59 54.7 +0.4
baz=247
YUS Yu-Shan 0.88 235 *e*P Pn 07 59 55.0 +0.1
baz=226
YUS *e*S Sn 08 00 06.1 -0.7
baz=226
FULB Fuli 0.89 207 *e*P Pn 07 59 54.7 -0.1
baz=215
FULB *e*S Sn 08 00 06.0 -0.6
baz=215
LIOB Emei 0.92 315 ⇓ *i*P Pn 07 59 56.0 +0.9
baz=316
LIOB *e*S Sn 08 00 07.5 +0.4
baz=316
NSTT Nanjuang 0.92 313 ⇓ *i*P Pn 07 59 55.8 +0.7
baz=315
NSTT *e*S Sn 08 00 07.2 +0.1
baz=315
WJS Zhushan 0.94 259 *e*P Pn 07 59 56.4 +1.1
baz=259
WJS *e*S Sn 08 00 08.8 +1.2
baz=259
TWQ1 Liyutan 0.94 292 ⇓ *i*P Pn 07 59 56.1 +0.7
baz=292
TWQ1 *e*S Sn 08 00 08.5 +0.7
baz=292
WLTB Daxi 0.95 333 *e*P Pn 07 59 56.3 +0.7
baz=336
WLTB *e*S Sn 08 00 08.8 +0.8
baz=336
CHKT Chengkung 0.96 201 *e*P Pn 07 59 55.8 +0.2
baz=187
WNT Mingjian 0.96 263 *e*P Pn 07 59 56.7 +1.0
baz=262
WNT *e*S Sn 08 00 09.6 +1.2
baz=262
TIPB Shuangxi 0.97 5 *e*P Pn 07 59 56.6 +0.7
baz=357
TIPB *e*S Sn 08 00 08.6 +0.1
baz=357
TCU Taichung 0.97 279 *e*P Pn 07 59 56.8 +1.0
baz=278
TCU *e*S Sn 08 00 10.0 +1.5
baz=278
NHDH Xindian Distri 0.98 349 *e*P Pn 07 59 56.3 +0.4
baz=343
NHDH *e*S Sn 08 00 08.5 -0.1
baz=343
NSY Sanyi 0.98 295 P Pn 07 59 56.8 +0.9
baz=295
NSY *e*S Sn 08 00 10.5 +1.9
baz=295
ALS Alishan 0.98 240 *e*P Pn 07 59 56.5 +0.3
baz=232
ALS *e*S Sn 08 00 09.2 +0.1
baz=232
TWA Mucha 0.98 352 *e*P Pn 07 59 56.4 +0.3
baz=348
TWA *e*S Sn 08 00 08.7 -0.1
baz=348
NMLH Miaoli 1.01 302 *e*P Pn 07 59 57.0 +0.6
baz=302
NMLH *e*S Sn 08 00 11.1 +1.6
baz=302
TWB1 Santiao Chiao 1.03 13 *e*P Pn 07 59 57.7 +1.1
baz=25
TWB1 *e*S Sn 08 00 11.9 +2.0
baz=25
PTSB Yuanli 1.04 296 *e*P Pn 07 59 57.2 +0.5
baz=296
PTSB *e*S Sn 08 00 11.2 +1.1
baz=296
ELDTW Lidau 1.04 219 *e*P Pn 07 59 56.1 -0.8
baz=211
SBCB Hsinchu 1.04 319 *e*P Pn 07 59 57.4 +0.6
baz=320
SBCB *e*S Sn 08 00 11.9 +1.7
baz=320
CHN5 Tsauling 1.04 248 ⇓ *i*P Pn 07 59 57.6 +0.7
baz=238
CHN5 *e*S Sn 08 00 11.8 +1.4
baz=238
TAP Taipei 1.05 349 *e*S Sn 08 00 11.1 +0.6
baz=350
WDJ Dajia District 1.05 289 *e*P Pn 07 59 56.8 -0.1
baz=289
WDJ *e*S Sb 08 00 12.7 +1.0
baz=289
HSN Hsinchu 1.06 319 *e*P Pn 07 59 57.6 +0.6
baz=323
HSN *e*S Sb 08 00 12.9 +1.1
baz=323
NWF Wu-fen Shan 1.07 2 *e*P Pn 07 59 57.9 +0.6
baz=352
NWF *e*S Sn 08 00 12.2 +1.3
baz=352
WFSB Wu-fen Shan 1.07 2 *e*P Pn 07 59 57.8 +0.6
baz=352
WFSB *e*S Sn 08 00 12.8 +1.9
baz=352
WCHH Zhanghua 1.07 274 *e*P Pn 07 59 58.0 +0.8
baz=274
WCHH *e*S Sn 08 00 12.1 +1.1
baz=274
NCUH Zhongli 1.08 333 *e*P Pn 07 59 57.9 +0.5
baz=334
NCUH *e*S Sn 08 00 12.7 +1.4
baz=334
NCU National Centr 1.08 333 *e*P Pn 07 59 57.9 +0.5
baz=334
NCU *e*S Sn 08 00 12.9 +1.6
baz=334
WGK Gukeng 1.11 254 *e*P Pn 07 59 58.8 +1.0
baz=254
WGK *e*S Sn 08 00 13.8 +1.8
baz=254
TWS1 Kuangyinshan 1.13 345 *e*P Pn 07 59 58.2 +0.2
baz=356
TWS1 *e*S Sn 08 00 13.4 +0.9
baz=356
WDLH Douliu 1.14 254 P Pn 07 59 59.1 +1.1
baz=254
WDLH *e*S Sn 08 00 14.6 +2.1
baz=254
YM01 YM01 1.15 353 *e*P Pn 07 59 58.0 -0.3
baz=354
YM10 YM10 1.16 352 *e*P Pn 07 59 58.4 -0.1
baz=353
YM10 *e*S Sn 08 00 12.8 -0.5
baz=353
YM04 YM04 1.16 351 *e*P Pn 07 59 58.3 -0.1
baz=353
YM11 YM11 1.17 353 *e*P Pn 07 59 58.4 -0.2
baz=354
YM11 *e*S Sn 08 00 13.3 -0.2
baz=354
YM03 YM03 1.19 352 *e*P Pn 07 59 58.5 -0.4
baz=353
NTST Danshui 1.19 348 *e*P Pn 07 59 59.1 +0.4
baz=349
NTST *e*S Sn 08 00 13.7 -0.1
baz=349
YM08 YM08 1.19 354 *e*P Pn 07 59 58.4 -0.5
baz=341
ANP Anpu 1.20 351 *e*P Pn 07 59 58.5 -0.5
baz=353
JYNG Yonagunijimaku 1.20 68 P Pn 07 59 59.3 +0.4
JYNG S Sn 08 00 14.6 +0.6
STYT Tauyuan 1.22 227 *e*P Pn 07 59 59.9 +0.6
baz=227
STYT *e*S Sn 08 00 15.2 +0.5
baz=227
CHN4 Tsaushan 1.23 238 P Pn 08 00 00.6 +1.2
baz=228
CHN4 *e*S Sb 08 00 17.4 +0.8
baz=228
TPUB Ta-pu 1.23 236 *e*P Pn 08 00 00.5 +1.2
baz=230
TPUB *e*S Sn 08 00 16.8 +2.0
baz=230
CHN2 Minshiung 1.24 248 *e*P Pn 08 00 01.4 +1.9
baz=248
CHN2 *e*S Sb 08 00 17.9 +0.9
baz=248
YOJ Yonaguni jima 1.26 68 P Pn 08 00 00.1 +0.4
YOJ *e*S Sn 08 00 16.2 +0.7
WTP Ta-pu 1.27 234 *i* P Pn 08 00 01.0 +1.1
baz=234
WTP *e*S Sn 08 00 17.7 +1.8
baz=234
TWY Chenhua 1.27 355 *e*P Pn 08 00 00.0 0.0
baz=343
TWY *e*S Sn 08 00 14.8 -1.1
baz=343
CHY Chiayi 1.30 248 *e*P Pn 08 00 01.6 +1.3
baz=247
CHY *e*S Sn 08 00 18.9 +2.4
baz=247
TWH Lutao 1.30 190 *e*P Pn 07 59 59.6 -0.8
baz=182
TWH *e*S Sn 08 00 15.9 -0.8
baz=182
TWGBT Beinan 1.32 207 *e*P Pn 07 59 59.1 -1.5
baz=195
TWG Pinlang 1.32 207 *e*P Pn 07 59 59.3 -1.3
baz=195
WTCT Ta-ch'eng 1.33 264 *e*P Pn 08 00 01.6 +0.8
baz=274
WTCT *e*S Sn 08 00 19.8 +2.4
baz=274
TWK Hsinying 1.35 238 *e*P Pn 08 00 02.2 +1.1
baz=228
TWK *e*S Sn 08 00 20.0 +2.1
baz=228
CHN1 Nanshi 1.37 234 *e*P Pn 08 00 02.4 +1.1
baz=234
CHN1 *e*S Sn 08 00 19.9 +1.5
baz=234
SNST Tainan City 1.37 236 *e*P Pn 08 00 01.9 +0.6
baz=236
SNST *e*S Sn 08 00 20.9 +2.6
baz=236
SGST Jiashian 1.40 229 *e*P Pn 08 00 02.1 +0.5
baz=220
SGST *e*S Sn 08 00 20.2 +1.3
baz=220
WLGB Puzi 1.41 249 *e*P Pn 08 00 02.6 +0.8
baz=237
WLGB *e*S Sb 08 00 22.6 +0.7
baz=237
SLGT Liugui 1.41 225 *e*P Pn 08 00 03.2 +1.3
baz=226
SLGT *e*S Sb 08 00 22.4 +0.4
baz=226
WSF Szhu 1.43 256 *e*P Pn 08 00 03.0 +1.0
baz=255
WSF *e*S Sb 08 00 22.7 +0.3
baz=255
CHN8 Yiju 1.54 245 *e*P Pn 08 00 04.1 +0.5
baz=244
ECL Taimali 1.57 207 *e*P Pn 08 00 04.3 +0.3
baz=198
SSD Sandimen 1.61 219 *e*P Pn 08 00 06.2 +1.7
baz=221
SSD *e*S Sn 08 00 25.5 +1.4
baz=221
PCYT Pengchaiyu 1.65 11 *e*P Pn 08 00 04.2 -1.0
baz=13
MASBT Mashibuluo 1.71 216 *e*P Pn 08 00 07.1 +1.1
baz=219
MASBT *e*S Sn 08 00 28.7 +1.9
baz=219
SSPT Xinbi 1.85 216 *e*P Pn 08 00 10.7 +2.8
baz=204
IRIF Iriomote-Funau 1.86 79 P Pn 08 00 08.5 +0.5
IRIF S Sn 08 00 31.0 +0.7
HATJ Hateruma jima 1.90 88 P Pn 08 00 09.4 +0.9
HATJ S Sn 08 00 32.3 +1.0
SCZT Fangliau 1.92 212 *e*P Pn 08 00 10.1 +1.3
baz=213
PHUB P'eng-hu 2.04 257 *e*P Pn 08 00 10.1 -0.3
baz=257
PHUB *e*S Sn 08 00 35.5 +0.7
baz=257
WDGT Dungji 2.04 249 *e*P Pn 08 00 10.8 +0.3
baz=248
PNG Penghu 2.04 258 *e*P Pn 08 00 10.4 0.0
baz=258
PNG *e*S Sn 08 00 35.0 +0.2
baz=258
JKRS Kuro-shima 2.10 83 P Pn 08 00 12.5 +1.2
JKRS S Sn 08 00 37.9 +1.7
TWKBT Hengchun 2.22 203 *e*P Pn 08 00 14.2 +1.3
baz=194
JIJ Ishigaki jima 2.23 80 P Pn 08 00 13.6 +0.5
JIJ S Sn 08 00 39.2 -0.4
VWUC VWUC 2.30 296 *e*P Pn 08 00 13.0 -1.0
baz=295
JISG Ishigakijimahi 2.43 76 P Pn 08 00 16.1 +0.3
JISG S Sn 08 00 44.0 -0.4
MATB Ma-tsu 2.69 323 *e*P Pn 08 00 18.1 -1.3
baz=322
JTJ Tarama 2.79 76 P Pn 08 00 21.9 +1.2
JTJ S Sn 08 00 53.9 +0.7
KNM Kinmen 3.04 279 *e*P Pn 08 00 25.2 +1.0
baz=276
KNMB Chin-men Tao 3.09 279 *e*P Pn 08 00 24.0 -0.9
baz=278

IDC ***13*** *08:08:18.9±0.7,22.°98S×175.°59W,h0km,mb4.2/11, mb1 4.5/11,mb1mx4.3/24,mbtmp4.2/11,Error ellipse: s-maj=37.3km s-min=18.0km az=139.0*
NEIC ***13*** *08:08:22.0±1.5,23.°2S±0.°1×175.°6W±0.°2,h21km±5km, mb4.7/46,Error ellipse: s-maj=23.9km s-min=14.8km az=114.0*
ISC 13 08:08:24.0±0.5,23.°15S±0.°09×175.°6W±0.°1,h34km,n57, σ0s89/52,mb4.5/32,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**6.44**	**199**	Pn	**Pn**	**08 09 56.6**	**+0.2**
MSVF	**Nonsavu**	**8.05**	**311**		Pn	08 10 26.6	+7.9
BKZ	**Black Stump Fm**	**17.34**	**201**	Pn	**Pn**	**08 12 21.1**	**-2.4**
RPZ	**Rata Peaks**	**23.30**	**205**	P	**P**	**08 13 28.7**	**-0.2**
	2.9nm,0.6s,baz=29,slow=19,SNR=1.5						
RPZ	**Rata Peaks**	**23.30**	**205**	P	**P**	**08 13 27.3**	**-1.6**
RPZ				IAmb	IAmb	08 13 43.4	
	comp=Z,28nm,1.3s						
CTAO	**Charters Tower**	**35.56**	**267**	P	**P**	**08 15 18.9**	**+0.6**
CTAO				IAmb	IAmb	08 15 30.9	
	comp=Z,8.8nm,0.7s						
TOO	**Toolangi**	**36.28**	**238**	P	**P**	**08 15 25.2**	**+0.9**
TOO				IAmb	IAmb	08 15 26.4	
	comp=Z,13nm,1.4s						
STKA	**Stephens Creek**	**38.78**	**247**	P	**P**	**08 15 45.8**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=86,slow=11,SNR=5.4						
STKA	**Stephens Creek**	**38.78**	**247**	P	**P**	**08 15 45.2**	**-0.2**
BBOO	**Buckleboo**	**43.48**	**246**	P	**P**	**08 16 23.3**	**-0.9**
BBOO				IAmb	IAmb	08 16 34.3	
	comp=Z,12nm,1.1s						
AS31	**Alice Springs**	**46.18**	**259**	P	**P**	**08 16 46.0**	**+0.1**
ASAR	**Alice Springs**	**46.18**	**259**	P	**P**	**08 16 45.8**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=89,slow=6.2,SNR=22						
WB2	**Warramunga Arr**	**46.52**	**264**	P	**P**	**08 16 47.6**	**-0.9**
WB2				IAmb	IAmb	08 16 48.2	
	comp=Z,15nm,1.4s						
WB0	**Warramunga Arr**	**46.52**	**264**	P	**P**	**08 16 47.7**	**-0.8**
WRA	**Warramunga Arr**	**46.53**	**264**	P	**P**	**08 16 47.7**	**-0.9**
	comp=Z,3.4nm,0.3s,baz=103,slow=8.5,SNR=249						
KNRA	**Kununurra**	**52.78**	**267**	P	**P**	**08 17 35.9**	**-0.3**
VNDA	**Vanda**	**55.50**	**186**	P	**P**	**08 17 55.0**	**-0.2**
NWAO	**Narrogin (SRO)**	**59.24**	**244**	P	**P**	**08 18 21.4**	**-0.8**
MORW	**Morawa**	**60.95**	**249**	P	**P**	**08 18 33.1**	**-0.9**
MORW				IAmb	IAmb	08 18 47.0	
	comp=Z,8.5nm,1.3s						
CASY	**Casey**	**62.57**	**206**	P	**P**	**08 18 44.5**	**+0.3**
CASY				IAmb	IAmb	08 18 48.2	
	comp=Z,8.8nm,1.2s						
QSPA	**South Pole Qui**	**66.94**	**180**	P	**P**	**08 19 14.0**	**+1.1**
PEA0B	**Petropavlovsk-**	**79.41**	**344**	P	**P**	**08 20 26.1**	**-0.3**
PETK	**Petropavlovsk-**	**79.41**	**344**	P	**P**	**08 20 26.6**	**+0.2**
	comp=Z,3.9nm,0.9s,baz=145,slow=5.3,SNR=5.0						
ISA	**Isabella, Lake**	**79.61**	**44**	P	**P**		
ISA				IAmb	IAmb	**08 20 28.0**	**+0.1**
	comp=Z,7.8nm,1.2s						
MAW	**Mawson**	**79.84**	**199**	P	**P**	**08 20 30.7**	**+2.1**
	comp=Z,3.1nm,0.7s,baz=130,slow=7.7,SNR=8.3						
MAW	**Mawson**	**79.84**	**199**	P	**P**	**08 20 30.3**	**+1.6**
OMMB	**Old Mammoth Mi**	**80.49**	**42**	P	**P**	**08 20 32.9**	**-0.1**
WAKR	**Walker**	**80.78**	**41**	P	**P**	**08 20 34.6**	**+0.2**
WAKR				IAmb	IAmb	08 20 35.5	
	comp=Z,5.5nm,1.0s						
PNTR	**Pine Nut**	**81.05**	**41**	P	**P**	**08 20 36.0**	**+0.1**
PNTR				IAmb	IAmb	08 20 36.9	
	comp=Z,5.8nm,0.8s						
YERR	**Yerington**	**81.20**	**41**	P	**P**	**08 20 36.8**	**+0.2**
YERR				IAmb	IAmb	08 20 37.4	
	comp=Z,3.3nm,0.7s						
NVAR	**Mina Array Bea**	**81.43**	**42**	P	**P**	**08 20 37.7**	**-0.2**
	comp=Z,2.8nm,0.7s,baz=226,slow=8.8,SNR=25						
K05A	**Summer Lake**	**82.64**	**37**	IAmb	IAmb	08 20 46.0	
	comp=Z,8.8nm,1.1s						
PINE	**Pine Mountain**	**83.32**	**36**	IAmb	IAmb	08 20 48.8	
	comp=Z,8.0nm,1.1s						
WVOR	**Wild Horse Val**	**83.74**	**39**	IAmb	IAmb	08 20 50.5	
	comp=Z,7.4nm,1.1s						
I07A	**Izee**	**84.30**	**37**	IAmb	IAmb	08 20 53.4	
	comp=Z,6.1nm,1.1s						
SNAA	**Sanae**	**85.30**	**178**	P	**P**	**08 20 57.3**	**+0.1**
SNAA				IAmb	IAmb	08 21 10.7	
	comp=Z,3.1nm,1.0s						
G08A	**Pilot Rock**	**85.37**	**36**	IAmb	IAmb	08 20 58.7	
	comp=Z,5.8nm,1.2s						
MNTX	**Cornudas Mount**	**86.47**	**53**	IAmb	IAmb	08 21 04.8	
	comp=Z,3.6nm,1.1s						
TX32	**Lajitas Array**	**86.60**	**56**	P	**P**	**08 21 03.9**	**-0.4**
TXAR	**Lajitas Array**	**86.60**	**56**	P	**P**	**08 21 03.9**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=213,slow=9.0,SNR=6.3						
ANMO	**Albuquerque**	**87.32**	**50**	P	**P**	**08 21 07.4**	**-0.4**
TRF	**Thorofare Moun**	**88.58**	**11**	P	**P**	**08 21 12.4**	**-0.6**
RND	**Reindeer**	**88.80**	**12**	P	**P**	**08 21 14.1**	**+0.2**
RND				IAmb	IAmb	08 21 27.0	
	comp=Z,3.5nm,0.8s						
PDAR	**Pinedale Array**	**89.36**	**42**	P	**P**	**08 21 16.4**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=204,slow=3.3,SNR=7.4						
DOT	**Dot Lake**	**89.97**	**13**	P	**P**	**08 21 18.6**	**-0.8**
DOT				IAmb	IAmb	08 21 20.4	
	comp=Z,2.7nm,1.0s						
ILAR	**Eielson Array**	**90.40**	**12**	P	**P**	**08 21 20.5**	**-0.8**
	comp=Z,0.9nm,0.9s,baz=214,slow=6.0,SNR=6.0						
DAWY	**Dawson**	**91.39**	**15**	P	**P**	**08 21 26.0**	**0.0**
DAWY				IAmb	IAmb	08 21 38.5	
	comp=Z,2.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**93.12**	**289**	P	**P**	**08 21 37.5**	**+2.5**
	comp=Z,2.6nm,0.8s,baz=115,slow=3.2,SNR=11						
YKA	**Yellowknife Ar**	**97.97**	**24**	P	**P**	**08 21 55.4**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=241,slow=3.8,SNR=5.9						
KSH	**Kashi**	**118.24**	**304**	PKP	**PKiKP**	**08 27 10.1**	**+2.1**
ARCES	**ARCESS Array B**	**131.91**	**350**	PKP	**PKiKP**	**08 27 33.6**	**-0.5**
	comp=Z,2.3nm,0.8s,baz=328,slow=1.9,SNR=9.0						
FINES	**FINESS Array B**	**138.93**	**344**	PKP	**PKiKP**	**08 27 48.1**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=20,slow=6.1,SNR=5.6						
AKASG	**Malin Array Be**	**146.41**	**331**	PKPbc	**PKPbc**	**08 28 00.8**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=39,slow=4.2,SNR=7.0						
BRTR	**Keskin Array B**	**150.28**	**311**	PKPbc	**PKPbc**	**08 28 11.5**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=93,slow=2.5,SNR=6.0						
CLL	**Colln**	**151.12**	**349**	*i* PKPbc	**PKiKP**	**08 28 14.6**	**+0.7**
	comp=Z,11nm,1.1s						
CLL				*e*PKPbc	**PKPab**	**08 28 20.0**	**-1.0**
CLL				*e*PKPab	**sPKPdf**	**08 28 21.0**	**-0.1**
	comp=Z,7.0nm,1.1s						
BRG	**Berggiesshubel**	**151.35**	**347**	*i* PKP	**PKiKP**	**08 28 14.6**	**+0.1**
	comp=Z,7.2nm,0.7s						
GERES	**GERESS Array B**	**153.32**	**346**	PKPbc	**PKiKP**	**08 28 18.6**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=48,slow=2.2,SNR=4.8						

UCR 13 08:21:57.3±1.3,9.°67N×84.°91W,h3km±4km,MD3.6,Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRA1	**San Ramn**	**0.59**	**45**	*e*P	Pg	08 22 09.3	+0.7
JTS	**Las Juntas de**	**0.62**	**356**	*e*P	Pg	08 22 09.7	+0.4
CASO	**Castillo**	**0.78**	**13**	*i* P	Pg	08 22 12.7	+0.4
PLVR	**Palo Verde**	**0.81**	**327**	*e*P	Pg	08 22 12.7	0.0
ARE1	**Arenal 1**	**0.81**	**13**	*e*P	Pb	08 22 13.5	-0.6
FORC	**Fortuna**	**0.83**	**16**	*i* P	Pg	08 22 13.6	+0.4
CEDE	**Laguna Cedeo**	**0.84**	**14**	*e*P	Pb	08 22 14.0	-0.6
GUAI	**GUAI**	**0.84**	**315**	*i* P	Pg	08 22 13.2	-0.3
GUAI				*i* S	Sb	08 22 26.2	-0.2
HDC	**Heredia**	**0.85**	**67**	*e*P	Pg	08 22 13.9	+0.3
SJS	**Escuela Geolog**	**0.88**	**72**	*e*P	Pg	08 22 14.3	0.0
LCR2	**La Lucha 2**	**0.89**	**85**	*e*P	Pg	08 22 14.1	-0.4
ACAL	**Aguas Claras**	**0.97**	**352**	*i* P	Pg	08 22 15.6	-0.3
CUI	**Cuipilapa**	**1.01**	**346**	*i* P	Pg	08 22 16.4	-0.4
CUI				*i* S	Sb	08 22 32.0	+0.6
HORNC	**Hornillas**	**1.07**	**346**	*i* P	Pg	08 22 17.2	-0.6
GUAB	**Guayabo de Bag**	**1.08**	**343**	*i* P	Pg	08 22 17.6	-0.4
GPS2	**Hotel Rincn d**	**1.16**	**338**	*i* P	Pg	08 22 18.6	-1.0
GPS3	**Bodega del ICE**	**1.17**	**337**	*i* P	Pg	08 22 18.9	-0.9
BUEV	**Buena Vista**	**1.23**	**336**	*i* P	Pg	08 22 19.6	-1.2
GB1A	**Borinquen Arri**	**1.24**	**337**	*e*P	Pg	08 22 20.0	-1.1
GB1A				*i* S	Sb	08 22 37.9	-0.1

INET ***13*** *08:39:29.4,6.°86N×82.°51W,h10km,ML3.7*
UCR ***13*** *08:39:33.6±1.6,7.°17N×82.°40W,h17km±30km, mb4.4(NEIC)*
UPA ***13*** *08:39:33.8±2.0,7.°23N×82.°41W,h13km±14km,MW4.6*
IDC ***13*** *08:39:35.5±1.2,7.°83N×82.°01W,h0km,mb3.9/7, mb1 4.2/10,mb1mx4.0/31,mbtmp4.0/10,ML3.8/3,MS4.2/2, Ms1 4.2/2,ms1mx3.5/36,Error ellipse: s-maj=56.3km s-min=20.7km az=47.0*
NEIC ***13*** *08:39:38.1±1.3,7.°67N±0.°09×82.°36W±0.°07,h10km±1km, mb4.4/57,Error ellipse: s-maj=16.8km s-min=9.9km az=213.0*
ISC 13 08:39:33.9±2.8,7.°33N±0.°05×82.°38W±0.°04,h2km±17km, n179,σ1s47/179,mb4.4/31,27C-18D,South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
REME3	**Remedios, Chir**	**1.04**	**31** ⇓	*e*P	**Pb**	**08 39 53.8**	**-0.9**
PVID3	**Puerto Vidal,**	**1.04**	**47**	*e*P	**Pb**	**08 39 53.3**	**-1.4**
PEDE3	**Pedregal, Chir**	**1.05**	**357** ⇑	*i*P	**Pb**	**08 39 53.6**	**-1.2**
CHIR3	**Chiriqui UPA,**	**1.06**	**2** ⇑	*i*P	**Pb**	**08 39 53.9**	**-1.1**
CHIR3				*i* S	**Sn**	**08 40 12.3**	**+1.2**
LOCO3	**Loma Colorada,**	**1.07**	**358**	*e*P	**Pn**	**08 39 54.2**	**-1.8**
LOMA3	**Las Lomas, Chi**	**1.09**	**359**	*i* P	**Pn**	**08 39 54.4**	**-1.9**
DVD	**David**	**1.10**	**356** ⇓	*i*P	**Pn**	**08 39 54.4**	**-2.0**
SBAR3	**San Bartolo, C**	**1.10**	**333** ⇑	*i*P	**Pn**	**08 39 54.5**	**-1.9**
PSOM3	**Paja de Sombre**	**1.34**	**2**	*e*P	**Pn**	**08 39 58.7**	**-1.1**
RSUS3	**Rio de Jesus,**	**1.37**	**62** ⇑	*i*P	**Pn**	**08 39 58.5**	**-1.6**
BCO2	**Palmira**	**1.39**	**354** ⇑	*i*P	**Pn**	**08 39 58.9**	**-1.6**
MESA3	**La Mesa, Verag**	**1.43**	**55**	*e*P	**Pn**	**08 39 59.0**	**-1.9**
BRU2	**Volcan**	**1.49**	**348** ⇑	*i*P	**Pn**	**08 40 00.1**	**-1.8**

BRU2 eS Sb 08 40 22.6 +0.8
BRU2 Volcan 1.49 348 ⇑ iP Pn 08 40 00.1 -1.8
PONU3 Ponuga, Veragu 1.49 68 ⇓ iP Pn 08 40 00.2 -1.5
PONU3 i S Sn 08 40 19.2 -2.7
CACAO El Cacao, Vera 1.50 89 ⇑ iP Pn 08 39 59.8 -2.1
CACAO i S Sn 08 40 18.8 -3.3
PTJ1 Puerto Jimnez 1.51 323 ⇑ iP Pn 08 40 00.3 -1.7
PTJ1 Puerto Jimnez 1.51 323 ⇑ iP Pn 08 40 00.3 -1.7
MLIR3 Monte Lirio, C 1.52 343 ⇑ iP Pn 08 40 00.9 -1.3
CNAZ3 Canazas, Verag 1.54 49 ⇑ iP Pn 08 40 00.6 -1.8
STIA3 Santiago, Vera 1.58 61 ⇑ iP Pn 08 40 01.7 -1.4
STIA3 eS Sn 08 40 22.6 -1.5
EDSV San Vito 1.59 338 eP Pn 08 40 02.0 -1.3
SFRA3 San Francisco, 1.66 57 ⇑ iP Pn 08 40 02.8 -1.2
SFRA3 i S Sn 08 40 26.1 0.0
OCU3 Ocu, Herrera 1.70 69 ⇓ eP Pn 08 40 03.2 -1.5
OCU3 i S Sn 08 40 25.7 -1.3
CALO3 Calobre, Verag 1.81 57 ⇓ iP Pn 08 40 05.8 -0.4
PESE3 Pese, Herrera 1.84 72 eP Pn 08 40 06.4 -0.1
TOSI3 Tonosi 1.92 88 ⇓ eP Pn 08 40 05.7 -2.0
EDPN Palmar Norte 1.94 327 ⇑ iP Pn 08 40 06.5 -1.5
CRIS3 El Cristo, Coc 1.97 62 ⇑ iP Pn 08 40 07.2 -1.2
CRIS3 i S Sn 08 40 32.3 -1.4
EDBA Buenos Aires 2.03 334 ⇑ iP Pn 08 40 08.7 -0.5
AZU Azuero 2.13 77 eP Pn 08 40 09.7 -0.9
AZU eS Sn 08 40 36.9 -0.8
AZU Azuero 2.13 77 iP Pn 08 40 09.2 -1.4
AZU i S Sn 08 40 36.8 -0.8
AZU Azuero 2.13 77 ⇓ eP Pn 08 40 08.8 -1.8
AZU eS Sn 08 40 33.1 -4.5
ACHO3 Achotines, Los 2.19 88 ⇓ iP Pn 08 40 09.7 -1.6
ACHO3 i S Sn 08 40 35.2 -3.8
PCRI3 Pocri, Los San 2.26 82 ⇓ eP Pn 08 40 11.5 -0.9
PNME Penonome 2.33 60 eP Pn 08 40 12.9 -0.4
PNME Penonome 2.33 60 ⇓ iP Pn 08 40 12.9 -0.4
EDDO Dominical 2.41 322 ⇑ iP Pn 08 40 13.0 -1.4
VTON El Valle, Cocl 2.58 60 ⇓ eP Pn 08 40 17.2 +0.5
LCR2 La Lucha 2 2.89 326 ⇑ iP Pn 08 40 20.0 -1.1
ZANG Zanguenga, Cho 2.96 57 ⇓ eP Pn 08 40 21.5 -0.5
ZANG eS Sn 08 40 56.3 -1.9
ZANG Zanguenga, Cho 2.96 57 ⇓ eP Pn 08 40 21.2 -0.8
PINA Piqa, Costa Ab 2.98 50 ⇓ eP Pn 08 40 24.0 +1.7
CVTR Volcan Turrial 3.00 333 ⇑ iP Pn 08 40 22.9 -0.1
SJS Escuela Geolog 3.08 327 eP Pn 08 40 22.8 -0.9
SPIL Cristobal, Col 3.09 51 eP Pb 08 40 28.7 -0.9
BCIP Isla Barro Col 3.10 54 eP Pn 08 40 24.0 0.0
BCIP eS Sb 08 41 05.8 -2.4
BCIP Isla Barro Col 3.10 54 eP Pn 08 40 23.6 -0.4
BCIP Isla Barro Col 3.10 54 ⇓ eP Pn 08 40 23.2 -0.7
BCIP Isla Barro Col 3.10 54 Pn 08 40 24.3 +0.3
HDC Heredia 3.16 327 ⇑ iP Pn 08 40 24.7 +0.2
HDC Heredia 3.16 327 ⇑ iP Pn 08 40 24.6 -0.3
HDC Heredia 3.16 327 Pn 08 40 24.5 -0.4
PML3 Paraiso 3.21 58 eP Pb 08 40 30.0 -1.7
FLAM Flamenco Islan 3.22 61 eP Pn 08 40 26.2 +0.7
FRIJ El Hiral 3.23 54 eP Pn 08 40 25.1 -0.5
UPA Univ. de Panam 3.25 60 eP Pn 08 40 27.2 +1.2
UPA eS Sb 08 41 15.3 +2.7
UPA Univ. de Panam 3.25 60 ⇓ eP Pn 08 40 26.1 +0.1
UPA eS Sn 08 41 04.2 -1.2
UPA Univ. de Panam 3.25 60 ⇓ eP Pn 08 40 25.8 -0.2
SRA1 San Ramn 3.44 323 ⇑ eP Pn 08 40 27.5 -1.2
CHPO Chepo, Panama 3.71 60 eP Pn 08 40 32.8 +0.5
MIRA3 Miramar, Colon 3.75 53 eP Pb 08 40 38.7 -2.2
CASO Castillo 3.87 323 eP Pn 08 40 35.2 +0.7
ARE1 Arenal 1 3.88 323 eP Pn 08 40 34.7 +0.1
CEDE Laguna Cedeo 3.89 324 eP Pn 08 40 35.0 +0.2
JTS Las Juntas de 3.89 319 Pn Pn 08 40 33.4 -1.4
30nm,0.3s,baz=162,slow=14,SNR=105
JTS Sn Sn 08 41 18.7 -2.4
3.3nm,0.3s,baz=234,slow=19,SNR=4.2
JTS Las Juntas de 3.89 319 eP Pn 08 40 33.4 -1.4
JTS Las Juntas de 3.89 319 ⇑ iP Pn 08 40 33.2 -1.6
JTS Las Juntas de 3.89 319 Pn 08 40 33.3 -1.6
CNTA3 Canitas, Panam 3.93 61 eP Pn 08 40 35.4 +0.1
PLVR Palo Verde 4.20 316 ⇑ iP Pn 08 40 38.6 -0.7
ACAL Aguas Claras 4.20 322 eP Pn 08 40 39.9 +0.7
PTEN Parque Tenorio 4.24 323 eP Pn 08 40 39.9 +0.3
GUAI GUAI 4.26 314 ⇑ iP Pn 08 40 38.8 -1.1
CUI Cuipilapa 4.30 320 eP Pn 08 40 39.5 -1.0
COLC Colonia 4.33 320 eP Pn 08 40 40.8 -0.1
HORNC Hornillas 4.35 321 eP Pn 08 40 41.6 +0.3
LIM1 Limonal 4.39 320 eP Pn 08 40 41.4 -0.3
UPD2 Meteti 4.48 74 ⇓ eP Pn 08 40 43.4 +0.4
GPS2 Hotel Rincn d 4.49 319 eP Pn 08 40 43.9 +0.7
GPS3 Bodega del ICE 4.50 319 eP Pn 08 40 43.3 0.0
LAPC Finca la Perla 4.56 319 eP Pn 08 40 44.3 +0.3
BUEV Buena Vista 4.56 319 eP Pn 08 40 44.1 0.0
GB1A Borinquen Arri 4.57 319 eP Pn 08 40 43.2 -1.1
BUAI Buenos Aires 4.58 321 eP Pn 08 40 44.2 -0.1
GBS3 Finca Las Img 4.58 319 eP Pn 08 40 44.1 -0.3
ESPN Las Esperanzas 5.19 339 ⇑ iP Pn 08 40 52.3 -0.5
ESPN Las Esperanzas 5.19 339 Pn 08 40 52.2 -0.5
ESPN Sn Sn 08 41 49.5 -3.8
ACON Acoyapa 5.37 329 eP Pn 08 40 54.5 -0.6
ACON Acoyapa 5.37 329 Pn 08 40 54.6 -0.6
PRVC Isla de Provid 6.09 9 eP Pn 08 41 05.8 +0.7
DBBC Dabeiba 6.12 93 eP Pn 08 41 05.5 -0.2
CBBC Ciudad Bolivar 6.49 103 eP Pn 08 41 09.0 -1.4
MATN Matagalpa 6.57 328 Pn 08 41 11.0 -1.7
UREC San Jos de Ur 6.80 86 eP Pn 08 41 15.4 +0.6
YOTC Yotoco, Valle 6.86 119 eP Pn 08 41 14.4 -1.3
HORQ Saladito 6.88 123 eP Pn 08 41 15.4 -0.9
HELC Santa Helena 6.89 99 eP Pn 08 41 16.3 -0.1
ZARC Zaragoza, Cauc 7.46 88 eP Pn 08 41 24.2 +0.4
SJCC San Jacinto, C 7.56 70 eP Pn 08 41 28.6 +3.3
SOTA Rioblanco 7.72 132 eP Pn 08 41 29.3 +1.3
PCON Cinco Dias 7.76 130 eP Pn 08 41 30.5 +2.0
GCUF Volcan Galeras 7.87 140 eP Pn 08 41 30.7 +0.8
CRUC La Cruz 7.87 136 eP Pn 08 41 30.4 +0.5
TGUH Tegucigalpa,Un 8.23 325 eP Pn 08 41 34.8 +0.2
TGUH Tegucigalpa,Un 8.23 325 Pn 08 41 33.6 -1.1
SMLC San Martn de 8.35 79 eP Pn 08 41 39.8 +3.6
ROSC El Rosal 8.38 107 Pn Pn 08 41 40.7 +3.7
CHIC Chingaza 9.01 107 eP Pn 08 41 47.7 +2.2
RUSC La Rusia 9.34 98 eP Pn 08 41 51.9 +1.7
RUSC La Rusia 9.34 98 Pn 08 41 54.1 +4.0
MACC Macarena, Meta 9.94 121 eP Pn 08 41 57.6 -0.3
APG El Apazote 11.00 315 Pn Pn 08 42 15.2 +2.4
0.3nm,0.3s,baz=176,slow=23,SNR=5.6
SDV Santo Domingo 11.73 82 Pn 08 42 25.1 +2.5
CMIG Matias Romero 15.60 310 Pn P 08 43 16.8 -2.7
0.2nm,0.3s,baz=106,slow=10,SNR=3.3
SDDR Presa de Saban 15.82 42 Pn Pn 08 43 19.1 +1.1
SDDR IAmb IAmb 08 43 34.9
comp=Z,14nm,0.8s
BANI BANI 16.05 46 Pn 08 43 20.3 -0.8
AOPR Arecibo Observ 18.74 53 P Pn 08 43 55.5 +1.0
AOPR IAmb IAmb 08 44 01.3
comp=Z,22nm,0.8s
ZAIG Zacatecas 24.76 310 P P 08 44 59.1 +1.5
SAML Samuel 25.05 130 P P 08 45 04.2 +4.3
SAML IAmb IAmb 08 45 12.3
comp=Z,8.1nm,1.2s
344A Westbrook Farm 25.24 343 P P 08 45 01.7 +0.4
CSU Charleston Sou 25.62 4 P P 08 45 04.5 -0.3
LRAL Lakeview Retre 25.93 351 P P 08 45 08.6 +0.9
LRAL IAmb IAmb 08 45 13.9
comp=Z,6.0nm,1.0s
146A Union 25.93 347 P P 08 45 07.7 -0.1
LPAZ La Paz 27.38 149 P P 08 45 25.3 +3.7
comp=Z,1.2nm,0.9s,baz=321,slow=12,SNR=3.9
LPAZ La Paz 27.38 149 P P 08 45 26.9 +5.3
JCT Junction City 28.24 327 P P 08 45 29.1 +0.5
JCT IAmb IAmb 08 45 37.1
comp=Z,4.8nm,0.7s
V48A Smith Brothers 28.57 352 P P 08 45 31.4 0.0
V48A IAmb IAmb 08 45 37.0
comp=Z,5.5nm,0.7s
MNMC Minye Minye 29.16 155 P P 08 45 43.2 +6.1
MNMC IAmb IAmb 08 45 46.5
comp=Z,13nm,1.2s
MDP Montagnes des 29.64 93 LR LR 08 57 18.4
comp=Z,402nm,19.1s,baz=4.5,slow=36
LCAR Lake Charles 29.71 346 P P 08 45 40.8 -0.7
LCAR IAmb IAmb 08 45 46.6
comp=Z,6.8nm,0.8s
T47A Sharon Grove 29.83 352 P P 08 45 43.2 +0.6
T47A IAmb IAmb 08 45 47.6
comp=Z,9.3nm,1.2s
H06E1 SOCORRO T-PHAS 30.00 295 T T 09 17 20.3
SNR=15
USIN University of 30.87 352 P P 08 45 52.0 +0.2
MNTX Cornudas Mount 32.38 322 P P 08 46 05.6 +0.5
MNTX IAmb IAmb 08 46 06.7
comp=Z,3.3nm,0.9s
MSTX Muleshoe 32.52 327 P P 08 46 06.3 -0.2
MSTX IAmb IAmb 08 46 12.7
comp=Z,11nm,1.5s
319A Douglas 34.69 317 P P 08 46 25.9 +0.5
ANMO Albuquerque 35.29 325 P P 08 46 30.6 -0.1
TUC Tucson 36.27 317 P P 08 46 40.5 +1.5
TUC IAmb IAmb 08 46 50.9
comp=Z,4.0nm,1.1s
214A Organ Pipe Nat 37.46 315 P P 08 46 50.4 +1.3
X16A Lo Mia Camp, P 37.99 319 IAmb IAmb 08 47 05.2
comp=Z,6.1nm,1.1s
WUAZ Wupatki 38.64 321 P P 08 46 59.6 +0.5
WUAZ IAmb IAmb 08 47 02.4
comp=Z,5.3nm,0.9s
Y14A Wickenburg 38.73 317 P P 08 47 01.2 +1.4
PV13 Radium Mtn., P 38.91 326 P P 08 47 02.0 +0.5
PV13 IAmb IAmb 08 47 13.1
comp=Z,7.9nm,1.0s
W13A Hualapai Mount 40.01 318 P P 08 47 12.0 +1.4
SHPR Sheep Range 41.67 319 P P 08 47 25.6 +1.3
SHPR IAmb IAmb 08 47 36.5
comp=Z,9.2nm,1.4s
TPNV Topopah Spring 42.64 319 P P 08 47 32.7 +0.5
TPNV IAmb IAmb 08 47 44.8
comp=Z,8.8nm,1.2s
BW06 Boulder Array 42.65 330 P P 08 47 32.3 +0.1
PDAR Pinedale Array 42.65 330 P P 08 47 31.7 -0.5
comp=Z,0.4nm,0.6s,baz=133,slow=10,SNR=6.8
ULM Lac du Bonnet 44.24 348 P P 08 47 42.4 -2.3
comp=Z,4.3nm,0.7s,baz=163,slow=10,SNR=3.6
ELK Elko 44.32 324 P P 08 47 46.8 +1.0
NV11 Mina Array Sit 44.73 319 P P 08 47 50.1 +1.2
NV11 IAmb IAmb 08 48 01.0
comp=Z,8.7nm,1.1s
NVAR Mina Array Bea 44.82 319 P P 08 47 51.8 +2.0
comp=Z,2.7nm,0.8s,baz=131,slow=7.1,SNR=19
OMMB Old Mammoth Mi 44.83 318 P P 08 47 51.4 +1.4
OMMB IAmb IAmb 08 48 06.2
comp=Z,8.6nm,1.4s
MDPB Devils Postpil 44.89 318 P P 08 47 50.8 +0.4
MDPB IAmb IAmb 08 48 09.3
comp=Z,9.0nm,1.3s
KVN Kaiserville 45.04 320 IAmb IAmb 08 48 03.0
comp=Z,5.8nm,1.1s
YERR Yerington 45.74 319 IAmb IAmb 08 48 08.8
comp=Z,8.8nm,1.3s
PAHR Pah Rah Range 46.23 320 P P 08 48 02.2 +1.3
BEKR Beckworth 46.95 320 IAmb IAmb 08 48 18.0
comp=Z,5.7nm,1.1s
LC01 Cunco 47.02 169 P P 08 48 14.3 +7.5
ORV Oroville 47.52 319 P P 08 48 11.9 +1.1
MOD Modoc Plateau 48.05 322 IAmb IAmb 08 48 26.7
comp=Z,6.9nm,1.3s
PLCA Paso Flores 49.05 168 P P 08 48 28.2 +5.6
PINE Pine Mountain 49.53 324 P P 08 48 27.3 +0.8
PINE IAmb IAmb 08 48 31.6
comp=Z,3.8nm,1.0s
H04A Detroit Lake 50.77 324 P P 08 48 36.4 +0.7
H04A IAmb IAmb 08 48 38.4
comp=Z,8.8nm,1.2s
YKA Yellowknife Ar 59.88 343 P P 08 49 39.8 -1.2
comp=Z,1.0nm,0.8s,baz=140,slow=7.1,SNR=14
INK Inuvik 69.57 342 P P 08 50 44.0 -0.1
ILAR Eielson Array 72.69 336 P P 08 51 03.3 +0.1
comp=Z,0.5nm,0.5s,baz=92,slow=4.3,SNR=8.8
RND Reindeer 73.06 334 P P 08 51 07.8 +2.4
TORD Torodi Ar. Bea 82.62 78 P P 08 51 59.9 +0.3
comp=Z,0.8nm,0.8s,baz=287,slow=5.6,SNR=4.1
SPITS Spitsbergen Ar 84.67 12 LR LR 09 29 10.2
comp=Z,129nm,21.8s,baz=100,slow=35
WMQ Urumqi 128.30 9 eP PKiKP 08 58 45.4 +2.2
WMQ pmax pmax
comp=Z,240nm,11.8s
HHC Hu-ho-hao-te 130.37 346 eP PKiKP 08 58 49.1 +1.6
CD2 Chengdu 141.53 352 PKP PKiKP 08 59 07.8 -2.6
ASAR Alice Springs 141.61 241 PKP PKiKP 08 59 08.3 -2.4
comp=Z,1.1nm,0.8s,baz=98,slow=2.3,SNR=7.1
WRA Warramunga Arr 142.28 247 PKhKP PKPpre 08 59 05.6
comp=Z,1.3nm,0.9s,baz=101,slow=4.7,SNR=3.8
H01W1 Cape Leeuwin H 148.64 207 T T 11 46 23.9
baz=144,slow=76,SNR=16
H01W2 Cape Leeuwin H 148.64 207 T T 11 46 21.4
baz=144,slow=76,SNR=22
H01W3 Cape Leeuwin H 148.65 207 T T 11 46 22.3
baz=144,slow=76,SNR=14

*IDC **13** 08:50:26.9±1.6, 6.°92S×155.°46E, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.7/27, mbtmp3.8/4, Error ellipse: s-maj=67.4km s-min=26.2km az=133.0*
*NEIC **13** 08:50:31.1±0.6, 6.°95S±0.°10×155.°5E±0.°1, h30km±8km, mb4.1/6, Error ellipse: s-maj=18.2km s-min=13.9km az=104.0*
ISC 13 08:50:34.5±1.0, **7.°07S**±0.°10×**155.°4E**±0.°1, **h50**km±7km, **n17,**
σ1**s30**/15, **mb4.0**/8, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**4.29**	**312**	Pn	**Pn**	**08 51 39.6**	**+2.2**
RABL				Sn	**Sn**	**08 52 24.3**	**-1.9**
PMG	**Port Moresby**	**8.45**	**254**	Pn	**Pn**	**08 52 34.3**	**-0.1**
CTAO	**Charters Tower**	**15.67**	**213**	Pn	**Pn**	**08 54 11.0**	**-1.2**
CTAO				IAmb	IAmb	08 54 24.9	
comp=Z,17nm,1.1s							
WR0	**Warramunga Arr**	**23.92**	**236**	P	**P**	**08 55 44.9**	**+0.8**
WR0				IAmb	IAmb	08 55 55.0	
comp=Z,4.3nm,1.1s							
WB2	**Warramunga Arr**	**24.07**	**236**	P	**P**	**08 55 45.9**	**+0.5**
WRA	**Warramunga Arr**	**24.08**	**236**	P	**P**	**08 55 45.9**	**+0.3**
comp=Z,0.9nm,0.5s,baz=59,slow=9.3,SNR=8.5							
ASAR	**Alice Springs**	**26.40**	**229**	P	**P**	**08 56 07.1**	**+0.5**
comp=Z,0.4nm,0.7s,baz=62,slow=8.2,SNR=7.3							
KNRA	**Kununurra**	**27.42**	**250**	P	**P**	**08 56 16.2**	**+0.4**
KNRA				IAmb	IAmb	08 56 26.9	
comp=Z,8.1nm,1.0s							
H11S3	**WAKE ISLAND Hy**	**27.75**	**24**	T	T	09 24 44.2	
baz=201							
H11S2	**WAKE ISLAND Hy**	**27.75**	**24**	T	T	09 24 32.7	
baz=201							
H11S1	**WAKE ISLAND Hy**	**27.77**	**24**	T	T	09 24 42.2	
baz=201							
FITZ	**Fitzroy Crossi**	**30.96**	**246**	P	**P**	**08 56 48.9**	**+1.6**
FITZ				IAmb	IAmb	08 57 02.1	
comp=Z,4.5nm,1.2s							
CMAR	**Chiang Mai Arr**	**61.16**	**295**	P	**P**	**09 00 44.0**	**-0.4**
comp=Z,2.3nm,0.7s,baz=128,slow=5.6,SNR=10.0							
QSPA	**South Pole Qui**	**82.90**	**180**		**P**	**09 02 55.4**	**+1.5**
ILAR	**Eielson Array**	**83.31**	**21**	P	**P**	**09 02 54.0**	**-1.8**
comp=Z,0.3nm,0.4s,baz=250,slow=5.3,SNR=6.9							
YKA	**Yellowknife Ar**	**96.23**	**28**	P	**P**	**09 03 57.0**	**-0.2**
comp=Z,0.4nm,0.8s,baz=263,slow=4.4,SNR=6.1							
TORD	**Torodi Ar. Bea**	**153.41**	**285**	PKPbc	**PKPbc**	**09 10 27.6**	**-0.8**
comp=Z,0.3nm,0.5s,baz=45,slow=3.1,SNR=2.7							

*UPA **13** 08:52:22.2±2.0, 7.°26N×82.°41W, h9km±16km, MW4.1*
ISC 13 08:52:21.1±1.9, **7.°36N**±0.°08×**82.°34W**±0.°04, **h3**km±12km,
n37, σ1**s19**/46, **3C-1D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVID3	**Puerto Vidal,**	**0.99**	**46**	eP	**Pn**	**08 52 42.3**	**+0.3**
REME3	**Remedios, Chir**	**1.00**	**30**	iP	**Pn**	**08 52 42.4**	**+0.4**
PEDE3	**Pedregal, Chir**	**1.02**	**355**	iP	**Pn**	**08 52 42.1**	**-0.2**
CHIR3	**Chiriqui UPA,**	**1.03**	**0**	eP	**Pn**	**08 52 42.2**	**-0.2**
LOMA3	**Las Lomas, Chi**	**1.06**	**357**	eP	**Pn**	**08 52 43.5**	**+0.6**
DVD	**David**	**1.07**	**354**	iP	**Pn**	**08 52 43.0**	**0.0**
DVD				eS	**Sn**	**08 52 59.5**	**+1.0**
SBAR3	**San Bartolo, C**	**1.09**	**330**	eP	**Pn**	**08 52 42.4**	**-0.9**
PSOM3	**Paja de Sombre**	**1.32**	**1**	eP	**Pg**	**08 52 47.4**	**+1.0**
RSUS3	**Rio de Jesus,**	**1.32**	**62**	eP	**Pb**	**08 52 46.4**	**-0.2**
BCO2	**Palmira**	**1.36**	**352**	⇑ iP	**Pg**	**08 52 47.4**	**+0.1**
MESA3	**La Mesa, Verag**	**1.39**	**56**	eP	**Pg**	**08 52 48.9**	**+1.2**
PONU3	**Ponuga, Veragu**	**1.45**	**69**	⇑ iP	**Pg**	**08 52 49.0**	**+0.2**
PONU3				eS	**Sg**	**08 53 08.1**	**+0.4**
CACAO	**El Cacao, Vera**	**1.47**	**90**	i P	**Pn**	**08 52 48.2**	**-0.2**
CACAO				i S	**Sn**	**08 53 07.3**	**-0.8**
BRU2	**Volcan**	**1.47**	**346**	⇑ iP	**Pb**	**08 52 48.6**	**-0.5**
CNAZ3	**Canazas, Verag**	**1.49**	**49**	eP	**Pb**	**08 52 49.2**	**-0.2**
MLIR3	**Monte Lirio, C**	**1.50**	**341**	eP	**Pb**	**08 52 49.4**	**-0.3**
PTJ1	**Puerto Jimnez**	**1.51**	**321**	eP	**Pb**	**08 52 49.0**	**-0.7**
STIA3	**Santiago, Vera**	**1.54**	**61**	eP	**Pb**	**08 52 49.7**	**-0.6**
SFRA3	**San Francisco,**	**1.62**	**57**	eP	**Pb**	**08 52 51.7**	**+0.1**
OCU3	**Ocu, Herrera**	**1.65**	**69**	i P	**Pb**	**08 52 52.0**	**-0.3**
OCU3				i S	**Sg**	**08 53 14.1**	**-0.2**
CALO3	**Calobre, Verag**	**1.76**	**57**	eP	**Pg**	**08 52 55.0**	**0.0**
TOSI3	**Tonosi**	**1.88**	**88**	eP	**Pb**	**08 52 55.7**	**-0.4**
CRIS3	**El Cristo, Coc**	**1.92**	**62**	i P	**Pb**	**08 52 55.9**	**-1.0**
AZU	**Azuero**	**2.09**	**78**	eP	**Pb**	**08 52 58.7**	**-1.0**
AZU				eS	**Sb**	**08 53 24.5**	**-1.5**
AZU	**Azuero**	**2.09**	**78**	eP	**Pb**	**08 52 58.8**	**-1.0**
AZU				eS	**Sb**	**08 53 25.0**	**-1.0**
PCRI3	**Pocri, Los San**	**2.22**	**82**	eP	**Pg**	**08 53 05.5**	**+1.8**
PNME	**Penonome**	**2.29**	**61**	eP	**Pb**	**08 53 01.2**	**-1.8**
PNME	**Penonome**	**2.29**	**61**	eP	**Pb**	**08 53 01.2**	**-1.8**
VTON	**El Valle, Cocl**	**2.53**	**60**	eP	**Pb**	**08 53 05.6**	**-1.6**
VTON				eS	**Sb**	**08 53 38.7**	**-0.1**
ZANG	**Zanguenga, Cho**	**2.92**	**57**	eP	**Pn**	**08 53 10.3**	**+1.9**
ZANG				eS	**Sn**	**08 53 45.4**	**+1.5**
BCIP	**Isla Barro Col**	**3.06**	**54**	eP	**Pb**	**08 53 15.3**	**-0.9**
BCIP	**Isla Barro Col**	**3.06**	**54**	eP	**Pb**	**08 53 14.7**	**-1.5**
HDC	**Heredia**	**3.16**	**326**	⇓ eP	**Pn**	**08 53 13.7**	**+1.9**
FRIJ	**El Hiral**	**3.18**	**54**	eP	**Pn**	**08 53 16.3**	**-1.9**
UPA	**Univ. de Panam**	**3.21**	**60**	eP	**Pn**	**08 53 15.0**	**+2.6**
UPA				eS	**Sg**	**08 54 03.0**	**-1.3**
UPA	**Univ. de Panam**	**3.21**	**60**	eP	**Pb**	**08 53 15.8**	**-2.9**
JTS	**Las Juntas de**	**3.89**	**319**	eP	**Pn**	**08 53 21.9**	**+0.1**

*UPA **13** 09:02:39.2±2.1, 7.°38N×82.°41W, h20km±20km, MW4.1*
*UCR **13** 09:02:40.2±1.3, 7.°46N×82.°60W, h0km±8km, MD3.5*
ISC 13 09:02:38.1±1.7, **7.°43N**±0.°09×**82.°32W**±0.°05, **h12**km, **n41,**
σ0**s93**/45, **1C-1D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
REME3	**Remedios, Chir**	**0.92**	**31**	i P	**Pn**	**09 02 57.2**	**+0.3**
PVID3	**Puerto Vidal,**	**0.93**	**49**	eP	**Pg**	**09 02 55.9**	**-0.2**
PEDE3	**Pedregal, Chir**	**0.95**	**354**	i P	**Pg**	**09 02 55.8**	**-0.7**
CHIR3	**Chiriqui UPA,**	**0.95**	**359**	i P	**Pn**	**09 02 57.2**	**-0.2**
LOMA3	**Las Lomas, Chi**	**0.99**	**356**	eP	**Pg**	**09 02 57.5**	**+0.2**
DVD	**David**	**1.00**	**352**	i P	**Pb**	**09 02 57.1**	**-0.4**
SBAR3	**San Bartolo, C**	**1.04**	**328**	eP	**Pb**	**09 02 58.0**	**-0.2**
PSOM3	**Paja de Sombre**	**1.24**	**360**	eP	**Pg**	**09 03 01.9**	**-0.2**
BCO2	**Palmira**	**1.29**	**351**	i P	**Pb**	**09 03 02.3**	**-0.2**
BCO2				i S	**Sb**	**09 03 18.6**	**-0.6**
MESA3	**La Mesa, Verag**	**1.33**	**58**	eP	**Pg**	**09 03 04.4**	**+0.7**
BRU2	**Volcan**	**1.40**	**345**	⇑ iP	**Pn**	**09 03 03.5**	**-0.2**
BRU2	**Volcan**	**1.40**	**345**	eP	**Pn**	**09 03 03.5**	**-0.2**
PONU3	**Ponuga, Veragu**	**1.40**	**71**	eP	**Pn**	**09 03 04.0**	**+0.5**
PONU3				i S	**Sg**	**09 03 23.1**	**-0.2**
MLIR3	**Monte Lirio, C**	**1.44**	**340**	eP	**Pn**	**09 03 03.1**	**-1.0**
CACAO	**El Cacao, Vera**	**1.45**	**93**	eP	**Pn**	**09 03 03.7**	**-0.5**
CACAO				i S	**Sn**	**09 03 23.1**	**0.0**
PTJ1	**Puerto Jimnez**	**1.47**	**318**	⇓ eP	**Pn**	**09 03 03.9**	**-0.5**
PTJ1	**Puerto Jimnez**	**1.47**	**318**	eP	**Pn**	**09 03 03.8**	**-0.6**
STIA3	**Santiago, Vera**	**1.49**	**64**	eP	**Pn**	**09 03 03.4**	**-1.4**
EDSV	**San Vito**	**1.52**	**335**	eP	**Pn**	**09 03 05.4**	**+0.1**
SFRA3	**San Francisco,**	**1.56**	**59**	eP	**Pb**	**09 03 07.3**	**+0.4**
OCU3	**Ocu, Herrera**	**1.61**	**72**	eP	**Pn**	**09 03 04.4**	**-2.0**
CALO3	**Calobre, Verag**	**1.71**	**59**	eP	**Pb**	**09 03 09.4**	**-0.1**
EDPN	**Palmar Norte**	**1.89**	**323**	eP	**Pn**	**09 03 09.9**	**-0.4**
EDBA	**Buenos Aires**	**1.96**	**331**	eP	**Pn**	**09 03 12.1**	**+0.8**
AZU	**Azuero**	**2.06**	**80**	eP	**Pn**	**09 03 13.6**	**+1.0**
AZU	**Azuero**	**2.06**	**80**	iP	**Pn**	**09 03 13.8**	**+1.2**
PNME	**Penonome**	**2.23**	**62**	eP	**Pb**	**09 03 17.1**	**-1.4**
PNME	**Penonome**	**2.23**	**62**	iP	**Pn**	**09 03 16.0**	**+1.0**
VTON	**El Valle, Cocl**	**2.48**	**62**	eP	**Pb**	**09 03 21.4**	**-1.3**
LCR2	**La Lucha 2**	**2.83**	**324**	eP	**Pn**	**09 03 24.1**	**+0.6**
ZANG	**Zanguenga, Cho**	**2.86**	**58**	eP	**Pn**	**09 03 24.3**	**+0.7**
ZANG				eS	**Sn**	**09 03 59.0**	**+1.0**
ZANG	**Zanguenga, Cho**	**2.86**	**58**	eP	**Pb**	**09 03 29.9**	**+0.8**
CVTR	**Volcan Turrial**	**2.94**	**331**	eP	**Pn**	**09 03 26.7**	**+1.6**
BCIP	**Isla Barro Col**	**3.00**	**55**	eP	**Pb**	**09 03 30.9**	**-0.6**
BCIP	**Isla Barro Col**	**3.00**	**55**	eP	**Pn**	**09 03 27.1**	**+1.6**
BCIP	**Isla Barro Col**	**3.00**	**55**	eP	**Pb**	**09 03 31.5**	**0.0**
HDC	**Heredia**	**3.11**	**325**	eP	**Pn**	**09 03 28.7**	**+1.5**
FRIJ	**El Hiral**	**3.12**	**55**	eP	**Pb**	**09 03 31.7**	**-1.9**
ARE1	**Arenal 1**	**3.83**	**322**	eP	**Pn**	**09 03 38.8**	**+1.8**
JTS	**Las Juntas de**	**3.85**	**318**	eP	**Pn**	**09 03 36.9**	**-0.4**
PLVR	**Palo Verde**	**4.17**	**314**	eP	**Pn**	**09 03 42.8**	**+1.0**

*UPA **13** 09:07:24.1±2.0, 7.°21N×82.°44W, h19km±22km, MW4.2*
ISC 13 09:07:19.2±2.2, **7.°2N**±0.°1×**82.°43W**±0.°07, **h12**km, **n30,**
σ1**s05**/34, **1D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVID3	**Puerto Vidal,**	**1.20**	**42**	eP	**Pg**	**09 07 43.7**	**+1.3**
REME3	**Remedios, Chir**	**1.22**	**29**	i P	**Pg**	**09 07 43.9**	**+1.2**
PEDE3	**Pedregal, Chir**	**1.22**	**0**	i P	**Pg**	**09 07 43.7**	**+1.0**
CHIR3	**Chiriqui UPA,**	**1.23**	**4**	i P	**Pg**	**09 07 43.9**	**+0.9**
SBAR3	**San Bartolo, C**	**1.24**	**339**	eP	**Pg**	**09 07 44.5**	**+1.4**
LOMA3	**Las Lomas, Chi**	**1.27**	**2**	i P	**Pg**	**09 07 44.9**	**+1.3**
DVD	**David**	**1.27**	**359**	⇓ iP	**Pg**	**09 07 44.5**	**+0.7**
DVD		

LPAZ					IAmb	IAmb	09 18 55.5	
	comp=Z,8.4nm,1.3s							
MAW	**Mawson**	**62.97**	**179**	P		**P**	**09 20 06.6**	**+1.1**
	comp=Z,1.6nm,0.9s,baz=309,slow=3.6,SNR=2.0							
MAW	**Mawson**	**62.97**	**179**	P		**P**	**09 20 06.2**	**+0.7**
CCIG	**Comitan**	**68.77**	**24**	P		**P**	**09 20 43.9**	**+0.3**
STKA	**Stephens Creek**	**74.22**	**239**	P		**P**	**09 21 16.1**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=114,slow=5.1,SNR=3.1							
STKA	**Stephens Creek**	**74.22**	**239**	P		**P**	**09 21 16.2**	**-0.1**
TX32	**Lajitas Array**	**79.36**	**10**	P		**P**	**09 21 47.0**	**+1.9**
TX32					IAmb	IAmb	09 21 48.2	
	comp=Z,4.9nm,1.3s							
TXAR	**Lajitas Array**	**79.36**	**10**	P		**P**	**09 21 44.4**	**-0.7**
	comp=Z,1.4nm,1.0s,baz=175,slow=11,SNR=3.1							
JCT	**Junction City**	**81.00**	**13**	P		**P**	**09 21 54.9**	**+1.0**
JCT					IAmb	IAmb	09 21 56.3	
	comp=Z,7.9nm,0.9s							
ANMO	**Albuquerque**	**84.65**	**7**	P		**P**	**09 22 14.0**	**+1.1**
ANMO					IAmb	IAmb	09 22 15.6	
	comp=Z,3.1nm,1.1s							
GSC	**Goldstone, Bar**	**84.68**	**359**	P		**P**	**09 22 14.5**	**+1.6**
GSC					IAmb	IAmb	09 22 15.7	
	comp=Z,2.4nm,0.9s							
ASAR	**Alice Springs**	**84.86**	**239**	P		**P**	**09 22 13.1**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=139,slow=4.6,SNR=6.7							
H01W1	**Cape Leeuwin H**	**85.15**	**219**	T		T	10 57 19.2	
	baz=150,slow=75,SNR=16							
H01W2	**Cape Leeuwin H**	**85.15**	**219**	T		T	10 57 20.3	
	baz=150,slow=75,SNR=15							
H01W3	**Cape Leeuwin H**	**85.17**	**219**	T		T	10 57 20.4	
	baz=150,slow=75,SNR=18							
SDCO	**Great Sand Dun**	**87.51**	**8**	P		**P**	**09 22 25.1**	**-2.0**
NVAR	**Mina Array Bea**	**87.84**	**357**	P		**P**	**09 22 29.1**	**+0.5**
	comp=Z,0.7nm,1.0s,baz=205,slow=6.6,SNR=3.6							
PDAR	**Pinedale Array**	**92.25**	**4**	P		**P**	**09 22 46.0**	**-3.1**
	comp=Z,1.1nm,1.0s,baz=145,slow=3.6,SNR=8.6							
TPAW	**Teton Pass**	**92.91**	**3**	P		**P**	**09 22 52.8**	**+0.6**
TPAW					IAmb	IAmb	09 23 06.6	
	comp=Z,2.5nm,1.1s							
YHH	**Holmes Hill**	**94.21**	**3**	P		**P**	**09 22 57.1**	**-1.1**
GERES	**GERESS Array B**	**147.06**	**71**	PKPbc		**PKPdf**	**09 29 19.0**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=256,slow=4.0,SNR=6.7							
SONM	**Songino Array**	**152.90**	**282**	PKPbc		**PKiKP**	**09 29 35.8**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=90,slow=4.4,SNR=4.0							

IDC 13 09:14:49.1±4.8, 55.98S×125.25W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.9/22, mbtmp4.1/3, Error ellipse: s-maj=320.1km s-min=60.7km az=139.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**38.60**	**75**	T	T	10 02 52.9	
	baz=219,slow=74,SNR=97						
H03S1	**Juan Fernandez**	**38.61**	**75**	T	T	10 02 57.6	
	baz=219,slow=74,SNR=94						
H03S3	**Juan Fernandez**	**38.62**	**75**	T	T	10 02 54.2	
	baz=219,slow=74,SNR=93						
H03N3	**Juan Fernandez**	**38.89**	**74**	T	T	10 03 13.8	
	baz=222,slow=72,SNR=286						
H03N2	**Juan Fernandez**	**38.90**	**74**	T	T	10 03 12.7	
	baz=222,slow=72,SNR=497						
H03N1	**Juan Fernandez**	**38.91**	**74**	T	T	10 03 15.8	
	baz=222,slow=72,SNR=274						
STKA	**Stephens Creek**	**65.90**	**249**	P	P	09 25 38.0	+1.5
	1.8nm,0.9s,baz=118,slow=3.8,SNR=4.3						
H01W1	**Cape Leeuwin H**	**76.36**	**227**	T	T	10 51 57.9	
	baz=150,slow=76,SNR=798						
H01W2	**Cape Leeuwin H**	**76.36**	**227**	T	T	10 51 59.1	
	baz=150,slow=76,SNR=1090						
H01W3	**Cape Leeuwin H**	**76.38**	**227**	T	T	10 51 59.1	
	baz=150,slow=76,SNR=909						
ASAR	**Alice Springs**	**76.52**	**248**	P	P	09 26 40.5	-0.5
	1.7nm,0.9s,baz=150,slow=5.5,SNR=13						
WRA	**Warramunga Arr**	**79.35**	**250**	P	P	09 26 56.1	-0.6
	2.3nm,0.9s,baz=144,slow=4.8,SNR=11						
H10S3	**ASCENSION HYDF**	**93.86**	**112**	T	T	11 07 20.1	
	SNR=894						
ILAR	**Eielson Array**	**121.56**	**349**	PKP	PKPdf	09 33 42.5	-0.5
	0.3nm,0.7s,baz=196,slow=1.7,SNR=2.5						
SONM	**Songino Array**	**147.80**	**278**	PKPbc	PKPbc	09 34 35.6	+0.6
	1.3nm,0.8s,baz=128,slow=2.7,SNR=5.1						
MKAR	**Makanchi Array**	**160.63**	**253**	PKPab	PKPab	09 35 31.1	-0.6
	0.5nm,0.7s,baz=102,slow=5.1,SNR=5.1						
ZALV	**Zalesovo Beam**	**162.68**	**276**	PKPab	PKPab	09 35 39.2	-1.2
	0.5nm,0.5s,baz=99,slow=1.9,SNR=2.3						

IDC 13 09:44:10.5±3.8, 18°.74S×149°.93E, h0km, mb3.7/1, mb1 3.8/6, mb1mx3.6/23, mbtmp3.7/6, ML3.2/4, MS3.5/1, Ms1 3.5/1, ms1mx3.0/18, Error ellipse: s-maj=54.2km s-min=28.7km az=135.0
NEIC 13 09:44:10.2±2.6, 18°.72S±0°.07×149°.96E±0°.04, h10km±1km, mb4.1/8, Error ellipse: s-maj=12.3km s-min=5.8km az=166.0

ISC 13 09:44:10.1±0.8, 18°.70S±0°.07×149°.94E±0°.07, h10km, n24, σ1§33/26, East of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**3.74**	**248**	Pn	**Pn**	**09 45 09.4**	**+1.5**
	4.3nm,0.3s,baz=73,slow=16,SNR=32						
CTA				Lg	Lg	09 46 10.7	
	36nm,0.3s,baz=353,slow=23,SNR=3.7						
CTAO	**Charters Tower**	**3.74**	**248**		**Pn**	**09 45 09.0**	**+1.1**
CTAO				Sn	**Sn**	**09 45 49.1**	**-3.0**
EIDS	**Eidsvold**	**6.72**	**171**		**Pn**	**09 45 49.6**	**+0.7**
COEN	**Coen**	**8.02**	**305**		**Pn**	**09 46 08.0**	**+1.2**
COEN				Sn	**Sn**	**09 47 36.1**	**-1.6**
PMG	**Port Moresby**	**9.63**	**343**	Pn	**Pn**	**09 46 31.9**	**+3.2**
	2.2nm,0.3s,baz=113,slow=15,SNR=2.7						
PMG	**Port Moresby**	**9.63**	**343**		**Pn**	**09 46 30.2**	**+1.4**
PMG				Sn	**Sn**	**09 48 16.3**	**-0.8**
HNR	**Honiara**	**13.38**	**48**	Pn	**Pn**	**09 47 19.0**	**-1.1**
WR0	**Warramunga Arr**	**14.59**	**263**	Pn	**Pn**	**09 47 37.0**	**+0.3**
WB0	**Warramunga Arr**	**14.72**	**263**	Pn	**Pn**	**09 47 37.5**	**-1.1**
WB2	**Warramunga Arr**	**14.77**	**263**	Pn	**Pn**	**09 47 39.9**	**+0.7**
WRAB	**Tennant Creek**	**14.77**	**263**	Pn	**Pn**	**09 47 39.0**	**-0.1**
WRA	**Warramunga Arr**	**14.78**	**263**	Pn	**Pn**	**09 47 39.9**	**+0.6**
	0.1nm,0.3s,baz=85,slow=11,SNR=5.3						
WRA				Lg	Lg	09 51 55.6	
	0.3nm,0.3s,baz=72,slow=28,SNR=6.6						
STKA	**Stephens Creek**	**15.12**	**208**	Pn	**Pn**	**09 47 44.5**	**+0.7**
	baz=26,slow=16,SNR=1.7						
STKA	**Stephens Creek**	**15.12**	**208**		**Pn**	**09 47 44.9**	**+1.1**
AS31	**Alice Springs**	**15.74**	**249**	Pn	**Pn**	**09 47 52.6**	**+0.5**
ASAR	**Alice Springs**	**15.74**	**249**	Pn	**P**	**09 47 54.9**	**-1.2**
	0.1nm,0.3s,baz=70,slow=12,SNR=9.9						
ASAR				Lg	Lg	09 52 23.2	
	0.2nm,0.3s,baz=65,slow=26,SNR=4.4						
DZM	**Mont Dzumac**	**15.83**	**105**	LR	LR	09 53 20.3	
	comp=Z,140nm,18.0s,baz=271,slow=35						
DZM	**Mont Dzumac**	**15.83**	**105**	Pn	**Pn**	**09 47 51.7**	**-1.6**
DZM				IAmb	IAmb	09 48 09.3	
	comp=Z,13nm,1.0s						
BBOO	**Buckleboo**	**18.77**	**219**	P	**Pn**	**09 48 29.9**	**-0.1**
BBOO				IAmb	IAmb	09 48 41.4	
	comp=Z,14nm,1.2s						
MTN	**Manton Dam**	**19.00**	**285**	P	**P**	**09 48 31.6**	**-0.5**
MTN				IAmb	IAmb	09 48 46.1	
	comp=Z,10nm,1.1s						
KNRA	**Kununurra**	**20.45**	**275**	P	**P**	**09 48 48.1**	**+0.2**
FITZ	**Fitzroy Crossi**	**23.06**	**268**	P	**P**	**09 49 17.1**	**+1.3**
	comp=Z,1.5nm,0.6s,baz=79,slow=9.2,SNR=6.9						
FITZ	**Fitzroy Crossi**	**23.06**	**268**	P	**P**	**09 49 16.6**	**+0.8**
FITZ				IAmb	IAmb	09 49 24.8	
	comp=Z,7.0nm,0.9s						
QSPA	**South Pole Qui**	**71.34**	**180**	P	**P**	**09 55 30.0**	**0.0**

SOME 13 09:47:10.5, 39°.02N×75°.92E, h0km
NNC 13 09:47:15.7±1.1, 39°.19N×75°.94E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=9.1km s-min=6.4km az=141.0
BJI 13 09:47:19.7±0.0, 39°.21N×75°.61E, h5km, mb4.1/1, ML4.1/4

ISC 13 09:47:21.5±1.0, 39°.29N±0°.05×75°.72E±0°.05, h10km, n51, σ3§08/67, 11C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.30**	**40**	Pg	Pg	09 47 20.8	-6.8
KSH				Sg	Sg	09 47 23.4	-8.2
KSH				smax	smax		
	comp=N,252μm,0.2s						
KSH				smax	smax		
	comp=E,269μm,0.3s						
KZA	**Kyzart**	**2.81**	**353**	P	**Pn**	**09 48 07.1**	**+0.3**
	SNR=126						
ULHL	**Ulahol**	**2.98**	**7**	P	**Pb**	**09 48 13.3**	**-1.5**
	SNR=47						
UCH	**Uchtor**	**3.08**	**343**	P	**Pn**	**09 48 11.0**	**+0.4**
	SNR=76						
AML	**Almayashu**	**3.23**	**332**	P	**Pn**	**09 48 12.7**	**0.0**
	SNR=13						
KBK	**Karagaybulak**	**3.42**	**350**	P	**Pn**	**09 48 16.7**	**+1.7**
	SNR=14						
AAK	**Ala-Archa**	**3.47**	**345**	P	**Pn**	**09 48 16.8**	**+1.0**
	SNR=40						
AAK	**Ala-Archa**	**3.47**	**345**	⇑Pn	**Pn**	**09 48 15.0**	**-0.7**
	49nm,0.7s						
AAK				⇑Lg	Lg	09 49 11.2	
	171nm,0.9s						
TKM2	**Tokmak 2**	**3.63**	**359**	P	**Pn**	**09 48 19.1**	**+1.1**
	SNR=20						
TKM2	**Tokmak 2**	**3.63**	**359**	⇑Pn	**Pn**	**09 48 16.2**	**-1.8**
	9.7nm,0.8s						
TKM2				⇑Pg	**Pb**	**09 48 24.3**	**-1.6**
	20nm,0.7s						
TKM2				⇑Lg	Lg	09 49 13.8	
	94nm,0.6s						
EKS2	**Erkin-Say**	**3.68**	**337**	P	**Pb**	**09 48 23.6**	**-3.1**
	SNR=13						
KST	**Kastek**	**3.75**	**3**	*eP*	**Pb**	**09 48 24.8**	**-3.2**
	40nm,0.3s						
KST				*eS*	**Sg**	**09 49 18.8**	**-3.3**
	131nm,0.5s						
KST	**Kastek**	**3.75**	**3**	Pg	**Pb**	**09 48 24.8**	**-3.2**
	40nm,0.3s						
KST				Lg	Lg	09 49 18.8	
	131nm,0.5s						
CHMS	**Chumysh**	**3.78**	**349**	P	**Pn**	**09 48 20.6**	**+0.8**
	SNR=6.7						
TNSS	**Tian-Shan**	**3.86**	**13**	*eP*	**Pb**	**09 48 26.8**	**-3.0**
	20nm,0.3s						
TNSS				*eS*	**Sb**	**09 49 22.0**	**+5.3**
	92nm,0.4s						
TNSS	**Tian-Shan**	**3.86**	**13**	Pg	**Pb**	**09 48 26.6**	**-3.3**
	20nm,0.3s						
TNSS				Lg	Lg	09 49 22.0	
	92nm,0.4s						
MTBS	**Maitube**	**3.87**	**8**	*eP*	**Pb**	**09 48 27.0**	**-3.0**
	26nm,0.3s						
MTBS				*eS*	**Sb**	**09 49 22.3**	**+5.3**
	52nm,0.2s						
MTBS	**Maitube**	**3.87**	**8**	Pg	**Pb**	**09 48 26.8**	**-3.2**
	21nm,0.4s						
MTBS				Lg	Lg	09 49 22.3	
	52nm,0.2s						
MRKS	**Merke**	**3.94**	**332**	*eP*	**Pb**	**09 48 29.3**	**-1.7**
	16nm,0.3s						
MRKS				*eS*	**Sg**	**09 49 26.4**	**-1.5**
	51nm,0.7s						
MRKS	**Merke**	**3.94**	**332**	Pg	**Pb**	**09 48 29.3**	**-1.7**
	16nm,0.3s						
MRKS				Lg	Lg	09 49 26.4	
	51nm,0.7s						
MDOK	**Medeo**	**4.00**	**14**	*eP*	**Pb**	**09 48 28.6**	**-3.5**
	29nm,0.4s						
MDOK				*eS*	**Sb**	**09 49 25.3**	**+4.8**
	93nm,0.7s						
MDOK	**Medeo**	**4.00**	**14**	⇑Pg	**Pb**	**09 48 30.6**	**-1.6**
	26nm,0.6s						
MDOK				⇓Lg	Lg	09 49 24.8	
	165nm,1.0s						
MDOK	**Medeo**	**4.00**	**14**	Pg	**Pb**	**09 48 28.6**	**-3.5**
	29nm,0.4s						
MDOK				Lg	Lg	09 49 25.3	
	93nm,0.7s						
AAA	**Alma-Ata**	**4.02**	**13**	*eP*	**Pb**	**09 48 28.4**	**-4.0**
	44nm,0.2s						
AAA				*eS*	**Sb**	**09 49 24.3**	**+3.2**
	57nm,0.3s						
AAA	**Alma-Ata**	**4.02**	**13**	Pg	**Pb**	**09 48 28.4**	**-4.0**
	44nm,0.2s						
AAA				Lg	Lg	09 49 24.3	
KOTS	**Kotyrbulak**	**4.08**	**14**	*eP*	**Pb**	**09 48 30.5**	**-3.0**
	44nm,0.3s						
KOTS				*eS*	**Sb**	**09 49 28.4**	**+5.5**
	270nm,0.4s						
KOTS	**Kotyrbulak**	**4.08**	**14**	Pg	**Pb**	**09 48 30.5**	**-3.0**
	44nm,0.3s						
KOTS				Lg	Lg	09 49 28.4	
	270nm,0.4s						
SATY	**Saty**	**4.28**	**27**	*eP*	**Pb**	**09 48 34.4**	**-2.5**
	15nm,0.4s						
SATY				*eS*	**Sb**	**09 49 35.0**	**+6.4**
	157nm,0.8s						
SATY	**Saty**	**4.28**	**27**	Pg	**Pb**	**09 48 34.4**	**-2.5**
	15nm,0.4s						
SATY				Lg	Lg	09 49 35.0	
	157nm,0.8s						
KRBS	**Karabastau**	**4.40**	**360**	*eP*	**Pb**	**09 48 36.6**	**-2.3**
	10.0nm,0.2s						
KRBS				*eS*	**Sg**	**09 49 39.0**	**-3.9**
	36nm,0.4s						
KRBS	**Karabastau**	**4.40**	**360**	Pg	**Pb**	**09 48 36.6**	**-2.3**
	10.0nm,0.2s						
KRBS				Lg	Lg	09 49 39.0	
	36nm,0.4s						
KTBS	**Karatobe**	**4.48**	**9**	*eP*	**Pb**	**09 48 38.0**	**-2.2**
	16nm,0.4s						
KTBS				*eS*	**Sg**	**09 49 41.4**	**-3.8**
	267nm,0.6s						
KTBS	**Karatobe**	**4.48**	**9**	Pg	**Pb**	**09 48 38.0**	**-2.2**
	16nm,0.4s						
KTBS				Lg	Lg	09 49 41.4	
	267nm,0.6s						
KURS	**Kuram**	**4.58**	**23**	*eP*	**Pb**	**09 48 39.8**	**-2.2**
	6.1nm,0.4s						
KURS				*eS*	**Sb**	**09 49 44.3**	**+7.0**
	50nm,0.6s						
UZB	**Uzynbulak**	**4.59**	**32**	*eP*	**Pb**	**09 48 39.4**	**-2.7**
	15nm,0.5s						
UZB				*eS*	**Sb**	**09 49 43.8**	**+6.3**
	56nm,0.7s						
UZB	**Uzynbulak**	**4.59**	**32**	Pg	**Pb**	**09 48 38.6**	**-3.6**
	15nm,0.5s						
UZB				Lg	Lg	09 49 41.9	
	56nm,0.7s						
KUU	**Kurty**	**4.62**	**6**	*eP*	**Pb**	**09 48 41.2**	**-1.5**
	15nm,0.3s						
KUU				*eS*	**Sg**	**09 49 46.7**	**-3.2**
	94nm,0.4s						
KUU	**Kurty**	**4.62**	**6**	Pg	**Pb**	**09 48 41.2**	**-1.5**
	15nm,0.3s						
KUU				Lg	Lg	09 49 46.7	
	94nm,0.4s						
CHKK	**Chushkaly**	**4.66**	**11**	*eP*	**Pb**	**09 48 41.2**	**-2.1**
	4.5nm,0.2s						
CHKK				*eS*	**Sg**	**09 49 46.8**	**-4.3**
	71nm,0.6s						
CHKK	**Chushkaly**	**4.66**	**11**	Pg	**Pb**	**09 48 41.2**	**-2.1**
	4.5nm,0.2s						
CHKK				Lg	Lg	09 49 46.8	
	71nm,0.6s						
PDGK	**Podgornoye**	**4.93**	**34**	⇑Pg	**Pb**	**09 48 46.9**	**-1.1**
	12nm,0.5s						
PDGK				⇑Lg	Lg	09 49 53.3	
	152nm,0.9s						
ARXS	**Arharly**	**5.17**	**17**	*eP*	**Pb**	**09 48 50.2**	**-1.8**
	13nm,0.5s						
ARXS				*eS*	**Sg**	**09 50 02.1**	**-5.2**
	57nm,0.6s						
ARXS	**Arharly**	**5.17**	**17**	Pg	**Pb**	**09 48 49.9**	**-2.1**
	13nm,0.5s						
ARXS				Lg	Lg	09 50 02.1	
	57nm,0.6s						
KK31	**Karatay Array**	**5.47**	**316**	Pn	**Pn**	**09 48 41.4**	**-1.8**
	1.4nm,0.3s,baz=126,slow=12,SNR=47						
KK31				⇑Pg	**Pb**	**09 48 58.9**	**+1.7**
	2.5nm,0.4s,baz=133,slow=12,SNR=5.2						
KK31				⇑Sn	**Sn**	**09 49 46.3**	**+0.1**
	7.4nm,0.4s,baz=151,slow=21,SNR=4.0						
KK31				⇑Lg	Lg	09 50 16.6	
	24nm,0.5s,baz=131,slow=28,SNR=3.3						
DJR	**Jarkent**	**5.88**	**30**	Pg	**Pb**	**09 49 03.2**	**-1.0**
	10nm,0.5s						
DJR				Lg	Lg	09 50 24.8	
	48nm,0.9s						
CHCP	**Chirah Chowk**	**5.96**	**200**	P	Pn	09 48 51.4	+1.6
TDK	**Taldyqorghan**	**6.05**	**18**	Pg	**Pb**	**09 49 06.8**	**-0.1**
	63nm,0.3s						
TDK				Lg	Lg	09 50 30.7	
	90nm,0.5s						
KAPS	**Kapalarasan**	**6.57**	**23**	Pg	**Pb**	**09 49 15.1**	**-0.7**
	6.3nm,0.6s						
KAPS				Lg	Lg	09 50 44.6	
	29nm,1.2s						
THN	**Thein Dam**	**6.84**	**180**	*eP*	Pb	09 49 11.0	-9.5
THN				*eS*	**Sn**	**09 50 18.5**	**-1.3**
THW	**Thamme Wali**	**7.24**	**208**	P	**Pn**	**09 49 07.8**	**+0.4**
WMQ	**Urumqi**	**10.05**	**59**	*eP*	**Pn**	**09 49 48.3**	**+2.4**

INET 13 10:02:35.8, 11°.84N×86°.14W, h157km, ML2.9

UCR 13 10:02:40.4±3.2, 11°.72N×86°.30W, h21km±49km, MD4.0, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACON	**Acoyapa**	**1.13**	**77**	*eP*	Pn	10 03 00.6	-0.4
CRIN	**San Cristobal**	**1.22**	**323**	*eP*	Pb	10 03 03.7	+0.9
MATN	**Matagalpa**	**1.25**	**17**	*eP*	Pn	10 03 02.4	-0.4
GB1A	**Borinquen Arri**	**1.26**	**135**	*i* P	Pb	10 03 03.7	+0.2
GB1A				*i* S	Sb	10 03 24.4	+5.0
LAPC	**Finca la Perla**	**1.27**	**138**	*i* P	Pn	10 03 03.0	0.0
LAPC				*i* S	Sb	10 03 23.0	+3.4
GPS3	**Bodega del ICE**	**1.33**	**136**	*i* P	Pn	10 03 03.9	+0.1
CUI	**Cuipilapa**	**1.54**	**133**	*i* P	Pn	10 03 05.7	-0.9
PLVR	**Palo Verde**	**1.65**	**146**	*eP*	Pn	10 03 08.5	+0.1
PLVR				*eS*	Sb	10 03 32.2	+1.5
JTS	**Las Juntas de**	**1.94**	**137**	*eP*	Pn	10 03 12.1	-0.1
ARE1	**Arenal 1**	**1.99**	**129**	*eP*	Pn	10 03 10.8	-2.1
CASO	**Castillo**	**2.00**	**130**	*i* S	Sn	10 03 37.6	+0.2

IDC 13 10:05:37.2±0.9, 15°.14S×177°.41W, h0km, mb4.3/8, mb1 4.6/8, mb1mx4.3/28, mbtmp4.3/8, MS4.3/15, Ms1 4.3/15, ms1mx4.1/30, Error ellipse: s-maj=48.7km s-min=17.8km az=138.0
NEIC 13 10:05:38.1±2.0, 15°.25S±0°.1×177°.2W±0°.1, h10km±1km, mb4.7/89, Error ellipse: s-maj=26.7km s-min=13.3km az=150.0
GCMT 13 10:05:44.1±0.4, 15°.03S±0°.02×177°.23W±0°.02, h15km±2km, MW5.0/81, Moment Tensor Solution. s4,c4; s81,c103; Duration: 0 Moment tensor: Scale 10^16 Nm; Mr=0.89±.25; Mθθ=0.99±.22; Mφφ=0.10±.21; Mrθ=0.17±.40; Mφθ=4.01±.20; Mφr=1.34±.52; Best double couple: Mo=4.28100×10^16 NP1: φs=273.00000°, δ70.00000°, λ=-5.00000°. NP2: φs=5.00000°, δ85.00000°, λ=-160.00000°. Principal axes: T 4.6770, Plg10.0000°, Azm138.0000°; N -0.7930, Plg70.0000°, Azm18.0000°; P -3.8840, Plg17.0000°, Azm231.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 13 10:05:41.6±0.5, 15°.45S±0°.1×177°.0W±0°.1, h35km, n141, σ1§06/124, mb4.7/54, MS4.3/17, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.25**	**243**	Pn	**Pn**	**10 06 56.4**	**-1.3**
AFI	**Afiamalu**	**5.30**	**74**		**Pn**	**10 06 58.1**	**-0.4**
RAO	**Raoul Island**	**13.79**	**183**	LR	LR	10 13 21.0	
	comp=Z,658nm,18.2s,baz=356,slow=33						
DZM	**Mont Dzumac**	**16.98**	**245**	*eP*	**P**	**10 09 40.0**	**+1.7**
	75nm,1.2s						
DZM				*e*LQ	LQ	10 12 49.5	
	2μm,28.6s						
DZM				*e*LR	LR	10 13 31.9	
	comp=Z,2μm,24.0s						
DZM	**Mont Dzumac**	**16.98**	**245**	LR	LR	10 15 04.5	
	comp=Z,2μm,18.3s,baz=68,slow=34						
RAR	**Rarotonga**	**17.36**	**112**	LR	LR	10 14 47.3	
	comp=Z,957nm,20.4s,baz=284,slow=31						
HNR	**Honiara**	**23.24**	**282**	LR	LR	10 18 13.1	
	comp=Z,1μm,20.9s,baz=119,slow=33						
URZ	**Urewera**	**23.33**	**192**	P	**P**	**10 10 48.7**	**+2.0**
	5.6nm,0.8s,baz=58,slow=13,SNR=1.5						
URZ				LR	LR	10 18 28.1	
	comp=Z,816nm,19.3s,baz=37,slow=33						
BKZ	**Black Stump Fm**	**24.33**	**192**	P	**P**	**10 10 55.7**	**-0.5**
PPT	**Papeete**	**26.41**	**98**	LR	LR	10 19 11.5	
	comp=Z,225nm,19.6s,baz=276,slow=30						
TBI	**Tubuai**	**27.14**	**111**	*e*LQ	LQ	10 17 09.0	
	1μm,28.0s						
TBI				*e*LR	LR	10 18 19.0	
	comp=Z,1μm,26.8s						
RPZ	**Rata Peaks**	**29.98**	**197**	LR	LR	10 22 30.9	
	comp=Z,548nm,18.9s,baz=14,slow=34						
ARMA	**Armidale**	**32.36**	**237**	P	**P**	**10 12 08.4**	**+0.3**
CAN	**Canberra**	**36.28**	**231**	P	**P**	**10 12 41.7**	**-0.2**
CAN				IAmb	IAmb	10 12 48.1	
	comp=Z,19nm,1.3s						
TAOE	**Nuku Hiva Isla**	**36.61**	**84**	*e*LR	LR	10 22 43.2	
	comp=Z,590nm,26.7s						
H11N3	**WAKE ISLAND Hy**	**38.32**	**335**	T	T	10 53 11.4	
	baz=163						
H11N1	**WAKE ISLAND Hy**	**38.33**	**335**	T	T	10 53 14.3	
	baz=163						
H11N2	**WAKE ISLAND Hy**	**38.34**	**335**	T	T	10 53 14.9	
	baz=163						
TOO	**Toolangi**	**39.77**	**229**	P	**P**	**10 13 12.3**	**+0.9**
RKT	**Rikitea**	**40.32**	**108**	*e*LR	LR	10 24 23.9	
	comp=Z,596nm,24.5s						
STKA	**Stephens Creek**	**41.01**	**239**	P	**P**	**10 13 20.8**	**-0.8**
	comp=Z,22nm,1.0s,baz=54,slow=6.8,SNR=16						
STKA				LR	LR	10 28 59.4	
	comp=Z,469nm,18.6s,baz=53,slow=34						
STKA	**Stephens Creek**	**41.01**	**239**	P	**P**	**10 13 20.5**	**-1.1**
WB0	**Warramunga Arr**	**46.38**	**257**	P	**P**	**10 14 04.5**	**-0.5**
WB0				IAmb	IAmb	10 14 06.9	
	comp=Z,8.0nm,1.1s						
WRA	**Warramunga Arr**	**46.43**	**257**	P	**P**	**10 14 03.2**	**-2.2**
	comp=Z,1.9nm,0.9s,baz=89,slow=7.8,SNR=9.4						
WRA				PcP	**PcP**	**10 15 40.7**	**+0.8**
	comp=Z,1.1nm,0.9s,baz=80,slow=3.2,SNR=4.9						
AS31	**Alice Springs**	**46.77**	**252**	P	**P**	**10 14 06.3**	**-1.7**
ASAR	**Alice Springs**	**46.77**	**252**	P

PINE	Pine Mountain	78.03	38	P	P	10 17 36.7	-0.2	
E03A	Lebam	78.17	35	P	P	10 17 36.7	-0.6	
WVOR	Wild Horse Val	78.67	40	P	P	10 17 40.6	+0.3	
WVOR				IAmb	IAmb	10 17 44.6		
	comp=Z,5.6nm,1.1s							
KLR	Kul'dur	78.67	329	LR	LR	10 46 21.2		
	comp=Z,316nm,22.0s,baz=114,slow=31							
I07A	Izee	79.05	38	P	P	10 17 41.9	-0.5	
I07A				IAmb	IAmb	10 17 46.7		
	comp=Z,5.8nm,1.0s							
TUC	Tucson	79.14	52	P	P	10 17 42.5	-0.6	
LON	Longmire	79.25	35	P	P	10 17 42.4	-1.0	
LON				IAmb	IAmb	10 17 51.9		
	comp=Z,6.9nm,1.3s							
J08A	Circle Bar Ran	79.27	39	P	P	10 17 43.2	-0.4	
D05A	Enumclaw	79.42	35	P	P	10 17 44.5	+0.3	
GLI	Glacier Island	79.72	14	P	P	10 17 43.8	-1.7	
GLI				IAmb	IAmb	10 17 48.4		
	comp=Z,11nm,1.0s							
TTA	Tatalina	79.81	10	P	P	10 17 46.3	+0.2	
ELK	Elko	79.95	43	P	P	10 17 45.4	-2.2	
G08A	Pilot Rock	80.04	37	P	P	10 17 46.9	-0.9	
G08A				IAmb	IAmb	10 17 51.9		
	comp=Z,10nm,1.2s							
GHO	Glory Hole Cre	80.09	13	P	P	10 17 46.5	-1.1	
GHO				IAmb	IAmb	10 17 54.7		
	comp=Z,8.4nm,1.0s							
LTY	Liberty	80.19	35	P	P	10 17 49.2	+0.8	
HAWA	Hanford	80.33	36	P	P	10 17 49.4	+0.2	
HAWA				IAmb	IAmb	10 17 53.3		
	comp=Z,7.7nm,1.0s							
SCM	Sheep Creek Mo	80.51	14	P	P	10 17 49.6	-0.3	
SCM				IAmb	IAmb	10 17 52.5		
	comp=Z,9.7nm,1.0s							
YAH	Yahtse	80.68	17	P	P	10 17 51.2	+0.2	
BMO	Blue Mountains	80.79	38	P	P	10 17 51.4	-0.3	
GLB	Gilahina Butte	81.03	15	P	P	10 17 52.0	-0.7	
D08A	Wollman Farm,	81.05	36	P	P	10 17 53.3	+0.3	
D08A				IAmb	IAmb	10 17 57.1		
	comp=Z,13nm,1.3s							
BALM	Baldy	81.07	16	P	P	10 17 51.9	-1.0	
BALM				IAmb	IAmb	10 17 55.8		
	comp=Z,8.4nm,1.0s							
MCARA	McCarthy VSAT	81.18	16	P	P	10 17 53.5	+0.1	
MCARA				IAmb	IAmb	10 17 56.2		
	comp=Z,12nm,1.3s							
E09A	Wood Farm, Sta	81.19	37	P	P	10 17 56.3	+2.5	
E09A				IAmb	IAmb	10 17 57.5		
	comp=Z,8.2nm,1.2s							
BARN	Barnard Glacie	81.28	17	P	P	10 17 54.4	+0.3	
KTH	Kantishna Hill	81.28	12	P	P	10 17 54.2	+0.3	
KTH				IAmb	IAmb	10 17 56.6		
	comp=Z,11nm,1.3s							
CTGM	Chitina Glacie	81.29	17	P	P	10 17 54.6	+0.5	
CTGM				IAmb	IAmb	10 17 57.2		
	comp=Z,8.3nm,1.0s							
TRF	Thorofare Moun	81.31	12	P	P	10 17 54.7	+0.4	
TRF				IAmb	IAmb	10 17 58.5		
	comp=Z,5.6nm,0.9s							
F10A	Beach Ranch, E	81.44	38	P	P	10 17 55.8	+0.6	
F10A				IAmb	IAmb	10 17 58.8		
	comp=Z,8.4nm,1.0s							
B08A	Colville Reser	81.56	35	P	P	10 17 56.0	+0.3	
B08A				IAmb	IAmb	10 17 59.0		
	comp=Z,8.4nm,1.1s							
RND	Reindeer	81.57	12	P	P	10 17 54.9	-0.6	
DHY	Denali Highway	81.59	13	P	P	10 17 54.6	-1.0	
DHY				IAmb	IAmb	10 17 58.2		
	comp=Z,9.8nm,1.4s							
MCK	McKinley	81.84	12	P	P	10 17 55.5	-1.3	
HYT	Haines Junctio	82.29	18	P	P	10 18 00.1	+0.7	
HYT				IAmb	IAmb	10 18 07.7		
	comp=Z,9.0nm,1.3s							
MLY	Manley	82.66	11	P	P	10 17 59.5	-1.6	
MLY				IAmb	IAmb	10 18 03.1		
	comp=Z,3.8nm,1.0s							
TCUT	Toone Canyon	82.67	44	P	P	10 18 00.8	-1.2	
WRH	Wood River Hil	82.67	12	P	P	10 18 00.2	-0.9	
WRH				IAmb	IAmb	10 18 04.3		
	comp=Z,7.9nm,1.1s							
NEW	Newport	82.73	36	P	P	10 18 01.4	-0.5	
NEW				IAmb	IAmb	10 18 06.8		
	comp=Z,5.3nm,1.1s							
DOT	Dot Lake	82.84	14	P	P	10 18 03.0	+0.9	
DOT				IAmb	IAmb	10 18 04.9		
	comp=Z,5.6nm,1.0s							
HDA	Harding Lake	82.85	13	P	P	10 18 02.6	+0.6	
HDA				IAmb	IAmb	10 18 05.7		
	comp=Z,4.1nm,0.8s							
CCB	Clear Creek Bu	82.88	12	P	P	10 18 01.4	-0.8	
CCB				IAmb	IAmb	10 18 04.5		
	comp=Z,7.3nm,1.0s							
BJI	Beijing	82.97	315	P	P	10 18 03.9	+0.7	
BJI				pmax	pmax			
	comp=Z,5.0nm,0.7s							
DLBC	Dease Lake	83.04	23	P	P	10 18 03.3	+0.1	
DLBC				IAmb	IAmb	10 18 07.1		
	comp=Z,8.9nm,1.2s							
COLA	College	83.07	12	P	P	10 18 02.4	-0.8	
IL31		83.18	13	P	P	10 18 02.5	-1.2	
ILAR	Eielson Array	83.18	13	P	P	10 18 02.9	-0.8	
	comp=Z,2.8nm,0.9s,baz=236,slow=6.7,SNR=16							
MCMT	McKenzie Canyo	83.50	40	P	P	10 18 05.5	-0.6	
TXAR	Lajitas Array	83.55	57	LR	LR	10 47 59.2		
	comp=Z,264nm,19.7s,baz=0.0,slow=30							
DLMT	Dillon	83.91	40	P	P	10 18 08.4	+0.2	
DLMT				IAmb	IAmb	10 18 12.6		
	comp=Z,6.4nm,1.2s							
REDW	Red Top Meadow	84.07	42	P	P	10 18 09.2	+0.1	
PRP	Porcupine Dome	84.12	13	P	P	10 18 07.6	-1.1	
SNOW	Snow King Moun	84.18	42	P	P	10 18 11.0	+1.3	
IMW	Indian Meadow	84.26	42	P	P	10 18 08.9	-1.2	
IMW				IAmb	IAmb	10 18 19.5		
	comp=Z,8.5nm,1.4s							
EGAK	Eagle	84.48	15	P	P	10 18 10.2	-0.2	
YHB	Horse Butte	84.50	41	P	P	10 18 10.7	-0.6	
YHL	Hebgen Lake	84.55	41	P	P	10 18 10.8	-0.8	
YMR	Madison River	84.60	41	P	P	10 18 10.1	-1.7	
BOZ	Bozeman (W)	84.62	40	P	P	10 18 11.3	-0.5	
BOZ				IAmb	IAmb	10 18 15.6		
	comp=Z,7.4nm,1.3s							
PDAR	Pinedale Array	84.64	43	P	P	10 18 12.8	+0.8	
	comp=Z,0.9nm,0.8s,baz=236,slow=3.3,SNR=9.2							
YHH	Holmes Hill	84.73	41	P	P	10 18 11.3	-1.2	
LKWY	Lake	84.91	41	P	P	10 18 12.1	-1.3	
YNE	Yellowstone No	85.36	41	P	P	10 18 15.3	-0.3	
HHC	Hu-ho-hao-te	86.49	314	*e*P	P	10 18 18.8	-2.3	
HHC				pmax	pmax			
	comp=Z,9.0nm,1.1s							
HHC				pmax	pmax			
	comp=Z,42nm,6.5s							
HHC				LR	LR			
	comp=N,130nm,17.2s							
HHC				LR	LR			
	comp=E,170nm,15.9s							
HHC				LR	LR			
	comp=Z,140nm,20.1s							
EPYK	Eagle Plains	86.87	15	P	P	10 18 22.6	+0.4	
CD2	Chengdu	88.85	302	P	P	10 18 31.8	-0.8	
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
LZH	Lanzhou	90.43	307	*e*P	P	10 18 42.6	+2.6	
LZH				pP	pP	10 18 46.8	-3.7	
LZH				sP	pwP	10 18 50.3	-2.9	
LZH				PP	PP	10 22 18.8	+3.8	
LZH				pmax	pmax			
	comp=Z,19nm,1.0s							
LZH				pmax	pmax			
	comp=Z,63nm,4.3s							
LZH				LR	LR			
	comp=N,150nm,17.5s							
LZH				LR	LR			
	comp=E,150nm,17.4s							
LZH				LR	LR			
	comp=Z,170nm,19.6s							
YKA	Yellowknife Ar	91.53	24	P	P	10 18 45.3	+1.1	
	comp=Z,1.5nm,1.0s,baz=241,slow=4.3,SNR=12							
SYO	Syowa Base	91.86	192	*e*X	P	10 18 43.6	-2.2	
PLCA	Paso Flores	92.07	133	LR	LR	10 52 03.3		
	comp=Z,82nm,19.7s,baz=250,slow=30							
C36M	Paulatuk	92.35	16	P	P	10 18 47.2	-0.7	
C36M				IAmb	IAmb	10 18 50.4		
	comp=Z,4.0nm,1.1s							
SNAA	Sanae	93.03	178	LR	LR	10 59 20.4		
	comp=Z,84nm,18.2s,baz=196,slow=34							

TIXI	Tiksi	94.10	345	LR	LR	10 59 13.4		
	comp=Z,132nm,19.4s,baz=86,slow=34							
GTA	Gaotai	94.47	310	*e*P	P	10 19 02.4	+3.8	
GTA				pP	pP	10 19 08.0	-1.1	
GTA				sP	pwP	10 19 11.1	-0.6	
GTA				pmax	pmax			
	comp=Z,2.0nm,1.3s							
TLY	Talaya	95.48	322	LR	LR	11 00 27.5		
	comp=Z,107nm,18.9s,baz=64,slow=35							
BRTR	Keskin Array B	143.90	318	PKhKP	PKPpre	10 25 10.8		
	comp=Z,0.5nm,0.7s,baz=132,slow=2.1,SNR=4.9							
KHC	Kasperske Hory	145.28	348	*e*PKP	**PKPdf**	**10 25 16.0**	**+0.2**	
GERES	GERESS Array B	145.52	347	PKPbc	**PKPdf**	**10 25 16.5**	**+0.2**	
	comp=Z,1.6nm,0.8s,baz=88,slow=4.3,SNR=11							
CONA	Conrad Observa	145.88	344	*ep*PKPbc	**PKPab**	**10 25 18.5**	**+0.6**	
	comp=Z,21nm,1.4s							
MOA	Molln	146.34	346	*ep*PKPdf	**PKPab**	**10 25 19.3**	**-0.3**	
	comp=Z,14nm,1.4s							
ARSA	Arzberg	146.59	344	*e*PKPab	**PKPbc**	**10 25 19.3**	**-0.3**	
	comp=Z,2.9nm,0.8s							
SOKA	Soboth	147.25	345	*e*PKPbc	**PKPbc**	**10 25 20.5**	**-1.1**	
	comp=Z,17nm,1.6s							
KBA	Koelnbreinsper	147.27	347	pPKPdf	**PKPbc**	**10 25 21.7**	**0.0**	
	comp=Z,9.3nm,1.2s							
RETA	Reutte	147.38	350	*e*PKPab	**PKPbc**	**10 25 22.4**	**+0.5**	
	comp=Z,15nm,1.3s							
WATA	Walderalm	147.38	349	*i* sPKPdf	**PKPab**	**10 25 22.9**	**-1.0**	
WTTA	Wattenberg	147.44	349	*e*PKPab	**PKPbc**	**10 25 22.5**	**+0.4**	
	comp=Z,17nm,1.4s							
MOTA	Moosalm	147.46	350	*i* pPKPdf	**PKPbc**	**10 25 21.8**	**-0.4**	
	comp=Z,15nm,1.5s							
OBKA	Obir	147.53	345	PKPab	**PKPab**	**10 25 23.1**	**-1.3**	
	comp=Z,5.3nm,0.6s							
SQTA	Sankt Quirin	147.56	350	*ep*PKPdf	**PKPbc**	**10 25 22.4**	**-0.1**	
	comp=Z,14nm,1.6s							
MYKA	Terra Mystica	147.63	346	*e*PKPab	**PKPbc**	**10 25 23.1**	**+0.5**	
	comp=Z,17nm,1.5s							
DAVA	Damuels	147.71	351	*i* PKPab	**PKPbc**	**10 25 23.2**	**+0.3**	
	comp=Z,18nm,1.4s							
ABTA	Abfaltersbach	147.76	348	*ep*PKPdf	**PKPbc**	**10 25 22.7**	**-0.2**	
	comp=Z,11nm,1.1s							
FETA	Feichten	147.84	350	*ep*PKPdf	**PKPbc**	**10 25 22.6**	**-0.6**	
	comp=Z,5.2nm,1.1s							

MAN 13 10:31:41.9, 13.60N×120.62E, h61km, mb3.9, ML2.7, MS2.2, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PGP	Puerto Galera	0.34	106	*e*P	Pn	10 31 54.8	+2.3
PGP				*e*S	Sn	10 32 03.1	+2.9

BJI ***13*** *10:36:00.0±0.0, 7.59S×155.46E, h35km, mB5.1/18, mb4.8/25, Ms4.8/6, Ms7 4.6/6*
NEIC ***13*** *10:36:06.8±1.6, 6.86S±0.06×155.39E±0.03, h60km±6km, mb4.7/82, Error ellipse: s-maj=9.4km s-min=3.2km az=155.0*
IDC ***13*** *10:36:07.9±1.5, 6.86S×155.37E, h69km±13km, mb4.2/29, mb1 4.3/34, mb1mx4.2/47, mbtmp4.5/34, MS4.3/3, Ms1 4.3/3, ms1mx3.8/24, Error ellipse: s-maj=11.4km s-min=8.6km az=53.0*
DJA ***13*** *10:36:12.0±0.5, 7.7S±3.1×155.1E±1.1, h99km±6km, M5.2/28, mb4.8/28, mB4.7/3, MLv5.5/2, Mw(mB)3.9/3*

ISC 13 10:36:06.0±0.3, 6.86S±0.05×155.42E±0.05, h50km, n173, σ1°33/177, mb4.7/82, MS4.5/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	4.18	309	Pn	Pn	10 37 08.8	+1.5
RABL				Sn	Sn	10 37 53.6	-1.4
KRVT	Keravat (AS076	4.22	307	P	Pn	10 37 08.8	+1.0
	16nm,0.3s,baz=148,slow=2.5,SNR=16						
KRVT				S	Sn	10 37 57.8	+1.9
	39nm,0.3s,baz=157,slow=3.9,SNR=4.2						
HNR	Honiara	5.16	120	P	Pn	10 37 23.3	+2.5
	20nm,0.3s,baz=229,slow=8.4,SNR=2.9						
HNR				S	Sn	10 38 21.5	+2.5
	6.5nm,0.3s,baz=216,slow=19,SNR=4.4						
HNR	Honiara	5.16	120		Pn	10 37 21.8	+1.0
PMG	Port Moresby	8.55	252	P	Pn	10 38 08.6	+1.3
	3.1nm,0.3s,baz=63,slow=13,SNR=9.0						
PMG				S	Sn	10 39 44.8	+2.3
	4.1nm,0.3s,baz=52,slow=20,SNR=4.0						
PMG	Port Moresby	8.55	252		Pn	10 38 07.5	+0.3
PMG				Sn	Sn	10 39 41.0	-1.5
PATS	Pohnpei	13.91	12	Pn	Pn	10 39 18.5	-2.0
COEN	Coen	13.95	239	Pn	Pn	10 39 21.0	0.0
CTA	Charters Tower	15.87	213	P	Pn	10 39 46.2	+0.1
	0.2nm,0.3s,baz=36,slow=17,SNR=1.9						
SMPI	Sarmi	17.34	285	P	P	10 40 07.3	+1.9
	35nm,0.8s						
DZM	Mont Dzumac	18.49	146	P	Pn	10 40 19.2	+0.5
	2.0nm,0.3s,baz=298,slow=8.3,SNR=19						
DZM	Mont Dzumac	18.49	146	P	P	10 40 17.5	-0.7
DZM				IAmb	IAmb	10 40 22.3	
	comp=Z,53nm,1.5s						
EIDS	Eidsvold	18.86	192	P	P	10 40 21.4	-0.8
TARA	Tarawa	19.29	66	P	P	10 40 26.3	-0.6
TARA				IAmb	IAmb	10 40 29.2	
	comp=Z,38nm,0.9s						
FAKI	Fak Fak	23.41	279	P	P	10 41 09.9	-0.9
FAKI				IAmb	IAmb	10 41 22.1	
	comp=Z,15nm,0.7s						
ARMA	Armidale	23.70	188	P	P	10 41 13.9	+0.4
WR0	Warramunga Arr	24.08	235	P	P	10 41 17.0	0.0
WR0				IAmb	IAmb	10 41 29.5	
	comp=Z,31nm,0.9s						
WB0	Warramunga Arr	24.11	236	P	P	10 41 17.3	+0.1
WB0				IAmb	IAmb	10 41 30.3	
	comp=Z,47nm,1.4s						
WRAB	Tennant Creek	24.22	236	P	P	10 41 18.0	-0.2
WRAB				IAmb	IAmb	10 41 30.8	
	comp=Z,52nm,1.5s						
WB2	Warramunga Arr	24.23	235	P	P	10 41 18.2	-0.1
WB2				IAmb	IAmb	10 41 31.7	
	comp=Z,35nm,1.2s						
WRA	Warramunga Arr	24.23	236	P	P	10 41 18.4	0.0
	comp=Z,8.4nm,0.5s,baz=59,slow=9.4,SNR=110						
MSVF	Nonsavu	24.58	118	P	P	10 41 22.6	+1.0
MTN	Manton Dam	24.64	254	P	P	10 41 22.7	+0.6
MTN				IAmb	IAmb	10 41 39.9	
	comp=Z,16nm,0.8s						
SIJI	Sorong	24.81	283	P	P	10 41 23.9	+0.3
	comp=Z,31nm,0.6s,baz=158,slow=6.2,SNR=6.7						
BNDI	Bandanaira	25.49	274	P	P	10 41 31.5	+1.7
	comp=Z,162nm,1.2s						
AS31	Alice Springs	26.57	229	P	P	10 41 39.1	-0.4
ASAR	Alice Springs	26.57	229	P	P	10 41 39.0	-0.6
	comp=Z,4.2nm,0.5s,baz=63,slow=9.0,SNR=132						
KNRA	Kununurra	27.54	249	P	P	10 41 47.9	-0.4
KNRA				IAmb	IAmb	10 42 02.5	
	comp=Z,14nm,0.7s						
STKA	Stephens Creek	28.03	206	P	P	10 41 52.9	+0.3
	comp=Z,2.1nm,0.6s,baz=27,slow=12,SNR=7.5						
STKA	Stephens Creek	28.03	206	P	P	10 41 52.8	+0.3
NLAI	Namlea	28.43	276	P	P	10 41 57.8	+1.5
	comp=Z,19nm,1.3s						
LBMI	Labuha	28.52	281	P	P	10 41 58.5	+1.4
	comp=Z,43nm,0.6s						
FITZ	Fitzroy Crossi	31.09	246	P	P	10 42 19.2	-0.5
	comp=Z,11nm,0.6s,baz=75,slow=8.1,SNR=51						
FITZ	Fitzroy Crossi	31.09	246	P	P	10 42 19.2	-0.5
FITZ				IAmb	IAmb	10 42 20.7	
	comp=Z,10nm,0.7s						
BBOO	Buckleboo	31.47	212	P	P	10 42 23.2	+0.3
BBOO				IAmb	IAmb	10 42 38.9	
	comp=Z,11nm,1.1s						
MMRI	Maumere	32.91	265	P	P	10 42 36.2	+0.3
	comp=Z,47nm,0.4s						
GTOI	Gorontalo	33.18	282	P	P	10 42 40.8	+2.6
	comp=Z,0.1nm,0.8s						
EDFI	Ende, Flores	33.46	265	P	P	10 42 39.5	-1.2
	comp=Z,30nm,0.7s						
MRSI	Marisa	34.19	281	P	P	10 42 47.8	+0.9
	comp=Z,15nm,0.9s						
APSI	Ampana	34.19	278	P	P	10 42 48.2	+1.3
	comp=Z,11nm,1.1s						
FORT	Forrest	34.97	224	P	P	10 42 53.2	-0.3
BKSI	Bulukumba	35.12	270	P	P	10 42 55.8	+0.8
	comp=Z,12nm,0.7s						
BNSI	Bone	35.22	272	P	P	10 42 56.8	+1.0
	comp=Z,20nm,1.3s						

MPSI	Mapaga	36.15	280	P	P	10 43 02.8	-1.0	
URZ	Urewera	36.92	151	P	P	10 43 09.9	-0.1	
	comp=Z,2.2nm,0.5s,baz=9.0,slow=19,SNR=1.5							
PSA00	Pilbara Seismi	37.33	243	P	P	10 43 14.6	+0.8	
BKZ	Black Stump Fm	37.35	153	P	P	10 43 12.2	-1.6	
BKZ				IAmb	IAmb	10 43 22.6		
	comp=Z,5.6nm,0.8s							
THZ	Tophouse	38.07	159	P	P	10 43 20.5	+0.7	
TUWZ	Tuamarina	38.17	157	P	P	10 43 21.3	+0.7	
BFZ	Birch Farm	38.48	154	P	P	10 43 21.0	-2.3	
PLWZ	Palliser	38.80	156	P	P	10 43 25.8	-0.2	
KHZ	Kahutara	38.87	158	P	P	10 43 25.1	-1.4	
RPZ	Rata Peaks	39.19	162	P	P	10 43 29.5	+0.3	
	comp=Z,4.5nm,0.6s,baz=260,slow=8.7,SNR=2.0							
RPZ	Rata Peaks	39.19	162	P	P	10 43 28.1	-1.0	
MQZ	McQueen's Vall	39.70	160	P	P	10 43 32.1	-1.2	
KKM	Kota Kinabalu	41.16	287	P	P	10 43 45.7	-0.3	
MORW	Morawa	43.17	234	P	P	10 44 01.7	-0.4	
NWAO	Narrogin (SRO)	43.89	229	P	P	10 44 05.8	-2.0	
	comp=Z,11nm,1.0s,baz=82,slow=6.2,SNR=2.2							
NWAO	Narrogin (SRO)	43.89	229	P	P	10 44 07.3	-0.5	
YULB	Yu-li	44.90	313	P	P	10 44 15.0	-0.9	
YULB				IAmb	IAmb	10 44 31.8		
	comp=Z,8.8nm,0.8s							
TPUB	Ta-pu	45.33	312	P	P	10 44 19.4	0.0	
KSM	Kuching	45.77	279	P	P	10 44 22.5	-0.5	
KSM				IAmb	IAmb	10 44 39.7		
	comp=Z,7.9nm,0.9s							
JNU	Nakatsue	46.10	331	P	P	10 44 24.5	-0.9	
JNU				IAmb	IAmb	10 44 38.7		
	comp=Z,15nm,1.4s							
KSRS	Korea Array	51.02	332	P	P	10 45 02.2	-0.8	
	comp=Z,0.7nm,0.5s,baz=155,slow=7.1,SNR=4.6							
JKA	Kamikawa-asahi	52.05	348	P	P	10 45 11.0	+0.4	
ASAJ	Asahikawa	52.05	348	P	P	10 45 11.0	+0.4	
	comp=Z,3.7nm,0.6s,baz=140,slow=7.9,SNR=1.8							
NJ2	Nanjing	52.08	320	*e*P	P	10 45 13.3	+2.2	
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
USRK	Ussuriysk Ar.	55.05	340	P	P	10 45 32.7	+0.1	
	comp=Z,2.2nm,0.6s,baz=111,slow=6.4,SNR=6.7							
USRK				LR	LR	11 08 20.1		
	comp=Z,248nm,21.1s,baz=139,slow=35							
IPM	Ipoh	55.44	280	P	P	10 45 34.9	-1.1	
IPM				IAmb	IAmb	10 45 52.0		
	comp=Z,8.7nm,0.8s							
KLR	Kul'dur	59.57	342	P	P	10 46 04.4	0.0	
	comp=Z,1.7nm,0.5s,baz=163,slow=11,SNR=5.4							
PETK	Petropavlovsk-	59.77	2	P	P	10 46 06.7	+0.9	
	comp=Z,6.9nm,0.7s,baz=171,slow=7.0,SNR=7.8							
PETK				LR	LR	11 09 54.5		
	comp=Z,449nm,21.9s,baz=208,slow=34							
XAN	Xi'an	59.90	316	P	P	10 46 06.0	-1.1	
XAN				IAmb	IAmb	10 46 10.2		
	comp=Z,6.0nm,0.8s							
KMI	Kunming	60.29	304	P	P	10 46 07.1	-3.0	
CM31	Chiang Mai Arr	61.10	295	P	P	10 46 14.8	-0.7	
CMAR	Chiang Mai Arr	61.10	295	P	P	10 46 16.4	+0.9	
	comp=Z,12nm,0.6s,baz=124,slow=5.9,SNR=43							
CHTO	Chiang Mai	61.22	296	P	P	10 46 16.8	+0.6	
CD2	Chengdu	62.05	310	P	P	10 46 22.9	+1.2	
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
HHC	Hu-ho-hao-te	62.23	324	*e*P	P	10 46 23.8	+1.0	
HHC				pmax	pmax			
	comp=Z,10.0nm,1.1s							
HHC				pmax	pmax			
	comp=Z,62nm,6.9s							
HHC				LR	LR			
	comp=Z,220nm,17.9s							
HHC				LR	LR			
	comp=Z,260nm,19.5s							
HHC				LR	LR			
	comp=Z,240nm,19.5s							
LZH	Lanzhou	64.51	315	*e*P	P	10 46 42.0	+3.9	
LZH				pP	pP	10 46 53.8	+1.7	
LZH				sP	sP	10 46 56.5	-1.3	
LZH				pmax	pmax			
	comp=Z,15nm,1.0s							
LZH				pmax	pmax			
	comp=Z,63nm,4.9s							
LZH				LR	LR			
	comp=Z,190nm,15.0s							
LZH				LR	LR			
	comp=Z,180nm,14.9s							
LZH				LR	LR			
	comp=Z,280nm,17.2s							
MA2	Magadan	66.33	357	LR	LR	11 13 30.2		
	comp=Z,154nm,22.0s,baz=184,slow=34							
MA2	Magadan	66.33	357	P	P	10 46 49.4	+0.3	
CASY	Casey	66.85	198	P	P	10 46 52.3	0.0	
CASY				IAmb	IAmb	10 46 53.5		
	comp=Z,5.7nm,0.8s							
SONM	Songino Array	69.45	327	P	P	10 47 08.6	-0.6	
	comp=Z,2.1nm,0.5s,baz=148,slow=6.2,SNR=12							
SEY	Seymchan	69.63	359	P	P	10 47 10.1	+0.4	
	comp=Z,1.9nm,0.8s,baz=253,slow=8.9,SNR=4.8							
VNDA	Vanda	70.70	179	P	P	10 47 15.9	-0.3	
	comp=Z,1.0nm,0.6s,baz=333,slow=7.2,SNR=7.9							
VNDA	Vanda	70.70	179	P	P	10 47 16.0	-0.2	
TAPN	Taplejung	73.69	301	*e*P	P	10 47 35.9	+0.6	
	comp=Z,18nm,0.5s							
ODAN	Odare	73.82	300	*e*P	P	10 47 36.5	+0.5	
	comp=Z,42nm,0.5s							
RAMN	Ramite	74.53	300	*e*P	P	10 47 40.4	+0.3	
	comp=Z,12nm,0.4s							
JIRN	Jiri	75.07	301	*e*P	P	10 47 43.7	+0.2	
	comp=Z,19nm,0.5s							
BILL	Bilibino	75.12	4	P	P	10 47 43.5	+1.2	
GUN	Gumba	75.41	301	*e*P	P	10 47

comp=Z,14nm,1.0s

KTH	Kantishna Hill	80.95	21	P	P	10 48 14.9	0.0	
TRF	Thorofare Moun	81.12	22	P	P	10 48 15.3	-0.6	
TRF				IAmb	IAmb	10 48 17.6		
	comp=Z,7.4nm,1.1s							
BPAW	Bear Paw Mtn.	81.25	21	P	P	10 48 14.5	-1.9	
SCM	Sheep Creek Mo	81.35	24	P	P	10 48 16.5	-0.6	
SCM				IAmb	IAmb	10 48 18.8		
	comp=Z,11nm,1.1s							
RND	Reindeer	81.63	22	P	P	10 48 18.2	-0.3	
RND				IAmb	IAmb	10 48 35.2		
	comp=Z,5.8nm,0.9s							
MCK	McKinley	81.78	22	P	P	10 48 18.9	-0.4	
MLY	Manley	81.88	20	P	P	10 48 19.6	-0.1	
DHY	Denali Highway	82.00	23	P	P	10 48 20.1	-0.5	
GLB	Gilahina Butte	82.60	25	P	P	10 48 23.1	-0.5	
GLB				IAmb	IAmb	10 48 25.2		
	comp=Z,9.5nm,1.1s							
VRDI	Verde Repeater	82.64	25	P	P	10 48 23.8	-0.2	
VRDI				IAmb	IAmb	10 48 25.5		
	comp=Z,7.6nm,1.2s							
CCB	Clear Creek Bu	82.70	21	P	P	10 48 22.8	-1.1	
HDA	Harding Lake	82.88	22	P	P	10 48 24.5	-0.4	
BALM	Baldy	83.03	26	P	P	10 48 26.4	+0.5	
IL31		83.10	21	P	P	10 48 24.5	-1.5	
ILAR	Eielson Array	83.10	21	P	P	10 48 24.9	-1.1	
	comp=Z,1.7nm,0.5s,baz=251,slow=5.5,SNR=31							
QSPA	South Pole Qui	83.11	180	P	P	10 48 26.7	+0.3	
	comp=Z,5.7nm,0.6s,baz=287,slow=0.4,SNR=69							
QSPA	South Pole Qui	83.11	180	P	P	10 48 26.9	+0.6	
QSPA				IAmb	IAmb	10 48 28.1		
	comp=Z,6.8nm,0.7s							
COLD	Coldfoot	83.35	19	P	P	10 48 26.2	-1.1	
MENT	Mentasta	83.36	24	P	P	10 48 25.9	-1.6	
CTGM	Chitina Glacie	83.43	26	P	P	10 48 27.4	-0.6	
CTGM				IAmb	IAmb	10 48 29.7		
	comp=Z,16nm,1.3s							
DOT	Dot Lake	83.58	23	P	P	10 48 27.7	-0.9	
DOT				IAmb	IAmb	10 48 30.0		
	comp=Z,12nm,1.3s							
MK31	Makanchi Array	83.58	319	P	P	10 48 27.9	-1.1	
MKAR	Makanchi Array	83.58	319	P	P	10 48 27.6	-1.4	
	comp=Z,1.5nm,0.7s,baz=97,slow=5.4,SNR=11							
MAKZ	Makanchi	83.79	319	P	P	10 48 29.5	-0.6	
MAKZ				IAmb	IAmb	10 48 45.3		
	comp=Z,5.5nm,0.8s							
ZALV	Zalesovo Beam	84.30	326	P	P	10 48 30.5	-2.0	
	comp=Z,1.1nm,0.4s,baz=122,slow=6.3,SNR=5.4							
TOLK	Toolik Lake Re	84.37	18	P	P	10 48 33.2	+0.7	
TOLK				IAmb	IAmb	10 48 38.1		
	comp=Z,5.9nm,0.9s							
FYU	Fort Yukon	84.63	20	P	P	10 48 33.8	0.0	
FYU				IAmb	IAmb	10 48 43.3		
	comp=Z,7.1nm,1.3s							
MAW	Mawson	84.68	203	P	P	10 48 34.4	+0.3	
	comp=Z,4.3nm,0.5s,baz=96,slow=5.5,SNR=20							
MAW	Mawson	84.68	203	P	P	10 48 34.8	+0.7	
HYT	Haines Junctio	85.07	27	P	P	10 48 35.0	-1.3	
HYT				IAmb	IAmb	10 48 39.0		
	comp=Z,10nm,1.2s							
EGAK	Eagle	85.23	23	P	P	10 48 37.6	+0.8	
EGAK				IAmb	IAmb	10 48 54.8		
	comp=Z,5.9nm,1.1s							
KSH	Kashi	86.24	310	P	P	10 48 45.4	+2.7	
KSH				sP	sP	10 49 03.4	+0.7	
KSH				PP	PP	10 52 10.5	+6.4	
KSH				SKS	S	10 59 04.5	-10	
KSH				S	SKKSac	10 59 16.5	+3.6	
KSH				SS	SS	11 05 07.8	+13	
KSH				pmax	pmax			
	comp=Z,27nm,1.4s							
KSH				pmax	pmax			
	comp=Z,130nm,4.8s							
KSH				LR	LR			
	comp=Z,110nm,10.4s							
KSH				LR	LR			
	comp=Z,78nm,11.3s							
KSH				LR	LR			
	comp=Z,280nm,14.5s							
KURK	Kurchatov	86.99	322	P	P	10 48 46.1	+0.2	
KURBB	Kurchatov Arra	87.02	322	P	P	10 48 44.4	-1.6	
	comp=Z,0.6nm,0.3s,baz=97,slow=5.4,SNR=4.4							
NRIK	Noril'sk	88.75	341	P	P	10 48 52.8	-1.1	
	comp=Z,2.3nm,0.5s,baz=127,slow=6.5,SNR=4.4							
INK	Inuvik	89.45	21	P	P	10 48 57.4	+0.2	
	comp=Z,4.9nm,0.4s,baz=274,slow=4.0,SNR=16							
INK	Inuvik	89.45	21	P	P	10 48 57.0	-0.1	
NVAR	Mina Array Bea	91.31	52	P	P	10 49 07.1	+0.3	
	comp=Z,1.2nm,1.0s,baz=249,slow=5.1,SNR=6.8							
BVAR	Borovoye Array	92.44	323	P	P	10 49 11.5	+0.1	
	comp=Z,0.4nm,0.4s,baz=116,slow=6.9,SNR=3.7							
C36M	Paulatuk	93.03	21	P	P	10 49 13.6	-0.1	
YKA	Yellowknife Ar	96.03	28	P	P	10 49 27.8	+0.2	
	comp=Z,1.3nm,0.4s,baz=266,slow=4.3,SNR=57							
PDAR	Pinedale Array	98.30	48	P	P	10 49 37.4	-1.3	
	comp=Z,0.6nm,0.9s,baz=268,slow=5.6,SNR=4.5							
PLCA	Paso Flores	116.57	142	PKP	PKiKP	10 54 45.0	+0.1	
	comp=Z,1.6nm,0.6s,baz=232,slow=3.2,SNR=10							
PLCA	Paso Flores	116.57	142		PKPdf	10 54 44.6	-0.3	
BRTR	Keskin Array B	118.61	312	PKP	PKPdf	10 54 48.2	-0.8	
	comp=Z,0.4nm,0.5s,baz=107,slow=4.8,SNR=2.7							
NB2	NORSAR Subarra	119.71	341	PKPdf	PKPdf	10 54 49.6	-0.7	
	comp=Z,1.4nm,0.6s,baz=44,slow=1.9							
NOA	NORSAR Array B	119.71	341	PKP	PKPdf	10 54 49.0	-1.3	
	comp=Z,0.5nm,0.5s,baz=44,slow=1.9,SNR=4.5							
SUR	Sutherland	121.78	225	PKP	PKPdf	10 54 54.0	-1.4	
	comp=Z,6.3nm,1.0s,baz=181,slow=4.3,SNR=5.6							
MLR	Muntele Rosu	121.89	320	PKP	PKPdf	10 54 53.2	-1.9	
	comp=Z,1.1nm,0.4s,baz=31,slow=12,SNR=2.1							
MLR	Muntele Rosu	121.89	320		PKPdf	10 54 53.4	-1.7	
GERES	GERESS Array B	127.15	329	PKP	PKPdf	10 55 03.9	-1.1	
	comp=Z,0.4nm,0.4s,baz=107,slow=1.0,SNR=6.6							
EKA	Eskdalemuir Ar	128.72	344	PKP	PKPdf	10 55 06.0	-1.7	
	comp=Z,1.1nm,0.4s,baz=12,slow=2.6,SNR=10							
BMRD	Maredsous	130.25	336	pPKiKP	pPKPdf	10 55 22.5	-3.4	
DOU	Dourbes	130.48	336	pPKiKP	pPKPdf	10 55 23.1	-3.2	
LPAZ	La Paz	131.16	119	PKP	PKiKP	10 55 14.8	-0.3	
	comp=Z,1.3nm,0.4s,baz=229,slow=9.8,SNR=9.0							
BDFB	Brasilia	147.77	134	PKPbc	PKPbc	10 55 46.3	-0.2	
	comp=Z,10.0nm,0.5s,baz=346,slow=1.7,SNR=13							
TORD	Torodi Ar. Bea	153.39	286	PKP	PKPdf	10 55 51.7	-0.5	
	comp=Z,0.5nm,0.6s,baz=6.2,slow=1.5,SNR=4.4							
TORD				PKPbc	PKPbc	10 55 59.0	-0.8	
	comp=Z,2.1nm,0.6s,baz=50,slow=2.4,SNR=13							
TORD				PKPab	pPKPdf	10 56 09.3	+2.0	
	comp=Z,2.5nm,0.5s,baz=76,slow=2.8,SNR=11							
KIC	Kosan Boka	160.28	270	*e*PKP1	PKPab	10 56 34.3	-7.5	
	comp=Z,12nm,0.8s							
LIC	Lamto	160.56	269	*e*PKP1	PKPab	10 56 34.9	-8.1	
	comp=Z,11nm,0.8s							
TIC	Toumodi	160.57	271	*e*PKP1	PKPab	10 56 35.1	-8.0	

BGR **13** *10:38:12.9±0.0, 7.˚18S×155.˚38E, h33km, Ms4.8*
MOS **13** *10:38:14.5±1.2, 6.˚73S×155.˚34E, h54km, mb5.3/46, Error ellipse: s-maj=7.0km s-min=5.8km az=96.5*
NEIC **13** *10:38:15.0±2.2, 6.˚84S±0.˚06×155.˚27E±0.˚06, h53km±4km, mb5.2/204, Error ellipse: s-maj=9.4km s-min=7.4km az=214.0*
BJI **13** *10:38:17.6±0.0, 6.˚23S×155.˚55E, h70km, mB5.1/42, mb5.1/65, Ms4.8/45, Ms7 4.6/44*
IDC **13** *10:38:17.4±1.3, 6.˚82S×155.˚33E, h67km±11km, mb4.8/36, mb1 4.8/42, mb1mx4.8/50, mbtmp5.1/42, MS4.6/20, Ms1 4.6/20, ms1mx4.6/25, Error ellipse: s-maj=10.1km s-min=7.8km az=66.0*
GCMT **13** *10:38:18.0±0.2, 7.˚07S±0.˚01×155.˚33E±0.˚01, h38km, MW5.4/104, Moment Tensor Solution. s104,c151; s104,c166; Duration: 1s2 Moment tensor: Scale 1017 Nm; Mrr1.31±.03; Mθθ-1.06±.02; Mϕϕ-0.25±.02; Mrθ0.20±.03; Mθϕ0.66±.02; Mϕr-0.07±.03; Best double couple: Mo1.38600×1017 NP1:ϕs301.00000°, δ41.00000°, λ93.00000°. NP2:ϕs117.00000°, δ49.00000°, λ87.00000°. Principal axes: T 1.3280, Plg85.0000°, Azm5.0000°; N 0.1170, Plg2.0000°, Azm119.0000°; P -1.4450, Plg4.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA **13** *10:38:23.6±0.6, 7.˚5S×15.˚5E±.˚, h125km±5km, M5.2/42, mb5.2/42, mB5.5/18, MLv6.2/1, Mw(mB)5.0/18*
ISC 13 10:38:15.5±0.5, **6.˚87S**±0.˚04×**155.˚34E**±0.˚04, **h57**km±4km, **n860**, σ1s**20**/866, **mb5.1**/187, **MS4.6**/34, **27C-8D**,

Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
RABL	Rabaul	4.13	310	Pn	Pn	10 39 14.5	-1.6
RABL				Sn	Sn	10 40 00.2	-3.0
KRVT	Keravat (AS076	4.16	307	P	Pn	10 39 18.2	+1.6
	baz=36,slow=19,SNR=0.9						
KRVT				S	Sn	10 40 07.8	+3.8
	102nm,0.3s,baz=130,slow=17,SNR=1.4						
KRVT				LR	LR	10 41 14.1	
	comp=Z,14μm,20.6s,baz=117,slow=43						
HNR	Honiara	5.23	120	P	Pn	10 39 34.2	+3.0
	29nm,0.3s,baz=234,slow=8.7,SNR=1.0						
HNR				S	Sn	10 40 34.4	+4.2
	131nm,0.3s,baz=266,slow=16,SNR=1.5						
HNR				LR	LR	10 41 37.3	
	comp=Z,15μm,19.8s,baz=310,slow=38						
HNR	Honiara	5.23	120	Pn	Pn	10 39 30.7	-0.4
HNR				Sn	Sn	10 40 31.1	+0.9
PMG	Port Moresby	8.48	252	P	Pn	10 40 18.7	+2.9
	10nm,0.3s,baz=75,slow=10,SNR=7.2						
PMG				S	Sn	10 41 52.4	+2.3
	3.9nm,0.3s,baz=87,slow=17,SNR=2.7						
PMG				LR	LR	10 43 36.1	
	comp=Z,7μm,18.9s,baz=56,slow=38						
PMG	Port Moresby	8.48	252		Pn	10 40 13.4	-2.4
PMG				Sn	Sn	10 41 46.3	-3.9
COEN	Coen	13.88	239	P	Pn	10 41 30.8	+1.2
	baz=14,SNR=8.2						
COEN	Coen	13.88	239		Pn	10 41 30.6	+1.1
PATS	Pohnpei	13.93	12		Pn	10 41 29.2	-1.0
JAY	Jayapura	15.21	286	P	Pn	10 41 48.1	+1.1
	2.8nm,0.3s,baz=56,slow=5.1,SNR=8.8						
JAY				LR	LR	10 48 05.9	
	comp=Z,2μm,20.3s,baz=96,slow=39						
JAY	Jayapura	15.21	286	P	Pn	10 41 47.3	+0.3
	512nm36nm,1.0s						
MTSU	Mount Surprise	15.52	223	P	P	10 41 53.1	-1.2
	baz=16,SNR=6.7						
GENI	Genyem	15.70	285	P	P	10 41 58.4	+2.1
	6um141nm,1.1s						
CTA	Charters Towe	15.83	213	P	P	10 41 56.7	-1.0
	0.6nm,0.3s,baz=36,slow=15,SNR=5.9						
CTA				LR	LR	10 47 47.2	
	comp=Z,3μm,18.1s,baz=50,slow=36						
CTAO	Charters Tower	15.83	213	P	P	10 41 56.6	-1.0
CTAO				pmax	pmax		
	comp=Z,94nm,1.0s						
CTAO	Charters Tower	15.83	213		P	10 41 56.6	-1.1
SMPI	Sarmi	17.27	286	P	P	10 42 14.7	+1.0
	comp=Z,9μmcomp=Z,87nm,1.1s						
DZM	Mont Dzumac	18.53	146	*e*Pn	Pn	10 42 29.4	+1.0
	comp=Z,55nm,0.6s						
DZM				*e*LQ	LQ	10 46 04.2	
	comp=Z,7μm,30.8s						
DZM				*e*LR	LR	10 46 50.3	
	comp=Z,6μm,26.2s						
DZM	Mont Dzumac	18.53	146	P	Pn	10 42 30.3	+1.9
	comp=Z,2.2nm,0.3s,baz=8.1,slow=11,SNR=11						
DZM				PcP	PcP	10 46 57.4	+1.8
	comp=Z,0.6nm,0.3s,baz=252,slow=13,SNR=2.3						
DZM				LR	LR	10 48 48.2	
	comp=Z,2μm,21.8s,baz=317,slow=34						
DZM	Mont Dzumac	18.53	146	P	Pn	10 42 30.1	+1.7
EIDS	Eidsvold	18.84	192	P	Pn	10 42 32.0	0.0
	baz=19,SNR=6.4						
EIDS	Eidsvold	18.84	192	P	P	10 42 31.5	+0.6
KWAJ	Kwajalein Atol	19.80	38	P	P	10 42 39.9	-1.5
KWAJ				pmax	pmax		
	comp=Z,316nm,0.9s						
KWAJ	Kwajalein Atol	19.80	38	P	P	10 42 39.9	-1.5
QIS	Mount Isa	20.44	227	P	P	10 42 49.7	+1.3
	baz=20,SNR=16						
RMQ	Roma	20.50	197	P	Pn	10 42 51.2	-0.4
	baz=20,SNR=7.5						
QLP	Quilpie	22.28	207	P	P	10 43 08.3	+0.2
	baz=22,SNR=14						
GUMO	Guam	22.83	333	P	P	10 43 13.2	-0.7
GUMO				pmax	pmax		
	comp=Z,85nm,1.1s						
GUMO	Guam	22.83	333	P	P	10 43 13.2	-0.7
GUMO				IAmb	IAmb	10 43 26.2	
	comp=Z,84nm,1.1s						
KDU	Kakadu	23.25	254	P	P	10 43 18.7	+0.5
	baz=23,SNR=10						
FAKI	Fak Fak	23.33	279	P	P	10 43 20.1	+1.1
	comp=Z,2μmcomp=Z,95nm,1.1s						
FAKI	Fak Fak	23.33	279	P	P	10 43 19.5	+0.5
FAKI				IAmb	IAmb	10 43 21.7	
	comp=Z,86nm,0.9s						
ARMA	Armidale	23.69	188	P	P	10 43 23.6	+1.4
	baz=24,SNR=7.1						
ARMA	Armidale	23.69	188	P	P	10 43 23.1	+0.8
WR0	Warramunga Arr	24.01	235	P	P	10 43 25.8	+0.5
WB0	Warramunga Arr	24.04	236	P	P	10 43 26.0	+0.5
WRAB	Tennant Creek	24.16	235	*ce*P	P	10 43 28.0	+1.4
WRAB				pmax	pmax		
	comp=Z,73nm,1.3s						
WRAB	Tennant Creek	24.16	235	P	P	10 43 27.4	+0.9
WB2	Warramunga Arr	24.16	235	P	P	10 43 27.8	+1.2
WRA	Warramunga Arr	24.17	235	P	P	10 43 28.1	+1.4
	comp=Z,26nm,0.6s,baz=60,slow=9.5,SNR=21						
WRA				PcP	PcP	10 47 07.6	+1.1
	comp=Z,4.1nm,0.6s,baz=60,slow=2.3,SNR=4.8						
WRA				ScP	ScP	10 50 42.2	+1.9
	comp=Z,1.6nm,1.0s,baz=58,slow=3.1,SNR=2.7						
WRA				LR	LR	10 52 42.6	
	comp=Z,2μm,19.9s,baz=55,slow=36						
WRA	Warramunga Arr	24.17	235	*ce*P	P	10 43 27.7	+1.0
WRA				pmax	pmax		
	comp=Z,26nm,0.6s						
MTN	Manton Dam	24.57	254	P	P	10 43 31.7	+1.4
	baz=24,SNR=10.0						
MTN	Manton Dam	24.57	254	P	P	10 43 31.6	+1.2
MTN				IAmb	IAmb	10 43 48.7	
	comp=Z,110nm,1.0s						
MSVF	Nonsavu	24.65	118	*i*P	P	10 43 32.0	+0.9
MSVF				pmax	pmax		
	comp=Z,161nm,1.1s						
MSVF	Nonsavu	24.65	118	P	P	10 43 31.3	+0.1
MSVF				IAmb	IAmb	10 43 35.6	
	comp=Z,132nm,1.0s						
SIJI	Sorong	24.73	283	P	P	10 43 32.2	+0.3
	comp=Z,149nm,0.8s,baz=60,slow=9.6,SNR=17						
CMSA	Cobar Meteorol	26.15	199	P	P	10 43 46.3	+1.8
	baz=26,SNR=16						
MGCD	Mangrove Creek	26.51	188	P	P	10 43 49.8	+2.1
	baz=27,SNR=5.0						
AS31	Alice Springs	26.51	229	P	P	10 43 47.1	-0.8
ASAR	Alice Springs	26.51	229	P	P	10 43 48.5	+0.5
	comp=Z,10nm,0.7s,baz=58,slow=9.9,SNR=16						
ASAR				PcP	PcP	10 47 12.9	+1.2
	comp=Z,4.3nm,0.6s,baz=54,slow=2.3,SNR=4.8						
ASAR				ScP	ScP	10 50 48.7	+1.6
	comp=Z,2.6nm,0.9s,baz=51,slow=3.0,SNR=4.9						
AAI	Ambon	27.21	275	P	P	10 43 55.0	+0.7
	comp=Z,65nm,0.8s						
KNRA	Kununurra	27.47	249	P	P	10 43 56.6	0.0
	baz=27,SNR=6.4						
KNRA	Kununurra	27.47	249	P	P	10 43 56.6	0.0
KNRA				IAmb	IAmb	10 44 11.4	
	comp=Z,55nm,0.9s						
STKA	Stephens Creek	28.00	206	P	P	10 44 01.8	+0.7
	baz=28,SNR=14						
STKA	Stephens Creek	28.00	206	P	P	10 44 03.9	+2.7
	comp=Z,11nm,0.7s,baz=34,slow=12,SNR=14						
STKA				PcP	PcP	10 47 15.9	+0.8
	comp=Z,5.8nm,0.8s,baz=79,slow=6.5,SNR=2.9						
STKA				ScP	ScP	10 50 52.9	+1.6
	comp=Z,2.2nm,1.0s,baz=30,slow=6.6,SNR=3.6						
STKA				LR	LR	10 55 02.7	
	comp=Z,3μm,19.8s,baz=44,slow=36						
STKA	Stephens Creek	28.00	206	P	P	10 44 00.4	-0.8
LBMI	Labuha	28.45	281	P	P	10 44 06.6	+1.3
	comp=Z,2μmcomp=Z,237nm,1.1s						
CNB	Canberra Magne	28.84	190	P	P	10 44 10.3	+1.7
	baz=29,SNR=4.8						
CAN	Canberra	28.91	191	P	P	10 44 11.4	+2.1
CAN				pmax	pmax		
	comp=Z,14nm,0.9s						
CAN	Canberra	28.91	191	P	P	10 44 11.3	+2.1
TNTI	Ternate	28.92	284	P	P	10 44 10.4	+0.8
	comp=Z,1μmcomp=Z,48nm,0.9s						
TNTI	Ternate	28.92	284	P	P	10 44 09.8	+0.2
TNTI				IAmb	IAmb	10 44 12.4	
	comp=Z,38nm,0.9s						

HTT	Hallett	30.50	208	P	P	10 44 24.2	+0.8
	baz=30,SNR=7.0						
SOEI	Soe	30.87	263	P	P	10 44 26.6	-0.4
FITZ	Fitzroy Crossi	31.02	246	P	P	10 44 28.7	+0.7
	baz=31,SNR=16						
FITZ	Fitzroy Crossi	31.02	246	P	P	10 44 28.4	+0.3
	comp=Z,29nm,0.7s,baz=87,slow=7.9,SNR=17						
FITZ				LR	LR	10 56 58.6	
	comp=Z,2μm,20.3s,baz=76,slow=36						
FITZ	Fitzroy Crossi	31.02	246	P	P	10 44 28.7	+0.7
FITZ				IAmb	IAmb	10 44 36.7	
	comp=Z,34nm,0.8s						
BBOO	Buckleboo	31.43	212	P	P	10 44 32.0	+0.5
BBOO				IAmb	IAmb	10 44 44.2	
	comp=Z,36nm,1.1s						
BATI	Baumata	31.49	262	P	P	10 44 33.1	+0.9
	comp=Z,55nm,0.9s,baz=135,slow=8.6,SNR=2.8						
BATI				LR	LR	10 59 20.8	
	comp=Z,3μm,19.3s,baz=128,slow=40						
WRKA	Warakurna	31.55	232	P	P	10 44 32.6	-0.1
	baz=32,SNR=8.0						
TOO	Toolangi	31.85	195	P	P	10 44 36.0	+0.8
TOO				pmax	pmax		
	comp=Z,18nm,1.3s						
TOO	Toolangi	31.85	195	P	P	10 44 36.0	+0.8
KMSI	Cibinong	32.15	282	P	P	10 44 37.9	-0.1
	comp=Z,3μmcomp=Z,210nm,0.8s						
BBSI	Bau Bau	32.60	271	P	P	10 44 42.8	+0.8
	comp=Z,683nmcomp=Z,26nm,1.1s						
OUZ	Omahuta	32.84	152	P	P	10 44 43.7	-0.1
OUZ				PcP	PcP	10 47 29.5	+1.9
MMRI	Maumere	32.84	265	P	P	10 44 44.4	+0.3
	comp=Z,4μmcomp=Z,178nm,1.0s						
MMRI	Maumere	32.84	265	P	P	10 44 43.0	-1.1
AFI	Afiamalu	33.06	105	P	P	10 44 47.3	+1.2
AFI				pmax	pmax		
	comp=Z,48nm,0.8s						
AFI	Afiamalu	33.06	105	P	P	10 44 47.3	+1.2
KCP	Kidapawan	33.17	294	*e*P	P	10 44 48.4	+1.3
EDFI	Ende, Flores	33.38	265	P	P	10 44 49.4	+0.4
	comp=Z,77nm,0.9s						
RAO	Raoul Island	33.63	135	LR	LR	10 57 23.8	
	comp=Z,796nm,18.7s,baz=320,slow=34						
MRSI	Marisa	34.11	281	P	P	10 44 55.3	+0.1
	comp=Z,656nmcomp=Z,46nm,1.1s						
FORT	Forrest	34.92	224	P	P	10 45 02.9	+0.9
	baz=35,SNR=8.6						
FORT	Forrest	34.92	224	P	P	10 45 02.6	+0.6
BKSI	Bulukumba	35.05	271	P	P	10 45 04.3	+1.0
	comp=Z,558nmcomp=Z,53nm,0.9s						
BNSI	Bone	35.14	272	P	P	10 45 05.0	+0.9
	comp=Z,48nm,1.1s						
KAPI	Kappang	35.44	271	P	P	10 45 07.7	+1.1
KAPI				pmax	pmax		
	comp=Z,53nm,0.9s						
KAPI	Kappang	35.44	271	P	P	10 45 07.7	+1.1
SPSI	Sidrap Palu	35.52	273	P	P	10 45 08.1	+0.8
	comp=Z,35nm,1.0s						
TTSI	Tana Toraja	35.58	274	P	P	10 45 08.3	+0.4
	comp=Z,22nm,0.9s						
MPSI	Mapaga	36.08	280	P	P	10 45 12.2	+0.1
	comp=Z,552nmcomp=Z,48nm,1.0s						
HIZ	Hauiti	36.12	154	P	P	10 45 14.5	+2.4
TAU	Tasmania Unive	36.59	190	P	P	10 45 16.4	+0.3
TAU				pmax	pmax		
	comp=Z,85nm,1.2s						
TAU	Tasmania Unive	36.59	190	P	P	10 45 16.4	+0.3
URZ	Urewera	36.95	151	P	P	10 45 20.8	+1.5
	comp=Z,5.7nm,0.5s,baz=39,slow=0.7,SNR=8.1						
URZ				PcP	PcP	10 47 38.2	-1.3
	comp=Z,17nm,0.8s,baz=348,slow=2.3,SNR=4.4						
URZ				LR	LR	10 59 38.8	
	comp=Z,1μm,18.2s,baz=330,slow=35						
URZ	Urewera	36.95	151	P	P	10 45 19.1	-0.1
URZ				IAmb	IAmb	10 45 30.8	
	comp=Z,28nm,1.0s						
MXZ	Matakaoa Point	37.01	149	P	P	10 45 20.9	+1.2
QRZ	Quartz Range	37.14	158	P	P	10 45 20.6	-0.2
PLAI	Plampang	37.25	264	P	P	10 45 22.0	-0.1
	comp=Z,144nm,0.7s						
PSA00	Pilbara Seismi	37.26	243	P	P	10 45 22.0	-0.1
BKZ	Black Stump Fm	37.38	152	P	P	10 45 23.6	+0.7
BKZ				IAmb	IAmb	10 45 34.7	
	comp=Z,21nm,0.9s						
THZ	Tophouse	38.09	159	P	P	10 45 29.5	+0.5
THZ				IAmb	IAmb	10 45 40.4	
	comp=Z,53nm,1.0s						
TUWZ	Tuamarina	38.20	157	P	P	10 45 30.7	+1.0
SNZO	South Karori	38.39	156	P	P	10 45 31.9	+0.6
BSWZ	Blackbirch Sta	38.41	157	P	P	10 45 32.4	+0.9
BFZ	Birch Farm	38.51	154	P	P	10 45 32.7	+0.4
BFZ				IAmb	IAmb	10 45 35.7	
	comp=Z,23nm,0.9s						
MSWZ	Moikau Station	38.70	156	P	P	10 45 33.2	-0.7
PLWZ	Palliser	38.83	156	P	P	10 45 35.0	-0.1
KHZ	Kahutara	38.90	158	P	P	10 45 35.2	-0.3
KHZ				IAmb	IAmb	10 45 47.9	
	comp=Z,69nm,1.1s						
OXZ	Oxford	39.17	161	P	P	10 45 38.8	+0.9
OXZ				IAmb	IAmb	10 45 49.6	
	comp=Z,38nm,0.6s						
RPZ	Rata Peaks	39.21	162	P	P	10 45 38.0	-0.2
	comp=Z,27nm,0.8s,baz=345,slow=4.5,SNR=7.3						
RPZ				L

TJN Taejon 50.39 331 *ce*P P **10 47 07.2 +0.1**
KSRS Korea Array 50.98 332 P P **10 47 11.7 +0.1**
comp=Z,11nm,0.9s,baz=149,slow=8.8,SNR=20
KSRS LR LR 11 07 31.8
comp=Z,165nm,20.8s,baz=135,slow=34
KS19 Wonju Array Si 51.05 332 P P **10 47 11.2 -0.9**
YUK Yuzh-Kuril'sk 51.38 351 *eP* P **10 47 13.6 -0.8**
YUK *e* 10 48 26.6
YUK *e* 10 49 10.7
YUK *e*PPP PPP 10 50 11.5
YUK *e*S **S** **10 54 28.1 -1.7**
YUK *e*SS **SS** **10 58 06.2 -0.2**
YUK *e*SSS SSS 10 59 46.7
YUK pmax pmax
comp=Z,179nm,0.9s
YUK pmax pmax
comp=N,134nm,1.0s
YUK pmax pmax
comp=E,114nm,1.0s
YUK pmax pmax
comp=Z,312nm,1.7s
QIZ Qiongzhong 51.69 301 P P **10 47 18.9 +1.7**
QIZ S **S** **10 54 33.3 -1.6**
QIZ pmax pmax
comp=Z,46nm,0.9s
QIZ LR LR
comp=Z,240nm,23.0s
QIZ LR LR
comp=Z,280nm,22.1s
QIZ LR LR
comp=Z,570nm,30.9s
NJ2 Nanjing 52.03 320 *eP* P **10 47 20.5 +1.0**
NJ2 pmax pmax
comp=Z,16nm,0.5s
NJ2 LR LR
comp=Z,450nm,19.9s
NJ2 LR LR
comp=Z,320nm,20.8s
NJ2 LR LR
comp=Z,710nm,22.7s
JKA Kamikawa-asahi 52.03 348 P P **10 47 19.9 +0.6**
ASAJ Asahikawa 52.03 348 P P **10 47 19.9 +0.6**
comp=Z,22nm,0.7s,baz=202,slow=5.4,SNR=4.2
WHN Wuhan 54.09 316 ⇑P P **10 47 36.1 +1.4**
WHN S **S** **10 55 11.8 +4.6**
WHN pmax pmax
comp=Z,68nm,1.1s
WHN LR LR
comp=Z,410nm,11.5s
WHN LR LR
comp=Z,250nm,5.3s
WHN LR LR
comp=Z,2μm,23.0s
YSS Yuzh-Sakhalins 54.74 349 *eP* P **10 47 40.2 +1.1**
YSS *e* 10 47 54.5
YSS pmax pmax
comp=Z,30nm,1.0s
YSS Yuzh-Sakhalins 54.74 349 P P **10 47 39.4 +0.3**
KHU Kahuku 54.83 61 P P **10 47 40.8 +0.2**
KHU pmax pmax
comp=Z,367nm,1.4s
KHU Kahuku 54.83 61 P P **10 47 40.8 +0.2**
USA0B Ussuriysk Arra 55.03 340 P P **10 47 40.2 -1.1**
USA0B pmax pmax
comp=Z,31nm,1.3s
USA0B Ussuriysk Arra 55.03 340 P P **10 47 40.2 -1.1**
USA0B IAmb IAmb 10 47 59.3
comp=Z,31nm,1.3s
USRK Ussuriysk Ar. 55.03 340 P P **10 47 41.9 +0.6**
comp=Z,10nm,0.8s,baz=126,slow=4.9,SNR=11
DL2 Dalian 55.24 328 P P **10 47 43.5 +0.6**
DL2 S **S** **10 55 25.3 +3.0**
DL2 pmax pmax
comp=Z,46nm,1.0s
DL2 pmax pmax
comp=Z,190nm,7.7s
DL2 LR LR
comp=Z,250nm,19.0s
DL2 LR LR
comp=Z,350nm,27.3s
DL2 LR LR
comp=Z,600nm,24.9s
IPM Ipoh 55.37 280 P P **10 47 43.9 -0.4**
IPM Ipoh 55.37 280 P P **10 47 45.0 +0.7**
TBI Tubuai 55.42 114 *eS* **S** **10 55 21.1 -4.2**
comp=Z,270nm,26.5s
TBI *e*LQ LQ 11 01 36.0
comp=Z,713nm,30.2s
TBI *e*LR LR 11 03 55.5
comp=Z,2μm,29.8s,baz=285
TIA Tai'an 55.87 323 P P **10 47 47.1 -0.4**
TIA pmax pmax
comp=Z,14nm,1.0s
KULM Kulim 55.90 281 P P **10 47 47.1 -1.0**
KULM IAmb IAmb 10 48 01.7
comp=Z,31nm,1.0s
KULM Kulim 55.90 281 P P **10 47 48.0 -0.1**
CN2 Changchun 57.22 335 *eP* P **10 47 57.0 +0.1**
CN2 *eS* **S** **10 55 46.3 -2.2**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,210nm,5.9s
CN2 LR LR
comp=Z,320nm,23.0s
CN2 LR LR
comp=Z,240nm,23.0s
CN2 LR LR
comp=Z,380nm,24.0s
SKR Severo-Kuril's 57.32 1 *eP* P 10 48 08.9 +11
SKR pmax pmax
comp=Z,76nm,1.1s
SKR pmax pmax
comp=Z,100nm,5.4s
SKR pmax pmax
comp=Z,300nm,5.7s
SKR MLR MLR
comp=Z,200nm,14.0s
SKR MLR MLR
comp=Z,400nm,18.0s
ENH Enshi 57.40 313 IAmb IAmb 10 48 10.6
comp=Z,31nm,1.0s
SLVN Son La 57.71 300 P P **10 48 01.0 +0.1**
SLVN IAmb IAmb 10 48 12.9
comp=Z,35nm,1.0s
GSI Gunungsitoli 58.21 276 P P **10 48 03.2 -1.3**
TYV Tymovskoe 58.53 351 *eP* P **10 48 06.9 +1.0**
TYV pmax pmax
comp=Z,17nm,1.5s
BJI Beijing 59.01 326 P P **10 48 10.4 +0.9**
BJI S **S** **10 56 13.6 +1.7**
BJI pmax pmax
comp=Z,5.0nm,1.1s
BJI LR LR
comp=Z,240nm,21.0s
BJI LR LR
comp=Z,260nm,20.1s
BJI LR LR
comp=Z,420nm,23.5s
KLR Kul'dur 59.55 342 P P **10 48 14.0 +1.0**
comp=Z,11nm,1.0s,baz=139,slow=6.7,SNR=11
KLR Kul'dur 59.55 342 *ce*P P **10 48 13.8 +0.8**
KLR pmax pmax
comp=Z,20nm,1.3s
PET Petropavlovsk 59.73 2 P P **10 48 14.6 +0.5**
PET pmax pmax
comp=Z,61nm,0.9s
PET Petropavlovsk 59.73 2 P P **10 48 14.6 +0.5**
PEA0B Petropavlovsk- 59.78 2 *ce*P P **10 48 15.2 +0.7**
PEA0B Petropavlovsk- 59.78 2 P P **10 48 15.1 +0.5**
PETK Petropavlovsk- 59.78 2 P P **10 48 16.2 +1.7**
comp=Z,75nm,0.9s,baz=159,slow=6.2,SNR=40
XAN Xi'an 59.85 316 P P **10 48 14.3 -1.2**
XAN pmax pmax
comp=Z,23nm,0.7s
XAN Xi'an 59.85 316 P P **10 48 14.3 -1.2**
XAN IAmb IAmb 10 48 30.8
comp=Z,23nm,0.7s
KMI Kunming 60.23 304 P P 10 48 23.8 +5.3
KMI pmax pmax
comp=Z,23nm,0.7s
KMI pmax pmax
comp=Z,140nm,4.8s
KMI LR LR
comp=Z,290nm,21.7s
KMI LR LR
comp=Z,350nm,21.3s
KMI LR LR
comp=Z,660nm,22.9s
CM31 Chiang Mai Arr 61.04 295 P P **10 48 23.2 -0.7**
CMAR Chiang Mai Arr 61.04 295 P P **10 48 25.6 +1.8**
comp=Z,80nm,0.9s,baz=116,slow=5.2,SNR=116
CMAR Chiang Mai Arr 61.04 295 *ce*P P **10 48 25.7 +1.8**
CMAR pmax pmax
comp=Z,84nm,0.9s
CHTO Chiang Mai 61.15 296 P P **10 48 26.0 +1.4**
CHTO pmax pmax
comp=Z,133nm,1.4s
CHTO Chiang Mai 61.15 296 P P **10 48 25.9 +1.4**
CD2 Chengdu 61.99 310 ⇓*i*P P **10 48 31.1 +1.0**
CD2 pP sP 10 48 52.5 +0.4
CD2 sP PcP 10 48 59.8 -10
CD2 S **S** **10 56 50.9 +0.3**
CD2 sS sS 10 57 22.8 +6.9
CD2 SS **SS** **11 00 55.1 +1.0**
CD2 pmax pmax
comp=Z,50nm,0.6s
CD2 LR LR
comp=Z,820nm,28.4s
CD2 LR LR
comp=Z,1μm,19.9s
CD2 LR LR
comp=Z,1μm,19.7s
HHC Hu-ho-hao-te 62.19 324 *eP* P **10 48 31.8 +0.5**
HHC pmax pmax
comp=Z,18nm,1.1s
HHC pmax pmax
comp=Z,70nm,5.6s
HHC LR LR
comp=Z,220nm,16.9s
HHC LR LR
comp=Z,260nm,17.5s
HHC LR LR
comp=Z,240nm,17.6s
ADK Adak 63.23 19 P P **10 48 39.5 +1.6**
ADK pmax pmax
comp=Z,164nm,1.5s
ADK Adak 63.23 19 P P **10 48 39.5 +1.6**
TAOE Nuku Hiva Isla 63.87 96 *e*LR LR 11 07 54.9
comp=Z,640nm,22.3s
HIA Hailar 63.95 335 P P **10 48 42.0 -0.7**
HIA pmax pmax
comp=Z,17nm,0.8s
HIA Hailar 63.95 335 P P **10 48 42.0 -0.7**
HIA IAmb IAmb 10 48 58.4
comp=Z,18nm,0.8s
LZH Lanzhou 64.46 315 ⇑P P **10 48 48.6 +2.1**
LZH pP sP 10 49 06.9 -1.7
LZH sP PcP 10 49 14.9 -5.5
LZH pmax pmax
comp=Z,29nm,1.4s
LZH pmax pmax
comp=Z,120nm,5.0s
LZH LR LR
comp=Z,260nm,15.6s
LZH LR LR
comp=Z,220nm,15.2s
LZH LR LR
comp=Z,260nm,17.1s
ZEA Zeya 64.86 342 *eP* P **10 48 49.8 +1.3**
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=Z,35nm,1.0s
MA2 Magadan 66.33 357 P P **10 48 58.5 +0.6**
comp=Z,44nm,0.9s,baz=157,slow=8.7,SNR=18
MA2 Magadan 66.33 357 P P **10 48 58.2 +0.4**
CASY Casey 66.82 198 P P **10 49 01.7 +0.8**
CASY IAmb IAmb 10 49 04.4
comp=Z,25nm,1.1s
UNV Unalaska Valle 68.47 23 P P **10 49 11.2 -0.3**
UNV IAmb IAmb 10 49 27.2
comp=Z,31nm,1.3s
RKT Rikitea 68.67 112 *e*LR LR 11 10 08.8
comp=Z,2μm,27.8s
GTA Gaotai 68.88 317 ⇓P P **10 49 15.8 +1.2**
GTA S **S** **10 58 18.6 +3.9**
GTA SS **SS** **11 02 36.8 -4.4**
GTA pmax pmax
comp=Z,16nm,1.0s
GTA pmax pmax
comp=Z,130nm,5.7s
GTA LR LR
comp=Z,170nm,19.7s
GTA LR LR
comp=Z,300nm,21.9s
GTA LR LR
comp=Z,430nm,23.2s
ULN Ulaanbaatar 69.08 327 *ce*P P **10 49 16.5 +0.8**
ULN pmax pmax
comp=Z,19nm,1.0s
ULN Ulaanbaatar 69.08 327 P P **10 49 16.9 +1.2**
ULN IAmb IAmb 10 49 18.7
comp=Z,18nm,0.9s
SONM Songino Array 69.41 327 P P **10 49 18.5 +0.8**
comp=Z,24nm,0.9s,baz=134,slow=6.1,SNR=38
SONM PKP2bc 11 17 25.1
comp=Z,5.2nm,1.0s,baz=278,slow=3.0,SNR=15
SONM LR LR 11 19 33.0
comp=Z,232nm,21.7s,baz=116,slow=36
SHL Shillong 69.52 300 P P **10 49 20.0 +1.1**
SHL pmax pmax
comp=Z,73nm,1.0s
SHL Shillong 69.52 300 P P **10 49 20.0 +1.1**
SEY Seymchan 69.63 359 P P **10 49 19.4 +0.9**
comp=Z,20nm,0.9s,baz=166,slow=5.4,SNR=29
FALS False Pass 70.44 24 P P **10 49 24.2 +0.6**
VNDA Vanda 70.70 179 P P **10 49 26.2 +1.3**
comp=Z,6.7nm,1.0s,baz=329,slow=6.1,SNR=14
VNDA Vanda 70.70 179 P P **10 49 26.1 +1.1**
LSA Lhasa 71.48 304 P P **10 49 30.3 -0.8**
LSA pmax pmax
comp=Z,23nm,0.8s
LSA Lhasa 71.48 304 P P **10 49 30.2 -0.8**
LSA IAmb IAmb 10 49 49.4
comp=Z,23nm,0.8s
YAK Yakutsk 71.50 348 P P **10 49 31.0 +1.1**
comp=Z,8.4nm,0.5s,baz=105,slow=0.2,SNR=5.8
YAK Yakutsk 71.50 348 *eP* P **10 49 30.7 +0.8**
YAK pmax pmax
comp=Z,34nm,0.9s
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK Yakutsk 71.50 348 IAmb IAmb 10 49 47.1
comp=Z,36nm,0.9s
ZAK Zakamensk 72.56 328 *eP* P **10 49 37.1 +0.4**
ZAK pmax pmax
comp=Z,21nm,1.0s
BOD Bodaibo 72.62 338 *eP* P **10 49 36.7 0.0**
BOD pmax pmax
comp=Z,8.0nm,1.5s
CHGN Chignik 73.49 25 P P **10 49 41.4 -0.5**
CHGN IAmb IAmb 10 49 46.9
comp=Z,20nm,0.9s
TAPN Taplejung 73.63 301 *eP* P **10 49 44.4 +0.7**
comp=Z,43nm,0.5s
ODAN Odare 73.76 300 *eP* P **10 49 45.8 +1.4**
comp=Z,161nm,0.7s
RAMN Ramite 74.46 300 *eP* P **10 49 49.4 +0.9**
comp=Z,25nm,0.6s
MOY Mondy 74.48 328 *eP* P **10 49 48.2 +0.2**
MOY pmax pmax
comp=Z,25nm,1.3s
JIRN Jiri 75.01 301 *eP* P **10 49 53.2 +1.3**
comp=Z,36nm,0.4s
BILL Bilibino 75.13 4 *eP* P **10 49 52.7 +1.5**
BILL *e* 10 50 05.7
BILL *e* 10 52 40.2
BILL *e*PPP PPP 10 54 23.4
BILL pmax pmax
comp=Z,15nm,0.8s
BILL MLR MLR
comp=Z,405nm,18.0s
BILL Bilibino 75.13 4 P P **10 49 52.2 +1.1**
BILL IAmb IAmb 10 50 08.9
comp=Z,42nm,1.0s
GUN Gumba 75.34 301 *eP* P **10 49 55.0 +1.3**
comp=Z,116nm,0.9s
PKI Pulchoki 75.65 301 *eP* P **10 49 56.4 +0.9**
comp=Z,43nm,0.7s
KKN Kakani 75.82 301 *eP* P **10 49 57.4 +1.1**
comp=Z,45nm,0.6s
DMN Daman 75.92 301 *e*P P **10 49 57.6 +0.7**
comp=Z,138nm,1.0s
OHAK Old Harbor 76.26 26 P P **10 49 58.1 +0.3**
OHAK IAmb IAmb 10 50 00.3
comp=Z,21nm,1.0s
GKN Gorkha 76.43 301 *e*P P **10 50 00.8 +1.1**
KDAK Kodiak Island 76.90 26 P P **10 50 02.4 +1.0**
KDAK pmax pmax
comp=Z,14nm,0.9s
KDAK Kodiak Island 76.90 26 P P **10 50 02.4 +1.0**
KDAK IAmb IAmb 10 50 03.9
comp=Z,14nm,0.9s
KOLN Koldanda 77.25 300 *e*P P **10 50 05.2 +0.8**
comp=Z,18nm,0.4s
DANN Dangsing 77.26 301 *e*P P **10 50 05.2 +0.6**
comp=Z,26nm,0.5s
SVW2 Sparrevohn 77.75 22 P P **10 50 07.5 +1.2**
SVW2 IAmb IAmb 10 50 21.1
comp=Z,32nm,1.0s
RSO Redoubt South 78.44 23 P P **10 50 09.9 -0.4**
CNPM China Poot 78.50 25 P P **10 50 11.2 +0.8**
BRLK Bradley Lake 78.78 25 P P **10 50 12.7 +0.7**
BRLK IAmb IAmb 10 50 14.3
comp=Z,24nm,0.9s
TTA Tatalina 78.78 20 P P **10 50 13.0 +1.1**
TTA pmax pmax
comp=Z,20nm,0.9s
TTA Tatalina 78.78 20 P P **10 50 13.0 +1.1**
TTA IAmb IAmb 10 50 26.2
comp=Z,20nm,0.9s
WMQ Urumqi 78.96 317 *e*P P **10 50 15.3 +1.9**
WMQ PcP **PcP** **10 50 23.8 +2.0**
WMQ S **S** **11 00 04.4 -3.4**
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ pmax pmax
comp=Z,61nm,4.5s
WMQ LR LR
comp=Z,220nm,21.9s
WMQ LR LR
comp=Z,170nm,21.9s
WMQ LR LR
comp=Z,430nm,26.5s
HYB Hyderabad 79.55 289 *i* P P **10 50 17.5 +0.5**
comp=Z,70nm,1.0s
HYB *e*pP **pP** **10 50 32.0 -1.1**
SEW Seward 79.57 25 P P **10 50 15.7 -0.5**
SEW IAmb IAmb 10 50 33.0
comp=Z,34nm,1.2s
RC01 Rabbit Creek A 80.01 24 P P **10 50 19.1 +0.6**
RC01 IAmb IAmb 10 50 21.5
comp=Z,41nm,1.2s
PPLA Purkeypile 80.13 22 P P **10 50 19.3 0.0**
TIXI Tiksi 80.28 352 P P **10 50 19.7 0.0**
comp=Z,8.9nm,1.1s,baz=125,slow=7.3,SNR=4.7
TIXI Tiksi 80.28 352 *ce*P P **10 50 20.4 +0.6**
TIXI pmax pmax
comp=Z,16nm,1.7s
TIXI Tiksi 80.28 352 P P **10 50 19.0 -0.7**
RDOG Red Dog Mine 80.31 15 P P **10 50 21.2 +1.2**
PMR Palmer 80.53 24 P P **10 50 21.7 +0.4**
PMR pmax pmax
comp=Z,28nm,0.9s
PMR Palmer 80.53 24 P P **10 50 21.7 +0.4**
PMR IAmb IAmb 10 50 23.6
comp=Z,28nm,0.9s
KNK Knik Glacier 80.70 24 P P **10 50 23.1 +0.8**
KNK IAmb IAmb 10 50 25.8
comp=Z,34nm,1.2s
GHO Glory Hole Cre 80.72 23 P P **10 50 22.8 +0.3**
GHO IAmb IAmb 10 50 24.9
comp=Z,35nm,0.9s
HIN Hinchinbrook I 80.97 25 P P **10 50 24.5 +0.8**
HIN IAmb IAmb 10 50 27.9
comp=Z,22nm,0.8s
SML Sawmill 80.97 24 P P **10 50 24.6 +0.8**
GLI Glacier Island 80.97 25 IAmb IAmb 10 50 26.2
comp=Z,33nm,0.9s
KTH Kantishna Hill 80.98 21 IAmb IAmb 10 50 25.9
comp=Z,32nm,0.9s
TRF Thorofare Moun 81.15 22 IAmb IAmb 10 50 28.2
comp=Z,31nm,0.8s
FID Port Fidalgo 81.16 25 IAmb IAmb 10 50 29.9
comp=Z,33nm,1.0s
SCM Sheep Creek Mo 81.39 24 IAmb IAmb 10 50 28.8
comp=Z,44nm,0.9s
RND Reindeer 81.66 22 IAmb IAmb 10 50 29.7
comp=Z,33nm,0.8s
BWN Browne 81.86 21 IAmb IAmb 10 50 41.2
comp=Z,34nm,0.9s
MLY Manley 81.91 20 IAmb IAmb 10 50 31.1
comp=Z,14nm,0.7s
DHY Denali Highway 82.03 23 IAmb IAmb 10 50 34.8
comp=Z,22nm,0.8s
NEA Nenana 82.23 21 IAmb IAmb 10 50 41.6
comp=Z,37nm,1.0s
WRH Wood River Hil 82.53 21 P P **10 50 31.4 -0.5**
WRH IAmb IAmb 10 50 33.6
comp=Z,17nm,0.8s
HARP HAARP 82.55 24 P P **10 50 33.0 +1.0**
GLB Gilahina Butte 82.63 25 IAmb IAmb 10 50 35.4
comp=Z,33nm,0.9s
VRDI Verde Repeater 82.68 25 IAmb IAmb 10 50 35.7
comp=Z,23nm,0.9s
CCB Clear Creek Bu 82.73 21 IAmb IAmb 10 50 34.4
comp=Z,18nm,0.9s
MDM Murphy Dome 82.75 21 IAmb IAmb 10 50 45.9
comp=Z,17nm,0.9s
TCOL CIGO, UAF Yank 82.83 21 P P **10 50 33.2 -0.2**
baz=237,SNR=7.9
COLA College 82.84 21 P P **10 50 32.8 -0.6**
COLA pmax pmax
comp=Z,42nm,0.8s
COLA College 82.84 21 P P **10 50 32.8 -0.6**
HDA Harding Lake 82.91 22 P P **10 50 34.2 +0.3**
baz=238,SNR=18
HDA Harding Lake 82.91 22 IAmb IAmb 10 50 47.0
comp=Z,32nm,1.2s
BALM Baldy 83.06 26 IAmb IAmb 10 50 38.0
comp=Z,27nm,0.9s
QSPA South Pole Qui 83.11 180 P P **10 50 36.1 +1.0**
comp=Z,63nm,1.1s,baz=316,slow=0.8,SNR=34
QSPA South Pole Qui 83.11 180 P P **10 50 34.4 -0.7**
POKR Poker Flat Res 83.12 21 P P **10 50 35.2 +0.3**
baz=237,SNR=6.1
IL31 83.13 21 P P **10 50 33.7 -1.2**
IL31 IAmb IAmb 10 50 36.4
comp=Z,19nm,0.8s
ILAR Eielson Array 83.13 21 P P **10 50 34.5 -0.5**
comp=Z,21nm,1.0s,baz=254,slow=4.7,SNR=49
BARN Barnard Glacie 83.37 26 P P **10 50 36.1 -0.5**
COLD Coldfoot 83.38 19 P P **10 50 35.5 -0.7**
MENT Mentasta 83.40 24 P P **10 50 36.3 -0.1**
MENT IAmb IAmb 10 50 44.4
comp=Z,14nm,0.6s
MK31 Makanchi Array 83.53 319 IAmb IAmb 10 50 53.2
comp=Z,16nm,0.8s
MKAR Makanchi Array 83.53 319 P P **10 50 37.6 +0.1**
comp=Z,14nm,1.0s,baz=101,slow=6.4,SNR=23
MKAR PKKPbc **PKKPbc** **11 08 54.5 -3.1**
comp=Z,0.9nm,0.7s,baz=276,slow=3.2,SNR=7.5
MKAR PKPPKP 11 17 01.4
comp=Z,0.8nm,0.9s,baz=283,slow=2.1,SNR=5.3
DOT Dot Lake 83.61 23 IAmb IAmb 10 50 40.2
comp=Z,26nm,0.9s
MAKZ Makanchi 83.74 319 P P **10 50 38.4 -0.2**
MAKZ pmax pmax
comp=Z,26nm,0.9s
MAKZ Makanchi 83.74 319 P P **10 50 38.4 -0.2**
MAKZ IAmb IAmb 10 50 54.2
comp=Z,26nm,0.8s
ZAA0 Zalesovo Array 84.26 326 P P **10 50 39.9 -1.1**
ZALV Zalesovo Beam 84.26 326 P P **10 50 40.1 -0.8**
comp=Z,8.0nm,0.7s,baz=113,slow=4.8,SNR=14
ZALV PKKPbc **PKKPbc** **11 08 53.8 -2.3**
comp=Z,0.9nm,0.5s,baz=269,slow=2.1,SNR=4.9
ZALV PKPPKP 11 17 02.5
comp=Z,1.1nm,0.6s,baz=289,slow=4.5,SNR=6.0
TOLK Toolik Lake Re 84.39 18 P P **10 50 42.2 +0.8**
baz=235
TOLK Toolik Lake Re 84.39 18 P P **10 50 41.1 -0.3**
MAW Mawson 84.65 203 P P **10 50 43.9 +1.2**
baz=84,SNR=25
MAW Mawson 84.65 203 P P **10 50 43.9 +1.2**
comp=Z,21nm,0.9s,baz=91,slow=5.9,SNR=21
MAW Mawson 84.65 203 P P **10 50 43.6 +0.9**

FYU	**Fort Yukon**	**84.66**	**20**	P	**P**	**10 50 42.7**	**0.0**
FYU				IAmb	IAmb	10 50 45.8		
	comp=Z,20nm,0.8s							
HYT	**Haines Junctio**	**85.10**	**27**	P	**P**	**10 50 44.4**	**-0.9**
EGAK	**Eagle**	**85.27**	**23**	P	**P**	**10 50 46.1**	**+0.3**
EGAK				IAmb	IAmb	10 50 48.9		
	comp=Z,30nm,1.1s							
BESE	**Bessie Mountai**	**85.50**	**30**	P	**P**	**10 50 47.8**	**+0.6**
BESE				IAmb	IAmb	10 50 50.4		
	comp=Z,14nm,0.8s							
SKAG	**Skagway**	**85.59**	**29**	P	**P**	**10 50 46.6**	**-0.9**
SKAG				IAmb	IAmb	10 51 05.2		
	comp=Z,14nm,1.1s							
JIS	**Juneau Island**	**85.63**	**30**	P	**P**	**10 50 48.2**	**+0.5**
JIS				IAmb	IAmb	10 51 07.2		
	comp=Z,12nm,1.1s							
KDJ	**Kajisay**	**85.86**	**313**	P	**P**	**10 50 48.2**	**-1.3**
KDJ				pmax	pmax			
	comp=Z,11nm,1.0s							
KDJ	**Kajisay**	**85.86**	**313**	P	**P**	**10 50 48.2**	**-1.3**
KDJ				IAmb	IAmb	10 50 56.8		
	comp=Z,11nm,0.9s							
WRAK	**Wrangell Islan**	**86.05**	**32**	IAmb	IAmb	10 51 07.6		
	comp=Z,31nm,1.3s							
KSH	**Kashi**	**86.19**	**310**	P	**P**	**10 50 53.5**	**+2.4**
KSH				sP	sP	10 51 24.1	+11	
KSH				PP	**PP**	**10 54 15.0**	**+2.5**
KSH				S	**S**	**11 01 19.5**	**-2.4**
KSH				SS	**SS**	**11 07 05.9**	**+3.9**
KSH				pmax	pmax			
	comp=Z,21nm,1.1s							
KSH				pmax	pmax			
	comp=Z,410nm,4.1s							
KSH				LR	LR			
	comp=Z,200nm,7.0s							
KSH				LR	LR			
	comp=Z,72nm,10.3s							
KSH				LR	LR			
	comp=Z,280nm,11.0s							
WHY	**Whitehorse**	**86.23**	**28**	P	**P**	**10 50 51.8**	**+0.9**
WHY				IAmb	IAmb	10 50 57.1		
	comp=Z,11nm,0.9s							
KURK	**Kurchatov**	**86.94**	**322**	P	**P**	**10 50 53.8**	**-0.5**
KURK				pmax	pmax			
	comp=Z,7.0nm,0.9s							
KURK	**Kurchatov**	**86.94**	**322**	P	**P**	**10 50 53.8**	**-0.5**
KURBB	**Kurchatov Arra**	**86.97**	**322**	P	**P**	**10 50 53.8**	**-0.7**
	comp=Z,2.6nm,1.0s,baz=110,slow=3.0,SNR=11							
NIL	**Nilore**	**87.22**	**304**	P	**P**	**10 50 55.1**	**-1.1**
NIL				pmax	pmax			
	comp=Z,11nm,0.9s							
NIL	**Nilore**	**87.22**	**304**	P	**P**	**10 50 55.1**	**-1.1**
NIL				IAmb	IAmb	10 51 14.5		
	comp=Z,11nm,0.9s							
EPYK	**Eagle Plains**	**87.61**	**22**	P	**P**	**10 50 58.6**	**+1.3**
	baz=247							
EPYK	**Eagle Plains**	**87.61**	**22**	P	**P**	**10 50 58.0**	**+0.7**
DLBC	**Dease Lake**	**87.86**	**30**	P	**P**	**10 51 00.0**	**+1.3**
DLBC				IAmb	IAmb	10 51 02.1		
	comp=Z,18nm,1.0s							
AAK	**Ala-Archa**	**87.91**	**313**	*i* P	**P**	**10 50 59.1**	**-0.4**
AAK				pmax	pmax			
	comp=Z,5.0nm,0.9s							
O02D	**Mt. Diablo Mer**	**88.21**	**49**	P	**P**	**10 51 02.1**	**+1.3**
	baz=260,SNR=6.1							
M02C	**Callahan**	**88.38**	**48**	P	**P**	**10 51 02.8**	**+1.2**
	baz=260,SNR=5.2							
N02D	**Trinity Center**	**88.42**	**49**	P	**P**	**10 51 02.5**	**+0.7**
	baz=260							
I03D	**Drain, OR**	**88.45**	**46**	P	**P**	**10 51 02.6**	**+0.9**
	baz=259							
NRIK	**Noril'sk**	**88.73**	**341**	P	**P**	**10 51 02.2**	**-0.2**
	comp=Z,7.6nm,0.6s,baz=108,slow=5.2,SNR=10							
ARSB	**Arslanbob**	**88.78**	**312**	P	**P**	**10 51 01.5**	**-2.0**
ARSB				pmax	pmax			
	comp=Z,7.0nm,1.0s							
ARSB	**Arslanbob**	**88.78**	**312**	P	**P**	**10 51 01.5**	**-2.0**
G03D	**McMinnville, O**	**88.80**	**44**	P	**P**	**10 51 04.3**	**+0.9**
	baz=259							
NLWA	**Neilton Lookou**	**88.81**	**42**	P	**P**	**10 51 03.9**	**+0.5**
E03A	**Lebam**	**88.85**	**43**	P	**P**	**10 51 04.5**	**+1.0**
E03A				IAmb	IAmb	10 51 07.3		
	comp=Z,13nm,0.9s							
L04D	**Klamath Falls**	**88.93**	**47**	P	**P**	**10 51 04.9**	**+0.6**
	baz=260							
O03E	**Paynes Creek**	**88.97**	**49**	P	**P**	**10 51 04.8**	**+0.4**
	baz=260,SNR=6.6							
H04D	**Lebanon**	**89.04**	**45**	P	**P**	**10 51 06.2**	**+1.7**
	baz=260							
ORV	**Oroville**	**89.08**	**50**	P	**P**	**10 51 04.1**	**-0.7**
ORV				pmax	pmax			
	comp=Z,6.0nm,1.1s							
ORV	**Oroville**	**89.08**	**50**	P	**P**	**10 51 04.1**	**-0.7**
I04A	**Tendick Farm,**	**89.14**	**46**	P	**P**	**10 51 06.0**	**+0.9**
	baz=260							
M04C	**Macdoel**	**89.20**	**48**	P	**P**	**10 51 06.6**	**+1.1**
	baz=260							
J04D	**Umpqua Nationa**	**89.25**	**46**	P	**P**	**10 51 06.6**	**+0.8**
	baz=260,SNR=6.5							
AFDM	**Forest Hills D**	**89.38**	**51**	P	**P**	**10 51 07.4**	**+1.1**
INK	**Inuvik**	**89.48**	**21**	P	**P**	**10 51 06.5**	**+0.6**
	comp=Z,20nm,0.6s,baz=253,slow=3.6,SNR=58							
INK	**Inuvik**	**89.48**	**21**	P	**P**	**10 51 06.0**	**0.0**
INK				pmax	pmax			
	comp=Z,47nm,1.2s							
INK	**Inuvik**	**89.48**	**21**	P	**P**	**10 51 06.0**	**0.0**
PKM	**Mcpherson Peak**	**89.67**	**55**	P	**P**	**10 51 08.4**	**+0.4**
	baz=262,SNR=6.8							
J05D	**Fort Rock, OR**	**89.89**	**47**	P	**P**	**10 51 09.6**	**+0.8**
	baz=261,SNR=10							
I05D	**Terrebonne, OR**	**89.99**	**45**	P	**P**	**10 51 09.9**	**+0.9**
	baz=260							
BEKR	**Beckworth**	**90.00**	**50**	P	**P**	**10 51 09.7**	**+0.4**
K05A	**Summer Lake**	**90.05**	**47**	P	**P**	**10 51 10.4**	**+0.8**
B05A	**Bryant**	**90.14**	**41**	P	**P**	**10 51 10.1**	**+0.5**
	baz=260							
G05D	**Wamic, OR**	**90.16**	**45**	P	**P**	**10 51 10.5**	**+0.7**
	baz=260							
PINE	**Pine Mountain**	**90.19**	**46**	P	**P**	**10 51 10.2**	**0.0**
PINE				IAmb	IAmb	10 51 13.2		
	comp=Z,7.6nm,0.9s							
MOD	**Modoc Plateau**	**90.35**	**48**	P	**P**	**10 51 11.4**	**+0.5**
SCI2	**San Clemente I**	**90.45**	**57**	P	**P**	**10 51 12.0**	**+0.7**
	baz=262							
VCNR	**Virginia City**	**90.45**	**51**	P	**P**	**10 51 10.4**	**-1.1**
PNTR	**Pine Nut**	**90.46**	**51**	P	**P**	**10 51 11.3**	**-0.3**
PNTR				IAmb	IAmb	10 51 28.1		
	comp=Z,7.0nm,1.1s							
CIS	**Catalina Islan**	**90.61**	**57**	P	**P**	**10 51 12.9**	**+0.7**
	baz=262							
MDPB	**Devils Postpil**	**90.66**	**52**	P	**P**	**10 51 11.9**	**-0.6**
PAHR	**Pah Rah Range**	**90.72**	**50**	P	**P**	**10 51 12.3**	**-0.3**
PAHR				IAmb	IAmb	10 51 15.6		
	comp=Z,8.0nm,1.1s							
OMMB	**Old Mammoth Mi**	**90.72**	**52**	P	**P**	**10 51 13.5**	**+0.6**
PASC	**Pasadena Art C**	**90.91**	**56**	IAmb	IAmb	10 51 16.4		
	comp=Z,12nm,0.8s							
EDW2	**Edwards Air Fo**	**91.16**	**55**	P	**P**	**10 51 15.7**	**+1.0**
	baz=262,SNR=13							
RYN	**Ryan**	**91.23**	**51**	IAmb	IAmb	10 51 18.1		
	comp=Z,7.8nm,1.2s							
CWC	**Cottonwood Cre**	**91.29**	**54**	P	**P**	**10 51 16.6**	**+1.2**
	baz=262							
BFSC	**Mount Baldy Ra**	**91.35**	**56**	P	**P**	**10 51 16.5**	**+0.8**
	baz=263							
NVAR	**Mina Array Bea**	**91.37**	**52**	P	**P**	**10 51 17.5**	**+1.6**
	comp=Z,9.3nm,1.1s,baz=258,slow=5.3,SNR=22							
LRMC	**Laurel Mtn Rad**	**91.48**	**55**	P	**P**	**10 51 17.3**	**+1.0**
	baz=263							
NV11	**Mina Array Sit**	**91.49**	**52**	P	**P**	**10 51 16.6**	**+0.3**
NV11				IAmb	IAmb	10 51 20.0		
	comp=Z,7.7nm,1.0s							
KVN	**Kaiserville**	**91.61**	**51**	P	**P**	**10 51 15.4**	**-1.5**
KVN				pmax	pmax			
	comp=Z,11nm,1.2s							
KVN	**Kaiserville**	**91.61**	**51**	P	**P**	**10 51 15.4**	**-1.5**
KVN				IAmb	IAmb	10 51 19.8		
	comp=Z,11nm,1.2s							
MURC	**Murrieta**	**91.65**	**57**	P	**P**	**10 51 17.8**	**+0.8**
	baz=263							
WVOR	**Wild Horse Val**	**91.65**	**48**	P	**P**	**10 51 15.7**	**-1.2**
WVOR				pmax	pmax			
	comp=Z,7.0nm,1.0s							
WVOR	**Wild Horse Val**	**91.65**	**48**	P	**P**	**10 51 15.7**	**-1.2**
WVOR				IAmb	IAmb	10 51 19.4		
	comp=Z,6.7nm,1.0s							
MPMC	**Manual Prospec**	**91.71**	**54**	P	**P**	**10 51 18.1**	**+0.7**
	baz=263							
J08A	**Circle Bar Ran**	**91.90**	**47**	IAmb	IAmb	10 51 21.1		
	comp=Z,6.0nm,0.8s							
GRAC	**Grapevine Rang**	**91.93**	**53**	P	**P**	**10 51 19.1**	**+0.9**
	baz=263							
PNT	**Penticton**	**91.93**	**41**	P	P	10 51 11.3	-6.6	
PNT				pmax	pmax			
	comp=Z,7.0nm,1.1s							
GSC	**Goldstone, Bar**	**92.17**	**55**	P	**P**	**10 51 20.1**	**+0.7**
	baz=263							
MONP2	**Monument Peak**	**92.21**	**57**	P	**P**	**10 51 20.3**	**+0.5**
	baz=263							
PFO	**Pinyon Flats O**	**92.26**	**57**	P	**P**	**10 51 17.1**	**-2.9**
PFO				pmax	pmax			
	comp=Z,6.0nm,0.9s							
PFO	**Pinyon Flats O**	**92.26**	**57**	P	**P**	**10 51 21.0**	**+1.1**
	baz=263,SNR=7.3							
PFO	**Pinyon Flats O**	**92.26**	**57**	P	**P**	**10 51 17.1**	**-2.9**
PFO				IAmb	IAmb	10 51 22.9		
	comp=Z,6.3nm,0.9s							
XPFO	**Pion Flat**	**92.26**	**57**	P	**P**	**10 51 17.5**	**-2.4**
XPFO				IAmb	IAmb	10 51 22.9		
	comp=Z,6.2nm,0.9s							
FURC	**Furnace Creek,**	**92.27**	**54**	P	**P**	**10 51 20.5**	**+0.9**
	baz=263							
BVAR	**Borovoye Array**	**92.40**	**323**	P	**P**	**10 51 19.0**	**-1.0**
	comp=Z,3.3nm,0.8s,baz=104,slow=6.3,SNR=11							
BVAR	**Borovoye Array**	**92.40**	**323**	P	**P**	**10 51 19.0**	**-1.0**
BRVK	**Borovoye**	**92.47**	**323**	*ce*P	**P**	**10 51 20.8**	**+0.6**
BRVK				pmax	pmax			
	comp=Z,2.0nm,0.9s							
HEC	**Hector,Ludlow**	**92.50**	**55**	P	**P**	**10 51 21.7**	**+0.8**
	baz=264							
SYO	**Syowa Base**	**92.56**	**199** ⇑	*i* P	**P**	**10 51 20.2**	**-0.2**
SYO	**Syowa Base**	**92.56**	**199** ⇑	*i* PcP	**PcP**	**10 51 21.2**	**+0.1**
SHOC	**Shoshone, Teco**	**92.67**	**54**	P	**P**	**10 51 22.5**	**+0.9**
	baz=264							
BELC	**Belle Mtn. Jos**	**92.69**	**56**	P	**P**	**10 51 22.9**	**+1.0**
	baz=264,SNR=12							
TPNV	**Topopah Spring**	**92.81**	**53**	P	**P**	**10 51 20.7**	**-1.8**
TPNV				pmax	pmax			
	comp=Z,8.0nm,1.2s							
TPNV	**Topopah Spring**	**92.81**	**53**	P	**P**	**10 51 23.3**	**+0.8**
	baz=264							
TPNV	**Topopah Spring**	**92.81**	**53**	P	**P**	**10 51 20.7**	**-1.8**
TPNV				IAmb	IAmb	10 51 25.4		
	comp=Z,7.7nm,1.1s							
BMO	**Blue Mountains**	**92.92**	**45**	P	**P**	**10 51 21.9**	**-0.7**
BMO				pmax	pmax			
	comp=Z,3.0nm,1.1s							
BMO	**Blue Mountains**	**92.92**	**45**	P	**P**	**10 51 21.9**	**-0.7**
GMRC	**Granite Mounta**	**93.05**	**56**	P	**P**	**10 51 24.2**	**+0.6**
	baz=264,SNR=10							
C36M	**Paulatuk**	**93.06**	**21**	P	**P**	**10 51 23.6**	**+1.0**
	baz=259							
C36M	**Paulatuk**	**93.06**	**21**	P	**P**	**10 51 23.1**	**+0.5**
BC3	**Big Chuckawall**	**93.10**	**57**	P	**P**	**10 51 24.9**	**+1.1**
	baz=264							
F10A	**Beach Ranch, E**	**93.10**	**44**	P	**P**	**10 51 23.5**	**+0.1**
F10A				IAmb	IAmb	10 51 25.3		
	comp=Z,6.6nm,1.1s							
A36M	**Sachs Harbour**	**93.22**	**18**	P	**P**	**10 51 24.6**	**+1.3**
	baz=258,SNR=5.8							
IRM	**Iron Mountain**	**93.41**	**56**	P	**P**	**10 51 26.1**	**+1.0**
	baz=264,SNR=7.3							
NEW	**Newport**	**93.43**	**42**	P	**P**	**10 51 24.7**	**-0.2**
NEW				pmax	pmax			
	comp=Z,7.0nm,1.1s							
NEW	**Newport**	**93.43**	**42**	P	**P**	**10 51 25.2**	**+0.3**
	baz=264							
NEW	**Newport**	**93.43**	**42**	P	**P**	**10 51 24.6**	**-0.2**
NEW				IAmb	IAmb	10 51 26.4		
	comp=Z,6.8nm,1.1s							
R11A	**Troy Canyon, C**	**93.48**	**52**	P	**P**	**10 51 26.0**	**+0.5**
	baz=264							
R11A	**Troy Canyon, C**	**93.48**	**52**	P	**P**	**10 51 26.7**	**+1.1**
SHPR	**Sheep Range**	**93.63**	**54**	P	**P**	**10 51 27.4**	**+1.1**
NEE2	**Needles Airpor**	**93.90**	**56**	P	**P**	**10 51 29.0**	**+1.7**
	baz=264							
ELK	**Elko**	**93.99**	**50**	P	**P**	**10 51 27.9**	**0.0**
ELK				pmax	pmax			
	comp=Z,6.0nm,1.0s							
ELK	**Elko**	**93.99**	**50**	P	**P**	**10 51 27.9**	**0.0**
ELK				IAmb	IAmb	10 51 30.7		
	comp=Z,5.8nm,1.0s							
PDMCI	**Parker Dam,Lak**	**94.25**	**56**	P	**P**	**10 51 30.4**	**+1.5**
	baz=265							
YKA	**Yellowknife Ar**	**96.06**	**28**	P	**P**	**10 51 37.0**	**+0.5**
	comp=Z,13nm,0.8s,baz=264,slow=4.3,SNR=58							
YKA				PKiKP	**PKiKP**	**10 56 14.6**	**-0.3**	
	comp=Z,0.7nm,0.8s,baz=264,slow=1.1,SNR=5.2							
YKA				PKKPbc	**PKKPbc**	**11 08 23.0**	**-3.6**	
	comp=Z,1.2nm,0.9s,baz=91,slow=3.0,SNR=11							
YKA				LR	LR	11 31 46.0		
	comp=Z,214nm,19.8s,baz=0.0,slow=33							
MTPU	**Mount Pierson**	**96.13**	**53**	P	**P**	**10 51 38.7**	**+0.8**
HWUT	**Hardware Ranch**	**96.82**	**49**	P	**P**	**10 51 40.5**	**-0.2**
AHID	**Auburn Hatcher**	**97.22**	**48**	P	**P**	**10 51 42.5**	**-0.1**
AHID				IAmb	IAmb	10 51 45.5		
	comp=Z,7.1nm,1.1s							
BW06	**Boulder Array**	**98.36**	**48**	P	Pdif	10 51 48.0	+0.3	
	baz=268							
BW06	**Boulder Array**	**98.36**	**48**	IAmb	IAmb	10 51 50.0		
	comp=Z,4.7nm,0.9s							
PDAR	**Pinedale Array**	**98.36**	**48**	P	**P**	**10 51 47.4**	**-0.3**
	comp=Z,4.2nm,0.9s,baz=239,slow=1.8,SNR=25							
PDAR				PKiKP	**PKiKP**	**10 56 20.4**	**+0.6**	
	comp=Z,0.3nm,0.7s,baz=224,slow=3.8,SNR=2.2							
PV23	**Carpenter Ridg**	**98.64**	**52**	IAmb	IAmb	10 51 53.0		
	comp=Z,6.2nm,0.9s							
NVL	**N'lazarevskaya**	**98.77**	**192**	*e*P	**P**	**10 51 45.6**	**-3.0**
NVL				pmax	pmax			
	comp=Z,646nm,17.1s							
PV12	**Saucer Basin,**	**98.80**	**52**	P	Pdif	10 51 50.1	+0.4	
PV12				IAmb	IAmb	10 51 52.8		
	comp=Z,10nm,0.9s							
PV22	**Blue Mesa, Par**	**98.82**	**52**	IAmb	IAmb	10 51 52.6		
	comp=Z,4.8nm,1.0s							
ARU	**Arti**	**99.43**	**326**	*i* P	**Pdif**	**10 51 52.3**	**+0.5**
ARU				pmax	pmax			
	comp=Z,3.0nm,0.9s							
SNAA	**Sanae**	**100.31**	**187**	P	**Pdif**	**10 51 55.6**	**0.0**
	comp=Z,0.7nm,0.6s,baz=197,slow=13,SNR=1.6							
K22A	**Casper**	**100.59**	**48**	P	**Pdif**	**10 51 58.1**	**+0.5**
	baz=270							
LAO	**LASA Array**	**100.75**	**44**	P	**Pdif**	**10 51 59.0**	**+1.0**
	baz=271							
N23A	**Red Feather La**	**101.04**	**50**	P	**Pdif**	**10 52 00.4**	**+0.6**
	baz=270							
VNA3	**Neumayer Olymp**	**101.42**	**185**	P	**Pdif**	**10 51 58.3**	**-2.2**
VNA2	**Neumayer--Watz**	**101.51**	**186**	P	**Pdif**	**10 51 59.4**	**-1.5**
	baz=166,slow=4.1							
WMOK	**Wichita Mounta**	**106.92**	**56**	P	**PKiKP**	**10 56 33.9**	**-1.5**
	baz=273							
ECSD	**EROS Data Cent**	**107.75**	**46**	P	**PKiKP**	**10 56 36.5**	**-0.2**
	baz=278							
KLMR	**Klimovskoe**	**108.38**	**332**	*e*P	**Pdif**	**10 52 25.3**	**-6.2**
KLMR				pmax	pmax			
	comp=Z,14nm,1.5s							
KLMR	**Klimovskoe**	**108.38**	**332**	*e*Pdif	**Pdif**	**10 52 25.4**	**-6.1**
KLMR				AMP		10 52 34.1		
	comp=Z,14nm,1.5s							
ARCES	**ARCESS Array B**	**109.56**	**343**	PKiKP	**PKiKP**	**10 56 39.4**	**+0.1**
	comp=Z,3.1nm,0.6s,baz=83,slow=1.8,SNR=12							
ARCES				PKKPbc	**PKKPbc**	**11 07 43.0**	**-3.8**	
	comp=Z,3.7nm,0.9s,baz=288,slow=0.8,SNR=5.9							
KIV	**Kislovodsk**	**111.00**	**314**	*i* PKIKP	**PKiKP**	**10 56 41.0**	**-1.9**
KIV				pmax	pmax			
	comp=Z,12nm,1.1s							
KIV				MLR	MLR			
	comp=Z,275nm,21.0s							
U40A	**Yellville**	**111.58**	**54**	P	**PKiKP**	**10 56 44.1**	**0.0**
	baz=278							
OBN	**Obninsk**	**111.82**	**327**	*i* PKIKP	**PKiKP**	**10 56 45.7**	**+1.8**
OBN				*e*		10 57 27.4		
OBN				*e*PPP	PPP	10 59 49.5		
OBN				pmax	pmax			
	comp=Z,5.0nm,0.9s							
W41B	**Gary Mavity, V**	**112.22**	**55**	P	**PKiKP**	**10 56 45.4**	**+0.1**
	baz=278							
JFWS	**Jewell Farm**	**112.46**	**46**	P	**PKiKP**	**10 56 45.4**	**-0.1**
	baz=282							
FINES	**FINESS Array B**	**113.96**	**336**	PKiKP	**PKiKP**	**10 56 48.0**	**+0.2**
	comp=Z,2.9nm,0.7s,baz=96,slow=5.7,SNR=6.9							
FINES				PKKPbc	**PKKPbc**	**11 07 30.0**	**-2.0**	
	comp=Z,2.4nm,0.8s,baz=197,slow=2.0,SNR=5.3							
WVT	**Waverly**	**115.63**	**53**	P	**PKPdf**	**10 56 51.2**	**-0.6**
	baz=281							
D46A	**Sault St. Mari**	**115.68**	**41**	P	**PKiKP**	**10 56 51.4**	**-0.2**
	baz=289							
T47A	**Sharon Grove**	**116.04**	**52**		**PKPdf**	**10 56 51.2**	**-1.3**
D47A	**Chapleau**	**116.23**	**41**	P	**PKPdf**	**10 56 52.5**	**-0.2**
	baz=290							
J47A	**Sunmer**	**116.24**	**45**	P	**PKPdf**	**10 56 52.4**	**-0.4**
	baz=286							
K47A	**Vermontville**	**116.27**	**46**	P	**PKPdf**	**10 56 52.5**	**-0.4**
	baz=286							
E47A	**Iron Bridge**	**116.31**	**41**	P	**PKPdf**	**10 56 52.8**	**0.0**
	baz=289							
G47A	**Hillman**	**116.34**	**43**	P	**PKPdf**	**10 56 52.7**	**-0.2**
	baz=288							
WCI	**Wyandotte Cave**	**116.41**	**51**	P	**PKPdf**	**10 56 53.0**	**-0.3**
	baz=283							
PLCA	**Paso Flores**	**116.62**	**142**	PKP	**PKiKP**	**10 56 54.4**	**+0.6**
	comp=Z,3.4nm,0.5s,baz=248,slow=2.8,SNR=15							
N48A	**Decatur**	**116.73**	**48**	P	**PKPdf**	**10 56 53.1**	**-0.7**
	baz=285							
O48A	**Farmland**	**116.79**	**48**	P	**PKPdf**	**10 56 53.6**	**-0.3**
	baz=285							
CLTN	**Cedars of Leba**	**116.83**	**53**		**PKPdf**	**10 56 53.0**	**-1.1**
H48A	**Harrisville**	**116.84**	**43**	P	**PKPdf**	**10 56 53.9**	**0.0**
	baz=288							
LRAL	**Lakeview Retre**	**116.85**	**56**	P	**PKPdf**	**10 56 53.5**	**-0.7**
	baz=280							
L48A	**N Adams**	**116.87**	**46**	P	**PKPdf**	**10 56 53.6**	**-0.4**
	baz=286							
J48A	**Bridge Port**	**116.95**	**45**	P	**PKiKP**	**10 56 54.2**	**+0.1**
	baz=287							
F48A	**Evansville**	**116.95**	**42**	P	**PKiKP**	**10 56 54.2**	**+0.2**
	baz=289							
D48A	**Paudash Townsh**	**117.02**	**40**	P	**PKPdf**	**10 56 53.5**	**-0.6**
	baz=291							
E48A	**Lockeyer**	**117.03**	**41**	P	**PKPdf**	**10 56 53.9**	**-0.3**
	baz=290							
U49A	**Red Boiling Sp**	**117.18**	**52**		**PKPdf**	**10 56 53.3**	**-1.5**
D49A	**Beulah Townshi**	**117.27**	**40**	P	**PKPdf**	**10 56 54.4**	**-0.3**
	baz=291							
P49A	**Miami Univ. Ec**	**117.30**	**49**	P	**PKPdf**	**10 56 54.3**	**-0.6**
	baz=285							
M49A	**Liberty Center**	**117.33**	**47**	P	**PKPdf**	**10 56 54.6**	**-0.3**
	baz=286							
F49A	**Sandfield**	**117.35**	**42**	P	**PKPdf**	**10 56 54.6**	**-0.2**
	baz=290							
AKASG	**Malin Array Be**	**117.63**	**325**	PKP	**PKPdf**	**10 56 55.0**	**-0.2**
	comp=Z,2.5nm,0.6s,baz=58,slow=2.5,SNR=7.3							
AKASG				PKKPbc	**PKKPbc**	**11 07 17.6**	**-1.3**	
	comp=Z,1.1nm,0.5s,baz=265,slow=3.5,SNR=5.8							
AKASG	**Malin Array Be**	**117.63**	**325**	PKIKP	**PKPdf**	**10 56 55.0**	**-0.2**
AKBB	**Malin Array Si**	**117.63**	**325**	*c i* PKIKP	**PKiKP**	**10 56 56.0**	**+0.8**
Z50A	**Ashland**	**117.70**	**56**	P	**PKPdf**	**10 56 55.7**	**-0.2**
	baz=281							
KMBO	**Kilima Mbogo**	**117.71**	**265**	PKP	**PKPdf**	**10 56 56.6**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=242,slow=3.4,SNR=5.1							
KMBO	**Kilima Mbogo**	**117.71**	**265**	PKIKP	**PKPdf**	**10 56 55.0**	**-1.8**
KMBO	**Kilima Mbogo**	**117.71**	**265**		**PKPdf**	**10 56 55.0**	**-1.8**
W50A	**Signal Mountai**	**117.82**	**54**		**PKPdf**	**10 56 54.8**	**-1.3**
O50A	**Cable**	**117.95**	**48**	P	**PKPdf**	**10 56 55.8**	**-0.4**
	baz=286							
P50A	**Jamestown**	**117.96**	**49**	P	**PKPdf**	**10 56 55.8**	**-0.4**
	baz=285							
E50A	**Wahnapitae**	**117.97**	**41**	P	**PKPdf**	**10 56 55.8**	**-0.2**
	baz=291							
L50A	**Kingsville**	**118.00**	**46**	P	**PKPdf**	**10 56 56.1**	**-0.1**
	baz=287							
M50A	**Fremont**	**118.02**	**47**	P	**PKPdf**	**10 56 55.6**	**-0.7**
	baz=287							
N50A	**Nevada**	**118.13**	**47**	P	**PKPdf**	**10 56 55.8**	**-0.7**
	baz=286							
D50A	**G1974 Best Tow**	**118.27**	**39**	P	**PKPdf**	**10 56 56.4**	**-0.2**
	baz=292							
ACSO	**Alum Creek Sta**	**118.40**	**48**	P	**PKPdf**	**10 56 56.7**	**-0.3**
	baz=286							
ACSO	**Alum Creek Sta**	**118.40**	**48**		**PKPdf**	**10 56 56.7**	**-0.3**
Q51A	**Peebles**	**118.45**	**49**	P	**PKPdf**	**10 56 56.8**	**-0.4**
	baz=285							
BI02	**San Fabin de**	**118.55**	**138**		**PKiKP**	**10 56 57.9**	**+0.2**
P51A	**Williamsport**	**118.55**	**49**	P	**PKPdf**	**10 56 56.8**	**-0.5**
	baz=286							
BR131	**Keskin Array S**	**118.55**	**312**	PKIKP	**PKPdf**	**10 56 55.3**	**-2.2**
BR131	**Keskin Array S**	**118.55**	**312**		**PKPdf**	**10 56 55.3**	**-2.2**
BRTR	**Keskin Array B**	**118.55**	**312**	PKP	**PKPdf**	**10 56 57.3**	**-0.2**
	comp=Z,2.3nm,0.8s,baz=132,slow=1.8,SNR=10							
BRTR				PKKPbc	**PKKPbc**	**11 07 14.6**	**-0.8**	
	comp=Z,1.3nm,0.8s,baz=223,slow=4.7,SNR=6.4							
MATQ	**Matagami**	**118.56**	**36**	P	**PKPdf**	**10 56 56.5**	**-0.6**
	baz=296							
D51A	**Lot 18 Range I**	**118.60**	**39**	P	**PKPd

	baz=294								
H53A	**Bobcaygeon**	120.06	42	P		PKPdf	10 56 59.8	-0.3	
	baz=292								
G54A	**Lake Saint Pet**	120.07	41	P		PKPdf	10 56 59.5	-0.6	
	baz=293								
E54A	**Lac Daplat, Po**	120.24	39	P		PKPdf	10 57 00.1	-0.2	
	baz=294								
D54A	**Lac Fusel, La**	120.27	39	P		PKPdf	10 57 00.2	-0.2	
	baz=295,SNR=6.2								
U54A	**Nelsons Funny**	120.27	52	P		PKPdf	10 57 00.5	-0.4	
	baz=285								
O54A	**Avella**	120.32	47	P		PKPdf	10 57 00.6	-0.2	
	baz=288								
X54A	**Belton**	120.32	54	P		PKPdf	10 57 00.6	-0.3	
	baz=284								
T54A	**Tazewell**	120.32	51	P		PKPdf	10 57 00.8	-0.1	
	baz=286								
S54A	**Dingess, Beckl**	120.32	50	P		PKPdf	10 57 00.5	-0.4	
	baz=286								
W54A	**Cherokee Point**	120.34	53	P		PKPdf	10 57 00.9	-0.1	
	baz=284								
Q54A	**Coxs Mills**	120.34	49	P		PKPdf	10 57 00.7	-0.1	
	baz=287								
N54A	**Moraine State**	120.35	46	P		PKPdf	10 57 00.8	0.0	
	baz=289								
V54A	**Nebo**	120.36	52	P		PKPdf	10 57 00.8	-0.2	
	baz=285								
CHGQ	**Chibougamau**	120.38	35	P		PKPdf	10 57 00.4	-0.2	
	baz=299								
L54A	**Sinclairville**	120.41	45	P		PKPdf	10 57 00.7	-0.2	
	baz=290								
M54A	**Oil Creek Stat**	120.41	46	P		PKPdf	10 57 00.6	-0.3	
	baz=290								
P54A	**Burton**	120.42	48	P		PKPdf	10 57 00.6	-0.3	
	baz=288								
HODGE	**Hodges**	120.49	54			PKPdf	10 57 00.6	-0.6	
PAULI	**Pauline**	120.70	54			PKPdf	10 57 00.8	-0.9	
K54A	**Basiliko Farm,**	120.71	44	P		PKPdf	10 57 00.9	-0.5	
	baz=291								
I55A	**Frankford**	120.80	42	P		PKPdf	10 57 01.5	+0.1	
	baz=293								
WVNY	**West Valley, N**	120.84	44			PKPdf	10 57 00.7	-1.0	
PLVO	**Plevna**	120.87	41			PKPdf	10 57 01.3	-0.3	
Y55A	**Saluda**	120.88	55	P		PKPdf	10 57 01.8	-0.2	
	baz=284								
U55A	**TA2, Sparta**	120.88	51	P		PKPdf	10 57 02.1	+0.1	
	baz=286								
Q55A	**Buckhannon**	120.90	48	P		PKPdf	10 57 01.8	-0.2	
	baz=288								
T55A	**Pulaski**	120.92	51	P		PKPdf	10 57 02.0	0.0	
	baz=286								
V55A	**Taylorsville**	120.92	52	P		PKiKP	10 57 02.2	0.0	
	baz=285								
V55A	**Taylorsville**	120.92	52			PKPdf	10 57 01.6	-0.5	
P55A	**Reedsville**	120.93	48	P		PKPdf	10 57 01.7	-0.3	
	baz=288								
X55A	**Gracelyn & Ava**	120.93	54	P		PKPdf	10 57 02.1	0.0	
	baz=284								
E55A	**Montcerf-Lytto**	120.94	39	P		PKPdf	10 57 01.7	0.0	
	baz=295								
S55A	**Lewisburg**	120.95	50	P		PKPdf	10 57 01.3	-0.8	
	baz=287								
H55A	**Tweed**	121.00	41	P		PKPdf	10 57 01.5	-0.4	
	baz=293								
KMSC	**Kings Mountain**	121.01	53	P		PKPdf	10 57 02.0	-0.2	
	baz=285,SNR=5.4								
G55A	**Calabogie**	121.02	41	P		PKPdf	10 57 01.5	-0.4	
	baz=294								
L55A	**Hinsdale**	121.03	44	P		PKPdf	10 57 01.8	-0.3	
	baz=291								
M55A	**Ridgway**	121.06	45	P		PKPdf	10 57 01.9	-0.2	
	baz=290								
D55A	**Sainte-Anne-du**	121.06	38	P		PKPdf	10 57 01.7	-0.3	
	baz=296								
J55A	**Hilton**	121.07	43	P		PKPdf	10 57 01.6	-0.4	
	baz=292,SNR=6.3								
R55A	**Marlinton**	121.09	49	P		PKPdf	10 57 01.8	-0.6	
	baz=287,SNR=8.8								
O55A	**Ligonier**	121.09	47	P		PKPdf	10 57 02.1	-0.1	
	baz=289								
K55A	**Perry**	121.09	44	P		PKPdf	10 57 01.9	-0.3	
	baz=292								
BIZ	**Bicaz**	121.12	322	⇓P		PKiKP	10 57 03.3	+1.1	
N55A	**Marion Center**	121.13	46	P		PKPdf	10 57 01.9	-0.5	
	baz=290								
BLA	**Blacksburg**	121.17	50	PKIKP		PKPdf	10 57 01.8	-0.7	
BLA	**Blacksburg**	121.17	50	P		PKPdf	10 57 02.2	-0.3	
	baz=286								
BLA	**Blacksburg**	121.17	50			PKPdf	10 57 01.8	-0.7	
CO04	**Los Peladeros**	121.31	134			PKPdf	10 57 02.9	-0.4	
BUR08	**Bucovina Ar. S**	121.35	323			PKiKP	10 57 03.8	+1.1	
BURAR	**Bucovina Array**	121.36	323	⇓P		PKiKP	10 57 04.5	+1.7	
BURAR	**Bucovina Array**	121.36	323	⇓PKIKP		PKiKP	10 57 04.5	+1.7	
X56A	**White Oak**	121.41	54	P		PKPdf	10 57 03.0	0.0	
	baz=284								
M56A	**Emporium**	121.46	45	P		PKPdf	10 57 02.5	-0.4	
	baz=291,SNR=6.4								
D56A	**ZEC Mazanza, M**	121.48	38	P		PKPdf	10 57 02.3	-0.5	
	baz=297,SNR=6.0								
V56A	**Mocksville**	121.49	52	P		PKPdf	10 57 03.0	-0.1	
	baz=286								
T56A	**Rocky Mt**	121.52	51	P		PKPdf	10 57 02.6	-0.5	
	baz=287								
E56A	**St. Veronique**	121.54	39	P		PKPdf	10 57 02.8	0.0	
	baz=296								
Q56A	**Snyder Ridge,**	121.55	48	P		PKPdf	10 57 02.9	-0.3	
	baz=288								
N56A	**West Decatur**	121.58	46	P		PKPdf	10 57 02.9	-0.2	
	baz=290								
H56A	**Elgin**	121.58	41	P		PKPdf	10 57 02.5	-0.5	
	baz=294								
W56A	**Indian Trail**	121.60	53	P		PKPdf	10 57 02.9	-0.4	
	baz=285								
O56A	**Blue Knob Stat**	121.60	47	P		PKPdf	10 57 02.8	-0.5	
	baz=290,SNR=5.5								
K56A	**Middlesex**	121.61	43	P		PKPdf	10 57 03.1	-0.1	
	baz=292								
P56A	**Dayton Farm, R**	121.66	47	P		PKPdf	10 57 03.1	-0.2	
	baz=289								
L56A	**Greenwood**	121.66	44	P		PKPdf	10 57 02.9	-0.4	
	baz=292,SNR=7.8								
J56A	**Wolcott**	121.71	43	P		PKPdf	10 57 02.6	-0.6	
	baz=293,SNR=7.6								
ORIO	**Orleans, Innes**	121.71	40	P		PKPdf	10 57 02.9	-0.3	
	baz=295								
SUR	**Sutherland**	121.73	225	PKP		PKiKP	10 57 04.9	+0.7	
	comp=Z,4.0nm,0.7s,baz=191,slow=4.9,SNR=8.6								
KWP	**Kalwaria Pacla**	121.83	326	PKIKP		PKPdf	10 57 02.6	-0.8	
KWP	**Kalwaria Pacla**	121.83	326			PKPdf	10 57 02.6	-0.8	
MLR	**Muntele Rosu**	121.85	320	⇑P		PKiKP	10 57 04.4	+0.6	
MLR	**Muntele Rosu**	121.85	320	⇑PKIKP		PKiKP	10 57 04.4	+0.6	
MLR	**Muntele Rosu**	121.85	320			PKPdf	10 57 03.8	+0.2	
SSPA	**Standing Stone**	121.97	46			PKPdf	10 57 02.3	-1.5	
D57A	**Chemin Vers le**	122.03	38	P		PKPdf	10 57 03.1	-0.7	
	baz=298,SNR=5.4								
V57A	**Coltrane Farms**	122.04	52	P		PKPdf	10 57 03.6	-0.5	
	baz=286								
W57A	**Gilead**	122.06	53	P		PKPdf	10 57 03.9	-0.3	
	baz=286,SNR=5.6								
S57A	**Dark Hollow, R**	122.12	49	P		PKPdf	10 57 03.8	-0.5	
	baz=288								
T57A	**Hurt**	122.12	50	P		PKPdf	10 57 03.8	-0.5	
	baz=287								
T57A	**Hurt**	122.12	50			PKPdf	10 57 03.3	-1.0	
Q57A	**Strasburg**	122.12	48	P		PKPdf	10 57 03.8	-0.5	
	baz=289								
E57A	**Chemin Saint G**	122.14	38	P		PKPdf	10 57 03.5	-0.6	
	baz=297,SNR=6.3								
K57A	**Scipio Center**	122.15	43	P		PKPdf	10 57 03.7	-0.5	
	baz=293								
N57A	**Milroy**	122.16	46	P		PKPdf	10 57 03.8	-0.4	
	baz=291								
G57A	**Newington**	122.19	40	P		PKPdf	10 57 03.9	-0.3	
	baz=296								
L57A	**Andrews Acres**	122.20	44	P		PKPdf	10 57 04.3	0.0	
	baz=292								
U57A	**Blanch**	122.22	51	P		PKPdf	10 57 04.3	-0.2	
	baz=287								
J57A	**Williamstown**	122.23	42	P		PKPdf	10 57 04.1	-0.2	
	baz=294								
I57A	**Carthage**	122.25	42	P		PKPdf	10 57 03.9	-0.4	
	baz=294,SNR=5.3								
M57A	**Sunshine Farm,**	122.25	45	P		PKPdf	10 57 04.2	-0.2	
	baz=292,SNR=5.8								
M57A	**Sunshine Farm,**	122.25	45			PKPdf	10 57 04.0	-0.4	
P57A	**Homestead Farm**	122.27	47	P		PKPdf	10 57 04.0	-0.4	
	baz=290								
P57A	**Homestead Farm**	122.27	47			PKPdf	10 57 04.2	-0.3	
R57A	**Stanardsville**	122.28	49	P		PKPdf	10 57 04.1	-0.5	
	baz=289								
O57A	**Amberson**	122.29	46	P		PKPdf	10 57 04.3	-0.2	
	baz=290								
KOLS	**Kolonicke sedl**	122.44	325	*e*PKIKP		PKiKP	10 57 06.0	+1.3	
KOLS	**Kolonicke sedl**	122.44	325	*e*PKP		PKiKP	10 57 06.0	+1.3	
158A	**Hollywood**	122.52	55	P		PKPdf	10 57 04.7	-0.5	
	baz=284								
LATQ	**La Tuque**	122.52	37	P		PKPdf	10 57 04.6	-0.1	
	baz=299								
V58A	**Windy Hill, Pi**	122.58	52	P		PKPdf	10 57 05.0	-0.2	
	baz=287								
UZH	**Uzhgorod**	122.58	325	*e*PKIKP		PKiKP	10 57 09.3	+4.3	
D58A	**Chemin du LacG**	122.59	37	P		PKPdf	10 57 04.6	-0.3	
	baz=299								
LONY	**Lake Ozonia**	122.66	40	P		PKPdf	10 57 05.0	-0.1	
	baz=296								
R58A	**Rapidan**	122.67	49	P		PKPdf	10 57 04.8	-0.5	
	baz=288								
T58A	**Grand View Acr**	122.69	50	P		PKPdf	10 57 05.0	-0.4	
	baz=288								
Q58A	**Fox Den Farm,**	122.69	48	P		PKPdf	10 57 04.7	-0.6	
	baz=290								
E58A	**La Victoria**	122.70	38	P		PKPdf	10 57 04.6	-0.5	
	baz=298								
M58A	**Price's Panora**	122.71	45	P		PKPdf	10 57 05.2	-0.1	
	baz=292								
BINY	**Binghamton**	122.72	44	P		PKPdf	10 57 05.3	0.0	
	baz=293								
N58A	**Sunbury**	122.72	45	P		PKPdf	10 57 04.8	-0.5	
	baz=292,SNR=8.8								
N58A	**Sunbury**	122.72	45			PKPdf	10 57 04.1	-1.2	
K58A	**Earlville**	122.73	43	P		PKPdf	10 57 05.2	-0.1	
	baz=294								
J58A	**Remsen**	122.73	42	P		PKPdf	10 57 05.2	-0.1	
	baz=294								
ARR	**Arges**	122.73	321	⇓P		PKiKP	10 57 06.4	+0.9	
X58A	**Rowland**	122.74	53	P		PKPdf	10 57 05.4	-0.1	
	baz=286								
G58A	**Ormstown**	122.77	40	P		PKPdf	10 57 05.4	+0.2	
	baz=296								
P58A	**Pank, Wackersv**	122.78	47	P		PKPdf	10 57 05.5	0.0	
	baz=290								
I58A	**Old Forge**	122.80	42	P		PKPdf	10 57 05.2	-0.2	
	baz=295								
O58A	**Lewisberry**	122.83	46	P		PKPdf	10 57 05.2	-0.4	
	baz=291,SNR=7.8								
U58A	**Oxford**	122.84	51	P		PKPdf	10 57 05.5	-0.2	
	baz=287								
S58A	**Poland Farm, P**	122.85	49	P		PKPdf	10 57 05.5	-0.1	
	baz=289								
R58B	**Mineral**	122.87	49	P		PKPdf	10 57 05.5	-0.1	
	baz=289								
L58A	**Harry Jones Me**	122.87	44	P		PKPdf	10 57 05.3	-0.3	
	baz=293								
H58A	**Gabriels**	123.01	41	P		PKiKP	10 57 06.1	+0.1	
	baz=296								
SDMD	**Soldier's Deli**	123.15	47			PKPdf	10 57 06.0	-0.2	
FRNY	**Flat Rock**	123.20	40			PKPdf	10 57 04.8	-1.3	
J59A	**Piesco**	123.20	42	P		PKPdf	10 57 06.1	-0.1	
	baz=295								
K59A	**Cooperstown**	123.26	43	P		PKPdf	10 57 06.2	-0.1	
	baz=294								
V59A	**Middlesex**	123.27	52	P		PKPdf	10 57 06.3	-0.2	
	baz=287								
O59A	**Robesonia**	123.29	46	P		PKPdf	10 57 06.4	0.0	
	baz=292								
M59A	**Waymart**	123.36	44	P		PKPdf	10 57 06.2	-0.3	
	baz=293,SNR=6.0								
R59A	**King George, V**	123.36	48	P		PKiKP	10 57 07.0	+0.2	
	baz=290								
N59A	**State Game Lan**	123.36	45	P		PKPdf	10 57 06.3	-0.3	
	baz=292								
L59A	**Walton**	123.37	43	P		PKPdf	10 57 06.7	+0.1	
	baz=294								
P59A	**Jarrettsville**	123.37	47	P		PKiKP	10 57 07.2	+0.3	
	baz=291								
T59A	**Double "B" Far**	123.43	50	P		PKPdf	10 57 06.9	+0.2	
	baz=289								
I59A	**Olmsteadville**	123.48	41	P		PKPdf	10 57 06.9	+0.2	
	baz=296								
AC05	**El Transito**	123.53	131			PKiKP	10 57 08.2	+0.4	
F60A	**Warwick**	123.70	38	P		PKPdf	10 57 07.0	0.0	
	baz=299								
E60A	**Ste Agathe de**	123.81	37	P		PKPdf	10 57 07.1	-0.1	
	baz=300								
X60A	**Albert Glenn T**	123.82	53	P		PKiKP	10 57 07.8	0.0	
	baz=287								
I60A	**Shoreham**	123.83	41	P		PKPdf	10 57 07.5	+0.2	
	baz=296								
O60A	**Telford**	123.84	45	P		PKiKP	10 57 07.9	+0.2	
	baz=292								
N60A	**Cedar Hill Far**	123.85	45	P		PKPdf	10 57 07.6	+0.1	
	baz=300								
D60A	**Saint Jean D'O**	123.85	37	P		PKPdf	10 57 07.4	+0.2	
	baz=300								
S60A	**Water View**	123.87	49	P		PKiKP	10 57 08.2	+0.4	
	baz=290								
P60A	**Greenville**	123.87	46	P		PKiKP	10 57 07.9	+0.1	
	baz=292								
G60A	**Masonville**	123.88	39	P		PKiKP	10 57 07.8	+0.2	
	baz=298								
GZR	**Gura Zlata**	123.88	321	⇑P		PKiKP	10 57 08.2	+0.4	
GZR	**Gura Zlata**	123.88	321	⇑PKIKP		PKiKP	10 57 08.2	+0.4	
LANS	**Liptovska Anna**	123.88	327	*e*PKIKP		PKiKP	10 57 08.8	+1.2	
LANS	**Liptovska Anna**	123.88	327	*e*PKP		PKiKP	10 57 08.8	+1.2	
H60A	**Morristown**	123.89	40	P		PKPdf	10 57 07.4	-0.1	
	baz=297								
T60A	**Surry**	123.99	49	P		PKiKP	10 57 08.1	0.0	
	baz=289								
L60A	**Shokan**	124.01	43	P		PKPdf	10 57 07.9	+0.1	
	baz=294								
J60A	**Lant Hill Farm**	124.01	42	P		PKiKP	10 57 08.0	0.0	
	baz=296								
D61A	**St Aubert, Com**	124.14	36	P		PKPdf	10 57 08.0	+0.2	
	baz=301								
F61A	**St Evariste**	124.28	38	P		PKPdf	10 57 08.0	-0.1	
	baz=300								
G61A	**St-Isidore-de-**	124.29	39	P		PKiKP	10 57 08.7	+0.2	
	baz=299								
PSZ	**Piszkesteto**	124.32	325	⇑P		PKiKP	10 57 09.8	+1.2	
PSZ	**Piszkesteto**	124.32	325	⇑PKIKP		PKiKP	10 57 09.8	+1.2	
E61A	**Lac Etchemin**	124.35	37	P		PKiKP	10 57 08.9	+0.2	
	baz=300								
K61A	**Williamstown**	124.36	42	P		PKiKP	10 57 08.9	+0.2	
	baz=296								
H61A	**Lyndonville**	124.39	40	P		PKiKP	10 57 09.2	+0.4	
	baz=298								
W61A	**Ground Anchor**	124.42	52	P		PKiKP	10 57 09.2	+0.2	
	baz=288								
N61A	**South Mountain**	124.45	45	P		PKiKP	10 57 09.3	+0.4	
	baz=294								
BZS	**Buzias**	124.49	322	⇑P		PKPdf	10 57 08.1	-0.4	
BZS	**Buzias**	124.49	322	⇑PKIKP		PKPdf	10 57 08.1	-0.5	
I61A	**Oroboro, Fairl**	124.49	40	P		PKPdf	10 57 08.8	+0.2	
	baz=297								
LBNH	**Lisbon**	124.53	40	P		PKPdf	10 57 08.9	+0.2	
	baz=298								
J61A	**Chester**	124.54	41	P		PKiKP	10 57 09.2	+0.2	
	baz=297								
V61A	**Roper**	124.55	51	P		PKPdf	10 57 09.1	+0.1	
	baz=288								
MORC	**Moravsky Berou**	124.56	328	*e*PKP		PKiKP	10 57 09.7	+0.7	
MORC	**Moravsky Berou**	124.56	328	⇑P		PKiKP	10 57 10.3	+1.3	
MORC	**Moravsky Berou**	124.56	328	⇑PKIKP		PKiKP	10 57 10.3	+1.3	
MORC	**Moravsky Berou**	124.56	328			PKiKP	10 57 09.2	+0.3	
M61A	**Granite Spring**	124.60	44	P		PKPdf	10 57 08.9	0.0	
	baz=294								
VYHS	**Vyhne**	124.60	326	*e*PKIKP		PKPdf	10 57 08.5	-0.2	
VYHS	**Vyhne**	124.60	326	*e*PKP		PKPdf	10 57 08.5	-0.2	
S61A	**Accomac**	124.61	49	P		PKiKP	10 57 09.3	0.0	
	baz=290								
PAL	**Palisades**	124.62	44	P		PKiKP	10 57 09.4	+0.2	
	baz=294								
KRLC	**Kraliky**	124.78	329	*e*PKIKP		PKiKP	10 57 10.3	+0.9	
KRLC				*e*			10 57 21.3		
KRLC	**Kraliky**	124.78	329	*e*PKPDF		PKiKP	10 57 10.3	+0.9	
KRLC				*e*pPKP		pPKPdf	10 57 21.3	-4.6	
MDVR	**Moldovita**	124.84	321	⇑P		PKiKP	10 57 10.2	+0.6	
L61B	**Northampton**	124.85	42	P		PKPdf	10 57 09.5	+0.1	
	baz=296								
VTS	**Vitosha**	124.86	318	⇓P		PKiKP	10 57 10.3	+0.4	
VTS	**Vitosha**	124.86	318	⇓PKIKP		PKiKP	10 57 10.3	+0.4	
VTS	**Vitosha**	124.86	318			PKPdf	10 57 09.3	-0.2	
H62A	**Milan**	124.86	39	P		PKPdf	10 57 09.5	+0.2	
	baz=299								
D62A	**Allapoint, All**	124.86	36	P		PKPdf	10 57 09.4	+0.1	
	baz=302								
G62A	**West of Eustis**	124.94	38	P		PKPdf	10 57 09.6	+0.2	
	baz=300								
JAVC	**Velka Javorina**	125.02	327	*e*PKP		PKiKP	10 57 11.6	+1.7	
J62A	**Henniker**	125.07	41	P		PKiKP	10 57 10.0	-0.1	
	baz=297								
I62A	**Tamworth**	125.08	40	P		PKiKP	10 57 10.4	+0.3	
	baz=298								
BSEG	**Bad Segeberg**	125.23	335	*e*PKPdf		PKiKP	10 57 11.0	+0.9	
	baz=48,slow=1.9								
BSEG				*e*L		L	11 54 32.1		
	comp=Z,210nm,21.4s								
D63A	**Stockholm**	125.43	35	P		PKPdf	10 57 10.2	-0.1	
	baz=303								
AC02	**Maricunga**	125.44	130			PKPdf	10 57 10.8	-0.8	
K63A	**Dunstable**	125.50	41	P		PKPdf	10 57 10.6	0.0	
	baz=297								
MODS	**Modra-Piesok**	125.52	327	*e*PKIKP		PKiKP	10 57 11.3	+0.4	
MODS	**Modra-Piesok**	125.52	327	*e*PKP		PKiKP	10 57 11.3	+0.4	
G63A	**Kingsbury**	125.55	38	P		PKPdf	10 57 10.8	+0.2	
	baz=301								
F63A	**Nahmakanta, Br**	125.56	37	P		PKiKP	10 57 10.9	-0.1	
	baz=301								
E63A	**Oxbow**	125.58	36	P		PKPdf	10 57 10.8	+0.2	
	baz=302								
KRUC	**Moravsky**	125.59	328	*e*PKP		PKiKP	10 57 11.5	+0.5	
PKME	**Peaks-Kenny Pk**	125.67	38	P		PKPdf	10 57 11.0	+0.2	
	baz=301								
PQI	**Presque Isle**	125.68	36			PKPdf	10 57 10.3	-0.5	
BRG	**Berggiesshubel**	125.70	331	*e*PKP		PKiKP	10 57 11.6	+0.5	
	comp=Z,18nm,1.2s								
BRG				*e*			10 57 22.0		
	comp=Z,26nm,1.6s comp=N,175nm,17.9s comp=E,224nm,22.4s comp=Z,267nm,19.8s								
BRG	**Berggiesshubel**	125.70	331	*e*PKPdf		PKiKP	10 57 11.6	+0.5	
	baz=48,slow=1.9								
BRG	**Berggiesshubel**	125.70	331	*e*PKIKP		PKiKP	10 57 11.6	+0.5	
BRG				*e*			10 57 22.0		
BRG				pmax		pmax			
	comp=Z,18nm,1.2s								
BRG				pmax		pmax			
	comp=Z,26nm,1.6s								
BRG				MLR		MLR			
	comp=N,175nm,17.9s								
BRG				MLR		MLR			
	comp=E,224nm,22.4s								
BRG				MLR		MLR			
	comp=Z,267nm,19.8s								
L63A	**North Scituate**	125.82	42	P		PKPdf	10 57 11.3	+0.1	
	baz=297								
CLL	**Collm**	125.86	332	*i* PKPdf		PKiKP	10 57 12.5	+1.1	
	comp=Z,14nm,1.0s								
CLL				*e*pPKPdf		pPKPdf	10 57 23.0	-4.9	
CLL	**Collm**	125.86	332	*e*PKPdf		PKiKP	10 57 12.6	+1.1	
	baz=48,slow=1.9								
CLL				*e*L		L	11 55 32.4		
	comp=Z,182nm,20.8s								
F64A	**Sherman**	125.92	37	P		PKiKP	10 57 11.7	0.0	
	baz=302								
E64A	**Bridgewater**	125.93	36	P		PKiKP	10 57 11.6	-0.1	
	baz=303								
FBE	**Freiberg**	125.95	331	*e*PKPdf		PKiKP	10 57 12.4	+0.8	
	baz=48,slow=1.9								
PRU	**Pruhonice**	125.97	330	*e*PKIKP		PKiKP	10 57 12.2	+0.5	
PRU	**Pruhonice**	125.97	330	*e*PKPDF		PKiKP	10 57 12.2	+0.5	
G64A	**Maxfield**	126.00	37	P		PKPdf	10 57 11.6	+0.2	
	baz=302								
H64A	**Troy**	126.03	38	P		PKPdf	10 57 11.7	+0.2	
	baz=301								
I64A	**Boothbay**	126.14	39	P		PKPdf	10 57 11.8	+0.1	
	baz=300								
M64A	**Tiverton**	126.23	42	P		PKPdf	10 57 11.9	-0.1	
	baz=297								
NRDL	**Niedersach Rie**	126.35	334	*e*PKPdf		PKiKP	10 57 13.0	+0.8	
	baz=48,slow=1.9								
ASSE	**Asse, Remlinge**	126.36	334	*e*PKPdf		PKiKP	10 57 12.9	+0.6	
	baz=48,slow=1.9								
PBCC	**Pribram**	126.43	330	*e*PKPDF		PKiKP	10 57 13.5	+0.9	
RETH	**Rethem/Aller,**	126.49	335	*e*PKPdf		PKiKP	10 57 13.1	+0.5	
	baz=48,slow=1.9								
IDI	**Anoyia**	126.53	309	PKP		PKiKP	10 57 13.3	0.0	
	comp=Z,9.2nm,0.8s,baz=122,slow=3.5,SNR=4.4								
CONA	**Conrad Observa**	126.55	327	*e*PKiKP		PKiKP	10 57 12.9	-0.1	
	comp=Z,7.1nm,1.2s								
H65A	**Eastbrook**	126.60	38	P		PKPdf	10 57 12.8	+0.2	
	baz=302								
CLZ	**Clausthal**	126.69	334	*e*PKPdf		PKiKP	10 57 13.8	+0.6	
	baz=48,slow=1.9								
TANN	**Tannenbergstha**	126.71	331	*e*PKPdf		PKiKP	10 57 13.4	+0.1	
	baz

BMRD				x	x		10 57 31.1	
DAVOX	**Davos/Dischmat**	**130.42**	**329**	PKP	**PKPdf**		**10 57 20.1**	**0.0**
	comp=Z,4.1nm,0.7s,baz=45,slow=5.7,SNR=5.2							
DOU	**Dourbes**	**130.45**	**336**	PKPdf	**PKPdf**		**10 57 19.0**	**-0.8**
DOU				PKiKP	**PKiKP**		**10 57 20.5**	**-0.1**
DOU				x	x		10 57 31.1	
ROSC	**El Rosal**	**130.58**	**90**	PKP	**PKiKP**		**10 57 22.2**	**-0.3**
	comp=Z,7.3nm,0.3s,baz=226,slow=17,SNR=3.0							
ROSC	**El Rosal**	**130.58**	**90**		**PKPdf**		**10 57 20.1**	**-1.5**
MACC	**Macarena, Meta**	**130.76**	**93**	*e*P	**PKPdf**		**10 57 21.1**	**-0.4**
SMLC	**San Martn de**	**131.04**	**84**	*e*P	**PKPdf**		**10 57 20.0**	**-1.9**
CHIC	**Chingaza**	**131.14**	**90**	*e*P	**PKPdf**		**10 57 21.0**	**-1.7**
LPAZ	**La Paz**	**131.22**	**119**	PKP	**PKPdf**		**10 57 23.0**	**0.0**
	comp=Z,4.0nm,0.6s,baz=277,slow=0.9,SNR=14							
LPAZ	**La Paz**	**131.22**	**119**	PKIKP	**PKPdf**		**10 57 22.3**	**-0.7**
LPAZ	**La Paz**	**131.22**	**119**		**PKPdf**		**10 57 22.3**	**-0.7**
RUSC	**La Rusia**	**131.88**	**88**	*e*P	**PKPdf**		**10 57 20.2**	**-4.0**
BNI	**Bardonecchia**	**133.23**	**330**	PKIKP	**PKPdf**		**10 57 25.1**	**-0.3**
BNI	**Bardonecchia**	**133.23**	**330**		**PKPdf**		**10 57 25.1**	**-0.3**
SDV	**Santo Domingo**	**134.44**	**84**	*e*P	**PKPdf**		**10 57 26.2**	**-2.4**
SDV	**Santo Domingo**	**134.44**	**84**		**PKPdf**		**10 57 27.1**	**-1.5**
HUMP	**Col San Antoni**	**138.36**	**70**		**PKPdf**		**10 57 34.8**	**-0.7**
SAML	**Samuel**	**138.52**	**112**	PKIKP	**PKPdf**		**10 57 32.2**	**-3.8**
SAML	**Samuel**	**138.52**	**112**		**PKPdf**		**10 57 32.1**	**-3.8**
MVO	**Moncorvo**	**142.40**	**338**	*e*PKP	**PKPdf**		**10 57 39.9**	**-2.4**
ESDC	**Sonseca Array**	**142.41**	**333**	PKP	**PKPdf**		**10 57 39.9**	**-2.5**
	comp=Z,2.2nm,0.9s,baz=8.1,slow=3.0,SNR=9.7							
SPB	**Sao Paulo**	**142.44**	**144**		**PKPdf**		**10 57 43.2**	**+0.4**
PVIS	**Viseu**	**143.11**	**339**	*e*PKP	PKPbc		10 57 40.8	+0.3
MTE	**Manteigas**	**143.26**	**338**	*e*PKP	**PKiKP**		**10 57 47.3**	**+0.2**
PCBR	**Castelo Branco**	**143.72**	**337**	*e*PKP	**PKPdf**		**10 57 43.9**	**-0.7**
PMRV	**Marv??o**	**144.04**	**337**	*e*PKP	PKPbc		10 57 44.2	+1.0
PSBE	**So Bento**	**144.50**	**339**	*e*PKP	**PKPdf**		**10 57 45.9**	**-0.1**
PMTG	**Montargil**	**144.68**	**338**	*e*PKP	**PKPdf**		**10 57 46.3**	**0.0**
PMAFR	**Mafra**	**145.17**	**339**	*e*PKP	**PKPdf**		**10 57 49.0**	**+1.9**
PBEJ	**Beja**	**145.44**	**336**	*e*PKP	**PKPab**		**10 57 49.1**	**+1.2**
PNCL	**Nicolau / Gran**	**145.63**	**337**	*e*PKP	**PKPab**		**10 57 49.5**	**+1.0**
MESJ	**Messejana**	**145.74**	**337**	*e*PKPdf	**PKPdf**		**10 57 47.1**	**-1.0**
MESJ	**Messejana**	**145.74**	**337**	*e*PKP	**PKPab**		**10 57 50.4**	**+1.4**
PCVE	**Castro Verde**	**145.85**	**336**	*e*PKP	**PKPdf**		**10 57 48.6**	**+0.3**
PVAQ	**Vaqueiros**	**145.91**	**336**	*e*PKP	**PKPbc**		**10 57 49.4**	**+0.3**
PVAQ	**Vaqueiros**	**145.91**	**336**		**PKPab**		**10 57 49.9**	**+0.3**
PBDV	**Barranco-do-Ve**	**146.14**	**336**	*e*PKP	**PKiKP**		**10 57 52.0**	**-1.1**
PTEO	**Sao Teotonio**	**146.19**	**337**	*e*PKP	**PKPab**		**10 57 51.7**	**+1.0**
MORF	**Marmelete**	**146.37**	**337**	*e*PKPdf	**PKPdf**		**10 57 48.2**	**-1.1**
MORF	**Marmelete**	**146.37**	**337**	*e*PKP	**PKPab**		**10 57 51.9**	**+0.4**
TDRA	**Tendrara**	**146.53**	**324**	P	**PKiKP**		**10 57 54.0**	**-0.3**
	SNR=7.6							
PFVI	**Vila Bisbo**	**146.59**	**337**	*e*PKP	**PKPab**		**10 57 52.3**	**+0.1**
CHEFC	**Chefchaouen**	**146.74**	**330**	P	**PKPab**		**10 57 53.0**	**0.0**
	SNR=12							
TAM	**Tamanrasset**	**146.91**	**302**	PKP2	**PKPbc**		**10 57 52.8**	**+0.1**
TAM	**Tamanrasset**	**146.91**	**302**	PKPbc	**PKPbc**		**10 57 52.8**	**+0.1**
RSA	**Sarsar**	**147.16**	**331**	P	**PKPab**		**10 57 54.0**	**-0.6**
	SNR=13							
BDFB	**Brasilia**	**147.83**	**134**	PKPbc	**PKPdf**		**10 57 53.7**	**+1.3**
	comp=Z,38nm,0.6s,baz=302,slow=1.1,SNR=24							
BDFB	**Brasilia**	**147.83**	**134**	PKIKP	**PKPdf**		**10 57 53.8**	**+1.4**
BDFB	**Brasilia**	**147.83**	**134**	PKPbc	**PKPdf**		**10 57 53.8**	**+1.4**
CZD	**Col de Zad**	**148.22**	**328**	P	**PKPab**		**10 57 59.0**	**-0.2**
	SNR=13							
ZHG	**ZHG**	**148.72**	**330**	P	**PKiKP**		**10 57 59.0**	**+0.5**
	SNR=13							
GOLM	**Goulmima**	**149.19**	**326**	P	**PKiKP**		**10 58 01.0**	**+1.3**
	SNR=8.1							
SRHM	**Skhour des Reh**	**150.12**	**331**	P	**PKiKP**		**10 58 03.0**	**+1.5**
	SNR=6.4							
TZRR	**Tazzarine**	**150.22**	**325**	P	**PKiKP**		**10 58 02.3**	**+0.5**
	SNR=16							
ZGR	**Zagora**	**150.75**	**325**	P	**PKiKP**		**10 58 04.0**	**+1.0**
	SNR=17							
OUZM	**OUZ**	**150.78**	**327**	P	**PKiKP**		**10 58 04.0**	**+1.0**
	SNR=14							
TOA0	**Torodi Ar. Sit**	**153.32**	**286**	PKPdf	**PKPdf**		**10 57 57.7**	**-3.1**
TOA0					**PKPbc**		**10 58 07.1**	**-1.2**
TOA0				PKPab	**pPKPdf**		**10 58 18.4**	**+0.9**
TORD	**Torodi Ar. Bea**	**153.32**	**286**	PKP	**PKPdf**		**10 58 00.8**	**0.0**
	comp=Z,2.1nm,0.9s,baz=16,slow=2.0,SNR=3.8							
TORD				PKPbc	**PKPbc**		**10 58 08.3**	**0.0**
	comp=Z,7.7nm,0.7s,baz=94,slow=1.9,SNR=34							
TORD				PKPab	**PKPab**		**10 58 18.8**	**-1.6**
	comp=Z,10nm,0.7s,baz=52,slow=2.1,SNR=12							
TORD				PP	**PP**		**11 01 52.9**	**-1.6**
	comp=Z,1.2nm,0.9s,baz=63,slow=5.2,SNR=3.2							
KIC	**Kosan Boka**	**160.21**	**270**	*e*PKP1	**PKPab**		**10 58 43.3**	**-6.9**
	comp=Z,98nm,1.2s							
LIC	**Lamto**	**160.48**	**269**	*e*PKP1	**PKPab**		**10 58 44.0**	**-7.4**
	comp=Z,66nm,1.2s							
TIC	**Toumodi**	**160.49**	**271**	*e*PKP1	**PKPab**		**10 58 44.0**	**-7.5**

KRSC 13 10:42:00.0±1.7, 48.73N×156.42E, h24km±26km, ML4.1, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.96**	**354**	*e*P	Pn	10 42 32.5	+0.7
SKR				*e*S	Sn	10 42 56.4	+0.7
ALID	**Alaid**	**2.21**	**346**	*e*P	Pb	10 42 38.1	-1.3
PAU	**Pauzhetka**	**2.75**	**5**	*e*P	Pb	10 42 45.7	-2.8
PAU				*e*S	Sb	10 43 19.7	-2.0
KDTR	**Khodutka, Kamc**	**3.26**	**18**	*e*P	Pb	10 42 53.5	-3.6
KDTR				*e*S	Sb	10 43 33.0	-3.4
MIPR	**Malaya Ipel'ka**	**3.56**	**3**	*e*P	Pn	10 42 54.7	+1.0
ASAK	**Asacha**	**3.78**	**14**	*e*P	Pn	10 43 00.6	+3.8
MTVR	**Mutnovka**	**3.92**	**16**	*e*P	Pn	10 43 02.9	+4.0
MTVR				*e*S	Sb	10 43 49.9	-5.6
RUS	**Russkaya**	**3.94**	**19**	*e*P	Pn	10 43 02.7	+3.7
RUS				*e*S	Sn	10 43 49.4	+5.0
GRL	**Gorelyy**	**3.97**	**15**	*e*P	Pn	10 43 04.0	+4.5
GRL				*e*S	Sb	10 43 51.4	-5.5
KRMR	**Karymshinskiy**	**4.25**	**14**	*e*P	Pn	10 43 07.8	+4.6
KRMR				*e*S	Sb	10 43 58.7	-6.0
DALK	**Dalny**	**4.55**	**18**	*e*P	Pn	10 43 12.0	+4.6
DALK				*e*S	Sn	10 44 05.0	+5.5
UGLR	**Uglovaya**	**4.74**	**18**	*e*P	Pn	10 43 13.8	+3.8
AVH	**Avacha**	**4.77**	**17**	*e*P	Pn	10 43 15.4	+4.9
KOK	**Koryaka**	**4.78**	**16**	*e*P	Pn	10 43 15.5	+4.9
SMAR	**Somma**	**4.78**	**17**	*e*P	Pn	10 43 16.0	+5.3
KRER	**Koryakskii**	**4.81**	**17**	*e*P	Pn	10 43 15.5	+4.4
SDLR	**Sedlovina**	**4.81**	**18**	*e*P	Pn	10 43 14.7	+3.6
NLC	**Nalytchevo**	**4.82**	**21**	*e*S	Sn	10 44 09.5	+3.5
KRX	**Arik**	**4.84**	**16**	*e*P	Pn	10 43 16.2	+4.7
SPN	**Mys Shipunski**	**4.93**	**26**	*e*P	Pn	10 43 16.9	+4.3
SPN				*e*S	Sn	10 44 13.9	+5.1
TUMR	**Tumrok**	**6.95**	**18**	*e*P	Pn	10 43 46.4	+6.0
KMNR	**Kamenistaya**	**7.42**	**17**	*e*P	Pn	10 43 52.6	+5.8

MAN 13 10:44:16.2, 5.93N×125.82E, h51km, mb4.2, ML3.0, MS2.6, Mindanao

IDC 13 10:46:56.0±4.3, 47.75N×147.15E, h456km±54km, mb2.9/8, mb1 3.1/9, mb1mx2.8/50, mbtmp3.7/9, Error ellipse: s-maj=27.7km s-min=15.6km az=129.0, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**17.45**	**241**	P	P	10 50 33.0	+0.3
	0.1nm,0.3s,baz=41,slow=9.8,SNR=4.4						
ILAR	**Eielson Array**	**38.32**	**39**	P	P	10 53 35.2	-0.5
	1.3nm,0.8s,baz=277,slow=7.2,SNR=3.0						
MKAR	**Makanchi Array**	**42.85**	**294**	P	P	10 54 13.3	+0.9
	0.6nm,0.6s,baz=79,slow=7.5,SNR=1.8						
INK	**Inuvik**	**42.99**	**32**	P	P	10 54 12.8	-0.3
	1.3nm,0.3s,baz=298,slow=11,SNR=12						
YKA	**Yellowknife Ar**	**52.51**	**35**	P	P	10 55 24.6	-0.2
	0.4nm,0.6s,baz=303,slow=6.7,SNR=7.5						
FINES	**FINESS Array B**	**61.33**	**332**	P	P	10 56 24.9	-0.7
	1.9nm,0.7s,baz=32,slow=8.2,SNR=7.4						
PDAR	**Pinedale Array**	**67.36**	**51**	P	P	10 57 05.5	+0.8
	0.6nm,0.6s,baz=28,slow=1.2,SNR=7.2						
WRA	**Warramunga Arr**	**68.35**	**193**	P	P	10 57 09.9	-0.8
	0.3nm,0.6s,baz=7.8,slow=6.4,SNR=2.1						
ASAR	**Alice Springs**	**72.08**	**193**	P	P	10 57 33.2	+0.3
	0.1nm,0.5s,baz=10,slow=5.6,SNR=1.0						

IDC 13 10:50:07.6±1.1, 34.56N×141.73E, h0km, mb3.4/5, mb1 3.6/9, mb1mx3.4/48, mbtmp3.5/9, ML3.0/3, Error ellipse: s-maj=26.7km s-min=17.6km az=87.0

JMA 13 10:50:09.4±0.6, 34.40N×141.66E, h28km±2km, M2.9

ISC 13 10:50:11.0±1.0, 34.47N±0.06×141.63E±0.08, h27km, n20, σ1s22/22, mb3.4/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.57**	**289**	P	**Pb**	**10 50 21.4**	**-0.7**
BSO3	**Boso 3**	**0.98**	**290**	P	**Pn**	**10 50 28.1**	**-0.7**
BSO4	**Boso 4**	**1.18**	**296**	P	**Pn**	**10 50 31.9**	**+0.2**
JKUC	**kamogawauchiur**	**1.36**	**301**	P	**Pn**	**10 50 34.1**	**-0.2**
JKUC				*e*S	**Sn**	**10 50 51.1**	**-0.4**
CHOJ	**Chosi**	**1.38**	**333**	P	**Pn**	**10 50 34.2**	**-0.4**
JMKN	**Mikurajimanish**	**1.79**	**252**	P	**Pn**	**10 50 39.6**	**-0.5**
JMKN				*e*S	**Sn**	**10 51 00.2**	**-1.7**
JHJ	**Hachijo jima 2**	**2.04**	**229**	Pn	**Pn**	**10 50 44.3**	**+0.6**
	18nm,0.3s,baz=359,slow=22,SNR=16						
JHJ				Sn	**Sb**	**10 51 11.2**	**-1.3**
	33nm,0.3s,baz=90,slow=20,SNR=6.3						
JOD2	**Odawara 2**	**2.23**	**291**	P	**Pn**	**10 50 46.3**	**0.0**
MJAR	**Matsushiro Arr**	**3.47**	**308**	Pn	**Pn**	**10 51 03.3**	**-0.1**
	0.2nm,0.3s,baz=125,slow=11,SNR=8.5						
MJAR				Sn	**Sn**	**10 51 45.4**	**+1.8**
	0.2nm,0.3s,baz=122,slow=8.7,SNR=2.1						
MAT	**Matsushiro**	**3.48**	**308**	P	**Pn**	**10 51 05.0**	**+1.6**
MAT				S	**Sn**	**10 51 45.1**	**+1.5**
JCJ	**Chichijima**	**7.37**	**176**	Pn	**Pn**	**10 51 57.4**	**+0.6**
	7.6nm,0.3s,baz=294,slow=20,SNR=1.8						
ASAJ	**Asahikawa**	**9.66**	**4**	Pn	**Pn**	**10 52 26.1**	**-2.2**
	0.3nm,0.3s,baz=227,slow=19,SNR=1.1						
H11N2	**WAKE ISLAND Hy**	**26.76**	**117**	T	T	11 23 56.3	
	baz=310,slow=75,SNR=9.2						
H11N1	**WAKE ISLAND Hy**	**26.77**	**117**	T	T	11 23 57.1	
	baz=310,slow=75,SNR=8.0						
H11N3	**WAKE ISLAND Hy**	**26.78**	**117**	T	T	11 23 55.4	
	baz=310,slow=75,SNR=8.5						
MKAR	**Makanchi Array**	**45.67**	**304**	P	**P**	**10 58 30.2**	**+0.9**
	0.3nm,0.7s,baz=84,slow=8.1,SNR=1.5						
KURBB	**Kurchatov Arra**	**47.75**	**310**	P	**P**	**10 58 46.4**	**+0.9**
	0.2nm,0.5s,baz=84,slow=7.5,SNR=7.8						
ILAR	**Eielson Array**	**51.58**	**31**	P	**P**	**10 59 13.1**	**-1.4**
	0.3nm,0.8s,baz=265,slow=6.2,SNR=2.2						
WRA	**Warramunga Arr**	**54.55**	**188**	P	**P**	**10 59 38.5**	**+1.7**
	0.4nm,0.4s,baz=1.6,slow=7.6,SNR=14						
ASAR	**Alice Springs**	**58.28**	**188**	P	**P**	**11 00 04.9**	**+1.5**
	0.5nm,0.8s,baz=12,slow=9.5,SNR=5.1						

VIE 13 10:55:28.1±0.9, 47.80N×14.16E, h0km, ml1.6/2, Error ellipse: s-maj=6.3km s-min=2.6km az=32.0 3 km SSE of Klaus Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOA	**Molln**	**0.09**	**54**	*e*Pg	Pg	10 55 30.0	+0.3
	2.0nm,0.1s						
MOA				*e*Sg	Sg	10 55 31.1	+0.2
	55nm,0.4s						
CONA	**Conrad Observa**	**1.15**	**83**	*e*Pg	Pg	10 55 50.1	0.0
	1.1nm,0.3s						
CONA				Sg	Sg	10 56 05.7	+0.7
	8.0nm,0.3s						

NEIC 13 11:02:48.7±1.4, 20.19S±0.1×178.38W±0.1, h626km±7km, mb4.4/35, Error ellipse: s-maj=18.4km s-min=15.8km az=129.0

IDC 13 11:02:49.9±1.8, 21.03S×178.80W, h639km±22km, mb3.5/17, mb1 3.7/19, mb1mx3.5/33, mbtmp4.5/19, Error ellipse: s-maj=17.1km s-min=12.7km az=153.0

ISC 13 11:02:48.3±0.5, 20.93S±0.09×178.76W±0.08, h619km, n72, σ1s19/75, mb4.4/33, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.38**	**316**	P	**P**	**11 04 19.7**	**+1.7**
NIUE	**Niue**	**8.51**	**79**	P	**P**	**11 04 51.2**	**-2.0**
AFI	**Afiamalu**	**9.65**	**45**	P	**P**	**11 05 04.5**	**+0.2**
DZM	**Mont Dzumac**	**13.82**	**263**	P	**P**	**11 05 46.3**	**+1.3**
	0.7nm,0.3s,baz=160,slow=9.5,SNR=7.0						
DZM	**Mont Dzumac**	**13.82**	**263**	P	**P**	**11 05 47.3**	**+2.3**
OUZ	**Omahuta**	**15.75**	**204**	P	**P**	**11 06 04.5**	**+2.2**
OUZ				IAmb	IAmb	11 06 06.7	
	comp=Z,12nm,0.8s						
URZ	**Urewera**	**17.64**	**191**	P	**P**	**11 06 17.9**	**-1.7**
	comp=Z,2.6nm,0.3s,baz=323,slow=1.5,SNR=22						
BKZ	**Black Stump Fm**	**18.63**	**192**	P	**P**	**11 06 27.4**	**-1.3**
BFZ	**Birch Farm**	**20.15**	**191**	P	**P**	**11 06 42.3**	**0.0**
BFZ				IAmb	IAmb	11 06 47.4	
	comp=Z,26nm,1.4s						
MSWZ	**Moikau Station**	**21.05**	**193**	P	**P**	**11 06 50.6**	**+0.2**
QRZ	**Quartz Range**	**21.18**	**199**	P	**P**	**11 06 52.2**	**+0.7**
PLWZ	**Palliser**	**21.20**	**192**	P	**P**	**11 06 50.8**	**-1.0**
NNZ	**Nelson**	**21.30**	**196**	P	**P**	**11 06 52.9**	**+0.3**
TUWZ	**Tuamarina**	**21.36**	**195**	P	**P**	**11 06 53.5**	**+0.4**
THZ	**Tophouse**	**21.94**	**197**	P	**P**	**11 06 58.9**	**+0.5**
MLZ	**Mavora Lakes**	**26.66**	**201**	P	**P**	**11 07 40.2**	**+0.2**
MLZ				IAmb	IAmb	11 07 56.2	
	comp=Z,12nm,1.1s						
EIDS	**Eidsvold**	**28.05**	**255**	P	**P**	**11 07 52.7**	**+0.4**
EIDS				IAmb	IAmb	11 07 53.1	
	comp=Z,9.6nm,1.0s						
ARMA	**Armidale**	**28.24**	**244**	P	**P**	**11 07 55.4**	**+1.3**
CTA	**Charters Tower**	**32.74**	**265**	P	**P**	**11 08 33.1**	**+0.6**
	comp=Z,17nm,0.5s,baz=91,slow=11,SNR=30						
CTAO	**Charters Tower**	**32.74**	**265**	P	**P**	**11 08 33.3**	**+0.8**
TOO	**Toolangi**	**35.07**	**234**	P	**P**	**11 08 51.4**	**-0.3**
TOO				IAmb	IAmb	11 08 53.1	
	comp=Z,4.6nm,0.7s						
COEN	**Coen**	**36.90**	**275**	P	**P**	**11 09 07.5**	**+0.6**
COEN				IAmb	IAmb	11 09 24.8	
	comp=Z,17nm,1.2s						
STKA	**Stephens Creek**	**36.96**	**245**	P	**P**	**11 09 07.8**	**+0.7**
	comp=Z,5.1nm,0.5s,baz=93,slow=11,SNR=24						
STKA	**Stephens Creek**	**36.96**	**245**	P	**P**	**11 09 07.9**	**+0.7**
BBOO	**Buckleboo**	**41.72**	**244**	P	**P**	**11 09 45.2**	**0.0**
BBOO				IAmb	IAmb	11 09 45.7	
	comp=Z,12nm,0.5s						
JAY	**Jayapura**	**43.51**	**289**	P	**P**	**11 09 59.8**	**+0.4**
	comp=Z,24nm,0.6s,baz=148,slow=4.4,SNR=14						
WR0	**Warramunga Arr**	**43.65**	**263**	P	**P**	**11 10 00.1**	**-0.3**
WR0				IAmb	IAmb	11 10 01.3	
	comp=Z,8.3nm,0.8s						
AS31	**Alice Springs**	**43.73**	**257**	P	**P**	**11 10 01.0**	**0.0**
ASAR	**Alice Springs**	**43.73**	**257**	P	**P**	**11 10 01.1**	**+0.1**
	comp=Z,16nm,0.8s,baz=95,slow=7.7,SNR=262						
ASAR				PcP	**PcP**	**11 11 33.8**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=102,slow=4.1,SNR=5.8						
ASAR				ScP	**ScP**	**11 14 27.1**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=90,slow=4.5,SNR=5.0						
ASAR				S	**S**	**11 15 45.1**	**-2.9**
	comp=Z,1.7nm,0.8s,baz=94,slow=16,SNR=9.6						
WB0	**Warramunga Arr**	**43.82**	**263**	P	**P**	**11 10 01.3**	**-0.4**
WB2	**Warramunga Arr**	**43.83**	**263**	P	**P**	**11 10 01.4**	**-0.3**
WB2				IAmb	IAmb	11 10 02.0	
	comp=Z,21nm,0.9s						
WRAB	**Tennant Creek**	**43.83**	**263**	P	**P**	**11 10 00.8**	**-0.9**
WRAB				IAmb	IAmb	11 10 02.0	
	comp=Z,20nm,0.9s						
WRA	**Warramunga Arr**	**43.84**	**263**	P	**P**	**11 10 01.5**	**-0.3**
	comp=Z,16nm,0.7s,baz=97,slow=7.7,SNR=350						
WRA				S	**S**	**11 15 43.6**	**-6.0**
	comp=Z,0.6nm,0.8s,baz=98,slow=13,SNR=2.3						
MTN	**Manton Dam**	**48.46**	**271**	P	**P**	**11 10 36.4**	**-0.3**
FORT	**Forrest**	**48.47**	**247**	P	**P**	**11 10 36.3**	**-0.3**
KNRA	**Kununurra**	**49.92**	**267**	P	**P**	**11 10 47.1**	**-0.2**
KNRA				IAmb	IAmb	11 10 50.4	
	comp=Z,28nm,1.5s						
FITZ	**Fitzroy Crossi**	**52.27**	**263**	P	**P**	**11 11 04.3**	**+0.1**
	comp=Z,2.6nm,0.5s,baz=89,slow=4.1,SNR=28						
FITZ	**Fitzroy Crossi**	**52.27**	**263**	IAmb	IAmb	11 11 04.7	
	comp=Z,3.8nm,0.7s						
SIJI	**Sorong**	**52.66**	**286**	P	**P**	**11 11 07.2**	**+0.1**
	comp=Z,31nm,0.7s,baz=86,slow=6.1,SNR=8.1						
SOEI	**Soe**	**55.80**	**272**	P	**P**	**11 11 28.9**	**-0.3**
SOEI				IAmb	IAmb	11 11 40.2	
	comp=Z,26nm,0.8s						
PSA00	**Pilbara Seismi**	**56.88**	**257**	P	**P**	**11 11 36.0**	**-0.3**
PSA00				IAmb	IAmb	11 11 36.6	
	comp=Z,14nm,0.8s						
VNDA	**Vanda**	**57.43**	**185**	P	**P**	**11 11 38.9**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=12,slow=7.7,SNR=6.1						
VNDA	**Vanda**	**57.43**	**185**	P	**P**	**11 11 40.9**	**+1.8**
NWAO	**Narrogin (SRO)**	**57.54**	**244**	P	**P**	**11 11 39.5**	**-1.1**
NWAO				IAmb	IAmb	11 11 50.7	
	comp=Z,35nm,1.4s						
NWAO	**Narrogin (SRO)**	**57.54**	**244**	P	**P**	**11 11 40.7**	**+0.1**
NWAO				IAmb	IAmb	11 11 50.7	
	comp=Z,43nm,1.4s						
MORW	**Morawa**	**59.01**	**248**	P	**P**	**11 11 49.9**	**-0.6**
GIRL	**Giralia**	**61.75**	**255**	P	**P**	**11 12 09.6**	**+1.0**
QSPA	**South Pole Qui**	**69.14**	**180**	P	**P**	**11 12 55.2**	**+1.2**
MJAR	**Matsushiro Arr**	**70.13**	**324**	P	**P**	**11 12 59.9**	**-0.2**
	comp=Z,3.5nm,0.8s,baz=140,slow=5.6,SNR=6.7						
KSM	**Kuching**	**72.77**	**278**	P	**P**	**11 13 15.1**	**-0.8**
KSM				IAmb	IAmb	11 13 17.2	
	comp=Z,7.1nm,0.8s						
YULB	**Yu-li**	**73.14**	**304**	P	**P**	**11 13 17.2**	**-0.6**
SSLB	**Suanglung**	**73.61**	**304**	P	**P**	**11 13 19.7**	**-0.8**
SSLB				IAmb	IAmb	11 13 28.6	
	comp=Z,17nm,1.4s						
PEA0B	**Petropavlovsk-**	**76.50**	**346**	P	**P**	**11 13 34.6**	**-1.3**
PEA0B				IAmb	IAmb	11 13 42.0	
	comp=Z,25nm,1.1s						
PETK	**Petropavlovsk-**	**76.50**	**346**	P	**P**	**11 13 36.0**	**+0.2**
	comp=Z,3.1nm,0.7s,baz=149,slow=4.7,SNR=7.8						
USRK	**Ussuriysk Ar.**	**78.92**	**326**	P	**P**	**11 13 50.2**	**+1.2**
	comp=Z,3.7nm,0.8s,baz=134,slow=5.5,SNR=6.2						
NVAR	**Mina Array Bea**	**81.82**	**44**	P	**P**	**11 14 05.1**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=221,slow=10.0,SNR=5.5						
TRF	**Thorofare Moun**	**87.01**	**12**	P	**P**	**11 14 28.5**	**-0.6**
TRF				IAmb	IAmb	11 14 29.3	
	comp=Z,6.1nm,0.8s						
TXAR	**Lajitas Array**	**87.88**	**58**	P	**P**	**11 14 35.2**	**+1.4**
	comp=Z,1.0nm,0.6s,baz=192,slow=2.6,SNR=3.1						
ILAR	**Eielson Array**	**88.89**	**13**	P	**P**	**11 14 36.8**	**-0.7**
	comp=Z,1.2nm,0.9s,baz=221,slow=5.1,SNR=7.5						
CMAR	**Chiang Mai Arr**	**89.59**	**290**	P	**P**	**11 14 43.1**	**+1.3**
	comp=Z,2.6nm,0.9s,baz=126,slow=2.7,SNR=13						
PDAR	**Pinedale Array**	**89.76**	**44**	P	**P**	**11 14 42.7**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=204,slow=3.3,SNR=4.1						
YKA	**Yellowknife Ar**	**97.19**	**25**	P	**P**	**11 15 15.3**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=248,slow=3.5,SNR=2.3						
ARCES	**ARCESS Array B**	**129.21**	**349**	PKP	**PKPdf**	**11 20 46.4**	**-0.4**
	comp=Z,4.0nm,1.1s,baz=350,slow=3.0,SNR=5.7						
AKASG	**Malin Array Be**	**143.03**	**330**	PKP	PKPab	11 21 10.1	-0.5
	comp=Z,5.6nm,0.6s,baz=42,slow=4.4,SNR=30						
AKBB	**Malin Array Si**	**143.03**	**330**		PKPab	11 21 10.4	-0.3
BR131	**Keskin Array S**	**146.59**	**311**		**PKPbc**	**11 21 21.4**	**-0.7**
BRTR	**Keskin Array B**	**146.59**	**311**	PKPbc	**PKPbc**	**11 21 20.6**	**-1.5**
	comp=Z,2.0nm,0.6s,baz=130,slow=4.1,SNR=11						
BUR08	**Bucovina Ar. S**	**147.06**	**330**	PKPdf	**PKPdf**	**11 21 17.7**	**-2.2**
BUR08					**PKPbc**	**11 21 21.9**	**-1.2**
BUR08				PKPab	**PKiKP**	**11 21 24.6**	**-0.2**
CLL	**Collm**	**148.31**	**346**	*i* PKPbc	**PKiKP**	**11 21 26.9**	**-0.1**
	comp=Z,8.0nm,0.9s						
BRG	**Berggiesshubel**	**148.49**	**345**	*i* PKP	**PKiKP**	**11 21 26.7**	**-0.8**
	comp=Z,12nm,1.6s						
KHC	**Kasperske Hory**	**150.18**	**344**	*e*PKP	**PKiKP**	**11 21 30.5**	**-0.6**
GERES	**GERESS Array B**	**150.41**	**343**	PKPbc	**PKPbc**	**11 21 31.0**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=35,slow=3.6,SNR=9.8						

NEIC 13 11:08:36.7±1.3, 5.15S±0.2×150.75E±0.2, h438km±6km, mb4.3/6, Error ellipse: s-maj=25.7km s-min=21.1km az=131.0

*IDC 13 11:08:37.1

RDWB	**Redoubt West**	**7.29**	**108**		**Pn**	**12 03 45.1**	**+0.7**
DFR	**Drift River**	**7.30**	**107**		**Pn**	**12 03 45.1**	**+0.6**
SPU	**Mount Spurr**	**7.30**	**102**	Pn	**Pn**	**12 03 45.4**	**+0.9**
RSO	**Redoubt South**	**7.34**	**108**		**Pn**	**12 03 46.1**	**+1.0**
TRF	**Thorofare Moun**	**7.45**	**83**		**Pn**	**12 03 46.8**	**+0.2**
KAHC	**Katmai Hardscr**	**7.56**	**125**		**Pn**	**12 03 48.1**	**+0.1**
AUH	**Augustine H**	**7.68**	**117**		**Pn**	**12 03 50.4**	**+0.7**
KABU	**Katmai Buttres**	**7.73**	**128**		**Pn**	**12 03 50.2**	**-0.3**
MCK	**McKinley**	**8.01**	**80**		**Pn**	**12 03 54.7**	**+0.5**
RND	**Reindeer**	**8.09**	**83**		**Pn**	**12 03 55.6**	**+0.3**
WAT2	**Susitna Watana**	**8.29**	**86**		**Pn**	**12 03 59.2**	**+1.1**
RC01	**Rabbit Creek A**	**8.36**	**99**	Pn	**Pn**	**12 04 00.2**	**+1.2**
CHGN	**Chignik**	**8.40**	**146**	Pn	**Pn**	**12 04 00.9**	**+1.5**
SLKM	**Skilak Lake**	**8.41**	**103**		**Pn**	**12 04 00.4**	**+0.8**
TCOL	**CIGO, UAF Yank**	**8.42**	**72**		**Pn**	**12 03 60.0**	**+0.2**
COLA	**College**	**8.43**	**72**		**Pn**	**12 03 59.4**	**-0.3**
PMR	**Palmer**	**8.44**	**95**		**Pn**	**12 04 00.8**	**+0.8**
CCB	**Clear Creek Bu**	**8.45**	**74**		**Pn**	**12 03 59.6**	**-0.4**
GHO	**Glory Hole Cre**	**8.47**	**94**		**Pn**	**12 04 01.4**	**+0.9**
CNPM	**China Poot**	**8.49**	**111**	Pn	**Pn**	**12 04 00.6**	**-0.2**
BRLK	**Bradley Lake**	**8.50**	**109**	Pn	**Pn**	**12 04 01.6**	**+0.7**
TOLK	**Toolik Lake Re**	**8.70**	**46**	Pn	**Pn**	**12 04 03.7**	**+0.1**
SML	**Sawmill**	**8.72**	**93**		**Pn**	**12 04 05.0**	**+1.0**
KNK	**Knik Glacier**	**8.80**	**96**		**Pn**	**12 04 06.9**	**+1.9**
DHY	**Denali Highway**	**8.81**	**84**		**Pn**	**12 04 05.8**	**+0.6**
SDPT	**Sand Point**	**8.82**	**155**	Pn	**Pn**	**12 04 03.6**	**-1.7**
HDA	**Harding Lake**	**8.82**	**75**		**Pn**	**12 04 05.5**	**+0.2**
IL31		**8.84**	**73**		**Pn**	**12 04 04.8**	**-0.6**
ILAR	**Eielson Array**	**8.84**	**73**	Pn	**Pn**	**12 04 04.7**	**-0.8**
	0.3nm,0.3s,baz=273,slow=14,SNR=27						
ILAR				Sn	**Sn**	**12 05 41.4**	**-3.6**
	0.5nm,0.3s,baz=271,slow=24,SNR=4.0						
SEW	**Seward**	**8.94**	**105**	Pn	**Pn**	**12 04 08.4**	**+1.5**
KDAK	**Kodiak Island**	**9.08**	**123**	Pn	**Pn**	**12 04 09.8**	**+1.0**
	2.0nm,0.3s,baz=337,slow=14,SNR=65						
KDAK				Sn	**Sn**	**12 05 49.7**	**-1.2**
	0.1nm,0.3s,baz=300,slow=20,SNR=2.0						
KDAK	**Kodiak Island**	**9.08**	**123**		**Pn**	**12 04 10.6**	**+1.8**
SCM	**Sheep Creek Mo**	**9.16**	**92**		**Pn**	**12 04 12.0**	**+2.0**
OHAK	**Old Harbor**	**9.23**	**127**	Pn	**Pn**	**12 04 10.4**	**-0.5**
PRP	**Porcupine Dome**	**9.42**	**68**	Pn	**Pn**	**12 04 13.8**	**+0.2**
AKUT	**Akutan**	**9.43**	**176**	Pn	**Pn**	**12 04 12.2**	**-1.3**
CNBA	**Chernabura Isl**	**9.49**	**153**	Pn	**Pn**	**12 04 14.6**	**+0.1**
GLI	**Glacier Island**	**9.62**	**97**	Pn	**Pn**	**12 04 15.9**	**-0.3**
FYU	**Fort Yukon**	**9.64**	**62**	Pn	**Pn**	**12 04 17.9**	**+1.4**
UNV	**Unalaska Valle**	**9.71**	**179**	Pn	**Pn**	**12 04 15.4**	**-2.0**
FID	**Port Fidalgo**	**9.95**	**97**	Pn	**Pn**	**12 04 21.3**	**+0.5**
HIN	**Hinchinbrook I**	**10.10**	**99**	Pn	**Pn**	**12 04 24.7**	**+2.0**
DOT	**Dot Lake**	**10.17**	**79**		**Pn**	**12 04 24.1**	**+0.3**
EYAK	**Cordova Ski Ar**	**10.36**	**97**	Pn	**Pn**	**12 04 27.2**	**+0.9**
MENT	**Mentasta**	**10.47**	**83**		**Pn**	**12 04 28.5**	**+0.7**
GLB	**Gilahina Butte**	**10.88**	**91**	Pn	**Pn**	**12 04 35.3**	**+2.0**
RAGM	**Ragged Mountai**	**10.91**	**97**	Pn	**Pn**	**12 04 37.5**	**+3.6**
VRDI	**Verde Repeater**	**11.11**	**91**	Pn	**Pn**	**12 04 38.5**	**+1.7**
EGAK	**Eagle**	**11.29**	**72**		**Pn**	**12 04 38.8**	**-0.1**
DAWY	**Dawson**	**12.14**	**75**		**Pn**	**12 04 50.1**	**-0.6**
YAH	**Yahtse**	**12.23**	**94**	Pn	**Pn**	**12 04 53.5**	**+1.4**
INK	**Inuvik**	**14.31**	**56**	Pn	**Pn**	**12 05 23.2**	**+3.0**
	0.1nm,0.3s,baz=246,slow=3.3,SNR=3.6						
YKA	**Yellowknife Ar**	**23.23**	**69**	P	**P**	**12 07 06.3**	**+1.6**
	1.5nm,0.5s,baz=296,slow=9.5,SNR=33						
NVAR	**Mina Array Bea**	**38.18**	**108**	P	**P**	**12 09 18.9**	**+1.5**
	0.5nm,0.7s,baz=304,slow=6.2,SNR=5.4						
PDAR	**Pinedale Array**	**38.48**	**95**	P	**P**	**12 09 20.3**	**+0.3**
	0.2nm,0.4s,baz=339,slow=4.8,SNR=2.5						

*SOME **13** 12:27:38.6,43˙48N×86˚90E,h35km*
*IDC **13** 12:27:51.6±1.4,43˙99N×86˚35E,h0km,mb3.4/4,*
mb1 3.6/10,mb1mx3.4/53,mbtmp3.5/10,ML3.3/6,Error ellipse: s-maj=25.6km s-min=14.7km az=40.0
*NNC **13** 12:27:54.3±4.6,43˙99N×86˚12E,h0km,mb4.0,mpv3.7,*
Error ellipse: s-maj=36.8km s-min=20.0km az=118.0

ISC 13 12:27:52.7±1.0,43˙97N±0˙06×86˚17E±0˙06,h10km,n22,
σ2s72/31,mb3.5/3,8C-10D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res
ZSN	**Zaisan**	**3.60**	**346**	*eP*		**Pb**	**12 28 54.0**	**-2.4**
	4.6nm,0.1s							
ZSN				*e*S		**Sg**	**12 29 48.5**	**+0.3**
	50nm,0.3s							
ZSN	**Zaisan**	**3.60**	**346**	Pg		**Pb**	**12 28 54.0**	**-2.4**
	4.6nm,0.1s							
ZSN				Lg		Lg	12 29 48.5	
	50nm,0.3s							
MK31	**Makanchi Array**	**3.93**	**317**	⇓Pn		**Pn**	**12 28 57.3**	**+4.2**
	1.0nm,0.3s,baz=126,slow=16,SNR=68							
MK31				⇑Pg		**Pg**	**12 29 07.5**	**-0.5**
	25nm,0.6s,baz=131,slow=16,SNR=24							
MK31				⇓Lg		Lg	12 29 59.2	
	62nm,0.6s,baz=128,slow=31,SNR=15							
MKAR	**Makanchi Array**	**3.93**	**317**	Pn		**Pn**	**12 28 57.1**	**+4.0**
	1.7nm,0.3s,baz=136,slow=14,SNR=60							
MKAR				Pg		**Pg**	**12 29 05.7**	**-2.2**
	11nm,0.3s,baz=130,slow=18,SNR=78							
MKAR				Lg		Lg	12 29 58.5	
	14nm,0.3s,baz=129,slow=30,SNR=11							
MAKZ	**Makanchi**	**4.09**	**315**	⇑Pn		**Pn**	**12 28 59.3**	**+3.9**
	4.9nm,0.6s							
MAKZ				⇑Pg		**Pg**	**12 29 09.8**	**-1.3**
	7.8nm,0.6s							
MAKZ				⇓Sn		**Sn**	**12 29 46.7**	**+3.3**
	12nm,0.5s							
MAKZ				⇓Lg		Lg	12 30 04.8	
	82nm,0.8s							
DJR	**Jarkent**	**4.61**	**277**	*eP*		**Pb**	**12 29 11.7**	**-1.9**
	4.8nm,0.2s							
DJR				*e*S		**Sg**	**12 30 18.8**	**-1.8**
	36nm,0.5s							
DJR	**Jarkent**	**4.61**	**277**	Pg		**Pb**	**12 29 11.7**	**-1.9**
	4.8nm,0.2s							
DJR				Lg		Lg	12 30 18.7	
	36nm,0.5s							
PDGK	**Podgornoye**	**4.89**	**265**	⇓Pn		**Pn**	**12 29 09.3**	**+2.8**
	3.9nm,0.4s							
PDGK				⇑Pg		**Pg**	**12 29 24.6**	**-1.8**
	16nm,0.7s							
PDGK				⇑Sn		**Sn**	**12 30 08.1**	**+4.9**
	13nm,0.5s							
PDGK				⇓Lg		Lg	12 30 30.0	
	50nm,0.8s							
SHLS	**Shalkode**	**4.94**	**263**	*eP*		**Pn**	**12 29 09.6**	**+2.4**
	6.8nm,0.1s							
SHLS				*e*S		**Sb**	**12 30 14.9**	**-4.0**
	54nm,0.3s							
SHLS	**Shalkode**	**4.94**	**263**	Pg		**Pn**	**12 29 09.6**	**+2.4**
	6.8nm,0.1s							
SHLS				Lg		Lg	12 30 14.9	
	54nm,0.3s							
TKM2	**Tokmak 2**	**7.77**	**266**	⇓Pn		**Pn**	**12 29 50.1**	**+4.2**
	1.1nm,0.4s							
TKM2				⇑Pg		Pg	12 30 17.8	-3.6
	3.4nm,0.7s							
TKM2				⇑Lg		Lg	12 32 02.6	
	7.8nm,0.8s							
KURBB	**Kurchatov Arra**	**8.44**	**325**	Pn		**Pn**	**12 29 55.4**	**+0.5**
	0.2nm,0.3s,baz=133,slow=13,SNR=15							
KURBB				Sn		**Sn**	**12 31 32.6**	**+2.4**
	0.2nm,0.3s,baz=138,slow=19,SNR=4.7							
KURBB				Lg		Lg	12 32 20.4	
	0.3nm,0.3s,baz=139,slow=28,SNR=4.3							
KURBB	**Kurchatov Arra**	**8.44**	**325**	⇑Pn		**Pn**	**12 29 58.3**	**+3.4**
	3.9nm,0.8s							
KURBB				⇓Lg		Lg	12 32 22.8	
	80nm,1.1s							
AAK	**Ala-Archa**	**8.62**	**265**	Pn		**Pn**	**12 30 00.3**	**+2.7**
	0.2nm,0.3s,baz=79,slow=5.2,SNR=2.4							
AAK				Lg		Lg	12 32 28.4	
	0.2nm,0.3s,baz=0.0,slow=20,SNR=1.2							
AAK	**Ala-Archa**	**8.62**	**265**	⇓Pg		Pg	12 30 33.1	-4.6
	3.1nm,0.8s							
AAK				⇓Lg		Lg	12 32 29.4	
	8.5nm,0.9s							
ZALV	**Zalesovo Beam**	**10.03**	**355**	Pn		**Pn**	**12 30 18.1**	**+1.5**
	1.4nm,0.3s,baz=180,slow=14,SNR=9.7							
ZALV				Sn		**Sn**	**12 32 08.2**	**-0.9**
	0.9nm,0.3s,baz=163,slow=25,SNR=3.2							
BVAR	**Borovoye Array**	**13.81**	**317**	Pn		**Pn**	**12 31 07.9**	**-0.5**
	0.2nm,0.3s,baz=222,slow=44,SNR=1.6							
BVAR				Lg		Lg	12 35 12.4	
	0.2nm,0.3s,baz=107,slow=24,SNR=5.6							
SONM	**Songino Array**	**14.59**	**68**	Pn		**Pn**	**12 31 18.2**	**-1.1**
	0.2nm,0.3s,baz=263,slow=10,SNR=1.6							
AKTO	**Aktyubinsk**	**20.11**	**299**	P		Pn	12 32 28.4	0.0
	0.9nm,0.5s,baz=101,slow=11,SNR=1.3							
FINES	**FINESS Array B**	**38.76**	**318**	P		**P**	**12 35 19.1**	**+2.2**
	1.1nm,0.8s,baz=71,slow=9.0,SNR=2.0							
YKA	**Yellowknife Ar**	**72.58**	**10**	P		**P**	**12 39 18.1**	**-1.5**
	0.2nm,0.7s,baz=341,slow=6.0,SNR=2.0							
WRA	**Warramunga Arr**	**77.38**	**134**	P		**P**	**12 39 48.6**	**+0.8**
	0.3nm,0.7s,baz=337,slow=5.4,SNR=1.6							

*TAP **13** 12:33:29.9,24˙47N×122˙07E,h64km,ML2.7,C*
*JMA **13** 12:33:29.4±0.1,24˙40N×122˙11E,h66km±2km,M2.0*

ISC 13 12:33:30.5±1.2,24˙42N±0˙03×122˙16E±0˙02,h55km±8km,
n72,σ1s11/131,2C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res
EOS1	**EOS1**	**0.13**	**349**	P		**Pn**	**12 33 39.7**	**+0.7**
	baz=45							
EOS1				S		**Sn**	**12 33 47.4**	**+2.3**
	baz=45							
TWC	**Suao**	**0.34**	**304**	⇑*i*P		**Pn**	**12 33 40.3**	**-0.1**
	baz=312							
TWC				*i* S		**Sn**	**12 33 47.7**	**+0.1**
	baz=312							
ENA	**Nanau**	**0.38**	**271**	*i* P		**Pn**	**12 33 40.7**	**-0.1**
	baz=262							
ENA				*i* S		**Sn**	**12 33 48.7**	**+0.4**
	baz=262							
TWE	**Neicheng**	**0.54**	**304**	*i* P		**Pn**	**12 33 42.5**	**0.0**
	baz=309							
TWE				*i* S		**Sn**	**12 33 51.5**	**+0.3**
	baz=309							
NACB	**Ninganchiao**	**0.57**	**245**	P		**Pn**	**12 33 42.2**	**-0.6**
	baz=230							
NACB				S		**Sn**	**12 33 51.6**	**-0.3**
	baz=230							
SLBB	**Yuanshan**	**0.58**	**305**	P		**Pn**	**12 33 43.1**	**+0.1**
	baz=314							
SLBB				S		**Sn**	**12 33 51.4**	**-0.8**
	baz=314							
ENTT	**Nioudou**	**0.58**	**292**	⇑*i*P		**Pn**	**12 33 43.0**	**-0.1**
	baz=285							
ENTT				S		**Sn**	**12 33 52.2**	**0.0**
	baz=285							
TWB1	**Santiao Chiao**	**0.61**	**345**	S		**Sn**	**12 33 50.9**	**-1.8**
	baz=353							
NDT	**Datong Townshi**	**0.61**	**287**	*i* P		**Pn**	**12 33 43.5**	**0.0**
	baz=280							
NDT				*i* S		**Sn**	**12 33 52.9**	**0.0**
	baz=280							
TWD	**Chiawan**	**0.61**	**237**	P		**Pn**	**12 33 42.9**	**-0.5**
	baz=223							
TWD				*i* S		**Sn**	**12 33 52.9**	**+0.2**
	baz=223							
TIPB	**Shuangxi**	**0.63**	**331**	S		**Sn**	**12 33 51.8**	**-1.4**
	baz=347							
ETLH	**Xiulin Townshi**	**0.65**	**251**	P		**Pn**	**12 33 43.4**	**-0.5**
	baz=237							
ETLH				S		**Sn**	**12 33 53.1**	**-0.6**
	baz=237							
NWLT	**Wulai**	**0.69**	**301**	*e*P		**Pn**	**12 33 44.3**	**-0.2**
	baz=301							
NWLT				*e*S		**Sn**	**12 33 54.9**	**+0.3**
	baz=301							
NNSB	**Datong**	**0.70**	**271**	P		**Pn**	**12 33 44.3**	**-0.3**
	baz=260							
NNSB				S		**Sn**	**12 33 54.1**	**-0.9**
	baz=260							
NNSH	**Datong**	**0.70**	**271**	*e*P		**Pn**	**12 33 44.2**	**-0.4**
	baz=260							
NNSH				S		**Sn**	**12 33 54.4**	**-0.6**
	baz=260							
NNS	**Nan Shan**	**0.71**	**272**	P		**Pn**	**12 33 44.6**	**-0.2**
	baz=261							
NNS				S		**Sn**	**12 33 54.7**	**-0.5**
	baz=261							
JYNG	**Yonagunijimaku**	**0.72**	**87**	P		**Pn**	**12 33 44.9**	**+0.2**
JYNG				*e*S		**Sn**	**12 33 55.9**	**+0.8**
NWF	**Wu-fen Shan**	**0.73**	**332**	*e*P		**Pn**	**12 33 45.8**	**+0.8**
	baz=337							
NWF				*e*S		**Sn**	**12 33 53.4**	**-2.1**
	baz=337							
WFSB	**Wu-fen Shan**	**0.73**	**332**	*e*S		**Sn**	**12 33 54.4**	**-1.0**
	baz=337							
YHNB	**Yeheng**	**0.75**	**289**	P		**Pn**	**12 33 44.7**	**-0.5**
	baz=280							
YHNB				S		**Sn**	**12 33 54.9**	**-1.1**
	baz=280							
TWA	**Mucha**	**0.76**	**317**	*e*S		**Sn**	**12 33 55.4**	**-0.7**
	baz=329							
YOJ	**Yonaguni jima**	**0.78**	**87**	P		**Pn**	**12 33 45.6**	**+0.1**
	baz=82							
YOJ				S		**Sn**	**12 33 57.2**	**+0.7**
	baz=82							
YOJ	**Yonaguni jima**	**0.78**	**87**	P		**Pn**	**12 33 45.6**	**+0.1**
YOJ				S		**Sn**	**12 33 57.4**	**+1.0**
WHF	**Hehuan Shan**	**0.86**	**252**	P		**Pn**	**12 33 46.6**	**-0.3**
	baz=246							
WHF				*i* S		**Sn**	**12 33 58.1**	**-0.8**
	baz=246							
ESL	**Shilin**	**0.89**	**228**	P		**Pn**	**12 33 45.9**	**-1.1**
	baz=231							
ESL				S		**Sn**	**12 33 58.4**	**-0.7**
	baz=231							
YM01	**YM01**	**0.90**	**324**	S		**Sn**	**12 33 57.2**	**-2.1**
	baz=336							
TWT	**Tachien**	**0.91**	**260**	P		**Pn**	**12 33 48.4**	**+1.1**
	baz=255							
TWT				S		**Sn**	**12 33 59.8**	**+0.1**
	baz=255							
YM10	**YM10**	**0.91**	**324**	*e*S		**Sn**	**12 33 58.5**	**-1.1**
	baz=336							
YM11	**YM11**	**0.91**	**325**	*e*S		**Sn**	**12 33 59.5**	**-0.1**
	baz=337							
YM04	**YM04**	**0.92**	**323**	*e*P		**Pn**	**12 33 47.7**	**+0.3**
	baz=335							
YM04				*e*S		**Sn**	**12 33 57.7**	**-2.1**
	baz=335							
TDCB	**Techi**	**0.93**	**260**	*e*P		**Pn**	**12 33 47.4**	**-0.1**
	baz=256							
TDCB				S		**Sn**	**12 33 59.8**	**-0.3**
	baz=256							
CHGB	**Renai**	**0.96**	**248**	*e*P		**Pn**	**12 33 46.9**	**-1.2**
	baz=236							
CHGB				*e*S		**Sn**	**12 34 00.3**	**-0.8**
	baz=236							
EGFH	**Guangfu**	**1.00**	**222**	P		**Pn**	**12 33 48.3**	**-0.1**
	baz=226							
EGFH				S		**Sn**	**12 34 00.7**	**-0.9**
	baz=226							
OWD	**Renai**	**1.01**	**243**	*e*P		**Pn**	**12 33 48.2**	**-0.4**
	baz=232							
OWD				*e*S		**Sn**	**12 34 01.1**	**-0.9**
	baz=232							
LIOB	**Emei**	**1.06**	**282**	P		**Pn**	**12 33 48.4**	**-0.8**
	baz=281							
LIOB				S		**Sn**	**12 34 02.6**	**-0.5**
	baz=281							
NSTT	**Nanjuang**	**1.07**	**282**	P		**Pn**	**12 33 49.0**	**-0.4**
	baz=280							
NSTT				S		**Sn**	**12 34 02.9**	**-0.4**
	baz=280							
WHP	**Taichung City**	**1.11**	**263**	P		**Pn**	**12 33 50.5**	**+0.6**
	baz=257							
WHP				S		**Sn**	**12 34 04.4**	**0.0**
	baz=257							
HGSD	**Ruisui**	**1.14**	**216**	P		**Pn**	**12 33 50.1**	**-0.1**
	baz=202							
HGSD				*e*S		**Sn**	**12 34 04.7**	**-0.2**
	baz=202							
VWDT	**VWDT**	**1.14**	**235**	P		**Pn**	**12 33 49.7**	**-0.5**
	baz=223							
VWDT				S		**Sn**	**12 34 04.7**	**-0.1**
	baz=223							
DPDB	**Guoxing**	**1.19**	**251**	*e*P		**Pn**	**12 33 52.0**	**+1.1**
	baz=243							
DPDB				*e*S		**Sn**	**12 34 06.5**	**+0.4**
	baz=243							
EHY	**Hungye**	**1.19**	**220**	P		**Pn**	**12 33 50.2**	**-0.6**
	baz=224							
EHY				S		**Sn**	**12 34 04.1**	**-1.9**
	baz=224							
TWQ1	**Liyutan**	**1.26**	**267**	*e*P		**Pn**	**12 33 51.3**	**-0.6**
	baz=264							
TWQ1				*e*S		**Sn**	**12 34 08.5**	**+0.6**
	baz=264							
SMLT	**Sun Moon Lake**	**1.27**	**245**	*e*P		**Pn**	**12 33 53.3**	**+1.2**
	baz=235							
SMLT				*e*S		**Sn**	**12 34 10.1**	**+2.0**
	baz=235							
SSLB	**Suanglung**	**1.27**	**240**	*e*P		**Pn**	**12 33 51.5**	**-0.4**
	baz=232							
SSLB				*e*S		**Sn**	**12 34 07.9**	**-0.1**
	baz=232							
YULB	**Yu-li**	**1.29**	**218**	*e*P		**Pn**	**12 33 51.7**	**-0.6**
	baz=221							
YULB				*e*S		**Sn**	**12 34 06.4**	**-2.2**
	baz=221							
TYC	**Yuchr**	**1.29**	**247**	*e*P		**Pn**	**12 33 53.1**	**+0.8**
	baz=237							
TYC				*e*S		**Sn**	**12 34 10.6**	**+2.0**
	baz=237							
TWF1	**Yuli**	**1.32**	**217**	*e*P		**Pn**	**12 33 51.8**	**-0.9**
	baz=220							
WJS	**Zhushan**	**1.43**	**246**	*e*P		**Pn**	**12 33 54.9**	**+0.7**
	baz=255							
WJS				*e*S		**Sn**	**12 34 14.2**	**+2.2**
	baz=255							
IRIF	**Iriomote-Funau**	**1.44**	**93**	P		**Pn**	**12 33 54.0**	**-0.2**
IRIF				S		**Sn**	**12 34 12.2**	**+0.1**
FULB	**Fuli**	**1.45**	**213**	*e*P		**Pn**	**12 33 53.6**	**-0.9**
	baz=218							
FULB				*e*S		**Sn**	**12 34 12.4**	**0.0**
	baz=218							
WNT	**Mingjian**	**1.45**	**248**	*e*P		**Pn**	**12 33 55.6**	**+1.3**
	baz=257							
WNT				*e*S		**Sn**	**12 34 14.7**	**+2.4**
	baz=257							
CHKT	**Chengkung**	**1.50**	**209**	*e*P		**Pn**	**12 33 53.3**	**-1.8**
	baz=197							
CHKT				*e*S		**Sn**	**12 34 11.1**	**-2.5**
	baz=197							
ALS	**Alishan**	**1.53**	**234**	*e*P		**Pn**	**12 33 56.7**	**+0.9**
	baz=222							
ALS				*e*S		**Sn**	**12 34 15.7**	**+0.9**
	baz=222							
HATJ	**Hateruma jima**	**1.55**	**103**	*e*S		**Sn**	**12 34 15.1**	**+0.4**
CHN5	**Tsauling**	**1.58**	**239**	*e*P		**Pn**	**12 33 56.7**	**+0.4**
	baz=226							
CHN5				*e*S		**Sn**	**12 34 17.8**	**+2.1**
	baz=226							
ELDTW	**Lidau**	**1.61**	**221**	*e*P		**Pn**	**12 33 55.9**	**-0.8**
	baz=217							
ELDTW				S		**Sn**	**12 34 15.2**	**-1.2**
	baz=217							
WDLH	**Douliu**	**1.65**	**244**	*e*S		**Sn**	**12 34 19.6**	**+2.4**
	baz=253							
JKRS	**Kuro-shima**	**1.70**	**96**	P		**Pn**	**12 33 58.2**	**+0.4**
JKRS				S		**Sn**	**12 34 19.5**	**+1.1**
CHN4	**Tsaushan**	**1.78**	**234**	*e*P		**Pn**	**12 33 59.5**	**+0.6**
	baz=222							
CHN4				*e*S		**Sn**	**12 34 22.9**	**+2.4**
	baz=222							
TPUB	**Ta-pu**	**1.79**	**232**	*e*P		**Pn**	**12 33 59.8**	**+0.7**
	baz=220							
TPUB				*e*S		**Sn**	**12 34 22.9**	**+2.3**
	baz=220							
STYT	**Tauyuan**	**1.79**	**226**	*e*P		**Pn**	**12 34 00.5**	**+1.4**
	baz=222							
STYT				*e*S		**Sn**	**12 34 21.9**	**+1.1**
	baz=222							
TWH	**Lutao**	**1.81**	**200**	*e*P		**Pn**	**12 33 58.2**	**-1.1**
	baz=197							
TWH				*e*S		**Sn**	**12 34 18.3**	**-2.9**
	baz=197							
JIJ	**Ishigaki jima**	**1.81**	**91**	P		**Pn**	**12 33 59.1**	**-0.2**
JIJ				*e*S		**Sn**	**12 34 20.5**	**-0.7**
WTP	**Ta-pu**	**1.83**	**231**	*e*P		**Pn**	**12 34 00.5**	**+0.9**
	baz=227							
WTP				*e*S		**Sn**	**12 34 22.9**	**+1.2**
	baz=227							
TWGBT	**Beinan**	**1.88**	**212**	*e*P		**Pn**	**12 33 58.5**	**-1.7**
	baz=203							
TWGBT				*e*S		**Sn**	**12 34 20.6**	**-2.1**
	baz=203							
TWG	**Pinlang**	**1.88**	**212**	*e*S		**Sn**	**12 34 20.9**	**-1.9**
	baz=203							
TWK	**Hsinying**	**1.91**	**233**	*e*P		**Pn**	**12 34 01.6**	**+0.8**
	baz=230							
TWK				*e*S		**Sn**	**12 34 25.5**	**+1.8**
	baz=230							
CHN1	**Nanshi**	**1.93**	**231**	*e*P		**Pn**	**12 34 01.8**	**+0.8**
	baz=227							
CHN1				*e*S		**Sn**	**12 34 25.3**	**+1.1**
	baz=227							
JISG	**Ishigakijimahi**	**1.97**	**85**	P		**Pn**	**12 34 01.2**	**-0.3**
JISG				*e*S		**Sn**	**12 34 24.4**	**-0.6**
SLGT	**Liugui**	**1.98**	**225**	*e*P		**Pn**	**12 34 02.6**	**+0.9**
	baz=221							
SLGT				*e*S		**Sn**	**12 34 25.8**	**+0.4**
	baz=221							
SSD	**Sandimen**	**2.17**	**220**	*e*P		**Pn**	**12 34 05.9**	**+1.6**
	baz=215							
MASBT	**Mashibuluo**	**2.28**	**218**	*e*P		**Pn**	**12 34 07.2**	**+1.5**
	baz=212							

IDC 13 12:39:20.8±3.6,32˙50S×67˙65W,h0km,mb4.0/1,
mb1 4.1/2,mb1mx3.7/14,mbtmp4.0/2,ML3.9/1,Error ellipse: s-maj=131.5km s-min=69.6km az=68.0,
Mendoza Province

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res
LPAZ	**La Paz**	**16.14**	**358**		Pn	Pn	12 43 09.7	-0.1
	0.2nm,0.3s,baz=184,slow=4.6,SNR=8.9							
TORD	**Torodi Ar. Bea**	**80.24**	**68**	P		P	12 51 33.7	0.0
	1.0nm,0.6s,baz=249,slow=3.9,SNR=5.8							
KURBB	**Kurchatov Arra**	**149.24**	**44**	PKPbc		PKPbc	12 59 11.3	+0.4
	0.

SKR eS Sn 13 06 07.1 -4.6
SKR A A 13 06 11.6
comp=E,200nm,2.0s
SKR A A 13 06 11.6
comp=E,200nm,2.0s
SKR A A 13 06 12.0
comp=E,80nm,0.3s
SKR A A 13 06 12.0
comp=E,70nm,0.3s
SKR Severo-Kuril's 5.01 16 ePN **Pn 13 05 12.5 -1.9**
SKR pmax pmax
comp=Z,48nm,0.7s
SKR MLR MLR
comp=Z,200nm,12.0s
SKR MLR MLR
comp=Z,200nm,13.0s
PAU Pauzhetka 5.90 17 *i* P **Pn 13 05 25.3 -1.2**
PAU AMB AMB 13 05 27.2
comp=Z,30nm,0.4s
PAU AMB AMB 13 05 27.2
comp=Z,20nm,0.4s
PAU AMB AMB 13 05 27.2
comp=Z,40nm,0.4s
PAU *i* S **Sn 13 06 28.8 -4.6**
PAU A A 13 06 33.2
comp=Z,180nm,0.4s
PAU A A 13 06 33.2
comp=Z,70nm,0.4s
YUK Yuzh-Kuril'sk 6.06 255 *i* P **Pn 13 05 29.0 +0.3**
YUK AMB AMB 13 05 34.0
comp=Z,40nm,0.4s
YUK AMB AMB 13 05 34.0
comp=Z,40nm,0.4s
YUK AMB AMB 13 05 34.0
comp=Z,110nm,0.4s
YUK *i* S **Sn 13 06 34.7 -2.7**
YUK A A 13 06 37.0
comp=Z,720nm,2.0s
YUK A A 13 06 37.0
comp=Z,900nm,2.0s
YUK A A 13 06 38.0
comp=Z,50nm,0.4s
YUK A A 13 06 38.0
comp=Z,340nm,0.4s
YUK Yuzh-Kuril'sk 6.06 255 *d i* PN **Pn 13 05 27.5 -1.2**
YUK pmax pmax
comp=N,39nm,0.2s
YUK pmax pmax
comp=Z,110nm,0.2s
YUK pmax pmax
comp=E,36nm,0.1s
LAGR Lagunnoye 6.10 256 *i* S **Sn 13 06 35.0 -3.5**
GRPR Tuman 6.13 255 *e*P **Pn 13 05 29.6 -0.2**
GRPR AMB AMB 13 05 41.0
comp=E,90nm,0.4s
GRPR eS **Sn 13 06 36.2 -3.1**
GRPR A A 13 06 39.0
comp=E,300nm,0.4s
GRPR A A 13 06 39.0
comp=E,220nm,0.4s
GRPR Tuman 6.13 255 ePN **Pn 13 05 28.1 -1.7**
GRPR pmax pmax
comp=Z,94nm,0.4s
GLVR Golovnino 6.39 253 *e*P **Pn 13 05 33.2 -0.2**
GLVR eS **Sn 13 06 43.6 -2.2**
GLVR A A 13 06 50.0
comp=Z,230nm,0.5s
GLVR A A 13 06 50.0
comp=Z,530nm,0.5s
GLVR Golovnino 6.39 253 *e*PN **Pn 13 05 33.2 -0.2**
NEM2 Nemuro 2 6.40 250 *i* P **Pn 13 05 31.9 -1.6**
NEM2 eS **Sn 13 06 39.7 -6.2**
NMR Nemuro--Hokkai 6.41 250 ‖ *i* PN **Pn 13 05 31.1 -2.5**
JRA Rausu 6.59 256 P **Pn 13 05 37.1 +1.0**
JRA eS **Sn 13 06 48.1 -2.5**
JNK Nakash 6.99 254 P **Pn 13 05 41.8 +0.2**
JNK eS **Sn 13 06 55.8 -4.6**
JAK Akkeshi 7.25 250 P **Pn 13 05 44.0 -1.1**
JAK eS **Sn 13 07 01.1 -5.7**
JTKR Abashiri--Toko 7.41 259 P **Pn 13 05 48.0 +0.7**
PEA0B Petropavlovsk- 7.63 17 PN **Pn 13 05 49.8 -0.5**
PEA0B Petropavlovsk- 7.63 17 Pn **Pn 13 05 49.8 -0.5**
PETK Petropavlovsk- 7.63 17 Pn **Pn 13 05 50.0 -0.3**
comp=Z,2.1nm,0.3s,baz=284,slow=14,SNR=83
PETK Sn **Sn 13 07 15.1 -1.0**
baz=303,slow=25,SNR=1.2
PETK LR LR 13 10 12.7
comp=Z,62nm,18.1s,baz=62,slow=49
PETK Petropavlovsk- 7.63 17 PN **Pn 13 05 50.0 -0.3**
JAR Ashorobuto 7.74 254 P **Pn 13 05 52.9 +1.0**
JAR eS **Sn 13 07 15.6 -3.3**
PET Petropavlovsk 7.77 21 *e*P **Pn 13 05 51.0 -1.2**
PET AMB AMB 13 05 55.1
comp=Z,20nm,0.8s
PET eS **Sn 13 07 14.3 -5.2**
PET A A 13 07 20.4
comp=Z,60nm,0.5s
PET A A 13 07 20.4
comp=Z,30nm,0.5s
PET Petropavlovsk 7.77 21 PN **Pn 13 05 51.0 -1.2**
PET Petropavlovsk 7.77 21 Pn **Pn 13 05 51.0 -1.2**
JMP Maruseppu 7.77 260 P **Pn 13 05 55.1 +2.8**
YSS Yuzh-Sakhalins 7.84 282 *e*P **Pn 13 05 52.6 -0.6**
YSS AMB AMB 13 05 57.2
comp=Z,20nm,0.6s
YSS Yuzh-Sakhalins 7.84 282 ePN **Pn 13 05 56.3 +3.1**
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=Z,200nm,14.0s
YSS Yuzh-Sakhalins 7.84 282 Pn **Pn 13 05 55.5 +2.3**
JOB Onbets 7.86 251 P **Pn 13 05 53.6 +0.1**
JOB eS **Sn 13 07 16.1 -5.7**
JKA Kamikawa-asahi 8.26 262 *e*P **Pn 13 06 00.4 +1.3**
JKA Kamikawa-asahi 8.26 262 **Pn 13 06 00.4 +1.3**
ASAJ Asahikawa 8.27 262 Pn **Pn 13 06 00.4 +1.3**
comp=Z,1.4nm,0.3s,baz=77,slow=17,SNR=9.6
ASAJ LR LR 13 10 32.8
comp=Z,84nm,18.3s,baz=157,slow=48
JCH Churui 8.30 251 P **Pn 13 05 59.5 0.0**
JCH eS **Sn 13 07 26.4 -6.2**
JFR Furan 8.58 256 P **Pn 13 06 05.6 +2.1**
ERM Erimo 8.72 248 *i* PN **Pn 13 06 07.5 +2.3**
ERM Erimo 8.72 248 Pn **Pn 13 06 05.5 +0.3**
JNBK Urakawa-nobuka 8.85 250 P **Pn 13 06 06.2 -0.9**
JBT2 Biratori 2 8.89 254 P **Pn 13 06 07.9 +0.2**
JBT2 eS **Sn 13 07 42.4 -4.8**
TYV Tymovskoe 9.04 308 *e*P **Pn 13 06 08.3 -1.4**
TYV AMB AMB 13 06 11.3
comp=Z,30nm,1.0s
JNB Noboribetsu 9.91 254 eS **Sn 13 08 06.1 -6.1**
JKB Kayabe 10.17 252 P **Pn 13 06 24.1 -1.0**
JKB eS Sn 13 08 09.5 -9.0
OKH Okha 10.49 321 *e*P **Pn 13 06 29.1 -0.3**
OKH AMB AMB 13 06 31.9
comp=Z,30nm,1.0s
JANG Nango 10.64 243 P **Pn 13 06 28.6 -3.1**
JANG eS Sn 13 08 18.2 -12
JTM Tenmabayashi 10.70 246 eS Sn 13 08 21.1 -10
JRG Rokugo 11.77 241 eS Sn 13 08 47.9 -10
JIO Ouri 11.95 236 eS Sn 13 08 48.9 -13
TEY Ternei 12.24 272 *e*P **Pn 13 06 52.5 -1.0**
MA2 Magadan 13.86 353 Pn **Pn 13 07 15.5 +0.1**
comp=Z,1.4nm,0.3s,baz=158,slow=21,SNR=4.3
MA2 Magadan 13.86 353 P **Pn 13 07 15.8 +0.4**
MA2 Magadan 13.86 353 Pn **Pn 13 07 15.8 +0.4**
MJAR Matsushiro Arr 15.08 237 Pn **Pn 13 07 32.0 -0.2**
comp=Z,0.0nm,0.3s,baz=41,slow=11,SNR=2.6
MJAR Matsushiro Arr 15.08 237 P **Pn 13 07 32.0 -0.2**
MJB9 Matsu-Tunnel 15.08 237 P **P 13 07 38.9 +1.5**
MAJO Matsushiro 15.08 237 P **P 13 07 39.0 +1.6**
MAJO pmax pmax
comp=Z,12nm,0.8s
MAJO Matsushiro 15.08 237 P **P 13 07 39.0 +1.6**
MAT Matsushiro 15.08 237 P **P 13 07 38.7 +1.3**
KLR Kul'dur 15.37 291 Pn **Pn 13 07 35.3 -0.7**
comp=Z,0.1nm,0.3s,baz=97,slow=14,SNR=4.0
KLR Kul'dur 15.37 291 *e*P **Pn 13 07 34.4 -1.6**
KLR Kul'dur 15.37 291 *ce*P **Pn 13 07 34.4 -1.6**
KLR pmax pmax
comp=Z,1.0nm,0.9s
EKMR Ekimchan 15.42 305 *e*P **Pn 13 07 32.6 -4.0**

USRK Ussuriysk Ar. 15.64 272 Pn **Pn 13 07 39.6 +0.1**
baz=91,slow=13,SNR=6.6
SEY Seymchan 17.11 357 P **P 13 07 56.8 -2.9**
comp=Z,0.4nm,0.3s,baz=238,slow=23,SNR=6.3
SEY Seymchan 17.11 357 *i* P **Pn 13 07 56.5 -1.6**
BMKR Bomnak 18.25 308 *e*P **Pn 13 08 07.4 -4.9**
ZEA Zeya 18.88 304 *e*P **Pn 13 08 19.6 -0.3**
KSRS Korea Array 21.14 256 P **P 13 08 45.5 +1.6**
comp=Z,0.4nm,0.3s,baz=97,slow=39,SNR=3.0
YAK Yakutsk 21.38 328 *e*P **P 13 08 45.7 -0.6**
YAK Yakutsk 21.38 328 P **P 13 08 45.7 -0.6**
YAK pmax pmax
comp=Z,13nm,0.6s
YAK Yakutsk 21.38 328 P **P 13 08 45.7 -0.6**
YAK IAmb IAmb 13 08 46.7
comp=Z,13nm,0.6s
INCN Inchon 22.01 257 *e*P **P 13 08 53.1 -0.2**
INCN Inchon 22.01 257 P **P 13 08 53.1 -0.2**
INCN pmax pmax
comp=Z,59nm,1.6s
INCN Inchon 22.01 257 P **P 13 08 53.1 -0.2**
INCN IAmb IAmb 13 09 17.7
comp=Z,58nm,1.6s
BILL Bilibino 23.11 12 *e*P **P 13 09 05.4 +0.7**
BILL Bilibino 23.11 12 *e*P **P 13 09 03.0 -1.7**
BILL *e* 13 09 17.8
BILL *e*PPP PPP 13 09 32.5
BILL *e* 13 12 53.9
BILL pmax pmax
comp=Z,3.0nm,0.6s
BILL Bilibino 23.11 12 P **P 13 09 04.4 -0.3**
TIXI Tiksi 28.48 344 P **P 13 09 52.3 -1.3**
comp=Z,1.2nm,0.3s,baz=134,slow=13,SNR=5.5
TIXI Tiksi 28.48 344 *e*P **P 13 09 54.6 +0.9**
TIXI Tiksi 28.48 344 *ce*P **P 13 09 54.6 +0.9**
TIXI pmax pmax
comp=Z,4.0nm,1.3s
TIXI Tiksi 28.48 344 P **P 13 09 52.6 -1.0**
NJ2 Nanjing 30.34 255 *e*P **P 13 10 11.6 +1.0**
NJ2 pmax pmax
comp=Z,11nm,0.5s
HHC Hu-ho-hao-te 30.98 276 *e*P **P 13 10 17.0 +0.7**
HHC pmax pmax
comp=Z,9.0nm,1.0s
HHC pmax pmax
comp=Z,39nm,5.2s
HHC LR LR
comp=N,170nm,14.8s
HHC LR LR
comp=E,96nm,14.4s
HHC LR LR
comp=Z,66nm,13.8s
ULN Ulaanbaatar 31.77 291 *e*P **P 13 10 24.9 +1.7**
ULN Ulaanbaatar 31.77 291 *ce*P **P 13 10 24.9 +1.7**
ULN pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 32.20 291 P **P 13 10 27.3 +0.3**
comp=Z,0.3nm,0.3s,baz=246,slow=42,SNR=2.6
BPAW Bear Paw Mtn. 35.04 39 P **P 13 10 51.4 0.0**
SML Sawmill 36.19 43 P **P 13 11 01.6 +0.3**
HDA Harding Lake 36.82 38 P **P 13 11 07.0 +0.4**
IL31 36.86 38 P **P 13 11 07.1 +0.2**
IL31 IAmb IAmb 13 11 56.9
comp=Z,12nm,1.9s
ILAR Eielson Array 36.86 38 P **P 13 11 07.2 +0.3**
comp=Z,0.4nm,0.7s,baz=247,slow=7.7,SNR=6.0
DOT Dot Lake 38.10 40 P **P 13 11 17.4 -0.1**
LZH Lanzhou 38.54 274 *e*P **P 13 11 22.1 +0.5**
LZH pP sP 13 11 28.4 +1.3
LZH sP pwP 13 11 32.9 -2.5
LZH PP **PnPn 13 12 52.6 +0.8**
LZH pmax pmax
comp=Z,19nm,1.0s
LZH pmax pmax
comp=Z,74nm,4.8s
LZH LR LR
comp=N,190nm,14.8s
LZH LR LR
comp=E,260nm,14.8s
LZH LR LR
comp=Z,290nm,15.7s
MCARA McCarthy VSAT 38.75 43 P **P 13 11 21.4 -1.6**
MCARA IAmb IAmb 13 11 49.4
comp=Z,9.6nm,0.8s
EGAK Eagle 39.31 38 P **P 13 11 27.5 -0.1**
GTA Gaotai 39.72 281 *e*P **P 13 11 35.5 +4.1**
GTA pP pwP 13 11 42.4 -2.8
GTA sP sP 13 11 45.8 +8.9
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,40nm,4.6s
GTA LR LR
comp=N,43nm,15.9s
GTA LR LR
comp=E,69nm,16.5s
GTA LR LR
comp=Z,71nm,15.9s
NRIK Noril'sk 39.82 329 ‖ *e*P **P 13 11 32.8 +1.1**
CD2 Chengdu 41.43 267 P **P 13 11 45.1 -0.4**
CD2 pmax pmax
comp=Z,30nm,0.5s
INK Inuvik 42.06 32 P **P 13 11 50.1 0.0**
comp=Z,0.9nm,0.7s,baz=303,slow=5.0,SNR=5.4
INK Inuvik 42.06 32 P **P 13 11 51.3 +1.1**
INK pmax pmax
comp=Z,8.0nm,1.6s
INK Inuvik 42.06 32 P **P 13 11 51.3 +1.1**
ZALV Zalesovo Beam 43.62 307 P **P 13 12 02.1 -0.9**
comp=Z,1.2nm,0.4s,baz=60,slow=8.9,SNR=5.5
ZALV PcP **PcP 13 13 50.4 +0.3**
comp=Z,0.7nm,0.7s,baz=69,slow=4.8,SNR=2.3
C36M Paulatuk 45.27 30 P **P 13 12 17.2 +1.2**
C36M IAmb IAmb 13 12 18.7
comp=Z,14nm,1.8s
DLBC Dease Lake 45.77 45 P **P 13 12 19.8 -0.4**
comp=Z,2.5nm,1.0s,baz=305,slow=13,SNR=4.6
DLBC Dease Lake 45.77 45 IAmb IAmb 13 12 22.4
comp=Z,8.9nm,1.4s
WMQ Urumqi 45.81 292 *e*P **P 13 12 23.0 +2.2**
WMQ sP pwP 13 12 33.8 -0.8
WMQ pmax pmax
comp=Z,12nm,0.7s
WMQ pmax pmax
comp=Z,74nm,5.1s
WMQ LR LR
comp=N,1μm,29.2s
WMQ LR LR
comp=E,600nm,29.1s
WMQ LR LR
comp=Z,2μm,29.0s
MK31 Makanchi Array 47.89 298 P **P 13 12 37.3 +0.4**
MK31 pmax pmax
comp=Z,3.0nm,1.0s
MK31 Makanchi Array 47.89 298 P **P 13 12 37.3 +0.4**
MKAR Makanchi Array 47.89 298 P **P 13 12 37.5 +0.7**
comp=Z,1.6nm,0.7s,baz=66,slow=6.8,SNR=18
MKAR PcP **PcP 13 14 05.3 +0.2**
comp=Z,0.5nm,0.6s,baz=65,slow=3.8,SNR=2.7
MKAR LR LR 13 33 16.4
comp=Z,55nm,18.5s,baz=82,slow=37
MAKZ Makanchi 48.07 299 P **P 13 12 38.8 +0.5**
MAKZ pmax pmax
comp=Z,6.0nm,1.5s
MAKZ Makanchi 48.07 299 P **P 13 12 38.8 +0.5**
MAKZ IAmb IAmb 13 12 43.1
comp=Z,5.5nm,1.5s
KURK Kurchatov 48.36 305 *e*P **P 13 12 41.9 +1.5**
KURK Kurchatov 48.36 305 *ce*P **P 13 12 41.9 +1.5**
KURK pmax pmax
comp=Z,3.0nm,1.1s
KURK Kurchatov 48.36 305 P **P 13 12 40.3 -0.1**
KURK IAmb IAmb 13 12 44.5
comp=Z,8.8nm,1.4s
YKA Yellowknife Ar 51.26 37 P **P 13 13 03.0 +0.7**
comp=Z,0.9nm,0.6s,baz=295,slow=6.8,SNR=6.5
YKA PcP **PcP 13 14 17.1 -0.1**
comp=Z,0.2nm,0.5s,baz=316,slow=3.5,SNR=2.3
BRVK Borovoye 51.92 310 *e*P **P 13 13 09.3 +1.9**
BRVK Borovoye 51.92 310 *ce*P **P 13 13 09.3 +1.9**
BRVK pmax pmax
comp=Z,3.0nm,0.6s
BRVK Borovoye 51.92 310 P **P 13 13 07.6 +0.2**
BRVK IAmb IAmb 13 13 12.5
comp=Z,3.4nm,0.7s

CMAR Chiang Mai Arr 52.77 258 P **P 13 13 15.0 +0.9**
comp=Z,0.8nm,0.6s,baz=40,slow=7.5,SNR=5.7
KDJ Kajisay 53.36 296 P **P 13 13 19.6 +1.2**
KDJ pmax pmax
comp=Z,6.0nm,1.5s
KDJ Kajisay 53.36 296 P **P 13 13 19.6 +1.2**
KDJ IAmb IAmb 13 13 33.6
comp=Z,5.5nm,1.5s
AAK Ala-Archa 54.77 297 *e*P **P 13 13 30.6 +1.9**
AAK Ala-Archa 54.77 297 *ce*P **P 13 13 30.6 +1.9**
AAK pmax pmax
comp=Z,6.0nm,1.7s
KSH Kashi 55.55 293 P **P 13 13 37.6 +3.3**
KSH pP pwP 13 13 44.9 -3.4
KSH sP sP 13 13 48.4 +8.6
KSH pmax pmax
comp=Z,5.0nm,0.5s
KSH pmax pmax
comp=Z,110nm,4.2s
ARU Arti 56.07 318 *e*P **P 13 13 38.2 +0.6**
ARU Arti 56.07 318 *c i* P **P 13 13 38.2 +0.6**
ARU 13 14 33.7
ARU 13 15 40.4
ARU S **S 13 21 27.8 +2.9**
ARU SS **SS 13 25 11.0 +0.6**
ARU pmax pmax
comp=Z,4.0nm,0.8s
ARCES ARCESS Array B 58.88 341 P **P 13 13 58.2 +1.0**
comp=Z,1.2nm,0.6s,baz=34,slow=7.4,SNR=7.8
ABKAR Akbulak array 59.45 311 P **P 13 14 02.1 +0.7**
KLMR Klimovskoe 61.17 329 *e*P **P 13 14 14.8 +1.8**
KLMR pmax pmax
comp=Z,12nm,1.4s
KLMR Klimovskoe 61.17 329 *e*P **P 13 14 14.9 +1.9**
KLMR AMP 13 14 20.7
comp=Z,12nm,1.4s
MTN Manton Dam 61.98 205 P **P 13 14 18.5 -0.4**
NVAR Mina Array Bea 62.30 62 P **P 13 14 21.9 +0.6**
comp=Z,1.0nm,0.8s,baz=279,slow=7.0,SNR=9.0
R11A Troy Canyon, C 64.02 61 P **P 13 14 32.7 0.0**
R11A IAmb IAmb 13 14 33.8
comp=Z,3.3nm,1.1s
BW06 Boulder Array 64.77 54 P **P 13 14 37.5 -0.1**
BW06 IAmb IAmb 13 16 29.6
comp=Z,9.4nm,1.9s
PDAR Pinedale Array 64.77 54 P **P 13 14 37.6 +0.1**
comp=Z,1.3nm,0.9s,baz=303,slow=2.9,SNR=8.1
FIA1 FINESS Array S 65.08 335 P **P 13 14 40.4 +1.4**
FINES FINESS Array B 65.09 335 P **P 13 14 40.2 +1.3**
comp=Z,1.4nm,0.4s,baz=37,slow=7.6,SNR=12
FINES LR LR 13 45 41.1
comp=Z,26nm,18.6s,baz=70,slow=38
RDMU Red Mountain 66.18 56 P **P 13 14 47.4 +0.7**
LCMT Little Creek M 66.30 61 P **P 13 14 48.2 +0.8**
OBN Obninsk 66.37 326 *e*P **P 13 14 49.3 +1.9**
OBN Obninsk 66.37 326 *e*P **P 13 14 49.3 +1.9**
OBN *e* 13 15 19.3
OBN *e* 13 17 11.5
OBN pmax pmax
comp=Z,4.0nm,0.9s
SRU San Rafael Swe 66.57 58 P **P 13 14 49.5 +0.3**
SRU pmax pmax
comp=Z,2.0nm,0.7s
SRU San Rafael Swe 66.57 58 P **P 13 14 49.5 +0.3**
RSSD Black Hills 66.92 50 P **P 13 14 51.3 -0.1**
RSSD pmax pmax
comp=Z,3.0nm,0.8s
RSSD Black Hills 66.92 50 P **P 13 14 51.3 -0.1**
RSSD IAmb IAmb 13 14 52.2
comp=Z,3.0nm,0.8s
WB0 Warramunga Arr 67.71 200 P **P 13 14 55.6 -0.7**
WB0 IAmb IAmb 13 14 56.6
comp=Z,5.6nm,0.9s
WR0 Warramunga Arr 67.86 200 P **P 13 14 56.8 -0.3**
WRAB Tennant Creek 67.88 200 P **P 13 14 56.7 -0.6**
WRAB pmax pmax
comp=Z,9.0nm,0.5s
WRAB Tennant Creek 67.88 200 P **P 13 14 56.7 -0.6**
WB2 Warramunga Arr 67.89 200 P **P 13 14 56.6 -0.7**
WB2 IAmb IAmb 13 14 57.8
comp=Z,5.8nm,0.8s
WRA Warramunga Arr 67.89 200 P **P 13 14 56.8 -0.6**
comp=Z,6.3nm,0.9s,baz=17,slow=6.6,SNR=13
PV22 Blue Mesa, Par 67.97 57 P **P 13 14 58.2 +0.1**
PV22 IAmb IAmb 13 14 59.2
comp=Z,2.9nm,0.9s
PV17 East Wray Mesa 68.04 57 P **P 13 14 58.5 0.0**
PV17 IAmb IAmb 13 14 59.6
comp=Z,5.0nm,0.7s
PV16 Nyswonger Mesa 68.05 57 P **P 13 14 58.5 -0.1**
PV16 IAmb IAmb 13 14 59.7
comp=Z,4.7nm,1.2s
PV05 Paradox Valley 68.09 58 P **P 13 14 58.3 -0.6**
PV05 IAmb IAmb 13 15 00.7
comp=Z,10nm,1.5s
PV13 Radium Mtn., P 68.20 57 P **P 13 14 59.4 -0.2**
PV13 IAmb IAmb 13 15 15.6
comp=Z,9.2nm,1.6s
FITZ Fitzroy Crossi 68.67 209 P **P 13 15 02.6 +0.4**
NB2 NORSAR Subarra 69.25 342 P **P 13 15 06.4 +0.9**
comp=Z,1.6nm,0.5s,baz=30,slow=6.5
NOA NORSAR Array B 69.25 342 P **P 13 15 07.9 +2.4**
comp=Z,0.7nm,0.5s,baz=27,slow=6.3,SNR=5.9
NOA LR LR 13 49 19.2
comp=Z,7.0nm,19.0s,baz=255,slow=39
GOF Gofitskoye 70.87 316 ‖ *e*P **P 13 15 09.7 -5.9**
AS31 Alice Springs 71.58 199 P **P 13 15 20.4 +0.4**
ASAR Alice Springs 71.58 199 P **P 13 15 20.5 +0.4**
comp=Z,4.1nm,0.7s,baz=15,slow=5.8,SNR=33
KIV Kislovodsk 71.84 315 *e*P **P 13 15 23.3 +1.6**
KIV Kislovodsk 71.84 315 *e*P **P 13 15 23.3 +1.6**
KIV pmax pmax
comp=Z,15nm,1.0s
KBZ Khabaz 71.90 315 P **P 13 15 21.9 0.0**
comp=Z,1.8nm,0.7s,baz=357,slow=5.1,SNR=4.4
KBZ Khabaz 71.90 315 *e*P **P 13 15 23.3 +1.4**
KBZ Khabaz 71.90 315 *ce*P **P 13 15 23.3 +1.4**
AKASG Malin Array Be 72.61 327 P **P 13 15 26.0 0.0**
comp=Z,2.0nm,0.5s,baz=35,slow=6.1,SNR=4.9
AKASG Malin Array Be 72.61 327 P **P 13 15 26.0 0.0**
HDIL Hopedale 77.05 44 P **P 13 15 51.2 -0.7**
TX31 Lajitas Ar. Si 77.39 61 P **P 13 15 54.1 +0.1**
TX32 Lajitas Array 77.39 61 P **P 13 15 53.8 -0.3**
TX32 IAmb IAmb 13 15 57.2
comp=Z,18nm,2.0s
TXAR Lajitas Array 77.39 61 P **P 13 15 54.1 0.0**
comp=Z,1.9nm,0.6s,baz=294,slow=3.4,SNR=9.8
CLL Collm 77.51 336 *e*P **P 13 15 54.0 -0.2**
CLL Collm 77.51 336 *e*P **P 13 15 54.0 -0.2**
P46A Rosedale 78.79 44 P **P 13 16 00.9 -0.6**
KHC Kasperske Hory 79.29 335 *e*P **P 13 16 04.5 +0.3**
KHC Kasperske Hory 79.29 335 *e*P **P 13 16 04.5 +0.3**
BRTR Keskin Array B 79.44 317 P **P 13 16 07.2 +1.8**
comp=Z,0.8nm,0.8s,baz=204,slow=1.2,SNR=4.1
GERES GERESS Array B 79.50 335 P **P 13 16 08.0 +2.5**
comp=Z,0.2nm,0.3s,baz=62,slow=4.8,SNR=4.1
GERES LR LR 13 55 24.3
comp=Z,16nm,18.1s,baz=306,slow=39
GERES GERESS Array B 79.50 335 P **P 13 16 08.0 +2.5**
BMRD Maredsous 80.55 341 PcP **PcP 13 16 17.8 0.0**
CFA Coronel Fontan 144.54 81 PKP PKPbc 13 23 32.4 -1.5
comp=Z,3.0nm,0.6s,baz=228,slow=3.4,SNR=5.9
PLCA Paso Flores 147.51 97 PKPbc **PKPab 13 23 42.5 -2.3**
comp=Z,3.9nm,0.8s,baz=237,slow=2.9,SNR=6.9
SNAA Sanae 151.88 195 PKPbc **PKPbc 13 23 51.1 -1.4**
comp=Z,1.6nm,0.6s,baz=51,slow=5.4,SNR=6.9

IDC ***13*** *13:05:30.2±0.9,56°.84S×24°.88W,h0km,mb4.2/3, mb1 4.4/3,mb1mx3.9/27,mbtmp4.2/3,ML3.7/1,MS3.6/6, Ms1 3.6/6,ms1mx3.3/18,Error ellipse: s-maj=45.2km s-min=26.0km az=69.0*
NEIC ***13*** *13:05:31.6±1.1,56°.9S±0°.1×24°.8W±0°.2,h10km±1km, mb4.7/9,Error ellipse: s-maj=24.4km s-min=15.6km az=59.0*
ISC 13 13:05:33.5±0.7,56°.9S±0°.1×24°.8W±0°.2,h22km,n34, σ0s60/28,mb4.6/6,MS3.6/6,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**		**7.13 286**	Pn	**Pn**		**13 07 16.6**	**+0.3**
VNA1	**Neumayer--Stat**		**15.55 159**	P	**Pn**		**13 09 11.5**	**+0.5**
VNA3	**Neumayer Olymp**		**15.79 162**	P	**Pn**		**13 09 13.8**	**-0.3**

VNA2	Neumayer--Watz	15.94	159	P	Pn	13 09 15.9	-0.2
	baz=330,slow=15						
SNAA	Sanae	17.46	157	P	P	13 09 37.3	+0.9
SNAA	Sanae	17.46	157	P	P	13 09 36.2	-0.2
	0.3nm,0.3s,baz=324,slow=12,SNR=12						
PMSA	Palmer Station	20.41	231	LR	LR	13 15 25.2	
	comp=Z,859nm,20.4s,baz=20,slow=29						
QSPA	South Pole Qui	33.39	180	P	P	13 12 10.0	+0.1
	1.4nm,0.5s,baz=218,slow=1.2,SNR=8.1						
QSPA	South Pole Qui	33.39	180	P	P	13 12 09.8	-0.1
QSPA				IAmb	IAmb	13 12 28.5	
	comp=Z,14nm,1.6s						
PLCA	Paso Flores	33.46	279	LR	LR	13 24 05.4	
	comp=Z,61nm,21.4s,baz=154,slow=33						
PLCA	Paso Flores	33.46	279	P	P	13 12 11.2	+0.5
SPB	Sao Paulo	37.10	324	P	P	13 12 42.5	+0.4
CFA	Coronel Fontan	39.11	291	LR	LR	13 29 57.9	
	comp=Z,18nm,21.0s,baz=106,slow=38						
SUR	Sutherland	39.59	72	LR	LR	13 26 35.6	
	comp=Z,90nm,18.6s,baz=332,slow=32						
BOSA	Boshof	44.90	73	LR	LR	13 29 22.7	
	comp=Z,103nm,18.2s,baz=214,slow=32						
GO02	Mina Guanaco	45.05	296	P	P	13 13 45.9	-2.0
VNDA	Vanda	45.82	182	P	P	13 13 53.0	+0.1
VNDA				IAmb	IAmb	13 14 13.3	
	comp=Z,19nm,1.9s						
LVC	Limon Verde	46.87	298	P	P	13 14 01.8	-0.4
LVC				IAmb	IAmb	13 14 04.3	
	comp=Z,12nm,1.1s						
LPAZ	La Paz	51.94	303	P	P	13 14 41.0	-0.3
	comp=Z,10nm,0.7s,baz=137,slow=5.6,SNR=34						
LPAZ	La Paz	51.94	303	P	P	13 14 41.2	-0.1
LPAZ				IAmb	IAmb	13 14 43.2	
	comp=Z,14nm,0.8s						
SAML	Samuel	56.33	312	P	P	13 15 12.2	-0.4
SAML				IAmb	IAmb	13 15 24.3	
	comp=Z,3.9nm,1.0s						
TORD	Torodi Ar. Bea	73.14	27	P	P	13 17 02.6	+0.6
	comp=Z,0.5nm,0.7s,baz=190,slow=6.5,SNR=3.7						
KMBO	Kilima Mbogo	74.10	67	LR	LR	13 45 50.6	
	comp=Z,34nm,20.1s,baz=91,slow=33						
YKA	Yellowknife Ar	137.68	316	PKP	PKPdf	13 24 53.8	-0.4
	comp=Z,0.6nm,0.8s,baz=121,slow=2.5,SNR=8.6						
INK	Inuvik	147.29	319	PKPbc	PKPbc	13 25 13.2	-0.3
	comp=Z,1.4nm,0.9s,baz=80,slow=0.7,SNR=7.0						
SONM	Songino Array	149.44	86	PKPbc	PKiKP	13 25 19.9	-1.1
	comp=Z,0.5nm,0.5s,baz=268,slow=2.6,SNR=3.6						
DOT	Dot Lake	150.20	308		PKiKP	13 25 21.6	-0.3
FYU	Fort Yukon	151.31	314		PKiKP	13 25 24.5	+0.4
ILAR	Eielson Array	151.66	310	PKPbc	PKiKP	13 25 24.2	-0.6
	comp=Z,2.9nm,0.9s,baz=138,slow=1.8,SNR=20						
RND	Reindeer	152.22	307		PKiKP	13 25 26.2	+0.1
KDAK	Kodiak Island	152.38	294	PKPbc	PKiKP	13 25 26.4	-0.1
	comp=Z,3.2nm,0.9s,baz=298,slow=3.3,SNR=1.5						
KDAK	Kodiak Island	152.38	294		PKiKP	13 25 26.5	0.0
TOLK	Toolik Lake Re	153.18	318		PKiKP	13 25 27.8	-0.2
BPAW	Bear Paw Mtn.	153.29	308		PKiKP	13 25 27.9	-0.4

*IDC **13** 13:08:21.1±1.4, 4.°69S×154.°49E, h453km±15km, mb3.3/12, mb1 3.4/14, mb1mx3.2/37, mbtmp4.1/14, Error ellipse: s-maj=17.0km s-min=12.6km az=73.0*
*NEIC **13** 13:08:21.1±1.1, 4.°69S±0.°08×154.°5E±0.°1, h455km±6km, mb4.4/25, Error ellipse: s-maj=17.7km s-min=8.2km az=123.0*

ISC 13 13:08:20.5±0.5, 4.°71S±0.°08×154.°45E±0.°10, h446km, n45, σ1s07/50, mb4.3/24, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RABL	Rabaul	2.34	283	P		P	13 09 23.3	+0.5
KRVT	Keravat (AS076	2.45	279	P		P	13 09 24.3	+0.9
	116nm,0.3s,baz=106,slow=2.3,SNR=158							
KRVT				S		S	13 10 13.4	-1.0
	baz=21,slow=22,SNR=1.2							
PMG	Port Moresby	8.61	237	P		P	13 10 25.6	+3.0
	3.8nm,0.3s,baz=68,slow=4.2,SNR=12							
PATS	Pohnpei	12.10	19	P		P	13 11 00.9	+0.3
COEN	Coen	14.42	230	P		P	13 11 28.2	+2.5
CTA	Charters Tower	17.24	207	P		P	13 11 55.6	0.0
	0.5nm,0.3s,baz=37,slow=13,SNR=8.7							
CTAO	Charters Tower	17.24	207	P		P	13 11 55.9	+0.3
DZM	Mont Dzumac	20.80	147	P		P	13 12 30.0	+0.4
	5.1nm,0.4s,baz=257,slow=6.5,SNR=15							
MTN	Manton Dam	24.40	249	P		P	13 13 01.7	-0.4
MTN				IAmb		IAmb	13 13 31.8	
	comp=Z,20nm,1.4s							
WR0	Warramunga Arr	24.61	230	P		P	13 13 04.3	+0.4
WR0				IAmb		IAmb	13 13 14.4	
	comp=Z,31nm,1.9s							
WB0	Warramunga Arr	24.61	231	P		P	13 13 04.1	+0.2
WB0				IAmb		IAmb	13 13 39.7	
	comp=Z,23nm,1.9s							
WRAB	Tennant Creek	24.74	231	P		P	13 13 04.9	-0.1
WRAB				IAmb		IAmb	13 13 55.8	
	comp=Z,19nm,1.6s							
WB2	Warramunga Arr	24.74	231	P		P	13 13 05.2	+0.1
WB2				IAmb		IAmb	13 13 22.7	
	comp=Z,25nm,1.9s							
WRA	Warramunga Arr	24.75	231	P		P	13 13 05.4	+0.2
	comp=Z,0.8nm,0.4s,baz=54,slow=9.5,SNR=15							
WRA				PcP		PcP	13 16 27.9	+0.3
	comp=Z,0.8nm,0.5s,baz=59,slow=2.5,SNR=5.3							
WRA				S		S	13 16 50.4	-4.4
	comp=Z,0.5nm,0.7s,baz=52,slow=15,SNR=2.8							
AS31	Alice Springs	27.34	224	P		P	13 13 28.0	-0.1
ASAR	Alice Springs	27.34	224	P		P	13 13 27.9	-0.3
	comp=Z,0.6nm,0.6s,baz=53,slow=8.8,SNR=12							
ASAR				PcP		PcP	13 16 33.5	-0.3
	comp=Z,0.4nm,0.5s,baz=59,slow=3.1,SNR=5.2							
ASAR				S		S	13 17 32.8	-2.7
	comp=Z,0.8nm,0.7s,baz=56,slow=14,SNR=8.0							
KNRA	Kununurra	27.49	245	P		P	13 13 28.9	-0.5
KNRA				IAmb		IAmb	13 14 27.5	
	comp=Z,31nm,1.5s							
STKA	Stephens Creek	29.59	203	P		P	13 13 47.8	+0.1
FITZ	Fitzroy Crossi	31.15	242	P		P	13 14 00.9	-0.5
FITZ				IAmb		IAmb	13 14 41.1	
	comp=Z,24nm,1.8s							
FORT	Forrest	35.91	221	P		P	13 14 41.7	+0.1
URZ	Urewera	39.25	151	P		P	13 15 09.9	+0.9
	comp=Z,1.9nm,0.3s,baz=259,slow=5.2,SNR=7.9							
KKM	Kota Kinabalu	39.64	285	P		P	13 15 13.4	+0.6
KKM				IAmb		IAmb	13 16 13.3	
	comp=Z,21nm,1.2s							
BKZ	Black Stump Fm	39.69	153	P		P	13 15 13.0	+0.3
BKZ				IAmb		IAmb	13 16 15.6	
	comp=Z,28nm,1.5s							
THZ	Tophouse	40.41	159	P		P	13 15 18.3	-0.1
THZ				IAmb		IAmb	13 16 21.9	
	comp=Z,29nm,1.3s							
TUWZ	Tuamarina	40.51	157	P		P	13 15 19.5	+0.4
BFZ	Birch Farm	40.82	154	P		P	13 15 21.8	+0.2
MSWZ	Moikau Station	41.01	156	P		P	13 15 23.5	+0.3
LTZ	Lake Taylor	41.08	160	P		P	13 15 24.0	+0.2
KHZ	Kahutara	41.21	158	P		P	13 15 24.2	-0.5
KHZ				IAmb		IAmb	13 16 01.9	
	comp=Z,30nm,1.2s							
MORW	Morawa	43.69	232	P		P	13 15 44.2	-0.4
PETK	Petropavlovsk-	57.67	2	P		P	13 17 27.0	+0.2
	comp=Z,2.0nm,0.9s,baz=155,slow=10,SNR=4.8							
CMAR	Chiang Mai Arr	59.33	295	P		P	13 17 39.8	+1.1
	comp=Z,1.3nm,0.8s,baz=122,slow=6.4,SNR=9.5							
SONM	Songino Array	67.14	327	P		P	13 18 29.0	+0.2
	comp=Z,0.6nm,0.4s,baz=140,slow=5.5,SNR=3.6							
VNDA	Vanda	72.86	178	P		P	13 19 03.1	+0.8
VNDA				IAmb		IAmb	13 21 20.7	
	comp=Z,20nm,1.8s							
BILL	Bilibino	73.06	5	P		P	13 19 03.8	+0.1
BILL				IAmb		IAmb	13 20 03.8	
	comp=Z,14nm,1.9s							
GLI	Glacier Island	79.41	25	P		P	13 19 38.6	-0.4
MK31	Makanchi Array	81.34	319	P		P	13 19 49.5	+0.1
MKAR	Makanchi Array	81.34	319	P		P	13 19 49.6	+0.2
	comp=Z,1.7nm,0.6s,baz=97,slow=5.7,SNR=17							
ILAR	Eielson Array	81.47	22	P		P	13 19 48.2	-1.4
	comp=Z,0.5nm,0.5s,baz=246,slow=4.8,SNR=8.4							
MAKZ	Makanchi	81.56	319	P		P	13 19 50.5	0.0
ZALV	Zalesovo Beam	82.00	326	P		P	13 19 52.1	-0.5
	comp=Z,1.1nm,0.3s,baz=128,slow=5.6,SNR=5.0							
MAW	Mawson	86.28	203	P		P	13 20 13.3	-0.2
	comp=Z,2.1nm,0.6s,baz=74,slow=3.1,SNR=8.5							
YKA	Yellowknife Ar	94.58	28	P		P	13 20 51.4	-0.7
	comp=Z,0.1nm,0.5s,baz=267,slow=4.0,SNR=2.2							
PTGA	Pitinga	145.19	98	PKPbc		PKPdf	13 27 06.8	-0.7
	comp=Z,2.0nm,0.5s,baz=339,slow=22,SNR=2.6							
TORD	Torodi Ar. Bea	151.84	289	PKPbc		PKPbc	13 27 24.0	-1.0
	comp=Z,0.7nm,0.4s,baz=76,slow=2.1,SNR=10							

*UCR **13** 13:17:26.9±1.8, 7.°05N×82.°40W, h35km±30km, mb4.4(NEIC)*
*INET **13** 13:17:27.5, 7.°05N×82.°41W, h38km, ML4.3*
*UPA **13** 13:17:28.3±2.2, 7.°34N×82.°31W, h14km±17km, MW4.5*
*IDC **13** 13:17:30.9±5.1, 8.°31N×81.°86W, h0km, mb4.0/7, mb1 4.3/10, mb1mx4.0/35, mbtmp4.1/10, ML4.2/3, MS3.2/4, Ms1 3.2/4, ms1mx2.9/21, Error ellipse: s-maj=136.6km s-min=28.6km az=16.0*
*NEIC **13** 13:17:30.5±1.6, 7.°7N±0.°1×82.°29W±0.°07, h10km±2km, mb4.4/53, Error ellipse: s-maj=21.7km s-min=10.1km az=201.0*

ISC 13 13:17:25.7±2.0, 7.°31N±0.°06×82.°32W±0.°04, h1km±11km, n121, σ1s08/132, mb4.3/26, 14C-4D, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DVD	David	1.13	353	eP		Pg	13 17 47.6	+0.2
DVD				eS		Sg	13 18 02.0	-0.1
BCO2	Palmira	1.42	351	iP		Pn	13 17 52.0	-0.9
BCO2				eS		Sg	13 18 10.3	-1.1
CACAO	El Cacao, Vera	1.44	88	eP		Pn	13 17 51.7	-1.3
CACAO				eS		Sb	13 18 10.7	-1.6
BRU2	Volcan	1.52	346	iP		Pn	13 17 53.5	-0.8
BRU2				eS		Sn	13 18 12.9	-1.9
BRU2	Volcan	1.52	346	eP		Pn	13 17 53.5	-0.8
PTJ1	Puerto Jimnez	1.56	321	iP		Pn	13 17 53.7	-1.0
PTJ1				eS		Sn	13 18 13.9	-1.7
PTJ1	Puerto Jimnez	1.56	321	eP		Pn	13 17 53.7	-1.0
PTJ1				eS		Sn	13 18 15.5	-0.1
EDSV	San Vito	1.64	337	eP		Pn	13 17 55.6	-0.2
EDSV				eS		Sb	13 18 17.8	-0.3
EDPN	Palmar Norte	2.00	326	eP		Pn	13 17 60.0	-0.6
EDPN				eS		Sn	13 18 25.2	-1.0
EDBA	Buenos Aires	2.08	333	eP		Pn	13 18 02.1	+0.4
EDBA				eS		Sb	13 18 30.1	-0.4
AZU	Azuero	2.08	76	iP		Pn	13 18 01.6	-0.2
AZU				eS		Sn	13 18 27.3	-1.0
AZU	Azuero	2.08	76	eP		Pn	13 18 01.5	-0.3
PNME	Penonome	2.29	59	iP		Pn	13 18 05.6	+0.9
PNME				eS		Sn	13 18 32.3	-1.3
EDDO	Dominical	2.47	322	eP		Pn	13 18 06.5	-0.6
EDDO				eS		Sn	13 18 38.9	+1.0
VTON	El Valle, Cocl	2.54	59	eP		Pn	13 18 09.6	+1.5
VTON				eS		Sn	13 18 40.5	+0.7
ZANG	Zanguenga, Cho	2.93	56	eP		Pn	13 18 14.4	+1.0
LCR2	La Lucha 2	2.94	326	eP		Pn	13 18 13.6	-0.2
CVTR	Volcan Turrial	3.05	332	iP		Pn	13 18 16.3	+0.7
CVTR				eS		Sn	13 18 55.0	+2.1
BCIP	Isla Barro Col	3.07	53	eP		Pn	13 18 16.7	+1.2
BCIP	Isla Barro Col	3.07	53	eP		Pn	13 18 15.9	+0.5
BCIP	Isla Barro Col	3.07	53			Pn	13 18 16.1	+0.6
SJS	Escuela Geolog	3.13	327	eP		Pn	13 18 16.8	+0.5
HDC	Heredia	3.21	327	iP		Pn	13 18 18.6	+1.0
HDC				eS		Sn	13 18 57.5	+0.9
HDC	Heredia	3.21	327	eP		Pn	13 18 18.2	+0.7
HDC	Heredia	3.21	327			Pn	13 18 17.9	+0.3
UPA	Univ. de Panam	3.22	59	eP		Pn	13 18 19.0	+1.6
UPA	Univ. de Panam	3.22	59	eP		Pn	13 18 18.2	+0.8
SRA1	San Ramn	3.49	322	eP		Pn	13 18 20.8	-0.5
ARE1	Arenal 1	3.93	323	eP		Pn	13 18 28.2	+0.9
CEDE	Laguna Cedeo	3.94	323	eP		Pn	13 18 28.4	+0.9
JTS	Las Juntas de	3.95	319	Pn		Pn	13 18 27.1	-0.4
	61nm,0.3s,baz=325,slow=22,SNR=128							
JTS				Sn		Sn	13 19 11.7	-2.8
	4.9nm,0.3s,baz=349,slow=22,SNR=1.5							
JTS				LR		LR	13 20 03.8	
	comp=Z,326nm,21.6s,baz=128,slow=42							
JTS	Las Juntas de	3.95	319	eP		Pn	13 18 26.6	-0.9
JTS	Las Juntas de	3.95	319			Pn	13 18 26.4	-1.2
PLVR	Palo Verde	4.26	315	eP		Pn	13 18 31.8	-0.1
GB1A	Borinquen Arri	4.63	319	eP		Pn	13 18 37.8	+0.8
CAPC	Capurgana	5.09	75	eP		Pn	13 18 43.6	+0.3
ACON	Acoyapa	5.42	329	eP		Pn	13 18 48.0	+0.2
ACON	Acoyapa	5.42	329			Pn	13 18 47.6	-0.1
MALC	Bahia Malaga	5.94	123	eP		Pn	13 18 54.4	-0.5
PRVC	Isla de Provid	6.10	9	eP		Pn	13 18 56.8	-0.3
CBOC	Ciudad Bolivar	6.42	103	eP		Pn	13 18 50.1	-12
MATN	Matagalpa	6.62	328			Pn	13 19 03.1	-1.2
UREC	San Jos de Ur	6.74	86	eP		Pn	13 19 04.9	-1.1
YOTC	Yotoco, Valle	6.80	119	eP		Pn	13 19 05.2	-1.6
RREF	El Recreo	7.33	109	eP		Pn	13 19 16.1	+1.5
POPC	Popayan Colom	7.35	130	eP		Pn	13 19 14.6	+0.2
ZARC	Zarzoza, Cauc	7.40	88	eP		Pn	13 19 16.3	+1.3
SJCC	San Jacinto, C	7.51	69	eP		Pn	13 19 14.9	-1.7
SOTA	Rioblanco	7.66	132	eP		Pn	13 19 18.8	-0.2
PCON	Cinco Dias	7.70	130	eP		Pn	13 19 20.8	+1.3
PTBC	PUERTO BERRIO,	7.84	95	eP		Pn	13 19 21.4	+0.4
PRAC	Prado	8.21	115	eP		Pn	13 19 27.5	+1.4
SMLC	San Martn de	8.30	79	eP		Pn	13 19 25.6	-1.7
ROSC	El Rosal	8.32	107	LR		LR	13 22 27.1	
	comp=Z,148nm,19.5s,baz=254,slow=36							
RUSC	La Rusia	9.28	98			Pn	13 19 47.3	+6.1
APG	El Apazote	11.06	314	Pn		Pn	13 20 06.0	+0.6
	1.1nm,0.3s,baz=100,slow=11,SNR=2.6							
CMIG	Matias Romero	15.66	310	Pn		Pn	13 21 09.3	+1.6
	0.4nm,0.3s,baz=85,slow=9.1,SNR=4.2							
SDDR	Presa de Saban	15.80	42	P		P	13 21 13.7	0.0
SDDR				IAmb		IAmb	13 21 52.1	
	comp=Z,30nm,1.2s							
GCPR	Guaynabo City	19.22	54	P		Pn	13 21 52.9	+0.6
GCPR				IAmb		IAmb	13 22 24.2	
	comp=Z,33nm,1.2s							
HUMP	Col San Antoni	19.32	55	P		Pn	13 21 54.4	+0.9
HUMP				IAmb		IAmb	13 22 01.2	
	comp=Z,24nm,1.1s							
TXAR	Lajitas Array	29.74	320	LR		LR	13 36 57.6	
	comp=Z,33nm,18.4s,baz=0.0,slow=40							
LCAR	Lake Charles	29.75	345	P		P	13 23 33.5	-0.2
LCAR				IAmb		IAmb	13 23 34.1	
	comp=Z,4.4nm,0.7s							
CCM	Cathedral Cave	31.66	347	P		P	13 23 50.3	-0.3
GDL2	Guadalupe Moun	32.17	323	P		P	13 23 55.2	-0.1
MNTX	Cornudas Mount	32.43	321	P		P	13 23 58.0	+0.4
121A	Cookes Peak, D	34.50	320	P		P	13 24 18.2	+2.4
N38A	Joes South For	34.74	345	P		P	13 24 16.6	-0.9
ANMO	Albuquerque	35.35	324	P		P	13 24 23.8	+0.7
SDCO	Great Sand Dun	36.88	329	P		P	13 24 37.1	+0.8
WUAZ	Wupatki	38.70	321	P		P	13 24 53.4	+1.8
WUAZ				IAmb		IAmb	13 24 55.2	
	comp=Z,7.1nm,0.8s							
Y14A	Wickenburg	38.79	317	P		P	13 24 53.1	+0.9
Y14A				IAmb		IAmb	13 24 55.9	
	comp=Z,4.2nm,0.7s							
PV02	Paradox Valley	38.95	326	P		P	13 24 53.8	0.0
PV13	Radium Mtn., P	38.96	326	P		P	13 24 54.6	+0.8
PV13				IAmb		IAmb	13 24 57.1	
	comp=Z,5.6nm,0.9s							
PV03	Paradox Valley	39.05	326	P		P	13 24 55.2	+0.7
PV05	Paradox Valley	39.06	326	P		P	13 24 55.1	+0.5
PV07	Paradox Valley	39.07	326	P		P	13 24 55.2	+0.5
PV18	Skein Mesa, Pa	39.08	326	P		P	13 24 55.4	+0.7
PV18				IAmb		IAmb	13 24 57.7	
	comp=Z,6.1nm,0.8s							
PV16	Nyswonger Mesa	39.12	326	P		P	13 24 55.5	+0.3
PV17	East Wray Mesa	39.13	326	P		P	13 24 55.1	0.0
PV17				IAmb		IAmb	13 25 06.8	
	comp=Z,12nm,1.3s							
O20A	White River Ci	40.09	329	P		P	13 25 03.7	+0.6
O20A				IAmb		IAmb	13 26 31.1	
	comp=Z,18nm,1.9s							
PKCU	Pink Cliffs	40.51	322	P		P	13 25 07.6	+0.7
SRU	San Rafael Swe	40.58	326	P		P	13 25 08.0	+0.7
RSMU	Red Mountain	41.10	328	P		P	13 25 11.9	+0.4
MSU	Marysvale	41.13	324	P		P	13 25 13.7	+1.9
CCUT	Cedar City	41.22	322	P		P	13 25 14.2	+1.6
PSUT	Pine Spring	42.15	322	P		P	13 25 22.6	+2.5
BW06	Boulder Array	42.70	330	P		P	13 25 24.7	+0.1
PDAR	Pinedale Array	42.70	330	P		P	13 25 24.9	+0.3
	comp=Z,0.7nm,0.5s,baz=130,slow=11,SNR=11							
HWUT	Hardware Ranch	42.89	327	P		P	13 25 26.0	-0.1
R11A	Troy Canyon, C	43.10	321	P		P	13 25 30.1	+2.3
SPUT	South Promonto	43.16	326	P		P	13 25 29.6	+1.2
BGU	Big Grassy Mou	43.23	326	P		P	13 25 29.6	+0.8
FXWY	Fox Creek	44.07	330	P		P	13 25 35.1	-0.6
FXWY				IAmb		IAmb	13 26 11.5	
	comp=Z,8.6nm,1.9s							
IMW	Indian Meadow	44.21	330	P		P	13 25 36.5	-0.3
IMW				IAmb		IAmb	13 25 38.0	
	comp=Z,3.0nm,0.7s							
FLWY	Flagg Ranch	44.23	331	P		P	13 25 37.1	+0.2
FLWY				IAmb		IAmb	13 25 38.5	
	comp=Z,3.7nm,0.8s							
ULM	Lac du Bonnet	44.28	348	P		P	13 25 35.2	-1.7
	comp=Z,4.7nm,0.6s,baz=146,slow=4.3,SNR=4.1							
ULM	Lac du Bonnet	44.28	348	P		P	13 25 35.5	-1.5
LAO	LASA Array	44.28	336	P		P	13 25 36.9	-0.2
RLMT	Red Lodge	44.34	333	P		P	13 25 37.3	-0.5
RLMT				IAmb		IAmb	13 26 21.9	
	comp=Z,7.3nm,1.1s							
ELK	Elko	44.37	324	P		P	13 25 39.3	+1.2
NVAR	Mina Array Bea	44.88	319	P		P	13 25 44.8	+2.5
	comp=Z,2.3nm,0.5s,baz=130,slow=7.2,SNR=33							
MDPB	Devils Postpil	44.95	318	P		P	13 25 43.3	+0.5
MDPB				IAmb		IAmb	13 25 47.5	
	comp=Z,4.5nm,0.9s							
KVN	Kaiserville	45.10	320	P		P	13 25 44.2	+0.2
KVN				IAmb		IAmb	13 26 00.1	
	comp=Z,7.2nm,1.5s							
YERR	Yerington	45.80	319	P		P	13 25 51.1	+1.7
YERR				IAmb		IAmb	13 25 52.8	
	comp=Z,3.2nm,0.7s							
WVOR	Wild Horse Val	47.42	323	P		P	13 26 03.0	+0.9
MOD	Modoc Plateau	48.11	322	P		P	13 26 07.6	+0.1
MOD				IAmb		IAmb	13 26 09.8	
	comp=Z,3.5nm,0.9s							
G08A	Pilot Rock	49.36	326	P		P	13 26 18.6	+1.6
PINE	Pine Mountain	49.58	324	P		P	13 26 19.8	+1.0
PINE				IAmb		IAmb	13 26 21.7	
	comp=Z,2.7nm,0.8s							
H04A	Detroit Lake	50.83	324	P		P	13 26 28.5	+0.4
LLLB	Lillooet	54.22	330	P		P	13 26 54.3	+1.2
LLLB				IAmb		IAmb	13 28 19.3	
	comp=Z,3.1nm,0.8s							
YKA	Yellowknife Ar	59.92	343	P		P	13 27 32.9	-0.3
	comp=Z,0.8nm,0.6s,baz=135,slow=7.2,SNR=16							
PMOZ	Porto Moniz, M	65.19	57	P		P	13 28 10.6	+1.4
INK	Inuvik	69.61	342	P		P	13 28 36.3	0.0
	comp=Z,1.1nm,0.8s,baz=98,slow=3.8,SNR=4.4							
DOT	Dot Lake	71.18	335	P		P	13 28 47.2	+1.2
DOT				IAmb		IAmb	13 28 59.5	
	comp=Z,2.9nm,0.9s							
IL31		72.74	336	P		P	13 28 56.0	+0.7
IL31				IAmb		IAmb	13 29 58.2	
	comp=Z,5.7nm,1.6s							
ILAR	Eielson Array	72.74	336	P		P	13 28 56.2	+0.9
	comp=Z,0.5nm,0.6s,baz=105,slow=4.6,SNR=10							
PPLA	Purkeypile	74.42	333	P		P	13 29 05.6	+0.2
ESDC	Sonseca Array	76.41	51	P		P	13 29 16.7	-0.7
	comp=Z,0.9nm,0.7s,baz=284,slow=5.2,SNR=3.2							
FINES	FINESS Array B	92.27	27	LR		LR	14 15 13.2	
	comp=Z,19nm,18.4s,baz=70,slow=38							
LZH	Lanzhou	136.45	353	ePKP		PKPdf	13 36 47.0	-3.3
LZH				pPKP		PKiKP	13 36 58.1	+6.1
LZH				sPKP			13 37 01.4	
CD2	Chengdu	141.56	352	PKP		PKPdf	13 37 00.6	+1.0

*IDC **13** 13:20:33.6±1.3, 55.°46N×165.°17E, h0km, mb3.6/6, mb1 3.9/9, mb1mx3.6/48, mbtmp3.7/9, ML3.7/3, MS2.6/2, Ms1 2.6/2, ms1mx2.5/39, Error ellipse: s-maj=39.1km s-min=15.6km az=173.0*
*KRSC **13** 13:20:35.2±2.0, 55.°12N×165.°02E, h51km±17km, ML4.2*
*NEIC **13** 13:20:37.9±0.7, 55.°3N±0.°1×165.°2E±0.°2, h34km±4km, mb4.2/11, Error ellipse: s-maj=20.9km s-min=10.7km az=157.0*

ISC 13 13:20:33.4±3.0, 55.°19N±0.°04×165.°12E±0.°04, h5km±20km, n71, σ1s95/102, mb4.1/13, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BKI	Bering	0.49	88	i P		Pn	13 20 47.3	+0.2
BKI				eS		Sb	13 20 54.5	+2.6
KBTR	Krutoberegovo	1.66	309	eP		Pn	13 21 02.6	-0.6

MA2	**Magadan**	**8.91**	**305**	Pn		**Pn**	**13 22 43.4**	**+0.8**
	0.1nm,0.3s,baz=128,slow=19,SNR=1.6								
MA2				LR		LR	13 26 30.4		
	comp=Z,39nm,20.1s,baz=90,slow=41								
JKA	**Kamikawa-asahi**	**18.22**	**242**	P		**P**	**13 24 49.4**	**+2.2**
ASAJ	**Asahikawa**	**18.22**	**242**	P		**P**	**13 24 49.4**	**+2.2**
	0.4nm,0.3s,baz=210,slow=21,SNR=1.8								
ERM	**Erimo**	**19.50**	**237**	P		**Pn**	**13 25 02.6**	**+0.1**
KDAK	**Kodiak Island**	**23.22**	**66**	P		**P**	**13 25 39.9**	**-1.2**
	2.0nm,0.5s,baz=305,slow=4.0,SNR=7.3								
MLY	**Manley**	**23.59**	**48**	P		**P**	**13 25 44.5**	**-0.2**
CNPM	**China Poot**	**23.60**	**61**	P		**P**	**13 25 44.5**	**-0.4**
BRLK	**Bradley Lake**	**23.74**	**61**	P		**P**	**13 25 44.9**	**-1.4**
BRLK				IAmb	IAmb		13 26 20.1		
	comp=Z,21nm,1.8s								
SML	**Sawmill**	**24.73**	**55**	P		**P**	**13 25 55.2**	**-0.2**
SML				IAmb	IAmb		13 25 56.7		
	comp=Z,4.9nm,0.8s								
CCB	**Clear Creek Bu**	**24.83**	**49**	P		**P**	**13 25 55.3**	**-0.9**
CCB				IAmb	IAmb		13 25 57.9		
	comp=Z,4.2nm,0.8s								
DHY	**Denali Highway**	**25.07**	**52**	P		**P**	**13 25 57.7**	**-0.9**
SCM	**Sheep Creek Mo**	**25.20**	**55**	P		**P**	**13 25 59.3**	**-0.5**
SCM				IAmb	IAmb		13 26 27.8		
	comp=Z,9.1nm,1.1s								
IL31		**25.22**	**48**	P		**P**	**13 25 59.5**	**-0.3**
IL31				IAmb	IAmb		13 26 01.7		
	comp=Z,3.9nm,0.8s								
ILAR	**Eielson Array**	**25.22**	**48**	P		**P**	**13 25 59.1**	**-0.7**
	comp=Z,2.2nm,0.9s,baz=260,slow=8.4,SNR=18								
GLI	**Glacier Island**	**25.44**	**57**	P		**P**	**13 26 01.9**	**+0.1**
GLI				IAmb	IAmb		13 26 04.3		
	comp=Z,20nm,1.8s								
FID	**Port Fidalgo**	**25.76**	**58**	P		**P**	**13 26 04.3**	**-0.4**
FID				IAmb	IAmb		13 26 13.3		
	comp=Z,5.9nm,1.2s								
H11N2	**WAKE ISLAND Hy**	**35.42**	**177**	T		T	14 05 20.9		
	baz=359,slow=76,SNR=150								
H11N3	**WAKE ISLAND Hy**	**35.44**	**177**	T		T	14 05 22.0		
	baz=359,slow=76,SNR=134								
H11N1	**WAKE ISLAND Hy**	**35.44**	**177**	T		T	14 05 17.9		
	baz=359,slow=76,SNR=145								
SONM	**Songino Array**	**36.30**	**283**	P		**P**	**13 27 38.7**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=58,slow=8.8,SNR=3.9								
H11S1	**WAKE ISLAND Hy**	**36.63**	**177**	T		T	14 06 42.0		
	baz=359,slow=76,SNR=12								
H11S3	**WAKE ISLAND Hy**	**36.65**	**178**	T		T	14 06 45.1		
	baz=359,slow=76,SNR=11								
H11S2	**WAKE ISLAND Hy**	**36.65**	**177**	T		T	14 06 44.3		
	baz=359,slow=76,SNR=16								
YKA	**Yellowknife Ar**	**39.60**	**46**	P		**P**	**13 28 04.7**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=300,slow=7.8,SNR=6.6								
NVAR	**Mina Array Bea**	**52.29**	**75**	P		**P**	**13 29 45.5**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=324,slow=6.0,SNR=2.9								
PDAR	**Pinedale Array**	**53.94**	**65**	P		**P**	**13 29 58.0**	**0.0**
	comp=Z,0.5nm,0.8s,baz=341,slow=3.1,SNR=5.2								

*IDC **13** 13:21:39.9±0.8,56°.86S×24°.98W,h0km,mb4.4/4, mb1 4.5/5,mb1mx4.0/32,mbtmp4.3/5,ML4.2/1,MS3.4/2, Ms1 3.4/2,ms1mx3.0/16,Error ellipse: s-maj=44.7km s-min=24.0km az=68.0*

*NEIC **13** 13:21:41.4±0.9,56°.9S±0°.1×25°.0W±0°.2,h10km±1km, mb4.8/17,Error ellipse: s-maj=25.3km s-min=17.3km az=207.0*

ISC 13 13:21:43.0±0.7,56°.9S±0°.1×25°.0W±0°.1,h22km,n46, σ0s76/44,mb4.8/10,1C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.01**	**287**	Pn	**Pn**	**13 23 25.7**	**+1.5**
VNA1	**Neumayer--Stat**	**15.57**	**159**	P	**Pn**	**13 25 21.2**	**+0.5**
VNA3	**Neumayer Olymp**	**15.81**	**162**	P	**Pn**	**13 25 23.5**	**-0.3**
VNA2	**Neumayer--Watz**	**15.96**	**159**	P	**Pn**	**13 25 26.1**	**+0.3**
	baz=328,slow=15						
SNAA	**Sanae**	**17.49**	**157**	P	**P**	**13 25 47.3**	**+1.1**
SNAA	**Sanae**	**17.49**	**157**	P	**Pn**	**13 25 46.1**	**+1.0**
	0.8nm,0.3s,baz=287,slow=0.7,SNR=18						
SNAA				S	Sn	13 28 40.1	-19
	0.0nm,0.3s,baz=280,slow=4.6,SNR=1.0						
SNAA	**Sanae**	**17.49**	**157**		**Pn**	**13 25 45.9**	**+0.8**
EFI	**East Falkland**	**19.86**	**271**	P	**Pn**	**13 26 12.3**	**-1.6**
SYO	**Syowa Base**	**30.16**	**140⇑**	*eP*	**P**	**13 27 48.6**	**-2.2**
PLCA	**Paso Flores**	**33.34**	**279**	LR	LR	13 42 30.5	
	comp=Z,44nm,18.1s,baz=144,slow=38						
QSPA	**South Pole Qui**	**33.36**	**180**	P	**P**	**13 28 19.7**	**+0.4**
	2.6nm,0.5s,baz=40,slow=0.2,SNR=24						
QSPA	**South Pole Qui**	**33.36**	**180**	P	**P**	**13 28 19.6**	**+0.4**
PEL	**Peldehue**	**39.05**	**288**	P	**P**	**13 29 07.0**	**-1.0**
MT02	**Curacav**	**39.20**	**287**	P	**P**	**13 29 07.2**	**-2.0**
AC05	**El Transito**	**42.27**	**292**	P	**P**	**13 29 34.0**	**-0.7**
AC05				IAmb	IAmb	13 30 15.1	
	comp=Z,40nm,1.8s						
AC02	**Maricunga**	**43.34**	**295**	P	**P**	**13 29 43.4**	**-0.4**
AC02				IAmb	IAmb	13 29 44.4	
	comp=Z,45nm,2.0s						
GO02	**Mina Guanaco**	**44.95**	**296**	P	**P**	**13 29 55.8**	**-0.8**
BOSA	**Boshof**	**45.02**	**73**	LR	LR	13 45 53.4	
	comp=Z,67nm,19.0s,baz=206,slow=32						
VNDA	**Vanda**	**45.79**	**182**	P	**P**	**13 30 02.6**	**+0.4**
VNDA				IAmb	IAmb	13 30 21.4	
	comp=Z,24nm,2.0s						
LVC	**Limon Verde**	**46.77**	**298**	P	**P**	**13 30 11.2**	**+0.3**
PB04	**IPOC Station P**	**47.61**	**297**	P	**P**	**13 30 17.7**	**+0.5**
PB09	**IPOC Station P**	**47.62**	**299**	P	**P**	**13 30 17.8**	**+0.4**
PB07	**IPOC Station P**	**47.99**	**298**	P	**P**	**13 30 20.1**	**-0.2**
PB08	**IPOC Station P**	**48.99**	**300**	P	**P**	**13 30 29.3**	**+1.0**
PB08				IAmb	IAmb	13 31 47.3	
	comp=Z,7.1nm,0.9s						
MNMC	**Minye Minye**	**50.07**	**300**	P	**P**	**13 30 36.9**	**+0.6**
MNMC				IAmb	IAmb	13 30 42.8	
	comp=Z,12nm,1.0s						
PB16	**IPOC Station P**	**50.72**	**301**	P	**P**	**13 30 41.9**	**+0.3**
PB16				IAmb	IAmb	13 31 41.3	
	comp=Z,16nm,1.5s						
LPAZ	**La Paz**	**51.85**	**303**	P	**P**	**13 30 50.7**	**+0.6**
	comp=Z,15nm,0.6s,baz=139,slow=5.7,SNR=56						
LPAZ	**La Paz**	**51.85**	**303**	P	**P**	**13 30 50.3**	**+0.2**
SAML	**Samuel**	**56.26**	**313**	P	**P**	**13 31 21.4**	**-0.1**
TORD	**Torodi Ar. Bea**	**73.21**	**27**	P	**P**	**13 33 12.5**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=210,slow=6.9,SNR=2.6						
ASAR	**Alice Springs**	**97.81**	**161**	P	**P**	**13 35 16.8**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=183,slow=4.4,SNR=6.5						
WRA	**Warramunga Arr**	**101.52**	**160**	P	**Pdif**	**13 35 33.6**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=200,slow=4.6,SNR=1.8						
PDAR	**Pinedale Array**	**121.82**	**300**	PKP	**PKPdf**	**13 40 34.1**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=119,slow=3.2,SNR=2.3						
YKA	**Yellowknife Ar**	**137.61**	**316**	PKP	**PKPdf**	**13 41 03.9**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=124,slow=2.5,SNR=13						
INK	**Inuvik**	**147.23**	**319**	PKPdf	**PKPbc**	**13 41 22.6**	**-0.1**
DAWY	**Dawson**	**148.26**	**310**		**PKPbc**	**13 41 25.5**	**-0.3**
SONM	**Songino Array**	**149.57**	**86**	PKPbc	**PKPbc**	**13 41 29.9**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=223,slow=2.9,SNR=8.9						
DOT	**Dot Lake**	**150.12**	**308**		**PKiKP**	**13 41 31.0**	**-0.2**
DHY	**Denali Highway**	**151.41**	**307**		**PKiKP**	**13 41 34.2**	**+0.1**
IL31		**151.58**	**310**		**PKPbc**	**13 41 33.7**	**0.0**
ILAR	**Eielson Array**	**151.58**	**310**	PKPbc	**PKiKP**	**13 41 34.1**	**0.0**
	comp=Z,3.1nm,0.9s,baz=135,slow=2.4,SNR=23						
CCB	**Clear Creek Bu**	**151.94**	**310**		**PKPbc**	**13 41 34.2**	**-0.4**
RND	**Reindeer**	**152.14**	**307**		**PKiKP**	**13 41 35.6**	**+0.1**
MCK	**McKinley**	**152.24**	**308**		**PKiKP**	**13 41 35.9**	**+0.3**
TOLK	**Toolik Lake Re**	**153.11**	**318**		**PKiKP**	**13 41 37.5**	**+0.2**
BPAW	**Bear Paw Mtn.**	**153.20**	**308**		**PKPbc**	**13 41 37.3**	**-0.1**

*UPA **13** 13:33:07.0±7.0,7°.13N×82°.57W,h20km±52km,MW4.2*

*IDC **13** 13:33:13.3±9.5,8°.73N×81°.90W,h0km,mb3.6/3,mb1 4.0/4, mb1mx3.6/26,mbtmp3.6/4,ML3.9/1,MS2.8/6,Ms1 2.9/6, ms1mx2.7/30,Error ellipse: s-maj=241.4km s-min=45.3km az=8.0*

ISC 13 13:33:07.0±1.2,7°.19N±0°.07×82°.48W±0°.04,h10km,n29, σ2s95/40,mb3.7/3,1C,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBAR3	**San Bartolo, C**	**1.19**	**341**	*eP*	**Pg**	**13 33 33.3**	**+3.4**
SBAR3				*eS*	**Sn**	**13 33 48.7**	**+2.6**
CHIR3	**Chiriqui UPA,**	**1.21**	**7**	*eP*	**Pn**	**13 33 26.2**	**-3.8**
CHIR3				*eS*	**Sb**	**13 33 40.8**	**-5.0**
LOCO3	**Loma Colorada,**	**1.22**	**3**	*eP*	**Pn**	**13 33 26.8**	**-3.3**
LOCO3				*eS*	**Sb**	**13 33 44.0**	**-2.0**
DVD	**David**	**1.24**	**1**	*eP*	**Pn**	**13 33 28.8**	**-1.7**
DVD				*eS*	**Sb**	**13 33 43.2**	**-3.5**
PSOM3	**Paja de Sombre**	**1.50**	**6**	*eP*	**Pn**	**13 33 31.5**	**-2.5**
PSOM3				*eS*	**Sn**	**13 33 49.1**	**-4.5**
BCO2	**Palmira**	**1.52**	**358⇑**	*iP*	**Pn**	**13 33 31.3**	**-3.2**
PTJ1	**Puerto Jimnez**	**1.57**	**329**	*eP*	**Pn**	**13 33 33.1**	**-1.9**
PTJ1				*eS*	**Sn**	**13 33 50.8**	**-4.5**
BRU2	**Volcan**	**1.61**	**353**	*eP*	**Pn**	**13 33 32.7**	**-3.0**
BRU2				*eS*	**Sg**	**13 34 06.0**	**+7.0**
CACAO	**El Cacao, Vera**	**1.61**	**84**	*eP*	**Pn**	**13 33 32.9**	**-2.7**
CACAO				*eS*	**Sn**	**13 33 49.8**	**-6.7**
MLIR3	**Monte Lirio, C**	**1.63**	**348**	*eP*	**Pb**	**13 33 36.4**	**-1.0**
MLIR3				*eS*	**Sn**	**13 33 56.9**	**-0.2**
CRIS3	**El Cristo, Coc**	**2.13**	**60**	*eP*	**Pn**	**13 33 43.3**	**+0.6**
AZU	**Azuero**	**2.27**	**74**	*eP*	**Pn**	**13 33 43.4**	**-1.2**
AZU				*eS*	**Sn**	**13 34 10.3**	**-2.3**
VTON	**El Valle, Cocl**	**2.74**	**59**	*eP*	**Pn**	**13 33 51.4**	**+0.3**
VTON				*eS*	**Sn**	**13 34 24.0**	**-0.4**
ZANG	**Zanguenga, Cho**	**3.13**	**56**	*eP*	**Pn**	**13 33 56.4**	**0.0**
ZANG				*eS*	**Sb**	**13 34 41.1**	**+0.1**
HDC	**Heredia**	**3.23**	**330**	*eP*	**Pn**	**13 33 57.5**	**-0.4**
HDC				*eS*	**Sn**	**13 34 35.2**	**-1.4**
BCIP	**Isla Barro Col**	**3.27**	**53**	*eP*	**Pn**	**13 34 01.7**	**+3.3**
BCIP				*eS*	**Sn**	**13 34 37.8**	**+0.3**
FLAM	**Flamenco Islan**	**3.38**	**59**	*eS*	**Sn**	**13 34 38.1**	**-2.0**
UPA	**Univ. de Panam**	**3.42**	**58**	*eP*	**Pb**	**13 34 05.5**	**-2.3**
UPA				*eS*	**Sn**	**13 34 41.0**	**-0.1**
JTS	**Las Juntas de**	**3.94**	**322**	Pn	**Pn**	**13 34 05.8**	**-1.7**
	13nm,0.3s,baz=328,slow=16,SNR=33						
JTS				Sn	**Sn**	**13 34 50.7**	**-3.2**
	baz=2.7,slow=22,SNR=1.1						
JTS				LR	LR	13 35 12.0	
	comp=Z,44nm,21.3s,baz=160,slow=35						
JTS	**Las Juntas de**	**3.94**	**322**	*eP*	**Pn**	**13 34 08.4**	**+0.9**
JTS				*eS*	Sn	13 34 38.0	-16
UPD2	**Meteti**	**4.63**	**73**	*eP*	**Pn**	**13 34 19.9**	**+2.9**
APG	**El Apazote**	**11.03**	**315**	LR	LR	13 39 15.3	
	comp=Z,76nm,18.8s,baz=115,slow=35						
TEIG	**Tepich**	**14.13**	**337**	LR	LR	13 41 58.4	
	comp=Z,29nm,20.8s,baz=166,slow=40						
SJG	**San Juan**	**19.26**	**54**	LR	LR	13 44 22.9	
	comp=Z,35nm,18.3s,baz=36,slow=37						
PTGA	**Pitinga**	**23.80**	**108**	LR	LR	13 48 22.2	
	comp=Z,43nm,19.2s,baz=150,slow=38						
LPAZ	**La Paz**	**27.31**	**149**	LR	LR	13 51 34.0	
	comp=Z,43nm,18.1s,baz=32,slow=39						
NVAR	**Mina Array Bea**	**44.86**	**319**	P	**P**	**13 41 24.7**	**+2.8**
	1.0nm,0.9s,baz=123,slow=7.6,SNR=5.8						
YKA	**Yellowknife Ar**	**59.99**	**343**	P	**P**	**13 43 12.3**	**-1.2**
	0.5nm,0.8s,baz=134,slow=7.4,SNR=7.8						
ILAR	**Eielson Array**	**72.78**	**336**	P	**P**	**13 44 35.9**	**+0.4**
	0.5nm,0.9s,baz=110,slow=5.3,SNR=3.6						

WEL 13 13:35:19.2±0.5,32°.5S×17°.9E±1°.2,h33km,M3.8/12, mB4.5/7,ML4.2/12,MLv4.0/12,Mw(mB)3.6/7,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.97**	**38**	S	Sn	13 37 02.1	-1.1
MXZ	**Matakaoa Point**	**5.18**	**189**	P	Pn	13 36 36.4	+2.0
MXZ				S	Sn	13 37 35.1	+2.1
WMGZ	**Waiomatatini S**	**5.42**	**187**	P	Pn	13 36 39.9	+2.1
WMGZ				S	Sn	13 37 40.3	+1.3
HAZ	**Te Kaha**	**5.45**	**193**	P	Pn	13 36 41.1	+2.9
PKGZ	**Pakihiroa**	**5.53**	**190**	P	Pn	13 36 41.6	+2.3
PKGZ				S	Sn	13 37 44.4	+2.6
RUGZ	**Raukumara Rang**	**5.67**	**193**	P	Pn	13 36 42.9	+1.6
RUGZ				S	Sn	13 37 44.4	-1.0
PUZ	**Puketiti**	**5.69**	**188**	P	Pn	13 36 40.7	-0.7
PUZ				S	Sn	13 37 45.0	-0.6
MWZ	**Matawai**	**6.06**	**193**	P	Pn	13 36 46.8	+0.3
MWZ				S	Sn	13 37 56.3	+1.5
URZ	**Urewera**	**6.08**	**196**	P	Pn	13 36 48.2	+1.4
URZ				S	Sn	13 37 56.4	+1.2
TKGZ	**Te Karaka**	**6.11**	**191**	P	Pn	13 36 47.2	+0.1
TKGZ				S	Sn	13 37 55.6	-0.2
MUGZ	**Murupara**	**6.37**	**198**	P	Pn	13 36 52.0	+1.2
RIGZ	**Rimuhau**	**6.38**	**191**	P	Pn	13 36 51.4	+0.5
SNGZ	**Shannon Statio**	**6.53**	**193**	P	Pn	13 36 53.1	+0.1
SNGZ				S	Sn	13 38 05.9	-0.5
MTHZ	**Maungataniwha**	**6.71**	**197**	P	Pn	13 36 55.7	+0.3
BKZ	**Black Stump Fm**	**7.09**	**198**	P	Pn	13 36 59.8	-0.9
KWHZ	**Kaweka Forest**	**7.35**	**198**	P	Pn	13 37 03.5	-0.8
KWHZ				S	Sn	13 38 26.8	+0.2
KRHZ	**Kereru**	**7.57**	**197**	P	Pn	13 37 05.1	-2.2
KRHZ				S	Sn	13 38 29.5	-2.5
KAHZ	**Kahuranaki**	**7.60**	**194**	P	Pn	13 37 05.4	-2.3
KAHZ				S	Sn	13 38 31.3	-1.4

*TAP **13** 13:39:35.0,24°.07N×122°.30E,h24km,ML3.0,D*

*JMA **13** 13:39:34.2±0.1,23°.97N×122°.30E,h14km±3km,M2.8*

ISC 13 13:39:34.1±1.1,23°.99N±0°.02×122°.27E±0°.02,h20km±5km, n89,σ0s64/161,4C-4D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.57**	**347**	⇓P	**Pg**	**13 39 45.5**	**0.0**
	baz=333						
EOS1				S	**Sb**	**13 39 53.0**	**0.0**
	baz=333						
TWD	**Chiawan**	**0.62**	**278⇑**	*iP*	**Pn**	**13 39 47.4**	**-0.3**
TWD	baz=271			*i* S	**Sn**	**13 39 56.6**	**-0.5**
	baz=271						
NACB	**Ninganchiao**	**0.64**	**286**	⇓P	**Pn**	**13 39 47.7**	**-0.3**
	baz=266						
NACB				S	**Sn**	**13 39 57.4**	**-0.2**
	baz=266						
ENA	**Nanau**	**0.65**	**312**	⇓*iP*	**Pg**	**13 39 46.9**	**0.0**
	baz=315						
ENA				S	**Sg**	**13 39 56.1**	**+0.5**
	baz=315						
TWC	**Suao**	**0.72**	**328**	⇓*iP*	**Pb**	**13 39 47.7**	**-0.3**
	baz=323						
TWC				*i* S	**Sb**	**13 39 55.6**	**-1.9**
	baz=323						
ETLH	**Xiulin Townshi**	**0.75**	**287**	P	**Pn**	**13 39 49.5**	**-0.1**
	baz=268						
ETLH				S	**Sn**	**13 40 00.5**	**+0.1**
	baz=268						
JYNG	**Yonagunijimaku**	**0.77**	**54**	P	**Pb**	**13 39 48.5**	**-0.3**
JYNG				S	**Sb**	**13 39 58.7**	**-0.1**
ESL	**Shilin**	**0.78**	**257**	*iP*	**Pg**	**13 39 49.6**	**+0.2**
	baz=244						
ESL				*eS*	**Sn**	**13 40 00.6**	**-0.6**
	baz=244						
YOJ	**Yonaguni jima**	**0.82**	**55**	P	**Pb**	**13 39 49.7**	**0.0**
YOJ				S	**Sb**	**13 40 00.4**	**0.0**
EGFH	**Guangfu**	**0.83**	**247**	*eP*	**Pn**	**13 39 51.0**	**+0.3**
	baz=233						
EGFH				*eS*	**Sn**	**13 40 03.1**	**+0.7**
	baz=233						
ILA	**Ilan**	**0.90**	**329**	*eP*	**Pb**	**13 39 51.2**	**+0.1**
	baz=323						
ILA				*eS*	**Sg**	**13 40 03.2**	**-0.4**
	baz=323						
ENTT	**Nioudou**	**0.91**	**315⇑**	*iP*	**Pg**	**13 39 51.8**	**0.0**
	baz=321						
ENTT				*i* S	**Sn**	**13 40 04.1**	**-0.2**
	baz=321						
TWE	**Neicheng**	**0.91**	**323⇑**	*iP*	**Pb**	**13 39 51.4**	**+0.3**
	baz=325						
TWE				*i* S	**Sg**	**13 40 03.8**	**0.0**
	baz=325						
NNSB	**Datong**	**0.92**	**298**	⇑P	**Pg**	**13 39 52.4**	**+0.4**
	baz=293						
NNSB				S	**Sn**	**13 40 04.4**	**-0.2**
	baz=293						
NNSH	**Datong**	**0.92**	**298**	P	**Pg**	**13 39 52.2**	**+0.3**
	baz=293						
NNSH				*eS*	**Sn**	**13 40 05.2**	**+0.6**
	baz=293						
NDT	**Datong Townshi**	**0.92**	**312**	P	**Pg**	**13 39 52.4**	**+0.4**
	baz=317						
NDT				S	**Sn**	**13 40 04.4**	**-0.1**
	baz=317						
HGSD	**Ruisui**	**0.92**	**237**	P	**Pg**	**13 39 52.3**	**+0.3**
	baz=235						
HGSD				S	**Sn**	**13 40 04.9**	**+0.4**
	baz=235						
WHF	**Hehuan Shan**	**0.93**	**280**	*iP*	**Pn**	**13 39 52.5**	**+0.1**
	baz=263						
WHF				*i* S	**Sn**	**13 40 05.5**	**+0.2**
	baz=263						
NNS	**Nan Shan**	**0.93**	**299**	*i* P	**Pg**	**13 39 52.4**	**+0.1**
	baz=293						
NNS				*i* S	**Sn**	**13 40 05.1**	**+0.1**
	baz=293						
NTC	**Toucheng**	**0.94**	**335**	*eP*	**Pb**	**13 39 52.0**	**+0.2**
	baz=330						
NTC				*eS*	**Sb**	**13 40 03.5**	**-0.4**
	baz=330						
SLBB	**Yuanshan**	**0.95**	**323**	P	**Pn**	**13 39 52.4**	**0.0**
	baz=318						
EHY	**Hungye**	**0.99**	**241**	P	**Pg**	**13 39 53.9**	**+0.5**
	baz=230						
EHY				S	**Sg**	**13 40 07.3**	**+0.8**
	baz=230						
OWD	**Renai**	**1.00**	**268**	*eP*	**Pn**	**13 39 53.2**	**+0.1**
	baz=264						
OWD				*eS*	**Sg**	**13 40 06.8**	**+0.1**
	baz=264						
CHGB	**Renai**	**1.00**	**274**	P	**Pn**	**13 39 53.4**	**+0.2**
	baz=258						
CHGB				S	**Sn**	**13 40 07.8**	**+0.9**
	baz=258						
TWB1	**Santiao Chiao**	**1.04**	**346**	*i* P	**Pn**	**13 39 53.7**	**+0.1**
	baz=341						
TWB1				S	**Sb**	**13 40 06.6**	**-0.1**
	baz=341						
TDCB	**Techi**	**1.04**	**285**	P	**Pg**	**13 39 54.7**	**+0.3**
	baz=269						
TDCB				S	**Sg**	**13 40 08.8**	**+0.5**
	baz=269						
NWLT	**Wulai**	**1.05**	**318**	*eP*	**Pn**	**13 39 53.9**	**+0.2**
	baz=322						
NWLT				*eS*	**Sn**	**13 40 07.6**	**-0.1**
	baz=322						
TIPB	**Shuangxi**	**1.05**	**338**	P	**Pg**	**13 39 54.3**	**-0.3**
	baz=333						
TIPB				*i* S	**Sb**	**13 40 06.9**	**-0.2**
	baz=333						
YHNB	**Yeheng**	**1.05**	**310**	*i* P	**Pg**	**13 39 54.5**	**-0.2**
	baz=293						
YHNB				S	**Sb**	**13 40 07.6**	**+0.4**
	baz=293						
VWDT	**VWDT**	**1.06**	**257**	P	**Pg**	**13 39 54.9**	**+0.2**
	baz=243						
VWDT				S	**Sg**	**13 40 09.3**	**+0.8**
	baz=243						
YULB	**Yu-li**	**1.07**	**236**	P	**Pg**	**13 39 54.5**	**-0.4**
	baz=250						
YULB				S	**Sg**	**13 40 08.8**	**-0.2**
	baz=250						
TWF1	**Yuli**	**1.09**	**235**	*i* P	**Pg**	**13 39 55.2**	**-0.1**
	baz=222						
TWF1				*i* S	**Sg**	**13 40 09.6**	**-0.1**
	baz=222						
NWF	**Wu-fen Shan**	**1.16**	**338**	*eP*	**Pn**	**13 39 55.4**	**+0.1**
	baz=333						
NWF				*i* S	**Sn**	**13 40 10.7**	**+0.1**
	baz=333						
WFSB	**Wu-fen Shan**	**1.16**	**338**	P	**Pb**	**13 39 55.6**	**+0.1**
	baz=333						
WFSB				*eS*	**Sg**	**13 40 11.5**	**-0.4**
	baz=333						
TWA	**Mucha**	**1.16**	**328**	P	**Pg**	**13 39 56.6**	**-0.1**
	baz=323						
TWA				S	**Sg**	**13 40 12.8**	**+0.8**
	baz=323						
NHDH	**Xindian Distri**	**1.18**	**325**	*eP*	**Pb**	**13 39 56.2**	**+0.4**
	baz=332						
NHDH				*eS*	**Sn**	**13 40 11.1**	**+0.2**
	baz=332						
FULB	**Fuli**	**1.19**	**229**	*eP*	**Pb**	**13 39 56.2**	**+0.2**
	baz=215						
FULB				S	**Sg**	**13 40 12.3**	**-0.5**
	baz=215						
CHKT	**Chengkung**	**1.21**	**223**	S	**Sb**	**13 40 11.2**	**-0.4**
	baz=211						
SSLB	**Suanglung**	**1.22**	**261**	P	**Pg**	**13 39 57.3**	**-0.4**
	baz=247						
SSLB				S	**Sg**	**13 40 14.2**	**+0.5**
	baz=247						
DPDB	**Guoxing**	**1.23**	**272**	P	**Pg**	**13 39 57.5**	**-0.3**
	baz=260						
DPDB				*eS*	**Sg**	**13 40 14.4**	**+0.5**
	baz=260						
WHP	**Taichung City**	**1.24**	**283**	*eP*	**Pg**	**13 39 58.5**	**+0.4**
	baz=268						
WHP				*eS*	**Sg**	**13 40 14.4**	**0.0**
	baz=268						
SMLT	**Sun Moon Lake**	**1.25**	**265**	*eP*	**Pb**	**13 39 57.3**	**+0.2**
	baz=262						
SMLT				S	**Sg**	**13 40 14.6**	**-0.2**
	baz=262						
WLTB	**Daxi**	**1.26**	**313**	*eS*	**Sg**	**13 40 15.1**	**+0.1**
	baz=296						
TYC	**Yuchr**	**1.29**	**266**	P	**Pb**	**13 39 58.3**	**+0.6**
	baz=263						
TYC				*eS*	**Sg**	**13 40 15.1**	**-0.9**
	baz=263						
YM01	**YM01**	**1.31**	**331**	*eP*	**Pn**	**13 39 57.5**	**+0.2**
	baz=343						
YM01				*eS*	**Sb**	**13

	baz=257							
WDLH				*e*S		**Sg**	**13 40 24.9**	**-1.3**
	baz=257							
STYT	**Tauyuan**	**1.61**	**239**	*e*P		**Pb**	**13 40 03.4**	**+0.2**
	baz=228							
STYT				*e*S		**Sb**	**13 40 23.2**	**0.0**
	baz=228							
PCYT	**Pengchaiyu**	**1.64**	**354**	*e*P		**Pn**	**13 39 59.8**	**-2.0**
	baz=335							
PCYT				*e*S		**Sb**	**13 40 23.2**	**-0.7**
	baz=335							
TPUB	**Ta-pu**	**1.65**	**246**	*e*P		**Pb**	**13 40 04.6**	**+0.8**
	baz=244							
TPUB				*e*S		**Sg**	**13 40 27.1**	**-0.3**
	baz=244							
CHN4	**Tsaushan**	**1.66**	**248**	*e*P		**Pg**	**13 40 05.4**	**-0.7**
	baz=246							
CHN4				*e*S		**Sg**	**13 40 27.3**	**-0.5**
	baz=246							
WTP	**Ta-pu**	**1.69**	**244**	*e*P		**Pb**	**13 40 05.1**	**+0.6**
	baz=243							
WTP				*e*S		**Sg**	**13 40 27.8**	**-0.8**
	baz=243							
JIJ	**Ishigaki jima**	**1.75**	**77**	P		**Pn**	**13 40 04.2**	**+0.8**
JIJ				*e*S		**Sn**	**13 40 25.4**	**+0.3**
TWK	**Hsinying**	**1.78**	**246**	*e*P		**Pb**	**13 40 06.3**	**+0.2**
	baz=245							
TWK				*e*S		**Sb**	**13 40 29.8**	**+1.6**
	baz=245							
CHN1	**Nanshi**	**1.79**	**244**	*e*P		**Pb**	**13 40 06.1**	**-0.1**
	baz=242							
CHN1				S		**Sb**	**13 40 29.0**	**+0.9**
	baz=242							
SLGT	**Liugui**	**1.79**	**237**	*e*P		**Pb**	**13 40 05.8**	**-0.3**
	baz=226							
SLGT				*e*S		**Sb**	**13 40 28.8**	**+0.6**
	baz=226							
SGST	**Jiashian**	**1.79**	**240**	*e*P		**Pn**	**13 40 04.6**	**+0.7**
	baz=239							
SGST				*e*S		**Sb**	**13 40 28.0**	**-0.2**
	baz=239							
SNST	**Tainan City**	**1.80**	**245**	*e*S		**Sg**	**13 40 31.0**	**-1.1**
	baz=244							
ECL	**Taimali**	**1.84**	**221**	*e*P		**Pn**	**13 40 05.8**	**+1.3**
	baz=222							
ECL				*e*S		**Sn**	**13 40 25.6**	**-1.6**
	baz=222							
SSD	**Sandimen**	**1.95**	**231**	*e*P		**Pb**	**13 40 07.8**	**-1.1**
	baz=224							
SSD				*e*S		**Sn**	**13 40 31.2**	**+1.3**
	baz=224							
JISG	**Ishigakijimahi**	**1.96**	**72**	P		**Pn**	**13 40 06.4**	**+0.3**
JISG				S		**Sn**	**13 40 29.7**	**-0.4**
CHN8	**Yiju**	**1.99**	**252**	*e*P		**Pb**	**13 40 09.5**	**-0.1**
	baz=250							
CHN8				S		**Sb**	**13 40 34.9**	**+0.9**
	baz=250							
MASBT	**Mashibuluo**	**2.04**	**228**	*e*P		**Pb**	**13 40 09.5**	**-0.9**
	baz=222							
MASBT				S		**Sb**	**13 40 33.9**	**-1.4**
	baz=222							
EAST	**Anshuo**	**2.07**	**219**	P		**Pn**	**13 40 08.0**	**+0.3**
	baz=220							
EAST				*e*S		**Sn**	**13 40 32.2**	**-0.7**
	baz=220							
SCZT	**Fangliau**	**2.21**	**224**	*e*P		**Pn**	**13 40 11.3**	**+1.6**
	baz=218							
SCZT				*e*S		**Sb**	**13 40 38.5**	**-1.9**
	baz=218							
JTJ	**Tarama**	**2.31**	**73**	P		**Pn**	**13 40 12.7**	**+1.6**
JTJ				*e*S		**Sn**	**13 40 39.8**	**+0.8**

*KRNET **13** 13:41:10.1±0.1, 41.57N×78.26E, h17km, mb3.5*
*SOME **13** 13:41:10.4, 41.57N×78.20E, h5km*
*NNC **13** 13:41:14.1±1.0, 41.68N×78.18E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=7.0km s-min=4.0km az=173.0*

ISC 13 13:41:14.4±1.5, 41.70N±0.05×78.08E±0.03, h1km±10km, n73, σ1$55/117, 31C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**0.21**	**278**	⇑*i*P		**Pg**	**13 41 17.5**	**-1.0**
	baz=95							
TARG				⇑*i*S		**Sg**	**13 41 22.9**	**+1.6**
	baz=95							
KDJ	**Kajisay**	**0.80**	**303**	⇑*i*P		**Pg**	**13 41 28.4**	**-1.3**
	baz=5.0							
KDJ				⇑*i*S		**Sg**	**13 41 41.9**	**+1.8**
	baz=5.0							
PRZ	**Przheval'sk**	**0.82**	**17**	⇑*i*P		**Pg**	**13 41 27.6**	**-2.5**
	baz=7.0							
PRZ				⇑*i*S		**Sg**	**13 41 40.4**	**-0.3**
	baz=7.0							
ANVS	**Anan'yevo**	**1.12**	**344**	⇑*i*P		**Pb**	**13 41 34.3**	**-2.5**
	baz=40							
ANVS				⇑*i*S		**Sg**	**13 41 51.7**	**+1.1**
	baz=40							
SATY	**Saty**	**1.38**	**10**	*e*P		**Pn**	**13 41 38.1**	**-2.8**
	22nm,0.1s							
SATY				*e*S		**Sb**	**13 41 58.0**	**-1.2**
	62nm,0.2s							
SATY	**Saty**	**1.38**	**10**	P		**Pn**	**13 41 39.2**	**-1.7**
	22nm,0.1s							
SATY				S		**Sb**	**13 41 57.0**	**-2.2**
	62nm,0.2s							
ULHL	**Ulahol**	**1.48**	**292**	⇑*i*P		**Pn**	**13 41 40.5**	**-1.8**
	baz=95							
ULHL				⇑*i*S		**Sb**	**13 42 02.7**	**+0.6**
	baz=95							
ULHL	**Ulahol**	**1.48**	**292**	P		**Pn**	**13 41 40.5**	**-1.8**
	SNR=28							
TNSS	**Tian-Shan**	**1.58**	**328**	*e*P		**Pn**	**13 41 43.0**	**-0.9**
	35nm,0.1s							
TNSS				*e*S		**Sg**	**13 42 06.4**	**+1.2**
	115nm,0.3s							
TNSS	**Tian-Shan**	**1.58**	**328**	P		**Pn**	**13 41 43.3**	**-0.7**
	35nm,0.1s							
TNSS				S		**Sn**	**13 42 04.2**	**-1.0**
	115nm,0.3s							
UZB	**Uzynbulak**	**1.60**	**25**	*e*P		**Pg**	**13 41 44.8**	**-0.3**
	42nm,0.4s							
UZB				*e*S		**Sg**	**13 42 10.2**	**+4.3**
	220nm,0.2s							
UZB	**Uzynbulak**	**1.60**	**25**	P		**Pg**	**13 41 45.0**	**-0.1**
	14nm,0.2s							
UZB				S		**Sg**	**13 42 07.0**	**+1.1**
	220nm,0.2s							
MDOK	**Medeo**	**1.65**	**333**	*e*P		**Pn**	**13 41 44.5**	**-0.2**
	56nm,0.1s							
MDOK				*e*S		**Sg**	**13 42 08.5**	**+1.1**
	154nm,0.4s							
MDOK	**Medeo**	**1.65**	**333**	⇑P		**Pn**	**13 41 44.0**	**-0.7**
	41nm,0.4s							
MDOK				⇓S		**Sg**	**13 42 08.5**	**+1.1**
	103nm,0.5s							
MDOK	**Medeo**	**1.65**	**333**	Pg		**Pb**	**13 41 45.5**	**-0.2**
	56nm,0.1s							
MDOK				Lg		Lg	13 42 08.2	
	154nm,0.4s							
KOTS	**Kotyrbulak**	**1.69**	**335**	*e*P		**Pn**	**13 41 45.2**	**0.0**
	155nm,0.2s							
KOTS				*e*S		**Sg**	**13 42 10.1**	**+1.4**
	392nm,0.3s							
KOTS	**Kotyrbulak**	**1.69**	**335**	P		**Pb**	**13 41 46.7**	**+0.3**
	155nm,0.2s							
KOTS				S		**Sg**	**13 42 10.1**	**+1.4**
	392nm,0.3s							
IZV	**Izvestkoviy**	**1.72**	**321**	*e*P		**Pn**	**13 41 45.8**	**+0.1**
	25nm,0.2s							
IZV				*e*S		**Sg**	**13 42 11.4**	**+1.6**
	152nm,0.4s							
IZV	**Izvestkoviy**	**1.72**	**321**	P		**Pb**	**13 41 46.8**	**-0.1**
	25nm,0.2s							
IZV				S		**Sb**	**13 42 09.9**	**+0.8**
	152nm,0.4s							
KNDC	**Almaty**	**1.73**	**332**	⇓Pn		**Pb**	**13 41 46.0**	**-1.0**
	86nm,0.8s							
KNDC				⇓Sn		**Sg**	**13 42 10.9**	**+1.1**
	134nm,0.5s							
AAA	**Alma-Ata**	**1.74**	**331**	*e*P		**Pb**	**13 41 46.5**	**-0.6**
	64nm,0.2s							
AAA				*e*S		**Sg**	**13 42 12.3**	**+2.1**
	213nm,0.3s							
AAA	**Alma-Ata**	**1.74**	**331**	P		**Pg**	**13 41 48.1**	**+0.4**
	64nm,0.2s							
AAA				S		**Sg**	**13 42 12.3**	**+2.1**
	213nm,0.3s							
SHLS	**Shalkode**	**1.78**	**35**	*e*P		**Pg**	**13 41 50.1**	**+1.6**
	187nm,0.2s							
SHLS				*e*S		**Sg**	**13 42 19.1**	**+7.6**
	492nm,0.6s							
SHLS	**Shalkode**	**1.78**	**35**	Pg		**Pg**	**13 41 49.8**	**+1.4**
	187nm,0.2s							
SHLS				Lg		Lg	13 42 15.4	
	492nm,0.6s							
BOOM	**Boomskoye usch**	**1.78**	**297**	⇑*i*P		**Pn**	**13 41 45.6**	**-0.9**
	baz=99							
BOOM				⇑*i*S		**Sb**	**13 42 11.7**	**+0.9**
	baz=99							
KURS	**Kuram**	**1.79**	**2**	*e*P		**Pb**	**13 41 46.4**	**-1.6**
	32nm,0.2s							
KURS				*e*S		**Sg**	**13 42 11.9**	**+0.1**
	81nm,0.3s							
KPKS	**Kokpek**	**1.82**	**14**	*e*P		**Pn**	**13 41 45.9**	**-1.0**
	60nm,0.1s							
KPKS				*e*S		**Sg**	**13 42 13.2**	**+0.4**
	446nm,0.1s							
MTBS	**Maitube**	**1.88**	**320**	*e*P		**Pb**	**13 41 49.1**	**-0.5**
	18nm,0.1s							
MTBS				*e*S		**Sg**	**13 42 16.3**	**+1.4**
	115nm,0.3s							
MTBS	**Maitube**	**1.88**	**320**	Pg		**Pb**	**13 41 50.3**	**+0.7**
	18nm,0.1s							
MTBS				Lg		Lg	13 42 16.3	
	115nm,0.3s							
PDGK	**Podgornoye**	**1.93**	**32**	⇑Pn		**Pn**	**13 41 46.5**	**-2.0**
	19nm,0.3s							
PDGK				⇑Lg		Lg	13 42 16.3	
	348nm,0.6s							
KST	**Kastek**	**2.06**	**311**	*e*P		**Pn**	**13 41 51.3**	**+0.9**
	49nm,0.3s							
KST				*e*S		**Sg**	**13 42 21.8**	**+1.1**
	302nm,0.4s							
KST	**Kastek**	**2.06**	**311**	Pg		**Pb**	**13 41 53.8**	**+1.0**
	49nm,0.3s							
KST				Lg		Lg	13 42 22.1	
	302nm,0.4s							
KZA	**Kyzart**	**2.15**	**281**	⇑*e*P		**Pn**	**13 41 50.7**	**-1.1**
	baz=84							
KZA				⇑*i*S		**Sn**	**13 42 20.3**	**+1.0**
	baz=84							
KZA	**Kyzart**	**2.15**	**281**	P		**Pn**	**13 41 52.3**	**+0.5**
	SNR=15							
TKM2	**Tokmak 2**	**2.21**	**304**	⇑*i*P		**Pn**	**13 41 51.9**	**-0.5**
	baz=5.0							
TKM2				⇑*i*S		**Sb**	**13 42 22.3**	**-1.0**
	baz=5.0							
TKM2	**Tokmak 2**	**2.21**	**304**	P		**Pb**	**13 41 53.9**	**-1.4**
	SNR=79							
TKM2	**Tokmak 2**	**2.21**	**304**	⇑Pn		**Pn**	**13 41 53.2**	**+0.8**
	17nm,0.3s							
TKM2				⇓Lg		Lg	13 42 26.5	
	66nm,0.7s							
KTBS	**Karatobe**	**2.26**	**333**	*e*P		**Pb**	**13 41 55.1**	**-0.9**
	38nm,0.2s							
KTBS				*e*S		**Sg**	**13 42 27.3**	**+0.3**
	555nm,0.4s							
KTBS	**Karatobe**	**2.26**	**333**	Pg		**Pb**	**13 41 56.8**	**+0.8**
	38nm,0.2s							
KTBS				Lg		Lg	13 42 27.3	
	555nm,0.4s							
CHKK	**Chushkaly**	**2.30**	**340**	*e*P		**Pb**	**13 41 55.5**	**-1.2**
	22nm,0.2s							
CHKK				*e*S		**Sg**	**13 42 28.3**	**+0.1**
	302nm,0.4s							
CHKK	**Chushkaly**	**2.30**	**340**	Pg		**Pb**	**13 41 57.5**	**+0.9**
	22nm,0.2s							
CHKK				Lg		Lg	13 42 28.3	
	302nm,0.4s							
DGS	**Degeres**	**2.30**	**313**	*e*P		**Pb**	**13 41 56.1**	**-0.7**
	22nm,0.3s							
DGS				*e*S		**Sg**	**13 42 28.8**	**+0.5**
	298nm,0.6s							
DGS	**Degeres**	**2.30**	**313**	Pg		**Pb**	**13 41 57.7**	**+1.0**
	22nm,0.3s							
DGS				Lg		Lg	13 42 28.8	
	298nm,0.6s							
KTMS	**Ketmen**	**2.42**	**43**	*e*P		**Pb**	**13 41 55.4**	**-3.4**
	24nm,0.2s							
KTMS				*e*S		**Sb**	**13 42 28.1**	**-1.0**
	140nm,0.3s							
KTMS	**Ketmen**	**2.42**	**43**	Pg		**Pb**	**13 41 57.4**	**-1.4**
	24nm,0.2s							
KTMS				Lg		Lg	13 42 28.1	
	140nm,0.3s							
ARXS	**Arharly**	**2.52**	**356**	*e*P		**Pb**	**13 41 58.3**	**-2.1**
	88nm,0.3s							
ARXS				*e*S		**Sg**	**13 42 34.1**	**-1.1**
	219nm,0.5s							
ARXS	**Arharly**	**2.52**	**356**	Pg		**Pb**	**13 42 00.8**	**+0.3**
	88nm,0.3s							
ARXS				Lg		Lg	13 42 34.1	
	219nm,0.5s							
KBK	**Karagaybulak**	**2.52**	**293**	⇑*i*P		**Pn**	**13 41 56.0**	**-0.6**
	baz=95							
KBK				⇑*i*S		**Sn**	**13 42 29.5**	**+1.4**
	baz=95							
KBK	**Karagaybulak**	**2.52**	**293**	P		**Pb**	**13 41 59.4**	**-1.2**
	SNR=14							
KUU	**Kurty**	**2.54**	**330**	*e*P		**Pb**	**13 41 59.8**	**-1.0**
	27nm,0.3s							
KUU				*e*S		**Sg**	**13 42 35.4**	**-0.6**
	201nm,0.3s							
KUU	**Kurty**	**2.54**	**330**	Pg		**Pb**	**13 42 01.4**	**+0.6**
	27nm,0.3s							
KUU				Lg		Lg	13 42 35.4	
	201nm,0.3s							
KRBS	**Karabastau**	**2.67**	**319**	*e*P		**Pb**	**13 42 01.6**	**-1.4**
	18nm,0.3s							
KRBS				*e*S		**Sg**	**13 42 39.4**	**-0.8**
	53nm,0.5s							
KRBS	**Karabastau**	**2.67**	**319**	Pg		**Pb**	**13 42 03.8**	**+0.8**
	18nm,0.3s							
KRBS				Lg		Lg	13 42 39.4	
	53nm,0.5s							
UCH	**Uchtor**	**2.71**	**282**	P		**Pb**	**13 42 03.3**	**-0.7**
	SNR=18							
CHMS	**Chumysh**	**2.79**	**299**	⇑*i*P		**Pn**	**13 41 59.8**	**-0.4**
	baz=0.0							
CHMS				⇑*i*S		**Sn**	**13 42 36.3**	**+1.8**
	baz=0.0							
CHMS	**Chumysh**	**2.79**	**299**	P		**Pb**	**13 42 03.0**	**-2.1**
	SNR=7.9							
AAK	**Ala-Archa**	**2.83**	**291**	⇓*i*P		**Pn**	**13 42 00.2**	**-0.7**
	baz=92							
AAK				⇓*i*S		**Sn**	**13 42 36.8**	**+1.1**
	baz=92							
AAK	**Ala-Archa**	**2.83**	**291**	P		**Pb**	**13 42 04.2**	**-1.6**
	SNR=8.4							
AAK	**Ala-Archa**	**2.83**	**291**	⇑Pg		**Pb**	**13 42 04.4**	**-1.4**
	6.5nm,0.4s							
AAK				⇑Lg		Lg	13 42 44.8	
	42nm,0.7s							
DJR	**Jarkent**	**2.91**	**25**	*e*P		**Pb**	**13 42 04.2**	**-3.0**
	20nm,0.2s							
DJR				*e*S		**Sb**	**13 42 43.5**	**+0.2**
	185nm,0.4s							
DJR	**Jarkent**	**2.91**	**25**	Pg		**Pb**	**13 42 06.3**	**-0.9**
	20nm,0.2s							
DJR				Lg		Lg	13 42 43.5	
	185nm,0.4s							
AML	**Almayashu**	**3.30**	**279**	P		**Pb**	**13 42 14.2**	**+0.1**
	SNR=18							
TDK	**Taldyqorghan**	**3.31**	**4**	*e*P		**Pb**	**13 42 12.0**	**-1.8**
	22nm,0.2s							
TDK				*e*S		**Sb**	**13 42 56.9**	**+2.3**
	158nm,0.3s							
TDK	**Taldyqorghan**	**3.31**	**4**	Pg		**Pb**	**13 42 14.2**	**+0.3**
	22nm,0.2s							
TDK				Lg		Lg	13 42 56.9	
	158nm,0.3s							
KAPS	**Kapalarasan**	**3.70**	**14**	*e*P		**Pb**	**13 42 17.5**	**-3.1**
	3.3nm,0.3s							
KAPS				*e*S		**Sb**	**13 43 07.4**	**+1.5**
	43nm,0.5s							
KAPS	**Kapalarasan**	**3.70**	**14**	Pg		**Pb**	**13 42 20.6**	**0.0**
	3.3nm,0.3s							
KAPS				Lg		Lg	13 43 07.9	
	43nm,0.5s							
MRKS	**Merke**	**3.75**	**288**	*e*P		**Pb**	**13 42 22.2**	**+0.6**
	7.9nm,0.2s							
MRKS				*e*S		**Sg**	**13 43 14.9**	**-0.1**
	19nm,0.3s							
MRKS	**Merke**	**3.75**	**288**	Pg		**Pg**	**13 42 24.7**	**-1.7**
	7.9nm,0.2s							
MRKS				Lg		Lg	13 43 14.9	
	19nm,0.3s							
KK31	**Karatay Array**	**5.78**	**287**	Pg		**Pb**	**13 42 58.3**	**+2.3**
	0.9nm,0.4s,baz=97,slow=16,SNR=13							
KK31				Lg		Lg	13 44 20.3	
	6.9nm,0.7s,baz=106,slow=31,SNR=11							
MAKZ	**Makanchi**	**5.82**	**27**	⇓Pn		**Pn**	**13 42 40.9**	**-0.9**
	0.8nm,0.5s							
MAKZ				⇓Pg		**Pb**	**13 42 58.6**	**+2.0**
	1.3nm,0.6s							
MAKZ				⇑Sn		**Sn**	**13 43 48.9**	**-0.3**
	1.5nm,0.4s							
MAKZ				⇓Lg		Lg	13 44 19.3	
	8.1nm,1.1s							
MK31	**Makanchi Array**	**5.92**	**29**	Pn		**Pn**	**13 42 43.4**	**+0.2**
	0.7nm,0.4s,baz=201,slow=12,SNR=24							
MK31				⇑Pg		**Pb**	**13 43 00.1**	**+1.7**
	1.9nm,0.6s,baz=294,slow=19,SNR=4.1							
MK31				⇑Sn		**Sn**	**13 43 52.3**	**+0.6**
	4.6nm,0.6s,baz=208,slow=19,SNR=8.7							
MK31				⇑Lg		Lg	13 44 22.5	
	5.8nm,0.5s							
OTUK	**Ortayu**	**7.71**	**330**	⇑Lg		Lg	13 45 27.4	
	24nm,1.2s							
KURBB	**Kurchatov Arra**	**8.93**	**2**	⇓Lg		Lg	13 45 58.3	
	10nm,0.8s							

AUST 13 13:51:00.3±1.3, 28.33S×122.34E, h9km±8km, Error ellipse: s-maj=6.0km s-min=3.5km az=12.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KMBL	**Kambalda**	**3.05**	**187**	P		**Pn**	**13 51 49.7**	**+0.8**
	baz=3.1							
KMBL				S		Sn	13 52 27.5	+1.9
	baz=3.1							
MEEK	**Meekatharra**	**3.71**	**296**	P		Pb	13 52 02.7	-3.5
	baz=3.7							
MEEK				S		Sn	13 52 43.5	+1.6
	baz=3.7							
KLBR	**Kellerberrin**	**5.14**	**230**	P		Pn	13 52 17.6	+0.1
	baz=5.1							
KLBR				S		Sn	13 53 19.3	+2.3
	baz=5.1							
BLDU	**Ballidu**	**5.41**	**244**	P		Pn	13 52 21.1	-0.2
	baz=5.4							
BLDU				S		Sn	13 53 23.6	-0.1
	baz=5.4							
FORT	**Forrest**	**5.55**	**117**	P		Pn	13 52 23.5	+0.4
	baz=5.5							
FORT				S		Sn	13 53 27.4	+0.3
	baz=5.5							
NWAO	**Narrogin (SRO)**	**6.35**	**223**	P		Pn	13 52 33.7	-0.5
	baz=6.4							
MUN	**Mundaring**	**6.43**	**234**	P		Pn	13 52 34.8	-0.5
	baz=6.4							
MUN				S		Sn	13 53 49.2	+0.3
	baz=6.4							

*ISK **13** 14:08:41.3, 34.75N×26.41E, h86km, ML3.5/20*
*THE **13** 14:08:41.3, 34.44N×26.40E, h0km±3km, ML2.8/5, Error ellipse: s-maj=5.9km s-min=1.5km az=144.0*
*IDC **13** 14:08:46.0±1.9, 34.66N×26.32E, h71km±17km, mb3.4/8, mb1 3.5/11, mb1mx3.3/49, mbtmp3.6/11, MS2.6/3, Ms1 2.6/3, ms1mx2.3/37, Error ellipse: s-maj=25.9km s-min=18.4km az=16.0*
*HLW **13** 14:08:45.1, 34.20N×26.64E, h31km±18km, Ml3.6*

ISC 13 14:08:42.5±1.0, 34.47N±0.04×26.44E±0.04, h48km±11km, n54, σ1$92/58, mb3.6/8, Crete

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZKR	**Zakros**	**0.67**	**344**	P		**Pn**	**14 08 55.1**	**-0.7**
ZKR				S		**Sn**	**14 09 06.1**	**+0.7**
	1μm,0.5s							
ZKR	**Zakros**	**0.67**	**344**	PG		**Pn**	**14 08 55.3**	**-0.5**
ZKR				SG		**Sn**	**14 09 05.9**	**+0.5**
STIA	**Sitia Lasithi**	**0.79**	**339**	P		**Pn**	**14 08 57.1**	**-0.2**
FRMA	**Ierapetra Chan**	**0.80**	**313**	P		**Pn**	**14 08 55.6**	**-1.9**
FRMA				S		**Sn**	**14 09 08.5**	**+0.2**
	560nm,0.5s							
NPS	**Neapolis**	**1.04**	**320**	P		**Pn**	**14 09 01.0**	**+0.2**
LAST	**Lasithi**	**1.05**	**311**	P		**Pn**	**14 09 00.8**	**-0.2**
LAST				S		**Sn**	**14 09 17.4**	**+2.8**
	522nm,0.7s							
KARP	**Karpathos**	**1.23**	**29**	P		**Pn**	**14 09 05.6**	**+2.3**
HRKL	**Herakleio**	**1.39**	**308**	PN		**Pn**	**14 09 04.5**	**-0.9**
KSTL	**Kastelli Herak**	**1.40**	**307**	P		**Pn**	**14 09 03.9**	**-1.7**
SIVA	**Sivas**	**1.45**	**293**	P		**Pn**	**14 09 07.8**	**+1.5**
SIVA				S		**Sn**	**14 09 30.7**	**+6.5**
	730nm,0.6s							
IDI	**Anoyia**	**1.52**	**303**	P		**Pn**	**14 09 07.9**	**+0.6**
IDI				S		**Sn**	**14 09 26.6**	**+0.7**
	200nm,0.5s							
IDI	**Anoyia**	**1.52**	**303**	P		**Pn**	**14 09 07.8**	**+0.6**
	4.0nm,0.3s,baz=128,slow=16,SNR=25							
IDI				S		**Sn**	**14 09 26.1**	**+0.2**
	20nm,0.3s,baz=169,slow=22,SNR=7.6							
SANT	**Santorini**	**2.06**	**337**	PN		**Pn**	**14 09 11.7**	**-3.0**
THT2	**Imerovigli**	**2.13**	**337**	PN		**Pn**	**14 09 12.9**	**-2.8**
ARG	**Arkhangelos**	**2.22**	**38**	PN		**Pn**	**14 09 14.3**	**-2.6**
IMMV	**Iera Moni Meta**	**2.25**	**297**	PN		**Pn**	**14 09 16.0**	**-1.3**
DAT	**Datca**	**2.44**	**22**	PN		**Pn**	**14 09 16.9**	**-3.1**
RODP	**Rodopos**	**2.46**	**297**	PN		**Pn**	**14 09 18.7**	**-1.4**
APE	**Apeiranthos**	**2.70**	**344**	PN		**Pn**	**14 09 20.3**	**-3.2**
DALY	**Dalyan (Mula)**	**2.96**	**37**	PN		**Pn**	**14 09 25.0**	**-1.9**
TURN	**Turunc**	**2.98**	**36**	PN		Pn	14 09 21.9	-5.3
YER	**Yerkesik**	**3.05**	**29**	PN		**Pn**	**14 09 25.8**	**-2.5**
AKAS	**Kas**	**3.13**	**55**	PN		**Pn**	**14 09 28.6**	**-0.9**
SLUM	**Salum**	**3.14**	**200**	P		**Pn**	**14 09 29.5**	**0.0**
	baz=205							
SLUM				AMP			14 10 00.0	
	baz=205							
SLUM				S		**Sn**	**14 10 02.1**	**-3.7**
	baz=205							
KTHA	**Kythira Island**	**3.29**	**304**	PN		**Pn**	**14 09 29.9**	**-1.6**
ELL	**Elmali**	**3.63**	**50**	PN		**Pn**	**14 09 34.7**	**-1.6**
CHOS	**Chios island**	**3.92**	**356**	PN		**Pn**	**14 09 37.1**	**-3.2**
ITM	**Ithomi**	**4.56**	**308**	PN		**Pn**	**14 09 46.5**	**-2.4**
GAZI	**Gazipasa**	**5.12**	**68**	PN		**Pn**	**14 09 55.7**	**-0.9**
SWA2		**5.28**	**189**	P		**Pn**	**14 09 58.6**	**-0.2**
	baz=192							
SWA2				AMP			14 10 00.0	
	baz=192							
SWA2				S		Sn	14 10 53.6	-4.7
	baz=192							
LEF	**Lefka**	**5.35**	**81**	PN		**Pn**	**14 09 59.2**	**-0.6**
CSS	**Mathiatis**	**5.70**	**83**	PN		**Pn**	**14 10 04.2**	**-0.4**
TEKE	**Tekeli-Mersin**	**5.71**	**71**	PN		**Pn**	**14 10 04.3**	**-0.4**
BERE	**Bereket-Mersin**	**5.85**	**69**	PN		**Pn**	**14 10 05.9**	**-0.9**
AKKU	**Akkuyu-Mersin**	**6.05**	**72**	PN		**Pn**	**14 10 08.3**	**-1.1**
IKL	**Isikli**

0.2nm,0.5s,baz=33,slow=9.6,SNR=2.1
ARCES ARCESS Array B 35.12 359 P P 14 15 30.2 -0.8
1.9nm,0.8s,baz=173,slow=8.2,SNR=6.9
MKAR Makanchi Array 43.28 56 P P 14 16 41.2 +1.8
0.7nm,0.6s,baz=279,slow=6.1,SNR=10
ZALV Zalesovo Beam 44.73 46 P P 14 16 52.0 +1.2
0.4nm,0.4s,baz=270,slow=12,SNR=2.0
YKA Yellowknife Ar 78.43 343 P P 14 20 38.4 +0.6
0.2nm,0.6s,baz=29,slow=5.9,SNR=2.5

*JMA **13** 14:23:55.7±0.8, 34°.43N×141°.65E, h26km, M2.6*
*IDC **13** 14:23:55.4±2.5, 34°.45N×141°.61E, h0km, mb3.4/2, mb1 3.5/5, mb1mx3.3/53, mbtmp3.5/5, ML2.4/2, Error ellipse: s-maj=42.6km s-min=26.5km az=56.0*
ISC 13 14:23:57.0±1.2, 34°.45N±0°.07×141°.63E±0°.09, h27km, n17, σ1§78/13, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.57**	**291**	P		**Pb**		**14 24 07.3**	**-0.8**
BSO3	**Boso 3**	**0.98**	**291**	P		**Pn**		**14 24 14.2**	**-0.6**
BSO4	**Boso 4**	**1.19**	**297**	P		**Pn**		**14 24 17.9**	**+0.2**
JKUC	**kamogawauchiur**	**1.37**	**301**	P		**Pn**		**14 24 20.2**	**-0.1**
JMKN	**Mikurajimanish**	**1.78**	**252**	P		**Pn**		**14 24 26.5**	**+0.6**
JHJ	**Hachijo jima 2**	**2.03**	**230**	Pn		**Pb**		**14 24 31.2**	**-2.0**
	7.5nm,0.3s,baz=1.6,slow=22,SNR=8.7								
JHJ				Sn		**Sb**		**14 24 56.8**	**-1.2**
	13nm,0.3s,baz=230,slow=21,SNR=1.5								
MJAR	**Matsushiro Arr**	**3.48**	**308**	Pn		**Pn**		**14 24 51.0**	**+1.6**
	0.2nm,0.3s,baz=51,slow=29,SNR=7.2								
MJAR				Sn		**Sn**		**14 25 31.0**	**+1.3**
	0.1nm,0.3s,baz=137,slow=13,SNR=1.8								
JCJ	**Chichijima**	**7.35**	**176**	Pn		**Pn**		**14 25 43.8**	**+1.2**
	4.0nm,0.3s,baz=303,slow=23,SNR=1.6								
ASAJ	**Asahikawa**	**9.68**	**4**	Pn		**Pn**		**14 26 11.5**	**-3.0**
	0.2nm,0.3s,baz=298,slow=30,SNR=1.6								
H11N2	**WAKE ISLAND Hy**	**26.76**	**117**	T		T		14 57 41.9	
	baz=309,slow=75,SNR=7.1								
H11N1	**WAKE ISLAND Hy**	**26.76**	**117**	T		T		14 57 40.8	
	baz=309,slow=75,SNR=7.9								
H11N3	**WAKE ISLAND Hy**	**26.77**	**117**	T		T		14 57 43.7	
	baz=309,slow=75,SNR=8.6								
H11S3	**WAKE ISLAND Hy**	**27.38**	**119**	T		T		14 58 35.8	
	baz=312,slow=75,SNR=8.9								
H11S1	**WAKE ISLAND Hy**	**27.39**	**119**	T		T		14 58 37.1	
	baz=312,slow=75,SNR=8.5								
H11S2	**WAKE ISLAND Hy**	**27.40**	**119**	T		T		14 58 36.9	
	baz=312,slow=75,SNR=7.0								
WRA	**Warramunga Arr**	**54.53**	**188**	P		**P**		**14 33 24.6**	**+1.9**
	0.5nm,0.8s,baz=2.2,slow=7.6,SNR=5.4								
ASAR	**Alice Springs**	**56.26**	**188**	P		**P**		**14 33 51.7**	**+2.5**
	0.2nm,0.8s,baz=1.1,slow=4.9,SNR=2.1								

*BJI **13** 14:31:55.0±0.0, 31°.10S×178°.70W, h200km, mB5.1/6, mb5.0/10*
*NEIC **13** 14:31:60.0±2.2, 30°.66S±0°.09×179°.0W±0°.1, h223km±5km, mb4.8/41, Error ellipse: s-maj=18.0km s-min=11.0km az=114.0*
*IDC **13** 14:32:00.7±0.7, 30°.56S×179°.00W, h224km±6km, mb4.1/10, mb1 4.3/10, mb1mx4.1/22, mbtmp4.6/10, Error ellipse: s-maj=17.0km s-min=13.1km az=132.0*
ISC 13 14:31:57.7±0.4, 30°.92S±0°.04×179°.01W±0°.08, h200km, n158, σ2§01/139, mb4.8/29, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.90**	**30**	P		**Pn**		**14 32 37.3**	**+2.0**
GLKZ				S		**Sn**		**14 33 05.7**	**+1.3**
RAO	**Raoul Island**	**1.91**	**30**	P		**Pn**		**14 32 37.0**	**+1.6**
	573nm,0.3s,baz=50,slow=21,SNR=29								
RAO				S		**Sn**		**14 33 06.5**	**+1.9**
	1µm,0.3s,baz=72,slow=19,SNR=8.3								
RAO	**Raoul Island**	**1.91**	**30**			**Pn**		**14 32 36.7**	**+1.4**
RIZ	**Raoul Island**	**1.91**	**30**	P		**Pn**		**14 32 37.3**	**+1.9**
RIZ				S		**Sn**		**14 33 07.1**	**+2.4**
MXZ	**Matakaoa Point**	**6.99**	**198**	P		**Pn**		**14 33 38.1**	**+0.4**
MXZ				S		**Sn**		**14 34 56.1**	**-1.1**
MXZ	**Matakaoa Point**	**6.99**	**198**			**Pn**		**14 33 37.6**	**-0.1**
WMGZ	**Waiomatatini S**	**7.21**	**196**	P		**Pn**		**14 33 40.3**	**-0.2**
WMGZ				S		**Sn**		**14 35 00.9**	**-1.3**
KUZ	**Kuaotunu**	**7.28**	**216**	P		Pn		14 33 47.3	+5.9
HAZ	**Te Kaha**	**7.32**	**200**	P		**Pn**		**14 33 42.5**	**+0.5**
HAZ				S		**Sn**		**14 35 07.5**	**+2.6**
PUZ	**Puketiti**	**7.48**	**197**	P		**Pn**		**14 33 43.4**	**-0.8**
PUZ				S		**Sn**		**14 35 08.8**	**-0.1**
OUZ	**Omahuta**	**7.54**	**233**			Pn		14 33 50.9	+5.9
CNGZ	**Carnagh Statio**	**7.89**	**196**	P		**Pn**		**14 33 48.7**	**-0.7**
CNGZ				S		**Sn**		**14 35 17.1**	**-1.3**
MWZ	**Matawai**	**7.93**	**200**	P		**Pn**		**14 33 49.1**	**-0.9**
MWZ				S		**Sn**		**14 35 17.6**	**-1.9**
URZ	**Urewera**	**7.99**	**203**	P		**Pn**		**14 33 50.0**	**-0.7**
	7.2nm,0.3s,baz=278,slow=4.0,SNR=68								
URZ				S		**Sn**		**14 35 19.0**	**-1.8**
	108nm,0.3s,baz=298,slow=23,SNR=17								
URZ	**Urewera**	**7.99**	**203**			**Pn**		**14 33 49.6**	**-1.1**
BKZ	**Black Stump Fm**	**9.02**	**203**			Pn		14 34 01.9	-2.2
HIZ	**Hauiti**	**9.10**	**212**			**Pn**		**14 34 07.8**	**+2.6**
TRVZ	**Turoa**	**9.47**	**207**	P		**Pn**		**14 34 11.9**	**+1.6**
TRVZ				S		**Sn**		**14 35 57.0**	**+0.7**
PKVZ	**Pokaka**	**9.54**	**207**	P		**Pn**		**14 34 11.8**	**+0.8**
PKVZ				S		**Sn**		**14 35 57.3**	**-0.4**
MTVZ	**Mangateitei**	**9.58**	**207**	P		**Pn**		**14 34 12.3**	**+0.8**
MTVZ				S		**Sn**		**14 36 01.3**	**+2.7**
VRZ	**Vera Road**	**9.65**	**210**	P		**Pn**		**14 34 14.1**	**+1.8**
WPHZ	**Waipukurau**	**9.85**	**201**	P		**Pn**		**14 34 13.3**	**-1.6**
WPHZ				S		**Sn**		**14 36 01.9**	**-3.1**
PKE	**Pukeiti**	**10.05**	**213**	P		**Pn**		**14 34 20.1**	**+2.5**
LREZ	**Lake Rotokare**	**10.08**	**210**	P		**Pn**		**14 34 18.7**	**+0.8**
LREZ				S		**S**		**14 36 14.7**	**+3.8**
WAZ	**Wanganui**	**10.09**	**207**	P		**Pn**		**14 34 16.4**	**-1.6**
WAZ				S		**Sn**		**14 36 08.0**	**-2.6**
DVHZ	**Dannevirke**	**10.15**	**201**	P		Pn		14 34 16.2	-2.6
DVHZ				S		**Sn**		**14 36 07.4**	**-4.7**
ANWZ	**Angora Road**	**10.20**	**200**	P		Pn		14 34 16.8	-2.6
ANWZ				S		**Sn**		**14 36 11.1**	**-2.2**
POWZ	**Post Office Ro**	**10.36**	**203**	P		**Pn**		**14 34 19.4**	**-2.2**
POWZ				S		**Sn**		**14 36 15.0**	**-2.2**
PRWZ	**Pori Road**	**10.44**	**202**	P		Pn		14 34 20.0	-2.6
PRWZ				S		**Sn**		**14 36 15.1**	**-3.9**
BFZ	**Birch Farm**	**10.47**	**200**	P		Pn		14 34 19.0	-4.0
BFZ				S		Sn		14 36 14.6	-5.2
BFZ	**Birch Farm**	**10.47**	**200**			Pn		14 34 18.8	-4.2
MRZ	**Mangatainoka R**	**10.66**	**203**	P		Pn		14 34 21.2	-4.2
MRZ				S		Sn		14 36 18.1	-6.3
TIWZ	**Tintock**	**10.67**	**201**	P		Pn		14 34 22.1	-3.4
TIWZ				S		**Sn**		**14 36 20.4**	**-4.2**
CPWZ	**Castlepoint**	**10.70**	**200**	P		**Pn**		**14 34 25.1**	**-0.7**
CPWZ				S		**Sn**		**14 36 21.6**	**-3.5**
HOWZ	**Holdsworth Sta**	**10.90**	**202**	P		Pn		14 34 24.0	-4.5
HOWZ				S		Sn		14 36 20.5	-10
OGWZ	**Otaki Gorge**	**10.94**	**204**	P		Pn		14 34 24.9	-4.1
OGWZ				S		Sn		14 36 24.9	-6.2
TMWZ	**Te Maipa**	**10.97**	**201**	P		Pn		14 34 25.1	-4.3
TMWZ				S		Sn		14 36 25.1	-6.7
KIW	**Kapiti Island**	**11.07**	**205**	P		Pn		14 34 27.0	-3.7
KIW				S		Sn		14 36 27.9	-6.3
MTW	**Mount Morrison**	**11.14**	**202**	P		Pn		14 34 27.1	-4.4
MTW				S		**Sn**		**14 36 31.1**	**-4.6**
CAW	**Cannon Point**	**11.24**	**204**	P		Pn		14 34 28.4	-4.4
CAW				S		Sn		14 36 31.8	-6.2
TRWZ	**Traveller**	**11.30**	**201**	P		Pn		14 34 29.4	-4.1
TRWZ				S		Sn		14 36 31.6	-7.9
PAWZ	**Paruwai Farm**	**11.37**	**202**	P		Pn		14 34 30.3	-4.2
PAWZ				S		Sn		14 36 32.0	-9.1
DUWZ	**D'Urville Isla**	**11.40**	**208**	P		Pn		14 34 31.0	-3.9
MSWZ	**Moikau Station**	**11.45**	**202**	P		Pn		14 34 32.4	-3.1
MSWZ				S		Sn		14 36 34.6	-8.6
MSWZ	**Moikau Station**	**11.45**	**202**			Pn		14 34 30.7	-4.8
WEL	**Wellington**	**11.50**	**204**	P		Pn		14 34 31.9	-4.2
SNZO	**South Karori**	**11.54**	**204**			Pn		14 34 31.9	-4.8
BHW	**Baring Head**	**11.57**	**204**	P		Pn		14 34 32.5	-4.5
BHW	**Baring Head**	**11.57**	**204**			Pn		14 34 31.7	-5.3
PLWZ	**Palliser**	**11.59**	**202**	P		Pn		14 34 33.0	-4.3
PLWZ	**Palliser**	**11.59**	**202**			Pn		14 34 32.9	-4.4
TCW	**Tory Channel**	**11.61**	**206**	P		Pn		14 34 33.0	-4.5
TUWZ	**Tuamarina**	**11.93**	**207**	P		Pn		14 34 37.0	-4.5
TUWZ	**Tuamarina**	**11.93**	**207**			Pn		14 34 36.7	-4.9
NNZ	**Nelson**	**11.97**	**209**	P		Pn		14 34 38.6	-3.6
NNZ	**Nelson**	**11.97**	**209**			Pn		14 34 38.0	-4.2
QRZ	**Quartz Range**	**12.03**	**212**	P		**Pn**		**14 34 40.7**	**-2.1**
QRZ	**Quartz Range**	**12.03**	**212**	Pn		**Pn**		**14 34 40.8**	**-2.0**
CMWZ	**Cape Campbell**	**12.11**	**205**			Pn		14 34 41.4	-2.4
BSWZ	**Blackbirch Sta**	**12.20**	**206**	P		Pn		14 34 41.0	-4.1
BSWZ	**Blackbirch Sta**	**12.20**	**206**			Pn		14 34 40.7	-4.3
THZ	**Tophouse**	**12.62**	**209**	P		Pn		14 34 47.3	-3.2
THZ	**Tophouse**	**12.62**	**209**			Pn		14 34 46.7	-3.7
KHZ	**Kahutara**	**12.93**	**205**	P		Pn		14 34 49.4	-4.8
KHZ	**Kahutara**	**12.93**	**205**			Pn		14 34 49.7	-4.5
DSZ	**Denniston Nort**	**13.09**	**212**	P		**Pn**		**14 34 53.8**	**-2.4**
MSVF	**Nonsavu**	**13.39**	**348**			**Pn**		**14 34 57.8**	**-2.5**
GVZ	**Greta Valley S**	**13.60**	**206**	P		Pn		14 34 58.2	-4.3
LTZ	**Lake Taylor**	**13.73**	**208**	P		Pn		14 34 59.1	-5.2
LTZ	**Lake Taylor**	**13.73**	**208**			Pn		14 35 00.4	-3.9
OXZ	**Oxford**	**14.28**	**207**			Pn		14 35 06.3	-4.8
NIUE	**Niue**	**14.37**	**37**	P		**P**		**14 35 13.9**	**+0.2**
MQZ	**McQueen's Vall**	**14.37**	**205**			Pn		14 35 07.0	-5.1
RPZ	**Rata Peaks**	**15.01**	**209**	P		**Pn**		**14 35 18.1**	**-1.8**
	2.4nm,0.3s,baz=49,slow=5.6,SNR=12								
RPZ				S		S		14 37 54.2	-12
	9.8nm,0.3s,baz=12,slow=20,SNR=16								
RPZ	**Rata Peaks**	**15.01**	**209**			**Pn**		**14 35 16.4**	**-3.5**
RPZ				IAmb		IAmb		14 35 22.8	
	comp=Z,108nm,1.8s								
RPZ						S		14 37 56.6	-10
FOZ	**Fox Glacier**	**15.40**	**212**			**Pn**		**14 35 22.6**	**-2.0**
FOZ				IAmb		IAmb		14 35 33.9	
	comp=Z,79nm,1.5s								
LBZ	**Lake Benmore**	**15.91**	**209**	P		**P**		**14 35 29.4**	**-1.2**
LBZ				IAmb		IAmb		14 36 04.9	
	comp=Z,65nm,1.6s								
ODZ	**Otahua Downs**	**16.27**	**207**	P		**P**		**14 35 32.6**	**-1.9**
ODZ				IAmb		IAmb		14 35 52.2	
	comp=Z,30nm,1.3s								
WKZ	**Wanaka**	**16.77**	**211**	P		**P**		**14 35 39.4**	**-0.6**
WKZ				IAmb		IAmb		14 36 37.5	
	comp=Z,81nm,1.6s								
MLZ	**Mavora Lakes**	**17.59**	**211**	P		**P**		**14 35 50.2**	**+1.2**
MLZ				IAmb		IAmb		14 36 19.1	
	comp=Z,65nm,1.7s								
AFI	**Afiamalu**	**18.19**	**23**	P		**P**		**14 35 52.4**	**-3.3**
ARMA	**Armidale**	**25.23**	**264**	P		**P**		**14 37 08.5**	**+3.1**
ARMA				IAmb		IAmb		14 37 10.5	
	comp=Z,13nm,0.8s								
EIDS	**Eidsvold**	**26.90**	**274**	P		**P**		**14 37 22.7**	**+2.4**
EIDS				IAmb		IAmb		14 37 23.1	
	comp=Z,12nm,0.9s								
CAN	**Canberra**	**27.08**	**252**	P		**P**		**14 37 25.4**	**+3.4**
TOO	**Toolangi**	**29.96**	**248**	P		**P**		**14 37 50.2**	**+2.8**
TOO				IAmb		IAmb		14 37 52.2	
	comp=Z,22nm,1.2s								
CTAO	**Charters Tower**	**33.03**	**281**	P		**P**		**14 38 15.9**	**+1.6**
STKA	**Stephens Creek**	**33.52**	**258**	P		**P**		**14 38 21.3**	**+2.9**
	comp=Z,35nm,0.7s,baz=98,slow=10,SNR=97								
STKA	**Stephens Creek**	**33.52**	**258**	P		**P**		**14 38 20.7**	**+2.3**
BBOO	**Buckleboo**	**37.99**	**255**	P		**P**		**14 38 57.6**	**+1.1**
BBOO				IAmb		IAmb		14 38 59.7	
	comp=Z,23nm,0.8s								
COEN	**Coen**	**38.58**	**287**	P		**P**		**14 39 02.2**	**+0.6**
COEN				IAmb		IAmb		14 40 10.6	
	comp=Z,24nm,1.3s								
AS31	**Alice Springs**	**42.21**	**268**	P		**P**		**14 39 31.3**	**0.0**
ASAR	**Alice Springs**	**42.22**	**268**	P		**P**		**14 39 31.5**	**+0.2**
	comp=Z,7.2nm,0.5s,baz=105,slow=7.3,SNR=241								
ASAR				PcP		**PcP**		**14 41 20.8**	**-0.8**
	comp=Z,2.4nm,0.6s,baz=125,slow=4.0,SNR=7.8								
ASAR				ScP		**ScP**		**14 44 49.4**	**-3.7**
	comp=Z,1.1nm,0.8s,baz=118,slow=4.9,SNR=6.9								
WR0	**Warramunga Arr**	**43.07**	**273**	P		**P**		**14 39 37.9**	**-0.3**
WR0				IAmb		IAmb		14 39 39.4	
	comp=Z,10nm,0.4s								
WB2	**Warramunga Arr**	**43.24**	**273**	P		**P**		**14 39 39.3**	**-0.2**
WB2				IAmb		IAmb		14 39 40.8	
	comp=Z,16nm,0.7s								
WRAB	**Tennant Creek**	**43.24**	**273**	P		**P**		**14 39 39.4**	**-0.2**
WRA	**Warramunga Arr**	**43.25**	**273**	P		**P**		**14 39 39.6**	**0.0**
	comp=Z,10nm,0.3s,baz=111,slow=8.1,SNR=306								
WRA				PcP		**PP**		**14 41 24.4**	**0.0**
	comp=Z,3.2nm,0.8s,baz=118,slow=3.2,SNR=6.2								
WRA				ScP		**ScP**		**14 44 53.6**	**-3.6**
	comp=Z,1.1nm,0.6s,baz=104,slow=4.0,SNR=5.5								
WB0	**Warramunga Arr**	**43.28**	**274**	P		**P**		**14 39 39.6**	**-0.2**
WB0				IAmb		IAmb		14 39 41.0	
	comp=Z,15nm,0.5s								
FORT	**Forrest**	**45.07**	**256**	P		**P**		**14 39 53.6**	**-0.3**
FORT				IAmb		IAmb		14 39 55.5	
	comp=Z,32nm,0.5s								
VNDA	**Vanda**	**47.50**	**186**	P		**P**		**14 40 16.4**	**+4.3**
MTN	**Manton Dam**	**49.21**	**280**	P		**P**		**14 40 25.6**	**-0.5**
KNRA	**Kununurra**	**49.88**	**275**	P		**P**		**14 40 30.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**51.49**	**271**	P		**P**		**14 40 43.1**	**0.0**
NWAO	**Narrogin (SRO)**	**53.40**	**250**	P		**P**		**14 40 57.6**	**+0.7**
NWAO				IAmb		IAmb		14 41 34.7	
	comp=Z,85nm,1.9s								
FAKI	**Fak Fak**	**53.71**	**291**	P		**P**		**14 40 59.9**	**+0.5**
FAKI				IAmb		IAmb		14 41 59.6	
	comp=Z,31nm,1.2s								
CASY	**Casey**	**54.28**	**208**	P		**P**		**14 41 03.3**	**+0.5**
CASY				IAmb		IAmb		14 41 05.4	
	comp=Z,28nm,1.3s								
UWE	**Uwekahuna**	**55.00**	**28**	P		**P**		**14 41 07.2**	**-1.5**
MLH	**Mauna Loa**	**55.02**	**27**	P		**P**		**14 41 08.7**	**-0.3**
PSA00	**Pilbara Seismi**	**55.04**	**264**	P		**P**		**14 41 07.9**	**-1.1**
PSA00				IAmb		IAmb		14 42 56.4	
	comp=Z,25nm,1.5s								
HMH	**Humu'ula Sheep**	**55.09**	**27**	P		**P**		**14 41 09.4**	**-0.1**
MORW	**Morawa**	**55.55**	**254**	P		**P**		**14 41 12.1**	**-0.4**
MORW				IAmb		IAmb		14 41 44.6	
	comp=Z,42nm,1.6s								
QSPA	**South Pole Qui**	**59.19**	**180**	P		**P**		**14 41 41.5**	**+4.0**
	baz=50,slow=16								
QSPA	**South Pole Qui**	**59.19**	**180**	P		**P**		**14 41 41.4**	**+3.9**
GIRL	**Giralia**	**59.40**	**260**	P		**P**		**14 41 39.9**	**+0.4**
MAW	**Mawson**	**71.52**	**201**	P		**P**		**14 42 57.8**	**+1.6**
	comp=Z,9.2nm,0.7s,baz=133,slow=7.9,SNR=12								
MAW	**Mawson**	**71.52**	**201**	P		**P**		**14 42 57.4**	**+1.1**
KKM	**Kota Kinabalu**	**71.89**	**289**	P		**P**		**14 42 59.5**	**0.0**
KKM				IAmb		IAmb		14 43 57.3	
	comp=Z,28nm,1.5s								
KSM	**Kuching**	**74.27**	**281**	P		**P**		**14 43 12.9**	**-0.4**
MDSI	**Maura Dua**	**76.39**	**273**	P		P		14 43 16.0	-9.5
SNAA	**Sanae**	**77.66**	**179**	P		**P**		**14 43 33.8**	**+2.2**
SNAA	**Sanae**	**77.66**	**179**	P		**P**		**14 43 33.9**	**+2.2**
	comp=Z,12nm,0.6s,baz=204,slow=9.2,SNR=75								
SNAA	**Sanae**	**77.66**	**179**	P		**P**		**14 43 33.5**	**+1.8**
VNA3	**Neumayer Olymp**	**77.85**	**176**	P		**P**		**14 43 34.8**	**+2.2**
VNA2	**Neumayer--Watz**	**78.27**	**177**	P		**P**		**14 43 37.4**	**+2.5**
	baz=192,slow=5.1								
VNA1	**Neumayer--Stat**	**78.50**	**177**	P		**P**		**14 43 38.7**	**+2.5**
H03S2	**Juan Fernandez**	**80.90**	**124**	T		T		16 13 23.4	
	baz=242,slow=75								
H03S1	**Juan Fernandez**	**80.91**	**124**	T		T		16 13 23.9	
	baz=242,slow=75								
H03S3	**Juan Fernandez**	**80.92**	**124**	T		T		16 13 22.6	
	baz=242,slow=75								
KSRS	**Korea Array**	**84.18**	**320**	P		**P**		**14 44 06.7**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=154,slow=6.0,SNR=3.9								
GSI	**Gunungsitoli**	**85.01**	**274**	P		**P**		**14 44 11.0**	**-0.2**
NJ2	**Nanjing**	**85.92**	**311**	*eP*		**P**		**14 44 15.3**	**+0.1**
NJ2				pmax		pmax			
	comp=Z,11nm,0.5s								
PETK	**Petropavlovsk-**	**86.10**	**346**	P		**P**		**14 44 15.0**	**-0.5**
	comp=Z,2.2nm,0.7s,baz=108,slow=7.4,SNR=4.8								
NVAR	**Mina Array Bea**	**89.21**	**43**	P		**P**		**14 44 31.2**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=224,slow=7.6,SNR=6.2								
PINE	**Pine Mountain**	**91.34**	**38**	P		**P**		**14 44 40.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**92.75**	**290**	P		**P**		**14 44 48.5**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=140,slow=4.4,SNR=5.5								
CD2	**Chengdu**	**95.63**	**303**	P		**P**		**14 45 00.5**	**-0.1**
CD2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
HHC	**Hu-ho-hao-te**	**95.97**	**314**	*eP*		**P**		**14 45 02.9**	**+1.0**
HHC				pmax		pmax			
	comp=Z,14nm,1.1s								
HHC				pmax		pmax			
	comp=Z,36nm,6.9s								
PDAR	**Pinedale Array**	**97.11**	**44**	P		**P**		**14 45 06.8**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=229,slow=3.5,SNR=2.5								
LZH	**Lanzhou**	**98.33**	**307**	*eP*		Pdif		14 45 15.8	+3.0
LZH				pP		pwP		14 46 06.8	+2.1
LZH				sP		sP		14 46 25.3	+3.2
LZH				PP		**PP**		**14 49 17.5**	**+1.7**
LZH				pmax		pmax			
	comp=Z,27nm,1.1s								
LZH				pmax		pmax			
	comp=Z,110nm,5.0s								
WMQ	**Urumqi**	**112.86**	**308**	*eP*		**PKiKP**		**14 50 10.3**	**-0.3**
WMQ				LR		LR			
	comp=Z,730nm,29.0s								
WMQ				LR		LR			
	comp=Z,760nm,29.3s								
WMQ				LR		LR			
	comp=Z,1µm,29.0s								
ZALV	**Zalesovo Beam**	**117.84**	**318**	PKP		**PKPdf**		**14 50 17.6**	**-2.1**
	comp=Z,0.6nm,0.6s,baz=163,slow=1.5,SNR=2.3								
KURK	**Kurchatov**	**120.78**	**314**			**PKPdf**		**14 50 24.1**	**-1.4**
KURBB	**Kurchatov Arra**	**120.81**	**314**	PKP		**PKPdf**		**14 50 24.1**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=115,slow=2.0,SNR=11								
BVAR	**Borovoye Array**	**126.17**	**316**	PKP		**PKPdf**		**14 50 34.6**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=132,slow=3.3,SNR=6.2								
ARU	**Arti**	**132.93**	**320**	SKPbc		**SKPbc**		**14 53 52.9**	**-4.4**
	comp=Z,1.4nm,0.5s,baz=63,slow=2.3,SNR=6.8								
ARU	**Arti**	**132.93**	**320**			**SKPbc**		**14 53 53.5**	**-3.7**
GEYT	**Alibeck**	**132.99**	**295**	SKPab		**SKPbc**		**14 53 56.6**	**-1.6**
	comp=Z,2.1nm,0.6s,baz=163,slow=1.5,SNR=3.8								
AKTO	**Aktyubinsk**	**133.80**	**312**	SKPbc		**SKPbc**		**14 53 55.6**	**-4.7**
	comp=Z,1.1nm,0.5s,baz=88,slow=7.6,SNR=5.0								
ARCES	**ARCESS Array B**	**138.90**	**347**	PKhKP		PKPpre		14 50 50.8	
	comp=Z,3.5nm,0.9s,baz=29,slow=2.1,SNR=2.3								
ARCES				PKP		**PKPdf**		**14 50 58.5**	**-0.8**
	comp=Z,4.5nm,1.0s,baz=45,slow=1.4,SNR=5.2								
ARCES				SKPbc		**SKPbc**		**14 54 11.3**	**-3.9**
	comp=Z,0.8nm,0.5s,baz=20,slow=3.9,SNR=8.1								
KBZ	**Khabaz**	**144.67**	**303**	PKP		**PKPab**		**14 51 09.7**	**+0.1**
	comp=Z,1.9nm,0.4s,baz=50,slow=3.3,SNR=7.3								
FINES	**FINESS Array B**	**145.32**	**339**	PKP		**PKPdf**		**14 51 09.7**	**-1.1**
	comp=Z,6.8nm,0.6s,baz=56,slow=3.8,SNR=41								
FINES				SKPbc		**SKPbc**		**14 54 27.5**	**-3.9**
	comp=Z,1.6nm,0.8s,baz=276,slow=2.7,SNR=2.0								
NB2	**NORSAR Subarra**	**149.12**	**350**	PKP		**PKPbc**		**14 51 20.3**	**-1.3**
	comp=Z,0.9nm,0.4s,baz=30,slow=2.6								
NOA	**NORSAR Array B**	**149.12**	**350**	PKPbc		**PKPbc**		**14 51 20.6**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=17,slow=4.2,SNR=8.2								
AKASG	**Malin Array Be**	**151.17**	**321**	PKPbc		**PKPbc**		**14 51 25.9**	**-0.9**
	comp=Z,1.5nm,0.4s,baz=44,slow=3.1,SNR=7.3								
BR131	**Keskin Array S**	**152.07**	**297**	PKPbc		**PKPbc**		**14 51 29.2**	**-0.2**
BRTR	**Keskin Array B**	**152.07**	**297**	PKPbc		**PKPbc**		**14 51 28.6**	**-0.8**
	comp=Z,2.5nm,0.5s,baz=143,slow=4.6,SNR=14								
CLL	**Collm**	**157.76**	**340**	*e*P

comp=Z,3µm,18.0s
MAN01 Angra dos Reis 36.70 330 *e*P **P 14 48 02.7 +1.5**
PARB Paraibuna 36.72 328 *e*P **P 14 48 01.2 -0.2**
SPB Sao Paulo 37.03 325 P **P 14 48 05.5 +1.5**
SPB IAmb IAmb 14 48 07.5
comp=Z,202nm,1.2s
SPB Sao Paulo 37.03 325 *e*P **P 14 48 06.2 +2.2**
BI03 Tigo 37.38 282 IAMs_20 IAMs_20 15 03 35.3
comp=Z,2µm,19.0s
VAO Valinhos 37.44 326 *e*P **P 14 48 07.7 +0.1**
PTGB Pitanga 37.59 318 *e*P **P 14 48 09.8 +1.0**
BO02 Sierra Bellavi 37.74 286 IAMs_20 IAMs_20 15 05 49.7
comp=Z,2µm,18.0s
FRTB Fartura 37.96 322 *e*P **P 14 48 14.1 +2.2**
RCLB Rio Claro- Sao 38.16 325 *e*P **P 14 48 14.4 +0.8**
GO05 Huala 38.18 285 P **P 14 48 11.6 -2.0**
GO05 **PcP 14 50 27.9 0.0**
GO05 IAMs_20 IAMs_20 15 04 38.4
comp=Z,3µm,19.0s
BSCB Bom Sucesso 38.70 330 *e*P **P 14 48 19.6 +1.5**
MT01 Popeta 38.70 287 P **P 14 48 16.4 -1.5**
MAW Mawson 38.77 142 P **P 14 48 18.6 +0.4**
baz=39,SNR=6.4
MAW Mawson 38.77 142 P **P 14 48 18.6 +0.4**
comp=Z,17nm,0.9s,baz=245,slow=7.1,SNR=11
MAW LR LR 15 02 01.5
comp=Z,982nm,20.7s,baz=254,slow=33
MAW Mawson 38.77 142 P **P 14 48 18.1 -0.1**
MAW pmax pmax
comp=Z,12nm,1.4s
MAW Mawson 38.77 142 P **P 14 48 18.1 -0.1**
MT05 Renca 38.80 288 P **P 14 48 17.4 -1.5**
MT05 IAmb IAmb 14 48 19.5
comp=Z,106nm,1.4s
PEL Peldehue 38.97 288 P **P 14 48 19.2 -1.1**
PEL pmax pmax
comp=Z,45nm,0.7s
PEL MLR MLR
comp=Z,1µm,18.0s
PEL Peldehue 38.97 288 P **P 14 48 19.2 -1.1**
MT02 Curacav 39.11 287 P **P 14 48 19.9 -1.5**
VA03 San Esteban 39.19 288 P **P 14 48 20.6 -1.6**
ROC1 El Roble 39.27 288 P **P 14 48 21.7 -1.4**
TRCB Terra Rica 39.55 318 *e*P **P 14 48 26.3 +1.1**
BSFB Barra de Sao F 39.81 336 *e*P **P 14 48 28.5 +1.2**
SUR Sutherland 39.84 72 P **P 14 48 27.3 -0.5**
comp=Z,17nm,0.9s,baz=263,slow=1.9,SNR=7.9
SUR Sutherland 39.84 72 P **P 14 48 27.0 -0.8**
SJMB Sao Joao De Ma 40.01 336 *e*P **P 14 48 30.4 +1.4**
PCMB Pacaembu 40.15 321 *e*P **P 14 48 31.3 +1.2**
PCMB *e*pP **pP 14 48 34.7 -0.2**
CO02 Combarbal 40.66 289 P **P 14 48 33.2 -1.2**
CO02 IAMs_20 IAMs_20 15 08 13.0
comp=Z,3µm,19.0s
CO03 El Pedregal 40.79 290 P **P 14 48 34.4 -1.1**
CO03 IAmb IAmb 14 48 35.7
comp=Z,147nm,1.9s
CO03 **PcP 14 50 36.7 +0.3**
CO01 Juntas del Tor 41.17 292 IAMs_20 IAMs_20 15 08 08.1
comp=Z,3µm,19.0s
GO04 Tololo Observa 41.38 291 P **P 14 48 38.8 -1.7**
IPMB Ipameri, GO 42.54 327 *e*P **P 14 48 51.4 +1.5**
GO03 Ćopiap 43.19 293 P **P 14 48 53.4 -1.7**
C2SB Chapadao do Su 43.32 320 *e*P **P 14 48 57.5 +1.4**
JANB Januaria 44.26 333 *e*P **P 14 49 04.6 +0.9**
JANB *e*pP **pP 14 49 08.1 -0.5**
BDFB Brasilia 44.70 328 P **P 14 49 08.9 +1.6**
comp=Z,19nm,0.7s,baz=131,slow=6.2,SNR=17
BDFB LR LR 15 07 20.2
comp=Z,2µm,18.3s,baz=145,slow=36
BDFB Brasilia 44.70 328 P **P 14 49 06.4 -0.9**
BDFB pmax pmax
comp=Z,83nm,1.5s
BDFB MLR MLR
comp=Z,2µm,18.0s
BDFB Brasilia 44.70 328 P **P 14 49 06.4 -0.9**
BDFB IAmb IAmb 14 49 11.8
comp=Z,82nm,1.5s
BDFB IAMs_20 IAMs_20 15 09 59.6
comp=Z,2µm,18.0s
GO02 Mina Guanaco 44.88 296 P **P 14 49 07.4 -1.6**
GO02 IAmb IAmb 14 49 09.6
comp=Z,203nm,1.4s
BOSA Boshof 45.15 73 P **P 14 49 09.6 -1.3**
comp=Z,9.8nm,0.9s,baz=202,slow=8.2,SNR=9.5
BOSA LR LR 15 05 24.1
comp=Z,3µm,18.1s,baz=218,slow=33
BOSA Boshof 45.15 73 P **P 14 49 09.3 -1.6**
BOSA pmax pmax
comp=Z,40nm,1.2s
BOSA Boshof 45.15 73 P **P 14 49 09.2 -1.6**
VNDA Vanda 45.72 182 P **P 14 49 15.4 +0.7**
VNDA pmax pmax
comp=Z,37nm,1.0s
VNDA Vanda 45.72 182 P **P 14 49 15.3 +0.7**
VNDA IAmb IAmb 14 49 29.3
comp=Z,37nm,0.9s
PB14 IPOC Station P 45.73 296 P **P 14 49 14.7 -1.1**
PB14 IAmb IAmb 14 49 15.2
comp=Z,22nm,0.5s
ARAG Araguaiana, MT 45.82 323 *e*P **P 14 49 17.3 +1.3**
PB15 IPOC Station P 46.47 298 P **P 14 49 26.5 -0.9**
PB15 IAmb IAmb 14 49 26.7
comp=Z,112nm,1.0s
LVC Limon Verde 46.70 299 P **P 14 49 22.9 -0.5**
LVC pmax pmax
comp=Z,383nm,1.2s
LVC Limon Verde 46.70 299 P **P 14 49 22.9 -0.5**
LVC Limon Verde 46.70 299 *e*P **P 14 49 23.8 +0.4**
PB10 IPOC Station P 46.74 296 P **P 14 49 22.5 -0.8**
PB10 IAmb IAmb 14 49 23.8
comp=Z,172nm,1.7s
PB06 IPOC Station P 46.94 298 P **P 14 49 24.4 -0.7**
PB06 IAmb IAmb 14 49 31.9
comp=Z,56nm,0.8s
SALV Santo Antonio 46.99 318 *e*P **P 14 49 26.2 +1.0**
PB04 IPOC Station P 47.53 298 P **P 14 49 29.0 -0.7**
PB09 IPOC Station P 47.55 299 P **P 14 49 29.6 -0.2**
PB07 IPOC Station P 47.92 298 P **P 14 49 32.1 -0.6**
LBTB Lobatse 48.24 70 P **P 14 49 34.1 -1.0**
LBTB pmax pmax
comp=Z,38nm,1.2s
LBTB Lobatse 48.24 70 P **P 14 49 34.1 -1.0**
LBTB IAmb IAmb 14 49 45.9
comp=Z,38nm,1.1s
PB01 IPOC Station P 48.31 299 P **P 14 49 35.1 -0.5**
H10S2 ASCENSION HYDR 48.57 14 T T 15 42 34.6
baz=189,slow=74,SNR=19
H10S3 ASCENSION HYDR 48.58 14 T T 15 42 35.8
baz=31,slow=74,SNR=0.1
PTLB Pontes e Lacer 48.71 314 *e*P **P 14 49 39.0 +0.4**
PB08 IPOC Station P 48.93 300 P **P 14 49 40.8 +0.1**
TA01 Diego Aracena 49.05 299 P **P 14 49 40.3 -0.9**
TA01 IAmb IAmb 14 49 49.9
comp=Z,76nm,1.1s
TSUM Tsumeb 49.19 58 P **P 14 49 41.0 -1.5**
GO01 Chusmiza 49.35 300 P **P 14 49 43.8 -0.2**
PB11 IPOC Station P 49.49 300 P **P 14 49 44.5 -0.3**
H10N1 ASCENSION HYDR 49.69 14 T T 15 44 02.8
baz=188,slow=76,SNR=6.7
H10N3 ASCENSION HYDR 49.69 14 T T 15 44 00.6
baz=188,slow=76,SNR=15
H10N2 ASCENSION HYDR 49.71 14 T T 15 44 03.5
baz=188,slow=76,SNR=9.6
PSGCX Pisagua 49.85 299 P **P 14 49 46.9 -0.6**
PSGCX IAmb IAmb 14 49 48.4
comp=Z,111nm,1.2s
MNMC Minye Minye 50.01 300 P **P 14 49 48.5 -0.4**
PB16 IPOC Station P 50.65 301 P **P 14 49 53.9 -0.1**
PB16 IAmb IAmb 14 50 06.4
comp=Z,115nm,1.1s
PB12 IPOC Station P 50.80 300 P **P 14 49 54.2 -0.4**
PB12 IAmb IAmb 14 50 03.0
comp=Z,62nm,0.7s
VILB Vilhena 51.40 314 *e*P **P 14 49 59.3 +0.3**
VILB *e*pP **pP 14 50 03.0 -0.9**
CLDB Colider 51.67 320 *e*P **P 14 50 00.9 -0.2**
LPAZ La Paz 51.79 304 P **P 14 50 04.0 +1.3**
comp=Z,265nm,0.6s,baz=134,slow=4.1,SNR=947
LPAZ LR LR 15 16 08.6
comp=Z,477nm,18.1s,baz=210,slow=41
LPAZ La Paz 51.79 304 P **P 14 50 04.0 +1.3**
LPAZ La Paz 51.79 304 *e*P **P 14 50 03.8 +1.1**
CASY Casey 52.69 159 P **P 14 50 08.8 +0.8**
CASY IAmb IAmb 14 50 10.3
comp=Z,44nm,1.0s
PRPB Parauapebas 54.22 329 *e*P **P 14 50 21.6 +1.8**
NPGB Novo Progresso 55.09 323 *e*P **P 14 50 26.7 +0.5**
ROSB Rosrio 55.96 337 *e*P **P 14 50 33.2 +0.8**
ROSB *e*pP **pP 14 50 36.9 -0.5**
SAML Samuel 56.22 313 P **P 14 50 34.1 -0.2**
SAML pmax pmax
comp=Z,172nm,1.4s
SAML Samuel 56.22 313 P **P 14 50 34.1 -0.2**
MALB Monte Alegre 59.63 326 *e*P **P 14 50 58.5 +0.3**
NNA Nana 59.64 297 *ce*P **P 14 50 58.3 -0.1**
NNA pmax pmax
comp=Z,88nm,1.7s
NNA Nana 59.64 297 P **P 14 50 58.0 -0.3**
NNA IAmb IAmb 14 50 59.4
comp=Z,60nm,1.1s
MACA Manacapuru-AM 60.57 318 *e*P **P 14 51 04.0 -0.6**
PTGA Pitinga 62.56 320 P **P 14 51 17.5 -0.6**
PTGA IAmb IAmb 14 51 19.3
comp=Z,32nm,0.9s
PTGA IAMs_20 IAMs_20 15 17 50.1
comp=Z,1µm,20.0s
PTGA Pitinga 62.56 320 *e*P **P 14 51 18.4 +0.3**
RPN Rapa Nui 64.58 259 P **P 14 51 30.5 -0.8**
RPN pmax pmax
comp=Z,91nm,1.2s
RPN Rapa Nui 64.58 259 P **P 14 51 30.5 -0.8**
RPN IAmb IAmb 14 51 44.6
comp=Z,90nm,1.1s
ABPO Ambohimpanom 64.69 86 IAMs_20 IAMs_20 15 12 52.0
comp=Z,2µm,22.0s
LIC Lamto 65.08 22 *e*P **P 14 51 33.8 -0.8**
comp=Z,21nm,0.8s
KIC Kosan Boka 65.28 22 *e*P **P 14 51 38.1 +2.2**
comp=Z,36nm,0.9s
TIC Toumodi 65.49 22 *e*P **P 14 51 36.4 -0.9**
PTLC Puerto Leguiza 69.34 306 *e*P **P 14 51 58.5 -3.3**
PUAC Puerto Asis, P 70.48 304 *e*P **P 14 52 09.0 +0.3**
MACC Macarena, Meta 70.69 307 *e*P **P 14 52 09.6 -0.4**
PAC1 Pacto, Paraso 71.25 302 *e*P **P 14 52 13.9 +0.3**
GCUF Volcan Galeras 71.43 304 *e*P **P 14 52 15.9 +0.8**
GARC Garzon, Huila 71.45 306 *e*P **P 14 52 14.1 -0.8**
CRUC La Cruz 71.55 304 *e*P **P 14 52 17.2 +1.5**
MBAR Mbarara 71.60 61 IAMs_20 IAMs_20 15 21 10.9
comp=Z,817nm,19.0s
PTGC Puerto Gaitan, 71.80 310 *e*P **P 14 52 15.4 -1.3**
BETC Betania 71.86 306 *e*P **P 14 52 17.0 -0.2**
SOTA Rioblanco 71.90 305 *e*P **P 14 52 18.7 +0.8**
BBAC Balboa, Cauca 72.09 304 *e*P **P 14 52 18.3 -0.4**
POPC Popayan, Colom 72.29 305 *e*P **P 14 52 19.5 -0.4**
PRAC Prado 72.54 307 *e*P **P 14 52 20.1 -1.1**
CHIC Chingaza 72.86 309 *e*P **P 14 52 22.5 -1.0**
ORTC Ortega, Tolima 72.87 307 *e*P **P 14 52 22.5 -0.7**
TOC5 Torodi Ar. Sit 73.30 27 IAMs_20 IAMs_20 15 17 19.4
comp=Z,877nm,22.0s
ROSC El Rosal 73.30 308 P **P 14 52 27.0 +0.9**
comp=Z,40nm,0.8s,baz=126,slow=3.6,SNR=20
ROSC LR LR 15 28 00.3
comp=Z,846nm,18.8s,baz=202,slow=38
ROSC El Rosal 73.30 308 *e*P **P 14 52 26.2 +0.1**
ROSC El Rosal 73.30 308 P **P 14 52 24.6 -1.5**
ROSC IAmb IAmb 14 52 29.2
comp=Z,56nm,0.9s
TOA0 Torodi Ar. Sit 73.32 27 P **P 14 52 24.6 -1.0**
TORD Torodi Ar. Bea 73.32 27 P **P 14 52 25.6 -0.1**
comp=Z,6.4nm,0.5s,baz=182,slow=4.8,SNR=28
TORD LR LR 15 19 03.2
comp=Z,608nm,20.1s,baz=190,slow=31
TOA2 Torodi Ar. Sit 73.32 27 IAMs_20 IAMs_20 15 24 31.1
comp=Z,779nm,18.0s
YOTC Yotoco, Valle 73.42 306 *e*P **P 14 52 24.9 -1.6**
ANIL Santa Ana 73.46 307 *e*P **P 14 52 25.8 -1.1**
RUSC La Rusia 73.72 310 *e*P **P 14 52 27.0 -1.6**
RUSC La Rusia 73.72 310 P **P 14 52 27.1 -1.6**
RREF El Recreo 73.80 307 *e*P **P 14 52 28.4 -0.9**
SPBC San Pablo de B 73.92 309 *e*P **P 14 52 27.6 -1.8**
NORC Norcasia 74.19 308 *e*P **P 14 52 28.0 -2.8**
KMBO Kilima Mbogo 74.35 67 LR LR 15 23 44.0
comp=Z,844nm,18.1s,baz=256,slow=35
PTBC PUERTO BERRIO, 74.89 309 *e*P **P 14 52 32.3 -2.6**
CBOC Ciudad Bolivar 74.95 307 *e*P **P 14 52 33.4 -2.1**
HELC Santa Helena 75.03 308 *e*P **P 14 52 33.4 -2.8**
SDV Santo Domingo 75.42 313 *e*P **P 14 52 38.1 -0.1**
SDV Santo Domingo 75.42 313 P **P 14 52 36.9 -1.3**
SDV IAmb IAmb 14 52 43.0
comp=Z,77nm,1.0s
SDV Santo Domingo 75.42 313 IAMs_20 IAMs_20 15 31 11.0
comp=Z,1µm,18.0s
SDV Santo Domingo 75.42 313 *e*P **P 14 52 39.0 +0.9**
ZARC Zaragoza, Cauc 75.91 309 *e*P **P 14 52 38.9 -1.9**
DBBC Dabeiba 76.07 307 *e*P **P 14 52 41.1 -0.6**
UREC San Jos de Ur 76.43 308 *e*P **P 14 52 42.0 -1.7**
SMLC San Martn de 76.75 310 *e*P **P 14 52 43.6 -1.9**
DCZ Deep Cove 77.43 189 P **P 14 52 49.1 +0.1**
DCZ IAmb IAmb 14 53 09.7
comp=Z,150nm,1.8s
MLZ Mavora Lakes 77.45 190 P **P 14 52 49.1 -0.1**
MLZ IAmb IAmb 14 53 07.8
comp=Z,54nm,1.2s
ARGC Ariguani, Magd 77.78 310 *e*P **P 14 52 50.9 -0.4**
SJCC San Jacinto, C 78.20 310 *e*P **P 14 52 53.4 -0.3**
MQZ McQueen's Vall 78.60 193 P **P 14 52 55.1 -0.4**
MQZ IAmb IAmb 14 54 06.7
comp=Z,123nm,1.7s
RPZ Rata Peaks 78.78 192 P **P 14 52 57.8 +1.2**
comp=Z,25nm,1.0s,baz=141,slow=8.8,SNR=6.1
RPZ Rata Peaks 78.78 192 P **P 14 52 56.0 -0.6**
SMRC Santa Marta, M 78.94 311 *e*P **P 14 52 57.3 -0.4**
OXZ Oxford 79.05 193 IAMs_20 IAMs_20 15 27 44.0
comp=Z,755nm,21.0s
LTZ Lake Taylor 79.56 193 P **P 14 53 00.9 0.0**
LTZ IAmb IAmb 14 53 08.2
comp=Z,66nm,1.1s
BCIP Isla Barro Col 79.58 305 P **P 14 53 01.2 0.0**
BCIP pmax pmax
comp=Z,94nm,1.3s
BCIP Isla Barro Col 79.58 305 P **P 14 53 01.2 0.0**
BCIP IAmb IAmb 14 53 33.8
comp=Z,94nm,1.2s
TAU Tasmania Unive 80.31 174 P **P 14 53 04.4 -0.5**
TAU pmax pmax
comp=Z,76nm,1.1s
TAU Tasmania Unive 80.31 174 P **P 14 53 04.3 -0.5**
TAU IAmb IAmb 14 53 06.1
comp=Z,76nm,1.1s
THZ Tophouse 80.48 194 P **P 14 53 05.5 -0.4**
THZ IAmb IAmb 14 53 22.0
comp=Z,51nm,0.7s
BFZ Birch Farm 81.07 196 P **P 14 53 08.0 -1.0**
BFZ IAmb IAmb 14 53 12.1
comp=Z,206nm,1.9s
MTP Monte Pirata 82.01 322 P **P 14 53 13.0 -1.0**
MTP IAmb IAmb 14 53 15.4
comp=Z,58nm,1.1s
CUPR Culebra, Puert 82.11 322 P **P 14 53 14.2 -0.3**
HUMP Col San Antoni 82.16 321 P **P 14 53 14.6 -0.1**
HUMP IAmb IAmb 14 53 17.5
comp=Z,46nm,1.1s
SJG San Juan 82.23 321 P **P 14 53 14.5 -0.7**
SJG pmax pmax
comp=Z,66nm,1.3s
SJG San Juan 82.23 321 P **P 14 53 14.5 -0.7**
SJG IAmb IAmb 14 53 16.0
comp=Z,66nm,1.2s
SJG San Juan 82.23 321 IAMs_20 IAMs_20 15 34 36.2
comp=Z,639nm,18.0s
CBYP Canovanas 82.28 321 P **P 14 53 14.8 -0.7**
CBYP IAmb IAmb 14 53 16.8
comp=Z,105nm,1.2s
GCPR Guaynabo City 82.39 321 P **P 14 53 15.2 -0.8**
GCPR IAmb IAmb 14 53 17.0
comp=Z,71nm,1.1s
MLPR Magueyes Islan 82.41 320 P **P 14 53 15.6 -0.5**
MLPR IAmb IAmb 14 53 28.9
comp=Z,84nm,1.2s
CRPR Cabo Rojo, PR 82.47 320 P **P 14 53 16.0 -0.3**
BKZ Black Stump Fm 82.51 197 P **P 14 53 16.8 +0.1**
BKZ IAmb IAmb 14 53 32.1
comp=Z,86nm,1.5s
JTS Las Juntas de 82.92 301 *c i*P **P 14 53 19.5 +0.6**
JTS pmax pmax
comp=Z,99nm,1.4s
JTS Las Juntas de 82.92 301 P **P 14 53 18.3 -0.6**
URZ Urewera 83.30 198 P **P 14 53 21.1 +0.4**
comp=Z,17nm,0.8s,baz=140,slow=4.5,SNR=11
URZ Urewera 83.30 198 P **P 14 53 20.2 -0.5**
URZ IAmb IAmb 14 53 34.5
comp=Z,99nm,1.5s
FURI Furi 83.69 63 IAMs_20 IAMs_20 15 28 03.2
comp=Z,788nm,20.0s
ACON Acoyapa 84.49 302 P **P 14 53 26.2 -0.8**
SDDR Presa de Saban 84.88 317 P **P 14 53 28.1 -0.7**
SDDR IAmb IAmb 14 53 29.7
comp=Z,34nm,1.2s
TOO Toolangi 85.52 173 P **P 14 53 32.4 +0.4**
baz=85,SNR=4.6
TOO Toolangi 85.52 173 P **P 14 53 31.0 -1.0**
TOO pmax pmax
comp=Z,22nm,1.1s
TOO Toolangi 85.52 173 P **P 14 53 31.0 -1.0**
MUN Mundaring 85.59 148 P **P 14 53 32.3 -0.1**
baz=85,SNR=6.3
MATN Matagalpa 85.68 301 P **P 14 53 32.4 -0.6**
MILA Mila 86.24 175 P **P 14 53 35.6 -0.1**
baz=86,SNR=4.2
CSGN Cosiguina Volc 86.49 300 P **P 14 53 35.5 -1.4**
MTDJ Mount Denham 86.66 311 IAMs_20 IAMs_20 15 32 58.8
comp=Z,786nm,20.0s
OUZ Omahuta 86.82 195 P **P 14 53 37.6 -0.8**
GTBY Guantanamo Bay 87.21 314 IAMs_20 IAMs_20 15 31 43.4
comp=Z,761nm,21.0s
TBI Tubuai 87.36 230 *e*S **S 15 04 16.8 -3.7**
comp=Z,340nm,26.2s
TBI Tubuai 87.36 230 *e*LQ LQ 15 17 39.7
comp=Z,400nm,33.2s
TBI *e*LR LR 15 21 19.7
comp=Z,1µm,32.5s,baz=160
CAN Canberra 87.96 175 P **P 14 53 43.8 -0.2**
CAN pmax pmax
comp=Z,30nm,1.2s
CAN Canberra 87.96 175 P **P 14 53 43.8 -0.2**
CAN IAmb IAmb 14 53 45.1
comp=Z,30nm,1.2s
ATD Arta Tunnel 88.01 65 IAMs_20 IAMs_20 15 33 03.8
comp=Z,821nm,18.0s
YNG Young 88.95 175 P **P 14 53 49.7 +1.0**
baz=89,SNR=5.8
HTT Hallett 88.97 167 P **P 14 53 49.3 +0.5**
baz=89,SNR=19
BBOO Buckleboo 89.19 164 P **P 14 53 49.9 +0.1**
baz=89,SNR=16
BBOO Buckleboo 89.19 164 P **P 14 53 49.4 -0.4**
BBOO IAmb IAmb 14 53 50.4
comp=Z,18nm,0.8s
FORT Forrest 89.73 157 P **P 14 53 53.1 +0.8**
baz=90,SNR=10
FORT Forrest 89.73 157 P **P 14 53 52.6 +0.3**
STKA Stephens Creek 90.82 169 P **P 14 53 58.0 +0.6**
baz=91,SNR=11
STKA Stephens Creek 90.82 169 P **P 14 53 57.6 +0.2**
comp=Z,11nm,1.0s,baz=172,slow=5.5,SNR=17
STKA LR LR 15 33 14.0
comp=Z,1µm,19.1s,baz=194,slow=35
STKA Stephens Creek 90.82 169 *e*P **P 14 53 56.7 -0.7**
STKA Stephens Creek 90.82 169 P **P 14 53 56.7 -0.7**
DAMY Dhamar 91.38 65 IAMs_20 IAMs_20 15 32 49.9
comp=Z,663nm,18.0s
CMSA Cobar Meteorol 91.53 172 P **P 14 54 01.2 +0.6**
baz=91,SNR=6.3
TEIG Tepich 93.12 303 P **P 14 54 07.7 -0.3**
061Z Ochoppi 94.86 312 IAMs_20 IAMs_20 15 37 19.1
comp=Z,685nm,21.0s
BBSR R B Station 95.04 327 IAMs_20 IAMs_20 15 33 13.5
comp=Z,580nm,19.0s
PVAQ Vaqueiros 95.15 14 IAMs_20 IAMs_20 15 31 51.3
comp=Z,536nm,20.0s
WRKA Warakurna 95.33 156 P **P 14 54 18.5 +0.2**
baz=95,SNR=4.5
060A Indiantown 95.68 313 IAMs_20 IAMs_20 15 35 39.5
comp=Z,931nm,22.0s
TAOE Nuku Hiva Isla 95.77 244 *e*LR LR 15 25 20.3
comp=Z,347nm,20.3s
RMQ Roma 96.74 175 P **P 14 54 25.7 +1.1**
baz=97,SNR=4.5
KEST Kesra 96.84 28 LR LR 15 34 09.8
comp=Z,725nm,19.4s,baz=178,slow=33
KEST Kesra 96.84 28 IAMs_20 IAMs_20 15 33 19.1
comp=Z,719nm,20.0s
DWPF Disney Wildern 97.06 312 IAMs_20 IAMs_20 15 37 42.5
comp=Z,816nm,20.0s
PAB San Pablo 97.73 16 IAMs_20 IAMs_20 15 36 11.6
comp=Z,658nm,19.0s
ASAR Alice Springs 97.79 161 P **P 14 54 28.9 -0.6**
comp=Z,8.7nm,0.9s,baz=184,slow=4.4,SNR=59
ASAR PP **PP 14 58 27.4 +0.6**
comp=Z,2.7nm,1.0s,baz=188,slow=7.6,SNR=5.7
ASAR PKKPbc **PKKPdf 15 11 02.6 +0.2**
comp=Z,0.9nm,0.9s,baz=10,slow=2.2,SNR=7.1
ASAR LR LR 15 37 08.9
comp=Z,532nm,18.2s,baz=186,slow=34
AS31 Alice Springs 97.79 161 P **P 14 54 28.4 -1.1**
COI Coimbra 97.82 13 IAMs_20 IAMs_20 15 34 52.1
comp=Z,565nm,19.0s
ESDC Sonseca Array 97.91 16 LR LR 15 36 19.5
comp=Z,415nm,18.2s,baz=190,slow=34
MTE Manteigas 98.12 14 IAMs_20 IAMs_20 15 34 06.0
comp=Z,785nm,19.0s
WDD Wied Dalam 98.34 32 IAMs_20 IAMs_20 15 42 06.9
comp=Z,487nm,18.0s
RAYN Ar Rayn 99.54 61 IAMs_20 IAMs_20 15 39 46.3
comp=Z,666nm,18.0s
VSL Villasalto 100.42 27 IAMs_20 IAMs_20 15 35 43.7
comp=Z,666nm,20.0s
DZM Mont Dzumac 100.68 191 *e*LR LR 15 27 36.4
comp=Z,410nm,22.2s
255A Hazlehurst 100.85 313 IAMs_20 IAMs_20 15 48 45.8
comp=Z,522nm,18.0s
CEL Celeste 100.99 32 IAMs_20 IAMs_20 15 42 44.1
comp=Z,413nm,18.0s
352A Blakely 101.46 311 IAMs_20 IAMs_20 15 40 31.8
comp=Z,736nm,20.0s
WRA Warramunga Arr 101.50 160 P **Pdif 14 54 45.4 -0.6**
comp=Z,1.9nm,0.9s,baz=195,slow=4.5,SNR=10
WRA PKKPbc **PKKPbc 15 10 51.9 +0.7**
comp=Z,1.1nm,0.8s,baz=358,slow=2.9,SNR=8.4
WR3 Warramunga Arr 101.51 160 IAMs_20 IAMs_20 15 33 01.1
comp=Z,561nm,19.0s
WR4 Warramunga Arr 101.51 160 IAMs_20 IAMs_20 15 39 20.2
comp=Z,773nm,22.0s
WB4 Warramunga Arr 101.55 160 IAMs_20 IAMs_20 15 45 12.1
comp=Z,749nm,22.0s
V62A Hyde County Ai 101.63 320 IAMs_20 IAMs_20 15 48 41.2
comp=Z,530nm,18.0s
154A Montrose 101.71 313 IAMs_20 IAMs_20 15 46 03.4
comp=Z,475nm,18.0s
Y57A Sumter 101.89 316 IAMs_20 IAMs_20 15 50 14.0
comp=Z,431nm,18.0s
X58A Rowland 101.96 317 IAMs_20 IAMs_20 15 45 13.9
comp=Z,431nm,18.0s
HODGE Hodges 102.80 315 IAMs_20 IAMs_20 15 44 04.2
comp=Z,476nm,20.0s
V58A Windy Hill, Pi 102.98 318 IAMs_20 IAMs_20 15 49 06.0
comp=Z,491nm,18.0s
PAULI Pauline 103.14 315 IAMs_20 IAMs_20 15 51 28.3
comp=Z,432nm,19.0s
AQU L'Aquila 104.12 28 IAMs_20 IAMs_20 15 40 06.9
comp=Z,511nm,18.0s
V53A Saluda 104.27 315 IAMs_20 IAMs_20 15 46 04.3
comp=Z,509nm,19.0s
FPAL Fort Paine 104.40 312 IAMs_20 IAMs_20 15 41 55.7
comp=Z,522nm,21.0s
U54A Nelsons Funny 104.64 316 IAMs_20 IAMs_20 15 51 41.0
comp=Z,505nm,18.0s
SSB Saint Sauveur 104.86 21 IAMs_20 IAMs_20 15 42 18.3
comp=Z,649nm,18.0s
VLC Villacollemand 105.07 26 IAMs_20 IAMs_20 15 38 21.8
comp=Z,554nm,20.0s
V48A Smith Brothers 105.93 312 IAMs_20 IAMs_20 15 41 46.3
comp=Z,600nm,21.0s
CLTN Cedars of Leba 106.04 312 IAMs_20 IAMs_20 15 44 02.1
comp=Z,504nm,20.0s
TUE Stuetta 107.01 24 IAMs_20 IAMs_20 15 43 46.3
comp=Z,488nm,18.0s
LNXT Lenox 107.35 310 IAMs_20 IAMs_20 15 48 52.8
comp=Z,674nm,19.0s
TRI Trieste 107.35 27 IAMs_20 IAMs_20 15 41 34.3
comp=Z,510nm,19.0s
FUORN Ofenpass-Fuorn 107.36 25 IAMs_20 IAMs_20 15 39 58.5
comp=Z,612nm,20.0s
GAZ Gaziantep 107.49 48 IAMs_20 IAMs_20 15 44 06.4
comp=Z,481nm,18.0s

T45A	Paducah	107.78	311		IAMs_20	IAMs_20	15 43 52.2				
	comp=Z,743nm,22.0s										
WCI	Wyandotte Cave	107.87	314		IAMs_20	IAMs_20	15 44 44.5				
	comp=Z,510nm,20.0s										
LCAR	Lake Charles	108.02	309		IAMs_20	IAMs_20	15 44 26.7				
	comp=Z,563nm,20.0s										
ECH	Echery	108.20	22		IAMs_20	IAMs_20	15 42 21.6				
	comp=Z,443nm,18.0s										
BRTR	Keskin Array B	108.29	44		PP	PP	14 59 50.6	+4.1			
	comp=Z,1.1nm,0.9s,baz=183,slow=5.5,SNR=5.1										
ACSO	Alum Creek Sta	108.33	317		IAMs_20	IAMs_20	15 53 40.5				
	comp=Z,485nm,18.0s										
VT1	Waterbury	108.49	326		IAMs_20	IAMs_20	15 41 35.9				
	comp=Z,653nm,19.0s										
S44A	Carbondale	108.61	311		IAMs_20	IAMs_20	15 43 42.1				
	comp=Z,746nm,22.0s										
SIUC	Southern Illin	108.61	311		IAMs_20	IAMs_20	15 43 42.3				
	comp=Z,762nm,22.0s										
U40A	Yellville	109.00	308		IAMs_20	IAMs_20	15 46 17.5				
	comp=Z,678nm,20.0s										
STU	Stuttgart	109.16	23		IAMs_20	IAMs_20	15 43 00.9				
	comp=Z,454nm,18.0s										
MEDO	Medina	109.29	322		IAMs_20	IAMs_20	15 49 17.7				
	comp=Z,498nm,20.0s										
WLF	Walferdange	109.37	21		IAMs_20	IAMs_20	15 43 29.7				
	comp=Z,534nm,19.0s										
CCM	Cathedral Cave	109.74	310		IAMs_20	IAMs_20	15 45 38.2				
	comp=Z,671nm,21.0s										
SLM	Saint Louis	109.81	311		IAMs_20	IAMs_20	15 43 57.1				
	comp=Z,697nm,21.0s										
GERES	GERESS Array B	110.26	26		PKKPbc	PKKPbc	15 10 25.7	+0.1			
	comp=Z,0.3nm,0.5s,baz=15,slow=4.6,SNR=3.1										
P43A	Skaggs, Pawnee	110.37	312		IAMs_20	IAMs_20	15 46 06.9				
	comp=Z,650nm,19.0s										
GRA1	Grafenberg Arr	110.47	24		IAMs_20	IAMs_20	15 43 29.7				
	comp=Z,433nm,19.0s										
KHC	Kasperske Hory	110.50	26	*e*PS	PS		15 09 27.6	-3.9			
KHC				*e*SS	SS		15 15 29.5	+0.1			
KHC				AMS	AMS		15 46 20.0				
	comp=Z,400nm,17.8s										
PSZ	Piszkesteto	111.02	31	IAMs_20	IAMs_20		15 46 58.4				
	comp=Z,507nm,18.0s										
TREC	Trest	111.12	27	AMS	AMS		15 46 50.0				
	comp=Z,600nm,16.4s										
NKC	Novy Kostel	111.26	25	AMS	AMS		15 44 10.0				
	comp=Z,400nm,16.9s										
GOPC	GO Pecny, Ondr	111.52	27	*e*PS	PS		15 09 49.1	+8.4			
GOPC				*e*SS	SS		15 15 32.6	-10			
GOPC				AMS	AMS		15 42 20.0				
	comp=Z,400nm,20.1s										
PRU	Pruhonice	111.52	26	*e*PS	PS		15 09 44.4	+3.7			
PRU				*e*SS	SS		15 15 32.3	-11			
PRU				AMS	AMS		15 42 00.0				
	comp=Z,300nm,18.3s										
EPT	El Paso	111.58	295	IAMs_20	IAMs_20		15 43 21.1				
	comp=Z,477nm,18.0s										
PVCC	Panska Ves	112.03	26	AMS	AMS		15 47 50.0				
	comp=Z,300nm,16.3s										
KRLC	Kraliky	112.16	28	AMS	AMS		15 47 50.0				
	comp=Z,300nm,16.9s										
DPC	Dobruska-Polom	112.30	27	*e*PS	PS		15 10 00.8	+13			
DPC				*e*SS	SS		15 15 49.1	-4.4			
DPC				AMS	AMS		15 47 40.0				
	comp=Z,400nm,14.7s										
OKC	Ostrava-Krasne	112.30	29	AMS	AMS		15 48 50.0				
	comp=Z,400nm,15.0s										
UPC	Upice	112.37	27	*e*PS	PS		15 10 01.4	+13			
UPC				*e*SS	SS		15 16 12.8	+19			
UPC				AMS	AMS		15 44 50.0				
	comp=Z,400nm,18.6s										
CLL	Collm	112.39	25	*e*Sdif	Sdif		15 07 54.0	-0.4			
CLL				*e*PS	PS		15 09 47.0	-1.6			
CLL				*e*PPS	PPS		15 11 01.0				
CLL				*e*SS	SS		15 15 54.0	-0.5			
CLL				*e*SSS	SSS		15 20 12.0				
CLL				*e*SSSS			15 23 24.0				
CLL				LmV			15 45 00.0				
	comp=Z,300nm,18.5s										
CHVC	Chvalec	112.45	27	AMS	AMS		15 44 50.0				
	comp=Z,400nm,17.8s										
OSTC	Ostas	112.46	27	*e*PS	PS		15 09 51.7	+2.3			
OSTC				*e*SS	SS		15 16 14.0	+18			
OSTC				AMS	AMS		15 44 50.0				
	comp=Z,400nm,18.6s										
121A	Cookes Peak, D	112.83	295	IAMs_20	IAMs_20		15 49 09.2				
	comp=Z,369nm,19.0s										
KWP	Kalwaria Pacla	113.37	32	IAMs_20	IAMs_20		15 46 22.5				
	comp=Z,489nm,19.0s										
Y22D	IRIS PASSCAL I	113.64	296	IAMs_20	IAMs_20		15 53 25.7				
	comp=Z,474nm,21.0s										
ANMO	Albuquerque	114.11	297	*c i* PKIKP	PKPdf		14 59 32.3	-0.7			
ANMO				pmax	pmax						
	comp=Z,3.0nm,1.0s										
ANMO	Albuquerque	114.11	297	P	PKiKP		14 59 33.5	+0.5			
	baz=144										
TUC	Tucson	114.16	292	P	PKiKP		14 59 33.8	+0.8			
	baz=143										
D46A	Sault St. Mari	114.47	320	P	PKiKP		14 59 35.3	+2.3			
	baz=149										
T25A	Trinidad	114.89	300	P	PKiKP		14 59 35.0	+0.6			
	baz=144										
KIV	Kislovodsk	115.44	48	*i* PKIKP	PKPdf		14 59 35.0	-0.1			
KIV				*e*			15 00 36.6				
KIV				*e*PS	PS		15 10 16.6	-0.4			
KIV				pmax	pmax						
	comp=Z,14nm,1.1s										
KIV				MLR	MLR						
	comp=Z,681nm,22.0s										
W18A	Petrified Fore	115.86	295	P	PKiKP		14 59 37.0	+0.6			
	baz=143										
SDCO	Great Sand Dun	115.89	300	P	PKPdf		14 59 36.4	-0.1			
	baz=143,SNR=8.2										
SDCO	Great Sand Dun	115.89	300		PKiKP		14 59 36.5	0.0			
X16A	Lo Mia Camp, P	116.16	293		PKPdf		14 59 36.8	-0.1			
S22A	4UR Ranch, Cre	116.53	299	P	PKiKP		14 59 38.2	+0.4			
	baz=143										
MAK	Makhachkala	116.64	52	*e*P	Pdif		14 55 47.5	-5.0			
MAK				*i*			14 59 35.0				
MAK				*e*PPP	PPP		15 03 14.7				
MAK				*e*SSS	SSS		15 21 08.7				
MAK				pmax	pmax						
	comp=Z,42nm,0.4s										
ECSD	EROS Data Cent	116.72	310	P	PKPdf		14 59 37.4	-0.1			
	baz=144										
ECSD	EROS Data Cent	116.72	310		PKPdf		14 59 37.3	-0.2			
ECSD	EROS Data Cent	116.72	310	IAMs_20	IAMs_20		15 47 59.9				
	comp=Z,410nm,20.0s										
HRA	Herat	116.75	68	IAMs_20	IAMs_20		15 51 59.9				
	comp=Z,385nm,19.0s										
MVCO	Mesa Verde	116.91	297	P	PKiKP		14 59 39.1	+0.7			
	baz=142										
WUAZ	Wupatki	117.00	294	P	PKiKP		14 59 39.4	+0.9			
	baz=142										
IKP	In-Ko-Pah, Jac	117.16	289	P	PKiKP		14 59 39.6	+0.7			
	baz=142										
Y12C	Blythe	117.20	290	P	PKiKP		14 59 39.4	+0.7			
	baz=142										
Y12C	Blythe	117.20	290	IAMs_20	IAMs_20		15 47 25.5				
	comp=Z,359nm,18.0s										
SWSC	Sam W. Stewart	117.23	289	P	PKiKP		14 59 39.6	+0.8			
	baz=142										
PDMCI	Parker Dam,Lak	117.44	291	P	PKiKP		14 59 39.9	+0.7			
	baz=142										
MONP2	Monument Peak	117.51	288	P	PKiKP		14 59 40.5	+0.8			
	baz=142										
ISCO	Idaho Springs	117.58	301	PKIKP	PKPdf		14 59 39.6	-0.1			
ISCO	Idaho Springs	117.58	301		PKPdf		14 59 39.6	-0.1			
SMCO	Snowmass	117.73	300		PKiKP		14 59 40.2	0.0			
PV13	Radium Mtn., P	117.82	298		PKPdf		14 59 40.0	-0.1			
IRM	Iron Mountain	117.84	290	P	PKiKP		14 59 41.1	+1.1			
	baz=142										
PV03	Paradox Valley	117.91	298	IAMs_20	IAMs_20		15 50 53.6				
	comp=Z,570nm,21.0s										
PV18	Skein Mesa, Pa	117.93	298		PKPdf		14 59 40.3	0.0			
W13A	Hualapai Mount	117.94	292		PKiKP		14 59 40.7	+0.2			
PV16	Nyswonger Mesa	117.98	298		PKPdf		14 59 40.2	-0.2			
PFO	Pinyon Flats O	118.09	289	P	PKiKP		14 59 41.2	+0.6			
	baz=142										
PV22	Blue Mesa, Par	118.10	298		PKPdf		14 59 40.5	-0.1			
BELC	Belle Mtn. Jos	118.16	290	P	PKiKP		14 59 41.8	+1.0			
	baz=142										
U15A	North Rim	118.17	294		PKPdf		14 59 40.1	-0.8			
GMRC	Granite Mounta	118.60	290	P	PKiKP		14 59 42.6	+0.9			
	baz=142										
N23A	Red Feather La	118.60	302	P	PKiKP		14 59 42.1	+0.5			
	baz=142										
KRVT	Keravat (AS076	118.91	177	PKP	PKPdf		14 59 41.7	-1.0			
	comp=Z,13nm,0.8s,baz=96,slow=6.0,SNR=3.8										
PKCU	Pink Cliffs	118.97	295		PKPdf		14 59 42.4	-0.1			
O20A	White River Ci	119.09	299	P	PKiKP		14 59 42.8	+0.3			
	baz=142										
O20A	White River Ci	119.09	299		PKPdf		14 59 42.3	-0.2			
BFSC	Mount Baldy Ra	119.20	289	P	PKiKP		14 59 43.1	+0.3			
	baz=141										
MTPU	Mount Pierson	119.38	295		PKPdf		14 59 42.5	-0.7			
SRU	San Rafael Swe	119.39	297	PKIKP	PKPdf		14 59 42.2	-0.9			
SRU	San Rafael Swe	119.39	297		PKPdf		14 59 42.1	-0.9			
SZCU	Shurtz Canyon	119.48	294		PKPdf		14 59 43.2	-0.1			
CCUT	Cedar City	119.58	294		PKPdf		14 59 42.7	-0.8			
GSC	Goldstone, Bar	119.59	290	P	PKiKP		14 59 44.2	+0.7			
	baz=141										
SHPR	Sheep Range	119.68	292		PKPdf		14 59 43.1	-0.5			
MSU	Marysvale	119.74	296	PKIKP	PKPdf		14 59 43.7	-0.1			
MSU	Marysvale	119.74	296		PKPdf		14 59 43.7	-0.1			
SHOC	Shoshone, Teco	119.78	291	P	PKiKP		14 59 44.5	+0.7			
	baz=141										
RWWY	Rawlins	119.81	301		PKPdf		14 59 42.6	-1.2			
TMUT	Trail Mountain	119.87	297		PKPdf		14 59 44.1	0.0			
EDW2	Edwards Air Fo	119.88	289	P	PKiKP		14 59 44.4	+0.3			
	baz=141,SNR=9.9										
RDMU	Red Mountain	120.06	299		PKPdf		14 59 44.0	-0.4			
AGMN	Agassiz Nation	120.10	313	P	PKPdf		14 59 43.1	-0.7			
	baz=143										
K22A	Casper	120.24	302	P	PKPdf		14 59 44.4	-0.2			
	baz=141										
K22A	Casper	120.24	302		PKPdf		14 59 43.7	-0.8			
RSSD	Black Hills	120.26	305	PKIKP	PKPdf		14 59 43.9	-0.7			
RSSD				MLR	MLR						
	comp=Z,600nm,20.0s										
RSSD	Black Hills	120.26	305	P	PKPdf		14 59 44.5	-0.1			
	baz=142										
RSSD	Black Hills	120.26	305		PKPdf		14 59 43.9	-0.7			
FURC	Furnace Creek,	120.52	291	P	PKiKP		14 59 46.1	+1.0			
	baz=141										
MPMC	Manual Prospec	120.52	290	P	PKiKP		14 59 46.2	+0.8			
	baz=141										
TPNV	Topopah Spring	120.58	292	PKIKP	PKiKP		14 59 45.7	+0.2			
TPNV	Topopah Spring	120.58	292	P	PKiKP		14 59 46.2	+0.8			
	baz=141										
TPNV	Topopah Spring	120.58	292		PKiKP		14 59 45.7	+0.2			
TPNV				IAMs_20	IAMs_20		15 48 03.4				
	comp=Z,405nm,18.0s										
PSUT	Pine Spring	120.59	294		PKiKP		14 59 45.7	+0.2			
E28A	Huff	120.72	309		PKiKP		14 59 45.2	0.0			
ISA	Isabella, Lake	120.73	289	PKIKP	PKiKP		14 59 45.7	0.0			
ISA	Isabella, Lake	120.73	289	P	PKiKP		14 59 46.4	+0.8			
	baz=141,SNR=12										
ISA	Isabella, Lake	120.73	289		PKiKP		14 59 45.7	0.0			
ISA				IAMs_20	IAMs_20		15 46 21.5				
	comp=Z,437nm,19.0s										
NLU	North Lily Min	120.80	297		PKPdf		14 59 45.8	0.0			
PKM	Mcpherson Peak	120.83	287	P	PKiKP		14 59 46.8	+0.7			
	baz=141										
NB2	NORSAR Subarra	121.07	20	PKP	PKKPbc		15 09 48.9	+1.1			
	comp=Z,2.7nm,1.1s,baz=17,slow=2.6										
NOA	NORSAR Array B	121.07	20	PKP	PKPdf		14 59 43.8	-1.5			
	comp=Z,1.1nm,0.8s,baz=193,slow=1.8,SNR=3.6										
NOA				PKKPbc	PKKPbc		15 09 48.4	+0.6			
	comp=Z,1.5nm,0.8s,baz=22,slow=4.4,SNR=4.8										
CWC	Cottonwood Cre	121.12	290	P	PKiKP		14 59 47.4	+0.8			
	baz=140										
GRAC	Grapevine Rang	121.18	291	P	PKiKP		14 59 47.4	+0.9			
	baz=140										
CTU	Camp Tracy	121.21	297		PKiKP		14 59 46.6	0.0			
R11A	Troy Canyon, C	121.31	293	P	PKiKP		14 59 47.5	+0.6			
	baz=140										
R11A	Troy Canyon, C	121.31	293		PKiKP		14 59 46.9	0.0			
R11A				IAMs_20	IAMs_20		15 49 16.9				
	comp=Z,383nm,20.0s										
DUG	Dugway, Tooele	121.35	296	PKIKP	PKiKP		14 59 47.0	+0.1			
DUG	Dugway, Tooele	121.35	296	P	PKiKP		14 59 47.6	+0.8			
	baz=140										
DUG	Dugway, Tooele	121.35	296		PKiKP		14 59 47.0	+0.1			
TCUT	Toone Canyon	121.37	298		PKiKP		14 59 47.1	+0.1			
ULM	Lac du Bonnet	121.66	315	PKP	PKPdf		14 59 45.8	-1.0			
	comp=Z,9.2nm,0.8s,baz=83,slow=1.8,SNR=5.9										
ULM				PP	PP		15 01 22.5	+2.1			
	comp=Z,11nm,0.9s,baz=147,slow=9.6,SNR=4.6										
BW06	Boulder Array	121.75	300	P	PKPdf		14 59 47.0	-0.5			
	baz=140										
BW06	Boulder Array	121.75	300		PKPdf		14 59 46.6	-0.9			
PDAR	Pinedale Array	121.75	300	PKP	PKPdf		14 59 47.0	-0.6			
	comp=Z,2.5nm,0.7s,baz=140,slow=5.1,SNR=21										
PDAR				PP	PP		15 01 19.9	-1.5			
	comp=Z,5.3nm,1.1s,baz=116,slow=6.8,SNR=9.8										
PDAR				PKKPbc	PKKPab		15 09 44.5	-0.5			
	comp=Z,0.3nm,0.7s,baz=349,slow=2.8,SNR=2.9										
HWUT	Hardware Ranch	121.82	298		PKPdf		14 59 47.3	-0.4			
HWUT				IAMs_20	IAMs_20		15 51 02.2				
	comp=Z,464nm,19.0s										
NIL	Nilore	121.91	76	PKIKP	PKPdf		14 59 47.5	-0.3			
NIL				MLR	MLR						
	comp=Z,400nm,19.0s										
NIL	Nilore	121.91	76		PKPdf		14 59 47.5	-0.3			
NIL	Nilore	121.91	76	IAMs_20	IAMs_20		15 52 07.5				
	comp=Z,386nm,19.0s										
BGU	Big Grassy Mou	122.01	297		PKiKP		14 59 48.3	+0.1			
OBN	Obninsk	122.39	37	*e*PKIKP	PKiKP		14 59 48.6	+0.5			
OBN				*e*PPP	PPP		15 04 01.4				
OBN				pmax	pmax						
	comp=Z,8.0nm,1.0s										
OBN				MLR	MLR						
	comp=Z,168nm,19.0s										
AHID	Auburn Hatcher	122.48	299		PKPdf		14 59 48.5	-0.4			
OMMB	Old Mammoth Mi	122.49	290		PKPdf		14 59 48.9	-0.3			
OMMB				IAMs_20	IAMs_20		15 47 14.2				
	comp=Z,414nm,19.0s										
MDPB	Devils Postpil	122.55	290	IAMs_20	IAMs_20		15 49 55.7				
	comp=Z,358nm,19.0s										
NV11	Mina Array Sit	122.68	291		PKiKP		14 59 49.9	+0.4			
NVAR	Mina Array Bea	122.75	291	PKP	PKiKP		14 59 51.1	+1.3			
	comp=Z,4.7nm,0.8s,baz=147,slow=3.0,SNR=32										
NVAR				PP	PP		15 01 33.0	+4.7			
	comp=Z,0.9nm,0.9s,baz=141,slow=7.0,SNR=4.3										
NVAR				PKKPbc	PKKPab		15 09 41.2	0.0			
	comp=Z,0.1nm,0.3s,baz=311,slow=3.0,SNR=1.5										
REDW	Red Top Meadow	122.82	300		PKPdf		14 59 49.5	-0.1			
REDW				IAMs_20	IAMs_20		15 54 34.0				
	comp=Z,442nm,20.0s										
DLV	T Lat	122.85	123	IAMs_20	IAMs_20		16 00 28.1				
	comp=Z,327nm,18.0s										
TPAW	Teton Pass	122.96	300		PKPdf		14 59 49.9	0.0			
ELK	Elko	122.96	295	PKIKP	PKiKP		14 59 50.1	0.0			
ELK	Elko	122.96	295		PKiKP		14 59 50.1	0.0			
KOLN	Koldanda	122.97	89	*e*P	PKPdf		14 59 49.6	-0.7			
	comp=Z,22nm,0.7s										
RYN	Ryan	123.02	291		PKiKP		14 59 50.5	+0.3			
FXWY	Fox Creek	123.11	300		PKiKP		14 59 50.3	0.0			
KVN	Kaiserville	123.12	292	PKIKP	PKiKP		14 59 50.8	+0.3			
KVN				MLR	MLR						
	comp=Z,300nm,19.0s										
KVN	Kaiserville	123.12	292		PKiKP		14 59 50.8	+0.3			
LAO	LASA Array	123.22	306	P	PKiKP		14 59 50.2	0.0			
	baz=140										
LAO	LASA Array	123.22	306		PKiKP		14 59 50.2	0.0			
IMW	Indian Meadow	123.26	300		PKPdf		14 59 50.5	0.0			
IMW				IAMs_20	IAMs_20		16 00 40.4				
	comp=Z,334nm,19.0s										
FLWY	Flagg Ranch	123.29	301		PKPdf		14 59 50.5	0.0			
WAKR	Walker	123.39	290		PKiKP		14 59 51.5	+0.5			
WAKR				IAMs_20	IAMs_20		15 48 54.0				
	comp=Z,496nm,18.0s										
RLMT	Red Lodge	123.41	302	P	PKiKP		14 59 50.9	0.0			
	baz=139										
RLMT	Red Lodge	123.41	302		PKiKP		14 59 50.8	-0.1			
H17A	Grant Village	123.47	301	P	PKiKP		14 59 51.8	+0.7			
	baz=139										
YPP	Pitchstone Pla	123.48	301		PKiKP		14 59 51.6	+0.5			
DANN	Dangsing	123.51	89	*e*P	PKPdf		14 59 50.8	-0.6			
	comp=Z,34nm,0.7s										
LKWY	Lake	123.52	301	IAMs_20	IAMs_20		15 56 08.0				
	comp=Z,539nm,21.0s										
CMB	Columbia Colle	123.53	289	PKIKP	PKiKP		14 59 51.3	+0.2			
CMB	Columbia Colle	123.53	289		PKiKP		14 59 51.3	+0.2			
CMB				IAMs_20	IAMs_20		15 47 46.6				
	comp=Z,326nm,18.0s										
YERR	Yerington	123.65	291		PKiKP		14 59 51.8	+0.3			
YERR				IAMs_20	IAMs_20		15 48 47.9				
	comp=Z,362nm,20.0s										
YNE	Yellowstone No	123.67	302		PKPdf		14 59 50.7	-0.4			
DMN	Daman	123.67	90	*e*P	PKPdf		14 59 51.1	-0.6			
	comp=Z,25nm,0.9s										
DGMT	Dagmar	123.69	308	P	PKPdf		14 59 50.7	0.0			
	baz=140										
GKN	Gorkha	123.72	90	*e*P	PKPdf		14 59 51.0	-0.7			
CM31	Chiang Mai Arr	123.72	109		PKPdf		14 59 51.3	-0.5			
CMAR	Chiang Mai Arr	123.72	109	PKP	PKPdf		14 59 51.9	+0.1			
	comp=Z,7.0nm,0.8s,baz=232,slow=3.6,SNR=44										
CMAR				PKKPbc	PKKPbc		15 09 36.9	+0.1			
	comp=Z,1.1nm,0.9s,baz=1.8,slow=3.5,SNR=6.2										
PKIN	Phulchoki	123.80	91	*e*P	PKPdf		14 59 51.0	-1.0			
	comp=Z,29nm,0.9s										
PKI	Pulchoki	123.81	91	*e*P	PKPdf		14 59 51.3	-0.8			
	comp=Z,22nm,0.9s										
YHH	Holmes Hill	123.89	301		PKiKP		14 59 52.0	+0.1			
KKN	Kakani	123.91	90	*e*P	PKPdf		14 59 51.6	-0.5			
	comp=Z,13nm,0.6s										
PNTR	Pine Nut	123.92	291		PKiKP		14 59 52.2	+0.2			
PNTR				IAMs_20	IAMs_20		15 48 53.8				
	comp=Z,517nm,20.0s										
RAMN	Ramite	123.97	92	*e*P	PKPdf		14 59 52.0	-0.3			
	comp=Z,17nm,0.5s										
CHTO	Chiang Mai	124.02	109	PKIKP	PKPdf		14 59 51.5	-0.8			
CHTO	Chiang Mai	124.02	109		PKPdf		14 59 51.5	-0.8			
YHB	Horse Butte	124.03	301		PKPdf		14 59 51.0	-0.8			
YHL	Hebgen Lake	124.10	301		PKiKP		14 59 52.7	+0.4			
RUBR	Rubicon Trail	124.17	290	IAMs_20	IAMs_20		15 50 49.6				
	comp=Z,306nm,18.0s										
PAHR	Pah Rah Range	124.27	291		PKiKP		14 59 53.0	+0.3			
JIRN	Jiri	124.30	91	*e*P	PKPdf		14 59 52.6	-0.5			
	comp=Z,88nm,1.0s										
GUN	Gumba	124.33	91	*e*P	PKPdf		14 59 52.7	-0.4			
	comp=Z,34nm,0.9s										
ODAN	Odare	124.33	93	*e*P	PKPdf		14 59 52.9	-0.1			
GAR	Garm	124.43	70		PKPdf		14 59 52.7	+0.1			
AFDM	Forest Hills D	124.52	290		PKiKP		14 59 53.4	+0.4			
FINES	FINESS Array B	124.67	27	PKP	PKPdf		14 59 52.0	-0.2			
	comp=Z,4.6nm,0.8s,baz=156,slow=3.6,SNR=12										
FINES	FINESS Array B	124.67	27	PKIKP	PKPdf		14 59 52.0	-0.2			
BEKR	Beckworth	124.89	291		PKiKP		14 59 54.1	+0.2			
BEKR				IAMs_20	IAMs_20		15 51 33.6				
	comp=Z,367nm,18.0s										
TAPN	Taplejung	124.89	93	*e*P	PKPdf		14 59 54.1	0.0			
DLMT	Dillon	125.15	301		PKiKP		14 59 54.7	+0.5			
ORV	Oroville	125.24	290	PKIKP	PKiKP		14 59 54.4	0.0			
ORV	Oroville	125.24	290		PKiKP		14 59 54.4	0.0			
ORV				IAMs_20	IAMs_20		15 48 35.9				
	comp=Z,348nm,18.0s										
MFID	Camas Ranch	125.25	297		PKiKP		14 59 54.5	+0.1			
MFID				IAMs_20	IAMs_20		15 56 02.1				
	comp=Z,337nm,18.0s										
GDXM	Geysers	125.36	288	IAMs_20	IAMs_20		15 50 52.1				
	comp

comp=Z,341nm,21.0s
G05D Wamic, OR 129.29 295 P PKiKP 15 00 02.7 +0.4
baz=135
H04A Detroit Lake 129.33 294 PKPdf 15 00 02.0 +0.3
NEW Newport 129.39 300 P PKPdf 15 00 01.9 +0.1
baz=135
NEW Newport 129.39 300 IAMs_20 IAMs_20 15 56 23.5
comp=Z,478nm,20.0s
D08A Wollman Farm, 129.40 298 PKiKP 15 00 02.2 -0.2
FRU1 Bishkek 129.44 70 IAMs_20 IAMs_20 16 00 26.8
comp=Z,347nm,20.0s
E07A Sunnyside 129.50 297 IAMs_20 IAMs_20 15 57 12.5
comp=Z,380nm,18.0s
SUMG Summit 129.56 355 *e*PKiKP **PKiKP 15 00 05.9 +3.4**
SUMG Summit 129.56 355 *i* P **PKiKP 15 00 05.9 +3.4**
C09A Chrisman Ranch 129.61 299 PKPdf 15 00 02.1 0.0
QIZ Qiongzhong 129.64 120 PKP PKPdf 15 00 03.0 0.0
QIZ PP **PP 15 02 14.5 +1.0**
QIZ SS SS 15 19 38.5 +3.3
QIZ LR LR
comp=Z,280nm,16.7s
QIZ LR LR
comp=Z,240nm,17.6s
QIZ LR LR
comp=Z,260nm,18.1s
ULHL Ulahol 129.87 71 P PKPdf 15 00 03.1 0.0
SNR=5.7
BOOM Boomskoye usch 129.89 71 PKiKP PKPdf 15 00 02.0 -1.0
BOOM Boomskoye usch 129.89 71 PKPdf 15 00 02.0 -1.0
TKM2 Tokmak 2 130.02 70 P PKPdf 15 00 03.1 -0.2
SNR=5.6
G03D McMinnville, O 130.24 294 P PKiKP 15 00 04.1 0.0
baz=135
KDJ Kajisay 130.28 72 PKiKP PKPdf 15 00 03.4 -0.4
KDJ Kajisay 130.28 72 PKPdf 15 00 03.4 -0.4
KDJ IAMs_20 IAMs_20 16 01 45.7
comp=Z,361nm,18.0s
TARG Taragay, Kyrgy 130.32 73 IAMs_20 IAMs_20 16 02 13.1
comp=Z,304nm,19.0s
LTY Liberty 130.39 297 PKPdf 15 00 03.3 -0.4
PRGR Permogore 130.47 36 *e*PKiKP **PKPdf 15 00 00.3 -2.9**
PRGR pmax pmax
comp=Z,10.0nm,0.9s
B08A Colville Reser 130.51 299 PKPdf 15 00 03.8 0.0
B08A IAMs_20 IAMs_20 15 59 46.1
comp=Z,505nm,20.0s
LON Longmire 130.59 296 PKiKP PKPdf 15 00 03.6 -0.5
LON Longmire 130.59 296 PKPdf 15 00 03.6 -0.5
LON IAMs_20 IAMs_20 15 53 19.4
comp=Z,415nm,18.0s
F04D Rainier, OR 130.72 295 P PKiKP 15 00 05.0 -0.1
baz=134
E04D Cinebar 130.83 295 P PKiKP 15 00 05.1 -0.2
baz=134
D05A Enumclaw 130.99 296 PKPdf 15 00 05.0 +0.3
PRZ Przheval'sk 131.16 73 IAMs_20 IAMs_20 15 53 25.3
comp=Z,341nm,20.0s
KMI Kunming 131.20 108 PKP PKiKP 15 00 09.6 +2.6
PNT Penticton 131.31 300 PKHKP PKPpre 14 59 52.2
D04E Lakebay 131.37 296 P PKiKP 15 00 06.8 +0.5
baz=134
ARCES ARCESS Array B 131.37 21 PKP PKPdf 15 00 04.0 -0.8
comp=Z,3.5nm,0.9s,baz=230,slow=0.9,SNR=7.3
ARCES ARCESS Array B 131.37 21 PKiKP PKPdf 15 00 04.0 -0.8
ARU Arti 131.49 47 PKP PKPdf 15 00 04.8 -0.5
comp=Z,0.7nm,0.5s,baz=207,slow=5.4,SNR=7.9
ARU Arti 131.49 47 *i* PKiKP **PKiKP 15 00 05.8 -0.5**
ARU MLR MLR
comp=Z,272nm,21.0s
ARU Arti 131.49 47 PKPdf 15 00 05.2 -0.1
ARU IAMs_20 IAMs_20 15 59 55.3
comp=Z,317nm,20.0s
B06A Marblemount 131.66 298 IAMs_20 IAMs_20 16 01 11.5
comp=Z,450nm,20.0s
D03D Eldon 131.77 296 P PKiKP 15 00 07.7 +0.5
baz=133
B05A Bryant 131.78 297 P PKiKP 15 00 06.7 -0.5
baz=133
NLWA Neilton Lookou 132.06 295 PKPdf 15 00 07.0 +0.2
A04D Lummi Island 132.39 297 P PKiKP 15 00 08.0 -0.3
baz=133
SVE Sverdlovsk 132.60 48 *e*PKiKP **PKiKP 15 00 08.0 -0.5**
SVE pmax pmax
comp=Z,13nm,0.8s
LLLB Lillooet 133.26 300 PKPdf 15 00 08.5 -0.4
LLLB IAMs_20 IAMs_20 15 57 31.9
comp=Z,445nm,20.0s
DAG Danmarks Havn 133.52 2 *i* PKiKP **PKiKP 15 00 09.4 -0.5**
DAG Danmarks Havn 133.52 2 *i* P **PKiKP 15 00 09.4 -0.5**
comp=Z,0.4nm,0.4s
BRVK Borovoye 134.31 57 *c i* PKiKP **PKiKP 15 00 12.2 +0.1**
BRVK pmax pmax
comp=Z,8.0nm,1.3s
BRVK Borovoye 134.31 57 PKPdf 15 00 11.0 +0.2
BRVK Borovoye 134.31 57 IAMs_20 IAMs_20 16 00 37.7
comp=Z,420nm,20.0s
GYA Guiyang 134.31 111 *e*Pdif **Pdif 14 57 12.3 +0.5**
GYA PKP **PKPdf 15 00 12.0 +0.2**
GYA PP **PP 15 02 48.4 +4.6**
GYA AMB AMB
comp=Z,150nm,7.8s
BVAR Borovoye Array 134.34 57 PKP PKPdf 15 00 11.1 +0.3
comp=Z,4.8nm,0.9s,baz=236,slow=1.6,SNR=17
MAKZ Makanchi 135.98 71 PKiKP PKPdf 15 00 14.6 +0.5
MAKZ Makanchi 135.98 71 PKPdf PKPdf 15 00 14.6 +0.5
MAKZ IAMs_20 IAMs_20 16 05 15.0
comp=Z,341nm,18.0s
MK31 Makanchi Array 136.13 71 PKiKP PKPdf 15 00 14.1 -0.3
MK31 Makanchi Array 136.13 71 PKPdf 15 00 14.1 -0.3
MKAR Makanchi Array 136.13 71 PKhKP PKPpre 15 00 05.2
comp=Z,0.8nm,0.8s,baz=247,slow=6.2,SNR=5.4
MKAR PKP **PKPdf 15 00 13.8 -0.7**
comp=Z,2.7nm,0.9s,baz=262,slow=2.5,SNR=13
MKAR SKPbc **SKPbc 15 03 44.7 -0.3**
comp=Z,3.0nm,1.2s,baz=242,slow=2.8,SNR=4.3
CD2 Chengdu 136.36 104 PKP PKPdf 15 00 15.5 +0.1
KURBB Kurchatov Arra 136.69 64 PKhKP PKPpre 15 00 05.5
comp=Z,0.5nm,0.6s,baz=235,slow=3.5,SNR=6.0
KURBB PKP **PKPdf 15 00 14.4 -0.9**
comp=Z,3.4nm,0.9s,baz=237,slow=3.2,SNR=20
KURK Kurchatov 136.80 64 *c i* PKiKP **PKiKP 15 00 16.6 -0.6**
KURK pmax pmax
comp=Z,6.0nm,1.3s
KURK Kurchatov 136.80 64 IAMs_20 IAMs_20 16 02 17.5
comp=Z,298nm,20.0s
WMQ Urumqi 137.01 78 *e*PKP **PKiKP 15 00 17.3 -0.7**
WMQ LR LR
comp=Z,680nm,29.0s
WMQ LR LR
comp=Z,1μm,28.9s
WMQ LR LR
comp=Z,760nm,29.2s
YKA Yellowknife Ar 137.58 317 PKhKP PKPpre 15 00 03.5
comp=Z,1.0nm,0.7s,baz=122,slow=3.5,SNR=12
YKA PKP **PKPdf 15 00 16.8 +0.2**
comp=Z,23nm,0.8s,baz=123,slow=2.4,SNR=92
YKA PP **PP 15 03 03.2 -0.8**
comp=Z,2.9nm,0.8s,baz=123,slow=6.7,SNR=7.8
YKA SKPbc **SKPbc 15 03 49.2 +0.5**
comp=Z,2.3nm,0.8s,baz=120,slow=2.5,SNR=4.8
DIB Dawson Inlet, 140.00 297 PKPdf 15 00 22.0 +0.8
LZH Lanzhou 140.37 100 *e*PKP **PKPdf 15 00 22.3 -0.5**
LZH LR LR
comp=Z,52nm,18.1s
LZH LR LR
comp=Z,58nm,18.0s
GTA Gaotai 140.58 92 *e*PKP **PKPdf 15 00 22.6 -0.4**
GTA SKKS 15 10 19.5
GTA LR LR
comp=Z,130nm,20.9s
GTA LR LR
comp=Z,210nm,20.3s
GTA LR LR
comp=Z,180nm,21.9s
WHN Wuhan 141.51 116 PKP PKiKP 15 00 29.5 +1.9
WHN LR LR
comp=Z,440nm,20.5s
DLBC Dease Lake 141.74 305 PKPpre 15 00 19.0
ZAA0 Zalesovo Array 141.78 64 PKPdf 15 00 25.5 +1.0
ZAA0 IAMs_20 IAMs_20 16 07 55.2
comp=Z,274nm,18.0s
ZALV Zalesovo Beam 141.78 64 PKhKP PKPpre 15 00 18.1
comp=Z,1.5nm,0.5s,baz=240,slow=2.7,SNR=4.6
SIT Sitka 143.47 300 IAMs_20 IAMs_20 16 07 36.0
comp=Z,373nm,19.0s
JIS Juneau Island 143.64 303 PKPpre PKPbc 15 00 25.5 +0.4
BESE Bessie Mountai 144.00 303 PKPbc 15 00 26.9 +0.6
C36M Paulatuk 144.29 323 P PKPdf 15 00 28.9 +0.5
baz=112
C36M Paulatuk 144.29 323 PKPab 15 00 26.4 0.0
C36M IAMs_20 IAMs_20 16 03 29.4
comp=Z,381nm,20.0s
SKAG Skagway 144.63 304 PKPdf 15 00 29.0 -0.3
SKAG IAMs_20 IAMs_20 16 06 42.5
comp=Z,305nm,18.0s
NJ2 Nanjing 144.94 120 *e*PKP **PKPdf 15 00 30.6 -0.1**
WHY Whitehorse 144.97 306 PKPab 15 00 29.4 0.0
SSE Sheshan 145.22 124 IAMs_20 IAMs_20 16 04 06.7
comp=Z,388nm,18.0s
A36M Sachs Harbour 145.56 327 P PKPab 15 00 31.5 +0.4
baz=107
DHAK Deception Hill 145.79 302 PKPbc 15 00 31.9 -0.1
DHAK IAMs_20 IAMs_20 16 07 04.1
comp=Z,342nm,20.0s
TIY Taiyuan 146.17 106 *e*PKPbc **PKPdf 15 00 33.1 +0.3**
TIY PP **PP 15 04 03.3 +6.8**
TIY SKS **SKSdf 15 07 42.8 +2.4**
TIY AMB AMB
comp=Z,83nm,3.8s
TIY LR LR
comp=Z,90nm,6.7s
TIY LR LR
comp=Z,61nm,11.1s
TIY LR LR
comp=Z,100nm,15.8s
HYT Haines Junctio 146.21 305 PKPbc PKPab 15 00 34.0 0.0
HYT IAMs_20 IAMs_20 16 08 35.0
comp=Z,390nm,20.0s
BTO Baotou 146.98 100 *e*PKPbc **PKPbc 15 00 35.9 -0.2**
INK Inuvik 147.20 319 PKPbc PKPbc 15 00 36.2 +0.5
comp=Z,43nm,0.8s,baz=86,slow=3.2,SNR=124
INK Inuvik 147.20 319 PKPbc PKPbc 15 00 35.9 +0.1
TIA Tai'an 147.44 113 PKPbc PKPbc 15 00 37.5 +0.1
EPYK Eagle Plains 147.84 315 P PKPbc 15 00 37.7 +0.1
baz=107,SNR=54
EPYK Eagle Plains 147.84 315 PKPbc PKPbc 15 00 37.6 0.0
YAH Yahtse 147.95 303 PKPbc PKPbc 15 00 38.8 +0.5
HHC Hu-ho-hao-te 147.98 101 *e*PKPbc **PKPdf 15 00 34.8 -1.0**
HHC PP **PP 15 04 05.1 -2.1**
HHC SS SS 15 23 14.3 +2.2
HHC LR LR
comp=Z,230nm,20.8s
HHC LR LR
comp=Z,140nm,20.8s
HHC LR LR
comp=Z,140nm,20.3s
CTGM Chitina Glacie 147.99 304 PKPbc PKPbc 15 00 38.6 +0.3
CTGM IAMs_20 IAMs_20 16 12 19.2
comp=Z,352nm,20.0s
BARN Barnard Glacie 148.17 304 PKPbc PKPbc 15 00 39.0 +0.2
DAWY Dawson 148.21 310 PKPbc PKPbc 15 00 38.7 0.0
BALM Baldy 148.47 304 PKPbc PKPbc 15 00 39.7 +0.2
MOY Mondy 148.87 76 *e*PKHKP **PKPdf 15 00 36.4 -0.5**
MOY pmax pmax
comp=Z,76nm,2.6s
MCARA McCarthy VSAT 148.90 304 PKPbc PKPbc 15 00 41.1 +0.6
NRIK Noril'sk 149.01 39 PKPbc PKPbc 15 00 40.8 +0.3
comp=Z,15nm,0.9s,baz=164,slow=0.8,SNR=30
VRDI Verde Repeater 149.04 304 PKPbc PKPbc 15 00 41.3 +0.2
EGAK Eagle 149.16 311 PKPbc PKPbc 15 00 40.5 -0.4
GLB Gilahina Butte 149.28 304 PKPbc PKPbc 15 00 41.7 +0.2
RAGM Ragged Mountai 149.31 302 PKiKP 15 00 42.3 -0.4
ZAK Zakamensk 149.42 80 *e*PKiKP **PKPdf 15 00 37.1 -0.7**
ZAK pmax pmax
comp=Z,27nm,1.4s
SONM Songino Array 149.68 87 PKP PKPdf 15 00 37.9 -0.4
comp=Z,12nm,1.1s,baz=195,slow=3.4,SNR=6.7
SONM PKPbc **PKPbc 15 00 42.9 -0.1**
comp=Z,24nm,0.7s,baz=227,slow=2.7,SNR=72
MENT Mentasta 149.71 307 PKPbc PKiKP 15 00 43.0 -0.4
MENT IAMs_20 IAMs_20 16 12 39.6
comp=Z,296nm,18.0s
MID Middleton Isla 149.74 300 PKP2 PKPbc 15 00 42.8 +0.3
MID Middleton Isla 149.74 300 PKPbc 15 00 42.8 +0.3
BJT Baijiatuan 149.83 107 PKPbc 15 00 43.0 -0.5
BJI Beijing 149.85 107 PKPbc PKPdf 15 00 39.0 +0.4
BJI PP **PP 15 04 14.6 -3.3**
BJI SS SS 15 23 37.5 +4.9
BJI AMB AMB
comp=Z,110nm,3.6s
BJI LR LR
comp=Z,150nm,16.9s
BJI LR LR
comp=Z,170nm,20.9s
EYAK Cordova Ski Ar 149.86 302 PKPbc PKiKP 15 00 43.6 -0.1
ULN Ulaanbaatar 150.06 87 PKiKP PKPbc 15 00 43.4 -0.6
ULN Ulaanbaatar 150.06 87 PKPbc 15 00 43.4 -0.6
ULN Ulaanbaatar 150.06 87 IAMs_20 IAMs_20 16 20 37.3
comp=Z,324nm,19.0s
DOT Dot Lake 150.07 308 PKPbc PKiKP 15 00 43.9 -0.3
DOT IAMs_20 IAMs_20 16 11 44.9
comp=Z,380nm,19.0s
HIN Hinchinbrook I 150.16 301 PKiKP 15 00 44.3 -0.1
FID Port Fidalgo 150.27 302 PKPbc PKiKP 15 00 44.3 -0.3
TLY Talaya 150.29 78 *c i* PKiKP **PKiKP 15 00 44.6 -0.4**
TLY pmax pmax
comp=Z,38nm,1.3s
TLY Talaya 150.29 78 PKPbc 15 00 44.3 +0.1
TLY IAMs_20 IAMs_20 16 13 21.5
comp=Z,334nm,18.0s
GLI Glacier Island 150.60 302 PKPbc PKPbc 15 00 44.9 +0.2
IRK Irkutsk 150.91 78 *e*PKiKP **PKPbc 15 00 44.5 -1.1**
IRK pmax pmax
comp=Z,61nm,2.4s
SCM Sheep Creek Mo 151.00 304 PKiKP PKiKP 15 00 46.4 +0.2
SCM Sheep Creek Mo 151.00 304 PKiKP 15 00 46.4 +0.2
JNU Nakatsue 151.08 135 PKPbc PKPbc 15 00 46.2 -0.5
comp=Z,22nm,0.9s,baz=104,slow=3.4,SNR=14
PRP Porcupine Dome 151.12 312 PKiKP 15 00 46.2 -0.2
PRP IAMs_20 IAMs_20 16 08 31.6
comp=Z,397nm,20.0s
FYU Fort Yukon 151.20 314 PKPbc PKiKP 15 00 46.7 +0.3
FYU IAMs_20 IAMs_20 16 11 10.6
comp=Z,320nm,19.0s
DHY Denali Highway 151.35 307 PKPbc PKiKP 15 00 47.2 +0.2
KNK Knik Glacier 151.39 303 PKPbc PKiKP 15 00 47.0 0.0
SML Sawmill 151.44 304 PKPbc PKiKP 15 00 47.0 -0.1
SEW Seward 151.46 300 PKPbc PKiKP 15 00 46.8 -0.2
HDA Harding Lake 151.49 309 P PKPbc 15 00 46.7 +0.1
baz=102,SNR=6.9
HDA Harding Lake 151.49 309 PKPbc PKPbc 15 00 46.6 0.0
HDA IAMs_20 IAMs_20 16 13 47.3
comp=Z,324nm,20.0s
IL31 151.54 310 PKPbc PKPbc 15 00 46.7 +0.1
ILAR Eielson Array 151.54 310 PKPbc PKiKP 15 00 47.0 -0.1
comp=Z,88nm,0.9s,baz=135,slow=1.1,SNR=187
GHO Glory Hole Cre 151.71 303 PKPbc PKiKP 15 00 47.9 +0.2
PMR Palmer 151.75 303 PKiKP PKiKP 15 00 47.9 +0.3
PMR Palmer 151.75 303 PKPbc PKiKP 15 00 47.9 +0.3
PMR IAMs_20 IAMs_20 16 20 29.7
comp=Z,351nm,18.0s
DL2 Dalian 151.78 115 PKPbc PKPbc 15 00 47.9 -0.1
DL2 PP **PP 15 04 29.0 +0.1**
POKR Poker Plat Res 151.83 311 P PKPbc 15 00 47.2 -0.1
baz=101,SNR=9.9
RC01 Rabbit Creek A 151.89 302 PKiKP 15 00 47.9 -0.1
CCB Clear Creek Bu 151.90 310 PKPbc PKPbc 15 00 47.4 -0.1
COLA College 151.96 310 PKiKP PKPbc 15 00 47.5 -0.1
COLA College 151.96 310 PKPbc 15 00 47.5 -0.1
TCOL CIGO, UAF Yank 151.97 310 P PKPbc 15 00 47.4 -0.2
baz=101,SNR=7.8
WRH Wood River Hil 151.98 309 PKPbc PKiKP 15 00 48.0 -0.1
BRLK Bradley Lake 152.03 299 PKPbc 15 00 48.1 +0.1
CNPM China Poot 152.13 298 PKiKP 15 00 48.5 0.0
MDM Murphy Dome 152.13 310 PKPbc 15 00 46.8 -1.2
MCK McKinley 152.19 308 PKiKP PKiKP 15 00 48.4 -0.1
MCK McKinley 152.19 308 PKPbc PKiKP 15 00 48.4 -0.1
KDAK Kodiak Island 152.20 294 PKiKP PKiKP 15 00 48.8 +0.1
KDAK Kodiak Island 152.20 294 PKiKP 15 00 48.8 +0.1
OHAK Old Harbor 152.35 293 PKiKP 15 00 49.1 +0.1
HOM Homer 152.36 298 IAMs_20 IAMs_20 15 50 13.3
comp=Z,311nm,19.0s
NEA Nenana 152.42 309 PKPbc 15 00 48.5 -0.2
TJN Taejon 152.43 127 *c i* PKiKP **PKiKP 15 00 50.0 +0.1**
BWN Browne 152.51 308 PKPbc 15 00 48.7 -0.2
TRF Thorofare Moun 152.72 307 PKPbc PKiKP 15 00 50.0 +0.1
INCN Inchon 153.02 124 IAMs_20 IAMs_20 16 05 44.9
comp=Z,333nm,20.0s
KTH Kantishna Hill 153.02 307 PKPbc PKiKP 15 00 50.2 -0.1
TOLK Toolik Lake Re 153.08 318 P PKiKP 15 00 50.7 +0.4
baz=92
TOLK Toolik Lake Re 153.08 318 PKPbc PKiKP 15 00 50.7 +0.4
TOLK IAMs_20 IAMs_20 16 11 17.0
comp=Z,333nm,20.0s
BPAW Bear Paw Mtn. 153.15 308 PKPbc PKPbc 15 00 50.4 +0.1
COLD Coldfoot 153.23 315 PKPbc PKiKP 15 00 51.2 +0.7
PPLA Purkeypile 153.46 305 PKPbc PKPbc 15 00 51.2 0.0
KSRS Korea Array 153.58 126 PKPbc PKPbc 15 00 51.8 -0.3
comp=Z,4.3nm,0.9s,baz=217,slow=2.1,SNR=9.4
CHGN Chignik 154.64 288 PKiKP 15 00 53.8 +0.1
CNBA Chernabura Isl 154.69 285 PKPbc 15 00 53.8 -0.1
TTA Tatalina 155.18 304 PKiKP PKPdf 15 00 55.4 +10
TTA Tatalina 155.18 304 PKPdf 15 00 55.4 +10
SDPT Sand Point 155.37 285 PKPdf 15 00 55.4 +9.2
MAT Matsushiro 156.76 144 PKP PKPdf 15 00 55.9 +7.1
MJAR Matsushiro Arr 156.76 144 PKPbc PKPbc 15 00 59.7
comp=Z,1.8nm,0.8s,baz=192,slow=3.1,SNR=4.2
HIA Hailar 157.80 95 IAMs_20 IAMs_20 16 26 31.1
comp=Z,292nm,20.0s
RDOG Red Dog Mine 158.05 317 PKPab 15 01 24.0 +0.9
BOD Bodaibo 158.22 70 *e*PKiKP **PKPdf 15 00 47.8 -2.0**
BOD pmax pmax
comp=Z,10.0nm,1.5s
USRK Ussuriysk Ar. 160.82 122 PKPab PKPab 15 01 34.8 -0.9
comp=Z,3.2nm,0.9s,baz=216,slow=6.5,SNR=4.3
KLR Kul'dur 164.20 109 PKP PKPdf 15 00 55.8 -0.7
comp=Z,1.8nm,0.9s,baz=126,slow=20,SNR=4.1
KLR PKPab **PKPab 15 01 49.3 -1.2**
comp=Z,4.0nm,0.9s,baz=270,slow=5.1,SNR=4.0
YUK Yuzh-Kuril'sk 165.90 153 *e*PKiKP **PKPdf 15 00 57.0 -1.0**
KUR Kuril'sk 167.50 157 *e*PKiKP **PKPdf 15 00 58.0 -1.2**
YSS Yuzh-Sakhalins 167.56 138 *i* PKiKP **PKPdf 15 00 59.7 +0.5**
YSS *e* 15 02 05.0
BILL Bilibino 167.70 339 *e*PKiKP **PKPdf 15 00 54.5 -4.2**
BILL *e* 15 02 03.8
BILL *e* 15 05 55.6
BILL pmax pmax
comp=Z,3.0nm,1.3s
PETK Petropavlovsk- 175.81 205 PKP PKPdf 15 01 01.5 -1.5
comp=Z,3.6nm,0.9s,baz=165,slow=6.2,SNR=4.0
PETK PKPab **PKPab 15 02 41.4 -0.4**
comp=Z,8.9nm,1.1s,baz=67,slow=11,SNR=6.1

IDC ***13*** *14:45:28.5±1.6, 31°.26N×100°.22E, h0km, mb3.6/6, mb1 3.6/8, mb1mx3.4/62, mbtmp3.5/8, ML3.1/1, MS3.2/3, Ms1 3.3/3, ms1mx2.8/39, Error ellipse: s-maj=33.1km s-min=27.2km az=49.0*
BJI ***13*** *14:45:28.3±0.0, 30°.78N×100°.00E, h14km, ML3.5/11*
ISC 13 14:45:26.6±1.0, 30°.8N±0°.1×99°.98E±0°.06, h10km, n22,
σ1s49/20, mb3.6/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**3.25**	**87**	Pg	**Pb**	**14 46 26.0**	**+1.6**
CD2				Sn	**Sn**	**14 46 55.0**	**-1.5**
CD2				Sg	**Sg**	**14 47 10.8**	**-0.2**
CD2				smax	smax		
	comp=N,130nm,1.0s						
CD2				smax	smax		
	comp=E,310nm,1.0s						
GTA	**Gaotai**	**8.60**	**359**	*e*P	**Pg**	**14 48 12.3**	**+1.1**
GTA				pP	Pn	14 48 17.3	+46
GTA				sP		14 48 19.3	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,55nm,5.1s						
GTA				LR	LR		
	comp=N,100nm,18.4s						
GTA				LR	LR		
	comp=E,120nm,19.7s						
GTA				LR	LR		
	comp=Z,77nm,18.1s						
ODAN	**Odare**	**11.71**	**254**	*e*P	**Pn**	**14 48 14.4**	**+0.3**
	comp=Z,18nm,0.6s						
CMAR	**Chiang Mai Arr**	**12.32**	**185**	Pn	Pn	14 48 32.4	+10
	baz=356,slow=12,SNR=1.0						
CMAR				Pg		14 49 19.9	
	comp=Z,0.3nm,0.3s,baz=3.1,slow=18,SNR=3.3						
CMAR				LR	LR	14 53 36.7	
	comp=Z,31nm,18.0s,baz=95,slow=38						
WHN	**Wuhan**	**12.37**	**87**	P	Pn	14 48 17.8	-5.0
JIRN	**Jiri**	**12.44**	**259**	*e*P	**Pn**	**14 48 24.5**	**+0.3**
	comp=Z,12nm,0.4s						
GUN	**Gumba**	**12.63**	**260**	*e*P	**Pn**	**14 48 26.0**	**-0.7**
	comp=Z,5.5nm,0.3s						
PKI	**Pulchoki**	**13.13**	**259**	*e*P	**Pn**	**14 48 32.9**	**-0.6**
	comp=Z,14nm,0.7s						
PKIN	**Phulchoki**	**13.14**	**260**	*e*P	**Pn**	**14 48 32.7**	**-0.9**
	comp=Z,7.5nm,0.4s						
DMN	**Daman**	**13.38**	**260**	*e*P	**Pn**	**14 48 35.8**	**-1.0**
	comp=Z,10nm,0.6s						
GKN	**Gorkha**	**13.66**	**262**	*e*P	**Pn**	**14 48 39.9**	**-0.7**
KOLN	**Koldanda**	**14.61**	**262**	*e*P	**Pn**	**14 48 51.2**	**-2.4**
	comp=Z,5.5nm,0.4s						
WMQ	**Urumqi**	**16.24**	**327**	*e*P	**Pn**	**14 49 14.6**	**-0.3**
SONM	**Songino Array**	**17.71**	**14**	P	**Pn**	**14 49 30.1**	**-3.4**
	comp=Z,0.1nm,0.3s,baz=198,slow=12,SNR=2.7						
MKAR	**Makanchi Array**	**21.03**	**324**	P	**P**	**14 50 10.5**	**0.0**
	comp=Z,0.2nm,0.4s,baz=129,slow=13,SNR=11						
AAK	**Ala-Archa**	**23.51**	**307**	P	**P**	**14 50 39.7**	**+2.8**
	comp=Z,1.1nm,0.3s,baz=201,slow=14,SNR=4.0						
KSRS	**Korea Array**	**24.01**	**66**	P	**P**	**14 50 41.4**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=248,slow=8.8,SNR=4.6						
KURBB	**Kurchatov Arra**	**25.46**	**327**	P	**P**	**14 50 56.3**	**+1.7**
	comp=Z,0.6nm,0.8s,baz=128,slow=10,SNR=5.1						
ZALV	**Zalesovo Beam**	**25.60**	**339**	P	**P**	**14 50 56.3**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=92,slow=34,SNR=2.6						
JNU	**Nakatsue**	**26.27**	**77**	LR	LR	15 01 17.7	
	comp=Z,89nm,20.3s,baz=206,slow=37						
JAY	**Jayapura**	**51.00**	**123**	LR	LR	15 16 26.2	
	comp=Z,54nm,18.6s,baz=338,slow=36						
ARCES	**ARCESS Array B**	**56.09**	**336**	P	**P**	**14 55 05.4**	**-0.2**
	comp=Z,5.1nm,1.0s,baz=82,slow=6.5,SNR=2.4						

IDC ***13*** *14:53:15.6±1.0, 56°.83S×24°.83W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.9/18, mbtmp4.0/3, Error ellipse: s-maj=46.4km s-min=25.2km az=78.0*
NEIC ***13*** *14:53:16.3±1.6, 56°.9S±0°.1×24°.9W±0°.3, h4km±3km, mb4.7/7, Error ellipse: s-maj=20.7km s-min=18.8km az=73.0*
ISC 13 14:53:16.8±0.8, 56°.8S±0°.1×24°.9W±0°.2, h10km, n20,
σ0s89/21, mb4.7/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**17.53**	**157**		**P**	**14 57 22.0**	**-0.1**
QSPA	**South Pole Qui**	**33.45**	**180**	P	**P**	**14 59 55.7**	**0.0**
	1.2nm,0.5s,baz=192,slow=1.3,SNR=7.0						
QSPA	**South Pole Qui**	**33.45**	**180**	IAmb	IAmb	15 00 23.5	
	comp=Z,15nm,1.5s						
VNDA	**Vanda**	**45.87**	**182**	P	**P**	**15 01 38.5**	**0.0**
VNDA	**Vanda**	**45.87**	**182**	P	**P**	**15 01 39.1**	**+0.6**
VNDA				IAmb	IAmb	15 01 57.2	
	comp=Z,17nm,1.9s						
PB16	**IPOC Station P**	**50.74**	**300**	P	**P**	**15 02 18.6**	**+1.2**
PB16				IAmb	IAmb	15 03 38.9	
	comp=Z,28nm,1.9s						
LPAZ	**La Paz**	**51.87**	**303**	P	**P**	**15 02 26.4**	**+0.5**
	comp=Z,7.9nm,0.6s,baz=152,slow=6.1,SNR=30						
LPAZ	**La Paz**	**51.87**	**303**	P	**P**	**15 02 26.3**	**+0.3**
LPAZ					**P**	**15 02 26.4**	**+0.5**
CASY	**Casey**	**52.75**	**159**	P	**P**	**15 02 31.9**	**+0.7**
CASY				IAmb	IAmb	15 04 28.4	
	comp=Z,22nm,1.8s						
SAML	**Samuel**	**56.26**	**313**	P	**P**	**15 02 58.6**	**+1.3**
SAML				IAmb	IAmb	15 03 01.7	
	comp=Z,8.7nm,1.4s						
RPN	**Rapa Nui**	**64.79**	**259**	P	**P**	**15 03 54.9**	**-0.6**
TORD	**Torodi Ar. Bea**	**73.11**	**27**	P	**P**	**15 04 47.7**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=200,slow=5.9,SNR=1.8						
YKA	**Yellowknife Ar**	**137.60**	**316**	PKP	**PKiKP**	**15 12 39.5**	**-1.9**
	comp=Z,0.6nm,0.9s,baz=129,slow=2.8,SNR=6.1						
SONM	**Songino Array**	**149.49**	**86**	PKPbc	**PKiKP**	**15 13 05.1**	**-1.3**
	comp=Z,0.7nm,0.7s,baz=225,slow=1.8,SNR=3.2						
DOT	**Dot Lake**	**150.12**	**309**	PKPdf	**PKPdf**	**15 13 02.3**	**+1.1**
DOT					**sPKPbc**	**15 13 07.7**	**-0.2**
KNK	**Knik Glacier**	**151.47**	**303**		**PKPbc**	**15 13 08.5**	**-1.0**
SML	**Sawmill**	**151.52**	**304**		**PKPbc**	**15 13 08.5**	**-1.1**
IL31		**151.59**	**310**		**PKiKP**	**15 13 10.0**	**0.0**
ILAR	**Eielson Array**	**151.59**	**310**	PKPbc	**PKiKP**	**15 13 10.0**	**-0.1**
	comp=Z,2.2nm,0.9s,baz=121,slow=2.0,SNR=16						

GHO	**Glory Hole Cre**	**151.78**	**304**		**PKiKP**	**15 13 11.4**	**+0.7**

MAN 13 14:58:02.8, 13°.50N × 120°.66E, h2 km, mb4.5, ML3.4, MS3.2, 1C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.29**	**90**	↑*eP*	Pg	14 58 08.7	+0.3
PGP				*eS*	Sg	14 58 13.6	+1.5
LQP	**Lukban**	**1.05**	**55**	*eP*	Pg	14 58 18.0	-4.9
LQP				*i* S	Sb	14 58 38.5	+0.4
KCP	**Kidapawan**	**7.79**	**146**	↓*i* P	Pn	14 59 54.2	-3.1

*ATH **13** 15:04:31.2, 38°.43N × 20°.52E, h14 km ± 2 km, ML3.1/3, Error ellipse: s-maj=2.6km s-min=0.8km az=281.0*
*THE **13** 15:04:31.3, 38°.42N × 20°.46E, h6 km ± 1 km, ML2.7/6, Error ellipse: s-maj=1.7km s-min=0.7km az=86.0*
ISC 13 15:04:31.1 ± 0.8, 38°.43N ± 0°.02 × 20°.49E ± 0°.03, h11 km ± 5 km, n35, σ 0s81/54, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.06**	**66**	P	**Pg**	**15 04 33.3**	**+0.1**
FSK				S	**Sg**	**15 04 34.8**	**-0.1**
	29μm,0.3s						
FSK	**Fiskardo**	**0.06**	**66**	P	**Pg**	**15 04 33.3**	**+0.1**
FSK				S	**Sg**	**15 04 34.8**	**-0.1**
FSK				AML	AML	15 04 34.9	
	comp=N,29474μm,0.4s						
FSK				AML	AML	15 04 35.3	
	comp=E,84855μm,0.3s						
VSK1	**VASILIKIADES**	**0.06**	**112**	P	**Pg**	**15 04 33.3**	**0.0**
VSK1				S	**Sg**	**15 04 34.6**	**-0.3**
	comp=E,39μm,0.2s						
KEF1	**Kardakata, Kep**	**0.16**	**185**	P	**Pg**	**15 04 34.8**	**+0.3**
KEF1				S	**Sg**	**15 04 37.5**	**+0.6**
KEF4	**Livadi, Kephal**	**0.18**	**196**	P	**Pg**	**15 04 35.4**	**+0.4**
KEF4				S	**Sg**	**15 04 38.6**	**+0.9**
EVGI	**Lefkada island**	**0.23**	**35**	P	**Pg**	**15 04 36.4**	**+0.6**
EVGI				S	**Sg**	**15 04 40.5**	**+1.4**
EVGI	**Lefkada island**	**0.23**	**35**	P	**Pg**	**15 04 36.4**	**+0.6**
EVGI				S	**Sg**	**15 04 40.4**	**+1.4**
LXRA	**Lixouri, Kepha**	**0.24**	**190**	P	**Pg**	**15 04 36.4**	**+0.5**
LXRA				S	**Sg**	**15 04 40.7**	**+1.5**
KEF3	**Kipouria, Keph**	**0.26**	**206**	P	**Pg**	**15 04 36.5**	**+0.3**
KEF3				S	**Sg**	**15 04 40.8**	**+1.1**
ARGA	**Argostoli. Kep**	**0.26**	**182**	P	**Pg**	**15 04 36.4**	**+0.1**
ARGA				S	**Sg**	**15 04 40.8**	**+1.0**
KEF2	**Argostoli. Kep**	**0.27**	**180**	P	**Pg**	**15 04 36.6**	**+0.1**
KEF2				S	**Sg**	**15 04 41.2**	**+1.0**
VLS	**Valsamata**	**0.27**	**163**	P	**Pg**	**15 04 36.6**	**+0.1**
VLS				S	**Sg**	**15 04 40.8**	**+0.6**
	comp=E,3μm,0.3s						
VLS	**Valsamata**	**0.27**	**163**	P	**Pg**	**15 04 36.6**	**+0.1**
VLS				S	**Sg**	**15 04 40.6**	**+0.5**
VLS				AML	AML	15 04 41.1	
	comp=E,5333μm,0.2s						
VLS				AML	AML	15 04 42.5	
	comp=N,4032μm,0.3s						
MGNA	**Meganis**	**0.33**	**47**	P	**Pg**	**15 04 37.9**	**+0.3**
LKD2	**Lefkada island**	**0.38**	**20**	P	**Pg**	**15 04 38.7**	**+0.1**
LKD2				S	**Sb**	**15 04 45.3**	**-0.5**
	comp=N,782nm,0.4s						
LKD2	**Lefkada island**	**0.38**	**20**	P	**Pg**	**15 04 38.9**	**+0.3**
KFL	**Anninata**	**0.40**	**144**	P	**Pg**	**15 04 38.9**	**0.0**
KFL				S	**Sb**	**15 04 45.5**	**-0.8**
KFL	**Anninata**	**0.40**	**144**	P	**Pg**	**15 04 39.1**	**+0.1**
KFL				S	**Sb**	**15 04 45.4**	**-0.9**
KFL				AML	AML	15 04 46.2	
	comp=N,9284μm,0.3s						
KFL				AML	AML	15 04 46.6	
	comp=E,9275μm,0.3s						
AST1	**Astakos**	**0.48**	**77**	P	**Pg**	**15 04 40.8**	**+0.3**
PDO	**Prodromos**	**0.57**	**73**	P	**Pg**	**15 04 42.5**	**+0.4**
KRI1	**kERI**	**0.81**	**161**	P	**Pg**	**15 04 46.1**	**-0.6**
RLS	**Riolos of Patr**	**0.86**	**116**	P	**Pg**	**15 04 47.1**	**-0.5**
DRO	**Drossia**	**1.08**	**116**	P	**Pb**	**15 04 51.4**	**-0.3**
DRO				S	**Sn**	**15 05 09.5**	**+2.4**
	comp=E,342nm,0.6s						
IGT	**Igoumenitsa**	**1.10**	**354**	P	**Pn**	**15 04 52.6**	**+0.1**
EFP	**Efpalio**	**1.11**	**90**	P	**Pb**	**15 04 51.6**	**-0.7**
ANX	**Ano Chora**	**1.14**	**81**	P	**Pb**	**15 04 52.6**	**-0.2**
LAKA	**Lakka**	**1.19**	**99**	P	**Pb**	**15 04 52.8**	**-0.8**
LAKA				S	**Sn**	**15 05 12.1**	**+2.2**
	comp=E,88nm,0.7s						
LAKA	**Lakka**	**1.19**	**99**	P	**Pb**	**15 04 52.7**	**-1.0**
TRIZ	**Trizonia**	**1.25**	**93**	P	**Pn**	**15 04 53.9**	**-0.6**
KALE	**Kalithea**	**1.30**	**91**	P	**Pn**	**15 04 54.7**	**-0.5**
RICI	**Ricice**	**5.66**	**334**	*e*Pn	**Pn**	**15 05 54.7**	**-0.4**
RICI				Sn	**Sn**	**15 06 58.7**	**-1.4**
KIJV	**Kijevo**	**6.36**	**332**	*e*Pn	**Pn**	**15 06 04.4**	**-0.4**
ZIRJ	**Zirje**	**6.37**	**326**	*e*Pn	**Pn**	**15 06 03.7**	**-1.1**
MORI	**Morici**	**6.52**	**328**	*e*Pn	**Pn**	**15 06 07.1**	**+0.2**
DUGI	**Dugi Otok**	**6.90**	**325**	*i* Pn	**Pn**	**15 06 11.6**	**-0.6**

*IDC **13** 15:12:13.7 ± 1.0, 3°.01S × 141°.62E, h0 km, mb3.9/8, mb1 4.1/9, mb1mx3.8/39, mbtmp3.9/9, ML4.2/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/35, Error ellipse: s-maj=21.0km s-min=12.2km az=39.0*
*NEIC **13** 15:12:15.8 ± 1.3, 2°.93S ± 0°.08 × 141°.54E ± 0°.07, h9 km ± 5 km, mb4.5/12, Error ellipse: s-maj=12.4km s-min=8.9km az=213.0*
*DJA **13** 15:12:18.0 ± 1.5, 2°.S ± 9°.× 14°.2E ± °., h10 km, M3.7/4, MLv3.7/4*
ISC 13 15:12:15.6 ± 0.8, 3°.00S ± 0°.07 × 141°.53E ± 0°.07, h10 km, n37, σ 1s37/32, mb4.2/12, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**0.95**	**300**	Pg	**Pb**	**15 12 33.8**	**-0.4**
	24nm,0.3s,baz=143,slow=9.3,SNR=144						
JAY				Lg	Lg	15 12 47.2	
	53nm,0.3s,baz=52,slow=22,SNR=12						
JAY	**Jayapura**	**0.95**	**300**	P	**Pg**	**15 12 33.7**	**-0.3**
GENI	**Genyem**	**1.42**	**286**	P	**Pg**	**15 12 42.7**	**-0.1**
GENI				S	**Sg**	**15 13 03.5**	**+2.2**
WAMI	**Wamena**	**2.94**	**253**	P	**Pb**	**15 13 07.7**	**-0.6**
WAMI				S	**Sb**	**15 13 44.0**	**-0.3**
SMPI	**Sarmi**	**2.99**	**290**	P	**Pn**	**15 13 05.2**	**+2.1**
SIJI	**Sorong**	**10.47**	**281**	LR	LR	15 19 32.0	
	comp=Z,73nm,21.4s,baz=138,slow=42						
SAUI	**Saumlaki**	**11.32**	**244**	Pn	**Pn**	**15 14 57.4**	**-0.1**
MTN	**Manton Dam**	**14.19**	**226**	Pn	**Pn**	**15 15 35.5**	**-1.4**
TNTI	**Ternate**	**14.64**	**285**	Pn	**Pn**	**15 15 38.6**	**-4.5**
KNRA	**Kununurra**	**17.80**	**224**	P	**P**	**15 16 25.8**	**+1.4**
WB0	**Warramunga Arr**	**18.07**	**202**	P	**P**	**15 16 28.3**	**+0.9**
WB2	**Warramunga Arr**	**18.24**	**202**	P	**P**	**15 16 30.9**	**+1.6**
WB2				IAmb	IAmb	15 16 34.9	
	comp=Z,25nm,1.6s						
WRA	**Warramunga Arr**	**18.25**	**202**	P	**P**	**15 16 30.4**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=19,slow=13,SNR=46						
FITZ	**Fitzroy Crossi**	**21.62**	**225**	P	**P**	**15 17 07.1**	**+1.0**
	comp=Z,4.0nm,0.7s,baz=49,slow=6.9,SNR=14						
FITZ				S	**S**	**15 21 06.3**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=298,slow=18,SNR=2.3						
FITZ	**Fitzroy Crossi**	**21.62**	**225**	P	**P**	**15 17 06.7**	**+0.6**
ASAR	**Alice Springs**	**21.83**	**199**	P	**P**	**15 17 07.9**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=25,slow=12,SNR=11						
BKB	**Balikpapan**	**24.67**	**273**	P	**P**	**15 17 37.6**	**+0.6**
STKA	**Stephens Creek**	**28.73**	**180**	P	**P**	**15 18 11.0**	**-2.3**
	comp=Z,1.5nm,0.7s,baz=71,slow=20,SNR=3.2						
JCJ	**Chichijima**	**29.92**	**1**	LR	LR	15 30 11.9	
	comp=Z,83nm,18.3s,baz=104,slow=36						
FORT	**Forrest**	**30.42**	**203**	P	**P**	**15 18 29.5**	**+1.2**
FORT				IAmb	IAmb	15 18 31.7	
	comp=Z,22nm,1.1s						
UGM	**Wanagama**	**31.24**	**260**	P	**P**	**15 18 36.3**	**+0.5**
H11S3	**WAKE ISLAND Hy**	**32.71**	**48**	T	T	15 53 10.8	
	baz=232,slow=75,SNR=92						
H11S2	**WAKE ISLAND Hy**	**32.72**	**48**	T	T	15 53 12.0	
	baz=232,slow=75,SNR=56						
H11S1	**WAKE ISLAND Hy**	**32.73**	**48**	T	T	15 53 11.6	
	baz=232,slow=75,SNR=44						
CAN	**Canberra**	**32.90**	**169**	P	**P**	**15 18 51.5**	**+1.4**
H11N1	**WAKE ISLAND Hy**	**33.62**	**47**	T	T	15 54 07.0	
	baz=230,slow=75,SNR=47						
H11N2	**WAKE ISLAND Hy**	**33.64**	**47**	T	T	15 54 10.4	
	baz=230,slow=75,SNR=85						
H11N3	**WAKE ISLAND Hy**	**33.64**	**47**	T	T	15 54 09.8	
	baz=230,slow=75,SNR=37						
CMAR	**Chiang Mai Arr**	**47.03**	**299**	P	**P**	**15 20 48.0**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=117,slow=6.6,SNR=5.3						
MK31	**Makanchi Array**	**71.75**	**322**	P	**P**	**15 23 39.2**	**+1.0**
MK31				IAmb	IAmb	15 23 40.3	
	comp=Z,2.1nm,1.1s						
MKAR	**Makanchi Array**	**71.75**	**322**	P	**P**	**15 23 39.3**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=115,slow=8.1,SNR=12						
MAKZ	**Makanchi**	**71.95**	**321**	P	**P**	**15 23 40.4**	**+1.0**
MAKZ				IAmb	IAmb	15 23 41.0	
	comp=Z,1.7nm,0.8s						
ZALV	**Zalesovo Beam**	**73.61**	**329**	P	**P**	**15 23 49.2**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=131,slow=6.8,SNR=5.3						
RND	**Reindeer**	**83.68**	**25**	P	**P**	**15 24 43.7**	**-0.7**
RND				IAmb	IAmb	15 24 45.2	
	comp=Z,3.5nm,0.8s						
ILAR	**Eielson Array**	**84.94**	**24**	P	**P**	**15 24 49.6**	**-1.1**
	comp=Z,1.6nm,0.8s,baz=256,slow=5.2,SNR=15						
DOT	**Dot Lake**	**85.80**	**26**	P	**P**	**15 24 55.0**	**-0.1**
DOT				IAmb	IAmb	15 28 03.2	
	comp=Z,10.0nm,1.8s						
YKA	**Yellowknife Ar**	**99.04**	**27**	P	**Pdif**	**15 25 56.5**	**-0.1**
	comp=Z,0.3nm,0.9s,baz=272,slow=4.9,SNR=2.5						

*IDC **13** 15:14:24.6 ± 1.0, 2°.71N × 126°.15E, h0 km, mb3.7/6, mb1 3.9/7, mb1mx3.5/42, mbtmp3.8/7, ML3.7/1, Error ellipse: s-maj=80.9km s-min=17.7km az=64.0*
*DJA **13** 15:14:32.8 ± 1.3, 3°.N ± 4°.× 12°.7E ± °., h21 km ± 13 km, M4.0/7, mb4.3/2, mB5.0/1, MLv3.8/7, Mw(mB)4.3/1*
*NEIC **13** 15:14:33.8 ± 0.7, 2°.9N ± 0°.1× 126°.8E ± 0°.1, h82 km ± 12 km, mb4.3/5, Error ellipse: s-maj=18.7km s-min=15.3km az=95.0*
ISC 13 15:14:31.4 ± 0.8, 3°.14N ± 0°.06 × 127°.1E ± 0°.1, h44 km, n18, σ 2s44/21, mb3.9/9, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.37**	**174**	P	**Pn**	**15 15 10.0**	**+2.3**
TNTI				S	**Sn**	**15 15 38.0**	**+2.5**
TNTI	**Ternate**	**2.37**	**174**	Pn	**Pn**	**15 15 08.8**	**+1.1**
LBMI	**Labuha**	**3.77**	**174**	P	**Pn**	**15 15 29.3**	**+2.2**
LBMI				S	**Sn**	**15 16 12.9**	**+2.7**
KCP	**Kidapawan**	**4.33**	**333**	↓*eP*	**Pn**	**15 15 38.4**	**+3.5**
KCP				*i* S	**Sn**	**15 16 26.7**	**+2.5**
SIJI	**Sorong**	**5.76**	**134**	Pn	**Pn**	**15 15 58.0**	**+3.6**
	1.9nm,0.3s,baz=328,slow=18,SNR=8.3						
SIJI				Sn	**Sn**	**15 16 58.9**	**-0.4**
	0.2nm,0.3s,baz=134,slow=23,SNR=1.4						
MRSI	**Marisa**	**5.79**	**243**	P	**Pn**	**15 15 56.4**	**+1.6**
FAKI	**Fak Fak**	**7.92**	**139**	Pn	**Pn**	**15 16 26.9**	**+2.9**
WB0	**Warramunga Arr**	**23.86**	**163**	P	**P**	**15 19 38.2**	**-2.7**
WB0				IAmb	IAmb	15 20 06.2	
	comp=Z,32nm,1.9s						
WRA	**Warramunga Arr**	**24.01**	**163**	P	**P**	**15 19 40.0**	**-2.3**
	comp=Z,1.2nm,0.5s,baz=341,slow=9.5,SNR=6.8						
WB2	**Warramunga Arr**	**24.02**	**163**	P	**P**	**15 19 39.8**	**-2.5**
WB2				IAmb	IAmb	15 20 14.2	
	comp=Z,15nm,1.3s						
WR0	**Warramunga Arr**	**24.09**	**163**	P	**P**	**15 19 40.4**	**-2.6**
ASAR	**Alice Springs**	**27.45**	**166**	P	**P**	**15 20 11.2**	**-2.2**
	comp=Z,0.3nm,0.5s,baz=354,slow=8.2,SNR=4.3						
STKA	**Stephens Creek**	**37.45**	**159**	P	**P**	**15 21 39.1**	**-1.5**
	comp=Z,2.0nm,0.5s,baz=336,slow=11,SNR=6.6						
STKA	**Stephens Creek**	**37.45**	**159**	IAmb	IAmb	15 21 40.5	
	comp=Z,1.2nm,1.1s						
SONM	**Songino Array**	**47.97**	**341**	P	**P**	**15 23 06.1**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=158,slow=10,SNR=4.3						
MK31	**Makanchi Array**	**58.25**	**325**	P	**P**	**15 24 19.7**	**-1.8**
MK31				IAmb	IAmb	15 25 59.8	
	comp=Z,5.2nm,1.9s						
MKAR	**Makanchi Array**	**58.25**	**325**	P	**P**	**15 24 19.9**	**-1.6**
	comp=Z,0.5nm,0.4s,baz=116,slow=7.9,SNR=7.3						
ZALV	**Zalesovo Beam**	**61.28**	**333**	P	**P**	**15 24 40.7**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=134,slow=8.3,SNR=1.8						

*KRNET **13** 15:15:39.9 ± 0.1, 40°.79N × 71°.79E, h16 km, mb3.0*
*SOME **13** 15:15:39.6, 41°.05N × 71°.55E, h0 km*
*NNC **13** 15:15:40.9 ± 1.2, 41°.04N × 71°.56E, h0 km, mb3.6, mpv3.3, Error ellipse: s-maj=10.1km s-min=3.3km az=6.0*
ISC 13 15:15:38.3 ± 1.3, 40°.80N ± 0°.04 × 71°.77E ± 0°.05, h12 km ± 12 km, n28, σ 1s83/47, 21C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARK	**Arkit**	**1.01**	**8**	↓*iP*	**Pb**	**15 15 58.9**	**+1.0**
ARK	baz=8.0			↓*iS*	**Sg**	**15 16 13.2**	**+2.1**
	baz=8.0						
BTK	**Batken**	**1.03**	**225**	↓*iP*	**Pb**	**15 15 59.7**	**+1.5**
BTK	baz=26			↓*iS*	**Sn**	**15 16 14.2**	**+1.1**
	baz=26						
IUG	**Iuzhnay**	**1.88**	**317**	*eP*	**Pn**	**15 16 09.8**	**-0.5**
	13nm,0.1s						
IUG				*eS*	**Sn**	**15 16 32.2**	**-1.8**
	50nm,0.2s						
IUG	**Iuzhnay**	**1.88**	**317**	P	**Pn**	**15 16 09.8**	**-0.5**
	13nm,0.1s						
IUG				S	**Sn**	**15 16 32.2**	**-1.8**
	50nm,0.2s						
AML	**Almayashu**	**1.97**	**47**	↑*iP*	**Pb**	**15 16 16.4**	**+2.1**
AML	baz=46			↑*iS*	**Sg**	**15 16 42.7**	**+1.0**
	baz=46						
GAR	**Garm**	**2.11**	**212**	↑*iP*	**Pb**	**15 16 18.4**	**+1.8**
GAR	baz=13			↑*iS*	**Sg**	**15 16 46.5**	**+0.3**
	baz=13						
MRKS	**Merke**	**2.23**	**29**	*eP*	**Pb**	**15 16 20.0**	**+1.3**
	1.8nm,0.2s						
MRKS				*eS*	**Sg**	**15 16 49.6**	**-0.5**
	19nm,0.1s						
MRKS	**Merke**	**2.23**	**29**	Pg	**Pb**	**15 16 20.0**	**+1.3**
	20nm,0.2s						
MRKS				Lg	Lg	15 16 49.6	
	36nm,0.2s						
EKS2	**Erkin-Say**	**2.40**	**38**	↑*iP*	**Pb**	**15 16 21.9**	**+0.4**
	baz=38			↑*iS*	**Sb**	**15 16 52.9**	**+1.9**
EKS2							
	baz=38						
KK31	**Karatay Array**	**2.49**	**338**	Pg	**Pn**	**15 16 20.1**	**+1.4**
	3.1nm,0.5s,baz=150,slow=12,SNR=19						
KK31				Lg	Lg	15 16 50.5	
	6.5nm,0.3s,baz=150,slow=18,SNR=12						
UCH	**Uchtor**	**2.51**	**54**	↑*iP*	**Pb**	**15 16 23.6**	**0.0**
	baz=54			↑*iS*	**Sb**	**15 16 55.9**	**+1.3**
UCH							
	baz=54						
AAK	**Ala-Archa**	**2.75**	**47**	↑*iP*	**Pb**	**15 16 27.2**	**-0.3**
AAK	baz=47			↑*iS*	**Sb**	**15 17 01.3**	**+0.1**
	baz=47						
AAK	**Ala-Archa**	**2.75**	**47**	↑Pg	**Pb**	**15 16 30.4**	**+2.9**
	2.4nm,0.4s						
AAK				Lg	Lg	15 17 05.6	
	6.8nm,0.6s						
KZA	**Kyzart**	**2.92**	**63**	↑*iP*	**Pb**	**15 16 29.4**	**-1.1**
	baz=63			↑*iS*	**Sb**	**15 17 05.7**	**-0.5**
KZA							
	baz=63						
CHGR	**Chuyangaron**	**2.93**	**224**	↑*iP*	**Pb**	**15 16 29.7**	**-0.9**
	baz=25			↑*iS*	**Sb**	**15 17 06.3**	**-0.1**
CHGR							
	baz=25						
KBK	**Karagaybulak**	**3.02**	**51**	↑*iP*	**Pb**	**15 16 30.8**	**-1.3**
	baz=51			↑*iS*	**Sb**	**15 17 08.0**	**-1.1**
KBK							
	baz=51						
CHMS	**Chumysh**	**3.13**	**44**	↑*iP*	**Pb**	**15 16 32.3**	**-1.6**
	baz=44			↑*iS*	**Sb**	**15 17 10.3**	**-1.8**
CHMS							
	baz=44						
TKM2	**Tokmak 2**	**3.56**	**52**	↑Pg	**Pg**	**15 16 45.4**	**-1.2**
	1.0nm,0.3s						
TKM2				↑Lg	Lg	15 17 31.1	
	2.7nm,0.3s						
KST	**Kastek**	**3.85**	**53**	*eP*	**Pg**	**15 16 50.9**	**-1.2**
	0.6nm,0.1s						
KST				*eS*	**Sg**	**15 17 42.5**	**+0.4**
	7.8nm,0.3s						
KST	**Kastek**	**3.85**	**53**	Pg	**Pg**	**15 16 50.9**	**-1.2**
	0.6nm,0.1s						
KST				Lg	Lg	15 17 42.5	
	7.8nm,0.3s						
DGS	**Degeres**	**3.86**	**49**	*eP*	**Pg**	**15 16 50.8**	**-1.4**
	2.6nm,0.2s						
DGS				*eS*	**Sg**	**15 17 42.2**	**0.0**
	6.3nm,0.3s						
DGS	**Degeres**	**3.86**	**49**	Pg	**Pg**	**15 16 50.8**	**-1.4**
	2.6nm,0.2s						
DGS				Lg	Lg	15 17 42.2	
	6.3nm,0.3s						
KRBS	**Karabastau**	**4.10**	**44**	*eP*	**Pb**	**15 16 54.8**	**+4.3**
	0.9nm,0.2s						
KRBS				*eS*	**Sg**	**15 17 49.1**	**-0.9**
	2.0nm,0.3s						
KRBS	**Karabastau**	**4.10**	**44**	Pg	**Pb**	**15 16 54.8**	**+4.3**
	0.9nm,0.2s						
KRBS				Lg	Lg	15 17 49.1	
	2.0nm,0.3s						
TNSS	**Tian-Shan**	**4.47**	**58**	*eP*	**Pg**	**15 17 03.1**	**-0.7**
	0.5nm,0.1s						
TNSS				*eS*	**Sg**	**15 18 03.2**	**+1.4**
	3.7nm,0.5s						
TNSS	**Tian-Shan**	**4.47**	**58**	Pg	**Pg**	**15 17 03.1**	**-0.7**
	0.5nm,0.1s						
TNSS				Lg	Lg	15 18 03.2	
	3.7nm,0.5s						
BTLS	**Baital**	**4.56**	**21**	*eP*	**Pb**	**15 17 01.4**	**+3.1**
	0.8nm,0.1s						
BTLS				*eS*	**Sg**	**15 18 00.3**	**-4.4**
	5.5nm,0.3s						
BTLS	**Baital**	**4.56**	**21**	Pg	**Pb**	**15 17 01.3**	**+3.1**
	0.8nm,0.1s						
BTLS				Lg	Lg	15 18 00.3	
	5.5nm,0.3s						

*TAP **13** 15:17:50.8, 23°.68N × 122°.47E, h73 km ± 1 km, ML2.7, D*
*JMA **13** 15:17:50.5 ± 0.1, 23°.68N × 122°.48E, h43 km, M2.1*
ISC 13 15:17:48.3 ± 1.1, 23°.62N ± 0°.03 × 122°.53E ± 0°.02, h10 km ± 9 km, n64, σ 1s33/117, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.91**	**25**	P	**Pg**	**15 18 06.8**	**+1.0**
JYNG				S	**Sg**	**15 18 17.9**	**+0.2**
YOJ	**Yonaguni jima**	**0.95**	**28**	P	**Pg**	**15 18 07.2**	**+0.6**
	baz=32						
YOJ				S	**Sg**	**15 18 21.8**	**+2.9**
	baz=32						
YOJ	**Yonaguni jima**	**0.95**	**28**	P	**Pg**	**15 18 07.3**	**+0.8**
YOJ				S	**Sg**	**15 18 19.3**	**+0.5**
EOS1	**EOS1**	**0.99**	**339**	*eP*	**Pg**	**15 18 08.1**	**+0.8**
	baz=334						
EOS1				S	**Sg**	**15 18 23.4**	**+3.2**
	baz=334						
EGFH	**Guangfu**	**1.01**	**273**	P	**Pg**	**15 18 07.3**	**-0.3**
	baz=264						
EGFH				S	**Sg**	**15 18 21.9**	**+1.1**
	baz=264						
NACB	**Ninganchiao**	**1.01**	**303**	P	**Pg**	**15 18 07.2**	**-0.6**
	baz=301						
NACB				S	**Sg**	**15 18 20.1**	**-0.8**
	baz=301						
ESL	**Shilin**	**1.02**	**281**	P	**Pg**	**15 18 07.9**	**0.0**
	baz=274						
ESL				S	**Sg**	**15 18 20.7**	**-0.5**
	baz=274						
HGSD	**Ruisui**	**1.02**	**263**	*eP*	**Pg**	**15 18 08.2**	**+0.3**
	baz=259						
HGSD				*eS*	**Sg**	**15 18 20.7**	**-0.5**
	baz=259						
ENA	**Nanau**	**1.07**	**318**	P	**Pg**	**15 18 09.9**	**+0.9**
	baz=328						
ENA				S	**Sg**	**15 18 24.0**	**+1.0**
	baz=328						
EHY	**Hungye**	**1.11**	**264**	*i* P	**Pg**	**15 18 10.1**	**+0.5**
	baz=260						
EHY				S	**Sg**	**15 18 24.0**	**-0.1**
	baz=260						
ETLH	**Xiulin Townshi**	**1.12**	**302**	*eP*	**Pg**	**15 18 09.9**	**+0.1**
	baz=300						
ETLH				*eS*	**Sg**	**15 18 25.0**	**+0.6**
	baz=300						
YULB	**Yu-li**	**1.15**	**259**	P	**Pg**	**15 18 10.6**	**+0.2**
	baz=252						
YULB				*eS*	**Sg**	**15 18 25.9**	**+0.5**
	baz=252						
TWC	**Suao**	**1.16**	**328**	P	**Pg**	**15 18 12.2**	**+1.6**
	baz=334						
TWC				S	**Sg**	**15 18 25.1**	**-0.5**
	baz=334						
TWF1	**Yuli**	**1.16**	**257**	P	**Pg**	**15 18 10.8**	**+0.2**
	baz=247						
TWF1				*eS*	**Sg**	**15 18 26.2**	**+0.5**
	baz=247						
CHKT	**Chengkung**	**1.19**	**244**	P	**Pg**	**15 18 11.6**	**+0.5**
	baz=236						
CHKT				S	**Sg**	**15 18 25.4**	**-1.2**
	baz=236						
FULB	**Fuli**	**1.21**	**250**	P	**Pg**	**15 18 11.1**	**-0.4**
	baz=241						
FULB				*eS*	**Sg**	**15 18 26.3**	**-0.9**
	baz=241						
HATJ	**Hateruma jima**	**1.25**	**70**	P	**Pg**	**15 18 12.3**	**0.0**
HATJ				S	**Sg**	**15 18 27.4**	**-1.1**
WHF	**Hehuan Shan**	**1.27**	**294**	P	**Pg**	**15 18 12.0**	**-0.6**
	baz=285						
WHF				S	**Sg**	**15 18 27.3**	**-1.8**
	baz=285						
VWDT	**VWDT**	**1.27**	**276**	P	**Pg**	**15 18 12.2**	**-0.6**
	baz=273						
VWDT				S	**Sg**	**15 18 28.4**	**-0.9**
	baz=273						
OWD	**Renai**	**1.28**	**285**	P	**Pg**	**15 18 12.8**	**-0.1**
	baz=277						
OWD				S	**Sg**	**15 18 27.9**	**-1.6**
	baz=277						
IRIF	**Iriomote-Funau**	**1.31**	**57**	P	**Pg**	**15 18 13.3**	**-0.2**
IRIF				S	**Sg**	**15 18 30.0**	**-0.5**
CHGB	**Renai**	**1.31**

baz=314
NWLT Wulai 1.48 321 P **Pn** **15 18 15.5 +0.4**
baz=321
NWLT S **Sg** **15 18 32.9 -3.1**
baz=321
TIPB Shuangxi 1.49 335 *e*P **Pn** **15 18 15.5 +0.3**
baz=345
TIPB *e*S **Sg** **15 18 33.3 -2.9**
baz=345
JKRS Kuro-shima 1.49 65 P **Pn** **15 18 15.7 +0.5**
JKRS *e*S **Sg** **15 18 33.8 -2.5**
NSK Sanguang 1.50 315 *e*P **Pn** **15 18 15.9 +0.5**
baz=314
NSK S **Sg** **15 18 33.9 -2.6**
baz=314
SMLT Sun Moon Lake 1.51 280 *e*S **Sg** **15 18 35.2 -1.7**
baz=277
DPDB Guoxing 1.52 286 P **Pn** **15 18 16.1 +0.4**
baz=279
DPDB S **Sg** **15 18 35.2 -2.0**
baz=279
TWGBT Beinan 1.55 239 S **Sn** **15 18 35.4 -0.9**
baz=233
TYC Yuchr 1.55 281 *e*P **Pn** **15 18 17.4 +1.4**
baz=278
TYC *e*S **Sn** **15 18 35.0 -1.3**
baz=278
TWG Pinlang 1.56 239 S **Sn** **15 18 35.8 -0.6**
baz=233
ALS Alishan 1.58 266 *e*P **Pn** **15 18 18.0 +1.3**
baz=259
ALS S **Sn** **15 18 37.0 -0.5**
baz=259
WHP Taichung City 1.58 295 P **Pn** **15 18 19.1 +2.6**
baz=289
WHP S **Sn** **15 18 36.2 -1.0**
baz=289
NWF Wu-fen Shan 1.59 335 *e*S **Sn** **15 18 35.8 -1.6**
baz=345
JIJ Ishigaki jima 1.65 63 P **Pn** **15 18 17.7 +0.3**
JIJ S **Sn** **15 18 37.5 -1.3**
CHN5 Tsauling 1.69 269 P **Pn** **15 18 19.6 +1.5**
baz=266
CHN5 *e*S **Sn** **15 18 40.2 +0.3**
baz=266
TPUB Ta-pu 1.77 260 *e*P **Pn** **15 18 20.9 +1.8**
baz=252
TPUB *e*S **Sn** **15 18 41.6 -0.1**
baz=252
CHN4 Tsaushan 1.79 262 P **Pn** **15 18 21.5 +2.1**
baz=255
CHN4 *e*S **Sn** **15 18 42.6 +0.3**
baz=255
WTP Ta-pu 1.79 258 P **Pn** **15 18 21.3 +1.8**
baz=255
WTP S **Sn** **15 18 43.9 +1.6**
baz=255
WDLH Douliu 1.82 272 *e*P **Pn** **15 18 20.7 +0.9**
baz=269
WDLH *e*S **Sn** **15 18 43.5 +0.6**
baz=269
SLGT Liugui 1.84 250 P **Pn** **15 18 22.4 +2.4**
baz=244
SLGT *e*S **Sn** **15 18 44.3 +1.0**
baz=244
SGST Jiashian 1.86 254 *e*P **Pn** **15 18 22.2 +1.9**
baz=247
SGST S **Sn** **15 18 45.3 +1.3**
baz=247
CHN1 Nanshi 1.89 257 P **Pn** **15 18 22.1 +1.4**
baz=254
CHN1 *e*S **Sn** **15 18 45.9 +1.3**
baz=254
JISG Ishigakijimahi 1.89 59 P Pn 15 18 20.6 -0.1
JISG S **Sn** **15 18 44.0 -0.7**
TWK Hsinying 1.90 260 P **Pn** **15 18 22.8 +1.9**
baz=256
TWK *e*S **Sn** **15 18 46.2 +1.2**
baz=256
SSD Sandimen 1.95 244 *e*P **Pn** **15 18 22.6 +1.1**
baz=240
SSD *e*S **Sn** **15 18 45.9 -0.2**
baz=240
EAST Anshuo 1.98 232 *e*P **Pn** **15 18 22.8 +0.9**
baz=232
EAST S **Sn** **15 18 46.6 -0.2**
baz=232
MASBT Mashibuluo 2.01 240 *e*P **Pn** **15 18 24.2 +1.8**
baz=235
MASBT *e*S **Sn** **15 18 48.4 +0.7**
baz=235
JTJ Tarama 2.23 63 P **Pn** **15 18 26.0 +0.6**
JTJ S **Sn** **15 18 51.9 -1.2**
JIRB Irabujima 2.70 63 P **Pn** **15 18 32.2 +0.4**
JIRB *e*S **Sn** **15 19 04.1 -0.5**
JMJ2 Miyako jima3 2.79 66 P **Pn** **15 18 34.0 +0.9**

*IDC **13** 15:23:35.3±1.0,56°.86S×25°.01W,h0km,mb4.2/3, mb1 4.2/4,mb1mx3.9/21,mbtmp4.1/4,ML3.8/1,Error ellipse: s-maj=44.6km s-min=25.4km az=71.0*
*NEIC **13** 15:23:36.7±1.1,56°.9S±0°.1×25°.0W±0°.3,h10km±1km, mb4.5/4,Error ellipse: s-maj=29.5km s-min=16.2km az=53.0*
ISC 13 15:23:38.4±0.8,**56°.9S**±0°.1×**25°.0W**±0°.2,**h22**km,**n19,** σ0**°52/18,mb4.5/4,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.03**	**287**	Pn	**Pn**	**15 25 20.2**	**+0.3**
VNA1	**Neumayer--Stat**	**15.57**	**159**	P	**Pn**	**15 27 16.5**	**+0.4**
VNA3	**Neumayer Olymp**	**15.80**	**162**	P	**Pn**	**15 27 18.7**	**-0.5**
VNA2	**Neumayer--Watz**	**15.96**	**159**	P	**Pn**	**15 27 20.7**	**-0.5**
baz=329,slow=15							
SNAA	**Sanae**	**17.48**	**157**	P	**P**	**15 27 42.4**	**+0.9**
SNAA	**Sanae**	**17.48**	**157**	P	**P**	**15 27 41.6**	**+0.2**
0.3nm,0.3s,baz=308,slow=10.0,SNR=15							
SNAA	**Sanae**	**17.48**	**157**	IAmb	IAmb	15 28 23.1	
comp=Z,14nm,1.5s							
QSPA	**South Pole Qui**	**33.36**	**180**	P	**P**	**15 30 14.9**	**+0.3**
comp=Z,1.2nm,0.6s,baz=190,slow=3.3,SNR=19							
QSPA	**South Pole Qui**	**33.36**	**180**	P	**P**	**15 30 14.5**	**-0.2**
QSPA				IAmb	IAmb	15 30 35.8	
comp=Z,17nm,1.7s							
TA01	**Diego Aracena**	**49.14**	**298**	P	**P**	**15 32 23.7**	**-0.6**
LPAZ	**La Paz**	**51.87**	**303**	P	**P**	**15 32 46.1**	**+0.4**
comp=Z,7.6nm,0.7s,baz=154,slow=5.6,SNR=25							
LPAZ	**La Paz**	**51.87**	**303**	P	**P**	**15 32 45.5**	**-0.1**
SAML	**Samuel**	**56.27**	**313**	P	**P**	**15 33 17.4**	**+0.4**
SAML				IAmb	IAmb	15 34 40.1	
comp=Z,9.8nm,1.5s							
TORD	**Torodi Ar. Bea**	**73.20**	**27**	P	**P**	**15 35 07.9**	**+0.5**
comp=Z,0.7nm,0.7s,baz=195,slow=5.9,SNR=4.1							
YKA	**Yellowknife Ar**	**137.62**	**316**	PKP	**PKPdf**	**15 42 59.0**	**0.0**
comp=Z,0.5nm,0.8s,baz=119,slow=2.5,SNR=5.8							
SONM	**Songino Array**	**149.55**	**86**	PKPbc	**PKiKP**	**15 43 25.4**	**-0.7**
comp=Z,0.7nm,0.6s,baz=270,slow=3.0,SNR=4.2							
DOT	**Dot Lake**	**150.13**	**308**		**PKiKP**	**15 43 26.3**	**-0.3**
ILAR	**Eielson Array**	**151.60**	**310**	PKPbc	**PKiKP**	**15 43 29.1**	**-0.5**
comp=Z,2.0nm,0.9s,baz=132,slow=2.0,SNR=15							
BPAW	**Bear Paw Mtn.**	**153.22**	**308**		**PKiKP**	**15 43 32.3**	**-0.7**

*ATH **13** 15:32:00.9,39°.84N×23°.66E,h24km±1km,ML3.2/20,Error ellipse: s-maj=1.2km s-min=0.6km az=19.0*
*SOF **13** 15:32:00.8,39°.88N×23°.65E,h8km,MD3.6*
*ISK **13** 15:32:01.5,39°.83N×23°.67E,h19km,ML3.2/15*
*THE **13** 15:32:02.0,39°.84N×23°.63E,h13km,ML3.2/18,Error ellipse: s-maj=1.0km s-min=0.5km az=270.0*
*DDA **13** 15:32:02.2,39°.91N×23°.66E,h20km±2km,ML2.9*
ISC 13 15:32:01.6±0.8,**39°.84N**±0°.01×**23°.65E**±0°.02,**h18**km±5km, **n127,σ0°96/168,7C-8D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.09**	**17**	P	**Pg**	**15 32 04.8**	**-0.3**
PAIG				S	**Sg**	**15 32 07.1**	**-0.4**
27μm,0.2s							
PAIG	**Paliouri**	**0.09**	**17**	P	**Pg**	**15 32 04.9**	**-0.3**
PAIG				AML	AML	15 32 07.3	
comp=E,67362μm,0.2s							
PAIG				AML	AML	15 32 07.5	
comp=N,40145μm,0.2s							
PLG	**Polygyros**	**0.55**	**344**	P	**Pb**	**15 32 12.2**	**-0.6**
PLG				S	**Sg**	**15 32 19.8**	**-0.3**
comp=N,3μm,0.3s							
PLG	**Polygyros**	**0.55**	**344**	P	**Pb**	**15 32 12.2**	**-0.6**
PLG				S	**Sg**	**15 32 19.6**	**-0.5**
PLG				AML	AML	15 32 20.2	
comp=E,5773μm,0.5s							
PLG				AML	AML	15 32 24.9	
comp=N,5021μm,0.2s							
OUR	**Ouranopolis**	**0.55**	**28**	P	**Pg**	**15 32 13.4**	**+0.7**
OUR				S	**Sn**	**15 32 21.9**	**-1.5**
comp=N,6μm,0.3s							
OUR	**Ouranopolis**	**0.55**	**28**	PG	**Pg**	**15 32 13.4**	**+0.7**
OUR				SG	**Sb**	**15 32 21.6**	**+1.2**
XOR	**Xorichti**	**0.59**	**217**	P	**Pb**	**15 32 13.1**	**-0.5**
XOR				S	**Sg**	**15 32 22.8**	**+1.4**
comp=N,6μm,0.3s							
XOR	**Xorichti**	**0.59**	**217**	P	**Pb**	**15 32 13.0**	**-0.5**
XOR				S	**Sg**	**15 32 21.5**	**+0.2**
XOR				AML	AML	15 32 24.0	
comp=N,12973μm,0.3s							
XOR				AML	AML	15 32 24.3	
comp=E,12077μm,0.3s							
NEO	**Neokhori**	**0.63**	**212**	P	**Pb**	**15 32 13.8**	**-0.3**
NEO				S	**Sn**	**15 32 23.9**	**-1.5**
comp=E,7μm,0.6s							
NEO	**Neokhori**	**0.63**	**212**	P	**Pb**	**15 32 13.7**	**-0.5**
NEO				S	**Sg**	**15 32 23.0**	**+0.5**
NEO				AML	AML	15 32 24.8	
comp=E,13990μm,0.3s							
NEO				AML	AML	15 32 25.9	
comp=N,15153μm,0.4s							
SKIA	**Skiathos**	**0.69**	**192**	P	**Pg**	**15 32 15.1**	**-0.2**
SKIA				S	**Sg**	**15 32 25.0**	**+0.6**
comp=N,3μm,0.4s							
SKIA	**Skiathos**	**0.69**	**192**	P	**Pg**	**15 32 15.0**	**-0.2**
SKIA				S	**Sg**	**15 32 24.8**	**+0.4**
SKIA				AML	AML	15 32 25.9	
comp=E,6348μm,0.3s							
SKIA				AML	AML	15 32 27.3	
comp=N,3395μm,0.5s							
AOS	**Alonnisos**	**0.70**	**165**	P	**Pg**	**15 32 15.2**	**-0.1**
AOS				S	**Sn**	**15 32 26.1**	**-0.9**
comp=N,4μm,0.4s							
AOS	**Alonnisos**	**0.70**	**165**	P	**Pg**	**15 32 15.2**	**-0.1**
AOS				S	**Sg**	**15 32 24.9**	**+0.3**
AOS				AML	AML	15 32 26.8	
comp=N,10616μm,0.4s							
AOS				AML	AML	15 32 27.3	
comp=E,6866μm,0.3s							
AOS	**Alonnisos**	**0.70**	**165**	PG	**Pg**	**15 32 15.2**	**-0.1**
AOS				SG	**Sg**	**15 32 25.4**	**+0.8**
HORT	**Hortiatis**	**0.86**	**331**	P	**Pb**	**15 32 17.6**	**-0.5**
HORT				S	**Sb**	**15 32 29.2**	**-0.2**
comp=E,910nm,0.3s							
HORT	**Hortiatis**	**0.86**	**331**	P	**Pb**	**15 32 17.6**	**-0.5**
HORT				S	**Sb**	**15 32 29.5**	**+0.1**
HORT				AML	AML	15 32 34.7	
comp=N,1980μm,0.4s							
HORT				AML	AML	15 32 36.0	
comp=E,2065μm,0.6s							
HORT	**Hortiatis**	**0.86**	**331**	PG	**Pb**	**15 32 17.6**	**-0.5**
LIT	**Litokhoron**	**0.93**	**286**	P	**Pb**	**15 32 19.2**	**0.0**
LIT				S	**Sn**	**15 32 32.9**	**+0.2**
comp=E,455nm,0.3s							
LIT	**Litokhoron**	**0.93**	**286**	P	**Pb**	**15 32 19.1**	**0.0**
LIT	**Litokhoron**	**0.93**	**286**	*i* P	**Pb**	**15 32 19.2**	**0.0**
LIT				*i* S	**Sb**	**15 32 30.3**	**-0.9**
LIT				IAML		15 32 35.0	
comp=N,286nm,0.3s							
THE	**Thessaloniki**	**0.94**	**327**	P	**Pb**	**15 32 19.2**	**-0.3**
THE				S	**Sg**	**15 32 32.1**	**-0.3**
comp=N,632nm,0.4s							
SOH	**Sokhos**	**1.00**	**347**	P	**Pb**	**15 32 20.4**	**-0.1**
SOH				S	**Sn**	**15 32 36.1**	**+1.5**
comp=N,2μm,0.5s							
THAS	**Thassos island**	**1.12**	**47**	P	**Pg**	**15 32 22.8**	**-0.5**
THAS				S	**Sg**	**15 32 37.7**	**-0.3**
comp=N,1μm,0.3s							
THAS	**Thassos island**	**1.12**	**47**	P	**Pg**	**15 32 22.7**	**-0.5**
THAS				S	**Sg**	**15 32 37.6**	**-0.4**
THAS				AML	AML	15 32 38.8	
comp=E,2547μm,0.2s							
THAS				AML	AML	15 32 38.8	
comp=N,2398μm,0.3s							
MRKA	**Markates**	**1.14**	**182**	P	**Pb**	**15 32 22.6**	**-0.2**
MRKA	**Markates**	**1.14**	**182**	P	**Pn**	**15 32 22.5**	**-0.3**
MRKA				S	**Sn**	**15 32 37.8**	**-0.2**
MRKA				AML	AML	15 32 40.5	
comp=N,3861μm,0.6s							
MRKA				AML	AML	15 32 40.5	
comp=E,5128μm,0.6s							
LIA	**Limnos Island**	**1.18**	**87**	P	**Pb**	**15 32 23.7**	**+0.1**
LIA				S	**Sg**	**15 32 39.8**	**-0.2**
comp=E,540nm,0.5s							
LIA	**Limnos Island**	**1.18**	**87**	P	**Pb**	**15 32 23.5**	**-0.1**
LIA				S	**Sg**	**15 32 39.2**	**-0.7**
LIA				AML	AML	15 32 40.4	
comp=E,1241μm,0.6s							
LIA				AML	AML	15 32 44.5	
comp=N,943μm,0.4s							
SKY	**Skiros Island**	**1.19**	**144**	P	**Pb**	**15 32 23.8**	**+0.1**
SKY				S	**Sn**	**15 32 39.4**	**+0.2**
comp=N,2μm,0.3s							
SKY	**Skiros Island**	**1.19**	**144**	P	**Pb**	**15 32 23.8**	**+0.1**
KYMI	**Kymi, Euboea I**	**1.26**	**164**	P	**Pn**	**15 32 24.3**	**-0.1**
KYMI				S	**Sn**	**15 32 41.3**	**+0.4**
KYMI	**Kymi, Euboea I**	**1.26**	**164**	P	**Pn**	**15 32 24.1**	**-0.2**
KYMI				AML	AML	15 32 46.3	
comp=E,877μm,0.8s							
KYMI				AML	AML	15 32 53.7	
comp=N,1190μm,0.6s							
SRS	**Serrai**	**1.27**	**358**	P	**Pb**	**15 32 25.2**	**+0.1**
SRS				S	**Sg**	**15 32 42.7**	**-0.1**
comp=N,578nm,0.8s							
SRS	**Serrai**	**1.27**	**358**	P	**Pb**	**15 32 25.3**	**+0.2**
SRS				S	**Sg**	**15 32 43.0**	**+0.1**
SRS				AML	AML	15 32 47.4	
comp=E,897μm,0.5s							
SRS				AML	AML	15 32 47.9	
comp=N,1122μm,0.4s							
THL	**Klokotos Trika**	**1.29**	**258**	P	**Pn**	**15 32 24.5**	**-0.3**
LKR	**Lokris**	**1.29**	**203**	P	**Pn**	**15 32 24.8**	**-0.1**
LKR	**Lokris**	**1.29**	**203**	P	**Pn**	**15 32 24.7**	**-0.1**
LKR				AML	AML	15 32 44.9	
comp=E,847μm,0.5s							
LKR				AML	AML	15 32 53.1	
comp=N,897μm,0.7s							
AGG	**Agios Georgios**	**1.31**	**232**	P	**Pn**	**15 32 24.9**	**-0.2**
AGG				S	**Sg**	**15 32 43.8**	**-0.2**
comp=N,680nm,0.6s							
AGG	**Agios Georgios**	**1.31**	**232**	P	**Pb**	**15 32 25.5**	**-0.3**
AGG				AML	AML	15 32 46.6	
comp=E,1181μm,0.4s							
AGG				AML	AML	15 32 47.5	
comp=N,1447μm,0.4s							
AGG	**Agios Georgios**	**1.31**	**232**	PN	**Pn**	**15 32 25.1**	**0.0**
AGG	**Agios Georgios**	**1.31**	**232**	*i* P	**Pn**	**15 32 25.0**	**0.0**
AGG				*i* S	**Sg**	**15 32 43.9**	**-0.1**
AGG				IAML		15 32 47.0	
comp=N,279nm,0.4s							
AXAR	**Agios Charalam**	**1.32**	**216**	P	**Pb**	**15 32 25.5**	**-0.4**
AXAR				S	**Sg**	**15 32 44.6**	**+0.2**
AXAR				AML	AML	15 32 53.9	
comp=N,2677μm,0.5s							
AXAR				AML	AML	15 32 56.1	
comp=E,2057μm,0.5s							
KAVA	**Kavala**	**1.33**	**30**	P	**Pb**	**15 32 25.8**	**-0.2**
KAVA				S	**Sg**	**15 32 44.6**	**0.0**
comp=E,668nm,0.3s							
KAVA	**Kavala**	**1.33**	**30**	P	**Pb**	**15 32 25.9**	**-0.2**
KAVA				AML	AML	15 32 48.1	
comp=E,1504μm,0.4s							
KAVA				AML	AML	15 32 48.2	
comp=N,1264μm,0.3s							
KNT	**Kendrikon**	**1.44**	**337**	P	**Pb**	**15 32 27.8**	**-0.1**
KNT	**Kendrikon**	**1.44**	**337**	P	**Pb**	**15 32 28.1**	**+0.2**
KNT				S	**Sg**	**15 32 47.4**	**-0.6**
KNT				AML	AML	15 32 50.7	
comp=N,1202μm,0.6s							
KNT				AML	AML	15 32 51.6	
comp=E,1186μm,0.5s							
KNT	**Kendrikon**	**1.44**	**337**	PN	**Pb**	**15 32 28.1**	**+0.2**
KZN	**Kozani**	**1.51**	**288**	P	**Pb**	**15 32 28.6**	**-0.6**
NVR	**Nevrokopi**	**1.51**	**6**	P	**Pb**	**15 32 28.9**	**-0.3**
NVR	**Nevrokopi**	**1.51**	**6**	P	**Pb**	**15 32 28.8**	**-0.5**
NVR				S	**Sg**	**15 32 49.6**	**-0.9**
NVR				AML	AML	15 32 55.8	
comp=E,814μm,0.4s							
NVR				AML	AML	15 33 00.7	
comp=N,622μm,0.4s							
SMTH	**Samothraki Isl**	**1.57**	**66**	P	**Pn**	**15 32 28.8**	**0.0**
SMTH	**Samothraki Isl**	**1.57**	**66**	P	**Pn**	**15 32 28.7**	**0.0**
SMTH				AML	AML	15 32 57.2	
comp=E,249μm,0.5s							
SMTH				AML	AML	15 32 59.8	
comp=N,309μm,0.7s							
VIL2	**Platees**	**1.66**	**190**	P	**Pb**	**15 32 31.2**	**-0.5**
VIL2				S	**Sb**	**15 32 53.0**	**+0.8**
VIL2				AML	AML	15 33 00.2	
comp=N,1133μm,0.7s							
VIL2				AML	AML	15 33 00.3	
comp=E,1569μm,0.9s							
PROD	**Prodromos**	**1.69**	**200**	P	**Pn**	**15 32 30.3**	**0.0**
VAY	**Valandovo**	**1.69**	**331**	*e*Pn	**Pb**	**15 32 32.5**	**+0.4**
VAY	**Valandovo**	**1.69**	**331**	*e*Pn	**Pb**	**15 32 32.5**	**+0.4**
VILL	**Villia**	**1.70**	**189**	P	**Pn**	**15 32 30.7**	**+0.2**
MMB	**Musomiste**	**1.74**	**2**	*i* P	**Pn**	**15 32 32.1**	**-1.1**
GADA	**Gvkqeada**	**1.76**	**78**	PN	**Pn**	**15 32 31.3**	**0.0**
DION	**Dionisos Attik**	**1.78**	**173**	P	**Pn**	**15 32 31.7**	**+0.2**
DION	**Dionisos Attik**	**1.78**	**173**	P	**Pn**	**15 32 32.0**	**+0.5**
SIGR	**SIGRI**	**1.82**	**110**	P	**Pn**	**15 32 33.0**	**+0.9**
SIGR				S	**Sn**	**15 32 55.2**	**+0.5**
comp=E,202nm,0.8s							
SIGR	**SIGRI**	**1.82**	**110**	P	**Pn**	**15 32 32.9**	**+0.9**
SIGR	**SIGRI**	**1.82**	**110**	PN	**Pn**	**15 32 32.5**	**+0.4**
KALE	**Kalithea**	**1.87**	**219**	P	**Pn**	**15 32 33.1**	**+0.3**
SERG	**Sergoula**	**1.89**	**221**	P	**Pn**	**15 32 33.4**	**+0.3**
KARY	**Karystos**	**1.91**	**161**	P	**Pn**	**15 32 33.8**	**+0.4**
RDO	**Rodhopi**	**1.94**	**47**	P	**Pn**	**15 32 34.3**	**+0.6**
RDO	**Rodhopi**	**1.94**	**47**	PN	**Pn**	**15 32 34.5**	**+0.8**
EFP	**Efpalio**	**1.96**	**224**	P	**Pn**	**15 32 34.6**	**+0.6**
FNA	**Florina**	**1.97**	**299**	P	**Pn**	**15 32 35.2**	**+0.9**
FNA	**Florina**	**1.97**	**299**	PN	**Pn**	**15 32 35.2**	**+0.9**
FNA	**Florina**	**1.97**	**299**	*i* P	**Pn**	**15 32 35.0**	**+0.7**
FNA				*i* S	**Sn**	**15 32 58.6**	**0.0**
VLY	**Voula,Athens**	**1.99**	**177**	P	**Pn**	**15 32 34.8**	**+0.3**
RZN	**Rozhen**	**2.01**	**23**	*i* P	**Pb**	**15 32 36.5**	**-1.3**
EZN	**Ezine**	**2.06**	**90**	PN	**Pn**	**15 32 36.1**	**+0.7**
KKB	**Krupnik**	**2.06**	**348**	*i* P	**Pn**	**15 32 36.5**	**+1.0**
ALN	**Alexandroupoli**	**2.11**	**59**	P	**Pn**	**15 32 36.9**	**+0.8**
ALN	**Alexandroupoli**	**2.11**	**59**	PN	**Pn**	**15 32 36.5**	**+0.4**
ALN	**Alexandroupoli**	**2.11**	**59**	*i* P	**Pn**	**15 32 36.5**	**+0.4**
ALN				*i* S	**Sg**	**15 33 08.2**	**-1.4**
ENEZ	**Enez**	**2.11**	**64**	PN	**Pn**	**15 32 36.7**	**+0.6**
STIP	**Stip**	**2.16**	**329**	⇓*i* Pn	**Pn**	**15 32 37.9**	**+1.1**
STIP	**Stip**	**2.16**	**329**	⇓*i* Pn	**Pn**	**15 32 37.9**	**+1.1**
BAYC	**CANAKKALE_Bayr**	**2.24**	**92**	*i* P	**Pn**	**15 32 38.9**	**+1.1**
BAYC				*i* S	**Sn**	**15 33 04.2**	**-0.8**
GELI	**Tayfur-Gelibol**	**2.24**	**75**	PN	**Pn**	**15 32 38.2**	**+0.4**
KDZ	**Kurdzhali**	**2.25**	**36**	PN	**Pn**	**15 32 38.2**	**+0.2**
ERIK	**Erikli-Kesan**	**2.34**	**68**	PN	**Pn**	**15 32 39.7**	**+0.4**
CHOS	**Chios island**	**2.37**	**127**	P	**Pn**	**15 32 40.9**	**+1.1**
CHOS	**Chios island**	**2.37**	**127**	PN	**Pn**	**15 32 40.6**	**+0.8**
PLD	**Plovdiv**	**2.40**	**19**	*i* P	**Pb**	**15 32 42.4**	**-1.8**
PLD	**Plovdiv**	**2.40**	**19**	PN	**Pn**	**15 32 41.2**	**+1.2**
LPK	**Lapseki**	**2.44**	**77**	PN	**Pn**	**15 32 41.3**	**+0.6**
OHR	**Ohrid**	**2.51**	**301**	*i* Pn	**Pg**	**15 32 48.5**	**-1.3**
OHR	**Ohrid**	**2.51**	**301**	*i* Pn	**Pg**	**15 32 48.5**	**-1.3**
UKOP	**Uzunkopru-Edir**	**2.61**	**60**	PN	**Pn**	**15 32 43.9**	**+0.9**
DIM	**Dimitrovgrad**	**2.63**	**32**	*i* P	**Pn**	**15 32 44.8**	**+1.6**
URLA	**Izmir**	**2.73**	**122**	PN	**Pn**	**15 32 45.2**	**+0.6**
URLA	**Izmir**	**2.73**	**122**	*i* P	**Pn**	**15 32 45.9**	**+1.2**
VTS	**Vitosha**	**2.79**	**354**	⇑P	**Pg**	**15 32 55.1**	**0.0**
VTS	**Vitosha**	**2.79**	**354**	*i* P	**Pn**	**15 32 46.8**	**+1.2**
ZEDA	**zmir-Bergama**	**2.80**	**107**	*i* P	**Pn**	**15 32 44.0**	**-1.6**
ITM	**Ithomi**	**2.98**	**207**	PN	**Pn**	**15 32 49.1**	**+1.0**
KNL	**Balıkesir**	**3.01**	**81**	*i* P	**Pg**	**15 32 58.1**	**-1.2**
KNL				IAML		15 33 43.0	
comp=N,41nm,0.8s							
KNL				IAML		15 33 46.0	
comp=E,46nm,0.8s							
BALY	**Balya**	**3.06**	**91**	*i* P	**Pn**	**15 32 50.9**	**+1.7**
BALY				*i* S	**Sn**	**15 33 25.6**	**+0.2**
EDRB	**Edirne**	**3.08**	**49**	PN	**Pn**	**15 32 50.3**	**+0.8**
MRMT	**Marmara Adasi**	**3.12**	**75**	PN	**Pn**	**15 32 50.3**	**+0.3**
APE	**Apeiranthos**	**3.14**	**151**	⇓P	**Pn**	**15 32 50.5**	**+0.2**
APE	**Apeiranthos**	**3.14**	**151**	PN	**Pn**	**15 32 50.9**	**+0.6**
APE	**Apeiranthos**	**3.14**	**151**	*i* P	**Pn**	**15 32 50.3**	**0.0**
KIRK	**Kırklareli**	**3.26**	**52**	*i* P	**Pn**	**15 32 54.0**	**+2.2**
KIRK				IAML		15 33 48.0	
comp=N,53nm,0.3s							
MPEP	**Malo Peshtene**	**3.51**	**1**	*i* P	**Pn**	**15 32 57.7**	**+2.4**
PLVB	**Pleven**	**3.61**	**11**	⇑P	**Pg**	**15 33 08.8**	**-2.1**
IDI	**Anoyia**	**4.65**	**167**	⇑P	**Pn**	**15 33 14.7**	**+3.5**
HERR	**Herculane**	**5.12**	**350**	⇑P	**Pn**	**15 33 18.2**	**+0.8**
MDVR	**Moldovita**	**5.14**	**344**	⇓P	**Pn**	**15 33 18.9**	**+1.2**
VOIR		**5.68**	**10**	⇓P	**Pn**	**15 33 26.5**	**+1.3**
BZS	**Buzias**	**5.96**	**346**	⇑P	Pn	15 33 18.9	-10
RICI	**Ricice**	**6.09**	**309**	*e*Pn	**Pn**	**15 33 33.5**	**+2.7**
KDZE	**Karadeniz Ereo**	**6.11**	**74**	⇓P	Pn	15 33 16.9	-14
DOPR	**Dopca**	**6.25**	**11**	⇓P	**Pn**	**15 33 34.1**	**+1.1**
PLOR	**Plostina**	**6.39**	**19**	⇑P	**Pn**	**15 33 38.2**	**+3.2**
VRI	**Vrincioaia**	**6.43**	**20**	⇑P	**Pn**	**15 33 38.9**	**+3.5**
OZUR		**6.44**	**13**	⇓P	**Pn**	**15 33 38.5**	**+2.9**
KIJV	**Kijevo**	**6.81**	**310**	*i* Pn	**Pn**	**15 33 43.0**	**+2.3**
KIJV				Sn	**Sn**	**15 34 59.3**	**+1.5**
ZIRJ	**Zirje**	**7.09**	**305**	*e*Pn	**Pn**	**15 33 45.2**	**+0.7**
ZIRJ				Sn	**Sn**	**15 35 02.6**	**-2.0**
DUGI	**Dugi Otok**	**7.63**	**306**	*e*Pn	**Pn**	**15 33 51.9**	**0.0**

*IDC **13** 15:34:45.5±6.0,4°.75S×102°.92E,h51km±49km,mb3.8/10, mb1 3.9/11,mb1mx3.6/42,mbtmp4.1/11,ML3.8/1,Error ellipse: s-maj=73.3km s-min=14.5km az=57.0*
*DJA **13** 15:34:45.6±0.5,5°.5S×103°.3E±°,h24km±5km,M4.4/12, MLv4.3/12,MLv4.5/5*
*NEIC **13** 15:34:46.5±1.2,4°.77S±0°.09×102°.9E±0°.1,h63km±6km, mb4.6/18,Error ellipse: s-maj=17.3km s-min=9.8km az=58.0*
ISC 13 15:34:45.8±0.7,**4°.86S**±0°.08×**102°.89E**±0°.07,**h59**km,**n50,** σ0**°98/48,mb4.4/19,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.50**	**7**	P	**Pn**	**15 34 57.9**	**+0.2**
MNAI				S	**Sn**	**15 35 07.2**	**+0.9**
MNAI	**Manna**	**0.50**	**7**		**Pn**	**15 34 57.4**	**-0.3**
MNAI				Sn	**Sn**	**15 35 06.1**	**-0.3**
LWLI	**Liwa**	**1.17**	**98**	P	**Pn**	**15 35 06.5**	**+0.3**
LWLI				S	**Sn**	**15 35 22.3**	**+0.9**
LHSI	**Lahat**	**1.20**	**32**	P	**Pn**	**15 35 08.0**	**+1.5**
KSI	**Kapahiang**	**1.23**	**346**	P	**Pn**	**15 35 07.6**	**+0.6**
MDSI	**Maura Dua**	**

H08S1	**Diego Carcia H**	**30.36**	**263**	T	T	16 12 41.6	
	baz=86,slow=76,SNR=7.8						
H01W3	**Cape Leeuwin H**	**31.64**	**162**	T	T	16 14 44.8	
	baz=339,slow=76,SNR=18						
H01W2	**Cape Leeuwin H**	**31.65**	**162**	T	T	16 14 45.8	
	baz=339,slow=76,SNR=15						
H01W1	**Cape Leeuwin H**	**31.65**	**162**	T	T	16 14 45.9	
	baz=339,slow=76,SNR=16						
WB0	**Warramunga Arr**	**34.06**	**119**	P	**P**	**15 41 25.7**	**+0.9**
WRA	**Warramunga Arr**	**34.08**	**119**	P	**P**	**15 41 25.5**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=296,slow=9.9,SNR=21						
WB2	**Warramunga Arr**	**34.09**	**119**	P	**P**	**15 41 25.8**	**+0.7**
WB2				IAmb	IAmb	15 42 36.3	
	comp=Z,19nm,1.6s						
WR0	**Warramunga Arr**	**34.26**	**119**	P	**P**	**15 41 27.5**	**+1.0**
WR0				IAmb	IAmb	15 42 12.7	
	comp=Z,25nm,1.8s						
ASAR	**Alice Springs**	**35.25**	**125**	P	**P**	**15 41 35.8**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=294,slow=7.7,SNR=19						
AS31	**Alice Springs**	**35.25**	**125**	P	**P**	**15 41 35.6**	**+0.5**
ENH	**Enshi**	**35.50**	**10**	P	**P**	**15 41 36.0**	**-1.1**
ENH				IAmb	IAmb	15 42 12.3	
	comp=Z,26nm,1.9s						
BBOO	**Buckleboo**	**41.60**	**136**	P	**P**	**15 42 28.4**	**+0.2**
STKA	**Stephens Creek**	**45.11**	**131**	P	**P**	**15 42 57.6**	**+1.1**
	comp=Z,2.3nm,0.4s,baz=310,slow=6.3,SNR=12						
STKA	**Stephens Creek**	**45.11**	**131**	IAmb	IAmb	15 42 59.0	
	comp=Z,1.2nm,1.1s						
KDJ	**Kajisay**	**52.29**	**336**	P	**P**	**15 43 51.9**	**+0.2**
KDJ				IAmb	IAmb	15 43 52.9	
	comp=Z,2.6nm,0.7s						
SONM	**Songino Array**	**52.56**	**3**	P	**P**	**15 43 53.1**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=186,slow=7.6,SNR=4.3						
ULN	**Ulaanbaatar**	**52.63**	**4**	P	**P**	**15 43 54.5**	**+0.5**
ULN				IAmb	IAmb	15 43 56.9	
	comp=Z,2.8nm,0.4s						
MKAR	**Makanchi Array**	**54.57**	**343**	P	**P**	**15 44 07.8**	**-0.2**
	comp=Z,1.7nm,0.5s,baz=146,slow=8.0,SNR=32						
USRK	**Ussuriysk Ar.**	**55.40**	**25**	P	**P**	**15 44 13.9**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=225,slow=6.3,SNR=6.5						
KURK	**Kurchatov**	**59.17**	**342**	P	**P**	**15 44 40.3**	**-0.1**
KURK				IAmb	IAmb	15 44 55.6	
	comp=Z,1.6nm,0.8s						
ZAA0	**Zalesovo Array**	**60.52**	**348**	P	**P**	**15 44 49.2**	**-0.5**
ZAA0				IAmb	IAmb	15 45 04.7	
	comp=Z,3.8nm,1.1s						
ZALV	**Zalesovo Beam**	**60.52**	**348**	P	**P**	**15 44 49.2**	**-0.5**
	comp=Z,1.7nm,0.4s,baz=168,slow=5.2,SNR=8.8						
ATD	**Arta Tunnel**	**61.91**	**286**	P	**P**	**15 44 59.9**	**0.0**
YSS	**Yuzh-Sakhalins**	**62.44**	**30**	P	**P**	**15 45 00.8**	**-2.0**
ABKAR	**Akbulak array**	**65.52**	**331**	P	**P**	**15 45 22.9**	**-0.1**

*IDC **13** 15:44:02.5±1.8,38°.36N×142°.33E,h0km,mb3.7/4, mb1 3.7/6,mb1mx3.5/42,mbtmp3.6/6,ML2.4/2,Error ellipse: s-maj=44.0km s-min=23.4km az=64.0*
*JMA **13** 15:44:11.4±0.1,38°.24N×141°.69E,h50km±1km,M3.7 JMA Felt I J1.*
ISC 13 15:44:08.8±1.8,**38°.18N**±0°.04×**141°.85E**±0°.09,**h29**km±11km, **n19**,σ1°**13**/30,**mb3.6**/4,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.33**	**294**	P	**Pn**	**15 44 19.8**	**+2.0**
JIKH				S	**Sn**	**15 44 25.4**	**+1.7**
JIO	**Ouri**	**0.48**	**305**	P	**Pn**	**15 44 21.1**	**+1.2**
JIO				S	**Sn**	**15 44 27.7**	**+0.3**
JKMT	**Kesennumamotoy**	**0.70**	**335**	P	**Pn**	**15 44 23.8**	**+1.0**
JKMT				S	**Sb**	**15 44 32.4**	**+0.6**
JMM	**Marumori**	**0.89**	**250**	P	**Pn**	**15 44 26.1**	**+0.6**
JMM				S	**Sb**	**15 44 36.8**	**-0.5**
JMK	**Ichinoseki**	**0.92**	**327**	P	**Pn**	**15 44 26.7**	**+0.8**
JMK				S	**Sb**	**15 44 37.6**	**-0.5**
JOU	**Okura**	**0.96**	**282**	P	**Pn**	**15 44 26.9**	**+0.5**
JOU				S	**Sb**	**15 44 38.3**	**-0.8**
JFK	**Kawauchi**	**1.12**	**224**	P	**Pb**	**15 44 30.0**	**+0.4**
JFK				S	**Sn**	**15 44 43.5**	**+0.4**
JOM	**Ohasama**	**1.37**	**341**	P	**Pb**	**15 44 33.2**	**-0.6**
JOM				S	**Sn**	**15 44 49.0**	**-0.2**
JFT	**Otama**	**1.37**	**242**	P	**Pb**	**15 44 33.4**	**-0.4**
JFT				S	**Sn**	**15 44 49.2**	**0.0**
JYK	**Kaneyama**	**1.39**	**303**	P	**Pn**	**15 44 32.8**	**+0.5**
JYS	**Shirataka**	**1.41**	**272**	P	**Pn**	**15 44 33.3**	**+0.7**
JRG	**Rokugo**	**1.55**	**322**	P	**Pn**	**15 44 35.6**	**+1.1**
MJAR	**Matsushiro Arr**	**3.33**	**242**	Pn	**Pn**	**15 45 01.5**	**+2.5**
	0.3nm,0.3s,baz=53,slow=12,SNR=15						
MJAR				Sn	**Sb**	**15 45 46.5**	**-0.8**
	0.3nm,0.3s,baz=103,slow=15,SNR=4.5						
MAT	**Matsushiro**	**3.33**	**242**	P	**Pn**	**15 45 01.8**	**+2.7**
MAT				*e*S	**Sn**	**15 45 36.9**	**-0.8**
USRK	**Ussuriysk Ar.**	**9.56**	**312**	Pn	**Pn**	**15 46 25.4**	**+0.9**
	baz=124,slow=14,SNR=5.2						
ZALV	**Zalesovo Beam**	**41.41**	**311**	P	**P**	**15 51 51.3**	**-1.2**
	0.7nm,0.4s,baz=103,slow=6.4,SNR=3.7						
MKAR	**Makanchi Array**	**43.82**	**301**	P	**P**	**15 52 11.4**	**-0.8**
	0.5nm,0.6s,baz=85,slow=9.6,SNR=6.6						
WRA	**Warramunga Arr**	**58.24**	**188**	P	**P**	**15 54 00.2**	**-0.4**
	0.5nm,0.9s,baz=6.0,slow=7.4,SNR=12						
ASAR	**Alice Springs**	**61.97**	**188**	P	**P**	**15 54 25.9**	**-0.2**
	0.3nm,0.7s,baz=12,slow=4.7,SNR=8.5						

*IDC **13** 15:52:02.2±1.1,47°.57N×27°.74W,h0km,mb3.8/7, mb1 4.0/9,mb1mx3.6/48,mbtmp3.8/9,ML4.0/2,MS3.7/12, Ms1 3.7/12,ms1mx3.5/42,Error ellipse: s-maj=36.6km s-min=20.9km az=28.0*
*NEIC **13** 15:52:05.3±1.8,47°.7N±0°.2×27°.3W±0°.1,h10km±4km, mb4.7/10,Error ellipse: s-maj=27.6km s-min=9.3km az=205.0*
ISC 13 15:52:04.9±0.8,**47°.7N**±0°.2×**27°.5W**±0°.1,**h10**km,**n28**, σ1°**66**/19,**mb4.3**/12,**MS3.6**/11,**Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKA	**Eskdalemuir Ar**	**16.89**	**54**	P	**Pn**	**15 56 02.7**	**+1.5**
	baz=251,slow=11,SNR=4.8						
ESDC	**Sonseca Array**	**18.76**	**107**	P	**P**	**15 56 25.1**	**+1.2**
	0.1nm,0.3s,baz=293,slow=13,SNR=6.1						
ESDC				LR	LR	16 01 30.2	
	comp=Z,249nm,18.1s,baz=295,slow=30						
DAVOX	**Davos/Dischmat**	**25.23**	**78**	LR	LR	16 05 25.4	
	comp=Z,98nm,21.6s,baz=264,slow=32						
NOA	**NORSAR Array B**	**25.75**	**44**	LR	LR	16 06 21.8	
	comp=Z,127nm,18.1s,baz=125,slow=33						
BATG	**Bathurst New B**	**25.89**	**284**	P	**P**	**15 57 37.3**	**+0.5**
BATG				IAmb	IAmb	15 58 02.3	
	comp=Z,20nm,1.3s						
HFS	**Hagfors**	**26.77**	**47**	LR	LR	16 06 17.3	
	comp=Z,138nm,19.4s,baz=220,slow=32						
GERES	**GERESS Array B**	**27.20**	**72**	LR	LR	16 08 08.1	
	comp=Z,186nm,18.5s,baz=268,slow=35						
TRI	**Trieste**	**28.12**	**79**	P	**P**	**15 57 56.2**	**-0.5**
VRAC	**Vranov**	**28.94**	**70**	LR	LR	16 08 32.7	
	comp=Z,156nm,20.2s,baz=272,slow=34						
KEST	**Kesra**	**29.70**	**100**	LR	LR	16 08 18.5	
	comp=Z,207nm,19.2s,baz=160,slow=33						
RES	**Resolute Bay**	**38.76**	**337**	P	**P**	**15 59 26.1**	**-2.8**
	comp=Z,6.4nm,0.9s,baz=144,slow=5.4,SNR=2.8						
TORD	**Torodi Ar. Bea**	**42.17**	**135**	P	**P**	**15 59 56.0**	**-1.6**
	comp=Z,1.4nm,0.9s,baz=328,slow=7.5,SNR=5.0						
TORD				LR	LR	16 15 45.8	
	comp=Z,105nm,19.5s,baz=270,slow=34						
HODGE	**Hodges**	**42.63**	**272**	P	**P**	**16 00 03.7**	**+2.4**
HODGE				IAmb	IAmb	16 00 55.3	
	comp=Z,18nm,1.0s						
BG3	**Lake Jocassee**	**42.65**	**274**	P	**P**	**16 00 03.9**	**+2.4**
BG3				IAmb	IAmb	16 00 49.5	
	comp=Z,18nm,1.2s						
TKL	**Tuckaleechee C**	**42.84**	**275**	P	**P**	**16 00 00.5**	**-2.6**
	comp=Z,4.9nm,0.8s,baz=40,slow=7.9,SNR=4.5						
TKL				LR	LR	16 15 54.2	
	comp=Z,109nm,19.8s,baz=62,slow=34						
DBIC	**Dimbokro**	**45.22**	**147**	LR	LR	16 16 01.1	
	comp=Z,62nm,19.4s,baz=82,slow=32						
YKA	**Yellowknife Ar**	**48.02**	**321**	P	**P**	**16 00 42.7**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=69,slow=9.0,SNR=3.8						
PDAR	**Pinedale Array**	**55.43**	**298**	P	**P**	**16 01 38.1**	**-1.5**
	comp=Z,0.6nm,0.7s,baz=74,slow=6.7,SNR=5.3						
ILAR	**Eielson Array**	**58.39**	**334**	P	**P**	**16 02 00.3**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=45,slow=6.5,SNR=2.8						
ELK	**Elko**	**60.03**	**299**	P	**P**	**16 02 13.5**	**+1.5**
J08A	**Circle Bar Ran**	**60.27**	**303**	P	**P**	**16 02 14.6**	**+1.2**
J08A				IAmb	IAmb	16 04 10.6	
	comp=Z,16nm,2.0s						
WVOR	**Wild Horse Val**	**60.95**	**302**	P	**P**	**16 02 19.8**	**+1.7**
WVOR				IAmb	IAmb	16 02 21.1	
	comp=Z,16nm,1.9s						
LCMT	**Little Creek M**	**61.19**	**294**	P	**P**	**16 02 20.2**	**+0.4**
GHO	**Glory Hole Cre**	**61.24**	**332**	P	**P**	**16 02 20.4**	**+0.8**
GAMB	**Gambell**	**65.34**	**343**	P	**P**	**16 02 47.6**	**+0.9**
LPAZ	**La Paz**	**73.34**	**221**	LR	LR	16 31 11.4	
	comp=Z,33nm,19.3s,baz=26,slow=32						
SONM	**Songino Array**	**76.74**	**30**	P	**P**	**16 03 56.4**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=306,slow=5.0,SNR=3.4						
PLCA	**Paso Flores**	**95.99**	**211**	LR	LR	16 45 54.2	
	comp=Z,31nm,18.6s,baz=145,slow=34						

*IDC **13** 16:05:26.3±1.2,15°.77N×93°.54W,h87km±7km,mb3.5/6, mb1 3.8/10,mb1mx3.5/40,mbtmp3.9/10,Error ellipse: s-maj=31.6km s-min=6.2km az=32.0*
*NEIC **13** 16:05:26.5±2.0,15°.68N±0°.08×93°.62W±0°.07,h90km±3km, mb4.1/11,Error ellipse: s-maj=13.9km s-min=6.4km az=219.0*
*GCG **13** 16:05:27.6±0.9,15°.58N×93°.56W,h11km,MD4.5*
ISC 13 16:05:27.1±0.8,**15°.8N**±0°.1×**93°.56W**±0°.07,**h100**km,**n31**, σ1°**42**/37,**mb4.0**/8,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.45**	**70**		**Pn**	**16 05 52.0**	**-1.0**
CMIG	**Matias Romero**	**1.81**	**316**	P	**Pn**	**16 05 56.8**	**-0.4**
	39nm,0.3s,baz=147,slow=15,SNR=141						
CMIG				S	**Sn**	**16 06 19.0**	**-1.1**
	157nm,0.3s,baz=129,slow=19,SNR=23						
STG3	**Santiaguito 3,**	**2.21**	**119**	*e*P	**Pn**	**16 06 02.1**	**-0.5**
FUG	**Fuego 3**	**2.95**	**117**	*e*P	**Pn**	**16 06 13.6**	**+1.2**
APG	**El Apazote**	**3.09**	**104**	P	**Pn**	**16 06 14.1**	**-0.2**
	13nm,0.3s,baz=174,slow=12,SNR=79						
APG				S	**Sn**	**16 06 48.9**	**-1.8**
	52nm,0.3s,baz=1.1,slow=17,SNR=16						
IXG	**Ixpaco**	**3.42**	**118**	*e*P	**Pn**	**16 06 20.4**	**+1.7**
IXG				*e*S	**Sn**	**16 07 00.8**	**+2.2**
TLIG	**Tlapa**	**5.11**	**291**	Pn	**Pn**	**16 06 39.8**	**-1.7**
TGUH	**Tegucigalpa,Un**	**6.32**	**105**	Pn	**Pn**	**16 06 57.7**	**-0.3**
TEIG	**Tepich**	**6.68**	**48**	P	**Pn**	**16 07 01.0**	**-1.7**
	baz=192,slow=0.0						
CRIN	**San Cristobal**	**7.02**	**115**	Pn	**Pn**	**16 07 04.9**	**-2.6**
JTS	**Las Juntas de**	**10.01**	**122**	P	**Pn**	**16 07 47.4**	**-0.8**
	0.9nm,0.3s,baz=77,slow=24,SNR=2.6						
JCT	**Junction City**	**15.69**	**340**	P	**P**	**16 09 06.2**	**+1.5**
JCT				IAmb	IAmb	16 09 23.8	
	comp=Z,5.0nm,0.6s						
TX31	**Lajitas Ar. Si**	**16.37**	**327**	P	**P**	**16 09 14.0**	**+1.8**
TX31				IAmb	IAmb	16 09 46.1	
	comp=Z,35nm,1.6s						
TXAR	**Lajitas Array**	**16.37**	**327**	P	**P**	**16 09 12.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=149,slow=15,SNR=6.6						
MIAR	**Mount Ida**	**18.67**	**360**	Pn	**Pn**	**16 09 40.1**	**+1.3**
MIAR				IAmb	IAmb	16 10 18.1	
	comp=Z,6.4nm,1.1s						
X37A	**Clayton**	**18.78**	**355**	Pn	**Pn**	**16 09 41.2**	**+1.0**
X37A				IAmb	IAmb	16 10 12.9	
	comp=Z,9.9nm,1.1s						
255A	**Hazlehurst**	**18.96**	**30**	P	**Pn**	**16 09 41.9**	**-0.5**
GDL2	**Guadalupe Moun**	**19.06**	**331**	P	**Pn**	**16 09 43.0**	**-0.6**
MNTX	**Cornudas Mount**	**19.15**	**328**	P	**Pn**	**16 09 44.0**	**-0.5**
AMTX	**Amarillo**	**20.36**	**340**	P	Pn	16 09 57.3	-1.4
AMTX				IAmb	IAmb	16 10 00.7	
	comp=Z,11nm,0.6s						
CCM	**Cathedral Cave**	**22.27**	**5**	P	**P**	**16 10 16.7**	**+0.7**
CCM				IAmb	IAmb	16 10 19.9	
	comp=Z,6.6nm,0.7s						
ANMO	**Albuquerque**	**22.30**	**331**	P	**P**	**16 10 17.0**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=135,slow=11,SNR=3.9						
PV09	**Paradox Valley**	**26.44**	**332**	P	**P**	**16 10 54.6**	**-0.4**
U15A	**North Rim**	**26.46**	**324**	P	**P**	**16 10 54.5**	**-0.6**
U15A				IAmb	IAmb	16 11 37.6	
	comp=Z,20nm,2.0s						
NVAR	**Mina Array Bea**	**31.33**	**321**	P	**P**	**16 11 40.4**	**+2.0**
	comp=Z,0.9nm,0.7s,baz=133,slow=9.4,SNR=9.7						
NVAR				pP	**pP**	**16 12 00.6**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=143,slow=8.5,SNR=4.0						
MCMT	**McKenzie Canyo**	**33.21**	**335**	P	**P**	**16 11 57.5**	**+2.8**
SIV	**San Ignacio**	**45.02**	**133**	P	**P**	**16 13 32.1**	**-0.9**
	comp=Z,1.3nm,0.5s,baz=324,slow=8.4,SNR=7.5						
YKA	**Yellowknife Ar**	**48.94**	**347**	P	**P**	**16 14 03.2**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=150,slow=7.6,SNR=17						
YKA				pP	**pP**	**16 14 24.0**	**-3.0**
	comp=Z,0.7nm,0.8s,baz=149,slow=7.7,SNR=4.7						
INK	**Inuvik**	**58.30**	**344**	P	**P**	**16 15 12.2**	**+1.1**
	comp=Z,2.0nm,0.6s,baz=127,slow=5.7,SNR=15						
INK				pP	**pP**	**16 15 34.1**	**-1.8**
	comp=Z,1.0nm,0.5s,baz=150,slow=8.2,SNR=3.7						
INK	**Inuvik**	**58.30**	**344**	P	**P**	**16 15 11.9**	**+0.8**
ILAR	**Eielson Array**	**60.60**	**337**	P	**P**	**16 15 28.2**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=149,slow=11,SNR=2.3						
ILAR				pP	**pP**	**16 15 50.7**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=136,slow=6.2,SNR=2.8						

IDC 13 16:07:12.1±1.6,**7°.55S×123°.21E,h0**km,**mb3.7**/1, **mb1 3.6**/5,**mb1mx3.4**/37,**mbtmp3.5**/5,**ML3.3**/4,**Error ellipse: s-maj=74.9km s-min=19.9km az=63.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.67**	**170**	Pn	Pn	16 07 57.0	+0.4
	9.3nm,0.3s,baz=8.4,slow=2.3,SNR=11						
BATI				Sn	Sb	16 08 32.4	-2.0
	6.9nm,0.3s,baz=90,slow=16,SNR=1.8						
KAPI	**Kappang**	**4.26**	**306**	Pn	Pn	16 08 17.2	-1.2
	1.4nm,0.3s,baz=195,slow=23,SNR=3.6						
KAPI				Sn	Sn	16 09 02.4	-6.5
	baz=246,slow=23,SNR=1.1						
FITZ	**Fitzroy Crossi**	**10.75**	**168**	Pn	Pn	16 09 41.8	-5.6
	0.2nm,0.3s,baz=347,slow=11,SNR=6.2						
FITZ				Sn	Sn	16 11 30.4	-18
	0.1nm,0.3s,baz=60,slow=18,SNR=2.0						
WRA	**Warramunga Arr**	**16.37**	**140**	Pn	Pn	16 11 01.9	-1.7
	0.1nm,0.3s,baz=314,slow=13,SNR=5.2						
ASAR	**Alice Springs**	**19.03**	**149**	P	P	16 11 35.6	-0.2
	0.1nm,0.3s,baz=318,slow=12,SNR=16						
MKAR	**Makanchi Array**	**65.18**	**330**	P	P	16 17 55.5	+0.3
	0.6nm,0.6s,baz=141,slow=5.9,SNR=7.1						

*ISK **13** 17:58:19.9,36°.50N×26°.92E,h120km±1km,ML2.8/16*
*ATH **13** 17:58:20.2,36°.46N×26°.92E,h118km±8km,ML2.6/2,Error ellipse: s-maj=9.9km s-min=2.4km az=136.0*
*DDA **13** 17:58:21.3,36°.68N×26°.84E,h116km±1km,ML2.6*
*THE **13** 17:58:22.6,36°.45N×26°.88E,h123km±6km,ML2.7/5,Error ellipse: s-maj=6.5km s-min=0.8km az=70.0*
*HLW **13** 17:58:22.3,36°.11N×27°.13E,h26km±28km,Ml3.6*
ISC 13 17:58:18.6±1.4,**36°.48N**±0°.05×**26°.95E**±0°.04,**h132**km±8km, **n53**,σ1°**58**/73,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.57**	**64**	P	**Pn**	**17 58 39.1**	**+0.7**
DAT	**Datca**	**0.57**	**64**	PG	**Pn**	**17 58 39.2**	**+0.8**
DAT	**Datca**	**0.57**	**64**	*i* P	**Pn**	**17 58 39.0**	**+0.6**
DAT				*i* S	**Sn**	**17 58 52.9**	**-0.5**
BODT	**Bodrum**	**0.65**	**27**	P	**Pn**	**17 58 39.5**	**+0.6**
BODT	**Bodrum**	**0.65**	**27**	PG	**Pn**	**17 58 39.4**	**+0.6**
BODT				SG	**Sn**	**17 58 53.2**	**-1.0**
BDRM	**Kayabasi**	**0.71**	**34**	*i* P	**Pn**	**17 58 39.6**	**+0.4**
BDRM				*i* S	**Sn**	**17 58 52.7**	**-2.2**
AMGA	**Amorgos Island**	**0.92**	**293**	P	**Pn**	**17 58 41.7**	**+0.8**
KARP	**Karpathos**	**0.95**	**169**	P	**Pn**	**17 58 42.0**	**+0.8**
KARP	**Karpathos**	**0.95**	**169**	P	**Pn**	**17 58 42.2**	**+0.9**
KARP				S	**Sn**	**17 58 57.4**	**-1.0**
KARP	**Karpathos**	**0.95**	**169**	PG	**Pn**	**17 58 42.2**	**+0.9**
ANAF	**Anafi Island**	**0.95**	**263**	P	**Pn**	**17 58 42.2**	**+1.0**
ANAF	**Anafi Island**	**0.95**	**263**	P	**Pn**	**17 58 42.3**	**+1.0**
ARG	**Arkhangelos**	**0.99**	**105**	P	**Pn**	**17 58 42.9**	**+1.4**
ARG				S	**Sn**	**17 58 59.1**	**+0.2**
	170nm,0.2s						
ARG	**Arkhangelos**	**0.99**	**105**	P	**Pn**	**17 58 42.9**	**+1.4**
ARG				S	**Sn**	**17 58 58.7**	**-0.2**
ARG				AML	AML	17 59 00.1	
	comp=N,306μm,0.2s						
ARG				AML	AML	17 59 00.3	
	comp=E,379μm,0.2s						
ARG	**Arkhangelos**	**0.99**	**105**	PG	**Pn**	**17 58 42.9**	**+1.4**
ARG				SG	**Sn**	**17 58 59.2**	**+0.3**
MRSB	**Marmaris-Mugla**	**1.03**	**76**	PG	**Pn**	**17 58 42.8**	**+0.8**
MRSB				SG	**Sn**	**17 58 59.9**	**+0.1**
SANT	**Santorini**	**1.20**	**265**	PN	**Pn**	**17 58 44.7**	**+1.0**
YER	**Yerkesik**	**1.26**	**58**	PN	**Pn**	**17 58 45.3**	**+1.1**
TURN	**Turunc**	**1.39**	**73**	PN	**Pn**	**17 58 43.6**	**-1.9**
TURN				SN	**Sn**	**17 59 00.7**	**-5.4**
DALY	**Dalyan (Mula)**	**1.41**	**76**	PN	**Pn**	**17 58 47.9**	**+2.1**
DALY	**Dalyan (Mula)**	**1.41**	**76**	*i* P	**Pn**	**17 58 48.1**	**+2.3**
DALY				*i* S	**Sn**	**17 59 06.4**	**-0.2**
DALY				IAML		17 59 08.0	
	comp=E,115nm,0.4s						
DALY				IAML		17 59 09.0	
	comp=N,161nm,0.2s						
STIA	**Sitia Lasithi**	**1.45**	**209**	P	**Pn**	**17 58 47.6**	**+1.3**
ZKR	**Zakros**	**1.48**	**204**	P	**Pn**	**17 58 48.4**	**+1.7**
ZKR	**Zakros**	**1.48**	**204**	P	**Pn**	**17 58 48.4**	**+1.7**
ZKR				S	**Sn**	**17 59 08.8**	**+0.8**
ZKR	**Zakros**	**1.48**	**204**	PN	**Pn**	**17 58 48.2**	**+1.5**
NPS	**Neapolis**	**1.63**	**222**	P	**Pn**	**17 58 49.3**	**+1.0**
NPS				S	**Sn**	**17 59 10.1**	**-0.8**
	comp=N,118nm,0.1s						
NPS	**Neapolis**	**1.63**	**222**	P	**Pn**	**17 58 49.3**	**+1.0**
NPS				AML	AML	17 59 11.4	
	comp=E,259μm,0.1s						
NPS				AML	AML	17 59 12.1	
	comp=N,210μm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**1.65**	**27**	PN	**Pn**	**17 58 49.8**	**+1.2**
FETY	**Fethiye**	**1.73**	**84**	PN	**Pn**	**17 58 50.6**	**+1.2**
FETY	**Fethiye**	**1.73**	**84**	*i* P	**Pn**	**17 58 50.8**	**+1.4**
FETY				*i* S	**Sn**	**17 59 12.0**	**-1.0**
FETY				IAML		17 59 15.0	
	comp=N,29nm,0.4s						
FETY				IAML		17 59 15.0	
	comp=E,31nm,0.3s						
LAST	**Lasithi**	**1.78**	**223**	P	**Pn**	**17 58 51.1**	**+1.0**
LAST				S	**Sn**	**17 59 13.6**	**-0.5**
	comp=E,40nm,0.1s						
LAST	**Lasithi**	**1.78**	**223**	P	**Pn**	**17 58 51.0**	**+0.9**
TAVA	**DENIZLI_Tavas**	**1.86**	**57**	*i* P	**Pn**	**17 58 52.9**	**+1.9**
TAVA				*i* S	**Sn**	**17 59 15.2**	**-0.7**
HRKL	**Herakleio**	**1.90**	**233**	PN	**Pn**	**17 58 52.8**	**+1.4**
IDI	**Anoyia**	**2.05**	**235**	P	**Pn**	**17 58 54.2**	**+0.9**
IDI				S	**Sn**	**17 59 19.1**	**-0.8**
	comp=E,102nm,0.3s						
IDI	**Anoyia**	**2.05**	**235**	P	**Pn**	**17 58 54.3**	**+0.9**
IDI	**Anoyia**	**2.05**	**235**	PN	**Pn**	**17 58 54.2**	**+0.9**
MANT	**Manisa**	**2.38**	**32**	*i* P	**Pn**	**17 58 58.3**	**+0.7**
ELL	**Elmali**	**2.40**	**83**	PN	**Pn**	**17 58 59.4**	**+1.7**
IMMV	**Iera Moni Meta**	**2.61**	**248**	P	**Pn**	**17 59 02.2**	**+1.9**
IMMV				S	**Sn**	**17 59 31.4**	**-0.9**
	comp=E,130nm,0.4s						
IMMV	**Iera Moni Meta**	**2.61**	**248**	P	**Pn**	**17 59 02.1**	**+1.9**
IMMV	**Iera Moni Meta**	**2.61**	**248**	PN	**Pn**	**17 59 02.1**	**+1.9**
AKUM	**Antalya-Kumluc**	**2.75**	**92**	*i* P	**Pn**	**17 59 03.8**	**+1.8**
AKUM				*i* S	**Sn**	**17 59 33.0**	**-2.4**
AKUM				IAML		17 59 37.0	
	comp=E,35nm,0.5s						
AKUM				IAML		17 59 39.0	
	comp=N,33nm,1.1s						
KHAL	**Karahalli**	**2.77**	**46**	*i* P	**Pn**	**17 59 04.2**	**+1.8**
KHAL				*i* S	**Sn**	**17 59 35.0**	**-1.1**
USAK	**Uak-Merkez**	**2.77**	**36**	*i* P	**Pn**	**17 59 04.0**	**+1.6**
KORT	**Korkueli**	**2.78**	**78**	PN	**Pn**	**17 59 04.1**	**+1.5**
GVD	**Gavdhos**	**2.84**	**236**	PN	**Pn**	**17 59 04.9**	**+1.6**
SLUM	**Salum**	**5.18**	**197**	P	**Pn**	**17 59 35.0**	**+0.9**
	baz=200						
SLUM				AMP		18 00 00.0	
	baz=200						
SLUM				S	**Sn**	**18 00 26.9**	**-6.0**
	baz=200						
SWA2		**7.32**	**190**	P	**Pn**	**18 00 03.0**	**+0.1**
	baz=193						
SWA2				AMP		18 01 00.0	
	baz=193						
SWA2				S	Sn	18 01 17.6	-7.0
	baz=193						
RSH		**7.88**	**132**	P	**Pn**	**18 00 10.4**	**-0.1**

	2.9nm,0.1s						
SHLS				*e*S	**Sb**	**18 07 00.3 +0.3**	
	5.3nm,0.1s						
PDGK	**Podgornoye**	**3.50**	**300**	⇑Pg	**Pg**	**18 06 24.0 +0.2**	
	3.2nm,0.8s						
PDGK				⇑Lg	Lg	18 07 11.7	
	8.2nm,0.9s						
UZB	**Uzymbulak**	**3.74**	**295**	*e*P	**Pg**	**18 06 26.9 -1.5**	
	0.7nm,0.1s						
UZB				*e*S	**Sg**	**18 07 18.3 +1.5**	
	3.6nm,0.3s						
DJR	**Jarkent**	**3.89**	**314**	*e*P	**Pg**	**18 06 29.3 -2.0**	
	1.2nm,0.1s						
DJR				*e*S	**Sg**	**18 07 22.2 +0.5**	
	2.3nm,0.4s						
KAPS	**Kapalarasan**	**4.78**	**321**	*e*P	**Pg**	**18 06 45.2 -3.2**	
	0.7nm,0.1s						
KAPS				*e*S	**Sg**	**18 07 49.7 -0.6**	
	1.2nm,0.3s						
MK31	**Makanchi Array**	**5.22**	**350**	Pn	**Pn**	**18 06 37.0 +2.2**	
	0.1nm,0.5s,baz=14,slow=22,SNR=3.2						
MK31				⇓Pg	**Pg**	**18 06 54.3 -2.3**	
	0.2nm,0.3s						
MK31				⇑Sn	**Sn**	**18 07 38.4 +3.4**	
	0.2nm,0.3s,baz=172,slow=27,SNR=3.9						
MK31				⇓Lg	Lg	18 08 05.5	
	1.7nm,0.5s,baz=162,slow=26,SNR=9.3						
MAKZ	**Makanchi**	**5.28**	**347**	⇓Lg	Lg	18 08 07.5	
	3.6nm,1.2s						

IDC 13 18:06:22.6±5.5, 24°06'S×176°23'W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/46, mbtmp3.9/4, Error ellipse: s-maj=275.3km s-min=49.1km az=155.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.92**	**269**	P	P	18 13 17.4	+1.0
	1.2nm,0.4s,baz=96,slow=7.6,SNR=1.0						
ASAR	**Alice Springs**	**45.41**	**260**	P	P	18 14 42.7	-0.7
	1.9nm,1.1s,baz=90,slow=7.8,SNR=5.0						
WRA	**Warramunga Arr**	**45.83**	**265**	P	P	18 14 45.3	-1.5
	0.9nm,0.7s,baz=102,slow=8.4,SNR=1.8						
CMAR	**Chiang Mai Arr**	**92.83**	**289**	P	P	18 19 39.2	+1.5
	0.7nm,0.7s,baz=129,slow=2.9,SNR=8.4						
AKASG	**Malin Array Be**	**146.91**	**330**	PKPbc	PKPdf	18 26 04.0	-0.9
	0.3nm,0.4s,baz=41,slow=3.7,SNR=4.2						
BRTR	**Keskin Array B**	**150.39**	**309**	PKPbc	PKiKP	18 26 17.1	-0.1
	0.3nm,0.8s,baz=5.7,slow=2.9,SNR=4.0						

*NEIC **13** 18:07:31.1±2.1,3.86N±0.07×71.41W±0.07,h16km±3km, mb4.6/59, Error ellipse: s-maj=9.7km s-min=9.3km az=54.0*
*RSNC **13** 18:07:32.4±1.1,3.90N×71.57W,h3km±5km,ML4.3,Mw4.2*
*IDC **13** 18:07:33.6±2.3,3.97N×71.48W,h34km±17km,mb3.8/15, mb1 4.2/19,mb1mx4.0/48,mbtmp4.1/19,ML3.9/4,MS3.2/12, Ms1 3.2/12,ms1mx3.0/33, Error ellipse: s-maj=15.0km s-min=13.1km az=37.0*
*VAO **13** 18:07:40.7±0.8,3.20N×71.02W,h10km,mb4.3*

ISC 13 18:07:29.4±0.8, 3.84N±0.03×71.45W±0.03, h8km±5km, n140,σ2s02/165, mb4.5/43, MS3.4/7, 3C-10D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTGC	**Puerto Gaitan,**	**0.77**	**298**	*e*P	**Pg**	**18 07 43.2**	**-1.0**
PTGC				*e*S	**Sg**	**18 07 52.6**	**-1.6**
GUVC	**San Jose del G**	**1.74**	**222**	*e*P	**Pb**	**18 08 01.1**	**-0.5**
GUVC				*e*S	**Sb**	**18 08 24.3**	**+0.6**
GUVC				*i*		18 08 31.0	
	comp=Z,3μm,0.3s						
VILC	**Villavicencio,**	**2.25**	**277**	⇓*i*P	**Pn**	**18 08 08.3**	**+1.3**
VILC				*e*S	**Sn**	**18 08 35.3**	**+0.2**
VILC				*i*		18 08 54.2	
	comp=Z,4μm,0.4s						
CHIC	**Chingaza**	**2.40**	**289**	⇓*i*P	**Pn**	**18 08 10.3**	**+0.9**
CHIC				*e*S	**Sn**	**18 08 40.6**	**+1.3**
CHIC				*i*		18 08 44.7	
	comp=Z,1μm,0.4s						
TAMC	**Tame, Arauca**	**2.60**	**353**	⇓*i*P	**Pn**	**18 08 13.9**	**+2.2**
TAMC				*e*S	**Sn**	**18 08 45.6**	**+2.0**
TAMC				*i*		18 08 57.2	
	comp=Z,1μm,0.4s						
RUSC	**La Rusia**	**2.61**	**321**	⇓*i*P	**Pn**	**18 08 13.6**	**+1.2**
RUSC				*e*S	**Sn**	**18 08 44.3**	**0.0**
RUSC				*i*		18 09 02.1	
	comp=Z,1μm,0.4s						
RUSC	**La Rusia**	**2.61**	**321**		**Pn**	**18 08 13.4**	**+1.2**
MACC	**Macarena, Meta**	**2.93**	**235**	*e*P	**Pb**	**18 08 19.2**	**-2.7**
MACC				*e*S	**Sb**	**18 08 56.0**	**-1.8**
MACC				*i*		18 09 09.5	
	comp=Z,2μm,0.5s						
ROSC	**El Rosal**	**3.03**	**289**	Pn	**Pn**	**18 08 20.4**	**+2.4**
	comp=Z,55nm,0.3s,baz=126,slow=7.9,SNR=28						
ROSC				Pg	**Pg**	**18 08 29.4**	**+1.9**
	comp=Z,248nm,0.3s,baz=124,slow=15,SNR=39						
ROSC				Sn	**Sn**	**18 08 52.8**	**-1.9**
	comp=Z,71nm,0.3s,baz=9.9,slow=18,SNR=4.5						
ROSC				LR	LR	18 09 02.1	
	comp=Z,154nm,20.9s,baz=228,slow=30						
ROSC				Lg	Lg	18 09 07.9	
	comp=Z,112nm,0.3s,baz=102,slow=21,SNR=2.2						
ROSC	**El Rosal**	**3.03**	**289**	⇓*i*P	**Pn**	**18 08 20.3**	**+2.4**
ROSC				*e*S	**Sb**	**18 08 58.1**	**-2.9**
SPBC	**San Pablo de B**	**3.17**	**305**	*e*P	**Pn**	**18 08 20.1**	**+0.5**
SPBC				*e*S	**Sn**	**18 08 56.6**	**-1.2**
SPBC				*i*		18 09 11.4	
	comp=Z,470nm,0.5s						
PRAC	**Prado**	**3.43**	**268**	⇓*i*P	**Pn**	**18 08 25.2**	**+1.9**
PRAC				*e*S	**Sn**	**18 09 06.6**	**+2.5**
PRAC				*i*		18 09 24.6	
	comp=Z,465nm,0.4s						
PAMC	**Pamplona, Colo**	**3.69**	**340**	*e*P	**Pn**	**18 08 28.1**	**+0.9**
PAMC				*e*S	**Sn**	**18 09 11.0**	**-0.2**
PAMC				*i*		18 09 35.8	
	comp=Z,657nm,0.4s						
ORTC	**Ortega, Tolima**	**3.79**	**271**	⇓*i*P	**Pn**	**18 08 29.4**	**+1.3**
ORTC				*i*		18 09 41.6	
	comp=Z,706nm,0.7s						
NORC	**Norcasia**	**3.81**	**297**	*e*P	**Pn**	**18 08 28.4**	**-0.1**
NORC				*e*S	**Sn**	**18 09 13.9**	**+0.4**
NORC				*i*		18 09 30.2	
	comp=Z,290nm,0.4s						
ANIL	**Santa Ana**	**3.99**	**279**	*e*P	**Pn**	**18 08 31.9**	**+0.7**
ANIL				*e*S	**Sb**	**18 09 27.4**	**-1.4**
ANIL				*i*		18 09 42.1	
	comp=Z,1μm,0.3s						
RREF	**El Recreo**	**4.02**	**285**	⇓*i*P	**Pn**	**18 08 32.7**	**+0.8**
RREF				*e*S	**Sn**	**18 09 20.5**	**+0.9**
RREF				*i*		18 09 46.5	
	comp=Z,804nm,0.9s						
GUY2C	**Guyana, Caldas**	**4.13**	**290**	⇓*i*P	**Pn**	**18 08 34.5**	**+1.2**
GUY2C				*e*S	**Sn**	**18 09 20.6**	**-1.6**
GUY2C				*i*		18 09 40.6	
	comp=Z,229nm,0.4s						
BETC	**Betania**	**4.15**	**254**	⇑*i*P	**Pn**	**18 08 35.2**	**+2.1**
BETC				*e*S	**Sn**	**18 09 25.6**	**+3.8**
GARC	**Garzon, Huila**	**4.36**	**248**	*e*P	**Pn**	**18 08 37.5**	**+1.3**
GARC				*e*S	**Sb**	**18 09 36.0**	**-3.3**
OCAC	**Ocana**	**4.75**	**337**	*e*P	**Pn**	**18 08 41.8**	**+0.4**
OCAC				*e*S	**Sn**	**18 09 36.0**	**-0.8**
OCAC				*i*		18 10 09.0	
	comp=Z,303nm,0.5s						
YOTC	**Yotoco, Valle**	**4.88**	**272**	⇓*i*P	**Pn**	**18 08 43.7**	**+0.4**
YOTC				*e*S	**Sb**	**18 09 51.3**	**-3.1**
PTLC	**Puerto Leguiza**	**4.95**	**223**	*e*P	Pn	18 08 48.9	+4.8
PTLC				*e*S	**Sb**	**18 09 49.7**	**-6.4**
PTLC				*i*		18 10 19.7	
	comp=Z,565nm,0.5s						
ZARC	**Zaragoza, Cauc**	**4.96**	**317**	*e*P	**Pn**	**18 08 44.7**	**+0.4**
ZARC				*e*S	Sn	18 09 31.8	-10
CBOC	**Ciudad Bolivar**	**4.97**	**294**	⇑*i*P	**Pn**	**18 08 46.0**	**+1.5**
CBOC				*e*S	**Sn**	**18 09 48.9**	**+6.6**
CBOC				*i*		18 10 07.1	
	comp=Z,138nm,0.9s						
SDV	**Santo Domingo**	**5.08**	**9**	Pn	**Pn**	**18 08 46.0**	**0.0**
	comp=Z,26nm,0.3s,baz=177,slow=4.3,SNR=18						
SDV				Sn	**Sn**	**18 09 43.6**	**-1.3**
	comp=Z,154nm,0.3s,baz=66,slow=21,SNR=13						
SDV				Lg	Lg	18 10 07.2	
	comp=Z,67nm,0.3s,baz=226,slow=19,SNR=5.9						
SDV	**Santo Domingo**	**5.08**	**9**	*e*P	**Pn**	**18 08 45.3**	**-0.7**
SDV				*e*S	**Sn**	**18 09 41.1**	**-3.9**
PCON	**Cinco Dias**	**5.16**	**253**	*e*P	**Pn**	**18 08 48.8**	**+1.3**
PCON				*e*S	**Sn**	**18 09 48.6**	**+1.1**
PCON				*i*		18 10 17.2	
	comp=Z,642nm,0.5s						
SOTA	**Rioblanco**	**5.42**	**252**	*e*P	**Pn**	**18 08 53.2**	**+2.2**
SOTA				*i*		18 10 26.8	
	comp=Z,176nm,0.6s						
SMLC	**San Martn de**	**5.57**	**332**	*e*P	**Pn**	**18 08 51.5**	**-1.1**
SMLC				*e*S	Sn	18 09 40.1	-17
SMLC				*i*		18 10 36.9	
	comp=Z,104nm,0.5s						
DBBC	**Dabeiba**	**5.69**	**304**	⇑*i*P	**Pn**	**18 08 56.1**	**+1.8**
DBBC				*e*S	**Sn**	**18 09 56.6**	**-3.4**
DBBC				*i*		18 10 05.1	
	comp=Z,377nm,0.7s						
CRUC	**La Cruz**	**5.94**	**248**	*e*P	**Pn**	**18 08 56.7**	**-1.4**
CRUC				*e*S	**Sb**	**18 10 18.3**	**-6.6**
BBAC	**Balboa, Cauca**	**6.06**	**253**	*e*P	**Pn**	**18 09 00.2**	**+0.6**
BBAC				*e*S	**Sb**	**18 10 20.9**	**-7.5**
PUAC	**Puerto Asis, P**	**6.07**	**238**	*e*P	Pn	18 08 42.5	-17
PUAC				*e*S	**Sb**	**18 10 28.4**	**0.0**
GCUF	**Volcan Galeras**	**6.43**	**246**	*e*P	**Pb**	**18 09 20.2**	**-1.8**
GCUF				*e*S	**Sb**	**18 10 40.7**	**+1.4**
GCUF				*i*		18 10 54.7	
	comp=Z,114nm,0.4s						
PCRV	**Puerto La Cruz**	**9.24**	**47**	Pn	**Pn**	**18 09 43.9**	**+0.8**
	comp=Z,9.7nm,0.3s,baz=215,slow=10,SNR=16						
PCRV				Sn	**Sn**	**18 11 24.3**	**-3.0**
	comp=Z,2.8nm,0.3s,baz=197,slow=19,SNR=2.1						
PCRV				Lg	Lg	18 12 26.3	
	comp=Z,2.9nm,0.3s,baz=171,slow=18,SNR=4.3						
PLCV	**Puerto La Cruz**	**9.26**	**47**		**Pn**	**18 09 43.9**	**+0.5**
PLCV					**Sn**	**18 11 24.3**	**-3.6**
PTGA	**Pitinga**	**12.35**	**111**	Pn	**Pn**	**18 10 26.1**	**+0.5**
	comp=Z,1.3nm,0.3s,baz=306,slow=21,SNR=6.5						
PTGA				Sn	**Sn**	**18 12 42.0**	**-1.5**
	comp=Z,1.9nm,0.3s,baz=155,slow=22,SNR=6.0						
PTGA				Lg	Lg	18 14 01.0	
	comp=Z,7.0nm,0.3s,baz=199,slow=18,SNR=11						
PTGA				LR	LR	18 14 46.5	
	comp=Z,36nm,18.1s,baz=92,slow=35						
PTGA	**Pitinga**	**12.35**	**111**		**Pn**	**18 10 26.3**	**+0.6**
ATAH	**Atahualpa**	**12.92**	**212**	LR	LR	18 16 50.9	
	comp=Z,155nm,20.6s,baz=34,slow=43						
JTS	**Las Juntas de**	**14.85**	**296**	LR	LR	18 17 52.0	
	comp=Z,46nm,18.9s,baz=172,slow=42						
DR12	**Loma Pena Alta**	**14.99**	**8**		**P**	**18 11 09.2**	**+1.8**
SDDR	**Presa de Saban**	**15.05**	**1**		**Pn**	**18 11 03.3**	**+0.8**
SDDR				IAmb	IAmb	18 11 10.7	
	comp=Z,19nm,0.8s						
SJG	**San Juan**	**15.10**	**20**	LR	LR	18 17 15.3	
	comp=Z,47nm,20.0s,baz=244,slow=39						
SAML	**Samuel**	**15.15**	**147**		**Pn**	**18 11 03.1**	**-0.8**
SAML	**Samuel**	**15.15**	**147**	*e*P	**Pn**	**18 11 02.8**	**-1.0**
SAML				*e*S	**Sn**	**18 13 44.2**	**-7.7**
NNA	**Nana**	**16.61**	**199**	LR	LR	18 18 41.1	
	comp=Z,64nm,19.7s,baz=15,slow=40						
MDP	**Montagnes des**	**18.80**	**85**	Lg	Lg	18 17 16.6	
	comp=Z,1.4nm,0.3s,baz=353,slow=18,SNR=4.4						
NPGB	**Novo Progresso**	**19.37**	**124**	*e*P	**Pn**	**18 11 58.7**	**+1.9**
NPGB				*e*S	**Sn**	**18 15 29.5**	**-4.8**
VILB	**Vilhena**	**20.08**	**146**	*e*P	Pn	18 12 07.2	+1.9
VILB				*e*S	**S**	**18 15 45.2**	**-4.3**
LPAZ	**La Paz**	**20.27**	**171**	P	Pn	18 12 09.1	+1.0
	comp=Z,4.4nm,0.8s,baz=334,slow=6.5,SNR=17						
LPAZ				LR	LR	18 20 20.9	
	comp=Z,189nm,20.8s,baz=336,slow=38						
LPAZ	**La Paz**	**20.27**	**171**	P	Pn	18 12 08.1	0.0
LPAZ	**La Paz**	**20.27**	**171**	*e*P	Pn	18 12 09.4	+1.3
CLDB	**Colider**	**21.37**	**133**	*e*P	**P**	**18 12 20.3**	**+2.8**
PB16	**IPOC Station P**	**22.12**	**175**	P	**P**	**18 12 26.3**	**+0.1**
SIV	**San Ignacio**	**22.22**	**153**	P	**P**	**18 12 29.6**	**+3.0**
	comp=Z,3.8nm,0.7s,baz=350,slow=10,SNR=17						
SIV				LR	LR	18 21 27.8	
	comp=Z,130nm,21.2s,baz=328,slow=37						
PTLB	**Pontes e Lacer**	**22.72**	**148**	*e*P	**P**	**18 12 34.4**	**+2.5**
TEIG	**Tepich**	**23.11**	**316**	P	**P**	**18 12 38.3**	**+2.3**
PSGCX	**Pisagua**	**23.33**	**177**	P	**P**	**18 12 39.1**	**+0.8**
PSGCX				IAmb	IAmb	18 12 45.4	
	comp=Z,31nm,1.4s						
GO01	**Chusmiza**	**23.47**	**175**	P	**P**	**18 12 41.1**	**+1.0**
PB11	**IPOC Station P**	**23.52**	**176**	P	**P**	**18 12 40.5**	**+0.2**
PRPB	**Parauapebas**	**23.79**	**115**	*e*P	**P**	**18 12 46.6**	**+3.7**
PB01	**IPOC Station P**	**24.81**	**176**	P	**P**	**18 12 53.0**	**+0.7**
PB01				IAmb	IAmb	18 13 11.8	
	comp=Z,16nm,1.3s						
SALV	**Santo Antonio**	**25.06**	**142**	*e*P	**P**	**18 12 58.7**	**+4.2**
SALV				*e*S	**S**	**18 17 18.7**	**-0.5**
PB07	**IPOC Station P**	**25.46**	**177**	P	**P**	**18 12 58.5**	**+0.3**
PB07				IAmb	IAmb	18 13 09.6	
	comp=Z,32nm,1.5s						
PB09	**IPOC Station P**	**25.57**	**175**	P	**P**	**18 13 00.3**	**+1.1**
PB04	**IPOC Station P**	**26.05**	**177**	P	**P**	**18 13 05.2**	**+1.7**
LVC	**Limon Verde**	**26.41**	**175**	P	**P**	**18 13 09.3**	**+2.2**
PB06	**IPOC Station P**	**26.45**	**176**	P	**P**	**18 13 05.9**	**-1.3**
PB06				IAmb	IAmb	18 13 18.5	
	comp=Z,16nm,1.1s						
BDFB	**Brasilia**	**30.21**	**130**	LR	LR	18 26 20.1	
	comp=Z,86nm,18.5s,slow=37						
Z50A	**Ashland**	**32.23**	**337**	P	**P**	**18 13 59.2**	**+0.8**
Z50A				IAmb	IAmb	18 14 00.2	
	comp=Z,6.2nm,0.6s						
LRAL	**Lakeview Retre**	**32.48**	**335**	P	**P**	**18 14 01.4**	**+0.9**
LRAL				IAmb	IAmb	18 14 02.7	
	comp=Z,8.1nm,0.9s						
344A	**Westbrook Farm**	**32.92**	**329**	P	**P**	**18 14 04.6**	**+0.3**
Y49A	**Blount Mountai**	**32.96**	**337**	P	**P**	**18 14 05.7**	**+1.0**
Y49A				IAmb	IAmb	18 14 06.3	
	comp=Z,6.7nm,0.6s						
Z47A	**Carrollton**	**33.08**	**334**	P	**P**	**18 14 06.7**	**+1.0**
T59A	**Double "B" Far**	**33.44**	**351**	P	**P**	**18 14 10.2**	**+1.4**
T59A				IAmb	IAmb	18 14 10.5	
	comp=Z,6.3nm,0.7s						
TKL	**Tuckaleechee C**	**33.65**	**342**	LR	LR	18 27 26.9	
	comp=Z,42nm,19.5s,baz=172,slow=36						
CPCT	**Cooper Cave**	**33.70**	**341**	P	**P**	**18 14 13.0**	**+1.9**
CPCT				IAmb	IAmb	18 14 13.0	
	comp=Z,4.0nm,0.7s						
X48A	**Hartselle**	**33.73**	**336**	P	**P**	**18 14 12.1**	**+0.7**
X48A				IAmb	IAmb	18 14 13.3	
	comp=Z,10.0nm,0.8s						
W50A	**Signal Mountai**	**33.74**	**339**		**P**	**18 14 12.8**	**+1.2**
W50A				IAmb	IAmb	18 14 13.8	
	comp=Z,8.8nm,1.1s						
U54A	**Nelsons Funny**	**33.89**	**345**	P	**P**	**18 14 13.7**	**+0.8**
U54A				IAmb	IAmb	18 14 15.2	
	comp=Z,10nm,0.8s						
PLAL	**Pickwick Lake**	**34.61**	**336**	P	**P**	**18 14 19.8**	**+0.8**
V48A	**Smith Brothers**	**34.77**	**338**	P	**P**	**18 14 21.5**	**+1.0**
CLTN	**Cedars of Leba**	**34.91**	**339**	P	**P**	**18 14 22.5**	**+1.0**
CLTN				IAmb	IAmb	18 14 23.6	
	comp=Z,15nm,1.5s						
W45A	**Hickory Valley**	**35.23**	**334**	P	**P**	**18 14 24.4**	**0.0**
ZAIG	**Zacatecas**	**35.50**	**305**	P	**P**	**18 14 28.9**	**+1.7**
ZAIG				IAmb	IAmb	18 14 29.9	
	comp=Z,5.4nm,0.6s						
WVT	**Waverly**	**35.51**	**337**	P	**P**	**18 14 26.6**	**-0.1**
WVT				IAmb	IAmb	18 14 27.9	
	comp=Z,8.7nm,0.8s						
T47A	**Sharon Grove**	**35.98**	**338**	P	**P**	**18 14 31.3**	**+0.5**
T47A				IAmb	IAmb	18 14 32.3	
	comp=Z,9.2nm,0.8s						
R50A	**Paris**	**36.24**	**343**	P	**P**	**18 14 34.7**	**+1.7**
R50A				IAmb	IAmb	18 14 35.5	
	comp=Z,7.6nm,0.9s						
WHAR	**Wooly Hollow**	**36.76**	**331**	P	**P**	**18 14 37.4**	**-0.1**
MIAR	**Mount Ida**	**36.82**	**329**	P	**P**	**18 14 37.7**	**-0.3**
N59A	**State Game Lan**	**37.11**	**355**	P	**P**	**18 14 41.8**	**+1.3**
N59A				IAmb	IAmb	18 14 58.8	
	comp=Z,24nm,1.6s						
PBMO	**Poplar Bluff**	**37.13**	**334**	P	**P**	**18 14 40.3**	**-0.4**
BLO	**Bloomington**	**37.74**	**341**	P	**P**	**18 14 47.0**	**+1.2**
BLO				IAmb	IAmb	18 14 47.5	
	comp=Z,9.0nm,0.7s						
U40A	**Yellville**	**37.89**	**331**	P	**P**	**18 14 46.9**	**-0.2**
M56A	**Emporium**	**37.96**	**352**	P	**P**	**18 14 48.8**	**+1.1**
M55A	**Ridgway**	**38.03**	**351**	P	**P**	**18 14 49.8**	**+1.5**
M55A				IAmb	IAmb	18 14 50.2	
	comp=Z,7.8nm,0.8s						
L56A	**Greenwood**	**38.52**	**353**	P	**P**	**18 14 53.9**	**+1.6**
L56A				IAmb	IAmb	18 14 54.7	
	comp=Z,13nm,0.9s						
CCM	**Cathedral Cave**	**38.56**	**335**	P	**P**	**18 14 53.0**	**+0.4**
WVNY	**West Valley, N**	**38.92**	**352**	P	**P**	**18 14 57.3**	**+1.5**
WVNY				IAmb	IAmb	18 14 57.7	
	comp=Z,11nm,0.8s						
J56A	**Wolcott**	**39.56**	**354**	P	**P**	**18 15 05.3**	**+4.3**
J56A				IAmb	IAmb	18 15 06.5	
	comp=Z,8.8nm,0.8s						
J57A	**Williamstown**	**39.61**	**355**	P	**P**	**18 15 02.5**	**+1.1**
J55A	**Hilton**	**39.66**	**353**	P	**P**	**18 15 02.9**	**+1.0**
J55A				IAmb	IAmb	18 15 03.9	
	comp=Z,11nm,0.8s						
TXAR	**Lajitas Array**	**39.69**	**313**	P	**P**	**18 15 02.8**	**+0.3**
	comp=Z,3.3nm,0.7s,baz=127,slow=8.9,SNR=18						
TX31	**Lajitas Ar. Si**	**39.69**	**313**	P	**P**	**18 15 02.3**	**-0.1**
TX31				IAmb	IAmb	18 15 03.4	
	comp=Z,12nm,0.8s						
TX32	**Lajitas Array**	**39.69**	**313**	P	**P**	**18 15 02.4**	**0.0**
HPIG		**39.95**	**309**	P	**P**	**18 15 04.9**	**+0.1**
HPIG				IAmb	IAmb	18 15 06.1	
	comp=Z,11nm,1.0s						
G62A	**West of Eustis**	**41.22**	**1**	P	**P**	**18 15 16.4**	**+1.7**
G62A				IAmb	IAmb	18 15 16.8	
	comp=Z,5.8nm,0.7s						
MNTX	**Cornudas Mount**	**42.23**	**315**	P	**P**	**18 15 23.1**	**-0.1**
D62A	**Allapoint, All**	**43.12**	**2**	P	**P**	**18 15 31.5**	**+1.3**
D62A				IAmb	IAmb	18 15 32.3	
	comp=Z,7.0nm,0.7s						
121A	**Cookes Peak, D**	**44.39**	**314**	P	**P**	**18 15 41.4**	**+0.5**
ANMO	**Albuquerque**	**44.82**	**318**	P	**P**	**18 15 45.0**	**+0.7**
	comp=Z,2.1nm,0.9s,baz=135,slow=11,SNR=3.6						
ANMO	**Albuquerque**	**44.82**	**318**	P	**P**	**18 15 44.3**	**0.0**
TUC	**Tucson**	**46.45**	**312**	P	**P**	**18 15 57.3**	**+0.1**
TUC				IAmb	IAmb	18 15 58.5	
	comp=Z,4.9nm,1.0s						
ULM	**Lac du Bonnet**	**50.63**	**340**	LR	LR	18 38 05.9	
	comp=Z,53nm,19.6s,baz=144,slow=36						
SCHQ	**Schefferville**	**50.97**	**3**	P	**P**	**18 16 31.4**	**0.0**
	comp=Z,6.0nm,0.6s,baz=202,slow=5.2,SNR=4.8						
SCHQ	**Schefferville**	**50.97**	**3**	P	**P**	**18 16 31.5**	**0.0**
SCHQ				IAmb	IAmb	18 16 32.9	
	comp=Z,8.8nm,0.8s						
PDAR	**Pinedale Array**	**51.45**	**324**	P	**P**	**18 16 34.7**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=131,slow=9.7,SNR=2.4						
NVAR	**Mina Array Bea**	**54.75**	**315**	P	**P**	**18 16 59.4**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=124,slow=7.3,SNR=6.4						
YKA	**Yellowknife Ar**	**66.61**	**340**	P	**P**	**18 18 18.6**	**-1.5**
	comp=Z,1.3nm,0.6s,baz=133,slow=6.7,SNR=21						
ESDC	**Sonseca Array**	**70.30**	**49**	P	**P**	**18 18 44.8**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=259,slow=6.0,SNR=4.1						
SUMG	**Summit**	**71.60**	**10**	P	**P**	**18 18 51.5**	**0.0**
TORD	**Torodi Ar. Bea**	**72.73**	**77**	P	**P**	**18 18 58.7**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=291,slow=5.9,SNR=9.2						
INK	**Inuvik**	**76.38**	**340**	P	**P**	**18 19 18.1**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=135,slow=4.3,SNR=4.5						
INK	**Inuvik**	**76.38**	**340**	P	**P**	**18 19 18.2**	**-0.6**
DOT	**Dot Lake**	**78.89**	**334**	P	**P**	**18 19 32.5**	**-0.6**
ILAR	**Eielson Array**	**80.35**	**335**	P	**P**	**18 19 39.5**	**-1.4**
	comp=Z,2.0nm,0.5s,baz=100,slow=3.9,SNR=4.4						
ILAR				LR	LR	18 59 19.9	
	comp=Z,20nm,18.9s,baz=217,slow=39						
NOA	**NORSAR Array B**	**83.10**	**29**	P	**P**	**18 19 56.8**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=266,slow=5.4,SNR=2.9						
CLL	**Collm**	**83.55**	**39**	*e*P	**P**	**18 20 00.0**	**+1.9**
GERES	**GERESS Array B**	**83.94**	**41**	P	**P**	**18 20 01.0**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=267,slow=3.1,SNR=17						
ARCES	**ARCESS Array B**	**88.87**	**20**	P	**P**	**18 20 23.8**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=272,slow=3.3,SNR=6.7						
ZALV	**Zalesovo Beam**	**119.09**	**16**	PKP	**PKPdf**	**18 26 18.4**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=304,slow=3.4,SNR=4.4						
MKAR	**Makanchi Array**	**124.50**	**22**	PKP	**PKPdf**	**18 26 28.5**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=289,slow=2.8,SNR=7.0						
SONM	**Songino Array**	**128.51**	**2**	PKP	**PKPdf**	**18 26 36.3**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=357,slow=2.9,SNR=2.5						
HHC	**Hu-ho-hao-te**	**135.44**	**357**	*e*P	**PKPdf**	**18 26 47.6**	**-3.0**
HHC				LR	LR		
	comp=N,82nm,20.4s						
HHC				LR	LR		
	comp=E,110nm,20.4s						
HHC				LR	LR		
	comp=Z,67nm,18.1s						
LZH	**Lanzhou**	**140.04**	**6**	*e*PKP	PKPdf	18 26 45.9	-13
LZH				pPKP	PKiKP	18 26 54.5

RLS	**Riolos of Patr**	**0.84**	**115**	P	**Pg**	**18 11 15.4**	**0.0**	
RLS	**Riolos of Patr**	**0.84**	**115**	P	**Pg**	**18 11 14.8**	**-0.7**	
RLS				S	**Sg**	**18 11 26.0**	**-0.3**	
RLS				AML	AML	18 11 36.7		
	comp=N,716µm,0.6s							
RLS				AML	AML	18 11 37.0		
	comp=E,914µm,0.4s							
DRO	**Drossia**	**1.06**	**116**	P	**Pb**	**18 11 18.8**	**-0.8**	
DRO				S	**Sn**	**18 11 37.2**	**+2.4**	
	comp=E,1µm,0.3s							
DRO	**Drossia**	**1.06**	**116**	P	**Pb**	**18 11 19.0**	**-0.6**	
DRO				S	**Sg**	**18 11 33.2**	**-0.2**	
DRO				AML	AML	18 11 42.1		
	comp=E,2250µm,0.3s							
DRO				AML	AML	18 11 46.9		
	comp=N,2008µm,0.4s							
EFP	**Efpalio**	**1.10**	**89**	P	**Pb**	**18 11 19.7**	**-0.6**	
EFP				S	**Sn**	**18 11 38.1**	**+2.3**	
	comp=N,1µm,0.5s							
EFP	**Efpalio**	**1.10**	**89**	P	**Pb**	**18 11 19.4**	**-0.9**	
EFP				AML	AML	18 11 42.1		
	comp=N,3164µm,0.5s							
EFP				AML	AML	18 11 42.9		
	comp=E,2572µm,0.5s							
IGT	**Igoumenitsa**	**1.12**	**353**	P	**Pb**	**18 11 20.5**	**-0.2**	
IGT	**Igoumenitsa**	**1.12**	**353**	P	**Pb**	**18 11 20.3**	**-0.4**	
IGT				S	**Sn**	**18 11 36.1**	**-0.3**	
IGT				AML	AML	18 11 41.8		
	comp=N,1100µm,0.5s							
IGT				AML	AML	18 11 42.9		
	comp=E,893µm,0.3s							
ANX	**Ano Chora**	**1.12**	**81**	P	**Pb**	**18 11 20.4**	**-0.4**	
ANX	**Ano Chora**	**1.12**	**81**	P	**Pb**	**18 11 20.6**	**-0.2**	
ANX				S	**Sn**	**18 11 35.8**	**-0.7**	
ANX				AML	AML	18 11 43.4		
	comp=E,1420µm,0.6s							
ANX				AML	AML	18 11 45.8		
	comp=N,1790µm,0.6s							
EVR	**Evrytania**	**1.13**	**64**	P	**Pb**	**18 11 20.4**	**-0.6**	
EVR	**Evrytania**	**1.13**	**64**	P	**Pb**	**18 11 20.4**	**-0.6**	
EVR				AML	AML	18 11 47.4		
	comp=N,783µm,0.7s							
EVR				AML	AML	18 11 50.1		
	comp=E,424µm,0.6s							
LAKA	**Lakka**	**1.17**	**98**	P	**Pb**	**18 11 20.7**	**-0.9**	
LAKA	**Lakka**	**1.17**	**98**	P	**Pb**	**18 11 20.6**	**-1.0**	
SERG	**Sergoula**	**1.22**	**90**	P	**Pn**	**18 11 21.8**	**-0.5**	
SERG	**Sergoula**	**1.22**	**90**	P	**Pn**	**18 11 21.6**	**-0.7**	
TRIZ	**Trizonia**	**1.23**	**92**	P	**Pn**	**18 11 21.7**	**-0.7**	
TRIZ	**Trizonia**	**1.23**	**92**	P	**Pn**	**18 11 21.4**	**-1.0**	
JAN	**Janina**	**1.26**	**12**	P	**Pg**	**18 11 23.8**	**+0.2**	
JAN				AML	AML	18 11 44.9		
	comp=N,1064µm,0.4s							
JAN				AML	AML	18 11 46.6		
	comp=E,1028µm,0.5s							
ALIK	**Aliki, Aigiali**	**1.27**	**97**	P	**Pg**	**18 11 23.4**	**-0.3**	
KALE	**Kalithea**	**1.28**	**91**	P	**Pn**	**18 11 22.9**	**-0.3**	
KALE	**Kalithea**	**1.28**	**91**	P	**Pn**	**18 11 22.5**	**-0.7**	
AMT	**Artemida-Makis**	**1.30**	**133**	P	**Pb**	**18 11 23.6**	**-0.1**	
AMT	**Artemida-Makis**	**1.30**	**133**	P	**Pb**	**18 11 23.6**	**-0.1**	
AMT				AML	AML	18 11 52.6		
	comp=E,1142µm,0.5s							
AMT				AML	AML	18 11 57.3		
	comp=N,1044µm,0.6s							
KLV	**Kalavryta, Ach**	**1.35**	**106**	P	**Pn**	**18 11 23.6**	**-0.5**	
KLV	**Kalavryta, Ach**	**1.35**	**106**	P	**Pn**	**18 11 23.6**	**-0.5**	
KLV				AML	AML	18 11 51.6		
	comp=E,318µm,0.5s							
KLV				AML	AML	18 11 55.4		
	comp=N,437µm,0.7s							
KEK	**Kerkira**	**1.40**	**337**	P	**Pb**	**18 11 25.1**	**-0.4**	
KEK	**Kerkira**	**1.40**	**337**	P	**Pb**	**18 11 25.3**	**-0.2**	
AGG	**Agios Georgios**	**1.55**	**67**	P	**Pb**	**18 11 27.7**	**-0.3**	
ITM	**Ithomi**	**1.67**	**137**	P	**Pb**	**18 11 29.8**	**-0.3**	
VAY	**Valandovo**	**3.30**	**28**	*i* Pn	**Pb**	**18 11 58.5**	**+0.6**	
VAY	**Valandovo**	**3.30**	**28**	*i* Pn	**Pb**	**18 11 58.5**	**+0.6**	
STIP	**Stip**	**3.51**	**21**	*i* Pn	**Pb**	**18 11 58.3**	**-3.2**	
STIP	**Stip**	**3.51**	**21**	*i* Pn	**Pb**	**18 11 58.3**	**-3.2**	
SKO	**Skopje**	**3.62**	**11**	*i* Pn	**Pn**	**18 11 58.5**	**+3.2**	
SKO	**Skopje**	**3.62**	**11**	*i* Pn	**Pn**	**18 11 58.5**	**+3.2**	
DBRK	**Dubrovnik**	**4.61**	**338**	*e*Pn	**Pn**	**18 12 07.5**	**-1.3**	
STON	**Ston**	**4.93**	**335**	*e*Pn	**Pn**	**18 12 12.1**	**-1.2**	
RICI	**Ricice**	**5.67**	**334**	*e*Pn	**Pn**	**18 12 22.7**	**-0.9**	
KIJV	**Kijevo**	**6.38**	**332**	*i* Pn	**Pn**	**18 12 32.6**	**-0.6**	
ZIRJ	**Zirje**	**6.39**	**326**	*e*Pn	**Pn**	**18 12 32.2**	**-1.1**	
MORI	**Morici**	**6.54**	**328**	*e*Pn	**Pn**	**18 12 34.9**	**-0.4**	
DUGI	**Dugi Otok**	**6.92**	**325**	*e*Pn	**Pn**	**18 12 39.7**	**-0.9**	
NVLJ	**Novalja**	**7.45**	**327**	*e*Pn	**Pn**	**18 12 47.4**	**-0.5**	

*IDC **13** 18:11:32.1±1.7,43.˝96N×105.˝42W,h0km,mb3.9/3, mb1 3.9/7,mb1mx3.6/47,mbtmp3.7/7,ML3.5/4,Error ellipse: s-maj=56.4km s-min=8.5km az=147.0*
*ANF **13** 18:11:33.7±0.2,44.˝00N×105.˝32W,h0km,ML3.7/11,Error ellipse: s-maj=3.0km s-min=2.7km az=154.0*
*NEIC **13** 18:11:33.2±1.4,44.˝04N±0.˝05×105.˝28W±0.˝08,h0km±2km, ML3.6/73,Error ellipse: s-maj=10.0km s-min=8.5km az=270.0*

ISC 13 18:11:32.9±0.7,**44.˝11N**±0.˝04×**105.˝26W**±0.˝05,**h0**km,**n110,** σ1ᵎ**16**/117,**mb4.1**/3,**Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.88**	**89**	P	**Pb**	**18 11 51.5**	**+0.2**
RSSD	baz=263			S	**Sb**	**18 12 03.9**	**+0.2**
	baz=263						
RSSD	**Black Hills**	**0.88**	**89**		**Pb**	**18 11 51.4**	**+0.1**
K22A	**Casper**	**1.73**	**213**	P	**Pn**	**18 12 02.6**	**-1.8**
K22A	baz=32,SNR=269			S	**Sn**	**18 12 24.6**	**-2.6**
	baz=32						
K22A	**Casper**	**1.73**	**213**		**Pn**	**18 12 02.4**	**-1.9**
K22A				IAML		18 12 29.1	
	comp=N,656nm,0.3s						
K22A				IAML		18 12 29.5	
	comp=E,683nm,0.3s						
LAO	**LASA Array**	**2.66**	**346**	P	**Pn**	**18 12 18.4**	**+1.3**
LAO	baz=166,SNR=11			S	**Sb**	**18 12 54.8**	**+0.1**
	baz=166						
LAO	**LASA Array**	**2.66**	**346**		**Pn**	**18 12 18.4**	**+1.3**
LAO				IAML		18 13 13.4	
	comp=E,282nm,0.6s						
LAO				IAML		18 13 18.3	
	comp=E,261nm,0.8s						
RWWY	**Rawlins**	**2.81**	**211**		**Pn**	**18 12 18.4**	**-0.9**
RWWY				IAML		18 12 57.5	
	comp=E,236nm,0.6s						
RWWY				IAML		18 13 04.2	
	comp=E,188nm,0.6s						
PHWY	**Pilot Hill**	**2.81**	**183**		**Pn**	**18 12 18.6**	**-0.8**
RLMT	**Red Lodge**	**3.03**	**291**	P	**Pn**	**18 12 23.2**	**+0.9**
	baz=110,SNR=44						
RLMT	**Red Lodge**	**3.03**	**291**		**Pn**	**18 12 23.1**	**+0.7**
RLMT				IAML		18 13 12.5	
	comp=E,124nm,0.5s						
N23A	**Red Feather La**	**3.25**	**189**	P	**Pn**	**18 12 25.4**	**-0.1**
	baz=8.2,SNR=31						
N23A				S	**Sn**	**18 13 04.2**	**-0.8**
	baz=8.2						
PDAR	**Pinedale Array**	**3.40**	**248**	Pn	**Pn**	**18 12 26.9**	**-0.6**
	comp=E,4.6nm,0.3s,baz=70,slow=16,SNR=75						
PDAR				Lg	Lg	18 13 13.4	
	comp=E,27nm,0.3s,baz=72,slow=34,SNR=5.9						
BW06	**Boulder Array**	**3.41**	**248**	P	**Pn**	**18 12 27.2**	**-0.3**
	baz=67,SNR=75						
BW06	**Boulder Array**	**3.41**	**248**		**Pn**	**18 12 27.4**	**-0.1**
BW06				IAML		18 13 15.0	
	comp=N,114nm,0.6s						
BW06				IAML		18 13 16.9	
	comp=E,98nm,0.5s						
YNE	**Yellowstone No**	**3.51**	**286**		**Pn**	**18 12 29.2**	**+0.3**
GCMT	**Greycliff**	**3.55**	**300**		**Pn**	**18 12 30.5**	**+1.2**
YMP	**Mirror Lake Pl**	**3.56**	**282**		**Pn**	**18 12 29.8**	**+0.1**
LKWY	**Lake**	**3.71**	**279**		**Pn**	**18 12 33.8**	**+2.1**
LKWY				IAML		18 13 00.2	
	comp=E,78nm,0.5s						
H17A	**Grant Village**	**3.83**	**276**	P	**Pn**	**18 12 34.1**	**+0.8**
	baz=94						
H17A				S	**Sn**	**18 13 18.9**	**-0.2**
	baz=94						
H17A	**Grant Village**	**3.83**	**276**		**Pn**	**18 12 34.9**	**+1.6**
FLWY	**Flagg Ranch**	**3.92**	**271**		**Pn**	**18 12 34.8**	**+0.4**
FLWY				IAML		18 13 44.5	
	comp=E,69nm,1.3s						
FLWY				IAML		18 13 47.5	
	comp=E,72nm,1.1s						
YNR	**Norris Junctio**	**3.93**	**281**		**Pn**	**18 12 34.4**	**-0.2**
OGNE	**Ogallala**	**3.96**	**142**	P	**Pn**	**18 12 35.5**	**+0.4**
	baz=323,SNR=6.5						
OGNE	**Ogallala**	**3.96**	**142**		**Pn**	**18 12 35.1**	**+0.1**
YPP	**Pitchstone Pla**	**3.99**	**274**		**Pn**	**18 12 36.1**	**+0.5**
SNOW	**Snow King Moun**	**4.03**	**263**		**Pn**	**18 12 36.2**	**+0.2**
SNOW				IAML		18 13 42.9	
	comp=E,60nm,0.9s						
E28A	**Huff**	**4.05**	**51**		**Pn**	**18 12 38.1**	**+1.9**
YHH	**Holmes Hill**	**4.06**	**282**		**Pn**	**18 12 36.6**	**+0.1**
IMW	**Indian Meadow**	**4.10**	**269**		**Pn**	**18 12 37.1**	**0.0**
IMW				IAML		18 13 44.6	
	comp=E,61nm,0.6s						
IMW				IAML		18 13 47.4	
	comp=E,81nm,0.8s						
REDW	**Red Top Meadow**	**4.12**	**261**		**Pn**	**18 12 37.2**	**-0.1**
REDW				IAML		18 13 45.5	
	comp=E,88nm,0.7s						
REDW				IAML		18 14 06.0	
	comp=E,64nm,0.8s						
YMR	**Madison River**	**4.12**	**280**		**Pn**	**18 12 37.9**	**+0.6**
TPAW	**Teton Pass**	**4.16**	**263**		**Pn**	**18 12 38.4**	**+0.5**
TPAW				IAML		18 14 09.8	
	comp=E,56nm,0.8s						
FXWY	**Fox Creek**	**4.19**	**265**		**Pn**	**18 12 38.8**	**+0.5**
YHB	**Horse Butte**	**4.30**	**281**		**Pn**	**18 12 39.8**	**0.0**
YHL	**Hebgen Lake**	**4.30**	**282**		**Pn**	**18 12 40.0**	**+0.2**
ISCO	**Idaho Springs**	**4.32**	**184**		**Pn**	**18 12 40.0**	**-0.1**
DGMT	**Dagmar**	**4.42**	**9**	P	**Pn**	**18 12 44.1**	**+2.9**
	baz=190						
DGMT				Sb	**Sg**	**18 13 53.0**	**-1.8**
	baz=190						
DGMT	**Dagmar**	**4.42**	**9**		**Pn**	**18 12 43.0**	**+1.8**
AHID	**Auburn Hatcher**	**4.46**	**254**		**Pn**	**18 12 41.8**	**-0.1**
AHID				IAML		18 13 56.0	
	comp=N,65nm,0.7s						
AHID				IAML		18 14 01.3	
	comp=E,53nm,0.8s						
QLMT	**Earthquake Lak**	**4.47**	**281**		**Pn**	**18 12 42.6**	**+0.5**
SUSD	**Miller**	**4.54**	**84**		**Pn**	**18 12 43.9**	**+1.0**
O20A	**White River Ci**	**4.55**	**210**	P	**Pn**	**18 12 42.6**	**-0.6**
	baz=28						
O20A	**White River Ci**	**4.55**	**210**		**Pn**	**18 12 41.9**	**-1.2**
O20A				IAML		18 14 00.3	
	comp=N,47nm,0.7s						
O20A				IAML		18 14 14.7	
	comp=E,50nm,0.9s						
RDMU	**Red Mountain**	**4.76**	**224**		**Pn**	**18 12 46.4**	**+0.2**
K31A	**O'Neill**	**4.97**	**105**		**Pn**	**18 12 49.2**	**+0.4**
EGMT	**Eagleton**	**5.01**	**323**		**Pn**	**18 12 49.8**	**+0.5**
EGMT				IAML		18 14 17.3	
	comp=E,57nm,0.7s						
SMCO	**Snowmass**	**5.09**	**195**		**Pn**	**18 12 49.6**	**-1.3**
SMCO				IAML		18 14 17.8	
	comp=E,41nm,1.0s						
SMCO				IAML		18 14 18.4	
	comp=E,32nm,0.9s						
Q24A	**Divide**	**5.14**	**179**	P	**Pn**	**18 12 50.7**	**-0.8**
	baz=359						
Q24A				Sb	**Sb**	**18 14 08.7**	**+2.3**
	baz=359						
HWUT	**Hardware Ranch**	**5.26**	**244**		**Pn**	**18 12 52.8**	**-0.2**
HWUT				IAML		18 14 22.6	
	comp=E,50nm,0.7s						
DLMT	**Dillon**	**5.37**	**286**		**Pn**	**18 12 54.2**	**-0.2**
DLMT				IAML		18 13 42.5	
	comp=E,43nm,0.2s						
LRM	**Limekiln Ridge**	**5.38**	**291**		**Pn**	**18 12 54.9**	**+0.3**
MDND	**Maddock**	**5.43**	**45**		**Pn**	**18 12 55.0**	**-0.1**
TCUT	**Toone Canyon**	**5.43**	**239**		**Pn**	**18 12 54.7**	**-0.7**
KSCO	**Kaye Shedlock'**	**5.47**	**158**	Pn	**Pn**	**18 12 55.1**	**-0.6**
MCMT	**McKenzie Canyo**	**5.47**	**280**		**Pn**	**18 12 55.3**	**-0.7**
JLU	**Jordanelle**	**5.77**	**235**		**Pn**	**18 12 58.9**	**-1.1**
BGNE	**Belgrade**	**5.89**	**115**		**Pn**	**18 13 00.0**	**-1.4**
CTU	**Camp Tracy**	**5.89**	**237**		**Pn**	**18 12 59.6**	**-2.0**
HVU	**Hansel Valley**	**5.99**	**250**		**Pn**	**18 13 02.7**	**-0.1**
SPUT	**South Promonto**	**5.99**	**245**		**Pn**	**18 13 02.6**	**-0.3**
PV22	**Blue Mesa, Par**	**6.17**	**207**		**Pn**	**18 13 05.2**	**-0.3**
PV21	**Cone Mtn., Par**	**6.21**	**208**		**Pn**	**18 13 05.8**	**-0.2**
PV07	**Paradox Valley**	**6.22**	**205**		**Pn**	**18 13 06.5**	**+0.4**
PV15	**Paradox Valley**	**6.25**	**204**		**Pn**	**18 13 04.4**	**-2.3**
ECSD	**EROS Data Cent**	**6.26**	**90**	P	**Pn**	**18 13 07.8**	**+1.3**
	baz=276						
ECSD	**EROS Data Cent**	**6.26**	**90**		**Pn**	**18 13 07.5**	**+1.0**
PV09	**Paradox Valley**	**6.32**	**209**		**Pn**	**18 13 05.7**	**-1.9**
PV23	**Carpenter Ridg**	**6.32**	**208**		**Pn**	**18 13 07.3**	**-0.2**
PV04	**Paradox Valley**	**6.34**	**207**		**Pn**	**18 13 07.5**	**-0.2**
SDCO	**Great Sand Dun**	**6.36**	**182**	P	**Pn**	**18 13 08.0**	**-0.1**
	baz=1.2,SNR=15						
SDCO	**Great Sand Dun**	**6.36**	**182**		**Pn**	**18 13 07.6**	**-0.6**
SRU	**San Rafael Swe**	**6.36**	**220**		**Pn**	**18 13 07.3**	**-0.8**
PV12	**Saucer Basin,**	**6.37**	**206**		**Pn**	**18 13 06.7**	**-1.5**
PV20	**West Nyswonger**	**6.41**	**207**		**Pn**	**18 13 08.2**	**-0.4**
PV11	**David Mesa, Pa**	**6.41**	**206**		**Pn**	**18 13 08.0**	**-0.8**
PV16	**Nyswonger Mesa**	**6.42**	**207**		**Pn**	**18 13 08.4**	**-0.4**
PV03	**Paradox Valley**	**6.45**	**206**		**Pn**	**18 13 07.3**	**-1.9**
PV02	**Paradox Valley**	**6.46**	**205**		**Pn**	**18 13 09.5**	**+0.1**
PV17	**East Wray Mesa**	**6.46**	**207**		**Pn**	**18 13 09.2**	**-0.2**
PV01	**Paradox Valley**	**6.47**	**204**		**Pn**	**18 13 08.2**	**-1.5**
PV18	**Skein Mesa, Pa**	**6.47**	**206**		**Pn**	**18 13 09.0**	**-0.6**
PV13	**Radium Mtn., P**	**6.53**	**205**		**Pn**	**18 13 08.3**	**-2.0**
TMUT	**Trail Mountain**	**6.55**	**225**		**Pn**	**18 13 09.8**	**-1.0**
NLU	**North Lily Min**	**6.55**	**233**		**Pn**	**18 13 09.8**	**-0.9**
BGU	**Big Grassy Mou**	**6.56**	**244**		**Pn**	**18 13 09.8**	**-1.0**
F33A	**5 Mile Ranch,**	**6.59**	**72**		**Pn**	**18 13 11.5**	**+0.5**
MSO	**Missoula**	**6.68**	**297**	P	**Pn**	**18 13 12.7**	**+0.4**
	baz=112,SNR=13						
MSO	**Missoula**	**6.68**	**297**		**Pn**	**18 13 12.5**	**+0.2**
PV05	**Paradox Valley**	**6.69**	**207**		**Pn**	**18 13 10.3**	**-2.3**
CBKS	**Cedar Bluff**	**6.73**	**140**		**Pn**	**18 13 12.3**	**-0.6**
DUG	**Dugway, Tooele**	**6.84**	**238**	P	**Pn**	**18 13 13.4**	**-1.2**
	baz=53,SNR=12						
DUG	**Dugway, Tooele**	**6.84**	**238**		**Pn**	**18 13 13.2**	**-1.3**
L34A	**Svendsen Farm,**	**6.86**	**105**		**Pn**	**18 13 15.7**	**+1.0**
T25A	**Trinidad**	**7.00**	**174**	P	**Pn**	**18 13 16.1**	**-0.7**
	baz=354,SNR=6.9						
T25A				Sb	**Sb**	**18 15 05.1**	**+5.6**
	baz=354						
JTMT	**Jette**	**7.26**	**303**		**Pn**	**18 13 21.6**	**+1.3**
MSU	**Marysvale**	**7.64**	**225**		**Pn**	**18 13 25.1**	**-0.6**
WALA	**Waterton Lakes**	**7.74**	**313**	Pn	**Pn**	**18 13 27.2**	**+0.3**
AGMN	**Agassiz Nation**	**7.75**	**54**		**Pn**	**18 13 27.8**	**+1.0**
ELK	**Elko**	**8.11**	**249**		**Pn**	**18 13 31.3**	**-0.7**
F10A	**Beach Ranch, E**	**8.67**	**287**		**Pn**	**18 13 38.4**	**-1.3**
ULM	**Lac du Bonnet**	**8.86**	**43**	Pn	**Pn**	**18 13 41.6**	**-0.5**
	comp=E,1.9nm,0.3s,baz=228,slow=12,SNR=7.6						
ULM				Lg	Lg	18 16 11.5	
	comp=E,0.9nm,0.3s,baz=150,slow=20,SNR=2.0						
ULM	**Lac du Bonnet**	**8.86**	**43**		**Pn**	**18 13 42.2**	**+0.1**
I56US	**NEWPORT INFRAS**	**9.21**	**301**	*i*		19 04 40.0	
	baz=115,slow=318,SNR=1.8						
FFC	**Flin Flon**	**10.83**	**10**		**Pn**	**18 14 08.6**	**-0.5**
KVN	**Kaiserville**	**10.86**	**247**		**Pn**	**18 14 07.6**	**-2.1**
NVAR	**Mina Array Bea**	**11.33**	**244**	Pn	**Pn**	**18 14 17.1**	**+0.9**
	comp=E,0.1nm,0.3s,baz=50,slow=12,SNR=5.0						
YKA	**Yellowknife Ar**	**19.20**	**347**	P	**P**	**18 15 58.6**	**+0.6**
	comp=E,0.1nm,0.3s,baz=156,slow=12,SNR=8.2						
AKASG	**Malin Array Be**	**77.62**	**28**	P	**P**	**18 23 30.6**	**-0.1**
	comp=E,0.9nm,0.5s,baz=310,slow=4.8,SNR=6.4						
ZALV	**Zalesovo Beam**	**81.93**	**354**	P	**P**	**18 23 54.1**	**+0.1**
	comp=E,0.4nm,0.5s,baz=8.9,slow=4.7,SNR=2.2						
MKAR	**Makanchi Array**	**89.23**	**355**	P	**P**	**18 24 30.7**	**+0.2**
	comp=E,0.8nm,0.6s,baz=10,slow=5.0,SNR=12						

*IDC **13** 18:13:37.1±3.9,23.˝49S×177.˝71W,h0km,mb3.7/5, mb1 4.1/5,mb1mx3.8/26,mbtmp3.7/5,Error ellipse: s-maj=222.7km s-min=27.1km az=155.0*
*NEIC **13** 18:14:00.0±0.9,24.˝5±1.˝177.˝7W±0.˝4,h209km±28km, mb4.0/5,Error ellipse: s-maj=169.4km s-min=21.2km az=161.0*

ISC 13 18:13:59.4±3.1,**24.˝5**±1.˝×**177.˝7W**±0.˝5,**h200**km,**n11,** σ0ᵎ**61**/11,**mb3.6**/8,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AS31	**Alice Springs**	**44.03**	**260**	P	**P**	**18 21 46.6**	**-0.9**
ASAR	**Alice Springs**	**44.03**	**260**	P	**P**	**18 21 48.2**	**+0.6**
	0.3nm,0.5s,baz=93,slow=7.7,SNR=13						
WR0	**Warramunga Arr**	**44.26**	**266**	P	**P**	**18 21 48.7**	**-0.7**
WR0				IAmb	IAmb	18 21 54.5	
	comp=Z,6.4nm,1.3s						
WB2	**Warramunga Arr**	**44.44**	**266**	P	**P**	**18 21 50.7**	**-0.1**
WB2				IAmb	IAmb	18 22 02.5	
	comp=Z,8.7nm,1.4s						
WB0	**Warramunga Arr**	**44.45**	**266**	P	**P**	**18 21 50.8**	**-0.1**
WB0				IAmb	IAmb	18 22 10.4	
	comp=Z,9.0nm,1.4s						
WRA	**Warramunga Arr**	**44.45**	**266**	P	**P**	**18 21 50.7**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=104,slow=8.0,SNR=5.8						
SOEI	**Soe**	**56.93**	**274**	P	**P**	**18 23 24.5**	**+0.1**
NVAR	**Mina Array Bea**	**83.54**	**43**	P	**P**	**18 26 05.1**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=220,slow=7.4,SNR=5.1						
PDAR	**Pinedale Array**	**91.48**	**43**	P	**P**	**18 26 42.7**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=193,slow=3.7,SNR=3.6						
ILAR	**Eielson Array**	**91.85**	**13**	P	**P**	**18 26 44.2**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=202,slow=4.5,SNR=2.4						
AKASG	**Malin Array Be**	**146.32**	**329**	PKPbc	**PKPdf**	**18 33 15.6**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=45,slow=4.3,SNR=4.3						

*THE **13** 18:24:18.6,38.˝15N×20.˝22E,h2km±27km,ML3.0/3,Error ellipse: s-maj=27.6km s-min=0.9km az=45.0*
*ATH **13** 18:24:19.2,38.˝19N×20.˝25E,h7km±3km,ML2.9/13,Error ellipse: s-maj=3.6km s-min=1.0km az=79.0*

ISC 13 18:24:18.5±1.2,**38.˝18N**±0.˝04×**20.˝28E**±0.˝05,**h14**km±5km, **n39,** σ0ᵎ**86**/63,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.06**	**66**	P	**Pg**	**18 24 21.1**	**-0.1**
KEF3				S	**Sg**	**18 24 22.4**	**-0.7**
AGT1	**Agia Thekli**	**0.11**	**49**	P	**Pg**	**18 24 21.9**	**-0.5**
AGT1				S	**Sg**	**18 24 23.9**	**0.0**
LXRA	**Lixouri, Kepha**	**0.12**	**81**	P	**Pb**	**18 24 22.5**	**-0.2**
LXRA				S	**Sb**	**18 24 24.9**	**-0.5**
KEF4	**Livadi, Kephal**	**0.14**	**55**	P	**Pb**	**18 24 22.4**	**-0.5**
KEF4				S	**Sg**	**18 24 24.9**	**+0.4**
ARGA	**Argostoli. Kep**	**0.16**	**91**	P	**Pb**	**18 24 23.0**	**-0.2**
ARGA				S	**Sb**	**18 24 25.8**	**-0.5**
ARG2	**Argostoli**	**0.16**	**90**	P	**Pb**	**18 24 22.7**	**-0.6**
ARG2				S	**Sb**	**18 24 26.2**	**-0.3**
KEF2	**Argostoli. Kep**	**0.16**	**95**	P	**Pb**	**18 24 23.2**	**-0.1**
KEF2				S	**Sb**	**18 24 26.1**	**-0.4**
KEF1	**Kardakata, Kep**	**0.18**	**57**	P	**Pb**	**18 24 23.1**	**-0.5**
KEF1				S	**Sg**	**18 24 25.8**	**+0.2**
VLS	**Valsamata**	**0.24**	**91**	P	**Pb**	**18 24 24.2**	**-0.5**
VLS				S	**Sb**	**18 24 28.6**	**-0.3**
VLS	**Valsamata**	**0.24**	**91**	P	**Pb**	**18 24 24.3**	**-0.4**
VLS				S	**Sb**	**18 24 28.3**	**-0.6**
VLS				AML	AML	18 24 28.7	
	comp=N,15610µm,0.3s						
VLS				AML	AML	18 24 28.8	
	comp=E,11072µm,0.3s						
VSK1	**VASILIKIADES**	**0.32**	**44**	P	**Pb**	**18 24 25.7**	**-0.3**
VSK1				S	**Sb**	**18 24 31.1**	**0.0**
FSK	**Fiskardo**	**0.36**	**38**	P	**Pb**	**18 24 26.2**	**-0.4**
FSK				S	**Sb**	**18 24 31.9**	**-0.2**
	comp=E,3µm,0.5s						
FSK	**Fiskardo**	**0.36**	**38**	P	**Pb**	**18 24 26.2**	**-0.4**
FSK				S	**Sb**	**18 24 31.7**	**-0.4**
FSK				AML	AML	18 24 34.7	
	comp=E,7602µm,0.3s						
FSK				AML	AML	18 24 36.6	
	comp=N,5557µm,0.6s						
KFL	**Anninata**	**0.41**	**100**	P	**Pb**	**18 24 27.2**	**-0.3**
KFL				S	**Sb**	**18 24 34.1**	**+0.6**
	comp=N,4µm,0.4s						
KFL	**Anninata**	**0.41**	**100**	P	**Pb**	**18 24 27.3**	**-0.2**
KFL				S	**Sb**	**18 24 33.2**	**-0.4**
KFL				AML	AML	18 24 37.5	
	comp=N,9015µm,0.7s						
KFL				AML	AML	18 24 40.5	
	comp=E,6943µm,0.4s						
EVGl	**Lefkada island**	**0.53**	**34**	P	**Pb**	**18 24 29.4**	**-0.2**
EVGl	**Lefkada island**	**0.53**	**34**	P	**Pb**	**18 24 29.5**	**-0.2**
MGNA	**Meganis**	**0.62**	**40**	P	**Pb**	**18 24 30.9**	**-0.3**
MGNA				S	**Sb**	**18 24 40.6**	**+0.9**
MGNA				AML	AML	18 24 42.9	
	comp=E,1400µm,0.4s						
MGNA				AML	AML	18 24 45.6	
	comp=N,1210µm,0.4s						
LKD2	**Lefkada island**	**0.68**	**26**	P	**

PB16	**IPOC Station P**	**1.46**	**175**			**Pn**	**18 50 40.4**	**+2.3**
LPAZ	**La Paz**	**1.56**	**68**	P		**Pn**	**18 50 40.8**	**+1.8**
	64nm,0.3s,baz=253,slow=6.3,SNR=2108							
LPAZ				S		**Sn**	**18 51 05.0**	**+0.8**
	34nm,0.3s,baz=344,slow=24,SNR=15							
LPAZ				LR		LR	18 51 21.5	
	comp=Z,142nm,18.6s,baz=200,slow=56							
LPAZ	**La Paz**	**1.56**	**68**	Pn		**Pn**	**18 50 41.2**	**+2.1**
LPAZ	**La Paz**	**1.56**	**68**			**Sn**	**18 51 05.2**	**+1.1**
AP01	**Chacalluta**	**1.63**	**204**	Pn		**Pn**	**18 50 39.9**	**+0.8**
PB12	**IPOC Station P**	**1.85**	**201**			**Pn**	**18 50 41.8**	**+0.3**
MNMC	**Minye Minye**	**2.25**	**179**			**Pn**	**18 50 47.0**	**+0.9**
PSGCX	**Pisagua**	**2.75**	**190**			**Pn**	**18 50 50.6**	**-1.2**
GO01	**Chusmiza**	**2.81**	**171**	Pn		**Pn**	**18 50 54.0**	**+1.1**
PB11	**IPOC Station P**	**2.87**	**180**	Pn		**Pn**	**18 50 53.7**	**+0.3**
PB08	**IPOC Station P**	**3.28**	**172**	Pn		**Pn**	**18 50 59.8**	**+1.1**
TA01	**Diego Aracena**	**3.71**	**188**			**Pn**	**18 51 02.9**	**-0.7**
PB01	**IPOC Station P**	**4.15**	**178**			**Pn**	**18 51 08.8**	**-0.5**
PB07	**IPOC Station P**	**4.83**	**183**			**Pn**	**18 51 17.7**	**-0.6**
PB09	**IPOC Station P**	**4.91**	**176**			**Pn**	**18 51 18.4**	**-0.8**
PB04	**IPOC Station P**	**5.45**	**185**			**Pn**	**18 51 26.1**	**-0.3**
LVC	**Limon Verde**	**5.75**	**173**			**Pn**	**18 51 30.6**	**+0.2**
LVC	**Limon Verde**	**5.75**	**173**	*e*P		**Pn**	**18 51 30.2**	**-0.2**
PB06	**IPOC Station P**	**5.80**	**179**			**Pn**	**18 51 29.6**	**-1.3**
PB15	**IPOC Station P**	**6.30**	**179**	Pn		**Pn**	**18 51 35.9**	**-1.7**
PB10	**IPOC Station P**	**6.66**	**187**	Pn		**Pn**	**18 51 40.2**	**-1.9**
GO02	**Mina Guanaco**	**8.25**	**180**	Pn		**Pn**	**18 52 02.1**	**-1.2**
SIV	**San Ignacio**	**8.27**	**85**	P		**Pn**	**18 52 01.1**	**-2.2**
	4.4nm,0.3s,baz=283,slow=9.4,SNR=25							
SIV				S		Sn	18 53 23.3	-13
	baz=210,slow=18,SNR=1.4							
NNA	**Nana**	**8.50**	**304**	P		**Pn**	**18 52 07.8**	**+1.3**
	17nm,0.3s,baz=138,slow=11,SNR=20							
NNA				S		**Sn**	**18 53 37.0**	**-4.5**
	1.6nm,0.3s,baz=233,slow=17,SNR=2.0							
VILB	**Vilhena**	**9.92**	**68**	*e*P		**Pn**	**18 52 22.0**	**-3.2**
AC02	**Maricunga**	**9.93**	**177**			**Pn**	**18 52 24.9**	**-0.7**
SAML	**Samuel**	**10.08**	**39**			**Pn**	**18 52 27.9**	**+0.7**
PTLB	**Pontes e Lacer**	**10.19**	**83**	*e*P		**Pn**	**18 52 26.6**	**-2.1**
PTLB				*e*S		**S**	**18 54 23.5**	**+0.7**
AC05	**El Transito**	**11.92**	**183**			**Pn**	**18 52 48.4**	**-2.8**
ATAH	**Atahualpa**	**12.92**	**317**	P		**P**	**18 53 10.3**	**+1.8**
	0.0nm,0.3s,baz=66,slow=10.0,SNR=1.9							
GO04	**Tololo Observa**	**13.28**	**184**	P		**Pn**	**18 53 06.6**	**-2.0**
SALV	**Santo Antonio**	**13.42**	**88**	*e*P		**Pn**	**18 53 09.6**	**-0.6**
CO03	**El Pedregal**	**13.94**	**184**	Pn		**Pn**	**18 53 15.7**	**-1.0**
CO02	**Combarbal**	**14.32**	**185**			**Pn**	**18 53 22.4**	**+0.8**
CLDB	**Colider**	**14.70**	**68**	*e*P		**Pn**	**18 53 25.5**	**-0.7**
CFA	**Coronel Fontan**	**14.72**	**175**	P		**P**	**18 53 27.4**	**-0.6**
	0.8nm,0.3s,baz=348,slow=12,SNR=12							
CFA				S		Sn	18 55 58.5	-12
	baz=254,slow=20,SNR=1.4							
CO04	**Los Peladeros**	**15.15**	**184**			**P**	**18 53 33.7**	**+0.7**
CO04				IAmb		IAmb	18 53 53.8	
	comp=Z,34nm,1.5s							
ROC1	**El Roble**	**16.08**	**184**	P		**P**	**18 53 43.9**	**+0.6**
MT02	**Curacav**	**16.37**	**184**	P		**Pn**	**18 53 47.1**	**+0.6**
MT02				IAmb		IAmb	18 54 10.8	
	comp=Z,27nm,1.4s							
BO02	**Sierra Bellavi**	**17.88**	**183**	P		**Pn**	**18 54 04.2**	**-0.3**
BO02				IAmb		IAmb	18 54 08.7	
	comp=Z,12nm,0.6s							
PCMB	**Pacaembu**	**17.98**	**108**	*e*P		**P**	**18 54 04.1**	**+0.1**
PTGB	**Pitanga**	**18.18**	**118**	*e*P		**P**	**18 54 06.5**	**+0.3**
BI02	**San Fabin de**	**19.77**	**184**	P		**P**	**18 54 23.8**	**+0.6**
BI02				IAmb		IAmb	18 54 31.3	
	comp=Z,7.4nm,0.8s							
IPMB	**Ipameri, GO**	**20.47**	**96**	*e*P		**P**	**18 54 30.0**	**-1.0**
PLTB	**Pedras Altas**	**20.77**	**138**	*e*P		**P**	**18 54 33.8**	**-0.2**
BDFB	**Brasilia**	**20.80**	**90**	P		**P**	**18 54 33.6**	**-0.9**
	comp=Z,6.7nm,0.6s,baz=257,slow=13,SNR=6.9							
BDFB	**Brasilia**	**20.80**	**90**	P		**P**	**18 54 33.2**	**-1.3**
BDFB				IAmb		IAmb	18 54 37.4	
	comp=Z,6.9nm,0.6s							
LC01	**Cunco**	**22.03**	**185**	P		**P**	**18 54 47.0**	**-0.1**
LC01				IAmb		IAmb	18 54 52.8	
	comp=Z,26nm,1.6s							
PLCA	**Paso Flores**	**23.79**	**182**	P		**P**	**18 55 04.2**	**+0.9**
	comp=Z,12nm,0.8s,baz=4.7,slow=12,SNR=15							
PLCA	**Paso Flores**	**23.79**	**182**	P		**P**	**18 55 04.2**	**+0.9**
PLCA	**Paso Flores**	**23.79**	**182**	*e*P		**P**	**18 55 03.0**	**-0.3**
JANB	**Januaria**	**24.41**	**89**	*e*P		**P**	**18 55 09.5**	**+0.2**
ROSB	**Rosrio**	**28.66**	**64**	*e*P		**P**	**18 55 46.2**	**-1.0**
DBIC	**Dimbokro**	**68.17**	**75**	P		**P**	**19 00 48.4**	**-0.1**
	comp=Z,6.2nm,0.6s,baz=220,slow=3.6,SNR=6.1							
DBIC	**Dimbokro**	**68.17**	**75**	P		**P**	**19 00 48.6**	**+0.1**
QSPA	**South Pole Qui**	**73.29**	**180**	P		**P**	**19 01 19.6**	**+0.8**
TORD	**Torodi Ar. Bea**	**76.51**	**72**	P		**P**	**19 01 37.3**	**-0.6**
	comp=Z,2.5nm,0.7s,baz=257,slow=5.5,SNR=12							
YKA	**Yellowknife Ar**	**86.61**	**341**	P		**P**	**19 02 31.6**	**+1.7**
	comp=Z,1.5nm,0.8s,baz=132,slow=5.0,SNR=14							
MAW	**Mawson**	**88.94**	**164**	P		**P**	**19 02 42.0**	**+1.1**
	comp=Z,2.0nm,0.6s,baz=203,slow=5.5,SNR=7.6							
MAW	**Mawson**	**88.94**	**164**	P		**P**	**19 02 41.9**	**+0.9**
ASAR	**Alice Springs**	**133.61**	**210**	PKP		**PKiKP**	**19 09 04.2**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=135,slow=2.4,SNR=11							
WRA	**Warramunga Arr**	**136.49**	**214**	PKP		**PKiKP**	**19 09 09.9**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=151,slow=2.0,SNR=7.7							
ZALV	**Zalesovo Beam**	**138.02**	**22**	PKP		**PKPdf**	**19 09 10.8**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=330,slow=5.1,SNR=6.6							
ZALV				SKPbc		**SKPbc**	**19 12 26.9**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=305,slow=5.1,SNR=1.8							
MKAR	**Makanchi Array**	**142.19**	**32**	PKhKP		PKPpre	19 09 16.1	
	comp=Z,0.2nm,0.5s,baz=292,slow=3.1,SNR=2.8							
MKAR				SKPbc		**SKPbc**	**19 12 38.1**	**-1.6**
	comp=Z,0.1nm,0.7s,baz=292,slow=2.3,SNR=1.5							
SONM	**Songino Array**	**148.95**	**5**	PKPbc		**PKiKP**	**19 09 35.5**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=324,slow=2.0,SNR=15							

IDC ***13*** *19:01:22.2±0.7,17°.30S×172°.89W,h0km,mb4.2/12, mb1 4.4/12,mb1mx4.1/37,mbtmp4.2/12,MS3.5/3, Ms1 3.5/3,ms1mx3.0/33,Error ellipse: s-maj=31.9km s-min=16.8km az=134.0*

NEIC ***13*** *19:01:23.8±2.0, 17°.2S±0°.1×172°.9W±0°.2,h10km±1km, mb4.9/28,Error ellipse: s-maj=26.4km s-min=15.8km az=117.0*

ISC 13 19:01:23.6±0.6,17°.2S±0°.1×172°.9W±0°.1,h10km,n56, σ1$23/52,mb4.7/25,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**3.40**	**123**		Pn	19 02 07.5	-9.2
AFI	**Afiamalu**	**3.48**	**19**		**Pn**	**19 02 15.1**	**-2.8**
MSVF	**Nonsavu**	**8.62**	**265**		Pn	19 03 38.0	+9.4
RAR	**Rarotonga**	**13.05**	**110**	LR	LR	19 08 29.7	
	comp=Z,168nm,18.2s,baz=289,slow=33						
DZM	**Mont Dzumac**	**20.01**	**253**	LR	LR	19 12 12.2	
	comp=Z,133nm,19.4s,baz=0.0,slow=32						
DZM	**Mont Dzumac**	**20.01**	**253**	P	Pn	19 06 00.3	+1.9
DZM				IAmb	IAmb	19 06 21.8	
	comp=Z,44nm,1.4s						
OUZ	**Omahuta**	**21.57**	**211**		**P**	**19 06 12.1**	**-1.3**
URZ	**Urewera**	**22.70**	**201**	P	**P**	**19 06 24.8**	**-0.7**
	comp=Z,25nm,0.7s,baz=350,slow=3.4,SNR=16						
URZ				S	**S**	**19 10 30.1**	**-3.8**
	comp=Z,6.2nm,0.9s,baz=211,slow=23,SNR=1.3						
BKZ	**Black Stump Fm**	**23.73**	**201**	P	**P**	**19 06 35.2**	**-0.8**
BKZ				IAmb	IAmb	19 06 44.2	
	comp=Z,15nm,0.6s						
HIZ	**Hauiti**	**23.75**	**204**	P	**P**	**19 06 36.0**	**-0.1**
HIZ				IAmb	IAmb	19 07 08.5	
	comp=Z,168nm,1.6s						
TUWZ	**Tuamarina**	**26.63**	**202**	P	**P**	**19 07 05.1**	**+2.7**
NNZ	**Nelson**	**26.66**	**203**	P	**P**	**19 07 03.8**	**+1.2**
NNZ				IAmb	IAmb	19 07 41.8	
	comp=Z,89nm,1.2s						
QRZ	**Quartz Range**	**26.66**	**205**		**P**	**19 07 04.6**	**+2.0**
THZ	**Tophouse**	**27.31**	**204**	P	**P**	**19 07 10.2**	**+1.6**
THZ				IAmb	IAmb	19 07 14.3	
	comp=Z,58nm,1.6s						
HNR	**Honiara**	**27.48**	**283**	LR	LR	19 16 45.9	
	comp=Z,111nm,18.1s,baz=125,slow=34						
KHZ	**Kahutara**	**27.64**	**202**	P	**P**	**19 07 11.9**	**+0.4**
LTZ	**Lake Taylor**	**28.43**	**203**	P	**P**	**19 07 19.4**	**+0.9**
LTZ				IAmb	IAmb	19 07 37.8	
	comp=Z,63nm,1.7s						
OXZ	**Oxford**	**28.98**	**203**	P	**P**	**19 07 25.4**	**+2.0**
OXZ				IAmb	IAmb	19 07 34.0	
	comp=Z,13nm,0.8s						
RPZ	**Rata Peaks**	**29.68**	**204**	P	**P**	**19 07 29.8**	**+0.2**
	comp=Z,4.1nm,0.8s,baz=204,slow=14,SNR=1.5						
RPZ	**Rata Peaks**	**29.68**	**204**	P	**P**	**19 07 30.4**	**+0.8**
RPZ				IAmb	IAmb	19 07 34.7	
	comp=Z,90nm,1.9s						
FOZ	**Fox Glacier**	**30.03**	**206**	P	**P**	**19 07 33.5**	**+0.9**
WKZ	**Wanaka**	**31.42**	**205**	P	**P**	**19 07 47.8**	**+2.8**
DCZ	**Deep Cove**	**32.71**	**206**	P	**P**	**19 07 57.5**	**+1.3**
STKA	**Stephens Creek**	**43.55**	**242**	P	**P**	**19 09 27.9**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=110,slow=12,SNR=3.7						
STKA	**Stephens Creek**	**43.55**	**242**	P	**P**	**19 09 27.6**	**-0.2**
BBOO	**Buckleboo**	**48.31**	**241**	P	**P**	**19 10 05.4**	**-0.1**
BBOO				IAmb	IAmb	19 10 22.9	
	comp=Z,49nm,1.9s						
WR0	**Warramunga Arr**	**49.70**	**258**	P	**P**	**19 10 16.5**	**+0.2**
WR0				IAmb	IAmb	19 10 37.5	
	comp=Z,9.9nm,1.2s						
WB0	**Warramunga Arr**	**49.86**	**258**	P	**P**	**19 10 17.6**	**+0.1**
WB0				IAmb	IAmb	19 10 35.4	
	comp=Z,17nm,1.6s						
WB2	**Warramunga Arr**	**49.88**	**258**	P	**P**	**19 10 16.8**	**-0.8**
WB2				IAmb	IAmb	19 10 29.3	
	comp=Z,11nm,1.3s						
WRA	**Warramunga Arr**	**49.89**	**258**	P	**P**	**19 10 17.2**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=97,slow=7.0,SNR=21						
AS31	**Alice Springs**	**50.00**	**253**	P	**P**	**19 10 18.8**	**+0.3**
ASAR	**Alice Springs**	**50.00**	**253**	P	**P**	**19 10 18.8**	**+0.2**
	comp=Z,14nm,0.7s,baz=89,slow=8.5,SNR=217						
FORT	**Forrest**	**55.01**	**244**	P	**P**	**19 10 54.5**	**-1.0**
FORT				IAmb	IAmb	19 11 07.0	
	comp=Z,18nm,1.2s						
KNRA	**Kununurra**	**55.76**	**263**	P	**P**	**19 11 02.6**	**+1.5**
KNRA				IAmb	IAmb	19 11 05.1	
	comp=Z,15nm,1.1s						
SOEI	**Soe**	**61.30**	**268**	P	**P**	**19 11 39.7**	**-0.3**
QSPA	**South Pole Qui**	**72.83**	**180**	P	**P**	**19 12 52.4**	**-0.1**
KKM	**Kota Kinabalu**	**73.68**	**282**	P	**P**	**19 12 58.0**	**-0.3**
KKM				IAmb	IAmb	19 13 13.9	
	comp=Z,10nm,1.3s						
PETK	**Petropavlovsk-**	**74.49**	**342**	P	**P**	**19 13 03.0**	**+0.9**
	comp=Z,2.9nm,0.9s,baz=142,slow=7.3,SNR=1.9						
NVAR	**Mina Array Bea**	**75.38**	**41**	P	**P**	**19 13 08.5**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=227,slow=10.0,SNR=9.3						
MNTX	**Cornudas Mount**	**80.95**	**53**	P	**P**	**19 13 39.6**	**+1.0**
TXAR	**Lajitas Array**	**81.26**	**56**	P	**P**	**19 13 40.5**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=210,slow=9.7,SNR=4.5						
PDAR	**Pinedale Array**	**83.32**	**42**	P	**P**	**19 13 51.1**	**0.0**
	comp=Z,1.0nm,0.9s,baz=192,slow=4.4,SNR=4.0						
YHL	**Hebgen Lake**	**83.40**	**39**	P	**P**	**19 13 53.2**	**+1.7**
ILAR	**Eielson Array**	**84.14**	**11**	P	**P**	**19 13 54.8**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=220,slow=5.9,SNR=10						
DAWY	**Dawson**	**85.07**	**14**	P	**P**	**19 13 59.6**	**+0.4**
YKA	**Yellowknife Ar**	**91.58**	**23**	P	**P**	**19 14 31.5**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=224,slow=3.7,SNR=4.8						
CMAR	**Chiang Mai Arr**	**93.61**	**288**	P	**P**	**19 14 41.5**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=129,slow=2.4,SNR=2.5						
KMBO	**Kilima Mbogo**	**145.11**	**241**	PKPbc	**PKPbc**	**19 21 01.2**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=225,slow=21,SNR=1.8						
CLL	**Collm**	**145.67**	**353**	*i* PKPbc	**PKiKP**	**19 21 05.4**	**-0.9**
	comp=Z,5.0nm,1.0s						
CLL				*i* PKiKP	sPKPab	19 21 11.8	+5.6
CLL				*i* (sPKiKP)		19 21 15.2	
OSTC	**Ostas**	**145.95**	**350**	*e*PKP	**PKiKP**	**19 21 05.7**	**-1.2**
DPC	**Dobruska-Polom**	**146.13**	**349**	*e*PKP	**PKiKP**	**19 21 06.5**	**-0.8**
KHC	**Kasperske Hory**	**147.74**	**352**	*e*PKP	**PKiKP**	**19 21 10.5**	**-0.2**
BRTR	**Keskin Array B**	**147.84**	**320**	PKPbc	**PKPbc**	**19 21 10.1**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=80,slow=2.8,SNR=8.0						
GERES	**GERESS Array B**	**149.00**	**352**	PKPbc	**PKPbc**	**19 21 08.9**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=38,slow=5.0,SNR=7.8						
MMAI	**Mount Meron Ar**	**150.04**	**307**	PKPbc	**PKPbc**	**19 21 15.1**	**0.0**
	comp=Z,3.6nm,0.9s,baz=72,slow=4.7,SNR=3.9						
TORD	**Torodi Ar. Bea**	**173.42**	**127**	PKP	**PKPdf**	**19 21 34.8**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=204,slow=3.2,SNR=2.2						
TORD				PKPab	**PKPab**	**19 23 01.9**	**-0.9**
	comp=Z,1.7nm,0.9s,baz=260,slow=2.5,SNR=5.7						

IDC ***13*** *19:04:16.2±5.0,36°.37N×70°.91E,h171km±44km,mb3.1/5, mb1 3.2/10,mb1mx2.9/50,mbtmp3.6/10,Error ellipse: s-maj=37.3km s-min=28.1km az=27.0*

NNC ***13*** *19:04:23.5±4.2,36°.87N×70°.90E,h182km±68km,mb2.8, mpv3.9,Error ellipse: s-maj=42.1km s-min=22.0km az=16.0*

ISC 13 19:04:18.7±1.1,36°.54N±0°.10×70°.9E±0°.1,h188km,n27, σ1$31/30,mb3.3/4,1C-5D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.00**	**20**	P	**Pn**	**19 05 46.7**	**+0.7**
	SNR=297						
UCH	**Uchtor**	**6.34**	**25**	P	**Pn**	**19 05 51.4**	**+0.8**
	SNR=28						
KZA	**Kyzart**	**6.49**	**30**	P	**Pn**	**19 05 52.6**	**+0.2**
	SNR=7.0						
EKS2	**Erkin-Say**	**6.51**	**19**	P	**Pn**	**19 05 53.5**	**+1.0**
	SNR=57						
KK31	**Karatay Array**	**6.56**	**358**	P	**Pn**	**19 05 53.9**	**+0.8**
	1.4nm,0.2s,baz=184,slow=12,SNR=196						
KK31				S	**Sn**	**19 07 04.6**	**-3.0**
	3.7nm,0.3s,baz=190,slow=25,SNR=7.1						
AAK	**Ala-Archa**	**6.70**	**24**	P	**Pn**	**19 05 55.9**	**+0.9**
	4.1nm,0.3s,baz=155,slow=5.9,SNR=40						
AAK				S	**Sn**	**19 07 10.0**	**-1.1**
	1.5nm,0.3s,baz=338,slow=21,SNR=16						
AAK	**Ala-Archa**	**6.70**	**24**	P	**Pn**	**19 05 55.8**	**+0.9**
	SNR=13						
AAK	**Ala-Archa**	**6.70**	**24**	⇓P	**Pn**	**19 05 55.5**	**+0.6**
	2.5nm,0.3s						
AAK				⇑S	**Sn**	**19 07 09.3**	**-1.8**
	10.0nm,0.6s						
KBK	**Karagaybulak**	**6.87**	**26**	P	**Pn**	**19 05 58.6**	**+1.4**
	SNR=11						
ULHL	**Ulahol**	**7.05**	**34**	P	**Pn**	**19 06 00.6**	**+1.0**
	SNR=5.4						
CHMS	**Chumysh**	**7.11**	**24**	P	**Pn**	**19 06 01.4**	**+1.2**
	SNR=5.8						
USP	**Ospenovka**	**7.27**	**21**	P	**Pn**	**19 06 03.3**	**+1.0**
	SNR=7.0						
TKM2	**Tokmak 2**	**7.33**	**28**	P	**Pn**	**19 06 04.5**	**+1.2**
	SNR=8.8						
TKM2	**Tokmak 2**	**7.33**	**28**	⇓P	**Pn**	**19 06 03.2**	**-0.1**
	14nm,0.6s						
MDOK	**Medeo**	**8.14**	**34**	⇓P	**Pn**	**19 06 14.4**	**+0.6**
	4.4nm,0.5s						
PDGK	**Podgornoye**	**9.47**	**42**	⇓P	**Pn**	**19 06 34.4**	**+3.3**
	0.5nm,0.4s						
MK31	**Makanchi Array**	**13.32**	**36**	P	**Pn**	**19 07 20.4**	**+0.1**
	0.8nm,0.8s,baz=215,slow=9.5,SNR=4.8						
MKAR	**Makanchi Array**	**13.32**	**36**	P	**Pn**	**19 07 20.6**	**+0.2**
	0.1nm,0.3s,baz=221,slow=13,SNR=5.7						
AB31	**Akbulak array**	**15.00**	**331**	⇓P	**P**	**19 07 43.8**	**+1.7**
	0.3nm,0.3s,baz=146,slow=13,SNR=15						
KURBB	**Kurchatov Arra**	**15.12**	**19**	P	**Pn**	**19 07 41.8**	**-0.8**
	0.1nm,0.3s,baz=202,slow=10,SNR=6.9						
BVAR	**Borovoye Array**	**16.49**	**359**	P	**Pn**	**19 07 58.9**	**-0.3**
	0.3nm,0.3s,baz=159,slow=13,SNR=7.9						
AKTO	**Aktyubinsk**	**16.70**	**330**	P	**Pn**	**19 08 02.5**	**+0.8**
	0.2nm,0.3s,baz=149,slow=8.4,SNR=4.8						
ZALV	**Zalesovo Beam**	**19.92**	**25**	P	**P**	**19 08 36.4**	**+0.7**
	1.1nm,0.6s,baz=225,slow=11,SNR=5.9						
TORD	**Torodi Ar. Bea**	**65.62**	**269**	P	**P**	**19 14 41.6**	**-1.2**
	0.5nm,0.7s,baz=45,slow=5.2,SNR=2.3						
YKA	**Yellowknife Ar**	**81.21**	**3**	P	**P**	**19 16 13.6**	**+0.6**
	0.2nm,0.4s,baz=350,slow=4.9,SNR=5.0						
WRA	**Warramunga Arr**	**82.09**	**122**	P	**P**	**19 16 16.9**	**-1.4**
	0.4nm,0.8s,baz=308,slow=7.0,SNR=1.7						
ASAR	**Alice Springs**	**84.36**	**125**	P	**P**	**19 16 28.8**	**-1.0**
	0.3nm,0.5s,baz=313,slow=4.5,SNR=6.2						

ATH 13 19:10:15.4,38°.49N×21°.87E,h13km±2km,ML1.4/8,1D, Error ellipse: s-maj=2.1km s-min=0.7km az=106.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EFP	**Efpalio**	**0.07**	**153**	P	Pg	19 10 18.0	0.0
EFP				S	Sg	19 10 19.9	0.0
EFP				AML	AML	19 10 20.3	
	comp=E,1299μm,0.2s						
EFP				AML	AML	19 10 20.5	
	comp=N,815μm,0.1s						
ANX	**Ano Chora**	**0.11**	**23**	P	Pg	19 10 18.5	-0.2
ANX				S	Sg	19 10 20.8	-0.2
ANX				AML	AML	19 10 21.1	
	comp=E,871μm,0.2s						
ANX				AML	AML	19 10 21.1	
	comp=N,812μm,0.2s						
SERG	**Sergoula**	**0.17**	**117**	P	Pg	19 10 19.2	-0.2
SERG				S	Sg	19 10 22.2	0.0
SERG				AML	AML	19 10 22.6	
	comp=E,397μm,0.3s						
SERG				AML	AML	19 10 23.2	
	comp=N,338μm,0.2s						
TRIZ	**Trizonia**	**0.20**	**127**	P	Pg	19 10 19.8	-0.1
TRIZ				S	Sg	19 10 23.4	+0.4
KALE	**Kalithea**	**0.24**	**115**	P	Pg	19 10 20.3	-0.3
KALE				S	Sg	19 10 24.5	+0.5
KALE				AML	AML	19 10 25.1	
	comp=N,348μm,0.2s						
KALE				AML	AML	19 10 25.7	
	comp=E,136μm,0.3s						
LAKA	**Lakka**	**0.27**	**160**	P	Pg	19 10 21.0	0.0
LAKA				S	Sg	19 10 25.3	+0.5
LAKA				AML	AML	19 10 25.8	
	comp=N,78μm,0.3s						
LAKA				AML	AML	19 10 25.9	
	comp=E,46μm,0.2s						
EVR	**Evrytania**	**0.43**	**354**	P	Pg	19 10 23.7	-0.3
EVR				⇓Sd1		19 10 30.3	
EVR				AML	AML	19 10 31.6	
	comp=E,123μm,0.2s						
EVR				AML	AML	19 10 31.8	
	comp=N,124μm,0.2s						
KLV	**Kalavryta, Ach**	**0.50**	**153**	P	Pg	19 10 25.0	-0.3
KLV				S	Sg	19 10 32.3	+0.4
KLV				AML	AML	19 10 33.9	
	comp=N,46μm,0.2s						
KLV				AML	AML	19 10 35.9	
	comp=E,44μm,0.3s						
RLS	**Riolos of Patr**	**0.53**	**216**	P	Pg	19 10 26.3	+0.4
DRO	**Drossia**	**0.55**	**193**	P	Pg	19 10 26.3	+0.1
MAKR	**Makrakomi, Fth**	**0.56**	**22**	P	Pg	19 10 26.2	-0.3
MAKR				S	Sg	19 10 34.5	+0.5
MAKR				AML	AML	19 10 36.5	
	comp=E,329μm,0.4s						
MAKR				AML	AML	19 10 37.3	
	comp=N,187μm,0.2s						
AGG	**Agios Georgios**	**0.64**	**34**	P	Pg	19 10 27.9	-0.1
AXAR	**Agios Charalam**	**0.68**	**66**	P	Pg	19 10 28.4	-0.3
AXAR				S	Sb	19 10 38.3	-0.2

THE 13 19:10:15.0,38°.41N×20°.51E,h7km±1km,ML1.9/2,Error ellipse: s-maj=1.8km s-min=0.5km az=102.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSK1	**VASILIKIADES**	**0.04**	**94**	P	Pg	19 10 16.3	-0.3
VSK1				S	Sg	19 10 17.8	+0.1
FSK	**Fiskardo**	**0.06**	**42**	P	Pg	19 10 16.4	-0.4
FSK				S	Sg	19 10 18.0	-0.1
	1μm,0.2s						
AGT1	**Agia Thekli**	**0.19**	**211**	P	Pg	19 10 18.6	-0.2
AGT1				S	Sg	19 10 22.1	+0.7
ARG2	**Argostoli**	**0.23**	**184**	P	Pg	19 10 19.6	0.0
ARG2				S	Sg	19 10 23.5	+0.7
EVGl	**Lefkada island**	**0.24**	**29**	P	Pg	19 10 19.5	-0.3
EVGl				S	Sg	19 10 23.9	+0.9
VLS	**Valsamata**	**0.24**	**165**	P	Pg	19 10 19.6	-0.2
VLS				S	Sg	19 10 23.8	+0.7
	442nm,0.1s						
KFL	**Anninata**	**0.37**	**144**	P	Pg	19 10 22.0	-0.3
LKD2	**Lefkada island**	**0.39**	**17**	P	Pg	19 10 22.0	-0.7
LKD2				S	Sg	19 10 28.9	+1.0

IDC ***13*** *19:24:06.6±1.4,56°.80S×24°.73W,h0km,mb3.9/3, mb1 4.1/3,mb1mx3.7/28,m

MNMC *i* S **Sb** **19 34 46.9 -0.6**
MNMC IAML 19 34 54.2
comp=N,15µm,0.6s
MNMC Minye Minye 1.58 59 Pb 19 34 26.8 -0.8
MNMCX Minye Minye 1.58 59 *i* P **Pb 19 34 26.9 -0.7**
MNMCX *i* S **Sg** **19 34 51.2 +1.7**
MNMCX IAML 19 34 53.3
comp=Z,8µm,0.7s
AP01 Chacalluta 1.71 22 *i* P **Pn** **19 34 28.1 +0.3**
AP01 IAML 19 35 01.5
comp=N,13µm,0.5s
AP01 Chacalluta 1.71 22 Pn 19 34 27.9 +0.1
PB02 IPOC Station P 1.71 142⇑ *i*P **Pn** **19 34 28.4 +0.5**
PB02 *i* S **Sn** **19 34 49.1 -0.5**
PB02 IAML 19 35 01.0
comp=E,8µm,0.5s
PB02 IPOC Station P 1.71 142 *i* P **Pn** **19 34 28.5 +0.5**
PB02 *i* S **Sg** **19 34 52.9 -0.8**
PB02 IAML 19 34 59.8
comp=Z,5µm,0.9s
GO01 Chusmiza 1.75 81⇑ *i*P **Pn** **19 34 29.4 +0.7**
GO01 *i* S **Sn** **19 34 51.6 +0.6**
GO01 IAML 19 34 54.2
comp=N,13µm,0.2s
GO01 Chusmiza 1.75 81 Pn 19 34 29.4 +0.7
PB08 IPOC Station P 1.77 96⇑ *i*P **Pn** **19 34 29.5 +0.6**
PB08 *i* S **Sb** **19 34 52.4 -0.5**
PB08 IPOC Station P 1.77 96 Pn 19 34 29.4 +0.6
PB08 IPOC Station P 1.77 96 *i* P **Pn** **19 34 29.6 +0.6**
PB08 *i* S **Sg** **19 34 54.6 -0.8**
PB08 IAML 19 34 57.4
comp=Z,4µm,0.5s
PB01 IPOC Station P 1.79 127⇑ *i*P **Pn** **19 34 29.8 +0.7**
PB01 *i* S **Sn** **19 34 51.8 +0.1**
PB01 IPOC Station P 1.79 127 Pn 19 34 29.7 +0.7
PB01 IPOC Station P 1.79 127 *i* P **Pn** **19 34 29.8 +0.7**
PB01 *i* S **Sg** **19 34 58.5 +2.2**
PB01 IAML 19 35 01.3
comp=Z,5µm,0.7s
PB07 IPOC Station P 2.05 149⇑ *i*P **Pn** **19 34 32.9 +0.2**
PB07 *i* S **Sn** **19 34 56.8 -1.3**
PB07 IPOC Station P 2.05 149 Pn 19 34 32.8 +0.2
PB16 IPOC Station P 2.16 42⇑ *i*P **Pn** **19 34 35.2 +0.6**
PB16 *i* S **Sb** **19 35 03.3 -1.3**
PB16 IPOC Station P 2.16 42 Pn 19 34 35.0 +0.5
PB16 IPOC Station P 2.16 42 *i* P **Pb** **19 34 36.3 -1.4**
PB16 *i* S **Sb** **19 35 04.7 +0.1**
PB16 IAML 19 35 07.5
comp=Z,5µm,0.4s
PB03 IPOC Station P 2.39 150⇑ *i*P **Pn** **19 34 37.6 +0.3**
PB03 *i* S **Sn** **19 35 06.2 -0.2**
PB03 IPOC Station P 2.39 150 *i* P **Pn** **19 34 37.8 +0.5**
PB03 *i* S **Sg** **19 35 21.6 +6.3**
PB03 IAML 19 35 33.6
comp=Z,2µm,0.9s
PB09 IPOC Station P 2.47 138⇑ *i*P **Pn** **19 34 40.0 +1.7**
PB09 *i* S **Sn** **19 35 10.0 +1.6**
PB09 IAML 19 35 23.0
comp=E,3µm,0.6s
PB09 IPOC Station P 2.47 138 Pn 19 34 39.9 +1.5
PB09 IPOC Station P 2.47 138 *i* P **Pn** **19 34 40.1 +1.7**
PB09 *e*P **Pb** **19 34 40.2 -2.5**
PB09 *i* S **Sg** **19 35 16.5 -1.4**
PB04 IPOC Station P 2.49 161 *i* P **Pn** **19 34 38.6 -0.2**
PB04 IAML 19 35 26.9
comp=E,2µm,0.6s
PB04 IPOC Station P 2.49 161 Pn 19 34 38.6 -0.2
PB04 IPOC Station P 2.49 161 *i* P **Pn** **19 34 38.8 0.0**
PB04 IAML 19 35 33.4
comp=Z,1µm,0.7s
PB05 IPOC Station P 2.97 165 *i* P **Pn** **19 34 44.9 -0.4**
PB05 IAML 19 35 55.3
comp=N,724nm,0.5s
PB05 IPOC Station P 2.97 165 *i* P **Pn** **19 34 45.0 -0.4**
PB05 IAML 19 35 46.0
comp=Z,574nm,2.2s
PB06 IPOC Station P 3.04 154⇑ *i*P **Pn** **19 34 46.3 0.0**
PB06 IPOC Station P 3.04 154 Pn 19 34 46.0 -0.3
PB06 IPOC Station P 3.04 154 *i* P **Pn** **19 34 46.3 0.0**
PB06 *e*S **Sg** **19 35 38.3 +1.9**
PB06 IAML 19 35 40.7
comp=Z,1µm,0.8s
LVC Limon Verde 3.29 144 *e*P **Pn** **19 34 51.7 +1.9**
LVC *i* S **Sn** **19 35 28.9 0.0**
LVC Limon Verde 3.29 144 Pn 19 34 51.4 +1.5
LVC Limon Verde 3.29 144 *e*P **Pn** **19 34 51.8 +1.9**
PB15 IPOC Station P 3.54 156 Pn 19 34 53.0 -0.1
PB15 IPOC Station P 3.54 156 *i* P **Pn** **19 34 53.0 -0.1**
PB15 *i* S **Sg** **19 35 52.4 +0.3**
PB15 IAML 19 35 57.2
comp=Z,1µm,0.8s
PB10 IPOC Station P 3.56 173 Pn 19 34 52.4 -0.9
LPAZ La Paz 4.58 37 Pn Pn 19 35 10.8 +3.1
comp=Z,4.1nm,0.3s,baz=201,slow=5.5,SNR=31
LPAZ Lg Lg 19 36 19.8
comp=Z,2.4nm,0.3s,baz=270,slow=17,SNR=1.3
LPAZ La Paz 4.58 37 Pn 19 35 09.9 +2.2
LPAZ La Paz 4.58 37 *i* P **Pn** **19 35 11.3 +3.6**
LPAZ *i* S **Sg** **19 36 26.3 +0.8**
LPAZ La Paz 4.58 37 *e*P **Pn** **19 35 11.4 +3.6**
PB14 IPOC Station P 4.67 173 Pn 19 35 06.8 -2.1
PB14 IPOC Station P 4.67 173 *i* P **Pn** **19 35 04.5 -4.4**
PB14 *i* S **Sn** **19 35 58.4 -4.7**
PB14 IAML 19 36 04.3
comp=Z,267nm,1.1s
GO02 Mina Guanaco 5.34 166 Pn 19 35 17.2 -0.8
YJA Yavi 5.59 114 *i* P Pn 19 35 27.8 +6.1
YJA *i* S **Sb** **19 36 43.1 -0.2**
YJA IAML 19 37 09.7
comp=Z,31nm,1.2s
AC02 Maricunga 7.06 166 Pn 19 35 42.0 +0.2
GO03 Copiap 7.63 175 Pn Pn 19 35 49.0 -0.2
NNA Nana 9.71 324 Pn Pn 19 36 20.6 +2.8
comp=Z,1.4nm,0.3s,baz=227,slow=7.1,SNR=1.7
NNA Sn **Sn** **19 38 00.8 -5.9**
comp=Z,1.8nm,0.3s,baz=231,slow=7.0,SNR=2.3
NNA LR LR 19 40 24.3
comp=Z,254nm,18.1s,baz=157,slow=39
NNA Nana 9.71 324 Pn 19 36 19.0 +1.2
GO04 Tololo Observa 10.17 179 Pn Pn 19 36 24.0 -0.2
SIV San Ignacio 10.26 69 Pn Pn 19 36 23.8 -1.6
comp=Z,4.0nm,0.3s,baz=269,slow=11,SNR=32
CO03 El Pedregal 10.83 178 Pn Pn 19 36 32.9 -0.3
CO02 Combarbal 11.19 180 Pn Pn 19 36 37.3 -0.9
CFA Coronel Fontan 11.86 168 Pn Pn 19 36 46.2 -1.0
comp=Z,0.6nm,0.3s,baz=333,slow=12,SNR=2.4
CFA LR LR 19 41 33.4
comp=Z,284nm,19.4s,baz=309,slow=39
PTLB Pontes e Lacer 12.18 70 *e*P **Pn** **19 36 50.1 -1.5**
VILB Vilhena 12.50 58 *e*P **Pn** **19 36 55.4 -0.6**
ROC1 El Roble 12.96 180 Pn Pn 19 36 59.3 -3.2
MT02 Curacav 13.24 180 Pn Pn 19 37 04.6 -1.5
SAML Samuel 13.32 36 Pn 19 37 05.5 -1.6
SAML Samuel 13.32 36 *e*P **Pn** **19 37 05.6 -1.6**
AQDB Aquidauana 14.39 95 *e*P **Pn** **19 37 21.6 -0.2**
ATAH Atahualpa 14.62 330 LR LR 19 43 42.1
comp=Z,203nm,19.1s,baz=154,slow=40
BO02 Sierra Bellavi 14.77 179 P Pn 19 37 28.4 +1.3
H03N1 Juan Fernandez 15.15 206 T T 19 53 11.2
baz=32,slow=72,SNR=66
H03N2 Juan Fernandez 15.16 206 T T 19 53 10.9
baz=32,slow=72,SNR=62
H03N3 Juan Fernandez 15.17 206 T T 19 53 18.2
baz=32,slow=72,SNR=52
BI02 San Fabin de 16.64 181 P Pn 19 37 51.8 +0.5
C2SB Chapadao do Su 17.20 89 *e*P **Pn** **19 37 58.0 -0.5**
CLDB Colider 17.23 61 *e*P **Pn** **19 37 57.0 -1.8**
TRCB Terra Rica 17.36 103 *e*P **Pn** **19 38 00.4 0.0**
PTGB Pitanga 18.16 109 *e*P **P** **19 38 10.8 +0.2**
PCMB Pacaembu 18.55 99 *e*P **P** **19 38 15.0 +0.1**
ARAG Araguaiana, MT 18.77 80 *e*P **P** **19 38 16.0 -1.3**
LC01 Cunco 18.88 182 P Pn 19 38 19.6 +0.6
FRTB Fartura 20.22 103 *e*P **P** **19 38 33.2 0.0**
PLCA Paso Flores 20.70 179 P P 19 38 37.6 -0.7
comp=Z,2.9nm,0.9s,baz=204,slow=19,SNR=3.7
PLCA Paso Flores 20.70 179 P 19 38 37.6 -0.7
IPMB Ipameri, GO 21.66 89 *e*P **P** **19 38 47.7 -1.1**
PTGA Pitinga 21.97 31 P P 19 38 50.2 -1.7
comp=Z,12nm,0.3s,baz=214,slow=16,SNR=14
PTGA LR LR 19 47 55.4
comp=Z,203nm,19.6s,baz=212,slow=38
PTGA Pitinga 21.97 31 P P 19 38 50.3 -1.7
PTGA IAmb IAmb 19 39 02.7
comp=Z,40nm,1.4s
PTGA Pitinga 21.97 31 *e*P **P** **19 38 50.4 -1.7**
BDFB Brasilia 22.32 83 P **P** **19 38 52.4 -3.5**
comp=Z,2.9nm,0.5s
BDFB LR LR 19 48 19.5
comp=Z,220nm,21.4s,slow=39
BDFB Brasilia 22.32 83 P P 19 38 54.6 -1.3
BDFB IAmb IAmb 19 39 00.8
comp=Z,15nm,1.1s
SOTA Rioblanco 22.64 345 *e*P **P** **19 39 02.9 +3.2**
BBAC Balboa, Cauca 22.69 344 *e*P **P** **19 39 01.0 +1.1**
PCON Cinco Dias 22.77 346 *e*P **P** **19 39 02.4 +1.2**
PRAC Prado 23.84 350 *e*P **P** **19 39 08.8 -2.5**
HORQ Saladito 23.94 346 *e*P **P** **19 39 14.2 +1.6**
ORTC Ortega, Tolima 24.08 350 *e*P **P** **19 39 14.3 +0.6**
YOTC Yotoco, Valle 24.37 347 *e*P **P** **19 39 17.1 +0.7**
CHIC Chingaza 24.59 353 *e*P **P** **19 39 16.6 -2.1**
ROSC El Rosal 24.86 352 P **P** **19 39 22.6 +1.5**
comp=Z,2.7nm,0.3s,baz=168,slow=20,SNR=1.1
ROSC LR LR 19 49 25.6
comp=Z,270nm,18.1s,baz=161,slow=37
RREF El Recreo 25.07 350 *e*P **P** **19 39 25.7 +2.4**
RUSC La Rusia 25.77 355 *e*P **P** **19 39 30.7 +1.2**
RUSC La Rusia 25.77 355 P **P** **19 39 29.6 +0.1**
JANB Januaria 25.92 83 *e*P **P** **19 39 29.2 -1.3**
CBOC Ciudad Bolivar 26.13 349 *e*P **P** **19 39 32.4 0.0**
SJMB Sao Joao De Ma 28.17 93 *e*P **P** **19 39 50.5 -0.1**
SMLC San Martn de 28.74 354 *e*P **P** **19 39 53.8 -1.9**
NAN01 Guarapari, ES 29.29 91 *e*P **P** **19 39 59.0 -1.5**
NBIT Itapeh - BA 30.52 86 *e*P **P** **19 40 09.9 -1.6**
PCRV Puerto La Cruz 30.60 12 LR LR 19 53 55.8
comp=Z,777nm,18.9s,slow=39
GDU01 Guandu, BA 30.70 83 *e*P **P** **19 40 11.5 -1.6**
MDP Montagnes des 30.77 38 LR LR 19 53 16.7
comp=Z,322nm,19.4s,baz=196,slow=38
NBPN Pedro Novo - B 31.02 78 *e*P **P** **19 40 14.9 -1.0**
ROSB Rosrio 31.26 61 *e*P **P** **19 40 15.9 -2.1**
NBPS Pedro II - PI 32.70 66 *e*P **P** **19 40 29.0 -1.7**
NBLA Lagarto - SE 33.19 79 *e*P **P** **19 40 33.2 -1.8**
NBTA Tacaratu-PE 33.61 76 *e*P **P** **19 40 37.6 -1.1**
NBMA Muriti-CE 33.67 73 *e*P **P** **19 40 37.8 -1.5**
NBPB Pedra_Branca-C 33.76 69 *e*P **P** **19 40 38.5 -1.4**
NBMO Morrinhos-CE 34.45 65 *e*P **P** **19 40 44.3 -1.7**
NBAN Anadia - AL 35.05 78 *e*P **P** **19 40 49.6 -1.6**
NBCL Cascavel-CE 35.51 68 *e*P **P** **19 40 53.5 -1.6**
RPN Rapa Nui 35.73 251 LR LR 19 51 42.7
comp=Z,171nm,18.3s,baz=86,slow=30
RCBR Riachuelo 36.90 72 P **P** **19 41 05.6 -1.4**
comp=Z,18nm,0.8s,baz=240,slow=9.9,SNR=9.4
NBPV Pedro Velho 37.20 74 *e*P **P** **19 41 08.3 -1.3**
MLPR Magueyes Islan 37.90 6 P **P** **19 41 15.2 -0.1**
TEIG Tepich 43.37 336 P **P** **19 42 02.0 +1.5**
comp=Z,9.4nm,0.9s,baz=118,slow=0.0
TEIG Tepich 43.37 336 P **P** **19 42 01.0 +0.5**
PMSA Palmer Station 45.03 176 *e*P **P** **19 42 15.0 +1.7**
BIRD Birdtown, Kers 55.04 351 P **P** **19 43 30.6 +1.0**
BIRD IAmb IAmb 19 43 31.5
comp=Z,11nm,0.9s
V52A Sevierville 56.77 348 P **P** **19 43 41.7 -0.3**
V52A IAmb IAmb 19 43 52.1
comp=Z,10nm,1.0s
V48A Smith Brothers 57.39 345 P **P** **19 43 45.4 -1.0**
V48A IAmb IAmb 19 43 56.5
comp=Z,8.4nm,1.0s
TXAR Lajitas Array 58.25 326 P **P** **19 43 55.2 +2.5**
comp=Z,0.6nm,0.7s,baz=156,slow=8.9,SNR=1.9
MIAR Mount Ida 58.30 338 P **P** **19 43 53.0 +0.2**
MIAR IAmb IAmb 19 43 54.9
comp=Z,17nm,1.4s
U40A Yellville 59.70 340 P **P** **19 44 02.5 -0.1**
U40A IAmb IAmb 19 44 03.6
comp=Z,3.7nm,0.8s
WVNY West Valley, N 62.45 354 P **P** **19 44 21.9 +0.8**
SNAA Sanae 64.37 161 P **P** **19 44 34.7 +1.2**
G62A West of Eustis 64.87 0 P **P** **19 44 38.6 +1.6**
SDCO Great Sand Dun 65.94 331 P **P** **19 44 45.5 +1.1**
SDCO IAmb IAmb 19 47 06.5
comp=Z,4.4nm,1.1s
CCUT Cedar City 69.72 325 P **P** **19 45 11.0 +2.8**
DBIC Dimbokro 70.22 75 P **P** **19 45 10.4 -1.1**
comp=Z,8.3nm,1.0s,baz=236,slow=9.2,SNR=4.6
DBIC LR LR 20 14 33.8
comp=Z,83nm,18.9s,baz=164,slow=35
DBIC Dimbokro 70.22 75 P **P** **19 45 08.8 -2.7**
DBIC IAmb IAmb 19 45 11.6
comp=Z,15nm,1.1s
PDAR Pinedale Array 71.81 331 P **P** **19 45 22.3 +1.4**
comp=Z,0.3nm,0.6s,baz=124,slow=7.7,SNR=2.6
NVAR Mina Array Bea 73.08 323 P **P** **19 45 28.8 +0.3**
comp=Z,0.5nm,0.7s,baz=133,slow=6.7,SNR=3.7
YNE Yellowstone No 73.77 332 P **P** **19 45 33.3 +0.9**
YHH Holmes Hill 73.97 332 P **P** **19 45 36.5 +2.8**
TOA0 Torodi Ar. Sit 78.72 72 P **P** **19 45 59.6 -1.4**
TOA0 IAmb IAmb 19 46 01.3
comp=Z,10nm,0.8s
TORD Torodi Ar. Bea 78.72 72 P **P** **19 46 00.3 -0.6**
comp=Z,8.1nm,0.6s,baz=255,slow=4.9,SNR=44
TORD LR LR 20 18 48.5
comp=Z,73nm,20.8s,baz=220,slow=34
BOSA Boshof 85.91 119 LR LR 20 24 13.7
comp=Z,42nm,18.1s,baz=160,slow=35
TAM Tamanrasset 85.92 64 P **P** **19 46 37.9 -0.7**
TAM IAmb IAmb 19 46 41.5
comp=Z,8.0nm,1.2s
ESDC Sonseca Array 86.15 45 P **P** **19 46 39.3 0.0**
comp=Z,1.4nm,0.9s,baz=232,slow=6.1,SNR=5.3
ESDC LR LR 20 24 52.7
comp=Z,28nm,18.1s,baz=180,slow=36
MAW Mawson 86.35 164 P **P** **19 46 40.0 +0.2**
comp=Z,3.5nm,1.0s,baz=201,slow=7.0,SNR=6.5
MAW Mawson 86.35 164 P **P** **19 46 40.2 +0.4**
YKA Yellowknife Ar 89.10 341 P **P** **19 46 53.8 +1.0**
comp=Z,1.1nm,0.6s,baz=136,slow=4.7,SNR=17
KEST Kesra 93.97 54 LR LR 20 30 44.8
comp=Z,46nm,19.6s,slow=36
H11S2 WAKE ISLAND Hyl 25.71 279 T T 22 12 27.4
baz=101,slow=74,SNR=39
H11S1 WAKE ISLAND Hyl 25.72 279 T T 22 12 26.7
baz=101,slow=74,SNR=41
H11S3 WAKE ISLAND Hyl 25.72 279 T T 22 12 28.7
baz=101,slow=74,SNR=27
H11N3 WAKE ISLAND Hyl 25.75 280 T T 22 12 25.5
baz=100,slow=75,SNR=19
H11N2 WAKE ISLAND Hyl 25.77 280 T T 22 12 26.6
baz=100,slow=75,SNR=21
H11N1 WAKE ISLAND Hyl 25.77 280 T T 22 12 25.8
baz=100,slow=75,SNR=16
ABKAR Akbulak array 131.34 41 PKiKP 19 53 12.1 +1.0
WRA Warramunga Arr 133.20 214 PKP **PKPdf** **19 53 15.4 +0.8**
comp=Z,0.6nm,0.8s,baz=146,slow=1.6,SNR=4.6
ZAA0 Zalesovo Array 141.36 23 PKPdf 19 53 28.7 +0.1
ZALV Zalesovo Beam 141.36 23 PKP **PKPdf** **19 53 28.9 +0.3**
comp=Z,2.9nm,0.7s,baz=271,slow=2.4,SNR=12
KDJ Kajisay 145.24 43 PKPdf 19 53 37.3 +1.2
MK31 Makanchi Array 145.49 33 PKPab 19 53 37.0 +0.6
MKAR Makanchi Array 145.49 33 PKPbc **PKPab** **19 53 37.1 +0.7**
comp=Z,2.5nm,0.7s,baz=328,slow=4.3,SNR=29
NIL Nilore 145.50 59 PKPdf 19 53 37.0 +0.4
KSH Kashi 145.62 48 PKPbc **PKPab** **19 53 38.4 +1.1**
KSH PP **PP** **19 57 01.1 +3.6**
KSH PKS **PKSdf** **19 57 09.4 -2.9**
MJAR Matsushiro Arr 149.57 309 PKPbc **PKiKP** **19 53 49.0 +0.1**
comp=Z,2.0nm,0.7s,baz=143,slow=1.0,SNR=5.1
SONM Songino Array 152.12 4 PKPbc **PKiKP** **19 53 55.0 +1.1**
comp=Z,2.7nm,0.6s,baz=333,slow=1.6,SNR=15
LZH Lanzhou 163.32 15 *e*PKP PKPdf 19 53 53.5 -7.7
LZH pPKP sPKPdf 19 54 06.8 +0.8
LZH sPKP 19 54 11.1

*NEIC **13** 19:41:59.1±2.4, 16.24N±0.05×95.73W±0.04, h26km±7km, Error ellipse: s-maj=8.7km s-min=4.3km az=147.0*
*IDC **13** 19:42:00.8±5.5, 16.30N×95.61W, h34km±36km, mb3.5/5, mb1 3.9/7, mb1mx3.7/37, mbtmp3.7/7, ML4.3/2, MS3.1/5, Ms1 3.1/5, ms1mx2.9/24, Error ellipse: s-maj=48.4km s-min=27.7km az=37.0*
*MEX **13** 19:42:01.9±0.8, 16.14N×95.65W, h22km±24km, MD4.6*
ISC 13 19:41:57.3±1.5, 16°24N±0.04×95°73W±0.03, h14km±10km, n73, σ1°43/80, mb4.1/10, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.59**	**218**	*e*P	**Pn**	**19 42 11.3**	**0.0**
HUIG				*e*S	**Sn**	**19 42 19.5**	**-1.3**
PANG	**Puerto Angel**	**0.91**	**232**	*e*P	**Pn**	**19 42 15.9**	**+0.1**
PANG				*e*S	**Sn**	**19 42 28.0**	**-0.7**
PANG	**Puerto Angel**	**0.91**	**232**		**Pn**	**19 42 15.9**	**+0.1**
PANG					**Sn**	**19 42 28.0**	**-0.7**
CMIG	**Matias Romero**	**1.18**	**44**	Pg	**Pg**	**19 42 20.2**	**+0.3**
	363nm,0.3s,baz=218,slow=13,SNR=1391						
CMIG				Lg	Lg	19 42 36.1	
	2µm,0.3s,baz=349,slow=17,SNR=20						
CMIG	**Matias Romero**	**1.18**	**44**	*e*P	**Pg**	**19 42 20.2**	**+0.3**
CMIG				*i* S	**Sb**	**19 42 34.8**	**+0.3**
CMIG	**Matias Romero**	**1.18**	**44**		**Pg**	**19 42 20.2**	**+0.3**
CMIG					**Sb**	**19 42 34.8**	**+0.3**
VHO	**Vista Hermosa**	**1.27**	**311**	*i* P	**Pg**	**19 42 23.8**	**+2.0**
VHO				*e*S	**Sn**	**19 42 39.7**	**+1.9**
PEIG	**Puerto Escondi**	**1.38**	**260**	*e*P	**Pn**	**19 42 22.4**	**+0.2**
YOIG	**Yosondua**	**1.84**	**290**	*e*P	**Pg**	**19 42 31.6**	**-1.1**
TUIG	**Tuzandepetl**	**2.18**	**35**	*e*P	**Pn**	**19 42 34.6**	**+1.4**
TUIG	**Tuzandepetl**	**2.18**	**35**		**Pn**	**19 42 34.6**	**+1.4**
TXIG	**Tlaxiaco**	**2.20**	**298**	*e*P	**Pb**	**19 42 36.7**	**-0.3**
TOIG	**Toxpalan**	**2.24**	**326**	*e*P	**Pg**	**19 42 39.4**	**-1.0**
PCIG		**2.48**	**102**	*e*P	**Pn**	**19 42 37.0**	**-0.3**
PCIG				*i* S	**Sn**	**19 43 05.0**	**-2.3**
PCIG		**2.48**	**102**		**Pn**	**19 42 37.0**	**-0.3**
PCIG					**Sn**	**19 43 05.0**	**-2.3**
HLIG	**Huajuapan de L**	**2.54**	**309**	*e*P	**Pb**	**19 42 42.3**	**-0.5**
TGIG		**2.56**	**78**	*e*P	**Pn**	**19 42 39.5**	**+1.1**
TGIG		**2.56**	**78**		**Pn**	**19 42 39.5**	**+1.1**
FTIG	**Fresnillo de T**	**2.83**	**306**	*e*P	**Pb**	**19 42 46.0**	**-1.7**
TLIG	**Tlapa**	**3.02**	**296**	*e*P	**Pb**	**19 42 48.5**	**-2.4**
TLIG	**Tlapa**	**3.02**	**296**		**Pb**	**19 42 48.5**	**-2.4**
CCIG	**Comitan**	**3.45**	**89**		**Pn**	**19 42 52.0**	**+1.2**
PPM	**Popocatepetl**	**3.94**	**316**	*e*P	**Pb**	**19 43 02.9**	**-4.0**
UNM	**Universidad Na**	**4.50**	**314**	Pn	**Pb**	**19 43 13.6**	**-2.7**
APG	**El Apazote**	**5.22**	**103**	Pn	**Pn**	**19 43 16.6**	**+1.4**
	3.6nm,0.3s,baz=335,slow=22,SNR=15						
APG					**Sn**	**19 44 13.8**	**-1.6**
	24nm,0.3s,baz=72,slow=18,SNR=7.5						
APG				Lg	Lg	19 44 38.0	
	20nm,0.3s,baz=334,slow=18,SNR=4.2						
MOIG	**Morelia**	**6.22**	**304**	Pn	**Pn**	**19 43 31.6**	**+2.7**
TEIG	**Tepich**	**8.12**	**60**	Pn	**Pn**	**19 43 53.7**	**-1.1**
	11nm,0.3s,baz=256,slow=0.0,SNR=24						
TEIG					**Sn**	**19 45 23.3**	**-3.2**
	14nm,0.3s,baz=136,slow=0.0,SNR=3.1						
TEIG				LR	LR	19 47 36.9	
	comp=Z,170nm,19.2s,baz=69,slow=42						
TEIG	**Tepich**	**8.12**	**60**		**Pn**	**19 43 53.4**	**-1.5**
CSGN	**Cosiguina Volc**	**8.55**	**111**	Pn	**Pn**	**19 44 04.5**	**+3.7**
TXAR	**Lajitas Array**	**14.94**	**332**	Pn	**P**	**19 45 32.4**	**-1.5**
	baz=155,slow=13,SNR=2.7						
TXAR				LR	LR	19 51 59.9	
	comp=Z,32nm,21.9s,baz=0.0,slow=40						
CBCY	**The Bluff, Cay**	**15.59**	**75**	Pn	**Pn**	**19 45 37.4**	**+0.7**
LPIG	**La Paz**	**15.75**	**302**	LR	LR	19 51 35.0	
	comp=Z,127nm,19.3s,baz=245,slow=36						
WHTX	**Lake Whitney,**	**15.76**	**355**		**P**	**19 45 43.0**	**+0.1**
WHTX				IAmb	IAmb	19 46 02.3	
	comp=Z,16nm,0.7s						
BCIP	**Isla Barro Col**	**17.02**	**112**	P	**P**	**19 45 58.4**	**+1.5**
X37A	**Clayton**	**18.28**	**1**	P	**P**	**19 46 11.4**	**+0.8**
X37A				IAmb	IAmb	19 46 19.2	
	comp=Z,11nm,0.7s						
MIAR	**Mount Ida**	**18.33**	**6**	P	**P**	**19 46 11.6**	**+0.3**
WMOK	**Wichita Mounta**	**18.62**	**352**	P	**P**	**19 46 13.9**	**-0.7**
W39A	**Magazine**	**18.96**	**5**	P	**P**	**19 46 17.3**	**-0.9**
W39A				IAmb	IAmb	19 46 42.6	
	comp=Z,16nm,1.0s						
Z50A	**Ashland**	**19.12**	**26**	P	**P**	**19 46 19.6**	**-0.4**
WHAR	**Wooly Hollow**	**19.22**	**9**	P	**Pn**	**19 46 21.8**	**-0.3**
WHAR				IAmb	IAmb	19 46 44.7	
	comp=Z,7.1nm,0.6s						
121A	**Cookes Peak, D**	**19.56**	**328**	P	**Pn**	**19 46 27.1**	**+0.8**
FCAR	**Ozark Folk Cen**	**19.84**	**9**	P	**P**	**19 46 27.6**	**-0.2**
FCAR				IAmb	IAmb	19 46 28.5	
	comp=Z,14nm,1.2s						
HHAR	**Hobbs**	**20.03**	**4**	P	**P**	**19 46 29.4**	**-0.5**
U38A	**Gravette**	**20.16**	**3**	P	**P**	**19 46 30.7**	**-0.6**
U38A				IAmb	IAmb	19 46 32.3	
	comp=Z,15nm,1.2s						
LCAR	**Lake Charles**	**20.17**	**11**	P	**P**	**19 46 30.7**	**-0.7**
LCAR				IAmb	IAmb	19 46 31.6	
	comp=Z,16nm,1.3s						
U40A	**Yellville**	**20.20**	**7**	P	**P**	**19 46 31.5**	**-0.3**
U40A				IAmb	IAmb	19 46 32.8	
	comp=Z,9.8nm,0.8s						
FPAL	**Fort Paine**	**20.36**	**25**	P	**P**	**19 46 31.1**	**-2.5**
FPAL				IAmb	IAmb	19 46 43.2	
	comp=Z,5.9nm,0.7s						
LENM	**Lemitar**	**20.52**	**333**	P	**P**	**19 46 35.0**	**-0.4**
T35A	**Sooner Cattle**	**20.61**	**358**	P	**P**	**19 46 36.0**	**-0.2**
T35A				IAmb	IAmb	19 46 41.4	
	comp=Z,16nm,0.9s						
ANMO	**Albuquerque**	**20.96**	**335**	P	Pn	19 46 45.1	+2.3
	comp=Z,2.7nm,0.8s,baz=149,slow=16,SNR=6.3						
ANMO	**Albuquerque**	**20.96**	**335**	P	**P**	**19 46 41.0**	**+0.8**
PBMO	**Poplar Bluff**	**20.99**	**12**	P	**P**	**19 46 39.5**	**-0.8**
CPCT	**Cooper Cave**	**21.60**	**26**	P	**P**	**19 46 46.7**	**-0.2**
CPCT				IAmb	IAmb	19 46 50.0	
	comp=Z,10nm,0.9s						
CCM	**Cathedral Cave**	**22.09**	**9**	P	**P**	**19 46 51.8**	**-0.3**
CCM				IAmb	IAmb	19 47 25.6	
	comp=Z,5.4nm,0.7s						
TKL	**Tuckaleechee C**	**22.09**	**27**	LR	LR	19 57 35.5	
	comp=Z,31nm,18.7s,baz=188,slow=42						
R40A	**Maddies Statio**	**22.18**	**7**	P	**P**	**19 46 52.1**	**-1.0**
R40A				IAmb	IAmb	19 46 55.3	
	comp=Z,7.4nm,0.8s						
SDCO	**Great Sand Dun**	**23.09**	**340**	P	**P**	**19 47 03.9**	**+0.8**
Q44A	**Meyer Farm, Va**	**23.34**	**13**	P	**P**	**19 47 03.1**	**-2.1**
PV14	**Lion Creek, Pa**	**24.96**	**335**	P	**P**	**19 47 22.6**	**+1.9**
PV14				IAmb	IAmb	19 47 24.9	
	comp=Z,7.2nm,1.0s						
SCIA	**State Center**	**25.67**	**4**	P	**P**	**19 47 25.6**	**-1.2**
PDAR	**Pinedale Array**	**28.97**	**339**	P	**P**	**19 47 57.9**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=142,slow=7.5,SNR=4.1						
NVAR	**Mina Array Bea**	**29.69**	**323**	P	**P**	**19 48 04.8**	**+1.6**
	comp=Z,1.3nm,0.8s,baz=144,slow=9.4,SNR=7.3						
REDW	**Red Top Meadow**	**29.95**	**338**	P	**P**	**19 48 06.9**	**+1.5**
AGMN	**Agassiz Nation**	**31.97**	**360**	P	**P**	**19 48 21.8**	**-1.1**
J08A	**Circle Bar Ran**	**33.25**	**329**	P	**P**	**19 48 36.4**	**+2.1**
J08A				IAmb	IAmb	19 48 54.3	
	comp=Z,3.0nm,0.7s						
YKA	**Yellowknife Ar**	**48.08**	**348**	P	**P**	**19 50 36.0**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=150,slow=7.7,SNR=6.5						
INK	**Inuvik**	**57.30**	**344**	P	**P**	**19 51 43.5**	**-0.9**
	comp=Z,1.3nm,0.6s,baz=156,slow=4.5,SNR=6.6						
INK	**Inuvik**	**57.30**	**344**	P	**P**	**19 51 43.2**	**-1.2**
ILAR	**Eielson Array**	**59.38**	**337**	P	**P**	**19 51 59.7**	**+0.7**
	comp=Z,0.5nm,0.9s,baz=147,slow=7.2,SNR=6.0						
NOA	**NORSAR Array B**	**83.89**	**28**	LR	LR	20 32 09.4	
	comp=Z,18nm,19.1s,baz=270,slow=36						
KSH	**Kashi**	**124.00**	**8**	PKP	**PKiKP**	**20 00 58.1**	**+2.0**
KSH				sPKP		20 01 11.1	
LZH	**Lanzhou**	**124.76**	**341**	*e*PKP	**P

YUK			*i* S	**Sn**	**19 43 56.9**	**+0.2**	
YUK			pmax	pmax			
	comp=Z,536nm,0.1s						
YUK			pmax	pmax			
	comp=E,299nm,0.2s						
YUK			smax	smax			
	comp=E,2μm,0.4s						
YUK			smax	smax			
	comp=N,954nm,0.5s						
GRPR	**Tuman**	**1.26 285**	*i* P	**Pn**	**19 43 42.1**	**-0.1**	
GRPR			AMB	AMB	19 43 43.0		
	comp=N,250nm,0.4s						
GRPR			*i* S	**Sn**	**19 43 58.0**	**0.0**	
GRPR			A	A	19 44 02.0		
	comp=N,1μm,0.4s						
GRPR			A	A	19 44 02.0		
	comp=N,750nm,0.4s						
GRPR	**Tuman**	**1.26 285**	⇓*i* PN	**Pn**	**19 43 42.1**	**-0.1**	
GRPR			*i* S	**Sn**	**19 43 57.6**	**-0.4**	
GRPR			pmax	pmax			
	comp=N,187nm,0.4s						
GRPR			pmax	pmax			
	comp=Z,252nm,0.4s						
GRPR			pmax	pmax			
	comp=E,64nm,0.2s						
GRPR			smax	smax			
	comp=N,1μm,0.3s						
GRPR			smax	smax			
	comp=E,749nm,0.4s						
LAGR	**Lagunnoye**	**1.27 288**	*e*P	**Pn**	**19 43 42.5**	**+0.2**	
LAGR			AMB	AMB	19 43 45.0		
	comp=E,320nm,0.4s						
LAGR			*e*S	**Sn**	**19 43 58.0**	**-0.1**	
LAGR			A	A	19 44 01.0		
	comp=E,1μm,0.5s						
LAGR			A	A	19 44 01.0		
	comp=E,2μm,0.5s						
LAGR	**Lagunnoye**	**1.27 288**	*e*PN	**Pn**	**19 43 41.7**	**-0.6**	
LAGR			*e*S	**Sn**	**19 43 58.0**	**-0.1**	
LAGR			pmax	pmax			
	comp=N,184nm,0.2s						
LAGR			pmax	pmax			
	comp=E,204nm,0.2s						
LAGR			pmax	pmax			
	comp=Z,319nm,0.2s						
LAGR			smax	smax			
	comp=N,1μm,0.3s						
LAGR			smax	smax			
	comp=E,2μm,0.5s						
NEM2	**Nemuro 2**	**1.29 256**	P	**Pn**	**19 43 41.6**	**-1.0**	
NEM2			*e*S	**Sn**	**19 43 58.5**	**-0.2**	
NMR	**Nemuro--Hokkai**	**1.30 257**	*e*P	**Pn**	**19 43 41.8**	**-0.9**	
NMR			*e*S	**Sn**	**19 43 58.9**	**0.0**	
NMR	**Nemuro--Hokkai**	**1.30 257**	*e*PN	**Pn**	**19 43 41.8**	**-0.9**	
NMR			*e*S	**Sn**	**19 43 58.9**	**0.0**	
GLVR	**Golovnino**	**1.41 273**	*i* P	**Pn**	**19 43 44.5**	**+0.3**	
GLVR			AMB	AMB	19 43 44.8		
	comp=E,170nm,0.3s						
GLVR			*i* S	**Sn**	**19 44 01.8**	**+0.2**	
GLVR			A	A	19 44 05.0		
	comp=E,1μm,0.3s						
GLVR			A	A	19 44 05.0		
	comp=E,540nm,0.3s						
GLVR	**Golovnino**	**1.41 273**	*c i* PN	**Pn**	**19 43 44.5**	**+0.3**	
GLVR			*i* S	**Sn**	**19 44 02.2**	**+0.6**	
GLVR			pmax	pmax			
	comp=N,46nm,0.3s						
GLVR			pmax	pmax			
	comp=Z,169nm,0.3s						
GLVR			smax	smax			
	comp=N,1μm,0.3s						
GLVR			smax	smax			
	comp=E,538nm,0.3s						
KUR	**Kuril'sk**	**1.58 10**	*i* P	**Pn**	**19 43 46.5**	**0.0**	
KUR			AMB	AMB	19 43 49.0		
	comp=E,40nm,0.2s						
KUR			AMB	AMB	19 43 49.0		
	comp=E,30nm,0.2s						
KUR			AMB	AMB	19 43 49.0		
	comp=E,70nm,0.2s						
KUR			*i* S	**Sn**	**19 44 05.9**	**+0.2**	
KUR			A	A	19 44 08.0		
	comp=E,380nm,0.3s						
KUR			A	A	19 44 08.0		
	comp=E,290nm,0.3s						
KUR	**Kuril'sk**	**1.58 10**	*c i* PN	**Pn**	**19 43 46.8**	**+0.3**	
KUR			*e*S	**Sn**	**19 44 06.3**	**+0.6**	
KUR			pmax	pmax			
	comp=Z,66nm,0.1s						
KUR			pmax	pmax			
	comp=N,41nm,0.2s						
KUR			pmax	pmax			
	comp=E,30nm,0.1s						
KUR			smax	smax			
	comp=N,342nm,0.3s						
KUR			smax	smax			
	comp=E,195nm,0.2s						
JRA	**Rausu**	**1.71 279**	P	**Pn**	**19 43 48.8**	**+0.4**	
JKHN	**Kushirohamanak**	**1.78 251**	P	**Pn**	**19 43 49.1**	**-0.2**	
JNSB	**Nemuroshibetsu**	**1.79 274**	P	**Pn**	**19 43 49.8**	**+0.4**	
JNK	**Nakash**	**2.00 268**	P	**Pn**	**19 43 51.9**	**-0.4**	
JAK	**Akkeshi**	**2.13 252**	P	**Pn**	**19 43 53.9**	**-0.2**	
JTKR	**Abashiri--Toko**	**2.59 278**	P	**Pn**	**19 44 01.7**	**+1.3**	
JAR	**Ashorobuto**	**2.72 263**	P	**Pn**	**19 44 03.0**	**+0.8**	
JAR			*e*S	**Sn**	**19 44 34.8**	**+1.0**	
JOB	**Onbets**	**2.76 255**	P	**Pn**	**19 44 03.7**	**+0.9**	
JCH	**Churui**	**3.19 252**	P	**Pn**	**19 44 09.7**	**+1.1**	
ERM	**Erimo**	**3.58 244**	*d* iPN	**Pn**	**19 44 15.8**	**+1.8**	
JFR	**Furan**	**3.59 263**	P	**Pn**	**19 44 16.1**	**+2.0**	
JNBK	**Urakawa-nobuka**	**3.73 250**	P	**Pn**	**19 44 16.9**	**+0.8**	
YSS	**Yuzh-Sakhalins**	**4.66 316**	*e*P	**Pn**	**19 44 30.5**	**+1.6**	
YSS			*e*S	**Sn**	**19 45 21.8**	**+0.1**	
YSS			A	A	19 45 25.1		
	comp=E,10.0nm,0.8s						
YSS	**Yuzh-Sakhalins**	**4.66 316**	⇑*e*PN	**Pn**	**19 44 30.5**	**+1.6**	
YSS			*e*S	**Sn**	**19 45 21.6**	**-0.1**	
YSS			smax	smax			
	comp=E,10.0nm,0.8s						
EKMR	**Ekimchan**	**13.44 319**	*e*P	**Pn**	**19 46 28.3**	**-0.7**	
SEY	**Seymchan**	**19.50 7**	*e*P	**P**	**19 47 45.5**	**+1.1**	
SEY	**Seymchan**	**19.50 7**	*i* P	**P**	**19 47 45.5**	**+1.1**	
YAK	**Yakutsk**	**21.15 336**	*e*P	**P**	**19 48 01.5**	**-0.8**	
YAK	**Yakutsk**	**21.15 336**	*i* P	**P**	**19 48 01.5**	**-0.8**	
YAK			pmax	pmax			
	comp=Z,2.0nm,0.9s						
BILL	**Bilibino**	**26.36 16**	*e*P	**P**	**19 48 54.0**	**+1.1**	
BILL	**Bilibino**	**26.36 16**	*e*P	**P**	**19 48 54.0**	**+1.1**	
BILL			*e*		19 49 35.5		
BILL			*e*		19 52 16.6		
BILL			pmax	pmax			
	comp=Z,2.0nm,1.1s						
TIXI	**Tiksi**	**29.47 348**	*e*P	**P**	**19 49 18.9**	**-1.7**	
TIXI	**Tiksi**	**29.47 348**	*i* P	**P**	**19 49 18.9**	**-1.7**	
TIXI			pmax	pmax			
	comp=Z,1.0nm,1.3s						
ARU	**Arti**	**54.55 317**	*e*P	**P**	**19 52 44.4**	**-0.2**	
ARU	**Arti**	**54.55 317**	*d i*P	**P**	**19 52 44.4**	**-0.2**	
ARU					19 54 43.8		
ARU			S	**S**	**20 00 22.3**	**+1.5**	
ARU			SS	**SS**	**20 04 02.5**	**-0.6**	
ARU			pmax	pmax			
	comp=Z,6.0nm,1.6s						
FINES	**FINESS Array B**	**65.04 333**	*i* P	**P**	**19 53 56.4**	**-0.2**	
FINES			pmax	pmax			
	comp=Z,1.0nm,0.5s						
OBN	**Obninsk**	**65.50 324**	*e*P	**P**	**19 53 59.6**	**-0.1**	
OBN	**Obninsk**	**65.50 324**	*e*P	**P**	**19 53 59.6**	**-0.1**	
OBN			*e*		19 54 32.8		
OBN			*e*		19 56 22.8		
OBN			*e*PPP	PPP	19 58 00.6		
OBN			pmax	pmax			
	comp=Z,3.0nm,0.8s						

IDC 13 19:47:23.0±2.1, 2°29N×125°46E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/32, mbtmp3.3/3, MS3.4/1, Ms1 3.4/1, ms1mx2.6/18, Error ellipse: s-maj=187.0km s-min=27.6km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**19.98**	**243**	LR	LR	19 59 60.0	
	comp=Z,102nm,18.2s,baz=256,slow=38						
WRA	**Warramunga Arr**	**23.75**	**159**	P	P	19 52 36.6	-0.6
	0.4nm,0.3s,baz=337,slow=10,SNR=13						
ASAR	**Alice Springs**	**27.07**	**163**	P	P	19 53 08.1	+0.6
	0.3nm,0.5s,baz=339,slow=7.5,SNR=8.8						
MKAR	**Makanchi Array**	**58.03**	**326**	P	P	19 57 17.7	-0.2
	0.1nm,0.4s,baz=136,slow=6.6,SNR=2.0						

*JMA **13** 20:26:25.5±0.1, 24°.69N×122°.02E, h73km±2km, M2.5*
*TAP **13** 20:26:25.8, 24°.74N×122°.03E, h73km, ML3.2, B*
ISC 13 20:26:25.9±1.2, 24°.74N±0°.03×122°.03E±0°.02, h72km±5km, n114, σ0°90/223, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.20**	**232**	P	**Pn**	**20 26 36.7**	**0.0**
	baz=228						
TWC				*e*S	**Sn**	**20 26 44.1**	**-0.6**
	baz=228						
EOS1	**EOS1**	**0.21**	**153**	P	**Pn**	**20 26 37.1**	**+0.4**
	baz=154						
EOS1				S	**Sn**	**20 26 45.6**	**+1.0**
	baz=154						
NTC	**Toucheng**	**0.21**	**304**	P	**Pn**	**20 26 36.6**	**-0.1**
	baz=301						
NTC				S	**Sn**	**20 26 44.2**	**-0.6**
	baz=301						
ILA	**Ilan**	**0.25**	**277**	P	**Pn**	**20 26 37.3**	**+0.3**
	baz=274						
ILA				*e*S	**Sn**	**20 26 45.2**	**+0.1**
	baz=274						
TWB1	**Santiao Chiao**	**0.27**	**353**	*i* P	**Pn**	**20 26 37.1**	**0.0**
	baz=353						
TWB1				*e*S	**Sn**	**20 26 45.0**	**-0.3**
	baz=353						
TIPB	**Shuangxi**	**0.30**	**323**	P	**Pn**	**20 26 37.3**	**0.0**
	baz=321						
TIPB				S	**Sn**	**20 26 45.3**	**-0.4**
	baz=321						
TWE	**Neicheng**	**0.33**	**268**	*e*P	**Pn**	**20 26 37.7**	**+0.3**
	baz=265						
TWE				*e*S	**Sn**	**20 26 45.6**	**-0.3**
	baz=265						
SLBB	**Yuanshan**	**0.35**	**273**	*e*P	**Pn**	**20 26 38.0**	**+0.3**
	baz=271						
SLBB				*e*S	**Sn**	**20 26 46.5**	**+0.2**
	baz=271						
ENA	**Nanau**	**0.40**	**220**	P	**Pn**	**20 26 38.2**	**+0.2**
	baz=218						
ENA				S	**Sn**	**20 26 47.4**	**+0.5**
	baz=218						
NWF	**Wu-fen Shan**	**0.40**	**327**	*e*P	**Pn**	**20 26 38.1**	**-0.1**
	baz=325						
NWF				*e*S	**Sn**	**20 26 46.2**	**-0.9**
	baz=325						
WFSB	**Wu-fen Shan**	**0.40**	**327**	P	**Pn**	**20 26 38.1**	**0.0**
	baz=325						
WFSB				S	**Sn**	**20 26 47.0**	**0.0**
	baz=325						
ENTT	**Nioudou**	**0.43**	**257**	P	**Pn**	**20 26 38.9**	**+0.7**
	baz=255						
ENTT				S	**Sn**	**20 26 48.6**	**+1.3**
	baz=255						
TWA	**Mucha**	**0.47**	**301**	*e*P	**Pn**	**20 26 38.6**	**0.0**
	baz=300						
TWA				*e*S	**Sn**	**20 26 47.6**	**-0.3**
	baz=300						
NWLT	**Wulai**	**0.48**	**275**	*e*P	**Pn**	**20 26 38.8**	**+0.1**
	baz=274						
NWLT				*e*S	**Sn**	**20 26 47.9**	**-0.2**
	baz=274						
NDT	**Datong Townshi**	**0.48**	**254**	P	**Pn**	**20 26 39.2**	**+0.5**
	baz=253						
NDT				*e*S	**Sn**	**20 26 48.9**	**+0.7**
	baz=253						
NHDH	**Xindian Distri**	**0.51**	**297**	*e*P	**Pn**	**20 26 39.0**	**0.0**
	baz=295						
NHDH				*e*S	**Sn**	**20 26 48.7**	**+0.2**
	baz=295						
TATO	**Taipei**	**0.54**	**296**	*e*P	**Pn**	**20 26 39.0**	**-0.3**
	baz=295						
TATO				*e*S	**Sn**	**20 26 48.0**	**-1.1**
	baz=295						
TAP	**Taipei**	**0.56**	**303**	*e*P	**Pn**	**20 26 39.5**	**0.0**
	baz=302						
TAP				*e*S	**Sn**	**20 26 49.4**	**0.0**
	baz=302						
YM01	**YM01**	**0.58**	**315**	P	**Pn**	**20 26 39.6**	**-0.1**
	baz=313						
YM01				*e*S	**Sn**	**20 26 49.5**	**-0.4**
	baz=313						
YM11	**YM11**	**0.59**	**316**	*e*P	**Pn**	**20 26 39.8**	**-0.2**
	baz=315						
YM11				*e*S	**Sn**	**20 26 50.1**	**-0.1**
	baz=315						
YHNB	**Yeheng**	**0.59**	**264**	P	**Pn**	**20 26 40.1**	**+0.2**
	baz=262						
YHNB				S	**Sn**	**20 26 49.9**	**-0.3**
	baz=262						
YM10	**YM10**	**0.59**	**315**	*e*P	**Pn**	**20 26 39.8**	**-0.1**
	baz=314						
YM10				*e*S	**Sn**	**20 26 49.8**	**-0.4**
	baz=314						
YM05	**YM05**	**0.60**	**316**	P	**Pn**	**20 26 39.9**	**-0.1**
	baz=314						
YM08	**YM08**	**0.60**	**319**	*e*P	**Pn**	**20 26 39.5**	**-0.5**
	baz=318						
YM08				*e*S	**Sn**	**20 26 48.8**	**-1.4**
	baz=318						
NSK	**Sanguang**	**0.61**	**265**	*e*P	**Pn**	**20 26 40.2**	**+0.1**
	baz=263						
NSK				*e*S	**Sn**	**20 26 50.2**	**-0.2**
	baz=263						
YM04	**YM04**	**0.61**	**313**	*e*P	**Pn**	**20 26 39.8**	**-0.2**
	baz=312						
YM04				*e*S	**Sn**	**20 26 49.6**	**-0.8**
	baz=312						
YM03	**YM03**	**0.62**	**315**	*e*P	**Pn**	**20 26 40.2**	**0.0**
	baz=314						
YM03				*e*S	**Sn**	**20 26 52.2**	**+1.5**
	baz=314						
ANP	**Anpu**	**0.64**	**315**	*e*P	**Pn**	**20 26 40.2**	**-0.2**
	baz=314						
ANP				*e*S	**Sn**	**20 26 50.6**	**-0.5**
	baz=314						
NNSB	**Datong**	**0.66**	**243**	*e*P	**Pn**	**20 26 40.9**	**+0.2**
	baz=241						
NNSB				*e*S	**Sn**	**20 26 51.6**	**+0.1**
	baz=241						
NNSH	**Datong**	**0.66**	**243**	P	**Pn**	**20 26 40.8**	**+0.2**
	baz=241						
NNSH				*e*S	**Sn**	**20 26 51.6**	**+0.1**
	baz=241						
TWS1	**Kuangyinshan**	**0.66**	**304**	*e*P	**Pn**	**20 26 40.7**	**+0.2**
	baz=302						
TWS1				*e*S	**Sn**	**20 26 52.0**	**+0.7**
	baz=302						
NNS	**Nan Shan**	**0.66**	**244**	*e*P	**Pn**	**20 26 40.9**	**+0.2**
	baz=242						
NNS				*e*S	**Sn**	**20 26 51.6**	**0.0**
	baz=242						
TWY	**Chenhua**	**0.66**	**324**	*e*P	**Pn**	**20 26 40.2**	**-0.3**
	baz=324						
TWY				*e*S	**Sn**	**20 26 52.2**	**+0.9**
	baz=324						
NTST	**Danshui**	**0.68**	**309**	*e*P	**Pn**	**20 26 40.6**	**-0.1**
	baz=308						
NTST				*e*S	**Sn**	**20 26 52.6**	**+1.0**
	baz=308						
NACB	**Ninganchiao**	**0.68**	**215**	*e*P	**Pn**	**20 26 40.1**	**-0.7**
	baz=214						
NACB				*e*S	**Sn**	**20 26 51.5**	**-0.2**
	baz=214						
WLTB	**Daxi**	**0.71**	**280**	*e*P	**Pn**	**20 26 41.6**	**+0.6**
	baz=278						
WLTB				*e*S	**Sn**	**20 26 53.4**	**+1.2**
	baz=278						
ETLH	**Xiulin Townshi**	**0.72**	**223**	*e*P	**Pn**	**20 26 40.9**	**-0.5**
	baz=222						
ETLH				*e*S	**Sn**	**20 26 51.9**	**-0.8**
	baz=222						
TWD	**Chiawan**	**0.76**	**211**	*e*P	**Pn**	**20 26 41.1**	**-0.6**
	baz=210						
TWD				*e*S	**Sn**	**20 26 52.5**	**-0.7**
	baz=210						
NCU	**National Centr**	**0.80**	**287**	*e*P	**Pn**	**20 26 42.4**	**+0.3**
	baz=286						
NCU				*e*S	**Sn**	**20 26 55.1**	**+1.1**
	baz=286						
NCUH	**Zhongli**	**0.80**	**287**	*e*P	**Pn**	**20 26 42.3**	**+0.3**
	baz=286						
NCUH				S	**Sn**	**20 26 54.8**	**+0.7**
	baz=286						
HWA	**Hwalien**	**0.85**	**207**	*e*P	**Pn**	**20 26 42.5**	**-0.2**
	baz=206						
HWA				*e*S	**Sn**	**20 26 55.7**	**+0.7**
	baz=206						
JYNG	**Yonagunijimaku**	**0.88**	**108**	P	**Pn**	**20 26 42.6**	**-0.5**
JYNG				S	**Sn**	**20 26 55.3**	**-0.5**
PCYT	**Pengchaiyu**	**0.89**	**3**	*e*P	**Pn**	**20 26 43.6**	**+0.4**
	baz=3.0						
PCYT				*e*S	**Sn**	**20 26 55.8**	**-0.2**
	baz=3.0						
WHF	**Hehuan Shan**	**0.91**	**230**	*e*P	**Pn**	**20 26 43.8**	**-0.1**
	baz=229						
WHF				*e*S	**Sn**	**20 26 56.5**	**-0.6**
	baz=229						
TWT	**Tachien**	**0.91**	**238**	*e*P	**Pn**	**20 26 44.1**	**+0.5**
	baz=238						
TWT				*e*S	**Sn**	**20 26 57.1**	**+0.4**
	baz=238						
LIOB	**Emei**	**0.92**	**265**	*e*P	**Pn**	**20 26 43.6**	**0.0**
	baz=264						
LIOB				*e*S	**Sn**	**20 26 57.1**	**+0.4**
	baz=264						
TDCB	**Techi**	**0.92**	**239**	*e*P	**Pn**	**20 26 44.0**	**+0.3**
	baz=238						
TDCB				S	**Sn**	**20 26 56.9**	**-0.1**
	baz=238						
NHW	**Xinwu Township**	**0.93**	**287**	*e*P	**Pn**	**20 26 43.9**	**+0.2**
	baz=286						
NHW				*e*S	**Sn**	**20 26 57.9**	**+1.2**
	baz=286						
NSTT	**Nanjuang**	**0.94**	**264**	*e*P	**Pn**	**20 26 43.7**	**-0.1**
	baz=263						
NSTT				*e*S	**Sn**	**20 26 56.8**	**-0.1**
	baz=263						
YOJ	**Yonaguni jima**	**0.94**	**107**	P	**Pn**	**20 26 43.6**	**-0.2**
	baz=107						
YOJ				S	**Sn**	**20 26 56.5**	**-0.5**
	baz=107						
YOJ	**Yonaguni jima**	**0.94**	**107**	P	**Pn**	**20 26 43.5**	**-0.2**
YOJ				S	**Sn**	**20 26 56.6**	**-0.4**
SBCB	**Hsinchu**	**0.95**	**274**	*e*P	**Pn**	**20 26 44.0**	**+0.1**
	baz=272						
SBCB				*e*S	**Sn**	**20 26 57.7**	**+0.5**
	baz=272						
HSN	**Hsinchu**	**0.96**	**274**	*e*P	**Pn**	**20 26 43.8**	**-0.2**
	baz=275						
HSN				*e*S	**Sn**	**20 26 56.9**	**-0.6**
	baz=275						
CHGB	**Renai**	**1.03**	**229**	P	**Pn**	**20 26 45.1**	**+0.1**
	baz=228						
CHGB				S	**Sn**	**20 26 58.4**	**-0.9**
	baz=228						
ESL	**Shilin**	**1.06**	**211**	P	**Pn**	**20 26 43.7**	**-1.6**
	baz=209						
ESL				*e*S	**Sn**	**20 26 57.5**	**-2.3**
	baz=209						
WHP	**Taichung City**	**1.08**	**245**	*e*P	**Pn**	**20 26 46.3**	**+0.6**
	baz=244						
WHP				*e*S	**Sn**	**20 27 00.6**	**+0.2**
	baz=244						
OWD	**Renai**	**1.10**	**225**	*e*P	**Pn**	**20 26 45.6**	**-0.3**
	baz=224						
OWD				S	**Sn**	**20 26 59.7**	**-1.0**
	baz=224						
NMLH	**Miaoli**	**1.14**	**260**	*e*P	**Pn**	**20 26 46.5**	**+0.2**
	baz=259						
NMLH				*e*S	**Sn**	**20 27 01.3**	**-0.2**
	baz=259						
EGFH	**Guangfu**	**1.19**	**207**	*e*P	**Pn**	**20 26 46.0**	**-1.0**
	baz=207						
EGFH				*e*S	**Sn**	**20 27 01.5**	**-1.2**
	baz=207						
NSY	**Sanyi**	**1.19**	**255**	*e*P	**Pn**	**20 26 47.5**	**+0.5**
	baz=254						
NSY				*e*S	**Sn**	**20 27 03.1**	**+0.4**
	baz=254						
TWQ1	**Liyutan**	**1.20**	**252**	*e*P	**Pn**	**20 26 47.2**	**+0.1**
	baz=250						
TWQ1				*e*S	**Sn**	**20 27 03.1**	**+0.1**
	baz=250						
DPDB	**Guoxing**	**1.22**	**235**	*e*P	**Pn**	**20 26 48.2**	**+0.9**
	baz=234						
DPDB				*e*S	**Sn**	**20 27 04.7**	**+1.2**
	baz=234						
PTSB	**Yuanli**	**1.23**	**257**	*e*P	**Pn**	**20 26 47.8**	**+0.3**
	baz=256						
PTSB				S	**Sn**	**20 27 03.9**	**+0.2**
	baz=256						
VWDT	**VWDT**	**1.27**	**220**	*e*P	**Pn**	**20 26 47.8**	**-0.1**
	baz=219						
VWDT				*e*S	**Sn**	**20 27 03.3**	**-1.1**
	baz=219						
WDJ	**Dajia District**	**1.32**	**253**	*e*P	**Pn**	**20 26 48.8**	**+0.3**
	baz=252						
WDJ				*e*S	**Sn**	**20 27 05.2**	**-0.4**
	baz=252						
SMLT	**Sun Moon Lake**	**1.33**	**231**	*e*P	**Pn**	**20 26 49.5**	**+0.6**
	baz=229						
SMLT				*e*S	**Sn**	**20 27 07.7**	**+1.6**
	baz=229						
TYC	**Yuchr**	**1.35**	**232**	P	**Pn**	**20 26 49.4**	**+0.5**
	baz=231						
TYC				*e*S	**Sn**	**20 27 07.6**	**+1.4**
	baz=231						
HGSD	**Ruisui**	**1.35**	**204**	*e*P	**Pn**	**20 26 48.5**	**-0.6**
	baz=203						
HGSD				*e*S	**Sn**	**20 27 06.3**	**-0.1**
	baz=203						
SSLB	**Suanglung**	**1.36**	**226**	*e*P	**Pn**	**20 26 49.2**	**+0.1**
	baz=225						
SSLB				*e*S	**Sn**	**20 27 06.1**	**-0.5**
	baz=225						
TCU	**Taichung**	**1.36**	**245**	*e*P	**Pn**	**20 26 49.5**	**+0.4**
	baz=244						
TCU				*e*S	**Sn**	**20 27 06.8**	**+0.3**
	baz=244						
EHY	**Hungye**	**1.38**	**208**	*e*P	**Pn**	**20 26 49.3**	**-0.1**
	baz=207						
EHY				*e*S	**Sn**	**20 27 05.2**	**-1.8**
	baz=207						
WCHH	**Zhanghua**	**1.49**	**244**	*e*S	**Sn**	**20 27 09.8**	**+0.2**
	baz=243						
WHYT	**Xinyi Township**	**1.49**	**226**	*e*P	**Pn**	**20 26 52.0**	**+1.2**
	baz=225						
WHYT				*e*S	**Sn**	**20 27 11.2**	**+1.6**
	baz=225						
WNT	**Mingjian**	**1.49**	**235**	*e*P	**Pn**	**20 26 52.2**	**+1.4**
	baz=234						
WNT				*e*S	**Sn**	**20 27 10.3**	**+0.7**
	baz=234						
WJS	**Zhushan**	**1.49**	**233**	*e*P	**Pn**	**20 26 52.5**	**+1.7**
	baz=232						
WJS				*e*S	**Sn**	**20 27 10.4**	**+0.8**
	baz=232						
YULB	**Yu-li**	**1.49**	**207**	*e*P	**Pn**	**20 26 49.0**	**-1.9**
	baz=206						
YULB				*e*S	**Sn**	**20 27 09.6**	**-0.1**
	baz=206						
TWF1	**Yuli**	**1.53**	**206**	*e*P	**Pn**	**20 26 51.1**	**-0.3**
	baz=205						
TWF1				*e*S	**Sn**	**20 27 10.7**	**+0.1**
	baz=205						
IRIF	**Iriomote-Funau**	**1.60**	**104**	P	**Pn**	**20 26 52.0**	**-0.3**
IRIF				S	**Sn**	**20 27 11.8**	**-0.4**
ALS	**Alishan**	**1.65**	**223**	*e*P	**Pn**	**20 26 53.9**	**+0.6**
	baz=222						
ALS				*e*S	**Sn**	**20 27 14.9**	**+1.1**
	baz=222						
FULB	**Fuli**	**1.67**	**204**	*e*P	**Pn**	**20 26 52.4**	**-0.8**
	baz=203						
FULB				*e*S	**Sn**	**20 27 13.3**	**-0.5**
	baz=203						
CHN5	**Tsauling**	**1.67**	**228**	*e*P	**Pn**	**20 26 54.0**	**+0.7**
	baz=227						
CHN5				*e*S	**Sn**	**20 27 15.0**	**+0.9**
	baz=227						
WGK	**Gukeng**	**1.69**	**232**	*e*P	**Pn**	**20 26 54.0**	**+0.5**
	baz=231						
WGK				*e*S	**Sn**	**20 27 15.0**	**+0.6**
	baz=231						
WDLH	**Douliu**	**1.71**	**233**	*e*P	**Pn**	**20 26 53.8**	**+0.1**
	baz=232						
WDLH				*e*S	**Sn**	**20 27 15.0**	**+0.2**
	baz=232						
CHKT	**Chengkung**	**1.74**	**200**	*e*P	**Pn**	**20 26 52.4**	**-1.7**

baz=200
CHKT eS Sn 20 27 15.2 -0.2
baz=200
HATJ Hateruma jima 1.76 112 P Pn 20 26 54.9 +0.5
HATJ eS Sn 20 27 16.3 +0.4
ELDTW Lidau 1.79 211 eP Pn 20 26 54.4 -0.5
baz=210
ELDTW eS Sn 20 27 15.6 -1.4
baz=210
JKRS Kuro-shima 1.88 105 P Pn 20 26 56.3 +0.4
JKRS S Sn 20 27 18.9 +0.2
CHN4 Tsaushan 1.90 224 eP Pn 20 26 57.6 +1.3
baz=223
CHN4 eS Sn 20 27 21.8 +2.4
baz=223
CHY Chiayi 1.91 230 eP Pn 20 26 58.3 +1.9
baz=229
CHY eS Sn 20 27 19.7 +0.1
baz=229
TPUB Ta-pu 1.92 222 eP Pn 20 26 57.5 +1.0
baz=221
TPUB eS Sn 20 27 21.6 +1.8
baz=221
STYT Tauyuan 1.95 217 P Pn 20 26 57.9 +0.9
baz=216
STYT eS Sn 20 27 22.4 +1.9
baz=216
JIJ Ishigaki jima 1.96 100 P Pn 20 26 57.0 -0.1
JIJ S Sn 20 27 20.4 -0.5
WTP Ta-pu 1.96 221 eP Pn 20 26 58.6 +1.4
baz=220
WTP eS Sn 20 27 22.4 +1.5
baz=220
WSF Szhu 1.98 237 eP Pn 20 26 57.9 +0.6
baz=236
WSF S Sn 20 27 21.3 +0.2
baz=236
TWK Hsinying 2.03 224 eP Pn 20 26 59.2 +1.1
baz=223
TWK eS Sn 20 27 23.2 +0.7
baz=223
SNST Tainan City 2.06 223 eS Sn 20 27 25.1 +2.0
baz=222
CHN1 Nanshi 2.06 222 eP Pn 20 26 59.0 +0.5
baz=221
CHN1 eS Sn 20 27 24.0 +0.7
baz=221
TWH Lutao 2.08 194 eP Pn 20 26 57.5 -1.2
baz=193
TWH eS Sn 20 27 24.7 +1.1
baz=193
JISG Ishigakijimahi 2.08 94 P Pn 20 26 59.3 +0.6
JISG S Sn 20 27 24.7 +0.9
TWGBT Beinan 2.10 205 eP Pn 20 26 58.7 -0.2
baz=204
TWGBT eS Sn 20 27 22.0 -2.0
baz=204
TWG Pinlang 2.10 205 eP Pn 20 26 59.0 +0.1
baz=204
TWG eS Sn 20 27 21.9 -2.2
baz=204
SGST Jiashian 2.11 219 eP Pn 20 26 59.3 +0.2
baz=218
SGST eS Sn 20 27 25.5 +1.1
baz=218
SLGT Liugui 2.14 216 eP Pn 20 27 00.8 +1.2
baz=215
SLGT eS Sn 20 27 26.8 +1.5
baz=215
CHN8 Yiju 2.16 231 eS Sn 20 27 26.4 +0.8
baz=229
ECL Taimali 2.34 205 eP Pn 20 27 03.0 +0.8
baz=204
ECL eS Sn 20 27 28.5 -1.5
baz=204
MATB Ma-tsu 2.35 307 eP Pn 20 27 01.8 -0.6
baz=306
MATB eS Sn 20 27 29.0 -1.2
baz=306
VWUC VWUC 2.35 277 eP Pn 20 27 01.6 -0.7
baz=276
VWUC eS Sn 20 27 27.7 -2.6
baz=276
SSD Sandimen 2.35 213 eP Pn 20 27 04.0 +1.6
baz=212
SSD eS Sn 20 27 32.5 +2.1
baz=212
JTJ Tarama 2.44 92 P Pn 20 27 04.6 +1.1
JTJ eS Sn 20 27 33.5 +1.2
MASBT Mashibuluo 2.47 211 eP Pn 20 27 04.9 +0.9
baz=211
MASBT eS Sn 20 27 34.8 +1.7
baz=211
PNG Penghu 2.54 243 eP Pn 20 27 03.9 -0.9
baz=242
PNG eS Sn 20 27 33.2 -1.6
baz=242
PHUB P'eng-hu 2.55 242 eP Pn 20 27 03.4 -1.7
baz=241
PHUB eS Sn 20 27 32.4 -2.6
baz=241
EAST Anshuo 2.58 205 eP Pn 20 27 06.6 +1.1
baz=204
EAST eS Sn 20 27 33.6 -2.2
baz=204
WDGT Dungji 2.61 236 eS Sn 20 27 33.8 -2.8
baz=235

INET 13 20:34:02.0, 15°.56N×86°.43W, h31km, ML4.3, Honduras

IDC 13 20:44:22.1±4.2, 37°.69N×69°.69E, h0km, mb3.7/2, mb1 3.8/9, mb1mx3.5/46, mbtmp3.8/9, ML3.3/7, Error ellipse: s-maj=61.3km s-min=18.7km az=166.0
NNC 13 20:44:28.6±3.8, 38°.17N×69°.35E, h8km±15km, mb4.2, mpv4.0, Error ellipse: s-maj=25.4km s-min=12.7km az=20.0
ISC 13 20:44:24.9±0.7, **37°.95N**±0°.05×**69°.51E**±0°.06, **h12**km, **n38,**
σ2§**67**/43, **5C-8D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**4.55**	**154**	P	**Pb**	**20 45 42.8**	**-2.0**
KK31	**Karatay Array**	**5.21**	**8**	Pn	**Pn**	**20 45 45.1**	**+2.5**
	4.2nm,0.5s,baz=206,slow=16,SNR=78						
KK31				⇓Pg	**Pb**	**20 45 59.2**	**+3.4**
	13nm,0.6s,baz=192,slow=17,SNR=8.9						
KK31				⇓Lg	Lg	20 47 10.5	
	32nm,0.7s,baz=184,slow=30,SNR=5.5						
AML	**Almayashu**	**5.27**	**36**	P	**Pn**	**20 45 47.0**	**+3.2**
	SNR=8.1						
THW	**Thamme Wali**	**5.46**	**160**	P	**Pn**	**20 45 49.7**	**+3.6**
UCH	**Uchtor**	**5.74**	**40**	P	**Pn**	**20 45 53.7**	**+3.3**
	SNR=12						
KZA	**Kyzart**	**6.04**	**45**	P	**Pn**	**20 45 57.5**	**+3.1**
	SNR=19						
AAK	**Ala-Archa**	**6.04**	**38**	Pn	**Pn**	**20 45 56.2**	**+2.0**
	4.8nm,0.3s,baz=179,slow=4.7,SNR=60						
AAK				Pg	**Pg**	**20 46 17.7**	**-2.8**
	2.5nm,0.3s,baz=203,slow=16,SNR=14						
AAK				Lg	Lg	20 47 29.3	
	0.8nm,0.3s,baz=189,slow=24,SNR=1.2						
AAK	**Ala-Archa**	**6.04**	**38**	P	**Pn**	**20 45 58.9**	**+4.8**
	SNR=8.4						
AAK	**Ala-Archa**	**6.04**	**38**	⇑Pn	**Pn**	**20 45 56.9**	**+2.7**
	6.8nm,0.5s						
AAK				⇓Pg	**Pg**	**20 46 16.5**	**-4.0**
	19nm,0.7s						
AAK				⇑Lg	Lg	20 47 36.1	
	51nm,0.8s						
KBK	**Karagaybulak**	**6.28**	**40**	P	**Pn**	**20 46 01.5**	**+4.1**
	SNR=14						
CHMS	**Chumysh**	**6.43**	**37**	P	**Pn**	**20 46 03.8**	**+4.3**
	SNR=9.5						
USP	**Ospenovka**	**6.53**	**34**	P	**Pn**	**20 46 04.3**	**+3.5**
	SNR=7.2						
TKM2	**Tokmak 2**	**6.80**	**41**	P	**Pn**	**20 46 07.7**	**+3.1**
	SNR=7.6						
TKM2	**Tokmak 2**	**6.80**	**41**	⇓Pn	**Pn**	**20 46 07.5**	**+2.9**
	6.7nm,0.7s						
TKM2				⇓Lg	Lg	20 48 01.9	
	21nm,0.8s						
THN	**Thein Dam**	**7.49**	**135**	eP	**Pb**	**20 46 31.5**	**-3.2**
THN				eS	**Sn**	**20 47 40.5**	**+1.8**
MDOK	**Medeo**	**7.75**	**45**	Pn	**Pn**	**20 46 21.4**	**+3.8**
	5.4nm,0.6s						
MDOK				Lg	Lg	20 48 32.3	
	28nm,1.3s						
GEYT	**Alibeck**	**9.00**	**273**	Pn	**Pn**	**20 46 35.0**	**+0.3**
	0.3nm,0.3s,baz=98,slow=10,SNR=2.0						
GEYT				Sn	**Sn**	**20 48 14.1**	**-1.9**
	0.5nm,0.3s,baz=78,slow=14,SNR=1.8						
PDGK	**Podgornoye**	**9.29**	**52**	⇑Pn	**Pn**	**20 46 41.6**	**+2.8**
	1.6nm,0.8s						
PDGK				⇓Pg		20 47 15.5	
	4.5nm,0.9s						
PDGK				⇑Lg	Lg	20 49 23.8	
	11nm,1.0s						
OTUK	**Ortayu**	**10.50**	**10**	⇓Pn	**Pn**	**20 46 56.7**	**+1.5**
	2.8nm,1.2s						
MKAR	**Makanchi Array**	**12.93**	**43**	Pn	**Pn**	**20 47 28.0**	**-0.4**
	0.1nm,0.3s,baz=233,slow=14,SNR=13						
MKAR				Lg	Lg	20 51 07.8	
	0.0nm,0.3s,baz=204,slow=24,SNR=1.7						
AB31	**Akbulak array**	**13.24**	**332**	Pn	**Pn**	**20 47 33.3**	**+0.6**
	0.9nm,0.4s,baz=162,slow=11,SNR=45						
AB31				⇓Sn	**Sn**	**20 49 55.2**	**-4.6**
	1.0nm,0.6s,baz=170,slow=21,SNR=4.4						
KURBB	**Kurchatov Arra**	**14.21**	**24**	Pn	**Pn**	**20 47 43.5**	**-2.3**
	0.1nm,0.3s,baz=213,slow=13,SNR=4.4						
AKTO	**Aktyubinsk**	**14.94**	**330**	Pn	**Pn**	**20 47 54.7**	**-1.0**
	0.2nm,0.3s,baz=144,slow=12,SNR=7.9						
AKTO	**Aktyubinsk**	**14.94**	**330**	⇑Pn	**Pn**	**20 47 56.7**	**+1.0**
	12nm,0.8s						
PYUN	**Piuthan**	**14.96**	**127**	eP	**Pn**	**20 47 54.0**	**-2.4**
BVAR	**Borovoye Array**	**15.09**	**2**	Pn	**Pn**	**20 47 55.3**	**-2.5**
	0.1nm,0.3s,baz=233,slow=37,SNR=3.7						
DANN	**Dangsing**	**15.28**	**125**	eP	**Pn**	**20 48 00.1**	**-0.7**
GKN	**Gorkha**	**16.09**	**124**	eP	**Pn**	**20 48 10.3**	**-0.8**
KKN	**Kakani**	**16.66**	**123**	eP	**Pn**	**20 48 17.8**	**-0.6**
	8.0nm,0.5s						
DMN	**Daman**	**16.66**	**124**	eP	**Pn**	**20 48 17.5**	**-1.0**
	10.0nm,0.8s						
PKIN	**Phulchoki**	**16.87**	**123**	eP	**Pn**	**20 48 20.1**	**-1.1**
	15nm,0.6s						
PKI	**Pulchoki**	**16.89**	**123**	eP	**Pn**	**20 48 20.0**	**-1.4**
	11nm,0.7s						
JIRN	**Jiri**	**17.35**	**121**	eP	**Pn**	**20 48 26.8**	**-0.5**
RAMN	**Ramite**	**18.09**	**122**	eP	**Pn**	**20 48 33.8**	**-2.5**
TAPN	**Taplejung**	**18.59**	**119**	eP	**P**	**20 48 41.6**	**-0.6**
	5.2nm,0.5s						
ZALV	**Zalesovo Beam**	**19.15**	**28**	P	**Pn**	**20 48 48.7**	**-0.1**
	0.3nm,0.3s,baz=220,slow=12,SNR=9.9						
ARU	**Arti**	**19.88**	**342**	P	**Pn**	**20 48 58.5**	**+1.0**
	3.6nm,0.7s,baz=165,slow=6.8,SNR=20						
KBZ	**Khabaz**	**20.90**	**294**	P	Pn	20 49 08.8	-0.6
	1.8nm,0.7s,baz=98,slow=8.8,SNR=5.5						

IDC 13 21:00:05.4±1.2, 7°.04S×154°.78E, h0km, mb3.9/9, mb1 4.1/10, mb1mx3.9/33, mbtmp3.9/10, ML3.7/1, Error ellipse: s-maj=36.2km s-min=22.0km az=117.0
ISC 13 21:00:12.0±0.9, **6°.9S**±0°.1×**154°.6E**±0°.1, **h39**km, **n11,**
σ1§**35**/13, **mb3.8/9, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.58**	**315**	Pn	**Pn**	**21 01 04.7**	**-0.4**
	5.2nm,0.3s,baz=207,slow=6.8,SNR=1.9						
KRVT				Sn	**Sn**	**21 01 44.5**	**-1.7**
	9.9nm,0.3s,baz=118,slow=17,SNR=2.4						
WRA	**Warramunga Arr**	**23.52**	**235**	P	**P**	**21 05 17.6**	**-1.2**
	2.4nm,0.8s,baz=59,slow=9.3,SNR=1.0						
ASAR	**Alice Springs**	**25.91**	**228**	P	**P**	**21 05 39.9**	**-0.8**
	0.7nm,0.8s,baz=59,slow=9.2,SNR=6.2						
STKA	**Stephens Creek**	**27.65**	**204**	P	**P**	**21 05 55.2**	**-1.0**
	1.4nm,0.9s,baz=27,slow=14,SNR=4.3						
FITZ	**Fitzroy Crossi**	**30.29**	**246**	P	**P**	**21 06 19.9**	**+0.1**
	5.6nm,1.3s,baz=51,slow=14,SNR=1.8						
CMAR	**Chiang Mai Arr**	**60.33**	**296**	P	**P**	**21 10 20.4**	**+3.0**
	0.7nm,0.6s,baz=116,slow=4.9,SNR=4.3						
SONM	**Songino Array**	**69.00**	**327**	P	**P**	**21 11 14.6**	**+1.0**
	0.3nm,0.4s,baz=131,slow=5.9,SNR=2.9						
MKAR	**Makanchi Array**	**83.03**	**319**	P	**P**	**21 12 33.9**	**+0.4**
	0.5nm,0.7s,baz=105,slow=4.5,SNR=8.6						
NVAR	**Mina Array Bea**	**92.00**	**52**	P	**P**	**21 13 17.0**	**-0.3**
	0.5nm,0.8s,baz=247,slow=5.8,SNR=3.2						
YKA	**Yellowknife Ar**	**96.45**	**28**	P	**P**	**21 13 35.5**	**-1.3**
	0.5nm,0.6s,baz=266,slow=4.3,SNR=7.2						
TORD	**Torodi Ar. Bea**	**152.57**	**285**	PKPbc	**PKPbc**	**21 20 05.0**	**-0.3**
	0.9nm,0.9s,baz=43,slow=2.6,SNR=3.5						
TORD				PKPab	**PKPab**	**21 20 16.0**	**+0.1**
	0.7nm,0.7s,baz=70,slow=2.8,SNR=4.2						

SNET 13 21:36:06.0±1.4, 14°.17N×89°.71W, h6km±18km, MD3.0, ML3.3
GCG 13 21:36:07.8±0.7, 14°.19N×89°.76W, h14km±29km, MD3.7
ISC 13 21:36:06.1±1.2, **14°.13N**±0°.04×**89°.72W**±0°.03, **h15**km±11km, **n17,** σ0§**36**/22, **7C-4D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTR	**El Retiro**	**0.24**	**163**	eP	**Pb**	**21 36 12.3**	**0.0**
SNJE	**San Jose**	**0.28**	**157**	⇑iP	**Pb**	**21 36 13.0**	**0.0**
SBLS	**San Blas**	**0.30**	**162**	eP	**Pb**	**21 36 13.2**	**-0.2**
MTO3	**Montecristo**	**0.44**	**52**	⇑iP	**Pg**	**21 36 14.8**	**-0.2**
MTO3				⇓eS	**Sg**	**21 36 21.0**	**0.0**
MTO3				IAML		21 36 21.3	
	comp=Z,3μm,0.1s						
ESQI	**Esquipulas**	**0.56**	**40**	⇑iP	**Pg**	**21 36 17.1**	**-0.1**
ESQI				⇓eS	**Sg**	**21 36 25.1**	**+0.3**
BOQS	**Boqueron**	**0.58**	**133**	⇑iP	**Pb**	**21 36 18.1**	**0.0**
IXG	**Ixpaco**	**0.70**	**273**	⇓iP	**Pb**	**21 36 20.3**	**+0.2**
IXG	**Ixpaco**	**0.70**	**273**	⇓iP	**Pg**	**21 36 19.5**	**-0.4**
NBG	**Las Nubes**	**0.76**	**307**	eP	**Pb**	**21 36 21.4**	**+0.2**
NBG				eS	**Sb**	**21 36 32.3**	**+0.9**
LBRS	**Las Brisas**	**0.76**	**121**	⇑iP	**Pb**	**21 36 21.3**	**+0.2**
LFRS	**El Faro**	**0.81**	**128**	eP	**Pb**	**21 36 22.1**	**+0.1**
PCG	**Pacaya**	**0.90**	**287**	eP	**Pn**	**21 36 24.4**	**-0.1**
PCG				eS	**Sn**	**21 36 36.4**	**-0.9**
MRL	**Marmol**	**0.94**	**2**	⇑eP	**Pg**	**21 36 24.6**	**+0.1**
MRL	**Marmol**	**0.94**	**2**	⇑iP	**Pb**	**21 36 23.8**	**-0.5**
FUG	**Fuego 3**	**1.14**	**286**	eP	**Pg**	**21 36 28.1**	**0.0**
FUG				eS	**Sn**	**21 36 43.1**	**+0.1**
TECA	**Tecapa**	**1.34**	**118**	eP	**Pb**	**21 36 31.2**	**+0.2**
PACA	**Pacayal**	**1.51**	**116**	eP	**Pb**	**21 36 33.8**	**-0.1**

ANF 13 21:39:09.3±0.5, 36°.11N×96°.83W, h4km±3km, ML4.1/9, Error ellipse: s-maj=3.8km s-min=2.4km az=9.0
NEIC 13 21:39:09.6±1.8, 36°.10N±0°.03×96°.91W±0°.04, h6km±7km, Error ellipse: s-maj=4.9km s-min=4.2km az=120.0
TUL 13 21:39:11.7±2.1, 36°.14N±0°.03×96°.89W±0°.05, h5km±2km, ML3.3, Error ellipse: s-maj=7.3km s-min=4.8km az=292.0
ISC 13 21:39:09.5±0.8, **36°.11N**±0°.03×**96°.89W**±0°.03, **h4**km, **n43,**
σ1§**29**/54, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADOK	**Arcadia Dam**	**0.60**	**221**		**Pg**	**21 39 20.7**	**-0.3**
OKCFA	**Oklahoma City**	**0.82**	**214**	Pn	**Pg**	**21 39 24.5**	**-0.8**
T35A	**Sooner Cattle**	**0.87**	**21**	Pg	**Pg**	**21 39 24.7**	**-1.4**
TUL1	**Leonard**	**0.91**	**102**	P	**Pg**	**21 39 25.5**	**-1.5**
	baz=285						
TUL1				S	**Sg**	**21 39 37.7**	**-1.1**
	baz=285						
TUL1	**Leonard**	**0.91**	**102**		**Pg**	**21 39 25.5**	**-1.5**
W35A	**Tecumseh**	**0.95**	**179**	Pn	**Pg**	**21 39 26.6**	**-1.1**
X37A	**Clayton**	**1.96**	**140**		**Pn**	**21 39 43.3**	**-0.2**
X37A				Sn	**Sb**	**21 40 10.0**	**-0.4**
U38A	**Gravette**	**2.05**	**80**		**Pn**	**21 39 44.5**	**-0.3**
WMOK	**Wichita Mounta**	**2.06**	**229**	P	**Pn**	**21 39 44.8**	**-0.1**
	baz=47						
WMOK				S	**Sb**	**21 40 13.1**	**-0.3**
	baz=47						
WMOK	**Wichita Mounta**	**2.06**	**229**	Pn	**Pn**	**21 39 44.6**	**-0.3**
HHAR	**Hobbs**	**2.39**	**85**		**Pn**	**21 39 49.0**	**-0.5**
W39A	**Magazine**	**2.69**	**109**	P	**Pn**	**21 39 53.6**	**+0.1**
	baz=291						
W39A	**Magazine**	**2.69**	**109**		**Pn**	**21 39 53.5**	**+0.1**
R32A	**Long Quarter,**	**2.73**	**328**	Pn	**Pn**	**21 39 53.3**	**-0.9**
KSU1	**Kansas State U**	**3.00**	**4**	Sb	**Sb**	**21 40 42.3**	**+1.8**
	baz=185						
KSU1	**Kansas State U**	**3.00**	**4**	Pn	**Pn**	**21 39 57.9**	**+0.1**
MIAR	**Mount Ida**	**3.12**	**119**	P	**Pn**	**21 39 59.5**	**0.0**
	baz=302						
MIAR				S	**Sn**	**21 40 37.1**	**-0.2**
	baz=302						
MIAR	**Mount Ida**	**3.12**	**119**		**Pn**	**21 39 59.7**	**+0.2**
Z38A	**Mt. Pleasant**	**3.24**	**150**	Pn	**Pn**	**21 40 00.9**	**-0.2**
U40A	**Yellville**	**3.27**	**84**	P	**Pn**	**21 40 00.9**	**-0.7**
	baz=268						
U40A				S	**Sn**	**21 40 40.3**	**-0.7**
	baz=268						
CBKS	**Cedar Bluff**	**3.53**	**321**	Pb	**Pb**	**21 40 13.0**	**+0.5**
	baz=139						
CBKS	**Cedar Bluff**	**3.53**	**321**	Pn	**Pn**	**21 40 04.8**	**-0.3**
X40A	**Basin Creek Fa**	**3.69**	**115**		**Pn**	**21 40 07.5**	**+0.2**
WHAR	**Wooly Hollow**	**3.83**	**101**	Pn	**Pn**	**21 40 09.3**	**+0.1**
FCAR	**Ozark Folk Cen**	**3.87**	**92**	Pn	**Pn**	**21 40 10.6**	**+0.8**
W41B	**Gary Mavity, V**	**3.89**	**102**	S	**Sn**	**21 40 55.5**	**-0.8**
	baz=286						
AMTX	**Amarillo**	**4.09**	**254**	Pn	**Pn**	**21 40 11.2**	**-1.7**
WHTX	**Lake Whitney,**	**4.13**	**187**	Pn	**Pn**	**21 40 15.0**	**+1.7**
ABTX	**Abilene, Hawle**	**4.15**	**214**	Pn	**Pn**	**21 40 12.9**	**-0.7**
R40A	**Maddies Statio**	**4.29**	**58**		**Pn**	**21 40 15.1**	**-0.5**
P38A	**Dawn**	**4.41**	**36**	Pn	**Pn**	**21 40 16.8**	**-0.4**
Z41A	**Richland Creek**	**4.41**	**129**	S	**Sn**	**21 41 07.6**	**-1.3**
	baz=312						
LCAR	**Lake Charles**	**4.65**	**89**	Pn	**Pn**	**21 40 21.0**	**+0.6**
N35A	**Tabor**	**4.85**	**11**		**Pn**	**21 40 23.1**	**-0.1**
N35A					**Sn**	**21 41 16.5**	**-3.3**
CCM	**Cathedral Cave**	**4.92**	**65**		**Pn**	**21 40 23.8**	**-0.4**
CCM					**Pb**	**21 40 38.4**	**+2.3**
P40A	**Paris**	**5.14**	**47**	Pn	**Pn**	**21 40 27.1**	**-0.1**
MSTX	**Muleshoe**	**5.27**	**248**	Pn	**Pn**	**21 40 28.6**	**-0.6**
KSCO	**Kaye Shedlock'**	**5.40**	**304**	Pn	**Pn**	**21 40 32.2**	**+1.3**
KSCO					**Pb**	**21 40 47.5**	**+3.0**
N38A	**Joes South For**	**5.49**	**30**	Pn	**Pn**	**21 40 33.4**	**+1.3**
N38A				Pg	**Pb**	**21 40 49.4**	**+3.5**
N38A				Sn	**Sn**	**21 41 35.8**	**+0.1**
JCT	**Junction City**	**6.12**	**204**	Pn	**Pn**	**21 40 43.0**	**+2.3**
SDCO	**Great Sand Dun**	**7.09**	**286**	Pn	**Pn**	**21 40 56.2**	**+2.0**
SDCO					**Pg**	**21 41 22.5**	**-2.8**
HDIL	**Hopedale**	**7.44**	**51**	Pn	**Pn**	**21 40 58.2**	**-0.6**
ISCO	**Idaho Springs**	**7.81**	**301**	Pn	**Pn**	**21 41 05.1**	**+0.9**
ISCO					Pg	21 41 32.7	-6.5

IDC 13 21:43:26.6±0.8, 41°.94S×88°.26E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.7/45, mbtmp3.9/8, MS3.9/17, Ms1 3.9/17, ms1mx3.8/31, Error ellipse: s-maj=25.0km s-min=22.6km az=105.0
GCMT 13 21:43:30.0±0.4, 42°.06S±0°.02×88°.24E±0°.03, h21km±1km, MW4.8/74, Moment Tensor Solution. s12,c12; s74,c93; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr~1.33±.22; Mθθ2.98±.18; Mϕϕ-1.66±.12; Mrθ-0.52±.23; Mϕθ-0.05±.10; Mϕr~0.03±.22; Best double couple: M◎2.35300×10¹⁶ NP1:ϕs316.00000°, δ80.00000°, λ0.00000°. NP2: ϕs46.00000°, δ90.00000°, λ-170.00000°. Principal axes: T 3.0420, Plg7.0000°, Azm181.0000°; N -1.3860, Plg80.0000°, Azm48.0000°; P -1.6650, Plg7.0000°, Azm271.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function
ISC 13 21:43:29.2±0.8, **41°.95S**±0°.2×**88°.2E**±0°.2, **h17**km, **n27,**
σ0§**63**/11, **mb3.9/8, MS4.0/17, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**21.42**	**79**	T	T	22 10 23.2	
	baz=243,slow=74						
H01W3	**Cape Leeuwin H**	**21.43**	**79**	T	T	22 10 21.8	
	baz=243,slow=74						
H01W1	**Cape Leeuwin H**	**21.44**	**79**	T	T	22 10 23.9	
	baz=243,slow=74						
NWAO	**Narrogin (SRO)**	**24.62**	**78**	LR	LR	21 56 11.9	
	comp=Z,273nm,21.8s,baz=248,slow=31						
MAW	**Mawson**	**29.15**	**200**	LR	LR	21 58 31.5	
	comp=Z,566nm,20.6s,baz=51,slow=31						
H08S2	**Diego Garcia H**	**36.89**	**333**	T	T	22 29 43.4	
	baz=161,slow=76						
H08S1	**Diego Carcia H**	**36.90**	**333**	T	T	22 29 43.9	
	baz=161,slow=76						
H08S3	**Diego Garcia H**	**36.91**	**333**	T	T	22 29 44.9	
	baz=161,slow=76						
LEM	**Lembang**	**38.96**	**32**	LR	LR	22 03 54.5	
	comp=Z,178nm,19.4s,baz=192,slow=32						
ASAR	**Alice Springs**	**41.94**	**79**	P	**P**	**21 51 18.4**	**-0.7**
	1.1nm,0.7s,baz=224,slow=7.3,SNR=14						
ASAR				PcP	**PcP**	**21 53 14.3**	**-0.1**
	1.7nm,0.6s,baz=226,slow=2.6,SNR=18						
STKA	**Stephens Creek**	**43.21**	**95**	P	**P**	**21 51 29.4**	**+0.1**
	1.0nm,0.6s,baz=246,slow=7.9,SNR=5.0						
STKA				LR	LR	22 07 21.2	
	comp=Z,167nm,19.7s,baz=212,slow=33						
WRA	**Warramunga Arr**	**44.56**	**75**	P	**P**	**21 51 40.0**	**-0.3**
	1.2nm,0.9s,baz=233,slow=8.2,SNR=6.6						
WRA				PcP	**PcP**	**21 53 22.6**	**-0.6**
	0.4nm,0.6s,baz=234,slow=3.0,SNR=7.1						
VNDA	**Vanda**	**45.92**	**163**	P	**P**	**21 51 51.4**	**+1.0**
	1.0nm,0.6s,baz=289,slow=9.1,SNR=10						
VNDA				LR	LR	22 08 25.8	
	comp=Z,181nm,21.8s,baz=270,slow=33						
QSPA	**South Pole Qui**	**48.21**	**180**	P	**P**	**21 52 08.0**	**-0.6**
	2.9nm,0.7s,baz=306,slow=2.6,SNR=16						
QSPA				LR	LR	22 10 49.7	
	comp=Z,293nm,18.5s,baz=282,slow=34						
BOSA	**Boshof**	**52.04**	**263**	LR	LR	22 10 22.9	
	comp=Z,154nm,19.3s,baz=168,slow=31						
LSZ	**Lusaka**	**57.74**	**279**	P	**P**	**21 53 19.2**	**-0.3**
	1.7nm,0.3s,baz=121,slow=4.1,SNR=4.1						
RPZ	**Rata Peaks**	**58.25**	**122**	LR	LR	22 13 25.5	
	comp=Z,215nm,18.5s,baz=240,slow=31						
CMAR	**Chiang Mai Arr**	**60.90**	**12**	P	**P**	**21 53 41.9**	**+0.9**
	1.0nm,0.6s,baz=211,slow=6.9,SNR=7.1						
CMAR				LR	LR	22 15 21.7	
	comp=Z,64nm,21.2s,baz=211,slow=31						
GEYT	**Alibeck**	**84.11**	**336**	LR	LR	22 28 25.6	
	comp=Z,54nm,21.4s,baz=165,slow=32						
KSRS	**Korea Array**	**86.92**	**31**	LR	LR	22 35 59.3	
	comp=Z,25nm,19.2s,baz=240,slow=36						
MKAR	**Makanchi Array**	**88.51**	**356**	P	**P**	**21 56 20.0**	**-0.2**
	0.3nm,0.7s,baz=139,slow=9.4,SNR=4.6						
MKAR				LR	LR	22 35 18.9	
	comp=Z,58nm,18.4s,baz=204,slow=35						
SONM	**Songino Array**	**90.82**	**12**	LR	LR	22 36 35.2	
	comp=Z,63nm,18.8s,baz=200,slow=35						
KBZ	**Khabaz**	**94.50**	**329**	LR	LR	22 35 00.2	
	comp=Z,31nm,20.9s,baz=196,slow=33						
PLCA	**Paso Flores**	**95.50**	**196**	LR	LR	22 40 37.6	
	comp=Z,114nm,18.3s,baz=170,slow=36						
ZALV	**Zalesovo Beam**	**95.56**	**358**	LR	LR	22 38 33.7	
	comp=Z,34nm,19.9s,baz=89,slow=35						
DBIC	**Dimbokro**	**96.71**	**273**	LR	LR	22 39 47.3	
	comp=Z,48nm,18.1s,slow=35						
INK	**Inuvik**	**145.59**	**26**	PKPbc	**PKPab**	**22 03 05.8**	**0.0**
	5.3nm,0.7s,baz=313,slow=3.1,SNR=15						

IDC 13 21:46:02.6±2.0, 14°.30S×73°.39W, h72km±18km, mb3.4/1, mb1 4.0/5, mb1mx3.5/42, mbtmp4.1/5, MS3.5/2, Ms1 3.5/2, ms1mx2.7/24, Error ellipse: s-maj=61.6km s-min=10.9km az=26.0
ISC 13 21:46:03.5±1.4, **14°.2S**±0°.3×**73°.3W**±0°.1, **h87**km, **n7,** σ1§**19**/8, **Central Peru**

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

MLv4.0/7
*IDC **13** 21:53:53.5±1.8, 6.°32S×107.°75E, h111km±38km, mb3.3/4, mb1 3.5/4, mb1mx3.1/39, mbtmp3.6/4, Error ellipse: s-maj=159.2km s-min=25.3km az=50.0*
ISC 13 21:53:48.3±1.5, **7.°7S**±0.°1×**106.°61E**±0.°09, **h69**km±17km, **n12**, σ**0.s63**/16, **mb3.3**/4, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNJI	Cibinong	0.63	56	P	Pn	21 54 02.6	+0.2
CNJI				S	Sn	21 54 13.0	+0.3
DBJI	Dramaga	1.11	7	P	Pn	21 54 08.3	+0.1
DBJI				S	Sn	21 54 21.9	-1.2
CISI	Cisompet, Garu	1.20	85	P	Pn	21 54 09.4	0.0
CISI				S	Sn	21 54 24.4	-0.8
LEM	Lembang	1.30	50	P	Pn	21 54 11.6	+0.8
	43nm,0.3s,baz=221,slow=1.3,SNR=18						
LEM				S	Sn	21 54 28.8	+1.1
	48nm,0.3s,baz=177,slow=19,SNR=11						
LEM	Lembang	1.30	50	P	Pn	21 54 11.0	+0.2
LEM				S	Sn	21 54 27.0	-0.7
BLSI	Bandar Lampung	2.65	329	P	Pn	21 54 29.0	+0.2
LWLI	Liwa	3.65	316	P	Pn	21 54 42.9	+0.4
MNAI	Manna	4.89	312	P	Pn	21 54 59.7	+0.3
WRA	Warramunga Arr	29.51	117	P	P	21 59 46.1	-0.2
	0.4nm,0.5s,baz=307,slow=9.2,SNR=10						
ASAR	Alice Springs	30.63	124	P	P	21 59 56.2	-0.1
	0.1nm,0.4s,baz=297,slow=10,SNR=2.1						
STKA	Stephens Creek	40.49	131	P	P	22 01 20.7	+0.1
	2.4nm,0.4s,baz=309,slow=7.4,SNR=12						
MKAR	Makanchi Array	58.38	341	P	P	22 03 31.2	-5.3
	0.1nm,0.5s,baz=133,slow=9.5,SNR=2.1						

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*IDC **13** 21:54:03.2±1.8, 26.°42S×27.°64E, h0km, mb4.0/3, mb1 4.2/8, mb1mx3.7/42, mbtmp4.1/8, ML4.0/3, Error ellipse: s-maj=33.7km s-min=19.4km az=110.0*
*NEIC **13** 21:54:03.6±1.8, 26.°37S±0.°05×27.°55E±0.°10, h5km±1km, mb4.3/3, Error ellipse: s-maj=14.8km s-min=9.1km az=84.0*
ISC 13 21:54:03.1±0.9, **26.°34S**±0.°05×**27.°60E**±0.°09, **h5**km, **n13**, σ**2.s29**/20, **mb4.2**/5, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBTB	Lobatse	2.23	306	Pn	Pb	21 54 43.8	-0.3
	79nm,0.3s,baz=132,slow=14,SNR=707						
LBTB				Sn	Sb	21 55 13.9	+1.8
	88nm,0.3s,baz=29,slow=21,SNR=30						
LBTB				Lg	Lg	21 55 22.4	
	49nm,0.3s,baz=212,slow=5.7,SNR=8.5						
LBTB	Lobatse	2.23	306		Pb	21 54 43.7	-0.3
LBTB				Sg	Sb	21 55 14.4	+2.3
BOSA	Boshof	3.08	222	Pn	Pn	21 54 52.5	0.0
	8.6nm,0.3s,baz=40,slow=12,SNR=188						
BOSA				Pg	Pb	21 54 59.0	+0.5
	9.9nm,0.3s,baz=41,slow=15,SNR=36						
BOSA				Sn	Sn	21 55 27.7	-2.1
	9.5nm,0.3s,baz=295,slow=15,SNR=7.6						
BOSA				Lg	Lg	21 55 35.6	
	21nm,0.3s,baz=307,slow=19,SNR=13						
BOSA	Boshof	3.08	222		Pn	21 54 52.6	0.0
BOSA					Pb	21 55 00.0	+1.6
SUR	Sutherland	8.44	223	Pn	Pn	21 56 06.2	-0.1
	1.9nm,0.3s,baz=48,slow=10,SNR=61						
SUR				Sn	Sn	21 57 36.1	-6.0
	1.9nm,0.3s,baz=148,slow=22,SNR=6.2						
SUR				Lg	Lg	21 58 21.6	
	2.2nm,0.3s,baz=315,slow=20,SNR=1.8						
LSZ	Lusaka	11.02	3	Pn	Pn	21 56 41.9	+0.3
	1.1nm,0.3s,baz=180,slow=14,SNR=10.0						
LSZ				Sn	Sn	21 58 40.1	-5.3
	0.6nm,0.3s,baz=257,slow=14,SNR=1.9						
LSZ				Lg	Lg	21 59 44.8	
	1.3nm,0.3s,baz=332,slow=2.6,SNR=5.4						
TSUM	Tsumeb	11.65	306	Pn	Pn	21 56 51.0	+0.7
	1.4nm,0.3s,baz=124,slow=10,SNR=20						
TSUM				Lg	Lg	22 00 03.1	
	0.3nm,0.3s,baz=49,slow=20,SNR=2.5						
TOA0	Torodi Ar. Sit	46.64	324	P	P	22 02 33.2	+0.5
TOA0				IAmb	IAmb	22 02 34.7	
	comp=Z,1.7nm,0.8s						
TORD	Torodi Ar. Bea	46.64	324	P	P	22 02 33.7	+1.0
	comp=Z,0.8nm,0.4s,baz=130,slow=5.9,SNR=22						
ANTO	Ankara	66.04	4	P	P	22 04 49.6	-1.2
HRA	Herat	68.75	30	P	P	22 05 08.7	+0.4
HRA				IAmb	IAmb	22 05 11.0	
	comp=Z,3.6nm,1.4s						
ESDC	Sonseca Array	71.97	335	P	P	22 05 29.2	+1.5
	comp=Z,0.6nm,0.6s,baz=157,slow=6.3,SNR=5.8						
FINES	FINESS Array B	87.48	359	P	P	22 06 52.8	+1.6
	comp=Z,1.8nm,0.8s,baz=126,slow=8.8,SNR=5.2						

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*UCR **13** 21:59:00.9±1.6, 7.°09N×82.°42W, h20km, mb4.6(NEIC)*
*IDC **13** 21:59:02.2±0.7, 7.°51N×82.°28W, h0km, mb4.2/13, mb1 4.4/18, mb1mx4.3/36, mbtmp4.2/18, ML3.2/4, MS3.8/20, Ms1 3.8/20, ms1mx3.7/27, Error ellipse: s-maj=28.3km s-min=13.0km az=47.0*
*UPA **13** 21:59:02.4±1.6, 7.°33N×82.°39W, h9km±11km, MW5.0*
*NEIC **13** 21:59:04.9±2.0, 7.°48N±0.°09×82.°40W±0.°07, h19km±4km, mb4.6/126, Error ellipse: s-maj=14.2km s-min=8.4km az=210.0*
*GCMT **13** 21:59:05.9±0.4, 7.°32N±0.°02×82.°43W±0.°03, h19km±1km, MW4.8/86, Moment Tensor Solution. s7,c7; s86,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.31±.10; $M_{\theta\theta}$-0.08±.08; $M_{\phi\phi}$-0.23±.10; $M_{r\theta}$0.72±.19; $M_{\theta\phi}$1.54±.07; $M_{\phi r}$-0.22±.15; Best double couple: $M_0$1.70400×10^{16} NP1:ϕ_s2.00000°, δ64.00000°, λ178.00000°. NP2: ϕ_s93.00000°, δ88.00000°, λ26.00000°. Principal axes: T 1.5150, Plg19.0000°, Azm320.0000°; N 0.3780, Plg64.0000°, Azm96.0000°; P -1.8930, Plg17.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 13 21:59:02.1±1.6, **7.°36N**±0.°05×**82.°37W**±0.°03, **h5**km±9km, **n300**, σ**1.s39**/277, **mb4.6**/66, **MS3.8**/14, **19C-14D**, **South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
REME3	Remedios, Chir	1.01	32	⇑eP	Pg	21 59 21.9	+0.3
PEDE3	Pedregal, Chir	1.02	357	⇑iP	Pg	21 59 21.8	+0.1
PVID3	Puerto Vidal,	1.02	48	eP	Pg	21 59 21.6	0.0
CHIR3	Chiriqui UPA,	1.03	2	⇑iP	Pg	21 59 21.8	0.0
LOCO3	Loma Colorada,	1.04	357	⇑iP	Pg	21 59 22.1	0.0
LOMA3	Las Lomas, Chi	1.06	359	eP	Pg	21 59 22.4	-0.1
DVD	David	1.07	356	⇓iP	Pg	21 59 22.5	-0.2
DVD				iS	Sg	21 59 36.1	-0.4
SBAR3	San Bartolo, C	1.08	332	⇑iP	Pg	21 59 22.5	-0.3
NANC3	Nancito, Chiri	1.08	36	⇓eP	Pb	21 59 22.2	-1.1
LESP3	La Esperanza,	1.12	338	⇑iP	Pb	21 59 22.6	-1.4
GUAL3	Gualaca, Chiri	1.17	4	iP	Pb	21 59 24.0	-0.8
PSOM3	Paja de Sombre	1.32	2	⇑eP	Pn	21 59 26.0	-1.3
PSOM3				iS	Sb	21 59 44.9	+0.3
RSUS3	Rio de Jesus,	1.35	63	⇑iP	Pn	21 59 26.2	-1.5
RSUS3				iS	Sb	21 59 43.6	-1.9
BCO2	Palmira	1.36	353	iP	Pn	21 59 26.8	-1.2
BCO2				iS	Sn	21 59 46.9	+0.4
MARI3	Mariato, Verag	1.40	78	⇑iP	Pn	21 59 27.1	-1.2
MARI3				iS	Sn	21 59 46.8	-0.4
MESA3	La Mesa, Verag	1.41	56	⇓eP	Pn	21 59 28.1	-0.3
LNBQ3	Los Naranjos,	1.42	357	⇓iP	Pn	21 59 27.7	-1.1
LNBQ3				eS	Sn	21 59 48.0	0.0
BRU2	Volcan	1.46	347	⇑iP	Pn	21 59 28.0	-1.3
BRU2	Volcan	1.46	347	eP	Pn	21 59 27.9	-1.4
PONU3	Ponuga, Veragu	1.48	69	⇑eP	Pn	21 59 28.3	-1.1
PONU3				iS	Sn	21 59 47.6	-1.5
PTJ1	Puerto Jimnez	1.49	322	⇓eP	Pn	21 59 28.5	-1.0
PTJ1	Puerto Jimnez	1.49	322	eP	Pn	21 59 28.1	-1.4
MLIR3	Monte Lirio, C	1.49	343	⇓iP	Pn	21 59 29.2	-0.5
CACAO	El Cacao, Vera	1.50	91	⇑iP	Pn	21 59 27.6	-2.1
CACAO				iS	Sn	21 59 47.3	-2.4
CNAZ3	Canazas, Verag	1.51	49	eP	Pn	21 59 28.7	-1.2
EDSV	San Vito	1.57	338	eP	Pn	21 59 30.1	-0.6
STIA3	Santiago, Vera	1.57	62	⇑eP	Pn	21 59 29.9	-0.8
SFRA3	San Francisco,	1.64	57	⇓iP	Pn	21 59 30.9	-0.8
OCU3	Ocu, Herrera	1.68	70	⇑eP	Pn	21 59 31.4	-0.8
OCU3				iS	Sn	21 59 54.1	-0.2
CALO3	Calobre, Verag	1.79	58	⇑eP	Pn	21 59 33.1	-0.6
PESE3	Pese, Herrera	1.82	73	eP	Pn	21 59 31.7	-2.4
TOSI3	Tonosi	1.92	89	eP	Pn	21 59 32.4	-3.0
EDPN	Palmar Norte	1.92	326	eP	Pn	21 59 34.3	-1.2
CRIS3	El Cristo, Coc	1.95	63	iP	Pn	21 59 35.3	-0.7
EDBA	Buenos Aires	2.00	333	eP	Pn	21 59 36.7	0.0
AZU	Azuero	2.12	78	eP	Pn	21 59 38.0	-0.2
AZU				eS	Sn	22 00 01.8	-3.3
AZU	Azuero	2.12	78	⇓eP	Pn	21 59 38.1	-0.2
AZU				iS	Sn	22 00 05.1	+0.1
AZU	Azuero	2.12	78	eP	Pn	21 59 36.8	-1.4
ACHO3	Achotines, Los	2.18	88	⇓eP	Pn	21 59 37.5	-1.6
RGM0	Gandoca	2.23	354	eP	Pb	21 59 42.0	-0.9
RGM0	Gandoca	2.23	354	eP	Pn	21 59 40.9	+1.2
PCRI3	Pocri, Los San	2.25	82	⇓iP	Pn	21 59 40.1	0.0
PNME	Penonome	2.31	61	⇓eP	Pn	21 59 41.1	+0.2
PNME				eS	Sn	22 00 12.0	+2.2
EDDO	Dominical	2.39	322	⇑eP	Pn	21 59 41.0	-1.0
VTON	El Valle, Cocl	2.56	61	⇑eP	Pn	21 59 45.0	+0.7
VTON				eS	Sn	22 00 15.9	0.0
LCR2	La Lucha 2	2.86	326	eP	Pn	21 59 48.1	-0.6
ZANG	Zanguenga, Cho	2.94	57	⇑eP	Pn	21 59 49.8	+0.2
ZANG	Zanguenga, Cho	2.94	57	eP	Pn	21 59 49.7	+0.1
PINA	Piqa, Costa Ab	2.96	50	⇓eP	Pn	21 59 51.3	+1.5
PINA				eS	Sn	22 00 25.7	0.0
CVTR	Volcan Turrial	2.98	333	eP	Pn	21 59 50.7	+0.3
CHOR3	La Chorrera	3.00	59	eP	Pn	21 59 50.3	0.0
CHOR3				eS	Sn	22 00 25.3	-1.4
SPIL	Cristobal, Col	3.07	52	eP	Pn	21 59 51.2	0.0
BCIP	Isla Barro Col	3.08	54	eP	Pn	21 59 51.3	-0.2
BCIP				eS	Sb	22 00 33.5	-1.9
BCIP	Isla Barro Col	3.08	54		Pn	21 59 51.8	+0.3
MLIR	Monte Lirio	3.11	53	eP	Pn	21 59 51.7	-0.2
TABO3	Taboga, Panama	3.13	63	eP	Pn	21 59 52.6	+0.4
HDC	Heredia	3.14	327	⇑eP	Pn	21 59 52.8	+0.4
HDC	Heredia	3.14	327	eP	Pn	21 59 52.5	+0.1
HDC	Heredia	3.14	327		Pn	21 59 52.8	+0.4
GAMB1	Gamboa	3.16	56	⇓eP	Pn	21 59 54.6	+2.0
FLAM	Flamenco Islan	3.20	61	eP	Pn	21 59 53.3	+0.2
FRIJ	El Hiral	3.20	55	eP	Pn	21 59 53.5	+0.3
UPA	Univ. de Panam	3.24	60	iP	Pn	21 59 54.2	+0.6
UPA				eS	Sn	22 00 31.4	-1.2
CHPO	Chepo, Panama	3.69	61	eP	Pn	21 59 59.9	+0.1
MIRA3	Miramar, Colon	3.73	54	eP	Pb	22 00 05.8	-2.7
ARE1	Arenal 1	3.86	323	eP	Pn	22 00 03.1	+1.0
CEDE	Laguna Cedeo	3.87	324	eP	Pn	22 00 03.2	+0.8
JTS	Las Juntas de	3.87	319	Pn	Pn	22 00 01.4	-0.9
	56nm,0.3s,baz=166,slow=12,SNR=68						
JTS				LR	LR	22 00 43.3	
	comp=Z,294nm,19.6s,baz=148,slow=26						
JTS				Sn	Sn	22 00 46.0	-2.3
	21nm,0.3s,baz=276,slow=15,SNR=3.8						
JTS	Las Juntas de	3.87	319	⇓eP	Pn	22 00 01.5	-0.9
JTS	Las Juntas de	3.87	319	eP	Pn	22 00 01.1	-1.3
JTS	Las Juntas de	3.87	319	Pn	Pn	22 00 01.0	-1.3
JTS					Sn	22 00 42.9	-5.4
CNTA3	Canitas, Panam	3.91	62	eP	Pn	22 00 03.3	+0.4
PLVR	Palo Verde	4.18	315	eP	Pn	22 00 06.3	-0.4
PTEN	Parque Tenorio	4.22	322	eP	Pn	22 00 08.2	+1.0
GUAI	GUAI	4.24	313	eP	Pn	22 00 07.3	-0.2
COLC	Colonia	4.31	320	eP	Pn	22 00 08.9	+0.4
UPD2	Meteti	4.47	74	eP	Pn	22 00 10.9	+0.3
GPS2	Hotel Rincn d	4.47	319	eP	Pn	22 00 11.6	+0.9
BUEV	Buena Vista	4.54	319	eP	Pn	22 00 12.4	+0.7
ESPN	Las Esperanzas	5.17	339	eP	Pn	22 00 20.1	-0.1
ESPN	Las Esperanzas	5.17	339		Pn	22 00 20.3	+0.1
ACON	Acoyapa	5.35	329	eP	Pn	22 00 23.5	+0.8
ACON	Acoyapa	5.35	329		Pn	22 00 22.4	-0.3
MATN	Matagalpa	6.55	328	Pn	Pn	22 00 39.4	+0.2
YOTC	Yotoco, Valle	6.87	119	eP	Pn	22 00 42.7	-1.0
HORQ	Saladito	6.90	124	eP	Pn	22 00 41.9	-2.4
GUY2C	Guyana, Caldas	7.28	107	eP	Pn	22 00 50.6	+0.9
RREF	El Recreo	7.40	109	eP	Pn	22 00 52.3	+0.8
POPC	Popayan, Colom	7.42	130	eP	Pn	22 00 52.7	+1.3
SJCC	San Jacinto, C	7.54	70	eP	Pn	22 00 59.5	+6.5
SJCC	San Jacinto, C	7.54	70	eP	Pn	22 00 52.0	-0.9
CSGN	Cosiguina Volc	7.56	318	Pn	Pn	22 00 54.3	+1.1
PCON	Cinco Dias	7.77	130	eP	Pn	22 00 59.0	+2.5
ORTC	Ortega, Tolima	7.88	115	eP	Pn	22 00 59.0	+1.6
TGUH	Tegucigalpa,Un	8.21	325	Pn	Pn	22 01 02.7	+0.5
PRAC	Prado	8.28	116	eP	Pn	22 01 04.5	+1.5
ROSC	El Rosal	8.39	107	Pn	Pn	22 01 04.3	-0.5
	2.2nm,0.3s,baz=342,slow=20,SNR=2.5						
ROSC				LR	LR	22 03 52.5	
	comp=Z,1μm,19.4s,baz=273,slow=35						
ROSC	El Rosal	8.39	107	Pn	Pn	22 01 07.0	+2.2
RUSC	La Rusia	9.34	98	Pn	Pn	22 01 19.9	+1.9
APG	El Apazote	10.98	314	Pn	Pn	22 01 41.5	+1.3
	0.6nm,0.3s,baz=63,slow=4.1,SNR=7.1						
SDV	Santo Domingo	11.72	82	Pn	Pn	22 01 49.8	-0.5
	0.4nm,0.3s,baz=236,slow=5.7,SNR=1.9						
SDV				Sn	Sn	22 03 58.8	-2.9
	1.2nm,0.3s,baz=6.3,slow=18,SNR=2.0						
SDV				LR	LR	22 07 37.8	
	comp=Z,759nm,18.7s,baz=261,slow=44						
SDV	Santo Domingo	11.72	82		Pn	22 01 55.3	+5.0
MTDJ	Mount Denham	11.78	23	Pn	Pn	22 01 52.1	+1.1
TEIG	Tepich	14.01	336	LR	LR	22 07 52.1	
	comp=Z,702nm,19.5s,baz=288,slow=38						
ATAH	Atahualpa	14.94	165	LR	LR	22 07 29.4	
	comp=Z,408nm,21.4s,baz=347,slow=34						
CMIG	Matias Romero	15.58	310	Pn	Pn	22 02 43.6	+0.9
	0.4nm,0.3s,baz=110,slow=12,SNR=9.2						
SDDR	Presa de Saban	15.79	42	Pn	Pn	22 02 46.3	+0.8
SJG	San Juan	19.07	54	LR	LR	22 10 20.5	
	comp=Z,179nm,19.6s,baz=245,slow=36						
GCPR	Guaynabo City	19.23	54	P	P	22 03 27.6	+0.2
NNA	Nana	19.99	164	P	Pn	22 03 37.9	+0.4
	16nm,0.8s,baz=353,slow=12,SNR=4.7						
NNA	Nana	19.99	164	IAmb	IAmb	22 03 38.8	
	comp=Z,54nm,1.4s						
STVI	Saint Thomas	20.17	56	P	P	22 03 37.1	-0.5
STVI				IAmb	IAmb	22 03 53.9	
	comp=Z,43nm,1.1s						
PTGA	Pitinga	23.75	109	P	P	22 04 16.7	+1.1
	comp=Z,7.6nm,1.0s,baz=283,slow=11,SNR=6.8						
PTGA				LR	LR	22 13 25.3	
	comp=Z,185nm,20.3s,baz=294,slow=36						
PTGA	Pitinga	23.75	109	P	P	22 04 18.2	+2.5
ZAIG	Zacatecas	24.75	310	P	P	22 04 26.4	+1.3
SAML	Samuel	25.06	130	P	P	22 04 27.3	-0.4
344A	Westbrook Farm	25.21	343	P	P	22 04 27.5	-1.3
HKT	Hockley	25.79	332	P	P	22 04 34.4	+0.3
HKT				IAmb	IAmb	22 04 43.5	
	comp=Z,24nm,1.5s						
LRAL	Lakeview Retre	25.91	351	P	P	22 04 36.2	+1.1
	baz=169						
LRAL	Lakeview Retre	25.91	351	P	P	22 04 35.0	-0.2
146A	Union	25.91	347	P	P	22 04 35.5	+0.3
Z59A	Georgetown, SC	25.91	6	P	P	22 04 36.7	+1.5
	baz=187						
GOGA	Godfrey	25.94	358	P	P	22 04 37.6	+2.1
	baz=177						
Z50A	Ashland	25.98	353	P	P	22 04 37.7	+1.8
	baz=172						
Z47A	Carrollton	26.25	349	P	P	22 04 37.2	-1.1
Z47A				IAmb	IAmb	22 04 53.8	
	comp=Z,17nm,1.1s						
833A	Chaparral WMA,	26.34	324	P	P	22 04 39.3	+0.1
	baz=139						
435B	Jarrell	27.31	331	P	P	22 04 48.3	+0.3
	baz=145						
LPAZ	La Paz	27.40	149	P	P	22 04 49.9	+0.3
	comp=Z,2.1nm,0.9s,baz=336,slow=10,SNR=6.5						
LPAZ				LR	LR	22 16 55.3	
	comp=Z,262nm,19.4s,baz=317,slow=39						
JCT	Junction City	28.21	327	P	P	22 04 56.3	+0.2
	baz=141						
JCT	Junction City	28.21	327	P	P	22 04 54.6	-1.5
JCT				IAmb	IAmb	22 04 57.1	
	comp=Z,24nm,1.4s						
PB16	IPOC Station P	28.52	154	P	P	22 05 01.9	+2.5
PB16				IAmb	IAmb	22 05 09.5	
	comp=Z,13nm,1.0s						
V48A	Smith Brothers	28.54	352	P	P	22 04 57.5	-1.4
V48A				IAmb	IAmb	22 05 05.5	
	comp=Z,9.1nm,0.8s						
WVT	Waverly	29.07	351	P	P	22 05 03.2	-0.3
U58A	Oxford	29.11	6	P	P	22 05 03.6	-0.3
	baz=188						
W41B	Gary Mavity, V	29.13	343	P	P	22 05 04.2	+0.1
	baz=160						
MNMC	Minye Minye	29.18	155	P	P	22 05 06.0	+1.0
MNMC				IAmb	IAmb	22 05 18.7	
	comp=Z,15nm,1.1s						
WHAR	Wooly Hollow	29.25	343	IAmb	IAmb	22 05 11.5	
	comp=Z,7.7nm,0.8s						
W39A	Magazine	29.62	341	P	P	22 05 08.7	+0.3
	baz=156						
W39A	Magazine	29.62	341	P	P	22 05 07.0	-1.5
W39A				IAmb	IAmb	22 05 09.2	
	comp=Z,21nm,1.4s						
MDP	Montagnes des	29.64	93	LR	LR	22 17 36.7	
	comp=Z,252nm,18.7s,baz=280,slow=38						
TXAR	Lajitas Array	29.66	320	P	P	22 05 09.4	+0.4
	comp=Z,1.1nm,0.7s,baz=123,slow=9.1,SNR=5.4						
LCAR	Lake Charles	29.68	346	IAmb	IAmb	22 05 15.2	
	comp=Z,10nm,0.8s						
FCAR	Ozark Folk Cen	29.77	344	P	P	22 05 08.2	-1.5
FCAR				IAmb	IAmb	22 05 09.7	
	comp=Z,7.0nm,0.9s						
T47A	Sharon Grove	29.80	352	P	P	22 05 08.0	-2.0
T47A				IAmb	IAmb	22 05 20.5	
	comp=Z,12nm,1.1s						
U40A	Yellville	30.41	343	P	P	22 05 15.4	0.0
	baz=159						
U40A	Yellville	30.41	343	P	P	22 05 13.7	-1.8
U40A				IAmb	IAmb	22 05 16.2	
	comp=Z,6.7nm,1.0s						
WCI	Wyandotte Cave	30.93	354	P	P	22 05 20.5	+0.5
	baz=172						
TUL1	Leonard	30.96	339	P	P	22 05 21.2	+0.9
	baz=153						
WMOK	Wichita Mounta	31.15	333	P	P	22 05 21.9	-0.2
	baz=147						
Q55A	Buckhannon	31.56	3	P	P	22 05 26.5	+0.9
	baz=184						
MNTX	Cornudas Mount	32.36	321	P	P	22 05 34.0	+1.3
	baz=133,SNR=8.3						
MSTX	Muleshoe	32.50	327	P	P	22 05 34.6	+0.6
	baz=140						
MSTX	Muleshoe	32.50	327	IAmb	IAmb	22 05 36.3	
	comp=Z,13nm,1.1s						
AMTX	Amarillo	32.65	330	P	P	22 05 36.0	+0.7
	baz=142						
O48A	Farmland	32.85	356	P	P	22 05 37.5	+0.6
	baz=175						
O56A	Blue Knob Stat	32.94	5	P	P	22 05 37.7	-0.1
	baz=187						
HDIL	Hopedale	33.63	350	P	P	22 05 47.4	+3.7
	baz=168						
121A	Cookes Peak, D	34.42	320	P	P	22 05 51.0	+0.1
121A				IAmb	IAmb	22 06 03.1	
	comp=Z,14nm,1.3s						
N38A	Joes South For	34.67	345	P	P	22 05 52.1	-0.6
L58A	Harry Jones Me	35.02	8	P	P	22 05 56.7	+1.0
	baz=191						
ANMO	Albuquerque	35.27	325	P	P	22 05 59.3	+1.1
	baz=135						
ANMO	Albuquerque	35.27	325	P	P	22 05 57.4	-0.8
ANMO				IAmb	IAmb	22 06 01.0	
	comp=Z,6.5nm,0.9s						
L40A	Anamosa	35.44	349	P	P	22 05 58.0	-1.2
T25A	Trinidad	35.78	329	P	P	22 06 03.6	+1.0
	baz=140,SNR=5.6						
TUC	Tucson	36.25	317	P	P	22 06 09.0	+2.4
	baz=127						
TUC	Tucson	36.25	317	P	P	22 06 06.5	-0.1
TUC				IAmb	IAmb	22 06 16.6	
	comp=Z,6.9nm,1.0s						
J57A	Williamstown	36.34	8	P	P	22 06 08.8	+1.8
	baz=191						
SDCO	Great Sand Dun	36.81	329	P	P	22 06 12.8	+1.4
	baz=139,SNR=11						
SDCO	Great Sand Dun	36.81	329	IAmb	IAmb	22 06 13.6	
	comp=Z,8.0nm,1.1s						
X18A	Snowflake	37.09	321	IAmb	IAmb	22 06 17.6	
	comp=Z,18nm,1.4s						
W18A	Petrified Fore	37.34	322	P	P	22 06 18.3	+2.3
	baz=131,SNR=6.5						
214A	Organ Pipe Nat	37.44	315	P	P	22 06 18.8	+2.1
	baz=124						
214A	Organ Pipe Nat	37.44	315	IAmb	IAmb	22 06 22.9	
	comp=Z,10nm,1.1s						
S22A	4UR Ranch, Cre	37.51	327	P	P	22 06 18.6	+1.2
	baz=138,SNR=7.0						
Q24A	Divide	37.56	330	P	P	22 06 19.0	+1.1
	baz=141						
X16A	Lo Mia Camp, P	37.97	319	IAmb	IAmb	22 06 33.8	
	comp=Z,8.2nm,1.0s						
H60A	Morristown	38.00	11	P	P	22 06 22.6	+1.4
	baz=196						
MVCO	Mesa Verde	38.04	325	P	P	22 06 23.6	+1.7
	baz=135						
MVCO	Mesa Verde	38.04	325	IAmb	IAmb	22 06 25.9	
	comp=Z,19nm,1.1s						
WUAZ	Wupatki	38.62	321	P	P	22 06 28.8	+2.1
	baz=130,SNR=5.7						
WUAZ	Wupatki	38.62	321	IAmb	IAmb	22 06 30.4	
	comp=Z,12nm,1.1s						
Y14A	Wickenburg	38.72	317	IAmb	IAmb	22 06 31.1	
	comp=Z,10.0nm,0.9s						
PV15	Paradox Valley	38.83	327	IAmb	IAmb	22 06 42.3	
	comp=Z,15nm,1.2s						
PV07	Paradox Valley	38.99	326	IAmb	IAmb	22 06 34.5	
	comp=Z,20nm,1.3s						
PV18	Skein Mesa, Pa	39.00	326	IAmb	IAmb	22 06 38.2	
	comp=Z,21nm,1.1s						
G63A	Kingsbury	39.21	14	P	P	22 06 32.7	+1.4
	baz=200						
N23A	Red Feather La	39.45	332	P	P	22 06 34.3	+0.6
	baz=141						
PHWY	Pilot Hill	39.54	332	IAmb	IAmb	22 06 32.6	
	comp=Z,14nm,1.2s						
Y12C	Blythe	39.64	316	P	P	22 06 37.8	+2.7
	baz=124						
Y12C	Blythe	39.64	316	P	P	22 06 35.4	+0.3
Y12C				IAmb	IAmb	22 06 45.5	
	comp=Z,15nm,1.1s						
D48A	Paudash Townsh	39.67	1	P	P	22 06 36.3	+1.2
	baz=181						
PDMCI	Parker Dam,Lak	39.69	317	P	P	22 06 38.1	+2.6
	baz=125,SNR=5.5						
U15A	North Rim	39.77	321	IAmb	IAmb	22 06 47.5	
	comp=Z,14nm,1.2s						
G65A	Princeton	39.83	16	P	P	22 06 37.5	+1.1
	baz=203						
F63A	Nahmakanta, Br	39.89	15	P	P	22 06 38.2	+1.3
	baz=201						
D54A	Lac Fusel, La	39.95	6	P	P	22 06 38.4	+1.0
	baz=189						
W13A	Hualapai Mount	39.99	318	IAmb	IAmb	22 06 48.7	
	comp=Z,22nm,1.2s						
O20A	White River Ci	40.01	329	P	P	22 06 39.2	+0.9
	baz=138						
D56A	ZEC Mazanza, M	40.08	8	P	P	22 06 40.1	+1.6
	baz=192						
F33A	5 Mile Ranch,	40.18	345	IAmb	IAmb	22 06 40.1	
	comp=Z,10.0nm,0.9s						
BELC	Belle Mtn. Jos	40.80	315	P	P	22 06 45.7	+0.8
	baz=123						
PFO	Pinyon Flats O	40.92	314	P	P	22 06 47.2	+1.4
	baz=122						
BDFB	Brasilia	40.99	124	LR	LR	22 24 10.4	
	comp=Z,196nm,21.5s,baz=278,slow=37						
K22A	Casper	41.09	333	P	P	22 06 47.8	+0.6
	baz=142						
D62A	Allapoint, All	41.19	14	P	P	22 06 49.2	+1.6
	baz=200						
RSSD	Black Hills	41.22	336	P	P	22 06 49.2	+0.9
	baz=146						
RSSD	Black Hills	41.22	336	P	P	22 06 47.7	-0.6
LMN	Caledonia Moun	41.24	19	P	P	22 06 47.3	-0.8
LMN				IAmb	IAmb	22 06 55.4	
	comp=Z,16nm,0.8s						
HEC	Hector,Ludlow	41.49	316	P	P	22 06 52.4	+2.0
	baz=123						
SHPR	Sheep Range	41.65	319	P	P	22 06 51.0	-0.8
SHPR				IAmb	IAmb	22 06 55.9	
	comp=Z,14nm,1.2s						
SHOC	Shoshone, Teco	42.04	317	P	P	22 06 56.6	+1.8
	baz=124						
GSC	Goldstone, Bar	42.07	316	P	P	22 06 56.7	+1.5
	baz=123						
GSC	Goldstone, Bar	42.07	316	IAmb	IAmb	22 07 05.6	
	comp=Z,21nm,1.4s						
BFSC	Mount Baldy Ra	42.10	314	P	P	22 06 56.6	+1.1
	baz=121						
CIS	Catalina Islan	42.22	313	P	P	22 06 58.6	+2.3
	baz=120						
DUG	Dugway, Tooele	42.54	325	P	P	22 06 59.6	+0.6
	baz=132						

TPNV	**Topopah Spring**	**42.62**	**319**	P	**P**	**22 07 01.4**	**+1.7**
	baz=125,SNR=15						
TPNV	**Topopah Spring**	**42.62**	**319**	IAmb	IAmb	22 07 10.2	
	comp=Z,23nm,1.2s						
BW06	**Boulder Array**	**42.62**	**330**	P	**P**	**22 07 00.6**	**+0.9**
	baz=138,SNR=7.4						
PDAR	**Pinedale Array**	**42.62**	**330**	P	**P**	**22 06 59.4**	**-0.4**
	comp=Z,3.3nm,1.1s,baz=139,slow=9.2,SNR=14						
PDAR				PcP	**PcP**	**22 08 52.9**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=122,slow=4.4,SNR=3.3						
EDW2	**Edwards Air Fo**	**42.67**	**315**	P	**P**	**22 07 01.4**	**+1.4**
	baz=121						
FURC	**Furnace Creek,**	**42.75**	**318**	P	**P**	**22 07 03.3**	**+2.7**
	baz=124						
HWUT	**Hardware Ranch**	**42.82**	**327**	IAmb	IAmb	22 07 14.9	
	comp=Z,13nm,1.3s						
MPMC	**Manual Prospec**	**42.95**	**317**	P	**P**	**22 07 04.3**	**+1.8**
	baz=123						
R11A	**Troy Canyon, C**	**43.02**	**321**	P	**P**	**22 07 05.3**	**+2.2**
	baz=127						
R11A	**Troy Canyon, C**	**43.02**	**321**	IAmb	IAmb	22 07 13.0	
	comp=Z,16nm,1.4s						
ARVC	**Arvin**	**43.38**	**315**	P	**P**	**22 07 08.2**	**+2.5**
	baz=121						
GRAC	**Grapevine Rang**	**43.38**	**318**	P	**P**	**22 07 08.4**	**+2.6**
	baz=124						
SCZ2	**Santa Cruz Isl**	**43.39**	**313**	P	**P**	**22 07 07.6**	**+1.7**
	baz=119						
ISA	**Isabella, Lake**	**43.41**	**316**	P	**P**	**22 07 07.8**	**+1.7**
	baz=122						
CWC	**Cottonwood Cre**	**43.55**	**317**	P	**P**	**22 07 09.5**	**+2.2**
	baz=123						
VES	**Vestal, Richgr**	**43.93**	**316**	P	**P**	**22 07 11.7**	**+1.6**
	baz=121						
ULM	**Lac du Bonnet**	**44.21**	**348**	P	**P**	**22 07 10.6**	**-1.6**
	comp=Z,8.4nm,0.7s,baz=166,slow=9.3,SNR=5.5						
ULM				LR	LR	22 28 13.6	
	comp=Z,66nm,19.0s,baz=228,slow=40						
RLMT	**Red Lodge**	**44.26**	**333**	P	**P**	**22 07 13.3**	**+0.4**
	baz=140						
NVAR	**Mina Array Bea**	**44.80**	**319**	P	**P**	**22 07 19.1**	**+1.7**
	comp=Z,7.6nm,0.8s,baz=130,slow=7.0,SNR=22						
NVAR				LR	LR	22 28 29.5	
	comp=Z,137nm,19.0s,baz=182,slow=40						
KVN	**Kaiserville**	**45.02**	**320**	IAmb	IAmb	22 07 22.2	
	comp=Z,9.7nm,1.1s						
RYN	**Ryan**	**45.05**	**319**	IAmb	IAmb	22 07 22.7	
	comp=Z,9.9nm,1.0s						
YERR	**Yerington**	**45.72**	**319**	IAmb	IAmb	22 07 28.0	
	comp=Z,14nm,1.2s						
EGMT	**Eagleton**	**46.72**	**335**	P	**P**	**22 07 33.7**	**+1.5**
	baz=141						
ORV	**Oroville**	**47.50**	**319**	P	**P**	**22 07 38.8**	**+0.4**
MSO	**Missoula**	**47.72**	**331**	P	**P**	**22 07 41.1**	**+1.1**
	baz=135						
MOD	**Modoc Plateau**	**48.03**	**322**	IAmb	IAmb	22 07 46.4	
	comp=Z,10nm,1.1s						
O03E	**Paynes Creek**	**48.09**	**319**	P	**P**	**22 07 43.8**	**+0.8**
	baz=122						
O02D	**Mt. Diablo Mer**	**48.67**	**319**	P	**P**	**22 07 48.1**	**+0.6**
	baz=121						
M04C	**Macdoel**	**48.92**	**321**	P	**P**	**22 07 50.5**	**+1.1**
	baz=123,SNR=15						
N02D	**Trinity Center**	**49.03**	**320**	P	**P**	**22 07 50.9**	**+0.6**
	baz=122						
PLCA	**Paso Flores**	**49.08**	**168**	P	**P**	**22 07 52.8**	**+2.2**
	comp=Z,3.5nm,0.8s,baz=350,slow=9.8,SNR=3.3						
PLCA	**Paso Flores**	**49.08**	**168**	P	**P**	**22 07 52.1**	**+1.5**
K04D	**Chiloquin, OR**	**49.33**	**322**	P	**P**	**22 07 54.2**	**+1.6**
	baz=124						
M02C	**Callahan**	**49.35**	**320**	P	**P**	**22 07 53.2**	**+0.5**
	baz=125						
J05D	**Fort Rock, OR**	**49.39**	**323**	P	**P**	**22 07 54.3**	**+1.2**
	baz=125						
YBH	**Yreka Blue Hor**	**49.44**	**320**	IAmb	IAmb	22 07 59.8	
	comp=Z,5.7nm,1.0s						
L04D	**Klamath Falls**	**49.45**	**321**	P	**P**	**22 07 54.3**	**+0.8**
	baz=123,SNR=9.9						
PINE	**Pine Mountain**	**49.51**	**324**	P	**P**	**22 07 54.3**	**+0.3**
PINE				IAmb	IAmb	22 07 57.2	
	comp=Z,6.0nm,0.8s						
FFC	**Flin Flon**	**49.78**	**345**	P	**P**	**22 07 55.0**	**-0.7**
FFC				IAmb	IAmb	22 07 56.1	
	comp=Z,4.4nm,0.9s						
J04D	**Umpqua Nationa**	**49.89**	**322**	P	**P**	**22 07 58.0**	**+1.0**
	baz=124,SNR=11						
I04A	**Tendick Farm,**	**50.38**	**323**	P	**P**	**22 08 01.3**	**+0.9**
	baz=124,SNR=5.7						
K02D	**Willamette Mer**	**50.55**	**321**	P	**P**	**22 08 03.0**	**+1.2**
	baz=122						
G05D	**Wamic, OR**	**50.57**	**325**	P	**P**	**22 08 03.8**	**+1.9**
	baz=126						
I03D	**Drain, OR**	**50.89**	**322**	P	**P**	**22 08 06.0**	**+1.8**
	baz=123						
J01E	**Myrtle Point**	**50.96**	**321**	P	**P**	**22 08 06.3**	**+1.5**
	baz=122,SNR=5.6						
F05D	**White Salmon**	**51.04**	**325**	P	**P**	**22 08 07.0**	**+1.6**
	baz=126						
I02D	**Swisshome**	**51.42**	**322**	P	**P**	**22 08 08.9**	**+0.7**
	baz=123						
D03D	**Eldon**	**52.91**	**326**	P	**P**	**22 08 20.5**	**+1.2**
	baz=126						
NLWA	**Neilton Lookou**	**53.26**	**326**	IAmb	IAmb	22 08 24.6	
	comp=Z,15nm,1.2s						
A04D	**Lummi Island**	**53.41**	**328**	P	**P**	**22 08 23.9**	**+1.0**
	baz=127						
YKA	**Yellowknife Ar**	**59.85**	**343**	P	**P**	**22 09 07.9**	**-0.6**
	comp=Z,3.3nm,0.9s,baz=133,slow=7.6,SNR=29						
BALM	**Baldy**	**69.34**	**333**	P	**P**	**22 10 09.4**	**-1.3**
BALM				IAmb	IAmb	22 10 19.5	
	comp=Z,10nm,1.4s						
DAWY	**Dawson**	**69.41**	**337**	IAmb	IAmb	22 10 23.3	
	comp=Z,3.5nm,0.9s						
EPYK	**Eagle Plains**	**69.54**	**340**	P	**P**	**22 10 12.9**	**+1.1**
	baz=121						
INK	**Inuvik**	**69.55**	**342**	P	**P**	**22 10 11.9**	**+0.2**
SUMG	**Summit**	**70.33**	**13**	P	**P**	**22 10 15.2**	**-1.7**
SUMG	**Summit**	**70.33**	**13**	*i* P	**P**	**22 10 17.0**	**+0.1**
	comp=Z,21nm,1.0s						
PPT	**Papeete**	**70.83**	**249**	LR	LR	22 35 59.0	
	comp=Z,319nm,18.2s,baz=172,slow=31						
HDA	**Harding Lake**	**72.57**	**336**	IAmb	IAmb	22 10 41.2	
	comp=Z,10nm,1.1s						
IL31		**72.67**	**336**	IAmb	IAmb	22 10 41.8	
	comp=Z,5.3nm,1.0s						
ILAR	**Eielson Array**	**72.67**	**336**	P	**P**	**22 10 31.2**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=127,slow=4.1,SNR=12						
ILAR				LR	LR	22 45 23.1	
	comp=Z,45nm,18.3s,baz=138,slow=38						
RND	**Reindeer**	**73.03**	**334**	IAmb	IAmb	22 10 44.6	
	comp=Z,8.5nm,1.2s						
BPAW	**Bear Paw Mtn.**	**74.15**	**335**	P	**P**	**22 10 38.5**	**-1.0**
BPAW				IAmb	IAmb	22 10 55.5	
	comp=Z,5.5nm,1.2s						
MLY	**Manley**	**74.31**	**336**	P	**P**	**22 10 39.0**	**-1.4**
MLY				IAmb	IAmb	22 10 48.3	
	comp=Z,3.9nm,0.8s						
ESDC	**Sonseca Array**	**76.42**	**51**	P	**P**	**22 10 53.8**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=275,slow=5.6,SNR=8.7						
ESDC				LR	LR	22 39 25.5	
	comp=Z,29nm,21.8s,baz=235,slow=32						
TORD	**Torodi Ar. Bea**	**82.61**	**78**	P	**P**	**22 11 27.6**	**+0.4**
	comp=Z,1.3nm,0.9s,baz=272,slow=0.6,SNR=6.0						
TORD				LR	LR	22 46 54.6	
	comp=Z,44nm,20.9s,baz=325,slow=35						
TAM	**Tamanrasset**	**85.26**	**68**	P	**P**	**22 11 40.5**	**-0.3**
TAM				IAmb	IAmb	22 11 53.1	
	comp=Z,5.0nm,1.1s						
NOA	**NORSAR Array B**	**85.35**	**29**	LR	LR	22 47 36.2	
	comp=Z,25nm,19.6s,baz=100,slow=34						
CLL	**Collm**	**87.66**	**39**	*e*P	**P**	**22 11 51.0**	**-0.8**
GERES	**GERESS Array B**	**88.50**	**41**	P	**P**	**22 11 56.1**	**+0.1**
	comp=Z,0.8nm,0.9s,baz=268,slow=2.9,SNR=4.5						
GERES				LR	LR	22 45 05.9	
	comp=Z,51nm,21.3s,baz=282,slow=31						
FINES	**FINESS Array B**	**92.25**	**27**	LR	LR	22 51 35.4	
	comp=Z,49nm,19.4s,baz=218,slow=34						
AKASG	**Malin Array Be**	**97.69**	**37**	LR	LR	22 52 37.5	
	comp=Z,24nm,21.7s,baz=275,slow=33						
MKAR	**Makanchi Array**	**124.38**	**13**	PKP	**PKiKP**	**22 18 03.2**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=45,slow=4.3,SNR=2.8						
SONM	**Songino Array**	**124.50**	**353**	PKP	**PKiKP**	**22 18 02.9**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=358,slow=0.9,SNR=2.3						
KSRS	**Korea Array**	**127.19**	**330**	PKP	**PKiKP**	**22 18 12.4**	**+3.7**
	comp=Z,1.2nm,0.5s,baz=19,slow=2.6,SNR=5.8						
KSH	**Kashi**	**129.23**	**22**	PKP	**PKPdf**	**22 18 09.1**	**-3.2**
HHC	**Hu-ho-hao-te**	**130.34**	**346**	*e*P	**PKiKP**	**22 18 14.3**	**-0.8**
NJ2	**Nanjing**	**135.88**	**334**	*e*P	**PKPdf**	**22 18 24.4**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
LZH	**Lanzhou**	**136.39**	**353**	*e*PKP	**PKPdf**	**22 18 19.0**	**-6.9**
LZH				pPKP	sPKPdf	22 18 30.8	+3.9
LZH				sPKP		22 18 37.0	
CD2	**Chengdu**	**141.50**	**352**	PKP	**PKPdf**	**22 18 34.0**	**-1.2**
ASAR	**Alice Springs**	**141.63**	**241**	PKhKP	PKPpre	22 18 29.9	
	comp=Z,2.1nm,0.9s,baz=114,slow=2.5,SNR=8.3						
ASAR				PKP	**PKPdf**	**22 18 35.8**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=125,slow=2.8,SNR=12						
WRA	**Warramunga Arr**	**142.30**	**247**	PKhKP	PKPpre	22 18 33.1	
	comp=Z,1.7nm,0.7s,baz=97,slow=3.1,SNR=4.5						
WRA				PKP	pPKPdf	22 18 38.2	+0.6
	comp=Z,2.0nm,0.7s,baz=99,slow=2.7,SNR=7.7						
SHL	**Shillong**	**146.80**	**10**		**PKPab**	**22 18 47.1**	**-0.5**
CMAR	**Chiang Mai Arr**	**154.31**	**357**	PKPbc	**PKPbc**	**22 19 02.5**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=250,slow=1.8,SNR=4.7						

WEL 13 22:05:22.4, 40°S±3° × 17°3E±°, h175km±4km, M3.7/37, MLv3.7/37, Error ellipse: s-maj=0.0km s-min=0.0km az=53.4, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUWZ	**D'Urville Isla**	**0.55**	**124**	P	Pn	22 05 47.4	+0.5
DUWZ				S	Sn	22 06 05.1	-0.6
QRZ	**Quartz Range**	**0.69**	**241**	P	Pn	22 05 47.5	0.0
QRZ				S	Sn	22 06 05.8	-1.1
NNZ	**Nelson**	**0.73**	**177**	P	Pn	22 05 48.0	+0.3
NNZ				S	Sn	22 06 06.5	-0.9
TCW	**Tory Channel**	**1.02**	**135**	P	Pn	22 05 50.8	+1.1
TCW				S	Sn	22 06 10.1	-0.8
TUWZ	**Tuamarina**	**1.05**	**154**	P	Pn	22 05 50.8	+0.9
TUWZ				S	Sn	22 06 10.7	-0.6
NMEZ	**Namu Road**	**1.16**	**22**	P	Pn	22 05 51.0	+0.1
NMEZ				S	Sn	22 06 13.1	+0.3
KIW	**Kapiti Island**	**1.26**	**107**	P	Pn	22 05 52.3	+0.6
KIW				S	Sn	22 06 12.9	-1.5
BSWZ	**Blackbirch Sta**	**1.29**	**161**	P	Pn	22 05 52.8	+0.8
BSWZ				S	Sn	22 06 14.5	-0.5
THZ	**Tophouse**	**1.31**	**194**	P	Pn	22 05 52.3	+0.1
THZ				S	Sn	22 06 14.2	-1.2
PREZ	**Palmer Road**	**1.32**	**30**	P	Pn	22 05 52.3	0.0
PREZ				S	Sn	22 06 15.6	+0.3
LREZ	**Lake Rotokare**	**1.32**	**39**	P	Pn	22 05 52.5	+0.2
LREZ				S	Sn	22 06 16.0	+0.7
PKE	**Pukeiti**	**1.39**	**22**	P	Pn	22 05 52.9	-0.1
PKE				S	Sn	22 06 16.9	+0.3
CMWZ	**Cape Campbell**	**1.43**	**152**	P	Pn	22 05 54.4	+1.3
CMWZ				S	Sn	22 06 17.5	+0.3
OGWZ	**Otaki Gorge**	**1.44**	**104**	P	Pn	22 05 54.1	+0.7
OGWZ				S	Sn	22 06 16.2	-1.1
CAW	**Cannon Point**	**1.46**	**115**	P	Pn	22 05 54.1	+0.6
DREZ	**Durham Road**	**1.47**	**28**	P	Pn	22 05 53.8	+0.2
DREZ				S	Sn	22 06 17.9	+0.1
WAZ	**Wanganui**	**1.47**	**61**	P	Pn	22 05 54.3	+0.6
WAZ				S	Sn	22 06 19.8	+2.0
BHW	**Baring Head**	**1.49**	**128**	P	Pn	22 05 54.3	+0.5
BHW				S	Sn	22 06 16.7	-1.4
OHWZ	**Ohakea**	**1.55**	**80**	P	Pn	22 05 55.3	+0.9
OHWZ				S	Sn	22 06 20.9	+1.8
MHEZ	**Mangahewa**	**1.61**	**29**	P	Pn	22 05 55.3	+0.3
MHEZ				S	Sn	22 06 19.9	-0.3
DSZ	**Denniston Nort**	**1.70**	**222**	P	Pn	22 05 55.5	-0.4
HOWZ	**Holdsworth Sta**	**1.72**	**104**	P	Pn	22 05 56.6	+0.5
MRZ	**Mangatainoka R**	**1.73**	**96**	P	Pn	22 05 56.6	+0.4
MSWZ	**Moikau Station**	**1.73**	**123**	P	Pn	22 05 56.6	+0.5
VRZ	**Vera Road**	**1.76**	**40**	P	Pn	22 05 56.0	-0.5
MTW	**Mount Morrison**	**1.78**	**113**	P	Pn	22 05 57.3	+0.5
PLWZ	**Palliser**	**1.82**	**127**	P	Pn	22 05 57.5	+0.3
PAWZ	**Paruwai Farm**	**1.83**	**120**	P	Pn	22 05 57.6	+0.4
POWZ	**Post Office Ro**	**1.87**	**88**	P	Pn	22 05 57.9	+0.3
KHZ	**Kahutara**	**1.93**	**175**	P	Pn	22 05 58.5	+0.2
PKVZ	**Pokaka**	**1.97**	**53**	P	Pn	22 05 58.6	-0.3
TIWZ	**Tintock**	**1.97**	**99**	P	Pn	22 05 59.3	+0.5
MTVZ	**Mangateitei**	**1.99**	**57**	P	Pn	22 05 58.9	-0.2
TRWZ	**Traveller**	**2.01**	**118**	P	Pn	22 05 59.7	+0.5
PRWZ	**Pori Road**	**2.02**	**93**	P	Pn	22 05 59.1	-0.2
TMWZ	**Te Maipa**	**2.04**	**108**	P	Pn	22 06 00.1	+0.5
TSZ	**Takapari Road**	**2.07**	**79**	P	Pn	22 05 59.9	0.0
TRVZ	**Turoa**	**2.09**	**56**	P	Pn	22 05 59.7	-0.6
DRZ	**Dome Shelter**	**2.11**	**56**	P	Pn	22 06 00.2	-0.4
FWZ	**Far West T-bar**	**2.12**	**55**	P	Pn	22 06 00.0	-0.9
WHVZ	**Whangaehu Hut**	**2.12**	**56**	P	Pn	22 06 00.1	-0.6
MOVZ	**Moawhango**	**2.16**	**61**	P	Pn	22 06 00.2	-0.8
TWVZ	**Taurewa**	**2.16**	**50**	P	Pn	22 06 00.2	-0.8
TUVZ	**Tukino**	**2.17**	**57**	P	Pn	22 06 00.9	-0.3
DVHZ	**Dannevirke**	**2.18**	**86**	P	Pn	22 06 01.1	0.0
NGZ	**Ngauruhoe**	**2.19**	**54**	P	Pn	22 06 00.8	-0.6
WTVZ	**West Tongariro**	**2.22**	**53**	P	Pn	22 06 01.2	-0.6
CPWZ	**Castlepoint**	**2.23**	**102**	P	Pn	22 06 02.6	+1.0
BFZ	**Birch Farm**	**2.24**	**96**	P	Pn	22 06 02.1	+0.4
KRVZ	**Karewarewa**	**2.27**	**53**	P	Pn	22 06 01.6	-0.7
PNHZ	**Pukenui**	**2.28**	**76**	P	Pn	22 06 02.1	-0.2
HIZ	**Hauiti**	**2.31**	**31**	P	Pn	22 06 01.7	-0.8
BHHZ	**Black Hill Sta**	**2.33**	**65**	P	Pn	22 06 02.0	-0.9
KATZ	**Kakaramea**	**2.38**	**51**	P	Pn	22 06 02.8	-0.7
ANWZ	**Angora Road**	**2.41**	**90**	P	Pn	22 06 04.0	+0.4
LTZ	**Lake Taylor**	**2.42**	**199**	P	Pn	22 06 03.3	-0.5
WPHZ	**Waipukurau**	**2.42**	**81**	P	Pn	22 06 04.1	+0.2
RITZ	**Rihia Road**	**2.47**	**53**	P	Pn	22 06 04.1	-0.4
GVZ	**Greta Valley S**	**2.48**	**185**	P	Pn	22 06 04.2	+0.3
KRHZ	**Kereru**	**2.49**	**71**	P	Pn	22 06 04.2	-0.5
RATZ	**Rangitukua**	**2.49**	**50**	P	Pn	22 06 04.6	-0.2
PRHZ	**Porangahau**	**2.54**	**86**	P	Pn	22 06 05.8	+0.5
WATZ	**Wairara**	**2.58**	**47**	P	Pn	22 06 05.4	-0.4
KWHZ	**Kaweka Forest**	**2.61**	**67**	P	Pn	22 06 06.1	-0.1
INZ	**Inchbonnie**	**2.64**	**212**	P	Pn	22 06 05.5	-0.8
AMCZ	**Amberley**	**2.73**	**190**	P	Pn	22 06 06.8	-0.6
PXZ	**Pawanui**	**2.75**	**82**	P	Pn	22 06 07.7	0.0
TLZ	**Tolley Road**	**2.76**	**39**	P	Pn	22 06 06.9	-1.1
BKZ	**Black Stump Fm**	**2.78**	**63**	P	Pn	22 06 07.0	-1.2
KUTZ	**Kaahu Road**	**2.78**	**45**	P	Pn	22 06 07.7	-0.5
MCHZ	**McNeill Hill**	**2.80**	**69**	P	Pn	22 06 08.4	0.0
KAHZ	**Kahuranaki**	**2.81**	**77**	P	Pn	22 06 08.7	+0.1
MRHZ	**Matea Rd**	**2.91**	**56**	P	Pn	22 06 08.2	-1.6
OXZ	**Oxford**	**2.99**	**198**	P	Pn	22 06 09.2	-1.4
CKHZ	**Cape Kidnapper**	**3.00**	**75**	P	Pn	22 06 10.9	+0.1
ARHZ	**Aropaoanui**	**3.08**	**68**	P	Pn	22 06 11.3	-0.5
MTHZ	**Maungataniwha**	**3.17**	**60**	P	Pn	22 06 11.6	-1.3
OKCZ	**Okains Bay**	**3.23**	**183**	P	Pn	22 06 12.3	-1.3
MQZ	**McQueen's Vall**	**3.25**	**189**	P	Pn	22 06 11.8	-2.0
RAHZ	**Arahi**	**3.30**	**63**	P	Pn	22 06 13.6	-0.9
WHHZ	**Waihua**	**3.33**	**66**	P	Pn	22 06 14.0	-0.9
MUGZ	**Murupara**	**3.34**	**54**	P	Pn	22 06 13.2	-1.8
AKCZ	**Akaroa Harbour**	**3.39**	**185**	P	Pn	22 06 13.8	-1.7
RTZ	**Ruatahuna**	**3.39**	**58**	P	Pn	22 06 12.8	-2.9
SNGZ	**Shannon Statio**	**3.54**	**62**	P	Pn	22 06 16.4	-1.2
RPZ	**Rata Peaks**	**3.63**	**207**	P	Pn	22 06 16.9	-1.7
KNZ	**Kokohu**	**3.66**	**68**	P	Pn	22 06 17.5	-1.5
URZ	**Urewera**	**3.69**	**54**	P	Pn	22 06 17.0	-2.4
RAGZ	**Rawiri**	**3.74**	**59**	P	Pn	22 06 18.5	-1.6
MHGZ	**Mahia Peninsul**	**3.78**	**71**	P	Pn	22 06 19.7	-0.8
PRGZ	**Paritu Road**	**3.85**	**67**	P	Pn	22 06 20.2	-1.2
RIGZ	**Rimuhau**	**3.87**	**64**	P	Pn	22 06 20.5	-1.1
MWZ	**Matawai**	**3.91**	**58**	P	Pn	22 06 20.1	-2.1
FOZ	**Fox Glacier**	**4.01**	**220**	P	Pn	22 06 21.1	-2.2
TKGZ	**Te Karaka**	**4.06**	**61**	P	Pn	22 06 22.5	-1.5
RUGZ	**Raukumara Rang**	**4.22**	**55**	P	Pn	22 06 23.4	-2.9
CNGZ	**Carnagh Statio**	**4.28**	**64**	P	Pn	22 06 25.8	-1.1
HAZ	**Te Kaha**	**4.42**	**53**	P	Pn	22 06 25.5	-3.1
PKGZ	**Pakihiroa**	**4.52**	**56**	P	Pn	22 06 28.0	-2.1
LBZ	**Lake Benmore**	**4.53**	**210**	P	Pn	22 06 27.8	-2.3
WMGZ	**Waiomatatini S**	**4.78**	**58**	P	Pn	22 06 30.8	-2.5
JCZ	**Jackson Bay**	**4.91**	**222**	P	Pn	22 06 32.7	-2.4
ODZ	**Otahua Downs**	**4.96**	**203**	P	Pn	22 06 33.7	-1.9
WKZ	**Wanaka**	**5.37**	**215**	P	Pn	22 06 37.9	-3.1
HHSZ	**Highcliff Hill**	**5.75**	**199**	P	Pn	22 06 44.7	-1.2
MSZ	**Milford Sound**	**5.77**	**222**	P	Pn	22 06 44.0	-2.2
MLZ	**Mavora Lakes**	**6.19**	**216**	P	Pn	22 06 49.2	-2.6
WHZ	**Wether Hill Ro**	**6.67**	**214**	P	Pn	22 06 54.7	-3.4
APZ	**The Paps**	**7.42**	**210**	P	Pn	22 07 04.7	-3.3

*IDC **13** 22:52:31.9±2.0, 11°.55S × 162°.58E, h0km, mb3.8/4, mb1 4.0/6, mb1mx3.7/46, mbtmp4.0/6, ML4.4/2, MS3.3/4, Ms1 3.3/4, ms1mx2.9/33, Error ellipse: s-maj=48.2km s-min=30.9km az=77.0*

*NEIC **13** 22:52:33.5±1.8, 11°.5S±0°.1 × 162°.6E±0°.2, h10km±2km, mb4.2/3, Error ellipse: s-maj=33.5km s-min=13.9km az=50.0*

ISC 13 22:52:37.5±1.3, 11°.6S±0°.2 × 162°.5E±0°.2, h39km, n12, σ1°.30/11, mb3.8/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.29**	**311**	Pn	**Pn**	**22 53 27.1**	**+0.7**
	120nm,0.3s,baz=156,slow=3.3,SNR=8.4						
HNR				Sn	**Sn**	**22 54 03.0**	**-1.4**
	32nm,0.3s,baz=255,slow=20,SNR=1.4						
HNR				LR	LR	22 54 51.8	
	comp=Z,374nm,20.4s,baz=116,slow=42						
HNR	**Honiara**	**3.29**	**311**		**Pn**	**22 53 26.2**	**-0.3**
DZM	**Mont Dzumac**	**11.09**	**160**	Pn	**Pn**	**22 55 13.5**	**-0.1**
	0.7nm,0.3s,baz=26,slow=7.8,SNR=15						
DZM				LR	LR	22 58 30.1	
	comp=Z,180nm,19.8s,baz=16,slow=32						
PMG	**Port Moresby**	**15.22**	**277**	LR	LR	23 01 49.0	
	comp=Z,133nm,18.3s,baz=86,slow=36						
RAO	**Raoul Island**	**25.35**	**137**	LR	LR	23 06 38.5	
	comp=Z,87nm,20.3s,baz=173,slow=33						
WB2	**Warramunga Arr**	**28.27**	**249**	P	**P**	**22 58 29.1**	**+1.6**
WB2				IAmb	IAmb	22 58 33.2	
	comp=Z,3.3nm,1.1s						
WRA	**Warramunga Arr**	**28.29**	**249**	P	**P**	**22 58 29.5**	**+2.0**
	comp=Z,0.7nm,0.9s,baz=80,slow=9.6,SNR=3.2						
ASAR	**Alice Springs**	**29.69**	**242**	P	**P**	**22 58 39.2**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=70,slow=9.4,SNR=5.1						
BKZ	**Black Stump Fm**	**30.16**	**158**	P	**P**	**22 58 44.5**	**+0.5**
BKZ				IAmb	IAmb	22 58 48.0	
	comp=Z,6.5nm,1.1s						
OXZ	**Oxford**	**32.69**	**167**	P	**P**	**22 59 04.3**	**-1.8**
SONM	**Songino Array**	**77.24**	**325**	P	**P**	**23 04 27.7**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=142,slow=5.9,SNR=4.2						
MKAR	**Makanchi Array**	**91.74**	**317**	P	**P**	**23 05 41.6**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=96,slow=5.6,SNR=8.7						

IDC 13 22:58:23.7±2.4, 4°.46S × 153°.05E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.3/46, mbtmp3.4/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/17, Error ellipse: s-maj=52.2km s-min=16.3km az=17.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.03**	**278**	Pg	Pn	22 58 45.0	-0.5
	68nm,0.3s,baz=177,slow=2.2,SNR=37						
KRVT				Lg	Lg	22 58 56.7	
	328nm,0.3s,baz=323,slow=20,SNR=16						
WRA	**Warramunga Arr**	**23.86**	**228**	P	P	23 03 38.1	-0.9
	0.6nm,0.4s,baz=54,slow=11,SNR=2.4						
ASAR	**Alice Springs**	**26.57**	**222**	P	P	23 04 05.1	+1.4
	0.2nm,0.4s,baz=53,slow=9.0,SNR=1.9						
KSRS	**Korea Array**	**47.81**	**333**	LR	LR	23 26 39.8	
	comp=Z,13nm,18.1s,baz=355,slow=36						
TORD	**Torodi Ar. Bea**	**150.44**	**289**	PKPbc	PKPbc	23 18 17.0	-1.4
	0.2nm,0.3s,baz=91,slow=2.7,SNR=5.7						

*NIED **13** 23:03:00, 42°.00N × 142°.60E, h59km, Mw4.6 Best double couple: M0 7.65000×10^15 NP1:φ0=24.00000°, δ63.00000°, λ92.00000°. NP2:φ0=201.00000°, δ27.00000°, λ87.00000°.*

*BJI **13** 23:03:20.1±0.0, 41°.89N × 142°.66E, h61km, mB4.8/44, mb4.9/60, Ms3.9/24, Ms7 3.8/19*

*MOS **13** 23:03:22.1±0.9, 42°.03N × 142°.48E, h61km, mb5.1/38, Error ellipse: s-maj=6.0km s-min=4.3km az=101.6*

*JMA **13** 23:03:23.5±0.2, 41°.99N × 142°.57E, h62km±2km, M4.5 Broadband fault plane solution: P waves. NP1: φs=211.00000°, δ26.00000°, λ90.00000°. NP2:φs=24.00000°, δ64.00000°, λ87.00000°. Principal axes: T Plg71.0000°, Azm287.0000°; N Plg3.0000°, Azm25.0000°; P Plg19.0000°, Azm116.0000°;*

JMA Felt II J1.

*NEIC **13** 23:03:23.3±1.5, 41°.98N±0°.06 × 142°.55E±0°.08, h59km±4km, mb4.9/172 Error ellipse: s-maj=9.0km s-min=8.1km az=140.0*

YUK pmax pmax
comp=Z,780nm,0.5s
YUK pmax pmax
comp=N,175nm,0.1s
YUK pmax pmax
comp=E,346nm,0.4s
YUK pmax pmax
comp=Z,1µm,1.2s
YUK smax smax
comp=N,2µm,0.6s
YUK smax smax
comp=E,2µm,0.6s
YSS Yuzh-Sakhalins 4.97 2 ⇓ *e* PN Pn 23 04 37.8 +2.4
YSS *e*S **Sn 23 05 33.3 +1.8**
YSS pmax pmax
comp=Z,160nm,0.6s
YSS smax smax
comp=N,80nm,0.7s
YSS MLR MLR
comp=Z,500nm,14.0s
YSS Yuzh-Sakhalins 4.97 2 Pn 23 04 37.5 +2.1
KUR Kuril'sk 5.04 48 *i* PN Pn 23 04 37.6 +1.3
KUR *e*S **Sn 23 05 36.7 +3.6**
KUR pmax pmax
comp=N,91nm,0.5s
KUR pmax pmax
comp=E,120nm,0.5s
KUR pmax pmax
comp=Z,219nm,0.5s
KUR smax smax
comp=N,1µm,2.1s
KUR smax smax
comp=E,897nm,1.6s
KUR smax smax
comp=E,209nm,0.4s
KUR smax smax
comp=N,128nm,0.5s
TEY Ternei 5.30 307 ⇓ *i* PN Pn 23 04 39.8 -0.1
TEY pmax pmax
comp=Z,170nm,0.5s
TEY pmax pmax
comp=N,90nm,0.5s
TEY pmax pmax
comp=E,140nm,0.5s
MJB9 Matsu-Tunnel 6.40 213 Pn 23 04 55.7 +0.7
MAJO Matsushiro 6.40 213 PN Pn 23 04 56.4 +1.4
MAJO Matsushiro 6.40 213 Pn 23 04 56.4 +1.4
MAT Matsushiro 6.40 213 P Pn 23 04 56.6 +1.6
MAT *e*S **Sn 23 06 11.4 +4.7**
MJAR Matsushiro Arr 6.40 213 P Pn 23 04 56.9 +1.8
comp=E,0.8nm,0.3s,baz=24,slow=16,SNR=40
MJAR LR LR 23 07 57.8
comp=E,183nm,21.0s,baz=35,slow=43
INU Inuyama 7.92 215 Pn 23 05 17.7 +1.9
USA0B Ussuriysk Arra 8.05 290 PN Pn 23 05 18.1 +0.6
USA0B Ussuriysk Arra 8.05 290 Pn 23 05 18.1 +0.6
USRK Ussuriysk Ar. 8.05 290 P Pn 23 05 17.6 +0.1
baz=92,slow=14,SNR=42
USRK S **Sn 23 06 48.9 +1.8**
baz=103,slow=24,SNR=3.8
USRK LR LR 23 08 28.3
comp=E,209nm,21.8s,baz=98,slow=38
MSHR Mys Shultsa 8.48 278 *i* PN Pn 23 05 23.1 -0.3
JHJ Hachijo jima 2 9.12 195 P Pn 23 05 32.6 +0.4
comp=E,30nm,0.3s,baz=356,slow=21,SNR=7.4
JHJ S **Sn 23 07 07.3 -6.1**
comp=E,26nm,0.3s,baz=341,slow=22,SNR=9.2
JHJ LR LR 23 09 52.1
comp=E,165nm,19.1s,baz=56,slow=42
MDJ Mudanjiang 9.81 290 Pn 23 05 45.5 +3.8
KLR Kul'dur 10.47 317 P Pn 23 05 50.9 +0.3
comp=E,0.6nm,0.3s,baz=119,slow=15,SNR=23
KLR LR LR 23 10 09.1
comp=E,247nm,20.5s,baz=138,slow=39
KLR Kul'dur 10.47 317 *i* PN Pn 23 05 51.0 +0.3
KLR pmax pmax
comp=Z,18nm,1.0s
KSRS Korea Array 12.14 253 P Pn 23 06 15.2 +1.8
comp=Z,1.6nm,0.3s,baz=68,slow=13,SNR=19
KSRS S **Sn 23 08 34.6 +7.4**
comp=Z,1.7nm,0.3s,baz=66,slow=24,SNR=11
KSRS LR LR 23 10 27.3
comp=Z,243nm,20.5s,baz=64,slow=35
KS19 Wonju Array Si 12.16 253 Pn 23 06 11.2 -2.6
CN2 Changchun 12.68 284 *e*P Pn 23 06 22.8 +2.0
CN2 *e*S **Sn 23 08 41.0 +0.7**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 pmax pmax
comp=Z,80nm,3.9s
JNU Nakatsue 12.80 230 P Pn 23 06 22.8 +0.2
comp=Z,0.6nm,0.3s,baz=117,slow=4.8,SNR=5.8
JNU S **Sn 23 08 35.1 -8.3**
comp=Z,0.3nm,0.3s,baz=8.1,slow=19,SNR=0.8
JNU LR LR 23 10 11.2
comp=Z,57nm,21.9s,baz=41,slow=32
JNU Nakatsue 12.80 230 Pn 23 06 21.1 -1.5
JCJ Chichijima 14.86 181 P Pn 23 06 49.3 -0.6
comp=Z,8.1nm,0.3s,baz=278,slow=23,SNR=5.2
JCJ Sn 23 09 20.9 -12
comp=Z,7.6nm,0.3s,baz=53,slow=20,SNR=1.4
PETK Petropavlovsk- 15.07 37 P Pn 23 06 51.3 -1.3
comp=Z,0.4nm,0.3s,baz=214,slow=11,SNR=9.2
PETK LR LR 23 14 08.2
comp=Z,70nm,18.8s,baz=237,slow=43
ZEA Zeya 15.57 324 *e*P Pn 23 06 59.0 0.0
ZEA pmax pmax
comp=Z,36nm,0.8s
DL2 Dalian 16.23 266 P Pn 23 07 07.8 +0.5
DL2 *e*S **Sn 23 10 07.4 +1.0**
DL2 pmax pmax
comp=Z,45nm,0.6s
DL2 LR LR
comp=Z,210nm,17.1s
DL2 LR LR
comp=Z,150nm,18.6s
MA2 Magadan 18.33 13 LR LR 23 14 06.6
comp=Z,50nm,19.1s,baz=172,slow=35
MA2 Magadan 18.33 13 *i* P P 23 07 32.7 +0.1
MA2 pmax pmax
comp=Z,15nm,0.8s
MA2 Magadan 18.33 13 P P 23 07 32.8 +0.3
BJI Beijing 19.98 273 P P 23 07 48.4 -2.3
BJI S **S 23 11 30.8 -1.3**
BJI pmax pmax
comp=Z,18nm,1.2s
BJI LR LR
comp=Z,180nm,16.5s
BJI LR LR
comp=Z,100nm,15.1s
BJT Baijiatuan 19.99 273 P P 23 07 49.6 -1.2
BJT pmax pmax
comp=Z,17nm,0.8s
BJT Baijiatuan 19.99 273 P P 23 07 49.6 -1.2
TIA Tai'an 20.53 262 P P 23 07 54.9 -1.8
TIA pmax pmax
comp=Z,39nm,0.8s
NJ2 Nanjing 21.31 250 *e*P P 23 08 05.1 0.0
NJ2 pmax pmax
comp=Z,16nm,0.5s
YAK Yakutsk 21.50 343 *i* P P 23 08 06.9 0.0
YAK pmax pmax
comp=Z,16nm,0.4s
SEY Seymchan 21.77 12 P P 23 08 07.8 -1.9
comp=Z,4.7nm,0.4s,baz=194,slow=8.4,SNR=25
SEY Seymchan 21.77 12 *i* P P 23 08 10.5 +0.8
HHC Hu-ho-hao-te 23.21 278 *e*P P 23 08 24.5 -0.7
HHC pmax pmax
comp=Z,11nm,1.0s
HHC pmax pmax
comp=Z,75nm,4.4s
HHC LR LR
comp=Z,100nm,13.7s
HHC LR LR
comp=Z,80nm,12.5s
BOD Bodaibo 24.02 321 *e*P P 23 08 28.9 -3.4
BOD pmax pmax
comp=Z,7.0nm,0.9s
WHN Wuhan 25.34 252 ⇓ P P 23 08 43.4 -1.2
WHN S S 23 12 54.4 -12
WHN pmax pmax
comp=Z,30nm,0.7s
WHN LR LR
comp=Z,300nm,16.9s
ULN Ulaanbaatar 25.66 295 *ce*P P 23 08 47.6 +0.1
ULN pmax pmax
comp=Z,19nm,1.3s
ULN Ulaanbaatar 25.66 295 P P 23 08 47.5 -0.1
SONM Songino Array 26.10 295 P P 23 08 51.4 -0.1
comp=Z,7.7nm,0.5s,baz=78,slow=8.9,SNR=61
SONM PcP **PcP 23 12 16.1 -1.5**
comp=Z,0.9nm,0.4s,baz=141,slow=3.9,SNR=4.1
SONM LR LR 23 19 44.0
comp=Z,151nm,18.9s,baz=90,slow=38
XAN Xi'an 27.53 264 P P 23 09 05.2 +0.8
XAN pmax pmax
comp=Z,11nm,0.5s
XAN Xi'an 27.53 264 P P 23 09 05.2 +0.8
XAN IAmb IAmb 23 09 07.7
comp=Z,11nm,0.5s
TLY Talaya 28.03 304 LR LR 23 20 55.0
comp=Z,112nm,21.0s,baz=78,slow=38
TLY Talaya 28.03 304 *i* P P 23 09 08.8 +0.1
TLY pmax pmax
comp=Z,10.0nm,0.9s
ZAK Zakamensk 28.18 301 *e*P P 23 09 08.0 -2.1
ZAK pmax pmax
comp=Z,8.0nm,1.0s
ENH Enshi 28.98 257 P P 23 09 14.8 -2.6
ENH IAmb IAmb 23 09 20.2
comp=Z,18nm,0.5s
BILL Bilibino 29.04 18 *e*P P 23 09 18.6 +1.2
BILL *e* 23 10 11.0
BILL pmax pmax
comp=Z,16nm,3.0s
MOY Mondy 29.68 303 *e*P P 23 09 23.2 -0.2
MOY pmax pmax
comp=Z,19nm,1.6s
H11N2 WAKE ISLAND Hy 30.28 130 T T 23 42 11.8
baz=322,slow=75
H11N1 WAKE ISLAND Hy 30.29 130 T T 23 42 13.4
baz=322,slow=75
H11N3 WAKE ISLAND Hy 30.30 130 T T 23 42 14.3
baz=322,slow=75
LZH Lanzhou 30.46 272 *e*P P 23 09 30.6 +0.1
LZH pP pP 23 09 44.5 -0.5
LZH sP sP 23 09 56.4 +4.4
LZH PP **PnPn 23 10 33.6 +2.5**
LZH pmax pmax
comp=Z,16nm,1.0s
LZH pmax pmax
comp=Z,79nm,5.4s
LZH LR LR
comp=Z,220nm,13.3s
LZH LR LR
comp=Z,240nm,13.8s
LZH LR LR
comp=Z,280nm,16.5s
TIXI Tiksi 30.51 352 LR LR 23 21 59.2
comp=Z,61nm,21.7s,baz=164,slow=37
TIXI Tiksi 30.51 352 *i* P P 23 09 30.6 +0.3
TIXI pmax pmax
comp=Z,1.0nm,1.0s
H11S1 WAKE ISLAND Hy 31.14 131 T T 23 43 16.6
baz=323
H11S3 WAKE ISLAND Hy 31.15 131 T T 23 43 15.8
baz=323
H11S2 WAKE ISLAND Hy 31.16 131 T T 23 43 15.5
baz=323,slow=76
GTA Gaotai 32.27 280 *e*P P 23 09 46.6 +0.3
GTA PcP **PcP 23 12 34.8 +1.5**
GTA ScS ScS 23 20 07.1 -3.8
GTA pmax pmax
comp=Z,6.0nm,0.9s
GTA pmax pmax
comp=Z,24nm,4.9s
GTA LR LR
comp=Z,70nm,16.8s
GTA LR LR
comp=Z,120nm,18.4s
GTA LR LR
comp=Z,130nm,18.4s
CD2 Chengdu 32.86 263 P P 23 09 50.0 -1.5
CD2 pmax pmax
comp=Z,30nm,0.6s
GYA Guiyang 33.20 254 P P 23 09 55.3 +0.7
GYA pP pP 23 10 12.0 +2.8
GYA sP sP 23 10 20.4 +4.3
GYA PP **PP 23 11 08.6 -1.9**
GYA S **S 23 15 09.8 -0.4**
GYA sS sS 23 15 37.0 +1.8
GYA pmax pmax
comp=Z,10.0nm,0.7s
GYA pmax pmax
comp=Z,110nm,4.3s
KMI Kunming 36.83 256 P P 23 10 27.3 +1.4
KMI pP pP 23 10 43.8 +3.1
KMI pmax pmax
comp=Z,15nm,0.5s
KMI pmax pmax
comp=Z,95nm,3.2s
KMI LR LR
comp=Z,120nm,7.2s
KMI LR LR
comp=Z,110nm,8.5s
KMI LR LR
comp=Z,160nm,16.4s
KCP Kidapawan 38.12 209 ⇓ *i* P P 23 10 38.4 +1.6
SLVN Son La 38.39 250 P P 23 10 39.4 +0.5
SLVN IAmb IAmb 23 10 41.5
comp=Z,8.8nm,0.9s
NRIK Noril'sk 39.21 333 P P 23 10 43.5 -1.7
comp=Z,5.1nm,0.4s,baz=131,slow=4.4,SNR=15
NRIK LR LR 23 28 03.9
comp=Z,158nm,21.7s,baz=128,slow=38
ZAA0 Zalesovo Array 39.40 308 P P 23 10 46.8 -0.1
ZALV Zalesovo Beam 39.40 308 P P 23 10 46.6 -0.3
comp=Z,21nm,0.7s,baz=88,slow=7.4,SNR=98
ZALV PcP **PcP 23 12 53.9 -0.1**
comp=Z,3.7nm,0.6s,baz=105,slow=2.2,SNR=4.6
ZALV LR LR 23 27 53.8
comp=Z,84nm,18.8s,baz=66,slow=37
WMQ Urumqi 39.61 292 *e*P P 23 10 49.4 +0.4
WMQ pP sP 23 11 08.3 -2.5
WMQ pmax pmax
comp=Z,22nm,0.9s
WMQ pmax pmax
comp=Z,59nm,3.7s
WMQ LR LR
comp=Z,720nm,29.2s
WMQ LR LR
comp=Z,1µm,28.8s
WMQ LR LR
comp=Z,1µm,29.1s
MK31 Makanchi Array 42.42 298 IAmb IAmb 23 11 12.7
comp=Z,15nm,0.8s
MKAR Makanchi Array 42.42 298 P P 23 11 11.7 -0.2
comp=Z,17nm,0.8s,baz=83,slow=9.6,SNR=137
MKAR PcP **PcP 23 13 03.9 -0.1**
comp=Z,2.0nm,0.6s,baz=58,slow=4.1,SNR=3.4
MKAR Makanchi Array 42.42 298 *ce*P P 23 11 11.6 -0.3
MKAR pmax pmax
comp=Z,18nm,0.8s
MAKZ Makanchi 42.62 298 P P 23 11 13.3 -0.3
MAKZ pmax pmax
comp=Z,23nm,0.9s
MAKZ Makanchi 42.62 298 P P 23 11 13.3 -0.3
MAKZ IAmb IAmb 23 11 14.4
comp=Z,23nm,0.9s
LSA Lhasa 42.85 270 P P 23 11 16.1 -0.1
LSA pmax pmax
comp=Z,18nm,1.3s
LSA Lhasa 42.85 270 P P 23 11 16.1 -0.1
LSA IAmb IAmb 23 11 18.5
comp=Z,18nm,1.3s
KDAK Kodiak Island 42.91 45 P P 23 11 15.4 -0.3
comp=Z,2.6nm,0.4s,baz=297,slow=9.0,SNR=1.9
KDAK Kodiak Island 42.91 45 P P 23 11 15.4 -0.3
KDAK pmax pmax
comp=Z,27nm,1.4s
KDAK Kodiak Island 42.91 45 IAmb IAmb 23 12 31.5
comp=Z,27nm,1.4s
KTH Kantishna Hill 43.20 37 P P 23 11 19.3 +1.2
KTH IAmb IAmb 23 11 36.6
comp=Z,15nm,1.2s
CHTO Chiang Mai 43.54 252 P P 23 11 21.9 +0.7
CHTO pmax pmax
comp=Z,21nm,0.6s
CHTO Chiang Mai 43.54 252 P P 23 11 21.9 +0.7
CHTO IAmb IAmb 23 11 27.7
comp=Z,21nm,0.6s
TOLK Toolik Lake Re 43.70 29 P P 23 11 21.4 -0.6
baz=269
KURK Kurchatov 43.73 304 *ce*P P 23 11 22.0 -0.4
KURK pmax pmax
comp=Z,35nm,0.8s
KURK Kurchatov 43.73 304 P P 23 11 22.2 -0.2
CMAR Chiang Mai Arr 43.78 251 P P 23 11 23.8 +0.6
comp=Z,2.9nm,0.4s,baz=44,slow=7.3,SNR=16
CMAR PcP **PcP 23 13 10.1 +1.1**
comp=Z,1.0nm,0.6s,baz=38,slow=1.6,SNR=4.5
CMAR Chiang Mai Arr 43.78 251 *ce*P P 23 11 24.0 +0.8
CMAR pmax pmax
comp=Z,3.0nm,0.4s
SIJI Sorong 43.87 196 P P 23 11 24.7 +0.9
comp=Z,5.6nm,0.4s,baz=106,slow=15,SNR=4.5
MCK McKinley 44.08 37 P P 23 11 25.0 -0.1
MCK pmax pmax
comp=Z,14nm,1.1s
MCK McKinley 44.08 37 P P 23 11 25.0 -0.1
MCK IAmb IAmb 23 11 43.8
comp=Z,14nm,1.1s
SHL Shillong 44.54 265 P P 23 11 29.7 +0.3
SHL pmax pmax
comp=Z,24nm,0.3s
SHL Shillong 44.54 265 P P 23 11 29.7 +0.3
POKR Poker Plat Res 44.62 34 P P 23 11 28.6 -0.8
baz=274
IL31 44.88 35 P P 23 11 31.2 -0.2
ILAR Eielson Array 44.88 35 P P 23 11 31.4 -0.1
comp=Z,2.5nm,0.5s,baz=256,slow=5.3,SNR=15
ILAR PcP **PcP 23 13 11.2 -0.8**
comp=Z,0.7nm,0.5s,baz=288,slow=3.1,SNR=1.9
ILAR LR LR 23 31 55.8
comp=Z,15nm,18.1s,baz=174,slow=38
HDA Harding Lake 44.89 35 P P 23 11 29.8 -1.7
baz=275
HDA Harding Lake 44.89 35 P P 23 11 31.7 +0.2
SCM Sheep Creek Mo 45.01 39 P P 23 11 33.7 +1.1
SCM pmax pmax
comp=Z,11nm,1.2s
SCM Sheep Creek Mo 45.01 39 P P 23 11 33.7 +1.1
MRSI Marisa 45.31 210 P P 23 11 36.8 +1.5
comp=Z,35nm,1.0s
PRP Porcupine Dome 45.39 34 P P 23 11 36.2 +0.6
PRP IAmb IAmb 23 12 29.2
comp=Z,27nm,1.0s
PRZ Przheval'sk 46.46 293 P P 23 11 44.8 +0.3
PRZ pmax pmax
comp=Z,20nm,1.0s
PRZ Przheval'sk 46.46 293 P P 23 11 44.8 +0.3
PRZ IAmb IAmb 23 11 46.1
comp=Z,20nm,0.9s
TAPN Taplejung 46.66 270 *e*P P 23 11 47.1 +0.8
comp=Z,24nm,0.5s
ODAN Odare 47.17 270 *e*P P 23 11 50.7 +0.5
comp=Z,28nm,0.5s
KDJ Kajisay 47.43 293 IAmb IAmb 23 11 53.0
comp=Z,16nm,0.7s
JIRN Jiri 47.62 271 *e*P P 23 11 54.4 +0.5
comp=Z,30nm,0.3s
RAMN Ramite 47.70 270 *e*P P 23 11 54.6 +0.2
comp=Z,79nm,0.7s
GUN Gumba 47.72 272 *e*P P 23 11 55.1 +0.5
comp=Z,158nm,0.5s
CTGM Chitina Glacie 48.00 40 IAmb IAmb 23 12 19.0
comp=Z,5.7nm,0.6s
ULHL Ulahol 48.03 294 P P 23 11 56.7 +0.1
SNR=11
BRVK Borovoye 48.06 309 *ce*P P 23 11 56.6 +0.2
BRVK pmax pmax
comp=Z,6.0nm,0.5s
BRVK Borovoye 48.06 309 P P 23 11 56.7 +0.2
TKM2 Tokmak 2 48.20 295 P P 23 11 58.5 +0.5
SNR=36
KKN Kakani 48.23 272 *e*P P 23 11 58.7 +0.3
comp=Z,52nm,0.6s
PKI Pulchoki 48.26 272 *e*P P 23 11 58.7 0.0
comp=Z,27nm,0.5s
PKIN Phulchoki 48.26 272 *e*P P 23 11 58.7 0.0
comp=Z,34nm,0.5s
DMN Daman 48.46 272 *e*P P 23 12 00.6 +0.4
comp=Z,30nm,0.5s
GKN Gorkha 48.60 273 *e*P P 23 12 01.3 +0.2
comp=Z,45nm,0.4s
CHMS Chumysh 48.74 295 P P 23 12 01.9 0.0
SNR=7.5
KBK Karagaybulak 48.74 295 P P 23 12 02.5 +0.4
SNR=6.2
KZA Kyzart 48.77 294 P P 23 12 03.7 +1.1
SNR=26
USP Ospenovka 48.80 296 P P 23 12 02.5 +0.1
SNR=24
EPYK Eagle Plains 48.82 32 P P 23 12 00.3 -1.9
baz=282
EPYK Eagle Plains 48.82 32 IAmb IAmb 23 12 10.4
comp=Z,7.8nm,0.7s
AAK Ala-Archa 49.06 295 P P 23 12 04.6 0.0
SNR=17
AAK Ala-Archa 49.06 295 *i* P P 23 12 04.4 -0.2
SNR=9.5
AAK Ala-Archa 49.06 295 *ce*P P 23 12 04.3 -0.2
AAK pmax pmax
comp=Z,8.0nm,0.6s
AAK Ala-Archa 49.06 295 P P 23 12 04.5 0.0
DANN Dangsing 49.06 274 *e*P P 23 12 05.6 +0.7
comp=Z,167nm,0.5s
UCH Uchtor 49.21 295 P P 23 12 09.0 +2.9
SNR=10
KSH Kashi 49.34 291 P P 23 12 10.6 +3.9
KSH pP sP 23 12 27.8 -1.1
KSH PP **PP 23 14 06.5 +5.6**
KSH S **S 23 19 11.1 +2.2**
KSH ScS **ScS 23 21 53.5 +0.5**
KSH SS **SS 23 22 44.5 +3.7**
KSH pmax pmax
comp=Z,33nm,0.8s
KSH pmax pmax
comp=Z,200nm,4.1s
KSH LR LR
comp=Z,60nm,6.1s
KSH LR LR
comp=Z,210nm,5.9s
KSH LR LR
comp=Z,270nm,7.3s
KOLN Koldanda 49.49 273 *e*P P 23 12 08.5 +0.4
comp=Z,36nm,0.4s
EKS2 Erkin-Say 49.53 295 P P 23 12 07.8 -0.2
SNR=32
INK Inuvik 49.60 29 P P 23 12 08.0 0.0
comp=Z,2.3nm,0.3s,baz=258,slow=7.3,SNR=15
INK Inuvik 49.60 29 P P 23 12 08.0 0.0
INK Inuvik 49.60 29 IAmb IAmb 23 12 24.4
comp=Z,16nm,1.7s
KSM Kuching 49.66 224 IAmb IAmb 23 12 11.5
comp=Z,14nm,0.7s
PYUN Piuthan 49.77 274 *e*P P 23 12 10.6 +0.4
comp=Z,52nm,0.4s
AML Almayashu 49.81 295 P P 23 12 10.9 +0.4
SNR=8.5
HYT Haines Junctio 49.85 39 IAmb IAmb 23 12 13.5
comp=Z,14nm,0.8s
KKAR Karatay Array 51.53 297 P P 23 12 22.3 -0.7
KKAR pmax pmax
comp=Z,17nm,0.7s
KKAR Karatay Array 51.53 297 P P 23 12 22.2 -0.7
SVE Sverdlovsk 52.10 316 ⇓ *e*P P 23 12 27.4 +0.4
SVE pmax pmax
comp=Z,30nm,0.9s
C36M Paulatuk 52.59 26 P P 23 12 30.0 -0.4
baz=290
C36M Paulatuk 52.59 26 IAmb IAmb 23 13 12.0
comp=Z,16nm,1.4s
BTK Batken 52.66 294 IAmb IAmb 23 12 35.0
comp=Z,8.7nm,0.6s
ARU Arti 53.31 316 P P 23 12 35.6 -0.3
comp=Z,3.3nm,0.3s,baz=83,slow=1.4,SNR=27
ARU Arti 53.31 316 *c* *i* P P 23 12 35.6 -0.3
ARU *PP **pP 23 12 50.6 -1.0**
ARU 23 13 39.4
ARU 23 14 33.6
ARU S **S 23 20 04.4 +1.6**
ARU SS **SKiKP 23 23 45.3 -1.2**
ARU pmax pmax
comp=Z,17nm,0.8s
ARU Arti 53.31 316 P P 23 12 35.7 -0.3
ARU IAmb IAmb 23 12 36.7
comp=Z,18nm,0.9s

NIL	**Nilore**	**54.03**	**285**	P	**P**	**23 12 42.2**	**+0.6**
NIL				pmax	pmax		
	comp=Z,20nm,0.8s						
NIL	**Nilore**	**54.03**	**285**	P	**P**	**23 12 42.2**	**+0.6**
PSI	**Prapat**	**55.16**	**237**	P	**P**	**23 12 50.6**	**+0.6**
	comp=Z,7.7nm,0.8s,baz=360,slow=5.1,SNR=3.3						
HLK	**Haleakala**	**55.17**	**93**	P	**P**	**23 12 51.0**	**+0.7**
RPSI	**Rantau Prapat**	**55.24**	**237**	P	**P**	**23 12 50.6**	**+0.1**
RPSI	**Rantau Prapat**	**55.24**	**237**	P	**P**	**23 12 50.5**	**0.0**
RPSI				IAmb	IAmb	23 12 52.1	
	comp=Z,11nm,0.9s						
ABKAR	**Akbulak array**	**55.51**	**308**	P	**P**	**23 12 52.0**	**0.0**
SPA0	**Spitsbergen Ar**	**55.85**	**348**	*e*P	**P**	**23 12 53.6**	**-0.4**
AKTO	**Aktyubinsk**	**56.10**	**310**	P	**P**	**23 12 55.8**	**-0.4**
	comp=Z,4.2nm,0.5s,baz=75,slow=7.9,SNR=15						
NOR	**Nord**	**56.17**	**356**	*i* P	**P**	**23 12 55.3**	**-1.0**
NOR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
NOR	**Nord**	**56.17**	**356**	*i* P	**P**	**23 12 55.3**	**-1.0**
	comp=Z,5.7nm,1.3s						
KBL	**Kabul**	**56.58**	**288**	P	**P**	**23 12 59.3**	**-0.8**
KBL				pmax	pmax		
	comp=Z,16nm,0.9s						
KBL	**Kabul**	**56.58**	**288**	P	**P**	**23 12 59.3**	**-0.8**
KBL				IAmb	IAmb	23 13 00.4	
	comp=Z,16nm,0.9s						
KIRV	**Kirov**	**56.89**	**321**	P	**P**	**23 13 01.5**	**-0.1**
	comp=Z,28nm,0.6s,baz=41,slow=0.7,SNR=18						
GSI	**Gunungsitoli**	**57.16**	**237**	P	**P**	**23 13 03.0**	**-1.1**
RES	**Resolute Bay**	**57.59**	**15**	P	**P**	**23 13 05.8**	**-0.6**
RES				pmax	pmax		
	comp=Z,9.0nm,0.6s						
RES	**Resolute Bay**	**57.59**	**15**	P	**P**	**23 13 05.8**	**-0.6**
RES				IAmb	IAmb	23 13 06.4	
	comp=Z,9.0nm,0.6s						
DBJI	**Dramaga**	**58.32**	**223**	P	P	23 13 21.1	+8.8
CISI	**Cisompet, Garu**	**58.65**	**221**	P	**P**	**23 13 12.7**	**-1.9**
YKA	**Yellowknife Ar**	**59.11**	**32**	P	**P**	**23 13 17.1**	**0.0**
	comp=Z,1.9nm,0.8s,baz=308,slow=6.1,SNR=32						
YKA				LR	LR	23 43 11.1	
	comp=Z,44nm,18.1s,baz=0.0,slow=40						
HYB	**Hyderabad**	**59.32**	**266**	*i* P	**P**	**23 13 19.0**	**-0.3**
	comp=Z,27nm,0.8s						
ARCES	**ARCESS Array B**	**59.70**	**339**	P	**P**	**23 13 20.0**	**-1.1**
	comp=Z,3.7nm,0.8s,baz=49,slow=7.9,SNR=21						
ARCES				LR	LR	23 43 45.4	
	comp=Z,36nm,18.4s,baz=159,slow=41						
ARE0	**ARCESS Array S**	**59.70**	**339**	*e*P	**P**	**23 13 20.8**	**-0.3**
KLMR	**Klimovskoe**	**60.08**	**327**	*e*P	**P**	**23 13 21.9**	**-1.9**
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KLMR	**Klimovskoe**	**60.08**	**327**	*e*P	**P**	**23 13 22.0**	**-1.9**
KLMR				AMP		23 13 23.7	
	comp=Z,10.0nm,0.7s						
KTK1	**Kautokeino**	**60.65**	**339**	*e*P	**P**	**23 13 27.6**	**0.0**
DAG	**Danmarks Havn**	**60.92**	**355**	*i* P	**P**	**23 13 28.0**	**-1.3**
DAG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DAG	**Danmarks Havn**	**60.92**	**355**	*i* P	**P**	**23 13 28.0**	**-1.3**
	comp=Z,3.0nm,0.7s						
TRO	**Tromso**	**61.33**	**341**	*e*P	**P**	**23 13 31.7**	**-0.5**
HRA	**Herat**	**61.42**	**292**	IAmb	IAmb	23 13 34.6	
	comp=Z,11nm,0.8s						
WB0	**Warramunga Arr**	**61.90**	**189**	P	**P**	**23 13 36.6**	**0.0**
WB0				IAmb	IAmb	23 13 55.7	
	comp=Z,10nm,0.8s						
WR0	**Warramunga Arr**	**62.08**	**189**	IAmb	IAmb	23 13 56.9	
	comp=Z,12nm,1.1s						
WB2	**Warramunga Arr**	**62.08**	**189**	P	**P**	**23 13 37.3**	**-0.5**
WB2				IAmb	IAmb	23 13 38.3	
	comp=Z,8.2nm,0.9s						
WRA	**Warramunga Arr**	**62.08**	**189**	P	**P**	**23 13 37.5**	**-0.3**
	comp=Z,4.4nm,0.5s,baz=6.3,slow=6.9,SNR=36						
WRA	**Warramunga Arr**	**62.08**	**189**	*i* P	**P**	**23 13 37.5**	**-0.3**
WRA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GEYT	**Alibeck**	**62.29**	**297**	P	**P**	**23 13 38.7**	**-0.5**
	comp=Z,7.1nm,0.7s,baz=29,slow=3.4,SNR=15						
GEYT				LR	LR	23 42 33.2	
	comp=Z,81nm,19.2s,baz=60,slow=38						
GYA0B	**ALIBECK ARRAY**	**62.29**	**297**	P	**P**	**23 13 39.0**	**-0.2**
GYA0B				IAmb	IAmb	23 13 40.6	
	comp=Z,15nm,1.1s						
D03D	**Eldon**	**63.14**	**49**	P	**P**	**23 13 45.6**	**+0.9**
	baz=304						
B05A	**Bryant**	**63.29**	**48**	P	**P**	**23 13 46.2**	**+0.6**
	baz=304						
E04D	**Cinebar**	**63.98**	**50**	P	**P**	**23 13 51.7**	**+1.5**
	baz=304						
VRH	**Novokhopyorsk**	**64.54**	**317**	*e*P	**P**	**23 13 53.2**	**-0.6**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
OBN	**Obninsk**	**64.69**	**322**	P	**P**	**23 13 54.2**	**-0.4**
	comp=Z,3.9nm,0.4s,baz=27,slow=9.7,SNR=4.5						
OBN	**Obninsk**	**64.69**	**322**	*e*P	**P**	**23 13 54.8**	**+0.1**
OBN				*e*		23 14 13.2	
OBN				*e*		23 14 27.7	
OBN				*e*PPP	PPP	23 17 47.4	
OBN				pmax	pmax		
	comp=Z,15nm,1.3s						
OBN	**Obninsk**	**64.69**	**322**	P	**P**	**23 13 53.9**	**-0.8**
FIA1	**FINESS Array S**	**64.87**	**332**	P	**P**	**23 13 55.4**	**-0.3**
FINES	**FINESS Array B**	**64.87**	**332**	P	**P**	**23 13 55.1**	**-0.6**
	comp=Z,18nm,0.6s,baz=51,slow=7.3,SNR=122						
FINES				LR	LR	23 44 42.7	
	comp=Z,103nm,20.2s,baz=59,slow=38						
MOR8	**Moi Rana**	**65.04**	**339**	*e*P	**P**	**23 13 55.1**	**-1.7**
LPSR	**Galich'ya Gora**	**65.11**	**319**	*e*P	**P**	**23 13 56.3**	**-1.1**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
I03D	**Drain, OR**	**65.15**	**53**	P	**P**	**23 13 59.4**	**+1.5**
	baz=305						
I04A	**Tendick Farm,**	**65.65**	**52**	P	**P**	**23 14 02.0**	**+0.9**
	baz=306						
C09A	**Chrisman Ranch**	**65.66**	**47**	P	**P**	**23 14 02.0**	**+0.9**
C09A				IAmb	IAmb	23 14 03.1	
	comp=Z,4.8nm,0.7s						
SUMG	**Summit**	**65.74**	**0**	*i* P	**P**	**23 14 01.9**	**+0.2**
SUMG				pmax	pmax		
	comp=Z,19nm,0.6s						
SUMG	**Summit**	**65.74**	**0**	IAmb	IAmb	23 14 02.7	
	comp=Z,8.0nm,0.7s						
SUMG	**Summit**	**65.74**	**0**	*i* P	**P**	**23 14 01.9**	**+0.2**
	comp=Z,19nm,0.6s						
ASAR	**Alice Springs**	**65.81**	**189**	P	**P**	**23 14 02.5**	**+0.3**
	comp=Z,7nm,0.8s,baz=0.6,slow=6.9,SNR=16						
VSR	**Storozhevoye**	**65.83**	**318**	*e*P	**P**	**23 14 00.8**	**-1.3**
VSR				pmax	pmax		
	comp=Z,9.0nm,0.4s						
VORD	**Divnogorie**	**65.92**	**318**	*e*P	**P**	**23 14 02.7**	**0.0**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
I05D	**Terrebonne, OR**	**65.96**	**51**	P	**P**	**23 14 04.3**	**+1.1**
	baz=306						
NEW	**Newport**	**66.01**	**46**	P	**P**	**23 14 03.9**	**+0.5**
	baz=307						
J04D	**Umpqua Nationa**	**66.15**	**53**	P	**P**	**23 14 05.4**	**+0.8**
	baz=306						
PINE	**Pine Mountain**	**66.52**	**52**	P	**P**	**23 14 08.2**	**+1.2**
PINE				IAmb	IAmb	23 14 09.7	
	comp=Z,5.9nm,0.8s						
L04D	**Klamath Falls**	**66.63**	**54**	P	**P**	**23 14 08.4**	**+0.8**
	baz=306						
J05D	**Fort Rock, OR**	**66.64**	**52**	P	**P**	**23 14 08.2**	**+0.5**
	baz=306						
YBH	**Yreka Blue Hor**	**66.67**	**54**	P	**P**	**23 14 08.7**	**+0.9**
YBH				pmax	pmax		
	comp=Z,15nm,1.9s						
YBH	**Yreka Blue Hor**	**66.67**	**54**	P	**P**	**23 14 08.7**	**+0.9**
YBH				IAmb	IAmb	23 14 34.4	
	comp=Z,15nm,1.9s						
K04D	**Chiloquin, OR**	**66.72**	**53**	P	**P**	**23 14 09.5**	**+1.3**
	baz=306						
M02C	**Callahan**	**66.79**	**55**	P	**P**	**23 14 10.5**	**+2.0**
	baz=306						
AKT	**Akhty**	**66.89**	**306**	*e*P	**P**	**23 14 09.3**	**+0.1**
AKT				*e**PP	**pP**	**23 14 23.6**	**-1.7**
AKT				*e*		23 14 35.2	
AKT				pmax	pmax		
	comp=Z,20nm,0.6s						
NSS	**Namsos**	**66.97**	**339**	*e*P	**P**	**23 14 08.8**	**-0.3**
N02D	**Trinity Center**	**67.12**	**55**	P	**P**	**23 14 12.1**	**+1.4**
	baz=306						
M04C	**Macdoel**	**67.17**	**54**	P	**P**	**23 14 11.6**	**+0.5**
	baz=306						
K05A	**Summer Lake**	**67.17**	**53**	P	**P**	**23 14 12.3**	**+1.2**
K05A				IAmb	IAmb	23 14 31.7	
	comp=Z,12nm,1.2s						
GOF	**Gofitskoye**	**67.50**	**311**	⇑*e*P	**P**	**23 14 13.4**	**+0.5**
GOF				pmax	pmax		
	comp=Z,38nm,0.6s						
O02D	**Mt. Diablo Mer**	**67.54**	**56**	P	**P**	**23 14 15.1**	**+1.8**
	baz=307						
O03E	**Paynes Creek**	**68.08**	**55**	P	**P**	**23 14 17.6**	**+0.8**
	baz=307						
KVAR	**Kislovodsk Arr**	**68.36**	**310**	P	**P**	**23 14 19.4**	**+0.9**
	comp=Z,8.7nm,0.9s,baz=90,slow=20,SNR=8.7						
KIV	**Kislovodsk**	**68.37**	**310**	⇑P	**P**	**23 14 19.1**	**+0.7**
KIV	**Kislovodsk**	**68.37**	**310**	*i* P	**P**	**23 14 19.3**	**+0.8**
	SNR=14						
KIV	**Kislovodsk**	**68.37**	**310**	*e*P	**P**	**23 14 19.6**	**+1.1**
KIV				pmax	pmax		
	comp=Z,97nm,1.1s						
KIV				MLR	MLR		
	comp=Z,75nm,17.0s						
KIV	**Kislovodsk**	**68.37**	**310**	P	**P**	**23 14 19.0**	**+0.5**
ZEI	**Tsey**	**68.38**	**308**	*e*P	**P**	**23 14 17.7**	**-1.0**
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KBZ	**Khabaz**	**68.39**	**310**	P	**P**	**23 14 19.1**	**+0.7**
	comp=Z,9.7nm,0.7s,baz=64,slow=4.4,SNR=20						
KBZ				LR	LR	23 50 07.4	
	comp=Z,30nm,18.8s,baz=66,slow=41						
KBZ	**Khabaz**	**68.39**	**310**	*ce*P	**P**	**23 14 19.3**	**+0.9**
TBLG	**Delisi**	**68.53**	**307**	IAmb	IAmb	23 14 21.1	
	comp=Z,15nm,0.7s						
MSO	**Missoula**	**68.59**	**46**	P	**P**	**23 14 20.4**	**+0.6**
	baz=309						
IZAR	**Zarasai**	**68.73**	**327**	*e*P	**P**	**23 14 20.6**	**+0.2**
ISAL	**Salakas**	**68.90**	**327**	*e*P	**P**	**23 14 21.8**	**+0.3**
SLIT	**Slitere, Latvi**	**68.92**	**330**	*e*P	**P**	**23 14 20.8**	**-0.8**
IIGN	**Ignalina**	**69.01**	**327**	*e*P	**P**	**23 14 22.4**	**+0.2**
FFC	**Flin Flon**	**69.09**	**34**	P	**P**	**23 14 23.3**	**+0.7**
FFC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
FFC	**Flin Flon**	**69.09**	**34**	P	**P**	**23 14 23.3**	**+0.7**
FFC				IAmb	IAmb	23 14 24.1	
	comp=Z,8.8nm,0.8s						
AFDM	**Forest Hills D**	**69.40**	**56**	P	**P**	**23 14 25.2**	**+0.3**
AKH	**Akhalkalaki**	**69.47**	**308**	⇑P	**P**	**23 14 26.8**	**+1.4**
AKH	**Akhalkalaki**	**69.47**	**308**	IAmb	IAmb	23 14 27.5	
	comp=Z,7.7nm,0.8s						
DOMB	**Dombas**	**69.76**	**339**	*e*P	**P**	**23 14 26.4**	**-0.3**
PABE	**Paberze**	**69.81**	**328**	*e*P	**P**	**23 14 27.0**	**-0.1**
HFS	**Hagfors**	**69.95**	**335**	P	**P**	**23 14 27.2**	**-0.6**
	comp=Z,14nm,0.4s,baz=43,slow=6.7,SNR=179						
NB2	**NORSAR Subarra**	**69.97**	**337**	P	**P**	**23 14 27.2**	**-0.8**
	comp=Z,8.2nm,0.6s,baz=35,slow=6.5						
NB2	**NORSAR Subarra**	**69.97**	**337**	P	**P**	**23 14 27.2**	**-0.8**
	baz=35,slow=6.5						
NOA	**NORSAR Array B**	**69.97**	**337**	P	**P**	**23 14 27.5**	**-0.6**
	comp=Z,11nm,0.7s,baz=36,slow=6.2,SNR=46						
NOA				LR	LR	23 48 33.9	
	comp=Z,29nm,21.4s,baz=45,slow=39						
EGMT	**Eagleton**	**70.00**	**43**	P	**P**	**23 14 29.0**	**+0.5**
	baz=311						
EGMT	**Eagleton**	**70.00**	**43**	IAmb	IAmb	23 14 30.2	
	comp=Z,6.6nm,0.8s						
NBO00	**NORSAR Array S**	**70.11**	**337**	IAmb	IAmb	23 14 29.6	
	comp=Z,20nm,0.8s						
NAO01	**NORSAR Array S**	**70.22**	**337**	*e*P	**P**	**23 14 28.7**	**-0.8**
PBUR	**Paburge**	**70.23**	**329**	*e*P	**P**	**23 14 25.7**	**-3.9**
SOC	**Sochi**	**70.28**	**311**	*e*P	**P**	**23 14 29.0**	**-1.2**
SOC				*e*		23 17 05.0	
SOC				*e*PPP	PPP	23 18 46.6	
SOC				*e*S	**S**	**23 23 36.8**	**-0.6**
SOC				pmax	pmax		
	comp=Z,13nm,0.7s						
BATM	**Batumi**	**70.40**	**309**	⇑P	**P**	**23 14 31.0**	**0.0**
BCA	**Borcka**	**70.54**	**308**	⇓P	**P**	**23 14 32.6**	**+0.8**
SHME	**Shamm**	**70.55**	**288**	P	**P**	**23 14 31.9**	**-0.2**
ANN	**Anapa**	**70.76**	**313**	*e*P	**P**	**23 14 32.7**	**-0.3**
ANN				*e*		23 17 06.8	
ANN				*e*PPP	PPP	23 18 49.1	
ANN				*e*S	**S**	**23 23 41.9**	**-1.0**
ANN				pmax	pmax		
	comp=Z,14nm,0.8s						
MDH	**Madha**	**70.90**	**287**	P	**P**	**23 14 34.1**	**-0.2**
AKASG	**Malin Array Be**	**70.94**	**322**	P	**P**	**23 14 33.6**	**-0.5**
	comp=Z,7.3nm,0.4s,baz=45,slow=6.2,SNR=46						
AKASG	**Malin Array Be**	**70.94**	**322**	*ce*P	**P**	**23 14 33.5**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.4s						
AKBB	**Malin Array Si**	**70.94**	**322**	*ce*P	**P**	**23 14 33.7**	**-0.4**
AKBB	**Malin Array Si**	**70.94**	**322**	P	**P**	**23 14 33.6**	**-0.4**
AKBB				IAmb	IAmb	23 14 34.4	
	comp=Z,17nm,0.8s						
MSFE	**Esma-Masafi**	**70.96**	**287**	P	**P**	**23 14 34.6**	**0.0**
UOSS	**Minazif**	**71.18**	**287**	P	**P**	**23 14 35.9**	**0.0**
UOSS	**Minazif**	**71.18**	**287**	P	**P**	**23 14 36.1**	**+0.2**
UOSS				IAmb	IAmb	23 14 36.3	
	comp=Z,8.7nm,0.7s						
HATD	**Hatta, Dubai**	**71.31**	**287**	*i* P	**P**	**23 14 37.2**	**+0.5**
	SNR=5.9						
NVAR	**Mina Array Bea**	**71.36**	**55**	P	**P**	**23 14 38.1**	**+1.0**
	comp=Z,2.3nm,0.7s,baz=298,slow=6.3,SNR=18						
NVAR				LR	LR	23 45 26.1	
	comp=Z,18nm,18.4s,baz=339,slow=35						
ASHO	**Ashiyiah**	**71.45**	**287**	P	**P**	**23 14 37.3**	**-0.3**
KONO	**Kongsberg**	**71.57**	**337**	*ce*P	**P**	**23 14 38.6**	**+0.9**
KONO				pmax	pmax		
	comp=Z,22nm,1.7s						
KTUT	**Trabzon**	**71.91**	**309**	⇑P	**P**	**23 14 40.5**	**+0.4**
H17A	**Grant Village**	**71.96**	**46**	P	**P**	**23 14 42.3**	**+1.6**
	baz=312						
ALNE	**Al Ain**	**72.06**	**286**	*i* P	**P**	**23 14 41.4**	**+0.2**
	SNR=10						
RLMT	**Red Lodge**	**72.18**	**45**	P	**P**	**23 14 43.0**	**+1.1**
	baz=312						
SIM	**Simferopol'**	**72.44**	**315**	*e*P	**P**	**23 14 42.0**	**-1.2**
SIM				pmax	pmax		
	comp=Z,13nm,0.8s						
PKM	**Mcpherson Peak**	**72.65**	**59**	P	**P**	**23 14 45.6**	**+0.7**
	baz=309						
LAO	**LASA Array**	**72.68**	**42**	P	**P**	**23 14 45.5**	**+0.8**
	baz=313						
CWC	**Cottonwood Cre**	**72.76**	**56**	P	**P**	**23 14 46.4**	**+1.0**
	baz=310						
GRAC	**Grapevine Rang**	**72.85**	**56**	P	**P**	**23 14 47.6**	**+1.8**
	baz=310						
R11A	**Troy Canyon, C**	**73.06**	**54**	P	**P**	**23 14 48.3**	**+1.1**
	baz=310						
SORM	**Soroca**	**73.14**	**320**	⇑P	**P**	**23 14 46.8**	**-0.5**
MPMC	**Manual Prospec**	**73.37**	**56**	P	**P**	**23 14 49.7**	**+0.6**
	baz=310						
DUG	**Dugway, Tooele**	**73.49**	**51**	P	**P**	**23 14 50.8**	**+1.1**
	baz=311						
FURC	**Furnace Creek,**	**73.50**	**56**	P	**P**	**23 14 51.0**	**+1.4**
	baz=310						
STKA	**Stephens Creek**	**73.50**	**181**	P	**P**	**23 14 50.0**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=358,slow=6.4,SNR=3.6						
STKA	**Stephens Creek**	**73.50**	**181**	P	**P**	**23 14 50.0**	**+0.6**
BSD	**Bornholm Skovb**	**73.51**	**332**	*i* P	**P**	**23 14 48.0**	**-1.3**
BSD	**Bornholm Skovb**	**73.51**	**332**	*i* P	**P**	**23 14 48.0**	**-1.3**
TPNV	**Topopah Spring**	**73.56**	**55**	P	**P**	**23 14 51.1**	**+0.9**
	baz=310						
BW06	**Boulder Array**	**73.60**	**47**	P	**P**	**23 14 50.8**	**+0.4**
	baz=312						
PDAR	**Pinedale Array**	**73.60**	**47**	P	**P**	**23 14 51.1**	**+0.7**
	comp=Z,2.6nm,0.7s,baz=280,slow=2.4,SNR=18						
FORT	**Forrest**	**73.63**	**193**	P	**P**	**23 14 49.7**	**-0.4**
MILM	**Milestii Mici**	**73.77**	**319**	⇑P	**P**	**23 14 50.4**	**-0.5**
EDW2	**Edwards Air Fo**	**73.81**	**58**	P	**P**	**23 14 51.8**	**+0.3**
	baz=310						
LVV	**L'vov**	**73.91**	**324**	*e*P	**P**	**23 14 51.9**	**+0.1**
DIKM	**Dikmen**	**74.03**	**312**	⇑P	**P**	**23 14 54.2**	**+1.6**
GKP	**Gorka Klasztor**	**74.10**	**329**	*e*P	**P**	**23 14 52.8**	**0.0**
IAS	**Iasi**	**74.18**	**320**	⇑P	**P**	**23 14 51.9**	**-1.5**
BFSC	**Mount Baldy Ra**	**74.43**	**58**	P	**P**	**23 14 56.2**	**+0.9**
	baz=310						
VASR	**Vaslui**	**74.47**	**320**	⇓P	**P**	**23 14 55.5**	**+0.5**
BZK	**Bozkurt**	**74.52**	**313**	⇑P	**P**	**23 14 56.0**	**+0.6**
KWP	**Kalwaria Pacla**	**74.63**	**324**	*e*P	**P**	**23 14 56.5**	**+0.5**
KWP	**Kalwaria Pacla**	**74.63**	**324**	P	**P**	**23 14 55.6**	**-0.4**
KWP				pmax	pmax		
	comp=Z,18nm,0.6s						
KWP	**Kalwaria Pacla**	**74.63**	**324**	P	**P**	**23 14 55.6**	**-0.4**
ULM	**Lac du Bonnet**	**74.90**	**35**	P	**P**	**23 14 57.4**	**-0.1**
	comp=Z,2.7nm,0.4s,baz=309,slow=4.3,SNR=3.2						
BUR08	**Bucovina Ar. S**	**74.97**	**322**	IAmb	IAmb	23 14 59.2	
	comp=Z,10nm,0.7s						
BURAR	**Bucovina Array**	**74.99**	**322**	⇑P	**P**	**23 14 58.3**	**+0.1**
TLCR		**75.00**	**318**	⇑P	**P**	**23 14 57.8**	**-0.3**
BIZ	**Bicaz**	**75.06**	**321**	⇑P	**P**	**23 14 59.2**	**+0.7**
TESR	**Tescani**	**75.11**	**320**	⇓P	**P**	**23 14 59.1**	**+0.3**
ILGA	**Ilgaz**	**75.29**	**312**	P	**P**	**23 15 00.7**	**+0.5**
ILGA				IAmb	IAmb	23 15 02.4	
	comp=Z,18nm,0.8s						
K22A	**Casper**	**75.31**	**45**	P	**P**	**23 15 00.5**	**+0.2**
	baz=314						
GMRC	**Granite Mounta**	**75.33**	**56**	P	**P**	**23 15 01.5**	**+1.1**
	baz=311						
CFR	**Carcaliu**	**75.34**	**318**	⇑P	**P**	**23 14 60.0**	**-0.1**
KOLS	**Kolonicke sedl**	**75.34**	**324**	*e*P	**P**	**23 15 00.0**	**-0.1**
KOLS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KOLS	**Kolonicke sedl**	**75.34**	**324**	*e*P	**P**	**23 15 00.0**	**-0.1**
OJC	**Ojcow**	**75.43**	**326**	*e*P	**P**	**23 15 01.0**	**+0.4**
OJC	**Ojcow**	**75.43**	**326**	IAmb	IAmb	23 15 01.8	
	comp=Z,22nm,1.0s						
TOPG	**Topolog**	**75.43**	**318**	⇓P	**P**	**23 14 59.0**	**-1.7**
VRI	**Vrincioaia**	**75.54**	**319**	⇑P	**P**	**23 15 01.7**	**+0.5**
UZH	**Uzhgorod**	**75.56**	**324**	*e*P	**P**	**23 15 02.4**	**+1.1**
UZH				*e*		23 15 12.4	
UZH				*e*		23 15 26.6	
RSSD	**Black Hills**	**75.58**	**43**	P	**P**	**23 15 02.5**	**+0.7**
	baz=315						
PLOR	**Plostina**	**75.59**	**320**	⇑P	**P**	**23 15 00.8**	**-0.7**
ARCR	**ARCALIA**	**75.77**	**322**	⇑P	**P**	**23 15 03.7**	**+1.1**
HARR	**Harsova**	**75.79**	**318**	⇓P	**P**	**23 15 02.9**	**+0.2**
OZUR		**75.82**	**320**	⇓P	**P**	**23 15 04.0**	**+1.0**
TRPA	**Tarpa**	**75.82**	**323**	⇑P	**P**	**23 15 03.8**	**+1.0**
NIE	**Niedzica**	**75.83**	**325**	*e*P	**P**	**23 15 03.7**	**+0.8**
GAZ	**Gaziantep**	**75.92**	**307**	IAmb	IAmb	23 15 05.8	
	comp=Z,13nm,0.8s						
MONP2	**Monument Peak**	**76.09**	**58**	P	**P**	**23 15 06.4**	**+1.5**
	baz=311						
DOPR	**Dopca**	**76.11**	**320**	⇑P	**P**	**23 15 03.8**	**-0.7**
O20A	**White River Ci**	**76.12**	**48**	P	**P**	**23 15 05.2**	**+0.3**
	baz=314						
ISR	**Istrita**	**76.17**	**319**	⇑P	**P**	**23 15 03.3**	**-1.6**
MLR	**Muntele Rosu**	**76.19**	**320**	P	**P**	**23 15 04.8**	**-0.3**
	comp=Z,1.6nm,0.5s,baz=336,slow=20,SNR=5.3						
MLR	**Muntele Rosu**	**76.19**	**320**	⇑P	**P**	**23 15 04.8**	**-0.3**
MLR	**Muntele Rosu**	**76.19**	**320**	IAmb	IAmb	23 15 06.5	
	comp=Z,17nm,1.7s						
BR131	**Keskin Array S**	**76.24**	**311**	IAmb	IAmb	23 15 06.7	
	comp=Z,5.7nm,0.8s						
BRTR	**Keskin Array B**	**76.25**	**311**	P	**P**	**23 15 05.5**	**0.0**
	comp=Z,5.0nm,0.7s,baz=82,slow=3.7,SNR=42						
BRTR				PP	**PP**	**23 17 56.6**	**-0.3**
	comp=Z,1.3nm,0.9s,baz=60,slow=7.4,SNR=6.1						
BRTR				LR	LR	23 52 07.1	
	comp=Z,26nm,18.4s,baz=354,slow=38						
BRTR	**Keskin Array B**	**76.25**	**311**	*ce*P	**P**	**23 15 05.8**	**+0.2**
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ICOR	**Ion Corvin**	**76.27**	**318**	⇑P	**P**	**23 15 05.5**	**+0.2**
KSP	**Ksiaz**	**76.36**	**328**	*e*P	**P**	**23 15 06.2**	**+0.4**
AGMN	**Agassiz Nation**	**76.38**	**36**	P	**P**	**23 15 05.9**	**-0.1**
	baz=319						
LANS	**Liptovska Anna**	**76.39**	**326**	*e*P	**P**	**23 15 07.0**	**+0.9**
LANS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LANS	**Liptovska Anna**	**76.39**	**326**	*e*P	**P**	**23 15 07.0**	**+0.9**
PDMCI	**Parker Dam,Lak**	**76.59**	**56**	P	**P**	**23 15 08.5**	**+1.1**
	baz=312						
ANTO	**Ankara**	**76.62**	**312**	⇑P	**P**	**23 15 07.7**	**+0.1**
ANTO	**Ankara**	**76.62**	**312**	P	**P**	**23 15 08.1**	**+0.5**
ANTO				pmax	pmax		
	comp=Z,19nm,0.7s						
ANTO	**Ankara**	**76.62**	**312**	P	**P**	**23 15 08.1**	**+0.5**
OSTC	**Ostas**	**76.62**	**328**	*e*P	**P**	**23 15 07.7**	**+0.4**
BR231	**Keskin MP Arra**	**76.64**	**312**	P	**P**	**23 15 07.8**	**0.0**
BR231				IAmb	IAmb	23 15 09.3	
	comp=Z,15nm,0.8s						
CHVC	**Chvalec**	**76.66**	**328**	*e*P	**P**	**23 15 08.0**	**+0.5**
VOIR		**76.66**	**320**	⇓P	**P**	**23 15 08.7**	**+1.0**
MORC	**Moravsky Berou**	**76.70**	**327**	*e*P	**P**	**23 15 08.2**	**+0.4**
MORC	**Moravsky Berou**	**76.70**	**327**	⇑P	**P**	**23 15 08.3**	**+0.

comp=Z,5.2nm,0.6s,baz=270,slow=4.0,SNR=1.5
NWAO Narrogin (SRO) 78.10 202 P **P** **23 15 15.9 +0.3**
NWAO pmax pmax
comp=Z,117nm,1.7s
BZS Buzias 78.13 322 ⇑P **P** **23 15 15.7 -0.2**
PBCC Pribram 78.18 329 *e*P **P** **23 15 16.1 +0.1**
HERR Herculane 78.32 321 ⇓P **P** **23 15 16.9 +0.1**
PLVB Pleven 78.38 319 ⇑P **P** **23 15 16.7 -0.5**
EYMN Ely 78.51 34 P **P** **23 15 17.8 -0.2**
baz=322
PUNG Punghina 78.53 320 ⇑P **P** **23 15 18.0 0.0**
S22A 4UR Ranch, Cre 78.57 49 P **P** **23 15 19.2 +0.4**
baz=315
MDVR Moldovita 78.72 321 ⇑P **P** **23 15 19.1 -0.1**
EKA Eskdalemuir Ar 78.76 341 P **P** **23 15 19.0 -0.1**
comp=Z,5.4nm,0.7s,baz=28,slow=4.7,SNR=15
EKA Eskdalemuir Ar 78.76 341 P **P** **23 15 19.0 -0.1**
KHC Kasperske Hory 78.79 329 *ce*P **P** **23 15 20.0 +0.6**
KHC pmax pmax
comp=Z,22nm,0.8s
KHC Kasperske Hory 78.79 329 *e*P **P** **23 15 19.8 +0.4**
KHC *ep*P **pP** **23 15 38.3 +2.3**
KHC Kasperske Hory 78.79 329 P **P** **23 15 19.4 -0.1**
CONA Conrad Observa 78.84 327 *e*SKPbc **P** **23 15 20.6 +0.8**
comp=Z,4.6nm,0.7s,SNR=5.2
OGNE Ogallala 78.89 44 P **P** **23 15 20.8 +0.6**
baz=317
GERES GERESS Array B 78.97 328 P **P** **23 15 20.5 0.0**
comp=Z,1.9nm,0.5s,baz=38,slow=5.6,SNR=27
GERES LR LR 23 52 55.1
comp=Z,34nm,18.2s,baz=52,slow=38
GRA1 Grafenberg Arr 79.22 330 IAmb IAmb 23 15 23.2
comp=Z,16nm,0.8s
SDCO Great Sand Dun 79.31 48 P **P** **23 15 23.9 +1.0**
baz=315
ASF Jabal al Asfar 79.49 304 P **P** **23 15 24.2 +0.5**
comp=Z,3.3nm,0.7s,baz=332,slow=6.1,SNR=7.8
ECSD EROS Data Cent 79.50 39 P **P** **23 15 23.5 +0.1**
baz=320
ECSD EROS Data Cent 79.50 39 P **P** **23 15 23.6 +0.2**
ECSD IAmb IAmb 23 15 24.5
comp=Z,7.2nm,0.8s
ARSA Arzberg 79.52 326 *e*SKPab **P** **23 15 24.4 +1.0**
comp=Z,2.1nm,0.5s
RAYN Ar Rayn 79.61 292 P **P** **23 15 24.3 0.0**
RAYN pmax pmax
comp=Z,4.0nm,0.7s
RAYN Ar Rayn 79.61 292 P **P** **23 15 24.3 0.0**
VTS Vitosha 79.63 319 ⇑P **P** **23 15 24.9 +0.6**
VTS Vitosha 79.63 319 IAmb IAmb 23 15 25.9
comp=Z,15nm,0.8s
MMAI Mount Meron Ar 79.83 305 P **P** **23 15 26.3 +0.9**
comp=Z,3.4nm,0.3s,baz=350,slow=4.4,SNR=26
MANT Manisa 79.92 313 P **P** **23 15 25.3 -0.8**
SOKA Soboth 80.18 326 *e*SKPdf **P** **23 15 27.5 +0.4**
comp=Z,14nm,1.0s,SNR=9.3
MEM Membach 80.28 334 P **P** **23 15 27.3 -0.2**
MEM PcP **PcP** **23 15 33.6 -0.9**
MEM sP **sP** **23 15 50.3 -0.3**
SCHQ Schefferville 80.34 17 P **P** **23 15 28.0 +0.2**
comp=Z,1.8nm,0.3s,baz=343,slow=4.6,SNR=5.7
SCHQ Schefferville 80.34 17 IAmb IAmb 23 15 28.6
comp=Z,10nm,1.0s
T25A Trinidad 80.35 48 P **P** **23 15 29.1 +0.7**
baz=316
BSTI Sart Tilman 80.45 334 P **P** **23 15 29.2 +0.8**
OBKA Obir 80.51 327 *e*SKPab **P** **23 15 29.6 +0.7**
comp=Z,4.7nm,0.6s
KBA Koelnbreinsper 80.54 328 *e*SKPdf **P** **23 15 30.0 +0.8**
comp=Z,3.3nm,0.5s
BCLA Clavier 80.68 334 ⇑P **P** **23 15 29.1 -0.4**
BCLA PcP **PcP** **23 15 34.7 -1.5**
BCLA sP **sP** **23 15 55.1 +2.3**
ANMO Albuquerque 80.75 51 *ce*P **P** **23 15 31.6 +1.1**
ANMO pmax pmax
comp=Z,6.0nm,2.5s
ANMO Albuquerque 80.75 51 P **P** **23 15 31.6 +1.1**
baz=315
BGES Gesves 80.78 334 P **P** **23 15 29.2 -1.0**
BGES PcP **PcP** **23 15 34.9 -1.8**
BGES sP **sP** **23 15 53.6 +0.3**
MYKA Terra Mystica 80.78 327 *e*SKPdf **P** **23 15 30.2 -0.1**
comp=Z,3.9nm,0.4s,SNR=4.6
STIP Stip 80.83 319 *i* P **P** **23 15 30.1 -0.5**
STIP Stip 80.83 319 *i* P **P** **23 15 30.1 -0.5**
VAY Valandovo 80.93 319 *i* P P 23 15 21.1 -10
VAY Valandovo 80.93 319 *i* P P 23 15 21.1 -10
BMRD Maredsous 80.95 334 P **P** **23 15 30.6 -0.4**
BMRD PcP **PcP** **23 15 36.2 -1.2**
SKO Skopje 80.98 320 *i* P **P** **23 15 26.8 -4.6**
SKO Skopje 80.98 320 *i* P **P** **23 15 26.8 -4.6**
WATA Walderalm 81.03 329 *e*SKPdf **P** **23 15 32.0 +0.3**
comp=Z,5.0nm,0.7s,SNR=6.5
WTTA Wattenberg 81.06 329 *i* SKPab **P** **23 15 32.3 +0.3**
comp=Z,7.7nm,0.6s,SNR=8.7
DOU Dourbes 81.19 334 P **P** **23 15 32.3 0.0**
DOU sP **sP** **23 15 56.9 +1.5**
MOTA Moosalm 81.20 329 *e*SKPab **P** **23 15 33.0 +0.4**
comp=Z,14nm,0.8s,SNR=13
RETA Reutte 81.22 329 *e*SKPab **P** **23 15 33.1 +0.5**
comp=Z,11nm,1.0s
SQTA Sankt Quirin 81.26 329 *i* SKPab **P** **23 15 33.2 +0.3**
comp=Z,3.6nm,0.5s,SNR=4.2
FETA Feichten 81.61 329 *e*SKPab **P** **23 15 35.2 +0.4**
comp=Z,7.8nm,0.9s,SNR=6.5
PDG Podgorica 81.67 321 ⇓P **P** **23 15 34.9 0.0**
121A Cookes Peak, D 81.67 54 P **P** **23 15 37.3 +1.9**
baz=315
DAVA Damuels 81.72 330 *e*SKPab **P** **23 15 35.4 0.0**
comp=Z,5.2nm,0.6s,SNR=7.2
E44A Grand Marais A 81.82 31 P **P** **23 15 35.7 -0.1**
baz=326
ECH Echery 81.93 332 P **P** **23 15 35.8 -0.5**
ECH pmax pmax
comp=Z,5.0nm,0.7s
ECH Echery 81.93 332 P **P** **23 15 35.8 -0.5**
ECH IAmb IAmb 23 15 37.0
comp=Z,5.0nm,0.7s
CTI Castel Tesino 82.06 328 IAmb IAmb 23 15 36.8
comp=Z,9.1nm,0.5s
MATQ Matagami 82.07 25 P **P** **23 15 36.7 -0.2**
baz=331
DAVOX Davos/Dischmat 82.14 329 P **P** **23 15 37.3 -0.4**
comp=Z,4.9nm,0.5s,baz=264,slow=1.9,SNR=17
N35A Tabor 82.16 41 IAmb IAmb 23 15 39.4
comp=Z,12nm,0.7s
D46A Sault St. Mari 82.32 30 P **P** **23 15 37.9 -0.4**
baz=327
EIL Elat 82.42 303 P **P** **23 15 39.0 -0.1**
comp=Z,7.1nm,0.7s,baz=11,slow=6.3,SNR=7.8
SCIA State Center 82.50 39 P **P** **23 15 39.3 -0.1**
baz=322
D47A Chapleau 82.53 30 P **P** **23 15 39.0 -0.5**
baz=328
LSQQ Lebel-sur-Quev 82.89 25 P **P** **23 15 41.1 -0.1**
baz=332
D48A Paudash Townsh 82.89 29 P **P** **23 15 40.9 -0.5**
baz=328
CHGQ Chibougamau 82.92 23 P **P** **23 15 40.6 -0.9**
baz=333,SNR=7.1
E47A Iron Bridge 82.97 30 P **P** **23 15 40.9 -0.8**
baz=328
D49A Beulah Townshi 82.97 28 P **P** **23 15 41.3 -0.5**
baz=329
KSU1 Kansas State U 83.03 42 P **P** **23 15 41.6 -0.5**
baz=320
G45A Suttons Bay 83.23 32 P **P** **23 15 42.8 -0.3**
baz=326
G46A Petoskey 83.32 32 P **P** **23 15 43.4 -0.1**
baz=327
E48A Lockeyer 83.36 29 P **P** **23 15 43.1 -0.6**
baz=328
D50A G1974 Best Tow 83.59 28 P **P** **23 15 44.4 -0.5**
baz=330
MNTX Cornudas Mount 83.69 53 P **P** **23 15 45.4 -0.3**
baz=316
F48A Evansville 83.74 30 P **P** **23 15 45.2 -0.4**
baz=328
F49A Sandfield 84.01 30 P **P** **23 15 46.7 -0.3**
baz=328
P38A Dawn 84.14 40 IAmb IAmb 23 15 49.2
comp=Z,9.5nm,0.7s
H47A Mio 84.17 32 P **P** **23 15 47.9 0.0**
baz=327
I46A Reed City 84.23 33 P **P** **23 15 48.0 -0.2**
baz=326

IDI Anoyia 84.26 313 P **P** **23 15 47.5 -1.1**
comp=Z,11nm,0.4s,baz=43,slow=9.8,SNR=39
IDI Anoyia 84.26 313 ⇑P **P** **23 15 47.2 -1.4**
E51A G1948 Merrick 84.26 28 P **P** **23 15 47.7 -0.6**
baz=330
D53A Lac Vacive, Po 84.39 26 P **P** **23 15 48.6 -0.4**
baz=331
D53A Lac Vacive, Po 84.39 26 IAmb IAmb 23 15 49.6
comp=Z,11nm,0.7s
H48A Harrisville 84.43 31 P **P** **23 15 48.9 -0.3**
baz=328
I47A Gladwin 84.54 32 P **P** **23 15 49.6 -0.2**
baz=327
F51A Arnstein 84.64 28 P **P** **23 15 49.5 -0.7**
baz=330
L44A Lake County Fo 84.66 35 P **P** **23 15 50.7 +0.3**
baz=325
D54A Lac Fusel, La 84.67 26 P **P** **23 15 50.1 -0.3**
baz=332
I48A Sherman Twp 84.71 31 P **P** **23 15 51.0 +0.4**
baz=327
E52A Mattawa 84.76 27 P **P** **23 15 50.0 -0.8**
baz=331
F52A Sundridge 84.96 28 P **P** **23 15 51.6 -0.3**
baz=330
E53A Dumoine, Ponti 85.02 27 P **P** **23 15 51.8 -0.4**
baz=331
J47A Sumner 85.07 33 P **P** **23 15 52.9 +0.5**
baz=327
E54A Lac Daplat, Po 85.13 26 P **P** **23 15 51.4 -1.3**
baz=332
K46A Dorr 85.13 34 P **P** **23 15 52.8 0.0**
baz=326
D55A Sainte-Anne-du 85.17 25 P **P** **23 15 52.9 +0.1**
baz=333
WMOK Wichita Mounta 85.20 46 P **P** **23 15 53.8 +0.5**
baz=319
ALGO Algonquin Park 85.26 27 P **P** **23 15 53.2 -0.1**
baz=331
D56A ZEC Mazanza, M 85.36 25 P **P** **23 15 54.0 +0.1**
baz=333,SNR=7.6
HDIL Hopedale 85.37 37 P **P** **23 15 54.3 +0.3**
baz=324
J48A Bridge Port 85.43 32 P **P** **23 15 54.8 +0.6**
baz=327
K47A Vermontville 85.47 33 P **P** **23 15 54.7 +0.2**
baz=327
E55A Montcerf-Lytto 85.48 26 P **P** **23 15 53.9 -0.5**
baz=332
J49A Marlette 85.63 32 P **P** **23 15 55.7 +0.5**
baz=328
D57A Chemin Vers le 85.66 24 P **P** **23 15 55.5 +0.1**
baz=334,SNR=5.1
K48A Perry 85.71 32 P **P** **23 15 55.8 +0.1**
baz=327
E56A St. Veronique 85.73 25 P **P** **23 15 55.6 -0.1**
baz=333,SNR=6.5
G54A Lake Saint Pet 85.73 27 P **P** **23 15 55.5 -0.3**
baz=331
G53A Haliburton 85.79 28 P **P** **23 15 55.7 -0.3**
baz=331
R40A Maddies Statio 85.79 40 IAmb IAmb 23 15 57.1
comp=Z,4.9nm,0.7s
D58A Chmin du LacG 85.89 23 P **P** **23 15 56.4 -0.1**
baz=334
F55A Otter Lake 85.93 26 P **P** **23 15 56.2 -0.5**
baz=332
I51A Listowel 86.06 30 P **P** **23 15 57.8 +0.4**
baz=329
E57A Chemin Saint G 86.12 24 P **P** **23 15 57.7 0.0**
baz=334,SNR=7.9
H53A Bobcaygeon 86.28 28 P **P** **23 15 58.1 -0.4**
baz=331
L48A N Adams 86.31 33 P **P** **23 15 59.1 +0.4**
baz=327
G55A Calabogie 86.32 27 P **P** **23 15 58.2 -0.4**
baz=332,SNR=5.2
PLVO Plevna 86.39 27 IAmb IAmb 23 15 59.2
comp=Z,7.8nm,0.6s
TX31 Lajitas Ar. Si 86.42 53 IAmb IAmb 23 16 01.5
comp=Z,7.4nm,0.9s
TXAR Lajitas Array 86.42 53 P **P** **23 16 00.7 +1.2**
comp=Z,1.7nm,0.7s,baz=302,slow=3.7,SNR=10
TXAR PKiKP **PKiKP** **23 21 06.5 0.0**
comp=Z,0.1nm,0.4s,baz=330,slow=8.7,SNR=3.4
E58A La Victoria 86.42 24 P **P** **23 15 58.8 -0.3**
baz=334
CCM Cathedral Cave 86.47 40 P **P** **23 15 59.5 0.0**
CCM pmax pmax
comp=Z,6.0nm,0.8s
CCM Cathedral Cave 86.47 40 P **P** **23 15 59.5 0.0**
baz=323
CCM Cathedral Cave 86.47 40 P **P** **23 15 59.5 0.0**
CCM IAmb IAmb 23 16 00.3
comp=Z,5.6nm,0.8s
SFIN Lafayette 86.48 36 P **P** **23 15 59.5 +0.1**
baz=325
F57A Harrington 86.49 25 P **P** **23 15 59.1 -0.3**
baz=333
ORIO Orleans, Innes 86.55 26 P **P** **23 15 59.1 -0.6**
baz=333
ORIO Orleans, Innes 86.55 26 IAmb IAmb 23 16 00.4
comp=Z,4.3nm,0.9s
D61A St Aubert, Com 86.56 22 P **P** **23 15 58.1 -1.7**
baz=336
I53A Kortright Cn E 86.57 29 P **P** **23 15 59.6 -0.2**
baz=330
M48A Edgerton 86.57 34 P **P** **23 16 00.3 +0.4**
baz=327
D60A Saint Jean D'O 86.62 22 P **P** **23 15 59.6 -0.4**
baz=336
J52A Paris 86.75 30 P **P** **23 16 00.7 0.0**
baz=330
H55A Tweed 86.78 27 P **P** **23 16 00.7 -0.1**
baz=332
M49A Liberty Center 86.89 33 P **P** **23 16 01.8 +0.4**
baz=327
I55A Frankford 86.91 28 P **P** **23 16 01.0 -0.5**
baz=331
N48A Detour 86.97 34 P **P** **23 16 01.8 -0.1**
baz=327
D62A Allapoint, All 86.98 21 P **P** **23 16 01.7 -0.1**
baz=337
G57A Newington 87.03 26 P **P** **23 16 01.9 -0.2**
baz=333
U40A Yellville 87.03 42 P **P** **23 16 02.3 0.0**
baz=322,SNR=6.5
U40A Yellville 87.03 42 IAmb IAmb 23 16 03.3
comp=Z,8.3nm,0.7s
F59A Saint Guilaume 87.04 24 P **P** **23 16 02.2 +0.1**
baz=334
H56A Elgin 87.06 27 P **P** **23 16 02.0 -0.3**
baz=332
F60A Warwick 87.18 23 P **P** **23 16 03.4 +0.6**
baz=335
E61A Lac Etchemin 87.19 22 P **P** **23 16 02.9 +0.1**
baz=336
D63A Schoholm 87.27 20 P **P** **23 16 03.0 -0.2**
baz=338
F61A St Evariste 87.46 23 P **P** **23 16 04.5 +0.4**
baz=336
W39A Magazine 87.48 43 P **P** **23 16 03.8 -0.7**
baz=322
LONY Lake Ozonia 87.59 26 P **P** **23 16 04.3 -0.6**
baz=333
G59A Clarenceville 87.61 24 P **P** **23 16 04.5 -0.4**
baz=334
J55A Hilton 87.69 28 P **P** **23 16 05.0 -0.2**
baz=331
M51A Elyria 87.72 32 P **P** **23 16 05.7 +0.2**
baz=328
E63A Oxbow 87.76 21 P **P** **23 16 05.2 -0.3**
baz=338
FCAR Ozark Folk Cen 87.76 42 IAmb IAmb 23 16 06.6
comp=Z,3.1nm,0.7s
N50A Nevada 87.81 33 P **P** **23 16 05.8 -0.1**
baz=328
H59A Cadyville 87.85 25 P **P** **23 16 05.9 -0.1**
baz=334
G60A Masonville 87.86 24 P **P** **23 16 06.2 +0.1**
baz=335
M52A Chesterland 87.87 31 P **P** **23 16 06.4 +0.2**
baz=329
PBMO Poplar Bluff 87.88 40 P **P** **23 16 06.2 -0.1**
PBMO IAmb IAmb 23 16 07.8
comp=Z,7.4nm,0.8s
H58A Gabriels 87.90 25 P **P** **23 16 06.1 -0.2**
baz=334

ERPA Erie 87.90 30 P **P** **23 16 06.1 -0.3**
baz=330
E64A Bridgewater 87.92 20 P **P** **23 16 06.1 -0.2**
baz=338
G61A St-Isidore-de- 87.93 23 P **P** **23 16 06.9 +0.5**
baz=335
L53A Girard 87.94 30 P **P** **23 16 07.0 +0.5**
baz=330
K54A Basiliko Farm, 87.95 29 P **P** **23 16 06.5 -0.1**
baz=331
N51A Ashland 88.00 32 P **P** **23 16 06.7 -0.1**
baz=328
J56A Wolcott 88.02 28 P **P** **23 16 06.7 -0.1**
baz=332
L54A Sinclairville 88.05 30 P **P** **23 16 07.1 0.0**
baz=330
K55A Perry 88.07 29 P **P** **23 16 06.7 -0.4**
baz=331
MIAR Mount Ida 88.09 43 P **P** **23 16 07.8 +0.5**
baz=322
MIAR Mount Ida 88.09 43 IAmb IAmb 23 16 09.0
comp=Z,4.5nm,0.8s
O50A Cable 88.15 34 P **P** **23 16 07.8 +0.2**
baz=328
WHAR Wooly Hollow 88.16 42 IAmb IAmb 23 16 09.2
comp=Z,5.3nm,0.7s
J57A Williamstown 88.19 27 P **P** **23 16 07.4 -0.3**
baz=332
P49A Miami Univ. Ec 88.20 35 P **P** **23 16 07.7 -0.1**
baz=327
M53A WI Miller and 88.22 31 P **P** **23 16 07.9 +0.1**
baz=329
H60A Morristown 88.23 24 P **P** **23 16 08.1 +0.2**
baz=335
G62A West of Eustis 88.28 23 P **P** **23 16 07.6 -0.5**
baz=336
I58A Old Forge 88.29 26 P **P** **23 16 07.4 -0.8**
baz=333
F64A Sherman 88.29 21 P **P** **23 16 07.9 -0.2**
baz=338
ACSO Alum Creek Sta 88.34 33 P **P** **23 16 08.7 +0.2**
baz=328
K56A Middlesex 88.36 28 P **P** **23 16 08.3 -0.2**
baz=332
J58A Remsen 88.48 27 P **P** **23 16 08.2 -0.9**
baz=333
H61A Lyndonville 88.49 24 P **P** **23 16 09.2 +0.1**
baz=335
X40A Basin Creek Fa 88.52 43 P **P** **23 16 09.7 +0.3**
baz=322
P50A Jamestown 88.53 34 P **P** **23 16 09.3 0.0**
baz=328
M54A Oil Creek Stat 88.55 30 P **P** **23 16 09.9 +0.4**
baz=330,SNR=5.3
I59A Olmsteadville 88.55 25 P **P** **23 16 09.3 -0.1**
baz=334
O51A Pataskala 88.56 33 P **P** **23 16 09.5 0.0**
baz=328
WCI Wyandotte Cave 88.60 36 P **P** **23 16 09.8 0.0**
baz=326
J59A Piesco 88.64 26 P **P** **23 16 09.5 -0.4**
baz=333
H62A Milan 88.69 23 P **P** **23 16 10.7 +0.7**
baz=336
I60A Shoreham 88.69 25 P **P** **23 16 10.2 +0.2**
baz=334
N53A Lisbon 88.70 31 P **P** **23 16 10.5 +0.3**
baz=329
G64A Maxfield 88.75 22 P **P** **23 16 10.8 +0.6**
baz=337
L56A Greenwood 88.77 29 P **P** **23 16 10.5 0.0**
baz=331
K58A Earlville 88.89 27 P **P** **23 16 11.0 0.0**
baz=333
N54A Moraine State 88.89 31 P **P** **23 16 11.7 +0.7**
baz=330,SNR=6.0
O52A Adamsville 88.90 32 P **P** **23 16 11.3 +0.2**
baz=329
M55A Ridgway 88.92 30 P **P** **23 16 11.7 +0.5**
baz=331,SNR=5.9
P51A Williamsport 88.94 34 P **P** **23 16 11.6 +0.3**
baz=328
O53A New Philadelph 89.03 32 P **P** **23 16 12.3 +0.6**
baz=329,SNR=5.1
M56A Emporium 89.12 29 P **P** **23 16 12.5 +0.4**
baz=331
K59A Cooperstown 89.14 27 P **P** **23 16 12.1 -0.1**
baz=333
L57A Andrews Acres 89.14 28 P **P** **23 16 12.2 0.0**
baz=332
H64A Troy 89.18 22 P **P** **23 16 13.0 +0.7**
baz=337
P52A Corning 89.19 33 P **P** **23 16 12.3 -0.1**
baz=328
Q51A Peebles 89.20 34 P **P** **23 16 13.2 +0.7**
baz=328,SNR=7.6
Q51A Peebles 89.20 34 P **P** **23 16 13.1 +0.5**
BINY Binghamton 89.27 28 P **P** **23 16 12.7 -0.1**
baz=332
I63A Otisfield 89.33 23 P **P** **23 16 13.6 +0.6**
baz=336
J61A Chester 89.37 25 P **P** **23 16 13.8 +0.6**
baz=335
H65A Eastbrook 89.40 21 P **P** **23 16 14.1 +0.8**
baz=338
O54A Avella 89.42 31 P **P** **23 16 14.2 +0.7**
baz=330,SNR=5.9
N55A Marion Center 89.43 30 P **P** **23 16 14.2 +0.6**
baz=330,SNR=7.9
L58A Harry Jones Me 89.45 28 P **P** **23 16 13.6 -0.1**
baz=333
H66A Whiting 89.57 21 P **P** **23 16 14.4 +0.4**
baz=338
N56A West Decatur 89.57 30 P **P** **23 16 14.9 +0.6**
baz=331,SNR=5.3
L59A Walton 89.60 27 P **P** **23 16 14.5 +0.1**
baz=333
P53A Whipple 89.61 32 P **P** **23 16 14.6 +0.2**
baz=329
M57A Sunshine Farm, 89.63 29 P **P** **23 16 15.1 +0.6**
baz=332,SNR=6.6
WVT Waverly 89.63 39 P **P** **23 16 14.7 +0.2**
baz=325
I64A Boothbay 89.73 23 P **P** **23 16 15.1 +0.3**
baz=337
K61A Williamstown 89.76 26 P **P** **23 16 15.3 +0.2**
baz=334
O55A Ligonier 89.81 31 P **P** **23 16 15.5 +0.1**
baz=330
M58A Price's Panora 89.83 28 P **P** **23 16 15.9 +0.4**
baz=332
P54A Burton 89.88 32 P **P** **23 16 16.3 +0.6**
baz=330
J63A Strafford 89.89 24 P **P** **23 16 15.9 +0.2**
baz=336
SSPA Standing Stone 89.97 30 P **P** **23 16 17.1 +1.0**
N57A Milroy 89.98 29 P **P** **23 16 16.9 +0.7**
baz=331,SNR=8.7
O56A Blue Knob Stat 90.03 30 P **P** **23 16 17.1 +0.7**
baz=331,SNR=7.0
M59A Waymart 90.04 28 P **P** **23 16 16.5 +0.1**
baz=333
MCWV Mont Chateau 90.08 31 P **P** **23 16 16.7 +0.1**
baz=330
Q53A Leroy 90.10 33 P **P** **23 16 17.4 +0.6**
baz=329
OXF Oxford 90.19 41 P **P** **23 16 16.7 -0.5**
baz=324
N58A Sunbury 90.21 29 P **P** **23 16 17.7 +0.5**
baz=332
P55A Reedsville 90.21 31 P **P** **23 16 17.8 +0.5**
baz=330
U49A Red Boiling Sp 90.25 37 IAmb IAmb 23 16 18.9
comp=Z,5.4nm,0.8s
Q54A Coxs Mills 90.27 32 P **P** **23 16 17.9 +0.4**
baz=329
N59A State Game Lan 90.48 28 P **P** **23 16 19.2 +0.7**
baz=333
Q55A Buckhannon 90.56 32 P **P** **23 16 19.1 +0.2**
baz=330
O58A Lewisberry 90.77 29 P **P** **23 16 19.8 0.0**
baz=332
M61A Granite Spring 90.81 27 P **P** **23 16 20.5 +0.5**
baz=334
S53A Williamson 90.85 34 P **P** **23 16 20.6 +0.3**
baz=328
O59A Robesonia 90.87 29 P **P** **23 16 20.5 +0.2**
baz=332

R54A	**Victor**	**90.89**	**33**	P	**P**	**23 16 21.0**	**+0.6**	
	baz=329							
R55A	**Marlinton**	**91.15**	**32**	P	**P**	**23 16 21.2**	**-0.5**	
	baz=330							
L64A	**Middleborough**	**91.18**	**24**	P	**P**	**23 16 21.0**	**-0.7**	
	baz=336							
S55A	**Lewisburg**	**91.44**	**33**	P	**P**	**23 16 22.8**	**-0.2**	
	baz=330							
KEST	**Kesra**	**91.60**	**324**	LR	LR	00 01 35.2		
	comp=Z,70nm,18.2s,slow=38							
T54A	**Tazewell**	**91.61**	**34**	P	**P**	**23 16 23.6**	**-0.3**	
	baz=329							
T55A	**Pulaski**	**91.89**	**33**	P	**P**	**23 16 25.0**	**-0.1**	
	baz=329							
T56A	**Rocky Mt**	**92.27**	**33**	P	**P**	**23 16 27.2**	**+0.4**	
	baz=330							
U55A	**TA2, Sparta**	**92.31**	**34**	P	**P**	**23 16 26.8**	**-0.3**	
	baz=329							
LRAL	**Lakeview Retre**	**92.56**	**40**	P	**P**	**23 16 27.4**	**-0.8**	
	baz=326							
T57A	**Hurt**	**92.61**	**32**	P	**P**	**23 16 28.3**	**-0.1**	
	baz=330							
Z50A	**Ashland**	**92.89**	**39**	P	**P**	**23 16 29.5**	**-0.3**	
	baz=326							
ESDC	**Sonseca Array**	**93.22**	**335**	P	**P**	**23 16 30.9**	**-0.3**	
	comp=Z,1.3nm,0.7s,baz=22,slow=4.7,SNR=6.8							
ESDC				LR	LR	00 04 11.0		
	comp=Z,28nm,18.5s,baz=95,slow=39							
Y52A	**Lilburn**	**93.23**	**37**	P	**P**	**23 16 31.6**	**+0.3**	
	baz=327							
T59A	**Double "B" Far**	**93.30**	**31**	P	**P**	**23 16 31.8**	**+0.3**	
	baz=331							
U58A	**Oxford**	**93.41**	**32**	P	**P**	**23 16 31.7**	**-0.4**	
	baz=331							
X55A	**Gracelyn & Ava**	**93.79**	**35**	P	**P**	**23 16 34.3**	**+0.4**	
	baz=329							
W57A	**Gilead**	**93.90**	**34**	P	**P**	**23 16 34.6**	**+0.3**	
	baz=330							
Y55A	**Saluda**	**94.15**	**36**	P	**P**	**23 16 35.8**	**+0.3**	
	baz=329							
TORD	**Torodi Ar. Bea**	**114.38**	**318**	PKiKP	**PKiKP**	**23 21 55.9**	**-0.8**	
	comp=Z,0.6nm,0.4s,baz=22,slow=2.5,SNR=12							
TORD				PP	**PP**	**23 22 49.5**	**-3.0**	
	comp=Z,2.8nm,1.0s,baz=16,slow=7.7,SNR=8.7							
PB08	**IPOC Station P**	**145.49**	**61**		**PKPab**	**23 22 56.0**	**+0.3**	
SNAA	**Sanae**	**145.73**	**199**	PKPdf	**PKPbc**	**23 22 54.4**	**+0.1**	
SNAA	**Sanae**	**145.73**	**199**	PKP2	**PKPab**	**23 22 54.8**	**0.0**	
SNAA	**Sanae**	**145.73**	**199**		**PKPab**	**23 22 54.8**	**0.0**	
VNA2	**Neumayer--Watz**	**147.31**	**198**	PKPdf	**PKPbc**	**23 22 59.3**	**+0.5**	
	baz=106,slow=1.5							
VNA3	**Neumayer Olymp**	**147.57**	**196**	PKPdf	**PKPbc**	**23 22 59.2**	**-0.3**	
AC05	**El Transito**	**150.39**	**74**		**PKiKP**	**23 23 09.5**	**+0.6**	
BDFB	**Brasilia**	**152.21**	**22**	PKPbc	**PKiKP**	**23 23 13.4**	**+0.4**	
	comp=Z,5.3nm,0.8s,baz=265,slow=2.6,SNR=6.3							
BDFB				PKPab	**PKPab**	**23 23 22.7**	**+0.3**	
	comp=Z,4.2nm,0.6s,baz=6.6,slow=4.2,SNR=6.2							

ATH 13 23:12:54.8,38°39N×20°49E,h12km±2km,ML1.8/2,Error ellipse: s-maj=2.1km s-min=0.6km az=279.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.09**	**37**	P	Pg	23 12 57.4	-0.2
FSK				S	Sg	23 12 59.2	-0.4
FSK				AML	AML	23 12 59.5	
	comp=N,1038μm,0.1s						
FSK				AML	AML	23 12 59.6	
	comp=E,2255μm,0.1s						
KEF1	**Kardakata, Kep**	**0.11**	**189**	P	Pg	23 12 57.6	-0.2
KEF1				S	Sg	23 12 59.9	0.0
KEF4	**Livadi, Kephal**	**0.14**	**203**	P	Pg	23 12 58.1	-0.1
KEF4				S	Sg	23 13 00.7	+0.1
LXRA	**Lixouri, Kepha**	**0.19**	**193**	P	Pg	23 12 59.1	+0.1
LXRA				S	Sg	23 13 02.7	+0.8
ARGA	**Argostoli. Kep**	**0.21**	**183**	P	Pg	23 12 59.2	-0.1
ARGA				S	Sg	23 13 02.4	+0.1
KEF3	**Kipouria, Keph**	**0.21**	**212**	P	Pg	23 12 59.4	0.0
KEF3				S	Sg	23 13 02.7	+0.1
KEF2	**Argostoli. Kep**	**0.22**	**181**	P	Pg	23 12 59.5	-0.1
KEF2				S	Sg	23 13 03.1	+0.4
VLS	**Valsamata**	**0.22**	**160**	P	Pg	23 12 59.6	0.0
VLS				S	Sg	23 13 03.2	+0.4
VLS				AML	AML	23 13 04.6	
	comp=E,845μm,0.1s						
VLS				AML	AML	23 13 04.6	
	comp=N,463μm,0.1s						
EVGI	**Lefkada island**	**0.27**	**29**	P	Pg	23 13 00.6	+0.2
EVGI				S	Sg	23 13 04.8	+0.7
MGNA	**Meganis**	**0.36**	**41**	P	Pg	23 13 02.0	0.0
MGNA				S	Sb	23 13 08.0	-0.8
KFL	**Anninata**	**0.36**	**140**	P	Pg	23 13 02.0	-0.1
KFL				S	Sg	23 13 07.0	+0.1
LKD2	**Lefkada island**	**0.42**	**18**	P	Pg	23 13 02.9	-0.3
PDO	**Prodromos**	**0.58**	**68**	P	Pb	23 13 06.8	-0.2
RLS	**Riolos of Patr**	**0.83**	**113**	P	Pg	23 13 11.1	+0.1
RLS				S	Sb	23 13 22.9	+0.5
DRO	**Drossia**	**1.05**	**114**	P	Pb	23 13 14.7	-0.3
EFP	**Efpalio**	**1.11**	**87**	P	Pb	23 13 15.1	-0.8
EFP				S	Sg	23 13 31.0	+0.3
ANX	**Ano Chora**	**1.14**	**79**	P	Pb	23 13 16.4	-0.1
ANX				S	Sn	23 13 32.5	+0.1
IGT	**Igoumenitsa**	**1.15**	**354**	P	Pg	23 13 17.1	+0.1
LAKA	**Lakka**	**1.18**	**97**	P	Pb	23 13 16.2	-0.9
TRIZ	**Trizonia**	**1.24**	**90**	P	Pn	23 13 17.5	-0.5
AMT	**Artemida-Makis**	**1.28**	**131**	P	Pb	23 13 18.9	0.0
KLV	**Kalavryta, Ach**	**1.35**	**104**	P	Pn	23 13 19.3	-0.2

*DJA **13** 23:15:15.8±0.6,8°S±3°×10°7E±°,h23km±5km,M4.6/10, mb4.7/1,MLv4.6/10*
*BJI **13** 23:15:17.0±0.0,7.50S×106.70E,h61km,mB4.8/3, mb4.7/5*
*NEIC **13** 23:15:17.9±2.1,7.06S±0.08×106.75E±0.08,h87km±6km, mb4.2/12,Error ellipse: s-maj=14.6km s-min=5.0km az=224.0*
*IDC **13** 23:15:18.2±1.5,7.07S×106.78E,h88km±13km,mb3.9/19, mb1 4.0/20,mb1mx3.9/33,mbtmp4.2/20,MS3.5/3, Ms1 3.5/3,ms1mx2.8/31,Error ellipse: s-maj=21.1km s-min=11.1km az=56.0*

ISC 13 23:15:16.2±1.0,7°39S±0°08×106°67E±0°06,h73km±8km, n60,σ2s02/61,mb4.2/23,Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNJI	**Cibinong**	**0.46**	**80**	P	**Pn**	**23 15 28.1**	**-0.9**
CNJI				S	**Sn**	**23 15 36.5**	**-1.9**
DBJI	**Dramaga**	**0.83**	**5**	P	**Pn**	**23 15 33.5**	**+0.6**
DBJI				S	**Sn**	**23 15 46.2**	**+0.9**
LEM	**Lembang**	**1.09**	**59**	P	**Pn**	**23 15 37.0**	**+0.9**
	831nm,0.3s,baz=309,slow=2.2,SNR=153						
LEM				S	**Sn**	**23 15 54.5**	**+3.4**
	962nm,0.3s,baz=78,slow=23,SNR=17						
LEM				LR	LR	23 16 09.6	
	comp=Z,481nm,19.4s,baz=358,slow=59						
LEM	**Lembang**	**1.09**	**59**	P	**Pn**	**23 15 36.7**	**+0.5**
LEM				S	**Sn**	**23 15 54.2**	**+3.1**
CISI	**Cisompet, Garu**	**1.15**	**98**	P	**Pn**	**23 15 36.2**	**-0.6**
CISI				S	**Sn**	**23 15 50.5**	**-1.7**
CISI	**Cisompet, Garu**	**1.15**	**98**		**Pn**	**23 15 36.2**	**-0.6**
TNG	**Tangerang**	**1.21**	**359**	P	**Pn**	**23 15 38.4**	**+0.9**
TNG				S	**Sn**	**23 15 57.1**	**+3.7**
BLSI	**Bandar Lampung**	**2.46**	**325**	P	**Pn**	**23 15 55.7**	**+1.6**
BLSI				S	**Sn**	**23 16 27.4**	**+4.2**
LWLI	**Liwa**	**3.50**	**312**	P	**Pn**	**23 16 07.8**	**-0.7**
SMRI	**Semarang**	**3.75**	**85**	P	**Pn**	**23 16 14.7**	**+2.9**
SMRI	**Semarang**	**3.75**	**85**		**Pn**	**23 16 13.4**	**+1.6**
UGM	**Wanagama**	**3.85**	**98**	P	**Pn**	**23 16 14.8**	**+1.7**
UGM	**Wanagama**	**3.85**	**98**		**Pn**	**23 16 15.7**	**+2.6**
LHSI	**Lahat**	**4.72**	**318**	P	**Pn**	**23 16 27.3**	**+2.3**
KSI	**Kapahiang**	**5.50**	**312**	P	Pn	23 16 45.8	+10
JAGI	**Jajag, Banyuwa**	**7.49**	**99**		**Pn**	**23 17 04.5**	**+1.7**
PSI	**Prapat**	**12.73**	**322**	LR	LR	23 24 18.1	
	comp=Z,208nm,18.2s,baz=90,slow=43						
KAPI	**Kappang**	**13.22**	**80**	LR	LR	23 23 43.7	
	comp=Z,109nm,19.2s,baz=282,slow=39						
MPSI	**Mapaga**	**15.26**	**60**	P	**P**	**23 18 51.6**	**+0.7**
BATI	**Baumata**	**17.02**	**101**	P	**P**	**23 19 11.9**	**+1.4**
	6.1nm,0.3s,baz=292,slow=15,SNR=2.5						
BATI				S	**Sn**	**23 22 20.0**	**+1.5**
	1.5nm,0.3s,baz=24,slow=18,SNR=1.9						
SOEI	**Soe**	**17.56**	**99**	P	**Pn**	**23 19 14.5**	**-1.9**
FITZ	**Fitzroy Crossi**	**21.32**	**122**	P	**P**	**23 19 58.3**	**+1.1**
	2.3nm,0.5s,baz=351,slow=4.5,SNR=9.4						
FITZ				S	**S**	**23 23 48.2**	**-2.0**
	0.7nm,0.3s,baz=315,slow=20,SNR=2.0						
FITZ	**Fitzroy Crossi**	**21.32**	**122**	IAmb	IAmb	23 20 14.0	
	comp=Z,6.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**26.79**	**344**	P	**P**	**23 20 46.6**	**-2.9**
	comp=Z,1.4nm,0.5s,baz=179,slow=8.9,SNR=5.8						
CHTO	**Chiang Mai**	**27.13**	**344**	P	**P**	**23 20 49.2**	**-3.3**
H01W3	**Cape Leeuwin H**	**28.21**	**167**	T	T	23 50 33.6	
	baz=342,slow=78						
H01W1	**Cape Leeuwin H**	**28.23**	**167**	T	T	23 50 36.3	
	baz=342,slow=78						
H01W2	**Cape Leeuwin H**	**28.23**	**167**	T	T	23 50 39.1	
	baz=342,slow=78						
WRA	**Warramunga Arr**	**29.58**	**118**	P	**P**	**23 21 14.7**	**+0.2**
	comp=Z,2.4nm,0.5s,baz=294,slow=10.0,SNR=6.1						
WRA				PcP	**PcP**	**23 24 17.7**	**-0.3**
	comp=Z,1.6nm,0.9s,baz=300,slow=2.0,SNR=4.0						
ASAR	**Alice Springs**	**30.73**	**125**	P	**P**	**23 21 25.2**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=308,slow=8.6,SNR=13						
ASAR				PcP	**PcP**	**23 24 21.9**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=302,slow=2.8,SNR=4.6						
H08S2	**Diego Garcia H**	**33.88**	**267**	T	T	23 57 29.9	
	baz=91,slow=76						
H08S3	**Diego Garcia H**	**33.89**	**267**	T	T	23 57 24.3	
	baz=91,slow=76						
H08S1	**Diego Garcia H**	**33.90**	**267**	T	T	23 57 23.8	
	baz=91,slow=76						
STKA	**Stephens Creek**	**40.63**	**132**	P	**P**	**23 22 50.7**	**+1.5**
	comp=Z,11nm,0.4s,baz=315,slow=7.3,SNR=52						
STKA	**Stephens Creek**	**40.63**	**132**	P	**P**	**23 22 51.0**	**+1.8**
STKA				IAmb	IAmb	23 22 52.1	
	comp=Z,3.1nm,0.6s						
KSRS	**Korea Array**	**48.83**	**23**	P	**P**	**23 23 52.9**	**-1.4**
	comp=Z,1.8nm,0.8s,baz=208,slow=10,SNR=6.4						
KSH	**Kashi**	**54.64**	**331**	P	P	23 24 42.9	+5.3
KSH				pP	pP	23 24 57.5	+1.2
KSH				sP	sP	23 25 02.1	-2.5
KSH				pmax	pmax		
	comp=Z,37nm,1.5s						
KSH				pmax	pmax		
	comp=Z,120nm,4.5s						
SONM	**Songino Array**	**54.98**	**360**	P	**P**	**23 24 38.5**	**-1.5**
	comp=Z,1.0nm,0.7s,baz=176,slow=8.3,SNR=6.6						
SONM				PcP	**PcP**	**23 25 40.6**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=176,slow=3.9,SNR=8.4						
USRK	**Ussuriysk Ar.**	**56.21**	**22**	P	**P**	**23 24 46.7**	**-2.0**
	comp=Z,1.2nm,0.5s,baz=199,slow=5.2,SNR=6.6						
MK31	**Makanchi Array**	**58.14**	**340**	P	**P**	**23 25 00.0**	**-2.3**
MK31				IAmb	IAmb	23 25 00.2	
	comp=Z,0.9nm,0.7s						
MKAR	**Makanchi Array**	**58.14**	**340**	P	**P**	**23 24 59.5**	**-2.8**
	comp=Z,1.1nm,0.6s,baz=144,slow=7.4,SNR=21						
MKAR				PcP	**PcP**	**23 25 53.1**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=140,slow=6.9,SNR=5.4						
MAKZ	**Makanchi**	**58.26**	**340**	P	**P**	**23 25 00.8**	**-2.3**
MAKZ				IAmb	IAmb	23 26 33.7	
	comp=Z,6.3nm,1.8s						
ZALV	**Zalesovo Beam**	**63.83**	**346**	P	**P**	**23 25 38.4**	**-2.2**
	comp=Z,0.5nm,0.4s,baz=171,slow=5.6,SNR=3.3						
GEYT	**Alibeck**	**63.84**	**319**	P	**P**	**23 25 40.0**	**-1.0**
	comp=Z,2.2nm,0.8s,baz=144,slow=8.6,SNR=4.7						
MAW	**Mawson**	**66.90**	**197**	P	**P**	**23 26 03.4**	**+3.1**
	comp=Z,0.9nm,0.6s,baz=15,slow=6.0,SNR=2.2						
BRVK	**Borovoye**	**67.66**	**337**	P	**P**	**23 26 03.9**	**-1.4**
BRVK				IAmb	IAmb	23 26 06.3	
	comp=Z,5.2nm,1.6s						
ABKAR	**Akbulak array**	**69.58**	**329**	P	**P**	**23 26 15.7**	**-1.6**
VNDA	**Vanda**	**75.65**	**169**	P	**P**	**23 26 55.0**	**+2.1**
	comp=Z,0.6nm,0.4s,baz=322,slow=7.6,SNR=10.0						
KBZ	**Khabaz**	**76.72**	**318**	P	**P**	**23 26 59.7**	**+0.2**
	comp=Z,4.9nm,0.9s,baz=138,slow=4.4,SNR=11						
BOSA	**Boshof**	**78.99**	**242**	P	**P**	**23 27 14.6**	**+1.8**
	comp=Z,1.9nm,0.5s,baz=122,slow=6.8,SNR=7.0						
BR131	**Keskin Array S**	**81.84**	**312**	P	**P**	**23 27 27.2**	**-0.6**
BR131				IAmb	IAmb	23 27 28.8	
	comp=Z,2.9nm,1.1s						
BRTR	**Keskin Array B**	**81.84**	**312**	P	**P**	**23 27 27.5**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=126,slow=7.1,SNR=11						
ILGA	**Ilgaz**	**82.17**	**313**	P	**P**	**23 27 25.2**	**-4.3**
AKASG	**Malin Array Be**	**87.79**	**322**	P	**P**	**23 27 56.2**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=75,slow=5.0,SNR=4.7						
KOLS	**Kolonicke sedl**	**91.84**	**319**	*eP*	**P**	**23 28 20.8**	**+4.6**
FINES	**FINESS Array B**	**91.96**	**332**	P	**P**	**23 28 16.2**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=101,slow=7.2,SNR=1.9						
ARCES	**ARCESS Array B**	**93.78**	**340**	P	**P**	**23 28 23.7**	**-1.0**
	comp=Z,2.3nm,0.8s,baz=106,slow=2.9,SNR=4.3						
ARCES				LR	LR	00 15 07.2	
	comp=Z,30nm,19.0s,baz=268,slow=38						
YKA	**Yellowknife Ar**	**117.34**	**20**	PKP	**PKPdf**	**23 33 52.5**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=345,slow=1.7,SNR=5.6						
NVAR	**Mina Array Bea**	**129.06**	**46**	PKP	**PKiKP**	**23 34 16.8**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=255,slow=2.4,SNR=4.3						
TXAR	**Lajitas Array**	**144.07**	**49**	PKP	PKPbc	23 34 43.0	+0.6
	comp=Z,0.6nm,0.5s,baz=346,slow=3.0,SNR=6.3						

*IDC **13** 23:44:18.2±0.5,1°07N×127°81E,h0km,mb4.4/17, mb1 4.5/20,mb1mx4.3/35,mbtmp4.4/20,ML4.1/3,MS3.5/16, Ms1 3.5/16,ms1mx3.3/42,Error ellipse: s-maj=25.1km s-min=11.6km az=75.0*
*NEIC **13** 23:44:20.1±1.6,1°06N±0°06×127°90E±0°04,h10km±1km, mb4.6/38,Error ellipse: s-maj=10.5km s-min=7.3km az=342.0*
*DJA **13** 23:44:21.3±0.2,1°N±2°×12°8E±°,h10km,M4.5/16, mb4.7/16,mB5.0/6,MLv4.5/13,MLv4.5/10,Mw(mB)4.4/6*

ISC 13 23:44:22.1±0.4,1°03N±0°04×127°88E±0°05,h23km,n108, σ1s24/111,mb4.5/39,MS3.6/14,8C-1D,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.57**	**244**	P	**Pb**	**23 44 31.9**	**-1.6**
TNTI				S	**Sb**	**23 44 40.4**	**-0.8**
TNTI	**Ternate**	**0.57**	**244**		**Pb**	**23 44 32.1**	**-1.3**
LBMI	**Labuha**	**1.70**	**193**	P	**Pn**	**23 44 50.1**	**-0.2**
LBMI				S	**Sb**	**23 45 14.2**	**+0.7**
SIJI	**Sorong**	**3.88**	**119**	Pn	**Pn**	**23 45 20.8**	**+0.4**
	16nm,0.3s,baz=306,slow=9.9,SNR=27						
SIJI				Sn	**Sn**	**23 46 05.3**	**+0.2**
	7.0nm,0.3s,baz=285,slow=14,SNR=4.0						
SIJI				LR	LR	23 46 40.5	
	comp=Z,677nm,21.4s,baz=218,slow=36						
KMSI	**Cibinong**	**3.92**	**263**	P	**Pn**	**23 45 22.8**	**+1.9**
KMSI				S	**Sn**	**23 46 09.5**	**+3.2**
NLAI	**Namlea**	**4.31**	**190**	P	**Pn**	**23 45 26.8**	**+0.5**
MSAI	**Masohi**	**4.47**	**166**	P	**Pn**	**23 45 30.0**	**+1.5**
MSAI				S	**Sn**	**23 46 23.6**	**+3.8**
AAI	**Ambon**	**4.69**	**176**	P	**Pn**	**23 45 33.6**	**+2.0**
LUWI	**Luwuk**	**5.50**	**248**	P	**Pn**	**23 45 45.6**	**+2.9**
LUWI	**Luwuk**	**5.50**	**248**		**Pn**	**23 45 44.4**	**+1.7**
FAKI	**Fak Fak**	**5.87**	**132**		**Pn**	**23 45 48.6**	**+0.8**
MRSI	**Marisa**	**5.96**	**265**	P	**Pn**	**23 45 49.6**	**+0.6**
	0.2nm910nm46nm,0.9s						
DAV	**Davao City (W)**	**6.43**	**339**	*eP*	**Pn**	**23 45 56.0**	**+0.6**
APSI	**Ampana**	**6.52**	**253**	P	**Pn**	**23 45 57.8**	**+1.1**
	0.3nm0.3nm709nm64nm,0.5s						
MPSI	**Mapaga**	**8.01**	**265**	P	**Pn**	**23 46 19.5**	**+2.4**
BBSI	**Bau Bau**	**8.37**	**219**	P	Pb	23 46 39.1	-7.2
TTSI	**Tana Toraja**	**9.01**	**243**	P	**Pn**	**23 46 31.7**	**+0.8**
	1μm64nm,1.1s						
BNSI	**Bone**	**9.45**	**235**	P	**Pn**	**23 46 38.0**	**+1.0**
	35nm,0.8s						
SPSI	**Sidrap Palu**	**9.50**	**238**	P	**Pn**	**23 46 38.6**	**+1.0**
	848nm79nm,0.9s						
SAUI	**Saumlaki**	**9.58**	**159**	Pn	**Pn**	**23 46 37.3**	**-1.4**
BKSI	**Bulukumba**	**9.99**	**231**	P	**Pn**	**23 46 45.5**	**+1.2**
	481nm35nm,0.6s						
KAPI	**Kappang**	**10.10**	**233**	Pn	**Pn**	**23 46 45.4**	**-0.3**
	1.8nm,0.3s,baz=97,slow=2.9,SNR=7.2						
KAPI				Sn	**Sn**	**23 48 36.2**	**-2.2**
	1.7nm,0.3s,baz=137,slow=19,SNR=1.7						
KAPI				LR	LR	23 50 44.7	
	comp=Z,320nm,20.4s,baz=52,slow=38						
KAPI	**Kappang**	**10.10**	**233**		**Pn**	**23 46 44.6**	**-1.2**
BATI	**Baumata**	**11.92**	**201**	LR	LR	23 53 34.7	
	comp=Z,280nm,19.1s,baz=107,slow=47						
KKM	**Kota Kinabalu**	**12.66**	**293**		**Pn**	**23 47 19.3**	**-1.7**
JAY	**Jayapura**	**13.30**	**105**	LR	LR	23 52 46.3	
	comp=Z,312nm,20.6s,baz=246,slow=38						
KNRA	**Kununurra**	**16.62**	**177**		**Pn**	**23 48 13.2**	**-0.5**
KSM	**Kuching**	**17.57**	**272**		**Pn**	**23 48 24.1**	**-1.7**
FITZ	**Fitzroy Crossi**	**19.13**	**187**	P	**P**	**23 48 42.7**	**-1.0**
	0.3nm,0.3s,baz=14,slow=7.3,SNR=11						
FITZ				LR	LR	23 56 43.7	
	comp=Z,98nm,19.1s,baz=346,slow=39						
FITZ	**Fitzroy Crossi**	**19.13**	**187**	P	**P**	**23 48 44.0**	**+0.3**
SMRI	**Semarang**	**19.16**	**245**	P	**Pn**	**23 48 46.4**	**+1.2**
WB0	**Warramunga Arr**	**21.63**	**163**	P	**P**	**23 49 12.3**	**+1.4**
WB0				IAmb	IAmb	23 49 20.1	
	comp=Z,49nm,1.4s						
WRA	**Warramunga Arr**	**21.78**	**163**	P	**P**	**23 49 12.5**	**0.0**
	comp=Z,16nm,0.7s,baz=338,slow=10,SNR=23						
WB2	**Warramunga Arr**	**21.79**	**163**	P	**P**	**23 49 12.2**	**-0.4**
PMG	**Port Moresby**	**21.82**	**119**	LR	LR	23 58 56.5	
	comp=Z,215nm,18.1s,baz=275,slow=40						
WR0	**Warramunga Arr**	**21.86**	**163**	P	**P**	**23 49 13.5**	**+0.2**
WR0				IAmb	IAmb	23 49 22.5	
	comp=Z,27nm,1.2s						
TPUB	**Ta-pu**	**23.23**	**343**	P	**P**	**23 49 28.6**	**+0.8**
TPUB					**P**	**23 49 30.8**	**+3.0**
AS31	**Alice Springs**	**25.23**	**167**	P	**P**	**23 49 47.6**	**+1.1**
AS31				IAmb	IAmb	23 49 52.4	
	comp=Z,10nm,0.8s						
ASAR	**Alice Springs**	**25.23**	**167**	P	**P**	**23 49 47.5**	**+1.0**
	comp=Z,36nm,0.7s,baz=346,slow=12,SNR=93						
ASAR				PcP	**PcP**	**23 53 19.2**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=2.5,slow=2.1,SNR=4.1						
ASAR				ScP	**ScP**	**23 56 58.0**	**+0.2**
	comp=Z,0.8nm,1.0s,baz=321,slow=1.8,SNR=4.3						
CTA	**Charters Tower**	**27.66**	**140**	LR	LR	00 03 40.9	
	comp=Z,274nm,20.6s,baz=356,slow=42						
FORT	**Forrest**	**31.63**	**180**	P	**P**	**23 50 43.8**	**+0.3**
NJ2	**Nanjing**	**32.01**	**345**	*eP*	**P**	**23 50 46.9**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
CMAR	**Chiang Mai Arr**	**33.26**	**303**	P	**P**	**23 50 57.6**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=132,slow=9.1,SNR=9.5						
CMAR				LR	LR	00 04 35.9	
	comp=Z,57nm,18.5s,baz=152,slow=37						
CHTO	**Chiang Mai**	**33.43**	**304**	P	**P**	**23 50 59.7**	**+0.2**
STKA	**Stephens Creek**	**35.21**	**160**	P	**P**	**23 51 15.7**	**+0.9**
	comp=Z,8.2nm,0.8s,baz=328,slow=8.3,SNR=20						
STKA				LR	LR	00 06 04.3	
	comp=Z,98nm,18.3s,baz=278,slow=37						
STKA	**Stephens Creek**	**35.21**	**160**	P	**P**	**23 51 15.0**	**+0.2**
KSRS	**Korea Array**	**36.25**	**0**	P	**P**	**23 51 23.6**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=180,slow=10,SNR=6.3						
KSRS				LR	LR	00 09 42.0	
	comp=Z,30nm,18.6s,baz=185,slow=42						
MJAR	**Matsushiro Arr**	**36.61**	**14**	P	**P**	**23 51 25.6**	**-1.1**
	comp=Z,2.8nm,0.6s,baz=182,slow=9.6,SNR=8.1						
MJAR				LR	LR	00 05 39.8	
	comp=Z,99nm,19.7s,baz=235,slow=35						
MAT	**Matsushiro**	**36.61**	**14**	P	**P**	**23 51 26.2**	**-0.5**
MJB9	**Matsu-Tunnel**	**36.61**	**14**	P	**P**	**23 51 26.9**	**+0.2**
XAN	**Xi'an**	**37.33**	**334**	P	**P**	**23 51 34.5**	**+1.6**
CD2	**Chengdu**	**37.49**	**325**	P	**P**	**23 51 34.8**	**+0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	**Lanzhou**	**41.40**	**330**	*eP*	**P**	**23 52 09.3**	**+2.3**
LZH				pP	pP	23 52 13.8	-0.3
LZH				sP	sP	23 52 17.4	+0.6
LZH				PP	**PnPn**	**23 53 45.6**	**-2.0**
LZH				pmax	pmax		
	comp=Z,26nm,1.2s						
LZH				pmax	pmax		
	comp=Z,90nm,4.8s						
HHC	**Hu-ho-hao-te**	**42.31**	**342**	*eP*	**P**	**23 52 14.8**	**+0.5**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,44nm,5.7s						
HHC				LR	LR		
	comp=N,140nm,14.7s						
HHC				LR	LR		
	comp=E,92nm,12.5s						
HHC				LR	LR		
	comp=Z,66nm,13.5s						
SHL	**Shillong**	**42.41**	**308**	P	**P**	**23 52 15.3**	**-0.1**
SHL				IAmb	IAmb	23 52 16.6	
	comp=Z,13nm,0.9s						
USRK	**Ussuriysk Ar.**	**43.14**	**4**	LR	LR	00 11 25.6	
	comp=Z,38nm,18.8s,baz=165,slow=38						
GTA

ZALV				LR	LR	00 24 18.4	
	comp=Z,23nm,18.9s,baz=132,slow=38						
KBL	**Kabul**	**64.08**	**308**	P	**P**	**23 54 55.1**	**+0.3**
KURK	**Kurchatov**	**64.62**	**328**	P	**P**	**23 54 57.7**	**-0.1**
CHGR	**Chuyangaron**	**65.32**	**313**	P	**P**	**23 55 02.8**	**+0.1**
HRA	**Herat**	**69.44**	**306**	P	**P**	**23 55 28.7**	**-0.4**
HRA				IAmb	IAmb	23 55 29.8	
	comp=Z,3.2nm,0.9s						
BRVK	**Borovoye**	**70.27**	**327**	P	**P**	**23 55 33.3**	**-0.2**
TIXI	**Tiksi**	**70.52**	**0**	P	**P**	**23 55 36.2**	**+1.6**
NRIK	**Noril'sk**	**73.31**	**346**	P	**P**	**23 55 50.6**	**-0.9**
	comp=Z,2.1nm,0.6s,baz=134,slow=6.3,SNR=10						
GEYT	**Alibeck**	**73.48**	**309**	P	**P**	**23 55 52.6**	**-0.5**
	comp=Z,3.8nm,0.7s,baz=145,slow=5.4,SNR=9.8						
GYA0B	**ALIBECK ARRAY**	**73.48**	**309**	P	**P**	**23 55 53.3**	**+0.2**
GYA0B				IAmb	IAmb	23 55 54.4	
	comp=Z,4.4nm,0.8s						
ABKAR	**Akbulak array**	**74.96**	**321**	P	**P**	**23 56 01.1**	**-0.3**
ABKAR				IAmb	IAmb	23 56 01.8	
	comp=Z,4.4nm,0.8s						
ARU	**Arti**	**77.82**	**328**	P	**P**	**23 56 16.4**	**-1.2**
ARU				IAmb	IAmb	23 56 24.9	
	comp=Z,3.6nm,0.7s						
VNDA	**Vanda**	**80.62**	**173**	P	**P**	**23 56 32.3**	**-0.1**
	comp=Z,2.5nm,0.7s,baz=317,slow=7.2,SNR=17						
MAW	**Mawson**	**81.64**	**201**	P	**P**	**23 56 37.8**	**-0.2**
	comp=Z,1.8nm,0.6s,baz=68,slow=6.0,SNR=6.7						
RAYN	**Ar Rayn**	**82.60**	**293**	P	**P**	**23 56 43.7**	**-0.4**
RAYN				IAmb	IAmb	23 56 55.7	
	comp=Z,5.7nm,1.2s						
KBZ	**Khabaz**	**85.66**	**314**	P	**P**	**23 56 58.6**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=120,slow=3.2,SNR=5.0						
BRTR	**Keskin Array B**	**92.62**	**310**	P	**P**	**23 57 30.5**	**-2.0**
	comp=Z,0.8nm,0.8s,baz=122,slow=6.1,SNR=7.3						
BRTR				LR	LR	00 44 07.1	
	comp=Z,15nm,19.3s,baz=18,slow=39						
ARCES	**ARCESS Array B**	**93.36**	**340**	P	**P**	**23 57 33.0**	**-2.0**
	comp=Z,2.2nm,0.8s,baz=40,slow=4.7,SNR=4.8						
CFR	**Carcaliu**	**96.15**	**315**	⇑P	**P**	**23 57 47.0**	**-1.3**
TESR	**Tescani**	**96.98**	**317**	⇑P	**P**	**23 57 49.5**	**-2.6**
VRI	**Vrincioaia**	**97.03**	**316**	⇑P	**P**	**23 57 51.3**	**-1.0**
PLOR	**Plostina**	**97.08**	**316**	⇓P	**P**	**23 57 52.2**	**-0.4**
MLR	**Muntele Rosu**	**97.63**	**316**	⇑P	**P**	**23 57 53.8**	**-1.4**
BURAR	**Bucovina Array**	**97.77**	**318**	⇑P	**P**	**23 57 55.1**	**-0.7**
ARR	**Arges**	**98.56**	**316**	⇑P	**P**	**23 57 57.4**	**-2.0**
NB2	**NORSAR Subarra**	**101.70**	**334**	P	**Pdif**	**23 58 11.1**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=66,slow=4.4						
TORD	**Torodi Ar. Bea**	**124.82**	**287**	PKP	**PKPdf**	**00 03 20.1**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=62,slow=1.7,SNR=9.6						

*IDC **14** 00:10:06.7±1.9, 8.°79S×124.°42E, h0km, mb3.5/1, mb1 3.9/4, mb1mx3.6/28, mbtmp3.7/4, ML3.8/3, Error ellipse: s-maj=110.1km s-min=28.0km az=64.0*
*DJA **14** 00:10:18.3±1.0, 9.°5S×3.°12×12.°4E±.°, h23km±16km, M3.8/6, mb4.3/1, MLv3.6/6*

ISC 14 00:10:11.3±1.3, 8.°87S±0.°10×124.°69E±0.°09, h35km, n10, σ3°06/15, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.98**	**205**	P		**Pn**	**00 10 33.4**	**+4.7**
BATI	**Baumata**	**1.67**	**217**	P		**Pn**	**00 10 40.9**	**+2.8**
BATI				S		**Sn**	**00 10 58.1**	**-0.3**
MMRI	**Maumere**	**2.43**	**275**	P		**Pn**	**00 10 50.3**	**+1.7**
MMRI				S		**Sn**	**00 11 14.7**	**-2.4**
EDFI	**Ende, Flores**	**2.96**	**272**	P		**Pn**	**00 10 57.1**	**+1.1**
EDFI				S		**Sn**	**00 11 27.3**	**-3.1**
WBSI	**Waikabubak, Su**	**5.28**	**261**	P		**Pn**	**00 11 28.8**	**+0.9**
PLAI	**Plampang**	**6.83**	**270**	P		**Pn**	**00 11 49.5**	**+0.4**
FITZ	**Fitzroy Crossi**	**9.22**	**174**	Pn		**Pn**	**00 12 22.2**	**+0.3**
	0.6nm,0.3s,baz=3.2,slow=9.2,SNR=4.1							
FITZ				Sn		Sn	00 13 56.6	-7.9
	3.8nm,0.3s,baz=96,slow=9.0,SNR=6.0							
WRA	**Warramunga Arr**	**14.44**	**141**	Pn		**Pn**	**00 13 36.5**	**+3.2**
	0.6nm,0.3s,baz=316,slow=13,SNR=5.4							
WRA				Sn		**Sn**	**00 16 08.3**	**-3.9**
	1.1nm,0.3s,baz=314,slow=24,SNR=8.4							
ASAR	**Alice Springs**	**17.16**	**150**	P		**Pn**	**00 14 10.1**	**+1.5**
	0.2nm,0.3s,baz=319,slow=11,SNR=14							
ASAR				Sn		**Sn**	**00 17 12.6**	**-5.8**
	0.3nm,0.3s,baz=312,slow=19,SNR=9.4							
MKAR	**Makanchi Array**	**67.03**	**330**	P		**P**	**00 21 00.5**	**-0.4**
	0.4nm,0.7s,baz=122,slow=7.5,SNR=4.3							

*IDC **14** 01:05:19.3±3.9, 13.°39N×144.°95E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.6/42, mbtmp3.9/5, Error ellipse: s-maj=162.2km s-min=31.3km az=84.0*
*NEIC **14** 01:05:47.8±1.4, 13.°1N±0.°2×144.°4E±0.°9, h242km±26km, mb4.0/4, Error ellipse: s-maj=123.0km s-min=22.0km az=83.0*

ISC 14 01:05:47.5±1.2, 13.°2N±0.°2×144.°7E±0.°4, h250km, n11, σ0°87/12, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.44**	**25**	Pn		**Pn**	**01 06 20.3**	**0.0**
GUMO				S		**S**	**01 06 44.7**	**-1.3**
JNU	**Nakatsue**	**23.50**	**330**	P		**P**	**01 10 35.0**	**-0.3**
WB0	**Warramunga Arr**	**34.28**	**197**	P		**P**	**01 12 10.9**	**+0.4**
WB0				IAmb		IAmb	01 12 22.2	
	comp=Z,6.8nm,1.1s							
WB2	**Warramunga Arr**	**34.46**	**197**	P		**P**	**01 12 11.9**	**-0.1**
WRA	**Warramunga Arr**	**34.46**	**197**	P		**P**	**01 12 11.4**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=19,slow=9.1,SNR=4.5							
SONM	**Songino Array**	**46.95**	**325**	P		**P**	**01 13 53.2**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=128,slow=4.2,SNR=2.0							
MKAR	**Makanchi Array**	**61.65**	**316**	P		**P**	**01 15 38.5**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=88,slow=8.7,SNR=3.9							
ZALV	**Zalesovo Beam**	**61.84**	**325**	P		**P**	**01 15 40.5**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=115,slow=6.5,SNR=2.1							
BRVK	**Borovoye**	**70.19**	**322**	P		**P**	**01 16 33.5**	**+0.3**
BRVK				IAmb		IAmb	01 16 34.7	
	comp=Z,1.4nm,0.6s							
FINES	**FINESS Array B**	**91.44**	**335**	P		**P**	**01 18 26.4**	**+1.2**
	comp=Z,2.5nm,0.9s,baz=61,slow=6.5,SNR=4.5							
FINES	**FINESS Array B**	**91.44**	**335**	P		**P**	**01 18 26.7**	**+1.5**

*IDC **14** 01:06:14.5±1.4, 25.°56N×109.°81W, h0km, mb3.4/2, mb1 3.7/5, mb1mx3.5/44, mbtmp3.3/5, ML3.8/2, MS3.5/18, Ms1 3.5/18, ms1mx3.4/28, Error ellipse: s-maj=29.2km s-min=15.8km az=115.0*
*MEX **14** 01:06:17.4±1.0, 26.°29N×109.°75W, h16km±33km, MD4.0*

ISC 14 01:06:15.9±0.9, 25.°54N±0.°07×109.°77W±0.°09, h10km, n23, σ1°34/9, MS3.4/12, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TSIG	**Topolobambo**	**0.67**	**85**	*e*P		**Pn**	**01 06 32.5**	**+1.2**
TSIG				*i* S		**Sn**	**01 06 42.1**	**+0.2**
LPIG	**La Paz**	**1.51**	**199**	Pn		**Pb**	**01 06 42.4**	**-1.7**
	7.8nm,0.3s,baz=354,slow=9.2,SNR=14							
LPIG				Sn		**Sg**	**01 07 05.7**	**+1.1**
	33nm,0.3s,baz=9.1,slow=21,SNR=10							
GUYB	**Guaymas**	**2.54**	**338**	*e*P		Pn	01 06 45.3	-12
SRIG	**Santa Rosalia**	**2.83**	**309**	*e*P		Pn	01 06 52.9	-8.3
TXAR	**Lajitas Array**	**6.61**	**54**	Pn		**Pn**	**01 07 51.9**	**-1.4**
	0.2nm,0.3s,baz=230,slow=14,SNR=2.3							
TXAR				Lg		Lg	01 09 44.5	
	1.5nm,0.3s,baz=250,slow=29,SNR=5.3							
TXAR				LR		LR	01 10 41.9	
	comp=Z,407nm,19.8s,baz=0.0,slow=40							
ANMO	**Albuquerque**	**9.80**	**16**	Pn		Pn	01 08 43.3	+6.2
	0.1nm,0.3s,baz=183,slow=14,SNR=4.5							
ANMO				Lg		Lg	01 11 21.4	
	0.1nm,0.3s,baz=70,slow=16,SNR=3.8							
PFO	**Pinyon Flats O**	**9.92**	**326**	LR		LR	01 11 30.2	
	comp=Z,144nm,20.9s,baz=167,slow=32							
NVAR	**Mina Array Bea**	**14.74**	**333**	Pn		**Pn**	**01 09 45.3**	**+0.7**
	baz=157,slow=13,SNR=4.1							
NVAR				LR		LR	01 14 36.0	
	comp=Z,88nm,20.3s,baz=200,slow=34							
CMIG	**Matias Romero**	**16.21**	**118**	LR		LR	01 16 06.0	
	comp=Z,224nm,19.0s,baz=260,slow=36							
PDAR	**Pinedale Array**	**17.18**	**1**	P		**Pn**	**01 10 14.8**	**-1.5**
	0.1nm,0.3s,baz=169,slow=10,SNR=1.7							
PDAR				LR		LR	01 16 51.8	
	comp=Z,197nm,20.7s,baz=160,slow=37							
YBH	**Yreka Blue Hor**	**19.37**	**330**	LR		LR	01 17 59.2	
	comp=Z,79nm,19.4s,baz=168,slow=36							
TEIG	**Tepich**	**20.49**	**101**	LR		LR	01 20 05.5	
	comp=Z,134nm,20.3s,baz=249,slow=40							
APG	**El Apazote**	**20.90**	**116**	LR		LR	01 18 26.7	
	comp=Z,217nm,21.7s,baz=298,slow=35							
NEW	**Newport**	**23.41**	**348**	LR		LR	01 20 44.7	
	comp=Z,87nm,19.2s,baz=172,slow=37							
TKL	**Tuckaleechee C**	**24.48**	**59**	LR		LR	01 21 52.5	
	comp=Z,119nm,18.1s,baz=244,slow=38							
ULM	**Lac du Bonnet**	**26.91**	**20**	LR		LR	01 21 50.1	
	comp=Z,34nm,21.3s,baz=272,slow=35							
JTS	**Las Juntas de**	**27.99**	**118**	LR		LR	01 23 05.7	
	comp=Z,50nm,18.7s,baz=0.0,slow=36							
BBB	**Bella Bella**	**30.02**	**337**	LR		LR	01 23 48.2	
	comp=Z,86nm,19.5s,baz=186,slow=35							
SADO	**Sadowa**	**31.28**	**44**	LR		LR	01 26 08.6	
	comp=Z,140nm,19.0s,baz=248,slow=38							
YKA	**Yellowknife Ar**	**37.09**	**356**	P		**P**	**01 13 26.7**	**+0.6**
	0.2nm,0.6s,baz=173,slow=8.3,SNR=4.4							
YKA				LR		LR	01 29 03.0	
	comp=Z,160nm,19.7s,baz=0.0,slow=37							
ROSC	**El Rosal**	**39.71**	**115**	LR		LR	01 30 17.7	
	comp=Z,62nm,20.1s,baz=51,slow=36							
INK	**Inuvik**	**45.13**	**348**	P		**P**	**01 14 32.8**	**+0.6**
	0.6nm,0.6s,baz=135,slow=5.7,SNR=3.7							
INK				LR		LR	01 33 19.3	
	comp=Z,68nm,18.9s,baz=183,slow=36							
RES	**Resolute Bay**	**49.80**	**5**	LR		LR	01 36 12.5	
	comp=Z,62nm,18.7s,baz=235,slow=36							

*MOS **14** 01:14:50.4±1.5, 47.°74N×154.°22E, h46km, mb3.7/8, Error ellipse: s-maj=15.8km s-min=7.9km az=60.9*
*NEIC **14** 01:14:52.6±1.4, 47.°76N±0.°06×154.°3E±0.°2, h50km±8km, mb4.2/9, Error ellipse: s-maj=17.7km s-min=3.3km az=120.0*
*IDC **14** 01:14:52.2±2.6, 47.°73N×154.°26E, h48km±26km, mb3.5/11, mb1 3.7/15, mb1mx3.5/63, mbtmp3.8/15, ML3.2/4, MS3.0/4, Ms1 3.0/4, ms1mx2.7/40, Error ellipse: s-maj=28.9km s-min=14.0km az=140.0*
*SKHL **14** 01:14:53.2±0.3, 47.°96N×154.°05E, h62km±4km, mb4.7/3*

ISC 14 01:14:53.8±0.6, 47.°90N±0.°07×154.°08E±0.°07, h64km, n66, σ1°74/68, mb3.9/18, 2C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.09**	**25**	*e*P		**Pn**	**01 15 39.3**	**-0.8**
SKR				AMB		AMB	01 15 43.1	
	60nm,0.3s							
SKR				*e*S		**Sn**	**01 16 13.7**	**-2.2**
SKR				A		A	01 16 22.5	
	180nm,0.2s							
SKR				A		A	01 16 22.5	
	130nm,0.2s							
SKR	**Severo-Kuril's**	**3.09**	**25**	*e*PN		**Pn**	**01 15 40.1**	**0.0**
SKR				*e*S		**Sn**	**01 16 13.9**	**-2.0**
SKR				pmax		pmax		
	comp=Z,103nm,0.5s							
SKR				smax		smax		
	comp=E,45nm,0.4s							
SKR				smax		smax		
	comp=N,176nm,0.6s							
PAU	**Pauzhetka**	**3.99**	**25**	*e*P		**Pn**	**01 15 51.7**	**-0.7**
PAU				*e*S		**Sn**	**01 16 35.5**	**-2.4**
PAU				A		A	01 16 39.0	
	comp=N,150nm,0.5s							
PAU				A		A	01 16 39.0	
	comp=N,120nm,0.5s							
KUR	**Kuril'sk**	**5.04**	**240**	*e*P		**Pn**	**01 16 07.5**	**+0.7**
KUR				AMB		AMB	01 16 08.6	
	comp=N,80nm,0.6s							
KUR				*e*S		**Sn**	**01 17 03.5**	**-0.2**
KUR				A		A	01 17 11.0	
	comp=N,120nm,0.5s							
KUR				A		A	01 17 11.0	
	comp=N,190nm,0.5s							
KUR	**Kuril'sk**	**5.04**	**240**	*e*PN		**Pn**	**01 16 08.1**	**+1.2**
KUR				*e*S		**Sn**	**01 17 05.8**	**+2.1**
KUR				pmax		pmax		
	comp=Z,86nm,0.6s							
KUR				smax		smax		
	comp=E,189nm,0.6s							
KUR				smax		smax		
	comp=N,115nm,0.5s							
PEA0B	**Petropavlovsk-**	**5.71**	**23**	PN		**Pn**	**01 16 16.5**	**+0.6**
PEA0B	**Petropavlovsk-**	**5.71**	**23**			**Pn**	**01 16 16.5**	**+0.6**
PEA0B				Sn		**Sn**	**01 17 17.0**	**-2.9**
PETK	**Petropavlovsk-**	**5.71**	**23**	P		**Pn**	**01 16 16.5**	**+0.6**
	comp=N,3.1nm,0.3s,baz=183,slow=13,SNR=78							
PETK				LR		LR	01 18 45.9	
	comp=N,147nm,21.8s,baz=241,slow=40							
PET	**Petropavlovsk**	**5.91**	**28**	*e*P		**Pn**	**01 16 18.0**	**-0.6**
PET				*e*S		**Sn**	**01 17 22.0**	**-2.8**
PET				A		A	01 17 28.4	
	comp=N,40nm,0.5s							
PET				A		A	01 17 28.4	
	comp=N,120nm,0.5s							
PET	**Petropavlovsk**	**5.91**	**28**	*e*PN		**Pn**	**01 16 18.0**	**-0.6**
YUK	**Yuzh-Kuril'sk**	**6.91**	**239**	*e*P		**Pn**	**01 16 32.8**	**+0.5**
YUK				*e*S		**Sn**	**01 17 47.4**	**-2.0**
NMR	**Nemuro--Hokkai**	**7.40**	**235**	*i* P		N	**01 16 34.6**	**-4.5**
YSS	**Yuzh-Sakhalins**	**7.74**	**267**	*e*P		**Pn**	**01 16 44.0**	**+0.3**
YSS				AMB		AMB	01 16 49.9	
	comp=N,20nm,0.6s							
YSS				*e*S		**Sn**	**01 18 07.0**	**-2.8**
YSS	**Yuzh-Sakhalins**	**7.74**	**267**	*e*PN		**Pn**	**01 16 47.1**	**+3.4**
YSS				*e*S		Sn	01 18 18.0	+8.2
YSS				pmax		pmax		
	comp=Z,20nm,0.6s							
YSS				MLR		MLR		
	comp=Z,200nm,14.0s							
TYV	**Tymovskoe**	**8.02**	**296**	*e*P		**Pn**	**01 16 47.1**	**-0.5**
JKA	**Kamikawa-asahi**	**8.84**	**249**	*e*P		**Pn**	**01 16 59.7**	**+1.0**
JKA	**Kamikawa-asahi**	**8.84**	**249**			**Pn**	**01 16 59.7**	**+1.0**
ASAJ	**Asahikawa**	**8.84**	**249**	P		**Pn**	**01 16 59.7**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=64,slow=8.9,SNR=3.6							
ASAJ				LR		LR	01 20 09.5	
	comp=Z,101nm,20.3s,baz=151,slow=36							
ERM	**Erimo**	**9.72**	**237**	*i* PN		**Pn**	**01 17 09.7**	**-1.1**
ERM	**Erimo**	**9.72**	**237**	Pn		**Pn**	**01 17 09.0**	**-1.7**
ERM				Sn		**Sn**	**01 18 55.1**	**-3.2**
EKMR	**Ekimchan**	**14.39**	**299**	*e*P		**Pn**	**01 18 11.0**	**-3.0**
KLR	**Kul'dur**	**14.84**	**283**	P		**Pn**	**01 18 21.1**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=288,slow=20,SNR=1.7							
KLR	**Kul'dur**	**14.84**	**283**	*e*P		**Pn**	**01 18 17.3**	**-2.5**
KLR	**Kul'dur**	**14.84**	**283**	*i* P		**Pn**	**01 18 17.3**	**-2.5**
MJA0	**Matsu Arr-Jizo**	**16.28**	**232**	*e*P		**P**	**01 18 41.9**	**+1.6**
MJAR	**Matsushiro Arr**	**16.30**	**232**	P		**Pn**	**01 18 35.7**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=39,slow=12,SNR=4.9							
MJAR				LR		LR	01 25 21.9	
	comp=Z,45nm,19.5s,baz=280,slow=39							
BMKR	**Bomnak**	**17.13**	**303**	*e*P		**Pn**	**01 18 45.4**	**-3.3**
ADK	**Adak**	**19.19**	**67**	P		**P**	**01 19 11.6**	**-0.5**
ADK				pmax		pmax		
	comp=Z,65nm,1.2s							
ADK	**Adak**	**19.19**	**67**	P		**P**	**01 19 11.6**	**-0.5**
BILL	**Bilibino**	**21.13**	**13**	*e*P		**P**	**01 19 33.8**	**+0.8**
BILL	**Bilibino**	**21.13**	**13**	⇑*e*P		**P**	**01 19 33.8**	**+0.8**
BILL				*e*			01 19 53.9	
BILL				*e*S		Sn	01 23 58.3	+24
BILL				pmax		pmax		
	comp=Z,1.0nm,1.1s							
BILL				MLR		MLR		
	comp=Z,74nm,18.0s							
KSRS	**Korea Array**	**21.78**	**251**	P		**P**	**01 19 41.0**	**+0.8**
	comp=Z,4.5nm,0.8s,baz=60,slow=10,SNR=14							
KSRS				LR		LR	01 26 32.5	
	comp=Z,40nm,21.6s,baz=56,slow=32							
KSRS	**Korea Array**	**21.78**	**251**	*e*P		**P**	**01 19 42.5**	**+2.4**
KSRS	**Korea Array**	**21.78**	**251**	*e*P		**P**	**01 19 42.5**	**+2.4**
KSRS				pmax		pmax		
	comp=Z,5.0nm,0.8s							
JNU	**Nakatsue**	**22.88**	**238**	P		**P**	**01 19 50.3**	**-1.6**
	comp=Z,1.8nm,0.3s,baz=302,slow=6.8,SNR=14							
TIXI	**Tiksi**	**26.56**	**342**	*e*P		**P**	**01 20 26.8**	**+1.5**
TIXI	**Tiksi**	**26.56**	**342**	*i* P		**P**	**01 20 26.8**	**+1.5**
TIXI				pmax		pmax		
	comp=Z,1.0nm,1.3s							
TIXI	**Tiksi**	**26.56**	**342**	P		**P**	**01 20 25.7**	**+0.5**
H11N2	**WAKE ISLAND Hy**	**29.96**	**155**	T		T	01 52 46.1	
	SNR=171							
H11N1	**WAKE ISLAND Hy**	**29.98**	**155**	T		T	01 52 08.5	
	baz=344,slow=74,SNR=304							
H11N3	**WAKE ISLAND Hy**	**29.98**	**155**	T		T	01 52 13.7	
	baz=169,slow=74,SNR=147							
H11S1	**WAKE ISLAND Hy**	**31.07**	**156**	T		T	01 53 31.6	
	baz=344,slow=76,SNR=993							
H11S3	**WAKE ISLAND Hy**	**31.08**	**156**	T		T	01 53 25.9	
	baz=344,slow=76,SNR=1416							
H11S2	**WAKE ISLAND Hy**	**31.09**	**156**	T		T	01 53 30.9	
	baz=344,slow=76,SNR=879							
KTH	**Kantishna Hill**	**33.46**	**42**	P		**P**	**01 21 27.1**	**+0.7**
KTH				IAmb		IAmb	01 21 29.6	
	comp=Z,3.1nm,1.0s							
TRF	**Thorofare Moun**	**33.75**	**42**	P		**P**	**01 21 29.3**	**+0.3**
SML	**Sawmill**	**34.69**	**45**	P		**P**	**01 21 37.7**	**+0.6**
DHY	**Denali Highway**	**35.07**	**43**	P		**P**	**01 21 40.8**	**+0.3**
DHY				IAmb		IAmb	01 21 41.2	
	comp=Z,3.1nm,1.0s							
HDA	**Harding Lake**	**35.22**	**40**	P		**P**	**01 21 42.1**	**+0.6**
HDA				IAmb		IAmb	01 21 43.0	
	comp=Z,2.7nm,0.6s							
ILAR	**Eielson Array**	**35.24**	**40**	P		**P**	**01 21 41.0**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=276,slow=7.2,SNR=6.3							
ILAR	**Eielson Array**	**35.24**	**40**	*e*P		**P**	**01 21 45.0**	**+3.3**
ILAR				pmax		pmax		
	comp=Z,1.0nm,0.9s							
RIDG	**Independent Ri**	**36.17**	**41**	P		**P**	**01 21 49.8**	**0.0**
RIDG				IAmb		IAmb	01 22 02.0	
	comp=Z,4.3nm,1.2s							
INK	**Inuvik**	**40.33**	**33**	P		**P**	**01 22 24.8**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=302,slow=4.5,SNR=5.3							
MKAR	**Makanchi Array**	**47.00**	**297**	P		**P**	**01 23 19.6**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=62,slow=9.4,SNR=6.5							
YKA	**Yellowknife Ar**	**49.61**	**38**	P		**P**	**01 23 39.3**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=299,slow=6.7,SNR=3.9							
NVAR	**Mina Array Bea**	**61.33**	**63**	P		**P**	**01 25 02.9**	**0.0**
	comp=Z,0.3nm,0.5s,baz=301,slow=8.1,SNR=4.2							
FINES	**FINESS Array B**	**63.28**	**335**	P		**P**	**01 25 16.7**	**+1.5**
	comp=Z,2.2nm,0.9s,baz=32,slow=7.5,SNR=4.4							
FINES	**FINESS Array B**	**63.28**	**335**	*e*P		**P**	**01 25 17.2**	**+1.9**
FINES				pmax		pmax		
	comp=Z,2.0nm,0.9s							
WB0	**Warramunga Arr**	**69.63**	**200**	P		**P**	**01 25 55.4**	**-0.9**
WB0				IAmb		IAmb	01 26 14.5	
	comp=Z,3.9nm,1.1s							
ASAR	**Alice Springs**	**73.51**	**199**	P		**P**	**01 26 19.9**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=15,slow=5.6,SNR=9.3							
ASAR				pP		**pP**	**01 26 36.9**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=14,slow=4.7,SNR=4.3							
TXAR	**Lajitas Array**	**76.36**	**61**	P		**P**	**01 26 35.6**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=324,slow=4.5,SNR=4.5							
BRTR	**Keskin Array B**	**78.00**	**317**	P		**P**	**01 26 47.0**	**+1.7**
	comp=Z,0.7nm,0.9s,baz=121,slow=4.8,SNR=4.0							
BRTR	**Keskin Array B**	**78.00**	**317**	*e*P		**P**	**01 26 47.6**	**+2.3**
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.9s							
H03N2	**Juan Fernandez**	**138.10**	**90**	T		T	04 07 36.2	
	baz=309,slow=77,SNR=8.3							
H03N1	**Juan Fernandez**	**138.11**	**90**	T		T	04 07 37.6	
	baz=309,slow=77,SNR=8.5							
H03N3	**Juan Fernandez**	**138.11**	**90**	T		T	04 07 38.6	
	baz=309,slow=77,SNR=8.5							

*NEIC **14** 01:27:00.7±1.1, 18.°02S±0.°07×175.°6W±0.°1, h214km±6km, mb4.6/25, Error ellipse: s-maj=14.9km s-min=10.0km az=72.0*
*IDC **14** 01:27:05.3±2.2, 18.°06S×175.°53W, h260km±20km, mb3.7/12, mb1 3.9/13, mb1mx3.7/32, mbtmp4.4/13, Error ellipse: s-maj=17.2km s-min=10.9km az=114.0*

ISC 14 01:27:04.9±0.6, 18.°0S±0.°1×175.°6W±0.°1, h254km, n52, σ0°83/54, mb4.5/23, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.52**	**43**			Pn	01 28 21.7	-5.6
AFI						S	01 29 21.0	-12
DZM	**Mont Dzumac**	**17.31**	**254**	P		**P**	**01 30 51.1**	**+1.1**
	1.3nm,0.3s,baz=70,slow=21,SNR=9.8							
DZM	**Mont Dzumac**	**17.31**	**254**	P		**P**	**01 30 48.9**	**-1.1**
DZM				IAmb		IAmb	01 30 55.6	
	comp=Z,20nm,0.9s							
URZ	**Urewera**	**21.14**	**196**	P		**P**	**01 31 28.9**	**-1.6**
	comp=Z,11nm,0.4s,baz=37,slow=4.5,SNR=12							
URZ				S		**S**	**01 35 09.9**	**+1.3**
	comp=Z,11nm,0.3s,baz=261,slow=5.8,SNR=18							
HIZ	**Hauiti**	**22.05**	**200**	P		**P**	**01 31 38.6**	**-0.3**
BKZ	**Black Stump Fm**	**22.16**	**196**	P		**P**	**01 31 39.3**	**-0.6**
BFZ	**Birch

comp=Z,0.5nm,0.5s,baz=11,slow=2.7,SNR=5.2
GERES GERESS Array B 148.33 348 PKPbc 01 46 20.9 -0.3
WATA Walderalm 150.16 350 *i* PKPbc **PKPbc 01 46 25.5 -0.4**
comp=Z,0.7nm,0.3s
WTTA Wattenberg 150.22 350 *i* PKPbc **PKPbc 01 46 25.5 -0.6**
comp=Z,2.0nm,0.3s

BJI ***14*** *01:51:33.9±0.0,27.˙18S×178.˙59W,h384km,mB5.1/35, mb5.3/54*
IDC ***14*** *01:51:34.7±0.5,27.˙47S×179.˙04W,h375km±4km,mb4.8/24, mb1 4.8/26,mb1mx4.7/33,mbtmp5.5/26,Error ellipse: s-maj=9.3km s-min=8.6km az=51.0*
NEIC ***14*** *01:51:34.9±1.3,27.˙58S±0.˙08×179.˙1W±0.˙1,h386km±5km, mb4.9/207,Error ellipse: s-maj=16.5km s-min=11.8km az=97.0*
GCMT ***14*** *01:51:36.9±0.2,27.˙43S±0.˙03×179.˙02W±0.˙02, h373km±1km,MW5.4/115,Moment Tensor Solution. s115,c187; Duration: 1ś3 Moment tensor: Scale 10[17] Nm; Mrr-0.72±.03; Mθθ-0.80±.05; Mϕϕ1.53±.04; Mrθ-0.75±.04; Mrϕ-0.47±.04; Mθϕ-0.61±.04; Best double couple: M₀1.70500×10[17] NP1:ϕ₁132.00000°,δ51.00000°, λ-154.00000°. NP2:ϕ₂26.00000°,δ70.00000°, λ-42.00000°. Principal axes: T 1.7160, Plg12.0000°, Azm83.0000°; N -0.0160, Plg45.0000°, Azm185.0000°; P -1.6950, Plg43.0000°, Azm342.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
ISC 14 01:51:34.6±0.3,27.˙57S±0.˙04×178.˙95W±0.˙04, h382km±3km,h382km;pP-P,n724,σ1ś44/729,mb5.0/149, 49C-36D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**1.90**	**152**	P	**Pn**	**01 52 29.0**	**+1.0**
RIZ				S	**S**	**01 53 09.4**	**-1.8**
RAO	**Raoul Island**	**1.91**	**152**	P	**Pn**	**01 52 28.3**	**+0.2**
	3µm,0.3s,baz=41,slow=2.4,SNR=289						
RAO				S	**S**	**01 53 10.9**	**-0.5**
	2µm,0.3s,baz=102,slow=17,SNR=5.3						
RAO	**Raoul Island**	**1.91**	**152**		**S**	**01 53 12.6**	**+1.2**
RAO	**Raoul Island**	**1.91**	**152**		**Pn**	**01 52 29.0**	**+0.9**
GLKZ	**Green Lake**	**1.92**	**152**	P	**Pn**	**01 52 29.2**	**+1.0**
GLKZ				S	**S**	**01 53 09.8**	**-1.7**
GRZ	**Great Barrier**	**9.87**	**207**	P	**P**	**01 53 52.8**	**+1.7**
OUZ	**Omahuta**	**9.93**	**218**	P	**Pn**	**01 53 50.4**	**-1.3**
WCZ	**Waipu Caves**	**10.11**	**213**	P	**P**	**01 53 55.9**	**+2.1**
MSVF	**Nonsavu**	**10.17**	**344**	P	**P**	**01 53 54.3**	**-0.5**
KUZ	**Kuaotunu**	**10.20**	**205**	P	**P**	**01 53 56.4**	**+1.7**
MXZ	**Matakaoa Point**	**10.23**	**192**	P	Pn	01 53 50.5	-4.6
MXZ				S	S	01 55 41.9	-8.3
MXZ	**Matakaoa Point**	**10.23**	**192**	P	Pn	01 53 50.2	-4.9
ABAZ	**Army Bay**	**10.43**	**209**	P	**P**	**01 53 59.7**	**+2.4**
WIZ	**White Island**	**10.45**	**197**	P	**P**	**01 53 58.8**	**+1.3**
WMGZ	**Waiomatatini S**	**10.46**	**192**	P	**Pn**	**01 53 54.5**	**-3.3**
HAZ	**Te Kaha**	**10.52**	**194**	P	**Pn**	**01 53 55.7**	**-2.8**
PKGZ	**Pakihiroa**	**10.59**	**193**	P	P	01 53 54.8	-4.3
MKAZ	**Moumakai**	**10.73**	**206**	P	**Pn**	**01 54 03.6**	**+2.7**
PUZ	**Puketiti**	**10.73**	**192**	P	**P**	**01 53 57.6**	**-3.1**
RUGZ	**Raukumara Rang**	**10.75**	**194**	P	**P**	**01 53 58.2**	**-2.8**
WHRZ	**Whale Island**	**10.81**	**197**	P	**P**	**01 54 00.1**	**-1.5**
WHRZ				P	**S**	**01 56 03.2**	**+0.7**
WTAZ	**Waiatarua**	**10.82**	**209**	P	**Pn**	**01 54 03.0**	**+0.9**
TWGZ	**Tauwhareparae**	**10.89**	**193**	P	**P**	**01 54 00.0**	**-2.4**
TGRZ	**Tauranga**	**10.90**	**200**	P	**Pn**	**01 54 05.5**	**+2.6**
AWAZ	**Awhitu Peninsu**	**10.90**	**208**	P	**Pn**	**01 54 04.2**	**+1.3**
MARZ	**Manawahe**	**11.02**	**198**	P	**P**	**01 54 00.8**	**-3.1**
CNGZ	**Carnagh Static**	**11.14**	**192**	P	P	01 53 59.8	-5.4
TOZ	**Tahuroa Road**	**11.16**	**203**	P	**Pn**	**01 54 07.2**	**+1.3**
URZ	**Urewera**	**11.16**	**196**	P	**P**	**01 54 04.0**	**-1.4**
	22nm,0.3s,baz=60,slow=3.3,SNR=61						
URZ				S	**S**	**01 56 04.5**	**-5.2**
	70nm,0.3s,baz=103,slow=22,SNR=16						
URZ	**Urewera**	**11.16**	**196**	P	**P**	**01 54 04.2**	**-1.2**
KARZ	**Kaharoa**	**11.18**	**200**	P	**P**	**01 54 05.1**	**-0.5**
OMRZ	**Omania**	**11.22**	**199**	P	**Pn**	**01 54 09.3**	**+2.6**
TARZ	**Mount Tarawera**	**11.30**	**199**	P	**P**	**01 54 05.1**	**-2.0**
RAGZ	**Rawiri**	**11.31**	**195**	P	P	01 54 02.3	-4.9
RRRZ	**Republican Roa**	**11.39**	**198**	P	**P**	**01 54 08.8**	**+0.8**
RRRZ				S	**S**	**01 56 12.0**	**-2.7**
MUGZ	**Murupara**	**11.45**	**197**	P	**P**	**01 54 07.6**	**-1.1**
NFK	**Norfolk Island**	**11.64**	**260**	P	**Pn**	**01 54 14.8**	**+3.0**
	baz=12,SNR=12						
NIUE	**Niue**	**11.84**	**46**	P	**P**	**01 54 12.6**	**-0.5**
	baz=12,SNR=22						
NIUE				S	**S**	**01 56 22.0**	**-2.3**
	baz=12						
NIUE	**Niue**	**11.84**	**46**	P	**P**	**01 54 11.5**	**-1.7**
HIZ	**Hauiti**	**12.08**	**204**	P	**P**	**01 54 16.9**	**+1.3**
HIZ	**Hauiti**	**12.08**	**204**	P	**P**	**01 54 15.9**	**+0.3**
BKZ	**Black Stump Fm**	**12.17**	**197**	P	**P**	**01 54 14.7**	**-2.0**
LREZ	**Lake Rotokare**	**13.09**	**203**	P	**P**	**01 54 26.7**	**0.0**
LREZ				S	**S**	**01 56 53.2**	**+4.1**
TSZ	**Takapari Road**	**13.15**	**197**	P	P	01 54 23.5	-3.9
TSZ				S	**S**	**01 56 43.9**	**-6.6**
DVHZ	**Dannevirke**	**13.32**	**196**	P	**P**	**01 54 25.8**	**-3.5**
DVHZ				S	**S**	**01 56 47.9**	**-6.1**
BFZ	**Birch Farm**	**13.67**	**196**	P	**P**	**01 54 31.9**	**-1.1**
CPWZ	**Castlepoint**	**13.89**	**195**	P	**P**	**01 54 35.2**	**-0.3**
CPWZ				S	**S**	**01 57 03.0**	**-2.4**
OGWZ	**Otaki Gorge**	**14.07**	**199**	P	P	01 54 33.7	-3.8
OGWZ				S	S	01 57 02.1	-6.9
TMWZ	**Te Maipa**	**14.16**	**196**	P	**P**	**01 54 36.1**	**-2.3**
TMWZ				S	**S**	**01 57 05.2**	**-5.5**
KIW	**Kapiti Island**	**14.19**	**199**	P	**P**	**01 54 36.2**	**-2.6**
MTW	**Mount Morrison**	**14.30**	**197**	P	**P**	**01 54 38.2**	**-1.8**
DZM	**Mont Dzumac**	**14.34**	**289**	*eP*	**Pn**	**01 54 42.4**	**-0.7**
	162nm,0.9s						
DZM	**Mont Dzumac**	**14.34**	**289**	P	**Pn**	**01 54 41.5**	**-1.6**
	11nm,0.3s,baz=115,slow=10,SNR=62						
DZM	**Mont Dzumac**	**14.34**	**289**	P	**P**	**01 54 40.0**	**-0.7**
CAW	**Cannon Point**	**14.37**	**198**	P	**P**	**01 54 38.5**	**-2.3**
DUWZ	**D'Urville Isla**	**14.45**	**202**	P	**P**	**01 54 39.4**	**-2.2**
TRWZ	**Traveller**	**14.48**	**196**	P	**P**	**01 54 41.5**	**-0.5**
PAWZ	**Paruwai Farm**	**14.53**	**197**	P	**P**	**01 54 41.2**	**-1.3**
MSWZ	**Moikau Station**	**14.61**	**198**	P	P	01 54 39.8	-3.6
MSWZ				S	S	01 57 10.9	-8.8
MSWZ	**Moikau Station**	**14.61**	**198**	P	**P**	**01 54 41.9**	**-1.5**
TCW	**Tory Channel**	**14.70**	**201**	P	**P**	**01 54 40.9**	**-3.4**
TCW				S	**S**	**01 57 16.6**	**-4.9**
BHW	**Baring Head**	**14.71**	**199**	P	**P**	**01 54 41.1**	**-3.2**
BHW				S	**S**	**01 57 16.2**	**-5.4**
BHW	**Baring Head**	**14.71**	**199**	P	**P**	**01 54 42.3**	**-2.1**
PLWZ	**Palliser**	**14.75**	**197**	P	**P**	**01 54 41.5**	**-3.5**
PLWZ	**Palliser**	**14.75**	**197**	P	**P**	**01 54 43.3**	**-1.7**
QRZ	**Quartz Range**	**14.97**	**206**	P	**P**	**01 54 45.6**	**-1.7**
QRZ	**Quartz Range**	**14.97**	**206**	P	**P**	**01 54 46.2**	**-0.4**
NNZ	**Nelson**	**15.00**	**203**	P	**P**	**01 54 44.2**	**-3.4**
NNZ	**Nelson**	**15.00**	**203**	P	**P**	**01 54 44.6**	**-3.0**
TUWZ	**Tuamarina**	**15.01**	**201**	P	**P**	**01 54 44.6**	**-3.0**
AFI	**Afiamalu**	**15.15**	**28**	P	**P**	**01 54 48.6**	**-1.0**
CMWZ	**Cape Campbell**	**15.21**	**200**	P	**P**	**01 54 50.9**	**+1.0**
BSWZ	**Blackbirch Sta**	**15.29**	**201**	P	**P**	**01 54 49.5**	**-1.1**
BSWZ	**Blackbirch Sta**	**15.29**	**201**	P	**P**	**01 54 48.5**	**-2.2**
THZ	**Tophouse**	**15.65**	**203**	IAmb	IAmb	01 55 01.6	
	comp=Z,34nm,0.4s						
KHZ	**Kahutara**	**16.03**	**201**	IAmb	IAmb	01 55 03.6	
	comp=Z,55nm,0.8s						
LTZ	**Lake Taylor**	**16.77**	**203**	IAmb	IAmb	01 55 13.6	
	comp=Z,25nm,0.6s						
OXZ	**Oxford**	**17.33**	**203**	IAmb	IAmb	01 55 19.2	
	comp=Z,27nm,0.8s						
RPZ	**Rata Peaks**	**18.02**	**204**	P	**P**	**01 55 16.7**	**-3.3**
	comp=Z,1.0nm,0.3s,baz=183,slow=0.9,SNR=8.5						
RPZ				S	**S**	**01 58 22.1**	**-4.5**
	comp=Z,2.0nm,0.3s,baz=107,slow=7.1,SNR=3.1						
RPZ	**Rata Peaks**	**18.02**	**204**	IAmb	IAmb	01 55 26.9	
	comp=Z,24nm,0.6s						
FOZ	**Fox Glacier**	**18.33**	**207**	P	**P**	**01 55 23.1**	**-0.2**
FOZ				IAmb	IAmb	01 55 26.3	
	comp=Z,41nm,0.7s						
RAR	**Rarotonga**	**18.57**	**74**	P	**P**	**01 55 26.7**	**+0.6**
	comp=Z,6.2nm,0.3s,baz=240,slow=13,SNR=4.0						
LHI	**Lord Howe Isla**	**19.52**	**253**	P	**P**	**01 55 38.5**	**+2.8**
	baz=20,SNR=5.7						
MLZ	**Mavora Lakes**	**20.53**	**207**	P	**P**	**01 55 44.3**	**-0.7**
MLZ				IAmb	IAmb	01 55 48.9	
	comp=Z,38nm,0.8s						
KNTN	**Kanton**	**25.61**	**17**	P	**P**	**01 56 30.7**	**-0.3**
ARMA	**Armidale**	**25.86**	**257**	P	**P**	**01 56 35.7**	**+2.4**
	baz=26,SNR=14						
ARMA	**Armidale**	**25.86**	**257**	P	**P**	**01 56 32.4**	**-0.8**
ARMA				IAmb	IAmb	01 56 36.5	
	comp=Z,38nm,0.8s						
MGCD	**Mangrove Creek**	**26.38**	**250**	P	**P**	**01 56 40.1**	**+2.4**
	baz=27,SNR=6.8						
HNR	**Honiara**	**26.86**	**308**	P	**P**	**01 56 41.5**	**-0.7**
	comp=Z,257nm,0.7s,baz=206,slow=3.1,SNR=5.9						
HNR	**Honiara**	**26.86**	**308**	P	**P**	**01 56 41.4**	**-0.7**
EIDS	**Eidsvold**	**26.88**	**268**	P	**P**	**01 56 43.2**	**+0.9**
	baz=27,SNR=11						
TBI	**Tubuai**	**26.93**	**88**	*eP*	**P**	**01 56 43.3**	**+0.6**
	comp=Z,111nm,0.8s						
CNB	**Canberra Magne**	**28.03**	**246**	P	**P**	**01 56 54.6**	**+2.3**
	baz=28,SNR=34						
CAN	**Canberra**	**28.32**	**246**	P	**P**	**01 56 57.3**	**+2.3**
	baz=29						
CAN	**Canberra**	**28.32**	**246**	P	**P**	**01 56 54.5**	**-0.4**
CAN				IAmb	IAmb	01 56 58.0	
	comp=Z,35nm,0.7s						
MILA	**Mila**	**28.45**	**243**	P	**P**	**01 56 58.3**	**+2.2**
	baz=29,SNR=31						
YNG	**Young**	**28.71**	**248**	P	**P**	**01 57 00.7**	**+2.3**
	baz=29,SNR=15						
RMQ	**Roma**	**28.74**	**265**	P	**P**	**01 57 00.7**	**+1.9**
	baz=29,SNR=25						
PPT2	**Papeete2**	**28.82**	**76**	*eP*	**P**	**01 56 59.3**	**-0.2**
	comp=Z,81nm,1.2s						
PPT2				*ep*	**pP**	**01 58 07.4**	**-0.4**
	comp=Z,126nm,1.4s						
TVO	**Taravao**	**29.02**	**77**	*eP*	**P**	**01 57 01.0**	**-0.3**
	comp=Z,36nm,0.9s						
TVO				*ep*	**pP**	**01 58 09.3**	**-0.1**
	comp=Z,58nm,1.4s						
TIAR	**Tiarei**	**29.03**	**76**	*eP*	**P**	**01 57 01.6**	**+0.2**
	comp=Z,39nm,0.9s						
TIAR				*ep*	**pP**	**01 58 09.3**	**+0.1**
	comp=Z,55nm,1.4s						
TARA	**Tarawa**	**29.80**	**343**	P	**P**	**01 57 07.5**	**-0.5**
MEH	**Mehetia**	**30.01**	**78**	*eP*	**P**	**01 57 10.3**	**+0.4**
	comp=Z,62nm,1.2s						
CMSA	**Cobar Meteorol**	**30.93**	**254**	P	**P**	**01 57 19.0**	**+1.3**
	baz=31,SNR=15						
MOO	**Moorlands**	**31.21**	**233**	P	**P**	**01 57 21.7**	**+1.6**
	baz=32						
TOO	**Toolangi**	**31.42**	**242**	P	**P**	**01 57 23.4**	**+1.4**
	baz=32,SNR=25						
TOO	**Toolangi**	**31.42**	**242**	P	**P**	**01 57 22.1**	**+0.1**
TOO				IAmb	IAmb	01 57 24.6	
	comp=Z,96nm,1.1s						
VAH	**Vaihoa**	**31.55**	**74**	*eP*	**P**	**01 57 23.2**	**0.0**
	comp=Z,108nm,1.0s						
CTA	**Charters Tower**	**32.61**	**276**	P	**P**	**01 57 33.2**	**+0.8**
	comp=Z,40nm,0.3s,baz=99,slow=11,SNR=67						
CTAO	**Charters Tower**	**32.61**	**276**	P	**P**	**01 57 31.5**	**-0.9**
QLP	**Quilpie**	**32.72**	**263**	P	**P**	**01 57 33.7**	**+0.4**
	baz=33,SNR=22						
ARPS	**Mount Arapiles**	**34.24**	**244**	P	**P**	**01 57 47.5**	**+1.4**
	baz=34,SNR=24						
STKA	**Stephens Creek**	**34.40**	**253**	P	**P**	**01 57 48.5**	**+0.9**
	baz=35,SNR=41						
STKA	**Stephens Creek**	**34.40**	**253**	P	**P**	**01 57 48.4**	**+0.9**
	comp=Z,30nm,0.7s,baz=89,slow=10,SNR=58						
STKA	**Stephens Creek**	**34.40**	**253**	P	**P**	**01 57 47.4**	**-0.2**
MTSU	**Mount Surprise**	**35.02**	**278**	P	**P**	**01 57 53.5**	**+0.6**
	baz=35,SNR=33						
RABL	**Rabaul**	**36.03**	**305**	P	**P**	**01 58 00.8**	**-0.7**
KRVT	**Keravat (AS076**	**36.05**	**305**	P	**P**	**01 58 00.2**	**-1.5**
	comp=Z,432nm,0.5s,baz=223,slow=2.1,SNR=45						
HTT	**Hallett**	**36.58**	**250**	P	**P**	**01 58 06.3**	**+0.4**
	baz=37,SNR=50						
PMG	**Port Moresby**	**36.69**	**293**	P	**P**	**01 58 05.5**	**-1.4**
COEN	**Coen**	**37.75**	**283**	P	**P**	**01 58 16.1**	**+0.2**
	baz=38,SNR=44						
COEN	**Coen**	**37.75**	**283**	P	**P**	**01 58 14.0**	**-1.8**
COEN				IAmb	IAmb	01 58 18.4	
	comp=Z,69nm,0.8s						
QIS	**Mount Isa**	**38.34**	**271**	P	**P**	**01 58 20.4**	**-0.3**
	baz=39,SNR=28						
BBOO	**Buckleboo**	**39.01**	**251**	P	**P**	**01 58 25.4**	**-0.6**
	baz=39,SNR=44						
BBOO	**Buckleboo**	**39.01**	**251**	P	**P**	**01 58 24.7**	**-1.3**
BBOO				IAmb	IAmb	01 58 26.8	
	comp=Z,58nm,0.8s						
PATS	**Pohnpei**	**40.66**	**324**	P	**P**	**01 58 38.8**	**-0.7**
PATS				IAmb	IAmb	01 58 42.0	
	comp=Z,95nm,0.8s						
ASAR	**Alice Springs**	**42.49**	**264**	P	**P**	**01 58 53.9**	**-0.4**
	comp=Z,37nm,0.8s,baz=112,slow=7.9,SNR=196						
ASAR				pP	**pP**	**02 00 08.6**	**+0.9**
	comp=Z,3.9nm,0.5s,baz=103,slow=7.6,SNR=1.4						
ASAR				ScP	**ScP**	**02 03 54.0**	**+1.3**
	comp=Z,5.9nm,0.9s,baz=111,slow=4.3,SNR=6.3						
ASAR				S	**S**	**02 04 45.3**	**-2.1**
	comp=Z,6.3nm,0.9s,baz=102,slow=16,SNR=9.0						
WR0	**Warramunga Arr**	**43.03**	**270**	P	**P**	**01 58 57.6**	**-0.9**
WR0				IAmb	IAmb	01 58 59.5	
	comp=Z,68nm,1.0s						
WB2	**Warramunga Arr**	**43.21**	**270**	P	**P**	**01 58 58.7**	**-1.2**
WRAB	**Tennant Creek**	**43.21**	**270**	P	**P**	**01 58 59.4**	**-0.6**
WRAB				IAmb	IAmb	01 59 00.9	
	comp=Z,83nm,0.8s						
WRA	**Warramunga Arr**	**43.22**	**270**	P	**P**	**01 58 59.1**	**-0.9**
	comp=Z,74nm,0.6s,baz=108,slow=7.5,SNR=167						
WRA				pP	**pP**	**02 00 14.6**	**+0.9**
	comp=Z,5.8nm,0.9s,baz=105,slow=8.6,SNR=1.0						
WRA				ScP	**ScP**	**02 03 58.6**	**+2.9**
	comp=Z,4.2nm,0.8s,baz=112,slow=4.2,SNR=5.4						
WRA				S	**S**	**02 04 55.4**	**-2.5**
	comp=Z,12nm,1.1s,baz=105,slow=15,SNR=12						
WB0	**Warramunga Arr**	**43.23**	**270**	P	**P**	**01 58 59.1**	**-1.0**
JAY	**Jayapura**	**45.89**	**296**	P	**P**	**01 59 20.1**	**-0.9**
	comp=Z,96nm,0.8s,baz=142,slow=2.9,SNR=32						
JAY	**Jayapura**	**45.89**	**296**	P	**P**	**01 59 20.3**	**-0.7**
	comp=Z,710nmcomp=Z,69nm,1.0s						
FORT	**Forrest**	**46.02**	**253**	P	**P**	**01 59 21.0**	**-0.7**
	baz=46,SNR=84						
FORT	**Forest**	**46.02**	**253**	P	**P**	**01 59 21.2**	**-0.5**
GENI	**Genyem**	**46.27**	**295**	P	**P**	**01 59 23.3**	**-0.6**
	comp=Z,336nm,1.0s						
WRKA	**Warakurna**	**47.06**	**260**	P	**P**	**01 59 28.7**	**-1.2**
	baz=47,SNR=148						
KDU	**Kakadu**	**47.65**	**278**	P	**P**	**01 59 33.1**	**-1.2**
	baz=48,SNR=11						
SMPI	**Sarmi**	**47.80**	**295**	P	**P**	**01 59 35.4**	**-0.1**
	comp=Z,42nm,0.9s						
WAKE	**Wake Island**	**48.62**	**342**	P	**P**	**01 59 41.6**	**+0.1**
H11N3	**WAKE ISLAND Hy**	**48.96**	**342**	P	**P**	**01 59 43.7**	**-0.2**
	baz=184,slow=11,SNR=6.9						
H11N1	**WAKE ISLAND Hy**	**48.96**	**342**	P	**P**	**01 59 43.8**	**0.0**
	baz=184,slow=11,SNR=4.7						
H11N2	**WAKE ISLAND Hy**	**48.98**	**342**	P	**P**	**01 59 43.8**	**-0.2**
	baz=184,slow=11,SNR=7.6						
KNRA	**Kununurra**	**49.70**	**272**	P	**P**	**01 59 49.5**	**-0.3**
	baz=50,SNR=13						
KNRA	**Kununurra**	**49.70**	**272**	P	**P**	**01 59 49.3**	**-0.5**
KNRA				IAmb	IAmb	01 59 54.2	
	comp=Z,28nm,0.7s						
BAKI	**Biak**	**50.38**	**294**	P	**P**	**01 59 54.7**	**-0.1**
VNDA	**Vanda**	**50.82**	**185**	P	**P**	**01 59 57.7**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=11,slow=7.3,SNR=13						
VNDA				pP	**pP**	**02 01 15.9**	**+1.8**
	comp=Z,3.0nm,0.8s,baz=21,slow=7.7,SNR=3.2						
VNDA	**Vanda**	**50.82**	**185**	P	**P**	**01 59 58.5**	**+1.3**
FITZ	**Fitzroy Crossi**	**51.57**	**268**	P	**P**	**02 00 03.2**	**-0.4**
	baz=52,SNR=22						
FITZ	**Fitzroy Crossi**	**51.57**	**268**	P	**P**	**02 00 02.6**	**-1.0**
FITZ				IAmb	IAmb	02 00 05.2	
	comp=Z,29nm,0.8s						
FAKI	**Fak Fak**	**52.60**	**289**	P	**P**	**02 00 10.4**	**-0.8**
	comp=Z,601nmcomp=Z,69nm,1.2s						
FAKI	**Fak Fak**	**52.60**	**289**	P	**P**	**02 00 09.3**	**-1.9**
FAKI				IAmb	IAmb	02 00 12.9	
	comp=Z,62nm,1.0s						
GUMO	**Guam**	**53.89**	**315**	P	**P**	**02 00 19.4**	**-0.9**
KLBR	**Kellerberrin**	**54.52**	**249**	P	**P**	**02 00 24.4**	**-0.3**
	baz=55,SNR=9.0						
SIJI	**Sorong**	**54.54**	**290**	P	**P**	**02 00 24.1**	**-0.9**
	comp=Z,182nm,0.7s,baz=85,slow=5.5						
SIJI				pP	**pP**	**02 01 43.5**	**+0.7**
	comp=Z,26nm,0.8s,baz=195,slow=24,SNR=2.8						
MEEK	**Meekatharra**	**55.04**	**256**	P	**P**	**02 00 27.4**	**-1.1**
	baz=55,SNR=11						
PSA00	**Pilbara Seismi**	**55.50**	**262**	IAmb	IAmb	02 00 32.5	
	comp=Z,29nm,0.7s						
BLDU	**Balliduu**	**55.62**	**250**	P	**P**	**02 00 31.7**	**-0.7**
	baz=56,SNR=11						
MUN	**Mundaring**	**55.71**	**249**	P	**P**	**02 00 32.8**	**-0.2**
	baz=56,SNR=3.9						
SOEI	**Soe**	**56.16**	**277**	P	**P**	**02 00 37.5**	**+0.9**
	comp=Z,75nm,1.0s						
SOEI	**Soe**	**56.16**	**277**	IAmb	IAmb	02 00 48.5	
	comp=Z,45nm,0.8s						
MORW	**Morawa**	**56.57**	**252**	P	**P**	**02 00 38.6**	**-0.6**
	baz=57,SNR=11						
NLAI	**Namlea**	**56.81**	**285**	P	**P**	**02 00 40.5**	**-0.4**
	comp=Z,70nm,1.4s						
CASY	**Casey**	**57.26**	**207**	P	**P**	**02 00 43.1**	**-0.1**
EDFI	**Ende, Flores**	**58.88**	**277**	P	**P**	**02 00 55.3**	**0.0**
	comp=Z,15nm,1.3s						
GIRL	**Giralia**	**60.06**	**259**	P	**P**	**02 01 03.5**	**+0.4**
	baz=60,SNR=6.2						
BKSI	**Bulukumba**	**61.84**	**279**	P	**P**	**02 01 14.0**	**-1.0**
	comp=Z,924nmcomp=Z,61nm,0.9s						
BNSI	**Bone**	**62.29**	**280**	P	**P**	**02 01 17.8**	**-0.2**
	comp=Z,45nm,1.2s						
KAPI	**Kappang**	**62.31**	**279**	P	**P**	**02 01 16.0**	**-2.1**
QSPA	**South Pole Qui**	**62.53**	**180**	P	**P**	**02 01 20.9**	**+2.1**
	comp=Z,19nm,0.8s,baz=348,slow=0.6,SNR=90						
QSPA				pP	**pP**	**02 02 41.1**	**+1.2**
	comp=Z,61nm,1.0s,baz=38,slow=2.8,SNR=13						
QSPA	**South Pole Qui**	**62.53**	**180**	P	**P**	**02 01 19.1**	**+0.3**
QSPA				IAmb	IAmb	02 01 21.9	
	comp=Z,26nm,0.9s						
QSPA					**pP**	**02 02 40.4**	**+0.5**
SPSI	**Sidrap Palu**	**62.79**	**280**	P	**P**	**02 01 20.1**	**-1.2**
	comp=Z,24nm,1.0s						
MRSI	**Marisa**	**63.13**	**286**	P	**P**	**02 01 21.8**	**-1.6**
	comp=Z,28nm,0.5s						
TTSI	**Tana Toraja**	**63.19**	**281**	P	P	02 01 34.5	+11
MPSI	**Mapaga**	**64.81**	**285**	P	**P**	**02 01 33.3**	**-1.0**
	comp=Z,4µmcomp=Z,27nm,1.2s						
JCJ	**Chichijima**	**65.94**	**322**	P	**P**	**02 01 40.4**	**-0.7**
	comp=Z,142nm,0.6s,baz=254,slow=5.3,SNR=13						
KKM	**Kota Kinabalu**	**70.89**	**288**	IAmb	IAmb	02 02 12.3	
	comp=Z,36nm,0.9s						
JHJ	**Hachijo jima 2**	**71.96**	**324**	P	**P**	**02 02 17.0**	**-0.7**
	comp=Z,178nm,0.8s,baz=53,slow=24,SNR=6.3						
SBUM	**Sibu**	**72.49**	**282**	IAmb	IAmb	02 02 22.8	
	comp=Z,30nm,1.1s						
SBUM	**Sibu**	**72.49**	**282**	P	**P**	**02 02 22.0**	**+0.8**
DBJI	**Dramaga**	**73.09**	**271**	P	**P**	**02 02 25.1**	**+0.4**
	comp=Z,113nm,1.0s						
KSM	**Kuching**	**73.68**	**280**	P	**P**	**02 02 26.2**	**-2.0**
KSM	**Kuching**	**73.68**	**280**	P	**P**	**02 02 28.0**	**-0.1**
JOW	**Kunigami**	**74.14**	**312**	P	**P**	**02 02 30.2**	**-0.3**
	comp=Z,75nm,0.7s,baz=139,slow=9.7,SNR=7.0						
MAW	**Mawson**	**74.66**	**201**	P	**P**	**02 02 33.9**	**+1.2**
	baz=75,SNR=15						
MAW	**Mawson**	**74.66**	**201**	P	**P**	**02 02 33.9**	**+1.2**
	comp=Z,10nm,0.8s,baz=133,slow=7.5,SNR=24						
MAW	**Mawson**	**74.66**	**201**	P	**P**	**02 02 32.6**	**-0.2**
MJAR	**Matsushiro Arr**	**75.44**	**326**	P	**P**	**02 02 37.1**	**-0.5**
	comp=Z,55nm,0.9s,baz=153,slow=5.7,SNR=85						
MJAR	**Matsushiro Arr**	**75.44**	**326**	P	**P**	**02 02 37.5**	**-0.2**
MAT	**Matsushiro**	**75.45**	**326**	P	**P**	**02 02 37.3**	**-0.3**
MAT				eS	**S**	**02 11 37.5**	**-8.3**
LWLI	**Liwa**	**76.17**	**272**	P	**P**	**02 02 42.1**	**-0.3**
	comp=Z,133nm,0.9s						
YULB	**Yu-li**	**76.75**	**305**	IAmb	IAmb	02 02 47.5	
	comp=Z,14nm,0.6s						
JNU	**Nakatsue**	**76.89**	**319**	P	**P**	**02 02 45.8**	**0.0**
	comp=Z,40nm,0.6s,baz=234,slow=0.7,SNR=43						
JNU	**Nakatsue**	**76.89**	**319**	P	**P**	**02 02 44.9**	**-0.9**
LHSI	**Lahat**	**77.18**	**272**	P	**P**	**02 02 47.4**	**-0.4**
	comp=Z,87nm,1.0s						
TPUB	**Ta-pu**	**77.18**	**305**	IAmb	IAmb	02 02 48.3	
	comp=Z,32nm

	comp=Z,34nm,1.0s								
GSI	**Gunungsitoli**	**84.81**	**274**		P		**P**	**02 03 28.6**	**+0.9**
	comp=Z,1µm,0.9s								
ISA	**Isabella, Lake**	**84.89**	**45**		P		**P**	**02 03 29.2**	**+1.5**
	baz=231,SNR=11								
ISA	**Isabella, Lake**	**84.89**	**45**		IAmb		IAmb	02 03 29.9	
	comp=Z,12nm,1.0s								
PFO	**Pinyon Flats O**	**84.92**	**48**		P		**P**	**02 03 29.5**	**+1.6**
	baz=232								
PFO	**Pinyon Flats O**	**84.92**	**48**		P		**P**	**02 03 28.2**	**+0.3**
XPFO	**Pion Flat**	**84.92**	**48**		P		**P**	**02 03 27.8**	**-0.1**
SWSC	**Sam W. Stewart**	**84.96**	**49**		P		**P**	**02 03 29.4**	**+1.5**
	baz=233								
BBRC	**Big Bear Solar**	**85.02**	**47**		P		**P**	**02 03 29.7**	**+1.2**
	baz=232								
PLCA	**Paso Flores**	**85.05**	**134**		P		**P**	**02 03 29.4**	**+0.8**
	comp=Z,2.3nm,0.8s,baz=216,slow=4.1,SNR=4.6								
PLCA					pP		**pP**	**02 04 56.8**	**+0.9**
	comp=Z,5.6nm,0.9s,baz=234,slow=5.6,SNR=5.6								
PLCA	**Paso Flores**	**85.05**	**134**		P		**P**	**02 03 28.6**	**+0.1**
PLCA							**pP**	**02 04 57.2**	**+1.4**
KHMM	**Horse Mountain**	**85.19**	**39**		IAmb		IAmb	02 03 32.2	
	comp=Z,29nm,1.1s								
O02D	**Mt. Diablo Mer**	**85.25**	**40**		P		**P**	**02 03 31.5**	**+2.2**
	baz=228,SNR=34								
LRMC	**Laurel Mtn Rad**	**85.28**	**46**		P		**P**	**02 03 31.1**	**+1.4**
	baz=231								
RRX	**Edison Barstow**	**85.35**	**47**		P		**P**	**02 03 31.1**	**+1.3**
	baz=232								
BELC	**Belle Mtn. Jos**	**85.46**	**48**		P		**P**	**02 03 32.4**	**+1.8**
	baz=232,SNR=7.4								
KRMB	**Red Mountain**	**85.53**	**38**		IAmb		IAmb	02 03 33.4	
	comp=Z,17nm,1.0s								
BC3	**Big Chuckawall**	**85.62**	**48**		P		**P**	**02 03 33.3**	**+2.0**
	baz=233,SNR=5.5								
CWC	**Cottonwood Cre**	**85.63**	**45**		P		**P**	**02 03 32.5**	**+1.2**
	baz=231								
WDC	**Whiskeytown Da**	**85.66**	**40**		IAmb		IAmb	02 03 33.3	
	comp=Z,14nm,1.0s								
KCSI	**Kotacane, Aceh**	**85.66**	**276**		P		**P**	**02 03 31.1**	**-0.7**
	comp=Z,58nm,0.8s								
GLA	**Glamis**	**85.67**	**49**		P		**P**	**02 03 33.6**	**+2.1**
	baz=233								
GSC	**Goldstone, Bar**	**85.73**	**46**		P		**P**	**02 03 33.6**	**+1.8**
	baz=232								
GSC	**Goldstone, Bar**	**85.73**	**46**		IAmb		IAmb	02 03 33.9	
	comp=Z,9.6nm,0.9s								
HEC	**Hector,Ludlow**	**85.75**	**47**		P		**P**	**02 03 33.1**	**+1.2**
	baz=232								
MPMC	**Manual Prospec**	**85.77**	**46**		P		**P**	**02 03 33.3**	**+1.2**
	baz=231								
N02D	**Trinity Center**	**85.83**	**39**		P		**P**	**02 03 34.1**	**+2.0**
	baz=228,SNR=12								
O03E	**Paynes Creek**	**85.89**	**40**		P		**P**	**02 03 33.2**	**+0.8**
	baz=228,SNR=12								
MLAC	**Mammoth, Mammo**	**85.91**	**44**		P		**P**	**02 03 34.3**	**+1.5**
	baz=230								
TIN	**Tinemaha, Big**	**85.92**	**44**		P		**P**	**02 03 33.9**	**+1.2**
	baz=231								
WHN	**Wuhan**	**85.97**	**307**	⇓	P		**P**	**02 03 33.9**	**+1.0**
WHN					pmax		pmax		
	comp=Z,130nm,0.9s								
WHN					pmax		pmax		
	comp=Z,660nm,4.0s								
M02C	**Callahan**	**86.03**	**39**		P		**P**	**02 03 34.9**	**+1.9**
	baz=229,SNR=7.7								
WAKR	**Walker**	**86.11**	**43**		IAmb		IAmb	02 03 35.7	
	comp=Z,12nm,1.2s								
IRM	**Iron Mountain**	**86.12**	**48**		P		**P**	**02 03 35.5**	**+1.9**
	baz=233								
GMRC	**Granite Mounta**	**86.16**	**47**		P		**P**	**02 03 35.7**	**+1.8**
	baz=233								
Y12C	**Blythe**	**86.29**	**49**		P		**P**	**02 03 36.3**	**+2.0**
	baz=233								
DL2	**Dalian**	**86.31**	**318**		P		**P**	**02 03 35.1**	**+0.8**
DL2					pmax		pmax		
	comp=Z,49nm,0.9s								
PNTR	**Pine Nut**	**86.39**	**42**		IAmb		IAmb	02 03 36.9	
	comp=Z,11nm,0.9s								
TUQ	**Turquoise Moun**	**86.39**	**47**		P		**P**	**02 03 36.5**	**+1.5**
	baz=232								
214A	**Organ Pipe Nat**	**86.40**	**51**		P		**P**	**02 03 36.3**	**+1.2**
	baz=234								
FURC	**Furnace Creek,**	**86.42**	**46**		P		**P**	**02 03 36.6**	**+1.8**
	baz=232								
GRAC	**Grapevine Rang**	**86.43**	**45**		P		**P**	**02 03 36.7**	**+1.7**
	baz=231								
SHOC	**Shoshone, Teco**	**86.44**	**46**		P		**P**	**02 03 36.6**	**+1.5**
	baz=232								
K02D	**Willamette Mer**	**86.47**	**37**		P		**P**	**02 03 36.7**	**+1.6**
	baz=227								
J01E	**Myrtle Point**	**86.64**	**37**		P		**P**	**02 03 37.5**	**+1.7**
	baz=227								
NVAR	**Mina Array Bea**	**86.75**	**43**		P		**P**	**02 03 37.9**	**+1.2**
	comp=Z,6.8nm,0.7s,baz=222,slow=8.1,SNR=63								
NVAR					pP		**pwP**	**02 05 05.1**	**-1.7**
	comp=Z,5.1nm,0.8s,baz=220,slow=7.9,SNR=4.5								
NVAR	**Mina Array Bea**	**86.75**	**43**		P		**P**	**02 03 37.9**	**+1.2**
NVAR							**pwP**	**02 05 07.8**	**+0.9**
NV11	**Mina Array Sit**	**86.84**	**43**		IAmb		IAmb	02 03 39.4	
	comp=Z,11nm,1.1s								
M04C	**Macdoel**	**86.85**	**39**		P		**P**	**02 03 38.6**	**+1.5**
	baz=228								
PDMCI	**Parker Dam,Lak**	**86.88**	**49**		P		**P**	**02 03 38.4**	**+1.3**
	baz=234								
L04D	**Klamath Falls**	**86.89**	**38**		P		**P**	**02 03 38.5**	**+1.3**
	baz=228								
TPNV	**Topopah Spring**	**87.10**	**45**		P		**P**	**02 03 39.8**	**+1.4**
	baz=232								
TPNV	**Topopah Spring**	**87.10**	**45**		IAmb		IAmb	02 03 40.5	
	comp=Z,8.1nm,0.8s								
OHAK	**Old Harbor**	**87.19**	**14**		IAmb		IAmb	02 03 39.4	
	comp=Z,3nm,0.8s								
MLSI	**Meulaboh, Aceh**	**87.21**	**276**		P		**P**	**02 03 39.5**	**+0.3**
	comp=Z,3µmcomp=Z,61nm,0.9s								
KVN	**Kaiserville**	**87.26**	**43**		P		**P**	**02 03 39.6**	**+0.5**
KVN					pP		**pwP**	**02 05 07.9**	**-1.4**
I03D	**Drain, OR**	**87.32**	**37**		P		**P**	**02 03 40.7**	**+1.7**
	baz=227,SNR=6.0								
I02D	**Swisshome**	**87.33**	**36**		P		**P**	**02 03 40.8**	**+1.8**
	baz=227								
CN2	**Changchun**	**87.39**	**323**	⇓	P		**P**	**02 03 39.9**	**+0.6**
CN2					epP		pwP	02 05 07.3	-2.8
CN2					esP		sP	02 05 43.0	-2.8
CN2					*e*S		**S**	**02 13 48.5**	**+1.8**
CN2					pmax		pmax		
	comp=Z,70nm,1.3s								
CN2					pmax		pmax		
	comp=Z,380nm,4.0s								
TIA	**Tai'an**	**87.43**	**313**		P		**P**	**02 03 40.9**	**+1.2**
TIA					pmax		pmax		
	comp=Z,62nm,0.9s								
K04D	**Chiloquin, OR**	**87.46**	**38**		P		**P**	**02 03 41.0**	**+1.1**
	baz=228								
J04D	**Umpqua Nationa**	**87.68**	**38**		P		**P**	**02 03 42.2**	**+1.2**
	baz=228								
KDAK	**Kodiak Island**	**87.86**	**14**		P		**P**	**02 03 41.5**	**+0.3**
	comp=Z,5.3nm,0.3s,baz=44,slow=5.0,SNR=39								
I04A	**Tendick Farm,**	**87.88**	**37**		P		**P**	**02 03 42.9**	**+1.2**
	baz=228,SNR=8.6								
K05A	**Summer Lake**	**88.00**	**39**		IAmb		IAmb	02 03 44.8	
	comp=Z,19nm,0.9s								
TUC	**Tucson**	**88.01**	**52**		P		**P**	**02 03 45.3**	**+2.6**
	baz=236								
TUC	**Tucson**	**88.01**	**52**		P		**P**	**02 03 42.8**	**+0.1**
TUC					IAmb		IAmb	02 03 45.8	
	comp=Z,8.6nm,0.8s								
KLR	**Kul'dur**	**88.17**	**330**		P		**P**	**02 03 44.2**	**+1.4**
	comp=Z,26nm,0.7s,baz=124,slow=3.3,SNR=89								
J05D	**Fort Rock, OR**	**88.18**	**38**		P		**P**	**02 03 44.8**	**+1.5**
	baz=229								
H04D	**Lebanon**	**88.20**	**36**		P		**P**	**02 03 44.9**	**+1.8**
	baz=228,SNR=8.0								
R11A	**Troy Canyon, C**	**88.37**	**45**		P		**P**	**02 03 45.4**	**+1.0**
	baz=232								
G03D	**McMinnville, O**	**88.39**	**36**		P		**P**	**02 03 45.7**	**+1.7**
	baz=227,SNR=5.2								
H04A	**Detroit Lake**	**88.60**	**37**		IAmb		IAmb	02 03 46.8	
	comp=Z,18nm,0.8s								
PINE	**Pine Mountain**	**88.68**	**38**		P		**P**	**02 03 46.2**	**+0.5**
X16A	**Lo Mia Camp, P**	**88.76**	**50**		IAmb		IAmb	02 03 49.6	
	comp=Z,9.7nm,1.1s								
I05D	**Terrebonne, OR**	**88.82**	**37**		P		**P**	**02 03 47.6**	**+1.4**
	baz=228								
SLVN	**Son La**	**88.99**	**295**		IAmb		IAmb	02 03 58.1	
	comp=Z,19nm,1.0s								
WVOR	**Wild Horse Val**	**89.09**	**40**		IAmb		IAmb	02 03 49.4	
	comp=Z,11nm,1.1s								
F04D	**Rainier, OR**	**89.11**	**35**		P		**P**	**02 03 49.4**	**+2.0**
	baz=227								
U15A	**North Rim**	**89.34**	**48**		IAmb		IAmb	02 03 52.0	
	comp=Z,10.0nm,0.8s								
GYA	**Guiyang**	**89.41**	**300**	⇑	*i*P		**P**	**02 03 50.8**	**+1.4**
GYA					pP		pwP	02 05 18.6	-2.4
GYA					sP		sP	02 05 57.8	+1.8
GYA					SKS		**SKSac**	**02 13 42.0**	**-0.6**
GYA					S		**S**	**02 14 06.6**	**0.0**
GYA					pmax		pmax		
	comp=Z,20nm,0.8s								
GYA					pmax		pmax		
	comp=Z,120nm,4.9s								
WUAZ	**Wupatki**	**89.43**	**49**		P		**P**	**02 03 51.0**	**+1.7**
	baz=235								
G05D	**Wamic, OR**	**89.43**	**37**		P		**P**	**02 03 50.4**	**+1.5**
	baz=229								
NLWA	**Neilton Lookou**	**89.57**	**34**		IAmb		IAmb	02 03 52.0	
	comp=Z,15nm,0.8s								
I07A	**Izee**	**89.65**	**38**		IAmb		IAmb	02 03 52.8	
	comp=Z,26nm,1.0s								
E04D	**Cinebar**	**89.66**	**35**		P		**P**	**02 03 51.6**	**+1.7**
	baz=228,SNR=7.3								
J08A	**Circle Bar Ran**	**89.77**	**39**		IAmb		IAmb	02 03 53.2	
	comp=Z,30nm,1.2s								
F05D	**White Salmon**	**89.78**	**36**		P		**P**	**02 03 52.1**	**+1.6**
	baz=228								
G06A	**Carlson Farm,**	**89.79**	**37**		IAmb		IAmb	02 03 52.5	
	comp=Z,19nm,0.9s								
D04E	**Lakebay**	**89.98**	**35**		P		**P**	**02 03 53.6**	**+2.3**
	baz=228								
BRLK	**Bradley Lake**	**90.04**	**14**		IAmb		IAmb	02 03 52.3	
	comp=Z,24nm,0.7s								
D03D	**Eldon**	**90.06**	**34**		P		**P**	**02 03 53.3**	**+1.6**
	baz=227,SNR=6.6								
121A	**Cookes Peak, D**	**90.25**	**53**		P		**P**	**02 03 54.3**	**+1.1**
	baz=237								
W18A	**Petrified Fore**	**90.31**	**50**		P		**P**	**02 03 54.3**	**+0.8**
	baz=236								
BJI	**Beijing**	**90.32**	**316**		P		**P**	**02 03 54.3**	**+1.2**
BJI					sP		**sP**	**02 06 00.8**	**+1.0**
BJI					S		**S**	**02 14 17.5**	**+3.6**
BJI					pmax		pmax		
	comp=Z,43nm,0.8s								
BJI					LR		LR		
	comp=Z,100nm,5.6s								
BJI					LR		LR		
	comp=Z,67nm,5.5s								
D05A	**Emumclaw**	**90.38**	**35**		IAmb		IAmb	02 03 55.6	
	comp=Z,37nm,1.2s								
PGC	**Sidney**	**90.64**	**33**		IAmb		IAmb	02 03 56.9	
	comp=Z,22nm,0.9s								
SEW	**Seward**	**90.65**	**14**		IAmb		IAmb	02 03 55.5	
	comp=Z,27nm,1.1s								
G08A	**Pilot Rock**	**90.73**	**38**		IAmb		IAmb	02 03 58.3	
	comp=Z,12nm,0.9s								
B05A	**Bryant**	**91.04**	**34**		P		**P**	**02 03 57.6**	**+1.4**
	baz=228,SNR=7.6								
A04D	**Lummi Island**	**91.05**	**33**		P		**P**	**02 03 57.6**	**+1.4**
	baz=228								
HAWA	**Hanford**	**91.13**	**37**		IAmb		IAmb	02 03 58.7	
	comp=Z,9.3nm,1.0s								
DUG	**Dugway, Tooele**	**91.20**	**44**		P		**P**	**02 03 58.1**	**+0.7**
	baz=234								
MFID	**Camas Ranch**	**91.31**	**41**		IAmb		IAmb	02 04 00.1	
	comp=Z,12nm,0.8s								
MNTX	**Cornudas Mount**	**91.53**	**55**		P		**P**	**02 04 00.2**	**+1.2**
	baz=238,SNR=5.0								
TX31	**Lajitas Ar. Si**	**91.58**	**58**		IAmb		IAmb	02 04 08.5	
	comp=Z,9.0nm,1.1s								
TXAR	**Lajitas Array**	**91.58**	**58**		P		**P**	**02 04 00.6**	**+1.3**
	comp=Z,1.7nm,1.0s,baz=198,slow=7.5,SNR=5.9								
TXAR					pP		**pwP**	**02 05 28.8**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=203,slow=9.2,SNR=4.3								
TXAR	**Lajitas Array**	**91.58**	**58**		P		**P**	**02 04 01.9**	**+2.5**
TXAR							**pwP**	**02 05 32.0**	**+2.3**
CMAR	**Chiang Mai Arr**	**91.67**	**290**		P		**P**	**02 04 01.7**	**+1.8**
	comp=Z,6.5nm,0.3s,baz=134,slow=3.8,SNR=32								
CMAR					PP		**PP**	**02 07 45.9**	**+1.1**
	comp=Z,1.7nm,0.4s,baz=115,slow=6.2,SNR=6.7								
XAN	**Xi'an**	**91.73**	**308**		IAmb		IAmb	02 04 01.6	
	comp=Z,22nm,0.9s								
KMI	**Kunming**	**91.79**	**297**		P		**P**	**02 04 02.5**	**+1.9**
KMI					pmax		pmax		
	comp=Z,40nm,0.9s								
KMI					pmax		pmax		
	comp=Z,110nm,3.1s								
CHTO	**Chiang Mai**	**91.84**	**290**		P		**P**	**02 04 00.3**	**-0.3**
CHTO					IAmb		IAmb	02 04 03.2	
	comp=Z,15nm,0.8s								
D08A	**Wollman Farm,**	**91.88**	**36**		IAmb		IAmb	02 04 02.0	
	comp=Z,10.0nm,0.8s								
EYAK	**Cordova Ski Ar**	**91.90**	**16**		IAmb		IAmb	02 04 01.4	
	comp=Z,18nm,0.8s								
FID	**Port Fidalgo**	**91.90**	**15**		IAmb		IAmb	02 04 00.6	
	comp=Z,13nm,1.0s								
PMR	**Palmer**	**92.06**	**14**		IAmb		IAmb	02 04 01.9	
	comp=Z,26nm,1.1s								
F10A	**Beach Ranch, E**	**92.10**	**38**		IAmb		IAmb	02 04 02.4	
	comp=Z,5.9nm,0.8s								
MVCO	**Mesa Verde**	**92.30**	**49**		P		**P**	**02 04 03.7**	**+1.0**
	baz=237								
ANMO	**Albuquerque**	**92.47**	**52**		P		**P**	**02 04 05.0**	**+1.5**
	baz=238								
ANMO	**Albuquerque**	**92.47**	**52**		P		**P**	**02 04 03.1**	**-0.3**
PPLA	**Purkeypile**	**92.65**	**12**		IAmb		IAmb	02 04 05.3	
	comp=Z,5.5nm,0.8s								
SEY	**Seymchan**	**93.04**	**347**		P		**P**	**02 04 05.5**	**+0.4**
	comp=Z,18nm,0.8s,baz=148,slow=5.2,SNR=48								
GLB	**Gilahina Butte**	**93.15**	**16**		IAmb		IAmb	02 04 06.8	
	comp=Z,9.8nm,0.8s								
BALM	**Baldy**	**93.17**	**17**		IAmb		IAmb	02 04 07.6	
	comp=Z,12nm,0.8s								
MCARA	**McCarthy VSAT**	**93.29**	**16**		IAmb		IAmb	02 04 08.2	
	comp=Z,16nm,1.0s								
BARN	**Barnard Glacie**	**93.37**	**17**		IAmb		IAmb	02 04 08.8	
	comp=Z,19nm,0.9s								
CTGM	**Chitina Glacie**	**93.37**	**17**		IAmb		IAmb	02 04 08.6	
	comp=Z,12nm,0.8s								
NEW	**Newport**	**93.58**	**36**		P		**P**	**02 04 09.0**	**+0.9**
	baz=232								
HHC	**Hu-ho-hao-te**	**93.67**	**315**		*e*P		**P**	**02 04 08.0**	**-0.7**
HHC					pmax		pmax		
	comp=Z,19nm,0.7s								
HHC					pmax		pmax		
	comp=Z,100nm,7.0s								
S22A	**4UR Ranch, Cre**	**93.70**	**49**		P		**P**	**02 04 10.3**	**+1.1**
	baz=238								
AHID	**Auburn Hatcher**	**93.73**	**43**		IAmb		IAmb	02 04 11.4	
	comp=Z,9.6nm,0.8s								
DHY	**Denali Highway**	**93.76**	**14**		IAmb		IAmb	02 04 10.5	
	comp=Z,9.2nm,1.2s								
CD2	**Chengdu**	**93.87**	**303**	⇓	*i*P		**P**	**02 04 11.3**	**+1.5**
CD2					pmax		pmax		
	comp=Z,40nm,0.7s								
O20A	**White River Ci**	**94.06**	**47**		P		**P**	**02 04 11.4**	**+0.7**
	baz=237								
REDW	**Red Top Meadow**	**94.22**	**43**		IAmb		IAmb	02 04 12.9	
	comp=Z,4.3nm,0.8s								
TPAW	**Teton Pass**	**94.23**	**43**		P		**P**	**02 04 10.1**	**-1.4**
TPAW							**PcP**	**02 04 13.0**	**+1.3**
SNOW	**Snow King Moun**	**94.33**	**43**		IAmb		IAmb	02 04 13.7	
	comp=Z,6.5nm,0.8s								
MSO	**Missoula**	**94.43**	**39**		P		**P**	**02 04 14.0**	**+2.0**
	baz=234								
MENT	**Mentasta**	**94.46**	**15**		IAmb		IAmb	02 04 13.2	
	comp=Z,13nm,0.7s								
SDCO	**Great Sand Dun**	**94.60**	**50**		P		**P**	**02 04 13.7**	**+0.4**
	baz=239								
BW06	**Boulder Array**	**94.67**	**44**		P		**P**	**02 04 13.8**	**+0.4**
	baz=236								
PDAR	**Pinedale Array**	**94.67**	**44**		P		**P**	**02 04 13.3**	**-0.1**
	comp=Z,2.2nm,0.9s,baz=217,slow=3.7,SNR=13								
PDAR					pP		**pwP**	**02 05 43.0**	**-1.2**
	comp=Z,2.1nm,0.8s,baz=212,slow=3.6,SNR=6.4								
PDAR					PKKPbc		**PKKPdf**	**02 21 09.8**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=94,slow=4.5,SNR=3.9								
PDAR	**Pinedale Array**	**94.67**	**44**		P		**P**	**02 04 14.2**	**+0.8**
WRH	**Wood River Hil**	**94.86**	**13**		IAmb		IAmb	02 04 14.9	
	comp=Z,17nm,1.0s								
MLY	**Manley**	**94.86**	**12**		IAmb		IAmb	02 04 14.3	
	comp=Z,4.7nm,0.9s								
RIDG	**Independent Ri**	**94.89**	**14**		IAmb		IAmb	02 04 15.0	
	comp=Z,16nm,1.2s								
DOT	**Dot Lake**	**94.99**	**15**		IAmb		IAmb	02 04 15.4	
	comp=Z,13nm,0.8s								
T25A	**Trinidad**	**95.03**	**51**		P		**P**	**02 04 15.8**	**+0.7**
	baz=239								
HDA	**Harding Lake**	**95.03**	**13**		IAmb		IAmb	02 04 14.5	
	comp=Z,7.3nm,0.8s								
CCB	**Clear Creek Bu**	**95.07**	**13**		IAmb		IAmb	02 04 15.6	
	comp=Z,14nm,0.9s								
TCOL	**CIGO, UAF Yank**	**95.26**	**13**		P		**P**	**02 04 16.4**	**+1.2**
	baz=207								
SCRK	**Sand Creek**	**95.29**	**15**		IAmb		IAmb	02 04 16.5	
	comp=Z,6.4nm,0.9s								
IL31		**95.37**	**13**		IAmb		IAmb	02 04 19.4	
	comp=Z,5.9nm,0.9s								
ILAR	**Eielson Array**	**95.37**	**13**		P		**P**	**02 04 15.2**	**-0.5**
	comp=Z,3.4nm,0.7s,baz=223,slow=5.8,SNR=27								
ILAR					PP		**PP**	**02 08 05.2**	**-7.3**
	comp=Z,2.6nm,1.1s,baz=227,slow=7.2,SNR=5.6								
POKR	**Poker Flat Res**	**95.56**	**13**		P		**P**	**02 04 18.2**	**+1.6**
	baz=208								
N23A	**Red Feather La**	**95.94**	**47**		P		**P**	**02 04 19.9**	**+0.6**
	baz=239								
RLMT	**Red Lodge**	**96.14**	**42**		P		**P**	**02 04 20.8**	**+0.8**
	baz=237								
LZH	**Lanzhou**	**96.36**	**307**		*e*P		**P**	**02 04 20.8**	**-0.3**
LZH					sP		sP	02 06 32.1	+4.0
LZH					PP		**PP**	**02 08 19.4**	**-1.6**
LZH					pmax		pmax		
	comp=Z,26nm,1.0s								
LZH					pmax		pmax		
	comp=Z,110nm,4.9s								
DAWY	**Dawson**	**96.46**	**16**		IAmb		IAmb	02 04 22.6	
	comp=Z,7.2nm,1.1s								
K22A	**Casper**	**96.49**	**45**		P		**P**	**02 04 22.1**	**+0.5**
	baz=238								
EGAK	**Eagle**	**96.63**	**15**		IAmb		IAmb	02 04 23.5	
	comp=Z,9.5nm,0.9s								
TOLK	**Toolik Lake Re**	**98.34**	**10**		P		**P**	**02 04 30.2**	**+1.1**
	baz=206								
RSSD	**Black Hills**	**98.80**	**45**		P		Pdif	02 04 32.4	+0.5
	baz=240								
EPYK	**Eagle Plains**	**99.00**	**16**		P		**P**	**02 04 33.1**	**+1.0**
	baz=217								
SONM	**Songino Array**	**100.48**	**319**		P		**Pdif**	**02 04 39.3**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=116,slow=3.4,SNR=6.5								
SONM					PP		**PP**	**02 08 50.2**	**-1.7**
	comp=Z,1.6nm,0.9s,baz=136,slow=5.1,SNR=5.5								
GTA	**Gaotai**	**100.73**	**309**	⇑	P		**Pdif**	**02 04 41.6**	**+1.1**
GTA					PP		**PP**	**02 08 55.8**	**+1.8**
GTA					pmax		pmax		
	comp=Z,3.0nm,0.9s								
INK	**Inuvik**	**101.29**	**16**		P		**Pdif**	**02 04 42.2**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=173,slow=7.9,SNR=4.6								
YKA	**Yellowknife Ar**	**103.26**	**25**		Pdiff		**Pdif**	**02 04 51.3**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=239,slow=4.2,SNR=8.6								
YKA					PKiKP		**PKiKP**	**02 09 07.8**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=262,slow=1.0,SNR=9.2								
YKA					PKKPbc		**PKKPbc**	**02 20 44.5**	**-2.1**
	comp=Z,0.7nm,0.7s,baz=46,slow=3.0,SNR=9.9								
TIXI	**Tiksi**	**105.32**	**345**		PP		**PP**	**02 09 29.5**	**+2.5**
	comp=Z,5.2nm,0.9s,baz=144,slow=5.9,SNR=5.5								
WMQ	**Urumqi**	**110.81**	**309**		*e*PKP		**PKiKP**	**02 09 22.1**	**-0.6**
Q55A	**Buckhannon**	**113.28**	**57**		P		**PKiKP**	**02 09 27.5**	**0.0**
	baz=253								
F48A	**Evansville**	**113.43**	**49**		P		**PKiKP**	**02 09 28.4**	**+0.8**
	baz=254								
F49A	**Sandfield**	**113.80**	**49**		P		**PKiKP**	**02 09 29.2**	**+0.9**
	baz=254								
P56A	**Dayton Farm, R**	**114.35**	**57**		P		PKPdf	02 09 29.4	-0.1
	baz=254								
M55A	**Ridgway**	**114.94**	**55**		P		PKPdf	02 09 30.5	-0.2
	baz=254								
MKAR	**Makanchi Array**	**115.30**	**311**		Pdiff		**Pdif**	**02 05 48.2**	**+3.2**
	comp=Z,0.3nm,0.6s,baz=84,slow=4.6,SNR=4.7								
MKAR					PKP		**PKPdf**	**02 09 30.4**	**-0.7**
	comp=Z,5.3nm,0.7s,baz=86,slow=1.4,SNR=36								
MKAR					PP		**PP**	**02 10 41.6**	**+2.6**
	comp=Z,1.2nm,0.9s,baz=98,slow=8.7,SNR=4.1								
ZALV	**Zalesovo Beam**	**115.36**	**319**		PKP		**PKPdf**	**02 09 29.9**	**-1.0**
	comp=Z,2.9nm,0.6s,baz=148,slow=1.5,SNR=16								
MAKZ	**Makanchi**	**115.51**	**311**				**PKPdf**	**02 09 30.9**	**-0.6**
NRIK	**Noril'sk**	**116.72**	**337**		PKP		**PKPdf**	**02 09 32.9**	**-0.2**
	comp=Z,7.2nm,0.8s,baz=89,slow=2.7,SNR=8.1								

LMN Caledonia Moun 125.67 52 PKPdf 02 09 50.8 -0.3
KBS Kingsbay 128.33 357 *e*PKPdf PKPdf 02 09 55.1 -0.1
DAG Danmarks Havn 129.83 6 *i* P PKPdf 02 09 56.9 -1.2
comp=Z,6.5nm,0.9s
HSPB Hornsund (broa 130.01 356 *e*PKPdf PKPdf 02 09 58.9 +0.4
SUMG Summit 130.19 15 PKPdf 02 09 59.5 +0.1
SUMG Summit 130.19 15 *i* P PKiKP 02 10 01.1 +0.8
ARU Arti 130.37 322 PKP PKPdf 02 09 59.4 -0.3
comp=Z,8.9nm,0.6s,baz=56,slow=1.0,SNR=30
ARU Arti 130.37 322 SKPbc PKPdf 02 10 00.1 +0.5
AKTO Aktyubinsk 131.56 314 PKP PKPdf 02 10 02.1 0.0
comp=Z,11nm,0.7s,baz=66,slow=1.7,SNR=45
AKTO SKPbc SKPab 02 12 53.5 +1.4
comp=Z,11nm,1.1s,baz=78,slow=5.3,SNR=22
GEYT Alibeck 131.56 297 PKP PKPdf 02 10 03.3 +0.7
comp=Z,13nm,0.7s,baz=180,slow=1.3,SNR=24
GEYT SKPbc SKPab 02 12 54.0 +1.4
comp=Z,4.1nm,0.7s,baz=108,slow=3.3,SNR=6.7
KIRV Kirov 134.51 327 SKPbc SKPbc 02 13 03.2 +2.5
comp=Z,8.6nm,0.7s,baz=45,slow=3.7,SNR=4.0
KMBO Kilima Mbogo 135.01 237 PKP PKPdf 02 10 11.3 +1.2
comp=Z,7.1nm,1.1s,baz=40,slow=2.7,SNR=7.7
KMBO SKPbc SKPbc 02 13 07.2 +3.0
comp=Z,4.2nm,0.8s,baz=69,slow=1.3,SNR=9.3
HAMF Hammerfest 135.01 350 *e*PKPdf PKPdf 02 10 05.9 -2.1
ARCES ARCESS Array B 135.66 348 PKhKP PKPpre 02 10 00.5
comp=Z,3.9nm,0.9s,baz=54,slow=2.1,SNR=11
ARCES PKP PKPdf 02 10 08.6 -0.7
comp=Z,11nm,0.8s,baz=107,slow=0.3,SNR=14
ARCES SKPbc SKPbc 02 13 06.3 +2.3
comp=Z,7.5nm,0.8s,baz=38,slow=6.1,SNR=5.1
ARE0 ARCESS Array S 135.66 348 *e*PKPdf PKPdf 02 10 04.6 -4.7
TRO Tromso 136.64 351 *e*PKPdf PKPdf 02 10 08.7 -2.3
KLMR Klimovskoe 137.87 333 *e*PKPdf PKPdf 02 10 10.7 -2.8
KLMR AMP 02 10 15.8
comp=Z,28nm,1.1s
KLMR *e*PP PP 02 13 01.6 -4.5
STEI Steigen 138.72 352 *e* PKPdf 02 10 08.2 -6.7
MOR8 Moi Rana 140.49 351 *e* PKPdf 02 10 09.2 -9.0
FINES FINESS Array B 142.21 341 PKhKP PKPpre 02 10 16.5
comp=Z,16nm,0.5s,baz=54,slow=3.6,SNR=129
FINES FINESS Array B 142.21 341 PKPpre 02 10 16.5
FINES PKiKP 02 10 24.2 -0.3
NSS Namsos 142.37 352 *e*PKPdf PKPdf 02 10 17.5 -4.1
AKH Akhalkalaki 142.76 303 ⇓P PKPdf 02 10 20.5 -2.7
KBZ Khabaz 142.79 307 PKhKP PKPpre 02 10 20.5
comp=Z,10nm,0.9s,baz=354,slow=1.4,SNR=14
KBZ PP PP 02 13 39.3 +2.6
comp=Z,1.7nm,0.8s,baz=77,slow=15,SNR=3.5
KIV Kislovodsk 142.90 307 ⇑P PKPdf 02 10 19.6 -3.7
TBLU Trondheim 143.81 353 *e*PKPab PKPab 02 10 22.1 -0.4
BATM Batumi 144.06 304 ⇑P PKPab 02 10 24.6 +0.4
BCA Borcka 144.14 303 ⇑P PKPab 02 10 24.9 +0.4
DOMB Dombas 145.12 353 *e*PKPbc PKPdf 02 10 26.6 +0.1
AKN Aaknes 145.17 355 *e*PKPab PKPdf 02 10 27.2 +0.6
KTUT Trabzon 145.60 303 ⇓P PKPdf 02 10 29.4 +0.4
NB2 NORSAR Subarra 145.84 351 PKP PKPdf 02 10 28.3 +0.5
comp=Z,60nm,0.8s,baz=13,slow=2.9
NB2 NORSAR Subarra 145.84 351 PKPab PKPdf 02 10 28.3 +0.5
baz=13,slow=2.9
NOA NORSAR Array B 145.84 351 PKPbc PKPdf 02 10 28.8 +1.0
comp=Z,21nm,0.7s,baz=15,slow=4.9,SNR=73
FOO Floro 145.87 357 *e*PKPbc PKPdf 02 10 28.9 +1.2
NC602 NORSAR Array S 146.08 351 *e*PKPbc PKPdf 02 10 29.2 +1.0
HYA Hoyanger 146.23 356 *e*PKPbc PKPbc 02 10 30.2 +0.1
HFS Hagfors 146.31 349 PKPbc PKPdf 02 10 29.7 +1.2
comp=Z,59nm,0.7s,baz=56,slow=2.7,SNR=139
SUE Sulen 146.42 357 *e*PKPbc PKPbc 02 10 30.4 -0.3
SLIT Slitere, Latvi 146.43 339 *e*P PKPdf 02 10 29.9 +1.2
IZAR Zarasai 146.50 334 *e*P PKPbc 02 10 31.8 +0.7
SKAR Skarslia 146.53 354 *e*PKPbc PKPbc 02 10 31.3 +0.2
ISAL Salakas 146.68 334 *e*P PKPbc 02 10 31.9 +0.3
MICGM Minsk 146.72 331 ⇓*e*P PKPdf 02 10 31.0 +1.6
MICGM PM 02 10 32.0
comp=Z,0.5nm,1.0s
IIGN Ignalina 146.80 334 *e*P PKPbc 02 10 32.4 +0.5
NACGM Naroch 146.89 333 *e*P PKPdf 02 10 31.0 +1.3
NACGM PM 02 10 32.0
comp=Z,0.5nm,1.0s
ASK Askoy 146.97 356 *e*PKPbc PKPbc 02 10 32.4 +0.2
BER Bergen 147.06 356 *e*PKPbc PKPbc 02 10 32.3 -0.1
KONO Kongsberg 147.39 352 PKPbc PKPbc 02 10 33.4 0.0
KONO Kongsberg 147.39 352 *e*PKPbc PKPbc 02 10 33.3 -0.1
ODD1 Odda 147.44 355 *e*PKPbc PKPbc 02 10 34.3 +0.7
PABE Paberze 147.54 336 *e*P PKPbc 02 10 34.0 +0.1
PBUR Paburge 147.85 338 *e*P PKPbc 02 10 34.5 -0.2
BLS5 Blasjo 147.94 355 *e*PKPbc PKPbc 02 10 35.2 +0.3
KMY Karmoy 148.23 356 *e*PKPbc PKPbc 02 10 35.9 +0.3
AKASG Malin Array Be 148.53 325 PKPbc PKPbc 02 10 36.1 -0.5
comp=Z,106nm,0.7s,baz=43,slow=3.1,SNR=57
AKASG Malin Array Be 148.53 325 PKPdf 02 10 34.1 +1.7
ASF Jabal al Asfar 148.67 287 PKPbc PKPbc 02 10 38.4 +0.7
comp=Z,22nm,0.7s,baz=87,slow=2.1,SNR=43
DIKM Dikmen 148.75 306 ⇓P PKPbc 02 10 38.5 +1.0
HOMB Homborsund 148.87 352 *e*PKPbc PKPbc 02 10 37.5 +0.3
SNART Snartemo 148.94 354 *e*PKPbc PKPbc 02 10 37.7 +0.3
RCY Rachaya 149.55 290 *e*P PKPbc 02 10 40.8 +0.9
BZK Bozkurt 149.57 307 ⇓P PKPbc 02 10 40.0 +0.5
QRWL Qaraoun 149.68 290 *e*P PKPbc 02 10 40.8 +0.7
BHL Bhannes 149.69 291 *e*P PKPbc 02 10 40.8 +0.6
DQRL Deir Qamar 149.77 290 *e*P PKPbc 02 10 41.1 +0.8
MMAI Mount Meron Ar 149.93 289 PKPbc PKiKP 02 10 42.0 +0.6
comp=Z,95nm,0.6s,baz=76,slow=4.6,SNR=187
EIL Elat 150.22 282 PKPbc PKiKP 02 10 42.4 +0.4
comp=Z,55nm,0.7s,baz=48,slow=0.7,SNR=60
BRTR Keskin Array B 150.44 303 PKPbc PKPbc 02 10 41.5 -0.4
comp=Z,17nm,0.6s,baz=152,slow=1.5,SNR=11
BRTR Keskin Array B 150.44 303 PKPdf 02 10 39.4 +3.3
SORM Soroca 150.48 321 ⇑P PKPbc 02 10 41.3 -0.1
MUD Monsted U'grnd 150.55 351 ⇓*i*P PKPbc 02 10 41.6 +0.3
comp=Z,58nm,0.9s
BSD Bornholm Skovb 150.69 344 ⇓*i*P PKPbc 02 10 41.8 +0.2
comp=Z,72nm,0.8s
KIS Kishinev 150.84 319 ⇑*i*PKP PKPbc 02 10 43.0 +0.7
comp=Z,110nm,1.8s
KIS Kishinev 150.84 319 ⇑P PKPbc 02 10 42.2 -0.1
MILM Milestii Mici 150.88 319 ⇓P PKPbc 02 10 42.3 0.0
ANTO Ankara 151.04 303 ⇓P PKPbc 02 10 43.8 +0.7
ANTO Ankara 151.04 303 PKPbc PKPbc 02 10 42.4 -0.6
LEOM Leova 151.45 319 ⇑P PKPbc 02 10 43.1 -0.6
BEL Belsk 151.58 334 *e*PKP PKPbc 02 10 44.5 +0.7
VASR Vaslui 151.63 319 ⇑P PKPdf 02 10 39.2 +1.8
GKP Gorka Klasztor 151.66 339 *e*PKP PKPbc 02 10 44.3 +0.4
TLCR 151.76 316 ⇑P PKPbc 02 10 44.5 +0.1
LEF Lefka 151.87 293 ⇓P PKPbc 02 10 45.4 +0.4
BIR Birlad 151.92 319 ⇓P PKiKP 02 10 45.9 +0.9
JURR Jurilovca 151.92 315 ⇑P PKPbc 02 10 45.0 +0.3
VARL Varlezi 151.99 318 ⇑P PKiKP 02 10 45.6 +0.5
EKA Eskdalemuir Ar 152.09 5 PKPbc PKPbc 02 10 43.8 -1.0
comp=Z,7.1nm,0.5s,baz=343,slow=2.4,SNR=53
EKA PKPab PKPab 02 10 55.9 -0.1
comp=Z,4.7nm,0.5s,baz=350,slow=4.2,SNR=12
ESK Eskdalemuir 152.10 5 PKPbc PKPbc 02 10 44.7 -0.2
ESK PKPab 02 10 56.4 +0.3
GHRR 152.16 319 ⇓P PKiKP 02 10 46.5 +1.0
TOPG Topolog 152.18 316 ⇑P PKPbc 02 10 45.7 +0.3
CFR Carcaliu 152.18 316 ⇓P PKPbc 02 10 45.3 0.0
SCHL Schela 152.21 317 ⇓P PKPbc 02 10 45.5 +0.1
TESR Tescani 152.35 320 ⇓P PKPbc 02 10 45.2 -0.5
TIRR Tirgusor 152.36 315 ⇑P PKPbc 02 10 46.2 +0.4
KWP Kalwaria Pacla 152.40 329 *e*PKP PKPbc 02 10 46.3 +0.6
PETR Petresti 152.45 318 ⇑P PKPab 02 10 57.8 -0.1
MFTR Murfatlar 152.49 314 ⇑P PKPbc 02 10 46.2 +0.2
BURAR Bucovina Array 152.49 323 ⇑P PKPbc 02 10 46.7 +0.6
ODBI Odobesti 152.53 318 ⇑P PKiKP 02 10 47.3 +1.1
MANR Mangalia 152.55 313 ⇓P PKiKP 02 10 47.0 +0.6
TLBR Topalu 152.55 315 ⇑P PKPbc 02 10 46.8 +0.6
HARR Harsova 152.55 316 ⇓P PKPbc 02 10 46.1 -0.1
VRI Vrincioaia 152.67 319 ⇓P PKPbc 02 10 46.6 +0.1
ORH Orhaniye 152.72 307 *i* P PKPab 02 11 13.4 +14
PLOR Plostina 152.72 319 ⇓P PKPbc 02 10 46.4 -0.2
BSEG Bad Segeberg 152.79 348 *e*PKPbc PKPbc 02 10 47.0 +0.6
baz=23,slow=4.4
BSEG *e*PKPab PKPab 02 10 59.5 +0.5
baz=23,slow=4.4
BISRR Bisoca 152.85 318 ⇓P PKPbc 02 10 47.3 +0.4
PSN Preselentsi 152.87 313 *i* P PKPab 02 11 01.7 +1.9
ICOR Ion Corvin 152.91 315 ⇓P PKPbc 02 10 45.6 -1.4
KOLS Kolonicke sedl 153.10 328 *e*PKP PKPdf 02 10 39.9 +0.3
KOLS *e* 02 10 48.4
OJC Ojcow 153.23 333 *e*PKP PKPbc 02 10 47.7 +0.2
MLR Muntele Rosu 153.33 319 PKP PKPdf 02 10 40.1 -0.1
comp=Z,1.6nm,0.8s,baz=102,slow=2.1,SNR=4.4
MLR PKPbc PKPbc 02 10 47.7 -0.4
comp=Z,4.4nm,0.7s,baz=58,slow=2.1,SNR=9.0
MLR Muntele Rosu 153.33 319 ⇑P PKPbc 02 10 47.2 -0.8
MLR Muntele Rosu 153.33 319 PKPbc 02 10 47.9 -0.2
RUE Ruedersdorf 153.36 343 *e*PKPbc PKPbc 02 10 48.1 +0.5
baz=23,slow=4.4
RUE *e*PKPab PKPab 02 11 02.1 +0.7
baz=23,slow=4.4
DOPR Dopca 153.38 320 ⇑P PKPbc 02 10 48.6 +0.6
SECR 153.51 318 ⇑P PKPbc 02 10 48.6 +0.3
TRPA Tarpa 153.53 327 ⇓P PKPbc 02 10 48.4 +0.3
NIE Niedzica 153.63 331 *e*PKP PKiKP 02 10 49.5 +0.9
VOIR 153.88 319 ⇑P PKiKP 02 10 50.1 +0.9
RAZG Razgrad 154.00 315 ⇑P PKPab 02 11 04.5 -0.1
KSP Ksiaz 154.03 338 *e*PKP PKiKP 02 10 50.0 +0.8
RETH Rethem/Aller, 154.10 348 *e*PKPbc PKPbc 02 10 49.0 -0.2
baz=23,slow=4.4
RETH *e*PKPab PKPab 02 11 05.0 +0.4
baz=23,slow=4.4
ARR Arges 154.16 320 ⇑P PKPdf 02 10 41.8 +0.6
OKC Ostrava-Krasne 154.19 334 *e*PKPDF PKPdf 02 10 41.8 +0.8
OKC ⇑*e*PKP PKPbc 02 10 49.7 +0.1
OKC *e*PKPAB PKPab 02 11 05.5 +0.3
LANS Liptovska Anna 154.19 332 *e*PKP PKPdf 02 10 42.0 +0.9
LANS *e* 02 10 51.0
LANS *e* 02 11 06.3
NRDL Niedersach Rie 154.20 347 *e*PKPbc PKPbc 02 10 49.8 +0.5
baz=23,slow=4.4
NRDL *e*PKPab PKPab 02 11 05.4 +0.4
baz=23,slow=4.4
KECS Kecovo 154.24 329 *e*PKP PKPab 02 11 05.8 +0.3
OSTC Ostas 154.30 337 *e*PKPDF PKPdf 02 10 41.4 +0.2
OSTC ⇑*e*PKP PKPbc 02 10 50.2 +0.4
OSTC *e*PKPAB PKPab 02 11 06.5 +0.8
CHVC Chvalec 154.33 338 *e*PKPDF PKPdf 02 10 40.8 -0.5
CHVC ⇑*e*PKP PKiKP 02 10 50.8 +0.9
CHVC *e*PKPAB PKPab 02 11 06.0 +0.2
DRGR 154.34 324 ⇓P PKPab 02 10 50.3 +0.2
UPC Upice 154.41 338 *e*PKPDF PKPdf 02 10 41.9 +0.5
UPC ⇑*e*PKP PKPbc 02 10 50.6 +0.6
UPC *e*PKPAB PKPab 02 11 06.7 +0.6
ASSE Asse, Remlinge 154.43 346 *e*PKPbc PKPbc 02 10 50.2 +0.3
baz=23,slow=4.4
ASSE *e*PKPab PKPab 02 11 06.5 +0.5
baz=23,slow=4.4
HUMR Humele 154.43 318 ⇑P PKPbc 02 10 49.6 -0.7
DPC Dobruska-Polom 154.44 337 *e*PKPDF PKPdf 02 10 41.9 +0.5
DPC ⇑*e*PKP PKiKP 02 10 50.8 +0.7
DPC *e*PKPAB PKPab 02 11 07.0 +0.7
MORC Moravsky Berou 154.47 335 *e*PKP PKPdf 02 10 40.3 -1.2
MORC *e* 02 11 06.7
MORC Moravsky Berou 154.47 335 ⇑P PKPdf 02 10 41.9 +0.3
KRLC Kraliky 154.50 336 *e*PKPDF PKPdf 02 10 41.9 +0.3
KRLC ⇑*e*PKP PKPbc 02 10 50.6 +0.3
KRLC *e*PKPAB PKPab 02 11 06.5 -0.1
COPA Copaceanca 154.50 317 ⇓P PKPdf 02 10 43.4 +1.7
SZH Strazhica 154.51 314 *i* P PKPab 02 11 07.1 +0.3
CLL Collm 154.62 342 *e*PKPdf PKPdf 02 10 43.0 +1.4
comp=Z,9.0nm,1.3s
CLL *i* PKPdiff PKPbc 02 10 51.7 +1.3
comp=Z,22nm,0.9s
CLL ⇓*i*PKPab PKPab 02 11 07.9 +0.9
comp=Z,45nm,0.9s
CLL Collm 154.62 342 *e*PKPbc PKPbc 02 10 51.8 +1.4
baz=23,slow=4.4
CLL *e*PKPab PKPab 02 11 08.3 +1.3
baz=23,slow=4.4
ZIMR 154.67 316 ⇑P PKiKP 02 10 48.4 -2.3
ELND Elena 154.71 314 ⇑P PKiKP 02 10 51.2 +0.3
BRG Berggiesshubel 154.75 341 *i* PKP PKPdf 02 10 42.1 +0.4
comp=Z,9.6nm,1.1s
BRG Berggiesshubel 154.75 341 *i* PKP PKiKP 02 10 51.1 +0.4
comp=Z,14nm,0.9s
BRG Berggiesshubel 154.75 341 *i* PKP PKPab 02 11 07.8 +0.3
comp=Z,45nm,0.9s
BRG *es*PKP 02 12 25.1
comp=Z,5.0nm,0.8s
BRG Berggiesshubel 154.75 341 *e*PKPbc PKiKP 02 10 51.1 +0.4
baz=23,slow=4.4
BRG *e*PKPab PKPab 02 11 08.1 +0.6
baz=23,slow=4.4
CLZ Clausthal 154.76 346 *e*PKPbc PKPbc 02 10 51.5 +0.7
baz=23,slow=4.4
CLZ *e*PKPab PKPab 02 11 08.2 +0.6
baz=23,slow=4.4
IBBN Ibbenburen 154.78 350 *e*PKPab PKPab 02 11 08.0 +0.4
baz=23,slow=4.4
DEV Deva 154.82 322 ⇑P PKPbc 02 10 51.7 +0.6
PVCC Panska Ves 154.86 339 *e*PKPDF PKPdf 02 10 42.4 +0.4
PVCC ⇑*e*PKP PKiKP 02 10 51.4 +0.5
PVCC *e*PKPAB PKPab 02 11 08.8 +0.8
FBE Freiberg 154.88 341 *e*PKPab PKPab 02 11 09.0 +1.0
baz=23,slow=4.4
PSZ Piszkesteto 154.93 329 ⇓P PKPbc 02 10 52.3 +1.0
VYHS Vyhne 154.96 331 *e*PKP PKPdf 02 10 41.9 -0.3
VYHS *e* 02 10 51.9
VYHS *e* 02 11 08.9
NEUB Neuenburg 155.03 344 *e*PKPab PKPab 02 11 09.1 +0.4
baz=23,slow=4.4
VLAD Vladila 155.07 317 ⇑P PKPab 02 11 10.1 +0.9
GTTG Gottingen 155.12 347 *e*PKPab PKPab 02 11 09.7 +0.6
baz=23,slow=4.4
JAVC Velka Javorina 155.16 333 *e*PKP PKPdf 02 10 41.5 -1.0
JAVC *e* 02 11 10.9
GZR Gura Zlata 155.19 322 ⇓P PKPdf 02 10 52.0 +9.3
VRAC Vranov 155.21 335 PKP PKPdf 02 10 42.2 -0.3
comp=Z,1.3nm,0.3s,baz=286,slow=14,SNR=4.2
VRAC PKPab PKPab 02 11 10.2 +0.6
comp=Z,17nm,0.9s,baz=37,slow=4.4,SNR=20
VRAC Vranov 155.21 335 *e*PKP PKPdf 02 10 40.9 -1.6
VRAC *e* 02 11 10.1
VRAC Vranov 155.21 335 ⇓P PKPab 02 11 08.3 -1.3
SIRR Siria 155.23 324 ⇓P PKPdf 02 10 52.1 +10
PLVB Pleven 155.27 316 ⇑P PKPdf 02 10 52.6 +10
GOPC GO Pecny, Ondr 155.33 338 *e*PKPDF PKPdf 02 10 42.4 -0.2
GOPC *ex* x 02 10 52.5
GOPC *e*PKPAB PKPab 02 11 10.4 +0.3
PRU Pruhonice 155.34 339 *e*PKPDF PKPdf 02 10 42.4 -0.2
PRU ⇑*e*PKP PKPab 02 10 52.0 -18
PRU *e*PKPAB PKPab 02 11 10.6 +0.5
KRUC Moravsky 155.48 335 *e*PKP PKPdf 02 10 41.8 -1.0
KRUC *e* 02 11 11.1
SMOL Smolenice 155.53 333 *e*PKP PKPab 02 11 11.9 +0.9
TANN Tannenbergstha 155.58 342 *e*PKPab PKPab 02 11 11.9 +0.7
baz=23,slow=4.4
MOX Moxa 155.59 344 *e*PKPab PKPab 02 11 11.7 +0.5
baz=23,slow=4.4
PLN Plauen 155.60 343 *e*PKPab PKPab 02 11 11.9 +0.7
baz=23,slow=4.4
TREC Trest 155.62 337 *e*PKPAB PKPab 02 11 11.7 +0.3
GUNZ Gunzen 155.66 342 *e*PKPab PKPab 02 11 12.3 +0.8
baz=23,slow=4.4
BZS Buzias 155.68 323 ⇑P PKPdf 02 10 52.5 +9.3
BAIL Bailesti 155.69 318 ⇓P PKPab 02 11 13.0 +1.2
BUG Bochum--Univer 155.70 351 *e*PKPab PKPab 02 11 11.6 +0.1
baz=23,slow=4.4
MODS Modra-Piesok 155.70 333 *e*PKP PKPdf 02 10 53.0 +10
MODS *e* 02 11 11.7
SRO Srobarova 155.71 331 *e*PKP PKPab 02 11 12.1 +0.4
HERR Herculane 155.71 321 ⇑P PKPdf 02 10 51.7 +8.4
WERN Wernitzgruen 155.72 342 *e*PKPab PKPab 02 11 12.7 +0.9
baz=23,slow=4.4
NKC Novy Kostel 155.75 342 ⇑*e*PKP PKPdf 02 10 53.8 +11
NKC *e*PKPAB PKPab 02 11 12.4 +0.5
PBCC Pribram 155.78 339 *e*PKPAB PKPab 02 11 12.4 +0.4
UBBA Unterbreizbach 155.80 346 *e*PKPab PKPab 02 11 12.5 +0.6
baz=23,slow=4.4
MPEP Malo Peshtene 155.83 317 *i* P PKPab 02 11 13.6 +1.1
ZST Bratislava 155.91 333 *e*PKP PKPab 02 11 12.3 -0.3
MANZ Manzenberg 156.06 342 *e*PKPab PKPab 02 11 14.0 +0.8
baz=23,slow=4.4
RZN Rozhen 156.06 312 *i* P PKPab 02 11 14.4 +0.6
MDVR Moldovita 156.16 322 ⇑P PKPab 02 11 13.4 -0.5
ROTZ Rotzenmuhle 156.24 342 *e*PKPab PKPab 02 11 15.1 +1.1
baz=23,slow=4.4
KHC Kasperske Hory 156.40 339 *e*PKPDF PKPdf 02 10 43.9 -0.2
KHC ⇑*e*PKP PKPab 02 10 54.8 -20
KHC *e*PKPAB PKPab 02 11 15.3 +0.6
VTS Vitosha 156.54 316 ⇑P PKPab 02 11 16.6 +0.9
VTS Vitosha 156.54 316 *i* P PKPab 02 11 17.0 +1.2
GRF Grafenberg Arr 156.57 343 *e*PKPab PKPab 02 11 16.5 +1.1
baz=23,slow=4.4
WET Wettzell 156.60 340 *e*PKPab PKPab 02 11 16.6 +1.0
baz=23,slow=4.4
AHRW Bad Neuenahr-A 156.60 350 *e*PKPab PKPab 02 11 15.9 +0.5
baz=23,slow=4.4
GEC2 GERESS Array S 156.61 339 *e*PKPab PKPab 02 11 16.4 +0.7
baz=23,slow=4.4
GERES GERESS Array B 156.61 339 PKP PKPdf 02 10 44.3 -0.2
comp=Z,1.5nm,0.8s,baz=127,slow=0.7,SNR=13
GERES PKPab PKPab 02 11 16.1 +0.4
comp=Z,7.5nm,0.6s,baz=35,slow=4.8,SNR=23
CONA Conrad Observa 156.62 334 *e*PKPab PKPab 02 11 16.8 +1.0
comp=Z,16nm,0.6s,SNR=6.3
TNS Taunus Mts 156.68 348 *e*PKPab PKPab 02 11 16.2 +0.3
baz=23,slow=4.4
MEM Membach 156.68 352 PKPab PKPab 02 11 15.3 -0.6
MMB Musomiste 156.76 313 *i* P PKPab 02 11 17.4 +0.8
BHOU Houvegnez 156.93 352 PKPab PKPab 02 11 17.3 +0.4
BCLA Clavier 156.95 353 PKPab PKPab 02 11 16.3 -0.7
BGES Gesves 157.01 353 PKPab PKPab 02 11 17.0 -0.3
KKB Krupnik 157.03 314 *i* P PKPab 02 11 17.9 +0.1
BMRD Maredsous 157.12 354 PKPab PKPab 02 11 17.7 0.0
MOA Molln 157.27 337 *e*PKPab PKPab 02 11 19.3 +0.7
comp=Z,29nm,1.3s,SNR=9.4
ARSA Arzberg 157.31 334 *e*PKPab PKPab 02 11 19.2 +0.5
comp=Z,6.1nm,0.7s
DOU Dourbes 157.34 354 PKPab PKPab 02 11 18.2 -0.4
WLF Walferdange 157.59 351 PKPab PKPab 02 11 20.0 +0.2
WLF Walferdange 157.59 351 *e*PKPab PKPab 02 11 20.6 +0.8
baz=23,slow=4.4
VAY Valandovo 157.64 313 *i* P PKPab 02 11 20.9 +0.5
VAY Valandovo 157.64 313 *i* P PKPab 02 11 20.9 +0.5
STIP Stip 157.69 315 *i* P PKPab 02 11 20.3 -0.3
STIP Stip 157.69 315 *i* P PKPab 02 11 20.3 -0.3
RJOB Jochberg 157.87 339 *e*PKPab PKPab 02 11 22.3 +1.1
baz=23,slow=4.4
STU Stuttgart 157.91 346 *e*PKPab PKPab 02 11 21.5 +0.3
baz=23,slow=4.4
FUR Furstenfeldbru 157.95 342 *e*PKPab PKPab 02 11 22.3 +0.9
baz=23,slow=4.4
SOKA Soboth 157.97 334 *e*PKPab PKPab 02 11 21.8 +0.1
comp=Z,12nm,0.8s,SNR=5.9
LIC Lamto 158.00 164 *e*PKIKP PKPdf 02 10 47.2 +0.1
comp=Z,55nm,1.3s
SKO Skopje 158.01 316 *i* P PKPab 02 11 23.4 +1.4
SKO Skopje 158.01 316 *i* P PKPab 02 11 23.4 +1.4
KIC Kosan Boka 158.20 164 *e*PKIKP PKPdf 02 10 47.1 -0.3
comp=Z,32nm,1.0s
IDI Anoyia 158.28 297 PKPab PKPab 02 11 23.1 -0.4
comp=Z,9.3nm,0.6s,baz=26,slow=12,SNR=14
TIC Toumodi 158.41 163 *e*PKIKP PKPdf 02 10 47.7 +0.1
DBIC Dimbokro 158.47 164 PKP PKPdf 02 10 47.4 -0.3
comp=Z,6.0nm,0.7s,baz=111,slow=1.6,SNR=6.5
BFO Black Forest 158.51 347 *e*PKPab PKPab 02 11 24.1 +0.2
baz=23,slow=4.4
MYKA Terra Mystica 158.53 336 *i* PKPab PKPab 02 11 23.8 -0.3
comp=Z,14nm,0.6s,SNR=5.3
WATA Walderalm 158.61 340 *i* PKPab PKPab 02 11 24.7 +0.2
comp=Z,12nm,0.6s,SNR=13
WTTA Wattenberg 158.65 340 *i* PKPab PKPab 02 11 25.1 +0.4
comp=Z,34nm,0.6s,SNR=12
UBR Ueberruh 158.71 343 *e*PKPab PKPab 02 11 27.9 +3.1
baz=23,slow=4.4
RETA Reutte 158.71 342 *e*PKPab PKPab 02 11 25.6 +0.7
comp=Z,26nm,0.7s,SNR=9.2
MOTA Moosalm 158.74 341 *e*PKPab PKPab 02 11 25.6 +0.5
comp=Z,57nm,1.2s,SNR=13
SQTA Sankt Quirin 158.82 341 *i* PKPab PKPab 02 11 26.0 +0.6
comp=Z,39nm,0.9s,SNR=11
ABTA Abfaltersbach 158.83 338 *i* PKPab PKPab 02 11 25.1 -0.3
comp=Z,28nm,0.8s,SNR=6.2
OHR Ohrid 158.88 315 *i* P PKPab 02 11 26.2 +0.4
OHR Ohrid 158.88 315 *i* P PKPab 02 11 26.2 +0.4
PDG Podgorica 159.03 320 ⇑P PKPab 02 11 26.3 -0.1
DAVA Damuels 159.13 343 *i* PKPab PKPab 02 11 27.1 +0.4
comp=Z,26nm,0.8s,SNR=8.0
FETA Feichten 159.14 341 *i* PKPab PKPab 02 11 27.4 +0.6
comp=Z,19nm,1.0s,SNR=6.2
DAVOX Davos/Dischmat 159.60 342 PKP PKPdf 02 10 48.9 +0.6
comp=Z,2.2nm,0.7s,baz=289,slow=17,SNR=3.9
DAVOX PKPab PKPab 02 11 29.6 +0.8
comp=Z,29nm,0.7s,baz=22,slow=2.1,SNR=43
TUE Stuetta 160.02 343 PKPdf 02 11 29.3 -1.5
PBRG Braganca 164.43 22 *e*PKPab PKPab 02 11 50.8 +0.8
MVO Moncorvo 164.90 24 *e*PKPab PKPab 02 11 53.5 +1.3
MTE Manteigas 165.36 27 *e*PKPdf PKPdf 02 10 54.6 +0.7
TOA0 Torodi Ar. Sit 165.64 183 PKPdf 02 10 54.2 -0.6
TOA0 PKPab 02 11 55.8 0.0
TORD Torodi Ar. Bea 165.64 183 PKP PKPdf 02 10 54.6 -0.1
comp=Z,4.9nm,0.9s,baz=307,slow=1.1,SNR=20
TORD PKPab PKPab 02 11 56.0 +0.2
comp=Z,9.8nm,0.8s,baz=168,slow=4.5,SNR=32
TORD pPKPab pPKPab 02 13 24.7 +0.5
comp=Z,15nm,1.1s,baz=180,slow=2.8,SNR=12
PCBR Castelo Branco 165.86 28 *e*PKPdf PKPdf 02 10 54.8 +0.6
EVO Evora 166.70 32 *e*PKPdf PKPdf 02 10 55.1 +0.2
PTEO Sao Teotonio 167.09 37 *e*PKPdf PKPdf 02 10 56.2 +0.9
ESDC Sonseca Array 167.23 18 PKP PKPdf 02 10 55.9 +0.5
comp=Z,2.5nm,1.0s,baz=324,slow=2.8,SNR=8.7
ESDC PKPab PKPab 02 12 03.0 +0.6
comp=Z,6.3nm,1.1s,baz=334,slow=4.8,SNR=13
ESDC Sonseca Array 167.23 18 PKPdf 02 10 56.6 +1.2
ESDC PKPab 02 12 03.0 +0.6
KEST Kesra 169.22 321 PKPab PKPab 02 12 12.3 +0.8
comp=Z,13nm,0.9s,baz=264,slow=0.9,SNR=6.0
MDT Midelt 172.84 42 PKP PKPdf 02 11 00.3 +1.5
comp=Z,3.9nm,0.8s,baz=170,slow=5.3,SNR=6.8
MDT PKPab PKPab 02 12 28.9 +1.3
comp=Z,2.3nm,0.9s,baz=299,slow=6.9,SNR=4.4

IDC **14** *01:54:03.3± 7.7, 30.4′41N× 79.6′2E, h0km, mb3.8/3, mb1 3.6/4, mb1mx3.3/54, mbtmp3.5/4, ML2.6/1, Error ellipse: s-maj=190.7km s-min=42.1km az=125.0*
NDI **14** *01:54:05.8± 1.6, 29.8′88N× 80.2′7E, h19km± 11km, ML3.4*
ISC 14 01:54:01.6±1.0, 29.°95N±0.°07×80.°21E±0.°08, h16km, n12, σ2.°90/16, mb3.5/3, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**1.90**	**282**	*e*P	**Pg**		**01 54 38.8**	**+0.6**
DDI				*e*S	**Sg**		**01 55 03.1**	**+0.2**
DDI	comp=N,1μm,0.3s			IAML			01 55 05.3	
DDI	comp=E,832nm,0.1s			IAML			01 55 07.4	
SMLA	**Simla**	**2.88**	**295**	*e*P	**Pb**		**01 54 51.4**	**-1.1**
SMLA	comp=N,37nm,0.2s			IAML			01 55 09.3	
SMLA	comp=E,49nm,0.3s			IAML			01 55 09.3	
SMLA				*e*S	**Sb**		**01 55 25.3**	**-2.2**
JBP	**Jabalpur**	**6.76**	**182**	*e*P	**Pn**		**01 55 44.1**	**+4.0**
JBP				*e*S	**Sn**		**01 56 53.8**	**-2.9**
CHCP	**Chirah Chowk**	**6.97**	**304**	P	**Pn**		**01 55 46.1**	**+3.0**
BHPL	**Bhopal**	**7.13**	**201**	*e*P	**Pn**		**01 55 47.4**	**+2.1**
BHPL				*e*S	**Sn**		**01 57 01.9**	**-4.1**
BHPL	comp=N,57nm,0.3s			IAML			01 57 06.3	
BHPL	comp=E,69nm,0.4s			IAML			01 57 06.4	
THW	**Thamme Wali**	**7.78**	**294**	P	**Pn**		**01 55 55.8**	**+1.7**
CEP	**Cherat**	**8.04**	**301**	P	**Pn**		**01 56 01.1**	**+3.2**
NGP	**Nagpur**	**8.82**	**187**	*e*S	**Sn**		**01 57 44.2**	**-3.5**
MKAR	**Makanchi Array**	**16.90**	**5**	Pn	**Pn**		**01 57 52.9**	**-4.4**
	comp=E,0.0nm,0.3s,baz=181,slow=12,SNR=1.5							
ZALV	**Zalesovo Beam**	**24.21**	**7**	P	**P**		**01 59 18.0**	**+0.6**
	comp=E,0.5nm,0.4s,baz=190,slow=7.3,SNR=2.5							
FINES	**FINESS Array B**	**47.16**	**328**	P	**P**		**02 02 31.8**	**-1.2**
	comp=E,4.4nm,1.1s,baz=113,slow=11,SNR=3.5							
TORD	**Torodi Ar. Bea**	**73.70**	**276**	P	**P**		**02 05 36.2**	**+1.1**
	comp=E,0.2nm,0.4s,baz=52,slow

region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.74**	**226**	*eP*	**Pn**	**02 02 59.2**	**-1.2**
CNP				*eS*	**Sn**	**02 03 09.9**	**-0.7**
PVCP	**Virac**	**1.17**	**299**	*eP*	**Pn**	**02 03 05.6**	**-0.7**
PVCP				*eS*	**Sb**	**02 03 22.9**	**0.0**
OCLP	**Ormoc**	**2.06**	**197**	*eP*	**Pn**	**02 03 20.1**	**+1.7**
OCLP				*eS*	**Sb**	**02 03 47.6**	**-0.6**
RCP	**Roxas**	**2.82**	**239**	*eP*	**Pn**	**02 03 30.5**	**+1.5**
RCP				*eS*	**Sb**	**02 04 06.6**	**-3.5**
MSLP	**Maasin**	**2.90**	**187**	*eP*	**Pn**	**02 03 31.4**	**+1.3**
MSLP				*eS*	**Sn**	**02 04 04.2**	**+0.4**
LLP	**Lapu-Lapu**	**2.96**	**204**	*eP*	**Pn**	**02 03 31.8**	**+0.9**
LLP				*eS*	**Sn**	**02 04 05.9**	**+0.5**
LQP	**Lukban**	**3.73**	**287**	*eP*	**Pn**	**02 03 43.7**	**+2.0**
TGY	**Tagaytay City**	**4.29**	**285**	Pn	**Pn**	**02 03 53.7**	**+4.4**
	40nm,0.3s,baz=197,slow=11,SNR=1.4						
PAGZ	**Pagadian**	**5.46**	**199**	*eP*	**Pn**	**02 04 07.6**	**+2.3**
DAV	**Davao City (W)**	**5.94**	**176**	LR	LR	02 07 04.1	
	comp=Z,481nm,18.6s,baz=348,slow=45						
JNU	**Nakatsue**	**20.66**	**14**	LR	LR	02 15 42.9	
	comp=Z,47nm,19.5s,baz=174,slow=38						
SOEI	**Soe**	**22.66**	**182**	P	**P**	**02 07 43.9**	**-1.0**
SOEI				IAmb	IAmb	02 07 48.6	
	comp=Z,13nm,0.6s						
JHJ	**Hachijo jima 2**	**24.02**	**31**	LR	LR	02 16 11.3	
	comp=Z,59nm,21.2s,baz=241,slow=34						
JHJ2	**Mitsune**	**24.03**	**31**	P	**P**	**02 07 54.6**	**-3.6**
KNRA	**Kununurra**	**28.74**	**173**	P	**P**	**02 08 40.2**	**-0.6**
KNRA				IAmb	IAmb	02 08 55.6	
	comp=Z,24nm,1.1s						
FITZ	**Fitzroy Crossi**	**30.93**	**179**	P	**P**	**02 08 58.9**	**-1.3**
	comp=Z,3.6nm,1.0s,baz=356,slow=15,SNR=1.6						
FITZ	**Fitzroy Crossi**	**30.93**	**179**	P	**P**	**02 08 59.3**	**-0.9**
USA0B	**Ussuriysk Arra**	**31.60**	**9**	P	**P**	**02 09 04.7**	**-1.2**
USA0B				IAmb	IAmb	02 09 23.1	
	comp=Z,4.5nm,1.1s						
WB0	**Warramunga Arr**	**33.82**	**164**	P	**P**	**02 09 23.2**	**-2.4**
WB0				IAmb	IAmb	02 09 33.3	
	comp=Z,3.5nm,0.9s						
WRA	**Warramunga Arr**	**33.98**	**165**	P	**P**	**02 09 25.6**	**-1.3**
	comp=Z,0.9nm,0.6s,baz=343,slow=9.4,SNR=3.9						
WB2	**Warramunga Arr**	**33.98**	**164**	P	**P**	**02 09 25.2**	**-1.8**
WB2				IAmb	IAmb	02 09 27.5	
	comp=Z,3.7nm,0.9s						
PSA00	**Pilbara Seismi**	**34.79**	**189**	P	**P**	**02 09 33.7**	**-0.2**
ASAR	**Alice Springs**	**37.45**	**167**	P	**P**	**02 09 57.0**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=351,slow=8.0,SNR=15						
ASAR				S	**S**	**02 15 44.8**	**+1.6**
	comp=Z,0.8nm,0.8s,baz=346,slow=19,SNR=5.6						
ASAR	**Alice Springs**	**37.45**	**167**	P	**P**	**02 09 57.0**	**+0.2**
ASAR					**pwP**	**02 10 11.7**	**+2.1**
HNR	**Honiara**	**41.09**	**121**	LR	LR	02 25 11.7	
	comp=Z,56nm,19.2s,baz=0.5,slow=33						
FORT	**Forrest**	**43.64**	**176**	P	**P**	**02 10 47.5**	**-0.3**
BBOO	**Buckleboo**	**46.75**	**167**	P	**P**	**02 11 11.7**	**-0.7**
BBOO				IAmb	IAmb	02 11 14.1	
	comp=Z,5.1nm,0.8s						
STKA	**Stephens Creek**	**47.33**	**161**	P	**P**	**02 11 17.8**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=322,slow=12,SNR=3.6						
STKA	**Stephens Creek**	**47.33**	**161**	P	**P**	**02 11 15.9**	**-1.1**
MK31	**Makanchi Array**	**49.22**	**322**	P	**P**	**02 11 31.3**	**-0.1**
MKAR	**Makanchi Array**	**49.22**	**322**	P	**P**	**02 11 33.6**	**+2.1**
	comp=Z,2.0nm,0.9s,baz=116,slow=9.8,SNR=3.2						
ZALV	**Zalesovo Beam**	**51.72**	**331**	P	**P**	**02 11 51.7**	**+1.6**
	comp=Z,1.4nm,0.8s,baz=119,slow=5.4,SNR=2.2						
KURK	**Kurchatov**	**53.22**	**325**	P	**P**	**02 12 01.3**	**0.0**
KURK				IAmb	IAmb	02 12 17.6	
	comp=Z,6.9nm,0.9s						
KURBB	**Kurchatov Arra**	**53.23**	**325**	P	**P**	**02 12 03.3**	**+1.9**
	comp=Z,2.6nm,0.6s,baz=120,slow=8.1,SNR=11						

*IDC **14** 02:08:23.9±1.3,54.°52N×35.°13W,h0km,mb3.5/7, mb1 3.7/7,mb1mx3.4/58,mbtmp3.5/7,MS3.3/6,Ms1 3.3/6, ms1mx2.9/48,Error ellipse: s-maj=43.4km s-min=23.6km az=24.0*

ISC 14 02:08:25.0±1.1,**54.°5N**±0.°3×**35.°1W**±0.°2,**h10**km,**n13,** σ1§**25**/8,**mb3.8**/7,**MS3.4**/5,**Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**12.37**	**29**	LR	LR	02 15 01.3	
	comp=Z,72nm,20.8s,baz=256,slow=32						
NOA	**NORSAR Array B**	**25.09**	**56**	LR	LR	02 22 29.1	
	comp=Z,29nm,20.0s,baz=70,slow=34						
ESDC	**Sonseca Array**	**25.63**	**113**	P	**P**	**02 13 56.2**	**+1.7**
	1.0nm,0.9s,baz=327,slow=7.1,SNR=2.9						
HFS	**Hagfors**	**26.43**	**58**	LR	LR	02 22 48.4	
	comp=Z,41nm,20.8s,baz=327,slow=33						
DAVOX	**Davos/Dischmat**	**29.14**	**87**	LR	LR	02 25 18.2	
	comp=Z,110nm,19.4s,baz=262,slow=35						
GERES	**GERESS Array B**	**30.29**	**80**	LR	LR	02 25 37.0	
	comp=Z,76nm,19.3s,baz=302,slow=34						
YKA	**Yellowknife Ar**	**39.73**	**314**	P	**P**	**02 15 57.9**	**+0.8**
	0.3nm,0.8s,baz=69,slow=8.7,SNR=3.4						
BRTR	**Keskin Array B**	**47.16**	**79**	P	**P**	**02 16 55.9**	**-1.6**
	0.7nm,0.8s,baz=347,slow=5.9,SNR=1.9						
PDAR	**Pinedale Array**	**48.32**	**288**	P	**P**	**02 17 05.9**	**-0.7**
	0.2nm,0.3s,baz=23,slow=4.9,SNR=1.4						
PDAR				LR	LR	02 37 07.1	
	comp=Z,70nm,18.4s,baz=286,slow=36						
TORD	**Torodi Ar. Bea**	**50.35**	**131**	P	**P**	**02 17 21.8**	**-0.2**
	1.3nm,1.0s,baz=333,slow=9.5,SNR=2.8						
KURBB	**Kurchatov Arra**	**61.49**	**42**	P	**P**	**02 18 41.5**	**+0.1**
	0.5nm,0.6s,baz=320,slow=8.2,SNR=5.4						
MKAR	**Makanchi Array**	**66.05**	**42**	P	**P**	**02 19 12.5**	**+0.9**
	0.5nm,0.7s,baz=333,slow=5.7,SNR=6.3						
ASAR	**Alice Springs**	**148.11**	**19**	PKPbc	**PKiKP**	**02 28 11.9**	**-0.6**
	1.0nm,0.7s,baz=344,slow=2.3,SNR=10						

IDC 14 02:34:57.0±51.0,**19.°12S**×**173.°09W,h0**km,**mb4.1**/3, **mb1 4.3**/3,**mb1mx3.7**/32,**mbtmp4.1**/3,**Error ellipse: s-maj=971.0km s-min=197.2km az=83.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.54**	**243**	P	P	02 42 55.1	+0.4
	0.6nm,0.4s,baz=94,slow=13,SNR=3.1						
ASAR	**Alice Springs**	**49.34**	**255**	P	P	02 43 48.5	0.0
	5.2nm,0.8s,baz=98,slow=7.5,SNR=55						
WRA	**Warramunga Arr**	**49.38**	**260**	P	P	02 43 48.0	-0.9
	1.2nm,0.6s,baz=98,slow=8.0,SNR=2.3						

*IDC **14** 02:43:37.0±1.5,3.°91N×71.°29W,h0km,mb3.4/3,mb1 3.8/6, mb1mx3.5/35,mbtmp3.6/6,ML2.9/3,Error ellipse: s-maj=27.2km s-min=19.0km az=16.0*

*RSNC **14** 02:43:42.6±0.9,3.°86N×71.°59W,h4km±4km,ML3.4,Mw3.6*

ISC 14 02:43:38.5±1.7,**3.°94N**±0.°03×**71.°43W**±0.°05,**h7**km±11km, **n38,**σ2§**02**/69,**2C,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTGC	**Puerto Gaitan,**	**0.75**	**290**	*i*Pg	**Pg**	**02 43 52.9**	**-0.2**
PTGC				*e*Sg	**Sg**	**02 44 02.3**	**-0.6**
PTGC				*i*		02 44 18.3	
	comp=Z,1μm,0.5s						
GUVC	**San Jose del G**	**1.83**	**221**	*e*P	**Pn**	**02 44 11.0**	**+0.4**
GUVC				*e*S	**Sn**	**02 44 33.2**	**-0.9**
GUVC				*i*		02 44 37.9	
	comp=Z,644nm,0.2s						
VILC	**Villavicencio,**	**2.27**	**274**	*e*P	**Pn**	**02 44 17.8**	**+1.2**
VILC				*e*S	**Sn**	**02 44 44.8**	**-0.2**
CHIC	**Chingaza**	**2.40**	**287**	*e*P	**Pn**	**02 44 19.9**	**+1.2**
CHIC				*e*S	**Sn**	**02 44 49.5**	**+0.8**
CHIC				*i*		02 44 52.2	
	comp=Z,284nm,0.4s						
TAMC	**Tame, Arauca**	**2.51**	**352**	*e*P	**Pn**	**02 44 23.5**	**+3.7**
TAMC				*e*S	**Sb**	**02 44 56.2**	**+1.1**
TAMC				*i*		02 45 07.1	
	comp=Z,166nm,0.7s						
RUSC	**La Rusia**	**2.55**	**320**	*e*P	**Pn**	**02 44 23.0**	**+2.2**
RUSC				*e*S	**Sb**	**02 44 55.7**	**-1.1**
RUSC				*i*		02 45 11.8	
	comp=Z,189nm,0.5s						
MACC	**Macarena, Meta**	**3.00**	**234**	*e*P	**Pn**	**02 44 28.1**	**+1.4**
MACC				*e*S	**Sn**	**02 45 06.1**	**+3.0**
MACC				*i*		02 45 18.3	
	comp=Z,324nm,0.6s						
ROSC	**El Rosal**	**3.02**	**287**	Pn	**Pn**	**02 44 29.2**	**+2.0**
	comp=Z,8.7nm,0.3s,baz=129,slow=14,SNR=13						
ROSC				Pg	**Pg**	**02 44 37.5**	**+1.0**
	comp=Z,39nm,0.3s,baz=124,slow=15,SNR=38						
ROSC				Lg	Lg	02 45 17.9	
	comp=Z,26nm,0.3s,baz=178,slow=24,SNR=3.5						
ROSC	**El Rosal**	**3.02**	**287**	*e*P	**Pn**	**02 44 29.6**	**+2.3**
ROSC				*e*S	**Sn**	**02 45 04.5**	**+0.5**
ROSC				*i*		02 45 28.6	
	comp=Z,68nm,0.4s						
SPBC	**San Pablo de B**	**3.14**	**303**	*e*P	**Pn**	**02 44 29.8**	**+1.2**
SPBC				*e*S	**Sn**	**02 45 08.1**	**+1.6**
SPBC				*i*		02 45 20.6	
	comp=Z,91nm,0.5s						
PRAC	**Prado**	**3.46**	**266**	*e*P	**Pn**	**02 44 34.8**	**+1.9**
PRAC				*e*S	**Sn**	**02 45 13.0**	**-1.3**
PRAC				*i*		02 45 33.6	
	comp=Z,87nm,0.5s						
PAMC	**Pamplona, Colo**	**3.61**	**339**	*e*P	**Pn**	**02 44 38.2**	**+2.8**
PAMC				*e*S	**Sn**	**02 45 22.6**	**+4.1**
PAMC				*i*		02 45 46.7	
	comp=Z,78nm,0.8s						
NORC	**Norcasia**	**3.79**	**295**	*e*P	**Pn**	**02 44 38.8**	**+1.2**
NORC				*e*S	**Sn**	**02 45 22.2**	**-0.4**
NORC				*i*		02 45 36.9	
	comp=Z,65nm,1.2s						
ORTC	**Ortega, Tolima**	**3.81**	**270**	*e*P	**Pn**	**02 44 38.9**	**+1.0**
ORTC				*e*S	**Sn**	**02 45 22.9**	**0.0**
ORTC				*i*		02 45 44.2	
	comp=Z,141nm,0.6s						
BRRC	**Barranca, Sant**	**3.88**	**324**	*e*P	**Pn**	**02 44 41.0**	**+2.2**
BRRC				*e*S	**Sn**	**02 45 26.6**	**+1.9**
BRRC				*i*		02 45 52.5	
	comp=Z,67nm,0.5s						
TOLC	**Tolima**	**3.94**	**280**	*e*P	**Pn**	**02 44 41.1**	**+1.4**
TOLC				*e*S	**Sb**	**02 45 39.3**	**+2.7**
TOLC				*i*		02 45 49.0	
	comp=Z,48nm,0.9s						
PTBC	**PUERTO BERRIO,**	**3.97**	**311**	*e*P	**Pn**	**02 44 40.4**	**+0.4**
PTBC				*e*S	**Sn**	**02 45 21.5**	**-5.4**
PTBC				*i*		02 45 44.1	
	comp=Z,34nm,0.5s						
GUY2C	**Guyana, Caldas**	**4.13**	**288**	*i*P	**Pn**	**02 44 44.5**	**+1.9**
GUY2C				*e*S	Sn	02 45 22.7	-8.7
GUY2C				*i*		02 45 36.1	
	comp=Z,39nm,0.5s						
BETC	**Betania**	**4.20**	**253**	*e*P	**Pn**	**02 44 44.1**	**+1.0**
BETC				*e*S	**Sn**	**02 45 33.9**	**+1.3**
GARC	**Garzon, Huila**	**4.42**	**247**	*e*P	**Pn**	**02 44 47.0**	**+0.6**
GARC				*e*S	**Sn**	**02 45 36.6**	**-1.7**
HELC	**Santa Helena**	**4.66**	**299**	*e*P	**Pn**	**02 44 51.2**	**+1.5**
HELC				*e*S	**Sn**	**02 45 46.7**	**+2.3**
OCAC	**Ocana**	**4.67**	**336**	*e*P	**Pn**	**02 44 51.9**	**+2.2**
OCAC				*e*S	**Sn**	**02 45 45.7**	**+1.4**
OCAC				*i*		02 46 10.4	
	comp=Z,46nm,0.6s						
YOTC	**Yotoco, Valle**	**4.91**	**271**	*e*P	**Pn**	**02 44 53.2**	**+0.3**
YOTC				*e*S	**Sb**	**02 46 03.6**	**-0.7**
YOTC				*i*		02 46 11.5	
	comp=Z,23nm,0.8s						
SDV	**Santo Domingo**	**4.98**	**9**	Pn	**Pn**	**02 44 55.0**	**+1.0**
	comp=Z,2.7nm,0.3s,baz=156,slow=4.3,SNR=8.8						
SDV				Sn	**Sn**	**02 45 53.7**	**+1.8**
	comp=Z,9.5nm,0.3s,baz=256,slow=23,SNR=7.6						
SDV				Lg	Lg	02 46 23.5	
	comp=Z,8.9nm,0.3s,baz=241,slow=23,SNR=7.5						
SDV	**Santo Domingo**	**4.98**	**9**	*e*P	**Pn**	**02 44 55.5**	**+1.6**
SDV				*e*S	**Sn**	**02 45 52.2**	**+0.3**
SDV				*i*		02 46 18.2	
	comp=Z,29nm,1.0s						
PTLC	**Puerto Leguiza**	**5.04**	**222**	*e*P	**Pb**	**02 45 04.4**	**-2.8**
PTLC				*e*S	**Sb**	**02 46 12.8**	**+4.9**
PCON	**Cinco Dias**	**5.22**	**252**	*e*S	**Sb**	**02 46 14.0**	**+0.4**
POPC	**Popayan, Colom**	**5.42**	**255**	*e*P	**Pn**	**02 45 02.9**	**+2.7**
POPC				*e*S	**Sn**	**02 46 01.9**	**-1.1**
POPC				*i*		02 46 26.1	
	comp=Z,13nm,0.5s						
SOTA	**Rioblanco**	**5.48**	**251**	*e*P	**Pn**	**02 45 03.3**	**+2.2**
SOTA				*e*S	**Sn**	**02 46 03.1**	**-1.6**
SOTA				*i*		02 46 27.8	
	comp=Z,29nm,0.6s						
SMLC	**San Martn de**	**5.50**	**332**	*e*P	**Pn**	**02 45 03.4**	**+2.4**
SMLC				*e*S	**Sn**	**02 46 00.4**	**-4.1**
SMLC				*i*		02 46 16.7	
	comp=Z,13nm,0.6s						
UREC	**San Jos de Ur**	**5.57**	**313**	*e*P	**Pn**	**02 45 00.8**	**-1.2**
UREC				*e*S	**Sn**	**02 46 04.9**	**-1.5**
DBBC	**Dabeiba**	**5.66**	**303**	*e*P	**Pn**	**02 45 05.8**	**+2.5**
DBBC				*e*S	**Sn**	**02 46 08.0**	**-0.6**
PUAC	**Puerto Asis, P**	**6.14**	**237**	*e*P	Pn	02 45 15.5	+5.6
PUAC				*e*S	**Sn**	**02 46 23.4**	**+2.9**
SJCC	**San Jacinto, C**	**6.99**	**328**	*e*P	**Pn**	**02 45 22.1**	**+0.5**
SJCC				*e*S	**Sn**	**02 46 39.4**	**-2.1**
SJCC				*i*		02 46 45.0	
	comp=Z,13nm,2.2s						
PCRV	**Puerto La Cruz**	**9.15**	**47**	Pn	**Pn**	**02 45 51.8**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=196,slow=19,SNR=1.4						
LPAZ	**La Paz**	**20.36**	**171**	P	**P**	**02 48 17.0**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=341,slow=13,SNR=3.2						
TXAR	**Lajitas Array**	**39.64**	**313**	P	**P**	**02 51 11.1**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=128,slow=12,SNR=4.5						
TORD	**Torodi Ar. Bea**	**72.69**	**78**	P	**P**	**02 55 05.2**	**-2.7**
	comp=Z,0.3nm,0.6s,baz=276,slow=3.9,SNR=1.8						

*IDC **14** 02:56:37.8±3.7,6.°55N×94.°13E,h210km±38km,mb3.3/6, mb1 3.4/8,mb1mx3.1/46,mbtmp3.9/8,Error ellipse: s-maj=50.5km s-min=22.0km az=65.0*

ISC 14 02:56:36.9±1.0,**6.°6N**±0.°1×**94.°0E**±0.°2,**h200**km,**n11,** σ1§**20**/8,**mb3.4**/6,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.15**	**127**	P	**Pn**	**02 58 07.2**	**+0.9**
	4.2nm,0.3s,baz=359,slow=5.8,SNR=15						
CMAR	**Chiang Mai Arr**	**12.76**	**22**	P	**Pn**	**02 59 31.1**	**-0.3**
	baz=212,slow=12,SNR=8.6						
H08S3	**Diego Garcia H**	**25.70**	**237**	T	T	03 29 06.9	
	baz=57,slow=74,SNR=14						
H08S2	**Diego Garcia H**	**25.70**	**237**	T	T	03 29 05.6	
	baz=57,slow=74,SNR=8.2						
H08S1	**Diego Garcia H**	**25.72**	**237**	T	T	03 29 04.9	
	baz=57						
MKAR	**Makanchi Array**	**41.33**	**348**	P	**P**	**03 04 03.0**	**-0.1**
	0.4nm,0.4s,baz=162,slow=9.6,SNR=8.0						
WRA	**Warramunga Arr**	**47.61**	**125**	P	**P**	**03 04 52.1**	**-1.0**
	0.3nm,0.5s,baz=305,slow=8.5,SNR=2.0						
ZALV	**Zalesovo Beam**	**47.83**	**353**	P	**P**	**03 04 53.7**	**-0.6**
	0.8nm,0.3s,baz=169,slow=7.4,SNR=4.3						
BRTR	**Keskin Array B**	**63.20**	**311**	P	**P**	**03 06 45.0**	**+0.8**
	0.3nm,0.5s,baz=106,slow=7.7,SNR=2.8						
FINES	**FINESS Array B**	**73.81**	**332**	P	**P**	**03 07 50.7**	**+1.5**
	2.9nm,0.9s,baz=113,slow=15,SNR=3.9						
TORD	**Torodi Ar. Bea**	**90.78**	**283**	P	**P**	**03 09 16.7**	**-1.4**
	0.2nm,0.6s,baz=60,slow=4.3,SNR=1.4						

*IDC **14** 02:59:47.8±1.3,51.°84N×176.°14W,h0km,mb3.5/8, mb1 3.7/10,mb1mx3.6/43,mbtmp3.5/10,ML3.6/2,MS3.3/1, Ms1 3.3/1,ms1mx2.4/44,Error ellipse: s-maj=46.6km s-min=18.3km az=172.0*

*AEIC **14** 02:59:55.6±1.6,51.°6N±0.°1×175.°88W±0.°06,h46km±5km, ML3.9,mb3.7/11(NEIC),Error ellipse: s-maj=14.7km s-min=4.6km az=170.0*

ISC 14 02:59:54.5±0.8,**51.°6N**±0.°1×**175.°89W**±0.°05,**h47**km,**n48,** σ1§**31**/44,**mb3.5**/9,**Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETKA	**Kagalaska Isla**	**0.40**	**306**		**Pn**	**03 00 05.8**	**+1.5**
GSMY	**Great Sitkin M**	**0.43**	**346**		**Pn**	**03 00 06.1**	**+1.4**
GSTD	**Great Sitkin T**	**0.46**	**339**		**Pn**	**03 00 06.4**	**+1.4**
GSTR	**Great Sitkin T**	**0.48**	**347**		**Pn**	**03 00 06.9**	**+1.6**
ADK	**Adak**	**0.56**	**297**		**Pn**	**03 00 06.7**	**+0.5**
KIKV	**Kanaga Island**	**0.84**	**288**		**Pn**	**03 00 11.5**	**+1.5**
KIKV					**Sn**	**03 00 22.1**	**+0.9**
KIMD	**Kanaga Island**	**0.85**	**279**		**Pn**	**03 00 11.4**	**+1.4**
KICM	**Kanaga Island**	**0.86**	**290**		**Pn**	**03 00 11.6**	**+1.3**
ATKA	**Atka Island**	**1.19**	**61**		**Pn**	**03 00 15.9**	**+1.2**
ATKA					**Sn**	**03 00 31.5**	**+1.7**
TAPA	**Tanaga Point A**	**1.21**	**279**		**Pn**	**03 00 16.9**	**+1.9**
TAFP	**Tanaga Falls P**	**1.33**	**282**		**Pn**	**03 00 18.3**	**+1.7**
TAFP					**Sn**	**03 00 34.9**	**+1.7**
TASE	**Tanaga Southea**	**1.35**	**280**		**Pn**	**03 00 19.0**	**+2.1**
KDAK	**Kodiak Island**	**14.76**	**56**	Pn	**Pn**	**03 03 18.9**	**-1.1**
	0.9nm,0.3s,baz=225,slow=1.4,SNR=21						
KDAK	**Kodiak Island**	**14.76**	**56**		**Pn**	**03 03 20.4**	**+0.4**
KTH	**Kantishna Hill**	**17.78**	**38**	P	**P**	**03 03 59.0**	**+0.4**
KTH				IAmb	IAmb	03 04 01.0	
	comp=Z,3.4nm,0.6s						
RND	**Reindeer**	**18.52**	**40**	P	**Pn**	**03 04 07.5**	**+0.2**
RND				IAmb	IAmb	03 04 09.0	
	comp=Z,4.0nm,0.5s						
MLY	**Manley**	**18.64**	**34**	P	**Pn**	**03 04 08.9**	**+0.2**
MLY				IAmb	IAmb	03 04 10.5	
	comp=Z,2.8nm,0.6s						
DHY	**Denali Highway**	**18.98**	**42**	P	**P**	**03 04 12.2**	**+0.4**
HDA	**Harding Lake**	**19.73**	**38**	P	**P**	**03 04 18.2**	**-1.6**
HDA				IAmb	IAmb	03 04 35.3	
	comp=Z,2.8nm,0.7s						
IL31		**19.92**	**38**	P	**P**	**03 04 22.8**	**+1.0**
ILAR	**Eielson Array**	**19.92**	**38**	P	**P**	**03 04 19.4**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=233,slow=10.0,SNR=4.2						
ILAR	**Eielson Array**	**19.92**	**38**	P	**Pn**	**03 04 24.4**	**+0.6**
RIDG	**Independent Ri**	**20.29**	**41**	P	**P**	**03 04 26.3**	**+0.3**
RIDG				IAmb	IAmb	03 04 41.1	
	comp=Z,3.2nm,0.9s						
MCARA	**McCarthy VSAT**	**20.37**	**49**	P	**P**	**03 04 27.8**	**+1.0**
SCRK	**Sand Creek**	**20.74**	**41**	P	**P**	**03 04 31.6**	**+0.7**
SCRK				IAmb	IAmb	03 04 32.4	
	comp=Z,4.5nm,1.0s						
EGAK	**Eagle**	**22.17**	**40**	P	**P**	**03 04 46.2**	**+0.1**
EGAK				IAmb	IAmb	03 04 48.0	
	comp=Z,1.6nm,0.6s						
INK	**Inuvik**	**26.21**	**35**	P	**P**	**03 05 23.4**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=276,slow=5.1,SNR=2.7						
INK	**Inuvik**	**26.21**	**35**	P	**P**	**03 05 23.5**	**-0.9**
YKA	**Yellowknife Ar**	**33.73**	**47**	P	**P**	**03 06 29.6**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=280,slow=8.6,SNR=4.5						
YKA				PcP	**PcP**	**03 09 10.1**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=290,slow=3.0,SNR=17						
YKA	**Yellowknife Ar**	**33.73**	**47**	P	**P**	**03 06 31.2**	**+0.3**
YKA					**PcP**	**03 09 10.1**	**+0.8**
H11N2	**WAKE ISLAND Hy**	**34.59**	**209**	T	T	03 43 18.5	
	baz=18,slow=76,SNR=125						
H11N3	**WAKE ISLAND Hy**	**34.60**	**209**	T	T	03 43 20.1	
	baz=18,slow=76,SNR=130						
H11N1	**WAKE ISLAND Hy**	**34.61**	**209**	T	T	03 43 20.2	
	baz=18,slow=76,SNR=136						
H11S1	**WAKE ISLAND Hy**	**35.80**	**209**	T	T	03 44 48.8	
	baz=18,slow=76,SNR=103						
H11S2	**WAKE ISLAND Hy**	**35.81**	**209**	T	T	03 45 03.8	
	baz=18,slow=76,SNR=64						
H11S3	**WAKE ISLAND Hy**	**35.82**	**209**	T	T	03 44 58.5	
	baz=18,slow=76,SNR=32						
KSRS	**Korea Array**	**41.45**	**273**	P	**P**	**03 07 34.7**	**-1.6**
	comp=Z,1.3nm,0.6s,baz=47,slow=9.0,SNR=5.6						
KSRS	**Korea Array**	**41.45**	**273**	P	**P**	**03 07 37.3**	**+1.0**
NVAR	**Mina Array Bea**	**41.71**	**85**	P	**P**	**03 07 39.3**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=269,slow=5.1,SNR=1.6						
PDAR	**Pinedale Array**	**44.49**	**74**	P	**P**	**03 08 01.5**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=299,slow=3.1,SNR=5.1						
SONM	**Songino Array**	**48.15**	**298**	P	**P**	**03 08 27.7**	**-2.0**
	comp=Z,0.4nm,0.4s,baz=44,slow=4.6,SNR=2.3						
SFJD	**Kangerlussuaq**	**54.72**	**23**	LR	LR	03 35 59.8	
	comp=Z,28nm,19.6s,baz=306,slow=40						
TXAR	**Lajitas Array**	**56.81**	**83**	P	**P**	**03 09 34.8**	**+0.8**
	comp=Z,2.2nm,0.6s,baz=327,slow=6.5,SNR=2.8						
MKAR	**Makanchi Array**	**61.29**	**310**	P	**P**	**03 10 02.8**	**-1.8**
	comp=Z,0.2nm,0.5s,baz=58,slow=3.8,SNR=2.5						
TORD	**Torodi Ar. Bea**	**115.46**	**3**	PKP	**PKiKP**	**03 18 30.3**	**-0.9**
	comp=Z,0.7nm,0.9s,baz=24,slow=1.5,SNR=2.8						
H03N2	**Juan Fernandez**	**119.47**	**108**	T	T	05 29 58.6	
	baz=317,slow=77,SNR=12						
H03N1	**Juan Fernandez**	**119.48**	**108**	T	T	05 29 60.0	
	baz=317,slow=77,SNR=14						
H03N3	**Juan Fernandez**	**119.49**	**108**	T	T	05 29 58.9	
	baz=317,slow=77,SNR=14						

*JMA **14** 03:03:24.1±0.1,24.°77N×122.°45E,h1km±2km,M2.9*

*TAP **14** 03:03:24.1,24.°87N×122.°49E,h12km±1km,ML3.0,D*

ISC 14 03:03:23.7±1.1,**24.°86N**±0.°04×**122.°46E**±0.°02,**h9**km±12km, **

baz=236
TDCB Techi 1.33 243 *e*P **Pg 03 03 49.2 -0.1**
baz=243
CHGB Renai 1.42 236 *e*P **Pb 03 03 50.5 +0.1**
baz=236
HATJ Hateruma jima 1.46 123 P **Pb 03 03 51.1 0.0**
OWD Renai 1.48 233 *e*P **Pb 03 03 51.4 0.0**
baz=232
WHP Taichung City 1.50 248 *e*P **Pb 03 03 51.9 +0.1**
baz=247
JKRS Kuro-shima 1.54 113 P **Pb 03 03 52.6 +0.2**
JIJ Ishigaki jima 1.61 107 P **Pg 03 03 54.3 -0.3**

TAP ***14*** *03:06:16.6,23.83N×121.74E,h44km,ML2.8,C*
JMA ***14*** *03:06:16.2,23.77N×121.79E,h41km±2km,M2.3*
ISC 14 03:06:17.3±1.2,23.81N±0.03×121.77E±0.03,h41km±8km, n46,σ0.58/76,4D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.22**	**318**	*i* P	**Pn**	**03 06 24.7**	**-0.1**
	baz=322						
HWA				*e*S	**Sn**	**03 06 31.0**	**+0.9**
	baz=322						
ESL	**Shilin**	**0.31**	**270**	*i* P	**Pn**	**03 06 25.3**	**-0.4**
	baz=267						
ESL				*e*S	**Sn**	**03 06 31.7**	**+0.1**
	baz=267						
TWD	**Chiawan**	**0.31**	**330**	*i* P	**Pn**	**03 06 25.3**	**-0.4**
	baz=334						
TWD				S	**Sn**	**03 06 31.8**	**+0.2**
	baz=334						
EGFH	**Guangfu**	**0.34**	**246**	*e*P	**Pn**	**03 06 25.7**	**-0.3**
	baz=241						
EGFH				*e*S	**Sn**	**03 06 32.8**	**+0.5**
	baz=241						
NACB	**Ninganchiao**	**0.39**	**336**	P	**Pn**	**03 06 26.2**	**-0.5**
	baz=339						
NACB				S	**Sn**	**03 06 33.4**	**+0.1**
	baz=339						
HGSD	**Ruisui**	**0.45**	**225**	*e*P	**Pn**	**03 06 27.7**	**+0.3**
	baz=220						
HGSD				*e*S	**Sn**	**03 06 35.5**	**+1.1**
	baz=220						
ETLH	**Xiulin Townshi**	**0.47**	**326**	P	**Pn**	**03 06 27.3**	**-0.5**
	baz=328						
ETLH				S	**Sn**	**03 06 34.6**	**-0.5**
	baz=328						
EHY	**Hungye**	**0.51**	**233**	*e*P	**Pn**	**03 06 27.2**	**-1.0**
	baz=229						
OWD	**Renai**	**0.56**	**285**	⇓*i* P	**Pn**	**03 06 28.6**	**-0.4**
	baz=284						
OWD				S	**Sn**	**03 06 37.0**	**-0.3**
	baz=284						
WHF	**Hehuan Shan**	**0.57**	**306**	⇓*i* P	**Pn**	**03 06 28.7**	**-0.7**
	baz=306						
WHF				*e*S	**Sn**	**03 06 37.6**	**-0.2**
	baz=306						
VWDT	**VWDT**	**0.58**	**264**	P	**Pn**	**03 06 28.9**	**-0.2**
	baz=262						
VWDT				*e*S	**Sn**	**03 06 37.6**	**+0.2**
	baz=262						
CHGB	**Renai**	**0.60**	**295**	*e*P	**Pn**	**03 06 29.3**	**-0.3**
	baz=294						
CHGB				*e*S	**Sn**	**03 06 38.1**	**-0.1**
	baz=294						
YULB	**Yu-li**	**0.60**	**226**	⇓*i* P	**Pn**	**03 06 28.4**	**-1.0**
	baz=223						
ENA	**Nanau**	**0.61**	**358**	*e*P	**Pn**	**03 06 29.1**	**-0.4**
	baz=1.0						
TWF1	**Yuli**	**0.63**	**223**	⇓*i* P	**Pn**	**03 06 28.9**	**-0.9**
	baz=219						
TWT	**Tachien**	**0.70**	**309**	*e*S	**Sn**	**03 06 40.4**	**-0.2**
	baz=308						
NNSB	**Datong**	**0.71**	**330**	*i* P	**Pn**	**03 06 30.7**	**-0.3**
	baz=331						
NNSB				*i* S	**Sn**	**03 06 40.5**	**-0.3**
	baz=331						
NNSH	**Datong**	**0.71**	**330**	P	**Pn**	**03 06 30.6**	**-0.4**
	baz=331						
NNSH				*e*S	**Sn**	**03 06 40.3**	**-0.5**
	baz=331						
TDCB	**Techi**	**0.71**	**308**	*e*P	**Pn**	**03 06 31.0**	**0.0**
	baz=308						
TDCB				S	**Sn**	**03 06 40.5**	**-0.4**
	baz=308						
NNS	**Nan Shan**	**0.72**	**330**	*e*S	**Sn**	**03 06 41.0**	**-0.1**
	baz=331						
SSLB	**Suanglung**	**0.75**	**268**	*e*P	**Pn**	**03 06 31.3**	**-0.1**
	baz=267						
FULB	**Fuli**	**0.75**	**216**	*e*P	**Pn**	**03 06 31.3**	**-0.2**
	baz=213						
FULB				*e*S	**Sn**	**03 06 42.7**	**+1.1**
	baz=213						
TWC	**Suao**	**0.80**	**5**	P	**Pn**	**03 06 32.0**	**-0.1**
	baz=8.0						
TWC				S	**Sn**	**03 06 43.3**	**+0.5**
	baz=8.0						
SMLT	**Sun Moon Lake**	**0.80**	**275**	*e*P	**Pn**	**03 06 32.1**	**-0.1**
	baz=274						
CHKT	**Chengkung**	**0.80**	**208**	*e*P	**Pn**	**03 06 32.0**	**-0.1**
	baz=204						
DPDB	**Guoxing**	**0.80**	**286**	*e*P	**Pn**	**03 06 32.2**	**0.0**
	baz=285						
EOS1	**EOS1**	**0.81**	**24**	P	**Pn**	**03 06 32.6**	**+0.4**
	baz=26						
EOS1				*e*S	**Sn**	**03 06 44.2**	**+1.3**
	baz=26						
NDT	**Datong Townshi**	**0.82**	**344**	P	**Pn**	**03 06 32.4**	**0.0**
	baz=345						
NDT				S	**Sn**	**03 06 43.3**	**-0.1**
	baz=345						
TYC	**Yuchr**	**0.84**	**276**	*e*P	**Pn**	**03 06 32.5**	**-0.1**
	baz=275						
ENTT	**Nioudou**	**0.84**	**347**	*e*P	**Pn**	**03 06 32.7**	**-0.1**
	baz=349						
ENTT				*e*S	**Sn**	**03 06 44.2**	**+0.2**
	baz=349						
WHP	**Taichung City**	**0.88**	**302**	*e*P	**Pn**	**03 06 34.3**	**+0.9**
	baz=301						
WHP				*e*S	**Sn**	**03 06 45.3**	**+0.3**
	baz=301						
YHNB	**Yeheng**	**0.93**	**337**	*e*P	**Pn**	**03 06 33.9**	**0.0**
	baz=338						
YHNB				*e*S	**Sn**	**03 06 45.9**	**-0.2**
	baz=338						
ELDTW	**Lidau**	**0.93**	**228**	*e*P	**Pn**	**03 06 33.0**	**-0.9**
	baz=225						
NSK	**Sanguang**	**0.94**	**337**	*e*P	**Pn**	**03 06 34.0**	**-0.1**
	baz=338						
NSK				*e*S	**Sn**	**03 06 46.0**	**-0.3**
	baz=338						
NWLT	**Wulai**	**0.99**	**346**	*e*P	**Pn**	**03 06 34.6**	**-0.1**
	baz=347						
NWLT				*e*S	**Sn**	**03 06 47.4**	**-0.2**
	baz=347						
CHN5	**Tsauling**	**1.02**	**258**	*e*P	**Pn**	**03 06 35.9**	**+0.7**
	baz=256						
NTC	**Toucheng**	**1.04**	**3**	*e*S	**Sn**	**03 06 49.3**	**+0.6**
	baz=4.0						
LIOB	**Emei**	**1.08**	**321**	*e*P	**Pn**	**03 06 36.8**	**+0.8**
	baz=321						
TIPB	**Shuangxi**	**1.16**	**3**	*e*P	**Pn**	**03 06 37.4**	**+0.4**
	baz=4.0						
TIPB				*e*S	**Sn**	**03 06 52.2**	**+0.6**
	baz=4.0						
JYNG	**Yonaguni jima**	**1.25**	**59**	P	**Pn**	**03 06 38.2**	**0.0**
JYNG				S	**Sn**	**03 06 53.8**	**-0.1**
YOJ	**Yonaguni jima**	**1.31**	**60**	P	**Pn**	**03 06 38.2**	**-0.8**
YOJ				*e*S	**Sn**	**03 06 55.2**	**-0.1**
IRIF	**Iriomote-Funau**	**1.87**	**73**	P	**Pn**	**03 06 47.3**	**+0.6**
IRIF				*e*S	**Sn**	**03 07 09.7**	**+0.6**
HATJ	**Hateruma jima**	**1.88**	**82**	P	**Pn**	**03 06 47.0**	**+0.1**
HATJ				*e*S	**Sn**	**03 07 09.4**	**0.0**
JKRS	**Kuro-shima**	**2.09**	**78**	P	**Pn**	**03 06 50.1**	**+0.3**
JKRS				S	**Sn**	**03 07 15.6**	**+1.0**
JIJ	**Ishigaki jima**	**2.24**	**75**	P	**Pn**	**03 06 51.6**	**-0.2**
JIJ				S	**Sn**	**03 07 17.3**	**-1.0**
JISG	**Ishigakijimahi**	**2.45**	**71**	*e*S	**Sn**	**03 07 21.1**	**-2.3**

IDC ***14*** *03:21:33.1±10.0,15.41S×177.85W,h378km±111km, mb3.2/8,mb1 3.6/8,mb1mx3.3/31,mbtmp3.9/8,Error ellipse: s-maj=89.9km s-min=27.1km az=153.0*
ISC 14 03:21:34.8±1.4,15.3S±0.5×178.0W±0.4,h400km,n11,σ1.9/27/11,mb3.4/8,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.29**	**238**	P	**P**	**03 28 35.5**	**+0.2**
	1.1nm,0.6s,baz=61,slow=10,SNR=1.7						
WRA	**Warramunga Arr**	**45.54**	**257**	P	**P**	**03 29 16.3**	**-0.8**
	1.0nm,0.5s,baz=90,slow=7.5,SNR=4.4						
ASAR	**Alice Springs**	**45.93**	**252**	P	**P**	**03 29 21.4**	**+1.4**
	6.2nm,0.6s,baz=84,slow=8.1,SNR=64						
NVAR	**Mina Array Bea**	**77.26**	**44**	P	**P**	**03 32 47.5**	**+0.9**
	0.9nm,0.7s,baz=232,slow=8.7,SNR=4.9						
ILAR	**Eielson Array**	**83.22**	**13**	P	**P**	**03 33 18.1**	**+0.9**
	1.0nm,0.7s,baz=223,slow=5.4,SNR=12						
TXAR	**Lajitas Array**	**84.26**	**58**	P	**P**	**03 33 23.3**	**0.0**
	0.7nm,0.8s,baz=256,slow=5.0,SNR=4.9						
PDAR	**Pinedale Array**	**85.17**	**43**	P	**P**	**03 33 27.1**	**-0.6**
	0.2nm,0.5s,baz=226,slow=2.4,SNR=1.9						
YKA	**Yellowknife Ar**	**91.77**	**25**	P	**P**	**03 33 58.2**	**+0.3**
	0.3nm,0.6s,baz=241,slow=4.1,SNR=5.9						
BRTR	**Keskin Array B**	**143.13**	**318**	PKP	**PKPdf**	**03 40 21.8**	**-0.7**
	1.3nm,0.7s,baz=96,slow=2.5,SNR=11						
GERES	**GERESS Array B**	**145.14**	**346**	PKPbc	**PKiKP**	**03 40 27.0**	**-2.7**
	0.4nm,0.5s,baz=11,slow=2.9,SNR=5.0						
DAVOX	**Davos/Dischmat**	**147.88**	**350**	PKPbc	**PKiKP**	**03 40 34.8**	**-0.7**
	2.8nm,0.8s,baz=243,slow=6.8,SNR=2.9						

IDC ***14*** *03:24:57.9±0.4,34.08N×37.40W,h0km,mb4.3/30, mb1 4.4/30,mb1mx4.3/42,mbtmp4.3/30,MS4.0/28, Ms1 4.0/28,ms1mx3.9/50,Error ellipse: s-maj=13.6km s-min=10.6km az=144.0*
NEIC ***14*** *03:24:59.6±1.6,33.97N±0.10×37.3W±0.1,h17km±3km, mb4.7/120,Error ellipse: s-maj=14.1km s-min=13.5km az=204.0*
GCMT ***14*** *03:25:00.6±0.2,34.27N±0.02×37.50W±0.02,h12km, MW5.0/120,Moment Tensor Solution. s41,c47; s120,c177; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-3.54±.08; Mθθ 1.86±.09; Mφφ 1.68±.07; Mrθ 0.49±.32; Mθφ 1.91±.06; Mrφ-0.12±.26; Best double couple: M=3.64700×10^16 NP1:φs39.00000°,δ43.00000°, λ-100.00000°. NP2:φs233.00000°,δ48.00000°, λ-81.00000°. Principal axes: T 3.6920, Plg2.0000°, Azm317.0000°; N -0.0910, Plg7.0000°, Azm47.0000°; P -3.6010, Plg83.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 14 03:24:59.6±0.4,34.03N±0.07×37.37W±0.06,h13km,n199, σ1.9/02/166,mb4.6/91,MS3.9/28,7C-9D,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRLN	**Deer Lake**	**21.30**	**322**	P	**P**	**03 29 45.9**	**0.0**
F64A	**Sherman**	**26.36**	**306**	P	**P**	**03 30 36.0**	**+0.7**
F64A				IAmb	IAmb	03 30 38.3	
	comp=Z,43nm,1.6s						
ESDC	**Sonseca Array**	**27.22**	**68**	P	**P**	**03 30 43.6**	**+0.5**
	comp=Z,3.1nm,1.1s,baz=266,slow=9.3,SNR=8.2						
ESDC				LR	LR	03 39 10.1	
	comp=Z,170nm,20.9s,baz=225,slow=31						
MDT	**Midelt**	**27.31**	**83**	P	**P**	**03 30 44.6**	**+0.5**
	comp=Z,2.3nm,0.9s,baz=298,slow=14,SNR=3.1						
MDT				LR	LR	03 39 04.6	
	comp=Z,436nm,21.1s,baz=294,slow=31						
SCHQ	**Schefferville**	**29.23**	**324**	LR	LR	03 41 24.3	
	comp=Z,752nm,20.6s,baz=105,slow=34						
MDP	**Montagnes des**	**32.09**	**210**	LR	LR	03 41 30.4	
	comp=Z,176nm,20.8s,baz=4.0,slow=31						
R58B	**Mineral**	**32.83**	**289**	P	**P**	**03 31 32.6**	**-0.2**
R58B				IAmb	IAmb	03 31 39.9	
	comp=Z,12nm,1.2s						
S57A	**Dark Hollow, R**	**33.70**	**289**	P	**P**	**03 31 40.6**	**+0.2**
S57A				IAmb	IAmb	03 31 47.1	
	comp=Z,13nm,1.1s						
M54A	**Oil Creek Stat**	**33.99**	**295**	P	**P**	**03 31 42.3**	**-0.7**
M54A				IAmb	IAmb	03 31 48.8	
	comp=Z,15nm,1.1s						
N53A	**Lisbon**	**34.90**	**294**	P	**P**	**03 31 51.4**	**+0.5**
FRB	**Frobisher Bay**	**35.42**	**337**	P	**P**	**03 31 56.2**	**+1.3**
	comp=Z,6.0nm,0.9s,baz=113,slow=9.2,SNR=5.4						
FRB	**Frobisher Bay**	**35.42**	**337**	P	**P**	**03 31 57.4**	**+2.4**
O52A	**Adamsville**	**35.71**	**293**	P	**P**	**03 31 58.2**	**+0.4**
ACSO	**Alum Creek Sta**	**36.57**	**293**	P	**P**	**03 32 04.2**	**-1.0**
ACSO				IAmb	IAmb	03 32 13.0	
	comp=Z,18nm,1.1s						
BFO	**Black Forest**	**36.68**	**53**	P	**P**	**03 32 04.8**	**-1.2**
BFO				IAmb	IAmb	03 32 07.9	
	comp=Z,20nm,1.2s						
V53A	**Saluda**	**37.08**	**286**	P	**P**	**03 32 10.6**	**+1.0**
V53A				IAmb	IAmb	03 32 16.8	
	comp=Z,15nm,1.3s						
DAVOX	**Davos/Dischmat**	**37.62**	**56**	LR	LR	03 44 47.6	
	comp=Z,137nm,20.9s,baz=264,slow=32						
DAVA	**Damuels**	**37.65**	**55**	*e*P	**P**	**03 32 15.0**	**+0.7**
	comp=Z,8.6nm,0.9s						
TKL	**Tuckaleechee C**	**37.85**	**286**	P	**P**	**03 32 18.0**	**+1.9**
	comp=Z,3.1nm,0.9s,baz=120,slow=14,SNR=3.9						
TKL	**Tuckaleechee C**	**37.85**	**286**	P	**P**	**03 32 16.4**	**+0.3**
TKL				IAmb	IAmb	03 32 20.6	
	comp=Z,16nm,1.4s						
KEST	**Kesra**	**38.08**	**74**	LR	LR	03 44 54.5	
	comp=Z,118nm,21.6s,baz=274,slow=31						
FETA	**Feichten**	**38.21**	**55**	*e*P	**P**	**03 32 20.1**	**+0.9**
	comp=Z,4.4nm,1.1s						
V51A	**Loudon**	**38.28**	**286**	P	**P**	**03 32 19.0**	**-0.7**
V51A				IAmb	IAmb	03 32 26.5	
	comp=Z,14nm,1.1s						
T50A	**Nancy**	**38.44**	**288**	P	**P**	**03 32 20.8**	**-0.2**
MOTA	**Moosalm**	**38.48**	**55**	*e*P	**P**	**03 32 22.3**	**+0.9**
	comp=Z,7.9nm,1.1s						
SQTA	**Sankt Quirin**	**38.55**	**55**	*e*P	**P**	**03 32 22.8**	**+0.9**
	comp=Z,14nm,1.1s						
GRA1	**Grafenberg Arr**	**38.71**	**51**	P	**P**	**03 32 21.2**	**-1.9**
GRA1				IAmb	IAmb	03 32 24.4	
	comp=Z,14nm,1.0s						
WATA	**Walderalm**	**38.80**	**55**	*e*P	**P**	**03 32 25.0**	**+0.9**
	comp=Z,6.6nm,0.9s						
WTTA	**Wattenberg**	**38.84**	**55**	*e*pP	**P**	**03 32 25.6**	**+1.1**
	comp=Z,9.8nm,0.8s						
TAM	**Tamanrasset**	**39.10**	**95**	P	**P**	**03 32 25.8**	**-1.1**
SDV	**Santo Domingo**	**39.50**	**238**	P	**P**	**03 32 30.2**	**0.0**
SDV				IAmb	IAmb	03 32 32.8	
	comp=Z,14nm,0.9s						
NKC	**Novy Kostel**	**39.55**	**50**	*e*P	**P**	**03 32 31.0**	**+0.9**
CLL	**Collm**	**39.99**	**49**	*i* P	**P**	**03 32 35.3**	**+1.5**
	comp=Z,12nm,1.3s						
CLL				*e*S	**S**	**03 38 40.0**	**+1.1**
KBA	**Koelnbreinsper**	**40.00**	**55**	*e*P	**P**	**03 32 34.5**	**+0.4**
	comp=Z,8.0nm,0.9s						
KHC	**Kasperske Hory**	**40.21**	**52**	*e*P	**P**	**03 32 34.8**	**-0.9**
GEC2	**GERESS Array S**	**40.28**	**53**	IAmb	IAmb	03 32 37.7	
	comp=Z,20nm,1.8s						
GERES	**GERESS Array B**	**40.28**	**53**	P	**P**	**03 32 36.5**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=267,slow=6.7,SNR=16						
GERES				LR	LR	03 47 00.7	
	comp=Z,79nm,19.9s,baz=256,slow=33						
DBIC	**Dimbokro**	**40.54**	**125**	P	**P**	**03 32 39.2**	**+0.5**
	comp=Z,2.8nm,0.6s,baz=285,slow=9.3,SNR=3.6						
DBIC				LR	LR	03 47 50.8	
	comp=Z,402nm,18.7s,baz=303,slow=34						
DBIC	**Dimbokro**	**40.54**	**125**	P	**P**	**03 32 38.4**	**-0.4**
DBIC				IAmb	IAmb	03 32 39.7	
	comp=Z,36nm,1.6s						
BRG	**Berggiesshubel**	**40.55**	**50**	*e*P	**P**	**03 32 38.9**	**+0.5**
	comp=Z,5.3nm,1.1s						
PTGA	**Pitinga**	**40.57**	**216**	P	**P**	**03 32 40.1**	**+1.2**
	comp=Z,3.1nm,0.4s,baz=38,slow=13,SNR=7.0						
PTGA	**Pitinga**	**40.57**	**216**	P	**P**	**03 32 37.6**	**-1.3**
MOA	**Molln**	**40.63**	**54**	*e*P	**P**	**03 32 39.1**	**-0.1**
	comp=Z,3.7nm,0.9s						
OLIL	**Olney**	**40.69**	**292**	P	**P**	**03 32 40.1**	**+0.4**
OBKA	**Obir**	**40.83**	**56**	*e*P	**P**	**03 32 41.2**	**+0.3**
	comp=Z,10.0nm,0.7s						
PRU	**Pruhonice**	**40.87**	**51**	*e*P	**P**	**03 32 42.1**	**+1.0**
WVT	**Waverly**	**40.98**	**288**	P	**P**	**03 32 43.5**	**+1.3**
GOPC	**GO Pecny, Ondr**	**41.03**	**51**	*e*P	**P**	**03 32 43.4**	**+1.0**
TORD	**Torodi Ar. Bea**	**41.06**	**111**	P	**P**	**03 32 43.7**	**+0.7**
	comp=Z,1.4nm,0.6s,baz=307,slow=6.6,SNR=15						
TORD				PcP	**PcP**	**03 34 42.7**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=305,slow=4.9,SNR=3.1						
TORD				LR	LR	03 48 06.1	
	comp=Z,755nm,20.4s,baz=305,slow=34						
NB2	**NORSAR Subarra**	**41.06**	**34**	P	**P**	**03 32 42.8**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=253,slow=9.3						
NOA	**NORSAR Array B**	**41.06**	**34**	P	**P**	**03 32 42.6**	**0.0**
	comp=Z,6.1nm,1.0s,baz=252,slow=8.5,SNR=7.6						
NOA				LR	LR	03 46 54.0	
	comp=Z,100nm,20.0s,baz=255,slow=32						
NB201	**NORSAR Array S**	**41.10**	**34**	P	**P**	**03 32 41.0**	**-1.9**
NC303	**NORSAR Array S**	**41.19**	**34**	P	**P**	**03 32 42.8**	**-0.8**
CONA	**Conrad Observa**	**41.70**	**54**	*e*P	**P**	**03 32 48.3**	**+0.3**
	comp=Z,4.1nm,1.2s						
SIUC	**Southern Illin**	**41.74**	**290**	P	**P**	**03 32 48.3**	**-0.1**
SIUC				IAmb	IAmb	03 32 54.9	
	comp=Z,15nm,1.2s						
S44A	**Carbondale**	**41.77**	**290**	IAmb	IAmb	03 32 55.7	
	comp=Z,30nm,1.6s						
CHVC	**Chvalec**	**41.87**	**50**	*e*P	**P**	**03 32 49.9**	**+0.6**
HFS	**Hagfors**	**41.97**	**36**	LR	LR	03 47 14.6	
	comp=Z,84nm,19.9s,baz=280,slow=32						
OSTC	**Ostas**	**41.97**	**50**	*e*P	**P**	**03 32 51.0**	**+0.8**
DPC	**Dobruska-Polom**	**42.03**	**50**	*e*P	**P**	**03 32 50.7**	**0.0**
KRUC	**Moravsky**	**42.06**	**52**	*e*P	**P**	**03 32 51.1**	**+0.3**
VRAC	**Vranov**	**42.19**	**52**	LR	LR	03 48 42.3	
	comp=Z,55nm,19.1s,baz=265,slow=34						
VRAC	**Vranov**	**42.19**	**52**	*e*P	**P**	**03 32 52.5**	**+0.6**
KRLC	**Kraliky**	**42.32**	**51**	*e*P	**P**	**03 32 53.7**	**+0.7**
MORC	**Moravsky Berou**	**42.81**	**51**	*e*P	**P**	**03 32 57.4**	**+0.4**
JAVC	**Velka Javorina**	**42.90**	**53**	*e*P	**P**	**03 32 58.2**	**+0.4**
P40A	**Paris**	**43.58**	**294**	P	**P**	**03 33 01.7**	**-1.6**
VYHS	**Vyhne**	**43.68**	**53**	*e*P	**P**	**03 33 04.4**	**+0.4**
B35A	**Bob, Littlefor**	**43.79**	**307**	P	**P**	**03 33 04.0**	**-0.9**
PSZ	**Piszkesteto**	**44.42**	**54**	⇑P	**P**	**03 33 12.3**	**+2.3**
ULM	**Lac du Bonnet**	**45.12**	**309**	LR	LR	03 51 36.6	
	comp=Z,793nm,19.5s,baz=88,slow=36						
ULM	**Lac du Bonnet**	**45.12**	**309**	P	**P**	**03 33 14.3**	**-1.2**
ULM				IAmb	IAmb	03 33 22.2	
	comp=Z,8.8nm,1.0s						
PBUR	**Paburge**	**45.65**	**42**	*e*P	**P**	**03 33 19.7**	**+0.1**
BZS	**Buzias**	**45.80**	**57**	⇓P	**P**	**03 33 22.0**	**+1.1**
KOLS	**Kolonicke sedl**	**45.93**	**52**	*e*P	**P**	**03 33 23.3**	**+1.4**
ECSD	**EROS Data Cent**	**46.25**	**300**	IAmb	IAmb	03 33 30.1	
	comp=Z,9.4nm,1.0s						
DRGR		**46.42**	**55**	⇑P	**P**	**03 33 26.3**	**+0.3**
HERR	**Herculane**	**46.46**	**58**	⇓P	**P**	**03 33 27.1**	**+1.0**
GZR	**Gura Zlata**	**46.64**	**57**	⇓P	**P**	**03 33 28.1**	**+0.5**
PABE	**Paberze**	**46.78**	**43**	*e*P	**P**	**03 33 28.6**	**+0.1**
H10N2	**ASCENSION HYDR**	**46.94**	**148**	T	T	04 23 26.5	
	baz=334,slow=75,SNR=226						
H10N3	**ASCENSION HYDR**	**46.95**	**148**	T	T	04 23 26.9	
	baz=334,slow=75,SNR=181						
H10N1	**ASCENSION HYDR**	**46.96**	**148**	T	T	04 23 27.9	
	baz=334,slow=75,SNR=219						
TUL1	**Leonard**	**47.29**	**290**	P	**P**	**03 33 31.1**	**-1.7**
X37A	**Clayton**	**47.33**	**288**	IAmb	IAmb	03 33 44.1	
	comp=Z,11nm,1.1s						
VTS	**Vitosha**	**47.41**	**61**	⇑P	**P**	**03 33 35.1**	**+1.2**
H10S3	**ASCENSION HYDR**	**47.87**	**149**	T	T	04 24 36.1	
	baz=334,slow=74,SNR=269						
H10S2	**ASCENSION HYDR**	**47.88**	**149**	T	T	04 24 37.1	
	baz=246,slow=74,SNR=118						
ARR	**Arges**	**47.94**	**57**	⇓P	**P**	**03 33 38.5**	**+0.7**
BUR08	**Bucovina Ar. S**	**48.00**	**54**	P	**P**	**03 33 37.1**	**-1.2**
BUR08				IAmb	IAmb	03 33 43.6	
	comp=Z,8.0nm,1.3s						
ISAL	**Salakas**	**48.01**	**43**	*e*P	**P**	**03 33 38.5**	**+0.4**
BURAR	**Bucovina Array**	**48.02**	**54**	⇓P	**P**	**03 33 39.9**	**+1.5**
IIGN	**Ignalina**	**48.07**	**43**	*e*P	**P**	**03 33 38.9**	**+0.3**
IZAR	**Zarasai**	**48.08**	**43**	*e*P	**P**	**03 33 39.4**	**+0.8**
FINES	**FINESS Array B**	**48.17**	**35**	P	**P**	**03 33 39.2**	**0.0**
	comp=Z,3.9nm,0.8s,baz=304,slow=4.4,SNR=5.3						
FINES				LR	LR	03 52 22.6	
	comp=Z,98nm,18.5s,baz=273,slow=34						
VOIR		**48.22**	**57**	⇑P	**P**	**03 33 40.5**	**+0.6**
VSU	**Vasula**	**48.35**	**39**	*e*P	**P**	**03 33 40.6**	**0.0**
FFC	**Flin Flon**	**48.68**	**316**	P	**P**	**03 33 42.9**	**-0.4**
MLR	**Muntele Rosu**	**48.83**	**57**	⇓P	**P**	**03 33 45.6**	**+0.9**
MLR	**Muntele Rosu**	**48.83**	**57**	P	**P**	**03 33 43.6**	**-1.1**
MLR				IAmb	IAmb	03 33 47.4	
	comp=Z,9.1nm,1.0s						
MICGM	**Minsk**	**49.06**	**45**	*e*	**P**	**03 33 44.0**	**-2.2**
ARCES	**ARCESS Array B**	**49.11**	**24**	P	**P**	**03 33 45.6**	**-0.8**
	comp=Z,4.0nm,0.9s,baz=254,slow=7.2,SNR=6.3						
ARCES				LR	LR	03 52 00.2	
	comp=Z,66nm,19.8s,baz=242,slow=33						
PLOR	**Plostina**	**49.26**	**56**	⇑P	**P**	**03 33 48.0**	**+0.2**
ELND	**Elena**	**49.26**	**60**	⇓P	**P**	**03 33 49.0**	**+1.1**
SAML	**Samuel**	**49.27**	**215**	P	**P**	**03 33 48.4**	**+0.3**
BISRR	**Bisoca**	**49.35**	**56**	⇓P	**P**	**03 33 49.8**	**+1.1**
SPITS	**Spitsbergen Ar**	**49.73**	**13**	LR	LR	03 49 17.0	
	comp=Z,235nm,21.8s,baz=175,slow=29						
WMOK	**Wichita Mounta**	**49.97**	**289**	IAmb	IAmb	03 33 59.1	
	comp=Z,5.8nm,0.9s						
SORM	**Soroca**	**50.03**	**53**	⇓P	**P**	**03 33 51.6**	**-2.1**
AKASG	**Malin Array Be**	**50.23**	**49**	P	**P**	**03 33 54.8**	**-0.4**
	comp=Z,5.1nm,0.7s,baz=272,slow=7.4,SNR=24						
AKASG				LR	LR	03 53 11.0	
	comp=Z,106nm,19.8s,baz=285,slow=34						
AKBB	**Malin Array Si**	**50.23**	**49**	P	**P**	**03 33 53.5**	**-1.6**
HARR	**Harsova**	**50.36**	**57**	⇑P	**P**	**03 33 55.2**	**-1.0**
BDFB	**Brasilia**	**50.42**	**193**	P	**P**	**03 33 58.1**	**+1.1**
	comp=Z,4.2nm,0.8s,baz=359,slow=5.1,SNR=5.8						
BDFB	**Brasilia**	**50.42**	**193

comp=Z,7.9nm,0.9s,baz=353,slow=5.7,SNR=22
LPAZ La Paz 57.99 215 P P 03 34 53.1 +0.3
DUG Dugway, Tooele 58.80 300 IAmb IAmb 03 35 06.0
comp=Z,7.0nm,1.1s
U15A North Rim 59.77 296 IAmb IAmb 03 35 11.6
comp=Z,4.6nm,0.8s
ELK Elko 60.35 301 P P 03 35 08.3 -0.3
KVAR Kislovodsk Arr 60.74 55 LR LR 04 02 13.6
comp=Z,42nm,18.1s,baz=312,slow=37
ASF Jabal al Asfar 60.91 69 LR LR 04 01 22.0
comp=Z,252nm,21.4s,baz=252,slow=36
KBZ Khabaz 60.96 55 P P 03 35 13.8 +1.5
comp=Z,3.5nm,0.8s,baz=271,slow=3.6,SNR=7.8
J08A Circle Bar Ran 61.66 305 P P 03 35 16.9 -0.3
J08A IAmb IAmb 03 35 26.1
comp=Z,12nm,1.3s
AKH Akhalkalaki 62.21 57 P P 03 35 20.5 -0.6
TPNV Topopah Spring 62.50 298 P P 03 35 22.9 -0.2
TPNV IAmb IAmb 03 35 31.4
comp=Z,6.8nm,1.3s
KVN Kaiserville 63.02 300 IAmb IAmb 03 35 32.3
comp=Z,8.0nm,0.9s
PINE Pine Mountain 63.16 306 P P 03 35 27.7 +0.3
NV11 Mina Array Sit 63.31 300 IAmb IAmb 03 35 34.0
comp=Z,4.1nm,0.9s
NVAR Mina Array Bea 63.41 300 P P 03 35 28.4 -0.9
comp=Z,1.9nm,0.9s,baz=75,slow=5.5,SNR=12
NVAR LR LR 04 01 24.9
comp=Z,293nm,21.5s,baz=48,slow=35
NVAR Mina Array Bea 63.41 300 P P 03 35 29.2 0.0
PAHR Pah Rah Range 63.68 302 P P 03 35 31.0 +0.1
PAHR IAmb IAmb 03 35 38.1
comp=Z,4.9nm,1.0s
VCNR Virginia City 64.03 301 P P 03 35 31.1 -2.2
ISA Isabella, Lake 64.67 297 P P 03 35 38.3 +0.9
ARU Arti 65.45 37 LR LR 04 03 21.0
comp=Z,129nm,18.0s,baz=300,slow=35
GO02 Mina Guanaco 66.35 212 P P 03 35 47.1 -1.3
DOT Dot Lake 66.92 332 P P 03 35 51.1 -0.2
DOT IAmb IAmb 03 36 00.9
comp=Z,10nm,1.3s
ILAR Eielson Array 67.40 334 P P 03 35 54.1 -0.1
comp=Z,0.9nm,0.8s,baz=45,slow=4.8,SNR=9.4
ILAR PcP PcP **03 36 21.9 +0.1**
comp=Z,1.1nm,1.0s,baz=36,slow=2.7,SNR=4.8
ILAR LR LR 04 04 42.7
comp=Z,170nm,19.2s,baz=78,slow=35
ILAR Eielson Array 67.40 334 P P 03 35 55.7 +1.4
ILAR **PcP 03 36 21.9 +0.1**
AC02 Maricunga 67.61 211 P P 03 35 55.7 -1.0
AC02 IAmb IAmb 03 35 58.8
comp=Z,7.8nm,0.9s
AKTO Aktyubinsk 67.77 43 LR LR 04 04 41.2
comp=Z,99nm,18.3s,baz=312,slow=35
CCB Clear Creek Bu 67.80 334 P P 03 35 57.2 +0.5
NRIK Noril'sk 69.39 18 P P 03 36 07.6 +0.9
comp=Z,2.8nm,0.8s,baz=19,slow=4.1,SNR=7.2
KTH Kantishna Hill 69.55 334 IAmb IAmb 03 36 09.6
comp=Z,4.7nm,1.0s
KNK Knik Glacier 69.84 331 IAmb IAmb 03 36 11.4
comp=Z,5.2nm,0.8s
PMR Palmer 70.00 332 P P 03 36 10.7 +0.2
PMR IAmb IAmb 03 36 12.2
comp=Z,4.8nm,1.0s
CFA Coronel Fontan 71.47 207 P P 03 36 21.0 +1.2
comp=Z,4.3nm,1.1s,baz=13,slow=8.2,SNR=5.9
RAYN Ar Rayn 71.60 74 P P 03 36 19.6 -1.4
RAYN IAmb IAmb 03 36 22.4
comp=Z,7.7nm,1.3s
BRVK Borovoye 73.02 37 P P 03 36 28.1 -0.8
BRVK IAmb IAmb 03 36 30.6
comp=Z,10nm,1.0s
GEYT Alibeck 73.85 55 P P 03 36 34.9 +0.8
comp=Z,0.8nm,0.3s,baz=286,slow=11,SNR=5.2
TIXI Tiksi 74.17 4 P P 03 36 35.5 +0.2
KMBO Kilima Mbogo 77.92 100 P P 03 36 59.8 +1.8
comp=Z,0.6nm,0.3s,baz=349,slow=13,SNR=3.4
KURK Kurchatov 78.54 36 P P 03 37 00.1 -0.4
ZALV Zalesovo Beam 79.18 31 P P 03 37 04.2 +0.2
comp=Z,1.0nm,0.3s,baz=305,slow=5.2,SNR=8.7
ZALV LR LR 04 11 28.5
comp=Z,50nm,19.6s,baz=84,slow=35
UOSS Minazif 79.24 67 P P 03 37 04.0 -0.8
PLCA Paso Flores 80.44 205 P P 03 37 11.0 +0.2
comp=Z,4.9nm,1.0s,baz=19,slow=7.9,SNR=7.2
PLCA Paso Flores 80.44 205 P P 03 37 10.2 -0.7
PLCA IAmb IAmb 03 37 14.4
comp=Z,15nm,1.4s
AAK Ala-Archa 81.50 44 P P 03 37 16.4 -0.5
AAK IAmb IAmb 03 37 20.7
comp=Z,5.1nm,0.9s
MAKZ Makanchi 82.80 37 P P 03 37 22.2 -1.2
MAKZ IAmb IAmb 03 37 24.6
comp=Z,9.7nm,1.1s
MK31 Makanchi Array 82.97 37 P P 03 37 23.8 -0.5
MK31 IAmb IAmb 03 37 25.4
comp=Z,7.1nm,1.1s
MKAR Makanchi Array 82.97 37 P P 03 37 24.2 -0.1
comp=Z,6.9nm,1.0s,baz=316,slow=5.1,SNR=40
KDJ Kajisay 83.36 43 P P 03 37 21.5 -5.2
KDJ IAmb IAmb 03 37 28.9
comp=Z,7.5nm,1.4s
KSH Kashi 84.35 46 P P 03 37 33.3 +1.6
KSH pP pwP 03 37 44.3 +5.6
KSH PP PP **03 40 46.1 +0.2**
KSH Kashi 84.35 46 S S **03 47 51.8 -5.6**
KSH Kashi 84.35 46 SS SS 03 53 22.9 -3.4
KSH pmax pmax
comp=Z,50nm,1.0s
KSH pmax pmax
comp=Z,160nm,4.1s
KSH LR LR
comp=N,33nm,5.6s
KSH LR LR
comp=E,48nm,5.8s
KSH LR LR
comp=Z,390nm,6.4s
PETK Petropavlovsk- 92.24 351 LR LR 04 19 20.8
comp=Z,155nm,19.3s,baz=57,slow=35
SONM Songino Array 92.28 23 P P 03 38 09.8 +0.3
comp=Z,0.3nm,0.5s,baz=336,slow=6.5,SNR=4.4
VNDA Vanda 135.58 186 PKP **PKPdf 03 44 19.0 +0.7**
comp=Z,0.6nm,0.8s,baz=288,slow=3.3,SNR=5.3
KAPI Kappang 144.16 41 PKP PKPbc 03 44 34.2 +0.4
comp=Z,10.0nm,1.1s,baz=273,slow=7.0,SNR=4.2
KAPI Kappang 144.16 41 PKPab 03 44 33.2 -0.2
SIJI Sorong 145.34 20 PKPbc **PKPbc 03 44 36.6 -1.0**
comp=Z,4.8nm,0.5s,baz=6.0,slow=5.8,SNR=10
WRA Warramunga Arr 164.15 30 PKPab **PKPab 03 45 56.7 +0.1**
comp=Z,2.1nm,0.9s,baz=345,slow=4.3,SNR=6.2
ASAR Alice Springs 167.16 39 PKPab **PKPab 03 46 09.8 -0.1**
comp=Z,2.8nm,1.0s,baz=338,slow=4.4,SNR=12

*IDC **14** 03:33:19.8±2.3, 13°.76N×120°.91E, h145km±4km, mb3.4/7, mb1 3.6/7, mb1mx3.2/50, mbtmp3.9/7, Error ellipse: s-maj=50.6km s-min=33.5km az=171.0*
*MAN **14** 03:33:20.2, 13°.67N×120°.63E, h120km, mb4.4, ML3.2, MS3.0*
ISC 14 03:33:19.3±0.8, 13°.62N±0°.05×120°.67E±0°.07, h142km±6km, n17, σ1s29/23, mb3.7/7, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.30**	**113**	⇑*eP*	**Pn**	**03 33 38.4**	**-0.5**
PGP				*i* S	**Sn**	**03 33 53.2**	**-0.5**
LUBP	**Lubang**	**0.43**	**285**	*eP*	**Pn**	**03 33 39.2**	**-0.2**
LUBP				*eS*	**Sn**	**03 33 52.6**	**-1.9**
TGY	**Tagaytay City**	**0.54**	**28**	P	**Pn**	**03 33 40.6**	**+0.5**
	213nm,0.3s,baz=245,slow=1.6,SNR=14						
TGY				S	**Sn**	**03 33 56.7**	**+0.8**
	272nm,0.3s,baz=147,slow=23,SNR=18						
LQP	**Lukban**	**0.97**	**60**	*eP*	**Sn**	**03 34 04.1**	**+2.6**
BOAC	**Boac**	**1.15**	**98**	*eP*	**Pn**	**03 33 45.0**	**+0.3**
SJMP	**San Jose**	**1.23**	**159**	*eP*	**Pn**	**03 33 46.4**	**+0.9**
SJMP				*eS*	**Sn**	**03 34 06.5**	**+1.0**
OTRP	**Odiongan**	**1.81**	**133**	*eP*	**Pn**	**03 33 52.0**	**+0.3**
OTRP				*eS*	**Sn**	**03 34 14.4**	**-2.2**
BALP	**Baler**	**2.28**	**22**	*eP*	**Pn**	**03 33 58.2**	**+0.9**
ENPP	**El Nido**	**2.69**	**207**	*eP*	**Pn**	**03 34 04.4**	**+1.9**
ENPP				*eS*	**Sn**	**03 34 34.6**	**-1.2**
CUYO	**Cuyo Island**	**2.77**	**173**	*eP*	**Pn**	**03 34 04.5**	**+1.0**
CMAR	**Chiang Mai Arr**	**21.43**	**286**	P	**P**	**03 37 58.1**	**+1.9**
	1.2nm,0.3s,baz=87,slow=7.0,SNR=5.9						
SONM	**Songino Array**	**36.12**	**344**	P	**P**	**03 40 07.5**	**-0.3**
	0.6nm,0.6s,baz=157,slow=9.2,SNR=4.0						
MKAR	**Makanchi Array**	**46.08**	**324**	P	**P**	**03 41 29.6**	**+0.6**
	0.4nm,0.3s,baz=126,slow=9.4,SNR=7.3						
ZALV	**Zalesovo Beam**	**49.12**	**333**	P	**P**	**03 41 51.7**	**-0.6**
	0.8nm,0.4s,baz=100,slow=7.7,SNR=1.9						
KURBB	**Kurchatov Arra**	**50.24**	**326**	P	**P**	**03 42 00.8**	**0.0**
	1.4nm,0.5s,baz=129,slow=7.6,SNR=14						
TIXI	**Tiksi**	**58.21**	**3**	P	**P**	**03 42 57.0**	**-1.2**
	1.8nm,0.4s,baz=231,slow=3.3,SNR=4.9						
YKA	**Yellowknife Ar**	**92.86**	**22**	P	**P**	**03 46 15.1**	**-0.6**
	0.4nm,0.9s,baz=311,slow=4.5,SNR=4.9						

*MDD **14** 03:36:29.8±0.4, 42°.92N×0°.87E, h1km±5km, mbLg2.0/25, Error ellipse: s-maj=3.6km s-min=2.2km az=173.0, PRXIMO*
*MRB **14** 03:36:29.1±0.3, 42°.94N×0°.86E, h5km±2km, ML1.9/23, Error ellipse: s-maj=1.0km s-min=0.9km az=42.0*
*STR **14** 03:36:29.8±0.5, 43°.7'×°.', h25km±7km, MLv2.0/3, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/pyrenees_laup-2.11 preliminary*
*LDG **14** 03:36:29.3±0.1, 42°.92N×0°.86E, h2km, Md2.7/1, Ml2.7/16, Error ellipse: s-maj=1.3km s-min=1.2km az=78.0*
ISC 14 03:36:28.6±0.8, 42°.98N±0°.01×0°.89E±0°.01, h13km±6km, n86, σ1s17/144, 2C, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLS	**Moulis**	**0.15**	**96**	Pg	**Pg**	**03 36 32.5**	**+0.3**
MLS				Lg	Lg	03 36 35.2	
	138nm,0.5s						
MLS	**Moulis**	**0.15**	**96**	P	**Pg**	**03 36 32.6**	**+0.3**
MLS				S	**Sg**	**03 36 35.3**	**+0.4**
	147nm,0.5s						
CARA	**Val d'Aran**	**0.27**	**192**	P	**Pg**	**03 36 33.8**	**-0.5**
CARA				S	**Sg**	**03 36 37.2**	**-1.1**
	369nm,0.2s						
FMON	**Montouss**	**0.36**	**284**	P	**Pg**	**03 36 35.6**	**-0.3**
FMON				S	**Sg**	**03 36 40.6**	**-0.2**
	62nm,0.3s						
EPF	**Esparros**	**0.41**	**278**	*e*Pg	**Pg**	**03 36 36.0**	**-0.8**
EPF				*e*Sg	**Sg**	**03 36 41.2**	**-1.1**
	94nm,0.2s						
CEST	**Esterri de Car**	**0.46**	**144**	Pg	**Pg**	**03 36 37.4**	**-0.3**
CEST				Lg	Lg	03 36 43.8	
	36nm,0.3s						
CEST	**Esterri de Car**	**0.46**	**144**	P	**Pg**	**03 36 37.5**	**-0.3**
CEST				S	**Sg**	**03 36 43.9**	**0.0**
	36nm,0.3s						
ECHI	**Chisagues Biel**	**0.60**	**239**	⇑Pg	**Pg**	**03 36 39.9**	**-0.4**
	1.9nm,0.3s,SNR=18						
ECHI				Lg	Lg	03 36 47.0	
	9.6nm,0.1s,SNR=7.9						
ECHI	**Chisagues Biel**	**0.60**	**239**	P	**Pg**	**03 36 39.9**	**-0.4**
ECHI				S	**Sg**	**03 36 47.9**	**-0.4**
	18nm,0.2s						
ECHI	**Chisagues Biel**	**0.60**	**239**	Pg	**Pg**	**03 36 39.9**	**-0.4**
ECHI				Sg	**Sg**	**03 36 47.5**	**-0.8**
CSOR	**Sort**	**0.62**	**163**	⇑Pg	**Pg**	**03 36 40.8**	**0.0**
	15nm,0.4s,SNR=18						
CSOR				Lg	Lg	03 36 48.5	
	37nm,0.3s,SNR=14						
CSOR	**Sort**	**0.62**	**163**	P	**Pg**	**03 36 40.5**	**-0.3**
CSOR				S	**Sg**	**03 36 48.6**	**-0.5**
	36nm,0.4s						
CTRE	**Tremp**	**0.66**	**188**	Pg	**Pg**	**03 36 40.6**	**-0.8**
CTRE				Lg	Lg	03 36 49.6	
	24nm,0.3s						
CTRE	**Tremp**	**0.66**	**188**	P	**Pg**	**03 36 40.6**	**-0.8**
CTRE				S	**Sg**	**03 36 49.6**	**-0.4**
	24nm,0.3s						
ARBS	**La Rabassa**	**0.72**	**137**	P	**Pb**	**03 36 42.4**	**-0.6**
ARBS				S	**Sg**	**03 36 52.2**	**+0.3**
	27nm,0.3s						
CORG	**Organya**	**0.81**	**157**	Pg	**Pg**	**03 36 43.5**	**-0.7**
CORG				Lg	Lg	03 36 54.3	
	6.9nm,0.3s						
CORG	**Organya**	**0.81**	**157**	P	**Pg**	**03 36 43.6**	**-0.7**
CORG				S	**Sg**	**03 36 54.4**	**-0.4**
	14nm,0.3s						
FNEB	**Nbias**	**0.90**	**94**	Pg	**Pn**	**03 36 46.1**	**-0.7**
FNEB				Lg	Lg	03 36 58.4	
	28nm,0.3s						
FNEB	**Nbias**	**0.90**	**94**	P	**Pn**	**03 36 46.1**	**-0.7**
FNEB				S	**Sn**	**03 36 58.5**	**-1.2**
	28nm,0.3s						
FNEB	**Nbias**	**0.90**	**94**	Pg	**Pn**	**03 36 46.8**	**-0.1**
FNEB				Sg	**Sn**	**03 36 59.5**	**-0.1**
CLLI	**Llivia**	**0.94**	**121**	Pg	**Pb**	**03 36 47.0**	**+0.3**
	2.5nm,0.4s,SNR=15						
CLLI				Lg	Lg	03 36 60.0	
	4.6nm,0.2s						
CLLI	**Llivia**	**0.94**	**121**	P	**Pb**	**03 36 46.6**	**-0.1**
CLLI				S	**Sb**	**03 36 59.3**	**+0.1**
	8.3nm,0.4s						
MTLF	**Montolieu**	**1.04**	**69**	*e*Pg	**Pn**	**03 36 49.8**	**+1.0**
MTLF				*e*Sg	**Sn**	**03 37 04.0**	**+0.9**
	25nm,0.2s						
MTLF	**Montolieu**	**1.04**	**69**	Pg	**Pn**	**03 36 49.9**	**+1.2**
MTLF				Sg	**Sn**	**03 37 04.8**	**+1.7**
ETSF	**Etsaut**	**1.07**	**266**	*e*Pg	**Pg**	**03 36 47.9**	**-1.3**
ETSF				*e*Sg	**Sg**	**03 37 01.8**	**-1.3**
	10.0nm,0.2s						
CAVN	**Les Avellanes**	**1.10**	**186**	Pg	**Pg**	**03 36 48.3**	**-1.4**
CAVN				Lg	Lg	03 37 03.1	
	38nm,0.3s						
CAVN	**Les Avellanes**	**1.10**	**186**	P	**Pg**	**03 36 48.3**	**-1.4**
CAVN				S	**Sg**	**03 37 03.2**	**-0.8**
	76nm,0.3s						
EMIR	**Miracle**	**1.16**	**156**	Pg	**Pg**	**03 36 50.3**	**-0.6**
	16nm,0.5s,SNR=7.9						
EMIR				Lg	Lg	03 37 05.4	
	45nm,0.4s,SNR=7.9						
EMIR	**Miracle**	**1.16**	**156**	Pg	**Pg**	**03 36 50.3**	**-0.6**
EMIR				Lg	Lg	03 37 05.4	
ATE	**Arette**	**1.17**	**276**	Pg	**Pg**	**03 36 50.9**	**-0.2**
	1.1nm,0.9s,SNR=7.9						
ATE				Lg	Lg	03 37 07.0	
	4.5nm,0.1s,SNR=7.9						
ATE	**Arette**	**1.17**	**276**	P	**Pg**	**03 36 50.4**	**-0.8**
ATE				S	**Sg**	**03 37 06.0**	**-0.5**
	7.7nm,0.3s						
CBRU	**Bruguera**	**1.17**	**126**	Pg	**Pb**	**03 36 50.6**	**-0.1**
CBRU				Lg	Lg	03 37 06.7	
	10nm,1.1s						
CBRU	**Bruguera**	**1.17**	**126**	P	**Pb**	**03 36 50.6**	**-0.1**
CBRU				S	**Sb**	**03 37 06.8**	**+0.9**
	21nm,1.1s						
FILF	**Fillols**	**1.30**	**108**	Pg	**Pg**	**03 36 51.3**	**-2.2**
FILF				Lg	Lg	03 37 07.3	
	5.6nm,0.4s						
FILF	**Fillols**	**1.30**	**108**	P	**Pg**	**03 36 51.3**	**-2.2**
FILF				S	**Sg**	**03 37 07.4**	**-3.0**
	5.6nm,0.4s						
CORI	**Orista**	**1.32**	**139**	Pg	**Pn**	**03 36 53.1**	**+0.5**
CORI				Lg	Lg	03 37 10.5	
	28nm,0.3s						
CORI	**Orista**	**1.32**	**139**	P	**Pn**	**03 36 53.1**	**+0.5**
CORI				S	**Sb**	**03 37 10.6**	**+0.7**
	28nm,0.3s						
MONQ	**Montcuq**	**1.41**	**9**	Pn	**Pb**	**03 36 55.1**	**+0.4**
MONQ				Pg	**Pn**	**03 36 57.3**	**+3.4**
MONQ				Sn	**Sn**	**03 37 14.5**	**+2.2**
CBEU	**Beuda**	**1.50**	**118**	Pg	**Pg**	**03 36 56.2**	**-1.2**
CBEU				Lg	Lg	03 37 16.3	
	22nm,0.5s						
CBEU	**Beuda**	**1.50**	**118**	P	**Pg**	**03 36 56.2**	**-1.2**
CBEU				S	**Sn**	**03 37 16.4**	**+1.8**
	22nm,0.5s						
SJAF	**Saint Jean de**	**1.55**	**108**	Pg	**Pg**	**03 36 58.8**	**+0.6**
	0.7nm,0.3s,SNR=7.9						
SJAF				Lg	Lg	03 37 19.7	
	4.5nm,0.3s,SNR=7.9						
SJAF	**Saint Jean de**	**1.55**	**108**	P	**Pg**	**03 36 56.9**	**-1.3**
SJAF				S	**Sg**	**03 37 17.8**	**-0.5**
SJPF	**Ste Jean**	**1.56**	**276**	*e*Pn	**Pn**	**03 36 56.3**	**+0.4**
SJPF	**Ste Jean**	**1.56**	**276**	*e*Pg	**Pg**	**03 36 58.1**	**-0.4**
SJPF				*e*Sg	**Sg**	**03 37 18.8**	**+0.1**
	9.3nm,0.4s						
SJPF	**Ste Jean**	**1.56**	**276**	Pn	**Pn**	**03 36 56.3**	**+0.4**
SJPF				Sg	**Sg**	**03 37 18.8**	**+0.1**
EJON	**La Jonquera**	**1.56**	**109**	Pg	**Pg**	**03 36 59.4**	**+0.9**
	0.8nm,0.3s,SNR=7.9						
EJON				Lg	Lg	03 37 20.4	
	4.5nm,0.3s,SNR=7.9						
ESAC	**San Caprasio**	**1.61**	**219**	Pg	**Pn**	**03 36 58.0**	**+1.3**
	14nm,0.5s,SNR=16						
ESAC				Lg	Lg	03 37 20.5	
	92nm,0.3s						
ESAC	**San Caprasio**	**1.61**	**219**	Pg	**Pn**	**03 36 58.0**	**+1.3**
EORO	**Oroz-Betelu**	**1.62**	**268**	Pg	**Pg**	**03 36 59.6**	**-0.1**
	2.7nm,0.3s,SNR=7.9						
EORO				Lg	Lg	03 37 21.3	
	11nm,0.3s						
EPOB	**Poblet**	**1.63**	**175**	Pg	**Pb**	**03 36 58.7**	**+0.3**
	3.9nm,0.3s,SNR=18						
EPOB				Lg	Lg	03 37 19.8	
	9.6nm,0.2s						
EPOB	**Poblet**	**1.63**	**175**	P	**Pn**	**03 36 57.5**	**+0.6**
EPOB				S	**Sn**	**03 37 18.8**	**+1.1**
	13nm,0.3s						
CFON	**Fontmartina**	**1.67**	**136**	Pg	**Pg**	**03 37 00.7**	**+0.2**
	7.2nm,0.3s,SNR=27						
CFON				Lg	Lg	03 37 22.9	
	54nm,0.2s						
CFON	**Fontmartina**	**1.67**	**136**	P	**Pb**	**03 36 58.8**	**-0.3**
CFON				S	**Sb**	**03 37 20.6**	**+0.6**
	56nm,0.3s						
CGAR	**Garraf**	**1.69**	**174**	Pn	**Pb**	**03 37 00.3**	**+0.9**
CGAR				Sn	**Sg**	**03 37 24.2**	**+1.4**
	10nm,1.1s						
CGAR	**Garraf**	**1.69**	**174**	P	**Pb**	**03 37 00.4**	**+0.9**
CGAR				S	**Sg**	**03 37 24.3**	**+1.4**
	21nm,1.1s						
EALK	**Alkurruntz**	**1.77**	**279**	Pg	**Pg**	**03 37 02.3**	**-0.3**
	5.1nm,0.5s,SNR=6.0						
EALK				Lg	Lg	03 37 27.5	
	14nm,0.4s						
CPAL	**Palau Saverder**	**1.80**	**111**	Pn	**Pb**	**03 37 00.2**	**-1.1**
CPAL				Sn	**Sb**	**03 37 24.1**	**+0.3**
CPAL	**Palau Saverder**	**1.80**	**111**	P	**Pb**	**03 37 00.3**	**-1.1**
CPAL				S	**Sb**	**03 37 24.2**	**+0.3**
CCAS	**Cassa de la Se**	**1.85**	**126**	Pn	**Pn**	**03 37 00.9**	**+1.0**
CCAS				Sn	**Sb**	**03 37 24.8**	**-0.3**
	17nm,0.9s						
CCAS	**Cassa de la Se**	**1.85**	**126**	P	**Pn**	**03 37 00.9**	**+1.0**
CCAS				S	**Sb**	**03 37 24.9**	**-0.3**
	17nm,0.9s						
LFF	**La Frestale**	**1.97**	**357**	*e*Pn	**Pb**	**03 37 03.6**	**-0.6**
LFF				*e*Sn	**Sb**	**03 37 28.1**	**-0.5**
LFF				*e*Sg	**Sg**	**03 37 34.1**	**+2.3**
	25nm,0.4s						
ERTA	**Horta de San J**	**2.06**	**192**	Pn	**Pn**	**03 37 00.4**	**-2.4**
	SNR=7.9						
ERTA				Pg	**Pb**	**03 37 07.1**	**+1.3**
	6.1nm,0.7s,SNR=5.9						
ERTA				Sn	**Sn**	**03 37 27.4**	**-1.0**
	1.7nm,0.2s,SNR=4.0						
ERTA				Lg	Lg	03 37 33.0	
	8.9nm,0.2s						
ERTA	**Horta de San J**	**2.06**	**192**	P	**Pn**	**03 37 03.9**	**+1.0**
ERTA				S	**Sn**	**03 37 28.9**	**+0.6**
	16nm,0.8s						
CAF	**Calviac**	**2.13**	**23**	*e*Pn	**Pb**	**03 37 05.0**	**-1.9**
CAF				*e*Sn	**Sb**	**03 37 30.9**	**-2.3**
	9.8nm,0.2s						
CAF				*e*Sg	**Sg**	**03 37 38.1**	**+1.2**
	6.8nm,0.2s						
CMAS	**Mas de Barbera**	**2.29**	**191**	Pn	**Pn**	**03 37 06.9**	**+1.0**
CMAS				Sn	**Sn**	**03 37 35.5**	**+1.5**
	19nm,0.5s						
CMAS	**Mas de Barbera**	**2.29**	**191**	P	**Pn**	**03 37 07.0**	**+1.0**
CMAS				S	**Sn**	**03 37 35.2**	**+1.2**
	19nm,0.5s						
RJF	**Les Rejaudoux**	**2.37**	**11**	*e*Pn	**Pn**	**03 37 08.2**	**+1.1**
RJF	**Les Rejaudoux**	**2.37**	**11**	*e*Pg	**Pg**	**03 37 11.7**	**-2.3**
RJF				*e*Sn	**Sn**	**03 37 35.8**	**-0.3**
RJF				*e*Sg	**Sg**	**03 37 45.3**	**+0.5**
	8.3nm,0.2s						
LASF	**Ste Croix**	**2.42**	**62**	*e*Pn	**Pb**	**03 37 09.7**	**-2.2**
LASF	**Ste Croix**	**2.42**	**62**	*e*Pg	**Pg**	**03 37 15.5**	**+0.5**
LASF				*e*Sg	**Sg**	**03 37 47.5**	**+1.2**
	4.6nm,0.3s						
EMOS	**Mosqueruela**	**2.80**	**202**	Pg	**Pb**	**03 37 17.8**	**-0.7**
	8.0nm,0.9s,SNR=6.4						
EMOS				Lg	Lg	03 37 56.7	
	3.1nm,0.3s,SNR=7.9						
ETOR	**Torete**	**3.08**	**227**	Pn	**Pn**	**03 37 19.1**	**+2.2**
	1.3nm,1.6s,SNR=7.9						
ETOR				Pg	**Pb**	**03 37 24.7**	**+1.5**
	0.4nm,1.7s,SNR=8.2						
ETOR				Sn	**Sn**	**03 37 51.2**	**-2.4**
	0.6nm,1.9s,SNR=8.4						
ETOR				Lg	Lg	03 38 03.0	
	5.4nm,0.3s,SNR=4.0						
VIVF	**Saint-Julien-l**	**3.32**	**54**	*e*Pn	**Pn**	**03 37 20.6**	**+0.5**
VIVF	**Saint-Julien-l**	**3.32**	**54**	*e*Pg	**Pg**	**03 37 31.9**	**-0.2**
VIVF				*e*Sg	**Sg**	**03 38 15.3**	**+0.3**
	3.3nm,0.3s						
TCF	**Toulx Ste Croi**	**3.44**	**15**	*e*Pn	**Pn**	**03 37 22.7**	**+0.8**
TCF	**Toulx Ste Croi**	**3.44**	**15**	*e*Pg	**Pg**	**03 37 34.1**	**-0.4**
TCF				*e*Sn	**Sn**	**03 38 02.7**	**+0.2**
	2.4nm,0.2s						
TCF				*e*Sg	**Sg**	**03 38 19.7**	**+0.6**
	4.2nm,0.4s						
MFF	**Saint Martin d**	**3.70**	**349**	*e*Pn	**Pn**	**03 37 26.2**	**+0.8**
MFF	**Saint Martin d**	**3.70**	**349**	*e*Pg	**Pg**	**03 37 38.6**	**-0.8**
MFF				*e*Sg	**Sg**	**03 38 26.7**	**-0.7**
	5.2nm,0.5s						
BGF	**Bois d'Agland**	**3.84**	**21**	*e*Pg	**Pg**	**03 37 41.8**	**-0.4**
BGF				*e*Sn	**Sn**	**03 38 12.1**	**-0.2**
	15nm,0.4s						
AVF	**Avril sur Loir**	**4.20**	**24**	*e*Pn	**Pn**	**03 37 33.2**	**+1.0**
AVF	**Avril sur Loir**	**4.20**	**24**	*e*Pg	**Pg**	**03 37 47.5**	**-1.4**
AVF				*e*Sn	**Sn**	**03 38 20.6**	**-0.4**
	2.6nm,0.3s						
AVF				*e*Sg	**Sg**	**03 38 42.5**	**-0.8**
	3.0nm,0.4s						
SMF	**Signal de Mont**	**4.23**	**29**	*e*Pn	**Pn**	**03 37 33.8**	**+1.2**
PAB	**San Pablo**	**5.23**	**231**	Pn	**Pn**	**03 37 47.6**	**+1.1**
	0.1nm,0.5s,SNR=7.9						
PAB				Sn	**Sn**	**03 38 41.7**	**-4.9**
	2.7nm,1.7s,SNR=7.9						
GRR	**Gorron**	**5.55**	**348**	*e*Pn	**Pn**	**03 37 52.0**	**+1.2**
QUIF	**Quistinic**	**5.71**	**331**	*e*Pn	**Pn**	**03 37 55.7**	**+2.8**
ROSF	**Rostrenen**	**6.11**	**333**	*e*Pn	**Pn**	**03 37 58.9**	**+0.5**

SVSA 14 03:37:12.0±2.2, 37°.31N×23°.49W, h15km, MD3.5, ML3.2, 1C, Error ellipse: s-maj=15.1km s-min=12.6km az=69.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSMN	**Pico do Norte,**	**1.30**	**257**	*e*P	Pn	03 37 31.0	-4.6
PSMN				*e*S	Sb	03 37 45.2	-7.3
PSMN				A	A	03 37 49.4	
	76nm,0.2s						
PSMA	**Santa Maria**	**1.35**	**257**	*e*P	Pn	03 37 31.6	-4.7
PSMA				*e*S	Sn	03 37 47.6

PMAN	**Manadas**	**3.87 291**	*eS*	Sn	03 38 47.0	-9.1
PMAN			A	A	03 38 49.1	
	11nm,0.2s					
ROSA	**Rosais**	**4.01 292**	*eP*	Pn	03 38 08.9	-4.0
ROSA			*eS*	Sn	03 38 50.8	-8.8
ROSA			A	A	03 38 52.1	
	8.9nm,0.1s					
PCAN	**Candelaria**	**4.12 288**	*eP*	Pn	03 38 10.3	-4.1
PCED	**Cedros**	**4.33 289**	*eP*	Pn	03 38 13.3	-3.9

SJA ***14*** *03:38:20.9±0.6,22°.72S×66°.60W,h245km±9km,ML5.4, MW5.2*

VAO ***14*** *03:38:21.9±0.2,22°.68S×66°.62W,h237km±3km,mb5.7*

NEIC ***14*** *03:38:21.2±1.7,22°.72S±0°.06×66°.44W±0°.09,h213km±4km, mb5.2/452,Mww5.6,Md5.2(SJA),Error ellipse: s-maj=11.9km s-min=8.6km az=87.0*

MOS ***14*** *03:38:21.8±1.0,22°.45S×66°.46W,h217km,mb5.3/34, Error ellipse: s-maj=10.5km s-min=7.1km az=96.9*

NEIC ***14*** *03:38:23,22°.72S×66°.44W,h220km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.07; Mθθ0.49; Mϕϕ-0.56; Mrθ-0.02; Mθϕ-0.54; Mϕr-3.52; Fault plane solution: M₀3.60000×10¹⁷ NP1:ϕ₁179.00000°, δ88.00000°,λ81.00000°. NP2:ϕ₂74.00000°,δ9.00000°, λ165.00000°. Principal axes: T 3.3347, Plg47.0000°, Azm80.0000°; N 0.4840, Plg9.0000°, Azm179.0000°; P -3.8187, Plg42.0000°, Azm277.0000°;*

IDC ***14*** *03:38:24.3±0.5,22°.59S×66°.31W,h233km±4km,mb4.9/27, mb1 5.0/32,mb1mx5.0/36,mbtmp5.5/32 Error ellipse: s-maj=8.9km s-min=7.2km az=81.0*

GUC ***14*** *03:38:24.1±0.6,22°.77S×66°.86W,h245km±7km,ML5.8*

GCMT ***14*** *03:38:25.9±0.1,22°.78S±0°.01×66°.63W±0°.01,h239km, MW5.6/152,Moment Tensor Solution. s121,c185; s152,c274; Duration: 1ŝ6 Moment tensor: Scale 10¹⁷ Nm; Mrr0.45±.04; Mθθ-0.12±.04; Mϕϕ-0.33±.05; Mrθ-0.03±.03; Mθϕ0.36±.04; Mϕr-3.32±.03; Best double couple: M₀3.36300×10¹⁷ NP1:ϕ₁298.00000°,δ7.00000°, λ29.00000°. NP2:ϕ₂180.00000°,δ87.00000°,λ96.00000°. Principal axes: T 3.4240, Plg48.0000°, Azm96.0000°; N -0.1240, Plg6.0000°, Azm359.0000°; P -3.3010, Plg41.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 03:38:22.0±0.4,22°.74S±0°.03×66°.58W±0°.03,h223km±3km, h223km:pP-P,n1181,σ1ŝ31/1145,mb5.2/295,26C-6D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YJA	**Yavi**	**1.14**	**61**	*i* P		**Pn**	**03 38 57.4**	**+1.7**
YJA				*eS*		**S**	**03 39 24.5**	**+2.8**
YJA				IAML			03 39 27.2	
	comp=Z,9μm,0.8s							
AZAP	**Zapla**	**2.03**	**137**	*i* P		**Pn**	**03 39 04.2**	**+1.3**
AZAP				*eS*		**S**	**03 39 36.5**	**+1.7**
AZAP				IAML			03 39 38.5	
	comp=Z,4μm,1.0s							
LVC	**Limon Verde**	**2.15**	**273**	*eP*		**Pn**	**03 39 05.2**	**+0.9**
LVC				*eS*		**S**	**03 39 37.1**	**+0.1**
LVC	**Limon Verde**	**2.15**	**273**			**Pn**	**03 39 05.2**	**+0.9**
LVC				S		**S**	**03 39 37.0**	**+0.1**
LVC	**Limon Verde**	**2.15**	**273**	*i* P		**Pn**	**03 39 05.0**	**+0.8**
LVC				IAML			03 39 42.5	
	comp=Z,1μm,0.2s							
LVC	**Limon Verde**	**2.15**	**273**	*eP*		**Pn**	**03 39 05.2**	**+0.9**
LVC				*eS*		**S**	**03 39 37.5**	**+0.5**
PB09	**IPOC Station P**	**2.63**	**290**	⇑*i* P		**Pn**	**03 39 10.4**	**+1.3**
PB09				*i* S		**S**	**03 39 45.3**	**-0.4**
PB09				IAML			03 39 50.0	
	comp=E,11μm,0.2s							
PB09	**IPOC Station P**	**2.63**	**290**			**Pn**	**03 39 10.2**	**+1.2**
PB09				S		**S**	**03 39 45.7**	**0.0**
PB09	**IPOC Station P**	**2.63**	**290**	*i* P		**Pn**	**03 39 10.2**	**+1.2**
PB09				IAML			03 39 53.2	
	comp=Z,7μm,0.2s							
PB15	**IPOC Station P**	**2.70**	**259**	⇑*i* P		**Pn**	**03 39 10.4**	**+0.6**
PB15				*i* S		**S**	**03 39 46.1**	**-0.9**
PB15	**IPOC Station P**	**2.70**	**259**			**Pn**	**03 39 10.5**	**+0.6**
PB15				S		**S**	**03 39 47.2**	**+0.1**
PB15	**IPOC Station P**	**2.70**	**259**	*i* P		**Pn**	**03 39 10.5**	**+0.6**
PB15				IAML			03 39 53.2	
	comp=Z,50μm,0.3s							
PB06	**IPOC Station P**	**2.76**	**270**	⇑*i* P		**Pn**	**03 39 10.8**	**+0.4**
PB06				*i* S		**S**	**03 39 46.7**	**-1.4**
PB06				IAML			03 39 50.6	
	comp=E,16μm,0.4s							
PB06	**IPOC Station P**	**2.76**	**270**			**Pn**	**03 39 11.0**	**+0.6**
PB06				S		**S**	**03 39 48.1**	**0.0**
PB06	**IPOC Station P**	**2.76**	**270**	*i* P		**Pn**	**03 39 10.8**	**+0.4**
PB06				IAML			03 39 52.2	
	comp=Z,9μm,0.2s							
PB03	**IPOC Station P**	**3.01**	**283**	⇑*i* P		**Pn**	**03 39 13.6**	**+0.4**
PB03				*i* S		**S**	**03 39 51.5**	**-1.7**
PB03				IAML			03 39 54.3	
	comp=N,26μm,0.3s							
PB03	**IPOC Station P**	**3.01**	**283**	*i* P		**Pn**	**03 39 13.4**	**+0.1**
PB03				IAML			03 39 56.4	
	comp=Z,14μm,0.4s							
PB01	**IPOC Station P**	**3.18**	**301**	⇑*i* P		**Pn**	**03 39 15.6**	**+0.5**
PB01				*eS*		**S**	**03 39 55.3**	**-1.3**
PB01	**IPOC Station P**	**3.18**	**301**			**Pn**	**03 39 15.7**	**+0.6**
PB01				S		**S**	**03 39 56.0**	**-0.6**
PB07	**IPOC Station P**	**3.22**	**288**	⇑*i* P		**Pn**	**03 39 16.0**	**+0.4**
PB07				*i* S		**S**	**03 39 55.1**	**-2.4**
PB07	**IPOC Station P**	**3.22**	**288**			**Pn**	**03 39 16.0**	**+0.4**
PB07				S		**S**	**03 39 55.9**	**-1.6**
PB04	**IPOC Station P**	**3.32**	**276**	⇑*i* P		**Pn**	**03 39 17.0**	**+0.2**
PB04				*i* S		**S**	**03 39 57.0**	**-2.6**
PB04	**IPOC Station P**	**3.32**	**276**			**Pn**	**03 39 17.0**	**+0.2**
PB04	**IPOC Station P**	**3.32**	**276**	*i* P		**Pn**	**03 39 17.1**	**+0.2**
PB04				IAML			03 40 05.0	
	comp=Z,11μm,0.2s							
PB05	**IPOC Station P**	**3.34**	**267**	⇑*i* P		**Pn**	**03 39 17.0**	**0.0**
PB05				*i* S		**S**	**03 39 56.7**	**-3.3**
PB05	**IPOC Station P**	**3.34**	**267**	*i* P		**Pn**	**03 39 17.2**	**+0.2**
PB05				IAML			03 40 02.5	
	comp=Z,5μm,0.5s							
PB02	**IPOC Station P**	**3.38**	**294**	⇑*i* P		**Pn**	**03 39 17.6**	**+0.1**
PB02				*i* S		**S**	**03 39 58.5**	**-2.3**
PB08	**IPOC Station P**	**3.52**	**317**	⇑*i* P		**Pn**	**03 39 20.8**	**+1.4**
PB08				*i* S		**S**	**03 40 04.2**	**0.0**
PB08	**IPOC Station P**	**3.52**	**317**			**Pn**	**03 39 20.8**	**+1.4**
PB08				S		**S**	**03 40 04.7**	**+0.5**
GO02	**Mina Guanaco**	**3.66**	**228**	⇑*i* P		**Pn**	**03 39 21.1**	**+0.2**
GO02				*i* S		**S**	**03 40 05.6**	**-1.5**
GO02	**Mina Guanaco**	**3.66**	**228**			**Pn**	**03 39 21.3**	**+0.4**
GO02				S		**S**	**03 40 05.2**	**-1.9**
PB10	**IPOC Station P**	**3.74**	**257**	⇑*i* P		**Pn**	**03 39 21.5**	**-0.1**
PB10				*i* S		**S**	**03 40 04.7**	**-3.5**
PB10	**IPOC Station P**	**3.74**	**257**			**Pn**	**03 39 21.7**	**+0.1**
PB10	**IPOC Station P**	**3.74**	**257**	*i* P		**Pn**	**03 39 21.6**	**+0.1**
PB10				IAML			03 40 11.2	
	comp=Z,6μm,0.3s							
PATCX	**Punta Patache**	**3.83**	**299**			**Pn**	**03 39 22.4**	**-0.4**
PATCX				S		**S**	**03 40 07.6**	**-2.8**
GO01	**Chusmiza**	**3.91**	**321**	*i* P		**Pn**	**03 39 23.6**	**-0.5**
GO01				*i* S		**S**	**03 40 12.0**	**-0.7**
GO01	**Chusmiza**	**3.91**	**321**			**Pn**	**03 39 23.6**	**-0.5**
GO01				S		**S**	**03 40 12.3**	**-0.4**
PB14	**IPOC Station P**	**3.98**	**241**	⇑*i* P		**Pn**	**03 39 24.6**	**-0.1**
PB14				*i* S		**S**	**03 40 10.7**	**-3.2**
PB14	**IPOC Station P**	**3.98**	**241**			**Pn**	**03 39 24.3**	**-0.4**
PB14	**IPOC Station P**	**3.98**	**241**	*i* P		**Pn**	**03 39 24.7**	**0.0**
PB14				IAML			03 40 16.7	
	comp=Z,8μm,0.3s							
TA01	**Diego Aracena**	**3.98**	**302**	⇑*i* P		**Pn**	**03 39 23.8**	**-0.7**
TA01				*i* S		**S**	**03 40 10.5**	**-3.1**
TA01	**Diego Aracena**	**3.98**	**302**			**Pn**	**03 39 23.9**	**-0.7**
TA02	**Huaiquique**	**4.12**	**306**	*i* P		**Pn**	**03 39 25.4**	**-0.7**
TA02				*i* S		**S**	**03 40 12.8**	**-3.7**
PB11	**IPOC Station P**	**4.12**	**315**	⇑*i* P		**Pn**	**03 39 26.0**	**-0.4**
PB11				*i* S		**S**	**03 40 14.4**	**-2.5**
PB11	**IPOC Station P**	**4.12**	**315**			**Pn**	**03 39 25.9**	**-0.5**
PSGC	**Pisagua**	**4.55**	**313**	⇑*i* P		**Pn**	**03 39 30.2**	**-1.4**
PSGC				*i* S		**S**	**03 40 21.8**	**-4.4**
PSGCX	**Pisagua**	**4.55**	**313**	Pn		**Pn**	**03 39 30.4**	**-1.1**
MNMC	**Minye Minye**	**4.56**	**321**	*i* P		**Pn**	**03 39 32.0**	**+0.1**
MNMC				*i* S		**S**	**03 40 24.9**	**-2.0**
MNMC	**Minye Minye**	**4.56**	**321**	Pn		**Pn**	**03 39 32.0**	**+0.1**
AC02	**Maricunga**	**4.69**	**209**	⇑*i* P		**Pn**	**03 39 33.7**	**0.0**
AC02	**Maricunga**	**4.69**	**209**			**Pn**	**03 39 33.2**	**-0.4**
PB16	**IPOC Station P**	**5.17**	**327**	⇑*i* P		**Pn**	**03 39 40.4**	**+0.6**
PB16	**IPOC Station P**	**5.17**	**327**			**Pn**	**03 39 40.5**	**+0.8**
PB12	**IPOC Station P**	**5.39**	**319**	⇑*i* P		**Pn**	**03 39 40.3**	**-1.8**
PB12	**IPOC Station P**	**5.39**	**319**			**Pn**	**03 39 40.3**	**-1.8**
AP01	**Chacalluta**	**5.59**	**320**	*i* P		**Pn**	**03 39 43.2**	**-1.3**
CYA	**Choya**	**5.72**	**173**	*i* P		**Pn**	**03 39 46.5**	**+0.4**
CYA				*eS*		**S**	**03 40 53.1**	**+0.2**
CYA				IAML			03 40 56.9	
	comp=Z,256nm,3.0s							
LPAZ	**La Paz**	**6.58**	**347**	P		**Pn**	**03 39 59.4**	**+1.7**
LPAZ	**La Paz**	**6.58**	**347**	P		**Pn**	**03 39 58.2**	**+0.5**
LPAZ	**La Paz**	**6.58**	**347**			**Pn**	**03 39 58.2**	**+0.5**
GO04	**Tololo Observa**	**8.31**	**206**			**Pn**	**03 40 17.0**	**-2.4**
SIV	**San Ignacio**	**8.49**	**39**	P		**Pn**	**03 40 20.0**	**-1.7**
	comp=Z,135nm,0.3s,baz=231,slow=11,SNR=592							
SIV				S		S	03 41 45.6	-12
	baz=234,slow=13,SNR=3.8							
CFA	**Coronel Fontan**	**8.96**	**189**	P		**Pn**	**03 40 25.4**	**-2.1**
	comp=Z,18nm,0.3s,baz=4.5,slow=11,SNR=292							
CFA				S		**S**	**03 42 01.0**	**-7.5**
	comp=Z,95nm,0.3s,baz=137,slow=21,SNR=21							
CO04	**Los Peladeros**	**10.06**	**202**			**Pn**	**03 40 39.5**	**-2.4**
AQDB	**Aquidauana**	**10.37**	**80**	*eP*		**Pn**	**03 40 45.9**	**+0.2**
MT02	**Curacav**	**11.23**	**200**			**Pn**	**03 40 54.4**	**-2.1**
MT05	**Renca**	**11.23**	**198**			**Pn**	**03 40 56.2**	**-0.4**
BO02	**Sierra Bellavi**	**12.56**	**196**			**Pn**	**03 41 12.6**	**-0.7**
TRCB	**Terra Rica**	**12.87**	**93**	*eP*		**Pn**	**03 41 17.6**	**+0.3**
GO05	**Huala**	**13.09**	**200**			**Pn**	**03 41 18.0**	**-1.9**
PTGB	**Pitanga**	**13.44**	**101**	*eP*		**Pn**	**03 41 24.6**	**+0.2**
C2SB	**Chapadao do Su**	**13.45**	**75**	*eP*		**Pn**	**03 41 25.0**	**+0.6**
ITAB	**Concordia**	**13.85**	**112**	*eP*		**Pn**	**03 41 29.2**	**0.0**
CPSB	**Cacapava Do Su**	**14.02**	**126**	*eP*		**Pn**	**03 41 30.7**	**-0.6**
CPSB				*eS*		**S**	**03 44 07.2**	**+0.9**
SAML	**Samuel**	**14.09**	**14**	P		**Pn**	**03 41 31.8**	**-0.6**
SAML	**Samuel**	**14.09**	**14**	P		**Pn**	**03 41 31.8**	**-0.6**
PCMB	**Pacaembu**	**14.24**	**88**	*eP*		**Pn**	**03 41 33.4**	**-0.8**
LPA	**La Plata**	**14.29**	**150**	*eP*		Pn	**03 41 26.1**	**-8.5**
LPA				sP		P	03 42 25.7	+50
LPA				S		S	03 44 01.2	-11
LPA				PCP		**PcP**	**03 46 30.3**	**-4.5**
LPA				SCS		**ScS**	**03 53 19.3**	**-5.5**
LPA				SKIKS			04 01 03.6	
BI02	**San Fabin de**	**14.46**	**195**			**Pn**	**03 41 35.7**	**-1.0**
NNA	**Nana**	**14.49**	**316**	P		**P**	**03 41 38.8**	**+0.9**
	comp=Z,15nm,0.3s,baz=158,slow=11,SNR=62							
NNA	**Nana**	**14.49**	**316**	*d* iP		**Pn**	**03 41 37.4**	**+0.2**
NNA	**Nana**	**14.49**	**316**	P		**P**	**03 41 38.7**	**+0.8**
PLTB	**Pedras Altas**	**14.62**	**131**	*eP*		**Pn**	**03 41 37.3**	**-1.4**
PLTB				*eS*		**S**	**03 44 20.9**	**+0.5**
ARAG	**Araguaiana, MT**	**15.60**	**66**	*eP*		**Pn**	**03 41 50.5**	**-0.1**
ARAG				*eS*		**S**	**03 44 42.6**	**-0.1**
CLDB	**Colider**	**15.67**	**43**	*eP*		**P**	**03 41 49.2**	**-1.7**
CLDB				*eS*		**S**	**03 44 42.1**	**-2.2**
FRTB	**Fartura**	**15.68**	**96**	*eP*		**P**	**03 41 51.0**	**-0.1**
FRTB				*eS*		**S**	**03 44 44.5**	**0.0**
TIJ01	**Guaruva-PR**	**16.27**	**103**	*eP*		**Pn**	**03 41 58.3**	**-0.4**
LC01	**Cunco**	**16.73**	**194**	P		**P**	**03 42 00.7**	**-1.7**
LC01				IAmb		IAmb	03 42 06.5	
	comp=Z,67nm,1.0s							
SPB	**Sao Paulo**	**17.63**	**97**	P		**P**	**03 42 11.7**	**-0.7**
SPB	**Sao Paulo**	**17.63**	**97**	*eP*		**P**	**03 42 12.1**	**-0.3**
SPB				*eS*		**S**	**03 45 24.0**	**+0.2**
PET01	**Itanhaem-SP**	**17.78**	**99**	*eP*		**P**	**03 42 13.6**	**-0.3**
PET01				*eS*		**S**	**03 45 26.4**	**-0.4**
IPMB	**Ipameri, GO**	**17.86**	**78**	*eP*		**P**	**03 42 14.8**	**-0.2**
IPMB				*eS*		**S**	**03 45 27.9**	**-0.7**
VAO	**Valinhos**	**18.08**	**95**	*eP*		**P**	**03 42 16.7**	**-0.7**
VAO				*eS*		**S**	**03 45 32.0**	**-1.0**
PLCA	**Paso Flores**	**18.25**	**190**	P		**P**	**03 42 19.4**	**+0.3**
	comp=Z,4.3nm,0.3s,baz=11,slow=12,SNR=215							
PLCA	**Paso Flores**	**18.25**	**190**	P		**P**	**03 42 18.9**	**-0.1**
PLCA				pmax		pmax		
	comp=Z,94nm,0.7s							
PLCA	**Paso Flores**	**18.25**	**190**	P		**P**	**03 42 18.9**	**-0.1**
PLCA				IAmb		IAmb	03 42 21.2	
	comp=Z,94nm,0.7s							
PLCA	**Paso Flores**	**18.25**	**190**	*eP*		**P**	**03 42 18.7**	**-0.3**
PLCA				*eS*		**S**	**03 45 36.3**	**+0.3**
BDFB	**Brasilia**	**18.89**	**71**	P		**P**	**03 42 26.1**	**-0.1**
	comp=Z,80nm,0.3s,baz=248,slow=12,SNR=658							
BDFB	**Brasilia**	**18.89**	**71**	P		**P**	**03 42 25.9**	**-0.4**
BDFB				pmax		pmax		
	comp=Z,1μm,0.8s							
BDFB	**Brasilia**	**18.89**	**71**	P		**P**	**03 42 25.9**	**-0.4**
ATAH	**Atahualpa**	**19.23**	**322**	P		**Pn**	**03 42 33.2**	**-0.7**
	comp=Z,2.9nm,0.3s,baz=156,slow=9.0,SNR=39							
PARB	**Paraibuna**	**19.30**	**96**	*eP*		**P**	**03 42 30.4**	**-0.1**
PARB				*eS*		**S**	**03 45 56.7**	**-0.4**
LL01	**San Ignacio de**	**20.18**	**193**	P		**P**	**03 42 37.7**	**-1.9**
LL01				IAmb		IAmb	03 42 55.4	
	comp=Z,57nm,0.7s							
BSCB	**Bom Sucesso**	**20.32**	**89**	*eP*		**P**	**03 42 40.8**	**-0.6**
BSCB				*eS*		**S**	**03 46 15.9**	**-0.7**
MAN01	**Angra dos Reis**	**20.85**	**95**	*eP*		**P**	**03 42 46.1**	**-1.0**
MAN01				*eS*		**S**	**03 46 24.9**	**-1.3**
VAS01	**Vassouras-RJ**	**21.38**	**93**	*eP*		**P**	**03 42 51.7**	**-0.8**
JANB	**Januaria**	**22.39**	**74**	*eP*		**P**	**03 43 00.3**	**-1.8**
PTGA	**Pitinga**	**22.80**	**17**	P		**P**	**03 43 04.8**	**-0.9**
	comp=Z,99nm,0.6s,baz=203,slow=12,SNR=94							
PTGA				S		**S**	**03 46 52.7**	**-5.2**
	comp=Z,20nm,1.0s,baz=307,slow=22,SNR=5.6							
PTGA	**Pitinga**	**22.80**	**17**	P		**P**	**03 43 03.8**	**-1.9**
PTGA						**S**	**03 46 52.3**	**-5.6**
PTGA	**Pitinga**	**22.80**	**17**	*eP*		**P**	**03 43 04.5**	**-1.2**
PTGA				*eS*		**S**	**03 46 55.7**	**-2.2**
SMTB	**Santa Maria do**	**22.86**	**56**	*eP*		**P**	**03 43 05.3**	**-1.0**
PRPB	**Parauapebas**	**23.08**	**47**	*eP*		**P**	**03 43 06.0**	**-2.3**
MALB	**Monte Alegre**	**23.96**	**32**	*eP*		**P**	**03 43 14.9**	**-1.3**
SJMB	**Sao Joao De Ma**	**24.08**	**85**	*eP*		**P**	**03 43 16.4**	**-1.0**
PTLC	**Puerto Leguiza**	**24.13**	**340**	*eP*		**P**	**03 43 14.5**	**-3.3**
BSFB	**Barra de Sao F**	**24.36**	**86**	*eP*		**P**	**03 43 18.9**	**-1.0**
RIB01	**Linhares ES**	**24.67**	**87**	*eP*		**P**	**03 43 21.1**	**-1.5**
PUAC	**Puerto Asis, P**	**25.11**	**336**	*eP*		**P**	**03 43 28.3**	**+1.6**
NAN01	**Guarapari, ES**	**25.27**	**84**	*eP*		**P**	**03 43 26.1**	**-2.0**
CUSE	**Cuicocha Este**	**25.63**	**332**	*eP*		**P**	**03 43 31.9**	**+0.1**
MACC	**Macarena, Meta**	**25.73**	**343**	*eP*		**P**	**03 43 31.9**	**-0.3**
GUVC	**San Jose del G**	**25.81**	**346**	*eP*		**P**	**03 43 33.3**	**+0.3**
GCUF	**Volcan Galeras**	**26.02**	**335**	*eP*		**P**	**03 43 38.5**	**+3.1**
CRUC	**La Cruz**	**26.19**	**336**	*eP*		**P**	**03 43 40.0**	**+3.3**
GARC	**Garzon, Huila**	**26.25**	**340**	*eP*		**P**	**03 43 37.2**	**0.0**
SOTA	**Rioblanco**	**26.58**	**337**	*eP*		**P**	**03 43 42.3**	**+1.9**
PCON	**Cinco Dias**	**26.69**	**338**	*eP*		**P**	**03 43 43.0**	**+1.6**
BETC	**Betania**	**26.70**	**340**	*eP*		**P**	**03 43 42.8**	**+1.8**
BBAC	**Balboa, Cauca**	**26.71**	**336**	*eP*		**P**	**03 43 42.3**	**+1.0**
NBIT	**Itapeh - BA**	**26.81**	**78**	*eP*		**P**	**03 43 41.2**	**-0.7**
GDU01	**Guandu, BA**	**27.14**	**75**	*eP*		**P**	**03 43 43.1**	**-1.7**
PTGC	**Puerto Gaitan,**	**27.31**	**348**	*eP*		**P**	**03 43 45.5**	**-0.9**
PRAC	**Prado**	**27.51**	**342**	*eP*		**P**	**03 43 48.3**	**+0.1**
VILC	**Villavicencio,**	**27.57**	**345**	*eP*		**P**	**03 43 49.9**	**+1.0**
ORTC	**Ortega, Tolima**	**27.80**	**341**	*eP*		**P**	**03 43 50.8**	**+0.1**
NBPN	**Ponto Novo - B**	**27.83**	**69**	*eP*		**P**	**03 43 49.3**	**-1.7**
CHIC	**Chingaza**	**28.08**	**345**	*eP*		**P**	**03 43 53.0**	**-0.6**
YOTC	**Yotoco, Valle**	**28.22**	**339**	*eP*		**P**	**03 43 53.7**	**-0.8**
ROSC	**El Rosal**	**28.43**	**344**	P		**P**	**03 43 57.1**	**+0.4**
	comp=Z,8.6nm,0.5s,baz=145,slow=11,SNR=6.8							
ROSC	**El Rosal**	**28.43**	**344**	*eP*		**P**	**03 43 57.5**	**+0.8**
ROSC	**El Rosal**	**28.43**	**344**	P		**P**	**03 43 56.5**	**-0.2**
ROSC				IAmb		IAmb	03 44 09.4	
	comp=Z,23nm,0.6s							
MALC	**Bahia Malaga**	**28.59**	**337**	*eP*		**P**	**03 44 00.1**	**+2.5**
RREF	**El Recreo**	**28.77**	**342**	*eP*		**P**	**03 44 01.5**	**+1.5**
GUY2C	**Guyana, Caldas**	**29.09**	**342**	*eP*		**P**	**03 44 02.3**	**-0.3**
SPBC	**San Pablo de B**	**29.15**	**345**	*eP*		**P**	**03 44 03.0**	**+0.3**
RUSC	**La Rusia**	**29.16**	**347**	*eP*		**P**	**03 44 03.2**	**0.0**
RUSC	**La Rusia**	**29.16**	**347**	P		**P**	**03 44 02.0**	**-1.2**
NORC	**Norcasia**	**29.27**	**343**	*eP*		**P**	**03 44 03.3**	**-0.5**
ROSB	**Rosrio**	**29.38**	**51**	*eP*		**P**	**03 44 02.3**	**-2.4**
EFI	**East Falkland**	**29.63**	**169**	*i* P		**P**	**03 44 06.6**	**+0.2**
EFI				pmax		pmax		
	comp=Z,139nm,0.9s							
NBLA	**Lagarto - SE**	**29.86**	**72**	*eP*		**P**	**03 44 06.9**	**-2.0**
CBOC	**Ciudad Bolivar**	**29.88**	**341**	*eP*		**P**	**03 44 09.1**	**-0.1**
HELC	**Santa Helena**	**30.05**	**342**	*eP*		**P**	**03 44 08.5**	**-2.5**
PTBC	**PUERTO BERRIO,**	**30.10**	**344**	*eP*		**P**	**03 44 07.9**	**-3.1**
NBPS	**Pedro II - PI**	**30.39**	**57**	*eP*		**P**	**03 44 12.2**	**-1.5**
PAMC	**Pamplona, Colo**	**30.48**	**348**	*eP*		**P**	**03 44 14.4**	**-0.5**
NBTA	**Tacaratu-PE**	**30.50**	**68**	*eP*		**P**	**03 44 13.4**	**-1.2**
NBMA	**Muriti-CE**	**30.82**	**65**	*eP*		**P**	**03 44 16.2**	**-1.2**
MDP	**Montagnes des**	**30.84**	**28**	P		**P**	**03 44 16.8**	**-0.7**
	comp=Z,143nm,0.7s,baz=204,slow=9.4,SNR=72							
ZARC	**Zaragoza, Cauc**	**31.11**	**344**	*eP*		**P**	**03 44 18.2**	**-1.7**
NBPB	**Pedra_Branca-C**	**31.17**	**61**	*eP*		**P**	**03 44 18.7**	**-1.7**
UREC	**San Jos de Ur**	**31.54**	**343**	*eP*		**P**	**03 44 22.6**	**-1.0**
SDV	**Santo Domingo**	**31.68**	**352**	*eP*		**P**	**03 44 24.6**	**-0.4**
SDV	**Santo Domingo**	**31.68**	**352**	P		**P**	**03 44 24.6**	**-0.4**
SDV				IAmb		IAmb	03 44 28.5	
	comp=Z,46nm,0.9s							
SDV	**Santo Domingo**	**31.68**	**352**	*eP*		**P**	**03 44 24.5**	**-0.5**
NBAN	**Anadia - AL**	**31.79**	**71**	*eP*		**P**	**03 44 23.6**	**-2.2**
USHA	**Ushuaia**	**32.08**	**182**	P		**P**	**03 44 29.6**	**+1.8**
	comp=Z,21nm,0.6s,baz=179,slow=3.0,SNR=7.1							
NBMO	**Morrinhos-CE**	**32.16**	**57**	*eP*		**P**	**03 44 26.1**	**-2.9**
SMLC	**San Martn de**	**32.19**	**346**	*eP*		**P**	**03 44 25.9**	**-3.3**
PLCV	**Puerto La Cruz**	**32.75**	**4**	P		**P**	**03 44 34.4**	**+0.2**
PCRV	**Puerto La Cruz**	**32.76**	**4**	P		**P**	**03 44 34.4**	**+0.1**
	comp=Z,50nm,0.7s,baz=175,slow=4.1,SNR=17							
NBCL	**Cascavel-CE**	**32.98**	**60**	*eP*		**P**	**03 44 34.5**	**-1.7**
ARGC	**Ariguani, Magd**	**33.25**	**346**	*eP*		**P**	**03 44 34.8**	**-3.7**
SJCC	**San Jacinto, C**	**33.51**	**345**	*eP*		**P**	**03 44 39.7**	**-1.0**
RCBR	**Riachuelo**	**34.04**	**65**	P		**P**	**03 44 46.6**	**-0.8**
	comp=Z,169nm,0.7s,baz=225,slow=11,SNR=84							
RCBR	**Riachuelo**	**34.04**	**65**	*eP*		**P**	**03 44 44.2**	**-1.1**
NBPV	**Pedro Velho**	**34.24**	**67**	*eP*		**P**	**03 44 45.9**	**-1.1**
TOSP	**Speyside**	**34.34**	**11**	P		**P**	**03 44 48.6**	**+0.8**
URIC	**Uribia, Colomb**	**34.63**	**351**	P		**P**	**03 44 47.7**	**-2.7**
GRGR	**Grenville**	**34.99**	**8**	P		**P**	**03 44 52.6**	**-0.8**
SVB	**Belmont**	**36.16**	**9**	P		**P**	**03 45 02.7**	**-0.7**
MCLT	**Moule a Chique**	**36.64**	**9**	P		**P**	**03 45 06.5**	**-0.9**
JTS	**Las Juntas de**	**37.43**	**329**	P		**P**	**03 45 16.1**	**+2.0**
	comp=Z,83nm,1.1s,baz=206,slow=4.2,SNR=23							
JTS	**Las Juntas de**	**37.43**	**329**	P		**P**	**03 45 16.3**	**+2.2**
JTS				IAmb		IAmb	03 45 18.5	
	comp=Z,99nm,1.1s							
FDF	**Fort de France**	**37.62**	**9**	P		**P**	**03 45 12.9**	**-2.7**
FDF				pmax		pmax		
	comp=Z,545nm,1.0s							
FDF	**Fort de France**	**37.62**	**9**	P		**P**	**03 45 12.9**	**-2.7**
HOPE	**Hope Point**	**38

Y52A Lilburn 58.70 343 IAmb IAmb 03 47 57.7
comp=Z,37nm,0.8s
VNA2 Neumayer--Watz 58.78 161 P **P** **03 47 57.4 +1.0**
baz=289,slow=7.6
LRAL Lakeview Retre 58.78 340 P **P** **03 47 57.0 +0.1**
baz=158,SNR=26
LRAL Lakeview Retre 58.78 340 P **P** **03 47 56.3 -0.5**
LRAL IAmb IAmb 03 47 57.7
comp=Z,26nm,0.6s
X54A Belton 58.91 345 P **P** **03 47 58.8 +1.1**
baz=163,SNR=32
W57A Gilead 58.96 347 P **P** **03 47 58.8 +0.8**
baz=165,SNR=24
W57A Gilead 58.96 347 IAmb IAmb 03 47 60.0
comp=Z,55nm,0.9s
V61A Roper 58.97 351 P **P** **03 47 58.5 +0.5**
baz=169
PAULI Pauline 59.04 345 IAmb IAmb 03 48 00.8
comp=Z,54nm,0.7s
V60A Jim Taylor Roa 59.05 350 P **P** **03 47 59.3 +0.7**
baz=168
W56A Indian Trail 59.07 347 P **P** **03 47 59.6 +0.8**
baz=165,SNR=26
146A Union 59.10 338 IAmb IAmb 03 48 00.8
comp=Z,59nm,0.9s
V59A Middlesex 59.22 349 P **P** **03 48 00.5 +0.8**
baz=167,SNR=15
KMSC Kings Mountain 59.24 346 P **P** **03 48 01.0 +1.0**
baz=164,SNR=37
VBMS Vicksburg 59.25 336 P **P** **03 48 00.7 +0.7**
baz=154
Z47A Carrollton 59.28 339 IAmb IAmb 03 48 01.5
comp=Z,58nm,0.8s
Y49A Blount Mountai 59.36 341 IAmb IAmb 03 48 02.5
comp=Z,36nm,0.7s
W54A Cherokee Point 59.38 345 P **P** **03 48 02.3 +1.4**
baz=163,SNR=68
V58A Windy Hill, Pi 59.41 348 P **P** **03 48 01.6 +0.5**
baz=166,SNR=17
V58A Windy Hill, Pi 59.41 348 IAmb IAmb 03 48 02.4
comp=Z,24nm,0.7s
BG3 Lake Jocassee 59.47 344 IAmb IAmb 03 48 03.6
comp=Z,33nm,0.8s
U61A Possum Corner 59.48 351 P **P** **03 48 02.0 +0.4**
baz=169
V57A Coltrane Farms 59.63 348 P **P** **03 48 03.1 +0.5**
baz=166,SNR=16
V56A Mocksville 59.70 347 P **P** **03 48 04.3 +1.2**
baz=165,SNR=61
U59A Littleton 59.72 350 P **P** **03 48 03.7 +0.6**
baz=168,SNR=12
U60A Pendleton 59.73 350 P **P** **03 48 03.6 +0.4**
baz=169
FPAL Fort Paine 59.76 342 P **P** **03 48 03.2 -0.4**
FPAL IAmb IAmb 03 48 04.8
comp=Z,47nm,0.7s
W52A Murphy 59.82 344 IAmb IAmb 03 48 05.8
comp=Z,45nm,1.0s
833A Chaparral WMA, 59.82 326 P **P** **03 48 04.8 +0.7**
baz=145,SNR=38
U58A Oxford 59.89 349 P **P** **03 48 04.9 +0.6**
baz=167,SNR=12
V55A Taylorsville 59.89 346 P **P** **03 48 05.7 +1.3**
baz=164,SNR=92
V54A Nebo 59.99 346 P **P** **03 48 06.1 +1.1**
baz=164,SNR=65
143A Socs Landing, 60.01 336 IAmb IAmb 03 48 10.1
comp=Z,41nm,1.1s
U57A Blanch 60.07 348 P **P** **03 48 06.3 +0.8**
baz=166,SNR=24
V53A Saluda 60.09 345 IAmb IAmb 03 48 07.7
comp=Z,44nm,0.8s
U56A King 60.19 347 P **P** **03 48 07.8 +1.3**
baz=165,SNR=21
T59A Double "B" Far 60.28 350 P **P** **03 48 07.5 +0.5**
baz=168,SNR=13
T59A Double "B" Far 60.28 350 IAmb IAmb 03 48 08.8
comp=Z,36nm,1.1s
W50A Signal Mountai 60.30 342 IAmb IAmb 03 48 08.8
comp=Z,65nm,0.8s
CPCT Cooper Cave 60.31 343 P **P** **03 48 06.7 -0.6**
CPCT IAmb IAmb 03 48 08.9
comp=Z,37nm,0.8s
TKL Tuckaleechee C 60.32 344 P **P** **03 48 06.6 -0.7**
TKL pmax pmax
comp=Z,56nm,0.9s
TKL Tuckaleechee C 60.32 344 P **P** **03 48 06.5 -0.7**
TKL IAmb IAmb 03 48 08.7
comp=Z,56nm,0.9s
T60A Surry 60.32 351 P **P** **03 48 07.9 +0.7**
baz=169
Y45A Yeager Farm, C 60.38 338 P **P** **03 48 07.5 -0.3**
SNAA Sanae 60.41 161 P **P** **03 48 08.4 +0.9**
SNAA Sanae 60.41 161 P **P** **03 48 08.5 +0.9**
comp=Z,92nm,0.9s,baz=283,slow=7.2,SNR=218
SNAA Sanae 60.41 161 P **P** **03 48 08.1 +0.5**
T58A Grand View Acr 60.42 349 P **P** **03 48 08.5 +0.6**
baz=167,SNR=16
V52A Sevierville 60.45 344 IAmb IAmb 03 48 09.7
comp=Z,53nm,0.8s
U55A TA2, Sparta 60.48 347 P **P** **03 48 09.4 +1.0**
baz=164,SNR=38
SWET Sewanee 60.49 342 P **P** **03 48 08.2 -0.3**
NATX Nacogdoches 60.49 333 P **P** **03 48 10.3 +1.8**
baz=150,SNR=8.9
V51A Loudon 60.60 343 IAmb IAmb 03 48 10.6
comp=Z,25nm,0.8s
T57A Hurt 60.60 348 P **P** **03 48 10.1 +0.9**
baz=166,SNR=18
T57A Hurt 60.60 348 IAmb IAmb 03 48 11.2
comp=Z,30nm,0.8s
U54A Nelsons Funny 60.67 346 P **P** **03 48 10.7 +1.0**
baz=164,SNR=46
T56A Rocky Mt 60.78 348 P **P** **03 48 11.6 +1.2**
baz=166,SNR=21
PLAL Pickwick Lake 60.92 340 IAmb IAmb 03 48 12.3
comp=Z,41nm,0.9s
OXF Oxford 60.93 338 P **P** **03 48 11.6 +0.2**
baz=156
435B Jarrell 60.97 330 P **P** **03 48 12.3 +0.5**
baz=147,SNR=6.7
S58A Poland Farm, P 60.99 350 P **P** **03 48 12.4 +0.7**
baz=168
S59A Mechanicsville 61.01 350 P **P** **03 48 12.5 +0.6**
baz=169
T55A Pulaski 61.02 347 P **P** **03 48 12.7 +0.7**
baz=165,SNR=46
BLA Blacksburg 61.04 347 P **P** **03 48 13.3 +1.2**
BLA pmax pmax
comp=Z,47nm,1.0s
BLA Blacksburg 61.04 347 P **P** **03 48 12.9 +0.8**
baz=165,SNR=16
BLA Blacksburg 61.04 347 P **P** **03 48 13.3 +1.2**
BLA IAmb IAmb 03 48 15.4
comp=Z,47nm,0.9s
Z41A Richland Creek 61.04 335 P **P** **03 48 12.9 +0.7**
baz=152
T54A Tazewell 61.13 346 P **P** **03 48 13.4 +0.5**
baz=164,SNR=23
T53A Wise 61.27 345 P **P** **03 48 14.0 +0.2**
baz=163,SNR=22
S57A Dark Hollow, R 61.29 349 P **P** **03 48 14.4 +0.6**
baz=167,SNR=12
S57A Dark Hollow, R 61.29 349 IAmb IAmb 03 48 15.4
comp=Z,17nm,0.6s
R58B Mineral 61.30 350 P **P** **03 48 14.5 +0.7**
baz=168,SNR=12
R58B Mineral 61.30 350 IAmb IAmb 03 48 15.5
comp=Z,21nm,0.7s
S56A Natural Bridge 61.32 348 P **P** **03 48 14.6 +0.6**
baz=166,SNR=6.8
R59A King George, V 61.41 351 P **P** **03 48 15.4 +0.8**
baz=169,SNR=5.2
CLTN Cedars of Leba 61.42 342 IAmb IAmb 03 48 16.0
comp=Z,48nm,0.7s
X43A Marvell 61.44 337 P **P** **03 48 15.4 +0.6**
baz=154,SNR=9.3
CBN Corbin Frederi 61.46 350 P **P** **03 48 15.6 +0.7**
baz=168
S55A Lewisburg 61.59 347 P **P** **03 48 17.1 +1.2**
baz=165,SNR=48
R58A Rapidan 61.65 350 P **P** **03 48 16.9 +0.8**
baz=168,SNR=9.0
U49A Red Boiling Sp 61.66 342 IAmb IAmb 03 48 17.3
comp=Z,26nm,0.7s
R57A Stanardsville 61.74 349 P **P** **03 48 17.5 +0.8**
baz=167,SNR=12
JCT Junction City 61.78 328 P **P** **03 48 17.6 +0.4**
baz=145,SNR=30
JCT Junction City 61.78 328 IAmb IAmb 03 48 19.8
comp=Z,53nm,0.8s
S54A Dingess, Beckl 61.79 347 P **P** **03 48 17.9 +0.8**
baz=164,SNR=29
S53A Williamson 61.85 346 P **P** **03 48 17.7 +0.2**
baz=164,SNR=5.7
T50A Nancy 61.88 343 IAmb IAmb 03 48 18.9
comp=Z,30nm,0.8s
WVT Waverly 61.90 341 P **P** **03 48 16.8 -1.1**
WVT pmax pmax
comp=Z,99nm,0.7s
WVT Waverly 61.90 341 P **P** **03 48 17.8 -0.1**
baz=158
WVT Waverly 61.90 341 P **P** **03 48 16.8 -1.1**
WHTX Lake Whitney, 61.92 330 P **P** **03 48 18.3 +0.2**
baz=148,SNR=7.7
WHTX Lake Whitney, 61.92 330 IAmb IAmb 03 48 20.2
comp=Z,52nm,0.9s
Z38A Mt. Pleasant 61.92 333 IAmb IAmb 03 48 20.6
comp=Z,71nm,1.0s
R55A Marlinton 62.01 348 P **P** **03 48 19.8 +1.1**
baz=166,SNR=18
R55A Marlinton 62.01 348 IAmb IAmb 03 48 22.2
comp=Z,45nm,0.9s
Q60A Greensboro 62.02 352 P **P** **03 48 19.6 +1.0**
baz=170
R54A Victor 62.09 347 P **P** **03 48 20.0 +0.9**
baz=165,SNR=28
Q58A Fox Den Farm, 62.23 350 P **P** **03 48 20.7 +0.7**
baz=168,SNR=12
RKT Rikitea 62.41 255 *e*P **P** **03 48 24.1 +2.4**
comp=Z,88nm,1.1s
R53A Hurricane 62.43 346 P **P** **03 48 22.1 +0.8**
baz=164,SNR=18
Q57A Strasburg 62.44 350 P **P** **03 48 22.6 +1.2**
baz=168,SNR=14
MIAR Mount Ida 62.48 335 P **P** **03 48 21.5 -0.2**
MIAR pmax pmax
comp=Z,23nm,0.5s
MIAR Mount Ida 62.48 335 P **P** **03 48 21.5 -0.2**
baz=152,SNR=29
MIAR Mount Ida 62.48 335 P **P** **03 48 21.5 -0.2**
MIAR IAmb IAmb 03 48 23.1
comp=Z,23nm,0.5s
W41B Gary Mavity, V 62.53 336 P **P** **03 48 22.6 +0.6**
baz=153,SNR=12
P61A Hammonton 62.56 353 P **P** **03 48 22.9 +0.8**
baz=171
Q56A Snyder Ridge, 62.58 349 P **P** **03 48 23.4 +1.1**
baz=167,SNR=19
Q55A Buckhannon 62.70 348 P **P** **03 48 24.7 +1.6**
baz=166,SNR=19
P59A Jarrettsville 62.70 351 P **P** **03 48 23.8 +0.7**
baz=170,SNR=7.9
P58A Pank, Wackersv 62.71 351 P **P** **03 48 24.0 +0.9**
baz=169
P60A Greenville 62.79 352 P **P** **03 48 24.3 +0.7**
baz=170
P57A Homestead Farm 62.81 350 P **P** **03 48 24.9 +1.1**
baz=168,SNR=15
P57A Homestead Farm 62.81 350 IAmb IAmb 03 48 26.5
comp=Z,35nm,0.8s
Q54A Coxs Mills 62.83 348 P **P** **03 48 24.8 +0.8**
baz=165,SNR=19
Q54A Coxs Mills 62.83 348 IAmb IAmb 03 48 25.8
comp=Z,55nm,1.1s
Q53A Leroy 62.85 347 P **P** **03 48 24.7 +0.5**
baz=164,SNR=36
TX31 Lajitas Ar. Si 62.88 324 IAmb IAmb 03 48 26.9
comp=Z,23nm,0.8s
TXAR Lajitas Array 62.88 324 P **P** **03 48 25.1 +0.4**
comp=Z,3.8nm,0.4s,baz=148,slow=8.5,SNR=43
TXAR PKPPKP **P'P'df** **04 17 24.2 +1.6**
comp=Z,1.0nm,0.9s,baz=348,slow=5.4,SNR=3.5
LCAR Lake Charles 62.94 338 IAmb IAmb 03 48 26.0
comp=Z,31nm,1.2s
O61A Allentown 62.94 353 P **P** **03 48 25.7 +1.0**
baz=172
P56A Dayton Farm, R 62.97 349 P **P** **03 48 26.2 +1.3**
baz=167
PARMO Parma 63.00 339 P **P** **03 48 25.1 0.0**
Q52A Bidwell 63.11 346 P **P** **03 48 26.2 +0.3**
baz=164,SNR=22
FCAR Ozark Folk Cen 63.12 337 P **P** **03 48 25.2 -0.8**
FCAR IAmb IAmb 03 48 27.1
comp=Z,31nm,1.1s
W39A Magazine 63.13 335 P **P** **03 48 26.6 +0.6**
baz=152,SNR=44
P55A Reedsville 63.15 349 P **P** **03 48 27.0 +0.9**
baz=166,SNR=16
X37A Clayton 63.23 334 IAmb IAmb 03 48 29.2
comp=Z,49nm,0.8s
O60A Telford 63.26 352 P **P** **03 48 27.4 +0.7**
baz=171
O58A Lewisberry 63.27 351 P **P** **03 48 28.3 +1.4**
baz=169,SNR=5.4
MCWV Mont Chateau 63.29 349 P **P** **03 48 27.9 +0.9**
baz=166,SNR=16
O59A Robesonia 63.36 352 P **P** **03 48 28.5 +1.1**
baz=170
P54A Burton 63.36 348 P **P** **03 48 28.2 +0.7**
baz=166,SNR=31
WCI Wyandotte Cave 63.41 343 P **P** **03 48 27.3 -0.4**
baz=160
Q51A Peebles 63.41 345 P **P** **03 48 28.0 +0.2**
baz=163,SNR=12
Q51A Peebles 63.41 345 IAmb IAmb 03 48 29.8
comp=Z,36nm,0.8s
P53A Whipple 63.43 347 P **P** **03 48 28.5 +0.6**
baz=165,SNR=46
O57A Amberson 63.46 351 P **P** **03 48 29.2 +1.1**
baz=168,SNR=7.3
ABTX Abilene, Hawle 63.47 329 P **P** **03 48 28.3 0.0**
baz=146,SNR=27
ABTX Abilene, Hawle 63.47 329 P **P** **03 48 28.6 +0.2**
ABTX IAmb IAmb 03 48 30.3
comp=Z,39nm,0.9s
USIN University of 63.55 341 IAmb IAmb 03 48 29.2
comp=Z,39nm,0.7s
N61A South Mountain 63.57 353 P **P** **03 48 30.4 +1.6**
baz=172
N62A Caumsett State 63.66 354 P **P** **03 48 29.8 +0.4**
baz=173
O56A Blue Knob Stat 63.67 350 P **P** **03 48 30.6 +1.1**
baz=168,SNR=13
O56A Blue Knob Stat 63.67 350 IAmb IAmb 03 48 32.0
comp=Z,27nm,0.8s
P52A Corning 63.72 347 P **P** **03 48 30.0 +0.1**
baz=164,SNR=24
O55A Ligonier 63.73 349 P **P** **03 48 30.8 +0.9**
baz=167,SNR=20
N60A Cedar Hill Far 63.77 353 P **P** **03 48 30.9 +0.8**
baz=171
PAL Palisades 63.78 354 P **P** **03 48 30.9 +0.8**
baz=172
P51A Williamsport 63.78 346 P **P** **03 48 30.0 -0.2**
baz=163,SNR=5.4
P51A Williamsport 63.78 346 IAmb IAmb 03 48 32.0
comp=Z,34nm,0.8s
S44A Carbondale 63.78 340 IAmb IAmb 03 48 31.1
comp=Z,32nm,0.6s
SIUC Southern Illin 63.79 340 IAmb IAmb 03 48 32.8
comp=Z,34nm,0.8s
U40A Yellville 63.80 337 P **P** **03 48 30.1 -0.3**
baz=153,SNR=22
U40A Yellville 63.80 337 IAmb IAmb 03 48 31.9
comp=Z,34nm,1.1s
N59A Stes Game Lan 63.90 352 P **P** **03 48 31.8 +0.9**
baz=170
O54A Avella 63.90 348 P **P** **03 48 31.5 +0.6**
baz=166,SNR=12
O54A Avella 63.90 348 IAmb IAmb 03 48 32.8
comp=Z,32nm,0.8s
SSPA Standing Stone 63.92 350 P **P** **03 48 31.9 +0.8**
SSPA IAmb IAmb 03 48 32.9
comp=Z,18nm,0.7s
N58A Sunbury 63.95 351 P **P** **03 48 32.2 +1.0**
baz=170,SNR=9.0
N58A Sunbury 63.95 351 IAmb IAmb 03 48 33.6
comp=Z,28nm,0.9s
N57A Milroy 63.98 351 P **P** **03 48 32.3 +0.8**
baz=169,SNR=12
M61A Granite Spring 64.07 354 P **P** **03 48 32.0 -0.1**
baz=172
P50A Jamestown 64.07 345 P **P** **03 48 31.8 -0.3**
baz=162,SNR=16
M62A Hamden 64.12 355 P **P** **03 48 33.1 +0.8**
baz=173
O52A Adamsville 64.12 347 P **P** **03 48 32.6 +0.1**
baz=164,SNR=26
O53A New Philadelph 64.13 348 P **P** **03 48 32.9 +0.5**
baz=165,SNR=22
HHAR Hobbs 64.14 336 IAmb IAmb 03 48 34.3
comp=Z,30nm,0.7s
M60A Port Jervis 64.17 353 P **P** **03 48 33.1 +0.4**
baz=172
P49A Miami Univ. Ec 64.22 344 P **P** **03 48 32.4 -0.7**
baz=161,SNR=22
N55A Marion Center 64.23 350 P **P** **03 48 34.0 +0.8**
baz=167,SNR=31
N56A West Decatur 64.26 350 P **P** **03 48 34.0 +0.7**
baz=168,SNR=8.8
O51A Pataskala 64.32 346 P **P** **03 48 33.9 +0.2**
baz=166,SNR=34
W35A Tecumseh 64.34 333 P **P** **03 48 33.2 -0.8**
BLO Bloomington 64.35 343 P **P** **03 48 31.7 -2.2**
BLO pmax pmax
comp=Z,87nm,0.6s
BLO Bloomington 64.35 343 P **P** **03 48 31.7 -2.2**
OLIL Olney 64.39 341 IAmb IAmb 03 48 34.6
comp=Z,21nm,0.8s
M58A Price's Panora 64.44 352 P **P** **03 48 35.7 +1.3**
baz=170,SNR=16
L63A North Scituate 64.44 356 P **P** **03 48 35.1 +0.7**
baz=175,SNR=7.9
U38A Gravette 64.45 335 IAmb IAmb 03 48 37.0
comp=Z,22nm,0.5s
L64A Middleborough 64.47 356 P **P** **03 48 35.6 +1.0**
baz=176
M59A Waymart 64.47 353 P **P** **03 48 35.1 +0.4**
baz=171,SNR=9.5
ACSO Alum Creek Sta 64.48 346 P **P** **03 48 34.8 0.0**
baz=163,SNR=26
M57A Sunshine Farm, 64.49 351 P **P** **03 48 35.8 +1.0**
baz=169,SNR=11
M57A Sunshine Farm, 64.49 351 P **P** **03 48 35.1 +0.3**
M57A IAmb IAmb 03 48 36.9
comp=Z,23nm,0.7s
KSPA Keystone Colle 64.53 352 IAmb IAmb 03 48 37.0
comp=Z,21nm,0.7s
O50A Cable 64.54 346 P **P** **03 48 35.0 -0.2**
baz=162,SNR=15
TUL1 Leonard 64.55 334 P **P** **03 48 35.1 -0.2**
baz=150,SNR=14
TUL1 Leonard 64.55 334 IAmb IAmb 03 48 37.8
comp=Z,29nm,0.8s
N54A Moraine State 64.58 349 P **P** **03 48 36.2 +0.8**
baz=166,SNR=18
N54A Moraine State 64.58 349 IAmb IAmb 03 48 37.9
comp=Z,34nm,0.8s
N53A Lisbon 64.59 348 P **P** **03 48 35.9 +0.5**
baz=165,SNR=14
N53A Lisbon 64.59 348 IAmb IAmb 03 48 37.4
comp=Z,61nm,1.1s
CCM Cathedral Cave 64.76 339 P **P** **03 48 35.7 -0.9**
CCM pmax pmax
comp=Z,115nm,0.6s
CCM Cathedral Cave 64.76 339 P **P** **03 48 36.7 +0.1**
baz=155
CCM Cathedral Cave 64.76 339 P **P** **03 48 35.7 -0.9**
N52A McGinn's Farm, 64.77 347 P **P** **03 48 36.5 -0.1**
baz=164,SNR=14
L60A Shokan 64.78 354 P **P** **03 48 37.9 +1.2**
baz=172,SNR=11
M56A Emporium 64.79 350 P **P** **03 48 37.4 +0.6**
baz=168,SNR=18
M56A Emporium 64.79 350 IAmb IAmb 03 48 38.5
comp=Z,33nm,0.6s
OKCFA Oklahoma City 64.81 332 IAmb IAmb 03 48 38.5
comp=Z,35nm,0.6s
Q44A Meyer Farm, Va 64.82 341 P **P** **03 48 35.1 -1.8**
Q44A IAmb IAmb 03 48 37.4
comp=Z,29nm,1.0s
WMOK Wichita Mounta 64.82 331 P **P** **03 48 36.7 -0.4**
baz=147,SNR=16
M55A Ridgway 64.87 350 P **P** **03 48 37.9 +0.6**
baz=168,SNR=14
M55A Ridgway 64.87 350 IAmb IAmb 03 48 39.4
comp=Z,43nm,0.9s
NVL N'lazarevskaya 64.91 159 i*P* **P** **03 48 35.3 -1.9**
NVL *eS* **S** **03 56 56.1 -4.0**
NVL pmax pmax
comp=Z,110nm,0.8s
L61A Hillsdale 1, H 64.92 354 P **P** **03 48 38.7 +1.1**
baz=173
P46A Rosedale 64.95 343 IAmb IAmb 03 48 38.3
comp=Z,31nm,0.7s
N51A Ashland 65.01 347 P **P** **03 48 38.0 -0.2**
baz=164,SNR=19
N51A Ashland 65.01 347 IAmb IAmb 03 48 39.5
comp=Z,63nm,0.9s
O48A Farmland 65.02 344 P **P** **03 48 37.5 -0.7**
baz=161,SNR=15
L58A Harry Jones Me 65.02 352 P **P** **03 48 39.1 +0.9**
baz=170,SNR=22
N50A Nevada 65.03 346 P **P** **03 48 38.3 0.0**
baz=163,SNR=12
M54A Oil Creek Stat 65.06 349 P **P** **03 48 39.2 +0.8**
baz=167,SNR=23
M54A Oil Creek Stat 65.06 349 P **P** **03 48 39.5 +1.0**
L59A Walton 65.07 353 P **P** **03 48 39.6 +1.0**
baz=171,SNR=16
L59A Walton 65.07 353 P **P** **03 48 39.7 +1.2**
HRV Adam Dziewonsk 65.08 356 P **P** **03 48 38.8 +0.3**
HRV pmax pmax
comp=Z,33nm,0.8s
HRV Adam Dziewonsk 65.08 356 P **P** **03 48 39.5 +1.0**
baz=175
HRV Adam Dziewonsk 65.08 356 P **P** **03 48 38.8 +0.3**
HRV IAmb IAmb 03 48 40.8
comp=Z,33nm,0.8s
L61B Northampton 65.10 355 P **P** **03 48 39.9 +1.2**
baz=174,SNR=6.3
L57A Andrews Acres 65.11 352 P **P** **03 48 39.5 +0.7**
baz=169,SNR=9.3
M53A WI Miller and 65.17 348 P **P** **03 48 39.8 +0.6**
baz=166,SNR=16
BINY Binghamton 65.19 352 P **P** **03 48 40.3 +1.0**
baz=170,SNR=27
BINY Binghamton 65.19 352 P **P** **03 48 40.2 +0.9**
K63A Dunstable 65.26 356 P **P** **03 48 40.9 +1.3**
baz=175
K62A Royalston 65.28 355 P **P** **03 48 41.1 +1.2**
baz=174
L56A Greenwood 65.34 351 P **P** **03 48 40.6 +0.3**
baz=169,SNR=18
L56A Greenwood 65.34 351 IAmb IAmb 03 48 42.5
comp=Z,64nm,1.1s
M51A Elyria 65.37 347 P **P** **03 48 40.7 +0.3**
baz=164,SNR=9.4
K61A Williamstown 65.37 355 P **P** **03 48 41.2 +0.8**
baz=173,SNR=8.2
K60A Five Rivers En 65.37 354 P **P** **03 48 41.8 +1.4**
baz=172
M52A Chesterland 65.40 348 P **P** **03 48 40.9 +0.2**
baz=165,SNR=6.4
M52A Chesterland 65.40 348 IAmb IAmb 03 48 42.4
comp=Z,37nm,0.8s
L55A Hinsdale 65.52 350 P **P** **03 48 41.9 +0.5**
baz=168,SNR=8.8
N48A Decatur 65.55 345 P **P** **03 48 41.2 -0.4**
baz=161,SNR=16
L53A Girard 65.60 349 P **P** **03 48 42.1 +0.3**
baz=166,SNR=19
M50A Fremont 65.62 346 P **P** **03 48 41.8 -0.1**
baz=163,SNR=12
M50A Fremont 65.62 346 IAmb IAmb 03 48 43.4
comp=Z,58nm,0.8s
K59A Cooperstown 65.63 353 P **P** **03 48 43.2 +1.1**
baz=172,SNR=38
SFIN Lafayette 65.63 343 P **P** **03 48 41.1 -1.0**
baz=159,SNR=28
MNTX Cornudas Mount 65.65 324 P **P** **03 48 42.1 -0.3**
baz=141,SNR=70
MNTX Cornudas Mount 65.65 324 P **P** **03 48 41.6 -0.9**
MNTX IAmb IAmb 03 48 44.0
comp=Z,36nm,1.0s
K58A Earlville 65.71 353 P **P** **03 48 43.3 +0.8**
baz=171,SNR=36
T35A Sooner Cattle 65.71 334 IAmb IAmb 03 48 45.4
comp=Z,52nm,1.1s
L54A Sinclairville 65.71 350 P **P** **03 48 43.6 +1.0**
baz=167,SNR=33
ERPA Erie 65.71 349 P **P** **03 48 42.9 +0.4**
baz=166,SNR=27

K57A **Scipio Center** 65.78 352 P P 03 48 43.6 +0.6
baz=170,SNR=15
O44A **Mansfield** 65.81 342 IAmb IAmb 03 48 43.5
comp=Z,39nm,0.6s
J62A **Henniker** 65.81 356 P P 03 48 44.3 +1.1
baz=175,SNR=8.4
J63A **Strafford** 65.82 356 P P 03 48 44.0 +0.8
baz=175
K56A **Middlesex** 65.86 351 P P 03 48 44.2 +0.6
baz=169,SNR=14
M49A **Liberty Center** 65.89 346 P P 03 48 43.6 -0.2
baz=162,SNR=19
J60A **Lant Hill Farm** 65.95 355 P P 03 48 45.2 +1.1
baz=173,SNR=5.1
K54A **Basiliko Farm,** 65.97 350 P P 03 48 45.0 +0.8
baz=168,SNR=11
MMNY **Mt. Morris Dam** 65.97 351 IAmb IAmb 03 48 47.0
comp=Z,58nm,0.7s
J61A **Chester** 65.98 355 P P 03 48 45.4 +1.1
baz=174
K55A **Perry** 65.99 351 P P 03 48 44.9 +0.4
baz=168,SNR=10
MSTX **Muleshoe** 66.08 328 P P 03 48 45.3 +0.1
baz=143,SNR=58
M47A **Cromwell** 66.17 344 P P 03 48 45.2 -0.4
baz=161,SNR=5.8
L50A **Kingsville** 66.18 347 P P 03 48 45.4 -0.1
baz=164
J58A **Remsen** 66.25 353 P P 03 48 46.7 +0.7
baz=171,SNR=12
J58A **Remsen** 66.25 353 IAmb IAmb 03 48 47.9
comp=Z,29nm,0.7s
J59A **Piesco** 66.27 354 P P 03 48 47.3 +1.1
baz=172,SNR=56
AMTX **Amarillo** 66.28 329 P P 03 48 46.8 +0.3
baz=145
P40A **Paris** 66.36 339 P P 03 48 46.2 -0.5
P40A IAmb IAmb 03 48 48.6
comp=Z,35nm,0.7s
J56A **Wolcott** 66.36 352 P P 03 48 47.2 +0.5
baz=170,SNR=15
J56A **Wolcott** 66.36 352 P P 03 48 46.6 0.0
J57A **Williamstown** 66.39 353 P P 03 48 47.3 +0.5
baz=170,SNR=8.8
I64A **Boothbay** 66.39 358 P P 03 48 47.8 +1.0
baz=177,SNR=9.4
HDIL **Hopedale** 66.42 341 P P 03 48 46.3 -0.8
baz=157,SNR=22
I62A **Tamworth** 66.42 356 P P 03 48 48.1 +1.0
baz=175
L48A **N Adams** 66.44 346 P P 03 48 47.0 -0.3
baz=162,SNR=29
K52A **Tillsonburg** 66.48 349 P P 03 48 48.0 +0.5
baz=166,SNR=7.7
J55A **Hilton** 66.48 351 P P 03 48 47.9 +0.4
baz=169,SNR=5.7
I60A **Shoreham** 66.54 355 P P 03 48 48.5 +0.7
baz=173,SNR=18
I61A **Oroboro, Fairl** 66.54 356 P P 03 48 48.9 +1.1
baz=174,SNR=15
I59A **Olmsteadville** 66.54 354 P P 03 48 48.4 +0.6
baz=172,SNR=21
I58A **Old Forge** 66.55 353 P P 03 48 48.5 +0.6
baz=171,SNR=19
I63A **Otisfield** 66.56 357 P P 03 48 48.9 +1.0
baz=176,SNR=11
K51A **Iona Station** 66.57 348 P P 03 48 48.2 +0.2
baz=165,SNR=6.5
AAM **Ann Arbor** 66.61 346 P P 03 48 48.8 +0.6
baz=163
AAM **Ann Arbor** 66.61 346 IAmb IAmb 03 48 49.5
comp=Z,29nm,0.8s
J54A **Appleton** 66.61 350 P P 03 48 48.9 +0.6
baz=168
J54A **Appleton** 66.61 350 IAmb IAmb 03 48 50.2
comp=Z,40nm,0.9s
LIC **Lamto** 66.69 72 *eP* P 03 48 47.7 -1.7
comp=Z,128nm,0.7s
NCB **Newcomb** 66.75 354 IAmb IAmb 03 48 51.5
comp=Z,30nm,1.0s
LBNH **Lisbon** 66.83 356 P P 03 48 50.4 +0.7
LBNH *PP pP 03 49 38.7 -3.9
LBNH pmax pmax
comp=Z,47nm,0.9s
LBNH **Lisbon** 66.83 356 P P 03 48 50.6 +1.0
baz=174,SNR=14
LBNH **Lisbon** 66.83 356 P P 03 48 50.4 +0.7
LBNH IAmb IAmb 03 48 52.3
comp=Z,47nm,0.8s
LBNH pP pP 03 49 38.7 -3.9
K50A **Casco** 66.84 347 P P 03 48 49.6 -0.1
baz=164,SNR=18
I57A **Carthage** 66.87 353 P P 03 48 50.5 +0.6
baz=171,SNR=15
J52A **Paris** 66.88 349 P P 03 48 50.8 +0.8
baz=166,SNR=27
HSIG 66.89 318 P P 03 48 51.0 +0.6
HSIG IAmb IAmb 03 48 53.4
comp=Z,52nm,1.1s
TIC **Toumodi** 66.89 72 *eP* P 03 48 49.3 -1.4
P38A **Dawn** 66.95 338 P P 03 48 50.0 -0.6
L46A **Eue Claire** 66.96 344 P P 03 48 49.9 -0.6
baz=160,SNR=10.0
KIC **Kosan Boka** 67.00 72 *eP* P 03 48 50.3 -1.1
comp=Z,178nm,0.7s
K49A **Clarkson** 67.02 347 P P 03 48 50.5 -0.4
baz=163
PECO **Prince Edward** 67.03 352 P P 03 48 51.8 +0.9
WVL **Waterville** 67.03 358 IAmb IAmb 03 48 52.9
comp=Z,30nm,0.9s
N41A **Harden Midland** 67.04 340 IAmb IAmb 03 48 51.9
comp=Z,65nm,1.0s
DBIC **Dimbokro** 67.04 72 P P 03 48 50.5 -1.2
comp=Z,98nm,0.8s,baz=218,slow=6.4,SNR=72
DBIC pP pP 03 49 45.7 +1.2
comp=Z,37nm,0.8s,baz=198,slow=7.1,SNR=3.0
DBIC **Dimbokro** 67.04 72 P P 03 48 49.6 -2.0
DBIC pP 03 49 42.5 -2.1
H64A **Troy** 67.09 358 P P 03 48 52.0 +0.8
baz=177,SNR=7.3
HAL **Halifax** 67.10 2 P P 03 48 50.9 -0.4
HAL pmax pmax
comp=Z,36nm,0.8s
HAL **Halifax** 67.10 2 P P 03 48 50.9 -0.4
HAL IAmb IAmb 03 48 53.4
comp=Z,36nm,0.8s
H62A **Milan** 67.11 356 P P 03 48 52.8 +1.4
baz=175,SNR=8.3
H62A **Milan** 67.11 356 P P 03 48 51.7 +0.3
H61A **Lyndonville** 67.12 356 P P 03 48 52.2 +0.8
baz=174,SNR=15
H65A **Eastbrook** 67.12 359 P P 03 48 51.9 +0.5
baz=178,SNR=9.3
EMMW **East Machias** 67.12 359 IAmb IAmb 03 48 53.3
comp=Z,27nm,0.8s
H63A **New Sharon** 67.14 357 P P 03 48 52.6 +1.0
baz=176,SNR=15
H58A **Gabriels** 67.19 354 P P 03 48 52.2 +0.3
baz=172,SNR=29
K48A **Perry** 67.19 346 P P 03 48 51.7 -0.3
baz=162,SNR=37
H66A **Whiting** 67.20 359 P P 03 48 52.5 +0.6
baz=179,SNR=11
H60A **Morristown** 67.20 355 P P 03 48 52.6 +0.7
baz=174,SNR=7.9
K47A **Vermontville** 67.26 345 P P 03 48 52.0 -0.4
baz=162,SNR=16
I53A **Kortright Cn E** 67.30 350 P P 03 48 52.9 +0.3
baz=167,SNR=7.1
H59A **Cadyville** 67.37 355 P P 03 48 53.7 +0.7
baz=173,SNR=9.9
I55A **Frankford** 67.40 351 P P 03 48 53.6 +0.4
baz=169,SNR=24
LONY **Lake Ozonia** 67.42 354 P P 03 48 54.1 +0.7
baz=172,SNR=18
LONY **Lake Ozonia** 67.42 354 P P 03 48 54.3 +0.9
LONY IAmb IAmb 03 48 55.8
comp=Z,55nm,0.9s
QSPA **South Pole Qui** 67.46 180 S S 03 57 32.2 +1.0
comp=Z,4.7nm,0.9s,baz=37,slow=19,SNR=18
QSPA PKPPKP 04 17 13.1
comp=Z,4.3nm,1.0s,baz=319,slow=3.7,SNR=6.0
QSPA **South Pole Qui** 67.46 180 P P 03 48 54.5 +0.8
K46A **Dorr** 67.46 345 P P 03 48 53.0 -0.7
baz=161,SNR=13
J49A **Marlette** 67.51 347 P P 03 48 53.8 -0.1
baz=163,SNR=6.4

GGN **Saint George** 67.53 360 IAmb IAmb 03 48 56.4
comp=Z,35nm,0.8s
I51A **Listowel** 67.53 349 P P 03 48 54.5 +0.5
baz=166,SNR=21
L44A **Lake County Fo** 67.53 343 P P 03 48 54.3 +0.2
baz=159
L44A **Lake County Fo** 67.53 343 IAmb IAmb 03 48 55.0
comp=Z,42nm,1.1s
FRNY **Flat Rock** 67.55 355 IAmb IAmb 03 48 56.0
comp=Z,27nm,0.8s
G63A **Kingsbury** 67.58 358 P P 03 48 55.1 +0.8
baz=177,SNR=12
H56A **Elgin** 67.58 353 P P 03 48 54.8 +0.5
baz=170,SNR=15
J48A **Bridge Port** 67.59 346 P P 03 48 54.4 0.0
baz=163,SNR=11
319A **Douglas** 67.59 321 IAmb IAmb 03 48 58.1
comp=Z,34nm,0.7s
121A **Cookes Peak, D** 67.60 323 P P 03 48 56.6 +1.7
baz=139,SNR=26
121A **Cookes Peak, D** 67.60 323 IAmb IAmb 03 48 58.5
comp=Z,53nm,0.9s
G65A **Princeton** 67.61 359 P P 03 48 55.4 +0.9
baz=179,SNR=10
G65A **Princeton** 67.61 359 P P 03 48 54.5 0.0
G65A IAmb IAmb 03 48 56.9
comp=Z,33nm,0.8s
KSU1 **Kansas State U** 67.63 335 P P 03 48 54.4 -0.4
baz=150,SNR=5.6
KSU1 **Kansas State U** 67.63 335 IAmb IAmb 03 48 56.4
comp=Z,54nm,0.9s
I52A **Shelburne** 67.64 349 P P 03 48 55.3 +0.5
baz=166
H55A **Tweed** 67.66 352 P P 03 48 55.3 +0.5
baz=169,SNR=15
DELO **Deloro Mine** 67.68 351 P P 03 48 55.2 +0.3
DELO IAmb IAmb 03 48 56.9
comp=Z,51nm,0.7s
G64A **Maxfield** 67.69 358 P P 03 48 55.5 +0.6
baz=178,SNR=13
G60A **Masonville** 67.71 356 P P 03 48 56.1 +1.0
baz=174,SNR=12
PKME **Peaks-Kenny Pk** 67.72 358 P P 03 48 55.5 +0.4
baz=177,SNR=14
PKME **Peaks-Kenny Pk** 67.72 358 IAmb IAmb 03 48 57.4
comp=Z,26nm,0.8s
G62A **West of Eustis** 67.72 357 P P 03 48 56.0 +0.8
baz=176,SNR=22
G62A **West of Eustis** 67.72 357 P P 03 48 54.7 -0.5
G62A IAmb IAmb 03 48 57.5
comp=Z,54nm,0.9s
J47A **Sunmer** 67.76 346 P P 03 48 55.5 0.0
baz=162,SNR=13
J47A **Sunmer** 67.76 346 IAmb IAmb 03 48 57.2
comp=Z,52nm,0.8s
G61A **St-Isidore-de-** 67.84 356 P P 03 48 57.3 +1.3
baz=175,SNR=13
L42A **Oliver, Polo** 67.86 342 IAmb IAmb 03 48 56.8
comp=Z,24nm,0.6s
H53A **Bobcaygeon** 67.88 351 P P 03 48 56.6 +0.4
baz=168,SNR=17
N38A **Joes South For** 67.89 338 IAmb IAmb 03 48 57.5
comp=Z,44nm,0.7s
R32A **Long Quarter,** 67.90 333 P P 03 48 57.0 +0.5
R32A IAmb IAmb 03 48 58.7
comp=Z,54nm,0.8s
G58A **Ormstown** 67.90 354 P P 03 48 57.2 +1.0
baz=172
G57A **Newington** 67.94 354 P P 03 48 57.1 +0.5
baz=172,SNR=14
I49A **Point Hope** 68.00 347 P P 03 48 57.3 +0.3
baz=164
PLVO **Plevna** 68.12 352 IAmb IAmb 03 48 59.9
comp=Z,46nm,0.8s
H52A **Wyevale** 68.14 350 P P 03 48 58.1 +0.3
baz=167,SNR=30
F63A **Nahmakanta, Br** 68.15 358 P P 03 48 58.4 +0.5
baz=177,SNR=6.4
SADO **Sadowa** 68.15 350 P P 03 48 58.3 +0.4
SADO IAmb IAmb 03 48 59.6
comp=Z,48nm,0.7s
LMN **Caledonia Moun** 68.28 1 P P 03 48 58.9 +0.2
LMN IAmb IAmb 03 49 00.4
comp=Z,37nm,0.7s
F64A **Sherman** 68.29 359 P P 03 48 59.5 +0.8
baz=178,SNR=23
G55A **Calabogie** 68.29 352 P P 03 48 59.6 +0.8
baz=170,SNR=12
ORIO **Orleans, Innes** 68.34 353 P P 03 48 59.5 +0.4
baz=171,SNR=10
G53A **Haliburton** 68.42 351 P P 03 48 59.9 +0.4
baz=168,SNR=23
I48A **Sherman Twp** 68.42 347 P P 03 48 59.6 +0.1
baz=163,SNR=5.2
I47A **Gladwin** 68.43 346 P P 03 48 59.7 +0.1
baz=162,SNR=6.3
F61A **St Evariste** 68.50 357 P P 03 49 00.2 +0.1
baz=176,SNR=5.4
F60A **Warwick** 68.55 356 P P 03 49 00.6 +0.3
baz=175,SNR=9.0
I46A **Reed City** 68.57 345 P P 03 49 00.0 -0.5
baz=161,SNR=21
G54A **Lake Saint Pet** 68.61 351 P P 03 49 01.5 +0.8
baz=168,SNR=16
CBKS **Cedar Bluff** 68.66 333 P P 03 49 01.8 +0.5
CBKS pmax pmax
comp=Z,80nm,0.8s
CBKS **Cedar Bluff** 68.66 333 P P 03 49 01.7 +0.5
baz=147,SNR=40
CBKS **Cedar Bluff** 68.66 333 P P 03 49 01.8 +0.5
ANMO **Albuquerque** 68.72 326 PKPPKP P'P'bc 04 17 14.6 +0.7
comp=Z,1.1nm,0.8s,baz=230,slow=6.4,SNR=4.5
ANMO **Albuquerque** 68.72 326 P P 03 49 03.0 +1.1
ANMO pmax pmax
comp=Z,39nm,1.0s
ANMO **Albuquerque** 68.72 326 P P 03 49 03.3 +1.4
baz=141
ANMO **Albuquerque** 68.72 326 P P 03 49 03.0 +1.1
ANMO IAmb IAmb 03 49 05.0
comp=Z,39nm,0.9s
N35A **Tabor** 68.80 337 P P 03 49 01.7 -0.3
F55A **Otter Lake** 68.82 353 P P 03 49 03.2 +1.2
baz=170
H48A **Harrisville** 68.83 347 P P 03 49 02.3 +0.2
baz=163,SNR=7.2
E64A **Bridgewater** 68.83 359 P P 03 49 02.9 +0.9
baz=179,SNR=17
E63A **Oxbow** 68.85 359 P P 03 49 02.7 +0.6
baz=178,SNR=9.0
E63A **Oxbow** 68.85 359 P P 03 49 02.6 +0.4
E63A IAmb IAmb 03 49 04.5
comp=Z,28nm,0.8s
JFWS **Jewell Farm** 68.87 342 P P 03 49 01.7 -0.7
JFWS pmax pmax
comp=Z,75nm,0.6s
JFWS **Jewell Farm** 68.87 342 P P 03 49 01.8 -0.7
baz=156,SNR=42
JFWS **Jewell Farm** 68.87 342 P P 03 49 01.7 -0.7
SCIA **State Center** 68.88 339 P P 03 49 02.1 -0.4
baz=154,SNR=7.0
SCIA **State Center** 68.88 339 IAmb IAmb 03 49 04.0
comp=Z,50nm,0.8s
E60A **Ste Agathe de** 68.92 356 P P 03 49 02.8 +0.3
baz=175,SNR=5.4
H47A **Mio** 68.92 347 P P 03 49 02.6 0.0
baz=162,SNR=5.8
E61A **Lac Etchemin** 68.93 357 P P 03 49 03.6 +0.8
baz=176,SNR=5.5
E58A **La Victoria** 69.05 355 P P 03 49 03.8 +0.4
baz=173,SNR=8.1
PQI **Presque Isle** 69.09 359 P P 03 49 02.8 -0.9
PQI IAmb IAmb 03 49 05.8
comp=Z,35nm,0.7s
TUC **Tucson** 69.14 321 P P 03 49 05.9 +1.5
TUC pmax pmax
comp=Z,15nm,1.1s
TUC **Tucson** 69.14 321 P P 03 49 05.9 +1.5
baz=136
TUC **Tucson** 69.14 321 P P 03 49 05.9 +1.5
ALGO **Algonquin Park** 69.15 351 P P 03 49 04.1 +0.1
baz=169,SNR=14
E57A **Chemin Saint G** 69.16 354 P P 03 49 04.5 +0.3
baz=172,SNR=12
F52A **Sundridge** 69.18 350 P P 03 49 04.5 +0.3
baz=167,SNR=16
GLMI **Grayling** 69.22 346 P P 03 49 05.1 +0.6
baz=162

H45A **Beulah** 69.36 345 P P 03 49 05.3 0.0
baz=161
E56A **St. Veronique** 69.38 354 P P 03 49 05.7 +0.3
baz=172,SNR=11
G47A **Hillman** 69.39 347 P P 03 49 06.5 +0.9
baz=163
E55A **Montcerf-Lytto** 69.39 353 P P 03 49 06.2 +0.7
baz=170
I42A **Draeger Farm,** 69.39 343 P P 03 49 05.2 -0.4
K38A **Parkersburg** 69.40 340 IAmb IAmb 03 49 07.6
comp=Z,33nm,0.7s
F51A **Arnstein** 69.40 350 P P 03 49 05.8 +0.2
baz=167,SNR=7.3
T25A **Trinidad** 69.41 328 P P 03 49 07.0 +0.9
baz=143,SNR=43
D63A **Stockholm** 69.46 359 P P 03 49 06.5 +0.7
baz=178,SNR=16
E54A **Lac Daplat, Po** 69.51 352 P P 03 49 06.6 +0.4
baz=169,SNR=16
E53A **Dumoine, Ponti** 69.52 352 P P 03 49 07.0 +0.7
baz=169
D62A **Allapoint, All** 69.53 358 P P 03 49 06.5 +0.3
baz=177,SNR=28
D62A **Allapoint, All** 69.53 358 IAmb IAmb 03 49 08.5
comp=Z,56nm,0.8s
E52A **Mattawa** 69.56 351 P P 03 49 06.7 +0.2
baz=168,SNR=5.5
D59A **Saint-Raymond** 69.58 356 P P 03 49 07.1 +0.4
baz=175
F49A **Sandfield** 69.61 349 P P 03 49 07.1 +0.3
baz=165,SNR=20
H43A **Windswept, Lux** 69.63 344 P P 03 49 07.2 +0.2
H43A IAmb IAmb 03 49 08.3
comp=Z,56nm,0.8s
BATG **Bathurst New B** 69.69 0 IAmb IAmb 03 49 09.4
comp=Z,38nm,0.7s
D61A **St Aubert, Com** 69.69 357 P P 03 49 08.5 +1.3
baz=176
D58A **Chemin du LacG** 69.74 355 P P 03 49 08.1 +0.5
baz=174,SNR=30
D57A **Chemin Vers le** 69.74 355 P P 03 49 08.0 +0.4
baz=173,SNR=22
G46A **Petoskey** 69.75 346 P P 03 49 07.4 -0.2
baz=162,SNR=14
F48A **Evansville** 69.78 348 P P 03 49 08.3 +0.4
baz=181,SNR=13
D56A **ZEC Mazanza, M** 69.85 354 P P 03 49 08.4 +0.1
baz=172,SNR=12
I40A **Norwalk** 69.87 342 IAmb IAmb 03 49 09.4
comp=Z,33nm,0.5s
D55A **Sainte-Anne-du** 69.89 354 P P 03 49 08.7 +0.2
baz=171,SNR=22
E51A **G1948 Merrick** 69.93 351 P P 03 49 09.1 +0.3
baz=167,SNR=10
LATQ **La Tuque** 70.02 356 P P 03 49 09.8 +0.5
baz=174,SNR=5.7
E50A **Wahnapitae** 70.02 350 P P 03 49 09.5 +0.2
baz=166,SNR=9.4
KSCO **Kaye Shedlock'** 70.08 331 P P 03 49 10.8 +0.7
baz=145,SNR=8.5
214A **Organ Pipe Nat** 70.09 319 P P 03 49 11.2 +1.0
baz=135,SNR=11
214A **Organ Pipe Nat** 70.09 319 P P 03 49 11.4 +1.2
214A IAmb IAmb 03 49 13.7
comp=Z,32nm,0.9s
D54A **Lac Fusel, La** 70.15 353 P P 03 49 09.7 -0.5
baz=170,SNR=6.2
D53A **Lac Vacive, Po** 70.21 352 P P 03 49 10.5 +0.1
baz=169,SNR=13
D53A **Lac Vacive, Po** 70.21 352 IAmb IAmb 03 49 12.3
comp=Z,26nm,0.8s
BGNE **Belgrade** 70.22 335 P P 03 49 10.8 +0.2
baz=149,SNR=32
BGNE **Belgrade** 70.22 335 P P 03 49 10.9 +0.2
F45A **CMU Biological** 70.24 346 P P 03 49 10.8 +0.2
baz=161,SNR=24
E48A **Lockeyer** 70.32 349 P P 03 49 11.6 +0.4
baz=165,SNR=20
SDCO **Great Sand Dun** 70.42 328 P P 03 49 13.2 +0.9
baz=142,SNR=102
SDCO **Great Sand Dun** 70.42 328 P P 03 49 13.4 +1.1
SDCO IAmb IAmb 03 49 15.5
comp=Z,40nm,0.8s
D51A **Lot 18 Range I** 70.45 351 P P 03 49 12.4 +0.5
baz=167
E47A **Iron Bridge** 70.51 348 P P 03 49 12.1 -0.1
baz=164,SNR=19
HOR **Horta** 70.57 31 *eP* P 03 49 14.2 +1.4
comp=Z,137nm,1.0s
PCAN **Candelaria** 70.59 31 *eP* P 03 49 13.2 +0.2
comp=Z,140nm,0.9s
D50A **G1974 Best Tow** 70.60 350 P P 03 49 12.9 +0.1
baz=167,SNR=9.7
W18A **Petrified Fore** 70.61 324 P P 03 49 14.1 +0.7
baz=138,SNR=6.5
W18A **Petrified Fore** 70.61 324 IAmb IAmb 03 49 16.6
comp=Z,69nm,1.1s
PCED **Cedros** 70.62 31 *eP* P 03 49 14.9 +1.7
comp=Z,123nm,0.7s
I37A **Lemond, Waseca** 70.83 340 IAmb IAmb 03 49 15.8
comp=Z,70nm,1.0s
ROSA **Rosais** 70.91 31 *eP* P 03 49 15.2 +0.3
comp=Z,170nm,1.0s
PMAN **Manadas** 70.91 31 *eP* P 03 49 16.0 +1.1
comp=Z,221nm,0.8s
D48A **Paudash Townsh** 70.93 349 P P 03 49 14.7 -0.2
baz=165,SNR=9.3
D49A **Beulah Townshi** 70.94 349 P P 03 49 15.1 +0.2
baz=166,SNR=17
X16A **Lo Mia Camp, P** 71.05 322 IAmb IAmb 03 49 19.6
comp=Z,29nm,1.0s
D47A **Chapleau** 71.05 348 P P 03 49 15.5 -0.1
baz=164,SNR=12
D46A **Sault St. Mari** 71.07 347 P P 03 49 15.8 +0.1
baz=163
S22A **4UR Ranch, Cre** 71.07 327 P P 03 49 17.4 +1.1
baz=141,SNR=19
PSMA **Santa Maria** 71.11 34 *eP* P 03 49 15.9 -0.2
comp=Z,87nm,1.1s
PSMN **Pico do Norte,** 71.15 34 *eP* P 03 49 14.9 -1.5
comp=Z,103nm,0.8s
VLDQ **Val d'Or** 71.19 352 P P 03 49 17.1 +0.8
Q24A **Divide** 71.21 329 P P 03 49 17.8 +0.7
baz=142,SNR=21
E44A **Grand Marais A** 71.22 346 P P 03 49 17.3 +0.8
baz=161,SNR=8.5
E44A **Grand Marais A** 71.22 346 IAmb IAmb 03 49 18.2
comp=Z,33nm,0.7s
E43A **Lone Tree Farm** 71.23 345 IAmb IAmb 03 49 18.1
comp=Z,44nm,0.7s
ADH **Angra Heroismo** 71.34 32 *eP* P 03 49 17.3 -0.2
comp=Z,154nm,0.9s
OGNE **Ogallala** 71.41 332 P P 03 49 18.4 +0.4
baz=146,SNR=11
OGNE **Ogallala** 71.41 332 P P 03 49 18.8 +0.8
PDA **Ponta Delgada** 71.41 33 *eP* P 03 49 18.6 +0.7
comp=Z,127nm,0.8s
PSET **Sete Cidades** 71.44 33 *eP* P 03 49 17.1 -1.1
comp=Z,98nm,0.9s
K31A **O'Neill** 71.49 336 IAmb IAmb 03 49 20.4
comp=Z,48nm,0.7s
GRON **Grota Negra** 71.50 33 *eP* P 03 49 19.1 +0.6
comp=Z,122nm,1.5s
CMLA **Cha da Macela** 71.50 33 *eP* P 03 49 18.8 +0.3
comp=Z,45nm,0.7s
MVCO **Mesa Verde** 71.51 326 P P 03 49 19.9 +1.0
baz=139,SNR=33
MVCO **Mesa Verde** 71.51 326 IAmb IAmb 03 49 22.0
comp=Z,44nm,0.9s
ECSD **EROS Data Cent** 71.66 338 P P 03 49 19.7 +0.4
baz=151,SNR=10
ECSD **EROS Data Cent** 71.66 338 P P 03 49 19.2 -0.1
ECSD IAmb IAmb 03 49 21.6
comp=Z,27nm,0.9s
BART **Pico Bartolome** 71.69 34 *eP* P 03 49 19.5 -0.2
comp=Z,121nm,1.1s
SPMN **Marine on St.** 71.73 341 P P 03 49 19.2 -0.5
baz=154,SNR=8.5
SPMN **Marine on St.** 71.73 341 IAmb IAmb 03 49 21.6
comp=Z,23nm,0.7s
WUAZ **Wupatki** 71.81 323 P P 03 49 22.2 +1.7
baz=137,SNR=27
WUAZ **Wupatki** 71.81 323 IAmb IAmb 03 49 24.2
comp=Z,42nm,0.9s
LSQQ **Lebel-sur-Quev** 72.07 353 P P 03 49 22.3 +0.7
baz=170
ISCO **Idaho Springs** 72.09 329 P P 03 49 23.1 +0.8
baz=142,SNR=48

DRLN **Deer Lake** 72.12 6 P P 03 49 22.0 +0.1
DRLN IAmb IAmb 03 49 23.5
comp=Z,42nm,0.8s
SMCO **Snowmass** 72.26 328 IAmb IAmb 03 49 26.9
comp=Z,29nm,0.8s
PV15 **Paradox Valley** 72.36 327 IAmb IAmb 03 49 27.6
comp=Z,51nm,1.0s
Y12C **Blythe** 72.38 320 P P 03 49 25.1 +1.4
baz=134,SNR=8.0
Y12C **Blythe** 72.38 320 P P 03 49 25.8 +2.0
Y12C IAmb IAmb 03 49 27.3
comp=Z,46nm,1.1s
PV13 **Radium Mtn., P** 72.40 326 IAmb IAmb 03 49 27.3
comp=Z,32nm,1.0s
PV05 **Paradox Valley** 72.48 326 IAmb IAmb 03 49 27.5
comp=Z,34nm,1.1s
PV07 **Paradox Valley** 72.52 327 IAmb IAmb 03 49 28.1
comp=Z,36nm,1.2s
F36A **Milaca** 72.53 341 IAmb IAmb 03 49 25.8
comp=Z,30nm,0.8s
PDMCI **Parker Dam,Lak** 72.53 320 P P 03 49 26.2 +1.5
baz=134
IKP **In-Ko-Pah, Jac** 72.59 318 P P 03 49 26.0 +0.9
baz=133,SNR=12
SWSC **Sam W. Stewart** 72.60 318 P P 03 49 26.5 +1.5
baz=133
PMOZ **Porto Moniz, M** 72.62 42 eP P 03 49 25.7 +0.4
comp=Z,234nm,1.5s
PMOZ **Porto Moniz, M** 72.62 42 P P 03 49 24.7 -0.7
E38A **The Farm, Brul** 72.62 342 IAmb IAmb 03 49 26.4
comp=Z,30nm,0.9s
CHGQ **Chibougamau** 72.65 355 P P 03 49 26.0 +1.0
baz=172,SNR=10
PV22 **Blue Mesa, Par** 72.67 327 IAmb IAmb 03 49 28.9
comp=Z,34nm,0.8s
FUL **Funchal** 72.69 42 eP P 03 49 25.7 +0.1
comp=Z,201nm,1.8s
PMAR **Madeira** 72.73 42 eP P 03 49 26.1 0.0
comp=Z,246nm,1.7s
MATQ **Matagami** 72.84 353 P P 03 49 26.7 +0.6
baz=169,SNR=12
BC3 **Big Chuckawall** 72.87 319 P P 03 49 27.6 +0.8
baz=133,SNR=15
MONP2 **Monument Peak** 72.95 318 P P 03 49 28.3 +0.9
baz=132,SNR=6.6
BAR **Barrett** 72.96 317 IAmb IAmb 03 49 30.5
comp=Z,30nm,0.9s
U15A **North Rim** 72.98 323 IAmb IAmb 03 49 31.5
comp=Z,37nm,0.9s
IRM **Iron Mountain** 73.03 319 P P 03 49 29.2 +1.5
baz=134,SNR=16
N23A **Red Feather La** 73.11 330 P P 03 49 29.1 +0.9
baz=142,SNR=29
SUSD **Miller** 73.12 336 P P 03 49 27.7 -0.2
baz=149,SNR=9.5
SUSD **Miller** 73.12 336 IAmb IAmb 03 49 29.6
comp=Z,46nm,0.8s
PHWY **Pilot Hill** 73.21 330 IAmb IAmb 03 49 31.7
comp=Z,21nm,0.6s
109C **Camp Elliot, M** 73.37 317 P P 03 49 31.3 +1.7
baz=132
BELC **Belle Mtn. Jos** 73.44 319 P P 03 49 30.9 +0.7
baz=133,SNR=14
PFO **Pinyon Flats O** 73.45 318 iP P 03 49 32.5 +2.2
PFO pmax pmax
comp=Z,29nm,1.1s
PFO **Pinyon Flats O** 73.45 318 P P 03 49 31.5 +1.3
baz=133,SNR=13
PFO **Pinyon Flats O** 73.45 318 P P 03 49 31.9 +1.6
O20A **White River Ci** 73.62 328 P P 03 49 32.5 +1.3
baz=140,SNR=27
O20A **White River Ci** 73.62 328 P P 03 49 32.2 +1.1
O20A IAmb IAmb 03 49 34.4
comp=Z,43nm,0.8s
PKCU **Pink Cliffs** 73.72 324 P P 03 49 33.7 +1.8
GMRC **Granite Mounta** 73.77 320 P P 03 49 33.6 +1.5
baz=133,SNR=31
EYMN **Ely** 73.83 343 P P 03 49 32.8 +0.9
baz=156,SNR=7.6
MURC **Murrieta** 73.90 318 P P 03 49 33.9 +1.2
baz=132,SNR=7.6
HEC **Hector,Ludlow** 74.20 319 P P 03 49 35.7 +1.1
baz=133,SNR=21
RWWY **Rawlins** 74.33 330 P P 03 49 35.8 +0.5
RWWY IAmb IAmb 03 49 37.5
comp=Z,34nm,0.8s
TUQ **Turquoise Moun** 74.37 320 P P 03 49 37.2 +1.7
baz=133
MSU **Marysvale** 74.42 324 P P 03 49 37.5 +1.6
MSU **Marysvale** 74.42 324 P P 03 49 37.5 +1.6
CIS **Catalina Islan** 74.53 317 P P 03 49 37.5 +1.1
baz=131
SYO **Syowa Base** 74.59 159 iP P 03 49 35.1 -1.0
SYO **Syowa Base** 74.59 159 iPcP PcP 03 49 46.0 -3.3
SYO **Syowa Base** 74.59 159 iepP pP 03 50 24.2 -5.8
SYO **Syowa Base** 74.59 159 iesP sP 03 50 47.0 -7.2
BFSC **Mount Baldy Ra** 74.61 318 P P 03 49 37.6 +0.6
baz=132,SNR=10
K22A **Casper** 74.76 331 P P 03 49 39.0 +1.3
baz=142,SNR=19
K22A **Casper** 74.76 331 IAmb IAmb 03 49 40.8
comp=Z,41nm,1.1s
GSC **Goldstone, Bar** 74.81 319 P P 03 49 39.5 +1.6
baz=133,SNR=26
B35A **Bob, Littlefor** 74.84 342 IAmb IAmb 03 49 39.3
comp=Z,42nm,1.0s
MWC **Mount Wilson** 74.85 318 P P 03 49 38.4 0.0
MWC pmax pmax
comp=Z,10.0nm,0.9s
MWC **Mount Wilson** 74.85 318 P P 03 49 38.4 0.0
RSSD **Black Hills** 74.86 333 P P 03 49 38.9 +0.7
RSSD pmax pmax
comp=Z,23nm,0.8s
RSSD **Black Hills** 74.86 333 P P 03 49 39.6 +1.4
baz=144
RSSD **Black Hills** 74.86 333 P P 03 49 38.9 +0.7
SHOC **Shoshone, Teco** 74.90 320 P P 03 49 39.7 +1.3
baz=133,SNR=6.6
DECC **Green Verdugo** 75.04 318 P P 03 49 40.9 +1.6
baz=131
EDW2 **Edwards Air Fo** 75.25 318 P P 03 49 41.4 +0.9
baz=132,SNR=14
AGMN **Agassiz Nation** 75.42 340 P P 03 49 41.6 +0.5
baz=152,SNR=14
AGMN **Agassiz Nation** 75.42 340 P P 03 49 41.0 0.0
LRMC **Laurel Mtn Rad** 75.46 319 P P 03 49 43.0 +1.3
baz=132,SNR=11
TPNV **Topopah Spring** 75.60 321 P P 03 49 44.1 +1.6
TPNV pmax pmax
comp=Z,41nm,1.0s
TPNV **Topopah Spring** 75.60 321 P P 03 49 44.5 +1.9
baz=133,SNR=52
TPNV **Topopah Spring** 75.60 321 P P 03 49 44.1 +1.6
TPNV IAmb IAmb 03 49 46.4
comp=Z,41nm,1.0s
FURC **Furnace Creek,** 75.63 320 P P 03 49 43.9 +1.4
baz=133,SNR=28
SCZ2 **Santa Cruz Isl** 75.69 317 P P 03 49 44.2 +1.2
baz=130
MPMC **Manual Prospec** 75.73 320 P P 03 49 44.5 +1.2
baz=132,SNR=21
TOA0 **Torodi Ar. Sit** 75.76 69 P P 03 49 40.9 -2.8
TORD **Torodi Ar. Bea** 75.76 69 P P 03 49 41.9 -1.8
comp=Z,80nm,0.4s,baz=255,slow=5.0,SNR=944
TORD pP pP 03 50 38.7 +0.9
comp=Z,83nm,0.7s,baz=256,slow=5.7,SNR=7.3
TORD S S 03 59 03.5 -3.8
comp=Z,1.7nm,0.8s,baz=234,slow=12,SNR=5.7
TCUT **Toone Canyon** 75.94 327 P P 03 49 45.7 +1.3
DUG **Dugway, Tooele** 75.99 325 P P 03 49 46.2 +1.5
baz=137,SNR=26
DUG **Dugway, Tooele** 75.99 325 IAmb IAmb 03 49 48.1
comp=Z,34nm,1.1s
VNDA **Vanda** 76.00 190 P P 03 49 46.0 +2.0
comp=Z,7.4nm,1.0s,baz=129,slow=5.0,SNR=26
VNDA **Vanda** 76.00 190 P P 03 49 44.9 +0.8
ISA **Isabella, Lake** 76.06 319 P P 03 49 46.7 +1.7
baz=132,SNR=37
ISA **Isabella, Lake** 76.06 319 IAmb IAmb 03 49 48.6
comp=Z,25nm,0.8s
SUR **Sutherland** 76.09 119 P P 03 49 45.2 -0.5
SUR IAmb IAmb 03 49 47.7
comp=Z,22nm,0.8s
VAH **Vaihoa** 76.17 259 eP P 03 49 48.6 +2.6
comp=Z,186nm,1.2s
R11A **Troy Canyon, C** 76.19 322 P P 03 49 47.5 +1.6
baz=134,SNR=46

BW06 **Boulder Array** 76.27 329 P P 03 49 46.6 +0.3
baz=140,SNR=26
PDAR **Pinedale Array** 76.27 329 P P 03 49 46.7 +0.4
comp=Z,7.4nm,0.5s,baz=126,slow=8.4,SNR=54
MDND **Maddock** 76.27 338 P P 03 49 46.7 +0.8
baz=149,SNR=19
MDND **Maddock** 76.27 338 P P 03 49 46.6 +0.8
GRAC **Grapevine Rang** 76.29 320 P P 03 49 48.0 +1.7
baz=133,SNR=8.2
CWC **Cottonwood Cre** 76.34 320 P P 03 49 47.8 +1.0
baz=132
HWUT **Hardware Ranch** 76.38 327 P P 03 49 47.2 +0.3
HWUT IAmb IAmb 03 49 57.1
comp=Z,23nm,0.8s
PKM **Mcpherson Peak** 76.38 317 P P 03 49 48.6 +1.6
baz=130,SNR=26
PMOR **Pomariorio Ree** 76.49 259 eP P 03 49 50.5 +2.7
comp=Z,160nm,1.1s
VES **Vestal, Richgr** 76.55 318 P P 03 49 48.8 +1.1
baz=131,SNR=14
SMMC **Simmler** 76.77 318 P P 03 49 50.7 +1.7
baz=130,SNR=23
TIN **Tinemaha, Big** 76.84 320 P P 03 49 51.2 +1.7
baz=132,SNR=8.8
AHID **Auburn Hatcher** 77.01 328 P P 03 49 51.2 +0.8
AHID IAmb IAmb 03 49 53.3
comp=Z,45nm,0.7s
PPT2 **Papeete2** 77.12 256 eP P 03 49 54.0 +2.5
comp=Z,141nm,1.3s
PPT **Papeete** 77.13 256 P P 03 49 54.5 +3.0
comp=Z,86nm,1.0s,baz=98,slow=4.6,SNR=5.8
ULM **Lac du Bonnet** 77.16 341 P P 03 49 51.5 +0.7
comp=Z,19nm,0.5s,baz=152,slow=6.2,SNR=18
ULM **Lac du Bonnet** 77.16 341 IAmb IAmb 03 49 52.0
comp=Z,24nm,0.7s
PAGB **Antelope Grade** 77.19 318 IAmb IAmb 03 49 54.9
comp=Z,39nm,1.0s
SCHQ **Schefferville** 77.25 360 P P 03 49 51.8 +0.6
comp=Z,33nm,0.7s,baz=173,slow=5.0,SNR=31
SCHQ **Schefferville** 77.25 360 P P 03 49 51.0 -0.2
SCHQ IAmb IAmb 03 49 52.7
comp=Z,43nm,0.9s
REDW **Red Top Meadow** 77.34 329 IAmb IAmb 03 49 55.3
comp=Z,30nm,0.8s
SNOW **Snow King Moun** 77.36 329 IAmb IAmb 03 49 56.1
comp=Z,24nm,0.7s
MLAC **Mammoth, Mammo** 77.58 320 P P 03 49 55.4 +1.6
baz=132
TSUM **Tsumeb** 77.62 106 P P 03 49 53.7 -0.7
TSUM IAmb IAmb 03 49 59.1
comp=Z,65nm,0.8s
OMMB **Old Mammoth Mi** 77.67 320 IAmb IAmb 03 49 57.5
comp=Z,27nm,0.8s
ELK **Elko** 77.67 324 P P 03 49 54.9 +0.7
ELK pmax pmax
comp=Z,18nm,1.0s
ELK **Elko** 77.67 324 P P 03 49 54.9 +0.7
MDPB **Devils Postpil** 77.73 320 P P 03 49 55.9 +1.3
NVAR **Mina Array Bea** 77.80 321 P P 03 49 56.3 +1.4
comp=Z,4.6nm,0.5s,baz=146,slow=5.6,SNR=56
NVAR pP pP 03 50 52.5 +2.9
comp=Z,2.0nm,0.9s,baz=172,slow=7.3,SNR=1.2
FLWY **Flagg Ranch** 77.81 329 IAmb IAmb 03 49 57.9
comp=Z,29nm,0.6s
LAO **LASA Array** 77.84 333 P P 03 49 55.6 +0.9
baz=143,SNR=10.0
LAO **LASA Array** 77.84 333 IAmb IAmb 03 49 57.4
comp=Z,40nm,1.1s
RLMT **Red Lodge** 77.93 331 P P 03 49 56.6 +1.1
baz=140,SNR=63
RLMT **Red Lodge** 77.93 331 IAmb IAmb 03 49 58.5
comp=Z,33nm,0.7s
H17A **Grant Village** 77.98 329 P P 03 49 57.7 +1.9
baz=139,SNR=20
H17A **Grant Village** 77.98 329 P P 03 49 57.9 +2.1
KVN **Kaiserville** 78.10 321 P P 03 49 57.9 +1.4
KVN pmax pmax
comp=Z,30nm,0.7s
KVN **Kaiserville** 78.10 321 P P 03 49 57.9 +1.4
KVN IAmb IAmb 03 49 59.5
comp=Z,30nm,0.7s
DGMT **Dagmar** 78.47 336 P P 03 49 59.2 +1.1
baz=145,SNR=15
DGMT **Dagmar** 78.47 336 IAmb IAmb 03 50 01.2
comp=Z,61nm,0.8s
YERR **Yerington** 78.72 321 P P 03 50 01.3 +1.4
YERR IAmb IAmb 03 50 03.3
comp=Z,29nm,0.7s
PNTR **Pine Nut** 78.99 321 P P 03 50 02.9 +1.5
PNTR IAmb IAmb 03 50 05.5
comp=Z,44nm,0.7s
PAHR **Pah Rah Range** 79.28 321 IAmb IAmb 03 50 06.4
comp=Z,67nm,1.0s
MCMT **McKenzie Canyo** 79.39 328 P P 03 50 04.7 +1.3
DLMT **Dillon** 79.66 329 P P 03 50 06.2 +1.5
MFID **Camas Ranch** 79.86 326 P P 03 50 07.5 +1.6
EGMT **Eagleton** 80.38 332 P P 03 50 09.1 +0.6
baz=140,SNR=31
EGMT **Eagleton** 80.38 332 P P 03 50 09.3 +0.9
EGMT IAmb IAmb 03 50 10.8
comp=Z,42nm,0.9s
PFVI **Vila Bisbo** 80.64 43 eP P 03 50 11.1 +1.1
PFVI eS S 03 59 59.9 +1.5
WVOR **Wild Horse Val** 80.68 324 P P 03 50 11.2 +0.9
WVOR pmax pmax
comp=Z,9.0nm,1.0s
WVOR **Wild Horse Val** 80.68 324 P P 03 50 11.2 +0.9
MORF **Marmelete** 80.86 43 eP P 03 50 12.0 +0.8
MORF AMb AMB 03 50 16.4
comp=Z,94nm,1.1s
MORF **Marmelete** 80.86 43 eP P 03 50 12.0 +0.8
MORF pmax pmax
comp=Z,95nm,1.1s
MORF **Marmelete** 80.86 43 eP P 03 50 12.5 +1.3
comp=Z,95nm,1.1s
MORF eS S 04 00 06.1 +5.4
PTEO **Sao Teotonio** 80.96 43 eP P 03 50 13.1 +1.5
comp=Z,213nm,0.9s
BOSA **Boshof** 80.97 117 P P 03 50 11.7 -0.5
comp=Z,66nm,0.8s,baz=246,slow=3.8,SNR=66
BOSA **Boshof** 80.97 117 P P 03 50 11.7 -0.5
BOSA pmax pmax
comp=Z,59nm,0.8s
BOSA **Boshof** 80.97 117 P P 03 50 11.7 -0.5
BOSA IAmb IAmb 03 50 14.6
comp=Z,58nm,0.8s
O03E **Paynes Creek** 81.07 321 P P 03 50 12.3 0.0
baz=130,SNR=26
J08A **Circle Bar Ran** 81.22 324 IAmb IAmb 03 50 16.3
comp=Z,45nm,0.7s
PBDV **Barranco-do-Ve** 81.27 44 eP P 03 50 14.7 +1.3
comp=Z,136nm,0.8s
PBDV eS S 04 00 07.5 +2.5
MSO **Missoula** 81.37 329 P P 03 50 14.9 +1.1
baz=137,SNR=9.5
LIS **Lisbon** 81.41 42 eP P 03 50 14.7 +0.7
LIS AMb AMB 03 50 16.4
comp=Z,141nm,0.8s
LIS **Lisbon** 81.41 42 eP P 03 50 14.7 +0.7
LIS pmax pmax
comp=Z,141nm,0.8s
LIS **Lisbon** 81.41 42 eP P 03 50 15.0 +1.0
comp=Z,144nm,0.9s
PNCL **Nicolau / Gran** 81.42 43 eP P 03 50 15.3 +1.2
comp=Z,115nm,0.8s
PNCL eS S 04 00 09.1 +2.7
PCVE **Castro Verde** 81.44 43 eP P 03 50 15.4 +1.2
comp=Z,99nm,0.7s
PCVE eS S 04 00 15.4 +8.8
MESJ **Messejana** 81.45 43 eP P 03 50 15.0 +0.8
MESJ AMb AMB 03 50 16.5
comp=Z,155nm,1.3s
MESJ eS S 04 00 08.1 +1.3
MESJ **Messejana** 81.45 43 eP P 03 50 15.0 +0.8
MESJ eS S 04 00 08.0 +1.3
MESJ pmax pmax
comp=Z,155nm,1.3s
MESJ **Messejana** 81.45 43 eP P 03 50 15.5 +1.3
comp=Z,156nm,1.0s
PMAFR **Mafra** 81.47 42 eP P 03 50 14.5 +0.1
comp=Z,198nm,1.0s
PMAFR eS S 04 00 08.2 +1.3
PVAQ **Vaqueiros** 81.51 44 eP P 03 50 15.8 +1.3
comp=Z,81nm,1.4s
PVAQ eS S 04 00 10.2 +2.9
PVAQ **Vaqueiros** 81.51 44 P P 03 50 15.4 +0.8
PVAQ IAmb IAmb 03 50 18.6
comp=Z,54nm,1.0s
O02D **Mt. Diablo Mer** 81.58 320 P P 03 50 15.5 +0.5
baz=129,SNR=12
BMO **Blue Mountains** 81.63 326 P P 03 50 16.4 +1.2
BMO pmax pmax
comp=Z,31nm,1.1s
BMO **Blue Mountains** 81.63 326 P P 03 50 16.4 +1.2
BMO IAmb IAmb 03 50 18.9
comp=Z,31nm,1.1s
WDC **Whiskeytown Da** 81.68 320 P P 03 50 15.4 0.0
WDC pmax pmax
comp=Z,15nm,0.8s
WDC **Whiskeytown Da** 81.68 320 P P 03 50 15.4 0.0
PBEJ **Beja** 81.79 43 eP P 03 50 16.8 +0.8
comp=Z,94nm,0.9s
EVO **Evora** 82.00 43 eP P 03 50 17.9 +0.8
comp=Z,57nm,0.9s
N02D **Trinity Center** 82.03 321 P P 03 50 17.2 -0.1
baz=129,SNR=11
M04C **Macdoel** 82.04 322 P P 03 50 18.2 +0.8
baz=130,SNR=21
PSBE **So Bento** 82.12 41 eP P 03 50 18.8 +1.1
comp=Z,210nm,0.9s
PSBE **So Bento** 82.12 41 eS S 04 00 19.6 +6.1
K05A **Summer Lake** 82.12 323 P P 03 50 19.2 +1.3
K05A IAmb IAmb 03 50 21.3
comp=Z,58nm,0.7s
PMTG **Montargil** 82.19 42 eP P 03 50 18.9 +0.8
comp=Z,146nm,1.0s
JTMT **Jette** 82.20 330 P P 03 50 19.6 +1.5
I07A **Izee** 82.26 325 P P 03 50 19.9 +1.5
F10A **Beach Ranch, E** 82.36 327 P P 03 50 20.0 +1.1
F10A IAmb IAmb 03 50 22.6
comp=Z,31nm,0.7s
M02C **Callahan** 82.38 321 P P 03 50 19.4 +0.3
baz=129,SNR=11
PESTR **Estremoz** 82.47 42 eP P 03 50 20.8 +1.3
MAW **Mawson** 82.52 163 P P 03 50 20.5 +1.1
comp=Z,42nm,0.8s,baz=216,slow=6.0,SNR=64
MAW **Mawson** 82.52 163 P P 03 50 20.0 +0.6
K04D **Chiloquin, OR** 82.54 322 P P 03 50 20.4 +0.4
baz=130,SNR=11
LBTB **Lobatse** 82.55 114 P P 03 50 20.3 -0.2
LBTB pmax pmax
comp=Z,62nm,1.0s
LBTB **Lobatse** 82.55 114 P P 03 50 20.2 -0.2
LBTB IAmb IAmb 03 50 23.3
comp=Z,62nm,0.9s
L04D **Klamath Falls** 82.59 322 P P 03 50 20.6 +0.4
baz=130,SNR=9.5
PCAS **Casmilo, Conde** 82.63 41 eP P 03 50 21.6 +1.3
comp=Z,115nm,0.9s
PCAS **Casmilo, Conde** 82.63 41 eS S 04 00 25.7 +7.1
J05D **Fort Rock, OR** 82.67 323 P P 03 50 21.7 +1.0
baz=131,SNR=29
COI **Coimbra** 82.78 41 eP P 03 50 22.3 +1.3
comp=Z,159nm,1.0s
G08A **Pilot Rock** 82.78 326 IAmb IAmb 03 50 23.5
comp=Z,16nm,0.5s
PINE **Pine Mountain** 82.84 324 IAmb IAmb 03 50 25.0
comp=Z,32nm,0.8s
FFC **Flin Flon** 82.90 340 P P 03 50 21.8 +0.5
FFC pmax pmax
comp=Z,6.0nm,0.9s
FFC **Flin Flon** 82.90 340 P P 03 50 21.8 +0.5
PMRV **Marv??o** 82.93 42 eP P 03 50 21.4 -0.5
comp=Z,43nm,1.1s
PMRV **Marv??o** 82.93 42 eS S 04 00 25.9 +4.2
WALA **Waterton Lakes** 82.98 331 P P 03 50 22.1 0.0
PCBR **Castelo Branco** 83.12 42 eP P 03 50 23.4 +0.6
comp=Z,56nm,1.0s
J04D **Umpqua Nationa** 83.13 323 P P 03 50 23.8 +0.7
baz=130,SNR=14
PVIS **Viseu** 83.40 41 eP P 03 50 24.9 +0.6
I05D **Terrebonne, OR** 83.42 324 P P 03 50 25.5 +1.1
baz=131,SNR=25
MTE **Manteigas** 83.42 41 eP P 03 50 25.1 +0.7
comp=Z,124nm,1.0s
MTE **Manteigas** 83.42 41 eS S 04 00 28.0 +1.3
MTE **Manteigas** 83.42 41 P P 03 50 24.4 -0.1
TAM **Tamanrasset** 83.47 62 P P 03 50 25.4 +0.2
TAM pmax pmax
comp=Z,100nm,0.7s
TAM **Tamanrasset** 83.47 62 P P 03 50 25.4 +0.2
G06A **Carlson Farm,** 83.63 325 P P 03 50 27.1 +1.8
I04A **Tendick Farm,** 83.66 323 P P 03 50 25.8 +0.3
baz=130,SNR=5.2
K02D **Willamette Mer** 83.67 321 P P 03 50 26.7 +1.0
baz=129,SNR=14
HAWA **Hanford** 83.82 326 P P 03 50 27.8 +1.5
HAWA IAmb IAmb 03 50 29.2
comp=Z,41nm,1.0s
PVRL **Vila Real** 83.84 40 eP P 03 50 27.2 +0.6
comp=Z,111nm,1.1s
NEW **Newport** 83.91 329 P P 03 50 27.2 +0.5
NEW pmax pmax
comp=Z,10.0nm,0.7s
NEW **Newport** 83.91 329 P P 03 50 26.9 +0.2
baz=134,SNR=5.5
NEW **Newport** 83.91 329 P P 03 50 27.2 +0.5
PCAB **Cabril** 83.92 40 eP P 03 50 27.7 +0.8
comp=Z,101nm,1.0s
PGAV **Gavieira, Arco** 83.94 40 eP P 03 50 27.8 +0.7
comp=Z,59nm,1.1s
PGAV **Gavieira, Arco** 83.94 40 eS S 04 00 32.5 +0.6
D08A **Wollman Farm,** 83.96 327 IAmb IAmb 03 50 30.5
comp=Z,31nm,1.1s
G05D **Wamic, OR** 83.99 325 P P 03 50 28.7 +1.5
baz=131,SNR=9.3
J01E **Myrtle Point** 84.11 322 P P 03 50 29.2 +1.4
baz=129
I03D **Drain, OR** 84.12 322 P P 03 50 29.0 +1.2
baz=129
C09A **Chrisman Ranch** 84.14 328 IAmb IAmb 03 50 30.5
comp=Z,50nm,0.8s
MVO **Moncorvo** 84.19 41 eP P 03 50 29.0 +0.7
comp=Z,132nm,1.0s
MVO **Moncorvo** 84.19 41 eS S 04 00 34.6 +0.2
H04D **Lebanon** 84.30 323 P P 03 50 29.2 +0.5
baz=130
FCC **Fort Churchill** 84.33 346 IAmb IAmb 03 50 30.4
comp=Z,41nm,0.7s
F05D **White Salmon** 84.49 325 P P 03 50 30.6 +1.0
baz=131
I02D **Swisshome** 84.66 323 P P 03 50 31.5 +1.1
baz=129
PBRG **Braganca** 84.75 40 eP P 03 50 31.9 +0.8
comp=Z,63nm,1.4s
PAB **San Pablo** 84.90 43 P P 03 50 32.3 +0.3
PAB **San Pablo** 84.90 43 P P 03 50 32.3 +0.3
IVI **Ivigtut** 84.96 9 IAmb IAmb 03 50 33.2
comp=Z,56nm,1.0s
LTY **Liberty** 84.98 326 P P 03 50 32.3 +0.2
LTY IAmb IAmb 03 50 34.5
comp=Z,35nm,0.7s
G03D **McMinnville, O** 85.03 324 P P 03 50 33.7 +1.4
baz=129
F04A **Amboy** 85.03 325 IAmb IAmb 03 50 34.7
comp=Z,35nm,0.8s
B08A **Colville Reser** 85.05 328 P P 03 50 33.7 +1.3
ESDC **Sonseca Array** 85.22 43 P P 03 50 32.9 -0.6
comp=Z,64nm,1.0s,baz=249,slow=3.1,SNR=37
LON **Longmire** 85.24 325 P P 03 50 33.9 +0.5
LON pmax pmax
comp=Z,13nm,1.0s
LON **Longmire** 85.24 325 P P 03 50 33.9 +0.5
E04D **Cinebar** 85.51 325 P P 03 50 36.1 +1.5
baz=130
D05A **Enumclaw** 85.61 326 P P 03 50 36.0 +0.9
D05A IAmb IAmb 03 50 37.5
comp=Z,34nm,0.8s
E03A **Lebam** 86.03 325 IAmb IAmb 03 50 41.0
comp=Z,31nm,0.8s
B06A **Marblemount** 86.22 327 P P 03 50 38.5 +0.4
B05A **Bryant** 86.37 327 P P 03 50 39.0 +0.2
baz=130,SNR=34
D03D **Eldon** 86.41 326 P P 03 50 39.7 +0.7
baz=130,SNR=12
EANR **'Ain N'Sour** 86.57 49 P P 03 50 41.0 +0.8
ECHA **Ech Chlef** 86.86 49 P P 03 50 40.2 -1.3
A04D **Lummi Island** 86.97 327 P P 03 50 42.5 +0.8
baz=130,SNR=7.0
EBNR **Beni Rached** 87.04 49 P P 03 50 39.8 -2.7
PGC **Sidney** 87.31 326 P P 03 50 44.2 +1.0
PGC IAmb IAmb 03 50 46.0

comp=Z,37nm,0.8s
LLLB Lillooet 87.78 328 P **P** 03 50 46.6 +1.0
LLLB IAmb IAmb 03 50 47.6
comp=Z,31nm,0.9s
LSZ Lusaka 88.48 106 P **P** 03 50 51.4 +1.5
LSZ pmax pmax
comp=Z,84nm,1.1s
LSZ Lusaka 88.48 106 P **P** 03 50 51.4 +1.5
CASY Casey 91.24 179 P **P** 03 51 01.9 +0.4
KEST Kesra 92.34 52 P **P** 03 51 07.0 -0.2
comp=Z,21nm,0.9s,baz=257,slow=2.9,SNR=9.8
KEST Kesra 92.34 52 IAmb IAmb 03 51 10.2
comp=Z,18nm,0.8s
ILULI Ilulissat 92.37 5 P **P** 03 51 07.1 +0.7
ILULI pmax pmax
comp=Z,28nm,0.8s
ILULI Ilulissat 92.37 5 P **P** 03 51 07.1 +0.7
ILULI IAmb IAmb 03 51 08.6
comp=Z,28nm,0.8s
YKA Yellowknife Ar 93.08 340 P **P** 03 51 09.9 +0.1
comp=Z,9.4nm,0.5s,baz=130,slow=4.8,SNR=328
YKA pP **pP** 03 52 07.8 +1.7
comp=Z,3.0nm,0.7s,baz=126,slow=4.7,SNR=1.9
YKA PKKPbc **PKKPdf** 04 08 18.2 -0.9
comp=Z,0.5nm,0.9s,baz=315,slow=2.4,SNR=4.3
CLF Chambon-Foret 93.51 39 P **P** 03 51 12.7 +0.6
SSB Saint Sauveur 93.51 42 P **P** 03 51 12.6 +0.2
SSB pmax pmax
comp=Z,10.0nm,0.9s
SSB Saint Sauveur 93.51 42 P **P** 03 51 12.6 +0.2
EKA Eskdalemuir Ar 94.55 31 P **P** 03 51 16.1 -0.7
comp=Z,3.7nm,0.9s,baz=229,slow=0.8,SNR=6.0
DOU Dourbes 95.86 38 P **P** 03 51 22.6 -0.3
BMRD Maredsous 96.06 38 P **P** 03 51 23.7 -0.1
comp=Z,12nm,1.1s
DLBC Dease Lake 96.30 332 IAmb IAmb 03 51 27.5
comp=Z,8.7nm,0.9s
ECH Echery 96.48 40 P **P** 03 51 25.8 0.0
ECH pmax pmax
comp=Z,6.0nm,0.9s
ECH Echery 96.48 40 P **P** 03 51 25.8 0.0
WLF Walferdange 96.55 39 P **P** 03 51 26.6 +0.6
comp=Z,14nm,1.1s
SUMG Summit 96.96 8 P **P** 03 51 28.3 +0.4
SUMG pmax pmax
comp=Z,14nm,1.0s
SUMG Summit 96.96 8 P **P** 03 51 28.3 +0.4
SUMG IAmb IAmb 03 51 33.0
comp=Z,14nm,1.0s
TUE Stuetta 97.04 42 P Pdif 03 51 28.8 +0.1
TUE IAmb IAmb 03 51 37.1
comp=Z,12nm,0.8s
BFO Black Forest 97.23 41 *e*L L 04 39 17.9
comp=Z,88nm,19.3s
DAVOX Davos/Dischmat 97.51 42 P Pdif 03 51 31.0 +0.3
comp=Z,18nm,0.8s,baz=277,slow=3.0,SNR=25
FUORN Ofenpass-Fuorn 97.68 43 P Pdif 03 51 31.8 +0.2
DAVA Damuels 97.72 42 *e*Pdiff Pdif 03 51 32.1 +0.5
comp=Z,9.3nm,0.8s
TNS Taunus Mts 98.13 39 *e*L L 04 32 05.9
comp=Z,193nm,19.6s
FETA Feichten 98.14 42 *e*Pdiff Pdif 03 51 33.7 +0.3
comp=Z,9.6nm,1.0s,SNR=6.2
RETA Reutte 98.35 42 *e*Pdiff Pdif 03 51 34.7 +0.4
comp=Z,2.3nm,0.2s,SNR=6.0
MOTA Moosalm 98.50 42 *i* Pdiff Pdif 03 51 35.2 +0.1
comp=Z,9.7nm,0.9s,SNR=8.0
SQTA Sankt Quirin 98.52 42 *e*Pdiff Pdif 03 51 35.3 +0.2
comp=Z,24nm,0.9s,SNR=10
WATA Walderalm 98.79 42 *e*Pdiff **P** **03 51 36.6 +0.2**
comp=Z,3.9nm,0.5s
WTTA Wattenberg 98.80 42 *e*Pdiff **P** **03 51 36.9 +0.5**
comp=Z,15nm,0.9s,SNR=6.4
FUR Furstenfeldbru 98.94 41 *e*L L 04 35 20.7
comp=Z,94nm,21.9s
GRF Grafenberg Arr 99.53 40 *e*Pdiff **Pdif** **03 51 39.6 +0.1**
GRF *e*L L 04 35 29.8
comp=Z,124nm,19.6s
MOX Moxa 100.14 39 *e*L L 04 35 53.7
comp=Z,145nm,18.3s
WET Wettzell 100.31 41 *e*L L 04 40 13.1
comp=Z,71nm,20.3s
OBKA Obir 100.35 44 *e*Pdiff **Pdif** **03 51 44.0 +0.8**
comp=Z,2.7nm,0.7s
MOA Molln 100.67 43 *e*Pdiff **Pdif** **03 51 44.9 +0.3**
comp=Z,2.9nm,0.6s
GEC2 GERESS Array S 100.69 42 *e*L L 04 34 52.8
comp=Z,95nm,20.8s
GERES GERESS Array B 100.69 42 P **Pdif** **03 51 44.9 +0.2**
comp=Z,2.3nm,0.9s,baz=241,slow=2.7,SNR=14
GERES PKKPbc **PKKPbc** **04 07 59.5 +0.1**
comp=Z,1.0nm,0.9s,baz=45,slow=2.1,SNR=5.4
KHC Kasperske Hory 100.73 41 *e*P **Pdif** **03 51 45.2 +0.4**
KHC Kasperske Hory 100.73 41 *e*PDIFF **Pdif** **03 51 45.2 +0.4**
CLL Collm 101.21 39 *e*Pdif **Pdif** **03 51 48.0 +1.2**
CLL *e*pPP 03 56 42.0
CLL *e*SKSac **SKSac** **04 02 06.0 +2.0**
CLL *e*Sdif **Sdif** **04 03 10.0 +4.0**
CLL *e*SP SP 04 04 42.0 +3.1
CLL *e*PPS PPS 04 05 54.0
CLL *e*SS **SS** **04 10 12.0 0.0**
CLL Collm 101.21 39 *e*P **Pdif** **03 51 48.0 +1.2**
CLL *e*S **Sdif** **04 03 10.0 +4.0**
PRU Pruhonice 101.63 41 *e*P **Pdif** **03 51 50.1 +1.4**
PRU Pruhonice 101.63 41 *e*PDIFF **Pdif** **03 51 50.1 +1.4**
TREC Trest 101.95 42 *e*P **Pdif** **03 51 51.5 +1.3**
TREC MLR MLR
comp=Z,8µm,20.0s
TREC Trest 101.95 42 *e*PDIFF **Pdif** **03 51 51.5 +1.3**
UPC Upice 102.70 40 *e*P **Pdif** **03 51 54.9 +1.4**
UPC Upice 102.70 40 *e*PDIFF **Pdif** **03 51 54.9 +1.4**
CHVC Chvalec 102.75 40 *e*PDIFF **Pdif** **03 51 55.2 +1.5**
DPC Dobruska-Polom 102.83 41 *e*P **Pdif** **03 51 55.6 +1.5**
DPC Dobruska-Polom 102.83 41 *e*PDIFF **Pdif** **03 51 55.6 +1.5**
OSTC Ostas 102.83 40 *e*PDIFF **Pdif** **03 51 54.9 +0.8**
INK Inuvik 102.84 339 PKKPbc PKKPbc 04 07 53.4 -0.3
comp=Z,3.1nm,0.9s,baz=260,slow=2.9,SNR=7.9
KRLC Kraliky 103.01 41 *e*P **Pdif** **03 51 56.1 +1.2**
KRLC Kraliky 103.01 41 *e*PDIFF **Pdif** **03 51 56.1 +1.2**
VYHS Vyhne 103.76 43 *e*P **Pdif** **03 51 59.2 +0.9**
VYHS Vyhne 103.76 43 *e*PDIFF **Pdif** **03 51 59.2 +0.9**
ILAR Eielson Array 106.29 334 Pdiff **Pdif** **03 52 10.0 +0.9**
comp=Z,0.3nm,0.6s,baz=146,slow=3.5,SNR=3.3
ILAR PP PP 03 56 27.1 -9.3
comp=Z,1.0nm,1.0s,baz=101,slow=7.1,SNR=4.7
ILAR PKKPbc **PKKPbc** **04 07 41.1 -2.0**
comp=Z,1.2nm,1.0s,baz=275,slow=4.0,SNR=7.0
TOLK Toolik Lake Re 108.44 337 P **PKiKP** **03 56 23.5 +0.3**
baz=105
AKASG Malin Array Be 110.85 43 PKiKP **PKiKP** **03 56 27.9 -0.2**
comp=Z,1.4nm,0.5s,baz=274,slow=1.9,SNR=5.7
AKASG PP **PP** **03 57 07.6 -2.2**
comp=Z,0.2nm,0.3s,baz=257,slow=7.4,SNR=5.1
AKASG PKKPbc **PKKPbc** **04 07 27.2 -0.8**
comp=Z,0.2nm,0.3s,baz=64,slow=3.9,SNR=6.1
AKASG PKKP **PKKPab** **04 07 38.6 +2.5**
comp=Z,0.3nm,0.4s,baz=65,slow=4.5,SNR=4.6
AKASG Malin Array Be 110.85 43 *i* PKiKP **PKiKP** **03 56 28.0 -0.2**
FINES FINESS Array B 110.95 31 PKKPbc PKKPbc 04 07 27.4 -0.7
comp=Z,2.7nm,0.8s,baz=31,slow=4.4,SNR=5.4
BRTR Keskin Array B 111.78 55 PKiKP **PKiKP** **03 56 31.0 +0.5**
comp=Z,2.1nm,0.9s,baz=132,slow=1.8,SNR=3.9
BRTR PKKP **PKKPab** **04 07 35.8 +3.1**
comp=Z,0.6nm,0.6s,baz=108,slow=4.0,SNR=3.8
ARCES ARCESS Array B 111.81 22 PKKPbc PKKPbc 04 07 24.5 -1.1
comp=Z,4.3nm,0.9s,baz=74,slow=4.3,SNR=6.7
OBN Obninsk 115.80 38 PKP **PKiKP** **03 56 37.8 +0.3**
comp=Z,3.8nm,0.4s,baz=106,slow=22,SNR=3.4
OBN Obninsk 115.80 38‖ *e*PKiKP **PKiKP** **03 56 37.9 +0.4**
OBN *e* 03 57 42.9
OBN *e*PPP PPP 04 00 11.9
OBN pmax pmax
comp=Z,22nm,1.1s
SOC Sochi 116.89 51 *i* PKiKP **PKPdf** **03 56 39.8 -0.2**
SOC *e* 03 57 55.7
SOC *e*PPP PPP 04 00 23.6
SOC *e* 04 03 08.0
SOC *e*PS **PKKPdf** **04 07 34.6 +0.7**
SOC *e*SS SS 04 13 51.9 +9.4
SOC pmax pmax
comp=Z,12nm,0.7s
LPSR Galich'ya Gora 117.07 41 *e*PKiKP **PKPdf** **03 56 39.9 -0.1**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 117.15 43 *e*PKiKP **PKPdf** **03 56 39.4 -0.8**
VSR pmax pmax
comp=Z,10.0nm,0.6s
KLMR Klimovskoe 117.42 32 *e*PKiKP **PKPdf** **03 56 39.7 -0.7**
KLMR *e* 03 57 53.7
KLMR pmax pmax
comp=Z,33nm,1.5s
KLMR Klimovskoe 117.42 32 *e*PKPdf **PKPdf** **03 56 39.7 -0.7**
KLMR AMP 03 56 42.5
comp=Z,33nm,1.5s
KLMR *e*PP **PP** **03 57 53.7 -1.9**
VRH Novokhopyorsk 118.76 43 *e*PKiKP **PKPdf** **03 56 43.3 0.0**
VRH pmax pmax
comp=Z,20nm,0.9s
KIV Kislovodsk 119.07 51 *e*PKiKP **PKiKP** **03 56 44.6 +0.2**
KIV pmax pmax
comp=Z,54nm,1.1s
KVAR Kislovodsk Arr 119.07 51 PKP **PKiKP** **03 56 45.0 +0.6**
comp=Z,7.5nm,0.9s,baz=260,slow=20,SNR=2.1
KBZ Khabaz 119.20 52 PKP **PKiKP** **03 56 45.5 +1.1**
comp=Z,15nm,0.9s,baz=223,slow=1.5,SNR=27
KBZ SKP 04 00 00.2
comp=Z,5.8nm,1.0s,baz=207,slow=0.9,SNR=4.8
STKA Stephens Creek 119.37 207 PKP **PKiKP** **03 56 46.3 +1.0**
comp=Z,3.3nm,0.8s,baz=98,slow=3.6,SNR=7.6
STKA PKKPbc **PKKPbc** **04 06 58.7 +0.1**
comp=Z,1.2nm,0.4s,baz=7.4,slow=5.5,SNR=4.9
STKA Stephens Creek 119.37 207 **PKiKP** **03 56 46.0 +0.7**
GOF Gofitskoye 119.40 50‖ *e*PKiKP **PKiKP** **03 56 45.0 +0.2**
ZEI Tsey 119.86 53 *i* PKiKP **PKPdf** **03 56 46.0 0.0**
ZEI pmax pmax
comp=Z,8.0nm,0.7s
KIRV Kirov 122.64 34 PKP **PKPdf** **03 56 50.2 -0.3**
comp=Z,11nm,0.4s,baz=220,slow=18,SNR=3.7
BILL Bilibino 124.45 339‖ *e*PKiKP **PKPdf** **03 56 53.9 +0.1**
BILL *e* 03 57 47.3
BILL *e* 03 58 42.6
BILL *e*PPP PPP 04 01 29.0
BILL pmax pmax
comp=Z,4.0nm,0.9s
FORT Forrest 124.97 195 PKPdf **PKPdf** **03 56 55.3 -0.7**
CTA Charters Tower 126.72 219 PKP **PKiKP** **03 57 00.8 +0.7**
comp=Z,6.5nm,0.5s,baz=125,slow=4.6,SNR=5.5
ARU Arti 127.94 35 PKP **PKiKP** **03 57 02.2 +0.9**
comp=Z,4.2nm,0.5s,baz=339,slow=1.6,SNR=18
ARU Arti 127.94 35 *i* PKiKP **PKiKP** **03 57 01.6 +0.3**
ARU 03 59 02.7
ARU 04 03 52.3
ARU Arti 127.94 35 **PKiKP** **03 57 01.7 +0.3**
AKTO Aktyubinsk 129.10 43 PKP **PKiKP** **03 57 04.6 +0.7**
comp=Z,12nm,0.9s,baz=301,slow=1.4,SNR=32
AKTO SKPbc SKPbc 04 00 04.1 +1.2
comp=Z,8.9nm,1.0s,baz=239,slow=2.7,SNR=7.6
ASAR Alice Springs 129.76 205 PKiKP PKPpre 03 56 57.6
comp=Z,0.4nm,0.6s,baz=131,slow=2.1,SNR=5.3
ASAR PKP **PKiKP** **03 57 06.2 -0.1**
comp=Z,12nm,0.7s,baz=145,slow=2.2,SNR=68
ASAR pPKP pPKPdf 03 58 07.7 +3.3
comp=Z,5.6nm,0.8s,baz=147,slow=2.2,SNR=3.6
ASAR SKPbc SKPab 04 00 06.5 +0.1
comp=Z,8.1nm,0.8s,baz=143,slow=4.8,SNR=20
ASAR SKKPbc **SKKPbc** **04 09 49.1 +1.6**
comp=Z,1.3nm,0.8s,baz=339,slow=3.9,SNR=5.7
AS31 Alice Springs 129.76 205 **PKPdf** **03 57 04.4 -1.0**
WSAR Wadi Sarin 129.82 78 PKP **PKiKP** **03 57 06.3 +0.1**
comp=Z,22nm,0.9s,baz=251,slow=2.8,SNR=12
WSAR SKPbc SKPbc 04 00 07.4 +0.8
comp=Z,15nm,1.1s,baz=250,slow=4.2,SNR=5.2
TIXI Tiksi 130.27 354 PKP **PKPdf** **03 57 05.0 +0.2**
comp=Z,6.7nm,0.8s,baz=16,slow=3.7,SNR=9.3
TIXI SKPbc **SKPbc** **04 00 06.3 -0.4**
comp=Z,8.0nm,0.8s,baz=2.7,slow=3.6,SNR=7.6
TIXI Tiksi 130.27 354 *i* PKiKP **PKPdf** **03 57 04.9 +0.1**
TIXI pmax pmax
comp=Z,8.0nm,0.9s
AB31 Akbulak array 130.57 44 *i* PKiKP **PKiKP** **03 57 07.3 +0.4**
GEYT Alibeck 130.60 59 PKP **PKiKP** **03 57 07.5 +0.1**
comp=Z,3.4nm,0.6s,baz=275,slow=8.5,SNR=8.8
GEYT SKPbc **SKPbc** **04 00 09.4 +0.2**
comp=Z,22nm,0.9s,baz=272,slow=5.8,SNR=22
NRIK Noril'sk 130.85 12 PKP **PKiKP** **03 57 07.2 +0.3**
comp=Z,6.5nm,0.9s,baz=26,slow=4.1,SNR=6.5
NRIK SKPbc **SKPab** **04 00 09.8 +0.4**
comp=Z,10nm,0.8s,baz=18,slow=3.2,SNR=11
SEY Seymchan 132.07 337 *i* PKiKP **PKiKP** **03 57 09.2 -0.3**
WB2 Warramunga Arr 132.91 207 **PKPdf** **03 57 11.8 +0.3**
WRA Warramunga Arr 132.92 207 PKhKP PKPpre 03 56 59.2
comp=Z,0.7nm,0.4s,baz=144,slow=3.2,SNR=6.5
WRA PKP **PKiKP** **03 57 12.5 -0.2**
comp=Z,8.4nm,0.6s,baz=162,slow=1.7,SNR=41
WRA pPKP pPKPdf 03 58 12.9 +2.5
comp=Z,3.6nm,1.0s,baz=150,slow=1.6,SNR=2.6
WRA SKPbc **SKPbc** **04 00 17.6 -0.4**
comp=Z,13nm,0.8s,baz=151,slow=3.0,SNR=23
WRAB Tennant Creek 132.92 207 *i* PKiKP **PKPdf** **03 57 11.3 -0.1**
PMG Port Moresby 134.04 230 SKPbc **SKPbc** **04 00 22.2 +0.4**
comp=Z,35nm,0.9s,baz=360,slow=2.5,SNR=5.1
PETK Petropavlovsk- 134.84 324 PKP **PKiKP** **03 57 15.7 +0.3**
comp=Z,4.3nm,0.6s,baz=117,slow=4.7,SNR=6.2
PETK SKPbc **SKPbc** **04 00 23.2 +0.1**
comp=Z,8.9nm,0.7s,baz=99,slow=5.6,SNR=11
BRVK Borovoye 135.48 36 *i* PKiKP **PKPdf** **03 57 15.3 +0.2**
BRVK Borovoye 135.48 36 **PKiKP** **03 57 16.3 -0.4**
BVAR Borovoye Array 135.56 36 PKP **PKiKP** **03 57 16.7 -0.2**
comp=Z,9.2nm,0.8s,baz=270,slow=1.5,SNR=38
BVAR SKPbc **SKPbc** **04 00 24.4 -1.0**
comp=Z,1.7nm,0.7s,baz=204,slow=3.2,SNR=1.8
FITZ Fitzroy Crossi 137.69 197 PKhKP PKPpre 03 57 11.3
comp=Z,3.0nm,0.9s,baz=206,slow=3.7,SNR=6.2
FITZ PKP **PKiKP** **03 57 22.0 -0.3**
comp=Z,9.8nm,0.7s,baz=204,slow=5.7,SNR=15
FITZ SKPbc **SKPbc** **04 00 33.2 +0.3**
comp=Z,7.0nm,0.8s,baz=224,slow=3.2,SNR=7.5
YAK Yakutsk 139.18 348 *i* PKiKP **PKPdf** **03 57 21.6 0.0**
YAK pmax pmax
comp=Z,13nm,0.9s
KURK Kurchatov 141.13 35 PKiKP **PKPdf** **03 57 21.8 -3.7**
KURK Kurchatov 141.13 35 **PKPdf** **03 57 21.8 -3.7**
KURBB Kurchatov Arra 141.13 35 PKhKP PKPpre 03 57 20.4
comp=Z,4.1nm,0.6s,baz=301,slow=3.2,SNR=5.8
KURBB PP **PP** **04 00 34.6 +5.0**
comp=Z,5.3nm,1.0s,baz=290,slow=7.6,SNR=5.8
KURBB SKKPbc SKKPbc 04 09 06.7 -1.7
comp=Z,0.5nm,0.5s,baz=118,slow=3.1,SNR=6.4
EKS2 Erkin-Say 141.62 49 P **PKiKP** **03 57 29.2 -0.6**
SNR=5.2
USP Ospenovka 141.92 48 P **PKPdf** **03 57 28.9 +1.6**
SNR=7.0
ZALV Zalesovo Beam 142.10 27 PKhKP PKPpre 03 57 22.8
comp=Z,5.0nm,0.6s,baz=309,slow=4.7,SNR=18
ZALV PKP **PKiKP** **03 57 29.1 -1.1**
comp=Z,28nm,0.6s,baz=270,slow=2.6,SNR=24
ZALV SKPbc **SKPbc** **04 00 43.6 +0.1**
comp=Z,6.3nm,0.8s,baz=297,slow=3.5,SNR=3.6
AAK Ala-Archa 142.13 49 PKhKP PKPpre 03 57 24.0
comp=Z,7.5nm,0.9s,baz=210,slow=2.5,SNR=12
AAK SKPbc **SKPbc** **04 00 43.8 -0.4**
comp=Z,14nm,0.8s,baz=214,slow=2.3,SNR=8.5
AAK Ala-Archa 142.13 49 P **PKPdf** **03 57 24.8 -3.1**
SNR=8.5
AAK Ala-Archa 142.13 49 **PKPdf** **03 57 24.2 -3.6**
UCH Uchtor 142.27 50 P **PKPdf** **03 57 25.7 -2.8**
SNR=20
TKM2 Tokmak 2 142.79 48 P **PKPdf** **03 57 26.0 -3.0**
SNR=9.9
POO Poona 142.81 89 *ex* **PKiKP** **03 57 36.0 +3.2**
KZA Kyzart 142.84 50 P **PKPdf** **03 57 27.5 -2.0**
SNR=8.0
NIL Nilore 143.17 64 PKPab 03 57 25.9 -0.1
ULHL Ulahol 143.48 49 P PKPbc 03 57 29.1 +0.8
SNR=34
KSH Kashi 144.15 53 PKPbc **PKPab** **03 57 29.6 -0.2**
KSH pPKP pPKPdf 03 58 28.5 -1.8
KSH PP **PP** **04 00 46.1 -2.5**
KSH SKKS 04 07 12.5
KDJ Kajisay 144.17 49 **PKPab** **03 57 28.3 -1.5**
BOD Bodaibo 144.95 359‖ *i*PKiKP PKPbc 03 57 31.8 0.0
BOD pmax pmax
comp=Z,1µm,0.8s
MAKZ Makanchi 145.12 39 PKiKP **PKPbc** **03 57 32.8 0.0**
MAKZ Makanchi 145.12 39 **PKPbc** **03 57 32.8 0.0**
PDGK Podgornoye 145.26 46 PKiKP **PKPab** **03 57 34.3 +0.4**
MK31 Makanchi Array 145.31 39 *i* PKiKP **PKPbc** **03 57 33.6 +0.2**
MKAR Makanchi Array 145.31 39 PKPbc **PKPbc** **03 57 33.6 +0.2**
comp=Z,78nm,0.8s,baz=311,slow=2.4,SNR=404
MKAR SKPbc **SKiKP** **04 00 51.9 0.0**
comp=Z,3.8nm,0.8s,baz=329,slow=1.9,SNR=3.8
MKAR SKKPbc **SKKPab** **04 08 50.1 +0.8**
comp=Z,4.2nm,0.9s,baz=123,slow=6.0,SNR=17
THN Thein Dam 145.37 66 *ex* **PKPdf** **03 57 35.0 +1.4**
BATI Baumata 145.76 198 PKPbc **PKPab** **03 57 37.6 +1.4**
comp=Z,54nm,0.6s,baz=246,slow=2.5,SNR=5.7
YUK Yuzh-Kuril'sk 145.91 316 *e*PKHKP **PKPdf** **03 57 31.8 -2.3**
YUK *e* 04 00 59.7
BHK Bhakra 146.07 67 *ex* **PKPdf** **03 57 35.8 +0.9**
YSS Yuzh-Sakhalins 146.23 323 *i* PKiKP **PKPbc** **03 57 35.8 -0.2**
YSS *e*SS SS 04 19 40.6 +2.9
YSS pmax pmax
comp=Z,40nm,0.8s
HYB Hyderabad 146.88 93 *i* PKP **PKPdf** **03 57 35.7 -0.9**
comp=Z,260nm,1.0s
HYB *e*pPKP **pPKPdf** **03 58 34.0 -1.5**
NDI New Delhi 146.94 72 *e*P **PKPdf** **03 57 37.0 +0.6**
NDI *e*S **PKPab** **03 57 39.0 -1.6**
ZEA Zeya 147.32 345 *e*PKiKP **PKPbc** **03 57 37.8 -1.1**
ZEA pmax pmax
comp=Z,35nm,1.0s
FAKI Fak Fak 148.56 218 **PKiKP** **03 57 44.4 -0.4**
ERM Erimo 148.61 315 PKP2 **PKPbc** **03 57 43.1 +0.5**
ERM Erimo 148.61 315 **PKPbc** **03 57 43.1 +0.5**
GUMO Guam 148.82 258 **PKPbc** **03 57 42.7 -1.2**
CISI Cisompet, Garu 149.40 169 **PKPbc** **03 57 46.0 +0.5**
MOY Mondy 149.56 15 *e*PKP2 **PKiKP** **03 57 46.3 +0.5**
MOY pmax pmax
comp=Z,104nm,1.3s
IRK Irkutsk 149.71 11 *e*PKP2 **PKPbc** **03 57 45.4 +0.3**
IRK pmax pmax
comp=Z,89nm,0.8s
LEM Lembang 150.08 168 PKPbc **PKiKP** **03 57 49.3 +1.2**
comp=Z,234nm,0.8s,baz=145,slow=3.1,SNR=31
TLY Talaya 150.13 12 PKPbc **PKiKP** **03 57 47.5 +0.6**
comp=Z,15nm,0.7s,baz=216,slow=1.6,SNR=9.6
TLY Talaya 150.13 12*c* *i*PKP2 **PKiKP** **03 57 47.4 +0.6**
TLY pmax pmax
comp=Z,154nm,0.9s
WMQ Urumqi 150.13 39 *e*P **PKPdf** **03 57 40.8 -0.4**
WMQ pmax pmax
comp=Z,220nm,3.7s
WMQ LR LR
comp=N,590nm,29.1s
WMQ LR LR
comp=E,2µm,29.0s
WMQ LR LR
comp=Z,1µm,29.1s
WMQ Urumqi 150.13 39 PKP2 **PKiKP** **03 57 47.1 -0.1**
WMQ Urumqi 150.13 39 **PKiKP** **03 57 47.1 -0.1**
SMRI Semarang 150.25 174 **PKiKP** **03 57 49.2 +0.9**
TEY Ternei 150.78 325‖ *i*PKiKP **PKiKP** **03 57 49.1 +0.8**
TEY pmax pmax
comp=E,20nm,0.7s
TEY pmax pmax
comp=N,10.0nm,0.6s
TEY pmax pmax
comp=Z,40nm,0.7s
SIJI Sorong 150.80 219 PKPbc **PKiKP** **03 57 50.4 +1.0**
comp=Z,116nm,0.7s,baz=17,slow=6.8,SNR=61
ZAK Zakamensk 151.29 14 *e*PKiKP **PKPdf** **03 57 40.7 -2.1**
ZAK pmax pmax
comp=Z,23nm,1.0s
ZAK pmax pmax
comp=Z,12nm,1.0s
KAPI Kappang 151.73 193 PKPbc **PKiKP** **03 57 52.5 +1.3**
comp=Z,31nm,0.6s,baz=242,slow=2.3,SNR=22
PYUN Piuthan 152.05 73 *e*P **PKPdf** **03 57 45.9 +1.1**
comp=Z,240nm,0.9s
KOLN Koldanda 152.61 73 *e*P **PKPdf** **03 57 46.5 +0.9**
DANN Dangsing 152.71 72 *e*P **PKPdf** **03 57 46.8 +1.0**
comp=Z,237nm,0.7s
GKN Gorkha 153.51 73 *e*P **PKPdf** **03 57 47.8 +1.0**
comp=Z,77nm,0.9s
USRK Ussuriysk Ar. 153.69 329 PKP **PKPdf** **03 57 47.7 +1.3**
comp=Z,1.3nm,0.8s,baz=115,slow=1.3,SNR=4.1
USRK PKPbc **PKiKP** **03 57 55.7 +1.3**
comp=Z,6.3nm,0.6s,baz=7.0,slow=1.7,SNR=13
DMN Daman 153.95 73 *e*P **PKPdf** **03 57 48.5 +0.9**
KKN Kakani 154.09 73 *e*P **PKPdf** **03 57 48.7 +1.0**
PKIN Phulchoki 154.21 73 *e*P **PKPdf** **03 57 48.8 +0.8**
PKI Pulchoki 154.22 73 *e*P **PKPdf** **03 57 48.2 +0.1**
SONM Songino Array 154.33 11 PKP **PKPdf** **03 57 48.9 +1.6**
comp=Z,9.1nm,0.9s,baz=309,slow=0.7,SNR=42
SONM PKPbc **PKiKP** **03 57 56.6 +0.8**
comp=Z,12nm,0.8s,baz=329,slow=1.2,SNR=26
SONM PKPab **PKPab** **03 58 12.0 +1.3**
comp=Z,11nm,0.7s,baz=330,slow=4.7,SNR=14
ULN Ulaanbaatar 154.41 10 PKiKP **PKPdf** **03 57 48.7 +1.2**
ULN Ulaanbaatar 154.41 10 **PKPdf** **03 57 48.7 +1.2**
MJAR Matsushiro Arr 154.53 308 PKP **PKPdf** **03 57 48.8 +0.9**
comp=Z,2.0nm,0.9s,baz=192,slow=1.0,SNR=5.5
MJAR PKPbc **PKiKP** **03 57 57.2 +0.8**
comp=Z,7.7nm,0.8s,baz=94,slow=1.3,SNR=11
MJAR PKPab **PKPab** **03 58 13.0 +1.1**
comp=Z,4.8nm,0.7s,baz=60,slow=2.9,SNR=7.3
MAJO Matsushiro 154.53 308 PKiKP **PKiKP** **03 57 56.6 +0.2**
MAJO Matsushiro 154.53 308 **PKiKP** **03 57 56.6 +0.2**
MAT Matsushiro 154.53 308 PKP **PKiKP** **03 57 57.1 +0.7**
MJB9 Matsu-Tunnel 154.53 308 **PKPbc** **03 57 52.7 -3.7**
MJB9 **PKPab** **03 58 07.8 -4.1**
GUN Gumba 154.61 73 *e*P **PKPdf** **03 57 49.7 +1.1**
JIRN Jiri 154.91 73 *e*P **PKPdf** **03 57 49.3 +0.2**
RAMN Ramite 155.33 75 *e*P **PKPdf** **03 57 50.1 +0.6**
comp=Z,34nm,0.7s
RPSI Rantau Prapat 155.62 143 PKPab **PKPab** **03 58 17.2 +0.2**
PSI Prapat 155.71 143 PKP2 **PKPab** **03 58 17.2 -0.3**
ODAN Odare 156.04 75 *e*P **PKPdf** **03 57 51.2 +0.8**
LSA Lhasa 158.87 66 P **PKPdf** **03 57 55.5 +1.3**
LSA pmax pmax
comp=Z,50nm,1.0s
LSA Lhasa 158.87 66 PKP2 **PKPab** **03 58 31.7 +0.2**
LSA 04 57 54.9
LSA Lhasa 158.87 66 PKPdf **PKPdf** **03 57 54.9 +0.7**
LSA PKPab **PKPab** **03 58 31.7 +0.2**
GTA Gaotai 159.74 32 ⇑PKP **PKPdf** **03 57 55.4 +1.0**
GTA PKPab **PKPab** **03 58 35.3 +0.9**
GTA pPKP pPKPdf 03 58 55.3 +1.7
GTA sPKP 03 59 18.8
GTA LR LR
comp=N,120nm,18.4s
GTA LR LR
comp=E,470nm,19.7s
GTA LR LR
comp=Z,160nm,18.7s
BRDH Bariadhala 159.91 86 PKPab **PKPab** **03 58 37.2 +1.6**
comp=Z,191nm,1.0s,baz=94,slow=2.2,SNR=4.2
SHL Shillong 160.15 78 PKiKP **PKPdf** **03 57 55.6 +0.2**
SHL Shillong 160.15 78 **PKPdf** **03 57 55.6 +0.2**
KSRS Korea Array 160.73 323 PKP **PKPdf** **03 57 56.6 +1.3**
comp=Z,3.0nm,0.8s,baz=76,slow=1.0,SNR=14
KSRS PKPab **PKPab** **03 58 40.6 +2.0**
comp=Z,7.0nm,1.0s,baz=58,slow=4.3,SNR=11
LZH Lanzhou 164.31 30 *e*PKP **PKPdf** **03 57 55.9 -3.3**
LZH pPKP PKPab 03 58 56.0 +1.5
LZH sPKP 03 59 19.4
CM31 Chiang Mai Arr 165.80 105 **PKPab** **03 58 57.0 -4.5**
CMAR Chiang Mai Arr 165.80 105 PKP **PKPdf** **03 58 00.9 +0.2**
comp=Z,3.9nm,0.9s,baz=276,slow=2.2,SNR=19
CMAR PKPab **PKPab** **03 59 01.9 +0.4**
comp=Z,67nm,0.9s,baz=255,slow=5.1,SNR=69
CMAR PP **PP** **04 02 51.0 +1.5**
comp=Z,3.7nm,0.9s,baz=244,slow=5.3,SNR=6.0
TIA Tai'an 166.19 347 P **PKPdf** **03 58 02.3 +1.7**
TIA pmax pmax
comp=Z,9.0nm,0.5s
CD2 Chengdu 168.15 45 PKP **PKPdf** **03 58 02.4 +0.2**
CD2 PP **PP** **04 02 59.4 -1.2**
CD2 SKS **SKSdf** **04 04 44.9 0.0**
NJ2 Nanjing 169.54 334 *e*P **PKPdf** **03 58 03.1 +0.1**
NJ2 pmax pmax
comp=Z,13nm,0.9s
KMI Kunming 169.95 74 PKP **PKPdf** **03 58 03.6 -0.1**
KMI pPKP pPKPdf 03 59 03.3 +0.3
WHN Wuhan 172.18 354 PKPbc **PKPdf** **03 58 04.6 +0.2**
WHN PKPab **PKPab** **03 59 29.4 +0.3**
WHN PP **PP** **04 03 23.5 +4.0**
GYA Guiyang 172.82 58 *e*PKPbc **PKPdf** **03 58 03.4 -1.6**
GYA pPKP pPKPdf 03 58 59.3 -5.1
GYA PKPab **PKPab** **03 59 32.6 0.0**
GYA PKS **PKSdf** **04 01 34.0 -3.5**
GYA PP **PP** **04 03 25.9 +1.5**
GYA AMB AMB
comp=Z,130nm,8.3s
QIZ Qiongzhong 175.02 137 PKP **PKPdf** **03 58 04.8 -1.0**

QIZ PP **PP** **04 03 33.8 -0.5**

NEIC ***14*** *03:40:40.7±2.5, 17°.24N±0°.03×100°.83W±0°.02, h1*^{km}*±4km, Error ellipse: s-maj=4.0km s-min=2.3km az=200.0*

MEX ***14*** *03:40:42.3±0.9, 17°.13N×100°.91W, h16*^{km}*±999*^{km}*, MD4.0*

ISC 14 03:40:40.7±1.3, 17°.32N±0°.04×100°.81W±0°.03, h6^{km}**±11**^{km}**, n22,** σ1=**49**/40**, 1D, Guerrero**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.58**	**117**					
				eP		**Pg**	**03 40 52.3**	**+0.4**
CAIG				*i* S		**Sg**	**03 41 00.2**	**+0.7**
CAIG	**El Cayaco**	**0.58**	**117**			**Pg**	**03 40 52.3**	**+0.4**
CAIG						**Sg**	**03 41 00.2**	**+0.7**
ZIIG	**Zihuatanejo**	**0.69**	**295**	*eP*		**Pb**	**03 40 53.8**	**-1.4**
ZIIG				*eS*		**Sb**	**03 41 02.8**	**-2.2**
ZIIG	**Zihuatanejo**	**0.69**	**295**			**Pb**	**03 40 53.8**	**-1.4**
ZIIG						**Sb**	**03 41 02.8**	**-2.2**
ARIG	**Puente Sto Nin**	**1.06**	**25**	*eP*		**Pb**	**03 41 01.5**	**+0.1**
ARIG				*eS*		**Sn**	**03 41 16.5**	**-0.7**
ARIG	**Puente Sto Nin**	**1.06**	**25**			**Pb**	**03 41 01.5**	**+0.1**
ARIG						**Sn**	**03 41 16.5**	**-0.7**
MEIG	**Mezcala**	**1.29**	**62**	*i* P		**Pg**	**03 41 05.6**	**+0.2**
MEIG				*eS*		**Sg**	**03 41 22.6**	**+0.6**
MEIG	**Mezcala**	**1.29**	**62**			**Pg**	**03 41 05.6**	**+0.2**
MEIG						**Sg**	**03 41 22.6**	**+0.6**
PLIG	**Platanillo**	**1.64**	**49**	*eP*		**Pn**	**03 41 10.5**	**+0.2**
PLIG				*i* S		**Sg**	**03 41 31.5**	**-2.0**
PLIG	**Platanillo**	**1.64**	**49**			**Pn**	**03 41 10.5**	**+0.2**
PLIG						**Sg**	**03 41 31.5**	**-2.0**
TLIG	**Tlapa**	**2.15**	**83**	*eP*		**Pn**	**03 41 17.4**	**0.0**
TLIG				*eS*		**Sg**	**03 41 48.8**	**-1.2**
TLIG	**Tlapa**	**2.15**	**83**			**Pn**	**03 41 18.3**	**+1.0**
TLIG						**Sb**	**03 41 47.0**	**-0.3**
YAIG	**Yautepec**	**2.26**	**47**	*eP*		**Pb**	**03 41 20.5**	**-1.6**
YAIG				*eS*		**Sg**	**03 41 52.9**	**-0.5**
YAIG	**Yautepec**	**2.26**	**47**			**Pb**	**03 41 20.5**	**-1.6**
YAIG						**Sg**	**03 41 52.9**	**-0.5**
MOIG	**Morelia**	**2.38**	**351**	Pn		**Pn**	**03 41 22.3**	**+1.8**
MOIG				Sn		**Sb**	**03 41 53.4**	**-0.4**
PNIG	**Pinotepa**	**2.73**	**109**	*eP*		**Pn**	**03 41 26.4**	**+1.3**
PNIG				*eS*		**Sg**	**03 42 06.8**	**-1.5**
PNIG	**Pinotepa**	**2.73**	**109**			**Pn**	**03 41 26.4**	**+1.3**
PNIG						**Sg**	**03 42 06.8**	**-1.5**
HLIG	**Huajuapan de L**	**2.91**	**79**	*eP*		**Pn**	**03 41 23.8**	**-4.0**
HLIG				*eS*		**Sn**	**03 42 01.9**	**-1.4**
TX31	**Lajitas Ar. Si**	**12.25**	**348**	Pn		**Pn**	**03 43 38.3**	**+2.4**
JCT	**Junction City**	**13.14**	**4**	Pn		**Pn**	**03 43 51.3**	**+3.3**
TUC	**Tucson**	**17.44**	**331**	Pn		**Pn**	**03 44 46.0**	**+1.2**
X18A	**Snowflake**	**19.00**	**336**	P		**P**	**03 45 03.0**	**-0.3**

NEIC ***14*** *03:41:59.4±1.6, 53°.8N±0°.1×35°.8W±0°.2, h11*^{km}*±5km, mb4.4/10, Error ellipse: s-maj=22.2km s-min=12.4km az=222.0*

IDC ***14*** *03:42:00.1±2.6, 53°.93N×35°.41W, h0*^{km}*, mb3.7/7, mb1 3.7/8, mb1mx3.5/49, mbtmp3.6/8, ML3.8/1, MS3.3/3, Ms1 3.3/3, ms1mx2.9/48, Error ellipse: s-maj=65.6km s-min=27.3km az=28.0*

ISC 14 03:42:00.6±0.8, 53°.8N±0°.1×35°.7W±0°.1, h16^{km}**, n21,** σ1=**26**/19**, mb4.1**/10**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
BORG	**Borgarnes**	**13.18**	**28**	LR		LR	03 48 49.0	
	comp=Z,40nm,20.0s,baz=241,slow=32							
ILULI	**Ilulissat**	**17.06**	**341**	Pn		**Pn**	**03 45 56.8**	**-1.3**
ILULI						IAmb	IAmb	03 46 13.7
	comp=Z,82nm,2.0s							
CMLA	**Cha da Macela**	**17.47**	**152**			**Pn**	**03 46 03.2**	**-0.3**
CMLA						**Sn**	**03 49 18.2**	**+0.7**
EKA	**Eskdalemuir Ar**	**18.83**	**72**	P		**Pn**	**03 46 19.9**	**-0.1**
	baz=275,slow=7.8,SNR=2.9							
H62A	**Milan**	**24.73**	**263**	P		**P**	**03 47 19.4**	**-1.6**
H62A						IAmb	IAmb	03 47 25.1
	comp=Z,16nm,1.5s							
ESDC	**Sonseca Array**	**25.65**	**110**	P		**P**	**03 47 29.1**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=314,slow=9.7,SNR=2.1							
TULEG	**Thule**	**26.00**	**343**	P		**P**	**03 47 32.0**	**-0.2**
TULEG						IAmb	IAmb	03 47 35.0
	comp=Z,9.6nm,0.9s							
YKA	**Yellowknife Ar**	**40.03**	**315**	P		**P**	**03 49 37.0**	**+2.6**
	comp=Z,0.3nm,0.8s,baz=62,slow=9.8,SNR=3.6							
IDI	**Anoyia**	**45.45**	**89**	LR		LR	04 09 07.0	
	comp=Z,39nm,20.3s,baz=324,slow=36							
BR131	**Keskin Array S**	**47.62**	**78**	P		**P**	**03 50 34.4**	**-1.4**
BR131						IAmb	IAmb	03 50 46.4
	comp=Z,7.6nm,1.8s							
BRTR	**Keskin Array B**	**47.62**	**78**	P		**P**	**03 50 38.1**	**+2.4**
	comp=Z,0.8nm,0.8s,baz=305,slow=4.4,SNR=6.1							
TIXI	**Tiksi**	**54.40**	**6**	P		**P**	**03 51 26.6**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=342,slow=9.4,SNR=1.8							
TIXI	**Tiksi**	**54.40**	**6**	P		**P**	**03 51 27.0**	**+0.9**
TIXI						IAmb	IAmb	03 51 32.1
	comp=Z,2.4nm,0.8s							
LPIG	**La Paz**	**61.93**	**273**	LR		LR	04 18 44.9	
	comp=Z,73nm,18.6s,baz=97,slow=36							
KURK	**Kurchatov**	**62.23**	**41**	P		**P**	**03 52 20.2**	**-0.8**
KURK						IAmb	IAmb	03 52 25.7
	comp=Z,2.1nm,0.7s							
KURBB	**Kurchatov Arra**	**62.27**	**41**	P		**P**	**03 52 21.8**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=320,slow=7.1,SNR=8.5							
MAKZ	**Makanchi**	**66.69**	**41**	P		**P**	**03 52 49.0**	**-1.4**
MK31	**Makanchi Array**	**66.83**	**41**	P		**P**	**03 52 51.0**	**-0.2**
MKAR	**Makanchi Array**	**66.83**	**41**	P		**P**	**03 52 51.5**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=328,slow=6.7,SNR=7.1							
SONM	**Songino Array**	**73.78**	**26**	P		**P**	**03 53 34.1**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=318,slow=4.1,SNR=3.0							
USA0B	**Ussuriysk Arra**	**81.83**	**9**	P		**P**	**03 54 17.2**	**-1.4**

IDC ***14*** *04:20:14.4±0.6, 6°.94S×154°.86E, h0*^{km}*, mb4.3/21, mb1 4.5/23, mb1mx4.4/47, mbtmp4.3/23, ML3.5/2, MS4.2/12, Ms1 4.2/12, ms1mx3.9/30, Error ellipse: s-maj=19.4km s-min=14.4km az=115.0*

BJI ***14*** *04:20:19.0±0.0, 7°.00S×154°.70E, h36*^{km}*, mB5.0/9, mb4.8/14, Ms4.9/6, Ms7 4.4/5*

NEIC ***14*** *04:20:19.2±1.8, 7°.0S±0°.1×154°.8E±0°.1, h35*^{km}*±1km, mb4.7/43, Error ellipse: s-maj=22.3km s-min=15.2km az=61.0*

GCMT ***14*** *04:20:21.2±0.3, 7°.18S±0°.02×154°.84E±0°.02, h22*^{km}*, MW5.1/88, Moment Tensor Solution. s43,c49; s88,c115; Duration: 0 Moment tensor: Scale 10*^{16}*Nm; M*$_{rr}$*5.36±.26; M*$_{\theta\theta}$*-2.62±.17; M*$_{\phi\phi}$*-2.74±.18; M*$_{r\theta}$*2.46±.28; M*$_{\theta\phi}$*1.34±.11; M*$_{\phi r}$*~1.57±.28; Best double couple: M*$_o$*5.51500×10*^{16} *NP1:*ϕ_{s}*130.00000°,δ61.00000°,λ85.00000°. Principal axes: T 6.2090, Plg74.0000°, Azm28.0000°; N -1.3880, Plg4.0000°, Azm132.0000°; P -4.8210, Plg16.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***14*** *04:20:20.6±0.5, 7°.S±4°×15°.5E±°, h48*^{km}*±6km, M5.3/18, mb4.8/18, mB5.2/3, MLv5.7/2, Mw(mB)4.5/3*

ISC 14 04:20:20.5±0.4, 6°.98S±0°.06×154°.77E±0°.07, h41^{km}**, n100,** σ1=**79**/103**, mb4.6**/43**, MS4.2**/13**, 1D, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
RABL	**Rabaul**	**3.79**	**317**			**Pn**	**04 21 17.2**	**+0.7**
RABL						Sn	**04 22 01.0**	**+1.0**
KRVT	**Keravat (AS076**	**3.81**	**314**	Pn		**Pn**	**04 21 16.2**	**-0.4**
	22nm,0.3s,baz=149,slow=2.3,SNR=16							
KRVT						Sn	**04 22 00.3**	**+0.1**
	66nm,0.3s,baz=146,slow=20,SNR=6.0							
HNR	**Honiara**	**5.67**	**116**	LR		LR	04 24 08.0	
	comp=Z,4μm,18.3s,baz=248,slow=42							
PMG	**Port Moresby**	**7.91**	**252**	Pn		**Pn**	**04 22 13.7**	**+0.8**
	9.6nm,0.3s,baz=264,slow=21,SNR=4.3							
PMG						Sn	**04 23 44.8**	**+3.6**
	13nm,0.3s,baz=237,slow=22,SNR=7.9							
PMG						LR	LR	04 25 29.9
	comp=Z,2μm,18.6s,baz=37,slow=39							
CTA	**Charters Tower**	**15.42**	**212**	Pn		**P**	**04 23 58.0**	**-1.3**
	0.5nm,0.3s,baz=36,slow=13,SNR=14							
CTA						LR	LR	04 30 03.9
	comp=Z,1μm,18.5s,baz=36,slow=38							
CTAO	**Charters Tower**	**15.42**	**212**	P		**Pn**	**04 23 53.9**	**-1.4**
CTAO						IAmb	IAmb	04 24 02.5
	comp=Z,33nm,0.9s							
DZM	**Mont Dzumac**	**18.76**	**144**	*e*Pn		**Pn**	**04 24 40.5**	**+3.5**
	comp=Z,13nm,0.7s							
DZM				*e*LQ		LQ	04 28 14.6	
	comp=Z,1μm,24.4s							
DZM				*e*LR		LR	04 29 06.9	
	comp=Z,816nm,22.9s							
WR0	**Warramunga Arr**	**23.48**	**235**	P		**P**	**04 25 26.5**	**-0.2**
WR0						IAmb	IAmb	04 25 28.8
	comp=Z,29nm,0.9s							
ARMA	**Armidale**	**23.50**	**187**	P		**P**	**04 25 25.8**	**-1.1**
ARMA						IAmb	IAmb	04 25 29.8
	comp=Z,17nm,1.1s							
WB0	**Warramunga Arr**	**23.50**	**235**	P		**P**	**04 25 26.9**	**-0.1**
WB0						IAmb	IAmb	04 25 29.0
	comp=Z,24nm,1.0s							
WRAB	**Tennant Creek**	**23.62**	**235**	P		**P**	**04 25 26.9**	**-1.2**
WRAB						IAmb	IAmb	04 25 30.1
	comp=Z,30nm,0.9s							
WB2	**Warramunga Arr**	**23.63**	**235**	P		**P**	**04 25 27.0**	**-1.1**
WB2						IAmb	IAmb	04 25 30.2
	comp=Z,24nm,0.8s							
WRA	**Warramunga Arr**	**23.64**	**235**	P		**P**	**04 25 28.4**	**+0.2**
	comp=Z,23nm,0.8s,baz=60,slow=9.7,SNR=42							
WRA						LR	LR	04 35 14.3
	comp=Z,763nm,18.3s,baz=50,slow=38							
MTN	**Manton Dam**	**23.99**	**254**	P		**P**	**04 25 29.4**	**-2.1**
MTN						IAmb	IAmb	04 25 36.9
	comp=Z,36nm,1.1s							
SIJI	**Sorong**	**24.21**	**284**	P		**P**	**04 25 34.1**	**+0.5**
	comp=Z,15nm,0.8s,baz=66,slow=6.0,SNR=8.5							
BNDI	**Bandanaira**	**24.86**	**274**	P		**P**	**04 25 39.9**	**+0.5**
	comp=Z,442nm,0.7s							
AS31	**Alice Springs**	**26.01**	**228**	P		**P**	**04 25 49.4**	**-0.5**
ASAR	**Alice Springs**	**26.01**	**228**	P		**P**	**04 25 49.9**	**0.0**
	comp=Z,6.9nm,0.7s,baz=60,slow=8.7,SNR=63							
ASAR						S		**S**	**04 30 09.3**	**-8.8**
	comp=Z,0.2nm,0.5s,baz=49,slow=13,SNR=4.4							
ASAR						ScP		**ScP**	**04 32 59.4**	**+5.3**
	comp=Z,2.0nm,0.8s,baz=51,slow=2.8,SNR=11							
ASAR						LR	LR	04 36 26.8
	comp=Z,744nm,18.0s,baz=104,slow=37							
KNRA	**Kununurra**	**26.89**	**249**	P		**P**	**04 25 57.7**	**-0.2**
STKA	**Stephens Creek**	**27.65**	**205**	P		**P**	**04 26 04.7**	**+0.2**
	comp=Z,4.4nm,0.9s,baz=41,slow=11,SNR=8.2							
STKA						ScP		**ScP**	**04 33 04.2**	**+5.5**
	comp=Z,2.4nm,0.9s,baz=58,slow=9.6,SNR=2.9							
STKA						LR	LR	04 37 50.0
	comp=Z,868nm,18.0s,baz=20,slow=38							
STKA	**Stephens Creek**	**27.65**	**205**	P		**P**	**04 26 03.6**	**-0.9**
FITZ	**Fitzroy Crossi**	**30.45**	**246**	P		**P**	**04 26 29.1**	**-0.4**
	comp=Z,6.6nm,0.6s,baz=73,slow=6.6,SNR=14							
FITZ						LR	LR	04 39 41.4
	comp=Z,822nm,18.2s,baz=71,slow=38							
FITZ	**Fitzroy Crossi**	**30.45**	**246**	P		**P**	**04 26 29.8**	**+0.3**
FITZ						IAmb	IAmb	04 26 33.5
	comp=Z,8.4nm,0.8s							
BATI	**Baumata**	**30.91**	**262**	LR		LR	04 41 22.7	
	comp=Z,607nm,18.1s,baz=103,slow=41							
DAV	**Davao City (W)**	**32.29**	**295**	LR		LR	04 39 29.7	
	comp=Z,236nm,18.1s,baz=115,slow=36							
FORT	**Forrest**	**34.44**	**223**	P		**P**	**04 27 03.8**	**-0.6**
KAPI	**Kappang**	**34.87**	**271**	P		**P**	**04 27 09.0**	**+0.7**
	comp=Z,2.9nm,0.5s,baz=74,slow=7.1,SNR=4.5							
KAPI	**Kappang**	**34.87**	**271**	P		**P**	**04 27 07.5**	**-0.7**
KAPI						IAmb	IAmb	04 27 23.9
	comp=Z,9.2nm,0.9s							
PSA00	**Pilbara Seismi**	**36.70**	**243**	P		**P**	**04 27 21.8**	**-2.1**
JNU	**Nakatsue**	**45.89**	**332**	P		**P**	**04 28 38.1**	**-1.0**
	comp=Z,11nm,1.1s,baz=12,slow=3.7,SNR=4.2							
JNU	**Nakatsue**	**45.89**	**332**	P		**P**	**04 28 38.7**	**-0.5**
JNU						IAmb	IAmb	04 28 45.8
	comp=Z,9.9nm,1.0s							
KSRS	**Korea Array**	**50.82**	**332**	P		**P**	**04 29 16.0**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=140,slow=7.8,SNR=1.7							
ASAJ	**Asahikawa**	**52.04**	**349**	LR		LR	04 48 34.5	
	comp=Z,114nm,21.1s,baz=134,slow=33							
WHN	**Wuhan**	**53.77**	**316**	||P		**P**	**04 29 40.4**	**+1.3**
PPT	**Papeete**	**55.22**	**106**	LR		LR	04 49 20.0	
	comp=Z,146nm,18.1s,baz=315,slow=32							
PPT2	**Papeete2**	**55.22**	**106**	*e*LR		LR	04 46 02.0	
	comp=Z,128nm,22.8s							
TBI	**Tubuai**	**55.89**	**113**	*e*LQ		LQ	04 43 56.5	
	comp=Z,673nm,30.2s							
TBI				*e*LR		LR	04 46 19.2	
	comp=Z,212nm,32.2s							
KLR	**Kul'dur**	**59.49**	**343**	P		**P**	**04 30 19.7**	**+0.4**
	comp=Z,1.9nm,0.9s,baz=150,slow=11,SNR=3.0							
PEA0B	**Petropavlovsk-**	**59.91**	**2**	P		**P**	**04 30 20.8**	**-1.4**
PETK	**Petropavlovsk-**	**59.91**	**2**	P		**P**	**04 30 22.8**	**+0.6**
	comp=Z,2.9nm,0.8s,baz=156,slow=7.3,SNR=1.4							
PETK						LR	LR	04 52 45.3
	comp=Z,105nm,21.7s,baz=235,slow=33							
CMAR	**Chiang Mai Arr**	**60.57**	**296**	P		**P**	**04 30 28.9**	**+1.5**
	comp=Z,4.3nm,0.7s,baz=119,slow=5.4,SNR=11							
GTA	**Gaotai**	**68.58**	**317**	*e*P		**P**	**04 31 20.8**	**+1.4**
GTA						pmax	pmax	
	comp=Z,5.0nm,0.8s							
GTA						pmax	pmax	
	comp=Z,85nm,4.4s							
GTA						LR	LR	
	comp=Z,82nm,18.4s							
GTA						LR	LR	
	comp=Z,770nm,21.9s							
SHL	**Shillong**	**69.09**	**301**	P		**P**	**04 31 22.1**	**-0.9**
SONM	**Songino Array**	**69.20**	**327**	P		**P**	**04 31 23.7**	**+0.5**
	comp=Z,1.9nm,0.9s,baz=131,slow=8.0,SNR=9.0							
VNDA	**Vanda**	**70.60**	**178**	P		**P**	**04 31 32.7**	**+1.6**
	comp=Z,1.3nm,0.8s,baz=322,slow=6.0,SNR=6.3							
LSA	**Lhasa**	**71.08**	**305**	P		**P**	**04 31 33.3**	**-2.2**
TAPN	**Taplejung**	**73.20**	**301**	*e*P		**P**	**04 31 49.5**	**+1.5**
ODAN	**Odare**	**73.33**	**301**	*e*P		**P**	**04 31 49.6**	**+0.9**
	comp=Z,49nm,0.7s							
RAMN	**Ramite**	**74.03**	**300**	*e*P		**P**	**04 31 53.6**	**+0.8**
JIRN	**Jiri**	**74.58**	**301**	*e*P		**P**	**04 31 57.5**	**+1.3**
	comp=Z,22nm,0.6s							
GUN	**Gumba**	**74.92**	**301**	*e*P		**P**	**04 31 59.3**	**+1.2**
	comp=Z,42nm,0.8s							
PKI	**Pulchoki**	**75.22**	**301**	*e*P		**P**	**04 32 00.7**	**+0.9**
PKIN	**Phulchoki**	**75.24**	**301**	*e*P		**P**	**04 32 00.7**	**+0.9**
BILL	**Bilibino**	**75.29**	**4**	P		**P**	**04 31 57.6**	**-1.3**
BILL						IAmb	IAmb	04 32 06.2
	comp=Z,6.1nm,0.9s							
KOLN	**Koldanda**	**76.82**	**301**	*e*P		**P**	**04 32 09.3**	**+0.5**
	comp=Z,14nm,0.7s							
DANN	**Dangsing**	**76.84**	**301**	*e*P		**P**	**04 32 09.4**	**+0.4**
	comp=Z,18nm,0.8s							
CNPM	**China Poot**	**78.84**	**25**	P		**P**	**04 32 18.8**	**-0.3**
TTA	**Tatalina**	**79.09**	**21**	P		**P**	**04 32 20.4**	**0.0**
PMR	**Palmer**	**80.87**	**24**	P		**P**	**04 32 29.1**	**-0.8**
PMR						IAmb	IAmb	04 32 36.2
	comp=Z,5.4nm,0.8s							
GHO	**Glory Hole Cre**	**81.05**	**24**	P		**P**	**04 32 30.2**	**-0.9**
GHO						IAmb	IAmb	04 32 37.6
	comp=Z,7.9nm,0.8s							
KTH	**Kantishna Hill**	**81.30**	**22**	P		**P**	**04 32 30.6**	**-1.7**
SML	**Sawmill**	**81.31**	**24**	P		**P**	**04 32 32.6**	**+0.3**
SML						IAmb	IAmb	04 32 38.8
	comp=Z,8.4nm,0.8s							
TRF	**Thorofare Moun**	**81.47**	**22**	P		**P**	**04 32 32.9**	**-0.4**
TRF						IAmb	IAmb	04 32 40.8
	comp=Z,5.6nm,0.8s							
RND	**Reindeer**	**81.98**	**22**	P		**P**	**04 32 36.1**	**+0.2**
RND						IAmb	IAmb	04 32 42.3
	comp=Z,5.4nm,0.8s							
MLY	**Manley**	**82.22**	**20**	P		**P**	**04 32 37.1**	**0.0**
DHY	**Denali Highway**	**82.36**	**23**	P		**P**	**04 32 38.3**	**+0.3**
DHY						IAmb	IAmb	04 32 54.9
	comp=Z,4.5nm,1.0s							
QSPA	**South Pole Qui**	**82.99**	**180**	P		**P**	**04 32 41.8**	**+0.5**
CCB	**Clear Creek Bu**	**83.05**	**21**	P		**P**	**04 32 41.4**	**0.0**
HDA	**Harding Lake**	**83.23**	**22**	P		**P**	**04 32 41.8**	**-0.5**
HDA						IAmb	IAmb	04 32 53.5
	comp=Z,5.2nm,1.2s							
MK31	**Makanchi Array**	**83.25**	**319**	P		**P**	**04 32 42.1**	**-0.7**
MKAR	**Makanchi Array**	**83.25**	**319**	P		**P**	**04 32 42.9**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=102,slow=5.2,SNR=15							
MKAR	**Makanchi Array**	**83.25**	**319**	P		**P**	**04 32 43.6**	**+0.8**
ILAR	**Eielson Array**	**83.45**	**22**	P		**P**	**04 32 43.2**	**-0.2**
	comp=Z,2.1nm,0.8s,baz=251,slow=5.0,SNR=16							
CTGM	**Chitina Glacie**	**83.82**	**26**	P		**P**	**04 32 44.8**	**-0.8**
ZALV	**Zalesovo Beam**	**84.04**	**326**	P		**P**	**04 32 45.9**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=101,slow=6.3,SNR=3.6							
ZALV	**Zalesovo Beam**	**84.04**	**326**	P		**P**	**04 32 46.7**	**0.0**
MAW	**Mawson**	**84.32**	**203**	P		**P**	**04 32 48.0**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=79,slow=2.8,SNR=4.5							
MAW	**Mawson**	**84.32**	**203**	P		**P**	**04 32 47.7**	**-0.2**
HYT	**Haines Junctio**	**85.47**	**27**	P		**P**	**04 32 53.6**	**-0.3**
KDJ	**Kajisay**	**85.53**	**313**	P		**P**	**04 32 53.4**	**-1.3**
KDJ						IAmb	IAmb	04 33 01.2
	comp=Z,5.6nm,0.9s							
KSH	**Kashi**	**85.83**	**310**	P		**P**	**04 32 58.3**	**+2.1**
KSH						PP	**PP**	**04 36 21.5**	**+5.3**
KSH						SKS	**SKSac**	**04 43 13.3**	**-5.7**
KSH						S	**SKKSac**	**04 43 23.4**	**-2.8**
KSH						SS	**SS**	**04 49 05.0**	**+0.4**
KSH						pmax	pmax		
	comp=Z,170nm,2.3s							
KSH						pmax	pmax		
	comp=Z,200nm,4.2s							
KSH						LR	LR		
	comp=Z,100nm,8.7s							
KSH						LR	LR		
	comp=Z,59nm,11.9s							
KSH						LR	LR		
	comp=Z,230nm,9.2s							
DAWY	**Dawson**	**85.98**	**24**	P		**P**	**04 32 55.7**	**-0.5**
DAWY						IAmb	IAmb	04 33 00.4
	comp=Z,4.0nm,1.1s							
KURK	**Kurchatov**	**86.68**	**322**	P		**P**	**04 32 58.9**	**-1.0**
KURBB	**Kurchatov Arra**	**86.71**	**322**	P		**P**	**04 32 59.4**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=101,slow=5.0,SNR=4.2							
AFDM	**Forest Hills D**	**89.90**	**51**	P		**P**	**04 33 14.1**	**-1.5**
RYN	**Ryan**	**91.75**	**51**	P		**P**	**04 33 23.4**	**-0.9**
RYN						IAmb	IAmb	04 33 31.7
	comp=Z,2.4nm,0.9s							
NVAR	**Mina Array Bea**	**91.89**	**52**	P		**P**	**04 33 25.6**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=250,slow=6.3,SNR=12							
NVAR	**Mina Array Bea**	**91.89**	**52**	P		**P**	**04 33 26.9**	**+1.8**
NV11	**Mina Array Sit**	**92.01**	**52**	P		**P**	**04 33 24.2**	**-1.3**
NV11						IAmb	IAmb	04 33 32.9
	comp=Z,3.5nm,0.9s							
KVN	**Kaiserville**	**92.13**	**51**	P		**P**	**04 33 25.6**	**-0.6**
KVN						IAmb	IAmb	04 33 31.9
	comp=Z,2.1nm,0.9s							
YKA	**Yellowknife Ar**	**96.43**	**28**	P		**P**	**04 33 44.8**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=266,slow=4.2,SNR=30							
PDAR	**Pinedale Array**	**98.86**	**48**	P		**P**	**04 33 55.2**	**-1.6**
	comp=Z,0.4nm,0.8s,baz=177,slow=2.8,SNR=4.5							
TXAR	**Lajitas Array**	**103.45**	**62**	Pdiff		**Pdif**	**04 34 17.1**	**-0.2**
	comp=Z,0.1nm,0.5s,baz=236,slow=4.2,SNR=1.6							
AKASG	**Malin Array Be**	**117.40**	**324**	PKP		**PKPdf**	**04 39 00.9**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=58,slow=2.3,SNR=4.9							
CLL	**Collm**	**125.69**	**331**	*i* PKPdf		**PKiKP**	**04 39 19.6**	**+1.6**
	comp=Z,5.0nm,0.8s							
GERES	**GERESS Array B**	**126.92**	**329**	PKP		**PKPdf**	**04 39 20.0**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=48,slow=2.0,SNR=10							
BDFB	**Brasilia**	**148.15**	**135**	PKPbc		**PKPbc**	**04 40 03.1**	**0.0**
	comp=Z,5.6nm,0.8s,baz=199,slow=6.1,SNR=5.0							
BDFB	**Brasilia**	**148.15**	**135**	PKPdf		**PKPdf**	**04 39 57.1**	**-2.7**
TORD	**Torodi Ar. Bea**	**152.80**	**285**	PKPbc		**PKPbc**	**04 40 12.8**	**-1.4**
	comp=Z,4.1nm,0.8s,baz=58,slow=2.0,SNR=20							
TORD	**Torodi Ar. Bea**	**152.80**	**285**	PKPdf		**PKPdf**	**04 40 05.5**	**-1.5**

IDC ***14*** *04:22:03.4±1.3, 7°.06S×154°.93E, h0*^{km}*, mb4.1/6, mb1 4.4/6, mb1mx3.9/44, mbtmp4.1/6, MS3.8/2, Ms1 3.8/2, ms1mx3.4/26, Error ellipse: s-maj=42.5km s-min=26.9km az=133.0*

ISC 14 04:22:09.8±1.0, 7°.0S±0°.2×154°.8E±0°.2, h41^{km}**, n11,** σ0=**95**/11**, mb4.2**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.85**	**314**	Pn		**Pn**	**04 23 06.0**	**-0.5**
	baz=9.5,slow=22,SNR=1.6							
KRVT		

comp=Z,0.2nm,0.5s,baz=157,slow=6.6,SNR=4.7
MKAR LR LR 05 26 41.1
comp=Z,83nm,18.9s,baz=164,slow=34
MKAR Makanchi Array 89.04 359 P **P 04 48 32.5 +0.5**
TOA0 Torodi Ar. Sit 93.12 285 P **P 04 48 50.7 -1.0**
TORD Torodi Ar. Bea 93.12 285 P **P 04 48 51.7 0.0**
comp=Z,0.5nm,0.8s,baz=108,slow=4.7,SNR=2.6
TORD Torodi Ar. Bea 93.12 285 P **P 04 48 51.2 -0.5**
KBZ Khabaz 93.47 332 LR LR 05 26 36.6
comp=Z,44nm,20.6s,baz=134,slow=33
DBIC Dimbokro 93.52 276 LR LR 05 24 22.8
comp=Z,62nm,20.2s,baz=104,slow=31
ILAR Eielson Array 144.07 34 PKP PKPbc 04 55 10.2 +0.2
comp=Z,0.4nm,0.8s,baz=297,slow=4.0,SNR=2.7
ILAR Eielson Array 144.07 34 PKPdf 04 55 11.4 -0.5
INK Inuvik 147.60 25 PKPbc **PKiKP 04 55 21.9 -0.7**
comp=Z,1.4nm,0.8s,baz=284,slow=6.9,SNR=3.5
INK Inuvik 147.60 25 PKPdf 04 55 18.2 +0.4
YKA Yellowknife Ar 157.31 22 PKPab **PKPab 04 56 03.9 +0.3**
comp=Z,0.3nm,0.9s,baz=327,slow=4.4,SNR=3.1
NVAR Mina Array Bea 162.65 97 PKPab **PKPab 04 56 28.7 +0.7**
comp=Z,0.4nm,0.7s,baz=230,slow=7.2,SNR=4.3

HEL ***14*** *04:37:17.7±0.5, 57.°34N×21.°72E, h0km, ML2.4, Explosion*
UPP ***14*** *04:37:19.9±1.6, 57.°62N×22.°31E, h0km, ML2.3, Suspected explosion*
EST ***14*** *04:37:19.7±0.2, 57.°74N×21.°72E, h0km, ML2.3(HEL), Explosion*
LVSN ***14*** *04:37:21.3±4.4, 57.°62N×21.°92E, h0km±17km, ML2.6*
IDC ***14*** *04:37:23.2±2.8, 57.°79N×21.°93E, h0km, mb1 3.3/3, mb1mx3.0/39, mbtmp3.2/3, ML2.4/3, Error ellipse: s-maj=28.9km s-min=11.1km az=164.0*
NAO ***14*** *04:37:24.1±2.7, 57.°82N×21.°88E, h7km±12km, ML2.1*
BER ***14*** *04:37:24.7±6.9, 57.°53N×21.°99E, h16km±32km, ML2.1(NAO)*

ISC 14 04:37:20.1±0.7, 57.°66N±0.°03×21.°89E±0.°02, h0km, n64, σ1s86/93, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.22**	**98**	*eP*		**Pg**		**04 37 24.7**	**+0.4**
SLIT				IAML				04 37 29.2	
comp=Z,12μm,0.1s									
SLIT	**Slitere, Latvi**	**0.22**	**98**	*eP*		**Pg**		**04 37 25.4**	**+1.2**
SLIT				*eS*		**Sg**		**04 37 28.8**	**+1.8**
SLIT				AML		AML		04 37 38.1	
comp=Z,8μm,0.6s									
SLIT				AML		AML		04 37 38.3	
comp=N,6μm,0.7s									
SLIT				AML		AML		04 37 38.7	
comp=E,11μm,0.5s									
SLIT	**Slitere, Latvi**	**0.22**	**98**	*i P*		**Pg**		**04 37 25.6**	**+1.3**
MTSE	**Matsula**	**1.47**	**43**	*eP*		**Pn**		**04 37 47.4**	**-0.4**
MTSE				*eS*		**Sg**		**04 38 06.9**	**-0.4**
MTSE	**Matsula**	**1.47**	**43**	*ePN*		**Pn**		**04 37 47.4**	**-0.4**
PBUR	**Paburge**	**1.64**	**179**	*eP*		**Pn**		**04 37 50.8**	**+0.6**
PBUR				IAML				04 37 53.2	
comp=Z,74nm,0.2s									
PBUR	**Paburge**	**1.64**	**179**	*eP*		**Pg**		**04 37 51.8**	**+0.3**
GOTU	**Gotland**	**1.79**	**272**	P		**Pg**		**04 37 54.4**	**+0.1**
GOTU				S		**Sg**		**04 38 20.6**	**+3.2**
PABE	**Paberze**	**2.45**	**151**	*eP*		**Pb**		**04 38 03.7**	**-1.3**
PABE				IAML				04 38 05.4	
comp=Z,88nm,0.2s									
PABE	**Paberze**	**2.45**	**151**	*eP*		**Pb**		**04 38 04.6**	**-0.3**
PABE				*eS*		**Sb**		**04 38 35.2**	**-0.3**
NYNU	**Nynaeshamn**	**2.46**	**305**	P		**Pb**		**04 38 03.9**	**-1.2**
NYNU				S		**Sg**		**04 38 38.8**	**-0.1**
NRTU	**Norrtaelje**	**2.65**	**321**	P		**Pn**		**04 38 06.1**	**+2.1**
NRTU				S		**Sb**		**04 38 42.7**	**+1.4**
BYXU	**Byxelkrok**	**2.66**	**264**	P		**Pb**		**04 38 07.3**	**-1.4**
VSU	**Vasula**	**2.70**	**71**	Pn		**Pb**		**04 38 08.0**	**-1.2**
VSU				Sn		**Sb**		**04 38 42.1**	**-0.7**
VSU	**Vasula**	**2.70**	**71**	*eP*		**Pn**		**04 38 00.6**	**-4.1**
VSU	**Vasula**	**2.70**	**71**	*eP*		**Pb**		**04 38 08.3**	**-0.9**
VSU				AML		AML		04 38 08.5	
comp=Z,122nm,0.2s									
VSU				*eS*		**Sb**		**04 38 42.8**	**0.0**
VSU				AML		AML		04 38 45.1	
comp=N,162nm,0.2s									
VSU				AML		AML		04 38 48.9	
comp=E,177nm,0.4s									
VSU	**Vasula**	**2.70**	**71**	*eSB*		**Sb**		**04 38 42.5**	**-0.3**
VSU	**Vasula**	**2.70**	**71**	Pn		**Pb**		**04 38 08.0**	**-1.2**
VSU				Sn		**Sb**		**04 38 42.1**	**-0.7**
AAL	**Aland**	**2.71**	**340**	P		**Pn**		**04 38 06.1**	**+1.2**
AAL	**Aland**	**2.71**	**340**	*ePG*		**Pn**		**04 38 06.1**	**+1.2**
ARBE	**Arbavere**	**2.79**	**49**	*ePG*		**Pb**		**04 38 09.2**	**-1.5**
ARBE				*eSG*		**Sb**		**04 38 46.0**	**+0.5**
MEF	**Metsahovi**	**2.88**	**26**	*eP*		**Pb**		**04 38 10.8**	**-1.4**
MEF				*eP*		**Sb**		**04 38 47.4**	**-0.6**
MEF				*eS*		**Sb**		**04 38 47.6**	**-0.3**
MEF				AML		AML		04 38 49.6	
comp=N,11nm,0.5s									
MEF				AML		AML		04 38 50.3	
comp=E,15nm,0.1s									
MEF				AML		AML		04 38 54.2	
comp=Z,12nm,0.5s									
MEF	**Metsahovi**	**2.88**	**26**	*ePG*		**Pb**		**04 38 10.8**	**-1.4**
MEF				*eSG*		**Sb**		**04 38 46.9**	**-1.0**
MEF				MSG				04 38 49.0	
comp=Z,13nm,0.1s									
VSTU	**Vaestervik**	**2.88**	**272**	P		**Pb**		**04 38 10.5**	**-1.8**
UPP	**Uppsala**	**3.13**	**317**	P		**Pn**		**04 38 13.1**	**+2.4**
ISAL	**Salakas**	**3.14**	**130**	*eP*		Pg		04 38 34.7	+14
ISAL				IAML				04 38 38.0	
comp=Z,8.9nm,0.3s									
OSKU	**Oskarshamn**	**3.17**	**264**	P		**Pn**		**04 38 14.0**	**+2.8**
NUR	**Nurmijrvi**	**3.19**	**25**	*ePB*		**Pn**		**04 38 14.6**	**+3.1**
NUR				*eSG*		**Sb**		**04 38 56.5**	**-0.6**
FLYU	**Flymyra**	**3.23**	**322**	P		**Pn**		**04 38 14.3**	**+2.2**
FIBU	**Brunna**	**3.26**	**315**	P		**Pn**		**04 38 14.9**	**+2.4**
ESKU	**Eskilstuna**	**3.29**	**301**	P		**Pn**		**04 38 15.5**	**+2.6**
IIGN	**Ignalina**	**3.33**	**132**	*eP*		**Pn**		**04 38 14.3**	**+0.8**
RAF	**Rauma**	**3.38**	**359**	*eP*		**Pn**		**04 38 16.6**	**+2.6**
RAF				*eS*		**Sb**		**04 39 03.0**	**+0.7**
RAF				AML		AML		04 39 12.1	
comp=E,18nm,0.7s									
RAF				AML		AML		04 39 13.0	
comp=Z,8.4nm,0.4s									
RAF				AML		AML		04 39 15.5	
comp=N,7.8nm,0.2s									
RAF	**Rauma**	**3.38**	**359**	*ePB*		**Pn**		**04 38 16.4**	**+2.4**
LNKU	**Linkoeping**	**3.45**	**282**	P		**Pn**		**04 38 17.8**	**+2.7**
PVF	**Pernaja**	**3.54**	**34**	*ePB*		**Pn**		**04 38 19.1**	**+2.8**
PVF				MSG				04 39 15.8	
comp=Z,5.2nm,0.1s									
EKSU	**Eksjoe**	**3.55**	**271**	P		**Pn**		**04 38 19.8**	**+3.4**
BLEU	**Blekinge**	**3.59**	**250**	P		**Pn**		**04 38 19.8**	**+2.8**
VXJU	**Vaexsjoe**	**3.84**	**262**	P		**Pn**		**04 38 23.1**	**+2.6**
FIA0	**FINESS Array S**	**4.35**	**28**	Pn		**Pn**		**04 38 28.5**	**+1.1**
baz=205,slow=12									
FIA0				Pg		**Pb**		**04 38 39.2**	**+1.8**
baz=213,slow=16									
FIA0				Sn		**Sn**		**04 39 20.0**	**+1.2**
baz=215,slow=22									
FIA0				Lg		Lg		04 39 34.5	
baz=218,slow=28									
FIA0	**FINESS Array S**	**4.35**	**28**	MSG				04 39 38.8	
comp=Z,4.2nm,0.1s									
FIA0	**FINESS Array S**	**4.35**	**28**	Pn		**Pn**		**04 38 28.5**	**+1.1**
baz=205,slow=12									
FIA0				Pg		**Pb**		**04 38 39.2**	**+1.8**
baz=213,slow=16									
FIA0				Sn		**Sn**		**04 39 20.0**	**+1.2**
baz=215,slow=22									
FIA0				Sg		**Sb**		**04 39 34.5**	**+4.1**
baz=218,slow=28									
FINES	**FINESS Array B**	**4.35**	**28**	Pn		**Pn**		**04 38 29.4**	**+2.0**
comp=Z,0.2nm,0.3s,baz=213,slow=9.9,SNR=14									
FINES				Pg		**Pb**		**04 38 38.4**	**+0.9**
comp=Z,1.2nm,0.3s,baz=213,slow=15,SNR=30									
FINES				Sn		**Sn**		**04 39 18.1**	**-0.7**
comp=Z,0.4nm,0.3s,baz=212,slow=23,SNR=1.9									
FINES				Lg		Lg		04 39 35.7	
comp=Z,1.7nm,0.3s,baz=215,slow=24,SNR=12									
FKPU	**Falk**		**4.39 280**	P		**Pn**		**04 38 31.0**	**+3.0**
BSD	**Bornholm Skovb**		**4.64 240**	*eP*		**Pn**		**04 38 33.0**	**+1.6**
BSD				*eS*		**Sn**		**04 39 26.9**	**+1.0**
BSD	**Bornholm Skovb**		**4.64 240**	*i P*		**Pn**		**04 38 32.6**	**+1.2**
KEF	**Keuruu**	**4.76**	**17**	MSG				04 39 52.5	
comp=Z,2.8nm,0.1s									

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HFS	**Hagfors**		**4.92 304**	Pn		**Pn**		**04 38 37.5**	**+2.3**
baz=125,slow=14									
HFS				Sn		**Sn**		**04 39 31.8**	**-1.0**
baz=115,slow=28									
HFS				Lg		Lg		04 39 54.5	
baz=121,slow=37									
HFS	**Hagfors**		**4.92 304**	Pn		**Pn**		**04 38 37.5**	**+2.3**
baz=125,slow=14									
HFS				Sn		**Sn**		**04 39 31.8**	**-1.0**
baz=115,slow=28									
HFS				Sg		**Sg**		**04 39 54.5**	**-3.6**
baz=121,slow=37									
NRA0	**NORESS Array S**	**6.15**	**304**	Pn		**Pn**		**04 38 54.1**	**+2.1**
baz=111,slow=11									
NRA0				Sn		**Sn**		**04 40 01.8**	**-1.2**
baz=100,slow=28									
NRA0				Lg		Lg		04 40 36.1	
baz=124,slow=28									
NRA0	**NORESS Array S**	**6.15**	**304**	Pn		**Pn**		**04 38 54.1**	**+2.1**
baz=111,slow=11									
NRA0				Sn		**Sn**		**04 40 01.8**	**-1.2**
baz=100,slow=28									
NRA0				Sg		**Sg**		**04 40 36.1**	**-1.2**
baz=124,slow=28									
NB2	**NORSAR Subarra**	**6.42**	**306**	Pn		**Pn**		**04 38 57.0**	**+1.0**
baz=121,slow=14									
NB2	**NORSAR Subarra**	**6.42**	**306**	Pn		**Pn**		**04 38 57.0**	**+1.0**
baz=121,slow=14									
NOA	**NORSAR Array B**	**6.42**	**306**	Pn		**Pn**		**04 38 55.9**	**-0.1**
comp=Z,0.0nm,0.3s,baz=124,slow=12,SNR=9.4									
NOA				Sn		**Sn**		**04 40 08.6**	**-1.3**
comp=Z,0.0nm,0.3s,baz=82,slow=15,SNR=1.6									
NOA				Lg		Lg		04 40 41.9	
comp=Z,0.1nm,0.3s,baz=102,slow=16,SNR=4.5									
JOF	**Joensuu**	**7.05**	**38**	*eP*		**Pn**		**04 39 04.4**	**-0.1**
HOMB	**Homborsund**	**7.15**	**281**	Pn		**Pn**		**04 39 07.2**	**+1.4**
HOMB				Sn		**Sn**		**04 40 25.2**	**-2.4**
HOMB	**Homborsund**	**7.15**	**281**	Pn		**Pn**		**04 39 07.2**	**+1.4**
HOMB				Sn		**Sn**		**04 40 25.2**	**-2.4**
HEF	**Hetta**	**10.82**	**3**	Pn		**Pn**		**04 39 55.0**	**-1.1**
HEF	**Hetta**	**10.82**	**3**	Pn		**Pn**		**04 39 55.0**	**-1.1**
KIF	**Kilpisjarvi**	**11.40**	**358**	Pn		**Pn**		**04 40 04.2**	**+0.3**
KIF	**Kilpisjarvi**	**11.40**	**358**	Pn		**Pn**		**04 40 04.2**	**+0.3**
ARA0	**ARCESS Array S**	**12.03**	**6**	Pn		**Pn**		**04 40 08.4**	**-4.2**
baz=189,slow=14									
ARA0	**ARCESS Array S**	**12.03**	**6**	Pn		**Pn**		**04 40 08.4**	**-4.2**
baz=189,slow=14									
ARCES	**ARCESS Array B**	**12.03**	**6**	Pn		**Pn**		**04 40 09.7**	**-2.8**
comp=Z,0.1nm,0.3s,baz=191,slow=13,SNR=8.2									

UCR ***14*** *04:57:10.6±1.3, 11.°19N×85.°51W, h190km±4km, MD4.0*
INET ***14*** *04:57:13.5, 10.°22N×86.°66W, h33km, ML2.9*

ISC 14 04:57:10.0±3.9, 11.°26N±0.°10×85.°6W±0.°2, h192km±22km, n26, σ0s45/35, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BUAI	**Buenos Aires**	**0.46**	**145**	*i P*		**Pn**		**04 57 36.4**	**+0.3**
BUAI				*i S*		**Sn**		**04 57 56.6**	**+0.3**
GB1A	**Borinquen Arri**	**0.48**	**156**	*eP*		**Pn**		**04 57 36.7**	**+0.4**
GB1A				*eS*		**Sn**		**04 57 57.5**	**+0.9**
GBS3	**Finca Las Img**	**0.50**	**163**	*i P*		**Pn**		**04 57 35.9**	**-0.3**
GBS3				*i S*		**Sn**		**04 57 56.4**	**-0.2**
BUEV	**Buena Vista**	**0.50**	**158**	*i P*		**Pn**		**04 57 36.2**	**-0.1**
LAPC	**Finca la Perla**	**0.52**	**162**	*i P*		**Pn**		**04 57 35.7**	**-0.6**
GPS1	**Guardaparques**	**0.54**	**153**	*i P*		**Pn**		**04 57 36.2**	**-0.3**
GPS3	**Bodega del ICE**	**0.55**	**155**	*i P*		**Pn**		**04 57 36.5**	**0.0**
GPS3				*i S*		**Sn**		**04 57 57.1**	**+0.1**
GPS2	**Hotel Rincn d**	**0.56**	**154**	*i P*		**Pn**		**04 57 36.1**	**-0.5**
LIM1	**Limonal**	**0.65**	**149**	*i P*		**Pn**		**04 57 36.9**	**-0.1**
GUAB	**Guayabo de Bag**	**0.66**	**147**	*i P*		**Pn**		**04 57 37.1**	**+0.1**
HORNC	**Hornillas**	**0.68**	**143**	*i P*		**Pn**		**04 57 37.5**	**+0.4**
COLC	**Colonia**	**0.71**	**147**	*i P*		**Pn**		**04 57 37.2**	**-0.1**
CUI	**Cuipilapa**	**0.74**	**144**	*i P*		**Pn**		**04 57 37.6**	**+0.2**
PTEN	**Parque Tenorio**	**0.81**	**132**	*i P*		**Pn**		**04 57 38.1**	**+0.3**
PTEN				*i S*		**Sn**		**04 57 59.5**	**+0.2**
ACON	**Acoyapa**	**0.82**	**31**	*eP*		**Pn**		**04 57 37.7**	**-0.1**
ACAL	**Aguas Claras**	**0.83**	**138**	*i P*		**Pn**		**04 57 38.0**	**0.0**
PLVR	**Palo Verde**	**0.94**	**165**	*eP*		**Pn**		**04 57 38.9**	**+0.1**
PLVR				*eS*		**Sn**		**04 58 01.3**	**+0.2**
GUAI	**GUAI**	**0.99**	**175**	*i P*		**Pn**		**04 57 39.0**	**+0.1**
GUAI				*i S*		**Sn**		**04 58 01.3**	**0.0**
JTS	**Las Juntas de**	**1.15**	**147**	*eP*		**Pn**		**04 57 40.0**	**-0.2**
JTS				*eS*		**Sn**		**04 58 01.9**	**-1.6**
CEDE	**Laguna Cedeo**	**1.17**	**131**	*i P*		**Pn**		**04 57 40.6**	**+0.3**
ARE1	**Arenal 1**	**1.17**	**132**	*eP*		**Pn**		**04 57 40.6**	**+0.3**
CASO	**Castillo**	**1.18**	**134**	*i P*		**Pn**		**04 57 40.6**	**+0.2**
FORC	**Fortuna**	**1.21**	**131**	*i P*		**Pn**		**04 57 40.6**	**0.0**
ESPN	**Las Esperanzas**	**1.57**	**54**	*eP*		**Pn**		**04 57 43.6**	**0.0**
SRA1	**San Ramn**	**1.60**	**137**	*eP*		**Pn**		**04 57 45.0**	**+0.8**
SRA1				*eS*		**Sn**		**04 58 10.0**	**-0.6**
LCR2	**La Lucha 2**	**2.18**	**134**	*eP*		**Pn**		**04 57 50.1**	**0.0**

NEIC ***14*** *05:14:26.4±1.3, 21.°94S×0.°05×68.°5W±0.°1, h119km±7km, Error ellipse: s-maj=13.6km s-min=7.5km az=98.0*
GUC ***14*** *05:14:27.7±0.6, 21.°95S×68.°54W, h115km±3km, ML4.1*
IDC ***14*** *05:14:28.5±0.9, 21.°87S×68.°24W, h130km±7km, mb3.8/8, mb1 3.8/10, mb1mx3.6/26, mbtmp4.2/10, MS4.4/1, Ms1 4.4/1, ms1mx3.2/22, Error ellipse: s-maj=22.4km s-min=18.5km az=100.0*
VAO ***14*** *05:14:28.5±4.8, 21.°98S×68.°80W, h186km±27km, mb4.4*

ISC 14 05:14:26.6±0.6, 21.°95S±0.°03×68.°59W±0.°06, h124km±5km, n81, σ1s15/94, mb4.2/8, 9C-5D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.62**	**284**	⇑*iP*		**Pn**		**05 14 46.5**	**+0.6**
PB09				*i S*		**Sn**		**05 15 00.9**	**+0.4**
PB09	**IPOC Station P**	**0.62**	**284**			**Pn**		**05 14 46.3**	**+0.4**
LVC	**Limon Verde**	**0.72**	**204**	⇓*iP*		**Pn**		**05 14 47.2**	**+0.2**
LVC				*i S*		**Sn**		**05 15 02.1**	**-0.2**
LVC	**Limon Verde**	**0.72**	**204**			**Pn**		**05 14 47.2**	**+0.2**
PB03	**IPOC Station P**	**1.08**	**264**	⇑*iP*		**Pn**		**05 14 50.3**	**+0.4**
PB03				*i S*		**Sn**		**05 15 07.8**	**+0.1**
PB03				IAML				05 15 09.2	
comp=N,4μm,0.2s									
PB06	**IPOC Station P**	**1.18**	**230**	⇑*iP*		**Pn**		**05 14 51.7**	**+0.7**
PB06				*i S*		**Sn**		**05 15 10.1**	**+0.7**
PB06				IAML				05 15 11.7	
comp=E,5μm,0.2s									
PB06	**IPOC Station P**	**1.18**	**230**			**Pn**		**05 14 51.7**	**+0.7**
PB07	**IPOC Station P**	**1.22**	**280**	⇑*iP*		**Pn**		**05 14 51.8**	**+0.4**
PB07				*i S*		**Sn**		**05 15 10.6**	**+0.4**
PB07				IAML				05 15 12.2	
comp=E,6μm,0.3s									
PB07	**IPOC Station P**	**1.22**	**280**			**Pn**		**05 14 51.9**	**+0.4**
PB01	**IPOC Station P**	**1.23**	**317**	⇑*iP*		**Pn**		**05 14 51.4**	**0.0**
PB01				*i S*		**Sn**		**05 15 10.3**	**+0.1**
PB01	**IPOC Station P**	**1.23**	**317**			**Pn**		**05 14 51.4**	**0.0**
PB02	**IPOC Station P**	**1.36**	**297**	⇑*iP*		**Pn**		**05 14 53.1**	**+0.2**
PB02				*i S*		**Sn**		**05 15 12.6**	**-0.2**
PB02				IAML				05 15 13.7	
comp=N,4μm,0.5s									
PB04	**IPOC Station P**	**1.50**	**255**	⇑*iP*		**Pn**		**05 14 54.9**	**+0.5**
PB04				*i S*		**Sn**		**05 15 16.0**	**+0.4**
PB04				IAML				05 15 25.1	
comp=N,3μm,0.5s									
PB04	**IPOC Station P**	**1.50**	**255**			**Pn**		**05 14 54.7**	**+0.3**
PB15	**IPOC Station P**	**1.50**	**213**	⇑*iP*		**Pn**		**05 14 55.3**	**+0.8**
PB15				*i S*		**Sn**		**05 15 17.2**	**+1.5**
PB15	**IPOC Station P**	**1.50**	**213**			**Pn**		**05 14 55.5**	**+1.0**
PB05	**IPOC Station P**	**1.74**	**238**	⇑*iP*		**Pn**		**05 14 57.7**	**+0.4**
PB05				*eS*		**Sn**		**05 15 20.7**	**0.0**
PB05				IAML				05 15 23.4	
comp=N,1μm,0.3s									
PATCX	**Punta Patache**	**1.84**	**307**			**Pn**		**05 14 57.8**	**-0.5**
PB08	**IPOC Station P**	**1.87**	**344**	⇓*iP*		**Pn**		**05 14 59.9**	**+0.8**
PB08				*i S*		**Sn**		**05 15 24.3**	**+0.5**
PB08				IAML				05 15 26.1	
comp=E,2μm,0.7s									
PB08	**IPOC Station P**	**1.87**	**344**			**Pn**		**05 14 59.9**	**+0.8**
TA01	**Diego Aracena**	**2.02**	**312**	*i P*		**Pn**		**05 15 00.5**	**0.0**
TA01				*i S*		**Sn**		**05 15 25.4**	**-1.1**
TA01	**Diego Aracena**	**2.02**	**312**			**Pn**		**05 15 01.1**	**+0.5**
GO01	**Chusmiza**	**2.33**	**346**	⇓*iP*		**Pn**		**05 15 05.2**	**+0.3**
GO01				*i S*		**Sn**		**05 15 34.9**	**+0.6**
GO01				IAML				05 15 36.5	
comp=N,987nm,0.3s									
GO01	**Chusmiza**	**2.33**	**346**			**Pn**		**05 15 05.0**	**0.0**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB11	**IPOC Station P**	**2.39**	**335**	*i P*		**Pn**		**05 15 05.0**	**-0.4**
PB11				*i S*		**Sn**		**05 15 34.1**	**-0.9**
PB11				IAML				05 15 38.2	
comp=E,1μm,0.2s									
PB11	**IPOC Station P**	**2.39**	**335**			**Pn**		**05 15 04.3**	**-1.0**
PB10	**IPOC Station P**	**2.39**	**229**	*i P*		**Pn**		**05 15 05.5**	**+0.3**
PB10				*i S*		**Sn**		**05 15 32.8**	**-2.0**
PB10				IAML				05 15 46.1	
comp=N,727nm,0.4s									
PB10	**IPOC Station P**	**2.39**	**229**			**Pn**		**05 15 05.9**	**+0.7**
PSGC	**Pisagua**	**2.74**	**328**	*i P*		**Pn**		**05 15 08.4**	**-1.4**
PSGC				*i S*		**Sn**		**05 15 41.4**	**-1.6**
PSGC				IAML				05 15 47.4	
comp=E,344nm,0.6s									
PSGCX	**Pisagua**	**2.74**	**328**			**Pn**		**05 15 08.6**	**-1.2**
MNMC	**Minye Minye**	**2.95**	**341**	⇓*iP*		**Pn**		**05 15 12.5**	**-0.2**
MNMC				*i S*		**Sn**		**05 15 48.8**	**+0.6**
MNMC				IAML				05 15 53.8	
comp=N,791nm,0.3s									
MNMC	**Minye Minye**	**2.95**	**341**			**Pn**		**05 15 12.5**	**-0.2**
PB14	**IPOC Station P**	**3.15**	**212**			**Pn**		**05 15 15.9**	**+0.6**
GO02	**Mina Guanaco**	**3.33**	**196**	⇓*iP*		**Pn**		**05 15 17.9**	**+0.3**
GO02				*i S*		**Sn**		**05 15 57.5**	**+0.4**
GO02	**Mina Guanaco**	**3.33**	**196**			**Pn**		**05 15 17.8**	**+0.2**
PB12	**IPOC Station P**	**3.69**	**333**	*i P*		**Pn**		**05 15 20.6**	**-1.7**
PB16	**IPOC Station P**	**3.69**	**346**			**Pn**		**05 15 23.4**	**+0.6**
AC02	**Maricunga**	**4.89**	**186**			**Pn**		**05 15 38.7**	**+0.1**
LPAZ	**La Paz**	**5.64**	**4**	P		**Pn**		**05 15 49.3**	**+0.4**
comp=N,1.8nm,0.3s,baz=180,slow=7.0,SNR=34									
LPAZ	**La Paz**	**5.64**	**4**			**Pn**		**05 15 49.5**	**+0.6**
AC05	**El Transito**	**7.03**	**192**			**Pn**		**05 16 04.6**	**-2.5**
GO04	**Tololo Observa**	**8.43**	**193**	Pn		**Pn**		**05 16 22.9**	**-3.2**
CO03	**El Pedregal**	**9.05**	**192**			**Pn**		**05 16 30.6**	**-3.8**
SIV	**San Ignacio**	**9.25**	**51**	P		Pn		05 16 33.3	-3.8
comp=N,3.9nm,0.3s,baz=244,slow=11,SNR=101									
SIV				S		Sn		05 18 07.2	-12
comp=N,0.4nm,0.3s,baz=246,slow=15,SNR=2.2									
CO02	**Combarbal**	**9.47**	**193**	Pn		Pn		05 16 35.6	-4.4
CFA	**Coronel Fontan**	**9.63**	**178**	P		**Pn**		**05 16 38.6**	**-3.4**
comp=N,1.1nm,0.3s,baz=353,slow=14,SNR=18									
CFA				LR		LR		05 20 26.8	
comp=N,82nm,20.1s,baz=9.5,slow=37									
TRCB	**Terra Rica**	**14.79**	**96**	*eP*		**Pn**		**05 17 52.4**	**+2.7**
BI02	**San Fabin de**	**14.85**	**188**			**Pn**		**05 17 51.0**	**+0.6**
C2SB	**Chapadao do Su**	**15.11**	**81**	*eP*		**Pn**		**05 17 55.5**	**+1.8**
PTGB	**Pitanga**	**15.43**	**103**	*eP*		**Pn**		**05 17 57.9**	**+0.1**
ITAB	**Concordia**	**15.87**	**113**	*eP*		**Pn**		**05 18 04.1**	**+1.0**
PCMB	**Pacaembu**	**16.10**	**92**	*eP*		**Pn**		**05 18 05.7**	**-0.3**
CLDB	**Colider**	**16.47**	**50**	*eP*		**Pn**		**05 18 09.8**	**-0.8**
ARAG	**Araguaiana, MT**	**17.05**	**72**	*eP*		**P**		**05 18 17.6**	**+0.2**
FRTB	**Fartura**	**17.62**	**98**	*eP*		**P**		**05 18 23.4**	**-0.3**
PLCA	**Paso Flores**	**18.80**	**185**	P		**P**		**05 18 37.6**	**+1.0**
comp=N,0.3nm,0.3s,baz=353,slow=12,SNR=13									
PLCA	**Paso Flores**	**18.80**	**185**			**Pn**		**05 18 38.8**	**+0.3**
PLCA	**Paso Flores**	**18.80**	**185**	IAmb		IAmb		05 18 51.5	
comp=Z,1.3nm,0.7s								

ZANG Zanguenga, Cho 2.76 61 eP Pn 05 29 09.3 +0.6
CVTR Volcan Turrial 2.78 329 eP Pn 05 29 09.9 +0.5
SJS Escuela Geolog 2.88 323 eP Pn 05 29 10.5 +0.1
BCIP Isla Barro Col 2.89 58 eP Pn 05 29 11.0 +0.4
BCIP eS Sb 05 29 52.3 +0.8
BCIP i 05 30 07.7
comp=Z,2µm,0.6s
BCIP Isla Barro Col 2.89 58 eP Pn 05 29 10.7 +0.2
BCIP eS Sb 05 29 50.7 -0.8
BCIP Isla Barro Col 2.89 58 Pn 05 29 11.1 +0.6
HDC Heredia 2.96 323 eP Pn 05 29 11.9 +0.3
HDC Heredia 2.96 323 Pn 05 29 12.0 +0.3
UPA Univ. de Panam 3.07 64 ⇓i P Pn 05 29 13.0 +0.1
UPA ⇓i P Pb 05 29 13.2 -6.2
UPA Univ. de Panam 3.07 64 eP Pn 05 29 13.2 +0.3
SRA1 San Ramn 3.26 319 eP Pn 05 29 14.7 -0.9
FORC Fortuna 3.67 321 eP Pn 05 29 21.8 +0.6
CASO Castillo 3.68 320 eP Pn 05 29 21.9 +0.4
ARE1 Arenal 1 3.69 320 eP Pn 05 29 21.7 +0.1
CEDE Laguna Cedeo 3.70 321 eP Pn 05 29 21.6 -0.1
JTS Las Juntas de 3.72 316 Pn Pn 05 29 20.6 -1.4
comp=Z,229nm,0.3s,baz=279,slow=3.0,SNR=607
JTS Sn Sn 05 30 04.5 -0.8
comp=Z,144nm,0.3s,baz=109,slow=21,SNR=7.4
JTS Las Juntas de 3.72 316 eP Pn 05 29 20.6 -1.4
JTS Las Juntas de 3.72 316 Pn 05 29 21.0 -1.0
ACAL Aguas Claras 4.03 316 eP Pn 05 29 26.5 +0.3
PLVR Palo Verde 4.05 312 eP Pn 05 29 26.0 -0.6
PTEN Parque Tenorio 4.05 320⇓ eP Pn 05 29 27.0 +0.4
GUAI GUAI 4.12 310⇓ eP Pn 05 29 26.6 -0.7
CUI Cuipilapa 4.13 317 eP Pn 05 29 27.2 -0.4
COLC Colonia 4.16 317 eP Pn 05 29 27.7 -0.3
HORNC Hornillas 4.18 318 eP Pn 05 29 28.7 +0.4
GUAB Guayabo de Bag 4.21 317 eP Pn 05 29 29.1 +0.3
LIM1 Limonal 4.22 317 eP Pn 05 29 28.9 0.0
GPS2 Hotel Rincn d 4.33 316 eP Pn 05 29 30.8 +0.4
GPS3 Bodega del ICE 4.34 316 eP Pn 05 29 30.7 +0.2
GPS1 Guardaparques 4.34 317 eP Pn 05 29 30.8 +0.2
UPD2 Meteti 4.36 77 eS Sb 05 30 35.3 +1.6
LAPC Finca la Perla 4.39 316⇓ eP Pn 05 29 31.0 -0.2
BUEV Buena Vista 4.40 316⇓ eP Pn 05 29 31.4 +0.1
BUAI Buenos Aires 4.40 318⇓ iP Pn 05 29 31.7 +0.4
GB1A Borinquen Arri 4.40 316 eP Pn 05 29 31.8 +0.4
GBS3 Finca Las Img 4.42 316⇓ eP Pn 05 29 31.5 0.0
PTAC Punta Ardita, 4.49 96 eP Pn 05 29 30.7 +1.8
PTAC eS Sn 05 30 18.7 -5.6
PTAC i 05 30 21.7
comp=Z,2µm,0.3s
ESPN Las Esperanzas 4.95 337 eP Pn 05 29 39.0 +0.2
ESPN Las Esperanzas 4.95 337 Pn Pn 05 29 39.2 +0.3
CAPC Capurgana 5.01 78 eP Pn 05 29 40.0 +0.2
ACON Acoyapa 5.16 327 eP Pn 05 29 41.0 -0.8
ACON Acoyapa 5.16 327 Pn 05 29 40.9 -0.8
PRVC Isla de Provid 5.80 9 eP Pn 05 29 51.6 +1.1
LCBC Los crdobas, 6.01 78 eP Pn 05 29 59.6 +6.2
DBBC Dabeiba 6.08 95 eP Pn 05 29 54.4 -0.1
MALC Bahia Malaga 6.11 126 eP Pn 05 29 55.0 +0.2
MATN Matagalpa 6.36 326 Pn 05 29 58.2 -0.2
CBOC Ciudad Bolivar 6.50 105 eP Pn 05 29 59.7 -0.6
URIC San Jos de Ur 6.72 85 eP Pn 05 30 09.4 +6.2
TUMC Tumaco 6.77 148 Pn Pn 05 30 03.2 -0.7
CRIN San Cristobal 6.87 318 Pn 05 30 05.5 +0.2
HELC Santa Helena 6.88 101 eP Pn 05 30 05.8 +0.1
YOTC Yotoco, Valle 6.95 121 eP Pn 05 30 05.4 -1.0
GUY2C Guyana, Caldas 7.30 109 eP Pn 05 30 12.5 +0.9
ZARC Zaragoza, Cauc 7.39 90 eP Pn 05 30 15.8 +3.4
SJCC San Jacinto, C 7.41 72 eP Pn 05 30 13.4 +0.7
RREF El Recreo 7.43 111 eP Pn 05 30 14.2 +0.7
BBAC Balboa, Cauca 7.51 138 eP Pn 05 30 12.9 -1.3
ANIL Santa Ana 7.54 114 eP Pn 05 30 16.3 +1.5
TOLC Tolima 7.58 113 eP Pn 05 30 16.6 +1.3
NORC Norcasia 7.67 105 eP Pn 05 30 18.2 +1.9
PTBC PUERTO BERRIO, 7.87 97 eP Pn 05 30 22.5 +3.5
SOTA Rioblanco 7.87 133 eP Pn 05 30 19.4 -0.1
PCON Cinco Dias 7.89 131 eP Pn 05 30 22.4 +2.5
ORTC Ortega, Tolima 7.94 117 eP Pn 05 30 20.4 +0.5
CRUC La Cruz 8.04 138 eP Pn 05 30 22.6 +0.9
TGUH Tegucigalpa,Un 8.04 323 Pn 05 30 21.5 +0.4
GCUF Volcan Galeras 8.05 142 eP Pn 05 30 22.3 +0.4
CPAS2 Pasto 8.11 141 eP Pn 05 30 23.4 +0.7
SMLC San Martn de 8.24 81 eP Pn 05 30 26.0 +1.9
CUSE Cuicocha Este 8.24 152 eP Pn 05 30 24.1 -0.5
ARGC Ariguani, Magd 8.28 74 eP Pn 05 30 25.6 +1.0
PRAC Prado 8.35 117 eP Pn 05 30 27.1 +1.6
ROSC El Rosal 8.41 109 Pn Pn 05 30 27.4 +0.7
comp=Z,6.3nm,0.3s,baz=329,slow=2.8,SNR=37
ROSC LR LR 05 33 15.7
comp=Z,4µm,20.6s,baz=280,slow=35
ROSC El Rosal 8.41 109 eP Pn 05 30 30.6 +3.9
ROSC El Rosal 8.41 109 Pn 05 30 30.1 +3.3
SPSC San Pablo de B 8.41 103 eP Pn 05 30 29.4 +2.3
BETC Betania 8.42 125 eP Pn 05 30 28.5 +1.9
BRRC Barranca, Sant 8.55 93 eP Pn 05 30 36.0 +7.8
GARC Garzon, Huila 8.67 128 eP Pn 05 30 31.2 +0.9
SMRC Santa Marta, M 8.72 66 eP Pn 05 30 30.1 -0.7
OCAC Ocana 8.93 85 eP Pn 05 30 35.7 +2.0
CHIC Chingaza 9.03 109 eP Pn 05 30 37.9 +2.6
PUAC Puerto Asis, P 9.06 141 eP Pn 05 30 36.0 +0.6
SNET Serv Nac Est T 9.09 312 Pn 05 30 36.0 +0.2
VILC Villavicencio, 9.25 112 eP Pn 05 30 41.6 +3.5
RUSC La Rusia 9.32 100 eP Pn 05 30 43.2 +3.8
RUSC eP Pn 05 30 43.2 +3.8
RUSC La Rusia 9.32 100 Pn 05 30 41.5 +2.1
PAMC Pamplona, Colo 9.54 91 eP Pn 05 30 47.3 +5.0
MACC Macarena, Meta 10.03 122 eP Pn 05 30 51.4 +2.7
TAMC Tame, Arauca 10.51 96 eP Pn 05 30 58.4 +3.1
PTLC Puerto Leguiza 10.53 134 eP Pn 05 31 00.2 +4.7
PTGC Puerto Gaitan, 10.68 108 eP Pn 05 30 57.9 +0.4
APG El Apazote 10.85 313 Pn Pn 05 30 59.2 -0.8
comp=Z,2.5nm,0.3s,baz=117,slow=7.9,SNR=31
APG El Apazote 10.85 313 Pn 05 31 01.1 +1.0
GUVC San Jose del G 10.88 117 eP Pn 05 31 01.9 +1.6
URIC Uribia, Colomb 10.95 67 eP Pn 05 31 01.3 0.0
URIC Uribia, Colomb 10.95 67 Pn 05 31 01.5 +0.2
MCJ Malvern 11.19 23⇓ iP Pn 05 31 07.5 +2.9
MCJ ⇓i P Pn 05 31 11.5 +6.9
PAYG Puerto Ayora 11.45 224 Pn 05 31 10.4 +2.4
MTDJ Mount Denham 11.53 23 Pn 05 31 11.9 +2.7
MBJ Montego Bay 11.56 22 i P Pn 05 31 09.6 -0.1
SDV Santo Domingo 11.63 83 Pn Pn 05 31 10.3 -0.4
comp=Z,0.9nm,0.3s,baz=252,slow=9.8,SNR=16
SDV LR LR 05 36 15.9
comp=Z,4µm,21.3s,baz=264,slow=41
SDV Santo Domingo 11.63 83 Pn 05 31 11.1 +0.4
SDV Santo Domingo 11.63 83 eP Pn 05 31 11.1 +0.4
HOJ Hope 11.66 27 i P Pn 05 31 09.7 -1.2
FSCY Frank Sound, G 11.68 5 Pn 05 31 14.4 +3.3
STH Stony Hill 11.70 27⇑ iP Pn 05 31 14.8 +3.3
BNJ Bonny Gate 11.85 26 i P Pn 05 31 16.1 +2.5
CBCY The Bluff, Cay 12.30 11 Pn Pn 05 31 18.2 -1.5
TEIG Tepich 13.80 336 Pn Pn 05 31 40.2 0.0
comp=Z,0.3nm,0.3s,SNR=1.9
TEIG LR LR 05 37 10.2
comp=Z,2µm,19.7s,baz=68,slow=38
GTBY Guantanamo Bay 14.09 29 P P 05 31 49.0 -2.7
GTBY Guantanamo Bay 14.09 29 i P P 05 31 48.8 -2.9
JAKH Jacmel 14.22 41 i P Pn 05 31 47.5 +1.5
LGNH Logne 14.37 40 P P 05 31 51.6 -3.3
LGNH Logne 14.37 40 i P Pn 05 31 50.2 +2.2
PAPH Port-au-Prince 14.57 41 i P Pn 05 31 52.3 +1.5
ATAH Atahualpa 15.17 165 LR LR 05 37 06.3
comp=Z,2µm,18.3s,baz=342,slow=34
CMIG Matias Romero 15.46 309 Pn Pn 05 32 02.9 +0.2
comp=Z,1.3nm,0.3s,baz=105,slow=9.2,SNR=12
SDDR Presa de Saban 15.57 42 P P 05 32 06.6 -1.7
SDDR IAmb IAmb 05 32 15.4
comp=Z,117nm,0.8s
SDDR Presa de Saban 15.57 42 i P P 05 32 07.4 -0.9
BANI BANI 15.81 46 P P 05 32 11.2 +0.1
SC01 Santiago de lo 16.26 43 P P 05 32 15.8 -0.1
SC01 IAmb IAmb 05 32 28.8
comp=Z,414nm,1.4s
SC01 Santiago de lo 16.26 43 i P P 05 32 15.5 -0.4
DR12 Loma Pena Alta 16.77 47 P Pn 05 32 18.8 -0.7
PCRV Puerto La Cruz 17.65 80 P Pn 05 32 30.0 -0.5
comp=Z,0.5nm,0.3s,baz=360,slow=4.5,SNR=6.0
PCRV LR LR 05 41 28.2
comp=Z,2µm,19.9s,slow=44
CRPR Cabo Rojo, PR 18.05 54 P P 05 32 35.6 -0.1
MLPR Magueyes Islan 18.08 54 P P 05 32 37.4 +1.3
OBIP Obispado Ponce 18.47 54 P Pn 05 32 42.5 +2.0

AOPR Arecibo Observ 18.52 53 P Pn 05 32 42.6 +1.4
AOPR IAmb IAmb 05 32 44.1
comp=Z,124nm,0.7s
TLIG Tlapa 18.67 303 P Pn 05 32 44.5 +1.4
SJG San Juan 18.88 55 P Pn 05 32 45.9 +0.4
comp=Z,7.3nm,0.3s,baz=263,slow=8.1,SNR=26
SJG San Juan 18.88 55 P Pn 05 32 46.6 +1.2
SJG IAmb IAmb 05 32 48.5
comp=Z,74nm,0.7s
GCPR Guaynabo City 19.04 54 P Pn 05 32 47.0 -0.4
GCPR IAmb IAmb 05 32 50.0
comp=Z,102nm,0.8s
HUMP Col San Antoni 19.14 55 IAmb IAmb 05 32 51.0
comp=Z,79nm,0.8s
CBYP Canovanas 19.20 55 P P 05 32 48.4 0.0
MTP Monte Pirata 19.36 56 P Pn 05 32 51.1 -0.2
CUPR Culebra, Puert 19.68 56 P P 05 32 54.0 +0.3
CUPR IAmb IAmb 05 33 04.0
comp=Z,201nm,1.1s
CDVI St. Croix 19.84 58 P P 05 32 56.1 +0.7
CDVI IAmb IAmb 05 33 06.3
comp=Z,132nm,0.8s
STVI Saint Thomas 19.98 56 IAmb IAmb 05 33 07.1
comp=Z,307nm,1.7s
GUIV Guiria 20.06 80 eP P 05 32 48.9 -8.9
GRGR Grenville 20.84 76 eP P 05 33 00.4 -5.9
TRN Trinidad (W) 20.86 80 eP Pn 05 33 12.1 +3.0
SKI Saint Kitts 21.39 61 eP P 05 33 04.4 -7.8
SVB Belmont 21.45 73 eP P 05 33 04.4 -8.5
SVB Belmont 21.45 73 P P 05 33 13.8 +0.9
SSV Crater Summit 21.52 73 eP P 05 33 04.5 -9.3
TDBA Terre de Bas, 21.82 66 eP P 05 33 16.4 -0.5
SLBI Saint Lucia, B 21.89 71 eP P 05 33 20.3 +2.7
FDF Fort de France 21.92 69 eP P 05 33 08.4 -10
FDF Fort de France 21.92 69 P P 05 33 17.7 -0.2
BIM Bigot 21.93 70 eP P 05 33 12.4 -5.7
SLAC Saint Lucia, A 21.94 72 eP P 05 33 12.4 -5.7
ABD La Joyeuse, An 22.17 65 eP P 05 33 12.4 -8.2
MAGL Barre de l'ile 22.17 66 eP P 05 33 23.8 +3.2
TIGA Tifton 23.73 357 P P 05 33 37.1 +0.6
baz=177
PTGA Pitinga 23.78 109 P P 05 33 37.6 +0.4
comp=Z,13nm,0.8s,baz=301,slow=11,SNR=20
PTGA LR LR 05 43 56.4
comp=Z,1µm,19.8s,baz=300,slow=39
PTGA Pitinga 23.78 109 P P 05 33 37.7 +0.5
PTGA Pitinga 23.78 109 eP P 05 33 37.0 -0.1
352A Blakely 23.87 354 IAmb IAmb 05 34 02.6
comp=Z,71nm,1.1s
MACA Manacapuru-AM 24.09 116 eP P 05 33 39.6 -0.5
MACA epP sP 05 33 47.8 -0.4
346A Big Creek Wild 24.57 345 IAmb IAmb 05 34 32.1
comp=Z,70nm,1.2s
ZAIG Zacatecas 24.62 310 P P 05 33 44.1 -1.1
ZAIG IAmb IAmb 05 33 49.0
comp=Z,45nm,0.8s
154A Montrose 24.88 358 IAmb IAmb 05 34 05.2
comp=Z,57nm,0.8s
157A Early Branch 24.97 3 P P 05 33 48.7 +0.9
baz=183
158A Hollywood 25.07 4 P P 05 33 49.6 +0.8
baz=185
SAML Samuel 25.18 130 P P 05 33 48.8 -1.2
NHSC New Hope 25.44 4 P P 05 33 53.3 +1.1
baz=185
NHSC New Hope 25.44 4 IAmb IAmb 05 34 03.0
comp=Z,90nm,1.3s
HKT Hockley 25.59 332 P P 05 33 53.2 -0.3
HKT IAmb IAmb 05 33 57.2
comp=Z,120nm,1.6s
Z56A Williston 25.60 2 P P 05 33 54.8 +1.3
baz=182
Z57A Bowman 25.60 3 P P 05 33 54.6 +1.0
baz=184
VBMS Vicksburg 25.64 344 P P 05 33 54.3 +0.4
baz=161
LRAL Lakeview Retre 25.66 351 P P 05 33 54.4 +0.2
baz=169,SNR=10
GOGA Godfrey 25.69 358 P P 05 33 54.4 0.0
baz=177,SNR=8.6
GOGA Godfrey 25.69 358 P P 05 33 54.1 -0.3
GOGA IAmb IAmb 05 34 09.7
comp=Z,54nm,1.4s
Z58A St. Stephen 25.70 5 P P 05 33 55.5 +1.0
baz=186
Z50A Ashland 25.73 353 P P 05 33 54.7 -0.1
baz=172,SNR=9.6
Z47A Carrollton 26.01 349 IAmb IAmb 05 34 07.7
comp=Z,49nm,0.9s
833A Chaparral WMA, 26.16 324 P P 05 33 58.3 -0.4
baz=139,SNR=25
Y52A Lilburn 26.17 357 P P 05 33 59.4 +0.7
baz=176
Y55A Saluda 26.20 1 P P 05 33 59.6 +0.6
baz=181
Y58A Scranton 26.27 5 P P 05 34 00.6 +0.9
baz=186
Y49A Blount Mountai 26.39 352 P P 05 34 00.7 -0.1
Y59A Loris 26.44 6 P P 05 34 01.9 +0.7
baz=188
HODGE Hodges 26.49 0 IAmb IAmb 05 34 33.1
comp=Z,31nm,1.0s
NATX Nacogdoches 26.64 336 P P 05 34 03.4 +0.4
baz=152
NATX Nacogdoches 26.64 336 IAmb IAmb 05 34 06.0
comp=Z,44nm,1.1s
X55A Gracelyn & Ava 26.73 1 P P 05 34 04.4 +0.6
baz=182
Y45A Yeager Farm, C 26.96 347 P P 05 34 05.3 -0.6
PAULI Pauline 27.08 1 P P 05 34 06.4 -0.5
435B Jarrell 27.12 330 P P 05 34 06.8 -0.6
baz=145,SNR=19
Z41A Richland Creek 27.30 341 P P 05 34 09.0 0.0
baz=157
W54A Cherokee Point 27.34 0 P P 05 34 09.4 +0.1
baz=180
W52A Murphy 27.39 357 P P 05 34 10.1 +0.4
KMSC Kings Mountain 27.41 2 P P 05 34 10.1 +0.1
baz=182
W56A Indian Trail 27.43 3 P P 05 34 10.8 +0.7
baz=184
W57A Gilead 27.49 4 P P 05 34 10.7 0.0
baz=185
W57A Gilead 27.49 4 P P 05 34 10.6 0.0
LPAZ La Paz 27.59 149 P P 05 34 12.4 0.0
LPAZ La Paz 27.59 149 eP P 05 34 12.7 +0.3
CPCT Cooper Cave 27.77 356 P P 05 34 13.5 +0.3
WLAR White Oak Lake 27.80 340 P P 05 34 13.6 +0.1
WLAR IAmb IAmb 05 34 56.5
comp=Z,41nm,1.0s
V53A Saluda 27.92 359 P P 05 34 15.3 +0.8
V53A IAmb IAmb 05 34 43.8
comp=Z,53nm,1.7s
TKL Tuckaleechee C 27.94 357 P P 05 34 14.5 -0.2
comp=Z,3.8nm,0.7s,baz=188,slow=10,SNR=4.9
V54A Nebo 28.03 1 P P 05 34 15.4 -0.1
baz=181
JCT Junction City 28.03 326 P P 05 34 14.6 -1.0
baz=141,SNR=22
JCT Junction City 28.03 326 P P 05 34 15.3 -0.3
JCT IAmb IAmb 05 34 16.3
comp=Z,73nm,1.1s
JCT PcP 05 37 31.9 +1.5
WHTX Lake Whitney, 28.05 332 P P 05 34 15.4 -0.4
baz=147
WHTX Lake Whitney, 28.05 332 P P 05 34 14.2 -1.6
WHTX IAmb IAmb 05 34 16.0
comp=Z,35nm,0.8s
Z38A Mt. Pleasant 28.09 337 IAmb IAmb 05 34 17.4
comp=Z,28nm,0.8s
V56A Mocksville 28.11 3 P P 05 34 16.3 +0.1
baz=184
V51A Loudon 28.12 356 IAmb IAmb 05 34 45.7
comp=Z,39nm,1.4s
W45A Hickory Valley 28.13 348 IAmb IAmb 05 34 41.5
comp=Z,32nm,1.0s
V58A Windy Hill, Pi 28.20 6 P P 05 34 17.0 +0.1
baz=187,SNR=5.1
V57A Coltrane Farms 28.23 4 P P 05 34 17.6 +0.3
baz=185
V59A Middlesex 28.26 7 P P 05 34 17.5 -0.1
baz=189
V48A Smith Brothers 28.29 352 IAmb IAmb 05 34 18.4
comp=Z,25nm,0.7s
X40A Basin Creek Fa 28.44 342 P P 05 34 18.3 -0.9
baz=158

X40A Basin Creek Fa 28.44 342 P P 05 34 17.9 -1.3
UALR University of 28.56 343 IAmb IAmb 05 34 20.2
comp=Z,32nm,1.0s
U56A King 28.65 3 P P 05 34 21.4 +0.4
baz=184
PB16 IPOC Station P 28.72 154 P P 05 34 23.0 +0.6
MIAR Mount Ida 28.74 340 P P 05 34 20.4 -1.4
baz=156,SNR=7.8
U54A Nelsons Funny 28.77 1 P P 05 34 22.3 +0.1
baz=181
U55A TA2, Sparta 28.77 2 P P 05 34 22.0 -0.2
baz=183,SNR=5.6
U57A Blanch 28.81 5 P P 05 34 22.6 +0.2
baz=186
WVT Waverly 28.82 351 P P 05 34 21.8 -0.8
baz=169
WVT Waverly 28.82 351 P P 05 34 21.2 -1.3
WVT IAmb IAmb 05 34 22.5
comp=Z,17nm,0.6s
W41B Gary Mavity, V 28.90 343 P P 05 34 22.1 -1.2
baz=159,SNR=18
WHAR Wooly Hollow 29.02 343 P P 05 34 22.7 -1.6
WHAR IAmb IAmb 05 34 23.9
comp=Z,26nm,0.7s
Z35A Perchaven, San 29.09 334 IAmb IAmb 05 34 25.4
comp=Z,43nm,0.8s
T56A Rocky Mt 29.35 4 P P 05 34 27.7 +0.5
baz=185
T50A Nancy 29.36 356 P P 05 34 27.0 -0.3
T57A Hurt 29.38 5 P P 05 34 28.1 +0.6
baz=186
MNMC Minye Minye 29.39 155 P P 05 34 28.8 +0.7
MNMC IAmb IAmb 05 34 49.4
comp=Z,31nm,1.1s
T58A Grand View Acr 29.40 6 P P 05 34 27.5 -0.2
baz=188
T55A Pulaski 29.40 2 P P 05 34 27.9 +0.2
baz=183
W39A Magazine 29.40 341 P P 05 34 27.0 -0.7
baz=156,SNR=14
W39A Magazine 29.40 341 IAmb IAmb 05 34 28.2
comp=Z,20nm,0.8s
TX32 Lajitas Array 29.50 320 IAmb IAmb 05 34 31.2
comp=Z,24nm,1.0s
TXAR Lajitas Array 29.50 320 P P 05 34 29.3 +0.5
comp=Z,14nm,0.8s,baz=129,slow=8.9,SNR=82
TXAR PcP PcP 05 37 34.7 +0.6
comp=Z,1.2nm,0.6s,baz=155,slow=4.9,SNR=7.1
TXAR LR LR 05 48 08.9
comp=Z,426nm,22.0s,baz=0.0,slow=40
TXAR Lajitas Array 29.50 320 P P 05 34 28.8 0.0
BLA Blacksburg 29.51 3 P P 05 34 29.3 +0.5
baz=184
BLA Blacksburg 29.51 3 P P 05 34 29.2 +0.5
MALB Monte Alegre 29.52 107 eP P 05 34 29.0 0.0
T47A Sharon Grove 29.56 352 P P 05 34 28.1 -1.0
MDP Montagnes des 29.59 93 LR LR 05 46 43.1
comp=Z,1µm,18.1s,baz=278,slow=37
ABTX Abilene, Hawle 29.64 329 P P 05 34 28.6 -1.2
baz=143,SNR=10
S51A Beattyville 29.91 358 IAmb IAmb 05 34 56.5
comp=Z,18nm,0.8s
S53A Williamson 29.93 0 P P 05 34 32.5 +0.1
baz=180
H06E1 SOCORRO T-PHAS 29.93 295 T T 06 06 03.4
SNR=304
H06S1 SOCORRO T 29.95 294 T T 06 05 57.9
SNR=9.2
VILB Vilhena 30.00 133 eP P 05 34 33.2 -0.1
VILB epP sP 05 34 41.7 +0.3
VILB eS S 05 39 28.6 -2.0
S56A Natural Bridge 30.03 4 P P 05 34 33.3 0.0
baz=185
GO01 Chusmiza 30.03 155 P P 05 34 34.8 +0.8
GO01 IAmb IAmb 05 34 39.4
comp=Z,28nm,1.1s
S54A Dingess, Beckl 30.06 2 P P 05 34 32.2 -1.3
baz=182
S55A Lewisburg 30.06 3 P P 05 34 34.0 +0.4
baz=184
U40A Yellville 30.18 343 P P 05 34 33.7 -0.9
baz=159,SNR=19
U40A Yellville 30.18 343 IAmb IAmb 05 34 34.7
comp=Z,16nm,0.7s
T42A Van Buren 30.35 346 P P 05 34 34.5 -1.6
T42A IAmb IAmb 05 34 35.6
comp=Z,15nm,0.6s
R54A Victor 30.45 2 P P 05 34 36.8 -0.2
baz=183
NPGB Novo Progresso 30.57 118 eP P 05 34 37.8 -0.6
NPGB epP sP 05 34 46.9 +0.3
R55A Marlinton 30.59 3 P P 05 34 38.2 -0.1
baz=184
S44A Carbondale 30.60 349 P P 05 34 36.2 -2.0
SIUC Southern Illin 30.61 349 IAmb IAmb 05 34 38.3
comp=Z,11nm,0.6s
R49A Shelbyville 30.65 356 IAmb IAmb 05 34 39.0
comp=Z,17nm,0.7s
WCI Wyandotte Cave 30.69 354 P P 05 34 38.3 -0.7
baz=172
WCI Wyandotte Cave 30.69 354 P P 05 34 37.5 -1.5
WCI IAmb IAmb 05 34 39.6
comp=Z,20nm,0.7s
TUL1 Leonard 30.74 338 P P 05 34 37.9 -1.7
baz=153,SNR=7.2
TUL1 Leonard 30.74 338 IAmb IAmb 05 34 39.6
comp=Z,13nm,0.7s
WMOK Wichita Mounta 30.95 333 P P 05 34 39.6 -1.8
baz=147,SNR=18
Q53A Leroy 31.11 1 P P 05 34 42.9 +0.1
baz=182,SNR=5.5
Q52A Bidwell 31.21 0 P P 05 34 43.4 -0.2
baz=180
Q54A Coxs Mills 31.26 2 P P 05 34 43.6 -0.5
baz=183
Q51A Peebles 31.29 358 P P 05 34 43.9 -0.4
baz=178
Q51A Peebles 31.29 358 IAmb IAmb 05 35 11.2
comp=Z,24nm,1.0s
Q55A Buckhannon 31.30 3 P P 05 34 44.0 -0.5
baz=184,SNR=15
CCM Cathedral Cave 31.36 346 P P 05 34 44.0 -1.0
baz=163
CCM Cathedral Cave 31.36 346 P P 05 34 43.3 -1.7
CCM IAmb IAmb 05 34 44.5
comp=Z,28nm,0.6s
OLIL Olney 31.42 351 PcP 05 37 39.7 +0.9
Q57A Strasburg 31.48 6 P P 05 34 46.6 +0.6
baz=187
Q44A Meyer Farm, Va 31.73 350 IAmb IAmb 05 34 47.9
comp=Z,16nm,0.7s
P53A Whipple 31.74 1 P P 05 34 48.3 0.0
baz=182,SNR=6.2
P53A Whipple 31.74 1 IAmb IAmb 05 35 02.9
comp=Z,19nm,0.8s
P48A Milroy 31.83 355 IAmb IAmb 05 34 48.7
comp=Z,27nm,0.6s
R40A Maddies Statio 31.84 345 P P 05 34 46.8 -2.4
R40A IAmb IAmb 05 34 49.1
comp=Z,45nm,1.8s
P49A Miami Univ. Ec 31.85 356 P P 05 34 48.1 -1.2
baz=176,SNR=6.0
P52A Corning 31.88 0 P P 05 34 49.3 -0.2
baz=180
P50A Jamestown 31.88 358 P P 05 34 48.8 -0.7
baz=177
P54A Burton 31.89 3 P P 05 34 49.8 +0.2
baz=183
P56A Dayton Farm, R 31.90 5 P P 05 34 50.2 +0.4
baz=186
CLDB Colider 32.15 125 eP P 05 34 50.0 -2.3
P46A Rosedale 32.16 353 IAmb IAmb 05 34 51.5
comp=Z,17nm,0.6s
MNTX Cornudas Mount 32.19 321 P P 05 34 52.6 +0.2
baz=133,SNR=85
MNTX Cornudas Mount 32.19 321 IAmb IAmb 05 34 54.2
comp=Z,37nm,0.8s
P59A Jarrettsville 32.29 9 P P 05 34 52.7 -0.4
baz=191
MSTX Muleshoe 32.32 327 P P 05 34 52.4 -1.2
baz=140,SNR=12
MSTX Muleshoe 32.32 327 IAmb IAmb 05 34 56.5
comp=Z,27nm,0.8s
O52A Adamsville 32.36 1 P P 05 34 53.6 -0.1
baz=181
O51A Pataskala 32.39 360 P P 05 34 53.0 -1.1
baz=180,SNR=8.6

O50A	Cable	32.41	358	P		P	05 34 53.0	-1.2
	baz=178,SNR=5.4							
U32A	Winter Ranch,	32.43	334	P		P	05 34 52.8	-1.6
U32A				IAmb		IAmb	05 34 54.2	
	comp=Z,22nm,0.8s							
PTLB	Pontes e Lacer	32.44	135	*eP*		P	05 34 53.9	-0.8
PTLB				*epP*		sP	05 35 01.5	-1.4
AMTX	Amarillo	32.46	329	P		P	05 34 53.7	-1.1
	baz=142							
AMTX	Amarillo	32.46	329	IAmb		IAmb	05 35 02.1	
	comp=Z,13nm,0.7s							
O54A	Avella	32.47	3	P		P	05 34 54.9	+0.2
	baz=184							
O54A	Avella	32.47	3	IAmb		IAmb	05 35 09.0	
	comp=Z,21nm,0.8s							
ACSO	Alum Creek Sta	32.48	359	P		P	05 34 54.2	-0.6
	baz=179							
ACSO	Alum Creek Sta	32.48	359	P		P	05 34 53.5	-1.3
ACSO				IAmb		IAmb	05 35 09.5	
	comp=Z,16nm,0.8s							
O53A	New Philadelph	32.51	2	P		P	05 34 54.1	-0.9
	baz=182							
P43A	Skaggs, Pawnee	32.53	350	IAmb		IAmb	05 34 55.1	
	comp=Z,25nm,0.7s							
O55A	Ligonier	32.56	4	P		P	05 34 55.1	-0.4
	baz=186							
O48A	Farmland	32.60	356	P		P	05 34 54.8	-1.1
	baz=175							
O56A	Blue Knob Stat	32.68	5	P		P	05 34 56.8	+0.1
	baz=187							
O56A	Blue Knob Stat	32.68	5	IAmb		IAmb	05 35 13.5	
	comp=Z,27nm,1.2s							
O57A	Amberson	32.72	7	P		P	05 34 56.5	-0.4
	baz=189							
LVC	Limon Verde	32.78	157	*eP*		P	05 34 57.3	-0.7
O44A	Mansfield	32.86	351	P		P	05 34 56.8	-1.3
O44A				IAmb		IAmb	05 34 58.1	
	comp=Z,25nm,0.6s							
SFIN	Lafayette	32.90	353	P		P	05 34 56.5	-2.0
	baz=171,SNR=15							
SFIN	Lafayette	32.90	353	IAmb		IAmb	05 34 57.6	
	comp=Z,27nm,0.6s							
P40A	Paris	32.96	346	IAmb		IAmb	05 35 00.0	
	comp=Z,13nm,0.7s							
N50A	Nevada	33.02	359	P		P	05 34 58.6	-0.9
	baz=178							
N53A	Lisbon	33.08	2	P		P	05 34 59.4	-0.6
	baz=183							
SSPA	Standing Stone	33.12	6	P		P	05 35 00.6	+0.3
N55A	Marion Center	33.16	5	P		P	05 34 59.7	-1.1
	baz=186							
N51A	Ashland	33.16	360	P		P	05 34 59.7	-1.1
	baz=180,SNR=5.8							
N51A	Ashland	33.16	360	IAmb		IAmb	05 35 14.5	
	comp=Z,17nm,0.8s							
N48A	Decatur	33.19	356	P		P	05 34 59.8	-1.2
	baz=175,SNR=5.3							
N54A	Moraine State	33.27	3	P		P	05 35 00.6	-1.1
	baz=184							
HDIL	Hopedale	33.39	350	P		P	05 35 00.9	-1.8
	baz=167,SNR=23							
P38A	Dawn	33.42	344	P		P	05 35 01.2	-1.8
P38A				IAmb		IAmb	05 35 03.8	
	comp=Z,20nm,0.8s							
M50A	Fremont	33.65	359	P		P	05 35 03.9	-1.1
	baz=179							
M53A	Wi Miller and	33.71	2	P		P	05 35 04.8	-0.7
	baz=183							
M47A	Cromwell	33.73	356	P		P	05 35 04.9	-0.8
	baz=174							
M54A	Oil Creek Stat	33.83	4	P		P	05 35 06.1	-0.5
	baz=185							
M54A	Oil Creek Stat	33.83	4	IAmb		IAmb	05 35 25.0	
	comp=Z,46nm,1.6s							
M55A	Ridgway	33.86	5	P		P	05 35 06.7	-0.2
	baz=186							
M55A	Ridgway	33.86	5	P		P	05 35 06.6	-0.2
M55A				IAmb		IAmb	05 35 48.8	
	comp=Z,26nm,1.3s							
KSU1	Kansas State U	33.88	340	P		P	05 35 05.4	-1.7
	baz=154,SNR=7.7							
KSU1	Kansas State U	33.88	340	IAmb		IAmb	05 35 06.8	
	comp=Z,23nm,0.8s							
M57A	Sunshine Farm,	33.90	7	P		P	05 35 07.3	+0.2
	baz=189							
M57A	Sunshine Farm,	33.90	7	IAmb		IAmb	05 35 28.7	
	comp=Z,23nm,0.8s							
M56A	Emporium	33.92	6	P		P	05 35 07.4	-0.1
	baz=187,SNR=6.3							
M56A	Emporium	33.92	6	P		P	05 35 07.3	-0.1
M56A				IAmb		IAmb	05 35 21.7	
	comp=Z,15nm,0.8s							
M44A	Midewin, Midew	34.01	352	IAmb		IAmb	05 35 07.4	
	comp=Z,12nm,0.5s							
R32A	Long Quarter,	34.06	337	IAmb		IAmb	05 35 09.5	
	comp=Z,61nm,1.3s							
R32A						PcP	05 37 46.6	+0.4
L53A	Girard	34.24	3	P		P	05 35 09.4	-0.7
	baz=184							
121A	Cookes Peak, D	34.27	320	P		P	05 35 12.3	+1.6
	baz=131,SNR=44							
KSPA	Keystone Colle	34.30	9	P		P	05 35 10.8	+0.1
KSPA				IAmb		IAmb	05 35 25.3	
	comp=Z,23nm,0.8s							
L46A	Eue Claire	34.44	355	P		P	05 35 09.7	-2.1
	baz=173							
L46A	Eue Claire	34.44	355	IAmb		IAmb	05 35 10.3	
	comp=Z,20nm,0.6s							
L54A	Sinclairville	34.58	4	P		P	05 35 12.7	-0.4
	baz=185							
L57A	Andrews Acres	34.58	7	P		P	05 35 13.3	+0.1
	baz=190							
L55A	Hinsdale	34.59	5	P		P	05 35 13.5	+0.3
	baz=187							
L56A	Greenwood	34.63	6	P		P	05 35 13.8	+0.2
	baz=188							
Y22D	IRIS PASSCAL I	34.76	323	P		P	05 35 15.2	+0.2
L44A	Lake County Fo	34.77	353	IAmb		IAmb	05 35 13.1	
	comp=Z,18nm,0.6s							
CBKS	Cedar Bluff	34.80	336	P		P	05 35 14.7	-0.5
	baz=149							
CBKS	Cedar Bluff	34.80	336	IAmb		IAmb	05 35 15.6	
	comp=Z,72nm,1.7s							
L42A	Oliver, Polo	34.86	350	IAmb		IAmb	05 35 14.7	
	comp=Z,25nm,0.6s							
BINY	Binghamton	34.89	8	P		P	05 35 14.8	-1.0
	baz=191							
K47A	Vermontville	34.99	357	P		P	05 35 14.3	-2.3
	baz=175,SNR=9.5							
K49A	Clarkson	35.04	359	P		P	05 35 15.9	-1.2
	baz=178							
K46A	Dorr	35.06	356	P		P	05 35 14.7	-2.5
	baz=174,SNR=12							
K48A	Perry	35.08	358	P		P	05 35 15.9	-1.5
	baz=177,SNR=7.5							
ANMO	Albuquerque	35.10	324	P		P	05 35 17.9	0.0
	baz=135							
ANMO	Albuquerque	35.10	324	P		P	05 35 17.8	-0.1
ANMO				IAmb		IAmb	05 35 20.1	
	comp=Z,32nm,0.8s							
K55A	Perry	35.17	5	P		P	05 35 17.6	-0.5
	baz=187							
L40A	Anamosa	35.20	348	IAmb		IAmb	05 35 17.5	
	comp=Z,31nm,0.7s							
SALV	Santo Antonio	35.23	132	*eP*		P	05 35 18.0	-1.0
SALV				*epP*		sP	05 35 27.1	-0.1
SCIA	State Center	35.49	346	P		P	05 35 19.2	-1.7
	baz=161							
SCIA	State Center	35.49	346	IAmb		IAmb	05 35 20.3	
	comp=Z,26nm,0.7s							
T25A	Trinidad	35.60	329	P		P	05 35 22.3	+0.1
	baz=140,SNR=32							
N33A	J Bar K, Exete	35.64	340	P		P	05 35 20.8	-1.4
JFWS	Jewell Farm	35.84	350	P		P	05 35 21.9	-2.0
	baz=166,SNR=19							
JFWS	Jewell Farm	35.84	350	IAmb		IAmb	05 35 22.8	
	comp=Z,25nm,0.6s							
I51A	Listowel	36.06	2	P		P	05 35 25.1	-0.7
	baz=182							
TUC	Tucson	36.11	317	P		P	05 35 28.6	+2.1
	baz=127							
TUC	Tucson	36.11	317	P		P	05 35 27.2	+0.7
J58A	Remsen	36.13	9	IAmb		IAmb	05 35 40.8	
	comp=Z,18nm,0.8s							
KSCO	Kaye Shedlock'	36.21	333	P		P	05 35 26.7	-0.6
	baz=144,SNR=12							
KSCO	Kaye Shedlock'	36.21	333	IAmb		IAmb	05 35 28.3	
	comp=Z,26nm,0.8s							
I46A	Reed City	36.29	356	P		P	05 35 26.0	-1.8
	baz=175							
I47A	Gladwin	36.31	357	P		P	05 35 26.5	-1.4
	baz=176							
L34A	Svendsen Farm,	36.41	342	P		P	05 35 26.1	-2.7
L34A				IAmb		IAmb	05 35 28.4	
	comp=Z,18nm,0.8s							
AC02	Maricunga	36.56	160	P		P	05 35 34.2	+3.4
AC02				IAmb		IAmb	05 35 44.2	
	comp=Z,28nm,1.2s							
I42A	Draeger Farm,	36.59	352	IAmb		IAmb	05 35 29.8	
	comp=Z,20nm,0.7s							
SDCO	Great Sand Dun	36.62	328	P		P	05 35 31.1	+0.1
	baz=139,SNR=47							
SDCO	Great Sand Dun	36.62	328	IAmb		IAmb	05 35 32.8	
	comp=Z,25nm,0.9s							
I55A	Frankford	36.68	6	P		P	05 35 31.2	+0.1
	baz=188							
I59A	Olmsteadville	36.79	10	P		P	05 35 32.1	+0.2
	baz=194,SNR=5.1							
I40A	Norwalk	36.86	350	IAmb		IAmb	05 35 31.4	
	comp=Z,17nm,0.6s							
X18A	Snowflake	36.93	320	IAmb		IAmb	05 35 37.1	
	comp=Z,33nm,0.8s							
H52A	Wyevale	36.94	3	P		P	05 35 32.7	-0.6
	baz=184							
H43A	Windswept, Lux	37.02	354	IAmb		IAmb	05 35 32.7	
	comp=Z,40nm,0.6s							
GLMI	Grayling	37.12	357	P		P	05 35 33.7	-1.1
	baz=176							
W18A	Petrified Fore	37.18	321	P		P	05 35 37.3	+1.6
	baz=131,SNR=78							
W18A	Petrified Fore	37.18	321	P		P	05 35 37.1	+1.4
H56A	Elgin	37.21	7	P		P	05 35 35.9	+0.3
	baz=190							
214A	Orso Pipe Nat	37.31	315	P		P	05 35 38.6	+2.0
	baz=124,SNR=36							
S22A	4UR Ranch, Cre	37.32	327	P		P	05 35 37.1	0.0
	baz=137,SNR=38							
Q24A	Divide	37.37	330	P		P	05 35 37.4	0.0
	baz=141,SNR=9.8							
I37A	Lemond, Waseca	37.53	347	IAmb		IAmb	05 36 33.4	
	comp=Z,54nm,1.9s							
OGNE	Ogallala	37.55	335	P		P	05 35 38.2	-0.4
	baz=147,SNR=7.7							
I63A	Otisfield	37.71	14	P		P	05 35 41.2	+1.4
	baz=199							
K31A	O'Neill	37.76	340	P		P	05 35 38.5	-1.8
X16A	Lo Mia Camp, P	37.82	319	IAmb		IAmb	05 35 44.5	
	comp=Z,71nm,1.2s							
MVCO	Mesa Verde	37.86	325	P		P	05 35 41.7	+0.2
	baz=135,SNR=70							
AC05	El Transito	38.06	163	P		P	05 35 44.5	+1.5
ARAG	Araguaiana, MT	38.08	128	*eP*		P	05 35 42.0	-1.3
ECSD	EROS Data Cent	38.09	343	P		P	05 35 40.7	-2.4
	baz=157,SNR=16							
ECSD	EROS Data Cent	38.09	343	P		P	05 35 40.0	-3.1
F52A	Sundridge	38.12	3	P		P	05 35 41.4	-1.9
	baz=185							
F51A	Arnstein	38.23	3	P		P	05 35 43.0	-1.2
	baz=184							
ISCO	Idaho Springs	38.25	331	P		P	05 35 44.6	-0.2
	baz=141,SNR=18							
ISCO	Idaho Springs	38.25	331	IAmb		IAmb	05 35 48.1	
	comp=Z,42nm,1.6s							
AQDB	Aquidauana	38.27	137	*eP*		P	05 35 44.0	-0.7
AQDB				*epP*		sP	05 35 55.0	+2.0
SMTB	Santa Maria do	38.28	115	*eP*		P	05 35 44.9	-0.2
SMTB				*epP*		sP	05 35 53.4	+0.3
ALGO	Algonquin Park	38.37	5	P		P	05 35 44.9	-0.5
	baz=187							
WUAZ	Wupatki	38.46	320	P		P	05 35 48.0	+1.5
	baz=129,SNR=41							
PV01	Paradox Valley	38.55	326	P		P	05 35 48.0	+0.7
SPMN	Marine on St.	38.55	348	P		P	05 35 44.3	-2.6
	baz=163,SNR=14							
SPMN	Marine on St.	38.55	348	IAmb		IAmb	05 35 45.4	
	comp=Z,27nm,0.7s							
PV15	Paradox Valley	38.65	326	IAmb		IAmb	05 35 52.4	
	comp=Z,53nm,1.0s							
G61A	St-Isidore-de-	38.67	12	P		P	05 35 46.7	-1.2
	baz=197							
E50A	Wahnapitae	38.69	2	P		P	05 35 46.7	-1.3
	baz=182							
PV02	Paradox Valley	38.70	326	P		P	05 35 48.2	-0.4
PV02				IAmb		IAmb	05 35 51.8	
	comp=Z,92nm,1.2s							
E47A	Iron Bridge	38.70	359	P		P	05 35 46.7	-1.5
	baz=178							
E48A	Lockeyer	38.72	0	P		P	05 35 47.3	-1.1
	baz=180							
PV03	Paradox Valley	38.79	326	P		P	05 35 49.4	+0.1
PV03				IAmb		IAmb	05 35 52.3	
	comp=Z,91nm,1.2s							
PV05	Paradox Valley	38.81	325	IAmb		IAmb	05 35 51.5	
	comp=Z,96nm,1.3s							
PV07	Paradox Valley	38.81	326	IAmb		IAmb	05 35 52.8	
	comp=Z,81nm,1.2s							
PV18	Skein Mesa, Pa	38.82	326	P		P	05 35 49.9	+0.3
PV18				IAmb		IAmb	05 35 53.0	
	comp=Z,65nm,0.8s							
E51A	G1948 Merrick	38.85	3	P		P	05 35 48.2	-1.2
	baz=184,SNR=6.1							
PV16	Nyswonger Mesa	38.87	326	IAmb		IAmb	05 35 53.0	
	comp=Z,84nm,1.1s							
PV17	East Wray Mesa	38.87	326	P		P	05 35 50.2	+0.3
PV19	Morning Glory	38.91	326	IAmb		IAmb	05 35 53.2	
	comp=Z,43nm,1.0s							
PV20	West Nyswonger	38.92	326	IAmb		IAmb	05 35 53.2	
	comp=Z,56nm,1.1s							
PV04	Paradox Valley	38.92	326	IAmb		IAmb	05 35 53.5	
	comp=Z,66nm,1.1s							
E54A	Lac Daplat, Po	38.93	6	P		P	05 35 49.3	-0.7
	baz=188							
G63A	Kingsbury	38.95	14	P		P	05 35 49.1	-1.1
	baz=200							
PV22	Blue Mesa, Par	38.96	326	P		P	05 35 51.3	+0.6
PV22				IAmb		IAmb	05 35 52.5	
	comp=Z,36nm,1.1s							
PV14	Lion Creek, Pa	38.97	326	IAmb		IAmb	05 35 53.1	
	comp=Z,82nm,1.3s							
E44A	Grand Marais A	38.98	356	P		P	05 35 49.6	-0.9
	baz=174							
PV10	Paradox Valley	38.99	326	IAmb		IAmb	05 35 52.1	
	comp=Z,49nm,0.9s							
PV23	Carpenter Ridg	39.02	326	IAmb		IAmb	05 35 53.6	
	comp=Z,40nm,1.1s							
PKME	Peaks-Kenny Pk	39.17	15	P		P	05 35 51.8	-0.2
	baz=201							
PKME	Peaks-Kenny Pk	39.17	15	P		P	05 35 52.6	+0.6
F60A	Warwick	39.24	11	P		P	05 35 52.7	+0.1
	baz=196							
N23A	Red Feather La	39.25	331	P		P	05 35 52.9	-0.3
	baz=141,SNR=7.5							
H66A	Whiting	39.26	17	P		P	05 35 53.1	+0.4
	baz=204							
D47A	Chapleau	39.30	359	P		P	05 35 51.5	-1.6
	baz=179							
F36A	Milaca	39.31	348	IAmb		IAmb	05 35 52.0	
	comp=Z,20nm,0.6s							
GLA	Glamis	39.33	315	P		P	05 35 55.6	+2.0
	baz=123,SNR=31							
D48A	Paudash Townsh	39.42	1	P		P	05 35 52.4	-1.7
	baz=181,SNR=6.0							
SUSD	Miller	39.45	341	P		P	05 35 52.2	-2.3
	baz=154,SNR=6.5							
Y12C	Blythe	39.50	316	P		P	05 35 57.1	+2.1
	baz=124,SNR=43							
Y12C	Blythe	39.50	316	P		P	05 35 56.5	+1.5
ROSB	Rosrio	39.51	104	*eP*		P	05 35 54.7	-0.7
D53A	Lac Vacive, Po	39.52	5	P		P	05 35 54.0	-0.9
	baz=187							
D49A	Beulah Townshi	39.52	1	P		P	05 35 53.0	-2.0
	baz=182,SNR=5.1							
PDMCI	Parker Dam,Lak	39.55	317	P		P	05 35 57.2	+1.7
	baz=125,SNR=58							
U15A	North Rim	39.61	321	IAmb		IAmb	05 36 00.8	
	comp=Z,73nm,1.4s							
D41A	Chassel	39.66	353	IAmb		IAmb	05 35 55.8	
	comp=Z,28nm,0.7s							
D54A	Lac Fusel, La	39.69	6	P		P	05 35 55.6	-0.8
	baz=189							
D55A	Sainte-Anne-du	39.70	7	P		P	05 35 56.3	-0.2
	baz=191							
GGN	Saint George	39.70	17	P		P	05 35 57.5	+1.1
E60A	Ste Agathe de	39.73	12	P		P	05 35 56.9	+0.2
	baz=197							
O20A	White River Ci	39.82	328	P		P	05 35 57.0	-0.8
	baz=138,SNR=12							
O20A	White River Ci	39.82	328	IAmb		IAmb	05 36 02.1	
	comp=Z,71nm,1.8s							
F33A	5 Mile Ranch,	39.95	345	IAmb		IAmb	05 35 57.1	
	comp=Z,21nm,0.6s							
SWSC	Sam W. Stewart	39.96	314	P		P	05 36 00.9	+2.0
	baz=122,SNR=17							
F64A	Sherman	39.97	15	P		P	05 35 59.3	+0.6
	baz=202,SNR=5.6							
F64A	Sherman	39.97	15	P		P	05 35 59.0	+0.3
F64A				IAmb		IAmb	05 36 01.0	
	comp=Z,51nm,1.6s							
IKP	In-Ko-Pah, Jac	40.03	313	P		P	05 36 01.6	+2.0
	baz=121,SNR=12							
BC3	Big Chuckawall	40.10	315	P		P	05 36 01.8	+1.7
	baz=123,SNR=18							
NEE2	Needles Airpor	40.14	317	P		P	05 36 02.0	+1.7
	baz=125							
IRM	Iron Mountain	40.16	316	P		P	05 36 02.5	+2.0
	baz=124,SNR=51							
D58A	Chemin du LacG	40.16	10	P		P	05 36 00.7	+0.4
	baz=195							
D60A	Saint Jean D'O	40.35	12	P		P	05 36 02.9	+1.0
	baz=198							
MONP2	Monument Peak	40.38	313	P		P	05 36 04.4	+1.7
	baz=121,SNR=15							
LATQ	La Tuque	40.45	10	P		P	05 36 03.7	+1.0
	baz=195							
E63A	Oxbow	40.47	15	P		P	05 36 05.1	+2.3
	baz=202							
E63A	Oxbow	40.47	15	P		P	05 36 03.3	+0.5
RWWY	Rawlins	40.47	331	IAmb		IAmb	05 36 03.8	
	comp=Z,38nm,1.1s							
E64A	Bridgewater	40.62	15	P		P	05 36 05.7	+1.6
	baz=202							
BELC	Belle Mtn. Jos	40.66	315	P		P	05 36 06.8	+2.0
	baz=122,SNR=56							
XPFO	Pion Flat	40.78	314	P		P	05 36 07.2	+1.4
PFO	Pinyon Flats O	40.78	314	P		P	05 36 07.8	+2.0
	baz=122,SNR=23							
PFO	Pinyon Flats O	40.78	314	P		P	05 36 07.2	+1.4
D61A	St Aubert, Com	40.78	13	P		P	05 36 06.6	+1.2
	baz=199							
PQI	Presque Isle	40.80	15	P		P	05 36 06.5	+0.9
TMUT	Trail Mountain	40.84	325	P		P	05 36 06.8	+0.3
GMRC	Granite Mounta	40.85	316	P		P	05 36 08.3	+1.9
	baz=124,SNR=58							
109C	Camp Elliot, M	40.88	313	P		P	05 36 08.1	+1.6
	baz=120,SNR=11							
D62A	Allapoint, All	40.93	14	P		P	05 36 07.8	+1.2
	baz=200							
D62A	Allapoint, All	40.93	14	P		P	05 36 07.4	+0.8
EYMN	Ely	40.94	351	P		P	05 36 04.4	-2.4
	baz=166,SNR=8.6							
H03N2	Juan Fernandez	40.96	176	T		T	06 19 34.2	
	baz=354,slow=76,SNR=12							
H03N1	Juan Fernandez	40.96	176	T		T	06 19 36.4	
	baz=354,slow=76,SNR=12							
H03N3	Juan Fernandez	40.97	176	T		T	06 19 32.7	
	baz=354,slow=76,SNR=14							
LMN	Caledonia Moun	40.98	19	IAmb		IAmb	05 36 16.8	
	comp=Z,29nm,0.9s							
RSSD	Black Hills	41.01	336	P		P	05 36 07.4	-0.2
	baz=146							
RSSD	Black Hills	41.01	336	P		P	05 36 08.1	+0.4
RSSD				IAmb		IAmb	05 36 09.1	
	comp=Z,55nm,1.7s							
BDFB	Brasilia	41.09	124	P		P	05 36 07.8	-0.8
	comp=Z,4.4nm,0.7s,baz=291,slow=9.0,SNR=7.8							
BDFB	Brasilia	41.09	124	P		P	05 36 08.3	-0.2
D63A	Stockholm	41.12	15	P		P	05 36 09.1	+0.9
	baz=202							
CFA	Coronel Fontan	41.26	162	P		P	05 36 09.6	0.0
	comp=Z,2.4nm,0.8s,baz=352,slow=3.7,SNR=7.4							
MURC	Murrieta	41.30	314	P		P	05 36 11.9	+1.9
	baz=121,SNR=15							
HEC	Hector,Ludlow	41.34	316	P		P	05 36 12.4	+2.0
	baz=123,SNR=24							
TUQ	Turquoise Moun	41.40	317	P		P	05 36 12.8	+1.9
	baz=124,SNR=19							
BBRC	Big Bear Solar	41.45	315	P		P	05 36 13.9	+2.4
	baz=122							
SHPR	Sheep Range	41.50	319	IAmb		IAmb	05 36 15.2	
	comp=Z,89nm,1.2s							
GBN	Guysborough	41.73	22	P		P	05 36 14.5	+1.2
RRX	Edison Barstow	41.83	315	P		P	05 36 16.5	+2.2
	baz=122							
BATG	Bathurst New B	41.89	17	P		P	05 36 15.2	+0.6
SHOC	Shoshone, Teco	41.89	317	P		P	05 36 16.9	+2.2
	baz=124,SNR=85							
E28A	Huff	41.90	341	P		P	05 36 13.1	-1.6
E28A				IAmb		IAmb	05 36 14.6	
	comp=Z,49nm,0.9s							
GSC	Goldstone, Bar	41.92	316	P		P	05 36 17.2	+2.0
	baz=123,SNR=72							
BFSC	Mount Baldy Ra	41.96	314	P		P	05 36 17.1	+1.6
	baz=121,SNR=8.6							
SCI2	San Clemente I	41.98	312	P		P	05 36 17.3	+1.8
	baz=119							
CIS	Catalina Islan	42.09	313	P		P	05 36 18.3	+1.9
	baz=119,SNR=11							
PCMB	Pacaembu	42.09	134	*eP*		P	05 36 15.0	-1.5
PCMB				*epP*		sP	05 36 24.8	0.0
AGMN	Agassiz Nation	42.14	347	P		P	05 36 14.3	-2.3
	baz=160,SNR=8.2							
FMP	Fort Macarthur	42.15	313	P		P	05 36 18.9	+2.0
	baz=120							
MATQ	Matagami	42.19	5	P		P	05 36 15.2	-1.7
	baz=187,SNR=5.8							
IPMB	Ipameri, GO	42.20	127	*eP*		P	05 36 16.3	-1.3
IPMB				*epP*		sP	05 36 25.8	0.0
TCUT	Toone Canyon	42.21	327	P		P	05 36 18.5	+1.0
DUG	Dugway, Tooele	42.36	325	P		P	05 36 19.3	+0.6
	baz=132,SNR=32							
BW06	Boulder Array	42.43	330	P		P	05 36 18.7	-0.6
	baz=138,SNR=30							
PDAR	Pinedale Array	42.43	330	P		P	05 36 18.8	-0.6
	comp=Z,15nm,1.2s,baz=140,slow=7.8,SNR=40							
PDAR				PcP		PcP	05 38 12.4	+0.1
	comp=Z,2.7nm,0.8s,baz=139,slow=5.1,SNR=4.8							
PDAR	Pinedale Array	42.43	330	P		P	05 36 18.6	-0.8
DECC	Green Verdugo	42.45	314	P		P	05 36 21.0	+1.6
	baz=120							
TPNV	Topopah Spring	42.47	319	P		P	05 36 21.5	+1.9
	baz=125,SNR=128							
EDW2	Edwards Air Fo	42.53	315	P		P	05 36 21.7	+1.7
	baz=121,SNR=47							
FURC	Furnace Creek,	42.60	318	P		P	05 36 22.4	+1.9
	baz=124,SNR=136							
LRMC	Laurel Mtn Rad

SBC **Santa Barbara** 43.53 313 P P 05 36 29.5 +1.4
baz=119
VES **Vestal, Richgr** 43.79 315 P P 05 36 32.4 +2.3
baz=121,SNR=45
PKM **Mcpherson Peak** 43.82 314 P P 05 36 32.4 +1.7
baz=119,SNR=33
TIN **Tinemaha, Big** 43.84 317 P P 05 36 32.8 +2.1
baz=123,SNR=21
JANB **Januaria** 43.89 121 eP P 05 36 30.7 -0.6
IMW **Indian Meadow** 43.95 330 P P 05 36 31.4 -0.3
FLWY **Flagg Ranch** 43.96 330 IAmb IAmb 05 36 33.0
comp=Z,22nm,0.9s
ULM **Lac du Bonnet** 43.98 347 P P 05 36 29.1 -2.3
comp=Z,46nm,0.6s,baz=160,slow=7.8,SNR=56
ULM **Lac du Bonnet** 43.98 347 P P 05 36 29.2 -2.3
LAO **LASA Array** 44.00 336 P P 05 36 30.7 -1.1
baz=145,SNR=8.9
LAO **LASA Array** 44.00 336 IAmb IAmb 05 36 33.0
comp=Z,24nm,0.9s
RLMT **Red Lodge** 44.06 333 P P 05 36 31.9 -0.6
baz=140,SNR=28
RLMT **Red Lodge** 44.06 333 IAmb IAmb 05 36 33.2
comp=Z,23nm,1.0s
ELK **Elko** 44.13 324 IAmb IAmb 05 36 35.8
comp=Z,25nm,0.9s
H17A **Grant Village** 44.13 331 P P 05 36 34.2 +1.1
baz=138,SNR=6.2
SMMC **Simmler** 44.16 314 P P 05 36 35.4 +2.2
baz=120,SNR=32
VOG **Valley Oaks Go** 44.24 316 P P 05 36 34.9 +1.1
baz=121
YNE **Yellowstone No** 44.32 332 P P 05 36 33.5 -1.1
MLAC **Mammoth, Mammo** 44.56 318 P P 05 36 38.4 +1.8
baz=123,SNR=7.7
YHB **Horse Butte** 44.70 331 P P 05 36 38.2 +0.7
DGMT **Dagmar** 44.73 339 P P 05 36 36.8 -0.8
baz=148,SNR=18
YHL **Hebgen Lake** 44.76 331 P P 05 36 39.4 +1.3
ITAB **Concordia** 45.33 141 eP P 05 36 41.2 -1.3
MCMT **McKenzie Canyo** 45.57 330 P P 05 36 44.9 +0.4
CMB **Columbia Colle** 45.81 317 IAmb IAmb 05 36 57.7
comp=Z,34nm,1.1s
DLMT **Dillon** 45.82 330 IAmb IAmb 05 36 48.7
comp=Z,19nm,1.1s
VCNR **Virginia City** 46.00 319 P P 05 36 50.0 +2.0
MFID **Camas Ranch** 46.18 326 IAmb IAmb 05 36 51.7
comp=Z,23nm,1.1s
EGMT **Eagleton** 46.51 335 P P 05 36 51.1 -0.6
baz=141,SNR=9.6
EGMT **Eagleton** 46.51 335 IAmb IAmb 05 36 52.6
comp=Z,57nm,1.8s
AFDM **Forest Hills D** 46.68 318 IAmb IAmb 05 36 55.4
comp=Z,29nm,1.1s
LC01 **Cunco** 47.28 169 P P 05 36 58.8 +1.1
LC01 IAmb IAmb 05 37 04.6
comp=Z,33nm,1.6s
ORV **Oroville** 47.35 318 P P 05 36 59.3 +1.0
MSO **Missoula** 47.52 331 P P 05 36 59.0 -0.7
baz=135,SNR=12
J08A **Circle Bar Ran** 47.64 324 IAmb IAmb 05 37 03.2
comp=Z,29nm,0.9s
PLTB **Pedras Altas** 47.81 146 eP P 05 37 01.9 0.0
BMO **Blue Mountains** 47.92 327 IAmb IAmb 05 37 03.8
comp=Z,16nm,1.0s
O03E **Paynes Creek** 47.94 319 P P 05 37 03.0 +0.1
baz=122,SNR=57
O02D **Mt. Diablo Mer** 48.52 318 P P 05 37 07.0 -0.4
baz=121,SNR=54
WDC **Whiskeytown Da** 48.56 319 P P 05 37 05.8 -1.9
WDC IAmb IAmb 05 37 07.6
comp=Z,25nm,0.8s
BSFB **Barra de Sao F** 48.60 123 eP P 05 37 07.9 -0.3
BSFB epP sP 05 37 17.2 +0.9
I07A **Izee** 48.67 325 IAmb IAmb 05 37 10.2
comp=Z,19nm,0.9s
SCHQ **Schefferville** 48.69 12 P P 05 37 07.5 -0.9
comp=Z,6.5nm,0.6s,baz=150,slow=8.2,SNR=4.2
SCHQ LR LR 05 57 35.6
comp=Z,596nm,21.5s,baz=196,slow=36
K05A **Summer Lake** 48.70 322 IAmb IAmb 05 37 30.0
comp=Z,27nm,1.1s
M04C **Macdoel** 48.76 321 P P 05 37 10.0 +0.7
baz=123,SNR=76
N02D **Trinity Center** 48.88 319 P P 05 37 09.1 -1.1
baz=122,SNR=23
G08A **Pilot Rock** 49.10 326 IAmb IAmb 05 37 15.6
comp=Z,61nm,1.6s
K04D **Chiloquin, OR** 49.16 322 P P 05 37 12.6 +0.2
baz=124,SNR=11
M02C **Callahan** 49.19 320 P P 05 37 12.2 -0.4
baz=122,SNR=20
J05D **Fort Rock, OR** 49.22 323 P P 05 37 13.4 +0.5
baz=125,SNR=21
YBH **Yreka Blue Hor** 49.28 320 P P 05 37 12.5 -0.7
YBH IAmb IAmb 05 37 13.7
comp=Z,31nm,0.8s
L04D **Klamath Falls** 49.28 321 P P 05 37 13.5 +0.1
baz=123,SNR=64
PLCA **Paso Flores** 49.31 168 P P 05 37 13.2 -0.2
comp=Z,2.1nm,0.6s,baz=336,slow=9.3,SNR=11
PLCA **Paso Flores** 49.31 168 eP P 05 37 12.5 -0.9
PLCA epP sP 05 37 20.7 -1.1
PINE **Pine Mountain** 49.34 323 IAmb IAmb 05 37 15.9
comp=Z,35nm,0.9s
FFC **Flin Flon** 49.55 345 P P 05 37 14.1 -0.9
FFC IAmb IAmb 05 37 15.1
comp=Z,51nm,1.6s
J04D **Umpqua Nationa** 49.72 322 P P 05 37 17.2 +0.4
baz=124,SNR=18
I05D **Terrebonne, OR** 49.89 324 P P 05 37 18.5 +0.7
baz=125,SNR=19
E08A **Dider Farm, El** 49.91 327 IAmb IAmb 05 37 20.8
comp=Z,17nm,0.7s
G06A **Carlson Farm,** 50.01 325 IAmb IAmb 05 37 22.2
comp=Z,50nm,1.3s
F07A **Phinny Hill Vi** 50.01 326 IAmb IAmb 05 37 21.6
comp=Z,27nm,0.8s
NEW **Newport** 50.07 330 P P 05 37 18.5 -0.7
baz=132,SNR=11
HAWA **Hanford** 50.10 327 P P 05 37 19.9 +0.6
HAWA IAmb IAmb 05 37 21.8
comp=Z,23nm,1.1s
D08A **Wollman Farm,** 50.20 328 IAmb IAmb 05 37 21.8
comp=Z,12nm,0.7s
I04A **Tendick Farm,** 50.21 323 P P 05 37 20.4 +0.1
baz=124,SNR=20
C09A **Chrisman Ranch** 50.34 329 IAmb IAmb 05 37 24.7
comp=Z,12nm,0.7s
E07A **Sunnyside** 50.38 327 IAmb IAmb 05 37 23.4
comp=Z,24nm,0.6s
K02D **Willamette Mer** 50.39 321 P P 05 37 21.9 +0.2
baz=122,SNR=19
G05D **Wamic, OR** 50.40 325 P P 05 37 22.6 +0.9
baz=126,SNR=18
I03D **Drain, OR** 50.73 322 P P 05 37 24.4 +0.3
baz=123
J01E **Myrtle Point** 50.80 321 P P 05 37 25.1 +0.5
baz=122,SNR=16
H04D **Lebanon** 50.82 323 P P 05 37 24.3 -0.4
baz=124,SNR=8.5
COR **Corvallis** 51.19 323 P P 05 37 29.1 +1.5
I02D **Swisshome** 51.25 322 P P 05 37 28.7 +0.7
baz=123,SNR=12
F04A **Amboy** 51.43 325 IAmb IAmb 05 37 31.0
comp=Z,19nm,0.8s
G03D **McMinnville, O** 51.51 324 P P 05 37 31.3 +1.3
baz=124
LON **Longmire** 51.57 326 IAmb IAmb 05 37 32.2
comp=Z,18nm,0.8s
FCC **Fort Churchill** 51.82 352 P P 05 37 30.6 -1.4
E04D **Cinebar** 51.88 325 P P 05 37 33.4 +0.8
baz=126
D05A **Enumclaw** 51.93 326 IAmb IAmb 05 37 35.0
comp=Z,29nm,0.8s
F03A **Seaside** 52.08 324 IAmb IAmb 05 37 38.5
comp=Z,30nm,0.7s
D04E **Lakebay** 52.35 326 P P 05 37 36.2 0.0
baz=126,SNR=7.9
E03A **Lebam** 52.43 325 IAmb IAmb 05 37 38.9
comp=Z,34nm,0.7s
B06A **Marblemount** 52.46 328 IAmb IAmb 05 37 38.6
comp=Z,33nm,1.1s
B05A **Bryant** 52.63 327 P P 05 37 38.3 0.0
baz=127
D03D **Eldon** 52.73 326 P P 05 37 38.7 -0.3
baz=126,SNR=11
NLWA **Neilton Lookou** 53.09 326 IAmb IAmb 05 37 48.1
comp=Z,17nm,0.8s
A04D **Lummi Island** 53.23 328 P P 05 37 42.1 -0.5
baz=127,SNR=6.9
PGC **Sidney** 53.58 327 IAmb IAmb 05 37 48.4
comp=Z,64nm,2.0s
LLLB **Lillooet** 53.96 330 IAmb IAmb 05 37 51.3
comp=Z,12nm,0.8s
YKA **Yellowknife Ar** 59.62 343 P P 05 38 26.8 -1.2
comp=Z,19nm,0.9s,baz=134,slow=7.4,SNR=158
RKT **Rikitea** 59.86 238 eLR LR 05 56 14.2
comp=Z,784nm,28.2s
TAOE **Nuku Hiva Isla** 59.91 255 eLR LR 05 56 14.9
comp=Z,171nm,24.4s
BESE **Bessie Mountai** 64.66 333 IAmb IAmb 05 39 03.9
comp=Z,18nm,1.1s
PMOZ **Porto Moniz, M** 65.02 57 eLR LR 06 13 08.6
comp=Z,139nm,20.0s
MACI **Morro de la Ar** 65.14 62 P P 05 39 07.2 +1.4
WHY **Whitehorse** 65.71 335 IAmb IAmb 05 39 10.1
comp=Z,12nm,1.2s
HYT **Haines Junctio** 66.92 334 IAmb IAmb 05 39 18.8
comp=Z,18nm,1.1s
PCA **Pinnacle** 67.82 333 IAmb IAmb 05 39 24.5
comp=Z,20nm,0.9s
CTGM **Chitina Glacie** 68.66 333 IAmb IAmb 05 39 30.1
comp=Z,17nm,0.9s
BARN **Barnard Glacie** 68.85 333 P P 05 39 29.9 +1.1
BARN IAmb IAmb 05 39 31.2
comp=Z,27nm,1.2s
BALM **Baldy** 69.14 333 IAmb IAmb 05 39 33.3
comp=Z,23nm,1.1s
DAWY **Dawson** 69.20 337 IAmb IAmb 05 39 32.0
comp=Z,18nm,0.8s
INK **Inuvik** 69.32 342 IAmb IAmb 05 39 33.6
comp=Z,28nm,1.1s
EPYK **Eagle Plains** 69.32 339 P P 05 39 31.7 +0.3
baz=120,SNR=15
A36M **Sachs Harbour** 69.45 347 P P 05 39 31.0 -1.1
baz=134,SNR=15
VRDI **Verde Repeater** 69.71 333 IAmb IAmb 05 39 36.8
comp=Z,21nm,0.9s
BCAR **Beaver Creek A** 69.72 335 P P 05 39 35.0 +1.0
GLB **Gilahina Butte** 69.95 333 IAmb IAmb 05 39 38.3
comp=Z,29nm,1.0s
SUMG **Summit** 70.07 13 P P 05 39 34.9 -1.4
SUMG IAmb IAmb 05 39 45.1
comp=Z,20nm,1.0s
SUMG **Summit** 70.07 13 iP P 05 39 35.0 -1.4
comp=Z,39nm,0.8s
EYAK **Cordova Ski Ar** 70.52 332 IAmb IAmb 05 39 41.2
comp=Z,19nm,0.8s
FID **Port Fidalgo** 70.92 332 IAmb IAmb 05 39 44.4
comp=Z,8.4nm,0.7s
PPT2 **Papeete2** 70.98 249 eLR LR 06 01 26.5
comp=Z,172nm,24.0s
KNK **Knik Glacier** 72.05 332 IAmb IAmb 05 39 50.4
comp=Z,26nm,0.8s
DHY **Denali Highway** 72.09 334 P P 05 39 49.5 +1.1
DHY IAmb IAmb 05 39 50.4
comp=Z,24nm,1.7s
SEW **Seward** 72.13 331 IAmb IAmb 05 39 50.4
comp=Z,19nm,0.8s
HDA **Harding Lake** 72.36 336 P P 05 39 50.0 +0.1
baz=110,SNR=41
GHO **Glory Hole Cre** 72.37 333 IAmb IAmb 05 39 52.2
comp=Z,22nm,0.7s
TBI **Tubuai** 72.43 243 eLR LR 06 01 56.7
comp=Z,259nm,26.5s
MORF **Marmelete** 72.43 53 eP P 05 39 51.8 +0.8
MORF AMb AMB 05 40 07.9
comp=Z,93nm,2.6s
MORF **Marmelete** 72.43 53 eP P 05 39 51.9 +1.0
comp=Z,93nm,1.8s
IL31 72.46 336 IAmb IAmb 05 39 52.0
comp=Z,18nm,0.7s
ILAR **Eielson Array** 72.46 336 P P 05 39 50.5 +0.1
comp=Z,13nm,0.6s,baz=110,slow=4.6,SNR=152
ILAR LR LR 06 16 17.6
comp=Z,184nm,18.9s,baz=108,slow=40
ILAR **Eielson Array** 72.46 336 P P 05 39 50.3 -0.2
FYU **Fort Yukon** 72.47 338 IAmb IAmb 05 39 52.5
comp=Z,20nm,1.0s
RC01 **Rabbit Creek A** 72.54 332 IAmb IAmb 05 39 53.2
comp=Z,17nm,0.9s
BMAR **Burt Mountain** 72.57 339 P P 05 39 51.8 +0.6
PNCL **Nicolau / Gran** 72.58 53 eP P 05 39 54.3 +2.6
BRLK **Bradley Lake** 72.73 330 IAmb IAmb 05 39 54.4
comp=Z,23nm,0.8s
PCAS **Casmilo, Conde** 72.75 51 eP P 05 39 53.9 +1.2
comp=Z,84nm,1.7s
CCB **Clear Creek Bu** 72.79 336 IAmb IAmb 05 40 02.3
comp=Z,36nm,2.0s
POKR **Poker Plat Res** 72.80 336 P P 05 39 52.6 +0.1
baz=110,SNR=5.2
TCOL **CHU, UAF Yank** 72.89 336 P P 05 39 53.4 +0.4
baz=109
PMTG **Montargil** 72.89 52 eP P 05 39 54.4 +0.9
comp=Z,43nm,1.6s
PCVE **Castro Verde** 72.94 53 eP P 05 39 55.3 +1.4
comp=Z,46nm,2.1s
EVO **Evora** 73.02 52 eP P 05 39 55.1 +0.8
comp=Z,26nm,2.5s
MDM **Murphy Dome** 73.06 336 IAmb IAmb 05 39 56.2
comp=Z,10nm,0.8s
PVAQ **Vaqueiros** 73.18 53 eLR LR 06 02 47.8
comp=Z,190nm,18.0s
PVIS **Viseu** 73.26 50 eP P 05 39 56.7 +0.9
comp=Z,39nm,1.4s
OHAK **Old Harbor** 73.36 328 P P 05 39 56.5 +0.6
OHAK IAmb IAmb 05 39 58.4
comp=Z,26nm,0.9s
MTE **Manteigas** 73.51 50 eP P 05 39 57.9 +0.6
comp=Z,59nm,2.1s
MTE **Manteigas** 73.51 50 eLR LR 06 03 03.5
comp=Z,277nm,22.0s
PCBR **Castelo Branco** 73.52 51 eP P 05 39 58.0 +0.8
comp=Z,29nm,1.2s
PMRV **Marv??o** 73.56 51 eP P 05 39 58.3 +0.8
PMRV **Marv??o** 73.56 51 eLR LR 06 03 09.4
comp=Z,176nm,20.0s
BPAW **Bear Paw Mtn.** 73.94 335 IAmb IAmb 05 40 01.3
comp=Z,15nm,0.8s
MVO **Moncorvo** 73.95 49 eP P 05 40 00.6 +0.7
comp=Z,26nm,1.3s
MLY **Manley** 74.10 336 P P 05 40 00.0 -0.2
MLY IAmb IAmb 05 40 02.3
comp=Z,18nm,0.8s
PPLA **Purkeypile** 74.14 333 IAmb IAmb 05 40 02.0
comp=Z,16nm,0.8s
PBRG **Braganca** 74.21 49 eP P 05 40 02.0 +0.7
comp=Z,46nm,1.6s
COLD **Coldfoot** 74.54 338 IAmb IAmb 05 40 16.2
comp=Z,19nm,1.3s
TOLK **Toolik Lake Re** 74.76 340 P P 05 40 04.3 +0.3
baz=109
PAB **San Pablo** 75.92 51 P P 05 40 12.0 +0.7
PAB IAmb IAmb 05 40 13.1
comp=Z,22nm,1.4s
CHGN **Chignik** 75.99 326 IAmb IAmb 05 40 12.6
comp=Z,25nm,0.8s
ESDC **Sonseca Array** 76.22 51 P P 05 40 12.9 -0.1
comp=Z,8.1nm,0.8s,baz=274,slow=5.5,SNR=33
ESDC **Sonsca Array** 76.22 51 P P 05 40 12.6 -0.4
TIC **Toumodi** 76.60 85 eP P 05 40 14.7 -0.8
LIC **Lamto** 76.64 85 eP P 05 40 15.8 +0.1
comp=Z,41nm,1.0s
DAG **Danmarks Havn** 76.74 12 iP P 05 40 13.0 -2.1
DBIC **Dimbokro** 76.76 85 P P 05 40 16.1 -0.3
comp=Z,6.3nm,0.8s,baz=287,slow=5.9,SNR=4.4
DBIC **Dimbokro** 76.76 85 IAmb IAmb 05 40 26.8
comp=Z,14nm,0.8s
KIC **Kosan Boka** 76.91 85 eP P 05 40 16.7 -0.6
comp=Z,24nm,0.9s
BMRD **Maredsous** 82.33 40 P P 05 40 47.7 +1.6
TORD **Torodi Ar. Bea** 82.50 78 P P 05 40 47.5 0.0
comp=Z,3.1nm,0.8s,baz=294,slow=7.7,SNR=14
WLF **Walferdange** 83.26 41 PcP PcP 05 40 59.3 +4.0
ECH **Echery** 84.03 42 IAmb IAmb 05 41 06.2
comp=Z,20nm,1.0s
TNS **Taunus Mts** 84.69 40 eL L 06 16 28.0
comp=Z,206nm,21.5s
BFO **Black Forest** 84.80 42 eL L 06 16 27.6
comp=Z,152nm,21.4s
NB2 **NORSAR Subarra** 85.10 29 P P 05 40 59.8 -0.3
comp=Z,22nm,1.7s,baz=278,slow=5.1
NB2 **NORSAR Subarra** 85.10 29 P P 05 40 59.8 -0.3
baz=278,slow=5.1
NOA **NORSAR Array B** 85.10 29 P P 05 41 00.3 +0.2
comp=Z,0.7nm,0.7s,baz=281,slow=4.8,SNR=2.4
TAM **Tamanrasset** 85.11 68 P P 05 41 01.2 +0.2
TAM IAmb IAmb 05 41 16.0
comp=Z,18nm,1.2s
BSEG **Bad Segeberg** 85.45 36 eL L 06 19 48.2
comp=Z,198nm,19.9s
TUE **Stuetta** 85.68 44 P P 05 41 02.2 -1.3
TUE IAmb IAmb 05 41 14.4
comp=Z,14nm,0.7s
DAVA **Damuels** 85.95 43 eP P 05 41 05.5 +0.7
comp=Z,34nm,0.9s
RETA **Reutte** 86.52 43 eP P 05 41 07.9 +0.5
comp=Z,12nm,0.9s
GRF **Grafenberg Arr** 86.53 40 eP P 05 41 15.5 +8.1
comp=Z,17nm,1.1s,baz=270,slow=5.8
GRF eL L 06 20 08.7
comp=Z,156nm,18.5s
FETA **Feichten** 86.56 43 eP P 05 41 08.3 +0.6
comp=Z,20nm,0.9s
MOX **Moxa** 86.66 40 eL L 06 15 19.5
comp=Z,172nm,21.2s
MOTA **Moosalm** 86.77 43 eP P 05 41 07.8 -0.9
comp=Z,9.7nm,1.2s
FUR **Furstenfeldbru** 86.77 42 eL L 06 17 00.7
comp=Z,201nm,22.0s
SQTA **Sankt Quirin** 86.86 43 iP P 05 41 07.9 -1.3
comp=Z,5.6nm,0.5s
WTTA **Wattenberg** 87.14 43 eP P 05 41 11.1 +0.5
comp=Z,11nm,1.0s
CLL **Collm** 87.43 39 iP P 05 41 12.8 +1.1
comp=Z,75nm,2.7s
CLL iP pP 05 41 16.4 -1.6
comp=Z,9.0nm,1.0s
CLL i 05 41 20.2
comp=Z,14nm,0.8s
CLL LmV 06 20 00.0
CLL Lm MLR 06 47 00.0
comp=Z,500nm,21.4s
CLL **Collm** 87.43 39 eL L 06 20 06.3
comp=Z,216nm,20.0s
WET **Wettzell** 87.68 41 eL L 06 19 24.3
comp=Z,115nm,21.5s
ABTA **Abfaltersbach** 87.81 43 ePcP P 05 41 15.1 +1.3
comp=Z,20nm,1.1s
BRG **Berggiesshubel** 88.08 39 eP P 05 41 16.7 +1.9
comp=Z,10nm,1.4s
BRG e 05 41 23.3
comp=Z,13nm,1.1s
KHC **Kasperske Hory** 88.14 41 eP P 05 41 16.0 +0.8
KHC ex x 05 41 23.7
KHC **Kasperske Hory** 88.14 41 P P 05 41 15.5 +0.3
GEC2 **GERESS Array S** 88.27 41 eL L 06 15 54.0
comp=Z,127nm,20.7s
GEC2 **GERESS Array S** 88.27 41 IAmb IAmb 05 44 32.4
comp=Z,7.1nm,0.5s
GERES **GERESS Array B** 88.27 41 P P 05 41 16.1 +0.2
comp=Z,1.9nm,0.8s,baz=299,slow=2.7,SNR=12
GERES **GERESS Array B** 88.27 41 P P 05 41 15.6 -0.2
KBA **Koelnbreinsper** 88.32 43 ePcP P 05 41 16.6 +0.3
comp=Z,16nm,0.9s
MYKA **Terra Mystica** 88.59 43 eP P 05 41 17.5 +0.1
comp=Z,18nm,1.2s
MOA **Molln** 88.81 42 eP P 05 41 17.9 -0.5
comp=Z,5.6nm,1.4s
CHVC **Chvalec** 89.45 39 eP P 05 41 24.4 +3.1
CHVC ex x 05 41 32.2
SOKA **Soboth** 89.53 43 ePcP P 05 41 22.5 +0.6
comp=Z,6.6nm,1.0s
OSTC **Ostas** 89.56 39 eP P 05 41 25.1 +3.3
OSTC ex x 05 41 31.7
DPC **Dobruska-Polom** 89.67 39 eP P 05 41 23.9 +1.5
DPC ex x 05 41 33.5
ARSA **Arzberg** 89.75 42 eP P 05 41 20.5 -2.3
comp=Z,2.2nm,0.6s
CONA **Conrad Observa** 89.85 42 eP P 05 41 21.1 -2.2
comp=Z,3.7nm,0.7s
VRAC **Vranov** 90.05 40 LR LR 06 22 14.7
comp=Z,66nm,18.8s,baz=268,slow=36
BILL **Bilibino** 90.81 340 P P 05 41 27.4 +0.1
BILL IAmb IAmb 05 41 38.4
comp=Z,14nm,1.0s
AKASG **Malin Array Be** 97.46 37 LR LR 06 26 21.0
comp=Z,71nm,18.5s,baz=345,slow=36
OBN **Obninsk** 99.63 31 LR LR 06 23 44.1
comp=Z,17nm,21.2s,baz=350,slow=33
H11S2 **WAKE ISLAND Hy** 107.18 292 T T 07 42 42.2
baz=77,slow=75,SNR=7.8
H11S1 **WAKE ISLAND Hy** 107.18 292 T T 07 42 35.7
baz=77,slow=75,SNR=6.4
H11S3 **WAKE ISLAND Hy** 107.19 292 T T 07 42 39.3
baz=77,slow=75,SNR=7.5
KURBB **Kurchatov Arra** 119.67 14 PKP PKPdf 05 47 13.2 -1.1
comp=Z,0.4nm,0.6s,baz=324,slow=2.1,SNR=4.5
SONM **Songino Array** 124.25 353 PKP PKPdf 05 47 22.9 -0.5
comp=Z,0.8nm,0.6s,baz=355,slow=1.6,SNR=4.4
KSRS **Korea Array** 127.00 330 PKP PKPdf 05 47 28.6 -0.1
comp=Z,2.1nm,0.7s,baz=334,slow=1.2,SNR=8.4
KSAR **Wonju Array Be** 127.03 330 PKPdf 05 47 28.6 -0.2
WMQ **Urumqi** 128.01 9 ePKP PKiKP 05 47 31.4 +0.2
WMQ LR LR
comp=Z,790nm,29.1s
WMQ LR LR
comp=Z,1μm,29.2s
WMQ LR LR
comp=Z,1μm,28.8s
KSH **Kashi** 128.97 22 PKP PKiKP 05 47 35.5 +2.2
HHC **Hu-ho-hao-te** 130.11 346 ePKP PKPdf 05 47 31.3 -3.5
WSAR **Wadi Sarin** 131.02 50 PKP PKPdf 05 47 35.5 -1.4
comp=Z,3.4nm,0.6s,baz=344,slow=5.4,SNR=4.1
GTA **Gaotai** 133.17 358 ePKP PKiKP 05 47 51.0 +9.2
GTA LR LR
comp=N,86nm,21.9s
GTA LR LR
comp=E,580nm,21.9s
GTA LR LR
comp=Z,100nm,21.3s
NJ2 **Nanjing** 135.68 334 ePKP PKPdf 05 47 44.9 -0.4
LZH **Lanzhou** 136.15 353 ePKP PKPdf 05 47 42.4 -3.9
LZH LR LR
comp=Z,79nm,17.0s
LZH LR LR
comp=Z,86nm,17.1s
LZH LR LR
comp=Z,100nm,20.3s
CD2 **Chengdu** 141.25 352 PKP PKPdf 05 47 54.8 -0.9
DANN **Dangsing** 141.80 20 eP Pdif 05 45 15.4 -0.9
comp=Z,8.3nm,0.4s
ASAR **Alice Springs** 141.80 241 PKhKP PKPpre 05 47 50.1
comp=Z,1.0nm,0.8s,baz=111,slow=4.0,SNR=7.4
ASAR PKP PKPdf 05 47 55.6 -1.2
comp=Z,2.3nm,0.7s,baz=115,slow=2.6,SNR=17
ASAR **Alice Springs** 141.80 241 PKPdf 05 47 56.6 -0.2
ASAR **Alice Springs** 141.80 241 PKPpre 05 47 49.8
KOLN **Koldanda** 142.27 21 eP Pdif 05 45 19.1 +0.8
comp=Z,15nm,0.7s
WRA **Warramunga Arr** 142.45 247 PKhKP PKPpre 05 47 53.1
comp=Z,3.7nm,0.9s,baz=105,slow=3.1,SNR=15
WRA PKP PKPdf 05 47 58.2 +0.2
comp=Z,2.8nm,0.8s,baz=103,slow=1.8,SNR=7.6
GYA **Guiyang** 145.03 346 ePKP PKPdf 05 48 02.8 +0.3
GYA PP PP 05 51 23.3 +4.3
GYA AMB AMB
comp=Z,120nm,7.2s
MTN **Manton Dam** 146.70 258 PKPbc 05 48 07.4 +0.3
KMI **Kunming** 147.09 352 PKPbc PKPbc 05 48 08.6 +0.3
KMI PP PP 05 51 35.5 +4.3
KMI AMB AMB
comp=Z,110nm,5.7s
KMI LR LR
comp=Z,320nm,13.7s
KMI LR LR
comp=Z,200nm,22.3s
KMI LR LR
comp=Z,350nm,16.3s
HYB **Hyderabad** 148.75 37 iP PKPbc 05 48 11.5 -1.2
H01W1 **Cape Leeuwin H** 148.92 207 T T 08 35 11.5
baz=144,slow=76,SNR=406
H01W2 **Cape Leeuwin H** 148.92 207 T T 08 35 10.2
baz=144,slow=76,SNR=377
H01W3 **Cape Leeuwin H** 148.93 207 T T 08 35 12.0
baz=144,slow=76,SNR=398
SLVN **Son La** 150.59 348 PKPbc 05 48 16.5 -0.7
FITZ **Fitzroy Crossi** 150.87 246 PKPbc 05 48 17.5 -0.2
CMAR **Chiang Mai Arr** 154.06 357 PKP PKPdf 05 48 16.7 -0.2
comp=Z,0.6nm,0.3s,baz=320,slow=2.2,SNR=5.9

CMAR				PKPbc	**pPKPdf**	**05 48 23.9**	**+0.4**
	comp=Z,2.6nm,0.6s,baz=325,slow=2.2,SNR=8.4								
CMAR	**Chiang Mai Arr**	**154.06**	**357**		**PKPbc**	**05 48 24.8**	**-0.2**
CMAR	**Chiang Mai Arr**	**154.06**	**357**		**PKPdf**	**05 48 17.0**	**+0.1**

IDC ***14*** *05:41:55.4±1.0,30.95N×99.86E,h0km,mb3.7/11, mb1 3.8/12,mb1mx3.7/43,mbtmp3.7/12,ML3.4/1,MS3.5/6, Ms1 3.5/6,ms1mx3.1/49,Error ellipse: s-maj=31.0km s-min=17.6km az=41.0*

BJI ***14*** *05:41:57.0±0.0,30.84N×99.86E,h20km,ML3.6/13*

ISC 14 05:41:57.5±0.6,30.99N±0.05×99.75E±0.05,h10km,n28, σ2s45/30,mb3.8/10,MS3.1/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CD2	**Chengdu**	**3.44**	**90**	Pg		**Pb**	**05 42 58.4**	**-0.2**
CD2				Sg		**Sg**	**05 43 43.4**	**-4.7**
CD2				smax	smax			
	comp=N,270nm,0.9s							
CD2				smax	smax			
	comp=E,290nm,0.9s							
LZH	**Lanzhou**	**6.12**	**33**	*e*Pn		**Pn**	**05 43 26.4**	**-1.8**
LZH				Pg		**Pb**	**05 43 47.0**	**+2.6**
LZH				Sn		**Sn**	**05 44 34.3**	**-4.1**
LZH				Sg		**Sb**	**05 45 05.8**	**+8.0**
LZH				smax	smax			
	comp=N,44nm,0.9s							
LZH				smax	smax			
	comp=E,44nm,0.9s							
KMI	**Kunming**	**6.41**	**155**	Pn		Pn	05 43 36.5	+4.2
KMI				P*		Pg	05 43 51.8	-8.6
KMI				Sn		**Sn**	**05 44 48.6**	**+2.9**
KMI				smax	smax			
	comp=N,31nm,0.4s							
KMI				smax	smax			
	comp=E,22nm,0.5s							
KMI				LR	LR			
	comp=N,500nm,6.3s							
KMI				LR	LR			
	comp=E,1μm,8.6s							
KMI				LR	LR			
	comp=E,350nm,7.7s							
KMI	**Kunming**	**6.41**	**155**	Pg		Pg	05 43 51.8	-8.6
KMI				Sn		**Sn**	**05 44 48.6**	**+2.9**
KMI				smax	smax			
	comp=Z,31nm,0.4s							
KMI				smax	smax			
	comp=Z,22nm,0.5s							
GTA	**Gaotai**	**8.40**	**0**	*e*P		**Pg**	**05 44 38.4**	**+0.1**
GTA				pP		Pn	05 44 48.3	+49
GTA				sP			05 44 51.8	
GTA				pmax	pmax			
	comp=Z,4.0nm,1.1s							
GTA				pmax	pmax			
	comp=Z,42nm,4.9s							
GTA				LR	LR			
	comp=N,82nm,17.8s							
GTA				LR	LR			
	comp=E,410nm,18.1s							
GTA				LR	LR			
	comp=Z,85nm,17.5s							
TAPN	**Taplejung**	**11.13**	**254**	*e*P		**Pn**	**05 44 36.5**	**-0.6**
	comp=Z,14nm,0.4s							
ODAN	**Odare**	**11.59**	**252**	*e*P		**Pn**	**05 44 41.9**	**-1.3**
	comp=Z,17nm,0.4s							
RAMN	**Ramite**	**12.20**	**254**	*e*P		**Pn**	**05 44 50.6**	**-1.0**
	comp=Z,16nm,0.5s							
JIRN	**Jiri**	**12.29**	**258**	*e*P		**Pn**	**05 44 51.5**	**-1.5**
	comp=Z,40nm,0.7s							
GUN	**Gumba**	**12.47**	**259**	*e*P		**Pn**	**05 44 53.9**	**-1.6**
	comp=Z,16nm,0.5s							
PKI	**Pulchoki**	**12.98**	**258**	*e*P		**Pn**	**05 45 00.6**	**-1.7**
	comp=Z,28nm,0.5s							
PKIN	**Phulchoki**	**12.98**	**258**	*e*P		**Pn**	**05 45 00.6**	**-1.8**
	comp=Z,23nm,0.5s							
DMN	**Daman**	**13.22**	**259**	*e*P		**Pn**	**05 45 03.5**	**-2.1**
	comp=Z,25nm,0.8s							
WMQ	**Urumqi**	**15.97**	**327**	*e*P		**Pn**	**05 45 43.9**	**+1.6**
WMQ				smax	smax			
	comp=N,12nm,0.5s							
WMQ				smax	smax			
	comp=E,14nm,0.5s							
SONM	**Songino Array**	**17.57**	**15**	P		**Pn**	**05 46 02.2**	**-0.5**
	comp=E,0.1nm,0.3s,baz=195,slow=13,SNR=5.6							
MKAR	**Makanchi Array**	**20.75**	**324**	P		**P**	**05 46 38.6**	**+0.2**
	comp=E,1.7nm,0.8s,baz=135,slow=12,SNR=12							
MKAR				LR		LR	05 55 40.7	
	comp=E,77nm,18.4s,baz=149,slow=40							
TLY	**Talaya**	**20.87**	**7**	LR		LR	05 55 41.6	
	comp=E,54nm,19.6s,baz=167,slow=40							
AAK	**Ala-Archa**	**23.23**	**307**	P		**P**	**05 47 06.0**	**+0.9**
	comp=E,2.2nm,0.8s,baz=112,slow=6.3,SNR=5.5							
AAK				LR		LR	05 57 40.0	
	comp=E,63nm,18.2s,baz=85,slow=40							
KSRS	**Korea Array**	**24.11**	**67**	P		**P**	**05 47 11.4**	**-2.0**
	comp=E,6.8nm,0.8s,baz=256,slow=9.4,SNR=25							
KSRS				LR		LR	05 56 03.9	
	comp=E,30nm,20.0s,baz=85,slow=35							
KURBB	**Kurchatov Arra**	**25.19**	**327**	P		**P**	**05 47 23.2**	**+0.2**
	comp=E,0.8nm,0.8s,baz=132,slow=11,SNR=4.6							
ZALV	**Zalesovo Beam**	**25.34**	**339**	P		**P**	**05 47 23.5**	**-0.9**
	comp=E,1.0nm,0.4s,baz=158,slow=4.7,SNR=2.9							
GEYT	**Ailbeck**	**34.80**	**293**	P		**P**	**05 48 48.7**	**+0.2**
	comp=E,1.1nm,0.4s,baz=142,slow=7.2,SNR=2.5							
BRTR	**Keskin Array B**	**53.54**	**299**	P		**P**	**05 51 18.1**	**-0.5**
	comp=E,0.5nm,0.6s,baz=35,slow=5.3,SNR=2.2							
FINES	**FINESS Array B**	**55.58**	**326**	P		**P**	**05 51 32.5**	**-0.4**
	comp=E,1.5nm,0.9s,baz=82,slow=11,SNR=1.1							
FINES				LR		LR	06 18 05.7	
	comp=E,177nm,21.8s,baz=267,slow=39							
ARCES	**ARCESS Array B**	**55.83**	**336**	LR		LR	06 18 24.3	
	comp=E,146nm,21.4s,baz=333,slow=39							
WRA	**Warramunga Arr**	**60.57**	**142**	P		**P**	**05 52 06.8**	**-1.6**
	comp=E,0.7nm,0.8s,baz=336,slow=7.1,SNR=5.6							
ASAR	**Alice Springs**	**63.44**	**145**	P		**P**	**05 52 27.0**	**-0.6**
	comp=E,0.3nm,0.8s,baz=333,slow=6.4,SNR=1.7							
YKA	**Yellowknife Ar**	**82.84**	**15**	P		**P**	**05 54 22.6**	**+0.8**
	comp=E,0.3nm,0.9s,baz=304,slow=7.5,SNR=3.8							

SJA ***14*** *05:51:39.1±0.6,19.53S×71.69W,h16km±31km,ML5.5, MW5.4*

IDC ***14*** *05:51:46.6±0.5,19.56S×70.73W,h0km,mb4.7/17, mb1 4.7/19,mb1mx4.6/29,mbtmp4.7/19,ML4.0/2,MS4.7/15, Ms1 4.7/15,ms1mx4.6/22,Error ellipse: s-maj=18.9km s-min=13.4km az=64.0*

NEIC ***14*** *05:51:47.8,19.68S×71.04W,h14km,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr4.38; Mθθ0.36; Mϕϕ-4.75; Mrθ2.48; Mrϕ1.97; Mθr-5.70; Fault plane solution: M₀7.96000×10¹⁶ NP1:ϕs157.14000°, δ70.94000°, λ86.72000°. NP2:ϕs347.10000°,δ19.33000°, λ99.41000°. Principal axes: T 7.4125, Plg64.0000°, Azm62.0000°; N 1.0059, Plg3.0000°, Azm158.0000°; P -8.4184, Plg26.0000°, Azm250.0000°:*

NEIC ***14*** *05:51:47.6±2.8,19.71S±0.02×71.06W±0.04,h10km±1km, mb5.3/219,Mwr5.2/57,Mww5.2,ML5.5(GUC) Error ellipse: s-maj=6.6km s-min=2.6km az=298.0*

BJI ***14*** *05:51:48.0±0.0,19.70S×71.00W,h10km,mB5.3/19, Ms5.4/16,MS7 5.1/18*

VAO ***14*** *05:51:48.5±0.7,19.56S×70.90W,h18km±5km,mb5.2*

GUC ***14*** *05:51:48.4±0.7,19.68S×71.19W,h37km±3km,ML5.4*

NEIC ***14*** *05:51:51,19.68S×71.06W,h16km,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr5.96; Mθθ-0.97; Mϕϕ-4.99; Mrθ4.37; Mrϕ2.86; Mθr-5.32; Fault plane solution: M₀9.29000×10¹⁶ NP1:ϕs143.00000°, δ69.00000°, λ83.00000°. NP2:ϕs343.00000°,δ22.00000°, λ108.00000°. Principal axes: T 9.1052, Plg65.0000°, Azm42.0000°; N 0.3538, Plg7.0000°, Azm146.0000°; P -9.4590, Plg24.0000°, Azm239.0000°:*

GCMT ***14*** *05:51:52.6±0.2,19.64S±0.01×71.26W±0.01,h18km, MW5.3/129,Moment Tensor Solution. s83,c108; s129,c212; Duration: 1s1 Moment tensor: Scale 10¹⁷ Nm; Mrr0.74±.02; Mθθ-0.08±.01; Mϕϕ-0.66±.02; Mrθ0.16±.03; Mϕθ0.28±.01; Mϕr-0.71±.04; Best double couple: M₀1.05100×10¹⁷ NP1:ϕs332.00000°,δ23.00000°, λ78.00000°. NP2:ϕs164.00000°,δ67.00000°,λ95.00000°. Principal axes: T 1.0390, Plg68.0000°, Azm84.0000°; N 0.0240, Plg5.0000°, Azm343.0000°; P -1.0630, Plg22.0000°, Azm251.0000°; nsta1 refers to body waves,*

2014 MAY

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

ISC 14 05:51:50.4±0.6,19.69S±0.02×70.96W±0.04,h27km±3km, n755,σ1s32/701,mb5.2/124,MS4.9/21,23C-6D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PSGC	**Pisagua**	**0.79**	**84**	*i*P		**Pb**	**05 52 05.0**	**-0.7**
PSGC				*i* S		**Sn**	**05 52 18.6**	**+1.8**
PSGC	**Pisagua**	**0.79**	**84**	*i*P		**Pb**	**05 52 05.1**	**-0.5**
PSGC				*i* S		**Sn**	**05 52 18.5**	**+1.6**
PSGCX	**Pisagua**	**0.79**	**84**			**Pb**	**05 52 04.9**	**-0.8**
PSGCX						**Sn**	**05 52 18.4**	**+1.5**
PSGCX	**Pisagua**	**0.79**	**84**	*i* P		**Pb**	**05 52 04.9**	**-0.8**
PSGCX				*e*S		**Sn**	**05 52 18.3**	**+1.4**
PSGCX				IAML			05 52 20.9	
	comp=Z,57μm,0.9s							
TA02	**Huaiquique**	**0.97**	**127**	*e*P		**Pn**	**05 52 07.8**	**-0.5**
TA02				*i* S		**Sb**	**05 52 22.7**	**+1.6**
TA02	**Huaiquique**	**0.97**	**127**	*e*P		**Pn**	**05 52 07.8**	**-0.5**
TA02				*i* S		**Sb**	**05 52 23.2**	**+2.1**
TA01	**Diego Aracena**	**1.14**	**140**	⇑*i*P		**Pn**	**05 52 09.8**	**-0.8**
TA01				*i* S		**Sn**	**05 52 25.9**	**+0.5**
TA01				IAML			05 52 32.8	
	comp=E,73μm,0.6s							
TA01	**Diego Aracena**	**1.14**	**140**	⇓*i*P		**Pn**	**05 52 10.1**	**-0.5**
TA01				*i* S		**Sb**	**05 52 26.5**	**+0.6**
TA01	**Diego Aracena**	**1.14**	**140**			**Pn**	**05 52 09.9**	**-0.8**
TA01				Sg		**Sn**	**05 52 24.9**	**-0.4**
PB12	**IPOC Station P**	**1.22**	**29**	⇑*i*P		**Pn**	**05 52 10.7**	**-1.1**
PB12				*e*S		**Sn**	**05 52 28.0**	**+0.5**
PB12	**IPOC Station P**	**1.22**	**29**	⇑*i*P		**Pn**	**05 52 10.7**	**-1.1**
PB12				*e*S		**Sb**	**05 52 28.5**	**+0.2**
PB12	**IPOC Station P**	**1.22**	**29**			**Pn**	**05 52 11.4**	**-0.4**
PB12				Sn		**Sn**	**05 52 28.3**	**+0.8**
PB11	**IPOC Station P**	**1.23**	**94**	⇑*i*P		**Pn**	**05 52 12.1**	**+0.2**
PB11				*i* S		**Sb**	**05 52 30.8**	**+2.2**
PB11	**IPOC Station P**	**1.23**	**94**	⇑*i*P		**Pn**	**05 52 12.1**	**+0.2**
PB11				*i* S		**Sb**	**05 52 30.8**	**+2.2**
PB11	**IPOC Station P**	**1.23**	**94**			**Pn**	**05 52 11.9**	**0.0**
PB11	**IPOC Station P**	**1.23**	**94**	*i* P		**Pn**	**05 52 11.9**	**0.0**
PB11				*e*S		**Sb**	**05 52 29.9**	**+1.3**
PB11				IAML			05 52 36.4	
	comp=Z,113μm,1.1s							
PATCX	**Punta Patache**	**1.36**	**146**			**Pn**	**05 52 12.3**	**-1.4**
MNMC	**Minye Minye**	**1.40**	**67**	⇑*i*P		**Pn**	**05 52 14.8**	**+0.4**
MNMC				*i* S		**Sb**	**05 52 35.5**	**+1.8**
MNMC				IAML			05 52 41.8	
	comp=E,92μm,0.7s							
MNMC	**Minye Minye**	**1.40**	**67**	⇑*i*P		**Pn**	**05 52 14.8**	**+0.4**
MNMC				*i* S		**Sb**	**05 52 35.5**	**+1.8**
MNMC				IAML			05 52 41.8	
	comp=E,92μm,0.7s							
MNMC	**Minye Minye**	**1.40**	**67**			**Pn**	**05 52 14.7**	**+0.3**
MNMC				Sn		**Sb**	**05 52 34.1**	**+0.5**
AP01	**Chacalluta**	**1.43**	**24**	Sn		**Sn**	**05 52 32.3**	**-0.2**
GO01	**Chusmiza**	**1.66**	**90**	⇑*i*P		**Pn**	**05 52 18.8**	**+0.6**
GO01				*i* S		**Sb**	**05 52 43.0**	**+1.7**
GO01	**Chusmiza**	**1.66**	**90**	⇑*i*P		**Pn**	**05 52 18.8**	**+0.6**
GO01				*i* S		**Sb**	**05 52 42.6**	**+1.2**
GO01	**Chusmiza**	**1.66**	**90**			**Pn**	**05 52 19.2**	**+1.0**
GO01				Sn		**Sb**	**05 52 42.2**	**+0.8**
PB08	**IPOC Station P**	**1.76**	**105**	⇑*i*P		**Pn**	**05 52 19.9**	**+0.4**
PB08				*i* S		**Sb**	**05 52 45.0**	**+1.0**
PB08	**IPOC Station P**	**1.76**	**105**	⇑*i*P		**Pn**	**05 52 19.9**	**+0.4**
PB08				*i* S		**Sb**	**05 52 45.0**	**+1.0**
PB08	**IPOC Station P**	**1.76**	**105**			**Pn**	**05 52 19.8**	**+0.3**
PB02	**IPOC Station P**	**1.91**	**149**	⇑*i*P		**Pn**	**05 52 20.4**	**-0.8**
PB02				*i* S		**Sn**	**05 52 45.4**	**+1.0**
PB02	**IPOC Station P**	**1.91**	**149**	⇓*i*P		**Pn**	**05 52 20.7**	**-0.5**
PB02				*i* S		**Sn**	**05 52 45.9**	**+1.5**
PB16	**IPOC Station P**	**1.92**	**46**	⇑*i*P		**Pn**	**05 52 22.1**	**+0.2**
PB16				*e*S		**Sb**	**05 52 48.6**	**-0.2**
PB16	**IPOC Station P**	**1.92**	**46**	⇓*i*P		**Pn**	**05 52 22.2**	**+0.4**
PB16				*e*S		**Sb**	**05 52 48.6**	**-0.2**
PB16	**IPOC Station P**	**1.92**	**46**			**Pn**	**05 52 22.0**	**+0.2**
PB01	**IPOC Station P**	**1.93**	**135**	⇑*i*P		**Pn**	**05 52 21.6**	**+0.1**
PB01				*i* S		**Sn**	**05 52 46.6**	**+1.6**
PB01				IAML			05 52 56.0	
	comp=N,20μm,0.5s							
PB01	**IPOC Station P**	**1.93**	**135**	⇑*i*P		**Pn**	**05 52 21.6**	**+0.1**
PB01				*i* S		**Sn**	**05 52 46.6**	**+1.6**
PB01	**IPOC Station P**	**1.93**	**135**			**Pn**	**05 52 21.6**	**+0.1**
PB07	**IPOC Station P**	**2.27**	**154**	⇑*i*P		**Pn**	**05 52 25.1**	**-1.1**
PB07				IAML			05 53 11.5	
	comp=E,17μm,0.6s							
PB07	**IPOC Station P**	**2.27**	**154**	⇑*i*P		**Pn**	**05 52 25.4**	**-0.9**
PB07	**IPOC Station P**	**2.27**	**154**			**Pn**	**05 52 26.1**	**-0.2**
PB03	**IPOC Station P**	**2.61**	**155**	*e*P		**Pn**	**05 52 30.2**	**-0.7**
PB03				IAML			05 53 21.7	
	comp=E,10μm,0.8s							
PB03	**IPOC Station P**	**2.61**	**155**	*e*P		**Pn**	**05 52 30.2**	**-0.7**
PB03				IAML			05 53 21.7	
	comp=E,10μm,0.8s							
PB09	**IPOC Station P**	**2.64**	**143**	*e*P		**Pn**	**05 52 31.9**	**+0.4**
PB09	**IPOC Station P**	**2.64**	**143**	*e*P		**Pn**	**05 52 31.9**	**+0.4**
PB09	**IPOC Station P**	**2.64**	**143**			**Pn**	**05 52 32.4**	**+0.9**
PB09	**IPOC Station P**	**2.64**	**143**	*i* P		**Pn**	**05 52 32.1**	**+0.6**
PB09				*e*S		**Sb**	**05 53 11.2**	**+1.9**
PB09				IAML			05 53 21.1	
	comp=Z,28μm,1.4s							
PB04	**IPOC Station P**	**2.74**	**164**	⇑*i*P		**Pn**	**05 52 31.2**	**-1.6**
PB04				IAML			05 53 24.4	
	comp=E,25μm,0.8s							
PB04	**IPOC Station P**	**2.74**	**164**	⇑*i*P		**Pn**	**05 52 31.2**	**-1.6**
PB04				IAML			05 53 24.4	
	comp=E,25μm,0.8s							
PB04	**IPOC Station P**	**2.74**	**164**			**Pn**	**05 52 31.1**	**-1.7**
PB04	**IPOC Station P**	**2.74**	**164**	*i* P		**Pn**	**05 52 31.1**	**-1.7**
PB04				IAML			05 53 28.6	
	comp=Z,20μm,1.0s							
PB05	**IPOC Station P**	**3.23**	**168**	*e*P		**Pn**	**05 52 37.4**	**-2.1**
PB05	**IPOC Station P**	**3.23**	**168**	*e*P		**Pn**	**05 52 37.4**	**-2.1**
PB05	**IPOC Station P**	**3.23**	**168**	*i* P		**Pn**	**05 52 37.1**	**-2.4**
PB05				IAML			05 53 42.2	
	comp=Z,8μm,1.1s							
PB06	**IPOC Station P**	**3.27**	**157**	*e*P		**Pn**	**05 52 38.8**	**-1.2**
PB06				IAML			05 53 41.1	
	comp=N,10μm,0.6s							
PB06	**IPOC Station P**	**3.27**	**157**	*e*P		**Pn**	**05 52 38.8**	**-1.2**
PB06				IAML			05 53 41.1	
	comp=N,10μm,0.6s							
PB06	**IPOC Station P**	**3.27**	**157**			**Pn**	**05 52 38.9**	**-1.2**
PB06	**IPOC Station P**	**3.27**	**157**	*i* P		**Pn**	**05 52 39.8**	**-0.3**
PB06				IAML			05 53 40.6	
	comp=Z,18μm,0.9s							
LVC	**Limon Verde**	**3.48**	**147**			**Pn**	**05 52 43.7**	**+0.6**
LVC	**Limon Verde**	**3.48**	**147**	*i* P		**Pn**	**05 52 43.8**	**+0.6**
LVC				IAML			05 53 50.1	
	comp=Z,4μm,1.1s							
LVC	**Limon Verde**	**3.48**	**147**	*e*P		**Pn**	**05 52 43.7**	**+0.6**
PB15	**IPOC Station P**	**3.77**	**159**	⇑*i*P		**Pn**	**05 52 45.6**	**-1.3**
PB15				*i* S		**Sn**	**05 53 31.6**	**+1.0**
PB15	**IPOC Station P**	**3.77**	**159**			**Pn**	**05 52 45.8**	**-1.2**
PB15	**IPOC Station P**	**3.77**	**159**	*i* P		**Pn**	**05 52 45.7**	**-1.3**
PB15				IAML			05 53 54.3	
	comp=Z,14μm,1.0s							
PB10	**IPOC Station P**	**3.83**	**174**	⇓*i*P		**Pn**	**05 52 44.5**	**-3.1**
PB10	**IPOC Station P**	**3.83**	**174**			**Pn**	**05 52 44.7**	**-2.9**
PB10	**IPOC Station P**	**3.83**	**174**	*i* P		**Pn**	**05 52 44.7**	**-2.9**
PB10				IAML			05 54 05.1	
	comp=Z,2μm,0.9s							
I08BO	**LAS PENAS INFR**	**4.19**	**35**	*i*			06 13 27.4	
	baz=201,slow=328,SNR=1.6							
LPAZ	**La Paz**	**4.32**	**39**	Pn		**Pn**	**05 52 57.5**	**+2.6**
	comp=Z,0.5nm,0.3s,baz=212,slow=11,SNR=75							
LPAZ	**La Paz**	**4.32**	**39**	Pn		**Pn**	**05 52 58.0**	**+3.1**
LPAZ	**La Paz**	**4.32**	**39**	*e*P		**Pn**	**05 52 53.6**	**-1.3**
PB14	**IPOC Station P**	**4.94**	**174**			**Pn**	**05 53 00.2**	**-3.0**
PB14	**IPOC Station P**	**4.94**	**174**	*i* P		**Pn**	**05 53 00.5**	**-2.7**
PB14				IAML			05 54 33.4	
	comp=Z,2μm,1.9s							
GO02	**Mina Guanaco**	**5.59**	**167**	⇑*i*P		**Pn**	**05 53 10.4**	**-1.7**
GO02	**Mina Guanaco**	**5.59**	**167**	Pn		**Pn**	**05 53 10.6**	**-1.6**
YJA	**Yavi**	**5.66**	**117**	*i* P		**Pn**	**05 53 16.6**	**+3.5**
YJA				IAML			05 55 08.2	
	comp=Z,210nm,1.7s							
AC02	**Maricunga**	**7.31**	**167**			**Pn**	**05 53 34.6**	**-1.3**
AC05	**El Transito**	**9.13**	**176**			**Pn**	**05 53 57.5**	**-3.1**
SIV	**San Ignacio**	**10.10**	**70**	Pn		**Pn**	**05 54 11.2**	**-2.6**
	comp=Z,4.9nm,0.3s,baz=269,slow=9.8,SNR=57							
SIV	**San Ignacio**	**10.10**	**70**			**Pn**	**05 54 14.7**	**+0.9**
GO04	**Tololo Observa**	**10.44**	**179**	Pn		**Pn**	**05 54 16.3**	**-2.4**
CO03	**El Pedregal**	**11.11**	**179**	Pn		**Pn**	**05 54 24.7**	**-2.9**
PTLB	**Pontes e Lacer**	**12.03**	**71**	*e*P		**Pn**	**05 54 38.0**	**-2.2**
CFA	**Coronel Fontan**	**12.12**	**169**	Pn		**Pn**	**05 54 42.7**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=337,slow=12,SNR=5.6							
CFA	**Coronel Fontan**	**12.12**	**169**			**Pn**	**05 54 44.0**	**+2.7**
VILB	**Vilhena**	**12.30**	**59**	*e*P		**Pn**	**05 54 42.0**	**-1.9**
SAML	**Samuel**	**13.06**	**36**			**Pn**	**05 54 50.7**	**-3.5**
SAML	**Samuel**	**13.06**	**36**	*e*P		**Pn**	**05 54 50.7**	**-3.5**
AQDB	**Aquidauana**	**14.36**	**96**	*e*P		**Pn**	**05 55 09.4**	**-2.5**
ATAH	**Atahualpa**	**14.41**	**329**	LR		LR	06 01 14.3	
	comp=Z,3μm,19.4s,baz=71,slow=39							
ATAH	**Atahualpa**	**14.41**	**329**	P		**P**	**05 55 22.8**	**+3.0**
SALV	**Santo Antonio**	**15.02**	**78**	*e*P		**Pn**	**05 55 19.6**	**-1.3**
H03N1	**Juan Fernandez**	**15.43**	**206**	T		T	06 11 45.0	
	baz=229,slow=74,SNR=231							
H03N2	**Juan Fernandez**	**15.44**	**206**	T		T	06 12 04.1	
	baz=32,slow=74,SNR=186							
ITQB	**Itaqui**	**16.37**	**130**	*e*P		**Pn**	**05 55 39.3**	**+0.9**
CLDB	**Colider**	**17.04**	**61**	*e*P		**Pn**	**05 55 44.2**	**-2.7**
C2SB	**Chapadao do Su**	**17.14**	**90**	*e*P		**Pn**	**05 55 46.7**	**-1.4**
TRCB	**Terra Rica**	**17.36**	**103**	*e*P		**Pn**	**05 55 49.6**	**-1.3**
PTGB	**Pitanga**	**18.19**	**109**	*e*P		**Pn**	**05 55 59.5**	**-1.8**
PCMB	**Pacaembu**	**18.53**	**99**	*e*P		**P**	**05 56 03.4**	**-1.6**
ARAG	**Araguaiana, MT**	**18.66**	**81**	*e*P		**P**	**05 56 05.0**	**-1.5**
ITAB	**Concordia**	**18.82**	**117**	*e*P		**P**	**05 56 07.3**	**-0.8**
LPA	**La Plata**	**19.05**	**145**	*e*P		P	05 55 59.5	-11
LPA				PPP		PPP	05 56 27.9	
LPA				S		**Sn**	**05 59 36.5**	**-7.5**
LPA				SCS		**ScS**	**06 07 51.7**	**+1.2**
LPA				SKIKS			06 15 29.4	
CPSB	**Cacapava Do Su**	**19.10**	**127**	*e*P		**P**	**05 56 09.9**	**-1.3**
MACA	**Manacapuru-AM**	**19.25**	**33**	*e*P		**P**	**05 56 10.1**	**-2.8**
ITRB	**Iturama**	**19.40**	**94**	*e*P		**P**	**05 56 13.1**	**-1.4**
NPGB	**Novo Progresso**	**19.68**	**52**	*e*P		**P**	**05 56 14.8**	**-2.8**
PLTB	**Pedras Altas**	**19.69**	**131**	*e*P		**P**	**05 56 16.8**	**-0.9**
PTLC	**Puerto Leguiza**	**20.09**	**349**	*e*P		**P**	**05 56 17.5**	**-4.6**
FRTB	**Fartura**	**20.23**	**104**	*e*P		**P**	**05 56 22.1**	**-1.5**
FRTB				*e*S		**S**	**06 00 09.6**	**+0.1**
CNLB	**Canela**	**20.63**	**122**	*e*P		**P**	**05 56 27.6**	**-0.3**
PLCA	**Paso Flores**	**20.98**	**179**	P		**P**	**05 56 32.1**	**+0.5**
	comp=Z,13nm,0.9s,baz=358,slow=12,SNR=22							
PLCA	**Paso Flores**	**20.98**	**179**	P		**P**	**05 56 32.3**	**+0.6**
PLCA	**Paso Flores**	**20.98**	**179**	*e*P		Pn	05 56 33.5	-0.8
TIJ01	**Guaruva-PR**	**21.03**	**109**	*e*P		**P**	**05 56 31.8**	**-0.5**
BB19B	**Bebedouro**	**21.07**	**98**	*e*P		**P**	**05 56 28.9**	**-3.8**
ITTB	**Itaituba**	**21.26**	**46**	*e*P		**P**	**05 56 31.1**	**-3.7**
IPMB	**Ipameri, GO**	**21.59**	**89**	*e*P		**P**	**05 56 37.4**	**-1.0**
PTGA	**Pitinga**	**21.70**	**31**	P		**P**	**05 56 37.4**	**-2.0**
	comp=Z,15nm,0.3s,baz=208,slow=11,SNR=39							
PTGA				LR		LR	06 05 00.8	
	comp=Z,2μm,18.7s,baz=210,slow=37							
PTGA	**Pitinga**	**21.70**	**31**	P		**P**	**05 56 36.6**	**-2.8**
PTGA				IAmb		IAmb	05 56 50.5	
	comp=Z,131nm,1.2s							
PTGA	**Pitinga**	**21.70**	**31**	*e*P		**P**	**05 56 36.9**	**-2.5**
PTGA				*e*S		**S**	**06 00 36.8**	**-1.6**
GCUF	**Volcan Galeras**	**21.71**	**342**	*e*P		**P**	**05 56 42.8**	**+2.8**
CRUC	**La Cruz**	**21.93**	**344**	*e*P		**P**	**05 56 47.2**	**+4.9**
GUVC	**San Jose del G**	**22.15**	**356**	*e*P		**P**	**05 56 41.5**	**-2.9**
GARC	**Garzon, Huila**	**22.19**	**348**	*e*P		**P**	**05 56 44.5**	**-0.4**
SPB	**Sao Paulo**	**22.20**	**104**	P		**P**	**05 56 44.0**	**-0.8**
SPB				IAmb		IAmb	05 56 56.9	
	comp=Z,118nm,1.1s							
SPB	**Sao Paulo**	**22.20**	**104**	*e*P		**P**	**05 56 44.0**	**-0.8**
BDFB	**Brasilia**	**22.22**	**83**	P		**P**	**05 56 43.4**	**-1.8**
	comp=Z,21nm,0.9s,baz=257,slow=10,SNR=18							
BDFB				LR		LR	06 06 19.6	
	com

158A	Hollywood	52.87 350	P	P	06 01 05.2	+1.4	
	baz=169						
157A	Early Branch	52.95 349	P	P	06 01 05.8	+1.4	
	baz=168						
Z59A	Georgetown, SC	53.23 351	P	P	06 01 06.6	+0.2	
	baz=170						
NHSC	New Hope	53.23 350	P	P	06 01 06.6	+0.2	
	baz=169						
NHSC	New Hope	53.23 350	P	P	06 01 06.2	-0.2	
Z58A	St. Stephen	53.40 351	P	P	06 01 07.8	+0.1	
	baz=170						
Z57A	Bowman	53.50 350	P	P	06 01 08.3	-0.2	
	baz=169						
Z56A	Williston	53.64 349	P	P	06 01 09.0	-0.6	
	baz=168						
Z56A	Williston	53.64 349	P	P	06 01 08.2	-1.3	
Z56A			IAmb	IAmb	06 01 20.1		
	comp=Z,21nm,0.8s						
152A	Waverly Hall	53.70 346	P	P	06 01 08.7	-1.3	
152A			IAmb	IAmb	06 01 26.4		
	comp=Z,43nm,1.2s						
346A	Big Creek Wild	53.80 340	P	P	06 01 10.0	-0.8	
346A			IAmb	IAmb	06 02 22.9		
	comp=Z,58nm,1.4s						
Y60A	Bolivia	53.84 353	P	P	06 01 10.6	-0.3	
	baz=172						
Y59A	Loris	53.91 352	P	P	06 01 11.1	-0.4	
	baz=171						
Y58A	Scranton	53.94 351	P	P	06 01 11.7	+0.1	
	baz=170						
Y58A	Scranton	53.94 351	P	P	06 01 11.3	-0.4	
GOGA	Godfrey	54.13 347	P	P	06 01 12.7	-0.4	
Y57A	Sumter	54.16 350	P	P	06 01 12.9	-0.4	
	baz=169						
Y57A	Sumter	54.16 350	IAmb	IAmb	06 01 49.5		
	comp=Z,31nm,0.9s						
Y55A	Saluda	54.33 349	P	P	06 01 14.1	-0.5	
	baz=168						
X60A	Albert Glenn T	54.37 353	P	P	06 01 14.7	-0.1	
	baz=172						
X59A	McDuffie Farm,	54.45 352	P	P	06 01 14.7	-0.7	
	baz=171						
X58A	Rowland	54.53 352	P	P	06 01 15.8	-0.1	
	baz=170						
Z50A	Ashland	54.55 345	P	P	06 01 15.4	-0.8	
	baz=163						
Z50A	Ashland	54.55 345	P	P	06 01 14.4	-1.8	
Z50A			IAmb	IAmb	06 01 32.7		
	comp=Z,57nm,1.6s						
LRAL	Lakeview Retre	54.62 343	P	P	06 01 15.8	-0.8	
	baz=162						
Y52A	Lilburn	54.70 347	P	P	06 01 16.4	-0.9	
	baz=165						
X56A	White Oak	54.72 350	P	P	06 01 16.9	-0.5	
	baz=168,SNR=6.0						
BIRD	Birdtown, Kers	54.78 350	IAmb	IAmb	06 01 51.2		
	comp=Z,27nm,1.0s						
X55A	Gracelyn & Ava	54.80 349	P	P	06 01 17.3	-0.7	
	baz=168,SNR=5.4						
W60A	Pink Hill	54.81 353	P	P	06 01 17.6	-0.4	
	baz=172						
HKT	Hockley	54.86 333	P	P	06 01 19.3	+0.9	
HKT			IAmb	IAmb	06 01 35.0		
	comp=Z,31nm,1.6s						
W61A	Ground Anchor	54.86 354	P	P	06 01 18.5	+0.2	
	baz=173						
W58A	Raeford	54.97 352	P	P	06 01 18.9	-0.2	
	baz=171,SNR=8.6						
W59A	Clinton	55.01 353	P	P	06 01 19.5	0.0	
	baz=172						
X54A	Belton	55.02 348	P	P	06 01 19.2	-0.3	
	baz=167						
CNNC	Cliffs of the	55.02 353	P	P	06 01 19.1	-0.4	
	baz=172						
833A	Chaparral WMA,	55.08 329	P	P	06 01 19.3	-0.8	
	baz=147						
PAULI	Pauline	55.18 349	IAmb	IAmb	06 01 30.7		
	comp=Z,61nm,1.8s						
W57A	Gilead	55.21 351	P	P	06 01 20.3	-0.6	
	baz=170						
W57A	Gilead	55.21 351	IAmb	IAmb	06 01 53.5		
	comp=Z,20nm,1.0s						
W56A	Indian Trail	55.28 350	P	P	06 01 20.8	-0.6	
	baz=169						
KMSC	Kings Mountain	55.41 350	P	P	06 01 22.0	-0.3	
	baz=168,SNR=5.5						
KMSC	Kings Mountain	55.41 350	IAmb	IAmb	06 02 05.5		
	comp=Z,25nm,1.2s						
V61A	Roper	55.43 354	P	P	06 01 22.2	-0.3	
	baz=174						
V60A	Jim Taylor Roa	55.47 354	P	P	06 01 22.2	-0.5	
	baz=173						
W54A	Cherokee Point	55.50 349	P	P	06 01 22.6	-0.4	
	baz=167,SNR=6.5						
V59A	Middlesex	55.58 353	P	P	06 01 22.8	-0.8	
	baz=172,SNR=9.5						
V58A	Windy Hill, Pi	55.72 352	P	P	06 01 23.8	-0.7	
	baz=171,SNR=6.2						
V58A	Windy Hill, Pi	55.72 352	P	P	06 01 23.7	-0.8	
V58A			IAmb	IAmb	06 01 50.7		
	comp=Z,33nm,1.2s						
V57A	Coltrane Farms	55.90 351	P	P	06 01 25.2	-0.6	
	baz=170,SNR=5.2						
V56A	Mocksville	55.93 351	P	P	06 01 25.4	-0.6	
	baz=169,SNR=6.4						
X48A	Hartselle	55.97 344	IAmb	IAmb	06 01 42.2		
	comp=Z,25nm,1.3s						
NATX	Nacogdoches	55.98 336	P	P	06 01 25.7	-0.8	
	baz=153						
V55A	Taylorsville	56.08 350	P	P	06 01 26.9	-0.3	
	baz=168,SNR=7.7						
V55A	Taylorsville	56.08 350	IAmb	IAmb	06 02 08.5		
	comp=Z,37nm,1.3s						
U59A	Littleton	56.11 353	P	P	06 01 27.0	-0.3	
	baz=172,SNR=5.3						
U59A	Littleton	56.11 353	IAmb	IAmb	06 01 37.6		
	comp=Z,27nm,1.2s						
V54A	Nebo	56.13 349	P	P	06 01 26.7	-0.9	
	baz=168,SNR=7.9						
U60A	Pendleton	56.16 354	P	P	06 01 27.3	-0.4	
	baz=173						
U58A	Oxford	56.23 353	P	P	06 01 27.8	-0.4	
	baz=172,SNR=5.5						
W50A	Signal Mountai	56.26 346	P	P	06 01 26.7	-1.8	
W50A			IAmb	IAmb	06 01 44.9		
	comp=Z,23nm,1.1s						
435B	Jarrell	56.33 332	P	P	06 01 27.5	-1.6	
	baz=150						
TKL	Tuckaleechee C	56.37 347	P	P	06 01 28.1	-1.1	
	comp=Z,12nm,1.1s,baz=174,slow=11,SNR=7.1						
TKL	Tuckaleechee C	56.37 347	IAmb	IAmb	06 01 44.8		
	comp=Z,24nm,1.1s						
U57A	Blanch	56.37 352	P	P	06 01 28.5	-0.7	
	baz=171,SNR=5.3						
SWET	Sewanee	56.42 345	P	P	06 01 28.2	-1.5	
U56A	King	56.44 351	P	P	06 01 29.3	-0.4	
	baz=170,SNR=5.9						
U56A	King	56.44 351	IAmb	IAmb	06 02 03.7		
	comp=Z,39nm,1.2s						
V52A	Sevierville	56.51 348	IAmb	IAmb	06 01 45.9		
	comp=Z,43nm,1.1s						
Z41A	Richland Creek	56.63 338	P	P	06 01 30.2	-0.9	
	baz=155						
OXF	Oxford	56.69 342	IAmb	IAmb	06 01 54.0		
	comp=Z,32nm,1.1s						
U55A	TA2, Sparta	56.69 350	P	P	06 01 31.1	-0.5	
	baz=169						
T59A	Double "B" Far	56.69 354	P	P	06 01 31.3	-0.2	
	baz=173,SNR=7.7						
T59A	Double "B" Far	56.69 354	IAmb	IAmb	06 01 48.7		
	comp=Z,42nm,1.2s						
T58A	Grand View Acr	56.78 353	P	P	06 01 31.7	-0.4	
	baz=172,SNR=12						
T60A	Surry	56.78 354	P	P	06 01 31.7	-0.4	
	baz=174						
U54A	Nelsons Funny	56.84 350	P	P	06 01 31.9	-0.7	
	baz=168						
U54A	Nelsons Funny	56.84 350	IAmb	IAmb	06 01 58.2		
	comp=Z,28nm,1.1s						
T57A	Hurt	56.92 352	P	P	06 01 32.9	-0.2	
	baz=171,SNR=8.0						
T57A	Hurt	56.92 352	IAmb	IAmb	06 01 50.8		
	comp=Z,36nm,1.1s						
T56A	Rocky Mt	57.05 351	P	P	06 01 34.0	-0.1	
	baz=170,SNR=6.0						
W45A	Hickory Valley	57.22 342	IAmb	IAmb	06 02 23.4		
	comp=Z,30nm,1.1s						
S61A	Accomac	57.23 356	P	P	06 01 35.2	-0.1	
	baz=175						
T55A	Pulaski	57.25 351	P	P	06 01 35.2	-0.3	
	baz=169,SNR=8.2						
BLA	Blacksburg	57.29 351	P	P	06 01 35.5	-0.3	
	baz=170						
BLA	Blacksburg	57.29 351	P	P	06 01 35.9	+0.2	
BLA			IAmb	IAmb	06 02 14.3		
	comp=Z,20nm,1.0s						
WHTX	Lake Whitney,	57.32 333	P	P	06 01 35.4	-0.6	
	baz=150						
T54A	Tazewell	57.32 350	P	P	06 01 35.2	-0.8	
	baz=168						
S60A	Water View	57.34 355	P	P	06 01 35.7	-0.3	
	baz=174						
CLTN	Cedars of Leba	57.35 345	P	P	06 01 34.6	-1.5	
S58A	Poland Farm, P	57.38 353	P	P	06 01 36.2	-0.1	
	baz=172						
T53A	Wise	57.41 349	P	P	06 01 35.6	-1.1	
	baz=167						
S59A	Mechanicsville	57.45 354	P	P	06 01 36.3	-0.5	
	baz=173						
S56A	Natural Bridge	57.63 352	P	P	06 01 37.8	-0.3	
	baz=170						
R58B	Mineral	57.71 354	P	P	06 01 38.5	-0.1	
	baz=172,SNR=6.7						
R58B	Mineral	57.71 354	IAmb	IAmb	06 01 56.4		
	comp=Z,35nm,1.3s						
WVT	Waverly	57.76 344	P	P	06 01 37.5	-1.5	
	baz=161						
WVT	Waverly	57.76 344	P	P	06 01 37.6	-1.5	
WVT			IAmb	IAmb	06 01 54.2		
	comp=Z,27nm,1.2s						
S55A	Lewisburg	57.85 351	P	P	06 01 39.2	-0.5	
	baz=170,SNR=9.2						
R59A	King George, V	57.87 354	P	P	06 01 39.6	-0.1	
	baz=173						
CBN	Colin Frederi	57.90 354	P	P	06 01 40.1	+0.1	
	baz=173						
S54A	Dingess, Beckl	58.00 350	P	P	06 01 40.2	-0.6	
	baz=169						
S54A	Dingess, Beckl	58.00 350	IAmb	IAmb	06 02 06.3		
	comp=Z,28nm,1.1s						
S53A	Williamson	58.02 350	P	P	06 01 39.8	-1.1	
	baz=168						
R58A	Rapidan	58.05 353	P	P	06 01 41.3	+0.2	
	baz=172,SNR=5.2						
TX31	Lajitas Ar. Si	58.06 326	P	P	06 01 42.0	+0.6	
TX31			IAmb	IAmb	06 02 25.9		
	comp=Z,30nm,1.2s						
TX32	Lajitas Array	58.06 326	P	P	06 01 41.1	-0.3	
TXAR	Lajitas Array	58.06 326	P	P	06 01 41.2	-0.2	
	comp=Z,0.7nm,0.8s,baz=150,slow=10,SNR=5.5						
TXAR			LR	LR	06 26 17.5		
	comp=Z,405nm,18.1s,baz=0.0,slow=36						
TXAR	Lajitas Array	58.06 326	P	P	06 01 40.5	-0.9	
MIAR	Mount Ida	58.07 338	P	P	06 01 40.7	-0.5	
	baz=155,SNR=9.1						
R57A	Stanardsville	58.11 353	P	P	06 01 41.3	-0.2	
	baz=172,SNR=5.8						
W41B	Gary Mavity, V	58.18 340	P	P	06 01 41.3	-0.8	
	baz=156						
R55A	Marlinton	58.30 352	P	P	06 01 42.7	-0.2	
	baz=170						
R55A	Marlinton	58.30 352	IAmb	IAmb	06 02 00.7		
	comp=Z,42nm,1.4s						
R54A	Vior	58.33 351	P	P	06 01 42.5	-0.5	
	baz=169,SNR=5.8						
T47A	Sharon Grove	58.39 345	IAmb	IAmb	06 02 34.5		
	comp=Z,32nm,0.9s						
Q60A	Greensboro	58.56 356	P	P	06 01 44.1	-0.4	
	baz=175						
R53A	Hurricane	58.62 350	P	P	06 01 44.7	-0.3	
	baz=168						
LCAR	Lake Charles	58.66 341	P	P	06 01 43.6	-1.7	
Q58A	Fox Den Farm,	58.66 354	P	P	06 01 44.9	-0.4	
	baz=173						
W39A	Magazine	58.73 338	P	P	06 01 45.2	-0.6	
	baz=155,SNR=8.4						
W39A	Magazine	58.73 338	IAmb	IAmb	06 01 47.3		
	comp=Z,30nm,1.4s						
ABTX	Abilene, Hawle	58.81 332	P	P	06 01 45.5	-1.0	
	baz=148						
ABTX	Abilene, Hawle	58.81 332	IAmb	IAmb	06 02 20.3		
	comp=Z,23nm,1.2s						
Q57A	Strasburg	58.83 353	P	P	06 01 46.6	+0.2	
	baz=172,SNR=8.2						
Q56A	Snyder Ridge,	58.92 353	P	P	06 01 47.2	0.0	
	baz=171,SNR=8.8						
Q56A	Snyder Ridge,	58.92 353	IAmb	IAmb	06 02 05.6		
	comp=Z,30nm,0.9s						
Q55A	Buckhannon	58.99 352	P	P	06 01 47.7	0.0	
	baz=170						
R50A	Paris	59.01 348	IAmb	IAmb	06 02 03.5		
	comp=Z,27nm,1.4s						
Q53A	Leroy	59.07 350	P	P	06 01 48.1	-0.1	
	baz=168						
Q54A	Coxs Mills	59.09 351	P	P	06 01 47.4	-0.9	
	baz=169,SNR=6.1						
Q54A	Coxs Mills	59.09 351	IAmb	IAmb	06 02 13.1		
	comp=Z,21nm,1.1s						
PBMO	Poplar Bluff	59.09 342	P	P	06 01 46.2	-2.1	
PBMO			IAmb	IAmb	06 02 17.0		
	comp=Z,18nm,1.0s						
P61A	Hammonton	59.16 357	P	P	06 01 48.4	-0.3	
	baz=176						
P58A	Pank, Wackersv	59.16 354	P	P	06 01 48.5	-0.2	
	baz=173						
P59A	Jarrettsville	59.21 355	P	P	06 01 49.3	+0.2	
	baz=174						
P57A	Homestead Farm	59.23 354	P	P	06 01 49.2	0.0	
	baz=172						
P57A	Homestead Farm	59.23 354	IAmb	IAmb	06 02 08.1		
	comp=Z,34nm,1.3s						
Q52A	Bidwell	59.29 350	P	P	06 01 49.2	-0.4	
	baz=168						
P56A	Dayton Farm, R	59.34 353	P	P	06 01 50.1	+0.1	
	baz=172						
P60A	Greenville	59.35 356	P	P	06 01 50.1	0.0	
	baz=175						
WCI	Wyandotte Cave	59.38 346	P	P	06 01 49.0	-1.3	
	baz=163						
WCI	Wyandotte Cave	59.38 346	P	P	06 01 49.2	-1.1	
WCI			IAmb	IAmb	06 01 50.1		
	comp=Z,24nm,1.2s						
U40A	Yellville	59.46 340	P	P	06 01 49.5	-1.5	
	baz=156						
U40A	Yellville	59.46 340	P	P	06 01 48.6	-2.3	
P55A	Reedsville	59.47 352	P	P	06 01 50.7	-0.2	
	baz=170						
Q51A	Peebles	59.55 349	P	P	06 01 50.6	-0.8	
	baz=167						
Q51A	Peebles	59.55 349	IAmb	IAmb	06 01 53.1		
	comp=Z,26nm,1.4s						
O61A	Allentown	59.56 357	P	P	06 01 51.2	-0.3	
	baz=176						
MCWV	Mont Chateau	59.62 352	P	P	06 01 51.6	-0.3	
	baz=170						
MCWV	Mont Chateau	59.62 352	P	P	06 01 51.0	-1.0	
SIUC	Southern Illin	59.63 343	P	P	06 01 50.8	-1.2	
P54A	Burton	59.65 351	P	P	06 01 51.8	-0.3	
	baz=170,SNR=10						
P53A	Whipple	59.67 351	P	P	06 01 51.8	-0.4	
	baz=169,SNR=6.2						
O58A	Lewisberry	59.76 355	P	P	06 01 52.9	0.0	
	baz=174						
HHAR	Hobbs	59.76 339	IAmb	IAmb	06 02 10.4		
	comp=Z,28nm,1.3s						
O60A	Telford	59.84 356	P	P	06 01 53.6	+0.2	
	baz=175						
O59A	Robesonia	59.88 355	P	P	06 01 53.8	0.0	
	baz=174						
O57A	Amberson	59.91 354	P	P	06 01 53.7	-0.2	
	baz=173,SNR=5.2						
P52A	Corning	59.93 350	P	P	06 01 52.8	-1.2	
	baz=168						
P51A	Williamsport	59.94 349	P	P	06 01 52.9	-1.2	
	baz=167						
P51A	Williamsport	59.94 349	IAmb	IAmb	06 02 20.4		
	comp=Z,21nm,1.2s						
O56A	Blue Knob Stat	60.06 353	P	P	06 01 54.8	-0.2	
	baz=172,SNR=7.6						
O56A	Blue Knob Stat	60.06 353	IAmb	IAmb	06 02 13.2		
	comp=Z,27nm,1.1s						
O55A	Ligonier	60.09 353	P	P	06 01 55.0	-0.2	
	baz=171,SNR=7.5						
TUL1	Leonard	60.09 337	P	P	06 01 54.3	-1.0	
	baz=153,SNR=5.1						
TUL1	Leonard	60.09 337	IAmb	IAmb	06 02 14.9		
	comp=Z,22nm,1.0s						
P50A	Jamestown	60.19 349	P	P	06 01 54.7	-1.2	
	baz=166						
O54A	Avella	60.20 352	P	P	06 01 55.4	-0.5	
	baz=170						
N61A	South Mountain	60.21 357	P	P	06 01 55.4	-0.5	
	baz=176						
WMOK	Wichita Mounta	60.24 334	P	P	06 01 54.5	-1.8	
	baz=150						
P49A	Miami Univ. Ec	60.30 348	P	P	06 01 54.7	-1.9	
	baz=165,SNR=5.7						
BLO	Bloomington	60.34 346	IAmb	IAmb	06 01 56.8		
	comp=Z,27nm,1.4s						
N62A	Caumsett State	60.35 358	P	P	06 01 56.4	-0.5	
	baz=177						
O52A	Adamsville	60.35 350	P	P	06 01 55.7	-1.2	
	baz=168						
O52A	Adamsville	60.35 350	P	P	06 01 55.3	-1.6	
O52A			IAmb	IAmb	06 02 12.1		
	comp=Z,24nm,1.2s						
SSPA	Standing Stone	60.36 354	P	P	06 01 56.4	-0.6	
SSPA			IAmb	IAmb	06 02 14.9		
	comp=Z,28nm,1.1s						
N60A	Cedar Hill Far	60.37 356	P	P	06 01 56.7	-0.3	
	baz=176						
O53A	New Philadelph	60.39 351	P	P	06 01 56.6	-0.6	
	baz=169						
N57A	Milroy	60.44 354	P	P	06 01 57.6	0.0	
	baz=173						
PAL	Palisades	60.44 357	P	P	06 01 57.0	-0.5	
	baz=177						
N58A	Sunbury	60.45 355	P	P	06 01 57.3	-0.3	
	baz=174						
N58A	Sunbury	60.45 355	IAmb	IAmb	06 02 15.3		
	comp=Z,36nm,1.1s						
N59A	State Game Lan	60.46 356	P	P	06 01 56.7	-1.0	
	baz=175						
O51A	Pataskala	60.51 350	P	P	06 01 56.7	-1.4	
	baz=168						
CCM	Cathedral Cave	60.52 342	P	P	06 01 56.9	-1.2	
	baz=158						
CCM	Cathedral Cave	60.52 342	P	P	06 01 57.4	-0.7	
CCM			IAmb	IAmb	06 02 18.4		
	comp=Z,14nm,0.9s						
N55A	Marion Center	60.62 353	P	P	06 01 58.1	-0.7	
	baz=171,SNR=16						
ACSO	Alum Creek Sta	60.65 349	P	P	06 01 57.5	-1.5	
	baz=167,SNR=7.2						
ACSO	Alum Creek Sta	60.65 349	IAmb	IAmb	06 02 26.1		
	comp=Z,29nm,1.2s						
N56A	West Decatur	60.68 354	P	P	06 01 58.9	-0.3	
	baz=172,SNR=7.5						
O50A	Cable	60.68 349	P	P	06 01 58.2	-1.0	
	baz=166						
M61A	Granite Spring	60.74 358	P	P	06 01 59.2	-0.4	
	baz=177						
M63A	Gales Ferry	60.79 359	P	P	06 01 58.9	-0.9	
	baz=179						
M60A	Port Jervis	60.80 357	P	P	06 01 59.4	-0.5	
	baz=176						
MNTX	Cornudas Mount	60.83 327	P	P	06 01 59.3	-1.1	
	baz=143						
MNTX	Cornudas Mount	60.83 327	IAmb	IAmb	06 02 19.7		
	comp=Z,31nm,1.9s						
N54A	Moraine State	60.92 352	P	P	06 02 00.5	-0.3	
	baz=170,SNR=7.2						
M64A	Tiverton	60.92 360	P	P	06 02 00.5	-0.3	
	baz=180						
M58A	Price's Panora	60.96 355	P	P	06 02 01.0	-0.1	
	baz=174,SNR=5.4						
M57A	Sunshine Farm,	60.98 355	P	P	06 02 01.1	-0.1	
	baz=174						
M57A	Sunshine Farm,	60.98 355	P	P	06 02 01.3	+0.1	
N52A	McGinn's Farm,	61.01 351	P	P	06 02 00.9	-0.5	
	baz=169						
R40A	Maddies Statio	61.05 341	P	P	06 02 00.5	-1.2	
R40A			IAmb	IAmb	06 02 02.7		
	comp=Z,22nm,1.4s						
M59A	Waymart	61.06 356	P	P	06 02 01.4	-0.3	
	baz=175						
O48A	Farmland	61.08 348	P	P	06 02 00.4	-1.5	
	baz=165,SNR=5.8						
N50A	Nevada	61.21 349	P	P	06 02 01.4	-1.3	
	baz=167						
N51A	Ashland	61.22 350	P	P	06 02 01.4	-1.4	
	baz=168						
M56A	Emporium	61.23 354	P	P	06 02 02.4	-0.5	
	baz=172,SNR=7.6						
L63A	North Scituate	61.24 359	P	P	06 02 02.5	-0.4	
	baz=179						
T35A	Sooner Cattle	61.25 337	IAmb	IAmb	06 02 23.1		
	comp=Z,24nm,1.1s						
M55A	Ridgway	61.27 353	P	P	06 02 03.1	-0.1	
	baz=172,SNR=9.9						
BRYW	Bryant College	61.29 360	P	P	06 02 03.2	-0.2	
L64A	Middleborough	61.31 0	P	P	06 02 03.0	-0.4	
	baz=180						
MSTX	Muleshoe	61.37 330	P	P	06 02 03.2	-0.9	
	baz=146						
MSTX	Muleshoe	61.37 330	IAmb	IAmb	06 02 35.6		
	comp=Z,25nm,1.1s						
M54A	Oil Creek Stat	61.41 353	P	P	06 02 03.5	-0.7	
	baz=171						
M54A	Oil Creek Stat	61.41 353	IAmb	IAmb	06 02 22.1		
	comp=Z,23nm,0.9s						
L60A	Shokan	61.44 357	P	P	06 02 03.7	-0.6	
	baz=177						
M53A	WI Miller and	61.48 352	P	P	06 02 03.9	-0.7	
	baz=170						
P43A	Skaggs, Pawnee	61.51 344	IAmb	IAmb	06 02 55.2		
	comp=Z,23nm,0.8s						
L58A	Harry Jones Me	61.58 356	P	P	06 02 04.9	-0.4	
	baz=175,SNR=6.4						
M51A	Elyria	61.59 350	P	P	06 02 04.5	-0.8	
	baz=168						
L57A	Andrews Acres	61.62 355	P	P	06 02 04.7	-0.8	
	baz=174						
SFIN	Lafayette	61.62 346	P	P	06 02 03.6	-2.0	
	baz=163						
SFIN	Lafayette	61.62 346	IAmb	IAmb	06 02 14.1		
	comp=Z,51nm,1.7s						
N48A	Decatur	61.64 348	P	P	06 02 04.1	-1.6	
	baz=165,SNR=6.1						
M52A	Chesterland	61.67 351	P	P	06 02 04.9	-1.0	
	baz=169						
L59A	Walton	61.68 357	P	P	06 02 05.8	-0.2	
	baz=176,SNR=6.1						
BINY	Binghamton	61.75 356	P	P	06 02 06.1	-0.3	
	baz=175,SNR=6.4						
BINY	Binghamton	61.75 356	P	P	06 02 05.6	-0.9	
M50A	Fremont	61.80 350	P	P	06 02 05.5	-1.3	
	baz=167						
L56A	Greenwood	61.81 354	P	P	06 02 06.5	-0.4	
	baz=173						
L56A	Greenwood	61.81 354	IAmb	IAmb	06 02 24.6		
	comp=Z,25nm,1.0s						
L61B	Northampton	61.84 359	P	P	06 02 06.7	-0.3	
	baz=178						
HRV	Adam Dziewonsk	61.88 359	P	P	06 02 06.6	-0.7	
	baz=180						
HRV	Adam Dziewonsk	61.88 359	P	P	06 02 07.7	+0.5	
L53A	Girard	61.93 352	P	P	06 02 07.0	-0.6	
	baz=170,SNR=7.3						
L55A	Hinsdale	61.94 354	P	P	06 02 06.8	-0.9	
	baz=172,SNR=8.5						
M49A	Liberty Center	62.03 349	P	P	06 02 07.0	-1.3	
	baz=166,SNR=7.1						
K62A	Royalston	62.05 359	P	P	06 02 08.6	+0.2	
	baz=179						
ERPA	Erie	62.06 352	P	P	06 02 07.1	-1.4	
	baz=170,SNR=6.3						
ERPA	Erie	62.06 352	P	P	06 02 07.8	-0.6	
K63A	Dunstable	62.06 360	P	P	06 02 08.2	-0.3	
	baz=180						
K61A	Williamstown	62.08 358	P	P	06 02 09.0	+0.4	
	baz=178						
L54A	Sinclairville	62.09 353	P	P	06 02 08.2	-0.5	
	baz=171,SNR=12						
P40A	Paris	62.12 342	IAmb	IAmb	06 02 50.4		
	comp=Z,22nm,1.4s						
M48A	Edgerton	62.18 348	P	P	06 02 08.2	-1.1	
	baz=166						
M48A	Edgerton	62.18 348	P	P	06 02 07.3	-2.1	
M48A			IAmb	IAmb	06 03 13.0		
	comp=Z,19nm,1.1s						
M47A	Cromwell	62.24 348	P	P	06 02 08.1	-1.6	
	baz=164						
K59A	Cooperstown	62.25 357	P	P	06 02 09.6	-0.2	

baz=176,SNR=8.4
K58A **Earlville** 62.29 356 P P 06 02 09.9 -0.1
baz=175,SNR=6.0
K58A **Earlville** 62.29 356 IAmb IAmb 06 02 27.8
comp=Z,27nm,1.0s
HDIL **Hopedale** 62.31 344 P P 06 02 08.8 -1.5
baz=161
HDIL **Hopedale** 62.31 344 IAmb IAmb 06 02 24.8
comp=Z,31nm,1.2s
K57A **Scipio Center** 62.31 355 P P 06 02 09.9 -0.3
baz=174
K56A **Middlesex** 62.35 355 P P 06 02 09.9 -0.6
baz=173
K54A **Basiliko Farm,** 62.39 354 P P 06 02 10.4 -0.3
baz=172
VNA3 **Neumayer Olymp** 62.40 161 P P 06 02 11.8 +1.3
K55A **Perry** 62.45 354 P P 06 02 10.9 -0.2
baz=173,SNR=6.2
L48A **N Adams** 62.57 349 P P 06 02 10.9 -1.0
baz=166
J62A **Henniker** 62.60 359 P P 06 02 12.1 0.0
baz=179
AAM **Ann Arbor** 62.78 349 P P 06 02 12.2 -1.1
baz=167
K52A **Tillsonburg** 62.80 352 P P 06 02 12.7 -0.7
baz=170
ACCN **Adirondack Com** 62.81 358 IAmb IAmb 06 02 25.1
comp=Z,41nm,1.5s
K51A **Iona Station** 62.85 351 P P 06 02 13.0 -0.8
baz=169
J58A **Remsen** 62.86 356 P P 06 02 13.5 -0.3
baz=176
N41A **Harden Midland** 62.87 343 IAmb IAmb 06 02 23.6
comp=Z,22nm,1.1s
J56A **Wolcott** 62.88 355 P P 06 02 13.6 -0.4
baz=174
J59A **Piesco** 62.92 357 P P 06 02 14.2 -0.1
baz=176,SNR=7.5
J57A **Williamstown** 62.95 356 P P 06 02 14.2 -0.2
baz=175
J55A **Hilton** 62.95 354 P P 06 02 13.9 -0.5
baz=173
VNA2 **Neumayer--Watz** 62.99 161 P P 06 02 15.4 +1.0
baz=284,slow=8.2
J54A **Appleton** 63.04 354 P P 06 02 14.6 -0.4
baz=172
J54A **Appleton** 63.04 354 P P 06 02 14.5 -0.4
K50A **Casco** 63.07 350 P P 06 02 14.1 -1.2
baz=168
HNH **Hanover** 63.09 359 P P 06 02 16.4 +1.1
I58A **Old Forge** 63.17 357 P P 06 02 15.6 -0.3
baz=176,SNR=5.5
K49A **Clarkson** 63.22 350 P P 06 02 14.9 -1.3
baz=167
KSU1 **Kansas State U** 63.22 338 P P 06 02 15.5 -0.8
baz=153
KSU1 **Kansas State U** 63.22 338 IAmb IAmb 06 02 38.9
comp=Z,15nm,1.0s
J52A **Paris** 63.22 352 P P 06 02 15.4 -0.8
baz=170,SNR=5.9
I59A **Olmsteadville** 63.22 358 P P 06 02 16.1 -0.1
baz=177,SNR=6.2
I62A **Tamworth** 63.25 360 P P 06 02 15.8 -0.5
baz=180
I60A **Shoreham** 63.25 358 P P 06 02 16.5 +0.1
baz=178,SNR=5.5
I64A **Boothbay** 63.30 1 P P 06 02 16.9 +0.2
baz=182
I61A **Oroboro, Fairl** 63.31 359 P P 06 02 17.2 +0.4
baz=179,SNR=6.2
K48A **Perry** 63.35 349 P P 06 02 15.6 -1.4
baz=166
K47A **Vermontville** 63.38 348 P P 06 02 16.1 -1.2
baz=165
R32A **Long Quarter,** 63.40 336 IAmb IAmb 06 03 27.5
comp=Z,23nm,1.1s
NCB **Newcomb** 63.41 357 IAmb IAmb 06 02 36.4
comp=Z,20nm,1.2s
I57A **Carthage** 63.46 356 P P 06 02 17.2 -0.6
baz=175
L44A **Lake County Fo** 63.52 346 P P 06 02 16.7 -1.5
baz=162
L44A **Lake County Fo** 63.52 346 IAmb IAmb 06 03 08.0
comp=Z,22nm,1.0s
K46A **Dorr** 63.55 348 P P 06 02 16.7 -1.7
baz=164
LBNH **Lisbon** 63.62 359 P P 06 02 17.8 -1.0
baz=179
J49A **Marlette** 63.73 350 P P 06 02 18.1 -1.4
baz=167
J48A **Bridge Port** 63.77 350 P P 06 02 18.4 -1.4
baz=167
I51A **Listowel** 63.85 352 P P 06 02 19.6 -0.8
baz=170
H58A **Gabriels** 63.86 357 P P 06 02 20.0 -0.4
baz=177,SNR=5.3
I55A **Frankford** 63.89 355 P P 06 02 20.2 -0.4
baz=173
J47A **Sunmer** 63.90 349 P P 06 02 19.4 -1.3
baz=166
H61A **Lyndonville** 63.91 359 P P 06 02 21.0 +0.2
baz=179,SNR=5.1
ANMO **Albuquerque** 63.95 328 P P 06 02 21.8 +0.3
comp=Z,0.3nm,0.4s,baz=145,slow=9.4,SNR=6.5
ANMO **Albuquerque** 63.95 328 P P 06 02 22.2 +0.8
H62A **Milan** 63.95 360 P P 06 02 20.8 -0.2
baz=180
WVL **Waterville** 63.95 1 IAmb IAmb 06 02 22.6
comp=Z,14nm,1.0s
H60A **Morristown** 63.95 359 P P 06 02 20.6 -0.5
baz=178
H64A **Troy** 64.03 1 P P 06 02 21.1 -0.4
baz=182
H63A **New Sharon** 64.04 1 P P 06 02 22.0 +0.4
baz=181,SNR=6.9
H59A **Cadyville** 64.07 358 P P 06 02 21.6 -0.1
baz=177,SNR=5.2
LONY **Lake Ozonia** 64.08 357 P P 06 02 21.6 -0.3
baz=176,SNR=5.2
LONY **Lake Ozonia** 64.08 357 IAmb IAmb 06 02 39.7
comp=Z,22nm,1.0s
H65A **Eastbrook** 64.12 2 P P 06 02 21.4 -0.6
baz=183
CBKS **Cedar Bluff** 64.14 335 P P 06 02 21.6 -0.8
baz=150
H56A **Elgin** 64.15 356 P P 06 02 21.9 -0.3
baz=175
H55A **Tweed** 64.17 355 P P 06 02 22.3 -0.1
baz=174
DELO **Deloro Mine** 64.18 355 IAmb IAmb 06 02 23.4
comp=Z,22nm,1.1s
L40A **Anamosa** 64.23 343 IAmb IAmb 06 02 32.8
comp=Z,18nm,1.0s
H66A **Whiting** 64.24 3 P P 06 02 23.0 +0.1
baz=184,SNR=5.3
FRNY **Flat Rock** 64.25 358 IAmb IAmb 06 02 24.5
comp=Z,34nm,1.2s
H53A **Bobcaygeon** 64.33 354 P P 06 02 22.7 -0.7
baz=172,SNR=7.0
G60A **Masonville** 64.48 359 P P 06 02 24.7 +0.2
baz=179
G63A **Kingsbury** 64.50 1 P P 06 02 24.5 -0.1
baz=182
H52A **Wyevale** 64.53 353 P P 06 02 24.1 -0.7
baz=171,SNR=5.2
SADO **Sadowa** 64.58 354 P P 06 02 24.0 -1.1
comp=Z,24nm,1.1s,baz=202,slow=5.6,SNR=7.8
G57A **Newington** 64.58 357 P P 06 02 24.7 -0.4
baz=176,SNR=7.4
G62A **West of Eustis** 64.59 0 P P 06 02 25.3 +0.1
baz=181,SNR=22
G62A **West of Eustis** 64.59 0 P P 06 02 26.3 +1.1
I47A **Gladwin** 64.60 349 P P 06 02 23.6 -1.6
baz=166
GGN **Saint George** 64.60 3 IAmb IAmb 06 02 26.8
comp=Z,27nm,1.2s
SNAA **Sanae** 64.61 161 P P 06 02 26.1 +0.9
SNAA **Sanae** 64.61 161 P P 06 02 26.5 +1.3
SNAA IAmb IAmb 06 02 54.2
comp=Z,26nm,1.2s
G65A **Princeton** 64.65 3 P P 06 02 25.5 0.0
baz=184,SNR=6.1
G65A **Princeton** 64.65 3 IAmb IAmb 06 02 42.4
comp=Z,20nm,0.9s
SCIA **State Center** 64.65 342 P P 06 02 24.7 -1.0
baz=157
PKME **Peaks-Kenny Pk** 64.65 1 P P 06 02 25.3 -0.3
baz=182,SNR=5.6
PKME **Peaks-Kenny Pk** 64.65 1 IAmb IAmb 06 02 42.5
comp=Z,23nm,1.0s
G64A **Maxfield** 64.66 2 P P 06 02 25.5 0.0
baz=182,SNR=6.0
G61A **St-Isidore-de-** 64.66 360 P P 06 02 25.8 +0.1
baz=180,SNR=12
I46A **Reed City** 64.69 348 P P 06 02 24.0 -1.9
baz=165
T25A **Trinidad** 64.73 331 P P 06 02 25.2 -1.3
baz=145
JFWS **Jewell Farm** 64.77 344 P P 06 02 25.5 -1.0
baz=160
JFWS **Jewell Farm** 64.77 344 IAmb IAmb 06 02 36.0
comp=Z,17nm,1.0s
G55A **Calabogie** 64.84 356 P P 06 02 26.5 -0.2
baz=174,SNR=5.9
G53A **Haliburton** 64.87 354 P P 06 02 26.6 -0.4
baz=172,SNR=12
I45A **Fountain** 64.94 348 P P 06 02 26.9 -0.5
baz=164
ORIO **Orleans, Innes** 64.96 356 P P 06 02 27.2 -0.3
baz=175
H48A **Harrisville** 65.06 350 P P 06 02 27.2 -1.0
baz=167
G54A **Lake Saint Pet** 65.09 354 P P 06 02 28.1 -0.4
baz=173
F63A **Nahmakanta, Br** 65.10 1 P P 06 02 28.5 0.0
baz=182
F63A **Nahmakanta, Br** 65.10 1 IAmb IAmb 06 02 35.9
comp=Z,41nm,1.6s
H47A **Mio** 65.11 350 P P 06 02 27.1 -1.5
baz=166
F64A **Sherman** 65.28 2 P P 06 02 29.5 -0.1
baz=183,SNR=6.0
F64A **Sherman** 65.28 2 IAmb IAmb 06 02 46.6
comp=Z,29nm,1.1s
F61A **St Evariste** 65.35 360 P P 06 02 29.9 -0.2
baz=180
F60A **Warwick** 65.35 359 P P 06 02 29.8 -0.3
baz=179,SNR=5.9
I42A **Draeger Farm,** 65.37 346 IAmb IAmb 06 02 45.7
comp=Z,19nm,1.1s
LMN **Caledonia Moun** 65.46 5 IAmb IAmb 06 02 42.2
comp=Z,35nm,1.4s
KSCO **Kaye Shedlock'** 65.49 333 P P 06 02 31.0 -0.3
baz=147
F52A **Sundridge** 65.61 354 P P 06 02 31.0 -0.7
baz=172,SNR=5.4
ALGO **Algonquin Park** 65.64 355 P P 06 02 31.4 -0.6
baz=173
SDCO **Great Sand Dun** 65.72 330 P P 06 02 33.1 +0.1
baz=144,SNR=14
SDCO **Great Sand Dun** 65.72 330 IAmb IAmb 06 02 53.5
comp=Z,30nm,1.4s
E60A **Ste Agathe de** 65.74 360 P P 06 02 32.8 +0.2
baz=180
E58A **La Victoria** 65.78 358 P P 06 02 32.9 0.0
baz=178
E61A **Lac Etchemin** 65.80 0 P P 06 02 33.4 +0.4
baz=181,SNR=6.2
F51A **Arnstein** 65.81 353 P P 06 02 32.3 -0.7
baz=171
BGNE **Belgrade** 65.81 338 P P 06 02 32.5 -0.7
baz=152
E63A **Oxbow** 65.83 2 P P 06 02 32.7 -0.5
baz=183
E63A **Oxbow** 65.83 2 IAmb IAmb 06 02 44.5
comp=Z,30nm,1.4s
E57A **Chemin Saint G** 65.85 358 P P 06 02 33.0 -0.4
baz=177
E64A **Bridgewater** 65.85 2 P P 06 02 32.6 -0.7
baz=183
F49A **Sandfield** 65.91 352 P P 06 02 33.2 -0.5
baz=169
G46A **Petoskey** 65.92 349 P P 06 02 32.5 -1.3
baz=166
E55A **Montcerf-Lytto** 65.99 356 P P 06 02 33.1 -1.1
baz=175
E56A **St. Veronique** 66.02 357 P P 06 02 34.1 -0.3
baz=176,SNR=12
E52A **Mattawa** 66.03 354 P P 06 02 33.6 -0.8
baz=172
E53A **Dumoine, Ponti** 66.03 355 P P 06 02 33.9 -0.6
baz=173
E54A **Lac Daplat, Po** 66.05 355 P P 06 02 33.7 -0.9
baz=174
F48A **Evansville** 66.06 351 P P 06 02 33.4 -1.2
baz=168
D60A **Saint Jean D'O** 66.29 0 P P 06 02 35.8 -0.2
baz=180
E51A **1848 Merrick** 66.36 354 P P 06 02 35.8 -0.7
baz=171
D59A **Saint-Raymond** 66.38 359 P P 06 02 35.5 -1.2
baz=179
E50A **Wahnapitae** 66.39 353 P P 06 02 35.8 -1.0
baz=170
F45A **CMU Biological** 66.39 349 P P 06 02 35.4 -1.4
baz=165
D57A **Chemin Vers le** 66.44 358 P P 06 02 37.2 +0.1
baz=177,SNR=14
D63A **Stockholm** 66.46 2 P P 06 02 36.7 -0.5
baz=183
D62A **Allapoint, All** 66.48 1 P P 06 02 37.2 -0.1
baz=182,SNR=9.7
D62A **Allapoint, All** 66.48 1 P P 06 02 37.9 +0.6
D58A **Chemin du LacG** 66.49 359 P P 06 02 37.2 -0.2
baz=178,SNR=18
D56A **ZEC Mazanza, M** 66.51 357 P P 06 02 36.9 -0.7
baz=176,SNR=7.0
D55A **Sainte-Anne-du** 66.52 357 P P 06 02 37.0 -0.6
baz=176,SNR=9.7
Q24A **Divide** 66.55 331 P P 06 02 37.0 -1.4
baz=145
E48A **Lockeyer** 66.63 352 P P 06 02 37.4 -0.9
baz=169
D54A **Lac Fusel, La** 66.72 356 P P 06 02 37.9 -1.0
baz=174,SNR=7.0
D53A **Lac Vacive, Po** 66.73 355 P P 06 02 38.5 -0.5
baz=173,SNR=5.2
D53A **Lac Vacive, Po** 66.73 355 IAmb IAmb 06 03 15.0
comp=Z,22nm,1.1s
E47A **Iron Bridge** 66.77 351 P P 06 02 38.3 -0.9
baz=168
LATQ **La Tuque** 66.78 359 P P 06 02 38.8 -0.4
baz=178
OGNE **Ogallala** 66.88 335 P P 06 02 39.1 -1.1
baz=148
D51A **Lot 18 Range I** 66.89 354 P P 06 02 39.7 -0.3
baz=172
D50A **G1974 Best Tow** 67.02 353 P P 06 02 40.3 -0.5
baz=171,SNR=7.1
D48A **Paudash Townsh** 67.26 352 P P 06 02 41.8 -0.5
baz=169
D49A **Beulah Townshi** 67.30 352 P P 06 02 41.8 -0.8
baz=170
D47A **Chapleau** 67.33 351 P P 06 02 41.5 -1.3
baz=168
ECSD **EROS Data Cent** 67.36 340 P P 06 02 42.4 -0.7
baz=154,SNR=10
SPMN **Marine on St.** 67.59 343 P P 06 02 43.3 -1.2
baz=158
SPMN **Marine on St.** 67.59 343 IAmb IAmb 06 03 06.1
comp=Z,20nm,1.1s
IKP **In-Ko-Pah, Jac** 67.62 320 P P 06 02 42.8 -2.2
baz=134
VLDQ **Val d'Or** 67.74 355 IAmb IAmb 06 02 46.4
comp=Z,29nm,1.3s
LSQQ **Lebel-sur-Quev** 68.64 356 P P 06 02 50.2 -0.8
baz=174
SUSD **Miller** 68.76 339 P P 06 02 50.9 -0.9
baz=152
SUSD **Miller** 68.76 339 IAmb IAmb 06 03 11.5
comp=Z,26nm,1.1s
O20A **White River Ci** 68.91 330 IAmb IAmb 06 03 25.9
comp=Z,32nm,1.7s
F33A **5 Mile Ranch,** 69.15 341 IAmb IAmb 06 03 16.0
comp=Z,23nm,1.2s
CHGQ **Chibougamau** 69.35 358 P P 06 02 54.8 -0.6
baz=177,SNR=7.2
MATQ **Matagami** 69.39 355 P P 06 02 54.3 -1.2
baz=173,SNR=8.0
CIS **Catalina Islan** 69.55 319 P P 06 02 54.8 -2.2
baz=132
RWWY **Rawlins** 69.68 332 IAmb IAmb 06 03 17.6
comp=Z,25nm,1.4s
EYMN **Ely** 69.80 345 P P 06 02 56.9 -1.3
baz=160
DBIC **Dimbokro** 70.09 75 P P 06 02 58.5 -2.2
comp=Z,33nm,1.0s,baz=211,slow=4.8,SNR=12
DBIC LR LR 06 32 12.6
comp=Z,808nm,20.8s,baz=220,slow=35
DBIC Dimbokro 70.09 75 P 06 03 05.0 +4.2
DBIC **sP 06 03 14.3 +2.8**
DBIC **PcP 06 03 26.4 +3.7**
DBIC **Dimbokro** 70.09 75 IAmb IAmb 06 03 00.7
comp=Z,50nm,1.1s
K22A **Casper** 70.16 333 P P 06 03 00.5 -0.2
baz=145
K22A **Casper** 70.16 333 P P 06 03 00.6 -0.2
K22A IAmb IAmb 06 03 23.8
comp=Z,50nm,1.9s
EDW2 **Edwards Air Fo** 70.29 320 P P 06 03 01.6 0.0
baz=133
RSSD **Black Hills** 70.35 335 P P 06 03 02.5 +0.6
baz=147
RSSD **Black Hills** 70.35 335 P P 06 03 02.7 +0.8
QSPA **South Pole Qui** 70.50 180 P P 06 03 04.0 +1.5
LRMC **Laurel Mtn Rad** 70.51 321 P P 06 03 04.6 +1.6
baz=134
TPNV **Topopah Spring** 70.69 323 P P 06 03 05.2 +1.1
baz=135
FURC **Furnace Creek,** 70.71 322 P P 06 03 04.6 +0.6
baz=134,SNR=8.1
MPMC **Manual Prospec** 70.79 321 P P 06 03 05.1 +0.4
baz=134
ISA **Isabella, Lake** 71.10 321 P P 06 03 06.1 -0.4
baz=133
DUG **Dugway, Tooele** 71.20 327 P P 06 03 07.7 +0.6
baz=139,SNR=8.2
AGMN **Agassiz Nation** 71.25 343 P P 06 03 06.3 -0.8
baz=155,SNR=5.9
R11A **Troy Canyon, C** 71.31 324 P P 06 03 07.6 -0.3
baz=136
CWC **Cottonwood Cre** 71.40 321 P P 06 03 09.4 +1.0
baz=133
PKM **Mcpherson Peak** 71.40 319 P P 06 03 09.4 +0.9
baz=132
PDAR **Pinedale Array** 71.59 331 P P 06 03 10.6 +1.0
comp=Z,0.4nm,0.5s,baz=141,slow=7.3,SNR=8.8
PDAR **Pinedale Array** 71.59 331 **pP 06 03 16.9 0.0**
PDAR PcP 06 03 41.6 +13
PDAR **Pinedale Array** 71.59 331 P P 06 03 09.2 -0.4
BW06 **Boulder Array** 71.60 331 P P 06 03 09.7 +0.2
baz=142
SMMC **Simmler** 71.79 319 P P 06 03 11.7 +1.1
baz=132
MDND **Maddock** 71.97 340 P P 06 03 11.4 0.0
baz=152,SNR=5.3
TBI **Tubuai** 72.27 251 *e*S S 06 12 40.6 +5.1
comp=Z,278nm,27.0s
TBI **Tubuai** 72.27 251 *e*LR LR 06 25 26.3
comp=Z,1µm,28.2s,baz=104
SNOW **Snow King Moun** 72.69 331 IAmb IAmb 06 03 22.7
comp=Z,47nm,2.0s
ULM **Lac du Bonnet** 73.03 344 P P 06 03 17.2 -0.4
comp=Z,3.9nm,0.7s,baz=151,slow=5.3,SNR=5.7
ULM LR LR 06 37 47.9
comp=Z,389nm,19.7s,baz=140,slow=38
FLWY **Flagg Ranch** 73.14 331 IAmb IAmb 06 03 42.6
comp=Z,27nm,1.2s
PMOZ **Porto Moniz, M** 73.24 45 *e*LR LR 06 32 19.0
comp=Z,334nm,20.0s
RLMT **Red Lodge** 73.32 333 P P 06 03 20.6 +0.8
baz=143,SNR=10.0
H17A **Grant Village** 73.33 331 P P 06 03 20.3 +0.4
baz=141
LAO **LASA Array** 73.34 335 P P 06 03 19.9 +0.2
baz=146
LAO **LASA Array** 73.34 335 IAmb IAmb 06 03 26.8
comp=Z,43nm,1.5s
YERR **Yerington** 73.81 323 P P 06 03 23.5 +0.8
PPT2 **Papeete2** 73.86 257 *e*S S 06 12 55.7 +1.8
comp=Z,1µm,25.8s
PPT2 **Papeete2** 73.86 257 *e*LR LR 06 26 13.2
comp=Z,771nm,24.8s,baz=98
PPT **Papeete** 73.87 257 LR LR 06 27 41.2
comp=Z,203nm,21.4s,baz=116,slow=29
DGMT **Dagmar** 74.06 338 P P 06 03 24.3 +0.5
baz=148,SNR=7.6
DGMT **Dagmar** 74.06 338 IAmb IAmb 06 03 25.8
comp=Z,51nm,1.4s
SCHQ **Schefferville** 74.30 2 LR LR 06 39 55.3
comp=Z,378nm,18.0s,baz=236,slow=39
MFID **Camas Ranch** 75.09 328 IAmb IAmb 06 03 38.2
comp=Z,52nm,1.7s
ORV **Oroville** 75.49 322 P P 06 03 33.4 +1.2
ORV IAmb IAmb 06 03 53.6
comp=Z,46nm,1.5s
EGMT **Eagleton** 75.83 334 P P 06 03 33.7 -0.4
baz=143,SNR=11
O03E **Paynes Creek** 76.15 322 P P 06 03 35.8 -0.3
baz=131
O02D **Mt. Diablo Mer** 76.65 322 P P 06 03 38.7 -0.2
baz=131
MSO **Missoula** 76.71 331 P P 06 03 39.9 +0.7
baz=139
N02D **Trinity Center** 77.11 322 P P 06 03 42.1 +0.6
baz=131
M04C **Macdoel** 77.15 323 P P 06 03 41.9 +0.1
baz=132
M02C **Callahan** 77.47 323 P P 06 03 45.3 +1.8
baz=131
K04D **Chiloquin, OR** 77.66 324 P P 06 03 45.5 +0.9
baz=132
L04D **Klamath Falls** 77.70 324 P P 06 03 46.2 +1.3
baz=131
J05D **Fort Rock, OR** 77.82 325 P P 06 03 46.5 +1.0
baz=132
VNDA **Vanda** 78.29 190 P P 06 03 49.1 +1.7
comp=Z,0.5nm,0.8s,baz=212,slow=3.3,SNR=1.8
TORD **Torodi Ar. Bea** 78.58 72 P P 06 03 48.8 -1.4
comp=Z,52nm,1.0s,baz=259,slow=5.0,SNR=124
TORD LR LR 06 36 37.1
comp=Z,948nm,21.8s,baz=260,slow=34
I05D **Terrebonne, OR** 78.58 326 P P 06 03 51.0 +1.3
baz=132
FFC **Flin Flon** 78.72 342 P P 06 03 49.9 -0.1
FFC IAmb IAmb 06 04 05.8
comp=Z,40nm,2.0s
K02D **Willamette Mer** 78.78 323 P P 06 03 52.0 +1.2
baz=130
I04A **Tendick Farm,** 78.80 325 P P 06 03 52.3 +1.6
baz=132
SYO **Syowa Base** 78.86 160⇑ *e*pP P 06 03 51.4 +0.7
SYO **Syowa Base** 78.86 160⇓ *e*PcP P 06 03 55.0 +4.3
G05D **Wamic, OR** 79.18 326 P P 06 03 53.7 +0.9
baz=133
J01E **Myrtle Point** 79.23 324 P P 06 03 54.0 +1.0
baz=130
NEW **Newport** 79.23 331 P P 06 03 55.2 +2.2
baz=136
I03D **Drain, OR** 79.25 324 P P 06 03 53.9 +0.8
baz=131
G03D **McMinnville, O** 80.19 325 P P 06 03 58.8 +0.6
baz=131
E04D **Cinebar** 80.71 327 P P 06 04 01.7 +0.7
baz=132
B05A **Bryant** 81.61 328 P P 06 04 05.8 +0.1
baz=132
D03D **Eldon** 81.62 327 P P 06 04 06.7 +0.9
baz=131
A04D **Lummi Island** 82.22 328 P P 06 04 09.7 +0.8
baz=132
PVAQ **Vaqueiros** 82.22 46 *e*LR LR 06 33 18.3
comp=Z,462nm,18.0s
PMRV **Marv??o** 83.51 44 *e*LR LR 06 37 31.8
comp=Z,443nm,18.0s
MTE **Manteigas** 83.92 43 *e*P P 06 04 18.5 +0.4
comp=Z,61nm,1.4s
MTE **Manteigas** 83.92 43 *e*LR LR 06 34 46.5
comp=Z,764nm,18.0s
PGAV **Gavieira, Arco** 84.30 42 *e*LR LR 06 35 42.1
comp=Z,930nm,20.0s
MVO **Moncorvo** 84.66 43 *e*P P 06 04 22.4 +0.6
comp=Z,51nm,1.7s
MVO **Moncorvo** 84.66 43 *e*LR LR 06 35 24.1
comp=Z,714nm,18.0s
PAB **San Pablo** 85.59 45 P P 06 04 26.9 +0.4
PAB IAmb IAmb 06 04 36.9
comp=Z,33nm,1.3s
TAM **Tamanrasset** 85.74 64 P P 06 04 27.8 +0.1
ESDC **Sonseca Array** 85.91 45 P P 06 04 27.7 -0.4
comp=Z,8.4nm,1.1s,baz=240,slow=5.2,SNR=19
ESDC LR LR 06 42 37.0
comp=Z,419nm,18.1s,baz=235,slow=36
ESDC **Sonseca Array** 85.91 45 P P 06 04 28.6 +0.5

ESDC							pP	06 04 37.7	+1.5
BOSA	**Boshof**	**85.99**	**119**		P		**P**	**06 04 28.9**	**-0.1**
	comp=Z,8.9nm,1.1s,baz=278,slow=6.6,SNR=4.1								
BOSA					LR		LR	06 39 51.3	
	comp=Z,713nm,19.3s,baz=250,slow=34								
BOSA	**Boshof**	**85.99**	**119**		P		**P**	**06 04 30.4**	**+1.4**
BOSA					IAmb		IAmb	06 04 39.2	
	comp=Z,45nm,1.6s								
MAW	**Mawson**	**86.60**	**164**		P		**P**	**06 04 32.3**	**+1.3**
	comp=Z,7.6nm,1.1s,baz=218,slow=5.4,SNR=6.4								
YKA	**Yellowknife Ar**	**88.86**	**341**		P		**P**	**06 04 41.6**	**0.0**
	comp=Z,28nm,1.2s,baz=136,slow=5.2,SNR=91								
YKA					LR		LR	06 47 49.5	
	comp=Z,316nm,19.9s,baz=0.0,slow=38								
KEST	**Kesra**	**93.76**	**53**		LR		LR	06 47 29.8	
	comp=Z,542nm,20.5s,baz=190,slow=36								
SUMG	**Summit**	**94.58**	**9**		P		**P**	**06 05 08.7**	**+0.2**
SUMG					IAmb		IAmb	06 05 36.1	
	comp=Z,18nm,1.2s								
SUMG	**Summit**	**94.58**	**9**	*i*	P		**P**	**06 05 08.6**	**+0.1**
	comp=Z,55nm,1.4s								
C36M	**Paulatuk**	**96.45**	**343**		P		**P**	**06 05 17.5**	**+0.9**
	baz=131								
A36M	**Sachs Harbour**	**98.46**	**345**		P		**P**	**06 05 25.9**	**+0.3**
	baz=129								
HDA	**Harding Lake**	**101.69**	**335**		P		**Pdif**	**06 05 40.6**	**+0.4**
	baz=111								
DZM	**Mont Dzumac**	**110.23**	**236**	*e*	LR		LR	06 43 11.4	
	comp=Z,522nm,22.6s								
H11S2	**WAKE ISLAND Hyl**	**25.72**	**279**		T		T	08 30 06.5	
	baz=101,slow=74,SNR=114								
H11S1	**WAKE ISLAND Hyl**	**25.73**	**279**		T		T	08 30 10.5	
	baz=101,slow=74,SNR=74								
H11S3	**WAKE ISLAND Hyl**	**25.74**	**279**		T		T	08 30 11.2	
	baz=101,slow=74,SNR=72								
H11N3	**WAKE ISLAND Hyl**	**25.77**	**281**		T		T	08 30 09.1	
	baz=100,slow=75,SNR=45								
H11N2	**WAKE ISLAND Hyl**	**25.78**	**281**		T		T	08 30 11.0	
	baz=100,slow=75,SNR=39								
H11N1	**WAKE ISLAND Hyl**	**25.78**	**281**		T		T	08 30 11.9	
	baz=100,slow=75,SNR=24								
ASAR	**Alice Springs**	**130.56**	**210**		PKP		**PKPdf**	**06 10 59.8**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=126,slow=1.6,SNR=6.0								
ASAR	**Alice Springs**	**130.56**	**210**				**PKPdf**	**06 10 59.2**	**-0.4**
ABKAR	**Akbulak array**	**131.09**	**41**				**PKPdf**	**06 10 59.3**	**-0.3**
WRA	**Warramunga Arr**	**133.47**	**214**		PKP		**PKPdf**	**06 11 05.2**	**+0.1**
	comp=Z,1.6nm,1.1s,baz=134,slow=1.7,SNR=8.4								
WRA	**Warramunga Arr**	**133.47**	**214**				**PKiKP**	**06 11 06.5**	**+0.2**
KURK	**Kurchatov**	**140.81**	**31**				**PKPdf**	**06 11 18.4**	**+0.8**
ZALV	**Zalesovo Beam**	**141.08**	**23**		PKP		**PKPdf**	**06 11 16.8**	**-1.2**
	comp=Z,4.2nm,0.9s,baz=294,slow=1.5,SNR=13								
ZALV	**Zalesovo Beam**	**141.08**	**23**				pPKPdf	06 11 27.2	+1.1
ZALV	**Zalesovo Beam**	**141.08**	**23**				**PKPdf**	**06 11 15.1**	**-3.0**
KDJ	**Kajisay**	**145.00**	**43**				**PKPdf**	**06 11 26.4**	**+0.8**
MKAR	**Makanchi Array**	**145.23**	**33**		PKPbc		**PKPbc**	**06 11 25.6**	**+0.3**
	comp=Z,19nm,1.0s,baz=320,slow=3.2,SNR=75								
MKAR	**Makanchi Array**	**145.23**	**33**				pPKPab	06 11 47.2	+14
MKAR	**Makanchi Array**	**145.23**	**33**				**PKPbc**	**06 11 24.6**	**-0.7**
NIL	**Nilore**	**145.31**	**59**				**PKPbc**	**06 11 26.2**	**+0.2**
KSH	**Kashi**	**145.39**	**48**		PKPbc		**PKPab**	**06 11 26.8**	**+0.4**
KSH					PP		**PP**	**06 14 49.8**	**+3.7**
KSH					PKS			06 15 02.5	
KSH					SKKS			06 21 39.4	
KSH					SS		SS	06 33 42.8	+6.3
KSH					AMB		AMB		
	comp=Z,340nm,6.8s								
KSH					LR		LR		
	comp=Z,280nm,18.9s								
KSH					LR		LR		
	comp=Z,95nm,12.4s								
KSH					LR		LR		
	comp=Z,240nm,12.9s								
PRZ	**Przheval'sk**	**145.59**	**42**				**PKPab**	**06 11 29.0**	**+1.9**
USA0B	**Ussuriysk Arra**	**148.95**	**327**				**PKiKP**	**06 11 37.1**	**-0.1**
USRK	**Ussuriysk Ar.**	**148.95**	**327**		PKPbc		**PKPbc**	**06 11 36.1**	**+0.2**
	comp=Z,7.3nm,1.0s,baz=90,slow=3.8,SNR=10								
USRK	**Ussuriysk Ar.**	**148.95**	**327**				**PKPab**	**06 11 42.9**	**+3.0**
USRK	**Ussuriysk Ar.**	**148.95**	**327**				**PKPbc**	**06 11 35.7**	**-0.1**
MJAR	**Matsushiro Arr**	**149.44**	**309**		PKPbc		**PKPbc**	**06 11 38.0**	**+0.6**
	comp=Z,5.7nm,1.0s,baz=192,slow=0.9,SNR=12								
MJAR	**Matsushiro Arr**	**149.44**	**309**				**PKiKP**	**06 11 38.3**	**-0.2**
WMQ	**Urumqi**	**150.03**	**32**	*e*	PKPbc		**PKPdf**	**06 11 33.9**	**+0.2**
WMQ					LR		LR		
	comp=Z,580nm,26.9s								
WMQ					LR		LR		
	comp=Z,1μm,28.9s								
WMQ					LR		LR		
	comp=Z,290nm,22.9s								
HYB	**Hyderabad**	**151.03**	**89**	*i*	PKP		**PKPbc**	**06 11 42.0**	**+0.3**
SONM	**Songino Array**	**151.84**	**4**		PKP		**PKPdf**	**06 11 36.4**	**-0.1**
	comp=Z,1.1nm,1.0s,baz=292,slow=0.8,SNR=6.8								
SONM					PKPbc		**PKiKP**	**06 11 43.9**	**+0.6**
	comp=Z,5.3nm,1.0s,baz=309,slow=1.0,SNR=21								
SONM					PKPab		**sPKPbc**	**06 11 53.8**	**+0.2**
	comp=Z,4.2nm,0.9s,baz=63,slow=0.3,SNR=4.9								
SONM	**Songino Array**	**151.84**	**4**				**PKPdf**	**06 11 36.7**	**+0.3**
SONM							**PKPbc**	**06 11 43.0**	**+0.2**
ULN	**Ulaanbaatar**	**151.84**	**3**				**PKiKP**	**06 11 44.4**	**+1.1**
KSRS	**Korea Array**	**155.82**	**321**		PKP		**PKPdf**	**06 11 42.1**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=135,slow=0.2,SNR=6.8								
KSAR	**Wonju Array Be**	**155.85**	**321**				**PKPdf**	**06 11 43.4**	**+1.1**
GTA	**Gaotai**	**158.79**	**20**	*e*	PKP		**PKPdf**	**06 11 47.3**	**+1.2**
GTA					PKPab		**pPKPab**	**06 12 28.5**	**-1.1**
GTA					PP		**PP**	**06 16 08.3**	**+6.8**
GTA					AMB		AMB		
	comp=Z,56nm,4.6s								
GTA					LR		LR		
	comp=Z,180nm,22.2s								
GTA					LR		LR		
	comp=Z,380nm,22.2s								
GTA					LR		LR		
	comp=Z,260nm,20.0s								
HHC	**Hu-ho-hao-te**	**158.79**	**355**	*e*	PKP		**PKPdf**	**06 11 40.4**	**-5.7**
HHC					AMB		AMB		
	comp=Z,85nm,9.2s								
HHC					LR		LR		
	comp=Z,190nm,20.4s								
HHC					LR		LR		
	comp=Z,270nm,19.6s								
HHC					LR		LR		
	comp=Z,130nm,20.6s								
LZH	**Lanzhou**	**163.03**	**15**	*e*	PKP		PKPdf	06 11 42.8	-8.0
LZH					pPKP		pPKPdf	06 11 53.0	-5.8
LZH					sPKP			06 11 56.6	
LZH					LR		LR		
	comp=N,280nm,19.7s								
LZH					LR		LR		
	comp=E,200nm,19.5s								
LZH					LR		LR		
	comp=Z,300nm,21.2s								
NJ2	**Nanjing**	**164.86**	**326**	*e*	PKP		**PKPdf**	**06 11 51.4**	**-1.0**
CD2	**Chengdu**	**167.85**	**22**		PKP		**PKPdf**	**06 11 53.3**	**-1.5**
CD2					PP		**PP**	**06 16 48.6**	**-0.6**
CD2					SKS		**SKSdf**	**06 18 57.3**	**+0.2**
CD2					AMB		AMB		
	comp=Z,260nm,11.4s								
CD2					LR		LR		
	comp=Z,380nm,18.4s								
CD2					LR		LR		
	comp=Z,280nm,16.5s								
CD2					LR		LR		
	comp=Z,370nm,18.6s								
CMAR	**Chiang Mai Arr**	**170.37**	**96**		PKP		**PKPdf**	**06 11 57.4**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=244,slow=2.4,SNR=6.3								
CMAR					PKPab		**PKPab**	**06 13 12.8**	**-0.6**
	comp=Z,3.7nm,1.0s,baz=254,slow=5.9,SNR=11								
CMAR	**Chiang Mai Arr**	**170.37**	**96**				**PKPab**	**06 13 13.5**	**+0.1**
KMI	**Kunming**	**172.05**	**46**		PKP		**PKPdf**	**06 11 57.6**	**-0.1**
GYA	**Guiyang**	**172.91**	**18**	*e*	PKP		**PKPdf**	**06 11 56.3**	**-1.6**
GYA					PKPab		**PKPab**	**06 13 24.8**	**+0.6**
GYA					PKS		**PKSdf**	**06 15 27.0**	**-3.4**
GYA					PP		**PP**	**06 17 17.8**	**+3.2**
GYA					AMB		AMB		
	comp=Z,120nm,8.2s								
QIZ	**Qiongzhong**	**179.00**	**229**		PKP		**PKPdf**	**06 11 56.8**	**-2.5**
QIZ					PP		**PP**	**06 17 43.8**	**-0.9**
QIZ					SS		SS	06 39 27.8	+2.1
QIZ					AMB		AMB		
	comp=Z,200nm,8.0s								
QIZ					LR		LR		
	comp=Z,280nm,19.1s								
QIZ					LR		LR		
	comp=Z,160nm,18.6s								
QIZ					LR		LR		
	comp=Z,270nm,17.2s								

IDC **14** *05:52:08.5±0.9, 7.00N×73.17W, h145km±58km, mb2.7/2, mb1 3.2/4, mb1mx3.0/32, mbtmp3.4/4, Error ellipse: s-maj=128.2km s-min=7.7km az=133.0*
RSNC **14** *05:52:08.9±1.2, 6.82N×73.12W, h147km±5km, ML3.2, Mw3.7, Fault plane solution: NP1:δ=37.00000°, δ10.00000°, λ138.00000°.*

ISC 14 05:52:06.9±0.8, 6.85N±0.03×73.11W±0.03, h157km±6km, n39, σ1°53/69, 4C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**0.63**	**40**	⇓*eP*		**Pn**	**05 52 32.0**	**+1.8**
PAMC				*eS*		**Sn**	**05 52 48.3**	**+0.2**
PAMC				*i*			05 52 51.3	
	comp=Z,395nm,0.4s							
BRRC	**Barranca, Sant**	**0.65**	**293**	⇑*iP*		**Pn**	**05 52 30.9**	**+1.1**
BRRC				*eS*		**Sn**	**05 52 47.3**	**0.0**
RUSC	**La Rusia**	**0.95**	**179**	⇓*eP*		**Pn**	**05 52 33.0**	**+0.6**
RUSC				*eS*		**Sn**	**05 52 51.8**	**-0.3**
RUSC				*i*			05 52 52.9	
	comp=Z,228nm,0.3s							
TAMC	**Tame, Arauca**	**1.37**	**107**	⇓*iP*		**Pn**	**05 52 37.6**	**+1.9**
TAMC				*i*			05 52 37.9	
	comp=Z,230nm,0.3s							
TAMC				*eS*		**Sn**	**05 52 58.8**	**+1.0**
PTBC	**PUERTO BERRIO,**	**1.38**	**257**	*eP*		**Pn**	**05 52 35.3**	**-0.4**
PTBC				*eS*		**Sn**	**05 52 56.8**	**-1.1**
PTBC				*i*			05 53 03.9	
	comp=Z,220nm,0.6s							
OCAC	**Ocana**	**1.40**	**351**	*eP*		**Pn**	**05 52 37.1**	**+1.0**
OCAC				*eS*		**Sn**	**05 52 59.1**	**+0.5**
OCAC				*i*			05 53 02.5	
	comp=Z,134nm,0.2s							
SPBC	**San Pablo de B**	**1.53**	**219**	⇑*eP*		**Pn**	**05 52 37.9**	**+0.5**
SPBC				*eS*		**Sn**	**05 53 00.4**	**-0.4**
SPBC				*i*			05 53 06.4	
	comp=Z,207nm,0.3s							
ZARC	**Zaragoza, Cauc**	**1.85**	**290**	*eP*		**Pn**	**05 52 41.6**	**+0.8**
ZARC				*eS*		**Sn**	**05 53 06.8**	**0.0**
ZARC				*i*			05 53 09.7	
	comp=Z,78nm,0.2s							
SMLC	**San Martn de**	**2.16**	**334**	*eP*		**Pn**	**05 52 45.1**	**+0.9**
SMLC				*eS*		**Sn**	**05 53 13.5**	**+0.3**
SMLC				*i*			05 53 18.7	
	comp=Z,126nm,0.3s							
NORC	**Norcasia**	**2.17**	**234**	*eP*		**Pn**	**05 52 44.9**	**+0.4**
NORC				*eS*		**Sn**	**05 53 12.8**	**-0.6**
NORC				*i*			05 53 19.1	
	comp=Z,94nm,0.3s							
CHIC	**Chingaza**	**2.29**	**196**	*eP*		**Pn**	**05 52 47.0**	**+0.7**
CHIC				*eS*		**Sn**	**05 53 16.2**	**-0.4**
CHIC				*i*			05 53 19.9	
	comp=Z,112nm,0.4s							
ROSC	**El Rosal**	**2.33**	**211**	P		**Pn**	**05 52 48.8**	**+2.0**
	comp=Z,45nm,0.3s,baz=285,slow=19,SNR=82							
ROSC				S		**Sn**	**05 53 20.4**	**+3.0**
	comp=Z,56nm,0.3s,baz=21,slow=23,SNR=17							
ROSC	**El Rosal**	**2.33**	**211**	*eP*		**Pn**	**05 52 48.6**	**+1.9**
ROSC				*eS*		**Sn**	**05 53 18.0**	**+0.5**
ROSC				*i*			05 53 23.9	
	comp=Z,146nm,0.4s							
HELC	**Santa Helena**	**2.50**	**255**	*eP*		**Pn**	**05 52 50.2**	**+1.6**
HELC				*eS*		**Sn**	**05 53 21.0**	**+0.2**
HELC				*i*			05 53 27.2	
	comp=Z,99nm,0.3s							
UREC	**San Jos de Ur**	**2.57**	**291**	*eP*		**Pn**	**05 52 49.0**	**-0.2**
UREC				*eS*		**Sn**	**05 53 21.1**	**-0.8**
UREC				*i*			05 53 31.8	
	comp=Z,99nm,0.2s							
SOCV	**Socops**	**2.65**	**57**	*eP*		**Pn**	**05 52 51.5**	**+1.4**
SOCV				*eS*		**Sn**	**05 53 23.2**	**-0.4**
GUY2C	**Guyana, Caldas**	**2.77**	**234**	*eP*		**Pn**	**05 52 53.5**	**+1.4**
GUY2C				*eS*		**Sn**	**05 53 27.4**	**+0.4**
GUY2C				*i*			05 53 33.3	
	comp=Z,73nm,0.3s							
VILC	**Villavicencio,**	**2.78**	**192**	*eP*		**Pn**	**05 52 52.6**	**+0.6**
VILC				*eS*		**Sn**	**05 53 26.6**	**-0.3**
VILC				*i*			05 53 29.9	
	comp=Z,124nm,0.5s							
PTGC	**Puerto Gaitan,**	**2.81**	**160**	⇓*eP*		**Pn**	**05 52 52.3**	**+0.2**
PTGC				*eS*		**Sn**	**05 53 25.8**	**-1.3**
PTGC				*i*			05 53 28.2	
	comp=Z,89nm,0.4s							
RREF	**El Recreo**	**2.95**	**229**	*eP*		**Pn**	**05 52 55.5**	**+1.0**
RREF				*eS*		**Sn**	**05 53 32.1**	**+0.7**
RREF				*i*			05 53 41.4	
	comp=Z,109nm,0.4s							
CBOC	**Ciudad Bolivar**	**3.05**	**251**	*eS*		**Sn**	**05 53 32.8**	**0.0**
DBBC	**Dabeiba**	**3.09**	**273**	*eP*		**Pn**	**05 52 56.6**	**+1.0**
DBBC				*eS*		**Sn**	**05 53 33.3**	**-0.1**
TOLC	**Tolima**	**3.15**	**225**	*eP*		**Pn**	**05 52 58.5**	**+1.7**
TOLC				*eS*		**Sn**	**05 53 35.2**	**-0.1**
TOLC				*i*			05 53 42.7	
	comp=Z,34nm,0.6s							
SDV	**Santo Domingo**	**3.18**	**50**	P		**Pn**	**05 52 58.7**	**+1.8**
	comp=Z,5.4nm,0.3s,baz=248,slow=5.4,SNR=29							
SDV				S		**Sn**	**05 53 35.7**	**0.0**
	comp=Z,18nm,0.3s,baz=110,slow=23,SNR=41							
SDV	**Santo Domingo**	**3.18**	**50**	*eP*		**Pn**	**05 52 58.6**	**+1.7**
SDV				*eS*		**Sn**	**05 53 36.1**	**+0.4**
SDV				*i*			05 53 39.4	
	comp=Z,35nm,0.3s							
ARGC	**Ariguani, Magd**	**3.19**	**339**	⇑*eP*		**Pn**	**05 52 59.2**	**+2.2**
ARGC				*eS*		**Sn**	**05 53 37.6**	**+1.7**
ARGC				*i*			05 53 49.5	
	comp=Z,42nm,0.3s							
ANIL	**Santa Ana**	**3.27**	**224**	*eP*		**Pn**	**05 52 60.0**	**+1.7**
ANIL				*eS*		**Sn**	**05 53 38.5**	**+0.4**
PRAC	**Prado**	**3.58**	**210**	*eP*		**Pn**	**05 53 02.5**	**+0.5**
PRAC				*eS*		**Sn**	**05 53 44.8**	**-0.1**
PRAC				*i*			05 53 49.4	
	comp=Z,70nm,0.7s							
ELOV	**Elorza**	**3.60**	**87**	*eP*		**Pn**	**05 53 03.5**	**+1.3**
ELOV				*eS*		**Sn**	**05 53 44.7**	**-0.3**
ORTC	**Ortega, Tolima**	**3.62**	**216**	*eP*		**Pn**	**05 53 03.7**	**+1.3**
ORTC				*eS*		**Sn**	**05 53 45.9**	**+0.3**
ORTC				*i*			05 53 50.5	
	comp=Z,43nm,0.3s							
SJCC	**San Jacinto, C**	**3.66**	**326**	*eP*		**Pn**	**05 53 02.8**	**-0.2**
SJCC				*eS*		**Sn**	**05 53 44.3**	**-2.3**
SJCC				*i*			05 53 52.0	
	comp=Z,22nm,0.4s							
DABV	**Dabajuro**	**4.72**	**31**	*eP*		**Pn**	**05 53 18.2**	**+1.4**
PCM	**Pelee Case Pet**	**14.11**	**55**	*eP*		**Pn**	**05 55 17.3**	**-2.6**
PML	**Morne Lenard**	**14.11**	**55**	*eP*		**Pn**	**05 55 16.5**	**-3.5**
GBMF	**Grand Be**	**14.13**	**55**	*eP*		**Pn**	**05 55 15.7**	**-4.6**
CXM	**Morne La Croix**	**14.14**	**55**	*eP*		**Pn**	**05 55 16.2**	**-4.2**
BAMF	**Morne Balai**	**14.16**	**55**	*eP*		**Pn**	**05 55 16.9**	**-3.8**
TXAR	**Lajitas Array**	**36.45**	**312**	P		**P**	**05 58 58.5**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=124,slow=11,SNR=2.1							
YKA	**Yellowknife Ar**	**63.24**	**340**	P		**P**	**06 02 20.0**	**+1.6**
	comp=Z,0.1nm,0.5s,baz=134,slow=7.1,SNR=6.1							

IDC **14** *05:57:38.6±2.3, 19.60S×70.86W, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.8/33, mbtmp4.0/5, ML3.6/1, Error ellipse: s-maj=67.1km s-min=35.1km az=8.0*
GUC **14** *05:57:41.6±0.7, 19.67S×71.12W, h34km±2km, ML3.9*
NEIC **14** *05:57:42.1±1.4, 19.74S±0.03×71.11W±0.09, h30km±6km, mb4.5/2, ML3.9(GUC), Error ellipse: s-maj=13.3km s-min=1.3km az=110.0*

ISC 14 05:57:39.2±2.0, 19.68S±0.03×71.12W±0.06, h10km±11km, n45, σ0°73/55, mb4.3/5, 8C-1D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.94**	**85**	*iP*		**Pg**	**05 57 57.5**	**+0.2**
PSGC				*iS*		**Sg**	**05 58 09.7**	**+0.2**
PSGCX	**Pisagua**	**0.94**	**85**	Pn		**Pb**	**05 57 58.0**	**+0.3**
TA02	**Huaiquique**	**1.10**	**123**	*eP*		**Pb**	**05 58 00.4**	**+0.1**
TA02				*iS*		**Sb**	**05 58 14.2**	**-0.5**
TA01	**Diego Aracena**	**1.25**	**135**	*iP*		**Pn**	**05 58 01.9**	**-0.9**
TA01				*iS*		**Sb**	**05 58 18.3**	**-0.7**
TA01				IAML			05 58 25.4	
	comp=E,3μm,0.5s							
TA01	**Diego Aracena**	**1.25**	**135**	Pn		**Pb**	**05 58 02.9**	**0.0**
PB12	**IPOC Station P**	**1.29**	**35**	⇑*iP*		**Pn**	**05 58 03.1**	**-0.4**
PB12				*iS*		**Sb**	**05 58 20.5**	**0.0**
PB12				IAML			05 58 22.8	
	comp=N,3μm,0.5s							
PB12	**IPOC Station P**	**1.29**	**35**	Pn		**Pb**	**05 58 03.6**	**-0.1**
PB11	**IPOC Station P**	**1.38**	**94**	⇑*iP*		**Pn**	**05 58 04.8**	**0.0**
PB11				*iS*		**Sb**	**05 58 22.3**	**-0.6**
PB11				IAML			05 58 30.2	
	comp=E,6μm,0.8s							
PB11	**IPOC Station P**	**1.38**	**94**	Pn		**Pb**	**05 58 05.2**	**-0.1**
PATCX	**Punta Patache**	**1.45**	**142**	Pn		**Pn**	**05 58 05.9**	**+0.2**
AP01	**Chacalluta**	**1.49**	**29**	*iP*		**Pn**	**05 58 06.2**	**0.0**
AP01				*iS*		**Sn**	**05 58 23.9**	**-1.8**
MNMC	**Minye Minye**	**1.53**	**69**	⇓*iP*		**Pb**	**05 58 07.5**	**-0.5**
MNMC				*iS*		**Sb**	**05 58 27.4**	**-0.2**
MNMC				IAML			05 58 34.7	
	comp=E,4μm,0.6s							
MNMC	**Minye Minye**	**1.53**	**69**	Pn		**Pb**	**05 58 07.7**	**-0.3**
GO01	**Chusmiza**	**1.81**	**90**	⇑*iP*		**Pn**	**05 58 11.5**	**+0.5**
GO01				*iS*		**Sb**	**05 58 35.1**	**-0.6**
GO01				IAML			05 58 36.8	
	comp=N,4μm,0.2s							
GO01	**Chusmiza**	**1.81**	**90**	Pn		**Pn**	**05 58 11.7**	**+0.8**
PB08	**IPOC Station P**	**1.90**	**104**	*iP*		**Pn**	**05 58 12.6**	**+0.4**
PB08				*iS*		**Sn**	**05 58 37.2**	**+0.8**
PB08				IAML			05 58 41.8	
	comp=N,911nm,0.6s							
PB08	**IPOC Station P**	**1.90**	**104**	Pn		**Pn**	**05 58 12.4**	**+0.3**
PB02	**IPOC Station P**	**1.99**	**145**	⇑*iP*		**Pn**	**05 58 13.6**	**+0.4**
PB02				*iS*		**Sn**	**05 58 38.3**	**0.0**
PB02				IAML			05 58 46.6	
	comp=E,2μm,0.5s							
PB16	**IPOC Station P**	**2.02**	**49**	⇑*iP*		**Pn**	**05 58 14.6**	**+0.5**
PB16				*iS*		**Sn**	**05 58 40.7**	**+1.0**
PB16	**IPOC Station P**	**2.02**	**49**	Pn		**Pn**	**05 58 14.8**	**+0.8**
PB01	**IPOC Station P**	**2.04**	**132**	⇑*iP*		**Pn**	**05 58 14.4**	**+0.5**
PB01				*iS*		**Sn**	**05 58 38.7**	**-0.8**
PB01	**IPOC Station P**	**2.04**	**132**	Pn		**Pn**	**05 58 14.3**	**+0.5**
PB07	**IPOC Station P**	**2.34**	**151**	⇑*iP*		**Pn**	**05 58 18.2**	**+0.2**
PB07	**IPOC Station P**	**2.34**	**151**	Pn		**Pn**	**05 58 18.5**	**+0.5**
PB03	**IPOC Station P**	**2.68**	**152**	⇑*iP*		**Pn**	**05 58 22.8**	**+0.2**
PB03				IAML			05 59 13.5	
	comp=E,268nm,0.4s							
PB09	**IPOC Station P**	**2.74**	**141**	*eP*		**Pn**	**05 58 24.8**	**+1.3**
PB09				IAML			05 59 19.2	
	comp=E,630nm,0.3s							
PB09	**IPOC Station P**	**2.74**	**141**	Pn		**Pn**	**05 58 25.2**	**+1.7**
PB04	**IPOC Station P**	**2.79**	**161**	*iP*		**Pn**	**05 58 24.2**	**0.0**
PB04				IAML			05 59 16.1	
	comp=E,399nm,0.4s							
PB04	**IPOC Station P**	**2.79**	**161**	Pn		**Pn**	**05 58 24.2**	**0.0**
PB05	**IPOC Station P**	**3.27**	**165**	*iP*		**Pn**	**05 58 30.6**	**-0.2**
PB05				IAML			05 59 39.1	
	comp=N,151nm,0.4s							
PB06	**IPOC Station P**	**3.34**	**155**	*iP*		**Pn**	**05 58 31.4**	**-0.3**
PB06				IAML			05 59 43.8	
	comp=E,224nm,0.3s							
PB06	**IPOC Station P**	**3.34**	**155**	Pn		**Pn**	**05 58 31.3**	**-0.4**
LVC	**Limon Verde**	**3.57**	**145**	Pn		**Pn**	**05 58 36.0**	**+0.9**
PB15	**IPOC Station P**	**3.83**	**157**	Pn		**Pn**	**05 58 38.3**	**-0.3**
PB10	**IPOC Station P**	**3.85**	**172**	Pn		**Pn**	**05 58 37.5**	**-1.1**
LPAZ	**La Paz**	**4.41**	**41**	Pn		Pb	05 58 52.0	-5.2
	comp=E,1.3nm,0.3s,baz=240,slow=8.8,SNR=1.3							
GO02	**Mina Guanaco**	**5.64**	**166**	Pn		**Pn**	**05 59 03.3**	**-0.1**
SIV	**San Ignacio**	**10.24**	**71**	Pn		**Pn**	**06 00 05.5**	**-1.0**
	comp=E,0.5nm,0.3s,baz=272,slow=15,SNR=0.9							
PTGA	**Pitinga**	**21.77**	**31**	P		**P**	**06 02 29.5**	**-1.8**
	comp=E,4.5nm,0.4s,baz=288,slow=22,SNR=6.8							
PTGA	**Pitinga**	**21.77**	**31**	IAmb		IAmb	06 02 31.8	
	comp=Z,22nm,1.2s							
TXAR	**Lajitas Array**	**57.97**	**326**	P		**P**	**06 07 33.6**	**+1.4**
	comp=Z,0.2nm,0.7s,baz=144,slow=7.8,SNR=1.6							
M56A	**Emporium**	**61.20**	**354**	P		**P**	**06 07 54.5**	**+0.3**
M56A				IAmb		IAmb	06 07 55.2	
	comp=Z,3.6nm,0.8s							
TORD	**Torodi Ar. Bea**	**78.72**	**72**	P		**P**	**06 09 41.4**	**-1.1**
	comp=Z,2.7nm,0.7s,baz=249,slow=5.0,SNR=11							
YKA	**Yellowknife Ar**	**88.80**	**341**	P		**P**	**06 10 33.9**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=134,slow=4.8,SN

comp=E,4113µm,0.8s
KTHA AML AML 06 12 56.6
comp=N,2149µm,0.8s
LAST Lasithi 1.66 79 P **Pn 06 12 24.1 +2.8**
LAST S **Sn 06 12 46.1 +4.6**
comp=N,1µm,0.7s
LAST Lasithi 1.66 79 P **Pn 06 12 24.3 +2.9**
LAST AML AML 06 12 57.8
comp=N,2779µm,0.8s
LAST AML AML 06 13 03.9
comp=E,2286µm,1.0s
NPS Neapolis 1.79 76 P **Pn 06 12 26.2 +3.2**
NPS S **Sn 06 12 49.0 +4.5**
comp=E,1µm,0.9s
NPS Neapolis 1.79 76 P **Pn 06 12 26.2 +3.2**
NPS S **Sn 06 12 48.0 +3.5**
NPS AML AML 06 13 00.1
comp=N,2541µm,0.9s
NPS AML AML 06 13 06.7
comp=E,2360µm,0.6s
VLI Veliai 1.91 347 P **Pn 06 12 27.8 +3.1**
VLI Veliai 1.91 347 P **Pn 06 12 26.7 +2.0**
VLI AML AML 06 13 03.0
comp=N,1813µm,0.7s
VLI AML AML 06 13 14.0
comp=E,1338µm,1.3s
MHLO Agia Marina, M 1.97 22 P **Pn 06 12 27.4 +1.9**
MHLO Agia Marina, M 1.97 22 P **Pn 06 12 26.8 +1.2**
MHLA Plaka, Milos I 2.03 22 P **Pn 06 12 28.0 +1.6**
THR6 Thira Island, 2.16 46 P **Pn 06 12 30.0 +1.9**
THR5 Thira Island, 2.17 44 P **Pn 06 12 29.7 +1.4**
THR3 Thira Island, 2.20 45 P **Pn 06 12 30.2 +1.6**
SANT Santorini 2.21 46 P **Pn 06 12 29.9 +1.1**
SANT Santorini 2.21 46 *eP* **Pn 06 12 29.0 +0.2**
SANT Santorini 2.21 46 **Pn 06 12 29.8 +1.1**
THT2 Imerovigli 2.23 44 *eP* **Pn 06 12 29.3 +0.3**
THR8 Santorini-Mono 2.24 46 P **Pn 06 12 30.2 +1.0**
CMBO Columbo, Santo 2.24 44 P **Pn 06 12 30.6 +1.4**
ZKR Zakros 2.25 83 P **Pn 06 12 32.9 +3.5**
ZKR Zakros 2.25 83 P **Pn 06 12 32.2 +2.8**
ZKR Zakros 2.25 83 *eP* **Pn 06 12 31.6 +2.2**
IOSP Ios island 2.37 38 P **Pn 06 12 31.9 +0.9**
ANAF Anafi Island 2.39 51 P **Pn 06 12 32.6 +1.4**
SERI Serifos 2.44 19 P **Pn 06 12 32.6 +0.7**
SERI AML AML 06 13 13.7
comp=N,344µm,0.8s
SERI AML AML 06 13 17.7
comp=E,450µm,0.6s
PYL PYLOS 2.48 326 P **Pn 06 12 35.9 +3.4**
PYL PYLOS 2.48 326 P **Pn 06 12 33.2 +0.7**
KRND KRANIDI 2.54 354 P **Pn 06 12 34.3 +1.1**
ITM Ithomi 2.64 332 P **Pn 06 12 36.0 +1.2**
ITM AML AML 06 13 39.0
comp=N,773µm,2.1s
ITM AML AML 06 13 49.3
comp=E,654µm,1.0s
ITM Ithomi 2.64 332 Pn **Pn 06 12 35.5 +0.8**
DID Didima 2.65 356 P **Pn 06 12 37.1 +2.2**
DID Didima 2.65 356 P **Pn 06 12 36.7 +1.4**
APE Apeiranthos 2.76 36 P **Pn 06 12 37.0 +0.6**
APE AML AML 06 13 31.1
comp=E,776µm,0.7s
APE AML AML 06 13 35.4
comp=N,465µm,0.7s
APE Apeiranthos 2.76 36 *eP* **Pn 06 12 36.7 +0.3**
APE Apeiranthos 2.76 36 *d iP* **Pn 06 12 37.1 +0.7**
AMGA Amorgos Island 2.77 44 P **Pn 06 12 37.6 +1.0**
AMGA AML AML 06 13 36.2
comp=N,935µm,2.0s
AMGA AML AML 06 13 41.3
comp=E,827µm,0.8s
VLY Voula,Athens 3.00 5 P **Pn 06 12 41.1 +1.5**
KARP Karpathos 3.09 76 P **Pn 06 12 42.7 +1.9**
KARP Karpathos 3.09 76 P **Pn 06 12 42.6 +1.7**
KARP Karpathos 3.09 76 *eP* **Pn 06 12 42.8 +1.9**
KARP Karpathos 3.09 76 **Pn 06 12 41.5 +0.7**
LOUT Loutraki 3.15 353 P **Pn 06 12 43.5 +1.8**
PTL Penteli 3.20 5 P **Pn 06 12 43.9 +1.4**
DION Dionisos Attik 3.23 6 P **Pn 06 12 44.4 +1.5**
KARY Karystos 3.26 13 P **Pn 06 12 44.6 +1.4**
VIL2 Platees 3.35 357 P **Pn 06 12 45.6 +1.0**
KLV Kalavryta, Ach 3.36 342 P **Pn 06 12 46.8 +2.2**
KOSK Kos Island 3.41 55 *eP* **Pn 06 12 46.4 +1.2**
SLUM Salum 3.65 156 P **Pn 06 12 50.1 +1.5**
baz=159
SLUM AMP 06 13 00.0
baz=159
SLUM S **Sn 06 13 28.7 -1.8**
baz=159
TRIZ Trizonia 3.68 342 P **Pn 06 12 51.0 +2.0**
KALE Kalithea 3.69 343 P **Pn 06 12 51.5 +2.3**
KYMI Kymi, Euboea I 3.80 7 P **Pn 06 12 52.1 +1.4**
BODT Bodrum 3.80 54 *eP* **Pn 06 12 51.4 +0.7**
DAT Datca 3.81 59 *eP* **Pn 06 12 51.9 +0.9**
DAT Datca 3.81 59 *i P* **Pn 06 12 51.9 +0.9**
DAT *i* S **Sn 06 13 30.9 -3.6**
ANX Ano Chora 3.94 342 P **Pn 06 12 54.5 +1.9**
ARG Arkhangelos 4.02 69 P **Pn 06 12 56.0 +2.4**
ARG Arkhangelos 4.02 69 *eP* **Pn 06 12 55.2 +1.6**
CHOS Chios island 4.08 30 *eP* **Pn 06 12 54.9 +0.3**
GCAM G?zelcaml? 4.15 46 *eP* **Pn 06 12 56.5 +1.1**
AGG Agios Georgios 4.26 348 P **Pn 06 12 59.3 +2.3**
AGG Agios Georgios 4.26 348 P **Pn 06 12 57.9 +0.9**
AGG Agios Georgios 4.26 348 **Pn 06 12 57.9 +0.9**
URLA Izmir 4.30 35 *eP* **Pn 06 12 58.2 +0.7**
YER Yerkesik 4.50 58 *eP* **Pn 06 13 02.3 +1.9**
AYDN Tasoluk 4.52 50 *i P* **Pn 06 13 01.6 +1.1**
AYDN IAML 06 13 49.0
comp=E,21nm,0.6s
AYDN IAML 06 14 13.0
comp=N,19nm,1.0s
TURN Turunc 4.62 63 *eP* **Pn 06 12 59.3 -2.5**
TUN Turunc 4.62 63 *i P* **Pn 06 12 59.1 -2.7**
TURN *i* S Sn 06 13 43.4 -11
TURN IAML 06 13 48.0
comp=E,60nm,0.6s
TURN IAML 06 13 51.0
comp=N,67nm,0.7s
DALY Dalyan (Mula) 4.63 64 *eP* **Pn 06 13 04.2 +2.2**
DALY Dalyan (Mula) 4.63 64 *i P* **Pn 06 13 04.3 +2.3**
DALY *i* S **Sn 06 13 51.6 -2.9**
DALY IAML 06 13 55.0
comp=E,32nm,0.5s
DALY IAML 06 14 03.0
comp=N,63nm,0.8s
FETY Fethiye 4.88 67 *eP* **Pn 06 13 06.5 +0.9**
FETY Fethiye 4.88 67 *i P* **Pn 06 13 06.5 +0.9**
FETY *i* S **Sn 06 13 57.2 -3.6**
FETY IAML 06 14 00.0
comp=N,32nm,0.6s
FETY IAML 06 14 01.0
comp=E,20nm,0.5s
TAVA DENIZLI_Tavas 5.10 58 *i P* **Pn 06 13 11.7 +3.0**
TAVA *i* S **Sn 06 14 03.3 -3.0**
TAVA IAML 06 14 14.0
comp=N,18nm,0.6s
TAVA IAML 06 14 38.0
comp=E,16nm,1.0s
AKAS Kas 5.17 73 *eP* **Pn 06 13 10.5 +0.9**
AKAS Kas 5.17 73 *i P* **Pn 06 13 11.1 +1.4**
AKAS *i* S **Sn 06 14 06.1 -2.1**
AKAS IAML 06 14 13.0
comp=N,72nm,0.4s
AKAS IAML 06 14 14.0
comp=E,44nm,0.5s
LIT Litokhoron 5.29 352 P **Pn 06 13 11.8 +0.6**
LIT Litokhoron 5.29 352 Pn **Pn 06 13 11.8 +0.6**
GOLH Golhisar 5.46 62 *i P* **Pn 06 13 15.4 +1.8**
GOLH IAML 06 14 08.0
comp=E,27nm,2.5s
GOLH *i* S **Sn 06 14 10.6 -4.6**
GOLH IAML 06 14 16.0
comp=N,52nm,0.4s
ELL Elmali 5.55 68 *eP* **Pn 06 13 16.6 +1.8**
ELL Elmali 5.55 68 P **Pn 06 13 16.3 +1.5**
ELL Elmali 5.55 68 **Pn 06 13 16.3 +1.5**
SWA2 5.84 163 P **Pn 06 13 19.4 +0.7**
baz=164
SWA2 S **Sn 06 14 21.8 -2.6**
baz=164
KORT Korkueli 5.96 67 *eP* **Pn 06 13 23.6 +3.1**
KORT Korkueli 5.96 67 *i P* **Pn 06 13 23.1 +2.6**
KORT *i* S **Sn 06 14 25.2 -2.4**
KORT IAML 06 14 32.0
comp=E,54nm,0.7s
KORT IAML 06 14 46.0
comp=N,34nm,0.6s
KHAL Karahalli 5.97 52 *i P* **Pn 06 13 22.8 +2.3**
KHAL IAML 06 14 30.0
comp=E,7.0nm,0.6s
KHAL IAML 06 14 34.0
comp=N,7.5nm,1.1s
FNA Florina 6.15 345 P **Pn 06 13 23.3 +0.4**
FNA Florina 6.15 345 **Pn 06 13 23.3 +0.4**
MMB Musomiste 6.72 2 *i P* **Pn 06 13 31.2 +0.4**
RZN Rozhen 6.89 8 *eP* **Pn 06 13 34.3 +1.1**
KEPZ Antalya-Kepez 6.90 70 *i P* **Pn 06 13 34.4 +1.1**
KEPZ *i* S **Sn 06 14 46.1 -4.4**
KEPZ IAML 06 14 53.0
comp=E,24nm,0.7s
KEPZ IAML 06 14 59.0
comp=N,16nm,1.0s
GAZI Gazipasa 7.33 77 *i P* **Pn 06 13 36.7 -2.4**
GAZI *i* S Sn 06 14 51.7 -9.2
VAE Valguarnera 7.79 292 S **Sn 06 15 08.3 -4.2**
comp=N,4.9nm,0.3s,baz=266,slow=5.0,SNR=3.9
HNAT Natroun 7.97 129 P **Pn 06 13 48.7 +0.7**
baz=130
HMYD Mayadein 7.98 127 P **Pn 06 13 48.4 +0.3**
baz=128
CSS Mathiatis 8.09 86 Pn Pn 06 13 45.1 -4.4
CSS Sn **Sn 06 15 12.4 -7.3**
KOT Kottamia 8.59 123 P **Pn 06 13 57.2 +0.6**
baz=124
HSAF As Saff 8.60 125 P **Pn 06 13 56.8 +0.2**
baz=126
GLL Jalalah 8.73 125 P **Pn 06 13 57.7 -0.7**
baz=126
NBNS Bani Suef 9.10 131 P **Pn 06 14 03.8 +0.4**
baz=132
BR131 Keskin Array S 9.43 56 *d iP* **Pn 06 14 09.5 +1.4**
BR131 Keskin Array S 9.43 56 **Pn 06 14 09.1 +0.9**
BRTR Keskin Array B 9.43 56 P **Pn 06 14 08.9 +0.9**
comp=N,0.3nm,0.3s,baz=240,slow=14,SNR=12
BRTR Keskin Array B 9.43 56 *i P* **Pn 06 14 12.6 +4.5**
BRTR pmax pmax
comp=Z,4.0nm,0.9s
BRTR Keskin Array B 9.43 56 **Pn 06 14 10.1 +2.0**
KZIT Kziot 9.98 110 Sn Sn 06 15 57.8 -8.4
GEM Giv'at Ha'Em 10.24 96 Sn Sn 06 16 04.9 -7.5
KSDI Kefar Szold 10.24 96 Sn Sn 06 16 04.0 -8.4
NATI Neve Ativ 10.29 95 Pn **Pn 06 14 16.2 -3.4**
NATI Sn **Sn 06 16 06.1 -7.5**
YTIR Yattir 10.36 106 Sn Sn 06 16 07.0 -8.5
HMDT Nahal Hemdat 10.38 101 Pn Pn 06 14 16.9 -4.0
HMDT Sn **Sn 06 16 08.5 -7.3**
SHMJ Saham 10.43 98 Pn Pn 06 14 17.1 -4.6
DSI Dead Sea 10.49 105 Pn **Pn 06 14 19.5 -2.9**
DSI Sn Sn 06 16 10.5 -8.1
KRMI Paran Flat 10.60 113 Pn Pn 06 14 28.3 -3.7
KRMI Sn Sn 06 16 12.7 -8.7
PRNI Paran 10.70 112 Pn **Pn 06 14 22.2 -3.2**
PRNI Sn Sn 06 16 15.5 -8.3
GHAJ Ghor Haditha 10.73 106 Sn Sn 06 16 15.8 -8.8
HRFI Mount Harif 10.87 113 Pn **Pn 06 14 24.7 -3.1**
HRFI Sn Sn 06 16 19.5 -8.6
MBRI Mt Berech 10.90 114 Pn **Pn 06 14 24.9 -3.3**
MBRI Sn Sn 06 16 21.2 -7.7
EIL Elat 10.99 115 P **Pn 06 14 28.1 -1.3**
comp=Z,1.5nm,0.3s,baz=351,slow=3.9,SNR=9.8
EIL S Sn 06 16 22.4 -8.6
comp=Z,1.0nm,0.3s,baz=118,slow=6.1,SNR=3.5
EIL Elat 10.99 115 Pn Pn 06 14 25.2 -4.2
EIL Sn Sn 06 16 22.5 -8.5
KEST Kesra 11.59 278 LR LR 06 19 59.2
comp=Z,189nm,19.6s,baz=195,slow=42
VYHS Vyhne 14.06 347 *eP* **P 06 15 15.8 -2.5**
VYHS Vyhne 14.06 347 *ePN* **P 06 15 15.8 -2.5**
MODS Modra-Piesok 14.27 343 *eP* **P 06 15 21.3 +0.6**
MODS Modra-Piesok 14.27 343 *ePN* **P 06 15 21.3 +0.6**
VRAC Vranov 15.31 343 P **Pn 06 15 29.4 +1.5**
comp=Z,1.1nm,0.3s,baz=146,slow=9.8,SNR=8.5
OKC Ostrava-Krasne 15.47 347 *eP* **P 06 15 35.4 +1.4**
OKC Ostrava-Krasne 15.47 347 *eP* **P 06 15 35.4 +1.4**
GERES GERESS Array B 15.74 336 P **Pn 06 15 32.4 -1.1**
comp=Z,0.5nm,0.3s,baz=156,slow=13,SNR=9.4
KRLC Kraliky 15.98 344 *eP* **P 06 15 41.0 +1.3**
KRLC Kraliky 15.98 344 *eP* **P 06 15 41.0 +1.3**
KRLC *epP* **pP 06 15 46.0 -2.6**
KHC Kasperske Hory 16.03 336 *ceP* **P 06 15 41.5 +1.3**
KHC pmax pmax
comp=Z,53nm,1.7s
KHC Kasperske Hory 16.03 336 *eP* **P 06 15 41.9 +1.7**
KHC *ex* x 06 15 50.6
KHC Kasperske Hory 16.03 336 P **P 06 15 41.5 +1.3**
DPC Dobruska-Polom 16.34 344 *eP* **P 06 15 44.8 +1.1**
DPC Dobruska-Polom 16.34 344 *eP* **P 06 15 44.8 +1.1**
AKASG Malin Array Be 16.38 13 P **Pn 06 15 40.7 -0.8**
comp=Z,2.4nm,0.3s,baz=204,slow=10,SNR=12
AKASG Malin Array Be 16.38 13 *ceP* **P 06 15 44.0 0.0**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKASG Malin Array Be 16.38 13 P **P 06 15 46.0 +2.0**
AKBB Malin Array Si 16.38 13 *eP* **P 06 15 44.9 +0.9**
PRU Pruhonice 16.48 339 *eP* **P 06 15 46.2 +1.1**
PRU Pruhonice 16.48 339 *eP* **P 06 15 46.2 +1.1**
OSTC Ostas 16.56 344 *eP* **P 06 15 48.0 +1.9**
SHA1 Shidzhatmaz 17.25 53 *eP* **P 06 15 54.9 +0.9**
KIV Kislovodsk 17.36 53 *eP* **P 06 15 55.8 +0.7**
KIV pmax pmax
comp=Z,30nm,1.1s
KBZ Khabaz 17.41 54 P **P 06 15 56.1 +0.6**
comp=Z,0.3nm,0.3s,baz=258,slow=16,SNR=6.4
KBZ Khabaz 17.41 54 *d iP* **P 06 15 56.8 +1.4**
BRG Berggiesshubel 17.44 339 *eP* **P 06 15 57.2 +1.4**
comp=Z,5.8nm,1.1s
BRG Berggiesshubel 17.44 339 *eP* **P 06 15 57.2 +1.4**
BRG pmax pmax
comp=Z,6.0nm,1.1s
OBN Obninsk 22.20 20 *eP* **P 06 16 47.4 0.0**
OBN *e* 06 17 14.0
OBN *eS* **S 06 20 43.6 -5.8**
OBN pmax pmax
comp=Z,7.0nm,0.8s
OBN MLR MLR
comp=Z,159nm,20.0s
ESDC Sonseca Array 22.33 291 P **P 06 16 49.7 +0.6**
comp=Z,1.4nm,1.0s,baz=83,slow=12,SNR=5.5
PUL Pulkovo 25.33 8 *eP* **P 06 17 17.6 0.0**
PUL pmax pmax
comp=Z,103nm,1.0s
HFS Hagfors 26.08 349 P **P 06 17 23.1 -1.4**
comp=Z,3.2nm,0.5s,baz=156,slow=11,SNR=19
FINES FINESS Array B 26.66 3 P **P 06 17 27.9 -1.6**
comp=Z,0.7nm,0.3s,baz=152,slow=12,SNR=6.3
FINES PcP **PcP 06 20 52.5 0.0**
comp=Z,0.7nm,0.7s,baz=45,slow=2.2,SNR=3.7
FINES FINESS Array B 26.66 3 P **P 06 17 29.2 -0.4**
FINES FINESS Array B 26.66 3 P **P 06 17 29.2 -0.4**
NB2 NORSAR Subarra 27.36 347 P **P 06 17 35.5 -0.5**
comp=Z,0.7nm,0.5s,baz=154,slow=9.3
NOA NORSAR Array B 27.36 347 P **P 06 17 35.0 -1.0**
comp=Z,0.8nm,0.5s,baz=149,slow=9.5,SNR=5.7
EKA Eskdalemuir Ar 27.51 326 P **P 06 17 37.5 +0.1**
comp=Z,1.5nm,0.5s,baz=127,slow=8.1,SNR=9.6
TORD Torodi Ar. Bea 29.26 228 P **P 06 17 54.6 +1.4**
comp=Z,0.8nm,0.5s,baz=31,slow=8.9,SNR=14
AKTO Aktyubinsk 29.46 47 P **P 06 17 54.4 -0.4**
comp=Z,1.0nm,0.5s,baz=254,slow=7.7,SNR=5.0
ARU Arti 32.12 37 *c iP* **P 06 18 17.2 -0.9**
ARU 06 19 21.3
ARU S **S 06 23 31.8 +4.1**
ARU SS **SnSn 06 25 19.4 -0.4**
ARU pmax pmax
comp=Z,5.0nm,1.1s
ARCES ARCESS Array B 34.75 1 P **P 06 18 39.4 -1.5**
comp=Z,1.3nm,0.6s,baz=180,slow=8.5,SNR=10
ARCES ARCESS Array B 34.75 1 P **P 06 18 39.8 -1.1**
ARCES ARCESS Array B 34.75 1 P **P 06 18 39.8 -1.1**
KKAR Karatay Array 37.06 63 P **P 06 19 01.4 +0.3**
KKAR Karatay Array 37.06 63 P **P 06 19 01.4 +0.3**
BRVK Borovoye 37.49 46 *ieP* **P 06 19 04.5 0.0**
BRVK pmax pmax
comp=Z,2.0nm,1.0s
DBIC Dimbokro 38.32 230 P **P 06 19 12.8 +1.0**
comp=Z,6.5nm,1.1s,baz=47,slow=8.9,SNR=4.0
AAK Ala-Archa 40.02 63 *ieP* **P 06 19 26.9 +0.9**
AAK pmax pmax
comp=Z,4.0nm,1.0s
AAK Ala-Archa 40.02 63 P **P 06 19 27.5 +1.4**
AAK IAmb IAmb 06 19 33.0
comp=Z,6.8nm,1.3s
KSH Kashi 41.59 68 P **P 06 19 40.4 +1.4**
KSH pP pP 06 19 47.4 -2.0
KSH sP sP 06 19 50.3 -3.6
KSH pmax pmax
comp=Z,10.0nm,0.6s
KSH pmax pmax
comp=Z,200nm,4.1s
KDJ Kajisay 42.06 63 IAmb IAmb 06 19 56.7
comp=Z,2.9nm,0.8s
KURK Kurchatov 42.43 51 *deP* **P 06 19 45.2 -0.3**
KURK pmax pmax
comp=Z,3.0nm,0.9s
MK31 Makanchi Array 45.08 56 P **P 06 20 06.7 -0.2**
MK31 pmax pmax
comp=Z,4.0nm,1.1s
MK31 Makanchi Array 45.08 56 P **P 06 20 06.7 -0.2**
MK31 IAmb IAmb 06 20 08.0
comp=Z,3.9nm,1.1s
MKAR Makanchi Array 45.08 56 P **P 06 20 07.1 +0.2**
comp=Z,1.8nm,0.3s,baz=267,slow=7.5,SNR=68
MKAR PcP **PcP 06 21 47.9 +0.8**
comp=Z,0.3nm,0.4s,baz=260,slow=4.4,SNR=1.6
MKAR Makanchi Array 45.08 56 *ceP* **P 06 20 07.0 0.0**
MKAR pmax pmax
comp=Z,2.0nm,0.3s
MKAR Makanchi Array 45.08 56 P **P 06 20 06.9 0.0**
ZALV Zalesovo Beam 46.20 46 P **P 06 20 15.1 -0.6**
comp=Z,3.0nm,0.4s,baz=266,slow=10,SNR=12
ZALV Zalesovo Beam 46.20 46 P **P 06 20 14.8 -0.8**
DGZ Jazzator, Alta 48.15 52 *ieP* **P 06 20 31.2 +0.2**
DGZ pmax pmax
comp=Z,1.0nm,1.2s
TLY Talaya 57.81 46 *ceP* **P 06 21 42.7 +0.6**
TLY pmax pmax
comp=Z,3.0nm,1.0s
SONM Songino Array 60.73 50 P **P 06 22 02.2 -0.3**
comp=Z,1.9nm,0.6s,baz=284,slow=8.7,SNR=9.8
SONM Songino Array 60.73 50 P **P 06 22 02.7 +0.2**
SONM pmax pmax
comp=Z,5.0nm,1.3s
SONM Songino Array 60.73 50 P **P 06 22 02.7 +0.2**
ULN Ulaanbaatar 61.14 50 *deP* **P 06 22 05.8 +0.5**
ULN pmax pmax
comp=Z,4.0nm,0.8s
TIXI Tiksi 61.93 20 *ieP* **P 06 22 09.9 -0.1**
TIXI pmax pmax
comp=Z,2.0nm,0.8s
KLR Kul'dur 74.89 40 *ieP* **P 06 23 31.6 +0.3**
KLR pmax pmax
comp=Z,2.0nm,0.9s
MA2 Magadan 76.33 25 *ieP* **P 06 23 40.9 +1.5**
MA2 pmax pmax
comp=Z,28nm,2.5s
YKA Yellowknife Ar 77.31 341 P **P 06 23 45.5 +0.6**
comp=Z,0.6nm,0.5s,baz=35,slow=5.5,SNR=22
USRK Ussuriysk Ar. 78.02 44 P **P 06 23 48.0 -1.1**
comp=Z,3.4nm,0.9s,baz=305,slow=7.4,SNR=5.8
KSRS Korea Array 79.55 52 P **P 06 23 57.7 0.0**
comp=Z,1.1nm,0.6s,baz=310,slow=5.6,SNR=4.5
WRA Warramunga Arr 117.92 96 PKP **PKPdf 06 30 37.5 0.0**
comp=Z,0.4nm,0.5s,baz=316,slow=1.9,SNR=5.4
ASAR Alice Springs 119.35 100 PKP **PKiKP 06 30 40.6 +0.3**
comp=Z,0.3nm,0.5s,baz=312,slow=1.4,SNR=5.1

*IDC **14** 06:15:10.2±2.1, 20.55S×71.27W, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.5/24, mbtmp3.5/3, Error ellipse: s-maj=74.3km s-min=44.7km az=136.0*
*GUC **14** 06:15:17.3±0.8, 19.70S×71.13W, h35km±4km, ML3.1*
ISC 14 06:15:13.6±2.1, **19.64S**±0.04×**71.10W**±0.08, **h4**km±11km, **n17**,σ1**s03**/27, **7C**, **Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.92**	**88**	*i*P	**Pn**	**06 15 33.1**	**-0.3**
PSGC				*i* S	**Sb**	**06 15 46.1**	**+1.4**
PSGC				IAML		06 15 47.7	
comp=N,594nm,0.6s							
TA02	**Huaiquique**	**1.10**	**125**	*eP*	**Pb**	**06 15 35.5**	**+0.2**
PB12	**IPOC Station P**	**1.25**	**36**	*i*P	**Pb**	**06 15 39.0**	**+1.1**
PB12				*i* S	**Sn**	**06 15 56.1**	**+0.7**
PB12				IAML		06 15 57.8	
comp=N,475nm,0.3s							
TA01	**Diego Aracena**	**1.26**	**137**	*i*P	**Pn**	**06 15 37.9**	**-0.2**
TA01				*i* S	**Sg**	**06 15 53.4**	**-0.9**
TA01				IAML		06 16 01.3	
comp=E,557nm,0.6s							
PB11	**IPOC Station P**	**1.36**	**95**	*i*P	**Pg**	**06 15 40.4**	**+0.6**
PB11				*i* S	**Sn**	**06 15 58.5**	**+0.3**
PB11				IAML		06 15 59.3	
comp=N,745nm,0.4s							
MNMC	**Minye Minye**	**1.50**	**71**	*i*P	**Pg**	**06 15 42.9**	**+0.4**
MNMC				*e*S	**Sg**	**06 16 03.1**	**+1.1**
GO01	**Chusmiza**	**1.79**	**91**	*e*P	**Pb**	**06 15 47.1**	**-0.3**
GO01				*i* S	**Sb**	**06 16 10.7**	**+0.4**
PB08	**IPOC Station P**	**1.90**	**106**	*i*P	**Pb**	**06 15 48.6**	**-0.4**
PB08				*i* S	**Sb**	**06 16 13.0**	**-0.2**
PB08				IAML		06 16 18.0	
comp=N,201nm,0.6s							
PB16	**IPOC Station P**	**1.98**	**50**	*e*P	**Pb**	**06 15 50.6**	**-0.1**
PB16				*i* S	**Sg**	**06 16 17.5**	**0.0**
PB16				IAML		06 16 26.9	
comp=N,165nm,0.5s							
PB02	**IPOC Station P**	**2.02**	**146**	*e*P	**Pn**	**06 15 49.0**	**+0.4**
PB02				IAML		06 16 25.1	
comp=N,392nm,0.5s							
PB01	**IPOC Station P**	**2.06**	**133**	*i*P	**Pn**	**06 15 49.6**	**+0.5**
PB01				*i* S	**Sn**	**06 16 14.0**	**-1.3**
PB01				IAML		06 16 25.0	
comp=N,154nm,0.5s							
PB07	**IPOC Station P**	**2.37**	**152**	*e*P	**Pn**	**06 15 53.6**	**+0.2**
PB07				IAML		06 16 42.7	
comp=E,157nm,0.5s							
PB09	**IPOC Station P**	**2.76**	**141**	*e*P	**Pn**	**06 16 00.2**	**+1.3**
PB09				IAML		06 16 49.5	
comp=E,86nm,0.5s							
LPAZ	**La Paz**	**4.37**	**41**	Pn	**Pb**	**06 16 30.4**	**-0.9**
baz=221,slow=8.3							
LPAZ				Sn	**Sg**	**06 17 30.6**	**-3.3**
comp=E,0.7nm,0.3s,baz=257,slow=12,SNR=2.2							
TORD	**Torodi Ar. Bea**	**78.69**	**72**	P	**P**	**06 27 16.6**	**-1.1**
comp=E,0.5nm,0.6s,baz=246,slow=5.2,SNR=2.6							
YKA	**Yellowknife Ar**	**88.77**	**341**	P	**P**	**06 28 08.5**	**+0.3**
comp=E,0.1nm,0.5s,baz=137,slow=4.1,SNR=5.7							
MKAR	**Makanchi Array**	**145.25**	**33**	PKPbc	**PKPdf**	**06 34 53.2**	**+0.5**
comp=E,0.2nm,0.5s,baz=325,slow=1.8,SNR=2.0							

*HLW **14** 06:21:45.6, 34.96N×23.83E, h10km±22km, Md3.9, Ml3.9*
*IDC **14** 06:21:48.5±2.4, 34.92N×23.23E, h56km±21km, mb3.6/10, mb1 3.7/13, mb1mx3.5/39, mbtmp3.8/13, ML3.8/3, Error ellipse: s-maj=23.7km s-min=17.5km az=176.0*
*THE **14** 06:21:48.5, 34.89N×23.47E, h6km±2km, ML3.5/5, Error ellipse: s-maj=2.4km s-min=1.3km az=25.0*
*ATH **14** 06:21:49.4, 35.00N×23.60E, h44km±2km, ML3.3/6, Error ellipse: s-maj=4.9km s-min=1.9km az=46.0*
*DDA **14** 06:21:52.0, 35.45N×23.59E, h44km±520km, MW3.3*
ISC 14 06:21:47.6±1.0, **34.85N**±0.04×**23.54E**±0.06, **h47**km±9km, **n88**,σ2**s19**/103, **mb3.8**/10, **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.45**	**91**	P	**Pn**	**06 21 58.6**	**+0.5**
GVD				S	**Sn**	**06 22 06.0**	**+0.5**
19µm,0.3s							
GVD	**Gavdhos**	**0.45**	**91**	P	**Pn**	**06 21 58.7**	**+0.7**
GVD				S	**Sn**	**06 22 08.1**	**+2.6**
IMMV	**Iera Moni Meta**	**0.70**	**30**	P	**Pn**	**06 22 02.0**	**+0.7**
IMMV	**Iera Moni Meta**	**0.70**	**30**	P	**Pn**	**06 22 02.2**	**+0.8**
RODP	**Rodopos**	**0.73**	**14**	P	**Pn**	**06 22 02.5**	**+0.8**
VAM	**Vamos**	**0.77**	**44**	P	**Pn**	**06 22 03.0**	**+0.8**
VAM				S	**Sn**	**06 22 15.9**	**+3.1**
6µm,0.6s							
VAM	**Vamos**	**0.77**	**44**	P	**Pn**	**06 22 03.5**	**+1.3**
VAM				S	**Sn**	**06 22 12.8**	**0.0**
VAM				AML	AML	06 22 16.9	
comp=E,12514µm,0.6s							
VAM				AML	AML	06 22 20.4	
comp=N,10107µm,0.7s							

CHAN	**Chania**	**0.78**	**31**	P		**Pn**	**06 22 03.5**	**+1.2**
CHAN				S		**Sn**	**06 22 14.3**	**+1.3**
	comp=N,1μm,0.6s							
PRNS	**Prines Rethymn**	**0.94**	**57**	P		**Pn**	**06 22 05.6**	**+1.2**
PRNS				S		**Sn**	**06 22 18.8**	**+2.1**
SIVA	**Sivas**	**1.05**	**81**	P		**Pn**	**06 22 08.4**	**+2.4**
SIVA				S		**Sn**	**06 22 25.4**	**+5.8**
	comp=N,8μm,0.5s							
SIVA	**Sivas**	**1.05**	**81**	P		**Pn**	**06 22 08.4**	**+2.4**
SIVA				AML		AML	06 22 30.5	
	comp=E,13720μm,0.5s							
SIVA				AML		AML	06 22 30.6	
	comp=N,10711μm,0.5s							
IDI	**Anoyia**	**1.19**	**68**	P		**Pn**	**06 22 10.2**	**+2.3**
	comp=N,31nm,0.3s,baz=254,slow=10,SNR=190							
IDI				S		**Sn**	**06 22 29.8**	**+6.9**
	comp=N,99nm,0.3s,baz=226,slow=24,SNR=18							
IDI	**Anoyia**	**1.19**	**68**	P		**Pn**	**06 22 09.8**	**+1.9**
HRKL	**Herakleio**	**1.36**	**70**	P		**Pn**	**06 22 12.3**	**+2.2**
KTHA	**Kythira Island**	**1.46**	**344**	P		**Pn**	**06 22 13.5**	**+2.0**
KTHA				AML		AML	06 22 45.5	
	comp=E,1799μm,0.6s							
KTHA				AML		AML	06 22 48.7	
	comp=N,741μm,0.5s							
LAST	**Lasithi**	**1.62**	**78**	P		**Pn**	**06 22 16.7**	**+2.9**
LAST				S		**Sn**	**06 22 39.6**	**+6.1**
	comp=N,378nm,0.6s							
LAST	**Lasithi**	**1.62**	**78**	P		**Pn**	**06 22 16.7**	**+2.9**
LAST				AML		AML	06 22 55.2	
	comp=N,842μm,0.8s							
LAST				AML		AML	06 22 56.2	
	comp=E,692μm,0.7s							
NPS	**Neapolis**	**1.75**	**76**	P		**Pn**	**06 22 18.5**	**+3.1**
NPS				AML		AML	06 22 52.4	
	comp=N,988μm,1.1s							
NPS				AML		AML	06 22 52.8	
	comp=E,915μm,0.6s							
VLI	**Veliai**	**1.93**	**345**	P		**Pn**	**06 22 20.6**	**+2.7**
VLI	**Veliai**	**1.93**	**345**	P		**Pn**	**06 22 20.1**	**+2.2**
VLI				AML		AML	06 22 55.2	
	comp=N,811μm,0.8s							
VLI				AML		AML	06 22 57.5	
	comp=E,539μm,1.1s							
MHLO	**Agia Marina, M**	**1.96**	**21**	P		**Pn**	**06 22 19.4**	**+0.9**
MHLA	**Plaka, Milos I**	**2.02**	**20**	P		**Pn**	**06 22 20.3**	**+1.0**
SAP3	**Santorini-Thir**	**2.16**	**42**	P		**Pn**	**06 22 22.4**	**+1.3**
SANT	**Santorini**	**2.18**	**45**	P		**Pn**	**06 22 22.7**	**+1.3**
SANT	**Santorini**	**2.18**	**45**	*eP*		**Pn**	**06 22 22.2**	**+0.8**
THT2	**Imerovigli**	**2.20**	**44**	*eP*		**Pn**	**06 22 29.1**	**+1.2**
ZKR	**Zakros**	**2.21**	**82**	P		**Pn**	**06 22 25.0**	**+3.2**
ZKR	**Zakros**	**2.21**	**82**	*eP*		**Pn**	**06 22 25.0**	**+3.2**
IOSP	**Ios island**	**2.34**	**37**	P		**Pn**	**06 22 24.4**	**+0.7**
ANAF	**Anafi Island**	**2.36**	**50**	P		**Pn**	**06 22 25.0**	**+1.2**
SERI	**Serifos**	**2.43**	**18**	P		**Pn**	**06 22 25.6**	**+0.8**
KRND	**KRANIDI**	**2.55**	**353**	P		**Pn**	**06 22 28.7**	**+2.3**
DID	**Didima**	**2.66**	**355**	P		**Pn**	**06 22 29.6**	**+1.6**
DID	**Didima**	**2.66**	**355**	P		**Pn**	**06 22 29.3**	**+1.3**
APE	**Apeiranthos**	**2.74**	**36**	P		**Pn**	**06 22 29.7**	**+0.6**
APE	**Apeiranthos**	**2.74**	**36**	*eP*		**Pn**	**06 22 29.4**	**+0.3**
AMGA	**Amorgos Island**	**2.75**	**43**	P		**Pn**	**06 22 30.3**	**+1.1**
KARP	**Karpathos**	**3.04**	**76**	P		**Pn**	**06 22 35.1**	**+1.8**
KARP	**Karpathos**	**3.04**	**76**	*eP*		**Pn**	**06 22 35.1**	**+1.8**
DION	**Dionisos Attik**	**3.23**	**5**	P		**Pn**	**06 22 37.0**	**+1.1**
KARY	**Karystos**	**3.25**	**13**	P		**Pn**	**06 22 37.1**	**+1.0**
VIL2	**Platees**	**3.36**	**356**	P		**Pn**	**06 22 38.4**	**+0.7**
SLUM	**Salum**	**3.63**	**157**	P		**Pn**	**06 22 42.1**	**+0.8**
	baz=161							
SLUM				AMP			06 23 00.0	
	baz=161							
SLUM				S		**Sn**	**06 23 22.4**	**-0.5**
	baz=161							
BODT	**Bodrum**	**3.77**	**53**	*eP*		**Pn**	**06 22 43.8**	**+0.6**
DAT	**Datca**	**3.78**	**59**	*eP*		**Pn**	**06 22 44.1**	**+0.7**
DAT	**Datca**	**3.78**	**59**	*i P*		**Pn**	**06 22 44.1**	**+0.7**
MRKA	**Markates**	**3.85**	**1**	P		**Pn**	**06 22 45.5**	**+1.2**
ARG	**Arkhangelos**	**3.98**	**69**	*eP*		**Pn**	**06 22 47.7**	**+1.6**
URLA	**Izmir**	**4.28**	**34**	*eP*		**Pn**	**06 22 49.9**	**-0.3**
URLA	**Izmir**	**4.28**	**34**	*i P*		**Pn**	**06 22 48.0**	**-2.2**
YER	**Yerkesik**	**4.47**	**58**	*eP*		**Pn**	**06 22 55.4**	**+2.6**
AYDN	**Tasoluk**	**4.49**	**50**	*i P*		**Pn**	**06 22 54.7**	**+1.6**
TURN	**Turunc**	**4.58**	**62**	*eP*		**Pn**	**06 22 50.9**	**-3.4**
TURN	**Turunc**	**4.58**	**62**	*i P*		**Pn**	**06 22 51.1**	**-3.1**
TURN				*i* S		Sn	06 23 36.8	-9.4
DALY	**Dalyan (Mula)**	**4.59**	**63**	*eP*		**Pn**	**06 22 56.2**	**+1.7**
DALY	**Dalyan (Mula)**	**4.59**	**63**	*i P*		**Pn**	**06 22 55.2**	**+0.8**
FETY	**Fethiye**	**4.84**	**67**	*eP*		**Pn**	**06 22 59.1**	**+1.1**
FETY	**Fethiye**	**4.84**	**67**	*i P*		**Pn**	**06 22 58.7**	**+0.7**
TAVA	**DENİZLİ_Tavas**	**5.07**	**57**	*i P*		**Pn**	**06 23 03.3**	**+2.1**
AKAS	**Kas**	**5.13**	**73**	*eP*		**Pn**	**06 23 02.8**	**+0.8**
AKAS	**Kas**	**5.13**	**73**	*i P*		**Pn**	**06 23 03.2**	**+1.2**
AKAS				*i* S		**Sn**	**06 23 57.2**	**-2.8**
GOLH	**Golhisar**	**5.42**	**62**	*i P*		**Pn**	**06 23 08.1**	**+2.1**
ELL	**Elmali**	**5.51**	**68**	*eP*		**Pn**	**06 23 08.7**	**+1.5**
SWA2		**5.82**	**163**	P		**Pn**	**06 23 11.9**	**+0.5**
	baz=165							
SWA2				AMP			06 24 00.0	
	baz=165							
SWA2				S		**Sn**	**06 24 15.7**	**-1.1**
	baz=165							
KORT	**Korkueli**	**5.92**	**67**	*eP*		**Pn**	**06 23 16.8**	**+3.9**
KORT	**Korkueli**	**5.92**	**67**	*i P*		**Pn**	**06 23 17.4**	**+4.5**
KHAL	**Karahalli**	**5.93**	**52**	*i P*		**Pn**	**06 23 15.3**	**+2.3**
KEPZ	**Antalya-Kepez**	**6.86**	**70**	*i P*		**Pn**	**06 23 26.7**	**+1.1**
KEPZ				*i* S		**Sn**	**06 24 36.4**	**-5.9**
HNAT	**Natroun**	**7.93**	**129**	P		**Pn**	**06 23 42.1**	**+1.7**
	baz=130							
KOT	**Kottamia**	**8.55**	**123**	P		**Pn**	**06 23 48.3**	**-0.6**
	baz=124							
HSAF	**As Saff**	**8.56**	**125**	P		**Pn**	**06 23 49.2**	**+0.3**
	baz=127							
GLL	**Jalalah**	**8.69**	**125**	P		**Pn**	**06 23 50.0**	**-0.7**
	baz=126							
NBNS	**Bani Suef**	**9.06**	**131**	P		**Pn**	**06 23 56.1**	**+0.3**
	baz=132							
BRTR	**Keskin Array B**	**9.40**	**56**	P		**Pn**	**06 24 02.1**	**+1.6**
	comp=E,0.2nm,0.3s,baz=232,slow=16,SNR=6.1							
EIL	**Elat**	**10.95**	**115**	P		**Pn**	**06 24 19.8**	**-1.9**
	comp=E,0.8nm,0.3s,baz=175,slow=1.1,SNR=11							
EIL				S		**Sn**	**06 26 16.4**	**-6.3**
	comp=E,1.3nm,0.3s,baz=25,slow=3.0,SNR=5.5							
GERES	**GERESS Array B**	**15.77**	**335**	P		**Pn**	**06 25 26.6**	**+0.1**
	comp=E,0.2nm,0.3s,baz=278,slow=40,SNR=1.5							
KHC	**Kasperske Hory**	**16.05**	**336**	*eP*		**P**	**06 25 34.0**	**+1.2**
AKASG	**Malin Array Be**	**16.37**	**13**	P		**Pn**	**06 25 32.9**	**-1.1**
	comp=E,1.3nm,0.3s,baz=205,slow=11,SNR=4.4							
HFS	**Hagfors**	**26.10**	**349**	P		**P**	**06 27 14.8**	**-1.9**
	comp=E,1.5nm,0.4s,baz=159,slow=13,SNR=13							
FINES	**FINESS Array B**	**26.66**	**3**	P		**P**	**06 27 21.0**	**-0.7**
	comp=E,2.1nm,0.8s,baz=155,slow=10,SNR=3.7							
NOA	**NORSAR Array B**	**27.38**	**347**	P		**P**	**06 27 28.1**	**-0.1**
	comp=E,0.4nm,0.6s,baz=144,slow=8.4,SNR=2.2							
EKA	**Eskdalemuir Ar**	**27.54**	**326**	P		**P**	**06 27 29.3**	**-0.4**
	comp=E,0.5nm,0.5s,baz=123,slow=8.3,SNR=3.5							
TORD	**Torodi Ar. Bea**	**29.29**	**228**	P		**P**	**06 27 44.3**	**-1.3**
	comp=E,0.4nm,0.5s,baz=34,slow=8.2,SNR=6.3							
ARCES	**ARCESS Array B**	**34.75**	**1**	P		**P**	**06 28 31.8**	**-1.2**
	comp=E,2.8nm,0.9s,baz=173,slow=10,SNR=6.8							
MKAR	**Makanchi Array**	**45.05**	**56**	P		**P**	**06 29 59.6**	**+0.9**
	comp=E,1.6nm,0.3s,baz=266,slow=7.3,SNR=32							
MKAR				PcP		**PcP**	**06 31 39.2**	**+0.3**
	comp=E,0.2nm,0.6s,baz=264,slow=5.5,SNR=1.7							
ZALV	**Zalesovo Beam**	**46.17**	**46**	P		**P**	**06 30 07.2**	**-0.2**
	comp=E,1.7nm,0.3s,baz=266,slow=9.1,SNR=7.7							
SONM	**Songino Array**	**60.70**	**50**	P		**P**	**06 31 55.4**	**+1.2**
	comp=E,0.7nm,0.5s,baz=289,slow=6.2,SNR=5.4							
YKA	**Yellowknife Ar**	**77.33**	**341**	P		**P**	**06 33 37.2**	**+0.4**
	comp=E,0.2nm,0.4s,baz=35,slow=5.3,SNR=14							

*OSPL **14** 06:22:40.6±1.1, 19°.44N×73°.22W, h93km±73km, ML2.0*
*SSNC **14** 06:22:42.4±4.3, 19°.49N×73°.06W, h8km±32km, MD3.2, ML2.1, MW2.4*

ISC 14 06:22:41.0±1.5,**19°.49N**±0°.10×**73°.09W**±0°.07,**h29**km±16km, **n7**,σ1**§05**/13,**Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LGNH	**Logne**	**1.07**	**155**	*i* P	**Pb**	**06 23 00.5**	**-0.5**
LGNH				*e*S	**Sb**	**06 23 14.9**	**+0.2**
LGNH				IAML		06 23 15.7	
	comp=Z,16nm,1.3s						
PAPH	**Port-au-Prince**	**1.22**	**142**	*i* P	**Pb**	**06 23 03.1**	**-0.4**
PAPH				*e*S	**Sb**	**06 23 19.5**	**+0.7**
PAPH				IAML		06 23 21.5	
	comp=Z,19nm,0.2s						
MASC	**Masc**	**1.27**	**303**	*e*Pg	**Pn**	**06 23 01.5**	**-1.4**
MASC				*e*Sg	**Sb**	**06 23 20.7**	**+0.3**
MASC				IAML		06 23 25.9	
	comp=N,5.9nm,0.2s						
MASC				IAML		06 23 25.9	
	comp=E,9.4nm,0.1s						
JAKH	**Jacmel**	**1.36**	**156**	*i* P	**Pn**	**06 23 03.4**	**-0.6**
JAKH				IAML		06 23 23.6	
	comp=Z,31nm,1.7s						
SDDR	**Presa de Saban**	**1.78**	**106**	*i* P	**Pn**	**06 23 10.3**	**+0.5**
SDDR				*e*S	**Sn**	**06 23 31.8**	**+0.3**
SDDR				IAML		06 23 35.1	
	comp=Z,12nm,0.2s						
GTMO	**Guantanamo**	**2.02**	**287**	*e*P	**Pn**	**06 23 13.7**	**+0.6**
GTMO				*e*S	**Sn**	**06 23 36.2**	**-1.2**
GTMO				IAML		06 23 41.9	
	comp=E,82nm,0.3s						
GTMO				IAML		06 23 42.1	
	comp=N,174nm,0.5s						
LMGC	**Las Mercedes**	**3.73**	**280**	*e*P	**Pn**	**06 23 38.8**	**+2.2**
LMGC				*e*S	**Sn**	**06 24 19.5**	**-0.1**

*KLM **14** 06:41:37.0,5°.99S×102°.74E, h50km, mb4.8*
*DJA **14** 06:41:37.6±0.3, 6°.S±3°×10°.3E±°, h41km±6km, M4.9/18, mb4.9/18, mB5.3/7, MLv5.1/17, Mw(mB)4.7/7*
*BJI **14** 06:41:38.0±0.0, 5°.80S×102°.90E, h35km, mB4.9/29, mb4.8/40, Ms4.7/12, Ms7 4.4/13*
*IDC **14** 06:41:40.2±0.6, 5°.68S×102°.98E, h43km±4km, mb4.2/25, mb1 4.3/27, mb1mx4.2/44, mbtmp4.4/27, ML4.3/2, MS3.5/4, Ms1 3.6/4, ms1mx3.2/37, Error ellipse: s-maj=16.2km s-min=9.8km az=59.0*
*NEIC **14** 06:41:40.5±1.6, 5°.67S±0°.08×103°.04E±0°.09, h47km±2km, mb4.8/31, Error ellipse: s-maj=14.9km s-min=8.7km az=55.0*

ISC 14 06:41:40.1±0.6,**5°.80S**±0°.06×**102°.93E**±0°.05,**h47**km±4km, **h47**km:**pP-P,n161,**σ1**§49**/156,**mb4.7**/48,**MS4.2**/8,**6C, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.37**	**55**	P	**Pn**	**06 42 01.7**	**-1.2**
MNAI	**Manna**	**1.43**	**1**	P	**Pn**	**06 42 02.8**	**-0.9**
MNAI	**Manna**	**1.43**	**1**		**Pn**	**06 42 03.1**	**-0.6**
KASI	**Kota Agung**	**1.58**	**80**	P	**Pn**	**06 42 04.9**	**-0.9**
LHSI	**Lahat**	**2.05**	**17**	P	**Pn**	**06 42 12.4**	**+0.2**
KSI	**Kapahiang**	**2.16**	**351**	P	**Pn**	**06 42 13.0**	**-0.8**
KSI				S	**Sn**	**06 42 42.0**	**+2.6**
BLSI	**Bandar Lampung**	**2.34**	**79**	P	**Pn**	**06 42 16.7**	**+0.5**
BLSI				S	**Sn**	**06 42 46.7**	**+2.9**
MASI	**Maura Aman, Be**	**2.73**	**345**	P	**Pn**	**06 42 21.0**	**-0.6**
DBJI	**Dramaga**	**3.87**	**101**	P	**Pn**	**06 42 38.0**	**+0.8**
CBJI	**Citeko**	**3.94**	**99**	P	**Pn**	**06 42 40.8**	**+2.6**
KRJI	**Kerinci**	**3.97**	**338**	P	**Pn**	**06 42 38.4**	**-0.2**
KRJI				S	**Sn**	**06 43 25.5**	**+1.6**
PPSI	**Pulau Pagai**	**4.20**	**316**	P	**Pn**	**06 42 40.8**	**-0.8**
PPSI				S	**Sn**	**06 43 28.9**	**-0.5**
CNJI	**Cibinong**	**4.43**	**110**	P	**Pn**	**06 42 43.7**	**-1.2**
CNJI				S	**Sn**	**06 43 29.8**	**-5.4**
LEM	**Lembang**	**4.77**	**103**	P	**Pn**	**06 42 50.5**	**+0.8**
	47nm,0.3s,baz=12,slow=22,SNR=16						
LEM				LR	LR	06 45 09.5	
	comp=Z,558nm,18.7s,baz=242,slow=44						
LEM	**Lembang**	**4.77**	**103**	P	**Pn**	**06 42 50.7**	**+1.0**
PPBI	**Pangkal Pinang**	**4.83**	**42**	P	**Pn**	**06 42 51.6**	**+1.3**
	1.3nm24μm127nm,0.6s						
SDSI	**Sungai Dareh**	**5.07**	**343**	P	Pn	06 43 00.6	+7.0
CISI	**Cisompet, Garu**	**5.16**	**110**	P	**Pn**	**06 42 53.7**	**-1.2**
	2.5nm11μm316nm,0.6s						
CISI	**Cisompet, Garu**	**5.16**	**110**		**Pn**	**06 42 53.9**	**-1.0**
XMIS	**Christmas Isla**	**5.37**	**150**		Pn	06 42 51.6	-6.2
PDSI	**Padang**	**5.45**	**333**	P	**Pn**	**06 42 57.6**	**-1.3**
	0.9nm3μm81nm,0.6s						
SISI	**Saibi**	**5.87**	**319**	P	**Pn**	**06 43 03.0**	**-1.7**
	0.5nm71nm,0.6s						
BKNI	**Bangkinang**	**6.37**	**343**	P	Pn	06 43 19.1	+7.5
MNSI	**Mandailing Nat**	**7.36**	**333**	P	**Pn**	**06 43 28.7**	**+3.6**
PBSI	**Pulau Batu**	**7.36**	**321**	P	**Pn**	**06 43 23.1**	**-2.0**
	0.7nm76nm,0.9s						
UGM	**Wanagama**	**7.82**	**106**	P	**Pn**	**06 43 30.7**	**-0.8**
	1.2nm149nm,0.9s						
UGM	**Wanagama**	**7.82**	**106**		**Pn**	**06 43 31.0**	**-0.5**
GSI	**Gunungsitoli**	**8.86**	**323**		**Pn**	**06 43 43.1**	**-2.5**
PWJI	**Pagerwojo**	**9.08**	**105**	P	**Pn**	**06 43 48.5**	**-0.2**
	68nm,0.5s						
RPSI	**Rantau Prapat**	**9.34**	**335**		**Pn**	**06 43 51.4**	**-0.9**
PSI	**Prapat**	**9.44**	**335**	P	**Pn**	**06 43 51.4**	**-2.3**
	0.9nm,0.3s,baz=180,slow=11,SNR=3.6						
KULM	**Kulim**	**11.25**	**348**	P	**Pn**	**06 44 19.0**	**+0.6**
JAGI	**Jajag, Banyuwa**	**11.45**	**104**	P	**Pn**	**06 44 20.2**	**-0.9**
	93nm,0.7s						
JAGI	**Jajag, Banyuwa**	**11.45**	**104**		**Pn**	**06 44 19.2**	**-1.9**
SBUM	**Sibu**	**12.38**	**49**	P	**Pn**	**06 44 34.0**	**+0.1**
SRBI	**Singaraja**	**12.40**	**101**	P	**Pn**	**06 44 32.9**	**-1.2**
	60nm,0.6s						
PLAI	**Plampang**	**15.03**	**102**	P	**Pn**	**06 45 05.9**	**-3.7**
	62nm,0.7s						
TTSI	**Tana Toraja**	**17.06**	**81**	P	P	06 45 46.7	+10
BKSI	**Bulukumba**	**17.12**	**89**	P	P	06 45 44.4	+7.0
BNSI	**Bone**	**17.16**	**86**	P	**P**	**06 45 38.0**	**+0.1**
	45nm,1.2s						
MPSI	**Mapaga**	**18.00**	**71**	P	**P**	**06 45 48.1**	**+0.9**
	37nm,0.7s						
EDFI	**Ende, Flores**	**18.84**	**100**	P	**P**	**06 45 55.4**	**-1.1**
	10.0nm,0.4s						
APSI	**Ampana**	**19.30**	**76**	P	**Pn**	**06 46 02.3**	**-0.5**
	738nm52nm,0.7s						
BBSI	**Bau Bau**	**19.55**	**90**	P	**P**	**06 46 02.1**	**-2.0**
	629nm7.4nm,1.0s						
MRSI	**Marisa**	**19.98**	**72**	P	**Pn**	**06 46 08.9**	**-1.9**
	846nm78nm,0.8s						
BATI	**Baumata**	**20.99**	**103**	P	**P**	**06 46 20.1**	**+0.3**
	106nm,0.5s,baz=318,slow=2.0,SNR=11						
BATI	**Baumata**	**20.99**	**103**	P	**P**	**06 46 19.7**	**-0.1**
SOEI	**Soe**	**21.50**	**102**	P	**P**	**06 46 23.8**	**-1.6**
SOEI				IAmb	IAmb	06 46 41.3	
	comp=Z,55nm,1.0s						
CMAR	**Chiang Mai Arr**	**24.43**	**351**	P	**P**	**06 46 53.1**	**-1.5**
	comp=Z,14nm,0.5s,baz=181,slow=9.1,SNR=43						
CMAR				PcP	**PcP**	**06 50 34.2**	**+1.3**
	comp=Z,0.7nm,0.3s,baz=198,slow=3.9,SNR=4.7						
CMAR				pPcP		06 50 47.1	
	comp=Z,1.3nm,0.5s,baz=208,slow=3.5,SNR=6.0						
CMAR				LR	LR	06 55 37.1	
	comp=Z,137nm,21.1s,baz=200,slow=34						
CMAR	**Chiang Mai Arr**	**24.43**	**351**	P	**P**	**06 46 52.4**	**-2.2**
CHTO	**Chiang Mai**	**24.77**	**351**	P	**P**	**06 46 55.9**	**-1.9**
CHTO				IAmb	IAmb	06 46 57.8	
	comp=Z,14nm,0.9s						
FITZ	**Fitzroy Crossi**	**25.31**	**121**	P	**P**	**06 47 02.9**	**+0.2**
	comp=Z,1.9nm,0.4s,baz=333,slow=8.6,SNR=12						
FITZ	**Fitzroy Crossi**	**25.31**	**121**	P	**P**	**06 47 02.9**	**+0.2**
NWAO	**Narrogin (SRO)**	**30.10**	**156**	LR	LR	06 58 26.4	
	comp=Z,222nm,20.9s,baz=298,slow=33						
H08S2	**Diego Garcia H**	**30.28**	**265**	T	T	07 19 23.6	
	baz=88,slow=75,SNR=152						
H08S3	**Diego Garcia H**	**30.29**	**265**	T	T	07 19 18.3	
	baz=88,slow=75,SNR=274						
H08S1	**Diego Carcia H**	**30.30**	**265**	T	T	07 19 19.7	
	baz=88,slow=75,SNR=49						
H01W3	**Cape Leeuwin H**	**30.73**	**162**	T	T	07 20 15.5	
	baz=338,slow=76,SNR=56						
KMI	**Kunming**	**30.74**	**360**	P	**P**	**06 47 52.8**	**+1.5**
KMI				pP	pP	06 48 02.0	-1.1
KMI				sP	sP	06 48 06.3	-2.2
KMI				S	**S**	**06 52 55.0**	**+3.6**
KMI				pmax	pmax		
	comp=Z,13nm,0.7s						
KMI				pmax	pmax		
	comp=Z,130nm,5.8s						
KMI				LR	LR		
	comp=Z,320nm,15.7s						
KMI				LR	LR		
	comp=Z,150nm,16.1s						
KMI				LR	LR		
	comp=Z,350nm,16.8s						
H01W2	**Cape Leeuwin H**	**30.75**	**162**	T	T	07 20 34.8	
	baz=338,slow=76,SNR=60						
H01W1	**Cape Leeuwin H**	**30.75**	**162**	T	T	07 20 20.5	
	baz=338,slow=76,SNR=64						
GYA	**Guiyang**	**32.27**	**6**	*e*P	**P**	**06 48 07.3**	**+2.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WRA	**Warramunga Arr**	**33.60**	**118**	P	**P**	**06 48 16.2**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=288,slow=9.9,SNR=16						
WRA	**Warramunga Arr**	**33.60**	**118**	P	**P**	**06 48 16.4**	**+0.1**
WB2	**Warramunga Ar**	**33.61**	**118**	P	**P**	**06 48 16.4**	**-0.1**
WB2				IAmb	IAmb	06 48 28.2	
	comp=Z,6.6nm,0.8s						
WR0	**Warramunga Arr**	**33.78**	**118**	P	**P**	**06 48 18.2**	**+0.3**
WR0				IAmb	IAmb	06 48 18.4	
	comp=Z,5.6nm,0.7s						
AS31	**Alice Springs**	**34.69**	**124**	P	**P**	**06 48 26.4**	**+0.6**
ASAR	**Alice Springs**	**34.69**	**124**	P	**P**	**06 48 26.4**	**+0.6**
	comp=Z,4.4nm,0.5s,baz=302,slow=8.2,SNR=77						
ASAR	**Alice Springs**	**34.69**	**124**	P	**P**	**06 48 25.9**	**+0.2**
ODAN	**Odare**	**35.79**	**336**	*e*P	**P**	**06 48 35.4**	**+0.1**
	comp=Z,39nm,0.6s						
RAMN	**Ramite**	**36.20**	**335**	*e*P	**P**	**06 48 39.3**	**+0.5**
	comp=Z,25nm,0.6s						
CD2	**Chengdu**	**36.51**	**1**	P	**P**	**06 48 41.9**	**+0.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JIRN	**Jiri**	**36.99**	**335**	*e*P	**P**	**06 48 46.1**	**+0.4**
	comp=Z,39nm,0.5s						
PKI	**Pulchoki**	**37.25**	**334**	*e*P	**P**	**06 48 47.6**	**-0.3**
	comp=Z,14nm,0.7s						
GUN	**Gumba**	**37.34**	**335**	*e*P	**P**	**06 48 49.0**	**+0.3**
	comp=Z,27nm,0.5s						
DMN	**Daman**	**37.42**	**333**	*e*P	**P**	**06 48 49.2**	**0.0**
KKN	**Kakani**	**37.50**	**334**	*e*P	**P**	**06 48 49.7**	**-0.1**
	comp=Z,25nm,0.6s						
KOLN	**Koldanda**	**38.24**	**332**	*e*P	**P**	**06 48 56.6**	**+0.4**
	comp=Z,32nm,0.7s						
DANN	**Dangsing**	**38.66**	**332**	*e*P	**P**	**06 49 00.0**	**+0.3**
	comp=Z,42nm,0.4s						
XAN	**Xi'an**	**40.03**	**8**		pP	06 49 22.1	-0.8
COEN	**Coen**	**40.41**	**105**	P	**P**	**06 49 13.1**	**-1.2**
COEN				IAmb	IAmb	06 49 21.7	
	comp=Z,23nm,1.4s						
NJ2	**Nanjing**	**40.59**	**21**	*e*P	**P**	**06 49 16.9**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
LZH	**Lanzhou**	**41.68**	**1**	*e*P	**P**	**06 49 26.4**	**+1.9**
LZH				pP	pP	06 49 35.8	-0.7
LZH				sP	pwP	06 49 38.9	0.0
LZH				PP	**PnPn**	**06 51 06.3**	**-0.4**
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH				pmax	pmax		
	comp=Z,67nm,4.7s						
LZH				LR	LR		
	comp=Z,220nm,16.2s						
LZH				LR	LR		
	comp=Z,430nm,16.0s						
LZH				LR	LR		
	comp=Z,580nm,18.0s						
STKA	**Stephens Creek**	**44.46**	**131**	P	**P**	**06 49 48.0**	**+1.1**
	comp=Z,4.9nm,0.5s,baz=302,slow=6.7,SNR=21						
STKA	**Stephens Creek**	**44.46**	**131**	P	**P**	**06 49 47.6**	**+0.7**
GTA	**Gaotai**	**45.08**	**357**	*e*P	**P**	**06 49 51.6**	**-0.2**
GTA				pP	pP	06 49 58.4	-5.6
GTA				sP	pwP	06 50 03.4	-3.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,59nm,5.2s						
GTA				LR	LR		
	comp=Z,250nm,17.5s						
GTA				LR	LR		
	comp=Z,290nm,18.4s						
GTA				LR	LR		
	comp=Z,230nm,18.1s						
HHC	**Hu-ho-hao-te**	**47.09**	**9**	*e*P	**P**	**06 50 09.5**	**+1.9**
HHC				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC				pmax	pmax		
	comp=Z,49nm,4.8s						
BJI	**Beijing**	**47.22**	**14**	P	**P**	**06 50 08.8**	**+0.3**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSAR	**Wonju Array Be**	**48.91**	**26**	P	**P**	**06 50 21.1**	**-0.5**
KSRS	**Korea Array**	**48.94**	**26**	P	**P**	**06 50 21.4**	**-0.4**
	comp=Z,5.6nm,0.5s,baz=229,slow=7.6,SNR=23					

comp=Z,0.6nm,0.9s,baz=331,slow=6.9,SNR=1.7
VNDA pP **pP** 06 53 45.6 -0.1
comp=Z,2.4nm,0.9s,baz=304,slow=6.4,SNR=9.5
BRTR Keskin Array B 78.03 312 P **P** 06 53 34.1 -0.1
comp=Z,2.7nm,0.8s,baz=141,slow=7.1,SNR=15
BRTR Keskin Array B 78.03 312 P **P** 06 53 33.4 -0.8
TIXI Tiksi 79.16 8 P **P** 06 53 37.6 -1.9
OBN Obninsk 81.55 328 LR LR 07 34 52.0
comp=Z,7.5nm,18.2s,baz=161,slow=39
CFR Carcaliu 83.48 317 ⇑P **P** 06 54 03.5 +0.5
IDI Anoyia 83.63 306 P **P** 06 54 04.8 +0.7
comp=Z,2.5nm,0.4s,baz=48,slow=10,SNR=6.3
TSUM Tsumeb 83.74 251 P **P** 06 54 07.3 +2.3
comp=Z,1.2nm,0.3s,baz=88,slow=4.7,SNR=2.4
TSUM Tsumeb 83.74 251 IAmb IAmb 06 54 17.5
comp=Z,5.1nm,1.1s
QSPA South Pole Qui 84.18 180 P **P** 06 54 07.0 +0.6
comp=Z,0.9nm,0.8s,baz=124,slow=2.0
QSPA South Pole Qui 84.18 180 IAmb IAmb 06 54 07.9
comp=Z,4.2nm,1.2s
AKASG Malin Array Be 84.26 322 P **P** 06 54 05.6 -1.3
comp=Z,0.3nm,0.3s,baz=86,slow=5.1,SNR=5.6
AKASG pP **pP** 06 54 18.7 -1.5
comp=Z,0.6nm,0.3s,baz=85,slow=5.0,SNR=5.0
VRI Vrincioaia 84.61 317 ⇑P **P** 06 54 09.6 +0.8
MLR Muntele Rosu 85.05 317 ⇑P **P** 06 54 12.5 +1.3
PLVB Pleven 85.51 314 ⇑P P 06 54 27.0 +14
BURAR Bucovina Array 86.03 318 ⇑P **P** 06 54 18.0 +2.1
BURAR Bucovina Array 86.03 318 P **P** 06 54 17.4 +1.4
BUR08 Bucovina Ar. S 86.04 319 P **P** 06 54 18.1 +2.1
BUR08 IAmb IAmb 06 54 30.9
comp=Z,6.8nm,0.9s
SIRR Siria 88.14 317 ⇑P **P** 06 54 26.6 +0.4
KOLS Kolonicke sedl 88.22 319 *eP* **P** 06 54 28.2 +1.8
KOLS *ep*P **pP** 06 54 40.6 +0.7
FINES FINESS Array B 88.82 332 P **P** 06 54 28.9 0.0
comp=Z,1.1nm,0.5s,baz=105,slow=6.4,SNR=7.7
FINES FINESS Array B 88.82 332 P **P** 06 54 29.4 +0.6
SNAA Sanae 89.44 198 P **P** 06 54 34.1 +2.3
comp=Z,1.1nm,1.0s,baz=210,slow=7.2,SNR=6.1
SNAA Sanae 89.44 198 IAmb IAmb 06 54 49.8
comp=Z,5.7nm,1.2s
ARCES ARCESS Array B 91.02 340 P **P** 06 54 39.0 -0.1
comp=Z,3.2nm,1.0s,baz=102,slow=8.9,SNR=4.2
ARCES ARCESS Array B 91.02 340 P **P** 06 54 41.1 +2.0
GERES GERESS Array B 93.82 319 P **P** 06 54 53.4 +0.8
comp=Z,0.3nm,0.3s,baz=72,slow=4.3,SNR=4.8
YKA Yellowknife Ar 117.08 19 PKP **PKPdf** 07 00 18.9 -0.8
comp=Z,0.3nm,0.7s,baz=0.3,slow=2.1,SNR=7.7
YKA pPKP pPKPdf 07 00 31.3 -2.3
comp=Z,0.4nm,0.7s,baz=12,slow=2.2,SNR=4.9
J08A Circle Bar Ran 127.81 38 **PKiKP** 07 00 43.2 +1.6
CCM Cathedral Cave 145.40 20 **PKPbc** 07 01 12.7 -0.7
TX31 Lajitas Ar. Si 145.67 44 **PKPab** 07 01 15.6 +0.6
TX32 Lajitas Array 145.67 44 **PKPab** 07 01 15.7 +0.7
TXAR Lajitas Array 145.67 44 PKPbc **PKPab** 07 01 15.5 +0.5
comp=Z,12nm,0.8s,baz=302,slow=1.6,SNR=99
TXAR Lajitas Array 145.67 44 **PKPab** 07 01 15.2 +0.2
WCI Wyandotte Cave 146.65 13 **PKPbc** 07 01 17.0 -0.1
WVT Waverly 148.24 17 **PKPbc** 07 01 21.7 +0.1
CLTN Cedars of Leba 148.68 15 **PKPbc** 07 01 23.0 +0.2
PLAL Pickwick Lake 149.24 18 **PKPbc** 07 01 23.6 -0.6
V52A Sevierville 149.51 10 **PKPbc** 07 01 25.0 +0.2
CPCT Cooper Cave 149.71 12 **PKPbc** 07 01 25.7 +0.4
V53A Saluda 149.81 9 **PKPbc** 07 01 25.6 -0.1

NIED ***14*** *06:44:00, 37˚.50N×141˚.90E, h11km, Mw3.7 Best double couple: M₀3.52000×10¹⁴ NP1:φ=82.00000°, δ56.00000°, λ-47.00000°. NP2:φ=203.00000°, δ53.00000°, λ-135.00000°.*

IDC ***14*** *06:44:33.6±1.2, 37˚.33N×142˚.13E, h0km, mb3.7/3, mb1 3.9/5, mb1mx3.6/41, mbtmp3.5/5, ML2.3/2, Error ellipse: s-maj=34.7km s-min=23.1km az=135.0*

JMA ***14*** *06:44:35.3±0.1, 37˚.47N×141˚.84E, h25km±2km, M4.2 JMA Felt I J1.*

ISC 14 06:44:33.3±1.9, 37˚44N±0˚.04×141˚89E±0˚.06, h3km±11km, n19, σ1°27/34, mb3.6/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JFK	**Kawauchi**	**0.81**	**265**	P		**Pb**	**06 44 49.7**	**-0.3**
JFK				S		**Sg**	**06 45 00.3**	**+1.0**
JMST	**Minamisoumatoc**	**0.84**	**290**	P		**Pg**	**06 44 50.0**	**+0.6**
JMST				S		**Sg**	**06 45 00.3**	**0.0**
JIKH	**Ishinomakikobu**	**0.93**	**339**	P		**Pb**	**06 44 51.7**	**-0.4**
JIKH				S		**Sg**	**06 45 03.5**	**+0.3**
ONAJ	**Iwakimizuishiy**	**0.93**	**249**	P		**Pg**	**06 44 51.8**	**+0.6**
ONAJ				*eS*		**Sg**	**06 45 03.6**	**+0.4**
JMM	**Marumori**	**0.96**	**296**	P		**Pg**	**06 44 51.9**	**+0.1**
JMM				*eS*		**Sg**	**06 45 04.4**	**+0.1**
JIO	**Ouri**	**1.09**	**337**	P		**Pg**	**06 44 54.4**	**+0.1**
JIO				S		**Sg**	**06 45 07.7**	**-0.8**
JFT	**Otama**	**1.23**	**274**	P		**Pg**	**06 44 56.9**	**-0.1**
JFT				S		**Sg**	**06 45 12.6**	**-0.4**
JOU	**Okura**	**1.33**	**314**	P		**Pn**	**06 44 58.6**	**-0.3**
JOU				*eS*		**Sg**	**06 45 15.6**	**-0.6**
JHO	**Hitachi**	**1.34**	**232**	P		**Pn**	**06 44 58.1**	**-0.9**
JHO				S		**Sg**	**06 45 14.7**	**-1.7**
JKMT	**Kesennumamotoy**	**1.40**	**347**	P		**Pn**	**06 44 59.0**	**-0.8**
JKMT				*eS*		**Sb**	**06 45 16.6**	**-1.9**
JMK	**Ichinoseki**	**1.59**	**341**	P		**Pn**	**06 45 02.2**	**-0.3**
JMK				S		**Sn**	**06 45 22.4**	**-1.2**
JYS	**Shirataka**	**1.64**	**299**	P		**Pn**	**06 45 03.4**	**+0.3**
JYS				S		**Sn**	**06 45 24.3**	**-0.3**
JFY	**Yanaizu**	**1.74**	**269**	P		**Pn**	**06 45 04.5**	**+0.1**
JFY				*eS*		**Sn**	**06 45 26.9**	**-0.2**
MJAR	**Matsushiro Arr**	**3.08**	**254**	Pn		**Pn**	**06 45 24.8**	**+1.9**
	0.6nm,0.3s,baz=77,slow=17,SNR=5.5							
MJAR				Sn		**Sb**	**06 46 05.8**	**-0.9**
	0.7nm,0.3s,baz=54,slow=13,SNR=4.8							
MAT	**Matsushiro**	**3.08**	**254**	P		**Pn**	**06 45 24.7**	**+1.8**
MAT				*eS*		**Sb**	**06 46 03.8**	**-2.9**
USRK	**Ussuriysk Ar.**	**10.09**	**315**	Pn		**Pn**	**06 47 03.3**	**+4.3**
	baz=127,slow=14,SNR=2.3							
ILAR	**Eielson Array**	**48.95**	**33**	P		**P**	**06 53 20.8**	**+0.3**
	0.4nm,0.8s,baz=286,slow=6.5,SNR=4.7							
WRA	**Warramunga Arr**	**57.52**	**188**	P		**P**	**06 54 24.3**	**+0.3**
	1.0nm,0.3s,baz=7.2,slow=7.1,SNR=6.5							
YKA	**Yellowknife Ar**	**63.27**	**30**	P		**P**	**06 55 03.7**	**+0.8**
	0.3nm,0.7s,baz=306,slow=6.1,SNR=7.4							

IDC ***14*** *06:49:22.6±1.0, 28˚.05S×63˚.36E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.7/41, mbtmp3.9/7, Error ellipse: s-maj=32.8km s-min=26.2km az=20.0*

ISC 14 06:49:25.3±0.9, 28˚.0S±0˚.2×63˚.4E±0˚.2, h17km, n11, σ0°24/8, mb3.9/7, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LSZ	**Lusaka**	**34.93**	**284**	P		**P**	**06 56 16.4**	**-0.2**
	3.1nm,0.6s,baz=117,slow=7.6,SNR=5.9							
H01W2	**Cape Leeuwin H**	**43.47**	**112**	T		T	07 43 59.0	
	baz=264,slow=75,SNR=10							
H01W3	**Cape Leeuwin H**	**43.47**	**112**	T		T	07 44 00.2	
	baz=264,slow=75,SNR=12							
H01W1	**Cape Leeuwin H**	**43.48**	**112**	T		T	07 44 01.1	
	baz=264,slow=75,SNR=9.0							
CMAR	**Chiang Mai Arr**	**57.65**	**41**	P		**P**	**06 59 14.6**	**-0.2**
	0.8nm,0.4s,baz=228,slow=8.7,SNR=4.1							
QSPA	**South Pole Qui**	**62.10**	**180**	P		**P**	**06 59 45.2**	**+0.2**
	1.4nm,0.9s,baz=216,slow=2.5,SNR=2.5							
ASAR	**Alice Springs**	**62.84**	**104**	P		**P**	**06 59 50.4**	**-0.2**
	0.8nm,0.8s,baz=240,slow=6.5,SNR=5.9							
TORD	**Torodi Ar. Bea**	**72.36**	**296**	P		**P**	**07 00 50.6**	**-0.1**
	0.5nm,0.8s,baz=118,slow=6.5,SNR=2.8							
BRTR	**Keskin Array B**	**72.88**	**336**	P		**P**	**07 00 53.6**	**+0.2**
	0.3nm,0.5s,baz=119,slow=4.8,SNR=4.1							
MKAR	**Makanchi Array**	**76.43**	**13**	P		**P**	**07 01 14.0**	**+0.3**
	0.5nm,0.8s,baz=191,slow=5.6,SNR=4.4							
YKA	**Yellowknife Ar**	**145.52**	**358**	PKPbc		**PKPab**	**07 09 02.1**	**-0.1**
	0.6nm,0.8s,baz=353,slow=3.4,SNR=12							

IDC ***14*** *07:27:50.2±0.8, 50˚.08N×78˚.84E, h0km, mb1 2.9/3, mb1mx2.9/40, mbtmp2.9/3, ML2.7/3, Error ellipse: s-maj=13.5km s-min=5.7km az=58.0*

NNC ***14*** *07:27:50.1±0.9, 50˚.06N×78˚.54E, h0km, mb3.1, mpv3.0, Error ellipse: s-maj=9.4km s-min=4.8km az=86.0, Suspected Mining explosion.*

ISC 14 07:27:49.6±0.8, 49˚98N±0˚.03×78˚60E±0˚.04, h0km, n23, σ1°42/38, 15C-15D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KUR07	**Kurchatov Arra**	**0.60**	**355**	⇑P		**Pg**	**07 28 00.3**	**-0.9**
KUR07				⇑S		**Sg**	**07 28 09.0**	**-0.1**
KUR06	**Kurchatov Arra**	**0.62**	**356**	⇑P		**Pg**	**07 28 00.6**	**-1.0**
KUR06				⇓S		**Sg**	**07 28 09.5**	**-0.2**
KUR14	**Kurchatov Arra**	**0.64**	**360**	⇓P		**Pg**	**07 28 00.5**	**-1.3**
KUR14				⇑S		**Sg**	**07 28 09.1**	**-1.0**
KUR15	**Kurchatov Arra**	**0.64**	**358**	⇑P		**Pg**	**07 28 00.7**	**-1.2**
KUR15				⇓S		**Sg**	**07 28 09.8**	**-0.4**
KURBB	**Kurchatov Arra**	**0.64**	**356**	Pg		**Pg**	**07 28 00.9**	**-1.1**
	2.5nm,0.3s,baz=164,slow=17,SNR=199							
KURBB				Lg		Lg	07 28 09.8	
	2.7nm,0.3s,baz=178,slow=32,SNR=20							
KURBB	**Kurchatov Arra**	**0.64**	**356**	⇑P		**Pg**	**07 28 00.9**	**-1.1**
	26nm,0.3s							
KURBB				⇑S		**Sg**	**07 28 09.6**	**-0.7**
	58nm,0.5s							
KUR16	**Kurchatov Arra**	**0.65**	**355**	⇑P		**Pg**	**07 28 01.1**	**-1.0**
KUR16				⇓S		**Sg**	**07 28 10.1**	**-0.4**
KUR17	**Kurchatov Arra**	**0.66**	**353**	⇑P		**Pg**	**07 28 01.1**	**-1.1**
KUR17				⇓S		**Sg**	**07 28 10.1**	**-0.6**
KUR05	**Kurchatov Arra**	**0.66**	**357**	⇓P		**Pg**	**07 28 01.1**	**-1.2**
KUR05				⇓S		**Sg**	**07 28 10.3**	**-0.7**
KUR04	**Kurchatov Arra**	**0.68**	**357**	⇑P		**Pg**	**07 28 01.6**	**-1.2**
KUR04				⇓S		**Sg**	**07 28 10.7**	**-0.9**
KURK	**Kurchatov**	**0.74**	**1**	⇑P		**Pg**	**07 28 02.1**	**-1.6**
	10.0nm,0.4s							
KURK				⇑S		**Sg**	**07 28 11.2**	**-2.1**
	16nm,0.4s							
SEM	**Semipalatinsk**	**1.15**	**67**	P		**Pn**	**07 28 16.6**	**+3.5**
	6.8nm,0.2s							
SEM				S		**Sn**	**07 28 30.5**	**+0.8**
	21nm,0.1s							
BRZS	**Berezniki**	**3.82**	**272**	Pg		**Pg**	**07 29 02.9**	**+0.2**
	3.6nm,0.1s							
BRZS				Lg		Lg	07 29 49.9	
	8.3nm,0.1s							
MAKZ	**Makanchi**	**3.89**	**143**	⇓Pg		**Pb**	**07 28 59.6**	**+0.4**
	2.0nm,0.5s							
MAKZ				⇓Lg		Lg	07 29 54.6	
	4.0nm,0.5s							
MK31	**Makanchi Array**	**4.03**	**141**	⇑Pn		**Pn**	**07 28 53.0**	**+0.5**
	0.1nm,0.2s,baz=322,slow=10,SNR=17							
MK31				⇑Pg		**Pb**	**07 29 02.2**	**+0.7**
	0.7nm,0.3s,baz=332,slow=13,SNR=19							
MK31				⇓Lg		Lg	07 29 58.4	
	5.1nm,0.5s,baz=342,slow=28,SNR=11							
MKAR	**Makanchi Array**	**4.03**	**141**	Pn		**Pn**	**07 28 53.1**	**+0.5**
	0.4nm,0.3s,baz=327,slow=11,SNR=20							
MKAR				Pg		**Pb**	**07 29 01.4**	**-0.1**
	1.5nm,0.3s,baz=323,slow=14,SNR=25							
MKAR				Sn		**Sn**	**07 29 38.3**	**-2.2**
	0.4nm,0.3s,baz=335,slow=16,SNR=3.7							
MKAR				Lg		Lg	07 29 56.5	
	2.6nm,0.3s,baz=330,slow=29,SNR=10							
OTUK	**Ortayu**	**4.46**	**249**	Pg		**Pg**	**07 29 13.4**	**-1.7**
	0.8nm,0.4s							
OTUK				Lg		Lg	07 30 08.7	
	3.1nm,0.4s							
OTUK	**Ortayu**	**4.46**	**249**	⇓Pn		**Pn**	**07 29 00.6**	**+2.1**
	1.1nm,0.3s							
OTUK				⇓Pg		**Pg**	**07 29 12.3**	**-2.8**
	1.0nm,0.5s							
OTUK				⇓Lg		Lg	07 30 13.4	
	4.1nm,0.7s							
ZALV	**Zalesovo Beam**	**5.53**	**42**	Pn		**Pn**	**07 29 12.8**	**-0.4**
	1.1nm,0.3s,baz=230,slow=13,SNR=5.1							
ZALV				Lg		Lg	07 30 39.0	
	1.3nm,0.3s,baz=213,slow=34,SNR=2.7							
BVAR	**Borovoye Array**	**5.96**	**304**	Pn		**Pn**	**07 29 21.1**	**+2.0**
	0.2nm,0.3s,baz=111,slow=16,SNR=3.0							
BVAR				Sn		**Sn**	**07 30 28.3**	**+0.2**
	1.0nm,0.3s,baz=116,slow=24,SNR=10							
BVAR				Lg		Lg	07 31 01.0	
	0.4nm,0.3s,baz=120,slow=32,SNR=3.7							
BRVK	**Borovoye**	**6.03**	**304**	⇑Sn		**Sn**	**07 30 32.9**	**+3.1**
	2.0nm,0.6s							
BRVK				⇓Lg		Lg	07 31 00.5	
	1.8nm,0.6s							
KUU	**Kurty**	**6.28**	**195**	Pg		**Pg**	**07 29 49.8**	**-0.2**
	0.3nm,0.1s							
KUU				Lg		Lg	07 31 09.9	
	3.3nm,0.4s							
I31KZ	**AKTYUBINSK INF**	**13.18**	**280**	*i*			08 47 40.0	
	baz=84,slow=318,SNR=1.1							

IDC 14 07:35:14.3±4.6, 2˚42S×130˚49E, h0km, mb3.4/2, mb1 3.8/3, mb1mx3.4/29, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=346.9km s-min=29.0km az=71.0, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.82**	**168**	P		P	07 39 24.9	+0.2
	0.1nm,0.3s,baz=348,slow=11,SNR=5.7							
ASAR	**Alice Springs**	**21.38**	**171**	P		P	07 40 02.8	-0.8
	1.0nm,0.5s,baz=346,slow=10,SNR=16							
MKAR	**Makanchi Array**	**64.72**	**325**	P		P	07 45 54.6	+0.2
	0.3nm,0.6s,baz=117,slow=7.8,SNR=3.4							

GUC ***14*** *07:38:00.2±0.7, 22˚.21S×67˚.71W, h228km±6km, ML3.9*

SCB ***14*** *07:38:00.4±2.2, 22˚.34S×67˚.38W, h200km±21km, ML3.7/3, Error ellipse: s-maj=9.3km s-min=8.6km az=0.0*

ISC 14 07:37:59.9±2.0, 22˚23S±0˚.06×67˚45W±0˚.06, h192km±16km, n37, σ1°14/56, 11C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**1.41**	**254**	*eP*		**Pn**	**07 38 33.2**	**+0.8**
PB09	**IPOC Station P**	**1.72**	**284**	⇑*i*P		**Pn**	**07 38 36.3**	**+1.2**
PB09				*eS*		**Sn**	**07 39 04.2**	**+1.8**
VJA	**Yavi**	**1.79**	**89**	P		**Pn**	**07 38 35.5**	**-0.8**
MOCB	**Mochara**	**1.94**	**60**	P		**Pn**	**07 38 36.9**	**-0.8**
PB06	**IPOC Station P**	**2.02**	**256**	*eP*		**Pn**	**07 38 39.1**	**+0.9**
PB06				*i* S		**Sn**	**07 39 08.5**	**+0.6**
PB06				IAML			07 39 10.3	
	comp=N,394nm,0.3s							
PB15	**IPOC Station P**	**2.11**	**242**	⇑*i*P		**Pn**	**07 38 40.3**	**+1.1**
PB15				*i* S		**Sn**	**07 39 10.4**	**+0.7**
PB03	**IPOC Station P**	**2.14**	**274**	*eP*		**Pn**	**07 38 40.2**	**+0.7**
PB03				*i* S		**Sn**	**07 39 10.2**	**-0.1**
PB01	**IPOC Station P**	**2.23**	**301**	⇑*i*P		**Pn**	**07 38 41.0**	**+0.6**
PB01				*i* S		**Sn**	**07 39 11.8**	**0.0**
PB01				IAML			07 39 13.7	
	comp=N,200nm,0.5s							
PB01	**IPOC Station P**	**2.23**	**301**	P		**Pn**	**07 38 40.8**	**+0.4**
PB07	**IPOC Station P**	**2.32**	**282**	⇓*i*P		**Pn**	**07 38 42.1**	**+0.7**
PB07				*i* S		**Sn**	**07 39 13.1**	**-0.5**
PB07				IAML			07 39 13.7	
	comp=N,540nm,0.4s							
PB02	**IPOC Station P**	**2.45**	**291**	⇑*i*P		**Pn**	**07 38 43.3**	**+0.6**
PB02	**IPOC Station P**	**2.45**	**291**	P		**Pn**	**07 38 43.2**	**+0.4**
PB02				S		**Sn**	**07 39 14.7**	**-1.4**
PB02				AML	AML		07 39 15.4	
	comp=N,158nm,0.4s							
PB04	**IPOC Station P**	**2.50**	**267**	*eP*		**Pn**	**07 38 43.9**	**+0.4**
PB04				*i* S		**Sn**	**07 39 16.3**	**-1.1**
PB04	**IPOC Station P**	**2.50**	**267**	P		**Pn**	**07 38 44.1**	**+0.6**
PB04				S		**Sn**	**07 39 16.6**	**-0.8**
PB08	**IPOC Station P**	**2.61**	**322**	⇑*i*P		**Pn**	**07 38 45.5**	**+1.5**
PB08				IAML			07 39 22.1	
	comp=E,247nm,0.4s							
PB08	**IPOC Station P**	**2.61**	**322**	P		**Pn**	**07 38 46.3**	**+1.3**
PB08				S		**Sn**	**07 39 19.6**	**-0.5**
PB08				AML	AML		07 39 22.0	
	comp=E,141nm,0.3s							
PB05	**IPOC Station P**	**2.62**	**256**	⇑*i*P		**Pn**	**07 38 45.1**	**+0.3**
PB05				*i* S		**Sn**	**07 39 18.5**	**-1.2**
PB05				IAML			07 39 20.0	
	comp=N,366nm,0.5s							
PATCX	**Punta Patache**	**2.88**	**299**	⇑*i*P		**Pn**	**07 38 47.8**	**+0.1**
PATCX				*i* S		**Sn**	**07 39 23.4**	**-1.7**
GO01	**Chusmiza**	**3.02**	**327**	*i* P		**Pn**	**07 38 50.8**	**+0.9**
GO01				*i* S		**Sn**	**07 39 29.3**	**+0.5**
TA01	**Diego Aracena**	**3.04**	**302**	⇑*i*P		**Pn**	**07 38 49.3**	**-0.2**
TA01				*i* S		**Sn**	**07 39 28.5**	**-1.8**
TA01				IAML			07 39 28.0	
	comp=E,362nm,0.3s							
PB10	**IPOC Station P**	**3.14**	**245**	⇑*i*P		**Pn**	**07 38 51.0**	**+0.3**
PB10				*i* S		**Sn**	**07 39 28.7**	**-1.8**
TA02	**Huaiquique**	**3.17**	**307**	*eP*		**Pn**	**07 38 50.7**	**-0.4**
TA02				*i* S		**Sn**	**07 39 29.6**	**-1.6**
PB11	**IPOC Station P**	**3.20**	**320**	*eP*		**Pn**	**07 38 51.7**	**0.0**
PB11	**IPOC Station P**	**3.20**	**320**	P		**Pn**	**07 38 51.7**	**0.0**
PB11				S		**Sn**	**07 39 30.4**	**-1.9**
GO02	**Mina Guanaco**	**3.52**	**213**	*eP*		**Pn**	**07 38 56.8**	**+1.1**
PSGC	**Pisagua**	**3.62**	**316**	*eP*		**Pn**	**07 38 56.2**	**-0.5**
PSGC	**Pisagua**	**3.62**	**316**	P		**Pn**	**07 38 55.8**	**-0.9**
MNMC	**Minye Minye**	**3.68**	**326**	⇑*i*P		**Pn**	**07 38 58.3**	**+0.7**
MNMC				*i* S		**Sn**	**07 39 42.2**	**-0.7**
MNMC	**Minye Minye**	**3.68**	**326**	P		**Pn**	**07 38 57.9**	**+0.2**
MNMC				S		**Sn**	**07 39 40.9**	**-2.0**
MNMC				AML	AML		07 39 43.1	
	comp=E,148nm,0.8s							
PB16	**IPOC Station P**	**4.33**	**333**	⇑*i*P		**Pn**	**07 39 06.8**	**+0.7**
PB16				*i* S		**Sn**	**07 39 57.4**	**-0.5**
PB12	**IPOC Station P**	**4.50**	**323**	⇓*i*P		**Pn**	**07 39 06.4**	**-1.4**
BBOJ	**La Paz, Jacaqu**	**5.27**	**352**	P		**Pn**	**07 39 20.8**	**+2.7**
BBOE	**La Paz, Chanca**	**5.41**	**355**	P		**Pn**	**07 39 22.4**	**+2.5**
BBOD	**La Paz, Gloria**	**5.66**	**349**	P		**Pn**	**07 39 25.2**	**+2.0**
LPAZ	**La Paz**	**5.94**	**354**	P		**Pn**	**07 39 28.0**	**+1.1**
BBOB	**La Paz, Bander**	**6.09**	**354**	P		**Pn**	**07 39 29.9**	**+1.2**
SIV	**San Ignacio**	**8.65**	**45**	P		Pn	07 40 01.1	-0.6

CNRM ***14*** *07:39:11.0±1.8, 35˚.99N×4˚.67W, h142km±19km, Error ellipse: s-maj=19.8km s-min=7.8km az=73.0*

MDD ***14*** *07:39:14.1±0.7, 36˚.03N×4˚.57W, h73km±7km, mb3.3/17, Error ellipse: s-maj=5.6km s-min=4.1km az=170.0, PRXIMO*

IGIL ***14*** *07:39:14.2, 36˚.07N×4˚.58W, h24km, ML2.6*

SFS ***14*** *07:39:14.0, 36˚.06N×4˚.58W, ML3.3, ALBORAN W.*

INMG ***14*** *07:39:14.8±1.3, 36˚.12N×4˚.64W, h76km±4km, ML2.4, Error ellipse: s-maj=3.1km s-min=2.7km az=163.0*

ISC 14 07:39:12.3±1.2, 36˚06N±0˚.02×4˚56W±0˚.03, h91km±8km, n72, σ1°73/123, 4C, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EMIJ	**Mijas**	**0.53**	**341**	P		**Pn**	**07 39 27.3**	**-0.2**
	9.0nm,0.1s,SNR=38							
EMIJ				S		**Sn**	**07 39 36.8**	**-2.0**
	26nm,0.1s,SNR=26							
ECEU	**Ceuta**	**0.68**	**257**	P		**Pn**	**07 39 29.3**	**+0.5**
	11nm,0.1s,SNR=7.9							
ECEU				S		**Sn**	**07 39 40.2**	**-0.9**
	9.5nm,0.1s,SNR=7.9							
EMAL	**Malaga-Limoner**	**0.71**	**8**	*eP*		**Pn**	**07 39 29.1**	**0.0**
EMAL				*eS*		**Sn**	**07 39 40.8**	**-0.7**
PVLZ	**Peæn de**	**0.91**	**167**	P		**Pn**	**07 39 30.5**	**-0.5**
PVLZ				S		**Sn**	**07 39 41.8**	**-3.3**
PVLZ	**Peæn de**	**0.91**	**167**	*eP*		**Pn**	**07 39 30.5**	**-0.5**
PVLZ				*eS*		**Sn**	**07 39 41.8**	**-3.3**
ELGU	**Los Guajares,**	**1.10**	**43**	P		**Pn**	**07 39 32.9**	**-0.5**
	4.2nm,0.1s,SNR=7.9							
ELGU				S		**Sn**	**07 39 47.6**	**-1.6**
	18nm,0.1s,SNR=7.9							
EGOR	**Sierra Gorda,**	**1.11**	**19**	P		**Pn**	**07 39 35.1**	**+1.6**
	3.8nm,0.2s,SNR=7.9							
EGOR				S		**Sn**	**07 39 51.1**	**+1.7**
	1.8nm,0.1s,SNR=7.9							
CHEFC	**Chefchaouen**	**1.14**	**214**	P		**Pn**	**07 39 35.9**	**+2.0**
CHEFC				S		**Sn**	**07 39 57.1**	**+7.1**
ESPR	**Espera**	**1.32**	**308**	S		**Sn**	**07 39 53.4**	**-0.3**
	17nm,0.3s,SNR=6.5							
EQUE	**Quentar**	**1.46**	**38**	P		**Pn**	**07 39 38.6**	**+0.9**
	1.2nm,0.2s							
EQUE				S		**Sn**	**07 39 58.4**	**+1.6**
	3.1nm,0.3s,SNR=53							
RSA	**Sarsar**	**1.56**	**222**	P		**Pn**	**07 39 41.3**	**+2.3**
RSA				S		**Sn**	**07 40 01.3**	**+2.2**
EBER	**Berja**	**1.59**	**58**	P		**Pn**	**07 39 39.5**	**+0.1**
	2.3nm,0.2s,SNR=6.9							
EBER				S		**Sn**	**07 39 59.1**	**-0.8**
	32nm,0.6s,SNR=7.9							
AKLM	**AKL**	**1.65**	**160**	P		**Pn**	**07 39 40.5**	**+0.4**
AKLM				S		**Sn**	**07 40 02.6**	**+1.5**
HORN	**Hornachuelos**	**1.87**	**343**	P		**Pn**	**07 39 44.4**	**+1.5**
HORN				S		**Sn**	**07 40 09.1**	**+3.0**
ENIJ	**Nijar**	**2.10**	**64**	S		**Sn**	**07 40 12.3**	**+0.7**
	4.8nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**2.11**	**360**	⇑P		**Pn**	**07 39 47.3**	**+1.3**
	16nm,0.1s,SNR=18							
EADA				S		**Sn**	**07 40 11.7**	**0.0**
	8.6n

	comp=N,2.3nm,0.2s,SNR=18							
PAB				S		Sn	07 40 42.7	-2.1
	comp=N,0.9nm,0.1s,SNR=7.9							
MORF	**Marmelete**	**3.52**	**292**	*eS*		**Sn**	07 40 43.3	-2.2
MORF				AML		AML	07 40 45.0	
	comp=N,16nm,0.2s							
MORF	**Marmelete**	**3.52**	**292**	S		**Sn**	07 40 43.8	-1.7
	comp=N,13nm,0.2s							
MORF	**Marmelete**	**3.52**	**292**	*eS*		**Sn**	07 40 43.8	-1.7
MORF				A		A	07 40 45.5	
	comp=N,13nm,0.2s							
ETOB	**Tobarra**	**3.52**	**42**	P		**Pn**	07 40 06.5	+1.4
	comp=N,0.7nm,0.2s,SNR=7.9							
ETOB				S		**Sn**	07 40 44.6	-1.2
	comp=N,9.1nm,0.6s,SNR=7.9							
PFVI	**Vila Bisbo**	**3.60**	**289**	S		**Sn**	07 40 45.1	-2.3
	comp=N,18nm,0.2s,SNR=7.9							
PFVI	**Vila Bisbo**	**3.60**	**289**	*eS*		**Sn**	07 40 45.2	-2.2
PFVI				A		A	07 40 48.3	
	comp=N,8.7nm,0.2s							
ESDC	**Sonseca Array**	**3.64**	**7**	S		**Sn**	07 40 47.7	-0.8
	comp=N,0.5nm,0.3s,baz=188,slow=23,SNR=4.0							
PTEO	**Sao Teotonio**	**3.66**	**295**	S		**Sn**	07 40 47.7	-1.1
	comp=N,4.2nm,0.8s							
PTEO	**Sao Teotonio**	**3.66**	**295**	*eS*		**Sn**	07 40 47.7	-1.1
PTEO				A		A	07 40 48.1	
	comp=N,8.5nm,0.8s							
PESTR	**Estremoz**	**3.70**	**320**	*eP*		**Pn**	07 40 08.7	+1.4
PESTR				*eS*		**Sn**	07 40 48.5	-1.3
EVO	**Evora**	**3.70**	**313**	P		**Pn**	07 40 08.7	+1.4
EVO				S		**Sn**	07 40 48.3	-1.5
	comp=N,13nm,0.2s							
EVO	**Evora**	**3.70**	**313**	*eP*		**Pn**	07 40 08.6	+1.4
EVO				*eS*		**Sn**	07 40 48.2	-1.7
EVO	**Evora**	**3.70**	**313**	*eP*		**Pn**	07 40 08.7	+1.4
EVO				*eS*		**Sn**	07 40 48.3	-1.5
EVO				A		A	07 40 49.3	
	comp=N,13nm,0.2s							
PNCL	**Nicolau / Gran**	**3.78**	**304**	P		**Pn**	07 40 09.4	+1.1
PNCL				S		**Sn**	07 40 49.6	-2.1
	comp=N,7.0nm,0.3s							
PNCL	**Nicolau / Gran**	**3.78**	**304**	*eP*		**Pn**	07 40 09.4	+1.1
PNCL				*eS*		**Sn**	07 40 49.6	-2.1
PNCL				A		A	07 40 51.3	
	comp=N,7.0nm,0.3s							
PMRV	**Marv??o**	**4.04**	**327**	P		**Pn**	07 40 13.2	+1.2
PMRV				S		**Sn**	07 40 56.5	-1.7
	comp=N,3.3nm,0.5s							
PMRV	**Marv??o**	**4.04**	**327**	*eP*		**Pn**	07 40 13.2	+1.2
PMRV				*eS*		**Sn**	07 40 56.5	-1.7
PMRV				A		A	07 40 57.2	
	comp=N,3.3nm,0.5s							
EPLA	**Plasencia**	**4.18**	**344**	P		**Pn**	07 40 15.0	+1.2
	comp=N,2.2nm,0.2s,SNR=5.6							
PMTG	**Montargil**	**4.18**	**317**	P		**Pn**	07 40 14.9	+1.0
PMTG				S		**Sn**	07 40 59.8	-1.8
	comp=N,3.1nm,0.2s							
PMTG	**Montargil**	**4.18**	**317**	*eP*		**Pn**	07 40 14.9	+1.0
PMTG				*eS*		**Sn**	07 40 59.8	-1.8
PMTG				A		A	07 41 03.1	
	comp=N,3.1nm,0.2s							
PCBR	**Castelo Branco**	**4.42**	**329**	P		**Pn**	07 40 18.5	+1.4
PCBR	**Castelo Branco**	**4.42**	**329**	*eP*		**Pn**	07 40 18.5	+1.4
GUD	**Guadarrama**	**4.59**	**4**	P		**Pn**	07 40 20.6	+1.1
	comp=N,0.4nm,0.1s,SNR=5.7							
GUD				S		**Sn**	07 41 09.2	-2.4
	comp=N,0.3nm,0.1s							
PSBE	**So Bento**	**4.81**	**317**	*eP*		**Pn**	07 40 24.5	+2.1
ETOR	**Torete**	**5.14**	**22**	P		**Pn**	07 40 28.2	+1.2
	comp=N,9.3nm,0.1s,SNR=9.0							
ETOR				S		**Sn**	07 41 21.4	-3.7
	comp=N,12nm,0.2s,SNR=6.1							
EMOS	**Mosqueruela**	**5.37**	**36**	S		**Sn**	07 41 29.2	-1.5
	comp=N,0.3nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**5.45**	**340**	P		**Pn**	07 40 32.6	+1.5
	comp=N,2.3nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**5.45**	**340**	*eP*		**Pn**	07 40 32.6	+1.5
PBRG	**Braganca**	**5.99**	**344**	P		**Pn**	07 40 39.9	+1.5
PBRG	**Braganca**	**5.99**	**344**	*eP*		**Pn**	07 40 39.9	+1.5
ELAN	**Lanestosa**	**7.22**	**7**	P		**Pn**	07 40 57.7	+2.6
	comp=N,0.5nm,0.1s,SNR=7.9							

NEIC ***14*** *07:43:50.6±1.2,8.16S±0.09×122.69E±0.10,h195km±9km, mb4.4/11, Error ellipse: s-maj=14.5km s-min=13.6km az=70.0*

DJA ***14*** *07:43:50.2±0.3,8°S±3'×12°3E±°, h206km±4km, M4.0/10, mB5.2/1, mb4.3/5, MLv3.9/10, Mw(mB)4.6/1*

IDC ***14*** *07:43:53.9±4.9, 7.78S×123.36E, h226km±49km, mb3.1/1, mb1 3.3/3, mb1mx3.0/23, mbtmp3.8/3, Error ellipse: s-maj=147.0km s-min=13.9km az=58.0*

ISC 14 07:43:50.4±0.7,8.19S±0.06×122.62E±0.05,h200km,n31, σ1s50/40,mb4.6/4,Flores region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MMRI	**Maumere**	**0.58**	**221**	P		**Pn**	**07 44 18.3**	**+0.5**
MMRI	**Maumere**	**0.58**	**221**			**Pn**	**07 44 17.8**	**-0.1**
EDFI	**Ende, Flores**	**1.08**	**239**	P		**Pn**	**07 44 21.0**	**+0.2**
EDFI				S		**Sn**	**07 44 46.4**	**+2.0**
SOEI	**Soe**	**2.25**	**134**	P		**Pn**	**07 44 33.0**	**+1.3**
SOEI				S		**Sn**	**07 45 05.5**	**+1.6**
SOEI	**Soe**	**2.25**	**134**			**Pn**	**07 44 33.4**	**+1.7**
BATI	**Baumata**	**2.25**	**153**	P		**Pn**	**07 44 33.0**	**+1.4**
BATI				S		**Sn**	**07 45 06.0**	**+2.2**
BBSI	**Bau Bau**	**2.69**	**359**	P		**Pn**	**07 44 36.6**	**+0.2**
BASI	**Baing, Sumba**	**2.85**	**225**	P		**Pn**	**07 44 38.6**	**+0.3**
BASI				S		**Sn**	**07 45 16.6**	**+0.8**
WBSI	**Waikabubak, Su**	**3.50**	**245**	P		**Pn**	**07 44 46.0**	**-0.1**
WBSI				S		**Sn**	**07 45 28.2**	**-1.5**
BKSI	**Bulukumba**	**3.78**	**319**	P		**Pn**	**07 44 48.7**	**-0.7**
PLAI	**Plampang**	**4.83**	**262**	P		**Pn**	**07 45 02.6**	**-0.1**
PLAI				S		**Sn**	**07 45 59.4**	**-0.2**
MTN	**Manton Dam**	**9.56**	**120**			**Pn**	**07 46 03.7**	**-0.3**
KNRA	**Kununurra**	**9.56**	**142**			**Pn**	**07 46 03.9**	**-0.1**
KNRA						**Sn**	**07 47 46.1**	**-5.0**
FITZ	**Fitzroy Crossi**	**10.28**	**164**	Pn		**Pn**	**07 46 12.9**	**-0.3**
PWJI	**Pagerwojo**	**10.71**	**270**	P		**Pn**	**07 46 19.2**	**+0.3**
	24nm,2.8s							
FAKI	**Fak Fak**	**10.92**	**62**	P		**Pn**	**07 46 20.9**	**-0.6**
FAKI	**Fak Fak**	**10.92**	**62**	Pn		**Pn**	**07 46 20.8**	**-0.8**
WB0	**Warramunga Arr**	**16.20**	**136**			**Pn**	**07 47 27.6**	**+0.3**
WB0				IAmb		IAmb	07 47 35.4	
	comp=Z,11nm,1.2s							
WRA	**Warramunga Arr**	**16.29**	**137**	P		**P**	**07 47 27.8**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=314,slow=12,SNR=9.3							
WRA				S		**S**	**07 50 23.4**	**-4.8**
	comp=Z,1.1nm,0.3s,baz=317,slow=25,SNR=8.3							
WRA	**Warramunga Arr**	**16.29**	**137**	P		**P**	**07 47 26.8**	**-0.8**
WB2	**Warramunga Arr**	**16.30**	**137**			**Pn**	**07 47 28.6**	**+0.3**
WR0	**Warramunga Arr**	**16.43**	**137**			**P**	**07 47 29.4**	**+0.2**
WR0				IAmb		IAmb	07 47 38.5	
	comp=Z,6.2nm,0.8s							
AS31	**Alice Springs**	**18.81**	**146**	P		**P**	**07 47 56.6**	**+1.5**
ASAR	**Alice Springs**	**18.81**	**146**	P		**P**	**07 47 56.3**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=326,slow=12,SNR=25							
ASAR				S		**S**	**07 51 18.6**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=327,slow=22,SNR=12							
COEN	**Coen**	**20.96**	**108**	P		**P**	**07 48 17.8**	**-0.3**
COEN				IAmb		IAmb	07 48 21.7	
	comp=Z,8.9nm,0.9s							
MORW	**Morawa**	**21.67**	**196**	P		**P**	**07 48 26.5**	**+1.1**
MORW				IAmb		IAmb	07 48 26.8	
	comp=Z,31nm,1.3s							
FORT	**Forrest**	**23.04**	**168**	P		**P**	**07 48 39.5**	**+1.4**
FORT				IAmb		IAmb	07 48 41.0	
	comp=Z,12nm,0.6s							
NWAO	**Narrogin (SRO)**	**25.12**	**191**	P		**P**	**07 48 58.1**	**+1.1**
NWAO	**Narrogin (SRO)**	**25.12**	**191**	P		**P**	**07 48 58.0**	**+1.1**
NWAO				IAmb		IAmb	07 49 08.2	
	comp=Z,33nm,1.3s							
BBOO	**Buckleboo**	**27.48**	**155**	P		**P**	**07 49 19.2**	**+1.1**
BBOO				IAmb		IAmb	07 49 24.7	
	comp=Z,17nm,1.5s							
MKAR	**Makanchi Array**	**65.44**	**331**	P		**P**	**07 54 12.7**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=136,slow=7.3,SNR=6.5							

MAN 14 07:50:30.0,13.71N×120.26E,h35km,mb3.9,ML2.7, MS2.2,1C,Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LUBP	**Lubang**	**0.03**	**333**	*eP*		Pn	07 50 36.2	+0.4
LUBP				*eS*		Sn	07 50 39.2	-0.5
PGP	**Puerto Galera**	**0.70**	**107**	*ePi*		Pn	07 50 44.2	+0.7
PGP				*eS*		Sn	07 50 54.5	+1.3
SJMP	**San Jose**	**1.50**	**146**	*eP*		Pn	07 50 54.8	+0.4
SJMP				*eS*		Sn	07 51 11.0	-1.7

IDC ***14*** *08:02:35.9±2.1,20.54S×70.91W,h0km,mb3.6/2, mb1 3.7/2,mb1mx3.4/19,mbtmp3.6/2,ML2.9/1,Error ellipse: s-maj=68.8km s-min=43.7km az=129.0*

GUC ***14*** *08:02:41.7±0.8,19.95S×70.98W,h35km±3km,ML3.6*

NEIC ***14*** *08:02:42.0±1.8,20.00S±0.04×70.98W±0.08,h41km±32km, Error ellipse: s-maj=10.7km s-min=5.2km az=94.0*

ISC 14 08:02:39.3±2.1,19.97S±0.03×70.99W±0.06,h13km±13km, n45,σ0s65/63,8C–4D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TA02	**Huaiquique**	**0.86**	**111**	*eP*		**Pb**	**08 02 56.0**	**-0.1**
TA02				*i* S		**Sb**	**08 03 07.8**	**+0.2**
TA02				IAML			08 03 09.8	
	comp=N,9μm,0.1s							
PSGC	**Pisagua**	**0.90**	**66**	*eP*		**Pb**	**08 02 56.5**	**-0.4**
PSGC				*i* S		**Sb**	**08 03 08.3**	**-0.4**
PSGC				IAML			08 03 16.5	
	comp=E,572nm,0.4s							
PSGCX	**Pisagua**	**0.90**	**66**			**Pb**	**08 02 56.2**	**-0.6**
PSGCX				Sn		**Sb**	**08 03 07.7**	**-1.0**
TA01	**Diego Aracena**	**0.96**	**128**	*i*↑P		**Pb**	**08 02 58.1**	**+0.2**
TA01				*i* S		**Sg**	**08 03 10.9**	**+0.3**
TA01				IAML			08 03 12.7	
	comp=N,2μm,0.2s							
TA01	**Diego Aracena**	**0.96**	**128**			**Pb**	**08 02 58.2**	**+0.3**
PATCX	**Punta Patache**	**1.16**	**137**	*i*↑P		**Pb**	**08 03 01.2**	**0.0**
PATCX				*i* S		**Sg**	**08 03 16.6**	**-0.1**
PATCX				IAML			08 03 17.7	
	comp=N,1μm,0.3s							
PATCX	**Punta Patache**	**1.16**	**137**			**Pb**	**08 03 01.2**	**0.0**
PATCX				Sn		**Sn**	**08 03 17.0**	**-0.1**
PB11	**IPOC Station P**	**1.27**	**81**	*i*↓P		**Pn**	**08 03 02.6**	**-0.3**
PB11				*i* S		**Sb**	**08 03 18.9**	**-0.8**
PB11				IAML			08 03 20.2	
	comp=N,3μm,0.3s							
PB11	**IPOC Station P**	**1.27**	**81**			**Pn**	**08 03 02.4**	**-0.6**
PB11				Sn		**Sb**	**08 03 18.9**	**-0.8**
PB12	**IPOC Station P**	**1.48**	**25**	*i*↑P		**Pn**	**08 03 06.0**	**+0.1**
PB12				*i* S		**Sn**	**08 03 25.1**	**-0.1**
PB12	**IPOC Station P**	**1.48**	**25**			**Pn**	**08 03 06.0**	**+0.1**
PB12				Sn		**Sn**	**08 03 26.4**	**+1.2**
MNMC	**Minye Minye**	**1.56**	**58**	*eP*		**Pn**	**08 03 07.5**	**+0.5**
MNMC				*i* S		**Sn**	**08 03 27.1**	**-0.1**
MNMC	**Minye Minye**	**1.56**	**58**			**Pn**	**08 03 07.7**	**+0.7**
PB02	**IPOC Station P**	**1.69**	**143**	*i*↓P		**Pn**	**08 03 09.0**	**+0.3**
PB02				IAML			08 03 40.1	
	comp=N,3μm,0.4s							
AP01	**Chacalluta**	**1.70**	**21**	*i*↑P		**Pn**	**08 03 08.7**	**-0.1**
AP01				*i* S		**Sn**	**08 03 30.2**	**-0.2**
AP01				IAML			08 03 35.3	
	comp=E,1μm,0.6s							
AP01	**Chacalluta**	**1.70**	**21**			**Pn**	**08 03 10.4**	**+1.6**
GO01	**Chusmiza**	**1.72**	**80**	*i*↑P		**Pn**	**08 03 09.8**	**+0.4**
GO01				*i* S		**Sn**	**08 03 32.2**	**+0.8**
GO01	**Chusmiza**	**1.72**	**80**			**Pn**	**08 03 09.4**	**0.0**
PB08	**IPOC Station P**	**1.74**	**96**	*eP*		**Pn**	**08 03 09.8**	**+0.2**
PB08				*eS*		**Sn**	**08 03 32.3**	**+0.6**
PB08				IAML			08 03 38.8	
	comp=N,759nm,0.6s							
PB08	**IPOC Station P**	**1.74**	**96**			**Pn**	**08 03 10.3**	**+0.8**
PB08				Sn		**Sb**	**08 03 33.2**	**0.0**
PB01	**IPOC Station P**	**1.77**	**127**	*i*↑P		**Pn**	**08 03 10.4**	**+0.7**
PB01				*i* S		**Sn**	**08 03 32.1**	**-0.2**
PB01				IAML			08 03 39.7	
	comp=E,760nm,0.5s							
PB01	**IPOC Station P**	**1.77**	**127**			**Pn**	**08 03 09.8**	**0.0**
PB01				Sn		**Sn**	**08 03 31.4**	**-0.8**
PB07	**IPOC Station P**	**2.03**	**150**	*i*↑P		**Pn**	**08 03 13.5**	**0.0**
PB07				*i* S		**Sn**	**08 03 39.3**	**+0.4**
PB07				IAML			08 03 58.9	
	comp=E,461nm,0.5s							
PB07	**IPOC Station P**	**2.03**	**150**			**Pn**	**08 03 13.5**	**0.0**
PB16	**IPOC Station P**	**2.15**	**41**	*eP*		**Pn**	**08 03 16.2**	**+0.8**
PB16				IAML			08 03 51.0	
	comp=N,304nm,0.5s							
PB16	**IPOC Station P**	**2.15**	**41**			**Pn**	**08 03 16.2**	**+0.8**
PB03	**IPOC Station P**	**2.37**	**151**	*eP*		**Pn**	**08 03 18.5**	**+0.4**
PB03				IAML			08 03 59.2	
	comp=E,247nm,0.4s							
PB09	**IPOC Station P**	**2.45**	**138**	*eP*		**Pn**	**08 03 20.5**	**+1.4**
PB09				IAML			08 04 02.0	
	comp=E,1μm,0.9s							
PB09	**IPOC Station P**	**2.45**	**138**			**Pn**	**08 03 20.6**	**+1.4**
PB04	**IPOC Station P**	**2.48**	**162**	*i*↓P		**Pn**	**08 03 19.5**	**-0.2**
PB04				IAML			08 04 07.5	
	comp=E,341nm,0.6s							
PB04	**IPOC Station P**	**2.48**	**162**			**Pn**	**08 03 19.6**	**0.0**
PB05	**IPOC Station P**	**2.96**	**166**	*i*↓P		**Pn**	**08 03 25.6**	**-0.6**
PB05				IAML			08 04 22.5	
	comp=E,141nm,0.4s							
PB06	**IPOC Station P**	**3.03**	**154**	*i*↑P		**Pn**	**08 03 26.9**	**-0.2**
PB06				IAML			08 04 22.4	
	comp=E,189nm,0.7s							
PB06	**IPOC Station P**	**3.03**	**154**			**Pn**	**08 03 27.0**	**-0.2**
LVC	**Limon Verde**	**3.27**	**144**	*eP*		**Pn**	**08 03 31.5**	**+0.9**
LVC				*eS*		**Sn**	**08 04 10.2**	**+0.6**
LVC	**Limon Verde**	**3.27**	**144**			**Pn**	**08 03 32.4**	**+1.8**
PB15	**IPOC Station P**	**3.52**	**157**	*eP*		**Pn**	**08 03 34.0**	**0.0**
PB15	**IPOC Station P**	**3.52**	**157**			**Pn**	**08 03 33.5**	**-0.5**
PB10	**IPOC Station P**	**3.55**	**174**	Pn		**Pn**	**08 03 33.6**	**-0.6**
LPAZ	**La Paz**	**4.56**	**37**	Pn		Pn	08 03 54.4	+5.7
	comp=E,0.3nm,0.3s,baz=294,slow=16,SNR=4.9							
LPAZ				Pg		Pg	08 04 05.2	-1.5
	comp=E,0.7nm,0.3s,baz=214,slow=13,SNR=14							
LPAZ				Lg		Lg	08 05 06.9	
	comp=E,0.0nm,0.3s,baz=127,slow=16,SNR=1.3							
GO02	**Mina Guanaco**	**5.33**	**166**	Pn		**Pn**	**08 03 59.6**	**+0.7**
AC02	**Maricunga**	**7.05**	**166**	Pn		**Pn**	**08 04 23.3**	**+0.6**
TORD	**Torodi Ar. Bea**	**78.70**	**72**	P		**P**	**08 14 40.7**	**-1.2**
	comp=E,0.5nm,0.6s,baz=245,slow=4.7,SNR=4.3							
YKA	**Yellowknife Ar**	**89.11**	**341**	P		**P**	**08 15 34.7**	**+0.8**
	comp=E,0.1nm,0.8s,baz=125,slow=4.6,SNR=4.8							
MKAR	**Makanchi Array**	**145.48**	**33**	PKPbc		**PKPdf**	**08 22 17.5**	**+0.2**
	comp=E,0.2nm,0.3s,baz=321,slow=2.6,SNR=4.3							

ISK ***14*** *08:08:58.6,35.59N×33.37E,h3km,ML3.1/16*

DDA ***14*** *08:08:59.5,35.61N×33.25E,h30km±6km,MW3.2*

NIC ***14*** *08:09:00.1±0.0,35.49N×33.36E,h36km±5km,Ml2.5/4*

ISC 14 08:08:59.2±1.0,35.58N±0.02×33.34E±0.03,h29km±10km, n39,σ1s21/60,Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ATHAL	**Athalassa**	**0.44**	**174**	P		**Pb**	**08 09 08.5**	**-0.1**
ATHAL				S		**Sn**	**08 09 15.7**	**-0.8**
YORU	**Yoruktepe-Mers**	**0.58**	**5**	PG		**Pb**	**08 09 10.3**	**-0.6**
YORU				SG		**Sb**	**08 09 18.9**	**0.0**
AKK2	**Akkuyu-Mersin**	**0.58**	**17**	PG		**Pb**	**08 09 10.5**	**-0.5**
AKK2				SG		**Sb**	**08 09 18.8**	**-0.2**
LEF	**Lefka**	**0.58**	**219**	PG		**Pn**	**08 09 11.8**	**+0.3**
LEF	**Lefka**	**0.58**	**219**	*i* P		**Pn**	**08 09 11.8**	**+0.3**
LEF				*i* S		**Sn**	**08 09 21.0**	**+0.8**
AKK1	**Akkuyu-Mersin**	**0.59**	**16**	PG		**Pb**	**08 09 10.6**	**-0.5**
AKK1				SG		**Sb**	**08 09 19.1**	**-0.1**
TEKE	**Tekeli-Mersin**	**0.59**	**342**	PG		**Pb**	**08 09 10.8**	**-0.4**
TEKE				SG		**Sn**	**08 09 19.9**	**-0.5**
AKKU	**Akkuyu-Mersin**	**0.60**	**17**	PG		**Pb**	**08 09 10.9**	**-0.5**
MVOU	**Mavrovouni**	**0.61**	**157**	P		**Pb**	**08 09 11.0**	**-0.4**
MVOU				AML		AML	08 09 18.4	
	1.4nm,0.3s							
MVOU				AML		AML	08 09 18.4	
	1.4nm,0.3s							
MVOU				AML		AML	08 09 18.6	
	1.9nm,0.2s							
MVOU				AML		AML	08 09 18.6	
	1.9nm,0.2s							
MVOU				S		**Sb**	**08 09 19.1**	**-0.6**
CSS	**Mathiatis**	**0.61**	**181**	PG		**Pn**	**08 09 11.6**	**-0.4**
CSS	**Mathiatis**	**0.61**	**181**	P		**Pn**	**08 09 11.6**	**-0.4**
CSS				S		**Sb**	**08 09 20.1**	**+0.2**
GULN	**MERSIN_Gulnar**	**0.63**	**15**	*i* P		**Pn**	**08 09 10.8**	**-1.3**
GULN				*i* S		**Sn**	**08 09 20.7**	**-0.6**
OREN	**Orenkoy-Mersin**	**0.64**	**9**	PG		**Pn**	**08 09 11.4**	**-0.9**
OREN				SG		**Sb**	**08 09 20.2**	**-0.3**
TISA	**Tisan-Mersin**	**0.65**	**25**	PG		**Pn**	**08 09 11.6**	**-0.8**
YESI	**Yesilovacik-Me**	**0.67**	**22**	PG		**Pn**	**08 09 11.9**	**-0.8**
TEPK	**Tepekoy-MERSIN**	**0.67**	**15**	PG		**Pn**	**08 09 11.9**	**-0.9**
EREN	**Erenkoy**	**0.68**	**94**	PG		**Pb**	**08 09 12.3**	**-0.3**
EREN	**Erenkoy**	**0.68**	**94**	*eP*		**Pb**	**08 09 14.8**	**+2.2**
EREN				*i* S		**Sn**	**08 09 26.9**	**+4.5**
KARG	**Kargicak-Mersi**	**0.69**	**26**	PG		**Pn**	**08 09 12.5**	**-0.6**
IKL	**Isikli**	**0.72**	**23**	PG		**Pn**	**08 09 12.4**	**-1.0**
ALFC	**Alefka**	**0.74**	**235**	P		**Pb**	**08 09 13.6**	**+0.1**
ALFC				S		**Sn**	**08 09 23.7**	**-0.2**
ALFC				AML		AML	08 09 24.6	
	1.6nm,0.6s							
ALFC				AML		AML	08 09 24.6	
	1.6nm,0.6s							
ALFC				AML		AML	08 09 30.2	
	1.2nm,0.3s							
ALFC				AML		AML	08 09 30.2	
	1.2nm,0.3s							
BERE	**Bereket-Mersin**	**0.77**	**353**	PG		**Pb**	**08 09 14.1**	**-0.2**
ASGA	**Asgata**	**0.79**	**185**	P		**Pn**	**08 09 13.9**	**-0.6**
ASGA				S		**Sn**	**08 09 23.8**	**-1.5**
PARAL	**Paralimni**	**0.82**	**135**	P		**Pn**	**08 09 13.7**	**-1.0**
PARAL				S		**Sb**	**08 09 25.5**	**-0.1**
TEVE	**Tevekalti-Mers**	**0.86**	**6**	PG		**Pb**	**08 09 15.6**	**-0.1**
SZAC	**Souni**	**0.90**	**205**	P		**Pn**	**08 09 15.7**	**-0.2**
SZAC				AML		AML	08 09 38.8	
	0.6nm,0.4s							
SZAC				AML		AML	08 09 39.5	
	0.6nm,0.2s							
KEBE	**Keben-Mersin**	**0.92**	**19**	PG		**Pb**	**08 09 16.7**	**0.0**
SILI	**Silifke-Mersin**	**0.92**	**31**	PG		**Pb**	**08 09 16.3**	**-0.3**
SLFK	**Silifke-Mersin**	**0.95**	**31**	PG		**Pb**	**08 09 17.2**	**+0.1**
AKMS	**Akamas**	**0.99**	**236**	P		**Pn**	**08 09 16.9**	**-0.3**
AKMS				S		**Sb**	**08 09 30.8**	**+0.2**
AKMS				AML		AML	08 09 38.1	
	0.5nm,0.4s							
AKMS				AML		AML	08 09 38.1	
	0.5nm,0.4s							
AKMS				AML		AML	08 09 39.5	
	0.4nm,0.7s							
AKMS				AML		AML	08 09 39.5	
	0.4nm,0.7s							
GAZI	**Gazipasa**	**1.06**	**309**	PG		**Pb**	**08 09 19.5**	**+0.5**
GAZI	**Gazipasa**	**1.06**	**309**	*i* P		**Pb**	**08 09 19.3**	**+0.4**
GAZI				*i* S		**Sb**	**08 09 33.7**	**+1.2**
KIZK	**Mersin**	**1.11**	**36**	PN		**Pb**	**08 09 19.7**	**-0.2**
KIZK	**Mersin**	**1.11**	**36**	*i* P		**Pb**	**08 09 19.6**	**-0.2**
KIZK				*i* S		**Sb**	**08 09 36.9**	**+2.9**
ERMK	**Ermenek**	**1.12**	**342**	*i* P		**Pb**	**08 09 20.4**	**+0.4**
ERMK				*i* S		**Sb**	**08 09 38.2**	**+3.9**
KEPZ	**Antalya-Kepez**	**1.93**	**314**	*i* P		**Pb**	**08 09 32.8**	**-0.9**
KEPZ				*i* S		**Sb**	**08 09 58.0**	**+0.7**
KERG	**Konya-Eregli**	**1.94**	**19**	*i* P		**Pb**	**08 09 32.8**	**-1.2**
KERG				*i* S		**Sb**	**08 10 00.2**	**+2.4**
KERG	**Konya-Eregli**	**1.94**	**19**	*i* P		**Pb**	**08 09 33.5**	**-0.5**
KERG				*i* S		**Sb**	**08 09 59.0**	**+1.1**
YURE	**YUREGIR**	**2.23**	**55**	*i* P		**Pn**	**08 09 31.8**	**-2.5**

DDA 14 08:09:18.3,37.50N×35.55E,h7km±3km,ML2.0,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YAHY	**KAYSERI_Yahyal**	**0.61**	**346**	*i* P		Pg	08 09 30.0	-0.2
YAHY				*i* S		Sg	08 09 38.9	+0.7
SAIM	**ADANA**	**0.64**	**41**	*i* P		Pg	08 09 30.1	-0.4
SAIM				*i* S		Sb	08 09 40.1	-0.8
SAIM				IAML			08 09 42.0	
	comp=E,109nm,0.2s							
ANDN	**Andirin**	**0.64**	**83**	*i* P		Pg	08 09 30.3	-0.3
ANDN				*i* S		Sb	08 09 40.7	-0.3
GULE	**Gulek**	**0.65**	**251**	*i* P		Pg	08 09 31.2	+0.3
GULE				*i* S		Sb	08 09 41.5	0.0
GULE				IAML	

CIRR	**Tsirk**	**1.11**	**323**	PN		**Pn**	**08 17 20.9**	**+0.8**
KIRR	**Kirishev**	**1.16**	**309**	*e*P		**Pn**	**08 17 21.0**	**+0.4**
KIRR				*e*S		**Sn**	**08 17 36.8**	**+0.1**
KIRR	**Kirishev**	**1.16**	**309**	PN		**Pn**	**08 17 21.0**	**+0.4**
KIRR				S		**Sn**	**08 17 36.8**	**+0.1**
KPT	**Kopyto**	**1.22**	**307**	*e*P		**Pn**	**08 17 21.6**	**+0.3**
KPT	**Kopyto**	**1.22**	**307**	PN		**Pn**	**08 17 21.6**	**+0.3**
KRSR	**Krestovskiy**	**1.25**	**322**	*i* P		**Pn**	**08 17 22.1**	**+0.3**
KRSR				*e*S		**Sn**	**08 17 38.9**	**+0.2**
KRSR	**Krestovskiy**	**1.25**	**322**	PN		**Pn**	**08 17 22.1**	**+0.3**
KRSR				S		**Sn**	**08 17 38.9**	**+0.2**
KLY	**Klyuchi**	**1.30**	**326**	*e*P		**Pn**	**08 17 21.9**	**-0.3**
KLY				*e*S		**Sn**	**08 17 38.9**	**-0.6**
KLY	**Klyuchi**	**1.30**	**326**	PN		**Pn**	**08 17 21.9**	**-0.3**
KLY				S		**Sn**	**08 17 38.9**	**-0.6**
SMKR	**Semkarok**	**1.37**	**349**	*e*P		**Pn**	**08 17 24.2**	**+1.0**
SMKR				*e*S		**Sn**	**08 17 42.2**	**+0.9**
SMKR	**Semkarok**	**1.37**	**349**	PN		**Pn**	**08 17 24.2**	**+1.0**
SMKR				S		**Sn**	**08 17 42.2**	**+0.9**
BDR	**Baidarnaya**	**1.39**	**343**	*e*P		**Pn**	**08 17 24.4**	**+0.9**
BDR	**Baidarnaya**	**1.39**	**343**	PN		**Pn**	**08 17 24.4**	**+0.9**
KOZ	**Kozyrevsk**	**1.43**	**306**	*e*P		**Pn**	**08 17 24.9**	**+1.0**
KOZ				*e*S		**Sn**	**08 17 43.8**	**+1.2**
KOZ	**Kozyrevsk**	**1.43**	**306**	PN		**Pn**	**08 17 24.9**	**+1.0**
KOZ				S		**Sn**	**08 17 43.8**	**+1.2**
SRKR	**Sorokina**	**1.48**	**343**	*e*P		**Pn**	**08 17 25.3**	**+0.7**
SRKR	**Sorokina**	**1.48**	**343**	PN		**Pn**	**08 17 25.3**	**+0.7**
SRDR	**Sredinnyy**	**1.66**	**311**	*e*P		**Pn**	**08 17 27.1**	**+0.2**
SRDR	**Sredinnyy**	**1.66**	**311**	PN		**Pn**	**08 17 27.1**	**+0.2**
KII	**Karymskiy**	**1.89**	**231**	*e*P		**Pn**	**08 17 31.0**	**+1.1**
KII				*e*S		**Sn**	**08 17 53.8**	**+0.6**
KII	**Karymskiy**	**1.89**	**231**	PN		**Pn**	**08 17 31.0**	**+1.1**
KII				S		**Sn**	**08 17 53.8**	**+0.6**
ESO	**Esso**	**1.97**	**292**	*e*P		**Pn**	**08 17 30.9**	**0.0**
ESO				*e*S		**Sn**	**08 17 54.1**	**-0.8**
ESO	**Esso**	**1.97**	**292**	PN		**Pn**	**08 17 30.9**	**0.0**
ESO				S		**Sn**	**08 17 54.1**	**-0.8**
BKI	**Bering**	**2.31**	**89**	*e*P		**Pn**	**08 17 35.6**	**+0.3**
BKI				*e*S		**Sn**	**08 18 01.9**	**-1.0**
BKI	**Bering**	**2.31**	**89**	PN		**Pn**	**08 17 35.6**	**+0.3**
BKI				S		**Sn**	**08 18 01.9**	**-1.0**
SPN	**Mys Shipunski**	**2.43**	**209**	*e*P		**Pn**	**08 17 36.5**	**-0.5**
SPN				*e*S		**Sn**	**08 18 03.9**	**-1.9**
SPN	**Mys Shipunski**	**2.43**	**209**	PN		**Pn**	**08 17 36.5**	**-0.5**
SPN				S		**Sn**	**08 18 03.9**	**-1.9**
NLC	**Nalytchevo**	**2.58**	**217**	*e*P		**Pn**	**08 17 40.2**	**+1.3**
NLC				*e*S		**Sn**	**08 18 09.4**	**0.0**
NLC	**Nalytchevo**	**2.58**	**217**	PN		**Pn**	**08 17 40.2**	**+1.3**
NLC				S		**Sn**	**08 18 09.4**	**0.0**
SDLR	**Sedlovina**	**2.67**	**224**	*e*P		**Pn**	**08 17 41.3**	**+1.0**
SDLR				*e*S		**Sn**	**08 18 12.5**	**+0.8**
SDLR	**Sedlovina**	**2.67**	**224**	PN		**Pn**	**08 17 41.3**	**+1.0**
SDLR				S		**Sn**	**08 18 12.5**	**+0.8**
KRER	**Koryakskii**	**2.70**	**225**	*e*P		**Pn**	**08 17 42.2**	**+1.4**
KRER	**Koryakskii**	**2.70**	**225**	PN		**Pn**	**08 17 42.2**	**+1.4**
KRX	**Arik**	**2.70**	**227**	*e*P		**Pn**	**08 17 42.1**	**+1.3**
KRX	**Arik**	**2.70**	**227**	PN		**Pn**	**08 17 42.1**	**+1.3**
SMAR	**Somma**	**2.71**	**224**	*e*P		**Pn**	**08 17 42.2**	**+1.3**
SMAR				*e*S		**Sn**	**08 18 13.0**	**+0.1**
SMAR	**Somma**	**2.71**	**224**	PN		**Pn**	**08 17 42.2**	**+1.3**
SMAR				S		**Sn**	**08 18 13.0**	**+0.1**
AVH	**Avacha**	**2.73**	**225**	*e*P		**Pn**	**08 17 43.0**	**+1.9**
AVH				*e*S		**Sn**	**08 18 14.4**	**+1.1**
AVH	**Avacha**	**2.73**	**225**	PN		**Pn**	**08 17 43.0**	**+1.9**
AVH				S		**Sn**	**08 18 14.4**	**+1.1**
UGLR	**Uglovaya**	**2.74**	**223**	*e*P		**Pn**	**08 17 42.7**	**+1.4**
UGLR				*e*S		**Sn**	**08 18 14.5**	**+1.0**
UGLR	**Uglovaya**	**2.74**	**223**	PN		**Pn**	**08 17 42.7**	**+1.4**
UGLR				S		**Sn**	**08 18 14.5**	**+1.0**
KOK	**Koryaka**	**2.75**	**226**	*e*P		**Pn**	**08 17 42.9**	**+1.5**
KOK	**Koryaka**	**2.75**	**226**	PN		**Pn**	**08 17 42.9**	**+1.5**
DALK	**Dalny**	**2.91**	**222**	*e*P		**Pn**	**08 17 44.2**	**+0.9**
DALK				*e*S		**Sn**	**08 18 17.0**	**-0.3**
DALK	**Dalny**	**2.91**	**222**	PN		**Pn**	**08 17 44.2**	**+0.9**
DALK				S		**Sn**	**08 18 17.0**	**-0.3**
PET	**Petropavlovsk**	**2.95**	**202**	*e*PN		**Pn**	**08 17 45.1**	**+1.2**
PET				*e*S		**Sn**	**08 18 18.4**	**+0.1**
PET				pmax	pmax			
	comp=Z,80nm,0.4s							
PET				smax	smax			
	comp=E,378nm,0.4s							
PET				smax	smax			
	comp=N,375nm,0.4s							
PET	**Petropavlovsk**	**2.95**	**222**			**Pn**	**08 17 45.3**	**+1.4**
PEA0B	**Petropavlovsk-**	**3.29**	**231**	*ce*PN		**Pn**	**08 17 50.3**	**+1.8**
PEA0B	**Petropavlovsk-**	**3.29**	**231**			**Pn**	**08 17 50.4**	**+1.9**
PETK	**Petropavlovsk-**	**3.29**	**231**	P		**Pn**	**08 17 50.3**	**+1.8**
	comp=N,9.5nm,0.3s,baz=70,slow=16,SNR=72							
PETK				S		**Sn**	**08 18 29.3**	**+2.7**
	comp=N,9.3nm,0.3s,baz=91,slow=18,SNR=5.5							
PETK				LR		LR	08 19 09.7	
	comp=N,70nm,21.7s,baz=64,slow=39							
RUS	**Russkaya**	**3.47**	**217**	*e*P		**Pn**	**08 17 51.3**	**+0.3**
RUS				*e*S		**Sn**	**08 18 30.0**	**-1.0**
RUS	**Russkaya**	**3.47**	**217**	PN		**Pn**	**08 17 51.3**	**+0.3**
RUS				S		**Sn**	**08 18 30.0**	**-1.0**
GRL	**Gorelyy**	**3.54**	**222**	*e*P		**Pn**	**08 17 54.1**	**+2.1**
GRL				*e*S		**Sn**	**08 18 34.0**	**+1.2**
GRL	**Gorelyy**	**3.54**	**222**	PN		**Pn**	**08 17 54.1**	**+2.1**
GRL				S		**Sn**	**08 18 34.0**	**+1.2**
MTVR	**Mutnovka**	**3.55**	**220**	*e*P		**Pn**	**08 17 53.5**	**+1.3**
MTVR				*e*S		**Sn**	**08 18 32.3**	**-0.9**
MTVR	**Mutnovka**	**3.55**	**220**	PN		**Pn**	**08 17 53.5**	**+1.3**
MTVR				S		**Sn**	**08 18 32.3**	**-0.9**
APC	**Apacha**	**3.65**	**233**	*e*P		**Pn**	**08 17 55.2**	**+1.7**
APC	**Apacha**	**3.65**	**233**	PN		**Pn**	**08 17 55.2**	**+1.7**
ASAK	**Asacha**	**3.74**	**222**	*e*P		**Pn**	**08 17 56.6**	**+1.9**
ASAK				*e*S		**Sn**	**08 18 38.7**	**+1.1**
ASAK	**Asacha**	**3.74**	**222**	PN		**Pn**	**08 17 56.6**	**+1.9**
ASAK				S		**Sn**	**08 18 38.7**	**+1.1**
MIPR	**Malaya Ipel'ka**	**4.28**	**228**	*e*P		**Pn**	**08 18 03.8**	**+1.8**
MIPR	**Malaya Ipel'ka**	**4.28**	**228**	PN		**Pn**	**08 18 03.8**	**+1.8**
TILK	**Tilichiki**	**5.68**	**22**	*e*P		**Pn**	**08 18 22.5**	**+1.6**
TILK				*e*S		**Sn**	**08 19 24.3**	**-0.3**
TILK	**Tilichiki**	**5.68**	**22**	PN		**Pn**	**08 18 22.5**	**+1.6**
TILK				S		**Sn**	**08 19 24.3**	**-0.3**
SKR	**Severo-Kuril's**	**5.77**	**220**	*e*P		**Pn**	**08 18 23.5**	**+1.3**
SKR	**Severo-Kuril's**	**5.77**	**220**	*e*PN		Pn	08 18 27.6	+5.4
SKR				pmax	pmax			
	comp=Z,14nm,0.6s							
MA2	**Magadan**	**7.43**	**310**	LR		LR	08 21 42.5	
	comp=Z,36nm,19.4s,baz=136,slow=39							
BILL	**Bilibino**	**13.00**	**7**⇑	*e*PN		**Pn**	**08 19 57.4**	**-2.9**
BILL				pmax	pmax			
	comp=Z,3.0nm,1.2s							
YSS	**Yuzh-Sakhalins**	**14.60**	**243**	*e*P		**P**	**08 20 23.9**	**-1.4**
JKA	**Kamikawa-asahi**	**16.69**	**236**	P		**Pn**	**08 20 48.3**	**+0.7**
ASAJ	**Asahikawa**	**16.69**	**236**	P		**Pn**	**08 20 48.3**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=35,slow=5.4,SNR=8.4							
YAK	**Yakutsk**	**17.96**	**305**⇑	*e*P		**P**	**08 20 59.3**	**-3.1**
YAK				pmax	pmax			
	comp=Z,11nm,0.5s							
ERM	**Erimo**	**18.07**	**231**	P		**P**	**08 21 02.9**	**-0.8**
ERM				pmax	pmax			
	comp=Z,41nm,1.3s							
ERM	**Erimo**	**18.07**	**231**	P		**P**	**08 21 02.9**	**-0.8**
ERM				IAmb	IAmb		08 21 06.2	
	comp=Z,41nm,1.2s							
TIXI	**Tiksi**	**21.64**	**332**	P		**P**	**08 21 41.7**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=119,slow=9.2,SNR=4.2							
TIXI	**Tiksi**	**21.64**	**332**⇓	*e*P		**P**	**08 21 40.8**	**-1.2**
TIXI				pmax	pmax			
	comp=Z,2.0nm,0.7s							
TTA	**Tatalina**	**22.55**	**53**	P		**P**	**08 21 53.5**	**+1.5**
TTA				pmax	pmax			
	comp=Z,5.0nm,1.3s							
TTA	**Tatalina**	**22.55**	**53**	P		**P**	**08 21 53.5**	**+1.5**
IMAR	**Indian Mountai**	**23.69**	**45**	P		**P**	**08 22 02.9**	**+0.1**
PPLA	**Purkeypile**	**24.30**	**53**	P		**P**	**08 22 11.2**	**+2.7**
PPLA				IAmb	IAmb		08 22 16.4	
	comp=Z,4.4nm,1.0s							
OHAK	**Old Harbor**	**24.62**	**67**	P		**P**	**08 22 11.3**	**+0.1**
OHAK				IAmb	IAmb		08 22 26.2	
	comp=Z,12nm,1.3s							
MJA0	**Matsu Arr-Jizo**	**24.73**	**231**	*e*P		**P**	**08 22 13.3**	**+0.8**
MJA0				pmax	pmax			
	comp=Z,9.0nm,0.6s							
MJB9	**Matsu-Tunnel**	**24.75**	**231**	P		**P**	**08 22 13.3**	**+0.7**
MJB9						**P**	**08 22 13.5**	**+0.9**
MAJO	**Matsushiro**	**24.75**	**231**	P		**P**	**08 22 13.3**	**+0.7**
MAJO				pmax	pmax			
	comp=Z,17nm,0.7s							
MAJO	**Matsushiro**	**24.75**	**231**	P		**P**	**08 22 13.3**	**+0.7**
MAT	**Matsushiro**	**24.75**	**231**	P		**P**	**08 22 12.7**	**+0.1**
MJAR	**Matsushiro Arr**	**24.75**	**231**	P		**P**	**08 22 13.1**	**+0.5**
	comp=Z,8.4nm,0.6s,baz=32,slow=7.5,SNR=22							
MJAR	**Matsushiro Arr**	**24.75**	**231**	P		**P**	**08 22 13.2**	**+0.6**
MJAR				pmax	pmax			
	comp=Z,5.0nm,0.6s							
MJAR	**Matsushiro Arr**	**24.75**	**231**	P		**P**	**08 22 13.2**	**+0.6**
BPAW	**Bear Paw Mtn.**	**24.80**	**50**	P		**P**	**08 22 13.8**	**+1.0**
BPAW				IAmb	IAmb		08 22 15.8	
	comp=Z,4.3nm,1.2s							
KTH	**Kantishna Hill**	**24.84**	**51**	P		**P**	**08 22 14.3**	**+1.0**
KDAK	**Kodiak Island**	**24.86**	**65**	P		**P**	**08 22 13.7**	**+0.4**
	comp=Z,1.6nm,0.4s,baz=289,slow=3.1,SNR=6.5							
KDAK	**Kodiak Island**	**24.86**	**65**	P		**P**	**08 22 13.7**	**+0.4**
KDAK				pmax	pmax			
	comp=Z,24nm,1.5s							
KDAK	**Kodiak Island**	**24.86**	**65**	IAmb	IAmb		08 22 32.1	
	comp=Z,24nm,1.5s							
TRF	**Thorofare Moun**	**25.13**	**52**	P		**P**	**08 22 16.7**	**+0.7**
TRF				IAmb	IAmb		08 22 33.7	
	comp=Z,9.8nm,1.5s							
CNPM	**China Poot**	**25.17**	**61**	P		**P**	**08 22 17.3**	**+1.0**
CNPM				IAmb	IAmb		08 22 27.2	
	comp=Z,18nm,1.4s							
TOLK	**Toolik Lake Re**	**25.60**	**39**	P		**P**	**08 22 20.1**	**0.0**
CCB	**Clear Creek Bu**	**26.16**	**49**	P		**P**	**08 22 26.8**	**+1.7**
CCB				IAmb	IAmb		08 22 27.3	
	comp=Z,3.3nm,1.2s							
ILAR	**Eielson Array**	**26.55**	**48**	P		**P**	**08 22 28.2**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=253,slow=7.3,SNR=5.1							
ILAR	**Eielson Array**	**26.55**	**48**	*e*P		**P**	**08 22 29.7**	**+1.1**
ILAR				pmax	pmax			
	comp=Z,1.0nm,0.8s							
BMAR	**Burnt Mountain**	**27.40**	**42**	P		**P**	**08 22 37.3**	**+1.0**
BCAR	**Beaver Creek A**	**29.00**	**51**	P		**P**	**08 22 51.3**	**+0.8**
INK	**Inuvik**	**31.51**	**40**	P		**P**	**08 23 13.1**	**+0.6**
	comp=Z,0.9nm,0.4s,baz=265,slow=4.4,SNR=6.6							
INK	**Inuvik**	**31.51**	**40**	P		**P**	**08 23 13.1**	**+0.6**
INK				pmax	pmax			
	comp=Z,3.0nm,1.2s							
INK	**Inuvik**	**31.51**	**40**	IAmb	IAmb		08 23 22.7	
	comp=Z,3.3nm,1.2s							
C36M	**Paulatuk**	**34.66**	**37**	P		**P**	**08 23 40.7**	**+0.8**
H11N2	**WAKE ISLAND Hy**	**35.65**	**172**	T		T	09 01 13.8	
	baz=355,slow=76,SNR=50							
H11N3	**WAKE ISLAND Hy**	**35.66**	**172**	T		T	09 01 22.1	
	baz=355,slow=76,SNR=50							
H11N1	**WAKE ISLAND Hy**	**35.67**	**172**	T		T	09 01 19.8	
	baz=355,slow=76,SNR=56							
YKA	**Yellowknife Ar**	**40.85**	**45**	P		**P**	**08 24 32.9**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=301,slow=7.5,SNR=12							
KURK	**Kurchatov**	**47.54**	**301**⇓	*e*P		**P**	**08 25 22.2**	**-3.4**
KURK				pmax	pmax			
	comp=Z,6.0nm,0.9s							
MKAR	**Makanchi Array**	**48.22**	**295**	P		**P**	**08 25 29.1**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=61,slow=7.2,SNR=4.5							
MKAR	**Makanchi Array**	**48.22**	**295**	*e*P		**P**	**08 25 28.7**	**-2.2**
PDAR	**Pinedale Array**	**55.55**	**63**	P		**P**	**08 26 27.4**	**+1.8**
	comp=Z,0.4nm,0.5s,baz=320,slow=2.4,SNR=5.7							
TXAR	**Lajitas Array**	**68.82**	**69**	P		**P**	**08 27 55.5**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=296,slow=4.8,SNR=6.3							
TXAR				PcP		**PcP**	**08 28 19.2**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=304,slow=4.1,SNR=6.0							
WRA	**Warramunga Arr**	**78.49**	**206**	P		**P**	**08 28 51.0**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=16,slow=6.1,SNR=3.5							
WRA	**Warramunga Arr**	**78.49**	**206**	IAmb	IAmb		08 28 54.6	
	comp=Z,0.1nm,1.0s							
ASAR	**Alice Springs**	**82.17**	**206**	P		**P**	**08 29 11.3**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=15,slow=5.6,SNR=8.1							

SJA ***14*** *08:19:26.6±0.5, 19°.25S×72°.00W, h15km, ML4.4, MW4.6*
NEIC ***14*** *08:19:41.7±1.9, 19°.75S±0°.03×71°.00W±0°.05, h15km±2km, mb4.6/8, ML4.1(GUC), Error ellipse: s-maj=6.5km s-min=3.8km az=112.0*
GUC ***14*** *08:19:42.2±0.7, 19°.71S×71°.12W, h33km±2km, ML4.2*
IDC ***14*** *08:19:44.1±0.6, 19°.62S×70°.67W, h30km±3km, mb3.8/11, mb1 3.9/13,mb1mx3.9/33,mbtmp4.0/13, ML3.2/2, MS3.8/15, Ms1 3.8/15,ms1mx3.6/35, Error ellipse: s-maj=20.9km s-min=15.6km az=69.0*
VAO ***14*** *08:19:45.3±1.2, 19°.62S×70°.87W, h48km±9km, mb4.2*
ISC 14 08:19:42.0±0.4,**19°.77S**±0°.02×**71°.04W**±0°.05,**h21**km±3km, **n141**,σ1**s73**/164,**mb4.4**/13,**MS3.7**/11,**15C-1D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.88**	**79**	⇓*i*	P	**Pb**	**Pb**	**08 19 57.8**	**-0.9**
PSGC				*i*	S	**Sb**	**Sb**	**08 20 10.1**	**0.0**
PSGCX	**Pisagua**	**0.88**	**79**			**Pb**	**Pb**	**08 19 57.8**	**-0.9**
PSGCX					Sn	**Sn**	**Sn**	**08 20 11.1**	**-0.4**
TA02	**Huaiquique**	**0.99**	**120**	⇑*i*	P	**Pn**	**Pn**	**08 20 00.3**	**-0.3**
TA02				*i*	S	**Sn**	**Sn**	**08 20 14.5**	**+0.6**
TA02				IAML				08 20 15.9	
	comp=E,9μm,0.2s								
TA01	**Diego Aracena**	**1.13**	**135**	⇑*i*	P	**Pb**	**Pb**	**08 20 02.7**	**-0.2**
TA01				*i*	S	**Sn**	**Sn**	**08 20 17.1**	**-0.4**
TA01				IAML				08 20 24.5	
	comp=N,4μm,0.6s								
TA01	**Diego Aracena**	**1.13**	**135**			**Pb**	**Pb**	**08 20 02.7**	**-0.2**
PB11	**IPOC Station P**	**1.30**	**90**	⇑*i*	P	**Pb**	**Pb**	**08 20 05.2**	**-0.7**
PB11				*i*	S	**Sb**	**Sb**	**08 20 22.6**	**+0.4**
PB11	**IPOC Station P**	**1.30**	**90**			**Pb**	**Pb**	**08 20 05.2**	**-0.7**
PB11					Sn	**Sb**	**Sb**	**08 20 23.5**	**+1.2**
PB12	**IPOC Station P**	**1.33**	**30**	⇑*i*	P	**Pn**	**Pn**	**08 20 04.3**	**-1.2**
PB12				*i*	S	**Sn**	**Sn**	**08 20 21.6**	**-1.0**
PB12				IAML				08 20 24.1	
	comp=E,5μm,0.5s								
PB12	**IPOC Station P**	**1.33**	**30**	Pn		**Pn**	**Pn**	**08 20 04.3**	**-1.2**
PB12					Sn	**Sn**	**Sn**	**08 20 22.6**	**0.0**
PATCX	**Punta Patache**	**1.34**	**142**	⇑*i*	P	**Pb**	**Pb**	**08 20 05.6**	**-0.9**
PATCX				*i*	S	**Sb**	**Sb**	**08 20 24.0**	**+0.9**
PATCX				IAML				08 20 35.6	
	comp=E,4μm,0.6s								
PATCX	**Punta Patache**	**1.34**	**142**			**Pb**	**Pb**	**08 20 05.5**	**-0.9**
MNMC	**Minye Minye**	**1.50**	**65**	⇑*i*	P	**Pn**	**Pn**	**08 20 08.1**	**+0.1**
MNMC				*i*	S	**Sb**	**Sb**	**08 20 28.6**	**+0.5**
MNMC	**Minye Minye**	**1.50**	**65**			**Pn**	**Pn**	**08 20 08.0**	**+0.1**
AP01	**Chacalluta**	**1.54**	**25**	⇑*i*	P	**Pn**	**Pn**	**08 20 07.2**	**-1.0**
AP01				*i*	S	**Sn**	**Sn**	**08 20 26.9**	**-0.7**
AP01				IAML				08 20 36.1	
	comp=N,12μm,0.6s								
AP01	**Chacalluta**	**1.54**	**25**	Pn		**Pn**	**Pn**	**08 20 08.1**	**-0.1**
AP01					Sn	**Sb**	**Sb**	**08 20 28.7**	**-0.2**
GO01	**Chusmiza**	**1.74**	**87**	⇑*i*	P	**Pn**	**Pn**	**08 20 11.9**	**+0.4**
GO01				*i*	S	**Sb**	**Sb**	**08 20 36.1**	**+0.9**
GO01				IAML				08 20 37.5	
	comp=N,6μm,0.3s								
GO01	**Chusmiza**	**1.74**	**87**			**Pn**	**Pn**	**08 20 12.1**	**+0.6**
PB08	**IPOC Station P**	**1.81**	**102**	⇑*i*	P	**Pn**	**Pn**	**08 20 12.8**	**+0.5**
PB08				*i*	S	**Sb**	**Sb**	**08 20 37.3**	**+0.2**
PB08				IAML				08 20 42.9	
	comp=N,2μm,0.6s								
PB08	**IPOC Station P**	**1.81**	**102**			**Pn**	**Pn**	**08 20 12.9**	**+0.5**
PB08					Sn	**Sb**	**Sb**	**08 20 38.3**	**+1.1**
PB02	**IPOC Station P**	**1.88**	**145**	⇑*i*	P	**Pn**	**Pn**	**08 20 13.3**	**+0.3**
PB02				*i*	S	**Sb**	**Sb**	**08 20 37.8**	**-1.0**
PB02				IAML				08 20 49.6	
	comp=E,5μm,0.5s								
PB01	**IPOC Station P**	**1.93**	**131**	⇑*i*	P	**Pn**	**Pn**	**08 20 14.3**	**+0.6**
PB01				*i*	S	**Sb**	**Sb**	**08 20 38.7**	**-1.5**
PB01				IAML				08 20 48.2	
	comp=E,2μm,0.2s								
PB01	**IPOC Station P**	**1.93**	**131**	Pn		**Pb**	**Pb**	**08 20 14.6**	**-2.0**
PB16	**IPOC Station P**	**2.03**	**46**	⇑*i*	P	**Pn**	**Pn**	**08 20 15.5**	**0.0**
PB16				*i*	S	**Sn**	**Sn**	**08 20 42.1**	**+1.5**
PB16				IAML				08 20 52.4	
	comp=N,4μm,0.8s								
PB16	**IPOC Station P**	**2.03**	**46**			**Pn**	**Pn**	**08 20 15.4**	**-0.2**
PB16						**Sb**	**Sb**	**08 20 42.7**	**-1.0**
PB07	**IPOC Station P**	**2.23**	**151**	*e*P		**Pn**	**Pn**	**08 20 18.0**	**+0.1**
PB07				*i*	S	**Sb**	**Sb**	**08 20 55.8**	**+6.9**
PB07	**IPOC Station P**	**2.23**	**151**			**Pn**	**Pn**	**08 20 17.7**	**-0.2**
PB03	**IPOC Station P**	**2.57**	**152**⇑	*e*P		**Pn**	**Pn**	**08 20 22.6**	**+0.1**
PB03				*i*	S	**Sb**	**Sb**	**08 20 56.3**	**-2.3**
PB03				IAML				08 21 12.4	
	comp=N,662nm,0.4s								
PB09	**IPOC Station P**	**2.63**	**140**	⇑*i*	P	**Pn**	**Pn**	**08 20 24.7**	**+1.4**
PB09				*i*	S	**Sb**	**Sb**	**08 21 02.2**	**+1.9**
PB09				IAML				08 21 12.6	
	comp=E,2μm,0.5s								
PB09	**IPOC Station P**	**2.63**	**140**	Pn		**Pn**	**Pn**	**08 20 24.4**	**+1.1**
PB09	**IPOC Station P**	**2.63**	**140**	*i* P		**Pb**	**Pb**	**08 20 25.4**	**-3.1**
PB09				*e*S		Sb	Sb	08 21 08.6	+8.2
PB09				IAML				08 21 14.9	
	comp=Z,2μm,1.1s								
PB04	**IPOC Station P**	**2.68**	**162**⇑	*e*P		**Pn**	**Pn**	**08 20 23.6**	**-0.5**
PB04				*i* S		**Sn**	**Sn**	**08 20 54.2**	**-1.8**
PB04	**IPOC Station P**	**2.68**	**162**			**Pn**	**Pn**	**08 20 24.2**	**+0.1**
PB04					Sn	**Sn**	**Sn**	**08 20 54.0**	**-2.1**
PB04	**IPOC Station P**	**2.68**	**162**	*i* P		**Pn**	**Pn**	**08 20 23.9**	**-0.2**
PB04				*e*S		**Sb**	**Sb**	**08 21 06.6**	**+4.6**
PB04				IAML				08 21 20.6	
	comp=Z,2μm,1.1s								
PB05	**IPOC Station P**	**3.17**	**166**	*i* P		**Pn**	**Pn**	**08 20 30.2**	**-0.5**
PB05				IAML				08 21 33.8	
	comp=N,445nm,0.4s								
PB05	**IPOC Station P**	**3.17**	**166**	*i* P		**Pn**	**Pn**	**08 20 30.1**	**-0.5**
PB05				IAML				08 21 37.4	
	comp=Z,602nm,1.3s								
PB06	**IPOC Station P**	**3.23**	**155**	*i* P		**Pn**	**Pn**	**08 20 31.4**	**-0.2**
PB06				IAML				08 21 28.2	
	comp=E,424nm,0.7s								
PB06	**IPOC Station P**	**3.23**	**155**			**Pn**	**Pn**	**08 20 31.4**	**-0.2**
PB06	**IPOC Station P**	**3.23**	**155**	*i* P		**Pn**	**Pn**	**08 20 31.5**	**-0.2**
PB06				IAML				08 21 57.5	
	comp=Z,654nm,1.1s								
LVC	**Limon Verde**	**3.46**	**145**	*e*P		**Pn**	**Pn**	**08 20 36.5**	**+1.6**
LVC				*e*S		**Sn**	**Sn**	**08 21 18.0**	**+2.6**
LVC	**Limon Verde**	**3.46**	**145**	Pn		**Pn**	**Pn**	**08 20 36.5**	**+1.6**
LVC	**Limon Verde**	**3.46**	**145**	*i* P		**Pn**	**Pn**	**08 20 37.0**	**+2.1**
LVC				*e*S		**Sb**	**Sb**	**08 21 29.4**	**+5.0**
LVC				IAML				08 21 38.2	
	comp=Z,513nm,1.0s								
LVC	**Limon Verde**	**3.46**	**145**	*e*P		**Pn**	**Pn**	**08 20 36.6**	**+1.7**
PB15	**IPOC Station P**	**3.72**	**157**	*e*P		**Pn**	**Pn**	**08 20 38.1**	**-0.3**
PB15	**IPOC Station P**	**3.72**	**157**			**Pn**	**Pn**	**08 20 38.2**	**-0.2**
PB15	**IPOC Station P**	**3.72**	**157**	*i* P		**Pn**	**Pn**	**08 20 38.9**	**+0.5**
PB15				IAML				08 22 09.2	
	comp=Z,456nm,1.4s								
PB10	**IPOC Station P**	**3.75**	**173**			**Pn**	**Pn**	**08 20 37.8**	**-0.9**
PB10					Sn

DBIC	**Dimbokro**	**70.19**	**75**	P		**P**	**08 30 52.2**	**-1.5**	
	comp=Z,4.1nm,0.9s,baz=326,slow=7.3,SNR=1.8								
PDAR	**Pinedale Array**	**71.63**	**331**	P		**P**	**08 31 04.0**	**+1.8**	
	comp=Z,0.1nm,0.3s,baz=224,slow=41,SNR=1.8								
PDAR				pP		**pwP**	**08 31 12.6**	**-0.1**	
	comp=Z,0.5nm,0.8s,baz=119,slow=5.2,SNR=3.2								
PDAR				LR		LR	09 03 36.2		
	comp=Z,42nm,18.2s,baz=144,slow=37								
PPT	**Papeete**	**73.77**	**257**	LR		LR	08 56 10.6		
	comp=Z,168nm,18.1s,baz=108,slow=30								
YHH	**Holmes Hill**	**73.80**	**332**	P		**P**	**08 31 18.1**	**+3.0**	
SCHQ	**Schefferville**	**74.39**	**3**	LR		LR	09 07 30.0		
	comp=Z,34nm,18.0s,baz=69,slow=39								
TORD	**Torodi Ar. Bea**	**78.68**	**72**	P		**P**	**08 31 41.6**	**-1.5**	
	comp=Z,4.2nm,0.7s,baz=256,slow=4.6,SNR=21								
TORD				pP		**sP**	**08 31 50.3**	**-0.9**	
	comp=Z,6.3nm,0.8s,baz=262,slow=5.0,SNR=16								
TORD				LR		LR	09 05 22.2		
	comp=Z,60nm,19.3s,baz=255,slow=35								
TORD	**Torodi Ar. Bea**	**78.68**	**72**	P		**P**	**08 31 42.1**	**-1.0**	
ESDC	**Sonseca Array**	**86.03**	**45**	P		**P**	**08 32 20.8**	**-0.3**	
	comp=Z,0.5nm,0.3s,baz=244,slow=3.5,SNR=3.0								
ESDC				pP		**pwP**	**08 32 31.2**	**-0.8**	
	comp=Z,2.0nm,1.0s,baz=253,slow=5.5,SNR=5.4								
ESDC				LR		LR	09 10 38.8		
	comp=Z,41nm,18.0s,baz=180,slow=36								
YKA	**Yellowknife Ar**	**86.91**	**341**	P		**P**	**08 32 34.6**	**+0.3**	
	comp=Z,3.9nm,1.1s,baz=134,slow=5.1,SNR=30								
YKA				pP		**pwP**	**08 32 44.2**	**-0.8**	
	comp=Z,3.3nm,0.7s,baz=133,slow=5.0,SNR=20								
DAVOX	**Davos/Dischmat**	**98.17**	**43**	LR		LR	09 14 40.6		
	comp=Z,16nm,19.5s,baz=264,slow=34								
H11S2	**WAKE ISLAND Hyl**	**25.66**	**279**	T		T	10 58 05.2		
	baz=100,slow=74,SNR=26								
H11S1	**WAKE ISLAND Hyl**	**25.67**	**279**	T		T	10 58 05.6		
	baz=100,slow=74,SNR=5.5								
H11S3	**WAKE ISLAND Hyl**	**25.68**	**279**	T		T	10 58 02.3		
	baz=100,slow=74,SNR=4.7								
ASAR	**Alice Springs**	**130.45**	**211**	PKP		**PKiKP**	**08 38 52.5**	**-0.1**	
	comp=Z,0.6nm,0.9s,baz=108,slow=3.0,SNR=3.0								
WRA	**Warramunga Arr**	**133.35**	**214**	PKP		**PKiKP**	**08 38 59.4**	**+0.8**	
	comp=Z,0.6nm,1.0s,baz=138,slow=1.7,SNR=2.0								
ZALV	**Zalesovo Beam**	**141.19**	**23**	PKP		**PKPdf**	**08 39 11.7**	**+1.0**	
	comp=Z,0.5nm,0.4s,baz=247,slow=3.0,SNR=1.9								
ZALV				pPKP		**sPKPdf**	**08 39 20.1**	**+1.4**	
	comp=Z,0.5nm,0.3s,baz=7.5,slow=12,SNR=2.3								
MKAR	**Makanchi Array**	**145.34**	**33**	PKPbc		**PKPbc**	**08 39 17.7**	**-0.4**	
	comp=Z,3.7nm,1.1s,baz=320,slow=3.2,SNR=12								
MKAR				pPKPbc		**sPKPdf**	**08 39 28.1**	**+1.7**	
	comp=Z,4.2nm,0.9s,baz=301,slow=0.7,SNR=16								
MKAR				sPKPbc		sPKPbc	08 39 36.9	+11	
	comp=Z,1.7nm,0.8s,baz=336,slow=2.7,SNR=4.4								
MKAR	**Makanchi Array**	**145.34**	**33**			**PKPab**	**08 39 18.5**	**+0.2**	
KSH	**Kashi**	**145.50**	**48**	PKPbc		**PKPab**	**08 39 19.3**	**0.0**	
KSH				PP		**PP**	**08 42 43.0**	**+3.8**	
SONM	**Songino Array**	**151.93**	**4**	PKP		**PKPdf**	**08 39 29.3**	**+0.2**	
	comp=Z,0.3nm,0.3s,baz=300,slow=2.8,SNR=1.4								
SONM				PKPbc		**sPKPdf**	**08 39 36.5**	**-0.7**	
	comp=Z,0.3nm,0.3s,baz=309,slow=0.9,SNR=4.9								
SONM				pPKPbc		**PKPab**	**08 39 44.2**	**-0.5**	
	comp=Z,0.7nm,0.7s,baz=344,slow=2.8,SNR=2.8								
SONM	**Songino Array**	**151.93**	**4**			**PKiKP**	**08 39 36.9**	**+0.9**	
SONM	**Songino Array**	**151.93**	**4**			**PKPab**	**08 39 45.5**	**+0.8**	

*ISK **14** 08:39:02.4, 39.65N×29.42E, h5km, ML2.1/8, Suspected Mining explosion.*

DDA 14 08:39:02.0, 39.65N×29.46E, h7km±7km, ML2.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
TVSB	**Tavsanli**	**0.20**	**179**	PG		Pg	08 39 07.1		+1.0
TVSB				SG		Sg	08 39 10.5		+1.6
ULDT	**Uludag**	**0.55**	**333**	*i* P		Pg	08 39 12.3		-0.3
ULDT				*i* S		Sg	08 39 20.8		+1.0
CAVI	**Cavuskoy**	**0.62**	**28**	PG		Pb	08 39 15.0		-0.2
IGD	**Bursa**	**0.64**	**342**	*i* P		Pg	08 39 14.0		-0.3
IGD				*i* S		Sg	08 39 23.6		+0.9
DURS	**Dursunbey**	**0.76**	**266**	*i* P		Pg	08 39 16.6		0.0
DURS				*i* S		Sb	08 39 29.5		+1.3
BORA	**Eskisehir**	**0.80**	**73**	PG		Pb	08 39 18.9		+0.6
BORA				SG		Sn	08 39 30.9		-1.1
BORA	**Eskisehir**	**0.80**	**73**	*i* P		Pg	08 39 17.2		-0.2
BORA				*i* S		Sb	08 39 29.8		+0.4
DEMI	**Demirci**	**0.84**	**224**	*eP*		Pg	08 39 16.4		-1.7
DEMI				*i* S		Sn	08 39 35.8		+2.9
YLV	**Yalova**	**0.91**	**356**	PG		Pb	08 39 20.6		+0.4
SRCK	**Saricakaya, Es**	**0.98**	**66**	PG		Pn	08 39 22.4		+0.2
SRCK				SG		Sn	08 39 36.7		+0.4
USAK	**Uak-Merkez**	**1.00**	**200**	*i* P		Pn	08 39 22.2		-0.3
USAK				*i* S		Sn	08 39 36.4		-0.4
ARMT	**Armutlu**	**1.02**	**334**	PG		Pn	08 39 22.4		-0.3
KCTX	**Karacabey (Bur**	**1.04**	**306**	PG		Pn	08 39 23.3		+0.2
GULT	**Gulveren**	**1.12**	**46**	PN		Pn	08 39 24.7		+0.5
GULT				SN		Sn	08 39 41.1		+1.1
HRT	**Hereke**	**1.18**	**8**	PN		Pn	08 39 25.1		+0.2

*DDA **14** 08:39:47.0, 38.28N×27.93E, h7km±4km, ML2.2*

ISK 14 08:39:46.8, 38.27N×27.98E, h5km, ML2.4/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
AYDB	**Zeytinkoy-Aydi**	**0.34**	**192**	PG		Pg	08 39 53.9		+0.6
AYDB				SG		Sg	08 39 59.2		+1.4
GOMA	**Golmarmara-Man**	**0.43**	**353**	PG		Pg	08 39 56.0		+0.8
MANT	**Manisa**	**0.50**	**64**	*i* P		Pb	08 39 57.8		-0.5
MANT				*i* S		Sb	08 40 04.8		-1.2
MANT				IAML			08 40 05.0		
	comp=N,173nm,0.2s								
KULA	**Kula-Manisa**	**0.59**	**66**	PG		Pg	08 39 58.8		+0.7
KULA				SG		Sb	08 40 07.0		-1.2
AKHS	**Akhisar**	**0.62**	**348**	*i* P		Pg	08 39 59.3		+0.6
AKHS				*i* S		Sg	08 40 07.6		+0.9
AKS	**Akhisar**	**0.62**	**348**	PG		Pg	08 39 58.8		+0.1
BLCB	**Balcova**	**0.75**	**279**	PG		Pg	08 40 01.3		+0.2
GCAM	**G?zelcami?**	**0.82**	**226**	PG		Pg	08 40 02.6		0.0
GCAM	**G?zelcami?**	**0.82**	**226**	*i* P		Pg	08 40 03.0		+0.4
GCAM				*i* S		Sg	08 40 11.6		-1.7
GCAM				IAML			08 40 14.0		
	comp=N,92nm,0.2s								
DGB	**zmir**	**0.89**	**256**	*i* P		Pg	08 40 04.3		+0.4
DGB				*i* S		Sg	08 40 14.2		-1.3
USAK	**Uak-Merkez**	**0.93**	**61**	*i* P		Pb	08 40 05.4		+0.1
USAK				*i* S		Sg	08 40 17.0		+0.5
DEMI	**Demirci**	**0.96**	**37**	*i* P		Pb	08 40 06.2		+0.3
DEMI				*i* S		Sb	08 40 18.4		-0.6
DEMI				IAML			08 40 21.0		
	comp=E,53nm,0.2s								
ZEDA	**zmir-Bergama**	**0.99**	**315**	*i* P		Pg	08 40 06.0		+0.2
ZEDA				*i* S		Sg	08 40 18.6		-0.1
ZEDA				IAML			08 40 19.0		
	comp=N,65nm,0.8s								
URLA	**Izmir**	**1.09**	**275**	PN		Pb	08 40 08.2		0.0
URLA	**Izmir**	**1.09**	**275**	*i* P		Pg	08 40 07.5		-0.3
URLA				*i* S		Sg	08 40 22.2		+0.3
TAVA	**DENIZLI_Tavas**	**1.09**	**137**	*i* P		Pb	08 40 08.5		+0.3
TAVA				*i* S		Sn	08 40 23.9		-0.5
STEP	**BALIKESIR_Sava**	**1.12**	**350**	*i* P		Pg	08 40 08.4		+0.2
STEP				*i* S		Sb	08 40 23.4		-0.1
STEP				IAML			08 40 28.0		
	comp=N,65nm,1.3s								
STEP	**BALIKESIR_Sava**	**1.12**	**350**	*i* P		Pg	08 40 08.4		+0.1
STEP				*i* S		Sb	08 40 23.4		-0.1
STEP				IAML			08 40 28.0		
	comp=N,65nm,1.3s								
SIMA	**Simav-Kutahya**	**1.13**	**44**	PN		Pn	08 40 09.4		+0.1
DKL	**Dikili**	**1.16**	**314**	PN		Pn	08 40 09.5		-0.1
YER	**Yerkesik**	**1.16**	**168**	PN		Pb	08 40 09.4		0.0
KHAL	**Karahalli**	**1.19**	**85**	*i* P		Pn	08 40 10.4		+0.2
KHAL				*i* S		Sn	08 40 27.6		+0.8
BODT	**Bodrum**	**1.32**	**204**	PN		Pg	08 40 12.2		+0.1
BALB	**Balikesir**	**1.37**	**357**	PN		Pg	08 40 13.5		+0.5
DURS	**Dursunbey**	**1.38**	**16**	*i* P		Pg	08 40 13.7		+0.4
DURS				*i* S		Sb	08 40 30.9		-0.1
BALY	**Balya**	**1.49**	**349**	*i* P		Pn	08 40 13.8		-0.4
BALY				*i* S		Sn	08 40 33.2		-0.9
BALY				IAML			08 40 38.0		
	comp=N,45nm,0.5s								
BALY	**Balya**	**1.49**	**349**	*i* P		Pn	08 40 13.7		-0.6
BALY				*i* S		Sn	08 40 32.9		-1.2
BALY				IAML			08 40 38.0		
	comp=E,31nm,0.5s								
CHOS	**Chios island**	**1.52**	**275**	PN		Pb	08 40 15.4		-0.1

BUC 14 08:40:36.1±0.5, 46.09N×23.19E, h9km±2km, ml1.3/6, 18C-10D, Error ellipse: s-maj=4.2km s-min=1.9km az=173.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
DEV	**Deva**	**0.28**	**225**	↑P		Pg	08 40 41.4		-0.3
DEV				↑S		Sg	08 40 45.5		0.0
DEV	**Deva**	**0.28**	**225**	↑P		Pg	08 40 41.4		-0.3
DEV				↑S		Sg	08 40 45.5		0.0
GZR	**Gura Zlata**	**0.75**	**203**	↑P		Pb	08 40 51.2		-0.2
GZR				↑S		Sb	08 41 01.3		-0.5
GZR	**Gura Zlata**	**0.75**	**203**	↑P		Pb	08 40 51.2		-0.2
GZR				↑S		Sb	08 41 01.3		-0.5
BZS	**Buzias**	**1.20**	**247**	↑P		Pb	08 40 58.4		-0.5
BZS				↑S		Sn	08 41 15.3		-0.1
BZS	**Buzias**	**1.20**	**247**	↑P		Pb	08 40 58.4		-0.5
BZS				↑S		Sn	08 41 15.3		-0.1
ARR	**Arges**	**1.24**	**125**	↓P		Pn	08 40 59.4		-0.3
ARR				↓S		Sn	08 41 17.4		+0.8
ARR	**Arges**	**1.24**	**125**	↓P		Pn	08 40 59.4		-0.3
ARR				↓S		Sn	08 41 17.4		+0.8
HERR	**Herculane**	**1.32**	**205**	↑P		Pn	08 41 00.4		-0.3
HERR				↓S		Sg	08 41 19.0		+0.5
HERR	**Herculane**	**1.32**	**205**	↑P		Pn	08 41 00.4		-0.3
HERR				↓S		Sg	08 41 19.0		+0.5
VOIR		**1.45**	**116**	↑P		Pb	08 41 03.3		0.0
VOIR				↓S		Sb	08 41 22.1		+0.1
VOIR		**1.45**	**116**	↑P		Pb	08 41 03.3		0.0
VOIR				↓S		Sb	08 41 22.1		+0.1
MDVR	**Moldovita**	**1.67**	**219**	↓P		Pn	08 41 05.8		+0.2
MDVR				↑S		Sb	08 41 28.4		+0.2
MDVR	**Moldovita**	**1.67**	**219**	↓P		Pn	08 41 05.8		+0.2
MDVR				↑S		Sb	08 41 28.4		+0.2

IDC 14 08:54:10.5±46.0, 16.09S×170.90W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/42, mbtmp3.8/3, Error ellipse: s-maj=907.9km s-min=205.6km az=80.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
STKA	**Stephens Creek**	**45.79**	**241**	P		P	09 02 35.2		+1.0
	1.3nm,1.0s,baz=90,slow=16,SNR=1.5								
WRA	**Warramunga Arr**	**52.03**	**257**	P		P	09 03 21.4		-1.0
	0.5nm,0.9s,baz=98,slow=7.0,SNR=4.6								
ASAR	**Alice Springs**	**52.19**	**252**	P		P	09 03 23.4		-0.2
	2.0nm,0.5s,baz=90,slow=8.1,SNR=44								

*KRAR **14** 09:08:31.9±0.2, 53.60N×87.97E, M2.2, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC 14 09:08:28.9±3.0, 53.60N×87.91E, h0km, mb1 3.0/2, mb1mx2.9/47, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=24.2km s-min=15.4km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
I46RU	**ZALESOVO INFRA**	**1.87**	**282**	*i*			09 20 32.4		
	baz=97,slow=322,SNR=1.6								
ZALV	**Zalesovo Beam**	**1.87**	**282**	Pg		Pn	09 09 02.2		+0.1
	2.0nm,0.3s,baz=96,slow=15,SNR=16								
ZALV				Lg		Lg	09 09 28.3		
	2.7nm,0.3s,baz=102,slow=24,SNR=15								
KURBB	**Kurchatov Arra**	**6.50**	**246**	Pn		Pn	09 10 06.7		+0.9
	0.1nm,0.3s,baz=62,slow=14,SNR=8.5								
KURBB				Sn		Sn	09 11 19.2		-1.4
	0.1nm,0.3s,baz=69,slow=5.1,SNR=4.1								
KURBB				Lg		Lg	09 11 56.3		
	0.1nm,0.3s,baz=62,slow=31,SNR=8.2								
MKAR	**Makanchi Array**	**7.71**	**210**	Pn		Pn	09 10 23.5		+1.2
	0.1nm,0.3s,baz=31,slow=13,SNR=4.3								
MKAR				Sn		Sn	09 11 49.6		-0.7
	0.1nm,0.3s,baz=30,slow=15,SNR=3.9								
MKAR				Lg		Lg	09 12 34.0		
	0.1nm,0.3s,baz=25,slow=24,SNR=4.3								

*IDC **14** 09:17:56.7±1.8, 7.35Sx155.08E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.6/32, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=54.4km s-min=31.3km az=120.0*

ISC 14 09:18:02.0±1.3, 7.45S±0.2×155.06E±0.2, h31km, n6, σ0.875/8, mb3.5/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
KRVT	**Keravat (AS076**	**4.21**	**316**	Pn		**Pn**	**09 19 05.2**	**+1.1**	
	2.7nm,0.3s,baz=72,slow=20,SNR=1.6								
KRVT				Sn		**Sn**	**09 19 51.1**	**-1.0**	
	6.0nm,0.3s,baz=198,slow=22,SNR=4.1								
WRA	**Warramunga Arr**	**23.59**	**236**	P		**P**	**09 23 10.1**	**-0.2**	
	0.7nm,0.7s,baz=58,slow=9.5,SNR=2.8								
ASAR	**Alice Springs**	**25.91**	**229**	P		**P**	**09 23 31.9**	**+0.3**	
	0.4nm,0.6s,baz=55,slow=9.4,SNR=5.4								
MKAR	**Makanchi Array**	**83.65**	**319**	P		**P**	**09 30 27.4**	**-0.3**	
	0.3nm,0.5s,baz=134,slow=4.2,SNR=6.1								
YKA	**Yellowknife Ar**	**96.67**	**28**	P		**P**	**09 31 28.9**	**0.0**	
	0.6nm,1.1s,baz=270,slow=3.7,SNR=3.8								
TORD	**Torodi Ar. Bea**	**153.09**	**285**	PKPbc		**PKPbc**	**09 37 57.0**	**-0.6**	
	0.5nm,0.8s,baz=81,slow=2.7,SNR=3.5								
TORD				PKPab		**sPKPbc**	**09 38 08.5**	**-0.2**	
	0.8nm,0.8s,baz=75,slow=1.6,SNR=4.3								

IDC 14 09:25:22.8±52.0, 18.02S×177.27W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.6/37, mbtmp4.0/3, Error ellipse: s-maj=957.9km s-min=165.1km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
STKA	**Stephens Creek**	**39.53**	**242**	P		P	09 32 55.9		+0.4
	1.1nm,0.6s,baz=79,slow=10,SNR=3.8								
WRA	**Warramunga Arr**	**45.68**	**259**	P		P	09 33 45.6		-0.1
	0.7nm,0.4s,baz=97,slow=7.5,SNR=29								
ASAR	**Alice Springs**	**45.80**	**254**	P		P	09 33 46.3		-0.5
	1.3nm,0.4s,baz=87,slow=8.4,SNR=27								

*SOME **14** 09:42:28.1, 43.73N×69.70E*

NNC 14 09:42:29.9±1.1, 43.70N×69.81E, h0km, mb3.6, mpv3.1, 5C-1D, Error ellipse: s-maj=5.6km s-min=4.0km az=138.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
KK31	**Karatay Array**	**0.79**	**139**	↑P		Pg	09 42 45.0		0.0
	1.3nm,0.3s,baz=321,slow=17,SNR=65								
KK31				↑S		Sg	09 42 56.3		+1.0
	9.8nm,0.3s,baz=320,slow=29,SNR=115								
IUG	**luzhnay**	**1.56**	**174**	P		Pn	09 42 58.5		-0.6
	13nm,0.2s								
IUG				S		Sb	09 43 20.5		+0.3
	32nm,0.3s								
MRKS	**Merke**	**2.68**	**110**	Pg		Pg	09 43 20.1		-1.1
	2.6nm,0.4s								
MRKS				Lg		Lg	09 43 58.0		
	8.7nm,0.3s								
AAK	**Ala-Archa**	**3.59**	**106**	↑Pg		Pb	09 43 35.7		+1.3
	2.1nm,0.5s								
AAK				↓Lg		Lg	09 44 24.0		
	7.0nm,0.5s								
TKM2	**Tokmak 2**	**4.30**	**99**	↑Pg		Pb	09 43 48.9		+2.5
	16nm,1.3s								
TKM2				↑Lg		Lg	09 44 44.5		
	9.6nm,1.0s								
DGS	**Degeres**	**4.37**	**94**	Pg		Pg	09 43 50.9		-2.7
	2.0nm,0.4s								
DGS				Lg		Lg	09 44 50.3		
	9.8nm,0.5s								

*IDC **14** 09:46:12.3±0.5, 7.35N×82.37W, h0km, mb4.5/16, mb1 4.7/24, mb1mx4.6/32, mbtmp4.6/24, ML3.8/7, MS4.7/23, Ms1 4.7/23, ms1mx4.6/31, Error ellipse: s-maj=13.5km s-min=9.8km az=42.0*

*MOS **14** 09:46:13.2±1.2, 7.45N×82.35W, h10km, mb5.2/38, Error ellipse: s-maj=11.0km s-min=5.8km az=114.3*

*UCR **14** 09:46:13.4±1.6, 7.10N×82.42W, h35km±999km, MD5.2, mb5.3(NEIC)*

*UPA **14** 09:46:13.4±1.6, 7.25N×82.39W, h19km±17km, MW5.7*

*NEIC **14** 09:46:14.7±1.7, 7.40N±0.06×82.41W±0.05, h10km±1km, mb5.0/411, Mwc5.3(GCMT), Error ellipse: s-maj=11.0km s-min=8.5km az=22.0*

*BJI **14** 09:46:15.0±0.0, 7.40N×82.50W, h10km, mB5.5/7, Ms5.3/10, Ms7 5.1/10*

*GCMT **14** 09:46:17.7±0.1, 7.35N±0.01×82.32W±0.01, h12km, MW5.3/149, Moment Tensor Solution. s81,c115; s149,c271; Duration: 1⁄1 Moment tensor: Scale 10^17 Nm; Mrr-0.09±.01; Mθθ 1.04±.01; Mφφ-0.94±.01; Mrθ-0.08±.03; Mrφ 0.14±.01; Mθφ 0.00±.04; Best double couple: M0 1.00600×10^17 NP1:φ=221.00000°, δ87.00000°, λ178.00000°. NP2:φ=311.00000°, δ88.00000°, λ3.00000°. Principal axes: T 1.0550, Plg4.0000°, Azm176.0000°; N -0.0980, Plg86.0000°, Azm349.0000°; P -0.9570, Plg0.0000°, Azm86.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*INET **14** 09:46:18.0, 7.62N×82.33W, h6km, ML5.2*

*NEIC **14** 09:46:18, 7.36N×82.33W, h12km, Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr-0.08; Mθθ 1.10; Mφφ-1.02; Mrθ-0.16; Mrφ 0.13; Mθφ 0.01; Fault plane solution: M0 1.08000×10^17 NP1:φ=312.00000°, δ86.00000°, λ6.00000°. NP2:φ=221.00000°, δ84.00000°, λ176.00000°. Principal axes: T 1.1282, Plg8.0000°, Azm177.0000°; N -0.0980, Plg82.0000°, Azm346.0000°; P -1.0302, Plg1.0000°, Azm86.0000°;*

*BGR **14** 09:46:24.8±0.0, 6.81N×81.29W, h33km, mb5.5, Ms4.9*

ISC 14 09:46:14.1±0.7, 7.33N±0.04×82.36W±0.03, h9km±4km, n1077, σ1.9⁄39/946, mb5.0/226, MS4.9/41, 20C-11D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
BCO2	**Palmira**	**1.39**	**353**	↑*i* P		**Pn**	**09 46 38.0**	**-1.9**	
CACAO	**El Cacao, Vera**	**1.49**	**89**	↓*i* P		**Pn**	**09 46 38.3**	**-2.7**	
CACAO				*eS*		**Sn**	**09 46 57.6**	**-2.9**	
BRU2	**Volcan**	**1.49**	**347**	↑*i* P		**Pn**	**09 46 39.0**	**-2.2**	
BRU2	**Volcan**	**1.49**	**347**	*eP*		**Pn**	**09 46 39.1**	**-2.1**	
BRU2				*eS*		**Sg**	**09 47 03.1**	**+0.9**	
PTJ1	**Puerto Jimnez**	**1.52**	**322**	↑*i* P		**Pn**	**09 46 39.3**	**-2.1**	
PTJ1				*eS*		**Sn**	**09 46 58.2**	**-3.1**	
PTJ1	**Puerto Jimnez**	**1.52**	**322**	↑*i* P		**Pn**	**09 46 39.4**	**-2.1**	
EDSV	**San Vito**	**1.60**	**338**	↑*eP*		**Pn**	**09 46 40.9**	**-1.8**	
EDPN	**Palmar Norte**	**1.95**	**326**	↑*i* P		**Pn**	**09 46 45.6**	**-1.8**	
EDPN				*eS*		**Sn**	**09 47 12.1**	**+0.1**	
EDBA	**Buenos Aires**	**2.04**	**334**	↑*i* P		**Pn**	**09 46 47.7**	**-0.9**	
EDBA				*eS*		**Sn**	**09 47 14.6**	**+0.5**	
AZU	**Azuero**	**2.12**	**77**	↓*i* P		**Pn**	**09 46 47.9**	**-1.8**	
AZU	**Azuero**	**2.12**	**77**	↓*i* P		**Pn**	**09 46 48.0**	**-1.8**	
AZU				*eS*		**Sn**	**09 47 13.6**	**-2.6**	
AZU	**Azuero**	**2.12**	**77**	*eP*		**Pn**	**09 46 48.2**	**-1.5**	
ACHO3	**Achotines, Los**	**2.17**	**88**	↓*i* P		**Pn**	**09 46 48.4**	**-2.0**	
RGM0	**Gandoca**	**2.26**	**354**	↑*i* P		**Pn**	**09 46 52.3**	**+0.7**	
PNME	**Penonome**	**2.32**	**60**	*eP*		**Pn**	**09 46 51.9**	**-0.6**	
PNME	**Penonome**	**2.32**	**60**	↓*i* P		**Pn**	**09 46 51.9**	**-0.6**	
PNME				*eS*		**Sn**	**09 47 19.7**	**-1.4**	
EDDO	**Dominical**	**2.42**	**322**	↑*i* P		**Pn**	**09 46 52.1**	**-1.8**	
EDDO				*eS*		**Sn**	**09 47 22.8**	**-0.8**	
LCR2	**La Lucha 2**	**2.90**	**326**	↑*i* P		**Pn**	**09 46 59.1**	**-1.5**	
ZANG	**Zanguenga, Cho**	**2.95**	**57**	*eP*		**Pn**	**09 47 00.6**	**-0.5**	
CVTR	**Volcan Turrial**	**3.01**	**333**	*eP*		**Pn**	**09 47 01.9**	**-0.4**	
CVTR				*eS*		**Sn**	**09 47 40.3**	**+1.6**	
SJS	**Escuela Geolog**	**3.09**	**327**	*eP*		**Pn**	**09 47 02.3**	**-0.9**	
BCIP	**Isla Barro Col**	**3.09**	**54**	*eP*		**Pn**	**09 47 03.0**	**-0.1**	
BCIP	**Isla Barro Col**	**3.09**	**54**	*eP*		**Pn**	**09 47 04.7**	**+1.6**	
BCIP				*eS*		**Sb**	**09 47 48.1**	**+0.9**	
BCIP	**Isla Barro Col**	**3.09**	**54**	P		**Pn**	**09 47 03.3**	**+0.2**	
BCIP	**Isla Barro Col**	**3.09**	**54**	*eP*		**Pn**	**09 47 02.5**	**-0.6**	
BCIP	**Isla Barro Col**	**3.09**	**54**			**Pn**	**09 47 03.3**	**+0.2**	
HDC	**Heredia**	**3.17**	**327**	↑*i* P		**Pn**	**09 47 03.2**	**-1.1**	
HDC				*eS*		**Sn**	**09 47 41.6**	**-0.7**	
HDC	**Heredia**	**3.17**	**327**	↑*eP*		**Pn**	**09 47 03.7**	**-

VILC Villavicencio, 9.20 110 eP Pn 09 48 30.3 +3.1
SNET Serv Nac Est T 9.25 314 Pn 09 48 28.1 +0.3
RUSC La Rusia 9.33 98 eP Pn 09 48 29.2 0.0
RUSC La Rusia 9.33 98 Pn 09 48 30.7 +1.4
PAMC Pamplona, Colo 9.58 89 eP Pn 09 48 29.6 -3.2
MACC Macarena, Meta 9.92 121 eP Pn 09 48 37.0 0.0
PTLC Puerto Leguiza 10.37 133 eP Pn 09 48 48.6 +5.5
PTGC Puerto Gaitan, 10.64 106 eP Pn 09 48 47.1 +0.3
GUVC San Jose del G 10.80 116 eP Pn 09 48 48.3 -0.7
APG El Apazote 11.01 315 Pn Pn 09 48 51.5 -0.6
1.3nm,0.3s,baz=118,slow=3.9,SNR=14
APG Lg Lg 09 52 03.0
0.1nm,0.3s,baz=92,slow=21,SNR=1.0
APG LR LR 09 53 08.6
comp=Z,3µm,21.2s,baz=130,slow=38
URIC Uribia, Colomb 11.11 66 Pn 09 48 53.8 +0.5
PAYG Puerto Ayora 11.21 225 Pn Pn 09 48 53.8 -0.9
SOCV Socops 11.44 84 eP Pn 09 48 54.6 -3.2
SDV Santo Domingo 11.71 82 Pn Pn 09 49 00.8 -0.9
0.7nm,0.3s,baz=259,slow=8.1,SNR=12
SDV Sn Sn 09 51 07.1 -5.7
1.2nm,0.3s,baz=276,slow=23,SNR=1.0
SDV LR LR 09 54 07.1
comp=Z,8µm,19.6s,baz=258,slow=40
SDV Santo Domingo 11.71 82 eP Pn 09 48 59.1 -2.6
SDV Santo Domingo 11.71 82 Pn 09 49 01.0 -0.7
SDV Santo Domingo 11.71 82 eP Pn 09 48 58.9 -2.8
SDV eS Sn 09 51 04.9 -7.9
ELOV Elorza 12.78 91 eP Pn 09 49 15.5 -0.7
CCIG Comitan 13.06 314 Pn 09 49 22.8 +2.6
TEIG Tepich 14.04 336 Pn Pn 09 49 32.6 -0.8
0.3nm,0.3s,baz=331,slow=0.0,SNR=2.2
TEIG LR LR 09 54 42.8
comp=Z,6µm,20.5s,baz=82,slow=36
TEIG Tepich 14.04 336 eP Pn 09 49 32.4 -1.0
GTBY Guantanamo Bay 14.36 29 eP P 09 49 41.6 -3.2
GTBY Guantanamo Bay 14.36 29 Pn 09 49 38.3 +0.5
LGNH Logne 14.62 40 Pn 09 49 42.6 +1.4
ATAH Atahualpa 14.90 165 Pn Pn 09 49 46.3 +0.8
0.3nm,0.3s,baz=332,slow=20,SNR=7.5
ATAH LR LR 09 54 55.3
comp=Z,9µm,21.4s,baz=345,slow=35
ATAH Atahualpa 14.90 165 P P 09 49 49.8 -1.5
SDDR Presa de Saban 15.81 42 P 09 49 59.2 -1.9
SDDR IAmb IAmb 09 50 14.3
comp=Z,108nm,0.9s
DR12 Loma Pena Alta 17.00 47 P P 09 50 13.9 -0.3
PCRV Puerto La Cruz 17.75 80 P Pn 09 50 20.0 -1.7
comp=Z,0.5nm,0.3s,baz=272,slow=4.5,SNR=7.2
PCRV LR LR 09 59 03.3
comp=Z,8µm,18.2s,slow=43
MLPR Magueyes Islan 18.29 53 P P 09 50 28.9 +0.5
MLPR IAmb IAmb 09 50 38.8
comp=Z,116nm,1.2s
OBIP Obispado Ponce 18.68 54 P Pn 09 50 33.5 +0.5
OBIP IAmb IAmb 09 50 42.8
comp=Z,101nm,1.3s
AOPR Arecibo Observ 18.73 53 IAmb IAmb 09 50 35.4
comp=Z,67nm,0.7s
SJG San Juan 19.08 54 P P 09 50 36.1 -1.0
comp=Z,0.7nm,0.3s,baz=260,slow=10,SNR=5.0
SJG S S 09 54 14.5 +0.7
comp=Z,1.5nm,0.3s,baz=329,slow=21,SNR=1.3
SJG LR LR 09 57 43.5
comp=Z,1µm,20.2s,baz=218,slow=36
SJG San Juan 19.08 54 P P 09 50 37.4 +0.3
SJG pmax pmax
comp=Z,95nm,1.2s
SJG San Juan 19.08 54 P P 09 50 37.4 +0.3
SJG IAmb IAmb 09 50 48.8
comp=Z,96nm,1.2s
GCPR Guaynabo City 19.24 54 P P 09 50 38.6 -0.2
GCPR IAmb IAmb 09 50 54.7
comp=Z,139nm,0.9s
CBYP Canovanas 19.40 54 P P 09 50 40.5 -0.2
CBYP IAmb IAmb 09 50 55.1
comp=Z,74nm,1.1s
MTP Monte Pirata 19.56 55 IAmb IAmb 09 50 57.4
comp=Z,92nm,1.1s
NNA Nana 19.96 164 P P 09 50 46.0 -0.8
comp=Z,0.7nm,0.3s,baz=346,slow=10.0,SNR=9.1
NNA Nana 19.96 164‖ eP Pn 09 50 47.8 -0.6
NNA pmax pmax
comp=Z,147nm,1.1s
NNA Nana 19.96 164 P Pn 09 50 48.3 -0.1
CDVI St. Croix 20.04 57 P P 09 50 48.1 +0.6
CDVI IAmb IAmb 09 50 53.2
comp=Z,104nm,0.8s
STVI Saint Thomas 20.18 55 P P 09 50 48.4 -0.7
STVI IAmb IAmb 09 51 04.9
comp=Z,84nm,1.0s
DWPF Disney Wildern 20.69 2 P P 09 50 54.9 +0.4
baz=183
GRGR Grenville 20.95 75 eP Pn 09 51 00.6 +0.5
GRGR Grenville 20.95 75 P P 09 50 58.3 +0.7
GCMP Grenada, Carri 21.24 74 eP P 09 50 59.9 -0.8
SVB Belmont 21.58 72 P P 09 51 04.1 -0.2
MCLT Moule a Chique 21.98 71 eP P 09 51 13.3 +4.7
SLBI Saint Lucia, B 22.03 71 eP P 09 51 10.9 +1.8
FDF Fort de France 22.07 69 eP P 09 51 07.9 -1.7
BIM Bigot 22.08 69 eP P 09 51 12.5 +2.8
ZAM Aeronautique 22.13 69 eP P 09 51 11.8 +1.5
LPMF Morne Lapointe 22.19 69 eP P 09 51 13.0 +2.1
MPOM Morne Pois Mar 22.25 70 eP P 09 51 11.3 -0.2
PTGA Pitinga 23.73 109 P P 09 51 26.1 -0.7
comp=Z,31nm,1.1s,baz=296,slow=11,SNR=28
PTGA S S 09 55 43.5 +1.1
comp=Z,1.1nm,0.3s,baz=278,slow=22,SNR=1.2
PTGA Pitinga 23.73 109 P P 09 51 26.6 -0.2
PTGA IAmb IAmb 09 51 36.0
comp=Z,48nm,1.0s
PTGA Pitinga 23.73 109 eP P 09 51 25.7 -1.1
PTGA eS S 09 55 36.8 -5.6
MACA Manacapuru-AM 24.01 115 eP P 09 51 27.8 -1.7
TIGA Tifton 24.02 357 P P 09 51 29.1 -0.2
baz=177
352A Blakely 24.15 355 P P 09 51 31.5 +0.9
352A IAmb IAmb 09 51 35.0
comp=Z,32nm,0.8s
255A Hazlehurst 24.47 360 P P 09 51 34.4 +0.8
ZAIG Zacatecas 24.77 310 IAmb IAmb 09 51 49.0
comp=Z,29nm,1.1s
SAML Samuel 25.04 130 eP P 09 51 38.8 0.0
SAML Samuel 25.04 130 P P 09 51 38.3 -0.5
SAML pmax pmax
comp=Z,57nm,1.3s
SAML Samuel 25.04 130 P P 09 51 38.3 -0.5
SAML IAmb IAmb 09 51 49.7
comp=Z,57nm,1.2s
SAML Samuel 25.04 130 eP P 09 51 38.5 -0.3
157A Early Branch 25.25 3 P P 09 51 40.5 0.0
baz=183
158A Hollywood 25.36 4 P P 09 51 41.4 -0.2
baz=185
342A Flagon Creek P 25.67 340 P P 09 51 45.5 +1.1
342A IAmb IAmb 09 51 48.5
comp=Z,19nm,0.7s
NHSC New Hope 25.73 4 P P 09 51 44.6 -0.3
baz=185
HKT Hockley 25.82 332 P P 09 51 45.7 0.0
HKT pmax pmax
comp=Z,40nm,1.4s
HKT Hockley 25.82 332 P P 09 51 45.7 0.0
HKT IAmb IAmb 09 52 00.7
comp=Z,40nm,1.4s
Z56A Williston 25.89 2 P P 09 51 45.9 -0.4
baz=182
Z57A Bowman 25.89 3 P P 09 51 45.7 -0.6
baz=184
735A Kenedy 25.90 328 P P 09 51 46.5 -0.1
VBMS Vicksburg 25.90 344 P P 09 51 46.2 -0.3
baz=161
VBMS Vicksburg 25.90 344 P P 09 51 46.1 -0.4
LRAL Lakeview Retre 25.94 351 P P 09 51 46.0 -0.8
baz=170,SNR=14
LRAL Lakeview Retre 25.94 351 P P 09 51 46.4 -0.4
LRAL IAmb IAmb 09 51 58.2
comp=Z,28nm,1.1s
146A Union 25.94 347 P P 09 51 47.1 +0.3
Z59A Georgetown, SC 25.94 6 P P 09 51 46.3 -0.5
baz=187
GOGA Godfrey 25.98 358 P P 09 51 46.8 -0.4
GOGA pmax pmax
comp=Z,42nm,1.4s
GOGA Godfrey 25.98 358 P P 09 51 46.6 -0.5
baz=178
GOGA Godfrey 25.98 358 P P 09 51 46.8 -0.4
GOGA IAmb IAmb 09 51 55.8
comp=Z,42nm,1.4s
Z58A St. Stephen 25.99 5 P P 09 51 46.6 -0.6
baz=186
Z50A Ashland 26.01 353 P P 09 51 46.4 -1.0
baz=172,SNR=8.9
Z50A Ashland 26.01 353 P P 09 51 46.8 -0.7
Z47A Carrollton 26.28 349 P P 09 51 49.8 -0.1
Z47A IAmb IAmb 09 52 00.6
comp=Z,34nm,1.1s
Y56A Pelion 26.35 2 P P 09 51 50.3 -0.3
baz=182
833A Chaparral WMA, 26.37 324 P P 09 51 50.2 -0.5
baz=139
Y52A Lilburn 26.45 357 P P 09 51 50.5 -1.0
baz=176
Y52A Lilburn 26.45 357 P P 09 51 51.4 -0.1
Y55A Saluda 26.48 1 P P 09 51 51.6 -0.2
baz=181
Y57A Sumter 26.62 4 P P 09 51 51.8 -1.2
baz=184
HODGE Hodges 26.77 0 P P 09 51 54.4 0.0
Y60A Bolivia 26.82 8 P P 09 51 54.2 -0.6
baz=189
NATX Nacogdoches 26.88 336 P P 09 51 54.5 -0.9
baz=152
X55A Gracelyn & Ava 27.02 1 P P 09 51 56.3 -0.3
baz=182
X56A White Oak 27.06 2 P P 09 51 56.3 -0.6
baz=183
X57A Johnson Farm, 27.09 4 P P 09 51 57.0 -0.1
baz=185
X54A Belton 27.09 360 P P 09 51 56.3 -0.8
baz=180
X58A Rowland 27.24 5 P P 09 51 57.9 -0.6
baz=187
BIRD Birdtown, Kers 27.24 3 P P 09 51 59.5 +0.9
X59A McDuffie Farm, 27.33 7 P P 09 51 58.3 -1.0
baz=188
435B Jarrell 27.34 331 P P 09 51 58.6 -1.0
baz=146,SNR=7.7
LPAZ La Paz 27.37 149 P P 09 52 01.9 +1.4
LPAZ La Paz 27.37 149 P P 09 52 01.9 +1.4
X60A Albert Glenn T 27.42 8 P P 09 52 00.1 0.0
baz=190
Z41A Richland Creek 27.56 341 P P 09 52 00.1 -1.3
baz=157
W54A Cherokee Point 27.62 0 P P 09 52 01.4 -0.6
baz=180
KMSC Kings Mountain 27.70 2 P P 09 52 02.3 -0.4
baz=182
W58A Raeford 27.71 6 P P 09 52 01.8 -0.9
baz=187
W56A Indian Trail 27.72 3 P P 09 52 02.2 -0.7
baz=184
W57A Gilead 27.78 4 P P 09 52 02.4 -0.9
baz=185
W60A Pink Hill 27.92 8 P P 09 52 04.3 -0.4
baz=190
W59A Clinton 27.94 7 P P 09 52 04.2 -0.6
baz=188
CNNC Cliffs of the 28.08 8 P P 09 52 05.6 -0.5
baz=189
W61A Ground Anchor 28.15 9 P P 09 52 06.2 -0.5
baz=191
X43A Marvell 28.18 345 P P 09 52 05.9 -1.0
baz=162
TKL Tuckaleechee C 28.23 358 P P 09 52 05.0 -2.3
comp=Z,2.1nm,0.6s,baz=108,slow=5.9,SNR=2.5
TKL LR LR 10 03 23.0
comp=Z,3µm,20.0s,baz=172,slow=36
TKL Tuckaleechee C 28.23 358 P P 09 52 05.1 -2.3
TKL pmax pmax
comp=Z,9.0nm,1.3s
JCT Junction City 28.25 327 P P 09 52 06.6 -1.1
baz=141,SNR=14
JCT Junction City 28.25 327 IAmb IAmb 09 52 13.5
comp=Z,66nm,1.4s
WHTX Lake Whitney, 28.29 332 P P 09 52 06.7 -1.3
baz=147
V54A Nebo 28.32 1 P P 09 52 07.6 -0.6
baz=181
V56A Mocksville 28.40 3 P P 09 52 08.8 -0.1
baz=184
V55A Taylorsville 28.41 2 P P 09 52 08.6 -0.4
baz=182
V58A Windy Hill, Pi 28.49 6 P P 09 52 08.8 -0.9
baz=187
V57A Coltrane Farms 28.52 4 P P 09 52 09.2 -0.8
baz=185
V59A Middlesex 28.55 7 P P 09 52 09.8 -0.5
baz=189
V48A Smith Brothers 28.57 352 IAmb IAmb 09 52 14.2
comp=Z,19nm,0.9s
V60A Jim Taylor Roa 28.69 9 P P 09 52 11.4 0.0
baz=191
X40A Basin Creek Fa 28.70 342 P P 09 52 10.1 -1.5
baz=158
V62A Hyde County Ai 28.71 11 P P 09 52 11.3 -0.3
baz=193
UALR University of 28.82 343 IAmb IAmb 09 52 13.2
comp=Z,16nm,0.8s
V61A Roper 28.82 10 P P 09 52 10.2 -2.4
baz=192
U56A King 28.94 3 P P 09 52 13.0 -0.7
baz=184
MIAR Mount Ida 28.99 341 P P 09 52 12.1 -2.1
baz=157,SNR=7.4
ITTB Itaituba 29.00 113 eP P 09 52 13.3 -1.2
U54A Nelsons Funny 29.06 1 P P 09 52 13.4 -1.5
baz=181
U55A TA2, Sparta 29.06 2 P P 09 52 13.8 -1.1
baz=183
U57A Blanch 29.10 5 P P 09 52 14.7 -0.4
baz=186
WVT Waverly 29.10 351 P P 09 52 13.9 -1.2
WVT pmax pmax
comp=Z,10.0nm,0.8s
WVT Waverly 29.10 351 P P 09 52 13.0 -2.1
baz=169
WVT Waverly 29.10 351 P P 09 52 13.9 -1.2
U58A Oxford 29.14 6 P P 09 52 14.6 -0.9
baz=188
W41B Gary Mavity, V 29.16 343 P P 09 52 14.1 -1.6
baz=160,SNR=10
U59A Littleton 29.19 8 P P 09 52 15.5 -0.4
baz=189
WHAR Wooly Hollow 29.29 343 IAmb IAmb 09 52 17.2
comp=Z,24nm,0.8s
U61A Possum Corner 29.37 10 P P 09 52 17.1 -0.4
baz=190
U60A Pendleton 29.39 9 P P 09 52 17.0 -0.8
baz=191
MALB Monte Alegre 29.48 107 eP P 09 52 17.5 -1.3
T53A Wise 29.52 360 P P 09 52 18.3 -0.7
baz=180
T54A Tazewell 29.61 1 P P 09 52 18.8 -0.9
baz=182
MDP Montagnes des 29.62 93 P P 09 52 19.1 -1.0
comp=Z,26nm,1.1s,baz=262,slow=8.3,SNR=3.0
MDP LR LR 10 04 47.5
comp=Z,2µm,18.4s,baz=278,slow=38
T56A Rocky Mt 29.64 4 P P 09 52 19.6 -0.4
baz=185
W39A Magazine 29.66 341 P P 09 52 18.8 -1.3
baz=157,SNR=12
W39A Magazine 29.66 341 IAmb IAmb 09 52 31.6
comp=Z,40nm,1.4s
T57A Hurt 29.67 5 P P 09 52 19.3 -0.9
baz=186
T58A Grand View Acr 29.69 6 P P 09 52 19.4 -0.9
baz=188
T55A Pulaski 29.69 3 P P 09 52 19.7 -0.7
baz=183
TXAR Lajitas Array 29.69 320 P P 09 52 19.5 -1.1
comp=Z,2.6nm,0.7s,baz=138,slow=8.7,SNR=29
TXAR PcP PcP 09 55 26.5 +1.6
comp=Z,1.2nm,0.9s,baz=128,slow=5.2,SNR=3.0
TXAR LR LR 10 07 01.5
comp=Z,777nm,19.7s,baz=0.0,slow=42
TXAR Lajitas Array 29.69 320 P P 09 52 21.4 +0.8
TXAR Lajitas Array 29.69 320 P P 09 52 21.4 +0.8
LCAR Lake Charles 29.72 346 IAmb IAmb 09 52 20.9
comp=Z,24nm,0.7s
BLA Blacksburg 29.80 3 P P 09 52 20.8 -0.6
baz=184
T59A Double "B" Far 29.83 8 P P 09 52 20.8 -0.8
baz=190
T47A Sharon Grove 29.84 352 IAmb IAmb 09 52 27.3
comp=Z,24nm,1.1s
VILB Vilhena 29.85 132 eP P 09 52 20.9 -1.1
ABTX Abilene, Hawle 29.86 330 P P 09 52 20.4 -1.6
baz=144,SNR=6.7
ABTX Abilene, Hawle 29.86 330 IAmb IAmb 09 52 27.2
comp=Z,23nm,1.4s
T60A Surry 30.11 9 P P 09 52 23.6 -0.5
baz=191
S53A Williamson 30.22 0 P P 09 52 23.7 -1.4
baz=180
PB08 IPOC Station P 30.23 155 IAmb IAmb 09 52 33.9
comp=Z,39nm,1.1s
S56A Natural Bridge 30.32 4 P P 09 52 25.4 -0.6
baz=186
S54A Dingess, Beckl 30.35 2 P P 09 52 25.1 -1.2
baz=182
S55A Lewisburg 30.35 3 P P 09 52 24.5 -1.7
baz=184
S58A Poland Farm, P 30.40 7 P P 09 52 25.8 -0.9
baz=188
U40A Yellville 30.44 343 P P 09 52 25.6 -1.5
baz=159,SNR=13
U40A Yellville 30.44 343 IAmb IAmb 09 52 27.7
comp=Z,17nm,0.8s
NPGB Novo Progresso 30.48 117 eP P 09 52 26.9 -0.8
S59A Mechanicsville 30.64 8 P P 09 52 28.6 -0.2
baz=190
S60A Water View 30.68 9 P P 09 52 27.7 -1.4
baz=191
R54A Victor 30.74 2 P P 09 52 29.0 -0.7
baz=183
R58B Mineral 30.77 7 P P 09 52 28.6 -1.2
baz=189
R53A Hurricane 30.87 1 P P 09 52 29.6 -1.1
baz=181
R55A Marlinton 30.88 3 P P 09 52 30.2 -0.7
baz=184
SIUC Southern Illin 30.88 349 IAmb IAmb 09 52 30.2
comp=Z,15nm,0.8s
R49A Shelbyville 30.93 356 IAmb IAmb 09 52 37.0
comp=Z,19nm,0.9s
WCI Wyandotte Cave 30.97 354 P P 09 52 30.8 -0.9
WCI pmax pmax
comp=Z,24nm,1.0s
WCI Wyandotte Cave 30.97 354 P P 09 52 30.4 -1.2
baz=172
WCI Wyandotte Cave 30.97 354 P P 09 52 30.8 -0.9
WCI IAmb IAmb 09 52 40.4
comp=Z,24nm,0.9s
TUL1 Leonard 30.99 339 P P 09 52 30.0 -1.9
baz=154
R57A Stanardsville 31.02 6 P P 09 52 31.4 -0.8
baz=187
CBN Corbin Frederi 31.07 8 P P 09 52 32.2 -0.3
baz=190
R58A Rapidan 31.08 7 P P 09 52 32.0 -0.7
baz=188
R59A King George, V 31.10 8 P P 09 52 30.4 -2.3
baz=190
WMOK Wichita Mounta 31.19 333 P P 09 52 31.8 -1.9
baz=147
R60A Leonardtown, M 31.24 9 P P 09 52 32.4 -1.7
baz=191
Q53A Leroy 31.40 1 P P 09 52 34.7 -0.8
baz=182
Q52A Bidwell 31.49 0 P P 09 52 35.2 -1.1
baz=180
R61A Willards 31.51 11 P P 09 52 35.4 -1.0
baz=193
Q54A Coxs Mills 31.55 2 P P 09 52 35.7 -1.0
baz=183
Q54A Coxs Mills 31.55 2 IAmb IAmb 09 52 42.5
comp=Z,23nm,1.4s
Q51A Peebles 31.57 359 P P 09 52 36.2 -0.8
baz=178
Q51A Peebles 31.57 359 IAmb IAmb 09 52 54.9
comp=Z,15nm,0.8s
Q55A Buckhannon 31.59 3 P P 09 52 36.9 -0.4
baz=184,SNR=7.5
CCM Cathedral Cave 31.63 347 P P 09 52 35.9 -1.6
CCM pmax pmax
comp=Z,18nm,0.7s
CCM Cathedral Cave 31.63 347 P P 09 52 35.6 -1.9
baz=163
CCM Cathedral Cave 31.63 347 P P 09 52 35.9 -1.6
CCM IAmb IAmb 09 52 37.9
comp=Z,18nm,0.7s
Q56A Snyder Ridge, 31.70 5 P P 09 52 36.8 -1.4
baz=186
Q56A Snyder Ridge, 31.70 5 IAmb IAmb 09 52 56.0
comp=Z,18nm,1.1s
Q57A Strasburg 31.77 6 P P 09 52 38.1 -0.6
baz=188
BLO Bloomington 31.93 354 IAmb IAmb 09 52 47.0
comp=Z,27nm,0.8s
Q44A Meyer Farm, Va 32.00 350 IAmb IAmb 09 52 42.6
comp=Z,16nm,0.8s
P51A Williamsport 32.02 359 P P 09 52 39.7 -1.2
baz=179
P53A Whipple 32.03 1 P P 09 52 40.3 -0.7
baz=182,SNR=6.0
P53A Whipple 32.03 1 IAmb IAmb 09 52 49.0
comp=Z,19nm,0.9s
CLDB Colider 32.03 124 eP P 09 52 39.2 -2.1
Q60A Greensboro 32.08 10 P P 09 52 39.7 -1.7
baz=192
R40A Maddies Statio 32.10 345 IAmb IAmb 09 52 46.1
comp=Z,24nm,1.5s
P48A Milroy 32.11 356 IAmb IAmb 09 52 57.6
comp=Z,20nm,1.0s
P55A Reedsville 32.12 4 P P 09 52 41.5 -0.4
baz=185
P49A Miami Univ. Ec 32.13 357 P P 09 52 40.3 -1.6
baz=176
T35A Sooner Cattle 32.15 338 IAmb IAmb 09 52 47.0
comp=Z,35nm,1.3s
P52A Corning 32.16 0 P P 09 52 41.1 -1.1
baz=180
P50A Jamestown 32.17 358 P P 09 52 40.5 -1.7
baz=177
P54A Burton 32.18 3 P P 09 52 41.2 -1.1
baz=184
P56A Dayton Farm, R 32.19 5 P P 09 52 42.2 -0.2
baz=187
P57A Homestead Farm 32.25 6 P P 09 52 42.5 -0.4
baz=188
P57A Homestead Farm 32.25 6 IAmb IAmb 09 53 01.4
comp=Z,19nm,1.2s
MCWV Mont Chateau 32.27 4 P P 09 52 42.4 -0.7
baz=185
PTLB Pontes e Lacer 32.27 135 eP P 09 52 43.1 -0.3
P58A Pank, Wackersv 32.34 7 P P 09 52 43.5 -0.2
baz=189
PB06 IPOC Station P 32.37 158 IAmb IAmb 09 52 56.7
comp=Z,26nm,1.0s
MNTX Cornudas Mount 32.39 322 P P 09 52 43.9 -0.4
baz=134,SNR=13
MNTX Cornudas Mount 32.39 322 IAmb IAmb 09 53 04.0
comp=Z,17nm,1.1s
P46A Rosedale 32.44 353 IAmb IAmb 09 52 51.2
comp=Z,21nm,0.8s
MSTX Muleshoe 32.53 327 P P 09 52 44.4 -1.3
baz=140
MSTX Muleshoe 32.53 327 IAmb IAmb 09 52 52.3
comp=Z,44nm,1.3s
LVC Limon Verde 32.54 156 P P 09 52 49.1 +3.0
LVC pmax pmax
comp=Z,70nm,1.4s
LVC Limon Verde 32.54 156 P P 09 52 49.1 +3.0
LVC Limon Verde 32.54 156 eP P 09 52 45.2 -0.8
P59A Jarrettsville 32.58 9 P P 09 52 45.6 -0.2
baz=191
O52A Adamsville 32.65 1 P P 09 52 45.4 -1.0
baz=181
O51A Pataskala 32.68 360 P P 09 52 45.2 -1.5
baz=180,SNR=8.5
AMTX Amarillo 32.68 330 P P 09 52 45.3 -1.5
baz=143
AMTX Amarillo 32.68 330 IAmb IAmb 09 52 51.9
comp=Z,19nm,1.3s
O50A Cable 32.70 358 P P 09 52 45.7 -1.1
baz=178
O54A Avella 32.76 3 P P 09 52 46.2 -1.2
baz=184
O54A Avella 32.76 3 IAmb IAmb 09 53 06.1

	comp=Z,15nm,0.9s								
ACSO	**Alum Creek Sta**	32.77	359	P	P	09 52 46.5	-1.0		
	baz=179								
ACSO	**Alum Creek Sta**	32.77	359	IAmb	IAmb	09 52 56.0			
	comp=Z,19nm,0.9s								
O53A	**New Philadelph**	32.80	2	P	P	09 52 46.8	-0.9		
	baz=182								
P43A	**Skaggs, Pawnee**	32.81	350	IAmb	IAmb	09 52 54.7			
	comp=Z,34nm,1.1s								
O55A	**Ligonier**	32.85	4	P	P	09 52 47.0	-1.3		
	baz=186								
O48A	**Farmland**	32.88	356	P	P	09 52 46.4	-2.0		
	baz=175,SNR=6.5								
P60A	**Greenville**	32.90	10	P	P	09 52 47.7	-0.9		
	baz=192								
P61A	**Hammonton**	32.91	11	P	P	09 52 48.2	-0.5		
	baz=194								
MVL	**Millersville**	32.97	8	IAmb	IAmb	09 53 07.4			
	comp=Z,26nm,1.2s								
O56A	**Blue Knob Stat**	32.97	5	P	P	09 52 48.3	-1.1		
	baz=187								
O56A	**Blue Knob Stat**	32.97	5	IAmb	IAmb	09 53 06.3			
	comp=Z,20nm,1.0s								
O57A	**Amberson**	33.01	7	P	P	09 52 48.8	-0.8		
	baz=189								
O58A	**Lewisberry**	33.02	8	P	P	09 52 47.4	-2.3		
	baz=190								
O44A	**Mansfield**	33.14	351	IAmb	IAmb	09 52 51.1			
	comp=Z,20nm,0.8s								
PAGS	**Pennsylvania G**	33.15	8	IAmb	IAmb	09 53 07.5			
	comp=Z,28nm,1.2s								
SFIN	**Lafayette**	33.18	353	P	P	09 52 48.4	-2.6		
	baz=171,SNR=6.1								
SFIN	**Lafayette**	33.18	353	IAmb	IAmb	09 52 52.1			
	comp=Z,25nm,1.2s								
P40A	**Paris**	33.22	346	IAmb	IAmb	09 52 55.9			
	comp=Z,17nm,0.9s								
O59A	**Robesonia**	33.30	9	P	P	09 52 50.9	-1.3		
	baz=191								
N50A	**Nevada**	33.31	359	P	P	09 52 50.9	-1.2		
	baz=179								
N52A	**McGinn's Farm,**	33.35	1	P	P	09 52 51.3	-1.2		
	baz=181								
N53A	**Lisbon**	33.36	2	P	P	09 52 51.9	-0.8		
	baz=183								
O61A	**Allentown**	33.37	11	P	P	09 52 51.2	-1.5		
	baz=194								
SSPA	**Standing Stone**	33.41	6	P	P	09 52 54.5	+1.5		
O60A	**Telford**	33.43	10	P	P	09 52 51.8	-1.5		
	baz=193								
N55A	**Marion Center**	33.45	5	P	P	09 52 52.3	-1.2		
	baz=186								
N51A	**Ashland**	33.45	360	P	P	09 52 51.4	-2.0		
	baz=180								
N48A	**Decatur**	33.47	356	P	P	09 52 52.0	-1.6		
	baz=175								
N54A	**Moraine State**	33.56	3	P	P	09 52 53.0	-1.4		
	baz=184								
N54A	**Moraine State**	33.56	3	IAmb	IAmb	09 52 59.9			
	comp=Z,33nm,1.5s								
N57A	**Milroy**	33.56	7	P	P	09 52 53.8	-0.6		
	baz=189								
N56A	**West Decatur**	33.64	6	P	P	09 52 55.0	-0.1		
	baz=187								
HDIL	**Hopedale**	33.66	350	P	P	09 52 52.9	-2.3		
	baz=168,SNR=9.0								
P38A	**Dawn**	33.69	344	IAmb	IAmb	09 53 00.9			
	comp=Z,25nm,1.3s								
M51A	**Elyria**	33.86	0	P	P	09 52 55.5	-1.5		
	baz=180								
M50A	**Fremont**	33.94	359	P	P	09 52 56.0	-1.7		
	baz=179								
N59A	**State Game Lan**	33.96	9	P	P	09 52 57.6	-0.3		
	baz=192								
M53A	**WI Miller and**	34.00	2	P	P	09 52 56.4	-1.8		
	baz=183								
M47A	**Cromwell**	34.01	356	P	P	09 52 56.1	-2.2		
	baz=174								
N60A	**Cedar Hill Far**	34.02	10	P	P	09 52 58.0	-0.3		
	baz=193								
M52A	**Chesterland**	34.08	1	P	P	09 52 57.1	-1.8		
	baz=182								
M54A	**Oil Creek Stat**	34.12	4	P	P	09 52 58.6	-0.7		
	baz=185								
KSU1	**Kansas State U**	34.14	340	P	P	09 52 58.0	-1.5		
	baz=154								
KSU1	**Kansas State U**	34.14	340	IAmb	IAmb	09 53 05.0			
	comp=Z,29nm,1.1s								
M55A	**Ridgway**	34.15	5	P	P	09 52 58.7	-0.8		
	baz=186								
M55A	**Ridgway**	34.15	5	IAmb	IAmb	09 53 16.0			
	comp=Z,27nm,1.2s								
M57A	**Sunshine Farm,**	34.19	7	P	P	09 52 59.5	-0.3		
	baz=189								
M57A	**Sunshine Farm,**	34.19	7	IAmb	IAmb	09 53 17.4			
	comp=Z,31nm,1.1s								
M56A	**Emporium**	34.22	6	P	P	09 52 59.4	-0.7		
	baz=187								
M56A	**Emporium**	34.22	6	IAmb	IAmb	09 53 16.4			
	comp=Z,26nm,1.1s								
M58A	**Price's Panora**	34.31	8	P	P	09 53 00.4	-0.5		
	baz=190								
PAL	**Palisades**	34.37	11	P	P	09 53 00.4	-1.0		
	baz=195								
N62A	**Caumsett State**	34.39	12	P	P	09 53 00.9	-0.7		
	baz=196								
121A	**Cookes Peak, D**	34.45	320	P	P	09 53 04.2	+1.7		
	baz=131,SNR=17								
121A	**Cookes Peak, D**	34.45	320	IAmb	IAmb	09 53 24.2			
	comp=Z,36nm,1.1s								
L48A	**N Adams**	34.52	357	P	P	09 53 02.8	+0.1		
	baz=176								
L53A	**Girard**	34.53	3	P	P	09 53 02.1	-0.7		
	baz=184								
M60A	**Port Jervis**	34.55	10	P	P	09 53 02.4	-0.6		
	baz=194								
L50A	**Kingsville**	34.57	359	P	P	09 53 01.0	-2.1		
	baz=179								
KSPA	**Keystone Colle**	34.59	9	IAmb	IAmb	09 53 20.1			
	comp=Z,33nm,1.2s								
GO02	**Mina Guanaco**	34.61	159	P	P	09 53 07.1	+3.1		
M61A	**Granite Spring**	34.69	11	P	P	09 53 04.2	0.0		
	baz=195								
319A	**Douglas**	34.70	317	P	P	09 53 07.6	+3.0		
ERPA	**Erie**	34.71	3	P	P	09 53 03.7	-0.7		
	baz=184								
L46A	**Eue Claire**	34.72	355	P	P	09 53 03.8	-0.6		
	baz=173								
AAM	**Ann Arbor**	34.85	358	P	P	09 53 04.3	-1.2		
	baz=178								
L54A	**Sinclairville**	34.87	4	P	P	09 53 04.6	-1.2		
	baz=185								
L57A	**Andrews Acres**	34.87	7	P	P	09 53 05.4	-0.4		
	baz=190								
L55A	**Hinsdale**	34.88	5	P	P	09 53 05.4	-0.5		
	baz=187								
L56A	**Greenwood**	34.92	6	P	P	09 53 06.0	-0.3		
	baz=188								
Y22D	**IRIS PASSCAL I**	34.96	323	P	P	09 53 06.0	-0.8		
	baz=134								
M62A	**Hamden**	35.00	12	P	P	09 53 06.6	-0.2		
	baz=196								
CBKS	**Cedar Bluff**	35.05	336	P	P	09 53 06.5	-0.9		
	baz=149								
L58A	**Harry Jones Me**	35.05	8	P	P	09 53 07.4	+0.1		
	baz=191								
L44A	**Lake County Fo**	35.05	353	P	P	09 53 07.5	+0.2		
	baz=170								
SALV	**Santo Antonio**	35.07	131	*e*P	P	09 53 07.1	-0.7		
WVNY	**West Valley, N**	35.09	5	IAmb	IAmb	09 53 24.0			
	comp=Z,27nm,1.2s								
PRPB	**Paraupebas**	35.13	112	*e*P	P	09 53 07.1	-1.3		
L42A	**Oliver, Polo**	35.13	351	IAmb	IAmb	09 53 14.0			
	comp=Z,20nm,0.9s								
M63A	**Gales Ferry**	35.15	14	P	P	09 53 07.8	-0.4		
	baz=198								
BINY	**Binghamton**	35.18	8	P	P	09 53 08.6	+0.2		
	baz=191								
K51A	**Iona Station**	35.26	1	P	P	09 53 10.2	+1.2		
	baz=182								
L60A	**Shokan**	35.26	11	P	P	09 53 06.8	-2.3		
	baz=194								
K47A	**Vermontville**	35.28	357	P	P	09 53 06.8	-2.4		
	baz=176								
K54A	**Basiliko Farm,**	35.29	5	P	P	09 53 07.8	-1.5		
	baz=186								
ANMO	**Albuquerque**	35.30	325	*de*P	P	09 53 10.5	+0.7		
ANMO				pmax	pmax				
	comp=Z,8.0nm,0.9s								
ANMO	**Albuquerque**	35.30	325	P	P	09 53 09.3	-0.5		
	baz=136								
ANMO	**Albuquerque**	35.30	325	P	P	09 53 10.6	+0.7		
ANMO				IAmb	IAmb	09 53 17.5			
	comp=Z,20nm,1.1s								
K50A	**Casco**	35.30	360	P	P	09 53 07.6	-1.8		
	baz=180								
L59A	**Walton**	35.32	9	P	P	09 53 08.4	-1.2		
	baz=193								
K49A	**Clarkson**	35.33	359	P	P	09 53 07.7	-1.9		
	baz=178								
K52A	**Tillsonburg**	35.34	2	P	P	09 53 08.6	-1.1		
	baz=183								
K46A	**Dorr**	35.34	356	P	P	09 53 07.2	-2.6		
	baz=174								
K48A	**Perry**	35.37	358	P	P	09 53 07.8	-2.2		
	baz=177								
N35A	**Tabor**	35.43	343	IAmb	IAmb	09 53 15.2			
	comp=Z,33nm,0.9s								
K55A	**Perry**	35.46	5	P	P	09 53 09.9	-0.9		
	baz=187								
L40A	**Anamosa**	35.47	349	IAmb	IAmb	09 53 15.7			
	comp=Z,34nm,0.9s								
M64A	**Tiverton**	35.49	14	P	P	09 53 09.7	-1.4		
	baz=199								
M66A	**Nantucket**	35.50	16	P	P	09 53 09.1	-2.0		
	baz=201								
K56A	**Middlesex**	35.51	6	P	P	09 53 09.5	-1.8		
	baz=189								
L61A	**Hillsdale 1, H**	35.59	11	P	P	09 53 10.0	-1.9		
	baz=195								
K57A	**Scipio Center**	35.63	7	P	P	09 53 11.8	-0.5		
	baz=190								
M65A	**Busby, Falmout**	35.65	15	P	P	09 53 11.9	-0.5		
	baz=200								
L63A	**North Scituate**	35.69	14	P	P	09 53 12.3	-0.5		
	baz=198								
SCIA	**State Center**	35.76	346	P	P	09 53 11.3	-2.0		
	baz=161								
SCIA	**State Center**	35.76	346	IAmb	IAmb	09 53 17.9			
	comp=Z,34nm,0.9s								
K58A	**Earlville**	35.78	8	P	P	09 53 12.9	-0.7		
	baz=191								
J52A	**Paris**	35.81	2	P	P	09 53 12.9	-0.9		
	baz=183								
T25A	**Trinidad**	35.82	329	P	P	09 53 14.2	0.0		
	baz=141,SNR=13								
J47A	**Sunmer**	35.83	357	P	P	09 53 11.7	-2.3		
	baz=176								
J48A	**Bridge Port**	35.85	358	P	P	09 53 12.1	-2.0		
	baz=178								
J49A	**Marlette**	35.89	359	P	P	09 53 12.6	-1.9		
	baz=179								
K60A	**Five Rivers En**	35.93	11	P	P	09 53 14.4	-0.5		
	baz=194								
J54A	**Appleton**	35.95	5	P	P	09 53 12.8	-2.1		
	baz=186								
L61B	**Northampton**	36.01	12	P	P	09 53 14.7	-0.8		
	baz=196								
J55A	**Hilton**	36.02	6	P	P	09 53 14.2	-1.3		
	baz=188								
JFWS	**Jewell Farm**	36.12	350	P	P	09 53 14.5	-2.0		
	baz=167								
JFWS	**Jewell Farm**	36.12	350	IAmb	IAmb	09 53 23.4			
	comp=Z,47nm,1.5s								
TUC	**Tucson**	36.28	317	P	P	09 53 14.8	-3.3		
TUC				pmax	pmax				
	comp=Z,69nm,1.5s								
TUC	**Tucson**	36.28	317	P	P	09 53 15.4	-2.7		
	baz=127								
TUC	**Tucson**	36.28	317	P	P	09 53 14.8	-3.3		
K62A	**Royalston**	36.31	13	IAmb	IAmb	09 53 30.4			
	comp=Z,29nm,1.2s								
I51A	**Listowel**	36.35	2	P	P	09 53 17.2	-1.3		
	baz=182								
K38A	**Parkersburg**	36.36	347	IAmb	IAmb	09 53 22.6			
	comp=Z,34nm,0.9s								
J57A	**Williamstown**	36.37	8	P	P	09 53 17.5	-1.1		
	baz=191								
J58A	**Remsen**	36.42	9	P	P	09 53 17.4	-1.6		
	baz=192								
J58A	**Remsen**	36.42	9	IAmb	IAmb	09 53 36.5			
	comp=Z,26nm,1.1s								
KSCO	**Kaye Shedlock'**	36.45	333	P	P	09 53 18.9	-0.6		
	baz=145								
I49A	**Point Hope**	36.47	359	P	P	09 53 17.7	-1.7		
	baz=179								
I46A	**Reed City**	36.57	356	P	P	09 53 19.7	-0.6		
	baz=175								
I47A	**Gladwin**	36.59	357	P	P	09 53 19.4	-1.1		
	baz=176								
J59A	**Piesco**	36.65	10	P	P	09 53 20.2	-0.9		
	baz=193								
BGNE	**Belgrade**	36.73	340	P	P	09 53 19.9	-1.8		
	baz=153								
I58A	**Old Forge**	36.79	9	P	P	09 53 21.7	-0.5		
	baz=192								
SDCO	**Great Sand Dun**	36.84	329	P	P	09 53 23.6	+0.5		
	baz=140,SNR=25								
SDCO	**Great Sand Dun**	36.84	329	IAmb	IAmb	09 53 31.6			
	comp=Z,55nm,1.4s								
I42A	**Draeger Farm,**	36.87	352	IAmb	IAmb	09 53 29.7			
	comp=Z,69nm,1.5s								
I57A	**Carthage**	36.94	8	P	P	09 53 22.4	-1.0		
	baz=191								
J62A	**Henniker**	36.94	13	P	P	09 53 22.8	-0.6		
	baz=198								
I55A	**Frankford**	36.97	6	P	P	09 53 22.7	-1.0		
	baz=188								
I59A	**Olmsteadville**	37.08	10	P	P	09 53 24.3	-0.4		
	baz=194								
X18A	**Snowflake**	37.12	321	IAmb	IAmb	09 53 34.1			
	comp=Z,46nm,1.4s								
J63A	**Strafford**	37.16	14	P	P	09 53 24.9	-0.4		
	baz=199								
I60A	**Shoreham**	37.23	11	P	P	09 53 25.5	-0.3		
	baz=195								
H48A	**Harrisville**	37.24	359	P	P	09 53 25.2	-0.8		
	baz=178								
H53A	**Bobcaygeon**	37.25	4	P	P	09 53 25.3	-0.8		
	baz=186								
H43A	**Windswept, Lux**	37.30	354	IAmb	IAmb	09 53 27.2			
	comp=Z,19nm,0.8s								
H55A	**Tweed**	37.35	6	P	P	09 53 27.3	+0.4		
	baz=188								
W18A	**Petrified Fore**	37.38	322	P	P	09 53 28.5	+0.9		
	baz=131								
GLMI	**Grayling**	37.40	357	P	P	09 53 25.4	-2.0		
	baz=176								
214A	**Organ Pipe Nat**	37.47	315	P	P	09 53 27.8	-0.4		
	baz=124,SNR=15								
H56A	**Elgin**	37.50	7	P	P	09 53 26.9	-1.2		
	baz=190								
I61A	**Oroboro, Fairl**	37.53	12	P	P	09 53 27.5	-1.0		
	baz=197								
S22A	**4UR Ranch, Cre**	37.54	327	P	P	09 53 29.3	+0.3		
	baz=138,SNR=24								
Q24A	**Divide**	37.60	330	P	P	09 53 28.9	-0.6		
	baz=141								
I62A	**Tamworth**	37.66	13	P	P	09 53 28.3	-1.3		
	baz=198								
G45A	**Suttons Bay**	37.68	356	P	P	09 53 26.9	-2.7		
	baz=175								
LONY	**Lake Ozonia**	37.76	9	P	P	09 53 29.6	-0.8		
	baz=193								
OGNE	**Ogdalla**	37.79	335	P	P	09 53 30.3	-0.5		
	baz=147								
G53A	**Haliburton**	37.79	4	P	P	09 53 30.3	-0.3		
	baz=186								
AC05	**El Transito**	37.80	163	P	P	09 53 34.3	+3.2		
I37A	**Lemond, Waseca**	37.80	347	IAmb	IAmb	09 53 34.5			
	comp=Z,24nm,1.1s								
LBNH	**Lisbon**	37.88	12	P	P	09 53 31.5	+0.1		
	baz=197								
H59A	**Cadyville**	37.93	10	P	P	09 53 31.2	-0.7		
	baz=194								
ARAG	**Araguaiana, MT**	37.94	127	*e*P	P	09 53 30.6	-1.7		
X16A	**Lo Mia Camp, P**	38.01	319	IAmb	IAmb	09 53 45.7			
	comp=Z,36nm,1.1s								
H60A	**Morristown**	38.03	11	P	P	09 53 32.8	0.0		
	baz=196								
MVCO	**Mesa Verde**	38.07	325	P	P	09 53 33.6	+0.2		
	baz=135,SNR=16								
MVCO	**Mesa Verde**	38.07	325	IAmb	IAmb	09 53 41.1			
	comp=Z,46nm,1.2s								
AQDB	**Aquidauana**	38.09	137	*e*P	P	09 53 32.7	-0.8		
G55A	**Calabogie**	38.10	6	P	P	09 53 33.0	-0.2		
	baz=189								
G54A	**Lake Saint Pet**	38.11	5	P	P	09 53 32.5	-0.8		
	baz=187								
I64A	**Boothbay**	38.11	15	P	P	09 53 34.0	+0.6		
	baz=201								
H61A	**Lyndonville**	38.16	12	P	P	09 53 34.1	+0.3		
	baz=197								
G57A	**Newington**	38.17	8	P	P	09 53 33.1	-0.8		
	baz=192								
SMTB	**Santa Maria do**	38.20	114	*e*P	P	09 53 34.5	-0.1		
F45A	**CMU Biological**	38.31	356	P	P	09 53 33.7	-1.3		
	baz=175								
ECSD	**EROS Data Cent**	38.35	343	P	P	09 53 33.3	-2.1		
	baz=157,SNR=10.0								
F48A	**Evansville**	38.36	360	P	P	09 53 33.9	-1.5		
	baz=180								
H62A	**Milan**	38.37	13	P	P	09 53 35.9	+0.3		
	baz=198								
F52A	**Sundridge**	38.41	3	P	P	09 53 35.8	-0.1		
	baz=185								
ISCO	**Idaho Springs**	38.47	331	P	P	09 53 35.8	-1.0		
	baz=141,SNR=14								
F51A	**Arnstein**	38.51	3	P	P	09 53 36.4	-0.3		
	baz=184								
113A	**Mohawk Valley,**	38.60	315	IAmb	IAmb	09 53 46.7			
	comp=Z,62nm,1.4s								
G60A	**Masonville**	38.62	11	P	P	09 53 39.4	+1.8		
	baz=196								
WUAZ	**Wupatki**	38.65	321	P	P	09 53 40.0	+1.7		
	baz=130,SNR=28								
ALGO	**Algonquin Park**	38.66	5	P	P	09 53 36.9	-1.1		
	baz=187								
F55A	**Otter Lake**	38.71	7	P	P	09 53 37.8	-0.6		
	baz=190								
Y14A	**Wickenburg**	38.75	317	IAmb	IAmb	09 53 52.4			
	comp=Z,35nm,1.2s								
SPMN	**Marine on St.**	38.83	348	P	P	09 53 36.2	-3.2		
	baz=163,SNR=9.2								
SPMN	**Marine on St.**	38.83	348	IAmb	IAmb	09 53 43.5			
	comp=Z,25nm,0.9s								
PV15	**Paradox Valley**	38.86	327	IAmb	IAmb	09 53 48.2			
	comp=Z,43nm,1.3s								
H64A	**Troy**	38.89	15	P	P	09 53 37.8	-2.1		
	baz=201								
PV02	**Paradox Valley**	38.91	326	IAmb	IAmb	09 53 50.3			
	comp=Z,32nm,1.2s								
PV13	**Radium Mtn., P**	38.92	326	IAmb	IAmb	09 53 50.8			
	comp=Z,25nm,1.0s								
G61A	**St-Isidore-de-**	38.96	12	P	P	09 53 41.6	+1.1		
	baz=197								
E50A	**Wahnapitae**	38.98	2	P	P	09 53 39.1	-1.5		
	baz=183								
C2SB	**Chapadao do Su**	38.99	132	*e*P	P	09 53 41.3	+0.2		
CYA	**Choya**	38.99	156	*i* P	P	09 53 43.5	+2.5		
E47A	**Iron Bridge**	38.99	359	P	P	09 53 39.4	-1.3		
	baz=179								
PV03	**Paradox Valley**	39.00	326	IAmb	IAmb	09 53 48.9			
	comp=Z,30nm,1.1s								
E48A	**Lockeyer**	39.01	0	P	P	09 53 39.6	-1.3		
	baz=180								
PV07	**Paradox Valley**	39.02	326	IAmb	IAmb	09 53 50.1			
	comp=Z,65nm,1.5s								
PV12	**Saucer Basin,**	39.02	326	IAmb	IAmb	09 53 49.3			
	comp=Z,45nm,1.1s								
PV18	**Skein Mesa, Pa**	39.03	326	IAmb	IAmb	09 54 01.5			
	comp=Z,30nm,1.0s								
PV11	**David Mesa, Pa**	39.05	326	IAmb	IAmb	09 53 49.2			
	comp=Z,41nm,1.2s								
PV16	**Nyswonger Mesa**	39.08	326	IAmb	IAmb	09 53 51.4			
	comp=Z,37nm,1.2s								
E53A	**Dumoine, Ponti**	39.12	5	P	P	09 53 42.9	+1.1		
	baz=187								
G62A	**West of Eustis**	39.12	13	P	P	09 53 42.4	+0.6		
	baz=199								
PV20	**West Nyswonger**	39.13	326	IAmb	IAmb	09 53 50.6			
	comp=Z,41nm,1.5s								
PV04	**Paradox Valley**	39.13	326	IAmb	IAmb	09 53 50.1			
	comp=Z,35nm,1.1s								
E51A	**G1948 Merrick**	39.14	3	P	P	09 53 41.4	-0.6		
	baz=184								
PV10	**Paradox Valley**	39.20	326	IAmb	IAmb	09 53 49.9			
	comp=Z,36nm,1.2s								
E54A	**Lac Daplat, Po**	39.22	6	P	P	09 53 41.8	-0.8		
	baz=188								
G63A	**Kingsbury**	39.24	14	P	P	09 53 43.1	+0.3		
	baz=200								
D46A	**Sault St. Mari**	39.45	358	P	P	09 53 45.6	+1.1		
	baz=177								
PKME	**Peaks-Kenny Pk**	39.46	15	P	P	09 53 45.2	+0.6		
	baz=201								
PKME	**Peaks-Kenny Pk**	39.46	15	IAmb	IAmb	09 54 02.8			
	comp=Z,31nm,1.1s								
N23A	**Red Feather La**	39.48	332	P	P	09 53 44.8	-0.5		
	baz=142,SNR=6.5								
ROSB	**Rosrio**	39.48	104	*e*P	P	09 53 44.8	-0.5		
F60A	**Warwick**	39.53	11	P	P	09 53 44.9	-0.4		
	baz=196								
H66A	**Whiting**	39.55	17	P	P	09 53 43.3	-2.1		
	baz=204								
CO03	**El Pedregal**	39.56	164	P	P	09 53 48.0	+2.2		
CO03				IAmb	IAmb	09 53 58.9			
	comp=Z,58nm,1.1s								
E56A	**St. Veronique**	39.58	8	P	P	09 53 45.0	-0.6		
	baz=191								
E57A	**Chemin Saint G**	39.58	9	P	P	09 53 44.5	-1.1		
	baz=193								
G64A	**Maxfield**	39.58	15	P	P	09 53 42.4	-3.3		
	baz=201								
D47A	**Chapleau**	39.59	359	P	P	09 53 43.7	-2.1		
	baz=179								
Y12C	**Blythe**	39.67	316	P	P	09 53 48.6	+2.0		
	baz=124,SNR=13								
Y12C	**Blythe**	39.67	316	P	P	09 53 49.9	+3.3		
Y12C				IAmb	IAmb	09 53 56.5			
	comp=Z,71nm,1.3s								
E58A	**La Victoria**	39.68	10	P	P	09 53 45.4	-1.1		
	baz=194								
D51A	**Lot 18 Range I**	39.70	3	P	P	09 53 45.6	-1.1		
	baz=185								
SUSD	**Miller**	39.70	341	P	P	09 53 44.3	-2.5		
	baz=154								
SUSD	**Miller**	39.70	341	IAmb	IAmb	09 53 51.5			
	comp=Z,69nm,1.4s								
D48A	**Paudash Townsh**	39.70	1	P	P	09 53 44.7	-2.0		
	baz=181								
PDMC	**Parker Dam,Lak**	39.73	317	P	P	09 53 48.4	+1.4		
	baz=125,SNR=19								
F61A	**St Evariste**	39.73	12	P	P	09 53 46.3	-0.6		
	baz=198								
D50A	**G1974 Best Tow**	39.75	3	P	P	09 53 45.5	-1.6		
	baz=184								
U15A	**North Rim**	39.80	321	IAmb	IAmb	09 53 57.8			
	comp=Z,94nm,1.5s							

IRM	Iron Mountain	40.33	316		P		P	09 53 54.0	+1.8		
	baz=124,SNR=27										
D58A	Chemin du LacG	40.45	10		P		P	09 53 53.5	+0.6		
	baz=195										
SRU	San Rafael Swe	40.54	326		P		P	09 53 54.8	+0.8		
SRU					pmax		pmax				
	comp=Z,22nm,0.9s										
SRU	San Rafael Swe	40.54	326		P		P	09 53 54.8	+0.8		
MONP2	Monument Peak	40.55	314		P		P	09 53 54.6	+0.4		
	baz=121										
D59A	Saint-Raymond	40.55	11		P		P	09 53 54.8	+1.1		
	baz=196										
D60A	Saint Jean D'O	40.65	12		P		P	09 53 53.6	-0.8		
	baz=198										
H03N2	Juan Fernandez	40.67	176		T		T	10 37 48.3			
	baz=354,slow=76,SNR=4.6										
H03N1	Juan Fernandez	40.68	176		T		T	10 37 39.2			
	baz=354,slow=76,SNR=6.3										
H03N3	Juan Fernandez	40.69	176		T		T	10 37 49.0			
	baz=354,slow=76,SNR=4.6										
RWWY	Rawlins	40.70	331		IAmb		IAmb	09 54 08.4			
	comp=Z,36nm,1.2s										
E63A	Oxbow	40.76	15		P		P	09 53 56.0	+0.6		
	baz=201										
MTPU	Mount Pierson	40.78	323		P		P	09 53 58.0	+1.8		
BELC	Belle Mtn. Jos	40.83	315		P		P	09 53 58.2	+1.8		
	baz=123,SNR=15										
RTLS	Leoncito	40.86	163	*i*	P		P	09 53 58.8	+2.0		
E64A	Bridgewater	40.91	15		P		P	09 53 57.0	+0.3		
	baz=202										
XPFO	Pion Flat	40.95	314		P		P	09 53 59.6	+2.3		
PFO	Pinyon Flats O	40.95	314	*eP*			P	09 53 58.7	+1.3		
PFO					pmax		pmax				
	comp=Z,33nm,2.7s										
PFO	Pinyon Flats O	40.95	314		P		P	09 53 58.4	+1.0		
	baz=122										
PFO	Pinyon Flats O	40.95	314		P		P	09 53 59.6	+2.2		
BDFB	Brasilia	40.97	124		P		P	09 53 56.2	-1.5		
	comp=Z,3.9nm,0.6s,baz=275,slow=9.0,SNR=5.9										
BDFB	Brasilia	40.97	124		P		P	09 53 56.6	-1.1		
BDFB					pmax		pmax				
	comp=Z,30nm,1.1s										
BDFB	Brasilia	40.97	124		P		P	09 53 56.6	-1.1		
BDFB					IAmb		IAmb	09 54 07.8			
	comp=Z,30nm,1.1s										
CFA	Coronel Fontan	41.00	161		P		P	09 53 58.2	+0.6		
	comp=Z,7.2nm,0.8s,baz=333,slow=8.1,SNR=12										
GMRC	Granite Mounta	41.03	316		P		P	09 53 59.8	+1.7		
	baz=124,SNR=20										
109C	Camp Elliot, M	41.04	313		P		P	09 53 59.9	+1.9		
	baz=121										
109C	Camp Elliot, M	41.04	313		IAmb		IAmb	09 54 07.9			
	comp=Z,50nm,1.3s										
D61A	St Aubert, Com	41.08	13		P		P	09 53 57.9	-0.1		
	baz=198										
PQI	Presque Isle	41.09	15		P		P	09 53 58.8	+0.7		
PQI					IAmb		IAmb	09 54 09.6			
	comp=Z,34nm,1.4s										
K22A	Casper	41.13	333		P		P	09 53 58.5	-0.3		
	baz=142,SNR=8.7										
K22A	Casper	41.13	333		P		P	09 53 58.4	-0.3		
K22A					IAmb		IAmb	09 54 11.4			
	comp=Z,36nm,1.5s										
RTCV	Cerro Valdivia	41.15	162	*i*	P		P	09 54 00.2	+1.3		
CCUT	Cedar City	41.18	322		P		P	09 54 01.3	+1.9		
EYMN	Ely	41.22	351		P		P	09 53 56.6	-2.6		
	baz=166										
EYMN	Ely	41.22	351		P		P	09 53 55.9	-3.3		
D62A	Allapoint, All	41.22	14		P		P	09 53 59.8	+0.6		
	baz=200										
D62A	Allapoint, All	41.22	14		P		P	09 53 59.6	+0.4		
D62A					IAmb		IAmb	09 54 09.1			
	comp=Z,30nm,1.3s										
RSSD	Black Hills	41.25	336		P		P	09 53 59.5	-0.4		
RSSD					pmax		pmax				
	comp=Z,26nm,1.4s										
RSSD	Black Hills	41.25	336		P		P	09 53 59.9	0.0		
	baz=146										
RSSD	Black Hills	41.25	336		P		P	09 53 59.5	-0.4		
LMN	Caledonia Moun	41.27	19		P		P	09 53 59.6	0.0		
LMN					IAmb		IAmb	09 54 06.2			
	comp=Z,35nm,1.0s										
ITRB	Iturama	41.40	131	*eP*			P	09 54 00.5	-0.7		
D63A	Stockholm	41.41	15		P		P	09 54 01.3	+0.6		
	baz=202										
VA03	San Esteban	41.42	165		P		P	09 54 02.4	+1.2		
MURC	Murrieta	41.47	314		P		P	09 54 01.2	-0.3		
	baz=121										
ROC1	El Roble	41.51	166		P		P	09 54 02.7	+0.6		
HEC	Hector,Ludlow	41.52	316		P		P	09 54 03.9	+1.9		
	baz=123,SNR=10										
SHPR	Sheep Range	41.68	319		P		P	09 54 05.6	+2.2		
ASAL	Salagasta	41.74	163	*i*	P		P	09 54 06.1	+2.4		
PEL	Peldehue	41.75	165		P		P	09 54 03.9	+0.1		
PEL					pmax		pmax				
	comp=Z,74nm,1.3s										
PEL	Peldehue	41.75	165		P		P	09 54 03.9	+0.1		
PEL					IAmb		IAmb	09 54 15.1			
	comp=Z,74nm,1.3s										
LSQQ	Lebel-sur-Quev	41.84	5		P		P	09 54 02.9	-1.3		
	baz=188										
PCMB	Pacaembu	41.93	134	*eP*			P	09 54 04.7	-0.7		
ARCO	CERRO ARCO	41.94	163	*i*	P		P	09 54 09.5	+4.0		
ACAN	Cantantal	41.96	161	*i*	P		P	09 53 59.0	-6.5		
MT05	Renca	41.97	165		P		P	09 54 07.0	+1.3		
NLU	North Lily Min	41.99	325		P		P	09 54 06.1	+0.2		
B35A	Bob, Littlefor	42.01	349		P		P	09 54 02.9	-2.9		
GBN	Guysborough	42.02	22		P		P	09 54 06.2	+0.5		
GBN					IAmb		IAmb	09 54 12.5			
	comp=Z,34nm,1.1s										
IPMB	Ipameri, GO	42.06	127	*eP*			P	09 54 05.5	-1.1		
SHOC	Shoshone, Teco	42.07	317		P		P	09 54 08.4	+2.0		
	baz=124,SNR=25										
JLU	Jordanelle	42.09	326		P		P	09 54 07.3	+0.5		
GSC	Goldstone, Bar	42.10	316		P		P	09 54 06.4	-0.3		
GSC					pmax		pmax				
	comp=Z,111nm,1.5s										
GSC	Goldstone, Bar	42.10	316		P		P	09 54 08.2	+1.4		
	baz=123,SNR=27										
GSC	Goldstone, Bar	42.10	316		P		P	09 54 06.4	-0.3		
PSUT	Pine Spring	42.10	322		P		P	09 54 06.7	-0.1		
BFSC	Mount Baldy Ra	42.13	314		P		P	09 54 08.8	+1.8		
	baz=121										
SCI2	San Clemente I	42.13	312		P		P	09 54 08.1	+1.1		
	baz=119										
BATG	Bathurst New B	42.18	17		P		P	09 54 07.5	+0.5		
BATG					IAmb		IAmb	09 54 25.7			
	comp=Z,30nm,1.2s										
AAGR	Agrelo	42.20	163	*i*	P		P	09 54 12.2	+4.7		
CIS	Catalina Islan	42.24	313		P		P	09 54 09.3	+1.4		
	baz=120										
CTU	Camp Tracy	42.31	326		P		P	09 54 08.3	-0.2		
AGMN	Agassiz Nation	42.41	347		P		P	09 54 06.9	-2.1		
	baz=160,SNR=8.6										
AGMN	Agassiz Nation	42.41	347		IAmb		IAmb	09 54 13.0			
	comp=Z,25nm,1.1s										
TCUT	Toone Canyon	42.42	327		P		P	09 54 08.9	-0.6		
NBPS	Pedro II - PI	42.46	105	*eP*			P	09 54 10.1	+0.2		
PASC	Pasadena Art C	42.47	314		P		P	09 54 10.1	+0.5		
MATQ	Matagami	42.48	5		P		P	09 54 07.4	-2.0		
	baz=187										
DUG	Dugway, Tooele	42.57	325		P		P	09 54 10.8	+0.2		
DUG					pmax		pmax				
	comp=Z,5.0nm,0.8s										
DUG	Dugway, Tooele	42.57	325		P		P	09 54 10.9	+0.3		
	baz=132										
DUG	Dugway, Tooele	42.57	325		P		P	09 54 10.8	+0.2		
MRA	San Martin	42.59	159	*i*	P		P	09 54 11.6	+0.8		
TPNV	Topopah Spring	42.65	319		P		P	09 54 13.2	+1.9		
	baz=125,SNR=28										
PDAR	Pinedale Array	42.66	330		P		P	09 54 10.8	-0.6		
	comp=Z,2.2nm,0.6s,baz=127,slow=8.3,SNR=18										
PDAR					PcP		PcP	09 56 03.6	+0.3		
	comp=Z,0.1nm,0.3s,baz=143,slow=6.6,SNR=2.5										
PDAR	Pinedale Array	42.66	330		P		P	09 54 10.2	-1.2		
BW06	Boulder Array	42.66	330		P		P	09 54 10.8	-0.5		
	baz=138,SNR=22										
BW06	Boulder Array	42.66	330		P		P	09 54 10.6	-0.8		
EDW2	Edwards Air Fo	42.70	315		P		P	09 54 13.2	+1.7		
	baz=122,SNR=12										
FURC	Furnace Creek,	42.78	318		P		P	09 54 14.1	+2.0		
	baz=124,SNR=47										
LRMC	Laurel Mtn Rad	42.80	316		P		P	09 54 14.2	+1.7		
	baz=122,SNR=50										
HWUT	Hardware Ranch	42.85	327		IAmb		IAmb	09 54 25.3			
	comp=Z,18nm,0.8s										
MDND	Maddock	42.96	343		P		P	09 54 11.9	-1.6		
	baz=154,SNR=8.9										
CHGQ	Chibougamau	42.97	8		P		P	09 54 13.1	-0.4		
	baz=192										
MPMC	Manual Prospec	42.98	317		P		P	09 54 15.9	+1.9		
	baz=123,SNR=41										
R11A	Troy Canyon, C	43.05	321		P		P	09 54 16.0	+1.4		
	baz=127,SNR=60										
R11A	Troy Canyon, C	43.05	321		IAmb		IAmb	09 54 24.0			
	comp=Z,79nm,1.5s										
OSI	Osito Audit: C	43.07	314		P		P	09 54 14.8	+0.1		
	baz=121										
RPN	Rapa Nui	43.08	216		LR		LR	10 07 27.0			
	comp=Z,1μm,21.1s,baz=42,slow=30										
GO05	Huala	43.25	167		P		P	09 54 17.3	+1.4		
BO02	Sierra Bellavi	43.30	166		P		P	09 54 18.4	+2.0		
BO02					IAmb		IAmb	09 54 34.2			
	comp=Z,29nm,1.1s										
ARVC	Arvin	43.41	315		P		P	09 54 19.5	+2.2		
	baz=121										
GRAC	Grapevine Rang	43.41	318		P		P	09 54 19.4	+2.1		
	baz=124,SNR=40										
PTGB	Pitanga	43.43	138	*eP*			P	09 54 17.2	-0.4		
AHID	Auburn Hatcher	43.43	329		P		P	09 54 17.2	-0.3		
AHID					IAmb		IAmb	09 54 24.5			
	comp=Z,26nm,1.4s										
ISA	Isabella, Lake	43.44	316		P		P	09 54 19.7	+2.1		
ISA					pmax		pmax				
	comp=Z,67nm,1.5s										
ISA	Isabella, Lake	43.44	316		P		P	09 54 18.9	+1.3		
	baz=122,SNR=23										
ISA	Isabella, Lake	43.44	316		P		P	09 54 19.7	+2.1		
ISA					IAmb		IAmb	09 54 29.2			
	comp=Z,67nm,1.4s										
CWC	Cottonwood Cre	43.59	317		P		P	09 54 21.1	+2.3		
	baz=123										
BB19B	Bebedouro	43.59	131	*eP*			P	09 54 18.0	-1.0		
HVU	Hansel Valley	43.62	327		P		P	09 54 19.7	+0.6		
HVU					pmax		pmax				
	comp=Z,20nm,1.1s										
HVU	Hansel Valley	43.62	327		P		P	09 54 19.7	+0.6		
SBC	Santa Barbara	43.70	313		P		P	09 54 17.6	-2.0		
	baz=120										
REDW	Red Top Meadow	43.74	330		IAmb		IAmb	09 54 28.0			
	comp=Z,23nm,0.9s										
SNOW	Snow King Moun	43.76	330		IAmb		IAmb	09 54 38.1			
	comp=Z,24nm,1.1s										
JANB	Januaria	43.79	121	*eP*			P	09 54 19.0	-1.6		
VES	Vestal, Richgr	43.96	316		P		P	09 54 22.9	+1.2		
	baz=121										
PKM	Mcpherson Peak	43.99	314		P		P	09 54 22.3	+0.1		
	baz=120,SNR=11										
TIN	Tinemaha, Big	44.02	318		P		P	09 54 24.2	+1.8		
	baz=123										
FLWY	Flagg Ranch	44.19	331		IAmb		IAmb	09 54 30.2			
	comp=Z,18nm,1.1s										
FRTB	Fartura	44.24	134	*eP*			P	09 54 22.9	-1.2		
LAO	LASA Array	44.24	336		P		P	09 54 23.1	-0.8		
	baz=145,SNR=8.9										
LAO	LASA Array	44.24	336		IAmb		IAmb	09 54 29.5			
	comp=Z,27nm,1.2s										
ULM	Lac du Bonnet	44.25	348		P		P	09 54 20.6	-3.2		
	comp=Z,19nm,0.7s,baz=158,slow=8.1,SNR=22										
ULM					LR		LR	10 15 26.6			
	comp=Z,570nm,18.2s,baz=168,slow=40										
ULM	Lac du Bonnet	44.25	348		IAmb		IAmb	09 54 27.9			
	comp=Z,35nm,0.8s										
RLMT	Red Lodge	44.30	333		P		P	09 54 23.9	-0.6		
	baz=140,SNR=13										
SMMC	Simmler	44.33	314		P		P	09 54 26.5	+1.8		
	baz=120,SNR=8.1										
ELK	Elko	44.33	324		IAmb		IAmb	09 54 35.5			
	comp=Z,42nm,1.3s										
ITQB	Itaqui	44.34	147	*eP*			P	09 54 24.7	-0.1		
H17A	Grant Village	44.36	331		P		P	09 54 24.7	-0.4		
	baz=138										
H17A	Grant Village	44.36	331		IAmb		IAmb	09 54 37.7			
	comp=Z,26nm,1.5s										
YPP	Pitchstone Pla	44.38	331		P		P	09 54 25.3	0.0		
LKWY	Lake	44.40	331		P		P	09 54 24.0	-1.5		
LKWY					pmax		pmax				
	comp=Z,10.0nm,1.1s										
LKWY	Lake	44.40	331		P		P	09 54 24.0	-1.5		
VOG	Valley Oaks Go	44.41	316		P		P	09 54 25.6	+0.3		
	baz=122										
YMP	Mirror Lake Pl	44.42	332		P		P	09 54 25.6	0.0		
YNE	Yellowstone No	44.55	332		P		P	09 54 25.6	-1.0		
NBPB	Pedra_Branca-C	44.56	106	*eP*			P	09 54 26.9	0.0		
PAGB	Antelope Grade	44.72	315		P		P	09 54 28.4	+0.6		
PAGB					IAmb		IAmb	09 54 39.1			
	comp=Z,24nm,0.9s										
MLAC	Mammoth, Mammo	44.74	318		P		P	09 54 29.4	+1.2		
	baz=123,SNR=5.5										
YMR	Madison River	44.75	331		P		P	09 54 28.2	+0.1		
YHH	Holmes Hill	44.78	331		P		P	09 54 28.4	-0.2		
BI03	Tigo	44.80	169		P		P	09 54 28.5	+0.2		
OMMB	Old Mammoth Mi	44.84	318		IAmb		IAmb	09 54 46.1			
	comp=Z,38nm,1.4s										
YHB	Horse Butte	44.92	331		P		P	09 54 29.2	-0.3		
BI02	San Fabin de	44.98	167		P		P	09 54 31.2	+1.3		
DGMT	Dagmar	44.98	340		P		P	09 54 28.8	-0.9		
	baz=149,SNR=8.1										
DGMT	Dar	44.98	340		IAmb		IAmb	09 54 35.4			
	comp=Z,27nm,0.9s										
YHL	Hebgen Lake	44.99	331		P		P	09 54 30.0	-0.1		
KVN	Kaiserville	45.05	320		IAmb		IAmb	09 54 44.8			
	comp=Z,20nm,1.2s										
QLMT	Earthquake Lak	45.09	331		P		P	09 54 31.8	+0.9		
ITAB	Concordia	45.14	141	*eP*			P	09 54 31.0	-0.2		
RCLB	Rio Claro- Sao	45.14	132	*eP*			P	09 54 30.7	-0.6		
PMPB	Monarch Peak	45.34	315		P		P	09 54 34.4	+1.5		
NBCL	Cascavel-CE	45.45	103	*eP*			P	09 54 34.2	+0.3		
NBPN	Ponto Novo - B	45.68	113	*eP*			P	09 54 34.7	-1.0		
BOZ	Bozeman (W)	45.75	331		P		P	09 54 36.1	+0.1		
BOZ					pmax		pmax				
	comp=Z,11nm,1.0s										
BOZ	Bozeman (W)	45.75	331		P		P	09 54 36.1	+0.1		
NBMA	Muriti-CE	45.86	108	*eP*			P	09 54 37.1	-0.1		
VAO	Valinhos	45.91	132	*eP*			P	09 54 36.9	-0.6		
SPB	Sao Paulo	45.92	133	*eP*			P	09 54 36.4	-1.0		
CMB	Columbia Colle	45.99	317		P		P	09 54 38.7	+0.8		
CMB					pmax		pmax				
	comp=Z,15nm,1.1s										
CMB	Columbia Colle	45.99	317		P		P	09 54 38.7	+0.8		
CMB					IAmb		IAmb	09 54 53.4			
	comp=Z,15nm,1.1s										
PNTR	Pine Nut	46.04	319		P		P	09 54 40.1	+1.6		
PNTR					IAmb		IAmb	09 54 44.1			
	comp=Z,22nm,0.8s										
DLMT	Dillon	46.05	330		P		P	09 54 38.5	+0.2		
DLMT					IAmb		IAmb	09 54 53.3			
	comp=Z,15nm,1.2s										
SAO	San Andreas Ge	46.07	315		P		P	09 54 39.4	+0.9		
SAO					pmax		pmax				
	comp=Z,12nm,0.9s										
SAO	San Andreas Ge	46.07	315		P		P	09 54 39.4	+0.9		
SAO					IAmb		IAmb	09 54 46.7			
	comp=Z,12nm,0.8s										
BSCB	Bom Sucesso	46.42	128	*eP*			P	09 54 40.9	-0.6		
PET01	Itanhaem-SP	46.46	134	*eP*			P	09 54 41.6	-0.1		
CPSB	Cacapava Do Su	46.66	145	*eP*			P	09 54 42.9	-0.2		
EGMT	Eagleton	46.75	335		P		P	09 54 43.4	-0.4		
	baz=141,SNR=6.0										
EGMT	Eagleton	46.75	335		IAmb		IAmb	09 54 50.7			
	comp=Z,16nm,1.1s										
AFDM	Forest Hills D	46.86	318		IAmb		IAmb	09 54 53.3			
	comp=Z,20nm,1.5s										
LC01	Cunco	47.01	169		P		P	09 54 46.5	+0.8		
PARB	Paraibuna	47.10	131	*eP*			P	09 54 45.6	-1.2		
GDU01	Guandu, BA	47.34	116	*eP*			P	09 54 48.5	-0.3		
CNLB	Canela	47.40	142	*eP*			P	09 54 48.6	-0.4		
ORV	Oroville	47.53	319		P		P	09 54 52.2	+2.3		
ORV					pmax		pmax				
	comp=Z,152nm,1.5s										
ORV	Oroville	47.53	319		P		P	09 54 52.2	+2.3		
PLTB	Pedras Altas	47.60	146	*eP*			P	09 54 49.6	-0.9		
MCCM	Marconi Confer	47.74	316		P		P	09 54 51.1	-0.4		
MSO	Missoula	47.75	331		P		P	09 54 51.1	-0.5		
	baz=136,SNR=7.0										
MSO	Missoula	47.75	331		P		P	09 54 51.2	-0.4		
ESAR	Angra dos Reis	47.80	130	*eP*			P	09 54 51.8	-0.4		
J08A	Circle Bar Ran	47.84	325		IAmb		IAmb	09 55 02.9			
	comp=Z,31nm,1.4s										
NBLA	Lagarto - SE	47.95	112	*eP*			P	09 54 53.1	-0.3		
NBIT	Itapeh - BA	47.96	118	*eP*			P	09 54 53.1	-0.4		
GDXM	Geysers	48.01	317		P		P	09 54 56.6	+2.9		
GDXM					IAmb		IAmb	09 55 15.1			
	comp=Z,19nm,1.4s										
MAN01	Angra dos Reis	48.08	130	*eP*			P	09 54 54.0	-0.4		
O03E	Paynes Creek	48.12	319		P		P	09 54 54.2	-0.3		
	baz=122,SNR=30										
BMO	Blue Mountains	48.13	327		IAmb		IAmb	09 55 02.2			
	comp=Z,12nm,1.1s										
SJMB	Sao Joao De Ma	48.14	123	*eP*			P	09 54 53.7	-1.2		
BSFB	Barra de Sao F	48.48	123	*eP*			P	09 54 57.7	+0.1		
JTMT	Jette	48.57	332		P		P	09 54 57.3	-0.7		
O02D	Mt. Diablo Mer	48.70	319		P		P	09 54 58.6	-0.5		
	baz=121,SNR=13										
WDC	Whiskeytown Da	48.75	319		P		P	09 54 58.1	-1.2		
WDC					pmax		pmax				
	comp=Z,14nm,1.2s										
WDC	Whiskeytown Da	48.75	319		P		P	09 54 58.1	-1.2		
WDC					IAmb		IAmb	09 55 04.8			
	comp=Z,14nm,1.2s										
F10A	Beach Ranch, E	48.82	328		P		P	09 54 59.6	-0.3		
F10A					IAmb		IAmb	09 55 13.5			
	comp=Z,8.7nm,0.8s										
I07A	Izee	48.88	325		P		P	09 55 00.2	-0.2		
I07A					IAmb		IAmb	09 55 08.7			
	comp=Z,22nm,1.1s										
K05A	Summer Lake	48.90	322		P		P	09 55 01.3	+0.6		
NBAN	Anadia - AL	48.91	110	*eP*			P	09 54 59.5	-1.4		
M04C	Macdoel	48.95	321		P		P	09 55 01.4	+0.4		
	baz=123,SNR=38										
KCPM	Cahto Peak	48.98	318		P		P	09 55 03.3	+2.0		
SCHQ	Schefferville	48.98	12		P		P	09 54 58.9	-1.9		
	comp=Z,3.4nm,0.5s,baz=170,slow=4.7,SNR=1.9										
PLCA	Paso Flores	49.05	168		P		P	09 55 01.4	-0.2		
	comp=Z,7.6nm,0.8s,baz=343,slow=8.9,SNR=15										
PLCA					PcP		PcP	09 56 25.8	+0.4		
	comp=Z,3.0nm,0.8s,baz=40,slow=12,SNR=1.1										
PLCA					LR		LR	10 11 53.4			
	comp=Z,523nm,20.0s,baz=350,slow=31										
PLCA	Paso Flores	49.05	168		P		P	09 55 02.9	+1.3		
PLCA					pmax		pmax				
	comp=Z,33nm,1.0s										
PLCA	Paso Flores	49.05	168		P		P	09 55 02.9	+1.3		
PLCA	Paso Flores	49.05	168	*eP*			P	09 55 02.7	+1.1		
N02D	Trinity Center	49.06	320		P		P	09 55 01.3	-0.5		
	baz=122										
RIB01	Linhares ES	49.09	123	*eP*			P	09 55 01.7	-0.5		
G08A	Pilot Rock	49.31	326		P		P	09 55 03.9	+0.2		
G08A					IAmb		IAmb	09 55 11.6			
	comp=Z,17nm,1.1s										
KMRM	Mail Ridge	49.33	318		P		P	09 55 04.9	+1.1		
K04D	Chiloquin, OR	49.36	322		P		P	09 55 04.1	0.0		
	baz=124										
M02C	Callahan	49.38	320		P		P	09 55 04.0	-0.3		
	baz=122										
J05D	Fort Rock, OR	49.42	323		P		P	09 55 04.8	+0.2		
	baz=125,SNR=12										
YBH	Yreka Blue Hor	49.47	320		IAmb		IAmb	09 55 12.2			
	comp=Z,11nm,0.8s										
L04D	Klamath Falls	49.48	321		P		P	09 55 05.4	+0.4		
	baz=123,SNR=18										
PINE	Pine Mountain	49.54	324		IAmb		IAmb	09 55 10.2			
	comp=Z,20nm,0.8s										
FFC	Flin Flon	49.82	345		P		P	09 55 05.6	-1.6		
FFC					pmax		pmax				
	comp=Z,17nm,1.2s										
FFC	Flin Flon	49.82	345		P		P	09 55 05.6	-1.6		
FFC					IAmb		IAmb	09 55 12.4			
	comp=Z,17nm,1.1s										
JCC	Jacoby Creek,	49.84	319		P		P	09 55 06.7	-0.9		
J04D	Umpqua Nationa	49.92	322		P		P	09 55 09.1	+0.6		
	baz=124,SNR=32										
I05D	Terrebonne, OR	50.09	324		P		P	09 55 09.7	+0.1		
	baz=126,SNR=13										
KRMB	Red Mountain	50

BESE	**Bessie Mountai**	**64.89**	**333**	P	**P**	**09 56 53.1**	**-0.6**
BESE				lAmb	lAmb	09 57 00.8	
	comp=Z,21nm,1.1s						
SKAG	**Skagway**	**65.54**	**333**	P	**P**	**09 56 58.0**	**+0.2**
SKAG				lAmb	lAmb	09 57 04.8	
	comp=Z,12nm,1.0s						
WHY	**Whitehorse**	**65.95**	**335**	P	**P**	**09 57 00.3**	**-0.2**
HYT	**Haines Junctio**	**67.16**	**334**	P	**P**	**09 57 08.7**	**+0.4**
HYT				lAmb	lAmb	09 57 15.8	
	comp=Z,16nm,1.1s						
C36M	**Paulatuk**	**67.59**	**345**	P	**P**	**09 57 09.5**	**-1.2**
	baz=134						
YAH	**Yahtse**	**68.84**	**333**	P	**P**	**09 57 18.6**	**-0.4**
CTGM	**Chitina Glacie**	**68.90**	**333**	P	**P**	**09 57 19.3**	**0.0**
CTGM				lAmb	lAmb	09 57 26.9	
	comp=Z,18nm,1.2s						
BARN	**Barnard Glacie**	**69.08**	**333**	P	**P**	**09 57 20.0**	**-0.5**
BARN				lAmb	lAmb	09 57 28.9	
	comp=Z,27nm,1.4s						
BALM	**Baldy**	**69.38**	**333**	P	**P**	**09 57 22.7**	**+0.5**
DAWY	**Dawson**	**69.44**	**337**	lAmb	lAmb	09 57 28.9	
	comp=Z,21nm,1.1s						
ASCN	**Ascension**	**69.47**	**101**	P	**P**	**09 57 23.6**	**+0.1**
TULEG	**Thule**	**69.56**	**3**	P	**P**	**09 57 22.6**	**-0.3**
EPYK	**Eagle Plains**	**69.58**	**340**	P	**P**	**09 57 23.0**	**-0.3**
	baz=121,SNR=12						
A36M	**Sachs Harbour**	**69.72**	**347**	P	**P**	**09 57 22.7**	**-1.3**
	baz=134,SNR=10.0						
MCARA	**McCarthy VSAT**	**69.82**	**333**	P	**P**	**09 57 22.5**	**-2.3**
VRDI	**Verde Repeater**	**69.95**	**333**	P	**P**	**09 57 25.1**	**-0.7**
VRDI				lAmb	lAmb	09 57 35.0	
	comp=Z,17nm,1.1s						
BCAR	**Beaver Creek A**	**69.97**	**335**	P	**P**	**09 57 26.3**	**+0.6**
GLB	**Gilahina Butte**	**70.19**	**333**	P	**P**	**09 57 27.4**	**+0.3**
GLB				lAmb	lAmb	09 57 34.5	
	comp=Z,24nm,1.2s						
SUMG	**Summit**	**70.36**	**13**	*i* P	**P**	**09 57 27.0**	**-1.4**
SUMG				pmax	pmax		
	comp=Z,93nm,1.1s						
SUMG	**Summit**	**70.36**	**13**	P	**P**	**09 57 26.9**	**-1.4**
SUMG	**Summit**	**70.36**	**13**	*i* P	**P**	**09 57 27.0**	**-1.4**
	comp=Z,93nm,1.1s						
EGAK	**Eagle**	**70.45**	**337**	P	**P**	**09 57 28.2**	**-0.4**
EGAK				lAmb	lAmb	09 57 35.3	
	comp=Z,14nm,0.9s						
PPT	**Papeete**	**70.83**	**249**	LR	LR	10 22 20.5	
	comp=Z,570nm,19.1s,baz=87,slow=31						
PPT2	**Papeete2**	**70.83**	**249**	*e*S	**S**	**10 06 48.0**	**+0.4**
	comp=Z,694nm,25.8s						
PPT2	**Papeete2**	**70.83**	**249**	*e*LR	LR	10 19 16.4	
	comp=Z,1µm,26.5s,baz=57						
DOT	**Dot Lake**	**71.14**	**335**	P	**P**	**09 57 33.5**	**+0.6**
SCRK	**Sand Creek**	**71.24**	**336**	P	**P**	**09 57 33.8**	**+0.2**
SCRK				lAmb	lAmb	09 57 41.9	
	comp=Z,16nm,0.9s						
RIDG	**Independent Ri**	**71.50**	**335**	P	**P**	**09 57 35.1**	**0.0**
SCM	**Sheep Creek Mo**	**71.90**	**333**	P	**P**	**09 57 37.8**	**+0.3**
SCM				pmax	pmax		
	comp=Z,19nm,0.8s						
SCM	**Sheep Creek Mo**	**71.90**	**333**	P	**P**	**09 57 37.8**	**+0.3**
SCM				lAmb	lAmb	09 57 52.7	
	comp=Z,19nm,0.8s						
TBI	**Tubuai**	**72.25**	**243**	*e*S	**S**	**10 07 05.2**	**+1.5**
	comp=Z,168nm,25.5s						
TBI				*e*LQ	LQ	10 16 53.9	
	comp=Z,451nm,30.6s						
TBI				*e*LR	LR	10 19 58.2	
	comp=Z,975nm,31.0s,baz=63						
KNK	**Knik Glacier**	**72.28**	**333**	P	**P**	**09 57 39.9**	**+0.1**
KNK				lAmb	lAmb	09 57 46.6	
	comp=Z,19nm,1.0s						
DHY	**Denali Highway**	**72.33**	**334**	P	**P**	**09 57 39.9**	**-0.3**
PRP	**Porcupine Dome**	**72.43**	**337**	P	**P**	**09 57 40.7**	**-0.1**
PRP				lAmb	lAmb	09 57 47.5	
	comp=Z,11nm,0.8s						
HDA	**Harding Lake**	**72.60**	**336**	P	**P**	**09 57 41.6**	**0.0**
	baz=110,SNR=39						
IL31		**72.70**	**336**	lAmb	lAmb	09 57 48.7	
	comp=Z,25nm,1.1s						
ILAR	**Eielson Array**	**72.70**	**336**	P	**P**	**09 57 42.2**	**+0.1**
	comp=Z,4.8nm,0.7s,baz=107,slow=4.5,SNR=49						
ILAR				LR	LR	10 34 02.0	
	comp=Z,438nm,18.3s,baz=117,slow=40						
ILAR	**Eielson Array**	**72.70**	**336**	P	**P**	**09 57 41.5**	**-0.7**
ILAR	**Eielson Array**	**72.70**	**336**	P	**P**	**09 57 41.5**	**-0.7**
FYU	**Fort Yukon**	**72.72**	**338**	P	**P**	**09 57 41.8**	**-0.4**
BMAR	**Burnt Mountain**	**72.82**	**339**	P	**P**	**09 57 42.7**	**-0.2**
BRLK	**Bradley Lake**	**72.96**	**330**	P	**P**	**09 57 43.1**	**-0.7**
BRLK				lAmb	lAmb	09 57 50.6	
	comp=Z,24nm,1.0s						
CCB	**Clear Creek Bu**	**73.03**	**336**	P	**P**	**09 57 43.4**	**-0.7**
CCB				lAmb	lAmb	09 57 52.1	
	comp=Z,12nm,1.3s						
POKR	**Poker Plat Res**	**73.04**	**336**	P	**P**	**09 57 43.9**	**-0.3**
	baz=110						
WRH	**Wood River Hil**	**73.09**	**336**	P	**P**	**09 57 44.4**	**0.0**
COLA	**College**	**73.12**	**336**	⇓*i* P	**P**	**09 57 44.8**	**+0.2**
COLA				pmax	pmax		
	comp=Z,11nm,1.4s						
COLA	**College**	**73.12**	**336**	P	**P**	**09 57 44.8**	**+0.2**
COLA				lAmb	lAmb	09 57 51.1	
	comp=Z,15nm,0.9s						
TCOL	**CIGO, UAF Yank**	**73.13**	**336**	P	**P**	**09 57 44.4**	**-0.3**
	baz=109						
MCK	**McKinley**	**73.20**	**335**	P	**P**	**09 57 44.7**	**-0.5**
MCK				pmax	pmax		
	comp=Z,21nm,1.2s						
MCK	**McKinley**	**73.20**	**335**	P	**P**	**09 57 44.7**	**-0.5**
MCK				lAmb	lAmb	09 57 53.9	
	comp=Z,21nm,1.2s						
SCO	**Scoresbysund**	**73.50**	**18**	P	**P**	**09 57 48.1**	**+1.3**
SCO				pmax	pmax		
	comp=Z,19nm,1.4s						
SCO	**Scoresbysund**	**73.50**	**18**	P	**P**	**09 57 48.1**	**+1.3**
SCO				lAmb	lAmb	09 57 53.7	
	comp=Z,19nm,1.4s						
NEA	**Nenana**	**73.53**	**336**	lAmb	lAmb	09 57 53.6	
	comp=Z,19nm,1.1s						
TRF	**Thorofare Moun**	**73.70**	**334**	P	**P**	**09 57 48.3**	**0.0**
TRF				lAmb	lAmb	09 57 54.3	
	comp=Z,16nm,1.0s						
KTH	**Kantishna Hill**	**74.00**	**334**	lAmb	lAmb	09 58 04.5	
	comp=Z,18nm,1.2s						
RSO	**Redoubt South**	**74.04**	**331**	P	**P**	**09 57 50.4**	**0.0**
BPAW	**Bear Paw Mtn.**	**74.18**	**335**	lAmb	lAmb	09 57 57.4	
	comp=Z,20nm,1.2s						
MLY	**Manley**	**74.34**	**336**	lAmb	lAmb	09 58 06.7	
	comp=Z,17nm,1.1s						
PPLA	**Purkeypile**	**74.38**	**333**	P	**P**	**09 57 51.6**	**-0.7**
PPLA				lAmb	lAmb	09 58 06.8	
	comp=Z,28nm,1.3s						
COLD	**Coldfoot**	**74.79**	**338**	P	**P**	**09 57 53.9**	**-0.5**
COLD				lAmb	lAmb	09 58 02.2	
	comp=Z,18nm,1.2s						
TOLK	**Toolik Lake Re**	**75.01**	**340**	P	**P**	**09 57 55.4**	**-0.3**
	baz=109						
IMAR	**Indian Mountai**	**75.81**	**336**	P	**P**	**09 57 60.0**	**-0.3**
TTA	**Tatalina**	**76.09**	**333**	P	**P**	**09 58 01.9**	**-0.1**
TTA				pmax	pmax		
	comp=Z,26nm,1.5s						
TTA	**Tatalina**	**76.09**	**333**	P	**P**	**09 58 01.9**	**-0.1**
TTA				lAmb	lAmb	09 58 09.9	
	comp=Z,26nm,1.5s						
PAB	**San Pablo**	**76.13**	**51**	P	**P**	**09 58 03.1**	**+0.3**
PAB				pmax	pmax		
	comp=Z,44nm,1.5s						
PAB	**San Pablo**	**76.13**	**51**	P	**P**	**09 58 03.0**	**+0.3**
ESDC	**Sonseca Array**	**76.44**	**51**	P	**P**	**09 58 05.2**	**+0.7**
	comp=Z,4.6nm,0.7s,baz=273,slow=5.6,SNR=25						
ESDC				LR	LR	10 29 06.2	
	comp=Z,396nm,19.3s,baz=260,slow=34						
TIC	**Toumodi**	**76.67**	**85**	*e*P	**P**	**09 58 02.2**	**-4.0**
LIC	**Lamto**	**76.71**	**85**	*e*P	**P**	**09 58 06.4**	**0.0**
	comp=Z,34nm,1.0s						
DBIC	**Dimbokro**	**76.83**	**85**	P	**P**	**09 58 07.0**	**-0.1**
	comp=Z,11nm,1.0s,baz=257,slow=4.0,SNR=3.8						
DBIC				LR	LR	10 31 12.6	
	comp=Z,135nm,18.5s,baz=246,slow=35						
DBIC	**Dimbokro**	**76.83**	**85**	P	**P**	**09 58 07.3**	**+0.2**
DBIC				pmax	pmax		
	comp=Z,20nm,1.2s						
DBIC	**Dimbokro**	**76.83**	**85**	P	**P**	**09 58 07.3**	**+0.2**
DBIC				lAmb	lAmb	09 58 18.0	
	comp=Z,20nm,1.1s						
KIC	**Kosan Boka**	**76.98**	**85**	*e*P	**P**	**09 58 07.0**	**-0.9**
	comp=Z,132nm,1.7s						

DAG	**Danmarks Havn**	**77.03**	**12**	*i* P	**P**	**09 58 10.2**	**+3.2**
DAG				pmax	pmax		
	comp=Z,21nm,1.4s						
DAG	**Danmarks Havn**	**77.03**	**12**	*i* P	**P**	**09 58 10.2**	**+3.2**
	comp=Z,21nm,1.4s						
ESK	**Eskdalemuir**	**77.84**	**35**	P	**P**	**09 58 11.7**	**-0.2**
ESK	**Eskdalemuir**	**77.84**	**35**	P	**P**	**09 58 11.7**	**-0.2**
NOR	**Nord**	**79.31**	**8**	*i* P	**P**	**09 58 19.6**	**0.0**
NOR	**Nord**	**79.31**	**8**	*i* P	**P**	**09 58 19.6**	**0.0**
DOU	**Dourbes**	**82.48**	**40**	PcP	**PcP**	**09 58 41.9**	**-0.3**
BMRD	**Maredsous**	**82.58**	**40**	PcP	**PcP**	**09 58 43.3**	**+0.7**
TORD	**Torodi Ar. Bea**	**82.61**	**78**	P	**P**	**09 58 38.2**	**-0.2**
	comp=Z,2.7nm,0.7s,baz=274,slow=4.5,SNR=15						
TORD				LR	LR	10 36 11.6	
	comp=Z,259nm,19.1s,baz=260,slow=36						
TORD	**Torodi Ar. Bea**	**82.61**	**78**	P	**P**	**09 58 38.3**	**-0.2**
BSTI	**Sart Tilman**	**83.08**	**40**	PcP	**PcP**	**09 58 46.3**	**+1.4**
WLF	**Walferdange**	**83.51**	**41**	PcP	**PcP**	**09 58 48.3**	**+1.6**
ECH	**Echery**	**84.27**	**42**	P	**P**	**09 58 46.3**	**-0.1**
ECH				pmax	pmax		
	comp=Z,51nm,1.5s						
ECH	**Echery**	**84.27**	**42**	P	**P**	**09 58 46.3**	**-0.1**
TNS	**Tanus Mts**	**84.94**	**40**	*e*L	L	10 31 24.6	
	comp=Z,614nm,21.9s						
BFO	**Black Forest**	**85.04**	**42**	*e*L	L	10 34 14.3	
	comp=Z,571nm,19.2s						
TAM	**Tamanrasset**	**85.26**	**68**	P	**P**	**09 58 53.7**	**+1.6**
TAM				pmax	pmax		
	comp=Z,41nm,1.3s						
TAM	**Tamanrasset**	**85.26**	**68**	P	**P**	**09 58 53.7**	**+1.6**
NB2	**NORSAR Subarra**	**85.38**	**29**	P	**P**	**09 58 51.7**	**0.0**
	comp=Z,140nm,2.0s,baz=278,slow=5.1						
NB2	**NORSAR Subarra**	**85.38**	**29**	P	**P**	**09 58 51.7**	**0.0**
	baz=278,slow=5.1						
NOA	**NORSAR Array B**	**85.38**	**29**	P	**P**	**09 58 51.5**	**-0.3**
	comp=Z,2.1nm,1.0s,baz=270,slow=16,SNR=4.1						
NOA				LR	LR	10 36 09.1	
	comp=Z,152nm,18.4s,baz=280,slow=35						
NC405	**NORSAR Array S**	**85.61**	**29**	P	**P**	**09 58 52.4**	**-0.5**
NC405				lAmb	lAmb	09 58 55.7	
	comp=Z,24nm,1.4s						
BSEG	**Bad Segeberg**	**85.71**	**36**	*e*P	P	09 58 59.6	+6.1
	comp=Z,61nm,1.6s,baz=272,slow=5.5						
BSEG				*e*L	L	10 30 14.6	
	comp=Z,351nm,21.8s						
TUE	**Stuetta**	**85.92**	**44**	P	**P**	**09 58 55.4**	**+0.4**
RETA	**Reutte**	**86.76**	**43**	*i* P	**P**	**09 58 59.7**	**+0.7**
	comp=Z,14nm,1.2s,SNR=5.7						
GRF	**Grafenberg Arr**	**86.78**	**40**	*e*P	P	09 59 04.4	+5.5
	comp=Z,57nm,1.5s,baz=272,slow=5.5						
GRF				*e*L	L	10 31 45.4	
	comp=Z,628nm,21.4s						
FETA	**Feichten**	**86.80**	**43**	*e*P	**P**	**09 58 58.5**	**-0.7**
	comp=Z,18nm,1.1s,SNR=6.0						
MOX	**Moxa**	**86.91**	**39**	*e*L	L	10 32 23.7	
	comp=Z,663nm,21.7s						
FUR	**Furstenfeldbru**	**87.02**	**42**	*e*L	L	10 35 13.6	
	comp=Z,526nm,19.4s						
WTTA	**Wattenberg**	**87.38**	**43**	*e*PcP	**P**	**09 59 03.5**	**+1.4**
	comp=Z,27nm,1.8s						
NKC	**Novy Kostel**	**87.49**	**40**	AMS	AMS	10 32 10.0	
	comp=Z,700nm,20.0s						
CLL	**Collm**	**87.68**	**39**	*i* P	**P**	**09 59 04.9**	**+1.7**
	comp=Z,6.0nm,0.8s						
CLL				*i* (sP)	**pwP**	**09 59 09.9**	**+1.2**
	comp=Z,78nm,1.8s						
CLL				*e*SSS	SSS	10 19 24.0	
CLL				Lm	MLR	10 34 00.0	
	comp=N,200nm,22.0s						
CLL				Lm	MLR	10 34 00.0	
	comp=E,500nm,20.2s						
CLL				Lm	MLR	10 34 00.0	
	comp=Z,500nm,20.1s						
CLL	**Collm**	**87.68**	**39**	*e*L	L	10 34 49.0	
	comp=Z,578nm,19.3s						
CLL	**Collm**	**87.68**	**39**	*i* P	**P**	**09 59 04.9**	**+1.7**
CLL				*i*		09 59 09.9	
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CLL				MLR	MLR		
	comp=Z,500nm,20.1s						
CLL	**Collm**	**87.68**	**39**	P	**P**	**09 59 04.0**	**+0.8**
WET	**Wettzell**	**87.93**	**41**	*e*L	L	10 36 53.2	
	comp=Z,384nm,19.2s						
BRG	**Berggiesshubel**	**88.34**	**39**	*e*P	**P**	**09 59 08.0**	**+1.7**
	comp=Z,63nm,1.7s						
BRG	**Berggiesshubel**	**88.34**	**39**	S	**S**	**10 09 51.0**	**-0.7**
	comp=N,239nm,15.1s						
	comp=E,378nm,20.9s						
	comp=Z,556nm,18.0s						
BRG	**Berggiesshubel**	**88.34**	**39**	*e*P	**P**	**09 59 08.0**	**+1.7**
BRG				S	**S**	**10 09 51.0**	**-0.7**
BRG				pmax	pmax		
	comp=Z,63nm,1.7s						
BRG				MLR	MLR		
	comp=N,239nm,15.1s						
BRG				MLR	MLR		
	comp=E,378nm,20.9s						
BRG				MLR	MLR		
	comp=Z,556nm,18.0s						
KHC	**Kasperske Hory**	**88.39**	**41**	⇓*e*P	**P**	**09 59 07.2**	**+0.5**
KHC				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KHC	**Kasperske Hory**	**88.39**	**41**	*e*P	**P**	**09 59 07.6**	**+0.9**
KHC				*e*pP	**pwP**	**09 59 12.7**	**+0.5**
KHC				AMS	AMS	10 36 20.0	
	comp=Z,400nm,16.8s						
GEC2	**GERESS Array S**	**88.51**	**41**	*e*P	P	09 59 12.6	+5.3
	comp=Z,44nm,1.8s,baz=272,slow=5.5						
GEC2				*e*L	L	10 34 29.2	
	comp=Z,285nm,21.9s						
GEC2	**GERESS Array S**	**88.51**	**41**	P	**P**	**09 59 07.4**	**+0.1**
GEC2				lAmb	lAmb	09 59 13.4	
	comp=Z,14nm,1.4s						
GERES	**GERESS Array B**	**88.51**	**41**	P	**P**	**09 59 07.5**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=247,slow=2.8,SNR=7.0						
GERES				LR	LR	10 37 02.1	
	comp=Z,268nm,18.5s,baz=282,slow=34						
GERES	**GERESS Array B**	**88.51**	**41**	P	**P**	**09 59 07.0**	**-0.3**
GERES	**GERESS Array B**	**88.51**	**41**	P	**P**	**09 59 07.0**	**-0.3**
PBCC	**Pribram**	**88.57**	**40**	*e*P	P	09 59 13.5	+6.1
PBCC				*ex*	x	09 59 21.9	
PRU	**Pruhonice**	**88.86**	**40**	AMS	AMS	10 33 00.0	
	comp=Z,900nm,21.6s						
GOPC	**GO Pecny, Ondr**	**89.03**	**40**	AMS	AMS	10 33 00.0	
	comp=Z,800nm,21.1s						
MOA	**Molln**	**89.05**	**42**	*i* sP	sP	09 59 15.4	+2.5
	comp=Z,16nm,1.4s						
JAVS	**Javornik**	**89.25**	**44**	*e*P	P	09 59 17.1	+6.3
ARCES	**ARCESS Array B**	**89.34**	**20**	LR	LR	10 37 44.5	
	comp=Z,287nm,19.0s,baz=312,slow=35						
TREC	**Trest**	**89.59**	**40**	AMS	AMS	10 31 20.0	
	comp=Z,500nm,21.5s						
UPC	**Upice**	**89.70**	**39**	AMS	AMS	10 35 20.0	
	comp=Z,800nm,19.9s						
CHVC	**Chvalec**	**89.71**	**39**	*e*P	**P**	**09 59 09.7**	**-3.1**
CHVC				*ex*	x	09 59 18.7	
CHVC				AMS	AMS	10 35 10.0	
	comp=Z,800nm,20.1s						
OSTC	**Ostas**	**89.81**	**39**	AMS	AMS	10 35 30.0	
	comp=Z,700nm,18.9s						
DPC	**Dobruska-Polom**	**89.92**	**39**	*e*P	**P**	**09 59 15.0**	**+1.2**
DPC				*e*		09 59 20.2	
DPC				MLR	MLR		
	comp=Z,700nm,18.7s						
DPC	**Dobruska-Polom**	**89.92**	**39**	*e*P	**P**	**09 59 15.0**	**+1.2**
DPC				*e*pP	**pwP**	**09 59 20.2**	**+0.8**
DPC				AMS	AMS	10 35 10.0	
	comp=Z,700nm,18.7s						
CONA	**Conrad Observa**	**90.09**	**42**	*i* PcP	**P**	**09 59 15.9**	**+1.2**
	comp=Z,22nm,1.7s						
GROS	**Grobnik**	**90.13**	**43**	*i* P	P	09 59 20.8	+5.9
KRUC	**Moravsky**	**90.22**	**41**	*e*P	**P**	**09 59 14.4**	**-0.8**
KRLC	**Kraliky**	**90.27**	**40**	AMS	AMS	10 33 50.0	
	comp=Z,600nm,21.9s						
VRAC	**Vranov**	**90.30**	**40**	*e*P	**P**	**09 59 15.0**	**-0.6**
MORC	**Moravsky Berou**	**90.81**	**40**	*e*P	**P**	**09 59 16.8**	**-1.2**
ZST	**Bratislava**	**90.86**	**41**	*e*P	P	09 59 23.5	+5.3
ZST				pmax	pmax		
	comp=Z,77nm,2.0s						
ZST	**Bratislava**	**90.86**	**41**	*e*P	P	09 59 23.5	+5.3
MODS	**Modra-Piesok**	**90.93**	**41**	*e*P	P	09 59 24.0	+5.4
MODS				pmax	pmax		
	comp=Z,50nm,1.8s						
MODS	**Modra-Piesok**	**90.93**	**41**	*e*P	P	09 59 24.0	+5.4
SMOL	**Smolenice**	**91.00**	**41**	*e*P	P	09 59 25.6	+6.7

SMOL	**Smolenice**	**91.00**	**41**	*e*P	P	09 59 25.6	+6.7
BILL	**Bilibino**	**91.06**	**339**	⇑*i*P	**P**	**09 59 19.0**	**+0.3**
BILL				*e*		10 02 56.8	
BILL				*e*PPP	PPP	10 04 54.9	
BILL				*i* S	**S**	**10 10 20.2**	**+3.8**
BILL				*i* SS	**SS**	**10 16 26.5**	**+7.2**
BILL				pmax	pmax		
	comp=Z,22nm,2.0s						
BILL	**Bilibino**	**91.06**	**339**	P	**P**	**09 59 18.5**	**-0.2**
BILL				lAmb	lAmb	09 59 26.0	
	comp=Z,16nm,1.1s						
OKC	**Ostrava-Krasne**	**91.18**	**40**	AMS	AMS	10 34 30.0	
	comp=Z,600nm,20.3s						
VYHS	**Vyhne**	**91.92**	**41**	*e*P	P	09 59 29.0	+5.9
VYHS				pmax	pmax		
	comp=Z,66nm,2.2s						
VYHS	**Vyhne**	**91.92**	**41**	*e*P	P	09 59 29.0	+5.9
FINES	**FINESS Array B**	**92.27**	**27**	LR	LR	10 35 42.9	
	comp=Z,298nm,21.7s,baz=282,slow=32						
SNAA	**Sanae**	**93.62**	**162**	*e*P	**P**	**09 59 31.9**	**+1.4**
SNAA	**Sanae**	**93.62**	**162**	P	**P**	**09 59 31.4**	**+0.9**
KOLS	**Kolonicke sedl**	**94.01**	**40**	*e*P	P	09 59 39.3	+6.5
KOLS				pmax	pmax		
	comp=Z,13nm,1.7s						
KOLS	**Kolonicke sedl**	**94.01**	**40**	*e*P	P	09 59 39.3	+6.5
QSPA	**South Pole Qui**	**97.33**	**180**	P	Pdif	09 59 49.5	+1.9
AKASG	**Malin Array Be**	**97.72**	**37**	LR	LR	10 40 59.1	
	comp=Z,406nm,20.8s,baz=290,slow=34						
TIXI	**Tiksi**	**98.54**	**350**	⇑*e*P	**P**	**09 59 51.5**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
DZM	**Mont Dzumac**	**112.33**	**249**	*e*LR	LR	10 38 33.3	
	comp=Z,332nm,27.6s						
ZALV	**Zalesovo Beam**	**118.00**	**9**	PKP	**PKPdf**	**10 05 00.0**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=64,slow=3.4,SNR=1.8						
ZALV	**Zalesovo Beam**	**118.00**	**9**	PKIKP	**PKiKP**	**10 05 02.8**	**+1.4**
ZALV	**Zalesovo Beam**	**118.00**	**9**		**PKiKP**	**10 05 02.8**	**+1.4**
KURK	**Kurchatov**	**119.89**	**14**	PKIKP	**PKiKP**	**10 05 05.2**	**+0.1**
KURK	**Kurchatov**	**119.89**	**14**		**PKiKP**	**10 05 05.2**	**+0.1**
KURBB	**Kurchatov Arra**	**119.96**	**14**	PKP	**PKPdf**	**10 05 04.3**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=339,slow=2.0,SNR=2.5						
MKAR	**Makanchi Array**	**124.41**	**13**	PKP	**PKPdf**	**10 05 12.8**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=333,slow=1.6,SNR=2.6						
MKAR	**Makanchi Array**	**124.41**	**13**	PKIKP	**PKPdf**	**10 05 12.6**	**-1.3**
MKAR	**Makanchi Array**	**124.41**	**13**		**PKPdf**	**10 05 12.6**	**-1.3**
SONM	**Songino Array**	**124.53**	**353**	PKP	**PKPdf**	**10 05 14.2**	**-0.1**
	comp=Z,1.5nm,1.0s,baz=272,slow=40,SNR=2.8						
SONM	**Songino Array**	**124.53**	**353**	PKIKP	**PKiKP**	**10 05 15.3**	**+0.7**
SONM	**Songino Array**	**124.53**	**353**		**PKiKP**	**10 05 15.3**	**+0.7**
ARSB	**Arslanbob**	**126.56**	**23**	PKIKP	**PKPdf**	**10 05 18.2**	**-0.2**
ARSB	**Arslanbob**	**126.56**	**23**		**PKPdf**	**10 05 18.2**	**-0.2**
KSRS	**Korea Array**	**127.22**	**330**	PKP	**PKPdf**	**10 05 19.1**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=142,slow=41,SNR=3.1						
KSAR	**Wonju Array Be**	**127.25**	**330**	PKIKP	**PKPdf**	**10 05 19.5**	**-0.1**
KSAR	**Wonju Array Be**	**127.25**	**330**		**PKPdf**	**10 05 19.5**	**-0.1**
KDJ	**Kajisay**	**127.35**	**19**	PKIKP	**PKPdf**	**10 05 19.1**	**-0.8**
KDJ	**Kajisay**	**127.35**	**19**		**PKPdf**	**10 05 19.1**	**-0.8**
TARG	**Taragay, Kyrgy**	**127.91**	**19**		**PKPdf**	**10 05 21.4**	**+0.1**
WMQ	**Urumqi**	**128.30**	**9**	*e*PKP	**PKiKP**	**10 05 22.3**	**+0.2**
WMQ				LR	LR		
	comp=Z,320nm,21.9s						
WMQ				LR	LR		
	comp=Z,220nm,16.3s						
WMQ				LR	LR		
	comp=Z,580nm,19.9s						
KSH	**Kashi**	**129.26**	**22**	PKP	**PKPdf**	**10 05 23.8**	**+0.3**
KSH				PP	**PP**	**10 07 34.4**	**+3.5**
KSH				PKS	**PKSdf**	**10 09 01.5**	**+1.3**
KSH				SKKS		10 14 24.5	
KSH				SS	**SS**	**10 24 59.8**	**+8.6**
KSH				AMB	AMB		
	comp=Z,260nm,6.4s						
KSH				LR	LR		
	comp=Z,74nm,10.5s						
KSH				LR	LR		
	comp=Z,94nm,5.8s						
KSH				LR	LR		
	comp=Z,620nm,14.4s						
HHC	**Hu-ho-hao-te**	**130.38**	**346**	*e*PKP	**PKPdf**	**10 05 25.0**	**-0.6**
HHC				AMB	AMB		
	comp=Z,54nm,5.1s						
HHC				LR	LR		
	comp=Z,330nm,18.7s						
HHC				LR	LR		
	comp=Z,200nm,17.0s						
HHC				LR	LR		
	comp=Z,320nm,19.6s						
STKA	**Stephens Creek**	**132.38**	**233**	PKP	**PKPdf**	**10 05 29.4**	**0.0**
	comp=Z,1.6nm,0.9s,baz=346,slow=4.2,SNR=3.4						
GTA	**Gaotai**	**133.45**	**358**	PKP	**PKiKP**	**10 05 37.5**	**+4.8**
GTA				AMB	AMB		
	comp=Z,97nm,6.7s						
GTA				LR	LR		
	comp=Z,350nm,19.4s						
GTA				LR	LR		
	comp=Z,330nm,19.4s						
GTA			

BRRC				*e*S	Sn	09 48 28.3	-0.1
PAMC	**Pamplona, Colo**	**0.67**	**42**	*e*P	Pn	09 48 13.2	-0.2
PAMC				*e*S	Sn	09 48 30.4	+0.5
PAMC				*i*		09 48 32.8	
	comp=Z,74nm,0.5s						
RUSC	**La Rusia**	**0.94**	**176**	*e*P	Pn	09 48 14.8	-0.6
RUSC				*e*S	Sn	09 48 33.0	-0.6
PTBC	**PUERTO BERRIO,**	**1.33**	**257**	*e*P	Pn	09 48 17.0	-1.6
PTBC				*e*S	Sn	09 48 37.9	-1.3
PTBC				*i*		09 48 42.7	
	comp=Z,72nm,0.2s						
TAMC	**Tame, Arauca**	**1.41**	**106**	*e*P	Sn	09 48 40.6	-0.1
TAMC	**Tame, Arauca**	**1.41**	**106**	*e*P	Pn	09 48 18.8	-0.6
TAMC				*i*		09 48 19.0	
	comp=Z,81nm,0.4s						
TAMC				*e*S	Sn	09 48 40.3	-0.4
SPBC	**San Pablo de B**	**1.49**	**218**	*e*P	Pn	09 48 19.6	-0.7
SPBC				*e*S	Sn	09 48 41.5	-1.0
NORC	**Norcasia**	**2.13**	**234**	*e*P	Pn	09 48 26.8	-0.8
NORC				*e*S	Sn	09 48 54.1	-1.2
SMLC	**San Martn de**	**2.15**	**335**	*e*P	Pn	09 48 27.5	-0.4
CHIC	**Chingaza**	**2.27**	**195**	*e*P	Pn	09 48 29.2	-0.5
CHIC				*e*S	Sn	09 48 58.5	-0.5
ROSC	**El Rosal**	**2.30**	**210**	*e*P	Pn	09 48 30.8	+0.8
ROSC				*e*S	Sn	09 49 00.2	+0.5
ROSC				*i*		09 49 03.8	
	comp=Z,50nm,0.4s						
HELC	**Santa Helena**	**2.45**	**255**	*e*P	Pn	09 48 32.1	+0.3
SOCV	**Socops**	**2.69**	**58**	*e*P	Pn	09 48 33.5	-1.1
GUY2C	**Guyana, Caldas**	**2.72**	**234**	*e*P	Pn	09 48 35.9	+0.5
GUY2C				*e*S	Sn	09 49 09.8	+0.6
SDV	**Santo Domingo**	**3.22**	**51**	*e*P	Pn	09 48 40.1	-1.3

*KRAR **14** 09:59:32.1±0.1,53.65N×88.09E,M2.2,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC 14 09:59:27.8±3.2,**53.52N×88.07E,h0**km,**mb1 2.8**/2,**mb1mx2.7**/46,**mbtmp2.8**/2,**ML2.6**/2,**Error ellipse: s-maj=27.2km s-min=19.2km az=51.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.98**	**284**	*i*		10 11 20.0	
	baz=98,slow=316,SNR=6.6						
ZALV	**Zalesovo Beam**	**1.98**	**284**	Pn	Pn	10 00 03.1	+0.6
	1.1nm,0.3s,baz=106,slow=14,SNR=21						
ZALV				Lg	Lg	10 00 29.1	
	2.1nm,0.3s,baz=115,slow=24,SNR=8.5						
KURBB	**Kurchatov Arra**	**6.56**	**248**	Pn	Pn	10 01 07.6	+2.2
KURBB	0.1nm,0.3s,baz=61,slow=14,SNR=4.7			Sn	Sn	10 02 20.1	-0.8
	0.0nm,0.3s,baz=130,slow=6.1,SNR=1.8						
KURBB				Lg	Lg	10 02 56.0	
	0.1nm,0.3s,baz=60,slow=32,SNR=7.2						
MKAR	**Makanchi Array**	**7.69**	**211**	Pn	Pn	10 01 20.2	-0.7
	0.2nm,0.3s,baz=25,slow=13,SNR=2.0						
MKAR				Sn	Sn	10 02 51.2	+2.5
	0.1nm,0.3s,baz=33,slow=28,SNR=3.0						
MKAR				Lg	Lg	10 03 32.4	
	0.1nm,0.3s,baz=42,slow=28,SNR=8.9						

*KRSC **14** 10:07:56.0±1.3,56.07N×164.84E,h50km±22km,ML3.7*
*IDC **14** 10:08:02.5±2.0,56.41N×163.26E,h0km,mb3.3/4, mb1 3.5/5,mb1mx3.3/41,mbtmp3.3/5,ML2.1/1,MS2.7/1, Ms1 2.7/1,ms1mx2.3/32,Error ellipse: s-maj=60.6km s-min=24.5km az=156.0*

ISC 14 10:07:59.4±1.1,**56.12N**±0.05**×164.84E**±0.05,**h35**km,**n46,** σ1**44**/55,**mb3.4**/4,**Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.12**	**145**	P	**Pn**	**10 08 17.1**	**-1.4**
BKI				S	**Sn**	**10 08 31.7**	**-1.0**
KBTR	**Krutoberegovo**	**1.14**	**275**	P	**Pn**	**10 08 15.9**	**-2.9**
KBTR				S	**Sn**	**10 08 29.4**	**-3.7**
KBG	**Krutoberegovo**	**1.20**	**277**	P	**Pn**	**10 08 16.8**	**-2.9**
KBG				S	**Sn**	**10 08 31.2**	**-3.5**
BDR	**Baidarnaya**	**2.07**	**284**	P	**Pn**	**10 08 31.5**	**-0.2**
BDR				S	**Sn**	**10 08 56.8**	**+0.4**
SRKR	**Sorokina**	**2.11**	**286**	P	**Pn**	**10 08 31.8**	**-0.5**
SRKR				S	**Sn**	**10 08 57.0**	**-0.3**
ZLN	**Zelenaya**	**2.27**	**269**	P	**Pn**	**10 08 34.7**	**+0.3**
CIRR	**Tsirk**	**2.29**	**272**	P	**Pn**	**10 08 34.4**	**-0.4**
LGNR	**Loginova**	**2.33**	**271**	P	**Pn**	**10 08 35.5**	**+0.1**
LGNR				S	**Sn**	**10 09 02.8**	**-0.1**
BZGR	**Bezymyannyi-Gr**	**2.33**	**267**	P	**Pn**	**10 08 34.7**	**-0.7**
KLY	**Klyuchi**	**2.35**	**276**	P	**Pn**	**10 08 33.7**	**-1.7**
KLY				S	**Sn**	**10 09 00.2**	**-2.8**
KRSR	**Krestovskiy**	**2.39**	**274**	P	**Pn**	**10 08 35.6**	**-0.6**
BZWR	**Bezymyannyi-We**	**2.44**	**268**	P	**Pn**	**10 08 37.1**	**+0.2**
BZMR	**Bezymyannaya**	**2.45**	**267**	S	**Sn**	**10 09 05.7**	**-0.1**
KIRR	**Kirishev**	**2.53**	**268**	P	**Pn**	**10 08 38.1**	**0.0**
KIRR				S	**Sn**	**10 09 07.7**	**-0.1**
KPT	**Kopyto**	**2.60**	**268**	P	**Pn**	**10 08 39.2**	**+0.2**
KMNR	**Kamenistaya**	**2.62**	**264**	P	**Pn**	**10 08 40.2**	**+1.0**
KMNR				S	**Sn**	**10 09 11.8**	**+2.0**
TUMD	**Tumrok D**	**2.68**	**252**	P	**Pn**	**10 08 39.8**	**-0.2**
KZV	**Kizimen**	**2.77**	**250**	P	**Pn**	**10 08 41.1**	**-0.3**
KZV				S	**Sn**	**10 09 12.9**	**-0.8**
KOZ	**Kozyrevsk**	**2.79**	**271**	P	**Pn**	**10 08 42.4**	**+0.9**
TUMR	**Tumrok**	**2.79**	**254**	P	**Pn**	**10 08 41.9**	**+0.3**
TUMR				S	**Sn**	**10 09 14.7**	**+0.7**
SRDR	**Sredinnyy**	**2.87**	**276**	P	**Pn**	**10 08 42.5**	**-0.2**
SRDR				S	**Sn**	**10 09 16.2**	**+0.2**
OSSR	**Ossora**	**3.28**	**344**	P	**Pn**	**10 08 48.3**	**+0.1**
OSSR				S	**Sn**	**10 09 24.7**	**-1.2**
ESO	**Esso**	**3.45**	**269**	P	Pn	10 08 52.6	+1.9
KII	**Karymskiy**	**3.74**	**238**	P	**Pn**	**10 08 52.8**	**-1.8**
SPN	**Mys Shipunski**	**4.13**	**225**	P	**Pn**	**10 08 58.3**	**-1.6**
SDLR	**Sedlovina**	**4.48**	**233**	P	**Pn**	**10 09 04.5**	**-0.3**
KRER	**Koryakskii**	**4.52**	**234**	P	**Pn**	**10 09 05.3**	**-0.2**
SMAR	**Somma**	**4.53**	**233**	P	**Pn**	**10 09 05.2**	**-0.4**
KRX	**Arik**	**4.53**	**235**	P	**Pn**	**10 09 05.2**	**-0.4**
UGLR	**Uglovaya**	**4.55**	**233**	P	**Pn**	**10 09 05.8**	**0.0**
AVH	**Avacha**	**4.55**	**234**	P	**Pn**	**10 09 05.9**	**+0.1**
KOK	**Koryaka**	**4.58**	**234**	P	**Pn**	**10 09 05.6**	**-0.6**
DALK	**Dalny**	**4.71**	**231**	P	**Pn**	**10 09 05.4**	**-2.4**
KRMR	**Karymshinskiy**	**5.12**	**233**	P	**Pn**	**10 09 13.6**	**+0.1**
PETK	**Petropavlovsk-**	**5.13**	**237**	Pn	**Pn**	**10 09 13.6**	**-0.1**
	0.5nm,0.3s,baz=69,slow=17,SNR=14						
PETK				Sn	**Sn**	**10 10 15.5**	**+3.9**
	0.1nm,0.3s,baz=304,slow=43,SNR=1.1						
PETK				LR	LR	10 11 29.5	
	comp=Z,75nm,19.3s,baz=61,slow=45						
GRL	**Gorelyy**	**5.34**	**231**	P	**Pn**	**10 09 16.8**	**+0.2**
MTVR	**Mutnovka**	**5.34**	**230**	P	**Pn**	**10 09 16.7**	**+0.1**
MTVR				S	**Sn**	**10 10 14.3**	**-2.6**
ASAK	**Asacha**	**5.53**	**230**	P	**Pn**	**10 09 19.9**	**+0.7**
KMSK	**Kamenskaya**	**6.40**	**6**	P	**Pn**	**10 09 32.9**	**+1.8**
ILAR	**Eielson Array**	**24.73**	**50**	P	P	10 13 29.4	+12
	0.9nm,1.0s,baz=254,slow=8.3,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**36.37**	**177**	T	T	10 52 56.4	
	baz=359,slow=76,SNR=86						
H11N3	**WAKE ISLAND Hy**	**36.38**	**177**	T	T	10 52 57.5	
	baz=359,slow=76,SNR=34						
H11N1	**WAKE ISLAND Hy**	**36.38**	**177**	T	T	10 52 57.7	
	baz=359,slow=76,SNR=36						
YKA	**Yellowknife Ar**	**39.06**	**47**	P	P	10 15 34.3	+12
	0.1nm,0.6s,baz=303,slow=7.9,SNR=2.0						
KURBB	**Kurchatov Arra**	**48.58**	**302**	P	**P**	**10 16 40.3**	**+1.4**
	0.2nm,0.3s,baz=53,slow=8.2,SNR=2.6						
MKAR	**Makanchi Array**	**49.32**	**296**	P	**P**	**10 16 45.5**	**+0.8**
	0.2nm,0.4s,baz=57,slow=6.4,SNR=5.0						

*JMA **14** 10:09:23.9±0.1,36.09N×140.01E,h67km±1km,M3.1*
JMA Felt I J1.
*IDC **14** 10:09:23.3±4.2,36.06N×140.11E,h74km±30km,mb3.2/3, mb1 3.3/4,mb1mx3.0/35,mbtmp3.5/4,Error ellipse: s-maj=55.5km s-min=10.1km az=60.0*

ISC 14 10:09:23.5±1.0,**36.07N**±0.04**×140.04E**±0.06,**h70**km±8km, **n17,** σ0**45**/26,**mb3.5**/3,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.20**	**38**	P	**Pn**	**10 09 34.3**	**+0.2**
JYT				S	**Sn**	**10 09 42.0**	**+0.2**
JAG	**Ashikaga**	**0.59**	**307**	P	**Pn**	**10 09 37.3**	**+0.1**
JAG				S	**Sn**	**10 09 47.0**	**-0.3**
JRY	**Ryogami san**	**0.92**	**267**	P	**Pn**	**10 09 41.2**	**+0.2**
JRY				S	**Sn**	**10 09 53.9**	**-0.1**
JKT	**Katashina**	**0.95**	**318**	P	**Pn**	**10 09 41.2**	**-0.2**
JKT				S	**Sn**	**10 09 54.5**	**-0.2**
JOD2	**Odawara 2**	**1.11**	**224**	P	**Pn**	**10 09 43.6**	**+0.2**
JOD2				S	**Sn**	**10 09 57.8**	**-0.5**
JYN	**Shimob**	**1.34**	**245**	P	**Pn**	**10 09 47.0**	**+0.6**
JYN				S	**Sn**	**10 10 03.8**	**+0.2**
JFY	**Yanaizu**	**1.37**	**349**	P	**Pn**	**10 09 47.3**	**+0.6**
JFNN	**Fujinakano**	**1.40**	**232**	P	**Pn**	**10 09 47.6**	**+0.5**
JHK	**Hiroka**	**1.44**	**325**	P	**Pn**	**10 09 47.8**	**+0.2**
JFT	**Otama**	**1.47**	**9**	P	**Pn**	**10 09 48.6**	**+0.6**
MJAR	**Matsushiro Arr**	**1.55**	**288**	P	**Pn**	**10 09 49.0**	**-0.1**
	3.7nm,0.3s,baz=102,slow=12,SNR=194						
MJAR				S	**Sn**	**10 10 09.4**	**+0.9**
	2.1nm,0.3s,baz=134,slow=7.0,SNR=6.4						
MAT	**Matsushiro**	**1.55**	**288**	P	**Pn**	**10 09 49.6**	**+0.5**
MAT				S	**Sn**	**10 10 09.2**	**+0.7**
MAT	**Matsushiro**	**1.55**	**288**	P	**Pn**	**10 09 49.7**	**+0.6**
JHJ	**Hachijo jima 2**	**2.95**	**184**	P	**Pn**	**10 10 08.4**	**+0.5**
	7.3nm,0.3s,baz=49,slow=19,SNR=15						
JHJ				S	**Sn**	**10 10 42.2**	**0.0**
	10nm,0.3s,baz=3.6,slow=19,SNR=1.7						
MKAR	**Makanchi Array**	**43.70**	**303**	P	**P**	**10 17 21.2**	**-0.3**
	0.5nm,0.6s,baz=102,slow=6.6,SNR=4.8						
KURBB	**Kurchatov Arra**	**45.73**	**309**	P	**P**	**10 17 36.9**	**-0.6**
	0.5nm,0.5s,baz=83,slow=7.6,SNR=5.5						
WRA	**Warramunga Arr**	**55.96**	**186**	P	**P**	**10 18 54.4**	**-0.2**
	0.3nm,0.7s,baz=0.2,slow=7.4,SNR=1.6						

*ATH **14** 10:36:44.0,40.38N×25.83E,h26km±2km,ML2.0/3,Error ellipse: s-maj=2.7km s-min=1.0km az=317.0*
*DDA **14** 10:36:43.6,40.40N×25.84E,h25km±2km,ML2.5*
*ISK **14** 10:36:44.7,40.38N×25.90E,h7km,ML2.6/21*
*THE **14** 10:36:44.6,40.36N×25.89E,h14km,ML2.0/6,Error ellipse: s-maj=0.9km s-min=0.4km az=42.0*

ISC 14 10:36:44.0±0.9,**40.38N**±0.02**×25.89E**±0.02,**h17**km±8km, **n47,** σ0**66**/69,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.18**	**178**	PG	**Pb**	**10 36 49.1**	**+0.2**
GADA				SG	**Sb**	**10 36 52.2**	**0.0**
SMTH	**Samothraki Isl**	**0.29**	**289**	P	**Pb**	**10 36 50.7**	**0.0**
SMTH				S	**Sb**	**10 36 55.1**	**-0.2**
	525nm,0.1s						
SMTH	**Samothraki Isl**	**0.29**	**289**	P	**Pb**	**10 36 50.8**	**0.0**
SMTH				S	**Sg**	**10 36 54.8**	**+0.1**
SMTH				AML	AML	10 36 55.5	
	comp=E,892μm,0.2s						
SMTH				AML	AML	10 36 55.5	
	comp=N,1168μm,0.2s						
ENEZ	**Enez**	**0.41**	**29**	P	**Pb**	**10 36 53.1**	**+0.3**
ENEZ				S	**Sb**	**10 36 59.5**	**+0.8**
ENEZ	**Enez**	**0.41**	**29**	PG	**Pb**	**10 36 53.2**	**+0.4**
ENEZ				SG	**Sb**	**10 36 59.6**	**+0.8**
GELI	**Tayfur-Gelibol**	**0.45**	**87**	PG	**Pb**	**10 36 53.7**	**+0.3**
GELI				SG	**Sb**	**10 37 00.4**	**+0.7**
ALN	**Alexandroupoli**	**0.53**	**13**	P	**Pb**	**10 36 55.1**	**+0.2**
ALN				S	**Sb**	**10 37 03.0**	**+0.7**
	comp=N,102nm,0.3s						
ALN	**Alexandroupoli**	**0.53**	**13**	P	**Pb**	**10 36 55.3**	**+0.4**
ALN				S	**Sb**	**10 37 02.7**	**+0.4**
ALN				AML	AML	10 37 03.7	
	comp=E,270μm,0.2s						
ALN				AML	AML	10 37 09.3	
	comp=N,224μm,0.4s						
ALN	**Alexandroupoli**	**0.53**	**13**	PG	**Pb**	**10 36 55.4**	**+0.5**
ALN				SG	**Sb**	**10 37 02.8**	**+0.5**
ERIK	**Erikli-Kesan**	**0.56**	**58**	PG	**Pn**	**10 36 56.0**	**-1.1**
EZN	**Ezine**	**0.64**	**149**	P	**Pb**	**10 36 57.0**	**+0.4**
EZN				S	**Sb**	**10 37 05.8**	**+0.5**
	comp=N,132nm,0.1s						
EZN	**Ezine**	**0.64**	**149**	PG	**Pb**	**10 36 57.1**	**+0.4**
LPK	**Lapseki**	**0.66**	**90**	PG	**Pn**	**10 36 57.9**	**-0.7**
LIA	**Limnos Island**	**0.72**	**229**	P	**Pg**	**10 36 58.5**	**+0.4**
LIA				S	**Sg**	**10 37 08.9**	**+1.2**
	comp=N,135nm,0.2s						
LIA	**Limnos Island**	**0.72**	**229**	P	**Pb**	**10 36 57.3**	**-0.8**
BAYC	**CANAKKALE_Bayr**	**0.81**	**141**	*i* P	**Pn**	**10 37 00.1**	**-0.5**
BAYC				*i* S	**Sg**	**10 37 11.1**	**+0.6**
RDO	**Rodhopi**	**0.81**	**341**	P	**Pn**	**10 37 00.2**	**-0.4**
RDO				S	**Sn**	**10 37 12.8**	**+0.5**
	comp=N,112nm,0.1s						
RDO	**Rodhopi**	**0.81**	**341**	P	**Pb**	**10 36 59.1**	**-0.6**
RDO				S	**Sg**	**10 37 10.6**	**-0.1**
RDO				AML	AML	10 37 14.7	
	comp=E,220μm,0.1s						
RDO				AML	AML	10 37 15.2	
	comp=N,223μm,0.2s						
RDO	**Rodhopi**	**0.81**	**341**	PG	**Pn**	**10 37 00.6**	**0.0**
UKOP	**Uzunkopru-Edir**	**0.94**	**37**	PG	**Pn**	**10 37 03.4**	**+1.1**
KRBG	**Karabiga-Canak**	**1.07**	**89**	PG	**Pg**	**10 37 05.4**	**+0.6**
SIGR	**SIGRI**	**1.16**	**181**	P	**Pn**	**10 37 05.4**	**0.0**
SIGR				S	**Sn**	**10 37 21.1**	**+0.3**
SIGR	**SIGRI**	**1.16**	**181**	P	**Pg**	**10 37 06.7**	**+0.2**
PRK	**Paraskevi**	**1.17**	**165**	P	**Pg**	**10 37 06.5**	**0.0**
PRK				S	**Sg**	**10 37 23.1**	**+1.3**
KAVA	**Kavala**	**1.22**	**301**	P	**Pg**	**10 37 06.9**	**-0.6**
KAVA				S	**Sg**	**10 37 23.1**	**-0.3**
	comp=N,70nm,0.3s						
KAVA	**Kavala**	**1.22**	**301**	P	**Pg**	**10 37 06.9**	**-0.6**
AYVA	**Ayvalik**	**1.23**	**150**	*i* P	**Pg**	**10 37 08.0**	**+0.3**
AYVA				*i* S	**Sg**	**10 37 24.7**	**+0.9**
AYVA				IAML		10 37 26.0	
	comp=N,274nm,0.7s						
AYVA				IAML		10 37 27.0	
	comp=E,112nm,0.6s						
MRMT	**Marmara Adasi**	**1.32**	**80**	PN	**Pg**	**10 37 09.7**	**+0.2**
KDZ	**Kurdzhali**	**1.32**	**344**	PN	**Pg**	**10 37 09.8**	**+0.3**
GONE	**Gonen-Balikesi**	**1.41**	**103**	PN	**Pg**	**10 37 11.2**	**0.0**
OUR	**Ouranopolis**	**1.46**	**269**	P	**Pn**	**10 37 09.6**	**+0.1**
BALY	**Balya**	**1.47**	**115**	*i* P	**Pg**	**10 37 11.7**	**-0.6**
BALY				*i* S	**Sg**	**10 37 30.3**	**-1.2**
EDC	**Edincik**	**1.51**	**90**	PN	**Pg**	**10 37 12.6**	**-0.4**
DKL	**Dikili**	**1.52**	**149**	PN	**Pg**	**10 37 12.7**	**-0.5**
EDRB	**Edirne**	**1.60**	**23**	PN	**Pg**	**10 37 14.0**	**-0.9**
KIRK	**Kirklareli**	**1.68**	**33**	*i* P	**Pn**	**10 37 12.9**	**+0.4**
KIRK				*i* S	**Sb**	**10 37 35.3**	**+0.2**
BALB	**Balikesir**	**1.69**	**115**	PN	**Pb**	**10 37 15.0**	**+0.3**
STEP	**BALIKESIR_Sava**	**1.72**	**125**	*i* P	**Pg**	**10 37 16.4**	**-0.7**
STEP				*i* S	**Sg**	**10 37 39.7**	**+0.1**
KCTX	**Karacabey (Bur**	**1.89**	**93**	PN	**Pb**	**10 37 17.5**	**-0.5**
PLD	**Plovdiv**	**1.95**	**333**	PN	**Pb**	**10 37 18.8**	**-0.1**
CHOS	**Chios island**	**1.99**	**176**	P	**Pn**	**10 37 17.1**	**+0.2**
CHOS	**Chios island**	**1.99**	**176**	PN	**Pb**	**10 37 18.5**	**-1.2**
URLA	**Izmir**	**2.09**	**165**	PN	**Pb**	**10 37 20.6**	**-0.7**
CTYL	**Yalikoy Yolu**	**2.12**	**58**	PN	**Pb**	**10 37 21.4**	**-0.5**
DURS	**Dursunbey**	**2.13**	**110**	*i* P	**Pg**	**10 37 24.9**	**0.0**
DURS				*i* S	**Sg**	**10 37 50.1**	**-2.4**
DURS				IAML		10 37 54.0	
	comp=N,36nm,0.3s						
DURS				IAML		10 37 54.0	
	comp=E,34nm,0.5s						
HORT	**Hortiatis**	**2.14**	**277**	PN	**Pb**	**10 37 21.7**	**-0.6**
CTKS	**Kestanelik-??a**	**2.16**	**66**	PN	**Pb**	**10 37 21.9**	**-0.7**

IDC 14 11:32:46.5±2.8,**4.53N×93.69E,h0**km,**mb3.6**/4,**mb1 3.7**/5, **mb1mx3.5**/44,**mbtmp3.6**/5,**ML4.0**/1,**Error ellipse: s-maj=111.1km s-min=23.7km az=61.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.76**	**20**	Pn	Pn	11 36 18.0	+1.2
	0.2nm,0.3s,baz=205,slow=12,SNR=4.8						
H08S2	**Diego Garcia H**	**24.36**	**240**	T	T	12 04 19.0	
	baz=56,slow=76						
H08S3	**Diego Garcia H**	**24.36**	**240**	T	T	12 04 14.1	
	baz=56,slow=76						
H08S1	**Diego Garcia H**	**24.38**	**240**	T	T	12 04 24.9	
	baz=56,slow=76						
MKAR	**Makanchi Array**	**43.24**	**349**	P	P	11 40 49.7	+0.1
	0.3nm,0.4s,baz=176,slow=8.4,SNR=4.7						
WRA	**Warramunga Arr**	**46.77**	**123**	P	P	11 41 17.6	-0.6
	0.2nm,0.6s,baz=301,slow=9.7,SNR=6.6						
ASAR	**Alice Springs**	**48.19**	**127**	P	P	11 41 29.6	+0.4
	0.3nm,0.4s,baz=303,slow=7.8,SNR=10.0						
ZALV	**Zalesovo Beam**	**49.79**	**353**	P	P	11 41 40.3	-0.7
	1.0nm,0.4s,baz=178,slow=7.8,SNR=4.2						

*IDC **14** 11:34:43.9±0.6,15.88N×173.82W,h0km,mb4.1/12, mb1 4.4/13,mb1mx4.1/47,mbtmp4.2/13,ML3.6/1,MS3.3/1, Ms1 3.3/1,ms1mx2.7/34,Error ellipse: s-maj=27.2km s-min=17.1km az=131.0*
*NEIC **14** 11:34:54.1±1.1,16.07S±0.05×173.78W±0.1,h76km±6km, mb4.4/44,Error ellipse: s-maj=14.7km s-min=5.0km az=108.0*

ISC 14 11:34:56.0±0.5,**16.06S**±0.06**×173.59W**±0.08,**h100**km, **n78,** σ1**64**/78,**mb4.3**/28,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.76**	**40**		**Pn**	**11 35 38.1**	**-0.6**
AFI				Sn	**Sn**	**11 36 07.6**	**-3.9**
NIUE	**Niue**	**4.61**	**131**		**Pn**	**11 36 03.4**	**-0.1**
NIUE				Sn	**Sn**	**11 36 52.9**	**-2.9**
MSVF	**Nonsavu**	**8.18**	**257**		Pn	11 36 58.4	+6.3
RAR	**Rarotonga**	**14.06**	**113**	Pn	**Pn**	**11 38 07.7**	**-3.1**
	2.8nm,0.3s,baz=270,slow=20,SNR=2.6						
RAR				LR	LR	11 42 19.2	
	comp=Z,107nm,18.9s,baz=244,slow=32						
RAR	**Rarotonga**	**14.06**	**113**		**Pn**	**11 38 12.1**	**+1.4**
URZ	**Urewera**	**23.59**	**199**	P	**P**	**11 39 55.9**	**-1.8**
	2.4nm,0.4s,baz=232,slow=18,SNR=1.8						
URZ				S	**S**	**11 44 04.1**	**-0.3**
	4.7nm,0.8s,baz=307,slow=14,SNR=1.8						
STKA	**Stephens Creek**	**43.55**	**240**	P	**P**	**11 42 49.5**	**-0.6**
	1.2nm,0.5s,baz=93,slow=7.1,SNR=4.2						
STKA	**Stephens Creek**	**43.55**	**240**	P	**P**	**11 42 48.6**	**-1.6**
BBOO	**Buckleboo**	**48.33**	**240**	P	**P**	**11 43 26.9**	**-0.8**
BBOO				IAmb	IAmb	11 43 36.1	
	comp=Z,4.4nm,1.0s						
WB0	**Warramunga Arr**	**49.48**	**258**	P	**P**	**11 43 35.4**	**-1.3**
WB2	**Warramunga Arr**	**49.51**	**257**	P	**P**	**11 43 35.4**	**-1.5**
WRA	**Warramunga Arr**	**49.52**	**257**	P	**P**	**11 43 34.7**	**-2.3**
	comp=Z,1.1nm,0.7s,baz=93,slow=6.7,SNR=12						
WRA	**Warramunga Arr**	**49.52**	**257**	P	**P**	**11 43 36.7**	**-0.2**
ASAR	**Alice Springs**	**49.74**	**252**	P	**P**	**11 43 37.3**	**-1.3**
	comp=Z,1.6nm,0.6s,baz=91,slow=8.1,SNR=23						
ASAR	**Alice Springs**	**49.74**	**252**	P	**P**	**11 43 36.2**	**-2.4**
VNDA	**Vanda**	**62.71**	**186**	P	**P**	**11 45 12.2**	**+2.3**
	comp=Z,2.1nm,0.7s,baz=6.5,slow=8.0,SNR=9.0						
VNDA	**Vanda**	**62.71**	**186**	P	P	11 45 12.8	+3.0
VNDA				IAmb	IAmb	11 45 13.3	
	comp=Z,3.5nm,0.9s						
QSPA	**South Pole Qui**	**73.99**	**180**	P	**P**	**11 46 22.1**	**+1.6**
QSPA				IAmb	IAmb	11 46 23.3	
	comp=Z,8.4nm,1.4s						
OHAK	**Old Harbor**	**74.94**	**11**	P	**P**	**11 46 26.1**	**+0.3**
PINE	**Pine Mountain**	**76.53**	**36**	P	**P**	**11 46 37.9**	**+2.4**
PINE				IAmb	IAmb	11 46 39.5	
	comp=Z,6.5nm,1.2s						
319A	**Douglas**	**77.64**	**52**	P	**P**	**11 46 44.7**	**+2.8**
MNTX	**Cornudas Mount**	**80.76**	**53**	P	**P**	**11 47 00.6**	**+1.9**
MNTX				IAmb	IAmb	11 47 02.6	
	comp=Z,9.9nm,1.4s						
TCUT	**Toone Canyon**	**80.85**	**43**	P	**P**	**11 47 00.7**	**+1.4**
PV09	**Paradox Valley**	**81.09**	**46**	P	**P**	**11 47 02.8**	**+2.1**
TX31	**Lajitas Ar. Si**	**81.13**	**56**	P	**P**	**11 47 02.3**	**+1.5**
TX32	**Lajitas Array**	**81.13**	**56**	P	**P**	**11 47 02.0**	**+1.2**
TXAR	**Lajitas Array**	**81.13**	**56**	P	**P**	**11 47 02.9**	**+2.0**
	comp=Z,2.2nm,1.1s,baz=221,slow=5.0,SNR=13						
TXAR	**Lajitas Array**	**81.13**	**56**	P	**P**	**11 47 01.9**	**+1.1**
PV23	**Carpenter Ridg**	**81.15**	**46**	P	**P**	**11 47 00.3**	**-0.7**
PV23				IAmb	IAmb	11 47 04.0	
	comp=Z,4.2nm,0.8s						
TRF	**Thorofare Moun**	**81.30**	**10**	P	**P**	**11 47 01.8**	**+0.7**
TRF				IAmb	IAmb	11 47 14.1	
	comp=Z,8.0nm,1.2s						
ANMO	**Albuquerque**	**81.36**	**50**	P	**P**	**11 47 03.6**	**+1.5**
ANMO				IAmb	IAmb	11 47 05.6	
	comp=Z,5.1nm,1.3s						
SKAG	**Skagway**	**81.42**	**19**	P	**P**	**11 47 03.3**	**+1.7**
SKAG				IAmb	IAmb	11 47 04.1	
	comp=Z,4.1nm,0.9s						
GDL2	**Guadalupe Moun**	**81.76**	**53**	P	**

az=77.0

ISC 14 11:44:35.7±1.2, 9.5S±0.1×155.8E±0.2, h35km, n30, σ1§20/26, mb4.2/13, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.05**	**89**	LR	LR	11 46 44.5	
	comp=Z,235nm,19.6s,baz=226,slow=36						
KRVT	**Keravat (AS076**	**6.42**	**324**	Pn	**Pn**	**11 46 08.7**	**+0.8**
	6.3nm,0.3s,baz=279,slow=0.5,SNR=8.5						
KRVT				LR	LR	11 47 45.8	
	comp=Z,64nm,20.9s,baz=196,slow=29						
RABL	**Rabaul**	**6.43**	**325**	Pn	**Pn**	**11 46 06.8**	**-1.3**
PMG	**Port Moresby**	**8.57**	**270**	LR	LR	11 50 03.0	
	comp=Z,174nm,21.7s,baz=124,slow=38						
WR0	**Warramunga Arr**	**23.04**	**241**	P	**P**	**11 49 37.9**	**-0.2**
WR0				IAmb	IAmb	11 49 47.3	
	comp=Z,11nm,1.0s						
WB0	**Warramunga Arr**	**23.09**	**241**	P	**P**	**11 49 38.9**	**+0.2**
WB0				IAmb	IAmb	11 49 43.6	
	comp=Z,10.0nm,1.1s						
WRAB	**Tennant Creek**	**23.19**	**241**	P	**P**	**11 49 39.4**	**-0.2**
WRAB				IAmb	IAmb	11 49 42.1	
	comp=Z,8.8nm,0.8s						
WB2	**Warramunga Arr**	**23.19**	**241**	P	**P**	**11 49 39.8**	**+0.2**
WB2				IAmb	IAmb	11 49 48.8	
	comp=Z,9.9nm,0.9s						
WRA	**Warramunga Arr**	**23.20**	**241**	P	**P**	**11 49 40.6**	**+0.8**
	comp=Z,6.1nm,0.8s,baz=66,slow=9.8,SNR=24						
WRA	**Warramunga Arr**	**23.20**	**241**	P	**P**	**11 49 39.5**	**-0.2**
MTN	**Manton Dam**	**24.46**	**260**	P	**P**	**11 49 50.8**	**-0.8**
MTN				IAmb	IAmb	11 49 52.0	
	comp=Z,23nm,1.4s						
AS31	**Alice Springs**	**25.24**	**233**	P	**P**	**11 49 58.7**	**0.0**
ASAR	**Alice Springs**	**25.24**	**233**	P	**P**	**11 49 59.0**	**+0.3**
	comp=Z,3.1nm,0.9s,baz=66,slow=9.7,SNR=18						
ASAR	**Alice Springs**	**25.24**	**233**	P	**P**	**11 49 58.7**	**0.0**
STKA	**Stephens Creek**	**25.87**	**209**	P	**P**	**11 50 04.0**	**-0.3**
	comp=Z,4.7nm,0.9s,baz=28,slow=10,SNR=10						
STKA	**Stephens Creek**	**25.87**	**209**	P	**P**	**11 50 04.6**	**+0.3**
KSM	**Kuching**	**46.64**	**281**	P	**P**	**11 53 00.7**	**-0.5**
KSRS	**Korea Array**	**53.55**	**332**	LR	LR	12 15 05.0	
	comp=Z,20nm,19.2s,baz=204,slow=34						
PETK	**Petropavlovsk-**	**62.41**	**1**	LR	LR	12 19 35.2	
	comp=Z,30nm,20.6s,baz=240,slow=34						
CMAR	**Chiang Mai Arr**	**62.64**	**296**	P	**P**	**11 54 59.9**	**+2.7**
	comp=Z,0.7nm,0.4s,baz=141,slow=5.8,SNR=1.8						
CMAR	**Chiang Mai Arr**	**62.64**	**296**	P	**P**	**11 54 54.3**	**-2.9**
SONM	**Songino Array**	**71.91**	**327**	P	**P**	**11 55 58.9**	**+3.4**
	comp=Z,0.4nm,0.5s,baz=142,slow=7.2,SNR=2.7						
SONM	**Songino Array**	**71.91**	**327**	P	**P**	**11 55 55.1**	**-0.4**
ILAR	**Eielson Array**	**85.41**	**21**	P	**P**	**11 57 08.4**	**-0.9**
	comp=Z,0.5nm,0.9s,baz=270,slow=2.7,SNR=3.5						
MKAR	**Makanchi Array**	**85.85**	**319**	P	**P**	**11 57 12.1**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=100,slow=6.1,SNR=2.6						
MKAR	**Makanchi Array**	**85.85**	**319**	P	**P**	**11 57 12.6**	**+0.7**
MAKZ	**Makanchi**	**86.05**	**319**	P	**P**	**11 57 12.9**	**0.0**
MAKZ				IAmb	IAmb	11 57 27.4	
	comp=Z,3.1nm,1.4s						
BCAR	**Beaver Creek A**	**86.45**	**24**	P	**P**	**11 57 14.2**	**-0.4**
BOOM	**Boomskoye usch**	**89.01**	**313**	P	**P**	**11 57 27.6**	**+0.1**
ESDC	**Sonseca Array**	**144.99**	**332**	PKPbc	**PKPdf**	**12 04 09.7**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=12,slow=6.6,SNR=2.4						

*IDC **14** 11:45:09.9±0.8, 51.61N×175.38W, h0km, mb3.9/11, mb1 4.0/13, mb1mx3.8/52, mbtmp3.9/13, ML3.8/2, MS3.4/5, Ms1 3.4/5, ms1mx2.9/58, Error ellipse: s-maj=33.3km s-min=14.5km az=160.0*

*NEIC **14** 11:45:14.0±2.2, 51.50N±0.06×175.31W±0.07, h21km±1km, Error ellipse: s-maj=8.9km s-min=6.1km az=164.0*

*AEIC **14** 11:45:14.4±2.1, 51.49N±0.04×175.26W±0.07, h26km±4km, ML3.7, mb3.8/23(NEIC), Error ellipse: s-maj=6.7km s-min=6.2km az=214.0*

ISC 14 11:45:11.7±0.7, 51.39N±0.08×175.29W±0.03, h10km, n77, σ1§24/68, mb3.8/13, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSMY	**Great Sitkin M**	**0.81**	**324**		**Pb**	**11 45 28.8**	**+0.9**
GSTD	**Great Sitkin T**	**0.86**	**322**		**Pb**	**11 45 29.5**	**+0.8**
GSTR	**Great Sitkin T**	**0.86**	**326**		**Pb**	**11 45 29.6**	**+0.9**
ADK	**Adak**	**1.00**	**300**		**Pg**	**11 45 31.7**	**+0.7**
ADK				Sg	**Sg**	**11 45 43.8**	**-0.2**
ATKA	**Atka Island**	**1.06**	**39**		**Pg**	**11 45 31.5**	**-0.6**
ATKA				Sg	**Sg**	**11 45 43.6**	**-2.3**
KIWB	**Kanaga Island**	**1.25**	**293**		Pb	11 45 30.2	-5.1
KIMD	**Kanaga Island**	**1.27**	**288**		**Pn**	**11 45 35.8**	**+0.3**
KIKV	**Kanaga Island**	**1.27**	**294**		**Pn**	**11 45 35.9**	**+0.4**
TAPA	**Tanaga Point A**	**1.63**	**286**		**Pn**	**11 45 41.5**	**+1.0**
TAFP	**Tanaga Falls P**	**1.75**	**288**		**Pn**	**11 45 43.3**	**+1.2**
TAFP					**Sn**	**11 46 04.2**	**-0.3**
TASE	**Tanaga Southea**	**1.77**	**286**		**Pn**	**11 45 43.7**	**+1.3**
NIKH	**Nikolski High**	**4.27**	**66**	Pn	**Pn**	**11 46 18.7**	**+2.1**
NIKH				Sn	**Sn**	**11 47 06.8**	**+0.4**
MREP	**Makushin Rep't**	**5.75**	**62**		**Pn**	**11 46 39.5**	**+2.5**
SPIA	**Saint Paul Isl**	**6.51**	**25**	Pn	**Pn**	**11 46 49.9**	**+2.5**
KDAK	**Kodiak Island**	**14.60**	**55**	Pn	**Pn**	**11 48 36.5**	**-1.5**
	0.4nm,0.3s,baz=266,slow=2.4,SNR=12						
KDAK				Sn	**Sn**	**11 51 19.2**	**-0.4**
	0.1nm,0.3s,baz=19,slow=18,SNR=1.6						
PETK	**Petropavlovsk-**	**16.60**	**287**	Pn	**P**	**11 49 07.3**	**+0.5**
	0.1nm,0.3s,baz=79,slow=15,SNR=2.0						
PETK				LR	LR	11 55 16.3	
	comp=Z,37nm,18.7s,baz=238,slow=37						
KTH	**Kantishna Hill**	**17.75**	**37**	P	**Pn**	**11 49 19.9**	**+1.2**
KTH				IAmb	IAmb	11 49 24.7	
	comp=Z,6.3nm,0.9s						
TRF	**Thorofare Moun**	**17.93**	**38**	P	**Pn**	**11 49 22.2**	**+1.2**
TRF				IAmb	IAmb	11 49 26.7	
	comp=Z,7.8nm,1.4s						
BPAW	**Bear Paw Mtn.**	**18.02**	**36**	P	**Pn**	**11 49 23.4**	**+1.5**
IMAR	**Indian Mountai**	**18.27**	**29**	P	**Pn**	**11 49 26.1**	**+1.2**
SCM	**Sheep Creek Mo**	**18.45**	**45**	P	**Pn**	**11 49 26.0**	**-1.2**
SCM				IAmb	IAmb	11 49 42.2	
	comp=Z,15nm,1.4s						
RND	**Reindeer**	**18.48**	**39**	P	**Pn**	**11 49 27.1**	**-0.5**
MLY	**Manley**	**18.64**	**33**	P	**P**	**11 49 29.8**	**+0.5**
DHY	**Denali Highway**	**18.92**	**41**	P	**P**	**11 49 31.6**	**-0.9**
DHY				IAmb	IAmb	11 49 49.3	
	comp=Z,6.9nm,1.3s						
BILL	**Bilibino**	**18.97**	**339**	P	**P**	**11 49 33.0**	**+0.3**
BILL				IAmb	IAmb	11 49 33.8	
	comp=Z,7.4nm,1.2s						
NEA	**Nenana**	**18.98**	**36**	P	**P**	**11 49 32.4**	**-0.5**
WRH	**Wood River Hil**	**19.29**	**37**	P	**P**	**11 49 34.6**	**-1.7**
HDA	**Harding Lake**	**19.69**	**38**	P	**P**	**11 49 40.4**	**-0.3**
IL31		**19.89**	**37**	P	**P**	**11 49 42.4**	**-0.4**
IL31				IAmb	IAmb	11 49 57.7	
	comp=Z,4.5nm,1.3s						
ILAR	**Eielson Array**	**19.89**	**37**	P	**P**	**11 49 39.5**	**-3.3**
	comp=Z,0.3nm,0.3s,baz=228,slow=8.7,SNR=23						
ILAR	**Eielson Array**	**19.89**	**37**	P	**P**	**11 49 42.3**	**-0.6**
RIDG	**Independent Ri**	**20.23**	**41**	P	**P**	**11 49 46.2**	**-0.5**
RIDG				IAmb	IAmb	11 49 54.6	
	comp=Z,7.8nm,1.3s						
DOT	**Dot Lake**	**20.52**	**41**	P	**P**	**11 49 48.8**	**-1.0**
SCRK	**Sand Creek**	**20.68**	**40**	P	**P**	**11 49 49.9**	**-1.6**
MA2	**Magadan**	**20.70**	**307**	LR	LR	11 57 34.8	
	comp=Z,31nm,19.1s,baz=105,slow=36						
SEY	**Seymchan**	**20.74**	**316**	P	Pn	11 49 54.5	+0.1
	comp=Z,1.0nm,0.6s,baz=85,slow=18,SNR=5.0						
BMAR	**Burnt Mountain**	**22.05**	**32**	P	**P**	**11 50 07.0**	**+0.9**
EGAK	**Eagle**	**22.12**	**40**	P	**P**	**11 50 05.4**	**-1.5**
EGAK				IAmb	IAmb	11 50 20.7	
	comp=Z,2.8nm,0.8s						
DAWY	**Dawson**	**22.61**	**42**	P	**P**	**11 50 12.2**	**-0.1**
DAWY				IAmb	IAmb	11 50 20.5	
	comp=Z,3.4nm,1.1s						
INK	**Inuvik**	**26.20**	**34**	P	**P**	**11 50 43.9**	**-2.2**
	comp=Z,0.5nm,0.4s,baz=255,slow=4.9,SNR=2.3						
INK	**Inuvik**	**26.20**	**34**	P	**P**	**11 50 45.0**	**-1.1**
INK				IAmb	IAmb	11 50 54.1	
	comp=Z,3.8nm,1.4s						
BBB	**Bella Bella**	**28.80**	**70**	P	**P**	**11 51 10.0**	**+0.6**
	comp=Z,17nm,1.2s,baz=146,slow=7.3,SNR=2.6						
ASAJ	**Asahikawa**	**28.90**	**272**	LR	LR	12 03 51.7	
	comp=Z,32nm,18.6s,baz=198,slow=39						
KLR	**Kul'dur**	**33.28**	**288**	P	**P**	**11 51 48.1**	**-1.0**
	comp=Z,2.0nm,0.4s,baz=73,slow=6.9,SNR=14						
KLR	**Kul'dur**	**33.28**	**288**	P	**P**	**11 51 48.4**	**-0.7**
YKA	**Yellowknife Ar**	**33.63**	**47**	P	**P**	**11 51 51.0**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=279,slow=7.9,SNR=7.7						
YKA				PcP	**PcP**	**11 54 31.2**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=288,slow=3.1,SNR=6.7						
YKA				ScP	**ScP**	**11 58 15.8**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=259,slow=4.4,SNR=4.6						
H11N2	**WAKE ISLAND Hy**	**34.56**	**211**	T	T	12 29 06.9	
	baz=18,slow=76,SNR=71						
H11N3	**WAKE ISLAND Hy**	**34.57**	**211**	T	T	12 28 56.4	
	baz=18,slow=76,SNR=66						
H11N1	**WAKE ISLAND Hy**	**34.58**	**211**	T	T	12 28 59.5	
	baz=18,slow=76,SNR=75						
USRK	**Ussuriysk Ar.**	**35.47**	**280**	P	**P**	**11 52 07.3**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=55,slow=11,SNR=6.2						
USRK	**Ussuriysk Ar.**	**35.47**	**280**	P	**P**	**11 52 07.6**	**-0.4**
H11S1	**WAKE ISLAND Hy**	**35.77**	**210**	T	T	12 30 37.4	
	baz=19,slow=76,SNR=113						
H11S2	**WAKE ISLAND Hy**	**35.78**	**210**	T	T	12 30 38.6	
	baz=19,slow=76,SNR=64						
H11S3	**WAKE ISLAND Hy**	**35.78**	**210**	T	T	12 30 24.9	
	baz=19,slow=76,SNR=24						
MCMT	**McKenzie Canyo**	**41.08**	**74**	P	**P**	**11 52 56.4**	**+0.8**
KSRS	**Korea Array**	**41.84**	**273**	P	**P**	**11 53 02.1**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=60,slow=7.3,SNR=2.7						
YHH	**Holmes Hill**	**42.30**	**73**	P	**P**	**11 53 06.2**	**+0.6**
H17A	**Grant Village**	**42.67**	**73**	P	**P**	**11 53 10.0**	**+1.3**
BW06	**Boulder Array**	**44.20**	**74**	P	**P**	**11 53 21.5**	**+0.6**
PD31	**Pinedale Array**	**44.20**	**74**	P	**P**	**11 53 21.9**	**+1.0**
PD31				IAmb	IAmb	11 53 22.4	
	comp=Z,2.1nm,0.9s						
PDAR	**Pinedale Array**	**44.20**	**74**	P	**P**	**11 53 21.4**	**+0.5**
	comp=Z,2.2nm,0.5s,baz=307,slow=3.4,SNR=13						
PDAR	**Pinedale Array**	**44.20**	**74**	P	**P**	**11 53 21.6**	**+0.7**
SONM	**Songino Array**	**48.59**	**298**	PcP	**PcP**	**11 55 19.7**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=87,slow=2.6,SNR=3.0						
MKAR	**Makanchi Array**	**61.73**	**310**	P	**P**	**11 55 27.8**	**-2.1**
	comp=Z,0.2nm,0.2s,baz=36,slow=6.1,SNR=5.4						
PPT	**Papeete**	**72.25**	**154**	LR	LR	12 22 15.1	
	comp=Z,69nm,21.7s,baz=300,slow=31						
CTA	**Charters Tower**	**78.75**	**217**	LR	LR	12 25 55.3	
	comp=Z,219nm,19.9s,baz=303,slow=31						
WRA	**Warramunga Arr**	**83.58**	**227**	P	**P**	**11 57 39.1**	**-0.9**
	comp=Z,0.4nm,0.8s,baz=33,slow=5.7,SNR=1.8						
WRA	**Warramunga Arr**	**83.58**	**227**	IAmb	IAmb	11 57 42.8	
	comp=Z,0.2nm,1.2s						
FITZ	**Fitzroy Crossi**	**86.23**	**235**	P	**P**	**11 57 53.6**	**+0.3**
	comp=Z,2.5nm,1.0s,baz=17,slow=14,SNR=2.4						
ASAR	**Alice Springs**	**87.02**	**225**	P	**P**	**11 57 56.0**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=24,slow=4.4,SNR=4.3						
ASAR	**Alice Springs**	**87.02**	**225**	P	**P**	**11 57 57.9**	**+0.8**
TORD	**Torodi Ar. Bea**	**115.69**	**3**	PKP	**PKiKP**	**12 03 52.9**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=7.8,slow=3.1,SNR=1.9						
H03N2	**Juan Fernandez**	**119.04**	**108**	T	T	14 14 49.8	
	baz=317,slow=78,SNR=4.2						
H03N1	**Juan Fernandez**	**119.06**	**108**	T	T	14 14 58.5	
	baz=317,slow=78,SNR=17						
H03N3	**Juan Fernandez**	**119.06**	**108**	T	T	14 14 57.1	
	baz=317,slow=78,SNR=14						
MAW	**Mawson**	**147.83**	**218**	PKPbc	**PKPdf**	**12 04 55.7**	**+3.3**
	comp=Z,1.4nm,0.5s,baz=56,slow=7.3,SNR=2.7						
BOSA	**Boshof**	**152.52**	**318**	PKPbc	**PKPbc**	**12 05 07.8**	**-0.3**
	comp=Z,1.9nm,0.5s,baz=21,slow=4.2,SNR=6.2						

*GCG **14** 11:46:07.7±0.3, 15.34N×91.60W, h90km±35km, MD3.9*

*MEX **14** 11:46:09.0±0.9, 14.28N×91.53W, h31km±23km, MD3.4*

ISC 14 11:46:13.6±1.8, 14.7N±0.1×91.8W±0.1, h24km±24km, n7, σ2§25/12, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.51**	**289**	*eP*	**Pn**	**11 46 24.3**	**-1.2**
THIG				*eS*	**Sn**	**11 46 36.4**	**+2.9**
FUG	**Fuego 3**	**0.94**	**108**	*eP*	**Pb**	**11 46 29.8**	**-1.6**
FUG				*eS*	**Sb**	**11 46 47.0**	**+3.5**
PCG	**Pacaya**	**1.17**	**107**	*eP*	**Pb**	**11 46 35.1**	**-0.3**
PCG				*eS*	**Sb**	**11 46 51.8**	**+1.6**
IXG	**Ixpaco**	**1.40**	**114**	*eP*	**Pn**	**11 46 35.6**	**-2.2**
CCIG	**Comitan**	**1.57**	**347**	*i* P	**Pb**	**11 46 40.7**	**-1.6**
CCIG				*i* S	**Sb**	**11 47 03.8**	**+2.0**
PCIG		**1.70**	**304**	*eP*	**Pn**	**11 46 40.4**	**-1.4**
TGIG		**2.41**	**327**	*eP*	**Pn**	**11 46 51.7**	**+0.1**
TGIG				*i* S	**Sb**	**11 47 25.6**	**-0.1**

*SKHL **14** 11:51:53.6±0.3, 44.85N×151.33E, h41km±5km, mb4.6/2*

*JMA **14** 11:51:57.7±0.5, 45.56N×150.31E, h188km, M3.6*

*IDC **14** 11:51:58.4±2.6, 46.52N×149.93E, h203km±25km, mb3.2/12, mb1 3.3/16, mb1mx3.2/45, mbtmp3.7/16, Error ellipse: s-maj=20.2km s-min=13.9km az=132.0*

ISC 14 11:51:55.2±0.8, 45.9N±0.1×150.21E±0.10, h200km, n42, σ1§93/48, mb3.3/12, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.78**	**248**	*i* P	**Pn**	**11 52 31.6**	**+0.1**
KUR				AMB	AMB	11 52 34.0	
	80nm,0.3s						
KUR				*i* S	**Sn**	**11 53 00.3**	**+0.7**
KUR				A	A	11 53 03.0	
	130nm,0.3s						
KUR				A	A	11 53 03.0	
	360nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.61**	**240**	*eP*	**Pn**	**11 52 53.8**	**+1.7**
YUK				AMB	AMB	11 52 55.0	
	50nm,0.3s						
YUK				*eS*	**Sn**	**11 53 38.7**	**+2.0**
YUK				A	A	11 53 46.0	
	140nm,0.3s						
YUK				A	A	11 53 46.0	
	110nm,0.3s						
LAGR	**Lagunnoye**	**3.65**	**241**	*eS*	**Sn**	**11 53 39.9**	**+2.4**
GRPR	**Tuman**	**3.69**	**240**	*eS*	**Sn**	**11 53 40.5**	**+2.0**
GLVR	**Golovnino**	**3.98**	**239**	*eP*	**Pn**	**11 52 57.7**	**+1.0**
GLVR				*eS*	**Sn**	**11 53 46.2**	**+1.2**
GLVR				A	A	11 53 48.0	
	230nm,0.7s						
GLVR				A	A	11 53 48.0	
	180nm,0.7s						
NEM2	**Nemuro 2**	**4.08**	**233**	P	**Pn**	**11 52 58.5**	**+0.6**
NEM2				*eS*	**Sn**	**11 53 45.8**	**-1.4**
NMR	**Nemuro--Hokkai**	**4.09**	**233**	*i* P	**Pn**	**11 52 57.7**	**-0.3**
NMR				*eS*	**Sn**	**11 53 44.9**	**-2.4**
JRA	**Rausu**	**4.12**	**243**	P	**Pn**	**11 53 00.2**	**+1.8**
JNK	**Nakash**	**4.55**	**241**	P	**Pn**	**11 53 05.4**	**+1.5**
JTKR	**Abashiri--Toko**	**4.88**	**249**	P	**Pn**	**11 53 09.9**	**+1.9**
JAK	**Akkeshi**	**4.91**	**236**	P	**Pn**	**11 53 09.1**	**+0.8**
JAK				*eS*	**Sn**	**11 54 05.0**	**-1.0**
JMP	**Maruseppu**	**5.22**	**251**	P	**Pn**	**11 53 14.4**	**+2.0**
JAR	**Ashorobuto**	**5.29**	**243**	P	**Pn**	**11 53 15.9**	**+2.6**
JOB	**Onbets**	**5.47**	**239**	P	**Pn**	**11 53 17.1**	**+1.6**
JKK2	**Kamakawa 2**	**5.68**	**252**	P	**Pn**	**11 53 20.8**	**+2.5**
ASAJ	**Asahikawa**	**5.69**	**254**	P	**Pn**	**11 53 21.2**	**+2.9**
	1.2nm,0.3s,baz=66,slow=14,SNR=15						
ASAJ	**Asahikawa**	**5.69**	**254**	P	**Pn**	**11 53 21.1**	**+2.7**
JCH	**Churui**	**5.92**	**239**	P	**Pn**	**11 53 22.4**	**+1.0**
JCH				*eS*	**Sn**	**11 54 28.5**	**-1.0**
JEM	**Erimo**	**6.41**	**235**	P	**Pn**	**11 53 29.9**	**+2.2**
JBT2	**Biratori 2**	**6.44**	**244**	P	**Pn**	**11 53 30.2**	**+2.1**
JNB	**Noboribetsu**	**7.44**	**246**	P	**Pn**	**11 53 41.6**	**+0.6**
JNB				*eS*	**Sn**	**11 55 04.5**	**-0.7**
JKB	**Kayabe**	**7.75**	**242**	P	**Pn**	**11 53 45.7**	**+0.6**
JKB				*eS*	**Sn**	**11 55 08.2**	**-4.4**
JYM2	**Yakumo 2**	**8.04**	**245**	P	**Pn**	**11 53 49.5**	**+0.6**
JANG	**Nango**	**8.43**	**232**	P	**Pn**	**11 53 53.5**	**-0.5**
PETK	**Petropavlovsk-**	**8.69**	**31**	P	Pn	11 53 51.2	-6.0
	0.1nm,0.3s,baz=203,slow=14,SNR=3.0						
JIO	**Ouri**	**9.93**	**225**	*eS*	**Sn**	**11 56 00.4**	**-4.1**
KLR	**Kul'dur**	**12.90**	**292**	P	**Pn**	**11 54 50.3**	**-0.9**
	0.1nm,0.3s,baz=102,slow=14,SNR=6.1						
USRK	**Ussuriysk Ar.**	**13.00**	**269**	P	**Pn**	**11 54 53.8**	**+1.3**
	baz=58,slow=10.0,SNR=5.1						
SEY	**Seymchan**	**17.10**	**3**	P	**P**	**11 55 36.9**	**-3.9**
	0.3nm,0.3s,baz=59,slow=23,SNR=7.3						
KSRS	**Korea Array**	**18.63**	**251**	P	**Pn**	**11 56 03.8**	**+3.4**
	0.1nm,0.3s,baz=50,slow=12,SNR=4.0						
SONM	**Songino Array**	**29.72**	**290**	P	**P**	**11 57 42.8**	**+0.2**
	0.3nm,0.6s,baz=84,slow=13,SNR=1.9						
ILAR	**Eielson Array**	**38.45**	**38**	P	**P**	**11 58 56.7**	**-0.5**
	0.4nm,0.5s,baz=268,slow=7.5,SNR=8.1						
INK	**Inuvik**	**43.43**	**32**	P	**P**	**11 59 38.0**	**+0.4**
	0.4nm,0.3s,baz=274,slow=9.0,SNR=9.3						
MKAR	**Makanchi Array**	**45.53**	**297**	P	**P**	**11 59 54.8**	**+0.1**
	0.5nm,0.5s,baz=64,slow=6.2,SNR=4.8						
YKA	**Yellowknife Ar**	**52.78**	**35**	P	**P**	**12 00 49.5**	**+0.2**
	0.4nm,0.6s,baz=301,slow=6.6,SNR=7.8						
FINES	**FINESS Array B**	**63.92**	**334**	P	**P**	**12 02 04.4**	**-1.8**
	1.7nm,0.5s,baz=39,slow=9.8,SNR=9.2						
PDAR	**Pinedale Array**	**66.86**	**52**	P	**P**	**12 02 27.5**	**+1.8**
	0.4nm,0.6s,baz=310,slow=4.5,SNR=2.7						
WRA	**Warramunga Arr**	**67.11**	**196**	P	P	12 02 32.5	+5.4
	0.4nm,0.8s,baz=11,slow=6.4,SNR=1.8						
NOA	**NORSAR Array B**	**68.35**	**340**	P	**P**	**12 02 32.9**	**-1.5**
	0.3nm,0.6s,baz=29,slow=6.9,SNR=1.6						
ASAR	**Alice Springs**	**70.81**	**196**	P	P	12 02 56.4	+6.5
	0.5nm,0.6s,baz=9.8,slow=6.1,SNR=8.3						
AKASG	**Malin Array Be**	**71.10**	**325**	P	**P**	**12 02 50.2**	**-1.1**
	0.7nm,0.4s,baz=34,slow=6.1,SNR=2.4						
TXAR	**Lajitas Array**	**79.65**	**59**	P	**P**	**12 03 42.6**	**+2.1**
	0.6nm,0.7s,baz=301,slow=5.2,SNR=6.0						

IDC 14 12:09:49.2±3.0, 7.03S×129.90E, h102km±40km, mb3.3/1, mb1 3.4/5, mb1mx3.2/34, mbtmp3.7/5, Error ellipse: s-maj=76.2km s-min=23.1km az=90.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.27**	**13**	P	Pn	12 11 19.2	0.0
	0.6nm,0.3s,baz=162,slow=20,SNR=1.3						
SIJI				S	Sn	12 12 25.1	-4.4
	1.0nm,0.3s,baz=189,slow=22,SNR=1.6						
FITZ	**Fitzroy Crossi**	**11.76**	**200**	P	Pn	12 12 34.4	+0.6
	0.4nm,0.3s,baz=28,slow=15,SNR=7.7						
FITZ				S	Sn	12 14 37.1	-6.1
	0.7nm,0.3s,baz=279,slow=19,SNR=9.1						
WRA	**Warramunga Arr**	**13.55**	**162**	P	Pn	12 12 55.5	-1.8
	0.5nm,0.3s,baz=332,slow=14,SNR=13						
WRA				S	Sn	12 15 20.2	-6.3
	0.9nm,0.3s,baz=337,slow=22,SNR=11						
ASAR	**Alice Springs**	**16.99**	**167**	P	P	12 13 41.8	+0.8
	0.3nm,0.3s,baz=346,slow=9.8,SNR=31						
ASAR				S	Sn	12 16 42.4	-7.2
	0.2nm,0.3s,baz=355,slow=26,SNR=4.0						
MKAR	**Makanchi Array**	**68.19**	**327**	P	P	12 20 38.8	0.0
	0.2nm,0.3s,baz=122,slow=7.3,SNR=7.5						

*CMWS **14** 12:18:20.5±0.7, 44.05N×42.02E, M2.3, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

*NORS **14** 12:18:21.2±0.0, 43.91N×41.92E, h1km, MPVA3.5, Explosion*

MOS 14 12:18:20.5±0.0, 44.05N×42.01E, h0km, MPVA3.5, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHA1	**Shidzhatmaz**	**0.56**	**123**	*i* Pg	Pg	12 18 31.9	+0.5
SHA1				*i* Sg	Sg	12 18 39.5	+0.9
KBZ	**Khabaz**	**0.72**	**116**	*i* Pg	Pg	12 18 34.3	0.0
KBZ				*i* Sg	Sg	12 18 44.5	+0.9
ARXR	**Arkhyz**	**0.72**	**228**	*e*Pg	Pb	12 18 35.9	-0.1
ARXR				*i* Sg	Sb	12 18 45.3	-1.2
DOMR	**Dombai**	**0.81**	**200**	*e*Pg	Pb	12 18 36.8	-0.7
DOMR				*e*Sg	Sg	12 18 47.5	+1.0
NEY	**Neytrino**	**0.96**	**147**	*i* Pg	Pg	12 18 38.9	+0.1
NEY				*i* Sg	Sg	12 18 51.6	+0.4
KBTC	**Kuba-Taba**	**1.04**	**103**	*e*Pg	Pg	12 18 40.8	+0.4
KBTC				*e*Sg	Sb	12 18 56.0	+0.4
GOF	**Gofitskoye**	**1.25**	**36**	*e*Pg	Pg	12 18 42.9	-1.6
GOF				*e*Sg	Sb	12 19 01.9	+0.3
LSNR	**Lesken**	**1.53**	**120**	*e*Pg	Pg	12 18 50.1	+0.3
LSNR				*e*Sg	Sn	12

baz=289,slow=11
ARCES ARCESS Array B 9.95 88 Pn **Pn** **12 21 18.8 -2.7**
comp=Z,1.0nm,0.3s,baz=287,slow=12,SNR=31
ARCES LR LR 12 24 42.5
comp=Z,328nm,18.9s,baz=318,slow=35
ARCES ARCESS Array B 9.95 88 Pn **Pn** **12 21 19.0 -2.5**
ARE0 ARCESS Array S 9.95 88 Pn **Pn** **12 21 19.1 -2.4**
MOL Molde 10.05 148 *e*P **Pn** **12 21 18.7 -4.1**
AKN Aaknes 10.33 150 Pn **Pn** **12 21 24.1 -2.5**
AKN Sn Sn 12 23 13.0 -9.0
AKN Aaknes 10.33 150 Pn **Pn** **12 21 24.1 -2.5**
AKN Sn Sn 12 23 13.0 -9.0
KEV Kevo 10.34 85 Pn **Pn** **12 21 24.5 -2.2**
NOR Nord 10.47 350 *i* P **Pn** **12 21 26.4 -2.1**
SUMG Summit 10.60 292 **Pn** **12 21 30.9 +0.1**
SUMG Summit 10.60 292 *i* P **Pn** **12 21 32.0 +1.3**
DOMB Dombas 10.80 146 *e*P **Pn** **12 21 31.5 -1.7**
NC204 NORSAR Array S 11.83 143 **Pn** **12 21 44.9 -2.2**
SKAR Skarslia 11.95 150 *e*P **Pn** **12 21 45.9 -3.0**
NBO00 NORSAR Array S 12.05 144 Pn **Pn** **12 21 48.6 -1.7**
NB2 NORSAR Subarra 12.13 143 Pn **Pn** **12 21 49.8 -1.6**
NB2 NORSAR Subarra 12.13 143 Pn **Pn** **12 21 49.8 -1.6**
NOA NORSAR Array B 12.13 143 Pn **Pn** **12 21 49.1 -2.2**
comp=Z,0.1nm,0.3s,baz=333,slow=12,SNR=6.4
NOA LR LR 12 26 16.3
comp=Z,1μm,21.2s,baz=335,slow=36
NC405 NORSAR Array S 12.16 142 **Pn** **12 21 50.6 -1.1**
NRA0 NORESS Array S 12.47 143 Pn **Pn** **12 21 53.8 -2.2**
baz=348,slow=18
NRA0 NORESS Array S 12.47 143 Pn **Pn** **12 21 53.8 -2.2**
baz=348,slow=18
KONO Kongsberg 13.14 149 Pn **Pn** **12 22 06.3 +1.3**
APA0 Apatity Array 13.30 89 Pn **Pn** **12 22 03.8 -3.3**
baz=329,slow=14
APA0 Apatity Array 13.30 89 Pn **Pn** **12 22 03.8 -3.3**
baz=329,slow=14
HFS Hagfors 13.46 139 Pn **Pn** **12 22 07.1 -2.3**
baz=334,slow=14
HFS Hagfors 13.46 139 Pn **Pn** **12 22 06.8 -2.6**
comp=Z,2.0nm,0.3s,baz=338,slow=9.9,SNR=22
HFS LR LR 12 26 57.6
comp=Z,1μm,21.9s,baz=330,slow=36
HFS Hagfors 13.46 139 **Pn** **12 22 07.2 -2.2**
HFS Hagfors 13.46 139 Pn **Pn** **12 22 07.1 -2.3**
baz=334,slow=14
LVZ Lovozero 13.66 87 Pn **Pn** **12 22 09.8 -2.4**
FIA0 FINESS Array S 15.45 116 Pn **Pn** **12 22 33.1 -3.1**
baz=326,slow=12
FIA0 FINESS Array S 15.45 116 Pn **Pn** **12 22 33.1 -3.1**
baz=326,slow=12
FINES FINESS Array B 15.45 116 Pn **Pn** **12 22 33.2 -3.1**
comp=Z,0.4nm,0.3s,baz=318,slow=11,SNR=12
FINES LR LR 12 27 53.7
comp=Z,802nm,19.3s,baz=331,slow=35
FINES FINESS Array B 15.45 116 Pn **Pn** **12 22 33.8 -2.5**
EKA Eskdalemuir Ar 16.30 178 Pn **Pn** **12 22 46.4 -0.9**
baz=352,slow=13,SNR=3.3
EKA Eskdalemuir Ar 16.30 178 **Pn** **12 22 46.4 -0.9**
EKA **pP** **12 22 51.5 -2.4**
SFJD Kangerlussuaq 16.77 277 Pn **P** **12 22 56.4 +1.1**
comp=Z,0.3nm,0.3s,baz=61,slow=13,SNR=1.7
SFJD LR LR 12 28 37.3
comp=Z,382nm,18.6s,baz=47,slow=34
TMCR Tamitsa 17.08 94 *e*P **Pn** **12 22 57.2 +0.2**
comp=Z,41nm,0.6s
TULEG Thule 17.59 315 P **Pn** **12 22 59.8 -3.5**
TULEG IAmb IAmb 12 23 00.8
comp=Z,16nm,0.6s
LSH Leshukonskoye 19.04 86 *e*P **P** **12 23 14.2 -6.1**
comp=Z,31nm,1.1s
KLMR Klimovskoe 19.98 100 *e*P **P** **12 23 29.4 -1.2**
comp=Z,45nm,1.1s
KLMR Klimovskoe 19.98 100 *e*Pn **P** **12 23 29.5 -1.2**
KLMR AMP 12 23 31.2
comp=Z,49nm,1.0s
SUW Suwalki 21.17 132 *e*P **P** **12 23 44.2 +0.6**
SUW Suwalki 21.17 132 P **P** **12 23 43.5 0.0**
BMRD Maredsous 21.70 165 P **P** **12 23 50.2 +1.0**
BMRD pP **pwP** **12 23 56.4 +0.9**
BMRD sP **sP** **12 23 59.0 +4.4**
CLL Collm 21.71 150 *e*P **P** **12 23 50.0 +0.7**
CLL *i* sP **pwP** **12 23 54.3 -1.3**
comp=Z,34nm,1.4s
CLL *e*S **S** **12 27 52.0 +3.3**
CLL Collm 21.71 150 P **P** **12 23 49.4 +0.1**
CLL IAmb IAmb 12 23 55.9
comp=Z,15nm,1.0s
MICGM Minsk 21.90 125 *e*P **P** **12 23 50.0 -1.4**
MICGM *e*LR LR 12 31 08.0
BRG Berggiesshubel 22.28 149 *e*P **P** **12 23 57.8 +2.4**
comp=Z,5.2nm,0.9s
BRG S **S** **12 28 06.0 +6.3**
comp=N,270nm,20.6s
comp=E,343nm,17.1s
comp=Z,348nm,17.1s
NKC Novy Kostel 22.66 152 AMS AMS 12 30 20.0
comp=Z,400nm,30.8s
KSP Ksiaz 22.71 145 *e*P **P** **12 24 00.8 +0.7**
CHVC Chvalec 22.91 146 *e*P **P** **12 24 03.3 +1.1**
CHVC *ex* x 12 24 07.8
CHVC AMS AMS 12 34 00.0
comp=Z,400nm,13.8s
OSTC Ostas 22.97 146 AMS AMS 12 34 00.0
comp=Z,400nm,13.1s
UPC Upice 22.98 146 *e*P **P** **12 24 07.4 +4.5**
UPC AMS AMS 12 34 00.0
comp=Z,400nm,14.4s
GRA1 Grafenberg Arr 23.02 154 P **P** **12 24 02.6 -0.7**
GRA1 IAmb IAmb 12 24 14.7
comp=Z,33nm,1.5s
DPC Dobruska-Polom 23.19 146 *e*P **P** **12 24 05.2 +0.1**
DPC *e*pP **pwP** **12 24 10.2 -1.1**
DPC AMS AMS 12 34 10.0
comp=Z,400nm,14.6s
PRU Pruhonice 23.23 149 *e*P **P** **12 24 11.5 +6.0**
PRU AMS AMS 12 32 00.0
comp=Z,300nm,22.8s
GOPC GO Pecny, Ondr 23.34 148 *e*P **P** **12 24 11.6 +5.0**
GOPC *ex* x 12 24 20.9
GOPC AMS AMS 12 31 50.0
comp=Z,400nm,24.3s
KRLC Kraliky 23.54 145 AMS AMS 12 34 20.0
comp=Z,500nm,12.7s
CLF Chambon-Foret 23.79 170 P **P** **12 24 12.8 +1.9**
CLF IAmb IAmb 12 24 17.2
comp=Z,14nm,0.7s
OBN Obninsk 23.79 112 LR LR 12 32 54.3
comp=Z,151nm,18.5s,baz=348,slow=35
KHC Kasperske Hory 23.91 151 *e*P **P** **12 24 14.1 +1.9**
KHC *e*pP **pwP** **12 24 17.3 -1.7**
KHC AMS AMS 12 30 50.0
comp=Z,500nm,35.0s
KHC Kasperske Hory 23.91 151 P **P** **12 24 12.3 +0.1**
MORC Moravsky Berou 23.96 144 P **P** **12 24 13.7 +1.0**
OJC Ojcow 23.98 141 *e*P **P** **12 24 12.5 -0.2**
OJC Ojcow 23.98 141 P **P** **12 24 13.5 +0.8**
OJC IAmb IAmb 12 24 19.5
comp=Z,16nm,1.2s
ECH Echery 23.99 162 P **P** **12 24 09.3 -3.5**
BFO Black Forest 24.00 160 P **P** **12 24 12.4 -0.5**
BFO IAmb IAmb 12 24 20.3
comp=Z,8.8nm,0.9s
OKC Ostrava-Krasne 24.02 143 AMS AMS 12 34 30.0
comp=Z,600nm,14.2s
TREC Trest 24.06 148 AMS AMS 12 32 10.0
comp=Z,400nm,21.0s
RES Resolute Bay 24.15 320 P **P** **12 24 20.0 +5.9**
comp=Z,5.0nm,0.9s,baz=42,slow=12,SNR=9.7
RES LR LR 12 33 18.8
comp=Z,608nm,20.2s,baz=63,slow=36
GEC2 GERESS Array S 24.21 151 P **P** **12 24 15.8 +0.8**
GEC2 IAmb IAmb 12 24 22.5
comp=Z,21nm,1.5s
GERES GERESS Array B 24.21 151 P **P** **12 24 15.6 +0.6**
comp=Z,0.5nm,0.3s,baz=336,slow=8.9,SNR=2.4
GERES LR LR 12 33 22.2
comp=Z,263nm,21.3s,baz=336,slow=36
GERES GERESS Array B 24.21 151 P **P** **12 24 13.8 -1.2**
VRAC Vranov 24.24 146 P **P** **12 24 15.8 +0.7**
comp=Z,4.1nm,0.6s,baz=345,slow=11,SNR=1.7
VRAC LR LR 12 33 26.9
comp=Z,350nm,21.6s,baz=337,slow=36
FRB Frobisher Bay 24.54 285 LR LR 12 33 23.2
comp=Z,321nm,19.2s,baz=28,slow=35
KIRV Kirov 24.89 93 P **P** **12 24 20.3 -0.6**
comp=Z,4.3nm,0.4s,baz=324,slow=16,SNR=1.5
KIRV LR LR 12 33 22.7
comp=Z,172nm,20.8s,baz=332,slow=35
KWP Kalwaria Pacla 25.14 137 *e*P **P** **12 24 23.8 +0.4**
KWP Kalwaria Pacla 25.14 137 P **P** **12 24 23.6 +0.2**
VYHS Vyhne 25.43 143 *e*P **P** **12 24 28.4 +2.4**
AKASG Malin Array Be 25.70 127 P **P** **12 24 27.0 -1.3**
comp=Z,5.4nm,0.5s,baz=337,slow=9.9,SNR=11
AKASG LR LR 12 34 14.7
comp=Z,508nm,19.7s,baz=340,slow=36
AKASG Malin Array Be 25.70 127 P **P** **12 24 28.0 -0.3**
AKBB Malin Array Si 25.70 127 P **P** **12 24 27.9 -0.4**
DAVOX Davos/Dischmat 25.70 158 LR LR 12 35 46.0
comp=Z,161nm,18.6s,baz=272,slow=39
KOLS Kolonicke sedl 25.71 138 *e*P **P** **12 24 31.2 +2.7**
TUE Stuetta 25.94 159 P **P** **12 24 30.9 0.0**
TUE IAmb IAmb 12 24 39.0
comp=Z,7.6nm,1.1s
PSZ Piszkesteto 26.19 142 P **P** **12 24 34.2 +1.3**
PSZ IAmb IAmb 12 24 36.7
comp=Z,6.5nm,0.9s
BURAR Bucovina Array 27.60 135 P **P** **12 24 44.7 -1.0**
NRIK Noril'sk 27.94 49 P **P** **12 24 48.4 +0.1**
comp=Z,1.2nm,0.3s,baz=13,slow=3.8,SNR=6.1
ARU Arti 29.54 88 P **P** **12 25 03.3 +0.6**
comp=Z,0.6nm,0.3s,baz=285,slow=20,SNR=1.6
ARU LR LR 12 36 21.3
comp=Z,171nm,20.2s,baz=302,slow=36
ARU Arti 29.54 88 P **P** **12 25 02.6 -0.1**
ARU IAmb IAmb 12 25 22.7
comp=Z,3.6nm,0.6s
MLR Muntele Rosu 29.78 135 LR LR 12 37 30.7
comp=Z,585nm,19.3s,baz=301,slow=38
SCHQ Schefferville 31.02 271 LR LR 12 36 26.9
comp=Z,274nm,21.4s,baz=57,slow=34
ESDC Sonseca Array 31.96 180 P **P** **12 25 24.1 -0.1**
comp=Z,0.7nm,0.6s,baz=0.2,slow=8.0,SNR=6.6
ESDC LR LR 12 37 42.9
comp=Z,147nm,20.0s,baz=340,slow=35
ESDC Sonseca Array 31.96 180 P **P** **12 25 26.2 +2.0**
TIXI Tiksi 33.82 25 P **P** **12 25 41.2 +1.1**
TIXI IAmb IAmb 12 25 48.7
comp=Z,5.3nm,1.2s
ROSA Rosais 35.18 214 P **P** **12 25 53.5 +1.3**
KIV Kislovodsk 35.54 116 P **P** **12 25 57.0 +1.6**
KBZ Khabaz 35.81 115 P **P** **12 25 57.3 -0.3**
comp=Z,1.7nm,0.7s,baz=313,slow=8.7,SNR=4.5
KBZ LR LR 12 40 24.2
comp=Z,173nm,18.0s,baz=341,slow=36
KBZ Khabaz 35.81 115 P **P** **12 26 00.8 +3.2**
ABKAR Akbulak array 36.09 93 P **P** **12 25 59.9 0.0**
INK Inuvik 36.43 331 P **P** **12 26 01.7 -0.8**
comp=Z,1.9nm,1.1s,baz=359,slow=8.2,SNR=2.7
INK LR LR 12 42 05.9
comp=Z,197nm,19.1s,baz=31,slow=38
INK Inuvik 36.43 331 P **P** **12 26 02.6 +0.1**
KEST Kesra 36.56 162 LR LR 12 40 55.2
comp=Z,220nm,20.6s,baz=266,slow=36
BR131 Keskin Array S 37.05 129 P **P** **12 26 07.9 -0.4**
BRTR Keskin Array B 37.05 129 P **P** **12 26 08.0 -0.4**
comp=Z,1.3nm,0.6s,baz=353,slow=5.0,SNR=4.6
BRTR LR LR 12 43 15.4
comp=Z,146nm,18.1s,baz=343,slow=40
YKA Yellowknife Ar 38.05 315 P **P** **12 26 16.5 0.0**
comp=Z,1.1nm,0.9s,baz=30,slow=8.6,SNR=6.8
YKA PcP **PcP** **12 28 32.8 +1.6**
comp=Z,0.2nm,0.6s,baz=22,slow=2.3,SNR=2.9
YKA LR LR 12 41 51.8
comp=Z,246nm,18.5s,baz=0.0,slow=36
YKA Yellowknife Ar 38.05 315 P **P** **12 26 19.8 +3.4**
BMAR Burnt Mountain 38.78 337 P **P** **12 26 23.8 +1.2**
ZALV Zalesovo Beam 39.74 68 LR LR 12 50 00.0
comp=Z,32nm,18.3s,baz=276,slow=47
ILAR Eielson Array 41.61 337 P **P** **12 26 47.3 +1.3**
comp=Z,0.5nm,0.6s,baz=12,slow=8.0,SNR=8.0
ILAR LR LR 12 45 36.0
comp=Z,143nm,19.7s,baz=32,slow=38
ILAR Eielson Array 41.61 337 P **P** **12 26 46.7 +0.7**
BCAR Beaver Creek A 42.56 333 P **P** **12 26 55.1 +1.3**
ULM Lac du Bonnet 43.96 292 P **P** **12 27 06.3 +1.1**
comp=Z,1.6nm,0.4s,baz=90,slow=2.0,SNR=2.1
ULM LR LR 12 44 41.1
comp=Z,114nm,20.0s,baz=54,slow=35
ULM Lac du Bonnet 43.96 292 IAmb IAmb 12 27 13.6
comp=Z,3.5nm,0.8s
KK31 Karatay Array 44.92 88 P **P** **12 27 14.0 +1.1**
KK31 IAmb IAmb 12 27 14.8
comp=Z,3.5nm,0.8s
KKAR Karatay Array 44.92 88 P **P** **12 27 13.8 +0.8**
KKAR Karatay Array 44.92 88 P **P** **12 27 14.0 +1.1**
KKAR IAmb IAmb 12 27 14.8
comp=Z,3.5nm,0.8s
MKAR Makanchi Array 45.30 75 P **P** **12 27 16.5 +0.5**
comp=Z,0.7nm,0.8s,baz=352,slow=7.5,SNR=4.8
MKAR PcP **PcP** **12 28 55.9 +0.6**
comp=Z,0.2nm,0.5s,baz=264,slow=4.3,SNR=2.2
MKAR LR LR 12 50 09.2
comp=Z,59nm,18.4s,baz=335,slow=41
MKAR Makanchi Array 45.30 75 P **P** **12 27 16.6 +0.7**
GEYT Alibeck 45.70 103 P **P** **12 27 17.7 -1.5**
comp=Z,2.2nm,0.5s,baz=330,slow=8.6,SNR=5.0
GEYT LR LR 12 48 05.5
comp=Z,148nm,18.6s,baz=335,slow=38
GEYT Alibeck 45.70 103 P **P** **12 27 18.9 -0.3**
BOOM Boomskoye usch 47.19 83 P **P** **12 27 31.0 -0.1**
BOOM IAmb IAmb 12 27 34.1
comp=Z,3.9nm,0.9s
WMQ Urumqi 49.63 72 *e*P **P** **12 27 52.0 +2.3**
WMQ sP pwP 12 27 58.3 +1.8
WMQ pmax pmax
comp=Z,10.0nm,0.7s
WMQ LR LR
comp=N,480nm,28.9s
WMQ LR LR
comp=E,840nm,28.8s
WMQ LR LR
comp=Z,550nm,29.2s
SONM Songino Array 51.23 54 P **P** **12 28 02.7 +1.0**
comp=Z,0.2nm,0.4s,baz=321,slow=11,SNR=1.7
SONM LR LR 12 55 10.1
comp=Z,71nm,18.6s,baz=285,slow=42
SONM Songino Array 51.23 54 IAmb IAmb 12 28 10.5
comp=Z,0.9nm,1.0s
PDAR Pinedale Array 54.68 300 P **P** **12 28 28.7 +1.3**
comp=Z,0.1nm,0.3s,baz=45,slow=9.1,SNR=2.1
PDAR LR LR 12 51 49.9
comp=Z,265nm,18.7s,baz=22,slow=36
PETK Petropavlovsk- 54.95 13 LR LR 12 51 31.0
comp=Z,63nm,18.4s,baz=63,slow=36
ISCO Idaho Springs 56.31 295 P **P** **12 28 41.4 +2.1**
TORD Torodi Ar. Bea 58.48 174 P **P** **12 28 54.1 -0.4**
comp=Z,1.5nm,0.6s,baz=354,slow=7.4,SNR=7.3
TORD LR LR 12 54 09.2
comp=Z,167nm,19.0s,baz=250,slow=36
TORD Torodi Ar. Bea 58.48 174 P **P** **12 28 54.3 -0.1**
HHC Hu-ho-hao-te 59.07 53 *e*P **P** **12 28 59.5 +1.1**
HHC pmax pmax
comp=Z,12nm,0.6s
HHC pmax pmax
comp=Z,61nm,6.8s
USRK Ussuriysk Ar. 60.37 35 P **P** **12 29 07.8 +0.6**
NATX Nacogdoches 60.46 282 P **P** **12 29 09.2 +1.2**
NVAR Mina Array Bea 61.08 305 LR LR 12 55 58.2
comp=Z,115nm,19.4s,baz=358,slow=36
LZH Lanzhou 61.48 61 *e*P **P** **12 29 14.3 -0.8**
LZH sP pwP 12 29 21.6 -0.3
LZH PP **PP** **12 31 22.4 -7.6**
LZH pmax pmax
comp=Z,19nm,1.1s
LZH pmax pmax
comp=Z,87nm,5.4s
Y14A Wickenburg 63.88 299 P **P** **12 29 33.5 +2.6**
DBIC Dimbokro 64.83 181 LR LR 12 59 14.8
comp=Z,62nm,18.2s,baz=344,slow=37
TXAR Lajitas Array 65.49 289 LR LR 12 57 37.9
comp=Z,130nm,20.0s,baz=0.0,slow=35
KSRS Korea Array 66.09 40 P **P** **12 29 45.0 -0.1**
comp=Z,0.4nm,0.5s,baz=347,slow=11,SNR=1.8
CD2 Chengdu 66.32 63 P **P** **12 29 46.0 -0.8**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
MJAR Matsushiro Arr 68.91 32 P **P** **12 30 02.8 -0.3**
comp=Z,0.5nm,0.4s,baz=313,slow=9.1,SNR=2.2
MJAR Matsushiro Arr 68.91 32 IAmb IAmb 12 30 10.0
comp=Z,0.8nm,0.8s
CMAR Chiang Mai Arr 76.63 72 P **P** **12 30 49.8 +0.8**
comp=Z,0.4nm,0.3s,baz=334,slow=8.0,SNR=4.5
BDFB Brasilia 91.94 222 LR LR 13 10 02.4
comp=Z,26nm,18.2s,baz=165,slow=33

TAP 14 12:20:20.6,24.29N×121.93E,h58km±1km,ML2.0,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.22**	**309**	*e*P			Pn	12 20 30.0	+0.1
	baz=310								
ENA				*e*S			Sn	12 20 37.4	+0.7
	baz=310								
EOS1	**EOS1**	**0.32**	**35**	P			Pn	12 20 31.2	+0.6
	baz=35								
EOS1				S			Sn	12 20 38.9	+1.1
	baz=35								
NACB	**Ninganchiao**	**0.33**	**250**	*e*P			Pn	12 20 30.5	-0.2
	baz=249								
NACB				*e*S			Sn	12 20 38.4	+0.4
	baz=249								
TWC	**Suao**	**0.33**	**347**	P			Pn	12 20 31.0	+0.3
	baz=348								
TWC				S			Sn	12 20 38.5	+0.4
	baz=348								
TWD	**Chiawan**	**0.37**	**236**	*e*S			Sn	12 20 39.5	+0.9
	baz=235								
ETLH	**Xiulin Townshi**	**0.41**	**259**	*e*P			Pn	12 20 31.8	+0.1
	baz=258								
ETLH				S			Sn	12 20 40.0	+0.4
	baz=258								
ENTT	**Nioudou**	**0.48**	**317**	P			Pn	12 20 32.5	+0.3
	baz=317								
ENTT				S			Sn	12 20 42.1	+1.5
	baz=317								
NDT	**Datong Townshi**	**0.49**	**310**	P			Pn	12 20 32.6	+0.3
	baz=309								
NDT				S			Sn	12 20 41.6	+0.8
	baz=309								
NNSH	**Datong**	**0.52**	**286**	P			Pn	12 20 33.3	+0.6
	baz=285								
NNSH				S			Sn	12 20 42.0	+0.5
	baz=285								
NNSB	**Datong**	**0.52**	**286**	P			Pn	12 20 32.8	+0.1
	baz=285								
NNSB				S			Sn	12 20 42.3	+0.8
	baz=285								
NNS	**Nan Shan**	**0.53**	**287**	P			Pn	12 20 33.4	+0.5
	baz=286								
NNS				S			Sn	12 20 42.5	+0.8
	baz=286								
SLBB	**Yuanshan**	**0.54**	**330**	*e*P			Pn	12 20 33.6	+0.8
	baz=330								
SLBB				*e*S			Sn	12 20 43.0	+1.3
	baz=330								
NWLT	**Wulai**	**0.62**	**322**	P			Pn	12 20 34.2	+0.3
	baz=321								
NWLT				S			Sn	12 20 44.4	+0.9
	baz=321								
WHF	**Hehuan Shan**	**0.62**	**257**	P			Pn	12 20 35.0	+0.7
	baz=256								
WHF				S			Sn	12 20 44.7	+0.6
	baz=256								
YHNB	**Yeheng**	**0.63**	**307**	P			Pn	12 20 34.5	+0.5
	baz=307								
YHNB				S			Sn	12 20 44.6	+0.9
	baz=307								
NSK	**Sanguang**	**0.65**	**307**	*e*P			Pn	12 20 34.8	+0.6
	baz=306								
NSK				S			Sn	12 20 44.4	+0.4
	baz=306								
TIPB	**Shuangxi**	**0.69**	**352**	P			Pn	12 20 35.0	+0.3
	baz=352								
TIPB				S			Sn	12 20 45.0	+0.1
	baz=352								
CHGB	**Renai**	**0.72**	**252**	*e*S			Sn	12 20 46.5	+0.6
	baz=251								
OWD	**Renai**	**0.76**	**244**	S			Sn	12 20 47.3	+0.6
	baz=244								
EGFH	**Guangfu**	**0.77**	**217**	*e*S			Sn	12 20 46.9	+0.4
	baz=216								
VWDT	**VWDT**	**0.90**	**234**	*e*S			Sn	12 20 50.4	+1.0
	baz=233								
WHP	**Taichung City**	**0.90**	**270**	*e*P			Pn	12 20 38.8	+1.5
	baz=269								
WHP				*e*S			Sn	12 20 50.6	+1.0
	baz=269								
LIOB	**Emei**	**0.90**	**293**	*e*P			Pn	12 20 38.6	+1.3
	baz=293								
LIOB				*e*S			Sn	12 20 51.5	+1.8
	baz=293								
SSLB	**Suanglung**	**1.02**	**241**	*e*S			Sn	12 20 53.8	+1.4
	baz=240								

JMA 14 12:20:56.9±0.1,24.12N×124.10E,h16km±2km,M1.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JKRS	**Kuro-shima**	**0.14**	**325**	P			Pg	12 21 00.8	0.0
JKRS				S			Sb	12 21 03.9	-0.2
JIJ	**Ishigaki jima**	**0.25**	**9**	P			Pg	12 21 02.4	0.0
JIJ				S			Sg	12 21 05.8	-0.3
HATJ	**Hateruma jima**	**0.28**	**257**	P			Pg	12 21 02.7	-0.2
HATJ				S			Sg	12 21 07.1	+0.1
IRIF	**Iriomote-Funau**	**0.40**	**302**	P			Pg	12 21 04.9	-0.1
IRIF				S			Sg	12 21 10.8	+0.2
JISG	**Ishigakijimahi**	**0.50**	**22**	P			Pg	12 21 06.8	-0.1
JISG				*e*S			Sg	12 21 13.9	+0.2
JTJ	**Tarama**	**0.76**	**47**	P			Pb	12 21 11.9	+0.2
JTJ				*e*S			Sb	12 21 22.1	+0.4

*IDC **14** 12:31:14.9±2.0,7.07S×129.63E,h123km±18km,mb3.5/6, mb1 3.7/10,mb1mx3.5/33,mbtmp4.0/10,MS3.4/1, Ms1 3.4/1,ms1mx2.4/26,Error ellipse: s-maj=29.7km s-min=16.6km az=87.0*

ISC 14 12:31:11.8±0.7,7.21S±0.05×129.82E±0.09,h104km,n12, σ3.45/17,mb3.8/6,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.46**	**13**	P			Pn	**12 32 45.7**	**+1.2**
	3.5nm,0.3s,baz=229,slow=23,SNR=12								
SIJI				S			**Sn**	**12 33 51.0**	**-5.8**
	1.6nm,0.3s,baz=108,slow=20,SNR=2.2								
BATI	**Baumata**	**6.77**	**243**	P			**Pn**	**12 32 51.9**	**+3.2**
	4.2nm,0.3s,baz=73,slow=7.2,SNR=2.2								
BATI				S			**Sn**	**12 34 00.5**	**-3.9**
	1.9nm,0.3s,baz=277,slow=17,SNR=1.4								
FITZ	**Fitzroy Crossi**	**11.56**	**200**	P			**Pn**	**12 33 55.7**	**+2.1**
	0.8nm,0.3s,baz=27,slow=9.8,SNR=26								
FITZ				S			**Sn**	**12 35 55.5**	**-5.3**
	1.9nm,0.3s,baz=88,slow=18,SNR=13								
WRA	**Warramunga Arr**	**13.40**	**161**	P			**Pn**	**12 34 19.8**	**+1.9**
	1.3nm,0.3s,baz=345,slow=13,SNR=76								
WRA				S			**Sn**	**12 36 40.7**	**-4.7**
	2.5nm,0.3s,baz=331,slow=22,SNR=12								
ASAR	**Alice Springs**	**16.83**	**167**	P			**P**	**12 35 04.3**	**+2.7**
	0.8nm,0.3s,baz=340,slow=9.6,SNR=56								
ASAR				S			**Sn**	**12 38 04.1**	**-4.2**
	0.5nm,0.3s,baz=333,slow=16,SNR=8.3								
ASAR				ScP			**ScP**	**12 43 06.7**	**-2.0**
	0.2nm,0.3s,baz=357,slow=1.9,SNR=12								
STKA	**Stephens Creek**	**26.89**	**157**	P			**P**	**12 36 47.0**	**+3.9**
	3.2nm,1.0s,baz=319,slow=11,SNR=3.5								
NWAO	**Narrogin (SRO)**	**28.13**	**203**	LR			LR	12 47 54.6	
	comp=Z,76nm,19.6s,baz=232,slow=36								
CMAR	**Chiang Mai Arr**	**39.73**	**310**	P			**P**	**12 38 33.4**	**-1.1**
	0.4nm,0.3s,baz=137,slow=8.4,SNR=4.7								
USRK	**Ussurisk Ar.**	**51.21**	**2**	P			**P**	**12 40 04.1**	**-0.4**
	0.5nm,0.5s,baz=185,slow=6.7,SNR=1.8								
SONM	**Songino Array**	**58.58**	**342**	P			**P**	**12 40 58.1**	**+0.3**
	0.2nm,0.3s,baz=144,slow=12,SNR=1.5								
PETK	**Petropavlovsk-**	**64.58**	**18**	P			**P**	**12 41 39.1**	**+1.2**
	2.6nm,1.0s,baz=251,slow=4.4,SNR=2.4								
MKAR	**Makanchi Array**	**68.30**	**327**	P			**P**	**12 42 01.3**	**-0.4**
	0.7nm,0.4s,baz=116,slow=8.6,SNR=16								

*IDC **14** 12:31:30.6±1.2,71.37N×3.14W,h0km,mb3.4/4, mb1 3.6/10,mb1mx3.5/50,mbtmp3.6/10,ML2.8/4,MS3.1/8, Ms1 3.2/8,ms1mx2.9/40,Error ellipse: s-maj=26.9km s-min=20.6km az=58.0*

BER ***14*** *12:31:30.9±4.1, 71°.45N×4°.39W, h12km±72km, ML2.0, ML3.6(NAO), Confirmed Earthquake*
NAO ***14*** *12:31:31.5±5.2, 71°.48N×2°.60W, ML3.6*

ISC 14 12:31:29.0±0.8, **71°.55N**±0°.08×**4°.50W**±0°.08, **h12**km, **n39,** σ1°.**88**/37, **mb3.4**/5, **MS2.9**/4, **Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DBG	**Daneborg**	**5.38**	**308**	*i*	P	**Pn**		**12 32 50.6**	**+1.7**
DBG				*i*	Sn	**Sn**		**12 33 47.8**	**-2.9**
DBG					IAML			12 33 54.6	
	comp=Z,2.1nm,0.4s								
DAG	**Danmarks Havn**	**6.50**	**330**	*i*	P	**Pn**		**12 33 04.6**	**+0.5**
DAG	**Danmarks Havn**	**6.50**	**330**	*i*	P	**Pn**		**12 33 04.0**	**-0.2**
DAG				*i*	P	**Pn**		**12 33 04.7**	**+0.5**
DAG					IAML			12 34 16.6	
	comp=Z,4.0nm,0.5s								
LOF	**Lofoten**	**7.10**	**110**	*eP*		**Pn**		**12 33 10.9**	**-1.6**
HSPB	**Hornsund (broa**	**7.67**	**36**	P	n	**Pn**		**12 33 19.8**	**-0.5**
HSPB	**Hornsund (broa**	**7.67**	**36**	*eP*		**Pn**		**12 33 20.0**	**-0.2**
STEI	**Steigen**	**7.73**	**108**	*eP*		**Pn**		**12 33 18.6**	**-2.6**
KONS	**Konsvik**	**8.08**	**120**	*eP*		**Pn**		**12 33 23.2**	**-2.6**
BRBA	**Barentsburg A**	**8.12**	**28**	P	n	**Pn**		**12 33 26.5**	**+0.1**
BRBA	**Barentsburg A**	**8.12**	**28**	P	n	**Pn**		**12 33 26.5**	**+0.1**
KBS	**Kingsbay**	**8.46**	**22**	P	n	**Pn**		**12 33 31.6**	**+0.4**
KBS	**Kingsbay**	**8.46**	**22**	*eP*		**Pn**		**12 33 31.5**	**+0.4**
SPA0	**Spitsbergen Ar**	**8.53**	**30**	P	n	**Pn**		**12 33 33.2**	**+1.1**
	baz=226,slow=16								
SPA0	**Spitsbergen Ar**	**8.53**	**30**	P	n	**Pn**		**12 33 33.2**	**+1.1**
	baz=226,slow=16								
SPITS	**Spitsbergen Ar**	**8.53**	**30**	P	n	**Pn**		**12 33 33.2**	**+1.1**
	baz=218,slow=16,SNR=82								
SPITS					LR	LR		12 36 04.0	
	comp=Z,87nm,18.7s,baz=215,slow=32								
KIF	**Kilpisjarvi**	**8.89**	**94**	*eP*		**Pn**		**12 33 34.0**	**-3.0**
SALU	**Saltoluokta**	**9.06**	**106**	*e*	Pn	**Pn**		**12 33 41.7**	**+2.3**
ARA0	**ARCESS Array S**	**10.15**	**87**	P	n	**Pn**		**12 33 50.9**	**-3.4**
	baz=289,slow=12								
ARA0	**ARCESS Array S**	**10.15**	**87**	P	n	**Pn**		**12 33 50.9**	**-3.4**
	baz=289,slow=12								
ARCES	**ARCESS Array B**	**10.15**	**87**	P	n	**Pn**		**12 33 51.0**	**-3.3**
	comp=Z,0.3nm,0.3s,baz=288,slow=12,SNR=9.8								
NOR	**Nord**	**10.45**	**350**	*i*	P	**Pn**		**12 33 58.7**	**+0.5**
NOR	**Nord**	**10.45**	**350**	*i*	P	**Pn**		**12 33 58.8**	**+0.5**
NOR					IAML			12 35 54.1	
	comp=Z,1.0nm,0.4s								
NB2	**NORSAR Subarra**	**12.24**	**142**	P	n	**Pn**		**12 34 21.8**	**-1.1**
NB2	**NORSAR Subarra**	**12.24**	**142**	P	n	**Pn**		**12 34 21.8**	**-1.1**
NOA	**NORSAR Array B**	**12.24**	**142**	P	n	**Pn**		**12 34 21.6**	**-1.3**
	comp=Z,0.0nm,0.3s,baz=332,slow=12,SNR=2.6								
NOA					LR	LR		12 38 47.6	
	comp=Z,69nm,20.9s,baz=335,slow=37								
HFS	**Hagfors**	**13.58**	**138**	P	n	**Pn**		**12 34 39.0**	**-2.0**
	baz=342,slow=12								
HFS	**Hagfors**	**13.58**	**138**	P	n	**Pn**		**12 34 39.4**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=345,slow=11,SNR=7.2								
HFS					LR	LR		12 39 29.7	
	comp=Z,124nm,19.1s,baz=323,slow=36								
HFS	**Hagfors**	**13.58**	**138**	P	n	**Pn**		**12 34 39.0**	**-2.0**
	baz=342,slow=12								
FINES	**FINESS Array B**	**15.62**	**115**	P	n	**Pn**		**12 35 04.4**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=306,slow=12,SNR=2.0								
FINES					LR	LR		12 40 14.1	
	comp=Z,56nm,19.8s,baz=86,slow=35								
EKA	**Eskdalemuir Ar**	**16.29**	**177**	P	n	**Pn**		**12 35 18.3**	**+1.0**
	baz=357,slow=13,SNR=4.1								
GERES	**GERESS Array B**	**24.29**	**150**	LR		LR		12 44 53.6	
	comp=Z,45nm,21.6s,baz=285,slow=34								
VRAC	**Vranov**	**24.34**	**145**	LR		LR		12 44 30.2	
	comp=Z,44nm,20.2s,baz=348,slow=33								
KIRV	**Kirov**	**25.08**	**93**	LR		LR		12 46 11.8	
	comp=Z,37nm,18.7s,baz=193,slow=36								
AKASG	**Malin Array Be**	**25.84**	**126**	P		**P**		**12 37 00.1**	**+0.3**
	comp=Z,2.2nm,0.6s,baz=337,slow=9.3,SNR=1.9								
YKA	**Yellowknife Ar**	**37.93**	**315**	P		P		12 38 53.1	+7.5
	comp=Z,0.2nm,0.6s,baz=32,slow=9.2,SNR=3.7								
YKA					LR	LR		12 53 45.7	
	comp=Z,88nm,18.2s,baz=0.0,slow=35								
MKAR	**Makanchi Array**	**45.49**	**74**	P		**P**		**12 39 49.4**	**+1.7**
	comp=Z,0.1nm,0.5s,baz=351,slow=7.4,SNR=1.8								
TORD	**Torodi Ar. Bea**	**58.50**	**173**	P		**P**		**12 41 26.1**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=20,slow=4.7,SNR=1.9								
USRK	**Ussuriysk Ar.**	**59.49**	**35**	P		**P**		**12 41 38.2**	**0.0**
	comp=Z,3.3nm,0.7s,baz=147,slow=38,SNR=3.8								
ASAR	**Alice Springs**	**126.63**	**49**	PKP		**PKiKP**		**12 50 32.8**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=18,slow=3.3,SNR=4.1								

BER ***14*** *12:35:55.8±1.5, 71°.32N×4°.66W, h10km, ML2.1, ML2.6(DNK), Confirmed Earthquake*
IDC ***14*** *12:36:01.3±2.6, 71°.46N×1°.83W, h0km, mb3.6/2, mb1 3.8/6, mb1mx3.4/49, mbtmp3.8/6, ML3.3/4, Error ellipse: s-maj=47.0km s-min=26.5km az=110.0*

ISC 14 12:35:54.1±1.1, **71°.48N**±0°.09×**4°.62W**±0°.08, **h10**km, **n17,** σ2°.**25**/16, **Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DBG	**Daneborg**	**5.40**	**309**	*i*	P	**Pn**		**12 37 16.1**	**+1.6**
DBG				*i*	S	**Sn**		**12 38 13.3**	**-3.3**
DBG					IAML			12 38 30.6	
	comp=Z,1.3nm,0.4s								
DAG	**Danmarks Havn**	**6.54**	**331**	*i*	P	**Pn**		**12 37 30.9**	**+0.8**
DAG	**Danmarks Havn**	**6.54**	**331**	*i*	P	**Pn**		**12 37 30.9**	**+0.8**
DAG					IAML			12 38 41.9	
	comp=Z,2.9nm,0.4s								
STEI	**Steigen**	**7.75**	**108**	*eP*		**Pn**		**12 37 44.1**	**-2.6**
STEI				*e*				12 39 51.6	
HSPB	**Hornsund (broa**	**7.75**	**35**	*eP*		**Pn**		**12 37 45.8**	**-0.9**
KONS	**Konsvik**	**8.07**	**120**	*eP*		**Pn**		**12 37 48.8**	**-2.3**
KBS	**Kingsbay**	**8.54**	**22**	*eP*		**Pn**		**12 37 57.6**	**0.0**
KBS					eS	**Sn**		**12 39 37.2**	**+3.4**
KBS					IAML			12 39 39.5	
	comp=Z,4.8nm,0.4s								
SPA0	**Spitsbergen Ar**	**8.61**	**30**	*eP*		**Pn**		**12 37 59.1**	**+0.5**
SPA0				*e*				12 40 11.7	
SPITS	**Spitsbergen Ar**	**8.61**	**30**	P	n	**Pn**		**12 37 59.0**	**+0.5**
	baz=220,slow=17,SNR=33								
SALU	**Saltoluokta**	**9.08**	**106**	*eP*		Pn		12 38 07.4	+2.5
ARCES	**ARCESS Array B**	**10.19**	**86**	P	n	**Pn**		**12 38 16.8**	**-3.4**
	comp=Z,0.2nm,0.3s,baz=292,slow=11,SNR=5.9								
NOR	**Nord**	**10.51**	**350**	*i*	P	**Pn**		**12 38 24.5**	**0.0**
NOR	**Nord**	**10.51**	**350**	*i*	P	**Pn**		**12 38 24.5**	**0.0**
NOR					IAML			12 40 23.2	
	comp=Z,1.1nm,0.4s								
HFS	**Hagfors**	**13.55**	**138**	P	n	**Pn**		**12 39 05.7**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=329,slow=11,SNR=6.2								
EKA	**Eskdalemuir Ar**	**16.22**	**177**	P	n	**P**		**12 39 48.7**	**+3.9**
	baz=357,slow=12,SNR=1.9								
BRTR	**Keskin Array B**	**37.18**	**128**	P		P		12 43 09.6	+4.5
	comp=Z,0.7nm,0.7s,baz=352,slow=8.1,SNR=3.6								
TORD	**Torodi Ar. Bea**	**58.43**	**173**	P		P		12 45 57.4	+7.7
	comp=Z,0.4nm,0.7s,baz=352,slow=7.9,SNR=2.5								

SSNC 14 12:55:50.4±1.7, **20°.21N×75°.96W, h5km, MD2.0, ML0.9, Cuba region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RCC	**Rio Carpintero**	**0.33**	**130**	*eP*	g	Pg		12 55 57.3	+0.6
RCC				*e*	Sg	Sg		12 56 01.7	+0.6
GTMO	**Guantanamo**	**0.78**	**99**	*eP*	g	Pn		12 56 07.7	-0.5
GTMO				*e*	Sg	Sn		12 56 20.2	0.0
GTMO					IAML			12 56 22.6	
	comp=N,15nm,0.4s								
GTMO					IAML			12 56 23.3	
	comp=E,8.1nm,0.3s								
GTMO	**Guantanamo**	**0.78**	**99**	*eP*		Pn		12 56 07.5	-0.7
GTMO				*e*	S	Sn		12 56 20.5	+0.3

MEX ***14*** *12:55:53.3±0.3, 14°.21N×92°.17W, h20km±202km, MD3.6*
GCG ***14*** *12:55:53.7±0.7, 15°.24N×91°.78W, h58km±60km, MD3.3*

ISC 14 12:55:55.0±2.6, **14°.6N**±0°.3×**92°.1W**±0°.2, **h67**km, **n4,** σ1°**.02**/8, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.49**	**74**	*eP*		**Pn**		**12 56 07.1**	**-0.5**
STG3				*e*	S	**Sn**		**12 56 17.1**	**+0.3**
FUG	**Fuego 3**	**1.18**	**96**	*eP*		**Pn**		**12 56 15.2**	**-0.7**
FUG				*e*	S	**Sn**		**12 56 31.5**	**+0.1**
PCIG		**1.59**	**315**	*eP*		**Pn**		**12 56 20.6**	**-0.5**
PCIG				*e*	S	**Sn**		**12 56 41.5**	**+0.8**
IXG	**Ixpaco**	**1.61**	**104**	*eP*		**Pn**		**12 56 20.9**	**-0.6**
IXG				*e*	S	**Sn**		**12 56 43.4**	**+1.8**

IDC ***14*** *13:04:23.0±0.7, 0°.80S×131°.78E, h0km, mb4.0/12, mb1 4.2/13, mb1mx3.9/43, mbtmp4.0/13, ML4.4/1, MS3.3/4, Ms1 3.3/4, ms1mx2.9/26, Error ellipse: s-maj=11.8km s-min=8.4km az=175.0*
DJA ***14*** *13:04:25.2±0.6, 1°.S±5°×13°.2E±°, h10km, M4.5/11, mB4.7/2, mb4.5/6, MLv4.5/11, Mw(mB)3.9/2*
NEIC ***14*** *13:04:27.9±1.8, 0°.83S±0°.07×131°.40E±0°.09, h33km±4km, mb4.4/24, Error ellipse: s-maj=16.2km s-min=3.1km az=51.0*

ISC 14 13:04:28.3±0.5, **0°.80S**±0°.06×**131°.51E**±0°.07, **h35**km, **n67,** σ1°**76**/63, **mb4.1**/20, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**0.26**	**254**	Pg		**Pn**		**13 04 33.5**	**-2.2**
	568nm,0.3s,baz=230,slow=7.6,SNR=2662								
SIJI				Lg		Lg		13 04 39.8	
	14μm,0.3s,baz=39,slow=16,SNR=378								
FAKI	**Fak Fak**	**2.23**	**161**	P		**Pn**		**13 05 03.0**	**+0.2**
FAKI	**Fak Fak**	**2.23**	**161**			**Pn**		**13 05 03.0**	**+0.2**
RKPI	**Ransiki, Papua**	**2.76**	**105**	P		**Pn**		**13 05 09.3**	**-0.8**
MSAI	**Masohi**	**3.62**	**226**	P		**Pn**		**13 05 22.4**	**+0.5**
LBMI	**Labuha**	**4.01**	**272**	P		**Pn**		**13 05 28.7**	**+1.3**
BNDI	**Bandanaira**	**4.03**	**203**	P		**Pn**		**13 05 29.5**	**+1.9**
AAI	**Ambon**	**4.38**	**229**	P		**Pn**		**13 05 34.8**	**+2.3**
TNTI	**Ternate**	**4.43**	**291**	P		Pn		13 05 42.2	+9.1
TNTI	**Ternate**	**4.43**	**291**	P	n	**Pn**		**13 05 32.3**	**-0.8**
NLAI	**Namlea**	**5.03**	**241**	P		**Pn**		**13 05 43.8**	**+2.4**
	0.3nm633nm55nm,0.6s								
SANI	**Sanana**	**5.66**	**257**	P		**Pn**		**13 05 51.4**	**+1.4**
	0.1nm601nm18nm,0.9s								
LUWI	**Luwuk**	**8.74**	**268**	Pn		**Pn**		**13 06 30.9**	**-1.4**
JAY	**Jayapura**	**9.35**	**101**	LR		LR		13 10 39.4	
	comp=Z,152nm,18.2s,baz=281,slow=42								
DAV	**Davao City (W)**	**9.80**	**323**	LR		LR		13 09 52.5	
	comp=Z,108nm,19.1s,baz=144,slow=33								
APSI	**Ampana**	**9.86**	**269**	P		**Pn**		**13 06 49.4**	**+1.7**
MPSI	**Mapaga**	**11.67**	**276**	P		**Pn**		**13 07 13.3**	**+0.8**
	13nm,1.1s								
MTN	**Manton Dam**	**11.97**	**182**			**Pn**		**13 07 14.4**	**-2.2**
SPSI	**Sidrap Palu**	**12.15**	**255**	P		**Pn**		**13 07 20.7**	**+1.7**
	7.8nm,0.5s								
BATI	**Baumata**	**12.18**	**220**	Pn		**Pn**		**13 07 23.7**	**+4.2**
	4.4nm,0.3s,baz=147,slow=1.6,SNR=7.5								
BATI	**Baumata**	**12.18**	**220**	P		**Pn**		**13 07 23.0**	**+3.6**
BKB	**Balikpapan**	**14.62**	**268**	Pn		Pn		13 07 48.2	-4.6
KNRA	**Kununurra**	**15.03**	**190**			**Pn**		**13 07 52.5**	**-5.8**
COEN	**Coen**	**17.44**	**139**	Pn		**Pn**		**13 08 28.3**	**-0.7**
COEN				IAmb		IAmb		13 08 56.1	
	comp=Z,36nm,1.5s								
FITZ	**Fitzroy Crossi**	**18.14**	**198**	Pn		**P**		**13 08 33.8**	**-3.9**
	comp=Z,0.6nm,0.3s,baz=34,slow=6.4,SNR=17								
FITZ						Sn		13 11 44.8	-14
	comp=Z,0.1nm,0.3s,baz=199,slow=18,SNR=1.3								
FITZ	**Fitzroy Crossi**	**18.14**	**198**			**P**		**13 08 34.9**	**-2.7**
FITZ					IAmb	IAmb		13 08 40.8	
	comp=Z,36nm,1.8s								
WB0	**Warramunga Arr**	**19.06**	**172**	P		**P**		**13 08 47.3**	**-0.6**
WRAB	**Tennant Creek**	**19.22**	**172**	P		**P**		**13 08 48.8**	**-0.7**
WRAB					IAmb	IAmb		13 09 08.4	
	comp=Z,18nm,1.4s								
WRA	**Warramunga Arr**	**19.23**	**172**	P		**P**		**13 08 49.2**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=353,slow=11,SNR=49								
WRA					S	Sn		13 12 13.5	-12
	comp=Z,0.4nm,0.3s,baz=356,slow=23,SNR=5.8								
WRA	**Warramunga Arr**	**19.23**	**172**	P		**P**		**13 08 48.8**	**-0.8**
WB2	**Warramunga Arr**	**19.23**	**172**	P		**P**		**13 08 48.0**	**-1.6**
WR0	**Warramunga Arr**	**19.27**	**171**	P		**P**		**13 08 48.7**	**-1.5**
KSM	**Kuching**	**21.32**	**276**	P		**P**		**13 09 11.0**	**-1.4**
KSM					IAmb	IAmb		13 09 19.0	
	comp=Z,6.1nm,0.7s								
AS31	**Alice Springs**	**22.85**	**174**	P		**P**		**13 09 28.1**	**-0.7**
ASAR	**Alice Springs**	**22.85**	**174**	P		**P**		**13 09 28.4**	**-0.3**
	comp=Z,5.4nm,0.8s,baz=359,slow=10.0,SNR=68								
ASAR					S	**S**		**13 13 37.2**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=354,slow=24,SNR=3.8								
ASAR	**Alice Springs**	**22.85**	**174**	P		**P**		**13 09 28.0**	**-0.7**
PSA00	**Pilbara Seismi**	**23.58**	**208**	P		**P**		**13 09 33.0**	**-2.9**
PSA00	**Pilbara Seismi**	**23.58**	**208**	P		**P**		**13 09 33.8**	**-2.2**
PSA00					IAmb	IAmb		13 09 51.7	
	comp=Z,62nm,2.0s								
FORT	**Forrest**	**30.00**	**186**	P		**P**		**13 10 35.0**	**+1.2**
FORT					IAmb	IAmb		13 10 36.0	
	comp=Z,12nm,0.8s								
KULM	**Kulim**	**31.41**	**281**	P		**P**		**13 10 46.1**	**-0.4**
KULM					IAmb	IAmb		13 10 50.1	
	comp=Z,11nm,1.2s								
MORW	**Morawa**	**31.75**	**206**	P		**P**		**13 10 49.7**	**+0.4**
BBOO	**Buckleboo**	**32.13**	**173**	P		**P**		**13 10 52.7**	**+0.2**
STKA	**Stephens Creek**	**32.35**	**164**	P		**P**		**13 10 54.6**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=338,slow=9.5,SNR=6.2								
STKA					LR	LR		13 24 35.1	
	comp=Z,87nm,22.0s,baz=18,slow=38								
STKA	**Stephens Creek**	**32.35**	**164**	P		**P**		**13 10 54.2**	**-0.3**
ARMA	**Armidale**	**35.11**	**149**	P		**P**		**13 11 18.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**37.30**	**303**	P		**P**		**13 11 38.9**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=128,slow=6.7,SNR=5.1								
CMAR					LR	LR		13 27 40.0	
	comp=Z,31nm,18.0s,baz=215,slow=37								
CMAR	**Chiang Mai Arr**	**37.30**	**303**	P		**P**		**13 11 36.9**	**-0.5**
SONM	**Songino Array**	**53.15**	**339**	P		**P**		**13 13 44.6**	**+1.8**
	comp=Z,0.5nm,0.4s,baz=147,slow=3.4,SNR=2.1								
SONM	**Songino Array**	**53.15**	**339**	P		**P**		**13 13 44.0**	**+1.2**
TLY	**Talaya**	**57.35**	**340**	P		**P**		**13 14 15.4**	**+2.5**
	comp=Z,5.9nm,0.5s,baz=104,slow=9.0								
TLY	**Talaya**	**57.35**	**340**	P		**P**		**13 14 12.5**	**-0.5**
PETK	**Petropavlovsk-**	**58.00**	**18**	P		**P**		**13 14 16.2**	**-1.3**
	comp=Z,1.7nm,0.8s,baz=225,slow=3.9,SNR=2.2								
MK31	**Makanchi Array**	**63.98**	**325**	P		**P**		**13 14 58.1**	**-0.2**
MK31					IAmb	IAmb		13 15 03.5	
	comp=Z,1.6nm,0.9s								
MKAR	**Makanchi Array**	**63.98**	**325**	P		**P**		**13 14 58.0**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=116,slow=8.1,SNR=14								
SEY	**Seymchan**	**65.47**	**10**	P		**P**		**13 15 06.8**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=216,slow=19,SNR=2.0								
ZALV	**Zalesovo Beam**	**66.78**	**332**	P		**P**		**13 15 17.6**	**+1.4**
	comp=Z,0.6nm,0.6s,baz=129,slow=11,SNR=3.7								
CASY	**Casey**	**67.02**	**189**	P		**P**		**13 15 18.3**	**+0.9**
CASY					IAmb	IAmb		13 15 24.2	
	comp=Z,7.8nm,1.3s								
KURK	**Kurchatov**	**68.11**	**327**	P		**P**		**13 15 24.2**	**-0.4**
KURK	**Kurchatov**	**68.11**	**327**		IAmb	IAmb		13 15 31.1	
	comp=Z,2.7nm,0.8s								
KURBB	**Kurchatov Arra**	**68.11**	**327**	P		**P**		**13 15 24.2**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=123,slow=6.0,SNR=3.5								
TIXI	**Tiksi**	**72.35**	**359**	P		**P**		**13 15 49.5**	**-0.7**
TIXI					IAmb	IAmb		13 17 08.3	
	comp=Z,11nm,1.8s								
BVAR	**Borovoye Array**	**73.70**	**327**	P		**P**		**13 15 58.8**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=236,slow=44,SNR=2.3								
VNDA	**Vanda**	**78.39**	**174**	P		**P**		**13 16 25.8**	**+1.0**
	comp=Z,1.1nm,0.5s,baz=319,slow=7.1,SNR=16								
VNDA	**Vanda**	**78.39**	**174**	P		**P**		**13 16 25.5**	**+0.7**
VNDA					IAmb	IAmb		13 16 55.7	
	comp=Z,9.4nm,1.7s								
ABKAR	**Akbulak array**	**78.66**	**321**	P		**P**		**13 16 27.2**	**+0.4**
ILAR	**Eielson Array**	**87.13**	**25**	P		**P**		**13 17 14.0**	**+3.6**
	comp=Z,0.4nm,0.8s,baz=263,slow=5.4,SNR=4.1								
TORD	**Torodi Ar. Bea**	**128.82**	**286**	PKP		**PKPdf**		**13 23 32.9**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=112,slow=1.6,SNR=2.3								

NIED ***14*** *13:14:00, 37°.50N×134°.20E, h460km, Mw4.6 Best double couple: M0 9.75000×10^15 NP1:φ0 180.00000°, δ77.00000°, λ117.00000°. NP2:φ0 294.00000°, δ30.00000°, λ28.00000°.*
JMA ***14*** *13:14:59.9±0.1, 37°.51N×134°.16E, h422km±2km, M3.8*
IDC ***14*** *13:15:01.2±0.5, 37°.48N×134°.11E, h408km±6km, mb3.3/25, mb1 3.4/33, mb1mx3.3/65, mbtmp4.1/33, Error ellipse: s-maj=8.3km s-min=7.4km az=54.0*
NEIC ***14*** *13:15:01.7±1.6, 37°.48N±0°.08×134°.2E±0°.1, h412km±6km, mb4.2/135, Error ellipse: s-maj=12.3km s-min=11.8km az=62.0*

ISC 14 13:15:00.8±0.5, **37°.47N**±0°.05×**134°.21E**±0°.04, **h409**km±5km, **n238,** σ1°**35**/261, **mb4.1**/92, **1C-1D, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JOI	**OKI**	**1.40**	**214**	P		**P**		**13 15 54.9**	**+0.4**
JOI							eS	**S**	**13 16 38.7**	**+0.9**
JKG	**Kaga**	**2.07**	**124**	P		**P**		**13 15 59.1**	**+1.1**
JKG							S	**S**	**13 16 46.0**	**+1.7**
JWT	**Wachi**	**2.38**	**156**	P		**P**		**13 16 01.2**	**+1.1**
JSZ	**Suzu**	**2.51**	**89**	P		**P**		**13 16 01.9**	**+1.1**
JSZ							eS	**S**	**13 16 51.2**	**+1.7**
JHS	**Saijyo**	**2.62**	**200**	P		**P**		**13 16 02.3**	**+0.5**
JYTA	**Yamagatataniai**	**2.76**	**132**	P		**P**		**13 16 03.6**	**+0.8**
JYTA							eS	**S**	**13 16 53.4**	**+0.3**
JGT2	**ShimaneMisato**	**2.77**	**210**	P		**P**		**13 16 03.3**	**+0.4**
JGT2							eS	**S**	**13 16 53.0**	**-0.1**
INU	**Inuyama**	**3.10**	**132**	P		**P**		**13 16 05.8**	**+0.4**
MJB9	**Matsu-Tunnel**	**3.33**	**105**	P		**P**		**13 16 07.9**	**+0.6**
MAJO	**Matsushiro**	**3.33**	**105**	P		**P**		**13 16 07.9**	**+0.6**
MAT	**Matsushiro**	**3.33**	**105**	P		**P**		**13 16 07.8**	**+0.5**
MAT							S	**S**	**13 17 01.6**	**+0.2**
MJAR	**Matsushiro Arr**	**3.33**	**105**	P		**P**		**13 16 08.4**	**+1.0**
	1.4nm,0.3s,baz=288,slow=9.6,SNR=156								
MJAR						S		**S**	**13 17 04.3**	**+2.8**
	0.2nm,0.3s,baz=288,slow=17,SNR=4.3								
MJAR	**Matsushiro Arr**	**3.33**	**105**			**P**		**13 16 07.8**	**+0.4**
JIE	**Ise**	**3.68**	**146**	P		**P**		**13 16 11.6**	**+1.2**
JTNC	**Tanabenakahech**	**3.81**	**162**	P		**P**		**13 16 12.4**	**+0.7**
JTNC						S		**S**	**13 17 09.2**	**-0.2**
JRY	**Ryogami san**	**4.04**	**110**	P		**P**		**13 16 14.4**	**+0.7**
JOD2	**Odawara 2**	**4.51**	**118**	P		**P**		**13 16 18.6**	**+0.4**
JTU	**Tsushima**	**4.88**	**234**	*eS*		**S**		**13 17 27.3**	**-0.8**
KSRS	**Korea Array**	**5.00**	**272**	P		**P**		**13 16 24.2**	**+1.2**
	2.0nm,0.3s,baz=92,slow=11,SNR=80								
KSRS						S		**S**	**13 17 31.9**	**+1.7**
	baz=96,slow=20,SNR=15								
KSAR	**Wonju Array Be**	**5.03**	**272**			**P**		**13 16 23.4**	**0.0**
KS19	**Wonju Array Si**	**5.05**	**272**	P		**P**		**13 16 23.4**	**-0.1**
JNU	**Nakatsue**	**5.12**	**213**	P		**P**		**13 16 25.2**	**+0.9**
	1.8nm,0.3s,baz=30,slow=6.4,SNR=16								
JNU						S		**S**	**13 17 31.1**	**-1.5**
	baz=215,slow=19,SNR=3.7								
JNU	**Nakatsue**	**5.12**	**213**			**P**		**13 16 25.1**	**+0.7**
JMK	**Ichinoseki**	**5.72**	**73**	P		**P**		**13 16 30.0**	**-0.4**
JMK							eS	**S**	**13 17 40.4**	**-3.4**
JOSM	**Okushiri--Mats**	**6.14**	**40**	P		**P**		**13 16 35.7**	**+0.9**
BSO1	**Boso 1**	**6.16**	**115**	P		**P**		**13 16 34.0**	**-0.6**
BSO1							eS	**S**	**13 17 49.8**	**-1.9**
JHJ	**Hachijo jima 2**	**6.29**	**132**	P		**P**		**13 16 38.4**	**+1.8**
	8.9nm,0.3s,baz=80,slow=17,SNR=7.8								
JHJ						S		**S**	**13 17 56.8**	**+1.5**
	17nm,0.3s,baz=46,slow=23,SNR=8.4								
JHJ2	**Mitsune**	**6.32**	**132**			**P**		**13 16 37.9**	**+1.0**
JOT	**Ohata**	**6.58**	**51**	P		**P**		**13 16 39.9**	**-0.4**
JOT							eS	**S**	**13 17 58.7**	**-2.1**
JKB	**Kayabe**

KKN	**Kakani**	41.92	271	*e*P		P		13 22 14.8	+0.9
	comp=Z,6.5nm,0.3s								
PKIN	**Phulchoki**	41.92	271	*e*P		P		13 22 14.6	+0.6
	comp=Z,6.4nm,0.5s								
KOLN	**Koldanda**	43.27	272	*e*P		P		13 22 25.6	+1.1
	comp=Z,6.6nm,0.2s								
ANM	**Nome**	44.28	33	P		P		13 22 33.3	+1.7
ANM				IAmb		IAmb		13 22 58.0	
	comp=Z,14nm,1.4s								
KRVT	**Keravat (AS076**	44.75	154	P		P		13 22 36.5	+0.6
	comp=Z,6.9nm,0.5s,baz=0.0,slow=19,SNR=2.5								
KSH	**Kashi**	44.94	291	P		P		13 22 41.1	+3.7
KSH				pmax		pmax			
	comp=Z,20nm,1.3s								
KSH				pmax		pmax			
	comp=Z,120nm,4.1s								
FALS	**False Pass**	44.96	46	P		P		13 22 37.9	+0.8
BVAR	**Borovoye Array**	45.99	311	P		P		13 22 44.8	-0.3
	comp=Z,0.5nm,0.3s,baz=107,slow=7.9,SNR=5.6								
BRVK	**Borovoye**	46.05	311	P		P		13 22 44.9	-0.7
SDPT	**Sand Point**	46.61	46	P		P		13 22 49.3	-0.4
CNBA	**Chernabura Isl**	47.17	46	P		P		13 22 54.0	0.0
CNBA				IAmb		IAmb		13 24 02.0	
	comp=Z,17nm,1.3s								
KK31	**Karatay Array**	47.88	298	P		P		13 22 59.4	-0.3
KKAR	**Karatay Array**	47.88	298	P		P		13 22 59.5	-0.3
KKAR	**Karatay Array**	47.88	298	P		P		13 22 59.2	-0.5
PMG	**Port Moresby**	48.18	163	P		P		13 23 02.9	+0.8
	comp=Z,12nm,1.0s,baz=332,slow=17,SNR=1.4								
TTA	**Tatalina**	48.36	35	P		P		13 23 04.6	+1.6
IMAR	**Indian Mountai**	49.23	31	P		P		13 23 10.5	+1.1
GAR	**Garm**	49.27	293	P		P		13 23 09.7	-0.6
PPLA	**Purkeypile**	50.11	35	P		P		13 23 17.9	+1.7
PPLA				IAmb		IAmb		13 23 19.5	
	comp=Z,25nm,1.6s								
RSO	**Redoubt South**	50.12	38	P		P		13 23 16.7	+0.4
CHGR	**Chuyangaron**	50.24	293	P		P		13 23 17.1	-0.4
OHAK	**Old Harbor**	50.33	42	P		P		13 23 17.9	+0.2
BPAW	**Bear Paw Mtn.**	50.52	33	P		P		13 23 20.3	+1.3
MLY	**Manley**	50.54	32	P		P		13 23 20.3	+1.1
COLD	**Coldfoot**	50.58	29	P		P		13 23 20.5	+1.1
KDAK	**Kodiak Island**	50.61	42	P		P		13 23 20.3	+0.5
KTH	**Kantishna Hill**	50.61	34	P		P		13 23 21.1	+1.3
KTH				IAmb		IAmb		13 23 22.5	
	comp=Z,11nm,0.8s								
TOLK	**Toolik Lake Re**	50.72	27	P		P		13 23 21.4	+0.9
TRF	**Thorofare Moun**	50.90	34	P		P		13 23 22.3	+0.3
TRF				IAmb		IAmb		13 23 26.4	
	comp=Z,15nm,1.6s								
CNPM	**China Poot**	51.01	39	P		P		13 23 22.9	+0.1
BWN	**Browne**	51.18	33	P		P		13 23 25.2	+1.4
NEA	**Nenana**	51.29	33	P		P		13 23 25.9	+1.2
NEA				IAmb		IAmb		13 23 27.3	
	comp=Z,7.8nm,1.0s								
MCK	**McKinley**	51.47	34	P		P		13 23 27.0	+1.0
MCK				IAmb		IAmb		13 23 28.0	
	comp=Z,5.6nm,0.7s								
RC01	**Rabbit Creek A**	51.49	37	P		P		13 23 26.9	+0.7
RND	**Reindeer**	51.55	34	P		P		13 23 27.3	+0.6
RND				IAmb		IAmb		13 23 28.4	
	comp=Z,10nm,1.0s								
MDM	**Murphy Dome**	51.60	32	P		P		13 23 27.9	+0.9
MDM				IAmb		IAmb		13 23 29.6	
	comp=Z,8.4nm,0.8s								
PMR	**Palmer**	51.70	36	P		P		13 23 28.2	+0.6
PMR				IAmb		IAmb		13 24 43.4	
	comp=Z,12nm,1.2s								
WRH	**Wood River Hil**	51.73	33	P		P		13 23 28.6	+0.7
SEW	**Seward**	51.80	38	P		P		13 23 28.9	+0.5
SEW				IAmb		IAmb		13 24 22.3	
	comp=Z,21nm,1.2s								
CCB	**Clear Creek Bu**	51.83	32	P		P		13 23 29.9	+1.3
COEN	**Coen**	51.84	169	P		P		13 23 29.6	+0.3
COEN				IAmb		IAmb		13 24 16.8	
	comp=Z,19nm,1.2s								
SML	**Sawmill**	52.04	36	P		P		13 23 31.6	+1.3
KNK	**Knik Glacier**	52.05	37	P		P		13 23 31.3	+1.0
KNK				IAmb		IAmb		13 23 32.2	
	comp=Z,11nm,0.8s								
ARU	**Arti**	52.18	317	P		P		13 23 30.7	-0.6
	comp=Z,0.6nm,0.3s,baz=17,slow=2.4,SNR=4.7								
ARU	**Arti**	52.18	317	P		P		13 23 30.8	-0.4
IL31		52.20	32	P		P		13 23 31.5	+0.2
ILAR	**Eielson Array**	52.20	32	P		P		13 23 31.7	+0.4
	comp=Z,2.1nm,0.7s,baz=273,slow=5.6,SNR=34								
ILAR	**Eielson Array**	52.20	32	P		P		13 23 31.5	+0.2
HDA	**Harding Lake**	52.23	33	P		P		13 23 31.9	+0.3
HDA				IAmb		IAmb		13 23 32.9	
	comp=Z,11nm,0.8s								
DHY	**Denali Highway**	52.26	34	P		P		13 23 32.6	+0.7
FYU	**Fort Yukon**	52.60	30	P		P		13 23 35.9	+1.8
FYU				IAmb		IAmb		13 23 37.2	
	comp=Z,7.4nm,0.8s								
PRP	**Porcupine Dome**	52.65	31	P		P		13 23 36.1	+1.4
PRP				IAmb		IAmb		13 23 37.2	
	comp=Z,7.1nm,0.8s								
BMAR	**Burnt Mountain**	52.72	29	P		P		13 23 36.8	+1.7
KNRA	**Kununurra**	53.11	187	P		P		13 23 38.9	+0.5
KNRA				IAmb		IAmb		13 24 14.6	
	comp=Z,19nm,1.2s								
FID	**Port Fidalgo**	53.12	37	P		P		13 23 39.0	+0.9
ABKAR	**Akbulak array**	53.21	308	P		P		13 23 37.8	-1.0
ABKAR	**Akbulak array**	53.21	308	P		P		13 23 38.0	-0.7
ABKAR				IAmb		IAmb		13 23 39.0	
	comp=Z,3.1nm,0.9s								
RIDG	**Independent Ri**	53.26	33	P		P		13 23 39.2	+0.1
SCRK	**Sand Creek**	53.58	33	P		P		13 23 41.8	+0.3
SCRK				IAmb		IAmb		13 23 43.0	
	comp=Z,9.8nm,0.8s								
DOT	**Dot Lake**	53.62	33	P		P		13 23 41.8	+0.2
MENT	**Mentasta**	53.92	34	P		P		13 23 44.8	+1.1
MENT				IAmb		IAmb		13 23 46.5	
	comp=Z,8.0nm,0.8s								
AKTO	**Aktyubinsk**	54.05	310	P		P		13 23 44.7	-0.1
	comp=Z,1.5nm,0.6s,baz=87,slow=14,SNR=5.3								
GLB	**Gilahina Butte**	54.23	36	P		P		13 23 47.2	+1.2
VRDI	**Verde Repeater**	54.45	36	P		P		13 23 48.8	+1.1
VRDI				IAmb		IAmb		13 23 50.0	
	comp=Z,6.3nm,0.8s								
EGAK	**Eagle**	54.61	32	P		P		13 23 49.2	+0.7
MCARA	**McCarthy VSAT**	54.61	36	P		P		13 23 49.8	+1.2
MCARA				IAmb		IAmb		13 24 32.1	
	comp=Z,25nm,1.5s								
BCAR	**Beaver Creek A**	54.75	34	P		P		13 23 51.1	+1.5
BALM	**Baldy**	55.02	36	P		P		13 23 52.3	+0.7
BALM				IAmb		IAmb		13 24 24.6	
	comp=Z,22nm,1.8s								
BARN	**Barnard Glacie**	55.33	36	P		P		13 23 55.1	+1.1
YAH	**Yahtse**	55.48	37	P		P		13 23 56.5	+1.4
YAH				IAmb		IAmb		13 25 27.0	
	comp=Z,15nm,1.2s								
CTGM	**Chitina Glacie**	55.51	36	P		P		13 23 56.4	+1.3
CTGM				IAmb		IAmb		13 23 57.5	
	comp=Z,7.7nm,0.8s								
DAWY	**Dawson**	55.53	32	P		P		13 23 55.9	+0.8
FITZ	**Fitzroy Crossi**	55.85	190	P		P		13 23 58.2	+0.3
	comp=Z,1.3nm,0.8s,baz=21,slow=13,SNR=1.9								
FITZ	**Fitzroy Crossi**	55.85	190	IAmb		IAmb		13 24 23.4	
	comp=Z,18nm,1.6s								
EPYK	**Eagle Plains**	55.98	29	P		P		13 23 59.2	+1.0
EPYK				IAmb		IAmb		13 24 00.4	
	comp=Z,10.0nm,0.7s								
INK	**Inuvik**	56.59	26	P		P		13 24 03.0	+0.7
WB0	**Warramunga Arr**	56.93	180	P		P		13 24 05.1	-0.2
WB2	**Warramunga Arr**	57.10	180	P		P		13 24 06.4	-0.1
WB2				IAmb		IAmb		13 24 43.0	
	comp=Z,16nm,1.5s								
WRA	**Warramunga Arr**	57.10	180	P		P		13 24 06.5	0.0
	comp=Z,0.8nm,0.3s,baz=358,slow=7.6,SNR=34								
WRA	**Warramunga Arr**	57.10	180	P		P		13 24 05.8	-0.7
WR0	**Warramunga Arr**	57.12	180	P		P		13 24 06.4	-0.2
HYT	**Haines Junctio**	57.34	36	P		P		13 24 09.4	+1.6
HYT				IAmb		IAmb		13 24 10.9	
	comp=Z,6.9nm,0.9s								
GEYT	**Alibeck**	58.53	296	P		P		13 24 16.3	-0.1
WHY	**Whitehorse**	58.60	35	P		P		13 24 17.7	+1.2
WHY				IAmb		IAmb		13 24 18.3	
	comp=Z,14nm,1.6s								
C36M	**Paulatuk**	59.40	24	P		P		13 24 22.1	+0.5
C36M				IAmb		IAmb		13 24 23.2	
	comp=Z,9.0nm,0.7s								
AS31	**Alice Springs**	60.80	180	P		P		13 24 31.6	0.0
ASAR	**Alice Springs**	60.81	180	P		P		13 24 31.9	+0.2
	comp=Z,1.7nm,0.9s,baz=360,slow=7.5,SNR=17								
ASAR	**Alice Springs**	60.81	180	P		P		13 24 31.4	-0.2
ARCES	**ARCESS Array B**	61.49	338	P		P		13 24 35.6	0.0
	comp=Z,2.6nm,0.8s,baz=66,slow=7.3,SNR=1.5								
RES	**Resolute Bay**	63.54	13	P		P		13 24 49.7	+0.9
FINES	**FINESS Array B**	65.66	330	P		P		13 25 02.6	+0.1
	comp=Z,1.1nm,0.7s,baz=45,slow=8.1,SNR=1.8								
YKA	**Yellowknife Ar**	66.24	28	P		P		13 25 06.8	+0.6
	comp=Z,1.7nm,0.8s,baz=305,slow=6.5,SNR=26								
YKA				pP		pP		13 26 34.0	+0.4
	comp=Z,0.2nm,0.6s,baz=90,slow=37,SNR=1.7								
NLWA	**Neilton Lookou**	70.56	45	P		P		13 25 34.0	+1.1
NLWA				IAmb		IAmb		13 25 36.1	
	comp=Z,8.5nm,1.0s								
HFS	**Hagfors**	71.21	333	P		P		13 25 36.3	-0.2
	comp=Z,1.0nm,0.7s,baz=74,slow=11,SNR=2.0								
NOA	**NORSAR Array B**	71.44	334	P		P		13 25 38.3	+0.4
	comp=Z,0.2nm,0.4s,baz=55,slow=7.3,SNR=1.4								
B08A	**Colville Reser**	72.48	42	P		P		13 25 45.1	+0.9
B08A				IAmb		IAmb		13 25 46.4	
	comp=Z,5.9nm,1.1s								
H04A	**Detroit Lake**	73.08	46	P		P		13 25 48.9	+1.1
H04A				IAmb		IAmb		13 25 50.0	
	comp=Z,4.2nm,0.7s								
C09A	**Chrisman Ranch**	73.39	42	P		P		13 25 50.4	+0.9
D08A	**Wollman Farm,**	73.49	43	P		P		13 25 51.1	+1.1
D08A				IAmb		IAmb		13 25 52.2	
	comp=Z,5.5nm,0.7s								
NEW	**Newport**	73.71	41	P		P		13 25 52.0	+0.7
NEW				IAmb		IAmb		13 25 53.5	
	comp=Z,4.8nm,0.8s								
E09A	**Wood Farm, Sta**	74.25	43	P		P		13 25 55.2	+0.9
E09A				IAmb		IAmb		13 25 56.8	
	comp=Z,5.6nm,0.9s								
PINE	**Pine Mountain**	74.33	47	P		P		13 25 56.9	+1.7
WALA	**Waterton Lakes**	74.86	39	P		P		13 25 59.1	+1.1
I07A	**Izee**	74.98	46	P		P		13 26 00.1	+1.3
K05A	**Summer Lake**	75.00	47	P		P		13 26 00.6	+1.6
K05A				IAmb		IAmb		13 26 01.9	
	comp=Z,5.7nm,0.9s								
F10A	**Beach Ranch, E**	75.08	43	P		P		13 26 00.6	+1.4
F10A				IAmb		IAmb		13 26 03.0	
	comp=Z,3.1nm,0.8s								
JTMT	**Jette**	75.52	40	P		P		13 26 03.1	+1.4
BMO	**Blue Mountains**	75.74	44	P		P		13 26 04.2	+1.2
BMO				IAmb		IAmb		13 26 05.3	
	comp=Z,4.4nm,0.7s								
J08A	**Circle Bar Ran**	76.02	46	P		P		13 26 05.7	+1.1
FCC	**Fort Churchill**	76.05	24	P		P		13 26 04.8	+0.5
FCC				IAmb		IAmb		13 26 06.0	
	comp=Z,5.8nm,0.8s								
MSO	**Missoula**	76.29	41	P		P		13 26 06.7	+0.7
MSO				IAmb		IAmb		13 26 08.7	
	comp=Z,3.4nm,0.9s								
FFC	**Flin Flon**	76.32	30	P		P		13 26 06.3	+0.5
FFC				IAmb		IAmb		13 26 07.5	
	comp=Z,5.2nm,0.8s								
WVOR	**Wild Horse Val**	76.50	47	P		P		13 26 08.3	+1.1
WVOR				IAmb		IAmb		13 26 09.8	
	comp=Z,5.0nm,1.1s								
BEKR	**Beckworth**	77.07	50	P		P		13 26 11.5	+1.0
BEKR				IAmb		IAmb		13 26 12.7	
	comp=Z,4.1nm,0.9s								
MFID	**Camas Ranch**	77.47	45	P		P		13 26 13.9	+1.3
MFID				IAmb		IAmb		13 26 15.2	
	comp=Z,5.0nm,0.8s								
EGMT	**Eagleton**	77.61	38	P		P		13 26 14.2	+1.0
EGMT				IAmb		IAmb		13 26 15.4	
	comp=Z,5.7nm,0.9s								
LRM	**Limekiln Ridge**	77.73	41	P		P		13 26 15.2	+1.1
PAHR	**Pah Rah Range**	77.76	49	P		P		13 26 15.2	+0.9
PAHR				IAmb		IAmb		13 26 16.6	
	comp=Z,5.0nm,1.2s								
DLMT	**Dillon**	77.96	42	P		P		13 26 16.4	+1.2
PNTR	**Pine Nut**	78.01	50	P		P		13 26 17.2	+1.4
PNTR				IAmb		IAmb		13 26 17.9	
	comp=Z,2.7nm,0.7s								
MCMT	**McKenzie Canyo**	78.18	42	P		P		13 26 17.7	+1.1
CMB	**Columbia Colle**	78.18	51	P		P		13 26 17.5	+1.0
CMB				IAmb		IAmb		13 26 18.7	
	comp=Z,2.5nm,0.8s								
YERR	**Yerington**	78.29	50	P		P		13 26 18.6	+1.3
KVN	**Kaiserville**	78.94	49	P		P		13 26 21.8	+1.1
KVN				IAmb		IAmb		13 26 22.8	
	comp=Z,3.7nm,0.8s								
RYN	**Ryan**	78.95	50	P		P		13 26 21.9	+1.1
YHL	**Hebgen Lake**	79.04	41	P		P		13 26 21.9	+0.6
YHB	**Horse Butte**	79.10	41	P		P		13 26 23.0	+1.5
GEC2	**GERESS Array S**	79.17	325	P		P		13 26 21.9	+0.3
GCMT	**Greycliff**	79.19	40	P		P		13 26 23.1	+1.3
NVAR	**Mina Array Bea**	79.21	50	P		P		13 26 24.1	+1.8
	comp=Z,1.3nm,0.7s,baz=292,slow=4.9,SNR=15								
NVAR	**Mina Array Bea**	79.21	50	P		P		13 26 23.6	+1.3
YHH	**Holmes Hill**	79.26	41	P		P		13 26 23.7	+1.2
ELK	**Elko**	79.54	46	P		P		13 26 24.9	+0.9
ELK				IAmb		IAmb		13 28 43.5	
	comp=Z,9.4nm,1.9s								
YNE	**Yellowstone No**	79.55	41	P		P		13 26 24.9	+1.0
IMW	**Indian Meadow**	79.82	42	P		P		13 26 26.5	+1.1
IMW				IAmb		IAmb		13 26 28.5	
	comp=Z,2.8nm,0.8s								
FLWY	**Flagg Ranch**	79.82	42	P		P		13 26 26.8	+1.4
FLWY				IAmb		IAmb		13 26 28.9	
	comp=Z,3.4nm,0.8s								
RLMT	**Red Lodge**	79.85	40	P		P		13 26 26.4	+0.9
RLMT				IAmb		IAmb		13 26 28.3	
	comp=Z,10nm,1.6s								
FXWY	**Fox Creek**	79.95	42	P		P		13 26 27.1	+1.0
TPAW	**Teton Pass**	80.09	42	P		P		13 26 27.9	+1.0
TPAW				IAmb		IAmb		13 26 29.8	
	comp=Z,2.8nm,0.8s								
EKA	**Eskdalemuir Ar**	80.64	337	P		P		13 26 30.0	+0.8
	comp=Z,0.1nm,0.3s,baz=47,slow=5.2,SNR=1.5								
EKA	**Eskdalemuir Ar**	80.64	337	P		P		13 26 30.0	+0.8
HWUT	**Hardware Ranch**	81.03	44	P		P		13 26 33.0	+1.3
HWUT				IAmb		IAmb		13 26 34.5	
	comp=Z,6.7nm,1.2s								
PD31	**Pinedale Array**	81.33	42	P		P		13 26 33.6	+0.3
PDAR	**Pinedale Array**	81.33	42	P		P		13 26 34.0	+0.7
	comp=Z,1.6nm,0.8s,baz=265,slow=0.5,SNR=16								
PDAR	**Pinedale Array**	81.33	42	P		P		13 26 33.6	+0.3
TPNV	**Topopah Spring**	81.41	50	P		P		13 26 34.4	+0.6
TPNV				IAmb		IAmb		13 26 36.2	
	comp=Z,9.2nm,1.3s								
SHPR	**Sheep Range**	82.36	50	P		P		13 26 40.0	+1.4
SHPR				IAmb		IAmb		13 26 41.5	
	comp=Z,3.8nm,0.9s								
MTPU	**Mount Pierson**	83.10	47	P		P		13 26 44.3	+1.7
KNB	**Kanab**	83.42	48	P		P		13 26 45.8	+1.8
XPFO	**Pion Flat**	83.46	52	P		P		13 26 44.5	+0.2
XPFO				IAmb		IAmb		13 26 46.3	
	comp=Z,4.4nm,0.9s								
U15A	**North Rim**	84.13	48	P		P		13 26 49.1	+1.4
B35A	**Bob, Littlefor**	84.50	30	P		P		13 26 49.3	+0.4
PV17	**East Wray Mesa**	84.78	45	P		P		13 26 52.0	+1.2
PV05	**Paradox Valley**	84.84	45	P		P		13 26 52.3	+1.2
TXAR	**Lajitas Array**	94.25	48	P		P		13 27 36.6	+1.5
	comp=Z,0.9nm,0.6s,baz=297,slow=4.0,SNR=11								
DBIC	**Dimbokro**	121.82	310	PKP		PKPdf		13 33 07.6	-0.1
	comp=Z,8.6nm,1.3s,baz=225,slow=7.1,SNR=1.3								
LPAZ	**La Paz**	151.12	49	PKPbc		PKiKP		13 34 08.1	+0.1
	comp=Z,0.9nm,0.4s,baz=351,slow=8.1,SNR=4.3								

*IDC **14** 13:22:00.8±1.6,0.7S93N×125.7E,h0km,mb3.6/4, mb1 3.8/5,mb1mx3.5/31,mbtmp3.6/5,ML3.3/1,Error ellipse: s-maj=124.7km s-min=20.5km az=68.0*
*NEIC **14** 13:22:04.7±2.5,1.3N±0.1×126.51E±0.06,h38km±12km, mb4.3/12,Error ellipse: s-maj=21.2km s-min=6.2km az=200.0*
*DJA **14** 13:22:05.9±1.1,1.1N±5.2×12.7E±°,h30km±14km,M3.8/6, mb4.2/4,MLv3.6/6*

ISC 14 13:22:05.3±1.1,1.2N±0.1×126.56E±0.0,h39km,n31, σ1.9 46/30,mb4.2/11,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	0.92	119	P	Pn	13 22 21.4	-0.4
TNTI	**Ternate**	0.92	119		Pn	13 22 21.2	-0.7
LBMI	**Labuha**	2.08	153	P	Pn	13 22 38.1	+0.4
LBMI				S	Sn	13 23 02.3	-0.1
KMSI	**Cibinong**	2.66	256	P	Pn	13 22 48.5	+2.8
SANI	**Sanana**	3.31	190	P	Pn	13 22 54.1	-0.5
NLAI	**Namlea**	4.47	173	P	Pn	13 23 10.4	-0.2
MPSI	**Mapaga**	6.72	262	P	Pn	13 23 47.1	+5.5
FAKI	**Fak Fak**	7.02	126	Pn	Pn	13 23 47.5	+1.8
SPSI	**Sidrap Palu**	8.53	233	P	Pn	13 24 08.5	+2.2
	7.7nm,0.5s						
BNSI	**Bone**	8.54	229	P	Pn	13 24 08.7	+2.2
	8.8nm,0.7s						
BKSI	**Bulukumba**	9.15	225	P	Pn	13 24 17.1	+2.2
	8.1nm,0.5s						
KAPI	**Kappang**	9.21	228	Pn	Pn	13 24 16.1	+0.4
BKB	**Balikpapan**	9.98	256	Pn	Pn	13 24 25.4	-0.8
KBKI	**Kotabaru**	11.32	247	P	Pn	13 24 48.1	+3.4
FITZ	**Fitzroy Crossi**	19.23	183	P	P	13 26 24.9	-1.4
	0.1nm,0.3s,baz=9.5,slow=12,SNR=1.8						
CISI	**Cisompet, Garu**	20.64	245	P	P	13 26 38.5	-3.3
WB0	**Warramunga Arr**	22.23	160	P	P	13 26 58.4	-0.5
WB0				IAmb	IAmb	13 27 54.2	
	comp=Z,8.9nm,1.2s						
WRAB	**Tennant Creek**	22.38	160	P	P	13 26 59.7	-0.7
WRAB				IAmb	IAmb	13 27 31.2	
	comp=Z,17nm,1.7s						
WRA	**Warramunga Arr**	22.38	160	P	P	13 27 00.2	-0.2
	comp=Z,2.3nm,0.5s,baz=335,slow=11,SNR=29						
WRA	**Warramunga Arr**	22.38	160	P	P	13 26 59.2	-1.3
WB2	**Warramunga Arr**	22.38	160	P	P	13 26 60.0	-0.5
WB2				IAmb	IAmb	13 27 17.9	
	comp=Z,16nm,1.5s						
WR0	**Warramunga Arr**	22.46	160	P	P	13 27 01.1	-0.3
WR0				IAmb	IAmb	13 27 09.8	
	comp=Z,21nm,1.8s						
AS31	**Alice Springs**	25.75	164	P	P	13 27 31.5	-1.1
ASAR	**Alice Springs**	25.76	164	P	P	13 27 32.8	+0.2
	comp=Z,0.5nm,0.4s,baz=345,slow=12,SNR=22						
BBOO	**Buckleboo**	35.02	166	P	P	13 28 54.4	0.0
STKA	**Stephens Creek**	35.88	158	P	P	13 29 02.5	+0.8
STKA				IAmb	IAmb	13 29 34.0	
	comp=Z,7.0nm,2.0s						
MKAR	**Makanchi Array**	59.51	326	P	P	13 32 04.3	-0.4
	comp=Z,0.2nm,0.3s,baz=112,slow=8.5,SNR=2.7						
MAKZ	**Makanchi**	59.70	326	P	P	13 32 05.2	-0.8
MAKZ				IAmb	IAmb	13 32 13.7	
	comp=Z,1.9nm,0.5s						
KURBB	**Kurchatov Arra**	63.75	328	P	P	13 32 33.6	+0.5
	comp=Z,0.3nm,0.4s,baz=129,slow=6.1,SNR=5.7						
KURK	**Kurchatov**	63.76	328	P	Pn	13 32 33.6	+0.5
KURK	**Kurchatov**	63.76	328	IAmb	IAmb	13 33 48.9	
	comp=Z,4.6nm,1.4s						

*DDA **14** 13:29:18.9,40.04N×42.70E,h7km±3km,ML2.5*
*ISK **14** 13:29:19.1,40.06N×42.71E,h6km,ML2.5/5*

ISC 14 13:29:19.1±1.1,40.05N±0.03×42.71E±0.04,h11km±10km, n12,σ0.8 49/18,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EATA	**Eleskirt**	0.25	222	*i* P	Pg	13 29 23.9	-0.6
EATA				*i* S	Sg	13 29 28.7	+0.6
EATA				IAML		13 29 30.0	
	comp=N,1μm,0.4s						
AGRB	**Hanur-Agry**	0.52	155	PG	Pb	13 29 30.2	-0.2
AGRB				SG	Sb	13 29 37.7	-0.3
SENK	**Senkaya-Erzuru**	0.58	332	PG	Pg	13 29 30.6	+0.1
SENK				SG	Sb	13 29 39.2	-0.7
KARS	**Kars**	0.64	26	PG	Pg	13 29 31.3	-0.4
KARS				SG	Sg	13 29 40.8	+0.6
KOPR	**Koprukoy-ERZUR**	0.66	265	PG	Pg	13 29 32.0	0.0
KOPR				SG	Sb	13 29 42.1	0.0
MLAZ	**Malazgirt-MUS**	0.92	188	PG	Pb	13 29 37.1	0.0
EAK	**Akyaka**	0.94	47	*i* P	Pb	13 29 37.5	0.0
EAK				*i* S	Sn	13 29 52.0	0.0
EAK				IAML		13 29 57.0	
	comp=N,79nm,0.5s						
DDEM	**Demirkent**	1.12	319	*i* P	Pn	13 29 41.7	+0.8
DAGI	**Agillar**	1.19	330	*i* P	Pg	13 29 41.7	-0.4
DBAD	**Bademkaya**	1.24	322	*i* P	Pg	13 29 42.3	-0.7
KRIK	**Erzurum-spir**	1.40	283	*i* P	Pn	13 29 45.0

PVAQ				*e*Sn		**Sn**	**13 53 44.4**	**-2.5**
PVAQ				A		A	13 53 55.9	
	8.5nm,0.3s								
PVAQ	**Vaqueiros**	**4.46**	**330**	Pn		**Pn**	**13 52 55.0**	**-0.5**
EGRO	**El Granado**	**4.47**	**333**	P		**Pn**	**13 52 55.9**	**+0.2**
	3.0nm,0.1s,SNR=21								
EGRO				S		**Sn**	**13 53 44.4**	**-3.0**
	3.9nm,0.1s								
EGRO	**El Granado**	**4.47**	**333**			**Pn**	**13 52 55.9**	**+0.2**
EGRO						**Sn**	**13 53 44.4**	**-3.0**
EQES	**Quesada**	**4.49**	**19**	P		**Pn**	**13 52 59.5**	**+3.5**
	4.6nm,0.4s,SNR=7.9								
EQES				S		**Sn**	**13 53 50.9**	**+3.1**
	1.4nm,0.3s,SNR=7.9								
EQES	**Quesada**	**4.49**	**19**			**Pn**	**13 52 59.5**	**+3.5**
EQES						**Sn**	**13 53 50.9**	**+3.1**
ECAB	**El Cabril**	**4.51**	**355**	S		**Sn**	**13 53 46.3**	**-2.2**
	8.0nm,0.2s,SNR=7.9								
ECAB	**El Cabril**	**4.51**	**355**			**Sn**	**13 53 46.3**	**-2.2**
EADA	**Adamuz**	**4.60**	**3**	P		**Pn**	**13 52 58.5**	**+1.0**
	0.6nm,0.1s,SNR=7.9								
EADA				S		**Sn**	**13 53 47.8**	**-2.7**
	5.0nm,0.2s,SNR=7.9								
EADA	**Adamuz**	**4.60**	**3**			**Pn**	**13 52 57.2**	**-0.2**
EADA						**Sn**	**13 53 47.8**	**-2.7**
PFVI	**Vila Bisbo**	**4.78**	**319**	P		**Pn**	**13 52 59.1**	**-0.8**
	4.9nm,0.1s,SNR=7.9								
PFVI				S		**Sn**	**13 53 52.6**	**-2.3**
	11nm,0.3s,SNR=7.9								
PFVI	**Vila Bisbo**	**4.78**	**319**	*e*Pn		**Pn**	**13 53 01.2**	**+1.3**
PFVI				*e*Sn		**Sn**	**13 53 54.8**	**-0.1**
PFVI	**Vila Bisbo**	**4.78**	**319**			**Pn**	**13 52 59.1**	**-0.8**
PFVI	**Vila Bisbo**	**4.78**	**319**			**Sn**	**13 53 52.6**	**-2.3**
PCVE	**Castro Verde**	**4.78**	**329**	P		**Pn**	**13 53 01.2**	**+1.2**
PCVE				S		**Sn**	**13 53 53.5**	**-1.6**
	4.0nm,0.6s								
PCVE	**Castro Verde**	**4.78**	**329**	*e*Pn		**Pn**	**13 53 01.2**	**+1.2**
PCVE				*e*Sn		**Sn**	**13 53 53.5**	**-1.6**
PCVE				A		A	13 54 08.4	
	4.0nm,0.6s								
MORF	**Marmelete**	**4.81**	**322**	*e*P		**Pn**	**13 53 00.2**	**-0.2**
MORF	**Marmelete**	**4.81**	**322**	P		**Pn**	**13 53 01.1**	**+0.7**
MORF				S		**Sn**	**13 53 55.2**	**-0.7**
	7.9nm,0.7s								
MORF	**Marmelete**	**4.81**	**322**	*e*Pn		**Pn**	**13 53 01.1**	**+0.7**
MORF				*e*Sn		**Sn**	**13 53 55.2**	**-0.7**
MORF				A		A	13 53 58.9	
	7.9nm,0.7s								
PBAR	**Barrancos**	**4.91**	**340**	S		**Sn**	**13 53 58.3**	**+0.2**
PBAR	**Barrancos**	**4.91**	**340**	*e*Sn		**Sn**	**13 53 58.3**	**+0.2**
SESP	**Santiago Espad**	**4.93**	**22**	P		**Pn**	**13 53 02.2**	**0.0**
	1.0nm,0.2s,SNR=7.9								
SESP				S		**Sn**	**13 54 00.9**	**+1.9**
	0.2nm,0.2s,SNR=7.9								
SESP	**Santiago Espad**	**4.93**	**22**			**Pn**	**13 53 02.2**	**0.0**
SESP						**Sn**	**13 54 00.9**	**+1.9**
PTEO	**Sao Teotonio**	**5.04**	**323**	P		**Pn**	**13 53 04.6**	**+1.2**
PTEO	**Sao Teotonio**	**5.04**	**323**	*e*Pn		**Pn**	**13 53 04.6**	**+1.2**
MESJ	**Messejana**	**5.04**	**329**	*e*P		**Pn**	**13 53 02.9**	**-0.5**
MESJ	**Messejana**	**5.04**	**329**	P		**Pn**	**13 53 04.7**	**+1.3**
MESJ				S		**Sn**	**13 54 00.6**	**-0.7**
	5.4nm,0.6s								
MESJ	**Messejana**	**5.04**	**329**	*e*Pn		**Pn**	**13 53 04.7**	**+1.3**
MESJ				*e*Sn		**Sn**	**13 54 00.6**	**-0.7**
MESJ				A		A	13 54 05.6	
	5.4nm,0.6s								
PNCL	**Nicolau / Gran**	**5.40**	**328**	P		**Pn**	**13 53 09.1**	**+0.7**
PNCL				S		**Sn**	**13 54 08.5**	**-1.7**
	2.9nm,0.5s								
PNCL	**Nicolau / Gran**	**5.40**	**328**	*e*Pn		**Pn**	**13 53 09.1**	**+0.7**
PNCL				*e*Sn		**Sn**	**13 54 08.5**	**-1.7**
PNCL				A		A	13 54 10.2	
	2.9nm,0.5s								
EBAD	**Badajoz**	**5.45**	**342**	P		**Pn**	**13 53 09.8**	**+0.7**
	2.5nm,0.1s,SNR=13								
EBAD				S		**Sn**	**13 54 08.4**	**-2.9**
	2.3nm,0.1s								
EBAD	**Badajoz**	**5.45**	**342**			**Pn**	**13 53 09.8**	**+0.7**
EBAD						**Sn**	**13 54 08.4**	**-2.9**
EVO	**Evora**	**5.55**	**334**	P		**Pn**	**13 53 11.1**	**+0.6**
EVO				S		**Sn**	**13 54 10.3**	**-3.6**
EVO	**Evora**	**5.55**	**334**	*e*Pn		**Pn**	**13 53 11.1**	**+0.6**
EVO				*e*Sn		**Sn**	**13 54 10.3**	**-3.6**
PESTR	**Estremoz**	**5.71**	**339**	*e*Pn		**Pn**	**13 53 14.1**	**+1.4**
PESTR				*e*Sn		**Sn**	**13 54 15.9**	**-2.0**
PESTR	**Estremoz**	**5.71**	**339**	Pn		**Pn**	**13 53 11.9**	**-0.8**
PAB	**San Pablo**	**5.98**	**4**	S		**Sn**	**13 54 20.3**	**-4.4**
	2.3nm,0.4s,SNR=7.9								
PAB	**San Pablo**	**5.98**	**4**			**Pn**	**13 53 16.7**	**+0.2**
PMTG	**Montargil**	**6.10**	**335**	P		**Pn**	**13 53 18.7**	**+0.6**
PMTG	**Montargil**	**6.10**	**335**	*e*Pn		**Pn**	**13 53 18.7**	**+0.6**
ESDC	**Sonseca Array**	**6.14**	**7**	S		**Sn**	**13 54 24.1**	**-4.5**
	0.5nm,0.3s,baz=194,slow=23,SNR=4.8								
ESDC	**Sonseca Array**	**6.14**	**7**			**Pn**	**13 53 18.8**	**+0.1**
ESDC						**Sn**	**13 54 24.1**	**-4.5**
PMRV	**Marv??o**	**6.18**	**342**	P		**Pn**	**13 53 19.9**	**+0.8**
PMRV				S		**Sn**	**13 54 26.1**	**-3.3**
	2.5nm,0.7s								
PMRV	**Marv??o**	**6.18**	**342**	*e*Pn		**Pn**	**13 53 19.9**	**+0.8**
PMRV				*e*Sn		**Sn**	**13 54 26.1**	**-3.3**
PMRV				A		A	13 54 38.8	
	2.5nm,0.7s								
PCBR	**Castelo Branco**	**6.59**	**343**	P		**Pn**	**13 53 25.4**	**+0.7**
PCBR	**Castelo Branco**	**6.59**	**343**	*e*Pn		**Pn**	**13 53 25.4**	**+0.7**
PSBE	**So Bento**	**6.70**	**333**	*e*Pn		**Pn**	**13 53 26.9**	**+0.5**
GUD	**Guadarrama**	**7.09**	**5**	S		**Sn**	**13 54 46.8**	**-5.2**
	0.3nm,0.3s,SNR=7.9								
GUD	**Guadarrama**	**7.09**	**5**			**Sn**	**13 54 47.1**	**-4.9**
MTE	**Manteigas**	**7.13**	**344**	P		**Pn**	**13 53 33.7**	**+1.4**
MTE	**Manteigas**	**7.13**	**344**	*e*Pn		**Pn**	**13 53 33.7**	**+1.4**
MTE	**Manteigas**	**7.13**	**344**	Pn		**Pn**	**13 53 32.1**	**-0.2**
MVO	**Moncorvo**	**7.76**	**348**	P		**Pn**	**13 53 40.9**	**-0.1**
	2.1nm,0.2s,SNR=7.9								
MVO				S		**Sn**	**13 55 02.7**	**-5.9**
	0.9nm,0.2s,SNR=7.9								
MVO	**Moncorvo**	**7.76**	**348**	*e*Pn		**Pn**	**13 53 43.1**	**+2.1**
MVO				*e*Sn		**Sn**	**13 55 04.8**	**-3.8**
MVO	**Moncorvo**	**7.76**	**348**			**Pn**	**13 53 40.9**	**-0.1**
MVO						**Sn**	**13 55 02.7**	**-5.9**
MURB	**Monte Urbino**	**16.72**	**50**	P		**P**	**13 54 44.8**	**+0.4**
MURB				IAmb		IAmb	13 56 40.9	
	comp=Z,49nm,1.5s								
INTR	**Introdacqua**	**17.08**	**55**	Pn		**Pn**	**13 55 47.1**	**+0.5**
INTR				IAmb		IAmb	13 55 54.6	
	comp=Z,32nm,1.2s								
BFO	**Black Forest**	**17.78**	**30**	Pn		**Pn**	**13 55 54.8**	**-0.5**
BFO				IAmb		IAmb	13 55 59.7	
	comp=Z,5.7nm,1.3s								

*IDC **14** 13:54:15.0±1.1,23°.16S×177°.06W,h0km,mb4.1/6, mb1 4.4/6,mb1mx3.9/35,mbtmp4.1/6,MS3.4/6,Ms1 3.4/6, ms1mx3.0/28,Error ellipse: s-maj=55.4km s-min=28.0km az=162.0*

*NEIC **14** 13:54:25.1±2.3,23°.4S±0°.1×177°.2W±0°.1,h72km±6km, mb4.7/10,Error ellipse: s-maj=16.1km s-min=13.9km az=165.0*

ISC 14 13:54:27.7±0.7,23°.29S±0°.09×177°.2W±0°.1,h100km,n47, σ1s73/33,mb4.4/13,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
RAO	**Raoul Island**	**5.98**	**186**	Pn		**Pn**	**Pn**	**13 55 49.3**	**-4.4**
MSVF	**Nonsavu**	**7.11**	**320**	Pn		**Pn**	**Pn**	**13 56 07.2**	**-2.0**
DZM	**Mont Dzumac**	**15.17**	**271**	eLR		LR	LR	14 01 44.1	
	comp=Z,243nm,25.1s								
DZM	**Mont Dzumac**	**15.17**	**271**	LR		LR	LR	14 02 48.2	
	comp=Z,155nm,19.5s,baz=62,slow=34								
PLWZ	**Palliser**	**19.30**	**197**	P		**Pn**	**13 58 49.0**	**+2.2**	
BSWZ	**Blackbirch Sta**	**19.84**	**200**	P		**Pn**	**13 58 55.1**	**+2.1**	
RPZ	**Rata Peaks**	**22.57**	**203**	LR		LR	14 07 07.9		
	comp=Z,122nm,18.9s,baz=334,slow=34								
LHI	**Lord Howe Isla**	**22.60**	**244**	P		**P**	**13 59 20.0**	**0.0**	
TBI	**Tubuai**	**25.44**	**96**	eLR		LR	14 05 38.0		
	comp=Z,148nm,29.5s								
DCZ	**Deep Cove**	**25.53**	**206**	P		**P**	**13 59 48.7**	**+1.8**	
DCZ				IAmb		IAmb	14 00 38.1		
	comp=Z,32nm,1.2s								
HNR	**Honiara**	**25.86**	**298**	LR		LR	14 09 17.9		
	comp=Z,39nm,21.4s,baz=226,slow=35								
PPT2	**Papeete2**	**26.45**	**83**	eLR		LR	14 05 56.5		
	comp=Z,196nm,26.5s								
PPT	**Papeete**	**26.46**	**83**	LR		LR	14 07 31.7		

	comp=Z,100nm,19.7s,baz=319,slow=30								
ARMA	**Armidale**	**28.66**	**249**	P		**P**	**14 00 17.0**	**+1.7**	
CTA	**Charters Tower**	**34.07**	**268**	P		**P**	**14 01 03.5**	**+0.8**	
	comp=Z,5.2nm,0.8s,baz=105,slow=14,SNR=2.5								
BBOO	**Buckleboo**	**42.06**	**246**	P		**P**	**14 02 11.1**	**+1.3**	
ASAR	**Alice Springs**	**44.69**	**259**	P		**P**	**14 02 31.2**	**+0.2**	
	comp=Z,1.0nm,0.8s,baz=89,slow=8.8,SNR=5.2								
ASAR				LR		LR	14 20 47.3		
	comp=Z,47nm,18.2s,baz=106,slow=36								
ASAR	**Alice Springs**	**44.69**	**259**	P		**P**	**14 02 30.2**	**-0.8**	
WB2	**Warramunga Arr**	**45.02**	**265**	P		**P**	**14 02 33.5**	**-0.2**	
WB2				IAmb		IAmb	14 02 34.5		
	comp=Z,12nm,1.3s								
WB0	**Warramunga Arr**	**45.03**	**265**	P		**P**	**14 02 32.9**	**-0.8**	
WRA	**Warramunga Arr**	**45.03**	**265**	P		**P**	**14 02 32.4**	**-1.4**	
	comp=Z,1.7nm,1.1s,baz=100,slow=8.0,SNR=4.8								
WRA	**Warramunga Arr**	**45.03**	**265**	P		**P**	**14 02 33.8**	**0.0**	
PETK	**Petropavlovsk-**	**79.15**	**345**	LR		LR	14 36 15.6		
	comp=Z,18nm,21.0s,baz=72,slow=32								
NVAR	**Mina Array Bea**	**82.53**	**43**	P		P	14 06 42.7	+2.9	
	comp=Z,0.3nm,0.8s,baz=262,slow=6.3,SNR=2.4								
H03S2	**Juan Fernandez**	**83.80**	**124**	T		T	15 38 26.5		
	baz=244,slow=74,SNR=25								
H03S1	**Juan Fernandez**	**83.81**	**124**	T		T	15 38 27.6		
	baz=244,slow=74,SNR=18								
H03S3	**Juan Fernandez**	**83.81**	**124**	T		T	15 38 28.6		
	baz=244,slow=74,SNR=14								
H03N2	**Juan Fernandez**	**83.95**	**124**	T		T	15 38 31.6		
	baz=250,slow=73,SNR=18								
H03N3	**Juan Fernandez**	**83.95**	**124**	T		T	15 38 33.1		
	baz=250,slow=73,SNR=24								
H03N1	**Juan Fernandez**	**83.97**	**124**	T		T	15 38 34.1		
	baz=250,slow=73,SNR=17								
TXAR	**Lajitas Array**	**87.92**	**57**	P		**P**	**14 07 05.9**	**-0.8**	
	comp=Z,0.8nm,1.0s,baz=238,slow=5.0,SNR=4.5								
GDL2	**Guadalupe Moun**	**88.75**	**54**	P		**P**	**14 07 11.1**	**+0.6**	
TRF	**Thorofare Moun**	**89.01**	**12**	P		**P**	**14 07 11.2**	**+0.2**	
TRF				IAmb		IAmb	14 07 15.8		
	comp=Z,5.7nm,0.8s								
RND	**Reindeer**	**89.24**	**12**	P		**P**	**14 07 12.9**	**+0.9**	
RND				IAmb		IAmb	14 07 16.5		
	comp=Z,5.7nm,0.9s								
PDAR	**Pinedale Array**	**90.47**	**43**	P		**P**	**14 07 20.8**	**+2.3**	
	comp=Z,0.2nm,0.3s,baz=218,slow=11,SNR=4.5								
PDAR	**Pinedale Array**	**90.47**	**43**	P		**P**	**14 07 20.3**	**+1.8**	
HDA	**Harding Lake**	**90.52**	**13**	P		**P**	**14 07 18.4**	**+0.5**	
HDA				IAmb		IAmb	14 07 22.0		
	comp=Z,2.5nm,0.8s								
ILAR	**Eielson Array**	**90.86**	**12**	P		**P**	**14 07 19.9**	**+0.4**	
	comp=Z,0.8nm,1.0s,baz=221,slow=6.7,SNR=5.3								
CMAR	**Chiang Mai Arr**	**91.76**	**289**	P		**P**	**14 07 26.3**	**+1.6**	
	comp=Z,0.8nm,0.3s,baz=133,slow=6.4,SNR=1.6								
CMAR	**Chiang Mai Arr**	**91.76**	**289**	P		**P**	**14 07 24.6**	**-0.1**	
AKASG	**Malin Array Be**	**145.80**	**330**	PKPbc		**PKiKP**	**14 13 54.8**	**-3.8**	
	comp=Z,3.1nm,0.7s,baz=42,slow=4.3,SNR=8.9								
AKASG	**Malin Array Be**	**145.80**	**330**	PKPbc		**PKiKP**	**14 13 55.9**	**-2.6**	
BRTR	**Keskin Array B**	**149.23**	**309**	PKPbc		**PKiKP**	**14 14 04.0**	**-2.2**	
	comp=Z,0.9nm,0.8s,baz=126,slow=2.2,SNR=3.8								
BRTR	**Keskin Array B**	**149.23**	**309**			**PKiKP**	**14 14 04.4**	**-1.8**	
CLL	**Collm**	**150.94**	**347**	*e*PKPbc		**PKiKP**	**14 14 09.0**	**-0.1**	
TORD	**Torodi Ar. Bea**	**169.86**	**174**	PKP		**PKPdf**	**14 14 25.8**	**+1.4**	
	comp=Z,1.0nm,1.0s,baz=316,slow=4.0,SNR=3.9								
TORD				PKPab		**PKPab**	**14 15 40.0**	**+0.9**	
	comp=Z,0.9nm,0.9s,baz=166,slow=5.5,SNR=4.1								
TORD	**Torodi Ar. Bea**	**169.86**	**174**			**PKPdf**	**14 14 23.9**	**-0.5**	

IDC 14 14:01:53.9±2.5,32°.53N×105°.72E,h0km,mb3.3/4, mb1 3.5/4,mb1mx3.3/50,mbtmp3.3/4,MS3.4/1,Ms1 3.4/1, ms1mx2.4/32,Error ellipse: s-maj=367.8km s-min=22.7km az=52.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
HHC	**Hu-ho-hao-te**	**9.54**	**28**	*e*P		Pn	14 04 25.3	+13	
HHC				pmax		pmax			
	comp=Z,9.0nm,0.7s								
HHC				pmax		pmax			
	comp=Z,27nm,6.4s								
MKAR	**Makanchi Array**	**22.87**	**315**	P		P	14 06 59.0	+0.1	
	comp=Z,0.6nm,0.8s,baz=118,slow=11,SNR=5.7								
KURBB	**Kurchatov Arra**	**26.98**	**320**	P		P	14 07 36.9	-0.2	
	comp=Z,0.2nm,0.3s,baz=129,slow=9.3,SNR=2.9								
WSAR	**Wadi Sarin**	**42.35**	**270**	LR		LR	14 28 35.3		
	comp=Z,43nm,19.1s,baz=146,slow=38								
WRA	**Warramunga Arr**	**58.93**	**148**	P		P	14 11 55.0	0.0	
	comp=Z,0.3nm,0.5s,baz=338,slow=7.5,SNR=7.2								
ASAR	**Alice Springs**	**62.03**	**151**	P		P	14 12 16.1	0.0	
	comp=Z,0.3nm,0.8s,baz=339,slow=7.0,SNR=6.0								

TRN 14 14:16:28.3,15°.81N×61°.58W,h23km,MD2.2,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
TDBA	**Terre de Bas,**	**0.07**	**310**	*e*P		Pb	14 16 34.3	+1.7	
TDBA				*e*S		Sb	14 16 36.4	+1.0	
CBE	**Ff, Capester**	**0.26**	**355**	*e*P		Pn	14 16 36.7	-0.1	
CBE				*e*S		Sn	14 16 42.1	-0.1	
MAGL	**Barre de l'ile**	**0.32**	**63**	*e*P		Pn	14 16 37.3	-0.2	
MAGL				*e*S		Sn	14 16 42.6	-0.9	

TRN 14 14:16:35.5,18°.13N×62°.21W,h29km,MD3.0,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
ANWB	**Willy Bob**	**0.61**	**139**	*e*P		Pn	14 16 50.1	+1.9	
ANWB				*e*S		Sn	14 16 59.6	+2.6	
ANWB	**Willy Bob**	**0.61**	**139**	*e*P		Sn	14 16 59.7	+2.6	
SKI	**Saint Kitts**	**0.94**	**213**	*e*P		Pb	14 16 53.9	+0.7	
SKI				*e*S		Sb	14 17 08.8	+3.4	
SKOC	**St. Kitts, UWI**	**0.97**	**211**	*e*P		Pb	14 16 54.2	+0.4	
SKOC				*e*S		Sb	14 17 08.3	+2.1	
NVDO	**Nevis, Disaste**	**1.08**	**201**	*e*P		Pb	14 16 56.4	+0.7	
NVDO				*e*S		Sb	14 17 11.0	+1.7	
MLYT	**Lee's Yard**	**1.40**	**179**	*e*S		Sb	14 17 19.1	+0.5	
MLYT	**Lee's Yard**	**1.40**	**179**	*e*S		Sb	14 17 20.6	+2.0	

IDC 14 14:46:35.0±4.3,16°.91S×173°.07W,h0km,mb3.7/3, mb1 4.0/3,mb1mx3.6/24,mbtmp3.7/3,MS3.3/1,Ms1 3.3/1, ms1mx2.6/34,Error ellipse: s-maj=282.9km s-min=33.9km az=150.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
HNR	**Honiara**	**27.28**	**282**	LR		LR	LR	15 01 29.6	
	comp=Z,65nm,19.6s,baz=206,slow=33								
WRA	**Warramunga Arr**	**49.83**	**258**	P		P		14 55 29.6	-0.7
	0.4nm,0.7s,baz=94,slow=6.6,SNR=5.7								
ASAR	**Alice Springs**	**49.96**	**253**	P		P		14 55 31.4	+0.1
	1.2nm,0.6s,baz=89,slow=8.3,SNR=24								
PDAR	**Pinedale Array**	**83.17**	**42**	P		P		14 59 03.2	-0.2
	0.3nm,0.7s,baz=221,slow=6.8,SNR=3.9								
BRTR	**Keskin Array B**	**147.52**	**320**	PKPbc		PKPbc		15 06 21.4	-0.3
	1.1nm,0.8s,baz=125,slow=2.0,SNR=6.5								

*STR **14** 15:02:36.0±0.3,43°.N±2°.×°.±°,h0km,MLv2.5/6, smi:scs/0.6/LOCSAT earthModelD smi:scs/0.6/pyrenees_taup-2.11 preliminary*

*MRB **14** 15:02:35.4±0.2,43°.00N×0°.00E,h3km±1km,ML2.5/26, Error ellipse: s-maj=0.7km s-min=0.5km az=248.0*

*MDD **14** 15:02:36.4±0.4,43°.01N×0°.04E,h0km,mbLg2.7/24,Error ellipse: s-maj=4.3km s-min=2.2km az=14.0,PRXIMO*

*LDG **14** 15:02:36.3±0.1,43°.01N×0°.05E,h2km,Md3.2/3,Ml2.9/33, Error ellipse: s-maj=1.2km s-min=1.1km az=54.0*

ISC 14 15:02:34.8±0.8,43°.07N±0°.01×0°.02E±0°.01,h14km±4km, n133,σ1s11/219,2D,France

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
PYLO	**Lourdes**	**0.05**	**299**	P		**Pg**		**15 02 37.5**	**0.0**
PYLO				S		**Sg**		**15 02 39.1**	**-0.2**
	2μm,0.1s								
PYLO	**Lourdes**	**0.05**	**299**	Pg		**Pg**		**15 02 37.7**	**+0.2**
PYLO				Sg		**Sg**		**15 02 39.2**	**-0.2**
EPF	**Esparros**	**0.24**	**100**	*e*Pg		**Pg**		**15 02 40.4**	**+0.3**
EPF				*e*Sg		**Sg**		**15 02 44.2**	**+0.6**
	362nm,0.2s								
EPF	**Esparros**	**0.24**	**100**	Pg		**Pg**		**15 02 40.4**	**+0.3**
EPF				Sg		**Sg**		**15 02 44.2**	**+0.6**

FMON	**Montouss**	**0.29**	**92**	P		**Pg**		**15 02 41.4**	**+0.5**
FMON				S		**Sb**		**15 02 46.0**	**-0.6**
	125nm,0.2s								
ECHI	**Chisagues Biel**	**0.43**	**162**	⇓Pg		**Pg**		**15 02 42.8**	**-0.6**
	7.2nm,0.1s,SNR=18								
ECHI				Lg		Lg		15 02 47.8	
	1μm,0.2s,SNR=7.9								
ECHI	**Chisagues Biel**	**0.43**	**162**	P		**Pg**		**15 02 42.6**	**-0.8**
ECHI				S		**Sg**		**15 02 47.9**	**-1.3**
	834nm,0.1s								
ECHI	**Chisagues Biel**	**0.43**	**162**	Pg		**Pg**		**15 02 42.9**	**-0.6**
ECHI				Sg		**Sg**		**15 02 47.7**	**-1.5**
ETSF	**Etsaut**	**0.46**	**248**	*e*Pg		**Pg**		**15 02 43.9**	**0.0**
ETSF				*e*Sg		**Sg**		**15 02 49.5**	**-0.6**
	342nm,0.2s								
ETSF	**Etsaut**	**0.46**	**248**	Pg		**Pg**		**15 02 43.9**	**0.0**
ATE	**Arette**	**0.53**	**272**	Pg		**Pg**		**15 02 45.4**	**+0.2**
	28nm,0.1s,SNR=7.9								
ATE				Lg		Lg		15 02 53.0	
	91nm,0.1s,SNR=7.9								
ATE	**Arette**	**0.53**	**272**	P		**Pg**		**15 02 45.3**	**+0.2**
ATE				S		**Sg**		**15 02 52.9**	**+0.7**
	88nm,0.1s								
ATE	**Arette**	**0.53**	**272**	Pg		**Pg**		**15 02 45.3**	**+0.2**
URDF	**Urds**	**0.58**	**310**	Pg		**Pn**		**15 02 48.2**	**-0.4**
URDF				Sg		**Sn**		**15 02 57.8**	**-0.1**
CARA	**Val d'Aran**	**0.69**	**121**	P		**Pg**		**15 02 48.2**	**-0.2**
CARA				S		**Sg**		**15 02 57.7**	**+0.2**
	328nm,0.2s								
MLS	**Moulis**	**0.80**	**98**	Pg		**Pg**		**15 02 50.3**	**0.0**
MLS				Lg		Lg		15 03 01.6	
	22nm,0.2s								
MLS	**Moulis**	**0.80**	**98**	P		**Pg**		**15 02 50.4**	**0.0**
MLS				S		**Sb**		**15 03 01.6**	**+0.4**
	24nm,0.2s								
MLS	**Moulis**	**0.80**	**98**	Pg		**Pg**		**15 02 50.5**	**+0.2**
SJPF	**Ste Jean**	**0.91**	**273**	*e*Pg		**Pg**		**15 02 52.8**	**+0.4**
SJPF				*e*Sg		**Sn**		**15 03 06.1**	**0.0**
	27nm,0.2s								
CTRE	**Tremp**	**0.93**	**143**	Pg		**Pb**		**15 02 52.1**	**-0.7**
CTRE				Lg		Lg		15 03 04.6	
	42nm,0.2s								
CTRE	**Tremp**	**0.93**	**143**	P		**Pb**		**15 02 52.1**	**-0.7**
CTRE				S		**Sg**		**15 03 04.6**	**-0.5**
	42nm,0.2s								
EORO	**Oroz-Betelu**	**0.99**	**260**	Pg		**Pn**		**15 02 54.6**	**+0.2**
	1.6nm,0.1s,SNR=12								
EORO				Lg		Lg		15 03 07.7	
	24nm,0.2s,SNR=13								
TERF	**Tercis-les-Bai**	**1.02**	**307**	Pg		**Pn**		**15 02 56.4**	**+1.7**
CEST	**Esterri de Car**	**1.03**	**117**	Pg		**Pb**		**15 02 54.2**	**-0.2**
CEST				Lg		Lg		15 03 08.0	
	46nm,0.2s								
CEST	**Esterri de Car**	**1.03**	**117**	P		**Pb**		**15 02 54.2**	**-0.2**
CEST				S		**Sg**		**15 03 08.1**	**0.0**
	46nm,0.2s								
CSOR	**Sort**	**1.08**	**130**	Pg		**Pb**		**15 02 55.2**	**-0.1**
	6.4nm,0.2s,SNR=35								
CSOR				Lg		Lg		15 03 08.9	
	35nm,0.1s								
CSOR	**Sort**	**1.08**	**130**	P		**Pb**		**15 02 54.9**	**-0.4**
CSOR				S		**Sg**		**15 03 09.5**	**-0.2**
	37nm,0.2s								
EALK	**Alkurruntz**	**1.12**	**278**	Pg		**Pg**		**15 02 57.1**	**+0.6**
	0.7nm,0.1s,SNR=17								
EALK				Lg		Lg		15 03 12.5	
	19nm,0.2s								
EALK	**Alkurruntz**	**1.12**	**278**	Pg		**Pg**		**15 02 56.9**	**+0.4**
EALK	**Alkurruntz**	**1.12**	**

ERTA					S		**Sn**	**15 03 36.9 +0.7**
	40nm,0.2s							
SJAF	**Saint Jean de**	**2.19**	**105**		Pg		**Pg**	**15 03 16.1 -0.7**
	0.3nm,0.1s,SNR=7.9							
SJAF					Lg		Lg	15 03 45.7
	10nm,0.2s,SNR=7.9							
SJAF	**Saint Jean de**	**2.19**	**105**		P		**Pn**	**15 03 12.5 +1.7**
SJAF					S		**Sb**	**15 03 40.0 -1.2**
	23nm,0.4s							
EJON	**La Jonquera**	**2.21**	**105**		Pn		**Pn**	**15 03 12.6 +1.5**
	0.3nm,0.1s,SNR=4.0							
EJON					Lg		Lg	15 03 46.5
	18nm,0.3s,SNR=7.9							
CFON	**Fontmartina**	**2.22**	**125**		Pn		**Pb**	**15 03 14.3 -0.4**
	2.2nm,0.1s,SNR=12							
CFON					Lg		Lg	15 03 45.0
	104nm,0.2s,SNR=7.9							
CFON	**Fontmartina**	**2.22**	**125**		P		**Pn**	**15 03 12.3 +1.0**
CFON					S		**Sb**	**15 03 40.4 -1.7**
	112nm,0.3s							
CMAS	**Mas de Barbera**	**2.35**	**174**		Pn		**Pn**	**15 03 13.7 +0.7**
CMAS					Sn		**Sn**	**15 03 42.2 +0.4**
	36nm,0.3s							
CMAS	**Mas de Barbera**	**2.35**	**174**		P		**Pn**	**15 03 13.8 +0.7**
CMAS					S		**Sn**	**15 03 42.3 +0.6**
	36nm,0.3s							
CAF	**Calviac**	**2.37**	**38**	*e*Pn			**Pn**	**15 03 14.9 +1.6**
CAF	**Calviac**	**2.37**	**38**	*e*Pg			**Pg**	**15 03 20.8 +0.6**
CAF				*e*Sn			**Sn**	**15 03 43.0 +0.8**
	7.9nm,0.2s							
CAF				*e*Sg			**Sg**	**15 03 51.6 +0.6**
	16nm,0.2s							
CPAL	**Palau Saverder**	**2.44**	**107**		Pn		**Pn**	**15 03 15.5 +1.3**
CPAL					Sn		**Sn**	**15 03 45.9 +2.0**
	11nm,0.4s							
CPAL	**Palau Saverder**	**2.44**	**107**		P		**Pn**	**15 03 15.5 +1.3**
CPAL					S		**Sn**	**15 03 45.9 +2.0**
	11nm,0.4s							
CCAS	**Cassa de la Se**	**2.44**	**118**		Pn		**Pn**	**15 03 15.8 +1.5**
CCAS					Sn		**Sb**	**15 03 46.3 -2.2**
	30nm,0.8s							
CCAS	**Cassa de la Se**	**2.44**	**118**		P		**Pn**	**15 03 15.8 +1.5**
CCAS					S		**Sn**	**15 03 45.8 +1.9**
	30nm,0.8s							
RJF	**Les Rejaudoux**	**2.48**	**25**	*e*Pn			**Pn**	**15 03 16.5 +1.7**
RJF	**Les Rejaudoux**	**2.48**	**25**	*e*Pg			**Pg**	**15 03 22.9 +0.6**
RJF				*e*Sg			**Sg**	**15 03 55.3 +0.8**
	26nm,0.3s							
ELAN	**Lanestosa**	**2.53**	**275**		Pn		**Pb**	**15 03 19.6 -0.5**
	0.2nm,0.1s,SNR=7.9							
ELAN					Sn		**Sb**	**15 03 50.3 -0.7**
	1.0nm,0.2s,SNR=7.9							
EMOS	**Mosqueruela**	**2.73**	**188**		Pn		**Pn**	**15 03 18.8 +0.4**
	2.6nm,0.3s,SNR=4.0							
EMOS					Lg		Lg	15 03 59.1
	14nm,0.3s,SNR=7.9							
ETOR	**Torete**	**2.73**	**215**		Pn		**Pn**	**15 03 20.2 +1.9**
	12nm,0.1s,SNR=20							
ETOR					Sn		**Sn**	**15 03 51.8 +0.6**
	8.1nm,0.1s,SNR=7.9							
ETOR					Lg		Lg	15 04 02.3
	47nm,0.3s,SNR=5.0							
LASF	**Ste Croix**	**2.97**	**69**	*e*Pn			**Pn**	**15 03 22.8 +1.3**
LASF	**Ste Croix**	**2.97**	**69**	*e*P			**Pb**	**15 03 26.5 -0.9**
LASF	**Ste Croix**	**2.97**	**69**	*e*Pg			**Pg**	**15 03 31.5 -0.1**
LASF				*e*Sg			**Sg**	**15 04 10.2 +0.1**
	20nm,0.3s							
MFF	**Saint Martin d**	**3.53**	**358**	*e*Pn			**Pn**	**15 03 30.2 +1.0**
MFF	**Saint Martin d**	**3.53**	**358**	*e*Pg			**Pg**	**15 03 42.1 -0.3**
MFF				*e*Sn			**Sn**	**15 04 11.2 +0.4**
	3.1nm,0.3s							
MFF				*e*Sg			**Sg**	**15 04 27.9 -0.3**
	10nm,0.3s							
TCF	**Toulx Ste Croi**	**3.58**	**25**	*e*Pn			**Pn**	**15 03 31.2 +1.3**
TCF	**Toulx Ste Croi**	**3.58**	**25**	*e*Pg			**Pg**	**15 03 43.4 +0.1**
TCF				*e*Sn			**Sn**	**15 04 12.6 +0.7**
	1.7nm,0.2s							
TCF				*e*Sg			**Sg**	**15 04 29.7 +0.1**
	8.8nm,0.2s							
VIVF	**Saint-Julien-l**	**3.81**	**60**	*e*Pn			**Pn**	**15 03 34.2 +1.2**
VIVF	**Saint-Julien-l**	**3.81**	**60**	*e*Pg			**Pg**	**15 03 47.1 -0.6**
VIVF				*e*Sg			**Sg**	**15 04 35.7 -1.3**
	8.0nm,0.3s							
EARI	**Arriondas**	**3.83**	**275**		Pn		**Pn**	**15 03 36.2 +2.8**
	0.3nm,0.1s,SNR=7.9							
EARI					Sn		**Sn**	**15 04 19.4 +1.2**
	0.0nm,0.1s,SNR=7.9							
ETOS	**Mallorca**	**3.91**	**147**		Pn		**Pn**	**15 03 36.2 +1.7**
	1.1nm,0.6s,SNR=7.9							
ETOS					Sn		**Sn**	**15 04 19.5 -0.8**
	7.3nm,0.4s,SNR=7.9							
GUD	**Guadarrama**	**3.95**	**233**		Pn		**Pn**	**15 03 36.8 +1.7**
	0.0nm,0.1s,SNR=7.9							
GUD					Sn		**Sn**	**15 04 21.5 +0.2**
	1.0nm,0.2s,SNR=7.9							
GUD					Lg		Lg	15 04 37.8
	0.6nm,0.2s,SNR=5.8							
BGF	**Bois d'Agland**	**4.03**	**29**	*e*Pn			**Pn**	**15 03 37.4 +1.4**
BGF	**Bois d'Agland**	**4.03**	**29**	*e*Pg			**Pg**	**15 03 51.7 -0.2**
BGF				*e*Sg			**Sg**	**15 04 43.5 -0.5**
	27nm,0.3s							
SMRF	**Simiane la Rot**	**4.14**	**76**	*e*Pn			**Pn**	**15 03 37.8 +0.1**
EIBI	**Ibiza**	**4.16**	**166**		Sn		**Sn**	**15 04 24.4 -2.0**
	1.0nm,0.2s,SNR=7.9							
AVF	**Avril sur Loir**	**4.41**	**31**	*e*Pn			**Pn**	**15 03 42.8 +1.5**
AVF	**Avril sur Loir**	**4.41**	**31**	*e*Pg			**Pg**	**15 03 58.7 -0.5**
AVF				*e*Sg			**Sg**	**15 04 55.3 -1.0**
	3.4nm,0.3s							
SMF	**Signal de Mont**	**4.49**	**36**	*e*Pn			**Pn**	**15 03 43.9 +1.5**
SMF	**Signal de Mont**	**4.49**	**36**	*e*Pg			**Pg**	**15 04 00.2 -0.6**
SMF				*e*Sn			**Sn**	**15 04 33.8 -0.6**
	1.1nm,0.2s							
SMF				*e*Sg			**Sg**	**15 04 57.4 -1.5**
	5.2nm,0.4s							
ESDC	**Sonseca Array**	**4.53**	**223**		Pn		**Pn**	**15 03 43.6 +0.6**
	0.0nm,0.1s,baz=44,slow=14,SNR=5.0							
ESDC					Sn		**Sn**	**15 04 33.5 -1.9**
	0.7nm,0.4s,baz=43,slow=24,SNR=5.1							
ESDC					Lg		Lg	15 04 56.3
	0.5nm,0.2s,baz=48,slow=29,SNR=3.6							
ETOB	**Tobarra**	**4.58**	**196**		Pn		**Pn**	**15 03 44.9 +1.2**
	0.0nm,0.1s,SNR=7.9							
ETOB					Sn		**Sn**	**15 04 34.6 -2.1**
	0.3nm,0.1s,SNR=7.9							
HYF	**Humbligny**	**4.59**	**23**	*e*Pn			**Pn**	**15 03 45.2 +1.5**
HYF	**Humbligny**	**4.59**	**23**	*e*Pg			**Pg**	**15 04 01.9 -0.7**
HYF				*e*Sg			**Sg**	**15 05 02.2 +0.2**
ORIF	**Oris-en-Rattie**	**4.62**	**64**	*e*Pn			**Pn**	**15 03 43.7 -0.5**
ORIF				*e*Sn			**Sn**	**15 04 36.2 -1.4**
	1.3nm,0.3s							
SSF	**Saint Saulge**	**4.69**	**31**	*e*Pn			**Pn**	**15 03 46.3 +1.1**
SSF	**Saint Saulge**	**4.69**	**31**	*e*Pg			**Pg**	**15 04 04.2 -0.4**
SSF				*e*Sn			**Sn**	**15 04 38.3 -1.1**
SSF				*e*Sg			**Sg**	**15 05 04.0 -1.4**
	4.1nm,0.4s							
PAB	**San Pablo**	**4.82**	**224**		Pn		**Pn**	**15 03 48.6 +1.6**
	0.3nm,0.1s,SNR=7.9							
PAB					Sn		**Sn**	**15 04 41.2 -1.5**
	0.7nm,0.2s,SNR=7.9							
PAB					Lg		Lg	15 05 04.7
	2.5nm,0.4s,SNR=7.9							
FRF	**La Foret Royal**	**4.86**	**82**	*e*Pn			**Pn**	**15 03 49.2 +1.7**
FRF	**La Foret Royal**	**4.86**	**82**	*e*Pg			**Pg**	**15 04 07.3 -0.6**
FRF				*e*Sn			**Sn**	**15 04 40.6 -3.0**
	1.6nm,0.3s							
LOR	**Lormes**	**5.00**	**32**	*e*Pn			**Pn**	**15 03 50.8 +1.4**
LOR	**Lormes**	**5.00**	**32**	*e*Pg			**Pg**	**15 04 09.5 -1.0**
	baz=212							
LOR				*e*Sn			**Sn**	**15 04 46.1 -0.9**
LOR				*e*Sg			**Sg**	**15 05 13.9 -1.3**
	4.9nm,0.3s,baz=211							
ECAL	**Calabor**	**5.12**	**260**		Pn		**Pn**	**15 03 53.3 +2.2**
	1.3nm,0.2s,SNR=7.9							
ECAL					Sn		**Sn**	**15 04 48.1 -1.9**
	0.2nm,0.2s,SNR=7.9							
MBDF	**Montbardon**	**5.15**	**69**	*e*Pn			**Pn**	**15 03 52.7 +1.0**
EMUR	**La Murta**	**5.31**	**191**		Pn		**Pn**	**15 03 55.0 +1.2**
	2.6nm,0.2s,SNR=4.0							
QUIF	**Quistinic**	**5.34**	**336**	*e*Pn			**Pn**	**15 03 54.8 +0.8**
QUIF	**Quistinic**	**5.34**	**336**	*e*Pg			**Pg**	**15 04 15.2 -1.7**
QUIF				*e*Sn			**Sn**	**15 04 54.4 -0.8**
	2.1nm,0.2s							
QUIF				*e*Sg			**Sg**	**15 05 25.0 -1.0**
	3.2nm,0.3s							
GRR	**Gorron**	**5.35**	**354**	*e*Pn			**Pn**	**15 03 55.5 +1.3**
GRR	**Gorron**	**5.35**	**354**	*e*Pg			**Pg**	**15 04 16.3 -0.9**
GRR				*e*Sn			**Sn**	**15 04 54.8 -0.8**
	2.1nm,0.3s							
GRR				*e*Sg			**Sg**	**15 05 25.6 -0.9**
	2.8nm,0.2s							
SGMF	**Saint Gilles**	**5.49**	**342**	*e*Pn			**Pn**	**15 03 57.8 +1.7**
SGMF				*e*Sn			**Sn**	**15 04 57.9 -1.0**
	1.2nm,0.2s							
LDF	**La Druitiere**	**5.52**	**359**	*e*Pn			**Pn**	**15 03 57.6 +1.0**
LDF	**La Druitiere**	**5.52**	**359**	*e*Pg			**Pg**	**15 04 20.1 -0.4**
LDF				*e*Sg			**Sg**	**15 05 30.8 -1.2**
	2.8nm,0.3s							
MVO	**Moncorvo**	**5.58**	**252**	Pn			**Pn**	**15 03 58.8 +1.4**
	0.5nm,0.1s,SNR=7.9							
MVO				Sn			**Sn**	**15 04 59.7 -1.6**
	0.2nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**5.58**	**252**	*e*Pn			**Pn**	**15 03 59.5 +2.1**
MVO				*e*Sn			**Sn**	**15 05 00.3 -1.0**
MVO				A			A	15 05 03.1
	2.0nm,0.2s							
CABF	**La Chapelle**	**5.58**	**49**	*e*Pn			**Pn**	**15 03 58.7 +1.2**
CABF	**La Chapelle**	**5.58**	**49**	*e*Pg			**Pg**	**15 04 20.7 -0.9**
CABF				*e*Sn			**Sn**	**15 04 59.5 -1.9**
CABF				*e*Sg			**Sg**	**15 05 32.0 -1.9**
	0.9nm,0.2s							
FLN	**La Foliniere**	**5.70**	**357**	*e*Pn			**Pn**	**15 04 00.6 +1.6**
	baz=177							
FLN				*e*Sn			**Sn**	**15 05 03.0 -1.2**
	2.9nm,0.3s							
ROSF	**Rostrenen**	**5.75**	**338**	*e*Pn			**Pn**	**15 04 00.7 +1.1**
ROSF				*e*Sn			**Sn**	**15 05 03.9 -1.4**
	1.0nm,0.2s							
EAGO	**Agolada(Pontev**	**5.96**	**270**	Pn			**Pn**	**15 04 05.4 +2.9**
	0.7nm,0.2s,SNR=7.9							
PGF	**Pioggiola**	**6.63**	**91**	*e*Pn			**Pn**	**15 04 13.5 +1.6**
PMRV	**Marv??o**	**6.66**	**239**	*e*Pn			**Pn**	**15 04 14.0 +1.7**
PMRV				*e*Sn			**Sn**	**15 05 27.4 -0.6**

NEIC ***14*** *15:11:20.1±2.1,7.4S±0.1×156.5E±0.07,h10km±1km, mb4.5/6, Error ellipse: s-maj=23.5km s-min=11.1km az=196.0*
IDC ***14*** *15:11:21.5±1.7,7.0S×155.9E,h0km,mb3.5/4, mb1 3.8/5,mb1mx3.5/30,mbtmp3.5/5,ML3.3/1, Error ellipse: s-maj=39.2km s-min=32.7km az=113.0*

ISC 14 15:11:19.5±0.8,**7.5S**±0.2×**156.6E**±0.1,**h10**km,**n17,** σ1§**99**/14,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**3.81**	**120**	Pn		**Pn**	**15 12 19.6**	**+1.3**
HNR				Sn		**Sn**	**15 12 59.3**	**-4.0**
RABL	**Rabaul**	**5.51**	**306**			**Pn**	**15 12 39.7**	**-2.1**
KRVT	**Keravat (AS076**	**5.56**	**305**	Pn		Pn	15 12 36.7	-5.7
	1.2nm,0.3s,baz=60,slow=14,SNR=2.0							
KRVT				Sn		Sn	15 13 32.4	-14
	3.5nm,0.3s,baz=197,slow=20,SNR=1.8							
WR0	**Warramunga Arr**	**24.72**	**238**	P		**P**	**15 16 41.7**	**+0.4**
WR0				IAmb		IAmb	15 17 34.2	
	comp=Z,22nm,1.9s							
WB0	**Warramunga Arr**	**24.76**	**238**	P		**P**	**15 16 42.5**	**+0.8**
WB0				IAmb		IAmb	15 16 52.5	
	comp=Z,18nm,1.7s							
WRAB	**Tennant Creek**	**24.87**	**238**	P		**P**	**15 16 43.7**	**+1.1**
WB2	**Warramunga Arr**	**24.87**	**238**	P		**P**	**15 16 43.2**	**+0.5**
WRA	**Warramunga Arr**	**24.88**	**238**	P		**P**	**15 16 43.4**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=60,slow=9.8,SNR=8.3							
ASAR	**Alice Springs**	**27.08**	**231**	P		**P**	**15 17 04.1**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=62,slow=9.0,SNR=2.0							
H11S3	**WAKE ISLAND Hy**	**27.68**	**21**	T		T	15 45 38.2	
	baz=203,slow=75,SNR=25							
H11S2	**WAKE ISLAND Hy**	**27.68**	**21**	T		T	15 45 29.4	
	baz=203,slow=75,SNR=26							
H11S1	**WAKE ISLAND Hy**	**27.69**	**21**	T		T	15 45 29.5	
	baz=203,slow=75,SNR=20							
USA0B	**Ussuriysk Arra**	**56.07**	**339**	P		**P**	**15 20 58.5**	**-0.3**
USRK	**Ussuriysk Ar.**	**56.07**	**339**	P		**P**	**15 20 58.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**62.45**	**295**	P		**P**	**15 21 41.5**	**-2.0**
	comp=Z,1.3nm,0.6s,baz=126,slow=5.9,SNR=9.2							
ILAR	**Eielson Array**	**83.26**	**21**	P		**P**	**15 23 48.9**	**+2.8**
	comp=Z,0.2nm,0.5s,baz=238,slow=6.2,SNR=2.2							
TORD	**Torodi Ar. Bea**	**154.71**	**285**	PKPbc		**PKiKP**	**15 31 24.2**	**+2.1**
	comp=Z,0.2nm,0.4s,baz=108,slow=0.5,SNR=1.8							

DJA 14 15:24:32.2±0.3,**3°S**±3°×**12°8E**±°,**h46**km±8km,**M3.6**/11, **mb4.1**/2,**MLv3.5**/11,**MLv3.5**/4,**Seram**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AAI	**Ambon**	**0.51**	**179**	P		Pn	15 24 44.2	+0.8
MSAI	**Masohi**	**0.76**	**103**	P		Pn	15 24 47.6	+1.0
NLAI	**Namlea**	**1.09**	**266**	P		Pn	15 24 51.6	+0.5
BNDI	**Bandanaira**	**2.17**	**128**	P		Pn	15 25 07.0	+1.1
SANI	**Sanana**	**2.46**	**297**	P		Pn	15 25 09.4	-0.5
LBMI	**Labuha**	**2.61**	**345**	P		Pn	15 25 12.4	+0.5
TNTI	**Ternate**	**4.00**	**348**	P		Pn	15 25 31.4	+0.4
FAKI	**Fak Fak**	**4.06**	**87**	P		Pn	15 25 31.1	-0.8

HEL ***14*** *15:28:15.9±0.6,57.26N×21.68E,h0km,ML2.4, Explosion*
EST ***14*** *15:28:18.4±0.3,57.73N×21.71E,h0km,ML2.3(HEL), Explosion*
UPP ***14*** *15:28:19.5±1.7,57.66N×22.23E,h0km,ML2.6,Suspected explosion*
LVSN ***14*** *15:28:22.9±6.0,57.61N×22.45E,h0km±24km,ML2.5*
NAO ***14*** *15:28:23.8±1.8,57.93N×21.86E,ML2.1*
BER ***14*** *15:28:24.8±4.2,57.87N×21.85E,h0km,ML2.1(NAO), Suspected explosion*

ISC 14 15:28:19.6±0.7,**57.77N**±0.03×**21.92E**±0.02,**h0**km,**n52,** σ1§**57**/77,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.25**	**126**	*e*P		**Pg**	**15 28 24.2**	**0.0**
SLIT				IAML			15 28 28.1	
	comp=Z,14μm,0.2s							
SLIT	**Slitere, Latvi**	**0.25**	**126**	*e*P		**Pg**	**15 28 24.4**	**+0.2**
SLIT				*e*S		**Sg**	**15 28 27.8**	**+0.4**
SLIT				AML		AML	15 28 37.0	
	comp=Z,8μm,0.7s							
SLIT				AML		AML	15 28 37.3	
	comp=N,6μm,0.8s							
SLIT				AML		AML	15 28 37.6	
	comp=E,12μm,0.6s							
SLIT	**Slitere, Latvi**	**0.25**	**126**	*i* P		**Pg**	**15 28 24.5**	**+0.2**
SLIT				*e*S		**Sg**	**15 28 27.6**	**+0.2**
MTSE	**Matsula**	**1.38**	**46**	*e*P		**Pb**	**15 28 46.4**	**+0.2**
MTSE				*e*S		**Sn**	**15 29 04.8**	**-0.1**
MTSE	**Matsula**	**1.38**	**46**	*e*PN		**Pb**	**15 28 46.3**	**+0.2**
MTSE				*e*SB		**Sn**	**15 29 04.7**	**-0.2**
PBUR	**Paburge**	**1.75**	**180**	*e*P		**Pn**	**15 28 50.6**	**-0.5**
PBUR				IAML			15 28 52.1	
	comp=Z,82nm,0.2s							
PBUR	**Paburge**	**1.75**	**180**	*e*P		**Pn**	**15 28 50.7**	**-0.5**
PBUR				*e*S		**Sn**	**15 29 14.6**	**+0.5**
GOTU	**Gotland**	**1.80**	**269**	P		**Pb**	**15 28 53.4**	**0.0**
GOTU				S		**Sg**	**15 29 19.1**	**+1.8**
NYNU	**Nynaeshamn**	**2.40**	**303**	P		**Pb**	**15 29 02.6**	**-1.0**
PABE	**Paberze**	**2.54**	**153**	*e*P		**Pn**	**15 29 03.1**	**+1.2**
PABE				IAML			15 29 04.2	
	comp=Z,122nm,0.2s							
PABE	**Paberze**	**2.54**	**153**	*e*P		**Pn**	**15 29 03.5**	**+1.6**
PABE				*e*S		**Sn**	**15 29 34.1**	**+0.5**
NRTU	**Norrtaelje**	**2.57**	**319**	P		**Pb**	**15 29 05.1**	**-1.4**
AAL	**Aland**	**2.61**	**338**	P		**Pn**	**15 29 05.0**	**+2.1**
AAL	**Aland**	**2.61**	**338**	*e*PG		**Pn**	**15 29 05.0**	**+2.1**
VSU	**Vasula**	**2.65**	**73**	Pn		**Pb**	**15 29 07.1**	**-0.7**
VSU				Sn		**Sb**	**15 29 41.8**	**+1.0**
VSU	**Vasula**	**2.65**	**73**	*e*P		**Pb**	**15 29 06.5**	**-1.3**
VSU	**Vasula**	**2.65**	**73**	*e*P		**Pb**	**15 29 07.3**	**-0.5**
VSU				AML		AML	15 29 07.4	
	comp=Z,133nm,0.2s							
VSU				*e*S		**Sb**	**15 29 41.2**	**+0.4**
VSU				AML		AML	15 29 44.8	
	comp=N,173nm,0.2s							
VSU				AML		AML	15 29 45.5	
	comp=E,146nm,0.5s							
VSU	**Vasula**	**2.65**	**73**	*e*PB		**Pb**	**15 29 06.8**	**-1.0**
VSU				*e*SB		**Sb**	**15 29 41.6**	**+0.8**
VSU	**Vasula**	**2.65**	**73**	Pn		**Pb**	**15 29 07.1**	**-0.7**
VSU				Sn		**Sb**	**15 29 41.8**	**+1.0**
BYXU	**Byxelkrok**	**2.69**	**262**	P		**Pn**	**15 29 06.1**	**+2.0**
ARBE	**Arbavere**	**2.70**	**50**	*e*PG		**Pb**	**15 29 08.2**	**-0.5**
ARBE				*e*SG		**Sg**	**15 29 44.3**	**-2.0**
MEF	**Metsahovi**	**2.77**	**27**	*e*P		**Pb**	**15 29 09.9**	**0.0**
MEF				*e*S		**Sg**	**15 29 46.4**	**-1.9**
MEF				AML		AML	15 29 47.1	
	comp=N,15nm,0.2s							
MEF				AML		AML	15 29 47.2	
	comp=E,17nm,0.1s							
MEF				AML		AML	15 29 50.1	
	comp=Z,13nm,0.2s							
MEF	**Metsahovi**	**2.77**	**27**	*e*PG		**Pb**	**15 29 09.6**	**-0.2**
MEF				*e*SG		**Sg**	**15 29 46.5**	**-1.9**
MEF				MSG			15 29 48.0	
	comp=Z,14nm,0.1s							
VIKU	**Vikbolandet**	**2.86**	**287**	P		**Pb**	**15 29 09.9**	**-1.6**
ASPU	**Aespoe**	**2.89**	**265**	P		**Pn**	**15 29 09.6**	**+2.9**
VSTU	**Vaestervik**	**2.89**	**270**	P		**Pn**	**15 29 09.6**	**+2.8**
NUR	**Nurmijrvi**	**3.08**	**26**	*e*PB		**Pb**	**15 29 13.7**	**-1.6**
NUR				MSG			15 29 57.3	
	comp=Z,7.3nm,0.1s							
OSKU	**Oskarshamn**	**3.19**	**262**	P		**Pn**	**15 29 12.7**	**+1.7**
ISAL	**Salakas**	**3.20**	**132**	*e*P		**Sn**	**15 29 48.2**	**-1.8**
ISAL				IAML			15 29 48.5	
	comp=Z,4.7nm,0.4s							
RAF	**Rauma**	**3.26**	**359**	*e*P		**Pb**	**15 29 15.6**	**-2.7**
RAF				*e*S		**Sg**	**15 30 03.3**	**-1.0**
RAF				AML		AML	15 30 07.7	
	comp=N,7.4nm,0.6s							
RAF				AML		AML	15 30 11.0	
	comp=E,16nm,0.5s							
RAF				AML		AML	15 30 12.7	
	comp=Z,10nm,0.6s							
RAF	**Rauma**	**3.26**	**359**	*e*PB		**Pn**	**15 29 14.9**	**+3.0**
RAF				MSG			15 30 10.9	
	comp=Z,7.5nm,0.2s							
PVF	**Pernaja**	**3.44**	**34**	*e*PB		**Pb**	**15 29 18.1**	**-3.3**
PVF				MSG			15 30 15.1	
	comp=Z,5.0nm,0.1s							
LNKU	**Linkoeping**	**3.44**	**280**	P		**Pn**	**15 29 16.6**	**+2.2**
EKSU	**Eksjoe**	**3.56**	**270**	P		**Pn**	**15 29 18.3**	**+2.3**
BLEU	**Blekinge**	**3.65**	**249**	P		**Pn**	**15 29 18.6**	**+1.5**
VXJU	**Vaexsjoe**	**3.88**	**260**	P		**Pn**	**15 29 21.8**	**+1.5**
FIA0	**FINESS Array S**	**4.25**	**28**	Pn		**Pn**	**15 29 27.0**	**+1.6**
	baz=209,slow=11							
FIA0				Pg		**Pb**	**15 29 37.5**	**+2.5**
	baz=213,slow=16							
FIA0				Lg		Lg	15 30 34.5	
	baz=220,slow=22							
FIA0	**FINESS Array S**	**4.25**	**28**	Pn		**Pn**	**15 29 27.0**	**+1.6**
	baz=209,slow=11							
FIA0				Pg		**Pb**	**15 29 37.5**	**+2.5**
	baz=213,slow=16							
FIA0				Sg		**Sg**	**15 30 34.5**	**-1.3**
	baz=220,slow=22							
FIA1	**FINESS Array S**	**4.25**	**28**	*e*P		**Pn**	**15 29 27.4**	**+2.0**
FKPU	**Falk**	**4.38**	**279**	P		**Pn**	**15 29 29.8**	**+2.5**
DEL	**Delary**	**4.58**	**257**	P		**Pn**	**15 29 30.6**	**+0.7**
BSD	**Bornholm Skovb**	**4.71**	**239**	*i* P		**Pn**	**15 29 31.7**	**-0.1**
BSD				*i* S		**Sn**	**15 30 25.6**	**-1.5**
HFS	**Hagfors**	**4.87**	**303**	Pn		**Pn**	**15 29 36.3**	**+2.3**
	baz=125,slow=14							
HFS				Sn		**Sn**	**15 30 30.8**	**-0.3**
	baz=131,slow=22							
HFS				Lg		Lg	15 30 53.6	
	baz=112,slow=22							
HFS	**Hagfors**	**4.87**	**303**	Pn		**Pn**	**15 29 36.3**	**+2.3**
	baz=125,slow=14							
HFS				Sn		**Sn**	**15 30 30.8**	**-0.3**
	baz=131,slow=22							
HFS				Sg		**Sg**	**15 30 53.6**	**-2.3**
	baz=112,slow=22							
NRA0	**NORESS Array S**	**6.09**	**304**	Pn		**Pn**	**15 29 52.2**	**+1.4**
	baz=110,slow=11							
NRA0				Sn		**Sn**	**15 31 02.8**	**+1.6**
	baz=107,slow=28							
NRA0				Lg		Lg	15 31 32.6	
	baz=110,slow=28							
NRA0	**NORESS Array S**	**6.09**	**304**	Pn		**Pn**	**15 29 52.2**	**+1.4**
	baz=110,slow=11							
NRA0				Sn		**Sn**	**15 31 02.8**	**+1.6**
	baz=107,slow=28							
NRA0				Sg		**Sg**	**15 31 32.6**	**-2.6**
	baz=110,slow=28							
NB2	**NORSAR Subarra**	**6.37**	**305**	Pn

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAYL	**Yayladag**	**0.54**	**302**	PG	**Pn**	**15 59 01.2**	**-0.5**
YAYL	**Yayladag**	**0.54**	**302**	*i* P	**Pn**	**15 59 01.3**	**-0.4**
YAYL				*i* P	**Pb**	**15 59 01.5**	**+1.9**
YAYL				*i* S	**Sn**	**15 59 09.2**	**-1.6**
YAYL				*i* S	**Sb**	**15 59 09.3**	**+2.0**
TAHT	**Tahtakopru-Hat**	**0.74**	**328**	PG	**Pn**	**15 59 05.3**	**+0.9**
TAHT				SG	**Sn**	**15 59 18.7**	**+3.1**
KUZU	**Kuzuini**	**1.07**	**18**	*i* P	**Pn**	**15 59 11.7**	**+2.7**
KUZU				*i* S	**Sn**	**15 59 24.5**	**+0.6**
KUZU				IAML		15 59 35.0	
	comp=E,391nm,0.4s						
KUZU				IAML		15 59 38.0	
	comp=N,382nm,0.5s						
KRTS	**Karatas**	**1.33**	**308**	PN	**Pg**	**15 59 15.9**	**+2.2**
YURE	**YUREGIR**	**1.36**	**322**	PN	**Pg**	**15 59 16.4**	**+2.1**
YURE	**YUREGIR**	**1.36**	**322**	*i* P	**Pg**	**15 59 17.5**	**+3.3**
YURE				*i* S	**Sg**	**15 59 30.8**	**-1.2**
KAMA	**Osmaniye**	**1.43**	**360**	*i* P	**Pg**	**15 59 17.5**	**+1.9**
KAMA				*i* S	**Sg**	**15 59 32.9**	**-1.3**
CEYT	**Ceyhan**	**1.46**	**330**	PN	**Pg**	**15 59 18.2**	**+2.1**
GAZ	**Gaziantep**	**1.48**	**17**	PN	**Pg**	**15 59 17.9**	**+1.3**
HWQ	**Hawqa**	**1.58**	**202**	*eP*	**Pn**	**15 59 16.6**	**+0.5**
HWQ				*eS*	**Sn**	**15 59 37.8**	**+1.2**
HCB	**Kahramanmara**	**1.60**	**7**	*i* P	**Pg**	**15 59 19.9**	**+1.1**
HCB				*i* S	**Sg**	**15 59 39.9**	**+0.2**
GZT	**Gaziantep**	**1.76**	**24**	*i* P	**Pg**	**15 59 42.2**	**+0.2**
GZT				*i* S	**Sg**	**15 59 42.4**	**-2.2**
GZT				IAML		15 59 45.0	
	comp=E,76nm,1.1s						
GZT				IAML		15 59 54.0	
	comp=N,86nm,0.5s						
KMRS	**Kahramanmaras**	**1.76**	**6**	PN	**Pg**	**15 59 22.0**	**+0.1**
ANDN	**Andirin**	**1.85**	**352**	*i* P	**Pg**	**15 59 23.3**	**-0.2**
ANDN				*i* S	**Sb**	**15 59 43.2**	**-1.7**
KOZT	**Kozan**	**1.86**	**339**	PN	**Pg**	**15 59 23.0**	**-0.7**
SURC	**SANLIURFA_SURC**	**1.93**	**54**	*i* P	**Pb**	**15 59 22.9**	**-0.3**
SURC				*i* S	**Sn**	**15 59 45.0**	**-0.1**
SURC				IAML		15 59 54.0	
	comp=E,80nm,0.5s						
DED	**Mersin**	**1.94**	**309**	*i* P	**Pg**	**15 59 23.7**	**-1.5**
DED				*i* S	**Sn**	**15 59 41.2**	**-3.9**
BHL	**Bhannes**	**2.02**	**205**	*eP*	**Pn**	**15 59 22.5**	**+0.5**
BHL				*eS*	**Sn**	**15 59 48.2**	**+0.9**
MERS	**Mersin**	**2.06**	**303**	PN	**Pg**	**15 59 26.3**	**-1.3**
ATAB	**Bozova**	**2.16**	**37**	*i* P	**Pg**	**15 59 30.0**	**+0.6**
KIZK	**Mersin**	**2.17**	**290**	PN	**Pb**	**15 59 27.5**	**+0.2**
KIZK	**Mersin**	**2.17**	**290**	*i* P	**Pb**	**15 59 27.4**	**0.0**
DQRL	**Deir Qamar**	**2.23**	**204**	*eP*	**Pn**	**15 59 25.3**	**+0.4**
SILI	**Silifke-Mersin**	**2.31**	**286**	PN	**Pb**	**15 59 29.3**	**-0.4**
CMRD	**Camardi-Nigde**	**2.34**	**325**	PN	**Pb**	**15 59 30.4**	**+0.2**
URFA	**Urfa**	**2.42**	**45**	PN	**Pb**	**15 59 30.5**	**-1.0**
IKL	**Isikli**	**2.47**	**282**	PN	**Pb**	**15 59 30.3**	**-2.1**
KEBE	**Keben-Mersin**	**2.50**	**287**	PN	**Pb**	**15 59 31.8**	**-1.1**
AKKU	**Akkuyu-Mersin**	**2.56**	**280**	PN	**Pb**	**15 59 32.0**	**-2.0**
GULN	**MERSIN_Gulnar**	**2.58**	**281**	*i* P	**Pn**	**15 59 31.1**	**+1.6**
KERG	**Konya-Eregli**	**2.64**	**310**	*i* P	**Pb**	**15 59 35.5**	**+0.2**
SARI	**SarD1z-Kayseri**	**2.69**	**356**	PN	**Pb**	**15 59 35.0**	**-0.8**
BERE	**Bereket-Mersin**	**2.86**	**283**	PN	**Pb**	**15 59 36.8**	**-2.3**
DARE	**Darende-Malaty**	**2.89**	**13**	PN	**Pb**	**15 59 38.0**	**-1.6**
MALT	**Malatya**	**2.92**	**28**	PN	**Pb**	**15 59 38.1**	**-2.0**

*BJI **14** 16:11:05.6±0.0,5˚.06S×150˚.64E, h222km, mB4.8/14, mb4.5/20*
*NEIC **14** 16:11:06.4±1.5,5˚.07S±0˚.07×150˚.79E±0˚.08, h216km±5km, mb4.8/48, Error ellipse: s-maj=13.8km s-min=6.1km az=131.0*
*DJA **14** 16:11:06.7±0.5,5˚S±6˚×15˚1E±˚, h235km±5km, M4.5/14, mb4.6/14, mB4.8/4, MLv4.7/2, Mw(mB)4.0/4*
*IDC **14** 16:11:07.2±0.5,5.09S×150˚.76E, h221km±5km, mb3.9/16, mb1 4.1/19, mb1mx3.9/33, mbtmp4.5/19, Error ellipse: s-maj=12.4km s-min=7.8km az=120.0*

ISC 14 16:11:09.3±0.4,5˚15S±0˚.06×150˚.78E±0˚.05, h250km, n110, σ1ş57/111, mb4.7/41, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.50**	**56**	P	Pn	16 11 42.2	-5.4
	131nm,0.3s,baz=222,slow=0.9,SNR=216						
KRVT				S	**S**	**16 12 10.1**	**-7.6**
	55nm,0.3s,baz=188,slow=19,SNR=9.7						
RABL	**Rabaul**	**1.68**	**55**		Pn	16 11 43.3	-5.7
PMG	**Port Moresby**	**5.55**	**220**	P	**Pn**	**16 12 30.2**	**-1.6**
	36nm,0.3s,baz=54,slow=5.8,SNR=66						
PMG				S	**S**	**16 13 37.1**	**-0.6**
	baz=0.0,slow=20,SNR=1.1						
PMG	**Port Moresby**	**5.55**	**220**		**Pn**	**16 12 30.0**	**-1.9**
HNR	**Honiara**	**10.03**	**116**	Pn	**Pn**	**16 13 26.6**	**-1.8**
JAY	**Jayapura**	**10.39**	**284**	P	**Pn**	**16 13 31.7**	**-1.2**
	0.7nm,0.3s,baz=54,slow=6.1,SNR=5.5						
JAY	**Jayapura**	**10.39**	**284**		**Pn**	**16 13 33.9**	**+1.0**
GENI	**Genyem**	**10.89**	**283**	P	**Pn**	**16 13 40.0**	**+0.8**
	25nm,0.6s						
COEN	**Coen**	**11.52**	**220**	P	**Pn**	**16 13 47.8**	**+0.8**
SMPI	**Sarmi**	**12.45**	**284**	P	**P**	**16 13 58.9**	**-2.1**
	753nm47nm,1.2s						
CTA	**Charters Tower**	**15.49**	**196**	P	**Pn**	**16 14 36.6**	**+1.3**
	1.5nm,0.3s,baz=34,slow=13,SNR=15						
CTAO	**Charters Tower**	**15.49**	**196**	P	**P**	**16 14 34.7**	**+0.1**
CTAO				IAmb	IAmb	16 14 37.7	
	comp=Z,30nm,0.8s						
EIDS	**Eidsvold**	**20.10**	**179**	P	**P**	**16 15 24.9**	**+0.4**
EIDS				IAmb	IAmb	16 15 26.0	
	comp=Z,24nm,0.7s						
MTN	**Manton Dam**	**20.84**	**247**	P	**P**	**16 15 32.0**	**-0.5**
WB0	**Warramunga Arr**	**21.58**	**226**	P	**P**	**16 15 39.5**	**0.0**
WB0				IAmb	IAmb	16 15 41.5	
	comp=Z,18nm,0.8s						
WR0	**Warramunga Arr**	**21.60**	**226**	P	**P**	**16 15 39.8**	**0.0**
WR0				IAmb	IAmb	16 15 41.7	
	comp=Z,19nm,0.8s						
WRAB	**Tennant Creek**	**21.72**	**226**	P	**P**	**16 15 40.9**	**+0.1**
WB2	**Warramunga Arr**	**21.72**	**226**	P	**P**	**16 15 41.2**	**+0.3**
WRA	**Warramunga Arr**	**21.73**	**226**	P	**P**	**16 15 41.2**	**+0.2**
	comp=Z,23nm,0.6s,baz=53,slow=9.6,SNR=133						
WRA				S	**S**	**16 19 26.5**	**+2.8**
	comp=Z,4.7nm,0.7s,baz=45,slow=16,SNR=9.1						
WRA				ScP	**ScP**	**16 22 49.1**	**+4.0**
	comp=Z,2.2nm,1.1s,baz=48,slow=2.8,SNR=6.5						
WRA	**Warramunga Arr**	**21.73**	**226**	P	**P**	**16 15 40.2**	**-0.8**
KWAJ	**Kwajalein Atol**	**21.77**	**51**	P	**P**	**16 15 39.6**	**-1.7**
DZM	**Mont Dzumac**	**22.64**	**139**	P	**P**	**16 15 50.4**	**+1.0**
	comp=Z,22nm,0.5s,baz=310,slow=6.1,SNR=48						
DZM	**Mont Dzumac**	**22.64**	**139**	P	**P**	**16 15 49.5**	**+0.1**
DZM				IAmb	IAmb	16 15 52.0	
	comp=Z,24nm,0.7s						
KNRA	**Kununurra**	**24.02**	**243**	P	**P**	**16 16 02.1**	**+0.3**
KNRA				IAmb	IAmb	16 16 19.3	
	comp=Z,19nm,0.6s						
AS31	**Alice Springs**	**24.56**	**220**	P	**P**	**16 16 07.2**	**+0.4**
ASAR	**Alice Springs**	**24.56**	**220**	P	**P**	**16 16 07.5**	**+0.7**
	comp=Z,7.1nm,0.5s,baz=53,slow=8.5,SNR=253						
ASAR				S	**S**	**16 20 11.5**	**+2.5**
	comp=Z,0.5nm,0.6s,baz=53,slow=14,SNR=2.8						
ASAR				ScP	**ScP**	**16 22 56.9**	**+4.2**
	comp=Z,0.5nm,0.6s,baz=40,slow=2.5,SNR=4.4						
ASAR	**Alice Springs**	**24.56**	**220**	P	**P**	**16 16 06.4**	**-0.3**
ARMA	**Armidale**	**25.14**	**178**	P	**P**	**16 16 10.9**	**-1.1**
ARMA				IAmb	IAmb	16 16 39.3	
	comp=Z,47nm,1.7s						
FITZ	**Fitzroy Crossi**	**27.73**	**240**	P	**P**	**16 16 35.4**	**+0.3**
	comp=Z,2.0nm,0.3s,baz=63,slow=4.3,SNR=31						
FITZ	**Fitzroy Crossi**	**27.73**	**240**	P	**P**	**16 16 35.1**	**0.0**
STKA	**Stephens Creek**	**27.95**	**197**	P	**P**	**16 16 37.0**	**+0.2**
	comp=Z,6.5nm,0.5s,baz=35,slow=16,SNR=30						
STKA	**Stephens Creek**	**27.95**	**197**	P	**P**	**16 16 36.9**	**0.0**
MMRI	**Maumere**	**28.54**	**261**	P	**P**	**16 16 40.2**	**-2.1**
CAN	**Canberra**	**30.07**	**183**	P	**P**	**16 16 56.3**	**+0.7**
CAN				IAmb	IAmb	16 17 47.8	
	comp=Z,73nm,2.0s						
BBOO	**Buckleboo**	**30.76**	**205**	P	**P**	**16 17 01.3**	**-0.3**
BBOO				IAmb	IAmb	16 17 33.3	
	comp=Z,28nm,1.6s						
TOO	**Toolangi**	**32.63**	**188**	P	**P**	**16 17 18.6**	**+0.7**
TOO				IAmb	IAmb	16 18 07.9	
	comp=Z,38nm,1.6s						
FORT	**Forrest**	**33.27**	**217**	P	**P**	**16 17 23.4**	**-0.1**
OUZ	**Omahuta**	**36.59**	**148**	P	**P**	**16 17 54.1**	**+2.4**
OUZ				IAmb	IAmb	16 19 03.5	
	comp=Z,71nm,1.6s						
UGM	**Wanagama**	**40.08**	**264**	P	**P**	**16 18 17.7**	**-3.4**
HSRZ	**Hossack Road**	**40.31**	**148**	P	**P**	**16 18 19.5**	**-3.2**
TWVZ	**Taurewa**	**40.48**	**150**	P	P	16 18 34.7	+11
MORW	**Morawa**	**40.57**	**230**	P	**P**	**16 18 24.8**	**-0.1**
MORW				IAmb	IAmb	16 18 32.1	
	comp=Z,42nm,1.7s						
URZ	**Urewera**	**40.73**	**148**	P	**P**	**16 18 27.4**	**+1.4**
	comp=Z,4.3nm,0.5s,baz=267,slow=5.3,SNR=8.8						
URZ	**Urewera**	**40.73**	**148**	P	**P**	**16 18 27.5**	**+1.5**
URZ	**Urewera**	**40.73**	**148**	P	**P**	**16 18 27.2**	**+1.2**
URZ				IAmb	IAmb	16 19 34.2	
	comp=Z,41nm,1.4s						
PKGZ	**Pakihiroa**	**40.99**	**146**	P	**P**	**16 18 30.2**	**+2.1**
MWZ	**Matawai**	**41.01**	**147**	P	**P**	**16 18 30.3**	**+2.0**
MTHZ	**Maungataniwha**	**41.03**	**148**	P	**P**	**16 18 30.0**	**+1.6**
BKZ	**Black Stump Fm**	**41.08**	**149**	P	**P**	**16 18 29.7**	**+0.8**
BKZ				IAmb	IAmb	16 19 47.0	
	comp=Z,61nm,1.6s						
WMGZ	**Waiomatatini S**	**41.12**	**146**	P	**P**	**16 18 31.0**	**+1.8**
RAHZ	**Arahi**	**41.20**	**148**	P	**P**	**16 18 32.6**	**+2.7**
NNZ	**Nelson**	**41.21**	**154**	P	**P**	**16 18 31.3**	**+1.5**
SNGZ	**Shannon Statio**	**41.24**	**148**	P	**P**	**16 18 32.0**	**+1.9**
TKGZ	**Te Karaka**	**41.26**	**147**	P	**P**	**16 18 31.8**	**+1.5**
RIGZ	**Rimuhau**	**41.41**	**148**	P	**P**	**16 18 33.4**	**+1.9**
THZ	**Tophouse**	**41.45**	**155**	P	**P**	**16 18 33.0**	**+1.1**
THZ				IAmb	IAmb	16 19 02.9	
	comp=Z,95nm,1.8s						
TUWZ	**Tuamarina**	**41.63**	**154**	P	**P**	**16 18 34.7**	**+1.4**
NWAO	**Narrogin (SRO)**	**41.72**	**224**	P	**P**	**16 18 34.0**	**-0.1**
NWAO	**Narrogin (SRO)**	**41.72**	**224**	P	**P**	**16 18 34.1**	**-0.1**
NWAO				IAmb	IAmb	16 20 01.7	
	comp=Z,123nm,1.9s						
BSWZ	**Blackbirch Sta**	**41.83**	**154**	P	**P**	**16 18 35.4**	**+0.5**
LTZ	**Lake Taylor**	**42.04**	**156**	P	**P**	**16 18 38.4**	**+1.8**
LTZ				IAmb	IAmb	16 18 56.8	
	comp=Z,92nm,2.0s						
KHZ	**Kahutara**	**42.26**	**155**	P	**P**	**16 18 39.0**	**+0.7**
KHZ				IAmb	IAmb	16 19 53.9	
	comp=Z,41nm,1.1s						
PLWZ	**Palliser**	**42.34**	**153**	P	**P**	**16 18 39.6**	**+0.6**
RPZ	**Rata Peaks**	**42.36**	**158**	P	**P**	**16 18 40.6**	**+1.5**
	comp=Z,16nm,0.8s,baz=38,slow=14,SNR=5.6						
RPZ	**Rata Peaks**	**42.36**	**158**	P	**P**	**16 18 40.4**	**+1.3**
RPZ				IAmb	IAmb	16 18 41.3	
	comp=Z,21nm,0.9s						
OXZ	**Oxford**	**42.40**	**157**	P	**P**	**16 18 40.0**	**+0.5**
OXZ				IAmb	IAmb	16 20 00.8	
	comp=Z,34nm,1.4s						
DCZ	**Deep Cove**	**42.62**	**163**	P	**P**	**16 18 42.4**	**+1.3**
DCZ				IAmb	IAmb	16 19 06.5	
	comp=Z,59nm,1.4s						
LBZ	**Lake Benmore**	**42.63**	**159**	P	**P**	**16 18 42.6**	**+1.3**
LBZ				IAmb	IAmb	16 19 20.4	
	comp=Z,36nm,1.4s						
MLZ	**Mavora Lakes**	**42.82**	**162**	P	**P**	**16 18 43.8**	**+1.0**
MLZ				IAmb	IAmb	16 19 12.3	
	comp=Z,119nm,1.9s						
NJ2	**Nanjing**	**47.88**	**323**	*eP*	**P**	**16 19 23.3**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
KLR	**Kul'dur**	**56.64**	**345**	P	**P**	**16 20 27.7**	**+1.2**
	comp=Z,1.5nm,0.8s,baz=176,slow=5.3,SNR=3.7						
CD2	**Chengdu**	**57.45**	**312**	P	**P**	**16 20 32.3**	**-0.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
KHU	**Kahuku**	**58.05**	**64**	P	**P**	**16 20 37.4**	**+0.2**
HHC	**Hu-ho-hao-te**	**58.18**	**326**	*eP*	**P**	**16 20 37.1**	**-0.4**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,67nm,6.9s						
PEA0B	**Petropavlovsk-**	**58.34**	**5**	P	**P**	**16 20 38.7**	**+0.5**
PETK	**Petropavlovsk-**	**58.34**	**5**	P	**P**	**16 20 38.6**	**+0.4**
	comp=Z,6.9nm,0.8s,baz=186,slow=8.8,SNR=8.4						
PETK	**Petropavlovsk-**	**58.34**	**5**	P	**P**	**16 20 38.7**	**+0.5**
LZH	**Lanzhou**	**60.10**	**317**	*eP*	**P**	**16 20 50.3**	**-0.5**
LZH				pP	pP	16 21 43.6	-2.4
LZH				sP	sP	16 22 06.1	-7.1
LZH				PP	**PP**	**16 23 08.8**	**+2.2**
LZH				pmax	pmax		
	comp=Z,29nm,1.0s						
LZH				pmax	pmax		
	comp=Z,220nm,4.9s						
SONM	**Songino Array**	**65.57**	**329**	P	**P**	**16 21 28.2**	**+1.7**
	comp=Z,0.6nm,0.5s,baz=137,slow=5.5,SNR=4.1						
SONM	**Songino Array**	**65.57**	**329**	P	**P**	**16 21 26.4**	**-0.1**
SONM	**Songino Array**	**65.57**	**329**		PcP	16 21 43.3	-13
CASY	**Casey**	**67.10**	**196**	P	**P**	**16 21 36.7**	**+1.0**
CASY				IAmb	IAmb	16 22 32.2	
	comp=Z,29nm,2.0s						
VNDA	**Vanda**	**72.56**	**177**	P	**P**	**16 22 10.5**	**+1.8**
	comp=Z,2.0nm,0.8s,baz=335,slow=6.3,SNR=14						
VNDA	**Vanda**	**72.56**	**177**	P	**P**	**16 22 10.3**	**+1.6**
WMQ	**Urumqi**	**74.65**	**318**	*eP*	**P**	**16 22 22.3**	**+0.8**
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,62nm,5.3s						
WMQ				LR	LR		
	comp=Z,770nm,29.1s						
WMQ				LR	LR		
	comp=Z,1μm,29.0s						
WMQ				LR	LR		
	comp=Z,88nm,29.0s						
OHAK	**Old Harbor**	**76.78**	**28**	P	**P**	**16 22 33.5**	**+0.4**
TTA	**Tatalina**	**78.84**	**22**	P	**P**	**16 22 45.0**	**+0.5**
CNPM	**China Poot**	**78.91**	**26**	P	**P**	**16 22 45.4**	**+0.6**
CNPM				IAmb	IAmb	16 22 46.5	
	comp=Z,17nm,0.8s						
MKAR	**Makanchi Array**	**79.28**	**319**	P	**P**	**16 22 48.1**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=94,slow=4.8,SNR=2.6						
ZALV	**Zalesovo Beam**	**80.34**	**327**	P	**P**	**16 22 53.0**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=69,slow=4.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**80.34**	**327**	P	**P**	**16 22 53.0**	**+0.4**
ZALV					PcP	16 23 07.3	+8.4
IMAR	**Indian Mountai**	**81.39**	**20**	P	**P**	**16 22 58.3**	**+0.4**
MLY	**Manley**	**81.94**	**21**	P	**P**	**16 23 01.1**	**+0.2**
MCK	**McKinley**	**81.96**	**23**	P	**P**	**16 23 00.5**	**-0.5**
WRH	**Wood River Hil**	**82.65**	**22**	P	**P**	**16 23 04.3**	**-0.2**
IL31		**83.25**	**22**	P	**P**	**16 23 05.7**	**-1.7**
ILAR	**Eielson Array**	**83.25**	**22**	P	**P**	**16 23 06.7**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=253,slow=5.1,SNR=17						
ILAR	**Eielson Array**	**83.25**	**22**	P	**P**	**16 23 06.3**	**-1.2**
DOT	**Dot Lake**	**83.86**	**24**	P	**P**	**16 23 10.3**	**-0.4**
BCAR	**Beaver Creek A**	**84.57**	**25**	P	**P**	**16 23 14.8**	**+0.5**
BMAR	**Burnt Mountain**	**85.27**	**20**	P	**P**	**16 23 18.6**	**+0.9**
EGAK	**Eagle**	**85.48**	**23**	P	**P**	**16 23 19.2**	**+0.5**
NRIK	**Noril'sk**	**85.65**	**341**	P	**P**	**16 23 20.8**	**+1.3**
	comp=Z,0.9nm,0.5s,baz=151,slow=4.7,SNR=4.8						
NRIK	**Noril'sk**	**85.65**	**341**	P	P	16 23 21.3	+1.9
NVAR	**Mina Array Bea**	**93.88**	**52**	P	P	16 24 00.5	+1.5
	comp=Z,0.9nm,0.7s,baz=250,slow=4.3,SNR=6.5						
NVAR	**Mina Array Bea**	**93.88**	**52**	P	**P**	**16 23 59.8**	**+0.8**
YKA	**Yellowknife Ar**	**96.67**	**28**	P	**P**	**16 24 11.7**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=268,slow=4.4,SNR=5.6						
PDAR	**Pinedale Array**	**100.57**	**48**	P	**Pdif**	**16 24 29.6**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=228,slow=3.8,SNR=3.7						
TORD	**Torodi Ar. Bea**	**148.50**	**287**	PKPbc	**PKPab**	**16 30 28.2**	**-3.5**
	comp=Z,1.5nm,0.7s,baz=59,slow=2.8,SNR=9.8						
TORD	**Torodi Ar. Bea**	**148.50**	**287**		**PKiKP**	**16 30 27.4**	**-1.5**

*NIED **14** 16:15:00, 36˚.60N×143˚.80E, h8km, Mw3.6 Best double couple: M0 2.46000×10^14 NP1:φs187.00000°, δ57.00000°, λ-109.00000°. NP2:φs39.00000°, δ37.00000°, λ-64.00000°.*

JMA 14 16:15:00.5±0.2, 36˚.60N×143˚.79E, h56km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**2.45**	**283**	P	Pn	16 15 39.0	+0.9
ONAJ				*eS*	Sn	16 16 07.9	+1.0
JFK	**Kawauchi**	**2.46**	**289**	P	Pn	16 15 39.2	+1.0
JFK				S	Sn	16 16 07.9	+0.9
JIKH	**Ishinomakikobu**	**2.52**	**313**	P	Pn	16 15 39.8	+0.9
JIKH				S	Sn	16 16 08.7	+0.3
CHOJ	**Chosi**	**2.54**	**250**	P	Pn	16 15 40.4	+1.2
JHO	**Hitachi**	**2.59**	**271**	P	Pn	16 15 40.9	+0.9
JHO				*eS*	Sn	16 16 10.6	+0.3
JHYU	**Hitachinakayam**	**2.59**	**265**	P	Pn	16 15 41.3	+1.3
JHYU				S	Sn	16 16 11.5	+1.2
BSO1	**Boso 1**	**3.00**	**231**	P	Pn	16 15 45.9	+0.8
JMK	**Ichinoseki**	**3.11**	**320**	P	Pn	16 15 48.2	+1.2
JMK				*eS*	Sn	16 16 24.3	+1.4
JRY	**Ryogami san**	**3.99**	**263**	P	Pn	16 16 00.6	+1.4
JRY				*eS*	Sn	16 16 45.3	+0.6
JOD2	**Odawara 2**	**4.04**	**252**	P	Pn	16 16 01.4	+1.5
JOD2				*eS*	Sn	16 16 46.3	+0.4
JOT	**Ohata**	**5.23**	**337**	P	Pn	16 16 17.4	+1.3
JKB	**Kayabe**	**5.70**	**339**	P	Pn	16 16 24.1	+1.6
JKB				*eS*	Sn	16 17 24.0	-2.5
JCH	**Churui**	**6.02**	**357**	P	Pn	16 16 25.4	-1.4
JCH				*eS*	Sn	16 17 28.9	-5.4
NEM2	**Nemuro 2**	**6.92**	**12**	P	Pn	16 16 35.8	-3.4
NEM2				*eS*	Sn	16 17 47.9	-8.6
JTKR	**Abashiri--Toko**	**7.36**	**1**	P	Pn	16 16 43.9	-1.4
JTKR				*eS*	Sn	16 18 02.3	-5.1

*IDC **14** 16:34:23.8±6.5,23˚.02S×179˚.99W, h490km±73km, mb3.2/8, mb1 3.4/9, mb1mx3.1/35, mbtmp4.1/9, Error ellipse: s-maj=44.0km s-min=20.8km az=46.0*
*NEIC **14** 16:34:26.1±1.4,23˚.3S±0˚.1×180˚.0W±0˚.2, h529km±5km, mb4.6/29, Error ellipse: s-maj=26.9km s-min=17.8km az=79.0*

ISC 14 16:34:27.4±1.2, 23˚.29S±0˚.10×180˚.0E±0˚.2, h543km, n39, σ1ş18/40, mb4.4/18, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.82**	**342**	P	**P**	**16 36 02.8**	**-1.4**
URZ	**Urewera**	**15.12**	**189**	P	**P**	**16 37 37.6**	**-0.4**
	1.9nm,0.3s,baz=290,slow=3.8,SNR=14						
URZ				S	**S**	**16 40 11.3**	**-3.7**
	0.3nm,0.3s,baz=78,slow=20,SNR=5.7						
BKZ	**Black Stump Fm**	**16.10**	**190**	P	**P**	**16 37 45.9**	**-2.1**
BFZ	**Birch Farm**	**17.62**	**189**	P	**P**	**16 38 00.6**	**-1.4**
MSWZ	**Moikau Station**	**18.50**	**191**	P	**P**	**16 38 08.9**	**-1.1**
NNZ	**Nelson**	**18.71**	**196**	P	**P**	**16 38 10.3**	**-1.6**
TUWZ	**Tuamarina**	**18.78**	**194**	P	**P**	**16 38 11.1**	**-1.4**
THZ	**Tophouse**	**19.34**	**196**	P	**P**	**16 38 17.7**	**0.0**
KHZ	**Kahutara**	**19.81**	**194**	P	**P**	**16 38 21.4**	**-0.5**
KHZ				IAmb	IAmb	16 39 11.1	
	comp=Z,36nm,1.3s						
LTZ	**Lake Taylor**	**20.46**	**196**	P	**P**	**16 38 27.0**	**-0.9**
LTZ				IAmb	IAmb	16 38 30.6	
	comp=Z,22nm,1.0s						
OXZ	**Oxford**	**21.03**	**196**	P	**P**	**16 38 31.5**	**-1.5**
OXZ				IAmb	IAmb	16 38 35.4	
	comp=Z,14nm,0.6s						
MQZ	**McQueen's Vall**	**21.24**	**195**	P	**P**	**16 38 34.4**	**-0.4**
MQZ				IAmb	IAmb	16 39 05.5	
	comp=Z,32nm,1.3s						
RPZ	**Rata Peaks**	**21.66**	**198**	P	**P**	**16 38 40.6**	**+2.0**
	comp=Z,4.5nm,0.5s,baz=2.3,slow=20,SNR=1.8						
RPZ	**Rata Peaks**	**21.66**	**198**	P	**P**	**16 38 37.8**	**-0.8**
RPZ				IAmb	IAmb	16 39 36.8	
	comp=Z,38nm,1.4s						
FOZ	**Fox Glacier**	**21.86**	**200**	P	**P**	**16 38 39.9**	**-0.5**
WKZ	**Wanaka**	**23.28**	**200**	P	**P**	**16 38 52.3**	**-0.8**
MLZ	**Mavora Lakes**	**24.05**	**201**	P	**P**	**16 38 59.9**	**-0.1**
MLZ				IAmb	IAmb	16 39 01.9	
	comp=Z,14nm,0.9s						
DCZ	**Deep Cove**	**24.46**	**202**	P	**P**	**16 39 03.5**	**0.0**
CTA	**Charters Tower**	**31.46**	**269**	P	**P**	**16 40 05.9**	**+0.9**
	comp=Z,5.1nm,0.5s,baz=90,slow=6.8,SNR=2.8						
CTAO	**Charters Tower**	**31.46**	**269**	P	**P**	**16 40 05.9**	**+0.9**
CTAO				IAmb	IAmb	16 41 26.7	
	comp=Z,24nm,1.2s						
RABL	**Rabaul**	**32.90**	**301**	P	**P**	**16 40 17.5**	**+0.2**
RABL				IAmb	IAmb	16 40 19.1	
	comp=Z,14nm,0.5s						
STKA	**Stephens Creek**	**34.93**	**247**	P	**P**	**16 40 35.0**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=83,slow=8.1,SNR=3.3						
**AS

STKA					IAmb	IAmb	16 49 20.3	
	comp=Z,3.2nm,1.6s							
JHJ	**Hachijo jima 2**	**37.60**	**17**	LR	LR		17 03 41.1	
	comp=Z,44nm,21.7s,baz=306,slow=35							
MKAR	**Makanchi Array**	**63.66**	**327**	P	**P**		**16 52 19.9**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=130,slow=7.8,SNR=2.7							
MAKZ	**Makanchi**	**63.84**	**327**	P	**P**		**16 52 20.9**	**-0.1**

*IDC **14** 16:52:03.4±1.6, 7°.36S×105°.64E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.4/48, mbtmp3.5/6, ML4.0/1, MS2.7/1, Ms1 2.7/1, ms1mx2.4/20, Error ellipse: s-maj=55.5km s-min=20.8km az=40.0*

*NEIC **14** 16:52:10.2±2.2, 7°.26S±0°.08×105°.83E±0°.07, h55km±8km, mb4.7/16, Error ellipse: s-maj=11.6km s-min=9.8km az=153.0*

*DJA **14** 16:52:12.1±0.4, 7°.5S±5°×10°.6E±°, h50km±12km, M3.8/6, mb3.7/1, MLv3.9/6*

ISC 14 16:52:08.0±0.6, **7°.30S**±0°.07×**105°.91E**±0°.04, **h32**km, **n49,** σ1§**59**/44, **mb4.6**/12, **1C, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBJI	**Dramaga**	**1.12**	**48**	P	**Pb**	**16 52 30.2**	**+1.4**
CNJI	**Cibinong**	**1.21**	**90**	P	**Pb**	**16 52 30.2**	**-0.2**
CNJI				S	**Sn**	**16 52 42.6**	**-1.4**
CBJI	**Citeko**	**1.28**	**47**	P	**Pb**	**16 52 30.9**	**-0.7**
LEM	**Lembang**	**1.76**	**75**	Pn	**Pb**	**16 52 39.8**	**0.0**
	55nm,0.3s,baz=333,slow=14,SNR=80						
LEM				Sn	**Sb**	**16 53 01.8**	**+0.3**
	99nm,0.3s,baz=130,slow=19,SNR=8.6						
LEM				LR	LR	16 53 26.5	
	comp=Z,171nm,19.3s,baz=30,slow=41						
LEM	**Lembang**	**1.76**	**75**	P	**Pb**	**16 52 39.3**	**-0.5**
CISI	**Cisompet, Garu**	**1.91**	**98**	P	**Pn**	**16 52 39.9**	**+1.5**
CISI				S	**Sn**	**16 52 59.1**	**-2.2**
CISI	**Cisompet, Garu**	**1.91**	**98**		**Pn**	**16 52 39.6**	**+1.2**
KASI	**Kota Agung**	**2.26**	**321**	P	**Pb**	**16 52 50.0**	**+1.8**
LWLI	**Liwa**	**2.92**	**321**	P	**Pb**	**16 53 00.3**	**+0.7**
XMIS	**Christmas Isla**	**3.17**	**185**	Pn	**Pn**	**16 52 57.4**	**+1.7**
UGM	**Wanagama**	**4.61**	**98**	Pn	**Pn**	**16 53 20.2**	**+4.6**
PWJI	**Pagerwojo**	**5.88**	**97**	P	Pn	16 53 40.0	+6.9
JAGI	**Jajag, Banyuwa**	**8.25**	**99**	Pn	**Pn**	**16 54 09.4**	**+3.9**
MYKOM	**Kota Tinggi**	**9.26**	**347**	Pn	**Pn**	**16 54 21.2**	**+1.7**
LHMI	**Lhok Sumawe**	**15.33**	**324**	P	**P**	**16 55 45.0**	**-1.6**
SOEI	**Soe**	**18.32**	**99**	P	**Pn**	**16 56 20.8**	**+0.8**
DLV	**T Lat**	**19.29**	**8**	P	P	**16 56 30.1**	**-0.4**
DLV				IAmb	IAmb	16 56 40.0	
	comp=Z,63nm,1.9s						
KNRA	**Kununurra**	**23.87**	**112**	P	**P**	**16 57 19.8**	**+0.9**
KNRA				IAmb	IAmb	16 58 13.2	
	comp=Z,28nm,1.4s						
MTN	**Manton Dam**	**25.43**	**105**	P	**P**	**16 57 34.5**	**+1.4**
MTN				IAmb	IAmb	16 58 20.4	
	comp=Z,61nm,1.6s						
FAKI	**Fak Fak**	**26.59**	**82**	P	**P**	**16 57 43.8**	**+0.1**
FAKI				IAmb	IAmb	16 58 24.2	
	comp=Z,43nm,1.3s						
H01W3	**Cape Leeuwin H**	**28.48**	**166**	T	T	17 27 39.6	
	baz=341,slow=78,SNR=43						
H01W1	**Cape Leeuwin H**	**28.49**	**166**	T	T	17 27 40.9	
	baz=341,slow=78,SNR=40						
H01W2	**Cape Leeuwin H**	**28.49**	**166**	T	T	17 27 43.0	
	baz=341,slow=78,SNR=46						
WB0	**Warramunga Arr**	**30.27**	**117**	P	**P**	**16 58 17.7**	**+1.2**
WRA	**Warramunga Arr**	**30.29**	**117**	P	**P**	**16 58 18.2**	**+1.6**
	comp=Z,0.4nm,0.5s,baz=300,slow=9.7,SNR=9.5						
WRA	**Warramunga Arr**	**30.29**	**117**	P	**P**	**16 58 16.7**	**+0.1**
WRAB	**Tennant Creek**	**30.29**	**117**	P	**P**	**16 58 16.7**	**0.0**
WRAB				IAmb	IAmb	16 58 20.3	
	comp=Z,7.1nm,0.5s						
WB2	**Warramunga Arr**	**30.30**	**117**	P	**P**	**16 58 16.7**	**0.0**
ASAR	**Alice Springs**	**31.40**	**124**	P	**P**	**16 58 28.1**	**+1.6**
	comp=Z,0.2nm,0.9s,baz=302,slow=7.6,SNR=6.9						
H08S2	**Diego Garcia H**	**33.13**	**267**	T	T	17 34 23.1	
	baz=91,slow=75,SNR=16						
H08S3	**Diego Garcia H**	**33.14**	**267**	T	T	17 34 23.8	
	baz=91,slow=75,SNR=18						
H08S1	**Diego Garcia H**	**33.15**	**267**	T	T	17 34 24.4	
	baz=91,slow=75,SNR=14						
KS19	**Wonju Array Si**	**49.07**	**23**	P	**P**	**17 00 51.2**	**-1.1**
RER	**Riviere de l'E**	**50.32**	**249**	P	**P**	**17 01 02.2**	**-0.1**
SONM	**Songino Array**	**54.90**	**0**	PcP	**PcP**	**17 02 38.3**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=176,slow=3.0,SNR=4.2						
SONM	**Songino Array**	**54.90**	**0**		**PcP**	**17 02 38.0**	**+0.5**
MKAR	**Makanchi Array**	**57.81**	**341**	P	**P**	**17 01 55.8**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=157,slow=7.6,SNR=5.5						
MKAR	**Makanchi Array**	**57.81**	**341**	P	**P**	**17 01 55.4**	**-1.0**
TLY	**Talaya**	**58.78**	**358**	P	**P**	**17 02 00.8**	**-2.2**
TLY				IAmb	IAmb	17 02 54.0	
	comp=Z,4.6nm,0.6s						
KURBB	**Kurchatov Arra**	**62.37**	**341**	P	**P**	**17 02 27.4**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=138,slow=7.4,SNR=2.9						
KURK	**Kurchatov**	**62.42**	**341**	P	**P**	**17 02 27.4**	**-0.4**
KURK	**Kurchatov**	**62.42**	**341**	IAmb	IAmb	17 04 20.0	
	comp=Z,7.9nm,1.8s						
GEYT	**Alibeck**	**63.27**	**319**	P	**P**	**17 02 30.7**	**-3.1**
GYA0B	**ALIBECK ARRAY**	**63.27**	**319**	P	**P**	**17 02 30.9**	**-3.0**
GYA0B				IAmb	IAmb	17 04 21.7	
	comp=Z,3.0nm,0.6s						
MAW	**Mawson**	**66.77**	**197**	P	**P**	**17 02 55.0**	**-1.0**
BVAR	**Borovoye Array**	**67.23**	**338**	P	**P**	**17 02 59.7**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=141,slow=7.6,SNR=5.8						
ABKAR	**Akbulak array**	**69.12**	**330**	P	**P**	**17 03 11.4**	**+0.3**
SYO	**Syowa Base**	**74.85**	**200**↑	*eP*	**P**	**17 03 46.4**	**+1.3**
TXAR	**Lajitas Array**	**144.57**	**48**	PKP	**PKPdf**	**17 11 42.4**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=338,slow=2.1,SNR=3.6						

*IDC **14** 16:53:31.2±3.2, 17°.46S×178°.98W, h509km±33km, mb3.4/12, mb1 3.6/12, mb1mx3.3/46, mbtmp4.3/12, Error ellipse: s-maj=39.1km s-min=15.6km az=144.0*

*NEIC **14** 16:53:33.1±1.1, 17°.5S±0°.2×179°.0W±0°.1, h538km±8km, mb4.6/20, Error ellipse: s-maj=26.2km s-min=17.2km az=159.0*

ISC 14 16:53:33.3±0.7, **17°.5S**±0°.2×**179°.0W**±0°.1, **h539**km, **n43,** σ0§**74**/40, **mb4.5**/23, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.84**	**265**	P	**P**	**16 54 46.6**	**0.0**
AFI	**Afiamalu**	**7.81**	**64**	P	P	16 55 23.7	-5.3
NIUE	**Niue**	**8.74**	**102**	P	P	16 55 32.5	-5.7
FUNA	**Funafuti**	**9.11**	**349**	P	P	16 55 35.8	-6.3
PPTF	**Pamatai, Papee**	**28.04**	**95**	P	**P**	**16 58 41.6**	**0.0**
EIDS	**Eidsvold**	**28.89**	**249**	P	**P**	**16 58 48.5**	**-0.4**
EIDS				IAmb	IAmb	16 59 22.2	
	comp=Z,44nm,1.6s						
ARMA	**Armidale**	**29.67**	**239**	P	**P**	**16 58 55.8**	**0.0**
ARMA				IAmb	IAmb	16 58 57.4	
	comp=Z,14nm,1.0s						
CTA	**Charters Tower**	**32.97**	**260**	P	**P**	**16 59 24.1**	**+0.1**
	comp=Z,5.2nm,0.7s,baz=104,slow=14,SNR=2.7						
CTAO	**Charters Tower**	**32.97**	**260**	P	**P**	**16 59 24.2**	**+0.2**
CAN	**Canberra**	**33.51**	**232**	P	**P**	**16 59 28.6**	**+0.3**
CAN				IAmb	IAmb	17 00 39.4	
	comp=Z,20nm,1.4s						
COEN	**Coen**	**36.56**	**270**	P	**P**	**16 59 54.4**	**+0.4**
COEN				IAmb	IAmb	17 00 46.0	
	comp=Z,20nm,1.2s						
TOO	**Toolangi**	**37.00**	**230**	P	**P**	**16 59 57.6**	**+0.2**
TOO				IAmb	IAmb	17 00 22.2	
	comp=Z,48nm,1.9s						
TAU	**Tasmania Unive**	**38.17**	**221**	P	**P**	**17 00 06.6**	**-0.1**
STKA	**Stephens Creek**	**38.34**	**241**	P	**P**	**17 00 08.7**	**+0.3**
	comp=Z,5.3nm,0.4s,baz=87,slow=9.4,SNR=23						
STKA	**Stephens Creek**	**38.34**	**241**	P	**P**	**17 00 08.6**	**+0.3**
BBOO	**Buckleboo**	**43.12**	**241**	P	**P**	**17 00 46.3**	**-0.1**
BBOO				IAmb	IAmb	17 00 46.7	
	comp=Z,8.8nm,0.8s						
WB0	**Warramunga Arr**	**44.13**	**259**	P	**P**	**17 00 53.3**	**-1.1**
WB0				IAmb	IAmb	17 02 14.8	
	comp=Z,32nm,1.9s						
WB2	**Warramunga Arr**	**44.15**	**259**	P	**P**	**17 00 53.5**	**-1.1**
WB2				IAmb	IAmb	17 01 34.1	
	comp=Z,29nm,1.8s						
WRA	**Warramunga Arr**	**44.17**	**259**	P	**P**	**17 00 53.6**	**-1.0**
	comp=Z,1.3nm,0.5s,baz=94,slow=7.8,SNR=26						
WRA	**Warramunga Arr**	**44.17**	**259**	P	**P**	**17 00 53.2**	**-1.5**
AS31	**Alice Springs**	**44.37**	**254**	P	**P**	**17 00 55.9**	**-0.4**
ASAR	**Alice Springs**	**44.37**	**254**	P	**P**	**17 00 56.0**	**-0.3**
	comp=Z,17nm,0.5s,baz=89,slow=8.0,SNR=527						
ASAR				ScP	**ScP**	**17 05 32.4**	**+3.0**
	comp=Z,0.4nm,0.6s,baz=92,slow=4.5,SNR=5.2						
ASAR	**Alice Springs**	**44.37**	**254**	P	**P**	**17 00 55.4**	**-0.8**
MTN	**Manton Dam**	**48.26**	**268**	P	**P**	**17 01 25.4**	**-0.4**
MTN				IAmb	IAmb	17 03 13.5	
	comp=Z,38nm,1.5s						
FORT	**Forrest**	**49.68**	**244**	P	**P**	**17 01 35.4**	**-0.7**
FORT				IAmb	IAmb	17 01 36.2	
	comp=Z,14nm,0.7s						
FAKI	**Fak Fak**	**49.97**	**281**	P	**P**	**17 01 38.7**	**+0.3**
KNRA	**Kununurra**	**49.98**	**264**	P	**P**	**17 01 38.0**	**-0.5**
KNRA				IAmb	IAmb	17 02 13.3	
	comp=Z,77nm,1.9s						
SIJI	**Sorong**	**51.61**	**283**	P	**P**	**17 01 50.7**	**+0.3**
	comp=Z,8.6nm,0.6s,baz=136,slow=6.9,SNR=9.1						
FITZ	**Fitzroy Crossi**	**52.55**	**260**	P	**P**	**17 01 57.4**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=81,slow=8.8,SNR=9.4						
FITZ	**Fitzroy Crossi**	**52.55**	**260**	P	**P**	**17 01 56.9**	**-0.2**
MJAR	**Matsushiro Arr**	**67.27**	**324**	P	**P**	**17 03 34.6**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=120,slow=7.2,SNR=4.5						
PETK	**Petropavlovsk-**	**73.16**	**346**	P	**P**	**17 04 09.3**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=131,slow=6.7,SNR=4.4						
PETK	**Petropavlovsk-**	**73.16**	**346**	P	**P**	**17 04 09.0**	**0.0**
NVAR	**Mina Array Bea**	**79.52**	**44**	P	**P**	**17 04 45.3**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=223,slow=8.5,SNR=8.9						
NVAR	**Mina Array Bea**	**79.52**	**44**	P	**P**	**17 04 44.0**	**-0.6**
319A	**Douglas**	**82.64**	**54**		pP	17 06 55.6	-0.7
TRF	**Thorofare Moun**	**83.75**	**13**	P	**P**	**17 05 04.6**	**-0.9**
ILAR	**Eielson Array**	**85.63**	**13**	P	**P**	**17 05 13.7**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=220,slow=5.4,SNR=6.1						
PDAR	**Pinedale Array**	**87.44**	**44**	P	**P**	**17 05 24.1**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=253,slow=4.5,SNR=4.6						
YKA	**Yellowknife Ar**	**94.21**	**25**	P	**P**	**17 05 54.6**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=238,slow=4.5,SNR=5.6						
BRTR	**Keskin Array B**	**144.12**	**315**	PKP	**PKPdf**	**17 12 08.1**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=112,slow=3.8,SNR=2.1						
GERES	**GERESS Array B**	**147.09**	**345**	PKPbc	**PKPbc**	**17 12 16.3**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=345,slow=2.3,SNR=4.3						
GERES	**GERESS Array B**	**147.09**	**345**		**PKPbc**	**17 12 15.8**	**-0.2**

*IDC **14** 16:57:30.3±2.6, 19°.96S×72°.11W, h0km, mb3.9/2, mb1 4.0/3, mb1mx3.6/20, mbtmp3.8/3, ML3.3/1, MS2.7/1, Ms1 2.8/1, ms1mx2.5/33, Error ellipse: s-maj=88.7km s-min=53.2km az=170.0*

*GUC **14** 16:57:36.7±0.6, 19°.36S×71°.79W, h23km±3km, ML3.6*

ISC 14 16:57:37.0±1.3, **19°.49S**±0°.05×**71°.89W**±0°.09, **h35**km, **n23,** σ1§**27**/34, **2C-3D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**1.67**	**94**	*eP*	**Pn**	**16 58 02.3**	**-1.5**
PSGC				*i* S	**Sn**	**16 58 22.6**	**-1.5**
PSGC				IAML		16 58 25.0	
	comp=N,432nm,0.3s						
PB12	**IPOC Station P**	**1.71**	**60**↑	*iP*	**Pn**	**16 58 02.8**	**-1.6**
PB12				*i* S	**Sn**	**16 58 22.7**	**-2.5**
AP01	**Chacalluta**	**1.84**	**53**	*eP*	**Pn**	**16 58 02.4**	**-1.9**
AP01				*i* S	**Sn**	**16 58 25.6**	**-2.5**
AP01				IAML		16 58 27.4	
	comp=N,712nm,0.5s						
TA01	**Diego Aracena**	**1.93**	**124**	*eP*	**Pn**	**16 58 06.5**	**-0.9**
TA01				*i* S	**Sn**	**16 58 30.0**	**-0.4**
TA01				IAML		16 58 31.3	
	comp=N,536nm,0.3s						
PB11	**IPOC Station P**	**2.12**	**98**↓	*iP*	**Pn**	**16 58 10.0**	**-0.1**
PB11				*i* S	**Sn**	**16 58 35.7**	**+0.4**
PB11				IAML		16 58 38.0	
	comp=N,812nm,0.2s						
MNMC	**Minye Minye**	**2.19**	**81**	*eP*	**Pn**	**16 58 10.9**	**-0.3**
MNMC				*i* S	**Sn**	**16 58 37.2**	**-0.1**
PB16	**IPOC Station P**	**2.53**	**63**↑	*iP*	**Pn**	**16 58 15.4**	**-0.6**
PB16				*i* S	**Sn**	**16 58 46.5**	**+0.6**
PB16				IAML		16 58 50.0	
	comp=N,173nm,0.5s						
GO01	**Chusmiza**	**2.55**	**94**	*eP*	**Pn**	**16 58 16.4**	**+0.2**
GO01				*i* S	**Sn**	**16 58 47.4**	**+1.1**
PB02	**IPOC Station P**	**2.61**	**135**↓	*iP*	**Pn**	**16 58 16.4**	**-0.5**
PB02				*i* S	**Sn**	**16 58 46.8**	**-0.6**
PB02				IAML		16 58 49.2	
	comp=E,409nm,0.4s						
PB08	**IPOC Station P**	**2.66**	**105**	*eP*	**Pn**	**16 58 17.9**	**+0.2**
PB08				*i* S	**Sn**	**16 58 50.2**	**+1.4**
PB08				IAML		16 58 52.8	
	comp=N,251nm,0.4s						
PB01	**IPOC Station P**	**2.73**	**125**	*eP*	**Pn**	**16 58 18.1**	**-0.4**
PB01				*i* S	**Sn**	**16 58 50.5**	**+0.1**
PB01				IAML		16 58 52.2	
	comp=N,317nm,0.4s						
PB07	**IPOC Station P**	**2.91**	**140**↓	*iP*	**Pn**	**16 58 20.3**	**-0.7**
PB07				*i* S	**Sn**	**16 58 53.9**	**-1.0**
PB07				IAML		16 58 58.8	
	comp=E,144nm,0.5s						
PB04	**IPOC Station P**	**3.27**	**150**	*eP*	**Pn**	**16 58 24.6**	**-1.3**
PB04				*i* S	**Sn**	**16 59 03.5**	**-0.1**
PB04				IAML		16 59 06.5	
	comp=E,128nm,0.1s						
PB09	**IPOC Station P**	**3.38**	**133**	*eP*	**Pn**	**16 58 27.9**	**+0.5**
PB09				*i* S	**Sn**	**16 59 08.0**	**+1.6**
PB09				IAML		16 59 14.5	
	comp=N,118nm,0.5s						
PB06	**IPOC Station P**	**3.86**	**146**	*eP*	**Pn**	**16 58 33.4**	**-0.7**
PB06				IAML		16 59 22.0	
	comp=E,85nm,0.1s						
PB15	**IPOC Station P**	**4.33**	**149**	*eP*	**Pn**	**16 58 40.1**	**-0.5**
LPAZ	**La Paz**	**4.79**	**49**	Pn	**Pn**	**16 58 50.9**	**+3.7**
	comp=E,0.6nm,0.3s,baz=229,slow=9.0,SNR=11						
LPAZ				LR	LR	17 00 59.2	
	comp=E,76nm,21.4s,baz=270,slow=40						
H03N1	**Juan Fernandez**	**15.25**	**203**	T	T	17 16 58.2	
	baz=26,slow=72,SNR=8.0						
H03N2	**Juan Fernandez**	**15.25**	**203**	T	T	17 16 52.8	
	baz=26,slow=72,SNR=5.7						
H03N3	**Juan Fernandez**	**15.26**	**203**	T	T	17 16 56.5	
	baz=26,slow=72,SNR=4.7						
TORD	**Torodi Ar. Bea**	**79.35**	**72**	P	**P**	**17 09 40.0**	**+0.2**
	comp=E,0.8nm,0.7s,baz=257,slow=6.3,SNR=4.2						
YKA	**Yellowknife Ar**	**88.39**	**342**	P	**P**	**17 10 25.1**	**+0.3**
	comp=E,0.5nm,0.6s,baz=135,slow=4.8,SNR=6.9						
MKAR	**Makanchi Array**	**145.53**	**32**	PKPbc	**PKPab**	**17 17 12.2**	**+0.3**
	comp=E,0.4nm,0.7s,baz=8.7,slow=1.9,SNR=3.9						

*IDC **14** 17:16:56.1±2.7, 11°.04N×85°.05W, h70km±30km, mb3.8/2, mb1 4.2/3, mb1mx3.4/28, mbtmp4.0/3, ML3.1/1, Error ellipse: s-maj=95.4km s-min=32.4km az=56.0*

*UCR **14** 17:16:56.1±1.2, 10°.80N×85°.69W, h58km±2km, MD4.0, mb4.2(NEIC)*

*NEIC **14** 17:16:56.2±0.7, 10°.78N±0°.09×85°.54W±0°.10, h67km±4km, mb4.2/5, Error ellipse: s-maj=17.3km s-min=7.4km az=46.0*

*INET **14** 17:16:57.0, 10°.82N×85°.64W, h22km, ML3.9*

ISC 14 17:16:56.3±0.8, **10°.78N**±0°.04×**85°.64W**±0°.05, **h60**km±5km, **n54,** σ0§**92**/79, **mb4.1**/5, **6D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBS3	**Finca Las Img**	**0.18**	**90**	*iP*	**Pn**	**17 17 05.3**	**-0.3**
GBS3				*i* S	**Sn**	**17 17 12.7**	**+0.2**
LAPC	**Finca la Perla**	**0.21**	**94**	*iP*	**Pn**	**17 17 05.4**	**-0.4**
LAPC				*i* S	**Sn**	**17 17 12.6**	**-0.1**
BUEV	**Buena Vista**	**0.23**	**86**	*iP*	**Pn**	**17 17 05.8**	**-0.2**
BUEV				*e*S	**Sn**	**17 17 13.5**	**+0.4**
GB1A	**Borinquen Arri**	**0.24**	**81**	*iP*	**Pn**	**17 17 06.0**	**-0.1**
GB1A				*e*S	**Sn**	**17 17 13.8**	**+0.6**
GPS3	**Bodega del ICE**	**0.27**	**96**	*iP*	**Pn**	**17 17 06.0**	**-0.2**
GPS3				*e*S	**Sn**	**17 17 13.9**	**+0.4**
GPS2	**Hotel Rincn d**	**0.29**	**96**	*iP*	**Pn**	**17 17 06.1**	**-0.2**
GPS2				*e*S	**Sn**	**17 17 14.0**	**+0.3**
GPS1	**Guardaparques**	**0.29**	**91**	*iP*	**Pn**	**17 17 06.2**	**-0.2**
GPS1				*e*S	**Sn**	**17 17 13.9**	**+0.2**
BUAI	**Buenos Aires**	**0.32**	**73**↓	*iP*	**Pn**	**17 17 07.0**	**+0.4**
BUAI				*i* S	**Sn**	**17 17 15.9**	**+1.9**
LIM1	**Limonal**	**0.39**	**102**	*iP*	**Pn**	**17 17 07.1**	**-0.1**
LIM1				*e*S	**Sn**	**17 17 15.6**	**+0.4**
GUAB	**Guayabo de Bag**	**0.41**	**100**	*iP*	**Pn**	**17 17 07.3**	**-0.1**
GUAB				*e*S	**Sn**	**17 17 15.9**	**+0.4**
COLC	**Colonia**	**0.45**	**105**	*iP*	**Pn**	**17 17 07.7**	**-0.1**
COLC				*i* S	**Sn**	**17 17 16.6**	**+0.5**
HORNC	**Hornillas**	**0.46**	**99**	*iP*	**Pn**	**17 17 07.9**	**0.0**
HORNC				*e*S	**Sn**	**17 17 16.8**	**+0.4**
CUI	**Cuipilapa**	**0.49**	**105**	*iP*	**Pn**	**17 17 08.1**	**0.0**
CUI				*e*S	**Sn**	**17 17 17.4**	**+0.6**

PLVR	**Palo Verde**	**0.52**	**146**↓	*eP*	**Pn**	**17 17 08.6**	**-0.1**
PLVR				*e*S	**Sn**	**17 17 19.1**	**+1.5**
GUAI	**GUAI**	**0.53**	**166**	*iP*	**Pn**	**17 17 08.4**	**-0.1**
GUAI				*e*S	**Sn**	**17 17 18.2**	**+0.8**
ACAL	**Aguas Claras**	**0.61**	**104**	*iP*	**Pn**	**17 17 09.9**	**+0.3**
ACAL				*e*S	**Sn**	**17 17 21.2**	**+1.8**
PTEN	**Parque Tenorio**	**0.65**	**96**	*iP*	**Pn**	**17 17 10.3**	**+0.3**
PTEN				*e*S	**Sn**	**17 17 21.7**	**+1.7**
JTS	**Las Juntas de**	**0.83**	**126**	LR	LR	17 17 06.9	
	comp=Z,39nm,21.8s,baz=32,slow=14						
JTS				P	**Pn**	**17 17 12.1**	**-0.1**
	439nm,0.3s,baz=1.3,slow=12,SNR=1496						
JTS				S	**Sn**	**17 17 24.3**	**+0.4**
	538nm,0.3s,baz=297,slow=21,SNR=17						
JTS	**Las Juntas de**	**0.83**	**126**↓	*eP*	**Pn**	**17 17 12.1**	**-0.1**
JTS				*e*S	**Sn**	**17 17 24.4**	**+0.4**
CASO	**Castillo**	**0.96**	**111**	*iP*	**Pn**	**17 17 14.2**	**+0.4**
CASO				*i* S	**Sn**	**17 17 28.3**	**+1.5**
ARE1	**Arenal 1**	**0.96**	**109**↓	*iP*	**Pn**	**17 17 14.6**	**+0.7**
ARE1				*e*S	**Sn**	**17 17 29.3**	**+2.5**
CEDE	**Laguna Cedeo**	**0.97**	**108**↓	*iP*	**Pn**	**17 17 14.7**	**+0.7**
CEDE				*e*S	**Sn**	**17 17 29.0**	**+1.9**
FORC	**Fortuna**	**1.01**	**108**	*iP*	**Pn**	**17 17 14.9**	**+0.5**
FORC				*e*S	**Sn**	**17 17 29.4**	**+1.6**
ACON	**Acoyapa**	**1.27**	**21**↓	*iP*	**Pn**	**17 17 17.8**	**0.0**
ACON				*e*S	**Sn**	**17 17 34.0**	**+0.9**
ACON	**Acoyapa**	**1.27**	**21**		**Pn**	**17 17 17.7**	**-0.2**
MASN	**Masaya**	**1.30**	**337**	*eP*	**Pn**	**17 17 21.1**	**+2.7**
MASN				*e*S	**Sn**	**17 17 33.1**	**-1.7**
HDC	**Heredia**	**1.69**	**117**	*eP*	**Pn**	**17 17 24.3**	**+0.6**
HDC	**Heredia**	**1.69**	**117**		**Pn**	**17 17 22.6**	**-1.1**
LCR2	**La Lucha 2**	**1.92**	**122**	*eP*	**Pn**	**17 17 27.2**	**+0.4**
ESPN	**Las Esperanzas**	**1.92**	**43**	*eP*	**Pn**	**17 17 27.2**	**+0.4**
ESPN	**Las Esperanzas**	**1.92**	**43**	Pn	**Pn**	**17 17 26.2**	**-0.5**
CVTR	**Volcan Turrial**	**2.00**	**112**	*eP*	**Pn**	**17 17 28.7**	**+0.6**
MATN	**Matagalpa**	**2.15**	**353**	*eP*	**Pn**	**17 17 30.5**	**+0.6**
MATN	**Matagalpa**	**2.15**	**353**		**Pn**	**17 17 29.8**	**-0.1**
EDDO	**Dominical**	**2.32**	**131**	*eP*	**Pn**	**17 17 31.6**	**-0.5**
CRIN	**San Cristobal**	**2.35**	**324**	*eP*	**Pn**	**17 17 32.9**	**+0.3**
CRIN	**San Cristobal**	**2.35**	**324**	Pn	**Pn**	**17 17 32.4**	**-0.2**
EDBA	**Buenos Aires**	**2.83**	**124**	*eP*	**Pn**	**17 17 38.9**	**-0.3**
CSGN	**Cosiguina Volc**	**2.88**	**319**		**Pn**	**17 17 40.6**	**+0.8**
TGUH	**Tegucigalpa,Un**	**3.62**	**334**		**Pn**	**17 17 50.4**	**+0.3**
BCIP	**Isla Barro Col**	**5.94**	**105**	Pn	**Pn**	**17 18 20.6**	**-1.1**
APG	**El Apazote**	**6.30**	**312**	P	Pn	**17 18 30.5**	**+3.7**
	0.4nm,0.3s,baz=98,slow=12,SNR=4.1						
HODGE	**Hodges**	**23.55**	**7**	P	**P**	**17 22 00.5**	**-0.8**
HODGE				IAmb	IAmb	17 22 01.9	
	comp=Z,6.4nm,0.9s						
W45A	**Hickory Valley**	**24.48**	**353**	P	**P**	**17 22 09.4**	**-0.4**
W45A				IAmb	IAmb	17 22 25.8	
	comp=Z,12nm,0.9s						
MIAR	**Mount Ida**	**24.74**	**344**	P	**P**	**17 22 12.1**	**-0.1**
TXAR	**Lajitas Array**	**24.98**	**320**	P	**P**	**17 22 14.9**	**+0.4**
	comp=Z,4.4nm,0.7s,baz=148,slow=9.9,SNR=42						
TXAR	**Lajitas Array**	**24.98**	**320**	P	**P**	**17 22 14.0**	**-0.6**
TX31	**Lajitas Ar. Si**	**24.98**	**320**	P	**P**	**17 22 14.4**	**-0.2**
TX32	**Lajitas Array**	**24.98**	**320**	P	**P**	**17 22 14.7**	**+0.2**
TX32				IAmb	IAmb	17 22 17.4	
	comp=Z,5.5nm,0.8s						
NVAR	**Mina Array Bea**	**40.12**	**319**	P	**P**	**17 24 26.9**	**+0.4**
	comp

AEIL Aeropuerto Ilo 0.77 343 eP Pn 17 29 58.0 0.0
AEIL IAML 17 30 16.6
comp=Z,46µm,0.4s
BLLM Bellamira 0.79 53 eP Pn 17 29 58.7 +0.4
BLLM Bellamira 0.79 53 eP Pn 17 29 58.7 +0.4
LBRS Las Brisas 0.79 349 eP Pn 17 29 58.4 +0.1
LBRS Las Brisas 0.79 349 eP Pn 17 29 58.4 +0.1
UDBS Universidad Do 0.80 341 eP Pn 17 29 58.5 +0.1
UDBS Universidad Do 0.80 341 eP Pn 17 29 58.5 +0.1
SNET Serv Nac Est T 0.80 335 eP Pn 17 29 58.1 -0.3
SNET Serv Nac Est T 0.80 335 Pn 17 29 57.9 -0.5
SNET Serv Nac Est T 0.80 335 eP Pn 17 29 58.1 -0.3
UEES Universidad Ev 0.83 335 IAML 17 30 12.8
comp=Z,18µm,0.2s
UEES Universidad Ev 0.83 335 IAML 17 30 12.8
comp=Z,18µm,0.2s
BOQS Boqueron 0.86 333 i P Pn 17 29 59.3 -0.1
BOQS Boqueron 0.86 333 i P Pn 17 29 59.3 -0.1
FAGO Alcalda de S 1.05 46 eP Pn 17 30 02.2 +0.6
FAGO IAML 17 30 22.1
comp=Z,5µm,0.5s
FAGO Alcalda de S 1.05 46 eP Pn 17 30 02.2 +0.6
FAGO IAML 17 30 22.1
comp=Z,5µm,0.5s
CNCH Conchagua 1.07 73 eS Sn 17 30 16.6 +0.6
CNCH Conchagua 1.07 73 eS Sn 17 30 16.6 +0.6
LLGN La Laguna 1.20 357 IAML 17 30 26.0
comp=Z,7µm,0.5s
LLGN La Laguna 1.20 357 IAML 17 30 26.0
comp=Z,7µm,0.5s
CSGN Cosiguina Volc 1.29 89 Pn 17 30 04.6 -0.2
CRIN San Cristobal 1.81 98 Pn 17 30 12.2 +0.5
TGUH Tegucigalpa,Un 1.91 55 Pn 17 30 14.1 +0.9
IXG Ixpaco 1.94 309 i P Pn 17 30 14.6 +0.9
NBG Las Nubes 2.15 319 eP Pn 17 30 18.8 +2.1
PCG Pacaya 2.20 311 eP Pn 17 30 19.2 +1.9
MRL Marmol 2.25 340 eP Pn 17 30 20.0 +2.0
FUG Fuego 3 2.41 308 eP Pn 17 30 21.5 +1.4
APG El Apazote 2.55 323 P Pn 17 30 23.3 +1.3
comp=Z,20nm,0.3s,baz=126,slow=4.5,SNR=45
APG S **Sn 17 30 52.8 +0.8**
comp=Z,34nm,0.3s,baz=17,slow=15,SNR=5.2
MATN Matagalpa 2.88 90 Pn 17 30 26.5 +0.1
STG3 Santiaguito 3, 3.14 304 eP Pn 17 30 31.4 +1.3
ACON Acoyapa 3.75 105 eP Pn 17 30 37.8 -0.5
ACON Acoyapa 3.75 105 Pn 17 30 37.5 -0.8
GBS3 Finca Las Img 3.99 122 eP Pn 17 30 43.2 +1.6
LAPC Finca la Perla 4.02 122 eP Pn 17 30 43.5 +1.5
GB1A Borinquen Arri 4.02 122 eP Pn 17 30 43.2 +1.1
BUEV Buena Vista 4.02 122 eP Pn 17 30 44.2 +2.1
BUAI Buenos Aires 4.04 120 eP Pn 17 30 43.8 +1.5
GPS3 Bodega del ICE 4.08 122 eP Pn 17 30 44.6 +1.8
GPS1 Guardaparques 4.08 122 eP Pn 17 30 43.8 +0.9
GPS2 Hotel Rincn d 4.09 122 eP Pn 17 30 44.9 +1.8
LIM1 Limonal 4.21 122 eP Pn 17 30 46.7 +2.2
GUAI GUAI 4.25 129 eP Pn 17 30 46.4 +1.3
HORNC Hornillas 4.26 121 eP Pn 17 30 45.7 +0.4
COLC Colonia 4.26 122 eP Pn 17 30 47.1 +1.8
CUI Cuipilapa 4.30 122 eP Pn 17 30 47.1 +1.3
PLVR Palo Verde 4.32 127 eP Pn 17 30 47.7 +1.4
PTEN Parque Tenorio 4.42 120 eP Pn 17 30 48.2 +0.7
ACAL Aguas Claras 4.42 121 eP Pn 17 30 48.8 +1.3
ESPN Las Esperanzas 4.54 99 eP Pn 17 30 49.1 +0.1
ESPN Las Esperanzas 4.54 99 Pn 17 30 49.1 +0.1
CCIG Comitan 4.56 317 Pn 17 30 51.3 +1.7
JTS Las Juntas de 4.67 124 P Pn 17 30 52.5 +1.5
comp=Z,7.0nm,0.3s,baz=19,slow=7.1,SNR=20
JTS S **Sn 17 31 43.8 -0.1**
baz=344,slow=18,SNR=0.9
JTS Las Juntas de 4.67 124 eP Pn 17 30 53.0 +2.1
JTS Las Juntas de 4.67 124 Pn 17 30 52.2 +1.2
CEDE Laguna Cedeo 4.77 121 eP Pn 17 30 54.5 +2.1
ARE1 Arenal 1 4.77 121 eP Pn 17 30 55.0 +2.7
HDC Heredia 5.52 122 eP Pn 17 31 06.2 +3.5
HDC Heredia 5.52 122 Pn 17 31 02.7 0.0
LCR2 La Lucha 2 5.75 123 eP Pn 17 31 07.3 +1.4
CVTR Volcan Turrial 5.81 120 eP Pn 17 31 07.8 +0.9
EDDO Dominical 6.15 126 eP Pn 17 31 14.0 +2.8
TEIG Tepich 7.25 5 P Pn 17 31 28.8 +2.6
baz=131,slow=0.0
TEIG LR LR 17 34 35.6
comp=Z,692nm,21.1s,baz=74,slow=41
TEIG Tepich 7.25 5 Pn 17 31 28.7 +2.5
ICCO Coco Island 7.59 166 eP Pn 17 31 33.7 +2.8
FSCY Frank Sound, G 9.72 48 Pn 17 32 01.8 +1.7
TLIG Tlapa 10.40 297 Pn 17 32 11.5 +2.0
SJCC San Jacinto, C 13.77 101 eP P 17 33 01.9 -0.2
UREC San Jos de Ur 14.11 110 eP P 17 33 05.1 -0.7
CBOC Ciudad Bolivar 14.52 118 eP P 17 33 10.0 -0.5
ZARC Zaragoza, Cauc 14.83 110 eP P 17 33 13.4 -0.4
SMLC San Martn de 15.12 104 eP P 17 33 16.6 -0.4
GUY2C Guyana, Caldas 15.39 119 eP P 17 33 21.8 +1.2
BBAC Balboa, Cauca 15.84 132 eP P 17 33 24.3 -0.9
POPC Popayan, Colom 15.91 130 eP P 17 33 24.9 -1.1
SOTA Rioblanco 16.23 131 eP P 17 33 31.5 +1.7
PCON Cinco Dias 16.26 130 eP P 17 33 28.7 -1.5
ROSC El Rosal 16.48 118 P P 17 33 34.0 +1.4
comp=Z,3.7nm,0.3s,baz=313,slow=19,SNR=2.2
ROSC LR LR 17 39 25.7
comp=Z,129nm,20.9s,baz=208,slow=36
DWPF Disney Wildern 16.60 24 P Pn 17 33 31.9 +0.2
baz=206
PRAC Prado 16.61 122 eP P 17 33 32.8 -0.8
833A Chaparral WMA, 18.16 329 P Pn 17 33 51.8 +0.9
baz=145
SDV Santo Domingo 18.37 101 P Pn 17 33 53.0 -0.7
comp=Z,1.0nm,0.3s,baz=313,slow=7.8,SNR=9.0
SDV Santo Domingo 18.37 101 eP P 17 33 52.5 -0.7
SDV Santo Domingo 18.37 101 P Pn 17 33 53.1 -0.7
SDV Santo Domingo 18.37 101 P Pn 17 33 53.2 -0.6
TIGA Tifton 19.03 14 P Pn 17 34 00.7 -0.6
baz=196
TIGA Tifton 19.03 14 P Pn 17 34 01.1 -0.2
VBMS Vicksburg 19.23 356 P Pn 17 34 04.5 +0.8
baz=175
VBMS Vicksburg 19.23 356 P Pn 17 34 03.7 0.0
NATX Nacogdoches 19.45 345 P Pn 17 34 06.3 -0.1
baz=163
NATX Nacogdoches 19.45 345 P Pn 17 34 05.6 -0.8
435B Jarrell 19.47 337 P P 17 34 05.6 +0.7
baz=154
255A Hazlehurst 19.77 16 P P 17 34 08.7 +0.5
143A Socs Landing, 19.79 354 P P 17 34 07.3 -1.1
143A IAmb IAmb 17 34 30.6
comp=Z,32nm,1.0s
152A Waverly Hall 19.98 10 P Pn 17 34 11.4 -1.2
152A IAmb IAmb 17 34 14.9
comp=Z,40nm,1.2s
LRAL Lakeview Retre 20.06 5 P Pn 17 34 12.2 -1.3
baz=185,SNR=7.0
LRAL Lakeview Retre 20.06 5 P Pn 17 34 14.1 +0.6
LRAL IAmb IAmb 17 34 30.2
comp=Z,18nm,0.9s
JCT Junction City 20.15 332 P P 17 34 13.0 +0.7
baz=148,SNR=6.7
JCT Junction City 20.15 332 P P 17 34 13.1 +0.7
JCT IAmb IAmb 17 34 14.3
comp=Z,23nm,0.8s
Z47A Carrollton 20.16 2 P Pn 17 34 13.4 -1.3
Z50A Ashland 20.38 7 P Pn 17 34 16.2 -1.1
baz=188
Z50A Ashland 20.38 7 P Pn 17 34 17.4 0.0
Z50A IAmb IAmb 17 34 21.9
comp=Z,16nm,0.9s
157A Early Branch 20.91 19 P Pn 17 34 21.9 -1.7
baz=202
Y49A Blount Mountai 20.93 6 P Pn 17 34 22.0 -1.8
Y49A IAmb IAmb 17 34 38.6
comp=Z,17nm,0.8s
GOGA Godfrey 20.95 13 P Pn 17 34 22.4 -1.7
baz=195,SNR=20
GOGA Godfrey 20.95 13 P Pn 17 34 22.9 -1.2
HPIG 20.99 314 P P 17 34 23.1 +1.4
Y52A Lilburn 21.27 11 P P 17 34 26.0 +1.7
baz=193,SNR=6.1
Y52A Lilburn 21.27 11 P P 17 34 25.1 +0.8
Y52A IAmb IAmb 17 34 28.5
comp=Z,18nm,0.7s
TXAR Lajitas Array 21.31 322 P P 17 34 26.4 +1.5
comp=Z,7.6nm,0.8s,baz=143,slow=11,SNR=52
TXAR LR LR 17 44 09.8
comp=Z,68nm,18.2s,baz=0.0,slow=41
TX31 Lajitas Ar. Si 21.31 322 P P 17 34 26.6 +1.7
TX31 IAmb IAmb 17 34 27.8
comp=Z,26nm,0.9s
TX32 Lajitas Array 21.31 322 P P 17 34 26.4 +1.5
X48A Hartselle 21.46 4 P P 17 34 27.9 +1.5
NHSC New Hope 21.57 20 P P 17 34 28.7 +1.1
baz=203
NHSC New Hope 21.57 20 P P 17 34 28.3 +0.7
FPAL Fort Paine 21.69 7 P P 17 34 29.7 +0.9
X40A Basin Creek Fa 21.73 351 P P 17 34 31.0 +1.8
X51A Calhoun 21.82 9 P P 17 34 30.7 +0.5
X51A IAmb IAmb 17 34 39.4
comp=Z,15nm,0.9s
Y55A Saluda 21.84 16 P P 17 34 31.2 +0.7
baz=198
Z58A St. Stephen 21.91 21 P P 17 34 31.1 -0.1
baz=204
MIAR Mount Ida 21.91 350 P P 17 34 32.0 +0.8
baz=168,SNR=9.0
MIAR Mount Ida 21.91 350 P P 17 34 31.8 +0.6
MIAR IAmb IAmb 17 34 35.9
comp=Z,18nm,0.8s
ABTX Abilene, Hawle 21.91 335 P P 17 34 31.0 -0.3
baz=151
ABTX Abilene, Hawle 21.91 335 P P 17 34 30.4 -0.9
ABTX IAmb IAmb 17 34 32.4
comp=Z,11nm,0.8s
PLAL Pickwick Lake 21.94 2 P P 17 34 32.5 +1.0
UALR University of 21.95 352 P P 17 34 33.7 +2.1
Z59A Georgetown, SC 22.01 22 P P 17 34 32.7 +0.5
baz=206
X54A Belton 22.29 14 P P 17 34 36.2 +0.9
baz=197
SWET Sewanee 22.32 6 P P 17 34 35.9 +0.2
X37A Clayton 22.32 346 P P 17 34 38.2 +2.6
X37A IAmb IAmb 17 35 21.2
comp=Z,20nm,0.8s
W41B Gary Mavity, V 22.32 353 P P 17 34 37.2 +1.5
baz=171
Y57A Sumter 22.34 19 P P 17 34 37.1 +1.2
baz=202
W50A Signal Mountai 22.38 8 P P 17 34 36.9 +0.6
X55A Gracelyn & Ava 22.40 16 P P 17 34 37.5 +1.0
baz=199
WHAR Wooly Hollow 22.45 353 P P 17 34 39.6 +2.7
WHAR IAmb IAmb 17 34 55.1
comp=Z,36nm,1.1s
HBAR Harrisburg 22.55 356 P P 17 34 39.6 +1.5
W39A Magazine 22.58 349 P P 17 34 39.7 +1.3
baz=167
W39A Magazine 22.58 349 P P 17 34 38.4 0.0
W39A IAmb IAmb 17 34 57.3
comp=Z,42nm,1.5s
BG3 Lake Jocassee 22.59 13 P P 17 34 40.8 +2.3
X56A White Oak 22.59 17 P P 17 34 39.9 +1.4
baz=200,SNR=7.0
PAULI Pauline 22.69 15 P P 17 34 39.5 0.0
PAULI IAmb IAmb 17 34 57.2
comp=Z,23nm,1.1s
CPCT Cooper Cave 22.74 9 P P 17 34 41.6 +1.6
V48A Smith Brothers 22.76 4 P P 17 34 41.2 +1.0
W54A Cherokee Point 22.85 14 P P 17 34 42.1 +0.9
baz=197,SNR=5.8
BIRD Birdtown, Kers 22.90 18 P P 17 34 43.0 +1.3
BIRD IAmb IAmb 17 35 01.1
comp=Z,19nm,0.8s
FCAR Ozark Folk Cen 23.02 353 P P 17 34 43.7 +0.8
FCAR IAmb IAmb 17 35 00.7
comp=Z,17nm,0.9s
TKL Tuckaleechee C 23.07 11 P P 17 34 42.5 -0.9
comp=Z,3.0nm,0.5s,baz=175,slow=13,SNR=5.4
TKL Tuckaleechee C 23.07 11 P P 17 34 42.0 -1.3
WVT Waverly 23.09 2 P P 17 34 44.4 +0.8
baz=182
WVT Waverly 23.09 2 P P 17 34 42.8 -0.8
KMSC Kings Mountain 23.12 16 P P 17 34 44.2 +0.3
baz=199
CLTN Cedars of Leba 23.15 5 P P 17 34 43.6 -0.5
CLTN IAmb IAmb 17 35 02.2
comp=Z,9.6nm,0.7s
V53A Saluda 23.27 13 P P 17 34 46.7 +1.3
V52A Sevierville 23.28 11 P P 17 34 45.0 -0.4
V52A IAmb IAmb 17 35 14.1
comp=Z,43nm,1.9s
W56A Indian Trail 23.32 17 P P 17 34 46.0 +0.2
baz=201
WMOK Wichita Mounta 23.47 339 P P 17 34 47.4 +0.1
baz=155
WMOK Wichita Mounta 23.47 339 P P 17 34 46.9 -0.4
W57A Gilead 23.51 19 P P 17 34 48.3 +0.7
baz=202
W57A Gilead 23.51 19 P P 17 34 47.7 +0.1
V54A Nebo 23.56 14 P P 17 34 48.6 +0.5
baz=197
U40A Yellville 23.57 352 P P 17 34 49.2 +1.1
baz=170,SNR=9.9
U40A Yellville 23.57 352 P P 17 34 49.3 +1.1
U40A IAmb IAmb 17 35 06.1
comp=Z,17nm,0.8s
U49A Red Boiling Sp 23.62 6 P P 17 34 49.5 +0.9
W58A Raeford 23.64 20 P P 17 34 49.0 +0.2
baz=204
HHAR Hobbs 23.66 350 P P 17 34 49.2 +0.2
HHAR IAmb IAmb 17 34 53.2
comp=Z,6.5nm,0.5s
TUL1 Leonard 23.69 346 P P 17 34 49.3 +0.1
baz=163
TUL1 Leonard 23.69 346 P P 17 34 47.5 -1.8
TUL1 IAmb IAmb 17 35 14.3
comp=Z,14nm,0.7s
X60A Albert Glenn T 23.69 23 P P 17 34 49.7 +0.5
baz=207
PBMO Poplar Bluff 23.76 357 P P 17 34 50.5 +0.6
PBMO IAmb IAmb 17 35 06.0
comp=Z,24nm,1.0s
V55A Taylorsville 23.82 16 P P 17 34 50.8 +0.4
baz=199
V55A Taylorsville 23.82 16 P P 17 34 50.6 +0.2
V55A pP **pP 17 35 06.0 +1.4**
V55A IAmb IAmb 17 35 07.4
comp=Z,11nm,0.8s
U38A Gravette 23.90 349 P P 17 34 52.2 +1.0
U38A pP **pP 17 35 05.8 +0.3**
V56A Mocksville 23.98 17 P P 17 34 52.7 +0.9
baz=200,SNR=5.3
T47A Sharon Grove 23.98 4 P P 17 34 52.0 +0.1
T47A pP **pP 17 35 06.1 -0.2**
T47A IAmb IAmb 17 35 08.2
comp=Z,25nm,0.9s
MNTX Cornudas Mount 24.04 324 P P 17 34 52.7 +0.2
baz=137,SNR=7.1
MNTX Cornudas Mount 24.04 324 P P 17 34 51.6 -0.9
T42A Van Buren 24.05 356 P P 17 34 52.1 -0.4
T42A pP **pP 17 35 06.9 -0.1**
CPRX Cap Rock 24.22 328 P P 17 34 55.1 +0.8
V57A Coltrane Farms 24.26 18 P P 17 34 54.7 +0.2
baz=202
U54A Nelsons Funny 24.30 14 P P 17 34 56.1 +1.1
baz=197,SNR=5.3
U54A Nelsons Funny 24.30 14 P P 17 34 54.7 -0.2
V58A Windy Hill, Pi 24.38 20 P P 17 34 56.2 +0.6
baz=203,SNR=7.0
V58A Windy Hill, Pi 24.38 20 P P 17 34 55.8 +0.3
V58A pP **pP 17 35 09.9 -0.3**
U55A TA2, Sparta 24.48 15 P P 17 34 57.0 +0.5
baz=198
U56A King 24.51 17 P P 17 34 57.4 +0.7
baz=200
U56A King 24.51 17 P P 17 34 55.7 -1.0
U56A IAmb IAmb 17 35 16.8
comp=Z,19nm,1.1s
T53A Wise 24.59 12 P P 17 34 58.3 +0.7
baz=195
S44A Carbondale 24.63 359 P P 17 34 56.8 -1.0
S44A pP **pP 17 35 12.2 -0.1**
S44A IAmb IAmb 17 35 15.0
comp=Z,14nm,0.9s
V59A Middlesex 24.65 21 P P 17 34 58.9 +0.9
baz=205
SIUC Southern Illin 24.66 359 P P 17 34 57.2 -0.8
SIUC pP **pP 17 35 12.7 +0.1**
SIUC IAmb IAmb 17 35 16.2
comp=Z,14nm,0.8s
AMTX Amarillo 24.71 334 P P 17 34 59.1 +0.4
baz=149
AMTX Amarillo 24.71 334 P P 17 34 58.5 -0.3
AMTX IAmb IAmb 17 35 01.1
comp=Z,24nm,0.9s
AMTX pP **pP 17 35 13.9 +0.6**
T54A Tazewell 24.88 14 P P 17 35 00.1 -0.1
baz=197
U57A Blanch 24.90 19 P P 17 35 01.2 +1.0
baz=202
CCM Cathedral Cave 25.08 356 P P 17 35 02.3 +0.4
baz=174
CCM Cathedral Cave 25.08 356 P P 17 35 01.6 -0.3
CCM pP **pP 17 35 16.9 +0.5**
U58A Oxford 25.12 20 P P 17 35 02.8 +0.6
baz=204
T55A Pulaski 25.13 15 P P 17 35 02.9 +0.5
baz=199
WCI Wyandotte Cave 25.27 5 P P 17 35 03.4 -0.2
baz=186
WCI Wyandotte Cave 25.27 5 P P 17 35 02.5 -1.1
WCI IAmb IAmb 17 35 19.7
comp=Z,16nm,0.8s
BLA Blacksburg 25.31 16 P P 17 35 04.8 +0.7
baz=199
BLA Blacksburg 25.31 16 P P 17 35 01.4 -2.7
BLA pP **pP 17 35 19.6 +1.1**
BLA IAmb IAmb 17 35 21.0
comp=Z,16nm,0.9s
R40A Maddies Statio 25.41 354 P P 17 35 05.6 +0.7
R40A pP **pP 17 35 20.7 +1.4**
R40A IAmb IAmb 17 35 22.0
comp=Z,32nm,1.4s
T57A Hurt 25.45 18 P P 17 35 05.8 +0.6
baz=202
T57A Hurt 25.45 18 P P 17 35 04.3 -0.9
T57A pP **pP 17 35 20.9 +1.2**
T57A IAmb IAmb 17 35 22.3
comp=Z,18nm,0.9s
T59A Double "B" Far 25.98 21 P P 17 35 10.6 +0.6
baz=206
T59A Double "B" Far 25.98 21 P P 17 35 09.9 -0.1
T59A pP **pP 17 35 25.4 +0.9**
121A Cookes Peak, D 26.06 321 P P 17 35 11.0 -0.1
baz=134
121A Cookes Peak, D 26.06 321 P P 17 35 12.2 +1.1
R54A Victor 26.08 14 P P 17 35 11.5 +0.5
baz=198
S57A Dark Hollow, R 26.24 18 P P 17 35 12.2 -0.2
baz=202
S58A Poland Farm, P 26.39 20 P P 17 35 13.9 +0.2
baz=204
R55A Marlinton 26.40 16 P P 17 35 13.4 -0.6
baz=199
Q51A Peebles 26.42 10 P P 17 35 14.5 +0.4
baz=192
BNM Barren Site 26.55 326 P P 17 35 17.3 +1.7
P40A Paris 26.61 355 P P 17 35 15.2 -0.5
P40A pP **pP 17 35 30.2 -0.1**
Y22D IRIS PASSCAL I 26.66 325 P P 17 35 17.4 +0.9
baz=138
LENM Lemitar 26.76 325 P P 17 35 16.0 -1.4
R58B Mineral 26.76 20 P P 17 35 17.7 +0.6
baz=204
R57A Stanardsville 26.86 18 P P 17 35 18.0 -0.1
baz=203
P38A Dawn 26.88 352 P P 17 35 18.1 -0.1
P38A IAmb IAmb 17 35 34.9
comp=Z,15nm,0.7s
Q54A Coxs Mills 26.88 14 P P 17 35 18.4 +0.2
baz=197
Q54A Coxs Mills 26.88 14 P P 17 35 17.4 -0.8
R58A Rapidan 27.03 19 P P 17 35 19.5 0.0
baz=204
ANMO Albuquerque 27.06 327 P P 17 35 19.7 -0.4
baz=140
Q56A Snyder Ridge, 27.36 17 P P 17 35 23.1 +0.6
baz=201
Q56A Snyder Ridge, 27.36 17 P P 17 35 22.6 +0.1
O50A Cable 27.48 9 P P 17 35 23.5 0.0
baz=191
CBKS Cedar Bluff 27.49 341 P P 17 35 24.1 +0.4
baz=156
CBKS Cedar Bluff 27.49 341 P P 17 35 23.0 -0.7
CBKS IAmb IAmb 17 35 25.0
comp=Z,13nm,0.9s
P54A Burton 27.56 14 P P 17 35 24.3 0.0
baz=198
O52A Adamsville 27.75 12 P P 17 35 26.6 +0.7
baz=195
T25A Trinidad 27.80 333 P P 17 35 27.2 +0.4
baz=146,SNR=9.9
TUC Tucson 27.82 317 P P 17 35 27.2 +0.5
P57A Homestead Farm 28.11 18 P P 17 35 30.0 +0.8
baz=203
P57A Homestead Farm 28.11 18 P P 17 35 29.0 -0.2
P57A pP **pP 17 35 45.7 +1.9**
P57A IAmb IAmb 17 35 47.4
comp=Z,24nm,1.2s
N52A McGinn's Farm, 28.45 12 P P 17 35 31.8 -0.4
baz=195
N53A Lisbon 28.62 13 P P 17 35 33.3 -0.4
baz=196
KSCO Kaye Shedlock' 28.66 337 P P 17 35 35.1 +0.9
baz=151
SDCO Great Sand Dun 28.80 332 P P 17 35 36.6 +0.9
baz=145,SNR=8.3
SDCO Great Sand Dun 28.80 332 P P 17 35 36.3 +0.7
N54A Moraine State 28.96 14 P P 17 35 36.7 -0.1
baz=198
214A Organ Pipe Nat 28.98 315 P P 17 35 37.4 +0.3
baz=125
L40A Anamosa 29.07 356 P P 17 35 37.7 +0.1
L40A pP **pP 17 35 51.7 -0.5**
L40A IAmb IAmb 17 35 53.3
comp=Z,15nm,0.9s
S22A 4UR Ranch, Cre 29.42 330 P P 17 35 42.0 +0.8
baz=142,SNR=6.7
M54A Oil Creek Stat 29.56 14 P P 17 35 42.4 +0.3
baz=198
X16A Lo Mia Camp, P 29.59 320 P P 17 35 44.0 +1.4
O60A Telford 29.72 21 P P 17 35 44.4 +1.0
baz=207
K38A Parkersburg 29.77 354 P P 17 35 43.6 -0.3
L53A Girard 29.85 13 P P 17 35 44.7 +0.2
baz=197
MVCO Mesa Verde 29.85 327 P P 17 35 45.1 +0.2
M57A Sunshine Farm, 30.08 18 P P 17 35 47.3 +0.6
baz=203
N59A State Game Lan 30.13 20 P P 17 35 47.7 +0.7
baz=206
OGNE Ogallala 30.17 340 P P 17 35 48.1 +0.6
baz=154
WUAZ Wupatki 30.27 322 P P 17 35 48.7 +0.1
baz=132
WUAZ Wupatki 30.27 322 P P 17 35 50.0 +1.4
M58A Price's Panora 30.32 19 P P 17 35 49.3 +0.6
baz=204
ISCO Idaho Springs 30.54 334 P P 17 35 51.8 +0.7
baz=146,SNR=6.4
ISCO Idaho Springs 30.54 334 P P 17 35 52.1 +1.1
SMCO Snowmass 30.63 332 P P 17 35 53.0 +1.0
SMCO IAmb IAmb 17 35 54.8
comp=Z,7.3nm,0.9s
PV02 Paradox Valley 30.73 328 P P 17 35 53.5 +0.8
PV02 IAmb IAmb 17 36 18.0
comp=Z,14nm,1.5s
PV13 Radium Mtn., P 30.74 328 P P 17 35 53.5 +0.8
PV05 Paradox Valley 30.82 328 P P 17 35 53.7 +0.3
PV05 IAmb IAmb 17 35 56.3
comp=Z,7.5nm,0.8s
PV03 Paradox Valley 30.82 328 P P 17 35 54.3 +0.8
PV03 IAmb IAmb 17 35 56.5
comp=Z,6.8nm,0.8s
PV12 Saucer Basin, 30.85 328 P P 17 35 55.2 +1.5
PV18 Skein Mesa, Pa 30.85 328 P P 17 35 54.7 +0.9
PV18 IAmb IAmb 17 35 56.7
comp=Z,9.1nm,0.8s
PV11 David Mesa, Pa 30.87 328 P P 17 35 54.7 +0.8
PV11 IAmb IAmb 17 35 56.9
comp=Z,10nm,0.7s
PV17 East Wray Mesa 30.90 328 P P 17 35 52.8 -1.3
PV17 IAmb IAmb 17 35 57.1
comp=Z,12nm,0.7s
PV16 Nyswonger Mesa 30.90 328 P P 17 35 54.6 +0.4
PV16 IAmb IAmb 17 35 57.2
comp=Z,8.0nm,0.7s
PV19 Morning Glory 30.93 328 P P 17 35 54.1 -0.4
PV19 IAmb IAmb 17 35 57.3

comp=Z,8.7nm,0.7s
PV20 West Nyswonger 30.95 328 P P 17 35 55.0 +0.4
PV20 IAmb IAmb 17 35 57.4
comp=Z,7.9nm,0.8s
PV04 Paradox Valley 30.96 328 P P 17 35 55.5 +0.8
PV04 IAmb IAmb 17 35 57.7
comp=Z,11nm,0.8s
PV14 Lion Creek, Pa 31.00 328 P P 17 35 54.4 -0.7
PV14 IAmb IAmb 17 35 57.9
comp=Z,8.1nm,0.8s
PV22 Blue Mesa, Par 31.00 329 P P 17 35 54.3 -0.8
PV22 IAmb IAmb 17 35 58.1
comp=Z,5.8nm,0.8s
PV23 Carpenter Ridg 31.06 328 P P 17 35 56.1 +0.5
PV23 IAmb IAmb 17 35 58.9
comp=Z,9.3nm,0.8s
PV09 Paradox Valley 31.15 328 P P 17 35 56.5 0.0
PDMCI Parker Dam,Lak 31.26 317 P P 17 35 57.5 +0.4
baz=127
K56A Middlesex 31.28 17 P P 17 35 56.8 -0.4
baz=202
ECSD EROS Data Cent 31.38 349 P P 17 35 58.8 +0.7
baz=165
L59A Walton 31.51 20 P P 17 35 59.5 +0.2
baz=206
N23A Red Feather La 31.59 335 P P 17 36 00.8 +0.6
baz=147
J56A Wolcott 31.94 17 P P 17 36 02.6 -0.3
baz=202
O20A White River Ci 31.98 331 P P 17 36 04.5 +0.8
baz=142,SNR=9.0
O20A White River Ci 31.98 331 P P 17 36 03.5 -0.1
MONP2 Monument Peak 32.04 313 P P 17 36 04.9 +0.6
baz=122
G40A Rib Lake 32.22 358 P P 17 36 04.5 -0.9
G40A pP 17 36 19.4 -0.8
G40A IAmb IAmb 17 36 20.8
comp=Z,8.5nm,0.9s
SPMN Marine on St. 32.33 355 P P 17 36 05.9 -0.5
baz=173
SPMN Marine on St. 32.33 355 P P 17 36 05.1 -1.3
SRU San Rafael Swe 32.33 328 P P 17 36 07.2 +0.5
G47A Hillman 32.39 7 P P 17 36 08.0 +1.1
baz=189
PFO Pinyon Flats O 32.45 314 LR LR 17 49 41.3
comp=Z,62nm,19.4s,baz=138,slow=37
MTPU Mount Pierson 32.47 324 P P 17 36 10.2 +2.0
H53A Bobcaygeon 32.72 14 P P 17 36 09.3 -0.4
baz=199
SADO Sadowa 32.78 13 P P 17 36 09.4 -0.9
comp=Z,5.0nm,0.5s,baz=221,slow=8.7,SNR=9.0
SADO pP pP 17 36 23.5 -1.5
comp=Z,5.5nm,0.5s,baz=221,slow=9.8,SNR=5.3
SADO Sadowa 32.78 13 P P 17 36 09.4 -0.9
SADO pP 17 36 24.1 -0.9
SADO IAmb IAmb 17 36 25.7
comp=Z,7.1nm,0.7s
RWWY Rawlins 32.78 334 P P 17 36 10.2 -0.5
RDMU Red Mountain 32.96 330 P P 17 36 12.0 -0.2
F36A Milaca 33.03 354 P P 17 36 12.6 +0.1
F36A IAmb IAmb 17 36 28.9
comp=Z,4.9nm,0.9s
COWI Conover 33.03 360 P P 17 36 11.1 -1.5
COWI IAmb IAmb 17 36 28.7
comp=Z,5.6nm,0.7s
F48A Evansville 33.19 8 P P 17 36 12.4 -1.4
baz=191
F49A Sandfield 33.21 9 P P 17 36 12.2 -1.8
baz=192
G53A Haliburton 33.23 13 P P 17 36 12.9 -1.3
baz=198
K22A Casper 33.30 336 P P 17 36 15.6 +0.5
baz=147
E43A Lone Tree Farm 33.35 2 P P 17 36 13.4 -1.8
E43A IAmb IAmb 17 36 30.1
comp=Z,7.4nm,0.8s
SAML Samuel 33.55 129 P P 17 36 16.7 -0.6
RSSD Black Hills 33.67 340 P P 17 36 18.2 -0.2
baz=153
RSSD Black Hills 33.67 340 P P 17 36 18.8 +0.5
RSSD IAmb IAmb 17 36 22.2
comp=Z,4.8nm,0.7s
F52A Sundridge 33.72 12 P P 17 36 18.0 -0.5
baz=197
PSUT Pine Spring 33.77 323 P P 17 36 19.2 -0.1
ALGO Algonquin Park 34.14 14 P P 17 36 21.4 -0.7
baz=199
TPNV Topopah Spring 34.22 319 P P 17 36 23.3 +0.1
baz=127
D48A Paudash Townsh 34.62 9 P P 17 36 25.5 -0.8
baz=192
R11A Troy Canyon, C 34.67 322 P P 17 36 27.7 +0.6
baz=130
BW06 Boulder Array 34.67 333 P P 17 36 26.7 -0.4
baz=143
BW06 Boulder Array 34.67 333 P P 17 36 27.9 +0.8
BW06 IAmb IAmb 17 37 17.3
comp=Z,10nm,1.8s
PD31 Pinedale Array 34.67 333 P P 17 36 26.8 -0.3
PDAR Pinedale Array 34.67 333 P P 17 36 27.7 +0.6
comp=Z,1.5nm,0.6s,baz=129,slow=11,SNR=16
PDAR PcP PcP 17 38 59.9 -0.2
comp=Z,0.5nm,0.5s,baz=133,slow=5.7,SNR=4.6
PDAR Pinedale Array 34.67 333 P P 17 36 26.5 -0.6
PDAR PcP 17 38 60.0 -0.2
HWUT Hardware Ranch 34.72 329 P P 17 36 27.4 -0.1
HWUT IAmb IAmb 17 36 33.6
comp=Z,3.8nm,0.7s
D49A Beulah Townshi 34.78 9 P P 17 36 26.6 -1.1
baz=193
E54A Lac Daplat, Po 34.80 14 P P 17 36 26.9 -0.9
baz=200
D53A Lac Vacive, Po 35.29 13 P P 17 36 31.6 -0.5
baz=199
D53A Lac Vacive, Po 35.29 13 P P 17 36 31.0 -1.0
AHID Auburn Hatcher 35.38 331 P P 17 36 33.6 +0.4
AHID IAmb IAmb 17 36 35.7
comp=Z,7.7nm,0.8s
LPAZ La Paz 35.57 144 P P 17 36 36.3 +0.8
comp=Z,2.7nm,0.7s,baz=327,slow=7.1,SNR=12
LPAZ LR LR 17 52 21.3
comp=Z,40nm,21.4s,baz=306,slow=38
LPAZ La Paz 35.57 144 P P 17 36 35.0 -0.5
D54A Lac Fusel, La 35.60 14 P P 17 36 34.0 -0.7
baz=201
AGMN Agassiz Nation 35.71 352 P P 17 36 35.6 0.0
baz=168
AGMN Agassiz Nation 35.71 352 P P 17 36 35.6 0.0
AGMN IAmb IAmb 17 36 53.1
comp=Z,6.0nm,0.8s
REDW Red Top Meadow 35.73 332 P P 17 36 37.0 +0.8
REDW pP pP 17 36 51.3 +0.3
SNOW Snow King Moun 35.76 332 P P 17 36 35.7 -0.8
D55A Sainte-Anne-du 35.77 16 P P 17 36 35.2 -1.0
baz=203
E58A La Victoria 35.82 19 P P 17 36 36.1 -0.5
baz=206
TPAW Teton Pass 35.87 332 P P 17 36 38.7 +1.3
TPAW IAmb IAmb 17 36 55.0
comp=Z,5.7nm,0.8s
FXWY Fox Creek 36.02 332 P P 17 36 38.8 +0.1
FXWY IAmb IAmb 17 36 54.6
comp=Z,6.2nm,1.5s
ELK Elko 36.04 325 P P 17 36 39.9 +1.0
IMW Indian Meadow 36.18 333 P P 17 36 40.2 +0.1
IMW IAmb IAmb 17 37 39.7
comp=Z,5.0nm,1.1s
FLWY Flagg Ranch 36.22 333 P P 17 36 40.6 +0.2
FLWY IAmb IAmb 17 36 57.4
comp=Z,7.2nm,1.1s
PKME Peaks-Kenny Pk 36.26 24 P P 17 36 40.2 -0.2
baz=213
NVAR Mina Array Bea 36.41 319 P P 17 36 43.3 +1.2
comp=Z,1.6nm,0.7s,baz=133,slow=7.0,SNR=14
NVAR PcP PcP 17 39 05.9 +0.5
comp=Z,1.6nm,0.7s,baz=131,slow=4.3,SNR=9.4
NVAR ScP ScP 17 42 47.5 +0.5
comp=Z,0.5nm,0.5s,baz=126,slow=5.3,SNR=5.8
NVAR LR LR 17 53 42.0
comp=Z,83nm,18.4s,baz=180,slow=40
NVAR Mina Array Bea 36.41 319 P P 17 36 43.0 +0.9
NVAR PcP 17 39 06.2 +0.9
NVAR ScP 17 42 47.7 +0.7
H17A Grant Village 36.42 333 P P 17 36 41.6 -0.5
H17A IAmb IAmb 17 37 01.5
comp=Z,5.6nm,1.2s
YPP Pitchstone Pla 36.42 333 P P 17 36 43.7 +1.5
RLMT Red Lodge 36.45 335 P P 17 36 42.5 +0.1
baz=145,SNR=10
RLMT Red Lodge 36.45 335 P P 17 36 42.7 +0.4
RLMT IAmb IAmb 17 36 45.0
comp=Z,5.7nm,0.8s
PB16 IPOC Station P 36.50 148 P P 17 36 43.3 -0.1
PB16 IAmb IAmb 17 36 47.2
comp=Z,5.6nm,0.7s
YMP Mirror Lake Pl 36.51 334 P P 17 36 44.6 +1.7
KVN Kaiserville 36.65 320 P P 17 36 44.9 +0.9
LAO LASA Array 36.66 340 P P 17 36 43.8 0.0
baz=151
LAO LASA Array 36.66 340 P P 17 36 43.0 -0.8
YNE Yellowstone No 36.67 335 P P 17 36 44.1 0.0
YMR Madison River 36.80 333 P P 17 36 44.2 -1.1
YHH Holmes Hill 36.85 334 P P 17 36 46.4 +0.6
YHL Hebgen Lake 37.04 333 P P 17 36 46.9 -0.5
MNMC Minye Minye 37.12 149 P P 17 36 47.4 -0.9
GCMT Greycliff 37.16 336 P P 17 36 48.4 +0.1
LSQQ Lebel-sur-Quev 37.31 13 P P 17 36 48.4 -0.8
baz=199
E63A Oxbow 37.56 23 P P 17 36 50.2 -1.1
baz=214
D61A St Aubert, Com 37.57 21 P P 17 36 50.8 -0.6
baz=211
DGMT Dagmar 37.62 343 P P 17 36 51.6 -0.4
baz=155
DGMT Dagmar 37.62 343 P P 17 36 52.5 +0.6
ULM Lac du Bonnet 37.62 353 P P 17 36 51.6 -0.2
comp=Z,4.0nm,0.6s,baz=173,slow=9.2,SNR=3.0
ULM LR LR 17 54 08.0
comp=Z,119nm,20.1s,baz=132,slow=39
ULM Lac du Bonnet 37.62 353 P P 17 36 51.7 -0.2
ULM IAmb IAmb 17 36 52.2
comp=Z,4.9nm,0.7s
MCMT McKenzie Canyo 37.77 332 P P 17 36 54.9 +1.3
MATQ Matagami 37.84 12 P P 17 36 52.4 -1.4
baz=198
LRM Limekiln Ridge 38.36 333 P P 17 36 58.9 +0.4
EGMT Eagleton 39.05 338 P P 17 37 04.9 +0.9
baz=146,SNR=14
EGMT Eagleton 39.05 338 P P 17 37 04.3 +0.3
WVOR Wild Horse Val 39.07 324 P P 17 37 04.9 +0.6
MSO Missoula 39.79 333 P P 17 37 10.4 +0.1
baz=140
SIV San Ignacio 39.80 135 P P 17 37 11.0 +0.4
comp=Z,3.7nm,0.6s,baz=315,slow=8.1,SNR=23
SIV PcP PcP 17 39 16.6 +0.7
comp=Z,1.5nm,0.6s,baz=333,slow=2.3,SNR=3.6
F10A Beach Ranch, E 40.71 329 P P 17 37 16.9 -0.9
YBH Yreka Blue Hor 41.07 321 LR LR 17 55 45.6
comp=Z,89nm,19.6s,baz=137,slow=38
NEW Newport 42.30 332 LR LR 17 59 31.6
comp=Z,59nm,18.4s,baz=142,slow=42
FFC Flin Flon 42.92 349 P P 17 37 35.2 -0.4
FFC IAmb IAmb 17 37 50.9
comp=Z,4.3nm,0.7s
F04D Rainier, OR 43.81 326 P P 17 37 42.4 -0.5
baz=128
SCHQ Schefferville 45.21 18 LR LR 17 58 29.7
comp=Z,72nm,18.3s,baz=291,slow=38
A04D Lummi Island 45.31 329 P P 17 37 54.1 -0.7
baz=130
H03N2 Juan Fernandez 47.11 169 T T 18 28 31.0
baz=347,slow=76,SNR=7.4
H03N1 Juan Fernandez 47.11 169 T T 18 28 29.6
baz=347,slow=76,SNR=11
H03N3 Juan Fernandez 47.12 169 T T 18 28 29.6
baz=347,slow=76,SNR=11
CFA Coronel Fontan 48.53 156 P P 17 38 21.4 +1.1
comp=Z,1.4nm,0.4s,baz=326,slow=6.9,SNR=4.3
CFA Coronel Fontan 48.53 156 P P 17 38 23.2 +2.9
BDFB Brasilia 49.42 124 P P 17 38 26.6 -0.8
comp=Z,3.4nm,0.5s,baz=289,slow=8.8,SNR=4.9
BDFB LR LR 18 01 58.5
comp=Z,58nm,18.8s,slow=39
BDFB Brasilia 49.42 124 P P 17 38 26.6 -0.8
BI02 San Fabin de 52.07 162 P P 17 38 47.6 +0.7
FRB Frobisher Bay 52.69 11 LR LR 18 01 19.8
comp=Z,108nm,20.2s,baz=203,slow=36
YKA Yellowknife Ar 52.76 345 P P 17 38 51.1 -0.5
comp=Z,4.2nm,0.6s,baz=135,slow=8.5,SNR=75
YKA pP pP 17 39 06.4 -0.8
comp=Z,10nm,0.8s,baz=141,slow=8.1,SNR=23
YKA LR LR 18 03 38.2
comp=Z,95nm,20.6s,baz=0.0,slow=39
YKA Yellowknife Ar 52.76 345 P P 17 38 51.0 -0.6
TAOE Nuku Hiva Isla 55.34 250 *eT* T 18 38 23.6
comp=Z,19nm,0.2s
PLCA Paso Flores 56.06 163 P P 17 39 16.9 +1.0
comp=Z,3.1nm,0.8s,baz=354,slow=7.6,SNR=6.2
PLCA Paso Flores 56.06 163 P P 17 39 16.7 +0.8
LL01 San Ignacio de 57.11 166 P P 17 39 23.7 +0.5
RKT Rikitea 57.63 232 *eT* T 18 41 13.6
comp=Z,3.4nm,0.3s
SFJD Kangerlussuaq 59.62 16 LR LR 18 05 00.1
comp=Z,36nm,19.8s,baz=223,slow=36
EPYK Eagle Plains 62.12 340 P P 17 39 56.5 -0.9
baz=125
BCAR Beaver Creek A 62.22 336 P P 17 39 57.8 -0.4
INK Inuvik 62.31 343 P P 17 39 57.8 -0.8
INK pP pP 17 40 13.9 -0.6
PMOR Pomariorio Ree 64.68 246 *eT* T 18 50 02.9
comp=Z,4.3nm,0.4s
HDA Harding Lake 64.87 336 P P 17 40 14.8 -0.8
HDA pP pP 17 40 30.2 -1.5
HDA IAmb IAmb 17 40 31.2
comp=Z,6.3nm,1.2s
IL31 64.99 336 P P 17 40 14.8 -1.6
ILAR Eielson Array 64.99 336 P P 17 40 15.6 -0.8
comp=Z,0.7nm,0.7s,baz=160,slow=4.0,SNR=9.2
ILAR pP pP 17 40 30.7 -1.8
comp=Z,2.6nm,1.0s,baz=122,slow=4.4,SNR=9.1
ILAR Eielson Array 64.99 336 P P 17 40 14.4 -2.0
ILAR pP 17 40 30.6 -1.9
RND Reindeer 65.26 335 P P 17 40 17.2 -1.0
RND pP 17 40 33.0 -1.3
BMAR Burnt Mountain 65.31 339 P P 17 40 18.2 -0.3
BPAW Bear Paw Mtn. 66.39 335 P P 17 40 23.6 -1.8
MLY Manley 66.61 336 P P 17 40 26.0 -0.9
MLY IAmb IAmb 17 40 42.0
comp=Z,3.4nm,0.8s
PPT2 Papeete2 67.16 244 *e*LR LR 18 00 49.6
comp=Z,150nm,24.5s
COLD Coldfoot 67.21 338 P P 17 40 30.3 -0.3
COLD pP 17 40 46.5 -0.2
TOLK Toolik Lake Re 67.53 340 P P 17 40 31.5 -1.2
baz=113
ESDC Sonseca Array 77.97 52 pP pP 17 41 50.2 -1.4
comp=Z,1.3nm,0.8s,baz=289,slow=6.1,SNR=6.6
ESDC LR LR 18 09 55.3
comp=Z,36nm,21.8s,baz=295,slow=31
NOA NORSAR Array B 83.60 29 LR LR 18 15 11.1
comp=Z,24nm,21.9s,baz=270,slow=33
ARCES ARCESS Array B 86.16 19 LR LR 18 20 16.7
comp=Z,31nm,18.0s,baz=182,slow=35
GERES GERESS Array B 88.45 40 LR LR 18 17 24.8
comp=Z,43nm,20.6s,baz=288,slow=32
FINES FINESS Array B 90.13 26 LR LR 18 24 00.8
comp=Z,10nm,19.0s,baz=313,slow=36
TIXI Tiksi 91.88 349 LR LR 18 26 28.7
comp=Z,35nm,21.2s,baz=34,slow=37
NRIK Noril'sk 97.87 1 LR LR 18 28 43.0
comp=Z,62nm,21.6s,baz=46,slow=36
YAK Yakutsk 99.37 343 LR LR 18 39 09.6
comp=Z,29nm,18.0s,baz=12,slow=42
SONM Songino Array 117.96 348 PKP **PKiKP 17 48 23.1 -0.2**
comp=Z,0.5nm,0.6s,baz=8.5,slow=2.9,SNR=3.3
KSRS Korea Array 119.09 327 PKP **PKiKP 17 48 25.7 +0.1**
comp=Z,0.6nm,0.7s,baz=272,slow=3.1,SNR=2.6
KSRS pPKP **pPKPdf 17 48 41.8 -1.1**
comp=Z,1.4nm,0.6s,baz=10,slow=2.0,SNR=5.6
MKAR Makanchi Array 120.00 7 PKP **PKPdf 17 48 26.3 -0.7**
comp=Z,0.2nm,0.7s,baz=34,slow=3.8,SNR=2.3
LZH Lanzhou 129.76 347 *e*PKP **PKiKP 17 48 48.4 +1.4**
LZH pPKP pPKPdf 17 48 59.3 -4.4
LZH sPKP 17 49 04.9
CD2 Chengdu 134.72 345 PKP **PKPdf 17 48 53.8 -1.8**
WRA Warramunga Arr 138.06 255 PKP **PKPdf 17 49 02.3 +0.4**
comp=Z,1.9nm,0.7s,baz=92,slow=2.0,SNR=18
WRA pPKP **pPKPdf 17 49 18.1 -1.2**
comp=Z,1.3nm,0.6s,baz=90,slow=2.1,SNR=4.5
WRA Warramunga Ar 138.06 255 PKiKP 17 49 02.8 -1.2
ASAR Alice Springs 138.15 249 PKhKP PKPpre 17 48 52.0
comp=Z,0.3nm,0.8s,baz=89,slow=2.5,SNR=1.9
ASAR PKP **PKPdf 17 49 02.8 +0.7**
comp=Z,1.2nm,1.0s,baz=87,slow=2.2,SNR=6.2
ASAR pPKP pPKPdf 17 49 18.5 -1.0
comp=Z,0.8nm,0.7s,baz=101,slow=2.1,SNR=4.1
FITZ Fitzroy Crossi 146.38 257 PKPbc **PKPab 17 49 18.6 -0.4**
comp=Z,3.5nm,0.8s,baz=177,slow=4.0,SNR=6.1
CMAR Chiang Mai Arr 147.84 346 PKPbc **PKPbc 17 49 20.5 -1.7**
comp=Z,0.8nm,0.6s,baz=343,slow=3.2,SNR=7.7
CMAR pPKPbc **pPKPdf 17 49 37.4 +0.7**
comp=Z,1.8nm,0.7s,baz=341,slow=3.7,SNR=7.1
CMAR Chiang Mai Arr 147.84 346 PKPdf 17 49 18.7 -0.6
NWAO Narrogin (SRO) 148.95 226 PKPbc **PKPbc 17 49 25.0 +0.3**
comp=Z,12nm,0.9s,baz=168,slow=3.0,SNR=2.7

IDC 14 17:56:38.1±4.2, 58.49S×30.16W, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.5/29, mbtmp3.6/2, MS3.4/1, Ms1 3.3/1, ms1mx2.9/13, Error ellipse: s-maj=146.4km s-min=60.8km az=177.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**48.12**	**76**	LR	LR	18 22 33.2	
	comp=Z,41nm,18.0s,baz=220,slow=32						
LPAZ	**La Paz**	**50.59**	**310**	P	P	18 05 39.1	-0.1
	0.7nm,0.6s,baz=136,slow=8.4,SNR=2.4						
TORD	**Torodi Ar. Bea**	**75.98**	**32**	P	P	18 08 26.8	+0.1
	0.3nm,0.6s,baz=201,slow=5.7,SNR=1.6						
ILAR	**Eielson Array**	**150.47**	**309**	PKPbc	PKPbc	18 16 29.6	-0.4
	0.2nm,0.5s,baz=132,slow=1.3,SNR=1.8						

IDC 14 17:58:46.8±4.7, 23.22S×111.35W, h0km, mb3.6/3, mb1 4.1/3, mb1mx3.7/34, mbtmp3.6/3, MS3.6/3, Ms1 3.7/3, ms1mx3.3/17, Error ellipse: s-maj=340.8km s-min=56.9km az=107.0, Easter Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H03N2	**Juan Fernandez**	**30.20**	**117**	T	T	18 36 48.4	
	baz=283,slow=75,SNR=2.4						
H03N3	**Juan Fernandez**	**30.20**	**117**	T	T	18 36 39.9	
	baz=283,slow=75,SNR=6.1						
H03N1	**Juan Fernandez**	**30.20**	**117**	T	T	18 36 45.3	
	baz=283,slow=75,SNR=5.9						
TAOE	**Nuku Hiva Isla**	**31.06**	**293**	*e*LR	LR	18 11 43.3	
	comp=Z,530nm,28.5s						
TBI	**Tubuai**	**34.94**	**262**	*e*LR	LR	18 13 21.1	
	comp=Z,91nm,27.5s						
PPT2	**Papeete2**	**36.19**	**272**	*e*LR	LR	18 13 56.2	
	comp=Z,152nm,26.2s						
LPAZ	**La Paz**	**41.14**	**88**	LR	LR	18 21 22.2	
	comp=Z,60nm,18.3s,baz=295,slow=33						
ROSC	**El Rosal**	**45.65**	**57**	LR	LR	18 23 53.8	
	comp=Z,76nm,19.5s,baz=174,slow=33						
NVAR	**Mina Array Bea**	**61.66**	**354**	P	P	18 09 06.5	-0.3
	0.7nm,0.9s,baz=188,slow=11,SNR=2.8						
PDAR	**Pinedale Array**	**65.67**	**1**	P	P	18 09 33.5	+0.3
	0.3nm,0.5s,baz=156,slow=7.9,SNR=3.7						
VNDA	**Vanda**	**66.81**	**194**	LR	LR	18 32 21.6	
	comp=Z,49nm,19.3s,baz=100,slow=30						
YKA	**Yellowknife Ar**	**85.45**	**358**	P	P	18 11 25.6	-0.3
	1.0nm,1.0s,baz=173,slow=4.8,SNR=8.0						
ZALV	**Zalesovo Beam**	**146.98**	**342**	PKPbc	PKPbc	18 18 31.3	+0.2
	0.7nm,0.8s,baz=343,slow=2.0,SNR=4.0						
CMAR	**Chiang Mai Arr**	**151.33**	**266**	PKPbc	PKPbc	18 18 43.0	-0.3
	0.3nm,0.4s,baz=149,slow=2.4,SNR=4.6						
MKAR	**Makanchi Array**	**154.03**	**338**	PKPbc	PKPbc	18 18 47.7	-0.8
	0.4nm,0.8s,baz=29,slow=3.3,SNR=2.8						

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*UPA **14** 18:01:48.9±2.4, 7.57N×82.44W, h3km±12km, MW4.4*
*UCR **14** 18:01:51.5±2.5, 7.59N×82.38W, h13km±14km, MD3.5*

ISC 14 18:01:49.4±2.0, 7.61N±0.09×82.40W±0.05, h8km±11km, n22, σ1°43/33, 3C-2D, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHIR3	**Chiriqui UPA,**	**0.78**	**5**	↑*i*P	**Pb**	**18 02 05.8**	**+0.5**
DVD	**David**	**0.82**	**356**	*e*P	**Pn**	**18 02 06.7**	**-0.6**
DVD				*e*S	**Sb**	**18 02 17.7**	**+0.4**
BCO2	**Palmira**	**1.11**	**353**	↑*e*P	**Pn**	**18 02 11.2**	**-0.3**
BCO2				*e*S	**Sg**	**18 02 24.6**	**-0.6**
LNBQ3	**Los Naranjos,**	**1.18**	**358**	*e*P	**Pb**	**18 02 11.8**	**-0.3**
BRU2	**Volcan**	**1.21**	**346**	↑*i*P	**Pg**	**18 02 13.5**	**+0.8**
BRU2				*e*S	**Sb**	**18 02 26.0**	**-2.7**
BRU2	**Volcan**	**1.21**	**346**	↓*e*P	**Pg**	**18 02 13.3**	**+0.6**
BRU2				*e*S	**Sn**	**18 02 29.5**	**-0.1**
PTJ1	**Puerto Jimnez**	**1.28**	**316**	*e*S	**Sg**	**18 02 31.3**	**+0.5**
MARI3	**Mariato, Verag**	**1.40**	**88**	*e*P	**Pn**	**18 02 15.0**	**-0.3**
MARI3				*e*S	**Sg**	**18 02 35.5**	**+1.1**
PONU3	**Ponuga, Veragu**	**1.43**	**79**	*e*P	**Pn**	**18 02 14.7**	**-1.1**
DRK0	**Durika**	**1.84**	**333**	*e*P	**Pb**	**18 02 22.9**	**-0.6**
AZU	**Azuero**	**2.11**	**85**	*e*P	**Pn**	**18 02 24.9**	**-0.3**
AZU				*e*S	**Sn**	**18 02 52.3**	**+0.7**
AZU	**Azuero**	**2.11**	**85**	↓*i*P	**Pn**	**18 02 25.0**	**-0.1**
AZU				*e*S	**Sn**	**18 02 52.5**	**+0.9**
VTON	**El Valle, Cocl**	**2.47**	**66**	*e*S	**Sn**	**18 03 01.6**	**+1.1**
LCR2	**La Lucha 2**	**2.65**	**323**	*e*P	**Pn**	**18 02 33.6**	**+1.0**
LCR2				*e*S	**Sn**	**18 03 04.9**	**-0.2**
CVTR	**Volcan Turrial**	**2.75**	**331**	*e*P	**Pb**	**18 02 36.3**	**-2.8**
CVTR				*e*S	**Sn**	**18 03 09.4**	**+1.5**
ZANG	**Zanguenga, Cho**	**2.84**	**62**	*e*P	**Pn**	**18 02 35.7**	**+0.6**
HDC	**Heredia**	**2.92**	**325**	*e*P	**Pn**	**18 02 34.8**	**-1.5**
HDC				*e*S	**Sn**	**18 03 12.7**	**+1.0**
BCIP	**Isla Barro Col**	**2.97**	**58**	*e*P	**Pb**	**18 02 40.5**	**-2.1**
BCIP				*e*S	**Sb**	**18 03 17.3**	**-1.8**
BCIP	**Isla Barro Col**	**2.97**	**58**	*e*P	**Pn**	**18 02 39.2**	**+2.3**
UPA	**Univ. de Panam**	**3.15**	**64**	*e*S	**Sn**	**18 03 19.3**	**+2.2**
UPA	**Univ. de Panam**	**3.15**	**64**	*e*P	**Pn**	**18 02 40.1**	**+0.7**
ARE1	**Arenal 1**	**3.65**	**321**	*e*P	**Pn**	**18 02 49.6**	**+3.3**

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*IDC **14** 18:13:28.2±2.0, 46.91N×152.50E, h0km, mb3.5/9, mb1 3.7/11, mb1mx3.5/51, mbtmp3.5/11, ML2.8/2, MS4.4/1, Ms1 4.4/1, ms1mx2.5/52, Error ellipse: s-maj=55.5km s-min=23.6km az=159.0*

ISC 14 18:13:36.1±1.6, 46.8N±0.3×152.4E±0.2, h67km, n19, σ1°09/12, mb3.5/8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**7.24**	**27**	Pn	**Pn**	**18 15 17.9**	**-1.1**
	0.3nm,0.3s,baz=187,slow=18,SNR=2.5						
ASAJ	**Asahikawa**	**7.35**	**252**	Pn	**Pn**	**18 15 19.1**	**-1.5**
	0.3nm,0.3s,baz=85,slow=11,SNR=2.8						
USRK	**Ussuriysk Ar.**	**14.51**	**267**	Pn	**Pn**	**18 16 56.3**	**-1.4**
	baz=88,slow=11,SNR=4.6						
KSRS	**Korea Array**	**20.30**	**252**	P	**P**	**18 18 07.1**	**+0.8**
	0.8nm,0.6s,baz=60,slow=12,SNR=3.3						
H11N2	**WAKE ISLAND Hy**	**29.47**	**151**	T	T	18 51 02.4	
	baz=340,slow=76,SNR=10						
H11N1	**WAKE ISLAND Hy**	**29.49**	**151**	T	T	18 51 02.5	
	baz=340,slow=76,SNR=5.4						
H11N3	**WAKE ISLAND Hy**	**29.49**	**151**	T	T	18 51 03.1	
	baz=340,slow=76,SNR=6.3						
H11S1	**WAKE ISLAND Hy**	**30.55**	**152**	T	T	18 52 33.1	
	baz=340,slow=76,SNR=7.4						
H11S3	**WAKE ISLAND Hy**	**30.56**	**152**	T	T	18 52 25.8	
	baz=340,slow=76,SNR=6.4						
H11S2	**WAKE ISLAND Hy**	**30.57**	**152**	T	T	18 52 33.9	
	baz=340,slow=76,SNR=8.6						
MKAR	**Makanchi Array**	**46.47**	**297**	P	**P**	**18 21 56.7**	**+0.5**
	0.2nm,0.5s,baz=62,slow=7.0,SNR=2.3						
KURBB	**Kurchatov Arra**	**47.01**	**303**	P	**P**	**18 22 00.8**	**+0.5**
	0.2nm,0.3s,baz=71,slow=8.4,SNR=3.0						
YKA	**Yellowknife Ar**	**51.23**	**36**	P	**P**	**18 22 31.1**	**-1.2**
	0.3nm,0.7s,baz=292,slow=6.6,SNR=2.5						
HNR	**Honiara**	**56.34**	**171**	LR	LR	18 47 12.8	
	comp=Z,287nm,19.1s,baz=88,slow=36						
FINES	**FINESS Array B**	**63.81**	**334**	P	**P**	**18 24 01.0**	**+0.3**
	2.8nm,1.0s,baz=10,slow=8.8,SNR=6.7						
NOA	**NORSAR Array B**	**68.05**	**341**	P	**P**	**18 24 28.6**	**+0.6**
	0.4nm,0.5s,baz=29,slow=6.6,SNR=4.0						
AKASG	**Malin Array Be**	**71.25**	**326**	P	**P**	**18 24 48.4**	**+0.7**
	0.3nm,0.3s,baz=36,slow=6.2,SNR=2.6						
TXAR	**Lajitas Array**	**77.95**	**60**	P	**P**	**18 25 27.6**	**+0.5**
	0.3nm,0.6s,baz=328,slow=3.2,SNR=3.6						
GERES	**GERESS Array B**	**78.22**	**334**	P	**P**	**18 25 29.3**	**+1.1**
	0.3nm,0.5s,baz=39,slow=7.9,SNR=2.4						

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*IDC **14** 18:22:28.3±0.8, 52.67N×172.22E, h0km, mb4.1/23, mb1 4.3/25, mb1mx4.1/55, mbtmp4.1/25, ML3.9/2, MS3.1/6,*

Ms1 3.1/6,ms1mx2.7/52,Error ellipse: s-maj=21.1km s-min=12.6km az=169.0
*NEIC **14** 18:22:32.3±1.4,52.6°N±0.3°×172.2°E±0.1,h33km±8km, mb4.3/59,Error ellipse: s-maj=39.1km s-min=9.1km az=182.0*

ISC 14 18:22:32.0±0.6,52.6°N±0.1°×172.20°E±0.05,h28km,n124, σ1°04/119,mb4.3/53,MS3.0/5,Near Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMY	**Shemya**	**1.16**	**84**		**Pn**	**18 22 51.6**	**-0.7**
PEA0B	**Petropavlovsk-**	**8.79**	**279**	Pn	**Pn**	**18 24 36.3**	**-0.8**
PETK	**Petropavlovsk-**	**8.79**	**279**	Pn	**Pn**	**18 24 37.9**	**+0.8**
	1.6nm,0.3s,baz=101,slow=17,SNR=15						
PETK				Sn	**Sn**	**18 26 10.2**	**-4.9**
	0.5nm,0.3s,baz=127,slow=29,SNR=1.4						
PETK				LR	LR	18 28 42.5	
	comp=Z,58nm,18.2s,baz=63,slow=43						
PETK	**Petropavlovsk-**	**8.79**	**279**	Pn	**Pn**	**18 24 37.5**	**+0.5**
MA2	**Magadan**	**13.79**	**309**	Pn	**Pn**	**18 25 46.2**	**+0.8**
	0.1nm,0.3s,baz=79,slow=18,SNR=1.4						
MA2	**Magadan**	**13.79**	**309**		**P**	**18 25 55.2**	**+1.7**
SEY	**Seymchan**	**14.71**	**322**	Pn	**Pn**	**18 25 59.8**	**+2.0**
	0.1nm,0.3s,baz=338,slow=23,SNR=2.6						
BILL	**Bilibino**	**15.73**	**352**	P	**P**	**18 26 14.2**	**-0.7**
BILL				IAmb	IAmb	18 26 21.5	
	comp=Z,25nm,1.9s						
RDOG	**Red Dog Mine**	**19.54**	**28**	P	**Pn**	**18 26 57.9**	**-0.4**
TTA	**Tatalina**	**19.62**	**46**	P	**P**	**18 26 55.7**	**-2.2**
KDAK	**Kodiak Island**	**20.58**	**61**	P	**P**	**18 27 07.8**	**-0.5**
	comp=Z,2.1nm,0.4s,baz=272,slow=7.5,SNR=1.8						
RSO	**Redoubt South**	**20.64**	**54**	P	**P**	**18 27 08.9**	**-0.2**
PPLA	**Purkeypile**	**21.30**	**47**	P	**P**	**18 27 16.9**	**+0.7**
PPLA				IAmb	IAmb	18 27 19.3	
	comp=Z,19nm,1.4s						
ASAJ	**Asahikawa**	**21.30**	**258**	P	**P**	**18 27 16.6**	**+0.4**
	comp=Z,6.4nm,0.9s,baz=63,slow=6.9,SNR=5.5						
ASAJ				LR	LR	18 34 58.2	
	comp=Z,18nm,20.9s,baz=162,slow=35						
IMAR	**Indian Mountai**	**21.57**	**39**	P	**P**	**18 27 18.8**	**-0.1**
KTH	**Kantishna Hill**	**22.01**	**46**	P	**P**	**18 27 24.3**	**+0.6**
KTH				IAmb	IAmb	18 27 28.0	
	comp=Z,14nm,1.3s						
BPAW	**Bear Paw Mtn.**	**22.10**	**44**	P	**P**	**18 27 23.7**	**-0.9**
TRF	**Thorofare Moun**	**22.26**	**46**	P	**P**	**18 27 27.1**	**+0.5**
MLY	**Manley**	**22.45**	**42**	P	**P**	**18 27 28.1**	**-0.3**
BWN	**Browne**	**22.77**	**45**	P	**P**	**18 27 30.6**	**-1.1**
MCK	**McKinley**	**22.91**	**46**	P	**P**	**18 27 32.6**	**-0.7**
MCK				IAmb	IAmb	18 27 37.9	
	comp=Z,5.2nm,0.7s						
SML	**Sawmill**	**22.91**	**51**	P	**P**	**18 27 31.8**	**-1.5**
SML				IAmb	IAmb	18 27 35.6	
	comp=Z,16nm,1.2s						
NEA	**Nenana**	**23.02**	**44**	P	**P**	**18 27 34.5**	**+0.2**
SCM	**Sheep Creek Mo**	**23.39**	**51**	P	**P**	**18 27 38.0**	**-0.1**
WRH	**Wood River Hil**	**23.42**	**44**	P	**P**	**18 27 38.1**	**-0.2**
WRH				IAmb	IAmb	18 27 40.3	
	comp=Z,5.3nm,0.8s						
MDM	**Murphy Dome**	**23.46**	**43**	P	**P**	**18 27 37.4**	**-1.4**
MDM				IAmb	IAmb	18 27 45.2	
	comp=Z,7.0nm,0.9s						
DHY	**Denali Highway**	**23.50**	**48**	P	**P**	**18 27 39.6**	**+0.3**
DHY				IAmb	IAmb	18 28 20.8	
	comp=Z,18nm,1.9s						
CCB	**Clear Creek Bu**	**23.57**	**44**	P	**P**	**18 27 40.2**	**+0.4**
CCB				IAmb	IAmb	18 27 41.3	
	comp=Z,5.9nm,0.6s						
COLA	**College**	**23.60**	**43**	P	**P**	**18 27 38.8**	**-1.2**
COLA				IAmb	IAmb	18 27 42.5	
	comp=Z,16nm,1.1s						
IL31		**23.99**	**44**	P	**P**	**18 27 42.5**	**-1.2**
IL31				IAmb	IAmb	18 27 45.4	
	comp=Z,12nm,1.1s						
ILAR	**Eielson Array**	**23.99**	**44**	P	**P**	**18 27 43.3**	**-0.4**
	comp=Z,6.6nm,0.9s,baz=250,slow=7.5,SNR=44						
ILAR	**Eielson Array**	**23.99**	**44**	P	**P**	**18 27 42.5**	**-1.2**
TOLK	**Toolik Lake Re**	**24.07**	**34**	P	**P**	**18 27 44.3**	**-0.2**
TOLK				IAmb	IAmb	18 27 46.6	
	comp=Z,4.9nm,0.6s						
PAX	**Paxson**	**24.35**	**48**	P	**P**	**18 27 43.8**	**-3.5**
YAK	**Yakutsk**	**24.37**	**309**	P	**P**	**18 27 47.0**	**-0.2**
	comp=Z,15nm,0.6s,baz=130,slow=1.0,SNR=20						
YAK	**Yakutsk**	**24.37**	**309**	P	**P**	**18 27 46.1**	**-1.1**
PRP	**Porcupine Dome**	**24.69**	**42**	P	**P**	**18 27 50.0**	**-0.3**
RIDG	**Independent Ri**	**24.71**	**46**	P	**P**	**18 27 50.3**	**-0.1**
FYU	**Fort Yukon**	**25.03**	**40**	P	**P**	**18 27 51.9**	**-1.3**
DOT	**Dot Lake**	**25.05**	**47**	P	**P**	**18 27 53.5**	**0.0**
DOT				IAmb	IAmb	18 27 54.9	
	comp=Z,4.5nm,0.9s						
GLB	**Gilahina Butte**	**25.05**	**52**	P	**P**	**18 27 54.1**	**+0.6**
GLB				IAmb	IAmb	18 28 05.5	
	comp=Z,4.9nm,0.6s						
SCRK	**Sand Creek**	**25.12**	**46**	P	**P**	**18 27 54.1**	**-0.1**
SCRK				IAmb	IAmb	18 27 56.0	
	comp=Z,8.2nm,0.9s						
MENT	**Mentasta**	**25.15**	**48**	P	**P**	**18 27 54.0**	**-0.4**
MENT				IAmb	IAmb	18 28 52.4	
	comp=Z,3.5nm,0.6s						
MCARA	**McCarthy VSAT**	**25.43**	**52**	P	**P**	**18 27 54.8**	**-2.1**
KLR	**Kul'dur**	**25.48**	**279**	P	**P**	**18 27 58.5**	**+1.0**
	comp=Z,3.1nm,0.8s,baz=84,slow=8.5,SNR=8.7						
KLR				LR	LR	18 39 37.5	
	comp=Z,46nm,19.2s,baz=50,slow=40						
BCAR	**Beaver Creek A**	**26.04**	**48**	P	**P**	**18 28 02.5**	**+0.1**
EGAK	**Eagle**	**26.42**	**44**	P	**P**	**18 28 05.2**	**-0.5**
EGAK				IAmb	IAmb	18 28 08.4	
	comp=Z,7.3nm,0.7s						
TIXI	**Tiksi**	**26.83**	**331**	P	**P**	**18 28 09.6**	**+0.2**
	comp=Z,1.8nm,0.3s,baz=113,slow=10,SNR=5.2						
TIXI				LR	LR	18 38 27.0	
	comp=Z,31nm,20.0s,baz=50,slow=36						
TIXI	**Tiksi**	**26.83**	**331**	P	**P**	**18 28 09.3**	**-0.1**
EPYK	**Eagle Plains**	**28.38**	**41**	P	**P**	**18 28 23.5**	**+0.1**
EPYK				IAmb	IAmb	18 29 13.2	
	comp=Z,19nm,1.9s						
INK	**Inuvik**	**29.75**	**37**	P	**P**	**18 28 35.7**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=267,slow=9.1,SNR=7.8						
H11N2	**WAKE ISLAND Hy**	**33.09**	**189**	T	T	19 04 29.0	
	baz=6.3,slow=76,SNR=374						
H11N3	**WAKE ISLAND Hy**	**33.10**	**189**	T	T	19 04 25.9	
	baz=6.3,slow=76,SNR=496						
H11N1	**WAKE ISLAND Hy**	**33.10**	**189**	T	T	19 04 31.1	
	baz=6.3,slow=76,SNR=478						
H11S1	**WAKE ISLAND Hy**	**34.32**	**189**	T	T	19 05 57.3	
	baz=6.1,slow=76,SNR=951						
H11S3	**WAKE ISLAND Hy**	**34.33**	**189**	T	T	19 06 01.1	
	baz=6.1,slow=76,SNR=743						
H11S2	**WAKE ISLAND Hy**	**34.33**	**189**	T	T	19 06 05.4	
	baz=6.1,slow=76,SNR=512						
YKA	**Yellowknife Ar**	**38.38**	**46**	P	**P**	**18 29 50.7**	**+0.5**
	comp=Z,2.1nm,0.6s,baz=290,slow=7.6,SNR=21						
LLLB	**Lillooet**	**39.70**	**66**	P	**P**	**18 29 58.9**	**-2.5**
LLLB				IAmb	IAmb	18 30 50.5	
	comp=Z,3.5nm,0.8s						
ULN	**Ulaanbaatar**	**40.66**	**290**	P	**P**	**18 30 07.8**	**-1.8**
SONM	**Songino Array**	**41.05**	**291**	P	**P**	**18 30 13.6**	**+0.8**
	comp=Z,2.0nm,0.5s,baz=60,slow=7.5,SNR=19						
SONM	**Songino Array**	**41.05**	**291**	P	**P**	**18 30 12.8**	**+0.1**
HHC	**Hu-ho-hao-te**	**41.99**	**279**	*eP*	**P**	**18 30 21.5**	**+1.0**
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,55nm,8.0s						
LTY	**Liberty**	**42.12**	**69**	P	**P**	**18 30 22.0**	**+0.6**
LTY				IAmb	IAmb	18 31 43.4	
	comp=Z,9.6nm,1.8s						
B08A	**Colville Reser**	**42.28**	**67**	P	**P**	**18 30 23.6**	**+0.9**
WHN	**Wuhan**	**47.10**	**266**	P	**P**	**18 30 59.6**	**-1.7**
ZALV	**Zalesovo Beam**	**49.02**	**309**	P	**P**	**18 31 14.7**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=79,slow=7.5,SNR=2.4						
ZALV				LR	LR	18 54 53.5	
	comp=Z,31nm,18.1s,baz=12,slow=40						
YHH	**Holmes Hill**	**49.11**	**67**	P	**P**	**18 31 17.1**	**0.0**
FLWY	**Flagg Ranch**	**49.64**	**67**	P	**P**	**18 31 20.6**	**-0.3**
LZH	**Lanzhou**	**49.69**	**279**	*eP*	**P**	**18 31 21.1**	**-0.3**
LZH				pP	sP	18 31 29.8	-2.2
LZH				sP	pwP	18 31 34.6	+1.2
LZH				PP	**PP**	**18 33 15.8**	**+0.1**
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,58nm,4.8s						
FXWY	**Fox Creek**	**49.73**	**68**	P	**P**	**18 31 20.0**	**-1.7**
GTA	**Gaotai**	**49.90**	**285**	*eP*	**P**	**18 31 23.9**	**+1.0**
GTA				pP	pP	18 31 28.8	-1.5
GTA				sP	sP	18 31 30.9	-2.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PDAR	**Pinedale Array**	**51.11**	**68**	P	**P**	**18 31 32.3**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=323,slow=4.7,SNR=9.3						
TMUT	**Trail Mountain**	**52.43**	**72**	P	**P**	**18 31 42.2**	**+0.1**
RDMU	**Red Mountain**	**52.53**	**70**	P	**P**	**18 31 42.1**	**-0.7**
PFO	**Pinyon Flats O**	**53.16**	**81**	P	**P**	**18 31 46.5**	**-0.9**
PFO				IAmb	IAmb	18 32 40.2	
	comp=Z,5.2nm,1.1s						
XPFO	**Pion Flat**	**53.17**	**81**	P	**P**	**18 31 46.5**	**-0.9**
XPFO				IAmb	IAmb	18 32 40.2	
	comp=Z,5.2nm,1.1s						
WMQ	**Urumqi**	**53.90**	**297**	*eP*	**P**	**18 31 54.3**	**+1.7**
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
KURK	**Kurchatov**	**54.01**	**308**	P	**P**	**18 31 52.7**	**-0.4**
PV13	**Radium Mtn., P**	**54.58**	**72**	P	**P**	**18 31 57.5**	**-0.3**
MK31	**Makanchi Array**	**54.79**	**303**	P	**P**	**18 31 57.8**	**-1.1**
MKAR	**Makanchi Array**	**54.79**	**303**	P	**P**	**18 31 58.2**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=47,slow=6.9,SNR=24						
MKAR				LR	LR	18 55 57.7	
	comp=Z,39nm,20.9s,baz=348,slow=37						
MKAR	**Makanchi Array**	**54.79**	**303**	P	**P**	**18 31 57.7**	**-1.2**
ARCES	**ARCESS Array B**	**55.75**	**346**	P	**P**	**18 32 05.4**	**-0.1**
	comp=Z,5.1nm,1.0s,baz=26,slow=8.6,SNR=6.6						
BRVK	**Borovoye**	**56.22**	**315**	P	**P**	**18 32 08.8**	**-0.2**
KDJ	**Kajisay**	**60.65**	**302**	P	**P**	**18 32 40.1**	**-0.3**
KDJ				IAmb	IAmb	18 32 41.4	
	comp=Z,3.6nm,1.0s						
AAK	**Ala-Archa**	**61.66**	**304**	P	**P**	**18 32 47.1**	**-0.1**
AAK				IAmb	IAmb	18 32 48.3	
	comp=Z,3.3nm,1.1s						
FINES	**FINESS Array B**	**63.13**	**343**	P	**P**	**18 32 56.5**	**0.0**
	comp=Z,2.7nm,0.7s,baz=19,slow=9.2,SNR=12						
KSH	**Kashi**	**63.18**	**300**	P	P	18 33 01.8	+4.5
KSH				pP	pwP	18 33 11.4	+2.8
KSH				sP	sP	18 33 15.0	+7.1
KSH				pmax	pmax		
	comp=Z,14nm,0.5s						
KSH				pmax	pmax		
	comp=Z,74nm,4.0s						
KK31	**Karatay Array**	**63.30**	**307**	P	**P**	**18 32 57.5**	**-0.5**
KK31				IAmb	IAmb	18 32 58.3	
	comp=Z,2.3nm,0.7s						
KKAR	**Karatay Array**	**63.30**	**307**	P	**P**	**18 32 57.2**	**-0.8**
KKAR	**Karatay Array**	**63.30**	**307**	P	**P**	**18 32 57.5**	**-0.5**
KKAR				IAmb	IAmb	18 32 58.3	
	comp=Z,2.3nm,0.7s						
ABKAR	**Akbulak array**	**63.41**	**317**	P	**P**	**18 32 58.4**	**-0.1**
TXAR	**Lajitas Array**	**63.85**	**75**	P	**P**	**18 33 02.6**	**+0.8**
	comp=Z,0.9nm,0.9s,baz=316,slow=5.2,SNR=4.9						
CMAR	**Chiang Mai Arr**	**65.41**	**268**	P	**P**	**18 33 12.7**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=25,slow=8.0,SNR=7.3						
BTK	**Batken**	**65.43**	**304**	P	**P**	**18 33 12.3**	**+0.3**
NC204	**NORSAR Array S**	**65.49**	**350**	P	**P**	**18 33 11.8**	**-0.2**
TAPN	**Taplejung**	**65.52**	**283**	*eP*	**P**	**18 33 13.6**	**+0.5**
NB201	**NORSAR Array S**	**65.66**	**350**	P	**P**	**18 33 11.9**	**-1.2**
NB2	**NORSAR Subarra**	**65.67**	**350**	P	**P**	**18 33 13.3**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=12,slow=6.5						
NOA	**NORSAR Array B**	**65.67**	**350**	P	**P**	**18 33 13.3**	**+0.1**
	comp=Z,2.8nm,0.6s,baz=13,slow=6.5,SNR=14						
GUN	**Gumba**	**66.19**	**285**	*eP*	**P**	**18 33 18.2**	**+0.8**
	comp=Z,9.1nm,0.4s						
JIRN	**Jiri**	**66.19**	**285**	*eP*	**P**	**18 33 18.1**	**+0.6**
	comp=Z,19nm,0.7s						
RAMN	**Ramite**	**66.48**	**284**	*eP*	**P**	**18 33 19.6**	**+0.5**
	comp=Z,17nm,0.5s						
GAR	**Garm**	**66.48**	**304**	P	**P**	**18 33 18.7**	**-0.2**
KKN	**Kakani**	**66.63**	**285**	*eP*	**P**	**18 33 20.6**	**+0.5**
	comp=Z,9.0nm,0.8s						
PKI	**Pulchoki**	**66.72**	**285**	*eP*	**P**	**18 33 21.1**	**+0.3**
	comp=Z,12nm,0.7s						
PKIN	**Phulchoki**	**66.72**	**285**	*eP*	**P**	**18 33 20.9**	**+0.2**
	comp=Z,12nm,0.7s						
DMN	**Daman**	**66.87**	**285**	*eP*	**P**	**18 33 22.2**	**+0.6**
DANN	**Dangsing**	**67.10**	**287**	*eP*	**P**	**18 33 23.5**	**+0.3**
	comp=Z,13nm,0.8s						
KOLN	**Koldanda**	**67.63**	**287**	*eP*	**P**	**18 33 26.6**	**+0.2**
	comp=Z,5.5nm,0.6s						
AKASG	**Malin Array Be**	**72.41**	**336**	P	**P**	**18 33 55.3**	**+0.3**
	comp=Z,2.3nm,0.5s,baz=28,slow=6.0,SNR=7.9						
KBZ	**Khabaz**	**74.57**	**324**	P	**P**	**18 34 09.4**	**+1.5**
	comp=Z,3.7nm,0.8s,baz=94,slow=2.5,SNR=8.2						
KOLS	**Kolonicke sedl**	**75.64**	**340**	*eP*	**P**	**18 34 11.3**	**-2.7**
LANS	**Liptovska Anna**	**75.99**	**342**	*eP*	**P**	**18 34 17.2**	**+1.1**
BUR08	**Bucovina Ar. S**	**76.22**	**338**	P	**P**	**18 34 17.4**	**-0.1**
BUR08				IAmb	IAmb	18 34 19.2	
	comp=Z,4.2nm,0.9s						
BURAR	**Bucovina Array**	**76.24**	**338**	P	**P**	**18 34 17.8**	**+0.2**
VYHS	**Vyhne**	**76.74**	**342**	*eP*	**P**	**18 34 21.1**	**+0.8**
GERES	**GERESS Array B**	**77.27**	**346**	P	**P**	**18 34 24.1**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=23,slow=6.3,SNR=10						
WRA	**Warramunga Arr**	**79.40**	**216**	P	**P**	**18 34 35.5**	**+0.3**
	comp=Z,0.4nm,0.9s,baz=37,slow=6.2,SNR=2.4						
BR131	**Keskin Array S**	**81.25**	**329**	P	**P**	**18 34 45.8**	**+0.5**
BR131				IAmb	IAmb	18 34 46.9	
	comp=Z,3.7nm,0.8s						
BRTR	**Keskin Array B**	**81.25**	**329**	P	**P**	**18 34 46.2**	**+0.9**
	comp=Z,2.7nm,0.7s,baz=60,slow=3.2,SNR=17						
BRTR	**Keskin Array B**	**81.25**	**329**	P	**P**	**18 34 45.7**	**+0.4**
ASAR	**Alice Springs**	**82.98**	**215**	P	**P**	**18 34 55.6**	**+1.5**
	comp=Z,0.5nm,0.9s,baz=23,slow=5.5,SNR=7.4						

*KRNET **14** 18:28:16.4±0.1,41.85°N×79.36°E,h21km,mb1.9*
*NNC **14** 18:28:17.4±1.4,41.91°N×79.31°E,h0km,mb2.5,mpv2.5, Error ellipse: s-maj=9.3km s-min=5.8km az=149.0*
*SOME **14** 18:28:17.2,41.90°N×79.32°E,h10km*

ISC 14 18:28:16.1±2.0,41.85°N±0.07°×79.34°E±0.05,h6km±11km, n26,σ0°90/46,12C-4D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.94**	**313**	⇑*iP*	**Pg**	**18 28 34.6**	**+0.4**
	baz=12						
PRZ				⇑*iS*	**Sb**	**18 28 47.7**	**-0.1**
	baz=12						
TARG	**Taragay, Kyrgy**	**1.15**	**265**	⇑*iP*	**Pg**	**18 28 38.4**	**+0.2**
	baz=65						
TARG				⇑*iS*	**Sb**	**18 28 54.7**	**+0.7**
	baz=65						
SHLS	**Shalkode**	**1.31**	**4**	*eP*	**Pg**	**18 28 41.6**	**+0.4**
	4.1nm,0.1s						
SHLS				*eS*	**Sn**	**18 29 00.5**	**+1.5**
	5.1nm,0.2s						
UZB	**Uzynbulak**	**1.32**	**350**	*eP*	**Pn**	**18 28 40.9**	**-0.4**
	0.5nm,0.1s						
UZB				*eS*	**Sn**	**18 28 58.5**	**-0.7**
	3.1nm,0.2s						
UZB	**Uzynbulak**	**1.32**	**350**	P	**Pg**	**18 28 41.6**	**+0.2**
	0.5nm,0.1s						
UZB				S	**Sn**	**18 28 58.5**	**-0.7**
	3.1nm,0.2s						
SATY	**Saty**	**1.39**	**331**	*eP*	**Pb**	**18 28 42.6**	**0.0**
	1.1nm,0.1s						
SATY				*eS*	**Sg**	**18 29 00.6**	**-0.2**
	8.2nm,0.1s						
SATY	**Saty**	**1.39**	**331**	P	**Pg**	**18 28 43.0**	**+0.3**
	1.1nm,0.1s						
SATY				S	**Sg**	**18 29 00.6**	**-0.2**
	8.2nm,0.1s						
PDGK	**Podgornoye**	**1.48**	**4**	P	**Pb**	**18 28 43.8**	**-0.4**
	0.4nm,0.1s						
PDGK				S	**Sn**	**18 29 01.1**	**-2.2**
	1.8nm,0.3s						
PDGK	**Podgornoye**	**1.48**	**4**	⇓P	**Pb**	**18 28 43.8**	**-0.4**
	0.2nm,0.3s						
PDGK				⇑S	**Sg**	**18 29 03.2**	**-0.6**
	0.6nm,0.3s						
ANVS	**Anan'yevo**	**1.55**	**308**	⇑*iP*	**Pb**	**18 28 45.3**	**0.0**
	baz=7.0						
ANVS				⇑*iS*	**Sg**	**18 29 06.4**	**+0.5**
	baz=7.0						
KDJ	**Kajisay**	**1.63**	**281**	⇑*iP*	**Pb**	**18 28 46.6**	**-0.1**
	baz=81						
KDJ				⇑*iS*	**Sg**	**18 29 08.6**	**+0.1**
	baz=81						
KPKS	**Kokpek**	**1.69**	**344**	*eP*	**Pg**	**18 28 48.7**	**+0.3**
	2.4nm,0.1s						
KPKS				*eS*	**Sg**	**18 29 11.2**	**+0.9**
	9.5nm,0.3s						
KTMS	**Ketmen**	**1.76**	**25**	*eP*	**Pb**	**18 28 48.9**	**0.0**
	0.4nm,0.1s						
KTMS				*eS*	**Sb**	**18 29 11.4**	**0.0**
	2.1nm,0.3s						
KTMS	**Ketmen**	**1.76**	**25**	P	**Pb**	**18 28 48.9**	**0.0**
	0.4nm,0.1s						
KTMS				S	**Sb**	**18 29 11.4**	**0.0**
	2.1nm,0.3s						
TNSS	**Tian-Shan**	**2.13**	**305**	*eP*	**Pb**	**18 28 56.0**	**+0.7**
	1.3nm,0.2s						
TNSS				*eS*	**Sg**	**18 29 23.0**	**-1.5**
	3.0nm,0.6s						
TNSS	**Tian-Shan**	**2.13**	**305**	Pg	**Pb**	**18 28 56.0**	**+0.7**
	1.3nm,0.2s						
TNSS				Lg	Lg	18 29 23.0	
	3.0nm,0.6s						
MDOK	**Medeo**	**2.14**	**309**	*eP*	**Pb**	**18 28 56.0**	**+0.6**
	1.0nm,0.2s						
MDOK				*eS*	**Sg**	**18 29 23.2**	**-1.7**
	7.2nm,0.5s						
MDOK	**Medeo**	**2.14**	**309**	⇓Pg	**Pn**	**18 28 53.5**	**+1.0**
	2.1nm,0.9s						
MDOK				⇓Lg	Lg	18 29 24.1	
	5.1nm,0.5s						
MDOK	**Medeo**	**2.14**	**309**	Pg	**Pb**	**18 28 56.0**	**+0.6**
	1.0nm,0.2s						
MDOK				Lg	Lg	18 29 23.2	
	7.2nm,0.5s						
MNBS	**Baschi**	**2.33**	**343**	*eP*	**Pg**	**18 29 00.0**	**-0.7**
	1.1nm,0.3s						
MNBS				*eS*	**Sg**	**18 29 30.0**	**-1.0**
	14nm,0.3s						
ULHL	**Ulahol**	**2.34**	**281**	⇑*iP*	**Pb**	**18 28 57.6**	**-1.2**
	baz=81						
ULHL				⇑*iS*	**Sb**	**18 29 27.5**	**-0.5**
	baz=81						
DJR	**Jarkent**	**2.50**	**7**	*eP*	**Pb**	**18 29 02.2**	**+0.7**
	0.5nm,0.1s						
DJR				*eS*	**Sb**	**18 29 33.9**	**+1.3**
	3.2nm,0.4s						
DJR	**Jarkent**	**2.50**	**7**	Pg	**Pb**	**18 29 02.2**	**+0.7**
	0.5nm,0.1s						
DJR				Lg	Lg	18 29 33.9	
	3.2nm,0.4s						
KTBS	**Karatobe**	**2.70**	**315**	*eP*	**Pb**	**18 29 06.4**	**+1.6**
	0.4nm,0.1s						
KTBS				*eS*	**Sg**	**18 29 40.7**	**-2.0**
	3.7nm,0.5s						
KTBS	**Karatobe**	**2.70**	**315**	Pg	**Pb**	**18 29 06.4**	**+1.6**
	0.4nm,0.1s						
KTBS				Lg	Lg	18 29 40.7	
	3.7nm,0.5s						
TKM2	**Tokmak 2**	**2.97**	**292**	⇓Pg	**Pb**	**18 29 10.2**	**+0.6**
	1.1nm,0.7s						
TKM2				⇑Lg	Lg	18 29 49.2	
	0.9nm,0.7s						

IDC 14 18:38:11.8±2.4,1.80°S×15.89°W,h0km,mb3.7/5, mb1 3.9/5,mb1mx3.6/41,mbtmpg3.7/5,MS3.4/5,Ms1 3.5/5, ms1mx3.0/44,Error ellipse: s-maj=82.5km s-min=39.7km az=151.0,North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**6.15**	**167**	T	T	18 46 47.0	
	baz=348,slow=74,SNR=167						
H10N3	**ASCENSION HYDR**	**6.16**	**167**	T	T	18 46 52.2	
	baz=348,slow=74,SNR=176						
H10N1	**ASCENSION HYDR**	**6.17**	**167**	T	T	18 47 00.3	
	baz=348,slow=74,SNR=189						
DBIC	**Dimbokro**	**13.86**	**53**	LR	LR	18 45 39.1	
	comp=Z,189nm,20.4s,baz=196,slow=32						
RCBR	**Riachuelo**	**20.36**	**258**	LR	LR	18 49 00.1	
	comp=Z,83nm,18.8s,baz=76,slow=32						
TORD	**Torodi Ar. Bea**	**22.91**	**49**	P	P	18 43 18.0	+0.5
	2.3nm,0.8s,baz=227,slow=9.4,SNR=11						
TORD				LR	LR	18 51 11.7	
	comp=Z,145nm,18.7s,baz=210,slow=34						
ESDC	**Sonseca Array**	**42.70**	**14**	P	P	18 46 10.7	+0.2
	0.7nm,0.8s,baz=183,slow=8.3,SNR=1.6						
ESDC				LR	LR	19 04 09.8	
	comp=Z,36nm,18.4s,baz=270,slow=36						
BRTR	**Keskin Array B**	**61.28**	**42**	P	P	18 48 28.6	-0.7
	0.6nm,0.8s,baz=258,slow=6.8,SNR=2.5						
AKASG	**Malin Array Be**	**64.88**	**30**	P	P	18 48 52.6	-0.2
	0.2nm,0.2s,baz=231,slow=5.9,SNR=4.2						
JTS	**Las Juntas de**	**69.76**	**282**	LR	LR	19 18 27.7	
	comp=Z,29nm,18.2s,baz=203,slow=35						
TXAR	**Lajitas Array**	**88.93**	**299**	P	P	18 51 08.9	0.0
	0.5nm,0.8s,baz=97,slow=5.8,SNR=3.7						
ASAR	**Alice Springs**	**141.22**	**133**	PKP	PKPdf	18 57 43.5	-2.0
	0.5nm,0.8s,baz=218,slow=2.5,SNR=7.5						
WRA	**Warramunga Arr**	**143.67**	**128**	PKP	PKPdf	18 57 50.8	+1.0
	0.6nm

MALC	Bahia Malaga	5.39	101	eP		Pn	18 48 20.4	-0.8
JTS	Las Juntas de	5.69	336	Pn		Pn	18 48 24.3	-1.1
	9.4nm,0.3s,baz=169,slow=11,SNR=47							
JTS				Sn		Sn	18 49 30.3	-0.6
	33nm,0.3s,baz=57,slow=20,SNR=21							
JTS	Las Juntas de	5.69	336	eP		Pn	18 48 24.2	-1.2
JTS	Las Juntas de	5.69	336			Pn	18 48 23.7	-1.7
UPD2	Meteti	5.76	53	eP		Pn	18 48 28.9	+2.6
ARE1	Arenal 1	5.76	339	eP		Pn	18 48 25.5	-0.9
CEDE	Laguna Cedeo	5.78	339	eP		Pn	18 48 26.2	-0.4
PLVR	Palo Verde	5.91	333	eP		Pn	18 48 27.6	-1.0
PLVR				eS		Sn	18 49 34.3	-2.3
ACAL	Aguas Claras	6.04	337	eP		Pn	18 48 29.8	-0.4
CUI	Cuipilapa	6.11	336	eP		Pn	18 48 30.9	-0.2
PAC1	Pacto, Paraso	6.11	141	eP		Pn	18 48 26.6	-4.7
COLC	Colonia	6.13	336	eP		Pn	18 48 31.5	+0.1
BBAC	Balboa, Cauca	6.16	119	eP		Pn	18 48 29.0	-3.0
BBAC				eS		Sn	18 49 25.6	-17
BBAC				i			18 49 39.5	
	comp=Z,66nm,0.3s							
HORNC	Hornillas	6.16	336	eP		Pn	18 48 32.3	+0.3
HORQ	Saladito	6.20	104	eP		Pn	18 48 30.9	-1.7
LAPC	Finca la Perla	6.32	334	eP		Pn	18 48 33.0	-1.0
CUSE	Cuicocha Este	6.33	138	eP		Pn	18 48 31.8	-2.8
CUSE				eS		Sn	18 49 30.0	-17
BUEV	Buena Vista	6.34	335	eP		Pn	18 48 35.2	+0.8
YOTC	Yotoco, Valle	6.36	99	eP		Pn	18 48 34.1	-0.7
YOTC				eS		Sn	18 49 35.5	-12
POPC	Popayan, Colom	6.45	113	eP		Pn	18 48 32.8	-3.3
GCUF	Volcan Galeras	6.51	126	eP		Pn	18 48 35.1	-1.9
GCUF				eS		Sn	18 49 34.6	-17
GCUF				i			18 49 55.9	
	comp=Z,67nm,0.4s							
CRUC	La Cruz	6.65	121	eP		Pn	18 48 37.5	-1.4
CRUC				eS		Sn	18 49 37.3	-18
SOTA	Rioblanco	6.68	115	eP		Pn	18 48 38.5	-0.9
SOTA				eS		Sn	18 49 42.3	-14
PCON	Cinco Dias	6.79	113	eP		Pn	18 48 40.8	-0.2
PCON				eS		Sn	18 49 47.2	-12
ANIL	Santa Ana	7.23	94	eP		Pn	18 48 47.2	+0.3
ANIL				eS		Sn	18 49 56.4	-13
ANIL				i			18 50 14.8	
	comp=Z,77nm,0.3s							
GUY2C	Guyana, Caldas	7.25	88	eP		Pn	18 48 47.9	+0.7
RREF	El Recreo	7.27	91	eP		Pn	18 48 47.8	+0.2
ESPN	Las Esperanzas	7.29	347			Pn	18 48 46.6	-0.7
ACON	Acoyapa	7.32	340			Pn	18 48 46.9	-0.8
ORTC	Ortega, Tolima	7.46	98	eP		Pn	18 48 49.9	+0.2
BETC	Betania	7.56	108	eP		Pn	18 48 52.1	+1.1
BETC				eS		Sn	18 49 56.3	-21
GARC	Garzon, Huila	7.68	111	eP		Pn	18 48 52.8	-0.1
GARC				eS		Sn	18 50 03.1	-17
GARC				i			18 50 21.0	
	comp=Z,27nm,0.4s							
PRAC	Prado	7.84	99	eP		Pn	18 48 54.5	-0.5
ROSC	El Rosal	8.29	91	Pn		Pn	18 49 01.8	+0.3
	comp=Z,2.9nm,0.3s,baz=196,slow=22,SNR=3.7							
ROSC				LR		LR	18 51 52.7	
	comp=Z,98nm,19.4s,baz=79,slow=36							
ROSC	El Rosal	8.29	91	Pn		Pn	18 49 01.1	-0.3
SJCC	San Jacinto, C	8.82	56	eP		Pn	18 49 10.7	+2.2
MACC	Macarena, Meta	9.23	108	eP		Pn	18 49 13.5	-0.6
MACC				eS		Sn	18 50 48.9	-9.3
PAYG	Puerto Ayora	9.52	234			Pn	18 49 19.3	+1.3
SDV	Santo Domingo	12.51	72	Pn		Pn	18 50 00.2	+1.1
	comp=Z,0.7nm,0.3s,baz=277,slow=9.4,SNR=6.6							
SDV	Santo Domingo	12.51	72			Pn	18 50 00.6	+1.5
APG	El Apazote	12.54	323	Pn		Pn	18 50 03.2	+3.7
	comp=Z,0.2nm,0.3s,baz=139,slow=11,SNR=5.0							
APG				LR		LR	18 54 16.8	
	comp=Z,318nm,20.4s,baz=167,slow=35							
ATAH	Atahualpa	12.82	161	Pn		Pn	18 50 03.8	+0.2
	comp=Z,1.5nm,0.3s,baz=352,slow=8.7,SNR=7.0							
ATAH				LR		LR	18 54 33.9	
	comp=Z,844nm,20.0s,baz=337,slow=36							
SDDR	Presa de Saban	17.73	38	P		P	18 51 10.6	+1.8
SDDR				IAmb		IAmb	18 51 14.1	
	comp=Z,28nm,1.1s							
NNA	Nana	17.88	161	P		Pn	18 51 09.5	-0.3
	comp=Z,2.0nm,0.3s,baz=326,slow=14,SNR=4.4							
NNA				LR		LR	18 57 27.4	
	comp=Z,104nm,21.6s,baz=316,slow=35							
NNA	Nana	17.88	161	P		Pn	18 51 10.9	+1.1
NNA				IAmb		IAmb	18 51 21.0	
	comp=Z,76nm,1.4s							
BANI	BANI	17.88	41	P		P	18 51 12.4	+1.9
AOPR	Arecibo Observ	20.38	48	P		Pn	18 51 39.0	-0.9
GCPR	Guaynabo City	20.86	49	P		Pn	18 51 44.5	-1.0
SAML	Samuel	23.86	126	P		P	18 52 12.5	-2.1
SAML				IAmb		IAmb	18 52 14.4	
	comp=Z,19nm,1.1s							
LPAZ	La Paz	25.60	146	P		P	18 52 30.4	-0.6
	comp=Z,6.3nm,0.8s,baz=331,slow=7.6,SNR=17							
LPAZ				LR		LR	19 03 42.5	
	comp=Z,236nm,19.9s,baz=296,slow=39							
LPAZ	La Paz	25.60	146			P	18 52 30.2	-0.9
LPAZ	La Paz	25.60	146			P	18 52 29.9	-1.1
LPAZ				IAmb		IAmb	18 52 35.7	
	comp=Z,6.5nm,0.8s							
PB16	IPOC Station P	26.60	151	P		P	18 52 39.9	-0.1
PB16				IAmb		IAmb	18 52 44.9	
	comp=Z,11nm,0.9s							
MNMC	Minye Minye	27.25	152	P		P	18 52 45.3	-0.2
GO01	Chusmiza	27.90	152	P		P	18 52 52.3	+0.7
LRAL	Lakeview Retre	28.14	352	P		P	18 52 53.9	+0.8
LRAL				IAmb		IAmb	18 52 57.6	
	comp=Z,6.2nm,0.9s							
SIV	San Ignacio	29.88	135	P		P	18 53 07.9	-0.9
	comp=Z,3.6nm,1.0s,baz=312,slow=11,SNR=7.9							
V48A	Smith Brothers	30.79	353	P		P	18 53 16.2	-0.4
V48A				IAmb		IAmb	18 53 20.5	
	comp=Z,6.1nm,0.8s							
TXAR	Lajitas Array	31.29	323	P		P	18 53 21.9	+0.6
	comp=Z,0.2nm,0.4s,baz=113,slow=6.1,SNR=3.9							
TXAR				LR		LR	19 05 04.0	
	comp=Z,70nm,20.6s,baz=0.0,slow=35							
LCAR	Lake Charles	31.85	347	P		P	18 53 24.7	-1.2
LCAR				IAmb		IAmb	18 53 28.6	
	comp=Z,6.1nm,0.8s							
T42A	Van Buren	32.76	347	P		P	18 53 33.0	-0.9
CCM	Cathedral Cave	33.78	348	P		P	18 53 41.9	-0.9
CCM				IAmb		IAmb	18 53 45.7	
	comp=Z,6.8nm,0.9s							
OLIL	Olney	33.90	352	P		P	18 53 43.2	-0.6
S39A	Bolivar	33.92	345	P		P	18 53 43.5	-0.6
S39A				IAmb		IAmb	18 53 44.5	
	comp=Z,5.7nm,1.1s							
MNTX	Cornudas Mount	34.02	324	P		P	18 53 45.4	+0.3
MNTX				IAmb		IAmb	18 53 47.4	
	comp=Z,4.9nm,1.1s							
121A	Cookes Peak, D	36.05	322	P		P	18 54 04.6	+1.9
ANMO	Albuquerque	37.01	327	LR		LR	19 10 11.9	
	comp=Z,68nm,20.4s,baz=115,slow=38							
ANMO	Albuquerque	37.01	327	P		P	18 54 12.1	+1.2
ANMO				IAmb		IAmb	18 54 14.2	
	comp=Z,6.8nm,1.1s							
TUC	Tucson	37.79	319	P		P	18 54 18.3	+0.9
TUC				IAmb		IAmb	18 54 20.4	
	comp=Z,6.5nm,1.2s							
H03N2	Juan Fernandez	38.44	175	T		T	19 34 56.2	
	baz=354,slow=76,SNR=11							
H03N1	Juan Fernandez	38.44	175	T		T	19 34 58.6	
	baz=354,slow=76,SNR=13							
H03N3	Juan Fernandez	38.45	175	T		T	19 34 56.9	
	baz=354,slow=76,SNR=13							
SDCO	Great Sand Dun	38.65	330	P		P	18 54 26.8	+1.9
SDCO				IAmb		IAmb	18 54 28.1	
	comp=Z,8.2nm,1.2s							
X18A	Snowflake	38.73	323	P		P	18 54 26.2	+0.7
X18A				IAmb		IAmb	18 54 28.9	
	comp=Z,16nm,1.6s							
W18A	Petrified Fore	39.01	324	P		P	18 54 30.9	+3.1
X16A	Lo Mia Camp, P	39.57	321	P		P	18 54 33.5	+1.0
CPUP	Villa Florida	39.68	143	P		P	18 54 32.8	-0.4
	comp=Z,1.9nm,0.8s,baz=324,slow=12,SNR=4.4							
MVCO	Mesa Verde	39.80	327	P		P	18 54 35.5	+1.1
MVCO				IAmb		IAmb	18 54 37.4	
	comp=Z,14nm,1.2s							
BDFB	Brasilia	39.97	122	LR		LR	19 11 33.5	
	comp=Z,109nm,18.7s,slow=37							
113A	Mohawk Valley,	40.05	317	P		P	18 54 36.4	+0.2
113A				IAmb		IAmb	18 54 39.2	
	comp=Z,11nm,1.4s							
Y14A	Wickenburg	40.26	319	P		P	18 54 38.5	+0.5
WUAZ	Wupatki	40.26	323	P		P	18 54 39.1	+0.9
WUAZ				IAmb		IAmb	18 54 41.5	
	comp=Z,8.1nm,1.0s							
SMCO	Snowmass	40.49	330	P		P	18 54 42.1	+1.8
PV13	Radium Mtn., P	40.67	328	P		P	18 54 42.9	+1.3
PV13				IAmb		IAmb	18 54 46.9	
	comp=Z,8.2nm,0.9s							
PV03	Paradox Valley	40.75	328	P		P	18 54 43.9	+1.6
PV05	Paradox Valley	40.76	327	P		P	18 54 42.3	0.0
PV12	Saucer Basin,	40.77	328	P		P	18 54 44.0	+1.6
PV12				IAmb		IAmb	18 54 49.3	
	comp=Z,10nm,1.0s							
PV18	Skein Mesa, Pa	40.78	328	P		P	18 54 43.9	+1.4
PV07	Paradox Valley	40.78	328	P		P	18 54 44.3	+1.8
PV11	David Mesa, Pa	40.80	328	P		P	18 54 43.6	+1.0
PV16	Nyswonger Mesa	40.83	328	P		P	18 54 43.3	+0.3
PV04	Paradox Valley	40.88	328	P		P	18 54 45.2	+1.9
PV14	Lion Creek, Pa	40.93	328	P		P	18 54 43.0	-0.8
U15A	North Rim	41.42	323	P		P	18 54 49.6	+1.7
U15A				IAmb		IAmb	18 54 51.5	
	comp=Z,11nm,1.3s							
W13A	Hualapai Mount	41.55	320	P		P	18 54 51.0	+2.1
PKCU	Pink Cliffs	42.11	324	P		P	18 54 55.9	+2.2
KNB	Kanab	42.13	323	P		P	18 54 55.6	+2.0
SRU	San Rafael Swe	42.27	327	P		P	18 54 55.6	+0.9
PFO	Pinyon Flats O	42.37	316	LR		LR	19 11 37.8	
	comp=Z,88nm,18.4s,baz=182,slow=35							
SZCU	Shurtz Canyon	42.67	324	P		P	18 54 59.6	+1.6
RSSD	Black Hills	43.23	337	P		P	18 55 02.2	-0.2
GSC	Goldstone, Bar	43.58	318	P		P	18 55 06.9	+1.6
GSC				IAmb		IAmb	18 55 08.8	
	comp=Z,8.8nm,1.6s							
PSUT	Pine Spring	43.75	324	P		P	18 55 08.5	+1.8
TPNV	Topopah Spring	44.20	320	P		P	18 55 11.5	+1.2
TPNV				IAmb		IAmb	18 55 12.9	
	comp=Z,8.3nm,1.4s							
PD31	Pinedale Array	44.50	332	P		P	18 55 13.3	+0.5
PD31				IAmb		IAmb	18 55 14.6	
	comp=Z,9.3nm,1.8s							
PDAR	Pinedale Array	44.50	332	P		P	18 55 13.5	+0.8
	comp=Z,0.9nm,0.8s,baz=113,slow=11,SNR=7.0							
PDAR	Pinedale Array	44.50	332	P		P	18 55 12.7	-0.1
HWUT	Hardware Ranch	44.63	329	P		P	18 55 13.7	0.0
HWUT				IAmb		IAmb	18 55 15.7	
	comp=Z,7.3nm,1.2s							
R11A	Troy Canyon, C	44.66	323	P		P	18 55 15.3	+1.3
R11A				IAmb		IAmb	18 55 16.9	
	comp=Z,6.5nm,1.4s							
BGU	Big Grassy Mou	44.91	327	P		P	18 55 16.1	+0.1
FXWY	Fox Creek	45.86	331	P		P	18 55 23.2	-0.3
ELK	Elko	46.02	325	P		P	18 55 25.1	+0.3
ELK				IAmb		IAmb	18 55 27.1	
	comp=Z,13nm,1.9s							
NV11	Mina Array Sit	46.30	321	P		P	18 55 28.1	+1.1
NV11				IAmb		IAmb	18 55 29.7	
	comp=Z,9.7nm,1.2s							
OMMB	Old Mammoth Mi	46.36	319	P		P	18 55 28.6	+1.0
NVAR	Mina Array Bea	46.39	321	P		P	18 55 29.4	+1.7
	comp=Z,2.4nm,0.7s,baz=137,slow=6.8,SNR=19							
NVAR				LR		LR	19 15 20.0	
	comp=Z,111nm,18.3s,baz=208,slow=37							
NVAR	Mina Array Bea	46.39	321	P		P	18 55 28.9	+1.1
MDPB	Devils Postpil	46.42	319	P		P	18 55 27.8	-0.2
MDPB				IAmb		IAmb	18 55 36.8	
	comp=Z,7.8nm,1.0s							
KVN	Kaiserville	46.64	322	P		P	18 55 30.5	+0.9
KVN				IAmb		IAmb	18 55 31.8	
	comp=Z,5.2nm,1.2s							
RYN	Ryan	46.65	321	P		P	18 55 29.8	+0.1
RYN				IAmb		IAmb	18 55 32.2	
	comp=Z,7.4nm,1.3s							
YHH	Holmes Hill	46.65	332	P		P	18 55 30.6	+0.8
YHL	Hebgen Lake	46.85	332	P		P	18 55 32.5	+1.1
PLCA	Paso Flores	46.89	167	P		P	18 55 32.1	+0.7
	comp=Z,1.8nm,0.7s,baz=345,slow=11,SNR=3.9							
WAKR	Walker	47.15	320	P		P	18 55 34.2	+0.5
CMB	Columbia Colle	47.50	319	P		P	18 55 36.1	-0.1
WVOR	Wild Horse Val	49.05	325	P		P	18 55 48.2	-0.1
ORV	Oroville	49.07	320	P		P	18 55 49.7	+1.4
J08A	Circle Bar Ran	49.55	326	P		P	18 55 51.7	-0.3
J08A				IAmb		IAmb	18 56 04.0	
	comp=Z,12nm,1.7s							
KCPM	Cahto Peak	50.49	319	P		P	18 56 01.4	+2.2
YBH	Yreka Blue Hor	51.06	322	LR		LR	19 18 16.3	
	comp=Z,74nm,19.6s,baz=148,slow=37							
YBH	Yreka Blue Hor	51.06	322	P		P	18 56 03.0	-0.4
KHMM	Horse Mountain	51.22	320	P		P	18 56 05.3	+0.6
SCHQ	Schefferville	51.26	12	P		P	18 56 04.5	0.0
	comp=Z,5.7nm,0.9s,baz=205,slow=15,SNR=2.6							
KRMB	Red Mountain	51.69	321	P		P	18 56 09.5	+1.3
G06A	Carlson Farm,	51.94	326	P		P	18 56 10.4	+0.4
G06A				IAmb		IAmb	18 57 12.5	
	comp=Z,5.4nm,1.1s							
FFC	Flin Flon	51.94	346	P		P	18 56 09.3	-0.4
H04A	Detroit Lake	52.47	325	P		P	18 56 14.6	+0.7
H04A				IAmb		IAmb	18 56 17.6	
	comp=Z,4.4nm,0.9s							
LTY	Liberty	53.24	328	P		P	18 56 20.0	+0.4
LTY				IAmb		IAmb	18 56 21.4	
	comp=Z,4.5nm,1.1s							
FRB	Frobisher Bay	59.47	7	LR		LR	19 24 22.3	
	comp=Z,32nm,18.0s,baz=186,slow=38							
YKA	Yellowknife Ar	61.98	344	P		P	18 57 20.8	0.0
	comp=Z,2.4nm,0.9s,baz=139,slow=6.7,SNR=13							
YKA				LR		LR	19 26 50.5	
	comp=Z,39nm,18.6s,baz=0.0,slow=39							
YAH	Yahtse	70.73	333	P		P	18 58 14.2	-2.9
BARN	Barnard Glacie	70.99	334	P		P	18 58 20.6	+2.0
DAWY	Dawson	71.42	337	P		P	18 58 20.6	-0.4
DAWY				IAmb		IAmb	18 58 24.8	
	comp=Z,3.5nm,0.9s							
INK	Inuvik	71.65	342	LR		LR	19 32 01.2	
	comp=Z,42nm,18.3s,baz=95,slow=38							
INK	Inuvik	71.65	342	P		P	18 58 22.7	+0.4
INK				IAmb		IAmb	18 58 26.7	
	comp=Z,3.5nm,0.9s							
BCAR	Beaver Creek A	71.91	336	P		P	18 58 25.6	+1.6
DOT	Dot Lake	73.09	336	P		P	18 58 31.7	+0.7
DOT				IAmb		IAmb	18 58 35.3	
	comp=Z,3.7nm,0.9s							
SCRK	Sand Creek	73.19	336	P		P	18 58 32.9	+1.1
HDA	Harding Lake	74.56	336	P		P	18 58 40.2	+0.6
HDA				IAmb		IAmb	18 58 43.2	
	comp=Z,4.7nm,1.0s							
ILAR	Eielson Array	74.66	336	P		P	18 58 40.6	+0.4
	comp=Z,1.6nm,0.9s,baz=113,slow=4.6,SNR=13							
ILAR				LR		LR	19 33 11.4	
	comp=Z,25nm,22.0s,baz=120,slow=37							
ILAR	Eielson Array	74.66	336	P		P	18 58 39.9	-0.3
FYU	Fort Yukon	74.72	338	P		P	18 58 39.8	-0.7
FYU				IAmb		IAmb	18 58 44.3	
	comp=Z,7.1nm,1.0s							
BMAR	Burnt Mountain	74.84	339	P		P	18 58 42.1	+0.9
RND	Reindeer	75.00	335	P		P	18 58 43.4	+1.2
BPAW	Bear Paw Mtn.	76.12	335	P		P	18 58 48.2	-0.4
IMAR	Indian Mountai	77.78	337	P		P	18 58 57.3	-0.6
ESDC	Sonseca Array	78.08	51	P		P	18 59 00.4	+0.2
	comp=Z,0.5nm,0.9s,baz=246,slow=8.3,SNR=2.5							
TORD	Torodi Ar. Bea	83.36	77	P		P	18 59 29.2	+0.3
	comp=Z,0.3nm,0.5s,baz=296,slow=7.3,SNR=2.5							
NOA	NORSAR Array B	87.49	29	LR		LR	19 34 31.6	
	comp=Z,8.7nm,21.7s,baz=225,slow=33							
FINES	FINESS Array B	94.41	27	LR		LR	19 41 56.4	
	comp=Z,19nm,18.1s,baz=270,slow=35							
H11N3	WAKE ISLAND Hyl	07.37	292	T		T	21 01 30.7	
	baz=79,slow=75,SNR=32							
H11N2	WAKE ISLAND Hyl	07.38	292	T		T	21 01 35.8	
	baz=79,slow=75,SNR=25							
H11N1	WAKE ISLAND Hyl	07.39	292	T		T	21 01 32.8	
	baz=79,slow=75,SNR=24							
H11S2	WAKE ISLAND Hyl	07.81	291	T		T	21 02 14.5	
	baz=77,slow=75,SNR=6.7							
H11S1	WAKE ISLAND Hyl	07.82	291	T		T	21 02 07.7	
	baz=77,slow=75,SNR=4.6							
H11S3	WAKE ISLAND Hyl	07.83	291	T		T	21 02 00.8	
	baz=77,slow=75,SNR=5.6							
WMQ	Urumqi	130.58	9	eP		PKPdf	19 06 12.3	0.0
WMQ				pmax		pmax		
	comp=Z,84nm,5.7s							
WMQ				LR		LR		
	comp=N,2μm,29.2s							
WMQ				LR		LR		
	comp=E,2μm,29.2s							
WMQ				LR		LR		
	comp=Z,2μm,28.9s							
KSH	Kashi	131.46	22	PKP		PKPdf	19 06 13.1	-1.1
NJ2	Nanjing	137.81	332	eP		PKPdf	19 06 25.3	-0.8
NJ2				pmax		pmax		
	comp=Z,14nm,0.6s							
LZH	Lanzhou	138.63	352	ePKP		PKPdf	19 06 27.8	0.0
LZH				pPKP		sPKPdf	19 06 36.3	+5.3
LZH				sPKP			19 06 38.8	
ASAR	Alice Springs	140.24	239	PKP		PKiKP	19 06 32.7	-0.6
	comp=Z,0.4nm,0.7s,baz=108,slow=2.1,SNR=2.1							
WRA	Warramunga Arr	141.11	244	PKP		PKPdf	19 06 32.8	+0.4
	comp=Z,0.6nm,0.9s,baz=266,slow=0.7,SNR=1.4							
CD2	Chengdu	143.72	351	PKP		PKPbc	19 06 35.3	+1.0
H01W1	Cape Leeuwin H	146.48	205	T		T	21 50 47.4	
	baz=151,slow=77,SNR=2.4							
H01W2	Cape Leeuwin H	146.49	205	T		T	21 50 55.6	
	baz=151,slow=77,SNR=4.1							
H01W3	Cape Leeuwin H	146.50	205	T		T	21 50 54.2	
	baz=151,slow=77,SNR=3.5							

IDC ***14*** *18:55:49.6±1.6, 11.66S×124.12E, h0km, mb3.4/1, mb1 4.0/5, mb1mx3.5/37, mbtmp3.8/5, ML3.8/4, MS3.3/1, Ms1 3.3/1, ms1mx2.5/24, Error ellipse: s-maj=88.3km s-min=20.4km az=64.0*

NEIC ***14*** *18:55:53.6±0.7, 11.72S±0.06×124.05E±0.08, h44km±9km, mb4.1/3, Error ellipse: s-maj=12.1km s-min=8.5km az=101.0*

ISC 14 18:55:52.6±0.8, 11.66S±0.06×124.2E±0.1, h35km, n35, σ1ᵍ75/40, South of Timor

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	Baumata	1.54	340	Pn		Pn	Pn	18 56 18.5	+0.9
	137nm,0.3s,baz=173,slow=6.3,SNR=285								
BATI				Sn		Sn	Sn	18 56 34.4	-2.0
	73nm,0.3s,baz=157,slow=16,SNR=9.3								
SOEI	Soe	1.90	2			Pn	Pn	18 56 24.8	+2.2
MMRI	Maumere	3.57	327			Pn	Pn	18 56 44.7	-0.8
KNRA	Kununurra	5.97	132	Pn		Pn	Pn	18 57 23.2	+4.7
FITZ	Fitzroy Crossi	6.55	168	Pn		Pn	Pn	18 57 28.6	+2.1
	1.4nm,0.3s,baz=351,slow=8.9,SNR=160								
FITZ				Sn		Sn	Sn	18 58 39.3	-0.7
	14nm,0.3s,baz=194,slow=11,SNR=23								
FITZ	Fitzroy Crossi	6.55	168	Pn		Pn	Pn	18 57 28.3	+1.9
FITZ						Sn	Sn	18 58 39.0	-0.9
MTN	Manton Dam	6.88	101	Pn		Pn	Pn	18 57 34.0	+3.0
KAPI	Kappang	7.93	326	Pn		Pn	Pn	18 57 46.5	+1.0
	1.1nm,0.3s,baz=167,slow=12,SNR=5.9								
KAPI	Kappang	7.93	326			Pn		18 57 46.9	+1.4
PSAD1	Pilbara Seismi	10.60	203	Pn		Pn		18 58 21.5	-0.5
PSAC2	Pilbara Seismi	10.67	202	Pn		Pn		18 58 22.3	-0.8
PSAC1	Pilbara Seismi	10.68	203	Pn		Pn		18 58 22.5	-0.6
PSAB2	Pilbara Seismi	10.68	202	Pn		Pn		18 58 22.5	-0.6
PSAA2	Pilbara Seismi	10.69	202	Pn		Pn		18 58 22.9	-0.4
PSAD2	Pilbara Seismi	10.70	202	Pn		Pn		18 58 22.6	-0.8
PSA00	Pilbara Seismi	10.70	202	Pn		Pn		18 58 23.1	-0.3
PSAA3	Pilbara Seismi	10.70	202	Pn		Pn		18 58 23.1	-0.4
PSAB1	Pilbara Seismi	10.71	202	Pn		Pn		18 58 22.9	-0.6
PSAA1	Pilbara Seismi	10.71	202	Pn		Pn		18 58 23.1	-0.4
PSAB3	Pilbara Seismi	10.71	202	Pn		Pn		18 58 23.2	-0.4
PSAC3	Pilbara Seismi	10.75	202	Pn		Pn		18 58 23.4	-0.8
PSAD3	Pilbara Seismi	10.79	202	Pn		Pn		18 58 24.1	-0.5
WB0	Warramunga Arr	12.70	131	Pn		Pn		18 58 52.1	+1.3
WRA	Warramunga Arr	12.76	131	Pn		Pn		18 58 53.3	+1.6
	0.6nm,0.3s,baz=306,slow=14,SNR=25								
WRA				Sn		Sn		19 01 07.2	-5.4
	1.9nm,0.3s,baz=297,slow=27,SNR=15								
WRA	Warramunga Arr	12.76	131	Pn		Pn		18 58 52.6	+0.9
WRAB	Tennant Creek	12.77	131	Pn		Pn		18 58 53.6	+1.8
WB2	Warramunga Arr	12.77	131			Pn		18 58 53.5	+1.7
WR0	Warramunga Arr	12.92	131	Pn		Pn		18 58 55.1	+1.2
AS31	Alice Springs	15.09	144	P		Pn		18 59 24.0	+0.6
ASAR	Alice Springs	15.09	144	Pn		Pn		18 59 24.8	+1.4
	0.5nm,0.3s,baz=319,slow=12,SNR=40								
ASAR				Sn		Sn		19 02 06.9	-2.6

MAW	**Mawson**	**97.86**	**187**	P		**P**	**19 16 53.7**	**-1.0**
	0.6nm,0.3s,baz=20,slow=12,SNR=1.8								

NEIC ***14*** *19:05:02.0±2.1,6°.85N±0°.07×75°.45W±0°.09, h71km±8km, mb4.2/5, Error ellipse: s-maj=14.1km s-min=8.1km az=57.0*

RSNC ***14*** *19:05:03.4±1.2,6°.89N×75°.33W, h32km±9km, ML3.6, Mw3.7*

IDC ***14*** *19:05:07.5±2.3,6°.83N×75°.03W, h118km±20km, mb3.4/3, mb1 3.6/5, mb1mx3.2/48, mbtmp3.8/5, Error ellipse: s-maj=32.3km s-min=12.3km az=114.0*

ISC 14 19:05:01.8±0.8, 6°.94N±0°.03×75°.38W±0°.03, h59km±8km, n56, σ1§51/74, mb3.7/5, 9C-8D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ZARC	**Zaragoza, Cauc**	**0.75**	**43**	⇓*iP*		**Pn**	**19 05 16.9**	**+0.3**
ZARC				*eS*		**Sn**	**19 05 27.8**	**+0.3**
HELC	**Santa Helena**	**0.76**	**191**	⇓*iP*		**Pn**	**19 05 16.5**	**-0.6**
HELC				*eS*		**Sn**	**19 05 27.1**	**-1.1**
UREC	**San Jos de Ur**	**0.82**	**349**	⇓*iP*		**Pn**	**19 05 18.1**	**+0.6**
UREC				*eS*		**Sn**	**19 05 29.9**	**+0.9**
UREC				*i*			19 05 30.6	
	comp=Z,3μm,0.3s							
DBBC	**Dabeiba**	**0.83**	**275**	⇑*iP*		**Pn**	**19 05 17.9**	**+0.3**
DBBC				*eS*		**Sn**	**19 05 31.0**	**+1.7**
PTBC	**PUERTO BERRIO,**	**1.00**	**114**	⇑*iP*		**Pn**	**19 05 19.2**	**-0.6**
PTBC				*eS*		**Sn**	**19 05 30.6**	**-2.6**
CBOC	**Ciudad Bolivar**	**1.24**	**211**	⇓*iP*		**Pn**	**19 05 23.2**	**+0.1**
CBOC				*eS*		**Sn**	**19 05 39.1**	**0.0**
CBOC				*i*			19 05 41.2	
	comp=Z,734nm,0.2s							
NORC	**Norcasia**	**1.46**	**160**	⇑*iP*		**Pn**	**19 05 26.0**	**0.0**
NORC				*eS*		**Sn**	**19 05 43.4**	**-0.7**
NORC				*i*			19 05 45.6	
	comp=Z,757nm,0.3s							
BRRC	**Barranca, Sant**	**1.66**	**84**	⇑*iP*		**Pn**	**19 05 29.2**	**+0.6**
BRRC				*i*			19 05 44.5	
	comp=Z,1μm,0.4s							
BRRC				*eS*		**Sn**	**19 05 49.5**	**+0.5**
GUY2C	**Guyana, Caldas**	**1.71**	**180**	⇓*iP*		**Pn**	**19 05 29.9**	**+0.2**
GUY2C				*eS*		**Sn**	**19 05 50.1**	**-0.6**
GUY2C				*i*			19 05 55.0	
	comp=Z,562nm,0.4s							
SPBC	**San Pablo de B**	**1.82**	**135**	⇑*iP*		**Pn**	**19 05 30.9**	**-0.1**
SPBC				*eS*		**Sn**	**19 05 52.3**	**-0.7**
SPBC				*i*			19 05 56.1	
	comp=Z,368nm,0.3s							
RREF	**El Recreo**	**2.03**	**179**	⇓*iP*		**Pn**	**19 05 35.4**	**+1.2**
RREF				*eS*		**Sn**	**19 05 59.1**	**+0.4**
RREF				*i*			19 06 13.8	
	comp=Z,572nm,0.6s							
LCBC	**Los crdobas,**	**2.14**	**333**	*eS*		**Sn**	**19 06 03.2**	**+2.5**
LCBC				*i*			19 06 06.8	
	comp=Z,252nm,0.4s							
SMLC	**San Martn de**	**2.26**	**35**	*eP*		**Pn**	**19 05 35.7**	**-1.0**
SMLC				*i*			19 06 17.6	
	comp=Z,292nm,0.4s							
ROSC	**El Rosal**	**2.34**	**153**	P		**Pn**	**19 05 41.1**	**+2.9**
	comp=Z,62nm,0.3s,baz=325,slow=16,SNR=39							
ROSC				S		**Sn**	**19 06 09.7**	**+3.7**
	comp=Z,108nm,0.3s,baz=199,slow=23,SNR=14							
ROSC	**El Rosal**	**2.34**	**153**	*eP*		**Pn**	**19 05 40.5**	**+2.3**
ROSC				*eS*		**Sn**	**19 06 08.7**	**+2.7**
ROSC				*i*			19 06 13.8	
	comp=Z,267nm,0.3s							
ROSC	**El Rosal**	**2.34**	**153**			**Pn**	**19 05 40.1**	**+1.9**
TOLC	**Tolima**	**2.34**	**179**	*eP*		**Pn**	**19 05 40.4**	**+2.1**
OCAC	**Ocana**	**2.41**	**58**	*eS*		**Sn**	**19 06 08.0**	**+0.5**
OCAC				*i*			19 06 28.0	
	comp=Z,357nm,0.5s							
ANIL	**Santa Ana**	**2.44**	**181**	*eP*		**Pn**	**19 05 41.3**	**+1.9**
ANIL				*i*			19 06 23.1	
	comp=Z,386nm,0.4s							
RUSC	**La Rusia**	**2.51**	**114**	⇑*eP*		**Pn**	**19 05 40.9**	**+0.2**
RUSC				*eS*		**Sn**	**19 06 09.9**	**-0.4**
RUSC				*i*			19 06 27.3	
	comp=Z,225nm,0.5s							
RUSC	**La Rusia**	**2.51**	**114**	Pn		**Pn**	**19 05 40.8**	**+0.2**
CAPC	**Capurgana**	**2.58**	**311**	⇑*iP*		**Pn**	**19 05 40.5**	**-0.7**
CAPC				*eS*		**Sn**	**19 06 09.6**	**-1.8**
PAMC	**Pamplona, Colo**	**2.69**	**81**	⇑*iP*		**Pn**	**19 05 44.0**	**+1.0**
PAMC				*eS*		**Sn**	**19 06 15.8**	**+1.2**
PAMC				*i*			19 06 31.6	
	comp=Z,367nm,0.4s							
CHIC	**Chingaza**	**2.82**	**144**	*eP*		**Pn**	**19 05 45.9**	**+1.1**
CHIC				*eS*		**Sn**	**19 06 17.4**	**-0.5**
CHIC				*i*			19 06 41.0	
	comp=Z,120nm,0.7s							
SJCC	**San Jacinto, C**	**2.94**	**4**	*eP*		**Pn**	**19 05 46.5**	**+0.3**
ORTC	**Ortega, Tolima**	**3.02**	**178**	⇓*iP*		**Pn**	**19 05 48.6**	**+1.4**
ORTC				*i*			19 06 44.4	
	comp=Z,133nm,0.4s							
YOTC	**Yotoco, Valle**	**3.09**	**198**	‖*eP*		**Pn**	**19 05 48.8**	**+0.5**
PRAC	**Prado**	**3.24**	**171**	*eP*		**Pn**	**19 05 51.2**	**+0.9**
PRAC				*i*			19 06 54.0	
	comp=Z,212nm,0.6s							
VILC	**Villavicencio,**	**3.27**	**149**	*eP*		**Pn**	**19 05 52.5**	**+1.7**
VILC				*i*			19 06 39.6	
	comp=Z,168nm,0.5s							
HORQ	**Saladito**	**3.65**	**200**	*eP*		**Pn**	**19 05 57.2**	**+1.1**
BETC	**Betania**	**4.23**	**181**	⇑*iP*		**Pn**	**19 06 04.7**	**+0.8**
POPC	**Popayan, Colom**	**4.56**	**197**	*eP*		**Pn**	**19 06 09.5**	**+1.0**
PCON	**Cinco Dias**	**4.69**	**193**	*eP*		**Pn**	**19 06 12.9**	**+2.3**
PCON				*i*			19 07 45.6	
	comp=Z,26nm,0.6s							
GARC	**Garzon, Huila**	**4.72**	**181**	*eP*		**Pn**	**19 06 11.0**	**+0.2**
SOTA	**Rioblanco**	**4.93**	**194**	*eP*		**Pn**	**19 06 15.4**	**+1.6**
BCIP	**Isla Barro Col**	**4.94**	**297**	Pn		**Pn**	**19 06 13.4**	**0.0**
MACC	**Macarena, Meta**	**5.00**	**162**	*eP*		**Pn**	**19 06 14.1**	**-0.3**
MACC				*i*			19 07 40.1	
	comp=Z,33nm,0.5s							
SDV	**Santo Domingo**	**5.08**	**67**	P		**Pn**	**19 06 19.9**	**+4.3**
	comp=Z,6.3nm,0.3s,baz=233,slow=10,SNR=13							
SDV				S		**Sn**	**19 07 12.9**	**-0.2**
	comp=Z,13nm,0.3s,baz=46,slow=18,SNR=7.3							
SDV	**Santo Domingo**	**5.08**	**67**	*eP*		**Pn**	**19 06 17.2**	**+1.7**
SDV	**Santo Domingo**	**5.08**	**67**			**Pn**	**19 06 17.3**	**+1.7**
BBAC	**Balboa, Cauca**	**5.23**	**201**	*eP*		**Pn**	**19 06 18.5**	**+0.8**
SDDR	**Presa de Saban**	**12.61**	**18**	Pn		**Pn**	**19 08 00.8**	**+2.3**
GTBY	**Guantanamo Bay**	**12.91**	**1**	Pn		**Pn**	**19 08 03.7**	**+1.2**
DR12	**Loma Pena Alta**	**13.14**	**26**	Pn		**Pn**	**19 08 05.3**	**-0.4**
SAML	**Samuel**	**19.92**	**142**	P		**P**	**19 09 27.2**	**-1.7**
SAML				IAmb		IAmb	19 09 48.0	
	comp=Z,3.7nm,0.8s							
LPAZ	**La Paz**	**24.17**	**163**	P		**P**	**19 10 10.8**	**-2.6**
	comp=Z,0.7nm,0.5s,baz=346,slow=8.3,SNR=2.7							
LPAZ	**La Paz**	**24.17**	**163**	P		**P**	**19 10 10.9**	**-2.5**
PB16	**IPOC Station P**	**25.78**	**167**	P		**P**	**19 10 25.8**	**-2.2**
PB16				IAmb		IAmb	19 11 14.5	
	comp=Z,17nm,1.6s							
SIV	**San Ignacio**	**26.83**	**148**	P		**P**	**19 10 34.6**	**-2.3**
	comp=Z,1.3nm,0.6s,baz=316,slow=9.8,SNR=6.2							
SIV	**San Ignacio**	**26.83**	**148**	P		**P**	**19 10 37.5**	**+0.6**
T42A	**Van Buren**	**33.20**	**337**	P		**P**	**19 11 32.9**	**-0.2**
T42A				IAmb		IAmb	19 11 37.2	
	comp=Z,4.5nm,0.7s							
CCM	**Cathedral Cave**	**34.15**	**337**	P		**P**	**19 11 39.6**	**-1.6**
YKA	**Yellowknife Ar**	**62.39**	**341**	P		**P**	**19 15 18.5**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=120,slow=7.4,SNR=4.1							
ASAR	**Alice Springs**	**141.34**	**236**	PKPbc		**PKPdf**	**19 24 38.7**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=118,slow=3.6,SNR=14							
ASAR	**Alice Springs**	**147.34**	**236**			**PKPdf**	**19 24 38.5**	**+1.2**
WRA	**Warramunga Arr**	**148.41**	**243**	PKPbc		**PKPbc**	**19 24 41.6**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=105,slow=2.8,SNR=18							

IDC ***14*** *19:09:13.1±1.9,43°.69N×105°.35W, h0km, mb4.0/4, mb1 3.9/9, mb1mx3.6/51, mbtmp3.7/9, ML3.1/4, Error ellipse: s-maj=52.2km s-min=8.9km az=149.0*

NEIC ***14*** *19:09:14.1±1.2,43°.82N±0°.05×105°.22W±0°.06, h0km±2km, ML3.5/67, Error ellipse: s-maj=8.5km s-min=6.8km az=151.0*

ISC 14 19:09:13.6±0.8, 43°.83N±0°.06×105°.21W±0°.07, h0km, n93, σ0§80/93, mb3.8/4, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RSSD	**Black Hills**	**0.89**	**70**			**Pb**	**19 09 31.8**	**-0.3**
K22A	**Casper**	**1.52**	**220**			**Pn**	**19 09 40.5**	**-1.7**
K22A				IAML			19 10 06.2	
	comp=E,503nm,0.3s							
K22A				IAML			19 10 06.2	
	comp=N,876nm,0.3s							
PHWY	**Pilot Hill**	**2.53**	**184**			**Pn**	**19 09 56.1**	**-0.1**
RWWY	**Rawlins**	**2.60**	**215**			**Pn**	**19 09 56.9**	**-0.2**
RWWY				IAML			19 10 34.1	
	comp=N,153nm,0.6s							
RWWY				IAML			19 10 35.4	
	comp=N,243nm,0.8s							
LAO	**LASA Array**	**2.95**	**346**			**Pn**	**19 10 02.2**	**+0.5**
RLMT	**Red Lodge**	**3.18**	**295**			**Pn**	**19 10 05.6**	**+0.5**
RLMT				IAML			19 10 58.8	
	comp=N,132nm,0.8s							
RLMT				IAML			19 11 00.8	
	comp=N,88nm,0.4s							
PD31	**Pinedale Array**	**3.35**	**253**			**Pn**	**19 10 07.6**	**+0.2**
PDAR	**Pinedale Array**	**3.35**	**253**	Pn		**Pn**	**19 10 07.5**	**+0.2**
	comp=N,6.5nm,0.3s,baz=68,slow=16,SNR=82							
PDAR				Lg		Lg	19 10 53.1	
	comp=N,15nm,0.3s,baz=76,slow=31,SNR=3.7							
BW06	**Boulder Array**	**3.35**	**253**			**Pn**	**19 10 07.6**	**+0.2**
BW06				IAML			19 10 60.0	
	comp=N,108nm,0.5s							
BW06				IAML			19 11 00.2	
	comp=E,64nm,0.5s							
YNE	**Yellowstone No**	**3.64**	**291**			**Pn**	**19 10 11.3**	**-0.1**
YMP	**Mirror Lake PI**	**3.67**	**286**			**Pn**	**19 10 11.9**	**0.0**
OGNE	**Ogallala**	**3.72**	**140**			**Pn**	**19 10 13.9**	**+1.6**
OGNE				IAML			19 11 18.4	
	comp=E,121nm,0.4s							
GCMT	**Greycliff**	**3.73**	**303**			**Pn**	**19 10 13.6**	**+1.0**
H17A	**Grant Village**	**3.91**	**280**			**Pn**	**19 10 16.3**	**+1.2**
H17A				IAML			19 11 19.6	
	comp=N,50nm,0.7s							
FLWY	**Flagg Ranch**	**3.98**	**276**			**Pn**	**19 10 16.3**	**+0.3**
FLWY				IAML			19 11 26.5	
	comp=N,49nm,1.1s							
FLWY				IAML			19 11 27.8	
	comp=N,63nm,2.0s							
YNR	**Norris Junctio**	**4.03**	**285**	Pn		**Pn**	**19 10 16.1**	**-0.6**
ISCO	**Idaho Springs**	**4.04**	**184**			**Pn**	**19 10 17.4**	**+0.5**
SNOW	**Snow King Moun**	**4.04**	**267**			**Pn**	**19 10 17.9**	**+0.9**
SNOW				IAML			19 11 32.2	
	comp=N,62nm,0.8s							
SNOW				IAML			19 11 39.0	
	comp=N,61nm,0.9s							
YPP	**Pitchstone Pla**	**4.06**	**278**			**Pn**	**19 10 17.5**	**+0.3**
REDW	**Red Top Meadow**	**4.13**	**265**			**Pn**	**19 10 18.7**	**+0.6**
REDW				IAML			19 11 30.4	
	comp=N,61nm,1.0s							
REDW				IAML			19 11 34.7	
	comp=N,51nm,0.8s							
IMW	**Indian Meadow**	**4.15**	**273**			**Pn**	**19 10 19.0**	**+0.6**
IMW				IAML			19 11 26.7	
	comp=N,46nm,0.5s							
IMW				IAML			19 11 33.0	
	comp=N,47nm,0.7s							
YHH	**Holmes Hill**	**4.17**	**285**			**Pn**	**19 10 18.6**	**-0.1**
TPAW	**Teton Pass**	**4.18**	**267**			**Pn**	**19 10 19.7**	**+0.8**
TPAW				IAML			19 11 40.8	
	comp=N,59nm,0.8s							
E28A	**Huff**	**4.21**	**48**			**Pn**	**19 10 19.2**	**+0.2**
FXWY	**Fox Creek**	**4.22**	**269**			**Pn**	**19 10 19.8**	**+0.4**
O20A	**White River Ci**	**4.33**	**213**			**Pn**	**19 10 20.9**	**+0.1**
O20A				IAML			19 11 31.9	
	comp=N,54nm,1.0s							
O20A				IAML			19 11 32.0	
	comp=E,71nm,0.7s							
YHB	**Horse Butte**	**4.40**	**284**			**Pn**	**19 10 22.1**	**+0.3**
YHL	**Hebgen Lake**	**4.41**	**286**			**Pn**	**19 10 21.9**	**-0.1**
AHID	**Auburn Hatcher**	**4.43**	**258**			**Pn**	**19 10 22.6**	**+0.3**
AHID				IAML			19 11 37.8	
	comp=N,55nm,0.6s							
AHID				IAML			19 11 48.2	
	comp=E,47nm,3.4s							
RDMU	**Red Mountain**	**4.59**	**226**			**Pn**	**19 10 25.7**	**+1.2**
DGMT	**Dagmar**	**4.70**	**8**			**Pn**	**19 10 27.1**	**+1.4**
SMCO	**Snowmass**	**4.83**	**197**			**Pn**	**19 10 28.8**	**+0.8**
SMCO				IAML			19 11 48.4	
	comp=E,25nm,0.7s							
BOZ	**Bozeman (W)**	**4.91**	**293**	Pn		**Pn**	**19 10 29.1**	**+0.3**
HWUT	**Hardware Ranch**	**5.18**	**247**			**Pn**	**19 10 32.6**	**0.0**
HWUT				IAML			19 12 11.8	
	comp=E,32nm,1.0s							
KSCO	**Kaye Shedlock'**	**5.19**	**157**			**Pn**	**19 10 32.6**	**0.0**
EGMT	**Eagleton**	**5.26**	**325**			**Pn**	**19 10 33.4**	**-0.1**
TCUT	**Toone Canyon**	**5.33**	**242**			**Pn**	**19 10 34.5**	**-0.1**
DLMT	**Dillon**	**5.50**	**289**			**Pn**	**19 10 37.2**	**+0.4**
LRM	**Limekiln Ridge**	**5.53**	**294**			**Pn**	**19 10 38.1**	**+0.8**
MCMT	**McKenzie Canyo**	**5.57**	**283**			**Pn**	**19 10 40.1**	**+2.1**
BGNE	**Belgrade**	**5.74**	**112**	Pn		**Pn**	**19 10 39.7**	**-0.3**
SPUT	**South Promonto**	**5.91**	**247**	Pn		**Pn**	**19 10 43.3**	**+0.7**
PV22	**Blue Mesa, Par**	**5.94**	**208**			**Pn**	**19 10 44.0**	**+1.0**
PV07	**Paradox Valley**	**5.98**	**207**			**Pn**	**19 10 44.3**	**+0.8**
PV21	**Cone Mtn., Par**	**5.98**	**210**	Pn		**Pn**	**19 10 43.9**	**+0.4**
PV15	**Paradox Valley**	**6.01**	**205**			**Pn**	**19 10 44.8**	**+0.8**
SDCO	**Great Sand Dun**	**6.08**	**182**			**Pn**	**19 10 45.2**	**+0.3**
PV23	**Carpenter Ridg**	**6.09**	**209**			**Pn**	**19 10 45.2**	**+0.2**
PV09	**Paradox Valley**	**6.09**	**210**			**Pn**	**19 10 45.5**	**+0.4**
PV04	**Paradox Valley**	**6.10**	**208**			**Pn**	**19 10 44.3**	**-0.9**
PV12	**Saucer Basin,**	**6.14**	**207**			**Pn**	**19 10 46.4**	**+0.7**
PV14	**Lion Creek, Pa**	**6.16**	**209**			**Pn**	**19 10 46.3**	**+0.2**
PV10	**Paradox Valley**	**6.17**	**209**	Pn		**Pn**	**19 10 47.3**	**+1.2**
PV20	**West Nyswonger**	**6.17**	**209**			**Pn**	**19 10 46.4**	**+0.3**
SRU	**San Rafael Swe**	**6.18**	**222**			**Pn**	**19 10 45.8**	**-0.4**
PV11	**David Mesa, Pa**	**6.18**	**208**			**Pn**	**19 10 46.3**	**+0.1**
PV16	**Nyswonger Mesa**	**6.18**	**208**			**Pn**	**19 10 46.8**	**+0.5**
PV19	**Morning Glory**	**6.21**	**209**	Pn		**Pn**	**19 10 46.8**	**+0.2**
PV03	**Paradox Valley**	**6.21**	**208**			**Pn**	**19 10 46.9**	**+0.2**
PV02	**Paradox Valley**	**6.22**	**207**			**Pn**	**19 10 47.8**	**+1.0**
ECSD	**EROS Data Cent**	**6.22**	**88**	Pn		**Pn**	**19 10 47.7**	**+1.1**
PV17	**East Wray Mesa**	**6.22**	**208**			**Pn**	**19 10 47.6**	**+0.7**
PV01	**Paradox Valley**	**6.23**	**205**			**Pn**	**19 10 48.0**	**+1.0**
PV18	**Skein Mesa, Pa**	**6.24**	**208**			**Pn**	**19 10 47.7**	**+0.7**
PV13	**Radium Mtn., P**	**6.29**	**207**			**Pn**	**19 10 48.3**	**+0.5**
TMUT	**Trail Mountain**	**6.38**	**227**			**Pn**	**19 10 49.4**	**+0.3**
NLU	**North Lily Min**	**6.42**	**235**	Pn		**Pn**	**19 10 49.7**	**+0.1**
PV05	**Paradox Valley**	**6.45**	**208**			**Pn**	**19 10 49.4**	**-0.6**
BGU	**Big Grassy Mou**	**6.48**	**246**			**Pn**	**19 10 51.2**	**+0.9**
DUG	**Dugway, Tooele**	**6.73**	**240**			**Pn**	**19 10 53.5**	**-0.2**
JTMT	**Jette**	**7.46**	**305**	Pn		**Pn**	**19 11 03.7**	**0.0**
MSU	**Marysvale**	**7.47**	**227**			**Pn**	**19 11 04.8**	**+0.8**
MTPU	**Mount Pierson**	**7.83**	**225**			**Pn**	**19 11 08.8**	**-0.2**
AGMN	**Agassiz Nation**	**7.89**	**52**	Pn		**Pn**	**19 11 08.8**	**-0.6**
WALA	**Waterton Lakes**	**7.97**	**314**	Pn		**Pn**	**19 11 10.3**	**-0.4**
ELK	**Elko**	**8.05**	**251**	Pn		**Pn**	**19 11 12.7**	**+0.8**
PSUT	**Pine Spring**	**8.39**	**234**			**Pn**	**19 11 17.2**	**+0.6**
F36A	**Milaca**	**8.55**	**72**	Pn		**Pn**	**19 11 18.8**	**+0.3**
CCUT	**Cedar City**	**8.81**	**227**			**Pn**	**19 11 23.1**	**+0.7**
ULM	**Lac du Bonnet**	**9.04**	**41**	Pn		**Pn**	**19 11 25.9**	**+0.6**
	comp=E,1.3nm,0.3s,baz=241,slow=7.8,SNR=4.3							
ULM				Pg			19 11 56.8	
	comp=E,1.2nm,0.3s,baz=228,slow=12,SNR=4.0							
ULM				Lg		Lg	19 13 56.5	
	comp=E,0.6nm,0.3s,baz=125,slow=22,SNR=1.9							
U15A	**North Rim**	**9.16**	**219**			**Pn**	**19 11 26.6**	**-0.7**
R11A	**Troy Canyon, C**	**9.55**	**239**	Pn		**Pn**	**19 11 32.3**	**-0.2**
FFC	**Flin Flon**	**11.11**	**10**			**Pn**	**19 11 51.7**	**-1.8**
NVAR	**Mina Array Bea**	**11.25**	**246**	Pn		**Pn**	**19 11 56.2**	**+0.5**
	comp=E,0.2nm,0.3s,baz=50,slow=13,SNR=5.2							
NVAR	**Mina Array Bea**	**11.25**	**246**			**Pn**	**19 11 56.4**	**+0.6**
YBH	**Yreka Blue Hor**	**13.03**	**267**	Pn		**Pn**	**19 12 23.9**	**+3.9**
	comp=E,0.1nm,0.3s,baz=62,slow=7.6,SNR=4.4							
YKA	**Yellowknife Ar**	**19.49**	**347**	P		**P**	**19 13 41.9**	**0.0**
	comp=E,0.1nm,0.3s,baz=155,slow=12,SNR=7.7							
YKA	**Yellowknife Ar**	**19.49**	**347**	P		**Pn**	**19 13 42.9**	**-0.1**
ARCES	**ARCESS Array B**	**61.32**	**18**	P		**P**	**19 19 29.9**	**-0.4**
	comp=E,3.3nm,0.8s,baz=326,slow=11,SNR=4.7							
ZALV	**Zalesovo Beam**	**82.22**	**354**	P		**P**	**19 21 35.3**	**-1.0**
	comp=E,0.3nm,0.4s,baz=5.7,slow=5.8,SNR=3.8							
SONM	**Songino Array**	**84.57**	**339**	P		**P**	**19 21 49.5**	**+0.8**
	comp=E,0.2nm,0.4s,baz=24,slow=1.3,SNR=2.3							
MKAR	**Makanchi Array**	**89.52**	**355**	P		**P**	**19 22 12.7**	**+0.1**
	comp=E,0.4nm,0.7s,baz=2.6,slow=4.1,SNR=5.8							
MKAR	**Makanchi Array**	**89.52**	**355**	P		**P**	**19 22 12.4**	**-0.2**

IDC ***14*** *19:09:29.5±0.7, 1°.16S×16°.04W, h0km, mb4.0/13, mb1 4.2/14, mb1mx3.9/48, mbtmp4.0/14, ML3.2/1, MS3.6/20, Ms1 3.6/20, ms1mx3.5/34, Error ellipse: s-maj=26.4km s-min=19.4km az=122.0*

NEIC ***14*** *19:09:31.9±2.0, 1°.3S±0°.1×16°.2W±0°.1, h10km±1km, mb4.6/17, Error ellipse: s-maj=28.3km s-min=17.2km az=141.0*

ISC 14 19:09:33.0±0.6, 1°.2S±0°.1×16°.0W±0°.1, h20km, n56, σ1§38/38, mb4.3/18, MS3.6/19, 1C, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
H10N2	**ASCENSION HYDR**	**6.76**	**167**	T		T	19 18 07.0	
	baz=349,slow=73,SNR=398							
H10N3	**ASCENSION HYDR**	**6.77**	**167**	T		T	19 18 08.0	
	baz=349,slow=73,SNR=349							
H10N1	**ASCENSION HYDR**	**6.78**	**167**	T		T	19 18 14.8	
	baz=349,slow=73,SNR=405							
LIC	**Lamto**	**13.23**	**56**	*eP*		**Pn**	**19 12 40.7**	**+0.8**
	32nm,0.9s							
TIC	**Toumodi**	**13.47**	**55**	*eP*		**Pn**	**19 12 41.8**	**-1.4**
KIC	**Kosan Boka**	**13.54**	**56**	*eP*		**Pn**	**19 12 44.1**	**0.0**
	76nm,1.5s							
DBIC	**Dimbokro**	**13.62**	**55**	Pn		**Pn**	**19 12 44.5**	**-0.7**
	0.1nm,0.3s,baz=230,slow=16,SNR=4.7							
DBIC				LR		LR	19 16 55.7	
	comp=Z,414nm,21.6s,baz=214,slow=33							
RCBR	**Riachuelo**	**20.35**	**256**	LR		LR	19 20 41.5	
	comp=Z,210nm,19.1s,baz=50,slow=33							
TOA0	**Torodi Ar. Sit**	**22.64**	**50**	P		**P**	**19 14 34.5**	**+1.5**
TOA0				IAmb		IAmb	19 14 41.6	
	comp=Z,25nm,1.2s							
TORD	**Torodi Ar. Bea**	**22.64**	**50**	P		**P**	**19 14 32.2**	**-0.8**
	comp=Z,10nm,1.0s,baz=234,slow=8.7,SNR=25							
TORD				LR		LR	19 22 18.4	
	comp=Z,283nm,19.1s,baz=230,slow=34							
TORD	**Torodi Ar. Bea**	**22.64**	**50**	P		**P**	**19 14 33.5**	**+0.5**
BDFB	**Brasilia**	**34.66**	**244**	LR		LR	19 30 42.1	
	comp=Z,62nm,18.1s,slow=37							
ESDC	**Sonseca Array**	**42.16**	**14**	LR		LR	19 35 52.1	
	comp=Z,42nm,18.5s,baz=170,slow=38							
KEST	**Kesra**	**43.71**	**30**	LR		LR	19 37 20.3	
	comp=Z,163nm,18.1s,baz=250,slow=38							
LSZ	**Lusaka**	**45.81**	**110**	LR		LR	19 34 46.3	
	comp=Z,51nm,18.8s,baz=302,slow=33							
CPUP	**Villa Florida**	**46.90**	**234**	LR		LR	19 36 22.8	
	comp=Z,74nm,19.0s,baz=60,slow=34							
BOSA	**Boshof**	**47.90**	**129**	P		**P**	**19 18 10.1**	**-0.2**
	comp=Z,3.5nm,0.8s,baz=294,slow=7.2,SNR=6.5							
BOSA				LR		LR	19 35 49.6	
	comp=Z,30nm,18.3s,baz=245,slow=33							
BOSA	**Boshof**	**47.90**	**129**	P		**P**	**19 18 10.8**	**+0.6**
BOSA				IAmb		IAmb	19 18 20.8	
	comp=Z,6.0nm,0.9s							
LPAZ	**La Paz**	**53.44**	**251**	P		**P**	**19 18 51.0**	**-1.9**
	comp=Z,1.1nm,0.3s,baz=328,slow=4.6,SNR=3.2							
LPAZ	**La Paz**	**53.44**	**251**	P		**P**	**19 18 51.1**	**-1.7**
GERES	**GERESS Array B**	**56.09**	**23**	P		**P**	**19 19 09.4**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=45,slow=42,SNR=2.2							
CFA	**Coronel Fontan**	**57.75**	**233**	LR		LR	19 42 43.3	
	comp=Z,84nm,18.5s,baz=78,slow=34							
ROSC	**El Rosal**	**58.54**	**276**	LR		LR	19 41 34.7	
	comp=Z,102nm,21.0s,baz=87,slow=33							
BRTR	**Keskin Array B**	**60.94**	**42**	P		**P**	**19 19 44.6**	**-0.3**
	comp=Z,1.5nm,1.0s,baz=235,slow=4.4,SNR=6.1							
BRTR				LR

1.4nm,1.0s,baz=103,slow=3.5,SNR=4.9

IDC 14 19:28:31.8±53.0, 16°72S×175°28W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/43, mbtmp3.9/3, Error ellipse: s-maj=997.7km s-min=187.6km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.82**	**241**	P	P	19 36 23.6	+0.1
	0.5nm,0.4s,baz=58,slow=7.2,SNR=1.8						
WRA	**Warramunga Arr**	**47.80**	**258**	P	P	19 37 11.3	-0.1
	0.3nm,0.4s,baz=95,slow=6.9,SNR=7.6						
ASAR	**Alice Springs**	**47.99**	**253**	P	P	19 37 12.7	-0.3
	3.2nm,0.6s,baz=87,slow=8.6,SNR=80						

DJA 14 19:34:45.7±1.1, 2°N±4°×12°1E±°, h15km±9km, M3.8/6, mb4.0/2, MLv3.7/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**1.58**	**154**	P	Pb	19 35 14.9	+0.3
MRSI				S	Sb	19 35 35.0	+0.6
MPSI	**Mapaga**	**2.05**	**221**	P	Pn	19 35 18.5	-1.2
APSI	**Ampana**	**2.82**	**172**	P	Pn	19 35 32.8	+2.5
KMSI	**Cibinong**	**3.04**	**116**	P	Pn	19 35 34.0	+0.7
LUWI	**Luwuk**	**3.30**	**152**	P	Pb	19 35 43.1	-0.9
SMKI	**Samarinda**	**4.66**	**240**	P	Pb	19 36 05.7	-1.4
TTSI	**Tana Toraja**	**5.11**	**196**	P	Pn	19 35 59.1	-2.7
	0.0nm9.1nm,1.0s						

DJA 14 19:39:08.6±0.3, 3°N±3°×9°9E±°, h10km, M3.8/11, mb4.3/1, MLv3.6/11, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KCSI	**Kotacane, Aceh**	**1.39**	**307**	P	Pn	19 39 32.3	-1.8
GSI	**Gunungsitoli**	**1.90**	**224**	P	Pn	19 39 40.9	-0.2
MNSI	**Mandailing Nat**	**2.00**	**160**	P	Pn	19 39 43.5	+1.0
SNSI	**Sinabang, Aceh**	**2.58**	**264**	P	Pn	19 39 51.3	+0.9
PBSI	**Pulau Batu**	**2.79**	**193**	P	Pn	19 39 52.2	-1.2
MLSI	**Meulaboh, Aceh**	**2.93**	**302**	P	Pn	19 39 55.9	+0.6
BKNI	**Bangkinang**	**3.18**	**138**	P	Pg	19 40 07.6	-2.1
PDSI	**Padang**	**3.91**	**156**	P	Pb	19 40 14.9	-2.8

IDC 14 19:44:27.4±8.8, 17°70S×176°63W, h0km, mb4.0/2, mb1 4.3/2, mb1mx3.6/41, mbtmp4.0/2, MS3.3/6, Ms1 3.3/6, ms1mx3.1/30, Error ellipse: s-maj=376.3km s-min=68.1km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	**16.27**	**105**	LR	LR	19 53 23.9	
	comp=Z,45nm,18.0s,baz=229,slow=33						
DZM	**Mont Dzumac**	**16.50**	**252**	LR	LR	19 53 45.8	
	comp=Z,168nm,20.1s,baz=95,slow=34						
HNR	**Honiara**	**24.19**	**287**	LR	LR	19 58 07.5	
	comp=Z,74nm,18.2s,baz=130,slow=34						
RPZ	**Rata Peaks**	**27.95**	**199**	LR	LR	20 02 02.7	
	comp=Z,119nm,18.5s,baz=16,slow=38						
WRA	**Warramunga Arr**	**46.34**	**259**	P	P	19 52 55.7	+0.1
	1.3nm,0.7s,baz=94,slow=7.2,SNR=6.3						
ASAR	**Alice Springs**	**46.48**	**254**	P	P	19 52 56.4	-0.3
	2.4nm,0.8s,baz=88,slow=8.4,SNR=40						
KSRS	**Korea Array**	**75.69**	**317**	LR	LR	20 22 53.2	
	comp=Z,8.1nm,21.2s,baz=235,slow=30						
TXAR	**Lajitas Array**	**84.46**	**57**	LR	LR	20 28 16.4	
	comp=Z,24nm,18.4s,baz=0.0,slow=31						
BRTR	**Keskin Array B**	**145.82**	**316**	PKPbc	PKPdf	20 04 08.3	-0.3
	0.7nm,0.8s,baz=111,slow=3.2,SNR=3.4						

*IDC **14** 19:54:06.8±2.0, 54°60S×28°00W, h0km, mb4.1/3, mb1 4.2/3, mb1mx3.8/16, mbtmp4.1/3, Error ellipse: s-maj=75.2km s-min=37.1km az=9.0*
*NEIC **14** 19:54:12.1±1.0, 54°7S±0°2×28°2W±0°3, h35km±5km, mb4.2/6, Error ellipse: s-maj=25.1km s-min=18.8km az=217.0*

ISC 14 19:54:08.0±0.7, 54°7S±0°1×28°2W±0°1, h10km, n15, σ0§81/15, mb4.3/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**4.83**	**271**	Pn	**Pn**	**19 55 19.6**	**-1.0**
SNAA	**Sanae**	**20.24**	**157**	P	**P**	**19 58 41.7**	**-1.3**
SNAA				IAmb	IAmb	19 59 29.7	
	comp=Z,19nm,2.0s						
CPUP	**Villa Florida**	**35.45**	**311**	P	**P**	**20 01 04.4**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=140,slow=7.9,SNR=3.0						
QSPA	**South Pole Qui**	**35.58**	**180**	P	**P**	**20 01 06.3**	**+1.2**
QSPA				IAmb	IAmb	20 01 49.8	
	comp=Z,6.5nm,1.4s						
MAW	**Mawson**	**41.61**	**145**	P	**P**	**20 01 56.0**	**+0.4**
LPAZ	**La Paz**	**49.09**	**305**	P	**P**	**20 02 57.4**	**+1.3**
	comp=Z,1.6nm,0.7s,baz=132,slow=5.7,SNR=3.8						
LPAZ	**La Paz**	**49.09**	**305**	P	**P**	**20 02 57.0**	**+0.9**
LPAZ				IAmb	IAmb	20 02 57.6	
	comp=Z,2.2nm,0.8s						
TOA0	**Torodi Ar. Sit**	**72.17**	**31**	P	**P**	**20 05 32.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**72.17**	**31**	P	**P**	**20 05 32.4**	**-0.3**
	comp=Z,2.6nm,0.6s,baz=201,slow=6.7,SNR=28						
TORD	**Torodi Ar. Bea**	**72.17**	**31**	P	**P**	**20 05 32.7**	**0.0**
BMAR	**Burnt Mountain**	**148.26**	**319**		**PKPbc**	**20 13 53.1**	**+0.4**
ILAR	**Eielson Array**	**148.75**	**314**	PKPbc	**PKPbc**	**20 13 54.2**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=116,slow=1.4,SNR=19						
BPAW	**Bear Paw Mtn.**	**150.38**	**312**		**PKiKP**	**20 13 58.4**	**-0.5**
SONM	**Songino Array**	**151.22**	**85**	PKPbc	**PKiKP**	**20 14 00.4**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=204,slow=4.6,SNR=5.2						
SONM	**Songino Array**	**151.22**	**85**		**PKPbc**	**20 14 00.3**	**-0.4**

*SFS **14** 20:08:49.0, 36°21N×3°95W, ML2.7, ALBORAN N.*
*MDD **14** 20:08:50.4±0.4, 36°24N×3°93W, h0km, mbLg2.9/21, Error ellipse: s-maj=3.7km s-min=2.7km az=175.0, PRXIMO*
MDD EMS: II INTENSIDAD MAXIMA.
*CNRM **14** 20:08:50.8±0.8, 36°15N×3°85W, h0km, Error ellipse: s-maj=8.9km s-min=5.1km az=104.0*
*INMG **14** 20:08:50.3±1.5, 36°23N×3°96W, h0km, ML2.5, Error ellipse: s-maj=2.4km s-min=2.1km az=1.0*
*IGIL **14** 20:08:51.7, 36°21N×3°96W, h2km, ML2.4*

ISC 14 20:08:49.2±1.3, 36°27N±0°03×3°96W±0°02, h1km±11km, n93, σ1§57/169, 2C-1D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMAL	**Malaga-Limoner**	**0.62**	**323**	*e*P	**Pb**	**20 09 02.6**	**-0.3**
EMAL				*e*S	**Sb**	**20 09 11.1**	**-1.1**
ELGU	**Los Guajares,**	**0.66**	**24**	⇑Pg	**Pg**	**20 09 02.8**	**+1.0**
	179nm,0.1s,SNR=18						
ELGU				Lg	Lg	20 09 11.4	
	3µm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**0.72**	**294**	Pg	**Pg**	**20 09 03.5**	**+0.5**
	21nm,0.3s,SNR=111						
EMIJ				Lg	Lg	20 09 12.9	
	168nm,0.1s,SNR=30						
EALB	**Alboran**	**0.82**	**113**	Pg	Pg	20 09 05.1	+0.2
	34nm,0.1s,SNR=7.9						
EALB				Lg	Lg	20 09 15.7	
	513nm,0.2s,SNR=7.9						
EGOR	**Sierra Gorda,**	**0.85**	**352**	⇓Pg	**Pg**	**20 09 06.3**	**+0.8**
	9.0nm,0.1s,SNR=18						
EGOR				Lg	Lg	20 09 18.7	
	71nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**1.02**	**24**	Pg	**Pg**	**20 09 09.3**	**+0.4**
	41nm,0.3s,SNR=18						
EQUE				Lg	Lg	20 09 21.9	
	52nm,0.2s						
PALE	**Palemas**	**1.05**	**179**	P	**Pg**	**20 09 09.1**	**-0.2**
PALE				S	**Sg**	**20 09 20.7**	**-2.3**
EBER	**Berja**	**1.06**	**54**	Pg	**Pg**	**20 09 08.9**	**-0.8**
	11nm,0.3s,SNR=68						
EBER				Lg	Lg	20 09 23.0	
	142nm,0.2s						
ECEU	**Ceuta**	**1.21**	**253**	Pg	**Pg**	**20 09 11.3**	**-1.1**
	0.4nm,0.1s,SNR=7.9						
ECEU				Lg	Lg	20 09 26.8	
	13nm,0.1s,SNR=7.9						
EJIF	**Jimena Fronter**	**1.23**	**279**	Pg	**Pg**	**20 09 12.6**	**-0.2**
	180nm,0.2s,SNR=7.9						
EJIF				Lg	Lg	20 09 29.3	
	2µm,0.3s,SNR=7.9						
EMEL	**Melilla**	**1.26**	**140**	Pg	Pn	20 09 12.5	-1.5
	16nm,0.1s,SNR=7.9						
EMEL				Lg	Lg	20 09 28.1	
	96nm,0.2s,SNR=4.0						
GOG	**Mont Gurugu**	**1.30**	**143**	P	Pn	20 09 12.7	-2.0
GOG				S	**Sg**	**20 09 28.9**	**-2.3**
GORA	**Gorafe**	**1.41**	**31**	Pg	**Pn**	**20 09 16.7**	**+0.5**
	10nm,0.1s,SNR=7.9						
GORA				Lg	Lg	20 09 35.2	
	170nm,0.3s,SNR=7.9						
ENIJ	**Nijar**	**1.57**	**63**	Pg	Pn	20 09 16.6	-1.7
	30nm,0.3s,SNR=7.9						
ENIJ				Lg	Lg	20 09 35.2	
	85nm,0.3s,SNR=7.9						
ESPR	**Espera**	**1.64**	**292**	Pg	**Pn**	**20 09 19.8**	**+0.6**
	2.3nm,0.2s,SNR=4.6						
ESPR				Lg	Lg	20 09 42.7	
	11nm,0.2s,SNR=7.9						
EQES	**Quesada**	**1.69**	**25**	⇑Pg	**Pn**	**20 09 21.2**	**+1.2**
	25nm,0.1s,SNR=18						
EQES				Lg	Lg	20 09 43.2	
	95nm,0.3s,SNR=7.9						
AKLM	**AKL**	**1.76**	**177**	P	Pn	20 09 17.0	-3.9
AKLM				S	**Sn**	**20 09 43.4**	**-0.6**
EADA	**Adamuz**	**1.96**	**346**	Pn	**Pn**	**20 09 24.5**	**+0.8**
	0.6nm,0.2s,SNR=87						
EADA				Pg	**Pb**	**20 09 26.9**	**+1.2**
	9.4nm,0.3s,SNR=8.9						
EADA				Sn	**Sn**	**20 09 49.2**	**+0.3**
	20nm,0.3s						
EADA				Lg	Lg	20 09 53.3	
	84nm,0.4s,SNR=5.1						
ECAB	**El Cabril**	**2.15**	**328**	Pn	**Pn**	**20 09 26.3**	**+0.1**
	2.3nm,0.3s,SNR=23						
ECAB				Pg	**Pb**	**20 09 29.6**	**+0.6**
	3.2nm,0.2s,SNR=7.9						
ECAB				Sn	**Sn**	**20 09 53.6**	**0.0**
	15nm,0.3s,SNR=8.3						
ECAB				Lg	Lg	20 09 58.6	
	28nm,0.4s,SNR=7.9						
SESP	**Santiago Espad**	**2.17**	**31**	Pn	**Pn**	**20 09 26.8**	**+0.1**
	2.1nm,0.2s,SNR=7.9						
SESP				Pg	**Pb**	**20 09 29.9**	**+0.6**
	14nm,0.2s,SNR=7.9						
SESP				Sn	**Sn**	**20 09 54.1**	**-0.1**
	61nm,0.3s,SNR=7.9						
SESP	**Santiago Espad**	**2.17**	**31**	P	**Pn**	**20 09 30.7**	**+4.1**
SESP				S	**Sn**	**20 09 58.0**	**+3.8**
EMIN	**Mina Concepcio**	**2.64**	**305**	Pn	**Pn**	**20 09 33.0**	**+0.1**
	1.3nm,0.3s,SNR=34						
EMIN				Sn	**Sn**	**20 10 04.6**	**-1.0**
	5.6nm,0.4s,SNR=6.4						
EMUR	**La Murta**	**2.68**	**53**	Pn	**Pn**	**20 09 33.1**	**-0.5**
	3.1nm,0.3s,SNR=5.7						
EMUR				Sn	**Sn**	**20 10 03.5**	**-3.3**
	15nm,0.7s,SNR=6.8						
ETOB	**Tobarra**	**3.05**	**38**	Pn	**Pn**	**20 09 39.5**	**+0.8**
	2.7nm,0.5s,SNR=8.7						
ETOB				Sn	**Sn**	**20 10 16.0**	**+0.1**
	12nm,0.7s,SNR=4.7						
EGRO	**El Granado**	**3.10**	**295**	Pn	**Pn**	**20 09 39.8**	**+0.5**
	4.1nm,0.3s,SNR=12						
EGRO				Sn	**Sn**	**20 10 15.6**	**-1.3**
	6.9nm,0.2s						
PBAR	**Barrancos**	**3.11**	**309**	Pn	**Pn**	**20 09 40.3**	**+0.9**
PBAR				Sn	**Sn**	**20 10 16.6**	**-0.6**
	19nm,0.8s						
PBAR	**Barrancos**	**3.11**	**309**	*e*Pn	**Pn**	**20 09 40.3**	**+0.9**
PBAR				*e*Sn	**Sn**	**20 10 16.6**	**-0.6**
PBAR				A	A	20 10 19.2	
	19nm,0.8s						
PVAQ	**Vaqueiros**	**3.22**	**292**	Pn	**Pn**	**20 09 41.6**	**+0.6**
PVAQ				Sn	**Sn**	**20 10 19.0**	**-1.0**
	7.7nm,0.6s						
PVAQ	**Vaqueiros**	**3.22**	**292**	*e*Pn	**Pn**	**20 09 41.6**	**+0.6**
PVAQ				*e*Sn	**Sn**	**20 10 19.0**	**-1.0**
PVAQ				A	A	20 10 21.1	
	7.7nm,0.6s						
PAB	**San Pablo**	**3.29**	**355**	Pn	**Pn**	**20 09 43.1**	**+1.1**
	1.7nm,0.4s,SNR=7.9						
PAB				Pg	**Pb**	**20 09 50.5**	**+2.1**
	0.1nm,0.6s,SNR=7.9						
PAB				Sn	**Sn**	**20 10 21.1**	**-0.7**
	0.9nm,0.3s,SNR=7.9						
PAB				Lg	Lg	20 10 33.4	
	3.2nm,0.2s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**3.33**	**288**	Pn	**Pn**	**20 09 43.2**	**+0.6**
PBDV				Sn	**Sn**	**20 10 21.6**	**-1.3**
	7.7nm,1.1s						
PBDV	**Barranco-do-Ve**	**3.33**	**288**	*e*Pn	**Pn**	**20 09 43.2**	**+0.6**
PBDV				*e*Sn	**Sn**	**20 10 21.6**	**-1.3**
PBDV				A	A	20 10 25.9	
	7.7nm,1.1s						
ESDC	**Sonseca Array**	**3.40**	**360**	Pn	**Pn**	**20 09 44.6**	**+1.1**
	1.1nm,0.3s,baz=182,slow=12,SNR=18						
ESDC				Pg	**Pb**	**20 09 51.2**	**+0.9**
	1.0nm,0.3s,baz=184,slow=12,SNR=7.9						
ESDC				Sn	**Sn**	**20 10 23.6**	**-0.9**
	0.6nm,0.3s,baz=188,slow=21,SNR=4.1						
ESDC				Lg	Lg	20 10 39.2	
	8.9nm,0.3s,baz=181,slow=28,SNR=7.9						
MD31	**MD31**	**3.46**	**191**	P	**Pn**	**20 09 46.3**	**+2.0**
MD31				S	**Sn**	**20 10 27.4**	**+1.4**
EBAD	**Badajoz**	**3.47**	**317**	Pn	**Pn**	**20 09 44.8**	**+0.4**
	6.4nm,0.2s,SNR=51						
EBAD				Sn	**Sn**	**20 10 24.8**	**-1.4**
	7.7nm,0.3s,SNR=10						
PCVE	**Castro Verde**	**3.54**	**294**	Pn	**Pn**	**20 09 46.1**	**+0.7**
PCVE				Sn	**Sn**	**20 10 26.3**	**-1.6**
	5.2nm,1.0s						
PCVE	**Castro Verde**	**3.54**	**294**	*e*Pn	**Pn**	**20 09 46.1**	**+0.7**
PCVE				*e*Sn	**Sn**	**20 10 26.3**	**-1.6**
PCVE				A	A	20 10 30.9	
	5.2nm,1.0s						
ZHG	**ZHG**	**3.58**	**219**	P	**Pn**	**20 09 48.0**	**+2.1**
ZHG				S	**Sn**	**20 10 34.3**	**+5.4**
PBEJ	**Beja**	**3.58**	**300**	Pn	**Pn**	**20 09 46.7**	**+0.8**
PBEJ				Sn	**Sn**	**20 10 28.2**	**-0.7**
	1.9nm,0.4s						
PBEJ	**Beja**	**3.58**	**300**	*e*Pn	**Pn**	**20 09 46.7**	**+0.8**
PBEJ				*e*Sn	**Sn**	**20 10 28.2**	**-0.7**
PBEJ				A	A	20 10 34.2	
	3.7nm,0.4s						
MESJ	**Messejana**	**3.75**	**296**	*e*P	**Pn**	**20 09 49.3**	**+1.1**
MESJ				*e*S	**Sn**	**20 10 31.0**	**-2.1**
MESJ				AML	AML	20 10 34.5	
	comp=N,7.7nm,0.5s						
MESJ	**Messejana**	**3.75**	**296**	Pn	**Pn**	**20 09 49.8**	**+1.5**
MESJ				Sn	**Sn**	**20 10 32.2**	**-0.9**
	comp=N,4.7nm,0.1s						
MESJ	**Messejana**	**3.75**	**296**	*e*Pn	**Pn**	**20 09 49.8**	**+1.5**
MESJ				*e*Sn	**Sn**	**20 10 32.2**	**-0.9**
MESJ				A	A	20 10 34.1	
	comp=N,4.7nm,0.1s						
PESTR	**Estremoz**	**3.88**	**313**	*e*Pn	**Pn**	**20 09 51.5**	**+1.4**
PESTR				*e*Sn	**Sn**	**20 10 35.3**	**-1.0**
MORF	**Marmelete**	**3.91**	**287**	*e*P	**Pn**	**20 09 51.3**	**+0.8**
MORF				*e*S	**Sn**	**20 10 34.7**	**-2.3**
MORF				AML	AML	20 10 41.3	
	comp=N,13nm,0.3s						
MORF	**Marmelete**	**3.91**	**287**	Pn	**Pn**	**20 09 51.4**	**+0.9**
MORF				Sn	**Sn**	**20 10 36.1**	**-0.9**
	comp=N,7.2nm,0.5s						
MORF	**Marmelete**	**3.91**	**287**	*e*Pn	**Pn**	**20 09 51.4**	**+0.9**
MORF				*e*Sn	**Sn**	**20 10 36.1**	**-0.9**
MORF				A	A	20 10 41.1	
	comp=N,7.2nm,0.5s						
EVO	**Evora**	**3.94**	**306**	Pn	**Pn**	**20 09 52.2**	**+1.3**
EVO				Sn	**Sn**	**20 10 37.4**	**-0.4**
	comp=N,18nm,0.3s						
EVO	**Evora**	**3.94**	**306**	*e*P	**Pn**	**20 09 52.2**	**+1.3**
EVO				*e*S	**Sn**	**20 10 36.4**	**-1.4**
EVO	**Evora**	**3.94**	**306**	*e*Pn	**Pn**	**20 09 52.2**	**+1.3**
EVO				*e*Sn	**Sn**	**20 10 37.4**	**-0.4**
EVO				A	A	20 10 38.3	
	comp=N,18nm,0.3s						
PFVI	**Vila Bisbo**	**4.01**	**284**	Pn	**Pn**	**20 09 53.0**	**+1.2**
	comp=N,2.7nm,0.5s,SNR=7.9						
PFVI				Sn	**Sn**	**20 10 38.4**	**-0.9**
	comp=N,52nm,0.8s,SNR=7.9						
PFVI	**Vila Bisbo**	**4.01**	**284**	*e*Pn	**Pn**	**20 09 53.1**	**+1.3**
PFVI				*e*Sn	**Sn**	**20 10 38.7**	**-0.7**
PFVI				A	A	20 10 41.4	
	comp=N,10nm,0.9s						
PTEO	**Sao Teotonio**	**4.03**	**290**	Pn	**Pn**	**20 09 53.4**	**+1.4**
PTEO				Sn	**Sn**	**20 10 40.6**	**+0.7**
	comp=N,2.8nm,1.0s						
PTEO	**Sao Teotonio**	**4.03**	**290**	*e*Pn	**Pn**	**20 09 53.4**	**+1.4**
PTEO				*e*Sn	**Sn**	**20 10 40.6**	**+0.7**
PTEO				A	A	20 10 42.5	
	comp=N,5.5nm,1.0s						
UCM	**Universidad Co**	**4.07**	**8**	*e*P	**Pn**	**20 09 53.8**	**+1.1**
UCM				*e*S	**Sn**	**20 10 40.0**	**-1.0**
PNCL	**Nicolau / Gran**	**4.09**	**298**	Pn	**Pn**	**20 09 53.6**	**+0.7**
PNCL				Sn	**Sn**	**20 10 40.6**	**-0.7**
	comp=N,3.6nm,0.2s						
PNCL	**Nicolau / Gran**	**4.09**	**298**	*e*Pn	**Pn**	**20 09 53.6**	**+0.7**
PNCL				*e*Sn	**Sn**	**20 10 40.6**	**-0.7**
PNCL				A	A	20 10 42.2	
	comp=N,3.6nm,0.2s						
EPLA	**Plasencia**	**4.14**	**337**	Pn	**Pn**	**20 09 55.2**	**+1.6**
	comp=N,2.7nm,0.4s,SNR=11						
EPLA				Sn	**Sn**	**20 10 42.7**	**-0.1**
	comp=N,5.4nm,0.4s						
EPLA				Lg	Lg	20 11 00.3	
	comp=N,4.2nm,0.3s,SNR=7.9						
PMRV	**Marv??o**	**4.16**	**320**	Pn	**Pn**	**20 09 55.2**	**+1.2**
PMRV				Sn	**Sn**	**20 10 41.9**	**-1.4**
	comp=N,7.4nm,0.5s						
PMRV	**Marv??o**	**4.16**	**320**	*e*Pn	**Pn**	**20 09 55.2**	**+1.2**
PMRV				*e*Sn	**Sn**	**20 10 41.9**	**-1.4**
PMRV				A	A	20 11 11.9	
	comp=N,7.4nm,0.5s						
GUD	**Guadarrama**	**4.37**	**358**	Pn	**Pn**	**20 09 58.3**	**+1.4**
	comp=N,1.3nm,0.4s,SNR=8.0						
GUD				Lg	Lg	20 11 09.0	
	comp=N,5.2nm,0.4s,SNR=5.0						
PMTG	**Montargil**	**4.39**	**311**	Pn	**Pn**	**20 09 58.2**	**+1.2**
PMTG				Sn	**Sn**	**20 10 47.6**	**-1.2**
	comp=N,5.3nm,0.6s						
PMTG	**Montargil**	**4.39**	**311**	*e*Pn	**Pn**	**20 09 58.2**	**+1.2**
PMTG				*e*Sn	**Sn**	**20 10 47.6**	**-1.2**
PMTG				A	A	20 10 48.0	
	comp=N,5.3nm,0.6s						
PCBR	**Castelo Branco**	**4.52**	**323**	Pn	**Pn**	**20 10 00.4**	**+1.6**
PCBR				Sn	**Sn**	**20 10 50.4**	**-1.6**
	comp=N,3.2nm,0.3s						
PCBR	**Castelo Branco**	**4.52**	**323**	*e*Pn	**Pn**	**20 10 00.4**	**+1.6**
PCBR				*e*Sn	**Sn**	**20 10 50.4**	**-1.6**
PCBR				A	A	20 10 51.7	
	comp=N,6.5nm,0.3s						
ETOR	**Torete**	**4.78**	**18**	Pn	**Pn**	**20 10 02.8**	**+0.2**
	comp=N,5.2nm,0.3s,SNR=8.1						
ETOR				Pg	**Pb**	**20 10 18.1**	**+4.2**
	comp=N,0.1nm,0.8s,SNR=7.9						
ETOR				Sn	**Sn**	**20 10 56.7**	**-1.9**
	comp=N,14nm,0.4s						
ETOR				Lg	Lg	20 11 20.2	
	comp=N,12nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**4.92**	**33**	Pn	**Pn**	**20 10 04.8**	**+0.3**
	comp=N,0.4nm,0.2s,SNR=7.9						
EMOS				Sn	**Sn**	**20 10 59.2**	**-3.0**
	comp=N,3.4nm,0.9s,SNR=7.9						
MTE	**Manteigas**	**5.00**	**327**	Pn	**Pn**	**20 10 07.0**	**+1.6**
MTE				Sn	**Sn**	**20 11 03.3**	**-0.6**
	comp=N,5.3nm,0.5s						
MTE	**Manteigas**	**5.00**	**327**	*e*Pn	**Pn**	**20 10 07.0**	**+1.6**
MTE				*e*Sn	**Sn**	**20 11 03.3**	**-0.6**
MTE				A	A	20 11 34.7	
	comp=N,11nm,0.5s						
PMAFR	**Mafra**	**5.01**	**304**	Pn	**Pn**	**20 10 06.1**	**+0.6**
	comp=N,4.7nm,0.4s,SNR=7.9						
PMAFR				Sn	**Sn**	**20 11 01.2**	**-2.8**
	comp=N,33nm,0.8s,SNR=7.9						
PMAFR	**Mafra**	**5.01**	**304**	*e*Pn	**Pn**	**20 10 07.0**	**+1.5**
PMAFR				*e*Sn	**Sn**	**20 11 02.6**	**-1.4**
PMAFR				A	A	20 11 03.4	
	comp=N,14nm,0.4s						
PSBE	**So Bento**	**5.01**	**312**	*e*Pn	**Pn**	**20 10 07.2**	**+1.6**
PSBE				*e*Sn	**Sn**	**20 11 03.1**	**-1.2**
EIBI	**Ibiza**	**5.03**	**55**	Pn	**Pn**	**20 10 05.9**	**+0.1**
	comp=N,1.7nm,0.3s,SNR=7.9						
EIBI				Sn	**Sn**	**20 11 01.0**	**-3.6**
	comp=N,1.8nm,0.5s,SNR=7.9						
PCAS	**Casmilo, Conde**	**5.20**	**318**	Pn	**Pn**	**20 10 10.2**	**+2.0**
PCAS				Sn	**Sn**	**20 11 06.5**	**-2.4**
	comp=N,6.6nm,0.5s						
PCAS	**Casmilo, Conde**	**5.20**	**318**	*e*Pn	**Pn**	**20 10 10.2**	**+2.0**
PCAS				*e*Sn	**Sn**	**20 11 06.5**	**-2.4**
PCAS				A	A	20 11 11.7	
	comp=N,6.6nm,0.5s						
COI	**Coimbra**	**5.27**	**320**	Pn	**Pn**	**20 10 10.9**	**+1.8**
COI	**Coimbra**	**5.27**	**320**	*e*Pn	**Pn**	**20 10 10.9**	**+1.8**
PVIS	**Viseu**	**5.41**	**326**	Pn	**Pn**	**20 10 12.5**	**+1.4**
PVIS				Sn	**Sn**	**20 11 11.7**	**-2.3**
	comp=N,1.8nm,0.3s						
PVIS	**Viseu**	**5.41**	**326**	*e*Pn	**Pn**	**20 10 12.5**	**+1.4**
PVIS				*e*Sn	**Sn**	**20 11 11.7**	**-2.3**
PVIS				A	A	20 11 45.1	
	comp=N,3.6nm,0.3s						
MVO	**Moncorvo**	**5.45**	**335**	Pn	**Pn**	**20 10 12.8**	**+1.2**
	comp=N,1.7nm,0.1s,SNR=13						
MVO				Sn	**Sn**	**20 11 12.2**	**-2.8**
	comp=N,7.4nm,0.6s						
MVO				Lg	Lg	20 11 41.1	
	comp=N,5.9nm,0.4s,SNR=4.0						
MVO	**Moncorvo**	**5.45**	**335**	*e*Pn	**Pn**	**20 10 13.0**	**+1.4**
MVO				*e*Sn	**Sn**	**20 11 12.7**	**-2.3**
MVO				A	A	20 11 49.4	
	comp=N,5.8nm,0.5s						
PVRL	**Vila Real**	**5.80**	**331**	Pn	**Pn**

WR0	**Warramunga Arr**	**49.97**	**258**	P	**P**	**20 32 02.4**	**-0.7**
WR0				IAmb	IAmb	20 32 12.3	
	comp=Z,9.0nm,1.4s						
WB0	**Warramunga Arr**	**50.12**	**258**	P	**P**	**20 32 03.5**	**-0.8**
WB2	**Warramunga Arr**	**50.15**	**258**	P	**P**	**20 32 03.3**	**-1.1**
WB2				IAmb	IAmb	20 32 16.3	
	comp=Z,9.7nm,1.3s						
WRAB	**Tennant Creek**	**50.15**	**258**	P	**P**	**20 32 03.1**	**-1.4**
WRAB				IAmb	IAmb	20 32 05.9	
	comp=Z,4.0nm,0.8s						
WRA	**Warramunga Arr**	**50.16**	**258**	P	**P**	**20 32 03.4**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=97,slow=7.5,SNR=18						
WRA	**Warramunga Arr**	**50.16**	**258**	P	**P**	**20 32 03.4**	**-1.1**
AS31	**Alice Springs**	**50.27**	**253**	P	**P**	**20 32 03.6**	**-1.8**
ASAR	**Alice Springs**	**50.27**	**253**	P	**P**	**20 32 04.7**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=91,slow=8.0,SNR=19						
ASAR	**Alice Springs**	**50.27**	**253**	P	**P**	**20 32 04.3**	**-1.1**
FORT	**Forrest**	**55.30**	**244**	P	**P**	**20 32 42.4**	**-0.1**
FITZ	**Fitzroy Crossi**	**58.56**	**259**	P	**P**	**20 33 05.5**	**-0.1**
FITZ				IAmb	IAmb	20 33 17.2	
	comp=Z,3.8nm,1.1s						
WCI	**Wyandotte Cave**	**97.60**	**52**	P	**P**	**20 36 43.5**	**+0.2**
P48A	**Milroy**	**98.58**	**51**	P	**P**	**20 36 47.4**	**-0.2**

NEIC ***14*** *20:23:17.9±1.0, 6.°32S±0.°10×147.°6E±0.°1, h61km±4km, mb4.1/10, Error ellipse: s-maj=15.0km s-min=13.9km az=99.0*

IDC ***14*** *20:23:19.3±1.6, 6.°27S×147.°47E, h74km±17km, mb3.4/7, mb1 3.7/12, mb1mx3.5/37, mbtmp3.8/12, MS2.8/3, Ms1 2.8/3, ms1mx2.6/17, Error ellipse: s-maj=19.1km s-min=10.7km az=119.0*

ISC 14 20:23:18.1±0.6, 6.°25S±0.°06×147.°43E±0.°07, h63km, n29, σ1°63/33, mb3.5/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.14**	**185**	P	**Pn**	**20 24 05.3**	**+0.1**
	6.7nm,0.3s,baz=328,slow=7.1,SNR=13						
PMG				S	**Sn**	**20 24 43.8**	**+2.2**
	17nm,0.3s,baz=170,slow=22,SNR=7.7						
PMG				LR	LR	20 25 41.5	
	comp=Z,142nm,21.0s,baz=1.5,slow=45						
PMG	**Port Moresby**	**3.14**	**185**		**Pn**	**20 24 05.1**	**-0.1**
KRVT	**Keravat (AS076**	**4.97**	**67**	P	**Pn**	**20 24 29.2**	**-1.0**
	6.0nm,0.3s,baz=226,slow=1.1,SNR=5.2						
KRVT				S	**Sn**	**20 25 28.3**	**+1.9**
	baz=208,slow=20,SNR=1.3						
KRVT				LR	LR	20 26 27.6	
	comp=Z,108nm,18.2s,baz=248,slow=38						
RABL	**Rabaul**	**5.14**	**67**		**Pn**	**20 24 31.4**	**-1.2**
JAY	**Jayapura**	**7.66**	**299**	P	**Pn**	**20 25 10.3**	**+3.1**
	0.6nm,0.3s,baz=146,slow=16,SNR=1.9						
JAY				LR	LR	20 28 36.4	
	comp=Z,88nm,21.3s,baz=60,slow=41						
COEN	**Coen**	**8.72**	**208**	Pn	**Pn**	**20 25 21.7**	**0.0**
SIJI	**Sorong**	**16.99**	**288**	P	**P**	**20 27 14.1**	**+1.4**
	0.4nm,0.3s,baz=81,slow=13,SNR=3.1						
SIJI	**Sorong**	**16.99**	**288**	P	**P**	**20 27 14.1**	**+1.4**
SIJI					**pP**	**20 27 20.9**	**-5.4**
WB0	**Warramunga Arr**	**18.46**	**222**	P	**P**	**20 27 29.4**	**+0.5**
WB0				IAmb	IAmb	20 28 05.8	
	comp=Z,8.5nm,1.2s						
WR0	**Warramunga Arr**	**18.50**	**221**		**P**	**20 27 28.8**	**-0.6**
WR0				IAmb	IAmb	20 27 32.4	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**18.62**	**222**	P	**P**	**20 27 30.6**	**-0.1**
WB2				IAmb	IAmb	20 28 11.2	
	comp=Z,20nm,1.6s						
WRA	**Warramunga Arr**	**18.62**	**222**	P	**P**	**20 27 30.7**	**0.0**
	comp=Z,0.3nm,0.3s,baz=52,slow=11,SNR=15						
WRA				S	**Sn**	**20 30 55.1**	**-4.3**
	comp=Z,0.1nm,0.3s,baz=46,slow=23,SNR=3.1						
WRA	**Warramunga Arr**	**18.62**	**222**	P	**P**	**20 27 30.9**	**+0.2**
KNRA	**Kununurra**	**20.56**	**241**	P	**P**	**20 27 52.3**	**+0.5**
AS31	**Alice Springs**	**21.65**	**216**	P	**P**	**20 28 03.1**	**-0.4**
ASAR	**Alice Springs**	**21.66**	**216**	P	**P**	**20 28 03.6**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=53,slow=9.0,SNR=17						
ASAR	**Alice Springs**	**21.66**	**216**	P	**P**	**20 28 03.4**	**-0.2**
FITZ	**Fitzroy Crossi**	**24.30**	**239**	P	**P**	**20 28 29.9**	**+0.1**
	comp=Z,7.5nm,0.8s,baz=53,slow=10,SNR=20						
FITZ	**Fitzroy Crossi**	**24.30**	**239**	P	**P**	**20 28 29.9**	**+0.1**
FITZ				IAmb	IAmb	20 28 31.7	
	comp=Z,8.5nm,0.9s						
STKA	**Stephens Creek**	**26.07**	**191**	P	**P**	**20 28 44.6**	**-1.2**
	comp=Z,0.8nm,0.5s,baz=350,slow=11,SNR=3.1						
STKA	**Stephens Creek**	**26.07**	**191**	P	**P**	**20 28 45.0**	**-0.8**
MJAR	**Matsushiro Arr**	**43.44**	**349**	P	**P**	**20 31 13.9**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=173,slow=11,SNR=4.1						
SONM	**Songino Array**	**64.83**	**331**	P	**P**	**20 33 51.7**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=134,slow=6.2,SNR=2.4						
VNDA	**Vanda**	**71.64**	**177**	P	**P**	**20 34 33.3**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=342,slow=5.7,SNR=7.9						
VNDA	**Vanda**	**71.64**	**177**	P	**P**	**20 34 33.4**	**+0.8**
VNDA				IAmb	IAmb	20 34 40.4	
	comp=Z,7.9nm,1.6s						
QSPA	**South Pole Qui**	**83.72**	**180**	P	**P**	**20 35 40.4**	**+0.3**
ILAR	**Eielson Array**	**85.55**	**23**	P	**P**	**20 35 48.9**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=250,slow=4.7,SNR=2.2						
TORD	**Torodi Ar. Bea**	**145.56**	**284**	PKPbc	**PKPdf**	**20 42 50.3**	**0.0**
	comp=Z,0.7nm,0.5s,baz=73,slow=4.3,SNR=6.5						
TORD	**Torodi Ar. Bea**	**145.56**	**284**		**PKPbc**	**20 42 50.8**	**+0.3**

PRU 14 20:40:42.0±0.0, 50.°14N×19.°16E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.72**	**246**	*e*PG	Pg	20 40 55.4	-0.4
OKC				*e*SG	Sg	20 41 05.9	+0.8
	comp=Z,5.1nm,0.7s						
LANS	**Liptovska Anna**	**1.01**	**168**	*e*PG	Pg	20 41 01.2	-0.1
LANS				*e*SG	Sg	20 41 14.4	0.0
LANS				*e*LG	Lg	20 41 16.2	
MORC	**Moravsky Berou**	**1.11**	**251**	*e*PG	Pg	20 41 03.0	-0.2
MORC				*e*SG	Sg	20 41 16.1	-1.4
KRLC	**Kraliky**	**1.53**	**268**	*e*PG	Pn	20 41 09.9	-0.8
KRLC				*e*SG	Sg	20 41 30.6	-0.6
	comp=Z,4.5nm,0.3s						
VYHS	**Vyhne**	**1.66**	**187**	*e*PN	Pn	20 41 11.1	-1.3
VYHS				*e*SN	Sn	20 41 32.7	-1.7
DPC	**Dobruska-Polom**	**1.83**	**278**	*e*PG	Pb	20 41 16.0	-0.4
DPC				*e*SG	Sb	20 41 40.4	+0.5
	comp=Z,4.7nm,0.7s						
VRAC	**Vranov**	**1.86**	**244**	*e*PN	Pn	20 41 15.5	+0.3
VRAC				*e*SG	Sn	20 41 39.8	+0.4
OSTC	**Ostas**	**1.93**	**284**	*e*SG	Sg	20 41 44.0	0.0
	comp=Z,2.9nm,0.6s						
CHVC	**Chvalec**	**2.04**	**284**	*e*PG	Pn	20 41 18.7	+1.1
CHVC				*e*SG	Sb	20 41 46.2	+0.4
KRUC	**Moravsky**	**2.10**	**240**	*e*PN	Pn	20 41 18.6	+0.2
KRUC				*e*SG	Sb	20 41 47.2	-0.3

PRU 14 20:55:46.3±0.0, 51.°45N×16.°24E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHVC	**Chvalec**	**0.87**	**188**	*e*PG	Pg	20 56 02.2	-0.8
CHVC				*e*SG	Sg	20 56 14.0	-0.2
	comp=Z,2.6nm,0.3s						
OSTC	**Ostas**	**0.90**	**181**	*e*PG	Pg	20 56 02.8	-0.6
OSTC				*e*SG	Sg	20 56 15.2	+0.2
	comp=Z,2.6nm,0.5s						
UPC	**Upice**	**0.95**	**189**	*e*PG	Pg	20 56 04.2	-0.4
UPC				*e*SG	Sg	20 56 16.5	-0.4
	comp=Z,5.4nm,0.3s						
DPC	**Dobruska-Polom**	**1.10**	**177**	*e*PG	Pg	20 56 07.0	-0.4
DPC				*e*SG	Sg	20 56 20.8	-0.9
	comp=Z,2.3nm,0.6s						
KRLC	**Kraliky**	**1.42**	**166**	*e*PG	Pn	20 56 12.3	-1.1
KRLC				*e*SG	Sg	20 56 31.6	-0.2
	comp=Z,2.6nm,0.5s						
BRG	**Berggiesshubel**	**1.56**	**249**	SG	Sn	20 56 32.8	-3.3
	3.0nm,0.3s						
OKC	**Ostrava-Krasne**	**2.02**	**142**	*e*SG	Sb	20 56 50.3	+0.8
	comp=Z,2.1nm,0.4s						
KHC	**Kasperske Hory**	**2.88**	**217**	*e*SG	Sg	20 57 17.0	-1.8

BJI ***14*** *20:56:11.4±0.0, 6.°46N×144.°89E, h5km, mB6.1/86, mb5.5/79, Ms6.1/99, Ms7 5.9/90*

IDC ***14*** *20:56:12.1±0.3, 6.°45N×144.°92E, h0km, mb5.3/56, mb1 5.3/60, mb1mx5.3/63, mbtmp5.3/60, ML2.7/1, MS5.7/35, Ms1 5.7/35, ms1mx5.6/42, Error ellipse: s-maj=10.6km s-min=7.2km az=78.0*

DJA ***14*** *20:56:13.9±0.2, 6.°N±2.°×14.°5E±.°, h10km, M5.9/104, mB6.3/88, mb5.8/104, MLv6.8/1, Mw(mB)6.0/88, Mwp5.9/65*

NEIC ***14*** *20:56:13.2±1.6, 6.°45N±0.°06×144.°92E±0.°07, h10km±1km, mb5.7/346, Ms_20 6.0/763, Mwb6.1/57, Mww6.1, Mwc6.2(GCMT), Error ellipse: s-maj=12.1km s-min=8.2km az=237.0*

NEIC ***14*** *20:56:13.1, 6.°47N×144.°93E, h6km, Moment Tensor Solution. Moment tensor: Scale 1018Nm; Mrr=0.10; Mθθ1.09; Mϕϕ-0.98; Mrθ-0.38; Mθϕ 1.33; Mϕr0.12; Fault plane solution: M0 1.73000×1018 NP1:ϕs108.76000°, δ89.18000°, λ-13.34000°. NP2:ϕs198.96000°, δ76.66000°, λ-179.15000°. Principal axes: T 1.7818, Plg9.0000°, Azm155.0000°; N -0.0995, Plg77.0000°, Azm285.0000°; P -1.6823, Plg10.0000°, Azm63.0000°;*

MOS ***14*** *20:56:15.3±0.9, 6.°42N×144.°90E, h33km, mb6.0/57, MS5.8/80 Error ellipse: s-maj=7.2km s-min=4.2km az=108.6*

NEIC ***14*** *20:56:15, 6.°46N×144.°88E, h26km, Moment Tensor Solution. Moment tensor: Scale 1018Nm; Mrr-0.42; Mθθ1.55; Mϕϕ-1.13; Mrθ-0.56; Mθϕ 1.34; Mϕr0.51; Fault plane solution: M0 2.07000×1018 NP1:ϕs110.00000°, δ79.00000°, λ-22.00000°. NP2:ϕs205.00000°, δ68.00000°, λ-167.00000°. Principal axes: T 2.1489, Plg7.0000°, Azm159.0000°; N -0.1617, Plg65.0000°, Azm265.0000°; P -1.9872, Plg24.0000°, Azm66.0000°;*

GCMT ***14*** *20:56:16.2±0.0, 6.°55N×144.°91E, h20km, MW6.2/174, Moment Tensor Solution. s170,c409; s174,c686; Duration: 3s0 Moment tensor: Scale 1018Nm; Mrr-0.11±.01; Mθθ1.72±.01; Mϕϕ-1.61±.01; Mrθ0.09±.02; Mθϕ 1.75±.01; Mϕr-0.19±.02; Best double couple: M0 2.42600×1018 NP1:ϕs222.00000°, δ86.00000°, λ-176.00000°. NP2:ϕs292.00000°, δ86.00000°, λ-4.00000°. Principal axes: T 2.4710, Plg0.0000°, Azm337.0000°; N -0.0910, Plg85.0000°, Azm68.0000°; P -2.3810, Plg5.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***14*** *20:56:17, 6.°53N×144.°90E, h18km, Moment Tensor Solution. Moment tensor: Scale 1018Nm; Mrr-0.05; Mθθ1.71; Mϕϕ-1.65; Mrθ-0.12; Mθϕ 1.75; Mϕr-0.24; Fault plane solution: M0 2.44000×1018 NP1:ϕs202.00000°, δ90.00000°, λ174.00000°. NP2:ϕs292.00000°, δ84.00000°, λ0.00000°. Principal axes: T 2.4696, Plg5.0000°, Azm157.0000°; N -0.0590, Plg84.0000°, Azm19.0000°; P -2.4107, Plg4.0000°, Azm247.0000°;*

ISC 14 20:56:16.3±0.3, 6.°37N±0.°03×144.°94E±0.°03, h27km±2km, h27km:pP-P, n1500, σ2°16/1322, mb5.7/335, MS5.9/496, 30C-22D, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**7.18**	**359**	P	Pn	20 57 54.9	-4.7
GUMO	**Guam**	**7.18**	**359**		Pn	20 57 54.9	-4.7
GUMO				Sn	Sn	20 59 09.1	-11
JAY	**Jayapura**	**9.78**	**206**	Pn	**Pn**	**20 58 33.8**	**-1.6**
	146nm,0.3s,baz=9.1,slow=3.4,SNR=302						
JAY				Sn	**Sn**	**21 00 17.9**	**-6.5**
	36nm,0.3s,baz=1.2,slow=13,SNR=1.8						
JAY	**Jayapura**	**9.78**	**206**	P	**Pn**	**20 58 33.5**	**-1.9**
	11μm9μm1μm,0.8s						
GENI	**Genyem**	**10.10**	**208**	P	**Pn**	**20 58 38.1**	**-1.5**
	28μm64μm5μm,1.5s						
SMPI	**Sarmi**	**10.37**	**217**	P	**Pn**	**20 58 41.1**	**-2.3**
	41μm9μm474nm,0.7s						
SRPI	**Serui, Papua**	**11.93**	**227**	P	**Pn**	**20 59 04.7**	**-0.1**
	94nm5.4nm,0.6s						
WAMI	**Wamena**	**11.93**	**212**	P	**Pn**	**20 59 07.7**	**+2.9**
	33μm4μm,0.7s						
RABL	**Rabaul**	**12.73**	**145**		**Pn**	**20 59 15.0**	**-0.8**
KRVT	**Keravat (AS076**	**12.75**	**146**	Pn	**Pn**	**20 59 15.6**	**-0.4**
	12nm,0.3s,baz=28,slow=23,SNR=31						
KRVT				LR	LR	21 03 24.4	
	comp=Z,43μm,19.5s,baz=340,slow=34						
RKPI	**Ransiki, Papua**	**13.29**	**234**	P	**Pn**	**20 59 20.8**	**-2.6**
	158μm827nm,0.8s						
PATS	**Pohnpei**	**13.30**	**87**	P	**Pn**	**20 59 19.9**	**-3.6**
	baz=13,SNR=20						
PATS	**Pohnpei**	**13.30**	**87**		Pn	20 59 18.4	-5.0
SIJI	**Sorong**	**15.42**	**243**	Pn	**Pn**	**20 59 50.5**	**-1.7**
	4.9nm,0.3s,baz=60,slow=13,SNR=24						
SIJI				Sn	**Sn**	**21 02 39.8**	**-2.7**
	1.2nm,0.3s,baz=26,slow=23,SNR=1.7						
SIJI				LR	LR	21 04 21.8	
	comp=Z,39μm,21.1s,baz=36,slow=32						
SIJI	**Sorong**	**15.42**	**243**		**Pn**	**20 59 51.5**	**-0.7**
SIJI					**Sn**	**21 02 39.8**	**-2.7**
FAKI	**Fak Fak**	**15.67**	**234**	P	**Pn**	**20 59 53.2**	**-2.3**
	87μm16μm569nm,0.9s						
FAKI	**Fak Fak**	**15.67**	**234**		**Pn**	**20 59 54.2**	**-1.2**
FAKI				IAmb	IAmb	21 00 02.4	
	comp=Z,346nm,0.8s						
PMG	**Port Moresby**	**15.83**	**172**	Pn	**Pn**	**20 59 57.4**	**0.0**
	comp=Z,1.0nm,0.3s,baz=342,slow=9.7,SNR=5.3						
PMG				Sn	**S**	**21 03 01.9**	**-4.2**
	comp=Z,0.7nm,0.3s,baz=189,slow=19,SNR=1.0						
PMG				LR	LR	21 05 23.4	
	comp=Z,31μm,18.9s,baz=354,slow=35						
PMG	**Port Moresby**	**15.83**	**172**	*ce*P	**Pn**	**20 59 56.8**	**-0.6**
PMG				pmax	pmax		
	comp=Z,642nm,1.3s						
PMG				MLR	MLR		
	comp=Z,161μm,18.0s						
PMG	**Port Moresby**	**15.83**	**172**		**Pn**	**20 59 57.0**	**-0.4**
PMG				IAmb	IAmb	21 00 06.9	
	comp=Z,1μm,1.5s						
TNTI	**Ternate**	**18.39**	**253**	P	**P**	**21 00 28.4**	**-1.0**
	comp=Z,43μmcomp=Z,18μmcomp=Z,373nm,2.4s						
TNTI	**Ternate**	**18.39**	**253**	P	**P**	**21 00 29.0**	**-0.4**
BNDI	**Bandanaira**	**18.50**	**235**	P	**P**	**21 00 30.2**	**-0.4**
	comp=Z,55μmcomp=Z,42μmcomp=Z,1μm,1.7s						
MATI	**Mati**	**18.56**	**273**	*e*P	**P**	**21 00 30.0**	**-1.3**
MSAI	**Masohi**	**18.67**	**239**	P	**P**	**21 00 32.7**	**+0.2**
	comp=Z,16μmcomp=Z,8μmcomp=Z,113nm,1.5s						
LBMI	**Labuha**	**18.74**	**249**	P	**Pn**	**21 00 35.3**	**+1.4**
	comp=Z,50μmcomp=Z,981nm,1.2s						
DDMP	**Don Marcelino,**	**19.11**	**270**	*e*P	**P**	**21 00 37.0**	**-0.3**
DAV	**Davao City (W)**	**19.24**	**273**	P	**Pn**	**21 00 39.7**	**-0.1**
	comp=Z,102nm,0.3s,baz=287,slow=1.2,SNR=18						
DAV	**Davao City (W)**	**19.24**	**273**	P	**P**	**21 00 38.3**	**-0.4**
DAV	**Davao City (W)**	**19.24**	**273**	P	**Pn**	**21 00 39.7**	**-0.1**
DMPH	**Davao City--Mi**	**19.31**	**273**	*e*P	**Pn**	**21 00 41.6**	**+0.9**
BUTP	**Butuan**	**19.32**	**279**	*e*P	**P**	**21 00 39.7**	**+0.1**
AAI	**Ambon**	**19.47**	**240**	P	**P**	**21 00 42.0**	**+0.7**
	comp=Z,65μmcomp=Z,23μmcomp=Z,594nm,1.5s						
SAUI	**Saumlaki**	**19.70**	**224**	P	**Pn**	**21 00 45.1**	**-0.3**
	comp=Z,61μmcomp=Z,44μmcomp=Z,1μm,1.8s						
SAUI	**Saumlaki**	**19.70**	**224**	P	**P**	**21 00 44.0**	**+0.3**
KCP	**Kidapawan**	**19.72**	**273**	*e*P	**P**	**21 00 44.0**	**-0.1**
GSPH	**General Santos**	**19.87**	**270**	*e*P	**Pn**	**21 00 47.1**	**-0.4**
NLAI	**Namlea**	**20.20**	**242**	P	**P**	**21 00 49.7**	**+0.4**
	comp=Z,13μmcomp=Z,278nm,1.5s						
MSLP	**Maasin**	**20.22**	**282**	*e*P	**P**	**21 00 49.2**	**-0.2**
SKMP	**Bagumbayan, Su**	**20.27**	**272**	*e*P	**P**	**21 00 48.3**	**-1.7**
COEN	**Coen**	**20.27**	**185**	P	Pn	21 00 51.6	-0.4
	baz=20,SNR=140						
COEN	**Coen**	**20.27**	**185**	P	Pn	21 00 51.4	-0.6
CTBH	**Cotabato--PC H**	**20.56**	**274**	*e*P	**P**	**21 00 52.8**	**-0.4**
OCLP	**Ormoc**	**20.62**	**284**	*e*P	**P**	**21 00 54.0**	**+0.2**
JCJ	**Chichijima**	**20.78**	**353**	P	**P**	**21 00 55.1**	**-0.3**
	comp=Z,663nm,0.9s,baz=230,slow=6.7,SNR=11						
JCJ				S	**S**	**21 04 42.7**	**-3.4**
	comp=Z,53nm,0.8s,baz=101,slow=22,SNR=1.8						
JCJ	**Chichijima**	**20.78**	**353**		**P**	**21 00 56.0**	**+0.6**
JCJ					**S**	**21 04 42.6**	**-3.4**
CNP	**Catarman**	**20.90**	**288**	*e*P	**P**	**21 00 56.9**	**+0.1**
PAGZ	**Pagadian**	**21.44**	**275**	*e*P	**P**	**21 01 03.0**	**+0.3**
DCPH	**Dipolog City**	**21.51**	**277**	*e*P	**P**	**21 01 05.4**	**+2.0**
PVCP	**Virac**	**21.68**	**291**	*e*P	**P**	**21 01 03.8**	**-1.4**
HNR	**Honiara**	**21.68**	**136**	P	**P**	**21 01 06.7**	**+1.5**
	comp=Z,1μm,1.0s,baz=197,slow=3.8,SNR=24						
HNR				S	**S**	**21 05 05.3**	**+1.2**
	comp=Z,96nm,1.0s,baz=162,slow=11,SNR=1.7						
HNR				LR	LR	21 08 38.0	
	comp=Z,24μm,19.1s,baz=304,slow=34						
HNR	**Honiara**	**21.68**	**136**	P	**P**	**21 01 04.8**	**-0.4**
HNR				S	**S**	**21 05 05.3**	**+1.2**
HNR				pmax	pmax		
	comp=Z,1μm,1.0s						
HNR	**Honiara**	**21.68**	**136**	P	**P**	**21 01 04.8**	**-0.4**
KMSI	**Cibinong**	**21.69**	**255**	P	**P**	**21 01 06.4**	**+1.1**
	comp=Z,1μmcomp=Z,10μmcomp=Z,1μm,0.7s						
CNOP	**Candoni, Negro**	**22.34**	**280**	*e*P	**P**	**21 01 10.8**	**-1.5**
GUIM	**Jordan**	**22.50**	**282**	*e*P	**P**	**21 01 12.5**	**-1.5**
RCP	**Roxas**	**22.51**	**285**	*e*P	**P**	**21 01 15.3**	**+1.1**
KDU	**Kakadu**	**22.62**	**213**	P	**P**	**21 01 14.8**	**-0.5**
	baz=23,SNR=66						
JAP	**San Jose, Anti**	**23.14**	**282**	*e*P	**P**	**21 01 19.8**	**-1.0**
LUWI	**Luwuk**	**23.32**	**252**	P	**P**	**21 01 21.5**	**-1.0**
	comp=Z,29μmcomp=Z,20μmcomp=Z,878nm,1.2s						
LUWI	**Luwuk**	**23.32**	**252**	P	**P**	**21 01 21.3**	**-1.2**
OTRP	**Odiongan**	**23.37**	**286**	*e*P	**P**	**21 01 21.0**	**-2.0**
MTN	**Manton Dam**	**23.50**	**216**	P	**P**	**21 01 23.9**	**-0.3**
	baz=24,SNR=19						
MTN	**Manton Dam**	**23.50**	**216**	P	**P**	**21 01 23.9**	**-0.3**
MTN				IAmb	IAmb	21 01 32.1	
	comp=Z,177nm,0.9s						
MRSI	**Marisa**	**23.68**	**257**	P	**P**	**21 01 25.7**	**-0.3**
	comp=Z,26μmcomp=Z,20μmcomp=Z,418nm,1.5s						
BOAC	**Boac**	**23.80**	**289**	*e*P	**P**	**21 01 29.1**	**+2.0**
CUYO	**Cuyo Island**	**24.06**	**282**	*e*P	**P**	**21 01 29.3**	**-0.3**
POLP	**Polilio Island**	**24.07**	**292**	*e*P	**P**	**21 01 30.5**	**+0.8**
SJMP	**San Jose**	**24.25**	**286**	*e*P	**P**	**21 01 30.6**	**-0.8**
APSI	**Ampana**	**24.34**	**254**	P	**P**	**21 01 32.6**	**+0.4**
	comp=Z,12μmcomp=Z,11μmcomp=Z,340nm,1.8s						
MTSU	**Mount Surprise**	**24.35**	**181**	P	**P**	**21 01 33.6**	**+1.3**
	baz=24,SNR=58						
H11S3	**WAKE ISLAND Hy**	**24.38**	**58**	T	T	21 25 34.5	
	baz=242,slow=74						
H11S2	**WAKE ISLAND Hy**	**24.40**	**58**	T	T	21 25 35.5	
	baz=242						
H11S1	**WAKE ISLAND Hy**	**24.40**	**58**	T	T	21 25 37.1	
	baz=242,slow=74						
PGP	**Puerto Galera**	**24.65**	**289**	*e*P	**P**	**21 01 32.7**	**-2.3**
BALP	**Baler**	**24.72**	**294**	*e*P	**P**	**21 01 34.1**	**-1.6**
TGY	**Tagaytay City**	**24.82**	**290**	P	**P**	**21 01 37.6**	**+1.0**
	comp=Z,464nm,0.8s,baz=297,slow=2.0,SNR=23						
TGY				LR	LR	21 09 38.5	
	comp=Z,25μm,21.6s,baz=100,slow=33						
CAUP	**Cauayan**	**24.93**	**297**	*e*P	**P**	**21 01 39.2**	**+1.8**
BUSP	**Coron**	**25.04**	**285**	*e*P	**P**	**21 01 39.1**	**+0.5**
BBSI	**Bau Bau**	**25.24**	**243**	P	**P**	**21 01 40.4**	**0.0**
	comp=Z,82nm,1.3s						
SGCP	**Mt. Cagua**	**25.25**	**300**	*e*P	**P**	**21 01 41.7**	**+1.4**
LUBP	**Lubang**	**25.37**	**289**	*e*P	**P**	**21 01 39.5**	**-2.0**
ENPP	**El Nido**	**25.66**	**283**	*e*P	**P**	**21 01 43.3**	**-0.8**
SMPP	**San Manuel, Pa**	**25.67**	**294**	*e*P	**P**	**21 01 43.1**	**-1.1**
MPSI	**Mapaga**	**25.69**	**257**	P	**P**	**21 01 43.4**	**-1.1**
	comp=Z,20μmcomp=Z,5μmcomp=Z,167nm,1.3s						
APYP	**Conner**	**25.79**	**298**	*e*P	**P**	**21 01 46.1**	**+0.8**
JOW	**Kunigami**	**25.80**	**324**	P	**P**	**21 01 45.0**	**-0.4**
	comp=Z,8.6nm,0.6s,baz=120,slow=14,SNR=7.9						
JOW				LR	LR	21 10 07.8	
	comp=Z,1μm,21.1s,baz=218,slow=32						
JOW	**Kunigami**	**25.80**	**324**	P	**P**	**21 01 43.8**	**-1.6**
JOW				IAmb	IAmb	21 01 49.8	
	comp=Z,147nm,1.1s						
SOEI	**Soe**	**26.09**	**232**	P	**P**	**21 01 47.4**	**-0.8**
	comp=Z,22μmcomp=Z,7μmcomp=Z,346nm,1.0s						
SOEI	**Soe**	**26.09**	**232**	P	**P**	**21 01 48.0**	**-0.2**
SCZP	**Santa Cruz**	**26.25**	**293**	*e*P	**P**	**21 01 49.6**	**+0.2**
BBP	**Basco**	**26.31**	**304**	*e*P	**P**	**21 01 52.8**	**+2.8**
CTA	**Charters Tower**	**26.32**	**177**	P	**P**	**21 01 51.2**	**+1.1**
	comp=Z,99nm,0.7s,baz=357,slow=10,SNR=70						
CTA				LR	LR	21 12 15.3	
	comp=Z,9μm,19.1s,baz=3.0,slow=36						
CTAO	**Charters Tower**	**26.32**	**177**	P	**P**	**21 01 50.8**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,144nm,0.9s						
CTAO				MLR	MLR		
	comp=Z,11μm,21.0s						
CTAO	**Charters Tower**	**26.32**	**177**	P	**P**	**21 01 50.8**	**+0.7**
CTAO				IAmb	IAmb	21 01 53.9	
	comp=Z,144nm,0.8s						
SZP	**Santa**	**26.36**	**297**	P	**P**	**21 01 49.3**	**-1.2**
SZP				IAmb	IAmb	21 02 22.9	
	comp=Z,208nm,1.0s						
BOLP	**Bolinao**	**26.44**	**294**	*e*P	**P**	**21

comp=Z,128nm,0.9s
YHNB IAMs_20 IAMs_20 21 11 53.1
comp=Z,28μm,19.0s
TATO Taipei 29.09 312 IAMs_20 IAMs_20 21 12 07.2
comp=Z,34μm,19.0s
JNU Nakatsue 29.66 336 P **P** **21 02 18.6 -1.2**
comp=Z,84nm,0.8s,baz=135,slow=3.1,SNR=46
JNU LR LR 21 14 02.3
comp=Z,12μm,19.1s,baz=164,slow=36
JNU Nakatsue 29.66 336 P **P** **21 02 18.2 -1.6**
JNU IAmb IAmb 21 02 24.3
comp=Z,124nm,0.9s
INU Inuyama 29.75 347 P **P** **21 02 18.6 -1.9**
INU IAMs_20 IAMs_20 21 12 49.7
comp=Z,29μm,19.0s
WBSI Waikabubak, Su 30.01 238 P **P** **21 02 21.1 -2.1**
comp=Z,3μmcomp=Z,248nm,0.9s
KBKI Kotabaru 30.29 252 P **P** **21 02 26.4 +0.8**
comp=Z,305nmcomp=Z,24nm,0.9s
MJAR Matsushiro Arr 30.66 349 P **P** **21 02 25.8 -2.8**
comp=Z,47nm,1.1s,baz=170,slow=10,SNR=25
MJAR LR LR 21 15 11.2
comp=Z,16μm,18.3s,baz=170,slow=37
MJAR Matsushiro Arr 30.66 349 P **P** **21 02 26.1 -2.5**
MJAR pmax pmax
comp=Z,13nm,0.9s
MJAR Matsushiro Arr 30.66 349 P **P** **21 02 26.1 -2.5**
MAJO Matsushiro 30.66 349 P **P** **21 02 25.9 -2.7**
MAJO pmax pmax
comp=Z,111nm,1.2s
MAJO MLR MLR
comp=Z,18μm,18.0s
MAJO Matsushiro 30.66 349 P **P** **21 02 25.9 -2.7**
MAJO IAmb IAmb 21 02 30.7
comp=Z,111nm,1.1s
MAT Matsushiro 30.66 349 P **P** **21 02 24.9 -3.7**
MAT S **S** **21 07 30.2 +0.7**
MJB9 Matsu-Tunnel 30.66 349 P **P** **21 02 26.9 -1.8**
FITZ Fitzroy Crossi 30.88 218 P **P** **21 02 30.5 -0.2**
baz=31,SNR=36
FITZ Fitzroy Crossi 30.88 218 P **P** **21 02 30.5 -0.2**
PLAI Plampang 31.00 241 P P 21 02 26.4 -5.5
comp=Z,14μmcomp=Z,108nm,0.9s
QZH Quanzhou 31.27 309⇑ *i*P **P** **21 02 34.4 +0.3**
QZH S **S** **21 07 40.1 +0.9**
QZH pmax pmax
comp=Z,3μm,5.8s
QZH LR LR
comp=Z,20μm,17.5s
QZH LR LR
comp=Z,9μm,20.4s
QZH LR LR
comp=Z,17μm,18.0s
AS31 Alice Springs 31.73 199 P **P** **21 02 37.9 -0.3**
ASAR Alice Springs 31.74 199 P **P** **21 02 37.9 -0.4**
comp=Z,9.5nm,0.7s,baz=33,slow=9.1,SNR=59
ASAR S **S** **21 07 49.7 +3.0**
comp=Z,3.0nm,1.0s,baz=80,slow=36,SNR=0.8
ASAR LR LR 21 14 42.2
comp=Z,10μm,21.6s,baz=22,slow=35
ASAR Alice Springs 31.74 199 P **P** **21 02 38.0 -0.2**
EIDS Eidsvold 32.11 170 P **P** **21 02 41.5 0.0**
baz=32,SNR=24
EIDS Eidsvold 32.11 170 P **P** **21 02 41.3 -0.1**
EIDS IAmb IAmb 21 02 43.5
comp=Z,174nm,1.5s
QLP Quilpie 32.76 181 P **P** **21 02 46.3 -0.8**
baz=33,SNR=41
SBUM Sibu 32.84 265 P **P** **21 02 47.6 -0.5**
SBUM IAmb IAmb 21 03 02.4
comp=Z,248nm,1.9s
SBUM Sibu 32.84 265 P **P** **21 02 49.0 +0.9**
RMQ Roma 32.87 174 P **P** **21 02 48.6 +0.5**
baz=33,SNR=17
SSE Sheshan 33.17 321 P **P** **21 02 49.3 -1.4**
SSE S **S** **21 08 07.1 -1.7**
SSE sS **sS** **21 08 22.8 +2.1**
SSE pmax pmax
comp=Z,45nm,1.6s
SSE pmax pmax
comp=Z,1μm,5.3s
SSE LR LR
comp=Z,8μm,16.3s
SSE Sheshan 33.17 321 IAMs_20 IAMs_20 21 13 42.7
comp=Z,21μm,20.0s
HKPS Hong Kong Po S 33.66 301 P **P** **21 02 53.5 -1.7**
HKPS IAmb IAmb 21 03 08.2
comp=Z,162nm,1.1s
TJN Taejon 33.93 334*c i*P **P** **21 02 55.9 -1.3**
KSRS Korea Array 34.61 336 P **P** **21 03 01.9 -1.2**
comp=Z,17nm,0.7s,baz=158,slow=9.1,SNR=40
KSRS LR LR 21 17 58.3
comp=Z,16μm,18.3s,baz=132,slow=38
KSAR Wonju Array Be 34.61 336 P **P** **21 03 01.6 -1.6**
KSAR Wonju Array Be 34.61 336 P **P** **21 03 01.6 -1.6**
GZH Guangzhou 34.66 302 P **P** **21 03 04.6 +0.8**
GZH S **S** **21 08 36.5 +4.5**
GZH pmax pmax
comp=Z,3μm,5.7s
GZH LR LR
comp=Z,14μm,16.5s
GZH LR LR
comp=Z,9μm,15.8s
KS19 Wonju Array Si 34.67 336 P **P** **21 03 02.1 -1.6**
KSM Kuching 34.88 263 P **P** **21 03 04.8 -1.0**
KSM IAmb IAmb 21 03 18.1
comp=Z,153nm,1.1s
GRJI Gresik 34.97 248 P **P** **21 03 06.6 0.0**
comp=Z,1μmcomp=Z,103nm,1.1s
WRKA Warakurna 35.17 207 P **P** **21 03 07.7 -0.5**
baz=35,SNR=94
INCN Inchon 35.17 334 P **P** **21 03 09.1 +1.0**
INCN P **P** **21 03 09.1 +1.0**
INCN Inchon 35.17 334 P **P** **21 03 07.7 -0.4**
INCN pmax pmax
comp=Z,265nm,1.5s
INCN MLR MLR
comp=Z,24nm,18.0s
INCN Inchon 35.17 334 P **P** **21 03 07.7 -0.4**
INCN IAmb IAmb 21 03 12.0
comp=Z,265nm,1.4s
INCN Inchon 35.17 334 IAMs_20 IAMs_20 21 18 14.0
comp=Z,24μm,18.0s
DZM Mont Dzumac 35.26 144 *e*P **P** **21 03 07.2 -1.8**
comp=Z,570nm,1.2s
DZM *e*S **S** **21 08 37.8 -3.6**
comp=Z,9μm,25.6s
DZM *e*LQ LQ 21 11 00.7
comp=Z,39μm,30.2s
DZM *e*LR LR 21 12 33.2
comp=Z,44μm,26.9s,baz=303
DZM Mont Dzumac 35.26 144 P **P** **21 03 09.7 +0.7**
comp=Z,92nm,0.6s,baz=308,slow=7.2,SNR=50
DZM Mont Dzumac 35.26 144 P **P** **21 03 09.6 +0.6**
NJ2 Nanjing 35.29 320 *e*P **P** **21 03 07.6 -1.5**
NJ2 pP **pP** **21 03 11.4 -4.8**
NJ2 sP **sP** **21 03 12.8 -5.9**
NJ2 S **S** **21 08 43.1 +1.6**
NJ2 pmax pmax
comp=Z,14nm,0.6s
NJ2 pmax pmax
comp=Z,2μm,3.8s
NJ2 LR LR
comp=Z,26μm,15.6s
NJ2 LR LR
comp=Z,20μm,15.6s
NJ2 LR LR
comp=Z,19μm,11.8s
ERM Erimo 35.53 358⇑ *e*P **P** **21 03 10.1 -0.9**
ERM pmax pmax
comp=Z,78nm,1.2s
ERM MLR MLR
comp=Z,16μm,17.0s
ERM Erimo 35.53 358 IAMs_20 IAMs_20 21 19 32.8
comp=Z,19μm,18.0s
PWJI Pagerwojo 36.00 247 P **P** **21 03 12.2 -3.2**
comp=Z,89nm,1.4s
DLV T Lat 36.38 281 P **P** **21 03 17.9 -1.0**
QIZ Qiongzhong 36.38 294 P **P** **21 03 16.8 -1.9**
QIZ PP **PP** **21 04 41.9 +0.1**
QIZ S **S** **21 09 00.3 +1.6**
QIZ pmax pmax
comp=Z,2μm,8.4s
QIZ LR LR
comp=Z,32μm,22.1s
QIZ LR LR
comp=Z,12μm,16.2s
QIZ LR LR
comp=Z,7μm,13.7s
QIZ Qiongzhong 36.38 294 P **P** **21 03 18.2 -0.5**
QIZ IAmb IAmb 21 03 31.3
comp=Z,213nm,1.2s
WOJI Wonogiri, Jawa 36.74 248 P P 21 03 36.4 +15
SMRI Semarang 36.91 249 P **P** **21 03 25.3 +2.1**
comp=Z,18μmcomp=Z,10μmcomp=Z,141nm,1.1s
PSA00 Pilbara Seismi 37.10 221 P **P** **21 03 24.9 +0.2**
PSA00 IAmb IAmb 21 03 28.5
comp=Z,195nm,0.8s
ARMA Armidale 37.13 170 P **P** **21 03 25.0 0.0**
baz=37,SNR=64
ARMA Armidale 37.13 170 P **P** **21 03 24.9 -0.1**
FUNA Funafuti 37.22 113 IAMs_20 IAMs_20 21 16 31.4
comp=Z,23μm,18.0s
WHN Wuhan 37.45 314⇓ *i*P **P** **21 03 30.3 +2.7**
WHN sP **sP** **21 03 37.1 0.0**
WHN PP **PP** **21 04 51.5 -1.8**
WHN S **S** **21 09 17.1 +2.5**
WHN sS **sS** **21 09 27.4 +1.2**
WHN pmax pmax
comp=Z,760nm,2.2s
WHN pmax pmax
comp=Z,4μm,4.7s
WHN LR LR
comp=Z,47μm,16.2s
WHN LR LR
comp=Z,20μm,15.1s
WHN LR LR
comp=Z,56μm,18.2s
YUK Yuzh-Kuril'sk 37.52 1*c i*P **P** **21 03 26.6 -1.4**
YUK *i* 21 04 57.1
YUK *i* S **S** **21 09 12.6 -2.7**
YUK pmax pmax
comp=Z,320nm,1.0s
YUK pmax pmax
comp=N,143nm,1.1s
YUK pmax pmax
comp=E,123nm,0.6s
YUK pmax pmax
comp=Z,550nm,2.9s
ASAJ Asahikawa 37.65 357 P **P** **21 03 28.1 -1.0**
comp=Z,169nm,1.2s,baz=218,slow=13,SNR=29
ASAJ LR LR 21 18 18.6
comp=Z,8μm,18.9s,baz=190,slow=35
CMSA Cobar Meteorol 37.70 179 P **P** **21 03 28.7 -0.9**
baz=38,SNR=34
MSHR Mys Shultsa 38.07 343⇓ *e*P **P** **21 03 33.3 +0.7**
STKA Stephens Creek 38.16 185 P **P** **21 03 32.7 -0.9**
baz=38,SNR=38
STKA Stephens Creek 38.16 185 P **P** **21 03 32.5 -1.1**
comp=Z,23nm,0.8s,baz=346,slow=8.1,SNR=35
STKA LR LR 21 20 14.9
comp=Z,14μm,18.9s,baz=1.2,slow=38
STKA Stephens Creek 38.16 185 P **P** **21 03 32.4 -1.1**
STKA pmax pmax
comp=Z,24nm,1.4s
STKA MLR MLR
comp=Z,3μm,18.0s
STKA Stephens Creek 38.16 185 P **P** **21 03 32.4 -1.1**
VLA Vladivostok 38.37 345*de*P **P** **21 03 35.8 +0.6**
VLA pmax pmax
comp=Z,270nm,1.4s
VLA MLR MLR
comp=Z,11μm,16.0s
DL2 Dalian 38.64 330 P **P** **21 03 36.4 -1.1**
DL2 S **S** **21 09 34.1 +1.7**
DL2 pmax pmax
comp=Z,52nm,0.6s
DL2 pmax pmax
comp=Z,950nm,4.8s
DL2 LR LR
comp=Z,13μm,18.0s
DL2 LR LR
comp=Z,11μm,16.9s
DL2 LR LR
comp=Z,19μm,17.7s
KUR Kuril'sk 38.80 3⇓ *i*P **P** **21 03 38.4 -0.3**
KUR *e* 21 05 06.1
KUR *e*PPP PPP 21 05 27.3
KUR *e*S **S** **21 09 36.9 +2.3**
KUR *e*SS **SnSn** **21 12 22.5 -2.8**
KUR *e* 21 13 45.5
KUR pmax pmax
comp=Z,3μm,4.6s
KUR pmax pmax
comp=Z,303nm,1.3s
KUR MLR MLR
comp=Z,5μm,15.0s
KUR MLR MLR
comp=N,9μm,13.0s
KUR MLR MLR
comp=E,3μm,12.0s
TIA Tai'an 39.13 323 P **P** **21 03 40.9 -0.7**
TIA S **S** **21 09 33.3 -6.6**
TIA sS **pS** **21 09 46.8 -1.0**
TIA pmax pmax
comp=E,920nm,3.5s
TIA LR LR
comp=E,9μm,16.4s
TIA LR LR
comp=E,13μm,17.1s
TIA LR LR
comp=E,13μm,17.8s
TEY Ternei 39.20 351⇑ *e*P **P** **21 03 43.2 +1.2**
TEY *e*S **S** **21 09 38.3 -2.3**
TEY 21 12 29.1
TEY pmax pmax
comp=Z,20nm,3.3s
TEY pmax pmax
comp=Z,3μm,6.7s
TEY pmax pmax
comp=E,500nm,3.6s
TEY pmax pmax
comp=N,1μm,5.2s
USA0B Ussuriysk Arra 39.35 345⇓ *e*P **P** **21 03 43.1 -0.3**
USA0B Ussuriysk Arra 39.35 345 P **P** **21 03 42.9 -0.5**
USRK Ussuriysk Ar. 39.35 345 P **P** **21 03 43.0 -0.4**
comp=N,26nm,0.7s,baz=167,slow=7.3,SNR=62
USRK LR LR 21 18 03.9
comp=N,11μm,20.8s,baz=144,slow=33
USRK Ussuriysk Ar. 39.35 345 P **P** **21 03 42.0 -1.4**
USRK Ussuriysk Ar. 39.35 345 P **P** **21 03 42.0 -1.4**
LEM Lembang 39.48 251 P **P** **21 03 44.5 -0.6**
comp=N,90nm,0.9s,baz=76,slow=11,SNR=15
CISI Cisompet, Garu 39.53 250 P **P** **21 03 45.0 -0.3**
comp=N,5μmcomp=N,3μmcomp=N,194nm,0.9s
MGCD Mangrove Creek 39.79 172 P **P** **21 03 47.9 +0.7**
baz=40,SNR=14
BBOO Buckleboo 39.87 192 P **P** **21 03 47.1 -0.7**
baz=40,SNR=46
BBOO Buckleboo 39.87 192 P **P** **21 03 47.0 -0.8**
BBOO IAmb IAmb 21 03 50.1
comp=Z,168nm,0.9s
HTT Hallett 39.99 188 P **P** **21 03 48.6 -0.3**
baz=40,SNR=36
CNJI Cibinong 40.09 251 P **P** **21 03 49.4 -0.5**
comp=Z,3μmcomp=Z,319nm,1.1s
SNY Shenyang 40.09 335⇑ P **P** **21 03 48.8 -0.8**
SNY PP **PnPn** **21 05 25.9 +0.2**
SNY S **S** **21 09 52.8 -1.3**
SNY pmax pmax
comp=Z,4μm,5.2s
SNY LR LR
comp=Z,10μm,15.7s
SNY LR LR
comp=Z,10μm,13.7s
SNY LR LR
comp=Z,16μm,17.7s
DBJI Dramaga 40.21 252 P **P** **21 03 53.8 +2.8**
comp=Z,6μmcomp=Z,41nm,1.2s
FORT Forrest 40.32 203 P **P** **21 03 51.6 +0.1**
baz=40,SNR=20
FORT Forrest 40.32 203 P **P** **21 03 51.3 -0.3**
MDJ Mudanjiang 40.39 343 P **P** **21 03 51.0 -1.1**
MDJ IAMs_20 IAMs_20 21 20 18.5
comp=Z,17μm,18.0s
YSS Yuzh-Sakhalins 40.48 358κ *i*P **P** **21 03 52.2 -0.5**
YSS *e* 21 04 06.1
YSS *e* 21 05 35.9
YSS *e*S **S** **21 09 58.2 -1.6**
YSS *e*SS **SS** **21 12 57.3 -2.5**
YSS pmax pmax
comp=Z,80nm,1.3s
YSS pmax pmax
comp=Z,2μm,5.0s
YSS pmax pmax
comp=Z,2μm,4.4s
YSS pmax pmax
comp=N,2μm,4.5s
YSS pmax pmax
comp=E,700nm,4.0s
YSS smax smax
comp=N,5μm,16.0s
YSS MLR MLR
comp=Z,7μm,16.0s
YSS MLR MLR
comp=N,4μm,20.0s
YSS MLR MLR
comp=E,3μm,14.0s
YSS Yuzh-Sakhalins 40.48 358 P **P** **21 03 50.8 -1.9**
MSVF Nonsavu 40.53 127*ce*P **P** **21 03 54.6 +1.0**
MSVF pmax pmax
comp=Z,206nm,1.0s
MSVF Nonsavu 40.53 127 P **P** **21 03 54.1 +0.5**
MSVF IAmb IAmb 21 03 56.6
comp=Z,174nm,0.9s
YNG Young 40.58 176 P **P** **21 03 55.6 +1.9**
baz=41,SNR=12
ENH Enshi 40.91 310 P **P** **21 03 56.7 +0.1**
ENH IAmb IAmb 21 04 09.8
comp=Z,157nm,1.0s
CN2 Changchun 41.02 338 *e*P **P** **21 03 57.8 +0.5**
CN2 PP **PP** **21 05 31.6 -0.6**
CN2 *e*S **S** **21 10 12.5 +4.5**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,2μm,4.0s
CN2 LR LR
comp=Z,12μm,16.0s
CN2 LR LR
comp=Z,8μm,16.0s
CN2 LR LR
comp=Z,16μm,20.0s
PMBI Palembang 41.15 258 P **P** **21 03 59.3 +0.6**
MYKOM Kota Tinggi 41.22 265 P **P** **21 03 58.5 -0.8**
MYKOM Kota Tinggi 41.22 265 P **P** **21 03 59.0 -0.3**
BLSI Bandar Lampung 41.30 254 P **P** **21 04 02.3 +2.3**
comp=Z,5μmcomp=Z,5μmcomp=Z,241nm,1.4s
GYA Guiyang 41.55 303⇑ *i*P **P** **21 04 02.3 +0.2**
GYA pP pP 21 04 08.3 -0.7
GYA PP **PnPn** **21 05 41.0 -2.2**
GYA PcP **PcP** **21 06 00.9 +1.7**
GYA ScP **ScP** **21 09 49.3 +1.6**
GYA S **S** **21 10 17.8 +1.1**
GYA sS pS 21 10 24.3 -0.4
GYA SS **SS** **21 13 15.0 -7.1**
GYA pmax pmax
comp=Z,80nm,1.1s
GYA pmax pmax
comp=Z,2μm,5.9s
GYA LR LR
comp=Z,12μm,18.9s
GYA LR LR
comp=Z,11μm,18.7s
GYA LR LR
comp=Z,14μm,20.2s
MEEK Meekatharra 41.56 217 P **P** **21 04 02.8 +0.8**
baz=42,SNR=20
GIRL Giralia 41.64 225 P **P** **21 04 04.1 +1.5**
baz=42,SNR=11
GIRL Giralia 41.64 225 P **P** **21 04 02.2 -0.3**
CAN Canberra 41.64 175 P **P** **21 04 02.3 -0.1**
CAN pmax pmax
comp=Z,166nm,1.5s
CAN MLR MLR
comp=Z,10μm,20.0s
CAN Canberra 41.64 175 P **P** **21 04 02.3 -0.1**
CNB Canberra Magne 41.67 175 P **P** **21 04 02.9 +0.2**
baz=42,SNR=9.1
BJT Baijiatuan 42.30 327 P **P** **21 04 06.3 -1.5**
BJT pmax pmax
comp=Z,183nm,1.4s
BJT MLR MLR
comp=Z,20μm,22.0s
BJT Baijiatuan 42.30 327 P **P** **21 04 06.3 -1.5**
BJT IAmb IAmb 21 04 17.6
comp=Z,183nm,1.4s
BJT Baijiatuan 42.30 327 IAMs_20 IAMs_20 21 19 04.3
comp=Z,20μm,22.0s
BJI Beijing 42.31 327 P **P** **21 04 06.9 -0.9**
BJI PP **PP** **21 05 44.4 -1.7**
BJI S **S** **21 10 21.8 -5.3**
BJI pmax pmax
comp=Z,14nm,0.9s
BJI pmax pmax
comp=Z,2μm,5.6s
BJI LR LR
comp=Z,14μm,22.7s
LWLI Liwa 42.35 255 P **P** **21 04 07.1 -1.6**
comp=Z,6μmcomp=Z,357nm,1.0s
SLVN Son La 42.37 295 P **P** **21 04 08.7 0.0**
SLVN IAmb IAmb 21 04 22.5
comp=Z,278nm,1.6s
LHSI Lahat 42.57 257 P **P** **21 04 11.0 +0.7**
comp=Z,8μmcomp=Z,173nm,1.0s
TIY Taiyuan 42.95 321 *e*P **P** **21 04 11.6 -1.6**
TIY S **S** **21 10 37.8 +0.9**
TIY sS **sS** **21 10 49.6 +0.7**
TIY pmax pmax
comp=Z,2μm,4.3s
TIY LR LR
comp=Z,11μm,16.4s
TIY LR LR
comp=Z,17μm,16.2s
TIY LR LR
comp=Z,12μm,21.2s
ARPS Mount Arapiles 43.01 184 P **P** **21 04 13.6 +0.1**
baz=43,SNR=22
XAN Xi'an 43.20 314 P **P** **21 04 13.9 -1.3**
XAN pmax pmax
comp=Z,483nm,1.9s
XAN MLR MLR
comp=Z,17μm,20.0s
XAN Xi'an 43.20 314 P **P** **21 04 13.9 -1.3**
XAN Xi'an 43.20 314 IAMs_20 IAMs_20 21 20 38.4
comp=Z,17μm,20.0s
MNAI Manna 43.25 257 P **P** **21 04 19.5 +3.6**
comp=Z,6μmcomp=Z,11μmcomp=Z,611nm,1.3s
MNAI Manna 43.25 257 P **P** **21 04 15.3 -0.5**
MILA Mila 43.38 175 P **P** **21 04 17.7 +1.1**
baz=44,SNR=10
KSI Kapahiang 43.43 258 P **P** **21 04 17.5 +0.1**
comp=Z,5μmcomp=Z,225nm,1.1s
KMBL Kambalda 43.51 209 P **P** **21 04 17.7 0.0**
baz=44,SNR=4.4
MASI Maura Aman, Be 43.66 259 P **P** **21 04 19.8 +0.5**
comp=Z,15μmcomp=Z,1μm,1.1s
TOO Toolangi 43.71 179 P **P** **21 04 20.1 +0.9**
baz=44,SNR=15
TOO Toolangi 43.71 179 P **P** **21 04 19.3 +0.1**
TOO pmax pmax
comp=Z,265nm,1.2s
TOO Toolangi 43.71 179 P **P** **21 04 19.3 +0.1**
IPM Ipoh 43.74 270 P **P** **21 04 19.4 -0.5**
IPM IAmb IAmb 21 04 24.3
comp=Z,164nm,1.1s
IPM Ipoh 43.74 270 P **P** **21 04 20.0 +0.1**
KULM Kulim 44.06 271 P **P** **21 04 21.1 -1.3**
KULM Kulim 44.06 271 P **P** **21 04 23.0 +0.6**
KLR Kul'dur 44.15 348 P **P** **21 04 21.1 -1.4**
comp=Z,27nm,0.9s,baz=162,slow=6.5,SNR=23
KLR LR LR 21 20 24.5
comp=Z,13μm,21.0s,baz=150,slow=33
KLR Kul'dur 44.15 348*c i*P **P** **21 04 21.1 -1.4**
KLR pmax pmax
comp=Z,140nm,1.6s
BKNI Bangkinang 44.21 264 P **P** **21 04 23.8 +0.2**
comp=Z,6μmcomp=Z,7μmcomp=Z,619nm,1.1s
BKNI Bangkinang 44.21 264 P **P** **21 04 22.6 -1.0**
KRJI Kerinci 44.21 260 P **P** **21 04 24.6 +0.9**
comp=Z,7μmcomp=Z,8μmcomp=Z,282nm,1.2s
TYV Tymovskoe 44.39 358 *e*P **P** **21 04 22.9 -1.5**
TYV *e*S **S** **21 10 58.5 +1.2**
TYV pmax pmax
comp=Z,64nm,1.5s
TYV pmax pmax
comp=Z,2μm,7.1s
TYV smax smax

comp=N,3μm,9.7s
TYV MLR MLR
comp=N,11μm,17.0s
TYV MLR MLR
comp=Z,10μm,17.0s
KMI Kunming 44.44 300 P **P** **21 04 25.3 -0.3**
KMI pP pP 21 04 34.3 +1.8
KMI sP pwP 21 04 37.9 -0.1
KMI PcP **PcP** **21 06 08.1 -0.9**
KMI PP **PP** **21 06 09.3 -0.2**
KMI S **S** **21 11 00.3 +1.0**
KMI pmax pmax
comp=Z,56nm,1.3s
KMI pmax pmax
comp=Z,3μm,5.8s
KMI LR LR
comp=Z,4μm,16.8s
KMI LR LR
comp=Z,9μm,19.7s
KMI LR LR
comp=Z,11μm,19.2s
GRNR Gornyy 44.82 352 ⇓*i* P P 21 04 19.1 -8.8
GRNR pmax pmax
comp=Z,30nm,0.7s
GRNR MLR MLR
comp=Z,7μm,17.0s
MORW Morawa 44.89 217 P **P** **21 04 28.9 +0.1**
baz=45,SNR=36
MORW Morawa 44.89 217 P **P** **21 04 28.1 -0.6**
MORW IAmb IAmb 21 04 32.3
comp=Z,131nm,1.1s
PDSI Padang 44.98 262 P **P** **21 04 28.8 -1.0**
comp=Z,3μmcomp=Z,1μmcomp=Z,43nm,1.4s
SKR Severo-Kuril's 45.15 10 *e*P **P** **21 04 30.7 +0.2**
SKR *e*S **S** **21 11 06.3 -1.9**
SKR pmax pmax
comp=Z,1μm,5.3s
SKR pmax pmax
comp=Z,600nm,6.3s
SKR pmax pmax
comp=Z,70nm,1.1s
SKR MLR MLR
comp=Z,3μm,17.0s
SKR MLR MLR
comp=Z,3μm,21.0s
HHC Hu-ho-hao-te 45.46 324 *e*P **P** **21 04 34.4 +1.1**
HHC S **S** **21 11 10.3 -3.0**
HHC ScS **ScS** **21 14 21.8 -6.5**
HHC SS **SS** **21 14 32.8 -4.4**
HHC pmax pmax
comp=Z,27nm,0.8s
HHC pmax pmax
comp=Z,2μm,4.7s
HHC LR LR
comp=Z,4μm,16.2s
HHC LR LR
comp=Z,5μm,17.9s
HHC LR LR
comp=Z,6μm,17.0s
MNSI Mandaling Nat 45.58 265 P **P** **21 04 33.7 -0.8**
comp=Z,3μmcomp=Z,157nm,1.1s
CD2 Chengdu 45.63 308 ⇓*i* P **P** **21 04 34.5 -0.2**
CD2 sP pP 21 04 39.3 -2.5
CD2 PP **PP** **21 06 19.8 -2.1**
CD2 S **S** **21 11 15.3 -0.7**
CD2 sS pS 21 11 23.8 -0.4
CD2 pmax pmax
comp=Z,90nm,0.9s
CD2 pmax pmax
comp=Z,450nm,3.2s
CD2 LR LR
comp=Z,21μm,15.1s
CD2 LR LR
comp=Z,14μm,19.2s
CD2 LR LR
comp=Z,16μm,20.9s
BLDU Ballidu 45.64 215 P **P** **21 04 34.7 0.0**
baz=46,SNR=20
KLBR Kellerberrin 45.81 213 P **P** **21 04 35.7 -0.3**
baz=46,SNR=22
PSI Prapat 45.99 268 P **P** **21 04 37.2 -0.7**
comp=Z,68nm,0.9s,baz=3.2,slow=0.6,SNR=36
PSI Prapat 45.99 268 P **P** **21 04 35.7 -2.2**
PSI pmax pmax
comp=Z,81nm,0.8s
RPSI Rantau Prapat 46.00 268 P **P** **21 04 35.7 -2.1**
RPSI IAmb IAmb 21 04 49.8
comp=Z,81nm,0.8s
BTO Baotou 46.22 323 *e*P **P** **21 04 39.8 +0.5**
CM31 Chiang Mai Arr 46.36 289 P **P** **21 04 42.0 +1.4**
SNR=153
CM31 Chiang Mai Arr 46.36 289 P **P** **21 04 42.1 +1.5**
CMAR Chiang Mai Arr 46.36 289 P **P** **21 04 42.0 +1.3**
comp=Z,68nm,0.9s,baz=96,slow=5.8,SNR=115
CMAR LR LR 21 24 57.2
comp=Z,4μm,18.9s,baz=96,slow=37
CMAR Chiang Mai Arr 46.36 289 P **P** **21 04 41.7 +1.1**
CMAR Chiang Mai Arr 46.36 289 P **P** **21 04 41.7 +1.1**
SISI Saibi 46.40 262 P **P** **21 04 41.0 0.0**
comp=Z,103nm,1.1s
CHTO Chiang Mai 46.42 290 P **P** **21 04 42.2 +1.1**
CHTO P **P** **21 04 42.2 +1.1**
CHTO Chiang Mai 46.42 290 P **P** **21 04 41.8 +0.7**
CHTO pmax pmax
comp=Z,142nm,1.0s
CHTO MLR MLR
comp=Z,7μm,22.0s
CHTO Chiang Mai 46.42 290 P **P** **21 04 41.8 +0.7**
NKL Nikolayevsk 46.77 356 *e*P **P** **21 04 43.4 +0.2**
NKL *e* 21 06 35.3
NKL *e*S **S** **21 11 34.5 +3.0**
NKL pmax pmax
comp=Z,48nm,1.2s
NKL pmax pmax
comp=N,5.0nm,0.8s
NKL pmax pmax
comp=E,2.0nm,0.8s
NKL pmax pmax
comp=Z,203nm,3.8s
NKL smax smax
comp=N,10.0nm,3.2s
NKL smax smax
comp=E,4.0nm,4.1s
MUN Mundaring 46.95 214 P **P** **21 04 45.4 +0.4**
baz=47,SNR=4.1
KCSI Kotacane, Aceh 47.06 269 P **P** **21 04 44.7 -1.5**
comp=E,5μmcomp=E,4μmcomp=E,221nm,1.7s
NWAO Narrogin (SRO) 47.12 212 P **P** **21 04 46.9 +0.6**
baz=47,SNR=5.7
NWAO Narrogin (SRO) 47.12 212 P **P** **21 04 46.1 -0.2**
comp=E,40nm,1.0s,baz=30,slow=7.5,SNR=7.0
NWAO Narrogin (SRO) 47.12 212 P **P** **21 04 46.7 +0.4**
NWAO pmax pmax
comp=Z,91nm,1.3s
NWAO Narrogin (SRO) 47.12 212 P **P** **21 04 46.5 +0.3**
NWAO IAmb IAmb 21 05 09.2
comp=Z,102nm,1.2s
NWAO Narrogin (SRO) 47.12 212 P **P** **21 04 46.7 +0.4**
NWAO IAmb IAmb 21 05 09.2
comp=Z,91nm,1.3s
AFI Afiamalu 47.45 115 IAMs_20 IAMs_20 21 21 22.8
comp=Z,11μm,20.0s
GSI Gunungsitoli 47.50 266 P **P** **21 04 48.4 -1.2**
comp=Z,19μmcomp=Z,1μm,1.2s
GSI Gunungsitoli 47.50 266 P **P** **21 04 48.4 -1.2**
HIA Hailar 47.75 338 P **P** **21 04 50.5 -0.5**
HIA pmax pmax
comp=Z,60nm,1.0s
HIA MLR MLR
comp=Z,14μm,19.0s
HIA Hailar 47.75 338 P **P** **21 04 50.5 -0.5**
HIA IAmb IAmb 21 04 55.5
comp=Z,60nm,1.0s
HIA Hailar 47.75 338 IAMs_20 IAMs_20 21 24 58.3
comp=Z,14μm,19.0s
PEA0B Petropavlovsk- 47.75 10 P **P** **21 04 49.6 -1.3**
PEA0B pmax pmax
comp=Z,219nm,1.4s
PEA0B MLR MLR
comp=Z,16μm,20.0s
PEA0B Petropavlovsk- 47.75 10 P **P** **21 04 49.6 -1.3**
PEA0B IAMs_20 IAMs_20 21 21 38.9
comp=Z,16μm,20.0s
PETK Petropavlovsk- 47.75 10 P **P** **21 04 50.4 -0.6**
comp=Z,68nm,1.1s,baz=187,slow=7.2,SNR=37
PETK LR LR 21 22 11.8
comp=Z,15μm,21.9s,baz=190,slow=33
LZH Lanzhou 47.83 314 *e*P **P** **21 04 52.8 +0.8**
LZH pP pP 21 04 57.8 -1.3
LZH sP sP 21 05 02.3 -0.1
LZH PP **PP** **21 06 45.5 +1.4**
LZH S **S** **21 11 47.0 -0.5**
LZH sS pS 21 11 57.9 +1.9
LZH SS **SS** **21 15 14.8 -1.6**
LZH pmax pmax
comp=Z,160nm,1.3s
LZH pmax pmax
comp=Z,3μm,4.9s
LZH LR LR
comp=Z,10μm,15.7s
LZH LR LR
comp=Z,15μm,19.0s
LZH LR LR
comp=Z,19μm,19.0s
PET Petropavlovsk 47.85 11 *e*P **P** **21 04 51.9 +0.3**
PET *i* S **S** **21 11 46.8 -0.1**
PET pmax pmax
comp=Z,65nm,0.9s
PET MLR MLR
comp=Z,8μm,18.0s
PET MLR MLR
comp=Z,10μm,18.0s
PET Petropavlovsk 47.85 11 P **P** **21 04 50.4 -1.2**
MLSI Meulaboh, Aceh 48.36 270 P **P** **21 04 55.7 -0.5**
comp=Z,4μmcomp=Z,336nm,1.1s
RKGY Rocky Gully 48.56 211 P **P** **21 04 58.7 +1.3**
baz=49,SNR=4.3
TAU Tasmania Unive 49.09 178 P **P** **21 05 01.8 +0.5**
TAU pmax pmax
comp=Z,134nm,1.3s
TAU MLR MLR
comp=Z,13μm,18.0s
TAU Tasmania Unive 49.09 178 P **P** **21 05 01.8 +0.5**
TAU IAmb IAmb 21 05 14.4
comp=Z,134nm,1.3s
TAU Tasmania Unive 49.09 178 IAMs_20 IAMs_20 21 25 30.8
comp=Z,13μm,18.0s
ZEA Zeya 49.37 346 *e*P **P** **21 05 01.8 -1.5**
ZEA *e* 21 06 59.0
ZEA *e*S **S** **21 12 06.0 -2.4**
ZEA pmax pmax
comp=N,100nm,1.2s
ZEA pmax pmax
comp=E,43nm,1.2s
ZEA pmax pmax
comp=Z,160nm,1.4s
ZEA pmax pmax
comp=E,800nm,6.0s
ZEA pmax pmax
comp=Z,2μm,6.0s
ZEA pmax pmax
comp=N,1μm,5.0s
ZEA pmax pmax
comp=Z,2μm,6.0s
ZEA pmax pmax
comp=N,2μm,5.0s
ZEA smax smax
comp=E,2μm,15.0s
ZEA smax smax
comp=Z,2μm,15.0s
ZEA smax smax
comp=N,6μm,16.0s
OUZ Omahuta 49.40 149 P **P** **21 05 06.5 +2.7**
OUZ IAMs_20 IAMs_20 21 24 22.4
comp=Z,13μm,18.0s
RAO Raoul Island 50.30 137 P **P** **21 05 11.6 +0.8**
comp=Z,246nm,0.9s,baz=153,slow=23,SNR=5.4
RAO Raoul Island 50.30 137 P **P** **21 05 11.6 +0.8**
RAO pmax pmax
comp=Z,212nm,0.9s
RAO MLR MLR
comp=Z,7μm,21.0s
RAO Raoul Island 50.30 137 IAmb IAmb 21 05 14.6
comp=Z,212nm,0.8s
PBA Port Blair 51.76 280 P P 21 05 22.9 +0.9
SMY Shemya 52.03 22 IAMs_20 IAMs_20 21 25 10.3
comp=Z,13μm,19.0s
GTA Gaotai 52.20 316 ⇑P **P** **21 05 24.6 -0.5**
GTA pP pP 21 05 30.9 -1.4
GTA sP sP 21 05 34.1 -1.4
GTA S **S** **21 12 51.3 +3.0**
GTA sS pS 21 12 58.9 +2.1
GTA SS **SS** **21 16 26.3 +0.3**
GTA pmax pmax
comp=Z,20nm,1.3s
GTA pmax pmax
comp=Z,1μm,4.8s
GTA LR LR
comp=Z,7μm,18.1s
GTA LR LR
comp=Z,9μm,18.7s
GTA LR LR
comp=Z,10μm,20.0s
CIT Chita 52.34 336 *e*P **P** **21 05 25.4 -0.4**
CIT *e* 21 07 23.0
CIT pmax pmax
comp=Z,502nm,2.8s
ULN Ulaanbaatar 52.43 329 P **P** **21 05 27.0 +0.3**
ULN P **P** **21 05 27.0 +0.3**
ULN Ulaanbaatar 52.43 329*c i*P **P** **21 05 26.5 -0.2**
ULN pmax pmax
comp=Z,264nm,2.2s
ULN Ulaanbaatar 52.43 329 P **P** **21 05 26.4 -0.4**
ULN IAmb IAmb 21 05 39.5
comp=Z,72nm,0.8s
ULN Ulaanbaatar 52.43 329 IAMs_20 IAMs_20 21 28 01.3
comp=Z,12μm,20.0s
SONM Songino Array 52.76 328 P **P** **21 05 28.8 -0.3**
comp=Z,14nm,0.7s,baz=142,slow=7.4,SNR=103
SONM LR LR 21 28 03.0
comp=Z,12μm,21.1s,baz=128,slow=36
SONM PKP2bc 21 36 18.3
comp=Z,0.2nm,0.5s,baz=215,slow=1.8,SNR=3.8
SONM Songino Array 52.76 328 P **P** **21 05 28.7 -0.4**
SONM pmax pmax
comp=Z,291nm,1.9s
SONM Songino Array 52.76 328 P **P** **21 05 28.7 -0.4**
ZIRO ZIRO 52.77 300 *e*P **P** **21 05 30.8 +1.3**
ZIRO *i* pP **sP** **21 05 40.8 +0.8**
MA2 Magadan 53.27 4 P **P** **21 05 32.0 -0.5**
comp=Z,37nm,0.8s,baz=176,slow=7.7,SNR=8.3
MA2 Magadan 53.27 4⇑ *e*P **P** **21 05 31.8 -0.7**
MA2 pmax pmax
comp=Z,53nm,1.0s
MA2 MLR MLR
comp=Z,4μm,17.0s
MA2 Magadan 53.27 4 P **P** **21 05 31.7 -0.8**
QRZ Quartz Range 53.37 154 P **P** **21 05 35.9 +2.5**
QRZ IAmb IAmb 21 05 38.0
comp=Z,166nm,1.3s
URZ Urewera 53.53 149 P **P** **21 05 35.8 +1.1**
comp=Z,45nm,0.6s,baz=276,slow=1.5,SNR=21
URZ Urewera 53.53 149 P **P** **21 05 36.0 +1.3**
BKZ Black Stump Fm 53.91 150 P **P** **21 05 38.1 +0.6**
BKZ IAmb IAmb 21 05 40.0
comp=Z,66nm,1.0s
BKZ IAMs_20 IAMs_20 21 25 09.4
comp=Z,10μm,20.0s
SHL Shillong 54.06 297 *e*P **P** **21 05 40.5 +1.3**
SHL *i* pP **pwP** **21 05 50.0 +0.2**
SHL IAmb IAmb 21 05 53.3
comp=Z,58nm,0.6s
SHL Shillong 54.06 297 P **P** **21 05 40.2 +1.1**
SNR=53
SHL Shillong 54.06 297 P **P** **21 05 38.8 -0.3**
SHL pmax pmax
comp=Z,159nm,1.0s
SHL MLR MLR
comp=Z,6μm,19.0s
SHL Shillong 54.06 297 P **P** **21 05 38.8 -0.3**
THZ Tophouse 54.30 154 P **P** **21 05 40.4 0.0**
TUWZ Tuamarina 54.48 153 P **P** **21 05 41.5 -0.1**
SNZO South Karori 54.73 153 P **P** **21 05 43.1 -0.3**
SNZO South Karori 54.73 153 IAMs_20 IAMs_20 21 25 25.1
comp=Z,13μm,21.0s
LTZ Lake Taylor 54.87 156 P **P** **21 05 44.3 -0.2**
LTZ IAmb IAmb 21 06 07.3
comp=Z,66nm,1.0s
LTZ IAMs_20 IAMs_20 21 26 27.8
comp=Z,11μm,20.0s
BHW Baring Head 54.88 153 P **P** **21 05 44.3 -0.2**
BFZ Birch Farm 54.95 151 P **P** **21 05 45.0 -0.1**
BFZ IAMs_20 IAMs_20 21 25 47.1
comp=Z,10μm,22.0s
MSWZ Moikau Station 55.06 152 P **P** **21 05 45.9 +0.1**
KHZ Kahutara 55.10 154 IAMs_20 IAMs_20 21 26 08.0
comp=Z,14μm,21.0s
RPZ Rata Peaks 55.16 157 P **P** **21 05 47.4 +0.8**
comp=Z,190nm,0.9s,baz=359,slow=2.7,SNR=23
RPZ Rata Peaks 55.16 157 P **P** **21 05 46.0 -0.5**
RPZ IAMs_20 IAMs_20 21 25 07.7
comp=Z,15μm,21.0s
PLWZ Palliser 55.18 153 P **P** **21 05 46.7 0.0**
OXZ Oxford 55.23 156 P **P** **21 05 46.0 -0.9**
OXZ IAmb IAmb 21 05 48.8
comp=Z,90nm,1.0s
OXZ IAMs_20 IAMs_20 21 26 46.3
comp=Z,10μm,20.0s
DCZ Deep Cove 55.30 161 P **P** **21 05 47.7 +0.3**
DCZ IAmb IAmb 21 06 04.5
comp=Z,101nm,1.0s
WKZ Wanaka 55.37 159 IAMs_20 IAMs_20 21 27 13.0
comp=Z,11μm,19.0s
LBZ Lake Benmore 55.41 158 P **P** **21 05 47.8 -0.5**
LBZ IAmb IAmb 21 05 50.7
comp=Z,120nm,1.1s
LBZ IAMs_20 IAMs_20 21 26 17.1
comp=Z,9μm,20.0s
MLZ Mavora Lakes 55.53 160 P **P** **21 05 49.3 +0.2**
MLZ IAMs_20 IAMs_20 21 26 47.4
comp=Z,10μm,18.0s
LSA Lhasa 55.58 302 P **P** **21 05 49.8 -0.6**
LSA S **S** **21 13 29.3 -5.8**
LSA pmax pmax
comp=Z,50nm,1.2s
LSA LR LR
comp=Z,12μm,17.8s
LSA LR LR
comp=Z,13μm,18.2s
LSA LR LR
comp=Z,18μm,16.4s
LSA Lhasa 55.58 302 *i* P **P** **21 05 49.8 -0.6**
SNR=18
LSA Lhasa 55.58 302 *i* P **P** **21 05 49.8 -0.6**
SNR=18
LSA Lhasa 55.58 302 P **P** **21 05 53.1 +2.7**
LSA P **P** **21 05 53.1 +2.7**
LSA Lhasa 55.58 302 P **P** **21 05 51.3 +0.9**
LSA Lhasa 55.58 302 P **P** **21 05 51.3 +0.9**
LSA IAmb IAmb 21 06 03.6
comp=Z,113nm,1.1s
MQZ McQueen's Vall 55.79 156 P **P** **21 05 49.9 -1.1**
MQZ IAmb IAmb 21 05 52.9
comp=Z,131nm,1.1s
ZAK Zakamensk 55.94 329 *e*P **P** **21 05 51.6 -0.6**
ZAK pmax pmax
comp=Z,94nm,1.7s
ODZ Otahua Downs 56.14 158 P **P** **21 05 52.7 -0.8**
TLY Talaya 56.55 331 P **P** **21 05 56.3 -0.2**
comp=Z,16nm,0.8s,baz=159,slow=2.7,SNR=9.6
TLY Talaya 56.55 331 P **P** **21 05 57.5 +1.1**
TLY P **P** **21 05 57.5 +1.1**
TLY Talaya 56.55 331*c i*P **P** **21 05 55.6 -0.8**
TLY *e* 21 06 45.4
TLY *e* 21 08 07.1
TLY *e*PPP PPP 21 09 22.3
TLY *e*S **S** **21 13 44.5 -1.9**
TLY pmax pmax
comp=Z,271nm,1.9s
TLY MLR MLR
comp=Z,25μm,16.0s
TLY Talaya 56.55 331 P **P** **21 05 56.1 -0.3**
TLY IAmb IAmb 21 06 10.8
comp=Z,116nm,1.3s
TLY IAMs_20 IAMs_20 21 31 46.1
comp=Z,12μm,18.0s
IRK Irkutsk 56.60 331 *e*P **P** **21 05 58.0 +1.2**
IRK pmax pmax
comp=Z,365nm,1.8s
ATKA Atka Island 56.67 29 P **P** **21 05 56.1 -1.1**
ATKA IAMs_20 IAMs_20 21 27 22.3
comp=Z,10μm,20.0s
BOD Bodaibo 56.68 341 *e*P **P** **21 05 56.4 -0.8**
BOD pmax pmax
comp=Z,153nm,1.8s
YAK Yakutsk 56.69 351 P **P** **21 05 56.3 -0.8**
comp=Z,29nm,0.7s,baz=241,slow=1.0,SNR=21
YAK Yakutsk 56.69 351 *e*P **P** **21 05 56.6 -0.5**
YAK *e* 21 08 00.6
YAK *e*S **S** **21 13 44.9 -2.8**
YAK *e**SS **sS** **21 14 04.5 +4.4**
YAK *e* 21 15 42.5
YAK pmax pmax
comp=Z,64nm,0.9s
YAK pmax pmax
comp=E,17nm,1.1s
YAK pmax pmax
comp=N,65nm,1.0s
YAK pmax pmax
comp=Z,440nm,3.0s
YAK pmax pmax
comp=N,401nm,3.7s
YAK pmax pmax
comp=E,147nm,3.2s
YAK smax smax
comp=E,1μm,5.4s
YAK smax smax
comp=N,903nm,6.1s
YAK Yakutsk 56.69 351 P **P** **21 05 55.5 -1.6**
YAK IAMs_20 IAMs_20 21 27 22.9
comp=Z,9μm,21.0s
SEY Seymchan 56.71 4 P **P** **21 05 56.6 -0.7**
comp=Z,31nm,1.1s,baz=175,slow=7.0,SNR=19
KIP Kipapa 57.06 69⇑ *e*P **P** **21 06 02.2 +1.7**
KIP pmax pmax
comp=Z,119nm,1.3s
OPA Opana 57.10 68 IAMs_20 IAMs_20 21 23 47.2
comp=Z,11μm,22.0s
GTK Tadong 57.28 298 *e*P **P** **21 06 03.0 +0.7**
MOY Mondy 57.87 329 *e*P **P** **21 06 06.8 +1.0**
MOY pmax pmax
comp=Z,433nm,2.2s
TAPN Taplejung 58.07 298 *e*P **P** **21 06 08.3 +0.4**
comp=Z,215nm,0.8s
ODAN Odare 58.27 298 *e*P **P** **21 06 09.3 +0.1**
comp=Z,917nm,1.3s
HLK Haleakala 58.64 70 IAMs_20 IAMs_20 21 24 30.3
comp=Z,9μm,22.0s
BWNR Bhubaneshwar 58.89 290 *e*P **P** **21 06 15.3 +1.9**
BWNR *i* x x 21 06 25.3
BWNR IAmb IAmb 21 06 59.7
comp=Z,32nm,0.8s
RAMN Ramite 58.98 298 *e*P **P** **21 06 14.1 -0.1**
comp=Z,430nm,1.2s
BOK Bokaro 59.17 294 *e*P **P** **21 06 16.4 +1.0**
BOK *i* x x 21 06 27.6
MLH Mauna Loa 59.34 71 P **P** **21 06 14.9 -1.9**
JIRN Jiri 59.45 298 *e*P **P** **21 06 17.6 0.0**
comp=Z,2μm,1.7s
GUN Gumba 59.76 299 *e*P **P** **21 06 19.8 0.0**
comp=Z,2μm,1.5s
PKI Pulchoki 60.12 298 *e*P **P** **21 06 21.7 -0.5**
comp=Z,1μm,1.6s
PKIN Phulchoki 60.13 298 *e*P **P** **21 06 21.5 -0.7**
comp=Z,1μm,1.7s
KKN Kakani 60.27 298 *e*P **P** **21 06 22.8 -0.3**
comp=Z,417nm,1.0s
DMN Daman 60.39 298 *e*P **P** **21 06 23.9 -0.1**
comp=Z,921nm,1.4s
RAR Rarotonga 60.76 118 P **P** **21 06 25.9 -0.3**
comp=Z,17nm,0.9s,baz=117,slow=13,SNR=2.2
RAR Rarotonga 60.76 118 P **P** **21 06 25.9 -0.3**
RAR pmax pmax
comp=Z,171nm,1.6s
GKN Gorkha 60.86 298 *e*P **P** **21 06 26.9 -0.2**
comp=Z,1μm,1.4s
UNV Unalaska Valle 61.41 30 IAMs_20 IAMs_20 21 32 11.7
comp=Z,8μm,20.0s
SPIA Saint Paul Isl 61.55 26 IAMs_20 IAMs_20 21 27 17.2
comp=Z,11μm,22.0s
DANN Dangsing 61.68 299 *e*P **P** **21 06 32.4 -0.3**
comp=Z,452nm,0.8s
KOLN Koldanda 61.74 298 *e*P **P** **21 06 32.8 -0.2**
comp=Z,443nm,1.0s
WMQ Urumqi 62.27 317 P **P** **21 06 37.0 +0.8**
WMQ pP pP 21 06 41.4 -2.0
WMQ PcP **PcP** **21 07 13.3 -2.5**
WMQ PP **PP** **21 08 56.4 +3.1**

WMQ S **S** **21 14 58.6 -2.1**
WMQ SS **SS** **21 19 05.0 +0.7**
WMQ pmax pmax
comp=Z,63nm,1.7s
WMQ pmax pmax
comp=Z,1μm,4.3s
WMQ LR LR
comp=Z,5μm,14.5s
WMQ LR LR
comp=Z,6μm,18.9s
WMQ LR LR
comp=Z,10μm,21.3s
WMQ Urumqi 62.27 317 IAMs_20 IAMs_20 21 33 21.5
comp=Z,9μm,20.0s
PYUN Piuthan 62.32 298 *e*P **P** **21 06 36.7 -0.2**
comp=Z,982nm,1.1s
PVM Polavaram 62.67 286 *e*P **P** **21 06 39.5 +0.3**
PVM IVmB_BB 21 06 51.8
comp=Z,1μm,3.2s
PVM IVMsBB 21 28 55.2
comp=Z,633nm,18.3s
BILL Bilibino 63.24 9*c i*P **P** **21 06 41.6 -0.4**
BILL *e* 21 07 20.4
BILL pmax pmax
comp=Z,88nm,1.4s
BILL MLR MLR
comp=Z,5μm,18.0s
BILL Bilibino 63.24 9 P **P** **21 06 40.6 -1.4**
BILL IAmb IAmb 21 06 58.6
comp=Z,107nm,1.4s
FALS False Pass 63.48 30 P **P** **21 06 42.4 -1.4**
FALS IAmb IAmb 21 07 32.5
comp=Z,78nm,1.1s
MYLAV Mylavaram 63.61 285 *e*P **P** **21 06 46.0 +0.6**
MYLAV IVmB_BB 21 06 58.2
comp=Z,1μm,1.2s
MYLAV IVMs_BB IVMs_BB 21 29 34.1
comp=Z,830nm,27.1s
MDRS Chennai 63.97 281 *e*P **P** **21 06 49.6 +1.7**
MDRS *i* x x 21 07 00.0
MDRS IAmb IAmb 21 07 00.9
comp=Z,132nm,1.4s
ADKI Addanki 64.24 284 *e*P **P** **21 06 50.1 +0.6**
ADKI IVmB_BB 21 07 02.3
comp=Z,1μm,2.3s
ADKI IVMs_BB IVMs_BB 21 30 42.8
comp=Z,821nm,20.9s
SKHT Srikalahasti 64.49 282 *e*P **P** **21 06 51.3 +0.1**
SKHT IVmBBB 21 07 03.8
comp=Z,838nm,1.9s
SKHT IVMs_BB IVMs_BB 21 29 52.9
comp=Z,841nm,21.6s
DGZ Jazzator, Alta 64.50 323*ce*P **P** **21 06 50.9 0.0**
DGZ pmax pmax
comp=Z,193nm,1.5s
DGZ MLR MLR
comp=Z,7μm,17.0s
JBP Jabalpur 64.51 293[1] *e*x x 21 07 03.1
JBP *e*S **S** **21 15 32.6 +3.5**
NJS Nagarjunasagar 64.88 285 *e*P **P** **21 06 53.7 -0.1**
NJS IVmB_BB 21 07 05.9
comp=Z,1μm,1.3s
NJS IVMs_BB IVMs_BB 21 30 21.6
comp=Z,708nm,27.5s
GAMB Gambell 65.18 20 IAMs_20 IAMs_20 21 31 33.9
comp=Z,8μm,20.0s
SDPT Sand Point 65.20 31 P **P** **21 06 54.0 -1.1**
NGP Nagpur 65.26 290 *e*P **P** **21 06 55.7 -0.5**
NGP *i* x x 21 07 07.0
SRLM Srisailam 65.27 285 *e*P **P** **21 06 56.0 -0.3**
SRLM IVmBBB 21 07 08.4
comp=Z,1μm,1.4s
SRLM IVMs_BB IVMs_BB 21 30 59.6
comp=Z,642nm,21.8s
ZSN Zaisan 65.32 320 *e*P **P** **21 06 57.2 +1.1**
comp=Z,584nm,3.2s
ZSN *e*S **S** **21 15 43.0 +4.6**
ZSN *e*LR LR 21 38 26.5
ZSN Zaisan 65.32 320 *e*P **P** **21 06 57.2 +1.1**
ZSN *e*S **S** **21 15 43.0 +4.6**
ZSN pmax pmax
comp=Z,584nm,3.2s
CNBA Chernabura Isl 65.43 32 P **P** **21 06 55.9 -0.7**
CNBA IAmb IAmb 21 07 40.0
comp=Z,44nm,1.1s
HYB Hyderabad 65.61 286 *i* P **P** **21 06 59.0 +0.5**
comp=Z,108nm,0.8s
HYB *e*S **S** **21 15 44.0 +1.1**
HYB Hyderabad 65.61 286 *e*P **P** **21 06 59.1 +0.5**
HYB *i* x x 21 07 09.7
HYBB Hyderabad (bro 65.61 286 *e*P **P** **21 06 58.3 -0.2**
HYBB IVmBBB 21 07 10.3
comp=Z,1μm,0.9s
HYBB IVMs_BB IVMs_BB 21 30 31.8
comp=Z,669nm,21.6s
SRSP Sriramsagar 65.84 288 *e*P **P** **21 06 59.5 -0.4**
SRSP IVmB_BB 21 07 11.7
comp=Z,1μm,3.3s
SRSP IVMs_BB IVMs_BB 21 35 18.3
comp=Z,421nm,16.5s
TIXI Tiksi 65.98 354 P **P** **21 06 59.0 -0.9**
comp=Z,19nm,0.7s,baz=134,slow=5.8,SNR=23
TIXI Tiksi 65.98 354*de*P **P** **21 06 59.2 -0.7**
TIXI pmax pmax
comp=Z,138nm,2.9s
TIXI MLR MLR
comp=Z,4μm,16.0s
TIXI Tiksi 65.98 354 P **P** **21 06 58.5 -1.4**
CHGN Chignik 66.67 30 P **P** **21 07 03.5 -1.0**
MK31 Makanchi Array 66.81 318 P **P** **21 07 05.0 -0.7**
MK31 pmax pmax
comp=Z,306nm,1.7s
MK31 Makanchi Array 66.81 318 P **P** **21 07 05.0 -0.7**
MKAR Makanchi Array 66.81 318 P **P** **21 07 05.3 -0.4**
comp=Z,11nm,0.7s,baz=97,slow=6.3,SNR=81
MKAR PKPPKP **P'P'df** **21 35 34.5 -2.4**
comp=Z,2.1nm,0.9s,baz=274,slow=4.8,SNR=11
MKAR LR LR 21 37 43.8
comp=Z,5μm,18.2s,baz=108,slow=37
URV Uravakonda 66.85 283 *e*P **P** **21 07 05.9 -0.6**
URV IVmBBB 21 07 18.2
comp=Z,2μm,1.1s
URV IVMs_BB IVMs_BB 21 36 39.5
comp=Z,1μm,15.8s
BHPL Bhopal 66.86 292 *e*P **P** **21 07 07.5 +1.0**
BHPL *i* pP **sP** **21 07 16.5 -0.6**
DDI Dehra Dun 66.87 300 *e*P **P** **21 07 08.2 +1.7**
DDI *i* x x 21 07 17.7
MAKZ Makanchi 67.02 318 P **P** **21 07 05.2 -1.8**
MAKZ pmax pmax
comp=Z,635nm,1.8s
MAKZ MLR MLR
comp=Z,8μm,20.0s
MAKZ Makanchi 67.02 318 P **P** **21 07 05.2 -1.8**
MAKZ IAMs_20 IAMs_20 21 35 49.7
comp=Z,8μm,20.0s
TRD Trivandrum 67.37 277 *e*P **P** **21 07 08.6 -1.2**
TRD IAmb IAmb 21 07 19.2
comp=Z,70nm,0.4s
TRD *i* x x 21 07 22.1
KLRI Killari 67.48 287 *e*P **P** **21 07 09.4 -1.1**
KLRI IVmBBB 21 07 22.0
comp=Z,895nm,1.7s
KLRI IVMs_BB IVMs_BB 21 32 51.2
comp=Z,673nm,21.9s
ZAA0 Zalesovo Array 67.57 326 P **P** **21 07 09.1 -1.2**
ZAA0 IAmb IAmb 21 07 21.6
comp=Z,57nm,0.8s
ZAA0 IAMs_20 IAMs_20 21 36 14.8
comp=Z,7μm,22.0s
ZALV Zalesovo Beam 67.57 326 P **P** **21 07 09.0 -1.3**
comp=Z,20nm,0.6s,baz=111,slow=6.3,SNR=86
ZALV PKPPKP **P'P'df** **21 35 32.6 -2.5**
comp=Z,1.8nm,0.8s,baz=274,slow=3.9,SNR=6.4
ZALV LR LR 21 36 37.2
comp=Z,5μm,21.8s,baz=112,slow=36
ZALV Zalesovo Beam 67.57 326 P **P** **21 07 08.9 -1.4**
ZALV Zalesovo Beam 67.57 326 P **P** **21 07 08.9 -1.4**
SMLA Simla 67.72 301 *e*P **P** **21 07 11.6 -0.1**
SMLA *i* x x 21 07 21.9
SMLA IAmb IAmb 21 07 27.7
comp=Z,267nm,1.3s
ANM Nome 67.85 21 P **P** **21 07 11.7 -0.2**
ANM pmax pmax
comp=Z,61nm,1.4s
ANM Nome 67.85 21 P **P** **21 07 11.7 -0.2**
ANM IAmb IAmb 21 07 35.0
comp=Z,61nm,1.4s
SHLS Shalkode 67.85 314 *e*P **P** **21 07 10.4 -2.1**
comp=Z,285nm,2.0s
SHLS *e*S **S** **21 16 08.2 -1.3**
SHLS *e*LR LR 21 36 45.0
SHLS Shalkode 67.85 314 *e*P **P** **21 07 10.3 -2.2**
SHLS *e*S **S** **21 16 08.1 -1.3**
SHLS pmax pmax
comp=Z,285nm,2.0s
UZB Uzynbulak 68.16 314 *e*P **P** **21 07 14.1 -0.5**
comp=Z,256nm,2.0s
UZB *i* S **S** **21 16 12.1 -1.2**
UZB *e*LR LR 21 38 06.5
UZB Uzynbulak 68.16 314 *e*P **P** **21 07 14.0 -0.5**
UZB *i* S **S** **21 16 12.0 -1.2**
UZB pmax pmax
comp=Z,256nm,2.0s
BHK Bhakra 68.39 301 *ex* P 21 07 21.0 +5.0
KPKS Kokpek 68.47 314 *e*P **P** **21 07 15.3 -1.1**
comp=Z,502nm,2.7s
KPKS *e*LR LR 21 38 24.0
KPKS Kokpek 68.47 314 *e*P **P** **21 07 15.2 -1.1**
KPKS pmax pmax
comp=Z,502nm,2.7s
PRZ Przheval'sk 68.48 313 P **P** **21 07 17.4 +0.8**
PRZ pmax pmax
comp=Z,858nm,1.7s
PRZ MLR MLR
comp=Z,6μm,20.0s
PRZ Przheval'sk 68.48 313 P **P** **21 07 17.4 +0.8**
SATY Saty 68.59 314 *e*P **P** **21 07 17.2 0.0**
comp=Z,306nm,2.1s
SATY *e*S **S** **21 16 20.1 +1.9**
SATY *e*LR LR 21 40 22.3
SATY Saty 68.59 314 *e*P **P** **21 07 17.1 0.0**
SATY *e*S **S** **21 16 20.1 +1.9**
SATY pmax pmax
comp=Z,306nm,2.1s
TARG Taragay, Kyrgy 68.77 312 P **P** **21 07 19.7 +1.0**
TARG IAMs_20 IAMs_20 21 37 44.4
comp=Z,8μm,20.0s
PPT Papeete 68.88 111 LR LR 21 34 08.6
comp=Z,5μm,18.3s,baz=281,slow=33
PPT2 Papeete2 68.89 112 *e*S **S** **21 16 21.9 -0.5**
comp=Z,7μm,26.2s
PPT2 *e*LQ LQ 21 24 48.0
comp=Z,29μm,29.8s
PPT2 *e*LR LR 21 28 05.9
comp=Z,8μm,22.5s,baz=288
PPT2 Papeete2 68.89 112 *e*T T 22 21 51.0
comp=Z,8.9nm,0.3s
TDK Taldygorghan 68.99 316 *e*P **P** **21 07 18.8 -0.7**
TDK *e*S **S** **21 16 21.8 -1.0**
TDK *e*LR LR 21 37 48.5
TDK Taldyqorghan 68.99 316 *e*P **P** **21 07 18.8 -0.7**
TDK *e*S **S** **21 16 21.7 -1.0**
TDK pmax pmax
comp=Z,716nm,1.9s
TIAR Tiarei 69.09 111 *e*P **P** **21 07 19.8 -0.7**
comp=Z,27nm,1.1s
TIAR Tiarei 69.09 111 *e*T T 22 21 59.6
comp=Z,3.4nm,0.2s
SEM Semipalatinsk 69.11 322 *e*P **P** **21 07 19.2 -1.2**
comp=Z,194nm,3.0s
SEM *e*S **S** **21 16 23.9 -0.4**
SEM *e*LR LR 21 38 58.5
SEM Semipalatinsk 69.11 322 *e*P **P** **21 07 19.1 -1.2**
SEM *e*S **S** **21 16 23.9 -0.4**
SEM pmax pmax
comp=Z,194nm,3.0s
TVO Taravao 69.23 112 *e*T T 22 22 16.0
comp=Z,3.7nm,0.3s
KDJ Kajisay 69.30 313 P **P** **21 07 21.4 -0.2**
KDJ pmax pmax
comp=Z,453nm,1.8s
KDJ MLR MLR
comp=Z,7μm,22.0s
KDJ Kajisay 69.30 313 P **P** **21 07 21.4 -0.2**
KDJ IAMs_20 IAMs_20 21 36 31.4
comp=Z,7μm,22.0s
MDOK Medeo 69.58 314 *e*P **P** **21 07 23.6 +0.2**
MDOK *e*S **S** **21 16 30.5 +0.5**
MDOK *e*LR LR 21 40 29.1
comp=Z,3μm,16.3s
MDOK Medeo 69.58 314 *e*P **P** **21 07 23.6 +0.2**
MDOK *e*S **S** **21 16 30.5 +0.5**
MDOK MLR MLR
comp=Z,3μm,16.0s
OHAK Old Harbor 69.63 31 P **P** **21 07 23.3 +0.2**
OHAK IAmb IAmb 21 07 44.6
comp=Z,118nm,1.4s
TNSS Tian-Shan 69.63 314 *e*P **P** **21 07 23.6 -0.4**
TNSS Tian-Shan 69.63 314 *e*P **P** **21 07 23.6 -0.4**
AAA Alma-Ata 69.69 314 *e*P **P** **21 07 23.3 -0.6**
comp=Z,514nm,2.5s
AAA *e*S **S** **21 16 32.2 +1.1**
AAA *e*LR LR 21 40 33.5
AAA Alma-Ata 69.69 314 *e*P **P** **21 07 23.2 -0.6**
AAA *e*S **S** **21 16 32.2 +1.1**
AAA pmax pmax
comp=Z,514nm,2.5s
CHKK Chushkaly 69.76 314 *e*P **P** **21 07 24.2 -0.1**
CHKK Chushkaly 69.76 314 *e*P **P** **21 07 24.1 -0.1**
KSH Kashi 69.77 310 P **P** **21 07 27.4 +2.9**
KSH sP pP 21 07 32.0 +0.2
KSH PP **PP** **21 10 02.3 +3.3**
KSH S **S** **21 16 36.5 +4.2**
KSH ScS **ScS** **21 17 24.9 -0.1**
KSH SS **SS** **21 21 05.6 +4.5**
KSH pmax pmax
comp=Z,43nm,0.7s
KSH pmax pmax
comp=Z,2μm,4.1s
KSH LR LR
comp=Z,4μm,13.4s
KSH LR LR
comp=Z,2μm,13.9s
KSH LR LR
comp=Z,2μm,11.6s
PMOR Pomariorio Ree 69.86 108 *e*P **P** **21 07 24.3 -1.0**
comp=Z,122nm,1.1s
PMOR Pomariorio Ree 69.86 108 *e*T T 22 23 01.4
comp=Z,16nm,0.2s
ULHL Ulahol 70.00 313 P **P** **21 07 22.8 -3.3**
SNR=10
POO Poona 70.09 287 *e*P **P** **21 07 26.8 0.0**
POO *i* x x 21 07 37.3
GOA Goa 70.16 284 *e*P **P** **21 07 28.2 +1.1**
GOA *i* pP **sP** **21 07 38.5 +0.7**
KDAK Kodiak Island 70.18 30 P **P** **21 07 26.8 +0.4**
comp=Z,32nm,1.1s,baz=281,slow=2.7,SNR=5.1
KDAK Kodiak Island 70.18 30 P **P** **21 07 27.3 +0.8**
KDAK pmax pmax
comp=Z,72nm,1.3s
KDAK MLR MLR
comp=Z,9μm,20.0s
KDAK Kodiak Island 70.18 30 P **P** **21 07 27.3 +0.8**
KDAK IAmb IAmb 21 08 20.6
comp=Z,72nm,1.2s
KDAK Kodiak Island 70.18 30 IAMs_20 IAMs_20 21 35 07.1
comp=Z,9μm,20.0s
KURK Kurchatov 70.19 322 P **P** **21 07 27.1 +0.4**
KURK P **P** **21 07 27.1 +0.4**
KURK Kurchatov 70.19 322*c i*P **P** **21 07 25.9 -0.8**
KURK pmax pmax
comp=Z,815nm,2.0s
KURK MLR MLR
comp=Z,9μm,17.0s
KURK Kurchatov 70.19 322 P **P** **21 07 26.0 -0.7**
KUU Kurty 70.22 314 *e*P **P** **21 07 26.5 -0.6**
comp=Z,755nm,1.9s
KUU *e*S **S** **21 16 40.6 +3.4**
KUU *e*LR LR 21 40 36.6
KUU Kurty 70.22 314 *e*P **P** **21 07 26.5 -0.6**
KUU *e*S **S** **21 16 40.6 +3.4**
KUU pmax pmax
comp=Z,755nm,1.9s
KURBB Kurchatov Arra 70.22 322 P **P** **21 07 26.1 -0.8**
comp=Z,37nm,0.9s,baz=108,slow=5.6,SNR=153
TBI Tubuai 70.49 117 *e*S **S** **21 16 38.9 -2.0**
comp=Z,6μm,29.5s
TBI *e*SS **SS** **21 21 14.0 +1.3**
comp=Z,3μm,28.2s
TBI *e*LR LR 21 28 51.5
comp=Z,9μm,31.8s,baz=290
TBI Tubuai 70.49 117 *e*T T 22 23 53.4
comp=Z,13nm,0.4s
TKM2 Tokmak 2 70.59 313 P **P** **21 07 29.5 -0.1**
SNR=15
TTA Tatalina 70.62 25 P **P** **21 07 28.8 -0.4**
TTA Tatalina 70.62 25 P **P** **21 07 28.8 -0.4**
RDOG Red Dog Mine 70.65 18 P **P** **21 07 29.6 +0.4**
RDOG IAmb IAmb 21 07 47.6
comp=Z,73nm,1.2s
RDOG IAMs_20 IAMs_20 21 35 13.9
comp=Z,6μm,21.0s
KZA Kyzart 70.70 312 P **P** **21 07 31.5 +0.9**
SNR=31
KBK Karagaybulak 71.02 313 P **P** **21 07 33.6 +1.5**
SNR=11
RSO Redoubt South 71.06 28 P **P** **21 07 30.6 -1.5**
BOM Bombay 71.08 288 *e*P P 21 07 23.2 -10
BOM *e*S S 21 16 37.0 -11
CHMS Chumysh 71.21 313 P **P** **21 07 32.9 -0.3**
SNR=6.5
NIL Nilore 71.26 303 P **P** **21 07 35.3 +1.7**
NIL P **P** **21 07 35.3 +1.7**
UCH Uchtor 71.27 312 P **P** **21 07 35.0 +0.9**
SNR=23
FRU1 Bishkek 71.27 313 IAMs_20 IAMs_20 21 40 34.6
comp=Z,10μm,20.0s
AAK Ala-Archa 71.34 313 P **P** **21 07 32.6 -1.6**
comp=Z,4.6nm,0.9s,baz=90,slow=4.2,SNR=12
AAK Ala-Archa 71.34 313 P **P** **21 07 33.9 -0.3**
SNR=7.3
AAK Ala-Archa 71.34 313 P **P** **21 07 36.6 +2.4**
AAK P **P** **21 07 36.6 +2.4**
AAK Ala-Archa 71.34 313*ce*P **P** **21 07 34.6 +0.5**
AAK pmax pmax
comp=Z,88nm,1.5s
AAK MLR MLR
comp=Z,9μm,19.0s
AAK Ala-Archa 71.34 313 P **P** **21 07 33.0 -1.1**
AAK IAmb IAmb 21 07 46.5
comp=Z,156nm,1.6s
AAK Ala-Archa 71.34 313 IAMs_20 IAMs_20 21 40 46.6
comp=Z,10μm,19.0s
SGDS Sogindy 71.37 314 *e*P **P** **21 07 33.3 -0.9**
comp=Z,271nm,2.7s
SGDS *i* S **S** **21 16 51.8 +1.0**
SGDS *e*LR LR 21 41 21.8
USP Ospenovka 71.44 313 P **P** **21 07 35.2 +0.7**
SNR=7.2
CNPM China Poot 71.44 29 P **P** **21 07 33.1 -1.0**
CNPM IAmb IAmb 21 08 08.1
comp=Z,96nm,1.3s
BRLK Bradley Lake 71.69 29 P **P** **21 07 34.4 -1.3**
BRLK IAmb IAmb 21 08 19.8
comp=Z,118nm,1.6s
AML Almayashu 71.86 312 P **P** **21 07 38.9 +1.4**
SNR=11
EKS2 Erkin-Say 71.87 313 P **P** **21 07 38.3 +1.0**
SNR=13
BTLS Baital 72.04 315 *e*P **P** **21 07 37.9 -0.2**
comp=Z,210nm,2.1s
BTLS *e*S **S** **21 16 56.7 -1.6**
BTLS *e*LR LR 21 40 13.2
BTLS Baital 72.04 315 *e*P **P** **21 07 37.8 -0.2**
BTLS *e*S **S** **21 16 56.6 -1.6**
BTLS pmax pmax
comp=Z,210nm,2.1s
PPLA Purkeypile 72.21 25 P **P** **21 07 38.2 -0.7**
PPLA IAmb IAmb 21 07 59.4
comp=Z,124nm,1.5s
SEW Seward 72.48 29 P **P** **21 07 39.6 -0.7**
SEW IAmb IAmb 21 07 45.6
comp=Z,61nm,1.1s
SEW IAMs_20 IAMs_20 21 34 08.9
comp=Z,8μm,21.0s
RC01 Rabbit Creek A 72.67 28 P **P** **21 07 40.3 -1.1**
RC01 IAmb IAmb 21 07 58.6
comp=Z,82nm,1.2s
IMAR Indian Mountai 72.80 22 P **P** **21 07 41.4 -0.7**
NRIK Noril'sk 72.95 342 P **P** **21 07 42.5 -0.5**
comp=Z,16nm,0.8s,baz=121,slow=6.2,SNR=21
NRIK LR LR 21 40 15.4
comp=Z,4μm,19.2s,baz=118,slow=36
KTH Kantishna Hill 72.98 25 P **P** **21 07 42.6 -0.8**
KTH IAmb IAmb 21 07 45.4
comp=Z,81nm,1.1s
KTH IAMs_20 IAMs_20 21 33 48.9
comp=Z,8μm,20.0s
PMR Palmer 73.11 27 P **P** **21 07 43.6 -0.4**
PMR pmax pmax
comp=Z,118nm,1.6s
PMR MLR MLR
comp=Z,6μm,20.0s
PMR Palmer 73.11 27 P **P** **21 07 43.6 -0.4**
PMR IAmb IAmb 21 08 12.0
comp=Z,118nm,1.6s
PMR IAMs_20 IAMs_20 21 34 22.2
comp=Z,6μm,20.0s
BPAW Bear Paw Mtn. 73.15 24 P **P** **21 07 43.6 -0.7**
BPAW IAMs_20 IAMs_20 21 36 45.3
comp=Z,8μm,20.0s
TRF Thorofare Moun 73.22 25 P **P** **21 07 43.2 -1.7**
TRF IAmb IAmb 21 08 01.8
comp=Z,78nm,1.2s
TRF IAMs_20 IAMs_20 21 35 58.0
comp=Z,9μm,20.0s
GHO Glory Hole Cre 73.26 27 P **P** **21 07 43.9 -1.2**
GHO IAmb IAmb 21 08 02.2
comp=Z,102nm,1.3s
GHO IAMs_20 IAMs_20 21 34 27.2
comp=Z,8μm,20.0s
KNK Knik Glacier 73.36 27 P **P** **21 07 44.6 -1.0**
KNK IAmb IAmb 21 07 57.9
comp=Z,80nm,1.2s
KNK IAMs_20 IAMs_20 21 36 34.9
comp=Z,7μm,21.0s
SML Sawmill 73.53 27 P **P** **21 07 45.8 -0.8**
SML IAmb IAmb 21 07 58.8
comp=Z,116nm,1.2s
SML IAMs_20 IAMs_20 21 34 34.6
comp=Z,7μm,21.0s
MLY Manley 73.59 24 P **P** **21 07 46.3 -0.6**
MLY IAmb IAmb 21 07 58.8
comp=Z,57nm,1.0s
DZA Taraz 73.69 313 *e*P **P** **21 07 47.7 -0.2**
DZA Taraz 73.69 313 *e*P **P** **21 07 47.7 -0.2**
BRZS Berezniki 73.76 320 *e*P **P** **21 07 47.6 -0.6**
comp=Z,453nm,2.2s
BRZS Berezniki 73.76 320 *e*P **P** **21 07 47.5 -0.6**
BRZS pmax pmax
comp=Z,453nm,2.2s
BTK Batken 73.78 310 P **P** **21 07 48.5 -0.1**
BTK pmax pmax
comp=Z,353nm,1.6s
BTK MLR MLR
comp=Z,6μm,20.0s
BTK Batken 73.78 310 P **P** **21 07 48.5 -0.1**
BTK IAMs_20 IAMs_20 21 39 29.1
comp=Z,6μm,20.0s
BWN Browne 73.80 25 P **P** **21 07 48.1 0.0**
BWN IAMs_20 IAMs_20 21 36 46.4
comp=Z,7μm,20.0s
RND Reindeer 73.81 25 P **P** **21 07 46.8 -1.5**
RND pmax pmax
comp=Z,136nm,1.3s
RND MLR MLR
comp=Z,9μm,20.0s
RND Reindeer 73.81 25 P **P** **21 07 46.8 -1.5**
RND IAmb IAmb 21 08 05.6
comp=Z,136nm,1.3s
RND IAMs_20 IAMs_20 21 35 01.6
comp=Z,9μm,20.0s
GLI Glacier Island 73.83 28 P **P** **21 07 47.6 -0.7**
GLI IAmb IAmb 21 08 04.4
comp=Z,124nm,1.5s
MCK McKinley 73.88 25 P **P** **21 07 48.2 -0.4**
MCK pmax pmax
comp=Z,123nm,1.2s
MCK MLR MLR
comp=Z,8μm,20.0s
MCK McKinley 73.88 25 P **P** **21 07 48.2 -0.4**
MCK IAmb IAmb 21 08 06.9
comp=Z,123nm,1.2s
MCK IAMs_20 IAMs_20 21 35 24.5

comp=Z,8µm,20.0s
SCM Sheep Creek Mo 74.00 27 P P 21 07 49.2 -0.2
SCM pmax pmax
comp=Z,131nm,1.2s
SCM Sheep Creek Mo 74.00 27 P P 21 07 49.2 -0.2
SCM IAmb IAmb 21 08 01.8
comp=Z,131nm,1.2s
GAR Garm 74.07 309 P P 21 07 49.5 -0.9
FID Port Fidalgo 74.08 28 P P 21 07 49.0 -0.9
NEA Nenana 74.10 24 P P 21 07 49.2 -0.6
NEA IAMs_20 IAMs_20 21 37 23.5
comp=Z,8µm,20.0s
JBG Jabagly 74.21 312 *e*P **P 21 07 51.5 +0.3**
JBG *e*S **S 21 17 24.6 +1.3**
JBG pmax pmax
comp=Z,290nm,1.7s
KK31 Karatay Array 74.31 313 P P 21 07 52.0 +0.4
KK31 pmax pmax
comp=Z,410nm,1.7s
KK31 Karatay Array 74.31 313 P P 21 07 52.0 +0.4
KKAR Karatay Array 74.31 313 P P 21 07 51.5 0.0
KKAR Karatay Array 74.31 313 P P 21 07 51.5 0.0
KKAR Karatay Array 74.31 313 P P 21 07 52.0 +0.4
KKAR IAmb IAmb 21 08 03.7
comp=Z,410nm,1.6s
DHY Denali Highway 74.34 26 P P 21 07 50.8 -0.7
DHY IAmb IAmb 21 08 03.6
comp=Z,77nm,1.2s
DHY IAMs_20 IAMs_20 21 35 18.8
comp=Z,9µm,21.0s
EYAK Cordova Ski Ar 74.38 29 IAMs_20 IAMs_20 21 37 22.9
comp=Z,8µm,21.0s
WRH Wood River Hil 74.47 24 P P 21 07 50.0 -2.0
WRH IAmb IAmb 21 08 03.4
comp=Z,123nm,1.3s
WRH IAMs_20 IAMs_20 21 37 03.1
comp=Z,6µm,20.0s
IUG luzhnay 74.56 312 *e*P **P 21 07 53.6 +0.5**
IUG *e*S **S 21 17 30.5 +3.3**
IUG luzhnay 74.56 312 *e*P **P 21 07 53.6 +0.5**
IUG *e*S **S 21 17 30.5 +3.3**
MDM Murphy Dome 74.57 24 P **P 21 07 51.7 -0.9**
MDM IAMs_20 IAMs_20 21 38 38.6
comp=Z,9µm,21.0s
COLD Coldfoot 74.58 21 P P 21 07 52.3 -0.3
CCB Clear Creek Bu 74.64 24 P P 21 07 51.5 -1.4
CCB IAmb IAmb 21 08 04.2
comp=Z,106nm,1.2s
CCB IAMs_20 IAMs_20 21 39 31.6
comp=Z,7µm,20.0s
TCOL CIGO, UAF Yank 74.69 24 P P 21 07 51.2 -2.0
baz=252
COLA College 74.69 24 *d i*P **P 21 07 51.5 -1.7**
COLA pmax pmax
comp=Z,57nm,1.1s
COLA College 74.69 24 P P 21 07 52.1 -1.1
COLA College 74.69 24 IAMs_20 IAMs_20 21 39 22.9
comp=Z,8µm,19.0s
KBL Kabul 74.80 304 P P 21 07 56.3 +1.5
KBL Kabul 74.80 304 P P 21 07 54.2 -0.6
KBL pmax pmax
comp=Z,63nm,0.9s
KBL MLR MLR
comp=Z,3µm,20.0s
KBL Kabul 74.80 304 P P 21 07 54.2 -0.6
KBL IAmb IAmb 21 08 05.7
comp=Z,63nm,0.9s
RAGM Ragged Mountai 74.85 29 P P 21 07 54.2 -0.2
RAGM IAmb IAmb 21 08 12.4
comp=Z,99nm,1.3s
CHM Chimkent 74.90 312 *e*P **P 21 07 53.7 -1.3**
CHM *e*S **S 21 17 31.7 +1.0**
CHM Chimkent 74.90 312 *e*P **P 21 07 53.7 -1.3**
CHM *e*S **S 21 17 31.7 +1.0**
HDA Harding Lake 74.92 25 P P 21 07 51.8 -2.9
baz=253
HDA Harding Lake 74.92 25 P P 21 07 52.6 -2.1
HDA IAMs_20 IAMs_20 21 35 56.1
comp=Z,7µm,20.0s
POKR Poker Plat Res 74.94 24 P P 21 07 51.6 -3.1
baz=252
CHGR Chuyangaron 74.95 308 P P 21 07 55.5 0.0
TAS Tashkent 75.04 311 P P 21 07 55.5 -0.3
TAS pmax pmax
comp=Z,308nm,1.1s
TAS MLR MLR
comp=Z,5µm,21.0s
TAS Tashkent 75.04 311 P P 21 07 55.5 -0.3
IL31 75.05 24 P P 21 07 53.2 -2.1
ILAR Eielson Array 75.05 24 P P 21 07 53.3 -2.1
comp=Z,23nm,0.6s,baz=252,slow=5.8,SNR=136
ILAR LR LR 21 39 15.5
comp=Z,6µm,20.1s,baz=268,slow=34
ILAR Eielson Array 75.05 24 P P 21 07 53.0 -2.4
ILAR Eielson Array 75.05 24 P P 21 07 53.0 -2.4
PAX Paxson 75.15 26 P P 21 07 55.3 -0.8
PAX pmax pmax
comp=Z,57nm,1.2s
PAX Paxson 75.15 26 P P 21 07 55.3 -0.8
TOLK Toolik Lake Re 75.31 20 P P 21 07 55.9 -1.0
baz=249
TOLK S **S 21 17 35.5 +1.0**
baz=249
TOLK Toolik Lake Re 75.31 20 P P 21 07 56.4 -0.5
GLB Gilahina Butte 75.52 28 P P 21 07 57.4 -0.7
GLB IAMs_20 IAMs_20 21 39 24.5
comp=Z,6µm,20.0s
RIDG Independent Ri 75.62 26 P P 21 07 57.5 -1.2
RIDG IAmb IAmb 21 08 10.8
comp=Z,74nm,1.1s
VRDI Verde Repeater 75.63 28 P P 21 07 57.5 -1.5
VRDI IAMs_20 IAMs_20 21 37 14.1
comp=Z,6µm,20.0s
BVAR Borovoye Array 75.66 323 P P 21 07 58.5 -0.5
comp=Z,29nm,0.8s,baz=110,slow=6.5,SNR=84
BRVK Borovoye 75.72 323 P P 21 08 01.2 +1.7
BRVK P **P 21 08 01.2 +1.7**
BRVK Borovoye 75.72 323 *ce*P **P 21 07 59.1 -0.3**
BRVK pmax pmax
comp=Z,365nm,1.7s
BRVK MLR MLR
comp=Z,7µm,18.0s
BRVK Borovoye 75.72 323 P P 21 07 59.1 -0.3
BRVK Borovoye 75.72 323 IAMs_20 IAMs_20 21 43 57.7
comp=Z,8µm,18.0s
PRP Porcupine Dome 75.82 24 P P 21 07 58.2 -1.8
MCARA McCarthy VSAT 75.87 28 P P 21 07 59.6 -0.5
MCARA IAmb IAmb 21 08 23.2
comp=Z,46nm,0.9s
MCARA IAMs_20 IAMs_20 21 39 35.4
comp=Z,5µm,20.0s
MENT Mentasta 75.91 27 P P 21 08 00.2 -0.2
DOT Dot Lake 75.94 26 P P 21 07 59.3 -1.2
DOT IAmb IAmb 21 08 12.6
comp=Z,54nm,0.9s
DOT IAMs_20 IAMs_20 21 37 43.9
comp=Z,7µm,20.0s
SCRK Sand Creek 76.05 25 P P 21 08 00.3 -0.9
BALM Baldy 76.11 29 P P 21 08 01.4 -0.3
BALM IAmb IAmb 21 08 18.0
comp=Z,70nm,1.3s
BALM IAMs_20 IAMs_20 21 37 31.9
comp=Z,6µm,22.0s
TAOE Nuku Hiva Isla 76.19 101 *e*S **S 21 17 45.3 -0.7**
comp=Z,5µm,26.8s
TAOE Nuku Hiva Isla 76.19 101 *e*LQ LQ 21 28 19.0
comp=Z,10µm,25.4s
TAOE *e*LR LR 21 31 32.3
comp=Z,12µm,26.5s,baz=282
TAOE Nuku Hiva Isla 76.19 101 *e*T T 22 30 52.9
comp=Z,71nm,0.2s
FYU Fort Yukon 76.23 23 P P 21 08 02.1 +0.1
FYU IAMs_20 IAMs_20 21 39 39.1
comp=Z,7µm,20.0s
YAH Yahtse 76.27 29 P P 21 08 02.7 0.0
YAH IAmb IAmb 21 08 42.9
comp=Z,62nm,1.0s
YAH IAMs_20 IAMs_20 21 39 30.8
comp=Z,5µm,20.0s
BARN Barnard Glacie 76.45 29 P P 21 08 03.7 0.0
BARN IAmb IAmb 21 08 16.6
comp=Z,64nm,1.0s
CTGM Chitina Glacie 76.58 29 P P 21 08 04.4 0.0
CASY Casey 76.64 194 P P 21 08 04.1 -0.2
CASY Casey 76.64 194 IAMs_20 IAMs_20 21 42 15.0
comp=Z,6µm,18.0s
BMAR Burnt Mountain 76.71 22 P P 21 08 05.0 +0.1
BCAR Beaver Creek A 76.80 27 P P 21 08 04.4 -1.1
EGAK Eagle 77.43 25 P P 21 08 08.5 -0.4
EGAK IAmb IAmb 21 08 21.6
comp=Z,124nm,1.2s
EGAK IAMs_20 IAMs_20 21 36 39.4
comp=Z,7µm,21.0s
DHAK Deception Hill 77.81 31 P P 21 08 11.2 0.0
DHAK IAmb IAmb 21 08 14.5
comp=Z,99nm,1.1s
DAWY Dawson 78.05 26 P P 21 08 12.1 -0.3
DAWY IAmb IAmb 21 08 25.3
comp=Z,112nm,1.2s
HYT Haines Junctio 78.41 29 IAMs_20 IAMs_20 21 40 07.5
comp=Z,7µm,20.0s
SKAG Skagway 79.33 31 P P 21 08 19.8 +0.3
SKAG IAmb IAmb 21 08 32.6
comp=Z,122nm,1.2s
BESE Bessie Mountai 79.49 32 P P 21 08 20.0 -0.5
BESE IAMs_20 IAMs_20 21 41 18.3
comp=Z,5µm,20.0s
EPYK Eagle Plains 79.53 24 P P 21 08 18.9 -1.6
baz=262
EPYK Eagle Plains 79.53 24 P P 21 08 19.9 -0.6
WHY Whitehorse 79.67 30 P P 21 08 21.3 -0.2
WHY IAmb IAmb 21 08 33.9
comp=Z,123nm,1.4s
JIS Juneau Island 79.71 32 P P 21 08 21.2 -0.3
HRA Herat 80.42 304 P P 21 08 25.6 -0.6
HRA IAMs_20 IAMs_20 21 46 55.4
comp=Z,5µm,20.0s
H02N1 VAN INLET T-PH 80.46 37 T T 22 37 23.3
SNR=5.3
DIB Dawson Inlet, 80.49 37 P P 21 08 25.7 -0.2
H02S1 DAWSON INLET T 80.49 37 T T 22 37 21.5
SNR=8.5
WRAK Wrangell Islan 80.70 34 P P 21 08 27.1 +0.2
WRAK IAmb IAmb 21 08 40.0
comp=Z,85nm,1.2s
WRAK Wrangell Islan 80.70 34 IAMs_20 IAMs_20 21 47 58.5
comp=Z,4µm,18.0s
MOBC Moresby Island 80.80 37 IAMs_20 IAMs_20 21 39 06.3
comp=Z,7µm,20.0s
INK Inuvik 80.99 22 P P 21 08 27.7 -0.5
comp=Z,58nm,1.1s,baz=259,slow=5.6,SNR=44
INK Inuvik 80.99 22 P P 21 08 27.5 -0.7
INK pmax pmax
comp=Z,93nm,1.0s
INK Inuvik 80.99 22 P P 21 08 27.5 -0.7
INK IAmb IAmb 21 08 40.3
comp=Z,93nm,1.0s
SVE Sverdlovsk 81.59 326 *ij e*P **P 21 08 31.8 +0.2**
SVE *e* 21 13 33.2
SVE *e*S **S 21 18 49.0 +7.0**
SVE pmax pmax
comp=Z,140nm,1.4s
SVE MLR MLR
comp=Z,10µm,17.0s
SVE MLR MLR
comp=E,8µm,18.0s
ABKAR Akbulak array 81.95 319 P P 21 08 32.1 -1.6
DLBC Dease Lake 82.01 32 P P 21 08 34.2 +0.2
comp=E,38nm,1.0s,baz=290,slow=6.2,SNR=33
DLBC Dease Lake 82.01 32 P P 21 08 33.4 -0.5
DLBC IAmb IAmb 21 08 47.1
comp=Z,125nm,1.2s
ARU Arti 82.73 326 P P 21 08 37.4 -0.3
comp=Z,4.8nm,0.7s,baz=222,slow=0.5,SNR=24
ARU Arti 82.73 326 *c i*P **P 21 08 36.6 -1.0**
ARU S **S 21 18 54.8 +1.1**
ARU SS **SS 21 24 16.0 0.0**
ARU pmax pmax
comp=Z,16nm,0.8s
ARU MLR MLR
comp=Z,11µm,20.0s
ARU Arti 82.73 326 P P 21 08 35.4 -2.3
BBB Bella Bella 83.14 38 P P 21 08 40.6 +0.8
comp=Z,27nm,1.1s,baz=242,slow=7.0,SNR=4.5
BBB LR LR 21 44 27.9
comp=Z,1µm,18.2s,baz=268,slow=35
BBB Bella Bella 83.14 38 P P 21 08 38.3 -1.5
BBB IAMs_20 IAMs_20 21 40 06.5
comp=Z,6µm,20.0s
AKTO Aktyubinsk 83.17 320 P P 21 08 40.4 +0.3
comp=Z,7.7nm,0.8s,baz=113,slow=3.9,SNR=13
RKT Rikitea 83.43 114 *e*S **S 21 18 59.7 -2.3**
comp=Z,2µm,27.5s
RKT *e*SS **SS 21 24 27.8 -0.4**
comp=Z,2µm,28.2s
RKT *e*LQ LQ 21 31 22.9
comp=Z,7µm,31.2s
RKT *e*LR LR 21 34 52.6
comp=Z,6µm,25.0s
RKT Rikitea 83.43 114 *e*T T 22 39 54.7
comp=Z,48nm,0.3s
GEYT Alibeck 83.62 307 P P 21 08 43.6 +0.9
comp=Z,4.9nm,0.8s,baz=92,slow=4.5,SNR=16
GEYT LR LR 21 48 44.8
comp=Z,4µm,20.2s,baz=90,slow=38
GEYT Alibeck 83.62 307 P P 21 08 41.7 -1.0
GYA0B ALIBECK ARRAY 83.62 307 P P 21 08 41.6 -1.1
GYA0B IAMs_20 IAMs_20 21 47 03.0
comp=Z,5µm,21.0s
WBK Wadi Bani Khal 83.87 292 P P 21 08 46.8 +2.5
SNR=9.4
WBK P **P 21 08 46.8 +2.5**
SNR=9.4
A36M Sachs Harbour 83.93 18 P P 21 08 42.1 -1.4
baz=272
WSAR Wadi Sarin 84.14 293 P P 21 08 46.2 +0.6
comp=Z,9.4nm,0.8s,baz=157,slow=2.6,SNR=7.1
VNDA Vanda 84.30 176 P P 21 08 45.4 +0.2
comp=Z,18nm,1.0s,baz=327,slow=6.0,SNR=69
VNDA LR LR 21 42 10.2
comp=Z,3µm,21.7s,baz=345,slow=33
VNDA Vanda 84.30 176 P P 21 08 44.5 -0.7
VNDA pmax pmax
comp=Z,23nm,1.0s
VNDA Vanda 84.30 176 P P 21 08 44.5 -0.7
C36M Paulatuk 84.44 21 P P 21 08 44.6 -1.5
baz=273
C36M Paulatuk 84.44 21 P P 21 08 44.6 -1.5
C36M IAmb IAmb 21 08 57.6
comp=Z,74nm,1.0s
BANOM Banah 86.03 296 *i*P **P 21 08 59.7 +4.6**
SNR=11
BANOM Banah 86.03 296 *i*P **P 21 08 59.7 +4.6**
SNR=11
MDH Madha 86.09 295 *i*P **P 21 08 58.5 +3.2**
SNR=5.2
MDH Madha 86.09 295 *i*P **P 21 08 58.5 +3.2**
SNR=5.2
SHME Shamm 86.16 296 *i*P **P 21 08 59.7 +3.9**
SNR=6.7
SHME Shamm 86.16 296 *i*P **P 21 08 59.7 +3.9**
SNR=6.7
NLWA Neilton Lookou 86.17 43 P P 21 08 55.5 +0.2
NLWA IAmb IAmb 21 09 15.4
comp=Z,100nm,1.4s
UOSS Minazif 86.21 295 *i*P **P 21 08 59.6 +3.6**
SNR=5.9
UOSS Minazif 86.21 295 *i*P **P 21 08 59.6 +3.6**
SNR=5.9
UOSS Minazif 86.21 295 P **P 21 08 52.8 -3.1**
MSFE Esma-Masafi 86.21 295 *i*P **P 21 09 00.5 +4.5**
SNR=10
MSFE Esma-Masafi 86.21 295 *i*P **P 21 09 00.5 +4.5**
SNR=10
HATD Hatta, Dubai 86.28 294 *i*P **P 21 09 00.2 +3.9**
SNR=8.9
HATD Hatta, Dubai 86.28 294 *i*P **P 21 09 00.2 +3.9**
SNR=8.9
PGC Sidney 86.33 42 P P 21 08 54.1 -1.9
ASHO Ashiyiah 86.36 294 *i*P **P 21 09 01.0 +4.2**
SNR=6.2
ASHO Ashiyiah 86.36 294 *i*P **P 21 09 01.0 +4.2**
SNR=6.2
E03A Lebam 86.46 44 P P 21 08 56.9 +0.2
I02D Swisshome 86.49 46 P P 21 08 53.6 -3.3
baz=276
I02D S **S 21 19 40.0 +8.3**
baz=276
J01E Myrtle Point 86.52 47 P P 21 08 54.7 -2.3
baz=276,SNR=11
F03A Seaside 86.52 44 P P 21 08 57.8 +0.8
F03A IAMs_20 IAMs_20 21 42 16.4
comp=Z,5µm,19.0s
JCC Jacoby Creek, 86.67 49 P P 21 08 56.6 -1.3
JCC IAmb IAmb 21 09 29.4
comp=Z,64nm,1.2s
JCC IAMs_20 IAMs_20 21 44 20.8
comp=Z,4µm,18.0s
D03D Eldon 86.69 43 P P 21 08 54.8 -3.0
baz=276
KRMB Red Mountain 86.69 49 P P 21 08 58.7 +0.6
KRMB IAmb IAmb 21 09 11.4
comp=Z,61nm,1.4s
NAZ Nazwa, Dubai 86.69 295 *i*P **P 21 09 02.4 +4.1**
SNR=5.8
NAZ Nazwa, Dubai 86.69 295 *i*P **P 21 09 02.4 +4.1**
SNR=5.8
ALNE Al Ain 86.70 294 *i*P **P 21 09 01.2 +2.8**
SNR=7.7
ALNE Al Ain 86.70 294 *i*P **P 21 09 01.2 +2.8**
SNR=7.7
K02D Willamette Mer 86.76 48 P P 21 08 57.0 -1.4
baz=276,SNR=12
FAQ Al Faqa, Dubai 86.78 294 P P 21 09 00.7 +1.9
FAQ P **P 21 09 00.7 +1.9**
G03D McMinnville, O 86.80 45 P P 21 08 57.4 -1.0
baz=276
A04D Lummi Island 86.82 42 P P 21 08 56.7 -1.7
baz=276
COR Corvallis 86.83 46 P P 21 08 57.8 -0.8
COR pmax pmax
comp=Z,251nm,1.8s
COR MLR MLR
comp=Z,5µm,20.0s
COR Corvallis 86.83 46 P P 21 08 57.8 -0.8
COR Corvallis 86.83 46 IAMs_20 IAMs_20 21 45 33.7
comp=Z,5µm,20.0s
F04D Rainier, OR 86.89 44 P P 21 08 57.6 -1.3
baz=276
KHMM Horse Mountain 86.89 49 P P 21 08 59.3 +0.1
KHMM IAmb IAmb 21 09 18.8
comp=Z,86nm,1.3s
KHMM IAMs_20 IAMs_20 21 50 39.6
comp=Z,5µm,18.0s
I03D Drain, OR 86.89 47 P P 21 08 57.1 -1.8
baz=276,SNR=12
D04E Lakebay 86.94 43 P P 21 08 57.8 -1.2
baz=276
KMRM Mail Ridge 86.97 50 P P 21 08 59.5 +0.1
KMRM IAmb IAmb 21 09 25.4
comp=Z,95nm,1.4s
KMRM IAMs_20 IAMs_20 21 41 42.9
comp=Z,4µm,19.0s
KCPM Cahto Peak 87.12 51 P P 21 09 00.7 +0.5
KCPM IAmb IAmb 21 09 03.6
comp=Z,70nm,1.2s
KCPM IAMs_20 IAMs_20 21 44 04.9
comp=Z,4µm,19.0s
E04D Cinebar 87.14 44 P P 21 08 58.5 -1.5
baz=276
LLLB Lillooet 87.15 40 P P 21 08 59.8 -0.3
LLLB IAmb IAmb 21 09 12.5
comp=Z,115nm,1.5s
LLLB IAMs_20 IAMs_20 21 42 46.5
comp=Z,5µm,21.0s
H04D Lebanon 87.24 46 P P 21 08 59.8 -0.8
baz=276,SNR=13
B05A Bryant 87.27 42 P P 21 08 59.4 -1.2
baz=277
B05A S **S 21 19 45.7 +6.6**
baz=277
F04A Amboy 87.31 44 P P 21 08 59.8 -1.1
D05A Enumclaw 87.47 43 P P 21 09 02.3 +0.7
M02C Callahan 87.49 49 P P 21 09 02.2 +0.2
baz=276,SNR=18
I04A Tendick Farm, 87.55 46 P P 21 09 02.0 -0.2
baz=276,SNR=18
I04A S **S 21 19 45.1 +3.0**
baz=276
YBH Yreka Blue Hor 87.56 48 P P 21 09 02.0 -0.3
YBH pmax pmax
comp=Z,42nm,1.3s
YBH MLR MLR
comp=Z,4µm,21.0s
YBH Yreka Blue Hor 87.56 48 P P 21 09 02.0 -0.3
HOPS Hopland Field 87.58 51 P P 21 09 04.0 +1.6
HOPS IAmb IAmb 21 09 15.2
comp=Z,83nm,1.4s
HOPS IAMs_20 IAMs_20 21 45 31.3
comp=Z,6µm,19.0s
H04A Detroit Lake 87.61 45 P P 21 09 01.1 -1.3
H04A IAmb IAmb 21 09 15.4
comp=Z,65nm,1.1s
B06A Marblemount 87.65 42 P P 21 09 02.6 +0.2
B06A IAmb IAmb 21 09 14.5
comp=Z,42nm,0.9s
B06A IAMs_20 IAMs_20 21 42 07.9
comp=Z,5µm,20.0s
N02D Trinity Center 87.65 49 P P 21 09 03.1 +0.3
baz=276,SNR=18
N02D S **S 21 19 49.9 +6.7**
baz=276
O02D Mt. Diablo Mer 87.67 50 P P 21 09 03.2 +0.3
baz=276,SNR=40
O02D S **S 21 19 47.6 +4.1**
baz=276
L04D Klamath Falls 87.81 48 P P 21 09 03.7 +0.1
baz=277,SNR=18
WDC Whiskeytown Da 87.82 50 P P 21 09 03.8 +0.3
WDC pmax pmax
comp=Z,109nm,1.7s
WDC MLR MLR
comp=Z,4µm,19.0s
WDC Whiskeytown Da 87.82 50 P P 21 09 03.8 +0.3
WDC IAmb IAmb 21 09 16.3
comp=Z,108nm,1.6s
GDXM Geysers 87.82 51 P P 21 09 03.3 -0.3
GDXM IAmb IAmb 21 09 29.3
comp=Z,52nm,1.5s
J04D Umpqua Nationa 87.83 47 P P 21 09 03.6 -0.1
baz=277,SNR=13
J04D S **S 21 19 48.9 +3.7**
baz=277
F05D White Salmon 87.98 44 P P 21 09 03.6 -0.5
baz=277
G05D Wamic, OR 88.16 45 P P 21 09 05.2 +0.2
baz=277
K04D Chiloquin, OR 88.17 47 P P 21 09 04.8 -0.5
baz=277
M04C Macdoel 88.20 48 P P 21 09 05.6 +0.1
baz=277,SNR=12
I05D Terrebonne, OR 88.26 46 P P 21 09 03.4 -2.2
baz=277
I05D S **S 21 19 50.9 +2.1**
baz=277
LTY Liberty 88.35 43 P P 21 09 04.2 -1.7
LTY IAmb IAmb 21 09 18.1
comp=Z,61nm,1.4s
LTY IAMs_20 IAMs_20 21 44 07.7
comp=Z,5µm,19.0s
O03E Paynes Creek 88.41 50 P P 21 09 06.6 +0.2
baz=277,SNR=15
O03E S **S 21 19 52.6 +2.1**
baz=277
J05D Fort Rock, OR 88.46 47 P P 21 09 06.9 +0.3
baz=277,SNR=17
PINE Pine Mountain 88.61 46 P P 21 09 07.4 0.0
PINE IAmb IAmb 21 09 21.0
comp=Z,67nm,1.0s
PINE IAMs_20 IAMs_20 21 46 03.9
comp=Z,5µm,20.0s
G06A Carlson Farm, 88.64 45 P P 21 09 06.4 -0.9
G06A IAmb IAmb 21 09 37.7
comp=Z,113nm,1.8s
ORV Oroville 88.73 51 P P 21 09 07.2 -0.6
ORV pmax pmax
comp=Z,73nm,1.6s
ORV MLR MLR
comp=Z,2µm,19.0s
ORV Oroville 88.73 51 P P 21 09 07.2 -0.6
ORV IAmb IAmb 21 09 20.1
comp=Z,74nm,1.6s
PNT Penticton 88.76 41 P P 21 09 14.9 +7.1
PNT pmax pmax
comp=Z,28nm,0.9s
PNT MLR MLR
comp=Z,4µm,19.0s
K05A Summer Lake 88.78 47 P P 21 09 07.9 -0.3

PRGR Permogore 88.85 332 *e*P P 21 09 15.2 +7.4
PRGR pmax pmax
comp=Z,24nm,1.0s
E07A Sunnyside 89.00 43 P **P** **21 09 09.0 +0.1**
E07A IAmb IAmb 21 09 21.5
comp=Z,58nm,1.1s
E07A IAMs_20 IAMs_20 21 48 40.9
comp=Z,4μm,19.0s
F07A Phinny Hill Vi 89.04 44 P **P** **21 09 08.7 -0.4**
F07A IAmb IAmb 21 09 21.9
comp=Z,108nm,1.7s
F07A IAMs_20 IAMs_20 21 43 20.1
comp=Z,4μm,20.0s
B08A Colville Reser 89.09 42 P **P** **21 09 09.2 -0.2**
B08A IAmb IAmb 21 09 21.5
comp=Z,56nm,1.1s
B08A IAMs_20 IAMs_20 21 43 23.1
comp=Z,5μm,21.0s
SAO San Andreas Ge 89.12 53 P **P** **21 09 09.3 -0.4**
SAO pmax pmax
comp=Z,69nm,1.7s
SAO MLR MLR
comp=Z,5μm,19.0s
SAO San Andreas Ge 89.12 53 P **P** **21 09 09.3 -0.4**
SAO IAmb IAmb 21 09 22.3
comp=Z,69nm,1.7s
SAO IAMs_20 IAMs_20 21 45 32.2
comp=Z,5μm,19.0s
YKA Yellowknife Ar 89.21 27 P **P** **21 09 09.0 -0.5**
comp=Z,12nm,0.9s,baz=282,slow=4.4,SNR=65
YKA PP **PP** **21 12 37.0 -2.8**
comp=Z,2.8nm,1.0s,baz=288,slow=4.9,SNR=3.4
YKA PKKP **PKKPdf** **21 26 43.7 +0.3**
comp=Z,0.4nm,0.8s,baz=103,slow=2.4,SNR=3.7
YKA LR LR 21 46 01.8
comp=Z,7μm,21.2s,baz=0.0,slow=34
AFDM Forest Hills D 89.22 51 P **P** **21 09 10.5 +0.4**
AFDM IAmb IAmb 21 09 22.8
comp=Z,64nm,1.4s
AFDM IAMs_20 IAMs_20 21 46 41.5
comp=Z,4μm,19.0s
HAWA Hanford 89.24 44 P **P** **21 09 09.8 -0.3**
HAWA IAmb IAmb 21 09 22.6
comp=Z,57nm,1.2s
HAWA IAMs_20 IAMs_20 21 48 48.3
comp=Z,4μm,19.0s
E08A Dider Farm, El 89.55 43 P **P** **21 09 11.0 -0.5**
E08A IAMs_20 IAMs_20 21 44 36.5
comp=Z,4μm,19.0s
D08A Wollman Farm, 89.56 43 P **P** **21 09 11.3 -0.3**
D08A IAMs_20 IAMs_20 21 49 01.6
comp=Z,4μm,18.0s
BEKR Beckworth 89.56 50 P **P** **21 09 11.3 -0.6**
I07A Izee 89.60 46 P **P** **21 09 12.1 +0.1**
I07A IAmb IAmb 21 09 24.7
comp=Z,54nm,1.3s
I07A IAMs_20 IAMs_20 21 47 23.0
comp=Z,5μm,19.0s
PMPB Monarch Peak 89.71 54 P **P** **21 09 12.4 -0.1**
PMPB IAMs_20 IAMs_20 21 42 09.8
comp=Z,5μm,20.0s
CMB Columbia Colle 89.79 52 P **P** **21 09 12.6 -0.3**
CMB pmax pmax
comp=Z,42nm,1.5s
CMB MLR MLR
comp=Z,2μm,19.0s
CMB Columbia Colle 89.79 52 P **P** **21 09 12.6 -0.3**
G08A Pilot Rock 89.80 45 P **P** **21 09 12.4 -0.4**
G08A IAmb IAmb 21 09 25.4
comp=Z,87nm,1.6s
RUBR Rubicon Trail 89.83 51 P **P** **21 09 11.1 -2.2**
RUBR IAMs_20 IAMs_20 21 46 59.7
comp=Z,4μm,20.0s
C09A Chrisman Ranch 89.88 42 P **P** **21 09 12.5 -0.5**
C09A IAMs_20 IAMs_20 21 43 17.9
comp=Z,5μm,20.0s
E09A Wood Farm, Sta 90.17 43 P **P** **21 09 14.3 -0.1**
E09A IAmb IAmb 21 09 27.7
comp=Z,82nm,1.2s
E09A IAMs_20 IAMs_20 21 45 12.9
comp=Z,4μm,19.0s
VCNR Virginia City 90.19 51 P **P** **21 09 15.1 +0.2**
VCNR IAMs_20 IAMs_20 21 56 33.1
comp=Z,4μm,18.0s
PAGB Antelope Grade 90.22 54 P **P** **21 09 14.2 -0.7**
PAGB IAMs_20 IAMs_20 21 42 24.3
comp=Z,6μm,20.0s
PNTR Pine Nut 90.25 51 P **P** **21 09 14.8 -0.4**
PAHR Pah Rah Range 90.33 50 P **P** **21 09 15.4 0.0**
PAHR IAmb IAmb 21 09 28.1
comp=Z,73nm,1.6s
J08A Circle Bar Ran 90.45 46 P **P** **21 09 15.8 -0.1**
J08A IAmb IAmb 21 09 28.7
comp=Z,60nm,1.3s
J08A IAMs_20 IAMs_20 21 50 22.5
comp=Z,5μm,19.0s
WAKR Walker 90.47 51 P **P** **21 09 15.6 -0.7**
WAKR IAmb IAmb 21 09 29.3
comp=Z,70nm,1.5s
WVOR Wild Horse Val 90.47 47 P **P** **21 09 16.0 -0.1**
WVOR pmax pmax
comp=Z,56nm,1.2s
WVOR MLR MLR
comp=Z,4μm,18.0s
WVOR Wild Horse Val 90.47 47 P **P** **21 09 16.0 -0.1**
WVOR IAmb IAmb 21 09 28.8
comp=Z,56nm,1.2s
WVOR IAMs_20 IAMs_20 21 50 11.4
comp=Z,4μm,18.0s
SMMC Simmler 90.48 55 P **P** **21 09 15.7 -0.4**
baz=278
YERR Yerington 90.55 51 P **P** **21 09 15.9 -0.6**
YERR IAmb IAmb 21 09 29.4
comp=Z,85nm,1.7s
YERR IAMs_20 IAMs_20 21 47 41.6
comp=Z,4μm,19.0s
NEW Newport 90.56 41 P **P** **21 09 16.1 -0.2**
comp=Z,16nm,1.0s,baz=268,slow=3.4,SNR=19
NEW Newport 90.56 41 P **P** **21 09 15.5 -0.7**
NEW pmax pmax
comp=Z,45nm,1.3s
NEW MLR MLR
comp=Z,6μm,19.0s
NEW Newport 90.56 41 P **P** **21 09 15.7 -0.6**
baz=280
NEW S **S** **21 20 14.9 +4.8**
baz=280
NEW Newport 90.56 41 P **P** **21 09 15.5 -0.7**
NEW IAmb IAmb 21 09 28.5
comp=Z,45nm,1.2s
NEW Newport 90.56 41 IAMs_20 IAMs_20 21 48 06.0
comp=Z,6μm,19.0s
PKM Mcpherson Peak 90.69 55 P **P** **21 09 17.2 -0.1**
baz=278
VOG Valley Oaks Go 90.83 53 P **P** **21 09 17.6 -0.1**
baz=279
SBC Santa Barbara 90.83 55 P **P** **21 09 17.6 -0.1**
baz=278
MDPB Devils Postpil 90.88 52 P **P** **21 09 16.8 -1.4**
F10A Beach Ranch, E 90.89 44 P **P** **21 09 17.5 -0.4**
F10A IAmb IAmb 21 09 30.3
comp=Z,38nm,1.1s
OMMB Old Mammoth Mi 90.94 52 P **P** **21 09 18.4 -0.1**
SCZ2 Santa Cruz Isl 90.96 56 P **P** **21 09 16.7 -1.7**
baz=278
BMO Blue Mountains 91.03 45 P **P** **21 09 17.7 -0.8**
BMO pmax pmax
comp=Z,59nm,1.2s
BMO MLR MLR
comp=Z,4μm,19.0s
BMO Blue Mountains 91.03 45 P **P** **21 09 17.7 -0.8**
BMO IAmb IAmb 21 09 31.0
comp=Z,59nm,1.2s
BMO IAMs_20 IAMs_20 21 50 16.8
comp=Z,4μm,19.0s
MLAC Mammoth, Mammo 91.07 52 P **P** **21 09 19.2 +0.1**
baz=279
MAK Makhachkala 91.12 313 *e*P P 21 09 12.6 -6.2
MAK *e* 21 12 49.4
MAK *e* 21 19 41.3
MAK *e*SS SS 21 26 13.9 -5.5
MAK *e*SSS SSS 21 29 51.5
MAK pmax pmax
comp=Z,119nm,1.3s
VES Vestal, Richgr 91.14 54 P **P** **21 09 19.0 -0.1**
baz=279
RYN Ryan 91.16 51 P **P** **21 09 19.7 +0.3**
RYN IAmb IAmb 21 09 32.2
comp=Z,86nm,1.6s
SNCC San Nicolas Is 91.16 57 P **P** **21 09 19.9 +0.6**
baz=278
SNCC San Nicolas Is 91.16 57 IAMs_20 IAMs_20 21 44 26.5
comp=Z,5μm,19.0s
AKT Akhty 91.20 312 *e*P **P** **21 09 23.1 +3.6**
AKT *e* 21 13 02.6
AKT pmax pmax
comp=Z,78nm,1.0s
NVAR Mina Array Bea 91.36 51 P **P** **21 09 20.5 +0.1**
comp=Z,3.7nm,0.8s,baz=265,slow=5.2,SNR=24
NVAR LR LR 21 45 03.7
comp=Z,2μm,19.9s,baz=294,slow=32
NVAR Mina Array Bea 91.36 51 P **P** **21 09 19.2 -1.2**
KVN Kaiserville 91.42 51 P **P** **21 09 20.0 -0.6**
KVN pmax pmax
comp=Z,63nm,1.6s
KVN MLR MLR
comp=Z,3μm,20.0s
KVN Kaiserville 91.42 51 P **P** **21 09 20.0 -0.6**
KVN IAmb IAmb 21 09 33.4
comp=Z,63nm,1.6s
ARVC Arvin 91.45 55 P **P** **21 09 20.5 -0.1**
baz=279
NV11 Mina Array Sit 91.47 51 P **P** **21 09 21.0 +0.2**
NV11 IAmb IAmb 21 09 33.7
comp=Z,58nm,1.5s
RES Resolute Bay 91.52 13 P **P** **21 09 20.6 +0.6**
comp=Z,4.2nm,0.8s,baz=49,slow=1.8,SNR=5.5
RES Resolute Bay 91.52 13 IAmb IAmb 21 09 31.6
comp=Z,108nm,1.9s
TMCR Tamitsa 91.58 335 *e*P **P** **21 09 21.5 +1.0**
TMCR pmax pmax
comp=Z,68nm,1.3s
OSI Osito Audit: C 91.62 55 P **P** **21 09 19.4 -2.0**
baz=279
OSI Osito Audit: C 91.62 55 IAMs_20 IAMs_20 21 45 24.4
comp=Z,5μm,19.0s
LVZ Lovozero 91.63 339 IAMs_20 IAMs_20 21 52 13.1
comp=Z,5μm,20.0s
TIN Tinemaha, Big 91.63 53 P **P** **21 09 20.0 -1.6**
baz=279
ISA Isabella, Lake 91.66 54 P **P** **21 09 20.7 -0.9**
ISA pmax pmax
comp=Z,49nm,1.6s
ISA MLR MLR
comp=Z,6μm,20.0s
ISA Isabella, Lake 91.66 54 P **P** **21 09 18.8 -2.8**
baz=279,SNR=9.9
ISA Isabella, Lake 91.66 54 P **P** **21 09 20.7 -0.9**
ISA IAmb IAmb 21 09 33.6
comp=Z,49nm,1.6s
ISA IAMs_20 IAMs_20 21 43 19.4
comp=Z,6μm,20.0s
CWC Cottonwood Cre 91.85 53 P **P** **21 09 20.7 -1.9**
baz=279
KLMR Klimovskoe 91.91 332 *e*P **P** **21 09 20.9 -1.2**
KLMR *e* 21 12 58.3
KLMR *e*S **SKSac** **21 19 53.4 +0.4**
KLMR *e*SS **SS** **21 26 32.6 +2.9**
KLMR pmax pmax
comp=Z,48nm,1.4s
KLMR MLR MLR
comp=Z,9μm,18.0s
KLMR Klimovskoe 91.91 332 *e*P **P** **21 09 20.9 -1.2**
KLMR AMP 21 09 34.4
comp=Z,48nm,1.4s
KLMR *e*PP **PP** **21 12 58.4 -2.8**
KLMR *e*S **SKSac** **21 19 53.5 +0.4**
KLMR *e*S **SKSac** **21 19 53.5 +0.4**
KLMR *e*SS **SS** **21 26 32.7 +3.0**
KLMR *e*SS **SS** **21 26 32.7 +3.0**
KLMR LQ LQ 21 44 12.3
KLMR LQ LQ 21 44 12.3
KLMR LR LR 21 46 29.2
KLMR AMP 21 54 20.3
comp=Z,9μm,17.6s
DECC Green Verdugo 91.99 55 P **P** **21 09 20.9 -2.3**
baz=279
SCI2 San Clemente I 92.01 57 P **P** **21 09 21.8 -1.5**
baz=279
CIS Catalina Islan 92.06 56 P **P** **21 09 20.4 -3.0**
baz=279
FMP Fort Macarthur 92.11 56 P **P** **21 09 21.2 -2.5**
baz=279
PASC Pasadena Art C 92.12 55 IAMs_20 IAMs_20 21 45 38.3
comp=Z,4μm,20.0s
EDW2 Edwards Air Fo 92.17 55 P **P** **21 09 21.7 -2.3**
baz=279,SNR=12
APA Apatity 92.19 339⇓ *i*P **P** **21 09 20.3 -3.0**
APA *i* 21 19 53.0
APA *i*S **S** **21 20 18.0 -6.0**
APA *i*PS PS 21 21 39.0 +1.4
APA *i*SS **SS** **21 26 36.0 +2.6**
APA pmax pmax
comp=Z,10.0nm,0.9s
MWC Mount Wilson 92.22 55 P **P** **21 09 24.3 -0.1**
MWC pmax pmax
comp=Z,88nm,1.5s
MWC MLR MLR
comp=Z,5μm,19.0s
MWC Mount Wilson 92.22 55 P **P** **21 09 24.3 -0.1**
MWC IAMs_20 IAMs_20 21 45 41.4
comp=Z,5μm,19.0s
GROC Groznyy 92.31 314 *e*P **P** **21 09 25.9 +1.5**
GROC *e* 21 13 09.0
GROC *e*S **SKSac** **21 19 57.3 +1.2**
GROC pmax pmax
comp=Z,86nm,1.2s
GRAC Grapevine Rang 92.32 53 P **P** **21 09 23.7 -1.0**
baz=280
LRMC Laurel Mtn Rad 92.32 54 P **P** **21 09 23.7 -1.1**
baz=280
MFID Camas Ranch 92.34 46 P **P** **21 09 24.3 -0.3**
MFID IAmb IAmb 21 09 37.3
comp=Z,67nm,1.3s
MFID IAMs_20 IAMs_20 21 45 37.5
comp=Z,4μm,21.0s
MPMC Manual Prospec 92.38 54 P **P** **21 09 25.0 -0.2**
baz=280,SNR=26
WALA Waterton Lakes 92.49 40 P **P** **21 09 22.7 -2.5**
WALA IAmb IAmb 21 09 38.0
comp=Z,43nm,1.2s
WALA IAMs_20 IAMs_20 21 49 36.9
comp=Z,5μm,20.0s
JTMT Jette 92.53 42 P **P** **21 09 23.4 -2.0**
BFSC Mount Baldy Ra 92.55 55 P **P** **21 09 26.2 +0.4**
baz=280,SNR=5.5
FURC Furnace Creek, 92.81 53 P **P** **21 09 25.4 -1.4**
baz=280
MAW Mawson 92.82 202 P **P** **21 09 26.5 +0.4**
baz=93,SNR=13
MAW Mawson 92.82 202 P **P** **21 09 26.8 +0.7**
comp=Z,7.8nm,0.7s,baz=91,slow=5.8,SNR=36
MAW LR LR 21 49 35.8
comp=Z,2μm,19.1s,baz=74,slow=34
MAW Mawson 92.82 202 P **P** **21 09 26.8 +0.7**
MAW pmax pmax
comp=Z,7.0nm,1.1s
MSO Missoula 92.95 42 P **P** **21 09 26.7 -0.7**
baz=283
MSO Missoula 92.95 42 P **P** **21 09 26.4 -1.1**
MSO IAMs_20 IAMs_20 21 45 23.4
comp=Z,5μm,20.0s
RRX Edison Barstow 92.98 55 P **P** **21 09 24.6 -3.1**
baz=280
MURC Murrieta 93.03 56 P **P** **21 09 26.5 -1.5**
baz=280
GSC Goldstone, Bar 93.06 54 P **P** **21 09 26.9 -1.2**
GSC pmax pmax
comp=Z,66nm,1.7s
GSC MLR MLR
comp=Z,6μm,20.0s
GSC Goldstone, Bar 93.06 54 P **P** **21 09 28.3 +0.2**
baz=280,SNR=7.5
GSC Goldstone, Bar 93.06 54 P **P** **21 09 26.9 -1.2**
GSC IAmb IAmb 21 09 40.4
comp=Z,66nm,1.6s
GSC IAMs_20 IAMs_20 21 44 22.5
comp=Z,6μm,20.0s
BBRC Big Bear Solar 93.14 55 P **P** **21 09 26.4 -2.3**
baz=280
TPNV Topopah Spring 93.21 52 P **P** **21 09 28.4 -0.5**
TPNV pmax pmax
comp=Z,85nm,1.6s
TPNV MLR MLR
comp=Z,4μm,19.0s
TPNV Topopah Spring 93.21 52 P **P** **21 09 28.8 -0.1**
baz=280,SNR=14
TPNV Topopah Spring 93.21 52 P **P** **21 09 28.4 -0.5**
TPNV IAMs_20 IAMs_20 21 50 48.4
comp=Z,4μm,19.0s
109C Camp Elliot, M 93.22 57 P **P** **21 09 27.9 -1.0**
baz=280
ELK Elko 93.28 49 P **P** **21 09 27.8 -1.5**
ELK pmax pmax
comp=Z,25nm,1.2s
ELK MLR MLR
comp=Z,4μm,20.0s
ELK Elko 93.28 49 P **P** **21 09 27.8 -1.5**
ELK IAMs_20 IAMs_20 21 44 22.7
comp=Z,4μm,20.0s
VRH Novokhopyorsk 93.28 322 *e*P **P** **21 09 30.7 +2.0**
VRH *e* 21 13 07.7
VRH *e* 21 19 55.9
VRH *e*SS SS 21 26 51.6 +1.6
VRH pmax pmax
comp=Z,30nm,0.9s
VRH MLR MLR
comp=Z,6μm,18.0s
TBLG Delisi 93.36 312 P **P** **21 09 28.3 -1.0**
TBLG pmax pmax
comp=Z,59nm,1.0s
TBLG Delisi 93.36 312 P **P** **21 09 28.3 -1.0**
KEV Kevo 93.37 342 IAMs_20 IAMs_20 21 58 35.4
comp=Z,4μm,19.0s
SHOC Shoshone, Teco 93.38 53 P **P** **21 09 29.8 +0.3**
baz=280,SNR=12
R11A Troy Canyon, C 93.47 51 P **P** **21 09 28.2 -2.0**
baz=281
R11A Troy Canyon, C 93.47 51 P **P** **21 09 30.2 0.0**
R11A IAmb IAmb 21 09 43.0
comp=Z,66nm,1.5s
HEC Hector,Ludlow 93.52 55 P **P** **21 09 27.9 -2.4**
baz=280
PFO Pinyon Flats O 93.63 56⇑ *e*P **P** **21 09 31.9 +1.0**
PFO pmax pmax
comp=Z,35nm,1.6s
PFO MLR MLR
comp=Z,4μm,18.0s
PFO Pinyon Flats O 93.63 56 P **P** **21 09 30.5 -0.4**
baz=280
PFO Pinyon Flats O 93.63 56 P **P** **21 09 28.5 -2.4**
PFO IAmb IAmb 21 09 42.9
comp=Z,60nm,1.9s
PFO Pinyon Flats O 93.63 56 IAMs_20 IAMs_20 21 46 09.9
comp=Z,4μm,19.0s
XPFO Pion Flat 93.64 56 P **P** **21 09 28.6 -2.3**
XPFO IAmb IAmb 21 09 42.9
comp=Z,56nm,1.9s
XPFO Pion Flat 93.64 56 IAMs_20 IAMs_20 21 46 10.4
comp=Z,5μm,19.0s
TPFO Pinon Flats 93.64 56 P **P** **21 09 29.8 -1.2**
baz=280
TUQ Turquoise Moun 93.75 54 P **P** **21 09 28.4 -3.0**
baz=281
ZEI Tsey 93.75 314 *e*P **P** **21 09 29.5 -1.8**
ZEI pmax pmax
comp=Z,46nm,1.2s
MONP2 Monument Peak 93.79 56 P **P** **21 09 31.0 -0.7**
baz=280,SNR=5.6
NCK Nalchik 93.82 314⇑ *e*P **P** **21 09 34.0 +2.6**
NCK pmax pmax
comp=Z,83nm,1.6s
NCK MLR MLR
comp=Z,3μm,18.0s
GOF Gofitskoye 93.87 316⇓ *i*P **P** **21 09 34.7 +3.2**
GOF pmax pmax
comp=Z,97nm,1.5s
ARCES ARCESS Array B 93.94 342 P **P** **21 09 30.5 -0.8**
comp=Z,3.6nm,0.7s,baz=342,slow=7.6,SNR=4.5
ARCES PP **PP** **21 13 16.8 -0.1**
comp=Z,4.2nm,0.9s,baz=46,slow=25,SNR=1.3
ARCES LR LR 21 56 31.2
comp=Z,4μm,19.2s,baz=61,slow=39
BELC Belle Mtn. Jos 93.94 55 P **P** **21 09 31.8 -0.5**
baz=280,SNR=5.8
GMRC Granite Mounta 94.08 54 P **P** **21 09 31.5 -1.4**
baz=281,SNR=9.3
IKP In-Ko-Pah, Jac 94.09 57 P **P** **21 09 32.1 -0.8**
baz=280
MCMT McKenzie Canyo 94.14 44 P **P** **21 09 32.5 -0.6**
LRM Limekiln Ridge 94.19 43 P **P** **21 09 33.0 -0.3**
DLMT Dillon 94.19 44 P **P** **21 09 32.5 -0.8**
DLMT IAmb IAmb 21 09 45.5
comp=Z,45nm,1.6s
KBZ Khabaz 94.27 315 P **P** **21 09 31.8 -1.5**
comp=Z,1.5nm,0.6s,baz=227,slow=3.1,SNR=3.0
KBZ LR LR 21 55 37.6
comp=Z,5μm,19.7s,baz=70,slow=38
KBZ Khabaz 94.27 315⇑ *e*P **P** **21 09 32.8 -0.5**
SWSC Sam W. Stewart 94.30 56 P **P** **21 09 32.8 -1.0**
baz=280
AKH Akhalkalaki 94.34 312 P **P** **21 09 34.2 +0.1**
AKH pmax pmax
comp=Z,202nm,1.7s
AKH MLR MLR
comp=Z,5μm,19.0s
AKH Akhalkalaki 94.34 312 P **P** **21 09 34.2 +0.1**
AKH IAMs_20 IAMs_20 21 56 51.8
comp=Z,5μm,19.0s
KIV Kislovodsk 94.36 315 *i*P P 21 09 28.4 -5.6
SNR=11
KIV Kislovodsk 94.36 315 *i*P P 21 09 28.4 -5.6
SNR=11
KIV Kislovodsk 94.36 315 *e*P **P** **21 09 33.5 -0.5**
KIV *e* 21 13 20.4
KIV *e* 21 20 08.3
KIV *e*SS SS 21 27 03.6 -2.5
KIV pmax pmax
comp=Z,66nm,1.0s
KIV pmax pmax
comp=Z,265nm,4.9s
KIV MLR MLR
comp=Z,10μm,20.0s
KIV Kislovodsk 94.36 315 P **P** **21 09 32.8 -1.2**
KIV IAmb IAmb 21 09 50.5
comp=Z,25nm,0.9s
KIV IAMs_20 IAMs_20 21 59 25.1
comp=Z,4μm,19.0s
MOS Moscow 94.38 327 *e*P **P** **21 09 34.0 +0.4**
MOS *e* 21 13 21.2
MOS *e* 21 20 06.5
MOS *e*S **S** **21 20 43.7 -0.1**
MOS *e*PS PS 21 22 07.5 +5.3
MOS *e*SS **SS** **21 27 08.0 +2.7**
MOS pmax pmax
comp=Z,121nm,1.7s
MOS pmax pmax
comp=Z,500nm,2.5s
MOS MLR MLR
comp=E,9μm,18.0s
MOS MLR MLR
comp=Z,11μm,18.0s
BC3 Big Chuckawall 94.45 56 P **P** **21 09 33.2 -1.4**
baz=281
LPSR Galich'ya Gora 94.58 324 *e*P **P** **21 09 35.8 +1.2**
LPSR *e* 21 13 17.3
LPSR *e* 21 20 08.2
LPSR *e*SS SS 21 27 09.7 +1.3
LPSR pmax pmax
comp=Z,40nm,1.0s
LPSR MLR MLR
comp=Z,3μm,16.0s
IRM Iron Mountain 94.61 55 P **P** **21 09 35.1 -0.1**
baz=281,SNR=6.8
PSUT Pine Spring 94.77 51 P **P** **21 09 35.8 -0.3**
VORD Divnogorie 94.83 322 *e*P **P** **21 09 38.4 +2.7**
VORD *e* 21 13 19.2
VORD pmax pmax
comp=Z,20nm,1.4s
VSR Storozhevoye 94.83 323 *e*P **P** **21 09 36.6 +0.8**
VSR *e* 21 13 21.1
VSR *e*SS SS 21 27 08.8 -3.2
VSR pmax pmax
comp=Z,30nm,1.5s
HVU Hansel Valley 94.88 47 P **P** **21 09 35.5 -1.0**
HVU pmax pmax
comp=Z,62nm,1.7s
HVU Hansel Valley 94.88 47 P **P** **21 09 35.5 -1.0**

BGU	**Big Grassy Mou**	**94.88**	**48**	P	**P**	**21 09 36.6**	**+0.1**		
NEE2	**Needles Airpor**	**94.92**	**54**	P	**P**	**21 09 36.1**	**-0.5**		
	baz=281								
TULEG	**Thule**	**94.96**	**8**	P	**P**	**21 09 34.9**	**-1.0**		
GLA	**Glamis**	**95.08**	**56**	P	**P**	**21 09 35.6**	**-1.9**		
	baz=281								
GLA	**Glamis**	**95.08**	**56**	IAMs_20	IAMs_20	21 46 33.9			
	comp=Z,4µm,20.0s								
QLMT	**Earthquake Lak**	**95.12**	**44**	P	**P**	**21 09 37.7**	**+0.1**		
OBN	**Obninsk**	**95.15**	**327**	*c iP*	**P**	**21 09 39.3**	**+2.2**		
OBN				*e*		21 13 29.2			
OBN				*i* S	**SKSac**	**21 20 14.6**	**+3.5**		
OBN				*i* SS	**SS**	**21 27 23.4**	**+7.2**		
OBN				pmax	pmax				
	comp=Z,134nm,2.2s								
OBN				MLR	MLR				
	comp=Z,12µm,19.0s								
OBN	**Obninsk**	**95.15**	**327**	P	**P**	**21 09 39.7**	**+2.5**		
Y12C	**Blythe**	**95.19**	**55**	P	**P**	**21 09 36.9**	**-1.0**		
	baz=281								
Y12C	**Blythe**	**95.19**	**55**	IAMs_20	IAMs_20	21 48 10.6			
	comp=Z,4µm,20.0s								
DUG	**Dugway, Tooele**	**95.20**	**49**	P	**P**	**21 09 37.3**	**-0.7**		
DUG				pmax	pmax				
	comp=Z,44nm,1.7s								
DUG				MLR	MLR				
	comp=Z,3µm,20.0s								
DUG	**Dugway, Tooele**	**95.20**	**49**	P	**P**	**21 09 36.8**	**-1.2**		
	baz=283								
DUG	**Dugway, Tooele**	**95.20**	**49**	P	**P**	**21 09 37.3**	**-0.7**		
DUG				IAmb	IAmb	21 09 41.4			
	comp=Z,44nm,1.7s								
SPUT	**South Promonto**	**95.22**	**48**	P	**P**	**21 09 37.5**	**-0.6**		
YHL	**Hebgen Lake**	**95.29**	**44**	P	**P**	**21 09 38.2**	**-0.3**		
YHB	**Horse Butte**	**95.30**	**44**	P	**P**	**21 09 35.8**	**-2.6**		
CCUT	**Cedar City**	**95.36**	**51**	P	**P**	**21 09 39.5**	**+0.6**		
PDMCI	**Parker Dam,Lak**	**95.40**	**55**	P	**P**	**21 09 37.8**	**-1.0**		
	baz=282								
EGMT	**Eagleton**	**95.42**	**41**	P	**P**	**21 09 37.7**	**-1.0**		
	baz=286								
EGMT	**Eagleton**	**95.42**	**41**	P	**P**	**21 09 37.5**	**-1.2**		
EGMT				IAmb	IAmb	21 09 50.4			
	comp=Z,44nm,1.4s								
EGMT				IAMs_20	IAMs_20	21 51 10.1			
	comp=Z,4µm,19.0s								
W13A	**Hualapai Mount**	**95.45**	**54**	P	**P**	**21 09 39.5**	**+0.2**		
W13A				IAMs_20	IAMs_20	21 46 06.1			
	comp=Z,4µm,20.0s								
YMR	**Madison River**	**95.48**	**44**	P	**P**	**21 09 40.3**	**+1.0**		
YHH	**Holmes Hill**	**95.53**	**44**	P	**P**	**21 09 38.1**	**-1.5**		
SZCU	**Shurtz Canyon**	**95.56**	**51**	P	**P**	**21 09 40.0**	**+0.2**		
LCMT	**Little Creek M**	**95.56**	**52**	P	**P**	**21 09 38.4**	**-1.3**		
YNR	**Norris Junctio**	**95.67**	**44**	P	**P**	**21 09 40.3**	**+0.2**		
IMW	**Indian Meadow**	**95.69**	**45**	P	**P**	**21 09 39.6**	**-0.7**		
YPP	**Pitchstone Pla**	**95.69**	**44**	P	**P**	**21 09 38.3**	**-2.0**		
FXWY	**Fox Creek**	**95.70**	**45**	P	**P**	**21 09 38.0**	**-2.3**		
TPAW	**Teton Pass**	**95.79**	**45**	P	**P**	**21 09 38.7**	**-2.0**		
HWUT	**Hardware Ranch**	**95.80**	**47**	P	**P**	**21 09 39.8**	**-1.0**		
NLU	**North Lily Min**	**95.81**	**49**	P	**P**	**21 09 38.0**	**-2.8**		
FLWY	**Flagg Ranch**	**95.81**	**45**	P	**P**	**21 09 41.3**	**+0.5**		
H17A	**Grant Village**	**95.82**	**44**	P	**P**	**21 09 38.8**	**-2.1**		
	baz=285								
H17A	**Grant Village**	**95.82**	**44**	P	**P**	**21 09 41.6**	**+0.7**		
TCRU	**Three Creeks R**	**95.83**	**50**	P	**P**	**21 09 39.6**	**-1.4**		
AHID	**Auburn Hatcher**	**95.86**	**46**	P	**P**	**21 09 40.4**	**-0.6**		
CTU	**Camp Tracy**	**95.88**	**48**	P	**P**	**21 09 40.4**	**-0.7**		
REDW	**Red Top Meadow**	**95.89**	**45**	P	**P**	**21 09 41.2**	**+0.1**		
REDW				IAmb	IAmb	21 09 52.6			
	comp=Z,46nm,1.9s								
KNB	**Kanab**	**95.89**	**52**	P	**P**	**21 09 40.2**	**-1.0**		
KNB				pmax	pmax				
	comp=Z,59nm,1.5s								
KNB	**Kanab**	**95.89**	**52**	P	**P**	**21 09 40.2**	**-1.0**		
LKWY	**Lake**	**95.90**	**44**	P	**P**	**21 09 41.7**	**+0.5**		
LKWY				pmax	pmax				
	comp=Z,13nm,0.9s								
LKWY	**Lake**	**95.90**	**44**	P	**P**	**21 09 41.7**	**+0.5**		
113A	**Mohawk Valley,**	**96.01**	**56**	IAMs_20	IAMs_20	21 52 41.2			
	comp=Z,3µm,19.0s								
YMP	**Mirror Lake Pl**	**96.02**	**44**	P	**P**	**21 09 43.2**	**+1.3**		
MSU	**Marysvale**	**96.06**	**50**	P	**P**	**21 09 43.0**	**+1.0**		
MSU	**Marysvale**	**96.06**	**50**	P	**P**	**21 09 43.0**	**+1.0**		
RAYN	**Ar Rayn**	**96.07**	**294**	P	**P**	**21 09 41.3**	**-0.8**		
RAYN				pmax	pmax				
	comp=Z,32nm,1.1s								
RAYN				MLR	MLR				
	comp=Z,3µm,22.0s								
RAYN	**Ar Rayn**	**96.07**	**294**	P	**P**	**21 09 41.3**	**-0.8**		
RAYN				IAmb	IAmb	21 09 53.6			
	comp=Z,32nm,1.1s								
GCMT	**Greycliff**	**96.08**	**43**	P	**P**	**21 09 38.8**	**-3.0**		
JLU	**Jordanelle**	**96.12**	**48**	P	**P**	**21 09 42.4**	**+0.1**		
MTPU	**Mount Pierson**	**96.16**	**51**	P	**P**	**21 09 42.5**	**-0.2**		
PKCU	**Pink Cliffs**	**96.19**	**51**	P	**P**	**21 09 43.3**	**+0.5**		
QSPA	**South Pole Qui**	**96.25**	**180**	P	**P**	**21 09 42.2**	**+0.1**		
QSPA				IAmb	IAmb	21 10 00.8			
	comp=Z,46nm,1.2s								
Y14A	**Wickenburg**	**96.40**	**55**	P	**P**	**21 09 43.3**	**-0.1**		
Y14A				IAMs_20	IAMs_20	21 47 52.3			
	comp=Z,4µm,20.0s								
U15A	**North Rim**	**96.43**	**52**	P	**P**	**21 09 44.4**	**+0.6**		
U15A				IAmb	IAmb	21 09 56.7			
	comp=Z,30nm,1.4s								
U15A				IAMs_20	IAMs_20	21 49 22.0			
	comp=Z,4µm,19.0s								
RLMT	**Red Lodge**	**96.53**	**43**	P	**P**	**21 09 43.5**	**-0.5**		
	baz=286								
RLMT	**Red Lodge**	**96.53**	**43**	P	**P**	**21 09 44.2**	**+0.3**		
RLMT				IAmb	IAmb	21 09 56.9			
	comp=Z,46nm,1.7s								
RLMT				IAMs_20	IAMs_20	21 52 32.7			
	comp=Z,4µm,20.0s								
SOC	**Sochi**	**96.54**	**315**	*e*P	**P**	**21 09 43.2**	**-0.6**		
SOC				*e*		21 13 35.2			
SOC				*e*PPP	PPP	21 15 46.3			
SOC				*e*S	**SKSac**	**21 20 20.0**	**+1.0**		
SOC				*e*SS	**SS**	**21 27 32.3**	**-4.4**		
SOC				*e*SSS	SSS	21 31 22.0			
SOC				pmax	pmax				
	comp=Z,5.0nm,0.9s								
SOC				MLR	MLR				
	comp=Z,5µm,21.0s								
TMUT	**Trail Mountain**	**96.61**	**49**	P	**P**	**21 09 45.4**	**+0.7**		
BW06	**Boulder Array**	**96.96**	**46**	P	**P**	**21 09 44.9**	**-1.1**		
	baz=285								
PD31	**Pinedale Array**	**96.96**	**46**	P	**P**	**21 09 44.2**	**-1.8**		
PDAR	**Pinedale Array**	**96.96**	**46**	P	**P**	**21 09 45.5**	**-0.5**		
	comp=Z,0.6nm,0.7s,baz=270,slow=1.5,SNR=6.2								
PDAR				PKKPbc	**PKKPbc**	**21 26 25.9**	**-2.4**		
	comp=Z,0.3nm,0.5s,baz=121,slow=6.4,SNR=3.0								
PDAR				LR	LR	21 53 11.7			
	comp=Z,1µm,18.0s,baz=297,slow=35								
PDAR	**Pinedale Array**	**96.96**	**46**	P	**P**	**21 09 46.2**	**+0.2**		
214A	**Organ Pipe Nat**	**96.97**	**57**	P	**P**	**21 09 45.9**	**-0.1**		
	baz=282								
214A	**Organ Pipe Nat**	**96.97**	**57**	IAMs_20	IAMs_20	21 49 49.6			
	comp=Z,4µm,19.0s								
SRU	**San Rafael Swe**	**97.17**	**49**	P	**P**	**21 09 46.7**	**-0.3**		
SRU				pmax	pmax				
	comp=Z,8.0nm,0.9s								
SRU	**San Rafael Swe**	**97.17**	**49**	P	**P**	**21 09 46.7**	**-0.3**		
WUAZ	**Wupatki**	**97.36**	**53**	P	**P**	**21 09 47.4**	**-0.5**		
	baz=283								
WUAZ	**Wupatki**	**97.36**	**53**	P	Pdif	21 09 48.1	+0.1		
WUAZ				IAmb	IAmb	21 09 51.0			
	comp=Z,16nm,1.0s								
WUAZ				IAMs_20	IAMs_20	21 47 12.7			
	comp=Z,5µm,19.0s								
RDMU	**Red Mountain**	**97.52**	**48**	P	**P**	**21 09 48.4**	**-0.2**		
X16A	**Lo Mia Camp, P**	**97.56**	**54**	P	**P**	**21 09 47.9**	**-1.0**		
X16A				IAMs_20	IAMs_20	21 48 44.0			
	comp=Z,3µm,20.0s								
FINES	**FINESS Array B**	**97.69**	**335**	P	**P**	**21 09 46.6**	**-1.9**		
	comp=Z,1.8nm,0.8s,baz=60,slow=8.2,SNR=5.3								
FINES				PP	**PP**	**21 13 46.0**	**-0.1**		
	comp=Z,4.0nm,1.0s,baz=233,slow=35,SNR=3.4								
FINES				LR	LR	21 56 57.8			
	comp=Z,4µm,19.7s,baz=61,slow=37								
FINES	**FINESS Array B**	**97.69**	**335**	P	**P**	**21 09 46.4**	**-2.1**		
ANN	**Anapa**	**97.78**	**317**	*e*P	Pdif	21 09 51.1	+1.7		
ANN				*e*		21 13 52.4			
ANN				*e*PPP	PPP	21 15 52.2			
ANN				*e*		21 20 27.9			
ANN				*e*		21 20 59.6			
ANN				*e*PS	**PS**	**21 22 36.5**	**-3.4**		
ANN				*e*SS	SS	21 27 50.7	-3.4		
ANN				pmax	pmax				
	comp=E,11nm,0.8s								
ANN				pmax	pmax				
	comp=Z,70nm,1.4s								
ANN				pmax	pmax				
	comp=N,24nm,1.3s								
ANN				MLR	MLR				
	comp=Z,6µm,20.0s								
ANN				MLR	MLR				
	comp=E,2µm,17.0s								
FFC	**Flin Flon**	**97.83**	**33**	P	**P**	**21 09 48.2**	**-1.2**		
FFC				pmax	pmax				
	comp=Z,15nm,1.0s								
FFC				MLR	MLR				
	comp=Z,6µm,21.0s								
FFC	**Flin Flon**	**97.83**	**33**	P	**P**	**21 09 48.2**	**-1.2**		
FFC				IAmb	IAmb	21 10 00.6			
	comp=Z,15nm,0.9s								
FFC	**Flin Flon**	**97.83**	**33**	IAMs_20	IAMs_20	21 47 12.0			
	comp=Z,6µm,21.0s								
LAO	**LASA Array**	**98.11**	**41**	P	Pdif	21 09 51.8	+0.9		
	baz=288								
LAO	**LASA Array**	**98.11**	**41**	P	**P**	**21 09 49.3**	**-1.5**		
LAO				IAmb	IAmb	21 10 04.3			
	comp=Z,23nm,0.9s								
LAO				IAMs_20	IAMs_20	21 53 13.2			
	comp=Z,4µm,19.0s								
PV09	**Paradox Valley**	**98.38**	**50**	P	**P**	**21 09 49.8**	**-2.8**		
SRIG	**Santa Rosalia**	**98.39**	**61**	IAMs_20	IAMs_20	21 45 17.9			
	comp=Z,4µm,20.0s								
PV10	**Paradox Valley**	**98.48**	**50**	IAMs_20	IAMs_20	21 54 45.6			
	comp=Z,4µm,19.0s								
PV21	**Cone Mtn., Par**	**98.48**	**50**	P	**P**	**21 09 51.0**	**-2.0**		
PV21				IAmb	IAmb	21 10 05.2			
	comp=Z,22nm,1.4s								
PV21				IAMs_20	IAMs_20	22 01 20.0			
	comp=Z,4µm,18.0s								
PV23	**Carpenter Ridg**	**98.48**	**50**	P	**P**	**21 09 52.7**	**-0.3**		
PV23				IAmb	IAmb	21 10 05.1			
	comp=Z,36nm,1.4s								
PV23				IAMs_20	IAMs_20	21 56 05.0			
	comp=Z,6µm,21.0s								
PV14	**Lion Creek, Pa**	**98.50**	**50**	P	Pdif	21 09 53.8	+0.8		
PV14				IAmb	IAmb	21 10 05.1			
	comp=Z,31nm,1.5s								
PV14				IAMs_20	IAMs_20	21 56 03.3			
	comp=Z,5µm,19.0s								
PV05	**Paradox Valley**	**98.52**	**50**	IAMs_20	IAMs_20	21 54 38.0			
	comp=Z,4µm,19.0s								
PV19	**Morning Glory**	**98.54**	**50**	P	**P**	**21 09 53.1**	**-0.1**		
PV19				IAmb	IAmb	21 09 57.1			
	comp=Z,20nm,1.3s								
PV19				IAMs_20	IAMs_20	21 54 54.6			
	comp=Z,3µm,19.0s								
PV20	**West Nyswonger**	**98.55**	**50**	P	**P**	**21 09 50.5**	**-2.7**		
TUC	**Tucson**	**98.57**	**56**	P	**P**	**21 09 52.7**	**-0.6**		
TUC				pmax	pmax				
	comp=Z,26nm,1.6s								
TUC				MLR	MLR				
	comp=Z,4µm,20.0s								
TUC	**Tucson**	**98.57**	**56**	P	**P**	**21 09 51.8**	**-1.5**		
	baz=283								
TUC	**Tucson**	**98.57**	**56**	P	**P**	**21 09 52.7**	**-0.6**		
TUC				IAmb	IAmb	21 10 05.7			
	comp=Z,26nm,1.6s								
TUC	**Tucson**	**98.57**	**56**	IAMs_20	IAMs_20	21 51 01.9			
	comp=Z,3µm,20.0s								
PV17	**East Wray Mesa**	**98.57**	**50**	P	**P**	**21 09 53.0**	**-0.4**		
PV17				IAmb	IAmb	21 10 05.4			
	comp=Z,18nm,1.3s								
PV04	**Paradox Valley**	**98.58**	**50**	P	**P**	**21 09 51.5**	**-1.8**		
PV04				IAmb	IAmb	21 10 05.5			
	comp=Z,20nm,1.2s								
PV16	**Nyswonger Mesa**	**98.59**	**50**	P	**P**	**21 09 53.3**	**-0.1**		
PV16				IAMs_20	IAMs_20	21 56 05.4			
	comp=Z,4µm,18.0s								
O20A	**White River Ci**	**98.61**	**48**	P	**P**	**21 09 53.4**	**-0.1**		
	baz=286								
O20A	**White River Ci**	**98.61**	**48**	P	**P**	**21 09 52.3**	**-1.1**		
O20A				IAMs_20	IAMs_20	21 53 30.2			
	comp=Z,4µm,20.0s								
PV18	**Skein Mesa, Pa**	**98.62**	**50**	P	**P**	**21 09 50.6**	**-3.0**		
PV18				IAMs_20	IAMs_20	21 54 49.5			
	comp=Z,4µm,19.0s								
PV11	**David Mesa, Pa**	**98.63**	**50**	P	Pdif	21 09 54.0	+0.4		
PV11				IAmb	IAmb	21 10 05.6			
	comp=Z,35nm,1.6s								
PV22	**Blue Mesa, Par**	**98.63**	**50**	P	**P**	**21 09 49.7**	**-3.9**		
PV22				IAMs_20	IAMs_20	22 01 22.9			
	comp=Z,4µm,18.0s								
PV03	**Paradox Valley**	**98.66**	**50**	P	**P**	**21 09 50.7**	**-3.1**		
PV03				IAMs_20	IAMs_20	21 56 07.7			
	comp=Z,4µm,20.0s								
PV12	**Saucer Basin,**	**98.68**	**50**	P	**P**	**21 09 52.6**	**-1.2**		
PV12				IAMs_20	IAMs_20	21 56 10.1			
	comp=Z,4µm,19.0s								
PV13	**Radium Mtn., P**	**98.71**	**50**	P	**P**	**21 09 52.4**	**-1.6**		
PV13				IAMs_20	IAMs_20	21 54 50.9			
	comp=Z,4µm,19.0s								
X18A	**Snowflake**	**98.73**	**54**	P	**P**	**21 09 53.8**	**-0.3**		
X18A				IAmb	IAmb	21 09 57.1			
	comp=Z,14nm,1.0s								
X18A				IAMs_20	IAMs_20	21 49 24.0			
	comp=Z,3µm,19.0s								
W18A	**Petrified Fore**	**98.76**	**53**	P	**P**	**21 09 53.8**	**-0.4**		
	baz=284								
W18A	**Petrified Fore**	**98.76**	**53**	P	Pdif	21 09 54.5	+0.3		
W18A				IAmb	IAmb	21 09 57.9			
	comp=Z,23nm,1.1s								
W18A				IAMs_20	IAMs_20	21 47 46.7			
	comp=Z,5µm,20.0s								
PV07	**Paradox Valley**	**98.77**	**50**	P	**P**	**21 09 51.7**	**-2.5**		
PV07				IAMs_20	IAMs_20	22 01 27.4			
	comp=Z,5µm,18.0s								
DGMT	**Dagmar**	**98.82**	**39**	P	**P**	**21 09 53.2**	**-0.8**		
	baz=290								
PV01	**Paradox Valley**	**98.90**	**50**	P	**P**	**21 09 52.4**	**-2.4**		
PV01				IAMs_20	IAMs_20	21 55 06.1			
	comp=Z,4µm,20.0s								
PV15	**Paradox Valley**	**98.92**	**50**	IAMs_20	IAMs_20	22 01 25.4			
	comp=Z,4µm,18.0s								
RWWY	**Rawlins**	**98.93**	**46**	P	**P**	**21 09 52.2**	**-2.7**		
K22A	**Casper**	**99.14**	**45**	P	**Pdif**	**21 09 55.9**	**+0.2**		
	baz=288								
HSIG		**99.16**	**59**	IAMs_20	IAMs_20	21 49 57.9			
	comp=Z,4µm,19.0s								
MVCO	**Mesa Verde**	**99.20**	**51**	P	**Pdif**	**21 09 54.0**	**-2.2**		
MVCO				IAmb	IAmb	21 10 08.8			
	comp=Z,47nm,1.8s								
MVCO				IAMs_20	IAMs_20	21 54 56.1			
	comp=Z,3µm,18.0s								
SMCO	**Snowmass**	**99.82**	**49**	Pdif	**Pdif**	**21 09 58.5**	**-0.6**		
SMCO				IAMs_20	IAMs_20	21 49 39.2			
	comp=Z,4µm,20.0s								
FCC	**Fort Churchill**	**99.94**	**27**	P	**Pdif**	**21 09 58.5**	**-0.1**		
FCC				pmax	pmax				
	comp=Z,19nm,1.1s								
FCC	**Fort Churchill**	**99.94**	**27**	Pdif	**Pdif**	**21 09 58.5**	**-0.1**		
SIM	**Simferopol'**	**99.98**	**318**	*d iP*	**Pdif**	**21 10 02.8**	**+3.6**		
SIM				*e*		21 14 05.0			
SIM				*e*PPP	PPP	21 16 12.0			
SIM				*e*SS	SS	21 28 30.7	+5.8		
SIM				pmax	pmax				
	comp=Z,53nm,7.9s								
SIM				pmax	pmax				
	comp=Z,72nm,7.6s								
MICGM	**Minsk**	**100.03**	**328**	*e*P	**Pdif**	**21 10 08.0**	**+8.8**		
MICGM				*e*PP	**PP**	**21 14 08.0**	**+3.9**		
MICGM				*e*PPP	PPP	21 16 14.0			
MICGM				*e*SKS		21 20 46.0			
MICGM				*e*S	**sS**	**21 21 50.0**	**+5.3**		
MICGM				*e*SKSP		21 23 00.0			
MICGM				*e*SS	**SS**	**21 28 16.0**	**-8.9**		
MICGM				*e*SSS	SSS	21 32 26.0			
MICGM				*e*LR	LR	21 35 52.0			
MICGM				*e*LQ	LQ	21 47 44.0			
MICGM				LRM	MLR	21 59 06.0			
	comp=Z,19nm,16.0s								
MNK	**Minsk**	**100.03**	**328**	*e*P	**Pdif**	**21 10 08.0**	**+8.8**		
MNK				*e*		21 14 08.0			
MNK				*e*PPP	PPP	21 16 14.0			
MNK				*e*		21 23 00.0			
N23A	**Red Feather La**	**100.08**	**47**	P	**Pdif**	**21 10 00.1**	**0.0**		
	baz=288								
GAZ	**Gaziantep**	**100.10**	**309**	IAMs_20	IAMs_20	22 02 34.6			
	comp=Z,5µm,18.0s								
S22A	**4UR Ranch, Ce**	**100.33**	**50**	P	**Pdif**	**21 10 01.5**	**+0.2**		
	baz=286								
RSSD	**Black Hills**	**100.39**	**43**	IAMs_20	IAMs_20	21 50 29.7			
	comp=Z,4µm,21.0s								
NACGM	**Naroch**	**100.42**	**329**	*e*P	**Pdif**	**21 10 04.0**	**+3.1**		
NACGM				*e*P	**pPdif**	**21 10 05.0**	**-3.3**		
NACGM				*e*PP	**PP**	**21 14 12.0**	**+4.9**		
NACGM				*e*PPP	PPP	21 16 12.0			
NACGM				*e*SKS		21 20 14.0			
NACGM				*e*SKKS	**SKSac**	**21 20 38.0**	**0.0**		
NACGM				*e*PS	PS	21 23 04.0	-3.9		
NACGM				*e*SS	SS	21 27 10.0	-80		
NACGM				*e*SSS	SSS	21 32 14.0			
NACGM				*e*LQ	LQ	21 46 40.0			
NACGM				LRM	MLR	21 58 16.0			
	comp=Z,27nm,19.0s								
ISCO	**Idaho Springs**	**100.64**	**48**	IAMs_20	IAMs_20	21 53 48.9			
	comp=Z,4µm,20.0s								
AKASG	**Malin Array Be**	**100.91**	**324**	P	**Pdif**	**21 10 03.8**	**+0.7**		
	comp=Z,0.4nm,0.5s,baz=61,slow=3.3,SNR=6.8								
AKASG				PP	**PP**	**21 14 12.0**	**+1.1**		
	comp=Z,0.5nm,0.4s,baz=86,slow=39,SNR=2.1								
AKASG				PKKPbc	**PKKPbc**	**21 26 13.7**	**-3.4**		
	comp=Z,1.1nm,0.6s,baz=265,slow=2.9,SNR=5.5								
121A	**Cookes Peak, D**	**100.98**	**55**	P	**Pdif**	**21 10 02.2**	**-2.0**		
	baz=285								
Y22D	**IRIS PASSCAL I**	**101.27**	**54**	P	**Pdif**	**21 10 03.9**	**-1.4**		
	baz=286								
Y22D	**IRIS PASSCAL I**	**101.27**	**54**	IAMs_20	IAMs_20	22 03 03.2			
	comp=Z,3µm,18.0s								
SDCO	**Great Sand Dun**	**101.34**	**50**	P	**Pdif**	**21 10 05.2**	**-0.6**		
	baz=287								
SDCO	**Great Sand Dun**	**101.34**	**50**	IAMs_20	IAMs_20	21 52 32.6			
	comp=Z,4µm,19.0s								
SYO	**Syowa Base**	**101.39**	**201**	*e*PP	**PP**	**21 14 15.0**	**+0.7**		
SYO	**Syowa Base**	**101.39**	**201**	*e*PKiKP	**PKiKP**	**21 14 29.0**	**+0.1**		
SYO	**Syowa Base**	**101.39**	**201**	*e*X	**PKiKP**	**21 14 35.6**	**+6.7**		
ANMO	**Albuquerque**	**101.40**	**53**	PP	**PP**	**21 14 13.4**	**-2.1**		
	comp=Z,0.8nm,0.4s,baz=277,slow=9.1,SNR=4.7								
ANMO	**Albuquerque**	**101.40**	**53**	P	**Pdif**	**21 10 05.5**	**-0.5**		
	baz=286								
ANMO	**Albuquerque**	**101.40**	**53**	IAMs_20	IAMs_20	21 49 33.6			
	comp=Z,4µm,20.0s								
E28A	**Huff**	**101.72**	**40**	IAMs_20	IAMs_20	21 51 28.7			
	comp=Z,4µm,20.0s								
MDND	**Maddock**	**101.91**	**38**	IAMs_20	IAMs_20	21 54 38.5			
	comp=Z,4µm,19.0s								
BRTR	**Keskin Array B**	**102.02**	**313**	P	**Pdif**	**21 10 09.3**	**+0.7**		
	comp=Z,0.5nm,0.6s,baz=72,slow=3.8,SNR=3.6								
BRTR				PP	**PP**	**21 14 18.4**	**-1.5**		
	comp=Z,1.5nm,0.9s,baz=72,slow=4.0,SNR=2.6								
T25A	**Trinidad**	**102.35**	**50**	P	**Pdif**	**21 10 09.7**	**-0.5**		
	baz=288								
KIS	**Kishinev**	**102.66**	**321**	*e*P	**Pdif**	**21 10 16.0**	**+5.0**		
KIS	**Kishinev**	**102.66**	**321**	*e*PP	**PKiKP**	**21 14 35.0**	**+3.1**		
KIS	**Kishinev**	**102.66**	**321**	*e*PS	PS	21 23 30.0	-2.0		
KIS	**Kishinev**	**102.66**	**321**	*e*P	**Pdif**	**21 10 16.0**	**+5.0**		
KIS				*e*PPP	PPP	21 16 38.0			
KIS				*e*		21 21 32.0			
KIS				*e*PS	PS	21 23 30.0	-2.0		
KIS				*e*PPS	PPS	21 24 25.0			
KIS				*e*SS	SS	21 29 00.0	-1.8		
KIS				MLR	MLR				
	comp=Z,6µm,20.0s								
KIS				MLR	MLR				
	comp=N,3µm,19.0s								
KSCO	**Kaye Shedlock'**	**103.09**	**48**	IAMs_20	IAMs_20	21 50 34.6			
	comp=Z,4µm,21.0s								
ULM	**Lac du Bonnet**	**103.10**	**35**	IAMs_20	IAMs_20	21 49 26.6			
	comp=Z,5µm,21.0s								
MNTX	**Cornudas Mount**	**103.16**	**56**	P	**Pdif**	**21 10 13.7**	**0.0**		
	baz=286								
SUSD	**Miller**	**103.67**	**41**	P	**Pdif**	**21 10 13.4**	**-2.3**		
	baz=294								
SUSD	**Miller**	**103.67**	**41**	IAMs_20	IAMs_20	21 58 23.6			
	comp=Z,4µm,20.0s								
CSS	**Mathiatis**	**103.75**	**308**	IAMs_20	IAMs_20	22 03 34.3			
	comp=Z,4µm,20.0s								
NB2	**NORSAR Subarra**	**103.77**	**339**	P	**Pdif**	**21 10 12.5**	**-3.3**		
	comp=Z,30nm,1.7s,baz=46,slow=5.1								
NB2	**NORSAR Subarra**	**103.77**	**339**	P	**Pdif**	**21 10 12.5**	**

comp=Z,3µm,19.0s
KRLC Kraliky 108.14 328 *e*P **Pdif 21 10 45.2 +10**
KRLC *e* 21 15 01.6
KRLC *e*SP SP 21 24 20.7 -4.1
KRLC MLR MLR
comp=Z,5µm,18.5s
KRLC Kraliky 108.14 328 *e*PDIFF **Pdif 21 10 45.2 +10**
KRLC *e*PP **PP 21 15 01.6 -3.0**
KRLC *e*SP SP 21 24 20.7 -4.1
KRLC AMS AMS 22 02 50.0
comp=Z,5µm,18.5s
OSTC Ostas 108.16 328 *e*PP **PP 21 15 04.4 -0.3**
OSTC *e*SP SP 21 24 12.1 -13
OSTC AMS AMS 22 03 00.0
comp=Z,7µm,19.9s
OKCFA Oklahoma City 108.22 50 IAMs_20 IAMs_20 21 56 43.8
comp=Z,5µm,19.0s
DPC Dobruska-Polom 108.23 328 *e*P **Pdif 21 10 44.7 +8.9**
DPC *e* 21 15 01.6
DPC *e*SP SP 21 24 23.9 -1.7
DPC MLR MLR
comp=Z,7µm,19.7s
DPC Dobruska-Polom 108.23 328 *e*PDIFF **Pdif 21 10 44.7 +8.9**
DPC *e*PP **PP 21 15 01.6 -3.6**
DPC *e*SP SP 21 24 23.9 -1.7
DPC AMS AMS 22 03 00.0
comp=Z,7µm,19.7s
CHVC Chvalec 108.23 329 *e*PDIFF **Pdif 21 10 45.1 +9.3**
CHVC AMS AMS 22 04 00.0
comp=Z,8µm,17.3s
KARP Karpathos 108.30 311 IAMs_20 IAMs_20 22 05 48.3
comp=Z,3µm,21.0s
UPC Upice 108.30 328 *e*PP **PP 21 15 01.8 -3.9**
UPC *e*SP SP 21 24 20.0 -6.3
UPC AMS AMS 22 04 10.0
comp=Z,8µm,17.3s
JAVC Velka Javorina 108.34 326 *e*PDIFF **Pdif 21 10 41.1 +4.7**
JAVC *e*PP **PP 21 15 11.5 +5.3**
JAVC *e*SP SP 21 24 25.2 -1.7
T35A Sooner Cattle 108.35 48 IAMs_20 IAMs_20 22 06 47.9
comp=Z,4µm,18.0s
K38A Parkersburg 108.50 41 IAMs_20 IAMs_20 21 56 00.3
comp=Z,5µm,20.0s
SCIA State Center 108.55 42 IAMs_20 IAMs_20 21 55 55.7
comp=Z,4µm,21.0s
VRAC Vranov 108.68 327 *e*PDIFF **Pdif 21 10 41.8 +4.0**
VRAC *e*PP **PP 21 15 12.2 +3.7**
VRAC *e*SP SP 21 24 28.2 -2.0
D41A Chassel 108.89 36 IAMs_20 IAMs_20 22 02 45.8
comp=Z,4µm,19.0s
BSEG Bad Segeberg 108.90 334 *e*L L 22 00 32.1
comp=Z,3µm,21.6s
KRUC Moravsky 108.93 327 *e*PDIFF **Pdif 21 10 42.7 +3.8**
KRUC *e*PP **PP 21 15 14.2 +3.9**
KRUC *e*SP SP 21 24 34.7 +1.9
N38A Joes South For 109.04 43 IAMs_20 IAMs_20 21 55 11.8
comp=Z,4µm,20.0s
COWI Conover 109.06 37 IAMs_20 IAMs_20 21 59 00.6
comp=Z,4µm,20.0s
BRG Berggiesshubel 109.14 330 *i* PKP **PKiKP 21 14 49.9 +6.2**
comp=Z,7.6nm,1.2s
BRG PP **PP 21 15 10.0 -1.7**
BRG SKS **SKSac 21 21 23.0 +5.1**
BRG SDIFF **Sdif 21 22 45.0 -3.4**
BRG SS **SS 21 30 27.0 -2.6**
comp=N,4µm,17.1s
comp=E,5µm,19.0s
comp=Z,8µm,19.4s
BRG Berggiesshubel 109.14 330 *e*P **Pdif 21 10 50.2 +10**
BRG pmax pmax
comp=Z,15nm,1.5s
BRG Berggiesshubel 109.14 330 *e*PDIFF **Pdif 21 10 50.2 +10**
comp=Z,15nm,1.5s
Z35A Perchaven, San 109.14 52 IAMs_20 IAMs_20 22 08 01.5
comp=Z,3µm,18.0s
TREC Trest 109.28 328 *e*PP **PP 21 15 19.1 +6.2**
TREC *e*SP SP 21 24 29.4 -7.0
TREC AMS AMS 22 02 00.0
comp=Z,8µm,20.0s
TUL1 Leonard 109.28 49 IAMs_20 IAMs_20 21 56 09.6
comp=Z,5µm,20.0s
GOPC GO Pecny, Ondr 109.28 328 *e*PP **PP 21 15 16.6 +3.7**
GOPC *e*SP SP 21 24 27.5 -8.9
GOPC AMS AMS 22 03 20.0
comp=Z,7µm,18.8s
I40A Norwalk 109.29 39 IAMs_20 IAMs_20 21 58 56.8
comp=Z,5µm,19.0s
CLL Collm 109.34 330 *es*Pdif **Pdif 21 10 46.0 +5.4**
CLL *e* 21 14 28.0
comp=Z,16nm,1.7s
CLL *e*PP **PP 21 15 12.0 -1.1**
comp=Z,35nm,2.0s
CLL *e*PPP PPP 21 17 27.0
CLL *e*SKSac **SKSac 21 21 22.0 +3.3**
CLL *e*SKKSac **SKKSac 21 22 19.0 +3.6**
CLL *e*PS **PS 21 24 39.0 -1.9**
CLL *e*PPS PPS 21 25 39.0
CLL *e* 21 26 42.0
CLL *e*SS **SS 21 30 36.0 +3.8**
CLL *e*PKPPKPdf **P'P'df 21 34 21.0 +2.9**
CLL *e* 21 34 30.0
CLL *e*SSS SSS 21 34 42.0
CLL *e* 21 39 42.0
CLL Lm MLR 22 03 00.0
comp=N,6µm,19.5s
CLL Lm MLR 22 03 00.0
comp=E,3µm,19.6s
CLL Lm MLR 22 03 00.0
comp=Z,7µm,20.0s
CLL Lmax 22 04 00.0
CLL Collm 109.34 330 *e*L L 22 03 57.8
comp=Z,7µm,20.0s
CLL Collm 109.34 330 *e*P **Pdif 21 10 46.0 +5.4**
CLL *e* 21 15 12.0
CLL *e* 21 21 22.0
CLL pmax pmax
comp=Z,35nm,2.0s
CLL MLR MLR
comp=Z,7µm,20.0s
P38A Dawn 109.36 44 IAMs_20 IAMs_20 22 09 18.3
comp=Z,3µm,19.0s
PRU Pruhonice 109.37 329 *e*PP **PP 21 15 09.8 -3.6**
PRU *e*SP SP 21 24 29.9 -7.3
PRU AMS AMS 22 03 40.0
comp=Z,7µm,19.5s
WHTX Lake Whitney, 109.47 53 IAMs_20 IAMs_20 21 59 52.2
comp=Z,4µm,21.0s
L40A Anamosa 109.79 41 IAMs_20 IAMs_20 21 57 31.4
comp=Z,5µm,21.0s
CONA Conrad Observa 109.86 326 *i* pPdiff **Pdif 21 10 50.5 +7.3**
comp=Z,16nm,1.2s
U38A Gravette 110.11 48 IAMs_20 IAMs_20 22 07 43.4
comp=Z,4µm,18.0s
E43A Lone Tree Farm 110.17 35 IAMs_20 IAMs_20 21 53 32.7
comp=Z,3µm,22.0s
FNA Florina 110.21 318 IAMs_20 IAMs_20 22 05 38.1
comp=Z,3µm,18.0s
735A Kenedy 110.27 56 IAMs_20 IAMs_20 22 00 05.8
comp=Z,4µm,19.0s
NKC Novy Kostel 110.28 330 *e*PP **PP 21 15 25.4 +5.3**
NKC *e*SP SP 21 24 42.3 -3.9
NKC AMS AMS 22 00 30.0
comp=Z,7µm,20.9s
AGG Agios Georgios 110.37 316 IAMs_20 IAMs_20 22 08 36.0
comp=Z,3µm,18.0s
KHC Kasperske Hory 110.38 328 *e*P **Pdif 21 10 54.5 +9.1**
KHC *e* 21 15 19.2
KHC *e*SP SP 21 24 46.0 -1.3
KHC MLR MLR
comp=Z,8µm,19.5s
KHC Kasperske Hory 110.38 328 *e*PDIFF **Pdif 21 10 54.5 +9.1**
KHC *ex* x 21 11 00.7
KHC *e*PP **PP 21 15 19.2 -1.7**
KHC *e*SP SP 21 24 46.0 -1.3
KHC AMS AMS 22 04 20.0
comp=Z,8µm,19.5s
KHC Kasperske Hory 110.38 328 IAMs_20 IAMs_20 22 04 57.4
comp=Z,3µm,20.0s
P40A Paris 110.42 44 IAMs_20 IAMs_20 21 55 58.5
comp=Z,4µm,21.0s
MOX Moxa 110.44 330 *e*L L 22 04 49.0
comp=Z,7µm,20.1s
ARSA Arzberg 110.44 326 *i* pPdiff **Pdif 21 10 52.8 +7.1**
comp=Z,13nm,1.5s
GEC2 GERESS Array S 110.49 328 *e*L L 22 02 30.9
comp=Z,5µm,21.6s
GERES GERESS Array B 110.49 328 Pdiff **Pdif 21 10 51.0 +5.0**
comp=Z,2.0nm,0.9s,baz=46,slow=3.0,SNR=12
GERES PP **PP 21 15 19.7 -2.1**
comp=Z,1.0nm,0.7s,baz=51,slow=3.9,SNR=2.2
GERES PKKPbc **PKKPbc 21 25 47.6 -0.3**
comp=Z,1.1nm,0.9s,baz=242,slow=2.9,SNR=4.7
GERES PKKPab **PKKPab 21 25 59.3 +1.0**
comp=Z,1.1nm,0.9s,baz=276,slow=1.2,SNR=5.4
HHAR Hobbs 110.50 48 IAMs_20 IAMs_20 22 07 36.8
comp=Z,4µm,18.0s
E44A Grand Marais A 110.65 35 IAMs_20 IAMs_20 21 54 10.2
comp=Z,5µm,22.0s
WET Wettzell 110.74 329 *e*L L 22 06 04.2
comp=Z,8µm,18.6s
237A Washetta, Mont 110.77 52 IAMs_20 IAMs_20 22 11 58.5
comp=Z,3µm,18.0s
PDG Podgorica 110.80 320 IAMs_20 IAMs_20 22 04 24.4
comp=Z,5µm,22.0s
R40A Maddies Statio 110.83 45 IAMs_20 IAMs_20 22 04 42.4
comp=Z,3µm,19.0s
Z38A Mt. Pleasant 110.93 51 IAMs_20 IAMs_20 22 07 20.6
comp=Z,4µm,18.0s
SOKA Soboth 111.05 326 *i* pPdiff **Pdif 21 10 56.7 +8.2**
comp=Z,16nm,1.6s
W39A Magazine 111.06 49 IAMs_20 IAMs_20 21 57 40.9
comp=Z,5µm,20.0s
GRF Grafenberg Arr 111.24 330 *e*PP **PP 21 15 30.7 +3.7**
GRF *e*L L 22 07 04.6
comp=Z,7µm,18.3s
MIAR Mount Ida 111.49 49 IAMs_20 IAMs_20 22 03 54.2
comp=Z,4µm,18.0s
CCM Cathedral Cave 111.66 45 IAMs_20 IAMs_20 22 05 24.6
comp=Z,3µm,19.0s
G45A Suttons Bay 111.69 36 IAMs_20 IAMs_20 21 54 20.0
comp=Z,4µm,22.0s
SNAA Sanae 111.75 190 IAMs_20 IAMs_20 21 58 30.2
comp=Z,4µm,21.0s
NATX Nacogdoches 111.76 52 IAMs_20 IAMs_20 22 12 22.8
comp=Z,3µm,19.0s
I45A Fountain 111.91 37 IAMs_20 IAMs_20 22 00 51.9
comp=Z,5µm,20.0s
UNM Universidad Na 111.93 66 IAMs_20 IAMs_20 21 51 37.2
comp=Z,4µm,22.0s
D47A Chapleau 111.96 33 P **PKiKP 21 14 50.9 +1.6**
baz=307
FCAR Ozark Folk Cen 112.00 47 IAMs_20 IAMs_20 22 01 44.3
comp=Z,3µm,20.0s
X40A Basin Creek Fa 112.07 49 IAMs_20 IAMs_20 21 56 05.5
comp=Z,4µm,20.0s
SLM Saint Louis 112.09 44 IAMs_20 IAMs_20 21 57 07.5
comp=Z,5µm,20.0s
WHAR Wooly Hollow 112.13 48 IAMs_20 IAMs_20 22 05 53.1
comp=Z,4µm,19.0s
FUR Furstenfeldbru 112.18 328 *e*L L 22 04 08.6
comp=Z,6µm,21.2s
NRS Narsarsuaq 112.19 5 IAMs_20 IAMs_20 22 01 33.7
comp=Z,4µm,20.0s
M44A Midewin, Midew 112.19 40 IAMs_20 IAMs_20 21 58 14.8
comp=Z,3µm,21.0s
WLAR White Oak Lake 112.19 50 IAMs_20 IAMs_20 22 03 26.9
comp=Z,4µm,19.0s
TNS Taunus Mts 112.25 331 *e*L L 22 02 59.6
comp=Z,6µm,22.0s
GLMI Grayling 112.42 36 IAMs_20 IAMs_20 21 57 05.1
comp=Z,4µm,21.0s
WATA Walderalm 112.54 328 *i* pPdiff **Pdif 21 11 05.9 +11**
comp=Z,4.2nm,1.0s
WTTA Wattenberg 112.56 328 *i* pPdiff **Pdif 21 11 01.8 +6.5**
comp=Z,14nm,1.5s
LCAR Lake Charles 112.62 47 IAMs_20 IAMs_20 21 59 02.8
comp=Z,4µm,20.0s
Q44A Mer Farm, Va 112.80 43 IAMs_20 IAMs_20 21 59 45.1
comp=Z,3µm,20.0s
PBMO Poplar Bluff 112.82 46 IAMs_20 IAMs_20 22 05 03.2
comp=Z,3µm,20.0s
I47A Gladwin 112.95 37 IAMs_20 IAMs_20 21 59 36.1
comp=Z,4µm,20.0s
ESK Eskdalemuir 113.09 341 IAMs_20 IAMs_20 22 07 03.8
comp=Z,4µm,20.0s
CCAR Cane Creek 113.11 49 IAMs_20 IAMs_20 22 09 17.1
comp=Z,4µm,18.0s
J47A Sunmer 113.20 37 IAMs_20 IAMs_20 22 01 40.2
comp=Z,4µm,20.0s
HBAR Harrisburg 113.21 47 IAMs_20 IAMs_20 22 02 37.8
comp=Z,4µm,20.0s
S44A Carbondale 113.22 44 IAMs_20 IAMs_20 21 57 54.3
comp=Z,4µm,20.0s
SIUC Southern Illin 113.23 44 IAMs_20 IAMs_20 21 57 54.6
comp=Z,4µm,20.0s
441A Deddder 113.31 53 IAMs_20 IAMs_20 22 01 33.0
comp=Z,3µm,19.0s
SFIN Lafayette 113.33 41 IAMs_20 IAMs_20 21 58 41.0
comp=Z,4µm,21.0s
LPAR Lepanto 113.45 47 IAMs_20 IAMs_20 22 00 17.1
comp=Z,3µm,20.0s
GNAR Gosnell 113.49 46 IAMs_20 IAMs_20 21 58 41.0
comp=Z,5µm,20.0s
OLIL Olney 113.50 43 IAMs_20 IAMs_20 21 59 08.8
comp=Z,4µm,20.0s
PVMO Portageville 113.51 46 IAMs_20 IAMs_20 22 10 00.4
comp=Z,3µm,18.0s
SCHQ Schefferville 113.52 19 Pdiff **Pdif 21 11 00.2 +1.1**
comp=Z,4.4nm,0.5s,baz=188,slow=14,SNR=4.4
SCHQ Schefferville 113.52 19 **Pdif 21 10 58.6 -0.6**
SCHQ IAMs_20 IAMs_20 22 06 58.5
comp=Z,4µm,19.0s
HENM Henderson Moun 113.53 45 IAMs_20 IAMs_20 22 10 52.9
comp=Z,3µm,18.0s
PEBM Pensicott Bayo 113.53 46 IAMs_20 IAMs_20 21 58 52.1
comp=Z,4µm,20.0s
PENMO Penman 113.54 46 IAMs_20 IAMs_20 22 10 01.3
comp=Z,3µm,19.0s
BFO Black Forest 113.57 330 *e*L L 22 06 20.7
comp=Z,7µm,20.0s
P46A Rosedale 113.65 42 IAMs_20 IAMs_20 21 59 59.6
comp=Z,4µm,20.0s
342A Flagon Creek P 113.75 52 IAMs_20 IAMs_20 22 09 34.3
comp=Z,4µm,19.0s
HICK Hickman 113.78 46 IAMs_20 IAMs_20 22 04 44.7
comp=Z,3µm,20.0s
J48A Bridge Port 113.79 37 IAMs_20 IAMs_20 21 55 47.7
comp=Z,4µm,22.0s
LNXT Lenox 113.80 46 IAMs_20 IAMs_20 22 04 53.3
comp=Z,4µm,19.0s
GLAT Glass 113.87 46 IAMs_20 IAMs_20 22 08 55.0
comp=Z,3µm,18.0s
143A Socs Landing, 113.91 50 IAMs_20 IAMs_20 22 05 34.3
comp=Z,4µm,19.0s
MET Memphis--Engin 113.94 47 IAMs_20 IAMs_20 22 03 09.7
comp=Z,3µm,20.0s
T45A Paducah 113.97 45 IAMs_20 IAMs_20 22 05 45.4
comp=Z,4µm,19.0s
HALT Halls 114.00 46 IAMs_20 IAMs_20 21 59 05.5
comp=Z,4µm,20.0s
TIP Timpagrande 114.09 318 IAMs_20 IAMs_20 22 09 16.7
comp=Z,4µm,21.0s
USIN University of 114.18 43 IAMs_20 IAMs_20 21 59 44.9
comp=Z,4µm,21.0s
BLO Bloomington 114.33 42 IAMs_20 IAMs_20 22 00 30.7
comp=Z,4µm,20.0s
CHGQ Chibougamau 114.40 27 P PKPdf 21 14 54.2 +0.4
baz=316
N48A Decatur 114.40 40 P PKPdf 21 14 56.1 +2.0
baz=304
AAM Ann Arbor 114.44 38 IAMs_20 IAMs_20 22 00 04.0
comp=Z,4µm,20.0s
W45A Hickory Valley 114.46 47 IAMs_20 IAMs_20 21 59 11.9
comp=Z,3µm,20.0s
PAOL Paolisi 114.52 321 IAMs_20 IAMs_20 22 05 32.7
comp=Z,4µm,21.0s
OXF Oxford 114.60 48 IAMs_20 IAMs_20 22 01 47.3
comp=Z,4µm,20.0s
O48A Farmland 114.65 40 P PKPdf 21 14 55.3 +0.7
baz=303
VBMS Vicksburg 114.79 50 IAMs_20 IAMs_20 22 04 32.7
comp=Z,4µm,19.0s
K50A Casco 114.79 37 IAMs_20 IAMs_20 21 59 34.1
comp=Z,4µm,20.0s
P48A Milroy 114.90 41 IAMs_20 IAMs_20 22 00 00.7
comp=Z,4µm,21.0s
344A Westbrook Farm 114.95 51 IAMs_20 IAMs_20 22 05 20.1
comp=Z,3µm,19.0s
WVT Waverly 114.97 45 IAMs_20 IAMs_20 22 01 10.1
comp=Z,3µm,20.0s
T47A Sharon Grove 115.06 44 IAMs_20 IAMs_20 22 02 29.1
comp=Z,3µm,21.0s
CEL Celeste 115.14 318 IAMs_20 IAMs_20 22 09 57.7
comp=Z,3µm,21.0s
PLAL Pickwick Lake 115.35 47 IAMs_20 IAMs_20 22 00 06.3
comp=Z,5µm,20.0s
SADO Sadowa 115.55 33 IAMs_20 IAMs_20 22 00 45.7
comp=Z,4µm,20.0s
G54A Lake Saint Pet 115.70 32 P **PKPdf 21 14 58.8 +2.3**
baz=311
146A Union 115.71 49 IAMs_20 IAMs_20 22 12 06.0
comp=Z,3µm,18.0s
CASP Castiglione de 115.74 324 IAMs_20 IAMs_20 22 09 04.7
comp=Z,4µm,20.0s
DSB Dublin 115.84 341 IAMs_20 IAMs_20 22 08 49.6
comp=Z,3µm,19.0s
V48A Smith Brothers 115.88 45 IAMs_20 IAMs_20 22 02 54.0
comp=Z,4µm,20.0s
D55A Sainte-Anne-du 115.94 30 P **PKPdf 21 14 58.8 +1.9**
baz=314
346A Big Creek Wild 115.96 51 IAMs_20 IAMs_20 21 58 12.7
comp=Z,3µm,20.0s
ACSO Alum Creek Sta 116.04 39 P **PKPdf 21 14 58.0 +0.7**
baz=305
CLTN Cedars of Leba 116.04 45 IAMs_20 IAMs_20 22 02 50.4
comp=Z,4µm,21.0s
U49A Red Boiling Sp 116.21 44 IAMs_20 IAMs_20 22 02 35.8
comp=Z,4µm,20.0s
R50A Paris 116.26 42 IAMs_20 IAMs_20 22 00 33.7
comp=Z,4µm,21.0s
D56A ZEC Mazanza, M 116.27 29 P **PKiKP 21 14 57.6 0.0**
baz=315
E56A St. Veronique 116.49 30 P **PKiKP 21 14 59.3 +1.3**
baz=315
Q51A Peebles 116.49 41 IAMs_20 IAMs_20 22 03 55.7
comp=Z,4µm,19.0s
G55A Calabogie 116.52 32 P **PKiKP 21 14 58.8 +0.8**
baz=313
T50A Nancy 116.59 43 IAMs_20 IAMs_20 22 01 48.7
comp=Z,4µm,21.0s
I55A Frankford 116.70 33 P **PKiKP 21 15 00.2 +1.8**
baz=311
D57A Chemin Vers le 116.71 29 P **PKiKP 21 15 00.5 +2.1**
baz=316
ERPA Erie 116.74 36 IAMs_20 IAMs_20 21 59 57.6
comp=Z,4µm,22.0s
H55A Tweed 116.75 32 P **PKiKP 21 14 59.8 +1.3**
baz=312
SWET Sewanee 116.77 45 IAMs_20 IAMs_20 22 03 19.6
comp=Z,4µm,20.0s
J54A Appleton 116.79 34 IAMs_20 IAMs_20 22 05 50.6
comp=Z,4µm,20.0s
P52A Corning 116.92 39 P **PKiKP 21 15 00.2 +1.2**
baz=306
LATQ La Tuque 116.96 28 P **PKiKP 21 14 59.9 +1.1**
baz=317
N53A Lisbon 117.03 38 P **PKiKP 21 15 00.9 +1.7**
baz=307
N53A Lisbon 117.03 38 IAMs_20 IAMs_20 22 02 34.6
comp=Z,4µm,20.0s
LRAL Lakeview Retre 117.06 48 P **PKiKP 21 15 00.3 +0.8**
baz=299
CORL Corleone 117.06 318 IAMs_20 IAMs_20 22 14 08.4
comp=Z,3µm,20.0s
Y49A Blount Mountai 117.10 47 IAMs_20 IAMs_20 22 02 10.5
comp=Z,4µm,20.0s
D58A Chemin du LacG 117.13 28 P **PKiKP 21 15 01.3 +2.1**
baz=317
O53A New Philadelph 117.14 38 P **PKiKP 21 15 00.8 +1.4**
baz=307
W50A Signal Mountai 117.21 45 IAMs_20 IAMs_20 21 59 18.3
comp=Z,3µm,21.0s
Q52A Bidwell 117.22 40 P **PKiKP 21 15 01.0 +1.4**
baz=305
J55A Hilton 117.25 34 P **PKiKP 21 14 60.0 +0.5**
baz=311
M54A Oil Creek Stat 117.31 36 P **PKiKP 21 15 01.1 +1.4**
baz=308
M54A Oil Creek Stat 117.31 36 IAMs_20 IAMs_20 22 01 54.7
comp=Z,4µm,20.0s
FPAL Fort Paine 117.33 46 IAMs_20 IAMs_20 22 00 48.7
comp=Z,5µm,21.0s
WDD Wied Dalam 117.34 316 IAMs_20 IAMs_20 22 07 36.1
comp=Z,3µm,22.0s
LSZ Lusaka 117.42 256 PKIKP **PKPdf 21 15 00.2 -0.5**
LSZ MLR MLR
comp=Z,2µm,21.0s
LSZ Lusaka 117.42 256 **PKPdf 21 15 00.2 -0.5**
P53A Whipple 117.47 39 P **PKiKP 21 15 01.7 +1.7**
baz=306
G57A Newington 117.52 31 P **PKiKP 21 15 01.8 +1.8**
baz=314
MMNY Mt. Morris Dam 117.55 34 IAMs_20 IAMs_20 22 03 30.7
comp=Z,4µm,20.0s
L55A Hinsdale 117.60 35 P **PKiKP 21 15 00.9 +0.6**
baz=310
CPCT Cooper Cave 117.64 44 IAMs_20 IAMs_20 22 00 11.5
comp=Z,3µm,21.0s
Z50A Ashland 117.75 47 P **PKPdf 21 15 00.3 -0.5**
baz=300
Z50A Ashland 117.75 47 IAMs_20 IAMs_20 22 03 24.6
comp=Z,4µm,20.0s
X51A Calhoun 117.86 45 IAMs_20 IAMs_20 22 02 53.5
comp=Z,3µm,20.0s
I57A Carthage 117.97 32 P **PKPdf 21 15 00.8 0.0**
baz=313
P54A Burton 117.97 39 P **PKiKP 21 15 01.1 +0.1**
baz=307
TKL Tuckaleechee C 118.04 44 PKP **PKiKP 21 15 02.1 +0.8**
comp=Z,4.0nm,0.7s,baz=273,slow=2.1,SNR=2.6
TKL Tuckaleechee C 118.04 44 PKIKP **PKiKP 21 15 02.1 +0.8**
TKL MLR MLR
comp=Z,5µm,21.0s
LONY Lake Ozonia 118.06 31 P **PKPdf 21 15 00.7 -0.3**
baz=314
V52A Sevierville 118.07 44 IAMs_20 IAMs_20 22 01 25.8
comp=Z,4µm,21.0s
L56A Greenwood 118.13 35 P **PKiKP 21 15 03.2 +1.9**
baz=311
L56A Greenwood 118.13 35 IAMs_20 IAMs_20 22 03 52.1
comp=Z,4µm,21.0s
J57A Williamstown 118.15 33 P **PKiKP 21 15 02.5 +1.2**
baz=313
W52A Murphy 118.24 45 IAMs_20 IAMs_20 22 02 02.4
comp=Z,4µm,20.0s
E60A Ste Agathe de 118.33 28 P **PKiKP 21 15 03.1 +1.5**
baz=318
F60A Warwick 118.39 28 P **PKiKP 21 15 02.1 +0.5**
baz=318
H58A Gabriels 118.41 31 P **PKiKP 21 15 02.2 +0.4**
baz=315
I58A Old Forge 118.50 32 P **PKPdf 21 15 01.9 -0.1**
baz=314
Q55A Buckhannon 118.58 39 P **PKPdf 21 15 00.2 -2.0**
baz=307
L57A Andrews Acres 118.62 34 P **PKPdf 21 15 02.1 -0.1**
baz=311
V53A Saluda 118.70 43 **PKPdf 21 15 00.7 -1.9**
E61A Lac Etchemin 118.72 27 P **PKiKP 21 15 02.5 +0.2**
baz=319
O56A Blue Knob Stat 118.73 37 P **PKiKP 21 15 04.1 +1.6**
baz=309
K58A Earlville 118.77 33 P **PKiKP 21 15 04.4 +1.9**
baz=313
Y52A Lilburn 118.78 46 P **PKiKP 21 15 04.3 +1.5**
baz=301
D62A Allapoint, All 118.87 26 P **PKiKP 21 15 03.6 +1.0**
baz=321
U54A Nelsons Funny 118.90 42 IAMs_20 IAMs_20 22 00 28.5
comp=Z,3µm,20.0s
152A Waverly Hall 118.92 47 IAMs_20 IAMs_20 22 03 15.1
comp=Z,4µm,20.0s
R55A Marlinton 118.98 40 P **PKiKP 21 15 04.9 +1.7**
baz=307
I59A Olmsteadville 119.00 31 P **PKiKP 21 15 04.4 +1.4**
baz=315
BOSA Boshof 119.03 241 PKP **PKiKP 21 15 03.8 +0.2**
comp=Z,3.3nm,0.7s,baz=107,slow=1.5,SNR=9.2
P56A Dayton Farm, R 119.04 38 P **PKiKP 21 15 04.7 +1.6**
baz=308
451A Vernon 119.15 50 IAMs_20 IAMs_20 22 01 23.1
comp=Z,3µm,21.0s
VT1 Waterbury 119.19 30 IAMs_20 IAMs_20 22 04 37.9
comp=Z,4µm,20.0s
I60A Shoreham 119.27 31 P **PKiKP 21 15 04.3 +0.9**
baz=315
D63A Stockholm 119.31 25 P **PKiKP 21 15 03.6 +0.2**
baz=322
O57A Amberson 119.32 36 P **PKiKP 21 15 04.0 +0.3**
baz=310
352A Blakely 119.35 49 IAMs_20 IAMs_20 22 02 49.7

	comp=Z,3µm,21.0s							
BLA	Blacksburg	119.42	41	IAMs_20	IAMs_20	22 00 49.2		
	comp=Z,4µm,22.0s							
GOGA	Godfrey	119.44	46	IAMs_20	IAMs_20	22 01 23.5		
	comp=Z,4µm,20.0s							
W54A	Cherokee Point	119.44	44	P	PKPdf	21 15 03.5	-0.5	
	baz=304							
N58A	Sunbury	119.45	35	P	PKiKP	21 15 06.0	+2.1	
	baz=311							
H61A	Lyndonville	119.45	30	P	PKiKP	21 15 05.7	+1.9	
	baz=317							
P57A	Homestead Farm	119.55	37	P	PKiKP	21 15 05.4	+1.3	
	baz=309							
G62A	West of Eustis	119.62	28	IAMs_20	IAMs_20	22 11 16.7		
	comp=Z,4µm,18.0s							
E63A	Oxbow	119.65	26	P	PKPdf	21 15 03.5	-0.5	
	baz=321							
LBNH	Lisbon	119.67	30	IAMs_20	IAMs_20	22 04 52.2		
	comp=Z,4µm,20.0s							
V55A	Taylorsville	119.68	42	IAMs_20	IAMs_20	22 02 32.2		
	comp=Z,4µm,20.0s							
O58A	Lewisberry	119.79	36	P	PKiKP	21 15 04.9	+0.3	
	baz=310							
PAULI	Pauline	119.84	44	IAMs_20	IAMs_20	22 03 51.1		
	comp=Z,3µm,20.0s							
HODGE	Hodges	119.86	44	IAMs_20	IAMs_20	22 09 23.3		
	comp=Z,4µm,20.0s							
F63A	Nahmakanta, Br	119.91	27	P	PKiKP	21 15 05.3	+0.6	
	baz=320							
F63A	Nahmakanta, Br	119.91	27	IAMs_20	IAMs_20	22 04 07.2		
	comp=Z,3µm,22.0s							
E64A	Bridgewater	119.91	26	P	PKiKP	21 15 05.8	+1.2	
	baz=322							
N59A	State Game Lan	119.94	35	P	PKiKP	21 15 05.9	+1.0	
	baz=312							
BATG	Bathurst New B	119.96	24	IAMs_20	IAMs_20	22 00 41.4		
	comp=Z,4µm,21.0s							
R57A	Stanardsville	119.98	39	P	PKiKP	21 15 05.7	+0.8	
	baz=308							
P58A	Pank, Wackersv	119.98	37	P	PKiKP	21 15 05.7	+0.8	
	baz=310							
Q58A	Fox Den Farm,	120.09	38	P	PKiKP	21 15 06.2	+1.0	
	baz=309							
O59A	Robesonia	120.10	36	P	PKiKP	21 15 06.5	+1.3	
	baz=311							
K61A	Williamstown	120.11	32	P	PKiKP	21 15 06.2	+1.1	
	baz=315							
F64A	Sherman	120.12	26	P	PKiKP	21 15 06.7	+1.7	
	baz=321							
F64A	Sherman	120.12	26	IAMs_20	IAMs_20	22 07 32.7		
	comp=Z,4µm,22.0s							
PKME	Peaks-Kenny Pk	120.16	27	P	PKPdf	21 15 04.7	-0.3	
	baz=320							
PKME	Peaks-Kenny Pk	120.16	27	IAMs_20	IAMs_20	22 05 50.9		
	comp=Z,3µm,20.0s							
I62A	Tamworth	120.22	30	P	PKPdf	21 15 04.9	-0.3	
	baz=317							
I62A	Tamworth	120.22	30	IAMs_20	IAMs_20	22 05 08.0		
	comp=Z,4µm,21.0s							
H63A	New Sharon	120.27	28	P	PKiKP	21 15 06.5	+1.2	
	baz=319							
SDMD	Soldier's Deli	120.30	37	IAMs_20	IAMs_20	22 04 26.7		
	comp=Z,3µm,20.0s							
553A	Crawfordville	120.35	50	IAMs_20	IAMs_20	22 04 23.9		
	comp=Z,3µm,21.0s							
N60A	Cedar Hill Far	120.35	34	P	PKiKP	21 15 06.2	+0.5	
	baz=312							
TIGA	Tifton	120.36	48	IAMs_20	IAMs_20	22 02 20.9		
	comp=Z,4µm,20.0s							
P59A	Jarrettsville	120.41	36	P	PKiKP	21 15 06.8	+1.0	
	baz=311							
W56A	Indian Trail	120.51	43	P	PKiKP	21 15 06.8	+0.7	
	baz=305							
O60A	Telford	120.55	35	P	PKiKP	21 15 08.1	+2.1	
	baz=312							
R58B	Mineral	120.58	39	P	PKiKP	21 15 07.4	+1.3	
	baz=309							
H64A	Troy	120.66	28	P	PKiKP	21 15 07.5	+1.4	
	baz=320							
J63A	Strafford	120.79	30	P	PKiKP	21 15 09.3	+2.9	
	baz=317							
T58A	Grand View Acr	120.79	40	P	PKiKP	21 15 08.1	+1.5	
	baz=308							
BIRD	Birdtown, Kers	120.87	43	IAMs_20	IAMs_20	22 02 49.8		
	comp=Z,4µm,20.0s							
W57A	Gilead	120.89	42	P	PKiKP	21 15 08.3	+1.4	
	baz=305							
KEST	Kesra	120.91	318	IAMs_20	IAMs_20	22 12 49.1		
	comp=Z,3µm,20.0s							
Z56A	Williston	120.97	45	IAMs_20	IAMs_20	22 05 32.9		
	comp=Z,4µm,19.0s							
G65A	Princeton	120.98	26	IAMs_20	IAMs_20	22 08 19.6		
	comp=Z,4µm,21.0s							
I64A	Boothbay	121.01	29	P	PKiKP	21 15 07.7	+0.9	
	baz=319							
V58A	Windy Hill, Pi	121.10	41	P	PKiKP	21 15 08.9	+1.7	
	baz=306							
V58A	Windy Hill, Pi	121.10	41	IAMs_20	IAMs_20	22 03 52.8		
	comp=Z,4µm,20.0s							
U58A	Oxford	121.11	40	P	PKiKP	21 15 08.4	+1.2	
	baz=307							
Q60A	Greensboro	121.16	36	P	PKiKP	21 15 08.2	+1.0	
	baz=311							
T59A	Double "B" Far	121.40	39	P	PKiKP	21 15 09.5	+1.7	
	baz=308							
EMMW	East Machias	121.41	27	IAMs_20	IAMs_20	22 08 23.0		
	comp=Z,3µm,21.0s							
Z57A	Bowman	121.45	45	P	PKiKP	21 15 09.9	+1.9	
	baz=304							
U59A	Littleton	121.63	40	IAMs_20	IAMs_20	22 02 42.5		
	comp=Z,3µm,20.0s							
V59A	Middlesex	121.69	41	P	PKiKP	21 15 10.1	+1.7	
	baz=307							
NHSC	New Hope	121.92	44	IAMs_20	IAMs_20	22 05 09.0		
	comp=Z,4µm,21.0s							
257A	Skidaway Islan	121.94	46	IAMs_20	IAMs_20	22 02 48.8		
	comp=Z,4µm,20.0s							
656A	Willston	122.19	49	IAMs_20	IAMs_20	22 08 05.5		
	comp=Z,3µm,20.0s							
DWPF	Disney Wildern	123.65	50	IAMs_20	IAMs_20	22 05 40.4		
	comp=Z,3µm,22.0s							
PAYG	Puerto Ayora	124.62	86	IAMs_20	IAMs_20	21 55 52.4		
	comp=Z,3µm,21.0s							
060A	Indiantown	125.01	51	IAMs_20	IAMs_20	22 07 16.6		
	comp=Z,2µm,20.0s							
UCM	Universidad Co	125.09	330	PP	PP	21 17 08.2	+5.3	
UCM	Universidad Co	125.09	330	PKS		21 18 19.7		
061Z	Ochoppi	125.17	52	IAMs_20	IAMs_20	22 12 28.9		
	comp=Z,3µm,19.0s							
PBRG	Braganca	125.52	334	ePP	PP	21 17 12.3	+6.6	
ESDC	Sonseca Array	125.93	331	PP	PP	21 17 08.7	+0.1	
	comp=Z,1.4nm,0.7s,baz=29,slow=5.9,SNR=7.3							
CART	Cartagena	125.96	327	PP	PP	21 17 11.8	+3.0	
CART	Cartagena	125.96	327	IAMs_20	IAMs_20	22 12 47.7		
	comp=Z,4µm,21.0s							
PGAV	Gavieira, Arco	126.03	335	ePP	PP	21 17 15.6	+6.4	
PGAV	Gavieira, Arco	126.03	335	eSS	SS	21 34 22.2	+13	
PGAV	Gavieira, Arco	126.03	335	eLR	LR	21 59 08.3		
	comp=Z,3µm,18.0s							
PCAB	Cabril	126.14	335	ePP	PP	21 17 12.7	+2.9	
MVO	Moncorvo	126.17	334	ePP	PP	21 17 15.2	+5.2	
MVO	Moncorvo	126.17	334	eSS	SS	21 34 21.4	+11	
MVO	Moncorvo	126.17	334	eLR	LR	21 58 12.2		
	comp=Z,5µm,20.0s							
PVRL	Vila Real	126.37	335	ePP	PP	21 17 19.0	+7.6	
PVIS	Viseu	126.91	334	ePP	PP	21 17 23.0	+8.1	
MTE	Manteigas	127.02	334	ePP	PP	21 17 21.1	+5.4	
MTE	Manteigas	127.02	334	eSS	SS	21 34 32.2	+11	
MTE	Manteigas	127.02	334	eLR	LR	21 58 35.3		
	comp=Z,5µm,20.0s							
PCBR	Castelo Branco	127.44	333	ePP	PP	21 17 27.4	+9.0	
COI	Coimbra	127.55	334	ePP	PP	21 17 25.7	+6.6	
PCAS	Casmilo, Conde	127.72	334	ePP	PP	21 17 27.4	+7.2	
PMRV	Marv??o	127.74	333	ePP	PP	21 17 27.4	+7.0	
PMRV	Marv??o	127.74	333	eSS	SS	21 34 39.2	+9.0	
PMRV	Marv??o	127.74	333	eLR	LR	21 58 47.8		
	comp=Z,5µm,22.0s							
PSBE	So Bento	128.29	334	ePP	PP	21 17 31.2	+7.2	
PMTG	Montargil	128.41	333	ePP	PP	21 17 31.2	+6.5	
HDC	Heredia	128.51	72	IAMs_20	IAMs_20	21 58 51.1		
	comp=Z,2µm,20.0s							
EVO	Evora	128.75	333	PP	PP	21 17 31.9	+4.9	
EVO	Evora	128.75	333	PKS		21 18 48.8		
EVO	Evora	128.75	333	ePP	PP	21 17 33.7	+6.7	
PMAFR	Mafra	128.96	334	ePP	PP	21 17 32.8	+4.4	
PBEJ	Beja	129.09	332	ePP	PP	21 17 39.1	+10	
LIS	Lisbon	129.10	334	ePP	PP	21 17 35.4	+6.1	
PNCL	Nicolau / Gran	129.32	333	ePP	PP	21 17 38.0	+7.2	
MESJ	Messejana	129.41	332	ePP	PP	21 17 30.8	-0.6	
MESJ				eSS	SS	21 34 53.1	+2.3	
MESJ				AMS	AMS	22 13 45.0		
	comp=Z,5µm,17.6s							
MESJ	Messejana	129.41	332	ePP	PP	21 17 39.1	+7.8	
PCVE	Castro Verde	129.49	332	ePP	PP	21 17 38.7	+6.8	
PVAQ	Vaqueiros	129.52	332	ePP	PP	21 17 40.1	+8.0	
PVAQ	Vaqueiros	129.52	332	eSS	SS	21 35 04.9	+13	
PVAQ	Vaqueiros	129.52	332	eLR	LR	21 59 00.1		
	comp=Z,4µm,20.0s							
SFS	San Fernando	129.53	330	PKS		21 18 57.4		
SFS	San Fernando	129.53	330	IAMs_20	IAMs_20	22 16 05.0		
	comp=Z,3µm,20.0s							
CEU	Ceuta	129.55	329	PP	PP	21 17 34.8	+2.4	
PBDV	Barranco-do-Ve	129.75	332	ePP	PP	21 17 41.6	+7.9	
PTEO	Sao Teotonio	129.88	333	ePP	PP	21 17 44.8	+10	
MORF	Marmelete	130.04	332	ePP	PP	21 17 34.7	-0.8	
MORF				AMS	AMS	22 14 15.7		
	comp=Z,5µm,29.9s							
MORF	Marmelete	130.04	332	ePP	PP	21 17 44.6	+9.1	
PFVI	Vila Bisbo	130.26	332	ePP	PP	21 17 44.6	+7.7	
IFR	Ifrane	131.22	326	PP	PP	21 17 45.5	+1.8	
IFR	Ifrane	131.22	326	PKS		21 19 01.9		
LL01	San Ignacio de	131.26	143	IAMs_20	IAMs_20	22 06 39.8		
	comp=Z,3µm,22.0s							
HOPE	Hope Point	132.21	179	IAMs_20	IAMs_20	22 14 07.9		
	comp=Z,3µm,20.0s							
BBSR	BB Station	132.25	34	IAMs_20	IAMs_20	22 13 06.9		
	comp=Z,3µm,20.0s							
AVE	Averroes	132.62	328	PP	PP	21 17 56.5	+4.2	
AVE	Averroes	132.62	328	PKS		21 18 53.2		
GTBY	Guantanamo Bay	132.73	55	IAMs_20	IAMs_20	22 14 36.7		
	comp=Z,2µm,20.0s							
BCIP	Isla Barro Col	132.78	71	IAMs_20	IAMs_20	22 01 34.3		
	comp=Z,3µm,21.0s							
PLCA	Paso Flores	133.36	143	PKP	PKPdf	21 15 30.6	+0.2	
	comp=Z,8.2nm,1.0s,baz=248,slow=2.4,SNR=8.3							
LC01	Cunco	133.62	140		PKiKP	21 15 31.8	-0.4	
BI03	Tigo	133.98	137	IAMs_20	IAMs_20	22 04 22.5		
	comp=Z,2µm,20.0s							
GRTK	Grand Turk	135.07	51	IAMs_20	IAMs_20	22 10 30.9		
	comp=Z,3µm,22.0s							
BI02	San Fabin de	135.26	138		PKPdf	21 15 34.9	+0.7	
GO05	Huala	135.70	135	IAMs_20	IAMs_20	22 04 41.1		
	comp=Z,2µm,20.0s							
SDDR	Presa de Saban	136.31	54	IAMs_20	IAMs_20	22 20 09.4		
	comp=Z,3µm,19.0s							
BO02	Sierra Bellavi	136.61	136		PKPdf	21 15 36.3	-0.4	
BO02				IAMs_20	IAMs_20	22 13 41.4		
	comp=Z,2µm,19.0s							
PMPST	Porto Santo, M	136.92	337	ePP	PP	21 18 23.3	+4.0	
MT02	Curacav	137.16	133	IAMs_20	IAMs_20	22 07 46.0		
	comp=Z,3µm,20.0s							
MT05	Renca	137.38	134	IAMs_20	IAMs_20	22 07 31.8		
	comp=Z,2µm,20.0s							
PMAR	Madeira	137.46	337	ePP	PP	21 18 28.6	+5.8	
PMOZ	Porto Moniz, M	137.48	338	ePP	PP	21 18 28.6	+5.7	
PMOZ	Porto Moniz, M	137.48	338	eLR	LR	22 01 18.5		
	comp=Z,2µm,20.0s							
FUL	Funchal	137.52	337	ePP	PP	21 18 34.8	+12	
PEL	Peldehue	137.54	134	IAMs_20	IAMs_20	22 08 08.4		
	comp=Z,3µm,20.0s							
VA03	San Esteban	137.84	133	IAMs_20	IAMs_20	22 08 14.0		
	comp=Z,2µm,21.0s							
RREF	El Recreo	138.26	75	eP	PKiKP	21 15 46.9	+3.8	
CO02	Combarbal	138.28	131	IAMs_20	IAMs_20	22 03 01.8		
	comp=Z,3µm,20.0s							
TOA0	Torodi Ar. Sit	138.66	298		PKPdf	21 15 40.5	-0.4	
TORD	Torodi Ar. Bea	138.66	298	PKhKP	PKPpre	21 15 34.2		
	comp=Z,2.0nm,0.7s,baz=48,slow=1.8,SNR=8.9							
TORD				PKP	PKPdf	21 15 41.3	+0.4	
	comp=Z,2.7nm,0.8s,baz=57,slow=2.3,SNR=13							
TORD				PP	PP	21 18 33.0	+1.4	
	comp=Z,3.3nm,1.1s,baz=26,slow=3.7,SNR=3.6							
TOC7	Torodi Ar. Sit	138.66	298	IAMs_20	IAMs_20	22 28 17.5		
	comp=Z,2µm,20.0s							
TOB4	Torodi Ar. Sit	138.67	298	IAMs_20	IAMs_20	22 28 18.7		
	comp=Z,2µm,20.0s							
TOC5	Torodi Ar. Sit	138.68	298	IAMs_20	IAMs_20	22 28 19.0		
	comp=Z,3µm,21.0s							
CO03	El Pedregal	138.69	131		PKPpre	21 15 31.4		
GO04	Tololo Observa	138.92	130	IAMs_20	IAMs_20	22 04 56.9		
	comp=Z,2µm,22.0s							
PRAC	Prado	139.00	77	eP	PKiKP	21 15 43.6	-0.3	
CO01	Juntas del Tor	139.55	130	IAMs_20	IAMs_20	22 12 10.4		
	comp=Z,3µm,18.0s							
CFA	Coronel Fontan	140.11	133	PKhKP	PKPpre	21 15 36.2		
	comp=Z,7.3nm,0.8s,baz=250,slow=3.0,SNR=9.1							
CFA				PKP	PKPdf	21 15 43.7	+0.5	
	comp=Z,11nm,0.8s,baz=260,slow=4.0,SNR=6.6							
RUSC	La Rusia	140.15	73		PKPpre	21 15 33.9		
SJG	San Juan	140.85	51	IAMs_20	IAMs_20	22 23 35.1		
	comp=Z,3µm,20.0s							
SDV	Santo Domingo	141.44	67	PKhKP	PKPpre	21 15 40.9		
	comp=Z,9.8nm,0.7s,baz=334,slow=2.0,SNR=10							
SDV				PKP	PKPdf	21 15 45.8	-0.4	
	comp=Z,6.3nm,0.6s,baz=306,slow=5.4,SNR=4.7							
PB07	IPOC Station P	143.05	118		PKPbc	21 15 46.8	+1.1	
TA01	Diego Aracena	143.16	116		PKPbc	21 15 46.7	+1.0	
PB12	IPOC Station P	143.57	113		PKPbc	21 15 48.0	+0.9	
PB09	IPOC Station P	143.60	118		PKPbc	21 15 48.0	+0.8	
PB09				IAMs_20	IAMs_20	22 08 19.9		
	comp=Z,3µm,22.0s							
LVC	Limon Verde	143.60	120	PKIKP	PKPbc	21 15 47.7	+0.3	
LVC	Limon Verde	143.60	120		PKPbc	21 15 47.7	+0.2	
MNMC	Minye Minye	144.10	114	IAMs_20	IAMs_20	22 16 02.5		
	comp=Z,2µm,19.0s							
PB08	IPOC Station P	144.20	116		PKPab	21 15 49.2	+0.2	
GO01	Chusmiza	144.31	115		PKPbc	21 15 50.0	+0.1	
PB16	IPOC Station P	144.39	113		PKPab	21 15 50.0	0.0	
ANWB	Willy Bob	144.41	47	eP	PKiKP	21 16 00.9	+6.2	
LPA	La Plata	144.63	147	PKIKP	PKPab	21 15 41.5	-8.1	
LPA				PP	PP	21 19 02.2	-4.6	
LPA				SKIKP		21 19 16.7		
LPA				PPP	PPP	21 22 18.7		
LPA				SDIFF		21 27 44.9		
LPA				PPP	PPP	21 30 21.1		
LPA				PPS	PPS	21 31 41.0		
LPA				SS	SS	21 37 54.3	+1.9	
LPA				SSS	SSS	21 43 20.8		
CBE	Ff, Capester	145.54	49	eP	PKPab	21 15 54.3	+0.8	
TDBA	Terre de Bas,	145.66	50	eP	PKPab	21 15 55.6	+1.7	
LPAZ	La Paz	146.16	110	PKPbc	PKPab	21 15 56.5	-0.1	
	comp=Z,19nm,0.6s,baz=310,slow=2.8,SNR=25							
LPAZ	La Paz	146.16	110	PKP2	PKPbc	21 15 56.3	+0.4	
LPAZ	La Paz	146.16	110		PKPbc	21 15 56.3	+0.4	
PCRV	Puerto La Cruz	146.27	61	PKPbc	PKPbc	21 15 55.7	+0.1	
	comp=Z,13nm,0.9s,baz=37,slow=23,SNR=2.1							
PLCV	Puerto La Cruz	146.32	61		PKPbc	21 15 55.7	0.0	
PCM	Pelee Case Pet	146.61	51	eP	PKiKP	21 16 06.0	+6.6	
SVN	Savane Anatole	146.62	51	eP	PKPab	21 15 58.0	+0.4	
CXM	Morne La Croix	146.64	51	eP	PKPab	21 15 58.7	+0.8	
GBMF	Grand Be	146.65	51	eP	PKiKP	21 16 07.7	+8.1	
BAMF	Morne Balai	146.66	51	eP	PKiKP	21 16 05.4	+5.9	
FDF	Fort de France	146.70	51	eP	PKiKP	21 16 04.4	+4.8	
FDF	Fort de France	146.70	51	IAMs_20	IAMs_20	22 18 13.3		
	comp=Z,2µm,21.0s							
ILAM	Ilet Lapin Mar	146.89	50	eP	PKiKP	21 16 06.8	+6.9	
ZAM	Aeronautique	146.89	51	eP	PKPab	21 15 58.7	+0.1	
BIM	Bigot	146.89	51	eP	PKiKP	21 16 06.8	+6.9	
TRMF	Trois Ilets	146.90	51	eP	PKiKP	21 16 08.9	+9.0	
LPMF	Morne Lapointe	146.94	51	eP	PKiKP	21 15 59.8	-0.2	
DBIC	Dimbokro	147.19	293	PKPbc	PKPbc	21 15 57.5	-0.7	
	comp=Z,8.8nm,0.7s,baz=40,slow=4.5,SNR=11							
DBIC	Dimbokro	147.19	293	PKP2	PKPbc	21 15 57.2	-1.0	
DBIC	Dimbokro	147.19	293		PKPbc	21 15 57.1	-1.0	
KIC	Kosan Boka	147.20	292	ePKIKP	PKPbc	21 15 58.2	-0.1	
	comp=Z,224nm,1.0s							
SLBI	Saint Lucia, B	147.26	52	eP	PKPab	21 16 00.3	+0.2	
TIC	Toumodi	147.35	293	ePKIKP	PKPbc	21 15 58.6	-0.1	
SVB	Belmont	147.48	53	eP	PKiKP	21 16 09.1	+7.9	
LIC	Lamto	147.52	292	ePKIKP	PKPbc	21 15 58.6	-0.5	
	comp=Z,245nm,1.1s							
GRGR	Grenville	147.80	55	IAMs_20	IAMs_20	22 23 14.5		
	comp=Z,3µm,21.0s							
TOSP	Speyside	149.17	55	eP	PKPbc	21 16 02.5	-0.9	
TOSP	Speyside	149.17	55		PKPbc	21 16 01.7	-1.7	
CPUP	Villa Florida	150.93	136	PKP	PKPdf	21 16 02.1	+0.4	
	comp=Z,3.7nm,0.9s,baz=198,slow=1.5,SNR=8.7							
CPUP				PKPbc	PKPbc	21 16 07.5	+0.1	
	comp=Z,44nm,1.0s,baz=251,slow=2.6,SNR=38							
CPUP				PKPab	PKPab	21 16 14.4	-0.3	
	comp=Z,18nm,0.7s,baz=226,slow=7.0,SNR=6.1							
CPUP	Villa Florida	150.93	136		PKPdf	21 16 01.5	-0.2	
SAML	Samuel	152.02	97	IAMs_20	IAMs_20	22 20 22.4		
	comp=Z,2µm,19.0s							
SIV	San Ignacio	152.78	113	PKP	PKPdf	21 16 05.8	+1.1	
	comp=Z,6.6nm,0.6s,baz=266,slow=4.5,SNR=5.5							
SIV				PKPbc	PKPbc	21 16 11.8	-0.1	
	comp=Z,9.9nm,0.8s,baz=324,slow=0.9,SNR=37							
SIV				PKPab	PKPab	21 16 22.4	-0.4	
	comp=Z,28nm,0.7s,baz=249,slow=4.2,SNR=18							
MDP	Montagnes des	159.08	57	PKP	PKPdf	21 16 11.8	-1.4	
	comp=Z,24nm,1.2s,baz=43,slow=2.5,SNR=2.7							
SPB	Sao Paulo	159.15	146	IAMs_20	IAMs_20	22 25 05.0		
	comp=Z,2µm,20.0s							
BDFB	Brasilia	164.31	127	PKP	PKPdf	21 16 19.3	+0.7	
	comp=Z,3.3nm,0.9s,baz=107,slow=5.3,SNR=2.1							

PRU 14 21:09:47.5±0.0, 49.78N×18.53E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
OKC	Ostrava-Krasne	0.26	283	ePG		Pg	21 09 52.4	0.0
OKC				eSG		Sg	21 09 56.1	+0.4
	comp=Z,9.7nm,0.5s							
KRLC	Kraliky	1.17	285	ePG		Pg	21 10 08.6	-1.3
KRLC				eSG		Sg	21 10 23.9	-1.1

NEIC ***14*** *21:12:44.1±1.4, 8.4S±0.1×76.4W±0.2, h9km±6km, Error ellipse: s-maj=25.3km s-min=18.0km az=67.0*
IDC ***14*** *21:12:46.9±1.0, 8.29S×76.05W, h0km, mb4.1/8, mb1 4.4/12, mb1mx4.1/52, mbtmp4.2/12, ML3.8/4, MS3.7/3, Ms1 3.7/3, ms1mx3.5/42, Error ellipse: s-maj=30.2km s-min=19.6km az=71.0*
ARE ***14*** *21:12:48±1.4, 8.4S±0.1×76.3W±0.1, h28km±5km, ML4.5, mb4.7/70(NEIC), Error ellipse: s-maj=21.8km s-min=16.3km az=61.0*
BJI ***14*** *21:12:51.0±0.0, 8.40S×76.10W, h25km, Ms5.3/1, Ms7 5.2/1*

ISC 14 21:12:49.3±0.4, 8.36S±0.05×76.15W±0.09, h35km, n118, σ2s 20/116, mb4.6/41, 1C, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
ATAH	Atahualpa	2.53	298	Pn		Pn	21 13 30.8	+2.5
	159nm,0.3s,baz=136,slow=5.6,SNR=183							
ATAH				Sn		Sn	21 14 02.2	+4.0
	41nm,0.3s,baz=70,slow=21,SNR=5.6							
ATAH				LR		LR	21 14 49.1	
	comp=Z,629nm,19.6s,baz=107,slow=47							
NNA	Nana	3.67	191	Pn		Pn	21 13 46.3	+2.6
	11nm,0.3s,baz=345,slow=14,SNR=16							
NNA				Sn		Sn	21 14 32.0	+6.2
	13nm,0.3s,baz=298,slow=20,SNR=6.1							
NNA	Nana	3.67	191			Pn	21 13 41.2	-2.5
NNA				Sn		Sn	21 14 23.1	-2.6
CRUC	La Cruz	9.89	355	eP		Pn	21 15 11.3	+1.9
BBAC	Balboa, Cauca	10.37	354	eP		Pn	21 15 20.5	+4.8
SOTA	Rioblanco	10.43	357	eP		Pn	21 15 18.4	+1.5
TUMC	Tumaco	10.43	346	Pn		Pn	21 15 14.7	-1.8
GARC	Garzon, Huila	10.49	4	eP		Pn	21 15 20.5	+3.0
PCON	Cinco Dias	10.62	359	eP		Pn	21 15 21.7	+2.2
MACC	Macarena, Meta	10.68	13	eP		Pn	21 15 22.8	+2.9
POPC	Popayan, Colom	10.84	357	eP		Pn	21 15 28.3	+6.1
BETC	Betania	10.99	4	eP		Pn	21 15 28.3	+4.2
LPAZ	La Paz	11.11	136	Pn		Pn	21 15 27.2	+0.9
	0.1nm,0.3s,baz=333,slow=11,SNR=4.4							
LPAZ	La Paz	11.11	136	Pn		Pn	21 15 25.2	-1.1
ORTC	Ortega, Tolima	12.22	4	eP		Pn	21 15 43.6	+2.6
YOTC	Yotoco, Valle	12.26	359	eP		P	21 15 49.0	-4.4
PSGCX	Pisagua	12.61	153	Pn		Pn	21 15 47.0	+0.7
VILC	Villavicencio,	12.63	11	eP		Pn	21 15 50.1	+3.5
SAML	Samuel	12.83	94			Pn	21 15 51.1	+1.8
PB11	IPOC Station P	12.96	152			Pn	21 15 48.3	-2.9
ROSC	El Ros

DELO				IAmb	IAmb	21 22 04.2		
	comp=Z,8.8nm,0.8s							
SADO	**Sadowa**	**52.95**	**357**	P	**P**	**21 22 03.6**	**+1.5**	
	comp=Z,2.0nm,0.5s,baz=181,slow=7.6,SNR=3.5							
I42A	**Draeger Farm,**	**53.27**	**349**	P	**P**	**21 22 03.4**	**-1.2**	
SDCO	**Great Sand Dun**	**53.44**	**331**	P	**P**	**21 22 03.9**	**-2.3**	
SDCO				IAmb	IAmb	21 22 11.8		
	comp=Z,8.6nm,0.9s							
X16A	**Lo Mia Camp, P**	**54.09**	**324**	P	**P**	**21 22 09.1**	**-1.9**	
ECSD	**EROS Data Cent**	**55.07**	**342**	P	**P**	**21 22 16.1**	**-1.6**	
ECSD				IAmb	IAmb	21 22 21.8		
	comp=Z,5.9nm,0.9s							
PV01	**Paradox Valley**	**55.26**	**329**	P	**P**	**21 22 17.6**	**-1.9**	
SMCO	**Snowmass**	**55.27**	**331**	P	**P**	**21 22 17.3**	**-2.4**	
PV13	**Radium Mtn., P**	**55.40**	**329**	P	**P**	**21 22 17.6**	**-2.8**	
PV13				IAmb	IAmb	21 22 25.3		
	comp=Z,6.7nm,0.9s							
F36A	**Milaca**	**56.18**	**345**	P	**P**	**21 22 23.7**	**-1.9**	
KNB	**Kanab**	**56.72**	**325**	P	**P**	**21 22 28.6**	**-1.3**	
GSC	**Goldstone, Bar**	**57.93**	**321**	P	**P**	**21 22 35.5**	**-2.8**	
RSSD	**Black Hills**	**58.01**	**337**	P	**P**	**21 22 36.5**	**-2.3**	
B35A	**Bob, Littlefor**	**58.56**	**346**	P	**P**	**21 22 40.9**	**-1.4**	
B35A				IAmb	IAmb	21 22 46.4		
	comp=Z,6.0nm,0.9s							
DUG	**Dugway, Tooele**	**58.99**	**328**	P	**P**	**21 22 43.3**	**-2.4**	
AGMN	**Agassiz Nation**	**59.03**	**345**	P	**P**	**21 22 43.6**	**-2.0**	
AGMN				IAmb	IAmb	21 22 49.7		
	comp=Z,6.6nm,0.8s							
PDAR	**Pinedale Array**	**59.30**	**332**	P	**P**	**21 22 47.4**	**-0.5**	
OMMB	**Old Mammoth Mi**	**60.77**	**322**	P	**P**	**21 22 56.1**	**-2.1**	
OMMB				IAmb	IAmb	21 23 03.7		
	comp=Z,3.9nm,0.9s							
ULM	**Lac du Bonnet**	**60.84**	**346**	P	**P**	**21 22 59.7**	**+1.7**	
	comp=Z,8.1nm,0.8s,baz=161,slow=6.2,SNR=6.6							
ULM	**Lac du Bonnet**	**60.84**	**346**	P	**P**	**21 22 56.6**	**-1.4**	
NVAR	**Mina Array Bea**	**60.87**	**323**	P	**P**	**21 23 01.9**	**+3.2**	
	comp=Z,1.3nm,0.8s,baz=147,slow=6.8,SNR=7.6							
NVAR	**Mina Array Bea**	**60.87**	**323**	P	**P**	**21 22 57.1**	**-1.6**	
YHH	**Holmes Hill**	**61.45**	**333**	P	**P**	**21 23 01.6**	**-1.1**	
WAKR	**Walker**	**61.60**	**322**	P	**P**	**21 23 03.1**	**-0.5**	
YHL	**Hebgen Lake**	**61.65**	**332**	P	**P**	**21 23 00.8**	**-3.2**	
MFID	**Camas Ranch**	**62.87**	**328**	P	**P**	**21 23 09.6**	**-2.3**	
MFID				IAmb	IAmb	21 23 17.2		
	comp=Z,6.3nm,1.1s							
I07A	**Izee**	**65.26**	**327**	P	**P**	**21 23 25.6**	**-2.0**	
I07A				IAmb	IAmb	21 23 32.9		
	comp=Z,5.8nm,1.1s							
YBH	**Yreka Blue Hor**	**65.57**	**323**	P	**P**	**21 23 32.7**	**+3.0**	
	comp=Z,1.0nm,0.8s,baz=77,slow=5.8,SNR=3.8							
PINE	**Pine Mountain**	**65.86**	**326**	P	**P**	**21 23 30.3**	**-1.3**	
PINE				IAmb	IAmb	21 23 38.8		
	comp=Z,4.5nm,0.9s							
FFC	**Flin Flon**	**66.48**	**344**	P	**P**	**21 23 34.1**	**-1.0**	
FFC				IAmb	IAmb	21 23 39.8		
	comp=Z,5.3nm,1.1s							
FCC	**Fort Churchill**	**68.44**	**350**	P	**P**	**21 23 45.3**	**-2.1**	
FCC				IAmb	IAmb	21 23 51.8		
	comp=Z,8.1nm,0.9s							
FRB	**Frobisher Bay**	**72.13**	**4**	LR	LR	21 57 18.4		
	comp=Z,4µm,21.2s,baz=328,slow=37							
YKA	**Yellowknife Ar**	**76.59**	**343**	P	**P**	**21 24 38.2**	**+2.3**	
	comp=Z,1.0nm,0.7s,baz=137,slow=6.2,SNR=15							
SUMG	**Summit**	**84.36**	**11**	P	**P**	**21 25 18.0**	**+0.1**	
SUMG	**Summit**	**84.36**	**11**	*i* P	**P**	**21 25 22.5**	**+4.6**	
	comp=Z,22nm,0.9s							
ILAR	**Eielson Array**	**89.46**	**336**	P	**P**	**21 25 46.4**	**+4.0**	
	comp=Z,1.6nm,1.0s,baz=132,slow=4.0,SNR=10							
ILAR				PP	**PP**	**21 29 17.0**	**+3.1**	
	comp=Z,0.7nm,0.8s,baz=80,slow=6.1,SNR=5.2							
ILAR	**Eielson Array**	**89.46**	**336**	P	**P**	**21 25 41.7**	**-0.6**	
CCB	**Clear Creek Bu**	**89.78**	**336**	P	**P**	**21 25 43.6**	**-0.2**	
CCB				IAmb	IAmb	21 25 49.0		
	comp=Z,3.1nm,1.0s							
RND	**Reindeer**	**89.80**	**335**	P	**P**	**21 25 42.9**	**-1.2**	
MDM	**Murphy Dome**	**90.06**	**336**	P	**P**	**21 25 43.6**	**-1.6**	
MDM				IAmb	IAmb	21 25 50.0		
	comp=Z,5.6nm,0.9s							
NEA	**Nenana**	**90.28**	**336**	P	**P**	**21 25 50.0**	**+3.8**	
NEA				IAmb	IAmb	21 25 50.9		
	comp=Z,5.7nm,1.1s							
ZALV	**Zalesovo Beam**	**132.02**	**15**	PKP	**PKiKP**	**21 32 02.9**	**+2.8**	
	comp=Z,0.4nm,0.5s,baz=298,slow=6.4,SNR=5.1							
ASAR	**Alice Springs**	**136.69**	**222**	PKP	**PKiKP**	**21 32 12.1**	**+1.4**	
	comp=Z,1.0nm,0.9s,baz=146,slow=2.2,SNR=7.3							
ASAR	**Alice Springs**	**136.69**	**222**	PKPdf	**PKPdf**	**21 32 07.1**	**-1.8**	
MKAR	**Makanchi Array**	**137.49**	**22**	PKP	**PKiKP**	**21 32 10.6**	**-0.9**	
	comp=Z,0.3nm,0.7s,baz=298,slow=3.1,SNR=3.3							
WRA	**Warramunga Arr**	**138.87**	**227**	PKP	**PKiKP**	**21 32 17.1**	**+2.0**	
	comp=Z,1.3nm,0.9s,baz=129,slow=1.7,SNR=5.9							
KSH	**Kashi**	**140.18**	**34**	PKP	**PKPdf**	**21 32 15.9**	**+1.0**	
KSH				sPKP		21 32 31.1		
WMQ	**Urumqi**	**141.96**	**19**	*e*PKP	**PKiKP**	**21 32 20.8**	**0.0**	
WMQ				LR	LR			
	comp=Z,250nm,15.3s							
WMQ				LR	LR			
	comp=Z,450nm,20.7s							
HHC	**Hu-ho-hao-te**	**146.92**	**349**	*e*PKPbc	**PKPbc**	**21 32 28.3**	**-0.3**	
GTA	**Gaotai**	**148.87**	**6**	*e*PKPbc	**PKPab**	**21 32 38.3**	**+0.6**	
LZH	**Lanzhou**	**152.40**	**0**	*e*PKPbc	**PKPdf**	**21 32 37.5**	**+1.9**	
LZH				pPKP	pPKPdf	21 32 45.8	-1.7	
LZH				sPKP		21 32 48.3		
CD2	**Chengdu**	**157.56**	**0**	PKP	**PKPdf**	**21 32 44.0**	**+1.4**	

*IDC **14** 21:18:42.4±2.8, 1°.63S×15°.76W, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.8/46, mbtmp3.9/9, ML3.2/1, Error ellipse: s-maj=71.3km s-min=53.8km az=150.0*
*NEIC **14** 21:18:46.7±1.8, 1°.1S±0°.2×15°.9W±0°.1, h10km±2km, mb4.4/5, Error ellipse: s-maj=30.9km s-min=10.8km az=324.0*

ISC 14 21:18:47.5±0.9, **1°.1S**±0°.1×**15°.6W**±0°.1, **h10**km, **n29,**
σ**2**§**21**/25, **mb4.2**/11, **North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**6.79**	**171**	T	T	21 27 20.8	
	baz=350,slow=74,SNR=380						
H10N3	**ASCENSION HYDR**	**6.80**	**171**	T	T	21 27 21.4	
	baz=350,slow=74,SNR=330						
H10N1	**ASCENSION HYDR**	**6.81**	**171**	T	T	21 27 22.2	
	baz=350						
H10S3	**ASCENSION HYDR**	**7.87**	**173**	T	T	21 28 42.1	
	baz=229,slow=74,SNR=207						
H10S2	**ASCENSION HYDR**	**7.88**	**173**	T	T	21 28 44.4	
	baz=351,slow=74,SNR=58						
DBIC	**Dimbokro**	**13.20**	**54**	Pn	**Pn**	**21 21 57.7**	**+2.5**
	0.1nm,0.3s,baz=252,slow=13,SNR=2.0						
DBIC				Sn	**Sn**	**21 24 18.3**	**-3.9**
	0.3nm,0.3s,baz=217,slow=10,SNR=2.1						
DBIC	**Dimbokro**	**13.20**	**54**		**Pn**	**21 21 56.7**	**+1.5**
DBIC				Sn	**Sn**	**21 24 19.0**	**-3.2**
TOA0	**Torodi Ar. Sit**	**22.23**	**50**	P	**P**	**21 23 45.8**	**+1.2**
TOA0				IAmb	IAmb	21 23 54.8	
	comp=Z,13nm,1.0s						
TORD	**Torodi Ar. Bea**	**22.23**	**50**	P	**P**	**21 23 45.8**	**+1.2**
	comp=Z,5.6nm,0.9s,baz=237,slow=8.1,SNR=17						
TORD	**Torodi Ar. Bea**	**22.23**	**50**	P	**P**	**21 23 45.8**	**+1.2**
ESDC	**Sonseca Array**	**41.94**	**13**	P	**P**	**21 26 39.5**	**+1.0**
	comp=Z,0.8nm,0.9s,baz=204,slow=8.4,SNR=2.8						
MBAR	**Mbarara**	**46.34**	**90**	P	**P**	**21 27 16.7**	**+2.3**
MBAR				IAmb	IAmb	21 27 19.0	
	comp=Z,2.9nm,0.8s						
BOSA	**Boshof**	**47.64**	**129**	P	**P**	**21 27 25.2**	**+0.9**
BOSA				IAmb	IAmb	21 27 32.8	
	comp=Z,3.3nm,0.9s						
GERES	**GERESS Array B**	**55.81**	**23**	P	**P**	**21 28 25.9**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=212,slow=6.3,SNR=5.4						
GERES	**GERESS Array B**	**55.81**	**23**	P	**P**	**21 28 25.5**	**+0.5**
BRTR	**Keskin Array B**	**60.56**	**42**	P	**P**	**21 28 59.6**	**+1.1**
	comp=Z,1.4nm,1.0s,baz=227,slow=11,SNR=6.7						
BRTR	**Keskin Array B**	**60.56**	**42**	P	**P**	**21 28 59.4**	**+0.9**
AKASG	**Malin Array Be**	**64.12**	**30**	P	**P**	**21 29 21.4**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=229,slow=8.1,SNR=6.8						
AKASG	**Malin Array Be**	**64.12**	**30**	IAmb	IAmb	21 29 29.4	
	comp=Z,1.5nm,1.1s						
NB2	**NORSAR Subarra**	**65.30**	**14**	P	**P**	**21 29 30.1**	**+0.6**
	comp=Z,18nm,2.0s,baz=211,slow=6.5						
NOA	**NORSAR Array B**	**65.30**	**14**	P	**P**	**21 29 29.4**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=210,slow=6.3,SNR=4.0						
KBZ	**Khabaz**	**68.54**	**42**	P	**P**	**21 29 49.5**	**-0.9**
	comp=Z,2.2nm,0.8s,baz=219,slow=6.5,SNR=3.4						
FINES	**FINESS Array B**	**69.98**	**20**	P	**P**	**21 29 59.6**	**+0.7**
	comp=Z,1.5nm,0.8s,baz=199,slow=10,SNR=3.8						
FINES	**FINESS Array B**	**69.98**	**20**	P	**P**	**21 29 58.6**	**-0.4**
KKAR	**Karatay Array**	**87.89**	**47**	P	**P**	**21 31 38.1**	**+0.5**
MKAR	**Makanchi Array**	**96.20**	**43**	P	**P**	**21 32 14.2**	**-1.8**
ASAR	**Alice Springs**	**141.48**	**132**	PKP	**PKPdf**	**21 38 13.8**	**-6.1**
	comp=Z,1.0nm,0.9s,baz=226,slow=3.3,SNR=5.9						
ASAR	**Alice Springs**	**141.48**	**132**		**PKPdf**	**21 38 15.8**	**-4.1**
WRA	**Warramunga Arr**	**143.87**	**127**	PKP	**PKPab**	**21 38 20.9**	**-0.3**
	comp=Z,1.1nm,1.0s,baz=239,slow=2.7,SNR=3.3						

IDC 14 21:38:50.7±8.2, **18°.73S**×**174°.73W, h0**km, **mb3.8**/3, **mb1 4.1**/3, **mb1mx3.6**/36, **mbtmp3.8**/3, **Error ellipse: s-maj=352.1km s-min=41.6km az=142.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.92**	**260**	P	P	21 47 32.1	+0.8
	0.7nm,0.3s,baz=94,slow=8.3,SNR=61						
ASAR	**Alice Springs**	**47.94**	**255**	P	P	21 47 30.4	-1.1
	0.7nm,0.4s,baz=93,slow=7.4,SNR=13						
ILAR	**Eielson Array**	**85.95**	**12**	P	P	21 51 32.3	0.0
	0.2nm,0.5s,baz=210,slow=5.2,SNR=2.2						

*NEIC **14** 21:48:02.4±1.5, 41°.18N±0°.03×117°.14W±0°.06, h0km±2km, ML2.6/78, Error ellipse: s-maj=7.9km s-min=4.2km az=91.0*
*IDC **14** 21:48:04.9±1.2, 41°.26N×117°.25W, h0km, mb1 2.8/3, mb1mx2.8/44, mbtmp2.5/3, ML2.0/3, Error ellipse: s-maj=12.2km s-min=10.3km az=66.0*

ISC 14 21:48:02.9±1.0, **41°.15N**±0°.03×**117°.16W**±0°.03, **h0**km, **n43,**
σ1§**10**/46, **Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELK	**Elko**	**1.51**	**105**		**Pb**	**21 48 33.3**	**+1.3**
WVOR	**Wild Horse Val**	**1.69**	**320**		**Pb**	**21 48 34.4**	**-0.6**
WVOR				IAML		21 49 05.0	
	43nm,1.6s						
KVN	**Kaiserville**	**2.21**	**199**		**Pn**	**21 48 40.5**	**-0.7**
KVN				Pg	**Pb**	**21 48 43.9**	**0.0**
KVN				IAML		21 49 26.7	
	comp=E,36nm,1.0s						
PAHR	**Pah Rah Range**	**2.23**	**230**		**Pn**	**21 48 40.7**	**-0.5**
PAHR				Pg	**Pb**	**21 48 43.5**	**-0.6**
PAHR				IAML		21 49 29.2	
	comp=E,32nm,1.2s						
J08A	**Circle Bar Ran**	**2.41**	**337**		**Pn**	**21 48 43.8**	**0.0**
MFID	**Camas Ranch**	**2.47**	**23**		**Pn**	**21 48 43.1**	**-1.5**
MFID				IAML		21 49 31.6	
	comp=E,25nm,0.8s						
YERR	**Yerington**	**2.69**	**217**		**Pn**	**21 48 46.7**	**-0.9**
YERR				IAML		21 49 39.9	
	comp=E,32nm,1.4s						
YERR				IAML		21 49 40.5	
	comp=N,24nm,1.1s						
RYN	**Ryan**	**2.73**	**203**		**Pn**	**21 48 47.4**	**-0.8**
RYN				IAML		21 49 40.0	
	comp=E,19nm,0.9s						
RYN				IAML		21 49 42.4	
	comp=N,28nm,0.8s						
BEKR	**Beckworth**	**2.75**	**243**	Pn	**Pn**	**21 48 48.7**	**+0.2**
BEKR				IAML		21 49 40.5	
	comp=E,14nm,1.2s						
PNTR	**Pine Nut**	**2.78**	**223**		**Pn**	**21 48 49.2**	**+0.3**
PNTR				IAML		21 49 43.2	
	comp=N,29nm,1.0s						
PNTR				IAML		21 49 59.2	
	comp=E,28nm,1.3s						
NV11	**Mina Array Sit**	**2.82**	**196**		**Pn**	**21 48 49.9**	**+0.5**
NV11				IAML		21 50 03.2	
	comp=E,13nm,1.7s						
NVAR	**Mina Array Bea**	**2.85**	**198**	Pn	**Pb**	**21 48 52.6**	**-2.3**
	comp=E,0.5nm,0.3s,baz=16,slow=14,SNR=23						
NVAR				Pg	**Pg**	**21 48 58.6**	**+1.0**
	comp=E,1.7nm,0.3s,baz=17,slow=16,SNR=17						
NVAR				Lg	Lg	21 49 37.8	
	comp=E,1.4nm,0.3s,baz=12,slow=28,SNR=3.0						
NVAR	**Mina Array Bea**	**2.85**	**198**		**Pn**	**21 48 50.0**	**+0.1**
R11A	**Troy Canyon, C**	**3.05**	**156**		**Pn**	**21 48 52.9**	**+0.3**
BGU	**Big Grassy Mou**	**3.13**	**93**		**Pn**	**21 48 53.1**	**-0.6**
WAKR	**Walker**	**3.17**	**214**		**Pn**	**21 48 54.4**	**+0.1**
WAKR				IAML		21 49 56.1	
	comp=N,9.2nm,1.9s						
WAKR				IAML		21 50 03.3	
	comp=E,12nm,1.2s						
K05A	**Summer Lake**	**3.20**	**301**		**Pn**	**21 48 54.0**	**-0.7**
K05A				IAML		21 49 59.6	
	comp=E,16nm,1.3s						
I07A	**Izee**	**3.40**	**330**		**Pn**	**21 48 56.6**	**-0.7**
I07A				IAML		21 49 55.1	
	comp=N,12nm,1.1s						
I07A				IAML		21 50 02.0	
	comp=E,18nm,1.1s						
DUG	**Dugway, Tooele**	**3.44**	**105**	Pn	**Pn**	**21 48 56.5**	**-1.4**
DUG				IAML		21 50 07.9	
	comp=E,11nm,1.6s						
DUG				IAML		21 50 08.2	
	comp=E,13nm,1.2s						
SPUT	**South Promonto**	**3.56**	**86**	Pn	**Pn**	**21 48 58.8**	**-0.8**
PSUT	**Pine Spring**	**3.65**	**135**		**Pn**	**21 49 01.1**	**+0.3**
AFDM	**Forest Hills D**	**3.66**	**234**	Pn	**Pn**	**21 49 00.9**	**+0.1**
AFDM				IAML		21 50 21.0	
	comp=E,6.9nm,4.7s						
BMO	**Blue Mountains**	**3.70**	**358**		**Pn**	**21 48 59.9**	**-1.5**
BMO				IAML		21 50 11.7	
	comp=E,10nm,1.7s						
OMMB	**Old Mammoth Mi**	**3.81**	**203**		**Pn**	**21 49 02.5**	**-0.6**
PINE	**Pine Mountain**	**3.84**	**315**	Pn	**Pn**	**21 49 02.4**	**-1.1**
PINE				IAML		21 50 21.4	
	comp=N,9.6nm,2.5s						
CMB	**Columbia Colle**	**3.98**	**220**	Pn	**Pn**	**21 49 04.7**	**-0.6**
CMB				IAML		21 49 51.5	
	comp=E,4.7nm,4.2s						
NLU	**North Lily Min**	**4.06**	**105**		**Pn**	**21 49 05.2**	**-1.2**
WDC	**Whiskeytown Da**	**4.12**	**264**		**Pn**	**21 49 06.7**	**-0.4**
WDC				IAML		21 50 23.0	
	comp=N,6.4nm,3.6s						
YBH	**Yreka Blue Hor**	**4.21**	**280**	Pn	**Pn**	**21 49 09.5**	**+1.1**
	comp=N,0.2nm,0.3s,baz=104,slow=8.3,SNR=2.4						
YBH				Pg	**Pb**	**21 49 19.3**	**+1.5**
	comp=N,0.1nm,0.3s,baz=127,slow=8.4,SNR=4.1						
YBH				Lg	Lg	21 50 14.1	
	comp=N,0.1nm,0.3s,baz=126,slow=19,SNR=1.8						
YBH	**Yreka Blue Hor**	**4.21**	**280**		**Pn**	**21 49 08.7**	**+0.3**
YBH				IAML		21 50 22.3	
	comp=E,4.7nm,4.3s						
YBH				IAML		21 50 25.8	
	comp=N,5.1nm,3.9s						
HWUT	**Hardware Ranch**	**4.24**	**82**		**Pn**	**21 49 07.2**	**-1.7**
HWUT				IAML		21 50 31.4	
	comp=N,7.7nm,1.1s						
HWUT				IAML		21 50 36.3	
	comp=N,7.3nm,4.0s						
TPNV	**Topopah Spring**	**4.25**	**170**	Pn	**Pn**	**21 49 07.9**	**-1.2**
CCUT	**Cedar City**	**4.65**	**139**		**Pn**	**21 49 13.1**	**-1.5**
SZCU	**Shurtz Canyon**	**4.75**	**137**	Pn	**Pn**	**21 49 15.7**	**-0.3**
MCMT	**McKenzie Canyo**	**4.85**	**39**		**Pn**	**21 49 17.1**	**-0.3**
TPAW	**Teton Pass**	**5.17**	**61**	Pn	**Pn**	**21 49 20.8**	**-1.0**
FXWY	**Fox Creek**	**5.18**	**59**		**Pn**	**21 49 20.2**	**-1.7**
FXWY				IAML		21 50 01.0	
	comp=N,3.5nm,3.9s						
FXWY				IAML		21 51 09.4	
	comp=N,3.7nm,3.7s						
REDW	**Red Top Meadow**	**5.18**	**63**		**Pn**	**21 49 19.8**	**-2.1**
IMW	**Indian Meadow**	**5.36**	**57**	Pn	**Pn**	**21 49 23.3**	**-1.0**
IMW					**Pb**	**21 49 39.4**	**+1.8**
YPP	**Pitchstone Pla**	**5.63**	**54**		**Pn**	**21 49 26.2**	**-1.9**
PDAR	**Pinedale Array**	**5.90**	**72**	Pn	Pn	21 49 36.8	+5.1
	comp=N,0.0nm,0.3s,baz=254,slow=14,SNR=2.4						
PDAR	**Pinedale Array**	**5.90**	**72**		**Pn**	**21 49 30.3**	**-1.4**
I56US	**NEWPORT INFRAS**	**7.11**	**0**	*i*		22 29 00.0	
	baz=182,slow=313,SNR=2.8						

*ISK **14** 21:48:42.6, 35°.57N×33°.40E, h11km, ML3.4/24*
*DDA **14** 21:48:43.8, 35°.64N×33°.45E, h9km±5km, ML3.2*
*NIC **14** 21:48:44.3±0.0, 35°.49N×33°.33E, h21km±1km, Ml2.8/6*
*GII **14** 21:48:44.2±0.0, 35°.48N×33°.46E, h1km±2km, Mm3.0/4*

ISC 14 21:48:43.2±0.9, **35°.59N**±0°.02×**33°.40E**±0°.02, **h17**km±8km,
n71, σ1§**67**/103, **1C-6D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATHAL	**Athalassa**	**0.45**	**180**	⇓P	**Pg**	**21 48 53.2**	**+1.0**
AKK2	**Akkuyu-Mersin**	**0.56**	**13**	PG	**Pg**	**21 48 54.4**	**+0.1**
AKK2				SG	**Sg**	**21 49 02.8**	**+0.9**
YORU	**Yoruktepe-Mers**	**0.56**	**1**	PG	**Pg**	**21 48 54.4**	**0.0**
YORU				SG	**Sg**	**21 49 03.1**	**+1.1**
AKK1	**Akkuyu-Mersin**	**0.57**	**12**	PG	**Pg**	**21 48 54.3**	**-0.1**
AKK1				SG	**Sg**	**21 49 03.2**	**+1.2**
AKKU	**Akkuyu-Mersin**	**0.58**	**12**	PG	**Pg**	**21 48 54.7**	**0.0**
TEKE	**Tekeli-Mersin**	**0.60**	**338**	PG	**Pg**	**21 48 54.9**	**-0.1**
MVOU	**Mavrovouni**	**0.60**	**161**	⇓P	**Pg**	**21 48 55.0**	**-0.1**
MVOU				AML	AML	21 49 02.3	
	3.3nm,0.5s						
MVOU				AML	AML	21 49 02.3	
	3.3nm,0.5s						
MVOU				AML	AML	21 49 02.4	
	3.6nm,0.5s						
MVOU				AML	AML	21 49 02.4	
	3.6nm,0.5s						
MVOU				S	**Sg**	**21 49 03.1**	**0.0**
GULN	**MERSIN_Gulnar**	**0.61**	**11**	*i* P	**Pg**	**21 48 55.1**	**-0.1**
GULN				*i* S	**Sg**	**21 49 02.7**	**-0.5**
TISA	**Tisan-Mersin**	**0.62**	**22**	PG	**Pg**	**21 48 55.3**	**-0.1**
BOZY	**Bozyazi-Mersin**	**0.62**	**327**	PG	**Pg**	**21 48 55.4**	**0.0**
OREN	**Orenkoy-Mersin**	**0.62**	**5**	PG	**Pg**	**21 48 54.9**	**-0.5**
LEF	**Lefka**	**0.62**	**222**	PG	**Pg**	**21 48 55.6**	**+0.1**
LEF	**Lefka**	**0.62**	**222**	*i* P	**Pg**	**21 48 54.9**	**-0.6**
LEF				*i* S	**Sg**	**21 49 00.9**	**-2.9**
CSS	**Mathiatis**	**0.63**	**185**	PG	**Pg**	**21 48 55.0**	**-0.6**
CSS	**Mathiatis**	**0.63**	**185**	Pg	**Pg**	**21 48 55.3**	**-0.3**
CSS	**Mathiatis**	**0.63**	**185**	⇓P	**Pg**	**21 48 55.5**	**-0.1**
CSS				S	**Sg**	**21 49 03.4**	**-0.5**
EREN	**Erenkoy**	**0.63**	**95**	PG	**Pg**	**21 48 55.5**	**-0.2**
EREN	**Erenkoy**	**0.63**	**95**	*i* P	**Pb**	**21 48 56.9**	**+1.1**
EREN				*i* S	**Sb**	**21 49 04.9**	**+0.5**
YESI	**Yesilovacik-Me**	**0.64**	**18**	PG	**Pg**	**21 48 55.8**	**0.0**
TEPK	**Tepekoy-MERSIN**	**0.65**	**11**	PG	**Pg**	**21 48 56.0**	**+0.1**
KARG	**Kargicak-Mersi**	**0.66**	**22**	PG	**Pg**	**21 48 56.3**	**+0.1**
IKL	**Isikli**	**0.69**	**20**	PG	**Pg**	**21 48 56.4**	**-0.3**
BERE	**Bereket-Mersin**	**0.77**	**350**	PG	**Pg**	**21 48 58.1**	**-0.2**
ALFC	**Alefka**	**0.78**	**237**	⇓P	**Pg**	**21 48 57.6**	**-0.8**
ALFC				S	**Sg**	**21 49 07.5**	**-1.2**
ALFC				AML	AML	21 49 08.7	
	3.8nm,0.5s						
ALFC				AML	AML	21 49 08.7	
	3.8nm,0.5s						
ALFC				AML	AML	21 49 16.1	
	2.8nm,0.6s						
ALFC				AML	AML	21 49 16.1	
	2.8nm,0.6s						
PARAL	**Paralimni**	**0.79**	**138**	P	**Pg**	**21 48 58.7**	**0.0**
PARAL				AML	AML	21 49 18.8	
	1.2nm,0.5s						
PARAL				AML	AML	21 49 25.5	
	1.2nm,0.6s						
ASGA	**Asgata**	**0.81**	**189**	⇓P	**Pg**	**21 48 57.9**	**-1.0**
ASGA				S	**Sg**	**21 49 09.1**	**-0.6**
ASGA				AML	AML	21 49 37.7	
	1.4nm,0.6s						
ASGA				AML	AML	21 49 37.7	
	1.4nm,0.6s						
ASGA				AML	AML	21 49 48.1	
	1.3nm,0.8s						
ASGA				AML	AML	21 49 48.1	
	1.3nm,0.8s						
TEVE	**Tevekalti-Mers**	**0.85**	**3**	PG	**Pg**	**21 48 59.3**	**-0.4**
SILI	**Silifke-Mersin**	**0.89**	**29**	PG	**Pg**	**21 49 00.3**	**-0.1**
KEBE	**Keben-Mersin**	**0.89**	**17**	PG	**Pg**	**21 49 00.3**	**-0.3**
SLFK	**Silifke-Mersin**	**0.92**	**29**	PG	**Pg**	**21 49 00.5**	**-0.5**
SZAC	**Souni**	**0.93**	**207**	⇓P	**Pg**	**21 49 00.3**	**-1.0**
SZAC				S	**Sg**	**21 49 12.2**	**-1.3**
SZAC				AML	AML	21 49 25.0	
	1.5nm,0.6s						
SZAC				AML	AML	21 49 25.0	
	1.5nm,0.6s						
SZAC				AML	AML	21 49 29.7	
	1.2nm,0.8s						
SZAC				AML	AML	21 49 29.7	
	1.2nm,0.8s						
AKMS	**Akamas**	**1.04**	**237**	⇑P	**Pb**	**21 49 02.2**	**-0.4**
AKMS				S	**Sg**	**21 49 15.7**	**-1.2**
AKMS				AML	AML	21 49 28.9	
	1.3nm,0.7s						
AKMS				AML	AML	21 49 28.9	
	1.3nm,0.7s						
AKMS				AML	AML	21 49 29.1	
	1.0nm,0.4s		

	66nm,0.3s,baz=221,slow=11,SNR=16							
KRVT				Sn	**Sn**	22 01 25.7	**+2.8**	
	113nm,0.3s,baz=192,slow=19,SNR=8.4							
PMG	**Port Moresby**	**5.33**	**216**	Pn	**Pn**	22 01 49.5	**+0.5**	
	1.2nm,0.3s,baz=43,slow=16,SNR=2.4							
PMG				Sn	**Sn**	22 02 48.8	**-0.4**	
	4.7nm,0.3s,baz=103,slow=20,SNR=6.0							
WRA	**Warramunga Arr**	**21.47**	**225**	P	**P**	22 05 17.2	**-0.2**	
	2.4nm,1.1s,baz=48,slow=9.2,SNR=7.5							
ASAR	**Alice Springs**	**24.34**	**219**	P	**P**	22 05 45.5	**-1.0**	
	1.3nm,0.8s,baz=57,slow=8.9,SNR=13							
FITZ	**Fitzroy Crossi**	**27.39**	**240**	P	**P**	22 06 14.6	**+0.4**	
	1.0nm,0.6s,baz=69,slow=8.1,SNR=1.8							
TORD	**Torodi Ar. Bea**	**148.06**	**287**	PKPbc	**PKPbc**	22 20 15.5	**+0.8**	
	0.4nm,0.5s,baz=65,slow=3.9,SNR=5.8							

*IDC **14** 22:03:59.6±5.2, 35°.98N×71°.18E, h59km±33km, mb3.4/6, mb1 3.5/12, mb1mx3.2/51, mbtmp3.6/12, ML3.4/6, Error ellipse: s-maj=60.3km s-min=25.6km az=150.0*

*NNC **14** 22:04:09.4±4.0, 37°.18N×70°.82E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=32.7km s-min=21.6km az=167.0*

ISC 14 22:04:04.9±0.8, 36°.50N±0°.07×71°.23E±0°.09, h100km, n28, σ2§78/34, mb3.7/5, 6C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**5.50**	**136**	*eP*		**Pn**		22 05 25.5	**+1.1**
THN				*eS*		**Sn**		22 06 25.7	**-0.6**
KK31	**Karatay Array**	**6.62**	**355**	⇑P		**Pn**		22 05 40.5	**+0.9**
	1.3nm,0.3s,baz=178,slow=12,SNR=32								
KK31				S		**Sn**		22 06 49.3	**-4.2**
	8.3nm,0.5s,baz=188,slow=26,SNR=16								
AAK	**Ala-Archa**	**6.62**	**21**	P		**Pn**		22 05 42.2	**+2.4**
	1.5nm,0.3s,baz=171,slow=5.6,SNR=22								
AAK				S		**Sn**		22 06 54.2	**+0.4**
	0.4nm,0.3s,baz=179,slow=9.0,SNR=1.8								
AAK	**Ala-Archa**	**6.62**	**21**	⇓P		**Pn**		22 05 42.1	**+2.3**
	2.3nm,0.5s								
AAK				⇑S		**Sn**		22 06 54.0	**+0.1**
	6.7nm,0.8s								
TKM2	**Tokmak 2**	**7.24**	**26**	⇑P		**Pn**		22 05 49.7	**+1.5**
	2.3nm,0.6s								
TKM2				⇑S		**Sn**		22 07 08.7	**-0.1**
	1.2nm,0.5s								
GEYT	**Alibeck**	**10.55**	**282**	P		Pn		22 06 28.7	-4.5
	0.4nm,0.3s,baz=111,slow=9.9,SNR=6.3								
PYUN	**Piuthan**	**13.00**	**127**	*eP*		**Pn**		22 07 03.7	**-2.3**
	20nm,0.4s								
MKAR	**Makanchi Array**	**13.18**	**35**	P		**P**		22 07 11.5	**-2.9**
	0.1nm,0.3s,baz=196,slow=13,SNR=2.2								
DANN	**Dangsing**	**13.34**	**124**	*eP*		**Pn**		22 07 07.3	**-3.2**
	7.1nm,0.3s								
KOLN	**Koldanda**	**13.62**	**126**	*eP*		**Pn**		22 07 11.6	**-2.5**
	4.5nm,0.3s								
GKN	**Gorkha**	**14.15**	**123**	*eP*		**Pn**		22 07 18.2	**-2.8**
	5.4nm,0.2s								
DMN	**Daman**	**14.72**	**123**	*eP*		**Pn**		22 07 25.8	**-2.6**
	3.7nm,0.3s								
PKIN	**Phulchoki**	**14.94**	**123**	*eP*		**Pn**		22 07 28.5	**-2.6**
	4.6nm,0.4s								
PKI	**Pulchoki**	**14.95**	**123**	*eP*		**Pn**		22 07 28.3	**-3.1**
	4.1nm,0.3s								
GUN	**Gumba**	**15.06**	**121**	*eP*		**Pn**		22 07 29.5	**-3.3**
	4.1nm,0.3s								
KURBB	**Kurchatov Arra**	**15.06**	**18**	P		**P**		22 07 36.3	**+1.2**
	0.1nm,0.3s,baz=206,slow=11,SNR=4.2								
AB31	**Akbulak array**	**15.17**	**331**	P		**Pn**		22 07 32.3	**-1.3**
	0.6nm,0.2s,baz=143,slow=13,SNR=27								
AB31				⇓S		**Sn**		22 10 13.1	**-7.9**
	0.5nm,0.2s,baz=163,slow=22,SNR=4.8								
JIRN	**Jiri**	**15.43**	**121**	*eP*		**Pn**		22 07 34.4	**-3.1**
	9.6nm,0.3s								
BVAR	**Borovoye Array**	**16.53**	**358**	P		**P**		22 07 52.8	**+1.4**
	0.1nm,0.3s,baz=156,slow=10,SNR=2.5								
AKTO	**Aktyubinsk**	**16.87**	**330**	P		**P**		22 07 57.1	**+1.9**
	0.3nm,0.3s,baz=133,slow=11,SNR=4.2								
AKTO	**Aktyubinsk**	**16.87**	**330**	⇑P		**P**		22 07 56.8	**+1.7**
	3.5nm,1.1s								
AKTO				⇑S		**Sn**		22 10 57.6	**-4.4**
	1.2nm,0.7s								
ZALV	**Zalesovo Beam**	**19.84**	**24**	P		**P**		22 08 29.0	**+1.4**
	2.5nm,0.5s,baz=218,slow=11,SNR=11								
FINES	**FINESS Array B**	**37.58**	**326**	P		**P**		22 11 11.3	**+2.0**
	0.4nm,0.4s,baz=112,slow=13,SNR=5.4								
ARCES	**ARCESS Array B**	**41.21**	**338**	P		**P**		22 11 43.0	**+3.6**
	1.0nm,0.6s,baz=116,slow=9.3,SNR=5.9								
NB2	**NORSAR Subarra**	**44.49**	**323**	P		**P**		22 12 08.1	**+2.1**
	comp=Z,0.9nm,0.6s,baz=97,slow=7.9								
NOA	**NORSAR Array B**	**44.49**	**323**	P		**P**		22 12 07.6	**+1.6**
	comp=Z,0.5nm,0.5s,baz=96,slow=7.7,SNR=5.6								
TORD	**Torodi Ar. Bea**	**65.90**	**269**	P		**P**		22 14 39.3	**-1.1**
	comp=Z,0.3nm,0.5s,baz=57,slow=5.8,SNR=4.0								
YKA	**Yellowknife Ar**	**81.23**	**3**	P		**P**		22 16 11.8	**+2.4**
	comp=Z,0.2nm,0.5s,baz=354,slow=5.5,SNR=4.1								

*IDC **14** 22:06:49.3±1.7, 1°.93N×85°.04W, h0km, mb3.6/4, mb1 3.9/6, mb1mx3.7/27, mbtmp3.8/6, ML3.3/2, Error ellipse: s-maj=62.5km s-min=21.6km az=58.0*

ISC 14 22:06:54.6±1.4, 2°.0N±0°.1×84°.8W±0°.1, h35km, n18, σ1§31/16, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GR1C	**Gorgona, Isla**	**6.72**	**82**	*eP*		**Pn**		22 08 29.7	**-1.2**
POPC	**Popayan, Colom**	**8.16**	**86**	*eP*		**Pn**		22 08 50.0	**-0.8**
JTS	**Las Juntas de**	**8.20**	**359**	Pn		**Pn**		22 08 51.4	**+0.2**
	0.6nm,0.3s,baz=180,slow=17,SNR=1.3								
JTS				S		**Sn**		22 10 22.1	**-0.6**
	0.9nm,0.3s,baz=154,slow=1.8,SNR=1.7								
SOTA	**Rioblanco**	**8.22**	**89**	*eP*		**Pn**		22 08 51.7	**-0.2**
HORQ	**Saladito**	**8.32**	**80**	*eP*		**Pn**		22 08 51.4	**-1.7**
PCON	**Cinco Dias**	**8.43**	**88**	*eP*		**Pn**		22 08 56.2	**+1.4**
YOTC	**Yotoco, Valle**	**8.69**	**77**	*eP*		**Pn**		22 08 57.8	**-0.2**
RREF	**El Recreo**	**9.88**	**73**	*eP*		**Pn**		22 09 16.9	**+2.1**
GUY2C	**Guyana, Caldas**	**9.96**	**71**	*eP*		**Pn**		22 09 17.6	**+1.9**
PRAC	**Prado**	**10.07**	**80**	*eP*		**Pn**		22 09 18.7	**+1.9**
SDV	**Santo Domingo**	**15.68**	**64**	Pn		**P**		22 10 35.7	**-1.2**
	0.6nm,0.3s,baz=220,slow=10,SNR=5.2								
LPAZ	**La Paz**	**24.57**	**138**	P		**P**		22 12 13.4	**+1.2**
	3.4nm,0.6s,baz=329,slow=9.5,SNR=14								
SIV	**San Ignacio**	**29.53**	**128**	P		**P**		22 12 55.6	**-0.5**
	1.4nm,0.8s,baz=302,slow=12,SNR=6.0								
TXAR	**Lajitas Array**	**32.53**	**328**	P		**P**		22 13 21.9	**-0.5**
	0.1nm,0.5s,baz=158,slow=7.8,SNR=1.6								
H03N2	**Juan Fernandez**	**35.73**	**172**	T		T		22 51 30.2	
	baz=351,slow=76,SNR=12								
H03N1	**Juan Fernandez**	**35.73**	**172**	T		T		22 51 30.1	
	baz=351,slow=76,SNR=21								
H03N3	**Juan Fernandez**	**35.74**	**172**	T		T		22 51 30.7	
	baz=351,slow=76,SNR=19								
YKA	**Yellowknife Ar**	**64.28**	**345**	P		**P**		22 17 26.6	**+0.6**
	0.1nm,0.4s,baz=142,slow=6.9,SNR=1.8								

IDC 14 22:30:48.7±2.3, 0°.84N×125°.74E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/24, mbtmp3.3/3, Error ellipse: s-maj=251.1km s-min=27.2km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.31**	**158**	P		P	P	22 35 48.1	+0.2
	0.3nm,0.6s,baz=337,slow=11,SNR=1.6								
ASAR	**Alice Springs**	**25.62**	**162**	P		P	P	22 36 19.9	-0.2
	0.2nm,0.3s,baz=342,slow=8.8,SNR=2.0								
MKAR	**Makanchi Array**	**59.38**	**327**	P		P	P	22 40 52.9	0.0
	0.2nm,0.3s,baz=121,slow=7.5,SNR=6.1								

*IDC **14** 22:48:47.0±1.3, 56°.36S×25°.56W, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.7/16, mbtmp3.9/3, Error ellipse: s-maj=49.6km s-min=36.2km az=91.0*

*NEIC **14** 22:48:51.8±1.7, 56°.5S±0°.2×25°.7W±0°.3, h35km±2km, mb4.1/9, Error ellipse: s-maj=38.7km s-min=9.8km az=220.0*

ISC 14 22:48:51.0±1.0, 56°.4S±0°.2×25°.8W±0°.2, h29km, n15, σ1§12/14, mb4.0/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.49**	**285**	Pn		**Pn**		22 50 25.9	**+1.5**
SNAA	**Sanae**	**18.07**	**157**	P		**P**		22 52 59.1	**-0.7**
EFI	**East Falkland**	**19.44**	**270**	P		**P**		22 53 12.7	**-2.2**
CPUP	**Villa Florida**	**37.66**	**310**	P		**P**		22 56 02.7	**-0.7**
MT02	**Curacav**	**38.66**	**287**	IAmb		IAmb		22 56 10.7	
	comp=Z,5.7nm,1.0s								
MT02				P		**P**		22 56 10.7	**-1.1**
CO01	**Juntas del Tor**	**40.70**	**292**	P		**P**		22 56 29.5	**+0.5**
GO02	**Mina Guanaco**	**44.38**	**296**	P		**P**		22 56 59.2	**+0.2**
LVC	**Limon Verde**	**46.18**	**299**	P		**P**		22 57 13.0	**-0.4**
LVC				IAmb		IAmb		22 57 20.4	
	comp=Z,1.3nm,0.7s								
VNDA	**Vanda**	**46.23**	**182**	P		**P**		22 57 13.9	**+1.1**
	comp=Z,0.6nm,1.0s,baz=173,slow=7.6,SNR=2.1								
PB16	**IPOC Station P**	**50.12**	**301**	P		**P**		22 57 44.8	**+0.7**
PB16				IAmb		IAmb		22 57 49.4	
	comp=Z,1.7nm,0.9s								
LPAZ	**La Paz**	**51.25**	**304**	P		**P**		22 57 53.8	**+1.1**
	comp=Z,1.1nm,0.4s,baz=172,slow=3.8,SNR=6.3								
LPAZ	**La Paz**	**51.25**	**304**	P		**P**		22 57 53.6	**+0.9**
LPAZ				IAmb		IAmb		22 57 55.7	
	comp=Z,1.8nm,0.8s								
TORD	**Torodi Ar. Bea**	**73.00**	**28**	P		**P**		23 00 17.9	**+0.2**
	comp=Z,1.0nm,0.7s,baz=200,slow=5.9,SNR=7.7								
TORD	**Torodi Ar. Bea**	**73.00**	**28**	IAmb		IAmb		23 00 18.7	
	comp=Z,1.0nm,0.8s								
ILAR	**Eielson Array**	**150.97**	**311**	PKPbc		**PKPbc**		23 08 38.9	**-0.4**
	comp=Z,0.3nm,0.5s,baz=93,slow=1.7,SNR=4.8								

MAN 14 23:01:57.9, 9°.83N×123°.83E, h2km, mb4.3, ML3.2, MS2.9, 2C, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.51**	**16**	⇑*iP*			Pg	23 02 08.0	+0.3
LLP				*i S*			Sg	23 02 15.3	+1.1
MSLP	**Maasin**	**1.06**	**73**	*eP*			Pg	23 02 18.6	+0.3
MSLP				*eS*			Sn	23 02 35.2	0.0
DCPH	**Dipolog City**	**1.32**	**201**	*eP*			Pg	23 02 23.0	-0.3
DCPH				*eS*			Sn	23 02 41.6	0.0
OCLP	**Ormoc**	**1.44**	**32**	*eP*			Pn	23 02 23.9	-1.2
OCLP				*eS*			Sn	23 02 45.2	+0.7
GUIM	**Jordan**	**1.45**	**303**	*eP*			Pn	23 02 25.0	-0.2
GUIM				*eS*			Sn	23 02 44.8	-0.1
PAGZ	**Pagadian**	**2.02**	**193**	*eP*			Pn	23 02 33.3	+0.3
RCP	**Roxas**	**2.02**	**328**	⇑*eP*			Pn	23 02 33.8	+0.7
RCP				*eS*			Sb	23 03 00.9	-0.2

IDC 14 23:10:10.1±3.1, 11°.51S×163°.03E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.7/41, mbtmp4.0/5, Error ellipse: s-maj=88.3km s-min=46.8km az=123.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**28.31**	**221**	P		P	P	23 16 06.5	+0.9
	1.7nm,0.7s,baz=37,slow=10,SNR=3.7								
WRA	**Warramunga Arr**	**28.83**	**250**	P		P	P	23 16 09.1	-1.2
	1.4nm,0.6s,baz=77,slow=9.2,SNR=5.6								
ASAR	**Alice Springs**	**30.21**	**242**	P		P	P	23 16 23.0	+0.4
	1.6nm,0.8s,baz=73,slow=9.9,SNR=14								
ASAR				PcP		PcP	PcP	23 19 22.5	-1.4
	0.2nm,0.4s,baz=75,slow=3.9,SNR=2.6								
FITZ	**Fitzroy Crossi**	**36.69**	**255**	P			P	23 17 19.2	+0.2
	1.2nm,0.7s,baz=90,slow=7.1,SNR=1.7								
MKAR	**Makanchi Array**	**92.04**	**317**	P			P	23 23 21.9	+0.7
	0.4nm,0.9s,baz=90,slow=2.9,SNR=2.1								

*AEIC **14** 23:13:27±4.2, 56°.62N×0°.02×164°.2W±0°.1, h8km±5km, ML3.3, Error ellipse: s-maj=8.7km s-min=2.2km az=73.0*

*IDC **14** 23:13:29.0±3.2, 55°.75N×164°.01W, h214km±35km, mb3.2/8, mb1 3.1/11, mb1mx2.9/49, mbtmp3.7/11, Error ellipse: s-maj=87.0km s-min=20.9km az=159.0*

*NEIC **14** 23:13:30.0±1.0, 55°.5N±0°.4×163°.7W±0°.3, h220km±21km, Error ellipse: s-maj=58.2km s-min=9.7km az=156.0*

ISC 14 23:13:29.1±0.7, 55°.7N±0°.2×163°.9W±0°.1, h219km±16km, n24, σ1§13/27, mb3.5/8, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**0.90**	**164**				**Pn**	23 14 00.1	**-0.1**
FALS							**S**	23 14 24.8	**+0.4**
SSBA	**Shishaldin**	**0.96**	**190**				**Pn**	23 14 00.5	**-0.2**
SSBA							**S**	23 14 24.3	**-1.0**
DT1	**Dutton Round H**	**1.08**	**124**				Pn	23 13 55.5	-5.8
HAG	**Hague Volcano**	**1.18**	**109**				Pn	23 13 57.3	-4.8
PVV	**Pavlof Volcano**	**1.22**	**106**				Pn	23 13 57.4	-4.9
WEBT	**Westdahl Beart**	**1.24**	**205**				**Pn**	23 14 02.4	**-0.2**
WESP	**Westdahl Peak**	**1.33**	**203**				**Pn**	23 14 03.0	**-0.2**
WESP							**S**	23 14 29.8	**+0.1**
AKUT	**Akutan**	**1.94**	**216**	Pn			**Pn**	23 14 07.9	**-0.5**
AKUT							**S**	23 14 39.1	**+0.2**
SDPT	**Sand Point**	**1.95**	**100**				**Pn**	23 14 08.9	**+0.4**
SDPT							**S**	23 14 39.1	**0.0**
UNV	**Unalaska Valle**	**2.43**	**220**	Pn			**Pn**	23 14 12.8	**-0.5**
CNBA	**Chernabura Isl**	**2.60**	**109**				**Pn**	23 14 14.7	**-0.5**
CHGN	**Chignik**	**3.11**	**77**				**Pn**	23 14 22.2	**+1.4**
KDAK	**Kodiak Island**	**6.53**	**67**	P			**Pn**	23 15 04.2	**+0.9**
	3.9nm,0.3s,baz=196,slow=2.2,SNR=16								
KDAK				S			**S**	23 16 13.7	**-4.5**
	1.4nm,0.3s,baz=294,slow=22,SNR=11								
GLB	**Gilahina Butte**	**11.90**	**53**				**Pn**	23 16 13.5	**+1.6**
ILAR	**Eielson Array**	**12.34**	**36**	P			**Pn**	23 16 17.6	**+0.2**
	0.1nm,0.3s,baz=244,slow=13,SNR=2.8								
INK	**Inuvik**	**18.74**	**36**	P			**P**	23 17 31.3	**+0.1**
	0.1nm,0.3s,baz=228,slow=12,SNR=5.0								
PETK	**Petropavlovsk-**	**22.34**	**279**	P			**P**	23 18 08.0	**-0.5**
	0.7nm,0.6s,baz=89,slow=1.9,SNR=2.7								
SEY	**Seynchan**	**23.06**	**306**	P			**P**	23 18 14.8	**-0.1**
	1.2nm,0.3s,baz=50,slow=18,SNR=4.5								
ZALV	**Zalesovo Beam**	**57.09**	**319**	P			**P**	23 22 51.7	**-0.3**
	0.3nm,0.2s,baz=54,slow=7.3,SNR=2.4								
FINES	**FINESS Array B**	**62.92**	**355**	P			**P**	23 23 31.8	**+0.4**
	0.9nm,0.5s,baz=35,slow=7.6,SNR=12								
NOA	**NORSAR Array B**	**63.52**	**3**	P			**P**	23 23 36.1	**+0.6**
	0.5nm,0.7s,baz=0.0,slow=5.8,SNR=1.5								
MKAR	**Makanchi Array**	**63.78**	**316**	P			**P**	23 23 36.7	**-0.7**
	0.2nm,0.5s,baz=37,slow=6.5,SNR=5.6								
AKASG	**Malin Array Be**	**73.39**	**351**	P			**P**	23 24 36.5	**0.0**
	0.6nm,0.3s,baz=9.8,slow=6.0,SNR=2.8								
BRTR	**Keskin Array B**	**83.76**	**347**	P			**P**	23 25 34.2	**+0.7**
	0.7nm,0.8s,baz=338,slow=5.3,SNR=3.6								

IDC 14 23:38:23.0±2.3, 4°.12N×126°.98E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/36, mbtmp3.5/4, 1C, Error ellipse: s-maj=213.1km s-min=26.4km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**3.43**	**327**	*i eP*			Pn	23 39 20.0	+2.2
WRA	**Warramunga Arr**	**24.98**	**163**	P		P	P	23 43 48.3	-0.3
	0.8nm,0.8s,baz=344,slow=10,SNR=3.3								
ASAR	**Alice Springs**	**28.43**	**167**	P		P	P	23 44 19.1	-0.6
	0.2nm,0.4s,baz=347,slow=8.3,SNR=1.6								
STKA	**Stephens Creek**	**38.41**	**160**	P		P	P	23 45 46.9	+0.6
	1.7nm,0.6s,baz=338,slow=11,SNR=4.7								
MKAR	**Makanchi Array**	**57.38**	**325**	P		P	P	23 48 13.2	-0.1
	0.2nm,0.5s,baz=118,slow=8.6,SNR=4.9								

*NEIC **14** 23:41:13.1±1.1, 18°.3S±0°.2×178°.2W±0°.1, h530km±9km, mb4.0/20, Error ellipse: s-maj=32.6km s-min=6.6km az=147.0*

*IDC **14** 23:41:14.2±2.9, 18°.29S×178°.21W, h544km±34km, mb3.5/13, mb1 3.7/14, mb1mx3.4/33, mbtmp4.3/14, Error ellipse: s-maj=48.1km s-min=11.7km az=152.0*

ISC 14 23:41:15.1±0.8, 18°.3S±0°.2×178°.2W±0°.2, h557km, n43, σ0§72/41, mb3.9/23, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.60**	**279**	P		P	P	23 42 29.9	-4.8
DZM	**Mont Dzumac**	**14.87**	**253**	P		P	P	23 44 21.7	**-1.5**
	0.5nm,0.3s,baz=106,slow=19,SNR=1.3								
OXZ	**Oxford**	**26.25**	**196**	P		P	P	23 46 06.2	**-0.1**
ARMA	**Armidale**	**29.89**	**241**	P		P	P	23 46 39.4	**+1.0**
ARMA						IAmb	IAmb	23 46 47.4	
	comp=Z,7.3nm,1.1s								
STKA	**Stephens Creek**	**38.59**	**242**	P		P	P	23 47 50.8	**-0.2**
	comp=Z,2.4nm,0.7s,baz=91,slow=12,SNR=5.1								
WRA	**Warramunga Arr**	**44.73**	**260**	P		P	P	23 48 39.4	**-0.2**
	comp=Z,1.5nm,0.6s,baz=98,slow=6.0,SNR=6.5								
AS31	**Alice Springs**	**44.85**	**255**	P		P	P	23 48 40.7	**+0.2**
ASAR	**Alice Springs**	**44.85**	**255**	P		P	P	23 48 40.8	**+0.3**
	comp=Z,6.8nm,0.8s,baz=88,slow=9.0,SNR=66								
ASAR				PcP		PcP	PcP	23 50 10.1	**-0.2**
	comp=Z,0.8nm,0.7s,baz=101,slow=3.6,SNR=4.6								
ASAR				S		S	S	23 54 38.8	**+0.8**
	comp=Z,1.0nm,1.0s,baz=90,slow=15,SNR=5.2								
ASAR	**Alice Springs**	**44.85**	**255**	P		P	P	23 48 40.3	**-0.2**
PETK	**Petropavlovsk-**	**74.13**	**345**	P		P	P	23 51 55.1	**+0.4**
	comp=Z,2.1nm,0.7s,baz=138,slow=7.8,SNR=5.1								
YBH	**Yreka Blue Hor**	**78.74**	**39**	P		P	P	23 52 20.7	**+0.3**
	comp=Z,1.5nm,0.5s,baz=177,slow=1.4,SNR=6.9								
PNTR	**Pine Nut**	**79.13**	**43**	P		P	P	23 52 23.2	**+0.5**
PNTR				IAmb		IAmb	IAmb	23 52 23.7	
	comp=Z,6.1nm,1.0s								
YERR	**Yerington**	**79.30**	**43**	P		P	P	23 52 23.9	**+0.3**
YERR				IAmb		IAmb	IAmb	23 52 24.4	
	comp=Z,2.9nm,0.6s								
NVAR	**Mina Array Bea**	**79.60**	**44**	P		P	P	23 52 25.2	**0.0**
	comp=Z,1.6nm,0.7s,baz=223,slow=8.5,SNR=16								
NVAR	**Mina Array Bea**	**79.60**	**44**	P		P	P	23 52 25.1	**-0.2**
KVN	**Kaiserville**	**80.08**	**43**	P		P	P	23 52 27.8	**+0.1**
K05A	**Summer Lake**	**80.41**	**39**	P		P	P	23 52 29.8	**+0.5**
K05A				IAmb		IAmb	IAmb	23 52 30.7	
	comp=Z,5.3nm,1.0s								
PINE	**Pine Mountain**	**81.01**	**38**	P		P	P	23 52 33.1	**+0.7**
PINE				IAmb		IAmb	IAmb	23 52 34.3	
	comp=Z,7.3nm,1.1s								
WVOR	**Wild Horse Val**	**81.61**	**40**	P		P	P	23 52 35.5	**+0.1**
WVOR				IAmb		IAmb	IAmb	23 52 37.0	
	comp=Z,3.9nm,0.9s								
I07A	**Izee**	**82.02**	**38**	P		P	P	23 52 38.0	**+0.6**
I07A				IAmb		IAmb	IAmb	23 52 39.0	
	comp=Z,4.9nm,1.2s								
X16A	**Lo Mia Camp, P**	**82.31**	**50**	P		P	P	23 52 39.8	**+0.5**
CCUT	**Cedar City**	**82.47**	**47**	P		P	P	23 52 40.1	**+0.1**
U15A	**North Rim**	**82.67**	**48**	IAmb		IAmb	IAmb	23 52 42.5	
	comp=Z,4.3nm,0.8s								
CCB	**Clear Creek Bu**	**85.95**	**13**	IAmb		IAmb	IAmb	23 52 55.5	
	comp=Z,3.1nm,0.6s								
TX32	**Lajitas Array**	**86.07**	**58**	IAmb		IAmb	IAmb	23 52 59.2	
	comp=Z,2.7nm,0.8s								
TXAR	**Lajitas Array**	**86.07**	**58**	P		P	P	23 52 57.9	**+0.2**
	comp=Z,2.7nm,0.8s,baz=218,slow=6.4,SNR=26								
TXAR	**Lajitas Array**	**86.07**	**58**	P		P	P	23 52 58.2	**+0.5**
ANMO	**Albuquerque**	**86.22**	**51**	P		P	P	23 52 59.3	**+0.9**
	comp=Z,0.7nm,0.5s,baz=249,slow=5.3,SNR=4.2								
ILAR	**Eielson Array**	**86.25**	**13**	P		P	P	23 52 56.7	**-0.9**
	comp=Z,1.3nm,0.4s,baz=221,slow=5.0,SNR=21								
ILAR	**Eielson Array**	**86.25**	**13**	P		P	P	23 52 55.5	**-2.1**
PDAR	**Pinedale Array**	**87.53**	**43**	P		P	P	23 53 04.1	**-0.3**
	comp=Z,0.9nm,0.6s,baz=209,slow=2.7,SNR=7.9								
PDAR	**Pinedale Array**	**87.53**	**43**	P		P	P	23 53 03.6	**-0.9**
BMAR	**Burnt Mountain**	**89.03**	**12**	P		P	P	23 53 10.4	**-0.2**
CMAR	**Chiang Mai Arr**	**89.19**	**290**	P		P	P	23 53 13.8	**+1.4**
	comp=Z,0.4nm,0.3s,baz=138,slow=1.5,SNR=4.3								
INK	**Inuvik**	**92.24**	**15**	P		P	P	23 53 24.4	**-0.9**
	comp=Z,1.5nm,0.6s,baz=221,slow=2.9,SNR=6.2								
YKA	**Yellowknife Ar**	**94.64**	**25**	P		P	P	23 53 35.7	**-0.6**
	comp=Z,0.5nm,0.6s,baz=241,slow=4.1,SNR=9.3								
FINES	**FINESS Array B**	**133.64**	**344**	PKP		**PKPdf**

σ0.92/15, **mb4.2/7, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.03**	**302**	Pn	**Pn**	**23 54 57.4**	**-0.5**
	22nm,0.3s,baz=190,slow=12,SNR=2.1						
HNR				Sn	**Sn**	**23 55 44.9**	**+1.0**
	46nm,0.3s,baz=97,slow=21,SNR=6.0						
HNR				LR	LR	23 56 56.6	
	comp=Z,389nm,18.1s,baz=138,slow=46						
DZM	**Mont Dzumac**	**10.81**	**165**	Pn	**Pn**	**23 56 30.0**	**-1.0**
	0.8nm,0.3s,baz=5.4,slow=19,SNR=6.1						
KRVT	**Keravat (AS076**	**13.40**	**302**	LR	LR	00 02 50.2	
	comp=Z,240nm,20.3s,baz=109,slow=40						
CTA	**Charters Tower**	**18.53**	**241**	P	**Pn**	**23 58 13.4**	**+0.7**
	0.3nm,0.3s,baz=61,slow=15,SNR=4.4						
RAO	**Raoul Island**	**24.73**	**138**	P	**P**	**23 59 18.0**	**+1.3**
	173nm,0.3s,baz=253,slow=19,SNR=8.3						
RAO				LR	LR	00 07 28.2	
	comp=Z,106nm,21.7s,baz=237,slow=33						
STKA	**Stephens Creek**	**28.50**	**222**	P	**P**	**23 59 50.8**	**+0.1**
	2.9nm,0.8s,baz=54,slow=11,SNR=5.0						
WRA	**Warramunga Arr**	**29.15**	**250**	P	**P**	**23 59 55.9**	**-0.8**
	2.9nm,0.6s,baz=79,slow=9.0,SNR=14						
WRA				PcP	**PcP**	**00 03 04.5**	**+0.6**
	1.2nm,0.7s,baz=71,slow=2.8,SNR=6.3						
H11S2	**WAKE ISLAND Hy**	**30.07**	**6**	T	T	00 31 33.3	
	baz=188,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**30.07**	**6**	T	T	00 31 35.0	
	baz=188,slow=76,SNR=3.7						
H11S1	**WAKE ISLAND Hy**	**30.09**	**6**	T	T	00 31 33.8	
	baz=188,slow=76,SNR=4.0						
ASAR	**Alice Springs**	**30.51**	**243**	P	**P**	**00 00 08.0**	**-0.8**
	4.7nm,0.8s,baz=72,slow=9.7,SNR=40						
ASAR				PcP	**PcP**	**00 03 07.9**	**+0.5**
	1.8nm,1.0s,baz=87,slow=3.0,SNR=7.2						
H11N1	**WAKE ISLAND Hy**	**31.30**	**6**	T	T	00 33 01.9	
	baz=175,slow=76,SNR=3.1						
H11N3	**WAKE ISLAND Hy**	**31.31**	**6**	T	T	00 33 03.9	
	baz=175						
H11N2	**WAKE ISLAND Hy**	**31.32**	**6**	T	T	00 33 02.2	
	baz=175,slow=76,SNR=2.9						
PETK	**Petropavlovsk-**	**64.63**	**356**	LR	LR	00 29 29.3	
	comp=Z,36nm,18.2s,baz=239,slow=33						
MAW	**Mawson**	**83.35**	**202**	P	**P**	**00 06 23.3**	**+1.6**
	2.7nm,0.9s,baz=123,slow=8.8,SNR=5.0						
NVAR	**Mina Array Bea**	**88.13**	**50**	P	**P**	**00 06 46.2**	**0.0**
	0.5nm,0.8s,baz=226,slow=5.3,SNR=5.4						
MKAR	**Makanchi Array**	**92.36**	**317**	P	**P**	**00 07 04.8**	**-0.8**
	0.3nm,0.6s,baz=86,slow=4.8,SNR=2.6						
TORD	**Torodi Ar. Bea**	**162.08**	**277**	PKP	**PKPdf**	**00 13 57.2**	**-0.1**
	1.0nm,1.1s,baz=356,slow=1.4,SNR=3.8						
TORD				PKPab	**PKPab**	**00 14 42.9**	**-1.0**
	0.8nm,1.0s,baz=82,slow=3.1,SNR=2.7						

*TUL **15** 00:28:52.7±1.6,36.80N±0.02×97.66W±0.06, h3km±6km, ML3.3, Error ellipse: s-maj=6.3km s-min=2.5km az=85.0*
*ANF **15** 00:28:53.4±0.4, 36.73N×97.62W, h0km, ML4.1/7, Error ellipse: s-maj=5.7km s-min=3.4km az=7.0*
*NEIC **15** 00:28:53.0±1.4, 36.78N±0.01×97.68W±0.06, h5km±6km, Error ellipse: s-maj=6.8km s-min=1.7km az=85.0*

ISC 15 00:28:52.7±0.7, 36.72N±0.04×97.74W±0.03, h10km, n49,
σ1.950/59, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**1.00**	**78**	Pg	**Pg**	**00 29 10.7**	**-1.3**
T35A				Sg	**Sg**	**00 29 22.9**	**-2.1**
U32A	**Winter Ranch,**	**1.07**	**252**		**Pb**	**00 29 14.6**	**+1.2**
ADOK	**Arcadia Dam**	**1.11**	**164**	Pg	**Pb**	**00 29 14.6**	**+0.7**
OKCFA	**Oklahoma City**	**1.32**	**170**		**Pn**	**00 29 18.7**	**+1.5**
W35A	**Tecumseh**	**1.72**	**156**		**Pn**	**00 29 24.5**	**+1.9**
TUL1	**Leonard**	**1.77**	**117**	P	**Pn**	**00 29 24.5**	**+1.2**
	baz=300						
TUL1				S	**Sb**	**00 29 48.0**	**+0.6**
	baz=300						
TUL1	**Leonard**	**1.77**	**117**		**Pn**	**00 29 24.5**	**+1.2**
R32A	**Long Quarter,**	**1.86**	**336**		**Pn**	**00 29 25.7**	**+1.0**
WMOK	**Wichita Mounta**	**2.15**	**204**	P	**Pn**	**00 29 31.0**	**+2.4**
	baz=24						
WMOK	**Wichita Mounta**	**2.15**	**204**		**Pn**	**00 29 30.9**	**+2.2**
KSU1	**Kansas State U**	**2.54**	**20**		**Pn**	**00 29 34.1**	**+0.2**
CBKS	**Cedar Bluff**	**2.62**	**323**	S	**Sb**	**00 30 13.5**	**+1.5**
	baz=141						
CBKS	**Cedar Bluff**	**2.62**	**323**		**Pn**	**00 29 36.0**	**+0.8**
U38A	**Gravette**	**2.71**	**95**		**Pn**	**00 29 37.2**	**+0.9**
X37A	**Clayton**	**2.87**	**137**		**Pn**	**00 29 38.9**	**+0.4**
HHAR	**Hobbs**	**3.09**	**97**		**Pn**	**00 29 41.9**	**+0.4**
Z35A	**Perchaven, San**	**3.41**	**173**	Pn	**Pn**	**00 29 47.2**	**+1.3**
W39A	**Magazine**	**3.55**	**114**		**Pn**	**00 29 48.8**	**+0.9**
AMTX	**Amarillo**	**3.69**	**241**	P	**Pn**	**00 29 53.2**	**+3.3**
	baz=59						
AMTX				Sb	**Sg**	**00 30 50.7**	**-0.6**
	baz=59						
AMTX	**Amarillo**	**3.69**	**241**		**Pn**	**00 29 52.2**	**+2.3**
U40A	**Yellville**	**3.95**	**94**	P	**Pn**	**00 29 54.0**	**+0.7**
	baz=278						
U40A				S	**Sn**	**00 30 39.7**	**0.0**
	baz=278						
U40A	**Yellville**	**3.95**	**94**		**Pn**	**00 29 53.8**	**+0.4**
U40A					**Sn**	**00 30 39.8**	**0.0**
MIAR	**Mount Ida**	**4.03**	**121**		**Pn**	**00 29 56.1**	**+1.8**
ABTX	**Abilene, Hawle**	**4.38**	**202**	P	**Pn**	**00 30 01.9**	**+2.6**
	baz=21						
ABTX	**Abilene, Hawle**	**4.38**	**202**		**Pn**	**00 30 01.0**	**+1.7**
P38A	**Dawn**	**4.40**	**48**		**Pn**	**00 29 59.7**	**+0.2**
N35A	**Tabor**	**4.45**	**21**		**Pn**	**00 29 59.8**	**-0.3**
N35A				Pg	**Pb**	**00 30 13.3**	**+2.4**
KSCO	**Kaye Shedlock'**	**4.49**	**302**	P	**Pn**	**00 30 02.6**	**+1.7**
	baz=118						
KSCO	**Kaye Shedlock'**	**4.49**	**302**		**Pn**	**00 30 02.1**	**+1.2**
X40A	**Basin Creek Fa**	**4.58**	**118**		**Pn**	**00 30 02.2**	**+0.3**
R40A	**Maddies Statio**	**4.62**	**69**		**Pn**	**00 30 00.6**	**-1.9**
WHAR	**Wooly Hollow**	**4.64**	**106**	Pn	**Pn**	**00 30 03.9**	**+1.0**
WHTX	**Lake Whitney,**	**4.72**	**177**		**Pn**	**00 30 06.0**	**+2.0**
UALR	**University of**	**4.80**	**112**		**Pn**	**00 30 04.6**	**-0.4**
CCM	**Cathedral Cave**	**5.34**	**74**	Pn	**Pn**	**00 30 12.4**	**0.0**
CCM					**Pb**	**00 30 29.7**	**+3.7**
CCM					**Sn**	**00 31 11.9**	**-2.0**
L34A	**Svendsen Farm,**	**5.34**	**11**		**Pn**	**00 30 11.8**	**-0.7**
OGNE	**Ogallala**	**5.39**	**323**		**Pn**	**00 30 12.9**	**-0.2**
K31A	**O'Neill**	**5.95**	**353**	Pn	**Pn**	**00 30 21.1**	**+0.3**
SCIA	**State Center**	**6.25**	**33**	Pn	**Pn**	**00 30 24.9**	**-0.1**
JCT	**Junction City**	**6.46**	**196**	Pn	**Pn**	**00 30 28.9**	**+1.1**
JCT				Pg	**Pg**	**00 30 54.1**	**-2.3**
ISCO	**Idaho Springs**	**6.92**	**299**		**Pn**	**00 30 35.3**	**+0.9**
ECSD	**EROS Data Cent**	**7.06**	**7**		**Pn**	**00 30 34.2**	**-1.8**
Q44A	**Meyer Farm, Va**	**7.24**	**70**	Pn	**Pn**	**00 30 39.2**	**+0.7**
ANMO	**Albuquerque**	**7.30**	**259**	Pn	**Pn**	**00 30 38.6**	**-0.9**
ANMO				Pg		00 31 08.8	-3.7
L40A	**Anamosa**	**7.34**	**41**		**Pn**	**00 30 38.7**	**-1.2**
PHWY	**Pilot Hill**	**7.55**	**310**		**Pn**	**00 30 43.8**	**+0.7**
PHWY				Sn	**Sn**	**00 32 06.7**	**-2.2**
HDIL	**Hopedale**	**7.64**	**57**	Pn	**Pn**	**00 30 43.8**	**-0.1**
JFWS	**Jewell Farm**	**8.45**	**41**	Pn	**Pn**	**00 30 53.9**	**-1.2**
TX31	**Lajitas Ar. Si**	**8.89**	**216**		**Pn**	**00 31 03.0**	**+1.8**

IDC 15 00:52:24.7±1.7, 3.92S×127.77E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.5/46, mbtmp3.7/4, ML3.6/1, Error ellipse: s-maj=150.8km s-min=24.8km az=67.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.16**	**159**	P	Pn	00 56 26.8	+0.7
	0.2nm,0.3s,baz=337,slow=12,SNR=4.9						
ASAR	**Alice Springs**	**20.51**	**164**	P	P	00 57 04.3	-0.3
	1.8nm,0.4s,baz=342,slow=11,SNR=28						
MKAR	**Makanchi Array**	**64.45**	**327**	P	P	01 03 02.8	-0.2
	0.2nm,0.3s,baz=114,slow=6.8,SNR=9.4						
KURBB	**Kurchatov Array**	**68.74**	**329**	P	P	01 03 30.6	+0.3
	0.6nm,0.7s,baz=126,slow=6.3,SNR=7.5						

*SJA **15** 00:53:24.0±0.8, 33.80S×70.39W, h121km±5km, ML4.1, MW4.1*
*NEIC **15** 00:53:25.8±1.3, 33.79S±0.04×70.33W±0.10, h109km±3km, Error ellipse: s-maj=12.0km s-min=5.3km az=95.0*
*GUC **15** 00:53:26.3±0.7, 33.80S×70.33W, h109km±2km, ML4.6*
*IDC **15** 00:53:27.0±0.6, 33.73S×70.12W, h111km±4km, mb4.0/9, mb1 4.1/12, mb1mx4.0/27, mbtmp4.4/12, MS3.0/1, Ms1 3.0/1, ms1mx2.6/24, Error ellipse: s-maj=16.8km*

s-min=9.6km az=118.0
*VAO **15** 00:53:27.3±0.7, 33.83S×69.95W, h119km±6km, mb4.6*

ISC 15 00:53:25.6±0.4, 33.80S±0.03×70.30W±0.04, h109km±3km, h108km:pP-P, n185, σ1.919/202, mb4.5/31, 11C-5D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMEL	**Las Melosas**	**0.10**	**121**	⇓*iP*	**Pn**	**00 53 40.4**	**-0.5**
LMEL				*i* S	**Sn**	**00 53 51.8**	**-0.7**
LMEL				IAML		00 53 55.0	
	comp=E,17μm,0.4s						
MT03	**Universidad Ad**	**0.35**	**330**	⇓*iP*	**Pn**	**00 53 41.6**	**-0.1**
MT03				*i* S	**Sn**	**00 53 53.0**	**-0.7**
MT03				IAML		00 53 54.7	
	comp=E,38μm,0.4s						
FSR	**Penalolen**	**0.37**	**329**	⇓*iP*	**Pn**	**00 53 43.0**	**+1.2**
FSR				*i* S	**Sn**	**00 53 54.7**	**+0.9**
CLCH	**Cerro Calan**	**0.45**	**334**	⇓*iP*	**Pn**	**00 53 42.3**	**+0.1**
CLCH				*i* S	**Sn**	**00 53 54.0**	**-0.5**
CLCH				IAML		00 53 56.0	
	comp=E,49μm,0.5s						
FCH	**Farellones**	**0.47**	**1**	⇑*iP*	**Pn**	**00 53 42.3**	**-0.4**
FCH				*i* S	**Sn**	**00 53 54.8**	**-0.6**
FCH				IAML		00 53 57.1	
	comp=N,20μm,0.5s						
MT05	**Renca**	**0.54**	**318**		**Pn**	**00 53 42.7**	**-0.1**
MT05				Sn	**Sn**	**00 53 55.2**	**-0.5**
PEL	**Peldehue**	**0.73**	**334**	⇑*iP*	**Pn**	**00 53 44.1**	**-0.2**
PEL				*i* S	**Sn**	**00 53 58.0**	**-0.2**
PEL				IAML		00 53 59.5	
	comp=N,33μm,0.4s						
PEL	**Peldehue**	**0.73**	**334**		**Pn**	**00 53 44.4**	**+0.1**
PEL				Sn	**Sn**	**00 53 58.4**	**+0.2**
PEL	**Peldehue**	**0.73**	**334**	*i* P	**Pn**	**00 53 44.3**	**+0.1**
PEL				*eS*	**Sn**	**00 53 58.9**	**+0.7**
MT01	**Popeta**	**0.79**	**265**	⇑*iP*	**Pn**	**00 53 44.5**	**-0.2**
MT01				*i* S	**Sn**	**00 53 58.7**	**-0.4**
MT01				IAML		00 54 00.1	
	comp=E,19μm,0.5s						
MT01	**Popeta**	**0.79**	**265**		**Pn**	**00 53 44.6**	**-0.2**
MT01				Sn	**Sn**	**00 53 58.9**	**-0.3**
MT02	**Curacav**	**0.88**	**307**	⇑*iP*	**Pn**	**00 53 45.6**	**0.0**
MT02				*i* S	**Sn**	**00 54 00.2**	**-0.4**
MT02	**Curacav**	**0.88**	**307**		**Pn**	**00 53 45.6**	**0.0**
MT02				Sn	**Sn**	**00 54 00.2**	**-0.4**
ROC1	**El Roble**	**1.01**	**324**	Pn	**Pn**	**00 53 47.1**	**0.0**
ROC1				Sn	**Sn**	**00 54 03.3**	**-0.1**
ROC1	**El Roble**	**1.01**	**324**	*i* P	**Pn**	**00 53 47.2**	**0.0**
ROC1				*eS*	**Sn**	**00 54 04.0**	**+0.6**
ROCH	**El Roble**	**1.01**	**324**	⇑*iP*	**Pn**	**00 53 47.1**	**-0.1**
ROCH				*i* S	**Sn**	**00 54 03.1**	**-0.3**
ROCH				IAML		00 54 05.4	
	comp=N,23μm,0.5s						
VA03	**San Esteban**	**1.05**	**349**	⇓*iP*	**Pn**	**00 53 48.0**	**+0.5**
VA03				*i* S	**Sn**	**00 54 04.0**	**+0.1**
VA03				IAML		00 54 06.3	
	comp=E,24μm,0.3s						
VA03	**San Esteban**	**1.05**	**349**		**Pn**	**00 53 47.9**	**+0.5**
VA03				Sn	**Sn**	**00 54 04.5**	**+0.6**
BO02	**Sierra Bellavi**	**1.07**	**202**	⇑*iP*	**Pn**	**00 53 48.1**	**+0.5**
BO02				*i* S	**Sn**	**00 54 04.8**	**+0.6**
BO02	**Sierra Bellavi**	**1.07**	**202**		**Pn**	**00 53 47.9**	**+0.1**
BO02				Sn	**Sn**	**00 54 05.3**	**+1.1**
AAGR	**Agrelo**	**1.42**	**60**	*iP*	**Pn**	**00 53 52.4**	**+0.8**
AAGR				IAML		00 54 33.5	
	comp=Z,1μm,0.9s						
LAMA	**Las Malvinas**	**1.45**	**142**	*iP*	**Pn**	**00 53 52.4**	**+0.5**
GO05	**Huala**	**1.81**	**228**	⇑*iP*	**Pn**	**00 53 55.6**	**-0.6**
GO05				*i* S	**Sn**	**00 54 18.8**	**-0.7**
GO05				IAML		00 54 21.8	
	comp=E,4μm,0.5s						
GO05	**Huala**	**1.81**	**228**		**Pn**	**00 53 56.0**	**-0.2**
GO05	**Huala**	**1.81**	**228**	*i* P	**Pn**	**00 53 55.4**	**-0.8**
GO05				*eS*	**Sn**	**00 54 18.4**	**-1.1**
PUMA	**Malargue**	**1.83**	**158**	*iP*	**Pn**	**00 53 57.1**	**+0.6**
CO04	**Los Peladeros**	**1.84**	**342**		**Pn**	**00 53 57.0**	**+0.1**
RTLS	**Leoncito**	**2.17**	**23**	*iP*	**Pn**	**00 54 02.6**	**+1.6**
RTLS				*eS*	**Sn**	**00 54 29.9**	**+1.9**
RTLS				IAML		00 54 33.0	
	comp=Z,476nm,1.1s						
RTCV	**Cerro Valdivia**	**2.43**	**38**	*iP*	**Pn**	**00 54 04.7**	**+0.4**
RTCV				IAML		00 54 37.1	
	comp=Z,453nm,0.5s						
CO02	**Combarbal**	**2.65**	**347**	⇑*iP*	**Pn**	**00 54 06.9**	**-0.3**
CO02				*i* S	**Sn**	**00 54 39.5**	**+0.4**
CFA	**Coronel Fontan**	**2.79**	**39**	P	**Pn**	**00 54 08.9**	**0.0**
	comp=Z,157nm,0.3s,baz=214,slow=13,SNR=866						
CFA				S	**Sn**	**00 54 41.0**	**-1.3**
	comp=Z,360nm,0.3s,baz=120,slow=20,SNR=27						
CFA	**Coronel Fontan**	**2.79**	**39**	*iP*	**Pn**	**00 54 09.0**	**0.0**
CFA				IAML		00 54 45.9	
	comp=Z,473nm,0.3s						
RTLL	**Cerro Villicun**	**2.91**	**33**	*iP*	**Pn**	**00 54 10.8**	**+0.3**
RTLL				IAML		00 54 49.8	
	comp=Z,766nm,0.4s						
BI02	**San Fabin de**	**2.97**	**195**	⇑*iP*	**Pn**	**00 54 11.7**	**+0.4**
BI02	**San Fabin de**	**2.97**	**195**		**Pn**	**00 54 11.7**	**+0.4**
CO03	**El Pedregal**	**2.97**	**354**	⇑*iP*	**Pn**	**00 54 11.7**	**+0.4**
CO03				*i* S	**Sn**	**00 54 46.1**	**-0.4**
CO03				IAML		00 54 52.1	
	comp=E,2μm,0.3s						
CO03	**El Pedregal**	**2.97**	**354**		**Pn**	**00 54 11.9**	**+0.6**
ACAN	**Cantantal**	**3.02**	**61**	*iP*	**Pn**	**00 54 12.3**	**+0.4**
ACAN				IAML		00 55 11.1	
	comp=Z,190nm,0.8s						
AMOG	**MOGNA**	**3.24**	**29**	*iP*	**Pn**	**00 54 15.3**	**+0.5**
AMOG				IAML		00 55 03.5	
	comp=Z,748nm,0.7s						
GO04	**Tololo Observa**	**3.64**	**353**		**Pn**	**00 54 20.6**	**+0.2**
GO04	**Tololo Observa**	**3.64**	**353**	*iP*	**Pn**	**00 54 20.2**	**-0.2**
BI03	**Tigo**	**3.77**	**215**	⇑*iP*	**Pn**	**00 54 19.9**	**-1.9**
BI03				*i* S	**Sn**	**00 55 02.9**	**-2.5**
BI03	**Tigo**	**3.77**	**215**		**Pn**	**00 54 20.0**	**-1.8**
CO01	**Juntas del Tor**	**3.81**	**3**		**Pn**	**00 54 23.7**	**+0.9**
LAJA	**Lajas**	**3.99**	**209**	*eP*	**Pn**	**00 54 23.4**	**-1.5**
MRA	**San Martin**	**4.09**	**72**	*iP*	**Pn**	**00 54 25.7**	**-0.5**
MRA				IAML		00 55 44.8	
	comp=Z,61nm,1.7s						
AC05	**El Transito**	**4.95**	**0**		**Pn**	**00 54 37.7**	**-0.2**
LC01	**Cunco**	**5.25**	**194**		**Pn**	**00 54 40.6**	**-1.1**
VCA	**Vinchina**	**5.36**	**20**	*iP*	**Pn**	**00 54 43.1**	**-0.3**
VCA				IAML		00 55 52.7	
	comp=Z,328nm,0.7s						
TCA	**Tanti**	**5.41**	**65**	*iP*	**Pn**	**00 54 42.6**	**-1.4**
TCA				IAML		00 56 17.6	
	comp=Z,156nm,1.0s						
CYA	**Choya**	**6.59**	**37**	*iP*	**Pn**	**00 54 56.7**	**-3.3**
CYA				IAML		00 56 31.4	
	comp=Z,62nm,0.7s						
PLCA	**Paso Flores**	**6.93**	**182**	P	**Pn**	**00 55 04.7**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=2.5,slow=14,SNR=7.1						
PLCA	**Paso Flores**	**6.93**	**182**		**Pn**	**00 55 05.6**	**+1.0**
PLCA	**Paso Flores**	**6.93**	**182**	*eP*	**Pn**	**00 55 05.0**	**+0.4**
AC02	**Maricunga**	**7.01**	**9**		**Pn**	**00 55 05.8**	**-0.4**
H03S1	**Juan Fernandez**	**7.16**	**267**	P	**Pn**	**00 55 07.1**	**-0.3**
	baz=54,slow=16,SNR=14						
H03S1				T	T	01 01 29.6	
	baz=85,slow=74,SNR=135						
H03S3	**Juan Fernandez**	**7.16**	**267**	P	**Pn**	**00 55 07.8**	**+0.3**
	baz=54,slow=16,SNR=22						
H03S3				T	T	01 01 36.0	
	baz=85,slow=74,SNR=118						
H03S2	**Juan Fernandez**	**7.18**	**267**	P	**Pn**	**00 55 07.5**	**-0.1**
	baz=54,slow=16,SNR=35						
H03S2				T	T	01 01 35.3	
	baz=85,slow=74,SNR=125						
H03N1	**Juan Fernandez**	**7.19**	**270**	P	**Pn**	**00 55 08.5**	**+0.6**
	baz=135,slow=24,SNR=60						
H03N1				T	T	01 02 13.8	
	baz=86,slow=73,SNR=41						
H03N3	**Juan Fernandez**	**7.20**	**270**	P	**Pn**	**00 55 09.4**	**+1.4**
	baz=135,slow=24,SNR=32						
H03N3				T	T	01 02 15.5	
	baz=86,slow=73,SNR=32						
H03N2	**Juan Fernandez**	**7.21**	**270**	P	**Pn**	**00 55 08.9**	**+0.8**
	baz=135,slow=24,SNR=26						
H03N2				T	T	01 02 24.4	
	baz=86,slow=73,SNR=36						
GO02	**Mina Guanaco**	**8.63**	**4**		**Pn**	**00 55 26.3**	**-1.7**
LL01	**San Ignacio de**	**8.73**	**190**		**Pn**	**00 55 26.6**	**-2.3**
PB14	**IPOC Station P**	**9.14**	**359**		**Pn**	**00 55 31.7**	**-3.2**
PB15	**IPOC Station P**	**10.57**	**4**	Pn	Pn	00 55 47.1	-7.2
LVC	**Limon Verde**	**11.21**	**7**	Pn	**Pn**	**00 55 60.0**	**-3.0**
LVC	**Limon Verde**	**11.21**	**7**	*eP*	**Pn**	**00 56 06.6**	**+3.6**
PB09	**IPOC Station P**	**11.99**	**5**	Pn	**Pn**	**00 56 10.8**	**-2.4**
ITQB	**Itaqui**	**12.35**	**74**	*eP*	**Pn**	**00 56 16.1**	**-1.6**
CPUP	**Villa Florida**	**13.47**	**60**	P	Pn	00 56 26.4	-5.9
	comp=Z,0.3nm,0.3s,baz=221,slow=7.7,SNR=7.1						
CPUP				LR	LR	01 02 33.2	
	comp=Z,65nm,18.6s,baz=258,slow=41						
CPUP	**Villa Florida**	**13.47**	**60**		Pn	00 56 27.0	-5.3
CPUP	**Villa Florida**	**13.47**	**60**	*eP*	Pn	00 56 28.2	-4.1
PB11	**IPOC Station P**	**13.99**	**3**		**Pn**	**00 56 38.7**	**-0.6**
GO01	**Chusmiza**	**14.11**	**4**		**Pn**	**00 56 38.5**	**-2.6**
PLTB	**Pedras Altas**	**14.20**	**86**	*eP*	**Pn**	**00 56 39.4**	**-2.3**
CPSB	**Cacapava Do Su**	**14.69**	**81**	*eP*	**Pn**	**00 56 45.2**	**-2.8**
PB12	**IPOC Station P**	**15.12**	**360**		**Pn**	**00 56 53.0**	**-0.6**
PB12				IAmb	IAmb	00 56 58.9	
	comp=Z,23nm,0.7s						
PB16	**IPOC Station P**	**15.41**	**3**		**Pn**	**00 56 57.1**	**-0.7**
PB16				IAmb	IAmb	00 57 03.3	
	comp=Z,30nm,1.3s						
ITAB	**Concordia**	**16.96**	**72**	*eP*	**Pn**	**00 57 15.5**	**-0.7**
CNLB	**Canela**	**17.17**	**80**	*eP*	**P**	**00 57 17.6**	**-1.1**
LPAZ	**La Paz**	**17.54**	**7**	P	**Pn**	**00 57 24.9**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=190,slow=6.0,SNR=18						
LPAZ	**La Paz**	**17.54**	**7**	P	**P**	**00 57 23.7**	**+0.2**
LPAZ	**La Paz**	**17.54**	**7**	*eP*	**Pn**	**00 57 24.4**	**+0.4**
PTGB	**Pitanga**	**18.29**	**65**	*eP*	**P**	**00 57 28.8**	**-2.3**
AQDB	**Aquidauana**	**18.54**	**48**	*eP*	**P**	**00 57 32.8**	**-1.0**
TRCB	**Terra Rica**	**19.00**	**59**	*eP*	**P**	**00 57 37.4**	**-1.5**
SIV	**San Ignacio**	**19.59**	**27**	P	**P**	**00 57 44.6**	**-0.6**
	comp=Z,1.3nm,0.3s,baz=216,slow=9.7,SNR=51						
EFI	**East Falkland**	**19.95**	**157**	P	**P**	**00 57 48.2**	**-0.6**
PCMB	**Pacaembu**	**20.74**	**59**	*eP*	**P**	**00 57 56.0**	**-1.6**
PTLB	**Pontes e Lacer**	**20.87**	**32**	*eP*	**P**	**00 57 58.4**	**-0.6**
FRTB	**Fartura**	**20.95**	**66**	*eP*	**P**	**00 57 57.6**	**-2.2**
C2SB	**Chapadao do Su**	**21.61**	**51**	*eP*	**P**	**00 58 06.0**	**-1.0**
SALV	**Santo Antonio**	**22.16**	**40**	*eP*	**P**	**00 58 11.2**	**-1.6**
PET01	**Itanhaem-SP**	**22.21**	**71**	*eP*	**P**	**00 58 11.9**	**-1.3**
SPB	**Sao Paulo**	**22.45**	**69**	*eP*	**P**	**00 58 12.1**	**-3.6**
ITRB	**Iturama**	**22.62**	**57**	*eP*	**P**	**00 58 15.7**	**-1.7**
VILB	**Vilhena**	**22.70**	**26**	*eP*	**P**	**00 58 17.0**	**-1.3**
BB19B	**Bebedouro**	**23.06**	**62**	*eP*	**P**	**00 58 18.7**	**-3.0**
VAO	**Valinhos**	**23.12**	**68**	*eP*	**P**	**00 58 20.7**	**-1.7**
PARB	**Paraibuna**	**24.00**	**71**	*eP*	**P**	**00 58 29.3**	**-1.0**
ARAG	**Araguaiana, MT**	**24.55**	**47**	*eP*	**P**	**00 58 33.5**	**-1.8**
IPMB	**Ipameri, GO**	**25.27**	**57**	*eP*	**P**	**00 58 40.0**	**-1.9**
SAML	**Samuel**	**25.59**	**16**	*eP*	**P**	**00 58 44.2**	**-0.4**
BSCB	**Bom Sucesso**	**25.93**	**67**	*eP*	**P**	**00 58 46.8**	**-1.0**
VAS01	**Vassouras-RJ**	**26.26**	**71**	*eP*	**P**	**00 58 49.2**	**-1.5**
CLDB	**Colider**	**26.41**	**34**	*eP*	**P**	**00 58 50.8**	**-1.3**
BDFB	**Brasilia**	**27.04**	**53**	P	**P**	**00 58 57.0**	**-1.0**
	comp=Z,27nm,0.8s,baz=220,slow=8.3,SNR=46						
BDFB	**Brasilia**	**27.04**	**53**	P	**P**	**00 58 56.5**	**-1.4**
MC01	**Montes Claros**	**29.16**	**61**	*eP*	**P**	**00 59 15.1**	**-1.6**
JANB	**Januaria**	**29.99**	**58**	*eP*	**P**	**00 59 22.7**	**-1.4**
NPGB	**Novo Progresso**	**30.00**	**31**	*eP*	**P**	**00 59 22.8**	**-1.3**
SJMB	**Sao Joao De Ma**	**30.00**	**67**	*eP*	**P**	**00 59 22.9**	**-1.2**
BSFB	**Barra de Sao F**	**30.19**	**68**	*eP*	**P**	**00 59 24.1**	**-1.7**
NAN01	**Guarapari, ES**	**31.32**	**67**	*eP*	**P**	**00 59 33.7**	**-1.9**
SMTB	**Santa Maria do**	**32.45**	**45**	*eP*	**P**	**00 59 44.7**	**-1.0**
PRPB	**Parauapebas**	**33.41**	**39**	*eP*	**P**	**00 59 52.7**	**-1.3**

NVAR	**Mina Array Bea**	**84.55**	**324**	P	**P**	**01 05 46.7**	**0.0**
FLWY	**Flagg Ranch**	**85.80**	**332**	IAmb	IAmb	01 05 55.1	
	comp=Z,5.0nm,0.8s						
RLMT	**Red Lodge**	**86.14**	**333**	IAmb	IAmb	01 05 56.3	
	comp=Z,2.7nm,0.5s						
WRA	**Warramunga Arr**	**121.62**	**207**	PKP	**PKPdf**	**01 12 06.7**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=161,slow=1.5,SNR=5.0						
BVAR	**Borovoye Array**	**146.15**	**43**	PKPbc	**PKPab**	**01 12 54.6**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=305,slow=2.6,SNR=5.5						
BVAR				pPKPbc	**pPKPdf**	**01 13 23.1**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=318,slow=2.0,SNR=3.3						
AAK	**Ala-Archa**	**151.14**	**62**	PKPbc	**PKiKP**	**01 13 07.6**	**+1.0**
	comp=Z,2.1nm,0.7s,baz=265,slow=5.2,SNR=4.9						
AAK				pPKPbc	**pPKPbc**	**01 13 36.2**	**-0.4**
	comp=Z,1.6nm,0.3s,baz=183,slow=6.5,SNR=2.9						
KURBB	**Kurchatov Arra**	**151.73**	**44**	PKPbc	**PKiKP**	**01 13 07.6**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=304,slow=2.9,SNR=11						
KURBB				pPKPbc	**pPKPbc**	**01 13 36.9**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=301,slow=3.1,SNR=4.4						
KURK	**Kurchatov**	**151.74**	**44**		**PKiKP**	**01 13 07.6**	**+0.3**
KURK					**pPKPbc**	**01 13 36.9**	**-0.4**
KSH	**Kashi**	**152.46**	**68**	PKPbc	**PKPdf**	**01 13 05.8**	**+3.7**
KSH				pPKP	pPKPdf	01 13 29.4	-3.3
KSH				sPKP		01 13 40.3	
ZALV	**Zalesovo Beam**	**153.27**	**34**	PKPbc	**PKPbc**	**01 13 10.0**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=264,slow=1.5,SNR=7.1						
ZALV				pPKPbc	**pPKPbc**	**01 13 40.5**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=293,slow=3.0,SNR=4.1						
MKAR	**Makanchi Array**	**155.54**	**50**	PKPab	**PKPab**	**01 13 32.8**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=294,slow=3.8,SNR=5.5						
MKAR	**Makanchi Array**	**155.54**	**50**	PKPdf	**PKPdf**	**01 13 05.0**	**-1.1**
LZH	**Lanzhou**	**174.68**	**63**	*e*PKP	**PKPdf**	**01 13 22.6**	**-0.1**
LZH				pPKP	pPKPdf	01 13 48.9	-4.5
LZH				sPKP		01 13 59.5	

NEIC ***15*** *00:58:02.7±0.9, 11.6°S×161.8°E±0.1, h10km±2km, mb4.2/7, Error ellipse: s-maj=24.6km s-min=8.7km az=42.0*

IDC ***15*** *00:58:09.1±5.6, 11.57°S×161.64°E, h50km±44km, mb3.7/8, mb1 3.9/9, mb1mx3.6/39, mbtmp3.9/9, ML2.7/1, MS3.3/6, Ms1 3.3/6, ms1mx2.9/36, Error ellipse: s-maj=41.7km s-min=19.4km az=112.0*

ISC 15 00:58:06.5±0.7, 11.64S±0.09×161.82E±0.10, h35km, n33, σ1s08/23, mb4.0/11, MS3.5/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HNR	**Honiara**	**2.86**	**320**	P		**Pn**	**00 58 50.6**	**+0.9**
	1.2nm,0.3s,baz=196,slow=19,SNR=1.4							
HNR				S		**Sn**	**00 59 22.1**	**-0.8**
	23nm,0.3s,baz=198,slow=15,SNR=2.4							
HNR				LR		LR	01 00 06.3	
	comp=Z,133nm,19.0s,baz=142,slow=43							
HNR	**Honiara**	**2.86**	**320**			**Pn**	**00 58 49.7**	**0.0**
DZM	**Mont Dzumac**	**11.28**	**158**	LR		LR	01 04 21.7	
	comp=Z,123nm,18.1s,baz=358,slow=33							
DZM	**Mont Dzumac**	**11.28**	**158**	Pn		**Pn**	**01 00 44.9**	**-0.5**
CTA	**Charters Tower**	**17.16**	**239**	P		**P**	**01 02 06.6**	**+1.5**
	0.3nm,0.3s,baz=62,slow=10,SNR=3.0							
FUNA	**Funafuti**	**17.39**	**81**	Pn		**Pn**	**01 02 04.9**	**-1.7**
COEN	**Coen**	**18.33**	**261**			**P**	**01 02 15.8**	**-2.2**
COEN				IAmb		IAmb	01 02 17.3	
	comp=Z,8.7nm,1.0s							
STKA	**Stephens Creek**	**27.45**	**220**	P		**P**	**01 03 49.5**	**+0.2**
	comp=Z,2.7nm,0.8s,baz=11,slow=15,SNR=4.4							
STKA				LR		LR	01 13 58.1	
	comp=Z,123nm,18.9s,baz=27,slow=35							
WB2	**Warramunga Arr**	**27.66**	**249**	P		**P**	**01 03 52.0**	**+0.7**
WB2				IAmb		IAmb	01 03 58.4	
	comp=Z,7.0nm,1.1s							
WRA	**Warramunga Arr**	**27.67**	**249**	P		**P**	**01 03 51.5**	**0.0**
	comp=Z,1.8nm,0.8s,baz=78,slow=9.5,SNR=6.0							
ASAR	**Alice Springs**	**29.10**	**242**	P		**P**	**01 04 04.4**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=75,slow=9.5,SNR=22							
ASAR	**Alice Springs**	**29.10**	**242**	P		**P**	**01 04 02.1**	**-2.1**
H11S2	**WAKE ISLAND Hy**	**30.32**	**9**	T		T	01 35 05.4	
	baz=188,slow=76,SNR=38							
H11S3	**WAKE ISLAND Hy**	**30.32**	**9**	T		T	01 35 04.6	
	baz=188,slow=76,SNR=30							
H11S1	**WAKE ISLAND Hy**	**30.34**	**9**	T		T	01 35 06.5	
	baz=188,slow=76,SNR=33							
H11N1	**WAKE ISLAND Hy**	**31.55**	**9**	T		T	01 36 37.8	
	baz=188,slow=76,SNR=17							
H11N3	**WAKE ISLAND Hy**	**31.56**	**9**	T		T	01 36 38.3	
	baz=188,slow=76,SNR=22							
H11N2	**WAKE ISLAND Hy**	**31.57**	**9**	T		T	01 36 39.0	
	baz=188,slow=76,SNR=23							
BBOO	**Buckleboo**	**31.66**	**224**	P		**P**	**01 04 26.9**	**+0.2**
FITZ	**Fitzroy Crossi**	**35.51**	**255**	P		**P**	**01 05 00.6**	**+0.3**
FITZ				IAmb		IAmb	01 05 03.9	
	comp=Z,4.0nm,1.1s							
FORT	**Forrest**	**36.58**	**233**	P		**P**	**01 05 09.7**	**+0.4**
KSRS	**Korea Array**	**58.28**	**329**	LR		LR	01 31 17.4	
	comp=Z,25nm,19.5s,baz=147,slow=34							
PETK	**Petropavlovsk-**	**64.58**	**357**	LR		LR	01 34 02.5	
	comp=Z,14nm,18.7s,baz=59,slow=33							
SONM	**Songino Array**	**76.91**	**325**	P		**P**	**01 09 55.6**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=134,slow=4.5,SNR=6.2							
SONM	**Songino Array**	**76.91**	**325**	P		**P**	**01 09 54.0**	**-1.4**
ILAR	**Eielson Array**	**85.33**	**20**	P		**P**	**01 10 40.6**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=233,slow=4.4,SNR=2.8							
NVAR	**Mina Array Bea**	**89.36**	**51**	P		**P**	**01 11 01.8**	**+1.8**
	comp=Z,0.2nm,0.7s,baz=219,slow=7.0,SNR=2.6							
MKAR	**Makanchi Array**	**91.33**	**317**	P		**P**	**01 11 08.9**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=70,slow=4.7,SNR=1.8							
INK	**Inuvik**	**91.73**	**20**	LR		LR	01 47 40.6	
	comp=Z,324nm,20.7s,baz=126,slow=32							
NEW	**Newport**	**92.72**	**41**	LR		LR	01 49 14.0	
	comp=Z,63nm,18.9s,baz=164,slow=33							
AAK	**Ala-Archa**	**95.83**	**312**	P		**P**	**01 11 29.5**	**-0.2**
	comp=Z,2.6nm,0.3s,baz=124,slow=13,SNR=6.5							
YKA	**Yellowknife Ar**	**97.27**	**28**	P		**P**	**01 11 35.2**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=253,slow=4.4,SNR=5.6							
ESDC	**Sonseca Array**	**149.36**	**338**	PKPbc		**PKPbc**	**01 17 52.1**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=7.1,slow=3.6,SNR=3.8							

KRSC 15 01:10:48.2±1.7, 49.17N×156.38E, h65km±29km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PAU	**Pauzhetka**	**2.31**	**7**	*e*P		Pn	01 11 26.2	+2.3
PAU				*e*S		Sn	01 11 54.3	+3.1
KDTR	**Khodutka, Kamc**	**2.85**	**22**	*e*P		Pn	01 11 34.3	+3.0
KDTR				*e*S		Sn	01 12 08.5	+4.1
MIPR	**Malaya Ipel'ka**	**3.12**	**4**	*e*P		Pn	01 11 35.3	+0.4
ASAK	**Asacha**	**3.35**	**16**	*e*P		Pn	01 11 41.4	+3.2
ASAK				*e*S		Sn	01 12 20.9	+4.1
MTVR	**Mutnovka**	**3.51**	**18**	*e*P		Pn	01 11 43.7	+3.4
MTVR				*e*S		Sn	01 12 24.8	+4.2
RUS	**Russkaya**	**3.53**	**22**	*e*P		Pn	01 11 43.0	+2.5
RUS				*e*S		Sn	01 12 24.1	+3.1
GRL	**Gorelyy**	**3.55**	**17**	*e*P		Pn	01 11 44.7	+3.8
GRL				*e*S		Sn	01 12 26.4	+4.8
KRMR	**Karymshinskiy**	**3.83**	**16**	*e*P		Pn	01 11 48.1	+3.6
KRMR				*e*S		Sn	01 12 31.9	+3.7
UGLR	**Uglovaya**	**4.32**	**20**	*e*P		Pn	01 11 54.7	+3.2
AVH	**Avacha**	**4.36**	**19**	*e*P		Pn	01 11 55.8	+3.9
KOK	**Koryaka**	**4.36**	**18**	*e*P		Pn	01 11 56.2	+4.2
SMAR	**Somma**	**4.37**	**19**	*e*P		Pn	01 11 55.6	+3.4
KRER	**Koryakskii**	**4.40**	**19**	*e*P		Pn	01 11 56.0	+3.5
SDLR	**Sedlovina**	**4.40**	**20**	*e*P		Pn	01 11 55.1	+2.6
NLC	**Nalytchevo**	**4.42**	**24**	*e*S		Sn	01 12 44.2	+1.5
KRX	**Arik**	**4.43**	**18**	*e*P		Pn	01 11 55.6	+2.7
SPN	**Mys Shipunski**	**4.55**	**29**	*e*P		Pn	01 11 57.5	+3.1
SPN				*e*S		Sn	01 12 48.9	+2.9
TUMR	**Tumrok**	**6.54**	**19**	*e*P		Pn	01 12 26.4	+4.6
KMNR	**Kamenistaya**	**7.00**	**18**	*e*P		Pn	01 12 32.4	+4.4

IDC ***15*** *01:48:28.9±2.1, 13.81N×92.65W, h0km, mb3.6/4, mb1 4.0/9, mb1mx3.8/47, mbtmp3.7/9, ML3.7/5, Error ellipse: s-maj=40.7km s-min=21.4km az=15.0*

NEIC ***15*** *01:48:30.3±1.9, 14.00N±0.08×92.82W±0.04, h18km, 8km, mb4.2/8, Md3.9/14(MEX), Error ellipse: s-maj=12.5km s-min=3.0km az=203.0*

MEX ***15*** *01:48:33.7±0.6, 13.93N×92.70W, h16km±112km, MD3.9*

GCG ***15*** *01:48:42.6±1.5, 13.75N×91.76W, h0km±47km, MD4.0*

UCR ***15*** *01:49:49.8±11.0, 11.65N×86.91W, h0km±999km, mb4.2(NEIC)*

ISC 15 01:48:30.9±3.1, 14.03N±0.06×92.73W±0.06, h14km±21km, n43, σ1s97/53, mb4.0/7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
THIG		**0.99**	**27**	*e*P		**Pb**	**01 48 49.8**	**+0.1**
THIG				*e*S		**Sb**	**01 49 03.3**	**+0.7**
THIG		**0.99**	**27**			**Pb**	**01 48 49.8**	**+0.1**
THIG						**Sb**	**01 49 03.3**	**+0.7**
PCIG		**1.74**	**344**	*e*P		**Pn**	**01 49 00.9**	**+0.3**
PCIG				*i* S		**Sn**	**01 49 21.9**	**-0.6**
PCIG		**1.74**	**344**			**Pn**	**01 49 00.9**	**+0.3**
FUG	**Fuego 3**	**1.88**	**77**	*e*P		**Pn**	**01 49 03.5**	**+0.7**
FUG				*e*S		**Sn**	**01 49 21.8**	**-4.6**
PCG	**Pacaya**	**2.09**	**80**	*e*P		**Pn**	**01 49 06.9**	**+1.2**
IXG	**Ixpaco**	**2.23**	**86**	*e*P		**Pn**	**01 49 08.1**	**+0.5**
CCIG	**Comitan**	**2.32**	**14**	*e*P		**Pn**	**01 49 10.2**	**+1.4**
CCIG				*i* S		**Sn**	**01 49 37.5**	**+0.4**
CCIG	**Comitan**	**2.32**	**14**			**Pn**	**01 49 09.0**	**+0.2**
CCIG						**Sn**	**01 49 36.6**	**-0.6**
NBG	**Las Nubes**	**2.38**	**76**	*e*P		**Pb**	**01 49 13.2**	**-0.5**
APG	**El Apazote**	**2.40**	**66**	Pn		**Pn**	**01 49 11.7**	**+1.7**
	22nm,0.3s,baz=256,slow=3.9,SNR=144							
APG				Sn		**Sn**	**01 49 40.3**	**+1.0**
	63nm,0.3s,baz=93,slow=11,SNR=9.8							
TGIG		**2.76**	**352**	*e*P		**Pn**	**01 49 16.7**	**+1.9**
TGIG				*e*S		**Sn**	**01 49 49.4**	**+1.4**
TGIG		**2.76**	**352**			**Pn**	**01 49 16.7**	**+1.9**
TGIG						**Sn**	**01 49 49.4**	**+1.4**
MRL	**Marmol**	**3.13**	**70**	*e*P		**Pb**	**01 49 25.0**	**-1.5**
CMIG	**Matias Romero**	**3.69**	**326**	Pn		**Pn**	**01 49 29.3**	**+1.8**
	3.6nm,0.3s,baz=165,slow=13,SNR=25							
CMIG				Sn		**Sb**	**01 50 18.2**	**-2.2**
	16nm,0.3s,baz=123,slow=17,SNR=5.8							
CRIN	**San Cristobal**	**5.68**	**103**	*e*P		**Pb**	**01 50 12.4**	**+2.5**
CNGN	**Cerro Negro**	**6.07**	**104**	*e*P		**Pn**	**01 50 04.8**	**+4.6**
MATN	**Matagalpa**	**6.71**	**99**			**Pn**	**01 50 09.2**	**+0.1**
TEIG	**Tepich**	**7.49**	**34**	Pn		**Pn**	**01 50 20.9**	**+1.1**
	4.8nm,0.3s,baz=350,slow=0.0,SNR=7.1							
TEIG	**Tepich**	**7.49**	**34**			**Pn**	**01 50 20.6**	**+0.8**
ACON	**Acoyapa**	**7.64**	**105**	*e*P		**Pn**	**01 50 18.8**	**-3.1**
BUEV	**Buena Vista**	**7.84**	**113**	*e*P		**Pn**	**01 50 29.0**	**+4.4**
ESPN	**Las Esperanzas**	**8.41**	**102**	*e*P		**Pn**	**01 50 33.2**	**+0.8**
JTS	**Las Juntas de**	**8.46**	**115**	Pn		**Pn**	**01 50 30.2**	**-2.9**
	0.3nm,0.3s,baz=339,slow=8.1,SNR=2.5							
060A	**Indiantown**	**17.35**	**40**	Pn		**Pn**	**01 52 31.7**	**-1.0**
TXAR	**Lajitas Array**	**18.29**	**328**	P		**P**	**01 52 47.8**	**+3.2**
	0.0nm,0.3s,baz=153,slow=11,SNR=8.0							
TXAR	**Lajitas Array**	**18.29**	**328**	P		**Pn**	**01 52 41.0**	**-3.4**
TX31	**Lajitas Ar. Si**	**18.29**	**328**	P		**P**	**01 52 44.3**	**-0.3**
TX31				IAmb		IAmb	01 52 53.8	
	comp=Z,5.9nm,1.1s							
TX32	**Lajitas Array**	**18.29**	**328**	P		**Pn**	**01 52 41.0**	**-3.5**
MNTX	**Cornudas Mount**	**21.07**	**329**	P		**P**	**01 53 13.4**	**-1.4**
PDAR	**Pinedale Array**	**32.11**	**336**	P		**P**	**01 55 00.1**	**+2.2**
	comp=Z,0.1nm,0.5s,baz=145,slow=13,SNR=1.5							
PDAR	**Pinedale Array**	**32.11**	**336**	P		**P**	**01 54 56.4**	**-1.5**
PAGB	**Antelope Grade**	**32.83**	**316**	P		**P**	**01 55 02.2**	**-1.9**
PAGB				IAmb		IAmb	01 55 08.0	
	comp=Z,5.2nm,0.6s							
REDW	**Red Top Meadow**	**33.12**	**335**	P		**P**	**01 55 05.0**	**-1.9**
REDW				IAmb		IAmb	01 55 12.2	
	comp=Z,4.4nm,1.1s							
SNOW	**Snow King Moun**	**33.17**	**336**	P		**P**	**01 55 06.4**	**-0.8**
NVAR	**Mina Array Bea**	**33.21**	**322**	P		**P**	**01 55 11.1**	**+3.4**
	comp=Z,0.7nm,0.6s,baz=128,slow=8.7,SNR=7.5							
NVAR	**Mina Array Bea**	**33.21**	**322**	P		**P**	**01 55 06.9**	**-0.7**
MCMT	**McKenzie Canyo**	**35.15**	**335**	P		**P**	**01 55 22.9**	**-1.5**
F10A	**Beach Ranch, E**	**37.95**	**332**	P		**P**	**01 55 48.4**	**+0.3**
F10A				IAmb		IAmb	01 56 00.9	
	comp=Z,2.3nm,0.8s							
YKA	**Yellowknife Ar**	**50.84**	**347**	P		**P**	**01 57 31.7**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=148,slow=7.7,SNR=35							
ILAR	**Eielson Array**	**62.54**	**337**	P		**P**	**01 58 55.6**	**+1.7**
	comp=Z,0.5nm,0.9s,baz=130,slow=4.0,SNR=5.9							
ILAR	**Eielson Array**	**62.54**	**337**	P		**P**	**01 58 54.4**	**+0.5**
CMAR	**Chiang Mai Arr**	**145.73**	**340**	PKPbc		**PKPdf**	**02 08 10.1**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=31,slow=5.4,SNR=1.5							

NEIC ***15*** *01:48:52.8±1.4, 5.59S±0.07×81.0W±0.1, h50km±6km, mb4.6/87, ML5.2(ARE), Error ellipse: s-maj=15.8km s-min=9.4km az=66.0*

ARE ***15*** *01:48:54±1.5, 5.60S±0.07×81.02W±0.07, h47km±1km, Error ellipse: s-maj=13.8km s-min=9.9km az=229.0*

IDC ***15*** *01:48:56.6±0.6, 5.63S×80.92W, h34km±3km, mb4.0/18, mb1 4.2/21, mb1mx4.1/37, mbtmp4.2/21, ML4.0/3, MS3.9/24, Ms1 3.9/24, ms1mx3.8/38, Error ellipse: s-maj=21.6km s-min=11.0km az=53.0*

BJI ***15*** *01:48:59.0±0.0, 5.60S×80.90W, h40km, Ms5.3/1, Ms7 5.3/1*

VAO ***15*** *01:49:07.8±2.4, 5.41S×80.11W, h96km±18km, mb4.6*

ISC 15 01:48:55.6±0.4, 5.67S±0.06×80.94W±0.09, h35km, n179, σ2s37/109, mb4.5/47, MS4.1/22, 1C, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ATAH	**Atahualpa**	**2.92**	**120**	Pn		**Pn**	**01 49 44.3**	**+4.3**
	47nm,0.3s,baz=6.4,slow=8.6,SNR=480							
ATAH				Lg		Lg	01 50 31.2	
	245nm,0.3s,baz=333,slow=23,SNR=6.2							
ATAH				LR		LR	01 50 42.1	
	comp=Z,692nm,20.0s,baz=296,slow=36							
PAC1	**Pacto, Paraso**	**6.27**	**20**	*e*P		**Pn**	**01 50 26.3**	**+0.5**
CUSE	**Cuicocha Este**	**6.45**	**23**	*e*P		**Pn**	**01 50 30.5**	**+1.9**
NNA	**Nana**	**7.47**	**147**	Pn		**Pn**	**01 50 44.4**	**+2.1**
	7.2nm,0.3s,baz=284,slow=11,SNR=11							
NNA				Sn		**Sn**	**01 52 05.0**	**-0.9**
	13nm,0.3s,baz=199,slow=19,SNR=1.6							
NNA				Lg		Lg	01 52 37.9	
	4.9nm,0.3s,baz=149,slow=15,SNR=4.5							
NNA				LR		LR	01 54 22.1	
	comp=Z,555nm,18.1s,baz=314,slow=43							
NNA	**Nana**	**7.47**	**147**			**Pn**	**01 50 40.6**	**-1.7**
NNA						**Sn**	**01 52 04.7**	**-1.2**
PUAC	**Puerto Asis, P**	**7.56**	**35**	*e*P		**Pn**	**01 50 45.3**	**+1.8**
GCUF	**Volcan Galeras**	**7.73**	**28**	*e*P		**Pn**	**01 50 48.3**	**+2.2**
TUMC	**Tumaco**	**7.76**	**17**	Pn		**Pn**	**01 50 42.9**	**-3.3**
CRUC	**La Cruz**	**8.22**	**29**	*e*P		**Pn**	**01 50 54.5**	**+1.7**
PTLC	**Puerto Leguiza**	**8.44**	**47**	*e*P		Pn	01 50 49.9	-5.6
SOTA	**Rioblanco**	**8.88**	**29**	*e*P		**Pn**	**01 51 04.1**	**+2.2**
GR1C	**Gorgona, Isla**	**9.04**	**18**	*e*P		**Pn**	**01 51 06.1**	**+2.4**
PCON	**Cinco Dias**	**9.15**	**30**	*e*P		**Pn**	**01 51 08.2**	**+2.6**
GARC	**Garzon, Huila**	**9.51**	**35**	*e*P		**Pn**	**01 51 09.9**	**-0.5**
MACC	**Macarena, Meta**	**10.51**	**43**	*e*P		**Pn**	**01 51 22.2**	**-1.6**
PAYG	**Puerto Ayora**	**10.56**	**298**	Pn		Pn	01 51 20.4	-4.2
ORTC	**Ortega, Tolima**	**11.08**	**31**	*e*P		**Pn**	**01 51 30.1**	**-1.7**
GUY2C	**Guyana, Caldas**	**12.17**	**27**	*e*P		**Pn**	**01 51 46.7**	**-0.2**
ROSC	**El Rosal**	**12.35**	**32**	LR		LR	01 57 02.9	
	comp=Z,2μm,19.7s,baz=223,slow=40							
ROSC	**El Rosal**	**12.35**	**32**	Pn		Pn	01 51 44.2	-5.2
CBOC	**Ciudad Bolivar**	**12.47**	**23**	*e*P		**Pn**	**01 51 53.3**	**+2.6**
RUSC	**La Rusia**	**13.91**	**34**			**Pn**	**01 52 07.6**	**-3.1**
SMLC	**San Martn de**	**15.92**	**26**	*e*P		**P**	**01 52 41.6**	**+1.2**
JTS	**Las Juntas de**	**16.35**	**346**	Pn		**P**	**01 52 51.0**	**+5.9**
	0.2nm,0.3s,baz=276,slow=5.4,SNR=6.0							
JTS				LR		LR	01 57 58.5	
	comp=Z,498nm,19.2s,baz=226,slow=33							
JTS	**Las Juntas de**	**16.35**	**346**			**Pn**	**01 52 37.8**	**-4.8**
LPAZ	**La Paz**	**16.41**	**131**	Pn		**P**	**01 52 46.5**	**+0.1**
	0.5nm,0.3s,baz=305,slow=7.1,SNR=23							
LPAZ				LR		LR	01 59 24.8	
	comp=Z,428nm,20.7s,baz=300,slow=38							
LPAZ	**La Paz**	**16.41**	**131**			**Pn**	**01 52 41.4**	**-2.5**
LPAZ	**La Paz**	**16.41**	**131**	*e*P		**P**	**01 52 46.7**	**+0.2**
SJCC	**San Jacinto, C**	**16.49**	**20**	*e*P		**Pn**	**01 52 45.4**	**+1.0**
PB16	**IPOC Station P**	**16.83**	**139**	P		**Pn**	**01 52 47.9**	**-1.3**
MNMC	**Minye Minye**	**17.36**	**141**			**Pn**	**01 52 52.8**	**-2.7**
SDV	**Santo Domingo**	**17.74**	**35**	P		**P**	**01 53 02.0**	**+1.3**
	0.8nm,0.3s,baz=240,slow=10,SNR=5.7							
SDV				LR		LR	02 00 41.5	
	comp=Z,586nm,20.5s,baz=220,slow=40							
SDV	**Santo Domingo**	**17.74**	**35**	P		**Pn**	**01 52 56.3**	**-3.9**
SDV	**Santo Domingo**	**17.74**	**35**	*e*P		**Pn**	**01 53 00.4**	**+0.2**
PB11	**IPOC Station P**	**17.80**	**143**	P		**Pn**	**01 52 57.5**	**-3.3**
SAML	**Samuel**	**17.91**	**102**	P		**Pn**	**01 53 01.7**	**-0.4**
SAML				IAmb		IAmb	01 53 15.2	
	comp=Z,33nm,0.8s							
GO01	**Chusmiza**	**18.01**	**142**	P		**Pn**	**01 53 00.1**	**-3.7**
ACON	**Acoyapa**	**18.02**	**346**	P		**Pn**	**01 52 57.4**	**-6.0**
TA01	**Diego Aracena**	**18.13**	**146**	P		**Pn**	**01 53 05.3**	**+0.6**

PB01	**IPOC Station P**	**18.90**	**145**	P		**P**	**01 53 11.3**	**-2.1**
PB01				IAmb		IAmb	01 53 30.8	
	comp=Z,27nm,1.1s							
MATN	**Matagalpa**	**19.13**	**345**	P		**P**	**01 53 15.7**	**-0.2**
PB09	**IPOC Station P**	**19.63**	**146**	P		**P**	**01 53 18.5**	**-3.0**
PB09				IAmb		IAmb	01 53 34.7	
	comp=Z,30nm,0.9s							
LVC	**Limon Verde**	**20.47**	**147**	P		**P**	**01 53 28.8**	**-2.0**
LVC				IAmb		IAmb	01 53 42.8	
	comp=Z,19nm,0.9s							
LVC	**Limon Verde**	**20.47**	**147**	*e*P		Pn	01 53 36.2	+3.1
SIV	**San Ignacio**	**22.02**	**119**	P		**P**	**01 53 48.3**	**+1.1**
	comp=Z,14nm,1.0s,baz=305,slow=10.0,SNR=42							
SIV				LR		LR	02 03 22.5	
	comp=Z,809nm,18.7s,baz=294,slow=39							
GO02	**Mina Guanaco**	**22.23**	**152**	P		**P**	**01 53 47.9**	**-1.8**
GO02				IAmb		IAmb	01 54 06.9	
	comp=Z,26nm,0.9s							
PCRV	**Puerto La Cruz**	**22.62**	**46**	P		**P**	**01 53 55.9**	**+2.3**
	comp=Z,9.8nm,0.5s,baz=228,slow=3.5,SNR=7.8							
CLDB	**Colider**	**25.41**	**103**	*e*P		**P**	**01 54 20.1**	**-0.1**
AOPR	**Arecibo Observ**	**27.66**	**30**	P		**P**	**01 54 35.0**	**-5.4**
H03N2	**Juan Fernandez**	**27.70**	**176**	T		T	02 23 22.1	
	baz=355,slow=76,SNR=61							
H03N1	**Juan Fernandez**	**27.70**	**176**	T		T	02 23 23.0	
	baz=355,slow=76,SNR=56							
H03N3	**Juan Fernandez**	**27.71**	**176**	T		T	02 23 20.6	
	baz=355,slow=76,SNR=58							
SJG	**San Juan**	**27.77**	**31**	P		**P**	**01 54 35.2**	**-6.1**
GCPR	**Guaynabo City**	**27.97**	**31**	P		**P**	**01 54 37.6**	**-5.5**
CBYP	**Canovanas**	**28.06**	**32**	P		**P**	**01 54 38.6**	**-5.3**
MTP	**Monte Pirata**	**28.07**	**32**	P		**P**	**01 54 44.4**	**+0.4**
BBGH	**Gun Hill**	**28.29**	**49**	P		**P**	**01 54 46.0**	**0.0**
CFA	**Coronel Fontan**	**28.42**	**157**	P		**P**	**01 54 49.1**	**+2.0**
	comp=Z,2.2nm,0.8s,baz=312,slow=5.6,SNR=1.9							
CFA				LR		LR	02 05 04.3	
	comp=Z,168nm,20.2s,baz=354,slow=34							
ROC1	**El Roble**	**28.70**	**162**	P		P	01 54 45.9	-3.9
MDP	**Montagnes des**	**30.21**	**70**	LR		LR	02 07 57.9	
	comp=Z,818nm,18.7s,baz=256,slow=38							
ARAG	**Araguaiana, MT**	**30.27**	**112**	*e*P		**P**	**01 55 04.0**	**+0.4**
CPUP	**Villa Florida**	**30.50**	**135**	P		**P**	**01 55 07.2**	**+1.6**
	comp=Z,2.2nm,1.0s,baz=322,slow=14,SNR=5.0							
CPUP				LR		LR	02 09 46.0	
	comp=Z,190nm,19.1s,baz=302,slow=41							
CPUP	**Villa Florida**	**30.50**	**135**	P		P	01 55 01.7	-3.9
SMTB	**

F10A	**Beach Ranch, E**	**60.71**	**332**	P	P	01 58 59.3	-4.4	
G08A	**Pilot Rock**	**61.05**	**330**	P	P	01 59 01.2	-4.8	
E09A	**Wood Farm, Sta**	**61.54**	**332**	P	P	01 59 04.2	-5.0	
E09A				IAmb	IAmb	01 59 22.9		
	comp=Z,3.9nm,0.6s							
NEW	**Newport**	**62.37**	**334**	P	**P**	**01 59 15.9**	**+1.2**	
	comp=Z,1.8nm,0.6s,baz=121,slow=4.1,SNR=3.1							
FCC	**Fort Churchill**	**65.08**	**352**	P	P	01 59 27.7	-4.6	
FCC				IAmb	IAmb	01 59 46.2		
	comp=Z,6.6nm,0.9s							
PPT	**Papeete**	**67.96**	**253**	LR	LR	02 22 22.0		
	comp=Z,188nm,18.1s,baz=114,slow=30							
PPT2	**Papeete2**	**67.96**	**253**	*e*LR	LR	02 20 33.5		
	comp=Z,200nm,25.0s							
TBI	**Tubuai**	**68.06**	**247**	*e*LR	LR	02 20 23.8		
	comp=Z,125nm,26.8s							
TBI	**Tubuai**	**68.06**	**247**	*e*T	T	03 13 32.6		
	comp=Z,4.9nm,0.2s							
YKA	**Yellowknife Ar**	**72.68**	**344**	P	**P**	**02 00 19.2**	**-0.3**	
	comp=Z,1.0nm,0.9s,baz=135,slow=6.6,SNR=8.8							
YKA				pP	**pP**	**02 00 29.2**	**-1.1**	
	comp=Z,3.1nm,1.2s,baz=135,slow=6.1,SNR=5.2							
DBIC	**Dimbokro**	**76.92**	**82**	P	**P**	**02 00 47.3**	**+2.2**	
	comp=Z,3.8nm,0.9s,baz=294,slow=2.7,SNR=4.7							
DBIC				LR	LR	02 33 12.5		
	comp=Z,163nm,19.6s,baz=244,slow=34							
DBIC	**Dimbokro**	**76.92**	**82**	P	P	02 00 39.9	-5.1	
DBIC				IAmb	IAmb	02 00 47.6		
	comp=Z,7.1nm,1.1s							
RAR	**Rarotonga**	**77.58**	**250**	LR	LR	02 25 53.1		
	comp=Z,139nm,21.1s,baz=82,slow=29							
VNA3	**Neumayer Olymp**	**78.69**	**162**	P	**P**	**02 00 54.9**	**+1.0**	
VNA1	**Neumayer--Stat**	**78.98**	**161**	P	**P**	**02 00 57.0**	**+1.6**	
VNA2	**Neumayer--Watz**	**79.32**	**161**	P	**P**	**02 00 58.2**	**+0.9**	
	baz=297,slow=6.5							
SNAA	**Sanae**	**80.91**	**162**	P	**P**	**02 01 06.8**	**+0.8**	
SNAA	**Sanae**	**80.91**	**162**	P	**P**	**02 01 06.2**	**+0.3**	
SNAA				IAmb	IAmb	02 01 07.8		
	comp=Z,9.5nm,1.0s							
INK	**Inuvik**	**82.31**	**343**	IAmb	IAmb	02 01 28.0		
	comp=Z,6.3nm,1.1s							
BCAR	**Beaver Creek A**	**82.33**	**336**	P	P	02 01 09.7	-3.8	
SCRK	**Sand Creek**	**83.63**	**337**	IAmb	IAmb	02 01 33.7		
	comp=Z,4.4nm,1.2s							
ESDC	**Sonseca Array**	**83.64**	**49**	P	**P**	**02 01 22.3**	**+1.5**	
	comp=Z,0.7nm,0.9s,baz=221,slow=29,SNR=5.7							
ESDC				pP	**pP**	**02 01 32.4**	**+0.4**	
	comp=Z,2.8nm,1.1s,baz=280,slow=4.3,SNR=6.5							
ESDC				LR	LR	02 36 37.4		
	comp=Z,37nm,19.3s,baz=320,slow=34							
TOA0	**Torodi Ar. Sit**	**84.14**	**76**	P	P	02 01 18.8	-5.1	
TOA0				IAmb	IAmb	02 01 37.3		
	comp=Z,7.8nm,1.1s							
TORD	**Torodi Ar. Bea**	**84.14**	**76**	P	**P**	**02 01 24.1**	**+0.2**	
	comp=Z,2.3nm,1.0s,baz=279,slow=5.2,SNR=15							
TORD				pP	**pP**	**02 01 35.8**	**+0.9**	
	comp=Z,3.4nm,0.9s,baz=295,slow=4.7,SNR=12							
TORD				LR	LR	02 38 52.4		
	comp=Z,210nm,18.5s,baz=260,slow=36							
TORD	**Torodi Ar. Bea**	**84.14**	**76**	P	P	02 01 19.8	-4.1	
QSPA	**South Pole Qui**	**84.42**	**180**	P	**P**	**02 01 21.0**	**-3.4**	
ILAR	**Eielson Array**	**85.11**	**337**	P	**P**	**02 01 27.5**	**-0.2**	
	comp=Z,0.5nm,0.9s,baz=158,slow=2.2,SNR=6.2							
ILAR				pP	**pP**	**02 01 40.0**	**+1.2**	
	comp=Z,1.1nm,1.1s,baz=148,slow=3.4,SNR=5.7							
ILAR				LR	LR	02 41 14.0		
	comp=Z,75nm,19.1s,baz=118,slow=37							
ILAR	**Eielson Array**	**85.11**	**337**	P	P	02 01 23.0	-4.7	
BMAR	**Burnt Mountain**	**85.40**	**340**	P	P	02 01 24.7	-4.5	
VNDA	**Vanda**	**90.19**	**191**	P	**P**	**02 01 53.4**	**+1.4**	
	comp=Z,1.1nm,0.8s,baz=84,slow=3.9,SNR=8.0							
VNDA				LR	LR	02 33 07.2		
	comp=Z,71nm,18.6s,baz=106,slow=29							
SYO	**Syowa Base**	**95.20**	**162**↑	*e*X	P	02 02 06.6	-8.6	
NOA	**NORSAR Array B**	**95.96**	**29**	LR	LR	02 43 15.8		
	comp=Z,15nm,20.8s,baz=275,slow=34							
GERES	**GERESS Array B**	**97.29**	**42**	LR	LR	02 44 20.8		
	comp=Z,17nm,20.0s,baz=288,slow=34							
VRAC	**Vranov**	**99.18**	**41**	LR	LR	02 46 40.4		
	comp=Z,25nm,19.1s,baz=270,slow=35							
H11N3	**WAKE ISLAND Hy**	**12.73**	**289**	T	T	04 09 52.1		
	baz=80,slow=73,SNR=58							
H11N2	**WAKE ISLAND Hy**	**12.74**	**289**	T	T	04 09 44.9		
	baz=80,slow=73,SNR=58							
H11N1	**WAKE ISLAND Hy**	**12.74**	**289**	T	T	04 09 45.6		
	baz=80,slow=73,SNR=51							
H11S2	**WAKE ISLAND Hy**	**12.96**	**288**	T	T	04 09 58.5		
	baz=97,slow=71,SNR=126							
H11S1	**WAKE ISLAND Hy**	**12.96**	**288**	T	T	04 10 02.1		
	baz=97,slow=71,SNR=91							
H11S3	**WAKE ISLAND Hy**	**12.98**	**288**	T	T	04 10 08.3		
	baz=97,slow=71,SNR=68							
ZALV	**Zalesovo Beam**	**130.49**	**11**	PKP	**PKPdf**	**02 08 02.4**	**-0.1**	
	comp=Z,0.4nm,0.3s,baz=310,slow=37,SNR=2.4							
ZALV				pPKP	**pPKPdf**	**02 08 13.1**	**-0.9**	
	comp=Z,1.6nm,0.9s,baz=336,slow=3.3,SNR=3.0							
ZALV				SKPbc	**SKPab**	**02 11 22.1**	**-1.3**	
	comp=Z,0.3nm,0.3s,baz=320,slow=5.8,SNR=3.7							
ZALV	**Zalesovo Beam**	**130.49**	**11**		**PKPdf**	**02 07 58.8**	**-3.7**	
ASAR	**Alice Springs**	**135.21**	**228**	PKP	**PKPdf**	**02 08 12.1**	**-0.4**	
	comp=Z,1.5nm,0.9s,baz=106,slow=2.1,SNR=11							
ASAR	**Alice Springs**	**135.21**	**228**		**PKPdf**	**02 08 07.5**	**-4.9**	
MKAR	**Makanchi Array**	**136.55**	**17**	PKP	**PKPdf**	**02 08 13.9**	**-0.3**	
	comp=Z,0.6nm,1.0s,baz=354,slow=4.9,SNR=3.9							
MKAR	**Makanchi Array**	**136.55**	**17**		**PKPdf**	**02 08 08.3**	**-5.9**	
WRA	**Warramunga Arr**	**136.97**	**233**	PKP	**PKPdf**	**02 08 16.2**	**+0.4**	
	comp=Z,0.8nm,0.3s,baz=113,slow=2.4,SNR=12							
WRA	**Warramunga Arr**	**136.97**	**233**		**PKPdf**	**02 08 11.0**	**-4.7**	
SONM	**Songino Array**	**137.52**	**353**	PKP	**PKPdf**	**02 08 16.6**	**+0.4**	
	comp=Z,0.2nm,0.3s,baz=207,slow=0.3,SNR=2.5							
SONM	**Songino Array**	**137.52**	**353**		**PKPdf**	**02 08 11.4**	**-4.7**	
WMQ	**Urumqi**	**140.70**	**13**	*e*PKP	**PKPdf**	**02 08 21.4**	**-0.6**	
WMQ				LR	LR			
	comp=Z,480nm,29.2s							
HHC	**Hu-ho-hao-te**	**143.22**	**344**	*e*PKP	**PKPdf**	**02 08 27.4**	**+0.8**	
GTA	**Gaotai**	**146.40**	**359**	*e*PKPbc	**PKPbc**	**02 08 34.3**	**+0.9**	
NJ2	**Nanjing**	**147.88**	**327**	*e*PKPbc	**PKPdf**	**02 08 35.4**	**+0.7**	
LZH	**Lanzhou**	**149.41**	**352**	*e*PKPbc	**PKPdf**	**02 08 36.8**	**-0.5**	

IDC ***15*** *01:54:02.3±1.9, 13°.90N×145°.32E, h0km, mb3.6/4, mb1 4.0/4, mb1mx3.6/31, mbtmp3.6/4, Error ellipse: s-maj=412.2km s-min=25.5km az=111.0*
NEIC ***15*** *01:54:16.4±1.7, 13°.9N±0°.2×145°.2E±0°.3, h120km±8km, mb4.4/6, Error ellipse: s-maj=43.4km s-min=18.3km az=108.0*
ISC 15 01:54:14.1±1.0, 13°.8N±0°.1×145°.6E±0°.2, h100km, n18, σ1s44/12, mb4.2/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.75**	**251**	Pn	Pn	01 54 34.4	+2.4
GUMO				Sn	**Sn**	**01 54 47.1**	**+1.8**
H11S3	**WAKE ISLAND Hy**	**20.77**	**74**	T	T	02 20 19.9	
	baz=263,slow=74,SNR=10						
H11S1	**WAKE ISLAND Hy**	**20.79**	**74**	T	T	02 20 20.9	
	baz=263,slow=74,SNR=6.5						
H11S2	**WAKE ISLAND Hy**	**20.79**	**74**	T	T	02 20 19.2	
	baz=263,slow=74,SNR=7.1						
H11N1	**WAKE ISLAND Hy**	**21.20**	**71**	T	T	02 22 13.3	
	baz=257,slow=75,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	**21.21**	**71**	T	T	02 22 13.1	
	baz=257,slow=75,SNR=4.5						
H11N3	**WAKE ISLAND Hy**	**21.22**	**71**	T	T	02 22 14.7	
	baz=257,slow=75,SNR=5.4						
MTN	**Manton Dam**	**30.13**	**209**	P	**P**	**02 00 12.9**	**-1.7**
MTN				IAmb	IAmb	02 00 20.4	
	comp=Z,13nm,1.1s						
YSS	**Yuzh-Sakhalins**	**33.11**	**356**	P	**P**	**02 00 38.3**	**-2.1**
MDJ	**Mudanjiang**	**33.58**	**339**	P	**P**	**02 00 44.1**	**-0.4**
MDJ				IAmb	IAmb	02 00 56.0	
	comp=Z,4.1nm,0.5s						
WB0	**Warramunga Arr**	**35.16**	**199**	P	**P**	**02 00 57.5**	**-0.9**
WB0				IAmb	IAmb	02 01 12.2	
	comp=Z,4.6nm,1.0s						
WB2	**Warramunga Arr**	**35.34**	**198**	P	**P**	**02 00 59.9**	**-0.1**
WRA	**Warramunga Arr**	**35.34**	**199**	P	**P**	**02 00 59.2**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=21,slow=9.3,SNR=1.4						
FITZ	**Fitzroy Crossi**	**37.34**	**212**	P	**P**	**02 01 16.2**	**-0.8**
FITZ				IAmb	IAmb	02 01 17.1	
	comp=Z,3.7nm,1.1s						
ASAR	**Alice Springs**	**38.98**	**197**	P	**P**	**02 01 30.5**	**-0.3**
	comp=Z,0.1nm,0.4s,baz=21,slow=14,SNR=2.5						
ASAR	**Alice Springs**	**38.98**	**197**	P	**P**	**02 01 30.1**	**-0.7**
ILAR	**Eielson Array**	**68.05**	**25**	P	**P**	**02 05 03.3**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=250,slow=5.9,SNR=7.4						
YKA	**Yellowknife Ar**	**82.32**	**27**	P	**P**	**02 06 26.6**	**+2.2**
	comp=Z,0.2nm,0.4s,baz=286,slow=4.7,SNR=4.5						

IDC ***15*** *02:12:29.8±4.7, 13°.97N×92°.67W, h0km, mb3.6/3, mb1 4.0/7, mb1mx3.7/37, mbtmp3.7/7, ML3.7/4, MS2.5/2, Ms1 2.5/2, ms1mx2.3/34, Error ellipse: s-maj=85.1km s-min=24.5km az=179.0*
MEX ***15*** *02:12:32.5±0.4, 13°.88N×92°.62W, h14km±29km, MD4.0*
GCG ***15*** *02:12:33.0±0.8, 14°.10N×92°.75W, h35km±999km, MD4.1*
ISC 15 02:12:32.0±2.3, 14°.09N±0°.08×92°.68W±0°.04, h7km±13km, n20, σ0s86/35, mb3.6/3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.91**	**26**	*e*P	**Pb**	**02 12 49.4**	**-0.7**
THIG				*e*P	**Pg**	**02 12 49.5**	**+0.1**
THIG				*e*S	**Sb**	**02 13 02.9**	**+0.6**
THIG				*e*S	**Sb**	**02 13 03.0**	**+0.6**
PCIG		**1.69**	**342**	*e*P	**Pn**	**02 13 00.7**	**-1.2**
PCIG				*i* S	**Sn**	**02 13 23.1**	**-0.7**
FUG	**Fuego 3**	**1.82**	**79**	*e*P	**Pn**	**02 13 03.4**	**-0.5**
FUG				*e*S	**Sn**	**02 13 26.5**	**-0.8**
PCG	**Pacaya**	**2.03**	**81**	*e*P	**Pn**	**02 13 06.9**	**-0.1**
PCG				*e*S	**Sn**	**02 13 33.2**	**+0.5**
IXG	**Ixpaco**	**2.17**	**88**	*e*P	**Pn**	**02 13 08.1**	**-0.7**
CCIG	**Comitan**	**2.24**	**13**	*i* P	**Pn**	**02 13 09.0**	**-0.7**
CCIG				*i* S	**Sn**	**02 13 38.1**	**+0.3**
NBG	**Las Nubes**	**2.31**	**77**	*e*P	**Pn**	**02 13 12.4**	**+1.5**
APG	**El Apazote**	**2.33**	**67**	Pn	**Pn**	**02 13 11.3**	**+0.4**
	15nm,0.3s,baz=221,slow=9.3,SNR=117						
APG				Sn	**Sn**	**02 13 40.7**	**+0.7**
	33nm,0.3s,baz=318,slow=22,SNR=9.0						
APG				LR	LR	02 14 19.6	
	comp=Z,88nm,21.8s,baz=324,slow=46						
TGIG		**2.71**	**351**	*e*P	**Pn**	**02 13 16.6**	**+0.6**
TGIG				*e*S	**Sn**	**02 13 50.1**	**+1.1**
CMIG	**Matias Romero**	**3.66**	**325**	Pn	**Pn**	**02 13 28.9**	**-0.2**
	3.8nm,0.3s,baz=140,slow=12,SNR=34						
CMIG				Sn	**Sn**	**02 14 11.3**	**-1.3**
	6.8nm,0.3s,baz=145,slow=9.3,SNR=4.7						
YOIG	**Yosondua**	**5.44**	**301**	*e*P	**Pn**	**02 13 54.0**	**+0.3**
YOIG				*e*S	**Sn**	**02 14 56.0**	**-0.8**
TOIG	**Toxpalan**	**5.80**	**314**	*i* P	**Pn**	**02 13 59.1**	**+0.5**
TOIG				*i* S	**Sn**	**02 15 06.4**	**+0.9**
TXIG	**Tlaxiaco**	**5.82**	**303**	*e*S	**Sn**	**02 15 06.0**	**-0.3**
HLIG	**Huajuapan de L**	**6.17**	**308**	*i* P	**Pn**	**02 14 04.8**	**+0.9**
HLIG				*i* P	**Pn**	**02 14 04.8**	**+0.9**
HLIG				*e*S	**Sn**	**02 15 15.5**	**+0.6**
FTIG	**Fresnillo de T**	**6.47**	**307**	*e*P	**Pn**	**02 14 08.1**	**+0.2**
FTIG				*e*S	**Sn**	**02 15 23.3**	**+1.2**
TEIG	**Tepich**	**7.41**	**34**	Pn	**Pn**	**02 14 20.4**	**-0.3**
	3.4nm,0.3s,baz=181,slow=0.0,SNR=23						
TEIG				LR	LR	02 17 45.3	
	comp=Z,56nm,20.5s,baz=36,slow=42						
TXAR	**Lajitas Array**	**18.26**	**328**	P	**P**	**02 16 47.8**	**+1.5**
	0.0nm,0.3s,baz=156,slow=14,SNR=6.1						
NVAR	**Mina Array Bea**	**33.19**	**322**	P	**P**	**02 19 10.8**	**+1.0**
	0.5nm,0.6s,baz=136,slow=8.5,SNR=5.2						
YKA	**Yellowknife Ar**	**50.79**	**347**	P	**P**	**02 21 31.5**	**-1.2**
	1.3nm,0.6s,baz=148,slow=7.5,SNR=19						
ILAR	**Eielson Array**	**62.50**	**337**	P	**P**	**02 22 54.9**	**-1.1**
	0.2nm,0.6s,baz=138,slow=4.1,SNR=4.1						

MEX ***15*** *02:16:38.2±0.5, 13°.82N×92°.60W, h16km±151km, MD3.8*
GCG ***15*** *02:16:40.3±0.5, 14°.39N×92°.69W, h35km±999km, MD3.8*
ISC 15 02:16:37.2±4.0, 14°.1N±0°.1×92°.67W±0°.10, h4km±27km, n7, σ0s84/14, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.93**	**25**	*e*P	**Pb**	**02 16 55.5**	**-0.3**
THIG				*e*S	**Sb**	**02 17 08.8**	**+0.3**
THIG				*e*S	**Sn**	**02 17 09.4**	**-1.3**
PCIG		**1.72**	**342**	*e*P	**Pn**	**02 17 07.1**	**-0.7**
PCIG				*e*S	**Sn**	**02 17 29.7**	**-0.6**
FUG	**Fuego 3**	**1.81**	**78**	*e*P	**Pn**	**02 17 09.2**	**-0.1**
FUG				*e*S	**Sn**	**02 17 31.8**	**-1.1**
PCG	**Pacaya**	**2.03**	**80**	*e*P	**Pn**	**02 17 13.0**	**+0.6**
PCG				*e*S	**Sn**	**02 17 38.3**	**0.0**
IXG	**Ixpaco**	**2.16**	**87**	*e*P	**Pn**	**02 17 14.8**	**+0.6**
CCIG	**Comitan**	**2.27**	**13**	*i* P	**Pn**	**02 17 15.9**	**+0.3**
CCIG				*i* S	**Sn**	**02 17 45.0**	**+0.9**
TGIG		**2.73**	**351**	*i* P	**Pn**	**02 17 22.7**	**+0.7**
TGIG				*e*S	**Sn**	**02 17 56.5**	**+1.0**

IDC ***15*** *02:51:05.5±1.0, 7°.86N×127°.28E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/36, mbtmp3.8/6, MS3.1/2, Ms1 3.2/2, ms1mx2.6/43, Error ellipse: s-maj=26.8km s-min=19.4km az=89.0*
MAN ***15*** *02:51:06.1, 7°.54N×127°.47E, h15km, mb5.2, ML4.2, MS4.4*
NEIC ***15*** *02:51:10.2±1.2, 7°.79N±0°.10×127°.2E±0°.1, h44km±9km, mb4.2/8, Error ellipse: s-maj=15.1km s-min=13.2km az=51.0*
ISC 15 02:51:06.0±3.8, 7°.64N±0°.06×127°.40E±0°.06, h9km±24km, n33, σ1s68/38, mb4.2/10, 1C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.32**	**239**	*e*P	**Pn**	**02 51 29.0**	**-1.6**
MATI				*e*S	**Sn**	**02 51 47.8**	**-0.6**
DAV	**Davao City (W)**	**1.89**	**253**	Pn	**Pn**	**02 51 39.7**	**+1.3**
	50nm,0.3s,baz=67,slow=4.6,SNR=14						
DAV				Sn	**Sb**	**02 52 04.4**	**+0.1**
	156nm,0.3s,baz=259,slow=16,SNR=8.7						
DAV				LR	LR	02 52 33.6	
	comp=Z,1μm,20.6s,baz=96,slow=47						
DAV	**Davao City (W)**	**1.89**	**253**		**Pn**	**02 51 37.7**	**-0.7**
DAV					**Sn**	**02 51 59.5**	**-2.8**
DMPH	**Davao City--Mi**	**1.95**	**254**‖	*e*P	**Pb**	**02 51 40.8**	**-0.9**
DMPH				*e*S	**Sn**	**02 52 04.9**	**+1.0**
BUTP	**Butuan**	**2.20**	**307**	*e*P	**Pn**	**02 51 43.2**	**+0.5**
BUTP				*e*S	**Sb**	**02 52 15.3**	**+2.0**
DDMP	**Don Marcelino,**	**2.26**	**228**	*e*P	**Pn**	**02 51 44.2**	**+0.6**
DDMP				*e*S	**Sn**	**02 52 11.1**	**-0.5**
BUKP	**Musuan**	**2.33**	**276**	*e*P	**Pn**	**02 51 44.7**	**+0.2**
BUKP				*e*S	**Sn**	**02 52 16.3**	**+3.1**
KCP	**Kidapawan**	**2.37**	**255**	*e*P	**Pn**	**02 51 46.2**	**+1.1**
KCP				*e*S	**Sb**	**02 52 19.8**	**+1.5**
CGP	**Cagayan de Oro**	**2.80**	**287**	*e*P	**Pn**	**02 51 54.0**	**+3.0**
CGP				*e*S	**Sn**	**02 52 30.1**	**-0.4**
SKMP	**Bagumbayan, Su**	**3.04**	**249**	*e*P	**Pn**	**02 51 54.5**	**+0.1**
CTBH	**Cotabato--PC H**	**3.15**	**263**	*i* P	**Pn**	**02 51 57.2**	**+1.4**
TBP	**Tagbilaran**	**4.05**	**301**	*i* P	**Pn**	**02 52 08.3**	**+0.2**
TNTI	**Ternate**	**6.82**	**180**	Pn	Pn	02 52 50.0	+3.7
KNRA	**Kununurra**	**23.20**	**177**	P	**P**	**02 56 15.1**	**+1.7**
KNRA				IAmb	IAmb	02 56 24.1	
	comp=Z,13nm,0.9s						
FITZ	**Fitzroy Crossi**	**25.63**	**184**	P	**P**	**02 56 38.3**	**+2.3**
	comp=Z,1.4nm,0.4s,baz=342,slow=5.8,SNR=12						
FITZ	**Fitzroy Crossi**	**25.63**	**184**	P	**P**	**02 56 37.5**	**+1.5**
PMG	**Port Moresby**	**25.97**	**130**	LR	LR	03 09 08.2	
	comp=Z,47nm,19.0s,baz=228,slow=41						
WB0	**Warramunga Arr**	**28.09**	**166**	P	**P**	**02 57 00.1**	**+1.9**
WRA	**Warramunga Arr**	**28.25**	**166**	P	**P**	**02 57 00.9**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=349,slow=9.3,SNR=1.8						
WB2	**Warramunga Arr**	**28.25**	**166**	P	**P**	**02 56 59.0**	**-0.6**
WB2				IAmb	IAmb	02 57 15.2	
	comp=Z,5.5nm,1.1s						
CMAR	**Chiang Mai Arr**	**29.68**	**294**	LR	LR	03 08 51.6	
	comp=Z,31nm,19.1s,baz=285,slow=36						
XAN	**Xi'an**	**31.32**	**330**	P	**P**	**02 57 23.6**	**-3.2**
XAN				IAmb	IAmb	02 57 26.9	
	comp=Z,5.6nm,1.2s						
ASAR	**Alice Springs**	**31.76**	**169**	P	P	02 57 35.1	+4.4
	comp=Z,0.2nm,0.3s,baz=343,slow=6.9,SNR=2.5						
ASAR	**Alice Springs**	**31.76**	**169**	P	**P**	**02 57 32.2**	**+1.5**
FORT	**Forrest**	**38.20**	**179**	P	**P**	**02 58 27.5**	**+1.3**
EIDS	**Eidsvold**	**40.10**	**146**	P	**P**	**02 59 43.2**	**+1.1**
MK31	**Makanchi Array**	**54.79**	**323**	P	**P**	**03 00 33.9**	**-2.4**
MK31				IAmb	IAmb	03 00 36.3	
	comp=Z,1.8nm,0.8s						
MK31				pwP		03 00 44.0	-3.4
MKAR	**Makanchi Array**	**54.79**	**323**	P	**P**	**03 00 34.4**	**-1.8**
	comp=Z,1.8nm,0.7s,baz=121,slow=7.8,SNR=15						
MKAR	**Makanchi Array**	**54.79**	**323**	P	**P**	**03 00 34.6**	**-1.6**
ZALV	**Zalesovo Beam**	**57.45**	**332**	P	**P**	**03 00 54.0**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=96,slow=5.8,SNR=1.6						
ZALV	**Zalesovo Beam**	**57.45**	**332**	P	**P**	**03 00 53.1**	**-2.0**
ILAR	**Eielson Array**	**81.31**	**26**	P	**P**	**03 03 24.1**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=250,slow=4.6,SNR=7.4						
ILAR	**Eielson Array**	**81.31**	**26**	P	**P**	**03 03 21.4**	**-1.2**

IDC ***15*** *03:42:21.6±2.2, 21°.28S×69°.96W, h0km, mb3.8/2, mb1 4.1/4, mb1mx3.6/31, mbtmp3.9/4, ML3.8/2, MS2.8/1, Ms1 2.7/1, ms1mx2.2/23, Error ellipse: s-maj=59.1km s-min=48.6km az=166.0*
GUC ***15*** *03:42:34.3±0.7, 20°.35S×69°.86W, h53km±3km, ML3.6*
ISC 15 03:42:33.2±0.9, 20°.35S±0°.03×69°.89W±0°.05, h53km±7km, n36, σ1s46/44, 6C-7D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.24**	**289**⇑	*i*P	**Pn**	**03 42 42.7**	**+0.5**
TA02				*i* S	**Sn**	**03 42 49.4**	**+0.8**
TA01	**Diego Aracena**	**0.35**	**232**	*i* P	**Pn**	**03 42 43.1**	**0.0**
TA01				*i* S	**Sn**	**03 42 50.7**	**+0.5**
TA01				IAML		03 42 54.2	
	comp=N,3μm,0.3s						
PB11	**IPOC Station P**	**0.62**	**20**⇓	*i*P	**Pn**	**03 42 46.7**	**+0.3**
PB11				*e*S	**Sn**	**03 42 56.5**	**+0.6**
PB11				IAML		03 42 57.7	
	comp=E,8μm,0.5s						
PB08	**IPOC Station P**	**0.72**	**73**⇓	*i*P	**Pn**	**03 42 48.1**	**+0.4**
PB08				*i* S	**Sn**	**03 42 59.0**	**+0.7**
PB08				IAML		03 42 59.2	
	comp=N,2μm,0.1s						
PSGC	**Pisagua**	**0.78**	**344**	*i* P	**Pn**	**03 42 48.4**	**+0.1**
PSGC				*i* S	**Sn**	**03 42 59.4**	**+0.2**
PSGC				IAML		03 43 01.0	
	comp=E,2μm,0.3s						
PB01	**IPOC Station P**	**0.79**	**152**⇓	*i*P	**Pn**	**03 42 48.1**	**-0.3**
PB01				*i* S	**Sn**	**03 42 58.6**	**-0.8**
PB01				IAML		03 42 59.5	
	comp=N,4μm,0.4s						
GO01	**Chusmiza**	**0.94**	**44**⇓	*i*P	**Pn**	**03 42 51.2**	**+0.5**
GO01				*i* S	**Sn**	**03 43 04.8**	**+1.3**
PB02	**IPOC Station P**	**0.96**	**180**⇑	*i*P	**Pn**	**03 42 50.8**	**+0.1**
PB02				*i* S	**Sn**	**03 43 04.2**	**+0.6**
PB02				IAML		03 43 05.3	
	comp=N,6μm,0.5s						
MNMC	**Minye Minye**	**1.24**	**13**⇓	*i*P	**Pn**	**03 42 55.3**	**+0.7**
MNMC				*i* S	**Sn**	**03 43 12.0**	**+1.5**
MNMC				IAML		03 43 17.3	
	comp=E,3μm,0.3s						
PB07	**IPOC Station P**	**1.37**	**180**⇑	*i*P	**Pn**	**03 42 56.8**	**+0.6**
PB07				*i* S	**Sn**	**03 43 14.4**	**+1.0**
PB07				IAML		03 43 16.5	
	comp=E,3μm,0.7s						
PB09	**IPOC Station P**	**1.56**	**157**⇓	*i*P	**Pn**	**03 42 59.8**	**+0.9**
PB09				*i* S	**Sn**	**03 43 19.4**	**+1.4**
PB09				IAML		03 43 24.6	
	comp=E,2μm,0.7s						
PB03	**IPOC Station P**	**1.69**	**176**⇑	*i*P	**Pn**	**03 43 01.5**	**+0.9**
PB03				*i* S	**Sn**	**03 43 22.6**	**+1.4**
PB03				IAML		03 43 25.7	
	comp=E,2μm,0.3s						
PB12	**IPOC Station P**	**1.78**	**346**⇓	*i*P	**Pn**	**03 43 02.2**	**+0.5**
PB12				*i* S	**Sn**	**03 43 23.5**	**+0.3**
PB12				IAML		03 43 30.6	
	comp=E,766nm,0.5s						
PB04	**IPOC Station P**	**1.99**	**187**⇑	*e*P	**Pn**	**03 43 05.5**	**+0.8**
PB04				*i* S	**Sn**	**03 43 32.7**	**+4.2**
PB04				IAML		03 43 34.0	
	comp=N,1μm,0.5s						
PB16	**IPOC Station P**	**2.04**	**10**⇑

JTKR				*e*S	Sn	03 55 25.5	-3.3	

IDC ***15*** *03:58:09.2±1.0, 7˚.88N×127˚.24E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.7/45, mbtmp3.8/6, MS3.1/3, Ms1 3.2/3, ms1mx2.7/39, Error ellipse: s-maj=26.9km s-min=19.4km az=91.0*

MAN ***15*** *03:58:10.8, 7˚.65N×127˚.33E, h11km, mb4.9, ML3.8, MS3.8*

NEIC ***15*** *03:58:19.2±1.9, 7˚.69N±0˚.09×126˚.8E±0˚.1, h83km±9km, mb4.2/18, Error ellipse: s-maj=15.9km s-min=12.5km az=115.0*

ISC 15 03:58:16.1±2.0, 7˚.67N±0˚.07×127˚.0E±0˚.1, h57km±20km, n45, σ1§40/40, mb4.2/15, MS3.1/3, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.00**	**224**	*e*P	**Pn**	**03 58 33.3**	**-0.8**
MATI				*e*S	Sn	03 58 55.3	+7.9
DAV	**Davao City (W)**	**1.49**	**247**	Pn	**Pn**	**03 58 43.0**	**+2.3**
	67nm,0.3s,baz=83,slow=1.2,SNR=12						
DAV				Sn	Sn	03 59 07.3	+8.1
	112nm,0.3s,baz=260,slow=16,SNR=8.5						
DAV				LR	LR	03 59 37.3	
	comp=Z,918nm,20.8s,baz=158,slow=48						
DAV	**Davao City (W)**	**1.49**	**247**		**Pn**	**03 58 42.9**	**+2.3**
DAV					**Sn**	**03 59 00.5**	**+1.3**
DMPH	**Davao City--Mi**	**1.56**	**248↑**	*e*P	Pn	03 58 45.0	+3.5
DMPH				*e*S	**Sn**	**03 58 58.9**	**-1.8**
BUTP	**Butuan**	**1.86**	**314**	*e*P	**Pn**	**03 58 46.6**	**+1.0**
BUTP				*e*S	Sn	03 59 21.2	+13
BUKP	**Musuan**	**1.90**	**277**	*e*P	**Pn**	**03 58 48.6**	**+2.4**
BUKP				*e*S	Sn	03 59 25.1	+16
KCP	**Kidapawan**	**1.97**	**251↓**	*e*P	**Pn**	**03 58 49.6**	**+2.5**
KCP				*i* S	**Sn**	**03 59 08.6**	**-2.2**
DDMP	**Don Marcelino,**	**1.99**	**219**	*e*P	**Pn**	**03 58 47.9**	**+0.5**
DDMP				*e*S	Sn	03 59 23.5	+12
CGP	**Cagayan de Oro**	**2.38**	**289↑**	*e*P	Pn	03 58 55.3	+2.5
CGP				*e*S	Sn	03 59 28.9	+8.1
CTBH	**Cotabato--PC H**	**2.73**	**261↓**	*i*P	Pn	03 59 01.9	+4.4
PAGZ	**Pagadian**	**3.55**	**273**	*e*P	**Pn**	**03 59 08.6**	**-0.2**
TBP	**Tagbilaran**	**3.67**	**304**	*e*P	Pn	03 59 14.8	+4.4
YULB	**Yu-li**	**16.56**	**341**	Pn	**P**	**04 02 04.7**	**-1.6**
MMRI	**Maumere**	**16.86**	**196**	Pn	**Pn**	**04 02 09.0**	**+0.6**
MTN	**Manton Dam**	**20.79**	**168**	P	**P**	**04 02 51.1**	**-1.7**
MTN				IAmb	IAmb	04 03 08.4	
	comp=Z,14nm,0.9s						
KNRA	**Kununurra**	**23.26**	**176**	P	**P**	**04 03 18.2**	**-0.6**
KNRA				IAmb	IAmb	04 03 27.7	
	comp=Z,13nm,0.8s						
FITZ	**Fitzroy Crossi**	**25.63**	**183**	P	**P**	**04 03 43.3**	**+2.9**
	comp=Z,2.1nm,0.8s,baz=8.8,slow=7.8,SNR=7.7						
FITZ	**Fitzroy Crossi**	**25.63**	**183**	P	**P**	**04 03 42.2**	**+1.7**
KULM	**Kulim**	**26.25**	**266**	P	**P**	**04 03 44.0**	**-2.2**
KULM				IAmb	IAmb	04 03 52.4	
	comp=Z,7.8nm,0.9s						
WB0	**Warramunga Arr**	**28.22**	**165**	P	**P**	**04 04 04.8**	**+1.0**
WB0				IAmb	IAmb	04 04 11.1	
	comp=Z,4.3nm,0.9s						
WRA	**Warramunga Arr**	**28.38**	**165**	P	**P**	**04 04 05.6**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=340,slow=10,SNR=2.8						
WR0	**Warramunga Arr**	**28.45**	**165**	P	P	04 04 09.8	+4.0
WR0				IAmb	IAmb	04 04 14.9	
	comp=Z,6.0nm,1.1s						
INU	**Inuyama**	**29.06**	**17**	P	**P**	**04 04 11.2**	**+0.1**
CMAR	**Chiang Mai Arr**	**29.28**	**294**	LR	LR	04 16 14.9	
	comp=Z,25nm,19.6s,baz=140,slow=37						
KSRS	**Korea Array**	**29.67**	**2**	LR	LR	04 16 51.6	
	comp=Z,44nm,19.3s,baz=175,slow=38						
ASAR	**Alice Springs**	**31.87**	**168**	P	**P**	**04 04 37.0**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=339,slow=7.5,SNR=3.1						
ASAR	**Alice Springs**	**31.87**	**168**	P	**P**	**04 04 37.1**	**+1.1**
USRK	**Ussuriysk Ar.**	**36.66**	**6**	LR	LR	04 19 48.0	
	comp=Z,30nm,20.3s,baz=182,slow=36						
USRK	**Ussuriysk Ar.**	**36.66**	**6**	P	**P**	**04 05 17.0**	**-0.2**
FORT	**Forrest**	**38.24**	**178**	P	**P**	**04 05 30.5**	**-0.2**
TLY	**Talaya**	**47.90**	**341**	P	**P**	**04 06 48.7**	**+0.1**
MK31	**Makanchi Array**	**54.51**	**324**	P	**P**	**04 07 37.7**	**-0.4**
MK31				IAmb	IAmb	04 07 39.3	
	comp=Z,2.8nm,0.8s						
MKAR	**Makanchi Array**	**54.51**	**324**	P	**P**	**04 07 38.4**	**+0.2**
	comp=Z,2.5nm,0.7s,baz=125,slow=7.7,SNR=14						
MKAR	**Makanchi Array**	**54.51**	**324**	P	**P**	**04 07 37.8**	**-0.4**
BOOM	**Boomskoye usch**	**56.61**	**316**	P	**P**	**04 07 51.4**	**-2.1**
BOOM				IAmb	IAmb	04 08 08.8	
	comp=Z,2.3nm,0.9s						
ZALV	**Zalesovo Beam**	**57.23**	**332**	P	**P**	**04 07 56.6**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=120,slow=8.7,SNR=3.9						
KURK	**Kurchatov**	**58.59**	**326**	P	**P**	**04 08 06.7**	**-0.3**
BPAW	**Bear Paw Mtn.**	**79.67**	**26**	P	**P**	**04 10 16.8**	**-0.6**
BPAW				IAmb	IAmb	04 10 22.0	
	comp=Z,3.3nm,1.0s						
MLY	**Manley**	**79.84**	**25**	P	**P**	**04 10 19.6**	**+1.3**
MCK	**McKinley**	**80.56**	**27**	P	**P**	**04 10 22.5**	**+0.3**
MCK				IAmb	IAmb	04 10 27.3	
	comp=Z,5.2nm,1.0s						
HDA	**Harding Lake**	**81.45**	**26**	P	**P**	**04 10 27.3**	**+0.5**
HDA				IAmb	IAmb	04 10 30.9	
	comp=Z,2.8nm,1.1s						
ILAR	**Eielson Array**	**81.47**	**26**	P	**P**	**04 10 27.6**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=244,slow=5.7,SNR=8.3						
ILAR	**Eielson Array**	**81.47**	**26**	P	**P**	**04 10 28.1**	**+1.2**
BMAR	**Burnt Mountain**	**82.38**	**23**	P	**P**	**04 10 32.5**	**+0.8**
BCAR	**Beaver Creek A**	**83.79**	**27**	P	**P**	**04 10 40.2**	**+1.1**

IDC ***15*** *03:58:35.5±1.1, 59˚.41S×151˚.59W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/29, mbtmp3.7/3, MS3.8/9, Ms1 3.8/9, ms1mx3.6/22, Error ellipse: s-maj=50.9km s-min=33.4km az=169.0*

NEIC ***15*** *03:58:35.8±1.4, 59˚.8S±0˚.2×151˚.5W±0˚.3, h15km±5km, mb4.6/6, Error ellipse: s-maj=33.1km s-min=24.6km az=168.0*

ISC 15 03:58:36.2±0.9, 59˚.8S±0˚.2×151˚.5W±0˚.2, h10km, n39, σ1§84/18, mb4.4/6, MS3.7/11, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**23.46**	**203**	P	**P**	**04 03 49.7**	**+4.5**
	2.7nm,1.2s,baz=62,slow=6.3,SNR=3.2						
VNDA				LR	LR	04 10 54.8	
	comp=Z,131nm,18.3s,baz=78,slow=31						
RPZ	**Rata Peaks**	**27.70**	**289**	LR	LR	04 12 52.2	
	comp=Z,173nm,18.5s,baz=134,slow=31						
URZ	**Urewera**	**29.30**	**303**	LR	LR	04 13 55.9	
	comp=Z,146nm,18.3s,baz=152,slow=32						
QSPA	**South Pole Qui**	**30.39**	**180**	P	**P**	**04 04 47.0**	**-1.1**
QSPA				IAmb	IAmb	04 04 55.6	
	comp=Z,11nm,1.1s						
TBI	**Tubuai**	**36.40**	**3**	*e*LR	LR	04 15 13.0	
	comp=Z,383nm,28.2s,baz=176						
TBI	**Tubuai**	**36.40**	**3**	*e*T	T	04 43 57.8	
	comp=Z,18nm,0.3s						
RKT	**Rikitea**	**38.42**	**25**	*e*T	T	04 46 18.7	
	comp=Z,1.5nm,0.2s						
PPT2	**Papeete2**	**42.13**	**3**	*e*LR	LR	04 18 04.4	
	comp=Z,338nm,25.0s,baz=188						
PPT	**Papeete**	**42.15**	**3**	LR	LR	04 18 57.4	
	comp=Z,110nm,21.9s,baz=149,slow=29						
VAH	**Vaihoa**	**44.53**	**5**	*e*T	T	04 54 05.6	
	comp=Z,74nm,0.3s						
VNA3	**Neumayer Olymp**	**46.59**	**164**	P	**P**	**04 07 02.1**	**-1.6**
SNAA	**Sanae**	**47.06**	**167**	P	**P**	**04 07 05.6**	**-1.7**
SNAA	**Sanae**	**47.06**	**167**	P	**P**	**04 07 05.7**	**-1.7**
VNA2	**Neumayer--Watz**	**47.19**	**165**	P	**P**	**04 07 06.4**	**-1.9**
	baz=209,slow=6.7						
VNA1	**Neumayer--Stat**	**47.33**	**164**	P	**P**	**04 07 08.2**	**-1.1**
MAW	**Mawson**	**50.48**	**196**	LR	LR	04 27 01.5	
	comp=Z,60nm,19.8s,baz=228,slow=34						
LC01	**Cunco**	**52.39**	**104**	P	**P**	**04 07 49.8**	**+1.6**
LC01				IAmb	IAmb	04 07 50.8	
	comp=Z,8.0nm,0.9s						
H03S2	**Juan Fernandez**	**52.84**	**95**	T	T	05 04 43.0	
	baz=216,slow=74,SNR=30						
H03S1	**Juan Fernandez**	**52.84**	**95**	T	T	05 04 43.4	
	baz=216,slow=74,SNR=37						
H03S3	**Juan Fernandez**	**52.86**	**95**	T	T	05 04 42.6	
	baz=216,slow=74,SNR=45						
H03N3	**Juan Fernandez**	**53.14**	**94**	T	T	05 04 55.5	
	baz=218,slow=72,SNR=43						
H03N2	**Juan Fernandez**	**53.15**	**94**	T	T	05 04 51.4	
	baz=218,slow=72,SNR=85						
H03N1	**Juan Fernandez**	**53.16**	**94**	T	T	05 04 51.4	
	baz=218,slow=72,SNR=34						

BI02	**San Fabin de**	**54.43**	**103**	P	**P**	**04 08 03.2**	**-0.1**
BI02				IAmb	IAmb	04 08 06.6	
	comp=Z,8.9nm,1.1s						
AS31	**Alice Springs**	**62.12**	**271**	P	**P**	**04 08 56.5**	**-0.7**
ASAR	**Alice Springs**	**62.12**	**271**	P	**P**	**04 08 58.0**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=150,slow=6.6,SNR=5.6						
ASAR	**Alice Springs**	**62.12**	**271**	P	**P**	**04 08 55.3**	**-1.9**
H01W1	**Cape Leeuwin H**	**62.63**	**247**	T	T	05 17 56.3	
	baz=145,slow=76,SNR=6.8						
H01W2	**Cape Leeuwin H**	**62.64**	**247**	T	T	05 17 54.6	
	baz=145,slow=76,SNR=5.6						
H01W3	**Cape Leeuwin H**	**62.65**	**247**	T	T	05 17 57.1	
	baz=145,slow=76,SNR=5.8						
LPAZ	**La Paz**	**72.76**	**93**	P	**P**	**04 10 07.5**	**+2.2**
	comp=Z,1.3nm,1.0s,baz=224,slow=9.2,SNR=3.6						
LPAZ				LR	LR	04 33 47.6	
	comp=Z,42nm,19.1s,baz=192,slow=29						
LPAZ	**La Paz**	**72.76**	**93**	P	**P**	**04 10 04.1**	**-1.2**
LPAZ				IAmb	IAmb	04 10 08.9	
	comp=Z,4.7nm,1.4s						
BDFB	**Brasilia**	**83.27**	**109**	LR	LR	04 43 47.6	
	comp=Z,49nm,21.0s,baz=247,slow=32						
ROSC	**El Rosal**	**87.73**	**77**	LR	LR	04 44 21.7	
	comp=Z,52nm,19.1s,baz=232,slow=31						
BOSA	**Boshof**	**91.93**	**177**	LR	LR	04 48 14.1	
	comp=Z,146nm,21.9s,baz=161,slow=32						
ILAR	**Eielson Array**	**124.25**	**2**	PKP	**PKiKP**	**04 17 34.9**	**+1.2**
	comp=Z,0.4nm,0.9s,baz=232,slow=2.2,SNR=3.9						
MKAR	**Makanchi Array**	**146.30**	**272**	PKPbc	**PKPbc**	**04 18 15.4**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=131,slow=5.6,SNR=9.2						
MKAR	**Makanchi Array**	**146.30**	**272**	PKPdf	**PKPdf**	**04 18 14.3**	**-0.5**
ESDC	**Sonseca Array**	**151.42**	**120**	PKPbc	**PKPbc**	**04 18 28.8**	**-0.6**
	comp=Z,1.5nm,0.9s,baz=224,slow=1.1,SNR=6.9						

SKHL ***15*** *04:22:10.1±0.7, 44˚.57N×148˚.65E, h30km±4km, mb4.1/3*

JMA ***15*** *04:22:10.3±0.4, 44˚.28N×148˚.42E, h0km, M3.9*

ISC 15 04:22:09.6±3.9, 44˚.64N±0˚.09×148˚.7E±0˚.2, h55km, n12, σ1§32/19, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**0.84**	**315**	*i* P	**Pn**	**04 22 25.2**	**-0.1**
KUR				AMB	AMB	04 22 25.5	
	100nm,0.4s						
KUR				*i* S	**Sn**	**04 22 36.4**	**-0.5**
KUR				A	A	04 22 37.0	
	960nm,0.5s						
KUR				A	A	04 22 37.0	
	950nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.13**	**254**	*e*P	**Pn**	**04 22 42.4**	**-0.3**
YUK				AMB	AMB	04 22 42.9	
	20nm,0.3s						
YUK				*e*S	**Sn**	**04 23 07.2**	**-0.7**
YUK				A	A	04 23 11.0	
	410nm,0.4s						
YUK				A	A	04 23 11.0	
	450nm,0.4s						
GRPR	**Tuman**	**2.20**	**254**	*e*P	**Pn**	**04 22 43.3**	**-0.4**
GRPR				AMB	AMB	04 22 44.0	
	80nm,0.4s						
GRPR				*i* S	**Sn**	**04 23 09.9**	**+0.1**
GRPR				A	A	04 23 14.0	
	400nm,0.3s						
GRPR				A	A	04 23 14.0	
	90nm,0.3s						
NEM2	**Nemuro 2**	**2.49**	**240**	P	**Pn**	**04 22 47.9**	**+0.3**
NEM2				*e*S	**Sn**	**04 23 15.9**	**-0.9**
NMR	**Nemuro--Hokkai**	**2.49**	**240**	*i* P	**Pn**	**04 22 47.1**	**-0.6**
NMR				*i* S	**Sn**	**04 23 15.7**	**-1.3**
JKHN	**Kushirohamanak**	**3.00**	**240**	P	**Pn**	**04 22 55.3**	**+0.7**
JNK	**Nakash**	**3.06**	**251**	P	**Pn**	**04 22 57.1**	**+1.6**
JNK				*e*S	**Sn**	**04 23 31.3**	**+0.5**
JAK	**Akkeshi**	**3.33**	**242**	*e*S	**Sn**	**04 23 36.5**	**-1.0**
JAR	**Ashorobuto**	**3.81**	**251**	P	**Pn**	**04 23 08.1**	**+2.4**
JAR				*e*S	**Sn**	**04 23 51.0**	**+1.8**
JCH	**Churui**	**4.37**	**244**	*e*S	**Sn**	**04 24 02.8**	**-0.3**
JNBK	**Urakawa-nobuka**	**4.93**	**243**	P	**Pn**	**04 23 22.0**	**+0.9**
JKB	**Kayabe**	**6.24**	**246**	*e*S	**Sn**	**04 24 45.8**	**-3.1**

IDC ***15*** *04:32:24.4±0.5, 6˚.33S×155˚.00E, h49km±4km, mb4.4/21, mb1 4.5/23, mb1mx4.5/29, mbtmp4.7/23, MS3.7/23, Ms1 3.7/23, ms1mx3.7/25, Error ellipse: s-maj=13.2km s-min=10.2km az=116.0*

DJA ***15*** *04:32:24.3±0.8, 6˚.54±4˚×15˚.5E±˚, h63km±7km, M5.3/24, mb5.1/24, mB5.2/6, MLv5.9/1, Mw(mB)4.7/6, Mwp5.8/2*

NEIC ***15*** *04:32:24.5±1.7, 6˚.38S±0˚.08×154˚.93E±0˚.07, h56km±5km, mb4.7/70, Error ellipse: s-maj=11.5km s-min=9.4km az=212.0*

BJI ***15*** *04:32:29.1±0.0, 5˚.76S×155˚.27E, h93km, mB5.0/26, mb4.8/38*

ISC 15 04:32:24.2±0.4, 6˚.40S±0˚.05×155˚.04E±0˚.05, h53km±3km, h53km:pP-P, n172, σ1§14/190, mb4.8/67, MS3.8/25, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.61**	**307**	Pn	**Pn**	**04 33 16.7**	**-0.9**
KRVT	**Keravat (AS076**	**3.65**	**305**	P	**Pn**	**04 33 20.5**	**+2.3**
	28nm,0.3s,baz=193,slow=2.5,SNR=11						
HNR	**Honiara**	**5.72**	**122**	LR	LR	04 36 06.6	
	comp=Z,1μm,19.6s,baz=290,slow=38						
HNR	**Honiara**	**5.72**	**122**	Pn	**Pn**	**04 33 48.6**	**+1.9**
PMG	**Port Moresby**	**8.36**	**249**	P	**Pn**	**04 34 24.3**	**+1.5**
	40nm,0.3s,baz=47,slow=10.0,SNR=33						
PMG				S	**Sn**	**04 35 57.2**	**+1.4**
	4.9nm,0.3s,baz=46,slow=19,SNR=4.0						
PMG				LR	LR	04 37 28.2	
	comp=Z,1μm,21.8s,baz=298,slow=36						
PMG	**Port Moresby**	**8.36**	**249**		**Pn**	**04 34 21.6**	**-1.2**
PMG				Sn	**Sn**	**04 35 53.7**	**-2.1**
PATS	**Pohnpei**	**13.55**	**14**	Pn	**Pn**	**04 35 33.5**	**-0.3**
COEN	**Coen**	**13.88**	**236**	Pn	**Pn**	**04 35 37.3**	**-1.0**
JAY	**Jayapura**	**14.80**	**284**	P	**P**	**04 35 57.2**	**+1.9**
CTA	**Charters Tower**	**16.06**	**211**	P	**Pn**	**04 36 08.7**	**+2.0**
	0.7nm,0.3s,baz=33,slow=16,SNR=5.5						
CTAO	**Charters Tower**	**16.06**	**211**		**Pn**	**04 36 07.5**	**+0.8**
SMPI	**Sarmi**	**16.86**	**284**	P	**Pn**	**04 36 16.8**	**+0.1**
DZM	**Mont Dzumac**	**19.08**	**146**	*e*Pn	**Pn**	**04 36 45.7**	**+1.8**
	59nm,0.8s						
DZM				*e*S	**S**	**04 40 11.2**	**-5.3**
	329nm,25.4s						
DZM				*e*LR	LR	04 41 10.7	
	comp=Z,825nm,26.1s						
DZM	**Mont Dzumac**	**19.08**	**146**	P	**Pn**	**04 36 46.3**	**+2.4**
	2.3nm,0.3s,baz=104,slow=22,SNR=8.7						
DZM				LR	LR	04 43 06.1	
	comp=Z,337nm,21.4s,baz=284,slow=34						
DZM	**Mont Dzumac**	**19.08**	**146**	P	**Pn**	**04 36 44.1**	**+0.2**
DZM				IAmb	IAmb	04 36 47.0	
	comp=Z,34nm,0.8s						
EIDS	**Eidsvold**	**19.24**	**191**	P	**P**	**04 36 44.3**	**0.0**
FAKI	**Fak Fak**	**22.97**	**278**	P	**P**	**04 37 22.5**	**-2.0**
FAKI				IAmb	IAmb	04 37 25.8	
	comp=Z,32nm,1.0s						
WR0	**Warramunga Arr**	**24.04**	**234**	P	**P**	**04 37 33.2**	**-1.3**
WR0				IAmb	IAmb	04 37 37.9	
	comp=Z,19nm,0.7s						
WB0	**Warramunga Arr**	**24.06**	**235**	P	**P**	**04 37 34.2**	**-0.6**
WB0				IAmb	IAmb	04 37 35.9	
	comp=Z,15nm,0.8s						
ARMA	**Armidale**	**24.11**	**187**	P	**P**	**04 37 35.4**	**+0.2**
WB2	**Warramunga Arr**	**24.18**	**234**	P	**P**	**04 37 33.5**	**-2.4**
WB2				IAmb	IAmb	04 37 38.8	
	comp=Z,22nm,0.7s						
WRA	**Warramunga Arr**	**24.19**	**234**	P	**P**	**04 37 36.6**	**+0.7**
	comp=Z,14nm,0.5s,baz=58,slow=9.5,SNR=36						
WRA				PcP	**PcP**	**04 41 16.5**	**+0.7**
	comp=Z,3.0nm,0.7s,baz=60,slow=2.2,SNR=6.0						
WRA				S	**S**	**04 41 54.7**	**+3.8**
	comp=Z,4.1nm,1.4s,baz=56,slow=16,SNR=5.6						
WRA				LR	LR	04 46 50.0	
	comp=Z,323nm,19.9s,baz=55,slow=36						
SIJI	**Sorong**	**24.34**	**282**	P	**P**	**04 37 37.6**	**+0.2**
	comp=Z,27nm,0.6s,baz=75,slow=8.0,SNR=15						
MTN	**Manton Dam**	**24.41**	**253**	P	**P**	**04 37 36.5**	**-1.5**
MTN				IAmb	IAmb	04 37 39.8	
	comp=Z,20nm,0.9s						
AS31	**Alice Springs**	**26.60**	**228**	P	**P**	**04 37 56.9**	**-0.9**
ASAR	**Alice Springs**	**26.60**	**228**	P	**P**	**04 37 57.6**	**-0.2**
	comp=Z,3.4nm,0.5s,baz=59,slow=8.8,SNR=58						
ASAR				PcP	**PcP**	**04 41 21.7**	**+0.6**
	comp=Z,4.1nm,0.8s,baz=61,slow=2.6,SNR=15						
ASAR				pPcP		04 41 35.2	
	comp=Z,5.2nm,1.1s,baz=63,slow=2.4,SNR=8.1						
ASAR				LR	LR	04 48 12.2	
	comp=Z,348nm,18.9s,baz=100,slow=36						
ASAR	**Alice Springs**	**26.60**	**228**	P	**P**	**04 37 56.7**	**-1.1**
ASAR					**PcP**	**04 41 20.1**	**-1.0**
H11S3	**WAKE ISLAND Hy**	**27.27**	**25**	T	T	05 06 20.2	
	baz=205,slow=76,SNR=74						
H11S2	**WAKE ISLAND Hy**	**27.28**	**25**	T	T	05 06 14.8	
	baz=205,slow=76,SNR=122						
H11S1	**WAKE ISLAND Hy**	**27.29**	**25**	T	T	05 06 17.0	
	baz=205,slow=76,SNR=105						
KNRA	**Kununurra**	**27.36**	**248**	P	**P**	**04 38 04.1**	**-0.5**
KNRA				IAmb	IAmb	04 38 07.4	
	comp=Z,18nm,0.9s						
STKA	**Stephens Creek**	**28.29**	**205**	P	**P**	**04 38 12.6**	**-0.2**
	comp=Z,2.3nm,0.5s,baz=22,slow=8.5,SNR=12						
STKA				PcP	**PcP**	**04 41 25.3**	**+0.3**
	comp=Z,2.3nm,0.7s,baz=287,slow=7.5,SNR=3.6						
STKA				LR	LR	04 48 58.3	
	comp=Z,426nm,21.5s,baz=24,slow=35						
STKA	**Stephens Creek**	**28.29**	**205**	P	**P**	**04 38 13.2**	**+0.4**
STKA					**PcP**	**04 41 25.2**	**+0.3**
FITZ	**Fitzroy Crossi**	**30.94**	**245**	P	**P**	**04 38 36.1**	**-0.3**
FITZ				IAmb	IAmb	04 38 36.8	
	comp=Z,9.6nm,0.7s						
BBOO	**Buckleboo**	**31.66**	**211**	P	**P**	**04 38 42.9**	**+0.2**
BBOO				IAmb	IAmb	04 38 42.9	
	comp=Z,10.0nm,0.8s						
KMSI	**Cibinong**	**31.76**	**281**	P	**P**	**04 38 43.5**	**-0.2**
	comp=Z,180nm,0.7s						
MMRI	**Maumere**	**32.59**	**264**	P	**P**	**04 38 51.2**	**+0.2**
	comp=Z,5μmcomp=Z,99nm,0.7s						
MMRI	**Maumere**	**32.59**	**264**	P	**P**	**04 38 51.1**	**+0.2**
EDFI	**Ende, Flores**	**33.13**	**264**	P	**P**	**04 38 55.2**	**-0.7**
FORT	**Forrest**	**35.05**	**223**	P	**P**	**04 39 12.3**	**+0.1**
WBSI	**Waikabubak, Su**	**35.43**	**262**	P	**P**	**04 39 15.6**	**-0.1**
	comp=Z,70nm,0.7s						
MPSI	**Mapaga**	**35.70**	**280**	P	**P**	**04 39 17.7**	**-0.3**
	comp=Z,29nm,0.5s						
TAU	**Tasmania Unive**	**37.00**	**189**	P	**P**	**04 39 28.9**	**+0.3**
TAU				IAmb	IAmb	04 39 29.0	
	comp=Z,18nm,1.0s						
PLAI	**Plampang**	**37.00**	**264**	P	**P**	**04 39 28.3**	**-0.8**
	comp=Z,111nm,0.7s						
PSA00	**Pilbara Seismi**	**37.21**	**243**	P	**P**	**04 39 30.6**	**-0.1**
PSA00				IAmb	IAmb	04 39 39.1	
	comp=Z,15nm,1.1s						
URZ	**Urewera**	**37.50**	**151**	P	**P**	**04 39 34.5**	**+1.5**
	comp=Z,17nm,0.7s,baz=36,slow=5.1,SNR=8.8						
URZ	**Urewera**	**37.50**	**151**	P	**P**	**04 39 35.1**	**+2.2**
QRZ	**Quartz Range**	**37.68**	**158**	P	**P**	**04 39 35.1**	**+0.7**
QRZ				IAmb	IAmb	04 39 37.5	
	comp=Z,15nm,0.9s						
THZ	**Tophouse**	**38.63**	**158**	P	**P**	**04 39 43.9**	**+1.4**
RPZ	**Rata Peaks**	**39.74**	**162**	P	**P**	**04 39 53.2**	**+1.5**
	comp=Z,24nm,0.7s,baz=294,slow=0.7,SNR=12						
KKM	**Kota Kinabalu**	**40.67**	**287**	P	**P**	**04 40 00.4**	**+0.5**
GIRL	**Giralia**	**42.49**	**243**	P	**P**	**04 40 13.6**	**-1.0**
MORW	**Morawa**	**43.14**	**234**	P	**P**	**04 40 20.1**	**+0.3**
MORW				IAmb	IAmb	04 40 28.8	
	comp=Z,10nm,1.1s						
MJAR	**Matsushiro Arr**	**45.53**	**341**	LR	LR	05 00 56.1	
	comp=Z,25nm,18.1s,baz=125,slow=38						
CISI	**Cisompet, Garu**	**46.87**	**266**	P	**P**	**04 40 49.5**	**-0.2**
KASI	**Kota Agung**	**50.26**	**268**	P	P	04 41 26.7	+11
KSRS	**Korea Array**	**50.44**	**332**	P	**P**	**04 41 16.5**	**0.0**
	comp=Z,4.4nm,0.8s,baz=146,slow=8.3,SNR=14						
KSRS				pP	**pP**	**04 41 29.2**	**-1.6**
	comp=Z,1.6nm,0.7s,baz=150,slow=8.4,SNR=3.2						
KSRS				LR	LR	04 58 15.5	
	comp=Z,18nm,21.6s,baz=143,slow=31						
NJ2	**Nanjing**	**51.49**	**320**	*e*P	**P**	**04 41 26.3**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**54.49**	**340**	P	**P**	**04 41 47.2**	**+0.8**
	comp=Z,2.8nm,0.7s,baz=153,slow=8.1,SNR=6.2						
USRK				LR	LR	05 02 34.8	
	comp=Z,47nm,21.8s,baz=180,slow=33						
USRK	**Ussuriysk Ar.**	**54.49**	**340**	P	**P**	**04 41 46.7**	**+0.2**
PDSI	**Padang**	**54.71**	**273**	P	**P**	**04 41 47.7**	**-1.0**
IPM	**Ipoh**	**55.00**	**280**	P	**P**	**04 41 49.9**	**-0.9**
PPT	**Papeete**

JIRN	**Jiri**	**74.52**	**301**	*eP*		**P**	**04 43 58.6**	**+0.5**
BILL	**Bilibino**	**74.69**	**4**	P		**P**	**04 43 58.5**	**+0.7**
GUN	**Gumba**	**74.85**	**301**	*eP*		**P**	**04 44 00.6**	**+0.6**
	comp=Z,56nm,0.7s							
PKIN	**Phulchoki**	**75.17**	**301**	*eP*		**P**	**04 44 01.6**	**-0.2**
	comp=Z,25nm,0.8s							
KKN	**Kakani**	**75.33**	**301**	*eP*		**P**	**04 44 02.6**	**0.0**
	comp=Z,39nm,0.7s							
DMN	**Daman**	**75.43**	**301**	*eP*		**P**	**04 44 03.9**	**+0.6**
GKN	**Gorkha**	**75.93**	**301**	*eP*		**P**	**04 44 06.4**	**+0.4**
KOLN	**Koldanda**	**76.76**	**300**	*eP*		**P**	**04 44 11.0**	**+0.2**
	comp=Z,27nm,0.7s							
DANN	**Dangsing**	**76.77**	**301**	*eP*		**P**	**04 44 10.4**	**-0.5**
	comp=Z,24nm,0.7s							
CNPM	**China Poot**	**78.20**	**25**	P		**P**	**04 44 18.9**	**+1.0**
WMQ	**Urumqi**	**78.42**	**317**	*eP*		**P**	**04 44 21.0**	**+1.5**
WMQ					pmax	pmax		
	comp=Z,66nm,4.3s							
WMQ					LR	LR		
	comp=Z,280nm,29.9s							
WMQ					LR	LR		
	comp=Z,160nm,28.9s							
WMQ					LR	LR		
	comp=Z,120nm,28.9s							
BRLK	**Bradley Lake**	**78.48**	**25**	P		**P**	**04 44 20.7**	**+1.3**
BRLK					IAmb	IAmb	04 44 35.7	
	comp=Z,12nm,1.1s							
HYB	**Hyderabad**	**79.12**	**289**	*i* P		**P**	**04 44 23.0**	**-0.8**
RC01	**Rabbit Creek A**	**79.71**	**24**	P		**P**	**04 44 26.7**	**+0.6**
RC01					IAmb	IAmb	04 44 42.3	
	comp=Z,10nm,1.1s							
GHO	**Glory Hole Cre**	**80.41**	**24**	P		**P**	**04 44 30.1**	**+0.1**
GHO					IAmb	IAmb	04 44 32.9	
	comp=Z,7.3nm,0.8s							
SML	**Sawmill**	**80.67**	**24**	P		**P**	**04 44 32.3**	**+1.0**
IMAR	**Indian Mountai**	**81.15**	**19**	P		**P**	**04 44 34.5**	**+0.7**
RND	**Reindeer**	**81.34**	**22**	P		**P**	**04 44 35.7**	**+0.8**
MLY	**Manley**	**81.58**	**20**	P		**P**	**04 44 36.5**	**+0.4**
DHY	**Denali Highway**	**81.72**	**23**	P		**P**	**04 44 38.3**	**+1.3**
CCB	**Clear Creek Bu**	**82.41**	**21**	P		**P**	**04 44 41.4**	**+1.1**
HDA	**Harding Lake**	**82.59**	**22**	P		**P**	**04 44 42.1**	**+0.7**
ILAR	**Eielson Array**	**82.81**	**22**	P		**P**	**04 44 41.9**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=248,slow=5.3,SNR=12							
ILAR					pP	**pP**	**04 44 57.2**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=237,slow=5.1,SNR=7.6							
ILAR					LR	LR	05 17 01.7	
	comp=Z,154nm,21.8s,baz=258,slow=32							
MK31	**Makanchi Array**	**82.99**	**319**	P		**P**	**04 44 43.9**	**+0.1**
MK31					IAmb	IAmb	04 44 45.3	
	comp=Z,7.8nm,0.8s							
MK31					pP	**pP**	**04 44 58.9**	**-0.1**
MKAR	**Makanchi Array**	**82.99**	**319**	P		**P**	**04 44 43.7**	**-0.1**
	comp=Z,11nm,0.8s,baz=105,slow=5.2,SNR=74							
MKAR					pP	**pP**	**04 44 57.6**	**-1.4**
	comp=Z,6.8nm,0.8s,baz=94,slow=7.7,SNR=9.0							
MKAR					LR	LR	05 21 50.4	
	comp=Z,22nm,21.7s,baz=106,slow=36							
MKAR	**Makanchi Array**	**82.99**	**319**	P		**P**	**04 44 43.8**	**0.0**
MKAR						**pP**	**04 44 59.0**	**0.0**
RIDG	**Independent Ri**	**83.04**	**23**	P		**P**	**04 44 44.2**	**+0.4**
RIDG					IAmb	IAmb	04 45 00.8	
	comp=Z,7.1nm,1.1s							
CTGM	**Chitina Glacie**	**83.18**	**26**	P		**P**	**04 44 45.2**	**+0.5**
CTGM					IAmb	IAmb	04 44 49.7	
	comp=Z,11nm,0.9s							
MAKZ	**Makanchi**	**83.20**	**319**	P		**P**	**04 44 44.2**	**-0.7**
DOT	**Dot Lake**	**83.30**	**23**	P		**P**	**04 44 45.0**	**0.0**
DOT					IAmb	IAmb	04 45 01.5	
	comp=Z,6.4nm,1.0s							
SCRK	**Sand Creek**	**83.49**	**23**	P		**P**	**04 44 46.0**	**-0.1**
QSPA	**South Pole Qui**	**83.57**	**180**	P		**P**	**04 44 47.0**	**+0.4**
QSPA					IAmb	IAmb	04 45 01.0	
	comp=Z,12nm,1.0s							
ZAA0	**Zalesovo Array**	**83.71**	**326**	P		**P**	**04 44 46.4**	**-0.9**
ZAA0					IAmb	IAmb	04 44 47.3	
	comp=Z,6.8nm,0.8s							
ZALV	**Zalesovo Beam**	**83.71**	**326**	P		**P**	**04 44 46.1**	**-1.2**
	comp=Z,6.7nm,0.8s,baz=113,slow=5.6,SNR=22							
ZALV					pP	**pP**	**04 45 00.1**	**-2.4**
	comp=Z,3.4nm,0.6s,baz=104,slow=6.3,SNR=6.7							
ZALV					LR	LR	05 21 03.9	
	comp=Z,17nm,21.3s,baz=84,slow=35							
ZALV	**Zalesovo Beam**	**83.71**	**326**	P		**P**	**04 44 45.6**	**-1.7**
ZALV						**pP**	**04 45 00.3**	**-2.2**
BCAR	**Beaver Creek A**	**83.93**	**24**	P		**P**	**04 44 48.9**	**+0.5**
BCAR						**pP**	**04 45 04.3**	**+0.7**
HYT	**Haines Junctio**	**84.83**	**27**	P		**P**	**04 44 53.4**	**+0.4**
HYT					IAmb	IAmb	04 45 10.2	
	comp=Z,8.9nm,1.0s							
EGAK	**Eagle**	**84.95**	**23**	P		**P**	**04 44 53.6**	**+0.3**
MAW	**Mawson**	**84.96**	**203**	LR		LR	05 19 45.7	
	comp=Z,51nm,18.9s,baz=61,slow=33							
BMAR	**Burnt Mountain**	**84.98**	**20**	P		**P**	**04 44 54.2**	**+0.7**
KDJ	**Kajisay**	**85.33**	**313**	P		**P**	**04 44 55.8**	**-0.2**
KDJ					IAmb	IAmb	04 44 58.3	
	comp=Z,7.0nm,0.8s							
KSH	**Kashi**	**85.66**	**310**	P		**P**	**04 44 59.6**	**+1.9**
KSH					pP	sP	04 45 25.6	+6.8
KSH					sP	pP	04 45 36.0	+23
KSH					pmax	pmax		
	comp=Z,23nm,1.1s							
KSH					pmax	pmax		
	comp=Z,110nm,5.0s							
EPYK	**Eagle Plains**	**87.30**	**22**	P		**P**	**04 45 05.5**	**+0.5**
EPYK					IAmb	IAmb	04 45 09.6	
	comp=Z,5.9nm,0.8s							
AAK	**Ala-Archa**	**87.38**	**313**	P		**P**	**04 45 05.5**	**-0.6**
NRIK	**Noril'sk**	**88.19**	**341**	P		**P**	**04 45 08.2**	**-0.9**
	comp=Z,2.0nm,0.5s,baz=103,slow=5.3,SNR=4.1							
NRIK					LR	LR	05 24 24.8	
	comp=Z,41nm,20.6s,baz=66,slow=35							
YBH	**Yreka Blue Hor**	**88.46**	**48**	P		**P**	**04 45 13.1**	**+2.0**
	comp=Z,0.7nm,0.7s,baz=314,slow=4.3,SNR=5.2							
YBH	**Yreka Blue Hor**	**88.46**	**48**	P		**P**	**04 45 11.7**	**+0.5**
AFDM	**Forest Hills D**	**89.32**	**51**	P		**P**	**04 45 15.7**	**+0.5**
AFDM					IAmb	IAmb	04 45 18.6	
	comp=Z,2.9nm,0.8s							
BEKR	**Beckworth**	**89.93**	**50**	P		**P**	**04 45 17.1**	**-1.0**
PNTR	**Pine Nut**	**90.40**	**51**	P		**P**	**04 45 20.4**	**-0.1**
PNTR					IAmb	IAmb	04 45 23.8	
	comp=Z,3.6nm,0.8s							
PAHR	**Pah Rah Range**	**90.65**	**50**	P		**P**	**04 45 20.8**	**-0.7**
PAHR					IAmb	IAmb	04 45 24.2	
	comp=Z,2.7nm,0.9s							
RYN	**Ryan**	**91.17**	**51**	P		**P**	**04 45 23.2**	**-0.8**
RYN					IAmb	IAmb	04 45 27.7	
	comp=Z,3.5nm,0.9s							
NVAR	**Mina Array Bea**	**91.32**	**52**	P		**P**	**04 45 26.6**	**+1.9**
	comp=Z,3.5nm,0.8s,baz=252,slow=6.7,SNR=25							
NVAR					pP	**pP**	**04 45 41.0**	**+0.9**
	comp=Z,2.7nm,0.9s,baz=255,slow=6.1,SNR=5.0							
NVAR					LR	LR	05 18 58.8	
	comp=Z,72nm,21.7s,baz=324,slow=31							
NVAR	**Mina Array Bea**	**91.32**	**52**	P		**P**	**04 45 24.8**	**0.0**
NVAR						**pP**	**04 45 40.6**	**+0.5**
NV11	**Mina Array Sit**	**91.44**	**52**	P		**P**	**04 45 24.3**	**-0.9**
NV11						**pP**	**04 45 40.9**	**+0.3**
KVN	**Kaiserville**	**91.55**	**51**	P		**P**	**04 45 24.9**	**-0.9**
KVN					IAmb	IAmb	04 45 28.5	
	comp=Z,3.9nm,0.9s							
TPNV	**Topopah Spring**	**92.77**	**53**	P		**P**	**04 45 31.1**	**-0.3**
TPNV						**pP**	**04 45 47.0**	**+0.2**
BMO	**Blue Mountains**	**92.80**	**45**	P		**P**	**04 45 31.7**	**+0.4**
R11A	**Troy Canyon, C**	**93.43**	**52**	P		**P**	**04 45 34.1**	**-0.3**
R11A					IAmb	IAmb	04 45 37.4	
	comp=Z,2.2nm,0.9s							
R11A						**pP**	**04 45 50.1**	**+0.2**
CCUT	**Cedar City**	**95.12**	**53**	P		**P**	**04 45 41.5**	**-0.8**
CCUT						**pP**	**04 45 57.7**	**0.0**
YKA	**Yellowknife Ar**	**95.79**	**28**	P		**P**	**04 45 45.2**	**+0.8**
	comp=Z,2.2nm,0.8s,baz=267,slow=4.3,SNR=22							
YKA					pP	**pP**	**04 45 59.9**	**0.0**
	comp=Z,2.9nm,0.9s,baz=263,slow=4.3,SNR=8.8							
YKA					PKKPbc	**PKKPbc**	**05 02 33.2**	**-3.3**
	comp=Z,0.6nm,0.7s,baz=84,slow=3.0,SNR=5.9							
YKA					LR	LR	05 25 34.4	
	comp=Z,20nm,20.3s,baz=0.0,slow=33							
PDAR	**Pinedale Array**	**98.27**	**48**	P		Pdif	04 45 56.9	+0.4
	comp=Z,0.5nm,0.7s,baz=262,slow=3.0,SNR=5.5							
PDAR					pP	pP	04 46 10.9	-1.0
	comp=Z,0.6nm,0.9s,baz=190,slow=2.6,SNR=3.4							
PDAR					LR	LR	05 26 46.6	
	comp=Z,69nm,18.9s,baz=304,slow=33							
PDAR	**Pinedale Array**	**98.27**	**48**	P		**P**	**04 45 54.1**	**-2.3**
PDAR						**pP**	**04 46 11.2**	**-0.7**
GEYT	**Alibeck**	**99.35**	**307**	LR		LR	05 34 25.7	
	comp=Z,19nm,19.6s,baz=110,slow=38							
TXAR	**Lajitas Array**	**102.94**	**61**	PKKPbc		PKKPbc	05 02 15.4	+0.1
	comp=Z,0.4nm,0.7s,baz=112,slow=3.4,SNR=7.3							
T47A	**Sharon Grove**	**115.99**	**52**			**PKiKP**	**04 51 00.7**	**-0.9**
CLTN	**Cedars of Leba**	**116.78**	**53**			**PKPdf**	**04 51 01.9**	**-1.3**
S51A	**Beattyville**	**118.56**	**51**			**PKiKP**	**04 51 06.3**	**-0.3**
Q54A	**Coxs Mills**	**120.26**	**48**			**PKiKP**	**04 51 08.9**	**-1.1**
PSUB	**Penn St. - Bra**	**123.85**	**46**			**PKiKP**	**04 51 16.7**	**-0.3**
GERES	**GERESS Array B**	**126.57**	**329**	PKP		**PKiKP**	**04 51 21.9**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=66,slow=3.2,SNR=6.5							
SDV	**Santo Domingo**	**134.69**	**84**			**PKPdf**	**04 51 37.1**	**-1.2**
BDFB	**Brasilia**	**148.36**	**134**	PKPbc		**PKPbc**	**04 52 05.5**	**-0.4**
	comp=Z,5.5nm,0.9s,baz=233,slow=6.4,SNR=5.9							
BDFB	**Brasilia**	**148.36**	**134**			**PKPbc**	**04 52 04.8**	**-1.1**
TOA0	**Torodi Ar. Sit**	**152.91**	**286**			**PKPbc**	**04 52 15.8**	**-0.8**
TORD	**Torodi Ar. Bea**	**152.91**	**286**	PKP		**PKPdf**	**04 52 08.6**	**-0.7**
	comp=Z,1.2nm,1.0s,baz=42,slow=2.0,SNR=5.8							
TORD					PKPbc	**PKPbc**	**04 52 15.9**	**-0.8**
	comp=Z,4.2nm,0.7s,baz=34,slow=2.1,SNR=41							
TORD	**Torodi Ar. Bea**	**152.91**	**286**			**PKPdf**	**04 52 07.9**	**-1.4**
TORD						**PKPbc**	**04 52 15.8**	**-0.8**
KIC	**Kosan Boka**	**159.91**	**271**	*eP*		**PKPab**	**04 52 57.1**	**-0.9**
	comp=Z,69nm,1.4s							
DBIC	**Dimbokro**	**160.02**	**272**	PKPab		**PKPab**	**04 52 58.6**	**+0.1**
	comp=Z,6.3nm,0.8s,baz=75,slow=4.4,SNR=9.4							
DBIC	**Dimbokro**	**160.02**	**272**			**PKPab**	**04 52 57.2**	**-1.4**
LIC	**Lamto**	**160.19**	**271**	*eP*		**PKPab**	**04 52 58.2**	**-1.1**
	comp=Z,33nm,0.9s							
TIC	**Toumodi**	**160.19**	**272**	*eP*		**PKPab**	**04 52 58.8**	**-0.5**

ISN ***15*** *04:50:39.8±1.0, 34°.41N×45°.52E, h14km±35km, ML3.2*
TEH ***15*** *04:50:40.7, 34°.36N×45°.56E, h10km, ML3.0*

ISC 15 04:50:41.1±1.4, 34°.38N±0°.04×45°.45E±0°.03, h2km±16km, n18, σ1ᵍ46/24, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.83**	**67**	*eP*g	**Pg**	**04 50 55.5**	**-1.5**
IDHR				*e*		04 51 08.8	
IGHG	**Ghaleghazi**	**0.92**	**93**	*eP*g	**Pg**	**04 50 57.4**	**-1.4**
IGHG				*e*		04 51 12.6	
IVIS	**Veis**	**1.16**	**83**	*eP*g	**Pg**	**04 51 01.5**	**-1.9**
IVIS				*e*		04 51 20.1	
KCHF	**Cheshme Sefid,**	**1.32**	**94**	*e*	**Sg**	**04 51 26.1**	**+2.6**
KCHF				*eP*g	**Pg**	**04 51 04.8**	**-1.5**
IBDR	**Badra**	**1.33**	**163**	*eP*g	**Pg**	**04 51 06.0**	**-0.6**
IBDR				*eS*g	**Sg**	**04 51 24.0**	**+0.2**
IBDR				AML	AML	04 51 29.4	
	comp=N,159nm,0.5s						
IBDR				AML	AML	04 51 29.5	
	comp=E,230nm,0.3s						
ILIN	**Lien**	**1.35**	**66**	*e*	**Sg**	**04 51 26.3**	**+1.7**
ILIN				*eP*g	**Pg**	**04 51 05.7**	**-1.3**
IKRK	**Kirkuk**	**1.37**	**318**	*eP*n	**Pg**	**04 51 06.0**	**-1.3**
IKRK				*eS*n	**Sb**	**04 51 26.6**	**+1.3**
IKRK				AML	AML	04 51 30.7	
	comp=E,720nm,0.4s						
IKRK				AML	AML	04 51 30.8	
	comp=N,1μm,0.4s						
KER	**Kermanshah**	**1.39**	**89**	*e*	**Sg**	**04 51 29.0**	**+3.3**
KER				*eP*g	**Pg**	**04 51 06.7**	**-1.0**
BHD	**Baghdad**	**1.43**	**219**	*eP*n	**Pn**	**04 51 08.0**	**0.0**
BHD				*eS*n	**Sg**	**04 51 28.0**	**+1.1**
IKOM	**Komasi**	**1.72**	**96**	*eP*g	**Pn**	**04 51 12.0**	**-0.2**
IKOM				*e*		04 51 40.2	
IBZA	**Bozab**	**1.99**	**87**	*eP*n	**Pn**	**04 51 15.1**	**-0.9**
IBZA				*e*		04 51 45.7	
IKFM	**Kafar-mosalman**	**2.17**	**113**	*eP*n	**Pn**	**04 51 17.5**	**-0.7**
IKFM				*e*		04 51 58.5	
IALM	**Almabolaq**	**2.29**	**77**	*eP*n	**Pn**	**04 51 19.9**	**-0.2**
IDOB	**Doab**	**2.34**	**104**	*eP*n	**Pn**	**04 51 20.2**	**-0.6**
IDOB				*e*		04 52 11.5	
IKMR	**Kamar-syah**	**2.58**	**109**	*eP*n	**Pn**	**04 51 23.5**	**-0.4**
IKMR				*e*		04 51 23.8	
HSAM	**Samen**	**2.61**	**93**	*eP*n	**Pn**	**04 51 23.3**	**-1.3**
HSAM				*e*		04 52 07.1	
BMDN	**Meydan**	**2.89**	**103**	*eP*n	**Pn**	**04 51 27.6**	**-0.7**
BMDN				*e*		04 51 28.3	
HAGD	**Aghdareh**	**3.07**	**81**	*eP*n	**Pn**	**04 51 30.8**	**-0.1**
HAGD				*e*		04 52 22.4	

NIED ***15*** *04:57:00, 31°.80N×135°.30E, h5km, Mw3.8 Best double couple: M₀5.92000×10¹⁴ NP1:φ=235.00000°, δ=74.00000°, λ=-90.00000°. NP2:φ=56.00000°, δ=16.00000°, λ=-89.00000°.*

JMA 15 04:57:36.9±0.3, 31°.83N×135°.28E, h23km±4km, M3.5, Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JWKM	**Wakayamakushim**	**1.67**	**14**	S	Sb	04 58 26.7	-0.7
MRT2	**Murotomisaki 2**	**1.82**	**329**	P	Pn	04 58 07.7	+0.8
MRT2				S	Sn	04 58 29.9	+0.6
JTNC	**Tanabenakahech**	**2.00**	**8**	P	Pn	04 58 10.4	+1.1
JTNC				S	Sn	04 58 34.9	+1.2
JAI	**Aioi**	**2.08**	**341**	P	Pn	04 58 11.7	+1.3
JMN	**Monobe**	**2.23**	**328**	P	Pn	04 58 14.0	+1.5
JMN				S	Sn	04 58 39.9	+0.5
JTO	**Tosashimizu**	**2.33**	**297**	P	Pn	04 58 12.5	-1.4
JTO				S	Sn	04 58 38.8	-3.1
JWY	**Kouya**	**2.40**	**6**	P	Pn	04 58 16.8	+2.0
JWY				S	Sn	04 58 45.6	+2.1
JIE	**Ise**	**2.82**	**25**	S	Sn	04 58 55.0	+1.1
JNA	**Nagahama**	**2.92**	**307**	P	Pn	04 58 22.0	0.0
JNA				S	Sn	04 58 56.0	-0.4
JTZ	**Takazaki**	**3.57**	**272**	S	Sn	04 59 08.9	-3.4
JHS	**Saijyo**	**3.64**	**331**	P	Pn	04 58 33.6	+1.7
JHS				S	Sn	04 59 15.7	+1.5
JHT	**Toyohira**	**3.70**	**320**	P	Pn	04 58 34.0	+1.3

IDC 15 04:58:47.8±2.9, 23°.79S×66°.92W, h0km, mb3.7/2, mb1 3.7/4, mb1mx3.5/27, mbtmp3.5/4, ML3.4/2, Error ellipse: s-maj=64.3km s-min=50.3km az=52.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**7.55**	**351**	Pn	Pn	05 00 39.0	-0.7
	0.3nm,0.3s,baz=166,slow=8.3,SNR=14						
SIV	**San Ignacio**	**9.50**	**36**	Pn	Pn	05 01 06.7	+0.7
	0.3nm,0.3s,baz=244,slow=10.0,SNR=8.5						
TORD	**Torodi Ar. Bea**	**76.42**	**69**	P	P	05 10 39.5	-0.2
	0.5nm,0.9s,baz=256,slow=5.6,SNR=4.2						
YKA	**Yellowknife Ar**	**93.95**	**340**	P	P	05 12 07.2	+0.2
	0.5nm,0.9s,baz=134,slow=6.1,SNR=4.6						

NEIC ***15*** *05:07:19.8±2.1, 6°.87N±0°.09×82°.31W±0°.02, h10km±2km, mb4.5/4, Error ellipse: s-maj=15.9km s-min=3.4km az=177.0*
UCR ***15*** *05:07:22.3±3.0, 7°.15N×82°.30W, h8km±31km, mb4.5(NEIC)*
UPA ***15*** *05:07:23.2±1.6, 7°.09N×82°.33W, h25km±34km, MW4.2*
IDC ***15*** *05:07:26.1±6.3, 8°.00N×81°.93W, h0km, mb3.5/4, mb1 4.0/5, mb1mx3.7/25, mbtmp3.7/5, ML4.8/1, MS3.0/4, Ms1 3.0/4, ms1mx2.7/24, Error ellipse: s-maj=183.1km s-min=49.6km az=21.0*

ISC 15 05:07:21.0±0.8, 7°.08N±0°.06×82°.28W±0°.04, h10km, n65, σ1ᵍ32/77, mb3.8/6, 3C-1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LOCO3	**Loma Colorada,**	**1.33**	**354**	*eP*	**Pn**	**05 07 44.9**	**-0.8**
LOMA3	**Las Lomas, Chi**	**1.35**	**355**	*eP*	**Pb**	**05 07 45.6**	**-0.9**
DVD	**David**	**1.36**	**353**	*i*/*eP*	**Pn**	**05 07 45.6**	**-0.5**
DVD				*eS*	**Sn**	**05 08 03.0**	**-1.2**
LESP3	**La Esperanza,**	**1.42**	**339**	*eP*	**Pn**	**05 07 45.3**	**-1.5**
CACAO	**El Cacao, Vera**	**1.43**	**79**	*eP*	**Pg**	**05 07 47.6**	**-0.9**
CACAO				*eS*	**Sn**	**05 08 05.6**	**-0.4**
PONU3	**Ponuga, Veragu**	**1.52**	**58**	*eP*	**Pg**	**05 07 49.5**	**-0.7**
PONU3				*eS*	**Sn**	**05 08 07.4**	**-0.8**
BCO2	**Palmira**	**1.65**	**351**	*eP*	**Pn**	**05 07 49.9**	**-0.3**
BCO2				*eS*	**Sn**	**05 08 10.5**	**-1.1**
LNBQ3	**Los Naranjos,**	**1.71**	**355**	*eP*	**Pn**	**05 07 50.3**	**-0.8**
LNBQ3				*eS*	**Sn**	**05 08 12.5**	**-0.6**
BRU2	**Volcan**	**1.76**	**347**	*i*/*eP*	**Pn**	**05 07 51.3**	**-0.4**
BRU2				*eS*	**Sn**	**05 08 11.4**	**-2.7**
BRU2	**Volcan**	**1.76**	**347**	*eP*	**Pn**	**05 07 51.2**	**-0.4**
BRU2				*eS*	**Sn**	**05 08 14.4**	**+0.2**

PTJ1	**Puerto Jimnez**	**1.77**	**325**	*eP*		**Pn**	**05 07 50.7**	**-0.9**
EDSV	**San Vito**	**1.86**	**339**	*eP*		**Pn**	**05 07 53.0**	**-0.1**
EDSV				*eS*		**Sb**	**05 08 18.4**	**-0.3**
AZU	**Azuero**	**2.11**	**70**	*eP*		**Pb**	**05 07 57.4**	**-2.0**
AZU				*eS*		**Sn**	**05 08 23.1**	**+0.3**
AZU	**Azuero**	**2.11**	**70**	*eP*		**Pb**	**05 07 57.7**	**-1.7**
AZU				*eS*		**Sn**	**05 08 23.8**	**+1.1**
EDPN	**Palmar Norte**	**2.21**	**328**	*eP*		**Pn**	**05 07 57.2**	**-0.5**
EDPN				*eS*		**Sn**	**05 08 24.6**	**-0.5**
DRK0	**Durika**	**2.37**	**336**	*eP*		**Pn**	**05 08 00.3**	**+0.1**
PNME	**Penonome**	**2.39**	**54**	*eP*		**Pb**	**05 08 02.4**	**-1.7**
PNME				*eS*		**Sb**	**05 08 32.7**	**-1.0**
EDLM	**Las Mercedes**	**2.54**	**329**	*eP*		**Pn**	**05 08 02.4**	**0.0**
EDLM				*eS*		**Sb**	**05 08 35.2**	**-3.0**
EDDO	**Dominical**	**2.67**	**324**	*eP*		**Pn**	**05 08 03.6**	**-0.5**
ZANG	**Zanguenga, Cho**	**3.04**	**52**	*eP*		**Pn**	**05 08 11.4**	**+2.3**
LCR2	**La Lucha 2**	**3.15**	**327**	*eP*		**Pn**	**05 08 10.9**	**+0.1**
BCIP	**Isla Barro Col**	**3.19**	**49**	*eP*		**Pn**	**05 08 13.3**	**+2.1**
BCIP	**Isla Barro Col**	**3.19**	**49**	Pn		**Pn**	**05 08 13.2**	**+1.9**
CVTR	**Volcan Turrial**	**3.27**	**334**	*eP*		**Pn**	**05 08 13.8**	**+1.1**
UPA	**Univ. de Panam**	**3.31**	**55**	*eP*		**Pn**	**05 08 15.2**	**+2.2**
SJS	**Escuela Geolog**	**3.34**	**328**	*eP*		**Pn**	**05 08 14.0**	**+0.5**
HDC	**Heredia**	**3.43**	**328**	⇑*i*/*eP*		**Pn**	**05 08 15.0**	**+0.4**
HDC	**Heredia**	**3.43**	**328**	*eP*		**Pn**	**05 08 15.4**	**+0.8**
HDC	**Heredia**	**3.43**	**328**			**Pn**	**05 08 15.6**	**+1.0**
SRA1	**San Ramn**	**3.70**	**324**	*eP*		**Pn**	**05 08 17.9**	**-0.4**
FORC	**Fortuna**	**4.12**	**325**	*eP*		**Pn**	**05 08 24.9**	**+0.9**
CASO	**Castillo**	**4.12**	**324**	*eP*		**Pn**	**05 08 25.6**	**+1.4**
ARE1	**Arenal 1**	**4.14**	**325**	*eP*		**Pn**	**05 08 25.5**	**+1.2**
JTS	**Las Juntas de**	**4.14**	**321**	Pn		**Pn**	**05 08 23.9**	**-0.5**
	72nm,0.3s,baz=131,slow=7.5,SNR=419							
JTS					Sn	**Sn**	**05 09 11.9**	**-1.1**
	1.9nm,0.3s,baz=349,slow=22,SNR=1.1							
JTS					LR	LR	05 10 02.4	
	comp=Z,127nm,21.3s,baz=166,slow=42							
JTS	**Las Juntas de**	**4.14**	**321**	*eP*		**Pn**	**05 08 25.2**	**+0.8**
JTS	**Las Juntas de**	**4.14**	**321**			**Pn**	**05 08 24.5**	**+0.1**
JTS						**Sn**	**05 09 12.2**	**-0.8**
CEDE	**Laguna Cedeo**	**4.15**	**325**	*eP*		**Pn**	**05 08 25.6**	**+1.1**
PLVR	**Palo Verde**	**4.45**	**317**	*eP*		**Pn**	**05 08 29.1**	**+0.4**
ACAL	**Aguas Claras**	**4.46**	**323**	*eP*		**Pn**	**05 08 29.8**	**+1.0**
PTEN	**Parque Tenorio**	**4.50**	**324**	*eP*		**Pn**	**05 08 30.4**	**+1.1**
GUAI	**GUAI**	**4.50**	**315**	*eP*		**Pn**	**05 08 29.3**	**0.0**
CUI	**Cuipilapa**	**4.56**	**322**	*eP*		**Pn**	**05 08 30.7**	**+0.6**
COLC	**Colonia**	**4.59**	**321**	*eP*		**Pn**	**05 08 31.5**	**+1.0**
HORNC	**Hornillas**	**4.61**	**322**	*eP*		**Pn**	**05 08 31.8**	**+0.9**
LAPC	**Finca la Perla**	**4.81**	**320**	*eP*		**Pn**	**05 08 34.3**	**+0.7**
GB1A	**Borinquen Arri**	**4.83**	**321**	*eP*		**Pn**	**05 08 35.0**	**+1.1**
BUAI	**Buenos Aires**	**4.83**	**322**	*eP*		**Pn**	**05 08 34.3**	**+0.4**
GBS3	**Finca Las Img**	**4.84**	**320**	*eP*		**Pn**	**05 08 34.8**	**+0.9**
ACON	**Acoyapa**	**5.64**	**330**	*eP*		**Pn**	**05 08 46.4**	**+1.6**
ACON	**Acoyapa**	**5.64**	**330**			**Pn**	**05 08 46.5**	**+1.6**
MATN	**Matagalpa**	**6.84**	**329**			**Pn**	**05 09 02.6**	**+1.2**
TGUH	**Tegucigalpa,Un**	**8.50**	**325**	Pn		**Pn**	**05 09 23.3**	**-1.0**
RUSC	**La Rusia**	**9.21**	**

ASAR				PcP	**PcP**	**05 17 55.2**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=0.0,slow=2.8,SNR=2.2							
STKA	**Stephens Creek**	**36.32**	**161**	P	**P**	**05 15 58.7**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=346,slow=9.7,SNR=4.3							
STKA	**Stephens Creek**	**36.32**	**161**	P	**P**	**05 15 59.0**	**+1.4**
USRK	**Ussuriysk Ar.**	**41.69**	**4**	P	**P**	**05 16 43.3**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=171,slow=10,SNR=2.2							
SONM	**Songino Array**	**49.09**	**340**	P	**P**	**05 17 41.1**	**0.0**
	comp=Z,0.7nm,0.6s,baz=157,slow=11,SNR=5.6							
SONM	**Songino Array**	**49.09**	**340**	P	**P**	**05 17 40.8**	**-0.3**
PETK	**Petropavlovsk-**	**55.96**	**21**	P	**P**	**05 18 31.0**	**-0.8**
MKAR	**Makanchi Array**	**59.63**	**325**	P	**P**	**05 18 57.4**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=106,slow=8.9,SNR=6.0							
ILAR	**Eielson Array**	**85.49**	**25**	P	**P**	**05 21 30.8**	**-0.3**

NEIC ***15*** *05:21:41.7±1.5,59.59N±0.05×151.15W±0.06,h53km±3km, Error ellipse: s-maj=7.0km s-min=4.6km az=169.0*

AEIC 15 05:21:42.6±1.3,59.63N±0.05×151.17W±0.06,h48km±1km, ML2.6/98, Error ellipse: s-maj=7.0km s-min=4.3km az=170.0, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNPM	**China Poot**	**0.11**	**199**		Pn	05 21 49.7	-0.5
CNPM					Sn	05 21 55.5	-0.1
BRLK	**Bradley Lake**	**0.20**	**46**		Pn	05 21 49.9	-0.8
BRLK					Sn	05 21 56.1	-0.4
HOM	**Homer**	**0.24**	**278**		Pn	05 21 50.6	-0.4
HOM					Sn	05 21 57.7	+0.7
BRSE	**Bradley Lake S**	**0.24**	**62**		Pn	05 21 50.5	-0.6
BRSE					Sn	05 21 57.1	+0.1
SEW	**Seward**	**0.99**	**60**		Pn	05 21 59.0	-1.1
SEW					Sn	05 22 11.8	-1.1
SEW	**Seward**	**0.99**	**60**		Sn	05 22 12.5	-0.5
SLKM	**Skilak Lake**	**1.00**	**28**		Pn	05 21 59.5	-0.8
SLKM					Sn	05 22 13.0	-0.4
IVE	**Iliamna Volcan**	**1.01**	**294**		Pn	05 21 59.5	-1.0
ILS	**Iliamna Low So**	**1.02**	**290**		Pn	05 21 59.8	-0.8
ILW	**Iliamna West**	**1.08**	**294**		Pn	05 22 00.6	-1.0
ILW					Sn	05 22 15.0	-0.5
RED	**Redoubt Volcan**	**1.13**	**315**		Pn	05 22 01.2	-0.9
RED					Sn	05 22 16.1	-0.5
RDT	**Redoubt**	**1.13**	**327**		Pn	05 22 01.4	-0.8
CAPN	**Captain Cook N**	**1.15**	**0**		Pn	05 22 03.2	+1.0
AU22	**Augustine Moun**	**1.15**	**258**		Pn	05 22 01.8	-0.3
RSO	**Redoubt South**	**1.16**	**317**		Pn	05 22 01.7	-0.8
RSO					Sn	05 22 16.9	-0.5
AUJK	**Augustine Jueg**	**1.18**	**257**		Pn	05 22 02.5	-0.1
AUP	**Augustine Pinn**	**1.18**	**258**		Pn	05 22 02.7	-0.1
AUH	**Augustine H**	**1.19**	**258**		Pn	05 22 02.8	-0.1
AUW	**Augustine West**	**1.20**	**259**		Pn	05 22 03.1	+0.1
RDWB	**Redoubt West**	**1.20**	**317**		Pn	05 22 02.2	-1.0
RDWB					Sn	05 22 17.7	-0.7
DFR	**Drift River**	**1.23**	**323**		Pn	05 22 02.4	-1.1
DFR					Sn	05 22 18.4	-0.6
RDJH	**Redoubt Jeurge**	**1.27**	**320**		Pn	05 22 03.1	-0.9
RDJH					Sn	05 22 19.5	-0.5
RC01	**Rabbit Creek A**	**1.63**	**25**		Pn	05 22 08.5	-0.3
RC01					Sn	05 22 29.3	+0.6
CKT	**Bend**	**1.66**	**342**		Pn	05 22 08.8	-0.5
CKL	**Chakachamna La**	**1.68**	**340**		Pn	05 22 09.1	-0.5
SPCG	**Spurr Capps Gl**	**1.72**	**346**		Pn	05 22 10.0	-0.2
SPWE	**Spurr West**	**1.79**	**338**		Pn	05 22 11.0	-0.1
PWL	**Port Wells**	**1.88**	**48**		Pn	05 22 11.3	-0.9
SPNN	**North Nagishla**	**1.90**	**337**		Pn	05 22 12.7	0.0
STLK	**Strandline Lak**	**1.91**	**350**		Pn	05 22 12.8	+0.1
KDAK	**Kodiak Island**	**1.99**	**202**		Pn	05 22 12.3	-1.5
PMR	**Palmer**	**2.21**	**26**		Pn	05 22 16.1	-0.7
KNK	**Knik Glacier**	**2.24**	**36**		Pn	05 22 16.4	-0.8
GLI	**Glacier Island**	**2.39**	**56**		Pn	05 22 17.2	-2.0
GLI					Sn	05 22 44.3	-2.9
GHO	**Glory Hole Cre**	**2.42**	**26**		Pn	05 22 19.2	-0.5
HIN	**Hinchinbrook I**	**2.47**	**70**		Pn	05 22 18.9	-1.4
HIN					Sn	05 22 48.1	-1.1
SML	**Sawmill**	**2.59**	**31**		Pn	05 22 21.6	-0.5
FID	**Port Fidalgo**	**2.60**	**62**		Pn	05 22 19.8	-2.3
OHAK	**Old Harbor**	**2.66**	**206**		Pn	05 22 21.1	-1.8
EYAK	**Cordova Ski Ar**	**2.87**	**69**		Pn	05 22 25.3	-0.5
SCM	**Sheep Creek Mo**	**2.91**	**39**		Pn	05 22 26.5	+0.1
PPLA	**Purkeypile**	**3.32**	**352**	Pn	Pn	05 22 32.5	+0.4
RAGM	**Ragged Mountai**	**3.35**	**74**		Pn	05 22 32.6	+0.2
PS12	**TAPS Pump St12**	**3.50**	**55**		Pn	05 22 33.7	-0.9
WAT2	**Susitna Watana**	**3.57**	**19**		Pn	05 22 35.7	+0.2
TRF	**Thorofare Moun**	**3.86**	**6**		Pn	05 22 39.6	+0.1
DHY	**Denali Highway**	**3.91**	**26**		Pn	05 22 40.7	+0.5
KTH	**Kantishna Hill**	**3.94**	**2**		Pn	05 22 41.0	+0.4
RND	**Reindeer**	**3.95**	**15**		Pn	05 22 40.8	+0.1
TT01	**Tatalina**	**4.04**	**327**		Pn	05 22 41.5	-0.3
TTA	**Tatalina**	**4.05**	**327**		Pn	05 22 41.5	-0.2
GLB	**Gilahina Butte**	**4.07**	**60**		Pn	05 22 41.0	-1.2
GLB					Sn	05 23 26.5	-2.0
VRDI	**Verde Repeater**	**4.15**	**64**		Pn	05 22 41.9	-1.6
MCK	**McKinley**	**4.25**	**14**		Pn	05 22 44.3	-0.5
PAX	**Paxson**	**4.33**	**37**		Pn	05 22 45.6	-0.3
PAX					Sn	05 23 35.5	+0.3
BPAW	**Bear Paw Mtn.**	**4.49**	**1**		Pn	05 22 48.3	+0.3
KIAG	**Kiagna River**	**4.58**	**70**		Pn	05 22 47.4	-1.9
PTPK	**Patty Peak**	**4.59**	**66**		Pn	05 22 48.3	-1.3
BALM	**Baldy**	**4.61**	**68**		Sn	05 23 38.7	-3.2
BALM	**Baldy**	**4.61**	**68**		Pn	05 22 48.0	-1.7
YAH	**Yahtse**	**4.79**	**77**		Pn	05 22 52.5	+0.1
YAH					Sn	05 23 44.6	-1.9
BARN	**Barnard Glacie**	**4.94**	**69**		Pn	05 22 53.0	-1.3
NEA	**Nenana**	**5.07**	**10**		Pn	05 22 55.8	0.0
CTGM	**Chitina Glacie**	**5.07**	**70**		Pn	05 22 55.4	-0.7
WRH	**Wood River Hil**	**5.07**	**15**		Pn	05 22 55.3	-0.6
CHX	**Chaix Hills**	**5.09**	**81**		Pn	05 22 56.5	+0.2
RIDG	**Independent Ri**	**5.11**	**33**		Pn	05 22 56.7	+0.2
HDA	**Harding Lake**	**5.19**	**21**		Pn	05 22 57.7	+0.1
DOT	**Dot Lake**	**5.27**	**37**	Pn	Pn	05 22 58.7	0.0
CCB	**Clear Creek Bu**	**5.28**	**16**		Pn	05 22 58.6	-0.1
MLY	**Manley**	**5.43**	**2**		Pn	05 23 01.3	+0.4
COLA	**College**	**5.49**	**15**		Pn	05 23 01.7	+0.1
COLA	**College**	**5.49**	**15**		Pn	05 23 01.9	+0.2
COLA					Sn	05 24 03.2	-0.1
YUK2	**White River**	**5.51**	**62**		Pn	05 23 01.1	-1.0
MDM	**Murphy Dome**	**5.52**	**13**	Pn	Pn	05 23 02.1	-0.1
SCRK	**Sand Creek**	**5.53**	**35**		Pn	05 23 01.8	-0.6
IL31		**5.54**	**19**		Pn	05 23 02.3	0.0
ILAR	**Eielson Array**	**5.54**	**19**	Pn	Pn	05 23 02.1	-0.3
BC03		**5.68**	**49**		Pn	05 23 03.9	-0.3
BCAR	**Beaver Creek A**	**5.68**	**49**	Pn	Pn	05 23 04.0	-0.3
YUK3	**Moose Creek**	**5.68**	**63**		Pn	05 23 03.7	-0.8
POKR	**Poker Plat Res**	**5.78**	**16**		Pn	05 23 05.5	-0.2
PNL	**Peninsula**	**5.97**	**85**		Pn	05 23 07.3	-1.0
YUK4	**Talbot Arm**	**6.42**	**69**		Pn	05 23 14.7	0.0
PRP	**Porcupine Dome**	**6.46**	**21**	Pn	Pn	05 23 14.7	-0.4
PRP					Sn	05 24 26.6	-0.8
YUK6	**Outpost Mounta**	**6.50**	**73**		Pn	05 23 15.7	-0.2
DHAK	**Deception Hill**	**6.65**	**89**		Pn	05 23 17.0	-0.6
HYT	**Haines Junctio**	**6.91**	**74**	Pn	Pn	05 23 21.2	-0.1
EGAK	**Eagle**	**6.97**	**38**	Pn	Pn	05 23 21.8	-0.1
WHY	**Whitehorse**	**8.19**	**76**		Pn	05 23 38.4	-0.4
BM03	**Burnt Mountain**	**8.35**	**18**		Pn	05 23 37.8	-3.1
BMAR	**Burnt Mountain**	**8.36**	**18**	Pn	Pn	05 23 39.8	-1.2

ASRS ***15*** *05:41:57.8,53.79N×91.15E,M2.1, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC 15 05:42:01.9±3.5,53.74N×90.89E,h0km,mb1 3.3/3, mb1mx3.1/60,mbtmp3.3/3,ML2.5/3, Error ellipse: s-maj=34.2km s-min=25.2km az=27.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.60**	**276**	*i*		06 03 40.0	
	baz=89,slow=308,SNR=2.7						
ZALV	**Zalesovo Beam**	**3.60**	**276**	Pn	Pn	05 43 00.1	+1.1
	0.2nm,0.3s,baz=96,slow=12,SNR=2.3						
ZALV				Pg	Pb	05 43 04.9	-1.6
	1.5nm,0.3s,baz=90,slow=14,SNR=17						
ZALV				Lg	Lg	05 43 56.2	
	1.6nm,0.3s,baz=93,slow=28,SNR=8.3						
TLY	**Talaya**	**8.02**	**100**	Lg	Lg	05 46 04.0	
	0.0nm,0.3s,baz=260,slow=1.2,SNR=11						
KURBB	**Kurchatov Arra**	**8.21**	**253**	Pn	Pn	05 44 02.1	-0.2
	0.1nm,0.3s,baz=65,slow=14,SNR=8.7						
KURBB					Sn	05 45 33.5	-2.2
	baz=67,slow=23,SNR=4.3						
KURBB					Lg	Lg	05 46 22.5
	0.1nm,0.3s,baz=68,slow=33,SNR=2.5						
MKAR	**Makanchi Array**	**8.87**	**222**	Pn	Pn	05 44 11.7	+0.5
	0.2nm,0.3s,baz=32,slow=14,SNR=7.1						
MKAR					Lg	Lg	05 46 47.2
	0.1nm,0.3s,baz=43,slow=36,SNR=4.8						
SONM	**Songino Array**	**11.45**	**115**	Lg	Lg	05 47 55.0	
	0.2nm,0.3s,baz=305,slow=25,SNR=8.9						

IDC ***15*** *05:48:04.4±0.5,20.33S×66.95E,h0km,mb4.2/19, mb1 4.4/19,mb1mx4.2/50,mbtmp4.2/19,MS3.7/21, Ms1 3.7/21,ms1mx3.5/34, Error ellipse: s-maj=17.2km s-min=14.4km az=5.0*

NEIC ***15*** *05:48:05.7±1.4,20.40S±0.10×66.87E±0.10,h10km±1km, mb4.5/25, Error ellipse: s-maj=17.7km s-min=14.5km az=149.0*

ISC 15 05:48:05.8±0.4,20.40S±0.08×66.90E±0.08,h10km,n68, σ0964/59,mb4.4/26,MS3.7/21, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**10.46**	**264**	Pn	**Pn**	**05 50 35.6**	**-0.4**
H08S1	**Diego Carcia H**	**13.79**	**24**	Pn	**Pn**	**05 51 22.6**	**+1.4**
	baz=208,slow=10,SNR=5.0						
H08S1				T	T	06 05 12.9	
	baz=202,slow=76,SNR=121						
H08S2	**Diego Garcia H**	**13.79**	**24**	Pn	**Pn**	**05 51 22.5**	**+1.2**
	baz=208,slow=10,SNR=24						
H08S2				T	T	06 05 13.1	
	baz=202,slow=76,SNR=139						
H08S3	**Diego Garcia H**	**13.80**	**24**	Pn	**Pn**	**05 51 22.5**	**+1.1**
	baz=208,slow=10,SNR=35						
H08S3				T	T	06 05 23.6	
	baz=202,slow=76,SNR=196						
KMBO	**Kilima Mbogo**	**34.73**	**300**	P	**P**	**05 54 57.6**	**+0.9**
	3.7nm,0.9s,baz=101,slow=7.9,SNR=6.4						
KMBO				LR	LR	06 07 10.3	
	comp=Z,54nm,18.2s,baz=130,slow=33						
KMBO	**Kilima Mbogo**	**34.73**	**300**	P	**P**	**05 54 56.0**	**-0.6**
KMBO				IAmb	IAmb	05 54 59.1	
	comp=Z,5.9nm,1.1s						
LSZ	**Lusaka**	**37.14**	**271**	P	**P**	**05 55 16.2**	**-1.0**
LSZ				IAmb	IAmb	05 55 19.2	
	comp=Z,6.2nm,0.9s						
LBTB	**Lobatse**	**38.27**	**255**	P	**P**	**05 55 27.6**	**+0.9**
	comp=Z,6.4nm,0.8s,baz=110,slow=10,SNR=9.0						
LBTB	**Lobatse**	**38.27**	**255**	P	**P**	**05 55 27.1**	**+0.4**
LBTB				IAmb	IAmb	05 55 28.6	
	comp=Z,12nm,1.0s						
BOSA	**Boshof**	**38.61**	**249**	P	**P**	**05 55 30.5**	**+1.0**
BOSA				LR	LR	06 07 28.0	
	comp=Z,37nm,19.3s,baz=110,slow=30						
BOSA	**Boshof**	**38.61**	**249**	P	**P**	**05 55 28.9**	**-0.6**
CISI	**Cisompet, Garu**	**41.58**	**78**	P	**P**	**05 55 53.4**	**-0.8**
IPM	**Ipoh**	**41.65**	**57**	P	**P**	**05 55 53.6**	**-1.1**
IPM				IAmb	IAmb	05 55 53.9	
	comp=Z,20nm,1.5s						
MAW	**Mawson**	**47.26**	**182**	P	**P**	**05 56 39.7**	**+0.8**
	comp=Z,5.6nm,0.8s,baz=338,slow=9.9,SNR=12						
MAW				LR	LR	06 11 18.6	
	comp=Z,149nm,21.6s,baz=55,slow=30						
MAW	**Mawson**	**47.26**	**182**	P	**P**	**05 56 39.3**	**+0.4**
CMAR	**Chiang Mai Arr**	**49.79**	**41**	P	**P**	**05 56 59.0**	**0.0**
	comp=Z,1.2nm,0.3s,baz=233,slow=9.2,SNR=10						
CMAR				LR	LR	06 15 49.0	
	comp=Z,56nm,19.1s,baz=220,slow=34						
CMAR	**Chiang Mai Arr**	**49.79**	**41**	P	**P**	**05 56 58.7**	**-0.3**
SHL	**Shillong**	**51.74**	**29**	P	**P**	**05 57 13.8**	**0.0**
SLVN	**Son La**	**55.04**	**43**	P	**P**	**05 57 38.4**	**+0.4**
SLVN				IAmb	IAmb	05 57 39.7	
	comp=Z,5.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**55.25**	**98**	P	**P**	**05 57 41.1**	**+1.4**
	comp=Z,3.5nm,0.8s,baz=250,slow=8.2,SNR=6.7						
FITZ	**Fitzroy Crossi**	**55.25**	**98**	P	**P**	**05 57 39.3**	**-0.4**
FITZ				IAmb	IAmb	05 57 47.5	
	comp=Z,7.4nm,1.2s						
GEYT	**Alibeck**	**58.61**	**352**	LR	LR	06 20 21.8	
	comp=Z,50nm,21.4s,baz=120,slow=33						
ASAR	**Alice Springs**	**61.69**	**107**	P	**P**	**05 58 24.2**	**-0.4**
	comp=Z,2.4nm,0.9s,baz=257,slow=6.5,SNR=18						
ASAR				LR	LR	06 21 27.8	
	comp=Z,98nm,20.1s,baz=290,slow=32						
ASAR	**Alice Springs**	**61.69**	**107**	P	**P**	**05 58 23.6**	**-1.0**
WRA	**Warramunga Arr**	**62.87**	**103**	P	**P**	**05 58 31.9**	**-0.6**
	comp=Z,3.3nm,1.0s,baz=260,slow=6.2,SNR=8.3						
WRA	**Warramunga Arr**	**62.87**	**103**	P	**P**	**05 58 33.2**	**+0.6**
WB2	**Warramunga Arr**	**62.88**	**103**	P	**P**	**05 58 33.1**	**+0.5**
WRAB	**Tennant Creek**	**62.88**	**103**	P	**P**	**05 58 33.0**	**+0.4**
AAK	**Ala-Archa**	**63.12**	**6**	LR	LR	06 23 13.1	
	comp=Z,82nm,21.2s,baz=170,slow=33						
AAK	**Ala-Archa**	**63.12**	**6**	P	**P**	**05 58 34.0**	**+0.2**
AAK				IAmb	IAmb	05 58 37.2	
	comp=Z,6.3nm,1.3s						
KKAR	**Karatay Array**	**63.28**	**3**	P	**P**	**05 58 34.4**	**-0.3**
SNAA	**Sanae**	**64.43**	**199**	P	**P**	**05 58 42.4**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=113,slow=6.3,SNR=6.8						
SNAA	**Sanae**	**64.43**	**199**	P	**P**	**05 58 42.9**	**+0.8**
SNAA				IAmb	IAmb	05 58 49.4	
	comp=Z,2.5nm,0.8s						
STKA	**Stephens Creek**	**66.87**	**117**	P	**P**	**05 58 58.6**	**+0.2**
	comp=Z,2.1nm,0.9s,baz=293,slow=5.8,SNR=3.0						
STKA				LR	LR	06 24 37.8	
	comp=Z,84nm,18.5s,baz=210,slow=33						
STKA	**Stephens Creek**	**66.87**	**117**	P	**P**	**05 58 58.9**	**+0.4**
BR131	**Keskin Array S**	**67.40**	**333**	P	**P**	**05 59 02.0**	**+0.4**
BR131				IAmb	IAmb	05 59 12.2	
	comp=Z,3.9nm,1.1s						
BRTR	**Keskin Array B**	**67.40**	**333**	P	**P**	**05 59 01.8**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=152,slow=8.2,SNR=10						
BRTR				LR	LR	06 26 49.5	
	comp=Z,46nm,19.9s,baz=145,slow=34						
KBZ	**Khabaz**	**67.51**	**341**	P	**P**	**05 59 02.2**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=182,slow=1.1,SNR=3.7						
MKAR	**Makanchi Array**	**68.31**	**11**	P	**P**	**05 59 06.4**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=191,slow=6.8,SNR=6.2						
MKAR				LR	LR	06 27 22.1	
	comp=Z,84nm,21.6s,baz=208,slow=35						
MKAR	**Makanchi Array**	**68.31**	**11**	P	**P**	**05 59 06.3**	**-0.8**
ABKAR	**Akbulak array**	**69.62**	**355**	P	**P**	**05 59 15.9**	**+0.8**
QSPA	**South Pole Qui**	**69.71**	**180**	P	**P**	**05 59 15.7**	**-0.1**
AKTO	**Aktyubinsk**	**70.96**	**354**	LR	LR	06 29 14.1	
	comp=Z,34nm,19.7s,baz=166,slow=35						
VNDA	**Vanda**	**71.30**	**167**	LR	LR	06 26 34.5	
	comp=Z,53nm,20.0s,baz=249,slow=32						
VNDA	**Vanda**	**71.30**	**167**	P	**P**	**05 59 25.0**	**-0.1**
KURK	**Kurchatov**	**71.56**	**8**	P	**P**	**05 59 26.4**	**-0.5**
KURK				IAmb	IAmb	05 59 29.1	
	comp=Z,5.6nm,1.3s						
TORD	**Torodi Ar. Bea**	**72.25**	**292**	P	**P**	**05 59 31.6**	**-0.2**
	comp=Z,2.0nm,0.9s,baz=101,slow=4.6,SNR=11						
TORD	**Torodi Ar. Bea**	**72.25**	**292**	P	**P**	**05 59 31.6**	**-0.2**
KIC	**Kosan Boka**	**75.19**	**283**	*e*PKP1	**P**	**05 59 49.7**	**+0.5**
	comp=Z,44nm,1.4s						
LIC	**Lamto**	**75.40**	**282**	*e*PKP1	**P**	**05 59 50.0**	**-0.4**
	comp=Z,42nm,1.4s						
DBIC	**Dimbokro**	**75.42**	**283**	P	**P**	**05 59 51.1**	**+0.6**
	comp=Z,6.3nm,0.9s,baz=78,slow=7.1,SNR=5.5						
DBIC				LR	LR	06 31 51.3	
	comp=Z,28nm,18.1s,baz=112,slow=35						
TIC	**Toumodi**	**75.56**	**283**	*e*PKP1	**P**	**05 59 51.1**	**-0.2**
ZALV	**Zalesovo Beam**	**75.64**	**11**	LR	LR	06 32 01.6	
	comp=Z,73nm,21.1s,baz=222,slow=35						
SONM	**Songino Array**	**76.61**	**26**	P	**P**	**05 59 56.6**	**0.0**
	comp=Z,2.0nm,1.0s,baz=218,slow=6.1,SNR=7.3						
SONM	**Songino Array**	**76.61**	**26**	P	**P**	**05 59 56.5**	**-0.2**
ULN	**Ulaanbaatar**	**76.91**	**26**	P	**P**	**05 59 58.2**	**-0.2**
KEST	**Kesra**	**78.00**	**315**	LR	LR	06 34 57.5	
	comp=Z,63nm,18.1s,baz=302,slow=36						
AKASG	**Malin Array Be**	**78.19**	**337**	P	**P**	**06 00 04.8**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=139,slow=4.9,SNR=4.8						
AKASG				LR	LR	06 35 00.2	
	comp=Z,20nm,18.1s,baz=260,slow=36						
AKASG	**Malin Array Be**	**78.19**	**337**	P	**P**	**06 00 05.0**	**-0.3**
KSAR	**Wonju Array Be**	**81.24**	**45**	P	**P**	**06 00 21.4**	**-0.8**
KSRS	**Korea Array**	**81.27**	**45**	P	**P**	**06 00 21.2**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=244,slow=5.3,SNR=2.1						
KSRS				LR	LR	06 33 49.6	
	comp=Z,33nm,21.6s,baz=217,slow=34						
MJAR	**Matsushiro Arr**	**87.90**	**50**	P	**P**	**06 00 56.0**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=234,slow=4.8,SNR=2.0						
MJAR				LR	LR	06 38 03.9	
	comp=Z,22nm,20.7s,baz=275,slow=34						
MJAR	**Matsushiro Arr**	**87.90**	**50**	P	**P**	**06 00 55.6**	**-0.3**
ESDC	**Sonseca Array**	**89.03**	**313**	LR	LR	06 42 33.5	
	comp=Z,45nm,18.0s,baz=140,slow=37						
NRIK	**Noril'sk**	**90.72**	**7**	LR	LR	06 43 10.1	
	comp=Z,49nm,18.6s,baz=221,slow=36						
ARCES	**ARCESS Array B**	**94.41**	**347**	LR	LR	06 44 46.5	
	comp=Z,13nm,18.4s,baz=166,slow=36						
YKA	**Yellowknife Ar**	**137.93**	**1**	PKP	**PKPdf**	**06 07 30.0**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=349,slow=2.5,SNR=3.3						
FFC	**Flin Flon**	**144.71**	**349**		**PKPab**	**06 07 41.1**	**-0.3**

TEH ***15*** *06:54:37.9,33.00N×48.99E,h10km,ML3.8*

IDC ***15*** *06:54:38.1±2.1,32.57N×48.95E,h0km,mb3.7/4, mb1 3.8/5,mb1mx3.5/32,mbtmp3.7/5,ML3.6/1, Error ellipse: s-maj=55.8km s-min=26.1km az=154.0*

THR ***15*** *06:54:39.3±0.8,32.97N×49.04E,h14km±5km,ML3.7*

ISC 15 06:54:39.9±0.7,33.02N±0.03×48.97E±0.03,h10km,n58, σ1963/60,mb3.8/4, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMDN	**Meydan**	**0.66**	**350**	*e*Pg	**Pg**	**06 54 51.1**	**-1.7**
IKMR	**Kamar-syah**	**0.70**	**316**	*e*Pg	**Pg**	**06 54 52.1**	**-1.4**
IKMR				*e*		06 55 14.0	
SHGR	**Shooshtar-Gavs**	**0.92**	**189**	*e*Pg	**Pg**	**06 54 55.8**	**-1.8**
SHGR				*e*Sg	**Sg**	**06 55 08.3**	**-1.3**
SHGR				IAML		06 55 14.5	
	comp=N,3μm,0.4s						
SHGR				IAML		06 55 15.6	
	comp=E,3μm,0.4s						
SHGR	**Shooshtar-Gavs**	**0.92**	**189**	*e*Pg	**Pg**	**06 54 55.8**	**-1.8**
IDOB	**Doab**	**1.01**	**320**	*e*Pg	**Pg**	**06 54 57.9**	**-1.5**
IKFM	**Kafar-mosalman**	**1.06**	**299**	*e*Pg	**Pg**	**06 54 58.8**	**-1.6**
IKFM				*e*		06 55 31.3	
KHMZ	**Khomeyn**	**1.10**	**49**	*e*Pg	**Pg**	**06 54 59.5**	**-1.6**
KHMZ	**Khomeyn**	**1.10**	**49**	*e*Pg	**Pg**	**06 54 59.5**	**-1.6**
HSAM	**Samen**	**1.23**	**346**	*e*Pg	**Pb**	**06 55 01.6**	**-1.8**
JHBN	**Jahan bin**	**1.64**	**118**	*e*		06 55 37.8	
JHBN				*e*Pg	**Pn**	**06 55 09.0**	**-0.1**
IPIR	**Pirpir**	**1.66**	**101**	*e*		06 55 43.6	
IPIR				*e*Pg	**Pn**	**06 55 08.6**	**-0.7**
IKOM	**Komasi**	**1.68**	**314**	*e*Pg	**Pn**	**06 55 08.5**	**-1.0**
IKOM				*e*		06 56 02.8	
AHWZ	**Ahwaz**	**1.71**	**189**	*e*Pg	**Pb**	**06 55 11.1**	**-0.3**
IBZA	**Bozab**	**1.72**	**328**	*e*Pg	**Pb**	**06 55 11.2**	**-0.5**
ASAO	**Ashtian**	**1.76**	**30**	*e*Pn	**Pb**	**06 55 11.4**	**-1.2**
ASAO	**Ashtian**	**1.76**	**30**	*e*Pn	**Pb**	**06 55 11.4**	**-1.2**
HAGD	**Aghdareh**	**1.81**	**5**	*e*Pn	**Pn**	**06 55 11.3**	**-0.1**
HAGD				*e*		06 55 49.7	
ROKH	**ROKH**	**1.87**	**110**	*e*Pn	**Pb**	**06 55 13.2**	**-1.1**
ROKH				*e*		06 55 49.7	
IKLH	**Kolahrood**	**2.21**	**81**	*e*Pn	**Pb**	**06 55 18.5**	**-1.7**
IKLH				*e*		06 55 54.6	
IBRJ	**Brojen**	**2.23**	**119**	*e*Pn	**Pn**	**06 55 17.7**	**+0.4**
IVIS	**Veis**	**2.32**	**311**	*e*Pn	**Pn**	**06 55 19.5**	**+1.2**
IGHG	**Ghaleghazi**	**2.39**	**304**	*e*		06 56 35.3	
GHVR	**GHOM**	**2.43**	**52**	*e*Pn	**Pn**	**06 55 19.9**	**+0.1**
GHVR				*e*Sg	**Sb**	**06 55 54.0**	**+0.2**
GHVR				IAML		06 56 05.7	
	comp=E,282nm,0.5s						
GHVR	**GHOM**	**2.43**	**52**	*e*Pn	**Pn**	**06 55 19.9**	**+0.1**
**SNGE

Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.06**	**214**	Pn	Pn	07 22 22.0	0.0
	10.0nm,0.3s,baz=122,slow=12,SNR=245						
DZM				Sn	Sn	07 23 00.1	+0.7
	13nm,0.3s,baz=140,slow=23,SNR=9.3						
STKA	**Stephens Creek**	**26.93**	**238**	P	P	07 27 16.0	+0.6
	0.9nm,0.5s,baz=71,slow=14,SNR=4.1						
WRA	**Warramunga Arr**	**31.92**	**263**	P	P	07 27 59.3	-0.6
	0.6nm,0.8s,baz=100,slow=8.0,SNR=0.4						
ASAR	**Alice Springs**	**32.18**	**256**	P	P	07 28 02.0	-0.1
	2.5nm,0.6s,baz=86,slow=8.9,SNR=45						

NEIC ***15*** *07:48:04.0±3.1, 17.0°N±0.1°×95.1°W±0.0°, h114km±6km, Error ellipse: s-maj=17.1km s-min=8.1km az=174.0*

MEX 15 07:48:04.4±0.8, 16.9°N×95.1°W, h126km±10km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.24**	**59**	*i* P	Pn	07 48 20.9	-0.9
CMIG				*e*S	Sn	07 48 32.2	-2.8
CMIG	**Matias Romero**	**0.24**	**59**		Pn	07 48 20.9	-0.9
CMIG					Sn	07 48 32.2	-2.8
HUIG	**Huatulco**	**1.54**	**219**	*e*P	Pn	07 48 31.1	-1.6
HUIG				*e*S	Sn	07 48 52.8	-1.4
HUIG	**Huatulco**	**1.54**	**219**		Pn	07 48 31.1	-1.6
HUIG					Sn	07 48 52.8	-1.4
VHO	**Vista Hermosa**	**1.57**	**274**	*e*P	Pn	07 48 31.5	-1.7
VHO				*e*S	Sn	07 48 54.0	-1.1
TOIG	**Toxpalan**	**2.19**	**301**	*i* P	Pn	07 48 39.9	-0.6
TOIG				*e*S	Sn	07 49 06.5	-1.8
PEIG	**Puerto Escondi**	**2.19**	**244**	*e*P	Pn	07 48 38.4	-2.1
PEIG				*e*S	Sn	07 49 06.9	-1.3
YOIG	**Yosondua**	**2.35**	**268**	*e*P	Pn	07 48 42.4	-0.4
YOIG				*e*S	Sn	07 49 10.1	-2.1
TXIG	**Tlaxiaco**	**2.57**	**277**	*e*P	Pn	07 48 44.7	-0.9
TXIG				*e*S	Sn	07 49 14.8	-2.4
HLIG	**Huajuapan de L**	**2.72**	**289**	*e*P	Pn	07 48 46.9	-0.5
HLIG				*i* S	Sn	07 49 18.5	-2.1
CCIG	**Comitan**	**2.92**	**103**	Pn	Pn	07 48 51.7	+1.7
CCIG				Sn	Sn	07 49 21.5	-3.6
PNIG	**Pinotepa**	**2.96**	**259**	*e*P	Pn	07 48 48.6	-1.8
PNIG				*i* S	Sn	07 49 24.6	-1.2
PNIG	**Pinotepa**	**2.96**	**259**		Pn	07 48 48.6	-1.8
PNIG					Sn	07 49 22.9	-2.9
FTIG	**Fresnillo de T**	**3.04**	**288**	*i* P	Pn	07 48 50.6	-1.0
FTIG				*i* S	Sn	07 49 27.0	-0.9
TLIG	**Tlapa**	**3.37**	**281**	*i* P	Pn	07 48 55.3	-0.5
TLIG				*i* S	Sn	07 49 34.0	-1.5
TLIG	**Tlapa**	**3.37**	**281**		Pn	07 48 56.2	+0.4
TLIG				Sn	Sn	07 49 31.8	-3.8
TEIG	**Tepich**	**7.23**	**62**	Pn	Pn	07 49 45.4	-2.2
TEIG				Sn	Sn	07 51 04.0	-4.2
ESPN	**Las Esperanzas**	**11.48**	**113**	Pn	Pn	07 50 44.8	+0.2

IDC ***15*** *07:52:56.4±13.0, 12.3°N×92.3°W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.5/29, mbtmp3.3/3, ML3.6/1, Error ellipse: s-maj=270.9km s-min=128.1km az=13.0*

NEIC ***15*** *07:53:09.4±1.5, 13.6°N±0.0°×92.5°W±0.0°, h20km±10km, mb3.8/3, Md4.0/14(MEX), Error ellipse: s-maj=14.5km s-min=7.6km az=207.0*

MEX ***15*** *07:53:10.3±0.4, 13.6°N×92.2°W, h20km, MD4.0*

GCG ***15*** *07:53:11.5±0.3, 13.8°N×92.3°W, h35km±999km, MD4.0*

ISC 15 07:53:08.5±3.4, 13.8°N±0.0°×92.3°W±0.0°, h1km±23km, n24, σ1°s19/32, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.04**	**6**	*e*P	**Pb**	**07 53 29.6**	**+0.4**
THIG				*e*S	**Sn**	**07 53 44.6**	**-0.6**
THIG		**1.04**	**6**		**Pb**	**07 53 29.6**	**+0.4**
THIG					**Sn**	**07 53 44.6**	**-0.6**
STG3	**Santiaguito 3,**	**1.14**	**43**	*e*P	**Pn**	**07 53 31.4**	**-0.3**
FUG	**Fuego 3**	**1.59**	**69**	*e*P	**Pn**	**07 53 37.6**	**-0.3**
FUG				*e*S	**Sb**	**07 53 57.9**	**-1.5**
IXG	**Ixpaco**	**1.90**	**81**	*e*P	**Pn**	**07 53 41.9**	**-0.2**
PCIG		**2.00**	**336**	*e*P	**Pn**	**07 53 43.4**	**0.0**
PCIG				*i* S	**Sn**	**07 54 09.5**	**+0.4**
PCIG		**2.00**	**336**		**Pn**	**07 53 43.4**	**0.0**
CCIG	**Comitan**	**2.41**	**5**	*i* P	**Pn**	**07 53 49.1**	**0.0**
CCIG				*i* S	**Sn**	**07 54 20.0**	**+0.6**
CCIG	**Comitan**	**2.41**	**5**		**Pb**	**07 53 51.8**	**-1.0**
TGIG		**2.98**	**346**	*e*P	**Pn**	**07 53 58.4**	**+1.5**
TGIG				*e*S	**Sn**	**07 54 34.8**	**+1.4**
TGIG		**2.98**	**346**		**Pn**	**07 53 58.4**	**+1.5**
TGIG					**Sn**	**07 54 34.8**	**+1.4**
SNET	**Serv Nac Est T**	**3.05**	**93**	Pn	**Pn**	**07 53 58.3**	**+0.4**
TGUH	**Tegucigalpa,Un**	**4.95**	**87**	Pn	**Pn**	**07 54 25.9**	**+1.8**
TGUH				Sn	**Sn**	**07 55 23.4**	**+1.3**
MATN	**Matagalpa**	**6.34**	**98**		**Pn**	**07 54 45.1**	**+1.9**
TLIG	**Tlapa**	**7.01**	**302**	Pn	**Pn**	**07 54 50.7**	**-1.7**
TEIG	**Tepich**	**7.43**	**31**	Pn	**Pn**	**07 54 59.6**	**+1.5**
656A	**Willston**	**17.91**	**29**		**P**	**07 57 20.7**	**+1.1**
656A				IAmb	IAmb	07 57 23.7	
	comp=Z,74nm,1.2s						
TXAR	**Lajitas Array**	**18.61**	**328**	P	**Pn**	**07 57 30.3**	**+2.6**
	comp=Z,0.0nm,0.3s,baz=153,slow=8.4,SNR=4.1						
TXAR	**Lajitas Array**	**18.61**	**328**	P	**Pn**	**07 57 28.1**	**+0.5**
TX31	**Lajitas Ar. Si**	**18.61**	**328**	P	**P**	**07 57 27.0**	**-0.5**
TX31				IAmb	IAmb	07 57 31.7	
	comp=Z,3.8nm,1.1s						
WHTX	**Lake Whitney,**	**18.63**	**346**	P	**P**	**07 57 26.5**	**-1.1**
WHTX				IAmb	IAmb	07 57 38.3	
	comp=Z,6.8nm,1.4s						
NVAR	**Mina Array Bea**	**33.55**	**322**	P	**P**	**07 59 49.0**	**-1.2**
	comp=Z,0.2nm,0.6s,baz=133,slow=9.2,SNR=2.2						
NVAR	**Mina Array Bea**	**33.55**	**322**	P	**P**	**07 59 49.0**	**-1.2**
YKA	**Yellowknife Ar**	**51.07**	**347**	P	**P**	**08 02 11.5**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=149,slow=8.6,SNR=4.7						

IDC ***15*** *08:16:34.2±0.3, 6.49°N×144.95°E, h0km, mb5.4/46, mb1 5.4/49, mb1mx5.4/53, mbtmp5.4/49, ML5.6/3, MS6.0/55, Ms1 6.0/55, ms1mx5.9/59, Error ellipse: s-maj=12.8km s-min=7.8km az=76.0*

BJI ***15*** *08:16:34.1±0.0, 6.44°N×144.95°E, h10km, mB6.4/88, mb6.0/63, Ms6.5/99, Ms7 6.2/90*

NEIC ***15*** *08:16:34.4±2.4, 6.43°N±0.0°×144.94°E±0.0°, h11km±1km, mb6.1/371, Ms_20 6.2/830, Mwb6.2/69, Mwc6.3/33, Mww6.3, Mwc6.4(GCMT), Error ellipse: s-maj=11.2km s-min=9.4km az=98.0*

DJA ***15*** *08:16:35.3±0.2, 6.1°N±2.3°×14.5°E±0.6°, h10km, M6.3/122, mB6.6/122, mb5.9/122, MLv6.8/1, Mw(mB)6.4/122, Mwp6.0/97*

NEIC ***15*** *08:16:35.1, 6.53°N×144.88°E, h11km, Moment Tensor Solution. Moment tensor: Scale 10^18 Nm; Mrr 0.07; Mθθ 0.85; Mϕϕ -0.92; Mrθ -0.36; Mθϕ 2.72; Mϕr -0.31; Fault plane solution: Mo 2.90000×10^18 NP1:ϕs 279.43000°, δ 82.67000°, λ 6.29000°. NP2:ϕs 188.62000°, δ 83.76000°, λ 172.63000°. Principal axes: T 2.9050, Plg 10.0000°, Azm 144.0000°; N -0.0064, Plg 80.0000°, Azm 329.0000°; P -2.8986, Plg 1.0000°, Azm 234.0000°;*

MOS ***15*** *08:16:37.0±1.2, 6.43°N×144.99°E, h33km, mb6.3/84, MS6.1/38 Error ellipse: s-maj=7.2km s-min=4.1km az=113.3*

GCMT ***15*** *08:16:38.4±0.0, 6.58°N×144.87°E, h20km, MW6.3/174, Moment Tensor Solution. s169,c428; s174,c702; Duration: 3s5 Moment tensor: Scale 10^18 Nm; Mrr 0.33±.02; Mθθ 1.27±.02; Mϕϕ -1.59±.02; Mrθ -0.01±.04; Mθϕ 3.41±.01; Mϕr -0.91±.04; Best double couple: Mo 3.80400×10^18 NP1:ϕs 281.00000°, δ 76.00000°, λ -1.00000°. NP2:ϕs 11.00000°, δ 89.00000°, λ -166.00000°. Principal axes: T 3.6200, Plg 9.0000°, Azm 145.0000°; N 0.3750, Plg 76.0000°, Azm 14.0000°; P -3.9890, Plg 10.0000°, Azm 237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***15*** *08:16:39, 6.56°N×144.84°E, h19km, Moment Tensor Solution. Moment tensor: Scale 10^18 Nm; Mrr 0.35; Mθθ 1.29; Mϕϕ -1.64; Mrθ -0.43; Mθϕ 3.44; Mϕr -0.89; Fault plane solution: Mo 3.88000×10^18 NP1:ϕs 191.00000°, δ 85.00000°, λ 165.00000°. NP2:ϕs 282.00000°, δ 75.00000°, λ 5.00000°. Principal axes: T 3.7774, Plg 14.0000°, Azm 146.0000°; N 0.1967, Plg 74.0000°, Azm 352.0000°; P -3.9741, Plg 7.0000°, Azm 237.0000°;*

NEIC ***15*** *08:16:41, 6.51°N×144.90°E, h20km, Moment Tensor Solution. Moment tensor: Scale 10^18 Nm; Mrr 0.12; Mθθ 0.78; Mϕϕ -0.89; Mrθ -0.84; Mθϕ 3.08; Mϕr -0.61; Fault plane solution: Mo 3.36000×10^18 NP1:ϕs 279.00000°, δ 78.00000°, λ 13.00000°. NP2:ϕs 186.00000°, δ 78.00000°, λ 168.00000°. Principal axes: T 3.4573, Plg 17.0000°, Azm 143.0000°; N -0.2044, Plg 73.0000°, Azm 321.0000°; P -3.2529, Plg 0.0000°, Azm 53.0000°;*

NEIC ***15*** *08:16:53.5, 6.73°N×145.02°E, h10km, Moment Tensor Solution. Moment tensor: Scale 10^18 Nm; Mrr 0.15; Mθθ 1.27; Mϕϕ -1.42; Mrθ 0.60; Mθϕ 3.17; Mϕr -0.01; Fault plane solution: Mo 3.49000×10^18 NP1:ϕs 11.29000°, δ 80.15000°, λ 177.58000°. NP2:ϕs 101.70000°, δ 87.62000°, λ 9.86000°. Principal axes: T 3.4390, Plg 9.0000°, Azm 327.0000°; N 0.1056, Plg 80.0000°, Azm 115.0000°; P -3.5447, Plg 5.0000°, Azm 236.0000°;*

ISC 15 08:16:36.2±0.4, 6.4°N±0.0°×144.9°E±0.0°, 3, h17km±2km, h17km:pP-P, n1591, σ2s26/1335, mb6.1/338, MS6.2/522, 23C-37D, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**7.14**	**359**	P	**Pn**	**08 18 17.0**	**-3.0**
GUMO						08 19 32.8	
GUMO	**Guam**	**7.14**	**359**		**Pn**	**08 18 17.0**	**-3.0**
GUMO				Sn	**Sn**	**08 19 32.8**	**-8.1**
JAY	**Jayapura**	**9.82**	**206**	Pn	**Pn**	**08 18 53.0**	**-3.8**
	112nm,0.3s,baz=8.0,slow=6.3,SNR=318						
JAY				Sn	**Sn**	**08 20 39.4**	**-7.4**
	106nm,0.3s,baz=44,slow=23,SNR=10.0						
JAY				LR	LR	08 21 52.1	
	comp=Z,93μm,18.2s,baz=24,slow=32						
JAY	**Jayapura**	**9.82**	**206**	P	**Pn**	**08 18 53.5**	**-3.3**
	65μm33μm2μm,1.3s						
GENI	**Genyem**	**10.13**	**208**	P	**Pn**	**08 18 57.2**	**-3.8**
	150μm124μm11μm,1.7s						
I39PW	**PALAU INFRASON**	**10.40**	**277**	Pn	**Pn**	**08 19 06.7**	**+2.1**
	baz=95,slow=28,SNR=5.1						
SMPI	**Sarmi**	**10.41**	**217**	P	**Pn**	**08 19 01.8**	**-3.0**
	129μm20μm1μm,0.8s						
SRPI	**Serui, Papua**	**11.97**	**227**	P	**Pn**	**08 19 24.9**	**-1.3**
WAMI	**Wamena**	**11.97**	**212**	P	**Pn**	**08 19 27.3**	**+1.1**
	159μm66μm6μm,0.8s						
RABL	**Rabaul**	**12.74**	**145**		**Pn**	**08 19 37.0**	**+0.2**
KRVT	**Keravat (AS076**	**12.76**	**146**	Pn	**Pn**	**08 19 36.7**	**-0.3**
	21nm,0.3s,baz=157,slow=3.3,SNR=22						
KRVT				LR	LR	08 23 57.7	
	comp=Z,88μm,18.5s,baz=333,slow=34						
PATS	**Pohnpei**	**13.27**	**87**	P	**Pn**	**08 19 42.4**	**-1.6**
	baz=13,SNR=10						
PATS	**Pohnpei**	**13.27**	**87**		**Pn**	**08 19 42.0**	**-2.0**
RKPI	**Ransiki, Papua**	**13.33**	**234**	P	**Pn**	**08 19 44.2**	**-0.6**
	193μm31μm1μm,1.4s						
SIJI	**Sorong**	**15.46**	**243**	Pn	**Pn**	**08 20 13.5**	**-0.2**
	5.2nm,0.3s,baz=51,slow=12,SNR=83						
SIJI				LR	LR	08 24 53.9	
	comp=Z,73μm,18.3s,baz=24,slow=32						
FAKI	**Fak Fak**	**15.71**	**234**	P	**Pn**	**08 20 15.8**	**-1.1**
	163μm47μm1μm,1.3s						
FAKI	**Fak Fak**	**15.71**	**234**		**Pn**	**08 20 14.3**	**-2.6**
PMG	**Port Moresby**	**15.85**	**172**	Pn	**Pn**	**08 20 17.7**	**-1.0**
	baz=347,slow=13,SNR=4.2						
PMG				LR	LR	08 25 36.8	
	comp=Z,75μm,22.0s,baz=360,slow=34						
PMG	**Port Moresby**	**15.85**	**172**	P	**Pn**	**08 20 17.8**	**-1.0**
PMG				pmax	pmax		
	comp=Z,2μm,1.8s						
PMG	**Port Moresby**	**15.85**	**172**		**Pn**	**08 20 17.8**	**-1.0**
PMG				IAmb	IAmb	08 20 25.9	
	comp=Z,2μm,1.8s						
TNTI	**Ternate**	**18.42**	**253**	P	**Pn**	**08 20 51.1**	**+0.1**
	comp=Z,74μmcomp=Z,46μmcomp=Z,1μm,1.9s						
TNTI	**Ternate**	**18.42**	**253**		**Pn**	**08 20 51.1**	**+0.1**
TNTI				IAmb	IAmb	08 20 54.9	
	comp=Z,4μm,1.9s						
BNDI	**Bandanaira**	**18.54**	**235**	P	**Pn**	**08 20 52.3**	**-0.1**
	comp=Z,111μmcomp=Z,144μmcomp=Z,7μm,2.0s						
MATI	**Mati**	**18.58**	**273**	*e*P	**P**	**08 20 52.1**	**-0.7**
MSAI	**Masohi**	**18.71**	**239**	P	**Pn**	**08 20 54.5**	**0.0**
	comp=Z,15μmcomp=Z,405nm,1.8s						
LBMI	**Labuha**	**18.78**	**249**	P	**Pn**	**08 20 56.4**	**+1.1**
	comp=Z,104μmcomp=Z,147μmcomp=Z,4μm,2.3s						
DDMP	**Don Marcelino,**	**19.14**	**270**	*e*P	**P**	**08 20 58.9**	**+0.1**
DAV	**Davao City (W)**	**19.26**	**273**	P	**Pn**	**08 21 01.7**	**+0.6**
	comp=Z,107nm,0.3s,baz=58,slow=3.7,SNR=17						
DAV				LR	LR	08 28 43.6	
	comp=Z,16μm,18.4s,baz=72,slow=38						
DAV	**Davao City (W)**	**19.26**	**273**	*e*P	**P**	**08 20 59.3**	**-0.8**
DAV	**Davao City (W)**	**19.26**	**273**	P	**Pn**	**08 21 01.3**	**+0.2**
DMPH	**Davao City--Mi**	**19.33**	**273**	*e*P	**Pn**	**08 21 01.7**	**-0.3**
BUTP	**Butuan**	**19.33**	**279**	*e*P	**Pn**	**08 21 02.9**	**+0.8**
AAI	**Ambon**	**19.51**	**240**	P	**Pn**	**08 21 04.0**	**-0.1**
	comp=Z,124μmcomp=Z,57μmcomp=Z,2μm,1.7s						
SAUI	**Saumlaki**	**19.74**	**224**	P	**Pn**	**08 21 07.0**	**+0.1**
SAUI	**Saumlaki**	**19.74**	**224**	P	**P**	**08 21 05.4**	**0.0**
KCP	**Kidapawan**	**19.74**	**273**	*i* P	**P**	**08 21 06.1**	**+0.6**
BUKP	**Musuan**	**19.80**	**275**	*e*P	**Pn**	**08 21 06.8**	**-0.8**
CGP	**Cagayan de Oro**	**20.20**	**277**	*e*P	**P**	**08 21 10.9**	**+0.5**
MSLP	**Maasin**	**20.23**	**282**	*e*P	Pn	08 21 11.6	-1.1
NLAI	**Namlea**	**20.24**	**242**	P	Pn	08 21 12.4	-0.4
	comp=Z,69μmcomp=Z,38μmcomp=Z,1μm,1.9s						
SKMP	**Bagumbayan, Su**	**20.29**	**271**	*e*P	**P**	**08 21 10.4**	**-1.0**
COEN	**Coen**	**20.30**	**185**	P	Pn	08 21 12.5	-1.0
	baz=20,SNR=102						
COEN	**Coen**	**20.30**	**185**	P	Pn	08 21 12.9	-0.6
COEN				IAmb	IAmb	08 21 26.7	
	comp=Z,2μm,1.4s						
CTBH	**Cotabato--PC H**	**20.58**	**273**	*i* *e*P	**P**	**08 21 14.7**	**+0.1**
OCLP	**Ormoc**	**20.63**	**284**	*e*P	Pn	08 21 16.7	-0.7
SANI	**Sanana**	**20.72**	**247**	P	**P**	**08 21 14.7**	**-1.3**
	comp=Z,72μmcomp=Z,26μmcomp=Z,786nm,2.6s						
JCJ	**Chichijima**	**20.75**	**353**	P	**P**	**08 21 15.6**	**-0.6**
	comp=Z,321nm,0.9s,baz=148,slow=6.9,SNR=9.1						
JCJ				LR	LR	08 28 25.9	
	comp=Z,55μm,21.1s,baz=162,slow=34						
PAGZ	**Pagadian**	**21.46**	**275**	*e*P	**P**	**08 21 24.8**	**+0.8**
DCPH	**Dipolog City**	**21.53**	**277**	*i* *e*P	**P**	**08 21 25.7**	**+0.9**
HNR	**Honiara**	**21.69**	**136**	P	**P**	**08 21 27.7**	**+1.3**
	comp=Z,769nm,1.0s,baz=172,slow=8.4,SNR=19						
HNR				LR	LR	08 28 41.6	
	comp=Z,48μm,21.2s,baz=298,slow=33						
HNR	**Honiara**	**21.69**	**136**	P	**P**	**08 21 27.0**	**+0.5**
HNR				pmax	pmax		
	comp=Z,2μm,1.0s						
HNR				MLR	MLR		
	comp=Z,44μm,20.0s						
HNR	**Honiara**	**21.69**	**136**	P	**P**	**08 21 27.0**	**+0.5**
PVCP	**Virac**	**21.69**	**291**	*e*P	**P**	**08 21 25.9**	**-0.6**
KMSI	**Cibinong**	**21.72**	**255**	P	**P**	**08 21 26.7**	**-0.1**
	comp=Z,2μmcomp=Z,19μmcomp=Z,2μm,0.9s						
CNOP	**Candoni, Negro**	**22.36**	**280**	*e*P	**P**	**08 21 32.3**	**-1.4**
GUIM	**Jordan**	**22.51**	**282**	*e*P	**P**	**08 21 34.2**	**-1.1**
RCP	**Roxas**	**22.53**	**285**	*i* *e*P	**P**	**08 21 34.8**	**-0.7**
KWAJ	**Kwajalein Atol**	**22.58**	**83**	P	**P**	**08 21 36.3**	**+0.2**
KWAJ				pmax	pmax		
	comp=Z,6μm,1.9s						
KWAJ	**Kwajalein Atol**	**22.58**	**83**	P	**P**	**08 21 36.3**	**+0.2**
KDU	**Kakadu**	**22.66**	**213**	P	**P**	**08 21 36.7**	**-0.2**
	baz=23,SNR=55						
LUWI	**Luwuk**	**23.35**	**252**	P	**P**	**08 21 43.0**	**-1.0**
	comp=Z,50μmcomp=Z,58μmcomp=Z,2μm,1.8s						
LUWI	**Luwuk**	**23.35**	**252**	P	**P**	**08 21 42.7**	**-1.3**
OTRP	**Odiongan**	**23.38**	**286**	*e*P	**P**	**08 21 43.9**	**-0.4**
MTN	**Manton Dam**	**23.54**	**216**	P	**P**	**08 21 45.7**	**-0.1**
	baz=24,SNR=24						
MTN	**Manton Dam**	**23.54**	**216**	P	**P**	**08 21 45.4**	**-0.5**
MRSI	**Marisa**	**23.71**	**257**	P	**P**	**08 21 47.0**	**-0.6**
CUYO	**Cuyo Island**	**24.07**	**282**	*e*P	**P**	**08 21 51.2**	**+0.2**
SJMP	**San Jose**	**24.27**	**286**	*e*P	**P**	**08 21 53.4**	**+0.6**
LQP	**Lukban**	**24.27**	**290**	*e*P	**P**	**08 21 51.9**	**-1.1**
H11S3	**WAKE ISLAND Hy**	**24.35**	**58**	T	T	08 45 52.0	
	baz=246,slow=76,SNR=16						
H11S2	**WAKE ISLAND Hy**	**24.36**	**58**	T	T	08 45 56.3	
	baz=246,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	**24.36**	**58**	T	T	08 45 41.7	
	baz=246,slow=76,SNR=19						
APSI	**Ampana**	**24.38**	**253**	P	**P**	**08 21 53.7**	**-0.1**
	comp=Z,25μmcomp=Z,21μmcomp=Z,937nm,1.8s						
MTSU	**Mount Surprise**	**24.39**	**181**	P	**P**	**08 21 56.1**	**+2.3**
	baz=24,SNR=162						
PGP	**Puerto Galera**	**24.66**	**288**	*i* *e*P	**P**	**08 21 55.3**	**-1.1**
WAKE	**Wake Island**	**24.68**	**57**	P	**P**	**08 21 56.5**	**-0.1**
BALP	**Baler**	**24.73**	**294**	*e*P	**P**	**08 21 57.1**	**+0.1**
TGY	**Tagaytay City**	**24.83**	**290**	P	**P**	**08 21 58.5**	**+0.6**
	comp=Z,205nm,0.3s,baz=86,slow=2.0,SNR=31						
TGY				LR	LR	08 30 09.7	
	comp=Z,52μm,21.3s,baz=100,slow=33						
CAUP	**Cauayan**	**24.93**	**297**	*e*P	**P**	**08 22 00.1**	**+1.3**
H11N1	**WAKE ISLAND Hy**	**25.09**	**56**	T	T	08 48 38.8	
	baz=243,slow=75,SNR=43						
H11N2	**WAKE ISLAND Hy**	**25.10**	**56**	T	T	08 48 34.9	
	baz=243,slow=75,SNR=46						
H11N3	**WAKE ISLAND Hy**	**25.10**	**56**	T	T	08 48 42.9	
	baz=243,slow=75,SNR=48						
PCPH	**Palayan**	**25.11**	**293**	*i* *e*P	**P**	**08 22 00.6**	**+0.3**
BBSI	**Bau Bau**	**25.28**	**243**	P	**P**	**08 22 03.6**	**+1.6**
LUBP	**Lubang**	**25.38**	**289**	*e*P	**P**	**08 22 01.4**	**-1.5**
ENPP	**El Nido**	**25.67**	**283**	*e*P	**P**	**08 22 04.7**	**-0.8**
SMPP	**San Manuel, Pa**	**25.68**	**294**	*e*P	**P**	**08 22 04.4**	**-1.2**
MPSI	**Mapaga**	**25.72**	**257**	P	**P**	**08 22 05.5**	**-0.5**
	comp=Z,30μmcomp=Z,16μmcomp=Z,476nm,1.9s						
JOW	**Kunigami**	**25.79**	**324**	P	**P**	**08 22 06.4**	**-0.1**
	comp=Z,39nm,1.1s,baz=138,slow=12,SNR=14						
JOW	**Kunigami**	**25.79**	**324**	P	**P**	**08 22 06.4**	**-0.1**
JOW				IAmb	IAmb	08 22 17.1	
	comp=Z,627nm,1.4s						
APYP	**Conner**	**25.80**	**298**	*e*P	**P**	**08 22 06.9**	**+0.3**
SOEI	**Soe**	**26.13**	**232**	P	**P**	**08 22 09.4**	**-0.4**
	comp=Z,45μmcomp=Z,171μmcomp=Z,604nm,1.3s						
SOEI	**Soe**	**26.13**	**232**	P	**P**	**08 22 09.0**	**-0.8**
ABRA	**Dolores**	**26.18**	**297**	*e*P	**P**	**08 22 09.8**	**-0.3**
SCZP	**Santa Cruz**	**26.26**	**293**	*e*P	**P**	**08 22 12.0**	**+1.1**
BBP	**Basco**	**26.31**	**304**	*e*P	**P**	**08 22 12.1**	**+0.8**
CTA	**Charters Tower**	**26.35**	**177**	P	**P**	**08 22 13.7**	**+2.0**
	comp=Z,186nm,1.1s,baz=352,slow=10,SNR=42						
CTA				LR	LR	08 32 38.7	
	comp=Z,19μm,19.2s,baz=1.5,slow=36						
CTAO	**Charters Tower**	**26.35**	**177**	P	**P**	**08 22 12.4**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,599nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,25μm,19.0s						
CTAO	**Charters Tower**	**26.35**	**177**	P	**P**	**08 22 12.4**	**+0.8**
CTAO				IAmb	IAmb	08 22 15.4	
	comp=Z,599nm,1.4s						
SZP	**Santa**	**26.37**	**297**	P	**P**	**08 22 10.8**	**-1.1**
SZP				IAmb	IAmb	08 22 29.9	
	comp=Z,971nm,1.4s						
BOLP	**Bolinao**	**26.45**	**294**	*e*P	**P**	**08 22 10.2**	**-2.4**
TTSI	**Tana Toraja**	**26.80**	**250**	P	**P**	**08 22 16.1**	**+0.4**
	comp=Z,33μmcomp=Z,16μmcomp=Z,471nm,1.4s						
BATI	**Baumata**	**26.87**	**232**	P	**P**	**08 22 16.2**	**-0.2**
	comp=Z,276nm,0.7s,baz=159,slow=0.8,SNR=29						
BATI				LR	LR	08 32 56.5	
	comp=Z,13μm,20.5s,baz=72,slow=36						
BATI	**Baumata**	**26.87**	**232**	P	**P**	**08 22 17.7**	**+1.3**
	comp=Z,20μmcomp=Z,10μmcomp=Z,362nm,1.5s						
JHJ	**Hachijo jima 2**	**27.02**	**350**	LR	LR	08 31 45.2	
	comp=Z,11μm,20.3s,baz=169,slow=34						
BATP	**Bataraza**	**27.02**	**277**	*e*P	**P**	**08 22 17.2**	**-0.6**
BNSI	**Bone**	**27.03**	**247**	P	**P**	**08 22 18.0**	**+0.1**
	comp=Z,37μmcomp=Z,20μmcomp=Z,866nm,2.0s						
MMRI	**Maumere**	**27.13**	**237**	P	**P**	**08 22 13.1**	**-5.7**
	comp=Z,44μmcomp=Z,9μmcomp=Z,286nm,1.9s						
MMRI	**Maumere**	**27.13**	**237**	P	**P**	**08 22 16.9**	**-1.8**
MMRI				IAmb	IAmb	08 22 56.9	
	comp=Z,1μm,1.7s						
KNRA	**Kununurra**	**27.18**	**216**	P	**P**	**08 22 19.4**	**+0.4**
	baz=27,SNR=71						
KNRA	**Kununurra**	**27.18**	**216**	P	**P**	**08 22 19.2**	**+0.1**
SPSI	**Sidrap Palu**	**27.18**	**248**	P	**P**	**08 22 19.2**	**+0.1**
	comp=Z,27μmcomp=Z,13μmcomp=Z,356nm,1.8s						
QIS	**Mount Isa**	**27.30**	**191**	P	**P**	**08 22 21.1**	**+0.9**
	baz=27,SNR=28						
BKSI	**Bulukumba**	**27.39**	**245**	P	**P**	**08 22 20.7**	**-0.4**
	comp=Z,33μmcomp=Z,9μmcomp=Z,446nm,1.8s						
KAPI	**Kappang**	**27.60**	**246**	P	**P**	**08 22 23.5**	**+0.5**
	comp=Z,27nm,0.8s,baz=59,slow=8.0,SN

MAJO MLR MLR
comp=Z,311nm,1.5s
comp=Z,27µm,18.0s
MAJO Matsushiro 30.63 349 P **P** **08 22 47.5 -2.2**
MAJO IAmb IAmb 08 23 09.1
comp=Z,311nm,1.4s
MAT Matsushiro 30.63 349 P **P** **08 22 47.4 -2.3**
MAT S **S** **08 27 43.6 -7.7**
MJB9 Matsu-Tunnel 30.64 349 P **P** **08 22 47.8 -1.9**
FITZ Fitzroy Crossi 30.92 218 P **P** **08 22 52.7 +0.3**
baz=31,SNR=42
FITZ Fitzroy Crossi 30.92 218 P **P** **08 22 50.7 -1.7**
PLAI Plampang 31.03 241 P **P** **08 22 48.8 -4.6**
comp=Z,29µmcomp=Z,3µmcomp=Z,191nm,1.1s
KNMB Chin-men Tao 31.17 308 P **P** **08 22 52.7 -1.9**
QZH Quanzhou 31.26 309⇓ *i*P **P** **08 22 57.6 +2.3**
QZH S **S** **08 28 03.3 +1.9**
QZH pmax pmax
comp=Z,190nm,2.3s
QZH pmax pmax
comp=Z,8µm,6.4s
QZH LR LR
comp=Z,27µm,19.0s
QZH LR LR
comp=Z,13µm,15.6s
QZH LR LR
comp=Z,30µm,18.5s
AS31 Alice Springs 31.77 200 P **P** **08 23 00.3 +0.4**
ASAR Alice Springs 31.77 200 P **P** **08 23 00.3 +0.4**
comp=Z,14nm,1.0s,baz=33,slow=6.9,SNR=66
ASAR PcP **PcP** **08 25 53.4 +2.2**
comp=Z,27nm,0.9s,baz=19,slow=3.9,SNR=4.4
ASAR LR LR 08 35 33.8
comp=Z,19µm,18.6s,baz=24,slow=36
ASAR Alice Springs 31.77 200 P **P** **08 22 59.3 -0.6**
EIDS Eidsvold 32.13 170 P **P** **08 23 04.0 +1.1**
baz=32,SNR=14
EIDS Eidsvold 32.13 170 P **P** **08 23 02.4 -0.6**
QLP Quilpie 32.79 181 P **P** **08 23 09.4 +0.7**
baz=33,SNR=35
SBUM Sibu 32.87 265 P **P** **08 23 09.6 0.0**
SBUM IAmb IAmb 08 23 12.6
comp=Z,701nm,1.9s
SBUM Sibu 32.87 265 P **P** **08 23 11.0 +1.4**
RMQ Roma 32.90 174 P **P** **08 23 10.8 +1.2**
baz=33,SNR=35
SRBI Singaraja 32.97 245 P **P** **08 23 09.4 -1.1**
comp=Z,26µmcomp=Z,7µmcomp=Z,223nm,2.4s
SSE Sheshan 33.16 321 P **P** **08 23 11.3 -0.6**
SSE S **S** **08 28 28.1 -2.8**
SSE sS **sS** **08 28 42.0 +5.0**
SSE pmax pmax
comp=Z,110nm,1.8s
SSE pmax pmax
comp=Z,3µm,5.7s
SSE LR LR
comp=Z,1µm,15.5s
SSE Sheshan 33.16 321 P **P** **08 23 11.1 -0.9**
SSE IAmb IAmb 08 23 21.3
comp=Z,473nm,1.4s
SSE Sheshan 33.16 321 IAMs_20 IAMs_20 08 34 04.0
comp=Z,39µm,20.0s
DNP Denpasar 33.23 244 P **P** **08 23 11.4 -1.3**
comp=Z,30µmcomp=Z,436nm,1.4s
HKC Hong Kong Obse 33.65 301⇑P **P** **08 23 20.0 +3.7**
HKPS Hong Kong Po S 33.66 301 P **P** **08 23 14.5 -1.9**
HKPS IAmb IAmb 08 23 28.5
comp=Z,581nm,1.5s
KMMI Kalianget 33.69 247 P **P** **08 23 17.3 +0.6**
comp=Z,9µmcomp=Z,289nm,1.8s
TJN Taejon 33.91 334*c* *i*P **P** **08 23 17.5 -0.9**
JAGI Jajag, Banyuwa 34.08 245 P **P** **08 23 17.3 -2.9**
comp=Z,28µmcomp=Z,5µmcomp=Z,166nm,1.8s
JAGI Jajag, Banyuwa 34.08 245 P **P** **08 23 16.2 -4.0**
JAGI IAmb IAmb 08 23 48.3
comp=Z,676nm,1.8s
PBKI Pangkalan Bun 34.45 256 P **P** **08 23 22.7 -0.7**
comp=Z,8µmcomp=Z,215nm,0.9s
KSRS Korea Array 34.59 336 P **P** **08 23 23.5 -0.8**
comp=Z,16nm,1.0s,baz=153,slow=9.4,SNR=30
KSRS PcP **PcP** **08 26 03.7 +5.0**
comp=Z,15nm,1.0s,baz=146,slow=3.4,SNR=4.7
KSRS LR LR 08 38 20.3
comp=Z,20µm,18.5s,baz=131,slow=38
KSRS P3KPbc 08 54 23.1
comp=Z,0.9nm,0.8s,baz=298,slow=2.6,SNR=4.2
KSAR Wonju Array Be 34.59 336 P **P** **08 23 22.9 -1.4**
KSAR Wonju Array Be 34.59 336 P **P** **08 23 22.9 -1.4**
KS19 Wonju Array Si 34.65 336 P **P** **08 23 21.9 -2.9**
GZH Guangzhou 34.66 302 P **P** **08 23 26.4 +1.3**
GZH S **S** **08 28 56.9 +2.6**
GZH pmax pmax
comp=Z,9µm,5.5s
GZH LR LR
comp=Z,23µm,17.2s
GZH LR LR
comp=Z,15µm,18.2s
KSM Kuching 34.90 263 P **P** **08 23 26.4 -0.9**
KSM IAmb IAmb 08 23 30.2
comp=Z,706nm,1.7s
KSM Kuching 34.90 263 P **P** **08 23 28.0 +0.7**
GRJI Gresik 35.00 248 P **P** **08 23 28.2 +0.1**
comp=Z,958nmcomp=Z,4µmcomp=Z,174nm,1.9s
INCN Inchon 35.15 334 P **P** **08 23 28.5 -0.7**
INCN P **P** **08 23 28.5 -0.7**
INCN S **S** **08 29 02.8 +1.2**
INCN S **S** **08 29 02.8 +1.2**
INCN Inchon 35.15 334 P **P** **08 23 27.7 -1.5**
INCN pmax pmax
comp=Z,685nm,1.7s
INCN MLR MLR
comp=Z,43µm,18.0s
INCN Inchon 35.15 334 P **P** **08 23 27.7 -1.5**
INCN IAmb IAmb 08 23 34.0
comp=Z,685nm,1.6s
INCN Inchon 35.15 334 IAMs_20 IAMs_20 08 38 43.8
comp=Z,43µm,18.0s
WRKA Warakurna 35.21 207 P **P** **08 23 29.8 0.0**
baz=35,SNR=102
DZM Mont Dzumac 35.27 144 *e*P **P** **08 23 31.5 +1.1**
comp=Z,1µm,1.4s
DZM Mont Dzumac 35.27 144 P **P** **08 23 32.5 +2.1**
comp=Z,142nm,0.8s
DZM LR LR 08 35 59.0
comp=Z,33µm,22.0s,baz=327,slow=33
DZM Mont Dzumac 35.27 144 P **P** **08 23 30.0 -0.4**
NJ2 Nanjing 35.28 320 *e*P **P** **08 23 31.1 +0.8**
NJ2 pP **pP** **08 23 33.5 -0.8**
NJ2 S **S** **08 29 02.1 -1.6**
NJ2 pmax pmax
comp=Z,160nm,1.1s
NJ2 pmax pmax
comp=Z,7µm,4.7s
NJ2 LR LR
comp=Z,50µm,17.2s
NJ2 LR LR
comp=Z,24µm,15.7s
NJ2 LR LR
comp=Z,44µm,19.1s
ERM Erimo 35.50 358⇑ *i*P **P** **08 23 32.2 +0.1**
ERM pmax pmax
comp=Z,147nm,1.6s
ERM Erimo 35.50 358 IAMs_20 IAMs_20 08 36 54.5
comp=Z,40µm,20.0s
PWJI Pagerwojo 36.03 247 P **P** **08 23 36.2 -0.8**
comp=Z,5µmcomp=Z,157nm,1.8s
UWJI Ujung Watu 36.25 250 P **P** **08 23 38.8 -0.1**
comp=Z,3µmcomp=Z,185nm,1.3s
QIZ Qiongzhong 36.39 293 P **P** **08 23 37.8 -2.3**
QIZ S **S** **08 29 19.5 -1.6**
QIZ pmax pmax
comp=Z,120nm,1.8s
QIZ pmax pmax
comp=Z,5µm,4.5s
QIZ LR LR
comp=Z,4µm,14.5s
QIZ LR LR
comp=Z,7µm,18.1s
QIZ LR LR
comp=Z,9µm,14.6s
QIZ Qiongzhong 36.39 293 P **P** **08 23 36.7 -3.3**
QIZ IAmb IAmb 08 23 43.7
comp=Z,775nm,1.8s
DLV T Lat 36.40 281 P **P** **08 23 37.9 -2.5**
DLV IAmb IAmb 08 23 42.8
comp=Z,605nm,1.7s
DLV IAMs_20 IAMs_20 08 35 53.7
comp=Z,33µm,20.0s
WOJI Wonogiri, Jawa 36.77 248 P **P** **08 23 42.4 -0.9**
comp=Z,13µmcomp=Z,7µmcomp=Z,169nm,2.9s
MBWA Marble Bar 36.92 221 P **P** **08 23 43.1 -1.4**
MBWA IAmb IAmb 08 23 45.9
comp=Z,442nm,1.6s
SMRI Semarang 36.94 249 P **P** **08 23 45.2 +0.4**
comp=Z,32µmcomp=Z,18µmcomp=Z,355nm,1.9s
SMRI Semarang 36.94 249 P **P** **08 23 41.4 -3.4**
PSA00 Pilbara Seismi 37.14 221 P **P** **08 23 46.5 +0.1**
PSA00 IAmb IAmb 08 23 48.5
comp=Z,301nm,1.0s
PSA00 Pilbara Seismi 37.14 221 P **P** **08 23 45.3 -1.0**
PSA00 IAmb IAmb 08 23 59.3
comp=Z,123nm,0.8s
ARMA Armidale 37.16 170 P **P** **08 23 48.1 +1.5**
baz=37,SNR=88
ARMA Armidale 37.16 170 P **P** **08 23 48.0 +1.5**
UGM Wanagama 37.17 248 P **P** **08 23 46.4 -0.4**
comp=Z,24µmcomp=Z,14µmcomp=Z,503nm,1.9s
FUNA Funafuti 37.22 113 P **P** **08 23 47.5 +0.4**
FUNA IAmb IAmb 08 23 59.8
comp=Z,752nm,1.6s
YOGI Yogyakarta 37.35 248 P **P** **08 23 47.9 -0.3**
comp=Z,9µmcomp=Z,11µmcomp=Z,427nm,1.5s
WHN Wuhan 37.45 314⇓ P **P** **08 23 50.0 +1.2**
WHN PP **PP** **08 25 12.8 -1.6**
WHN S **S** **08 29 34.1 -2.7**
WHN pmax pmax
comp=Z,3µm,2.0s
WHN pmax pmax
comp=Z,15µm,4.4s
WHN LR LR
comp=Z,60µm,14.1s
WHN LR LR
comp=Z,39µm,18.4s
WHN LR LR
comp=Z,95µm,18.8s
YUK Yuzh-Kuril'sk 37.49 1*d* *i*P P 08 23 40.4 -8.6
YUK *e* 08 25 12.0
YUK *e* 08 26 05.3
YUK *i* S **S** **08 29 28.4 -8.7**
YUK pmax pmax
comp=Z,758nm,2.8s
YUK pmax pmax
comp=Z,460µm,1.1s
YUK pmax pmax
comp=E,267nm,0.9s
YUK pmax pmax
comp=N,182nm,0.6s
YUK MLR MLR
comp=Z,14µm,15.0s
YUK MLR MLR
comp=N,7µm,13.0s
YUK MLR MLR
comp=E,8µm,14.0s
ASAJ Asahikawa 37.62 357 P **P** **08 23 50.7 +0.5**
comp=E,81nm,1.1s,baz=201,slow=27,SNR=12
ASAJ LR LR 08 40 36.0
comp=E,19µm,19.3s,baz=190,slow=38
JKA Kamikawa-asahi 37.62 357 P **P** **08 23 50.7 +0.5**
CMSA Cobar Meteorol 37.73 179 P **P** **08 23 51.7 +0.5**
baz=38,SNR=38
STKA Stephens Creek 38.20 185 P **P** **08 23 55.2 +0.1**
baz=38,SNR=26
STKA Stephens Creek 38.20 185 P **P** **08 23 55.2 +0.1**
comp=E,40nm,1.0s,baz=352,slow=9.0,SNR=50
STKA LR LR 08 40 37.4
comp=E,30µm,18.0s,baz=2.7,slow=38
STKA Stephens Creek 38.20 185 P **P** **08 23 55.1 -0.1**
VLA Vladivostok 38.35 345*d* *i*P **P** **08 23 57.6 +1.3**
VLA pmax pmax
comp=Z,856nm,3.1s
DL2 Dalian 38.62 330 P **P** **08 23 59.0 +0.4**
DL2 PP **PnPn** **08 25 32.8 +3.5**
DL2 S **S** **08 29 53.1 -1.3**
DL2 pmax pmax
comp=Z,250nm,1.5s
DL2 pmax pmax
comp=Z,10µm,5.2s
DL2 LR LR
comp=Z,24µm,17.3s
DL2 LR LR
comp=Z,17µm,18.1s
DL2 LR LR
comp=Z,33µm,17.4s
KUR Kuril'sk 38.77 3 P **P** **08 24 03.2 +3.5**
KUR *e* 08 25 34.6
KUR *e*PPP PPP 08 25 55.7
KUR S **S** **08 29 56.3 -0.1**
KUR pmax pmax
comp=Z,4µm,5.5s
KUR pmax pmax
comp=N,2µm,3.2s
KUR pmax pmax
comp=E,1µm,3.5s
KUR pmax pmax
comp=N,192nm,1.7s
KUR pmax pmax
comp=Z,580nm,1.7s
KUR pmax pmax
comp=E,111nm,1.3s
KUR MLR MLR
comp=Z,11µm,15.0s
KUR MLR MLR
comp=N,6µm,13.0s
KUR MLR MLR
comp=E,5µm,13.0s
TIA Tai'an 39.12 323 P **P** **08 24 02.8 -0.1**
TIA pP **pP** **08 24 07.1 +0.2**
TIA sP **pwP** **08 24 10.9 -0.9**
TIA PP **PP** **08 25 33.8 +1.1**
TIA S S 08 29 52.6 -9.4
TIA pmax pmax
comp=E,4µm,5.1s
TIA LR LR
comp=E,13µm,14.2s
TIA LR LR
comp=E,16µm,19.6s
TIA LR LR
comp=E,21µm,21.7s
TEY Ternei 39.17 351⇑ *e*P **P** **08 24 04.9 +1.8**
TEY *e*S **S** **08 30 02.6 +0.1**
TEY 08 32 50.0
TEY pmax pmax
comp=N,320nm,2.7s
TEY pmax pmax
comp=Z,50nm,1.4s
TEY pmax pmax
comp=Z,3µm,6.0s
TEY pmax pmax
comp=N,2µm,6.5s
TEY smax smax
comp=E,6µm,9.4s
TEY smax smax
comp=N,8µm,14.5s
USA0B Ussuriysk Arra 39.33 345⇑ *i*P **P** **08 24 05.9 +1.4**
USA0B Ussuriysk Arra 39.33 345 P **P** **08 24 04.3 -0.2**
USRK Ussuriysk Ar. 39.33 345 P **P** **08 24 05.2 +0.8**
comp=N,29nm,0.9s,baz=160,slow=7.9,SNR=31
USRK LR LR 08 38 25.4
comp=N,17µm,21.6s,baz=141,slow=33
USRK Ussuriysk Ar. 39.33 345 P **P** **08 24 02.8 -1.7**
LEM Lembang 39.51 251 P **P** **08 24 06.2 -0.4**
comp=N,9µmcomp=N,4µmcomp=N,126nm,1.6s
CISI Cisompet, Garu 39.56 250 P **P** **08 24 04.8 -2.1**
comp=N,10µmcomp=N,304nm,1.0s
CISI Cisompet, Garu 39.56 250 P **P** **08 24 05.8 -1.1**
CISI IAmb IAmb 08 24 18.1
comp=Z,414nm,1.2s
MGCD Mangrove Creek 39.82 172 P **P** **08 24 10.5 +1.8**
baz=40,SNR=7.5
BBOO Buckleboo 39.90 192 P **P** **08 24 09.7 +0.3**
baz=40,SNR=77
BBOO Buckleboo 39.90 192 P **P** **08 24 09.2 -0.2**
HTT Hallett 40.02 188 P **P** **08 24 11.2 +0.7**
baz=40,SNR=54
LHI Lord Howe Isla 40.04 161 P **P** **08 24 13.2 +2.6**
baz=40,SNR=4.1
LHI Lord Howe Isla 40.04 161 P **P** **08 24 10.5 -0.1**
CBJI Citeko 40.11 252 P **P** **08 24 10.4 -1.0**
comp=Z,290nm,1.0s
CNJI Cibinong 40.12 251 P **P** **08 24 10.1 -1.4**
comp=Z,8µmcomp=Z,454nm,1.4s
DBJI Dramaga 40.24 252 P **P** **08 24 12.6 +0.1**
comp=Z,9µmcomp=Z,203nm,1.7s
FORT Forrest 40.36 203 P **P** **08 24 13.8 +0.6**
baz=40,SNR=28
FORT Forrest 40.36 203 P **P** **08 24 12.9 -0.3**
FORT IAmb IAmb 08 24 31.9
comp=Z,799nm,2.0s
MDJ Mudanjiang 40.37 343 P **P** **08 24 12.2 -0.9**
MDJ IAMs_20 IAMs_20 08 40 40.8
comp=Z,31µm,18.0s
YSS Yuzh-Sakhalins 40.45 358⇑ *e*P **P** **08 24 12.5 -1.2**
YSS *e**SP **pwP** **08 24 21.5 -0.7**
YSS *e*PPP PPP 08 26 17.5
YSS *e*S **S** **08 30 19.9 -1.7**
YSS pmax pmax
comp=Z,3µm,6.0s
YSS pmax pmax
comp=N,2µm,6.3s
YSS smax smax
comp=N,4µm,17.2s
YSS smax smax
comp=E,5µm,22.0s
YSS MLR MLR
comp=Z,11µm,14.0s
YSS MLR MLR
comp=N,9µm,19.0s
YSS Yuzh-Sakhalins 40.45 358 P **P** **08 24 10.9 -2.8**
MSVF Nonsavu 40.53 127 P **P** **08 24 16.1 +1.2**
MSVF pmax pmax
comp=Z,604nm,1.3s
MSVF Nonsavu 40.53 127 P **P** **08 24 16.1 +1.2**
MSVF IAmb IAmb 08 24 18.2
comp=Z,604nm,1.2s
YNG Young 40.61 176 P **P** **08 24 16.4 +1.1**
baz=41,SNR=20
TPRI Tanjung Pinang 40.70 264 P **P** **08 24 17.8 +1.5**
ENH Enshi 40.91 310 P **P** **08 24 17.4 -0.4**
ENH IAmb IAmb 08 24 36.1
comp=Z,378nm,1.1s
CN2 Changchun 41.01 338⇑ P **P** **08 24 21.5 +3.1**
CN2 *e*sP pwP 08 24 28.0 +1.0
CN2 *e*S **S** **08 30 33.6 +3.6**
CN2 pmax pmax
comp=Z,4µm,6.0s
CN2 LR LR
comp=Z,23µm,17.0s
CN2 LR LR
comp=Z,16µm,17.0s
CN2 LR LR
comp=Z,29µm,20.0s
BLSI Bandar Lampung 41.33 254 P **P** **08 24 21.0 -0.5**
comp=Z,14µmcomp=Z,9µmcomp=Z,401nm,1.8s
GYA Guiyang 41.56 303⇑ *i*P **P** **08 24 23.8 +0.4**
GYA pP sP 08 24 28.6 -0.3
GYA PP **PnPn** **08 26 02.5 -1.8**
GYA PcP **PcP** **08 26 22.8 +2.1**
GYA ScP **ScP** **08 30 12.0 +1.6**
GYA S **S** **08 30 39.3 +0.3**
GYA SS **SS** **08 33 37.6 -6.4**
GYA pmax pmax
comp=Z,160nm,1.1s
GYA pmax pmax
comp=Z,8µm,6.2s
GYA LR LR
comp=Z,15µm,18.8s
GYA LR LR
comp=Z,15µm,19.0s
GYA LR LR
comp=Z,16µm,20.4s
MEEK Meekatharra 41.60 217 P **P** **08 24 24.0 +0.4**
baz=42,SNR=8.5
NFK Norfolk Island 41.61 149 P **P** **08 24 24.7 +1.1**
baz=42,SNR=5.6
CAN Canberra 41.67 175 P **P** **08 24 23.2 -0.8**
CAN pmax pmax
comp=Z,243nm,1.4s
CAN Canberra 41.67 175 P **P** **08 24 23.2 -0.8**
GIRL Giralia 41.68 225 P **P** **08 24 25.9 +1.7**
baz=42,SNR=16
GIRL Giralia 41.68 225 P **P** **08 24 24.2 0.0**
GIRL IAmb IAmb 08 24 27.4
comp=Z,667nm,1.1s
CNB Canberra Magne 41.70 175 P **P** **08 24 25.3 +1.0**
baz=42,SNR=30
KASI Kota Agung 42.09 255 P **P** **08 24 26.6 -1.1**
comp=Z,12µmcomp=Z,6µmcomp=Z,192nm,1.2s
BJT Baijiatuan 42.28 327 P **P** **08 24 28.4 -0.6**
BJT pmax pmax
comp=Z,752nm,1.8s
BJT Baijiatuan 42.28 327 P **P** **08 24 28.4 -0.6**
BJT IAmb IAmb 08 24 33.9
comp=Z,752nm,1.8s
BJT Baijiatuan 42.28 327 IAMs_20 IAMs_20 08 39 24.6
comp=Z,31µm,22.0s
BJI Beijing 42.30 327⇑ *i*P **P** **08 24 28.8 -0.2**
BJI PP **PP** **08 26 07.3 +0.1**
BJI S **S** **08 30 56.8 +7.6**
BJI pmax pmax
comp=Z,7µm,5.1s
BJI LR LR
comp=Z,19µm,21.8s
SLVN Son La 42.37 295 P **P** **08 24 28.3 -1.7**
SLVN IAmb IAmb 08 24 42.7
comp=Z,479nm,1.7s
LWLI Liwa 42.38 255 P **P** **08 24 29.6 -0.6**
comp=Z,10µmcomp=Z,523nm,1.8s
XMIS Christmas Isla 42.58 247 P **P** **08 24 29.9 -1.8**
XMIS IAmb IAmb 08 24 32.6
comp=Z,1µm,2.0s
LHSI Lahat 42.60 257 P **P** **08 24 32.2 +0.3**
comp=Z,15µmcomp=Z,520nm,2.5s
TIY Taiyuan 42.95 321 *e*P **P** **08 24 33.8 -0.7**
TIY PP **PP** **08 26 15.8 +1.5**
TIY S **S** **08 31 02.0 +2.9**
TIY pmax pmax
comp=Z,6µm,6.5s
TIY LR LR
comp=Z,18µm,16.1s
TIY LR LR
comp=Z,15µm,18.6s
TIY LR LR
comp=Z,23µm,16.3s
ARPS Mount Arapiles 43.04 184 P **P** **08 24 36.4 +1.3**
baz=43,SNR=28
XAN Xi'an 43.19 314 P **P** **08 24 36.2 -0.4**
XAN pmax pmax
comp=Z,954nm,1.9s
XAN Xi'an 43.19 314 P **P** **08 24 36.1 -0.4**
XAN IAmb IAmb 08 24 47.6
comp=Z,954nm,1.9s
XAN Xi'an 43.19 314 IAMs_20 IAMs_20 08 40 46.6
comp=Z,35µm,20.0s
MNAI Manna 43.28 257 P **P** **08 24 37.2 -0.2**
comp=Z,14µmcomp=Z,29µmcomp=Z,1µm,1.8s
MNAI Manna 43.28 257 P **P** **08 24 35.5 -1.9**
MILA Mila 43.41 175 P **P** **08 24 39.2 +1.1**
baz=44,SNR=15
KSI Kapahiang 43.46 258 P **P** **08 24 38.4 -0.6**
comp=Z,12µmcomp=Z,17µmcomp=Z,651nm,2.6s
KMBL Kambalda 43.55 209 P **P** **08 24 40.2 +0.8**
baz=44,SNR=13
MASI Maura Aman, Be 43.69 259 P **P** **08 24 40.9 +0.1**
comp=Z,29µmcomp=Z,2µm,1.5s
TOO Toolangi 43.74 179 P **P** **08 24 42.4 +1.6**
baz=44,SNR=30
TOO Toolangi 43.74 179 P **P** **08 24 42.1 +1.3**
TOO pmax pmax
comp=Z,797nm,1.6s
TOO Toolangi 43.74 179 P **P** **08 24 42.1 +1.3**
TOO IAmb IAmb 08 24 44.3
comp=Z,797nm,1.6s
IPM Ipoh 43.77 270 P **P** **08 24 40.7 -0.7**
IPM IAmb IAmb 08 24 52.8
comp=Z,766nm,1.6s
IPM Ipoh 43.77 270 P **P** **08 24 42.0 +0.6**
KULM Kulim 44.08 271 P **P** **08 24 43.8 -0.2**
KLR Kul'dur 44.12 348 P **P** **08 24 43.8 +0.1**
comp=Z,90nm,1.2s,baz=154,slow=7.1,SNR=18
KLR LR LR 08 40 16.1
comp=Z,20µm,21.5s,baz=152,slow=32
KLR Kul'dur 44.12 348*c* *i*P **P** **08 24 43.2 -0.5**
KLR pmax pmax
comp=Z,276nm,1.6s
KLR MLR MLR
comp=Z,10µm,18.0s
KNTN Kanton 44.20 101 P **P** **08 24 44.4 -0.5**
KNTN IAmb IAmb 08 24 58.8

comp=Z,411nm,1.2s
BKNI Bangkinang 44.23 264 P **P** **08 24 45.6 +0.5**
comp=Z,11µmcomp=Z,12µmcomp=Z,854nm,1.3s
BKNI Bangkinang 44.23 264 P **P** **08 24 44.8 -0.3**
TYV Tymovskoe 44.36 358 *e*P **P** **08 24 46.2 +0.7**
TYV *e*S **S** **08 31 23.0 +3.9**
TYV pmax pmax
comp=Z,40nm,1.3s
TYV pmax pmax
comp=Z,3µm,6.7s
TYV smax smax
comp=N,15nm,1.8s
TYV smax smax
comp=E,5µm,8.8s
TYV MLR MLR
comp=N,16µm,18.0s
TYV MLR MLR
comp=Z,19µm,18.0s
KMI Kunming 44.44 300 P **P** **08 24 49.3 +2.4**
KMI PP **PP** **08 26 36.1 +5.4**
KMI ScP **ScP** **08 30 21.6 -0.6**
KMI S **S** **08 31 22.1 +0.5**
KMI SS **SS** **08 34 32.5 -8.6**
KMI pmax pmax
comp=Z,130nm,1.6s
KMI pmax pmax
comp=Z,7µm,8.4s
KMI LR LR
comp=Z,9µm,21.3s
KMI LR LR
comp=Z,17µm,20.6s
KMI LR LR
comp=Z,25µm,20.3s
KMI Kunming 44.44 300 IAMs_20 IAMs_20 08 40 49.2
comp=Z,27µm,20.0s
MORW Morawa 44.92 217 P **P** **08 24 50.8 +0.4**
baz=45,SNR=52
MORW Morawa 44.92 217 P **P** **08 24 49.1 -1.3**
PDSI Padang 45.01 262 P **P** **08 24 49.9 -1.4**
comp=Z,6µmcomp=Z,4µmcomp=Z,94nm,1.6s
SKR Sevaro-Kuril's 45.11 10⇑ *i*P **P** **08 24 50.8 -0.7**
HHC Hu-ho-hao-te 45.45 324 *e*P **P** **08 24 54.3 -0.2**
HHC sP pwP 08 25 02.6 -0.8
HHC PP **PP** **08 26 44.6 +3.6**
HHC S **S** **08 31 33.8 -1.7**
HHC ScS **ScS** **08 34 43.4 -7.4**
HHC pmax pmax
comp=Z,4µm,5.0s
HHC LR LR
comp=Z,6µm,14.3s
HHC LR LR
comp=Z,10µm,17.3s
HHC LR LR
comp=Z,12µm,20.2s
MNSI Mandailing Nat 45.61 265 P **P** **08 24 52.6 -3.5**
comp=Z,10µmcomp=Z,6µmcomp=Z,140nm,1.1s
CD2 Chengdu 45.63 308 P **P** **08 24 56.9 +0.8**
CD2 PP **PP** **08 26 42.5 -0.5**
CD2 S **S** **08 31 39.4 +1.1**
CD2 pmax pmax
comp=Z,840nm,1.5s
CD2 pmax pmax
comp=Z,12µm,5.9s
CD2 LR LR
comp=Z,23µm,17.3s
CD2 LR LR
comp=Z,19µm,24.4s
CD2 LR LR
comp=Z,31µm,20.1s
JOHN Johnston Islan 45.65 73 IAMs_20 IAMs_20 08 40 46.1
comp=Z,28µm,19.0s
BLDU Ballidu 45.68 215 P **P** **08 24 56.8 +0.5**
baz=46,SNR=16
PPSI Pulau Pagai 45.79 260 P **P** **08 24 55.6 -1.9**
comp=Z,11µmcomp=Z,512nm,2.2s
KLBR Kellerberrin 45.85 213 P **P** **08 24 58.0 +0.4**
baz=46,SNR=28
PSI Prapat 46.01 268 P **P** **08 24 58.3 -1.1**
PSI pmax pmax
comp=Z,1µm,1.8s
RPSI Rantau Prapat 46.02 268 P **P** **08 24 58.3 -1.0**
BTO Bactou 46.20 323 *e*P **P** **08 25 01.8 +1.3**
CM31 Chiang Mai Arr 46.37 289 P **P** **08 25 04.2 +2.2**
SNR=153
CM31 S **S** **08 31 53.9 +4.6**
CM31 Chiang Mai Arr 46.37 289 P **P** **08 25 02.4 +0.4**
CMAR Chiang Mai Arr 46.37 289 P **P** **08 25 04.0 +2.0**
comp=Z,177nm,1.1s,baz=100,slow=5.2,SNR=130
CMAR LR LR 08 45 26.0
comp=Z,8µm,18.9s,baz=98,slow=37
CMAR PKPPKP 08 56 20.6
comp=Z,0.6nm,0.3s,baz=315,slow=4.0,SNR=6.5
CMAR Chiang Mai Arr 46.37 289 *i*P **P** **08 25 04.0 +2.0**
CMAR pmax pmax
comp=Z,182nm,1.1s
CMAR Chiang Mai Arr 46.37 289 P **P** **08 25 03.4 +1.4**
SISI Saibi 46.43 262 P **P** **08 25 04.1 +1.6**
comp=Z,5µmcomp=Z,195nm,1.4s
CHTO Chiang Mai 46.43 290 P **P** **08 25 04.1 +1.6**
CHTO P **P** **08 25 04.1 +1.6**
CHTO S **S** **08 31 55.2 +5.2**
CHTO S **S** **08 31 55.2 +5.2**
CHTO Chiang Mai 46.43 290 P **P** **08 25 03.4 +0.9**
CHTO pmax pmax
comp=Z,595nm,1.6s
CHTO MLR MLR
comp=Z,11µm,19.0s
CHTO Chiang Mai 46.43 290 P **P** **08 25 03.4 +0.9**
NKL Nikolayevsk 46.74 356 *e*P **P** **08 25 05.2 +0.9**
NKL *e* 08 26 36.6
NKL *e* 08 26 53.3
NKL *e*S **S** **08 31 53.1 -0.3**
NKL pmax pmax
comp=Z,45nm,1.1s
NKL pmax pmax
comp=E,2.0nm,0.9s
NKL pmax pmax
comp=N,6.0nm,0.6s
NKL pmax pmax
comp=Z,316nm,2.3s
NKL smax smax
comp=E,7.0nm,5.5s
NKL smax smax
comp=N,12nm,3.7s
NKL MLR MLR
comp=E,97nm,14.0s
MUN Mundaring 46.99 214 P **P** **08 25 07.4 +0.8**
baz=47,SNR=3.4
KCSI Kotacane, Aceh 47.09 269 P **P** **08 25 06.7 -1.0**
comp=E,8µmcomp=E,8µmcomp=E,341nm,1.8s
NWAO Narrogin (SRO) 47.16 212 P **P** **08 25 08.9 +1.0**
baz=47,SNR=8.9
NWAO Narrogin (SRO) 47.16 212 LR LR 08 44 54.6
comp=E,18µm,19.4s,baz=42,slow=36
NWAO Narrogin (SRO) 47.16 212 P **P** **08 25 07.5 -0.4**
NWAO pmax pmax
comp=Z,291nm,1.8s
NWAO Narrogin (SRO) 47.16 212 P **P** **08 25 07.5 -0.4**
NWAO IAmb IAmb 08 25 30.6
comp=Z,291nm,1.8s
NWAO Narrogin (SRO) 47.16 212 P **P** **08 25 07.5 -0.4**
NWAO IAmb IAmb 08 25 30.6
comp=Z,363nm,1.8s
AFI Afiamalu 47.44 115 P **P** **08 25 10.3 -0.2**
AFI pmax pmax
comp=Z,285nm,1.3s
AFI Afiamalu 47.44 115 P **P** **08 25 10.3 -0.2**
AFI IAmb IAmb 08 25 22.8
comp=Z,285nm,1.2s
GSI Gunungsitoli 47.53 266 P **P** **08 25 10.0 -1.1**
comp=Z,45µmcomp=Z,55µmcomp=Z,2µm,1.4s
GSI Gunungsitoli 47.53 266 P **P** **08 25 09.9 -1.3**
TPTI 47.70 269 P **P** **08 25 11.3 -1.2**
comp=Z,2µmcomp=Z,74nm,2.1s
PEA0B Petropavlovsk- 47.72 10 P **P** **08 25 10.7 -1.3**
PEA0B pmax pmax
comp=Z,360nm,1.5s
PEA0B Petropavlovsk- 47.72 10 P **P** **08 25 10.7 -1.3**
PEA0B IAmb IAmb 08 25 35.0
comp=Z,360nm,1.4s
PEA0B IAMs_20 IAMs_20 08 42 33.7
comp=Z,23µm,20.0s
PETK Petropavlovsk- 47.72 10 P **P** **08 25 11.9 -0.1**
comp=Z,24nm,0.9s,baz=176,slow=6.5,SNR=30
PETK LR LR 08 42 44.5
comp=Z,19µm,21.7s,baz=190,slow=33
PETK Petropavlovsk- 47.72 10 P **P** **08 25 11.3 -0.7**
HIA Hailar 47.73 338 P **P** **08 25 11.2 -1.0**
HIA pmax pmax
comp=Z,594nm,1.8s
HIA Hailar 47.73 338 P **P** **08 25 11.2 -1.0**
HIA Hailar 47.73 338 IAMs_20 IAMs_20 08 43 57.7
comp=Z,24µm,20.0s
LHMI Lhok Sumawe 47.77 271 P **P** **08 25 13.4 +0.4**
comp=Z,11µmcomp=Z,9µmcomp=Z,345nm,1.6s
LHMI Lhok Sumawe 47.77 271 P **P** **08 25 11.1 -1.9**
PET Petropavlovsk 47.81 11 *e*P **P** **08 25 12.1 -0.6**
PET *e*S **S** **08 32 05.0 -3.7**
PET pmax pmax
comp=Z,132nm,1.0s
PET pmax pmax
comp=Z,900nm,12.6s
PET smax smax
comp=E,12µm,20.8s
PET smax smax
comp=N,6µm,14.7s
PET smax smax
comp=N,8µm,16.3s
PET MLR MLR
comp=Z,15µm,19.0s
PET MLR MLR
comp=Z,14µm,18.0s
PET Petropavlovsk 47.81 11 P **P** **08 25 10.8 -1.9**
PET IAmb IAmb 08 25 24.8
comp=Z,141nm,1.1s
LZH Lanzhou 47.82 314⇑ P **P** **08 25 13.5 +0.2**
LZH pP sP 08 25 17.8 -1.1
LZH sP pwP 08 25 21.4 -1.1
LZH PP **PP** **08 27 07.0 +1.7**
LZH S **S** **08 32 09.3 -0.5**
LZH pmax pmax
comp=Z,89nm,1.2s
LZH pmax pmax
comp=Z,7µm,4.9s
LZH LR LR
comp=Z,17µm,17.4s
LZH LR LR
comp=Z,30µm,17.3s
LZH LR LR
comp=Z,39µm,17.3s
MLSI Meulaboh, Aceh 48.38 270 P **P** **08 25 16.4 -1.3**
comp=Z,6µmcomp=Z,9µmcomp=Z,602nm,1.5s
RKGY Rocky Gully 48.60 211 P **P** **08 25 20.1 +1.0**
baz=49,SNR=6.8
SNSI Sinabang, Aceh 48.63 268 P **P** **08 25 19.3 -0.4**
comp=Z,7µmcomp=Z,283nm,1.3s
TAU Tasmania Unive 49.12 178 P **P** **08 25 23.4 +0.5**
TAU pmax pmax
comp=Z,315nm,1.5s
TAU MLR MLR
comp=Z,20µm,20.0s
TAU Tasmania Unive 49.12 178 P **P** **08 25 23.4 +0.5**
TAU IAmb IAmb 08 25 26.1
comp=Z,315nm,1.4s
TAU Tasmania Unive 49.12 178 IAMs_20 IAMs_20 08 45 44.7
comp=Z,20µm,20.0s
ZEA Zeya 49.34 346 *e*P **P** **08 25 24.2 -0.3**
ZEA *e* 08 27 22.0
ZEA *e*S **S** **08 32 34.0 +3.7**
ZEA *e*SS **ScS** **08 35 18.0 +2.3**
ZEA pmax pmax
comp=E,35nm,1.0s
ZEA pmax pmax
comp=N,100nm,1.2s
ZEA pmax pmax
comp=Z,170nm,1.2s
ZEA pmax pmax
comp=Z,4µm,7.0s
ZEA pmax pmax
comp=E,1µm,6.0s
ZEA pmax pmax
comp=N,2µm,5.0s
ZEA pmax pmax
comp=N,3µm,6.0s
ZEA pmax pmax
comp=E,800nm,6.0s
ZEA pmax pmax
comp=Z,4µm,6.0s
ZEA smax smax
comp=N,10µm,20.0s
OUZ Omahuta 49.41 149 P **P** **08 25 25.9 +0.7**
OUZ IAMs_20 IAMs_20 08 44 46.3
comp=Z,24µm,18.0s
RAO Raoul Island 50.31 137 LR LR 08 45 31.7
comp=Z,15µm,18.0s,baz=318,slow=34
RAO Raoul Island 50.31 137 IAMs_20 IAMs_20 08 45 38.8
comp=Z,16µm,18.0s
LKP Lekhapani 51.00 300 *e*P **P** **08 25 38.0 +0.4**
LKP *i* x x 08 25 42.0
LKP IAmb IAmb 08 25 43.2
comp=Z,512nm,1.5s
NIUE Niue 51.15 121 P **P** **08 25 38.8 +0.2**
baz=51,SNR=4.1
NIUE Niue 51.15 121 P **P** **08 25 39.7 +1.0**
COCO West Island 51.29 249 P **P** **08 25 38.4 -1.4**
COCO pmax pmax
comp=Z,2µm,1.7s
COCO West Island 51.29 249 P **P** **08 25 38.4 -1.4**
PBA Port Blair 51.78 280 P P 08 25 43.8 +0.3
PBA Port Blair 51.78 280 P P 08 25 41.8 -1.7
SMY Shemya 51.99 22 P **P** **08 25 43.5 -1.0**
SMY pmax pmax
comp=Z,319nm,1.2s
SMY Shemya 51.99 22 P **P** **08 25 43.5 -1.0**
SMY IAmb IAmb 08 25 57.5
comp=Z,319nm,1.2s
SMY IAMs_20 IAMs_20 08 45 42.1
comp=Z,23µm,20.0s
GTA Gaotai 52.19 316 P **P** **08 25 46.6 +0.2**
GTA pP sP 08 25 50.8 -1.2
GTA sP pwP 08 25 54.0 -1.5
GTA S **S** **08 33 04.1 -6.5**
GTA SS **SS** **08 36 44.3 -3.9**
GTA pmax pmax
comp=Z,6µm,6.2s
GTA LR LR
comp=Z,12µm,19.2s
GTA LR LR
comp=Z,17µm,19.6s
GTA LR LR
comp=Z,22µm,20.3s
CIT Chita 52.32 336 *e*P **P** **08 25 50.6 +3.5**
CIT *e* 08 25 56.0
CIT *e* 08 26 06.4
CIT pmax pmax
comp=Z,1µm,2.2s
ULN Ulaanbaatar 52.42 329 P **P** **08 25 48.5 +0.5**
ULN P **P** **08 25 48.5 +0.5**
ULN S **S** **08 33 19.0 +5.5**
ULN S **S** **08 33 19.0 +5.5**
ULN Ulaanbaatar 52.42 329*c i*P **P** **08 25 48.5 +0.5**
ULN Ulaanbaatar 52.42 329 P **P** **08 25 47.8 -0.2**
HIZ Hauiti 52.61 151 P **P** **08 25 50.7 +1.4**
HIZ IAmb IAmb 08 26 07.5
comp=Z,476nm,1.3s
SONM Songino Array 52.74 328 P **P** **08 25 50.5 +0.1**
comp=Z,38nm,0.9s,baz=144,slow=6.4,SNR=77
SONM LR LR 08 48 23.9
comp=Z,17µm,20.8s,baz=126,slow=36
SONM PKPPKP **P'P'df** **08 56 12.7 -7.5**
comp=Z,1.1nm,1.0s,baz=249,slow=2.5,SNR=3.9
SONM PKP2bc 08 56 34.4
comp=Z,2.1nm,1.0s,baz=280,slow=1.8,SNR=6.4
SONM PKP2ab 08 57 03.4
comp=Z,1.7nm,0.9s,baz=299,slow=2.5,SNR=4.2
SONM Songino Array 52.74 328 P **P** **08 25 49.5 -0.8**
ZIRO ZIRO 52.77 300 *e*P **P** **08 25 52.2 +1.2**
MA2 Magadan 53.24 4 LR LR 08 45 23.1
comp=Z,8µm,20.1s,baz=193,slow=32
MA2 Magadan 53.24 4*d i*P **P** **08 25 53.1 -0.5**
MA2 pmax pmax
comp=Z,72nm,2.1s
MA2 MLR MLR
comp=Z,7µm,18.0s
MA2 Magadan 53.24 4 P **P** **08 25 52.7 -0.9**
MA2 IAmb IAmb 08 26 05.0
comp=Z,528nm,1.9s
QRZ Quartz Range 53.38 154 IAMs_20 IAMs_20 08 46 16.9
comp=Z,16µm,19.0s
URZ Urewera 53.55 149 P **P** **08 25 57.8 +1.6**
comp=Z,85nm,1.0s,baz=329,slow=2.5,SNR=25
URZ LR LR 08 48 15.2
comp=Z,13µm,18.9s,baz=331,slow=35
URZ Urewera 53.55 149 P **P** **08 25 58.3 +2.1**
URZ IAmb IAmb 08 26 12.9
comp=Z,477nm,1.4s
BKZ Black Stump Fm 53.92 150 P **P** **08 26 00.2 +1.2**
BKZ IAmb IAmb 08 26 15.0
comp=Z,242nm,1.2s
SHL Shillong 54.07 297 *e*P **P** **08 26 00.9 +0.3**
SHL IAmb IAmb 08 26 12.8
comp=Z,180nm,1.2s
SHL Shillong 54.07 297 P **P** **08 26 01.1 +0.6**
SNR=109
SHL Shillong 54.07 297 P **P** **08 26 00.7 +0.1**
SHL pmax pmax
comp=Z,392nm,1.3s
SHL Shillong 54.07 297 P **P** **08 26 00.7 +0.1**
SHL IAmb IAmb 08 26 11.8
comp=Z,392nm,1.3s
NNZ Nelson 54.08 154 P **P** **08 25 59.9 -0.1**
NNZ IAmb IAmb 08 26 14.2
comp=Z,496nm,1.8s
NNZ IAMs_20 IAMs_20 08 46 47.2
comp=Z,15µm,19.0s
THZ Tophouse 54.31 154 P **P** **08 26 02.1 +0.3**
AGT Agartala 54.34 295 *e*P **P** **08 26 04.3 +2.0**
GUWA GUWAHATI 54.36 298 *e*P **P** **08 26 02.7 +0.3**
GUWA IAmb IAmb 08 26 08.0
comp=Z,289nm,1.6s
TUWZ Tuamarina 54.50 153 P **P** **08 26 02.6 -0.5**
FOZ Fox Glacier 54.56 158 P **P** **08 26 04.1 +0.7**
FOZ IAmb IAmb 08 26 05.6
comp=Z,231nm,1.4s
SNZO South Karori 54.74 153 P **P** **08 26 05.5 +0.7**
SNZO South Karori 54.74 153 IAMs_20 IAMs_20 08 45 48.9
comp=Z,26µm,21.0s
LTZ Lake Taylor 54.89 156 IAMs_20 IAMs_20 08 45 02.7
comp=Z,17µm,21.0s
BFZ Birch Farm 54.97 151 IAMs_20 IAMs_20 08 50 24.9
comp=Z,22µm,18.0s
KHZ Kahutara 55.12 154 IAMs_20 IAMs_20 08 47 34.8
comp=Z,23µm,20.0s
RPZ Rata Peaks 55.18 157 P **P** **08 26 08.7 +0.7**
comp=Z,203nm,1.0s,baz=326,slow=1.9,SNR=36
RPZ LR LR 08 46 40.5
comp=Z,15µm,21.8s,baz=324,slow=33
RPZ Rata Peaks 55.18 157 IAmb IAmb 08 26 10.3
comp=Z,353nm,1.2s
RPZ IAMs_20 IAMs_20 08 45 44.5
comp=Z,21µm,22.0s
OXZ Oxford 55.24 156 IAMs_20 IAMs_20 08 47 11.1
comp=Z,17µm,20.0s
DCZ Deep Cove 55.33 161 P **P** **08 26 08.4 -0.6**
DCZ IAmb IAmb 08 26 22.3
comp=Z,510nm,1.7s
WKZ Wanaka 55.39 159 P **P** **08 26 07.8 -1.8**
WKZ IAmb IAmb 08 26 22.7
comp=Z,501nm,1.9s
WKZ IAMs_20 IAMs_20 08 47 16.9
comp=Z,16µm,19.0s
LBZ Lake Benmore 55.43 158 P **P** **08 26 07.9 -1.9**
KEKH Kekaha 55.53 68 P **P** **08 26 08.9 -2.1**
MLZ Mavora Lakes 55.55 160 P **P** **08 26 09.8 -0.9**
LSA Lhasa 55.59 302 P **P** **08 26 12.9 +1.1**
LSA S **S** **08 33 51.8 -5.7**
LSA pmax pmax
comp=Z,220nm,1.8s
LSA LR LR
comp=Z,22µm,17.1s
LSA LR LR
comp=Z,23µm,20.3s
LSA LR LR
comp=Z,30µm,20.6s
LSA Lhasa 55.59 302 P **P** **08 26 13.5 +1.6**
LSA Lhasa 55.59 302 P **P** **08 26 09.7 -2.1**
LSA pmax pmax
comp=Z,265nm,1.4s
LSA MLR MLR
comp=Z,10µm,20.0s
LSA Lhasa 55.59 302 P **P** **08 26 09.7 -2.1**
LSA IAmb IAmb 08 26 24.0
comp=Z,264nm,1.4s
MQZ McQueen's Vall 55.81 156 P **P** **08 26 12.3 -0.2**
DHUB DHUBRI 55.83 297 *e*P **P** **08 26 13.1 +0.1**
ZAK Zakamensk 55.92 329 *e*P **P** **08 26 13.3 -0.1**
ZAK *e* 08 27 14.1
ZAK pmax pmax
comp=Z,236nm,1.6s
ZAK pmax pmax
comp=Z,116nm,1.5s
ODZ Otahua Downs 56.16 158 P **P** **08 26 14.7 -0.3**
TLY Talaya 56.54 330 P **P** **08 26 18.1 +0.4**
comp=Z,8.9nm,0.8s,baz=142,slow=7.2,SNR=22
TLY LR LR 08 51 52.8
comp=Z,19µm,18.3s,baz=122,slow=38
TLY Talaya 56.54 330 P **P** **08 26 18.3 +0.6**
TLY P **P** **08 26 18.3 +0.6**
TLY S **S** **08 34 10.0 +1.4**
TLY S **S** **08 34 10.0 +1.4**
TLY Talaya 56.54 330*c i*P **P** **08 26 17.9 +0.2**
TLY *e* 08 27 19.1
TLY *e* 08 28 28.7
TLY *e*PPP PPP 08 29 44.7
TLY *e*S **S** **08 34 11.9 +3.3**
TLY *e*SS **SS** **08 37 58.7 +2.6**
TLY pmax pmax
comp=Z,864nm,1.6s
TLY MLR MLR
comp=Z,39µm,14.0s
TLY Talaya 56.54 330 P **P** **08 26 16.8 -0.9**
TLY IAMs_20 IAMs_20 08 51 57.6
comp=Z,19µm,18.0s
IRK Irkutsk 56.59 331 *e*P **P** **08 26 17.6 -0.4**
IRK pmax pmax
comp=Z,787nm,2.0s
ATKA Atka Island 56.63 29 IAMs_20 IAMs_20 08 46 14.2
comp=Z,16µm,19.0s
YAK Yakutsk 56.66 351 LR LR 08 47 55.9
comp=Z,13µm,22.0s,baz=154,slow=33
YAK Yakutsk 56.66 351 *e*P **P** **08 26 18.5 +0.2**
YAK *e**PP **pwP** **08 26 31.0 +3.8**
YAK *e* 08 27 12.4
YAK *e*PPP PPP 08 29 39.3
YAK *e*S **S** **08 34 09.0 -0.7**
YAK *e**SS sS 08 34 28.5 +11
YAK *e* 08 35 59.2
YAK *e*SS **SS** **08 37 50.8 -6.7**
YAK pmax pmax
comp=Z,175nm,1.1s
YAK pmax pmax
comp=N,150nm,1.3s
YAK pmax pmax
comp=E,43nm,1.4s
YAK pmax pmax
comp=Z,680nm,3.8s
YAK pmax pmax
comp=N,594nm,3.5s
YAK pmax pmax
comp=E,266nm,3.5s
YAK smax smax
comp=N,1µm,3.5s
YAK smax smax
comp=E,1µm,3.7s
YAK MLR MLR
comp=Z,5µm,16.0s
YAK MLR MLR
comp=N,3µm,15.0s
YAK MLR MLR
comp=E,4µm,17.0s
YAK Yakutsk 56.66 351 IAMs_20 IAMs_20 08 47 43.7
comp=Z,16µm,21.0s
SEY Seymchan 56.68 4⇑ *i*P **P** **08 26 18.4 -0.1**
comp=Z,12nm,0.8s,baz=194,slow=4.3,SNR=18
SEY LR LR 08 49 03.4
comp=Z,6µm,21.2s,baz=183,slow=34
SEY PKPPKP 08 56 08.0
comp=Z,2.2nm,1.0s,baz=78,slow=7.6,SNR=4.3
SEY Seymchan 56.68 4⇑ *i*P **P** **08 26 18.9 +0.4**
KIP Kipapa 57.03 69 P **P** **08 26 21.8 +0.1**
KIP pmax pmax
comp=Z,199nm,1.1s
KIP Kipapa 57.03 69 P **P** **08 26 21.8 +0.1**
KIP IAmb IAmb 08 26 34.7
comp=Z,199nm,1.1s
KIP Kipapa 57.03 69 IAMs_20 IAMs_20 08 46 18.2
comp=Z,17µm,19.0s
HON Honolulu 57.03 69 P **P** **08 26 20.0 -1.7**

HON pmax pmax
comp=Z,596nm,1.3s
HON Honolulu 57.03 69 P **P** **08 26 20.0 -1.7**
HON IAMs_20 IAMs_20 08 46 19.2
comp=Z,17μm,20.0s
OPA Opana 57.06 68 P **P** **08 26 19.4 -2.5**
OPA pmax pmax
comp=Z,254nm,1.1s
OPA Opana 57.06 68 P **P** **08 26 19.4 -2.5**
OPA IAmb IAmb 08 26 35.1
comp=Z,254nm,1.1s
OPA IAMs_20 IAMs_20 08 46 59.0
comp=Z,19μm,20.0s
XMAS Kiritimati 57.58 92 P **P** **08 26 25.3 -0.4**
XMAS IAmb IAmb 08 26 38.8
comp=Z,488nm,1.5s
MOY Mondy 57.85 329 *e*P **P** **08 26 26.6 -0.5**
MOY pmax pmax
comp=Z,874nm,2.4s
TAPN Taplejung 58.07 298 *e*P **P** **08 26 30.0 +0.7**
comp=Z,2μm,1.7s
ODAN Odare 58.27 298 *e*P **P** **08 26 31.3 +0.6**
KHLH Kahului Airpor 58.45 69 P **P** **08 26 30.1 -1.6**
KHLH IAmb IAmb 08 26 45.4
comp=Z,363nm,1.3s
HLK Haleakala 58.60 70 IAMs_20 IAMs_20 08 46 41.9
comp=Z,16μm,21.0s
KHLU Kahalu`u 58.84 71 IAMs_20 IAMs_20 08 47 10.1
comp=Z,14μm,19.0s
BWNR Bhubaneshwar 58.90 290 *e*P **P** **08 26 35.6 +0.8**
BWNR IAmb IAmb 08 26 43.2
comp=Z,365nm,1.6s
RAMN Ramite 58.98 298 *e*P **P** **08 26 36.2 +0.6**
comp=Z,3μm,1.9s
HPAH Hawaii Prepara 59.06 71 IAMs_20 IAMs_20 08 46 02.9
comp=Z,16μm,21.0s
KHU Kahuku 59.08 71 IAMs_20 IAMs_20 08 48 52.7
comp=Z,15μm,19.0s
BOK Bokaro 59.18 294 *e*P **P** **08 26 38.5 +1.7**
BOK IAmb IAmb 08 26 43.5
comp=Z,218nm,1.0s
POHA Pohakuloa 59.19 71 IAMs_20 IAMs_20 08 45 44.4
comp=Z,18μm,22.0s
HMH Humu'ula Sheep 59.23 71 P **P** **08 26 36.6 -0.9**
AIN Ainahou 59.23 71 P **P** **08 26 36.9 -0.4**
AIN IAmb IAmb 08 26 50.5
comp=Z,306nm,1.2s
JIRN Jiri 59.46 298 *e*P **P** **08 26 39.9 +0.9**
GUN Gumba 59.77 299 *e*P **P** **08 26 41.8 +0.6**
PKI Pulchoki 60.13 298 *e*P **P** **08 26 43.4 -0.2**
PKIN Phulchoki 60.14 298 *e*P **P** **08 26 43.6 0.0**
KKN Kakani 60.27 298 *e*P **P** **08 26 45.7 +1.2**
DMN Daman 60.40 298 *e*P **P** **08 26 46.0 +0.6**
RAR Rarotonga 60.76 119 P **P** **08 26 49.2 +1.6**
comp=Z,71nm,1.2s,baz=235,slow=3.5,SNR=3.6
RAR LR LR 08 49 04.1
comp=Z,12μm,19.7s,baz=288,slow=32
RAR Rarotonga 60.76 119 P **P** **08 26 47.0 -0.6**
RAR pmax pmax
comp=Z,228nm,1.6s
RAR Rarotonga 60.76 119 P **P** **08 26 47.0 -0.6**
RAR IAmb IAmb 08 26 50.2
comp=Z,228nm,1.6s
RAR Rarotonga 60.76 119 IAMs_20 IAMs_20 08 48 52.0
comp=Z,16μm,19.0s
GKN Gorkha 60.87 298 *e*P **P** **08 26 49.0 +0.5**
UNV Unalaska Valle 61.37 30 P **P** **08 26 50.2 -0.9**
UNV IAmb IAmb 08 27 02.8
comp=Z,156nm,1.3s
UNV IAMs_20 IAMs_20 08 52 53.6
comp=Z,13μm,20.0s
DANN Dangsing 61.69 299 *e*P **P** **08 26 54.4 +0.2**
KOLN Koldanda 61.74 298 *e*P **P** **08 26 54.7 +0.2**
AKUT Akutan 61.89 30 P **P** **08 26 54.6 -0.1**
AKUT IAmb IAmb 08 27 07.1
comp=Z,277nm,1.4s
WMQ Urumqi 62.26 317 P **P** **08 26 58.8 +1.3**
WMQ pP sP 08 27 02.0 -1.1
WMQ sP pwP 08 27 05.3 -1.5
WMQ PcP **PcP** **08 27 38.4 +1.1**
WMQ S **S** **08 35 24.6 +1.6**
WMQ SS **SS** **08 39 30.4 +4.0**
WMQ pmax pmax
comp=Z,140nm,1.7s
WMQ pmax pmax
comp=Z,4μm,3.7s
WMQ LR LR
comp=Z,6μm,15.7s
WMQ LR LR
comp=Z,8μm,17.5s
WMQ LR LR
comp=Z,18μm,29.0s
WMQ Urumqi 62.26 317 IAMs_20 IAMs_20 08 53 42.3
comp=Z,17μm,20.0s
PYUN Piuthan 62.32 298 *e*P **P** **08 26 58.9 +0.5**
PVM Polavaram 62.69 286 *e*P **P** **08 27 01.9 +1.3**
PVM IVmBBB 08 27 13.6
comp=Z,2μm,2.0s
PVM IVMs_BB IVMs_BB 08 49 15.2
comp=Z,1μm,21.8s
BILL Bilibino 63.20 9*d i*P **P** **08 27 02.6 -0.6**
BILL *e* 08 27 38.6
BILL pmax pmax
comp=Z,183nm,2.0s
BILL MLR MLR
comp=Z,6μm,18.0s
BILL Bilibino 63.20 9 P **P** **08 27 02.8 -0.4**
BILL IAmb IAmb 08 27 15.1
comp=Z,416nm,1.8s
FALS False Pass 63.44 30 P **P** **08 27 04.2 -0.8**
MYLAV Mylavaram 63.62 285 *e*P **P** **08 27 08.2 +1.3**
MYLAV IVmB_BB 08 27 19.6
comp=Z,2μm,2.1s
MYLAV IVMs_BB IVMs_BB 08 49 53.7
comp=Z,2μm,26.2s
ADKI Addanki 64.25 284 *e*P **P** **08 27 12.1 +1.1**
ADKI IVmBBB 08 27 23.8
comp=Z,2μm,2.3s
ADKI IVMs_BB IVMs_BB 08 50 49.7
comp=Z,2μm,26.2s
SKHT Srikalahasti 64.50 282 *e*P **P** **08 27 13.6 +0.9**
SKHT IVmBBB 08 27 25.2
comp=Z,2μm,2.2s
SKHT IVMs_BB IVMs_BB 08 49 47.1
comp=Z,1μm,26.5s
JBP Jabalpur 64.52 293⇑ *e*P **P** **08 27 15.1 +2.4**
JBP *e*S **S** **08 35 56.9 +5.3**
NJS Nagarjunasagar 64.89 285 *e*P **P** **08 27 15.7 +0.5**
NJS IVmB_BB 08 27 27.3
comp=Z,2μm,1.9s
NJS IVMs_BB IVMs_BB 08 50 43.5
comp=Z,1μm,23.7s
GAMB Gambell 65.14 20 IAMs_20 IAMs_20 08 52 06.8
comp=Z,13μm,20.0s
SDPT Sand Point 65.17 31 P **P** **08 27 15.7 -0.6**
SDPT IAmb IAmb 08 27 45.8
comp=Z,238nm,1.0s
NGP Nagpur 65.27 290 *e*P **P** **08 27 18.1 +0.4**
NGP IAmb IAmb 08 27 23.6
comp=Z,164nm,1.2s
SRLM Srisailam 65.29 285 *e*P **P** **08 27 18.3 +0.5**
SRLM IVmBBB 08 27 29.6
comp=Z,2μm,1.7s
SRLM IVMs_BB IVMs_BB 08 51 21.2
comp=Z,1μm,21.8s
ZSN Zaisan 65.31 320 *e*P **P** **08 27 18.0 +0.5**
comp=Z,1μm,4.1s
ZSN *e*S **S** **08 36 04.6 +3.9**
ZSN Zaisan 65.31 320 *e*P **P** **08 27 18.0 +0.5**
ZSN *e*S **S** **08 36 04.6 +3.9**
ZSN pmax pmax
comp=Z,1μm,4.1s
CNBA Chernabura Isl 65.39 32 P **P** **08 27 17.7 0.0**
HYB Hyderabad 65.62 286 *i* P **P** **08 27 20.5 +0.5**
comp=Z,700nm,1.4s
HYB *e*PcP **PcP** **08 27 49.0 -2.5**
HYB *e*PP **PP** **08 29 43.0 -1.6**
HYB *e*PPP PPP 08 31 27.0
HYB *e*S **S** **08 36 06.0 +0.5**
HYB Hyderabad 65.62 286 *e*P **P** **08 27 20.2 +0.2**
HYB IAmb IAmb 08 27 31.8
comp=Z,260nm,1.1s
HYBB Hyderabad (bro 65.63 286 *e*P **P** **08 27 20.2 +0.2**
HYBB IVmB_BB 08 27 31.6
comp=Z,2μm,1.8s
HYBB IVMs_BB IVMs_BB 08 50 52.0
comp=Z,1μm,23.7s
SRSP Sriramsagar 65.85 288 *e*P **P** **08 27 21.7 +0.3**
SRSP IVmBBB 08 27 33.2
comp=Z,2μm,2.1s
SRSP IVMsBB 08 53 11.5
comp=Z,662nm,20.3s
TIXI Tiksi 65.95 354 P **P** **08 27 20.2 -0.9**
comp=Z,17nm,0.8s,baz=140,slow=2.0,SNR=21
TIXI PKP2bc 08 56 02.2
comp=Z,1.3nm,0.2s,baz=7.3,slow=4.6,SNR=7.6
TIXI LR LR 08 57 42.4
comp=Z,5μm,20.3s,baz=160,slow=38
TIXI Tiksi 65.95 354*i* i*P* **P** **08 27 20.8 -0.3**
TIXI pmax pmax
comp=Z,69nm,1.6s
TIXI MLR MLR
comp=Z,7μm,16.0s
TIXI Tiksi 65.95 354 P **P** **08 27 19.8 -1.3**
TIXI IAmb IAmb 08 27 32.4
comp=Z,88nm,0.9s
CHGN Chignik 66.63 30 P **P** **08 27 24.7 -1.0**
CHGN IAmb IAmb 08 27 59.7
comp=Z,243nm,1.7s
MK31 Makanchi Array 66.80 318 *i* P **P** **08 27 27.5 +0.5**
MK31 Makanchi Array 66.80 318 P **P** **08 27 25.4 -1.6**
MKAR Makanchi Array 66.80 318 P **P** **08 27 27.0 0.0**
comp=Z,17nm,0.6s,baz=99,slow=7.8,SNR=47
MKAR PKPPKP 08 55 57.1
comp=Z,5.7nm,0.9s,baz=280,slow=3.6,SNR=12
MKAR LR LR 08 56 13.8
comp=Z,12μm,21.6s,baz=108,slow=36
URV Uravakonda 66.86 283 *e*P **P** **08 27 28.1 0.0**
URV IVmBBB 08 27 39.8
comp=Z,3μm,2.5s
URV IVMs_BB IVMs_BB 08 56 58.4
comp=Z,2μm,21.5s
BHPL Bhopal 66.87 292 *e*P **P** **08 27 27.7 -0.3**
BHPL IAmb IAmb 08 27 33.5
comp=Z,109nm,1.0s
DDI Dehra Dun 66.88 300 *e*P **P** **08 27 29.1 +1.2**
DDI IAmb IAmb 08 27 38.2
comp=Z,605nm,1.4s
MAKZ Makanchi 67.01 318 P **P** **08 27 28.4 0.0**
MAKZ Makanchi 67.01 318 P **P** **08 27 28.3 0.0**
MAKZ IAMs_20 IAMs_20 08 56 10.0
comp=Z,17μm,19.0s
TRD Trivandrum 67.39 277 *e*P **P** **08 27 32.7 +1.4**
TRD IAmb IAmb 08 27 41.5
comp=Z,103nm,1.0s
TRD *i* pP **pwP** **08 27 43.0 +3.4**
KLRI Killari 67.50 287 *e*P **P** **08 27 31.7 -0.3**
KLRI IVmBBB 08 27 43.5
comp=Z,2μm,2.6s
KLRI IVMs_BB IVMs_BB 08 50 56.2
comp=Z,1μm,28.9s
ZAA0 Zalesovo Array 67.56 326 P **P** **08 27 30.9 -0.7**
ZAA0 IAmb IAmb 08 27 42.6
comp=Z,92nm,0.8s
ZAA0 IAMs_20 IAMs_20 08 56 36.2
comp=Z,12μm,21.0s
ZALV Zalesovo Beam 67.56 326 P **P** **08 27 30.7 -0.9**
comp=Z,21nm,0.7s,baz=114,slow=6.5,SNR=28
ZALV LR LR 08 57 09.5
comp=Z,9μm,21.9s,baz=110,slow=36
ZALV Zalesovo Beam 67.56 326 *i* P **P** **08 27 31.5 -0.1**
ZALV pmax pmax
comp=Z,21nm,0.7s
ZALV Zalesovo Beam 67.56 326 P **P** **08 27 31.1 -0.6**
SMLA Simla 67.72 301 *e*P **P** **08 27 33.6 +0.4**
SMLA IAmb IAmb 08 27 43.5
comp=Z,291nm,1.4s
SHLS Shalkode 67.85 314 *e*P **P** **08 27 32.6 -1.4**
comp=Z,648nm,3.0s
SHLS *e*S **S** **08 36 30.9 -0.9**
SHLS *e*LR LR 08 57 15.0
SHLS Shalkode 67.85 314 *e*P **P** **08 27 32.5 -1.4**
SHLS *e*S **S** **08 36 30.9 -0.9**
SHLS pmax pmax
comp=Z,648nm,3.0s
UZB Uzynbulak 68.16 314⇓ *i*P **P** **08 27 36.0 +0.1**
comp=Z,592nm,2.3s
UZB *e*S **S** **08 36 37.0 +1.3**
UZB *e*LR LR 08 59 49.8
UZB Uzynbulak 68.16 314*d i*P **P** **08 27 36.0 +0.1**
UZB *e*S **S** **08 36 36.9 +1.3**
UZB pmax pmax
comp=Z,592nm,2.3s
KPKS Kokpek 68.47 314 *e*P **P** **08 27 37.9 +0.1**
comp=Z,913nm,3.0s
KPKS *e*S S 08 36 50.2 +11
KPKS *e*LR LR 08 58 28.7
KPKS Kokpek 68.47 314 *e*P **P** **08 27 37.8 +0.1**
KPKS pmax pmax
comp=Z,913nm,3.0s
PRZ Przheval'sk 68.47 313 IAMs_20 IAMs_20 09 02 56.9
comp=Z,11μm,18.0s
SATY Saty 68.58 314⇓ *i*P **P** **08 27 39.2 +0.7**
comp=Z,704nm,3.3s
SATY *e*S **S** **08 36 41.4 +0.7**
SATY Saty 68.58 314*d i*P **P** **08 27 39.2 +0.7**
SATY *e*S **S** **08 36 41.3 +0.7**
SATY pmax pmax
comp=Z,704nm,3.3s
TARG Taragay, Kyrgy 68.76 312 IAmb IAmb 08 28 11.1
comp=Z,317nm,1.5s
TARG IAMs_20 IAMs_20 08 58 04.7
comp=Z,14μm,21.0s
PPT Papeete 68.87 112 P **P** **08 27 44.2 +3.6**
comp=Z,79nm,0.9s,baz=151,slow=3.4,SNR=4.6
PPT LR LR 08 54 05.1
comp=Z,12μm,18.1s,baz=277,slow=33
PPT2 Papeete2 68.88 112 *e*P **P** **08 27 43.0 +2.3**
comp=Z,129nm,1.3s
PPT2 *e*S **S** **08 36 46.8 +2.1**
comp=Z,11μm,25.2s
PPT2 *e*LQ LQ 08 45 25.1
comp=Z,44μm,31.0s
PPT2 *e*LR LR 08 48 30.6
comp=Z,23μm,23.5s
PPT2 Papeete2 68.88 112 *e*T T 09 42 11.8
comp=Z,7.1nm,0.3s
PPTF Pamatai, Papee 68.89 112 P **P** **08 27 41.0 +0.3**
PPTF IAMs_20 IAMs_20 08 53 44.4
comp=Z,12μm,18.0s
PAE Paea 68.89 112 *e*P **P** **08 27 42.7 +2.1**
comp=Z,21nm,0.9s
PAE Paea 68.89 112 *e*T T 09 42 08.9
comp=Z,6.1nm,0.3s
TDK Taldyqorghan 68.99 316 *e*P **P** **08 27 41.6 +0.8**
comp=Z,2μm,3.6s
TDK *e*S **S** **08 36 45.5 +0.3**
TDK *e*LR LR 09 00 10.8
comp=Z,8μm,17.6s
TDK Taldyqorghan 68.99 316 *e*P **P** **08 27 41.6 +0.8**
TDK *e*S **S** **08 36 45.4 +0.3**
TDK pmax pmax
comp=Z,2μm,3.6s
TDK MLR MLR
comp=Z,8μm,18.0s
TIAR Tiarei 69.08 111 *e*P **P** **08 27 44.0 +2.1**
comp=Z,41nm,0.9s
TIAR Tiarei 69.08 111 *e*T T 09 42 28.7
comp=Z,3.3nm,0.2s
TVO Taravao 69.22 112 *e*P **P** **08 27 45.0 +2.2**
comp=Z,68nm,1.3s
TVO Taravao 69.22 112 *e*T T 09 42 39.7
comp=Z,2.3nm,0.3s
KDJ Kajisay 69.29 313 P **P** **08 27 43.2 +0.2**
KDJ pmax pmax
comp=Z,952nm,1.9s
KDJ MLR MLR
comp=Z,10μm,20.0s
KDJ Kajisay 69.29 313 P **P** **08 27 43.2 +0.2**
MDOK Medeo 69.58 314 *e*P **P** **08 27 45.4 +0.7**
MDOK *e*S **S** **08 36 53.6 +1.1**
MDOK *e*LR LR 09 00 50.0
comp=Z,4μm,16.2s
MDOK Medeo 69.58 314 *e*P **P** **08 27 45.4 +0.7**
MDOK *e*S **S** **08 36 53.5 +1.1**
MDOK MLR MLR
comp=Z,4μm,16.0s
OHAK Old Harbor 69.59 31 P **P** **08 27 44.1 -0.2**
TNSS Tian-Shan 69.63 314 *e*P **P** **08 27 46.0 +0.6**
TNSS Tian-Shan 69.63 314 *e*P **P** **08 27 45.9 +0.6**
AAA Alma-Ata 69.68 314 *e*P **P** **08 27 46.0 +0.8**
AAA *e*LR LR 09 00 54.2
comp=Z,5μm,16.1s
AAA Alma-Ata 69.68 314 *e*P **P** **08 27 49.6 +4.3**
AAA *e*S **S** **08 36 55.6 +2.1**
AAA pmax pmax
comp=Z,3μm,5.0s
AAA smax smax
comp=N,1μm,9.7s
AAA MLR MLR
comp=Z,3μm,18.0s
CHKK Chushkaly 69.75 314 *e*P **P** **08 27 46.2 +0.6**
CHKK Chushkaly 69.75 314 *e*P **P** **08 27 46.2 +0.6**
KSH Kashi 69.77 310 P **P** **08 27 48.9 +3.0**
KSH pP sP 08 27 52.4 +0.9
KSH PcP **PcP** **08 28 09.0 +0.4**
KSH PP **PP** **08 30 22.1 +1.8**
KSH S **S** **08 36 57.9 +3.2**
KSH SKS **SKSac** **08 37 43.3 -3.2**
KSH ScS **SKKSac** **08 37 46.5 0.0**
KSH SS **SS** **08 41 25.9 +2.6**
KSH pmax pmax
comp=Z,530nm,1.9s
KSH pmax pmax
comp=Z,11μm,3.9s
KSH LR LR
comp=Z,14μm,16.0s
KSH LR LR
comp=Z,10μm,15.2s
KSH LR LR
comp=Z,6μm,15.3s
PMOR Pomoriorio Ree 69.85 108 *e*P **P** **08 27 48.6 +2.0**
comp=Z,344nm,1.2s
PMOR Pomoriorio Ree 69.85 108 *e*T T 09 43 25.7
comp=Z,19nm,0.3s
ULHL Ulahol 70.00 313 P **P** **08 27 49.1 +1.6**
SNR=22
MTBS Maitube 70.02 314 *e*P **P** **08 27 48.4 +1.1**
MTBS Maitube 70.02 314 *e*P **P** **08 27 48.4 +1.1**
KDAK Kodiak Island 70.14 30 P **P** **08 27 48.0 +0.4**
comp=Z,30nm,1.1s,baz=191,slow=1.8,SNR=18
KDAK LR LR 08 56 23.9
comp=Z,9μm,19.9s,baz=250,slow=34
KDAK Kodiak Island 70.14 30*d i*P **P** **08 27 47.9 +0.2**
KDAK pmax pmax
comp=Z,110nm,1.3s
KDAK Kodiak Island 70.14 30 P **P** **08 27 46.9 -0.8**
KDAK IAmb IAmb 08 27 59.4
comp=Z,240nm,1.6s
KDAK Kodiak Island 70.14 30 IAMs_20 IAMs_20 08 56 01.5
comp=Z,12μm,20.0s
VAH Vaihoa 70.15 109 *e*P **P** **08 27 50.0 +1.5**
comp=Z,86nm,1.1s
GOA Goa 70.17 284 *e*P **P** **08 27 48.9 +0.3**
GOA IAmb IAmb 08 27 54.5
comp=Z,143nm,1.4s
KURK Kurchatov 70.18 322 P **P** **08 27 48.6 +0.6**
KURK P **P** **08 27 48.6 +0.6**
KURK S **S** **08 36 59.4 +0.6**
KURK S **S** **08 36 59.4 +0.6**
KURK Kurchatov 70.18 322*d i*P **P** **08 27 48.4 +0.3**
KURK pmax pmax
comp=Z,654nm,1.5s
KURK MLR MLR
comp=Z,15μm,20.0s
KURK Kurchatov 70.18 322 P **P** **08 27 47.3 -0.7**
KURBB Kurchatov Arra 70.21 322 P **P** **08 27 47.9 -0.4**
baz=108,slow=5.2
KURBB PKPPKP **P'P'df** **08 55 49.7 -2.8**
comp=Z,0.9nm,0.3s,baz=286,slow=3.9,SNR=5.6
KURBB Kurchatov Arra 70.21 322 P **P** **08 27 48.0 -0.3**
KUU Kurty 70.22 314 *e*P **P** **08 27 48.7 +0.2**
comp=Z,3μm,4.1s
KUU *e*S **S** **08 37 00.6 +0.9**
KUU *e*LR LR 08 57 43.0
KUU Kurty 70.22 314 *e*P **P** **08 27 48.7 +0.2**
KUU *e*S **S** **08 37 00.5 +0.9**
KUU pmax pmax
comp=Z,3μm,4.1s
BOOM Boomskoye usch 70.26 313 IAmb IAmb 08 28 00.6
comp=Z,399nm,1.6s
BOOM IAMs_20 IAMs_20 09 00 16.3
comp=Z,14μm,20.0s
TBI Tubuai 70.49 117 *e*P **P** **08 27 52.1 +1.7**
comp=Z,231nm,0.9s
TBI *e*S **S** **08 37 04.7 +1.4**
comp=Z,9μm,29.8s
TBI *e*LQ LQ 08 45 59.5
comp=Z,34μm,29.8s
TBI *e*LR LR 08 49 13.9
comp=Z,23μm,24.8s
TBI Tubuai 70.49 117 *e*T T 09 44 16.7
comp=Z,6.9nm,0.3s
TKM2 Tokmak 2 70.58 313 P **P** **08 27 51.6 +0.6**
SNR=39
TKM2 Tokmak 2 70.58 313 P **P** **08 27 51.6 +0.6**
TTA Tatalina 70.58 25 P **P** **08 27 50.4 0.0**
TTA pmax pmax
comp=Z,146nm,1.4s
TTA Tatalina 70.58 25 P **P** **08 27 50.4 0.0**
RDOG Red Dog Mine 70.61 18 P **P** **08 27 50.4 0.0**
RDOG IAMs_20 IAMs_20 08 55 36.3
comp=Z,10μm,20.0s
KZA Kyzart 70.70 312 P **P** **08 27 53.3 +1.3**
SNR=86
KBK Karagaybulak 71.01 313 P **P** **08 27 57.7 +4.1**
SNR=20
RSO Redoubt South 71.02 28 P **P** **08 27 52.1 -1.1**
CHMS Chumysh 71.21 313 P **P** **08 27 55.1 +0.5**
SNR=27
HOM Homer 71.26 29 P **P** **08 27 53.3 -1.1**
HOM IAmb IAmb 08 28 06.3
comp=Z,131nm,0.9s
NIL Nilore 71.26 303 P **P** **08 27 56.1 +1.1**
NIL P **P** **08 27 56.1 +1.1**
NIL Nilore 71.26 303 P **P** **08 27 56.0 +1.0**
NIL pmax pmax
comp=Z,2μm,1.7s
NIL Nilore 71.26 303 P **P** **08 27 56.0 +1.0**
NIL Nilore 71.26 303 IAMs_20 IAMs_20 08 58 31.9
comp=Z,13μm,21.0s
UCH Uchtor 71.27 312 P **P** **08 27 56.8 +1.4**
SNR=68
AAK Ala-Archa 71.34 313 PKPPKP **P'P'ab** **08 55 47.0 -0.3**
comp=Z,2.8nm,0.7s,baz=240,slow=4.4,SNR=14
AAK LR LR 09 01 29.5
comp=Z,12μm,18.9s,baz=72,slow=38
AAK Ala-Archa 71.34 313 P **P** **08 27 56.4 +0.9**
SNR=27
AAK Ala-Archa 71.34 313 P **P** **08 27 56.5 +1.0**
AAK Ala-Archa 71.34 313 P **P** **08 27 56.4 +0.9**
AAK P **P** **08 27 56.4 +0.9**
AAK Ala-Archa 71.34 313 P **P** **08 27 56.4 +0.9**
AAK pmax pmax
comp=Z,326nm,1.7s
AAK MLR MLR
comp=Z,16μm,19.0s
AAK Ala-Archa 71.34 313 P **P** **08 27 56.4 +0.9**
AAK IAmb IAmb 08 28 24.4
comp=Z,326nm,1.7s
AAK Ala-Archa 71.34 313 IAMs_20 IAMs_20 09 01 07.9
comp=Z,15μm,19.0s
SGDS Sogindy 71.37 314⇓ *i*P **P** **08 27 55.5 0.0**
comp=Z,952nm,4.3s
SGDS *e*S **S** **08 37 15.0 +1.9**
SGDS *e*LR LR 09 01 20.5
CNPM China Poot 71.41 29 P **P** **08 27 55.0 -0.3**
CNPM IAmb IAmb 08 28 07.4
comp=Z,188nm,1.1s
USP Ospenovka 71.43 313 P **P** **08 27 56.6 +0.6**
SNR=27
AML Almayashu 71.85 312 P **P** **08 28 00.2 +1.3**
SNR=36
EKS2 Erkin-Say 71.87 313 P **P** **08 27 59.5 +0.9**
SNR=38
BTLS Baital 72.03 315⇓ *i*P **P** **08 27 59.7 +0.2**
comp=Z,324nm,2.1s
BTLS *e*S **S** **08 37 19.3 -1.3**
BTLS *e*LR LR 08 59 53.9
BTLS Baital 72.03 315*d i*P **P** **08 27 59.6 +0.2**
BTLS *e*S **S** **08 37 19.2 -1.3**
BTLS pmax pmax
comp=Z,323nm,2.1s
PPLA Purkeypile 72.17 25 IAMs_20 IAMs_20 08 55 37.9
comp=Z,16μm,20.0s
SEW Seward 72.45 29 IAmb IAmb 08 28 17.7
comp=Z,212nm,1.3s

RC01 Rabbit Creek A 72.63 28 IAmb IAmb 08 28 14.3
comp=Z,175nm,1.2s
IMAR Indian Mountai 72.76 22 P P **08 28 02.6 -0.7**
NRIK Noril'sk 72.93 342 P P **08 28 05.5 +1.2**
comp=Z,47nm,1.1s,baz=119,slow=6.6,SNR=41
NRIK PKPPKP **P'P'df** **08 55 44.9 -2.0**
comp=Z,0.7nm,0.3s,baz=248,slow=2.7,SNR=5.3
NRIK LR LR 09 01 50.3
comp=Z,6µm,18.1s,baz=118,slow=37
KTH Kantishna Hill 72.95 25 P P **08 28 03.7 -0.9**
KTH IAmb IAmb 08 28 16.9
comp=Z,175nm,1.0s
KTH IAMs_20 IAMs_20 08 54 21.3
comp=Z,15µm,21.0s
PMR Palmer 73.07 27 P P **08 28 03.3 -1.9**
PMR pmax pmax
comp=Z,130nm,1.3s
PMR Palmer 73.07 27 P P **08 28 03.3 -1.9**
BPAW Bear Paw Mtn. 73.11 24 IAmb IAmb 08 28 17.6
comp=Z,440nm,1.8s
BPAW IAMs_20 IAMs_20 08 55 23.7
comp=Z,14µm,21.0s
TRF Thorofare Moun 73.18 25 P P **08 28 04.5 -1.6**
TRF IAMs_20 IAMs_20 08 54 19.4
comp=Z,17µm,21.0s
GHO Glory Hole Cre 73.22 27 P P **08 28 05.4 -0.8**
GHO IAmb IAmb 08 28 19.3
comp=Z,177nm,1.4s
GHO IAMs_20 IAMs_20 08 54 49.6
comp=Z,11µm,22.0s
KNK Knik Glacier 73.32 27 IAmb IAmb 08 28 18.9
comp=Z,149nm,1.2s
MLY Manley 73.55 24 IAMs_20 IAMs_20 08 55 12.1
comp=Z,14µm,22.0s
DGAR Diego Garcia 73.61 260 P P **08 28 10.7 +1.3**
DGAR P P **08 28 10.7 +1.3**
BRZS Berezniki 73.75 320⇓ *i*P P **08 28 09.6 0.0**
comp=Z,1µm,3.7s
BRZS *e*LR LR 09 02 21.5
comp=Z,6µm,18.0s
BRZS Berezniki 73.75 320 *d* *i*P P **08 28 09.5 0.0**
BRZS pmax pmax
comp=Z,1µm,3.7s
BRZS MLR MLR
comp=Z,6µm,18.0s
BWN Browne 73.77 25 IAMs_20 IAMs_20 08 53 59.8
comp=Z,15µm,22.0s
RND Reindeer 73.77 25 IAMs_20 IAMs_20 08 54 47.1
comp=Z,17µm,22.0s
BTK Batken 73.77 310 IAMs_20 IAMs_20 09 03 12.4
comp=Z,12µm,20.0s
MCK McKinley 73.84 25 IAMs_20 IAMs_20 08 55 48.0
comp=Z,15µm,20.0s
HIN Hinchinbrook I 73.94 29 IAmb IAmb 08 28 22.9
comp=Z,202nm,1.3s
NEA Nenana 74.06 24 IAmb IAmb 08 28 22.9
comp=Z,408nm,2.0s
NEA IAMs_20 IAMs_20 08 56 02.9
comp=Z,13µm,21.0s
JBG Jabagly 74.21 312 *d* *i*P P **08 28 13.4 +0.9**
JBG *e*S S **08 37 47.4 +1.7**
JBG pmax pmax
comp=Z,631nm,2.3s
KK31 Karatay Array 74.30 313 *i* P P **08 28 13.4 +0.5**
KKAR Karatay Array 74.30 313 P P **08 28 13.5 +0.6**
KKAR pmax pmax
comp=Z,1µm,2.0s
KKAR Karatay Array 74.30 313 P P **08 28 12.8 -0.1**
KKAR Karatay Array 74.30 313 P P **08 28 13.5 +0.6**
KKAR IAmb IAmb 08 28 25.2
comp=Z,1µm,1.9s
DHY Denali Highway 74.30 26 P P **08 28 12.6 -0.1**
DHY IAmb IAmb 08 28 24.8
comp=Z,195nm,1.2s
DHY IAMs_20 IAMs_20 08 55 41.3
comp=Z,14µm,22.0s
EYAK Cordova Ski Ar 74.34 29 P P **08 28 11.8 -0.8**
EYAK IAMs_20 IAMs_20 08 57 46.4
comp=Z,12µm,20.0s
WRH Wood River Hil 74.43 24 IAmb IAmb 08 28 25.2
comp=Z,195nm,1.0s
WRH IAMs_20 IAMs_20 08 56 35.5
comp=Z,10µm,20.0s
IUG Iuzhnay 74.56 312⇓ *i*P P **08 28 15.2 +0.7**
comp=Z,406nm,2.3s
IUG *e*S S **08 37 53.9 +4.2**
IUG Iuzhnay 74.56 312 *d* *i*P P **08 28 15.2 +0.7**
IUG *e*S S **08 37 53.8 +4.2**
IUG pmax pmax
comp=Z,406nm,2.3s
CCB Clear Creek Bu 74.60 24 IAMs_20 IAMs_20 09 00 03.0
comp=Z,12µm,19.0s
TCOL CIGO, UAF Yank 74.65 24 P P **08 28 13.7 -0.7**
baz=252
TCOL S S **08 37 53.5 +4.1**
baz=252
COLA College 74.66 24⇑ *i*P P **08 28 14.2 -0.2**
COLA pmax pmax
comp=Z,52nm,1.2s
COLA College 74.66 24 P P **08 28 13.5 -0.9**
COLA College 74.66 24 IAMs_20 IAMs_20 08 59 44.3
comp=Z,13µm,19.0s
KBL Kabul 74.80 304 P P **08 28 17.4 +1.1**
KBL P P **08 28 17.4 +1.1**
KBL S S **08 37 53.5 +0.7**
KBL S S **08 37 53.5 +0.7**
KBL Kabul 74.80 304 P P **08 28 15.9 -0.4**
KBL pmax pmax
comp=Z,359nm,1.7s
KBL Kabul 74.80 304 P P **08 28 15.8 -0.4**
KBL IAmb IAmb 08 28 26.9
comp=Z,359nm,1.6s
RAGM Ragged Mountai 74.81 29 P P **08 28 14.7 -0.8**
RAGM IAmb IAmb 08 28 28.2
comp=Z,184nm,1.2s
HDA Harding Lake 74.88 25 P P **08 28 14.9 -0.9**
baz=253
HDA S S **08 37 48.8 -3.4**
baz=253
HDA S S **08 37 48.8 -3.4**
baz=253
HDA Harding Lake 74.88 25 IAMs_20 IAMs_20 08 56 29.5
comp=Z,12µm,21.0s
CHM Chimkent 74.89 312 *e*P P **08 28 16.2 -0.2**
CHM Chimkent 74.89 312 *e*P P **08 28 16.2 -0.2**
POKR Poker Plat Res 74.90 24 P P **08 28 14.8 -1.1**
baz=252
POKR S S **08 37 55.8 +3.5**
baz=252
ILAR Eielson Array 75.02 24 P P **08 28 15.2 -1.4**
comp=Z,21nm,0.7s,baz=253,slow=5.1,SNR=178
ILAR PKKPbc **PKKPbc** **08 47 40.7 -2.3**
comp=Z,0.4nm,0.9s,baz=215,slow=4.2,SNR=4.6
ILAR PKPPKP **P'P'df** **08 55 38.8 -4.7**
comp=Z,1.4nm,1.2s,baz=237,slow=0.9,SNR=4.6
ILAR LR LR 08 59 48.0
comp=Z,9µm,19.9s,baz=269,slow=35
ILAR Eielson Array 75.02 24 P P **08 28 14.6 -2.0**
PAX Paxson 75.11 26 P P **08 28 16.7 -0.6**
PAX pmax pmax
comp=Z,434nm,1.9s
PAX Paxson 75.11 26 P P **08 28 16.7 -0.6**
PAX IAmb IAmb 08 28 28.5
comp=Z,434nm,1.9s
PAX IAMs_20 IAMs_20 08 56 16.6
comp=Z,13µm,21.0s
TOLK Toolik Lake Re 75.27 20 P P **08 28 18.9 +0.8**
baz=249
TOLK S S **08 37 57.6 +1.1**
baz=249
TOLK Toolik Lake Re 75.27 20 P P **08 28 17.5 -0.6**
TOLK IAmb IAmb 08 28 31.1
comp=Z,170nm,1.2s
GLB Gilahina Butte 75.48 28 P P **08 28 18.7 -0.7**
RIDG Independent Ri 75.58 26 IAMs_20 IAMs_20 08 57 46.7
comp=Z,16µm,20.0s
BVAR Borovoye Array 75.64 323 P P **08 28 20.0 -0.4**
comp=Z,44nm,0.8s,baz=100,slow=7.9,SNR=58
BVAR Borovoye Array 75.64 323 P P **08 28 20.0 -0.4**
BRVK Borovoye 75.71 323 P P **08 28 22.1 +1.3**
BRVK P P **08 28 22.1 +1.3**
BRVK S S **08 38 03.2 +1.4**
BRVK S S **08 38 03.2 +1.4**
BRVK Borovoye 75.71 323 P P **08 28 20.9 +0.1**
BRVK Borovoye 75.71 323 P P **08 28 20.7 -0.1**
BRVK Borovoye 75.71 323 IAMs_20 IAMs_20 09 05 09.0
comp=Z,13µm,18.0s
PRP Porcupine Dome 75.78 24 P P **08 28 19.1 -2.1**
PRP IAMs_20 IAMs_20 08 57 48.2
comp=Z,14µm,19.0s
MCARA McCarthy VSAT 75.83 28 P P **08 28 19.6 -1.7**
MENT Mentasta 75.87 27 P P **08 28 19.7 -1.9**
DOT Dot Lake 75.90 26 P P **08 28 20.9 -0.8**
SCRK Sand Creek 76.01 25 IAmb IAmb 08 28 34.6
comp=Z,252nm,1.6s
SCRK IAMs_20 IAMs_20 08 57 59.4
comp=Z,15µm,21.0s
TAOE Nuku Hiva Isla 76.17 101 *e*S S **08 38 09.8 +1.5**
comp=Z,8µm,27.7s
TAOE *e*SS SS **08 43 05.7 +3.5**
comp=Z,6µm,27.2s
TAOE *e*LQ LQ 08 48 45.7
comp=Z,15µm,26.1s
TAOE *e*LR LR 08 51 55.6
comp=Z,31µm,27.1s
TAOE Nuku Hiva Isla 76.17 101 *e*T T 09 51 18.3
comp=Z,93nm,0.2s
TAOE Nuku Hiva Isla 76.17 101 IAMs_20 IAMs_20 08 55 02.4
comp=Z,12µm,20.0s
YAH Yahtse 76.23 29 IAmb IAmb 08 28 36.8
comp=Z,134nm,1.0s
CTGM Chitina Glacie 76.55 29 IAmb IAmb 08 28 39.1
comp=Z,243nm,1.0s
BMAR Burnt Mountain 76.68 22 P P **08 28 26.0 -0.1**
CASY Casey 76.68 194 P P **08 28 26.7 +0.8**
CASY IAmb IAmb 08 28 28.8
comp=Z,422nm,1.8s
CASY Casey 76.68 194 IAMs_20 IAMs_20 09 02 46.2
comp=Z,10µm,18.0s
BCAR Beaver Creek A 76.76 27 P P **08 28 26.1 -0.5**
EGAK Eagle 77.39 25 P P **08 28 29.8 -0.3**
EGAK IAMs_20 IAMs_20 08 57 00.9
comp=Z,12µm,21.0s
DHAK Deception Hill 77.78 31 IAmb IAmb 08 28 48.9
comp=Z,266nm,1.2s
DAWY Dawson 78.01 26 IAmb IAmb 08 28 47.1
comp=Z,161nm,1.1s
HYT Haines Junctio 78.37 29 IAmb IAmb 08 28 51.7
comp=Z,152nm,0.9s
SKAG Skagway 79.29 31 IAmb IAmb 08 28 53.8
comp=Z,268nm,1.4s
BESE Bessie Mountai 79.45 32 IAmb IAmb 08 28 58.8
comp=Z,248nm,1.5s
EPYK Eagle Plains 79.49 24 P P **08 28 42.1 +0.4**
baz=262
EPYK S S **08 38 42.9 +0.6**
baz=262
EPYK Eagle Plains 79.49 24 IAmb IAmb 08 28 54.2
comp=Z,316nm,1.3s
EPYK IAMs_20 IAMs_20 09 00 53.2
comp=Z,14µm,20.0s
WHY Whitehorse 79.63 30 IAmb IAmb 08 28 55.8
comp=Z,308nm,1.6s
JIS Juneau Island 79.67 32 IAmb IAmb 08 28 59.9
comp=Z,338nm,1.7s
HRA Herat 80.42 304 IAMs_20 IAMs_20 09 07 26.7
comp=Z,9µm,19.0s
WRAK Wrangell Islan 80.66 34 IAmb IAmb 08 29 14.7
comp=Z,413nm,1.6s
MOBC Moresby Island 80.76 37 IAMs_20 IAMs_20 09 01 19.8
comp=Z,9µm,20.0s
INK Inuvik 80.95 22 P P **08 28 49.2 -0.2**
comp=Z,36nm,1.0s,baz=258,slow=6.0,SNR=59
INK PKPPKP **P'P'df** **08 55 32.7 0.0**
comp=Z,5.9nm,1.3s,baz=8.7,slow=8.7,SNR=3.9
INK LR LR 09 02 28.3
comp=Z,4µm,20.4s,baz=254,slow=34
INK Inuvik 80.95 22 P P **08 28 49.2 -0.2**
INK pmax pmax
comp=Z,613nm,1.9s
INK Inuvik 80.95 22 P P **08 28 49.2 -0.2**
INK IAmb IAmb 08 29 01.5
comp=Z,613nm,1.9s
SVE Sverdlovsk 81.57 326 *e*P P **08 28 54.6 +1.6**
SVE *e*S S **08 39 06.1 +1.8**
SVE *e*SS SS **08 44 25.2 +4.1**
SVE pmax pmax
comp=Z,253nm,1.8s
SVE MLR MLR
comp=E,15µm,19.0s
SVE MLR MLR
comp=Z,17µm,18.0s
AB31 Akbulak array 81.94 319 *i* P P **08 28 53.8 -1.3**
ABKAR Akbulak array 81.94 319 P P **08 28 54.5 -0.6**
DLBC Dease Lake 81.97 32 P P **08 28 55.1 -0.1**
ARU Arti 82.72 326 P P **08 29 00.2 +1.2**
comp=Z,13nm,0.7s,baz=95,slow=3.3,SNR=27
ARU PKPPKP 08 55 27.7
comp=Z,1.8nm,0.2s,baz=260,slow=11,SNR=1.1
ARU LR LR 09 06 37.4
comp=Z,21µm,21.1s,baz=79,slow=36
ARU Arti 82.72 326 *d* *i*P P **08 28 59.9 +0.9**
ARU 08 32 09.2
ARU PPP PPP 08 34 00.7
ARU S S **08 39 18.8 +2.7**
ARU SS SS **08 44 37.6 -0.5**
ARU pmax pmax
comp=Z,325nm,1.8s
ARU pmax pmax
comp=Z,2µm,7.5s
ARU smax smax
comp=N,1µm,10.3s
ARU MLR MLR
comp=Z,22µm,21.0s
ARU Arti 82.72 326 P P **08 28 58.3 -0.7**
BBB Bella Bella 83.11 38 IAmb IAmb 08 29 27.4
comp=Z,204nm,1.8s
BBB IAMs_20 IAMs_20 09 01 50.9
comp=Z,10µm,20.0s
AKTO Aktyubinsk 83.17 320 P P **08 29 01.8 +0.3**
comp=Z,98nm,1.3s,baz=83,slow=7.1,SNR=30
AKTO PKPPKP 08 55 31.2
comp=Z,2.0nm,0.9s,baz=256,slow=2.4,SNR=6.4
AKTO LR LR 09 07 35.8
comp=Z,11µm,20.7s,baz=88,slow=37
AKTO Aktyubinsk 83.17 320 P P **08 29 01.9 +0.4**
RKT Rikitea 83.42 114 *e*P P **08 29 04.9 +1.6**
comp=Z,288nm,1.6s
RKT Rikitea 83.42 114 *e*S S **08 39 25.8 +1.4**
comp=Z,3µm,26.5s
RKT *e*SS SS **08 44 51.6 +1.3**
comp=Z,3µm,29.0s
RKT *e*LQ LQ 08 51 47.5
comp=Z,10µm,32.2s
RKT *e*LR LR 08 55 14.4
comp=Z,15µm,23.8s
RKT Rikitea 83.42 114 *e*T T 10 00 18.8
comp=Z,33nm,0.3s
GEYT Alibeck 83.62 307 P P **08 29 05.3 +1.2**
comp=Z,92nm,1.2s,baz=66,slow=1.8,SNR=26
GEYT LR LR 09 08 54.6
comp=Z,6µm,20.8s,baz=0.0,slow=38
GEYT Alibeck 83.62 307 P P **08 29 03.7 -0.5**
GYA0 ALIBECK ARRAY 83.62 307 P P **08 29 05.3 +1.1**
GYA0B ALIBECK ARRAY 83.62 307 P P **08 29 03.0 -1.2**
WBK Wadi Bani Khal 83.88 292 P P **08 29 07.5 +1.7**
SNR=16
WBK S S **08 39 26.9 -2.4**
A36M Sachs Harbour 83.89 18 P P **08 29 05.2 +0.5**
baz=272
WSAR Wadi Sarin 84.15 293 P P **08 29 09.0 +1.9**
SNR=17
WSAR S S **08 39 33.0 +1.2**
VNDA Vanda 84.33 176 P P **08 29 07.8 +0.9**
comp=Z,40nm,0.9s,baz=328,slow=6.0,SNR=91
VNDA LR LR 09 02 22.4
comp=Z,5µm,21.6s,baz=346,slow=33
VNDA Vanda 84.33 176 P P **08 29 07.1 +0.3**
VNDA IAmb IAmb 08 29 09.7
comp=Z,284nm,1.8s
C36M Paulatuk 84.40 21 P P **08 29 07.7 +0.3**
baz=273
C36M Paulatuk 84.40 21 P P **08 29 06.5 -0.8**
C36M IAmb IAmb 08 29 19.5
comp=Z,199nm,1.3s
BIDO Bidbid 84.59 293 P P **08 29 11.2 +1.9**
SNR=38
BIDO S S **08 39 35.5 -0.7**
SMDO Samad 84.69 293 P P **08 29 11.7 +1.7**
SNR=13
SMDO S S **08 39 35.9 -1.6**
JMDO Jabal Madar 84.70 292 P P **08 29 11.4 +1.5**
SNR=16
JMDO S S **08 39 33.6 -3.9**
MHTO MHTO 84.94 290 P P **08 29 12.7 +1.6**
SNR=60
MHTO S S **08 39 39.9 0.0**
HOQ Hoqain 85.33 293 P P **08 29 14.8 +1.8**
SNR=53
BSY Bisya 85.50 292 P P **08 29 15.3 +1.4**
SNR=27
BSY S S **08 39 42.4 -3.0**
SOHO SOHO 85.99 294 P P **08 29 17.6 +1.3**
SNR=44
BANOM Banah 86.04 296 *i* P P **08 29 15.1 -1.5**
SNR=8.6
BANOM Banah 86.04 296 *i* P P **08 29 15.1 -1.5**
SNR=8.6
BANOM Banah 86.04 296 P P **08 29 18.5 +1.9**
SNR=15
ARQ Araqi 86.07 293 P P **08 29 18.6 +1.8**
SNR=69
MDH Madha 86.10 295 *i* P P **08 29 16.2 -0.6**
SNR=12
MDH Madha 86.10 295 *i* P P **08 29 16.2 -0.6**
SNR=12
MDH Madha 86.10 295 P P **08 29 18.3 +1.5**
NLWA Neilton Lookou 86.13 43 P P **08 29 15.9 -0.6**
NLWA IAmb IAmb 08 29 29.4
comp=Z,194nm,1.4s
SHME Shamm 86.17 296 *i* P P **08 29 18.1 +0.9**
SNR=6.5
SHME Shamm 86.17 296 *i* P P **08 29 18.1 +0.9**
SNR=6.5
UOSS Minazif 86.21 295 *i* P P **08 29 16.9 -0.5**
SNR=9.1
UOSS Minazif 86.21 295 *i* P P **08 29 16.9 -0.5**
SNR=9.1
UOSS Minazif 86.21 295 P P **08 29 18.8 +1.4**
UOSS Minazif 86.21 295 P P **08 29 16.3 -1.1**
MSFE Esma-Masafi 86.22 295 *i* P P **08 29 17.3 -0.2**
SNR=30
MSFE Esma-Masafi 86.22 295 *i* P P **08 29 17.3 -0.2**
SNR=30
HATD Hatta, Dubai 86.29 294 *i* P P **08 29 16.8 -1.0**
SNR=9.1
HATD Hatta, Dubai 86.29 294 *i* P P **08 29 16.8 -1.0**
SNR=9.1
HATD Hatta, Dubai 86.29 294 P P **08 29 19.5 +1.7**
SNR=17
PGC Sidney 86.30 42 P P **08 29 16.8 -0.5**
PGC IAmb IAmb 08 29 36.0
comp=Z,248nm,1.8s
ASHO Ashiyiah 86.37 294 *i* P P **08 29 18.2 0.0**
SNR=12
ASHO Ashiyiah 86.37 294 *i* P P **08 29 18.2 0.0**
SNR=12
ASHO Ashiyiah 86.37 294 P P **08 29 19.5 +1.2**
SNR=21
E03A Lebam 86.42 44 IAmb IAmb 08 29 49.5
comp=Z,210nm,1.2s
I02D Swisshome 86.45 46 P P **08 29 18.6 +0.5**
baz=276
I02D S S **08 39 59.5 +5.7**
baz=276
J01E Myrtle Point 86.48 47 P P **08 29 18.8 +0.5**
baz=276,SNR=6.7
J01E S S **08 39 59.5 +5.4**
baz=276
F03A Seaside 86.48 44 P P **08 29 17.5 -0.8**
JCC Jacoby Creek, 86.63 49 IAmb IAmb 08 29 33.3
comp=Z,304nm,1.7s
D03D Eldon 86.65 43 P P **08 29 20.5 +1.5**
baz=276
D03D S S **08 39 59.6 +4.1**
baz=276
UMQ Umm Al-Quwin 86.65 295 P P **08 29 23.7 +4.2**
KRMB Red Mountain 86.65 49 P P **08 29 18.0 -1.4**
KRMB IAmb IAmb 08 29 26.9
comp=Z,166nm,1.7s
NAZ Nazwa, Dubai 86.70 295 *i* P P **08 29 19.7 -0.1**
SNR=6.3
NAZ Nazwa, Dubai 86.70 295 *i* P P **08 29 19.7 -0.1**
SNR=6.3
NAZ Nazwa, Dubai 86.70 295 P P **08 29 24.3 +4.5**
SNR=14
ALNE Al Ain 86.71 294 *i* P P **08 29 19.4 -0.5**
SNR=31
ALNE Al Ain 86.71 294 *i* P P **08 29 19.4 -0.5**
SNR=31
K02D Willamette Mer 86.72 48 P P **08 29 21.3 +1.7**
baz=276,SNR=13
K02D S S **08 40 01.4 +4.7**
baz=276
G03D McMinnville, O 86.76 45 P P **08 29 21.0 +1.4**
baz=276
G03D S S **08 40 01.3 +4.6**
baz=276
A04D Lummi Island 86.78 42 P P **08 29 20.8 +1.2**
baz=276
A04D S S **08 40 00.3 +3.5**
baz=276
FAQ Al Faqa, Dubai 86.79 294 *i* P P **08 29 20.7 +0.5**
SNR=14
FAQ Al Faqa, Dubai 86.79 294 *i* P P **08 29 20.7 +0.5**
SNR=14
FAQ Al Faqa, Dubai 86.79 294 P P **08 29 21.8 +1.5**
SNR=9.1
COR Corvallis 86.79 46 IAMs_20 IAMs_20 09 02 24.2
comp=Z,10µm,20.0s
F04D Rainier, OR 86.85 44 P P **08 29 20.9 +0.8**
baz=276
KHMM Horse Mountain 86.85 49 P P **08 29 19.3 -1.1**
KHMM IAmb IAmb 08 29 47.1
comp=Z,152nm,1.5s
KHMM IAMs_20 IAMs_20 09 11 01.5
comp=Z,7µm,19.0s
I03D Drain, OR 86.85 47 P P **08 29 22.2 +2.0**
baz=276,SNR=11
I03D S S **08 40 02.3 +4.6**
baz=276
D04E Lakebay 86.90 43 P P **08 29 22.2 +2.0**
baz=276
KMRM Mail Ridge 86.93 50 IAmb IAmb 08 29 34.1
comp=Z,338nm,1.9s
KCPM Cahto Peak 87.08 51 P P **08 29 20.2 -1.3**
KCPM IAmb IAmb 08 29 35.4
comp=Z,163nm,1.3s
KCPM IAMs_20 IAMs_20 09 02 09.8
comp=Z,7µm,20.0s
E04D Cinebar 87.10 44 P P **08 29 23.0 +1.7**
baz=276
E04D S S **08 40 04.2 +4.2**
baz=276
LLLB Lillooet 87.11 40 P P **08 29 21.0 -0.3**
LLLB IAMs_20 IAMs_20 09 03 10.0
comp=Z,8µm,20.0s
H04D Lebanon 87.20 46 P P **08 29 23.7 +1.9**
baz=276,SNR=13
H04D S S **08 40 05.4 +4.3**
baz=276
B05A Bryant 87.23 42 P P **08 29 23.5 +1.6**
baz=277
B05A S S **08 40 04.5 +3.3**
baz=277
F04A Amboy 87.27 44 P P **08 29 20.9 -1.3**
F04A IAmb IAmb 08 29 46.9
comp=Z,111nm,1.1s
AJN Ajban 87.35 294 *i* P P **08 29 22.0 -0.9**
SNR=8.8
AJN Ajban 87.35 294 *i* P P **08 29 22.0 -0.9**
SNR=8.8
AJN Ajban 87.35 294 P P **08 29 27.3 +4.4**
SNR=13
SHAO Shalim 87.42 288 P P **08 29 24.7 +1.3**
D05A Enumclaw 87.43 43 P P **08 29 22.6 -0.3**
D05A IAmb IAmb 08 29 46.5
comp=Z,243nm,1.3s
M02C Callahan 87.45 49 P P **08 29 25.2 +2.0**
baz=276,SNR=29
M02C S S **08 40 09.0 +5.1**
baz=276
KIRV Kirov 87.48 329 P P **08 29 24.4 +1.6**
comp=Z,12nm,0.6s,baz=87,slow=5.9,SNR=17
KIRV LR LR 09 10 59.0
comp=Z,15µm,18.9s,baz=76,slow=37
I04A Tendick Farm, 87.52 46 P P **08 29 24.8 +1.4**
baz=277,SNR=14
I04A S S **08 40 07.0 +2.7**
baz=277

YBH	**Yreka Blue Hor**	**87.53**	**48**	IAMs_20	IAMs_20	09 00 50.0
	comp=Z,7µm,21.0s					
HOPS	**Hopland Field**	**87.55**	**51**	IAmb	IAmb	08 29 53.6
HOPS	comp=Z,290nm,1.8s			IAMs_20	IAMs_20	09 12 00.2
	comp=Z,7µm,18.0s					
N02D	**Trinity Center**	**87.61**	**49**	P	**P**	**08 29 26.1 +2.1**
	baz=276,SNR=33					
N02D				S	**S**	**08 40 09.7 +4.4**
	baz=276					
O02D	**Mt. Diablo Mer**	**87.64**	**50**	P	**P**	**08 29 26.0 +1.8**
	baz=276					
O02D				S	**S**	**08 40 10.5 +4.8**
	baz=276					
L04D	**Klamath Falls**	**87.77**	**48**	P	**P**	**08 29 25.9 +1.1**
	baz=277,SNR=23					
L04D				S	**S**	**08 40 10.9 +3.9**
	baz=277					
WDC	**Whiskeytown Da**	**87.78**	**50**	IAmb	IAmb	08 29 38.5
	comp=Z,262nm,1.9s					
GDXM	**Geysers**	**87.78**	**51**	IAMs_20	IAMs_20	09 13 49.4
	comp=Z,11µm,18.0s					
MCCM	**Marconi Confer**	**87.79**	**52**	IAMs_20	IAMs_20	09 08 17.1
	comp=Z,8µm,19.0s					
J04D	**Umpqua Nationa**	**87.80**	**47**	P	**P**	**08 29 26.3 +1.3**
	baz=277,SNR=20					
J04D				S	**S**	**08 40 10.8 +3.5**
	baz=277					
F05D	**White Salmon**	**87.94**	**44**	P	**P**	**08 29 27.2 +1.7**
	baz=277					
F05D				S	**S**	**08 40 11.6 +3.4**
	baz=277					
C06D	**Leavenworth**	**88.07**	**42**	P	**P**	**08 29 27.2 +1.2**
	baz=278					
DMTO	**DMTO**	**88.09**	**288**	P	**P**	**08 29 28.0 +1.3**
G05D	**Wamic, OR**	**88.12**	**45**	P	**P**	**08 29 27.6 +1.3**
	baz=277					
G05D				S	**S**	**08 40 14.3 +4.4**
	baz=277					
K04D	**Chiloquin, OR**	**88.13**	**47**	P	**P**	**08 29 27.8 +1.3**
	baz=277					
K04D				S	**S**	**08 40 14.5 +4.2**
	baz=277					
M04C	**Macdoel**	**88.17**	**48**	P	**P**	**08 29 28.3 +1.5**
	baz=277,SNR=30					
M04C				S	**S**	**08 40 15.1 +4.3**
	baz=277					
I05D	**Terrebonne, OR**	**88.22**	**46**	P	**P**	**08 29 28.1 +1.3**
	baz=277,SNR=20					
I05D				S	**S**	**08 40 14.9 +3.9**
	baz=277					
LTY	**Liberty**	**88.31**	**43**	IAmb	IAmb	08 29 45.5
	comp=Z,171nm,1.4s					
LTY				IAMs_20	IAMs_20	09 07 47.2
	comp=Z,7µm,20.0s					
O03E	**Paynes Creek**	**88.37**	**50**	P	**P**	**08 29 28.6 +0.9**
	baz=277,SNR=36					
O03E				S	**S**	**08 40 15.3 +2.7**
	baz=277					
J05D	**Fort Rock, OR**	**88.43**	**47**	P	**P**	**08 29 29.6 +1.6**
	baz=277,SNR=43					
J05D				S	**S**	**08 40 16.8 +3.6**
	baz=277					
PINE	**Pine Mountain**	**88.57**	**46**	IAmb	IAmb	08 29 42.4
	comp=Z,123nm,1.1s					
PINE				IAMs_20	IAMs_20	09 06 25.5
	comp=Z,8µm,20.0s					
G06A	**Carlson Farm,**	**88.60**	**45**	IAmb	IAmb	08 29 47.3
	comp=Z,318nm,1.9s					
K05A	**Summer Lake**	**88.75**	**47**	IAMs_20	IAMs_20	09 02 29.1
	comp=Z,8µm,21.0s					
RBK	**Rabkut**	**88.82**	**287**	P	**P**	**08 29 31.3 +1.2**
	SNR=14					
PRGR	**Permogore**	**88.84**	**332**	*e*P	**P**	**08 29 30.8 +1.6**
PRGR				pmax	pmax	
	comp=Z,90nm,1.6s					
MZR	**Muzera**	**88.89**	**293**	P	**P**	**08 29 33.7 +3.3**
	SNR=6.4					
E07A	**Sunnyside**	**88.96**	**43**	IAmb	IAmb	08 29 43.7
	comp=Z,86nm,1.1s					
E07A				IAMs_20	IAMs_20	09 09 03.3
	comp=Z,7µm,18.0s					
F07A	**Phinny Hill Vi**	**89.00**	**44**	IAmb	IAmb	08 29 37.5
	comp=Z,275nm,1.9s					
B08A	**Colville Reser**	**89.05**	**42**	IAMs_20	IAMs_20	09 05 43.5
	comp=Z,7µm,20.0s					
SAO	**San Andreas Ge**	**89.08**	**53**	IAmb	IAmb	08 30 01.6
	comp=Z,164nm,1.9s					
SAO				IAMs_20	IAMs_20	09 08 28.5
	comp=Z,9µm,18.0s					
YKA	**Yellowknife Ar**	**89.17**	**27**	P	**P**	**08 29 31.2 +0.5**
	comp=Z,7.9nm,0.8s,baz=283,slow=4.5,SNR=56					
YKA				PKKPbc	**PKKPbc**	**08 47 09.2 -1.1**
	comp=Z,1.0nm,0.7s,baz=108,slow=2.6,SNR=8.6					
YKA				PKPPKP		08 55 12.4
	comp=Z,0.3nm,0.8s,baz=109,slow=3.3,SNR=2.3					
YKA				LR	LR	09 06 02.2
	comp=Z,11µm,21.5s,baz=0.0,slow=33					
AFDM	**Forest Hills D**	**89.18**	**51**	IAmb	IAmb	08 29 44.9
	comp=Z,301nm,2.0s					
WHFO	**Wadi Hawf**	**89.19**	**288**	P	**P**	**08 29 32.7 +0.8**
	SNR=7.1					
HAWA	**Hanford**	**89.20**	**44**	P	**P**	**08 29 31.4 +0.1**
HAWA				IAMs_20	IAMs_20	09 09 10.8
	comp=Z,7µm,19.0s					
MOD	**Modoc Plateau**	**89.29**	**48**	P	**P**	**08 29 31.4 -0.7**
MOD				IAmb	IAmb	08 29 39.0
	comp=Z,236nm,1.9s					
MOD				IAMs_20	IAMs_20	09 08 51.6
	comp=Z,7µm,19.0s					
E08A	**Dider Farm, El**	**89.51**	**43**	IAmb	IAmb	08 29 51.6
	comp=Z,287nm,1.9s					
D08A	**Wollman Farm,**	**89.52**	**43**	IAmb	IAmb	08 29 51.4
	comp=Z,347nm,1.8s					
I07A	**Izee**	**89.56**	**46**	IAMs_20	IAMs_20	09 07 44.6
	comp=Z,8µm,20.0s					
PMPB	**Monarch Peak**	**89.67**	**54**	IAmb	IAmb	08 30 01.7
	comp=Z,307nm,1.9s					
ABTO	**Aybut**	**89.70**	**287**	P	**P**	**08 29 35.7 +1.4**
	SNR=9.6					
CMB	**Columbia Colle**	**89.76**	**52**	IAMs_20	IAMs_20	09 07 39.1
	comp=Z,7µm,18.0s					
G08A	**Pilot Rock**	**89.76**	**45**	IAmb	IAmb	08 29 41.0
	comp=Z,266nm,2.0s					
C09A	**Chrisman Ranch**	**89.84**	**42**	IAmb	IAmb	08 29 43.0
	comp=Z,210nm,1.9s					
C09A				IAMs_20	IAMs_20	09 09 36.4
	comp=Z,7µm,19.0s					
E09A	**Wood Farm, Sta**	**90.13**	**43**	IAmb	IAmb	08 29 42.5
	comp=Z,382nm,1.9s					
VCNR	**Virginia City**	**90.15**	**51**	IAMs_20	IAMs_20	09 17 14.0
	comp=Z,8µm,18.0s					
PAGB	**Antelope Grade**	**90.18**	**54**	IAmb	IAmb	08 29 43.4
	comp=Z,125nm,1.3s					
PNTR	**Pine Nut**	**90.22**	**51**	IAmb	IAmb	08 29 43.9
	comp=Z,185nm,1.7s					
PNTR				IAMs_20	IAMs_20	09 17 06.5
	comp=Z,7µm,18.0s					
PAHR	**Pah Rah Range**	**90.29**	**50**	IAmb	IAmb	08 29 49.4
	comp=Z,215nm,1.9s					
J08A	**Circle Bar Ran**	**90.41**	**46**	IAmb	IAmb	08 29 50.8
	comp=Z,305nm,1.9s					
J08A				IAMs_20	IAMs_20	09 10 46.1
	comp=Z,9µm,19.0s					
WAKR	**Walker**	**90.43**	**51**	IAmb	IAmb	08 30 03.9
	comp=Z,160nm,1.6s					
WAKR				IAMs_20	IAMs_20	09 14 55.5
	comp=Z,6µm,18.0s					
WVOR	**Wild Horse Val**	**90.44**	**47**	IAmb	IAmb	08 29 44.4
	comp=Z,222nm,1.8s					
WVOR				IAMs_20	IAMs_20	09 11 00.9
	comp=Z,8µm,19.0s					
SMMC	**Simmler**	**90.44**	**55**	P	**P**	**08 29 38.5 +1.1**
	baz=278					
SMMC				S	**S**	**08 40 34.2 +2.0**
	baz=278					
YERR	**Yerington**	**90.51**	**51**	IAmb	IAmb	08 29 51.6
	comp=Z,195nm,1.7s					
NEW	**Newport**	**90.52**	**41**	P	**P**	**08 29 37.1 -0.4**
NEW	**Newport**	**90.52**	**41**	P	**P**	**08 29 38.6 +1.1**
	baz=280					
NEW				S	**S**	**08 40 34.2 +1.9**
	baz=280					
NEW	**Newport**	**90.52**	**41**	P	**P**	**08 29 37.1 -0.4**
NEW				IAmb	IAmb	08 29 55.8
	comp=Z,282nm,1.9s					
NEW	**Newport**	**90.52**	**41**	IAMs_20	IAMs_20	09 11 29.4
	comp=Z,11µm,19.0s					
PKM	**Mcpherson Peak**	**90.65**	**55**	P	**P**	**08 29 39.6 +1.0**
	baz=278					
VOG	**Valley Oaks Go**	**90.79**	**53**	P	**P**	**08 29 39.1 +0.2**
	baz=279					
SBC	**Santa Barbara**	**90.80**	**55**	P	**P**	**08 29 39.6 +0.6**
	baz=278					
MDPB	**Devils Postpil**	**90.84**	**52**	P	**P**	**08 29 37.7 -1.8**
MDPB				IAMs_20	IAMs_20	09 14 20.8
	comp=Z,6µm,18.0s					
F10A	**Beach Ranch, E**	**90.85**	**44**	IAmb	IAmb	08 29 51.4
	comp=Z,146nm,1.5s					
OMMB	**Old Mammoth Mi**	**90.90**	**52**	IAmb	IAmb	08 29 52.6
	comp=Z,132nm,1.8s					
OMMB				IAMs_20	IAMs_20	09 14 23.5
	comp=Z,8µm,18.0s					
SCZ2	**Santa Cruz Isl**	**90.93**	**56**	P	**P**	**08 29 40.3 +0.7**
	baz=278					
BMO	**Blue Mountains**	**90.99**	**45**	IAmb	IAmb	08 29 46.6
	comp=Z,304nm,1.9s					
MLAC	**Mammoth, Mammo**	**91.03**	**52**	P	**P**	**08 29 41.7 +1.3**
	baz=279,SNR=7.5					
VES	**Vestal, Richgr**	**91.10**	**54**	P	**P**	**08 29 40.6 +0.2**
	baz=279,SNR=13					
MAK	**Makhachkala**	**91.12**	**313**	*e*P	**P**	**08 29 37.9 -2.4**
MAK				*e*		08 33 11.6
MAK				*e*PPP	PPP	08 35 14.7
MAK				*e*		08 40 07.7
MAK				*e*SS	SS	08 46 39.7 -1.9
MAK				pmax	pmax	
	comp=Z,284nm,1.8s					
SPITS	**Spitsbergen Ar**	**91.12**	**351**	P	**P**	**08 29 43.1 +3.5**
	comp=Z,17nm,1.1s,baz=260,slow=1.5,SNR=2.7					
RYN	**Ryan**	**91.12**	**51**	P	**P**	**08 29 39.8 -0.9**
RYN				IAmb	IAmb	08 29 47.8
	comp=Z,183nm,1.8s					
RYN				IAMs_20	IAMs_20	09 08 22.7
	comp=Z,6µm,19.0s					
SNCC	**San Nicolas Is**	**91.12**	**57**	P	**P**	**08 29 40.9 +0.4**
	baz=278					
SNCC	**San Nicolas Is**	**91.12**	**57**	IAMs_20	IAMs_20	09 05 07.0
	comp=Z,10µm,19.0s					
AKT	**Akhty**	**91.20**	**312**	*e*P	**P**	**08 29 40.5 -0.4**
AKT				*e*		08 33 20.0
AKT				pmax	pmax	
	comp=Z,83nm,1.0s					
KBS	**Kingsbay**	**91.29**	**352**	IAMs_20	IAMs_20	09 10 15.9
	comp=Z,7µm,20.0s					
NVAR	**Mina Array Bea**	**91.32**	**51**	P	**P**	**08 29 42.7 +1.1**
	comp=Z,8.0nm,1.0s,baz=269,slow=5.2,SNR=55					
NVAR				PKPPKP		08 55 18.1
	comp=Z,0.6nm,1.0s,baz=106,slow=3.3,SNR=4.3					
NVAR				LR	LR	09 05 11.5
	comp=Z,4µm,19.8s,baz=288,slow=32					
NVAR	**Mina Array Bea**	**91.32**	**51**	P	**P**	**08 29 40.2 -1.5**
KVN	**Kaiserville**	**91.38**	**51**	P	**P**	**08 29 40.6 -1.3**
KVN				pmax	pmax	
	comp=Z,95nm,1.4s					
KVN				MLR	MLR	
	comp=Z,6µm,18.0s					
KVN	**Kaiserville**	**91.38**	**51**	P	**P**	**08 29 40.6 -1.3**
KVN				IAMs_20	IAMs_20	09 12 41.5
	comp=Z,6µm,18.0s					
ARVC	**Arvin**	**91.42**	**55**	P	**P**	**08 29 43.2 +1.3**
	baz=279					
TMCR	**Tamitsa**	**91.56**	**335**	*e*P	**P**	**08 29 38.4 -3.5**
OSI	**Osito Audit: C**	**91.58**	**55**	P	**P**	**08 29 43.8 +1.1**
	baz=279					
TIN	**Tinemaha, Big**	**91.60**	**53**	P	**P**	**08 29 44.2 +1.4**
	baz=279					
LVZ	**Lovozero**	**91.61**	**339**	IAMs_20	IAMs_20	09 12 33.5
	comp=Z,8µm,20.0s					
NOR	**Nord**	**91.67**	**357**	*i*P	**P**	**08 29 43.8 +1.7**
NOR				pmax	pmax	
	comp=Z,140nm,1.7s					
NOR	**Nord**	**91.67**	**357**	*i*P	**P**	**08 29 43.8 +1.7**
	comp=Z,143nm,1.7s					
CWC	**Cottonwood Cre**	**91.81**	**53**	P	**P**	**08 29 44.6 +0.7**
	baz=279					
KLMR	**Klimovskoe**	**91.89**	**332**	*e*P	**P**	**08 29 42.4 -1.1**
KLMR				*e*		08 33 20.3
KLMR				*e*S	**SKSac**	**08 40 14.6 -1.0**
KLMR				*e*SS	**SS**	**08 46 50.3 -1.4**
KLMR				pmax	pmax	
	comp=Z,158nm,1.5s					
KLMR				MLR	MLR	
	comp=Z,16µm,17.0s					
KLMR	**Klimovskoe**	**91.89**	**332**	*e*P	**P**	**08 29 42.4 -1.1**
KLMR				AMP		08 29 53.5
	comp=Z,158nm,1.5s					
KLMR				*e*PP	**PP**	**08 33 20.3 -2.1**
KLMR				*e*S	**SKSac**	**08 40 14.6 -1.0**
KLMR				*e*S	**SKSac**	**08 40 14.6 -1.0**
KLMR				*e*SS	**SS**	**08 46 50.3 -1.4**
KLMR				*e*SS	**SS**	**08 46 50.3 -1.4**
KLMR				LQ	LQ	09 02 49.4
KLMR				LQ	LQ	09 02 49.4
KLMR				LR	LR	09 06 47.2
KLMR				AMP		09 14 41.0
	comp=Z,16µm,16.7s					
DECC	**Green Verdugo**	**91.95**	**55**	P	**P**	**08 29 45.0 +0.5**
	baz=279					
SCI2	**San Clemente I**	**91.98**	**57**	P	**P**	**08 29 45.6 +1.0**
	baz=279					
HSPB	**Hornsund (broa**	**92.01**	**350**	*e*PP	PP	08 33 26.7 +3.8
HSPB				LMZ	LR	09 08 52.9
	comp=Z,13nm,23.0s					
CIS	**Catalina Islan**	**92.02**	**56**	P	**P**	**08 29 45.2 +0.4**
	baz=279					
FMP	**Fort Macarthur**	**92.07**	**56**	P	**P**	**08 29 45.3 +0.4**
	baz=279					
PASC	**Pasadena Art C**	**92.09**	**55**	P	**P**	**08 29 43.1 -2.0**
PASC				IAmb	IAmb	08 29 51.4
	comp=Z,212nm,1.9s					
PASC	**Pasadena Art C**	**92.09**	**55**	IAMs_20	IAMs_20	09 06 00.4
	comp=Z,10µm,19.0s					
EDW2	**Edwards Air Fo**	**92.13**	**55**	P	**P**	**08 29 46.2 +0.9**
	baz=279,SNR=26					
APA	**Apatity**	**92.17**	**339**	*i*P	P	08 29 53.7 +9.1
APA				*i*		08 33 28.0
APA				*i*		08 40 20.0
APA				*i* SS	SS	08 46 51.0 -4.5
APA				pmax	pmax	
	comp=Z,12nm,0.9s					
MWC	**Mount Wilson**	**92.19**	**55**	P	**P**	**08 29 44.0 -1.7**
MWC				pmax	pmax	
	comp=Z,286nm,1.9s					
MWC	**Mount Wilson**	**92.19**	**55**	P	**P**	**08 29 44.0 -1.7**
MWC				IAMs_20	IAMs_20	09 06 04.9
	comp=Z,10µm,19.0s					
GRAC	**Grapevine Rang**	**92.29**	**53**	P	**P**	**08 29 47.3 +1.3**
	baz=280,SNR=21					
LRMC	**Laurel Mtn Rad**	**92.29**	**54**	P	**P**	**08 29 46.8 +0.7**
	baz=280,SNR=26					
MFID	**Camas Ranch**	**92.30**	**46**	P	**P**	**08 29 46.7 +0.7**
MFID				IAmb	IAmb	08 29 59.5
	comp=Z,78nm,1.1s					
MFID				IAMs_20	IAMs_20	09 09 29.0
	comp=Z,8µm,20.0s					
GROC	**Groznyy**	**92.30**	**314**	*e*P	**P**	**08 29 47.5 +1.7**
GROC				*e*		08 33 31.8
GROC				pmax	pmax	
	comp=Z,164nm,1.3s					
MPMC	**Manual Prospec**	**92.35**	**54**	P	**P**	**08 29 47.5 +1.1**
	baz=280,SNR=43					
WALA	**Waterton Lakes**	**92.45**	**40**	P	**P**	**08 29 45.2 -1.3**
WALA				IAmb	IAmb	08 30 09.7
	comp=Z,157nm,1.8s					
WALA				IAMs_20	IAMs_20	09 12 24.4
	comp=Z,9µm,19.0s					
JTMT	**Jette**	**92.49**	**42**	P	**P**	**08 29 44.9 -1.9**
JTMT				IAmb	IAmb	08 29 58.5
	comp=Z,120nm,1.9s					
JTMT				IAMs_20	IAMs_20	09 11 28.6
	comp=Z,7µm,19.0s					
BFSC	**Mount Baldy Ra**	**92.51**	**55**	P	**P**	**08 29 47.3 +0.2**
	baz=280,SNR=14					
FURC	**Furnace Creek,**	**92.78**	**53**	P	**P**	**08 29 49.5 +1.4**
	baz=280,SNR=20					
MAW	**Mawson**	**92.86**	**202**	P	**P**	**08 29 49.0 +1.3**
	baz=93,SNR=24					
MAW	**Mawson**	**92.86**	**202**	P	**P**	**08 29 48.9 +1.2**
	comp=Z,22nm,0.8s,baz=83,slow=5.8,SNR=29					
MAW				LR	LR	09 09 38.2
	comp=Z,4µm,19.2s,baz=77,slow=34					
MAW	**Mawson**	**92.86**	**202**	P	**P**	**08 29 47.8 +0.1**
MSO	**Missoula**	**92.92**	**42**	P	**P**	**08 29 49.0 +0.2**
	baz=283					
MSO	**Missoula**	**92.92**	**42**	P	**P**	**08 29 47.9 -0.8**
RRX	**Edison Barstow**	**92.94**	**55**	P	**P**	**08 29 49.2 +0.2**
	baz=280					
MURC	**Murrieta**	**92.99**	**56**	P	**P**	**08 29 49.5 +0.3**
	baz=280					
GSC	**Goldstone, Bar**	**93.02**	**54**	P	**P**	**08 29 50.1 +0.7**
	baz=280,SNR=20					
BBRC	**Big Bear Solar**	**93.11**	**55**	P	**P**	**08 29 50.2 +0.1**
	baz=280					
TPNV	**Topopah Spring**	**93.18**	**52**	P	**P**	**08 29 51.1 +0.9**
	baz=280,SNR=52					
TPNV	**Topopah Spring**	**93.18**	**52**	IAmb	IAmb	08 29 57.1
	comp=Z,161nm,1.6s					
TPNV				IAMs_20	IAMs_20	09 11 09.7
	comp=Z,9µm,19.0s					
109C	**Camp Elliot, M**	**93.19**	**57**	P	**P**	**08 29 50.4 +0.3**
	baz=280					
109C	**Camp Elliot, M**	**93.19**	**57**	IAmb	IAmb	08 30 02.3
	comp=Z,129nm,1.9s					
109C				IAMs_20	IAMs_20	09 04 30.6
	comp=Z,9µm,20.0s					
ELK	**Elko**	**93.24**	**49**	IAmb	IAmb	08 30 03.2
	comp=Z,156nm,2.0s					
ELK				IAMs_20	IAMs_20	09 19 48.3
	comp=Z,6µm,18.0s					
VRH	**Novokhopyorsk**	**93.27**	**322**	*e*P	**P**	**08 29 50.8 +0.7**
VRH				*e*		08 33 33.4
VRH				pmax	pmax	
	comp=Z,90nm,1.6s					
VRH				pmax	pmax	
	comp=Z,210nm,1.5s					
SHOC	**Shoshone, Teco**	**93.34**	**53**	P	**P**	**08 29 51.3 +0.5**
	baz=280					
KEV	**Kevo**	**93.35**	**342**	IAMs_20	IAMs_20	09 18 57.3
	comp=Z,9µm,19.0s					
R11A	**Troy Canyon, C**	**93.44**	**51**	P	**P**	**08 29 53.1 +1.7**
	baz=281,SNR=67					
R11A	**Troy Canyon, C**	**93.44**	**51**	IAmb	IAmb	08 29 58.6
	comp=Z,204nm,1.9s					
HEC	**Hector,Ludlow**	**93.48**	**55**	P	**P**	**08 29 52.3 +0.8**
	baz=280					
BAR	**Barrett**	**93.58**	**57**	P	**P**	**08 29 48.4 -3.6**
BAR				IAmb	IAmb	08 29 58.3
	comp=Z,132nm,1.9s					
BAR				IAMs_20	IAMs_20	09 04 51.1
	comp=Z,9µm,20.0s					
PFO	**Pinyon Flats O**	**93.60**	**56**	*i*P	**P**	**08 29 53.2 +1.0**
PFO				pmax	pmax	
	comp=Z,11nm,1.1s					
PFO	**Pinyon Flats O**	**93.60**	**56**	P	**P**	**08 29 53.0 +0.8**
	baz=280,SNR=12					
PFO	**Pinyon Flats O**	**93.60**	**56**	P	**P**	**08 29 50.4 -1.8**
PFO				IAmb	IAmb	08 29 58.5
	comp=Z,121nm,2.0s					
PFO	**Pinyon Flats O**	**93.60**	**56**	IAMs_20	IAMs_20	09 06 31.4
	comp=Z,10µm,19.0s					
XPFO	**Pion Flat**	**93.60**	**56**	P	**P**	**08 29 50.5 -1.7**
XPFO	**Pion Flat**	**93.60**	**56**	IAMs_20	IAMs_20	09 06 31.4
	comp=Z,10µm,19.0s					
TUQ	**Turquoise Moun**	**93.71**	**54**	P	**P**	**08 29 53.5 +0.8**
	baz=281					
ZEI	**Tsey**	**93.75**	**314**	*e*P	**P**	**08 29 51.5 -1.3**
ZEI				pmax	pmax	
	comp=Z,73nm,1.3s					
MONP2	**Monument Peak**	**93.75**	**56**	P	**P**	**08 29 53.8 +0.8**
	baz=280,SNR=15					
GOF	**Gofitskoye**	**93.86**	**316**	*e*P	**P**	**08 29 53.6 +0.6**
GOF				pmax	pmax	
	comp=Z,153nm,1.5s					
BELC	**Belle Mtn. Jos**	**93.91**	**55**	P	**P**	**08 29 54.2 +0.6**
	baz=280,SNR=18					
ARCES	**ARCESS Array B**	**93.91**	**342**	P	**P**	**08 29 53.6 +0.9**
	comp=Z,10nm,0.9s,baz=47,slow=5.7,SNR=10					
ARCES				LR	LR	09 16 53.2
	comp=Z,5µm,19.1s,baz=59,slow=39					
ARCES	**ARCESS Array B**	**93.91**	**342**	P	**P**	**08 29 52.5 -0.2**
ARCES	**ARCESS Array B**	**93.91**	**342**	P	**P**	**08 29 52.5 -0.2**
GMRC	**Granite Mounta**	**94.04**	**54**	P	**P**	**08 29 54.4 +0.2**
	baz=281,SNR=18					
IKP	**In-Ko-Pah, Jac**	**94.06**	**57**	P	**P**	**08 29 55.0 +0.7**
	baz=280,SNR=6.8					
MCMT	**McKenzie Canyo**	**94.10**	**44**	P	**P**	**08 29 52.5 -1.9**
SHPR	**Sheep Range**	**94.12**	**53**	IAmb	IAmb	08 30 01.9
	comp=Z,146nm,1.7s					
DLMT	**Dillon**	**94.16**	**44**	IAmb	IAmb	08 30 57.2
	comp=Z,123nm,1.9s					
SWSC	**Sam W. Stewart**	**94.26**	**56**	P	**P**	**08 29 55.2 +0.2**
	baz=280					
KBZ	**Khabaz**	**94.26**	**315**	P	**P**	**08 29 54.8 0.0**
	comp=Z,5.2nm,0.9s,baz=98,slow=8.3,SNR=10					
KBZ				LR	LR	09 15 58.2
	comp=Z,11µm,19.6s,baz=70,slow=38					
KBZ	**Khabaz**	**94.26**	**315**	*i*P	**P**	**08 29 55.1 +0.3**
AKH	**Akhalkalaki**	**94.34**	**312**	IAMs_20	IAMs_20	09 17 12.5
	comp=Z,9µm,20.0s					
KIV	**Kislovodsk**	**94.36**	**315**	*e*P	**P**	**08 29 56.4 +1.0**
KIV				*e*		08 33 43.7
KIV				*e*		08 40 31.4
KIV				*e*SS	SS	08 47 31.7 +3.4
KIV				*e*SSS	SSS	08 51 13.5
KIV				pmax	pmax	
	comp=Z,83nm,1.1s					
KIV				pmax	pmax	
	comp=Z,409nm,3.5s					
KIV				MLR	MLR	
	comp=Z,22µm,21.0s					
KIV	**Kislovodsk**	**94.36**	**315**	IAMs_20	IAMs_20	09 15 27.8
	comp=Z,8µm,21.0s					
MOS	**Moscow**	**94.37**	**327**	*e*P	**P**	**08 29 53.3 -1.7**
MOS				*e*		08 33 44.0
MOS				*e*		08 41 06.5
MOS				*e*		08 42 17.7
MOS				*e*SS	SS	08 47 39.4 +12
MOS				pmax	pmax	
	comp=Z,157nm,1.7s					
MOS				pmax	pmax	
	comp=Z,800nm,2.6s					
MOS				MLR	MLR	
	comp=N,6µm,19.0s					
MOS				MLR	MLR	
	comp=E,18µm,19.0s					
MOS				MLR	MLR	
	comp=Z,20µm,19.0s					
BC3	**Big Chuckawall**	**94.42**	**56**	P	**P**	**08 29 56.8 +0.9**
	baz=281,SNR=7.3					
SHA1	**Shidzhatmaz**	**94.43**	**315**	*i*P	**P**	**08 29 55.7 -0.2**
LPSR	**Galich'ya Gora**	**94.57**	**324**	*e*P	**P**	**08 29 57.1 +1.1**
LPSR				*e*		08 33 41.0
LPSR				pmax	pmax	
	comp=Z,80nm,1.2s					
LPSR				pmax	pmax	
	comp=Z,320nm,1.8s					
IRM	**Iron Mountain**	**94.57**	**55**	P	**P**	**08 29 57.0 +0.4**
	baz=281,SNR=20					
VORR	**Voronezh**	**94.67**	**323**	*e*P	**P**	**08 29 55.0 -1.5**
VORR				pmax	pmax	
	comp=Z,250nm,1.6s					
VORD	**Divnogorie**	**94.81**	**322**	*e*P	**P**	**08 29 57.1 -0.1**
VORD				pmax	pmax	
	comp=Z,70nm,1.7s					
VSR	**Storozhevoye**	**94.82**	**323**	*e*P	**P**	**08 29 57.4 +0.2**
VSR				*e*		08 33 44.8
VSR				*e*SP	SP	08 42 20.5 -5.3
VSR				pmax	pmax	
	comp=Z,70nm,1.5s					
VSR				pmax	pmax	
	comp=Z,280nm,1.8s					
BGU	**Big Grassy Mou**	**94.84**	**48**	P	**P**	**08 29 56.6 -1.1**
NEE2	**Needles Airpor**	**94.89**	**54**	P	**P**	**08 29 58.3 +0.4**
	baz=281					
GLA	**Glamis**	**95.04**	**56**	P	**P**	**08 29 59.0 +0.3**
	baz=281					
GLA	**Glamis**	**95.04**	**

OBN pmax pmax
comp=Z,172nm,1.7s
OBN MLR MLR
comp=Z,23µm,19.0s
OBN Obninsk 95.14 327 IAmb IAmb 08 30 08.8
OBN IAMs_20 IAMs_20 09 14 50.5
comp=Z,24µm,20.0s
Y12C Blythe 95.16 55 P **P 08 29 59.9 +0.7**
baz=281
Y12C Blythe 95.16 55 IAMs_20 IAMs_20 09 07 17.6
comp=Z,7µm,19.0s
DUG Dugway, Tooele 95.17 49 P **P 08 29 59.9 +0.6**
baz=283
CCUT Cedar City 95.32 51 P **P 08 29 57.7 -2.4**
PDMCI Parker Dam,Lak 95.36 55 P **P 08 30 00.7 +0.6**
baz=282,SNR=5.9
EGMT Eagleton 95.38 41 P **P 08 30 00.4 +0.4**
baz=286
EGMT Eagleton 95.38 41 P **P 08 29 56.8 -3.2**
EGMT IAMs_20 IAMs_20 09 14 15.0
comp=Z,7µm,18.0s
W13A Hualapai Mount 95.41 54 P **P 08 29 57.5 -3.1**
YHH Holmes Hill 95.49 44 P **P 08 30 00.0 -0.8**
TPAW Teton Pass 95.75 45 P **P 08 30 00.6 -1.4**
HWUT Hardware Ranch 95.76 47 P **P 08 30 00.8 -1.2**
HWUT IAMs_20 IAMs_20 09 08 05.9
comp=Z,7µm,20.0s
H17A Grant Village 95.78 44 P **P 08 30 00.7 -1.4**
baz=285
H17A Grant Village 95.78 44 P **P 08 30 00.8 -1.3**
113A Mohawk Valley, 95.97 56 IAMs_20 IAMs_20 09 07 50.9
comp=Z,8µm,19.0s
TCUT Toone Canyon 96.00 48 P **P 08 30 01.4 -1.8**
YNE Yellowstone No 96.02 44 P **P 08 30 01.6 -1.6**
GCMT Greycliff 96.04 43 P **P 08 30 00.7 -2.4**
RAYN Ar Rayn 96.08 294 P **P 08 30 02.6 -1.0**
RAYN pmax pmax
comp=Z,138nm,1.4s
RAYN Ar Rayn 96.08 294 P **P 08 30 02.6 -1.0**
RAYN IAmb IAmb 08 30 14.3
comp=Z,138nm,1.4s
QSPA South Pole Qui 96.28 180 P **P 08 30 04.8 +1.1**
comp=Z,37nm,0.9s,baz=325,slow=1.8,SNR=16
QSPA PP **PP 08 33 57.7 +0.8**
comp=Z,5.8nm,1.1s,baz=66,slow=7.2,SNR=1.7
QSPA LR LR 09 12 56.8
comp=Z,9µm,20.0s,baz=5.0,slow=35
QSPA South Pole Qui 96.28 180 P **P 08 30 03.2 -0.4**
Y14A Wickenburg 96.36 55 P **P 08 30 02.2 -2.5**
Y14A IAMs_20 IAMs_20 09 08 14.9
comp=Z,10µm,20.0s
U15A North Rim 96.40 52 IAmb IAmb 08 30 18.0
comp=Z,78nm,1.6s
U15A IAMs_20 IAMs_20 09 09 54.5
comp=Z,9µm,19.0s
DAG Danmarks Havn 96.42 356 *i* P **P 08 30 04.4 +0.4**
DAG pmax pmax
comp=Z,73nm,1.4s
DAG Danmarks Havn 96.42 356 *i* P **P 08 30 04.4 +0.4**
comp=Z,72nm,1.4s
RLMT Red Lodge 96.49 43 P **P 08 30 04.3 -1.0**
baz=286
RLMT S **S 08 41 31.3 +5.6**
baz=286
SOC Sochi 96.53 315 *e*P **P 08 30 05.9 +0.7**
SOC *e**SP **sP 08 30 12.2 +0.4**
SOC *e* 08 33 57.7
SOC *e*PPP PPP 08 36 04.3
SOC *e*S **SKSac 08 40 42.9 +1.3**
SOC *e*SS **SS 08 48 06.6 +7.6**
SOC pmax pmax
comp=Z,34nm,1.4s
SOC MLR MLR
comp=Z,8µm,21.0s
BW06 Boulder Array 96.92 46 P **P 08 30 05.8 -1.5**
baz=285
BW06 Boulder Array 96.92 46 P **P 08 30 05.5 -1.8**
BW06 IAMs_20 IAMs_20 09 08 53.1
comp=Z,7µm,19.0s
PD31 Pinedale Array 96.92 46 P **P 08 30 04.4 -2.9**
PDAR Pinedale Array 96.92 46 P **P 08 30 07.9 +0.6**
comp=Z,1.2nm,0.8s,baz=290,slow=4.3,SNR=9.3
PDAR PP **PP 08 34 05.5 +3.0**
comp=Z,0.2nm,0.4s,baz=317,slow=6.5,SNR=1.8
PDAR PKKPbc **PKKPbc 08 46 49.2 -0.7**
comp=Z,0.6nm,0.8s,baz=98,slow=4.5,SNR=5.1
PDAR LR LR 09 09 04.3
comp=Z,3µm,19.4s,baz=302,slow=32
PDAR Pinedale Array 96.92 46 P **P 08 30 05.1 -2.2**
214A Organ Pipe Nat 96.93 57 P **P 08 30 05.8 -1.5**
baz=282
214A Organ Pipe Nat 96.93 57 P **P 08 30 03.6 -3.7**
214A IAmb IAmb 08 30 14.1
comp=Z,72nm,1.8s
214A IAMs_20 IAMs_20 09 07 12.3
comp=Z,7µm,20.0s
SRU San Rafael Swe 97.14 49 P **P 08 30 06.4 -1.9**
SRU pmax pmax
comp=Z,63nm,1.7s
SRU San Rafael Swe 97.14 49 P **P 08 30 06.4 -1.9**
WUAZ Wupatki 97.33 53 P **P 08 30 07.6 -1.6**
baz=283
WUAZ Wupatki 97.33 53 P **P 08 30 07.7 -1.5**
WUAZ IAmb IAmb 08 30 16.4
comp=Z,62nm,1.5s
FINES FINESS Array B 97.67 335 P **P 08 30 09.8 -0.1**
comp=Z,6.7nm,0.9s,baz=62,slow=4.9,SNR=15
FINES PP **PP 08 34 07.1 -0.2**
comp=Z,5.9nm,1.1s,baz=69,slow=12,SNR=3.8
FINES PKKPbc **PKKPbc 08 46 47.4 -0.7**
comp=Z,2.3nm,0.9s,baz=190,slow=7.0,SNR=5.0
FINES LR LR 09 17 28.1
comp=Z,8µm,19.3s,baz=60,slow=37
FINES FINESS Array B 97.67 335 *i* P Pdif 08 30 11.3 +1.3
FINES pmax pmax
comp=Z,7.0nm,0.9s
FINES FINESS Array B 97.67 335 P **P 08 30 09.3 -0.6**
ANN Anapa 97.78 317 *e*P Pdif 08 30 12.0 +1.2
ANN *e* 08 34 09.2
ANN *e*PPP PPP 08 36 11.7
ANN *e* 08 40 46.9
ANN pmax pmax
comp=Z,79nm,1.4s
ANN MLR MLR
comp=Z,11µm,21.0s
FFC Flin Flon 97.80 33 P Pdif 08 30 10.8 +0.1
FFC pmax pmax
comp=Z,103nm,1.9s
FFC Flin Flon 97.80 33 P Pdif 08 30 10.8 +0.1
FFC IAmb IAmb 08 30 28.0
comp=Z,103nm,1.9s
FFC Flin Flon 97.80 33 IAMs_20 IAMs_20 09 07 33.9
comp=Z,6µm,21.0s
LAO LASA Array 98.07 41 P **P 08 30 11.1 -1.1**
baz=288
LAO LASA Array 98.07 41 IAmb IAmb 08 30 20.8
comp=Z,67nm,1.4s
LAO IAMs_20 IAMs_20 09 15 50.1
comp=Z,8µm,19.0s
PV10 Paradox Valley 98.45 50 IAMs_20 IAMs_20 09 18 40.1
comp=Z,9µm,19.0s
PV23 Carpenter Ridg 98.45 50 IAMs_20 IAMs_20 09 16 34.6
comp=Z,9µm,20.0s
PV14 Lion Creek, Pa 98.46 50 IAMs_20 IAMs_20 09 16 27.9
comp=Z,9µm,19.0s
PV19 Morning Glory 98.50 50 IAMs_20 IAMs_20 09 16 28.1
comp=Z,7µm,19.0s
PV20 West Nyswonger 98.51 50 IAmb IAmb 08 30 27.4
comp=Z,55nm,1.5s
PV20 IAMs_20 IAMs_20 09 16 29.2
comp=Z,7µm,18.0s
TUC Tucson 98.53 56 P Pdif 08 30 16.4 +1.8
TUC pmax pmax
comp=Z,26nm,1.5s
TUC Tucson 98.53 56 Pdiff Pdif 08 30 14.7 +0.1
baz=283
TUC S **S 08 41 45.1 +1.8**
baz=283
TUC Tucson 98.53 56 P Pdif 08 30 16.4 +1.8
TUC Tucson 98.53 56 IAMs_20 IAMs_20 09 09 09.0
comp=Z,8µm,19.0s
PV04 Paradox Valley 98.54 50 P **P 08 30 12.1 -2.5**
PV04 IAmb IAmb 08 30 27.7
comp=Z,81nm,1.5s
PV04 IAMs_20 IAMs_20 09 16 28.8
comp=Z,9µm,19.0s
PV16 Nyswonger Mesa 98.56 50 IAMs_20 IAMs_20 09 16 29.5
comp=Z,7µm,19.0s
O20A White River Ci 98.58 48 Pdiff **P 08 30 13.0 -1.7**
baz=286
O20A White River Ci 98.58 48 IAMs_20 IAMs_20 09 13 52.5
comp=Z,8µm,19.0s
PV18 Skein Mesa, Pa 98.58 50 IAMs_20 IAMs_20 09 18 26.1
comp=Z,8µm,18.0s
PV11 David Mesa, Pa 98.59 50 IAMs_20 IAMs_20 09 16 30.4
comp=Z,9µm,19.0s
PV03 Paradox Valley 98.62 50 IAMs_20 IAMs_20 09 18 28.2
comp=Z,8µm,18.0s
X18A Snowflake 98.69 54 P **P 08 30 13.3 -2.1**
X18A IAMs_20 IAMs_20 09 09 47.5
comp=Z,9µm,19.0s
PV02 Paradox Valley 98.72 50 IAMs_20 IAMs_20 09 18 29.8
comp=Z,9µm,19.0s
W18A Petrified Fore 98.72 53 Pdiff **P 08 30 14.0 -1.5**
baz=284
PV07 Paradox Valley 98.73 50 P **P 08 30 14.4 -1.1**
PV07 IAMs_20 IAMs_20 09 16 44.0
comp=Z,6µm,20.0s
DGMT Dagmar 98.78 39 Pdiff **P 08 30 13.8 -1.5**
baz=290
DGMT Dagmar 98.78 39 P **P 08 30 12.4 -2.9**
DGMT Dagmar 98.78 39 IAMs_20 IAMs_20 09 10 36.7
comp=Z,8µm,22.0s
PV01 Paradox Valley 98.86 50 IAMs_20 IAMs_20 09 19 16.7
comp=Z,9µm,18.0s
PV15 Paradox Valley 98.88 50 IAMs_20 IAMs_20 09 16 48.0
comp=Z,7µm,19.0s
RWWY Rawlins 98.89 46 P **P 08 30 13.2 -3.0**
RWWY IAmb IAmb 08 30 26.9
comp=Z,90nm,1.9s
K22A Casper 99.10 45 Pdiff **Pdif 08 30 16.3 -0.7**
baz=288
K22A Casper 99.10 45 P **Pdif 08 30 15.2 -1.8**
K22A IAmb IAmb 08 30 30.0
comp=Z,75nm,1.6s
HSIG 99.12 59 IAMs_20 IAMs_20 09 06 01.7
comp=Z,9µm,20.0s
MVCO Mesa Verde 99.16 51 Pdiff **Pdif 08 30 15.9 -1.6**
baz=285
MVCO Mesa Verde 99.16 51 P **Pdif 08 30 17.0 -0.5**
MVCO IAmb IAmb 08 30 30.9
comp=Z,60nm,1.6s
OPO Ambohidratompo 99.35 252 PP **PP 08 34 22.7 +0.7**
comp=Z,5.4nm,1.1s,baz=92,slow=5.5,SNR=3.5
SMCO Snowmass 99.78 49 IAMs_20 IAMs_20 09 16 00.5
comp=Z,7µm,19.0s
FCC Fort Churchill 99.90 27 P **Pdif 08 30 18.0 -1.9**
FCC pmax pmax
comp=Z,100nm,2.0s
FCC Fort Churchill 99.90 27 Pdif **Pdif 08 30 18.0 -1.9**
FCC IAmb IAmb 08 30 43.8
comp=Z,100nm,2.0s
SIM Simferopol' 99.97 318 *e*P **Pdif 08 30 23.4 +2.8**
SIM *e* 08 34 25.0
SIM *i* PS **PS 08 43 20.0 -4.7**
SIM pmax pmax
comp=Z,91nm,1.6s
SIM pmax pmax
comp=Z,150nm,3.2s
SIM MLR MLR
comp=Z,3µm,17.2s
319A Douglas 99.99 57 IAMs_20 IAMs_20 09 09 06.4
comp=Z,8µm,19.0s
MICGM Minsk 100.02 328⇑ *e*P **Pdif 08 30 22.0 +1.4**
MICGM PM 08 30 24.0
comp=Z,0.4nm,2.0s
MICGM *e*PP **PP 08 34 30.0 +4.6**
MICGM *e*PPP PPP 08 36 38.0
MICGM *e*SKS **SKSac 08 41 02.0 +3.3**
MICGM *e*SKKS **SKKSac 08 41 33.0 +1.1**
MICGM *e*S **Sdif 08 41 54.0 -0.6**
MICGM *e*PS **PS 08 43 22.0 -2.7**
MICGM *e*SS SS 08 48 36.0 -11
MICGM *e*SSS SSS 08 52 34.0
MICGM *e*LQ LQ 09 04 35.0
MICGM *e*LR LR 09 08 30.0
MICGM LRM MLR 09 19 48.0
comp=E,15nm,16.0s
MICGM LRM MLR 09 19 54.0
comp=Z,28nm,16.0s
MNK Minsk 100.02 328⇑ *e*P **Pdif 08 30 22.0 +1.4**
MNK *e* 08 34 30.0
MNK *e*PPP PPP 08 36 38.0
MNK *e* 08 41 02.0
MNK *e*S **Sdif 08 41 54.0 -0.6**
MNK *e*PS PS 08 43 22.0 -2.7
MNK *e*SSS SSS 08 52 34.0
MNK pmax pmax
comp=Z,380nm,2.0s
N23A Red Feather La 100.04 47 Pdiff **Pdif 08 30 20.1 -1.3**
baz=288
GAZ Gaziantep 100.10 309 IAMs_20 IAMs_20 09 22 56.3
comp=Z,8µm,18.0s
S22A 4UR Ranch, Cre 100.30 50 Pdiff **Pdif 08 30 21.9 -0.7**
baz=287
RSSD Black Hills 100.36 43 Pdiff **Pdif 08 30 22.5 -0.1**
baz=290
NACGM Naroch 100.41 329 *e*P **Pdif 08 30 18.0 -4.3**
NACGM *e*P **pPdif 08 30 21.0 -5.5**
NACGM *e*PP **PP 08 34 30.0 +1.7**
NACGM *e*PPP PPP 08 36 34.0
NACGM *e*SKS 08 41 04.0
NACGM *e*S **Sdif 08 41 48.0 -10**
NACGM *e*PS PS 08 43 26.0 -2.9
NACGM *e*SS **SS 08 48 42.0 -10**
NACGM *e*SSS SSS 08 52 14.0
NACGM *e*LQ LQ 09 04 24.0
NACGM *e*LR LR 09 12 14.0
NACGM LRM MLR 09 18 34.0
comp=Z,44nm,20.0s
ATD Arta Tunnel 100.51 283 P **Pdif 08 30 25.7 +2.0**
SNR=5.2
ISCO Idaho Springs 100.61 48 Pdiff **Pdif 08 30 22.9 -1.1**
baz=288
ISCO Idaho Springs 100.61 48 IAMs_20 IAMs_20 09 15 30.2
comp=Z,7µm,20.0s
AKASG Malin Array Be 100.89 324 P **Pdif 08 30 23.9 -0.6**
comp=Z,0.3nm,0.2s,baz=270,slow=29,SNR=4.1
AKASG PP **PP 08 34 33.6 +1.4**
comp=Z,0.2nm,0.3s,baz=60,slow=5.2,SNR=1.3
AKASG PKKPbc **PKKPbc 08 46 37.3 -1.4**
comp=Z,2.3nm,0.5s,baz=266,slow=2.9,SNR=6.4
121A Cookes Peak, D 100.94 55 Pdiff **Pdif 08 30 24.5 -1.0**
baz=285
121A Cookes Peak, D 100.94 55 IAMs_20 IAMs_20 09 10 48.2
comp=Z,7µm,19.0s
SUMG Summit 101.15 1 *i* P **Pdif 08 30 29.0 +3.3**
SUMG pmax pmax
comp=Z,280nm,1.9s
SUMG Summit 101.15 1 *i* P **Pdif 08 30 29.0 +3.3**
comp=Z,279nm,1.9s
Q24A Divide 101.20 48 Pdiff **Pdif 08 30 24.7 -2.0**
baz=288
Y22D IRIS PASSCAL I 101.23 54 Pdiff **Pdif 08 30 25.1 -1.6**
baz=286
Y22D IRIS PASSCAL I 101.23 54 IAMs_20 IAMs_20 09 11 19.8
comp=Z,8µm,20.0s
SDCO Great Sand Dun 101.30 50 Pdiff **Pdif 08 30 25.6 -1.5**
baz=287
SDCO Great Sand Dun 101.30 50 IAMs_20 IAMs_20 09 20 49.0
comp=Z,7µm,18.0s
ANMO Albuquerque 101.36 53 PKPPKP **P'P'df 08 54 59.3 +3.1**
comp=Z,0.2nm,0.3s,baz=144,slow=5.0,SNR=4.9
ANMO Albuquerque 101.36 53 Pdiff **Pdif 08 30 26.1 -1.2**
baz=286
ANMO Albuquerque 101.36 53 IAMs_20 IAMs_20 09 12 00.1
comp=Z,9µm,19.0s
ILGA Ilgaz 101.53 314 IAMs_20 IAMs_20 09 21 16.7
comp=Z,6µm,21.0s
E28A Huff 101.68 40 IAMs_20 IAMs_20 09 12 01.7
comp=Z,8µm,20.0s
MDND Maddock 101.87 38 Pdiff **Pdif 08 30 27.2 -1.8**
baz=294
MDND Maddock 101.87 38 IAMs_20 IAMs_20 09 13 05.5
comp=Z,10µm,20.0s
BR131 Keskin Array S 102.02 313 P **Pdif 08 30 33.1 +3.1**
SNR=8.7
BRTR Keskin Array B 102.02 313 P **Pdif 08 30 29.2 -0.9**
comp=Z,3.6nm,1.0s,baz=59,slow=3.7,SNR=14
BRTR PP **PP 08 34 37.3 -4.0**
comp=Z,5.2nm,1.2s,baz=34,slow=4.8,SNR=3.8
BRTR Keskin Array B 102.02 313 P **Pdif 08 30 26.3 -3.7**
BRTR Keskin Array B 102.02 313 **Pdif 08 30 26.3 -3.7**
EPT El Paso 102.18 56 IAMs_20 IAMs_20 09 10 12.2
comp=Z,6µm,20.0s
T25A Trinidad 102.31 50 Pdiff **Pdif 08 30 30.0 -1.5**
baz=288
KIS Kishinev 102.65 321 *e*P **Pdif 08 30 32.0 -0.5**
KIS Kishinev 102.65 321 *e*PP **PKiKP 08 34 48.0 -5.4**
KIS Kishinev 102.65 321 *e*PKP **PKiKP 08 34 55.0 +1.6**
KIS Kishinev 102.65 321 *e*PS PS 08 43 44.0 -9.1
KIS Kishinev 102.65 321 *e*P **Pdif 08 30 32.0 -0.5**
KIS *e* 08 34 48.0
KIS *e* 08 41 12.0
KIS *e*S **Sdif 08 42 10.0 -6.9**
KIS *e*PS **PS 08 43 44.0 -9.1**
OGNE Ogallala 102.83 46 Pdiff **Pdif 08 30 32.2 -1.3**
baz=290
KSCO Kaye Shedlock' 103.05 48 Pdiff **Pdif 08 30 32.4 -2.2**
baz=290
KSCO Kaye Shedlock' 103.05 48 IAMs_20 IAMs_20 09 23 51.9
comp=Z,6µm,19.0s
MNTX Cornudas Mount 103.13 56 Pdiff **Pdif 08 30 33.3 -1.6**
baz=286
MNTX Cornudas Mount 103.13 56 IAMs_20 IAMs_20 09 11 01.2
comp=Z,7µm,20.0s
HFS Hagfors 103.43 337 Pdiff **Pdif 08 30 36.2 +0.6**
comp=Z,0.7nm,0.7s,baz=178,slow=40,SNR=2.2
SUSD Miller 103.64 41 Pdiff **Pdif 08 30 36.6 -0.4**
baz=294
SUSD Miller 103.64 41 IAMs_20 IAMs_20 09 18 55.4
comp=Z,7µm,19.0s
CSS Mathiatis 103.75 308 IAMs_20 IAMs_20 09 23 45.1
comp=Z,6µm,21.0s
NB2 NORSAR Subarra 103.75 339 P **Pdif 08 30 39.1 +2.0**
comp=Z,5.2nm,0.9s,baz=50,slow=4.4
NB2 NORSAR Subarra 103.75 339 P **Pdif 08 30 39.1 +2.0**
baz=50,slow=4.4
NOA NORSAR Array B 103.75 339 Pdiff **Pdif 08 30 38.6 +1.5**
comp=Z,0.1nm,0.3s,baz=299,slow=5.4,SNR=5.0
NOA PP **PKiKP 08 34 55.4 +0.3**
comp=Z,11nm,1.3s,baz=46,slow=7.6,SNR=3.9
NOA PKKPbc **PKKPbc 08 46 29.3 -1.4**
comp=Z,1.9nm,0.8s,baz=51,slow=4.0,SNR=6.1
AGMN Agassiz Nation 103.95 37 Pdiff **Pdif 08 30 36.8 -1.4**
baz=297
LVV L'vov 104.27 325 *e*P **Pdif 08 30 41.4 +1.8**
LVV *e* 08 34 55.1
LVV *e* 08 41 14.0
LVV *e*S **Sdif 08 42 25.7 -4.7**
LVV *e*SS **SS 08 49 51.3 +5.2**
K31A O'Neill 104.49 43 IAMs_20 IAMs_20 09 17 39.2
comp=Z,6µm,19.0s
MSTX Muleshoe 104.56 53 Pdiff **Pdif 08 30 40.5 -0.9**
baz=288
MSTX Muleshoe 104.56 53 IAMs_20 IAMs_20 09 13 28.7
comp=Z,8µm,19.0s
BEL Belsk 105.04 328 *e*Pdif **Pdif 08 30 47.1 +4.1**
BEL LMZ LR 09 19 50.0
comp=Z,12nm,20.6s
MLR Muntele Rosu 105.09 320 IAMs_20 IAMs_20 09 20 21.4
comp=Z,10µm,22.0s
PRD Provadia 105.11 318 *e*P PKiKP 08 35 10.5 +12
KWP Kalwaria Pacla 105.11 325 *e*Pdif **Pdif 08 30 47.0 +3.6**
KWP LMZ LR 09 17 36.2
comp=Z,24nm,25.4s
AMTX Amarillo 105.12 51 PKiKP **PKiKP 08 34 56.9 -1.5**
baz=289
AMTX Amarillo 105.12 51 IAMs_20 IAMs_20 09 14 54.4
comp=Z,8µm,19.0s
TXAR Lajitas Array 105.21 57 Pdiff **Pdif 08 30 45.8 +1.4**
comp=Z,1.0nm,0.8s,baz=275,slow=3.7,SNR=5.7
TXAR PP **PP 08 35 07.4 +2.0**
comp=Z,2.1nm,1.0s,baz=268,slow=5.4,SNR=3.2
TXAR PKPPKP 08 54 49.5
comp=Z,0.3nm,0.8s,baz=148,slow=7.4,SNR=2.9
TXAR Lajitas Array 105.21 57 P **Pdif 08 30 41.0 -3.4**
TXAR Lajitas Array 105.21 57 **Pdif 08 30 41.0 -3.4**
CBKS Cedar Bluff 105.23 47 PKiKP **PKiKP 08 34 57.5 -1.0**
baz=292
CBKS Cedar Bluff 105.23 47 IAMs_20 IAMs_20 09 10 38.6
comp=Z,6µm,22.0s
BGNE Belgrade 105.38 44 IAMs_20 IAMs_20 09 15 48.9
comp=Z,6µm,20.0s
ECSD EROS Data Cent 105.47 41 PKiKP **PKiKP 08 34 57.6 -1.1**
baz=295
ECSD EROS Data Cent 105.47 41 IAMs_20 IAMs_20 09 20 44.8
comp=Z,7µm,19.0s
KOLS Kolonicke sedl 105.71 325 *e*SP SP 08 44 17.6 -4.7
KOLS *e*SS **SS 08 50 03.9 -1.9**
KOLS *e*L L 09 18 49.3
UZH Uzhgorod 105.84 325⇓ *i*P **Pdif 08 30 49.2 +2.6**
UZH *e* 08 35 13.8
UZH *e* 08 41 28.9
UZH *e*PS PS 08 44 25.6 -0.8
UZH *e*SS SS 08 50 08.0 +0.4
UZH MLR MLR
comp=N,2µm,21.0s
UZH MLR MLR
comp=E,2µm,21.0s
UZH MLR MLR
comp=Z,600nm,21.0s
JMB Yambol 105.96 317 *e*P **PP 08 35 16.6 +6.3**
SZH Strazhica 106.06 318 *e*P **PP 08 35 15.2 +4.2**
R32A Long Quarter, 106.12 47 IAMs_20 IAMs_20 09 16 35.2
comp=Z,6µm,21.0s
N33A J Bar K, Exete 106.13 45 IAMs_20 IAMs_20 09 22 39.8
comp=Z,5µm,20.0s
OJC Ojcow 106.43 327 *e*Pdif **Pdif 08 30 51.4 +2.2**
OJC *e*PP **PP 08 35 11.5 -1.9**
OJC LMZ LR 09 21 52.2
comp=Z,16nm,18.1s
NIE Niedzica 106.57 326 *e*Pdif **Pdif 08 30 53.3 +3.4**
NIE *e*PP **PP 08 35 15.8 +1.2**
NIE LMZ LR 09 18 46.0
comp=Z,12nm,24.2s
EYMN Ely 106.69 36 PKiKP **PKiKP 08 35 00.7 -0.1**
baz=300
EYMN Ely 106.69 36 IAMs_20 IAMs_20 09 18 09.7
comp=Z,6µm,19.0s
RPN Rapa Nui 106.86 116 IAMs_20 IAMs_20 09 09 27.2
comp=Z,9µm,22.0s
SPMN Marine on St. 107.24 39 PKiKP **PKiKP 08 35 00.9 -1.0**
baz=298
E38A The Farm, Brul 107.33 37 IAMs_20 IAMs_20 09 16 00.8
comp=Z,8µm,20.0s
N35A Tabor 107.33 44 IAMs_20 IAMs_20 09 24 27.5
comp=Z,5µm,20.0s
KSU1 Kansas State U 107.38 46 PKiKP **PKiKP 08 35 02.1 -0.3**
baz=294
KSU1 Kansas State U 107.38 46 IAMs_20 IAMs_20 09 15 29.1
comp=Z,9µm,20.0s
PLD Plovdiv 107.38 318 *e*P **PP 08 35 26.8 +6.1**
WMOK Wichita Mounta 107.42 51 PKiKP **PKiKP 08 35 02.6 0.0**
baz=291
WMOK Wichita Mounta 107.42 51 IAMs_20 IAMs_20 09 16 21.0
comp=Z,8µm,20.0s
ABTX Abilene, Hawle 107.47 53 PKiKP **PKiKP 08 35 02.7 -0.1**
baz=290
OKC Ostrava-Krasne 107.53 327 *e*P **Pdif 08 30 56.1 +2.0**
OKC *e* 08 35 27.0
OKC *e*SP SP 08 44 40.7 -0.3
OKC MLR MLR
comp=Z,9µm,19.3s
OKC Ostrava-Krasne 107.53 327 *e*PDIFF **Pdif 08 30 56.1 +2.0**
OKC *e*PP **PP 08 35 27.0 +5.5**
OKC *e*SP SP 08 44 40.7 -0.3
OKC AMS AMS 09 21 30.0
comp=Z,9µm,19.3s
RZN Rozhen 107.55 317 *e*P **PP 08 35 27.8 +5.6**
VYHS Vyhne 107.88 326 *e*P **Pdif 08 30 58.8 +3.1**
VYHS *e*SP SP 08 44 48.5 +3.8
VYHS MLR MLR
comp=Z,26µm,23.6s
VYHS Vyhne 107.88 326 *e*PDIFF **Pdif 08 30 58.8 +3.1**
MORC Moravsky Berou 107.89 327 *e*PDIFF **Pdif 08 30 58.5 +2.7**
MORC *e* 08 34 25.2
MORC *e* 08 35 29.3
MORC *e* 08 44 46.0
ZAIG Zacatecas 107.94 64 IAMs_20 IAMs_20 09 17 18.0
comp=Z,6µm,18.0s
KSP Ksiaz 107.94 329 *e*Pdif **Pdif 08 30 59.3 +3.4**
KSP *e*PP **PP 08 35 26.8 +2.4**
KSP LMZ LR 09 19 28.1
comp=Z,10.0nm,23.3s
JCT Junction City 108.06 55 PKiKP **PKiKP 08 35 03.4 -0.5**

baz=289
JCT Junction City 108.06 55 IAMs_20 IAMs_20 09 16 12.7
comp=Z,7µm,18.0s
VTS Vitosha 108.12 319 *e*P **PP 08 35 30.4 +4.1**
VTS Vitosha 108.12 319 IAMs_20 IAMs_20 09 27 30.7
comp=Z,6µm,19.0s
KRLC Kraliky 108.13 328 *e*P **Pdif 08 31 00.6 +3.8**
KRLC *e* 08 35 31.0
KRLC *e*SP SP 08 44 49.5 +2.4
KRLC MLR MLR
comp=Z,10µm,18.4s
KRLC Kraliky 108.13 328 *e*PDIFF **Pdif 08 31 00.6 +3.8**
KRLC *e*PP **PP 08 35 31.0 +5.1**
KRLC *e*SP SP 08 44 49.5 +2.4
KRLC AMS AMS 09 23 10.0
comp=Z,10µm,18.4s
OSTC Ostas 108.15 328 *e*PDIFF **Pdif 08 30 59.4 +2.5**
OSTC *e*PP **PP 08 35 31.0 +5.0**
OSTC *e*SP SP 08 44 47.3 0.0
OSTC AMS AMS 09 23 10.0
comp=Z,11µm,18.6s
DPC Dobruska-Polom 108.21 328 *e*PP **PP 08 35 30.1 +3.6**
DPC AMS AMS 09 23 10.0
comp=Z,11µm,19.4s
CHVC Chvalec 108.21 329 AMS AMS 09 24 30.0
comp=Z,14µm,17.6s
MMB Musomiste 108.26 318 *e*P **PP 08 35 30.9 +3.7**
UPC Upice 108.28 328 *e*P **Pdif 08 30 58.5 +1.0**
UPC *e* 08 35 32.5
UPC *e*SP SP 08 44 46.6 -2.0
UPC MLR MLR
comp=Z,13µm,17.7s
UPC Upice 108.28 328 *e*PDIFF **Pdif 08 30 58.5 +1.0**
UPC *e*PP **PP 08 35 32.5 +5.6**
UPC *e*SP SP 08 44 46.6 -2.0
UPC AMS AMS 09 24 30.0
comp=Z,13µm,17.7s
KARP Karpathos 108.29 311 IAMs_20 IAMs_20 09 26 08.1
comp=Z,6µm,21.0s
JAVC Velka Javorina 108.33 326 *e*PDIFF **Pdif 08 31 02.2 +4.4**
JAVC *e* 08 34 27.6
JAVC *e* 08 35 33.0
JAVC *e* 08 44 51.2
K38A Parkersburg 108.47 41 IAMs_20 IAMs_20 09 19 38.2
comp=Z,8µm,20.0s
LRW Lerwick 108.49 343 IAMs_20 IAMs_20 09 19 14.2
comp=Z,7µm,22.6s
SCIA State Center 108.51 42 IAMs_20 IAMs_20 09 27 39.5
comp=Z,6µm,19.0s
KKB Krupnik 108.57 318 *e*P **PP 08 35 32.0 +2.6**
VRAC Vranov 108.67 327 Pdiff **Pdif 08 31 02.6 +3.4**
comp=Z,4.3nm,0.3s,baz=56,slow=4.3,SNR=16
VRAC PP **PP 08 35 30.2 +0.4**
comp=Z,2.7nm,0.5s,baz=66,slow=9.5,SNR=3.6
VRAC Vranov 108.67 327 *e*PDIFF **Pdif 08 31 02.5 +3.3**
VRAC *e* 08 34 28.9
VRAC *e* 08 35 34.2
VRAC *e* 08 44 53.8
G40A Rib Lake 108.82 38 IAMs_20 IAMs_20 09 18 35.2
comp=Z,8µm,19.0s
MODS Modra-Piesok 108.82 326 *e*P **Pdif 08 31 03.5 +3.6**
MODS *e*SP SP 08 44 58.7 +4.5
MODS MLR MLR
comp=Z,18µm,23.3s
MODS Modra-Piesok 108.82 326 *e*PDIFF **Pdif 08 31 03.5 +3.6**
MODS *e*SP SP 08 44 58.7 +4.5
MODS *e*SS SS 08 51 14.9 +27
MODS *e*L L 09 20 21.3
D41A Chassel 108.85 36 IAMs_20 IAMs_20 09 18 31.8
comp=Z,5µm,21.0s
BSEG Bad Segeberg 108.88 334 *e*L L 09 25 13.4
comp=Z,6µm,20.6s
KRUC Moravsky 108.91 327 *e*PDIFF **Pdif 08 31 03.0 +2.7**
KRUC *e* 08 34 30.2
KRUC *e* 08 35 36.3
KRUC *e* 08 44 54.3
COWI Conover 109.03 37 IAMs_20 IAMs_20 09 19 34.5
comp=Z,6µm,19.0s
833A Chaparral WMA, 109.08 57 PKiKP **PKiKP 08 35 04.9 -0.9**
baz=289
Z35A Perchaven, San 109.11 52 IAMs_20 IAMs_20 09 28 41.9
comp=Z,7µm,18.0s
BRG Berggiesshubel 109.12 330 *e*PDIFF **Pdif 08 31 04.5 +3.3**
comp=Z,45nm,1.9s
BRG Berggiesshubel 109.12 330 *e*PKP PKiKP 08 34 41.4 -24
comp=Z,31nm,1.8s
BRG PP **PP 08 35 39.0 +6.0**
BRG SKS **SKSac 08 41 47.0 +6.6**
BRG *e*PKKP **PKKPbc 08 46 12.9 -0.9**
comp=Z,3.9nm,0.9s
BRG SS SS 08 51 03.0 +11
comp=N,8µm,17.8s
comp=E,9µm,18.9s
comp=Z,14µm,18.7s
BRG Berggiesshubel 109.12 330 *e*Pdiff **Pdif 08 31 04.7 +3.6**
BRG *e*PP **PP 08 35 36.5 +3.5**
BRG Berggiesshubel 109.12 330 *e*P **Pdif 08 31 04.5 +3.3**
BRG pmax pmax
comp=Z,45nm,2.0s
TUL1 Leonard 109.24 49 IAMs_20 IAMs_20 09 16 29.9
comp=Z,9µm,20.0s
TREC Trest 109.27 328 AMS AMS 09 21 50.0
comp=Z,13µm,21.7s
GOPC GO Pecny, Ondr 109.27 328 *e*P **Pdif 08 30 53.2 -8.7**
GOPC *e* 08 35 35.6
GOPC *e*SP SP 08 44 59.8 +1.1
GOPC MLR MLR
comp=Z,12µm,18.6s
GOPC GO Pecny, Ondr 109.27 328 *e*PDIFF **Pdif 08 30 53.2 -8.7**
GOPC *e*PP **PP 08 35 35.6 +1.5**
GOPC *e*SP SP 08 44 59.8 +1.1
GOPC AMS AMS 09 23 50.0
comp=Z,12µm,18.6s
P38A Dawn 109.32 44 IAMs_20 IAMs_20 09 19 25.2
comp=Z,7µm,18.0s
CLL Collm 109.32 330 *e*sPdif **Pdif 08 31 06.0 +4.0**
comp=Z,36nm,1.8s
CLL *e* 08 34 40.0
CLL *e* 08 34 51.0
CLL *e*PP **PP 08 35 39.0 +4.6**
comp=Z,96nm,1.8s
CLL *e*PPP PPP 08 37 50.0
CLL *e*SKSac **SKSac 08 41 39.0 -2.2**
CLL *e*(Sdif) 08 43 00.0
CLL *e*PS PS 08 45 03.0 +1.1
CLL *e*PPS PPS 08 45 58.0
CLL *e*pPKKPbc 08 46 14.0
CLL *e*SS **SS 08 51 00.0 +5.6**
CLL *e*SSS SSS 08 55 00.0
CLL *e*SSSS 08 58 30.0
CLL *e* 09 01 36.0
CLL Lm MLR 09 24 00.0
comp=N,9µm,19.8s
CLL Lm MLR 09 24 00.0
comp=E,5µm,19.4s
CLL Lm MLR 09 24 00.0
comp=Z,11µm,20.1s
CLL Collm 109.32 330 *e*L L 09 24 19.8
comp=Z,11µm,20.1s
CLL Collm 109.32 330 *e*P **Pdif 08 31 06.0 +4.0**
CLL *e* 08 41 39.0
CLL pmax pmax
comp=Z,36nm,1.8s
CLL MLR MLR
comp=Z,11µm,20.1s
PRU Pruhonice 109.35 329 *e*P **Pdif 08 31 05.6 +3.4**
PRU *e* 08 35 38.2
PRU *e*SP SP 08 44 53.8 -5.7
PRU MLR MLR
comp=Z,12µm,17.3s
PRU Pruhonice 109.35 329 *e*PDIFF **Pdif 08 31 05.6 +3.4**
PRU *e*PP **PP 08 35 38.2 +3.5**
PRU *e*SP SP 08 44 53.8 -5.7
PRU AMS AMS 09 25 30.0
comp=Z,12µm,17.3s
WHTX Lake Whitney, 109.43 53 PKiKP **PKiKP 08 35 06.8 +0.4**
baz=291
WHTX Lake Whitney, 109.43 53 IAMs_20 IAMs_20 09 23 23.7
comp=Z,7µm,19.0s
L40A Anamosa 109.75 41 IAMs_20 IAMs_20 09 17 53.2
comp=Z,7µm,21.0s
CONA Conrad Observa 109.85 326 *e*pPdiff **Pdif 08 31 08.6 +4.0**
comp=Z,29nm,1.5s
CONA *i* PP **PP 08 35 35.2 -3.3**
comp=Z,42nm,1.9s

NRDL Niedersach Rie 109.94 333 *e*PP **PP 08 35 41.1 +2.4**
JFWS Jewell Farm 109.97 40 IAMs_20 IAMs_20 09 18 45.9
comp=Z,9µm,20.0s
U38A Gravette 110.07 48 IAMs_20 IAMs_20 09 24 13.6
comp=Z,8µm,19.0s
E43A Lone Tree Farm 110.13 36 IAMs_20 IAMs_20 09 23 52.6
comp=Z,5µm,19.0s
735A Kenedy 110.23 56 IAMs_20 IAMs_20 09 15 36.4
comp=Z,8µm,20.0s
GUNZ Gunzen 110.25 330 *e*Pdiff **Pdif 08 31 09.2 +3.0**
NKC Novy Kostel 110.27 330 *e*P **Pdif 08 31 08.3 +2.0**
NKC *e* 08 35 39.0
NKC *e*SP SP 08 45 09.3 +0.7
NKC MLR MLR
comp=Z,9µm,20.6s
NKC Novy Kostel 110.27 330 *e*PDIFF **Pdif 08 31 08.3 +2.0**
NKC *e*PP **PP 08 35 39.0 -2.3**
NKC *e*SP SP 08 45 09.3 +0.7
NKC AMS AMS 09 23 10.0
comp=Z,9µm,20.6s
WERN Wernitzgruen 110.27 330 *e*Pdiff **Pdif 08 31 10.0 +3.6**
WERN *e*PP **PP 08 35 43.6 +2.2**
S39A Bolivar 110.31 46 IAMs_20 IAMs_20 09 24 35.8
comp=Z,5µm,19.0s
I42A Draeger Farm, 110.31 39 IAMs_20 IAMs_20 09 17 22.9
comp=Z,7µm,20.0s
KHC Kasperske Hory 110.37 328 *e*P **Pdif 08 31 08.9 +2.1**
KHC *e* 08 35 42.2
KHC *e*SP SP 08 45 04.5 -5.1
KHC MLR MLR
comp=Z,14µm,19.4s
KHC Kasperske Hory 110.37 328 *e*PDIFF **Pdif 08 31 08.9 +2.1**
KHC *ex* x 08 31 17.0
KHC *e*PP **PP 08 35 42.2 +0.1**
KHC *e*SP SP 08 45 04.5 -5.1
KHC AMS AMS 09 25 00.0
comp=Z,14µm,19.4s
KHC Kasperske Hory 110.37 328 IAMs_20 IAMs_20 09 25 20.2
comp=Z,6µm,20.0s
P40A Paris 110.39 44 IAMs_20 IAMs_20 09 18 23.4
comp=Z,7µm,20.0s
MOX Moxa 110.42 330 *e*L L 09 25 20.7
comp=Z,10µm,19.8s
ARSA Arzberg 110.43 326 *e*pPdiff **Pdif 08 31 11.2 +4.1**
comp=Z,14nm,1.2s
HHAR Hobbs 110.46 48 IAMs_20 IAMs_20 09 22 58.1
comp=Z,8µm,18.0s
GEC2 GERESS Array S 110.48 328 *e*Pdiff **Pdif 08 31 10.5 +3.1**
GEC2 *e*L L 09 24 43.8
comp=Z,11µm,19.9s
GERES GERESS Array B 110.48 328 Pdiff **Pdif 08 31 10.3 +2.9**
comp=Z,0.7nm,0.6s,baz=80,slow=3.2,SNR=7.0
GERES PP **PP 08 35 45.8 +2.8**
comp=Z,1.0nm,0.7s,baz=58,slow=3.3,SNR=4.2
GERES PKKPbc **PKKPbc 08 46 08.9 -0.6**
comp=Z,1.6nm,0.9s,baz=242,slow=2.9,SNR=6.5
GERES GERESS Array B 110.48 328 P **Pdif 08 31 04.8 -2.6**
GERES GERESS Array B 110.48 328 **Pdif 08 31 04.8 -2.6**
ROTZ Rotzenmuhle 110.68 329 *e*Pdiff **Pdif 08 31 11.9 +3.8**
H43A Windswept, Lux 110.71 38 IAMs_20 IAMs_20 09 16 13.2
comp=Z,7µm,20.0s
WET Wettzell 110.72 329 *e*L L 09 26 34.6
comp=Z,13µm,18.1s
237A Washetta, Mont 110.73 52 IAMs_20 IAMs_20 09 24 17.0
comp=Z,6µm,18.0s
MOA Molln 110.77 327 *i* pPdiff **Pdif 08 31 11.5 +2.9**
comp=Z,21nm,1.6s
L42A Oliver, Polo 110.79 41 IAMs_20 IAMs_20 09 19 24.6
comp=Z,9µm,21.0s
R40A Maddies Statio 110.79 45 IAMs_20 IAMs_20 09 27 46.4
comp=Z,6µm,18.0s
Z38A Mt. Pleasant 110.89 51 IAMs_20 IAMs_20 09 13 42.1
comp=Z,7µm,22.0s
TIR Tirane 110.94 319 IAMs_20 IAMs_20 09 26 45.2
comp=Z,7µm,20.0s
SOKA Soboth 111.03 326 *i* pPdiff **Pdif 08 31 13.9 +4.0**
comp=Z,12nm,1.4s
SOKA *i* pPKiKP **PKiKP 08 35 14.1 +5.0**
comp=Z,15nm,1.5s
SOKA *i* PP **PP 08 35 49.5 +2.5**
comp=Z,20nm,1.4s
U40A Yellville 111.22 47 IAMs_20 IAMs_20 09 23 25.2
comp=Z,8µm,19.0s
GRF Grafenberg Arr 111.22 330 *e*Pdiff **Pdif 08 31 19.6 +9.0**
GRF *e*L L 09 27 16.9
comp=Z,11µm,18.0s
CCM Cathedral Cave 111.62 45 IAMs_20 IAMs_20 09 21 46.2
comp=Z,6µm,20.0s
RJOB Jochberg 111.63 327 *e*Pdiff **Pdif 08 31 16.5 +4.0**
G45A Suttons Bay 111.65 36 IAMs_20 IAMs_20 09 23 05.0
comp=Z,8µm,19.0s
E46A Sault Ste Mari 111.67 34 IAMs_20 IAMs_20 09 21 06.1
comp=Z,6µm,20.0s
LJU Ljubljana 111.69 325 *i* Pdiff **Pdif 08 31 16.1 +3.4**
LJU *e* 08 34 52.2
LJU *e*PP **PP 08 35 58.8 +7.2**
LJU *e* 08 38 06.9
LJU *e*SKSac **SKSac 08 41 51.7 +0.4**
LJU *e*SKKSac **SKKSac 08 42 55.7 +1.4**
LJU *e*SP SP 08 45 23.0 +1.2
LJU *e* 08 46 21.4
LJU *e* 08 46 25.1
LJU *e*SS SS 08 51 48.7 +22
LJU *e* 08 55 36.4
LJU *e* 09 03 29.4
NATX Nacogdoches 111.72 52 PKiKP **PKiKP 08 35 09.9 -0.9**
baz=293
KBA Koelnbreinsper 111.73 327 *i* pPdiff **Pdif 08 31 17.7 +4.5**
comp=Z,14nm,1.3s
KBA *i* pPKiKP **PKiKP 08 35 18.1 +7.5**
comp=Z,9.9nm,1.1s
SNAA Sanae 111.78 190 PKiKP **PKiKP 08 35 11.8 +2.0**
SNAA Sanae 111.78 190 PP **PP 08 35 54.9 +3.0**
comp=Z,7.2nm,1.0s,baz=147,slow=9.5,SNR=7.1
SNAA Sanae 111.78 190 IAMs_20 IAMs_20 09 25 42.7
comp=Z,5µm,18.0s
L44A Lake County Fo 111.83 40 IAMs_20 IAMs_20 09 23 35.2
comp=Z,8µm,19.0s
MYKA Terra Mystica 111.84 326 *i* pPdiff **Pdif 08 31 15.0 +1.6**
comp=Z,10nm,1.1s
MYKA *i* pPKiKP PKiKP 08 35 20.3 +10
comp=Z,12nm,1.1s
MYKA *i* PP **PP 08 35 50.3 -2.5**
comp=Z,54nm,1.7s
I45A Fountain 111.87 37 IAMs_20 IAMs_20 09 19 58.9
comp=Z,8µm,20.0s
FCAR Ozark Folk Cen 111.96 47 IAMs_20 IAMs_20 09 23 45.6
comp=Z,6µm,18.0s
JAVS Javornik 112.03 325 *i* Pdiff **Pdif 08 31 17.5 +3.1**
JAVS *e* 08 34 54.0
JAVS *e*PP **PP 08 36 00.6 +6.3**
SLM Saint Louis 112.05 44 IAMs_20 IAMs_20 09 17 30.5
comp=Z,7µm,20.0s
WHAR Wooly Hollow 112.10 48 IAMs_20 IAMs_20 09 23 28.4
comp=Z,7µm,19.0s
J45A Montague 112.11 38 IAMs_20 IAMs_20 09 25 04.3
comp=Z,7µm,18.0s
M44A Midewin, Midew 112.15 40 IAMs_20 IAMs_20 09 27 37.6
comp=Z,6µm,19.0s
WLAR White Oak Lake 112.16 50 IAMs_20 IAMs_20 09 23 49.3
comp=Z,6µm,19.0s
NRS Narsarsuaq 112.16 5 IAMs_20 IAMs_20 09 21 56.4
comp=Z,6µm,21.0s
FUR Furstenfeldbru 112.17 328 *e*L L 09 24 29.7
comp=Z,11µm,21.8s
TNS Taunus Mts 112.23 331 *e*L L 09 23 31.9
comp=Z,8µm,20.9s
GLMI Grayling 112.38 36 IAMs_20 IAMs_20 09 28 51.3
comp=Z,7µm,18.0s
ABTA Abfaltersbach 112.39 327 *i* pPdiff **Pdif 08 31 17.3 +1.3**
comp=Z,19nm,1.4s
ABTA *i* pPKiKP **PKiKP 08 35 16.6 +4.9**
comp=Z,11nm,1.0s
SCTE Santa Cesarea 112.49 318 IAMs_20 IAMs_20 09 28 59.4
comp=Z,6µm,20.0s
WATA Walderalm 112.53 328 *e*pPdiff **Pdif 08 31 21.3 +4.7**
comp=Z,19nm,1.7s
WATA *i* pPKiKP **PKiKP 08 35 17.2 +5.1**
comp=Z,16nm,1.5s
WATA *i* PP **PP 08 36 02.2 +4.4**
comp=Z,55nm,1.6s
WATA Walderalm 112.53 328 *i* PKKPbc PKKPbc 08 46 02.1 -0.7
comp=Z,11nm,1.1s
WTTA Wattenberg 112.54 328 *i* pPdiff **Pdif 08 31 19.0 +2.3**
comp=Z,24nm,1.6s
WTTA *i* pPKiKP **PKiKP 08 35 16.1 +4.0**
comp=Z,40nm,1.8s
WTTA Wattenberg 112.54 328 *i* PKKPbc PKKPbc 08 46 03.4 +0.6
comp=Z,14nm,1.0s
D48A Paudash Townsh 112.55 33 PKiKP **PKiKP 08 35 11.2 -0.7**
baz=309
LCAR Lake Charles 112.58 47 IAMs_20 IAMs_20 09 19 26.1
comp=Z,8µm,19.0s
AHRW Bad Neuenahr-A 112.65 332 *e*PP **PP 08 36 00.7 +2.4**
Q44A Meyer Farm, Va 112.76 43 IAMs_20 IAMs_20 09 26 24.0
comp=Z,5µm,18.0s
MOTA Moosalm 112.77 328 *i* pPKiKP **PKiKP 08 35 19.4 +6.9**
comp=Z,11nm,1.6s
MOTA Moosalm 112.77 328 *i* PKKPbc PKKPbc 08 46 01.9 -0.1
comp=Z,27nm,1.3s
SQTA Sankt Quirin 112.80 328 *i* pPdiff **Pdif 08 31 21.2 +3.5**
comp=Z,15nm,1.6s
SQTA *i* pPKiKP **PKiKP 08 35 15.5 +3.0**
comp=Z,12nm,1.0s
RETA Reutte 112.86 328 *i* PP **PP 08 36 04.7 +4.6**
comp=Z,41nm,1.9s
RETA Reutte 112.86 328 *i* PKKPbc PKKPbc 08 46 01.5 0.0
comp=Z,18nm,1.3s
I47A Gladwin 112.91 37 IAMs_20 IAMs_20 09 23 44.3
comp=Z,6µm,19.0s
TLIG Tlapa 112.92 68 IAMs_20 IAMs_20 09 19 22.8
comp=Z,6µm,18.0s
ESK Eskdalemuir 113.07 341 IAMs_20 IAMs_20 09 29 51.7
comp=Z,8µm,19.0s
CCAR Cane Creek 113.07 49 IAMs_20 IAMs_20 09 21 49.4
comp=Z,6µm,19.0s
J47A Sunmer 113.17 37 IAMs_20 IAMs_20 09 22 01.3
comp=Z,8µm,20.0s
HBAR Harrisburg 113.17 47 IAMs_20 IAMs_20 09 22 36.8
comp=Z,7µm,21.0s
FETA Feichten 113.18 328 *i* pPdiff **Pdif 08 31 22.3 +2.8**
comp=Z,11nm,1.7s
FETA *i* pPKiKP **PKiKP 08 35 13.8 +0.6**
comp=Z,15nm,1.3s
FETA Feichten 113.18 328 *i* PKKPbc PKKPbc 08 46 01.3 +0.7
comp=Z,10nm,0.9s
S44A Carbondale 113.18 44 IAMs_20 IAMs_20 09 18 15.4
comp=Z,6µm,20.0s
SIUC Southern Illin 113.19 44 IAMs_20 IAMs_20 09 18 15.5
comp=Z,6µm,21.0s
VNA2 Neumayer--Watz 113.20 190 PKiKP **PKiKP 08 35 13.3 +0.9**
baz=116,slow=1.2
H48A Harrisville 113.20 35 IAMs_20 IAMs_20 09 23 00.9
comp=Z,7µm,20.0s
441A DeRidder 113.28 53 IAMs_20 IAMs_20 09 28 48.5
comp=Z,6µm,18.0s
VNA3 Neumayer Olymp 113.28 189 PKiKP **PKiKP 08 35 13.0 +0.5**
SFIN Lafayette 113.29 41 IAMs_20 IAMs_20 09 21 12.8
comp=Z,6µm,21.0s
LPAR Lepanto 113.41 47 IAMs_20 IAMs_20 09 23 03.1
comp=Z,6µm,19.0s
DAVA Damuels 113.45 328 *i* pPdiff **Pdif 08 31 21.6 +0.8**
comp=Z,14nm,1.5s
DAVA *i* pPKiKP **PKiKP 08 35 18.5 +4.6**
comp=Z,7.3nm,1.4s
DAVA *i* PP **PP 08 35 57.1 -7.2**
comp=Z,70nm,1.8s
DAVA Damuels 113.45 328 *i* PKKPbc PKKPbc 08 46 00.3 +0.6
comp=Z,17nm,1.4s
OLIL Olney 113.46 43 IAMs_20 IAMs_20 09 22 58.7
comp=Z,7µm,19.0s
PVMO Portageville 113.47 46 IAMs_20 IAMs_20 09 21 04.4
comp=Z,7µm,20.0s
PENMO Penman 113.50 46 IAMs_20 IAMs_20 09 21 14.3
comp=Z,6µm,20.0s
BFO Black Forest 113.56 330 *e*PP **PP 08 36 09.4 +4.5**
BFO *e*L L 09 26 42.0
comp=Z,9µm,20.0s
VNA1 Neumayer--Stat 113.59 189 PKiKP **PKiKP 08 35 14.0 +0.9**
P46A Rosedale 113.61 42 IAMs_20 IAMs_20 09 20 33.4
comp=Z,7µm,20.0s
342A Flagon Creek P 113.71 52 IAMs_20 IAMs_20 09 18 51.8
comp=Z,6µm,20.0s
HICK Hickman 113.75 46 IAMs_20 IAMs_20 09 25 06.7
comp=Z,8µm,19.0s
J48A Bridge Port 113.75 37 IAMs_20 IAMs_20 09 21 05.7
comp=Z,6µm,19.0s
143A Socs Landing, 113.87 50 IAMs_20 IAMs_20 09 25 55.7
comp=Z,7µm,18.0s
MET Memphis--Engin 113.90 47 IAMs_20 IAMs_20 09 20 03.0
comp=Z,5µm,20.0s
I49A Point Hope 113.94 36 IAMs_20 IAMs_20 09 22 44.6
comp=Z,8µm,20.0s
HALT Halls 113.96 46 IAMs_20 IAMs_20 09 19 38.5
comp=Z,8µm,20.0s
TIP Timpagrande 114.08 318 IAMs_20 IAMs_20 09 29 38.5
comp=Z,7µm,22.0s
MBAR Mbarara 114.13 272 PP **PP 08 36 07.3 -3.6**
comp=Z,2.2nm,0.3s,baz=114,slow=6.6,SNR=4.1
USIN University of 114.14 43 IAMs_20 IAMs_20 09 20 08.8
comp=Z,8µm,21.0s
BLO Bloomington 114.30 42 IAMs_20 IAMs_20 09 20 54.6
comp=Z,7µm,20.0s
INTR Introdacqua 114.37 322 IAMs_20 IAMs_20 09 28 12.7
comp=Z,7µm,22.0s
AAM Ann Arbor 114.41 38 IAMs_20 IAMs_20 09 21 08.1
comp=Z,7µm,20.0s
W45A Hickory Valley 114.43 47 IAMs_20 IAMs_20 09 19 44.9
comp=Z,7µm,20.0s
PAOL Paolisi 114.51 321 IAMs_20 IAMs_20 09 29 09.5
comp=Z,6µm,19.0s
K50A Casco 114.75 37 IAMs_20 IAMs_20 09 19 56.9
comp=Z,6µm,20.0s
VBMS Vicksburg 114.75 50 IAMs_20 IAMs_20 09 20 44.1
comp=Z,6µm,19.0s
P48A Milroy 114.87 41 IAMs_20 IAMs_20 09 20 33.5
comp=Z,6µm,21.0s
WCI Wyandotte Cave 114.94 43 IAMs_20 IAMs_20 09 22 39.7
comp=Z,7µm,20.0s
T47A Sharon Grove 115.02 44 IAMs_20 IAMs_20 09 28 04.1
comp=Z,6µm,18.0s
CEL Celeste 115.14 318 IAMs_20 IAMs_20 09 30 18.5
comp=Z,5µm,20.0s
SADO Sadowa 115.51 33 IAMs_20 IAMs_20 09 22 35.6
comp=Z,7µm,20.0s
146A Union 115.67 49 IAMs_20 IAMs_20 09 21 14.4
comp=Z,6µm,20.0s
CASP Castiglione de 115.73 324 IAMs_20 IAMs_20 09 29 21.5
comp=Z,8µm,20.0s
346A Big Creek Wild 115.92 51 IAMs_20 IAMs_20 09 24 06.1
comp=Z,5µm,19.0s
R50A Paris 116.22 42 IAMs_20 IAMs_20 09 20 04.5
comp=Z,7µm,20.0s
M52A Chesterland 116.24 37 IAMs_20 IAMs_20 09 22 42.6
comp=Z,8µm,20.0s
P51A Williamsport 116.38 40 IAMs_20 IAMs_20 09 25 29.7
comp=Z,8µm,20.0s
Q51A Peebles 116.45 41 IAMs_20 IAMs_20 09 24 28.5
comp=Z,5µm,19.0s
DELO Deloro Mine 116.50 33 IAMs_20 IAMs_20 09 21 09.7
comp=Z,8µm,21.0s
ERPA Erie 116.70 36 IAMs_20 IAMs_20 09 22 30.6
comp=Z,7µm,20.0s
SWET Sewanee 116.73 45 IAMs_20 IAMs_20 09 18 40.6
comp=Z,7µm,21.0s
ALLY Alegheny Colle 116.90 37 IAMs_20 IAMs_20 09 24 36.8
comp=Z,7µm,20.0s
MATP Matopo 116.98 250 PKP **PKiKP 08 35 22.3 +1.0**
comp=Z,3.8nm,0.8s,baz=130,slow=5.6,SNR=3.9
CORL Corleone 117.06 318 IAMs_20 IAMs_20 09 33 19.3
comp=Z,4µm,20.0s
Y49A Blount Mountai 117.06 47 IAMs_20 IAMs_20 09 22 31.4
comp=Z,7µm,20.0s
S51A Beattyville 117.06 42 IAMs_20 IAMs_20 09 21 22.7
comp=Z,7µm,20.0s
W50A Signal Mountai 117.17 45 IAMs_20 IAMs_20 09 26 49.3
comp=Z,7µm,20.0s
M54A Oil Creek Stat 117.27 36 IAMs_20 IAMs_20 09 22 17.6
comp=Z,7µm,21.0s
CLTB Caltabellotta 117.29 318 IAMs_20 IAMs_20 09 31 32.4
comp=Z,8µm,20.0s
WVNY West Valley, N 117.32 35 IAMs_20 IAMs_20 09 22 49.8
comp=Z,7µm,21.0s
N54A Moraine State 117.41 37 IAMs_20 IAMs_20 09 24 53.6
comp=Z,7µm,20.0s
MMNY Mt. Morris Dam 117.51 34 IAMs_20 IAMs_20 09 22 49.7
comp=Z,7µm,21.0s
SSB Saint Sauveur 117.54 330 IAMs_20 IAMs_20 09 29 49.9
comp=Z,7µm,20.0s
CPCT Cooper Cave 117.60 44 IAMs_20 IAMs_20 09 30 01.4
comp=Z,6µm,19.0s
J56A Wolcott 117.73 33 IAMs_20 IAMs_20 09 22 35.4
comp=Z,8µm,21.0s
R53A Hurricane 117.75 40 IAMs_20 IAMs_20 09 22 17.7

comp=Z,8µm,22.0s
250A Grady 118.07 49 IAMs_20 IAMs_20 09 27 07.7
comp=Z,7µm,20.0s
L56A Greenwood 118.09 35 IAMs_20 IAMs_20 09 23 10.1
comp=Z,7µm,21.0s
M56A Emporium 118.15 36 IAMs_20 IAMs_20 09 33 25.9
comp=Z,7µm,19.0s
MCWV Mont Chateau 118.29 38 IAMs_20 IAMs_20 09 27 27.0
comp=Z,4µm,19.0s
FRNY Flat Rock 118.38 30 IAMs_20 IAMs_20 09 24 45.0
comp=Z,7µm,20.0s
S54A Dingess, Beckl 118.47 41 IAMs_20 IAMs_20 09 23 52.7
comp=Z,7µm,20.0s
NCB Newcomb 118.66 31 IAMs_20 IAMs_20 09 24 26.6
comp=Z,7µm,20.0s
D62A Allapoint, All 118.83 26 **PKPdf 08 35 21.8 -2.1**
D62A IAMs_20 IAMs_20 09 22 17.5
comp=Z,8µm,22.0s
M57A Sunshine Farm, 118.85 35 IAMs_20 IAMs_20 09 22 20.4
comp=Z,6µm,20.0s
U54A Nelsons Funny 118.86 42 IAMs_20 IAMs_20 09 32 30.4
comp=Z,7µm,19.0s
SSPA Standing Stone 118.86 36 **PKPdf 08 35 21.2 -3.0**
J59A Piesco 118.87 32 **PKPdf 08 35 21.1 -3.1**
J59A IAMs_20 IAMs_20 09 24 25.2
comp=Z,8µm,20.0s
BG3 Lake Jocassee 118.94 44 IAMs_20 IAMs_20 09 23 29.0
comp=Z,5µm,20.0s
451A Vernon 119.11 50 IAMs_20 IAMs_20 09 30 22.5
comp=Z,5µm,18.0s
VT1 Waterbury 119.15 30 IAMs_20 IAMs_20 09 24 59.8
comp=Z,7µm,20.0s
352A Blakely 119.31 49 IAMs_20 IAMs_20 09 24 18.6
comp=Z,6µm,20.0s
BLA Blacksburg 119.38 41 IAMs_20 IAMs_20 09 28 04.2
comp=Z,5µm,19.0s
GOGA Godfrey 119.40 46 IAMs_20 IAMs_20 09 24 01.5
comp=Z,7µm,20.0s
N58A Sunbury 119.41 35 IAMs_20 IAMs_20 09 22 37.2
comp=Z,8µm,22.0s
L59A Walton 119.45 33 IAMs_20 IAMs_20 09 33 02.9
comp=Z,7µm,19.0s
G62A West of Eustis 119.58 28 IAMs_20 IAMs_20 09 30 00.6
comp=Z,5µm,20.0s
PQI Presque Isle 119.59 26 IAMs_20 IAMs_20 09 23 01.6
comp=Z,7µm,21.0s
LBNH Lisbon 119.63 30 IAMs_20 IAMs_20 09 25 14.1
comp=Z,5µm,20.0s
V55A Taylorsville 119.64 42 IAMs_20 IAMs_20 09 22 54.1
comp=Z,7µm,20.0s
H62A Milan 119.76 29 IAMs_20 IAMs_20 09 30 24.5
comp=Z,6µm,19.0s
TRY Troy 119.82 32 IAMs_20 IAMs_20 09 26 38.4
comp=Z,7µm,20.0s
HODGE Hodges 119.82 44 IAMs_20 IAMs_20 09 22 12.2
comp=Z,7µm,20.0s
F63A Nahmakanta, Br 119.87 27 IAMs_20 IAMs_20 09 32 59.1
comp=Z,5µm,18.0s
U56A King 119.91 41 IAMs_20 IAMs_20 09 23 28.1
comp=Z,7µm,20.0s
BATG Bathurst New B 119.92 24 IAMs_20 IAMs_20 09 33 04.2
comp=Z,6µm,20.0s
F64A Sherman 120.08 26 IAMs_20 IAMs_20 09 26 35.6
comp=Z,5µm,20.0s
MVL Millersville 120.17 36 IAMs_20 IAMs_20 09 24 43.4
comp=Z,8µm,20.0s
I62A Tamworth 120.19 30 IAMs_20 IAMs_20 09 25 29.9
comp=Z,6µm,20.0s
SDMD Soldier's Deli 120.26 37 IAMs_20 IAMs_20 09 24 50.9
comp=Z,4µm,20.0s
553A Crawfordville 120.31 50 IAMs_20 IAMs_20 09 24 44.2
comp=Z,6µm,21.0s
I63A Otisfield 120.42 29 IAMs_20 IAMs_20 09 28 02.1
comp=Z,5µm,20.0s
ODNJ Ogdensburg 120.44 34 IAMs_20 IAMs_20 09 22 40.2
comp=Z,7µm,22.0s
WVL Waterville 120.48 28 IAMs_20 IAMs_20 09 32 15.3
comp=Z,6µm,19.0s
K62A Royalston 120.61 31 IAMs_20 IAMs_20 09 25 44.2
comp=Z,7µm,20.0s
PSUB Penn St. - Bra 120.74 35 IAMs_20 IAMs_20 09 29 20.3
comp=Z,6µm,20.0s
BIRD Birdtown, Kers 120.83 43 IAMs_20 IAMs_20 09 28 22.7
comp=Z,7µm,19.0s
KEST Kesra 120.90 318 IAMs_20 IAMs_20 09 33 10.8
comp=Z,6µm,20.0s
G65A Princeton 120.94 26 IAMs_20 IAMs_20 09 28 51.4
comp=Z,5µm,20.0s
V58A Windy Hill, Pi 121.06 41 IAMs_20 IAMs_20 09 22 24.7
comp=Z,7µm,21.0s
HRV Adam Dziewonsk 121.07 31 IAMs_20 IAMs_20 09 25 28.4
comp=Z,6µm,20.0s
WSPT Westport, CT 121.08 33 IAMs_20 IAMs_20 09 27 00.1
comp=Z,7µm,19.0s
DRLN Deer Lake 121.20 17 IAMs_20 IAMs_20 09 27 25.5
comp=Z,6µm,21.0s
WES Weston 121.28 31 IAMs_20 IAMs_20 09 25 44.9
comp=Z,7µm,20.0s
P61A Hammonton 121.29 35 IAMs_20 IAMs_20 09 23 52.8
comp=Z,7µm,21.0s
BCX Boston College 121.39 31 IAMs_20 IAMs_20 09 25 48.9
comp=Z,6µm,20.0s
LMN Caledonia Moun 121.59 24 IAMs_20 IAMs_20 09 26 29.2
comp=Z,7µm,20.0s
X58A Rowland 121.64 43 IAMs_20 IAMs_20 09 23 24.0
comp=Z,7µm,20.0s
NHSC New Hope 121.89 44 IAMs_20 IAMs_20 09 25 42.0
comp=Z,8µm,22.0s
257A Skidaway Islan 121.91 46 IAMs_20 IAMs_20 09 21 42.8
comp=Z,8µm,22.0s
SUR Sutherland 122.08 236 PKP **PKiKP 08 35 31.6 +0.6**
comp=Z,12nm,1.1s,baz=138,slow=23,SNR=3.2
SUR Sutherland 122.08 236 **PKPdf 08 35 29.2 -1.6**
SNET Serv Nac Est T 122.63 69 IAMs_20 IAMs_20 09 26 09.4
comp=Z,4µm,19.0s
DWPF Disney Wildern 123.62 50 IAMs_20 IAMs_20 09 27 07.8
comp=Z,6µm,20.0s
TGUH Tegucigalpa,Un 124.33 68 IAMs_20 IAMs_20 09 20 58.2
comp=Z,4µm,20.0s
PAYG Puerto Ayora 124.60 86 IAMs_20 IAMs_20 09 16 37.8
comp=Z,6µm,21.0s
USHA Ushuaia 124.78 157 PKP **PKiKP 08 35 36.1 +0.8**
comp=Z,49nm,0.6s,baz=340,slow=2.6,SNR=3.6
060A Indiantown 124.98 51 IAMs_20 IAMs_20 09 27 59.9
comp=Z,6µm,21.0s
MG01 Puerto William 125.01 158 IAMs_20 IAMs_20 09 25 03.5
comp=Z,5µm,20.0s
UCM Universidad Co 125.07 331 PP PP 08 37 29.1 +4.8
UCM Universidad Co 125.07 331 PKS 08 38 43.5
061Z Ochoppi 125.13 52 IAMs_20 IAMs_20 09 32 51.3
comp=Z,6µm,19.0s
PBRG Braganca 125.50 334 *e*PP PP 08 37 30.0 +3.0
ESDC Sonseca Array 125.91 331 PKP **PKiKP 08 35 39.8 +1.5**
comp=Z,1.3nm,0.7s,baz=33,slow=3.1,SNR=6.6
ESDC PP **PP 08 37 30.4 +0.6**
comp=Z,8.6nm,1.2s,baz=35,slow=6.1,SNR=6.4
ESDC PKKPbc **PKKPbc 08 45 15.1 +1.6**
comp=Z,1.5nm,0.8s,baz=228,slow=3.4,SNR=6.2
MATN Matagalpa 125.92 69 **PKPdf 08 35 35.2 -3.3**
CART Cartagena 125.94 327 PP PP 08 37 33.9 +3.8
CART Cartagena 125.94 327 IAMs_20 IAMs_20 09 33 30.5
comp=Z,6µm,21.0s
PGAV Gavieira, Arco 126.01 335 *e*PP PP 08 37 35.0 +4.6
PGAV Gavieira, Arco 126.01 335 *e*SS SS 08 54 40.0 +8.9
PGAV Gavieira, Arco 126.01 335 *e*LQ LQ 09 12 02.1
PGAV *e*LR LR 09 20 11.5
comp=Z,6µm,20.0s
PCAB Cabril 126.12 335 *e*PP PP 08 37 35.6 +4.5
MVO Moncorvo 126.15 334 *e*PP PP 08 37 34.3 +3.0
MVO Moncorvo 126.15 334 *e*SS SS 08 54 44.1 +11
MVO Moncorvo 126.15 334 *e*LQ LQ 09 12 36.9
MVO *e*LR LR 09 20 22.7
comp=Z,8µm,20.0s
PVRL Vila Real 126.35 335 *e*PP PP 08 37 39.0 +6.4
PVIS Viseu 126.89 334 *e*PP PP 08 37 42.0 +5.8
MTE Manteigas 127.00 334 *e*PP PP 08 37 42.2 +5.3
MTE Manteigas 127.00 334 *e*SS SS 08 54 52.4 +9.0
MTE Manteigas 127.00 334 *e*LQ LQ 09 16 13.7
MTE *e*LR LR 09 20 48.1
comp=Z,9µm,18.0s
TSUM Tsumeb 127.33 251 PKP **PKiKP 08 35 42.6 +0.9**
comp=Z,4.5nm,0.9s,baz=115,slow=2.1,SNR=4.5
TSUM Tsumeb 127.33 251 **PKPdf 08 35 39.4 -1.8**
PCBR Castelo Branco 127.42 333 *e*PP PP 08 37 43.9 +4.2
COI Coimbra 127.53 334 *e*PP PP 08 37 45.7 +5.3
COI Coimbra 127.53 334 IAMs_20 IAMs_20 09 38 22.8
comp=Z,6µm,19.0s

JTS Las Juntas de 127.60 72 IAMs_20 IAMs_20 09 20 46.2
comp=Z,6µm,20.0s
PCAS Casmilo, Conde 127.70 334 *e*PP PP 08 37 45.7 +4.2
PCAS Casmilo, Conde 127.70 334 *e*SS SS 08 55 03.7 +12
PMRV Marv??o 127.72 333 *e*PP PP 08 37 44.0 +2.3
PMRV Marv??o 127.72 333 *e*SS SS 08 55 01.0 +8.6
PMRV Marv??o 127.72 333 *e*LQ LQ 09 16 09.7
PMRV *e*LR LR 09 21 02.6
comp=Z,9µm,20.0s
PESTR Estremoz 128.26 333 *e*SS SS 08 55 10.3 +11
PSBE So Bento 128.27 334 *e*PP PP 08 37 50.4 +5.1
PSBE So Bento 128.27 334 *e*SS SS 08 55 11.3 +12
EMAL Malaga-Limoner 128.38 329 PP PP 08 37 45.1 -1.0
EMAL Malaga-Limoner 128.38 329 PKS PKSbc 08 39 06.1 +1.9
PMTG Montargil 128.39 333 *e*PP PP 08 37 49.9 +3.9
PMTG Montargil 128.39 333 *e*SS SS 08 55 15.3 +15
MELI Melilla 128.68 326 PP PP 08 37 48.5 +0.3
MELI Melilla 128.68 326 PKS PKSbc 08 39 06.1 +0.9
EVO Evora 128.73 333 PP PP 08 37 50.9 +2.6
EVO Evora 128.73 333 PKS PKSbc 08 39 08.8 +3.6
EVO Evora 128.73 333 *e*PP PP 08 37 52.8 +4.5
PMAFR Mafra 128.94 334 *e*PP PP 08 37 55.4 +5.7
PMAFR Mafra 128.94 334 *e*SS SS 08 55 17.5 +10
PBEJ Beja 129.07 332 *e*PP PP 08 37 56.3 +5.7
LIS Lisbon 129.09 334 *e*PP PP 08 37 50.2 -0.3
LIS AMS AMS 09 36 04.1
comp=Z,8µm,21.8s
PNCL Nicolau / Gran 129.31 333 *e*PP PP 08 37 56.6 +4.5
PNCL Nicolau / Gran 129.31 333 *e*SS SS 08 55 24.2 +12
MESJ Messejana 129.39 332 *e*PKPdf **PKPdf 08 35 43.3 -1.2**
MESJ *e*PP **PP 08 37 52.3 -0.3**
MESJ *e*SS SS 08 55 14.6 +1.6
MESJ AMS AMS 09 34 28.0
comp=Z,8µm,25.3s
MESJ Messejana 129.39 332 *e*PKIKP **PKPdf 08 35 43.2 -1.2**
MESJ *e* 08 37 52.0
MESJ *e*SS SS 08 55 14.6 +1.6
PCVE Castro Verde 129.47 332 *e*PP PP 08 37 56.8 +3.6
PCVE Castro Verde 129.47 332 *e*SS SS 08 55 25.6 +12
PVAQ Vaqueiros 129.51 332 *e*PP PP 08 37 58.4 +5.0
PVAQ Vaqueiros 129.51 332 *e*SS SS 08 55 20.8 +6.3
PVAQ Vaqueiros 129.51 332 *e*LQ LQ 09 14 21.2
PVAQ *e*LR LR 09 19 53.9
comp=Z,8µm,18.0s
PVLZ Peæn de 129.52 327 PP PP 08 37 53.6 0.0
PVLZ Peæn de 129.52 327 PKS **PKSbc 08 39 09.3 +1.4**
SFS San Fernando 129.52 330 PP PP 08 37 56.4 +2.9
SFS San Fernando 129.52 330 PKS **PKSbc 08 39 12.1 +4.3**
SFS San Fernando 129.52 330 IAMs_20 IAMs_20 09 35 21.8
comp=Z,6µm,21.0s
CEU Ceuta 129.53 329 PP PP 08 37 55.8 +2.1
CEU Ceuta 129.53 329 PKS **PKSbc 08 39 10.7 +2.8**
PBDV Barranco-do-Ve 129.74 332 *e*PP PP 08 37 59.5 +4.5
PBDV Barranco-do-Ve 129.74 332 *e*SS SS 08 55 28.8 +11
MORF Marmelete 130.02 332 *e*PKPdf **PKPdf 08 35 44.5 -1.3**
MORF *e*PP **PP 08 37 56.4 -0.4**
MORF *e*SS SS 08 55 22.4 +1.5
MORF AMS AMS 09 34 34.2
comp=Z,8µm,22.0s
MORF Marmelete 130.02 332 *e*PKIKP **PKPdf 08 35 44.4 -1.3**
MORF *e* 08 37 56.4
MORF *e*SS SS 08 55 22.4 +1.5
MORF Marmelete 130.02 332 *e*SS SS 08 55 35.0 +14
PFVI Vila Bisbo 130.24 332 *e*PP PP 08 38 03.3 +5.1
PFVI Vila Bisbo 130.24 332 *e*SS SS 08 55 43.0 +19
IFR Ifrane 131.21 326 PKS **PKSbc 08 39 18.6 +4.1**
LL01 San Ignacio de 131.27 143 IAMs_20 IAMs_20 09 28 34.0
comp=Z,3µm,18.0s
AVE Averroes 132.61 328 PP PP 08 38 15.6 +2.0
AVE Averroes 132.61 328 PKS **PKSbc 08 39 22.6 +3.5**
GTBY Guantanamo Bay 132.69 55 IAMs_20 IAMs_20 09 34 49.2
comp=Z,5µm,20.0s
PLCA Paso Flores 133.37 143 PKP **PKiKP 08 35 53.7 +0.5**
comp=Z,24nm,0.9s,baz=252,slow=4.0,SNR=27
BI03 Tigo 133.99 137 IAMs_20 IAMs_20 09 24 02.6
comp=Z,4µm,20.0s
GRTK Grand Turk 135.03 51 IAMs_20 IAMs_20 09 37 50.2
comp=Z,5µm,20.0s
BI02 San Fabin de 135.27 138 IAMs_20 IAMs_20 09 25 17.5
comp=Z,5µm,20.0s
GO05 Huala 135.70 135 IAMs_20 IAMs_20 09 25 25.2
comp=Z,4µm,20.0s
PIZC Pizarro, Choco 136.27 76 *e*P **PKPdf 08 35 57.8 -0.2**
SDDR Presa de Saban 136.28 54 IAMs_20 IAMs_20 09 40 41.8
comp=Z,5µm,19.0s
BO02 Sierra Bellavi 136.62 136 IAMs_20 IAMs_20 09 32 50.5
comp=Z,4µm,18.0s
DBBC Dabeiba 136.82 73 *e*P **PKiKP 08 36 00.6 -0.4**
SJCC San Jacinto, C 136.86 68 *e*P **PKPdf 08 35 56.2 -3.0**
PMPST Porto Santo, M 136.90 337 *e*PP PP 08 38 42.3 +1.8
GCUF Volcan Galeras 137.10 81 *e*P **PKPdf 08 36 00.2 0.0**
UREC San Cristobal Ur 137.24 71 *e*P **PKPdf 08 35 59.5 -0.4**
CBOC Ciudad Bolivar 137.33 74 *e*P **PKPdf 08 35 59.2 -1.0**
HORQ Saladito 137.34 78 *e*P **PKPdf 08 36 01.2 +0.8**
MT05 Renca 137.38 134 IAMs_20 IAMs_20 09 32 41.9
comp=Z,4µm,18.0s
CRUC La Cruz 137.42 81 *e*P **PKiKP 08 36 01.8 -0.7**
PMOZ Porto Moniz, M 137.46 338 *e*SS SS 08 57 18.5 +28
PMOZ Porto Moniz, M 137.46 338 *e*LR LR 09 25 42.3
comp=Z,4µm,20.0s
YOTC Yotoco, Valle 137.49 77 *e*P PKPdf 08 35 51.4 -9.1
PEL Peldehue 137.55 134 IAMs_20 IAMs_20 09 28 31.5
comp=Z,5µm,20.0s
SOTA Rioblanco 137.64 80 *e*P **PKPdf 08 36 00.1 -1.1**
PCON Cinco Dias 137.81 79 *e*P **PKiKP 08 36 02.8 -0.8**
ZARC Zaragoza, Cauc 137.95 71 *e*P PKPdf 08 35 46.9 -14
PUAC Puerto Asis, P 137.98 82 *e*P **PKPdf 08 35 58.8 -2.4**
GUY2C Guyana, Caldas 138.12 75 *e*P **PKPdf 08 35 59.5 -2.5**
RREF El Recreo 138.23 75 *e*P **PKPdf 08 35 58.6 -3.9**
SMLC San Martn de 138.26 69 *e*P **PKPdf 08 36 01.2 -0.5**
ANIL Santa Ana 138.28 76 *e*P **PKPdf 08 36 01.2 -0.9**
CO02 Combarbal 138.28 131 IAMs_20 IAMs_20 09 23 27.0
comp=Z,5µm,21.0s
NORC Norcasia 138.51 74 *e*P **PKPdf 08 36 01.2 -1.1**
ORTC Ortega, Tolima 138.57 77 *e*P **PKPdf 08 35 57.1 -5.3**
PTBC PUERTO BERRIO 138.62 73 *e*P **PKPdf 08 35 54.9 -7.5**
TOC2 Torodi Ar. Sit 138.64 298 IAMs_20 IAMs_20 09 48 28.3
comp=Z,4µm,21.0s
TOC3 Torodi Ar. Sit 138.65 298 IAMs_20 IAMs_20 09 48 28.5
comp=Z,3µm,20.0s
TOC1 Torodi Ar. Sit 138.65 298 IAMs_20 IAMs_20 09 48 37.6
comp=Z,4µm,20.0s
TOA2 Torodi Ar. Sit 138.66 298 IAMs_20 IAMs_20 09 48 38.9
comp=Z,3µm,20.0s
TOB3 Torodi Ar. Sit 138.66 298 IAMs_20 IAMs_20 09 48 28.9
comp=Z,3µm,20.0s
TOA0 Torodi Ar. Sit 138.66 298 IAMs_20 IAMs_20 09 48 29.0
comp=Z,3µm,20.0s
TORD Torodi Ar. Bea 138.66 298 PKhKP PKPpre 08 35 54.4
comp=Z,2.5nm,1.1s,baz=50,slow=1.0,SNR=5.0
TORD PP **PP 08 38 54.0 +0.9**
comp=Z,10nm,1.1s,baz=66,slow=4.2,SNR=5.3
TORD Torodi Ar. Bea 138.66 298 PKPdf **PKPdf 08 36 00.7 -1.7**
BETC Betania 138.67 79 *e*P **PKPdf 08 35 56.0 -6.6**
TOC4 Torodi Ar. Sit 138.67 298 IAMs_20 IAMs_20 09 48 39.2
comp=Z,3µm,20.0s
TOC7 Torodi Ar. Sit 138.67 298 IAMs_20 IAMs_20 09 48 38.2
comp=Z,3µm,20.0s
TOB5 Torodi Ar. Sit 138.67 298 IAMs_20 IAMs_20 09 48 38.3
comp=Z,3µm,20.0s
TOB4 Torodi Ar. Sit 138.68 298 IAMs_20 IAMs_20 09 48 38.4
comp=Z,3µm,20.0s
CO03 El Pedregal 138.69 131 PKPdf **PKPdf 08 35 59.3 -2.9**
CO03 IAMs_20 IAMs_20 09 25 13.8
comp=Z,5µm,21.0s
TOC5 Torodi Ar. Sit 138.69 298 IAMs_20 IAMs_20 09 48 39.7
comp=Z,4µm,20.0s
GARC Garzon, Huila 138.72 79 *e*P **PKPdf 08 36 01.4 -1.5**
GO04 Tololo Observa 138.92 130 **PKPdf 08 35 59.7 -3.1**
PRAC Prado 138.97 77 *e*P **PKPdf 08 35 58.8 -4.3**
URIC Uribe, Colomb 139.08 64 *e*P **PKPdf 08 35 58.6 -4.6**
BRRC Barranca, Sant 139.15 71 *e*P **PKPdf 08 35 57.3 -6.0**
ROSC El Rosal 139.23 75 PKP **PKPdf 08 36 04.5 +0.5**
comp=Z,11nm,0.8s,baz=130,slow=11,SNR=7.7
ROSC El Rosal 139.23 75 *e*P **PKPdf 08 35 59.4 -4.6**
ROSC El Rosal 139.23 75 **PKPdf 08 36 00.1 -3.9**
ROSC IAMs_20 IAMs_20 09 27 33.8
comp=Z,4µm,20.0s
SPBC San Pablo de B 139.24 74 *e*P **PKPdf 08 36 00.8 -2.9**
PTLC Puerto Leguiza 139.79 82 *e*P **PKPdf 08 35 58.0 -6.5**
CHIC Chingaza 139.85 75 *e*P **PKPdf 08 36 01.8 -3.3**
AC05 El Transito 139.94 128 PKPdf **PKPdf 08 36 00.1 -4.5**
VILC Villavicencio, 140.02 76 *e*P **PKPdf 08 36 03.2 -1.9**

PAMC Pamplona, Colo 140.03 71 *e*P **PKiKP 08 36 10.2 +2.2**
RUSC La Rusia 140.12 73 *e*P **PKPdf 08 35 58.8 -6.9**
MACC Macarena, Meta 140.34 79 *e*P **PKPdf 08 35 59.5 -6.1**
GO03 Copiap 140.52 126 PKPdf **PKPdf 08 36 01.8 -3.7**
GO03 IAMs_20 IAMs_20 09 25 19.8
comp=Z,5µm,22.0s
SJG San Juan 140.81 51 *e*P PKPdf 08 35 57.3 -8.9
SJG San Juan 140.81 51 IAMs_20 IAMs_20 09 42 59.5
comp=Z,5µm,20.0s
HUMP Col San Antoni 141.03 51 **PKPdf 08 36 04.8 -1.8**
TAMC Tame, Arauca 141.17 72 *e*P **PKPdf 08 36 02.5 -4.6**
SDV Santo Domingo 141.41 67 *e*P PKPdf 08 35 58.0 -10
SDV Santo Domingo 141.41 67 IAMs_20 IAMs_20 09 30 48.2
comp=Z,3µm,21.0s
PTGC Puerto Gaitan, 141.50 75 *e*P PKPdf 08 35 58.3 -9.3
AC02 Maricunga 141.74 126 IAMs_20 IAMs_20 09 26 59.0
comp=Z,6µm,21.0s
PB10 IPOC Station P 141.86 120 IAMs_20 IAMs_20 09 28 26.0
comp=Z,4µm,20.0s
GO02 Mina Guanaco 142.06 123 IAMs_20 IAMs_20 09 28 46.6
comp=Z,5µm,20.0s
CDVI St. Croix 142.09 50 *e*P PKPdf 08 35 59.2 -9.3
PB04 IPOC Station P 142.62 119 **PKPdf 08 36 07.2 -2.4**
PB04 IAMs_20 IAMs_20 09 28 15.2
comp=Z,5µm,21.0s
PB15 IPOC Station P 142.90 120 IAMs_20 IAMs_20 09 31 24.5
comp=Z,5µm,19.0s
PB06 IPOC Station P 142.99 120 IAMs_20 IAMs_20 09 29 39.8
comp=Z,5µm,22.0s
PB07 IPOC Station P 143.05 118 IAMs_20 IAMs_20 09 28 27.7
comp=Z,5µm,22.0s
TA01 Diego Aracena 143.15 116 IAMs_20 IAMs_20 09 26 45.6
comp=Z,4µm,22.0s
SABA Saba 143.32 49 IAMs_20 IAMs_20 09 36 08.5
comp=Z,6µm,22.0s
PSGCX Pisagua 143.48 114 PKPbc 08 36 08.8 +0.4
PSGCX IAMs_20 IAMs_20 09 28 10.5
comp=Z,4µm,21.0s
PB12 IPOC Station P 143.56 113 IAMs_20 IAMs_20 09 28 10.7
comp=Z,5µm,20.0s
PB09 IPOC Station P 143.59 118 PKPbc 08 36 09.6 +1.0
PB09 IAMs_20 IAMs_20 09 28 45.0
comp=Z,6µm,21.0s
LVC Limon Verde 143.60 120 PKIKP PKPbc 08 36 10.0 +1.1
LVC Limon Verde 143.60 120 PKPbc 08 36 10.0 +1.1
LVC Limon Verde 143.60 120 IAMs_20 IAMs_20 09 30 08.0
comp=Z,5µm,21.0s
LVC Limon Verde 143.60 120 *i* P PKPbc 08 36 10.2 +1.2
AP01 Chacalluta 143.61 112 IAMs_20 IAMs_20 09 27 50.7
comp=Z,4µm,21.0s
PB01 IPOC Station P 143.62 117 PKPbc 08 36 08.6 -0.1
PB01 IAMs_20 IAMs_20 09 28 04.9
comp=Z,4µm,22.0s
BAUV El Baul 143.75 66 *e*P PKPab 08 36 07.1 -1.3
PB11 IPOC Station P 143.86 115 PKPbc 08 36 10.0 +0.5
SKI Saint Kitts 143.87 49 *e*P PKPab 08 36 00.8 -8.0
MNMC Minye Minye 144.09 114 PKPbc 08 36 11.3 +1.0
MNMC IAMs_20 IAMs_20 09 36 53.6
comp=Z,4µm,18.0s
PB08 IPOC Station P 144.20 116 **PKPdf 08 36 11.8 -0.9**
GO01 Chusmiza 144.30 115 PKPbc 08 36 11.6 +0.3
GO01 IAMs_20 IAMs_20 09 33 19.1
comp=Z,3µm,20.0s
ANWB Willy Bob 144.37 47 *e*P **PKPab 08 36 09.7 -0.8**
PB16 IPOC Station P 144.38 113 **PKPdf 08 36 12.8 -0.5**
PB16 IAMs_20 IAMs_20 09 28 59.5
comp=Z,4µm,20.0s
LPA La Plata 144.64 146 PKIKP **PKPab 08 36 03.9 -7.2**
LPA PP **PP 08 39 24.7 -3.6**
LPA PSP PSP 08 51 57.5
LPA SS SS 08 58 16.1 +1.1
MLYT Lee's Yard 144.66 49 *e*P **PKPab 08 36 10.2 -1.5**
ABD La Joyeuse, An 145.34 49 *e*P **PKPdf 08 36 15.1 +0.9**
CBE Ff, Capester 145.50 49 *e*P **PKPdf 08 36 11.5 -3.1**
TDBA Terre de Bas, 145.62 50 *e*P **PKPdf 08 36 13.8 -1.0**
MAGL Barre de l'ile 145.82 49 *e*P **PKPbc 08 36 15.5 -0.1**
MDVC Dominica, Viel 145.94 50 *e*P **PKPab 08 36 17.6 +1.2**
DWS Wesley 146.03 50 *e*P **PKPdf 08 36 08.5 -7.0**
LPAZ La Paz 146.15 110 PKPbc **PKPbc 08 36 17.7 +0.3**
comp=Z,66nm,0.5s,baz=1.1,slow=4.6,SNR=211
LPAZ La Paz 146.15 110 **PKPdf 08 36 16.8 +0.4**
LPAZ La Paz 146.15 110 *i* P **PKPab 08 36 18.4 +0.4**
AZAP Zapla 146.18 125 *i* P **PKPab 08 36 17.3 -0.1**
FDF Fort de France 146.66 51 *e*P **PKPdf 08 36 16.3 -0.3**
FDF Fort de France 146.66 51 IAMs_20 IAMs_20 09 46 12.7
comp=Z,4µm,20.0s
YJA Yavi 146.67 121 *i* P **PKPab 08 36 19.7 0.0**
BIM Bigot 146.86 51 *e*P **PKPdf 08 36 17.1 +0.2**
MPOM Morne Pois Mar 147.06 51 *e*P **PKPdf 08 36 17.8 +0.6**
DBIC Dimbokro 147.20 293 PKP2 **PKPdf 08 36 18.3 +0.8**
DBIC Dimbokro 147.20 293 **PKPdf 08 36 18.3 +0.8**
KIC Kosan Boka 147.21 292 *e*P **PKPbc 08 36 19.2 -0.6**
comp=Z,2µm,2.4s
SLBI Saint Lucia, B 147.23 52 *e*P **PKPbc 08 36 19.1 -0.6**
SLAC Saint Lucia, A 147.36 52 *e*P **PKPbc 08 36 19.1 -1.0**
TIC Toumodi 147.36 293 *e*P **PKPbc 08 36 21.0 +0.8**
MCLT Moule a Chique 147.44 52 *e*P **PKPbc 08 36 19.6 -0.7**
SVB Belmont 147.45 53 *e*P **PKPdf 08 36 17.4 -0.5**
SVB Belmont 147.45 53 **PKPbc 08 36 20.9 +0.6**
SVB IAMs_20 IAMs_20 09 35 22.8
comp=Z,5µm,22.0s
LIC Lamto 147.53 292 *e*P **PKPbc 08 36 21.6 +0.9**
comp=Z,899nm,1.8s
SVCV St. Vincent, C 147.53 53 *e*P **PKPdf 08 36 17.1 -1.0**
GRHS Sauteurs 147.72 55 *e*P **PKPbc 08 36 20.6 -0.5**
GCMP Grenada, Carri 147.75 54 *e*P **PKPdf 08 36 16.3 -2.0**
GRGR Grenville 147.76 55 *e*P **PKPbc 08 36 21.1 -0.2**
GRGR Grenville 147.76 55 IAMs_20 IAMs_20 09 43 45.6
comp=Z,5µm,20.0s
ORIV Oritupano 147.82 62 *e*P **PKPdf 08 36 16.6 -1.9**
GUIV Guiria 148.07 58 *e*P **PKPdf 08 36 13.8 -5.1**
TRN Trinidad (W) 148.76 57 *e*P **PKPbc 08 36 23.3 -0.5**
BBGH Gun Hill 148.85 51 *e*P **PKPbc 08 36 24.5 +0.5**
TOSP Speyside 149.13 55 *e*P **PKiKP 08 36 25.7 -0.4**
TOSP Speyside 149.13 55 IAMs_20 IAMs_20 09 41 24.9
comp=Z,5µm,22.0s
YCA YACYRETA 150.63 138 *i* P **PKPdf 08 36 23.3 +0.6**
SAML Samuel 152.00 97 PKIKP **PKPdf 08 36 25.9 +0.8**
SAML Samuel 152.00 97 **PKPdf 08 36 25.9 +0.8**
SAML Samuel 152.00 97 IAMs_20 IAMs_20 09 35 31.0
comp=Z,5µm,20.0s
SPB Sao Paulo 159.16 146 **PKPdf 08 36 33.1 -1.3**
BDFB Brasilia 164.31 127 PKP **PKPdf 08 36 41.0 +0.9**
comp=Z,11nm,1.0s,baz=304,slow=1.0,SNR=10
BDFB PKPab **PKPab 08 37 35.3 +1.2**
comp=Z,18nm,0.9s,baz=277,slow=4.9,SNR=3.0
BDFB Brasilia 164.31 127 PKIKP **PKPdf 08 36 41.0 +0.9**
BDFB Brasilia 164.31 127 **PKPdf 08 36 37.1 -3.0**
BDFB PKPab **PKPab 08 37 33.2 -0.9**

NEIC ***15*** *08:26:25.1±1.7,20.5S±0.1×178.1W±0.1, h503km±6km, mb4.7/70, Error ellipse: s-maj=16.8km s-min=13.2km az=127.0*
IDC ***15*** *08:26:30.1±2.2,20.51S×178.33W, h548km±24km, mb3.8/18, mb1 4.0/19, mb1mx3.7/44, mbtmp4.7/19, Error ellipse: s-maj=19.0km s-min=11.2km az=148.0*
ISC 15 08:26:27.6±0.4,20.58S±0.07×178.15W±0.07, h534km, n225,σ1°08/235, mb4.6/54, 34C-3D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.58**	**308**	P	**P**	**08 27 53.3**	**+0.2**
NIUE	**Niue**	**7.88**	**80**	P	**P**	**08 28 20.8**	**-3.0**
RAO	**Raoul Island**	**8.64**	**179**	P	**P**	**08 28 29.7**	**-1.4**
AFI	**Afiamalu**	**9.00**	**44**	P	**P**	**08 28 31.7**	**-3.5**
AFI				S	S	08 30 09.5	-10
FUNA	**Funafuti**	**12.26**	**348**	P	P	08 29 03.8	-5.1
DZM	**Mont Dzumac**	**14.44**	**261**	P	**P**	**08 29 31.4**	**-0.2**
	1.5nm,0.3s,baz=305,slow=23,SNR=11						
DZM	**Mont Dzumac**	**14.44**	**261**	P	**P**	**08 29 30.4**	**-1.2**
OUZ	**Omahuta**	**16.30**	**205**	P	**P**	**08 29 48.8**	**-1.5**
HAZ	**Te Kaha**	**17.48**	**191**	P	**P**	**08 30 01.3**	**0.0**
RUGZ	**Raukumara Rang**	**17.70**	**191**	P	**P**	**08 30 03.8**	**+0.3**
TGRZ	**Tauranga**	**17.77**	**195**	P	**P**	**08 30 05.6**	**+1.7**
TOZ	**Tahuroa Road**	**17.96**	**197**	P	**P**	**08 30 07.7**	**+2.1**
MWZ	**Matawai**	**18.08**	**191**	P	**P**	**08 30 06.9**	**0.0**
URZ	**Urewera**	**18.09**	**192**	P	**P**	**08 30 04.9**	**-1.9**
	2.4nm,0.3s,baz=275,slow=4.5,SNR=15						
URZ	**Urewera**	**18.09**	**192**	P	**P**	**08 30 04.8**	**-2.1**
URZ	**Urewera**	**18.09**	**192**	P	**P**	**08 30 04.8**	**-2.1**
URZ				IAmb	IAmb	08 30 13.0	
	comp=Z,35nm,1.5s						

MUGZ	Murupara	18.37	193	P	P	08 30 06.4	-3.0	
KNTN	Kanton	18.77	20	P	P	08 30 10.6	-2.9	
HATZ	Hinemaiaia	18.91	194	P	P	08 30 13.6	-0.8	
BKZ	Black Stump Fm	19.09	193	P	P	08 30 14.1	-2.0	
MCHZ	McNeill Hill	19.32	192	P	P	08 30 15.3	-2.7	
BHHZ	Black Hill Sta	19.49	194	P	P	08 30 17.5	-2.2	
BFZ	Birch Farm	20.60	192	P	P	08 30 30.5	+0.8	
QRZ	Quartz Range	21.69	199	P	P	08 30 39.8	+0.2	
NNZ	Nelson	21.80	197	P	P	08 30 39.8	-0.6	
TUWZ	Tuamarina	21.84	196	P	P	08 30 39.2	-1.7	
THZ	Tophouse	22.43	198	P	P	08 30 46.3	0.0	
THZ				IAmb	IAmb	08 30 59.7		
	comp=Z,20nm,1.2s							
KHZ	Kahutara	22.87	196	P	P	08 30 48.7	-1.4	
KHZ				IAmb	IAmb	08 30 49.3		
	comp=Z,27nm,1.1s							
LTZ	Lake Taylor	23.56	198	P	P	08 30 54.7	-1.6	
LTZ				IAmb	IAmb	08 31 00.5		
	comp=Z,22nm,1.2s							
HNR	Honiara	23.85	294	P	P	08 30 57.5	-1.7	
FOZ	Fox Glacier	25.00	201	P	P	08 31 08.2	-0.8	
FOZ				IAmb	IAmb	08 31 13.3		
	comp=Z,34nm,1.2s							
LBZ	Lake Benmore	25.64	200	P	P	08 31 12.4	-2.2	
LBZ				IAmb	IAmb	08 31 16.2		
	comp=Z,51nm,1.5s							
MLZ	Mavora Lakes	27.19	201	P	P	08 31 26.1	-2.3	
MLZ				IAmb	IAmb	08 31 36.0		
	comp=Z,15nm,1.1s							
DCZ	Deep Cove	27.62	203	P	P	08 31 29.0	-3.0	
DCZ				IAmb	IAmb	08 31 38.2		
	comp=Z,12nm,1.0s							
EIDS	Eidsvold	28.69	255	P	P	08 31 41.7	0.0	
EIDS				IAmb	IAmb	08 31 42.7		
	comp=Z,12nm,0.6s							
ARMA	Armidale	28.91	244	P	P	08 31 44.3	+0.7	
ARMA				IAmb	IAmb	08 31 45.6		
	comp=Z,16nm,0.8s							
CTA	Charters Tower	33.34	264	P	P	08 32 22.1	+0.4	
	comp=Z,20nm,0.4s,baz=92,slow=10,SNR=52							
CTAO	Charters Tower	33.34	264	P	P	08 32 21.4	-0.2	
CTAO				IAmb	IAmb	08 32 22.5		
	comp=Z,28nm,0.6s							
PMG	Port Moresby	35.23	283	P	P	08 32 37.6	+0.1	
	comp=Z,28nm,0.7s,baz=118,slow=7.5,SNR=7.7							
PMG	Port Moresby	35.23	283	P	P	08 32 37.0	-0.5	
TOO	Toolangi	35.74	234	P	P	08 32 41.9	+0.4	
TOO				IAmb	IAmb	08 32 43.0		
	comp=Z,13nm,0.9s							
PATS	Pohnpei	35.74	317	P	P	08 32 40.1	-1.6	
COEN	Coen	37.45	274	P	P	08 32 56.3	+0.5	
COEN				IAmb	IAmb	08 32 56.8		
	comp=Z,17nm,0.8s							
STKA	Stephens Creek	37.63	244	P	P	08 32 57.6	+0.5	
	comp=Z,8.8nm,0.7s,baz=97,slow=7.9,SNR=19							
STKA	Stephens Creek	37.63	244	P	P	08 32 57.5	+0.4	
BBOO	Buckleboo	42.39	244	P	P	08 33 35.2	0.0	
BBOO				IAmb	IAmb	08 33 35.9		
	comp=Z,15nm,0.8s							
WR0	Warramunga Arr	44.26	262	P	P	08 33 49.5	-0.5	
WR0				IAmb	IAmb	08 33 51.2		
	comp=Z,12nm,0.8s							
AS31	Alice Springs	44.37	257	P	P	08 33 50.9	+0.1	
AS31				IAmb	IAmb	08 33 51.6		
	comp=Z,14nm,0.6s							
ASAR	Alice Springs	44.37	257	P	P	08 33 50.9	+0.1	
	comp=Z,52nm,0.8s,baz=92,slow=8.4,SNR=213							
ASAR				PcP	PcP	08 35 23.8	+0.5	
	comp=Z,5.9nm,0.6s,baz=104,slow=3.8,SNR=13							
ASAR				S	S	08 39 45.1	-1.4	
	comp=Z,1.4nm,0.8s,baz=93,slow=16,SNR=7.9							
ASAR	Alice Springs	44.37	257	P	P	08 33 50.4	-0.4	
WB0	Warramunga Arr	44.43	262	P	P	08 33 50.6	-0.7	
WB2	Warramunga Arr	44.44	262	P	P	08 33 50.9	-0.5	
WB2				IAmb	IAmb	08 33 51.8		
	comp=Z,28nm,0.8s							
WRAB	Tennant Creek	44.44	262	P	P	08 33 50.9	-0.5	
WRAB				IAmb	IAmb	08 33 51.7		
	comp=Z,36nm,1.1s							
WRA	Warramunga Arr	44.45	262	P	P	08 33 50.8	-0.7	
	comp=Z,18nm,0.7s,baz=97,slow=7.8,SNR=124							
WRA	Warramunga Arr	44.45	262	P	P	08 33 50.4	-1.0	
MTN	Manton Dam	49.02	271	P	P	08 34 25.6	-0.5	
MTN				IAmb	IAmb	08 34 26.2		
	comp=Z,31nm,0.7s							
FORT	Forrest	49.14	247	P	P	08 34 26.6	0.0	
FORT				IAmb	IAmb	08 34 29.3		
	comp=Z,45nm,1.1s							
KNRA	Kununurra	50.52	266	P	P	08 34 36.9	0.0	
KNRA				IAmb	IAmb	08 34 37.8		
	comp=Z,26nm,0.7s							
FITZ	Fitzroy Crossi	52.88	262	P	P	08 34 53.9	-0.1	
SOEI	Soe	56.37	272	P	P	08 35 18.3	-0.3	
PSA00	Pilbara Seismi	57.52	257	P	P	08 35 26.4	+0.1	
PSA00				IAmb	IAmb	08 35 26.9		
	comp=Z,36nm,0.8s							
MORW	Morawa	59.67	248	P	P	08 35 40.7	0.0	
MORW				IAmb	IAmb	08 35 41.5		
	comp=Z,28nm,1.1s							
GIRL	Giralia	62.40	255	P	P	08 36 00.3	+1.5	
QSPA	South Pole Qui	69.49	180	P	P	08 36 44.3	+2.0	
	comp=Z,2.8nm,0.6s,baz=279,slow=1.8,SNR=8.0							
QSPA	South Pole Qui	69.49	180	P	P	08 36 44.3	+2.0	
MJAR	Matsushiro Arr	70.19	324	P	P	08 36 46.8	0.0	
	comp=Z,3.5nm,0.7s,baz=149,slow=5.4,SNR=7.2							
MJAR	Matsushiro Arr	70.19	324	IAmb	IAmb	08 36 51.4		
	comp=Z,3.1nm,1.2s							
MAT	Matsushiro	70.19	324	P	P	08 36 46.7	-0.1	
ADK	Adak	72.16	1	P	P	08 36 58.1	+0.2	
NIKH	Nikolski High	73.69	6	P	P	08 37 06.5	-0.1	
UNV	Unalaska Valle	74.80	7	P	P	08 37 12.3	-0.5	
AKUT	Akutan	75.17	7	P	P	08 37 14.5	-0.3	
FALS	False Pass	76.18	9	P	P	08 37 20.6	+0.1	
PEA0B	Petropavlovsk-	76.31	345	P	P	08 37 22.1	+0.8	
PEA0B				IAmb	IAmb	08 37 33.1		
	comp=Z,21nm,1.4s							
PETK	Petropavlovsk-	76.31	345	P	P	08 37 21.4	+0.1	
	comp=Z,5.5nm,0.7s,baz=147,slow=9.2,SNR=12							
PETK	Petropavlovsk-	76.31	345	P	P	08 37 21.7	+0.4	
KSRS	Korea Array	76.86	319	P	P	08 37 26.1	+1.4	
	comp=Z,1.8nm,0.9s,baz=141,slow=6.6,SNR=6.0							
CHGN	Chignik	78.38	11	P	P	08 37 32.4	0.0	
USRK	Ussuriysk Ar.	78.95	326	P	P	08 37 37.7	+1.9	
	comp=Z,2.3nm,0.7s,baz=97,slow=3.5,SNR=6.1							
NJ2	Nanjing	79.82	310	eP	P	08 37 42.3	+1.6	
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
WDC	Whiskeytown Da	79.82	40	P	P	08 37 41.6	+1.1	
OHAK	Old Harbor	80.26	13	P	P	08 37 42.5	+0.2	
OHAK				IAmb	IAmb	08 37 43.8		
	comp=Z,24nm,1.4s							
YBH	Yreka Blue Hor	80.44	39	P	P	08 37 46.1	+2.3	
	comp=Z,5.1nm,0.7s,baz=168,slow=1.5,SNR=16							
YBH	Yreka Blue Hor	80.44	39	IAmb	IAmb	08 37 46.7		
	comp=Z,5.7nm,0.8s							
PNTR	Pine Nut	80.73	42	P	P	08 37 46.9	+1.3	
KDAK	Kodiak Island	80.93	14	P	P	08 37 44.9	-0.9	
NVAR	Mina Array Bea	81.18	43	P	P	08 37 49.6	+1.7	
	comp=Z,2.2nm,0.8s,baz=226,slow=9.5,SNR=11							
MOD	Modoc Plateau	81.97	40	P	P	08 37 53.2	+1.5	
CNPM	China Poot	82.81	13	P	P	08 37 55.5	+0.1	
CNPM				IAmb	IAmb	08 37 57.1		
	comp=Z,25nm,1.4s							
BRLK	Bradley Lake	83.10	14	P	P	08 37 57.2	+0.4	
SEW	Seward	83.73	14	P	P	08 37 59.8	-0.1	
GLI	Glacier Island	84.96	15	P	P	08 38 06.3	+0.3	
GLI				IAmb	IAmb	08 38 07.0		
	comp=Z,14nm,0.8s							
GHO	Glory Hole Cre	85.33	13	P	P	08 38 08.2	+0.4	
GHO				IAmb	IAmb	08 38 09.0		
	comp=Z,15nm,0.8s							
SCM	Sheep Creek Mo	85.75	14	P	P	08 38 10.6	+0.7	
SCM				IAmb	IAmb	08 38 11.1		
	comp=Z,14nm,0.7s							
F10A	Beach Ranch, E	86.15	38	P	P	08 38 12.9	+0.7	
F10A				IAmb	IAmb	08 38 14.1		
	comp=Z,8.6nm,0.8s							
BALM	Baldy	86.30	17	P	P	08 38 12.3	-0.2	
SEY	Seymchan	86.42	347	P	P	08 38 13.6	+0.7	
	comp=Z,7.7nm,0.6s,baz=147,slow=5.9,SNR=35							
KTH	Kantishna Hill	86.53	12	P	P	08 38 12.5	-1.0	
TRF	Thorofare Moun	86.56	12	P	P	08 38 13.5	-0.2	
TRF				IAmb	IAmb	08 38 14.3		
	comp=Z,11nm,0.8s							

RND	Reindeer	86.81	13	P	P	08 38 14.9	0.0	
RND				IAmb	IAmb	08 38 15.9		
	comp=Z,14nm,0.8s							
TXAR	Lajitas Array	87.22	57	P	P	08 38 19.9	+2.3	
	comp=Z,0.6nm,0.7s,baz=224,slow=6.3,SNR=3.6							
NEA	Nenana	87.81	12	P	P	08 38 19.7	+0.3	
MLY	Manley	87.90	11	P	P	08 38 19.5	-0.4	
MLY				IAmb	IAmb	08 38 20.1		
	comp=Z,5.1nm,0.6s							
WRH	Wood River Hil	87.91	13	P	P	08 38 19.9	0.0	
WRH				IAmb	IAmb	08 38 20.6		
	comp=Z,11nm,0.8s							
VNA3	Neumayer Olymp	88.07	176	P	P	08 38 21.4	+0.7	
DOT	Dot Lake	88.08	14	P	P	08 38 21.4	+0.7	
CCB	Clear Creek Bu	88.12	13	P	P	08 38 20.6	-0.3	
IL31		88.42	13	P	P	08 38 22.2	0.0	
ILAR	Eielson Array	88.42	13	P	P	08 38 22.0	-0.3	
	comp=Z,3.5nm,0.8s,baz=221,slow=5.6,SNR=33							
ILAR	Eielson Array	88.42	13	P	P	08 38 21.7	-0.5	
VNA2	Neumayer--Watz	88.51	177	P	P	08 38 23.9	+1.1	
PDAR	Pinedale Array	89.11	43	P	P	08 38 27.2	+0.9	
	comp=Z,14nm,0.6s,baz=217,slow=3.2,SNR=10							
PDAR	Pinedale Array	89.11	43	P	P	08 38 26.9	+0.5	
HHC	Hu-ho-hao-te	89.31	314	eP	P	08 38 28.3	+1.2	
HHC				pmax	pmax			
	comp=Z,9.0nm,1.0s							
EGAK	Eagle	89.72	15	P	P	08 38 28.4	+0.2	
EGAK				IAmb	IAmb	08 38 30.1		
	comp=Z,12nm,1.2s							
CMAR	Chiang Mai Arr	90.01	290	P	P	08 38 32.7	+2.0	
	comp=Z,1.2nm,0.3s,baz=123,slow=3.0,SNR=14							
LZH	Lanzhou	92.71	308	eP	P	08 38 41.0	-2.0	
LZH				pP	pP	08 40 36.8	-3.4	
LZH				sP	sP	08 41 21.8	-12	
LZH				PP	PP	08 42 29.0	-5.6	
LZH				pmax	pmax			
	comp=Z,22nm,1.0s							
LZH				pmax	pmax			
	comp=Z,86nm,4.5s							
YKA	Yellowknife Ar	96.64	25	P	P	08 39 00.1	+0.1	
	comp=Z,0.4nm,0.7s,baz=245,slow=4.4,SNR=3.5							
ZALV	Zalesovo Beam	110.47	321	PKiKP	PKiKP	08 43 58.1	-0.8	
	comp=Z,1.4nm,0.6s,baz=36,slow=2.2,SNR=6.0							
ZALV	Zalesovo Beam	110.47	321		PKiKP	08 43 58.2	-0.7	
MKAR	Makanchi Array	111.15	313	PKiKP	PKiKP	08 43 60.0	-0.5	
	comp=Z,1.4nm,0.6s,baz=70,slow=0.9,SNR=15							
MKAR	Makanchi Array	111.15	313		PKiKP	08 43 59.6	-0.9	
KURK	Kurchatov	113.96	317		PKiKP	08 44 05.4	-0.3	
KURBB	Kurchatov Arra	114.01	317	PKiKP	PKPdf	08 44 05.1	-0.7	
	comp=Z,1.9nm,0.7s,baz=94,slow=1.8,SNR=14							
KSH	Kashi	114.82	305	PKP	PKiKP	08 44 09.3	+1.4	
KSH				PP	PP	08 45 21.3	+4.8	
KSH				sPKP		08 47 07.1		
KSH	Kashi	114.82	305	SS	SS	09 00 33.1	+1.7	
KSH				AMB	AMB			
	comp=Z,2µm,7.3s							
BVAR	Borovoye Array	119.05	320	PKP	PKPdf	08 44 15.3	-0.2	
	comp=Z,3.6nm,0.6s,baz=90,slow=1.6,SNR=18							
BRVK	Borovoye	119.11	320		PKPdf	08 44 15.4	-0.1	
KKAR	Karatay Array	119.19	309		PKPdf	08 44 15.8	-0.2	
AKTO	Aktyubinsk	127.03	318	PKP	PKiKP	08 44 31.7	+0.2	
	baz=96,slow=2.4							
ARCES	ARCESS Array B	128.97	350	PKP	PKPdf	08 44 34.3	+0.3	
	comp=Z,1.4nm,0.5s,baz=22,slow=0.9,SNR=11							
ARCES	ARCESS Array B	128.97	350		PKiKP	08 44 34.6	-0.2	
FINES	FINESS Array B	135.81	344	PKP	PKiKP	08 44 48.1	-0.7	
	comp=Z,1.4nm,0.5s,baz=67,slow=5.0,SNR=8.4							
FINES	FINESS Array B	135.81	344		PKPdf	08 44 47.2	+0.2	
NB2	NORSAR Subarra	139.04	353	PKP	PKPdf	08 44 44.0	-9.1	
	comp=Z,1.0nm,0.6s,baz=15,slow=3.5							
AKASG	Malin Array Be	143.02	331	PKhKP	PKPpre	08 44 57.6		
	comp=Z,17nm,0.5s,baz=42,slow=4.3,SNR=50							
MBAR	Mbarara	144.75	237	PKP	PKPab	08 45 06.6	+0.8	
	comp=Z,4.1nm,0.2s,baz=134,slow=6.1,SNR=6.8							
SORM	Soroca	145.20	328	⇑P	PKPbc	08 45 05.7	+0.5	
MILM	Milestii Mici	145.78	326	⇑P	PKPbc	08 45 06.5	-0.5	
BSEG	Bad Segeberg	146.08	351	ePKPbc	PKPbc	08 45 08.2	+0.6	
	baz=14,slow=2.4							
VASR	Vaslui	146.49	327	⇑P	PKPbc	08 45 09.6	+0.6	
BR131	Keskin Array S	146.79	312		PKPbc	08 45 10.2	0.0	
BRTR	Keskin Array B	146.79	312	PKPbc	PKPbc	08 45 10.2	0.0	
	comp=Z,7.2nm,0.7s,baz=137,slow=4.9,SNR=31							
TLCR		146.89	324	⇑P	PKPbc	08 45 10.5	+0.4	
BUR08	Bucovina Ar. S	147.05	330		PKPbc	08 45 09.9	-0.7	
BURAR	Bucovina Array	147.06	330	⇓P	PKPbc	08 45 11.4	+0.8	
BURAR	Bucovina Array	147.06	330		PKPbc	08 45 11.1	+0.5	
BIZ	Bicaz	147.13	329	⇑P	PKPbc	08 45 11.5	+0.8	
CFR	Carcaliu	147.27	325	⇑P	PKPbc	08 45 11.1	0.0	
TOPG	Topolog	147.33	324	⇑P	PKPbc	08 45 11.3	+0.1	
RETH	Rethem/Aller,	147.38	352	ePKPbc	PKPbc	08 45 11.7	+0.6	
	baz=14,slow=2.4							
ODBI	Odobesti	147.46	326	⇑P	PKiKP	08 45 12.9	-0.3	
NRDL	Niedersach Rie	147.51	351	ePKPbc	PKPbc	08 45 12.1	+0.7	
	baz=14,slow=2.4							
VRI	Vrincioaia	147.56	327	⇑P	PKPbc	08 45 11.2	-0.6	
PLOR	Plostina	147.61	327	⇑P	PKPab	08 45 16.1	0.0	
KSP	Ksiaz	147.73	343	ePKP	PKiKP	08 45 13.3	-0.3	
ASSE	Asse, Remlinge	147.77	350	ePKPbc	PKPbc	08 45 12.7	+0.6	
	baz=14,slow=2.4							
TRPA	Tarpa	147.85	334	⇑P	PKPbc	08 45 12.2	-0.2	
OZUR		147.88	328	⇑P	PKPbc	08 45 13.1	+0.4	
OSTC	Ostas	148.01	343	⇑ePKP	PKiKP	08 45 13.7	-0.5	
CHVC	Chvalec	148.02	343	⇑ePKP	PKPbc	08 45 13.5	+0.6	
CHVC				ePKPAB	PKPab	08 45 17.2	-0.4	
CLZ	Clausthal	148.10	350	ePKPbc	PKiKP	08 45 13.9	-0.5	
	baz=14,slow=2.4							
UPC	Upice	148.11	343	⇑ePKP	PKiKP	08 45 13.9	-0.5	
CLL	Collm	148.11	347	⇓iPKPbc	PKiKP	08 45 14.5	+0.2	
CLL	comp=Z,27nm,0.8s			⇑iPKPab	PKPab	08 45 19.0	+1.2	
	comp=Z,12nm,0.6s							
CLL	Collm	148.11	347	ePKPbc	PKiKP	08 45 14.6	+0.2	
	baz=14,slow=2.4							
CLL	Collm	148.11	347		PKiKP	08 45 14.0	-0.3	
DPC	Dobruska-Polom	148.16	342	⇑ePKP	PKPbc	08 45 12.6	-0.7	
DPC				ePKPAB	PKPab	08 45 19.3	+1.1	
DOPR	Dopca	148.16	328	⇑P	PKiKP	08 45 14.1	-0.5	
LANS	Liptovska Anna	148.20	338	ePKP	PKiKP	08 45 15.2	+0.5	
LANS				e		08 45 20.2		
MLR	Muntele Rosu	148.22	327	⇓P	PKPbc	08 45 13.6	-0.1	
KRLC	Kraliky	148.27	342	⇑ePKP	PKiKP	08 45 14.3	-0.5	
KRLC				ePKPAB	PKPab	08 45 19.0	+0.4	
BRG	Berggiesshubel	148.30	345	i PKP	PKiKP	08 45 14.2	-0.5	
	comp=Z,12nm,0.8s							
BRG				i		08 45 19.0		
	comp=Z,9.4nm,0.7s							
BRG	Berggiesshubel	148.30	345	ePKPbc	PKiKP	08 45 14.2	-0.5	
	baz=14,slow=2.4							
MORC	Moravsky Berou	148.31	341	ePKP	PKiKP	08 45 14.5	-0.4	
MORC	Moravsky Berou	148.31	341	⇑P	PKiKP	08 45 14.5	-0.4	
FBE	Freiberg	148.39	346	ePKPbc	PKiKP	08 45 14.8	-0.1	
	baz=14,slow=2.4							
GTTG	Gottingen	148.45	350	ePKPbc	PKiKP	08 45 14.8	-0.3	
	baz=14,slow=2.4							
VOIR		148.71	328	⇑P	PKPbc	08 45 15.1	+0.3	
ARR	Arges	148.96	328	⇑P	PKiKP	08 45 16.3	-0.1	
PRU	Pruhonice	148.97	344	⇑ePKP	PKiKP	08 45 15.8	-0.4	
PRU				ePKPAB	PKPab	08 45 22.2	+0.8	
GOPC	GO Pecny, Ondr	148.98	344	⇑ePKP	PKPbc	08 45 15.7	+0.4	
GOPC				ePKPAB	PKPab	08 45 22.6	+1.1	
VYHS	Vyhne	148.98	338	ePKP	PKiKP	08 45 16.2	-0.1	
VYHS				e		08 45 22.6		
VRAC	Vranov	149.01	341	ePKP	PKiKP	08 45 16.1	-0.2	
MOX	Moxa	149.02	348	ePKPbc	PKiKP	08 45 15.8	-0.4	
	baz=14,slow=2.4							
JAVC	Velka Javorina	149.06	340	ePKP	PKiKP	08 45 17.5	+1.0	
PLN	Plauen	149.06	347	ePKPbc	PKiKP	08 45 16.2	-0.2	
	baz=14,slow=2.4							
TANN	Tannenbergstha	149.07	347	ePKPbc	PKiKP	08 45 16.2	-0.2	
	baz=14,slow=2.4							
GUNZ	Gunzen	149.14	347	ePKPbc	PKiKP	08 45 16.5	0.0	
	baz=14,slow=2.4							
WERN	Wernitzgruen	149.21	347	ePKPbc	PKiKP	08 45 16.8	+0.1	
	baz=14,slow=2.4							
NKC	Novy Kostel	149.24	347	⇑ePKP	PKiKP	08 45 16.7	0.0	
KRUC	Moravsky	149.29	341	ePKP	PKiKP	08 45 16.8	0.0	
TREC	Trest	149.35	342	ePKPDF	PKPdf	08 45 12.6	+1.5	
TREC				⇑ePKP	PKPbc	08 45 16.3	+0.1	
PBCC	Pribram	149.39	344	⇑ePKP	PKiKP	08 45 16.8	-0.3	
PBCC				ePKPAB	PKPab	08 45 23.5	+0.3	
MANZ	Manzenberg	149.55	347	ePKPbc	PKiKP	08 45 17.4	0.0	
	baz=14,slow=2.4							
MODS	Modra-Piesok	149.62	339	ePKP	PKPbc	08 45 17.1	+0.3	
ROTZ	Rotzenmuhle	149.73	347	ePKPbc	PKiKP	08 45 17.7	0.0	

	baz=14,slow=2.4							
GZR	Gura Zlata	149.84	330	⇑P	PKPbc	08 45 17.6	0.0	
BSTI	Sart Tilman	149.92	355	PKiKP	PKiKP	08 45 18.3	+0.3	
TNS	Taunus Mts	149.96	352	ePKPbc	PKiKP	08 45 18.3	0.0	
	baz=14,slow=2.4							
KHC	Kasperske Hory	150.01	345	⇑ePKP	PKiKP	08 45 18.5	+0.1	
KHC				ePKPAB	PKPab	08 45 26.4	+0.6	
KHC	Kasperske Hory	150.01	345	PKPdf	PKPdf	08 45 12.3	+0.1	
KHC				PKPbc	PKiKP	08 45 18.7	+0.3	
KHC					PKPab	08 45 26.2	+0.4	
GRF	Grafenberg Arr	150.01	348	eL	L	10 00 58.7		
	comp=Z,967nm,18.4s							
BZS	Buzias	150.20	331	⇑P	PKPbc	08 45 18.2	-0.1	
GEC2	GERESS Array S	150.24	344	ePKPbc	PKiKP	08 45 18.8	-0.1	
	baz=14,slow=2.4							
GERES	GERESS Array B	150.24	344	PKPbc	PKiKP	08 45 18.9	-0.1	
	comp=Z,3.1nm,0.6s,baz=29,slow=3.0,SNR=20							
GERES				PKPab	PKPab	08 45 27.2	+0.3	
	comp=Z,1.1nm,0.4s,baz=11,slow=2.9,SNR=5.9							
GERES	GERESS Array B	150.24	344		PKPbc	08 45 18.6	+0.2	
GERES					PKPab	08 45 26.9	0.0	
BMRD	Maredsous	150.25	356	PKiKP	PKiKP	08 45 19.0	+0.2	
PLVB	Pleven	150.35	325	⇑P	PKPbc	08 45 18.2	-0.5	
HERR	Herculane	150.39	330	⇑P	PKPbc	08 45 18.3	-0.4	
CONA	Conrad Observa	150.46	341	ePKPdf	PKPdf	08 45 09.4	-3.5	
	comp=Z,9.3nm,1.0s							
CONA				i PKiKP	PKiKP	08 45 19.9	+0.5	
	comp=Z,6.7nm,0.6s							
DOU	Dourbes	150.47	356	PKiKP	PKiKP	08 45 19.2	0.0	
WLF	Walferdange	150.78	354	PKiKP	PKiKP	08 45 20.1	+0.2	
MDVR	Moldovita	150.80	330	⇑P	PKPbc	08 45 19.9	+0.2	
MANT	Manisa	150.86	314		PKPbc	08 45 20.0	-0.3	
MOA	Molln	151.00	343	PKiKP	PKiKP	08 45 20.5	0.0	
	comp=Z,3.5nm,0.7s							
VTS	Vitosha	151.61	326	⇑P	PKPbc	08 45 21.9	+0.1	
VTS	Vitosha	151.61	326		PKPbc	08 45 21.9	+0.1	
SOKA	Soboth	151.83	341	i PKPbc	PKPbc	08 45 22.1	+0.1	
	comp=Z,3.7nm,1.0s							
KBA	Koelnbreinsper	151.96	343	i PKiKP	PKiKP	08 45 22.6	0.0	
	comp=Z,4.0nm,0.6s							
UBR	Ueberruh	152.15	348	ePKPbc	PKiKP	08 45 23.0	+0.1	
	baz=14,slow=2.4							
WATA	Walderalm	152.16	346	i PKiKP	PKiKP	08 45 23.9	+0.9	
	comp=Z,3.2nm,0.5s							
WTTA	Wattenberg	152.22	346	i PKiKP	PKiKP	08 45 23.5	+0.3	
	comp=Z,8.0nm,0.8s							
MYKA	Terra Mystica	152.29	342	i PKPbc	PKPbc	08 45 22.6	-0.4	
	comp=Z,5.7nm,0.8s							
ABTA	Abfaltersbach	152.49	344	i PKPbc	PKPbc	08 45 22.9	-0.6	
	comp=Z,8.1nm,0.6s							
ESDC	Sonseca Array	160.32	13	PKPab	PKPab	08 46 10.4	0.0	
	comp=Z,1.2nm,0.8s,baz=356,slow=6.5,SNR=4.2							

IDC ***15*** *08:36:09.9±1.6, 45.86N×154.14E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.3/63, mbtmp3.5/4, ML2.4/1, Error ellipse: s-maj=110.0km s-min=28.6km az=118.0*
NEIC ***15*** *08:36:10.7±0.8, 45.8N±0.1×154.3E±0.1, h10km±2km, mb4.4/3, Error ellipse: s-maj=19.2km s-min=14.4km az=201.0*

ISC 15 08:36:12.8±1.0, 45.9N±0.1×154.2E±0.1, h20km, n13, σ0.88/13, mb3.6/5, East of Kuril Islands

| Code | Station Name | Δ° | AZ° | Phase

PB15	**IPOC Station P**	**32.76**	**335**	P	**P**	**09 01 29.0**	**+2.6**
PB08	**IPOC Station P**	**35.64**	**337**	P	**P**	**09 01 53.5**	**+1.9**
PB08				IAmb	IAmb	09 02 03.2	
	comp=Z,4.4nm,0.8s						
QSPA	**South Pole Qui**	**36.05**	**180**	P	**P**	**09 01 56.5**	**+2.1**
	comp=Z,23nm,0.8s,baz=171,slow=1.8,SNR=90						
QSPA	**South Pole Qui**	**36.05**	**180**	P	**P**	**09 01 56.4**	**+2.0**
GO01	**Chusmiza**	**36.10**	**337**	P	**P**	**09 01 56.8**	**+1.1**
GO01				IAmb	IAmb	09 02 08.2	
	comp=Z,5.5nm,0.7s						
MNMC	**Minye Minye**	**36.72**	**337**	P	**P**	**09 02 00.4**	**-0.3**
MNMC				IAmb	IAmb	09 02 12.8	
	comp=Z,8.3nm,0.8s						
SIV	**San Ignacio**	**38.41**	**351**	P	**P**	**09 02 13.9**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=190,slow=9.7,SNR=12						
BDFB	**Brasilia**	**38.89**	**11**	P	**P**	**09 02 18.2**	**-0.6**
	comp=Z,3.2nm,0.8s,baz=223,slow=9.7,SNR=3.8						
LPAZ	**La Paz**	**39.16**	**340**	P	**P**	**09 02 22.2**	**+0.6**
SYO	**Syowa Base**	**42.51**	**148**⇓*eP*		**P**	**09 02 44.8**	**-3.2**
SYO	**Syowa Base**	**42.51**	**148**⇓*pP*		**P**	**09 02 48.2**	**+0.2**
VNDA	**Vanda**	**46.54**	**190**	P	**P**	**09 03 23.8**	**+3.7**
	comp=Z,0.6nm,0.7s,baz=168,slow=7.6,SNR=5.0						
MAW	**Mawson**	**50.09**	**154**	P	**P**	**09 03 48.2**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=236,slow=9.5,SNR=2.6						
H10S3	**ASCENSION HYDR**	**55.51**	**51**	T	T	10 04 12.6	
	baz=12,slow=74,SNR=18						
H10S2	**ASCENSION HYDR**	**55.52**	**51**	T	T	10 04 10.4	
	baz=208,slow=74,SNR=13						
H10N3	**ASCENSION HYDR**	**56.57**	**51**	T	T	10 05 44.0	
	baz=207,slow=75,SNR=28						
H10N1	**ASCENSION HYDR**	**56.57**	**51**	T	T	10 05 44.5	
	baz=207,slow=75,SNR=22						
H10N2	**ASCENSION HYDR**	**56.59**	**51**	T	T	10 05 45.5	
	baz=207,slow=75,SNR=26						
SOTA	**Rioblanco**	**58.89**	**335**	*eP*	P	09 05 02.5	+10
PRAC	**Prado**	**60.01**	**337**	*eP*	**P**	**09 05 00.5**	**+0.5**
ORTC	**Ortega, Tolima**	**60.28**	**337**	*eP*	**P**	**09 05 02.1**	**+0.3**
GUY2C	**Guyana, Caldas**	**61.58**	**337**	*eP*	**P**	**09 05 11.2**	**+0.1**
RUSC	**La Rusia**	**61.73**	**340**	*eP*	**P**	**09 05 10.3**	**-1.8**
RUSC	**La Rusia**	**61.73**	**340**	P	**P**	**09 05 12.7**	**+0.6**
PTBC	**PUERTO BERRIO,**	**62.65**	**338**	*eP*	**P**	**09 05 14.6**	**-3.1**
TORD	**Torodi Ar. Bea**	**82.55**	**55**	P	**P**	**09 07 15.7**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=205,slow=5.0,SNR=5.9						
TORD	**Torodi Ar. Bea**	**82.55**	**55**	P	**P**	**09 07 15.7**	**-0.5**
TXAR	**Lajitas Array**	**93.11**	**319**	P	**P**	**09 08 08.2**	**+1.2**
	comp=Z,0.1nm,0.6s,baz=145,slow=6.4,SNR=2.3						
TXAR	**Lajitas Array**	**93.11**	**319**	P	**P**	**09 08 07.9**	**+0.9**
ASAR	**Alice Springs**	**102.06**	**189**	P	**Pdif**	**09 08 47.6**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=179,slow=5.3,SNR=6.0						
ASAR	**Alice Springs**	**102.06**	**189**		**Pdif**	**09 08 47.2**	**-0.5**
YKA	**Yellowknife Ar**	**125.30**	**331**	PKP	**PKPdf**	**09 13 52.7**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=132,slow=2.2,SNR=6.5						
H11S2	**WAKE ISLAND Hyd**	**132.07**	**239**	T	T	11 38 29.4	
	baz=146,slow=75,SNR=42						
H11S3	**WAKE ISLAND Hyd**	**132.08**	**239**	T	T	11 38 29.6	
	baz=146,slow=75,SNR=38						
H11S1	**WAKE ISLAND Hyd**	**132.09**	**239**	T	T	11 38 31.0	
	baz=146,slow=75,SNR=34						
H11N3	**WAKE ISLAND Hyd**	**133.00**	**240**	T	T	11 39 36.9	
	baz=147,slow=76,SNR=8.0						
H11N1	**WAKE ISLAND Hyd**	**133.00**	**240**	T	T	11 39 37.6	
	baz=147,slow=76,SNR=3.2						
H11N2	**WAKE ISLAND Hyd**	**133.02**	**240**	T	T	11 39 40.7	
	baz=147,slow=76,SNR=5.4						
ILAR	**Eielson Array**	**137.61**	**321**	PKP	**PKiKP**	**09 14 17.3**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=163,slow=1.9,SNR=3.4						
ILAR	**Eielson Array**	**137.61**	**321**		**PKiKP**	**09 14 17.6**	**-0.2**
AAK	**Ala-Archa**	**145.39**	**88**	PKPbc	**PKPab**	**09 14 31.0**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=122,slow=3.6,SNR=4.7						
KURBB	**Kurchatov Arra**	**151.95**	**78**	PKPbc	**PKPbc**	**09 14 47.0**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=235,slow=2.9,SNR=10						
KURK	**Kurchatov**	**152.04**	**78**	PKPdf	**PKPdf**	**09 14 41.1**	**+0.2**
KURK				PKPbc	**PKiKP**	**09 14 47.9**	**+0.1**
MKAR	**Makanchi Array**	**152.32**	**88**	PKPbc	**PKPbc**	**09 14 47.3**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=333,slow=0.5,SNR=7.1						

IDC ***15*** *08:55:33.1±0.7,28°.53N×128°.58E,h140km±9km,mb3.4/8, mb1 3.5/9,mb1mx3.2/45,mbtmp3.8/9,Error ellipse: s-maj=22.7km s-min=10.5km az=107.0*
NEIC ***15*** *08:55:33.1±1.6,28°.61N±0°.07×128°.6E±0°.1,h139km±7km, mb4.3/19,Error ellipse: s-maj=17.3km s-min=8.1km az=112.0*
JMA ***15*** *08:55:33.4±0.1,28°.62N×128°.47E,h131km±2km,M3.6*

ISC 15 08:55:33.2±0.7,28°.55N±0°.04×128°.59E±0°.05,h141km±6km, n61,σ0°.88/89,mb4.0/19,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAMN	**Amaminishikomi**	**0.60**	**120**	P	**Pn**	**08 55 54.1**	**+0.1**
JAMN				S	**Sn**	**08 56 09.5**	**-0.3**
JTAJ	**Takarajima**	**0.81**	**42**	P	**Pn**	**08 55 55.2**	**-0.3**
JTAJ				*eS*	**Sn**	**08 56 11.5**	**-0.9**
JTK	**Tokunoshima**	**0.82**	**157**	P	**Pn**	**08 55 56.0**	**+0.4**
JTK				S	**Sn**	**08 56 12.8**	**+0.2**
JAM	**Amami Oshima**	**0.90**	**98**	P	**Pn**	**08 55 56.4**	**+0.2**
JAM				S	**Sn**	**08 56 13.4**	**-0.3**
JOKE	**Okinoerabujima**	**1.18**	**181**	P	**Pn**	**08 55 59.2**	**+0.4**
JOKE				S	**Sn**	**08 56 18.1**	**-0.2**
JZK	**Kikaishima**	**1.24**	**100**	P	**Pn**	**08 56 00.9**	**+1.6**
JZK				S	**Sn**	**08 56 21.4**	**+2.2**
JYRO	**Yoronjima**	**1.52**	**185**	P	**Pn**	**08 56 02.5**	**+0.2**
JYRO				S	**Sn**	**08 56 24.2**	**-0.3**
JIH	**Iheya**	**1.60**	**200**	P	**Pn**	**08 56 03.7**	**+0.5**
JIH				S	**Sn**	**08 56 26.0**	**-0.1**
JNN	**Nakanoshima**	**1.71**	**41**	P	**Pn**	**08 56 04.3**	**-0.1**
JOW	**Kunigami**	**1.73**	**189**	P	**Pn**	**08 56 05.1**	**+0.5**
	2.8nm,0.3s,baz=102,slow=18,SNR=68						
JOW				S	**Sn**	**08 56 28.0**	**-0.7**
	15nm,0.3s,baz=94,slow=17,SNR=24						
JOW	**Kunigami**	**1.73**	**189**	P	**Pn**	**08 56 05.0**	**+0.3**
JOW				S	**Sn**	**08 56 28.7**	**0.0**
JOW	**Kunigami**	**1.73**	**189**		**Pn**	**08 56 05.5**	**+0.9**
JOW				Sn	**Sn**	**08 56 28.8**	**+0.1**
JNTH	**Nagotoyohara**	**2.08**	**194**	P	**Pn**	**08 56 09.3**	**+0.5**
JNTH				S	**Sn**	**08 56 35.4**	**-0.6**
JAGN	**Aguni-jima**	**2.29**	**212**	P	**Pn**	**08 56 11.5**	**+0.3**
JAGN				*eS*	**Sn**	**08 56 40.4**	**-0.1**
JKC	**Kuchinoerabu**	**2.37**	**36**	P	**Pn**	**08 56 12.1**	**-0.1**
JKC				S	**Sn**	**08 56 41.5**	**-0.7**
JYAK	**Yakushimahirau**	**2.38**	**44**	P	**Pn**	**08 56 11.9**	**-0.4**
JYAK				*eS*	**Sn**	**08 56 42.2**	**-0.2**
JJT3	**Tamagusuku3**	**2.50**	**197**	P	**Pn**	**08 56 14.8**	**+0.9**
JJT3				S	**Sn**	**08 56 45.7**	**+0.5**
JMTN	**Minamitane**	**2.73**	**47**	P	**Pn**	**08 56 16.7**	**0.0**
JMTN				*eS*	**Sn**	**08 56 48.9**	**-1.5**
JKE	**Kume jima 2**	**2.73**	**216**	P	**Pn**	**08 56 16.6**	**-0.2**
JKE				S	**Sn**	**08 56 49.9**	**-0.5**
JTN	**Tanegashima 3**	**2.96**	**44**	P	**Pn**	**08 56 19.4**	**-0.2**
JTN				*eS*	**Sn**	**08 56 54.1**	**-1.4**
JKDJ	**Kitadaitoujima**	**3.54**	**136**	P	**Pn**	**08 56 28.0**	**+0.9**
JKDJ				S	**Sn**	**08 57 08.5**	**-0.4**
JMZ	**Minamidaito 2**	**3.59**	**139**	P	**Pn**	**08 56 28.4**	**+0.6**
JMZ				S	**Sn**	**08 57 08.8**	**-1.3**
JNU	**Nakatsue**	**4.97**	**23**	P	**Pn**	**08 56 47.3**	**+1.3**
	1.7nm,0.3s,baz=266,slow=3.8,SNR=14						
JNU				S	**Sn**	**08 57 43.2**	**+0.5**
	0.6nm,0.3s,baz=360,slow=23,SNR=5.7						
JNU	**Nakatsue**	**4.97**	**23**		**Pn**	**08 56 45.4**	**-0.6**
JNU				Sn	**Sn**	**08 57 41.0**	**-1.7**
YOJ	**Yonaguni jima**	**6.44**	**232**	Pn	**Pn**	**08 57 04.7**	**-1.1**
YOJ				Sn	**Sn**	**08 58 16.7**	**-1.5**
YHNB	**Yeheng**	**7.52**	**241**	Pn	**Pn**	**08 57 21.1**	**+0.8**
YHNB				Sn	**Sn**	**08 58 44.5**	**+0.3**
NACB	**Ninganchiao**	**7.64**	**237**	Pn	**Pn**	**08 57 20.1**	**-1.7**
KSRS	**Korea Array**	**8.90**	**357**	P	**Pn**	**08 57 42.0**	**+3.5**
	0.1nm,0.3s,baz=176,slow=14,SNR=2.4						
SONM	**Songino Array**	**25.82**	**324**	P	**P**	**09 00 51.6**	**+0.2**
	0.6nm,0.4s,baz=137,slow=11,SNR=3.7						
MK31	**Makanchi Array**	**40.27**	**310**	P	**P**	**09 02 56.5**	**+0.3**
MKAR	**Makanchi Array**	**40.27**	**310**	P	**P**	**09 02 56.8**	**+0.5**
	0.7nm,0.4s,baz=95,slow=9.3,SNR=9.9						
MKAR				PcP	**PcP**	**09 04 56.9**	**-0.4**
	0.4nm,0.5s,baz=90,slow=3.6,SNR=4.3						
MKAR	**Makanchi Array**	**40.27**	**310**	P	**P**	**09 02 54.0**	**-2.3**
MKAR					**PcP**	**09 04 57.0**	**-0.2**
KURK	**Kurchatov**	**43.39**	**315**	P	**P**	**09 03 20.3**	**-1.2**
KURBB	**Kurchatov Arra**	**43.43**	**315**	P	**P**	**09 03 21.2**	**-0.6**
	0.8nm,0.5s,baz=101,slow=9.0,SNR=8.2						
KNRA	**Kununurra**	**43.96**	**180**	P	**P**	**09 03 27.6**	**+1.2**
FITZ	**Fitzroy Crossi**	**46.46**	**184**	P	**P**	**09 03 47.5**	**+1.4**
KKAR	**Karatay Array**	**48.36**	**304**	P	**P**	**09 04 01.2**	**+0.5**
WRA	**Warramunga Arr**	**48.52**	**173**	P	**P**	**09 04 02.6**	**+0.5**
	0.5nm,0.6s,baz=354,slow=8.1,SNR=2.5						
WR0	**Warramunga Arr**	**48.56**	**173**	P	**P**	**09 04 02.2**	**-0.1**
WR0				IAmb	IAmb	09 04 18.3	
	comp=Z,9.3nm,1.3s						
BVAR	**Borovoye Array**	**48.78**	**317**	P	**P**	**09 04 03.8**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=76,slow=9.3,SNR=3.6						
BVAR				PcP	**PcP**	**09 05 25.7**	**-0.7**
	comp=Z,1.3nm,0.4s,baz=94,slow=4.5,SNR=8.1						
CHGN	**Chignik**	**57.45**	**39**	P	**P**	**09 05 05.6**	**-1.4**
CHGN				IAmb	IAmb	09 05 13.2	
	comp=Z,6.8nm,1.4s						
OHAK	**Old Harbor**	**60.17**	**38**	P	**P**	**09 05 25.4**	**-0.4**
OHAK				IAmb	IAmb	09 05 27.4	
	comp=Z,4.3nm,1.0s						
KDAK	**Kodiak Island**	**60.48**	**37**	P	**P**	**09 05 27.8**	**-0.1**
RND	**Reindeer**	**61.59**	**30**	P	**P**	**09 05 34.7**	**-0.7**
SEW	**Seward**	**61.76**	**34**	P	**P**	**09 05 35.6**	**-0.9**
GHO	**Glory Hole Cre**	**61.77**	**32**	P	**P**	**09 05 36.6**	**-0.1**
GHO				IAmb	IAmb	09 05 47.8	
	comp=Z,3.5nm,1.0s						
ILAR	**Eielson Array**	**62.26**	**29**	P	**P**	**09 05 40.1**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=289,slow=9.3,SNR=7.7						
ILAR	**Eielson Array**	**62.26**	**29**	P	**P**	**09 05 38.2**	**-1.6**
HDA	**Harding Lake**	**62.28**	**29**	P	**P**	**09 05 38.9**	**-1.1**
HDA				IAmb	IAmb	09 05 40.2	
	comp=Z,5.3nm,1.2s						
BMAR	**Burnt Mountain**	**62.78**	**26**	P	**P**	**09 05 44.0**	**+0.7**
SCRK	**Sand Creek**	**63.63**	**29**	P	**P**	**09 05 48.5**	**-0.6**
SCRK				IAmb	IAmb	09 05 56.8	
	comp=Z,2.7nm,1.4s						
GLB	**Gilahina Butte**	**64.24**	**32**	P	**P**	**09 05 53.3**	**+0.4**
GLB				IAmb	IAmb	09 06 06.1	
	comp=Z,5.7nm,1.4s						
VRDI	**Verde Repeater**	**64.45**	**32**	P	**P**	**09 05 54.3**	**-0.2**
VRDI				IAmb	IAmb	09 06 11.5	
	comp=Z,5.5nm,1.2s						
EGAK	**Eagle**	**64.67**	**28**	P	**P**	**09 05 55.4**	**-0.2**
EGAK				IAmb	IAmb	09 06 05.1	
	comp=Z,3.6nm,1.4s						
BCAR	**Beaver Creek A**	**64.79**	**30**	P	**P**	**09 05 57.1**	**+0.6**
DAWY	**Dawson**	**65.58**	**29**	P	**P**	**09 06 01.4**	**-0.2**
EPYK	**Eagle Plains**	**66.04**	**26**	P	**P**	**09 06 04.2**	**-0.3**
EPYK				IAmb	IAmb	09 06 05.2	
	comp=Z,3.5nm,1.1s						
INK	**Inuvik**	**66.64**	**24**	P	**P**	**09 06 08.0**	**-0.2**
INK				IAmb	IAmb	09 06 08.7	
	comp=Z,3.1nm,1.4s						
BRTR	**Keskin Array B**	**75.87**	**308**	P	**P**	**09 07 04.7**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=76,slow=5.2,SNR=3.8						
BRTR	**Keskin Array B**	**75.87**	**308**	P	**P**	**09 07 04.8**	**+0.4**
YKA	**Yellowknife Ar**	**76.30**	**25**	P	**P**	**09 07 05.9**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=305,slow=5.4,SNR=15						

TIR ***15*** *09:05:23.6,41°.90N×19°.09E,h9km,Md2.8/3*
PDG ***15*** *09:05:24.9±0.1,41°.97N×19°.19E,h10km,ML2.0/10,Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*
RHSSO ***15*** *09:05:25.9±0.9,41°.98N×19°.28E,h3km±2km,ML2.4/7*
BEO ***15*** *09:05:27.8±0.4,42°.09N×19°.35E,h9km±3km,ML2.3/8*

ISC 15 09:05:25.7±0.9,42°.00N±0°.03×19°.21E±0°.02,h7km±6km, n45,σ1s07/84,11C-6D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULC	**Ulcinj**	**0.04**	**146**	⇑*iPg*	**Pg**	**09 05 26.8**	**-0.3**
ULC				*i* Sg	**Sg**	**09 05 28.2**	**+0.1**
DRME	**Dracevica, Mon**	**0.19**	**353**	⇓*iPg*	**Pg**	**09 05 29.7**	**+0.2**
DRME				*eSg*	**Sg**	**09 05 33.5**	**+1.4**
DRME	**Dracevica, Mon**	**0.19**	**353**	⇑*iPg*	**Pg**	**09 05 29.3**	**-0.2**
DRME				*i* Sg	**Sg**	**09 05 32.9**	**+0.8**
BUM	**Brajici-Budva**	**0.39**	**322**	⇓*iPg*	**Pg**	**09 05 32.4**	**-0.8**
BUM				*i* Sg	**Sg**	**09 05 38.8**	**+0.5**
PDG	**Podgorica**	**0.43**	**4**	*ePg*	**Pg**	**09 05 34.4**	**+0.3**
PDG				*eSg*	**Sg**	**09 05 40.7**	**+0.9**
PDG	**Podgorica**	**0.43**	**4**	*ePg*	**Pg**	**09 05 34.0**	**-0.1**
PDG				*eSg*	**Sg**	**09 05 40.6**	**+0.8**
TTG	**Podgorica**	**0.43**	**4**	⇑*iPg*	**Pg**	**09 05 33.5**	**-0.6**
TTG				*i* Sg	**Sg**	**09 05 41.1**	**+1.3**
PUK	**Puka**	**0.51**	**85**	*i* PN	**Pb**	**09 05 36.0**	**-1.0**
PUK				*i* SN	**Sb**	**09 05 45.1**	**+0.5**
CEME	**Cevo**	**0.59**	**338**	⇓*iPg*	**Pg**	**09 05 36.4**	**-0.7**
CEME				*i* Sg	**Sg**	**09 05 45.8**	**+1.0**
HCY	**Herceg Novi**	**0.70**	**310**	*ePg*	**Pg**	**09 05 38.5**	**-0.6**
HCY				*eSg*	**Sg**	**09 05 49.4**	**+1.2**
HCY	**Herceg Novi**	**0.70**	**310**	⇑*iPg*	**Pg**	**09 05 38.0**	**-1.1**
HCY				*i* Sg	**Sg**	**09 05 49.0**	**+0.8**
BCI	**Bajram Curri**	**0.73**	**60**	*i* PG	**Pb**	**09 05 40.1**	**-0.7**
BCI				*i* SG	**Sn**	**09 05 53.2**	**-0.8**
NKME	**Niksic**	**0.79**	**346**	⇑*iPg*	**Pg**	**09 05 39.8**	**-1.1**
NKME				*i* Sg	**Sg**	**09 05 52.8**	**+1.6**
TIR	**Tirane**	**0.81**	**143**	*ePg*	**Pn**	**09 05 43.3**	**-0.2**
TIR				*eSg*	**Sn**	**09 05 54.6**	**-1.2**
PVY	**Plav**	**0.81**	**43**	⇓*iPg*	**Pg**	**09 05 40.6**	**-0.7**
PVY				*i* Sg	**Sb**	**09 05 54.0**	**+0.5**
NKY	**Niksic**	**0.83**	**349**	⇑*iPg*	**Pg**	**09 05 40.7**	**-0.9**
NKY				*i* Sg	**Sb**	**09 05 54.2**	**+0.2**
KOME	**Kolasin**	**0.88**	**15**	⇓*iPg*	**Pg**	**09 05 42.0**	**-0.6**
KOME				*i* Sg	**Sb**	**09 05 56.1**	**+0.7**
TREB	**Trebinje**	**0.96**	**319**	*ePg*	**Pg**	**09 05 44.4**	**+0.3**
TREB				*eSg*	**Sg**	**09 05 58.4**	**+1.8**
TREB	**Trebinje**	**0.96**	**319**	*ePg*	**Pg**	**09 05 44.4**	**+0.3**
TREB				*eSg*	**Sg**	**09 05 58.0**	**+1.4**
PHP	**Peshkopia**	**0.97**	**108**	*i* PG	**Pg**	**09 05 43.7**	**-0.5**
PHP				*i* SG	**Sn**	**09 05 59.1**	**-0.7**
IVA	**Berane**	**1.01**	**30**	⇑*iPg*	**Pg**	**09 05 44.3**	**-0.7**
IVA				*i* Sg	**Sg**	**09 06 00.6**	**-0.3**
BRY	**Bratogost**	**1.03**	**331**	*ePg*	**Pg**	**09 05 45.6**	**+0.1**
BRY				*eSg*	**Sg**	**09 05 59.8**	**+0.9**
BRY	**Bratogost**	**1.03**	**331**	⇑*iPg*	**Pg**	**09 05 44.3**	**-1.2**
BRY				*i* Sg	**Sb**	**09 06 00.7**	**+0.9**
DBRK	**Dubrovnik**	**1.04**	**311**	*i* Pg	**Pg**	**09 05 44.3**	**-1.3**
DBRK				Sg	**Sg**	**09 06 00.6**	**+1.5**
UPM	**Unac-Piva**	**1.23**	**349**	*eSg*	**Sb**	**09 06 05.7**	**+0.3**
UPM	**Unac-Piva**	**1.23**	**349**	⇓*iPg*	**Pn**	**09 05 48.1**	**-1.3**
UPM				*i* Sg	**Sn**	**09 06 07.4**	**+1.0**
PLE	**Pljevlja**	**1.34**	**5**	⇑*iPg*	**Pn**	**09 05 50.1**	**-0.8**
PLE				*i* Sg	**Sg**	**09 06 11.7**	**+3.0**
SJES	**Sjenica**	**1.38**	**24**	*ePg*	**Pn**	**09 05 51.5**	**0.0**
SJES				*eSg*	**Sb**	**09 06 08.0**	**-1.8**
STON	**Ston**	**1.42**	**308**	*ePg*	**Pn**	**09 05 51.5**	**-0.4**
STON				*eSg*	**Sg**	**09 06 13.0**	**+1.7**
STON	**Ston**	**1.42**	**308**	*i* Pn	**Pn**	**09 05 51.3**	**-0.6**
STON				*i* Sg	**Sg**	**09 06 13.4**	**+2.1**
OHR	**Ohrid**	**1.48**	**126**	⇑*iPn*	**Pg**	**09 05 56.5**	**+2.5**
OHR	**Ohrid**	**1.48**	**126**	⇑*iPn*	**Pg**	**09 05 56.5**	**+2.5**
IVAS	**Ivanjica**	**1.72**	**23**	*ePg*	**Pb**	**09 05 58.1**	**+0.4**
IVAS				*eSg*	**Sb**	**09 06 19.6**	**0.0**
SELS	**Selova**	**1.86**	**48**	*ePg*	**Pb**	**09 05 59.3**	**-0.8**
SELS				*eSg*	**Sb**	**09 06 23.2**	**-0.4**
BBLS	**Lazići**	**1.87**	**4**	*eSn*	**Sb**	**09 06 23.7**	**-0.2**
BARS	**Barje**	**2.09**	**66**	*ePg*	**Pb**	**09 06 02.8**	**-1.2**
BARS				*eSg*	**Sb**	**09 06 30.4**	**+0.2**
HAPS	**Han Pijesak,Bl**	**2.10**	**355**	*ePn*	**Pn**	**09 06 02.7**	**+1.4**
HAPS				*eSn*	**Sn**	**09 06 26.4**	**-1.4**
HAPS	**Han Pijesak,Bl**	**2.10**	**355**	*ePn*	**Pn**	**09 06 02.7**	**+1.4**
HAPS				*eSn*	**Sn**	**09 06 28.3**	**+0.5**
RICI	**Ricice**	**2.14**	**315**	*ePn*	**Pn**	**09 06 01.5**	**-0.3**
RICI				Sn	**Sb**	**09 06 31.3**	**-0.3**
DIVS	**Divibare**	**2.18**	**15**	*ePg*	**Pn**	**09 06 04.0**	**+1.6**
DIVS				*eSg*	**Sb**	**09 06 32.3**	**-0.4**
DIVS	**Divibare**	**2.18**	**15**	*ePn*	**Pn**	**09 06 03.2**	**+0.8**
DIVS				*eSn*	**Sn**	**09 06 30.0**	**+0.3**
GRUS	**Gruza**	**2.19**	**30**	*ePg*	**Pb**	**09 06 04.2**	**-1.4**
GRUS				*eSg*	**Sb**	**09 06 32.4**	**-0.5**
STIP	**Stip**	**2.24**	**97**	*i* Pn	**Pg**	**09 06 06.9**	**-1.7**
STIP	**Stip**	**2.24**	**97**	*i* Pn	**Pg**	**09 06 06.9**	**-1.7**
ZAPS	**Zavoj**	**2.83**	**62**	*ePn*	**Pn**	**09 06 12.0**	**+0.7**
ZAPS				*eSg*	**Sb**	**09 06 51.6**	**+0.3**

UPA ***15*** *09:09:45.4±2.5,7°.24N×82°.43W,h10km±29km,MW5.1*
IDC ***15*** *09:09:46.7±0.7,7°.57N×82°.33W,h0km,mb3.9/13, mb1 4.1/18,mb1mx4.1/34,mbtmp4.0/18,ML2.7/4,Error ellipse: s-maj=30.2km s-min=12.8km az=54.0*
UCR ***15*** *09:09:46.4±2.0,7°.13N×82°.47W,h26km±25km, mb4.4(NEIC)*
NEIC ***15*** *09:09:51.0±2.5,7°.56N±0°.05×82°.31W±0°.06,h22km±4km, mb4.4/47,Error ellipse: s-maj=9.2km s-min=7.0km az=85.0*

ISC 15 09:09:48.3±4.0,7°.33N±0°.05×82°.40W±0°.05,h14km±26km,

n133,σ1s81/119,mb4.3/34,2C-1D,South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVD	**David**	**1.10**	**357**	*eP*	**Pn**	**09 10 06.3**	**-3.0**
DVD				*eS*	**Sb**	**09 10 22.3**	**-1.1**
BCO2	**Palmira**	**1.39**	**355**	*i* P	**Pn**	**09 10 10.7**	**-2.7**
BCO2				*eS*	**Sn**	**09 10 32.7**	**+1.0**
BRU2	**Volcan**	**1.49**	**349**	⇑*iP*	**Pn**	**09 10 12.1**	**-2.7**
BRU2	**Volcan**	**1.49**	**349**	*eP*	**Pn**	**09 10 12.2**	**-2.5**
BRU2				*eS*	**Sn**	**09 10 34.6**	**+0.5**
PTJ1	**Puerto Jimnez**	**1.50**	**323**	⇓*eP*	**Pn**	**09 10 12.4**	**-2.3**
PTJ1				*eS*	**Sn**	**09 10 31.7**	**-2.5**
PTJ1	**Puerto Jimnez**	**1.50**	**323**	*eP*	**Pn**	**09 10 12.5**	**-2.3**
PTJ1				*eS*	**Sn**	**09 10 33.4**	**-0.7**
CACAO	**El Cacao, Vera**	**1.52**	**89**	*eP*	**Pn**	**09 10 11.7**	**-3.4**
CACAO				*eS*	**Sn**	**09 10 29.3**	**-5.4**
EDSV	**San Vito**	**1.59**	**339**	*eP*	**Pn**	**09 10 14.2**	**-2.0**
EDSV				*eS*	**Sn**	**09 10 36.3**	**-0.2**
EDPN	**Palmar Norte**	**1.93**	**327**	*eP*	**Pn**	**09 10 18.6**	**-2.2**
EDPN				*eS*	**Sn**	**09 10 45.5**	**+0.6**
EDBA	**Buenos Aires**	**2.02**	**335**	*eP*	**Pn**	**09 10 20.7**	**-1.3**
EDBA				*eS*	**Sn**	**09 10 48.0**	**+0.9**
DRK0	**Durika**	**2.10**	**336**	*eP*	**Pn**	**09 10 21.4**	**-1.8**
AZU	**Azuero**	**2.15**	**78**	*eP*	**Pn**	**09 10 22.3**	**-1.5**
AZU				*eS*	**Sn**	**09 10 49.5**	**-0.9**
AZU	**Azuero**	**2.15**	**78**	*eP*	**Pn**	**09 10 22.5**	**-1.3**
AZU				*eS*	**Sn**	**09 10 49.6**	**-0.8**
RGM0	**Gandoca**	**2.26**	**355**	*eP*	**Pn**	**09 10 25.8**	**+0.6**
EDLM	**Las Mercedes**	**2.27**	**329**	*eP*	**Pn**	**09 10 24.1**	**-1.4**
EDLM				*eS*	**Sn**	**09 10 52.9**	**-0.4**
PNME	**Penonome**	**2.35**	**61**	*eP*	**Pn**	**09 10 25.5**	**-1.1**
PNME				*eS*	**Sn**	**09 10 53.9**	**-1.3**
EDDO	**Dominical**	**2.40**	**323**	*eP*	**Pn**	**09 10 25.5**	**-1.7**
LCR2	**La Lucha 2**	**2.88**	**327**	*eP*	**Pn**	**09 10 32.4**	**-1.6**
CVTR	**Volcan Turrial**	**3.00**	**333**	*eP*	**Pn**	**09 10 34.8**	**-1.0**
SJS	**Escuela Geolog**	**3.07**	**328**	*eP*	**Pn**	**09 10 36.0**	**-0.5**
BCIP	**Isla Barro Col**	**3.12**	**54**	*eP*	**Pn**	**09 10 38.3**	**+1.2**
BCIP	**Isla Barro Col**	**3.12**	**54**	*eP*	**Pn**	**09 10 39.7**	**+2.6**
BCIP	**Isla Barro Col**	**3.12**	**54**		**Pn

NVAR	**Mina Array Bea**	**44.81**	**319**	P	**P**	**09 18 03.8**	**+1.6**
OMMB	**Old Mammoth Mi**	**44.82**	**318**	P	**P**	**09 18 03.6**	**+1.3**
OMMB				IAmb	IAmb	09 18 18.6	
	comp=Z,6.3nm,1.3s						
KVN	**Kaiserville**	**45.03**	**320**	IAmb	IAmb	09 18 06.5	
	comp=Z,5.9nm,1.2s						
RYN	**Ryan**	**45.06**	**319**	IAmb	IAmb	09 18 12.5	
	comp=Z,3.8nm,0.9s						
PNTR	**Pine Nut**	**46.02**	**319**	IAmb	IAmb	09 18 14.7	
	comp=Z,6.3nm,1.1s						
LC01	**Cunco**	**47.02**	**169**	P	P	09 18 24.8	+5.5
MOD	**Modoc Plateau**	**48.04**	**322**	IAmb	IAmb	09 18 29.6	
	comp=Z,5.6nm,1.2s						
PLCA	**Paso Flores**	**49.05**	**168**	P	**P**	**09 18 36.5**	**+1.5**
	comp=Z,2.8nm,0.8s,baz=338,slow=9.3,SNR=12						
PLCA	**Paso Flores**	**49.05**	**168**	IAmb	IAmb	09 18 45.1	
	comp=Z,9.3nm,1.4s						
FFC	**Flin Flon**	**49.81**	**345**	P	**P**	**09 18 39.6**	**-0.9**
FFC				IAmb	IAmb	09 18 46.3	
	comp=Z,5.1nm,1.2s						
YKA	**Yellowknife Ar**	**59.87**	**343**	P	**P**	**09 19 52.1**	**-1.3**
	comp=Z,2.5nm,1.1s,baz=133,slow=7.7,SNR=16						
INK	**Inuvik**	**69.57**	**342**	P	**P**	**09 20 56.1**	**-0.4**
	comp=Z,2.1nm,1.1s,baz=314,slow=4.5,SNR=3.1						
INK	**Inuvik**	**69.57**	**342**	P	**P**	**09 20 55.9**	**-0.6**
ILAR	**Eielson Array**	**72.69**	**336**	P	**P**	**09 21 15.6**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=116,slow=4.2,SNR=5.3						
ILAR	**Eielson Array**	**72.69**	**336**	P	**P**	**09 21 15.9**	**+0.4**
LEWI	**Lewis, Hebride**	**76.18**	**32**	IAMs_20	IAMs_20	09 21 18.3	
	comp=Z,7µm,22.2s						
ESDC	**Sonseca Array**	**76.46**	**51**	P	**P**	**09 21 37.9**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=270,slow=5.8,SNR=3.2						
TORD	**Torodi Ar. Bea**	**82.64**	**78**	P	**P**	**09 22 11.9**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=292,slow=5.2,SNR=2.8						
TORD	**Torodi Ar. Bea**	**82.64**	**78**	IAmb	IAmb	09 22 12.9	
	comp=Z,1.1nm,1.1s						
SONM	**Songino Array**	**124.53**	**353**	PKP	**PKiKP**	**09 28 48.6**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=20,slow=4.6,SNR=1.9						
ASAR	**Alice Springs**	**141.59**	**241**	PKhKP	PKPpre	09 29 14.8	
	comp=Z,0.5nm,0.8s,baz=111,slow=2.5,SNR=2.8						
WRA	**Warramunga Arr**	**142.26**	**247**	PKhKP	PKPpre	09 29 16.8	
	comp=Z,0.4nm,0.6s,baz=102,slow=2.8,SNR=2.2						
WRA				PKP	pPKPdf	09 29 21.9	-3.3
	comp=Z,1.4nm,0.7s,baz=93,slow=3.4,SNR=4.6						
H01W1	**Cape Leeuwin H**	**148.62**	**207**	T	T	12 16 35.6	
	baz=144,slow=76,SNR=4.3						
H01W2	**Cape Leeuwin H**	**148.63**	**207**	T	T	12 16 39.9	
	baz=144,slow=76,SNR=4.2						
H01W3	**Cape Leeuwin H**	**148.64**	**207**	T	T	12 16 39.2	
	baz=144,slow=76,SNR=5.2						

KRAR ***15*** *09:11:14.8±0.1,53.73N×88.09E,M2.4, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC ***15*** *09:11:22.1±2.3,53.44N×87.93E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=21.5km s-min=15.7km az=173.0, Suspected Mining explosion.*

IDC 15 09:11:17.6±3.2,53.81N×88.24E,h0km,mb1 3.3/3, mb1mx3.1/47,mbtmp3.3/3,ML2.8/3,4C-5D,Error ellipse: s-maj=30.9km s-min=19.2km az=40.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.03**	**275**	*i*				09 23 40.0	
	baz=92,slow=317,SNR=3.2								
ZALV	**Zalesovo Beam**	**2.03**	**275**	Pn			Pn	09 11 53.5	+0.4
	3.7nm,0.3s,baz=97,slow=9.3,SNR=40								
ZALV					Lg		Lg	09 12 21.3	
	6.6nm,0.3s,baz=91,slow=24,SNR=15								
KURK	**Kurchatov**	**6.67**	**246**		⇓Pn		Pn	09 12 56.3	-0.5
	1.3nm,0.6s								
KURK					⇓Sn		Sn	09 14 11.1	-2.3
	1.4nm,0.8s								
KURK					⇓Lg		Lg	09 14 46.0	
	4.4nm,0.8s								
KURBB	**Kurchatov Arra**	**6.77**	**246**	Pn			Pn	09 12 58.6	+0.6
	0.3nm,0.3s,baz=62,slow=14,SNR=19								
KURBB					Sn		Sn	09 14 15.6	-0.2
	0.1nm,0.3s,baz=63,slow=23,SNR=1.8								
KURBB	**Kurchatov Arra**	**6.77**	**246**		⇑Pn		Pn	09 12 58.3	+0.2
	2.2nm,0.3s								
KURBB					⇓Sn		Sn	09 14 13.5	-2.3
	2.7nm,0.5s								
KURBB					⇑Lg		Lg	09 14 48.3	
	5.6nm,0.7s								
MK31	**Makanchi Array**	**7.99**	**211**		⇓Pn		Pn	09 13 15.0	+0.1
	0.3nm,0.6s,baz=29,slow=13,SNR=9.2								
MK31					⇑Sn		Sn	09 14 41.5	-4.4
	0.5nm,0.5s,baz=297,slow=1.3,SNR=6.0								
MK31					⇑Lg		Lg	09 15 19.3	
	2.1nm,0.8s,baz=257,slow=57,SNR=4.5								
MKAR	**Makanchi Array**	**7.99**	**211**	Pn			Pn	09 13 15.7	+0.8
	0.2nm,0.3s,baz=32,slow=14,SNR=10								

NNC 15 09:29:06.6±0.9,51.69N×75.40E,h0km,mb3.7,mpv3.1, 6C-2D,Error ellipse: s-maj=8.9km s-min=4.2km az=179.0,Suspected Mining explosion.,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.24**	**117**		⇑Pg		Pb	09 29 48.1	+0.1
	6.2nm,0.7s								
KURBB					⇓Lg		Lg	09 30 19.0	
	70nm,0.7s								
KURK	**Kurchatov**	**2.25**	**115**		⇓Pg		Pb	09 29 46.8	-1.3
	4.7nm,0.9s								
KURK					⇑Lg		Lg	09 30 14.9	
	23nm,0.6s								
BRZS	**Berezniki**	**2.43**	**226**	Pg			Pb	09 29 50.8	-0.4
BRZS				Pg			Pg	09 29 51.0	-2.2
	13nm,0.5s								
BRZS				Lg			Lg	09 30 22.5	
	20nm,1.2s								
BRZS				Lg			Lg	09 30 23.0	
SEM	**Semipalatinsk**	**3.32**	**111**	Pg			Pb	09 30 08.3	+1.8
	2.9nm,0.1s								
SEM				Lg			Lg	09 30 52.9	
BVA3	**Borovoye Array**	**3.36**	**295**		⇑Pg		Pb	09 30 07.9	+0.9
	2.8nm,0.5s								
BVA3					⇑Lg		Lg	09 30 51.7	
	20nm,0.6s								
OTUK	**Ortayu**	**3.98**	**211**	Pg			Pg	09 30 20.4	-2.4
	0.8nm,0.9s								
OTUK				Pg			Pb	09 30 20.6	+3.0
	1.0nm,0.8s								
OTUK				Lg			Lg	09 31 13.5	
	5.3nm,0.7s								
OTUK				Lg			Lg	09 31 13.9	
	6.1nm,0.8s								
MK31	**Makanchi Array**	**6.66**	**135**		⇑Sn		Sn	09 32 04.7	+2.4
	1.5nm,0.7s,baz=311,slow=13,SNR=5.8								
MK31					⇑Lg		Lg	09 32 37.7	
	8.1nm,0.8s,baz=327,slow=25,SNR=11								
KAPS	**Kapalarasan**	**6.93**	**156**	Pg			Pg	09 31 13.9	-5.4
	0.6nm,0.3s								
KAPS				Lg			Lg	09 32 44.1	
	8.7nm,0.6s								
ARXS	**Arharly**	**7.66**	**167**	Pg			Pg	09 31 28.0	-5.3
	4.1nm,0.5s								
ARXS				Lg			Lg	09 33 06.6	
	11nm,0.6s								
KST	**Kastek**	**8.66**	**177**	Pg			Pg	09 31 45.3	-7.2
	2.1nm,0.5s								
KST				Lg			Lg	09 33 36.0	
	6.9nm,0.8s								

IDC 15 09:39:36.3±6.6,14.43S×166.25E,h0km,mb3.7/4, mb1 4.0/4,mb1mx3.6/37,mbtmp3.7/4,Error ellipse: s-maj=360.4km s-min=30.3km az=144.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**30.94**	**255**	P			P	09 45 55.1	-0.2
	0.2nm,0.6s,baz=89,slow=10,SNR=1.0								
ASAR	**Alice Springs**	**31.86**	**248**	P			P	09 46 03.5	+0.1
	0.9nm,0.9s,baz=77,slow=10,SNR=7.3								
ILAR	**Eielson Array**	**86.55**	**18**	P			P	09 52 20.7	-0.3
	0.4nm,0.5s,baz=235,slow=5.0,SNR=10								
YKA	**Yellowknife Ar**	**97.73**	**27**	P			Pdif	09 53 13.2	+0.2
	0.1nm,0.3s,baz=254,slow=4.0,SNR=1.8								

NIED ***15*** *09:48:00,35.10N×139.40E,h130km,Mw4.5 Best double couple: M0:6.64000×1015 NP1:φs200.00000°, δ82.00000°,λ.72.00000°. NP2:φs87.00000°,δ19.00000°, λ156.00000°.*

BGR ***15*** *09:48:02.6±0.0,35.39N×141.07E,h33km,mb4.9,Ms5.3*

BJI ***15*** *09:48:09.8±0.0,35.06N×139.56E,h117km,mB5.0/24, mb4.7/46*

MOS ***15*** *09:48:11.3±1.2,35.05N×139.58E,h121km,mb4.8/27, Error ellipse: s-maj=8.8km s-min=5.1km az=103.7*

JMA ***15*** *09:48:14.6±0.1,35.06N×139.43E,h121km±1km,M4.2 Broadband fault plane solution: P waves. NP1: φs287.00000°,δ11.00000°,λ-16.00000°. NP2:φs33.00000°, δ87.00000°,λ-101.00000°. Principal axes: T Plg41.0000°, Azm133.0000°; N Plg11.0000°, Azm34.0000°; P Plg47.0000°, Azm292.0000°;*

JMA Felt II J1.

IDC ***15*** *09:48:14.3±0.5,35.00N×139.21E,h125km±4km,mb4.1/27, mb1 4.3/28,mb1mx4.1/54,mbtmp4.5/28 Error ellipse: s-maj=12.2km s-min=4.9km az=71.0*

NEIC ***15*** *09:48:14.6±1.8,35.06N±0.05×139.28E±0.10, h127km±5km,mb4.8/48,Error ellipse: s-maj=11.8km s-min=7.0km az=68.0*

ISC 15 09:48:13.5±0.5,35.10N±0.04×139.50E±0.04,h119km±3km, n219,σ1§59/242,mb4.6/84,25C-7D,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AJI	**Ajiro2**	**0.34**	**261**		⇑P		Pn	**09 48 31.6**	**+1.2**
AJI					S		Sn	**09 48 44.5**	**+1.3**
JOD2	**Odawara 2**	**0.38**	**296**		⇑P		Pn	**09 48 32.0**	**+1.4**
JOD2					S		Sn	**09 48 45.1**	**+1.5**
JIM2	**Oshima 3**	**0.39**	**189**		⇓P		Pn	**09 48 31.9**	**+1.2**
JIM2					S		Sn	**09 48 45.3**	**+1.6**
KTJ3	**Kamata3**	**0.39**	**245**		⇑P		Pn	**09 48 31.9**	**+1.2**
KTJ3					S		Sn	**09 48 45.3**	**+1.7**
JIZS	**Izushimoda**	**0.64**	**234**		⇑P		Pn	**09 48 33.4**	**+1.2**
JIZS					S		Sn	**09 48 47.6**	**+1.2**
JFNN	**Fujinakano**	**0.68**	**278**		⇑P		Pn	**09 48 33.7**	**+1.2**
JFNN					S		Sn	**09 48 48.6**	**+1.7**
BSO3	**Boso 3**	**0.88**	**109**		⇓P		Pn	**09 48 36.8**	**+2.9**
JYN	**Shimob**	**0.88**	**297**		⇑P		Pn	**09 48 35.5**	**+1.2**
JRY	**Ryogami san**	**1.04**	**332**		⇑P		Pn	**09 48 37.8**	**+2.0**
JRY					S		Sn	**09 48 55.5**	**+2.7**
SHZ3	**Shizuoka 3**	**1.06**	**269**		P		Pn	**09 48 37.0**	**+0.9**
BSO1	**Boso 1**	**1.29**	**110**		P		Pn	**09 48 40.3**	**+2.4**
JAG	**Ashikaga**	**1.32**	**358**		⇑P		Pn	**09 48 40.6**	**+1.8**
JAG					S		Sn	**09 49 00.3**	**+2.2**
MJAR	**Matsushiro Arr**	**1.78**	**324**		P		Pn	**09 48 44.8**	**+0.6**
	28nm,0.3s,baz=158,slow=11,SNR=1711								
MJAR					S		Sn	**09 49 07.8**	**+0.1**
	20nm,0.3s,baz=151,slow=18,SNR=9.7								
MJAR	**Matsushiro Arr**	**1.78**	**324**		Pn		Pn	**09 48 44.6**	**+0.4**
MAJO	**Matsushiro**	**1.78**	**324**		*i*P		Pn	**09 48 44.0**	**-0.2**
MAJO					pmax		pmax		
	comp=Z,1.0nm,0.8s								
MAJO	**Matsushiro**	**1.78**	**324**				Pn	**09 48 45.1**	**+0.9**
MAT	**Matsushiro**	**1.78**	**324**		P		Pn	**09 48 45.4**	**+1.2**
MAT					S		Sn	**09 49 08.9**	**+1.2**
MAT	**Matsushiro**	**1.78**	**324**		P		Pn	**09 48 45.5**	**+1.2**
MAT					S		Sn	**09 49 09.2**	**+1.5**
MJB9	**Matsu-Tunnel**	**1.79**	**324**				Pn	**09 48 44.7**	**+0.4**
TK02	**Tokai 2**	**1.84**	**232**		⇑P		Pn	**09 48 45.5**	**+0.8**
JHJ	**Hachijo jima 2**	**1.99**	**173**		P		Pn	**09 48 48.1**	**+1.4**
	comp=Z,550nm,0.3s,baz=82,slow=22,SNR=172								
JHJ					S		Sn	**09 49 12.9**	**+0.8**
	comp=Z,501nm,0.3s,baz=172,slow=21,SNR=38								
JHJ2	**Mitsune**	**2.00**	**172**		⇓P		Pn	**09 48 48.1**	**+1.2**
JHJ2					S		Sn	**09 49 13.1**	**+0.7**
JHJ2	**Mitsune**	**2.00**	**172**				Pn	**09 48 47.5**	**+0.7**
INU	**Inuyama**	**2.05**	**278**				Pn	**09 48 47.6**	**+0.1**
JNU	**Nakatsue**	**7.42**	**257**		P		Pn	**09 49 59.7**	**+0.6**
	comp=Z,2.7nm,0.3s,baz=83,slow=4.8,SNR=28								
JNU	**Nakatsue**	**7.42**	**257**					**09 49 59.5**	**+0.4**
ERM	**Erimo**	**7.47**	**21**		*i*P		Pn	**09 49 59.3**	**-0.4**
ERM	**Erimo**	**7.47**	**21**				Pn	**09 49 58.9**	**-0.8**
JCJ	**Chichijima**	**8.30**	**163**		P		Pn	**09 50 06.6**	**-4.4**
	comp=Z,15nm,0.3s,baz=278,slow=22,SNR=5.8								
JCJ					S		Sn	09 51 32.1	-11
	comp=Z,26nm,0.3s,baz=278,slow=23,SNR=2.8								
ASAJ	**Asahikawa**	**9.32**	**14**		P		Pn	**09 50 22.8**	**-1.8**
	comp=Z,6.2nm,0.3s,baz=212,slow=9.3,SNR=36								
ASAJ					S		Sn	**09 52 01.8**	**-5.7**
	comp=Z,1.2nm,0.3s,baz=276,slow=27,SNR=1.9								
JKA	**Kamikawa-asahi**	**9.32**	**14**				Pn	**09 50 22.8**	**-1.8**
JKA							Sn	**09 52 01.8**	**-5.7**
NMR	**Nemuro--Hokkai**	**9.56**	**28**		*i*P		Pn	**09 50 24.9**	**-3.0**
NMR					*i* S		Sn	09 52 03.8	-10
KSRS	**Korea Array**	**9.64**	**287**		P		Pn	**09 50 31.3**	**+2.3**
	comp=Z,0.7nm,0.3s,baz=104,slow=14,SNR=61								
KSAR	**Wonju Array Be**	**9.67**	**287**		P		Pn	**09 50 30.8**	**+1.4**
KSAR	**Wonju Array Be**	**9.67**	**287**				Pn	**09 50 30.8**	**+1.4**
KS19	**Wonju Array Si**	**9.69**	**288**				Pn	**09 50 29.0**	**-0.8**
TJN	**Taejon**	**9.95**	**281**		*i*P		Pn	**09 50 35.1**	**+1.9**
GRPR	**Tuman**	**10.11**	**27**		*e*P		Pn	**09 50 33.3**	**-2.0**
GRPR					*e*S		Sn	09 52 17.8	-9.0
GRPR					pmax		pmax		
	comp=Z,102nm,0.4s								
GRPR					pmax		pmax		
	comp=E,58nm,0.2s								
LAGR	**Lagunnoye**	**10.17**	**27**		*e*P		Pn	**09 50 34.9**	**-1.2**
LAGR					S		Sn	09 52 20.2	-8.0
LAGR					pmax		pmax		
	comp=Z,253nm,0.4s								
LAGR					pmax		pmax		
	comp=N,58nm,0.2s								
LAGR					pmax		pmax		
	comp=E,152nm,0.4s								
YUK	**Yuzh-Kuril'sk**	**10.18**	**27**		P		Pn	**09 50 34.7**	**-1.5**
YUK					S		Sn	**09 52 21.1**	**-7.3**
YUK					pmax		pmax		
	comp=N,25nm,0.2s								
YUK					pmax		pmax		
	comp=E,8.0nm,0.2s								
YUK					pmax		pmax		
	comp=Z,156nm,0.2s								
USA0B	**Ussuriysk Arra**	**10.77**	**330**		P		Pn	**09 50 44.8**	**+0.6**
USA0B	**Ussuriysk Arra**	**10.77**	**330**		Pn		Pn	**09 50 44.8**	**+0.6**
USRK	**Ussuriysk Ar.**	**10.77**	**330**		P		Pn	**09 50 44.5**	**+0.3**
	baz=135,slow=10,SNR=12								
USRK	**Ussuriysk Ar.**	**10.77**	**330**		Pn		Pn	**09 50 45.2**	**+1.0**
KUR	**Kuril'sk**	**11.97**	**30**		*e*P		Pn	**09 50 59.7**	**-0.4**
KUR					*e*S		Sn	**09 53 07.1**	**-4.5**
KUR					pmax		pmax		
	comp=Z,36nm,0.5s								
KUR					pmax		pmax		
	comp=N,17nm,0.4s								
KUR					pmax		pmax		
	comp=E,12nm,0.5s								
KUR					smax		smax		
	comp=N,25nm,0.4s								
KUR					smax		smax		
	comp=E,11nm,0.4s								
YSS	**Yuzh-Sakhalins**	**12.09**	**11**		*e*P		Pn	**09 50 59.9**	**-1.8**
YSS					pmax		pmax		
	comp=Z,40nm,0.4s								
KLR	**Kul'dur**	**15.23**	**340**		P		Pn	**09 51 39.9**	**-2.1**
	comp=Z,2.5nm,0.3s,baz=149,slow=10.0,SNR=34								
KLR	**Kul'dur**	**15.23**	**340**		*i*P		Pn	**09 51 40.5**	**-1.5**
KLR					pmax		pmax		
	comp=Z,6.0nm,0.8s								
GRNR	**Gornyy**	**15.82**	**353**		*i*P		Pn	09 51 43.3	-6.1
GRNR					pmax		pmax		
	comp=Z,20nm,0.7s								
GRNR					MLR		MLR		
	comp=Z,7µm,13.0s								
TYV	**Tymovskoe**	**15.92**	**7**		*e*P		**P**	**09 51 54.4**	**+2.6**
TYV					pmax		pmax		
	comp=Z,35nm,1.1s								
TYV					pmax		pmax		
	comp=Z,400nm,6.2s								
NJ2	**Nanjing**	**17.47**	**266**		*e*P		**P**	**09 52 08.3**	**-0.8**
NJ2					pmax		pmax		
	comp=Z,14nm,0.5s								
BJI	**Beijing**	**19.12**	**292**		P		**P**	**09 52 23.1**	**-3.9**
BJI					pmax		pmax		
	comp=Z,5.0nm,0.6s								
ZEA	**Zeya**	**20.53**	**339**		*e*P		**P**	**09 52 42.4**	**+0.2**
ZEA					pmax		pmax		
	comp=N,52nm,0.8s								
ZEA					pmax		pmax		
	comp=E,31nm,0.8s								
ZEA					pmax		pmax		
	comp=Z,92nm,0.8s								
PETK	**Petropavlovsk-**	**22.13**	**30**		P		**P**	**09 53 02.6**	**+3.4**
	comp=Z,1.3nm,0.7s,baz=230,slow=10,SNR=1.3								
HHC	**Hu-ho-hao-te**	**22.71**	**293**		*e*P		**P**	**09 53 03.5**	**-1.7**
HHC					pmax		pmax		
	comp=Z,5.0nm,0.7s								
HHC					LR		LR		
	comp=Z,390nm,15.9s								
HHC					LR		LR		
	comp=Z,240nm,11.8s								
HHC					LR		LR		
	comp=Z,450nm,12.0s								
MA2	**Magadan**	**25.58**	**13**		P		**P**	**09 53 32.9**	**+1.8**
	comp=Z,16nm,0.6s,baz=200,slow=10,SNR=11								
MA2	**Magadan**	**25.58**	**13**		*i*P		**P**	**09 53 30.5**	**-0.6**
MA2					pmax		pmax		
	comp=Z,14nm,0.6s								
MA2	**Magadan**	**25.58**	**13**		P		**P**	**09 53 32.5**	**+1.4**
MA2					IAmb		IAmb	09 53 33.7	
	comp=Z,19nm,0.7s								
ULN	**Ulaanbaatar**	**27.24**	**308**		*i*P		**P**	**09 53 47.0**	**+0.6**
ULN					pmax		pmax		
	comp=Z,4.0nm,0.6s								
SONM	**Songino Array**	**27.66**	**308**		P		**P**	**09 53 48.7**	**-1.4**
	comp=Z,2.0nm,0.5s,baz=110,slow=7.9,SNR=16								
SONM					PcP		**PcP**	**09 57 04.4**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=100,slow=2.1,SNR=2.4								
SONM					ScP		**ScP**	**10 00 32.8**	**-1.1**
	comp=Z,1.9nm,0.9s,baz=124,slow=3.2,SNR=11								
SONM	**Songino Array**	**27.66**	**308**		P		**P**	**09 53 48.4**	**-1.7**
SONM					pmax		pmax		
	comp=Z,2.0nm,0.8s								
SONM	**Songino Array**	**27.66**	**308**		P		**P**	**09 53 48.4**	**-1.7**
YAK	**Yakutsk**	**27.66**	**350**		*e*P		**P**	**09 53 49.6**	**-0.1**
YAK					*e*			09 54 39.7	
YAK					*e*			09 57 00.9	
YAK					*e*S		**S**	**09 58 24.1**	**+1.4**
YAK					*e*SS		**sS**	**09 59 08.5**	**+0.7**
YAK					*e*			10 04 25.6	
YAK					pmax		pmax		
	comp=Z,13nm,0.9s								
YAK					pmax		pmax		
	comp=N,9.0nm,0.9s								
YAK					pmax		pmax		
	comp=E,3.0nm,0.9s								
YAK					pmax		pmax		
	comp=Z,187nm,4.7s								
YAK					pmax		pmax		
	comp=N,118nm,4.3s								
YAK					pmax		pmax		
	comp=E,89nm,3.7s								
YAK					smax		smax		
	comp=N,51nm,2.6s								
YAK					smax		smax		
	comp=E,89nm,3.0s								
BOD	**Bodaibo**	**28.40**	**331**		*e*P		**P**	**09 53 56.5**	**+0.1**
BOD					pmax		pmax		
	comp=Z,20nm,1.3s								
H11N2	**WAKE ISLAND Hy**	**28.61**	**115**		T		T	10 24 04.2	
	baz=308,slow=75,SNR=24								
H11N1	**WAKE ISLAND Hy**	**28.62**	**115**		T		T	10 23 53.5	
	baz=308,slow=75,SNR=27								
H11N3	**WAKE ISLAND Hy**	**28.63**	**115**		T		T	10 23 52.0	
	baz=308,slow=75,SNR=28								
LZH	**Lanzhou**	**28.92**	**282**		*e*P		**P**	**09 54 01.4**	**0.0**
LZH					pP		pP	09 54 30.8	+3.3
LZH					sP		sP	09 54 42.6	+1.3
LZH					PP		**PnPn**	**09 54 54.9**	**-4.2**
LZH					pmax		pmax		
	comp=Z,24nm,1.1s								
LZH					pmax		pmax		
	comp=Z,100nm,5.3s								
LZH					LR		LR		
	comp=Z,470nm,13.6s								
LZH					LR		LR		
	comp=Z,630nm,12.5s								
LZH					LR		LR		
	comp=Z,590nm,12.5s								
SEY	**Seymchan**	**28.99**	**12**		P		**P**	**09 54 03.1**	**+1.6**
	comp=Z,1.0nm,0.5s,baz=198,slow=4.8,SNR=8.3								
SEY	**Seymchan**	**28.99**	**12**		*i* P		**P**	**09 54 01.8**	**+0.2**
H11S3	**WAKE ISLAND Hy**	**29.23**	**117**		T		T	10 24 35.6	
	baz=310,slow=75,SNR=6.8								
H11S1	**WAKE ISLAND Hy**	**29.23**	**117**		T		T	10 24 43.9	
	baz=310,slow=75,SNR=4.8								
H11S2	**WAKE ISLAND Hy**	**29.25**	**117**		T		T	10 24 44.3	
	baz=310,slow=75,SNR=6.0								
GYA	**Guiyang**	**29.39**	**262**		*i*P		**P**	**09 54 06.0**	**+0.3**
GYA					pP		pP	09 54 33.5	+1.9
GYA					PP		**PnPn**	**09 55 06.0**	**+0.6**
GYA					PcP		**PcP**	**09 57 10.3**	**+1.4**
GYA					S		**S**	**09 58 49.8**	**-1.2**
GYA					sS		sS	09 59 36.0	-0.2
GYA					ScP		**ScP**	**10 00 39.3**	**-0.4**
GYA					ScS		**ScS**	**10 04 31.6**	**-3.0**
GYA					pmax		pmax		
	comp=Z,10.0nm,0.8s								
GYA					pmax		pmax		
	comp=Z,110nm,4.3s								
TLY	**Talaya**	**30.49**	**314**		*i* P		**P**	**09 54 14.0**	**-1.0**
TLY					pmax		pmax		
	comp=Z,3.0nm,0.9s								
BILL	**Bilibino**	**36.32**	**17**		*e*P		**P**	**09 55 05.3**	**+0.1**
BILL					*e*PP		**pP**	**09 55 28.3**	**-3.4**
BILL					*e*			09 56 29.5	
BILL					pmax		pmax		
	comp=Z,2.0nm,0.9s								
TIXI	**Tiksi**	**37.04**	**354**		P		**P**	**09 55 11.6**	**+0.2**
	comp=Z,4.6nm,0.5s,baz=142,slow=4.9,SNR=6.9								
TIXI	**Tiksi**	**37.04**	**354**		*e*P		**P**	**09 55 10.6**	**-0.7**
TIXI					pmax		pmax		
	comp=Z,3.0nm,0.7s								
TIXI	**Tiksi**	**37.04**	**354**

comp=Z,5.9nm,0.5s,baz=107,slow=9.5,SNR=16
KURK Kurchatov 45.93 309*ce* P **P** 09 56 22.9 -1.2
KURK pmax pmax
comp=Z,19nm,0.9s
KURK Kurchatov 45.93 309 P **P** **09 56 23.8 -0.3**
KURK Kurchatov 45.93 309 IAmb IAmb 09 56 24.5
comp=Z,23nm,0.9s
KURBB Kurchatov Arra 46.00 309 P **P** **09 56 23.8 -0.8**
comp=Z,5.8nm,0.4s,baz=87,slow=7.5,SNR=9.9
TARG Taragay, Kyrgy 47.89 297 IAmb IAmb 09 56 41.3
comp=Z,18nm,0.8s
KDJ Kajisay 48.25 298 IAmb IAmb 09 56 43.4
comp=Z,9.9nm,0.8s
MTN Manton Dam 48.34 191 P **P** **09 56 40.9 -2.1**
MTN IAmb IAmb 09 56 45.6
comp=Z,21nm,1.3s
COEN Coen 48.91 175 P **P** **09 56 47.4 -0.1**
COEN IAmb IAmb 09 56 51.7
comp=Z,24nm,1.4s
TKM2 Tokmak 2 49.21 299 P **P** **09 56 50.3 +0.5**
SNR=31
KZA Kyzart 49.66 298 P **P** **09 56 54.5 +1.1**
SNR=14
KBK Karagaybulak 49.73 299 P **P** **09 56 54.1 +0.4**
SNR=20
KSH Kashi 49.80 295 P **P** **09 56 57.3 +3.1**
KSH pP pP 09 57 27.1 +4.7
KSH PP **PP** **09 58 54.8 +5.0**
KSH S **S** **10 03 56.4 +1.7**
KSH SS **SS** **10 07 27.1 -1.3**
KSH pmax pmax
comp=Z,27nm,0.7s
KSH pmax pmax
comp=Z,260nm,4.1s
KSH LR LR
comp=Z,78nm,5.8s
KSH LR LR
comp=Z,260nm,9.4s
KSH LR LR
comp=Z,450nm,17.7s
USP Ospenovka 49.91 300 P **P** **09 56 54.9 0.0**
SNR=13
AAK Ala-Archa 50.06 299 P **P** **09 56 56.3 +0.1**
SNR=9.2
AAK Ala-Archa 50.06 299*ce* P **P** **09 56 55.2 -1.0**
AAK pmax pmax
comp=Z,9.0nm,0.8s
AAK Ala-Archa 50.06 299 P **P** **09 56 56.5 +0.3**
AAK IAmb IAmb 09 56 57.0
comp=Z,12nm,0.8s
UCH Uchtor 50.15 299 P **P** **09 56 57.6 +0.3**
SNR=16
EKS2 Erkin-Say 50.57 299 P **P** **09 56 59.9 -0.1**
SNR=10
AML Almayashu 50.76 299 P **P** **09 57 02.4 +0.6**
SNR=72
BRVK Borovoye 50.80 313*ce* P **P** **09 57 01.0 -0.4**
BRVK pmax pmax
comp=Z,16nm,1.1s
BRVK Borovoye 50.80 313 P **P** **09 57 01.3 -0.1**
BRVK IAmb IAmb 09 57 02.7
comp=Z,17nm,1.1s
KNRA Kununurra 51.52 193 P **P** **09 57 05.4 -1.7**
KNRA IAmb IAmb 09 57 06.2
comp=Z,11nm,0.6s
ILAR Eielson Array 51.95 31 P **P** **09 57 11.8 +2.0**
comp=Z,0.7nm,0.8s,baz=270,slow=6.2,SNR=10
BMAR Burnt Mountain 52.77 28 P **P** **09 57 18.5 +2.7**
KKAR Karatay Array 52.77 301 P **P** **09 57 15.8 -0.4**
KKAR Karatay Array 52.77 301 P **P** **09 57 15.8 -0.4**
KKAR Karatay Array 52.77 301 IAmb IAmb 09 57 17.0
comp=Z,24nm,0.9s
HARP HAARP 52.90 34 P **P** **09 57 16.0 -0.8**
NIL Nilore 53.76 289 P **P** **09 57 23.9 +0.3**
NIL pmax pmax
comp=Z,23nm,0.8s
NIL Nilore 53.76 289 P **P** **09 57 23.9 +0.3**
WRAB Tennant Creek 54.95 186*ce* P **P** **09 57 30.6 -1.5**
WRAB pmax pmax
comp=Z,16nm,1.0s
WRAB Tennant Creek 54.95 186 P **P** **09 57 31.3 -0.8**
WRAB IAmb IAmb 09 57 31.8
comp=Z,21nm,1.1s
WB2 Warramunga Arr 54.96 186 P **P** **09 57 31.5 -0.7**
WRA Warramunga Arr 54.96 186 P **P** **09 57 30.9 -1.4**
comp=Z,15nm,0.6s,baz=0.2,slow=7.6,SNR=189
WRA Warramunga Arr 54.96 186 P **P** **09 57 30.4 -1.8**
KBL Kabul 56.67 291 P **P** **09 57 42.8 -1.9**
KBL pmax pmax
comp=Z,13nm,0.9s
KBL Kabul 56.67 291 P **P** **09 57 42.8 -1.9**
KBL IAmb IAmb 09 57 44.7
comp=Z,13nm,0.8s
ARU Arti 56.79 319*c* iP **P** **09 57 44.7 -0.2**
ARU *PP **pP** **09 58 13.5 -0.1**
ARU 09 59 50.3
ARU S **S** **10 05 31.9 +3.3**
ARU SS **SS** **10 09 17.9 +0.1**
ARU pmax pmax
comp=Z,27nm,1.0s
ARU Arti 56.79 319 P **P** **09 57 44.9 0.0**
INK Inuvik 56.81 26 P **P** **09 57 46.1 +1.3**
comp=Z,0.8nm,0.7s,baz=294,slow=8.9,SNR=6.5
INK Inuvik 56.81 26 P **P** **09 57 46.9 +2.1**
INK pmax pmax
comp=Z,4.0nm,1.4s
INK Inuvik 56.81 26 P **P** **09 57 46.9 +2.1**
ABKAR Akbulak array 58.01 311 P **P** **09 57 53.1 -0.5**
ASAR Alice Springs 58.69 186 P **P** **09 57 57.9 -0.7**
comp=Z,1.6nm,0.4s,baz=16,slow=12,SNR=71
ASAR ScP **ScP** **10 02 34.9 -1.5**
comp=Z,0.3nm,0.7s,baz=12,slow=2.3,SNR=2.2
ASAR Alice Springs 58.69 186 P **P** **09 57 57.4 -1.1**
DZM Mont Dzumac 62.34 152 P **P** **09 58 24.2 +0.7**
comp=Z,4.8nm,0.7s,baz=103,slow=3.8,SNR=5.5
GEYT Alibeck 63.42 299 P **P** **09 58 29.2 -1.3**
comp=Z,4.4nm,0.8s,baz=29,slow=3.4,SNR=8.3
GEYT Alibeck 63.42 299 P **P** **09 58 30.6 +0.2**
KLMR Klimovskoe 64.56 328 *eP* **P** **09 58 35.4 -2.1**
KLMR pmax pmax
comp=Z,11nm,0.8s
KLMR Klimovskoe 64.56 328 *eP* **P** **09 58 35.4 -2.1**
KLMR AMP 09 58 37.8
comp=Z,11nm,0.8s
RES Resolute Bay 64.85 14 P **P** **09 58 40.4 +1.2**
comp=Z,2.4nm,0.6s,baz=322,slow=9.7,SNR=7.9
RES Resolute Bay 64.85 14 P **P** **09 58 40.4 +1.2**
RES pmax pmax
comp=Z,15nm,1.3s
RES Resolute Bay 64.85 14 IAmb IAmb 09 58 51.7
comp=Z,15nm,1.2s
ARCES ARCESS Array B 65.26 339 P **P** **09 58 41.6 -0.3**
comp=Z,5.2nm,0.7s,baz=58,slow=10,SNR=12
YKA Yellowknife Ar 66.25 29 P **P** **09 58 49.9 +1.5**
comp=Z,0.2nm,0.6s,baz=306,slow=6.1,SNR=3.3
FORT Forrest 66.41 191 P **P** **09 58 49.5 -0.1**
OBN Obninsk 68.71 323|| *eP* **P** **09 59 03.1 -0.8**
OBN *e*PP **PcP** **09 59 30.2 +2.3**
OBN *e* 10 01 37.7
OBN *eS* **S** **10 08 00.5 +3.2**
OBN pmax pmax
comp=Z,17nm,1.0s
AKT Akhty 68.98 306 *eP* **P** **09 59 05.8 -0.3**
AKT *e* 09 59 27.6
AKT pmax pmax
comp=Z,15nm,0.7s
FIA1 FINESS Array S 69.80 332 IAmb IAmb 09 59 11.0
comp=Z,13nm,0.9s
FINES FINESS Array B 69.80 332 P **P** **09 59 10.6 0.0**
comp=Z,8.9nm,0.8s,baz=58,slow=6.6,SNR=34
FINES FINESS Array B 69.80 332 P **P** **09 59 10.1 -0.4**
KBZ Khabaz 70.98 310 P **P** **09 59 18.4 +0.4**
comp=Z,11nm,0.8s,baz=78,slow=1.7,SNR=21
KBZ Khabaz 70.98 310*ce* P **P** **09 59 17.8 -0.2**
KBZ pmax pmax
comp=Z,13nm,0.9s
KIV Kislovodsk 71.00 311 P **P** **09 59 18.7 +0.4**
KIV pmax pmax
comp=Z,19nm,1.0s
KIV Kislovodsk 71.00 311 P **P** **09 59 18.7 +0.4**
KIV IAmb IAmb 09 59 20.3
comp=Z,19nm,1.0s
VSU Vasula 71.33 329 *i* P **P** **09 59 19.1 -0.7**
VSU pmax pmax
comp=Z,41nm,0.9s

AKASG Malin Array Be 74.87 322 P **P** **09 59 40.5 -0.3**
comp=Z,4.8nm,0.4s,baz=50,slow=6.2,SNR=22
AKASG Malin Array Be 74.87 322 P **P** **09 59 40.6 -0.3**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 74.87 322 P **P** **09 59 40.6 -0.3**
AKBB Malin Array Si 74.87 322 P **P** **09 59 40.3 -0.5**
AKBB pmax pmax
comp=Z,12nm,0.7s
AKBB Malin Array Si 74.87 322 P **P** **09 59 40.3 -0.5**
AKBB IAmb IAmb 09 59 41.3
comp=Z,12nm,0.7s
NC405 NORSAR Array S 75.14 337 IAmb IAmb 09 59 43.2
comp=Z,22nm,1.0s
NB2 NORSAR Subarra 75.36 337 P **P** **09 59 43.4 -0.1**
comp=Z,12nm,1.0s,baz=42,slow=5.9
NOA NORSAR Array B 75.36 337 P **P** **09 59 43.7 +0.1**
comp=Z,4.9nm,0.8s,baz=41,slow=5.7,SNR=17
KVN Kaiserville 77.17 51 P **P** **09 59 57.1 +2.7**
KVN pmax pmax
comp=Z,3.0nm,0.7s
KVN Kaiserville 77.17 51 P **P** **09 59 57.1 +2.7**
NVAR Mina Array Bea 77.39 52 P **P** **09 59 57.4 +1.8**
comp=Z,1.7nm,0.7s,baz=293,slow=5.3,SNR=19
NVAR Mina Array Bea 77.39 52 P **P** **09 59 57.9 +2.2**
BURAR Bucovina Array 78.85 321 P **P** **10 00 02.8 -0.6**
BRTR Keskin Array B 78.96 311 P **P** **10 00 04.2 0.0**
comp=Z,4.3nm,0.8s,baz=108,slow=4.0,SNR=20
BRTR Keskin Array B 78.96 311 *i* P **P** **10 00 04.8 +0.6**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
TPNV Topopah Spring 79.58 52 P **P** **10 00 10.1 +2.4**
TPNV pmax pmax
comp=Z,2.0nm,0.9s
TPNV Topopah Spring 79.58 52 P **P** **10 00 10.1 +2.4**
RAYN Ar Rayn 79.94 292 P **P** **10 00 09.4 -0.3**
RAYN pmax pmax
comp=Z,12nm,0.8s
RAYN Ar Rayn 79.94 292 P **P** **10 00 09.4 -0.3**
RAYN IAmb IAmb 10 00 10.3
comp=Z,12nm,0.8s
PDAR Pinedale Array 80.13 44 P **P** **10 00 10.4 -0.2**
comp=Z,0.1nm,0.4s,baz=316,slow=2.5,SNR=1.4
KRLC Kraliky 81.25 327 *eP* **P** **10 00 16.4 +0.2**
KRLC Kraliky 81.25 327 *eP* **P** **10 00 16.4 +0.2**
DPC Dobruska-Polom 81.25 327 *eP* **P** **10 00 16.9 +0.7**
DPC Dobruska-Polom 81.25 327 *eP* **P** **10 00 16.9 +0.7**
PFO Pinyon Flats O 81.41 55 P **P** **10 00 18.7 +1.3**
comp=Z,0.9nm,0.6s,baz=47,slow=2.6,SNR=2.6
PFO Pinyon Flats O 81.41 55 P **P** **10 00 18.7 +1.3**
PFO pmax pmax
comp=Z,3.0nm,1.3s
PFO Pinyon Flats O 81.41 55 IAmb IAmb 10 00 27.9
comp=Z,3.2nm,1.2s
VYHS Vyhne 81.42 325 *eP* **P** **10 00 17.7 +0.6**
BRG Berggiesshubel 81.91 329 *eP* **P** **10 00 19.9 +0.3**
comp=Z,4.8nm,0.7s
BRG Berggiesshubel 81.91 329 *eP* **P** **10 00 20.1 +0.5**
comp=Z,4.8nm,0.7s,baz=46,slow=4.6
BRG Berggiesshubel 81.91 329 *eP* **P** **10 00 19.9 +0.3**
BRG pmax pmax
comp=Z,5.0nm,0.7s
CLL Collm 81.98 329 *i* P **P** **10 00 20.9 +1.0**
comp=Z,12nm,0.9s
CLL *ep*P **pP** **10 00 53.0 +2.5**
CLL Collm 81.98 329 *eP* **P** **10 00 21.0 +1.0**
comp=Z,12nm,0.8s,baz=46,slow=4.6
CLL Collm 81.98 329 *i* P **P** **10 00 20.9 +1.0**
CLL *e* 10 00 53.0
CLL pmax pmax
comp=Z,12nm,0.9s
FBE Freiberg 82.12 329 *eP* **P** **10 00 21.4 +0.7**
baz=46,slow=4.6
NRDL Niedersach Rie 82.25 332 *eP* **P** **10 00 21.5 +0.3**
comp=Z,11nm,1.2s,baz=46,slow=4.6
MOX Moxa 83.06 330 *eL* L 10 42 57.7
comp=Z,1µm,20.9s
CONA Conrad Observa 83.22 326 *i* PcP **P** **10 00 27.8 +1.3**
comp=Z,7.7nm,1.0s
KHC Kasperske Hory 83.36 328 *eP* **P** **10 00 26.5 -0.7**
KHC Kasperske Hory 83.36 328 *eP* **P** **10 00 26.5 -0.7**
GEC2 GERESS Array S 83.52 327 *eP* **P** **10 00 28.2 +0.1**
comp=Z,5.4nm,0.9s,baz=46,slow=4.6
GERES GERESS Array B 83.52 327 P **P** **10 00 28.1 +0.1**
comp=Z,2.9nm,0.7s,baz=36,slow=5.0,SNR=14
GERES GERESS Array B 83.52 327 P **P** **10 00 28.0 -0.1**
ARSA Arzberg 83.87 325 *i* PcP **P** **10 00 30.7 +0.9**
comp=Z,4.4nm,0.9s
GRF Grafenberg Arr 83.95 329 *eP* **P** **10 00 30.3 +0.2**
comp=Z,19nm,0.9s,baz=46,slow=4.6
GRF *eL* L 10 43 05.1
comp=Z,1µm,20.4s
MOA Molln 84.00 326 *i* PcP **P** **10 00 31.8 +1.3**
comp=Z,5.2nm,0.8s
SOKA Soboth 84.52 325 *i* PcP **P** **10 00 33.3 +0.1**
comp=Z,16nm,0.8s
OBKA Obir 84.86 325 *i* PcP **P** **10 00 35.0 +0.1**
comp=Z,5.9nm,0.8s
KBA Koelnbreinsper 85.00 326 *i* PcP **P** **10 00 35.7 +0.1**
comp=Z,7.7nm,0.8s
MYKA Terra Mystica 85.20 326 *i* P **P** **10 00 36.2 -0.3**
comp=Z,5.6nm,0.5s
ABTA Abfaltersbach 85.62 327 *i* PcP **P** **10 00 38.8 +0.2**
comp=Z,6.7nm,0.8s
RETA Reutte 85.83 328 *i* PcP **P** **10 00 40.1 +0.4**
comp=Z,5.1nm,0.8s
BMRD Maredsous 86.04 333 PcP **P** **10 00 40.6 +0.1**
FETA Feichten 86.21 328 *i* PcP **P** **10 00 42.0 +0.3**
comp=Z,3.7nm,0.7s
BFO Black Forest 86.21 330 *eP* **P** **10 00 41.4 0.0**
comp=Z,6.4nm,0.8s,baz=46,slow=4.6
DOU Dourbes 86.27 333 PcP **P** **10 00 41.9 +0.2**
DAVA Damuels 86.37 328 *i* P **P** **10 00 41.8 -0.6**
comp=Z,10nm,0.9s
TXAR Lajitas Array 92.53 51 P **P** **10 01 13.2 +1.6**
comp=Z,0.4nm,0.8s,baz=293,slow=2.6,SNR=5.4
TORD Torodi Ar. Bea 117.54 312 PKP **PKPdf** **10 06 45.2 -0.6**
comp=Z,0.5nm,0.9s,baz=29,slow=3.3,SNR=2.9
LPAZ La Paz 149.00 60 PKPbc **PKPbc** **10 07 49.3 +0.6**
comp=Z,0.7nm,0.4s,baz=46,slow=7.3,SNR=4.9

*IDC **15** 09:53:04.7±3.0, 6°.74S×155°.19E, h94km±24km, mb3.6/10, mb1 3.8/13, mb1mx3.5/54, mbtmp4.0/13, Error ellipse: s-maj=26.3km s-min=16.0km az=88.0*
ISC 15 09:53:00.4±0.8, 6.76S±0°.10×155°.4E±0°.1, h56km, n17, σ1s32/17, mb3.8/10, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**4.17**	**306**	P		**Pn**	**09 54 03.5**	**+2.0**
	5.7nm,0.3s,baz=13,slow=2.1,SNR=5.8							
KRVT				S		**Sn**	**09 54 49.7**	**+0.8**
	9.9nm,0.3s,baz=270,slow=8.9,SNR=4.8							
PMG	**Port Moresby**	**8.59**	**252**	P		**Pn**	**09 55 02.8**	**+0.7**
	3.8nm,0.3s,baz=48,slow=7.2,SNR=7.6							
DZM	**Mont Dzumac**	**18.57**	**146**	P		**Pn**	**09 57 15.6**	**+1.8**
	0.2nm,0.3s,baz=108,slow=22,SNR=1.2							
WRA	**Warramunga Arr**	**24.30**	**235**	P		**P**	**09 58 11.7**	**-1.0**
	0.9nm,0.5s,baz=60,slow=9.0,SNR=2.5							
WRA				PcP		**PcP**	**10 01 50.8**	**-0.9**
	0.5nm,0.8s,baz=64,slow=2.2,SNR=5.0							
ASAR	**Alice Springs**	**26.64**	**229**	P		**P**	**09 58 32.8**	**-1.3**
	0.9nm,0.7s,baz=65,slow=9.3,SNR=7.0							
ASAR				PcP		**PcP**	**10 01 55.6**	**-1.4**
	0.2nm,0.6s,baz=72,slow=2.3,SNR=2.1							
H11S3	**WAKE ISLAND Hy**	**27.45**	**24**	T		T	10 26 56.5	
	baz=204,slow=76,SNR=36							
H11S2	**WAKE ISLAND Hy**	**27.45**	**24**	T		T	10 26 56.0	
	baz=204,slow=76,SNR=51							
H11S1	**WAKE ISLAND Hy**	**27.47**	**24**	T		T	10 26 57.8	
	baz=204,slow=76,SNR=37							
STKA	**Stephens Creek**	**28.12**	**206**	P		**P**	**09 58 48.9**	**+1.7**
	2.6nm,0.8s,baz=14,slow=9.9,SNR=3.5							
PETK	**Petropavlovsk-**	**59.67**	**2**	P		**P**	**10 02 59.7**	**+0.9**
	1.1nm,0.5s,baz=170,slow=13,SNR=4.4							
CMAR	**Chiang Mai Arr**	**61.06**	**295**	P		**P**	**10 03 07.8**	**-1.2**
	2.2nm,0.5s,baz=121,slow=5.6,SNR=9.7							
SONM	**Songino Array**	**69.37**	**327**	P		**P**	**10 04 01.6**	**-0.8**
	0.4nm,0.4s,baz=136,slow=5.9,SNR=2.5							
ILAR	**Eielson Array**	**83.00**	**21**	P		**P**	**10 05 18.7**	**-0.6**
	0.4nm,0.6s,baz=239,slow=6.5,SNR=7.8							
MKAR	**Makanchi Array**	**83.51**	**319**	P		**P**	**10 05 21.2**	**-1.2**
	0.2nm,0.5s,baz=92,slow=4.8,SNR=1.9							
ZALV	**Zalesovo Beam**	**84.22**	**326**	P		**P**	**10 05 25.2**	**-0.6**

0.6nm,0.5s,baz=120,slow=8.5,SNR=1.8
YKA Yellowknife Ar 95.94 28 P **P** **10 06 21.6 +0.7**
0.6nm,0.8s,baz=261,slow=4.5,SNR=5.7
TORD Torodi Ar. Bea 153.37 286 PKPbc **PKPbc** **10 12 52.1 -1.3**
0.5nm,0.6s,baz=62,slow=2.9,SNR=4.3

*AEIC **15** 09:54:53±1.7, 53°.9N±0°.1×147°.9W±0°.1, h10km±2km, ML3.7/100, Error ellipse: s-maj=19.4km s-min=14.2km az=162.0*
NEIC 15 09:54:48.6±1.8, 53°.8N±0°.1×147°.9W±0°.1, h18km±8km, Error ellipse: s-maj=19.0km s-min=11.9km az=163.0, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**4.64**	**321**			Pn	09 55 57.3	-0.3
OHAK	**Old Harbor**	**4.64**	**321**			Sn	09 56 47.4	-3.5
KDAK	**Kodiak Island**	**4.83**	**329**			Pn	09 56 00.1	-0.2
KDAK	**Kodiak Island**	**4.83**	**329**			Sn	09 56 51.5	-4.1
MID	**Middleton Isla**	**5.75**	**8**			Pn	09 56 12.7	-0.2
MID						Sn	09 57 14.2	-3.9
CAHL	**Cahill**	**5.99**	**319**			Pn	09 56 16.3	0.0
FOSS	**Fourpeaked Sta**	**6.00**	**330**			Pn	09 56 16.6	+0.2
KAWH	**Katmai**	**6.04**	**323**			Pn	09 56 17.4	+0.5
CNPM	**China Poot**	**6.07**	**344**			Pn	09 56 17.0	-0.3
CNPM	**China Poot**	**6.07**	**344**			Sn	09 57 22.1	-4.1
KABU	**Katmai Buttres**	**6.14**	**320**			Pn	09 56 18.8	+0.5
PLK3	**Peulik 3**	**6.16**	**313**			Pn	09 56 19.3	+0.7
BRSE	**Bradley Lake S**	**6.20**	**346**			Pn	09 56 18.5	-0.6
BRSE						Sn	09 57 24.2	-5.2
BRLK	**Bradley Lake**	**6.24**	**346**			Pn	09 56 19.0	-0.7
BRLK	**Bradley Lake**	**6.24**	**346**			Sn	09 57 25.9	-4.6
HOM	**Homer**	**6.27**	**342**	Pn		Pn	09 56 20.2	+0.2
KAHC	**Katmai Hardscr**	**6.31**	**324**			Pn	09 56 21.1	+0.4
PLK1	**Peulik 1**	**6.38**	**313**			Pn	09 56 22.3	+0.8
AUJK	**Augustine Jueg**	**6.38**	**334**			Pn	09 56 22.1	+0.5
AU22	**Augustine Moun**	**6.39**	**334**			Pn	09 56 21.4	-0.2
AUP	**Augustine Pinn**	**6.40**	**334**			Pn	09 56 22.4	+0.6
AUH	**Augustine H**	**6.40**	**334**			Pn	09 56 22.0	+0.1
AUW	**Augustine West**	**6.42**	**333**			Pn	09 56 22.1	+0.1
SEW	**Seward**	**6.42**	**353**			Pn	09 56 21.3	-0.8
CHGN	**Chignik**	**6.57**	**297**			Pn	09 56 24.1	0.0
HIN	**Hinchinbrook I**	**6.70**	**6**			Pn	09 56 25.9	0.0
ILS	**Iliamna Low So**	**6.83**	**337**			Pn	09 56 27.5	-0.4
RAGM	**Ragged Mountai**	**6.87**	**13**			Pn	09 56 28.7	+0.4
IVE	**Iliamna Volcan**	**6.87**	**338**			Pn	09 56 27.8	-0.7
SLKM	**Skilak Lake**	**6.88**	**350**			Pn	09 56 27.6	-0.9
SLKM						Sn	09 57 40.9	-5.4
EYAK	**Cordova Ski Ar**	**6.90**	**9**			Pn	09 56 28.8	+0.1
CNBA	**Chernabura Isl**	**6.94**	**284**			Pn	09 56 28.1	-1.1
FID	**Port Fidalgo**	**7.05**	**6**	Pn		Pn	09 56 30.2	-0.5
PWL	**Port Wells**	**7.12**	**358**			Pn	09 56 31.3	-0.5
GLI	**Glacier Island**	**7.15**	**3**			Pn	09 56 31.2	-0.9
GLI						Sn	09 57 47.8	-5.0
RED	**Redoubt Volcan**	**7.19**	**340**			Pn	09 56 31.5	-1.2
RED						Sn	09 57 49.5	-4.3
RSO	**Redoubt South**	**7.22**	**340**			Pn	09 56 32.4	-0.9
CAPN	**Captain Cook N**	**7.25**	**347**			Pn	09 56 34.2	+0.8
RDWB	**Redoubt West**	**7.26**	**340**			Pn	09 56 32.8	-1.0
RDWB						Sn	09 57 52.2	-3.5
CHX	**Chaix Hills**	**7.32**	**28**			Pn	09 56 35.0	+0.5
YKU2	**Yakutat**	**7.33**	**35**	Pn		Pn	09 56 34.7	+0.3
DFR	**Drift River**	**7.33**	**341**			Pn	09 56 34.6	0.0
DFR						Sn	09 57 53.8	-3.5
JPK	**Jack Peak**	**7.35**	**5**			Pn	09 56 34.8	0.0
RDJH	**Redoubt Jeurge**	**7.35**	**341**			Pn	09 56 35.1	+0.1
YAH	**Yahtse**	**7.41**	**24**			Pn	09 56 36.4	+0.5
RC01	**Rabbit Creek A**	**7.42**	**353**			Sn	09 57 53.8	-5.5
RC01	**Rabbit Creek A**	**7.42**	**353**			Pn	09 56 35.8	0.0
SDPT	**Sand Point**	**7.50**	**287**	Pn		Pn	09 56 36.9	0.0
PNL	**Peninsula**	**7.54**	**35**			Pn	09 56 36.8	-0.6
DHAK	**Deception Hill**	**7.56**	**41**			Pn	09 56 37.1	-0.7
KNK	**Knik Glacier**	**7.68**	**358**			Pn	09 56 40.2	+0.8
KIAG	**Kiagna River**	**7.78**	**20**			Pn	09 56 41.0	+0.2
VRDI	**Verde Repeater**	**7.86**	**16**			Pn	09 56 42.4	+0.5
SPGG	**Spurr Capps Gl**	**7.87**	**345**			Pn	09 56 42.1	-0.1
BALM	**Baldy**	**7.88**	**20**			Pn	09 56 42.6	+0.4
PMR	**Palmer**	**7.88**	**356**			Pn	09 56 42.1	0.0
SPWE	**Spurr West**	**7.94**	**343**			Pn	09 56 43.4	+0.4
PTPK	**Patty Peak**	**8.00**	**19**			Pn	09 56 44.0	+0.1
GLB	**Gilahina Butte**	**8.01**	**14**			Pn	09 56 44.3	+0.5
CTGM	**Chitina Glacie**	**8.04**	**23**			Pn	09 56 44.3	-0.1
STLK	**Strandline Lak**	**8.04**	**346**			Pn	09 56 44.3	-0.1
BARN	**Barnard Glacie**	**8.05**	**22**			Pn	09 56 45.0	+0.4
GHO	**Glory Hole Cre**	**8.05**	**356**			Pn	09 56 44.7	+0.2
SPNN	**North Nagishla**	**8.05**	**343**			Pn	09 56 44.9	+0.2
MCARA	**McCarthy VSAT**	**8.07**	**17**	Pn		Pn	09 56 45.4	+0.6
SML	**Sawmill**	**8.07**	**358**			Pn	09 56 45.4	+0.6
SCM	**Sheep Creek Mo**	**8.10**	**2**			Pn	09 56 45.7	+0.4
PLBC	**Pleasant Camp**	**8.53**	**43**			Pn	09 56 50.1	-0.9
BESE	**Bessie Mountai**	**8.72**	**51**			Pn	09 56 52.0	-1.6
CRAG	**Craig**	**8.73**	**73**			Pn	09 56 54.4	+0.6
YUK6	**Outpost Mounta**	**8.84**	**32**			Pn	09 56 56.2	+0.7
YUK3	**Moose Creek**	**8.95**	**23**			Pn	09 56 58.3	+1.3
SKAG	**Skagway**	**8.96**	**45**			Pn	09 56 56.0	-0.9
HYT	**Haines Junctio**	**9.03**	**34**			Pn	09 56 58.0	+0.1
YUK4	**Talbot Arm**	**9.07**	**29**			Pn	09 57 00.6	+2.0
WAT2	**Susitna Watana**	**9.24**	**358**			Pn	09 57 01.2	+0.4
DHY	**Denali Highway**	**9.35**	**1**			Pn	09 57 03.2	+0.8
BVCY	**Beaver Creek**	**9.43**	**20**			Pn	09 57 04.3	+0.9
PPLA	**Purkeypile**	**9.44**	**348**			Pn	09 57 03.5	-0.1
RND	**Reindeer**	**9.69**	**357**			Pn	09 57 07.0	+0.1
RND	**Reindeer**	**9.69**	**357**			Sn	09 58 50.9	-4.3
TRF	**Thorofare Moun**	**9.80**	**354**			Pn	09 57 08.3	-0.2
TRF						Sn	09 58 53.9	-4.1
BC03		**9.86**	**16**			Pn	09 57 08.5	-0.6
BCAR	**Beaver Creek A**	**9.86**	**16**	Pn		Pn	09 57 09.7	+0.4
WHY	**Whitehorse**	**9.86**	**40**			Pn	09 57 09.1	-0.3
KTH	**Kantishna Hill**	**9.95**	**352**			Pn	09 57 11.5	+1.0
MCK	**McKinley**	**10.02**	**357**			Pn	09 57 12.4	+1.0
TT01	**Tatalina**	**10.11**	**338**			Pn	09 57 11.6	-1.1
TTA	**Tatalina**	**10.13**	**338**			Pn	09 57 12.4	-0.6
BPAW	**Bear Paw Mtn.**	**10.49**	**352**			Pn	09 58 00.1	+0.1
NEA	**Nenana**	**10.87**	**357**	Pn		Pn	09 57 23.9	+0.9
IL31		**11.06**	**2**			Pn	09 57 26.2	+0.6
ILAR	**Eielson Array**	**11.06**	**2**			Pn	09 57 26.5	+0.9
COLA	**College**	**11.15**	**0**			Pn	09 57 28.1	+1.3
DAWY	**Dawson**	**11.21**	**19**			Pn	09 57 29.1	+1.3
MDM	**Murphy Dome**	**11.24**	**359**	Pn		Pn	09 57 28.9	+0.8
EGAK	**Eagle**	**11.56**	**14**	Pn		Pn	09 57 30.6	-1.9
IMAR	**Indian Mountai**	**12.60**	**349**			Pn	09 57 46.3	-0.4
FYU	**Fort Yukon**	**12.91**	**5**	Pn		Pn	09 57 51.2	+0.3
TOLK	**Toolik Lake Re**	**14.96**	**358**	Pn		Pn	09 58 20.9	+2.2

*IDC **15** 09:55:58.2±2.8, 36°.43N×141°.31E, h0km, mb3.6/3, mb1 3.7/5, mb1mx3.3/54, mbtmp3.6/5, ML2.9/2, Error ellipse: s-maj=61.7km s-min=28.4km az=68.0*
*JMA **15** 09:56:04.9±0.1, 36°.26N×140°.94E, h45km±2km, M3.1*
ISC 15 09:56:04.3±1.2, 36°.31N±0°.03×140°.95E±0°.06, h28km±10km, n24, σ0s90/28, mb3.5/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.29**	**276**	P		**Pn**	**09 56 13.6**	**+0.8**
JHYU				S		**Sn**	**09 56 19.5**	**+1.3**
JHO	**Hitachi**	**0.43**	**314**	S		**Sn**	**09 56 22.4**	**+0.8**
JIHU	**Itakohorinouch**	**0.49**	**225**	P		**Pn**	**09 56 15.8**	**+0.4**
JIHU				S		**Sn**	**09 56 23.6**	**+0.7**
CHOJ	**Chosi**	**0.61**	**187**	P		**Pb**	**09 56 16.4**	**-0.1**
CHOJ				S		**Sb**	**09 56 24.3**	**-0.4**
JYT	**Yasato**	**0.62**	**263**	S		**Sn**	**09 56 25.5**	**-

JHJ	**Hachijo jima 2**	**3.33**	**197**	Pn	**Pn**	**09 56 55.4**	**+0.9**
	8.3nm,0.3s,baz=96,slow=22,SNR=0.9						
JHJ				Sn	**Sn**	**09 57 34.5**	**+1.4**
	14nm,0.3s,baz=254,slow=23,SNR=1.6						
USRK	**Ussuriysk Ar.**	**10.43**	**322**	Pn	**Pn**	**09 58 34.2**	**+2.2**
	baz=138,slow=13,SNR=0.9						
SONM	**Songino Array**	**27.89**	**305**	P	**P**	**10 01 50.4**	**-1.4**
	0.3nm,0.5s,baz=97,slow=7.8,SNR=1.8						
H11N2	**WAKE ISLAND Hy**	**28.11**	**119**	T	T	10 31 11.3	
	baz=312,slow=75,SNR=9.4						
H11N1	**WAKE ISLAND Hy**	**28.12**	**119**	T	T	10 31 10.5	
	baz=312,slow=75,SNR=7.3						
H11N3	**WAKE ISLAND Hy**	**28.13**	**119**	T	T	10 31 13.7	
	baz=312,slow=75,SNR=13						
H11S1	**WAKE ISLAND Hy**	**28.79**	**121**	T	T	10 32 03.6	
	baz=314,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy**	**28.79**	**121**	T	T	10 32 01.9	
	baz=314,slow=76,SNR=19						
H11S2	**WAKE ISLAND Hy**	**28.81**	**121**	T	T	10 32 05.2	
	baz=314,slow=76,SNR=16						
KURBB	**Kurchatov Arra**	**46.16**	**308**	P	**P**	**10 04 25.9**	**-0.2**
	0.8nm,0.5s,baz=87,slow=8.6,SNR=6.6						
WRA	**Warramunga Arr**	**56.30**	**187**	P	**P**	**10 05 41.1**	**-1.4**
	0.4nm,0.8s,baz=358,slow=7.9,SNR=1.8						

IDC 15 09:57:42.9±2.5, 54°29N×86°03E, h0km, mb1 3.2/2, mb1mx3.0/51, mbtmp3.2/2, ML3.0/2, Error ellipse: s-maj=18.6km s-min=11.1km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.79**	**245**	*i*		10 02 26.9	
	baz=63,slow=319,SNR=1.5						
ZALV	**Zalesovo Beam**	**0.79**	**245**	Pg	Pg	09 57 56.9	-1.1
	1.7nm,0.3s,baz=63,slow=17,SNR=11						
ZALV				Lg	Lg	09 58 09.4	
	5.4nm,0.3s,baz=65,slow=28,SNR=8.9						
KURBB	**Kurchatov Arra**	**5.87**	**234**	Pn	Pn	09 59 12.1	+1.1
	0.2nm,0.3s,baz=51,slow=13,SNR=4.5						
KURBB				Lg	Lg	10 00 50.0	
	0.1nm,0.3s,baz=57,slow=33,SNR=3.1						
MKAR	**Makanchi Array**	**7.87**	**199**	Pn	Pn	09 59 39.5	+1.0
	0.4nm,0.3s,baz=23,slow=12,SNR=9.6						
MKAR				Lg	Lg	10 01 51.8	
	baz=20,slow=31,SNR=3.3						

DDA ***15*** *10:16:38.9,40°.94N×41°.86E,h7km±1km,ML2.4*
ISK ***15*** *10:16:38.1,40°.98N×41°.88E,h6km,ML2.6/4*
TIF ***15*** *10:16:38.8,41°.00N×41°.87E,h11km*

ISC 15 10:16:38.8±1.0, 40°.96N±0°.03×41°.85E±0°.04, h8km±7km, n11, σ0°.39/20, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDEM	**Demirkent**	**0.10**	**229**	*i* P	**Pg**	**10 16 41.0**	**-0.3**
DDEM				*i* S	**Sg**	**10 16 42.8**	**-0.2**
DDEM				IAML		10 16 43.0	
	comp=E,3μm,0.2s						
DAGI	**Agillar**	**0.13**	**21**	*i* P	**Pg**	**10 16 41.5**	**-0.1**
DAGI				*i* S	**Sg**	**10 16 43.7**	**0.0**
DAGI				IAML		10 16 44.0	
	comp=E,1μm,0.2s						
DBAD	**Bademkaya**	**0.13**	**296**	*i* P	**Pg**	**10 16 42.0**	**+0.2**
DBAD				IAML		10 16 44.0	
	comp=E,1μm,0.2s						
DBAD				*i* S	**Sg**	**10 16 44.2**	**+0.3**
DBOC	**Borcka**	**0.41**	**340**	*i* P	**Pg**	**10 16 46.9**	**0.0**
DBOC				*i* S	**Sg**	**10 16 52.7**	**+0.4**
BCA	**Borcka**	**0.52**	**340**	PG	**Pg**	**10 16 48.5**	**-0.3**
BCA				SG	**Sg**	**10 16 55.9**	**+0.3**
SENK	**Senkaya-Erzuru**	**0.55**	**136**	PG	**Pg**	**10 16 49.2**	**-0.2**
SENK				SG	**Sg**	**10 16 57.3**	**+0.7**
BATM	**Batumi**	**0.66**	**350**	PG	**Pg**	**10 16 50.9**	**-0.6**
BATM				SG	**Sg**	**10 17 00.2**	**+0.2**
CHOM	**Cayeli-Rize**	**0.84**	**280**	PG	**Pg**	**10 16 54.4**	**-0.5**
CHOM				SG	**Sb**	**10 17 07.2**	**+0.2**
KOPR	**Koprukoy-ERZUR**	**0.97**	**180**	PG	**Pg**	**10 16 57.1**	**-0.3**
KOPR				SG	**Sb**	**10 17 11.5**	**+0.6**
AKH	**Akhalkalaki**	**1.32**	**69**	PN	**Pn**	**10 17 03.2**	**-0.5**
ONI	**Oni**	**2.02**	**36**	PN	**Pn**	**10 17 13.4**	**+0.1**

MOS ***15*** *10:16:40.6±0.9,9°.38N×122°.13E,h17km,mb6.3/86, MS6.0/55, Error ellipse: s-maj=6.5km s-min=3.5km az=113.1*
BJI ***15*** *10:16:41.2±0.0,9°.38N×122°.04E,h20km,mB6.1/78, mb5.9/88,Ms6.2/99,Ms7 6.0/91*
NEIC ***15*** *10:16:42.0±2.0,9°.38N±0°.06×122°.06E±0°.06,h15km±2km, mb6.1/267,Ms_20 6.0/708,Mwb6.1/47,Mww6.3, Mwc6.3(GCMT), Error ellipse: s-maj=9.3km s-min=8.1km az=58.0*
NEIC ***15*** *10:16:42.0,9°.38N×122°.06E,h15km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=1.10; Mθθ=1.02; Mθφ=-2.12; Mrθ=0.65; Mrφ=0.14; Mφr=0.40; Fault plane solution: M₀=2.00000×10¹⁸ NP1:φs=30.88000°, δ=64.26000°, λ=138.05000°. NP2:φs=142.20000°, δ=52.97000°, λ=32.96000°. Principal axes: T 1.7515, Plg47.0000°, Azm351.0000°; N 0.4239, Plg42.0000°, Azm185.0000°; P -2.1753, Plg7.0000°, Azm89.0000°;*
IDC ***15*** *10:16:42.2±1.9,9°.35N×122°.10E,h16km±11km,mb5.6/68, mb1 5.6/73,mb1mx5.6/77,mbtmp5.7/73,ML4.6/5,MS5.8/46, Ms1 5.8/46,ms1mx5.8/52 Error ellipse: s-maj=9.0km s-min=6.0km az=79.0*
MAN ***15*** *10:16:43.1,9°.30N×121°.87E,h38km, mb6.4,ML5.5,MS6.3*
MAN Intensity V - Hinoba-an & Sipalay Negros Occidental; Intensity IV - Ioilo City; Bago City; Pandan Antique; Basay Negros Occidental; Intensity III - Roxas City; Bais City; Intensity II - San Jose Antique; Intensity I - Masbate City.
BGR ***15*** *10:16:44.3±0.0,8°.96N×121°.97E,h33km,mb6.3, mB_BB6.6,Ms6.1*
KLM ***15*** *10:16:45.0,9°.48N×122°.00E,h29km,mb6.3*
DJA ***15*** *10:16:45.6±0.3,9°.N±2°×12°.2E±°,h36km±3km,M6.0/117, mB6.3/113,mb5.9/117,MLv5.1/2,Mw(mB)6.1/113, Mwp6.0/68*
GCMT ***15*** *10:16:47.0±0.1,9°.40N×121°.92E,h24km,MW6.2/173, Moment Tensor Solution. s165,c362; s173,c668; Duration: 3-3 Moment tensor: Scale 10¹⁸Nm; Mrr=2.34±.02; Mθθ=0.60±.01; Mφφ-2.94±.01; Mrθ=1.06±.03; Mθφ=0.73±.01; Mφr-0.34±.03; Best double couple: M₀=2.99200×10¹⁸ NP1:φs=12.00000°, δ=45.00000°, λ=126.00000°. NP2:φs=146.00000°, δ=55.00000°, λ=60.00000°. Principal axes: T 2.8420, Plg65.0000°, Azm360.0000°; N 0.3030, Plg25.0000°, Azm165.0000°; P -3.1420, Plg6.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NEIC ***15*** *10:16:47,9°.40N×121°.94E,h26km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=2.30; Mθθ=0.72; Mφφ-3.02; Mrθ=1.54; Mθφ=0.79; Mφr-0.13; Fault plane solution: M₀=3.24000×10¹⁸ NP1:φs=141.00000°, δ=58.00000°, λ=52.00000°. NP2:φs=17.00000°, δ=49.00000°, λ=134.00000°. Principal axes: T 3.2550, Plg58.0000°, Azm355.0000°; N -0.0371, Plg32.0000°, Azm164.0000°; P -3.2179, Plg5.0000°, Azm257.0000°;*
NEIC ***15*** *10:16:48,9°.48N×122°.17E,h30km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=2.10; Mθθ=0.56; Mφφ-2.66; Mrθ=1.59; Mθφ=0.74; Mφr-0.64; Fault plane solution: M₀=3.06000×10¹⁸ NP1:φs=140.00000°, δ=63.00000°, λ=57.00000°. NP2:φs=15.00000°, δ=42.00000°, λ=137.00000°. Principal axes: T 3.0999, Plg58.0000°, Azm3.0000°; N -0.0732, Plg29.0000°, Azm156.0000°; P -3.0268, Plg12.0000°, Azm253.0000°;*

ISC 15 10:16:44.2±0.3, 9°.35N±0°.02×122°.04E±0°.02, h30km±2km, h30km: pP-P, n2069, σ1°.55/2050, mb6.0/333, MS6.0/468, 219C-30D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIM	**Jordan**	**1.38**	**23**	*e*P	**Pn**	**10 17 08.3**	**+0.8**
GUIM				*e*S	**Sb**	**10 17 26.5**	**-0.2**
JAP	**San Jose, Anti**	**1.39**	**356**	*i*P	**Pn**	**10 17 07.5**	**-0.1**
DCPH	**Dipolog City**	**1.51**	**120**	*i*P	**Pn**	**10 17 08.6**	**-0.5**
DCPH				*i* S	**Sb**	**10 17 30.7**	**+0.4**
CUYO	**Cuyo Island**	**1.80**	**326**	*e*P	**Pn**	**10 17 12.8**	**-0.4**
CUYO				*e*S	**Sn**	**10 17 33.2**	**-1.7**
TBP	**Tagbilaran**	**1.83**	**79**	*i* P	**Pb**	**10 17 19.3**	**+2.2**
TBP				*i* S	**Sb**	**10 17 43.7**	**+4.0**
PAGZ	**Pagadian**	**2.00**	**138**	*e*P	**Pn**	**10 17 16.6**	**+0.6**
PAGZ				*e*S	**Sn**	**10 17 40.0**	**+0.1**
LLP	**Lapu-Lapu**	**2.13**	**63**	*i*P	**Pn**	**10 17 19.6**	**+1.8**
LLP				*i* S	**Sb**	**10 17 46.6**	**-1.6**
RCP	**Roxas**	**2.31**	**18**	*e*P	**Pn**	**10 17 21.7**	**+1.6**
RCP				*e*S	**Sb**	**10 17 51.7**	**-1.5**
KALP	**Kalibo**	**2.33**	**7**	*e*P	**Pb**	**10 17 23.3**	**-2.3**
ZCP	**Zamboanga City**	**2.40**	**179**	*i*P	**Pn**	**10 17 20.6**	**-0.9**
ZCP				*i* S	**Sn**	**10 17 48.2**	**-1.7**
CGP	**Cagayan de Oro**	**2.77**	**108**	*i*P	**Pn**	**10 17 27.2**	**+0.6**
CGP				*i* S	**Sn**	**10 18 01.8**	**+2.7**
MSLP	**Maasin**	**2.89**	**74**	*e*P	**Pn**	**10 17 30.9**	**+2.7**
MSLP				*e*S	**Sb**	**10 18 07.0**	**-3.1**
OTRP	**Odiongan**	**2.99**	**360**	*e*P	**Pn**	**10 17 29.6**	**0.0**
OTRP				*e*S	**Sn**	**10 18 05.8**	**+1.2**
CTBH	**Cotabato--PC H**	**3.04**	**134**	*e*P	**Pn**	**10 17 31.6**	**+1.3**
OCLP	**Ormoc**	**3.05**	**56**	*e*P	**Pn**	**10 17 32.1**	**+1.8**
OCLP				*e*S	**Sn**	**10 18 09.4**	**+3.5**
ENPP	**El Nido**	**3.16**	**306**	*e*P	**Pn**	**10 17 30.9**	**-1.0**
BUSP	**Coron**	**3.20**	**326**	*e*P	**Pn**	**10 17 31.3**	**-1.1**
BUSP				*e*S	**Sn**	**10 18 06.6**	**-2.9**
SJMP	**San Jose**	**3.22**	**344**	*e*P	**Pn**	**10 17 32.9**	**+0.1**
SJMP				*e*S	**Sn**	**10 18 09.5**	**-0.6**
BUKP	**Musuan**	**3.33**	**116**	*e*P	**Pn**	**10 17 36.7**	**+2.4**
BUKP				*e*S	**Sb**	**10 18 18.7**	**-4.1**
MMPH	**Masbate**	**3.37**	**27**	*e*P	**Pn**	**10 17 38.3**	**+3.4**
MMPH				*i* S	**Sb**	**10 18 19.4**	**-4.6**
SCPH	**Surigao**	**3.43**	**83**	*i*P	**Pn**	**10 17 37.8**	**+2.1**
SCPH				*i* S	**Sn**	**10 18 16.2**	**+0.9**
BUTP	**Butuan**	**3.56**	**96**	*e*P	**Pn**	**10 17 39.3**	**+1.9**
BUTP				*e*S	**Sn**	**10 18 23.2**	**+4.7**
SKMP	**Bagumbayan, Su**	**3.75**	**138**	*e*P	**Pn**	**10 17 40.8**	**+0.7**
KCP	**Kidapawan**	**3.81**	**127**	*i*P	**Pn**	**10 17 41.6**	**+0.6**
KCP				*i* S	**Sb**	**10 18 37.2**	**+0.5**
CNP	**Catarman**	**4.07**	**39**	*e*P	**Pn**	**10 17 46.1**	**+1.8**
BOAC	**Boac**	**4.09**	**357**	*e*P	**Pn**	**10 17 45.4**	**+0.7**
BOAC				*e*S	**Sn**	**10 18 32.5**	**+0.9**
DMPH	**Davao City--Mi**	**4.11**	**123**	*e*P	**Pn**	**10 17 48.5**	**+3.5**
DMPH				*e*S	**Sb**	**10 18 45.7**	**+0.6**
DAV	**Davao City (W)**	**4.17**	**123**	Pn	**Pn**	**10 17 46.5**	**+0.6**
	169nm,0.3s,baz=330,slow=3.3,SNR=26						
DAV				LR	LR	10 19 36.2	
	comp=Z,63μm,21.6s,baz=304,slow=42						
DAV	**Davao City (W)**	**4.17**	**123**	P	**Pn**	**10 17 45.9**	**0.0**
DAV	**Davao City (W)**	**4.17**	**123**		**Pn**	**10 17 50.0**	**+4.1**
BATP	**Bataraza**	**4.22**	**263**	*e*P	**Pn**	**10 17 42.6**	**-3.8**
PGP	**Puerto Galera**	**4.26**	**346**	*e*P	**Pn**	**10 17 47.8**	**+0.7**
GSPH	**General Santos**	**4.34**	**138**	*e*P	**Pn**	**10 17 48.6**	**+0.3**
GQP	**Guinayangan**	**4.55**	**5**	*e*P	**Pn**	**10 17 52.2**	**+1.2**
GQP				*e*S	**Sn**	**10 18 39.8**	**-3.1**
LUBP	**Lubang**	**4.70**	**338**	*e*P	**Pn**	**10 17 53.5**	**+0.4**
PVCP	**Virac**	**4.70**	**26**	*e*P	**Pn**	**10 17 54.7**	**+1.6**
LQP	**Lukban**	**4.76**	**354**	*e*P	**Pn**	**10 17 53.7**	**-0.4**
MATI	**Mati**	**4.81**	**119**	*e*P	**Pn**	**10 17 58.1**	**+3.5**
TGY	**Tagaytay City**	**4.84**	**347**	Pn	**Pn**	**10 17 56.5**	**+1.3**
	449nm,0.3s,baz=168,slow=9.2,SNR=20						
TGY				Sn	**Sn**	**10 18 48.4**	**-1.9**
	325nm,0.3s,baz=329,slow=23,SNR=3.1						
TGY				LR	LR	10 20 06.3	
	comp=Z,196μm,20.0s,baz=146,slow=42						
DDMP	**Don Marcelino,**	**4.86**	**131**	*e*P	**Pn**	**10 17 58.2**	**+2.8**
POLP	**Polilio Island**	**5.35**	**359**	*e*P	**Pn**	**10 18 02.9**	**+0.9**
POLP				*e*S	**Sn**	**10 19 01.0**	**-1.6**
PCPH	**Palayan**	**6.24**	**352**	*e*P	**Pn**	**10 18 17.8**	**+3.5**
BALP	**Baler**	**6.37**	**356**	*e*P	**Pn**	**10 18 18.9**	**+2.8**
KKM	**Kota Kinabalu**	**6.64**	**241**		**Pn**	**10 18 19.2**	**-0.7**
SCZP	**Santa Cruz**	**6.72**	**342**	*e*P	**Pn**	**10 18 23.3**	**+2.5**
SMPP	**San Manuel, Pa**	**6.89**	**349**	*e*P	**Pn**	**10 18 23.7**	**+0.5**
SPMM	**Sapulut**	**7.20**	**231**	P	**Pn**	**10 18 28.0**	**+0.5**
BOLP	**Bolinao**	**7.29**	**344**	*e*P	**Pn**	**10 18 31.0**	**+2.4**
CAUP	**Cauayan**	**7.55**	**358**	*e*P	**Pn**	**10 18 36.1**	**+3.9**
ABRA	**Dolores**	**8.35**	**351**	*e*P	**Pn**	**10 18 49.0**	**+5.7**
APYP	**Conner**	**8.50**	**355**	*e*P	**Pn**	**10 18 48.4**	**+3.1**
MRSI	**Marisa**	**8.81**	**181**	P	**Pn**	**10 18 49.7**	**+0.1**
	30μm6μm390nm,0.6s						
KMSI	**Cibinong**	**8.93**	**167**	P	**Pn**	**10 18 52.0**	**+0.8**
	596nm9μm924nm,0.8s						
MPSI	**Mapaga**	**9.20**	**193**	P	**Pn**	**10 18 54.0**	**-1.0**
	56μm15μm1μm,0.7s						
TNTI	**Ternate**	**10.04**	**148**	P	**Pn**	**10 19 08.3**	**+1.9**
	11μm8μm480nm,1.0s						
TNTI	**Ternate**	**10.04**	**148**		**Pn**	**10 19 08.4**	**+1.9**
APSI	**Ampana**	**10.20**	**182**	P	**Pn**	**10 19 11.8**	**+3.2**
	22μm8μm926nm,1.3s						
LUWI	**Luwuk**	**10.35**	**176**	P	**Pn**	**10 19 13.2**	**+2.5**
	30μm18μm2μm,0.9s						
LUWI	**Luwuk**	**10.35**	**176**		**Pn**	**10 19 13.8**	**+3.1**
SMKI	**Samarinda**	**10.85**	**207**	P	**Pn**	**10 19 19.0**	**+1.4**
	80μm13μm626nm,1.2s						
BBP	**Basco**	**11.03**	**360**	*e*P	**Pn**	**10 19 21.1**	**+1.1**
LBMI	**Labuha**	**11.32**	**151**	P	**Pn**	**10 19 25.3**	**+1.3**
	18μm1μm,1.6s						
BKB	**Balikpapan**	**11.72**	**206**		**Pn**	**10 19 30.6**	**+1.2**
SBUM	**Sibu**	**11.92**	**236**		**Pn**	**10 19 31.3**	**-1.0**
SBUM	**Sibu**	**11.92**	**236**	P	**Pn**	**10 19 32.0**	**-0.3**
SANI	**Sanana**	**11.99**	**161**	P	**Pn**	**10 19 34.0**	**+0.8**
	12μm643nm,0.9s						
TTSI	**Tana Toraja**	**12.51**	**190**	P	**Pn**	**10 19 42.3**	**+2.0**
	32μm7μm299nm,0.9s						
SPSI	**Sidrap Palu**	**13.42**	**190**	P	**Pn**	**10 19 54.7**	**+2.0**
	31μm9μm243nm,1.0s						
TWG	**Pinlang**	**13.43**	**356**	Pn	**Pn**	**10 19 54.2**	**+1.5**
NLAI	**Namlea**	**13.48**	**158**	P	**Pn**	**10 19 56.9**	**+3.3**
	5μm260nm,1.3s						
DLV	**T Lat**	**13.56**	**282**		**Pn**	**10 19 56.0**	**+1.1**
DLV					**Sn**	**10 22 23.0**	**-1.7**
SIJI	**Sorong**	**13.70**	**137**	Pn	**Pn**	**10 19 55.8**	**-0.7**
	1.6nm,0.3s,baz=338,slow=9.6,SNR=19						
SIJI				LR	LR	10 25 38.0	
	comp=Z,36μm,19.2s,baz=334,slow=39						
BNSI	**Bone**	**13.79**	**188**	P	**Pn**	**10 19 59.9**	**+2.1**
	10μm568nm,1.3s						
KBKI	**Kotabaru**	**13.86**	**205**	P	**Pn**	**10 20 01.0**	**+2.3**
	718nm2μm105nm,0.9s						
TPUB	**Ta-pu**	**13.94**	**355**		**Pn**	**10 20 01.1**	**+1.3**
YULB	**Yu-li**	**13.98**	**357**		**Pn**	**10 20 01.2**	**+0.8**
KSM	**Kuching**	**14.05**	**237**		**Pn**	**10 20 00.8**	**-0.5**
KSM	**Kuching**	**14.05**	**237**	P	**Pn**	**10 20 01.0**	**-0.3**
AAI	**Ambon**	**14.33**	**154**	P	**Pn**	**10 20 07.3**	**+2.1**
	15μm8μm467nm,1.0s						
MSAI	**Masohi**	**14.36**	**151**	P	**Pn**	**10 20 07.1**	**+1.5**
	3μm286nm,1.3s						
SSLB	**Suanglung**	**14.39**	**356**		**P**	**10 20 10.0**	**-2.6**
KAPI	**Kappang**	**14.45**	**189**	Pn	**Pn**	**10 20 07.3**	**+0.5**
	4.1nm,0.3s,baz=36,slow=14,SNR=22						
KAPI				LR	LR	10 25 37.3	
	comp=Z,98μm,21.9s,baz=5.5,slow=37						
KAPI	**Kappang**	**14.45**	**189**	P	**Pn**	**10 20 09.0**	**+2.3**
KAPI				P	**Pn**	**10 20 09.0**	**+2.3**
KAPI	**Kappang**	**14.45**	**189**	P	**Pn**	**10 20 09.1**	**+2.3**
KAPI	**Kappang**	**14.45**	**189**	Pn	**Pn**	**10 20 09.1**	**+2.3**
BKSI	**Bulukumba**	**14.70**	**188**	P	**Pn**	**10 20 12.4**	**+2.2**
	22μm5μm176nm,0.8s						
BBSI	**Bau Bau**	**14.75**	**178**	P	**Pn**	**10 20 09.9**	**-0.9**
	3μm39nm,1.2s						
NACB	**Ninganchiao**	**14.75**	**358**		**Pn**	**10 20 11.3**	**+0.5**
HKC	**Hong Kong Obse**	**14.93**	**331**	P	**Pn**	**10 20 13.0**	**-0.2**
YOJ	**Yonaguni jima**	**15.06**	**3**	P	**P**	**10 20 19.6**	**-0.3**
YOJ				pmax	pmax		
	comp=Z,461nm,0.9s						
YOJ	**Yonaguni jima**	**15.06**	**3**	P	**P**	**10 20 19.6**	**-0.3**
YOJ				IAmb	IAmb	10 20 24.8	
	comp=Z,461nm,0.9s						
QIZ	**Qiongzhong**	**15.23**	**310**	P	**Pn**	**10 20 17.0**	**-0.3**
QIZ				S	**Sn**	**10 23 06.8**	**+1.7**
QIZ				pmax	pmax		
	comp=Z,2μm,6.8s						
QIZ				LR	LR		
	comp=Z,89μm,14.2s						
QIZ				LR	LR		
	comp=Z,31μm,21.6s						
QIZ				LR	LR		
	comp=Z,73μm,15.7s						
KNMB	**Chin-men Tao**	**15.43**	**347**	Pn	**Pn**	**10 20 17.8**	**-2.0**
TATO	**Taipei**	**15.55**	**358**	P	**P**	**10 20 23.7**	**-1.7**
TATO				IAmb	IAmb	10 20 30.1	
	comp=Z,1μm,0.9s						
QZH	**Quanzhou**	**15.85**	**348**	*i*P	**Pn**	**10 20 26.3**	**+1.1**
QZH				pmax	pmax		
	comp=Z,400nm,2.4s						
QZH				pmax	pmax		
	comp=Z,13μm,5.7s						
QZH				LR	LR		
	comp=Z,54μm,17.5s						
QZH				LR	LR		
	comp=Z,19μm,16.6s						
QZH				LR	LR		
	comp=Z,72μm,17.5s						
BNDI	**Bandanaira**	**15.86**	**150**	P	**Pn**	**10 20 26.2**	**+0.8**
	comp=Z,16μmcomp=Z,36μmcomp=Z,3μm,1.3s						
FAKI	**Fak Fak**	**15.88**	**140**	P	**Pn**	**10 20 25.7**	**0.0**
	comp=Z,27μmcomp=Z,18μmcomp=Z,2μm,1.0s						
FAKI	**Fak Fak**	**15.88**	**140**		**Pn**	**10 20 25.7**	**0.0**
FAKI				IAmb	IAmb	10 20 33.2	
	comp=Z,2μm,1.0s						
GZH	**Guangzhou**	**16.00**	**330**	P	**P**	**10 20 31.6**	**+1.2**
GZH				S	**S**	**10 23 33.3**	**-3.5**
GZH				pmax	pmax		
	comp=Z,10μm,2.5s						
GZH				LR	LR		
	comp=Z,21μm,12.4s						
GZH				LR	LR		
	comp=Z,37μm,12.3s						
RKPI	**Ransiki, Papua**	**16.21**	**131**	P	**Pn**	**10 20 29.4**	**-0.5**
	comp=Z,13μmcomp=Z,1μm,1.5s						
MMRI	**Maumere**	**17.87**	**179**	P	**P**	**10 20 54.1**	**+3.0**
	comp=Z,27μmcomp=Z,20μmcomp=Z,788nm,1.4s						
MMRI	**Maumere**	**17.87**	**179**	P	**P**	**10 20 53.1**	**+1.9**
MMRI				IAmb	IAmb	10 21 24.7	
	comp=Z,1μm,1.1s						
EDFI	**Ende, Flores**	**17.98**	**181**	P	**P**	**10 20 55.1**	**+2.6**
	comp=Z,20μmcomp=Z,6μmcomp=Z,221nm,0.8s						
SRPI	**Serui, Papua**	**18.01**	**128**	P	**P**	**10 20 55.3**	**+2.5**
	comp=Z,0.8nm,0.8s						
KMMI	**Kalianget**	**18.17**	**207**	P	**P**	**10 20 57.8**	**+3.4**
	comp=Z,16μmcomp=Z,437nm,1.7s						
JOW	**Kunigami**	**18.36**	**18**	P	**P**	**10 20 56.5**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=185,slow=15,SNR=18						
PLAI	**Plampang**	**18.55**	**193**	P	**Pn**	**10 21 01.8**	**+2.8**
	comp=Z,31μmcomp=Z,20μmcomp=Z,1μm,1.3s						
SRBI	**Singaraja**	**18.61**	**202**	P	**Pn**	**10 21 02.1**	**+2.4**
	comp=Z,30μmcomp=Z,23μmcomp=Z,508nm,1.1s						
GRJI	**Gresik**	**18.75**	**211**	P	**Pn**	**10 21 02.6**	**+1.1**
	comp=Z,2μmcomp=Z,4μmcomp=Z,279nm,0.9s						
WBSI	**Waikabubak, Su**	**19.05**	**188**	P	**Pn**	**10 21 04.9**	**-0.2**
	comp=Z,21μmcomp=Z,469nm,1.1s						
SOEI	**Soe**	**19.11**	**173**	P	**Pn**	**10 21 08.2**	**+2.3**
	comp=Z,37μmcomp=Z,23μmcomp=Z,1μm,0.9s						
SOEI	**Soe**	**19.11**	**173**	P	**Pn**	**10 21 06.6**	**+0.7**
SOEI				IAmb	IAmb	10 21 37.2	
	comp=Z,1μm,0.9s						
DNP	**Denpasar**	**19.15**	**201**	P	**Pn**	**10 21 08.3**	**+2.0**
	comp=Z,46μmcomp=Z,2μm,1.4s						
UWJI	**Ujung Watu**	**19.17**	**216**	P	**Pn**	**10 21 08.1**	**+1.6**
	comp=Z,4μmcomp=Z,292nm,1.0s						
TPRI	**Tanjung Pinang**	**19.33**	**245**	P	**Pn**	**10 21 09.1**	**+0.6**
	comp=Z,78μmcomp=Z,60μmcomp=Z,648nm,1.8s						
JAGI	**Jajag, Banyuwa**	**19.36**	**204**	P	**Pn**	**10 21 10.5**	**+1.6**
	comp=Z,33μmcomp=Z,20μmcomp=Z,680nm,1.1s						
JAGI	**Jajag, Banyuwa**	**19.36**	**204**	P	**Pn**	**10 21 09.7**	**+0.9**
JAGI				IAmb	IAmb	10 21 25.3	
	comp=Z,671nm,1.0s						
BASI	**Baing, Sumba**	**19.49**	**184**	P	Pn	10 21 20.3	+10
BATI	**Baumata**	**19.50**	**175**	P	**P**	**10 21 09.2**	**+0.2**
	comp=Z,14nm,0.3s,baz=244,slow=0.2,SNR=46						
BATI				S	**Sn**	**10 24 49.2**	**+0.8**
	comp=Z,1.3nm,0.3s,baz=2.0,slow=18,SNR=1.7						
BATI	**Baumata**	**19.50**	**175**	P	**Pn**	**10 21 11.8**	**+1.4**
	comp=Z,19μmcomp=Z,13μmcomp=Z,857nm,0.8s						
SAUI	**Saumlaki**	**19.54**	**152**	P	Pn	10 21 19.5	+8.6
SAUI	**Saumlaki**	**19.54**	**152**	P	**P**	**10 21 09.8**	**+0.4**
SAUI				IAmb	IAmb	10 21 56.5	
	comp=Z,619nm,1.0s						
MYKOM	**Kota Tinggi**	**19.58**	**249**	P	**P**	**10 21 09.4**	**-0.6**
MYKOM				IAmb	IAmb	10 21 14.6	
	comp=Z,945nm,1.3s						
MYKOM	**Kota Tinggi**	**19.58**	**249**	P	**Pn**	**10 21 12.0**	**+0.5**
SMRI	**Semarang**	**19.97**	**216**	P	**Pn**	**10 21 18.0**	**+1.9**
	comp=Z,59μmcomp=Z,27μmcomp=Z,769nm,1.0s						
SMRI	**Semarang**	**19.97**	**216**	P	**Pn**	**10 21 16.4**	**+0.3**
SMRI				IAmb	IAmb	10 21 41.2	
	comp=Z,1μm,1.2s						
PWJI	**Pagerwojo**	**20.04**	**211**	P	Pn	10 21 16.5

comp=Z,26µm,15.8s
GYA LR LR
comp=Z,25µm,16.0s
GYA LR LR
comp=Z,26µm,17.4s
MDSI Maura Dua 22.49 233 P **P** **10 21 41.9 +0.5**
comp=Z,37µmcomp=Z,11µmcomp=Z,611nm,1.1s
LHSI Lahat 22.62 235 P **P** **10 21 44.1 +1.3**
comp=Z,48µmcomp=Z,16µmcomp=Z,841nm,1.4s
BKNI Bangkinang 22.74 248 P **P** **10 21 45.6 +1.5**
comp=Z,55µmcomp=Z,17µmcomp=Z,988nm,1.1s
BKNI Bangkinang 22.74 248 P **P** **10 21 44.0 -0.1**
GUMO Guam 22.77 77 P **P** **10 21 42.4 -1.9**
GUMO pmax pmax
comp=Z,502nm,1.1s
GUMO Guam 22.77 77 P **P** **10 21 42.4 -1.9**
GUMO IAmb IAmb 10 22 07.6
comp=Z,502nm,1.1s
NJ2 Nanjing 22.78 353⇑*i*P **P** **10 21 45.6 +1.3**
NJ2 pP **pP** **10 21 48.4 -3.1**
NJ2 sP **sP** **10 21 51.0 -3.9**
NJ2 sS **sS** **10 26 02.6 -1.1**
NJ2 pmax pmax
comp=Z,750nm,1.1s
NJ2 pmax pmax
comp=Z,14µm,4.3s
NJ2 LR LR
comp=Z,20µm,18.6s
NJ2 LR LR
comp=Z,14µm,17.6s
NJ2 LR LR
comp=Z,30µm,17.7s
KASI Kota Agung 22.89 230 P **P** **10 21 47.4 +1.8**
comp=Z,39µmcomp=Z,15µmcomp=Z,475nm,0.9s
LWLI Liwa 22.91 232 P **P** **10 21 47.5 +1.6**
comp=Z,22µmcomp=Z,2µm,1.0s
SDSI Sungai Dareh 22.93 245 P **P** **10 21 47.6 +1.6**
comp=Z,15µmcomp=Z,334nm,1.4s
KSI Kapahiang 22.29 237 P **P** **10 21 51.6 +1.9**
comp=Z,41µmcomp=Z,25µmcomp=Z,1µm,1.1s
MASI Maura Aman, Be 23.30 239 P **P** **10 21 52.1 +2.2**
comp=Z,31µmcomp=Z,2µm,1.3s
MNAI Manna 23.39 235 P **P** **10 21 53.4 +2.7**
comp=Z,53µmcomp=Z,36µmcomp=Z,3µm,1.5s
KRJI Kerinci 23.44 242 P **P** **10 21 54.0 +2.7**
comp=Z,51µmcomp=Z,52µmcomp=Z,3µm,1.4s
PDSI Padang 23.78 246 P **P** **10 21 55.1 +0.6**
comp=Z,27µmcomp=Z,8µmcomp=Z,478nm,1.2s
MTN Manton Dam 23.83 158 P **P** **10 21 55.3 +0.4**
baz=24,SNR=30
MTN Manton Dam 23.83 158 P **P** **10 21 54.9 +0.1**
MTN IAmb IAmb 10 22 08.3
comp=Z,852nm,1.3s
PSI Prapat 23.87 256 P **P** **10 21 55.6 +0.2**
comp=Z,340nm,1.1s,baz=0.9,slow=3.9,SNR=181
PSI PcP **PcP** **10 25 37.5 -0.7**
comp=Z,40nm,0.9s,baz=181,slow=2.3,SNR=3.8
PSI S **S** **10 26 09.3 -0.8**
comp=Z,7.2nm,0.6s,baz=180,slow=7.1,SNR=1.2
RPSI Rantau Prapat 23.90 255 **S** **10 26 09.3 -1.0**
RPSI Rantau Prapat 23.90 255 IAmb IAmb 10 22 09.3
comp=Z,549nm,1.0s
MNSI Mandailing Nat 23.91 250 P **P** **10 21 56.1 +0.4**
comp=Z,15µmcomp=Z,604nm,1.1s
KMI Kunming 24.15 313 P **P** **10 21 58.6 +0.5**
KMI pP sP 10 22 07.8 -1.0
KMI sP pwP 10 22 12.3 +1.6
KMI PcP **PcP** **10 25 39.3 +0.6**
KMI S **S** **10 26 13.5 -1.0**
KMI pmax pmax
comp=Z,140nm,2.0s
KMI pmax pmax
comp=Z,7µm,12.1s
KMI LR LR
comp=Z,46µm,20.5s
KMI LR LR
comp=Z,47µm,19.7s
KMI LR LR
comp=Z,50µm,16.8s
KMI Kunming 24.15 313 P **P** **10 21 58.8 +0.7**
KMI pmax pmax
comp=Z,529nm,1.8s
KMI MLR MLR
comp=Z,46µm,22.0s
KMI Kunming 24.15 313 P **P** **10 21 58.8 +0.7**
KMI IAmb IAmb 10 22 01.5
comp=Z,529nm,1.8s
KMI Kunming 24.15 313 IAMs_20 IAMs_20 10 29 59.8
comp=Z,46µm,22.0s
CM31 Chiang Mai Arr 24.15 294 P **P** **10 21 58.5 +0.6**
SNR=98
CM31 P **P** **10 21 58.5 +0.6**
SNR=98
CM31 P **P** **10 21 58.5 +0.6**
SNR=98
CM31 S **S** **10 26 17.1 +2.9**
CM31 S **S** **10 26 17.1 +2.9**
CM31 S **S** **10 26 17.1 +2.9**
CM31 Chiang Mai Arr 24.15 294 P **P** **10 21 59.0 +1.1**
CM31 IAmb IAmb 10 22 02.3
comp=Z,1µm,2.0s
CMAR Chiang Mai Arr 24.15 294 P **P** **10 21 58.2 +0.3**
comp=Z,51nm,0.9s,baz=128,slow=8.3,SNR=180
CMAR PcP **PcP** **10 25 38.8 +0.2**
comp=Z,6.5nm,0.8s,baz=101,slow=1.2,SNR=4.1
CMAR ScP **ScP** **10 29 15.1 0.0**
comp=Z,0.7nm,0.3s,baz=98,slow=1.3,SNR=1.6
CMAR PKiKP **PKiKP** **10 33 20.6 -0.9**
comp=Z,4.1nm,0.7s,baz=281,slow=1.3,SNR=16
CMAR Chiang Mai Arr 24.15 294 *i* P **P** **10 21 58.5 +0.6**
CMAR pmax pmax
comp=Z,51nm,0.9s
CMAR Chiang Mai Arr 24.15 294 P **P** **10 21 57.3 -0.6**
KDU Kakadu 24.22 154 P **P** **10 21 58.1 -0.4**
baz=24,SNR=101
CHTO Chiang Mai 24.27 295 P **P** **10 21 59.0 0.0**
CHTO pmax pmax
comp=Z,175nm,0.9s
CHTO Chiang Mai 24.27 295 P **P** **10 21 59.0 0.0**
KCSI Kotacane, Aceh 24.79 258 P **P** **10 22 03.2 -0.5**
comp=Z,32µmcomp=Z,8µmcomp=Z,648nm,1.1s
JNU Nakatsue 25.03 18 P **P** **10 22 05.2 -0.6**
comp=Z,91nm,0.9s,baz=265,slow=2.3,SNR=24
JNU PcP **PcP** **10 25 40.7 +0.4**
comp=Z,14nm,0.9s,baz=231,slow=5.3,SNR=2.6
JNU LR LR 10 31 27.2
comp=Z,35µm,21.8s,baz=200,slow=35
JNU Nakatsue 25.03 18 P **P** **10 22 04.3 -1.5**
PPSI Pulau Pagai 25.03 242 P **P** **10 22 07.8 +1.9**
comp=Z,30µmcomp=Z,22µmcomp=Z,2µm,1.3s
SISI Saibi 25.20 246 P **P** **10 22 07.5 +0.1**
comp=Z,19µmcomp=Z,7µmcomp=Z,301nm,1.1s
LHMI Lhok Sumawe 25.21 262 P **P** **10 22 10.4 +2.8**
comp=Z,42µmcomp=Z,22µmcomp=Z,446nm,1.0s
LHMI Lhok Sumawe 25.21 262 P **P** **10 22 08.2 +0.6**
LHMI IAmb IAmb 10 22 41.1
comp=Z,917nm,1.3s
TPTI 25.42 258 P **P** **10 22 08.4 -1.1**
comp=Z,1µmcomp=Z,22nm,0.9s
XMIS Christmas Isla 25.57 220 P **P** **10 22 13.1 +2.3**
GSI Gunungsitoli 25.61 253 P **P** **10 22 10.7 -0.5**
comp=Z,116µmcomp=Z,45µmcomp=Z,2µm,0.8s
GSI Gunungsitoli 25.61 253 P **P** **10 22 10.5 -0.7**
KNRA Kununurra 25.74 165 P **P** **10 22 12.9 +0.6**
baz=26,SNR=89
KNRA Kununurra 25.74 165 P **P** **10 22 12.7 +0.4**
KNRA IAmb IAmb 10 22 26.5
comp=Z,265nm,0.8s
MLSI Meulaboh, Aceh 25.94 261 P **P** **10 22 14.1 -0.1**
comp=Z,19µmcomp=Z,7µmcomp=Z,263nm,1.2s
JCJ Chichijima 25.96 45 P **P** **10 22 14.2 -0.1**
comp=Z,130nm,0.8s,baz=24,slow=16,SNR=3.8
JCJ LR LR 10 33 39.5
comp=Z,21µm,18.1s,baz=234,slow=39
SNSI Sinabang, Aceh 26.47 256 P **P** **10 22 21.0 +2.0**
comp=Z,11µmcomp=Z,624nm,1.0s
TIA Tai'an 27.11 351 P **P** **10 22 24.6 +0.1**
TIA pP **sP** **10 22 34.6 -0.9**
TIA sP **pwP** **10 22 38.4 +1.6**
TIA pmax pmax
comp=Z,97nm,0.9s
TIA pmax pmax
comp=Z,5µm,6.7s
TIA LR LR
comp=Z,17µm,19.4s
TIA LR LR
comp=Z,17µm,19.0s
TIA LR LR
comp=Z,28µm,20.2s
TJN Taejon 27.34 9*ce*P **P** **10 22 25.4 -1.1**
XAN Xi'an 27.37 336 P **P** **10 22 26.5 -0.4**
XAN pmax pmax
comp=Z,170nm,0.9s
XAN MLR MLR
comp=Z,31µm,18.0s
XAN Xi'an 27.37 336 P **P** **10 22 26.5 -0.4**
XAN Xi'an 27.37 336 IAMs_20 IAMs_20 10 34 59.4
comp=Z,31µm,18.0s
CD2 Chengdu 27.39 324 P **P** **10 22 27.0 -0.1**
CD2 pP pP 10 22 30.0 -4.7
CD2 S **S** **10 27 06.0 +0.5**
CD2 sS sS 10 27 17.5 -0.6
CD2 SS SS 10 28 23.0 -38
CD2 pmax pmax
comp=Z,950nm,1.1s
CD2 pmax pmax
comp=Z,8µm,10.0s
CD2 LR LR
comp=Z,57µm,15.8s
CD2 LR LR
comp=Z,50µm,17.3s
CD2 LR LR
comp=Z,54µm,17.2s
FITZ Fitzroy Crossi 27.50 173 P **P** **10 22 28.0 -0.2**
baz=28,SNR=39
FITZ Fitzroy Crossi 27.50 173 P **P** **10 22 28.0 -0.2**
comp=Z,30nm,0.8s,baz=5.7,slow=7.9,SNR=23
FITZ PcP **PcP** **10 25 46.2 +0.1**
comp=Z,15nm,0.5s,baz=175,slow=4.0,SNR=5.4
FITZ LR LR 10 35 26.0
comp=Z,13µm,18.0s,baz=310,slow=41
INCN Inchon 28.32 8 P **P** **10 22 34.3 -1.0**
INCN pmax pmax
comp=Z,93nm,1.1s
INCN MLR MLR
comp=Z,35µm,20.0s
INCN Inchon 28.32 8 P **P** **10 22 34.2 -1.0**
INCN Inchon 28.32 8 IAMs_20 IAMs_20 10 34 19.8
comp=Z,35µm,20.0s
KSAR Wonju Array Be 28.46 10 P **P** **10 22 36.3 -0.3**
KSAR Wonju Array Be 28.46 10 P **P** **10 22 36.3 -0.3**
KSRS Korea Array 28.48 10 P **P** **10 22 36.8 +0.1**
comp=Z,55nm,1.0s,baz=184,slow=9.9,SNR=109
KSRS ScP **ScP** **10 29 31.2 +3.8**
comp=Z,0.5nm,0.6s,baz=183,slow=3.6,SNR=1.4
KSRS PKiKP **PKiKP** **10 33 22.1 -1.4**
comp=Z,3.9nm,1.0s,baz=162,slow=1.7,SNR=9.0
KSRS LR LR 10 34 19.9
comp=Z,30µm,21.0s,baz=188,slow=37
KS19 Wonju Array Si 28.52 10 P **P** **10 22 36.8 -0.3**
JHJ Hachijo jima 2 28.77 32 P **P** **10 22 38.7 -0.6**
comp=Z,76nm,0.7s,baz=59,slow=21,SNR=1.5
JHJ LR LR 10 33 06.7
comp=Z,15µm,20.3s,baz=245,slow=34
INU Inuyama 29.27 26 IAMs_20 IAMs_20 10 32 39.1
comp=Z,32µm,22.0s
DL2 Dalian 29.43 359 P **P** **10 22 45.5 +0.3**
DL2 S **S** **10 27 37.8 +0.4**
DL2 pmax pmax
comp=Z,100nm,1.0s
DL2 pmax pmax
comp=Z,4µm,5.3s
DL2 LR LR
comp=Z,19µm,17.7s
DL2 LR LR
comp=Z,8µm,17.9s
DL2 LR LR
comp=Z,23µm,17.2s
TIY Taiyuan 29.54 344 *e*P **P** **10 22 45.6 -0.6**
TIY PP **PnPn** **10 23 36.9 -4.5**
TIY SS SS 10 29 08.0 -37
TIY pmax pmax
comp=Z,3µm,6.4s
TIY LR LR
comp=Z,25µm,17.1s
TIY LR LR
comp=Z,8µm,17.5s
TIY LR LR
comp=Z,26µm,18.2s
MBWA Marble Bar 30.40 184 P **P** **10 22 54.1 +0.2**
MBWA IAmb IAmb 10 23 07.4
comp=Z,152nm,0.8s
PSAC1 Pilbara Seismi 30.77 184 P **P** **10 22 56.7 -0.4**
PSAC1 IAmb IAmb 10 23 10.8
comp=Z,350nm,0.9s
PSAB2 Pilbara Seismi 30.79 184 P **P** **10 22 56.7 -0.6**
PSAB2 IAmb IAmb 10 23 11.4
comp=Z,364nm,0.9s
PSAC2 Pilbara Seismi 30.79 184 P **P** **10 22 56.6 -0.7**
PSAC2 IAmb IAmb 10 23 11.5
comp=Z,394nm,0.9s
PSAA2 Pilbara Seismi 30.79 184 P **P** **10 22 56.9 -0.4**
PSAA2 IAmb IAmb 10 23 11.5
comp=Z,357nm,0.9s
MAJO Matsushiro 30.80 26 P **P** **10 22 55.4 -1.9**
MAJO pmax pmax
comp=Z,69nm,1.3s
MAJO Matsushiro 30.80 26 P **P** **10 22 55.4 -1.9**
MAJO IAMs_20 IAMs_20 10 33 27.2
comp=Z,34µm,21.0s
MAT Matsushiro 30.80 26 P **P** **10 22 55.1 -2.2**
MAT S **S** **10 27 52.3 -6.6**
MJAR Matsushiro Arr 30.80 26 P **P** **10 22 54.9 -2.4**
comp=Z,33nm,0.9s,baz=203,slow=8.6,SNR=21
MJAR PcP **PcP** **10 25 54.0 -0.3**
comp=Z,39nm,1.0s,baz=195,slow=3.5,SNR=13
MJAR LR LR 10 33 48.3
comp=Z,31µm,21.3s,baz=210,slow=33
MJAR Matsushiro Arr 30.80 26 P **P** **10 22 55.4 -1.9**
MJAR pmax pmax
comp=Z,17nm,1.1s
MJAR Matsushiro Arr 30.80 26 P **P** **10 22 55.4 -1.9**
MJB9 Matsu-Tunnel 30.80 26 P **P** **10 22 55.1 -2.2**
PSAB1 Pilbara Seismi 30.80 184 P **P** **10 22 56.3 -1.1**
PSAB1 IAmb IAmb 10 23 11.0
comp=Z,357nm,0.9s
PSA00 Pilbara Seismi 30.80 184 P **P** **10 22 56.9 -0.5**
PSA00 IAmb IAmb 10 23 11.6
comp=Z,312nm,0.9s
PSA00 Pilbara Seismi 30.80 184 P **P** **10 22 57.2 -0.3**
PSA00 IAmb IAmb 10 23 11.4
comp=Z,151nm,0.9s
PSAA1 Pilbara Seismi 30.81 184 P **P** **10 22 56.9 -0.6**
PSAA1 IAmb IAmb 10 23 11.1
comp=Z,324nm,0.9s
PSAA3 Pilbara Seismi 30.81 184 P **P** **10 22 56.5 -1.0**
PSAA3 IAmb IAmb 10 23 11.6
comp=Z,314nm,0.9s
PSAB3 Pilbara Seismi 30.82 184 P **P** **10 22 57.3 -0.3**
PSAB3 IAmb IAmb 10 23 11.7
comp=Z,333nm,0.9s
PSAD2 Pilbara Seismi 30.84 184 P **P** **10 22 57.6 -0.2**
PSAD2 IAmb IAmb 10 23 11.4
comp=Z,358nm,0.9s
PSAC3 Pilbara Seismi 30.85 184 P **P** **10 22 58.1 +0.2**
PSAC3 IAmb IAmb 10 23 11.5
comp=Z,331nm,0.9s
PSAD3 Pilbara Seismi 30.88 184 P **P** **10 22 58.0 -0.2**
PSAD3 IAmb IAmb 10 23 11.8
comp=Z,314nm,0.9s
BJT Baijiatuao 30.99 351 IAmb IAmb 10 23 02.4
comp=Z,305nm,1.3s
BJI Beijing 31.01 351 P **P** **10 22 59.4 +0.3**
BJI S **S** **10 28 05.9 +3.9**
BJI pmax pmax
comp=Z,180nm,1.3s
BJI pmax pmax
comp=Z,4µm,6.3s
BJI LR LR
comp=Z,13µm,19.2s
BJI LR LR
comp=Z,9µm,18.2s
KOHI KOHIMA 31.11 305⇑*i*P **P** **10 22 59.7 -0.7**
KOHI IAMs_20 IAMs_20 10 35 55.6
comp=Z,24µm,18.9s
PMG Port Moresby 31.19 126 P **P** **10 22 58.9 -2.0**
comp=Z,35nm,0.9s,baz=305,slow=8.0,SNR=4.9
PMG Port Moresby 31.19 126 P **P** **10 22 59.4 -1.6**
PMG pmax pmax
comp=Z,47nm,0.9s
PMG Port Moresby 31.19 126 P **P** **10 22 59.4 -1.6**
COEN Coen 31.24 138 P **P** **10 22 60.0 -1.4**
baz=31,SNR=32
LZH Lanzhou 31.34 331⇑P **P** **10 23 03.5 +1.2**
LZH PP **PP** **10 24 10.8 -2.6**
LZH S **S** **10 28 09.3 +1.5**
LZH pmax pmax
comp=Z,600nm,1.2s
LZH pmax pmax
comp=Z,2µm,5.4s
LZH LR LR
comp=Z,27µm,19.0s
LZH LR LR
comp=Z,27µm,15.7s
LZH LR LR
comp=Z,24µm,18.4s
WB0 Warramunga Arr 31.39 157 IAmb IAmb 10 23 17.2
comp=Z,228nm,1.2s
WRAB Tennant Creek 31.52 157*ce*P **P** **10 23 02.9 -0.9**
WRAB pmax pmax
comp=Z,207nm,1.3s
WRAB Tennant Creek 31.52 157 P **P** **10 23 02.6 -1.3**
WRAB IAmb IAmb 10 23 16.9
comp=Z,228nm,1.2s
WRA Warramunga Arr 31.53 157 P **P** **10 23 02.9 -1.0**
comp=Z,70nm,0.9s,baz=340,slow=9.4,SNR=87
WRA PcP **PcP** **10 25 56.3 -0.1**
comp=Z,35nm,0.9s,baz=338,slow=3.6,SNR=7.2
WRA S **S** **10 28 05.3 -5.3**
comp=Z,4.3nm,1.1s,baz=346,slow=14,SNR=1.4
WRA ScP **ScP** **10 29 36.5 -1.2**
comp=Z,15nm,1.1s,baz=326,slow=3.2,SNR=5.0
WRA PKiKP **PKiKP** **10 33 24.1 -1.9**
comp=Z,1.1nm,0.7s,baz=326,slow=1.4,SNR=5.3
WRA LR LR 10 38 06.7
comp=Z,10µm,21.8s,baz=345,slow=41
WRA P3KPbc 10 54 38.8
comp=Z,5.5nm,1.2s,baz=158,slow=4.3,SNR=9.2
WRA Warramunga Arr 31.53 157 P **P** **10 23 02.4 -1.5**
WRA S **S** **10 28 05.3 -5.3**
WRA pmax pmax
comp=Z,5.0nm,1.1s
WRA Warramunga Arr 31.53 157 P **P** **10 23 02.4 -1.5**
WB2 Warramunga Arr 31.53 157 IAmb IAmb 10 23 16.9
comp=Z,209nm,1.1s
WR0 Warramunga Arr 31.62 157 IAmb IAmb 10 23 17.7
comp=Z,460nm,1.6s
ZIRO ZIRO 32.15 308⇑*i*P **P** **10 23 09.3 -0.2**
ZIRO IAMs_20 IAMs_20 10 37 37.5
comp=Z,18µm,17.1s
SNY Shenyang 32.38 2⇑P **P** **10 23 11.0 -0.1**
SNY S **S** **10 28 23.8 +0.4**
SNY pmax pmax
comp=Z,170nm,2.3s
SNY pmax pmax
comp=Z,5µm,8.0s
SNY LR LR
comp=Z,28µm,17.3s
SNY LR LR
comp=Z,10µm,18.6s
SNY LR LR
comp=Z,42µm,17.3s
GIRL Giralia 32.70 193 P **P** **10 23 15.9 +1.8**
baz=33,SNR=8.2
HHC Hu-ho-hao-te 32.72 345 *e*P **P** **10 23 14.8 +0.5**
HHC PP **PnPn** **10 24 24.6 +1.7**
HHC S **S** **10 28 30.4 +1.4**
HHC SS **SnSn** **10 30 23.5 -2.3**
HHC pmax pmax
comp=Z,60nm,0.9s
HHC pmax pmax
comp=Z,3µm,6.9s
HHC LR LR
comp=Z,8µm,18.6s
HHC LR LR
comp=Z,10µm,16.1s
HHC LR LR
comp=Z,13µm,14.9s
SHL Shillong 32.86 303⇑*i*P **P** **10 23 15.4 -0.3**
SHL *i* x x 10 28 33.1
RABL Rabaul 32.90 113 P **P** **10 23 15.5 -0.6**
BTO Baotou 32.91 343 *e*P **P** **10 23 16.6 +0.7**
MSHR Mys Shultsa 34.06 12 *i* P **P** **10 23 26.4 +0.7**
MSHR pmax pmax
comp=Z,124nm,1.0s
QIS Mount Isa 34.38 150 P **P** **10 23 28.6 -0.2**
baz=34,SNR=70
CN2 Changchun 34.45 4⇑P **P** **10 23 29.1 -0.1**
CN2 *es*P pP 10 23 38.0 +1.1
CN2 *e*S **S** **10 28 55.8 +0.3**
CN2 pmax pmax
comp=Z,100nm,0.6s
CN2 pmax pmax
comp=Z,4µm,5.0s
CN2 LR LR
comp=Z,18µm,18.0s
CN2 LR LR
comp=Z,18µm,18.0s
CN2 LR LR
comp=Z,17µm,22.0s
WRKA Warakurna 34.72 170 P **P** **10 23 31.5 -0.2**
baz=35,SNR=107
VLA Vladivostok 34.73 13*c i*P **P** **10 23 32.2 +0.7**
VLA pmax pmax
comp=Z,257nm,1.1s
AS31 Alice Springs 34.80 161 P **P** **10 23 32.6 +0.1**
ASAR Alice Springs 34.80 161 P **P** **10 23 32.4 -0.1**
comp=Z,57nm,0.9s,baz=344,slow=7.0,SNR=226
ASAR PcP **PcP** **10 26 05.2 -0.4**
comp=Z,25nm,0.7s,baz=340,slow=2.7,SNR=5.4
ASAR S **S** **10 28 53.6 -7.9**
comp=Z,4.0nm,1.0s,baz=349,slow=21,SNR=2.3
ASAR ScP **ScP** **10 29 48.1 -1.0**
comp=Z,9.5nm,0.9s,baz=338,slow=2.7,SNR=5.2
ASAR PKiKP **PKiKP** **10 33 27.1 -1.2**
comp=Z,1.1nm,0.8s,baz=356,slow=1.3,SNR=3.7
ASAR LR LR 10 40 21.0
comp=Z,17µm,19.6s,baz=337,slow=41
ASAR P4KPbc 11 02 05.7
comp=Z,0.3nm,0.7s,baz=354,slow=4.0,SNR=4.4
ASAR Alice Springs 34.80 161 P **P** **10 23 32.2 -0.3**
MTSU Mount Surprise 35.07 141 P **P** **10 23 34.3 -0.5**
baz=35,SNR=18
LSA Lhasa 35.27 309 P **P** **10 23 38.1 +1.0**
LSA S **S** **10 29 07.3 -2.2**
LSA pmax pmax
comp=Z,160nm,1.6s
LSA LR LR
comp=Z,33µm,16.4s
LSA LR LR
comp=Z,37µm,17.1s
LSA LR LR
comp=Z,60µm,17.4s
LSA Lhasa 35.27 309 P **P** **10 23 38.0 +1.0**
LSA Lhasa 35.27 309 P **P** **10 23 38.0 +1.0**
LSA Lhasa 35.27 309 P **P** **10 23 37.6 +0.6**
LSA pmax pmax
comp=Z,199nm,1.5s
LSA MLR MLR
comp=Z,17µm,18.0s
LSA Lhasa 35.27 309 P **P** **10 23 37.6 +0.6**
LSA IAmb IAmb 10 23 55.0
comp=Z,199nm,1.5s
MDJ Mudanjiang 35.74 9 IAMs_20 IAMs_20 10 38 22.5
comp=Z,36µm,21.0s
USA0B Ussuriysk Arra 35.78 12*c i*P **P** **10 23 41.0 +0.4**
USA0B Ussuriysk Arra 35.78 12 IAMs_20 IAMs_20 10 39 07.4
comp=Z,22µm,19.0s
USRK Ussuriysk Ar. 35.78 12 P **P** **10 23 41.1 +0.5**
comp=Z,78nm,0.7s,baz=198,slow=7.3,SNR=78
USRK PcP **PcP** **10 26 07.2 -0.8**
comp=Z,5.7nm,0.8s,baz=207,slow=4.7,SNR=1.7
USRK LR LR 10 39 10.0
comp=Z,20µm,19.7s,baz=187,slow=38
USRK Ussuriysk Ar. 35.78 12 P **P** **10 23 40.8 +0.2**
GTA Gaotai 35.92 330⇑P **P** **10 23 43.3 +1.2**
GTA pP pP 10 23 49.0 -0.7
GTA sP sP 10 23 51.9 -1.0
GTA S **S** **10 29 14.1 -4.5**
GTA pmax pmax
comp=Z,190nm,0.6s
GTA pmax pmax
comp=Z,5µm,11.7s
GTA LR LR
comp=Z,18µm,18.2s
GTA LR LR
comp=Z,19µm,17.9s
GTA LR LR
comp=Z,28µm,19.2s

MEEK Meekatharra 35.92 185 P **P** **10 23 41.8 -0.3**
baz=36,SNR=38
PATS Pohnpei 35.99 91 P **P** **10 23 41.7 -1.1**
baz=36,SNR=3.9
PATS Pohnpei 35.99 91 IAmb IAmb 10 24 17.3
comp=Z,269nm,1.4s
GTK Tadong 36.25 304⇑ *i*P **P** **10 23 46.0 +1.0**
GTK *i* x x 10 29 26.3
GTK *ex* x 10 32 13.0
BWNR Bhubaneshwar 36.59 291⇑ *i*P **P** **10 23 48.4 +0.5**
BWNR IAmb IAmb 10 24 02.1
comp=Z,394nm,1.9s
BWNR *i* x x 10 29 28.8
BWNR *ex* x 10 32 07.8
TAPN Taplejung 36.99 304 *e*P **P** **10 23 52.2 +0.6**
comp=Z,637nm,1.1s
ODAN Odare 37.08 303 *e*P **P** **10 23 52.7 +0.5**
BOK Bokaro 37.37 297⇑ *i*P **P** **10 23 55.5 +1.0**
BOK *ex* x 10 29 44.4
ERM Erimo 37.47 26*c i*P **P** **10 23 56.1 +1.1**
ERM pmax pmax
comp=Z,82nm,1.0s
ERM Erimo 37.47 26 P **P** **10 23 54.4 -0.6**
ERM Erimo 37.47 26 IAMs_20 IAMs_20 10 39 58.0
comp=Z,23µm,20.0s
TEY Ternei 37.72 17⇑ *i*P **P** **10 23 57.1 0.0**
TEY *e*S **S** **10 29 42.4 -3.0**
TEY pmax pmax
comp=E,20nm,1.2s
TEY pmax pmax
comp=N,30nm,1.0s
TEY pmax pmax
comp=Z,50nm,1.2s
TEY pmax pmax
comp=N,2µm,6.2s
TEY pmax pmax
comp=Z,5µm,6.3s
TEY pmax pmax
comp=E,1µm,5.3s
TEY smax smax
comp=E,8µm,4.6s
TEY smax smax
comp=N,8µm,5.5s
TEY MLR MLR
comp=E,8µm,18.0s
TEY MLR MLR
comp=N,12µm,17.0s
TEY MLR MLR
comp=Z,14µm,18.0s
CTA Charters Tower 37.74 141 P **P** **10 23 57.2 -0.4**
comp=Z,71nm,0.9s,baz=322,slow=12,SNR=36
CTA PcP **PcP** **10 26 14.7 +0.3**
comp=Z,11nm,0.7s,baz=331,slow=7.6,SNR=1.6
CTA S **S** **10 29 42.3 -4.0**
comp=Z,7.0nm,1.0s,baz=240,slow=18,SNR=1.5
CTAO Charters Tower 37.74 141 P **P** **10 23 57.5 -0.1**
CTAO pmax pmax
comp=Z,124nm,1.0s
CTAO MLR MLR
comp=Z,15µm,19.0s
CTAO Charters Tower 37.74 141 P **P** **10 23 57.5 -0.1**
RAMN Ramite 37.77 302 *e*P **P** **10 23 58.8 +0.7**
comp=Z,531nm,1.2s
JIRN Jiri 38.36 303 *e*P **P** **10 24 03.9 +0.6**
MORW Morawa 38.63 188 P **P** **10 24 05.0 +0.1**
baz=39,SNR=65
MORW Morawa 38.63 188 IAmb IAmb 10 24 19.3
comp=Z,240nm,0.9s
GUN Gumba 38.71 303 *e*P **P** **10 24 06.7 +0.5**
ASAJ Asahikawa 38.97 24 P **P** **10 24 08.3 +0.7**
comp=Z,157nm,0.9s,baz=236,slow=8.9,SNR=87
ASAJ PcP **PcP** **10 26 18.4 +0.6**
comp=Z,56nm,1.1s,baz=237,slow=3.3,SNR=3.0
ASAJ S **S** **10 30 01.7 -2.7**
comp=Z,7.8nm,1.0s,baz=209,slow=29,SNR=2.0
JKA Kamikawa-asahi 38.97 24 **S** **10 30 01.7 -2.8**
PKI Pulchoki 38.98 303 *e*P **P** **10 24 08.2 -0.2**
PKIN Phulchoki 38.99 303 *e*P **P** **10 24 08.2 -0.2**
KKN Kakani 39.16 303 *e*P **P** **10 24 09.8 0.0**
DMN Daman 39.24 303 *e*P **P** **10 24 10.7 +0.2**
comp=Z,376nm,1.0s
GKN Gorkha 39.77 303 *e*P **P** **10 24 14.9 +0.1**
HIA Hailar 39.84 358 IAMs_20 IAMs_20 10 42 01.4
comp=Z,24µm,20.0s
PVM Polavaram 40.04 286 *e*P **P** **10 24 17.6 +0.7**
PVM IVmB_BB 10 24 29.3
comp=Z,1µm,6.1s
PVM IVMs_BB IVMs_BB 10 43 07.3
comp=Z,3µm,17.1s
BLDU Ballidu 40.06 187 P **P** **10 24 16.8 0.0**
baz=40,SNR=12
YUK Yuzh-Kuril'sk 40.28 27 *e*P P 10 24 13.5 -5.0
YUK *e* 10 25 51.9
YUK *e*S **S** **10 30 19.7 -4.3**
YUK *e*SS **SS** **10 33 21.0 -2.2**
YUK pmax pmax
comp=Z,602nm,2.1s
YUK pmax pmax
comp=E,226nm,2.2s
YUK pmax pmax
comp=N,350nm,2.1s
YUK MLR MLR
comp=Z,8µm,19.0s
YUK MLR MLR
comp=N,9µm,16.0s
YUK MLR MLR
comp=E,2µm,19.0s
FORT Forrest 40.31 172 P **P** **10 24 19.0 0.0**
baz=40,SNR=103
FORT Forrest 40.31 172 P **P** **10 24 19.0 0.0**
FORT IAMs_20 IAMs_20 10 40 23.7
comp=Z,20µm,21.0s
ULN Ulaanbaatar 40.42 344 P **P** **10 24 20.5 +0.6**
ULN pmax pmax
comp=Z,332nm,1.4s
ULN MLR MLR
comp=Z,13µm,18.0s
ULN Ulaanbaatar 40.42 344 P **P** **10 24 20.5 +0.6**
ULN IAmb IAmb 10 24 23.6
comp=Z,332nm,1.4s
KMBL Kambalda 40.48 180 P **P** **10 24 20.3 -0.1**
baz=41,SNR=123
KOLN Koldanda 40.55 302 *e*P **P** **10 24 21.8 +0.5**
comp=Z,345nm,0.8s
SONM Songino Array 40.58 344 P **P** **10 24 21.5 +0.4**
comp=Z,62nm,0.8s,baz=164,slow=10.0,SNR=205
SONM PcP **PcP** **10 26 23.1 +0.1**
comp=Z,12nm,1.0s,baz=173,slow=6.6,SNR=1.4
SONM ScP **ScP** **10 30 14.0 +3.5**
comp=Z,0.6nm,0.6s,baz=154,slow=3.1,SNR=0.9
SONM PKiKP **PKiKP** **10 33 31.0 -1.5**
comp=Z,1.3nm,0.7s,baz=184,slow=1.6,SNR=2.6
SONM LR LR 10 43 11.6
comp=Z,25µm,19.1s,baz=156,slow=39
SONM Songino Array 40.58 344 P **P** **10 24 20.5 -0.7**
KLR Kul'dur 40.58 10 P **P** **10 24 21.1 +0.2**
comp=Z,157nm,1.1s,baz=210,slow=6.3,SNR=139
KLR Kul'dur 40.58 10*ce*P **P** **10 24 21.2 +0.3**
KLR pmax pmax
comp=Z,348nm,1.4s
DANN Dangsing 40.62 303 *e*P **P** **10 24 22.0 0.0**
comp=Z,381nm,0.9s
KLBR Kellerberrin 40.91 186 P **P** **10 24 23.9 0.0**
baz=41,SNR=28
MYLAV Mylavaram 40.93 285 *e*P **P** **10 24 25.4 +1.0**
MYLAV IVmB_BB 10 24 36.8
comp=Z,933nm,6.3s
MYLAV IVMs_BB IVMs_BB 10 45 02.1
comp=Z,3µm,16.2s
MDRS Chennai 41.12 279⇑ *i*P **P** **10 24 27.8 +1.8**
MDRS *i* x x 10 30 41.0
PYUN Piuthan 41.17 302 *e*P **P** **10 24 27.2 +0.8**
comp=Z,653nm,0.8s
YSS Yuzh-Sakhalins 41.42 21α *i*P **P** **10 24 28.2 +0.3**
YSS *e**SP **pP** **10 24 34.7 -1.3**
YSS *e* 10 26 25.9
YSS *e*S **S** **10 30 40.1 -0.9**
YSS pmax pmax
comp=Z,4µm,6.1s
YSS pmax pmax
comp=N,2µm,5.8s
YSS pmax pmax
comp=E,1µm,6.6s
YSS pmax pmax
comp=Z,140nm,0.6s
YSS smax smax
comp=N,4µm,9.5s
YSS MLR MLR
comp=Z,8µm,18.0s
YSS MLR MLR
comp=N,6µm,19.0s
YSS MLR MLR
comp=E,7µm,19.0s
YSS Yuzh-Sakhalins 41.42 21 P **P** **10 24 27.6 -0.2**
MUN Mundaring 41.47 187 P **P** **10 24 30.6 +2.1**
baz=42,SNR=7.6
ADKI Addanki 41.50 283 *e*P **P** **10 24 30.1 +1.1**
ADKI IVmBBB 10 24 41.8
comp=Z,880nm,5.9s
ADKI IVMs_BB IVMs_BB 10 44 22.8
comp=Z,2µm,16.2s
SKHT Srikalahasti 41.66 280 *e*P **P** **10 24 31.6 +1.3**
SKHT IVmBBB 10 24 46.1
comp=Z,927nm,4.6s
SKHT IVMs_BB IVMs_BB 10 45 38.4
comp=Z,2µm,15.5s
QLP Quilpie 41.72 149 P **P** **10 24 30.7 +0.1**
baz=42,SNR=27
KUR Kuril'sk 42.11 27 *e*P **P** **10 24 34.0 +0.4**
KUR *i* 10 26 08.9
KUR *i* PPP PPP 10 26 39.9
KUR S **S** **10 30 52.0 +0.8**
KUR pmax pmax
comp=Z,3µm,7.3s
KUR pmax pmax
comp=E,1µm,3.8s
KUR pmax pmax
comp=N,1µm,3.7s
KUR pmax pmax
comp=N,122nm,1.7s
KUR pmax pmax
comp=Z,234nm,1.7s
KUR pmax pmax
comp=E,50nm,1.2s
KUR MLR MLR
comp=Z,8µm,17.0s
KUR MLR MLR
comp=E,8µm,19.0s
KUR MLR MLR
comp=N,2µm,15.0s
NJS Nagarjunasagar 42.19 284 *e*P **P** **10 24 35.0 +0.4**
NJS IVmB_BB 10 24 46.5
comp=Z,870nm,6.5s
NJS IVMs_BB IVMs_BB 10 45 54.6
comp=Z,3µm,16.7s
NWAO Narrogin (SRO) 42.29 186 P **P** **10 24 35.8 +0.6**
baz=42,SNR=14
NWAO Narrogin (SRO) 42.29 186 P **P** **10 24 35.2 +0.1**
comp=Z,130nm,1.0s,baz=12,slow=10,SNR=25
NWAO Narrogin (SRO) 42.29 186 P **P** **10 24 35.8 +0.6**
NWAO pmax pmax
comp=Z,420nm,1.1s
NWAO Narrogin (SRO) 42.29 186 P **P** **10 24 35.8 +0.6**
NWAO IAmb IAmb 10 24 49.8
comp=Z,420nm,1.1s
NWAO Narrogin (SRO) 42.29 186 IAmb IAmb 10 24 49.8
comp=Z,335nm,1.1s
RPR Rampur 42.42 288 *e*P **P** **10 24 37.3 +0.8**
RPR IVmB_BB 10 25 06.2
comp=Z,994nm,6.7s
RPR IVMs_BB IVMs_BB 10 42 19.6
comp=Z,2µm,19.7s
JBP Jabalpur 42.48 294⇑ *e*P **P** **10 24 38.3 +1.4**
JBP *ex* x 10 24 38.5
baz=98,slow=10
JBP *ex* x 10 30 57.7
JBP AMS AMS 10 41 30.4
comp=Z,10µm,22.9s
SRLM Srisailam 42.55 284 *e*P **P** **10 24 38.0 +0.3**
SRLM IVmB_BB 10 24 49.4
comp=Z,1µm,6.5s
SRLM IVMs_BB IVMs_BB 10 40 35.7
comp=Z,2µm,18.9s
NGP Nagpur 42.96 291⇑ *i*P **P** **10 24 40.6 -0.4**
HYB Hyderabad 42.97 285 *i* P **P** **10 24 41.5 +0.4**
comp=Z,143nm,1.2s
HYB *e*PcP **PcP** **10 26 32.5 +1.1**
HYB *e*S **S** **10 31 06.0 +1.2**
HYB Hyderabad 42.97 285⇑ *i*P **P** **10 24 41.8 +0.7**
HYB *i* x x 10 31 05.0
HYB *ex* x 10 34 26.2
HYBB Hyderabad (bro 42.98 285 *e*P **P** **10 24 41.6 +0.5**
HYBB IVmBBB 10 24 54.5
comp=Z,854nm,2.6s
HYBB IVMsBB 10 45 35.1
comp=Z,3µm,15.8s
CIT Chita 43.11 352 *e*P **P** **10 24 42.4 +0.7**
CIT *e* 10 24 54.3
CIT *e* 10 26 26.7
CIT pmax pmax
comp=Z,602nm,2.3s
SRSP Sriramsagar 43.32 288 *e*P **P** **10 24 44.3 +0.5**
SRSP IVmBBB 10 24 55.7
comp=Z,1µm,6.3s
SRSP IVMs_BB IVMs_BB 10 44 45.6
comp=Z,2µm,16.3s
ZAK Zakamensk 43.76 343 *e*P **P** **10 24 46.2 -0.8**
ZAK pmax pmax
comp=Z,43nm,1.2s
ZAK pmax pmax
comp=Z,29nm,1.2s
ZAK pmax pmax
comp=Z,9.0nm,1.7s
RKGY Rocky Gully 43.98 186 P **P** **10 24 50.3 +1.5**
baz=44,SNR=12
BBOO Buckleboo 44.01 163 P **P** **10 24 48.8 -0.2**
baz=44,SNR=74
BBOO Buckleboo 44.01 163 IAmb IAmb 10 25 03.1
comp=Z,284nm,1.0s
URV Uravakonda 44.07 282 *e*P **P** **10 24 50.2 +0.3**
URV IVmB_BB 10 25 01.5
comp=Z,2µm,6.9s
URV IVMs_BB IVMs_BB 10 47 22.7
comp=Z,4µm,15.7s
RMQ Roma 44.08 145 P **P** **10 24 49.6 -0.1**
baz=44,SNR=25
ZEA Zeya 44.47 4*ce*P **P** **10 24 52.8 +0.3**
ZEA *e* 10 26 40.0
ZEA *e*S **S** **10 31 19.0 -6.5**
ZEA *e* 10 34 52.0
ZEA pmax pmax
comp=N,140nm,1.0s
ZEA pmax pmax
comp=Z,240nm,1.0s
ZEA pmax pmax
comp=Z,4µm,11.0s
ZEA pmax pmax
comp=N,2µm,10.0s
ZEA pmax pmax
comp=Z,3µm,10.0s
ZEA pmax pmax
comp=N,2µm,6.0s
ZEA smax smax
comp=Z,1µm,11.0s
ZEA smax smax
comp=N,5µm,13.0s
ZEA MLR MLR
comp=Z,19µm,17.0s
ZEA MLR MLR
comp=N,16µm,16.0s
ZEA MLR MLR
comp=E,6µm,16.0s
TRD Trivandrum 44.52 273 *e*P **P** **10 24 53.6 +0.1**
TRD IAmb IAmb 10 25 06.2
comp=Z,93nm,1.1s
EIDS Eidsvold 44.62 141 P **P** **10 24 53.2 -0.9**
baz=45,SNR=25
EIDS Eidsvold 44.62 141 P **P** **10 24 53.4 -0.7**
EIDS IAmb IAmb 10 24 56.7
comp=Z,294nm,1.1s
TYV Tymovskoe 44.75 18 *e*P **P** **10 24 55.8 +1.0**
TYV *e*S **S** **10 31 32.0 +2.3**
TYV pmax pmax
comp=Z,77nm,1.4s
TYV pmax pmax
comp=Z,5µm,6.9s
TYV smax smax
comp=N,7µm,9.1s
TYV MLR MLR
comp=E,9µm,19.0s
TYV MLR MLR
comp=Z,14µm,19.0s
BHPL Bhopal 44.80 294⇑ *i*P **P** **10 24 56.2 +0.5**
BHPL IAmb IAmb 10 24 59.3
comp=Z,124nm,0.4s
BHPL *i* x x 10 31 29.9
BHPL *ex* x 10 38 40.1
TLY Talaya 44.82 344 P **P** **10 24 55.8 +0.5**
comp=Z,49nm,0.8s,baz=185,slow=5.5,SNR=14
TLY Talaya 44.82 344 P **P** **10 24 56.2 +0.8**
TLY P **P** **10 24 56.2 +0.8**
TLY Talaya 44.82 344*c i*P **P** **10 24 56.0 +0.6**
TLY pmax pmax
comp=Z,332nm,1.3s
TLY MLR MLR
comp=Z,19µm,14.0s
TLY Talaya 44.82 344 P **P** **10 24 56.2 +0.8**
KLRI Killari 44.89 286 *e*P **P** **10 24 56.7 +0.2**
KLRI IVmB_BB 10 25 08.0
comp=Z,2µm,8.2s
KLRI IVMs_BB IVMs_BB 10 46 43.7
comp=Z,3µm,15.4s
STKA Stephens Creek 45.06 156 P **P** **10 24 57.6 +0.1**
baz=45,SNR=240
STKA Stephens Creek 45.06 156 P **P** **10 24 57.6 +0.1**
comp=Z,208nm,0.8s,baz=332,slow=7.9,SNR=271
STKA PcP **PcP** **10 26 37.2 -0.8**
comp=Z,40nm,0.8s,baz=270,slow=4.0,SNR=2.5
STKA LR LR 10 46 40.0
comp=Z,12µm,19.6s,baz=349,slow=40
STKA Stephens Creek 45.06 156 P **P** **10 24 57.1 -0.4**
STKA pmax pmax
comp=Z,55nm,1.0s
STKA Stephens Creek 45.06 156 P **P** **10 24 57.1 -0.4**
IRK Irkutsk 45.16 345 *e*P **P** **10 24 57.6 -0.4**
IRK pmax pmax
comp=Z,418nm,2.4s
HTT Hallett 45.48 160 P **P** **10 25 01.2 +0.4**
baz=46,SNR=53
WMQ Urumqi 45.48 325 P **P** **10 25 02.4 +1.6**
WMQ pP pP 10 25 04.6 -4.0
WMQ sP sP 10 25 10.8 -1.0
WMQ PP **PP** **10 26 50.3 +2.8**
WMQ S **S** **10 31 43.8 +3.1**
WMQ pmax pmax
comp=Z,240nm,1.5s
WMQ pmax pmax
comp=Z,4µm,3.8s
WMQ LR LR
comp=Z,16µm,21.3s
WMQ LR LR
comp=Z,12µm,21.5s
WMQ LR LR
comp=Z,27µm,22.5s
MOY Mondy 45.58 342 *e*P **P** **10 25 01.8 +0.3**
MOY pmax pmax
comp=Z,500nm,3.1s
DDI Dehra Dun 45.96 303⇑ *i*P **P** **10 25 05.2 +0.4**
DDI *i* x x 10 31 44.4
DDI *ex* x 10 42 10.8
NKL Nikolayevsk 46.21 15 *e*P **P** **10 25 06.8 +0.5**
NKL *e* 10 26 56.9
NKL *e*S S 10 32 05.6 +15
NKL pmax pmax
comp=Z,230nm,1.2s
NKL pmax pmax
comp=N,5.0nm,1.0s
NKL pmax pmax
comp=E,4.0nm,0.8s
NKL pmax pmax
comp=Z,240nm,3.3s
NKL smax smax
comp=E,5.0nm,2.9s
NKL smax smax
comp=N,12nm,2.3s
CMSA Cobar Meteorol 46.54 152 P **P** **10 25 10.0 +0.9**
baz=47,SNR=314
SMLA Simla 46.94 304⇑ *i*P **P** **10 25 13.3 +1.0**
SMLA IAmb IAmb 10 25 30.9
comp=Z,225nm,0.7s
GOA Goa 47.40 282⇑ *i*P **P** **10 25 16.8 +0.7**
GOA *i* x x 10 32 11.8
GOA *ex* x 10 36 06.5
ARMA Armidale 48.70 145 P **P** **10 25 27.4 +1.2**
baz=49,SNR=56
ARMA Armidale 48.70 145 IAmb IAmb 10 25 41.5
comp=Z,251nm,1.2s
BOD Bodaibo 48.75 354 *e*P **P** **10 25 26.3 +0.3**
BOD pmax pmax
comp=Z,331nm,2.1s
ZSN Zaisan 49.29 327⇑ *i*P **P** **10 25 31.2 +0.8**
comp=Z,710nm,2.7s
ZSN *e*S **S** **10 32 37.1 +2.4**
comp=Z,586nm,6.5s
ZSN *e*LR LR 10 46 20.0
ZSN Zaisan 49.29 327*c i*P **P** **10 25 31.1 +0.8**
ZSN *e*S **S** **10 32 37.1 +2.4**
ZSN pmax pmax
comp=Z,710nm,2.7s
ZSN smax smax
comp=N,586nm,6.5s
DGZ Jazzator, Alta 49.45 331*c i*P **P** **10 25 33.0 +1.3**
DGZ pmax pmax
comp=Z,330nm,1.1s
ARPS Mount Arapiles 49.51 159 P **P** **10 25 32.0 0.0**
baz=50,SNR=43
SKR Severo-Kuril's 49.87 28 *e*P **P** **10 25 32.4 -2.2**
SKR *e* 10 26 54.1
SKR *e* 10 27 35.1
SKR *e*S **S** **10 32 42.7 +0.1**
SKR *e* 10 35 16.6
SKR *e*SS **SS** **10 36 17.3 +1.7**
SKR pmax pmax
comp=Z,2µm,6.7s
SKR pmax pmax
comp=Z,72nm,0.9s
SKR MLR MLR
comp=Z,5µm,20.0s
SKR MLR MLR
comp=Z,5µm,18.0s
SHLS Shalkode 50.07 320⇑ *i*P **P** **10 25 36.1 -0.5**
comp=Z,956nm,1.8s
SHLS *e*S **S** **10 32 47.0 +0.9**
comp=Z,600nm,4.0s
SHLS *e*LR LR 10 46 54.6
SHLS Shalkode 50.07 320*c i*P **P** **10 25 36.0 -0.5**
SHLS *e*S **S** **10 32 46.9 +0.9**
SHLS pmax pmax
comp=Z,956nm,1.8s
SHLS smax smax
comp=N,600nm,4.0s
YNG Young 50.09 151 P **P** **10 25 37.7 +1.1**
baz=50,SNR=18
MK31 Makanchi Array 50.31 325 *i* P **P** **10 25 39.2 +1.1**
MKAR Makanchi Array 50.31 325 P **P** **10 25 39.4 +1.3**
comp=N,292nm,0.7s,baz=129,slow=8.9,SNR=1938
MKAR S **S** **10 32 50.4 +1.4**
comp=N,0.5nm,0.6s,baz=90,slow=10,SNR=0.9
MKAR PKiKP **PKiKP** **10 33 40.6 -1.3**
comp=N,2.2nm,0.9s,baz=101,slow=1.5,SNR=2.9
MKAR LR LR 10 47 21.3
comp=N,26µm,21.2s,baz=117,slow=36
MKAR P4KPbc 11 03 08.5
comp=N,1.9nm,1.0s,baz=133,slow=5.1,SNR=8.0
MKAR Makanchi Array 50.31 325 P **P** **10 25 37.2 -0.9**
UZB Uzynbulak 50.35 320⇑ *i*P **P** **10 25 39.8 +1.1**
comp=N,396nm,1.3s
UZB *e*S **S** **10 32 52.3 +2.4**
comp=N,439nm,6.5s
UZB *e*LR LR 10 46 18.6
UZB Uzynbulak 50.35 320*c i*P **P** **10 25 39.7 +1.1**
UZB *e*S **S** **10 32 52.3 +2.4**
UZB pmax pmax
comp=Z,396nm,1.3s
UZB smax smax
comp=N,439nm,6.5s
PRZ Przheval'sk 50.44 319 IAMs_20 IAMs_20 10 48 07.4
comp=Z,15µm,20.0s
TARG Taragay, Kyrgy 50.48 317 P **P** **10 25 41.0 +1.0**
TARG IAmb IAmb 10 25 50.6
comp=Z,178nm,0.8s
TARG IAMs_20 IAMs_20 10 48 21.9
comp=Z,19µm,20.0s
MAKZ Makanchi 50.50 325 P **P** **10 25 40.7 +1.2**
MAKZ pmax pmax
comp=Z,1µm,1.4s
MAKZ MLR MLR
comp=Z,31µm,21.0s

MAKZ Makanchi 50.50 325 P **P** **10 25 40.7 +1.2**
MGCD Mangrove Creek 50.57 148 P **P** **10 25 42.1 +1.9**
baz=51,SNR=12
SATY Saty 50.70 319⇑ *i*P **P** **10 25 42.6 +1.2**
comp=Z,699nm,2.4s
SATY *e*S **S** **10 32 57.9 +3.1**
SATY *e*LR LR 10 50 21.0
SATY Saty 50.70 319 *c i*P **P** **10 25 42.5 +1.2**
SATY *e*S **S** **10 32 57.9 +3.1**
SATY pmax pmax
comp=Z,699nm,2.4s
KPKS Kokpek 50.72 320⇑ *i*P **P** **10 25 42.6 +1.2**
comp=Z,711nm,1.6s
KPKS *e*S **S** **10 32 52.8 -2.2**
KPKS *e*LR LR 10 48 46.3
KPKS Kokpek 50.72 320 *c i*P **P** **10 25 42.6 +1.2**
KPKS *e*S **S** **10 32 52.8 -2.2**
KPKS pmax pmax
comp=Z,711nm,1.6s
KSH Kashi 50.80 314 P **P** **10 25 44.8 +2.7**
KSH sP sP 10 25 52.8 -0.4
KSH PP **PP** **10 27 39.3 +0.8**
KSH S **S** **10 33 00.0 +3.7**
KSH ScS **ScS** **10 35 28.1 -3.0**
KSH SS **SS** **10 36 33.1 +1.9**
KSH pmax pmax
comp=Z,550nm,1.0s
KSH pmax pmax
comp=Z,8μm,7.2s
KSH LR LR
comp=Z,7μm,16.2s
KSH LR LR
comp=Z,5μm,12.7s
KSH LR LR
comp=Z,4μm,14.9s
NIL Nilore 50.84 306 P **P** **10 25 43.4 +1.0**
NIL pmax pmax
comp=Z,836nm,1.1s
NIL Nilore 50.84 306 P **P** **10 25 43.4 +1.0**
KDJ Kajisay 51.08 318 IAmb IAmb 10 25 49.4
comp=Z,270nm,0.8s
CAN Canberra 51.21 152 IAmb IAmb 10 25 47.5
comp=Z,247nm,1.0s
CAN IAMs_20 IAMs_20 10 46 14.4
comp=Z,11μm,20.0s
TARA Tarawa 51.23 96 P **P** **10 25 46.7 +1.1**
TARA IAmb IAmb 10 26 03.6
comp=Z,266nm,1.4s
CNB Canberra Magne 51.38 151 P **P** **10 25 47.4 +1.1**
baz=52,SNR=42
TOO Toolangi 51.58 156 P **P** **10 25 48.6 +0.8**
baz=52,SNR=37
TOO Toolangi 51.58 156 IAmb IAmb 10 25 50.2
comp=Z,186nm,1.1s
MDOK Medeo 51.63 319 *i* P **P** **10 25 49.6 +1.2**
MDOK *e*S **S** **10 33 07.0 -0.7**
MDOK *e*LR LR 10 46 49.7
comp=Z,7μm,21.8s
MDOK Medeo 51.63 319 *i* P **P** **10 25 49.5 +1.2**
MDOK *e*S **S** **10 33 06.9 -0.7**
MDOK MLR MLR
comp=Z,7μm,22.0s
TNSS Tian-Shan 51.64 319⇑ *i*P **P** **10 25 50.5 +1.8**
TNSS Tian-Shan 51.64 319⇑ *i*P **P** **10 25 50.5 +1.8**
TDK Taldyqorghan 51.65 321 *i* P **P** **10 25 49.4 +1.1**
comp=Z,2μm,1.8s
TDK *e*S **S** **10 33 07.6 +0.1**
TDK *e*LR LR 10 48 26.9
comp=Z,10μm,18.4s
TDK Taldyqorghan 51.65 321 *i* P **P** **10 25 49.3 +1.1**
TDK *e*S **S** **10 33 07.6 +0.1**
TDK pmax pmax
comp=Z,2μm,1.8s
TDK MLR MLR
comp=Z,10μm,18.0s
AAA Alma-Ata 51.74 319 *e*P **P** **10 25 50.4 +1.4**
AAA *e*LR LR 10 47 03.3
comp=Z,7μm,21.4s
AAA Alma-Ata 51.74 319 *e*P **P** **10 25 50.6 +1.6**
AAA *e*S **S** **10 33 13.3 +4.3**
AAA pmax pmax
comp=Z,3μm,6.2s
AAA smax smax
comp=N,3μm,8.1s
AAA MLR MLR
comp=Z,7μm,22.0s
ULHL Ulahol 51.76 317 P **P** **10 25 51.0 +1.7**
SNR=155
KRAR Krasnoyarsk 51.87 340 *i* P **P** **10 25 49.3 -0.3**
MTBS Maitube 52.02 318⇑ *i*P **P** **10 25 52.2 +1.0**
MTBS Maitube 52.02 318⇑ *i*P **P** **10 25 52.1 +1.0**
BOOM Boomskoye usch 52.06 317 IAmb IAmb 10 25 55.1
comp=Z,533nm,1.6s
DGAR Diego Garcia 52.13 253 *ce*P **P** **10 25 54.3 +2.1**
DGAR pmax pmax
comp=Z,306nm,1.7s
H08S2 Diego Garcia H 52.16 253 P **P** **10 25 53.4 +1.3**
baz=42,slow=11,SNR=8.4
H08S3 Diego Garcia H 52.16 253 P **P** **10 25 53.2 +1.0**
baz=42,slow=11,SNR=11
H08S1 Diego Carcia H 52.18 253 P **P** **10 25 53.7 +1.4**
baz=42,slow=11,SNR=7.4
PEA0B Petropavlovsk- 52.25 26 *ce*P **P** **10 25 53.0 +0.4**
PETK Petropavlovsk- 52.25 26 P **P** **10 25 52.6 +0.1**
comp=Z,21nm,0.6s,baz=200,slow=5.0,SNR=97
PETK PcP **PcP** **10 27 03.5 -0.2**
comp=Z,90nm,1.1s,baz=198,slow=3.9,SNR=6.2
PETK LR LR 10 48 35.3
comp=Z,11μm,20.4s,baz=220,slow=37
PETK Petropavlovsk- 52.25 26 P **P** **10 25 52.3 -0.3**
KZA Kyzart 52.35 317 P **P** **10 25 56.0 +2.0**
SNR=345
KUU Kurty 52.42 319⇑ *i*P **P** **10 25 55.2 +1.2**
comp=Z,2μm,1.4s
KUU *e*S **S** **10 33 15.6 -2.6**
KUU Kurty 52.42 319 *c i*P **P** **10 25 55.2 +1.2**
KUU *e*S **S** **10 33 15.6 -2.6**
KUU pmax pmax
comp=Z,2μm,1.4s
TKM2 Tokmak 2 52.48 318 P **P** **10 25 56.1 +1.4**
SNR=221
TKM2 Tokmak 2 52.48 318 P **P** **10 25 56.1 +1.4**
PET Petropavlovsk 52.62 27 *c i*P **P** **10 25 54.8 -0.4**
PET *e* 10 26 59.3
PET *e*S **S** **10 33 19.0 -1.5**
PET *e* 10 35 38.5
PET pmax pmax
comp=Z,4μm,7.1s
PET pmax pmax
comp=Z,3μm,13.7s
PET MLR MLR
comp=Z,8μm,19.0s
PET MLR MLR
comp=Z,11μm,20.0s
PET Petropavlovsk 52.62 27 P **P** **10 25 56.3 +1.1**
PET IAMs_20 IAMs_20 10 46 02.6
comp=Z,14μm,22.0s
MILA Mila 52.71 153 P **P** **10 25 57.2 +1.0**
baz=53,SNR=14
KBK Karagaybulak 52.80 317 P **P** **10 25 58.7 +1.7**
SNR=118
YAK Yakutsk 52.88 5 P **P** **10 25 57.0 0.0**
comp=Z,144nm,0.6s,baz=198,slow=2.4,SNR=50
YAK Yakutsk 52.88 5 *c i*P **P** **10 25 57.2 +0.2**
YAK *e**PP **pP** **10 26 03.4 -1.6**
YAK *e* 10 27 04.5
YAK *e* 10 27 53.4
YAK *e*PPP PPP 10 29 00.3
YAK *e*S **S** **10 33 23.9 +0.1**
YAK *e**SS **sS** **10 33 40.7 +3.6**
YAK *e* 10 35 43.9
YAK *e*SS **SS** **10 37 05.3 +2.4**
YAK *e*SSS SSS 10 38 54.0
YAK pmax pmax
comp=Z,249nm,0.9s
YAK pmax pmax
comp=N,121nm,1.3s
YAK pmax pmax
comp=E,15nm,1.0s
YAK pmax pmax
comp=Z,323nm,1.9s
YAK pmax pmax
comp=N,393nm,2.1s
YAK pmax pmax
comp=E,138nm,2.2s
YAK smax smax
comp=N,352nm,2.7s
YAK smax smax
comp=E,139nm,2.8s
YAK MLR MLR
comp=Z,13μm,19.0s
YAK MLR MLR
comp=N,8μm,18.0s
YAK MLR MLR
comp=E,4μm,17.0s
YAK Yakutsk 52.88 5 P **P** **10 25 57.0 0.0**
YAK IAmb IAmb 10 26 00.5
comp=Z,312nm,0.8s
YAK IAMs_20 IAMs_20 10 48 35.2
comp=Z,17μm,21.0s
UCH Uchtor 52.91 317 P **P** **10 26 00.1 +1.9**
SNR=456
CHMS Chumysh 53.07 318 P **P** **10 26 00.0 +1.2**
SNR=49
AAK Ala-Archa 53.09 317 LR LR 10 51 29.6
comp=Z,10μm,18.1s,baz=102,slow=39
AAK PKPPKP **P'P'df** **10 56 23.8 -2.7**
comp=Z,1.4nm,0.4s,baz=328,slow=4.0,SNR=3.6
AAK Ala-Archa 53.09 317 P **P** **10 26 00.8 +1.6**
SNR=134
AAK Ala-Archa 53.09 317 P **P** **10 26 00.8 +1.6**
AAK P **P** **10 26 00.8 +1.6**
AAK P **P** **10 26 00.8 +1.6**
AAK Ala-Archa 53.09 317 P **P** **10 26 00.8 +1.6**
AAK pmax pmax
comp=Z,211nm,1.0s
AAK MLR MLR
comp=Z,10μm,18.0s
AAK Ala-Archa 53.09 317 P **P** **10 26 00.8 +1.6**
AAK IAmb IAmb 10 26 03.1
comp=Z,211nm,0.9s
AAK Ala-Archa 53.09 317 IAMs_20 IAMs_20 10 51 08.2
comp=Z,10μm,18.0s
SGDS Sogindy 53.34 318⇑ *i*P **P** **10 26 01.6 +0.7**
comp=Z,535nm,2.5s
SGDS *e*S **S** **10 33 31.8 +0.9**
SGDS *e*LR LR 10 48 07.4
USP Ospenovka 53.35 318 P **P** **10 26 02.2 +1.3**
SNR=148
AML Almayashu 53.43 316 P **P** **10 26 04.0 +2.0**
SNR=12
ZAA0 Zalesovo Array 53.51 334 IAmb IAmb 10 26 04.2
comp=Z,323nm,1.4s
ZAA0 IAMs_20 IAMs_20 10 51 07.3
comp=Z,11μm,19.0s
ZALV Zalesovo Beam 53.51 334 P **P** **10 26 01.6 -0.1**
comp=Z,53nm,0.7s,baz=132,slow=5.9,SNR=183
ZALV LR LR 10 50 04.7
comp=Z,11μm,18.5s,baz=134,slow=37
ZALV PKPPKP P'P'bc 10 56 23.8 -16
comp=Z,0.8nm,0.4s,baz=315,slow=0.2,SNR=4.5
ZALV Zalesovo Beam 53.51 334 *i* P **P** **10 26 01.7 -0.1**
ZALV pmax pmax
comp=Z,54nm,0.7s
ZALV Zalesovo Beam 53.51 334 P **P** **10 26 00.9 -0.9**
DZM Mont Dzumac 53.58 126 *e*P **P** **10 26 02.5 -0.4**
comp=Z,266nm,1.1s
DZM *e*S **S** **10 33 37.3 +2.6**
comp=Z,4μm,35.2s
DZM *e*LR LR 10 41 30.4
comp=Z,10μm,23.4s
DZM Mont Dzumac 53.58 126 P **P** **10 26 02.8 -0.1**
comp=Z,65nm,0.7s,baz=299,slow=7.0,SNR=24
DZM LR LR 10 46 51.4
comp=Z,5μm,21.7s,baz=313,slow=34
EKS2 Erkin-Say 53.59 317 P **P** **10 26 04.6 +1.8**
SNR=163
LHI Lord Howe Isla 53.92 140 P **P** **10 26 06.2 +1.1**
baz=54,SNR=6.8
LHI Lord Howe Isla 53.92 140 IAmb IAmb 10 26 07.2
comp=Z,173nm,1.0s
BTLS Baital 54.40 320⇑ *i*P **P** **10 26 09.1 +0.6**
comp=Z,298nm,1.8s
BTLS *e*S **S** **10 33 44.3 -0.8**
BTLS *e*LR LR 10 50 25.4
BTLS Baital 54.40 320 *c i*P **P** **10 26 09.1 +0.6**
BTLS *e*S **S** **10 33 44.2 -0.8**
BTLS pmax pmax
comp=Z,298nm,1.8s
KBL Kabul 54.45 306 P **P** **10 26 10.2 +0.9**
KBL pmax pmax
comp=Z,311nm,1.1s
KBL Kabul 54.45 306 P **P** **10 26 10.2 +0.9**
KBL IAmb IAmb 10 26 12.9
comp=Z,311nm,1.1s
KURBB Kurchatov Arra 54.52 327 P **P** **10 26 10.2 +0.9**
comp=Z,124nm,0.7s,baz=129,slow=6.7,SNR=733
KURBB S **S** **10 33 43.8 -2.6**
comp=Z,0.2nm,0.2s,baz=150,slow=16,SNR=0.9
KURBB PKPPKP **P'P'df** **10 56 20.3 -3.5**
comp=Z,2.2nm,1.0s,baz=293,slow=2.4,SNR=5.0
KURBB Kurchatov Arra 54.52 327 P **P** **10 26 10.0 +0.7**
KURK Kurchatov 54.53 328 P **P** **10 26 10.3 +1.0**
KURK P **P** **10 26 10.3 +1.0**
KURK P **P** **10 26 10.3 +1.0**
KURK Kurchatov 54.53 328 *ce*P **P** **10 26 10.1 +0.8**
KURK pmax pmax
comp=Z,650nm,1.2s
KURK Kurchatov 54.53 328 **S** **10 33 43.8 -2.7**
KURK P'P'bc 10 56 20.3 -18
KURK Kurchatov 54.53 328 P **P** **10 26 09.2 0.0**
MA2 Magadan 54.59 17 P **P** **10 26 10.2 +0.6**
comp=Z,70nm,0.8s,baz=206,slow=7.7,SNR=32
MA2 PcP **PcP** **10 27 13.3 +0.9**
comp=Z,76nm,0.7s,baz=170,slow=6.7,SNR=5.2
MA2 LR LR 10 51 27.5
comp=Z,10μm,19.8s,baz=211,slow=38
MA2 Magadan 54.59 17 *ce*P **P** **10 26 10.4 +0.8**
MA2 pmax pmax
comp=Z,298nm,1.7s
MA2 Magadan 54.59 17 P **P** **10 26 10.2 +0.6**
MA2 IAmb IAmb 10 26 13.2
comp=Z,515nm,1.6s
MA2 Magadan 54.59 17 IAMs_20 IAMs_20 10 50 36.0
comp=Z,12μm,20.0s
BTK Batken 54.70 313 P **P** **10 26 12.0 +1.1**
BTK pmax pmax
comp=Z,577nm,1.3s
BTK MLR MLR
comp=Z,9μm,19.0s
BTK Batken 54.70 313 P **P** **10 26 12.0 +1.1**
DZA Taraz 55.33 316 *e*P **P** **10 26 14.7 -0.6**
DZA Taraz 55.33 316 *e*P **P** **10 26 14.6 -0.7**
JBG Jabagly 55.70 315 *c i*P **P** **10 26 19.5 +1.3**
JBG *e*S **S** **10 34 06.4 +3.5**
JBG pmax pmax
comp=Z,296nm,1.7s
IUG Iuzhnay 55.97 315⇑ *i*P **P** **10 26 21.1 +1.1**
IUG *e*S **S** **10 34 06.7 +0.3**
IUG *e*LR LR 10 51 19.8
IUG Iuzhnay 55.97 315 *c i*P **P** **10 26 21.1 +1.1**
IUG *e*S **S** **10 34 06.6 +0.3**
KK31 Karatay Array 55.97 316 *i* P **P** **10 26 20.6 +0.7**
KK31 Karatay Array 55.97 316 IAmb IAmb 10 26 24.3
comp=Z,301nm,1.1s
KKAR Karatay Array 55.97 316 P **P** **10 26 19.4 -0.5**
KKAR Karatay Array 55.97 316 P **P** **10 26 19.4 -0.5**
KKAR Karatay Array 55.97 316 IAmb IAmb 10 26 24.3
comp=Z,301nm,1.1s
TAS Tashkent 56.21 314 IAMs_20 IAMs_20 10 52 02.6
comp=Z,14μm,22.0s
CHM Chimkent 56.32 315 *e*P **P** **10 26 22.5 0.0**
CHM *e*LR LR 10 51 43.1
comp=Z,1μm,18.0s
CHM Chimkent 56.32 315 *e*P **P** **10 26 22.4 0.0**
CHM MLR MLR
comp=Z,1μm,18.0s
OTUK Ortayu 56.86 322 P **P** **10 26 27.2 +1.1**
TAU Tasmania Unive 56.90 158 P **P** **10 26 27.4 +1.1**
TAU pmax pmax
comp=Z,205nm,1.7s
TAU Tasmania Unive 56.90 158 P **P** **10 26 27.4 +1.1**
TAU IAmb IAmb 10 26 52.6
comp=Z,205nm,1.6s
BRZS Berezniki 57.44 324⇑ *i*P **P** **10 26 31.1 +1.0**
comp=Z,789nm,1.7s
BRZS *e*S **S** **10 34 27.1 +1.8**
BRZS *e*LR LR 10 50 37.1
BRZS Berezniki 57.44 324 *c i*P **P** **10 26 31.1 +1.0**
BRZS *e*S **S** **10 34 27.1 +1.8**
BRZS pmax pmax
comp=Z,789nm,1.7s
SEY Seymchan 57.78 16 P **P** **10 26 33.1 +0.8**
comp=Z,38nm,0.8s,baz=221,slow=5.0,SNR=112
SEY PcP **PcP** **10 27 25.7 +0.9**
comp=Z,38nm,0.5s,baz=178,slow=3.9,SNR=9.5
SEY Seymchan 57.78 16 *c i*P **P** **10 26 33.6 +1.3**
HRA Herat 59.91 304 IAmb IAmb 10 26 51.4
comp=Z,127nm,0.8s
BVAR Borovoye Array 60.10 327 P **P** **10 26 49.1 +0.5**
comp=Z,97nm,1.0s,baz=120,slow=10,SNR=246
BVAR PKPPKP **P'P'df** **10 56 13.2 -2.1**
comp=Z,0.8nm,0.6s,baz=250,slow=4.4,SNR=5.3
BRVK Borovoye 60.17 327 P **P** **10 26 50.0 +0.9**
BRVK P **P** **10 26 50.0 +0.9**
BRVK P **P** **10 26 50.0 +0.9**
BRVK S **S** **10 35 04.7 +4.0**
BRVK S **S** **10 35 04.7 +4.0**
BRVK S **S** **10 35 04.7 +4.0**
BRVK Borovoye 60.17 327 P **P** **10 26 49.7 +0.6**
BRVK Borovoye 60.17 327 P **P** **10 26 49.7 +0.6**
MSVF Nonsavu 61.52 116 *i* P **P** **10 26 58.4 -0.5**
MSVF pmax pmax
comp=Z,93nm,1.1s
WBK Wadi Bani Khal 61.66 291 P **P** **10 26 59.6 -0.2**
SNR=9.6
WBK P **P** **10 26 59.6 -0.2**
SNR=9.6
WBK P **P** **10 26 59.6 -0.2**
SNR=9.6
WBK S **S** **10 35 20.0 -0.6**
WBK S **S** **10 35 20.0 -0.6**
WBK S **S** **10 35 20.0 -0.6**
WSAR Wadi Sarin 61.98 291 P **P** **10 27 01.6 -0.3**
comp=Z,70nm,0.7s,baz=130,slow=7.1,SNR=28
WSAR Wadi Sarin 61.98 291 P **P** **10 27 01.7 -0.3**
SNR=5.5
TIXI Tiksi 62.39 2 LR LR 10 55 41.3
comp=Z,19μm,20.8s,baz=192,slow=38
TIXI PKPPKP **P'P'df** **10 56 08.3 -2.5**
comp=Z,1.1nm,0.2s,baz=335,slow=2.6,SNR=4.7
TIXI Tiksi 62.39 2 *ce*P **P** **10 27 02.9 -0.8**
TIXI pmax pmax
comp=Z,495nm,1.0s
TIXI MLR MLR
comp=Z,17μm,19.0s
TIXI Tiksi 62.39 2 P **P** **10 27 03.4 -0.3**
JMDO Jabal Madar 62.45 290 P **P** **10 27 04.6 -0.5**
SNR=11
JMDO P **P** **10 27 04.6 -0.5**
SNR=11
JMDO P **P** **10 27 04.6 -0.5**
SNR=11
BIDO Bidbid 62.45 292 P **P** **10 27 04.9 -0.2**
SNR=9.7
BIDO P **P** **10 27 04.9 -0.2**
SNR=9.7
BIDO S **S** **10 35 29.8 -0.8**
BIDO S **S** **10 35 29.8 -0.8**
SMDO Samad 62.52 291 P **P** **10 27 04.9 -0.7**
SNR=8.6
SMDO P **P** **10 27 04.9 -0.7**
SNR=8.6
MHTO MHTO 62.56 289 P **P** **10 27 05.0 -0.8**
SNR=22
MHTO P **P** **10 27 05.0 -0.8**
SNR=22
MHTO P **P** **10 27 05.0 -0.8**
SNR=22
MHTO S **S** **10 35 28.2 -3.9**
MHTO S **S** **10 35 28.2 -3.9**
MHTO S **S** **10 35 28.2 -3.9**
HOQ Hoqain 63.20 292 P **P** **10 27 09.8 -0.3**
SNR=15
HOQ P **P** **10 27 09.8 -0.3**
SNR=15
HOQ S **S** **10 35 38.9 -1.3**
HOQ S **S** **10 35 38.9 -1.3**
BSY Bisya 63.29 291 P **P** **10 27 10.3 -0.4**
SNR=18
BSY P **P** **10 27 10.3 -0.4**
SNR=18
GEYT Alibeck 63.77 308 P **P** **10 27 15.0 +1.4**
comp=Z,180nm,1.1s,baz=134,slow=4.3,SNR=93
GEYT LR LR 10 57 12.0
comp=Z,4μm,19.0s,baz=65,slow=38
GEYT Alibeck 63.77 308 P **P** **10 27 15.1 +1.4**
GYA0 ALIBECK ARRAY 63.77 308 P **P** **10 27 14.8 +1.1**
NRIK Noril'sk 63.92 347 P **P** **10 27 14.1 +0.1**
comp=Z,212nm,1.0s,baz=134,slow=6.2,SNR=188
NRIK PKPPKP **P'P'df** **10 56 05.0 -3.6**
comp=Z,0.7nm,0.4s,baz=3.8,slow=4.1,SNR=5.5
NRIK LR LR 10 57 10.0
comp=Z,20μm,19.8s,baz=148,slow=38
ARQ Araqi 63.92 291 P **P** **10 27 14.6 -0.2**
SNR=16
ARQ P **P** **10 27 14.6 -0.2**
SNR=16
ARQ P **P** **10 27 14.6 -0.2**
SNR=16
ARQ S **S** **10 35 47.5 -1.7**
ARQ S **S** **10 35 47.5 -1.7**
ARQ S **S** **10 35 47.5 -1.7**
SOHO SOHO 63.93 292 P **P** **10 27 14.4 -0.4**
SNR=21
SOHO P **P** **10 27 14.4 -0.4**
SNR=21
MDH Madha 64.17 294 P **P** **10 27 14.4 -2.1**
MDH Madha 64.17 294 P **P** **10 27 14.4 -2.1**
BANOM Banah 64.19 294 *i* P **P** **10 27 16.6 0.0**
SNR=8.1
BANOM Banah 64.19 294 *i* P **P** **10 27 16.6 0.0**
SNR=8.1
BANOM Banah 64.19 294 P **P** **10 27 16.5 0.0**
BANOM P **P** **10 27 16.5 0.0**
BANOM S **S** **10 35 52.4 0.0**
BANOM S **S** **10 35 52.4 0.0**
UOSS Minazif 64.25 293 P **P** **10 27 16.6 -0.4**
UOSS P **P** **10 27 16.6 -0.4**
UOSS P **P** **10 27 16.6 -0.4**
UOSS Minazif 64.25 293 P **P** **10 27 16.8 -0.1**
UOSS IAmb IAmb 10 27 21.0
comp=Z,95nm,1.1s
MSFE Esma-Masafi 64.30 294 *i* P **P** **10 27 17.1 -0.2**
SNR=9.9
MSFE Esma-Masafi 64.30 294 *i* P **P** **10 27 17.1 -0.2**
SNR=9.9
HATD Hatta, Dubai 64.31 293 *i* P **P** **10 27 16.5 -0.8**
SNR=8.0
HATD Hatta, Dubai 64.31 293 *i* P **P** **10 27 16.5 -0.8**
SNR=8.0
HATD Hatta, Dubai 64.31 293 P **P** **10 27 17.4 0.0**
SNR=8.2
HATD P **P** **10 27 17.4 0.0**
SNR=8.2
HATD P **P** **10 27 17.4 0.0**
SNR=8.2
ASHO Ashiyiah 64.37 293 *i* P **P** **10 27 17.5 -0.3**
SNR=9.4
ASHO Ashiyiah 64.37 293 *i* P **P** **10 27 17.5 -0.3**
SNR=9.4
ASHO Ashiyiah 64.37 293 P **P** **10 27 17.6 -0.3**
SNR=12
ASHO P **P** **10 27 17.6 -0.3**
SNR=12
ASHO P **P** **10 27 17.6 -0.3**
SNR=12
ASHO S **S** **10 35 52.9 -1.7**
ASHO S **S** **10 35 52.9 -1.7**
ASHO S **S** **10 35 52.9 -1.7**
ALNE Al Ain 64.64 292 *i* P **P** **10 27 19.2 -0.4**
SNR=26
ALNE Al Ain 64.64 292 *i* P **P** **10 27 19.2 -0.4**
SNR=26
NAZ Nazwa, Dubai 64.74 293 *i* P **P** **10 27 19.9 -0.3**
SNR=6.4
NAZ Nazwa, Dubai 64.74 293 *i* P **P** **10 27 19.9 -0.3**
SNR=6.4
NAZ Nazwa, Dubai 64.74 293 P **P** **10 27 19.9 -0.3**
SNR=5.4
NAZ P **P** **10 27 19.9 -0.3**
SNR=5.4
FAQ Al Faqa, Dubai 64.80 293 P **P** **10 27 20.3 -0.2**
FAQ Al Faqa, Dubai 64.80 293 P **P** **10 27 20.3 -0.2**
SHAO Shalim 64.82 286 *i* P **P** **10 27 21.0 +0.2**
SNR=11
SHAO Shalim 64.82 286 *i* P **P** **10 27 21.0 +0.2**

SNR=11
SHAO Shalim 64.82 286 P **P** **10 27 21.2 +0.4**
SHAO P **P** **10 27 21.2 +0.4**
SHAO S **S** **10 36 01.5 +1.2**
SHAO S **S** **10 36 01.5 +1.2**
AB31 Akbulak array 64.88 320 *i* P **P** **10 27 20.7 +0.1**
ABKAR Akbulak array 64.88 320 P **P** **10 27 20.8 +0.2**
ADK Adak 65.13 37 IAMs_20 IAMs_20 10 51 08.0
comp=Z,8μm,21.0s
AJN Ajban 65.35 293 *i* P **P** **10 27 23.8 -0.3**
SNR=6.3
AJN Ajban 65.35 293 *i* P **P** **10 27 23.8 -0.3**
SNR=6.3
AJN Ajban 65.35 293 P **P** **10 27 23.7 -0.4**
SNR=6.4
AJN P **P** **10 27 23.7 -0.4**
SNR=6.4
BILL Bilibino 65.45 17*c* *i* P **P** **10 27 24.0 +0.1**
BILL *i* 10 27 57.0
BILL *e* 10 29 50.5
BILL *e* PPP PPP 10 31 23.6
BILL *i* S **S** **10 36 06.0 -0.4**
BILL *e* SS **SS** **10 40 20.3 +0.4**
BILL pmax pmax
comp=Z,458nm,1.7s
BILL MLR MLR
comp=Z,10μm,17.0s
BILL Bilibino 65.45 17 P **P** **10 27 24.1 +0.1**
DMTO DMTO 65.48 285 P **P** **10 27 25.4 +0.4**
SNR=7.3
DMTO P **P** **10 27 25.4 +0.4**
SNR=7.3
RBK Rabkut 66.20 285 P **P** **10 27 30.1 +0.3**
SNR=16
RBK P **P** **10 27 30.1 +0.3**
SNR=16
AKTO Aktyubinsk 66.39 321 P **P** **10 27 30.8 +0.4**
comp=Z,71nm,0.9s,baz=100,slow=7.4,SNR=68
AKTO PKPPKP **P'P'df** **10 56 00.2 -5.1**
comp=Z,1.0nm,0.5s,baz=342,slow=5.8,SNR=8.0
AKTO LR LR 10 57 23.6
comp=Z,16μm,21.2s,baz=108,slow=37
WHFO Wadi Hawf 66.59 285 P **P** **10 27 32.0 -0.3**
SNR=12
WHFO P **P** **10 27 32.0 -0.3**
SNR=12
WHFO P **P** **10 27 32.0 -0.3**
SNR=12
ATKA Atka Island 66.69 37 IAmb IAmb 10 27 38.0
comp=Z,196nm,1.1s
SOCY Socotra 66.76 279 P **P** **10 27 32.7 -0.7**
SNR=12
SOCY Socotra 66.76 279 IAMs_20 IAMs_20 10 53 47.0
comp=Z,12μm,21.0s
SVE Sverdlovsk 66.76 328*d* *i* P **P** **10 27 33.2 +0.6**
SVE *e* S **S** **10 36 23.4 +0.7**
SVE pmax pmax
comp=Z,967nm,1.4s
SVE MLR MLR
comp=Z,7μm,18.0s
ABTO Aybut 67.07 285 P **P** **10 27 35.5 +0.2**
SNR=30
ABTO P **P** **10 27 35.5 +0.2**
SNR=30
ABTO P **P** **10 27 35.5 +0.2**
SNR=30
ARU Arti 67.72 328 P **P** **10 27 38.6 -0.1**
comp=Z,31nm,0.5s,baz=110,slow=4.0,SNR=103
ARU PP **PP** **10 30 08.9 +0.7**
comp=Z,8.5nm,0.6s,baz=80,slow=11,SNR=3.0
ARU PKPPKP **P'P'df** **10 55 58.2 -4.6**
comp=Z,1.8nm,0.2s,baz=250,slow=6.2,SNR=8.6
ARU LR LR 10 59 43.2
comp=Z,6μm,18.0s,baz=105,slow=38
ARU Arti 67.72 328*c* *i* P **P** **10 27 38.6 -0.1**
ARU 10 28 03.8
ARU *e* 10 30 07.1
ARU PPP PPP 10 31 47.3
ARU S **S** **10 36 34.9 +0.6**
ARU 10 37 40.6
ARU pmax pmax
comp=Z,626nm,1.3s
ARU Arti 67.72 328 P **P** **10 27 38.5 -0.2**
DCZ Deep Cove 67.95 147 IAmb IAmb 10 27 55.5
comp=Z,80nm,0.8s
DCZ IAMs_20 IAMs_20 10 59 48.2
comp=Z,7μm,20.0s
FOZ Fox Glacier 68.19 145 IAmb IAmb 10 27 45.8
comp=Z,75nm,1.0s
QRZ Quartz Range 68.20 141 IAMs_20 IAMs_20 10 56 22.4
comp=Z,9μm,21.0s
MLZ Mavora Lakes 68.40 147 IAMs_20 IAMs_20 11 00 02.2
comp=Z,9μm,18.0s
WKZ Wanaka 68.55 146 IAMs_20 IAMs_20 10 55 41.1
comp=Z,8μm,21.0s
WHZ Wether Hill Ro 68.65 147 IAMs_20 IAMs_20 11 00 17.9
comp=Z,8μm,20.0s
LBZ Lake Benmore 68.92 145 IAMs_20 IAMs_20 10 58 58.1
comp=Z,7μm,20.0s
NNZ Nelson 68.95 141 IAMs_20 IAMs_20 10 57 07.3
comp=Z,9μm,21.0s
THZ Tophouse 68.97 142 IAmb IAmb 10 28 02.6
comp=Z,121nm,0.8s
THZ IAMs_20 IAMs_20 10 57 51.7
comp=Z,11μm,20.0s
RPZ Rata Peaks 69.01 144 P **P** **10 27 46.5 -0.4**
comp=Z,149nm,0.8s,baz=282,slow=1.6,SNR=40
RPZ LR LR 10 57 27.0
comp=Z,7μm,21.6s,baz=298,slow=35
RPZ Rata Peaks 69.01 144 IAmb IAmb 10 27 51.1
comp=Z,190nm,0.9s
RPZ IAMs_20 IAMs_20 11 00 06.4
comp=Z,8μm,20.0s
LTZ Lake Taylor 69.17 143 IAmb IAmb 10 27 49.7
comp=Z,143nm,1.0s
RAO Raoul Island 69.38 126 LR LR 10 58 40.0
comp=Z,2μm,18.1s,baz=294,slow=36
KHZ Kahutara 69.73 142 IAmb IAmb 10 27 51.9
comp=Z,104nm,1.1s
URZ Urewera 69.80 137 LR LR 10 57 26.0
comp=Z,12μm,21.4s,baz=314,slow=35
URZ Urewera 69.80 137 IAmb IAmb 10 28 01.9
comp=Z,98nm,0.9s
SNZO South Karori 69.84 140 P **P** **10 27 51.3 -0.8**
SNZO IAmb IAmb 10 27 53.3
comp=Z,204nm,1.0s
BKZ Black Stump Fm 69.85 138 IAMs_20 IAMs_20 10 57 59.0
comp=Z,10μm,20.0s
MQZ McQueen's Vall 69.94 143 IAmb IAmb 10 27 54.8
comp=Z,234nm,1.3s
MSWZ Moikau Station 70.24 140 P **P** **10 27 55.1 +0.5**
MXZ Matakaoa Point 70.28 135 P **P** **10 27 54.6 -0.2**
MXZ IAmb IAmb 10 27 55.2
comp=Z,140nm,1.0s
BFZ Birch Farm 70.48 139 IAmb IAmb 10 27 56.5
comp=Z,145nm,1.0s
BFZ IAMs_20 IAMs_20 10 57 16.7
comp=Z,8μm,22.0s
MCQ Macquarie Isla 70.78 158 IAmb IAmb 10 28 00.8
comp=Z,246nm,1.1s
RER Riviere de l'E 71.79 244 P **P** **10 28 05.1 +0.6**
RER IAmb IAmb 10 30 09.5
comp=Z,248nm,1.6s
AKUT Akutan 72.06 36 IAmb IAmb 10 28 22.2
comp=Z,498nm,1.9s
AKT Akhty 72.12 311 *e* P **P** **10 28 07.0 +0.8**
AKT *e* 10 28 25.2
AKT *e* 10 30 52.1
AKT *e* S **S** **10 37 28.6 +2.0**
AKT pmax pmax
comp=Z,270nm,1.2s
MAK Makhachkala 72.37 312*d* *i* P **P** **10 28 08.6 +1.1**
MAK *e* 10 30 48.0
MAK *e* PPP PPP 10 32 32.3
MAK *e* S **S** **10 37 30.9 +1.7**
MAK pmax pmax
comp=Z,329nm,1.6s
MAK MLR MLR
comp=Z,5μm,18.0s
KIRV Kirov 73.03 328 P **P** **10 28 11.0 0.0**
comp=Z,444nm,0.9s,baz=104,slow=2.4,SNR=79
KIRV LR LR 11 03 12.7
comp=Z,6μm,19.4s,baz=107,slow=38
FALS False Pass 73.52 36 IAmb IAmb 10 28 17.5
comp=Z,86nm,0.9s
FALS IAMs_20 IAMs_20 10 56 28.6
comp=Z,8μm,20.0s

GROC Groznyy 73.64 312 *e* P **P** **10 28 14.8 -0.2**
GROC *e* 10 28 29.5
GROC *e* 10 31 01.7
GROC *e* S **S** **10 37 45.8 +2.2**
GROC pmax pmax
comp=Z,399nm,1.3s
RAYN Ar Rayn 74.04 292 P **P** **10 28 17.9 +0.1**
RAYN pmax pmax
comp=Z,396nm,1.7s
RAYN Ar Rayn 74.04 292 P **P** **10 28 17.9 +0.1**
RAYN IAmb IAmb 10 28 20.1
comp=Z,396nm,1.6s
ANM Nome 74.15 25 IAMs_20 IAMs_20 10 59 18.0
comp=Z,8μm,22.0s
ZEI Tsey 75.01 312 *e* P **P** **10 28 22.1 -1.2**
ZEI *e* S **S** **10 37 58.7 -0.8**
ZEI pmax pmax
comp=Z,261nm,1.5s
ZEI pmax pmax
comp=N,142nm,1.1s
ZEI pmax pmax
comp=E,131nm,0.9s
ZEI pmax pmax
comp=Z,459nm,5.4s
NCK Nalchik 75.25 313 *i* P **P** **10 28 24.6 +0.2**
NCK pmax pmax
comp=Z,95nm,1.2s
SDPT Sand Point 75.25 35 IAmb IAmb 10 28 49.7
comp=Z,122nm,1.0s
AKH Akhalkalaki 75.30 310 ⇑P **P** **10 28 26.8 +1.8**
AKH Akhalkalaki 75.30 310 IAMs_20 IAMs_20 11 07 39.0
comp=Z,6μm,20.0s
PRGR Permogore 75.37 331⇑ *i* P **P** **10 28 24.4 -0.2**
PRGR pmax pmax
comp=Z,209nm,1.1s
GOF Gofitskoye 75.68 314⇑ *i* P **P** **10 28 27.3 +0.5**
GOF *e* S **S** **10 38 09.3 +3.0**
GOF pmax pmax
comp=Z,339nm,1.5s
KBZ Khabaz 75.76 313 P **P** **10 28 27.8 +0.6**
comp=Z,107nm,1.2s,baz=93,slow=6.1,SNR=76
KBZ PKPPKP
comp=Z,1.5nm,0.6s,baz=275,slow=0.9,SNR=4.8
KBZ LR LR 11 05 11.0
comp=Z,5μm,19.4s,baz=76,slow=38
KBZ Khabaz 75.76 313*c* *i* P **P** **10 28 27.5 +0.3**
KBZ pmax pmax
comp=Z,148nm,1.3s
RDOG Red Dog Mine 75.81 22 IAmb IAmb 10 28 31.0
comp=Z,521nm,1.9s
DAMY Dhamar 75.83 283 P **P** **10 28 30.1 +1.5**
SNR=20
KIV Kislovodsk 75.92 313 P **P** **10 28 28.9 +0.6**
KIV P **P** **10 28 28.9 +0.6**
KIV Kislovodsk 75.92 313 *e* P **P** **10 28 28.5 +0.2**
KIV *e* 10 31 19.7
KIV *e* S **S** **10 38 08.4 -0.8**
KIV *e* SS **SS** **10 43 03.5 +1.7**
KIV *e* SSS SSS 10 46 27.1
KIV pmax pmax
comp=Z,633nm,1.0s
KIV pmax pmax
comp=Z,4μm,4.8s
KIV MLR MLR
comp=Z,11μm,18.0s
KIV Kislovodsk 75.92 313 P **P** **10 28 29.0 +0.7**
KIV IAmb IAmb 10 28 32.1
comp=Z,383nm,1.3s
SHA1 Shidzhatmaz 75.93 313*c* *i* P **P** **10 28 27.4 -1.2**
BATM Batumi 76.65 311 ⇓P **P** **10 28 33.2 +0.8**
BCA Borcka 76.70 310 ⇑P **P** **10 28 33.5 +0.8**
VRH Novokhopyorsk 76.71 320 *e* P **P** **10 28 31.9 -0.6**
VRH *e* 10 28 32.7
VRH *e* S **S** **10 38 13.1 -4.3**
VRH pmax pmax
comp=Z,560nm,1.6s
VRH pmax pmax
comp=Z,510nm,1.1s
VRH smax smax
comp=N,1μm,7.9s
VRH MLR MLR
comp=Z,6μm,18.0s
ATD Arta Tunnel 77.67 280 P **P** **10 28 39.7 +1.0**
comp=Z,56nm,0.8s,baz=74,slow=1.5,SNR=29
ATD Arta Tunnel 77.67 280 *i* P **P** **10 28 39.3 +0.6**
ATD *i* S **S** **10 38 33.6 +4.3**
ATD Arta Tunnel 77.67 280 P **P** **10 28 40.1 +1.4**
SNR=15
ATD Arta Tunnel 77.67 280 *i* P **P** **10 28 39.3 +0.6**
ATD Arta Tunnel 77.67 280 IAmb IAmb 10 28 42.0
comp=Z,116nm,1.2s
SOC Sochi 78.07 313*c* *i* P **P** **10 28 40.1 -0.2**
SOC *e* 10 31 33.7
SOC *e* PPP PPP 10 33 20.3
SOC *e* S **S** **10 38 31.8 -0.7**
SOC *e* 10 38 47.2
SOC *e* SS **SS** **10 43 31.8 -2.3**
SOC pmax pmax
comp=Z,208nm,1.3s
SOC MLR MLR
comp=Z,5μm,18.0s
KTUT Trabzon 78.11 310 ⇑P **P** **10 28 41.4 +0.8**
VORD Divnogorie 78.24 320 *e* P **P** **10 28 40.1 -0.9**
VORD *e* 10 28 41.1
VORD *e* S **S** **10 38 25.5 -8.5**
VORD pmax pmax
comp=Z,250nm,1.2s
VORD pmax pmax
comp=Z,380nm,1.3s
VORD smax smax
comp=N,350nm,6.0s
VORD MLR MLR
comp=Z,2μm,13.0s
KLMR Klimovskoe 78.25 330 *e* P **P** **10 28 38.4 -2.5**
KLMR *e* 10 31 34.2
KLMR *e* S **S** **10 38 30.1 -3.6**
KLMR pmax pmax
comp=Z,1μm,1.2s
KLMR MLR MLR
comp=Z,10μm,19.0s
KLMR Klimovskoe 78.25 330 *e* P **P** **10 28 38.5 -2.5**
KLMR AMP 10 28 43.5
comp=Z,1μm,1.2s
KLMR *e* PP **PP** **10 31 34.2 -3.5**
KLMR *e* S **S** **10 38 30.1 -3.6**
KLMR *e* S **S** **10 38 30.1 -3.6**
KLMR LQ LQ 10 57 03.4
KLMR LQ LQ 10 57 03.4
KLMR LR LR 11 02 06.1
KLMR AMP 11 07 00.6
comp=Z,10μm,18.7s
VORR Voronezh 78.29 321 *e* P **P** **10 28 41.0 -0.3**
VORR pmax pmax
comp=Z,550nm,1.8s
VSR Storozhevoye 78.31 320 *e* P **P** **10 28 40.1 -1.4**
VSR *e* 10 28 40.9
VSR *e* S **S** **10 38 29.3 -5.5**
VSR pmax pmax
comp=Z,470nm,1.7s
VSR pmax pmax
comp=Z,580nm,1.2s
VSR smax smax
comp=N,1μm,8.1s
VSR MLR MLR
comp=Z,6μm,22.0s
LPSR Galich'ya Gora 78.45 322 *e* P **P** **10 28 42.1 -0.1**
LPSR *e* 10 28 42.8
LPSR *e* S **S** **10 38 31.2 -5.1**
LPSR pmax pmax
comp=Z,330nm,1.0s
LPSR pmax pmax
comp=Z,570nm,1.4s
LPSR smax smax
comp=N,2μm,5.3s
LPSR MLR MLR
comp=Z,6μm,18.0s
OPO Ambohidratompo 78.84 249 P **P** **10 28 45.0 -0.2**
comp=Z,62nm,1.2s,baz=86,slow=5.1,SNR=17
ABPO Ambohimpanom 78.91 248 P **P** **10 28 45.5 0.0**
ABPO pmax pmax
comp=Z,42nm,1.0s
ABPO Ambohimpanom 78.91 248 P **P** **10 28 45.5 0.0**
ABPO IAMs_20 IAMs_20 11 00 35.3
comp=Z,7μm,21.0s
TMCR Tamitsa 79.03 334 *e* P **P** **10 28 45.0 -0.1**
TMCR *e* S **S** **10 38 43.8 +1.8**
TMCR pmax pmax
comp=Z,590nm,1.0s
IMAR Indian Mountai 79.17 24 P **P** **10 28 46.4 +0.5**
MOS Moscow 79.19 325 *e* P **P** **10 28 42.1 -4.1**
MOS *e* 10 29 00.5
MOS *e* 10 31 41.7
MOS *e* S **S** **10 38 38.7 -5.3**
MOS pmax pmax
comp=Z,941nm,1.6s
MOS pmax pmax
comp=Z,3μm,2.5s
MOS smax smax
comp=N,2μm,5.7s
MOS smax smax
comp=E,800nm,3.9s
MOS MLR MLR
comp=Z,11μm,20.0s
KHLU Kahalu`u 79.51 72 IAMs_20 IAMs_20 11 00 25.5
comp=Z,6μm,19.0s
ANN Anapa 79.66 314*c* *i* P **P** **10 28 48.6 -0.4**
ANN *e** PP **pwP** **10 29 02.2 -0.2**
ANN *e* S **S** **10 38 48.2 -1.2**
ANN pmax pmax
comp=Z,394nm,1.2s
KDAK Kodiak Island 79.70 33 P **P** **10 28 48.7 -0.2**
comp=Z,19nm,0.5s,baz=270,slow=2.9,SNR=86
KDAK Kodiak Island 79.70 33 P **P** **10 28 48.9 0.0**
KDAK pmax pmax
comp=Z,138nm,1.5s
KDAK Kodiak Island 79.70 33 P **P** **10 28 48.9 0.0**
OBN Obninsk 79.81 324 P **P** **10 28 49.1 -0.5**
comp=Z,44nm,0.7s,baz=65,slow=2.7,SNR=66
OBN LR LR 11 05 52.4
comp=Z,3μm,19.0s,baz=91,slow=37
OBN Obninsk 79.81 324*c* *i* P **P** **10 28 49.0 -0.5**
OBN *e* 10 28 58.8
OBN *e* 10 31 51.7
OBN pmax pmax
comp=Z,982nm,1.7s
OBN MLR MLR
comp=Z,10μm,18.0s
PPLA Purkeypile 79.82 28 IAmb IAmb 10 28 52.2
comp=Z,247nm,1.7s
POHA Pohakuloa 79.83 72 IAMs_20 IAMs_20 11 00 24.0
comp=Z,7μm,20.0s
HMH Humu'ula Sheep 79.89 72 P **P** **10 28 51.0 -0.1**
HMH IAmb IAmb 10 29 23.0
comp=Z,286nm,1.6s
AIN Ainahou 79.94 72 P **P** **10 28 52.2 +1.0**
AIN IAmb IAmb 10 29 07.6
comp=Z,149nm,1.1s
VOI Vohitsoka 80.00 246 P **P** **10 28 52.8 +1.4**
SNR=5.2
SDHHI Sand Hill 80.09 72 IAmb IAmb 10 28 53.2
comp=Z,129nm,1.0s
BPAW Bear Paw Mtn. 80.34 26 IAmb IAmb 10 28 54.8
comp=Z,220nm,1.2s
CNPM China Poot 80.35 31 IAMs_20 IAMs_20 11 01 55.1
comp=Z,6μm,22.0s
LVZ Lovozero 80.42 337*ce* P **P** **10 28 52.3 -0.4**
LVZ pmax pmax
comp=Z,308nm,1.3s
LVZ Lovozero 80.42 337 P **P** **10 28 52.8 +0.1**
LVZ IAmb IAmb 10 28 55.4
comp=Z,213nm,1.0s
MLY Manley 80.42 25 IAMs_20 IAMs_20 11 03 23.6
comp=Z,8μm,22.0s
TOLK Toolik Lake Re 80.78 22 P **P** **10 28 55.6 +1.0**
baz=272
TOLK Toolik Lake Re 80.78 22 IAmb IAmb 10 28 58.6
comp=Z,215nm,1.2s
TOLK IAMs_20 IAMs_20 11 07 13.9
comp=Z,6μm,21.0s
DESE Dese 80.85 280 *i* P **P** **10 28 57.8 +1.4**
DESE *e* S **S** **10 39 10.7 +7.1**
APA Apatity 80.90 337⇓ *i* P **P** **10 28 54.2 -1.0**
APA *i* 10 31 56.0
APA *i* S **S** **10 39 09.0 +7.4**
APA *i* PS **PnS** **10 39 55.0 +4.5**
APA pmax pmax
comp=Z,205nm,0.8s
APA MLR MLR
comp=Z,20μm,17.0s
ASF Jabal al Asfar 81.00 301 P **P** **10 28 58.1 +1.5**
comp=Z,139nm,1.1s,baz=40,slow=2.2,SNR=104
NEA Nenana 81.15 26 IAMs_20 IAMs_20 11 02 19.0
comp=Z,6μm,22.0s
SEW Seward 81.23 30 IAmb IAmb 10 28 58.7
comp=Z,108nm,0.8s
SEW IAMs_20 IAMs_20 11 02 48.2
comp=Z,6μm,22.0s
MCK McKinley 81.26 27 IAMs_20 IAMs_20 11 06 03.8
comp=Z,6μm,20.0s
RND Reindeer 81.31 27 IAmb IAmb 10 28 59.1
comp=Z,187nm,1.5s
DIKM Dikmen 81.46 311 ⇑P **P** **10 28 59.5 +0.7**
HWQ Hawqa 81.59 303 *e* P **P** **10 29 00.6 +0.8**
KNK Knik Glacier 81.63 29 IAmb IAmb 10 29 01.3
comp=Z,91nm,0.8s
TCOL CIGO, UAF Yank 81.65 26 P **P** **10 28 58.7 -0.6**
baz=274
COLA College 81.66 26 P **P** **10 28 58.8 -0.4**
COLA pmax pmax
comp=Z,105nm,1.5s
COLA College 81.66 26 P **P** **10 28 58.8 -0.4**
COLA College 81.66 26 IAMs_20 IAMs_20 11 03 28.2
comp=Z,6μm,22.0s
SML Sawmill 81.66 29 IAmb IAmb 10 29 01.4
comp=Z,118nm,1.0s
CCB Clear Creek Bu 81.69 26 IAMs_20 IAMs_20 11 02 45.3
comp=Z,6μm,21.0s
RCY Rachaya 81.76 303 *e* P **P** **10 29 02.0 +1.4**
POKR Poker Flat Res 81.82 25 P **P** **10 28 59.8 -0.4**
baz=274
SHBL Chebaa 81.85 302 *e* P **P** **10 29 02.3 +1.1**
BHL Bhannes 81.87 303 *e* P **P** **10 29 02.2 +1.1**
AAE Adis Abeba 81.99 278 *e* P **P** **10 29 04.3 +1.9**
AAE *i* Sg **S** **10 39 21.1 +5.7**
AAE Adis Abeba 81.99 278 *e* P **P** **10 29 04.3 +1.9**
AAE *i* Sg **S** **10 39 21.1 +5.7**
SIM Simferopol' 82.00 314*c* *i* P **P** **10 29 01.7 +0.2**
SIM *i* S **S** **10 39 13.6 -0.3**
SIM *e* PS PnS 10 40 27.0 +22
SIM pmax pmax
comp=Z,586nm,1.9s
SIM pmax pmax
comp=Z,660nm,10.2s
ILAR Eielson Array 82.08 26 P **P** **10 29 00.1 -1.5**
comp=Z,10nm,0.8s,baz=234,slow=3.8,SNR=59
ILAR PKKPbc **PKKPbc** **10 47 29.6 -3.4**
comp=Z,2.7nm,1.0s,baz=86,slow=1.2,SNR=9.7
ILAR PKPPKP **P'P'df** **10 55 35.2 -1.9**
comp=Z,0.5nm,0.7s,baz=60,slow=0.7,SNR=5.5
ILAR LR LR 11 04 03.0
comp=Z,5μm,22.0s,baz=287,slow=35
ILAR Eielson Array 82.08 26 P **P** **10 28 59.3 -2.2**
ILAR Eielson Array 82.08 26 P **P** **10 28 59.3 -2.2**
HDA Harding Lake 82.08 26 P **P** **10 29 00.4 -1.2**
baz=275
HDA Harding Lake 82.08 26 IAMs_20 IAMs_20 11 02 34.5
comp=Z,6μm,22.0s
FURI Furi 82.09 278 *i* P **P** **10 29 05.3 +2.3**
FURI *i* S **S** **10 39 22.5 +6.0**
FURI Furi 82.09 278 *i* P **P** **10 29 05.3 +2.3**
SCM Sheep Creek Mo 82.13 29 IAmb IAmb 10 29 04.2
comp=Z,162nm,1.2s
MMAI Mount Meron Ar 82.17 302 P **P** **10 29 03.8 +1.0**
comp=Z,180nm,1.2s,baz=87,slow=8.5,SNR=48
GLI Glacier Island 82.33 30 IAmb IAmb 10 29 05.0
comp=Z,88nm,1.0s
BZK Bozkurt 82.37 311 ⇑P **P** **10 29 04.1 +0.6**
RAR Rarotonga 82.51 113 LR LR 11 03 34.5
comp=Z,1μm,19.1s,baz=286,slow=34
PRP Porcupine Dome 82.58 25 IAMs_20 IAMs_20 11 05 11.6
comp=Z,6μm,21.0s
FYU Fort Yukon 82.58 24 IAmb IAmb 10 29 07.6
comp=Z,348nm,1.6s
HOPEN Hopen 82.61 346⇑ *i* P **P** **10 29 04.4 +0.3**
HOPEN *e* S **S** **10 39 16.8 -2.2**
HOPEN IVMs_BB IVMs_BB 11 12 14.1
comp=Z,5μm,16.1s
HIN Hinchinbrook I 82.67 30 IAMs_20 IAMs_20 11 12 05.3
comp=Z,5μm,19.0s
BMAR Burnt Mountain 82.74 23 P **P** **10 29 04.7 -0.2**
PUL Pulkovo 82.86 329 *e* P **P** **10 29 05.0 -0.7**

PUL Pulkovo 82.86 329 *ce* P **P 10 29 06.1 +0.5**
PUL pmax pmax
comp=Z,906nm,1.3s
BR131 Keskin Array S 82.88 309 P **P 10 29 06.5 +0.1**
SNR=52
BR131 P **P 10 29 06.5 +0.1**
SNR=52
BR131 S **S 10 39 24.4 +1.0**
BR131 S **S 10 39 24.4 +1.0**
BR131 Keskin Array S 82.88 309 *c* iP **P 10 29 06.3 -0.1**
BRTR Keskin Array B 82.88 309 P **P 10 29 06.5 +0.1**
comp=Z,54nm,0.8s,baz=115,slow=5.6,SNR=137
BRTR PP **PP 10 32 18.0 +1.2**
comp=Z,9.2nm,0.8s,baz=84,slow=8.0,SNR=5.4
BRTR PKKPbc **PKKPbc 10 47 30.4 -0.1**
comp=Z,1.3nm,0.8s,baz=205,slow=3.0,SNR=6.5
BRTR PKPPKP 10 55 34.2
comp=Z,0.6nm,0.8s,baz=280,slow=0.9,SNR=2.2
BRTR LR LR 11 10 49.7
comp=Z,3µm,20.1s,baz=59,slow=39
BRTR Keskin Array B 82.88 309 *i* P **P 10 29 06.5 +0.1**
BRTR pmax pmax
comp=Z,55nm,0.8s
EIL Elat 82.92 299 P **P 10 29 07.4 +0.7**
comp=Z,176nm,1.1s,baz=85,slow=2.2,SNR=82
EYAK Cordova Ski Ar 83.02 30 IAMs_20 IAMs_20 11 12 24.6
comp=Z,6µm,19.0s
KEV Kevo 83.04 340 P **P 10 29 05.6 -0.8**
KEV pmax pmax
comp=Z,478nm,1.5s
KEV MLR MLR
comp=Z,8µm,19.0s
KEV Kevo 83.04 340 P **P 10 29 05.6 -0.8**
KEV IAMs_20 IAMs_20 11 09 56.7
comp=Z,8µm,19.0s
RIDG Independent Ri 83.07 27 IAmb IAmb 10 29 11.3
comp=Z,147nm,1.0s
ANTO Ankara 83.51 309 ⇑P **P 10 29 09.9 +0.4**
ANTO Ankara 83.51 309 P **P 10 29 10.1 +0.5**
ANTO P **P 10 29 10.1 +0.5**
ARCES ARCESS Array B 83.59 339 P **P 10 29 09.2 -0.1**
comp=Z,188nm,0.9s,baz=82,slow=6.9,SNR=200
ARCES PKKPbc **PKKPbc 10 47 27.8 -1.9**
comp=Z,1.9nm,0.8s,baz=279,slow=2.3,SNR=6.8
ARCES LR LR 11 10 24.6
comp=Z,8µm,19.2s,baz=82,slow=38
ARCES ARCESS Array B 83.59 339 P **P 10 29 09.7 +0.4**
ARCES ARCESS Array B 83.59 339 P **P 10 29 09.7 +0.4**
ARE0 ARCESS Array S 83.59 339 ⇑*i*P **P 10 29 09.5 +0.2**
ARE0 IVmB_BB 10 29 10.0
comp=Z,5µm,2.8s
ARE0 *e*SKSac **SKSac 10 39 30.3 +0.7**
ARE0 IVMs_BB IVMs_BB 11 10 02.5
comp=Z,3µm,16.5s
MENT Mentasta 83.68 27 IAmb IAmb 10 29 11.8
comp=Z,107nm,1.5s
MENT IAMs_20 IAMs_20 11 05 25.8
comp=Z,6µm,22.0s
GLB Gilahina Butte 83.85 29 P **P 10 29 11.4 +0.6**
GLB IAmb IAmb 10 29 13.4
comp=Z,84nm,1.0s
LEF Lefka 84.00 304 ⇑P **P 10 29 12.5 +0.4**
HAMF Hammerfest 84.01 341 ⇑*i*P **P 10 29 11.0 -0.3**
HAMF IVmB_BB 10 29 12.1
comp=Z,4µm,4.4s
HAMF *e*SKSac **SKSac 10 39 29.1 -3.1**
HAMF IVMs_BB IVMs_BB 11 09 07.9
comp=Z,3µm,20.5s
VRDI Verde Repeater 84.05 29 IAmb IAmb 10 29 14.5
comp=Z,318nm,1.9s
SPA0 Spitsbergen Ar 84.09 348 ⇑*i*P **P 10 29 11.7 0.0**
SPITS Spitsbergen Ar 84.09 348 P **P 10 29 11.5 -0.2**
comp=Z,267nm,0.9s,baz=90,slow=9.2,SNR=152
MCARA McCarthy VSAT 84.23 29 IAmb IAmb 10 29 47.8
comp=Z,94nm,1.0s
MCARA IAMs_20 IAMs_20 11 14 03.5
comp=Z,5µm,18.0s
KIBK Kibwezi 84.45 267 P **P 10 29 16.1 +1.2**
SNR=23
KTK1 Kautokeino 84.48 339 ⇑*i*P **P 10 29 13.8 -0.1**
KTK1 IVmBBB 10 29 14.4
comp=Z,3µm,2.3s
KTK1 *e*PP **PP 10 32 29.8 +0.9**
KTK1 *e*SKSac **SKSac 10 39 32.7 -2.6**
EGAK Eagle 84.51 25 IAmb IAmb 10 29 16.8
comp=Z,270nm,1.6s
BJO1 Bjornoya 84.52 345 ⇑*i*P **P 10 29 12.0 -1.9**
BJO1 *e*SKSac **SKSac 10 39 35.4 +0.1**
BJO1 IVMs_BB IVMs_BB 11 13 11.8
comp=Z,4µm,19.8s
BCAR Beaver Creek A 84.53 27 P **P 10 29 15.5 +1.3**
BALM Baldy 84.61 29 IAmb IAmb 10 29 17.7
comp=Z,169nm,1.4s
AKASG Malin Array Be 84.62 320 P **P 10 29 14.1 -0.8**
comp=Z,100nm,0.7s,baz=69,slow=4.8,SNR=124
AKASG PP **PP 10 32 32.7 +2.2**
comp=Z,36nm,1.2s,baz=65,slow=8.7,SNR=5.2
AKASG LR LR 11 09 33.7
comp=Z,6µm,19.9s,baz=65,slow=38
AKASG Malin Array Be 84.62 320 P **P 10 29 14.4 -0.5**
AKASG pmax pmax
comp=Z,195nm,1.3s
AKASG Malin Array Be 84.62 320 P **P 10 29 14.3 -0.5**
AKBB Malin Array Si 84.62 320 *ce* P **P 10 29 14.1 -0.8**
HSPB Hornsund (broa 84.62 347 *e*ScS **ScS 10 39 52.1 +1.7**
HSPB LMZ LR 11 13 03.7
comp=Z,19nm,17.8s
HSPB Hornsund (broa 84.62 347 ⇑*i*P **P 10 29 14.2 -0.2**
HSPB IVmB_BB 10 29 15.2
comp=Z,3µm,2.2s
HSPB *e*SKSac **SKSac 10 39 29.3 -6.6**
HSPB IVMs_BB IVMs_BB 11 13 02.3
comp=Z,7µm,16.0s
KBS Kingsbay 84.67 349 P **P 10 29 14.4 -0.2**
KBS pmax pmax
comp=Z,181nm,1.3s
KBS MLR MLR
comp=Z,22µm,20.0s
KBS Kingsbay 84.67 349 P **P 10 29 14.4 -0.2**
KBS IAmb IAmb 10 29 16.5
comp=Z,182nm,1.3s
KBS Kingsbay 84.67 349 ⇑*i*P **P 10 29 14.5 -0.2**
KBS IVmB_BB 10 29 15.8
comp=Z,2µm,1.0s
KBS *e*SKSac **SKSac 10 39 36.2 -0.1**
KBS IVMs_BB IVMs_BB 11 09 51.0
comp=Z,7µm,19.2s
FINES FINESS Array B 84.70 331 P **P 10 29 14.7 -0.4**
comp=Z,112nm,0.7s,baz=85,slow=6.1,SNR=284
FINES PKKPbc **PKKPbc 10 47 24.6 -2.3**
comp=Z,1.9nm,0.9s,baz=232,slow=1.6,SNR=5.0
FINES LR LR 11 10 12.7
comp=Z,7µm,19.0s,baz=79,slow=38
FINES FINESS Array B 84.70 331 P **P 10 29 14.9 -0.1**
MICGM Minsk 84.87 324 ⇑*i*P **P 10 29 15.0 -1.0**
MICGM ⇑*i*P **P 10 29 15.0 -1.0**
MICGM PM 10 29 16.0
comp=Z,1.7nm,1.0s
MICGM PM 10 29 16.0
comp=Z,10nm,4.0s
MICGM PM 10 29 17.0
comp=E,1.9nm,1.0s
MICGM *e*pP **sP 10 29 28.0 +0.6**
MICGM *es*P pwP 10 29 47.0 +17
MICGM *e*PP **PP 10 32 37.0 +4.5**
MICGM *e*PPP PPP 10 34 28.0
MICGM *e*S **S 10 39 39.0 -3.5**
MICGM *es*S **SKKSac 10 39 46.0 +1.7**
MICGM *e*PS **PnS 10 40 48.0 +8.3**
MICGM *e*SS SS 10 45 39.0 +24
MICGM *e*SSS SSS 10 49 29.0
MICGM *e*LR LR 11 06 05.0
MICGM LRM MLR 11 08 40.0
comp=E,11nm,18.0s
MICGM LRM MLR 11 08 45.0
comp=Z,22nm,18.0s
MICGM LRM MLR 11 08 45.0
comp=Z,22nm,18.0s
MNK Minsk 84.87 324 *ce* iP **P 10 29 15.0 -1.0**
MNK *e* 10 32 37.0
MNK *e*PPP PPP 10 34 28.0
MNK *e*S **S 10 39 39.0 -3.5**
MNK pmax pmax
comp=E,2µm,1.0s
MNK pmax pmax
comp=Z,10µm,4.0s
MNK MLR MLR
comp=E,11µm,18.0s
MNK MLR MLR
comp=Z,22µm,18.0s
VSU Vasula 84.87 328 *e*P **P 10 29 15.6 -0.3**
VSU Vasula 84.87 328 *c* iP **P 10 29 15.6 -0.3**
VSU pmax pmax
comp=Z,1µm,1.1s
YAH Yahtse 85.02 30 IAMs_20 IAMs_20 11 07 28.2
comp=Z,6µm,21.0s
KMBO Kilima Mbogo 85.03 268 P **P 10 29 20.2 +2.2**
comp=Z,41nm,1.0s,baz=58,slow=5.7,SNR=15
KMBO LR LR 11 04 49.0
comp=Z,4µm,20.6s,baz=94,slow=34
KMBO Kilima Mbogo 85.03 268 P **P 10 29 20.2 +2.2**
KMBO pmax pmax
comp=Z,83nm,0.7s
KMBO Kilima Mbogo 85.03 268 IAmb IAmb 10 32 01.2
comp=Z,83nm,0.7s
CTGM Chitina Glacie 85.11 29 IAMs_20 IAMs_20 11 05 28.6
comp=Z,5µm,21.0s
DAWY Dawson 85.40 26 IAmb IAmb 10 29 21.6
comp=Z,193nm,1.3s
DAWY IAMs_20 IAMs_20 11 11 53.2
comp=Z,6µm,20.0s
KIS Kishinev 85.43 317 ⇓*i*P **P 10 29 19.0 0.0**
comp=Z,900nm,2.1s
KIS Kishinev 85.43 317 *e*PP PP 10 32 40.0 +2.8
KIS Kishinev 85.43 317 ⇑P **P 10 29 19.4 +0.4**
KIS Kishinev 85.43 317 ⇑*i*P **P 10 29 19.0 0.0**
KIS *e* 10 32 40.0
KIS *e*PPP PPP 10 34 32.0
KIS *e*S **S 10 39 46.0 -2.3**
KIS *e*SS **SS 10 45 21.0 -2.4**
KIS *e*SSS SSS 10 48 49.0
KIS pmax pmax
comp=Z,900nm,2.1s
KIS pmax pmax
comp=Z,2µm,14.0s
KIS pmax pmax
comp=Z,2µm,20.0s
KIS smax smax
comp=N,2µm,10.0s
KIS MLR MLR
comp=Z,9µm,20.0s
NACGM Naroch 85.44 325 *e*P **P 10 29 18.0 -0.9**
NACGM *e*P **P 10 29 18.0 -0.9**
NACGM PM 10 29 21.0
comp=Z,1.3nm,1.0s
NACGM *e*PP PP 10 32 29.0 -8.1
NACGM *e*PPP PPP 10 34 06.0
NACGM *e*S **S 10 39 40.0 -8.0**
NACGM *e*PS **PnS 10 40 46.0 -0.6**
NACGM *e*SS SS 10 45 48.0 +25
NACGM *e*SSS SSS 10 49 30.0
NACGM *e*LQ LQ 11 01 18.0
NACGM *e*LR LR 11 05 50.0
NACGM LRM MLR 11 08 54.0
comp=Z,38nm,20.0s
NACGM LRM MLR 11 08 58.0
comp=E,17nm,20.0s
MILM Milestii Mici 85.44 317 ⇑P **P 10 29 18.5 -0.6**
SORM Soroca 85.56 318 ⇑P **P 10 29 19.2 -0.5**
TLCR 85.70 315 ⇑P **P 10 29 20.7 +0.3**
TRO Tromso 85.82 340 ⇑*i*P **P 10 29 18.7 -1.8**
TRO *e*PP **PP 10 32 43.1 +3.3**
TRO *e*SKSac **SKSac 10 39 45.4 +1.7**
TRO IVMs_BB IVMs_BB 11 13 36.2
comp=Z,3µm,20.7s
LEOM Leova 85.89 316 ⇑P **P 10 29 21.3 0.0**
TSCT Constanta Port 85.97 314 ⇑P P 10 29 28.6 +6.9
EPYK Eagle Plains 85.98 23 P **P 10 29 21.7 +0.3**
baz=284
EPYK Eagle Plains 85.98 23 IAMs_20 IAMs_20 11 10 55.5
comp=Z,6µm,21.0s
EFOR EFORIE 86.00 314 ⇓P **P 10 29 22.2 +0.3**
TOPG Topolog 86.06 315 ⇑P **P 10 29 22.4 +0.2**
TIRR Tirgusor 86.10 314 ⇑P **P 10 29 22.5 +0.1**
TIRR Tirgusor 86.10 314 ⇑P **P 10 29 22.5 +0.1**
ISK Istanbul-Kandi 86.17 311 P **P 10 29 21.9 -0.9**
LODK Lodwar 86.17 273 P **P 10 29 24.8 +1.3**
SNR=37
VASR Vaslui 86.18 316 ⇑P **P 10 29 23.1 +0.3**
CFR Carcaliu 86.18 315 ⇑P **P 10 29 22.7 -0.1**
IAS Iasi 86.24 317 ⇓P **P 10 29 22.8 -0.2**
VARL Varlezi 86.26 316 ⇑P **P 10 29 23.6 +0.4**
TLBR Topalu 86.35 314 ⇑P **P 10 29 23.2 -0.4**
PSN Preselentsi 86.39 314 *e*P **P 10 29 24.0 +0.2**
HARR Harsova 86.40 315 ⇑P **P 10 29 23.9 +0.1**
TUDR 86.44 315 ⇑P **P 10 29 24.5 +0.5**
GHRR 86.54 316 ⇑P **P 10 29 25.4 +0.9**
ICOR Ion Corvin 86.59 314 ⇓P **P 10 29 25.2 +0.4**
INK Inuvik 86.66 21 P **P 10 29 24.9 +0.3**
comp=Z,139nm,0.9s,baz=280,slow=5.6,SNR=176
INK PKKPbc **PKKPdf 10 47 18.4 +3.5**
comp=Z,3.0nm,0.7s,baz=91,slow=1.7,SNR=11
INK LR LR 11 10 06.1
comp=Z,2µm,20.3s,baz=270,slow=37
PETR Petresti 86.72 316 ⇑P **P 10 29 26.7 +1.3**
ODBI Odobesti 86.83 316 ⇓P **P 10 29 27.3 +1.3**
AMRR Amara 86.84 315 ⇑P **P 10 29 26.6 +0.6**
FETY Fethiye 86.85 306 P **P 10 29 25.5 -0.8**
KULA Kula-Manisa 86.88 308 P **P 10 29 28.1 +1.6**
PABE Paberze 86.91 326 *e*P **P 10 29 25.6 -0.4**
GRER 86.95 315 ⇓P **P 10 29 26.9 +0.3**
TESR Tescani 86.98 316 ⇑P **P 10 29 26.7 0.0**
DHAK Deception Hill 87.02 31 IAMs_20 IAMs_20 11 07 24.4
comp=Z,5µm,21.0s
PRD Provadia 87.03 313 *e*P **P 10 29 27.1 +0.1**
VRI Vrincioaia 87.04 316 ⇑P **P 10 29 27.4 +0.4**
PLOR Plostina 87.09 316 ⇑P **P 10 29 27.6 +0.3**
NOR Nord 87.10 354 ⇑*i*P **P 10 29 25.7 -0.9**
NOR Nord 87.10 354 ⇑*i*P **P 10 29 25.7 -0.9**
BISRR Bisoca 87.11 316 ⇑P **P 10 29 27.8 +0.4**
PRAR RASCA 87.11 317 ⇑P **P 10 29 27.1 -0.3**
NEF NEVSHA 87.11 313 *e*P **P 10 29 27.6 +0.2**
LEHL Lehliu 87.22 314 ⇑P **P 10 29 28.4 +0.5**
BIZ Bicaz 87.27 317 ⇑P **P 10 29 28.2 +0.1**
ISR Istrita 87.30 315 ⇑P **P 10 29 29.2 +0.8**
SLIT Slitere, Latvi 87.35 328 *e*P **P 10 29 25.8 -2.4**
MAW Mawson 87.43 199 P **P 10 29 27.8 -0.5**
baz=88,SNR=35
MAW Mawson 87.43 199 P **P 10 29 27.4 -0.8**
comp=Z,18nm,0.8s,baz=52,slow=6.2,SNR=35
MAW PKKP **PKKPdf 10 47 12.9 -2.1**
comp=Z,2.3nm,1.0s,baz=197,slow=4.7,SNR=3.4
MAW LR LR 11 04 30.2
comp=Z,2µm,21.5s,baz=47,slow=33
SULR 87.58 315 ⇑P **P 10 29 30.2 +0.6**
RAZG Razgrad 87.61 314 ⇑P **P 10 29 29.7 -0.1**
STEI Steigen 87.61 339 ⇑*i*P **P 10 29 28.0 -1.2**
STEI IVmB_BB 10 29 30.8
comp=Z,2µm,11.4s
STEI *e*PP **PP 10 32 53.4 -0.9**
STEI *e*SKSac **SKSac 10 39 53.8 -1.0**
STEI IVMs_BB IVMs_BB 11 13 18.8
comp=Z,4µm,18.3s
OZUR 87.64 316 ⇑P **P 10 29 30.0 +0.1**
MLR Muntele Rosu 87.65 316 P **P 10 29 30.0 -0.1**
comp=Z,117nm,0.9s,baz=343,slow=1.5,SNR=93
MLR Muntele Rosu 87.65 316 ⇓P **P 10 29 30.1 0.0**
SECR 87.65 315 ⇑P **P 10 29 30.6 +0.6**
SUW Suwalki 87.67 324 *i* P **P 10 29 29.2 -0.6**
SUW *e*PP **PP 10 32 57.7 +2.6**
SUW LMZ LR 11 10 16.0
comp=Z,12nm,19.6s
BURAR Bucovina Array 87.73 318 ⇑P **P 10 29 30.6 +0.2**
BURAR Bucovina Array 87.73 318 P **P 10 29 30.6 +0.2**
BUR08 Bucovina Ar. S 87.74 318 IAmb IAmb 10 29 32.9
comp=Z,123nm,1.2s
JMB Yambol 87.75 313 *e*P **P 10 29 30.4 -0.1**
SGRR Singureni 87.86 314 ⇑P **P 10 29 30.8 -0.2**
PBUR Paburge 87.92 326 *e*P **P 10 29 30.3 -0.6**
DOPR Dopca 87.94 316 ⇑P **P 10 29 31.3 -0.1**
A36M Sachs Harbour 88.00 17 P **P 10 29 31.2 +0.2**
baz=294
DAT Datca 88.02 307 P **P 10 29 31.0 -1.1**
LVV L'vov 88.06 320 *d* iP **P 10 29 31.3 -0.5**
LVV *e* 10 39 51.1
LVV *eS* **S 10 40 10.9 -2.8**
SZH Strazhica 88.08 313 *e*P **P 10 29 31.7 -0.3**
LOF Lofoten 88.15 339 ⇑*i*P **P 10 29 30.2 -1.6**
LOF IVmB_BB 10 29 31.1
comp=Z,2µm,5.3s
LOF *e*PP **PP 10 32 59.2 +0.7**
LOF *e*SKSac **SKSac 10 40 03.1 +5.0**
LOF IVMs_BB IVMs_BB 11 13 59.4
comp=Z,3µm,15.5s
BLCB Balcova 88.15 308 P **P 10 29 31.7 -0.8**
BODT Bodrum 88.18 307 P **P 10 29 31.8 -0.9**
VOIR 88.28 316 ⇑P **P 10 29 31.7 -1.3**
ARCR ARCALIA 88.41 317 ⇓P **P 10 29 34.2 +0.7**
COPA Copaceanca 88.42 314 ⇑P **P 10 29 33.4 -0.2**
SMG Samos 88.43 308 P **P 10 29 32.5 -1.4**
ALN Alexandroupoli 88.44 311 P **P 10 29 32.2 -1.6**
MOR8 Moi Rana 88.49 337 ⇑*i*P **P 10 29 31.4 -2.2**
MOR8 *e*PP **PP 10 33 02.3 +0.9**
MOR8 *e*SKSac **SKSac 10 40 04.4 +4.1**
MOR8 IVMs_BB IVMs_BB 11 12 56.7
comp=Z,5µm,16.8s
HUMR Humele 88.50 315 ⇓P **P 10 29 33.5 -0.5**
PVL Pavlikeni 88.52 313 *e*P **P 10 29 34.1 0.0**
ARR Arges 88.58 316 ⇑P **P 10 29 34.4 -0.1**
PRK Paraskevi 88.58 309 P **P 10 29 34.0 -0.5**
GADA Gvkgeada 88.69 310 P **P 10 29 33.9 -1.1**
KDZ Kurdzhali 88.76 312 *e*P **P 10 29 34.6 -0.7**
RDO Rodhopi 88.77 311 P **P 10 29 34.2 -1.1**
BMR Baia Mare 88.86 318 ⇓P **P 10 29 36.0 +0.4**
KONS Konsvik 88.88 338 *e*P **P 10 29 35.8 +0.5**
SIGR SIGRI 88.91 309 P **P 10 29 34.7 -1.3**
SMTH Samothraki Isl 88.91 311 P **P 10 29 34.6 -1.4**
CHOS Chios island 88.91 309 P **P 10 29 34.8 -1.4**
KWP Kalwaria Pacla 88.93 320 *e*P **P 10 29 36.3 +0.3**
KWP *e*PP **PP 10 33 09.3 +3.9**
KWP LMZ LR 11 13 55.7
comp=Z,5.8nm,21.1s
KWP Kalwaria Pacla 88.93 320 IAMs_20 IAMs_20 11 14 09.0
comp=Z,6µm,20.0s
STOK Stokkvaagen 88.98 338 *e*P **P 10 29 36.5 +0.7**
STOK *e*SKSac **SKSac 10 39 59.8 -3.3**
PLV Pleven 88.99 314 ⇑P **P 10 29 36.2 -0.1**
CJR Cluj-Napoca 89.00 317 ⇓P **P 10 29 37.0 +0.6**
VLAD Vladila 89.02 314 ⇑P **P 10 29 36.6 +0.2**
KLNR Kaliningrad 89.22 325 *c* iP **P 10 29 36.6 -0.5**
KLNR pmax pmax
comp=Z,255nm,1.2s
RZN Rozhen 89.27 312 *e*P **P 10 29 37.2 -0.7**
KOLS Kolonicke sedl 89.37 319 *e*P **P 10 29 40.4 +2.4**
KOLS pmax pmax
comp=Z,60nm,1.1s
KOLS Kolonicke sedl 89.37 319 *e*P **P 10 29 40.4 +2.4**
KOLS *e*PP PP 10 33 21.7 +13
KOLS *e*L L 11 12 34.7
TRPA Tarpa 89.38 319 ⇑P **P 10 29 37.8 -0.2**
UZH Uzhgorod 89.43 319 *e*P **P 10 29 37.1 -1.2**
UZH *i* 10 29 39.9
UZH *e* 10 29 45.5
UZH *e* 10 33 10.9
C36M Paulatuk 89.48 19 P **P 10 29 38.1 +0.1**
baz=296
THAS Thassos island 89.49 311 P **P 10 29 37.7 -1.0**
PGB Panagyurishte 89.49 313 *e*P **P 10 29 38.4 -0.4**
KAVA Kavala 89.56 311 P **P 10 29 38.1 -1.0**
VNDA Vanda 89.58 172 P **P 10 29 37.7 -0.6**
comp=Z,44nm,1.1s,baz=310,slow=6.0,SNR=58
VNDA PKKPbc **PKKPdf 10 47 13.1 +1.6**
comp=Z,1.4nm,0.8s,baz=183,slow=2.7,SNR=6.1
VNDA Vanda 89.58 172 P **P 10 29 37.6 -0.6**
VNDA pmax pmax
comp=Z,97nm,1.4s
VNDA Vanda 89.58 172 P **P 10 29 37.6 -0.6**
VNDA IAmb IAmb 10 29 39.7
comp=Z,97nm,1.4s
BEL Belsk 89.59 323 *i* P **P 10 29 39.3 +0.3**
BEL *e*S **S 10 40 30.1 +2.1**
BEL LMZ LR 11 10 58.9
comp=Z,8.3nm,20.8s
DEV Deva 89.65 316 ⇑P **P 10 29 39.6 +0.3**
SRE Strehaia 89.72 315 ⇑P **P 10 29 40.0 +0.3**
SANT Santorini 89.77 307 ⇑P **P 10 29 39.4 -0.8**
IOSP Ios island 89.83 307 P **P 10 29 38.2 -2.2**
GZR Gura Zlata 89.85 316 ⇑P **P 10 29 40.2 -0.2**
NVR Nevrokopi 89.97 312 P **P 10 29 39.6 -1.4**
MMB Musomiste 90.01 312 *e*P **P 10 29 40.2 -1.0**
NSS Namsos 90.05 336 ⇑*i*P **P 10 29 38.5 -2.3**
NSS IVmBBB 10 29 40.1
comp=Z,1µm,2.6s
NSS *e*SKSac **SKSac 10 40 09.9 +0.4**
NSS IVMs_BB IVMs_BB 11 13 50.8
comp=Z,5µm,18.9s
OUR Ouranopolis 90.09 311 P **P 10 29 40.1 -1.4**
VTS Vitosha 90.15 313 ⇑P **P 10 29 41.0 -1.0**
VTS Vitosha 90.15 313 *e*P **P 10 29 41.3 -0.7**
VTS Vitosha 90.15 313 IAmb IAmb 10 29 43.8
comp=Z,240nm,1.8s
SRS Serrai 90.22 312 P **P 10 29 40.3 -1.9**
KYMI Kymi, Euboea I 90.36 309 P **P 10 29 41.0 -1.9**
PAIG Paliouri 90.41 310 P **P 10 29 39.8 -3.2**
AOS Alonnisos 90.42 310 P **P 10 29 41.1 -2.0**
KKB Krupnik 90.42 312 *e*P **P 10 29 41.8 -1.3**
IDI Anoyia 90.44 306 P **P 10 29 42.9 -0.5**
comp=Z,74nm,1.1s,baz=100,slow=6.7,SNR=9.8
IDI Anoyia 90.44 306 ⇑P **P 10 29 43.3 0.0**
IDI Anoyia 90.44 306 IAmb IAmb 10 29 46.4
comp=Z,160nm,1.3s
PLG Polygyros 90.48 311 P **P 10 29 41.5 -2.0**
NIE Niedzica 90.51 320 *i* P **P 10 29 43.8 +0.5**
NIE *e*PP **PP 10 33 21.3 +3.4**
NIE LMZ LR 11 13 01.7
comp=Z,4.8nm,20.2s
BZS Buzias 90.59 316 ⇑P **P 10 29 43.1 -0.7**
OJC Ojcow 90.61 321 *i* P **P 10 29 43.7 -0.1**
OJC *e*PP **PP 10 33 20.5 +1.8**
OJC *e*S **S 10 40 36.5 -1.1**
OJC LMZ LR 11 12 54.8
comp=Z,6.2nm,19.2s
OJC Ojcow 90.61 321 IAmb IAmb 10 29 46.6
comp=Z,97nm,1.0s
KECS Kecovo 90.63 319 *e*P **P 10 29 44.2 +0.3**
KECS pmax pmax
comp=Z,51nm,1.2s
KECS Kecovo 90.63 319 *e*P **P 10 29 44.2 +0.3**
HORT Hortiatis 90.69 311 P **P 10 29 42.6 -1.9**
KNT Kendrikon 90.72 312 P **P 10 29 43.0 -1.5**
MDVR Moldovita 90.72 316 ⇑P **P 10 29 44.5 0.0**
ATHU Athens Univers 90.75 309 P **P 10 29 42.1 -2.6**
WRAK Wrangell Islan 90.77 32 IAmb IAmb 10 29 46.9
comp=Z,73nm,1.4s
THE Thessaloniki 90.79 311 P **P 10 29 41.8 -3.0**
HFS Hagfors 90.90 332 P **P 10 29 43.7 -1.2**
comp=Z,84nm,1.1s,baz=76,slow=6.3,SNR=45
HFS PP **PP 10 33 22.4 +1.8**
comp=Z,19nm,0.9s,baz=86,slow=7.6,SNR=4.4
VAY Valandovo 90.92 312 *i* P **P 10 29 44.1 -1.3**
VAY Valandovo 90.92 312 *i* P **P 10 29 44.1 -1.3**
BANR Banloc 90.97 316 ⇑P **P 10 29 45.7 +0.1**
DAG Danmarks Havn 91.08 352 ⇑*i*P **P 10 29 44.3 -1.1**
DAG pmax pmax
comp=Z,43nm,0.8s
DAG Danmarks Havn 91.08 352 ⇑*i*P **P 10 29 44.3 -1.1**
comp=Z,43nm,0.8s
STIP Stip 91.12 312 *i* P **P 10 29 44.3 -2.0**
STIP Stip 91.12 312 *i* P **P 10 29 44.3 -2.0**
IMMV Iera Moni Meta 91.13 306 P **P 10 29 46.1 -0.4**
PSZ Piszkesteto 91.16 319 ⇑P **P 10 29 46.1 -0.3**
PSZ Piszkesteto 91.16 319 IAmb IAmb 10 29 49.1
comp=Z,82nm,1.2s
TBLU Trondheim 91.25 335 ⇑*i*P **P 10 29 44.5 -1.9**
TBLU IVmB_BB 10 29 45.5
comp=Z,3µm,5.1s
TBLU *e*PP **PP 10 33 22.9 -0.4**
TBLU *e*SKSac **SKSac 10 40 10.8 -5.6**
TBLU IVMs_BB IVMs_BB 11 14 16.0
comp=Z,5µm,22.1s
PPT Papeete 91.26 107 LR LR 11 03 39.2
comp=Z,3µm,21.3s,baz=272,slow=31
LIT Litokhoron 91.26 311 P **P 10 29 45.1 -1.9**
PPT2 Papeete2 91.26 108 *e*SKSac **SKSac 10 40 16.2 -2.1**
comp=Z,2µm,21.9s
PPT2 *e*S **S 10 40 44.4 -0.3**
comp=Z,4µm,28.5s
PPT2 *e*SS **SS 10 46 52.4 +2.1**
comp=Z,3µm,26.8s
PPT2 *e*LQ LQ 10 55 06.8

PPT2 comp=Z,12µm,32.5s — eLR LR 10 58 57.7

DID Didima 91.27 308 P P 10 29 42.0 -5.2
GKP Gorka Klasztor 91.28 324 eP P 10 29 46.5 -0.2
GKP LMZ LR 11 11 50.4
comp=Z,7µm,23.0s,baz=285
comp=Z,14nm,21.9s

DLBC Dease Lake 91.30 30 P P 10 29 47.9 +1.0
comp=Z,14nm,1.0s,baz=307,slow=3.3,SNR=20
DLBC Dease Lake 91.30 30 IAmb IAmb 10 29 50.2
comp=Z,80nm,1.4s

MBAR Mbarara 91.38 270c iP P 10 29 47.6 -0.7
MBAR pmax pmax
comp=Z,54nm,1.2s
MBAR Mbarara 91.38 270 IAMs_20 IAMs_20 11 07 51.6
comp=Z,5µm,20.0s

SKO Skopje 91.59 313 i P P 10 29 46.3 -2.3
SKO Skopje 91.59 313 i P P 10 29 46.3 -2.3
AGG Agios Georgios 91.63 310 P P 10 29 42.7 -6.1
NC602 NORSAR Array S 91.67 333⇑iP P 10 29 47.0 -1.5
NC602 eSKSac SKSac 10 40 19.7 +0.7
VYHS Vyhne 91.68 320 eP P 10 29 48.7 -0.1
VYHS pmax pmax
comp=Z,58nm,1.3s
VYHS Vyhne 91.68 320 eP P 10 29 48.7 -0.1
VYHS ePP PP 10 33 31.8 +4.5
VYHS eSP SP 10 42 13.8 +18
VYHS eL L 11 19 12.4
NB2 NORSAR Subarra 91.70 333 P P 10 29 47.1 -1.6
comp=Z,120nm,1.7s,baz=71,slow=4.6
NB2 NORSAR Subarra 91.70 333 P P 10 29 47.1 -1.6
baz=71,slow=4.6
NOA NORSAR Array B 91.70 333 P P 10 29 47.2 -1.4
comp=Z,28nm,0.9s,baz=69,slow=4.7,SNR=36
NOA PP PP 10 33 27.0 -0.1
comp=Z,5.7nm,0.9s,baz=68,slow=7.6,SNR=5.2
NOA PKKPbc PKKPdf 10 47 06.8 +0.6
comp=Z,2.6nm,1.0s,baz=246,slow=4.5,SNR=3.3
NOA LR LR 11 15 36.2
comp=Z,14µm,19.4s,baz=60,slow=38

OKC Ostrava-Krasne 91.74 321 eP P 10 29 49.0 0.0
OKC e 10 33 26.1
OKC ePS PS 10 42 05.6 +4.8
OKC MLR MLR
comp=Z,4µm,16.5s
OKC Ostrava-Krasne 91.74 321 eP P 10 29 49.0 0.0
OKC ePP PP 10 33 26.1 -1.5
OKC ePS PS 10 42 05.6 +4.8
OKC AMS AMS 11 18 30.0
comp=Z,4µm,16.5s
NAO01 NORSAR Array S 91.93 333 IAmb IAmb 10 29 50.8
comp=Z,167nm,1.3s

VLX Vlachokerasia 91.97 308 P P 10 29 48.6 -1.9
KLV Kalavryta, Ach 91.99 309 P P 10 29 41.8 -8.7
BSD Bornholm Skovb 92.00 327 iP P 10 29 49.3 -0.7
BSD pmax pmax
comp=Z,120nm,1.3s
BSD Bornholm Skovb 92.00 327 iP P 10 29 49.3 -0.7
comp=Z,116nm,1.3s

MORC Moravsky Berou 92.13 321⇑iP P 10 29 51.0 +0.1
MORC ePP PP 10 33 33.4 +2.6
MORC eS S 10 40 50.5 -1.0
MORC Moravsky Berou 92.13 321⇑P P 10 29 51.1 +0.2
MORC Moravsky Berou 92.13 321 IAmb IAmb 10 29 53.3
comp=Z,80nm,1.3s
MORC IAMs_20 IAMs_20 11 19 38.6
comp=Z,4µm,18.0s

DOMB Dombas 92.25 334⇑iP P 10 29 50.4 -0.7
DOMB IVmBBB 10 29 51.7
comp=Z,2µm,1.5s
DOMB ePP PP 10 33 29.4 -1.9
DOMB eSKSac SKSac 10 40 23.7 +1.5
DOMB IVMs_BB IVMs_BB 11 16 24.1
comp=Z,6µm,15.2s

TBI Tubuai 92.29 113 eSKSac SKSac 10 40 22.7 -1.0
comp=Z,3µm,24.3s
TBI eSP SP 10 42 05.0 +0.9
comp=Z,2µm,29.2s
TBI eSS SS 10 47 07.6 +2.9
comp=Z,5µm,33.5s
TBI eLQ LQ 10 55 32.6
comp=Z,10µm,36.5s
TBI eLR LR 10 59 25.4
comp=Z,7µm,24.0s,baz=293

JAVC Velka Javorina 92.32 320⇑iP P 10 29 52.9 +1.1
JAVC ePP PP 10 33 37.1 +4.8
JAVC eS S 10 40 54.5 +1.3
DRO Drossia 92.35 309 P P 10 29 50.2 -1.9
OSL Oslo 92.36 332 eP P 10 29 51.4 -0.2
OSL eSKSac SKSac 10 40 23.2 +0.5
PHP Peshkopia 92.39 313 P P 10 29 50.6 -1.7
IVA Berane 92.48 314⇑iP P 10 29 52.0 -0.7
PVY Plav 92.50 314⇑iP P 10 29 51.7 -1.2
RLS Riolos of Patr 92.51 309 P P 10 29 51.7 -1.1
KRLC Kraliky 92.51 322 eP P 10 29 52.4 -0.3
KRLC e 10 30 01.3
KRLC e 10 33 36.7
KRLC ePS PS 10 42 14.6 +5.1
KRLC MLR MLR
comp=Z,6µm,18.5s
KRLC Kraliky 92.51 322 eP P 10 29 52.4 -0.3
KRLC epP pP 10 30 01.3 +0.2
KRLC ePP PP 10 33 36.7 +2.9
KRLC ePS PnS 10 42 14.6 +3.9
KRLC AMS AMS 11 13 40.0
comp=Z,6µm,18.5s

KSP Ksiaz 92.58 322 i P P 10 29 53.1 +0.3
KSP ePP PP 10 33 36.3 +2.1
KSP eS S 10 40 54.6 -0.7
KSP LMZ LR 11 12 53.1
comp=Z,8.2nm,21.3s

MOL Molde 92.66 335⇑iP P 10 29 52.4 -0.5
MOL IVmB_BB 10 29 53.1
comp=Z,2µm,3.0s
MOL ePP PP 10 33 39.0 +4.6
MOL IVMs_BB IVMs_BB 11 15 32.8
comp=Z,5µm,20.5s

DPC Dobruska-Polom 92.71 322 eP P 10 29 53.7 +0.1
DPC e 10 33 40.4
DPC ePS PS 10 42 09.4 -2.2
DPC MLR MLR
comp=Z,9µm,19.0s
DPC Dobruska-Polom 92.71 322 eP P 10 29 53.7 +0.1
DPC ePP PP 10 33 40.4 +5.1
DPC ePS PS 10 42 09.4 -2.2
DPC AMS AMS 11 13 50.0
comp=Z,9µm,19.0s

OSTC Ostas 92.71 322 eP P 10 29 53.7 +0.2
OSTC ex x 10 30 02.3
OSTC ePP PP 10 33 36.6 +1.3
OSTC ePS PS 10 42 16.2 +4.6
OSTC AMS AMS 11 13 40.0
comp=Z,9µm,20.1s

PLE Pljevlja 92.71 315⇑iP P 10 29 53.4 -0.4
MODS Modra-Piesok 92.71 320 eP P 10 29 53.9 +0.3
MODS pmax pmax
comp=Z,48nm,1.2s
MODS Modra-Piesok 92.71 320 eP P 10 29 53.9 +0.3
MODS ePP PP 10 33 42.2 +6.8
KOME Kolasin 92.75 314⇑iP P 10 29 53.6 -0.4
CHVC Chvalec 92.80 322 eP P 10 29 54.1 +0.2
CHVC AMS AMS 11 13 50.0
comp=Z,10µm,19.0s

UPC Upice 92.85 322 eP P 10 29 54.1 -0.1
UPC e 10 33 38.2
UPC MLR MLR
comp=Z,11µm,19.1s
UPC Upice 92.85 322 eP P 10 29 54.1 -0.1
UPC ePP PP 10 33 38.2 +1.9
UPC AMS AMS 11 13 50.0
comp=Z,11µm,19.1s

VRAC Vranov 92.86 321 P P 10 29 54.5 +0.3
comp=Z,80nm,1.2s,baz=74,slow=4.6,SNR=40
VRAC Vranov 92.86 321⇑iP P 10 29 54.5 +0.3
VRAC ePP PP 10 33 40.3 +3.8
VRAC eS S 10 40 57.8 -0.2
VRAC Vranov 92.86 321⇑P P 10 29 54.6 +0.3
ZST Bratislava 92.88 320 eP P 10 29 54.3 0.0
ZST pmax pmax
comp=Z,62nm,1.4s
ZST Bratislava 92.88 320 eP P 10 29 54.3 0.0
ZST ePP PP 10 33 44.0 +7.4
TIR Tirane 92.89 313⇑P P 10 29 54.2 -0.4
KONO Kongsberg 93.00 332 P P 10 29 53.5 -1.1

KONO pmax pmax
comp=Z,109nm,1.6s
KONO MLR MLR
comp=Z,12µm,21.0s
KONO Kongsberg 93.00 332 P P 10 29 53.5 -1.1
KONO IAmb IAmb 10 29 55.4
comp=Z,109nm,1.6s
KONO Kongsberg 93.00 332⇑iP P 10 29 53.6 -1.1
KONO IVmB_BB 10 29 54.8
comp=Z,914nm,1.9s
KONO eSKSac SKSac 10 40 27.6 +1.2
KONO IVMs_BB IVMs_BB 11 15 04.2
comp=Z,4µm,15.4s

PDG Podgorica 93.05 314⇑P P 10 29 54.2 -1.1
PDG Podgorica 93.05 314 IAmb IAmb 10 29 55.7
comp=Z,69nm,0.8s
TTG Podgorica 93.05 314⇑iP P 10 29 54.1 -1.1
RGN Rugen 93.06 326 eP P 10 29 54.5 -0.4
AKN Aaknes 93.06 335⇑iP P 10 29 54.7 -0.2
AKN ePP PP 10 33 38.8 +1.1
AKN eSKSac SKSac 10 40 23.9 -2.8
KRUC Moravsky 93.06 321⇑iP P 10 29 55.4 +0.2
KRUC ePP PP 10 33 42.0 +3.9
KRUC eS S 10 40 59.2 -0.5
UPM Unac-Piva 93.09 315⇓iP P 10 29 54.2 -1.4
RES Resolute Bay 93.10 9 P P 10 29 55.0 +0.2
comp=Z,54nm,0.9s,baz=311,slow=5.2,SNR=28
RES Resolute Bay 93.10 9 IAMs_20 IAMs_20 11 11 04.4
comp=Z,5µm,22.0s
NKY Niksic 93.13 314⇑iP P 10 29 54.5 -1.2
SKAR Skarslia 93.15 333 IVmB_BB 10 29 56.0
comp=Z,2µm,2.5s
SKAR eP P 10 29 56.4 +1.0
SKAR ePP PP 10 33 39.2 +0.8
SKAR eSKSac SKSac 10 40 27.9 +0.5
SKAR IVMs_BB IVMs_BB 11 16 17.4
comp=Z,6µm,18.0s

DRME Dracevica, Mon 93.16 313⇑iP P 10 29 55.1 -0.7
NKME Niksic 93.17 314⇑iP P 10 29 54.9 -1.0
ULC Ulcinj 93.18 313⇑iP P 10 29 55.5 -0.4
CEME Cevo 93.25 314⇑iP P 10 29 54.6 -1.7
BUM Brajici-Budva 93.34 314⇑iP P 10 29 56.5 -0.2
BRY Bratogost 93.43 314⇑iP P 10 29 56.1 -1.1
RUE Ruedersdorf 93.52 324 eP P 10 29 56.9 -0.3
RUE Ruedersdorf 93.52 324 eP P 10 29 57.5 +0.4
comp=Z,416nm,1.3s,baz=68,slow=4.5
TREC Trest 93.56 321 eP P 10 29 57.8 +0.3
TREC e 10 33 46.6
TREC MLR MLR
comp=Z,7µm,16.2s
TREC Trest 93.56 321 eP P 10 29 57.8 +0.3
TREC ePP PP 10 33 46.6 +4.7
TREC AMS AMS 11 19 20.0
comp=Z,7µm,16.2s

HCY Herceg Novi 93.58 314⇑iP P 10 29 56.4 -1.3
CONA Conrad Observa 93.75 320 i PcP P 10 29 57.8 -0.7
comp=Z,49nm,1.3s,SNR=15
CONA i PP PP 10 33 49.9 +6.3
comp=Z,70nm,1.6s,SNR=6.3

GOPC GO Pecny, Ondr 93.79 322 eP P 10 29 58.3 -0.2
GOPC e 10 30 07.0
GOPC e 10 33 44.8
GOPC ePS PS 10 42 22.3 -1.2
GOPC MLR MLR
comp=Z,10µm,19.2s
GOPC GO Pecny, Ondr 93.79 322 eP P 10 29 58.3 -0.2
GOPC epP pP 10 30 07.0 +0.1
GOPC ePP PP 10 33 44.8 +1.1
GOPC ePS PS 10 42 22.3 -1.2
GOPC AMS AMS 11 14 30.0
comp=Z,10µm,19.2s

HYA Hoyanger 93.87 334 eP P 10 29 58.7 +0.2
HYA eSKSac SKSac 10 40 27.4 -3.6
PRU Pruhonice 93.91 322 eP P 10 29 59.1 +0.1
PRU e 10 30 08.9
PRU e 10 33 43.0
PRU ePS PS 10 42 24.3 -0.5
PRU MLR MLR
comp=Z,10µm,19.5s
PRU Pruhonice 93.91 322 eP P 10 29 59.1 +0.1
PRU ex x 10 30 08.9
PRU ePP PP 10 33 43.0 -1.6
PRU ePS PS 10 42 24.3 -0.5
PRU AMS AMS 11 14 30.0
comp=Z,10µm,19.5s

BRG Berggiesshubel 93.97 323⇑iP P 10 29 59.3 0.0
comp=Z,128nm,1.1s
BRG i PP PP 10 33 42.5 -2.6
comp=Z,59nm,1.5s
BRG S S 10 41 10.0 +2.4
BRG SS SS 10 47 31.0 +4.1
BRG ePKPPKP 10 55 17.4
comp=Z,6.2nm,1.2s
comp=N,7µm,18.9s
comp=E,5µm,18.0s
comp=Z,9µm,21.9s
BRG Berggiesshubel 93.97 323 eP P 10 29 59.5 +0.2
comp=Z,161nm,1.3s,baz=68,slow=4.5
BRG Berggiesshubel 93.97 323⇑iP P 10 29 59.3 0.0
BRG i 10 33 42.5
BRG S S 10 41 10.0 +2.4
BRG SS SS 10 47 31.0 +4.1
BRG pmax pmax
comp=Z,128nm,1.1s
BRG pmax pmax
comp=Z,59nm,1.5s
BRG pmax pmax
comp=Z,6.0nm,1.2s
BRG MLR MLR
comp=N,7µm,18.9s
BRG MLR MLR
comp=E,5µm,18.0s
BRG MLR MLR
comp=Z,9µm,21.9s

TULEG Thule 94.03 3 IAMs_20 IAMs_20 11 16 49.3
comp=Z,6µm,20.0s
HOMB Homborsund 94.08 331 eP P 10 29 59.0 -0.6
HOMB ePP PP 10 33 46.3 +0.6
HOMB eSKSac SKSac 10 40 28.7 -3.6
FOO Floro 94.15 335 eP P 10 29 59.4 -0.5
FOO IVmBBB 10 30 00.3
comp=Z,1µm,2.2s
FOO eSKSac SKSac 10 40 33.4 +0.8
FOO IVMs_BB IVMs_BB 11 17 18.3
comp=Z,6µm,14.2s

ARSA Arzberg 94.18 319 i PcP P 10 30 00.4 0.0
comp=Z,51nm,1.5s,SNR=12
ARSA i PP PP 10 33 52.8 +5.9
comp=Z,51nm,1.3s,SNR=6.4

ODD1 Odda 94.24 333 eP P 10 29 59.1 -1.3
ODD1 ePP PP 10 33 48.9 +1.9
ODD1 eSKSac SKSac 10 40 30.4 -2.8
GOET G??ttrup 94.25 330 i P P 10 29 59.7 -0.7
comp=Z,120nm,1.0s
FBE Freiberg 94.31 323 eP P 10 30 01.2 +0.4
comp=Z,190nm,1.2s,baz=68,slow=4.5
PBCC Pribram 94.35 322 eP P 10 30 01.0 -0.1
CLL Collm 94.38 323⇑iP P 10 30 01.6 +0.5
comp=Z,124nm,1.3s
CLL ePP PP 10 33 49.0 +0.8
comp=Z,139nm,1.7s
CLL ePPP PPP 10 35 51.0
CLL eSKSac SKSac 10 40 37.0 +2.7
CLL eS S 10 41 10.0 -1.1
CLL ePS PS 10 42 30.0 +0.1
CLL ePPS PPS 10 43 09.0
CLL eSS SS 10 47 36.0 +3.4
CLL eSSS SSS 10 51 18.0
CLL eSSSS 10 54 36.0
CLL Lm MLR 11 19 00.0
comp=N,6µm,19.1s
CLL Lm MLR 11 19 00.0
comp=E,6µm,20.0s
CLL Lm MLR 11 19 00.0
comp=Z,9µm,19.0s
CLL Collm 94.38 323 eP P 10 30 01.9 +0.8
comp=Z,124nm,1.3s,baz=68,slow=4.5
CLL eL L 11 19 27.4
comp=Z,9µm,19.0s
CLL Collm 94.38 323⇑iP P 10 30 01.6 +0.5
CLL e 10 33 49.0
CLL e 10 40 37.0
CLL eS S 10 41 10.0 -1.1
CLL pmax pmax
comp=Z,124nm,1.3s
CLL pmax pmax
comp=Z,139nm,1.7s
CLL MLR MLR
comp=Z,9µm,19.0s
CLL Collm 94.38 323 P P 10 30 01.2 -0.4
MUD Monsted U'grnd 94.51 329 eP P 10 30 01.2 -0.4
MUD Monsted U'grnd 94.51 329 i P P 10 30 01.2 -0.4
SUE Sulen 94.53 334 eP P 10 30 01.9 +0.3
SUE IVmB_BB 10 30 02.4
comp=Z,1µm,1.4s
SUE ePP PP 10 33 49.3 +0.3
SUE eSKSac SKSac 10 40 36.2 +1.5
SUE IVMs_BB IVMs_BB 11 18 00.4
comp=Z,5µm,17.4s
BLS5 Blasjo 94.54 332 eP P 10 30 01.7 0.0
BLS5 IVmBBB 10 30 02.4
comp=Z,1µm,0.4s
BLS5 ePP PP 10 33 50.4 +1.2
BLS5 eSKSac SKSac 10 40 34.1 -0.7
BLS5 IVMs_BB IVMs_BB 11 16 52.1
comp=Z,4µm,15.2s
BER Bergen 94.60 334 eP P 10 30 02.4 +0.5
BER ePP PP 10 33 47.2 -2.4
PERS Pernice 94.64 319 i P P 10 30 01.9 -0.6
PERS i PP PP 10 33 53.7 +3.2
SOKA Soboth 94.68 319 i P P 10 30 01.6 -1.2
comp=Z,43nm,1.4s,SNR=17
SOKA i PP PP 10 33 56.6 +5.7
comp=Z,74nm,1.5s,SNR=6.8
KHC Kasperske Hory 94.79 321 eP P 10 30 02.6 -0.6
KHC e 10 30 08.6
KHC e 10 33 47.8
KHC ePS PS 10 42 41.4 +6.8
KHC MLR MLR
comp=Z,8µm,18.6s
KHC Kasperske Hory 94.79 321 eP P 10 30 02.6 -0.6
KHC epP pP 10 30 08.6 -3.0
KHC ePP PP 10 33 47.8 -3.8
KHC ePS PS 10 42 41.4 +6.8
KHC AMS AMS 11 15 00.0
comp=Z,8µm,18.6s
MOA Molln 94.79 320 i PcP P 10 30 03.0 -0.1
comp=Z,85nm,1.6s,SNR=31
GEC2 GERESS Array S 94.81 321 eP P 10 30 03.2 -0.1
comp=Z,73nm,1.3s,baz=68,slow=4.5
GEC2 eL L 11 19 11.9
comp=Z,6µm,19.5s
GEC2 GERESS Array S 94.81 321 IAmb IAmb 10 30 05.9
comp=Z,66nm,1.3s
GEC2 IAMs_20 IAMs_20 11 19 02.5
comp=Z,6µm,20.0s
GERES GERESS Array B 94.81 321 P P 10 30 02.9 -0.4
comp=Z,16nm,0.9s,baz=73,slow=4.6,SNR=57
GERES PP PP 10 33 53.6 +1.7
comp=Z,5.1nm,0.8s,baz=79,slow=6.9,SNR=7.5
GERES PKKPbc PKKPdf 10 46 54.3 -6.3
comp=Z,1.3nm,0.9s,baz=220,slow=5.9,SNR=4.2
GERES LR LR 11 15 32.4
comp=Z,4µm,20.2s,baz=76,slow=37
GERES GERESS Array B 94.81 321 P P 10 30 02.3 -1.0
BOJS Bojanci 94.91 317 i P P 10 30 03.4 -0.3
BOJS i PP PP 10 33 56.5 +3.9
BOJS e 10 36 02.2
BOJS e 10 37 21.8
BOJS e 10 37 43.5
BOJS eS S 10 41 14.6 -1.4
BOJS e 10 42 28.3
BSEG Bad Segeberg 94.92 327 eP P 10 30 03.8 +0.2
comp=Z,187nm,1.8s,baz=68,slow=4.5
BSEG eL L 11 18 40.9
comp=Z,7µm,21.6s
TANN Tannenbergstha 95.02 323 eP P 10 30 04.2 0.0
comp=Z,198nm,1.2s,baz=68,slow=4.5
OBKA Obir 95.05 319 i PcP P 10 30 04.3 -0.2
comp=Z,40nm,1.9s
OBKA i PP PP 10 33 59.5 +5.7
comp=Z,60nm,1.5s,SNR=5.4
NKC Novy Kostel 95.09 323 eP P 10 30 04.5 0.0
NKC e 10 33 54.0
NKC ePS PS 10 42 38.8 +1.0
NKC MLR MLR
comp=Z,9µm,20.8s
NKC Novy Kostel 95.09 323 eP P 10 30 04.5 0.0
NKC ePP PP 10 33 54.0 +0.1
NKC ePS PS 10 42 38.8 +1.0
NKC AMS AMS 11 14 00.0
comp=Z,9µm,20.8s
GUNZ Gunzen 95.11 323 eP P 10 30 04.7 +0.1
comp=Z,142nm,1.2s,baz=68,slow=4.5
WERN Wernitzgruen 95.12 323 eP P 10 30 04.8 +0.2
comp=Z,95nm,1.2s,baz=68,slow=4.5
NEUB Neuenburg 95.14 324 eP P 10 30 04.7 +0.1
comp=Z,162nm,1.2s,baz=68,slow=4.5
PLN Plauen 95.17 323 eP P 10 30 04.9 +0.1
comp=Z,106nm,1.3s,baz=68,slow=4.5
KMY Karmoy 95.19 333 eP P 10 30 04.5 -0.1
KMY IVmB_BB 10 30 04.6
comp=Z,1µm,5.6s
KMY eSKSac SKSac 10 40 40.0 +1.8
KMY IVMs_BB IVMs_BB 11 17 30.3
comp=Z,4µm,17.0s
WET Wettzell 95.22 321 eP P 10 30 05.2 +0.1
comp=Z,100nm,1.6s,baz=68,slow=4.5
WET eL L 11 15 41.3
comp=Z,9µm,19.3s
LJU Ljubljana 95.22 318 i P P 10 30 04.7 -0.5
LJU i PP PP 10 33 58.7 +3.7
MANZ Manzenberg 95.39 322 eP P 10 30 06.1 +0.2
comp=Z,98nm,1.4s,baz=68,slow=4.5
ROTZ Rotzenmuhle 95.41 322 eP P 10 30 06.2 +0.3
comp=Z,110nm,1.2s,baz=68,slow=4.5
ROTZ ePP PP 10 33 59.7 +3.4
ASSE Asse, Remlinge 95.42 325 eP P 10 30 06.0 +0.2
comp=Z,184nm,1.5s,baz=68,slow=4.5
MOX Moxa 95.44 323 eP P 10 30 06.1 +0.1
comp=Z,108nm,1.3s,baz=68,slow=4.5
MOX ePP PP 10 33 56.7 +0.1
MOX eL L 11 19 28.1
comp=Z,6µm,20.0s
JAVS Javornik 95.58 318 i P P 10 30 06.0 -0.9
JAVS ePP PP 10 34 01.0 +3.2
NRDL Niedersach Rie 95.60 325 eP P 10 30 07.3 +0.7
comp=Z,197nm,1.3s,baz=68,slow=4.5
NRDL ePP PP 10 34 01.1 +3.5
KBA Koelnbreinsper 95.64 319 i PcP P 10 30 06.4 -0.8
comp=Z,19nm,1.1s,SNR=10
CLZ Clausthal 95.71 325 eP P 10 30 07.7 +0.5
comp=Z,173nm,1.3s,baz=68,slow=4.5
RJOB Jochberg 95.76 320 ePP PP 10 34 01.9 +2.7
TIP Timpagrande 95.77 311⇑P P 10 30 07.4 -0.5
TIP Timpagrande 95.77 311 IAmb IAmb 10 30 10.3
comp=Z,96nm,1.2s
TRI Trieste 95.83 318 IAMs_20 IAMs_20 11 17 12.8
comp=Z,7µm,20.0s
RETH Rethem/Aller, 95.92 326 eP P 10 30 08.3 +0.2
comp=Z,153nm,1.5s,baz=68,slow=4.5
SYO Syowa Base 95.96 201⇑eP P 10 30 07.4 -0.4
SYO Syowa Base 95.96 201⇑iPcP PcP 10 30 10.2 +2.2
GRA1 Grafenberg Arr 96.03 322 P P 10 30 09.2 +0.4
GRA1 IAmb IAmb 10 30 11.1
comp=Z,72nm,1.1s
GRF Grafenberg Arr 96.03 322 eP P 10 30 09.2 +0.4
comp=Z,90nm,1.2s,baz=68,slow=4.5
GRF ePP PP 10 34 04.3 +3.2
GRF eL L 11 15 00.8
comp=Z,7µm,21.1s
GRF Grafenberg Arr 96.03 322 P P 10 30 09.2 +0.4
GRF pmax pmax
comp=Z,72nm,1.1s
GRF MLR MLR
comp=Z,8µm,20.0s
GTTG Gottingen 96.06 324 eP P 10 30 09.2 +0.4
comp=Z,148nm,1.2s,baz=68,slow=4.5
LSZ Lusaka 96.09 256 P P 10 30 08.7 -1.1
comp=Z,5.8nm,0.7s,baz=53,slow=4.4,SNR=11
LSZ Lusaka 96.09 256 P P 10 30 08.7 -1.1
LSZ pmax pmax
comp=Z,116nm,1.9s
LSZ Lusaka 96.09 256 IAmb IAmb 10 30 11.2
comp=Z,116nm,1.9s
KULLO Kullorsuaq 96.23 360⇑iP P 10 30 08.2 -0.9
KULLO Kullorsuaq 96.23 360⇑iP P 10 30 08.2 -0.9
YKA Yellowknife Ar 96.26 23 P P 10 30 09.5 +0.1

comp=Z,37nm,0.9s,baz=306,slow=4.1,SNR=261
YKA PKiKP **PKiKP** **10 34 47.5 +0.1**
comp=Z,1.3nm,0.5s,baz=308,slow=1.6,SNR=10
YKA PKKPbc **PKKPbc** **10 46 53.2 -4.6**
comp=Z,3.7nm,1.1s,baz=126,slow=3.3,SNR=10
YKA PKPPKP 10 55 06.0
comp=Z,0.2nm,0.8s,baz=134,slow=2.7,SNR=3.9
YKA LR LR 11 14 12.7
comp=Z,3µm,21.5s,baz=0.0,slow=36
ABTA Abfaltersbach 96.29 319 *i* P **P** **10 30 09.1 -1.0**
comp=Z,31nm,1.1s,SNR=8.8
UBBA Unterbreizbach 96.32 324 *e*P **P** **10 30 09.8 -0.1**
comp=Z,75nm,1.4s,baz=68,slow=4.5
MATP Matopo 96.49 250 P **P** **10 30 11.8 +0.2**
comp=Z,16nm,1.0s,baz=77,slow=3.7,SNR=19
FUR Furstenfeldbru 96.56 321 *e*PP **PP** **10 34 06.7 +1.4**
FUR *e*L L 11 17 43.7
comp=Z,6µm,21.2s
WTTA Wattenberg 96.67 320 *i* PcP **P** **10 30 11.1 -0.8**
comp=Z,54nm,1.0s,SNR=18
WTTA *i* PP **PP** **10 34 09.7 +3.4**
comp=Z,169nm,1.3s,SNR=13
SCO Scoresbysund 96.68 349⇑ *i*P **P** **10 30 11.7 +0.5**
SCO Scoresbysund 96.68 349 IAms_20 IAms_20 11 15 36.7
comp=Z,5µm,21.0s
SCO Scoresbysund 96.68 349⇑ *i*P **P** **10 30 11.7 +0.5**
WATA Walderalm 96.68 320 *i* PcP **P** **10 30 11.0 -0.9**
comp=Z,46nm,1.2s,SNR=13
WATA *i* PP **PP** **10 34 09.5 +3.1**
comp=Z,128nm,1.3s,SNR=15
PAOL Paolisi 96.81 313 IAms_20 IAms_20 11 19 36.1
comp=Z,4µm,19.0s
SQTA Sankt Quirin 96.95 320 *i* PcP **P** **10 30 12.2 -0.9**
comp=Z,43nm,1.0s,SNR=19
SQTA *i* PP **PP** **10 34 12.0 +3.5**
comp=Z,102nm,1.3s,SNR=9.8
MOTA Moosalm 96.97 320 *i* P **P** **10 30 11.9 -1.4**
comp=Z,35nm,1.1s,SNR=14
MOTA *i* PP **PP** **10 34 09.4 +0.8**
comp=Z,106nm,1.3s,SNR=9.3
IBBN Ibbenburen 96.99 326 *e*P **P** **10 30 13.3 +0.3**
comp=Z,188nm,1.4s,baz=68,slow=4.5
CTI Castel Tesino 97.10 319 IAms_20 IAms_20 11 23 12.2
comp=Z,5µm,22.0s
RETA Reutte 97.14 320 *i* PcP **P** **10 30 13.8 -0.1**
comp=Z,12nm,1.0s
AQU L'Aquila 97.20 315 IAmb IAmb 10 30 16.5
comp=Z,109nm,1.3s
SUMG Summit 97.26 354⇑ *i*P **P** **10 30 14.3 0.0**
SUMG pmax pmax
comp=Z,250nm,1.3s
SUMG Summit 97.26 354 IAmb IAmb 10 30 18.1
comp=Z,81nm,1.2s
SUMG IAms_20 IAms_20 11 17 08.9
comp=Z,6µm,20.0s
SUMG Summit 97.26 354⇑ *i*P **P** **10 30 14.3 0.0**
comp=Z,249nm,1.3s
FETA Feichten 97.33 320 *i* PcP **P** **10 30 14.0 -1.0**
comp=Z,35nm,1.0s,SNR=17
FETA *i* PP **PP** **10 34 16.4 +5.0**
comp=Z,66nm,1.2s,SNR=6.5
TNS Taunus Mts 97.47 324 *e*P Pdif 10 30 15.5 +0.1
comp=Z,68nm,1.2s,baz=68,slow=4.5
TNS *e*PP **PP** **10 34 12.1 -0.2**
TNS *e*L L 11 15 43.7
comp=Z,6µm,21.8s
UBR Ueberruh 97.47 321 *e*P **P** **10 30 14.9 -0.5**
comp=Z,72nm,1.6s,baz=68,slow=4.5
UBR *e*PP **PP** **10 34 15.2 +2.8**
MURB Monte Urbino 97.50 316 IAmb IAmb 10 30 30.4
comp=Z,110nm,1.3s
BUG Bochum--Univer 97.64 325 *e*P Pdif 10 30 16.1 +0.1
comp=Z,113nm,1.3s,baz=68,slow=4.5
DAVA Damueis 97.77 320 *i* PcP **P** **10 30 16.3 -0.6**
comp=Z,21nm,1.1s
FUORN Ofenpass-Fuorn 97.78 320 IAmb IAmb 10 30 19.0
comp=Z,101nm,1.4s
DAVOX Davos/Dischmat 97.96 320 P **P** **10 30 17.4 -0.4**
comp=Z,14nm,0.7s,baz=92,slow=5.5,SNR=18
DAVOX PP **PP** **10 34 20.5 +4.2**
comp=Z,18nm,0.9s,baz=62,slow=8.4,SNR=10
AHRW Bad Neuenahr-A 98.13 324 *e*P Pdif 10 30 18.5 +0.3
comp=Z,79nm,1.8s,baz=68,slow=4.5
OSSC Osservatorio P 98.28 317 IAms_20 IAms_20 11 20 15.7
comp=Z,4µm,20.0s
BFO Black Forest 98.31 322 *e*P **P** **10 30 18.8 -0.4**
comp=Z,22nm,1.2s,baz=68,slow=4.5
BFO *e*PP **PP** **10 34 19.2 +0.5**
BFO *e*L L 11 17 31.7
comp=Z,7µm,19.8s
BFO Black Forest 98.31 322 P **P** **10 30 19.0 -0.1**
BFO pmax pmax
comp=Z,20nm,1.2s
BFO MLR MLR
comp=Z,7µm,20.0s
BFO Black Forest 98.31 322 P **P** **10 30 19.0 -0.1**
PRMA PARMA 98.45 318 IAms_20 IAms_20 11 20 28.0
comp=Z,5µm,18.0s
VLC Villacollemand 98.63 317 IAms_20 IAms_20 11 23 59.7
comp=Z,4µm,19.0s
LLLB Lillooet 98.75 35 IAmb IAmb 10 30 23.7
comp=Z,40nm,1.3s
CASP Castiglione de 98.81 316 IAms_20 IAms_20 11 20 10.7
comp=Z,4µm,22.0s
NLWA Neilton Lookou 98.94 39 IAms_20 IAms_20 11 22 58.9
comp=Z,4µm,19.0s
WLF Walferdange 99.05 324 *e*P **Pdif** **10 30 22.7 +0.4**
comp=Z,64nm,1.3s,baz=68,slow=4.5
WLF Walferdange 99.05 324 IAmb IAmb 10 30 25.8
comp=Z,76nm,1.4s
WLF IAms_20 IAms_20 11 19 09.2
comp=Z,6µm,20.0s
TAOE Nuku Hiva Isla 99.05 98 *e*S **S** **10 41 49.9 -3.0**
comp=Z,4µm,29.5s
TAOE Nuku Hiva Isla 99.05 98 *e*LR LR 11 02 33.8
comp=Z,8µm,24.1s,baz=284
ECH Echery 99.07 322 IAms_20 IAms_20 11 21 49.0
comp=Z,7µm,20.0s
A04D Lummi Island 99.09 37 P **Pdif** **10 30 22.9 +0.4**
baz=295
QSPA South Pole Qui 99.22 180 P **Pdif** **10 30 22.2 -0.6**
comp=Z,6.5nm,0.8s,baz=324,slow=1.5,SNR=22
QSPA South Pole Qui 99.22 180 P **Pdif** **10 30 23.0 +0.2**
QSPA South Pole Qui 99.22 180 IAms_20 IAms_20 11 18 29.3
comp=Z,4µm,19.0s
D03D Eldon 99.36 39 P **Pdif** **10 30 23.8 +0.1**
baz=295
E03A Lebam 99.47 40 IAms_20 IAms_20 11 07 04.3
comp=Z,5µm,22.0s
B05A Bryant 99.65 38 P **Pdif** **10 30 25.6 +0.6**
baz=296
LBTB Lobatse 99.69 246 P **Pdif** **10 30 25.3 -0.5**
comp=Z,14nm,1.3s,baz=92,slow=7.0,SNR=4.5
LBTB Lobatse 99.69 246 IAmb IAmb 10 30 29.0
comp=Z,75nm,1.9s
D04E Lakebay 99.70 39 P **Pdif** **10 30 25.9 +0.6**
baz=295
F03A Seaside 99.73 40 IAms_20 IAms_20 11 07 09.1
comp=Z,5µm,22.0s
F04D Rainier, OR 100.02 40 P **Pdif** **10 30 27.3 +0.5**
baz=295
E04D Cinebar 100.09 39 P **Pdif** **10 30 27.4 +0.3**
baz=295
G03D McMinnville, O 100.22 41 P **Pdif** **10 30 27.1 -0.5**
baz=294
I02D Swisshome 100.29 42 P **Pdif** **10 30 27.2 -0.8**
baz=294
BOSA Boshof 100.33 243 PKKPbc PKKPbc 10 46 46.1 +0.4
comp=Z,3.1nm,0.7s,baz=256,slow=5.1,SNR=4.9
COR Corvallis 100.45 41 IAms_20 IAms_20 11 09 29.1
comp=Z,7µm,21.0s
F04A Amboy 100.45 40 IAms_20 IAms_20 11 07 55.1
comp=Z,4µm,22.0s
C06D Leavenworth 100.52 38 P **Pdif** **10 30 28.7 -0.3**
baz=297
J01E Myrtle Point 100.61 43 P **Pdif** **10 30 29.4 0.0**
baz=294
I03D Drain, OR 100.78 42 P **Pdif** **10 30 29.7 -0.5**
baz=294
H04D Lebanon 100.84 41 P **Pdif** **10 30 29.9 -0.5**
baz=295
K02D Willamette Mer 100.97 43 P **Pdif** **10 30 30.5 -0.7**
baz=294
F05D White Salmon 101.08 40 P **Pdif** **10 30 30.9 -0.6**
baz=296
EKA Eskdalemuir Ar 101.10 332 P **Pdif** **10 30 30.3 -1.1**
comp=Z,8.6nm,1.0s,baz=64,slow=5.7,SNR=12
EKA PP **PP** **10 34 40.3 +0.8**
comp=Z,15nm,1.0s,baz=58,slow=8.4,SNR=8.8
H04A Detroit Lake 101.13 41 IAms_20 IAms_20 11 08 19.2
comp=Z,5µm,21.0s
BORG Borgarnes 101.18 345 IAms_20 IAms_20 11 19 28.9
comp=Z,6µm,20.0s
I04A Tendick Farm, 101.36 42 P **Pdif** **10 30 32.5 -0.4**
baz=295
G05D Wamic, OR 101.45 40 P **Pdif** **10 30 33.9 +0.7**
baz=296
JCC Jacoby Creek, 101.47 45 IAms_20 IAms_20 11 07 06.5
comp=Z,5µm,22.0s
ILULI Ilulissat 101.48 358⇑ *i*P **Pdif** **10 30 32.0 -0.7**
ILULI Ilulissat 101.48 358 IAms_20 IAms_20 11 18 59.3
comp=Z,4µm,20.0s
ILULI Ilulissat 101.48 358⇑ *i*P **Pdif** **10 30 32.0 -0.7**
KHMM Horse Mountain 101.65 45 IAms_20 IAms_20 11 08 08.4
comp=Z,5µm,21.0s
J04D Umpqua Nationa 101.79 42 P **Pdif** **10 30 34.9 -0.1**
baz=295
I05D Terrebonne, OR 101.83 41 P **Pdif** **10 30 34.3 -0.6**
baz=296
G06A Carlson Farm, 101.88 40 IAms_20 IAms_20 11 08 50.0
comp=Z,5µm,21.0s
SSB Saint Sauveur 101.97 320 IAms_20 IAms_20 11 20 10.8
comp=Z,6µm,19.0s
YBH Yreka Blue Hor 102.01 44 P **Pdif** **10 30 35.9 0.0**
comp=Z,3.7nm,1.1s,baz=5.7,slow=3.4,SNR=8.9
YBH PKiKP **PKiKP** **10 34 59.1 +0.7**
comp=Z,2.7nm,1.1s,baz=272,slow=4.5,SNR=4.1
YBH Yreka Blue Hor 102.01 44 **Pdif** **10 30 35.8 -0.1**
YBH IAms_20 IAms_20 11 09 38.8
comp=Z,5µm,21.0s
F07A Phinny Hill Vi 102.03 39 IAms_20 IAms_20 11 12 03.8
comp=Z,5µm,20.0s
M02C Callahan 102.05 44 P **Pdif** **10 30 35.6 -0.5**
baz=294
L04D Klamath Falls 102.09 43 P **Pdif** **10 30 35.7 -0.5**
baz=295
KCPM Cahto Peak 102.22 46 IAms_20 IAms_20 11 07 25.6
comp=Z,6µm,22.0s
K04D Chiloquin, OR 102.29 43 P **Pdif** **10 30 36.6 -0.5**
baz=295
PINE Pine Mountain 102.32 41 IAms_20 IAms_20 11 09 28.8
comp=Z,5µm,20.0s
N02D Trinity Center 102.33 45 P **Pdif** **10 30 36.5 -0.7**
baz=296
J05D Fort Rock, OR 102.35 42 P **Pdif** **10 30 37.4 0.0**
baz=296
KEST Kesra 102.47 310 P **Pdif** **10 30 38.4 +0.4**
comp=Z,10.0nm,1.0s,baz=10,slow=11,SNR=4.1
M04C Macdoel 102.58 43 P **Pdif** **10 30 38.9 +0.5**
baz=295
O02D Mt. Diablo Mer 102.59 45 P **Pdif** **10 30 38.7 +0.3**
baz=294
NEW Newport 102.59 36 P **Pdif** **10 30 38.1 -0.1**
baz=300
K05A Summer Lake 102.82 42 IAms_20 IAms_20 11 10 22.0
comp=Z,4µm,20.0s
HOPS Hopland Field 102.86 46 IAms_20 IAms_20 11 07 55.5
comp=Z,6µm,22.0s
G08A Pilot Rock 102.91 39 IAms_20 IAms_20 11 09 26.2
comp=Z,5µm,22.0s
I07A Izee 103.12 41 IAms_20 IAms_20 11 11 09.9
comp=Z,5µm,20.0s
O03E Paynes Creek 103.23 45 P **Pdif** **10 30 40.3 -1.0**
baz=295
MOD Modoc Plateau 103.57 43 IAms_20 IAms_20 11 12 24.9
comp=Z,4µm,21.0s
F10A Beach Ranch, E 103.66 38 IAms_20 IAms_20 11 09 55.7
comp=Z,4µm,22.0s
SFJD Kangerlussuaq 103.67 357 Pdiff **Pdif** **10 30 41.7 -0.7**
comp=Z,6.8nm,0.7s,baz=357,slow=7.1,SNR=5.8
SFJD PP **PP** **10 34 59.2 +0.9**
comp=Z,10nm,1.0s,baz=24,slow=4.9,SNR=4.1
SFJD Kangerlussuaq 103.67 357 P **Pdif** **10 30 42.3 -0.2**
SFJD Kangerlussuaq 103.67 357 **Pdif** **10 30 42.3 -0.2**
SFJD Kangerlussuaq 103.67 357 IAms_20 IAms_20 11 22 24.1
comp=Z,4µm,20.0s
SFJD Kangerlussuaq 103.67 357⇑ *i*P **Pdif** **10 30 41.8 -0.7**
ORV Oroville 103.75 45 IAms_20 IAms_20 11 08 27.9
comp=Z,5µm,22.0s
WALA Waterton Lakes 104.00 34 IAms_20 IAms_20 11 24 10.5
comp=Z,4µm,20.0s
J08A Ice Bear Ran 104.12 41 IAms_20 IAms_20 11 10 16.3
comp=Z,4µm,20.0s
BMO Blue Mountains 104.15 39 IAms_20 IAms_20 11 10 15.0
comp=Z,5µm,22.0s
AFDM Forest Hills D 104.37 46 IAms_20 IAms_20 11 08 56.6
comp=Z,6µm,22.0s
BEKR Beckworth 104.41 45 IAms_20 IAms_20 11 09 02.5
comp=Z,4µm,22.0s
WVOR Wild Horse Val 104.44 42 IAms_20 IAms_20 11 12 40.8
comp=Z,4µm,22.0s
JTMT Jette 104.49 35 IAms_20 IAms_20 11 19 06.6
comp=Z,5µm,21.0s
VCNR Virginia City 105.16 45 IAms_20 IAms_20 11 09 25.1
comp=Z,5µm,22.0s
CMB Columbia Colle 105.17 46 IAms_20 IAms_20 11 11 52.8
comp=Z,6µm,20.0s
MSO Missoula 105.18 36 P **Pdif** **10 30 48.8 -1.0**
baz=302
PMPB Monarch Peak 105.63 48 IAms_20 IAms_20 11 11 54.0
comp=Z,6µm,21.0s
MFID Camas Ranch 105.78 40 IAms_20 IAms_20 11 13 07.2
comp=Z,4µm,21.0s
FFC Flin Flon 106.28 25 P **Pdif** **10 30 54.1 -0.3**
FFC Flin Flon 106.28 25 **Pdif** **10 30 54.1 -0.3**
FFC Flin Flon 106.28 25 IAms_20 IAms_20 11 24 15.8
comp=Z,4µm,21.0s
MDPB Devils Postpil 106.28 46 IAms_20 IAms_20 11 12 28.1
comp=Z,6µm,20.0s
KVN Kaiserville 106.34 45 IAms_20 IAms_20 11 09 53.5
comp=Z,5µm,22.0s
MLAC Mammoth, Mammt 106.46 46 P **PKiKP** **10 35 06.8 -0.1**
baz=296
NVAR Mina Array Bea 106.48 45 Pdiff **Pdif** **10 30 55.4 -0.5**
comp=Z,1.9nm,0.8s,baz=281,slow=4.6,SNR=14
NVAR PKiKP **PKiKP** **10 35 07.8 +0.9**
comp=Z,2.9nm,0.6s,baz=300,slow=2.5,SNR=16
NVAR PKKPbc **PKKPbc** **10 46 26.7 -1.1**
comp=Z,0.4nm,0.7s,baz=120,slow=4.7,SNR=5.2
NVAR PKKPab **PKKPdf** **10 46 41.5 +2.1**
comp=Z,1.6nm,0.7s,baz=135,slow=4.8,SNR=9.3
NVAR Mina Array Bea 106.48 45 **Pdif** **10 30 56.2 +0.3**
TSUM Tsumeb 106.59 253 IAms_20 IAms_20 11 20 07.9
comp=Z,4µm,19.0s
SMMC Simmler 106.60 49 P **PKiKP** **10 35 07.4 +0.5**
baz=295
VOG Valley Oaks Go 106.63 48 P **PKiKP** **10 35 06.3 -0.6**
baz=295
EGMT Eagleton 106.87 33 P **PKiKP** **10 35 07.2 0.0**
baz=306,SNR=5.7
PKM Mcpherson Peak 106.91 49 P **PKiKP** **10 35 09.1 +1.4**
baz=295,SNR=12
VES Vestal, Richgr 107.05 48 P **PKiKP** **10 35 09.2 +1.5**
baz=295
TIN Tinemaha, Big 107.14 47 P **PKiKP** **10 35 09.1 +1.1**
baz=296
SBC Santa Barbara 107.17 50 P **PKiKP** **10 35 09.0 +1.0**
baz=295
SCZ2 Santa Cruz Isl 107.41 50 P **PKiKP** **10 35 08.3 -0.2**
baz=294
ELK Elko 107.48 42 IAms_20 IAms_20 11 24 34.4
comp=Z,3µm,19.0s
CWC Cottonwood Cre 107.52 47 P **PKiKP** **10 35 09.5 +0.7**
baz=296
ARVC Arvin 107.54 49 P **PKiKP** **10 35 09.7 +1.1**
baz=295,SNR=6.8
GRAC Grapevine Rang 107.79 46 P **PKiKP** **10 35 10.2 +1.0**
baz=297
SNCC San Nicolas Is 107.81 51 P **PKiKP** **10 35 09.8 +0.6**
baz=294
SNCC San Nicolas Is 107.81 51 IAms_20 IAms_20 11 11 54.9
comp=Z,4µm,21.0s
OSI Osito Audit: C 107.84 49 P **PKiKP** **10 35 10.7 +1.4**
baz=295
MPMC Manual Prospec 108.12 47 P **PKiKP** **10 35 11.0 +1.0**
baz=297,SNR=10
LRMC Laurel Mtn Rad 108.23 48 P **PKiKP** **10 35 11.5 +1.3**
baz=296,SNR=7.4
EDW2 Edwards Air Fo 108.27 49 P **PKiKP** **10 35 11.6 +1.4**
baz=296,SNR=20
FURC Furnace Creek, 108.39 47 P **PKiKP** **10 35 12.0 +1.8**
baz=297
R11A Troy Canyon, C 108.41 44 P **PKiKP** **10 35 11.6 +1.1**
baz=299,SNR=11
R11A Troy Canyon, C 108.41 44 IAms_20 IAms_20 11 11 22.6
comp=Z,5µm,22.0s
FMP Fort Macarthur 108.55 50 P **PKiKP** **10 35 09.0 -1.5**
baz=295
IMW Indian Meadow 108.55 38 IAms_20 IAms_20 11 13 15.3
comp=Z,5µm,22.0s
CIS Catalina Islan 108.58 50 P **PKiKP** **10 35 11.7 +0.9**
baz=295
FLWY Flagg Ranch 108.59 37 IAms_20 IAms_20 11 27 56.1
comp=Z,3µm,20.0s
TPNV Topopah Spring 108.60 46 P **PKiKP** **10 35 11.9 +1.1**
baz=298
TPNV Topopah Spring 108.60 46 IAms_20 IAms_20 11 13 53.5
comp=Z,4µm,20.0s
FXWY Fox Creek 108.64 38 IAms_20 IAms_20 11 12 53.5
comp=Z,5µm,21.0s
TPAW Teton Pass 108.77 38 IAms_20 IAms_20 11 12 57.9
comp=Z,5µm,22.0s
BFSC Mount Baldy Ra 108.80 49 P **PKiKP** **10 35 11.9 +0.6**
baz=296,SNR=5.3
REDW Red Top Meadow 108.90 38 IAms_20 IAms_20 11 13 25.4
comp=Z,5µm,22.0s
SNOW Snow King Moun 108.90 38 IAms_20 IAms_20 11 13 02.5
comp=Z,5µm,21.0s
GSC Goldstone, Bar 108.95 48 P **PKiKP** **10 35 12.9 +1.5**
baz=297,SNR=12
GSC Goldstone, Bar 108.95 48 IAms_20 IAms_20 11 11 09.0
comp=Z,5µm,21.0s
SHOC Shoshone, Teco 109.07 47 P **PKiKP** **10 35 12.8 +1.3**
baz=297,SNR=7.9
AHID Auburn Hatcher 109.08 39 IAms_20 IAms_20 11 16 29.2
comp=Z,5µm,21.0s
CART Cartagena 109.23 315 PP **PP** **10 35 43.8 +3.5**
CART Cartagena 109.23 315 PKKP **PKKPbc** **10 46 17.9 -0.9**
BBRC Big Bear Solar 109.33 49 P **PKiKP** **10 35 13.3 +1.0**
baz=296,SNR=8.9
DUG Dugway, Tooele 109.36 42 P **PKiKP** **10 35 13.2 +1.1**
baz=301,SNR=13
DUG Dugway, Tooele 109.36 42 IAms_20 IAms_20 11 25 43.0
comp=Z,4µm,19.0s
SNAA Sanae 109.37 196 PKiKP **PKiKP** **10 35 10.7 -0.4**
SNAA Sanae 109.37 196 Pdiff **Pdif** **10 31 08.2 +0.4**
comp=Z,1.1nm,0.9s,baz=108,slow=3.2,SNR=2.6
SNAA PKKPbc **PKKPbc** **10 46 16.0 -3.5**
comp=Z,5.9nm,1.1s,baz=293,slow=4.1,SNR=9.0
SNAA PKKPab **PKKPab** **10 46 28.2 -0.5**
comp=Z,13nm,1.1s,baz=284,slow=6.8,SNR=15
SNAA Sanae 109.37 196 P **Pdif** **10 31 08.2 +0.4**
SNAA MLR MLR
comp=Z,3µm,20.0s
UCM Universidad Co 109.38 319 PP **PP** **10 35 41.3 -0.1**
UCM Universidad Co 109.38 319 PKKP 10 46 21.3
HWUT Hardware Ranch 109.42 40 IAms_20 IAms_20 11 13 30.9
comp=Z,4µm,22.0s
MURC Murrieta 109.42 50 P **PKiKP** **10 35 13.2 +0.9**
baz=296
DGMT Dagmar 109.50 31 P **PKiKP** **10 35 13.0 +1.0**
baz=311
DGMT Dagmar 109.50 31 IAms_20 IAms_20 11 23 18.7
comp=Z,3µm,20.0s
HEC Hector,Ludlow 109.51 48 P **PKiKP** **10 35 13.4 +0.9**
baz=297,SNR=9.7
TUQ Turquoise Moun 109.54 47 P **PKiKP** **10 35 13.2 +0.6**
baz=298
SHPR Sheep Range 109.58 46 IAms_20 IAms_20 11 13 44.6
comp=Z,5µm,21.0s
LAO LASA Array 109.59 33 P **PKiKP** **10 35 13.5 +1.2**
baz=309,SNR=10
LAO LASA Array 109.59 33 IAms_20 IAms_20 11 25 46.2
comp=Z,3µm,20.0s
109C Camp Elliot, M 109.80 50 P **PKiKP** **10 35 13.7 +0.7**
baz=296
PFO Pinyon Flats O 109.97 49 PKKPbc PKKPbc 10 46 15.3 -1.2
comp=Z,0.7nm,0.7s,baz=41,slow=5.5,SNR=4.0
PFO PKKPab **PKKPab** **10 46 27.5 -0.7**
comp=Z,5.8nm,1.2s,baz=81,slow=3.7,SNR=6.7
PFO Pinyon Flats O 109.97 49 P **PKiKP** **10 35 14.4 +1.0**
baz=297,SNR=8.8
PFO Pinyon Flats O 109.97 49 IAms_20 IAms_20 11 14 41.0
comp=Z,5µm,20.0s
XPFO Pion Flat 109.97 49 IAms_20 IAms_20 11 14 41.0
comp=Z,5µm,20.0s
BW06 Boulder Array 110.02 38 P **PKiKP** **10 35 13.8 +0.3**
baz=305
BW06 Boulder Array 110.02 38 IAms_20 IAms_20 11 13 49.0
comp=Z,6µm,22.0s
PDAR Pinedale Array 110.02 38 Pdiff **Pdif** **10 31 12.3 +0.7**
comp=Z,0.4nm,0.8s,baz=346,slow=3.1,SNR=3.3
PDAR PKiKP **PKiKP** **10 35 13.8 +0.3**
comp=Z,6.7nm,1.0s,baz=92,slow=0.6,SNR=13
PDAR PP **PP** **10 35 50.0 +4.0**
comp=Z,3.9nm,1.1s,baz=267,slow=3.0,SNR=4.2
PDAR PKKPbc **PKKPbc** **10 46 15.4 -1.4**
comp=Z,0.3nm,0.4s,baz=116,slow=6.8,SNR=4.1
PDAR PKKPab **PKKPab** **10 46 26.3 -2.0**
comp=Z,1.6nm,0.6s,baz=117,slow=5.7,SNR=15
GMRC Granite Mounta 110.03 48 P **PKiKP** **10 35 15.0 +1.4**
baz=298,SNR=25
BELC Belle Mtn. Jos 110.14 49 P **PKiKP** **10 35 15.2 +1.4**
baz=297,SNR=21
TAM Tamanrasset 110.14 298 IAms_20 IAms_20 11 22 52.8
comp=Z,4µm,21.0s
ESDC Sonseca Array 110.19 318 Pdiff **Pdif** **10 31 12.4 +0.2**
comp=Z,0.6nm,0.7s,baz=64,slow=6.0,SNR=2.7
ESDC PP **PP** **10 35 48.0 +0.8**
comp=Z,3.7nm,0.8s,baz=48,slow=6.5,SNR=7.0
MONP2 Monument Peak 110.31 50 P **PKiKP** **10 35 15.6 +1.4**
baz=296,SNR=20
PAB San Pablo 110.51 318 IAms_20 IAms_20 11 25 34.0
comp=Z,4µm,21.0s
IKP In-Ko-Pah, Jac 110.66 50 P **PKiKP** **10 35 16.0 +1.3**
baz=296,SNR=17
IRM Iron Mountain 110.69 48 P **PKiKP** **10 35 16.2 +1.5**
baz=298,SNR=11
BC3 Big Chuckawall 110.69 49 P **PKiKP** **10 35 16.2 +1.4**
baz=297,SNR=12
SWSC Sam W. Stewart 110.76 50 P **PKiKP** **10 35 15.8 +1.0**
baz=297,SNR=9.3
PBRG Braganca 110.79 321 *e*PP **PP** **10 35 51.7 +0.3**
NEE2 Needles Airpor 110.79 47 P **PKiKP** **10 35 15.5 +0.7**
baz=298
VNA2 Neumayer--Watz 111.01 196 PKiKP **PKiKP** **10 35 13.7 -0.4**
W13A Hualapai Mount 111.17 47 IAms_20 IAms_20 11 12 55.4
comp=Z,5µm,22.0s
MVO Moncorvo 111.33 321 *e*PP **PP** **10 35 57.3 +1.9**
MVO Moncorvo 111.33 321 *e*SS SS 10 51 36.7 +10
MVO Moncorvo 111.33 321 *e*LR LR 11 17 17.1
comp=Z,4µm,22.0s
Y12C Blythe 111.34 48 P **PKiKP** **10 35 17.2 +1.4**
baz=298,SNR=7.5
PDMCI Parker Dam,Lak 111.36 48 P **PKiKP** **10 35 16.5 +0.6**
baz=298,SNR=7.6
VNA1 Neumayer--Stat 111.40 196 PKiKP **PKiKP** **10 35 16.5 +1.7**
VNA3 Neumayer Olymp 111.41 195 PKiKP **PKiKP** **10 35 14.7 -0.2**
GLA Glamis 111.44 49 P **PKiKP** **10 35 16.2 0.0**
baz=298,SNR=5.5
GLA Glamis 111.44 49 IAms_20 IAms_20 11 13 00.9
comp=Z,4µm,22.0s
PGAV Gavieira, Arco 111.63 322 *e*PP **PP** **10 36 00.3 +2.8**
PGAV Gavieira, Arco 111.63 322 *e*SS SS 10 52 05.3 +35
PGAV Gavieira, Arco 111.63 322 *e*LR LR 11 19 44.2
comp=Z,5µm,20.0s
PCAB Cabril 111.63 322 *e*PP **PP** **10 35 57.9 +0.5**
U15A North Rim 111.64 45 IAms_20 IAms_20 11 14 57.9
comp=Z,5µm,20.0s
MELI Melilla 111.71 314 PP **PP** **10 35 57.1 -1.2**
MELI Melilla 111.71 314 PKKP 10 46 56.8
K22A Casper 111.90 37 P **PKiKP** **10 35 16.8 -0.1**
baz=307
K22A Casper 111.90 37 IAms_20 IAms_20 11 15 06.6
comp=Z,4µm,22.0s
EMAL Malaga-Limoner 112.01 316 PP **PP** **10 36 00.9 +0.5**
EMAL Malaga-Limoner 112.01 316 PKKP 10 46 48.9
MTE Manteigas 112.09 321 *e*PP **PP** **10 36 01.4 +0.6**
MTE Manteigas 112.09 321 *e*SS SS 10 52 11.0 +34
MTE Manteigas 112.09 321 *e*LR LR 11 16 46.5
comp=Z,4µm,18.0s
MTE Manteigas 112.09 321 IAms_20 IAms_20 11 28 39.6
comp=Z,4µm,21.0s
ULM Lac du Bonnet 112.09 25 PKiKP **PKiKP** **10 35 16.7 -0.1**
comp=Z,5.7nm,0.8s,baz=337,slow=4.3,SNR=5.6
ULM PKKPab **PKKPab** **10 46 14.5 -4.3**
comp=Z,6.7nm,0.6s,baz=148,slow=3.0,SNR=6.7
PVIS Viseu 112.12 321 *e*PP **PP** **10 36 05.0 +4.0**
MDND Maddock 112.18 29 P **PKiKP** **10 35 16.5 -0.5**
baz=315
MDND Maddock 112.18 29 IAms_20 IAms_20 11 23 43.3
comp=Z,4µm,20.0s
O20A White River Ci 112.33 40 P **PKiKP** **10 35 18.6 +0.7**

baz=305,SNR=27
O20A White River Ci 112.33 40 IAMs_20 IAMs_20 11 17 09.4
comp=Z,4µm,21.0s
113A Mohawk Valley, 112.36 49 IAMs_20 IAMs_20 11 16 08.3
comp=Z,4µm,21.0s
PCBR Castelo Branco 112.36 320 ePP PP 10 36 04.2 +1.5
RSSD Black Hills 112.40 34 P PKiKP 10 35 17.5 -0.4
baz=310
PMRV Marv??o 112.54 320 ePP PP 10 36 05.1 +1.1
PMRV Marv??o 112.54 320 eLR LR 11 17 01.8
comp=Z,4µm,20.0s
PVLZ Peæn de 112.74 314 PP PP 10 36 01.8 -3.8
PVLZ Peæn de 112.74 314 PKKP 10 46 56.8
COI Coimbra 112.74 321 ePP PP 10 36 07.0 +1.6
WUAZ Wupatki 112.74 45 P PKiKP 10 35 20.0 +1.3
baz=301,SNR=24
PV21 Cone Mtn., Par 112.74 41 IAMs_20 IAMs_20 11 28 36.6
comp=Z,4µm,20.0s
PV14 Lion Creek, Pa 112.82 42 IAMs_20 IAMs_20 11 15 32.5
comp=Z,5µm,21.0s
PV20 West Nyswonger 112.87 42 IAMs_20 IAMs_20 11 15 34.0
comp=Z,5µm,22.0s
PV19 Morning Glory 112.88 42 IAMs_20 IAMs_20 11 15 58.1
comp=Z,4µm,21.0s
PV22 Blue Mesa, Par 112.88 41 IAMs_20 IAMs_20 11 28 40.2
comp=Z,4µm,21.0s
PCAS Casmilo, Conde 112.88 321 ePP PP 10 36 07.7 +1.3
PCAS Casmilo, Conde 112.88 321 eSS SS 10 52 27.9 +41
PV16 Nyswonger Mesa 112.92 42 IAMs_20 IAMs_20 11 15 35.3
comp=Z,4µm,21.0s
PV05 Paradox Valley 112.93 42 IAMs_20 IAMs_20 11 16 00.8
comp=Z,4µm,22.0s
PV11 David Mesa, Pa 112.96 42 IAMs_20 IAMs_20 11 15 36.2
comp=Z,5µm,21.0s
PV18 Skein Mesa, Pa 112.96 42 IAMs_20 IAMs_20 11 15 59.4
comp=Z,5µm,22.0s
PESTR Estremoz 112.98 319 eSS SS 10 52 12.6 +24
PV03 Paradox Valley 113.00 42 IAMs_20 IAMs_20 11 16 00.3
comp=Z,5µm,22.0s
PV07 Paradox Valley 113.03 41 IAMs_20 IAMs_20 11 15 52.0
comp=Z,4µm,22.0s
PV13 Radium Mtn., P 113.07 42 IAMs_20 IAMs_20 11 16 03.2
comp=Z,4µm,21.0s
CEU Ceuta 113.11 315 PP PP 10 36 03.5 -4.7
CEU Ceuta 113.11 315 PKKP 10 46 58.6
PV15 Paradox Valley 113.19 41 IAMs_20 IAMs_20 11 15 56.3
comp=Z,4µm,22.0s
PV01 Paradox Valley 113.25 42 IAMs_20 IAMs_20 11 16 20.9
comp=Z,4µm,21.0s
PMTG Montargil 113.28 320 ePP PP 10 36 09.2 0.0
N23A Red Feather La 113.30 38 P PKiKP 10 35 19.7 0.0
baz=307
PHWY Pilot Hill 113.35 37 IAMs_20 IAMs_20 11 19 15.3
comp=Z,3µm,21.0s
PSBE So Bento 113.38 320 ePP PP 10 36 12.2 +2.2
SFS San Fernando 113.39 316 PP PP 10 36 07.1 -3.0
SFS San Fernando 113.39 316 PKKP 10 47 03.8
SFS San Fernando 113.39 316 IAMs_20 IAMs_20 11 27 49.5
comp=Z,4µm,20.0s
EVO Evora 113.45 319 PP PP 10 36 08.9 -1.5
EVO Evora 113.45 319 PKKP 10 47 04.6
EVO Evora 113.45 319 ePP PP 10 36 13.1 +2.6
214A Organ Pipe Nat 113.45 49 P PKiKP 10 35 20.9 +0.9
baz=298,SNR=5.7
AGMN Agassiz Nation 113.57 27 P PKiKP 10 35 20.8 +1.1
baz=319
AGMN Agassiz Nation 113.57 27 IAMs_20 IAMs_20 11 31 16.0
comp=Z,4µm,20.0s
PBEJ Beja 113.64 319 ePP PP 10 36 13.5 +1.6
MVCO Mesa Verde 113.81 42 P PKiKP 10 35 21.8 +1.0
baz=304,SNR=20
MVCO Mesa Verde 113.81 42 IAMs_20 IAMs_20 11 17 48.8
comp=Z,4µm,20.0s
PVAQ Vaqueiros 113.89 318 ePP PP 10 36 14.1 +0.5
PVAQ Vaqueiros 113.89 318 eSS SS 10 52 23.3 +23
PVAQ Vaqueiros 113.89 318 eLR LR 11 16 23.3
comp=Z,4µm,20.0s
PVAQ Vaqueiros 113.89 318 IAMs_20 IAMs_20 11 31 23.6
comp=Z,5µm,21.0s
D32A Dogwood Acres, 113.91 28 IAMs_20 IAMs_20 11 22 26.1
comp=Z,4µm,22.0s
MESJ Messejana 113.97 319 ePP PP 10 36 14.3 +0.1
MESJ AMS AMS 11 33 48.5
comp=Z,4µm,16.3s
MESJ Messejana 113.97 319 ePP PP 10 36 15.8 +1.6
PMAFR Mafra 114.02 320 ePP PP 10 36 16.2 +1.7
PMAFR Mafra 114.02 320 eSS SS 10 52 15.8 +13
PNCL Nicolau / Gran 114.02 319 ePP PP 10 36 16.4 +1.9
PNCL Nicolau / Gran 114.02 319 eSS SS 10 52 17.4 +15
LIS Lisbon 114.07 320 ePP PP 10 36 14.9 +0.1
LIS AMS AMS 11 33 41.9
comp=Z,6µm,24.4s
W18A Petrified Fore 114.09 45 P PKiKP 10 35 22.6 +1.2
baz=302,SNR=33
PBDV Barranco-do-Ve 114.12 318 eSS SS 10 52 21.1 +17
MDT Midelt 114.14 312 PP PP 10 36 19.6 +3.8
comp=Z,2.9nm,0.7s,baz=86,slow=10,SNR=5.3
ISCO Idaho Springs 114.16 39 P PKiKP 10 35 21.7 +0.2
baz=307,SNR=16
ISCO Idaho Springs 114.16 39 IAMs_20 IAMs_20 11 27 19.8
comp=Z,4µm,20.0s
IFR Ifrane 114.16 313 PP PP 10 36 14.8 -1.2
IFR Ifrane 114.16 313 PKKP 10 47 09.8
X18A Snowflake 114.25 46 IAMs_20 IAMs_20 11 16 00.2
comp=Z,4µm,22.0s
B35A Bob, Littlefor 114.45 25 IAMs_20 IAMs_20 11 23 27.8
comp=Z,5µm,22.0s
PTEO Sao Teotonio 114.47 319 ePP PP 10 36 22.4 +4.7
MORF Marmelete 114.56 318 ePP PP 10 36 21.7 +3.3
MORF Marmelete 114.56 318 eSS SS 10 52 21.5 +12
S22A 4UR Ranch, Cre 114.60 41 P PKPdf 10 35 23.6 +1.2
baz=305,SNR=16
TUC Tucson 114.78 48 P PKPdf 10 35 23.1 +0.6
baz=300
SUSD Miller 114.90 31 P PKiKP 10 35 22.0 -0.4
baz=315
SDCO Great Sand Dun 115.45 40 P PKPdf 10 35 24.4 +0.4
baz=306,SNR=23
SDCO Great Sand Dun 115.45 40 IAMs_20 IAMs_20 11 17 39.2
comp=Z,4µm,21.0s
OGNE Ogallala 115.58 36 P PKiKP 10 35 23.3 -0.6
baz=311
OGNE Ogallala 115.58 36 IAMs_20 IAMs_20 11 20 47.0
comp=Z,4µm,22.0s
SCHQ Scheffer ville 115.63 6 PKP PKiKP 10 35 23.4 -0.1
comp=Z,4.8nm,0.6s,baz=337,slow=4.6,SNR=4.0
SCHQ PP PP 10 36 25.6 +0.7
comp=Z,7.6nm,0.8s,baz=353,slow=8.7,SNR=3.7
EYMN Ely 115.70 24 P PKiKP 10 35 23.6 -0.2
baz=323,SNR=5.1
EYMN Ely 115.70 24 IAMs_20 IAMs_20 11 32 06.0
comp=Z,4µm,21.0s
AVE Averroes 115.91 314 PP PP 10 36 22.5 -5.6
SRIG Santa Rosalia 116.04 54 IAMs_20 IAMs_20 11 17 18.3
comp=Z,4µm,21.0s
K31A O'Neill 116.27 33 IAMs_20 IAMs_20 11 24 50.9
comp=Z,4µm,22.0s
319A Douglas 116.36 48 IAMs_20 IAMs_20 11 18 53.3
comp=Z,4µm,20.0s
ANMO Albuquerque 116.44 43 PKP PKiKP 10 35 27.0 +1.1
comp=Z,33nm,1.0s,baz=236,slow=1.6,SNR=59
ANMO PKKPbc PKKPbc 10 45 55.3 +0.4
comp=Z,3.7nm,0.9s,baz=127,slow=8.9,SNR=12
ANMO Albuquerque 116.44 43 PKIKP PKiKP 10 35 26.8 +0.9
ANMO Albuquerque 116.44 43 P PKiKP 10 35 26.8 +0.9
baz=304
ANMO Albuquerque 116.44 43 PKiKP 10 35 26.8 +0.9
ANMO Albuquerque 116.44 43 IAMs_20 IAMs_20 11 16 32.7
comp=Z,4µm,22.0s
F36A Milaca 116.46 27 IAMs_20 IAMs_20 11 23 17.6
comp=Z,3µm,22.0s
KSCO Kaye Shedlock' 116.47 38 P PKiKP 10 35 25.8 +0.1
baz=309,SNR=6.2
KSCO Kaye Shedlock' 116.47 38 IAMs_20 IAMs_20 11 21 10.7
comp=Z,4µm,22.0s
T25A Trinidad 116.51 40 P PKiKP 10 35 26.7 +0.7
baz=307,SNR=26
ECSD EROS Data Cent 116.58 30 P PKPdf 10 35 25.6 0.0
baz=316,SNR=22
Y22D IRIS PASSCAL I 116.61 44 P PKiKP 10 35 27.6 +1.4
baz=304,SNR=8.8
TOC1 Torodi Ar. Sit 116.67 290 IAMs_20 IAMs_20 11 29 15.8
comp=Z,3µm,19.0s
TOA2 Torodi Ar. Sit 116.68 290 IAMs_20 IAMs_20 11 29 16.0
comp=Z,3µm,20.0s
TORD Torodi Ar. Bea 116.69 290 PKP PKPdf 10 35 25.4 -1.1
comp=Z,7.4nm,0.6s,baz=35,slow=2.2,SNR=40
TORD PP PP 10 36 35.3 +0.8
comp=Z,12nm,1.1s,baz=66,slow=4.8,SNR=4.6
TORD PKKPbc PKKPbc 10 45 52.0 -1.3
comp=Z,3.2nm,0.9s,baz=285,slow=3.4,SNR=8.7
TOC5 Torodi Ar. Sit 116.71 290 IAMs_20 IAMs_20 11 24 23.8
comp=Z,3µm,21.0s
E38A The Farm, Brul 116.74 25 IAMs_20 IAMs_20 11 31 03.8
comp=Z,3µm,20.0s
121A Cookes Peak, D 116.84 46 P PKiKP 10 35 27.8 +1.1
baz=302,SNR=22
121A Cookes Peak, D 116.84 46 IAMs_20 IAMs_20 11 18 18.8
comp=Z,4µm,20.0s
SPMN Marine on St. 117.27 27 P PKPdf 10 35 26.7 -0.2
baz=321,SNR=6.7
BGNE Belgrade 117.44 33 P PKPdf 10 35 26.8 -0.5
baz=314,SNR=15
D41A Chassel 117.58 23 IAMs_20 IAMs_20 11 31 59.9
comp=Z,5µm,20.0s
I37A Lemond, Waseca 117.93 28 IAMs_20 IAMs_20 11 27 29.6
comp=Z,3µm,21.0s
EPT El Paso 118.16 46 IAMs_20 IAMs_20 11 19 50.4
comp=Z,3µm,21.0s
N33A J Bar K, Exete 118.28 33 IAMs_20 IAMs_20 11 23 44.5
comp=Z,3µm,22.0s
CBKS Cedar Bluff 118.31 36 P PKPdf 10 35 28.9 -0.3
baz=312,SNR=7.5
CBKS Cedar Bluff 118.31 36 IAMs_20 IAMs_20 11 22 55.6
comp=Z,4µm,21.0s
G40A Rib Lake 118.37 25 IAMs_20 IAMs_20 11 25 09.1
comp=Z,3µm,22.0s
E43A Lone Tree Farm 118.75 23 IAMs_20 IAMs_20 11 30 10.8
comp=Z,4µm,20.0s
E44A Grand Marais A 118.94 22 P PKPdf 10 35 29.9 -0.1
baz=328
MNTX Cornudas Mount 119.00 46 P PKiKP 10 35 31.0 +0.3
baz=304,SNR=75
LPIG La Paz 119.04 56 PKP PKiKP 10 35 31.5 +0.6
comp=Z,89nm,1.0s,baz=309,slow=1.2,SNR=12
N35A Tabor 119.16 32 IAMs_20 IAMs_20 11 37 10.6
comp=Z,3µm,19.0s
R32A Long Quarter, 119.17 36 IAMs_20 IAMs_20 11 33 13.3
comp=Z,4µm,21.0s
CHGQ Chibougamau 119.27 12 P PKPdf 10 35 30.2 -0.4
baz=341
K38A Parkersburg 119.27 29 IAMs_20 IAMs_20 11 23 51.1
comp=Z,4µm,21.0s
I40A Norwalk 119.29 27 IAMs_20 IAMs_20 11 26 20.5
comp=Z,4µm,22.0s
D46A Sault St. Mari 119.38 20 P PKPdf 10 35 30.7 -0.2
baz=330,SNR=8.0
MSTX Muleshoe 119.48 42 P PKiKP 10 35 32.1 +0.4
baz=307
LSQQ Gibel-sur-Quev 119.48 14 P PKPdf 10 35 30.1 -0.9
baz=338
D47A Chapleau 119.54 20 P PKPdf 10 35 31.0 -0.2
baz=331,SNR=7.5
SCIA State Center 119.62 30 P PKPdf 10 35 31.5 0.0
baz=319
SCIA State Center 119.62 30 IAMs_20 IAMs_20 11 29 11.4
comp=Z,3µm,22.0s
AMTX Amarillo 119.64 41 P PKiKP 10 35 32.1 +0.2
baz=308
E46A Sault Ste Mari 119.73 21 IAMs_20 IAMs_20 11 31 26.0
comp=Z,4µm,19.0s
D48A Paudash Townsh 119.86 19 P PKPdf 10 35 31.3 -0.6
baz=333,SNR=5.4
F45A CMU Biological 119.89 22 P PKPdf 10 35 31.5 -0.4
baz=328
KSU1 Kansas State U 119.89 34 P PKPdf 10 35 31.8 -0.4
baz=315,SNR=5.5
KSU1 Kansas State U 119.89 34 IAMs_20 IAMs_20 11 26 03.2
comp=Z,3µm,22.0s
E47A Iron Bridge 120.01 20 P PKPdf 10 35 31.8 -0.3
baz=331,SNR=10
I42A Draeger Farm, 120.03 25 IAMs_20 IAMs_20 11 35 12.9
comp=Z,4µm,20.0s
JFWS Jewell Farm 120.23 27 P PKPdf 10 35 31.6 -1.0
baz=322
JFWS Jewell Farm 120.23 27 IAMs_20 IAMs_20 11 22 14.3
comp=Z,4µm,22.0s
E48A Lockeye 120.36 19 P PKPdf 10 35 32.6 -0.2
baz=332,SNR=8.7
U32A Winter Ranch, 120.36 38 PKPdf 10 35 32.9 -0.2
U32A IAMs_20 IAMs_20 11 22 35.0
comp=Z,4µm,20.0s
G45A Suttons Bay 120.38 22 P PKPdf 10 35 31.8 -1.1
baz=328
G46A Petoskey 120.44 22 P PKPdf 10 35 31.7 -1.3
baz=329
N38A Joes South For 120.44 31 PKPdf 10 35 32.7 -0.5
N38A IAMs_20 IAMs_20 11 27 49.4
comp=Z,4µm,21.0s
L40A Anamosa 120.45 28 IAMs_20 IAMs_20 11 24 48.3
comp=Z,4µm,22.0s
D50A G1974 Best Tow 120.46 17 P PKPdf 10 35 32.2 -0.8
baz=335,SNR=8.5
H45A Beulah 120.58 23 P PKiKP 10 35 33.4 0.0
baz=327
D51A Lot 18 Range I 120.66 17 P PKPdf 10 35 32.5 -0.9
baz=335
F48A Evansville 120.78 20 P PKPdf 10 35 33.3 -0.3
baz=331
E50A Wahnapitae 120.86 18 P PKPdf 10 35 33.4 -0.3
baz=334,SNR=7.5
G47A Hillman 120.93 21 P PKPdf 10 35 34.0 +0.1
baz=330,SNR=11
GLMI Grayling 120.95 22 P PKPdf 10 35 33.5 -0.5
baz=329
GLMI Grayling 120.95 22 IAMs_20 IAMs_20 11 30 59.0
comp=Z,4µm,22.0s
H46A Fife Lake 120.97 22 P PKPdf 10 35 33.5 -0.5
baz=328
I45A Fountain 121.00 23 P PKPdf 10 35 33.8 -0.3
baz=327
I45A Fountain 121.00 23 IAMs_20 IAMs_20 11 35 30.5
comp=Z,4µm,19.0s
F49A Sandfield 121.03 19 P PKPdf 10 35 33.2 -0.9
baz=332
E51A G1948 Merrick 121.13 17 P PKPdf 10 35 33.7 -0.6
baz=335,SNR=7.6
D53A Lac Vacive, Po 121.13 16 P PKPdf 10 35 33.8 -0.5
baz=337,SNR=7.9
P38A Dawn 121.16 32 IAMs_20 IAMs_20 11 29 28.6
comp=Z,3µm,21.0s
L42A Oliver, Polo 121.21 27 IAMs_20 IAMs_20 11 32 30.4
comp=Z,4µm,21.0s
K43A Burlington 121.24 26 IAMs_20 IAMs_20 11 36 38.9
comp=Z,3µm,20.0s
H47A Mio 121.29 22 P PKPdf 10 35 34.5 -0.1
baz=329
D54A Lac Fusel, La 121.34 15 P PKPdf 10 35 34.2 -0.5
baz=338
I46A Reed City 121.39 23 P PKPdf 10 35 34.1 -0.7
baz=328
T35A Sooner Cattle 121.47 36 IAMs_20 IAMs_20 11 33 47.2
comp=Z,4µm,21.0s
H48A Harrisville 121.52 21 P PKPdf 10 35 34.1 -1.0
baz=330
H48A Harrisville 121.52 21 IAMs_20 IAMs_20 11 28 12.3
comp=Z,4µm,22.0s
TXAR Lajitas Array 121.55 47 PKP PKiKP 10 35 36.3 +0.4
comp=Z,24nm,0.6s,baz=242,slow=0.8,SNR=248
TXAR PKKPbc PKKPbc 10 45 34.7 -1.4
comp=Z,3.5nm,0.7s,baz=137,slow=6.8,SNR=29
TXAR PKKPab PKKPab 10 45 40.3 +3.0
comp=Z,1.3nm,0.8s,baz=194,slow=2.6,SNR=6.6
TXAR Lajitas Array 121.55 47 PKPdf 10 35 35.6 -0.1
F51A Arnstein 121.55 18 P PKPdf 10 35 34.6 -0.5
baz=334,SNR=5.5
WMOK Wichita Mounta 121.57 39 P PKPdf 10 35 35.3 -0.2
baz=311,SNR=29
WMOK Wichita Mounta 121.57 39 IAMs_20 IAMs_20 11 24 05.2
comp=Z,4µm,22.0s
E52A Mattawa 121.60 17 P PKPdf 10 35 34.5 -0.7
baz=336
DRLN Deer Lake 121.64 360 IAMs_20 IAMs_20 11 32 36.5
comp=Z,4µm,20.0s
N41A Harden Midland 121.68 29 IAMs_20 IAMs_20 11 29 31.9
comp=Z,4µm,22.0s
I47A Gladwin 121.68 22 P PKPdf 10 35 35.3 -0.1
baz=329
D55A Sainte-Anne-du 121.75 14 P PKPdf 10 35 34.8 -0.7
baz=340,SNR=5.7
E53A Dumoine, Ponti 121.79 16 P PKPdf 10 35 34.8 -0.7
baz=337
I48A Sherman Twp 121.83 22 P PKPdf 10 35 35.2 -0.5
baz=330
L44A Lake County Fo 121.85 26 P PKPdf 10 35 35.2 -0.6
baz=325
L44A Lake County Fo 121.85 26 IAMs_20 IAMs_20 11 34 56.1
comp=Z,4µm,20.0s
F52A Sundridge 121.85 17 P PKPdf 10 35 35.4 -0.3
baz=335,SNR=7.8
E54A Lac Daplat, Po 121.87 16 P PKPdf 10 35 35.2 -0.5
baz=338
D56A ZEC Mazanza, M 121.89 13 P PKPdf 10 35 35.2 -0.5
baz=340,SNR=11
P40A Paris 121.99 31 IAMs_20 IAMs_20 11 28 45.4
comp=Z,5µm,22.0s
LATQ La Tuque 122.00 12 P PKiKP 10 35 36.1 0.0
baz=343
ALGO Algonquin Park 122.07 16 P PKiKP 10 35 36.2 0.0
baz=336
D57A Chemin Vers le 122.12 13 P PKPdf 10 35 35.3 -0.8
baz=341,SNR=7.7
E55A Montcerf-Lytto 122.14 15 P PKPdf 10 35 35.8 -0.4
baz=339
J47A Sunmer 122.23 23 P PKPdf 10 35 36.3 -0.1
baz=328
J47A Sunmer 122.23 23 IAMs_20 IAMs_20 11 29 12.8
comp=Z,5µm,22.0s
D58A Chemin du LacG 122.26 12 P PKPdf 10 35 35.7 -0.7
baz=342,SNR=7.9
E56A St. Veronique 122.30 14 P PKPdf 10 35 35.9 -0.6
baz=340,SNR=7.0
K46A Dorr 122.31 24 P PKPdf 10 35 36.1 -0.6
baz=327
I49A Point Hope 122.36 21 P PKPdf 10 35 36.6 -0.1
baz=331
I49A Point Hope 122.36 21 IAMs_20 IAMs_20 11 28 46.5
comp=Z,4µm,22.0s
ABTX Abilene, Hawle 122.37 42 P PKiKP 10 35 37.8 +0.5
baz=309,SNR=30
M44A Midewin, Midew 122.43 27 IAMs_20 IAMs_20 11 34 10.6
comp=Z,4µm,20.0s
HDIL Hopedale 122.53 28 P PKPdf 10 35 36.8 -0.4
baz=323,SNR=11
HDIL Hopedale 122.53 28 IAMs_20 IAMs_20 11 33 56.4
comp=Z,3µm,21.0s
D59A Saint-Raymond 122.55 11 P PKPdf 10 35 36.3 -0.7
baz=344
J48A Bridge Port 122.57 22 P PKPdf 10 35 36.1 -1.0
baz=329
J48A Bridge Port 122.57 22 IAMs_20 IAMs_20 11 32 21.8
comp=Z,5µm,21.0s
G54A Lake Saint Pet 122.57 17 P PKPdf 10 35 36.5 -0.6
baz=336
TUL1 Leonard 122.59 36 P PKPdf 10 35 37.4 0.0
baz=314,SNR=9.1
TUL1 Leonard 122.59 36 IAMs_20 IAMs_20 11 38 18.7
comp=Z,4µm,19.0s
E57A Chemin Saint G 122.63 13 P PKPdf 10 35 36.4 -0.8
baz=341
K47A Vermontville 122.64 23 P PKPdf 10 35 36.9 -0.4
baz=328,SNR=9.9
F55A Otter Lake 122.64 15 P PKPdf 10 35 36.9 -0.3
baz=338
D61A St Aubert, Com 122.66 10 P PKPdf 10 35 36.7 -0.5
baz=346,SNR=9.7
L46A Eue Claire 122.67 25 P PKPdf 10 35 37.0 -0.4
baz=326
L46A Eue Claire 122.67 25 IAMs_20 IAMs_20 11 33 17.7
comp=Z,4µm,21.0s
G53A Haliburton 122.67 17 P PKPdf 10 35 36.9 -0.3
baz=336
S39A Bolivar 122.70 33 IAMs_20 IAMs_20 11 37 46.4
comp=Z,3µm,19.0s
H52A Wyevale 122.72 18 P PKPdf 10 35 36.8 -0.5
baz=334
J49A Marlette 122.75 22 P PKPdf 10 35 36.7 -0.8
baz=330
D60A Saint Jean D'O 122.81 11 P PKPdf 10 35 36.4 -1.1
baz=345
R40A Maddies Statio 122.81 32 IAMs_20 IAMs_20 11 30 35.3
comp=Z,4µm,21.0s
SADO Sadowa 122.83 18 PKP PKPdf 10 35 37.0 -0.6
comp=Z,10.0nm,0.7s,baz=325,slow=3.7,SNR=9.5
SADO PKKPbc PKKPbc 10 45 28.2 -3.3
comp=Z,3.0nm,0.7s,baz=286,slow=5.3,SNR=3.4
SADO Sadowa 122.83 18 IAMs_20 IAMs_20 11 32 19.8
comp=Z,5µm,21.0s
PMOZ Porto Moniz, M 122.84 319 ePP PP 10 37 16.1 +0.3
PMOZ Porto Moniz, M 122.84 319 eLR LR 11 23 16.1
comp=Z,2µm,22.0s
E58A La Victoria 122.86 13 P PKPdf 10 35 36.9 -0.7
baz=342,SNR=5.8
K48A Perry 122.87 23 P PKPdf 10 35 36.9 -0.8
baz=329,SNR=9.0
E59A St. Maurice 122.92 12 P PKPdf 10 35 37.2 -0.5
baz=343
D62A Allapoint, All 122.96 9 P PKPdf 10 35 36.9 -0.8
baz=347,SNR=6.5
U38A Gravette 123.02 35 IAMs_20 IAMs_20 11 25 39.0
comp=Z,3µm,21.0s
G55A Calabogie 123.08 16 P PKPdf 10 35 37.0 -1.1
baz=338,SNR=5.3
I51A Listowel 123.10 20 P PKPdf 10 35 37.8 -0.4
baz=333
K49A Clarkson 123.13 22 P PKPdf 10 35 37.4 -0.8
baz=330
D63A Stockholm 123.14 8 P PKPdf 10 35 37.8 -0.3
baz=348
I52A Shelburne 123.14 19 P PKPdf 10 35 38.3 0.0
baz=334
P43A Skaggs, Pawnee 123.15 29 IAMs_20 IAMs_20 11 33 36.8
comp=Z,3µm,21.0s
BATG Bathurst New B 123.17 7 PKPdf 10 35 38.1 -0.1
H53A Bobcaygeon 123.18 18 P PKPdf 10 35 37.9 -0.4
baz=336
ORIO Orleans, Innes 123.21 15 P PKPdf 10 35 37.5 -0.7
baz=339
F58A St-Lin Laurent 123.22 13 P PKPdf 10 35 37.8 -0.5
baz=341
O44A Mansfield 123.23 28 IAMs_20 IAMs_20 11 34 26.0
comp=Z,5µm,21.0s
E60A Ste Agathe de 123.24 11 P PKPdf 10 35 37.8 -0.5
baz=344
E61A Lac Etchemin 123.35 10 P PKPdf 10 35 38.4 -0.2
baz=345,SNR=18
HHAR Hobbs 123.38 35 IAMs_20 IAMs_20 11 25 49.6
comp=Z,3µm,20.0s
K50A Casco 123.45 22 P PKPdf 10 35 38.4 -0.4
baz=330
F59A Saint Guilaume 123.46 12 P PKPdf 10 35 38.4 -0.3
baz=342
AAM Ann Arbor 123.47 23 P PKPdf 10 35 38.5 -0.4
baz=329
AAM Ann Arbor 123.47 23 IAMs_20 IAMs_20 11 32 27.8
comp=Z,5µm,21.0s
L48A N Adams 123.48 23 P PKPdf 10 35 38.5 -0.4
baz=328,SNR=11
M47A Cromwell 123.49 25 P PKPdf 10 35 39.0 0.0
baz=327
PQI Presque Isle 123.51 8 IAMs_20 IAMs_20 11 31 10.5
comp=Z,4µm,20.0s
CCM Cathedral Cave 123.52 31 PKIKP PKPdf 10 35 39.0 -0.1
CCM MLR MLR
comp=Z,3µm,20.0s
CCM Cathedral Cave 123.52 31 P PKPdf 10 35 38.6 -0.5
baz=320
CCM Cathedral Cave 123.52 31 PKPdf 10 35 39.0 -0.1
CCM Cathedral Cave 123.52 31 IAMs_20 IAMs_20 11 28 59.9
comp=Z,3µm,20.0s
F60A Warwick 123.52 12 P PKPdf 10 35 38.4 -0.5
baz=343,SNR=8.6
I53A Kortright Cn E 123.55 19 P PKPdf 10 35 38.8 -0.2
baz=334
SLM Saint Louis 123.58 30 IAMs_20 IAMs_20 11 30 23.4
comp=Z,4µm,21.0s
JCT Junction City 123.59 44 P PKiKP 10 35 39.9 +0.1
baz=308,SNR=115
H55A Tweed 123.60 16 P PKPdf 10 35 39.1 +0.1
baz=337
G57A Newington 123.67 14 P PKPdf 10 35 38.7 -0.4
baz=340,SNR=7.5
SFIN Lafayette 123.67 27 P PKPdf 10 35 38.9 -0.4
baz=325,SNR=5.4
SFIN Lafayette 123.67 27 IAMs_20 IAMs_20 11 34 22.3
comp=Z,4µm,21.0s
E63A Oxbow 123.70 9 P PKPdf 10 35 38.7 -0.5
baz=348,SNR=5.6
F61A St Evariste 123.70 11 P PKPdf 10 35 39.0 -0.2
baz=344,SNR=5.9
M48A Edgerton 123.75 24 P PKPdf 10 35 39.1 -0.4
baz=328,SNR=5.1

I55A	**Frankford** baz=336	123.77	17	P	PKPdf	10 35 39.2	-0.1	
J52A	**Paris** baz=333	123.78	20	P	PKPdf	10 35 39.5	0.0	
E64A	**Bridgewater** baz=348	123.79	8	P	PKPdf	10 35 38.8	-0.5	
H56A	**Elgin** baz=338	123.82	16	P	PKPdf	10 35 39.3	-0.1	
G58A	**Ormstown** baz=341	123.85	14	P	PKPdf	10 35 38.5	-0.9	
K51A	**Iona Station** baz=332	123.89	21	P	PKPdf	10 35 39.5	-0.2	
U40A	**Yellville** baz=317,SNR=76	123.93	34	P	PKPdf	10 35 39.8	-0.2	
U40A	**Yellville** comp=Z,4µm,22.0s	123.93	34	IAMs_20	IAMs_20	11 32 54.1		
Q44A	**Meyer Farm, Va** comp=Z,3µm,20.0s	123.97	29	IAMs_20	IAMs_20	11 31 23.5		
L50A	**Kingsville** baz=330	124.01	22	P	PKPdf	10 35 39.3	-0.6	
M49A	**Liberty Center** baz=329,SNR=6.2	124.06	23	P	PKPdf	10 35 39.4	-0.6	
G59A	**Clarenceville** baz=342	124.11	13	P	PKPdf	10 35 39.7	-0.3	
K52A	**Tillsonburg** baz=333	124.11	20	P	PKPdf	10 35 40.1	0.0	
N48A	**Decatur** baz=327,SNR=5.7	124.15	25	P	PKPdf	10 35 39.6	-0.6	
WHTX	**Lake Whitney,** baz=311,SNR=42	124.20	41	P	PKiKP	10 35 41.0	+0.2	
WHTX	**Lake Whitney,** comp=Z,4µm,22.0s	124.20	41	IAMs_20	IAMs_20	11 20 55.0		
LONY	**Lake Ozonia** baz=340	124.22	14	P	PKPdf	10 35 39.7	-0.6	
LONY	**Lake Ozonia** comp=Z,3µm,20.0s	124.22	14	IAMs_20	IAMs_20	11 32 55.3		
P46A	**Rosedale** comp=Z,3µm,20.0s	124.24	27	IAMs_20	IAMs_20	11 37 47.5		
W39A	**Magazine** baz=316,SNR=20	124.25	35	P	PKPdf	10 35 40.1	-0.6	
W39A	**Magazine**	124.25	35		PKPdf	10 35 40.0	-0.6	
W39A	comp=Z,3µm,22.0s			IAMs_20	IAMs_20	11 30 37.7		
FRNY	**Flat Rock** comp=Z,5µm,21.0s	124.25	13	IAMs_20	IAMs_20	11 32 53.1		
F64A	**Sherman** baz=348,SNR=6.6	124.25	9	P	PKPdf	10 35 39.7	-0.5	
G61A	**St-Isidore-de-** baz=344	124.26	12	P	PKPdf	10 35 40.0	-0.4	
G60A	**Masonville** baz=343	124.28	12	P	PKPdf	10 35 40.2	-0.2	
F63A	**Nahmakanta, Br** baz=347,SNR=6.5	124.29	9	P	PKPdf	10 35 39.6	-0.8	
J54A	**Appleton** baz=335	124.34	18	P	PKPdf	10 35 40.6	0.0	
H59A	**Cadyville** baz=341	124.41	14	P	PKPdf	10 35 40.7	0.0	
PMSA	**Palmer Station** comp=Z,4µm,21.0s	124.50	177	IAMs_20	IAMs_20	11 30 02.1		
H58A	**Gabriels** baz=340,SNR=6.7	124.51	14	P	PKPdf	10 35 40.2	-0.6	
G62A	**West of Eustis** baz=345,SNR=6.3	124.52	11	P	PKPdf	10 35 40.6	-0.3	
OLIL	**Olney** comp=Z,5µm,21.0s	124.54	28	IAMs_20	IAMs_20	11 34 48.6		
I57A	**Carthage** baz=339	124.58	15	P	PKPdf	10 35 40.8	-0.2	
J55A	**Hilton** baz=336,SNR=7.6	124.60	18	P	PKPdf	10 35 40.5	-0.5	
O48A	**Farmland** baz=327,SNR=8.0	124.61	25	P	PKPdf	10 35 40.9	-0.2	
H60A	**Morristown** baz=342	124.71	13	P	PKiKP	10 35 41.4	-0.1	
KIC	**Kosan Boka** comp=Z,50nm,0.9s	124.72	284	*e*PKP1	PKPdf	10 35 41.1	-0.9	
DBIC	**Dimbokro** comp=Z,24nm,1.1s,baz=22,slow=2.5,SNR=14	124.74	285	PKP	PKPdf	10 35 41.4	-0.7	
DBIC	comp=Z,11nm,0.9s,baz=54,slow=12,SNR=4.7			PP	PP	10 37 29.9	+0.2	
DBIC	**Dimbokro**	124.74	285	PKiKP	PKPdf	10 35 41.8	-0.3	
DBIC	**Dimbokro**	124.74	285		PKPdf	10 35 41.8	-0.3	
G63A	**Kingsbury** baz=346,SNR=10.0	124.78	10	P	PKPdf	10 35 40.9	-0.5	
G64A	**Maxfield** baz=347,SNR=6.9	124.79	9	P	PKPdf	10 35 41.1	-0.2	
S44A	**Carbondale** comp=Z,3µm,21.0s	124.80	30	IAMs_20	IAMs_20	11 31 20.7		
SIUC	**Southern Illin** comp=Z,3µm,21.0s	124.80	30	IAMs_20	IAMs_20	11 31 20.6		
MIAR	**Mount Ida** baz=316,SNR=39	124.83	36	P	PKiKP	10 35 42.0	-0.1	
MIAR	**Mount Ida** comp=Z,3µm,21.0s	124.83	36	IAMs_20	IAMs_20	11 27 58.2		
M51A	**Elyria** baz=330	124.86	22	P	PKPdf	10 35 41.3	-0.2	
J56A	**Wolcott** baz=337	124.87	17	P	PKPdf	10 35 40.9	-0.6	
J56A	**Wolcott** comp=Z,5µm,21.0s	124.87	17	IAMs_20	IAMs_20	11 35 08.6		
435B	**Jarrell** baz=310,SNR=15	124.89	42	P	PKiKP	10 35 42.6	+0.3	
Z38A	**Mt. Pleasant** comp=Z,4µm,20.0s	124.90	38	IAMs_20	IAMs_20	11 40 13.1		
H61A	**Lyndonville** baz=343,SNR=7.3	124.90	12	P	PKPdf	10 35 41.7	+0.1	
TIC	**Toumodi**	124.90	285	*e*PKP1	PKPdf	10 35 41.3	-1.1	
BLO	**Bloomington** comp=Z,3µm,19.0s	124.91	27	IAMs_20	IAMs_20	11 38 17.2		
PBMO	**Poplar Bluff**	124.91	32		PKPdf	10 35 41.4	-0.4	
PBMO	comp=Z,3µm,19.0s			IAMs_20	IAMs_20	11 39 50.8		
VT1	**Waterbury** comp=Z,4µm,21.0s	124.92	13	IAMs_20	IAMs_20	11 32 51.5		
K54A	**Basiliko Farm,** baz=335	124.93	19	P	PKPdf	10 35 41.2	-0.5	
ERPA	**Erie** baz=333	124.95	20	P	PKPdf	10 35 41.5	-0.2	
N50A	**Nevada** baz=329,SNR=13	124.98	23	P	PKPdf	10 35 41.7	-0.1	
M52A	**Chesterland** baz=332	124.98	21	P	PKPdf	10 35 41.4	-0.5	
M52A	**Chesterland** comp=Z,4µm,21.0s	124.98	21	IAMs_20	IAMs_20	11 31 31.9		
J57A	**Williamstown** baz=338,SNR=6.1	124.98	16	P	PKPdf	10 35 41.5	-0.3	
J57A	**Williamstown** comp=Z,4µm,20.0s	124.98	16	IAMs_20	IAMs_20	11 41 30.6		
I58A	**Old Forge** baz=339,SNR=5.8	124.99	15	P	PKPdf	10 35 41.5	-0.3	
L53A	**Girard** baz=333	125.00	20	P	PKPdf	10 35 41.8	0.0	
K55A	**Perry** baz=336	125.01	18	P	PKPdf	10 35 41.2	-0.7	
G65A	**Princeton** baz=348	125.02	8	P	PKPdf	10 35 41.2	-0.6	
H62A	**Milan** baz=344	125.02	11	P	PKPdf	10 35 41.4	-0.4	
H62A	**Milan** comp=Z,3µm,20.0s	125.02	11	IAMs_20	IAMs_20	11 33 54.4		
LIC	**Lamto** comp=Z,78nm,0.9s	125.03	284	*e*PKP1	PKPdf	10 35 41.8	-0.8	
L54A	**Sinclairville** baz=334,SNR=7.0	125.07	19	P	PKPdf	10 35 41.5	-0.4	
W41B	**Gary Mavity, V** baz=317,SNR=16	125.13	34	P	PKPdf	10 35 42.0	-0.3	
H63A	**New Sharon** baz=345	125.14	11	P	PKPdf	10 35 41.4	-0.6	
N51A	**Ashland** baz=330,SNR=6.1	125.15	23	P	PKPdf	10 35 41.5	-0.7	
P48A	**Milroy** comp=Z,3µm,20.0s	125.15	26	IAMs_20	IAMs_20	11 34 46.6		
I59A	**Olmsteadville** baz=341,SNR=9.0	125.17	14	P	PKPdf	10 35 41.8	-0.3	
833A	**Chaparral WMA,** baz=307	125.18	46	P	PKiKP	10 35 42.9	0.0	
LBNH	**Lisbon** baz=343	125.18	12	P	PKiKP	10 35 42.5	+0.1	
LBNH	**Lisbon** comp=Z,4µm,20.0s	125.18	12	IAMs_20	IAMs_20	11 32 56.7		
GGN	**Saint George** comp=Z,4µm,19.0s	125.20	8	IAMs_20	IAMs_20	11 39 45.2		
J58A	**Remsen** baz=339,SNR=9.1	125.22	15	P	PKPdf	10 35 42.2	-0.1	
I60A	**Shoreham** baz=341,SNR=7.8	125.26	14	P	PKPdf	10 35 42.2	0.0	
K56A	**Middlesex** baz=336,SNR=5.4	125.27	17	P	PKPdf	10 35 41.9	-0.5	
X40A	**Basin Creek Fa** baz=316,SNR=6.4	125.30	35	P	PKPdf	10 35 42.4	-0.2	
X40A	**Basin Creek Fa** comp=Z,3µm,20.0s	125.30	35	IAMs_20	IAMs_20	11 28 32.5		
H64A	**Troy** baz=346	125.31	10	P	PKPdf	10 35 42.2	-0.2	
M53A	**WI Miller and** baz=332,SNR=5.5	125.31	21	P	PKPdf	10 35 41.2	-1.2	
J59A	**Piesco** baz=340,SNR=16	125.32	15	P	PKPdf	10 35 42.4	-0.1	
J59A	**Piesco** comp=Z,4µm,20.0s	125.32	15	IAMs_20	IAMs_20	11 36 03.6		
O50A	**Cable** baz=328,SNR=9.3	125.33	24	P	PKPdf	10 35 42.2	-0.4	
USIN	**University of** comp=Z,4µm,21.0s	125.36	29	IAMs_20	IAMs_20	11 35 54.2		
L55A	**Hinsdale** baz=335,SNR=7.1	125.39	19	P	PKPdf	10 35 42.3	-0.4	
P49A	**Miami Univ. Ec** baz=327,SNR=10	125.39	25	P	PKPdf	10 35 42.0	-0.7	
H65A	**Eastbrook** baz=348	125.41	9	P	PKiKP	10 35 42.8	-0.1	
I61A	**Oroboro, Fairl** baz=343	125.42	13	P	PKPdf	10 35 42.4	-0.2	
H66A	**Whiting** baz=349	125.46	8	P	PKPdf	10 35 42.4	-0.2	
K57A	**Scipio Center** baz=337,SNR=9.0	125.47	17	P	PKPdf	10 35 42.5	-0.2	
N52A	**McGinn's Farm,** baz=331,SNR=5.4	125.50	22	P	PKPdf	10 35 42.5	-0.4	
ACSO	**Alum Creek Sta** baz=329,SNR=15	125.51	23	P	PKPdf	10 35 42.6	-0.2	
ACSO	**Alum Creek Sta**	125.51	23		PKPdf	10 35 42.4	-0.5	
EMMW	**East Machias** comp=Z,4µm,21.0s	125.51	8	IAMs_20	IAMs_20	11 33 09.5		
PVMO	**Portageville** comp=Z,3µm,21.0s	125.57	31	IAMs_20	IAMs_20	11 27 19.1		
M54A	**Oil Creek Stat** baz=333,SNR=13	125.60	20	P	PKPdf	10 35 42.6	-0.5	
M54A	**Oil Creek Stat**	125.60	20	PKPdf	PKPdf	10 35 42.1	-0.9	
T45A	**Paducah** comp=Z,3µm,21.0s	125.63	30	IAMs_20	IAMs_20	11 31 44.7		
I63A	**Otisfield** baz=345	125.63	11	P	PKPdf	10 35 43.0	0.0	
I63A	**Otisfield** comp=Z,4µm,22.0s	125.63	11	IAMs_20	IAMs_20	11 31 31.7		
I62A	**Tamworth** baz=344	125.65	12	P	PKPdf	10 35 43.2	+0.2	
K58A	**Earlville** baz=338,SNR=10	125.68	16	P	PKPdf	10 35 43.2	0.0	
K58A	**Earlville** comp=Z,5µm,22.0s	125.68	16	IAMs_20	IAMs_20	11 30 59.0		
L56A	**Greenwood** baz=336	125.71	18	P	PKPdf	10 35 43.1	-0.1	
L56A	**Greenwood**	125.71	18	PKPdf	PKPdf	10 35 42.6	-0.7	
P50A	**Jamestown** baz=328,SNR=11	125.71	24	P	PKPdf	10 35 42.7	-0.6	
PEBM	**Pemiscott Bayo**	125.71	32		PKiKP	10 35 43.9	+0.1	
O51A	**Pataskala** baz=330,SNR=15	125.73	23	P	PKPdf	10 35 42.8	-0.5	
WCI	**Wyandotte Cave**	125.78	27	PKiKP	PKPdf	10 35 43.2	-0.3	
WCI	comp=Z,4µm,22.0s			MLR	MLR			
WCI	**Wyandotte Cave** baz=325	125.78	27	P	PKPdf	10 35 43.5	+0.1	
WCI	**Wyandotte Cave**	125.78	27		PKPdf	10 35 43.2	-0.3	
WCI	**Wyandotte Cave** comp=Z,4µm,22.0s	125.78	27	IAMs_20	IAMs_20	11 29 56.3		
J60A	**Lant Hill Farm** baz=341,SNR=6.8	125.80	14	P	PKPdf	10 35 43.3	-0.1	
N53A	**Lisbon** baz=332,SNR=9.4	125.81	21	P	PKPdf	10 35 42.9	-0.6	
N53A	**Lisbon**	125.81	21	PKPdf	PKPdf	10 35 43.4	-0.1	
N53A	comp=Z,4µm,20.0s			IAMs_20	IAMs_20	11 36 07.7		
LPAR	**Lepanto**	125.87	33		PKiKP	10 35 44.2	+0.1	
K59A	**Cooperstown** baz=339	125.88	15	P	PKPdf	10 35 42.8	-0.7	
J61A	**Chester** baz=342	125.90	13	P	PKPdf	10 35 43.3	-0.2	
ZAIG	**Zacatecas** comp=Z,4µm,21.0s	125.91	53	IAMs_20	IAMs_20	11 20 39.8		
I64A	**Boothbay** baz=346	125.94	10	P	PKPdf	10 35 43.6	0.0	
M55A	**Ridgway** baz=334,SNR=6.2	125.94	19	P	PKPdf	10 35 43.2	-0.5	
M55A	**Ridgway**	125.94	19	PKPdf	PKPdf	10 35 42.6	-1.1	
735A	**Kenedy** comp=Z,3µm,20.0s	125.96	44	IAMs_20	IAMs_20	11 34 47.0		
N54A	**Moraine State** baz=333,SNR=8.0	125.98	21	P	PKPdf	10 35 43.4	-0.4	
L57A	**Andrews Acres** baz=337,SNR=8.9	126.04	17	P	PKPdf	10 35 43.3	-0.6	
O52A	**Adamsville** baz=330,SNR=7.2	126.05	23	P	PKPdf	10 35 43.8	-0.2	
O52A	**Adamsville**	126.05	23	PKPdf	PKPdf	10 35 42.0	-1.9	
M56A	**Emporium** baz=335,SNR=8.9	126.11	19	P	PKPdf	10 35 43.4	-0.6	
BINY	**Binghamton** baz=338,SNR=7.5	126.11	17	P	PKPdf	10 35 43.7	-0.3	
P51A	**Williamsport** baz=329,SNR=6.2	126.12	24	P	PKPdf	10 35 43.5	-0.6	
NATX	**Nacogdoches** baz=313	126.12	39	P	PKiKP	10 35 44.7	0.0	
O53A	**New Philadelph** baz=331,SNR=7.6	126.17	22	P	PKPdf	10 35 43.5	-0.6	
J62A	**Henniker** baz=343	126.17	13	P	PKPdf	10 35 44.0	0.0	
Z41A	**Richland Creek** baz=316,SNR=5.6	126.20	36	P	PKiKP	10 35 44.7	-0.1	
TRY	**Troy** comp=Z,3µm,20.0s	126.22	14	IAMs_20	IAMs_20	11 39 06.3		
K60A	**Five Rivers En** baz=340	126.27	15	P	PKPdf	10 35 44.2	0.0	
J63A	**Strafford** baz=344	126.28	12	P	PKPdf	10 35 44.0	-0.2	
L58A	**Harry Jones Me** baz=338,SNR=5.1	126.29	16	P	PKPdf	10 35 44.5	+0.2	
P52A	**Corning** baz=330,SNR=7.5	126.35	23	P	PKPdf	10 35 43.8	-0.7	
X43A	**Marvell** baz=318	126.37	34	P	PKPdf	10 35 44.9	+0.3	
K61A	**Williamstown** baz=341	126.38	14	P	PKPdf	10 35 44.4	-0.1	
L59A	**Walton** baz=339	126.38	16	P	PKiKP	10 35 44.8	-0.2	
L59A	**Walton** comp=Z,4µm,20.0s	126.38	16	IAMs_20	IAMs_20	11 37 36.5		
Q51A	**Peebles** baz=328,SNR=9.0	126.39	25	P	PKPdf	10 35 44.2	-0.4	
Q51A	**Peebles** comp=Z,4µm,19.0s	126.39	25	IAMs_20	IAMs_20	11 39 46.2		
T47A	**Sharon Grove** comp=Z,4µm,20.0s	126.41	29	IAMs_20	IAMs_20	11 38 20.0		
MET	**Memphis--Engin** comp=Z,5µm,21.0s	126.43	33	IAMs_20	IAMs_20	11 27 53.1		
N55A	**Marion Center** baz=334,SNR=5.9	126.48	20	P	PKPdf	10 35 44.1	-0.6	
O54A	**Avella** baz=332,SNR=11	126.53	21	P	PKiKP	10 35 45.1	-0.2	
M57A	**Sunshine Farm,** baz=336,SNR=9.9	126.57	18	P	PKPdf	10 35 44.8	0.0	
HKT	**Hockley**	126.58	42	PKiKP	PKiKP	10 35 45.8	+0.2	
HKT	comp=Z,4µm,20.0s			MLR	MLR			
HKT	**Hockley**	126.58	42		PKiKP	10 35 45.8	+0.2	
N56A	**West Decatur** baz=335	126.58	19	P	PKiKP	10 35 45.2	-0.2	
R50A	**Paris** comp=Z,4µm,22.0s	126.61	26	IAMs_20	IAMs_20	11 34 57.1		
K62A	**Royalston** baz=342,SNR=5.3	126.62	13	P	PKPdf	10 35 44.9	0.0	
KVTX	**Kingsville** comp=Z,3µm,21.0s	126.71	45	IAMs_20	IAMs_20	11 32 00.0		
L61B	**Northampton** baz=342,SNR=5.3	126.72	14	P	PKPdf	10 35 44.9	-0.2	
WVT	**Waverly**	126.73	30	PKiKP	PKPdf	10 35 45.3	0.0	
WVT	comp=Z,3µm,21.0s			MLR	MLR			
WVT	**Waverly** baz=322	126.73	30	P	PKPdf	10 35 45.2	-0.2	
WVT	**Waverly**	126.73	30		PKPdf	10 35 45.3	0.0	
WVT	**Waverly** comp=Z,3µm,21.0s	126.73	30	IAMs_20	IAMs_20	11 31 28.9		
M58A	**Price's Panora** baz=337	126.74	17	P	PKPdf	10 35 45.3	+0.1	
K63A	**Dunstable** baz=343	126.75	12	P	PKiKP	10 35 45.5	-0.1	
L61A	**Hillsdale 1, H** baz=341,SNR=7.0	126.76	14	P	PKPdf	10 35 45.3	+0.1	
P53A	**Whipple** baz=331,SNR=15	126.77	23	P	PKiKP	10 35 45.6	-0.2	
P53A	**Whipple**	126.77	23	PKPdf	PKPdf	10 35 44.8	-0.5	
L60A	**Shokan** baz=340,SNR=6.1	126.78	15	P	PKPdf	10 35 45.4	+0.1	
M59A	**Waymart** baz=338,SNR=7.4	126.87	16	P	PKPdf	10 35 45.5	+0.1	
Q52A	**Bidwell** baz=330,SNR=12	126.88	24	P	PKPdf	10 35 44.8	-0.7	
O55A	**Ligonier** baz=333,SNR=6.0	126.89	20	P	PKPdf	10 35 45.3	-0.2	
HRV	**Adam Dziewonsk**	126.92	13	PKIKP	PKiKP	10 35 46.5	+0.5	
HRV	**Adam Dziewonsk** baz=343	126.92	13	P	PKPdf	10 35 45.2	-0.3	
HRV	**Adam Dziewonsk**	126.92	13		PKiKP	10 35 46.5	+0.5	
QUA2	**Belchertown** comp=Z,4µm,20.0s	126.96	13	IAMs_20	IAMs_20	11 34 22.8		
N57A	**Milroy** baz=336,SNR=6.3	126.97	19	P	PKPdf	10 35 45.4	-0.3	
SSPA	**Standing Stone** baz=335	126.97	19	P	PKPdf	10 35 45.5	-0.1	
SSPA	**Standing Stone**	126.97	19		PKPpre	10 35 33.1		
SSPA					PKPdf	10 35 45.6	-0.1	
P54A	**Burton** baz=332,SNR=7.2	127.00	22	P	PKPdf	10 35 45.8	0.0	
O56A	**Blue Knob Stat** baz=334,SNR=7.8	127.08	20	P	PKPdf	10 35 45.6	-0.3	
O56A	**Blue Knob Stat** comp=Z,3µm,22.0s	127.08	20	IAMs_20	IAMs_20	11 34 24.3		
L62A	**Suffield** baz=342	127.12	14	P	PKPdf	10 35 45.4	-0.5	
N58A	**Sunbury** baz=337,SNR=7.7	127.15	18	P	PKPdf	10 35 45.8	-0.1	
OXF	**Oxford** baz=320,SNR=20	127.17	33	P	PKPdf	10 35 46.0	-0.2	
OXF	**Oxford** comp=Z,4µm,22.0s	127.17	33	IAMs_20	IAMs_20	11 28 12.8		
MCWV	**Mont Chateau** baz=333	127.18	21	P	PKPdf	10 35 45.5	-0.5	
Q53A	**Leroy** baz=330,SNR=7.3	127.26	23	P	PKPdf	10 35 46.1	-0.2	
M60A	**Port Jervis** baz=339,SNR=5.3	127.29	16	P	PKPdf	10 35 46.1	-0.1	
P55A	**Reedsville** baz=332,SNR=5.4	127.32	21	P	PKPdf	10 35 45.8	-0.6	
N59A	**State Game Lan** baz=338,SNR=5.8	127.36	17	P	PKPdf	10 35 46.5	0.0	
143A	**Socs Landing,** comp=Z,5µm,22.0s	127.41	36	IAMs_20	IAMs_20	11 24 47.5		
Q54A	**Coxs Mills** baz=331,SNR=6.4	127.42	22	P	PKPdf	10 35 46.2	-0.3	
U49A	**Red Boiling Sp** comp=Z,3µm,20.0s	127.42	28	IAMs_20	IAMs_20	11 39 50.7		
T50A	**Nancy** comp=Z,3µm,22.0s	127.43	27	IAMs_20	IAMs_20	11 35 45.0		
O57A	**Amberson** baz=335,SNR=5.7	127.44	19	P	PKPdf	10 35 46.3	-0.3	
PLAL	**Pickwick Lake** comp=Z,3µm,22.0s	127.51	31	IAMs_20	IAMs_20	11 37 07.5		
L63A	**North Scituate** baz=343	127.52	13	P	PKPdf	10 35 46.2	-0.5	
M61A	**Granite Spring** baz=340,SNR=8.7	127.53	15	P	PKPdf	10 35 46.3	-0.4	
V48A	**Smith Brothers** comp=Z,4µm,20.0s	127.54	30	IAMs_20	IAMs_20	11 36 44.1		
R53A	**Hurricane** baz=330,SNR=9.7	127.55	24	P	PKPdf	10 35 46.5	-0.3	
N60A	**Cedar Hill Far** baz=338,SNR=6.4	127.59	16	P	PKPdf	10 35 46.4	-0.4	
Y45A	**Yeager Farm, C** comp=Z,4µm,22.0s	127.59	33	IAMs_20	IAMs_20	11 28 28.0		
L64A	**Middleborough** baz=344	127.62	12	P	PKPdf	10 35 46.3	-0.5	
M62A	**Hamden** baz=341	127.63	14	P	PKPdf	10 35 46.4	-0.5	
P56A	**Dayton Farm, R** baz=334,SNR=9.7	127.67	20	P	PKPdf	10 35 47.1	0.0	
L65A	**Cape Cod Natio** baz=345	127.68	11	P	PKPdf	10 35 45.8	-1.1	
Q55A	**Buckhannon** baz=332,SNR=5.8	127.69	22	P	PKPdf	10 35 47.0	-0.2	
YLE	**Yale** comp=Z,4µm,20.0s	127.74	14	IAMs_20	IAMs_20	11 32 31.1		
O58A	**Lewisberry** baz=336,SNR=8.3	127.74	18	P	PKPdf	10 35 46.8	-0.3	
WSPT	**Westport, CT** comp=Z,3µm,20.0s	127.78	15	IAMs_20	IAMs_20	11 37 46.9		
PAL	**Palisades** baz=340	127.78	15	P	PKiKP	10 35 47.5	-0.2	
PAL	**Palisades** comp=Z,4µm,22.0s	127.78	15	IAMs_20	IAMs_20	11 32 08.7		
O59A	**Robesonia** baz=337,SNR=7.8	127.79	18	P	PKPdf	10 35 47.2	-0.1	
M63A	**Gales Ferry** baz=342	127.86	13	P	PKPdf	10 35 47.2	-0.1	
M64A	**Tiverton** baz=343	127.91	13	P	PKPdf	10 35 46.9	-0.5	
N61A	**South Mountain** baz=339	127.92	16	P	PKPdf	10 35 47.8	+0.3	
Q56A	**Snyder Ridge,** baz=333,SNR=7.0	127.97	21	P	PKPdf	10 35 47.5	-0.1	
N62A	**Caumsett State** baz=340	127.97	15	P	PKPdf	10 35 47.0	-0.5	
P57A	**Homestead Farm** baz=335,SNR=9.3	127.97	20	P	PKPdf	10 35 47.5	-0.1	
M65A	**Busby, Falmout** baz=344	128.01	12	P	PKiKP	10 35 48.1	0.0	
M65A	**Busby, Falmout** comp=Z,4µm,22.0s	128.01	12	IAMs_20	IAMs_20	11 33 10.7		
O60A	**Telford** baz=338	128.02	17	P	PKPdf	10 35 47.7	+0.1	
S53A	**Williamson** baz=329	128.04	24	P	PKPdf	10 35 48.0	+0.2	
R54A	**Victor** baz=331,SNR=7.1	128.06	23	P	PKPdf	10 35 47.2	-0.6	
N63A	**Mattituck** baz=342	128.15	14	P	PKPdf	10 35 47.1	-0.7	
P58A	**Pank, Wackersv** baz=336,SNR=5.8	128.20	19	P	PKPdf	10 35 48.1	0.0	
Q57A	**Strasburg** baz=334,SNR=7.4	128.24	20	P	PKPdf	10 35 48.0	-0.1	
S54A	**Dingess, Beckl** baz=330	128.26	24	P	PKPdf	10 35 47.8	-0.5	
VBMS	**Vicksburg** baz=318	128.28	36	P	PKPdf	10 35 48.3	0.0	
R55A	**Marlinton** baz=332,SNR=6.0	128.30	22	P	PKPdf	10 35 48.4	0.0	
P59A	**Jarrettsville** baz=337,SNR=5.3	128.36	18	P	PKPdf	10 35 47.9	-0.4	
PSUB	**Penn St. - Bra** comp=Z,4µm,22.0s	128.36	17	IAMs_20	IAMs_20	11 31 38.1		
SWET	**Sewanee**	128.39	29		PKPdf	10 35 47.1	-1.5	
P60A	**Greenville** baz=338,SNR=5.3	128.42	17	P	PKPdf	10 35 48.2	-0.2	
X48A	**Hartselle**	128.45	31		PKPdf	10 35 47.9	-0.8	
X48A				IAMs_20	IAMs_20	11 32 22.4		
O61A	comp=Z,4µm,22.0s **Allentown** baz=339	128.46	16	P	PKPdf	10 35 48.0	-0.5	
T53A	**Wise** baz=328,SNR=8.6	128.47	25	P	PKPdf	10 35 48.8	+0.1	
Q58A	**Fox Den Farm,** baz=335,SNR=7.6	128.57	20	P	PKPdf	10 35 48.9	+0.1	
S55A	**Lewisburg** baz=331	128.60	23	P	PKPdf	10 35 48.2	-0.7	
W50A	**Signal Mountai** comp=Z,4µm,22.0s	128.70	29	IAMs_20	IAMs_20	11 33 39.8		
344A	**Westbrook Farm** comp=Z,3µm,21.0s	128.71	36	IAMs_20	IAMs_20	11 25 12.0		
146A	**Union** comp=Z,4µm,22.0s	128.79	34	IAMs_20	IAMs_20	11 33 22.6		
P61A	**Hammonton** baz=339	128.79	17	P	PKPdf	10 35 49.2	+0.1	
T54A	**Tazewell** baz=330,SNR=5.5	128.79	24	P	PKPdf	10 35 48.8	-0.6	
R57A	**Stanardsville** baz=334,SNR=6.5	128.86	21	P	PKPdf	10 35 49.4	+0.1	
Z47A	**Carrollton** comp=Z,4µm,21.0s	128.90	33	IAMs_20	IAMs_20	11 29 29.3		
V52A	**Sevierville** comp=Z,3µm,20.0s	128.97	27	IAMs_20	IAMs_20	11 39 26.7		
Q59A	**Harwood** baz=336	128.97	19	P	PKPdf	10 35 49.3	-0.1	
S56A	**Natural Bridge** baz=332	129.04	22	P	PKPdf	10 35 49.5	-0.2	
TKL	**Tuckaleechee C** comp=Z,53nm,1.1s,baz=251,slow=1.7,SNR=22	129.04	27	PKP	PKPdf	10 35 50.0	+0.3	

TKL	Tuckaleechee C	129.04	27	IAMs_20	IAMs_20	11 36 52.6		
	comp=Z,4μm,22.0s							
R58A	Rapidan	129.04	20	P	PKPdf	10 35 49.8	+0.1	
	baz=334,SNR=12							
T55A	Pulaski	129.06	24	P	PKPdf	10 35 49.8	0.0	
	baz=331,SNR=5.5							
Q60A	Greensboro	129.10	18	P	PKPdf	10 35 50.0	+0.3	
	baz=337							
Q60A	Greensboro	129.10	18	IAMs_20	IAMs_20	11 42 28.7		
	comp=Z,4μm,20.0s							
BLA	Blacksburg	129.12	23	P	PKPdf	10 35 49.9	-0.1	
	baz=331							
BLA	Blacksburg	129.12	23	IAMs_20	IAMs_20	11 32 00.4		
	comp=Z,3μm,20.0s							
U54A	Nelsons Funny	129.16	25	P	PKPdf	10 35 49.7	-0.3	
	baz=329							
S57A	Dark Hollow, R	129.19	21	P	PKPdf	10 35 49.8	-0.2	
	baz=333							
S57A	Dark Hollow, R	129.19	21		PKPdf	10 35 49.7	-0.2	
Y49A	Blount Mountai	129.24	31	IAMs_20	IAMs_20	11 28 47.3		
	comp=Z,5μm,22.0s							
CBN	Corbin Frederi	129.34	20	P	PKPdf	10 35 49.4	-0.8	
	baz=335							
Q61A	Milford	129.37	18	P	PKPdf	10 35 49.5	-0.8	
	baz=338							
R58B	Mineral	129.38	20	P	PKPdf	10 35 50.3	0.0	
	baz=334,SNR=5.7							
R59A	King George, V	129.43	20	P	PKPdf	10 35 50.4	0.0	
	baz=335							
T56A	Rocky Mt	129.43	23	P	PKPdf	10 35 50.4	-0.1	
	baz=331,SNR=5.9							
X51A	Calhoun	129.44	29	IAMs_20	IAMs_20	11 41 44.2		
	comp=Z,3μm,20.0s							
U55A	TA2, Sparta	129.49	24	P	PKPdf	10 35 50.7	+0.1	
	baz=330,SNR=8.1							
R60A	Leonardtown, M	129.54	19	P	PKPdf	10 35 50.6	0.0	
	baz=336							
LRAL	Lakeview Retre	129.59	32	P	PKPdf	10 35 50.9	0.0	
	baz=322,SNR=9.8							
LRAL	Lakeview Retre	129.59	32	IAMs_20	IAMs_20	11 40 51.6		
	comp=Z,3μm,20.0s							
S58A	Poland Farm, P	129.64	21	P	PKPdf	10 35 50.8	0.0	
	baz=334,SNR=7.8							
S58A	Poland Farm, P	129.64	21	IAMs_20	IAMs_20	11 36 05.1		
	comp=Z,4μm,22.0s							
V54A	Nebo	129.74	25	P	PKPdf	10 35 51.0	-0.1	
	baz=329,SNR=10							
T57A	Hurt	129.75	22	P	PKPdf	10 35 50.4	-0.7	
	baz=332							
S59A	Mechanicsville	129.77	20	P	PKPdf	10 35 51.1	+0.1	
	baz=335,SNR=6.6							
R61A	Willards	129.87	18	IAMs_20	IAMs_20	11 38 46.1		
	comp=Z,4μm,20.0s							
U56A	King	129.89	24	P	PKPdf	10 35 50.7	-0.7	
	baz=331							
U56A	King	129.89	24	IAMs_20	IAMs_20	11 32 03.7		
	comp=Z,4μm,22.0s							
Z50A	Ashland	129.97	31	P	PKPdf	10 35 51.3	-0.3	
	baz=323,SNR=5.3							
Z50A	Ashland	129.97	31	IAMs_20	IAMs_20	11 33 17.5		
	comp=Z,4μm,22.0s							
V55A	Taylorsville	129.98	25	P	PKPdf	10 35 51.6	0.0	
	baz=330,SNR=6.2							
S60A	Water View	130.03	19	P	PKiKP	10 35 52.2	-0.2	
	baz=336							
T58A	Grand View Acr	130.06	22	P	PKPdf	10 35 51.4	-0.3	
	baz=333,SNR=6.7							
U57A	Blanch	130.22	23	P	PKPdf	10 35 51.8	-0.2	
	baz=332,SNR=6.2							
W54A	Cherokee Point	130.22	26	P	PKPdf	10 35 52.0	0.0	
	baz=328,SNR=6.3							
Z51A	Franklin	130.29	30	IAMs_20	IAMs_20	11 29 53.0		
	comp=Z,4μm,20.0s							
V56A	Mocksville	130.31	24	P	PKPdf	10 35 52.1	-0.1	
	baz=330,SNR=5.1							
S61A	Accomac	130.37	18	P	PKiKP	10 35 52.8	-0.2	
	baz=337							
Y52A	Lilburn	130.39	29	P	PKPdf	10 35 52.5	+0.1	
	baz=325,SNR=8.5							
Y52A	Lilburn	130.39	29		PKiKP	10 35 53.5	+0.3	
Y52A				IAMs_20	IAMs_20	11 37 11.4		
	comp=Z,4μm,21.0s							
T59A	Double "B" Far	130.39	21	P	PKPdf	10 35 52.4	+0.2	
	baz=334,SNR=7.4							
T59A	Double "B" Far	130.39	21		PKiKP	10 35 53.9	+0.8	
UNM	Universidad Na	130.39	55	IAMs_20	IAMs_20	11 23 52.0		
	comp=Z,4μm,20.0s							
T60A	Surry	130.52	20	P	PKPdf	10 35 52.5	0.0	
	baz=335							
V57A	Coltrane Farms	130.53	23	P	PKPdf	10 35 52.1	-0.4	
	baz=331,SNR=5.2							
KMSC	Kings Mountain	130.54	25	P	PKPdf	10 35 52.5	-0.1	
	baz=329,SNR=6.2							
U58A	Oxford	130.55	22	P	PKPdf	10 35 52.6	0.0	
	baz=333,SNR=6.0							
X54A	Belton	130.59	27	P	PKPdf	10 35 53.1	+0.3	
	baz=328,SNR=6.0							
PAULI	Pauline	130.61	26		PKiKP	10 35 54.0	+0.4	
250A	Grady	130.80	32	IAMs_20	IAMs_20	11 39 27.6		
	comp=Z,3μm,21.0s							
W56A	Indian Trail	130.86	25	P	PKPdf	10 35 53.3	+0.1	
	baz=330							
U59A	Littleton	130.86	21	P	PKPdf	10 35 53.1	0.0	
	baz=334							
V58A	Windy Hill, Pi	130.87	23	P	PKPdf	10 35 53.1	-0.1	
	baz=332							
U60A	Pendleton	130.98	21	P	PKPdf	10 35 53.3	0.0	
	baz=335							
X55A	Gracelyn & Ava	130.98	26	P	PKPdf	10 35 53.6	+0.1	
	baz=328,SNR=6.4							
GOGA	Godfrey	131.04	29	P	PKPdf	10 35 53.8	+0.2	
	baz=326,SNR=7.4							
W57A	Gilead	131.08	24	P	PKPdf	10 35 54.0	+0.4	
	baz=331							
W57A	Gilead	131.08	24	IAMs_20	IAMs_20	11 32 17.5		
	comp=Z,4μm,22.0s							
V59A	Middlesex	131.22	22	P	PKPdf	10 35 54.1	+0.3	
	baz=333,SNR=5.0							
X56A	White Oak	131.22	25	P	PKPdf	10 35 54.1	+0.2	
	baz=329,SNR=5.6							
Y55A	Saluda	131.34	27	P	PKPdf	10 35 54.5	+0.3	
	baz=328							
U61A	Possum Corner	131.35	20	P	PKPdf	10 35 53.6	-0.5	
	baz=335							
W58A	Raeford	131.50	23	P	PKPdf	10 35 54.5	+0.1	
	baz=332							
V60A	Jim Taylor Roa	131.58	21	P	PKPdf	10 35 54.5	-0.1	
	baz=334							
X57A	Johnson Farm,	131.64	25	P	PKPdf	10 35 55.0	+0.3	
	baz=330							
W59A	Clinton	131.68	23	P	PKPdf	10 35 55.1	+0.3	
	baz=333							
Y56A	Pelion	131.70	26	P	PKPdf	10 35 55.4	+0.5	
	baz=328							
TLIG	Tlapa	131.79	56		PKPdf	10 35 55.3	-0.3	
TLIG				IAMs_20	IAMs_20	11 27 32.4		
	comp=Z,3μm,21.0s							
V61A	Roper	131.79	20	P	PKPdf	10 35 55.3	+0.4	
	baz=335							
CNNC	Cliffs of the	131.82	22	P	PKPdf	10 35 54.7	-0.3	
	baz=333							
X58A	Rowland	131.87	24	P	PKPdf	10 35 55.2	+0.1	
	baz=331							
352A	Blakely	131.89	31	IAMs_20	IAMs_20	11 39 16.4		
	comp=Z,4μm,20.0s							
Y57A	Sumter	131.90	25	P	PKPdf	10 35 55.5	+0.3	
	baz=330							
Y57A	Sumter	131.90	25	IAMs_20	IAMs_20	11 37 35.3		
	comp=Z,3μm,21.0s							
HOPE	Hope Point	132.01	197	IAMs_20	IAMs_20	11 37 13.6		
	comp=Z,4μm,21.0s							
W60A	Pink Hill	132.05	22	P	PKPdf	10 35 55.8	+0.3	
	baz=333							
Z56A	Williston	132.07	27	P	PKPdf	10 35 56.1	+0.5	
	baz=328,SNR=11							
X59A	McDuffie Farm,	132.14	23	P	PKPdf	10 35 55.7	+0.1	
	baz=332							
W61A	Ground Anchor	132.20	21	P	PKPdf	10 35 55.8	+0.1	
	baz=334							
V62A	Hyde County Ai	132.21	20	P	PKPdf	10 35 55.9	+0.1	
	baz=336							
Y58A	Scranton	132.30	25	P	PKPdf	10 35 56.0	+0.1	
	baz=330							
Y58A	Scranton	132.30	25	IAMs_20	IAMs_20	11 45 49.7		
	comp=Z,3μm,19.0s							
X60A	Albert Glenn T	132.38	22	P	PKPdf	10 35 56.2	+0.1	
	baz=333							
Z57A	Bowman	132.38	26	P	PKPdf	10 35 56.4	+0.3	
	baz=329							
Y59A	Loris	132.55	24	P	PKPdf	10 35 56.7	+0.3	
	baz=332							
TIGA	Tifton	132.59	30	P	PKPdf	10 35 56.0	-0.6	
	baz=325							
Z58A	St. Stephen	132.73	25	P	PKPdf	10 35 57.3	+0.5	
	baz=330							
255A	Hazlehurst	132.74	29	IAMs_20	IAMs_20	11 37 45.6		
	comp=Z,4μm,20.0s							
NHSC	New Hope	132.77	26	P	PKPdf	10 35 57.4	+0.5	
	baz=330							
157A	Early Branch	132.78	27	P	PKPdf	10 35 57.2	+0.3	
	baz=328							
Y60A	Bolivia	132.79	23	P	PKPdf	10 35 56.8	-0.1	
	baz=332							
Z59A	Georgetown, SC	133.03	25	P	PKPdf	10 35 57.8	+0.5	
	baz=331							
158A	Hollywood	133.09	26	P	PKPdf	10 35 57.9	+0.5	
	baz=329							
MG01	Puerto William	133.89	172	IAMs_20	IAMs_20	11 33 16.7		
	comp=Z,3μm,21.0s							
CMIG	Matias Romero	135.03	54	PKP	PKPdf	10 36 01.9	+0.4	
	comp=Z,64nm,0.9s,baz=297,slow=2.3,SNR=26							
DWPF	Disney Wildern	136.39	31	P	PKPdf	10 36 03.9	+0.1	
	baz=325							
DWPF	Disney Wildern	136.39	31	IAMs_20	IAMs_20	11 44 38.5		
	comp=Z,3μm,20.0s							
GO09	Cerro Castillo	136.56	167		PKPdf	10 36 04.2	+0.8	
CCIG	Comitan	137.66	53	IAMs_20	IAMs_20	11 27 23.2		
	comp=Z,4μm,21.0s							
EFI	East Falkland	137.80	180	IAMs_20	IAMs_20	11 36 20.9		
	comp=Z,3μm,20.0s							
060A	Indiantown	137.81	30	IAMs_20	IAMs_20	11 42 19.5		
	comp=Z,4μm,20.0s							
061Z	Ochoppi	138.49	32	IAMs_20	IAMs_20	11 40 11.2		
	comp=Z,4μm,21.0s							
APG	El Apazote	139.71	53	PKhKP	PKPpre	10 36 03.3		
	comp=Z,16nm,0.9s,baz=47,slow=11,SNR=7.9							
TGUH	Tegucigalpa,Un	142.77	52	IAMs_20	IAMs_20	11 32 25.2		
	comp=Z,3μm,21.0s							
MATN	Matagalpa	144.49	52	IAMs_20	IAMs_20	11 38 32.9		
	comp=Z,2μm,21.0s							
LL01	San Ignacio de	144.74	161		PKPab	10 36 17.0	-0.1	
LL01				IAMs_20	IAMs_20	11 47 37.2		
	comp=Z,2μm,19.0s							
ACON	Acoyapa	145.65	52	iP	PKPbc	10 36 21.0	0.0	
GBS3	Finca Las Img	146.12	54	eP	PKPdf	10 36 21.7	+0.1	
GB1A	Boringuen Arri	146.15	54	eP	PKPbc	10 36 22.4	-0.3	
LAPC	Finca la Perla	146.15	54	eP	PKPdf	10 36 20.0	-1.6	
MBJ	Montego Bay	146.15	35	iP	PKPab	10 36 23.1	0.0	
BUEV	Buena Vista	146.15	54	eP	PKPdf	10 36 21.0	-0.7	
BUAI	Buenos Aires	146.16	54	eP	PKPdf	10 36 20.2	-1.5	
ESPN	Las Esperanzas	146.19	51	eP	PKPdf	10 36 22.0	+0.3	
ESPN	Las Esperanzas	146.19	51	IAMs_20	IAMs_20	11 32 12.9		
	comp=Z,2μm,22.0s							
GPS3	Bodega del ICE	146.21	54	eP	PKPdf	10 36 21.7	-0.1	
LIM1	Limonal	146.33	54	eP	PKPdf	10 36 21.7	-0.3	
GUAB	Guayabo de Bag	146.34	54	eP	PKPbc	10 36 23.0	-0.2	
GTBY	Guantanamo Bay	146.37	30	eP	PKPbc	10 36 23.3	+0.3	
GUAI	GUAI	146.37	55	eP	PKPbc	10 36 22.7	-0.5	
HORNC	Hornillas	146.38	54	eP	PKPdf	10 36 21.7	-0.4	
COLC	Colonia	146.39	54	eP	PKPdf	10 36 21.4	-0.7	
CUI	Cuipilapa	146.43	54	eP	PKPdf	10 36 21.2	-1.0	
PLVR	Palo Verde	146.45	55	eP	PKPdf	10 36 22.3	0.0	
MTDJ	Mount Denham	146.47	35	IAMs_20	IAMs_20	11 47 43.2		
	comp=Z,3μm,21.0s							
BBJ	Bamboo Saint A	146.50	35	iP	PKPab	10 36 24.1	-0.3	
PTEN	Parque Tenorio	146.53	54	eP	PKPdf	10 36 21.7	-0.7	
ACAL	Aguas Claras	146.54	54	eP	PKPdf	10 36 21.4	-1.0	
MCJ	Malvern	146.63	36	iP	PKPbc	10 36 24.3	+0.4	
PAYG	Puerto Ayora	146.70	77		PKPab	10 36 24.9	-0.5	
GRTK	Grand Turk	146.72	23	IAMs_20	IAMs_20	11 47 35.5		
	comp=Z,3μm,22.0s							
BNJ	Bonny Glate	146.73	34	iP	PKPab	10 36 25.0	-0.3	
JTS	Las Juntas de	146.81	55	PKPbc	PKPdf	10 36 22.6	-0.1	
	comp=Z,131nm,1.0s,baz=11,slow=3.0,SNR=38							
JTS	Las Juntas de	146.81	55		PKPdf	10 36 23.1	+0.4	
PLCA	Paso Flores	146.81	162	PKPbc	PKPdf	10 36 22.5	+0.4	
	comp=Z,77nm,0.8s,baz=200,slow=3.8,SNR=120							
CEDE	Laguna Cedeo	146.89	54	eP	PKPdf	10 36 22.7	-0.2	
ARE1	Arenal 1	146.90	54	eP	PKPdf	10 36 22.3	-0.6	
CASO	Castillo	146.90	54	eP	PKPdf	10 36 22.7	-0.2	
FORC	Fortuna	146.93	54	eP	PKPdf	10 36 23.0	+0.1	
STH	Stony Hill	147.00	34	iP	PKPab	10 36 25.9	-0.5	
PCJ	Portland Cotta	147.07	35	iP	PKPbc	10 36 25.2	+0.1	
HOJ	Hope	147.09	34	iP	PKPab	10 36 26.0	-0.7	
CMJ	Castle Mountai	147.19	34	iP	PKPbc	10 36 26.3	+0.8	
PRVC	Isla de Provid	147.60	46	eP	PKPdf	10 36 23.6	-0.4	
HDC	Heredia	147.65	54	eP	PKPdf	10 36 24.4	+0.2	
HDC	Heredia	147.65	54	IAMs_20	IAMs_20	11 57 42.4		
	comp=Z,3μm,20.0s							
LCR2	La Lucha 2	147.88	54	eP	PKPdf	10 36 25.3	+0.5	
CVTR	Volcan Turrial	147.92	54	eP	PKPdf	10 36 25.1	0.0	
EDDO	Dominical	148.28	55	eP	PKPdf	10 36 23.5	-1.6	
EDLM	Las Mercedes	148.48	55	eP	PKPdf	10 36 26.3	+0.7	
DRK0	Durika	148.77	54	eP	PKPdf	10 36 26.6	+0.4	
BI03	Tigo	149.41	156	IAMs_20	IAMs_20	11 34 53.7		
	comp=Z,3μm,21.0s							
BRU2	Volcan	149.49	55	eP	PKPdf	10 36 26.8	-0.5	
BI02	San Fabin de	150.25	158		PKPdf	10 36 28.0	+0.2	
MLPR	Magueyes Islan	151.41	18		PKPab	10 36 44.8	+0.7	
GO05	Huala	151.44	156	IAMs_20	IAMs_20	11 51 23.5		
	comp=Z,2μm,19.0s							
BCIP	Isla Barro Col	151.49	50	eP	PKPbc	10 36 35.7	-0.7	
BCIP	Isla Barro Col	151.49	50	eP	PKPdf	10 36 29.8	-0.4	
SJG	San Juan	151.54	17	PKIKP	PKPdf	10 36 31.6	+1.4	
SJG	San Juan	151.54	17		PKPdf	10 36 31.6	+1.4	
SJG	San Juan	151.54	17	IAMs_20	IAMs_20	11 46 02.0		
	comp=Z,2μm,21.0s							
UPA	Univ. de Panam	151.84	50	eP	PKPdf	10 36 30.0	-0.8	
AZU	Azuero	152.00	53	eP	PKPdf	10 36 29.4	-1.6	
AZU	Azuero	152.00	53	eP	PKPdf	10 36 30.8	-0.2	
BO02	Sierra Bellavi	152.09	157	IAMs_20	IAMs_20	11 42 19.5		
	comp=Z,2μm,21.0s							
SMRT	St. Maarten	152.31	11	IAMs_20	IAMs_20	12 00 17.1		
	comp=Z,3μm,20.0s							
SABA	Saba	152.70	11	IAMs_20	IAMs_20	11 49 49.4		
	comp=Z,3μm,22.0s							
ANWB	Willy Bob	152.89	8	IAMs_20	IAMs_20	11 44 18.4		
	comp=Z,3μm,22.0s							
MT05	Renca	153.33	156	IAMs_20	IAMs_20	11 40 57.5		
	comp=Z,2μm,21.0s							
PEL	Peldehue	153.57	155	IAMs_20	IAMs_20	11 36 11.0		
	comp=Z,2μm,21.0s							
CAPC	Capugana	153.69	48	eP	PKPdf	10 36 32.9	-0.6	
SMRC	Santa Marta, M	153.99	39	eP	PKPdf	10 36 28.2	-5.7	
SJCC	San Jacinto, C	154.33	42	eP	PKPdf	10 36 33.4	-1.0	
SJCC				eP	PKPbc	10 36 36.9	-5.8	
CO04	Los Peladeros	154.40	154	IAMs_20	IAMs_20	11 47 31.9		
	comp=Z,2μm,20.0s							
URIC	Uribia, Colomb	154.86	34	eP	PKPdf	10 36 34.6	-0.5	
ARGC	Ariguani, Magd	154.97	41	eP	PKPdf	10 36 35.1	-0.1	
CO02	Combarbal	155.10	153	IAMs_20	IAMs_20	11 38 20.6		
	comp=Z,2μm,22.0s							
CO03	El Pedregal	155.55	153	IAMs_20	IAMs_20	11 49 26.5		
	comp=Z,2μm,20.0s							
UREC	San Jos de Ur	155.61	46	eP	PKPdf	10 36 35.9	-0.3	
DBBC	Dabeiba	155.61	49	eP	PKPdf	10 36 36.6	+0.3	
FDF	Fort de France	155.87	8	IAMs_20	IAMs_20	11 46 08.3		
	comp=Z,3μm,21.0s							
SMLC	San Martn de	155.87	42	eP	PKPdf	10 36 34.6	-1.9	
CFA	Coronel Fontan	155.88	158	PKP	PKPdf	10 36 36.4	+0.2	
	comp=Z,25nm,1.1s,baz=238,slow=2.7,SNR=22							
CFA				PKPbc	pPKPdf	10 36 45.2	+0.4	
	comp=Z,28nm,0.6s,baz=230,slow=2.4,SNR=32							
CFA				PP	PP	10 40 39.8	+1.0	
	comp=Z,1.4nm,0.4s,baz=191,slow=4.9,SNR=1.9							
PIZC	Pizarro, Choco	156.00	54	eP	PKPdf	10 36 37.7	+1.0	
DABV	Dabajuro	156.24	32	eP	PKPdf	10 36 36.8	-0.2	
ZARC	Zaragoza, Cauc	156.27	46	eP	PKPdf	10 36 36.7	-0.3	
GR1C	Gorgona, Isla	156.42	60	eP	PKPdf	10 36 35.7	-1.6	
CBOC	Ciudad Bolivar	156.51	51	eP	PKPdf	10 36 36.1	-1.4	
CO01	Juntas del Tor	156.55	153	IAMs_20	IAMs_20	11 51 39.2		
	comp=Z,3μm,20.0s							
MALC	Bahia Malaga	156.57	56	eP	PKPdf	10 36 38.5	+1.1	
HELC	Santa Helena	156.66	49	eP	PKPdf	10 36 37.5	-0.6	
OCAC	Ocana	156.78	42	eP	PKPdf	10 36 36.9	-1.0	
PAC1	Pacto, Paraso	157.17	66	eP	PKPdf	10 36 37.7	-0.7	
PTBC	PUERTO BERRIO	157.21	47	eP	PKPdf	10 36 36.3	-1.9	
BRRC	Barranca, Sant	157.34	44	eP	PKPdf	10 36 37.6	-0.9	
YOTC	Yotoco, Valle	157.40	55	eP	PKPdf	10 36 37.8	-0.9	
GUY2C	Guyana, Caldas	157.41	51	eP	PKPdf	10 36 38.3	-0.8	
CUSE	Cuicocha Este	157.51	66	eP	PKPdf	10 36 39.0	-0.2	
NORC	Norcasia	157.57	49	eP	PKPdf	10 36 38.0	-0.8	
RREF	El Recreo	157.63	51	eP	PKPdf	10 36 38.7	-0.9	
ANIL	Santa Ana	157.84	52	eP	PKPdf	10 36 39.3	-0.2	
RCBR	Riachuelo	157.85	278	PKP	PKPdf	10 36 39.2	+0.1	
	comp=Z,25nm,1.0s,baz=38,slow=2.3,SNR=5.5							
RCBR				PKPab	PKPab	10 37 12.2	+0.2	
	comp=Z,69nm,0.8s,baz=69,slow=5.0,SNR=16							
RCBR	Riachuelo	157.85	278		PKPab	10 37 12.6	+0.6	
PAMC	Pamplona, Colo	157.86	42	eP	PKPdf	10 36 39.1	-0.6	
SDV	Santo Domingo	157.93	35	PKP	PKPdf	10 36 39.5	+0.1	
	comp=Z,74nm,1.0s,baz=324,slow=1.3,SNR=56							
SDV	Santo Domingo	157.93	35	eP	PKPdf	10 36 36.9	-2.5	
SDV	Santo Domingo	157.93	35		PKPdf	10 36 39.3	0.0	
GCUF	Volcan Galeras	158.02	62	eP	PKPdf	10 36 40.6	+0.7	
SPBC	San Pablo de B	158.10	48	eP	PKPdf	10 36 38.3	-1.1	
CRUC	La Cruz	158.20	61	eP	PKPdf	10 36 39.0	-1.0	
SOTA	Rioblanco	158.20	59	eP	PKPdf	10 36 38.7	-1.5	
PCON	Cinco Dias	158.28	59	eP	PKPdf	10 36 40.1	-0.2	
ORTC	Ortega, Tolima	158.32	53	eP	PKPdf	10 36 38.5	-1.1	
GRGR	Grenville	158.35	10	IAMs_20	IAMs_20	11 50 16.1		
	comp=Z,3μm,21.0s							
ROSC	El Rosal	158.45	50	PKP	PKPdf	10 36 39.6	-0.7	
	comp=Z,32nm,0.7s,baz=93,slow=1.1,SNR=28							
ROSC	El Rosal	158.45	50	eP	PKPdf	10 36 39.8	-0.5	
GO03	Copiap	158.47	149	IAMs_20	IAMs_20	11 42 15.1		
	comp=Z,2μm,22.0s							
RUSC	La Rusia	158.64	45	eP	PKPdf	10 36 38.7	-2.0	
PRAC	Prado	158.72	53	eP	PKPdf	10 36 38.5	-1.6	
BETC	Betania	158.88	56	eP	PKPdf	10 36 39.9	-0.5	
PUAC	Puerto Asis, P	159.03	63	eP	PKPdf	10 36 39.8	-0.7	
CHIC	Chingaza	159.03	49	eP	PKPdf	10 36 39.4	-1.6	
GARC	Garzon, Huila	159.11	58	eP	PKPdf	10 36 40.4	-0.5	
PCRV	Puerto La Cruz	159.50	19	PKP	PKPdf	10 36 40.4	-0.6	
	comp=Z,40nm,1.1s,baz=25,slow=4.7,SNR=6.6							
PCRV				PKPab	PKPab	10 37 18.2	-0.5	
	comp=Z,16nm,0.5s,baz=351,slow=12,SNR=6.6							
AC02	Maricunga	159.65	150	IAMs_20	IAMs_20	11 59 17.4		
	comp=Z,3μm,21.0s							
ATAH	Atahualpa	159.66	85	PKP	PKPdf	10 36 41.0	-0.7	
	comp=Z,82nm,1.2s,baz=339,slow=2.8,SNR=30							
ELOV	Elorza	160.11	36	eP	PKPdf	10 36 41.5	-0.2	
MACC	Macarena, Meta	160.49	55	eP	PKPdf	10 36 41.0	-1.2	
PTGC	Puerto Gaitan,	160.49	47	eP	PKPdf	10 36 39.8	-2.3	
PTLC	Puerto Leguiza	160.76	61	eP	PKPdf	10 36 40.4	-2.1	
NNA	Nana	161.26	100	PKP	PKPdf	10 36 42.8	-0.2	
	comp=Z,28nm,0.9s,baz=311,slow=5.2,SNR=6.5							
NNA	Nana	161.26	100		PKPdf	10 36 45.3	+2.3	
PARB	Paraibuna	161.75	219	eP	PKPdf	10 36 45.0	+1.7	
SPB	Sao Paulo	162.62	214		PKPab	10 37 32.2	0.0	
SPB	Sao Paulo	162.62	214	eP	PKPdf	10 36 45.6	+1.5	
LVC	Limon Verde	163.15	143	PKIKP	PKPdf	10 36 46.6	+1.5	
LVC	Limon Verde	163.15	143		PKPdf	10 36 46.6	+1.5	
MDP	Montagnes des	164.70	340	PKP	PKPdf	10 36 46.2	0.0	
	comp=Z,53nm,1.1s,baz=287,slow=1.1,SNR=5.3							
MDP				PKPab	PKPab	10 37 41.4	-0.1	
	comp=Z,74nm,1.1s,baz=2.1,slow=3.8,SNR=5.3							
MDP				PP	PP	10 41 26.5	+0.3	
	comp=Z,56nm,1.2s,baz=20,slow=7.5,SNR=5.9							
JANB	Januaria	165.50	246	eP	PKPdf	10 36 49.0	+2.0	
LPAZ	La Paz	167.93	126	PKP	PKPdf	10 36 49.9	+0.5	
	comp=Z,72nm,1.2s,baz=12,slow=1.9,SNR=47							
LPAZ	La Paz	167.93	126	eP	PKPdf	10 36 49.7	+0.3	
BDFB	Brasilia	168.45	236	PKP	PKPdf	10 36 48.3	-0.9	
	comp=Z,11nm,1.0s,baz=36,slow=4.7,SNR=9

DOT				IAmb	IAmb	10 49 08.8	
	comp=Z,2.9nm,0.7s						
SCRK	**Sand Creek**	**63.95**	**27**	P	**P**	**10 49 09.1**	**+0.6**
BMAR	**Burnt Mountain**	**64.36**	**24**	P	**P**	**10 49 12.6**	**+1.7**
BVAR	**Borovoye Array**	**66.51**	**320**	P	**P**	**10 49 25.4**	**+0.4**
	comp=Z,1.9nm,0.5s,baz=93,slow=7.5,SNR=12						
KK31	**Karatay Array**	**66.97**	**309**	IAmb	IAmb	10 49 29.4	
	comp=Z,3.5nm,0.8s						
KKAR	**Karatay Array**	**66.97**	**309**	P	**P**	**10 49 28.5**	**+0.4**
INK	**Inuvik**	**68.62**	**23**	P	**P**	**10 49 38.1**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=280,slow=7.6,SNR=3.8						
INK	**Inuvik**	**68.62**	**23**	IAmb	IAmb	10 49 44.0	
	comp=Z,6.7nm,1.4s						
AKTO	**Aktyubinsk**	**74.43**	**318**	P	**P**	**10 50 13.2**	**0.0**
	comp=Z,1.4nm,0.5s,baz=99,slow=7.2,SNR=7.3						
YKA	**Yellowknife Ar**	**77.20**	**28**	P	**P**	**10 50 28.7**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=288,slow=5.2,SNR=8.6						
NEW	**Newport**	**80.06**	**42**	P	**P**	**10 50 44.2**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=90,slow=19,SNR=2.1						
NVAR	**Mina Array Bea**	**82.28**	**52**	P	**P**	**10 50 57.6**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=266,slow=6.0,SNR=12						
FINES	**FINESS Array B**	**86.70**	**335**	P	**P**	**10 51 18.1**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=58,slow=4.7,SNR=7.0						
TORD	**Torodi Ar. Bea**	**132.65**	**310**	PKP	**PKPdf**	**10 57 49.3**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=32,slow=2.7,SNR=2.5						
LPAZ	**La Paz**	**146.99**	**90**	PKPbc	**PKPdf**	**10 58 17.1**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=38,slow=15,SNR=6.2						

*IDC **15** 11:14:51.3±1.6, 63.36S×171.90E, h0km, mb3.4/2, mb1 3.8/3, mb1mx3.6/14, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=69.3km s-min=37.8km az=68.0*

ISC 15 11:14:52.3±1.3, 63.3S±0.2×172.2E±0.4, h10km, n18, σ0.50/9, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**14.69**	**189**	Pn	**Pn**	**11 18 20.0**	**+0.3**
	0.2nm,0.3s,baz=27,slow=16,SNR=8.4						
H01W1	**Cape Leeuwin H**	**45.21**	**281**	T	T	12 10 54.1	
	baz=147,slow=76,SNR=30						
H01W2	**Cape Leeuwin H**	**45.21**	**281**	T	T	12 10 54.2	
	baz=147,slow=76,SNR=38						
H01W3	**Cape Leeuwin H**	**45.22**	**281**	T	T	12 10 55.3	
	baz=147,slow=76,SNR=38						
ASAR	**Alice Springs**	**47.05**	**309**	P	**P**	**11 23 24.5**	**+0.6**
	0.4nm,0.7s,baz=146,slow=8.5,SNR=2.5						
WRA	**Warramunga Arr**	**50.34**	**311**	P	**P**	**11 23 49.1**	**0.0**
	0.6nm,1.0s,baz=165,slow=6.7,SNR=1.6						
H03S2	**Juan Fernandez**	**68.12**	**122**	T	T	12 41 36.0	
	baz=205,slow=74,SNR=15						
H03S1	**Juan Fernandez**	**68.12**	**122**	T	T	12 41 39.7	
	baz=205,slow=74,SNR=14						
H03S3	**Juan Fernandez**	**68.14**	**122**	T	T	12 41 36.6	
	baz=205,slow=74,SNR=13						
H08S2	**Diego Garcia H**	**87.58**	**258**	T	T	13 03 54.1	
	baz=153,slow=76,SNR=14						
H08S1	**Diego Garcia H**	**87.59**	**258**	T	T	13 03 57.4	
	baz=153,slow=76,SNR=13						
H08S3	**Diego Garcia H**	**87.60**	**258**	T	T	13 04 02.1	
	baz=153,slow=76,SNR=17						
TORD	**Torodi Ar. Bea**	**129.50**	**192**	PKP	**PKPdf**	**11 34 01.0**	**0.0**
	1.4nm,1.2s,baz=187,slow=0.6,SNR=4.3						
ILAR	**Eielson Array**	**131.25**	**22**	PKP	**PKPdf**	**11 34 03.0**	**+0.3**
	0.3nm,0.8s,baz=221,slow=3.3,SNR=4.8						
YKA	**Yellowknife Ar**	**136.82**	**40**	PKP	**PKiKP**	**11 34 15.2**	**+0.2**
	0.2nm,0.7s,baz=224,slow=1.7,SNR=2.4						
KBZ	**Khabaz**	**145.29**	**260**	PKPbc	**PKPbc**	**11 34 28.4**	**-0.4**
	0.4nm,0.3s,baz=161,slow=2.6,SNR=5.0						
BRTR	**Keskin Array B**	**146.03**	**246**	PKPbc	**PKPdf**	**11 34 30.1**	**-0.6**
	1.9nm,1.0s,baz=145,slow=5.3,SNR=10						
AKASG	**Malin Array Be**	**156.63**	**255**	PKPab	**PKPab**	**11 35 14.8**	**-0.6**
	0.3nm,0.4s,baz=145,slow=3.4,SNR=4.3						

BEO 15 11:33:23.9±1.3, 42.62N×24.05E, h0km, ML1.7/3, Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VTS	**Vitosha**	**0.60**	**270**	*e*Pg	Pg	11 33 34.3	-1.1
VTS				*e*Sg	Sg	11 33 43.3	+0.1
BOSS	**Bosilegrad**	**1.17**	**264**	*e*Pg	Pg	11 33 45.9	-0.4
BOSS				*e*Sg	Sg	11 34 01.8	+0.4
ZAPS	**Zavoj**	**1.23**	**302**	*e*Pg	Pg	11 33 46.0	-1.4
ZAPS				*e*Sg	Sg	11 34 03.2	-0.1
BARS	**Barje**	**1.66**	**277**	*e*Pg	Pn	11 33 53.0	-1.3
BARS				*e*Sg	Sn	11 34 15.8	-0.5
STIP	**Stip**	**1.67**	**237**	*i* Pn	Pn	11 33 51.5	-2.9
STIP	**Stip**	**1.67**	**237**	*i* Pn	Pn	11 33 51.5	-2.9

BUC 15 11:33:45.6±0.7, 44.26N×22.85E, h13km±5km, ml1.5/4, 15C-6D, Error ellipse: s-maj=6.3km s-min=3.9km az=73.0, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLKB	**Belogradchik**	**0.65**	**191**	↑S	Sb	11 34 07.4	-0.4
BLKB	**Belogradchik**	**0.65**	**191**	↑S	Sb	11 34 07.4	-0.4
HERR	**Herculane**	**0.69**	**334**	↑P	Pg	11 33 58.7	-0.4
HERR				↓S	Sb	11 34 09.4	+0.4
HERR	**Herculane**	**0.69**	**334**	↑P	Pg	11 33 58.7	-0.4
HERR				↓S	Sb	11 34 09.4	+0.4
MDVR	**Moldovita**	**0.97**	**303**	↑P	Pn	11 34 04.6	-0.3
MDVR				↓S	Sb	11 34 16.2	-0.7
MDVR	**Moldovita**	**0.97**	**303**	↑P	Pn	11 34 04.6	-0.3
MDVR				↓S	Sb	11 34 16.2	-0.7
GZR	**Gura Zlata**	**1.13**	**357**	↑P	Pg	11 34 07.9	+0.4
GZR				↑S	Sg	11 34 22.3	+0.1
GZR	**Gura Zlata**	**1.13**	**357**	↑P	Pg	11 34 07.9	+0.4
GZR				↑S	Sg	11 34 22.3	+0.1
BZS	**Buzias**	**1.61**	**328**	↑P	Pb	11 34 15.3	0.0
BZS				↓S	Sb	11 34 35.1	-0.4
BZS	**Buzias**	**1.61**	**328**	↑P	Pb	11 34 15.3	0.0
BZS				↓S	Sb	11 34 35.1	-0.4
VOIR		**1.96**	**52**	↑S	Sn	11 34 43.0	0.0
VOIR		**1.96**	**52**	↑S	Sn	11 34 43.0	0.0
SIRR	**Siria**	**2.18**	**338**	↑P	Pn	11 34 12.0	-9.4

*IDC **15** 11:33:54.2±1.1, 3.63S×140.08E, h0km, mb3.7/4, mb1 4.0/6, mb1mx3.7/26, mbtmp3.9/6, ML4.0/1, Error ellipse: s-maj=35.8km s-min=16.5km az=114.0*
*NEIC **15** 11:33:57.8±2.5, 3.7S±0.1×140.2E±0.1, h35km±2km, mb4.0/8, Error ellipse: s-maj=25.5km s-min=11.0km az=126.0*
*DJA **15** 11:33:57.3±0.4, 4°S±3°×14°0E±°, h10km, M4.0/4, mb4.0/4, MLv4.0/4*

ISC 15 11:33:55.8±0.7, 3.76S±0.05×140.24E±0.07, h10km, n24, σ1.974/27, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**1.17**	**356**	P	**Pb**	**11 34 18.0**	**-0.1**
GENI				S	**Sb**	**11 34 33.5**	**+0.2**
JAY	**Jayapura**	**1.32**	**21**	Pn	**Pn**	**11 34 19.1**	**-1.4**
	25nm,0.3s,baz=202,slow=16,SNR=69						
JAY				Sn	**Sg**	**11 34 37.9**	**-0.6**
	72nm,0.3s,baz=105,slow=16,SNR=7.7						
JAY	**Jayapura**	**1.32**	**21**	P	**Pn**	**11 34 19.0**	**-1.4**
JAY				S	**Sg**	**11 34 37.9**	**-0.6**
WAMI	**Wamena**	**1.53**	**265**	P	**Pn**	**11 34 21.2**	**-2.0**
SMPI	**Sarmi**	**2.33**	**319**	P	**Pn**	**11 34 35.9**	**+1.6**
PMG	**Port Moresby**	**8.87**	**130**	Pn	**Pn**	**11 36 07.9**	**+3.8**
	0.3nm,0.3s,baz=324,slow=16,SNR=2.9						
COEN	**Coen**	**10.54**	**164**	Pn	**Pn**	**11 36 27.8**	**+0.7**
LBMI	**Labuha**	**13.10**	**283**	P	**P**	**11 37 12.7**	**+0.2**
KNRA	**Kununurra**	**16.36**	**223**	Pn	**Pn**	**11 37 43.6**	**-2.1**
KNRA				IAmb	IAmb	11 38 01.4	
	comp=Z,9.5nm,0.8s						
WB0	**Warramunga Arr**	**16.90**	**199**	P	**Pn**	**11 37 50.0**	**-2.6**
WB0				IAmb	IAmb	11 38 05.0	
	comp=Z,13nm,1.1s						
WR0	**Warramunga Arr**	**17.03**	**199**	P	**Pn**	**11 37 51.5**	**-2.8**
WRAB	**Tennant Creek**	**17.07**	**199**	P	**Pn**	**11 37 56.6**	**+1.8**
WRAB				IAmb	IAmb	11 38 15.9	
	comp=Z,13nm,0.9s						
WB2	**Warramunga Arr**	**17.08**	**199**	P	**Pn**	**11 37 53.8**	**-1.1**
WRA	**Warramunga Arr**	**17.08**	**199**	P	**Pn**	**11 37 53.6**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=24,slow=12,SNR=15						
WRA				S	Sn	11 40 55.6	-9.5
	comp=Z,0.2nm,0.3s,baz=154,slow=24,SNR=3.0						
WRA	**Warramunga Arr**	**17.08**	**199**	P	**Pn**	**11 37 55.5**	**+0.5**

LUWI	**Luwuk**	**17.66**	**278**		**Sn**	**11 41 22.8**	**+3.6**
FITZ	**Fitzroy Crossi**	**20.18**	**224**	P	**P**	**11 38 29.8**	**-1.0**
	comp=Z,4.8nm,0.9s,baz=33,slow=13,SNR=7.7						
FITZ				S	S	11 42 02.6	-15
	comp=Z,4.1nm,0.8s,baz=151,slow=10,SNR=3.9						
FITZ	**Fitzroy Crossi**	**20.18**	**224**	P	**P**	**11 38 30.6**	**-0.2**
FITZ				IAmb	IAmb	11 38 39.5	
	comp=Z,9.8nm,1.2s						
AS31	**Alice Springs**	**20.71**	**197**	P	**P**	**11 38 35.9**	**-0.7**
AS31				IAmb	IAmb	11 38 43.0	
	comp=Z,4.9nm,0.6s						
ASAR	**Alice Springs**	**20.71**	**197**	P	**P**	**11 38 37.3**	**+0.8**
	comp=Z,10nm,0.8s,baz=28,slow=9.3,SNR=27						
ASAR	**Alice Springs**	**20.71**	**197**	P	**P**	**11 38 37.2**	**+0.6**
MKAR	**Makanchi Array**	**71.55**	**322**	P	**P**	**11 45 17.1**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=104,slow=6.1,SNR=2.4						
ILAR	**Eielson Array**	**86.16**	**24**	P	**P**	**11 46 35.2**	**-1.8**
	comp=Z,0.3nm,0.7s,baz=265,slow=4.0,SNR=5.0						
LPAZ	**La Paz**	**145.59**	**126**	PKPbc	**PKPdf**	**11 53 37.7**	**+1.4**
	comp=Z,1.3nm,0.8s,baz=225,slow=2.9,SNR=4.1						

*IDC **15** 11:47:28.4±2.2, 63.16S×170.68E, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.7/25, mbtmp3.7/3, ML3.4/1, Error ellipse: s-maj=90.5km s-min=39.7km az=69.0*

ISC 15 11:47:30.0±2.2, 63.2S±0.2×170.6E±0.6, h10km, n15, σ0.562/6, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**14.71**	**188**	Pn	**Pn**	**11 50 57.9**	**+0.2**
	0.2nm,0.3s,baz=18,slow=14,SNR=7.0						
H01W1	**Cape Leeuwin H**	**44.47**	**282**	T	T	12 43 27.3	
	baz=147,slow=76,SNR=48						
H01W2	**Cape Leeuwin H**	**44.48**	**282**	T	T	12 43 27.6	
	baz=147,slow=76,SNR=27						
H01W3	**Cape Leeuwin H**	**44.49**	**282**	T	T	12 43 28.4	
	baz=147,slow=76,SNR=40						
ASAR	**Alice Springs**	**46.42**	**311**	P	**P**	**11 55 57.2**	**+0.7**
	0.7nm,0.7s,baz=159,slow=8.3,SNR=5.1						
WRA	**Warramunga Arr**	**49.72**	**313**	P	**P**	**11 56 21.9**	**-0.3**
	0.9nm,0.9s,baz=172,slow=6.5,SNR=3.9						
H03S2	**Juan Fernandez**	**68.80**	**123**	T	T	13 14 12.7	
	baz=205,slow=74,SNR=11						
H03S1	**Juan Fernandez**	**68.80**	**123**	T	T	13 14 14.0	
	baz=205,slow=74,SNR=13						
H03S3	**Juan Fernandez**	**68.81**	**123**	T	T	13 14 17.8	
	baz=205,slow=74,SNR=12						
H08S2	**Diego Garcia H**	**86.90**	**259**	T	T	13 36 34.2	
	baz=153,slow=76,SNR=16						
H08S1	**Diego Garcia H**	**86.90**	**259**	T	T	13 36 46.6	
	baz=153,slow=76,SNR=13						
H08S3	**Diego Garcia H**	**86.92**	**259**	T	T	13 36 35.7	
	baz=153,slow=76,SNR=16						
ILAR	**Eielson Array**	**131.41**	**23**	PKP	**PKPdf**	**12 06 41.1**	**+0.3**
	0.4nm,0.8s,baz=238,slow=3.8,SNR=4.8						
KBZ	**Khabaz**	**144.60**	**262**	PKP	**PKPab**	**12 07 03.7**	**-0.4**
	1.0nm,0.6s,baz=147,slow=4.1,SNR=3.7						
BRTR	**Keskin Array B**	**145.41**	**248**	PKPbc	**PKPbc**	**12 07 06.8**	**-0.6**
	1.0nm,0.8s,baz=160,slow=4.6,SNR=5.5						

IDC 15 11:48:26.6±2.3, 63.22S×170.39E, h0km, mb3.6/1, mb1 3.8/2, mb1mx3.6/23, mbtmp3.6/2, ML3.3/1, MS4.2/3, Ms1 4.2/3, ms1mx3.8/24, Error ellipse: s-maj=95.2km s-min=46.4km az=73.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**14.62**	**187**	Pn	Pn	11 51 53.9	-0.5
	0.1nm,0.3s,baz=20,slow=15,SNR=1.6						
VNDA				LR	LR	11 56 18.0	
	comp=Z,1μm,18.3s,baz=10.0,slow=32						
RPZ	**Rata Peaks**	**19.54**	**1**	LR	LR	11 59 06.1	
	comp=Z,796nm,19.3s,baz=180,slow=33						
RAO	**Raoul Island**	**34.81**	**18**	LR	LR	12 09 15.2	
	comp=Z,206nm,18.0s,baz=138,slow=36						
H01W1	**Cape Leeuwin H**	**44.39**	**282**	T	T	12 44 28.6	
	baz=147,slow=76,SNR=5.0						
H01W2	**Cape Leeuwin H**	**44.39**	**282**	T	T	12 44 29.2	
	baz=147,slow=76,SNR=5.7						
H01W3	**Cape Leeuwin H**	**44.40**	**282**	T	T	12 44 30.1	
	baz=147,slow=76,SNR=5.2						
ASAR	**Alice Springs**	**46.39**	**311**	P	P	11 56 54.2	-0.2
	0.6nm,0.9s,baz=150,slow=7.5,SNR=4.4						
H03S2	**Juan Fernandez**	**68.84**	**123**	T	T	13 15 10.1	
	baz=206						
H03S1	**Juan Fernandez**	**68.84**	**123**	T	T	13 15 11.8	
	baz=206						
H03S3	**Juan Fernandez**	**68.86**	**123**	T	T	13 15 13.3	
	baz=206						
H08S2	**Diego Garcia H**	**86.78**	**260**	T	T	13 37 37.2	
	baz=153						
H08S1	**Diego Garcia H**	**86.79**	**260**	T	T	13 37 30.9	
	baz=153						
H08S3	**Diego Garcia H**	**86.80**	**260**	T	T	13 37 32.5	
	baz=153						
ILAR	**Eielson Array**	**131.52**	**23**	PKP	PKPdf	12 07 38.9	-0.4
	1.0nm,1.1s,baz=248,slow=2.4,SNR=5.0						
BRTR	**Keskin Array B**	**145.28**	**248**	PKPbc	PKPbc	12 08 04.6	-0.6
	1.2nm,0.8s,baz=151,slow=3.3,SNR=4.1						

*IDC **15** 11:50:39.7±0.8, 9.27N×122.05E, h0km, mb3.9/11, mb1 4.0/11, mb1mx3.8/40, mbtmp3.9/11, Error ellipse: s-maj=37.2km s-min=18.2km az=67.0*
*NEIC **15** 11:50:41.2±1.5, 9.4N±0.1×122.0E±0.1, h10km±1km, mb4.6/4, Error ellipse: s-maj=24.8km s-min=11.2km az=137.0*
*MAN **15** 11:50:43.5, 9.29N×121.97E, h30km, mb4.8, ML3.7, MS3.6*

ISC 15 11:50:43.2±0.5, 9.32N±0.03×121.92E±0.04, h20km±4km, n42, σ1.949/57, mb3.9/13, 4C-4D, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNOP	**Candoni, Negro**	**0.87**	**54**	*e*P	**Pb**	**11 50 58.9**	**-0.8**
CNOP				*e*S	**Sb**	**11 51 09.9**	**-1.0**
JAP	**San Jose, Anti**	**1.42**	**1**	↑*e*P	**Pn**	**11 51 08.4**	**+0.5**
GUIM	**Jordan**	**1.46**	**27**	*e*P	**Pn**	**11 51 07.8**	**-0.6**
GUIM				*e*S	**Sn**	**11 51 26.1**	**-0.8**
DCPH	**Dipolog City**	**1.59**	**117**	↑*e*P	**Pn**	**11 51 08.8**	**-1.5**
DCPH				*e*S	**Sn**	**11 51 27.3**	**-3.0**
CUYO	**Cuyo Island**	**1.76**	**330**	*e*P	**Pn**	**11 51 13.2**	**+0.6**
TBP	**Tagbilaran**	**1.95**	**79**	*e*P	**Pb**	**11 51 19.1**	**+1.0**
TBP				*i* S	**Sb**	**11 51 44.4**	**+2.4**
PAGZ	**Pagadian**	**2.06**	**135**	*e*P	**Pn**	**11 51 16.6**	**0.0**
PAGZ				*e*S	**Sn**	**11 51 39.9**	**-1.8**
LLP	**Lapu-Lapu**	**2.25**	**64**	↓*i*P	**Pn**	**11 51 19.5**	**+0.2**
LLP				*i* S	**Sn**	**11 51 46.0**	**-0.5**
RCP	**Roxas**	**2.37**	**20**	↓*e*P	**Pn**	**11 51 22.3**	**+1.3**
RCP				*e*S	**Sb**	**11 51 52.0**	**-2.2**
ZCP	**Zamboanga City**	**2.37**	**176**	↓*i*P	**Pn**	**11 51 20.9**	**-0.2**
ZCP				*i* S	**Sn**	**11 51 47.8**	**-1.7**
CGP	**Cagayan de Oro**	**2.87**	**107**	↓*e*P	**Pn**	**11 51 28.1**	**+0.2**
CGP				*e*S	**Sn**	**11 52 01.1**	**-0.8**
MSLP	**Maasin**	**3.01**	**74**	*e*P	**Pn**	**11 51 30.6**	**+0.8**
MSLP				*e*S	**Sn**	**11 52 04.9**	**-0.4**
OTRP	**Odiongan**	**3.03**	**2**	*e*P	**Pn**	**11 51 30.4**	**+0.4**
ENPP	**El Nido**	**3.09**	**308**	*e*P	**Pn**	**11 51 32.0**	**+1.1**
CTBH	**Cotabato--PC H**	**3.10**	**132**	↑*i*P	**Pn**	**11 51 31.1**	**0.0**
BUSP	**Coron**	**3.16**	**328**	*e*P	**Pn**	**11 51 32.2**	**+0.4**
BUSP				*e*S	**Sn**	**11 52 06.5**	**-2.4**
OCLP	**Ormoc**	**3.16**	**57**	*e*P	**Pn**	**11 51 30.3**	**-1.6**
SJMP	**San Jose**	**3.22**	**346**	*e*P	**Pn**	**11 51 33.4**	**+0.7**
SJMP				*e*S	**Sn**	**11 52 09.2**	**-1.3**
BUKP	**Musuan**	**3.42**	**114**	*e*P	**Pn**	**11 51 36.6**	**+1.1**
BUKP				*e*S	**Sn**	**11 52 17.9**	**+2.4**
BUTP	**Butuan**	**3.67**	**95**	*e*P	**Pn**	**11 51 39.2**	**+0.3**
SKMP	**Bagumbayan, Su**	**3.81**	**137**	*e*P	**Pn**	**11 51 39.6**	**-1.1**
SKMP				*e*S	**Sn**	**11 52 20.2**	**-4.7**
KCP	**Kidapawan**	**3.89**	**126**	↑*i*P	**Pn**	**11 51 43.1**	**+1.2**
KCP				*i* S	**Sn**	**11 52 30.0**	**+2.9**
KKM	**Kota Kinabalu**	**6.52**	**241**		**Pn**	**11 52 19.4**	**+1.3**
SBUM	**Sibu**	**11.81**	**235**		**Pn**	**11 53 31.7**	**+1.1**
CMAR	**Chiang Mai Arr**	**24.06**	**295**	P	**P**	**11 55 58.9**	**+1.5**
	0.4nm,0.3s,baz=98,slow=5.9,SNR=5.7						
WRA	**Warramunga Arr**	**31.54**	**157**	P	**P**	**11 57 02.5**	**-1.8**
	0.3nm,0.4s,baz=330,slow=11,SNR=9.2						
WB2	**Warramunga Arr**	**31.55**	**157**	P	**P**	**11 57 03.1**	**-1.3**
ASAR	**Alice Springs**	**34.81**	**161**	P	**P**	**11 57 32.4**	**-0.5**
	0.4nm,0.4s,baz=340,slow=8.3,SNR=10						
USRK	**Ussurisk Ar.**	**35.84**	**12**	P	**P**	**11 57 41.9**	**+0.5**
	1.4nm,0.8s,baz=198,slow=9.1,SNR=1.7						
FORT	**Forrest**	**40.30**	**172**	P	**P**	**11 58 21.7**	**+2.5**

SONM	**Songino Array**	**40.57**	**344**	P	**P**	**11 58 21.3**	**-0.2**
	0.6nm,0.5s,baz=142,slow=5.4,SNR=1.3						
MKAR	**Makanchi Array**	**50.27**	**325**	P	**P**	**11 59 39.9**	**+1.6**
	3.5nm,0.6s,baz=119,slow=9.9,SNR=15						
MKAR	**Makanchi Array**	**50.27**	**325**	P	**P**	**11 59 39.3**	**+1.0**
PETK	**Petropavlovsk-**	**52.34**	**26**	P	**P**	**11 59 52.9**	**-0.6**
	1.4nm,0.8s,baz=244,slow=4.0,SNR=2.2						
KURK	**Kurchatov**	**54.49**	**328**	P	**P**	**12 00 07.3**	**-2.2**
KURK				IAmb	IAmb	12 00 13.1	
	comp=Z,4.8nm,0.8s						
KKAR	**Karatay Array**	**55.91**	**316**	P	**P**	**12 00 20.4**	**+0.5**
TIXI	**Tiksi**	**62.43**	**2**	P	**P**	**12 01 03.4**	**-1.0**
TIXI				IAmb	IAmb	12 01 04.2	
	comp=Z,5.3nm,1.1s						
ARCES	**ARCESS Array B**	**83.58**	**339**	P	**P**	**12 03 09.1**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=86,slow=5.2,SNR=5.8						
AKASG	**Malin Array Be**	**84.57**	**320**	P	**P**	**12 03 14.3**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=69,slow=5.0,SNR=2.0						
FINES	**FINESS Array B**	**84.68**	**331**	P	**P**	**12 03 14.9**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=62,slow=4.5,SNR=7.1						
YKA	**Yellowknife Ar**	**96.33**	**23**	P	**P**	**12 04 11.2**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=322,slow=4.7,SNR=2.4						
TXAR	**Lajitas Array**	**121.65**	**47**	PKP	**PKPdf**	**12 09 36.1**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=27,slow=3.4,SNR=4.4						

*NCEDC **15** 11:57:07.4, 41.15N×127.14W, h10km*

NEIC 15 11:57:06.2±1.7, 41.34N±0.09×127.0W±0.1, h8km±9km, Error ellipse: s-maj=16.1km s-min=12.4km az=97.0, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KCTM	**Capetown**	**2.20**	**112**		Pn	11 57 43.3	+0.2
KRPM	**Rodgers**	**2.26**	**94**		Pn	11 57 44.0	+0.1
JCC	**Jacoby Creek,**	**2.31**	**102**		Pn	11 57 44.0	-0.5
JCC					Sn	11 58 13.7	+0.5
JCC	**Jacoby Creek,**	**2.31**	**102**	Pn	Pn	11 57 43.5	-1.0
KRMB	**Red Mountain**	**2.34**	**84**		Pn	11 57 44.8	-0.2
KMPM	**Mount Pierce**	**2.37**	**112**		Pn	11 57 45.4	-0.2
KSXB	**Camp Six Broad**	**2.40**	**77**		Pn	11 57 45.7	-0.2
KSMM	**Slide Mountain**	**2.44**	**117**		Pn	11 57 45.9	-0.6
KHMM	**Horse Mountain**	**2.52**	**99**		Pn	11 57 48.1	+0.5
KCRM	**Chalk Rock**	**2.58**	**110**		Pn	11 57 48.3	-0.1
KMRM	**Mail Ridge**	**2.74**	**113**		Pn	11 57 50.1	-0.5
KMRM					Sb	11 58 28.3	-1.0
KCSM	**Cold Springs**	**2.77**	**106**		Pn	11 57 51.3	+0.3
KHBM	**Hayfork Bally**	**2.95**	**102**		Pn	11 57 53.6	+0.1
KBSM	**Bell Springs**	**2.96**	**117**		Pn	11 57 54.2	+0.7
KCPM	**Cahto Peak**	**3.09**	**121**		Pn	11 57 55.7	+0.3
KIPM	**Iron Peak**	**3.09**	**118**		Pn	11 57 56.2	+0.8
M02C	**Callahan**	**3.13**	**88**	P	Pn	11 57 56.3	+0.4
	baz=267,SNR=9.1						
M02C	**Callahan**	**3.13**	**88**		Pn	11 57 57.0	+1.1
LGPM	**Granite Peak**	**3.19**	**96**		Pn	11 57 57.1	+0.4
KFPM	**Farley Peak**	**3.22**	**121**		Pn	11 57 57.1	0.0
KBNM	**Bluenose Ridge**	**3.24**	**115**		Pn	11 57 58.1	+0.6
YBH	**Yreka Blue Hor**	**3.25**	**82**		Pn	11 57 59.3	+1.7
YBH	**Yreka Blue Hor**	**3.25**	**82**		Pn	11 57 59.5	+1.9
N02D	**Trinity Center**	**3.27**	**95**	P	Pn	11 57 57.9	0.0
	baz=274,SNR=6.2						
N02D					S	Sb	11 58 41.8	-2.7
	baz=274						
N02D	**Trinity Center**	**3.27**	**95**		Pn	11 57 58.0	+0.2
GTC	**Three Chop Rid**	**3.27**	**125**		Pn	11 57 57.5	-0.3
LBKM	**Bonanza King**	**3.29**	**93**		Pn	11 57 58.8	+0.7
GNAM	**Navarro Ridge**	**3.35**	**128**		Pn	11 57 58.9	0.0
O02D	**Mt. Diablo Mer**	**3.41**	**108**	P	Pn	11 57 59.1	-0.6
	baz=288,SNR=16						
O02D					S

H11N1	**WAKE ISLAND Hy**	**26.61**	**117**	T	T	12 45 39.6	
	baz=309,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**26.62**	**117**	T	T	12 45 30.2	
	baz=309,slow=75,SNR=18						
H11S3	**WAKE ISLAND Hy**	**27.23**	**119**	T	T	12 46 18.4	
	baz=312,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**27.23**	**119**	T	T	12 46 27.4	
	baz=312,slow=75,SNR=17						
H11S2	**WAKE ISLAND Hy**	**27.25**	**119**	T	T	12 46 26.5	
	baz=312,slow=75,SNR=12						
SONM	**Songino Array**	**29.59**	**308**	P	**P**	**12 17 48.9**	**+2.1**
	0.6nm,0.6s,baz=106,slow=9.1,SNR=1.8						
MKAR	**Makanchi Array**	**45.83**	**304**	P	**P**	**12 20 06.1**	**+2.4**
	0.4nm,0.7s,baz=86,slow=8.6,SNR=2.8						
ILAR	**Eielson Array**	**51.58**	**31**	P	**P**	**12 20 47.5**	**-0.2**
	0.3nm,0.8s,baz=271,slow=6.9,SNR=2.5						

*IDC **15** 12:34:33.4±0.7, 16°19N×107°28E, h0km, mb4.1/15, mb1 4.3/16, mb1mx4.1/43, mbtmp4.1/16, ML4.9/1, MS3.8/2, Ms1 3.8/2, ms1mx3.3/46, Error ellipse: s-maj=26.1km s-min=14.0km az=48.0*

*BJI **15** 12:34:33.7±0.0, 16°00N×107°41E, h21km, mB4.6/16, mb4.2/23, Ms4.2/14, Ms7 4.0/13*

*NEIC **15** 12:34:35.8±2.4, 16°41N±0°04×107°30E±0°07, h14km±1km, mb4.6/30, Error ellipse: s-maj=10.1km s-min=5.4km az=71.0*

ISC 15 12:34:35.2±0.4, 16°37N±0°05×107°33E±0°05, h10km, n98, σ1s69/95, mb4.4/30, 1D, Vietnam

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKNT	**Sakolnakorn**	**3.27**	**281**	P	**Pn**	**12 35 24.5**	**-2.0**
SKNT				S	**Sn**	**12 36 07.8**	**+2.3**
QIZ	**Qiongzhong**	**3.57**	**42**	Pn	**Pn**	**12 35 29.3**	**-1.4**
QIZ				Sn	**Sn**	**12 36 12.1**	**-0.9**
QIZ				LR	LR		
	comp=N,3μm,8.4s						
QIZ				LR	LR		
	comp=Z,3μm,8.3s						
QIZ	**Qiongzhong**	**3.57**	**42**		**Pn**	**12 35 29.5**	**-1.2**
QIZ				Sn	**Sn**	**12 36 10.6**	**-2.4**
NONG	**Nongkai**	**4.34**	**293**	P	**Pn**	**12 35 38.9**	**-2.5**
DLV	**T Lat**	**4.54**	**166**	Pn	**Pn**	**12 35 42.1**	**-2.1**
DLV					**Sb**	**12 36 51.9**	**+1.9**
SLVN	**Son La**	**5.91**	**327**		**Pn**	**12 36 03.8**	**+0.8**
UTTA	**Uttaradit**	**6.62**	**283**	P	**Pn**	**12 36 10.7**	**-2.0**
PHIT	**Phitsanulok**	**6.67**	**278**	P	**Pn**	**12 36 11.5**	**-1.9**
NANT	**Nan**	**6.77**	**292**	P	**Pn**	**12 36 12.1**	**-2.6**
PHRA	**Phrae**	**7.10**	**288**	P	**Pn**	**12 36 16.9**	**-2.4**
PATY	**Pattaya**	**7.13**	**242**	P	**Pn**	**12 36 16.5**	**-3.1**
LAMP	**Lampang**	**7.65**	**287**	P	**Pn**	**12 36 24.3**	**-2.6**
UMPA	**Umpang Tak**	**8.13**	**270**	P	**Pn**	**12 36 30.8**	**-2.7**
SRDT	**SRDT**	**8.17**	**257**	P	**Pn**	**12 36 29.5**	**-4.4**
SRDT				S	**Sn**	**12 36 29.8**	**-4.2**
CM09	**Chiang Mai Arr**	**8.22**	**286**	P	**Pn**	**12 36 32.7**	**-2.0**
CM04	**Chiang Mai Arr**	**8.23**	**285**	P	**Pn**	**12 36 32.6**	**-2.2**
CM01	**Chiang Mai Arr**	**8.25**	**286**	P	**Pn**	**12 36 33.1**	**-2.0**
CM31	**Chiang Mai Arr**	**8.27**	**286**		**Pn**	**12 36 33.5**	**-1.9**
CMAR	**Chiang Mai Arr**	**8.27**	**286**	Pn	**Pn**	**12 36 33.0**	**-2.4**
	3.8nm,0.3s,baz=108,slow=12,SNR=83						
CMAR				Lg	Lg	12 38 55.8	
	3.5nm,0.3s,baz=104,slow=31,SNR=9.7						
CMAR	**Chiang Mai Arr**	**8.27**	**286**		**Pn**	**12 36 32.5**	**-2.9**
CHTO	**Chiang Mai**	**8.36**	**288**		**Pn**	**12 36 34.1**	**-2.5**
MHMT	**Maesarieng**	**9.16**	**283**	P	**Pn**	**12 36 44.1**	**-3.5**
KMI	**Kunming**	**9.71**	**335**	P	Pn	12 37 09.9	+15
KMI				S	Sn	12 39 01.8	+17
KMI				pmax	pmax		
	comp=Z,19nm,0.6s						
KMI				LR	LR		
	comp=N,1μm,8.1s						
KMI				LR	LR		
	comp=E,2μm,8.2s						
KMI				LR	LR		
	comp=Z,330nm,7.8s						
KSM	**Kuching**	**15.09**	**168**	P	**Pn**	**12 38 11.6**	**+2.9**
KSM				IAmb	IAmb	12 38 16.8	
	comp=Z,21nm,1.2s						
WHN	**Wuhan**	**15.51**	**23**	⇓P	**P**	**12 38 20.3**	**+1.8**
WHN				LR	LR		
	comp=Z,1μm,6.6s						
WHN				LR	LR		
	comp=Z,2μm,7.4s						
PSI	**Prapat**	**15.81**	**212**	Pn	**P**	**12 38 22.4**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=0.2,slow=6.6,SNR=6.1						
PSI				Lg	Lg	12 42 55.4	
	comp=Z,0.4nm,0.3s,baz=180,slow=19,SNR=1.6						
PSI				LR	LR	12 44 46.6	
	comp=Z,421nm,18.1s,baz=72,slow=39						
KCSI	**Kotacane, Aceh**	**15.85**	**217**	P	**Pn**	**12 38 21.1**	**+2.5**
	comp=Z,35nm,1.3s						
RPSI	**Rantau Prapat**	**15.90**	**212**	P	**P**	**12 38 22.4**	**-0.6**
RPSI	**Rantau Prapat**	**15.90**	**212**	P	**P**	**12 38 23.4**	**+0.4**
RPSI				IAmb	IAmb	12 38 28.8	
	comp=Z,29nm,1.4s						
MLSI	**Meulaboh, Aceh**	**16.11**	**223**	P	**P**	**12 38 25.4**	**+0.1**
	comp=Z,141nm,1.2s						
SHL	**Shillong**	**17.07**	**305**	P	**P**	**12 38 35.3**	**-0.8**
SHL				IAmb	IAmb	12 38 39.3	
	comp=Z,34nm,0.8s						
MNSI	**Mandailing Nat**	**17.26**	**207**	P	**Pn**	**12 38 37.3**	**+0.8**
XAN	**Xi'an**	**17.66**	**4**	P	**P**	**12 38 42.1**	**-0.3**
XAN				IAmb	IAmb	12 38 49.5	
	comp=Z,32nm,1.0s						
SDSI	**Sungai Dareh**	**18.15**	**199**	P	**P**	**12 38 49.9**	**+2.0**
	comp=Z,4μmcomp=Z,50nm,1.1s						
PDSI	**Padang**	**18.46**	**202**	P	**P**	**12 38 51.1**	**-0.2**
	comp=Z,609nmcomp=Z,47nm,1.3s						
KRJI	**Kerinci**	**19.23**	**198**	P	**P**	**12 38 56.8**	**-3.1**
LSA	**Lhasa**	**19.91**	**315**	P	**Pn**	**12 39 10.6**	**+1.3**
LSA				pmax	pmax		
	comp=Z,19nm,1.4s						
LSA	**Lhasa**	**19.91**	**315**	P	**Pn**	**12 39 09.1**	**-0.2**
LHSI	**Lahat**	**20.41**	**191**	P	**P**	**12 39 12.9**	**+0.2**
	comp=Z,62nm,1.1s						
MDSI	**Maura Dua**	**20.95**	**189**	P	**P**	**12 39 18.2**	**-0.3**
	comp=Z,30nm,1.3s						
TAPN	**Taplejung**	**21.21**	**304**	*e*P	**P**	**12 39 21.8**	**+0.3**
	comp=Z,154nm,0.9s						
ODAN	**Odare**	**21.25**	**303**	*e*P	**P**	**12 39 22.0**	**+0.1**
	comp=Z,95nm,1.0s						
RAMN	**Ramite**	**21.93**	**302**	*e*P	**P**	**12 39 29.9**	**+0.7**
	comp=Z,100nm,0.9s						
KASI	**Kota Agung**	**21.93**	**188**	P	**P**	**12 39 30.6**	**+1.6**
	comp=Z,40nm,1.8s						
JIRN	**Jiri**	**22.55**	**303**	*e*P	**P**	**12 39 35.9**	**-0.2**
	comp=Z,85nm,1.0s						
GUN	**Gumba**	**22.91**	**304**	*e*P	**P**	**12 39 40.8**	**+1.0**
PKI	**Pulchoki**	**23.15**	**303**	*e*P	**P**	**12 39 43.0**	**+0.8**
	comp=Z,27nm,0.8s						
PKIN	**Phulchoki**	**23.16**	**303**	*e*P	**P**	**12 39 43.3**	**+1.0**
KKN	**Kakani**	**23.34**	**303**	*e*P	**P**	**12 39 44.9**	**+0.8**
DMN	**Daman**	**23.41**	**302**	*e*P	**P**	**12 39 45.4**	**+0.6**
GTA	**Gaotai**	**23.88**	**346**	*e*P	**P**	**12 39 50.1**	**+0.9**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BTO	**Baotou**	**24.27**	**5**	*e*P	**P**	**12 39 54.0**	**+1.3**
KOLN	**Koldanda**	**24.70**	**301**	*e*P	**P**	**12 39 57.4**	**+0.5**
	comp=Z,21nm,0.6s						
DANN	**Dangsing**	**24.79**	**303**	*e*P	**P**	**12 39 57.6**	**-0.3**
	comp=Z,24nm,0.7s						
KSRS	**Korea Array**	**27.78**	**37**	P	**P**	**12 40 25.4**	**+1.0**
	comp=Z,3.2nm,1.1s,baz=225,slow=9.7,SNR=8.2						
KSRS				LR	LR	12 51 56.8	
	comp=Z,130nm,21.6s,baz=20,slow=37						
SONM	**Songino Array**	**31.39**	**359**	P	**P**	**12 40 57.1**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=189,slow=8.6,SNR=6.5						
WMQ	**Urumqi**	**32.04**	**333**	*e*P	P	12 40 55.1	-7.0
WMQ				pmax	pmax		
	comp=Z,13nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,32nm,3.7s						
WMQ				LR	LR		
	comp=N,120nm,16.5s						
WMQ				LR	LR		
	comp=E,190nm,22.7s						
WMQ				LR	LR		
	comp=Z,180nm,28.7s						
KSH	**Kashi**	**35.75**	**316**	P	**P**	**12 41 36.9**	**+2.4**
KSH				pmax	pmax		
	comp=Z,16nm,0.8s						
KSH				pmax	pmax		
	comp=Z,180nm,5.2s						

MKAR	**Makanchi Array**	**36.77**	**331**	P	**P**	**12 41 45.2**	**+2.2**
	comp=Z,0.9nm,0.7s,baz=134,slow=9.8,SNR=7.1						
MKAR	**Makanchi Array**	**36.77**	**331**	P	**P**	**12 41 43.4**	**+0.4**
MAKZ	**Makanchi**	**36.93**	**331**	P	**P**	**12 41 46.4**	**+2.1**
MAKZ				IAmb	IAmb	12 41 49.9	
	comp=Z,6.2nm,0.6s						
KBL	**Kabul**	**38.73**	**305**	P	**P**	**12 41 58.4**	**-1.6**
KBL				IAmb	IAmb	12 42 02.8	
	comp=Z,15nm,1.2s						
GAR	**Garm**	**39.39**	**312**	P	**P**	**12 42 05.4**	**0.0**
CHGR	**Chuyangaron**	**40.08**	**311**	P	**P**	**12 42 10.5**	**-0.6**
KKAR	**Karatay Array**	**41.10**	**318**	P	**P**	**12 42 18.6**	**-0.8**
KURK	**Kurchatov**	**41.29**	**332**	P	**P**	**12 42 19.6**	**-1.2**
ZAA0	**Zalesovo Array**	**41.40**	**340**	P	**P**	**12 42 22.5**	**+0.9**
ZALV	**Zalesovo Beam**	**41.40**	**340**	P	**P**	**12 42 21.9**	**+0.3**
	comp=Z,5.4nm,0.7s,baz=142,slow=7.5,SNR=15						
ZALV	**Zalesovo Beam**	**41.40**	**340**	P	**P**	**12 42 21.2**	**-0.4**
WRA	**Warramunga Arr**	**44.79**	**143**	P	**P**	**12 42 48.0**	**-1.5**
	comp=Z,2.6nm,0.8s,baz=328,slow=8.9,SNR=14						
WRA	**Warramunga Arr**	**44.79**	**143**	IAmb	IAmb	12 42 50.2	
	comp=Z,0.3nm,1.2s						
WR0	**Warramunga Arr**	**44.92**	**142**	P	**P**	**12 42 51.0**	**+0.5**
ASAR	**Alice Springs**	**47.51**	**146**	P	**P**	**12 43 09.4**	**-1.5**
	comp=Z,1.0nm,0.5s,baz=325,slow=7.5,SNR=19						
GEYT	**Alibeck**	**48.14**	**306**	P	**P**	**12 43 16.0**	**+0.3**
	comp=Z,7.3nm,1.0s,baz=108,slow=4.7,SNR=10						
GEYT	**Alibeck**	**48.14**	**306**	P	**P**	**12 43 14.9**	**-0.8**
ABKAR	**Akbulak array**	**50.40**	**321**	P	**P**	**12 43 32.7**	**-0.1**
TIXI	**Tiksi**	**56.74**	**8**	P	**P**	**12 44 17.9**	**-1.0**
TIXI				IAmb	IAmb	12 44 20.5	
	comp=Z,9.1nm,1.2s						
STKA	**Stephens Creek**	**58.14**	**146**	P	**P**	**12 44 28.4**	**-1.0**
	comp=Z,2.4nm,0.7s,baz=328,slow=6.9,SNR=5.1						
RAYN	**Ar Rayn**	**58.19**	**288**	P	**P**	**12 44 28.9**	**-1.1**
RAYN				IAmb	IAmb	12 44 31.3	
	comp=Z,7.2nm,1.0s						
KBZ	**Khabaz**	**60.45**	**311**	P	**P**	**12 44 45.6**	**+0.4**
	comp=Z,2.4nm,0.9s,baz=11,slow=8.0,SNR=5.2						
BRTR	**Keskin Array B**	**67.28**	**307**	P	**P**	**12 45 31.3**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=106,slow=7.7,SNR=4.3						
AKASG	**Malin Array Be**	**70.00**	**319**	P	**P**	**12 45 46.1**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=80,slow=5.8,SNR=5.4						
FINES	**FINESS Array B**	**71.59**	**330**	P	**P**	**12 45 57.8**	**+1.2**
	comp=Z,3.0nm,1.1s,baz=70,slow=16,SNR=4.0						
BURAR	**Bucovina Array**	**72.82**	**315**	P	**P**	**12 46 04.3**	**0.0**
NOA	**NORSAR Array B**	**78.76**	**330**	P	**P**	**12 46 38.5**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=95,slow=4.4,SNR=1.9						
IMAR	**Indian Mountai**	**78.78**	**24**	P	**P**	**12 46 38.2**	**+0.3**
MLY	**Manley**	**80.25**	**25**	IAmb	IAmb	12 46 49.4	
	comp=Z,9.8nm,1.0s						
NEA	**Nenana**	**81.07**	**25**	IAmb	IAmb	12 46 53.0	
	comp=Z,4.8nm,0.8s						
KDAK	**Kodiak Island**	**81.58**	**32**	P	**P**	**12 46 53.3**	**+0.2**
KDAK				IAmb	IAmb	12 46 55.3	
	comp=Z,8.6nm,1.0s						
BMAR	**Burnt Mountain**	**81.76**	**22**	P	**P**	**12 46 54.2**	**+0.2**
ILAR	**Eielson Array**	**81.89**	**25**	P	**P**	**12 46 50.7**	**-4.0**
	comp=Z,0.2nm,0.6s,baz=284,slow=4.9,SNR=3.2						
SCM	**Sheep Creek Mo**	**82.76**	**27**	IAmb	IAmb	12 47 01.6	
	comp=Z,9.3nm,1.0s						
RIDG	**Independent Ri**	**83.10**	**25**	IAmb	IAmb	12 47 03.0	
	comp=Z,4.3nm,0.9s						
BCAR	**Beaver Creek A**	**84.64**	**25**	P	**P**	**12 47 09.4**	**+0.4**
INK	**Inuvik**	**85.06**	**19**	P	**P**	**12 47 09.9**	**-0.9**
	comp=Z,3.1nm,1.1s,baz=265,slow=1.5,SNR=4.9						
DAWY	**Dawson**	**85.14**	**24**	IAmb	IAmb	12 47 13.9	
	comp=Z,2.6nm,0.8s						
YKA	**Yellowknife Ar**	**94.79**	**18**	P	**P**	**12 47 57.8**	**+0.8**
	comp=Z,0.8nm,0.9s,baz=332,slow=4.5,SNR=6.8						
TXAR	**Lajitas Array**	**125.59**	**34**	PKP	**PKiKP**	**12 53 39.1**	**+1.0**
	comp=Z,0.4nm,0.9s,baz=130,slow=2.0,SNR=4.7						

*NEIC **15** 12:49:01.4±1.9, 24°41S±0°06×179°9W±0°1, h492km±9km, mb4.5/28, Error ellipse: s-maj=19.6km s-min=7.1km az=103.0*

*IDC **15** 12:49:01.8±1.5, 24°34S×179°96W, h491km±16km, mb3.5/12, mb1 3.7/14, mb1mx3.6/21, mbtmp4.3/14, Error ellipse: s-maj=15.6km s-min=13.8km az=127.0*

ISC 15 12:49:02.6±0.5, 24°37S±0°07×179°89W±0°08, h505km, n68, σ1s12/72, mb4.3/25, 3C-1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.17**	**160**	P	**P**	**12 50 31.8**	**+0.5**
	31nm,0.3s,baz=253,slow=19,SNR=1.6						
RAO				S	S	12 51 32.7	-11
	28nm,0.3s,baz=270,slow=20,SNR=1.7						
MSVF	**Nonsavu**	**6.88**	**343**	P	**P**	**12 50 48.2**	**+0.2**
NIUE	**Niue**	**10.65**	**62**	P	**P**	**12 51 26.8**	**-0.2**
DZM	**Mont Dzumac**	**12.77**	**278**	P	**P**	**12 51 51.2**	**+1.7**
	0.5nm,0.3s,baz=87,slow=19,SNR=5.9						
AFI	**Afiamalu**	**12.92**	**38**	P	**P**	**12 51 48.9**	**-2.2**
URZ	**Urewera**	**14.08**	**190**	P	**P**	**12 52 00.7**	**-2.1**
	2.3nm,0.3s,baz=226,slow=2.6,SNR=11						
URZ				S	**S**	**12 54 31.0**	**-0.5**
	0.7nm,0.3s,baz=163,slow=19,SNR=11						
BKZ	**Black Stump Fm**	**15.06**	**191**	P	**P**	**12 52 11.8**	**-1.4**
BKZ				IAmb	IAmb	12 52 12.8	
	comp=Z,17nm,1.1s						
BFZ	**Birch Farm**	**16.58**	**190**	P	**P**	**12 52 27.3**	**-1.7**
SNZO	**South Karori**	**17.48**	**194**	P	**P**	**12 52 37.1**	**-0.6**
QRZ	**Quartz Range**	**17.59**	**199**	P	**P**	**12 52 37.7**	**-1.1**
PLWZ	**Palliser**	**17.62**	**192**	P	**P**	**12 52 37.2**	**-1.9**
NNZ	**Nelson**	**17.71**	**197**	P	**P**	**12 52 39.1**	**-0.8**
TUWZ	**Tuamarina**	**17.77**	**195**	P	**P**	**12 52 39.0**	**-1.5**
THZ	**Tophouse**	**18.35**	**197**	P	**P**	**12 52 45.1**	**-0.7**
THZ				IAmb	IAmb	12 52 46.7	
	comp=Z,37nm,1.4s						
KHZ	**Kahutara**	**18.80**	**195**	P	**P**	**12 52 48.4**	**-1.4**
LTZ	**Lake Taylor**	**19.47**	**198**	P	**P**	**12 52 53.9**	**-2.0**
LTZ				IAmb	IAmb	12 52 58.0	
	comp=Z,33nm,1.1s						
RPZ	**Rata Peaks**	**20.68**	**199**	P	**P**	**12 53 06.3**	**-0.6**
	comp=Z,18nm,0.6s,baz=14,slow=1.3,SNR=13						
FOZ	**Fox Glacier**	**20.90**	**201**	P	**P**	**12 53 08.0**	**-0.8**
LBZ	**Lake Benmore**	**21.55**	**200**	P	**P**	**12 53 12.1**	**-2.7**
LBZ				IAmb	IAmb	12 53 16.5	
	comp=Z,15nm,1.1s						
ODZ	**Otahua Downs**	**22.01**	**198**	P	**P**	**12 53 17.4**	**-1.6**
ODZ				IAmb	IAmb	12 53 35.7	
	comp=Z,9.0nm,1.2s						
WKZ	**Wanaka**	**22.31**	**201**	P	**P**	**12 53 21.1**	**-0.6**
WKZ				IAmb	IAmb	12 53 36.6	
	comp=Z,51nm,1.4s						
ARMA	**Armidale**	**25.95**	**250**	P	**P**	**12 53 54.2**	**-0.2**
ARMA				IAmb	IAmb	12 53 56.8	
	comp=Z,8.8nm,0.8s						
TOO	**Toolangi**	**32.28**	**238**	P	**P**	**12 54 49.4**	**+0.2**
TOO				IAmb	IAmb	12 54 51.0	
	comp=Z,8.0nm,0.8s						
TAU	**Tasmania Unive**	**32.69**	**227**	P	**P**	**12 54 53.5**	**+1.0**
TAU				IAmb	IAmb	12 54 57.0	
	comp=Z,27nm,1.2s						
STKA	**Stephens Creek**	**34.64**	**249**	P	**P**	**12 55 09.6**	**+0.4**
	comp=Z,8.2nm,0.6s,baz=99,slow=10.0,SNR=30						
STKA				PcP	**PcP**	**12 57 28.9**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=117,slow=4.5,SNR=2.3						
STKA	**Stephens Creek**	**34.64**	**249**	P	**P**	**12 55 09.7**	**+0.4**
AS31	**Alice Springs**	**42.06**	**261**	P	**P**	**12 56 09.8**	**+0.1**
ASAR	**Alice Springs**	**42.06**	**261**	P	**P**	**12 56 09.7**	**-0.1**
	comp=Z,8.0nm,0.9s,baz=96,slow=8.0,SNR=55						
ASAR				PcP	**PcP**	**12 57 53.0**	**-0.2**
	comp=Z,1.8nm,0.9s,baz=92,slow=4.8,SNR=6.2						
ASAR				ScP	**ScP**	**13 00 57.6**	**+2.3**
	comp=Z,1.4nm,1.0s,baz=100,slow=4.4,SNR=5.6						
ASAR				S	**S**	**13 01 51.4**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=95,slow=16,SNR=4.1						
ASAR	**Alice Springs**	**42.06**	**261**	P	**P**	**12 56 08.6**	**-1.1**
WR0	**Warramunga Arr**	**42.29**	**267**	IAmb	IAmb	12 56 11.3	
	comp=Z,6.0nm,0.8s						
WB2	**Warramunga Arr**	**42.47**	**267**	IAmb	IAmb	12 56 13.2	
	comp=Z,14nm,0.8s						
WRAB	**Tennant Creek**	**42.47**	**267**	P	**P**	**12 56 12.3**	**-0.7**
WRAB				IAmb	IAmb	12 56 13.2	
	comp=Z,14nm,0.9s						
WB0	**Warramunga Arr**	**42.47**	**267**	IAmb	IAmb	12 56 13.2	
	comp=Z,16nm,0.8s						
WRA	**Warramunga Arr**	**42.48**	**267**	P	**P**	**12 56 12.1**	**-1.0**
	comp=Z,10nm,0.6s,baz=98,slow=6.9,SNR=180						
WRA				PcP	**PcP**	**12 57 54.6**	**+0.1**
	comp=Z,1.0nm,1.0s,baz=100,slow=3.7,SNR=5.6						
WRA				ScP	**ScP**	**13 01 00.4**	**+3.3**
	comp=Z,3.4nm,0.9s,baz=98,slow=4.2,SNR=9.6						
WRA	**Warramunga Arr**	**42.48**	**267**	P	**P**	**12 56 12.1**	**-1.0**

FORT	**Forrest**	**46.24**	**250**	P	**P**	**12 56 41.2**	**-0.9**
MTN	**Manton Dam**	**47.59**	**275**	P	**P**	**12 56 51.8**	**-0.7**
KNRA	**Kununurra**	**48.79**	**270**	IAmb	IAmb	12 57 02.2	
	comp=Z,35nm,1.1s						
FAKI	**Fak Fak**	**50.82**	**287**	P	**P**	**12 57 15.9**	**-0.5**
	comp=Z,15nm,1.0s						
VNDA	**Vanda**	**53.92**	**185**	P	**P**	**12 57 38.8**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=3.9,slow=7.8,SNR=8.0						
MORW	**Morawa**	**56.81**	**250**	P	**P**	**12 57 58.2**	**-0.5**
BKSI	**Bulukumba**	**60.53**	**278**	P	**P**	**12 58 23.3**	**-0.6**
QSPA	**South Pole Qui**	**65.71**	**180**	P	**P**	**12 58 57.9**	**+1.3**
QSPA				IAmb	IAmb	12 58 59.6	
	comp=Z,8.2nm,1.0s						
MJAR	**Matsushiro Arr**	**72.34**	**326**	P	**P**	**12 59 36.8**	**0.0**
	comp=Z,3.2nm,1.0s,baz=147,slow=7.2,SNR=4.1						
MDSI	**Maura Dua**	**75.35**	**272**	P	**P**	**12 59 53.3**	**-1.1**
	comp=Z,21nm,0.9s						
MAW	**Mawson**	**77.34**	**200**	P	**P**	**13 00 05.0**	**+0.6**
	comp=Z,4.7nm,0.6s,baz=146,slow=6.7,SNR=22						
MAW	**Mawson**	**77.34**	**200**	P	**P**	**13 00 05.0**	**+0.6**
KSRS	**Korea Array**	**78.67**	**320**	P	**P**	**13 00 13.1**	**+1.1**
	comp=Z,1.2nm,0.7s,baz=137,slow=6.3,SNR=6.4						
PETK	**Petropavlovsk-**	**79.58**	**346**	P	**P**	**13 00 16.9**	**+0.5**
	comp=Z,2.1nm,0.9s,baz=118,slow=7.3,SNR=4.6						
SYO	**Syowa Base**	**82.58**	**193**	⇑*i*P	**P**	**13 00 30.6**	**-1.2**
SYO	**Syowa Base**	**82.58**	**193**	⇑*e*PcP	**P**	**13 00 33.8**	**+2.0**
SNAA	**Sanae**	**84.19**	**179**	P	**P**	**13 00 39.3**	**-0.7**
SNAA	**Sanae**	**84.19**	**179**	P	**P**	**13 00 39.9**	**-0.1**
VNA3	**Neumayer Olymp**	**84.40**	**177**	P	**P**	**13 00 40.3**	**-0.6**
VNA2	**Neumayer--Watz**	**84.82**	**178**	P	**P**	**13 00 42.6**	**-0.4**
	baz=170,slow=2.4						
NVAR	**Mina Array Bea**	**85.02**	**44**	P	**P**	**13 00 44.8**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=235,slow=8.9,SNR=4.3						
TXAR	**Lajitas Array**	**90.60**	**58**	P	**P**	**13 01 11.4**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=210,slow=6.7,SNR=7.9						
ILAR	**Eielson Array**	**92.47**	**14**	P	**P**	**13 01 17.5**	**-1.1**
	comp=Z,0.1nm,0.7s,baz=230,slow=5.6,SNR=2.3						
ARCES	**ARCESS Array B**	**132.37**	**348**	PKP	**PKPdf**	**13 07 18.2**	**-0.1**
	comp=Z,6.6nm,1.2s,baz=90,slow=0.9,SNR=1.7						
FINES	**FINESS Array B**	**138.92**	**341**	PKhKP	PKPpre	13 07 22.6	
	comp=Z,0.6nm,0.5s,baz=69,slow=4.6,SNR=1.3						
FINES				PKP	**PKPdf**	**13 07 31.6**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=60,slow=3.4,SNR=5.5						
AKASG	**Malin Array Be**	**145.42**	**327**	PKPbc	**PKPdf**	**13 07 42.8**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=44,slow=3.8,SNR=7.1						
BR131	**Keskin Array S**	**147.94**	**307**		**PKPbc**	**13 07 50.9**	**-0.1**
BRTR	**Keskin Array B**	**147.94**	**307**	PKPbc	**PKPbc**	**13 07 50.6**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=127,slow=3.7,SNR=8.5						
BRTR	**Keskin Array B**	**147.94**	**307**		**PKPbc**	**13 07 50.1**	**-0.9**
BURAR	**Bucovina Array**	**149.41**	**326**		**PKPbc**	**13 07 54.7**	**+0.4**
CLL	**Collm**	**151.33**	**343**	⇑*i*PKPbc	**PKiKP**	**13 07 59.8**	**+1.0**
	comp=Z,5.0nm,0.7s						
CLL				⇓*i*PKPab	**PKPab**	**13 08 09.6**	**+0.7**
BRG	**Berggiesshubel**	**151.46**	**342**	*e*PKP	**PKPbc**	**13 07 59.3**	**+0.4**
	comp=Z,3.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**168.73**	**188**	PKPab	**PKPab**	**13 09 25.1**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=171,slow=3.3,SNR=5.6						

*IDC **15** 13:03:12.4±62.0, 17°22S×178°59E, h0km, mb4.4/3, mb1 4.6/3, mb1mx3.8/25, mbtmp4.4/3, Error ellipse: s-maj=1102.0km s-min=139.2km az=76.0*

NEIC 15 13:03:12.7±2.1, 17°5S±0°2×179°1E±0°2, h32km±17km, mb4.5/15, Error ellipse: s-maj=33.3km s-min=21.4km az=221.0, Fiji Islands

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

CLCH				IAML		13 29 09.4	
	comp=E,8μm,0.4s						
FSR	**Penalolen**	**1.73**	**141**	*eP*	**Pb**	**13 28 44.6**	**+0.7**
FSR				*i* S	**Sb**	**13 29 06.8**	**+1.2**
MT03	**Universidad Ad**	**1.76**	**141**	⇑*i*P	**Pn**	**13 28 43.9**	**+1.5**
MT03				*e*S	**Sb**	**13 29 06.1**	**-0.2**
MT01	**Popeta**	**1.79**	**164**	⇑*i*P	**Pn**	**13 28 44.0**	**+1.2**
MT01				*e*S	**Sb**	**13 29 07.8**	**+0.5**
MT01				IAML		13 29 15.6	
	comp=N,4μm,0.4s						
MT01	**Popeta**	**1.79**	**164**		**Pn**	**13 28 44.5**	**+1.6**
GO04	**Tololo Observa**	**2.14**	**25**	⇑*i*P	**Pn**	**13 28 49.0**	**+1.2**
GO04				*i* S	**Sb**	**13 29 18.0**	**+0.4**
GO04	**Tololo Observa**	**2.14**	**25**		**Pn**	**13 28 49.0**	**+1.2**
GO04	**Tololo Observa**	**2.14**	**25**	*i* P	**Pn**	**13 28 49.1**	**+1.2**
GO04				*i* S	**Sb**	**13 29 18.2**	**+0.7**
RTLS	**Leoncito**	**2.18**	**82**	*i* P	**Pb**	**13 28 52.1**	**+0.5**
RTLS				*i* S	**Sg**	**13 29 20.7**	**-1.4**
RTLS				IAML		13 29 25.3	
	comp=Z,1μm,1.1s						
LMEL	**Las Melosas**	**2.19**	**142**	⇑*i*P	**Pn**	**13 28 50.3**	**+1.9**
LMEL				*i* S	**Sb**	**13 29 17.9**	**-0.9**
LMEL				IAML		13 29 23.9	
	comp=N,4μm,0.3s						
ARCO	**CERRO ARCO**	**2.55**	**107**	*i* P	**Pb**	**13 28 58.0**	**+0.2**
ARCO				*i* S	**Sg**	**13 29 32.1**	**-1.9**
ARCO				IAML		13 29 35.1	
	comp=Z,2μm,0.5s						
ASAL	**Salagasta**	**2.58**	**101**	*i* P	**Pb**	**13 28 58.4**	**+0.2**
ASAL				*i* S	**Sg**	**13 29 34.0**	**-0.9**
ASAL				IAML		13 29 41.5	
	comp=Z,739nm,0.7s						
CO01	**Juntas del Tor**	**2.61**	**35**	*eP*	**Pn**	**13 28 56.5**	**+2.2**
CO01				*i* S	**Sb**	**13 29 30.2**	**-0.9**
CO01				IAML		13 29 34.3	
	comp=E,763nm,0.3s						
CO01	**Juntas del Tor**	**2.61**	**35**		**Pb**	**13 28 57.1**	**-1.9**
AAGR	**Agrelo**	**2.71**	**111**	*i* P	**Pb**	**13 28 59.9**	**-0.5**
AAGR				*i* S	**Sg**	**13 29 37.1**	**-1.9**
AAGR				IAML		13 29 45.3	
	comp=Z,2μm,1.0s						
BO02	**Sierra Bellavi**	**2.79**	**162**	*eP*	**Pn**	**13 28 58.0**	**+1.4**
BO02	**Sierra Bellavi**	**2.79**	**162**		**Pn**	**13 28 58.2**	**+1.6**
RTCV	**Cerro Valdivia**	**2.81**	**85**	*i* P	**Pb**	**13 29 00.8**	**-1.4**
RTCV				IAML		13 29 51.0	
	comp=Z,598nm,1.2s						
GO05	**Huala**	**2.87**	**182**	⇑*i*P	**Pn**	**13 28 57.9**	**+0.3**
GO05	**Huala**	**2.87**	**182**		**Pn**	**13 28 58.0**	**+0.3**
GO05	**Huala**	**2.87**	**182**	*i* P	**Pn**	**13 28 57.9**	**+0.3**
RTLL	**Cerro Villicun**	**2.97**	**75**	*i* P	**Pb**	**13 29 03.3**	**-1.6**
RTLL				IAML		13 30 56.1	
	comp=Z,2μm,2.0s						
AMOG	**MOGNA**	**3.09**	**68**	*i* P	**Pb**	**13 29 04.2**	**-2.7**
AMOG				*i* S	**Sg**	**13 29 49.4**	**-1.9**
AMOG				IAML		13 29 51.8	
	comp=Z,609nm,0.4s						
CFA	**Coronel Fontan**	**3.10**	**81**	Pg	**Pn**	**13 29 04.2**	**+3.4**
	comp=Z,52nm,0.3s,baz=250,slow=11,SNR=171						
CFA				Lg	Lg	13 29 44.3	
	comp=Z,115nm,0.3s,baz=165,slow=20,SNR=7.2						
CFA				LR	LR	13 30 29.4	
	comp=Z,745nm,18.1s,baz=285,slow=47						
CFA	**Coronel Fontan**	**3.10**	**81**	*i* P	**Pn**	**13 29 04.2**	**+3.4**
CFA				*i* S	**Sb**	**13 29 44.9**	**-0.1**
CFA				IAML		13 29 55.0	
	comp=Z,345nm,0.6s						
AC05	**El Transito**	**3.55**	**23**	*eP*	**Pn**	**13 29 08.9**	**+1.9**
AC05				*i* S	**Sn**	**13 29 52.6**	**+3.6**
AC05				IAML		13 30 08.0	
	comp=E,588nm,0.7s						
AC05	**El Transito**	**3.55**	**23**		**Pn**	**13 29 09.0**	**+1.9**
LAMA	**Las Malvinas**	**3.55**	**143**	*i* P	**Pn**	**13 29 11.1**	**+4.1**
ACAN	**Cantantal**	**3.94**	**93**	*i* P	**Pn**	**13 29 15.2**	**+2.9**
ACAN				*i* S	**Sb**	**13 30 04.4**	**-4.7**
ACAN				IAML		13 30 19.5	
	comp=Z,134nm,0.6s						
BI02	**San Fabin de**	**4.54**	**174**		**Pn**	**13 29 22.2**	**+1.5**
VCA	**Vinchina**	**4.61**	**44**	*i* P	Pn	13 29 26.9	+5.3
VCA				*i* S	**Sb**	**13 30 26.2**	**-2.3**
VCA				IAML		13 30 43.3	
	comp=Z,578nm,1.2s						
GO03	**Copiap**	**4.73**	**17**		**Pn**	**13 29 24.1**	**+0.8**
BI03	**Tigo**	**4.80**	**192**		**Pn**	**13 29 24.0**	**-0.2**
AC02	**Maricunga**	**5.78**	**25**		**Pn**	**13 29 39.5**	**+1.4**
H03N1	**Juan Fernandez**	**6.11**	**256**	T	T	13 36 17.3	
	baz=85,slow=73,SNR=3067						
H03N3	**Juan Fernandez**	**6.12**	**256**	T	T	13 36 13.3	
	baz=85,slow=73,SNR=3655						
H03N2	**Juan Fernandez**	**6.12**	**256**	T	T	13 36 14.6	
	baz=85,slow=73,SNR=2711						
H03S3	**Juan Fernandez**	**6.18**	**252**	T	T	13 36 27.2	
	baz=84,slow=75,SNR=42						
H03S1	**Juan Fernandez**	**6.18**	**252**	T	T	13 36 25.9	
	baz=84,slow=75,SNR=44						
H03S2	**Juan Fernandez**	**6.20**	**252**	T	T	13 36 16.9	
	baz=84,slow=75,SNR=64						
CYA	**Choya**	**6.38**	**56**	*i* P	**Pn**	**13 29 48.8**	**+2.9**
CYA				*i* S	**Sn**	**13 31 05.2**	**+6.5**
CYA				IAML		13 31 09.1	
	comp=Z,99nm,0.6s						
LC01	**Cunco**	**6.75**	**180**		**Pn**	**13 29 51.1**	**+0.2**
PLCA	**Paso Flores**	**8.65**	**174**	Pn	**Pn**	**13 30 18.2**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=335,slow=11,SNR=16						
PLCA	**Paso Flores**	**8.65**	**174**		**Pn**	**13 30 18.6**	**+1.6**
CPUP	**Villa Florida**	**13.91**	**69**	Pn	**Pn**	**13 31 28.1**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=280,slow=12,SNR=2.4						
CPUP				Sn	**Sn**	**13 34 04.8**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=263,slow=20,SNR=4.3						
CPUP				LR	LR	13 37 41.2	
	comp=Z,110nm,18.7s,baz=238,slow=41						
CPUP	**Villa Florida**	**13.91**	**69**		**Pn**	**13 31 27.0**	**-2.1**
LPAZ	**La Paz**	**16.13**	**13**	Pn	**Pn**	**13 31 59.6**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=217,slow=6.3,SNR=2.3						
LPAZ	**La Paz**	**16.13**	**13**	P	**Pn**	**13 31 58.6**	**-0.7**
SIV	**San Ignacio**	**18.81**	**34**	P	**P**	**13 32 30.6**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=236,slow=12,SNR=4.1						
NNA	**Nana**	**20.57**	**346**	LR	LR	13 37 50.3	
	comp=Z,42nm,21.6s,baz=292,slow=28						
BDFB	**Brasilia**	**27.17**	**58**	P	**P**	**13 33 54.6**	**-1.0**
	comp=Z,4.8nm,0.7s,baz=227,slow=4.7,SNR=5.8						
BDFB				LR	LR	13 45 40.9	
	comp=Z,176nm,21.2s,baz=171,slow=39						
VNA3	**Neumayer Olymp**	**51.02**	**158**	P	**P**	**13 37 14.2**	**+0.8**
VNA2	**Neumayer--Watz**	**51.67**	**158**	P	**P**	**13 37 19.0**	**+0.7**
	baz=286,slow=8.9						
SNAA	**Sanae**	**53.25**	**158**	P	**P**	**13 37 30.7**	**+0.6**
SNAA	**Sanae**	**53.25**	**158**	P	**P**	**13 37 30.5**	**+0.5**
	comp=Z,3.5nm,0.8s,baz=277,slow=6.4,SNR=13						
SNAA	**Sanae**	**53.25**	**158**	P	**P**	**13 37 30.8**	**+0.6**
SNAA				IAmb	IAmb	13 37 31.7	
	comp=Z,5.4nm,1.0s						
QSPA	**South Pole Qui**	**58.10**	**180**	P	**P**	**13 38 06.2**	**+1.1**
	comp=Z,2.2nm,0.8s,baz=165,slow=1.8,SNR=10						
QSPA	**South Pole Qui**	**58.10**	**180**	IAmb	IAmb	13 38 19.8	
	comp=Z,5.9nm,1.2s						
DBIC	**Dimbokro**	**74.42**	**72**	P	**P**	**13 39 50.1**	**-0.2**
	comp=Z,3.8nm,0.8s,baz=206,slow=6.9,SNR=4.6						
DBIC	**Dimbokro**	**74.42**	**72**	IAmb	IAmb	13 39 50.6	
	comp=Z,5.0nm,0.9s						
BOSA	**Boshof**	**80.78**	**118**	P	**P**	**13 40 24.8**	**-1.2**
	comp=Z,4.2nm,1.1s,baz=263,slow=8.1,SNR=3.6						
BOSA	**Boshof**	**80.78**	**118**	IAmb	IAmb	13 40 27.0	
	comp=Z,9.2nm,1.1s						
TORD	**Torodi Ar. Bea**	**83.41**	**70**	P	**P**	**13 40 39.0**	**-0.6**
	comp=Z,3.4nm,0.8s,baz=263,slow=4.6,SNR=19						
ASAR	**Alice Springs**	**119.31**	**207**	PKP	**PKPdf**	**13 47 00.8**	**-1.0**
	comp=Z,0.4nm,1.0s,baz=156,slow=2.5,SNR=2.0						
WRA	**Warramunga Arr**	**122.47**	**209**	PKP	**PKPdf**	**13 47 07.0**	**-0.9**
	comp=Z,0.1nm,0.4s,baz=148,slow=1.7,SNR=5.4						
H11S2	**WAKE ISLAND Hyl**	**25.97**	**270**	T	T	16 06 22.2	
	baz=118,slow=75,SNR=69						
H11S1	**WAKE ISLAND Hyl**	**25.97**	**270**	T	T	16 06 22.9	
	baz=118,slow=75,SNR=72						
H11S3	**WAKE ISLAND Hyl**	**25.97**	**270**	T	T	16 06 07.6	
	baz=118,slow=75,SNR=68						
H11N3	**WAKE ISLAND Hyl**	**26.32**	**272**	T	T	16 06 35.5	
	baz=117,slow=75,SNR=19						
H11N1	**WAKE ISLAND Hyl**	**26.33**	**272**	T	T	16 06 38.4	
	baz=117,slow=75,SNR=11						
H11N2	**WAKE ISLAND Hyl**	**26.34**	**272**	T	T	16 06 44.0	
	baz=117,slow=75,SNR=52						
KURBB	**Kurchatov Arra**	**151.37**	**41**	PKPbc	**PKPbc**	**13 48 05.6**	**+0.4**
	baz=299,slow=3.1						
KURK	**Kurchatov**	**151.38**	**41**		**PKPbc**	**13 48 05.6**	**+0.4**
ZALV	**Zalesovo Beam**	**152.54**	**31**	PKPbc	**PKPbc**	**13 48 07.9**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=318,slow=1.9,SNR=6.7						
KSH	**Kashi**	**152.98**	**65**	PKPbc	**PKPdf**	**13 48 01.5**	**-0.6**
KSH				pPKP	sPKPdf	13 48 11.5	+4.1
KSH				sPKP		13 48 15.1	
MKAR	**Makanchi Array**	**155.38**	**46**	PKPab	**PKPab**	**13 48 30.5**	**0.0**
	comp=Z,1.4nm,0.8s,baz=292,slow=4.5,SNR=7.5						

IDC 15 13:43:47.6±502.0, 53.08N×32.51E, h0km, Error ellipse: s-maj=142.7km s-min=51.8km az=169.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.55**	**35**	*i*		14 13 40.0	
	baz=218,slow=310,SNR=0.5						
I31KZ	**AKTYUBINSK INF**	**16.01**	**89**	*i*		15 22 40.0	
	baz=290,slow=316,SNR=0.8						
I37NO	**I37NO**	**17.31**	**343**	*i*		15 29 40.0	
	baz=151,slow=328,SNR=1.9						

MAN 15 13:45:04.6, 11.56N×121.97E, h0km, mb3.9, ML2.6, MS2.2, Panay

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIM	**Jordan**	**1.11**	**147**	*e*P	Pg	13 45 26.0	+0.1
GUIM				*e*S	Sn	13 45 43.5	+0.1

JMA 15 13:49:00.6±0.3, 24.96N×123.34E, h22km, M1.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.58**	**211**	P	Pb	13 49 11.8	-0.3
YOJ				*e*S	Sb	13 49 19.7	-0.2
JYNG	**Yonagunijimaku**	**0.62**	**215**	P	Pb	13 49 12.2	-0.6
JYNG				*e*S	Sb	13 49 20.4	-0.7
IRIF	**Iriomote-Funau**	**0.72**	**150**	P	Pb	13 49 13.9	-0.5
IRIF				*e*S	Sb	13 49 23.4	-0.4
JIJ	**Ishigaki jima**	**0.94**	**129**	P	Pn	13 49 18.7	+0.2
JIJ				*e*S	Sb	13 49 30.7	+0.4
JKRS	**Kuro-shima**	**0.94**	**140**	P	Pb	13 49 18.0	-0.2
JKRS				*e*S	Sb	13 49 29.4	-0.9
JISG	**Ishigakijimahi**	**0.96**	**113**	P	Pb	13 49 17.8	-0.7
JISG				*e*S	Sb	13 49 29.8	-0.9
HATJ	**Hateruma jima**	**0.99**	**155**	S	Sb	13 49 31.8	0.0

TAP 15 13:49:51.2, 24.36N×121.91E, h16km, ML1.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.17**	**294**	*i* P	Pg	13 49 55.5	0.0
	baz=295						
ENA				S	Sg	13 49 58.4	+0.1
	baz=295						
TWC	**Suao**	**0.25**	**348**	*i* P	Pg	13 49 57.0	+0.1
	baz=355						
TWC				S	Sg	13 50 00.9	+0.2
	baz=355						
EOS1	**EOS1**	**0.28**	**47**	P	Pb	13 49 57.6	-0.2
	baz=40						
EOS1				S	Sb	13 50 02.6	+0.4
	baz=40						
NACB	**Ninganchiao**	**0.34**	**237**	P	Pg	13 49 58.3	0.0
	baz=234						
NACB				S	Sg	13 50 03.5	+0.3
	baz=234						
ENTT	**Nioudou**	**0.42**	**312**	*i* P	Pb	13 50 00.4	0.0
	baz=313						
ENTT				S	Sg	13 50 05.9	+0.4
	baz=313						
ETLH	**Xiulin Townshi**	**0.42**	**249**	P	Pg	13 49 59.6	-0.2
	baz=257						
ETLH				S	Sg	13 50 05.9	+0.4
	baz=257						
TWE	**Neicheng**	**0.42**	**329**	*e*P	Pg	13 49 59.2	-0.6
	baz=330						
TWE				*e*S	Sb	13 50 06.3	-0.2
	baz=330						
NDT	**Datong Townshi**	**0.43**	**304**	P	Pg	13 50 00.1	+0.1
	baz=305						
NDT				S	Sb	13 50 06.5	-0.5
	baz=305						
NNSH	**Datong**	**0.48**	**278**	P	Pg	13 50 01.2	+0.2
	baz=286						
NNSH				S	Sg	13 50 07.8	+0.2
	baz=286						
NNSB	**Datong**	**0.48**	**278**	P	Pb	13 50 01.4	-0.1
	baz=289						
NNSB				S	Sg	13 50 07.8	+0.3
	baz=289						
NNS	**Nan Shan**	**0.49**	**279**	*e*P	Pb	13 50 01.4	-0.3
	baz=289						
NNS				S	Sg	13 50 08.2	+0.3
	baz=289						
NWLT	**Wulai**	**0.56**	**318**	*e*P	Pg	13 50 02.3	0.0
	baz=313						
NWLT				S	Sg	13 50 09.7	0.0
	baz=313						
YHNB	**Yeheng**	**0.57**	**303**	P	Pb	13 50 03.0	0.0
	baz=308						
YHNB				S	Sg	13 50 10.7	+0.3
	baz=308						
NSK	**Sanguang**	**0.59**	**302**	*e*P	Pg	13 50 03.1	+0.1
	baz=303						
NSK				S	Sg	13 50 11.0	+0.1
	baz=303						
TIPB	**Shuangxi**	**0.61**	**353**	P	Pb	13 50 03.5	-0.1
	baz=352						
TIPB				*e*S	Sg	13 50 11.7	+0.1
	baz=352						

IDC 15 13:57:43.1±2.3, 3.72N×122.01E, h638km±29km, mb2.9/5, mb1 3.2/6, mb1mx2.6/38, mbtmp4.2/6, Error ellipse: s-maj=66.4km s-min=15.7km az=76.0

ISC 15 13:57:40.7±1.1, 3.8N±0.2×121.9E±0.4, h604km, n6, σ2.23/8, mb3.8/5, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**13.97**	**173**	P	**P**	**14 00 39.9**	**+0.6**
	7.3nm,0.3s,baz=26,slow=2.5,SNR=9.2						
WRA	**Warramunga Arr**	**26.51**	**153**	P	**P**	**14 02 31.9**	**-0.2**
	3.7nm,0.5s,baz=335,slow=9.5,SNR=52						
ASAR	**Alice Springs**	**29.64**	**157**	P	**P**	**14 02 59.9**	**+0.6**
	1.7nm,0.5s,baz=332,slow=7.0,SNR=90						
ASAR				PcP	**sP**	**14 05 42.9**	**-0.4**
	0.2nm,0.3s,baz=343,slow=2.5,SNR=5.3						
ASAR				ScP	**ScP**	**14 08 24.8**	**-4.8**
	0.2nm,0.7s,baz=333,slow=3.0,SNR=2.0						
STKA	**Stephens Creek**	**40.06**	**154**	P	**P**	**14 04 26.1**	**+0.6**
	1.8nm,0.6s,baz=322,slow=11,SNR=6.0						
USRK	**Ussuriysk Ar.**	**41.25**	**11**	P	**P**	**14 04 35.1**	**+0.4**
	1.5nm,0.9s,baz=188,slow=6.6,SNR=5.6						
KURBB	**Kurchatov Arra**	**59.21**	**329**	P	**P**	**14 06 45.3**	**+0.3**
	0.5nm,0.6s,baz=117,slow=8.0,SNR=3.1						

GCG 15 14:04:14.5±0.3, 15.18N×91.97W, h126km±7km, MD3.6
MEX 15 14:04:18.8±0.6, 14.55N×91.98W, h106km±8km, MD3.5

ISC 15 14:04:19.7±1.6, 14.6N±0.1×92.05W±0.09, h100km, n8, σ1.915/11, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.33**	**322**	*e*P	**Pn**	**14 04 34.1**	**-0.3**
STG3	**Santiaguito 3,**	**0.47**	**82**	*e*P	**Pn**	**14 04 34.6**	**-0.9**
ERG	**Entre ros, C**	**0.51**	**113**	*e*P	**Pn**	**14 04 35.7**	**+0.1**
FUG	**Fuego 3**	**1.19**	**99**	*e*P	**Pn**	**14 04 41.1**	**-1.3**
FUG				*e*S	**Sn**	**14 05 01.8**	**+2.2**
PCIG		**1.54**	**313**	*e*P	**Pn**	**14 04 46.2**	**-0.3**
PCIG				*i* S	**Sn**	**14 05 07.5**	**+0.7**
IXG	**Ixpaco**	**1.63**	**107**	*i* Pg	**Pn**	**14 04 46.6**	**-1.1**
CCIG	**Comitan**	**1.63**	**357**	*i* P	**Pn**	**14 04 47.5**	**-0.3**
CCIG				*i* S	**Sn**	**14 05 09.5**	**+0.4**
CMIG	**Matias Romero**	**3.65**	**312**	*e*P	**Pn**	**14 05 13.3**	**-1.0**

MAN 15 14:08:43.2, 9.28N×121.97E, h31km, mb4.4, ML3.2, MS3.0, 2C-2D, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNOP	**Candoni, Negro**	**0.86**	**51**	*e*P	Pn	14 08 58.7	-0.5
CNOP				*e*S	Sn	14 09 10.0	-0.7
JAP	**San Jose, Anti**	**1.46**	**359**	⇓*e*P	Pn	14 09 08.3	+0.8
GUIM	**Jordan**	**1.47**	**25**	*e*P	Pn	14 09 08.2	+0.5
GUIM				*e*S	Sn	14 09 26.1	+0.2
CUYO	**Cuyo Island**	**1.82**	**329**	*e*P	Pn	14 09 12.8	+0.3
TBP	**Tagbilaran**	**1.92**	**77**	*e*P	Pb	14 09 16.9	-0.6
PAGZ	**Pagadian**	**2.00**	**135**	*e*P	Pn	14 09 15.6	+0.8
PAGZ				*e*S	Sn	14 09 38.7	-0.1
LLP	**Lapu-Lapu**	**2.23**	**62**	*e*P	Pn	14 09 19.3	+1.2
LLP				*i* S	Sn	14 09 46.1	+1.6
ZCP	**Zamboanga City**	**2.33**	**177**	⇓*i*P	Pb	14 09 37.2	+12
ZCP				*i* S	Sn	14 09 46.2	-0.9
RCP	**Roxas**	**2.39**	**19**	⇑*e*P	Sn	14 09 51.7	+3.0
CGP	**Cagayan de Oro**	**2.82**	**107**	⇑*e*P	Pn	14 09 27.8	+1.6
CGP				*e*S	Sn	14 09 59.6	+0.5
MSLP	**Maasin**	**2.98**	**73**	*e*P	Pn	14 09 30.1	+1.7
MSLP				*e*S	Sn	14 10 06.2	+3.2
OCLP	**Ormoc**	**3.14**	**56**	*e*P	Pn	14 09 31.5	+0.9
ENPP	**El Nido**	**3.15**	**308**	*e*P	Pn	14 09 31.1	+0.4
ENPP				*e*S	Pb	14 09 38.6	+0.1
SJMP	**San Jose**	**3.27**	**345**	*e*P	Pn	14 09 33.0	+0.6
BUKP	**Musuan**	**3.36**	**114**	*e*P	Pn	14 09 35.6	+1.9

ATH 15 14:18:22.0, 38.38N±20.49E, h13km±2km, ML2.5/6, Error ellipse: s-maj=2.3km s-min=0.7km az=252.0
THE 15 14:18:22.2, 38.39N×20.48E, h8km±1km, ML2.7/9, Error ellipse: s-maj=1.4km s-min=0.4km az=79.0

ISC 15 14:18:21.9±0.9, 38.39N±0.02×20.49E±0.04, h10km±5km, n29, σ0.966/50, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VSK1	**VASILIKIADES**	**0.06**	**68**	P	**Pg**	**14 18 24.1**	**0.0**
VSK1				S	**Sg**	**14 18 25.8**	**+0.2**
	9μm,0.1s						
FSK	**Fiskardo**	**0.09**	**37**	P	**Pg**	**14 18 24.5**	**+0.1**
FSK				S	**Sg**	**14 18 25.9**	**-0.3**
	5μm,0.3s						
FSK	**Fiskardo**	**0.09**	**37**	P	**Pg**	**14 18 24.6**	**+0.1**
FSK				S	**Sg**	**14 18 26.5**	**+0.3**
FSK				AML	AML	14 18 27.0	
	comp=N,9047μm,0.4s						
FSK				AML	AML	14 18 28.8	
	comp=E,9491μm,0.4s						
KEF1	**Kardakata, Kep**	**0.11**	**189**	P	**Pg**	**14 18 24.7**	**+0.1**
KEF1				S	**Sg**	**14 18 26.8**	**+0.3**
KEF4	**Livadi, Kephal**	**0.14**	**203**	P	**Pg**	**14 18 25.2**	**+0.2**
KEF4				S	**Sg**	**14 18 27.9**	**+0.6**
AGT1	**Agia Thekli**	**0.16**	**212**	P	**Pg**	**14 18 25.5**	**+0.1**
AGT1				S	**Sg**	**14 18 28.2**	**+0.4**
	comp=E,10μm,0.3s						
LXRA	**Lixouri, Kepha**	**0.19**	**193**	P	**Pg**	**14 18 26.3**	**+0.4**
LXRA				S	**Sg**	**14 18 29.8**	**+1.2**
ARG2	**Argostoli**	**0.21**	**181**	P	**Pg**	**14 18 26.3**	**+0.1**
ARG2				S	**Sg**	**14 18 30.0**	**+0.9**
	comp=E,9μm,0.1s						
ARGA	**Argostoli. Kep**	**0.21**	**183**	P	**Pg**	**14 18 26.4**	**+0.1**
ARGA				S	**Sg**	**14 18 30.0**	**+0.8**
KEF3	**Kipouria, Keph**	**0.21**	**212**	P	**Pg**	**14 18 26.4**	**+0.1**
KEF3				S	**Sg**	**14 18 29.9**	**+0.6**
KEF2	**Argostoli. Kep**	**0.22**	**181**	P	**Pg**	**14 18 26.6**	**+0.1**
KEF2				S	**Sg**	**14 18 30.4**	**+0.9**
VLS	**Valsamata**	**0.22**	**160**	P	**Pg**	**14 18 26.6**	**+0.1**
VLS				S	**Sg**	**14 18 30.8**	**+1.2**
	comp=E,1μm,0.1s						
VLS	**Valsamata**	**0.22**	**160**	P	**Pg**	**14 18 26.7**	**+0.1**
VLS				S	**Sg**	**14 18 30.6**	**+1.0**
VLS				AML	AML	14 18 31.4	
	comp=E,2770μm,0.1s						
VLS				AML	AML	14 18 32.2	
	comp=N,2503μm,0.1s						
EVGI	**Lefkada island**	**0.27**	**29**	P	**Pg**	**14 18 27.7**	**+0.4**
EVGI				S	**Sg**	**14 18 32.1**	**+1.1**
	comp=N,598nm,0.2s						
EVGI	**Lefkada island**	**0.27**	**29**	P	**Pg**	**14 18 27.8**	**+0.4**
EVGI				S	**Sg**	**14 18 32.2**	**+1.1**
MGNA	**Meganis**	**0.36**	**41**	P	**Pg**	**14 18 29.3**	**+0.3**
MGNA				S	**Sg**	**14 18 35.1**	**+1.3**
MGNA				AML	AML	14 18 35.6	
	comp=N,1989μm,0.3s						
MGNA				AML	AML	14 18 35.6	
	comp=E,1311μm,0.2s						
KFL	**Anninata**	**0.36**	**140**	P	**Pg**	**14 18 29.2**	**+0.1**
KFL				S	**Sg**	**14 18 34.9**	**+1.1**
	comp=E,1μm,0.2s						
KFL	**Anninata**	**0.36**	**140**	P	**Pg**	**14 18 29.2**	**+0.1**
KFL				S	**Sg**	**14 18 35.1**	**+1.2**
KFL				AML	AML	14 18 37.4	
	comp=N,2791μm,0.2s						
KFL				AML	AML	14 18 40.1	
	comp=E,2652μm,0.3s						
LKD2	**Lefkada island**	**0.42**	**18**	P	**Pg**	**14 18 30.4**	**+0.1**
LKD2				S	**Sg**	**14 18 36.5**	**+0.6**
	comp=E,428nm,0.3s						
LKD2	**Lefkada island**	**0.42**	**18**	P	**Pg**	**14 18 30.3**	**+0.1**
LKD2				S	**Sb**	**14 18 37.5**	**-0.5**
LKD2				AML	AML	14 18 42.0	
	comp=N,859μm,0.4s						
LKD2				AML	AML	14 18 44.8	
	comp=E,862μm,0.5s						
KRI1	**kERI**	**0.77**	**160**	P	**Pg**	**14 18 36.1**	**-0.6**
KRI1				S	**Sb**	**14 18 48.1**	**+0.3**
	comp=E,952nm,0.1s						
RLS	**Riolos of Patr**	**0.83**	**113**	P	**Pg**	**14 18 38.4**	**+0.4**

JOM			S	Sn	14 42 44.5	-0.3
BSO1	**Boso 1**	**3.33 227**	P	Pn	14 42 07.8	-0.1
JYK	**Kaneyama**	**3.43 306**	P	Pn	14 42 11.5	+1.7
JAG	**Ashikaga**	**3.64 263**	P	Pn	14 42 13.5	+0.8
JAG			*eS*	Sn	14 42 52.0	-2.3
JRY	**Ryogami san**	**4.16 258**	P	Pn	14 42 20.4	+0.5
JRY			*eS*	Sn	14 43 05.5	-1.8
JOD2	**Odawara 2**	**4.27 248**	P	Pn	14 42 21.6	+0.2
JOD2			*eS*	Sn	14 43 08.3	-1.7
MJAR	**Matsushiro Arr**	**4.61 266**	Pn	Pn	14 42 27.9	+1.8
	0.4nm,0.3s,baz=85,slow=15,SNR=20					
MJAR			Sn	Sn	14 43 18.8	+0.4
	0.2nm,0.3s,baz=292,slow=31,SNR=5.8					
MAT	**Matsushiro**	**4.61 266**	P	Pn	14 42 28.3	+2.2
MAT			S	Sn	14 43 18.9	+0.4
JHJ2	**Mitsune**	**5.11 222**	P	Pn	14 42 33.3	+0.3
JHJ2			*eS*	Sn	14 43 25.7	-5.1
JKB	**Kayabe**	**5.40 336**	P	Pn	14 42 39.4	+2.5
JKB			*eS*	Sn	14 43 36.2	-1.6
JCH	**Churui**	**5.66 356**	P	Pn	14 42 40.5	+0.1
JCH			*eS*	Sn	14 43 40.4	-3.7
NEM2	**Nemuro 2**	**6.54 12**	P	Pn	14 42 50.7	-1.8
JTKR	**Abashiri--Toko**	**7.00 360**	P	Pn	14 42 58.5	-0.3
JTKR			*eS*	Sn	14 44 13.9	-3.2
H11N2	**WAKE ISLAND Hy**	**26.41 124**	T	T	15 13 50.3	
	baz=317,slow=75,SNR=11					
H11N1	**WAKE ISLAND Hy**	**26.42 124**	T	T	15 13 52.2	
	baz=317,slow=75,SNR=6.0					
H11N3	**WAKE ISLAND Hy**	**26.43 124**	T	T	15 13 51.6	
	baz=317,slow=75,SNR=7.1					
WRA	**Warramunga Arr**	**57.32 191**	P	**P**	**14 51 03.3**	**0.0**
	0.5nm,0.5s,baz=9.3,slow=7.1,SNR=12					
ASAR	**Alice Springs**	**61.04 191**	P	**P**	**14 51 29.6**	**+0.6**
	0.3nm,0.8s,baz=4.3,slow=6.7,SNR=5.5					

RSNC ***15*** *14:59:20.4±1.1, 6°.81N×73°.17W, h141km±5km, ML3.5*
IDC ***15*** *14:59:22.6±7.4, 4°.92N×76°.65W, h97km±74km, mb1 4.0/1, mb1mx3.0/36, mbtmp4.4/1, ML2.9/1, Error ellipse: s-maj=178.2km s-min=73.3km az=4.0*

ISC 15 14:59:19.2±1.1, 6°.83N±0°.03×73°.13W±0°.04, h151km±7km, n31, σ1§70/59, 6C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
BRRC	**Barranca, Sant**	**0.64**	**296**	⇑*iP*		**14 59 41.6**	**+0.2**
BRRC				*eS*		**14 59 57.5**	**-0.8**
BRRC				*i*		14 59 59.6	
	comp=Z,469nm,0.2s						
PAMC	**Pamplona, Colo**	**0.67**	**40**	⇓*iP*		**14 59 42.7**	**+0.6**
PAMC				*eS*		**14 59 59.5**	**-0.1**
PAMC				*i*		15 00 02.0	
	comp=Z,830nm,0.6s						
RUSC	**La Rusia**	**0.93**	**177**	⇑*iP*		**14 59 43.7**	**-0.4**
RUSC				*eS*		**15 00 02.2**	**-0.7**
RUSC				*i*		15 00 03.9	
	comp=Z,458nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.35**	**258**	⇑*iP*		**14 59 46.2**	**-1.1**
PTBC				*eS*		**15 00 06.3**	**-2.4**
PTBC				*i*		15 00 10.2	
	comp=Z,483nm,0.2s						
TAMC	**Tame, Arauca**	**1.39**	**106**	⇓*iP*		**14 59 48.1**	**+0.4**
TAMC				*eS*		**15 00 09.2**	**-0.2**
OCAC	**Ocana**	**1.42**	**352**	*eP*		**14 59 48.1**	**-0.1**
OCAC				*eS*		**15 00 09.8**	**-0.5**
OCAC				*i*		15 00 13.2	
	comp=Z,322nm,0.3s						
SPBC	**San Pablo de B**	**1.50**	**219**	⇑*iP*		**14 59 48.6**	**-0.3**
SPBC				*eS*		**15 00 10.1**	**-1.5**
SPBC				*i*		15 00 15.1	
	comp=Z,303nm,0.4s						
ZARC	**Zaragoza, Cauc**	**1.84**	**291**	*eP*		**14 59 52.7**	**+0.2**
ZARC				*eS*		**15 00 18.0**	**-0.1**
ZARC				*i*		15 00 23.7	
	comp=Z,321nm,0.4s						
NORC	**Norcasia**	**2.14**	**234**	⇑*iP*		**14 59 55.5**	**-0.5**
NORC				*eS*		**15 00 23.3**	**-1.0**
NORC				*i*		15 00 29.3	
	comp=Z,172nm,0.5s						
SMLC	**San Martn de**	**2.17**	**335**	*eP*		**14 59 56.2**	**-0.2**
SMLC				*eS*		**15 00 23.9**	**-1.1**
SMLC				*i*		15 00 34.1	
	comp=Z,148nm,0.1s						
CHIC	**Chingaza**	**2.26**	**195**	*eP*		**14 59 57.7**	**-0.2**
CHIC				*eS*		**15 00 26.8**	**-0.9**
CHIC				*i*		15 00 36.5	
	comp=Z,142nm,0.7s						
ROSC	**El Rosal**	**2.30**	**211**	P		**14 59 59.5**	**+1.2**
	comp=Z,65nm,0.3s,baz=265,slow=14,SNR=81						
ROSC				S		**15 00 28.6**	**+0.2**
	comp=Z,87nm,0.3s,baz=185,slow=23,SNR=6.2						
ROSC	**El Rosal**	**2.30**	**211**	⇑*iP*		**14 59 59.6**	**+1.2**
ROSC				*eS*		**15 00 31.0**	**+2.5**
ROSC				*i*		15 00 36.0	
	comp=Z,366nm,0.6s						
HELC	**Santa Helena**	**2.46**	**255**	*eP*		**15 00 00.9**	**+0.6**
HELC				*eS*		**15 00 30.6**	**-1.3**
HELC				*i*		15 00 38.7	
	comp=Z,245nm,0.3s						
UREC	**San Jos de Ur**	**2.55**	**291**	*eP*		**15 00 00.2**	**-0.9**
UREC				*eS*		**15 00 31.8**	**-1.5**
UREC				*i*		15 00 35.6	
	comp=Z,188nm,0.3s						
GUY2C	**Guyana, Caldas**	**2.73**	**234**	*eP*		**15 00 04.2**	**+0.5**
GUY2C				*eS*		**15 00 37.5**	**-0.5**
GUY2C				*i*		15 00 45.1	
	comp=Z,196nm,0.3s						
VILC	**Villavicencio,**	**2.75**	**192**	*eP*		**15 00 03.5**	**-0.2**
VILC				*eS*		**15 00 36.7**	**-1.3**
VILC				*i*		15 00 43.4	
	comp=Z,180nm,0.5s						
PTGC	**Puerto Gaitan,**	**2.79**	**159**	*eP*		**15 00 03.0**	**-1.0**
PTGC				*eS*		**15 00 35.7**	**-3.0**
PTGC				*i*		15 00 37.9	
	comp=Z,131nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.02**	**252**	*eP*		**15 00 07.6**	**+0.6**
CBOC				*eS*		**15 00 42.5**	**-1.5**
CBOC				*i*		15 00 53.4	
	comp=Z,74nm,0.6s						
DBBC	**Dabeiba**	**3.06**	**274**	*eP*		**15 00 08.1**	**+0.6**
DBBC				*eS*		**15 00 44.0**	**-0.8**
SDV	**Santo Domingo**	**3.21**	**50**	*eP*		**15 00 09.6**	**+0.1**
SDV				*eS*		**15 00 46.5**	**-1.9**
SDV				*i*		15 00 51.8	
	comp=Z,126nm,0.6s						
ANIL	**Santa Ana**	**3.24**	**224**	*eP*		**15 00 10.8**	**+0.8**
ANIL				*eS*		**15 00 49.6**	**+0.4**
ANIL				*i*		15 00 57.0	
	comp=Z,284nm,0.4s						
PRAC	**Prado**	**3.55**	**210**	*eP*		**15 00 13.1**	**-0.6**
PRAC				*eS*		**15 00 55.2**	**-0.8**
PRAC				*i*		15 01 04.2	
	comp=Z,119nm,0.5s						
ORTC	**Ortega, Tolima**	**3.58**	**216**	*eP*		**15 00 14.6**	**+0.5**
ORTC				*eS*		**15 00 55.7**	**-1.0**
ORTC				*i*		15 01 01.6	
	comp=Z,82nm,0.5s						
SJCC	**San Jacinto, C**	**3.66**	**327**	*eP*		**15 00 14.2**	**-1.0**
SJCC				*eS*		**15 00 53.6**	**-5.0**
YOTC	**Yotoco, Valle**	**4.27**	**229**	*eP*		**15 00 22.6**	**-0.6**
YOTC				*eS*		**15 01 10.9**	**-1.9**
CAPC	**Capurgana**	**4.55**	**294**	*eP*		**15 00 27.4**	**+0.7**
CAPC				*eS*		**15 01 16.0**	**-3.4**
MACC	**Macarena, Meta**	**4.71**	**189**	*eP*		**15 00 26.9**	**-1.9**
MACC				*eS*		**15 01 16.6**	**-6.5**
MACC				*i*		15 01 50.4	
	comp=Z,26nm,0.5s						
POPC	**Popayan, Colom**	**5.53**	**220**	*eP*		**15 00 40.0**	**0.0**
ASAR	**Alice Springs**	**149.10**	**234**	PKPbc		**PKPdf**	**15 18 49.4**	**+3.0**
	comp=Z,0.9nm,1.0s,baz=122,slow=3.3,SNR=15						
WRA	**Warramunga Arr**	**150.33**	**241**	PKPbc		**PKPdf**	**15 18 51.6**	**+3.3**
	comp=Z,0.6nm,0.5s,baz=104,slow=2.4,SNR=10						

IDC ***15*** *15:01:03.1±0.7, 16°.00N×93°.01W, h154km±6km, mb3.5/7, mb1 3.9/12, mb1mx3.6/49, mbtmp4.1/12, Error ellipse: s-maj=25.5km s-min=5.9km az=31.0*
NEIC ***15*** *15:01:04.9±2.3, 16°.16N±0°.06×92°.97W±0°.06, h160km±5km, Error ellipse: s-maj=10.9km s-min=6.9km az=224.0*
MEX ***15*** *15:01:04.2±0.5, 16°.14N×93°.06W, h173km±6km, MD4.2*
GCG ***15*** *15:01:17.0±0.4, 15°.93N×92°.07W, h16km±8km, MD4.3*
ISC 15 15:01:04.0±0.6, 16°.10N±0°.05×92°.99W±0°.05, h156km,
n161, σ1§38/173, mb4.2/24, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
PCIG		**0.45**	**210**	*eP*		**15 01 26.6**	**+0.9**
PCIG				*eS*		**15 01 44.1**	**+1.7**
PCIG		**0.45**	**210**			**15 01 26.6**	**+0.9**
PCIG						**15 01 44.1**	**+1.7**
TGBT	**Tuxtla Gutierr**	**0.68**	**352**	*i* P		**15 01 26.9**	**-0.1**
TGBT				*eS*		**15 01 45.1**	**+0.5**
TGBT	**Tuxtla Gutierr**	**0.68**	**352**			**15 01 23.7**	**-3.3**
TGBT						**15 01 45.1**	**+0.5**
TGIG		**0.69**	**349**	*eP*		**15 01 28.2**	**+1.1**
TGIG				*eS*		**15 01 45.6**	**+0.8**
TGIG		**0.69**	**349**			**15 01 28.5**	**+1.4**
TGIG						**15 01 45.6**	**+0.8**
CCIG	**Comitan**	**0.84**	**77**	*eP*		**15 01 29.7**	**+1.4**
CCIG				*eS*		**15 01 48.7**	**+2.0**
CCIG	**Comitan**	**0.84**	**77**			**15 01 29.6**	**+1.4**
THIG		**1.38**	**150**	*eP*		**15 01 34.1**	**+1.4**
THIG				*eS*		**15 01 56.7**	**+1.9**
THIG		**1.38**	**150**			**15 01 34.2**	**+1.5**
THIG						**15 01 57.0**	**+2.2**
STG3	**Santiaguito 3,**	**1.94**	**135**	*eP*		**15 01 40.5**	**+1.5**
CMIG	**Matias Romero**	**2.07**	**299**	P		**15 01 40.9**	**+0.7**
	77nm,0.3s,baz=136,slow=8.6,SNR=795						
CMIG				S		**15 02 07.6**	**-0.6**
	317nm,0.3s,baz=302,slow=22,SNR=90						
ERG	**Entre ros, C**	**2.14**	**140**	*eP*		**15 01 43.7**	**+2.6**
FUG	**Fuego 3**	**2.64**	**128**	*eP*		**15 01 48.9**	**+1.6**
APG	**El Apazote**	**2.66**	**114**	P		**15 01 48.0**	**+0.4**
	17nm,0.3s,baz=235,slow=24,SNR=104						
APG				S		**15 02 20.6**	**-0.8**
	90nm,0.3s,baz=323,slow=16,SNR=27						
NBG	**Las Nubes**	**2.96**	**120**	*eP*		**15 01 52.8**	**+1.5**
IXG	**Ixpaco**	**3.12**	**128**	*eP*		**15 01 55.2**	**+2.0**
MRL	**Marmol**	**3.34**	**107**	*eP*		**15 01 56.9**	**+0.8**
PANG	**Puerto Angel**	**3.38**	**263**			15 02 07.0	+11
PANG						**15 02 33.0**	**-4.1**
OXBJ	**Oaxaca**	**3.71**	**286**			15 02 22.0	+21
OXBJ						**15 02 44.0**	**-1.0**
TLIG	**Tlapa**	**5.54**	**286**			**15 02 26.2**	**+1.5**
TGUH	**Tegucigalpa,Un**	**5.88**	**109**	Pn		**15 02 30.2**	**+0.9**
TEIG	**Tepich**	**6.07**	**47**	P		**15 02 30.8**	**-0.9**
	16nm,0.3s,SNR=91						
TEIG	**Tepich**	**6.07**	**47**			**15 02 30.7**	**-1.0**
CRIN	**San Cristobal**	**6.67**	**120**	Pn		**15 02 38.6**	**-1.1**
JTS	**Las Juntas de**	**9.72**	**125**	P		**15 03 20.2**	**-0.1**
	2.1nm,0.3s,baz=18,slow=19,SNR=5.3						
JTS				S		**15 05 04.8**	**-3.4**
	1.0nm,0.3s,baz=3.2,slow=21,SNR=1.9						
JTS	**Las Juntas de**	**9.72**	**125**			**15 03 19.6**	**-0.7**
ZAIG	**Zacatecas**	**11.21**	**308**			**15 03 42.0**	**+2.0**
833A	**Chaparral WMA,**	**13.53**	**335**	P		**15 04 11.9**	**+2.2**
	baz=152,SNR=13						
342A	**Flagon Creek P**	**15.22**	**2**			**15 04 32.8**	**+0.7**
JCT	**Junction City**	**15.62**	**338**	P		**15 04 36.5**	**+0.8**
JCT				IAmb		IAmb	15 05 06.6
	comp=Z,11nm,0.7s						
HPIG		**15.97**	**315**	P		**15 04 42.8**	**+2.1**
237A	**Washetta, Mont**	**16.04**	**351**	P		**15 04 43.8**	**+2.6**
VBMS	**Vicksburg**	**16.20**	**8**	P		**15 04 44.1**	**+1.1**
WHTX	**Lake Whitney,**	**16.34**	**346**	P		**15 04 45.5**	**+1.1**
	baz=164						
WHTX	**Lake Whitney,**	**16.34**	**346**	P		**15 04 46.0**	**+1.6**
WHTX				IAmb		IAmb	15 04 55.1
	comp=Z,16nm,0.8s						
TXAR	**Lajitas Array**	**16.43**	**325**	P		**15 04 47.6**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=147,slow=14,SNR=33						
TXAR	**Lajitas Array**	**16.43**	**325**	P		**15 04 48.2**	**+2.5**
TX31	**Lajitas Ar. Si**	**16.43**	**325**	P		**15 04 48.9**	**+3.1**
TX32	**Lajitas Array**	**16.43**	**325**	P		**15 04 48.9**	**+3.1**
TX32				IAmb		IAmb	15 04 50.1
	comp=Z,33nm,1.8s						
143A	**Socs Landing,**	**16.59**	**5**	P		**15 04 48.2**	**+0.7**
TIGA	**Tifton**	**17.51**	**28**	P		**15 04 58.4**	**-0.2**
	baz=211						
WLAR	**White Oak Lake**	**17.51**	**360**	P		**15 04 58.3**	**+0.9**
ABTX	**Abilene, Hawle**	**17.52**	**341**	P		**15 04 58.6**	**+1.0**
	baz=158						
ABTX	**Abilene, Hawle**	**17.52**	**341**	P		**15 04 59.3**	**+0.5**
ABTX				IAmb		IAmb	15 05 00.1
	comp=Z,13nm,0.8s						
Z47A	**Carrollton**	**17.60**	**14**	P		**15 04 58.4**	**0.0**
Z47A				IAmb		IAmb	15 05 37.9
	comp=Z,27nm,1.3s						
Z50A	**Ashland**	**18.23**	**19**	P		**15 05 06.1**	**+0.8**
	baz=202						
X40A	**Basin Creek Fa**	**18.31**	**0**	P		**15 05 07.7**	**-0.3**
	baz=180						
MIAR	**Mount Ida**	**18.38**	**358**	P		**15 05 07.5**	**+0.7**
	baz=178,SNR=6.4						
MIAR	**Mount Ida**	**18.38**	**358**	P		**15 05 07.6**	**+0.7**
MIAR				IAmb		IAmb	15 05 08.4
	comp=Z,14nm,0.8s						
X37A	**Clayton**	**18.54**	**354**			**15 05 16.4**	**+5.8**
X37A				IAmb		IAmb	15 05 26.9
	comp=Z,15nm,0.7s						
UALR	**University of**	**18.61**	**2**	P		**15 05 09.6**	**+0.3**
UALR				IAmb		IAmb	15 05 11.8
	comp=Z,8.1nm,0.6s						
W41B	**Gary Mavity, V**	**19.01**	**2**	P		**15 05 13.9**	**+0.3**
	baz=182						
W39A	**Magazine**	**19.03**	**358**	P		**15 05 14.7**	**+0.8**
	baz=177						
W39A	**Magazine**	**19.03**	**358**	P		**15 05 16.0**	**-0.4**
W39A				IAmb		IAmb	15 05 30.1
	comp=Z,12nm,1.1s						
X48A	**Hartselle**	**19.04**	**15**	P		**15 05 14.6**	**+0.5**
X48A				IAmb		IAmb	15 05 18.7
	comp=Z,6.3nm,0.6s						
WHAR	**Wooly Hollow**	**19.12**	**2**	P		**15 05 16.6**	**-0.9**
WHAR				IAmb		IAmb	15 05 52.0
	comp=Z,30nm,2.0s						
MNTX	**Cornudas Mount**	**19.20**	**326**	P		**15 05 18.0**	**-0.5**
	baz=141,SNR=9.5						
MNTX	**Cornudas Mount**	**19.20**	**326**	P		**15 05 17.7**	**+1.9**
GOGA	**Godfrey**	**19.26**	**25**	P		**15 05 16.7**	**+0.2**
	baz=208						
GOGA	**Godfrey**	**19.26**	**25**	P		**15 05 16.9**	**+0.5**
GOGA				IAmb		IAmb	15 05 34.1
	comp=Z,20nm,1.4s						
WMOK	**Wichita Mounta**	**19.27**	**345**	P		**15 05 17.2**	**+0.6**
	baz=163						
WMOK	**Wichita Mounta**	**19.27**	**345**	P		**15 05 16.1**	**-0.5**
W35A	**Tecumseh**	**19.29**	**350**	P		**15 05 16.5**	**-0.3**
Y52A	**Lilburn**	**19.43**	**23**	P		**15 05 18.5**	**+0.1**
	baz=206						
FPAL	**Fort Paine**	**19.52**	**18**	P		**15 05 19.0**	**-0.4**
FPAL				IAmb		IAmb	15 05 20.0
	comp=Z,24nm,1.3s						
FCAR	**Ozark Folk Cen**	**19.72**	**2**	P		**15 05 20.8**	**-0.6**
MSTX	**Muleshoe**	**19.86**	**335**	P		**15 05 23.2**	**+0.1**
MSTX				IAmb		IAmb	15 05 37.9
	comp=Z,8.7nm,0.8s						
TUL1	**Leonard**	**19.89**	**353**	P		**15 05 23.5**	**+0.3**
HHAR	**Hobbs**	**20.12**	**358**	P		**15 05 26.2**	**+0.5**
HHAR				IAmb		IAmb	15 05 28.9
	comp=Z,11nm,1.0s						
U40A	**Yellville**	**20.18**	**0**	P		**15 05 27.3**	**+1.0**
	baz=180						
U40A	**Yellville**	**20.18**	**0**	P		**15 05 27.6**	**+1.3**
AMTX	**Amarillo**	**20.27**	**339**	P		**15 05 28.3**	**+0.9**
	baz=155						
AMTX	**Amarillo**	**20.27**	**339**	P		**15 05 27.9**	**+0.5**
U38A	**Gravette**	**20.30**	**357**	P		**15 05 29.1**	**+1.5**
U38A				IAmb		IAmb	15 05 30.2
	comp=Z,13nm,1.2s						
WVT	**Waverly**	**20.47**	**12**	P		**15 05 28.7**	**-0.7**
T42A	**Van Buren**	**20.91**	**4**	P		**15 05 34.0**	**-0.1**
X55A	**Gracelyn & Ava**	**20.95**	**27**	P		**15 05 34.7**	**+0.2**
	baz=211						
T35A	**Sooner Cattle**	**20.97**	**352**	P		**15 05 33.1**	**-1.7**
T35A				IAmb		IAmb	15 06 12.8
	comp=Z,22nm,1.4s						
121A	**Cookes Peak, D**	**21.16**	**323**	P		**15 05 39.9**	**+2.9**
	baz=137						
121A	**Cookes Peak, D**	**21.16**	**323**	P		**15 05 38.8**	**+1.7**
319A	**Douglas**	**21.26**	**319**	P		**15 05 36.2**	**-1.8**
319A				IAmb		IAmb	15 05 41.8
	comp=Z,8.1nm,0.9s						
T47A	**Sharon Grove**	**21.45**	**13**	P		**15 05 38.0**	**-1.9**
CCM	**Cathedral Cave**	**21.93**	**4**	P		**15 05 44.2**	**-0.7**
	baz=184						
CCM	**Cathedral Cave**	**21.93**	**4**	P		**15 05 43.5**	**-1.3**
CCM				IAmb		IAmb	15 05 44.8
	comp=Z,7.1nm,0.6s						
R40A	**Maddies Statio**	**22.11**	**2**	P		**P**	**15 05 45.7**	**-1.0**
ANMO	**Albuquerque**	**22.32**	**330**	P		**P**	**15 05 49.5**	**+0.5**
	comp=Z,2.5nm,0.4s,baz=157,slow=13,SNR=7.5							
ANMO	**Albuquerque**	**22.32**	**330**	P		**P**	**15 05 50.3**	**+1.3**
	baz=144							
ANMO	**Albuquerque**	**22.32**	**330**	P		**P**	**15 05 49.5**	**+0.5**
TUC	**Tucson**	**22.83**	**318**	P		**P**	**15 05 55.4**	**+1.7**
	baz=131							
TUC	**Tucson**	**22.83**	**318**	P		**P**	**15 05 54.3**	**+0.5**
KSU1	**Kansas State U**	**23.13**	**353**	P		**P**	**15 05 55.7**	**-0.6**
	baz=171							
KSU1	**Kansas State U**	**23.13**	**353**	P		**P**	**15 05 55.2**	**-1.1**
T25A	**Trinidad**	**23.27**	**336**	P		**P**	**15 05 59.2**	**+1.4**
	baz=151,SNR=13							
P40A	**Paris**	**23.36**	**2**	P		**P**	**15 05 57.1**	**-1.3**
P40A				IAmb		IAmb	15 05 58.0	
	comp=Z,7.9nm,0.8s							
CBKS	**Cedar Bluff**	**23.39**	**347**	P		**P**	**15 05 58.5**	**-0.3**
	baz=163							
CBKS	**Cedar Bluff**	**23.39**	**347**	P		**P**	**15 05 58.9**	**+0.1**
CBKS				IAmb		IAmb	15 06 40.1	
	comp=Z,7.4nm,0.8s							
P38A	**Dawn**	**23.44**	**359**	P		**P**	**15 05 59.0**	**-0.1**
SDCO	**Great Sand Dun**	**24.23**	**335**	P		**P**	**15 06 07.3**	**+0.7**
	baz=149,SNR=6.0							
SDCO	**Great Sand Dun**	**24.23**	**335**	P		**P**	**15 06 07.7**	**+1.0**
N38A	**Joes South For**	**24.61**	**360**	P		**P**	**15 06 08.7**	**-1.0**
X16A	**Lo Mia Camp, P**	**24.65**	**321**	P		**P**	**15 06 10.6**	**+0.2**
S22A	**4UR Ranch, Cre**	**24.79**	**333**	P		**P**	**15 06 13.3**	**+1.6**
	baz=147,SNR=6.3							
113A	**Mohawk Valley,**	**25.09**	**315**	P		**P**	**15 06 15.9**	**+1.8**
MVCO	**Mesa Verde**	**25.11**	**330**	P		**P**	**15 06 16.6**	**+1.9**
	baz=143,SNR=7.5							
MVCO	**Mesa Verde**	**25.11**	**330**	P		**P**	**15 06 16.5**	**+1.8**
Q24A	**Divide**	**25.15**	**337**	P		**P**	**15 06 16.1**	**+1.1**
	baz=151							
WUAZ	**Wupatki**	**25.37**	**323**	P		**P**	**15 06 18.1**	**+1.2**
	baz=135							
WUAZ	**Wupatki**	**25.37**	**323**	P		**P**	**15 06 18.9**	**+1.9**
PV13	**Radium Mtn., P**	**26.02**	**331**	P		**P**	**15 06 24.1**	**+1.3**
PV13				IAmb		IAmb	15 06 25.9	
	comp=Z,8.1nm,1.1s							
ISCO	**Idaho Springs**	**26.06**	**337**	P		**P**	**15 06 23.7**	**+0.5**
	baz=151							
PV03	**Paradox Valley**	**26.11**	**331**	P		**P**	**15 06 24.2**	**+0.6**
PV03				IAmb		IAmb	15 06 26.6	
	comp=Z,6.9nm,1.1s							
PV12	**Saucer Basin,**	**26.14**	**331**	P		**P**	**15 06 23.5**	**-0.4**
PV12				IAmb		IAmb	15 06 26.9	
	comp=Z,7.1nm,0.7s							
Q57A	**Strasburg**	**26.18**	**26**	P		**P**	**15 06 23.8**	**-0.1**
	baz=213							
PV17	**East Wray Mesa**	**26.19**	**331**	P		**P**	**15 06 23.9**	**-0.4**
PV17				IAmb		IAmb	15 06 27.1	
	comp=Z,7.5nm,0.9s							
PV04	**Paradox Valley**	**26.25**	**331**	P		**P**	**15 06 25.6**	**+0.8**
PV04				IAmb		IAmb	15 06 32.1	
	comp=Z,6.1nm,0.8s							
PV14	**Lion Creek, Pa**	**26.29**	**331**	P		**P**	**15 06 23.8**	**-1.5**
PV14				IAmb		IAmb	15 06 27.9	
	comp=Z,6.9nm,1.0s							
PV22	**Blue Mesa, Par**	**26.31**	**331**	P		**P**	**15 06 24.1**	**-1.3**
PV22				IAmb		IAmb	15 06 28.1	
	comp=Z,4.5nm,0.7s							
BC3	**Big Chuckawall**	**26.75**	**315**	P		**P**	**15 06 30.1**	**+0.8**
	baz=125							
MTPU	**Mount Pierson**	**27.64**	**326**	P		**P**	**15 06 39.6**	**+2.2**
CCUT	**Cedar City**	**27.94**	**324**	P		**P**	**15 06 41.5**	**+1.6**
K22A	**Casper**	**28.89**	**339**	P		**P**	**15 06 49.2**	**+0.9**
	baz=152							
RSSD	**Black Hills**	**29.46**	**344**	P		**P**	**15 06 53.9**	**+0.6**
	baz=158							
MPMC	**Manual Prospec**	**29.51**	**317**	P		**P**	**15 06 53.8**	**0.0**
	baz=126							
BW06	**Boulder Array**	**30.12**	**335**	P		**P**	**15 07 01.0**	**+1.7**
	baz=147							
PDAR	**Pinedale Array**	**30.12**	**335**	P		**P**	**15 06 59.6**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=143,slow=9.3,SNR=4.9							
PDAR	**Pinedale Array**	**30.12**	**335**	P		**P**	**15 06 59.5**	**+0.2**
M62A	**Hamden**	**30.63**	**30**	P		**P**	**15 07 03.0**	**-0.4**
	baz=220							
REDW	**Red Top Meadow**	**31.15**	**334**	P		**P**	**15 07 09.1**	**+0.9**
REDW				IAmb		IAmb	15 07 10.5	
	comp=Z,8.4nm,0.8s							
SNOW	**Snow King Moun**	**31.19**	**335**	P		**P**	**15 07 08.6**	**-0.1**
TPAW	**Teton Pass**	**31.29**	**334**	P		**P**	**15 07 10.6**	**+1.0**
TPAW				IAmb		IAmb	15 07 11.8	
	comp=Z,3.8nm,0.7s							
NV11	**Mina Array Sit**	**31.36**	**320**	P		**P**	**15 07 11.9**	**+1.8**
FXWY	**Fox Creek**	**31.45**	**334**	P		**P**	**15 07 10.9**	**+0.1**
NVAR	**Mina Array Bea**	**31.45**	**320**	P		**P**	**15 07 12.3**	**+1.4**
	comp=Z,2.3nm,0.7s,baz=133,slow=8.3,SNR=21							
NVAR	**Mina Array Bea**	**31.45**	**320**	P		**P**	**15 07 11.6**	**+0.6**
IMW	**Indian Meadow**	**31.62**	**335**	P		**P**	**15 07 13.3**	**+0.8**
KVN	**Kaiserville**	**31.72**	**321**	P		**P**	**15 07 14.1**	**+0.9**
RLMT	**Red Lodge**	**32.02**	**338**	P		**P**	**15 07

baz=303
ECL Taimali 0.41 271⇓iP Pb 15 30 03.8 -0.5
baz=278
ECL eS Sb 15 30 09.2 -1.1
baz=278
CHKT Chengkung 0.51 357⇑iP Pn 15 30 06.4 -0.5
baz=1.0
CHKT eS Sn 15 30 14.0 -0.7
baz=1.0
TAW Tawu 0.52 244⇓iP Pb 15 30 05.4 -0.6
baz=242
TAW eS Sb 15 30 11.6 -1.6
baz=242
EAST Anshuo 0.55 248⇓iP Pb 15 30 05.9 -0.6
baz=246
EAST eS Sb 15 30 12.5 -1.6
baz=246
LAY Lan-yu 0.57 165 P Pb 15 30 06.8 -0.1
baz=162
LAY eS Sb 15 30 15.4 +0.8
baz=162
FULB Fuli 0.61 351⇑iP Pb 15 30 07.8 +0.1
baz=342
FULB eS Sn 15 30 16.4 -1.0
baz=342
ELDTW Lidau 0.69 330⇑iP Pb 15 30 08.1 -0.9
baz=332
ELDTW eS Sb 15 30 16.1 -2.1
baz=332
MASBT Mashibuluo 0.71 272⇓iP Pb 15 30 08.5 -0.7
baz=272
MASBT eS Sb 15 30 16.7 -1.8
baz=272
SSD Sandimen 0.72 283⇓iP Pb 15 30 08.5 -0.9
baz=283
SSD eS Sb 15 30 16.6 -2.4
baz=283
SCZT Fangliau 0.75 253⇓iP Pb 15 30 09.1 -0.8
baz=251
SCZT eS Sb 15 30 18.1 -1.7
baz=251
TWF1 Yuli 0.77 353⇑iP Pb 15 30 09.2 -0.9
baz=345
TWF1 eS Sn 15 30 21.9 +0.9
baz=345
SSPT Xinbi 0.77 262⇓iP Pb 15 30 10.2 -0.1
baz=262
SSPT eS Sb 15 30 20.2 -0.2
baz=262
SLGT Liugui 0.80 300 P Pb 15 30 10.3 -0.4
baz=301
SLGT eS Sb 15 30 21.0 -0.2
baz=301
YULB Yu-li 0.81 354⇑iP Pb 15 30 09.7 -1.2
baz=346
YULB eS Sb 15 30 19.4 -2.0
baz=346
STYT Tauyuan 0.82 314⇑iP Pb 15 30 10.6 -0.5
baz=321
STYT eS Sb 15 30 21.0 -0.9
baz=321
TSEB Hengchuen, Pin 0.83 214⇑iP Pb 15 30 10.7 -0.5
baz=216
TSEB eS Sb 15 30 21.9 0.0
baz=216
HEN Hengchun 0.84 226 ⇑P Pb 15 30 10.8 -0.7
baz=226
HEN eS Sb 15 30 21.0 -1.4
baz=226
TWKBT Hengchun 0.84 220⇑iP Pb 15 30 10.4 -1.0
baz=214
TWKBT eS Sb 15 30 20.4 -1.9
baz=214
TWK1 Hengchun 0.84 221⇑iP Pb 15 30 10.5 -1.0
baz=214
TWK1 eS Sb 15 30 20.9 -1.6
baz=214
SGLT Jiouru 0.85 279 eP Pn 15 30 11.9 +0.4
baz=280
SGLT eS Sn 15 30 22.7 -0.4
baz=280
SGST Jiashian 0.90 303 P Pb 15 30 11.8 -0.6
baz=311
SGST S Sn 15 30 23.9 -0.4
baz=311
HGSD Ruisui 0.90 2 eP Pb 15 30 11.8 -0.6
baz=11
HGSD eS Sn 15 30 24.2 -0.1
baz=11
EHY Hungye 0.92 356 P Pb 15 30 11.4 -1.3
baz=346
EHY eS Sb 15 30 24.1 -0.4
baz=346
TWM1 Shoushan 0.93 285 P Pn 15 30 13.8 +1.2
baz=285
TWM1 eS Sn 15 30 27.2 +2.1
baz=285
WLCH Liuqiu 0.97 256 eP Pb 15 30 16.3 +2.7
baz=245
WTP Ta-pu 0.97 312⇑iP Pb 15 30 13.9 +0.2
baz=313
WTP eS Sn 15 30 27.3 +1.0
baz=313
YUS Yu-Shan 0.98 336 eP Pn 15 30 14.0 +0.2
baz=341
YUS S Sb 15 30 24.4 -2.6
baz=341
TWP Hsiaoliuchiu 0.99 256 eP Pb 15 30 16.2 +2.3
baz=244
SNJT Kaohsiung City 0.99 280 eP Pb 15 30 16.5 +2.5
baz=280
SNJT eS Sn 15 30 30.3 +3.6
baz=280
CHN1 Nanshi 1.00 307⇑iP Pb 15 30 14.7 +0.7
baz=308
CHN1 S Sn 15 30 28.2 +1.4
baz=308
TPUB Ta-pu 1.00 315⇑iP Pb 15 30 14.2 +0.1
baz=316
TPUB S Sn 15 30 27.3 +0.4
baz=316
SNST Tainan City 1.04 307 eP Pb 15 30 15.5 +0.7
baz=308
SNST eS Sn 15 30 29.5 +1.6
baz=308
CHN4 Tsaushan 1.06 316 P Pb 15 30 15.4 +0.3
baz=316
CHN4 eS Sn 15 30 29.8 +1.5
baz=316
ALS Alishan 1.07 329⇑iP Pb 15 30 15.1 -0.3
baz=337
ALS eS Sn 15 30 31.2 +2.3
baz=337
CHN3 Shinhua 1.07 297 eP Pb 15 30 17.5 +2.2
baz=298
EGFH Guangfu 1.07 2 eP Pn 15 30 14.1 -0.6
baz=352
TWK Hsinying 1.07 309⇑iP Pb 15 30 15.7 +0.3
baz=310
TWK eS Sn 15 30 29.8 +1.0
baz=310
VWDT VWDT 1.18 349 eP Pn 15 30 16.2 +0.1
baz=359
VWDT eS Sb 15 30 32.1 0.0
baz=359
CHN5 Tsauling 1.20 327 eP Pb 15 30 17.6 +0.1
baz=327
CHN5 eS Sb 15 30 34.8 +2.0
baz=327
WHYT Xinyi Township 1.21 336 eP Pb 15 30 18.0 +0.3
baz=340
WHYT eS Sb 15 30 33.1 +0.1
baz=340
ESL Shilin 1.22 2 eP Pn 15 30 15.6 -1.1
baz=1.0
ESL eS Sn 15 30 30.1 -2.2
baz=1.0
SCLT Jiali 1.25 298 eS Sb 15 30 35.0 +0.9
baz=298
SSLB Suanglung 1.26 341 P Pn 15 30 17.7 +0.4
baz=348
SSLB eS Sb 15 30 35.4 +1.0
baz=348
CHY Chiayi 1.27 315 eP Pb 15 30 18.7 0.0
baz=315
CHY eS Sb 15 30 35.6 +0.9
baz=315
CHN8 Yiju 1.33 305 eP Pb 15 30 19.8 +0.1
baz=305
CHN8 eS Sn 15 30 35.0 +0.1
baz=305
WGK Gukeng 1.33 325 eP Pb 15 30 20.0 +0.3
baz=325
WGK eS Sb 15 30 38.1 +1.6
baz=325
WLGB Puzi 1.34 311 eP Pb 15 30 19.6 -0.3
baz=311
WLGB eS Sb 15 30 37.3 +0.6
baz=311
WDLH Douliu 1.35 324 eP Pb 15 30 20.0 0.0
baz=324
WDLH eS Sb 15 30 37.9 +1.0
baz=324
SMLT Sun Moon Lake 1.37 341 eP Pb 15 30 19.9 -0.5
baz=340
SMLT eS Sb 15 30 37.8 +0.3
baz=340
WJS Zhushan 1.37 334 eP Pb 15 30 21.0 +0.5
baz=317
WJS eS Sb 15 30 38.6 +1.0
baz=317
OWD Renai 1.37 352 eP Pn 15 30 19.0 0.0
baz=359
OWD eS Sn 15 30 35.6 -0.7
baz=359
HWA Hwalien 1.40 8 eP Pn 15 30 19.1 0.0
baz=356
HWA eS Sn 15 30 36.6 +0.1
baz=356
TYC Yuchr 1.40 339 eP Pb 15 30 21.1 +0.2
baz=339
TYC eS Sb 15 30 40.0 +1.7
baz=339
WNT Mingjian 1.44 333 iP Pb 15 30 21.8 +0.2
baz=318
WNT eS Sb 15 30 40.7 +1.1
baz=318
CHGB Renai 1.48 352 eP Pn 15 30 20.6 +0.1
baz=359
CHGB eS Sn 15 30 37.8 -1.2
baz=359
TWD Chiawan 1.50 7 eP Pn 15 30 19.9 -0.6
baz=357
TWD eS Sn 15 30 39.2 +0.1
baz=357
DPDB Guoxing 1.50 343 P Pb 15 30 22.3 -0.4
baz=344
WSF Szhu 1.50 314 eP Pb 15 30 21.7 -1.0
baz=314
WSF eS Sb 15 30 40.9 -0.4
baz=314
WHF Hehuan Shan 1.55 356 eP Pn 15 30 21.8 +0.2
baz=3.0
WHF eS Sn 15 30 41.5 +0.4
baz=3.0
NACB Ninganchiao 1.59 7 P Pn 15 30 21.1 -0.7
baz=356
NACB eS Sn 15 30 40.1 -1.2
baz=356
RLNB Erlin 1.61 324 eP Pb 15 30 23.3 -1.1
baz=323
RLNB eS Sb 15 30 43.9 -0.5
baz=323
ETLH Xiulin Townshi 1.61 3 eP Pn 15 30 21.6 -0.5
ETLH eS Sn 15 30 40.7 -1.4
TDCB Techi 1.67 353 eP Pn 15 30 23.9 +0.9
baz=359
TDCB eS Sn 15 30 44.5 +0.9
baz=359
WCHH Zhanghua 1.67 333 eP Pb 15 30 24.9 -0.7
baz=318
WCHH eS Sb 15 30 46.7 +0.5
baz=318
TCU Taichung 1.69 337 eP Pb 15 30 24.5 -1.3
baz=336
TCU eS Sb 15 30 47.5 +0.9
baz=336
WDGT Dungji 1.73 293 eP Pn 15 30 23.0 -0.7
baz=292
WDGT eS Sn 15 30 43.8 -1.2
baz=292
NNSB Datong 1.83 360 eP Pn 15 30 25.7 +0.5
baz=5.0
NNSB eS Sn 15 30 48.7 +1.1
baz=5.0
NNSH Datong 1.83 360 eP Pn 15 30 25.8 +0.6
baz=10.0
NNS Nan Shan 1.84 359 eP Pn 15 30 26.4 +1.1
baz=5.0
NNS eS Sn 15 30 47.5 -0.4
baz=5.0
TWQ1 Liyutan 1.84 342 eP Pb 15 30 27.4 -1.1
baz=341
TWQ1 eS Sb 15 30 51.7 +0.6
baz=341
ENA Nanau 1.86 10 eP Pn 15 30 25.0 -0.4
baz=356
ENA eS Sn 15 30 48.3 +0.2
baz=356
WDJ Dajia District 1.88 339 eP Pb 15 30 28.4 -0.8
baz=337
WDJ eS Sb 15 30 52.5 +0.2
baz=337
NSY Sanyi 1.91 342 eP Pb 15 30 28.6 -1.0
baz=341
NSY eS Sb 15 30 53.7 +0.7
baz=341
PHUB P'eng-hu 1.92 299 eP Pn 15 30 24.2 -2.0
baz=298
PHUB eS Sn 15 30 47.6 -1.8
baz=298
PNG Penghu 1.96 300 eP Pn 15 30 27.0 +0.2
baz=299
PNG eS Sn 15 30 49.2 -1.2
baz=299
PTSB Yuanli 1.96 341 eP Pb 15 30 28.1 +1.3
baz=340
PTSB eS Sb 15 30 54.3 0.0
baz=340
NDT Datong Townshi 2.01 3 P Pn 15 30 29.2 +1.7
baz=13
NMLH Miaoli 2.02 344 eP Pb 15 30 29.9 -1.5
baz=342
NMLH eS Sb 15 30 56.2 +0.1
baz=342
ENTT Nioudou 2.05 4 eP Pn 15 30 28.5 +0.4
baz=1.0
ENTT eS Sn 15 30 51.5 -1.3
baz=1.0
TWC Suao 2.05 12 eP Pn 15 30 29.4 +1.2
baz=358
TWC eS Sb 15 30 55.3 -1.9
baz=358
EOS1 EOS1 2.06 19 eP Pn 15 30 29.5 +1.2
baz=25
EOS1 eS Sn 15 30 54.2 +1.2
baz=25
NSTT Nanjuang 2.06 350 eP Pn 15 30 29.7 +1.4
baz=335
NSTT eS Sb 15 30 56.9 -0.5
baz=335
YHNB Yeheng 2.07 359 P Pn 15 30 29.5 +1.1
baz=8.0
YHNB eS Sn 15 30 53.4 0.0
baz=8.0
LIOB Emei 2.08 350 eP Pn 15 30 30.2 +1.7
baz=348
LIOB eS Sb 15 30 57.3 -0.5
baz=348
NSK Sanguang 2.08 359 eP Pn 15 30 29.9 +1.3
baz=7.0
NSK eS Sn 15 30 54.1 +0.5
baz=7.0
TWE Neicheng 2.14 7 eP Pn 15 30 29.9 +0.6
baz=3.0
TWE eS Sn 15 30 55.4 +0.5
baz=3.0
SLBB Yuanshan 2.17 6 eP Pn 15 30 30.8 +1.0
baz=2.0
SLBB eS Sn 15 30 57.3 +1.6
baz=2.0
NWLT Wulai 2.18 3 eP Pn 15 30 30.9 +1.0
baz=14
WLTB Daxi 2.26 357 eP Pb 15 30 33.4 -2.1
baz=341
WLTB eS Sn 15 30 59.9 +2.1
baz=341
NTC Toucheng 2.29 10 eP Pb 15 30 33.8 -2.3
baz=2.0
JYNG Yonagunijimaku 2.34 37 P Pn 15 30 33.4 +1.4
JYNG eS Sn 15 31 00.1 +0.3
NHDH Xindian Distri 2.37 3 eP Pn 15 30 34.0 +1.6
baz=9.0
NHDH eS Sn 15 31 02.0 +1.4
baz=9.0
NCUH Zhongli 2.38 355 eP Pn 15 30 34.5 +1.9
baz=339
TATO Taipei 2.38 2 eP Pn 15 30 33.2 +0.7
baz=13
YOJ Yonaguni jima 2.38 38 eP Pn 15 30 34.0 +1.3
baz=44
YOJ eS Sn 15 31 02.4 +1.4
baz=44
YOJ Yonaguni jima 2.38 38 P Pn 15 30 33.9 +1.3
YOJ eS Sn 15 31 02.2 +1.3
TWA Mucha 2.39 4 eP Pn 15 30 34.1 +1.3
baz=14
TIPB Shuangxi 2.40 9 eP Pn 15 30 33.9 +0.9
baz=357
TIPB eS Sn 15 31 02.4 +0.8
baz=357
NWF Wu-fen Shan 2.50 8 eP Pn 15 30 35.2 +0.9
baz=8.0
WFSB Wu-fen Shan 2.50 8 eP Pn 15 30 35.2 +1.0
baz=4.0
WFSB eS Sn 15 31 04.1 +0.3
baz=4.0
YM01 YM01 2.55 4 eP Pn 15 30 37.3 +2.3
baz=3.0
YM04 YM04 2.56 3 eP Pn 15 30 35.6 +0.6
baz=13
YM10 YM10 2.56 3 eP Pn 15 30 35.2 0.0
baz=3.0
NTST Danshui 2.56 1 eP Pn 15 30 35.1 -0.1
baz=13
YM11 YM11 2.57 4 eP Pn 15 30 36.1 +0.8
baz=3.0
YM03 YM03 2.58 3 eP Pn 15 30 37.0 +1.6
baz=14
ANP Anpu 2.59 2 eP Pn 15 30 36.6 +1.0
baz=14
YM08 YM08 2.59 4 eP Pn 15 30 35.3 -0.2
baz=4.0
HATJ Hateruma jima 2.65 56 P Pn 15 30 37.6 +1.2
HATJ eS Sn 15 31 07.7 +0.1
TWY Chenhua 2.68 4 eP Pn 15 30 39.0 +2.3
baz=4.0
IRIF Iriomote-Funau 2.76 51 P Pn 15 30 39.2 +1.4
IRIF eS Sn 15 31 11.7 +1.4
JKRS Kuro-shima 2.91 55 P Pn 15 30 41.3 +1.4
JKRS eS Sn 15 31 13.9 0.0
VWUC VWUC 2.98 324 eP Pn 15 30 41.1 +0.2
baz=321
JIJ Ishigaki jima 3.08 54 P Pn 15 30 43.8 +1.6
JIJ S Sn 15 31 17.5 -0.7
PTMZ Houxiangcun 3.21 320 eP Pn 15 30 44.0 -0.1
baz=318
PTTC Pingtan 3.26 333 eP Pn 15 30 45.1 +0.4
baz=330
KNM Kinmen 3.27 304 eP Pn 15 30 47.4 +2.5
baz=301
JISG Ishigakijimahi 3.33 53 P Pn 15 30 46.6 +0.9
JISG eS Sn 15 31 23.4 -1.0
KNMB Chin-men Tao 3.33 305 eP Pn 15 30 44.5 -1.2
baz=302
JTJ Tarama 3.66 55 P Pn 15 30 51.6 +1.4
JTJ eS Sn 15 31 32.3 -0.1
MATB Ma-tsu 3.79 340 eP Pn 15 30 50.8 -1.1
baz=336
AXDP Jialang 3.89 307 eP Pn 15 30 53.0 -0.4
baz=304
MHZQ Yeshan 4.11 329 eP Pn 15 30 56.7 +0.3
baz=325
JIRB Irabujima 4.12 56 P Pn 15 30 57.9 +1.4
JIRB eS Sn 15 31 43.4 -0.4
JMJ2 Miyako jima3 4.19 59 P Pn 15 30 59.0 +1.4
JMJ2 eS Sn 15 31 46.6 +1.0
JMJ Miyako jima 2 4.20 57 eP Pn 15 30 58.0 +0.3
baz=53
LYJJ Jianjiangzhen 4.21 340 eP Pn 15 30 57.4 -0.5
baz=336
JOGS Gusukube 4.26 59 P Pn 15 31 00.0 +1.5
XPSS Dashiqiu 4.46 346 eP Pn 15 31 00.4 -0.8
baz=343

IDC 15 15:43:47.7±1.1, 2°.51N×95°.48W, h0km, mb4.1/11, mb1 4.3/13, mb1mx4.0/45, mbtmp4.1/13, ML3.3/2, MS3.7/14, Ms1 3.7/14, ms1mx3.5/26, Error ellipse: s-maj=36.7km s-min=17.0km az=46.0

NEIC 15 15:43:50.4±1.9, 2°.7N±0°.1×95°.2W±0°.1, h10km±2km, mb4.5/43, Error ellipse: s-maj=24.1km s-min=15.4km az=236.0

ISC 15 15:43:49.0±0.9, 2°.5N±0°.1×95°.3W±0°.1, h10km, n83, σ1§16/65, mb4.4/23, MS3.6/9, Galapagos Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PAYG Puerto Ayora 5.94 122 Pn Pn 15 45 16.2 -0.9
JTS Las Juntas de 12.86 53 LR LR 15 50 21.1
comp=Z,379nm,18.7s,baz=321,slow=30
JTS Las Juntas de 12.86 53 Pn Pn 15 46 46.4 -5.7
APG El Apazote 13.29 21 Pn Pn 15 46 58.6 +0.5
0.1nm,0.3s,baz=300,slow=19,SNR=4.0
APG LR LR 15 50 55.8
comp=Z,514nm,20.4s,baz=256,slow=32
ACON Acoyapa 13.74 46 Pn Pn 15 47 03.4 -0.7
CMIG Matias Romero 14.48 2 Pn Pn 15 47 16.3 +2.0
0.1nm,0.3s,baz=81,slow=12,SNR=2.8
CMIG LR LR 15 51 29.9
comp=Z,439nm,20.1s,baz=184,slow=32
TEIG Tepich 18.89 21 LR LR 15 54 43.0
comp=Z,249nm,18.1s,baz=244,slow=35
ATAH Atahualpa 19.42 120 LR LR 15 54 17.0
comp=Z,174nm,20.7s,baz=300,slow=32
ROSC El Rosal 21.07 83 P P 15 48 36.4 +2.3
5.0nm,0.3s,baz=311,slow=23,SNR=3.8
ROSC LR LR 15 55 09.9
comp=Z,88nm,18.2s,baz=334,slow=32
ROSC El Rosal 21.07 83 P P 15 48 35.0 +0.9
ROSC IAmb IAmb 15 48 52.2
comp=Z,24nm,1.2s
ZAIG Zacatecas 21.32 341 P P 15 48 36.0 -0.5
FSCY Frank Sound, G 21.66 39 P P 15 48 39.9 -0.1
H06E1 SOCORRO T-PHAS 22.25 318 T T 16 11 46.5
SNR=9.5
RUSC La Rusia 22.41 81 P P 15 48 49.0 +0.4
CBCY The Bluff, Cay 22.88 40 P P 15 48 51.9 -1.1
NNA Nana 23.34 129 LR LR 15 56 00.8
comp=Z,75nm,21.2s,baz=292,slow=31
SDV Santo Domingo 25.34 75 P P 15 49 18.1 +1.5
comp=Z,4.0nm,0.3s,baz=355,slow=14,SNR=4.0
SDV Santo Domingo 25.34 75 P P 15 49 17.1 +0.4
SDV IAmb IAmb 15 49 19.2
comp=Z,12nm,1.1s
LPIG La Paz 25.89 327 LR LR 15 56 38.5
comp=Z,67nm,20.7s,baz=170,slow=30
TX32 Lajitas Array 27.82 344 P P 15 49 37.2 -1.5
TXAR Lajitas Array 27.82 344 P P 15 49 37.3 -1.5
comp=Z,0.7nm,0.7s,baz=166,slow=11,SNR=6.5
TXAR LR LR 15 59 47.4
comp=Z,167nm,19.7s,baz=0.0,slow=34
TXAR Lajitas Array 27.82 344 P P 15 49 39.0 +0.2
TX31 Lajitas Ar. Si 27.82 344 P P 15 49 36.3 -2.5
TX31 IAmb IAmb 15 49 50.3
comp=Z,20nm,1.5s
319A Douglas 31.58 337 P P 15 50 12.1 0.0
319A IAmb IAmb 15 50 28.6
comp=Z,13nm,1.6s
MLPR Magueyes Islan 31.68 59 P P 15 50 11.1 -1.9
LPAZ La Paz 32.72 126 P P 15 50 24.8 +1.9
comp=Z,0.5nm,0.3s,baz=304,slow=4.3,SNR=4.8
LPAZ La Paz 32.72 126 P P 15 50 24.7 +1.9
LPAZ IAmb IAmb 15 50 33.6
comp=Z,8.7nm,1.2s
ANMO Albuquerque 33.88 343 LR LR 16 03 22.1
comp=Z,243nm,20.8s,baz=156,slow=35
WVT Waverly 34.15 11 P P 15 50 33.3 -1.0
WVT IAmb IAmb 15 50 36.9
comp=Z,9.5nm,0.9s
X16A Lo Mia Camp, P 35.12 336 P P 15 50 43.9 +0.9
Y14A Wickenburg 35.36 334 P P 15 50 45.8 +0.9

S44A	**Carbondale**	**35.44**	**8**	P	**P**	**15 50 46.6**	**+1.1**
GLA	**Glamis**	**35.45**	**331**	P	**P**	**15 50 46.9**	**+1.1**
GLA				IAmb	IAmb	15 51 25.9	
	comp=Z,5.3nm,0.8s						
SIUC	**Southern Illin**	**35.47**	**8**	P	**P**	**15 50 45.9**	**+0.2**
CCM	**Cathedral Cave**	**35.56**	**6**	P	**P**	**15 50 45.6**	**-0.9**
CCM				IAmb	IAmb	15 50 53.6	
	comp=Z,4.7nm,0.7s						
R40A	**Maddies Statio**	**35.71**	**4**	P	**P**	**15 50 47.9**	**+0.1**
W13A	**Hualapai Mount**	**36.72**	**334**	P	**P**	**15 50 57.7**	**+1.0**
R49A	**Shelbyville**	**36.79**	**13**	P	**P**	**15 50 58.2**	**+1.2**
P40A	**Paris**	**36.95**	**4**	P	**P**	**15 50 58.8**	**+0.4**
P40A				IAmb	IAmb	15 51 01.6	
	comp=Z,17nm,1.1s						
KNB	**Kanab**	**37.93**	**337**	P	**P**	**15 51 08.4**	**+1.4**
LCMT	**Little Creek M**	**38.09**	**336**	P	**P**	**15 51 08.5**	**+0.2**
SIV	**San Ignacio**	**38.52**	**120**	P	**P**	**15 51 13.3**	**+1.2**
	comp=Z,1.7nm,1.0s,baz=295,slow=11,SNR=5.0						
H03N2	**Juan Fernandez**	**38.97**	**158**	T	T	16 32 43.5	
	baz=334,slow=77,SNR=26						
H03N1	**Juan Fernandez**	**38.98**	**158**	T	T	16 32 49.4	
	baz=334,slow=77,SNR=35						
H03N3	**Juan Fernandez**	**38.99**	**158**	T	T	16 32 41.7	
	baz=334,slow=77,SNR=27						
R11A	**Troy Canyon, C**	**40.19**	**335**	P	**P**	**15 51 28.0**	**+2.1**
NLU	**North Lily Min**	**40.25**	**340**	P	**P**	**15 51 27.8**	**+1.5**
DUG	**Dugway, Tooele**	**40.72**	**339**	P	**P**	**15 51 31.4**	**+1.3**
DUG				IAmb	IAmb	15 51 35.2	
	comp=Z,11nm,1.4s						
NV11	**Mina Array Sit**	**41.40**	**333**	P	**P**	**15 51 37.6**	**+1.7**
NVAR	**Mina Array Bea**	**41.46**	**332**	P	**P**	**15 51 37.9**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=162,slow=8.8,SNR=12						
NVAR				LR	LR	16 06 07.2	
	comp=Z,79nm,20.9s,baz=203,slow=32						
NVAR	**Mina Array Bea**	**41.46**	**332**	P	**P**	**15 51 38.0**	**+1.5**
BW06	**Boulder Array**	**42.04**	**344**	P	**P**	**15 51 41.8**	**+0.7**
BW06				IAmb	IAmb	15 51 49.1	
	comp=Z,8.3nm,1.4s						
PD31	**Pinedale Array**	**42.04**	**344**	P	**P**	**15 51 41.7**	**+0.5**
PD31				IAmb	IAmb	15 51 49.1	
	comp=Z,6.5nm,1.3s						
PDAR	**Pinedale Array**	**42.04**	**344**	P	**P**	**15 51 41.6**	**+0.5**
	comp=Z,1.6nm,0.9s,baz=148,slow=8.6,SNR=12						
PDAR				LR	LR	16 08 42.6	
	comp=Z,285nm,19.5s,baz=156,slow=36						
PDAR	**Pinedale Array**	**42.04**	**344**	P	**P**	**15 51 41.1**	**0.0**
ELK	**Elko**	**42.09**	**337**	P	**P**	**15 51 42.6**	**+1.0**
RSSD	**Black Hills**	**42.14**	**351**	P	**P**	**15 51 40.2**	**-1.7**
RSSD				IAmb	IAmb	15 52 00.1	
	comp=Z,5.5nm,0.9s						
FXWY	**Fox Creek**	**43.26**	**343**	P	**P**	**15 51 51.7**	**+0.7**
FXWY				IAmb	IAmb	15 51 54.8	
	comp=Z,5.2nm,1.0s						
IMW	**Indian Meadow**	**43.47**	**344**	P	**P**	**15 51 52.7**	**-0.1**
YHH	**Holmes Hill**	**44.27**	**344**	P	**P**	**15 52 00.1**	**+0.9**
YHL	**Hebgen Lake**	**44.42**	**344**	P	**P**	**15 52 00.8**	**+0.5**
MCMT	**McKenzie Canyo**	**44.88**	**342**	P	**P**	**15 52 04.7**	**+0.7**
K05A	**Summer Lake**	**46.09**	**334**	P	**P**	**15 52 14.4**	**+0.8**
K05A				IAmb	IAmb	15 52 17.5	
	comp=Z,14nm,1.5s						
CPUP	**Villa Florida**	**46.58**	**130**	LR	LR	16 10 33.9	
	comp=Z,69nm,18.7s,baz=270,slow=34						
ULM	**Lac du Bonnet**	**47.56**	**360**	P	**P**	**15 52 23.9**	**-0.7**
	comp=Z,4.6nm,0.9s,baz=187,slow=8.1,SNR=3.4						
ULM				LR	LR	16 12 44.1	
	comp=Z,30nm,18.3s,baz=159,slow=36						
ULM	**Lac du Bonnet**	**47.56**	**360**	P	**P**	**15 52 23.7**	**-0.9**
ULM				IAmb	IAmb	15 52 24.7	
	comp=Z,4.5nm,0.7s						
NLWA	**Neilton Lookou**	**51.08**	**335**	P	**P**	**15 52 49.5**	**-2.2**
FFC	**Flin Flon**	**52.32**	**355**	P	**P**	**15 53 00.2**	**-0.6**
FFC				IAmb	IAmb	15 53 04.0	
	comp=Z,7.3nm,1.4s						
YKA	**Yellowknife Ar**	**61.54**	**350**	P	**P**	**15 54 05.7**	**-0.3**
	comp=Z,1.3nm,0.9s,baz=151,slow=6.9,SNR=14						
BCAR	**Beaver Creek A**	**69.38**	**339**	P	**P**	**15 54 56.7**	**-0.2**
INK	**Inuvik**	**70.58**	**346**	P	**P**	**15 55 04.9**	**+0.8**
	comp=Z,5.5nm,1.1s,baz=156,slow=6.0,SNR=8.5						
INK	**Inuvik**	**70.58**	**346**	P	**P**	**15 55 05.0**	**+0.9**
ILAR	**Eielson Array**	**72.21**	**339**	P	**P**	**15 55 13.7**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=149,slow=4.7,SNR=7.1						
ILAR	**Eielson Array**	**72.21**	**339**	P	**P**	**15 55 13.2**	**-0.8**
BMAR	**Burnt Mountain**	**73.02**	**342**	P	**P**	**15 55 19.3**	**+0.4**
H11N3	**WAKE ISLAND Hy**	**96.47**	**290**	T	T	17 44 33.5	
	baz=86,slow=75,SNR=6.5						
H11N2	**WAKE ISLAND Hy**	**96.49**	**290**	T	T	17 44 34.8	
	baz=86,slow=75,SNR=5.2						
H11N1	**WAKE ISLAND Hy**	**96.49**	**290**	T	T	17 44 34.7	
	baz=86,slow=75,SNR=7.6						
H11S2	**WAKE ISLAND Hy**	**96.77**	**289**	T	T	17 44 58.7	
	baz=86,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**96.78**	**289**	T	T	17 44 58.3	
	baz=86,slow=75,SNR=16						
H11S3	**WAKE ISLAND Hy**	**96.79**	**289**	T	T	17 44 55.2	
	baz=86,slow=75,SNR=14						
ASAR	**Alice Springs**	**128.01**	**242**	PKP	**PKPdf**	**16 02 55.9**	**-0.3**
	comp=Z,0.3nm,0.9s,baz=137,slow=1.8,SNR=1.8						
CMAR	**Chiang Mai Arr**	**154.87**	**327**	PKPbc	**PKPbc**	**16 03 50.6**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=43,slow=1.4,SNR=4.5						

*NEIC **15** 15:44:58.5±2.2,36.57N±0.01×90.03W±0.01,h8km±7km,*
Error ellipse: s-maj=2.4km s-min=1.0km az=147.0
*SLM **15** 15:44:58.3±2.4,36.56N±0.02×90.02W±0.01,h6km±7km,*
Md3.1,Error ellipse: s-maj=2.6km s-min=1.7km az=168.0
*CERI **15** 15:44:58.0,36.56N×90.02W,h4km*
*ANF **15** 15:44:58.8±1.5,36.57N×90.00W,h5km±9km,ML3.9/10,*
Error ellipse: s-maj=5.6km s-min=4.1km az=8.0

ISC 15 15:44:58.6±1.0,36.56N±0.02×90.01W±0.02,h10km±9km,
n82,σ1s05/100,New Madrid region, Missouri

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PARMO	**Parma**	**0.23**	**64**		**Pg**	**15 45 03.5**	**0.0**
PVMO	**Portageville**	**0.29**	**120**		**Pg**	**15 45 04.3**	**-0.1**
PVMO				Sg	**Sg**	**15 45 08.8**	**+0.4**
PENMO	**Penman**	**0.33**	**109**		**Pg**	**15 45 04.9**	**-0.2**
PENMO				Sg	**Sg**	**15 45 10.2**	**+0.6**
PBMO	**Poplar Bluff**	**0.40**	**303**		**Pg**	**15 45 06.2**	**-0.3**
PBMO				Sg	**Sg**	**15 45 11.9**	**0.0**
HENM	**Henderson Moun**	**0.46**	**70**		**Pg**	**15 45 07.5**	**-0.2**
HENM				Sg	**Sg**	**15 45 14.5**	**+0.7**
PEBM	**Pemiscott Bayo**	**0.46**	**165**		**Pg**	**15 45 07.7**	**0.0**
PEBM				Sg	**Sg**	**15 45 14.4**	**+0.6**
GNAR	**Gosnell**	**0.59**	**180**		**Pg**	**15 45 10.4**	**+0.3**
GNAR				Sg	**Sg**	**15 45 18.5**	**+0.6**
LNXT	**Lenox**	**0.62**	**137**		**Pg**	**15 45 10.5**	**-0.1**
HICK	**Hickman**	**0.63**	**91**	Pg	**Pg**	**15 45 10.2**	**-0.6**
GLAT	**Glass**	**0.65**	**116**		**Pg**	**15 45 11.0**	**-0.3**
GLAT				Sg	**Sg**	**15 45 20.7**	**+0.9**
HALT	**Halls**	**0.85**	**140**		**Pg**	**15 45 14.7**	**-0.2**
LPAR	**Lepanto**	**0.98**	**194**		**Pg**	**15 45 16.9**	**-0.7**
LPAR				Sg	**Sg**	**15 45 30.6**	**+0.3**
T42A	**Van Buren**	**0.99**	**299**		**Pg**	**15 45 16.8**	**-0.9**
T42A				Sg	**Sg**	**15 45 29.9**	**-0.6**
LCAR	**Lake Charles**	**1.04**	**242**		**Pg**	**15 45 17.6**	**-1.1**
LCAR				Sg	**Sg**	**15 45 31.2**	**-1.0**
HBAR	**Harrisburg**	**1.13**	**208**		**Pg**	**15 45 19.6**	**-0.8**
HBAR				Sg	**Sb**	**15 45 35.3**	**+0.3**
T45A	**Paducah**	**1.19**	**67**		**Pg**	**15 45 20.3**	**-1.2**
T45A				Sg	**Sg**	**15 45 36.3**	**-0.7**
S44A	**Carbondale**	**1.28**	**28**		**Pn**	**15 45 21.6**	**-1.0**
SIUC	**Southern Illin**	**1.32**	**29**		**Pn**	**15 45 22.1**	**-0.9**
MET	**Memphis--Engin**	**1.44**	**177**	Pn	**Pn**	**15 45 24.4**	**-0.3**
W45A	**Hickory Valley**	**1.55**	**154**		**Pn**	**15 45 26.1**	**-0.2**
CCM	**Cathedral Cave**	**1.79**	**327**	P	**Pn**	**15 45 30.3**	**+0.7**
	baz=147						
CCM				S	**Sg**	**15 45 54.9**	**-1.2**
	baz=147						
CCM	**Cathedral Cave**	**1.79**	**327**		**Pn**	**15 45 30.3**	**+0.7**
WVT	**Waverly**	**1.81**	**103**	P	**Pn**	**15 45 30.0**	**+0.1**
	baz=284						
WVT				S	**Sb**	**15 45 54.6**	**-0.1**
	baz=284						
WVT	**Waverly**	**1.81**	**103**		**Pn**	**15 45 29.8**	**-0.1**
FCAR	**Ozark Folk Cen**	**1.83**	**249**		**Pn**	**15 45 31.1**	**+0.9**
SLM	**Saint Louis**	**2.08**	**355**	Pn	**Pn**	**15 45 35.2**	**+1.6**
OXF	**Oxford**	**2.10**	**166**	P	**Pn**	**15 45 33.8**	**-0.1**
	baz=346						
OXF				S	**Sb**	**15 46 04.1**	**+1.2**
	baz=346						
OXF	**Oxford**	**2.10**	**166**		**Pn**	**15 45 33.6**	**-0.3**
X43A	**Marvell**	**2.16**	**199**	Sb	**Sg**	**15 46 06.7**	**-1.3**
	baz=19						
PLAL	**Pickwick Lake**	**2.23**	**134**		**Pn**	**15 45 35.1**	**-0.5**
WHAR	**Wooly Hollow**	**2.24**	**236**		**Pn**	**15 45 36.8**	**+1.0**
W41B	**Gary Mavity, V**	**2.28**	**233**	P	**Pn**	**15 45 37.3**	**+0.9**
	baz=52						
W41B				S	**Sb**	**15 46 06.8**	**-1.3**
	baz=52						
U40A	**Yellville**	**2.30**	**266**	P	**Pn**	**15 45 38.2**	**+1.6**
	baz=84						
U40A				S	**Sb**	**15 46 08.6**	**-0.1**
	baz=84						
U40A	**Yellville**	**2.30**	**266**		**Pn**	**15 45 38.1**	**+1.5**
USIN	**University of**	**2.34**	**52**		**Pn**	**15 45 38.7**	**+1.6**
T47A	**Sharon Grove**	**2.37**	**79**		**Pn**	**15 45 38.7**	**+1.1**
Q44A	**Meyer Farm, Va**	**2.47**	**18**		**Pn**	**15 45 40.7**	**+1.8**
R40A	**Maddies Statio**	**2.49**	**315**		**Pn**	**15 45 40.4**	**+1.2**
UALR	**University of**	**2.60**	**228**		**Pn**	**15 45 42.1**	**+1.4**
V48A	**Smith Brothers**	**2.71**	**107**		**Pn**	**15 45 42.6**	**+0.4**
Y45A	**Yeager Farm, C**	**2.71**	**172**	Pn	**Pn**	**15 45 42.0**	**-0.3**
CCAR	**Cane Creek**	**3.00**	**209**		**Pn**	**15 45 47.4**	**+1.1**
CLTN	**Cedars of Leba**	**3.01**	**98**		**Pn**	**15 45 45.8**	**-0.5**
X40A	**Basin Creek Fa**	**3.09**	**229**	P	**Pn**	**15 45 48.3**	**+0.8**
	baz=47						
X40A	**Basin Creek Fa**	**3.09**	**229**		**Pn**	**15 45 48.4**	**+0.8**
HHAR	**Hobbs**	**3.18**	**266**		**Pn**	**15 45 50.1**	**+1.4**
X48A	**Hartselle**	**3.21**	**130**		**Pn**	**15 45 49.2**	**+0.2**
W39A	**Magazine**	**3.35**	**247**	P	**Pn**	**15 45 52.3**	**+1.2**
	baz=65						
W39A				S	**Sn**	**15 46 33.5**	**+2.6**
	baz=65						
W39A	**Magazine**	**3.35**	**247**		**Pn**	**15 45 53.2**	**+2.2**
P40A	**Paris**	**3.37**	**332**		**Pn**	**15 45 52.5**	**+1.1**
WCI	**Wyandotte Cave**	**3.40**	**60**		**Pn**	**15 45 52.4**	**+0.7**
U49A	**Red Boiling Sp**	**3.41**	**90**		**Pn**	**15 45 52.2**	**+0.4**
U38A	**Gravette**	**3.53**	**269**		**Pn**	**15 45 55.0**	**+1.5**
MIAR	**Mount Ida**	**3.53**	**236**	P	**Pn**	**15 45 54.9**	**+1.4**
	baz=54						
MIAR	**Mount Ida**	**3.53**	**236**		**Pn**	**15 45 54.9**	**+1.4**
SWET	**Sewanee**	**3.57**	**111**		**Pn**	**15 45 54.1**	**0.0**
Z47A	**Carrollton**	**3.71**	**154**		**Pn**	**15 45 56.5**	**+0.5**
P46A	**Rosedale**	**3.77**	**35**		**Pn**	**15 45 58.6**	**+1.8**
O44A	**Mansfield**	**3.79**	**18**		**Pn**	**15 45 58.2**	**+1.1**
BLO	**Bloomington**	**3.80**	**46**		**Pn**	**15 45 57.5**	**+0.3**
146A	**Union**	**3.99**	**168**	Pn	**Pn**	**15 46 00.1**	**+0.2**
Y49A	**Blount Mountai**	**3.99**	**131**		**Pn**	**15 45 59.4**	**-0.5**
HDIL	**Hopedale**	**4.03**	**8**		**Pn**	**15 46 02.1**	**+1.8**
W50A	**Signal Mountai**	**4.05**	**108**		**Pn**	**15 45 59.6**	**-1.1**
FPAL	**Fort Paine**	**4.12**	**118**		**Pn**	**15 46 01.7**	**+0.1**
P38A	**Dawn**	**4.13**	**319**		**Pn**	**15 46 02.1**	**+0.4**
T50A	**Nancy**	**4.18**	**82**		**Pn**	**15 46 01.1**	**-1.3**
R49A	**Shelbyville**	**4.22**	**64**		**Pn**	**15 46 01.1**	**-2.0**
LRAL	**Lakeview Retre**	**4.30**	**144**	Pn	**Pn**	**15 46 03.3**	**-0.8**
SFIN	**Lafayette**	**4.45**	**30**		**Pn**	**15 46 06.6**	**+0.5**
X51A	**Calhoun**	**4.65**	**114**		**Pn**	**15 46 08.3**	**-0.6**
Z50A	**Ashland**	**4.71**	**133**		**Pn**	**15 46 08.0**	**-1.7**
TUL1	**Leonard**	**4.72**	**264**	S	**Sn**	**15 47 04.5**	**-0.1**
	baz=80						
TUL1	**Leonard**	**4.72**	**264**	Pn	**Pn**	**15 46 08.3**	**-1.5**
L40A	**Anamosa**	**5.58**	**351**	Pn	**Pn**	**15 46 19.4**	**-2.2**
SCIA	**State Center**	**5.89**	**336**	Pn	**Pn**	**15 46 23.4**	**-2.5**
BG3	**Lake Jocassee**	**5.96**	**103**		**Pn**	**15 46 25.6**	**-1.4**
JFWS	**Jewell Farm**	**6.35**	**358**	Pn	**Pn**	**15 46 31.0**	**-1.3**
R53A	**Hurricane**	**6.65**	**72**	Pn	**Pn**	**15 46 35.1**	**-1.3**
Z35A	**Perchaven, San**	**6.76**	**244**		**Pn**	**15 46 36.8**	**-1.1**
O52A	**Adamsville**	**7.34**	**59**	Pn	**Pn**	**15 46 45.3**	**-0.5**
WMOK	**Wichita Mounta**	**7.37**	**258**	Pn	**Pn**	**15 46 47.4**	**+1.1**

*IDC **15** 15:45:33.0±6.8,2.48N×93.95W,h0km,mb3.8/6,mb1 4.2/6,*
mb1mx3.8/44,mbtmp3.8/6,MS3.2/1,Ms1 3.3/1,
ms1mx2.8/26,Error ellipse: s-maj=202.8km
s-min=126.3km az=53.0
*NEIC **15** 15:45:36.5±0.6,2.6N±0.2×94.3W±0.3,h15km±9km,*
mb4.3/3,Error ellipse: s-maj=47.8km s-min=31.0km
az=111.0

ISC 15 15:45:35.9±6.0,2.6N±0.7×94.2W±0.4,h10km,n16,
σ0s51/15,mb3.8/7,Galapagos Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**12.23**	**32**	Pn	**Pn**	**15 48 30.0**	**-0.3**
TXAR	**Lajitas Array**	**28.05**	**342**	P	**P**	**15 51 28.0**	**+0.3**
	0.4nm,0.5s,baz=146,slow=12,SNR=4.3						
TXAR	**Lajitas Array**	**28.05**	**342**	P	**P**	**15 51 27.7**	**0.0**
LPAZ	**La Paz**	**31.90**	**127**	LR	LR	16 04 36.6	
	comp=Z,39nm,19.0s,baz=290,slow=36						
NVAR	**Mina Array Bea**	**41.90**	**331**	P	**P**	**15 53 27.1**	**+0.2**
	0.8nm,0.6s,baz=156,slow=8.2,SNR=3.8						
NVAR	**Mina Array Bea**	**41.90**	**331**	P	**P**	**15 53 26.1**	**-0.7**
PDAR	**Pinedale Array**	**42.26**	**343**	P	**P**	**15 53 30.4**	**+0.7**
	1.6nm,0.9s,baz=153,slow=10.0,SNR=6.3						
PDAR	**Pinedale Array**	**42.26**	**343**	P	**P**	**15 53 29.7**	**-0.1**
RUBR	**Rubicon Trail**	**43.28**	**330**	P	**P**	**15 53 37.4**	**-0.8**
FXWY	**Fox Creek**	**43.49**	**342**	P	**P**	**15 53 39.8**	**0.0**
FXWY				IAmb	IAmb	15 53 41.7	
	comp=Z,2.8nm,0.9s						
YKA	**Yellowknife Ar**	**61.65**	**349**	P	**P**	**15 55 54.2**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=152,slow=6.8,SNR=5.4						
INK	**Inuvik**	**70.77**	**346**	P	**P**	**15 56 52.5**	**+0.4**
	comp=Z,1.9nm,1.0s,baz=132,slow=9.1,SNR=3.3						
INK	**Inuvik**	**70.77**	**346**	P	**P**	**15 56 52.1**	**+0.1**
INK				IAmb	IAmb	15 56 54.4	
	comp=Z,6.4nm,1.3s						
ILAR	**Eielson Array**	**72.51**	**339**	P	**P**	**15 57 01.9**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=156,slow=5.0,SNR=4.9						
ILAR	**Eielson Array**	**72.51**	**339**	P	**P**	**15 57 02.3**	**-0.4**
BMAR	**Burnt Mountain**	**73.27**	**342**	P	**P**	**15 57 07.1**	**-0.1**

SJA 15 15:46:16.3±0.8,31.48S×67.99W,h107km±3km,ML3.3,
MW3.5,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CFA	**Coronel Fontan**	**0.24**	**239**	*i* P	Pn	15 46 32.2	+0.6
CFA				*e*S	Sn	15 46 43.8	+0.7
CFA				IAML		15 46 44.4	
	comp=Z,830nm,0.1s						
RTLL	**Cerro Villicun**	**0.44**	**290**	*i* P	Pn	15 46 33.0	+0.5
RTLL				*e*S	Sn	15 46 46.0	+1.2
RTLL				IAML		15 46 47.4	
	comp=Z,2μm,0.2s						
RTCV	**Cerro Valdivia**	**0.60**	**231**	*i* P	Pn	15 46 34.4	+0.7
RTCV				*e*S	Sn	15 46 47.5	+0.7
RTCV				IAML		15 46 51.4	
	comp=Z,715nm,1.5s						
AMOG	**MOGNA**	**0.69**	**321**	*i* P	Pn	15 46 35.3	+0.8
AMOG				*e*S	Sn	15 46 48.4	+0.4
AMOG				IAML		15 46 50.2	
	comp=Z,920nm,0.3s						
ACAN	**Cantantal**	**1.04**	**139**	*i* P	Pn	15 46 39.4	+1.6
ACAN				IAML		15 47 00.3	
	comp=Z,272nm,0.2s						
RTLS	**Leoncito**	**1.16**	**254**	*i* P	Pn	15 46 40.5	+1.2
RTLS				*e*S	Sn	15 46 58.3	+1.7
RTLS				IAML		15 46 59.9	
	comp=Z,350nm,0.5s						
ASAL	**Salagasta**	**1.32**	**213**	*i* P	Pn	15 46 42.1	+1.2
ASAL				*e*S	Sn	15 47 01.1	+1.6
ASAL				IAML		15 47 02.7	
	comp=Z,300nm,0.2s						
ARCO	**CERRO ARCO**	**1.57**	**210**	*i* P	Pn	15 46 45.3	+1.3
ARCO				*e*S	Sn	15 47 06.3	+1.2
ARCO				IAML		15 47 07.4	
	comp=Z,409nm,0.2s						
AAGR	**Agrelo**	**1.75**	**204**	*i* P	Pn	15 46 47.4	+1.3
AAGR				IAML		15 47 16.8	
	comp=Z,272nm,0.4s						
AGUA	**GUANDACOL**	**2.03**	**348**	*i* P	Pn	15 46 51.3	+1.6
AGUA				IAML		15 47 19.8	
	comp=Z,171nm,0.5s						
MRA	**San Martin**	**2.15**	**116**	*i* P	Pn	15 46 52.4	+1.2
MRA				IAML		15 47 22.4	
	comp=Z,73nm,0.6s						
VCA	**Vinchina**	**2.74**	**356**	*i* P	Pn	15 47 00.4	+1.4
VCA				IAML		15 47 37.8	
	comp=Z,178nm,0.2s						
GO04	**Tololo Observa**	**2.74**	**298**	*i* P	Pn	15 47 00.2	+1.1
PEL	**Peldehue**	**2.82**	**233**	*i* P	Pn	15 47 01.7	+1.8
TCA	**Tanti**	**2.91**	**88**	*i* P	Pn	15 47 01.9	+0.8
TCA				IAML		15 47 53.8	
	comp=Z,115nm,0.7s						
ROC1	**El Roble**	**2.96**	**239**	*i* P	Pn	15 47 02.9	+0.9
CYA	**Choya**	**3.58**	**33**	*i* P	Pn	15 47 10.5	+0.6
CYA				IAML		15 48 07.8	
	comp=Z,32nm,0.5s						
LAMA	**Las Malvinas**	**3.59**	**196**	*i* P	Pn	15 47 10.6	+0.4
PUMA	**Malargue**	**4.19**	**197**	*i* P	Pn	15 47 18.8	+0.6
AZAP	**Zapla**	**7.68**	**20**	*i* P	Pn	15 48 04.8	-0.9
AZAP				IAML		15 50 05.8	
	comp=Z,5.7nm,2.2s						

*JMA **15** 15:52:38.8±0.1,24.32N×121.86E,h46km±3km,M2.5*
*TAP **15** 15:52:39.4,24.40N×121.92E,h24km,ML3.3,C*

ISC 15 15:52:39.2±0.9,24.35N±0.01×121.95E±0.02,h17km±6km,
n117,σ0s95/226,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.21**	**292**	*i* P	**Pg**	**15 52 44.7**	**+0.5**
	baz=281						
ENA				*i* S	**Sg**	**15 52 48.3**	**+0.8**
	baz=281						
EOS1	**EOS1**	**0.26**	**39**	*i* P	**Pb**	**15 52 46.1**	**+0.7**
	baz=45						
EOS1				*i* S	**Sb**	**15 52 51.5**	**+1.9**
	baz=45						
TWC	**Suao**	**0.28**	**340**	*i* P	**Pb**	**15 52 45.2**	**-0.6**
	baz=345						
TWC				*i* S	**Sg**	**15 52 49.3**	**-0.2**
	baz=345						
NACB	**Ninganchiao**	**0.37**	**242**	P	**Pb**	**15 52 47.5**	**+0.1**
	baz=238						
NACB				S	**Sb**	**15 52 54.4**	**+1.5**
	baz=238						
TWD	**Chiawan**	**0.42**	**231**	*i* P	**Pb**	**15 52 48.6**	**+0.4**
	baz=226						
TWD				*i* S	**Sb**	**15 52 56.5**	**+2.2**
	baz=226						
ETLH	**Xiulin Townshi**	**0.45**	**252**	P	**Pb**	**15 52 48.9**	**+0.1**
	baz=249						
ETLH				S	**Sb**	**15 52 56.3**	**+0.9**
	baz=249						
ILA	**Ilan**	**0.46**	**336**	*i* P	**Pb**	**15 52 48.5**	**-0.3**
	baz=332						
ILA				*i* S	**Sb**	**15 52 55.1**	**-0.3**
	baz=332						
ENTT	**Nioudou**	**0.46**	**310**	*i* P	**Pb**	**15 52 48.3**	**-0.6**
	baz=308						
ENTT				*i* S	**Sb**	**15 52 54.7**	**-0.7**
	baz=308						
NDT	**Datong Townshi**	**0.47**	**302**	*i* P	**Pb**	**15 52 48.7**	**-0.4**
	baz=300						
NDT				*i* S	**Sb**	**15 52 55.1**	**-0.8**
	baz=300						
HWA	**Hwalien**	**0.49**	**221**	P	**Pb**	**15 52 50.4**	**+1.1**
	baz=213						
HWA				*e*S	**Sb**	**15 52 59.4**	**+3.1**
	baz=213						
SLBB	**Yuanshan**	**0.50**	**325**	*i* P	**Pb**	**15 52 49.1**	**-0.4**
	baz=325						
SLBB				S	**Sg**	**15 52 55.7**	**-0.2**
	baz=325						
NTC	**Toucheng**	**0.52**	**348**	*i* P	**Pg**	**15 52 49.2**	**-0.4**
	baz=350						
NTC				S	**Sg**	**15 52 56.4**	**-0.2**
	baz=350						
NNSH	**Datong**	**0.53**	**279**	*i* P	**Pb**	**15 52 49.9**	**-0.2**
	baz=278						
NNSH				*i* S	**Sb**	**15 52 57.1**	**-0.4**
	baz=278						
NNSB	**Datong**	**0.53**	**279**	P	**Pb**	**15 52 49.9**	**-0.2**
	baz=280						
NNSB				S	**Sb**	**15 52 57.1**	**-0.4**
	baz=280						
NNS	**Nan Shan**	**0.54**	**280**	*i* P	**Pb**	**15 52 50.0**	**-0.3**
	baz=281						
NNS				*i* S	**Sb**	**15 52 57.6**	**-0.2**
	baz=281						
NWLT	**Wulai**	**0.59**	**316**	*i* P	**Pg**	**15 52 50.6**	**-0.4**
	baz=315						
NWLT				*i* S	**Sg**	**15 52 58.1**	**-0.8**
	baz=315						
YHNB	**Yeheng**	**0.61**	**301**	P	**Pb**	**15 52 51.0**	**-0.6**
	baz=299						
YHNB				S	**Sg**	**15 52 59.1**	**-0.5**
	baz=299						
NSK	**Sanguang**	**0.63**	**301**	*i* P	**Pb**	**15 52 51.3**	**-0.6**
	baz=299						
NSK				*i* S	**Sg**	**15 52 59.5**	**-0.7**
	baz=299						
TIPB	**Shuangxi**	**0.63**	**349**	*i* P	**Pg**	**15 52 51.3**	**-0.5**
	baz=357						
TIPB				*i* S	**Sg**	**15 52

baz=340
LIOB Emei 0.90 289 *i* P Pn 15 52 57.1 -0.1
baz=288
LIOB S Sb 15 53 09.4 +1.2
baz=288
YM03 YM03 0.91 336 P Pb 15 52 56.7 +0.1
baz=337
YM03 S Sb 15 53 08.8 +0.3
baz=337
JYNG Yonagunijimaku 0.91 83 P Pg 15 52 56.7 -0.3
JYNG *e*S Sb 15 53 09.8 +1.4
NSTT Nanjuang 0.91 288 *i* P Pb 15 52 56.9 +0.3
baz=286
NSTT *i* S Sn 15 53 09.9 -0.2
baz=286
ANP Anpu 0.92 335 P Pg 15 52 56.7 -0.6
baz=336
ANP S Sg 15 53 08.7 -0.7
baz=336
NCU National Centr 0.93 312 P Pn 15 52 57.6 +0.1
baz=298
NCU *i* S Sn 15 53 10.8 +0.2
baz=298
NCUH Zhongli 0.93 312 *i* P Pn 15 52 57.7 +0.1
baz=297
NCUH *i* S Sn 15 53 10.6 0.0
baz=297
NTST Danshui 0.93 331 *i* P Pn 15 52 57.8 +0.2
baz=341
NTST S Sb 15 53 10.1 +1.0
baz=341
VWDT VWDT 0.95 232 *i* P Pb 15 52 57.5 +0.3
baz=228
VWDT S Sn 15 53 11.0 0.0
baz=228
YOJ Yonaguni jima 0.97 83 P Pg 15 52 57.8 -0.3
baz=79
YOJ S Sb 15 53 11.3 +1.1
baz=79
YOJ Yonaguni jima 0.97 83 P Pg 15 52 57.8 -0.3
YOJ *e*S Sg 15 53 10.8 -0.1
TWY Chenhua 0.98 341 *i* P Pb 15 52 58.2 +0.5
baz=343
TWY *i* S Sg 15 53 10.2 -0.9
baz=343
HGSD Ruisui 0.98 210 *i* P Pb 15 52 57.8 0.0
baz=206
HGSD *e*S Sn 15 53 13.7 +2.0
baz=206
SBCB Hsinchu 0.98 297 P Pb 15 52 58.1 +0.2
baz=296
SBCB *e*S Sn 15 53 12.4 +0.5
baz=296
DPDB Guoxing 0.99 252 *i* P Pn 15 52 58.3 -0.1
baz=249
DPDB S Sn 15 53 12.2 +0.2
baz=249
HSN Hsinchu 1.00 297 *e*P Pn 15 52 58.5 0.0
baz=298
HSN *i* S Sn 15 53 12.5 +0.2
baz=298
EHY Hungye 1.02 215 *i* P Pg 15 52 57.4 -1.6
baz=211
EHY *e*S Sn 15 53 12.7 0.0
baz=211
SMLT Sun Moon Lake 1.07 245 *i* P Pb 15 52 59.5 +0.2
baz=234
SMLT *i* S Sn 15 53 14.8 +0.8
baz=234
SSLB Suanglung 1.07 239 P Pb 15 52 59.4 0.0
baz=227
SSLB S Sb 15 53 13.6 +0.5
baz=227
NMLH Miaoli 1.07 280 *i* P Pn 15 53 00.6 +1.0
baz=278
NMLH *i* S Sn 15 53 15.6 +1.5
baz=278
TWQ1 Liyutan 1.08 270 *i* P Pn 15 53 00.3 +0.7
baz=268
TWQ1 *i* S Sn 15 53 15.0 +0.9
baz=268
NSY Sanyi 1.09 274 P Pn 15 53 00.6 +0.9
baz=271
NSY *i* S Sn 15 53 16.6 +2.1
baz=271
TYC Yuchr 1.09 246 *i* P Pb 15 52 59.7 0.0
baz=231
TYC *i* S Sn 15 53 15.8 +1.3
baz=231
YULB Yu-li 1.12 212 *i* P Pg 15 52 59.4 -1.6
baz=209
YULB *e*S Sb 15 53 14.9 +0.2
baz=209
PTSB Yuanli 1.14 275 P Pn 15 53 00.7 +0.2
baz=273
PTSB *e*S Sn 15 53 16.4 +0.7
baz=273
TWF1 Yuli 1.16 211 *i* P Pg 15 52 59.6 -2.1
baz=223
TWF1 *e*S Sg 15 53 15.7 -1.2
baz=223
TCU Taichung 1.18 261 P Pn 15 53 02.9 +1.8
baz=258
TCU *i* S Sn 15 53 19.6 +2.8
baz=258
WDJ Dajia District 1.20 270 *e*P Pn 15 53 02.3 +1.0
baz=268
WDJ S Sn 15 53 18.4 +1.3
baz=268
WHYT Xinyi Township 1.20 237 P Pg 15 53 00.4 -1.9
baz=235
WHYT S Sn 15 53 20.3 +3.2
baz=235
WJS Zhushan 1.24 245 *i* P Pn 15 53 02.7 +1.0
baz=242
WJS *i* S Sn 15 53 21.4 +3.3
baz=242
WNT Mingjian 1.25 248 *i* P Pg 15 53 03.3 -0.1
baz=245
WNT *i* S Sn 15 53 21.6 +3.2
baz=245
PCYT Pengchaiyu 1.28 5 *e*P Pn 15 53 01.0 -1.4
baz=8.0
FULB Fuli 1.29 208 P Pn 15 53 02.5 -0.1
baz=219
FULB *e*S Sn 15 53 21.3 +1.7
baz=219
WCHH Zhanghua 1.30 258 P Pg 15 53 03.6 -0.7
baz=256
WCHH S Sn 15 53 22.7 +3.1
baz=256
ALS Alishan 1.34 232 P Pn 15 53 03.8 +0.3
baz=217
ALS S Sn 15 53 22.4 +1.3
baz=217
CHKT Chengkung 1.35 204 *e*P Pn 15 53 03.1 -0.3
baz=184
CHKT *e*S Sb 15 53 21.5 +0.3
baz=184
CHN5 Tsauling 1.39 238 *i* P Pg 15 53 05.5 -0.5
baz=235
CHN5 *e*S Sg 15 53 24.0 -0.1
baz=235
WGK Gukeng 1.43 243 *e*P Pg 15 53 06.3 -0.6
baz=240
WGK S Sg 15 53 25.9 +0.3
baz=240
ELDTW Lidau 1.44 217 *i* P Pn 15 53 04.2 -0.5
baz=214
ELDTW *e*S Sb 15 53 23.4 -0.3
baz=214
WDLH Douliu 1.45 243 P Pg 15 53 06.4 -0.8
baz=241
WDLH S Sg 15 53 26.9 +0.8
baz=241
RLNB Erlin 1.52 253 *e*P Pb 15 53 06.9 -0.2
baz=250
RLNB S Sg 15 53 27.0 -1.5
baz=250
CHN4 Tsaushan 1.59 232 *i* P Pb 15 53 08.1 -0.1
baz=229
CHN4 S Sg 15 53 30.7 0.0
baz=229
TPUB Ta-pu 1.60 230 P Pb 15 53 08.3 -0.1
baz=227
TPUB S Sg 15 53 29.6 -1.3
baz=227
STYT Tauyuan 1.61 223 *i* P Pn 15 53 07.9 +0.9
baz=209
STYT S Sg 15 53 29.7 -1.5
baz=209
IRIF Iriomote-Funau 1.62 90 P Pn 15 53 06.9 -0.2
IRIF S Sn 15 53 27.8 +0.2
CHY Chiayi 1.64 239 *e*P Pb 15 53 08.7 -0.3
baz=237
CHY S Sg 15 53 31.4 -0.5
baz=237
WTP Ta-pu 1.65 228 *i* P Pb 15 53 09.0 -0.1
baz=226
WTP S Sg 15 53 31.5 -0.8
baz=226
TWH Lutao 1.69 195 P Pn 15 53 07.8 -0.2
baz=182
TWH *e*S Sn 15 53 27.7 -1.5
baz=182
TWK Hsinying 1.72 232 *i* P Pb 15 53 09.9 -0.5
baz=229
TWK S Sg 15 53 34.2 -0.5
baz=229
TWGBT Beinan 1.72 208 *e*P Pn 15 53 08.2 -0.3
baz=206
TWGBT *e*S Sn 15 53 31.0 +0.9
baz=206
TWG Pinlang 1.72 208 P Pn 15 53 07.0 -1.5
baz=194
WSF Szhu 1.73 246 *e*S Sg 15 53 33.4 -1.7
baz=244
SNST Tainan City 1.74 230 *e*P Pb 15 53 11.2 +0.4
baz=228
SNST *e*S Sg 15 53 36.0 +0.6
baz=228
WLGB Puzi 1.74 241 *e*P Pn 15 53 09.5 +0.8
baz=238
WLGB *e*S Sg 15 53 34.0 -1.4
baz=238
CHN1 Nanshi 1.75 229 P Pb 15 53 10.8 -0.1
baz=227
CHN1 S Sg 15 53 34.6 -0.9
baz=227
SGST Jiashian 1.78 225 P Pn 15 53 10.1 +0.8
baz=210
SGST *i* S Sb 15 53 34.3 +0.8
baz=210
SLGT Liugui 1.80 222 *i* P Pb 15 53 11.1 -0.7
baz=220
SLGT *i* S Sb 15 53 35.2 +1.0
baz=220
JKRS Kuro-shima 1.88 93 P Pn 15 53 11.5 +0.9
JKRS *e*S Sn 15 53 34.0 +0.1
CHN8 Yiju 1.88 238 *e*S Sg 15 53 37.9 -1.9
baz=222
ECL Taimali 1.97 208 *e*P Pn 15 53 11.6 -0.2
baz=195
ECL *e*S Sn 15 53 35.2 -1.0
baz=195
JIJ Ishigaki jima 2.00 89 P Pn 15 53 12.5 +0.3
JIJ S Sn 15 53 36.0 -0.9
SSD Sandimen 2.00 217 P Pn 15 53 13.8 +1.5
baz=216
SSD S Sb 15 53 40.2 +0.3
baz=216
MASBT Mashibuluo 2.11 215 P Pn 15 53 15.3 +1.5
baz=214
MASBT S Sb 15 53 43.5 +0.5
baz=214
JISG Ishigakijimahi 2.16 83 P Pn 15 53 14.2 -0.3
JISG *e*S Sn 15 53 40.1 -0.8
EAST Anshuo 2.20 208 P Pn 15 53 15.5 +0.4
baz=196
EAST *e*S Sn 15 53 42.0 0.0
baz=196
PTTC Pingtan 2.29 301 P Pn 15 53 16.5 +0.2
baz=299
PTTC S Sn 15 53 44.2 +0.1
baz=299
SCZT Fangliau 2.32 212 P Pn 15 53 18.7 +2.0
baz=211
SCZT *e*S Sb 15 53 48.2 -0.8
baz=211
PNG Penghu 2.33 251 *e*P Pn 15 53 17.5 +0.7
baz=249
PNG S Sn 15 53 45.6 +0.6
baz=249
LAY Lan-yu 2.33 189 *e*P Pn 15 53 15.7 -1.2
baz=188
PHUB P'eng-hu 2.33 250 *e*P Pn 15 53 16.5 -0.3
baz=247
PHUB S Sn 15 53 45.7 +0.6
baz=247
WDGT Dungji 2.36 243 *e*S Sb 15 53 48.7 -1.6
baz=240
VWUC VWUC 2.37 286 *e*P Pn 15 53 17.2 0.0
baz=284
VWUC *e*S Sn 15 53 45.5 -0.5
baz=284
JTJ Tarama 2.52 83 P Pn 15 53 21.1 +1.7
JTJ *e*S Sn 15 53 50.4 +0.6
MATB Ma-tsu 2.56 315 *e*P Pn 15 53 21.1 +1.2
baz=315
MATB S Sn 15 53 51.3 +0.7
baz=315
PTMZ Houxiangcun 2.67 286 *e*P Pn 15 53 21.4 0.0
baz=283
PTMZ *e*S Sn 15 53 52.5 -0.9
baz=283
XPSS Dashiqiu 3.02 329 *e*P Pn 15 53 26.3 0.0
baz=329
XPSS *e*S Sn 15 54 02.6 +0.4
baz=329
MHZQ Yeshan 3.17 304 *e*S Sn 15 54 06.4 +0.6
baz=303
KNMB Chin-men Tao 3.25 273 *e*P Pn 15 53 30.0 +0.5
baz=268
AXDP Jialang 3.67 279 *e*P Pn 15 53 35.5 +0.3
baz=276
AXDP *e*S Sn 15 54 18.2 +0.2
baz=276

IDC ***15*** *16:08:40.7±1.0,33°.78N×137°.21E,h358km±9km,mb2.9/13, mb1 3.1/17,mb1mx3.0/45,mbtmp3.6/17,Error ellipse: s-maj=16.1km s-min=12.9km az=94.0*
JMA ***15*** *16:08:40.6±0.5,33°.84N×137°.08E,h374km±4km,M2.8*
ISC 15 16:08:41.9±0.8,33°.88N±0°.10×137°.14E±0°.09,h374km±,n28, σ1°47/32,mb3.0/13,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTO4	**TONANKAI O.B.S**	**0.36**	**69**	P	**Pn**	**16 09 27.4**	**-0.8**
JIE	**Ise**	**0.62**	**325**	P	**Pn**	**16 09 28.0**	**-1.0**
JAA	**Atsumi**	**0.75**	**0**	P	**Pn**	**16 09 28.5**	**-0.8**
JTNC	**Tanabenakahech**	**1.27**	**268**	P	**Pn**	**16 09 29.9**	**-1.5**
JWY	**Kouya**	**1.33**	**285**	P	**Pn**	**16 09 30.4**	**-1.3**
JYTA	**Yamagatataniai**	**1.74**	**349**	P	**Pn**	**16 09 33.1**	**-0.7**
JWT	**Wachi**	**2.00**	**315**	P	**Pn**	**16 09 34.2**	**-1.2**
JAI	**Aioi**	**2.24**	**269**	P	**Pn**	**16 09 35.5**	**-1.6**
JRY	**Ryogami san**	**2.58**	**34**	P	**Pn**	**16 09 39.2**	**-0.4**
JRY				S	**S**	**16 10 24.3**	**-1.9**
MJAR	**Matsushiro Arr**	**2.80**	**18**	P	**Pn**	**16 09 40.3**	**-1.1**
	0.2nm,0.3s,baz=198,slow=10,SNR=34						
MJAR				S	**S**	**16 10 25.9**	**-3.5**
	baz=329,slow=27,SNR=1.1						
MAT	**Matsushiro**	**2.80**	**18**	P	**Pn**	**16 09 39.1**	**-2.3**
MAT				*e*S	**S**	**16 10 27.0**	**-2.4**
MAT	**Matsushiro**	**2.80**	**18**	P	**Pn**	**16 09 40.7**	**-0.7**
MAT				*e*S	**S**	**16 10 27.0**	**-2.4**
JNU	**Nakatsue**	**5.28**	**264**	P	**Pn**	**16 10 04.8**	**-1.0**
	0.5nm,0.3s,baz=13,slow=6.8,SNR=5.5						
KSRS	**Korea Array**	**8.30**	**298**	P	**P**	**16 10 41.0**	**-0.3**
	0.2nm,0.3s,baz=120,slow=10,SNR=6.9						
USRK	**Ussuriysk Ar.**	**11.05**	**340**	P	**Pn**	**16 11 12.7**	**+0.6**
	baz=146,slow=9.7,SNR=9.9						
SONM	**Songino Array**	**26.90**	**310**	P	**P**	**16 13 53.0**	**+2.7**
	0.3nm,0.4s,baz=119,slow=10,SNR=5.3						
CMAR	**Chiang Mai Arr**	**37.32**	**255**	P	**P**	**16 15 19.6**	**-0.6**
	0.2nm,0.5s,baz=52,slow=7.3,SNR=2.2						
ZALV	**Zalesovo Beam**	**41.57**	**315**	P	**P**	**16 15 54.5**	**+0.1**
	0.6nm,0.4s,baz=82,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	**42.92**	**304**	P	**P**	**16 16 06.1**	**+0.8**
	0.4nm,0.5s,baz=87,slow=9.7,SNR=7.7						
WRA	**Warramunga Arr**	**53.59**	**183**	P	**P**	**16 17 25.4**	**-0.6**
	0.4nm,0.5s,baz=360,slow=7.6,SNR=22						
ILAR	**Eielson Array**	**54.01**	**31**	P	**P**	**16 17 30.0**	**+1.5**
	0.2nm,0.5s,baz=261,slow=4.1,SNR=1.7						
ASAR	**Alice Springs**	**57.31**	**184**	P	**P**	**16 17 51.7**	**-0.5**
	0.3nm,0.7s,baz=358,slow=4.1,SNR=5.2						
YKA	**Yellowknife Ar**	**68.26**	**28**	P	**P**	**16 19 02.7**	**-0.4**
	0.2nm,0.7s,baz=302,slow=5.8,SNR=2.4						
FINES	**FINESS Array B**	**69.94**	**331**	P	**P**	**16 19 14.2**	**+0.8**
	1.5nm,0.4s,baz=54,slow=5.8,SNR=36						
AKASG	**Malin Array Be**	**74.61**	**321**	P	**P**	**16 19 40.8**	**0.0**
	0.4nm,0.3s,baz=52,slow=6.0,SNR=2.6						
NOA	**NORSAR Array B**	**75.69**	**336**	P	**P**	**16 19 46.5**	**-0.3**
	0.5nm,0.5s,baz=42,slow=5.7,SNR=3.3						
NVAR	**Mina Array Bea**	**79.68**	**51**	P	**P**	**16 20 10.1**	**+0.8**
	0.3nm,0.7s,baz=281,slow=5.4,SNR=2.5						
PDAR	**Pinedale Array**	**82.36**	**43**	P	**P**	**16 20 25.1**	**+1.8**
	0.4nm,0.7s,baz=222,slow=2.0,SNR=3.9						

IDC ***15*** *16:20:53.1±1.5,32°.92S×72°.25W,h0km,mb3.7/2, mb1 3.9/7,mb1mx3.7/28,mbtmp3.7/7,ML3.8/5,MS3.3/6, Ms1 3.3/6,ms1mx3.0/23,Error ellipse: s-maj=34.8km s-min=31.0km az=121.0*
NEIC ***15*** *16:20:55.1±1.4,32°.94S±0°.04×72°.18W±0°.05,h17km±5km, Error ellipse: s-maj=6.4km s-min=5.5km az=113.0*
GUC ***15*** *16:20:56.2±0.7,32°.91S×72°.15W,h35km±3km,ML4.0*
NEIC ***15*** *16:20:56,32°.94S×72°.13W,h20km,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.60; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$-0.41; $M_{r\theta}$-0.08; $M_{\theta\phi}$0.58; $M_{\phi r}$-1.40; Fault plane solution: $M_0$1.61000×10^{15} NP1:ϕ_s291.71000°, δ23.87000°,λ27.90000°. NP2:ϕ_s175.88000°,δ79.08000°, λ111.36000°. Principal axes: T 1.6736, Plg51.0000°, Azm110.0000°; N -0.1319, Plg21.0000°, Azm352.0000°; P -1.5417, Plg31.0000°, Azm248.0000°;*
SJA ***15*** *16:20:57.5±0.7,32°.86S×72°.01W,h11km±8km,ML4.0, MW3.9*
ISC 15 16:20:54.8±1.6,32°.91S±0°.03×72°.15W±0°.05,h11km±9km, n77,σ1°34/92,mb4.2/4,2C-2D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MT02	**Curacav**	**0.92**	**113**		**Pb**	**16 21 12.5**	**-0.2**
MT02				Sg	**Sg**	**16 21 24.4**	**-0.1**
ROC1	**El Roble**	**0.95**	**94**		**Pb**	**16 21 13.4**	**-0.1**
ROC1				Sg	**Sn**	**16 21 26.3**	**-1.7**
ROC1	**El Roble**	**0.95**	**94**	*i* P	**Pn**	**16 21 14.6**	**+0.3**
ROC1				*i* S	**Sn**	**16 21 26.4**	**-1.6**
ROCH	**El Roble**	**0.96**	**94**	*e*P	**Pb**	**16 21 13.6**	**0.0**
ROCH				*i* S	**Sn**	**16 21 26.4**	**-1.8**
ROCH				IAML		16 21 29.4	
	comp=N,10μm,0.7s						
MT01	**Popeta**	**1.21**	**142**	*e*P	**Pn**	**16 21 17.1**	**-0.6**
MT01				*i* S	**Sn**	**16 21 33.3**	**-0.8**
MT01	**Popeta**	**1.21**	**142**		**Pn**	**16 21 17.1**	**-0.6**
MT01				Sg	**Sb**	**16 21 32.2**	**-1.2**
PEL	**Peldehue**	**1.25**	**101**	*e*P	**Pb**	**16 21 18.3**	**-0.1**
PEL				*i* S	**Sg**	**16 21 35.3**	**+0.1**
PEL				IAML		16 21 41.4	
	comp=N,6μm,0.7s						
PEL	**Peldehue**	**1.25**	**101**		**Pb**	**16 21 18.4**	**-0.1**
PEL					**Sg**	**16 21 34.8**	**-0.3**
PEL	**Peldehue**	**1.25**	**101**	*i* P	**Pg**	**16 21 19.0**	**+0.1**
PEL				⇓*i* S	**Sg**	**16 21 35.6**	**+0.5**
RCDM	**Rinconada Maip**	**1.26**	**118**	*e*P	**Pb**	**16 21 18.6**	**-0.1**
RCDM				IAML		16 21 43.9	
	comp=E,2μm,0.6s						
MT05	**Renca**	**1.28**	**113**		**Pb**	**16 21 18.6**	**-0.3**
CO04	**Los Peladeros**	**1.31**	**49**		**Pn**	**16 21 19.2**	**-0.2**
VA03	**San Esteban**	**1.35**	**84**	⇓*e*P	**Pb**	**16 21 19.9**	**-0.3**
VA03				*i* S	**Sg**	**16 21 37.9**	**-0.5**
VA03				IAML		16 21 42.5	
	comp=E,7μm,0.2s						
VA03	**San Esteban**	**1.35**	**84**		**Pb**	**16 21 19.9**	**-0.3**
CLCH	**Cerro Calan**	**1.44**	**110**	*e*P	**Pb**	**16 21 21.5**	**-0.1**
CLCH				*i* S	**Sg**	**16 21 40.0**	**-1.0**
CLCH				IAML		16 21 47.0	
	comp=N,4μm,0.6s						
MT03	**Universidad Ad**	**1.49**	**113**	*e*P	**Pb**	**16 21 22.2**	**-0.4**
MT03				*i* S	**Sb**	**16 21 41.6**	**0.0**
MT03				IAML		16 21 50.8	
	comp=E,7μm,0.5s						
LMEL	**Las Melosas**	**1.88**	**120**	*e*P	**Pb**	**16 21 28.3**	**-0.9**
LMEL				*i* S	**Sb**	**16 21 52.2**	**-0.5**
LMEL				IAML		16 21 59.8	
	comp=N,3μm,0.3s						
CO02	**Combarbal**	**1.96**	**30**		**Pn**	**16 21 28.3**	**+0.2**
GO05	**Huala**	**2.10**	**175**	*e*P	**Pn**	**16 21 29.0**	**-1.0**
GO05				IAML		16 22 10.0	
	comp=N,545nm,0.4s						
GO05	**Huala**	**2.10**	**175**		**Pn**	**16 21 29.2**	**-0.8**
GO05	**Huala**	**2.10**	**175**	*i* P	**Pn**	**16 21 29.5**	**-0.5**
GO05				*e*S	**Sg**	**16 22 04.8**	**+2.3**
BO02	**Sierra Bellavi**	**2.19**	**149**		**Pn**	**16 21 31.9**	**+0.6**
CO03	**El Pedregal**	**2.41**	**31**	⇑*i* P	**Pn**	**16 21 35.0**	**+0.7**
CO03				*i* S	**Sn**	**16 22 04.9**	**+1.1**
CO03				IAML		16 22 18.9	
	comp=E,1μm,0.5s						
CO03	**El Pedregal**	**2.41**	**31**		**Pn**	**16 21 34.9**	**+0.7**
RTLS	**Leoncito**	**2.65**	**66**	*i* P	**Pb**	**16 21 41.7**	**-0.9**
RTLS				IAML		16 22 26.2	
	comp=Z,546nm,0.5s						
ARCO	**CERRO ARCO**	**2.71**	**89**	*i* P	**Pb**	**16 21 42.0**	**-1.4**
ARCO				IAML		16 22 25.9	
	comp=Z,562nm,1.5s						
AAGR	**Agrelo**	**2.79**	**94**	*i* P	**Pb**	**16 21 43.5**	**-1.3**
AAGR				IAML		16 22 29.9	
	comp=Z,450nm,1.6s						
ASAL	**Salagasta**	**2.81**	**84**	*i* P	**Pb**	**16 21 43.2**	**-1.8**
ASAL				IAML		16 22 28.8	
	comp=Z,683nm,0.9s						
GO04	**Tololo Observa**	**2.96**	**23**	⇑*i* P	**Pn**	**16 21 42.1**	**+0.2**
GO04	**Tololo Observa**	**2.96**	**23**		**Pn**	**16 21 42.2**	**+0.2**
GO04	**Tololo Observa**	**2.96**	**23**	*i* P	**Pn**	**16 21 42.8**	**+0.8**
GO04				*e*S	**Sb**	**16 22 27.1**	**+3.0**
RTCV	**Cerro Valdivia**	**3.23**	**72**	*i* P	**Pb**	**16 21 49.3**	**-2.8**
RTCV				IAML		16 22 49.5	
	comp=Z,418nm,1.0s						
CO01	**Juntas del Tor**	**3.41**	**32**		**Pn**	**16 21 50.1**	**+2.0**
RTLL	**Cerro Villicun**	**3.49**	**64**	*i* P	**Pb**	**16 21 52.9**	**-3.8**
RTLL				IAML		16 22 49.4	
	comp=Z,663nm,0.4s						
CFA	**Coronel Fontan**	**3.56**	**70**	Pn	**Pn**	**16 21 53.0**	**+2.9**
	comp=Z,17nm,0.3s,baz=253,slow=11,SNR=52						
CFA				Sn	**Sb**	**16 22 42.1**	**+1.1**
	comp=Z,35nm,0.3s,baz=131,slow=16,SNR=7.1						
CFA				LR	LR	16 23 37.5	
	comp=Z,279nm,19.6s,baz=286,slow=45						
CFA	**Coronel Fontan**	**3.56**	**70**	*i* P	**Pb**	**16 21 53.9**	**-3.9**
CFA				IAML		16 22 54.7	
	comp=Z,288nm,0.7s						
AMOG	**MOGNA**	**3.68**	**59**	*i* P	**Pn**	**16 21 55.3**	**+3.6**
AMOG				IAML		16 23 00.6	
	comp=Z,433nm,0.5s						
BI02	**San Fabin de**	**3.81**	**169**	*e*P	**Pn**	**16 21 54.1**	**+0.6**
BI02	**San Fabin de**	**3.81**	**169**		**Pn**	**16 21 53.6**	**+0.1**
BI03	**Tigo**	**3.99**	**190**	Pn	**Pn**	**16 21 55.1**	**-0.8**
ACAN	**Cantantal**	**4.23**	**83**	*i* P	Pn	16 22 03.8	+4.5
ACAN				IAML		16 23 12.9	
	comp=Z,81nm,0.7s						
AC05	**El Transito**	**4.37**	**22**		**Pn**	**16 22 02.0**	**+0.8**
GO03	**Copiap**	**5.55**	**18**		**Pn**	**16 22 17.1**	**-0.3**
LC01	**Cunco**	**5.98**	**178**		**Pn**	**16 22 22.6**	**-0.6**
AC02	**Maricunga**	**6.60**	**24**		**Pn**	**16 22 32.6**	**+0.5**
PLCA	**Paso Flores**	**7.91**	**171**	Pn	**Pn**	**16 22 49.9**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=334,slow=11,SNR=3.8						
PLCA				Lg	Lg	16 25 00.1	
	comp=Z,0.0nm,0.3s,baz=37,slow=20,SNR=1.5						
PLCA				LR	LR	16 26 14.1	
	comp=Z,136nm,21.0s,baz=346,slow=40						
PLCA	**Paso Flores**	**7.91**	**171**	Pn	**Pn**	**16 22 49.7**	**-0.1**
GO02	**Mina Guanaco**	**8.04**	**17**		**Pn**	**16 22 51.9**	**+0.1**
PB14	**IPOC Station P**	**8.39**	**11**		**Pn**	**16 22 57.1**	**+0.4**
PB10	**IPOC Station P**	**9.47**	**9**	Pn	**Pn**	**16 23 10.7**	**-0.4**
PB15	**IPOC Station P**	**9.95**	**14**	Pn	**Pn**	**16 23 16.7**	**-1.3**
PB06	**IPOC Station P**	**10.42**	**13**	Pn	**Pn**	**16 23 21.9**	**-2.4**
PB07	**IPOC Station P**	**11.32**	**11**	Pn	**Pn**	**16 23 36.8**	**+0.1**
PB09	**IPOC Station P**	**11.37**	**14**	Pn	**Pn**	**16 23 37.9**	**+0.5**
PB11	**IPOC Station P**	**13.28**	**10**	Pn	**Pn**	**16 24 04.0**	**+0.4**
PSGCX	**Pisagua**	**13.38**	**8**	Pn	**Pn**	**16 24 02.9**	**-1.9**
MNMC	**Minye Minye**	**13.91**	**10**	Pn	**Pn**	**16 24 15.0**	**+2.8**
CPUP	**Villa Florida**	**14.45**	**67**	Pn	**Pn**	**16 24 22.1**	**+2.8**
	comp=Z,0.3nm,0.3s,baz=236,slow=10,SNR=7.6						
CPUP				Sn	**Sn**	**16 27 01.4**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=254,slow=8.2,SNR=2.3						

CPUP					LR	LR	16 30 16.8				
	comp=Z,151nm,18.1s,baz=258,slow=39										
CPUP	**Villa Florida**	**14.45**	**67**	Pn	**Pn**	**16 24 20.8 +1.4**					
PB16	**IPOC Station P**	**14.71**	**10**	Pn	**Pn**	**16 24 23.4 0.0**					
LPAZ	**La Paz**	**16.94**	**13**	Pn	**Pn**	**16 24 52.1 -0.4**					
	comp=Z,0.1nm,0.3s,baz=183,slow=7.8,SNR=7.5										
LPAZ	**La Paz**	**16.94**	**13**		**Pn**	**16 24 50.8 -1.7**					
LPAZ				IAmb	IAmb	16 25 02.3					
	comp=Z,4.7nm,1.0s										
SIV	**San Ignacio**	**19.61**	**33**	P	**P**	**16 25 22.4 -0.8**					
	comp=Z,0.1nm,0.3s,baz=218,slow=8.8,SNR=6.8										
SIV				LR	LR	16 34 13.9					
	comp=Z,78nm,19.5s,baz=268,slow=41										
EFI	**East Falkland**	**21.38**	**155**		**P**	**16 25 42.1 -0.1**					
BDFB	**Brasilia**	**27.81**	**58**	LR	LR	16 39 26.2					
	comp=Z,93nm,20.9s,slow=40										
VNA3	**Neumayer Olymp**	**50.40**	**158**	P	**P**	**16 29 52.7 +1.0**					
VNA2	**Neumayer--Watz**	**51.05**	**158**	P	**P**	**16 29 57.5 +0.9**					
	baz=281,slow=8.2										
SNAA	**Sanae**	**52.63**	**158**	P	**P**	**16 30 09.2 +0.8**					
SNAA	**Sanae**	**52.63**	**158**	P	**P**	**16 30 08.9 +0.5**					
SNAA				IAmb	IAmb	16 30 10.6					
	comp=Z,5.9nm,1.4s										
QSPA	**South Pole Qui**	**57.32**	**180**	P	**P**	**16 30 42.0 -0.5**					
QSPA				IAmb	IAmb	16 30 58.1					
	comp=Z,3.0nm,1.0s										
TXAR	**Lajitas Array**	**68.74**	**331**	P	**P**	**16 32 00.0 +1.3**					
	comp=Z,0.2nm,0.6s,baz=146,slow=5.5,SNR=1.8										
DBIC	**Dimbokro**	**74.92**	**72**	LR	LR	17 02 54.6					
	comp=Z,17nm,20.7s,baz=119,slow=34										
TORD	**Torodi Ar. Bea**	**83.92**	**70**	P	**P**	**16 33 25.2 0.0**					
	comp=Z,1.4nm,1.0s,baz=244,slow=3.9,SNR=5.5										
ZALV	**Zalesovo Beam**	**153.35**	**31**	PKPbc	**PKPbc**	**16 40 51.5 -0.9**					
	comp=Z,0.3nm,0.3s,baz=309,slow=4.8,SNR=2.0										
ZALV	**Zalesovo Beam**	**153.35**	**31**	PKPdf	**PKPdf**	**16 40 42.1 -2.8**					
MKAR	**Makanchi Array**	**156.10**	**47**	PKPab	**PKPab**	**16 41 16.7 +0.1**					
	comp=Z,0.2nm,0.5s,baz=298,slow=2.6,SNR=4.9										
MKAR	**Makanchi Array**	**156.10**	**47**		**PKPab**	**16 41 17.1 +0.4**					

*MAN **15** 16:23:00.1,5.66N×125.47E,h223km,mb4.2,ML3.0, MS2.7*
*IDC **15** 16:23:49.1±2.1,0.52S×125.87E,h0km,mb3.0/3, mb1 3.2/3,mb1mx3.2/30,mbtmp3.1/3,Error ellipse: s-maj=187.2km s-min=28.5km az=65.0*
ISC 15 16:23:10.1±1.3,5.6N±0.1×125.9E±0.1,h127km,n8, σ2≤14/10,1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.52**	**343**	*e*P		**Pn**	**16 23 31.1**	**+2.1**
DDMP				*e*S		**Sn**	**16 23 47.3**	**+4.0**
MATI	**Mati**	**1.39**	**16**	*e*P		**Pn**	**16 23 36.2**	**-0.7**
KCP	**Kidapawan**	**1.59**	**331**	*i*P		**Pn**	**16 23 40.4**	**+1.2**
KCP				*i* S		**Sn**	**16 24 02.2**	**+0.9**
SKMP	**Bagumbayan, Su**	**1.60**	**305**	*e*P		**Pn**	**16 23 38.6**	**-0.5**
SKMP				*e*S		**Sn**	**16 24 01.4**	**+0.2**
BUKP	**Musuan**	**2.40**	**341**	*e*P		Pn	16 23 43.7	-5.3
BUKP				*e*S		**Sn**	**16 24 16.6**	**-2.2**
PAGZ	**Pagadian**	**3.32**	**312**	*e*P		Pn	16 23 51.2	-10
WRA	**Warramunga Arr**	**26.72**	**162**	P		**P**	**16 28 36.1**	**-1.8**
	0.2nm,0.5s,baz=336,slow=10,SNR=5.5							
ASAR	**Alice Springs**	**30.13**	**165**	P		**P**	**16 29 07.1**	**-1.0**
	0.2nm,0.4s,baz=338,slow=7.2,SNR=8.2							

*BJI **15** 16:33:01.9±0.0,15.97S×172.36W,h5km,mB5.4/14, mb5.0/23,Ms5.1/4,Ms7 4.8/2*
*IDC **15** 16:33:03.8±0.5,15.88S×172.54W,h0km,mb4.6/22, mb1 4.8/23,mb1mx4.7/40,mbtmp4.6/23,ML3.5/1,MS4.0/21, Ms1 4.0/21,ms1mx3.9/28,Error ellipse: s-maj=17.1km s-min=12.0km az=121.0*
*NEIC **15** 16:33:04.9±1.3,15.81S±0.06×172.60W±0.07,h9km±3km, mb5.0/205,Error ellipse: s-maj=9.9km s-min=8.1km az=125.0*
*MOS **15** 16:33:05.6±0.9,15.79S×172.66W,h26km,mb5.2/7,Error ellipse: s-maj=14.9km s-min=7.4km az=51.2*
*GCMT **15** 16:33:14.9±0.2,15.80S±0.02×172.27W±0.02,h46km±2km, MW5.0/96,Moment Tensor Solution. s30,c32; s96,c136; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr0.04±.18; Mθθ2.46±.14; Mφφ-2.50±.13; Mrθ-2.04±.14; Mθφ-0.41±.12; Mφr2.37±.14; Best double couple: M0 4.01300×10^16^ NP1:φs320.00000°,δ39.00000°,λ179.00000°. NP2: φs320.00000°,δ90.00000°,λ51.00000°. Principal axes: T 4.0220, Plg34.0000°, Azm198.0000°; N -0.0210, Plg39.0000°, Azm320.0000°; P -4.0030, Plg33.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 15 16:33:07.3±0.3,15.79S±0.05×172.61W±0.07,h24km, n573,σ1≤61/530,mb4.9/132,**MS4.3**/26,**10C-18D,Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.04**	**23**	P		**Pn**	**16 33 38.2**	**-2.0**
AFI	**Afiamalu**	**2.04**	**23**			**Pn**	**16 33 38.1**	**-2.0**
NIUE	**Niue**	**4.15**	**142**	P		**Pn**	**16 34 06.7**	**-2.4**
	baz=4.0,SNR=228							
NIUE	**Niue**	**4.15**	**142**			**Pn**	**16 34 06.9**	**-2.2**
MSVF	**Nonsavu**	**9.16**	**257**	*d* i P		**Pn**	**16 35 17.2**	**-0.9**
MSVF				pmax		pmax		
	comp=Z,6.0nm,1.1s							
MSVF	**Nonsavu**	**9.16**	**257**			**Pn**	**16 35 13.8**	**-4.3**
KNTN	**Kanton**	**12.96**	**4**			**Pn**	**16 36 06.0**	**-4.1**
KNTN						Sn	16 38 18.4	-15
RAR	**Rarotonga**	**13.31**	**116**	Pn		Pn	16 36 10.9	-3.9
	comp=Z,2.6nm,0.3s,baz=273,slow=8.6,SNR=12							
RAR				Sn		Sn	16 38 21.8	-20
	comp=Z,0.7nm,0.3s,baz=226,slow=19,SNR=1.7							
RAR				LR		LR	16 40 05.4	
	comp=Z,558nm,19.9s,baz=288,slow=32							
RAR	**Rarotonga**	**13.31**	**116**	P		Pn	16 36 11.1	-3.8
RAR	**Rarotonga**	**13.31**	**116**	Pn		Pn	16 36 11.1	-3.8
RAO	**Raoul Island**	**14.26**	**199**	P		**Pn**	**16 36 26.3**	**-1.5**
RAO	**Raoul Island**	**14.26**	**199**	Pn		**Pn**	**16 36 26.3**	**-1.5**
GLKZ	**Green Lake**	**14.27**	**199**	P		**Pn**	**16 36 25.7**	**-2.3**
GLKZ				S		Sn	16 38 54.4	-11
DZM	**Mont Dzumac**	**20.77**	**249**	*e*P		Pn	16 37 49.5	+0.3
	comp=Z,120nm,1.2s							
DZM				*e*LR		LR	16 42 40.8	
	comp=Z,3μm,26.4s							
DZM	**Mont Dzumac**	**20.77**	**249**	P		Pn	16 37 48.5	-0.8
	comp=Z,26nm,1.1s,baz=98,slow=19,SNR=3.4							
DZM				LR		LR	16 44 40.8	
	comp=Z,1μm,21.7s,baz=88,slow=34							
DZM	**Mont Dzumac**	**20.77**	**249**	P		**P**	**16 37 46.3**	**-0.4**
PPT	**Papeete**	**22.13**	**98**	LR		LR	16 44 07.9	
	comp=Z,341nm,20.1s,baz=282,slow=30							
PPT2	**Papeete2**	**22.13**	**98**	*e*LQ		LQ	16 42 07.2	
	comp=Z,727nm,27.8s							
PPT2				*e*LR		LR	16 43 00.7	
	comp=Z,1μm,27.2s,baz=262							
PPT2	**Papeete2**	**22.13**	**98**	*e*T		T	17 01 09.9	
	comp=Z,4.6nm,0.3s							
OUZ	**Omahuta**	**22.96**	**210**	P		**P**	**16 38 10.5**	**+0.6**
TBI	**Tubuai**	**23.05**	**113**	*e*LQ		LQ	16 42 37.9	
	comp=Z,655nm,33.5s							
TBI				*e*LR		LR	16 43 33.9	
	comp=Z,1μm,27.0s,baz=292							
TBI	**Tubuai**	**23.05**	**113**	*e*T		T	17 02 17.2	
	comp=Z,8.4nm,0.3s							
MXZ	**Matakaoa Point**	**23.13**	**199**	P		**P**	**16 38 16.2**	**+4.6**
MXZ	**Matakaoa Point**	**23.13**	**199**	P		**P**	**16 38 12.6**	**+0.9**
XMAS	**Kiritimati**	**23.21**	**42**	P		**P**	**16 38 14.5**	**+1.8**
KUZ	**Kuaotunu**	**23.31**	**204**	P		**P**	**16 38 15.6**	**+2.1**
WMGZ	**Waiomatatini S**	**23.33**	**198**	P		**P**	**16 38 20.1**	**+6.4**
HAZ	**Te Kaha**	**23.47**	**199**	P		**P**	**16 38 18.2**	**+3.1**
PKGZ	**Pakihiroa**	**23.50**	**199**	P		**P**	**16 38 19.6**	**+4.2**
WIAZ	**Waiheke Island**	**23.58**	**205**	P		**P**	**16 38 18.9**	**+2.7**
PUZ	**Puketiti**	**23.61**	**198**	P		**P**	**16 38 17.1**	**+0.5**
RUGZ	**Raukumara Rang**	**23.70**	**199**	P		**P**	**16 38 20.6**	**+3.2**
TWGZ	**Tauwhareparae**	**23.79**	**199**	P		**P**	**16 38 22.2**	**+3.9**
ETAZ	**East Tamaki Re**	**23.81**	**205**	P		**P**	**16 38 20.8**	**+2.5**
MKAZ	**Moumakai**	**23.84**	**205**	P		**P**	**16 38 21.2**	**+2.6**
WTAZ	**Waiatarua**	**23.94**	**206**	P		**P**	**16 38 23.0**	**+3.5**
KBAZ	**Karaka Road Bo**	**23.94**	**205**	P		**P**	**16 38 22.5**	**+2.9**
CNGZ	**Carnagh Statio**	**24.01**	**198**	P		**P**	**16 38 25.8**	**+5.5**
AWAZ	**Awhitu Peninsu**	**24.02**	**206**	P		**P**	**16 38 22.3**	**+1.9**
TKGZ	**Te Karaka**	**24.08**	**199**	P		**P**	**16 38 24.5**	**+3.6**
TKGZ				S		**S**	**16 42 36.2**	**-0.8**
MWZ	**Matawai**	**24.08**	**199**	P		**P**	**16 38 23.6**	**+2.7**
MWZ				S		**S**	**16 42 31.8**	**-5.3**
URZ	**Urewera**	**24.15**	**200**	P		**P**	**16 38 21.3**	**-0.2**
	comp=Z,21nm,0.5s,baz=357,slow=5.6,SNR=6.8							
URZ				S		**S**	**16 42 39.4**	**+1.3**
	comp=Z,6.8nm,0.6s,baz=75,slow=8.7,SNR=1.8							
URZ	**Urewera**	**24.15**	**200**	P		**P**	**16 38 23.6**	**+2.1**
URZ				S		**S**	**16 42 34.5**	**-3.6**
URZ	**Urewera**	**24.15**	**200**	P		**P**	**16 38 21.1**	**-0.4**
URZ				IAmb		IAmb	16 38 29.5	
	comp=Z,59nm,1.0s							
TOZ	**Tahuroa Road**	**24.25**	**203**	P		**P**	**16 38 25.6**	**+3.2**
RIGZ	**Rimuhau**	**24.35**	**199**	P		**P**	**16 38 27.9**	**+4.5**
RIGZ				S		**S**	**16 42 44.1**	**+2.6**
RRRZ	**Republican Roa**	**24.42**	**201**	P		**P**	**16 38 30.1**	**+6.0**
SNGZ	**Shannon Statio**	**24.55**	**199**	P		**P**	**16 38 30.5**	**+5.3**
PRRZ	**Plateau Road**	**24.61**	**201**	P		**P**	**16 38 27.6**	**+1.8**
ALRZ	**Allen Road**	**24.68**	**201**	P		**P**	**16 38 28.8**	**+2.4**
RAHZ	**Arahi**	**24.75**	**199**	P		**P**	**16 38 27.1**	**0.0**
RAHZ				S		**S**	**16 42 46.7**	**-1.2**
MTHZ	**Maungataniwha**	**24.77**	**200**	P		**P**	**16 38 32.4**	**+5.1**
NMHZ	**Naumai**	**25.01**	**200**	P		**P**	**16 38 35.7**	**+6.2**
BKZ	**Black Stump Fm**	**25.17**	**200**	P		**P**	**16 38 33.6**	**+2.7**
BKZ	**Black Stump Fm**	**25.17**	**200**	P		**P**	**16 38 31.1**	**+0.3**
BKZ				IAmb		IAmb	16 38 35.5	
	comp=Z,53nm,1.2s							
HIZ	**Hauiti**	**25.18**	**204**	P		**P**	**16 38 35.4**	**+4.5**
HIZ	**Hauiti**	**25.18**	**204**	P		**P**	**16 38 30.7**	**-0.2**
MCHZ	**McNeill Hill**	**25.36**	**200**	P		**P**	**16 38 38.7**	**+6.2**
KRVZ	**Karewarewa**	**25.40**	**202**	P		**P**	**16 38 34.5**	**+1.5**
KWHZ	**Kaweka Forest**	**25.43**	**200**	P		**P**	**16 38 37.6**	**+4.4**
BHHZ	**Black Hill Sta**	**25.61**	**201**	P		**P**	**16 38 36.0**	**+1.1**
KAHZ	**Kahuranaki**	**25.62**	**199**	P		**P**	**16 38 41.8**	**+6.9**
KRHZ	**Kereru**	**25.64**	**200**	P		**P**	**16 38 39.3**	**+4.2**
VRZ	**Vera Road**	**25.75**	**203**	P		**P**	**16 38 41.8**	**+5.7**
PXZ	**Pawanui**	**25.84**	**199**	P		**P**	**16 38 42.4**	**+5.6**
PNHZ	**Pukenui**	**25.94**	**200**	P		**P**	**16 38 41.8**	**+3.9**
TSZ	**Takapari Road**	**26.15**	**200**	P		**P**	**16 38 42.6**	**+2.9**
BFZ	**Birch Farm**	**26.62**	**199**	P		**P**	**16 38 45.1**	**+1.1**
BFZ	**Birch Farm**	**26.62**	**199**	P		**P**	**16 38 44.3**	**+0.4**
HNR	**Honiara**	**27.50**	**280**	LR		LR	16 48 25.3	
	comp=Z,727nm,20.1s,baz=128,slow=33							
SNZO	**South Karori**	**27.70**	**201**	P		**P**	**16 38 52.4**	**-1.2**
PLWZ	**Palliser**	**27.75**	**200**	P		**P**	**16 38 53.9**	**-0.2**
TUWZ	**Tuamarina**	**28.07**	**202**	P		**P**	**16 38 55.5**	**-1.4**
QRZ	**Quartz Range**	**28.08**	**204**	P		**P**	**16 38 56.2**	**-0.9**
NNZ	**Nelson**	**28.09**	**203**	P		**P**	**16 38 56.0**	**-1.1**
BSWZ	**Blackbirch Sta**	**28.34**	**202**	P		**P**	**16 38 57.9**	**-1.5**
THZ	**Tophouse**	**28.74**	**203**	P		**P**	**16 39 02.1**	**-0.9**
THZ				IAmb		IAmb	16 39 30.3	
	comp=Z,35nm,1.1s							
KHZ	**Kahutara**	**29.08**	**201**	P		**P**	**16 39 05.6**	**-0.3**
LTZ	**Lake Taylor**	**29.86**	**203**	P		**P**	**16 39 11.5**	**-1.3**
LHI	**Lord Howe Isla**	**30.18**	**234**	P		**P**	**16 39 16.6**	**+0.8**
	baz=30,SNR=3.6							
OXZ	**Oxford**	**30.41**	**202**	P		**P**	**16 39 16.6**	**-1.2**
RPZ	**Rata Peaks**	**31.11**	**203**	P		**P**	**16 39 24.8**	**+0.8**
	comp=Z,5.1nm,0.6s,baz=332,slow=20,SNR=2.6							
RPZ	**Rata Peaks**	**31.11**	**203**	P		**P**	**16 39 23.3**	**-0.6**
FOZ	**Fox Glacier**	**31.45**	**205**	P		**P**	**16 39 24.2**	**-2.6**
LBZ	**Lake Benmore**	**32.02**	**204**	P		**P**	**16 39 29.2**	**-2.7**
LBZ				IAmb		IAmb	16 39 59.9	
	comp=Z,38nm,1.4s							
TAOE	**Nuku Hiva Isla**	**32.42**	**82**	*e*LR		LR	16 47 43.0	
	comp=Z,1μm,27.9s							
TAOE	**Nuku Hiva Isla**	**32.42**	**82**	*e*T		T	17 13 58.3	
	comp=Z,38nm,0.2s							
WKZ	**Wanaka**	**32.84**	**204**	P		**P**	**16 39 37.2**	**-1.9**
MLZ	**Mavora Lakes**	**33.65**	**205**	P		**P**	**16 39 43.8**	**-2.3**
DCZ	**Deep Cove**	**34.12**	**206**	P		**P**	**16 39 50.4**	**+0.2**
ARMA	**Armidale**	**35.80**	**240**	P		**P**	**16 40 04.8**	**-0.2**
	baz=36,SNR=14							
ARMA	**Armidale**	**35.80**	**240**	P		**P**	**16 40 03.4**	**-1.6**
ARMA				IAmb		IAmb	16 40 05.5	
	comp=Z,14nm,0.7s							
RKT	**Rikitea**	**36.15**	**108**	*e*LR		LR	16 49 42.3	
	comp=Z,793nm,26.5s							
RKT	**Rikitea**	**36.15**	**108**	*e*T		T	17 18 39.0	
	comp=Z,4.5nm,0.3s							
H11S2	**WAKE ISLAND Hy**	**39.69**	**328**	T		T	17 21 25.5	
	baz=146,slow=76,SNR=59							
H11S3	**WAKE ISLAND Hy**	**39.71**	**328**	T		T	17 21 31.6	
	baz=146,slow=76,SNR=104							
H11S1	**WAKE ISLAND Hy**	**39.71**	**328**	T		T	17 21 46.6	
	baz=146,slow=76,SNR=24							
H11N3	**WAKE ISLAND Hy**	**40.63**	**330**	T		T	17 23 26.7	
	baz=146,slow=76,SNR=59							
H11N1	**WAKE ISLAND Hy**	**40.64**	**330**	T		T	17 23 26.7	
	baz=146,slow=76,SNR=19							
H11N2	**WAKE ISLAND Hy**	**40.65**	**330**	T		T	17 23 26.7	
	baz=146,slow=76,SNR=16							
CMSA	**Cobar Meteorol**	**41.02**	**240**	P		**P**	**16 40 48.3**	**-0.4**
	baz=41,SNR=40							
COEN	**Coen**	**42.72**	**266**	P		**P**	**16 41 03.5**	**+0.6**
COEN				IAmb		IAmb	16 41 44.1	
	comp=Z,49nm,1.6s							
TOO	**Toolangi**	**42.81**	**231**	P		**P**	**16 41 04.0**	**+0.5**
	baz=43,SNR=4.4							
TOO	**Toolangi**	**42.81**	**231**	P		**P**	**16 41 03.3**	**-0.1**
TOO				pmax		pmax		
	comp=Z,26nm,1.2s							
TOO	**Toolangi**	**42.81**	**231**	P		**P**	**16 41 03.3**	**-0.1**
TOO				IAmb		IAmb	16 41 04.8	
	comp=Z,26nm,1.1s							
STKA	**Stephens Creek**	**44.51**	**240**	P		**P**	**16 41 16.8**	**-0.3**
	baz=45,SNR=29							
STKA	**Stephens Creek**	**44.51**	**240**	P		**P**	**16 41 17.1**	**0.0**
	comp=Z,18nm,0.7s,baz=81,slow=8.5,SNR=48							
STKA				LR		LR	16 57 53.0	
	comp=Z,182nm,19.5s,baz=53,slow=34							
STKA	**Stephens Creek**	**44.51**	**240**	P		**P**	**16 41 16.5**	**-0.6**
ARPS	**Mount Arapiles**	**45.37**	**234**	P		**P**	**16 41 24.3**	**+0.4**
	baz=46,SNR=4.9							
HTT	**Hallett**	**46.99**	**239**	P		**P**	**16 41 36.8**	**0.0**
	baz=47,SNR=7.3							
BBOO	**Buckleboo**	**49.28**	**240**	P		**P**	**16 41 54.0**	**-0.4**
	baz=50,SNR=8.8							
BBOO	**Buckleboo**	**49.28**	**240**	P		**P**	**16 41 54.0**	**-0.4**
BBOO				IAmb		IAmb	16 41 55.0	
	comp=Z,18nm,0.8s							
WR0	**Warramunga Arr**	**50.31**	**257**	P		**P**	**16 42 01.5**	**-0.9**
WR0				IAmb		IAmb	16 42 03.3	
	comp=Z,19nm,1.4s							
WB0	**Warramunga Arr**	**50.46**	**257**	P		**P**	**16 42 02.4**	**-1.2**
WB0				IAmb		IAmb	16 42 03.7	
	comp=Z,27nm,1.2s							
WB0				PcP		**PcP**	**16 43 22.4**	**+0.6**
WB2	**Warramunga Arr**	**50.49**	**257**	P		**P**	**16 42 02.9**	**-0.9**
WB2				IAmb		IAmb	16 42 04.6	
	comp=Z,15nm,1.0s							
WRAB	**Tennant Creek**	**50.49**	**257**	*i*P		**P**	**16 42 03.1**	**-0.7**
WRAB				pmax		pmax		
	comp=Z,21nm,1.1s							
WRAB	**Tennant Creek**	**50.49**	**257**	P		**P**	**16 42 02.6**	**-1.3**
WRAB				IAmb		IAmb	16 42 04.0	
	comp=Z,21nm,1.1s							
WRA	**Warramunga Arr**	**50.50**	**257**	P		**P**	**16 42 03.1**	**-0.8**
	comp=Z,7.2nm,0.7s,baz=95,slow=6.6,SNR=90							
WRA				LR		LR	17 03 06.5	
	comp=Z,224nm,19.6s,baz=160,slow=36							
WRA	**Warramunga Arr**	**50.50**	**257**	P		**P**	**16 42 02.6**	**-1.3**
WRA				pmax		pmax		
	comp=Z,1.0nm,1.1s							
WRA	**Warramunga Arr**	**50.50**	**257**	P		**P**	**16 42 02.6**	**-1.3**
AS31	**Alice Springs**	**50.72**	**252**	P		**P**	**16 42 04.6**	**-0.9**
ASAR	**Alice Springs**	**50.72**	**252**	P		**P**	**16 42 04.5**	**-1.0**
	comp=Z,26nm,0.9s,baz=88,slow=7.8,SNR=148							
ASAR				LR		LR	17 02 17.9	
	comp=Z,548nm,20.2s,baz=94,slow=35							
ASAR	**Alice Springs**	**50.72**	**252**	P		**P**	**16 42 04.4**	**-1.2**
WRKA	**Warakurna**	**55.78**	**250**	P		**P**	**16 42 42.4**	**-0.4**
	baz=56,SNR=39							
FORT	**Forrest**	**55.92**	**243**	P		**P**	**16 42 43.6**	**-0.1**
	baz=56,SNR=12							
FORT	**Forrest**	**55.92**	**243**	P		**P**	**16 42 43.2**	**-0.5**
KNRA	**Kununurra**	**56.26**	**262**	P		**P**	**16 42 46.3**	**0.0**
KNRA				IAmb		IAmb	16 42 48.1	
	comp=Z,17nm,1.0s							
SIJI	**Sorong**	**57.28**	**279**	P		**P**	**16 42 53.5**	**0.0**
	comp=Z,9.6nm,0.9s,baz=9.6,slow=11,SNR=7.0							
FITZ	**Fitzroy Crossi**	**58.88**	**258**	P		**P**	**16 43 05.6**	**+0.9**
FITZ				IAmb		IAmb	16 43 06.8	
	comp=Z,16nm,1.5s							
SOEI	**Soe**	**61.67**	**267**	P		**P**	**16 43 25.1**	**+1.1**
VNDA	**Vanda**	**63.07**	**186**	P		**P**	**16 43 30.8**	**-1.4**
	comp=Z,4.8nm,0.9s,baz=8.5,slow=5.5,SNR=22							
VNDA				LR		LR	17 03 49.3	
	comp=Z,26nm,21.9s,baz=342,slow=29							
VNDA	**Vanda**	**63.07**	**186**	P		**P**	**16 43 33.2**	**+1.0**
VNDA				pmax		pmax		
	comp=Z,15nm,1.3s							
VNDA	**Vanda**	**63.07**	**186**	P		**P**	**16 43 33.1**	**+1.0**
VNDA				IAmb		IAmb	16 43 35.1	
	comp=Z,15nm,1.3s							
PSA00	**Pilbara Seismi**	**63.83**	**253**	P		**P**	**16 43 37.6**	**-0.6**
MEEK	**Meekatharra**	**64.37**	**248**	P		**P**	**16 43 42.1**	**+0.4**
	baz=65,SNR=6.6							
KLBR	**Kellerberrin**	**64.73**	**242**	P		**P**	**16 43 44.7**	**+0.7**
	baz=65,SNR=7.0							
NWAO	**Narrogin (SRO)**	**65.09**	**241**	P		**P**	**16 43 47.0**	**+0.7**
NWAO				pmax		pmax		
	comp=Z,179nm,2.0s							
NWAO	**Narrogin (SRO)**	**65.09**	**241**	P		**P**	**16 43 47.0**	**+0.7**
NWAO	**Narrogin (SRO)**	**65.09**	**241**	P		**P**	**16 43 46.2**	**-0.1**
NWAO				IAmb		IAmb	16 44 55.2	
	comp=Z,144nm,2.0s							
BLDU	**Ballidu**	**65.70**	**243**	P		**P**	**16 43 51.0**	**+0.7**
	baz=66,SNR=7.9							
MORW	**Morawa**	**66.41**	**245**	P		**P**	**16 43 55.2**	**+0.4**
GIRL	**Giralia**	**68.83**	**251**	P		**P**	**16 44 10.5**	**+0.3**
MJAR	**Matsushiro Arr**	**69.73**	**319**	P		**P**	**16 44 16.8**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=296,slow=42,SNR=3.5							
MJAR				LR		LR	17 09 25.7	
	comp=Z,22nm,21.9s,baz=135,slow=31							
MJAR	**Matsushiro Arr**	**69.73**	**319**	P		**P**	**16 44 16.7**	**+1.2**
MJAR				pmax		pmax		
	comp=Z,2.0nm,0.9s							
MJAR	**Matsushiro Arr**	**69.73**	**319**	P		**P**	**16 44 16.7**	**+1.2**
MAJO	**Matsushiro**	**69.73**	**319**	↑*i*P		P	16 44 09.7	-5.8
MAJO				pmax		pmax		
	comp=Z,3.0nm,1.2s							
SNCC	**San Nicolas Is**	**70.31**	**45**	P		**P**	**16 44 20.0**	**+1.0**
	baz=235							
CASY	**Casey**	**70.37**	**205**	P		**P**	**16 44 18.9**	**0.0**
CASY				IAmb		IAmb	16 44 20.1	
	comp=Z,15nm,1.3s							
SCZ2	**Santa Cruz Isl**	**70.66**	**45**	P		**P**	**16 44 21.8**	**+0.6**
	baz=234							
SCI2	**San Clemente I**	**70.83**	**46**	P		**P**	**16 44 22.9**	**+0.7**
	baz=236							
PKM	**Mcpherson Peak**	**71.06**	**44**	P		**P**	**16 44 24.9**	**+1.1**
	baz=234							
SAO	**San Andreas Ge**	**71.11**	**41**	P		**P**	**16 44 23.9**	**0.0**
SAO				pmax		pmax		
	comp=Z,22nm,1.2s							
SAO	**San Andreas Ge**	**71.11**	**41**	P		**P**	**16 44 23.9**	**0.0**
SAO				IAmb		IAmb	16 44 26.1	
	comp=Z,22nm,1.2s							
CIS	**Catalina Islan**	**71.16**	**46**	P		**P**	**16 44 24.7**	**+0.5**
	baz=235							
SMMC	**Simmler**	**71.19**	**43**	P		**P**	**16 44 25.6**	**+1.2**
	baz=234							
PMPB	**Monarch Peak**	**71.20**	**42**	P		**P**	**16 44 24.6**	**+0.1**
PAGB	**Antelope Grade**	**71.27**	**43**	P		**P**	**16 44 24.8**	**-0.1**
PAGB				IAmb		IAmb	16 44 27.1	
	comp=Z,12nm,1.1s							
FMP	**Fort Macarthur**	**71.41**	**46**	P		**P**	**16 44 26.2**	**+0.5**
	baz=235							
SDPT	**Sand Point**	**71.60**	**7**	P		**P**	**16 44 26.0**	**-0.3**
OSI	**Osito Audit: C**	**71.63**	**45**	P		**P**	**16 44 28.1**	**+1.0**
	baz=235				

baz=235
HEC Hector,Ludlow 73.38 46 P P 16 44 37.9 +0.3
baz=236
WAKR Walker 73.44 41 P P 16 44 38.0 +0.1
WAKR IAmb IAmb 16 44 40.1
comp=Z,21nm,1.4s
YBH Yreka Blue Hor 73.45 37 P P 16 44 38.0 +0.2
YBH pmax pmax
comp=Z,10.0nm,1.1s
YBH Yreka Blue Hor 73.45 37 P P 16 44 38.0 +0.2
GLA Glamis 73.48 48 P P 16 44 38.7 +0.6
baz=238
K02D Willamette Mer 73.53 35 P P 16 44 39.3 +1.0
baz=229
BEKR Beckworth 73.68 39 P P 16 44 39.8 +0.4
BEKR IAmb IAmb 16 44 41.2
comp=Z,11nm,1.1s
PNTR Pine Nut 73.68 40 P P 16 44 39.8 +0.3
PNTR IAmb IAmb 16 44 41.5
comp=Z,17nm,1.1s
J01E Myrtle Point 73.69 35 P P 16 44 40.0 +0.9
baz=229
GMRC Granite Mounta 73.82 46 P P 16 44 40.4 +0.1
baz=237
IRM Iron Mountain 73.84 47 P P 16 44 40.5 +0.2
baz=238
YERR Yerington 73.84 41 P P 16 44 40.3 0.0
YERR IAmb IAmb 16 44 42.2
comp=Z,13nm,1.2s
GRAC Grapevine Rang 73.89 43 P P 16 44 41.5 +1.0
baz=235,SNR=8.6
FURC Furnace Creek, 73.93 44 P P 16 44 41.3 +0.6
baz=236
M04C Macdoel 73.99 37 P P 16 44 42.0 +0.9
baz=231
L04D Klamath Falls 73.99 36 P P 16 44 41.9 +0.8
baz=230
TUQ Turquoise Moun 74.00 45 P P 16 44 41.6 +0.4
baz=237
SHOC Shoshone, Teco 74.01 45 P P 16 44 41.4 +0.2
baz=236
Y12C Blythe 74.07 47 P P 16 44 41.8 +0.2
baz=238
RYN Ryan 74.09 41 P P 16 44 41.9 +0.1
113A Mohawk Valley, 74.10 49 P P 16 44 41.0 -0.7
113A IAmb IAmb 16 44 43.5
comp=Z,37nm,2.0s
NVAR Mina Array Bea 74.11 42 P P 16 44 42.6 +0.6
comp=Z,5.7nm,0.9s,baz=227,slow=9.5,SNR=37
NVAR LR LR 17 09 56.5
comp=Z,346nm,21.1s,baz=203,slow=30
NVAR Mina Array Bea 74.11 42 P P 16 44 41.9 -0.1
YSS Yuzh-Sakhalins 74.20 330⇑*i*P P 16 44 37.9 -4.1
YSS pmax pmax
comp=Z,21nm,1.2s
NV11 Mina Array Sit 74.21 42 P P 16 44 42.2 -0.3
NV11 IAmb IAmb 16 44 44.4
comp=Z,18nm,1.2s
QSPA South Pole Qui 74.25 180 P P 16 44 42.5 +0.2
comp=Z,9.4nm,1.0s,baz=46,slow=2.0,SNR=19
QSPA South Pole Qui 74.25 180 P P 16 44 42.6 +0.3
QSPA IAmb IAmb 16 44 44.4
comp=Z,10nm,0.9s
I02D Swisshome 74.36 34 P P 16 44 44.5 +1.5
baz=229
I03D Drain, OR 74.36 35 P P 16 44 44.1 +1.1
baz=229
214A Organ Pipe Nat 74.38 50 P P 16 44 43.9 +0.5
baz=240
NEE2 Needles Airpor 74.54 46 P P 16 44 44.6 +0.4
baz=238
K04D Chiloquin, OR 74.57 36 P P 16 44 44.3 -0.1
baz=231
KVN Kaiserville 74.60 41 P P 16 44 44.9 +0.1
KVN pmax pmax
comp=Z,10.0nm,1.1s
KVN Kaiserville 74.60 41 P P 16 44 44.9 +0.1
TPNV Topopah Spring 74.61 44 P P 16 44 44.8 0.0
TPNV pmax pmax
comp=Z,7.0nm,1.0s
TPNV Topopah Spring 74.61 44 P P 16 44 45.4 +0.5
baz=236,SNR=11
TPNV Topopah Spring 74.61 44 P P 16 44 44.8 0.0
PDMCI Parker Dam,Lak 74.63 47 P P 16 44 45.1 +0.4
baz=238
J04D Umpqua Nationa 74.76 36 P P 16 44 46.7 +1.1
baz=230
I04A Tendick Farm, 74.94 35 P P 16 44 47.1 +0.7
baz=230
MOD Modoc Plateau 74.96 38 P P 16 44 46.4 -0.3
MOD IAmb IAmb 16 44 48.7
comp=Z,14nm,1.1s
SHPR Sheep Range 75.10 45 P P 16 44 46.5 -1.1
K05A Summer Lake 75.12 37 P P 16 44 48.3 +0.6
K05A IAmb IAmb 16 44 50.1
comp=Z,21nm,1.1s
KDAK Kodiak Island 75.16 11⇑*i*P P 16 44 42.1 -5.2
KDAK pmax pmax
comp=Z,3.0nm,1.0s
KDAK Kodiak Island 75.16 11 P P 16 44 47.4 +0.2
KDAK IAmb IAmb 16 44 49.0
comp=Z,32nm,1.6s
W13A Hualapai Mount 75.22 46 P P 16 44 48.5 0.0
H04D Lebanon 75.23 34 P P 16 44 48.7 +0.7
baz=230
J05D Fort Rock, OR 75.28 36 P P 16 44 49.2 +0.7
baz=231
H04A Detroit Lake 75.64 35 P P 16 44 50.6 +0.2
H04A IAmb IAmb 16 44 52.1
comp=Z,23nm,1.3s
PINE Pine Mountain 75.76 36 P P 16 44 52.1 +0.8
R11A Troy Canyon, C 75.82 43 P P 16 44 52.2 +0.4
baz=236,SNR=8.1
R11A Troy Canyon, C 75.82 43 P P 16 44 51.8 0.0
I05D Terrebonne, OR 75.89 35 P P 16 44 52.8 +1.0
baz=231
TUC Tucson 76.05 50 P P 16 44 52.4 -0.7
TUC pmax pmax
comp=Z,12nm,1.2s
TUC Tucson 76.05 50 P P 16 44 53.7 +0.6
baz=241
TUC Tucson 76.05 50 P P 16 44 52.4 -0.7
TUC IAmb IAmb 16 44 55.3
comp=Z,12nm,1.1s
WVOR Wild Horse Val 76.27 38 P P 16 44 53.9 -0.3
WVOR pmax pmax
comp=Z,11nm,1.1s
WVOR Wild Horse Val 76.27 38 P P 16 44 53.9 -0.3
WVOR IAmb IAmb 16 44 56.1
comp=Z,11nm,1.1s
LCMT Little Creek M 76.67 45 P P 16 44 56.4 -0.2
319A Douglas 76.73 52 P P 16 44 57.1 +0.1
319A IAmb IAmb 16 44 59.2
comp=Z,22nm,1.1s
I07A Izee 76.76 36 P P 16 44 57.3 +0.4
I07A IAmb IAmb 16 44 59.1
comp=Z,12nm,1.2s
TJN Taejon 76.80 314⇓*i*P P 16 44 51.2 -5.9
F05D White Salmon 76.80 34 P P 16 44 57.6 +0.7
baz=230
CCUT Cedar City 76.87 45 P P 16 44 57.9 +0.1
J08A Circle Bar Ran 76.92 37 P P 16 44 57.9 +0.1
J08A IAmb IAmb 16 44 59.8
comp=Z,16nm,1.3s
KNB Kanab 76.96 45 P P 16 44 58.8 +0.5
KNB pmax pmax
comp=Z,38nm,1.8s
KNB Kanab 76.96 45 P P 16 44 58.8 +0.5
KSRS Korea Array 76.97 315 P P 16 45 00.6 +2.5
comp=Z,2.7nm,0.9s,baz=127,slow=6.8,SNR=10
KSRS LR LR 17 12 38.5
comp=Z,28nm,20.9s,baz=97,slow=31
KSAR Wonju Array Be 76.99 315 P P 16 44 57.7 -0.5
KSAR Wonju Array Be 76.99 315 P P 16 44 57.7 -0.5
D03D Eldon 77.02 32 P P 16 44 58.6 +0.5
baz=229
U15A North Rim 77.02 46 P P 16 44 59.5 +0.7
U15A IAmb IAmb 16 45 01.2
comp=Z,15nm,1.2s
PSUT Pine Spring 77.06 43 P P 16 44 58.6 -0.3
SZCU Shurtz Canyon 77.08 45 P P 16 44 59.1 +0.1
WUAZ Wupatki 77.20 47 P P 16 45 00.2 +0.5
baz=240
WUAZ Wupatki 77.20 47 P P 16 44 59.8 +0.1
WUAZ IAmb IAmb 16 45 01.9
comp=Z,12nm,1.2s
BRLK Bradley Lake 77.33 11 P P 16 44 59.6 -0.1
BRLK IAmb IAmb 16 45 01.1
comp=Z,18nm,1.3s
D05A Enumclaw 77.36 33 P P 16 44 59.9 -0.1
ELK Elko 77.37 41 P P 16 44 59.8 -0.8
ELK pmax pmax
comp=Z,9.0nm,1.3s
ELK Elko 77.37 41 P P 16 44 59.8 -0.8
PKCU Pink Cliffs 77.53 45 P P 16 45 00.9 -0.7
PGC Sidney 77.58 31 P P 16 45 01.7 +0.5
PGC IAmb IAmb 16 45 03.2
comp=Z,15nm,1.1s
VLA Vladivostok 77.58 322⇑*i*P P 16 44 57.0 -4.4
VLA pmax pmax
comp=Z,34nm,1.2s
MSHR Mys Shultsa 77.71 321⇓*i*P P 16 44 58.0 -4.1
MSHR pmax pmax
comp=Z,38nm,1.7s
G08A Pilot Rock 77.80 36 P P 16 45 03.1 +0.3
G08A IAmb IAmb 16 45 04.7
comp=Z,14nm,1.2s
MTPU Mount Pierson 77.92 45 P P 16 45 04.5 +0.6
KSM Kuching 77.98 275 P P 16 45 04.8 +0.5
A04D Lummi Island 77.99 31 P P 16 45 04.5 +1.0
baz=229
B05A Bryant 78.00 32 P P 16 45 04.5 +0.9
baz=229
LTY Liberty 78.09 33 P P 16 45 04.2 -0.1
LTY IAmb IAmb 16 47 28.6
comp=Z,8.0nm,0.7s
USA0B Ussuriysk Arra 78.16 323⇑*i*P P 16 45 00.0 -4.5
MSU Marysvale 78.17 44 P P 16 45 05.3 +0.2
MSU Marysvale 78.17 44 P P 16 45 05.3 +0.2
W18A Petrified Fore 78.17 48 P P 16 45 05.6 +0.5
baz=241
LEM Lembang 78.37 266 P P 16 45 08.1 +1.4
comp=Z,13nm,0.8s,baz=290,slow=20,SNR=3.8
121A Cookes Peak, D 78.39 51 P P 16 45 07.2 +0.8
baz=243
121A Cookes Peak, D 78.39 51 P P 16 45 05.5 -0.8
121A IAmb IAmb 16 45 08.8
comp=Z,17nm,1.3s
BMO Blue Mountains 78.48 37 P P 16 45 06.3 -0.2
BMO pmax pmax
comp=Z,7.0nm,1.2s
BMO Blue Mountains 78.48 37 P P 16 45 06.3 -0.2
MFID Camas Ranch 78.51 38 P P 16 45 06.2 -0.5
DUG Dugway, Tooele 78.63 42 P P 16 45 07.8 +0.4
DUG pmax pmax
comp=Z,10.0nm,1.2s
DUG Dugway, Tooele 78.63 42 P P 16 45 07.9 +0.4
baz=238,SNR=6.0
DUG Dugway, Tooele 78.63 42 P P 16 45 07.8 +0.4
HIN Hinchinbrook I 78.79 13 P P 16 45 07.8 +0.1
HIN IAmb IAmb 16 45 08.9
comp=Z,17nm,1.1s
D08A Wollman Farm, 78.90 34 P P 16 45 08.9 +0.3
D08A IAmb IAmb 16 45 10.6
comp=Z,24nm,1.3s
GLI Glacier Island 79.10 12 P P 16 45 09.1 -0.3
GLI IAmb IAmb 16 45 10.4
comp=Z,22nm,1.0s
F10A Beach Ranch, E 79.19 36 P P 16 45 09.9 -0.4
F10A IAmb IAmb 16 45 11.6
comp=Z,11nm,1.1s
PMR Palmer 79.35 11 P P 16 45 11.3 +0.6
PMR pmax pmax
comp=Z,21nm,1.4s
PMR Palmer 79.35 11 P P 16 45 11.3 +0.6
PMR IAmb IAmb 16 45 33.0
comp=Z,21nm,1.4s
B08A Colville Reser 79.49 33 P P 16 45 11.6 -0.3
TTA Tatalina 79.54 8 P P 16 45 12.6 +0.8
TTA Tatalina 79.54 8 P P 16 45 12.6 +0.8
GHO Glory Hole Cre 79.56 11 P P 16 45 11.6 -0.4
SRU San Rafael Swe 79.59 44 P P 16 45 12.9 +0.1
SRU pmax pmax
comp=Z,21nm,1.4s
SRU San Rafael Swe 79.59 44 P P 16 45 12.9 +0.1
LLLB Lillooet 79.64 30 P P 16 45 13.1 +0.5
LLLB IAmb IAmb 16 45 14.3
comp=Z,12nm,1.1s
SML Sawmill 79.70 11 P P 16 45 12.8 +0.1
SML IAmb IAmb 16 45 14.1
comp=Z,25nm,1.5s
JLU Jordanelle 79.73 43 P P 16 45 13.8 +0.2
MNTX Cornudas Mount 79.85 53 P P 16 45 14.9 +0.8
baz=244
MNTX Cornudas Mount 79.85 53 P P 16 45 14.1 -0.1
MNTX IAmb IAmb 16 45 16.1
comp=Z,15nm,1.2s
SCM Sheep Creek Mo 79.92 12 P P 16 45 13.8 -0.2
SCM pmax pmax
comp=Z,19nm,1.2s
SCM Sheep Creek Mo 79.92 12 P P 16 45 13.8 -0.2
SCM IAmb IAmb 16 45 15.2
comp=Z,19nm,1.2s
TCUT Toone Canyon 80.02 42 P P 16 45 13.7 -1.5
PV05 Paradox Valley 80.05 46 P P 16 45 16.4 +1.0
MVCO Mesa Verde 80.05 47 P P 16 45 16.1 +0.7
baz=241
HWUT Hardware Ranch 80.17 42 P P 16 45 15.3 -0.6
HWUT IAmb IAmb 16 48 05.2
comp=Z,18nm,0.9s
TX31 Lajitas Ar. Si 80.20 56 P P 16 45 16.3 +0.1
TX32 Lajitas Array 80.20 56 P P 16 45 16.3 +0.1
TX32 IAmb IAmb 16 45 18.5
comp=Z,22nm,1.3s
TXAR Lajitas Array 80.20 56 P P 16 45 17.4 +1.2
comp=Z,8.3nm,1.1s,baz=223,slow=6.6,SNR=34
TXAR LR LR 17 13 45.3
comp=Z,140nm,20.2s,baz=0.0,slow=30
TXAR Lajitas Array 80.20 56 P P 16 45 15.7 -0.5
TXAR Lajitas Array 80.20 56 P P 16 45 15.7 -0.5
PV09 Paradox Valley 80.23 45 P P 16 45 17.1 +0.6
PV19 Morning Glory 80.24 46 P P 16 45 16.1 -0.4
PV17 East Wray Mesa 80.24 46 P P 16 45 16.6 +0.2
PV14 Lion Creek, Pa 80.24 46 P P 16 45 16.8 +0.3
PV14 IAmb IAmb 16 45 18.3
comp=Z,16nm,1.2s
PV20 West Nyswonger 80.27 46 P P 16 45 16.3 -0.2
PV13 Radium Mtn., P 80.28 46 P P 16 45 16.9 +0.3
PV16 Nyswonger Mesa 80.29 46 P P 16 45 16.3 -0.4
PV23 Carpenter Ridg 80.29 46 P P 16 45 16.2 -0.6
PV23 IAmb IAmb 16 45 20.7
comp=Z,14nm,1.1s
BALM Baldy 80.30 14 P P 16 45 16.3 +0.3
PV03 Paradox Valley 80.31 46 P P 16 45 17.2 +0.5
PV03 IAmb IAmb 16 45 18.7
comp=Z,18nm,1.4s
PV11 David Mesa, Pa 80.31 46 P P 16 45 17.0 +0.2
PV11 IAmb IAmb 16 48 02.6
comp=Z,12nm,0.8s
GLB Gilahina Butte 80.31 14 P P 16 45 16.5 +0.5
GLB IAmb IAmb 16 45 17.4
comp=Z,14nm,1.2s
PV04 Paradox Valley 80.33 46 P P 16 45 17.1 +0.2
PV02 Paradox Valley 80.36 46 P P 16 45 16.8 -0.2
PV21 Cone Mtn., Par 80.37 45 P P 16 45 17.3 +0.2
PV12 Saucer Basin, 80.37 46 P P 16 45 17.6 +0.5
PV12 IAmb IAmb 16 45 21.1
comp=Z,21nm,1.3s
ANMO Albuquerque 80.47 50 P P 16 45 17.1 -0.6
ANMO pmax pmax
comp=Z,10.0nm,1.5s
ANMO Albuquerque 80.47 50 P P 16 45 18.3 +0.7
baz=243
ANMO Albuquerque 80.47 50 P P 16 45 17.1 -0.6
CTGM Chitina Glacie 80.48 15 P P 16 45 17.3 +0.2
PV22 Blue Mesa, Par 80.48 46 P P 16 45 16.5 -1.1
NEW Newport 80.60 34 P P 16 45 18.5 +0.7
baz=233
KTH Kantishna Hill 80.87 10 P P 16 45 18.1 -0.8
KTH IAmb IAmb 16 45 40.7
comp=Z,18nm,1.3s
TRF Thorofare Moun 80.87 10 P P 16 45 18.3 -0.8
TRF IAmb IAmb 16 45 42.2
comp=Z,28nm,1.5s
RDMU Red Mountain 80.95 43 P P 16 45 20.1 0.0
NJ2 Nanjing 81.01 307 *e*P P 16 45 22.4 +2.0
NJ2 pmax pmax
comp=Z,11nm,0.6s
DHY Denali Highway 81.05 11 P P 16 45 19.6 -0.4
AHID Auburn Hatcher 81.07 41 P P 16 45 20.6 -0.1
RND Reindeer 81.08 11 P P 16 45 20.2 +0.1
RND pmax pmax
comp=Z,34nm,1.4s
RND Reindeer 81.08 11 P P 16 45 20.2 +0.1
MCMT McKenzie Canyo 81.08 38 P P 16 45 19.6 -1.2
KLR Kul'dur 81.26 327⇑*i*P P 16 45 14.9 -6.4
KLR pmax pmax
comp=Z,14nm,2.8s
HYT Haines Junctio 81.36 17 P P 16 45 22.4 +0.6
HYT IAmb IAmb 16 45 23.9
comp=Z,14nm,1.2s
MCK McKinley 81.37 10 P P 16 45 21.7 +0.1
MCK pmax pmax
comp=Z,19nm,1.0s
MCK McKinley 81.37 10 P P 16 45 21.7 +0.1
MCK IAmb IAmb 16 45 43.1
comp=Z,20nm,1.0s
BPAW Bear Paw Mtn. 81.37 9 P P 16 45 21.1 -0.5
S22A 4UR Ranch, Cre 81.47 47 P P 16 45 24.0 +0.9
baz=242,SNR=5.5
DLMT Dillon 81.52 38 P P 16 45 21.8 -1.2
DLMT IAmb IAmb 16 45 25.1
comp=Z,21nm,1.6s
REDW Red Top Meadow 81.53 41 P P 16 45 23.0 -0.2
TPAW Teton Pass 81.54 40 P P 16 45 22.7 -0.6
MSO Missoula 81.54 36 P P 16 45 22.6 -0.4
baz=236,SNR=5.3
MSO Missoula 81.54 36 P P 16 45 23.1 +0.2
MSO IAmb IAmb 16 45 24.1
comp=Z,10nm,1.1s
FXWY Fox Creek 81.57 40 P P 16 45 23.4 0.0
MENT Mentasta 81.66 13 P P 16 45 22.9 -0.3
IMW Indian Meadow 81.75 40 P P 16 45 24.1 -0.3
IMW IAmb IAmb 16 48 28.7
comp=Z,27nm,1.4s
LRM Limekiln Ridge 81.85 38 P P 16 45 24.9 +0.1
CN2 Changchun 81.88 320 *e*P P 16 45 25.9 +1.2
CN2 pmax pmax
comp=Z,10.0nm,0.6s
QLMT Earthquake Lak 81.94 39 P P 16 45 26.7 +1.5
FLWY Flagg Ranch 82.00 40 P P 16 45 26.4 +0.8
FLWY IAmb IAmb 16 45 28.0
comp=Z,9.0nm,0.9s
YPP Pitchstone Pla 82.03 40 P P 16 45 26.9 +1.1
SMCO Snowmass 82.03 46 P P 16 45 26.4 +0.3
YHB Horse Butte 82.04 39 P P 16 45 27.3 +1.4
BW06 Boulder Array 82.05 42 P P 16 45 25.8 -0.1
baz=240,SNR=7.0
BW06 Boulder Array 82.05 42 P P 16 45 25.8 -0.1
PD31 Pinedale Array 82.05 42 P P 16 45 25.9 0.0
PDAR Pinedale Array 82.05 42 P P 16 45 26.1 +0.2
comp=Z,3.4nm,1.0s,baz=238,slow=2.8,SNR=20
PDAR LR LR 17 15 39.3
comp=Z,238nm,20.1s,baz=254,slow=31
PDAR Pinedale Array 82.05 42 P P 16 45 25.3 -0.7
YHL Hebgen Lake 82.10 39 P P 16 45 27.2 +0.9
NEA Nenana 82.12 10 P P 16 45 25.4 -0.1
YMR Madison River 82.14 39 P P 16 45 26.8 +0.5
RIDG Independent Ri 82.14 12 P P 16 45 25.5 -0.2
RIDG IAmb IAmb 16 45 48.1
comp=Z,18nm,1.3s
WRH Wood River Hil 82.19 10 P P 16 45 25.6 -0.3
BCAR Beaver Creek A 82.20 14 P P 16 45 25.9 -0.2
DOT Dot Lake 82.22 12 P P 16 45 25.8 -0.3
DOT IAmb IAmb 16 45 48.5
comp=Z,10nm,1.1s
H17A Grant Village 82.23 40 P P 16 45 27.2 +0.3
YHH Holmes Hill 82.27 39 P P 16 45 27.4 +0.3
MLY Manley 82.28 9 P P 16 45 25.5 -0.9
MLY IAmb IAmb 16 45 47.5
comp=Z,8.4nm,1.0s
HDA Harding Lake 82.34 11 P P 16 45 26.5 -0.2
baz=205,SNR=8.7
HDA Harding Lake 82.34 11 P P 16 45 26.1 -0.6
HDA IAmb IAmb 16 45 27.8
comp=Z,9.0nm,1.0s
CCB Clear Creek Bu 82.41 10 P P 16 45 26.5 -0.4
CCB IAmb IAmb 16 45 49.0
comp=Z,20nm,1.2s
SDCO Great Sand Dun 82.41 47 P P 16 45 28.2 +0.2
baz=243
SDCO Great Sand Dun 82.41 47 P P 16 45 27.4 -0.6
SCRK Sand Creek 82.53 12 P P 16 45 26.9 -0.9
SCRK IAmb IAmb 16 45 49.6
comp=Z,11nm,1.3s
COLA College 82.61 10 ⇓P P 16 45 25.8 -2.2
COLA pmax pmax
comp=Z,18nm,1.0s
IL31 82.68 11 P P 16 45 28.0 -0.4
IL31 IAmb IAmb 16 45 50.7
comp=Z,14nm,1.3s
ILAR Eielson Array 82.68 11 P P 16 45 28.2 -0.2
comp=Z,2.2nm,0.8s,baz=219,slow=5.7,SNR=24
ILAR LR LR 17 17 36.9
comp=Z,65nm,18.7s,baz=196,slow=32
ILAR Eielson Array 82.68 11 P P 16 45 27.0 -1.4
ILAR Eielson Array 82.68 11 P P 16 45 27.0 -1.4
IMAR Indian Mountai 82.75 8 P P 16 45 28.5 -0.3
MSTX Muleshoe 82.80 52 P P 16 45 30.0 +0.1
baz=246
MSTX Muleshoe 82.80 52 P P 16 45 28.1 -1.8
WALA Waterton Lakes 82.80 35 P P 16 45 28.8 -0.8
WALA IAmb IAmb 16 45 31.0
comp=Z,19nm,1.4s
POKR Poker Plat Res 82.90 10 P P 16 45 29.7 +0.2
baz=204,SNR=6.9
T25A Trinidad 82.92 48 P P 16 45 30.7 0.0
baz=244
RWWY Rawlins 83.05 43 P P 16 45 30.1 -1.1
833A Chaparral WMA, 83.25 58 P P 16 45 31.0 -1.2
baz=248
ISCO Idaho Springs 83.25 46 P P 16 45 32.6 +0.2
baz=243
RLMT Red Lodge 83.41 40 P P 16 45 33.2 +0.3
baz=240,SNR=7.6
RLMT Red Lodge 83.41 40 P P 16 45 32.8 -0.2
RLMT IAmb IAmb 16 45 35.0
comp=Z,11nm,1.1s
N23A Red Feather La 83.53 44 P P 16 45 34.0 +0.3
baz=243
PRP Porcupine Dome 83.61 11 P P 16 45 33.7 +0.3
DAWY Dawson 83.61 14 P P 16 45 33.5 +0.1
DAWY IAmb IAmb 16 45 35.2
comp=Z,15nm,1.2s
EGAK Eagle 83.83 13 P P 16 45 34.6 +0.2
EGAK IAmb IAmb 16 45 57.2
comp=Z,19nm,1.5s
K22A Casper 83.95 43 P P 16 45 35.8 +0.1
baz=242
AMTX Amarillo 83.99 51 P P 16 45 35.9 -0.1
baz=246
AMTX Amarillo 83.99 51 P P 16 45 36.0 0.0
AMTX IAmb IAmb 16 45 37.2
comp=Z,9.5nm,0.9s
H03S2 Juan Fernandez 84.35 123 T T 18 19 35.1
baz=245
H03S1 Juan Fernandez 84.36 123 T T 18 19 46.8
baz=245
H03S3 Juan Fernandez 84.37 123 T T 18 19 42.6
baz=245
COLD Coldfoot 84.41 9 P P 16 45 37.7 +0.4
COLD IAmb IAmb 16 46 05.3
comp=Z,13nm,1.4s
EGMT Eagleton 84.58 37 P P 16 45 38.6 -0.1
baz=239
EGMT Eagleton 84.58 37 P P 16 45 38.5 -0.1
EGMT IAmb IAmb 16 45 40.2
comp=Z,16nm,1.3s
ABTX Abilene, Hawle 84.67 54 P P 16 45 39.3 -0.1
baz=248
KSCO Kaye Shedlock' 85.00 47 P P 16 45 41.3 +0.2
baz=245
BMUT Burnt Mountain 85.49 10 P P 16 45 43.3 +0.5
TOLK Toolik Lake Re 85.82 8 P P 16 45 45.2 +0.9
baz=202
TOLK Toolik Lake Re 85.82 8 P P 16 45 45.0 +0.7
TOLK IAmb IAmb 16 46 06.8
comp=Z,9.7nm,1.2s
LAO LASA Array 86.02 39 P P 16 45 46.6 +0.7
baz=242
WMOK Wichita Mounta 86.13 52 P P 16 45 46.1 -0.5
baz=248
WHTX Lake Whitney, 86.16 55 P P 16 45 46.6 -0.2
baz=249
EPYK Eagle Plains 86.17 14 P P 16 45 46.4 +0.2

baz=214,SNR=5.3
EPYK Eagle Plains 86.17 14 P P 16 45 46.3 +0.2
RSSD Black Hills 86.23 42 P P 16 45 46.9 -0.3
RSSD pmax pmax
comp=Z,8.0nm,1.2s
RSSD Black Hills 86.23 42 P P 16 45 46.9 -0.3
BJI Beijing 86.29 313 P P 16 45 48.4 +1.1
BJI S S **16 56 27.3 +6.0**
BJI pmax pmax
comp=Z,8.0nm,0.8s
BJI LR LR
comp=Z,71nm,4.2s
BJI LR LR
comp=Z,94nm,5.1s
SNET Serv Nac Est T 87.46 75 P P 16 45 53.1 -0.5
MAW Mawson 87.67 198 P P 16 45 50.9 -2.6
baz=88,SNR=7.9
MAW Mawson 87.67 198 P P 16 45 54.9 +1.4
comp=Z,10nm,1.1s,baz=101,slow=6.3,SNR=11
MAW LR LR 17 24 23.1
comp=Z,123nm,19.2s,baz=60,slow=35
MAW Mawson 87.67 198 P P 16 45 54.5 +1.0
MAW pmax pmax
comp=Z,3.0nm,1.2s
MAW Mawson 87.67 198 P P 16 45 54.5 +1.0
IPM Ipoh 87.72 275 P P 16 45 55.7 +0.9
ENH Enshi 87.77 302 P P 16 45 56.1 +1.3
ENH IAmb IAmb 16 45 58.0
comp=Z,8.6nm,0.8s
DGMT Dagmar 88.06 38 P P 16 45 56.0 +0.3
baz=244
INK Inuvik 88.47 14 P P 16 45 56.8 -0.3
INK pmax pmax
comp=Z,9.0nm,1.4s
INK Inuvik 88.47 14 P P 16 45 56.8 -0.3
INK IAmb IAmb 16 46 16.9
comp=Z,9.3nm,1.4s
PLCA Paso Flores 88.68 132 P P 16 46 00.9 +1.9
comp=Z,1.2nm,0.9s,baz=187,slow=9.0,SNR=2.1
PLCA LR LR 17 17 12.4
comp=Z,82nm,20.9s,baz=264,slow=30
PLCA Paso Flores 88.68 132 P P 16 45 58.1 -1.0
PLCA pmax pmax
comp=Z,23nm,2.0s
PLCA Paso Flores 88.68 132 P P 16 45 58.1 -1.0
PLCA IAmb IAmb 16 46 52.4
comp=Z,23nm,2.0s
GYA Guiyang 88.90 298 *e*P **P 16 46 01.3 +1.0**
GYA pmax pmax
comp=Z,10.0nm,1.0s
RPSI Rantau Prapat 89.25 273 P P 16 46 01.5 -0.6
PSI Prapat 89.28 273 P P 16 46 03.1 +0.8
comp=Z,12nm,0.9s,baz=180,slow=4.8,SNR=9.2
PSI Prapat 89.28 273 P P 16 46 01.5 -0.9
PSI pmax pmax
comp=Z,23nm,1.1s
HHC Hu-ho-hao-te 89.85 313 *e*P **P 16 46 01.4 -3.0**
HHC pmax pmax
comp=Z,8.0nm,0.9s
HHC pmax pmax
comp=Z,42nm,3.8s
HHC LR LR
comp=Z,79nm,14.3s
HHC LR LR
comp=Z,87nm,21.0s
YKA Yellowknife Ar 90.15 23 P P 16 46 05.4 +0.3
comp=Z,1.4nm,0.9s,baz=233,slow=4.1,SNR=14
YKA LR LR 17 19 25.8
comp=Z,131nm,21.9s,baz=0.0,slow=31
GSI Gunungsitoli 90.17 271 P P 16 46 07.0 +0.6
JTS Las Juntas de 90.53 80 ⇓ *i*P **P 16 46 07.0 -1.0**
JTS pmax pmax
comp=Z,13nm,1.3s
VNA3 Neumayer Olymp 92.40 175 P P 16 46 17.5 +1.9
SNAA Sanae 92.47 177 ⇑ *i*P **P 16 46 19.2 +3.1**
SNAA pmax pmax
comp=Z,85nm,1.1s
CD2 Chengdu 92.67 301 P P 16 46 16.9 -0.7
CD2 pmax pmax
comp=Z,10.0nm,0.6s
VNA2 Neumayer--Watz 92.90 175 P P 16 46 19.0 +1.1
baz=187,slow=2.5
VNA1 Neumayer--Stat 93.09 175 P P 16 46 20.1 +1.3
CMAR Chiang Mai Arr 93.46 288 P P 16 46 23.9 +2.4
comp=Z,2.2nm,1.1s,baz=108,slow=3.1,SNR=9.2
CMAR Chiang Mai Arr 93.46 288 P P 16 46 21.3 -0.2
CMAR Chiang Mai Arr 93.46 288 P P 16 46 21.3 -0.2
ULM Lac du Bonnet 93.76 39 LR LR 17 21 26.5
comp=Z,349nm,21.9s,baz=280,slow=31
LZH Lanzhou 94.07 306 *e*P **P 16 46 24.0 -0.1**
LZH pP pP 16 46 27.6 -2.9
LZH sP sP 16 46 30.9 -1.8
LZH PP **PP 16 50 15.3 +4.5**
LZH pmax pmax
comp=Z,27nm,1.0s
LZH pmax pmax
comp=Z,94nm,5.4s
LZH LR LR
comp=Z,240nm,18.4s
LZH LR LR
comp=Z,180nm,17.3s
LZH LR LR
comp=Z,210nm,19.0s
LPAZ La Paz 98.96 110 LR LR 17 21 23.8
comp=Z,45nm,21.7s,baz=290,slow=29
ROSC El Rosal 99.26 88 LR LR 17 22 25.4
comp=Z,45nm,20.8s,baz=272,slow=30
P54A Burton 101.50 52 P Pdif 16 46 57.1 -0.2
baz=259
R55A Marlinton 101.52 53 P Pdif 16 46 57.3 -0.2
baz=259
E48A Lockeyer 101.57 45 P Pdif 16 46 58.0 +0.5
baz=259
Q55A Buckhannon 101.69 53 P Pdif 16 46 58.6 +0.3
baz=259
V58A Windy Hill, Pi 101.84 56 P Pdif 16 46 59.4 +0.5
baz=259
M55A Ridgway 103.11 50 P Pdif 16 47 05.0 +0.5
baz=260
R58B Mineral 103.20 54 P Pdif 16 47 05.1 +0.2
baz=260
KURK Kurchatov 113.94 319 *i* PKIKP **PKiKP 16 51 41.6 -2.5**
KSH Kashi 116.32 307 PKP PKPdf 16 51 47.3 -2.0
BRVK Borovoye 118.71 322 *i* PKIKP **PKPdf 16 51 52.2 -1.1**
AKASG Malin Array Be 140.99 338 PKP PKPdf 16 52 34.8 -0.5
comp=Z,0.2nm,0.3s,baz=287,slow=37,SNR=1.6
BSEG Bad Segeberg 141.87 357 *e*L L 17 57 43.2
comp=Z,70nm,20.2s
CLL Collm 144.29 354 *e*(pPKiKP) 16 52 48.0
CLL *e* 16 52 52.0
CLL *e* 16 53 00.0
comp=Z,5.0nm,0.7s
CLL Collm 144.29 354 *e*L L 17 50 00.2
comp=Z,51nm,22.0s
BRG Berggiesshubel 144.61 353 *e*PKP PKiKP 16 53 01.8 +16
comp=Z,6.3nm,1.4s
KOLS Kolonicke sedl 144.78 343 *e*PKIKP **PKPdf 16 52 42.4 +0.2**
KOLS *e* 16 52 55.3
KOLS Kolonicke sedl 144.78 343 *e*PKP **PKPdf 16 52 42.4 +0.2**
KOLS *e* 16 52 55.3
DPC Dobruska-Polom 144.78 350 *e*PKIKP **PKPdf 16 52 41.8 -0.4**
DPC Dobruska-Polom 144.78 350 *e*PKP **PKPdf 16 52 41.8 -0.4**
DPC *ex* x 16 53 00.7
OKC Ostrava-Krasne 144.94 348 *e*PKP PKiKP 16 53 00.7 +14
KRLC Kraliky 144.97 349 *e*PKP PKiKP 16 53 00.7 +14
BURAR Bucovina Array 145.01 339 ⇑ P **PKiKP 16 52 54.1 +7.5**
BURAR Bucovina Array 145.01 339 PKPab 16 52 41.8 -0.3
MOX Moxa 145.07 355 *e*L L 17 53 10.6
comp=Z,63nm,20.4s
MORC Moravsky Berou 145.11 348 *e*PKP **PKPdf 16 52 42.7 -0.1**
MEM Membach 145.25 2 PKPdf **PKPbc 16 52 42.2 -0.4**
MEM x x 16 52 53.9
BIZ Bicaz 145.27 337 ⇓ P **PKPdf 16 52 44.0 +0.9**
PRU Pruhonice 145.40 352 *e*PKP PKiKP 16 53 01.5 +14
PRU *ex* x 16 53 09.2
BCLA Clavier 145.42 2 PKPdf **PKPab 16 52 43.4 +0.1**
BCLA x x 16 52 50.0
BCLA x x 16 53 01.9
GOPC GO Pecny, Ondr 145.44 352 *e*PKIKP **PKPab 16 52 43.5 0.0**
GOPC GO Pecny, Ondr 145.44 352 *e*PKP **PKPab 16 52 43.5 0.0**
GOPC *ex* x 16 53 02.3
BMRD Maredsous 145.51 3 PKPdf **PKPdf 16 52 42.9 -0.4**
BMRD x x 16 52 48.2
BMRD x x 16 53 02.2
TNS Taunus Mts 145.65 359 *e*L L 17 55 29.9
comp=Z,67nm,20.3s
DOU Dourbes 145.71 3 PKPdf **PKPdf 16 52 43.7 0.0**
DOU x x 16 53 03.0
VRAC Vranov 145.74 349 *e*PKP **PKPab 16 52 44.9 +0.3**
VRAC Vranov 145.74 349 ⇓ P **PKPab 16 52 45.7 +1.1**
VRAC Vranov 145.74 349 ⇓ PKP2 **PKPab 16 52 45.7 +1.1**
PBCC Pribram 145.77 352 *e*PKP **PKPab 16 52 45.7 +1.0**
PBCC *ex* x 16 52 54.0
PBCC *ex* x 16 53 02.7
VRI Vrincioaia 145.92 336 ⇓ P **PKiKP 16 52 54.4 +6.0**
KRUC Moravsky 146.01 349 *e*PKP **PKPdf 16 52 44.1 -0.2**
TOPG Topolog 146.03 333 ⇓ P **PKiKP 16 52 54.0 +5.4**
GRF Grafenberg Arr 146.05 356 *e*PKPbc **PKiKP 16 52 54.7 +6.1**
baz=6.5,slow=3.3
GRF *e*L L 17 48 24.6
comp=Z,61nm,21.0s
KMBO Kilima Mbogo 146.05 243 PKPbc **PKPbc 16 52 46.4 -0.2**
comp=Z,0.8nm,0.5s,baz=271,slow=6.3,SNR=3.8
VYHS Vyhne 146.06 346 *e*PKP2 **PKPab 16 52 45.9 +0.1**
VYHS Vyhne 146.06 346 *e*PKP **PKPab 16 52 45.9 +0.1**
VYHS *e* 16 52 56.5
VYHS *e* 16 53 04.7
WLF Walferdange 146.20 1 PKPdf **PKPdf 16 52 44.6 +0.1**
WLF x x 16 52 57.1
GRB1 Grafenberg Arr 146.31 355 *e*PKPbc PKiKP 16 53 07.6 +18
baz=6.5,slow=3.3
KHC Kasperske Hory 146.37 353 *e*PKP2 **PKPab 16 52 47.5 +0.5**
KHC Kasperske Hory 146.37 353 *e*PKP **PKPab 16 52 47.5 +0.5**
KHC *ex* x 16 52 57.9
KHC *ex* x 16 53 05.7
KHC Kasperske Hory 146.37 353 PKPbc 16 52 45.7 -0.4
WET Wettzell 146.44 353 *e*L L 17 51 03.7
comp=Z,73nm,21.9s
MLR Muntele Rosu 146.54 336 ⇓ P **PKPab 16 52 47.9 0.0**
MLR Muntele Rosu 146.54 336 ⇓ PKP2 **PKPab 16 52 47.9 0.0**
GEC2 GERESS Array S 146.63 352 *e*L L 17 58 28.5
comp=Z,76nm,19.5s
GERES GERESS Array B 146.63 352 PKPbc **PKPbc 16 52 46.3 -0.7**
comp=Z,1.0nm,0.8s,baz=104,slow=5.6,SNR=5.3
GERES GERESS Array B 146.63 352 PKIKP **PKPdf 16 52 42.3 -3.2**
GERES 16 52 49.6
GERES GERESS Array B 146.63 352 PKPdf **PKPdf 16 52 42.3 -3.2**
GERES **PKiKP 16 52 49.6 -0.3**
VOIR 146.93 337 ⇓ P PKiKP 16 53 05.4 +15
BR131 Keskin Array S 146.94 321 PKP2 **PKPab 16 52 49.6 -0.1**
BR131 Keskin Array S 146.94 321 PKPdf **PKPdf 16 52 46.0 -0.3**
BR131 **PKPab 16 52 49.6 -0.1**
BRTR Keskin Array B 146.94 321 PKPbc **PKPab 16 52 49.0 -0.7**
comp=Z,2.0nm,0.8s,baz=77,slow=2.5,SNR=9.2
BRTR Keskin Array B 146.94 321 PKP2 **PKPab 16 52 49.2 -0.5**
BRTR Keskin Array B 146.94 321 PKPab 16 52 49.2 -0.5
CONA Conrad Observa 147.20 349 *i* PKPab **PKPab 16 52 49.4 -0.9**
comp=Z,5.4nm,1.0s
CONA Conrad Observa 147.20 349 P PKiKP 16 53 08.7 +18
comp=Z,19nm,1.2s
SIRR Siria 147.36 342 ⇓ P **PKPab 16 52 50.3 -0.7**
MOA Molln 147.53 351 P PKiKP 16 53 08.5 +17
comp=Z,8.8nm,1.1s
BFO Black Forest 147.54 359 *e*L L 17 59 57.4
comp=Z,86nm,18.0s
FUR Furstenfeldbru 147.56 355 *e*L L 18 04 07.1
comp=Z,57nm,18.1s
GZR Gura Zlata 147.78 339 ⇑ P PKPab 16 53 07.7 +15
ARSA Arzberg 147.91 350 P PKPab 16 53 10.0 +17
comp=Z,8.3nm,1.1s
RETA Reutte 148.27 356 P PKPab 16 53 10.9 +16
comp=Z,10nm,1.1s
MOTA Moosalm 148.39 355 *i* sPKPdf **PKPbc 16 52 52.4 +0.4**
comp=Z,6.0nm,0.8s
MOTA Moosalm 148.39 355 P PKPab 16 53 11.2 +16
comp=Z,15nm,1.1s
SQTA Sankt Quirin 148.50 355 *i* PKPbc **PKPbc 16 52 51.3 -0.9**
comp=Z,6.0nm,1.4s
DAVA Damuels 148.53 357 P PKPab 16 53 11.9 +16
comp=Z,12nm,1.0s
SOKA Soboth 148.55 350 P PKPab 16 53 11.4 +16
comp=Z,14nm,1.2s
FETA Feichten 148.74 356 *i* sPKPdf **PKPbc 16 52 52.5 -0.4**
comp=Z,5.7nm,1.2s
ABTA Abfaltersbach 148.84 353 *i* sPKPdf **PKPbc 16 52 53.2 +0.1**
comp=Z,6.2nm,0.9s
ABTA Abfaltersbach 148.84 353 P PKPab 16 53 11.9 +15
comp=Z,10nm,0.9s
FUORN Ofenpass-Fuorn 149.17 356 PKPbc 16 52 53.4 -0.7
VTS Vitosha 150.01 336 ⇓ P PKPab 16 53 15.2 +13
LEF Lefka 150.14 315 ⇑ P **PKPab 16 53 03.0 +0.5**
MATE Matera 153.94 344 ⇓ P **PKPab 16 53 13.1 -5.0**
ESDC Sonseca Array 154.22 20 PKPab **PKPab 16 53 18.3 -1.1**
comp=Z,0.2nm,0.3s,baz=331,slow=5.0,SNR=1.9
TORD Torodi Ar. Bea 173.89 115 PKP **PKPdf 16 53 15.2 -0.6**
comp=Z,1.2nm,1.1s,baz=290,slow=4.8,SNR=3.6
TORD PKPab **PKPab 16 54 45.4 -0.9**
comp=Z,0.2nm,0.6s,baz=78,slow=36,SNR=2.3
TORD Torodi Ar. Bea 173.89 115 PKPdf 16 53 16.0 +0.2
TORD PKPab **PKPab 16 54 45.4 -0.9**

MAN 15 16:36:54.4, 7.64N×127.69E, h13km, mb4.9, ML3.8, MS3.8, 3C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.58**	**244**	*e*P	Pn	16 37 21.4	-0.8
MATI				*e*S	Sn	16 37 36.2	-6.3
DMPH	**Davao City--Mi**	**2.24**	**256** ⇓	*e*P	Pn	16 37 27.6	-3.6
DMPH				*e*S	Sn	16 37 53.2	-5.5
BUTP	**Butuan**	**2.44**	**303**	*e*P	Pn	16 37 33.7	-0.3
BUTP				*e*S	Sb	16 38 06.3	-2.0
DDMP	**Don Marcelino,**	**2.49**	**232**	*e*P	Pn	16 37 36.1	+1.4
DDMP				*e*S	Sn	16 38 01.6	-3.3
BUKP	**Musuan**	**2.62**	**275**	*e*P	Pn	16 37 36.7	+0.2
BUKP				*e*S	Sn	16 38 03.7	-4.5
KCP	**Kidapawan**	**2.66**	**257** ⇑	*i*P	Pn	16 37 37.6	+0.5
KCP				*i* S	Sn	16 38 10.0	+0.8
CGP	**Cagayan de Oro**	**3.08**	**286** ⇑	*i*P	Pn	16 37 43.0	+0.2
CGP				*i* S	Sn	16 38 21.6	+2.0
CTBH	**Cotabato--PC H**	**3.44**	**263** ⇑	*i*P	Pn	16 37 48.2	+0.4
MSLP	**Maasin**	**3.74**	**312**	*e*P	Pn	16 37 53.7	+1.8
MSLP				*e*S	Sb	16 38 43.3	-2.4
TBP	**Tagbilaran**	**4.30**	**299**	*e*P	Pn	16 38 03.3	+3.7
DCPH	**Dipolog City**	**4.40**	**283**	*e*P	Pn	16 38 02.9	+1.9
DCPH				*e*S	Sn	16 38 54.9	+2.8
CNOP	**Candoni, Negro**	**5.45**	**294**	*e*P	Pn	16 38 17.7	+2.3
CNP	**Catarman**	**5.69**	**329**	*e*P	Pn	16 38 20.0	+1.3

TAP ***15*** *16:59:29.2, 22.57N×121.35E, h35km, ML3.7, C*
JMA ***15*** *16:59:30.0±0.1, 22.73N×121.35E, h28km±4km, M3.4*

ISC 15 16:59:29.4±0.9, 22.58N±0.02×121.38E±0.02, h30km±5km, n124, σ1.09/240, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWH	**Lutao**	**0.16**	**34**	*i* P	**Pn**	**16 59 35.7**	**-0.2**
TWH	baz=48			S	**Sn**	**16 59 40.2**	**+1.0**
TTN	**Taitung**	**0.28**	**310**	*i* P	**Pn**	**16 59 37.5**	**+0.1**
TTN	baz=319			*i* S	**Sn**	**16 59 43.3**	**+0.6**
TWGBT	**Beinan**	**0.37**	**311**	P	**Pb**	**16 59 37.5**	**-0.3**
TWGBT	baz=305			S	**Sb**	**16 59 42.8**	**-0.7**
TWG	**Pinlang**	**0.38**	**311**	*i* P	**Pb**	**16 59 37.5**	**-0.4**
TWG	baz=305			*i* S	**Sb**	**16 59 43.0**	**-0.7**
ECL	**Taimali**	**0.39**	**273**	*i* P	**Pb**	**16 59 37.4**	**-0.8**
ECL	baz=283			S	**Sb**	**16 59 43.0**	**-1.2**
TAW	**Tawu**	**0.50**	**244**	*i* P	**Pb**	**16 59 39.0**	**-0.8**
TAW	baz=251			*i* S	**Sb**	**16 59 45.4**	**-1.5**
CHKT	**Chengkung**	**0.52**	**359**	P	**Pn**	**16 59 40.2**	**-0.7**
CHKT				S	**Sn**	**16 59 48.2**	**-0.5**
EAST	**Anshuo**	**0.53**	**249**	P	**Pb**	**16 59 39.5**	**-0.8**
EAST	baz=249			S	**Sb**	**16 59 46.2**	**-1.5**
LAY	**Lan-yu**	**0.56**	**163**	*e*P	**Pb**	**16 59 40.6**	**-0.2**
LAY	baz=161			S	**Sb**	**16 59 48.6**	**+0.1**
FULB	**Fuli**	**0.63**	**353**	*i* P	**Pb**	**16 59 41.5**	**-0.4**
FULB	baz=342			S	**Sn**	**16 59 52.0**	**+0.7**
MASBT	**Mashibuluo**	**0.69**	**273**	*i* P	**Pn**	**16 59 42.2**	**-1.0**
MASBT	baz=275			S	**Sb**	**16 59 51.2**	**-1.0**
ELDTW	**Lidau**	**0.70**	**331**	P	**Pb**	**16 59 41.6**	**-1.5**
ELDTW	baz=333			S	**Sb**	**16 59 49.8**	**-2.8**
SSD	**Sandimen**	**0.71**	**284**	*i* P	**Pn**	**16 59 42.3**	**-1.2**
SCZT	**Fangliau**	**0.73**	**254**	P	**Pn**	**16 59 42.8**	**-0.9**
SCZT	baz=253			S	**Sb**	**16 59 51.7**	**-1.7**
SSPT	**Xinbi**	**0.76**	**263**	P	**Pn**	**16 59 43.9**	**-0.1**
SSPT	baz=265			S	**Sn**	**16 59 54.8**	**+0.3**
TWF1	**Yuli**	**0.78**	**354**	*e*P	**Pb**	**16 59 44.3**	**-0.1**
TWF1	baz=345			*e*S	**Sn**	**16 59 55.1**	**0.0**
SLGT	**Liugui**	**0.80**	**302**	P	**Pn**	**16 59 43.9**	**-0.7**
SLGT	baz=303			S	**Sb**	**16 59 56.5**	**+1.1**
TSEB	**Hengchuen, Pin**	**0.81**	**214**	P	**Pn**	**16 59 44.2**	**-0.5**
TSEB	baz=217			S	**Sn**	**16 59 55.4**	**-0.3**
YULB	**Yu-li**	**0.82**	**355**	*e*P	**Pn**	**16 59 43.3**	**-1.6**
HEN	**Hengchun**	**0.82**	**227**	P	**Pn**	**16 59 44.7**	**-0.2**
HEN	baz=228			S	**Sn**	**16 59 54.5**	**-1.5**
STYT	**Tauyuan**	**0.82**	**316**	*i* P	**Pn**	**16 59 44.3**	**-0.7**
STYT	baz=322			*e*S	**Sn**	**16 59 55.0**	**-1.2**
TWKBT	**Hengchun**	**0.82**	**220**	P	**Pn**	**16 59 44.4**	**-0.5**
TWKBT	baz=216			S	**Sn**	**16 59 55.1**	**-1.0**
TWK1	**Hengchun**	**0.82**	**220**	P	**Pn**	**16 59 43.8**	**-1.2**
TWK1	baz=216			S	**Sn**	**16 59 54.6**	**-1.5**
SGLT	**Jiouru**	**0.83**	**281**	P	**Pb**	**16 59 46.0**	**+0.6**
SGLT	baz=282			*e*S	**Sb**	**16 59 56.8**	**+0.5**
SGST	**Jiashian**	**0.89**	**305**	P	**Pn**	**16 59 45.5**	**-0.4**
SGST	baz=312			S	**Sb**	**16 59 58.1**	**+0.1**
HGSD	**Ruisui**	**0.91**	**3**	*e*P	**Pn**	**16 59 45.4**	**-0.8**
HGSD	baz=9.0			*e*S	**Sb**	**16 59 59.3**	**+0.7**
TWM1	**Shoushan**	**0.92**	**286**	P	**Pb**	**16 59 47.8**	**+1.0**
TWM1	baz=288			*e*S	**Sb**	**17 00 00.5**	**+1.8**
EHY	**Hungye**	**0.93**	**357**	P	**Pn**	**16 59 45.0**	**-1.5**
EHY	baz=347			*e*S	**Sn**	**16 59 58.1**	**-0.7**
WLCH	**Liuqiu**	**0.95**	**257**	*e*P	**Pb**	**16 59 49.3**	**+2.0**
WLCH	baz=248			*e*S	**Sb**	**17 00 01.0**	**+1.4**
TWP	**Hsiaoliuchiu**	**0.97**	**257**	*e*P	**Pb**	**16 59 50.1**	**+2.5**
WTP	**Ta-pu**	**0.97**	**314**	P	**Pb**	**16 59 47.8**	**+0.1**
WTP	baz=314			S	**Sb**	**17 00 01.5**	**+1.2**
SNJT	**Kaohsiung City**	**0.98**	**281**	*e*P	**Pb**	**16 59 49.4**	**+1.6**
SNJT	baz=283			*e*S	**Sb**	**17 00 04.1**	**+3.7**
CHN1	**Nanshi**	**0.99**	**308**	P	**Pb**	**16 59 48.0**	**-0.1**
CHN1	baz=308			S	**Sb**	**17 00 02.0**	**+1.1**
TPUB	**Ta-pu**	**1.00**	**316**	*e*P	**Pb**	**16 59 47.9**	**-0.3**
TPUB	baz=317			*e*S	**Sb**	**17 00 01.4**	**+0.3**
SNST	**Tainan City**	**1.04**	**308**	P	**Pb**	**16 59 49.3**	**+0.5**
SNST	baz=309			S	**Sb**	**17 00 03.2**	**+1.1**
CHN4	**Tsaushan**	**1.06**	**317**	P	**Pb**	**16 59 49.3**	**+0.1**
CHN4	baz=317			S	**Sb**	**17 00 04.2**	**+1.5**
CHN3	**Shinhua**	**1.06**	**298**	P	**Pb**	**16 59 50.3**	**+1.1**
CHN3	baz=299			*e*S	**Sb**	**17 00 04.5**	**+1.7**
ALS	**Alishan**	**1.07**	**330**	P	**Pb**	**16 59 48.9**	**-0.6**
ALS	baz=337			S	**Sb**	**17 00 04.3**	**+1.0**
TWK	**Hsinying**	**1.07**	**310**	*e*P	**Pb**	**16 59 49.4**	**0.0**
TWK	baz=311			S	**Sb**	**17 00 04.1**	**+1.0**
EGFH	**Guangfu**	**1.09**	**2**	*e*P	**Pn**	**16 59 48.0**	**-0.6**
EGFH	baz=349			*e*S	**Sn**	**17 00 02.0**	**-0.8**
VWDT	**VWDT**	**1.19**	**349**	*e*P	**Pn**	**16 59 49.9**	**-0.2**
VWDT	baz=358			*e*S	**Sb**	**17 00 05.8**	**-0.8**
CHN5	**Tsauling**	**1.21**	**328**	P	**Pb**	**16 59 51.3**	**-0.4**
CHN5	baz=326			S	**Sb**	**17 00 09.3**	**+2.3**
WHYT	**Xinyi Township**	**1.22**	**337**	P	**Pb**	**16 59 51.6**	**-0.3**
WHYT	baz=340			*e*S	**Sn**	**17 00 06.1**	**+0.1**
ESL	**Shilin**	**1.23**	**2**	P	**Pn**	**16 59 49.3**	**-1.3**
ESL				*e*S	**Sn**	**17 00 04.6**	**-1.7**
SCLT	**Jiali**	**1.25**	**299**	*e*S	**Sb**	**17 00 08.7**	**+0.7**
CHN2	**Minshiung**	**1.27**	**319**	*e*P	**Pn**	**16 59 51.0**	**0.0**
CHN2	baz=318			S	**Sb**	**17 00 10.0**	**+1.4**
SSLB	**Suanglung**	**1.27**	**342**	*e*P	**Pn**	**16 59 50.9**	**-0.3**
SSLB	baz=346			*e*S	**Sb**	**17 00 09.3**	**+0.6**
CHY	**Chiayi**	**1.27**	**316**	P	**Pb**	**16 59 52.9**	**+0.1**
CHY	baz=316			S	**Sb**	**17 00 09.2**	**+0.4**
CHN8	**Yiju**	**1.32**	**306**	P	**Pb**	**16 59 54.1**	**+0.4**
CHN8	baz=306			S	**Sb**	**17 00 11.2**	**+1.0**
WGK	**Gukeng**	**1.34**	**326**	*i* P	**Pb**	**16 59 54.5**	**+0.6**
WGK	baz=325			*i* S	**Sb**	**17 00 12.4**	**+1.7**
WLGB	**Puzi**	**1.34**	**312**	*e*P	**Pb**	**16 59 53.9**	**0.0**
WLGB	baz=312			S	**Sb**	**17 00 11.6**	**+0.9**
WDLH	**Douliu**	**1.35**	**325**	P	**Pb**	**16 59 53.6**	**-0.6**
WDLH	baz=324			S	**Sb**	**17 00 12.3**	**+1.2**
SMLT	**Sun Moon Lake**	**1.38**	**341**	P	**Pb**	**16 59 54.3**	**-0.3**
SMLT	baz=345			S	**Sb**	**17 00 12.4**	**+0.6**

WJS	**Zhushan**	**1.38**	**334**	*eP*	**Pn**	**16 59 52.8**	**+0.2**
	baz=317								
WJS				*eS*	**Sb**	**17 00 12.8**	**+0.9**
	baz=317								
OWD	**Renai**	**1.39**	**352**	*eP*	**Pn**	**16 59 52.4**	**-0.5**
	baz=358								
OWD				*eS*	**Sn**	**17 00 10.4**	**+0.1**
	baz=358								
TYC	**Yuchr**	**1.41**	**340**	P	**Pb**	**16 59 54.6**	**-0.4**
	baz=339								
TYC				S	**Sb**	**17 00 14.4**	**+1.8**
	baz=339								
HWA	**Hwalien**	**1.41**	**8**	*eP*	**Pb**	**16 59 54.6**	**-0.5**
	baz=16								
HWA				*eS*	**Sb**	**17 00 13.0**	**+0.3**
	baz=16								
WNT	**Mingjian**	**1.45**	**334**	P	**Pb**	**16 59 56.0**	**+0.2**
	baz=318								
WNT				S	**Sb**	**17 00 14.2**	**+0.4**
	baz=318								
CHGB	**Renai**	**1.49**	**353**	P	**Pn**	**16 59 54.6**	**+0.3**
	baz=358								
CHGB				*eS*	**Sn**	**17 00 12.0**	**-0.9**
	baz=358								
DPDB	**Guoxing**	**1.51**	**344**	*eP*	**Pb**	**16 59 55.5**	**-1.4**
	baz=341								
DPDB				*eS*	**Sb**	**17 00 15.6**	**-0.1**
	baz=341								
TWD	**Chiawan**	**1.51**	**8**	P	**Pn**	**16 59 54.4**	**0.0**
	baz=356								
TWD				S	**Sb**	**17 00 14.4**	**-1.2**
	baz=356								
WHF	**Hehuan Shan**	**1.57**	**356**	*eP*	**Pn**	**16 59 56.1**	**+0.5**
	baz=2.0								
WHF				*eS*	**Sn**	**17 00 14.9**	**-0.2**
	baz=2.0								
NACB	**Ninganchiao**	**1.60**	**7**	*eP*	**Pn**	**16 59 55.2**	**-0.5**
	baz=355								
NACB				S	**Sn**	**17 00 15.8**	**+0.4**
	baz=355								
RLNB	**Erlin**	**1.61**	**325**	*eP*	**Pn**	**16 59 56.1**	**+0.3**
	baz=323								
RLNB				S	**Sb**	**17 00 17.4**	**-1.1**
	baz=323								
ETLH	**Xiulin Townshi**	**1.63**	**3**	*eP*	**Pn**	**16 59 55.6**	**-0.5**
	baz=360								
ETLH				*eS*	**Sn**	**17 00 14.2**	**-2.0**
	baz=360								
WTCT	**Ta-ch'eng**	**1.63**	**322**	*eP*	**Pn**	**16 59 56.0**	**-0.2**
	baz=321								
WTCT				*eS*	**Sb**	**17 00 18.4**	**-0.7**
	baz=321								
WCHH	**Zhanghua**	**1.68**	**333**	*eP*	**Pb**	**16 59 58.1**	**-1.6**
	baz=318								
WCHH				*eS*	**Sb**	**17 00 20.7**	**+0.3**
	baz=318								
TWT	**Tachien**	**1.68**	**354**	P	**Pn**	**16 59 57.8**	**+0.9**
	baz=359								
TWT				*eS*	**Sn**	**17 00 17.9**	**+0.4**
	baz=359								
TDCB	**Techi**	**1.68**	**353**	*eP*	**Pn**	**16 59 57.4**	**+0.4**
	baz=358								
TDCB				*eS*	**Sn**	**17 00 17.8**	**+0.2**
	baz=358								
TCU	**Taichung**	**1.69**	**338**	*eP*	**Pb**	**16 59 59.1**	**-0.8**
	baz=335								
TCU				*eS*	**Sb**	**17 00 21.9**	**+1.0**
	baz=335								
WDGT	**Dungji**	**1.73**	**294**	P	**Pn**	**16 59 57.2**	**-0.1**
	baz=293								
WDGT				S	**Sn**	**17 00 17.6**	**-0.8**
	baz=293								
NNSB	**Datong**	**1.84**	**0**	*eP*	**Pn**	**16 59 59.7**	**+0.6**
	baz=4.0								
NNSB				*eS*	**Sb**	**17 00 23.3**	**-2.0**
	baz=4.0								
NNSH	**Datong**	**1.84**	**0**	*eP*	**Pn**	**16 59 59.8**	**+0.7**
	baz=7.0								
NNSH				*eS*	**Sn**	**17 00 21.5**	**-0.1**
	baz=7.0								
TWQ1	**Liyutan**	**1.85**	**343**	*eP*	**Pb**	**17 00 01.2**	**-1.4**
	baz=326								
TWQ1				*eS*	**Sb**	**17 00 25.1**	**-0.3**
	baz=326								
NNS	**Nan Shan**	**1.86**	**360**	*eP*	**Pn**	**17 00 00.1**	**+0.8**
	baz=3.0								
NNS				*eS*	**Sn**	**17 00 22.3**	**+0.5**
	baz=3.0								
ENA	**Nanau**	**1.87**	**10**	P	**Pn**	**16 59 59.3**	**-0.2**
	baz=356								
ENA				*eS*	**Sb**	**17 00 23.8**	**-2.3**
	baz=356								
WDJ	**Dajia District**	**1.89**	**339**	P	**Pb**	**17 00 02.3**	**-0.9**
	baz=336								
WDJ				S	**Sb**	**17 00 26.0**	**-0.5**
	baz=336								
PHUB	**P'eng-hu**	**1.91**	**300**	*eP*	**Pn**	**16 59 59.5**	**-0.4**
	baz=299								
PHUB				S	**Sn**	**17 00 22.1**	**-0.9**
	baz=299								
NSY	**Sanyi**	**1.92**	**343**	P	**Pb**	**17 00 02.5**	**-1.3**
	baz=340								
NSY				S	**Sb**	**17 00 27.8**	**+0.4**
	baz=340								
PNG	**Penghu**	**1.95**	**301**	P	**Pn**	**16 59 59.7**	**-0.7**
	baz=300								
PNG				S	**Sn**	**17 00 23.2**	**-0.8**
	baz=300								
PTSB	**Yuanli**	**1.96**	**342**	*eP*	**Pn**	**17 00 01.9**	**+1.2**
	baz=339								
PTSB				*eS*	**Sb**	**17 00 28.4**	**-0.2**
	baz=339								
NDT	**Datong Townshi**	**2.02**	**3**	*eP*	**Pn**	**17 00 02.1**	**+0.6**
	baz=359								
NDT				*eS*	**Sn**	**17 00 26.4**	**+0.6**
	baz=359								
NMLH	**Miaoli**	**2.03**	**345**	*eP*	**Pb**	**17 00 03.4**	**-2.2**
	baz=341								
NMLH				*eS*	**Sb**	**17 00 29.8**	**-0.6**
	baz=341								
ENTT	**Nioudou**	**2.06**	**5**	*eP*	**Pn**	**17 00 02.5**	**+0.4**
ENTT				*eS*	**Sn**	**17 00 27.1**	**+0.3**
TWC	**Suao**	**2.07**	**12**	P	**Pn**	**17 00 02.0**	**-0.1**
	baz=357								
TWC				S	**Sn**	**17 00 28.5**	**+1.6**
	baz=357								
NSTT	**Nanjuang**	**2.08**	**350**	P	**Pb**	**17 00 05.3**	**-1.1**
	baz=333								
NSTT				S	**Sb**	**17 00 30.1**	**-1.7**
	baz=333								
EOS1	**EOS1**	**2.08**	**19**	*eP*	**Pn**	**17 00 03.3**	**+1.0**
	baz=23								
EOS1				S	**Sn**	**17 00 28.8**	**+1.7**
	baz=23								
YHNB	**Yeheng**	**2.09**	**360**	*eP*	**Pn**	**17 00 03.3**	**+0.9**
	baz=6.0								
YHNB				*eS*	**Sn**	**17 00 27.8**	**+0.3**
	baz=6.0								
LIOB	**Emei**	**2.09**	**351**	*eP*	**Pn**	**17 00 04.1**	**+1.7**
	baz=334								
LIOB				*eS*	**Sb**	**17 00 29.8**	**-2.4**
	baz=334								
NSK	**Sanguang**	**2.09**	**359**	*eP*	**Pn**	**17 00 03.4**	**+0.9**
	baz=6.0								
NSK				*eS*	**Sn**	**17 00 28.4**	**+0.8**
	baz=6.0								
TWE	**Neicheng**	**2.15**	**7**	*eP*	**Pn**	**17 00 03.9**	**+0.6**
	baz=2.0								
TWE				*eS*	**Sn**	**17 00 28.7**	**-0.2**
	baz=2.0								
SLBB	**Yuanshan**	**2.18**	**6**	P	**Pn**	**17 00 03.9**	**+0.2**
	baz=1.0								
SLBB				*eS*	**Sn**	**17 00 30.9**	**+1.1**
	baz=1.0								
NWLT	**Wulai**	**2.20**	**3**	*eP*	**Pn**	**17 00 04.5**	**+0.6**
	baz=7.0								
NWLT				*eS*	**Sn**	**17 00 31.8**	**+1.7**
	baz=7.0								
WLTB	**Daxi**	**2.27**	**357**	*eP*	**Pn**	**17 00 05.8**	**+0.9**
	baz=339								
WLTB				S	**Sb**	**17 00 35.7**	**-1.7**
	baz=339								
NTC	**Toucheng**	**2.31**	**10**	*eP*	**Pn**	**17 00 06.5**	**+1.1**
	baz=357								
NTC				*eS*	**Sn**	**17 00 33.7**	**+0.9**
	baz=357								
JYNG	**Yonagunijimaku**	**2.36**	**37**	P	**Pn**	**17 00 07.9**	**+1.8**
JYNG				*eS*	**Sn**	**17 00 33.8**	**-0.2**
TWA	**Mucha**	**2.40**	**4**	*eP*	**Pn**	**17 00 07.9**	**+1.2**
	baz=359								
TWA				*eS*	**Sb**	**17 00 37.9**	**-3.3**
	baz=359								
YOJ	**Yonaguni jima**	**2.40**	**38**	*eP*	**Pn**	**17 00 08.0**	**+1.3**
	baz=45								
YOJ				S	**Sn**	**17 00 36.3**	**+1.2**
	baz=45								
YOJ	**Yonaguni jima**	**2.40**	**38**	P	**Pn**	**17 00 07.6**	**+0.9**
YOJ				*eS*	**Sn**	**17 00 36.0**	**+0.9**
TIPB	**Shuangxi**	**2.42**	**10**	*eP*	**Pn**	**17 00 08.2**	**+1.2**
	baz=356								
TIPB				*eS*	**Sn**	**17 00 35.3**	**-0.3**
	baz=356								
WFSB	**Wu-fen Shan**	**2.51**	**8**	*eP*	**Pn**	**17 00 09.1**	**+0.9**
	baz=7.0								
TWS1	**Kuangyinshan**	**2.52**	**1**	*eP*	**Pn**	**17 00 10.4**	**+2.1**
	baz=6.0								
TWS1				*eS*	**Sn**	**17 00 40.4**	**+2.5**
	baz=6.0								
YM01	**YM01**	**2.57**	**4**	*eP*	**Pn**	**17 00 09.8**	**+0.8**
	baz=358								
YM01				*eS*	**Sn**	**17 00 39.8**	**+0.6**
	baz=358								
YM04	**YM04**	**2.57**	**3**	*eP*	**Pn**	**17 00 10.6**	**+1.6**
	baz=7.0								
YM04				*eS*	**Sn**	**17 00 39.8**	**+0.5**
	baz=7.0								
YM10	**YM10**	**2.58**	**4**	*eP*	**Pn**	**17 00 11.0**	**+1.8**
	baz=357								
YM10				*eS*	**Sn**	**17 00 40.7**	**+1.2**
	baz=357								
YM11	**YM11**	**2.59**	**4**	*eP*	**Pn**	**17 00 11.2**	**+1.9**
	baz=2.0								
YM03	**YM03**	**2.60**	**3**	*eP*	**Pn**	**17 00 11.3**	**+1.9**
	baz=7.0								
YM03				*eS*	**Sn**	**17 00 40.5**	**+0.5**
	baz=7.0								
ANP	**Anpu**	**2.60**	**3**	*eP*	**Pn**	**17 00 11.3**	**+1.8**
	baz=12								
YM08	**YM08**	**2.61**	**4**	*eP*	**Pn**	**17 00 11.3**	**+1.8**
	baz=3.0								
HATJ	**Hateruma jima**	**2.67**	**56**	P	**Pn**	**17 00 11.3**	**+0.9**
HATJ				S	**Sn**	**17 00 41.3**	**-0.5**
IRIF	**Iriomote-Funau**	**2.78**	**50**	P	**Pn**	**17 00 13.0**	**+1.1**
IRIF				*eS*	**Sn**	**17 00 44.6**	**+0.2**
JKRS	**Kuro-shima**	**2.93**	**55**	P	**Pn**	**17 00 14.5**	**+0.6**
JKRS				*eS*	**Sn**	**17 00 47.8**	**-0.3**
VWUC	**VWUC**	**2.99**	**324**	*eP*	**Pn**	**17 00 15.0**	**+0.3**
	baz=321								
VWUC				*eS*	**Sn**	**17 00 48.0**	**-1.5**
	baz=321								
JIJ	**Ishigaki jima**	**3.10**	**54**	P	**Pn**	**17 00 17.5**	**+1.2**
JIJ				S	**Sn**	**17 00 51.2**	**-1.1**
PTMZ	**Houxiangcun**	**3.21**	**320**	*eP*	**Pn**	**17 00 18.5**	**+0.7**
	baz=317								
PTMZ				*eS*	**Sn**	**17 00 53.4**	**-1.6**
	baz=317								
PTTC	**Pingtan**	**3.26**	**334**	*eP*	**Pn**	**17 00 18.5**	**0.0**
	baz=330								
PTTC				*eS*	**Sn**	**17 00 55.2**	**-1.1**
	baz=330								
KNMB	**Chin-men Tao**	**3.33**	**305**	*eP*	**Pn**	**17 00 18.8**	**-0.6**
	baz=302								
KNMB				*eS*	**Sn**	**17 00 57.2**	**-0.7**
	baz=302								
JISG	**Ishigakijimahi**	**3.35**	**53**	P	**Pn**	**17 00 20.3**	**+0.5**
JISG				*eS*	**Sn**	**17 00 57.5**	**-1.1**
ZPLA	**Ao Xicun**	**3.60**	**293**	*eP*	**Pn**	**17 00 24.0**	**+0.8**
	baz=291								
ZPLA				*eS*	**Sn**	**17 01 04.5**	**-0.1**
	baz=291								
JTJ	**Tarama**	**3.68**	**55**	P	**Pn**	**17 00 26.1**	**+1.9**
JTJ				*eS*	**Sn**	**17 01 06.5**	**-0.1**
JIRB	**Irabujima**	**4.14**	**56**	P	**Pn**	**17 00 31.9**	**+1.4**
JIRB				*eS*	**Sn**	**17 01 17.2**	**-0.7**
JMJ2	**Miyako jima3**	**4.21**	**58**	P	**Pn**	**17 00 32.9**	**+1.3**
JMJ2				*eS*	**Sn**	**17 01 20.2**	**+0.4**
JIKM	**Ikemajima**	**4.25**	**56**	P	**Pn**	**17 00 33.7**	**+1.7**
JIKM				*eS*	**Sn**	**17 01 21.7**	**+1.1**
JOGS	**Gusukube**	**4.29**	**59**	P	**Pn**	**17 00 34.3**	**+1.7**
JOGS				*eS*	**Sn**	**17 01 22.9**	**+1.3**

*IDC **15** 17:19:24.8±47.0, 18°.80S×174°.18W, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.5/34, mbtmp3.7/3, Error ellipse: s-maj=897.9km s-min=182.7km az=82.0*
*NEIC **15** 17:19:36.1±1.5, 19°.0S±0°.2×175°.1W±0°.1, h35km±2km, mb4.6/10, Error ellipse: s-maj=32.0km s-min=6.7km az=32.0*
ISC 15 17:19:36.1±1.5, 19°.1S±0°.3×175°.0W±0°.1, h35km, n13, σ0s80/13, mb4.4/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
NIUE	**Niue**	**4.82**	**91**			**Pn**	**17 20 46.2**	**0.0**
QRZ	**Quartz Range**	**24.18**	**204**	P		**P**	**17 24 49.1**	**-0.2**
NNZ	**Nelson**	**24.22**	**202**	P		**P**	**17 24 49.7**	**+0.2**
THZ	**Tophouse**	**24.87**	**202**	P		**P**	**17 24 54.4**	**-1.1**
THZ				IAmb		IAmb	17 25 14.4	
	comp=Z,49nm,1.5s							
LTZ	**Lake Taylor**	**25.99**	**202**	P		**P**	**17 25 05.8**	**+0.1**
LTZ				IAmb		IAmb	17 25 24.2	
	comp=Z,20nm,1.3s							
STKA	**Stephens Creek**	**40.94**	**243**	P		**P**	**17 27 16.3**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=90,slow=12,SNR=1.7							
WB0	**Warramunga Arr**	**47.57**	**260**	P		**P**	**17 28 09.3**	**+0.6**
WB0				IAmb		IAmb	17 28 33.2	
	comp=Z,13nm,1.5s							
WB2	**Warramunga Arr**	**47.59**	**260**	P		**P**	**17 28 08.1**	**-0.8**
WB2				IAmb		IAmb	17 28 36.7	
	comp=Z,4.3nm,1.4s							
WRAB	**Tennant Creek**	**47.59**	**260**	P		**P**	**17 28 07.4**	**-1.5**
WRAB				IAmb		IAmb	17 28 20.6	
	comp=Z,8.3nm,1.0s							
AS31	**Alice Springs**	**47.59**	**255**	P		**P**	**17 28 08.5**	**-0.4**
ASAR	**Alice Springs**	**47.59**	**255**	P		**P**	**17 28 09.2**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=92,slow=8.5,SNR=25							
WRA	**Warramunga Arr**	**47.60**	**260**	P		**P**	**17 28 08.7**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=98,slow=7.0,SNR=8.1							
WRA	**Warramunga Arr**	**47.60**	**260**	P		**P**	**17 28 08.0**	**-0.9**

*SOME **15** 17:28:28.9, 43°.55N×82°.85E, h15km*
*NNC **15** 17:28:30.4±1.5, 43°.61N×82°.80E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=13.1km s-min=4.9km az=136.0*
ISC 15 17:28:28.8±1.6, 43°.53N±0°.07×82°.88E±0°.06, h10km, n34, σ2s38/49, 7C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KTMS	**Ketmen**	**1.84**	**268**	*eP*		**Pg**	**17 29 04.0**	**-0.1**
	19nm,0.1s							
KTMS				*eS*		**Sg**	**17 29 29.7**	**+1.8**
	393nm,0.3s							
KTMS	**Ketmen**	**1.84**	**268**	Pg		**Pg**	**17 29 03.9**	**-0.1**
	19nm,0.1s							
KTMS				Lg		Lg	17 29 29.7	
	393nm,0.3s							
DJR	**Jarkent**	**2.37**	**291**	*eP*		**Pg**	**17 29 13.0**	**-1.2**
	50nm,0.4s							
DJR				*eS*		**Sg**	**17 29 45.2**	**+0.3**
	227nm,0.2s							
DJR	**Jarkent**	**2.37**	**291**	Pg		**Pg**	**17 29 12.9**	**-1.3**
	50nm,0.4s							
DJR				Lg		Lg	17 29 45.2	
	130nm,0.4s							
PDGK	**Podgornoye**	**2.48**	**267**	Pg		**Pb**	**17 29 14.0**	**+0.6**
	14nm,0.2s							
PDGK				Lg		Lg	17 29 47.1	
	97nm,0.5s							
UZB	**Uzynbulak**	**2.84**	**264**	*eP*		**Pg**	**17 29 21.2**	**-1.9**
	11nm,0.1s							
UZB				*eS*		**Sg**	**17 29 59.4**	**-0.5**
	96nm,0.3s							
UZB	**Uzynbulak**	**2.84**	**264**	Pg		**Pg**	**17 29 21.2**	**-1.9**
	13nm,0.2s							
UZB				Lg		Lg	17 29 59.4	
	96nm,0.3s							
KAPS	**Kapalarasan**	**3.08**	**306**	*eP*		**Pg**	**17 29 25.4**	**-2.3**
	13nm,0.2s							
KAPS				*eS*		**Sg**	**17 30 06.0**	**-1.5**
	74nm,0.2s							
KAPS	**Kapalarasan**	**3.08**	**306**	Pg		**Pg**	**17 29 25.4**	**-2.3**
	13nm,0.2s							
KAPS				Lg		Lg	17 30 06.0	
	74nm,0.2s							
MNBS	**Baschi**	**3.29**	**281**	*eP*		**Pb**	**17 29 28.3**	**+1.1**
	9.7nm,0.1s							
MNBS				*eS*		**Sg**	**17 30 11.3**	**-3.1**
	126nm,0.3s							
MNBS	**Baschi**	**3.29**	**281**	Pg		**Pb**	**17 29 28.3**	**+1.1**
	14nm,0.4s							
MNBS				Lg		Lg	17 30 11.3	
	126nm,0.3s							
MK31	**Makanchi Array**	**3.29**	**353**	⇑Pn		**Pn**	**17 29 22.2**	**+1.8**
	0.9nm,0.2s,baz=169,slow=14,SNR=414							
MK31				⇑Pg		**Pg**	**17 29 29.8**	**-2.0**
	10nm,0.5s,baz=171,slow=16,SNR=43							
MK31				⇑Sn		**Sn**	**17 30 01.4**	**+1.8**
	4.2nm,0.2s,baz=179,slow=27,SNR=5.8							
MK31				⇑Lg		Lg	17 30 09.7	
	14nm,0.2s,baz=179,slow=35,SNR=16							
SATY	**Saty**	**3.30**	**263**	*eP*		**Pg**	**17 29 29.6**	**-2.4**
	8.6nm,0.1s							
SATY				*eS*		**Sg**	**17 30 14.0**	**-0.7**
	113nm,0.1s							
SATY	**Saty**	**3.30**	**263**	Pg		**Pg**	**17 29 29.6**	**-2.4**
	8.6nm,0.2s							
SATY				Lg		Lg	17 30 14.0	
	113nm,0.1s							
MAKZ	**Makanchi**	**3.34**	**349**	⇓Pn		**Pn**	**17 29 23.0**	**+1.9**
	3.8nm,0.7s							
MAKZ				⇑Pg		**Pg**	**17 29 31.9**	**-0.9**
	11nm,0.5s							
MAKZ				⇑Lg		Lg	17 30 11.1	
	28nm,0.5s							
TDK	**Taldyqorghan**	**3.54**	**296**	*eP*		**Pb**	**17 29 33.5**	**+2.1**
	43nm,0.3s							
TDK				*eS*		**Sg**	**17 30 20.1**	**-2.2**
	142nm,0.7s							
TDK	**Taldyqorghan**	**3.54**	**296**	Pg		**Pb**	**17 29 33.5**	**+2.1**
	32nm,0.7s							
TDK				Lg		Lg	17 30 20.0	
	142nm,0.7s							
ARXS	**Arharly**	**3.72**	**282**	*eP*		**Pb**	**17 29 36.2**	**+1.6**
	38nm,0.3s							
ARXS				*eS*		**Sg**	**17 30 24.6**	**-3.5**
	146nm,0.7s							
ARXS	**Arharly**	**3.72**	**282**	Pg		**Pb**	**17 29 36.2**	**+1.6**
	38nm,0.3s							
ARXS				Lg		Lg	17 30 24.6	
	146nm,0.7s							
ZSN	**Zaisan**	**4.17**	**19**	*eP*		**Pb**	**17 29 43.3**	**+1.2**
	37nm,0.4s							
ZSN				*eS*		**Sg**	**17 30 37.3**	**-5.2**
	84nm,0.4s							
ZSN	**Zaisan**	**4.17**	**19**	Pg		**Pb**	**17 29 43.3**	**+1.2**
	37nm,0.4s							
ZSN				Lg		Lg	17 30 37.3	
	84nm,0.4s							
CHKK	**Chushkaly**	**4.29**	**276**	*eP*		**Pb**	**17 29 45.3**	**+1.1**
	4.0nm,0.4s							
CHKK				*eS*		**Sg**	**17 30 41.0**	**-5.3**
	51nm,0.2s							
CHKK	**Chushkaly**	**4.29**	**276**	Pg		**Pb**	**17 29 45.3**	**+1.1**
	4.0nm,0.4s							
CHKK				Lg		Lg	17 30 41.0	
	51nm,0.2s							
KNDC	**Almaty**	**4.32**	**268**	⇓Pg		**Pb**	**17 29 42.5**	**-2.3**
	14nm,0.5s							
KNDC				⇓Lg		Lg	17 30 45.6	
	84nm,0.9s							
TNSS	**Tian-Shan**	**4.36**	**266**	*eP*		**Pg**	**17 29 49.5**	**-2.7**
	6.1nm,0.5s							
TNSS				*eS*		**Sg**	**17 30 47.7**	**-1.0**
	32nm,0.3s							
TNSS	**Tian-Shan**	**4.36**	**266**	Pg		**Pg**	**17 29 49.5**	**-2.7**
	6.1nm,0.5s							
TNSS				Lg		Lg	17 30 47.7	
	32nm,0.3s							
MTBS	**Maitube**	**4.72**	**267**	*eP*		**Pg**	**17 29 56.9**	**-2.3**
	5.3nm,0.4s							
MTBS				*eS*		**Sg**	**17 31 00.2**	**-0.2**
	28nm,0.5s							
MTBS	**Maitube**	**4.72**	**267**	Pg		**Pg**	**17 29 56.9**	**-2.3**
	5.3nm,0.4s							
MTBS				Lg		Lg	17 31 00.2	
	28nm,0.5s							
KUU	**Kurty**	**4.76**	**277**	*eP*		**Pb**	**17 29 53.7**	**+1.5**
	1.2nm,0.2s							
KUU				*eS*		**Sb**	**17 30 54.7**	**+5.2**
	30nm,0.5s							
KUU	**Kurty**	**4.76**	**277**	Pg		**Pb**	**17 29 53.7**	**+1.5**
	2.2nm,0.6s							
KUU				Lg		Lg	17 30 54.7	
	30nm,0.5s							
SEM	**Semipalatinsk**	**7.12**	**346**	Pg		**Pg**	**17 31 37.4**	**+3.3**
	4.9nm,0.4s							
SEM				Lg		Lg	17 32 11.0	
	26nm,1.1s							
KURBB	**Kurchatov Arra**	**7.69**	**339**	⇓Pn		**Pn**	**17 30 20.7**	**0.0**
	1.7nm,0.4s							
KURBB				⇓Lg		Lg	17 32 31.8	
	30nm,0.7s							
OTUK	**Ortayu**	**8.73**	**306**	Pg		**Sn**	**17 32 08.2**	**-5.4**
	0.5nm,0.4s							
OTUK				Lg		Lg	17 33 03.8	
	4.5nm,0.7s							
OTUK	**Ortayu**	**8.73**	**306**	⇑Lg		Lg	17 33 00.3	
	4.5nm,0.7s							

*TAP **15** 17:29:17.3, 24°.86N×122°.23E, h14km, ML2.7, C*
*JMA **15** 17:29:18.5±0.1, 24°.76N×122°.21E, h35km, M2.1*
ISC 15 17:29:17.5±1.0, 24°.83N±0°.03×122°.23E±0°.02, h17km±7km, n41, σ0s49/72, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
EOS1	**EOS1**	**0.30**	**198**	P		**Pb**	**17 29 24.4**	**+0.1**
	baz=209							
EOS1				*i* S		**Sb**	**17 29 29.5**	**+0.6**
	baz=209							
NTC	**Toucheng**	**0.36**	**274**	*eP*		**Pg**	**17 29 24.5**	**-0.6**
	baz=268							
TIPB	**Shuangxi**	**0.39**	**291**	P		**Pg**	**17 29 25.2**	**-0.5**
	baz=286							
TIPB				*eS*		**Sg**	**17 29 30.8**	**-0.4**
	baz=286							
TWC	**Suao**	**0.41**	**237**	P		**Pg**	**17 29 25.7**	**-0.2**
	baz=234							
TWC				*eS*		**Sg**	**17 29 31.8**	**+0.1**
	baz=234							
WFSB	**Wu-fen Shan**	**0.47**	**300**	P		**Pb**	**17 29 27.6**	**+0.2**
	baz=296							
TWE	**Neicheng**	**0.52**	**258**	P		**Pg**	**17 29 27.3**	**-0.7**
	baz=246							
TWE				S		**Sb**	**17 29 35.8**	**+0.3**
	baz=246							
SLBB	**Yuanshan**	**0.55**	**262**	P		**Pg**	**17 29 28.3**	**-0.2**
	baz=251							
SLBB				*eS*		**Sb**	**17 29 36.4**	**+0.2**
	baz=251							
ENA	**Nanau**	**0.60**	**228**	P		**Pg**	**17 29 29.4**	**-0.1**
	baz=218							
ENA				S		**Sb**	**17 29 37.9**	**+0.2**
	baz=218							
TWA	**Mucha**	**0.60**	**284**	P		**Pb**	**17 29 30.1**	**+0.4**
	baz=281							
TWA				S		**Sn**	**17 29 39.3**	**-1.4**
	baz=281							
ENTT	**Nioudou**	**0.63**	**253**	P		**Pg**	**17 29 29.8**	**-0.2**
	baz=250

	baz=248							
NDT				S		Sg	17 29 40.8	+0.5
	baz=248							
YM04	YM04	0.71	297	P		Pg	17 29 31.5	+0.1
	baz=294							
YM03	YM03	0.71	299	*e*P		Pg	17 29 31.9	+0.3
	baz=296							
TWY	Chenhua	0.72	308	P		Pg	17 29 31.9	+0.2
	baz=305							
JYNG	Yonagunijimaku	0.75	120	P		Pb	17 29 32.2	0.0
JYNG				*e*S		Sg	17 29 43.0	+0.7
NTST	Danshui	0.78	295	*e*S		Sn	17 29 45.2	+0.1
	baz=302							
YHNB	Yeheng	0.79	258	P		Pb	17 29 32.6	-0.3
	baz=265							
YHNB				*e*S		Sg	17 29 44.4	+0.8
	baz=265							
YOJ	Yonaguni jima	0.80	117	P		Pg	17 29 33.4	+0.2
	baz=120							
YOJ				*e*S		Sn	17 29 44.9	-0.7
	baz=120							
YOJ	Yonaguni jima	0.80	117	P		Pg	17 29 33.3	+0.1
YOJ				S		Sg	17 29 44.0	+0.2
NSK	Sanguang	0.81	259	*e*P		Pg	17 29 33.5	+0.2
	baz=256							
NSK				S		Sg	17 29 44.7	+0.7
	baz=256							
NNSH	Datong	0.87	243	*e*P		Pb	17 29 33.7	-0.5
	baz=233							
NNSH				*e*S		Sg	17 29 46.5	+0.5
	baz=233							
NNSB	Datong	0.87	243	P		Pb	17 29 34.1	-0.1
	baz=231							
NNSB				*e*S		Sg	17 29 46.5	+0.5
	baz=231							
NNS	Nan Shan	0.87	244	*e*P		Pg	17 29 34.7	+0.2
	baz=232							
NNS				*e*S		Sb	17 29 45.8	+0.1
	baz=232							
NACB	Ninganchiao	0.87	222	P		Pb	17 29 34.2	-0.1
	baz=221							
NACB				*e*S		Sb	17 29 45.5	-0.2
	baz=221							
ETLH	Xiulin Townshi	0.92	228	P		Pb	17 29 35.1	0.0
	baz=218							
ETLH				*e*S		Sg	17 29 47.8	+0.1
	baz=218							
TWD	Chiawan	0.94	218	P		Pb	17 29 35.1	-0.4
	baz=218							
TWD				S		Sg	17 29 48.6	+0.3
	baz=218							
WHF	Hehuan Shan	1.11	232	P		Pn	17 29 38.7	0.0
	baz=231							
WHF				*e*S		Sb	17 29 53.3	+0.3
	baz=231							
TDCB	Techi	1.13	240	P		Pg	17 29 39.6	+0.1
	baz=229							
TDCB				*e*S		Sn	17 29 53.8	-0.1
	baz=229							
CHGB	Renai	1.23	232	P		Pb	17 29 40.9	+0.4
	baz=231							
CHGB				S		Sn	17 29 56.8	+0.3
	baz=231							
ESL	Shilin	1.25	216	P		Pb	17 29 40.8	+0.2
	baz=232							
ESL				S		Sg	17 29 58.6	+0.6
	baz=232							
OWD	Renai	1.30	228	*e*P		Pg	17 29 42.3	-0.3
	baz=227							
OWD				*e*S		Sg	17 29 59.6	0.0
	baz=227							
EGFH	Guangfu	1.37	212	*e*P		Pb	17 29 42.9	+0.2
	baz=229							
EGFH				*e*S		Sb	17 30 00.7	+0.8
	baz=229							
IRIF	Iriomote-Funau	1.45	110	P		Pn	17 29 42.8	-0.2
IRIF				*e*S		Sn	17 30 00.4	-1.2
SSLB	Suanglung	1.56	228	*e*P		Pb	17 29 45.6	-0.4
	baz=234							
SSLB				*e*S		Sb	17 30 06.5	+1.1
	baz=234							
YULB	Yu-li	1.67	211	*e*P		Pn	17 29 45.8	-0.2
	baz=214							
YULB				*e*S		Sb	17 30 08.2	-0.3
	baz=214							

*IDC **15** 17:46:34.2±1.2,6.°84S×155.°59E, h0km, mb3.8/7, mb1 4.0/10, mb1mx3.7/54, mbtmp3.9/10, ML3.7/2, MS2.4/1, Ms1 2.4/1, ms1mx2.2/35, Error ellipse: s-maj=29.0km s-min=23.0km az=139.0*

*NEIC **15** 17:46:36.0±1.0,6.°9S±0.°1×155.°6E±0.°1, h10km±6km, mb4.2/8, Error ellipse: s-maj=20.5km s-min=17.3km az=116.0*

ISC 15 17:46:41.2±0.9,**6.°81S**±0.°09×**155.°44E**±0.°10,**h50**km,**n25,** σ1**9**0**5**/23,**mb4.0**/11,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**4.17**	**308**	Pn	**Pn**	**17 47 41.3**	**-1.1**
KRVT	**Keravat (AS076**	**4.21**	**306**	Pn	**Pn**	**17 47 42.6**	**-0.3**
	3.1nm,0.3s,baz=165,slow=1.4,SNR=9.6						
KRVT				Sn	**Sn**	**17 48 28.6**	**-2.3**
	5.9nm,0.3s,baz=261,slow=18,SNR=3.7						
HNR	**Honiara**	**5.17**	**121**	LR	LR	17 49 18.8	
	comp=Z,37nm,20.0s,baz=212,slow=33						
PMG	**Port Moresby**	**8.60**	**252**	Pn	**Pn**	**17 48 41.8**	**-1.3**
	0.9nm,0.3s,baz=288,slow=21,SNR=1.4						
PMG				Sn	**Sn**	**17 50 19.0**	**+0.3**
	0.7nm,0.3s,baz=82,slow=3.6,SNR=1.9						
DZM	**Mont Dzumac**	**18.52**	**146**	P	**P**	**17 50 51.1**	**-2.6**
	0.4nm,0.3s,baz=116,slow=22,SNR=6.8						
WR0	**Warramunga Arr**	**24.13**	**235**	P	**P**	**17 51 53.1**	**+0.4**
WR0				IAmb	IAmb	17 52 10.7	
	comp=Z,8.3nm,1.4s						
WB0	**Warramunga Arr**	**24.16**	**236**	P	**P**	**17 51 53.0**	**+0.1**
WB0				IAmb	IAmb	17 52 17.5	
	comp=Z,9.9nm,1.4s						
WRAB	**Tennant Creek**	**24.27**	**235**	P	**P**	**17 51 53.4**	**-0.5**
WRAB				IAmb	IAmb	17 52 03.8	
	comp=Z,5.7nm,0.8s						
WB2	**Warramunga Arr**	**24.27**	**235**	P	**P**	**17 51 54.5**	**+0.5**
WB2				IAmb	IAmb	17 52 07.2	
	comp=Z,5.3nm,0.9s						
WRA	**Warramunga Arr**	**24.29**	**235**	P	**P**	**17 51 53.5**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=58,slow=9.2,SNR=15						
WRA	**Warramunga Arr**	**24.29**	**235**	P	**P**	**17 51 53.5**	**-0.6**
SIJI	**Sorong**	**24.82**	**283**	P	**P**	**17 52 00.5**	**+1.4**
	comp=Z,4.0nm,0.8s,baz=112,slow=9.4,SNR=4.3						
AS31	**Alice Springs**	**26.62**	**229**	P	**P**	**17 52 15.8**	**+0.5**
ASAR	**Alice Springs**	**26.63**	**229**	P	**P**	**17 52 16.1**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=59,slow=9.7,SNR=12						
ASAR	**Alice Springs**	**26.63**	**229**	P	**P**	**17 52 16.1**	**+0.8**
H11S3	**WAKE ISLAND Hy**	**27.48**	**24**	T	T	18 20 49.8	
	baz=204,slow=75,SNR=27						
H11S2	**WAKE ISLAND Hy**	**27.49**	**24**	T	T	18 20 38.8	
	baz=204,slow=75,SNR=32						
H11S1	**WAKE ISLAND Hy**	**27.50**	**24**	T	T	18 20 39.4	
	baz=204,slow=75,SNR=19						
FITZ	**Fitzroy Crossi**	**31.13**	**246**	P	**P**	**17 52 55.7**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=96,slow=9.2,SNR=1.6						
FITZ	**Fitzroy Crossi**	**31.13**	**246**	P	**P**	**17 52 55.6**	**+0.2**
FITZ				IAmb	IAmb	17 53 07.4	
	comp=Z,6.4nm,1.1s						
IMAR	**Indian Mountai**	**81.41**	**19**	P	**P**	**17 58 53.3**	**+0.8**
ILAR	**Eielson Array**	**83.04**	**21**	P	**P**	**17 59 00.7**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=230,slow=5.4,SNR=4.5						
ILAR	**Eielson Array**	**83.04**	**21**	P	**P**	**17 59 01.4**	**+0.4**
MKAR	**Makanchi Array**	**83.56**	**319**	P	**P**	**17 59 05.2**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=92,slow=6.3,SNR=1.9						
YKA	**Yellowknife Ar**	**95.97**	**28**	P	**P**	**18 00 02.6**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=262,slow=4.3,SNR=6.0						

*IDC **15** 17:49:47.3±2.3,49.°15N×160.°81E, h0km, mb4.0/3, mb1 4.1/4, mb1mx3.4/68, mbtmp3.9/4, ML3.0/1, MS2.3/1, Ms1 2.3/1, ms1mx2.0/48, Error ellipse: s-maj=78.3km s-min=30.1km az=13.0*

*KRSC **15** 17:49:57.6±1.5,54.°01N×163.°68E, h80km±31km, ML4.2*

ISC 15 17:49:56.4±3.2,**53.°96N**±0.°05×**163.°79E**±0.°05,**h16**km±23km,**n50,** σ1**9**6**6**/85,**mb4.1**/3,**Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**1.78**	**45**	*i* P	**Pb**	**17 50 27.9**	**-0.7**
BKI				*e*S	**Sn**	**17 50 47.8**	**-0.9**
KBTR	**Krutoberegovo**	**2.32**	**346**	*e*P	**Pn**	**17 50 33.8**	**-0.1**
KBTR				*e*S	**Sn**	**17 51 00.8**	**-1.4**
TUMD	**Tumrok D**	**2.34**	**304**	*e*P	**Pn**	**17 50 35.7**	**+1.5**
TUMD				*e*S	**Sn**	**17 51 01.4**	**-1.1**
KZV	**Kizimen**	**2.34**	**301**	*e*P	**Pn**	**17 50 35.9**	**+1.5**
KZV				*e*S	**Sn**	**17 51 01.8**	**-1.1**
KBG	**Krutoberegovo**	**2.39**	**345**	*e*P	**Pn**	**17 50 34.8**	**0.0**
KBG				*e*S	**Sn**	**17 51 03.4**	**-0.2**
SPN	**Mys Shipunski**	**2.41**	**251**	*e*P	**Pn**	**17 50 36.5**	**+1.4**
SPN				*e*S	**Sn**	**17 51 03.0**	**-1.3**
TUMR	**Tumrok**	**2.50**	**304**	*e*P	**Pb**	**17 50 38.5**	**-2.5**
TUMR				*e*S	**Sn**	**17 51 06.4**	**-0.3**
KII	**Karymskiy**	**2.57**	**273**	*e*P	**Pn**	**17 50 38.9**	**+1.5**
KII				*e*S	**Sn**	**17 51 07.2**	**-1.1**
BZGR	**Bezymyannyi-Gr**	**2.67**	**319**	*e*P	**Pn**	**17 50 39.8**	**+1.0**
BZGR				*e*S	**Sn**	**17 51 10.3**	**-0.6**
ZLN	**Zelenaya**	**2.69**	**321**	*e*P	**Pn**	**17 50 40.6**	**+1.6**
ZLN				*e*S	**Sn**	**17 51 10.0**	**-1.3**
KMNR	**Kamenistaya**	**2.73**	**313**	*e*P	**Pn**	**17 50 41.3**	**+1.6**
KMNR				*e*S	**Sn**	**17 51 13.2**	**+0.8**
BZWR	**Bezymyannyi-We**	**2.77**	**318**	*e*P	**Pn**	**17 50 41.4**	**+1.2**
NLC	**Nalytchevo**	**2.77**	**255**	*e*P	**Pn**	**17 50 41.8**	**+1.8**
NLC				*e*S	**Sn**	**17 51 11.7**	**-1.4**
LGNR	**Loginova**	**2.78**	**321**	*e*P	**Pn**	**17 50 41.9**	**+1.4**
LGNR				*e*S	**Sn**	**17 51 14.3**	**+0.5**
CIRR	**Tsirk**	**2.78**	**322**	*e*P	**Pn**	**17 50 42.0**	**+1.6**
KIRR	**Kirishev**	**2.82**	**317**	*e*P	**Pn**	**17 50 41.4**	**+0.5**
KPT	**Kopyto**	**2.88**	**316**	*e*P	**Pn**	**17 50 43.3**	**+1.3**
KRSR	**Krestovskiy**	**2.93**	**322**	*e*P	**Pn**	**17 50 43.6**	**+1.3**
KRSR				*e*S	**Sn**	**17 51 17.6**	**+0.4**
SMKR	**Semkarok**	**2.95**	**334**	*e*P	**Pn**	**17 50 43.9**	**+1.3**
SMKR				*e*S	**Sn**	**17 51 17.1**	**-0.5**
KLY	**Klyuchi**	**2.97**	**324**	*e*P	**Pn**	**17 50 43.4**	**+0.6**
KLY				*e*S	**Sn**	**17 51 16.4**	**-1.7**
SDLR	**Sedlovina**	**3.00**	**259**	*e*P	**Pn**	**17 50 45.4**	**+2.0**
SDLR				*e*S	**Sn**	**17 51 17.3**	**-1.8**
BDR	**Baidarnaya**	**3.00**	**332**	*e*P	**Pn**	**17 50 44.1**	**+0.7**
BDR				*e*S	**Sn**	**17 51 18.9**	**-0.2**
SMAR	**Somma**	**3.06**	**259**	*e*P	**Pn**	**17 50 46.1**	**+1.9**
UGLR	**Uglovaya**	**3.06**	**258**	*e*P	**Pn**	**17 50 46.2**	**+2.1**
UGLR				*e*S	**Sn**	**17 51 20.8**	**+0.4**
KRER	**Koryakskii**	**3.08**	**260**	*e*P	**Pn**	**17 50 46.7**	**+2.2**
KRER				*e*S	**Sn**	**17 51 20.2**	**-0.8**
KOZ	**Kozyrevsk**	**3.09**	**315**	*e*P	**Pn**	**17 50 46.5**	**+2.1**
KOZ				*e*S	**Sn**	**17 51 21.7**	**+0.7**
AVH	**Avacha**	**3.09**	**259**	*e*P	**Pn**	**17 50 46.8**	**+2.2**
AVH				*e*S	**Sn**	**17 51 21.4**	**+0.2**
SRKR	**Sorokina**	**3.09**	**332**	*e*P	**Pn**	**17 50 45.7**	**+1.1**
KRX	**Arik**	**3.12**	**261**	*e*P	**Pn**	**17 50 47.0**	**+2.0**
KRX				*e*S	**Sn**	**17 51 21.0**	**-1.0**
KOK	**Koryaka**	**3.14**	**260**	*e*P	**Pn**	**17 50 47.4**	**+2.1**
KOK				*e*S	**Sn**	**17 51 21.3**	**-1.2**
DALK	**Dalny**	**3.15**	**255**	*e*P	**Pn**	**17 50 47.4**	**+2.1**
DALK				*e*S	**Sn**	**17 51 21.1**	**-1.4**
SRDR	**Sredinnyy**	**3.33**	**317**	*e*P	**Pn**	**17 50 49.1**	**+1.3**
RUS	**Russkaya**	**3.52**	**246**	*e*P	**Pn**	**17 50 52.2**	**+1.8**
RUS				*e*S	**Sn**	**17 51 29.8**	**-1.9**
ESO	**Esso**	**3.54**	**306**	*e*P	**Pn**	**17 50 52.3**	**+1.7**
ESO				*e*S	**Sn**	**17 51 31.7**	**-0.4**
KRMR	**Karymshinskiy**	**3.57**	**254**	*e*P	**Pn**	**17 50 54.3**	**+3.2**
KRMR				*e*S	**Sn**	**17 51 32.9**	**-0.1**
MTVR	**Mutnovka**	**3.68**	**249**	*e*P	**Pn**	**17 50 55.0**	**+2.3**
MTVR				*e*S	**Sn**	**17 51 34.7**	**-1.2**
GRL	**Gorelyy**	**3.71**	**250**	*e*P	**Pn**	**17 50 55.8**	**+2.6**
GRL				*e*S	**Sn**	**17 51 36.0**	**-0.6**
PETK	**Petropavlovsk-**	**3.74**	**259**	Pn	**Pn**	**17 50 56.2**	**+2.8**
	3.9nm,0.3s,baz=82,slow=19,SNR=140						
PETK				Sn	**Sn**	**17 51 37.6**	**+0.6**
	6.0nm,0.3s,baz=85,slow=22,SNR=7.7						
PETK				LR	LR	17 52 31.8	
	comp=Z,42nm,22.0s,baz=59,slow=37						
ASAK	**Asacha**	**3.88**	**248**	*e*P	**Pn**	**17 50 58.2**	**+2.8**
ASAK				*e*S	**Sn**	**17 51 40.3**	**-0.4**
KDTR	**Khodutka, Kamc**	**4.08**	**240**	*e*P	**Pn**	**17 50 59.7**	**+1.7**
KDTR				*e*S	**Sn**	**17 51 42.6**	**-2.3**
APC	**Apacha**	**4.10**	**258**	*e*P	**Pn**	**17 50 59.8**	**+2.3**
APC				*e*S	**Sn**	**17 51 46.5**	**+0.6**
MIPR	**Malaya Ipel'ka**	**4.56**	**251**	*e*P	**Pn**	**17 51 07.7**	**+3.0**
OSSR	**Ossora**	**5.32**	**356**	*e*P	**Pn**	**17 51 16.2**	**+1.1**
OSSR				*e*S	**Sn**	**17 52 14.2**	**-1.7**
SKR	**Severo-Kuril's**	**5.74**	**238**	*e*P	**Pn**	**17 51 22.5**	**+1.7**
SKR				*e*S	**Sn**	**17 52 23.4**	**-2.8**
ALID	**Alaid**	**5.92**	**242**	*e*P	**Pn**	**17 51 26.5**	**+3.1**
TILK	**Tilichiki**	**6.63**	**10**	*e*P	**Pn**	**17 51 36.3**	**+3.3**
KMSK	**Kamenskaya**	**8.63**	**7**	*e*P	**Pn**	**17 52 03.3**	**+2.9**
KURBB	**Kurchatov Arra**	**49.23**	**303**	P	**P**	**17 58 43.9**	**+0.2**
	1.7nm,0.6s,baz=56,slow=8.0,SNR=21						
MKAR	**Makanchi Array**	**49.75**	**297**	P	**P**	**17 58 47.5**	**-0.1**
	1.4nm,0.6s,baz=60,slow=8.1,SNR=15						
TXAR	**Lajitas Array**	**68.26**	**70**	P	P	18 01 11.8	+15
	0.6nm,0.5s,baz=286,slow=3.6,SNR=6.8						

*IDC **15** 17:51:08.5±0.9,9.°41N×122.°50E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.7/50, mbtmp3.9/9, MS3.6/1, Ms1 3.7/1, ms1mx2.5/34, Error ellipse: s-maj=76.7km s-min=18.5km az=66.0*

*NEIC **15** 17:51:10.2±1.1,9.°2N±0.°1×122.°1E±0.°1, h10km±1km, mb4.2/8, Error ellipse: s-maj=23.2km s-min=21.7km az=181.0*

*MAN **15** 17:51:12.8,9.°30N×121.°92E, h34km, mb4.6, ML3.4, MS3.3*

ISC 15 17:51:09.6±1.4,**9.°27N**±0.°03×**122.°03E**±0.°04,**h8**km±9km,**n50,** σ1**9**7**4**/61,**mb4.1**/12,**6C-3D, Negros**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNOP	**Candoni, Negro**	**0.82**	**47**	*e*P	**Pn**	**17 51 28.6**	**+1.1**
CNOP				*e*S	**Sn**	**17 51 39.7**	**-0.1**
GUIM	**Jordan**	**1.46**	**22**	*e*P	**Pg**	**17 51 37.1**	**-0.5**
GUIM				*e*S	**Sg**	**17 51 55.5**	**-1.0**
JAP	**San Jose, Anti**	**1.47**	**357**⇓	*e*P	**Pg**	**17 51 37.4**	**+0.1**
DCPH	**Dipolog City**	**1.47**	**117**⇑	*e*P	**Pg**	**17 51 37.9**	**0.0**
DCPH				*e*S	**Sg**	**17 51 56.2**	**-0.8**
TBP	**Tagbilaran**	**1.86**	**77**	*e*P	**Pg**	**17 51 48.5**	**+3.3**
TBP				*i* S	**Sg**	**17 52 13.8**	**+4.5**
CUYO	**Cuyo Island**	**1.86**	**328**	*e*P	**Pn**	**17 51 42.4**	**+0.6**
CUYO				*e*S	**Sn**	**17 52 03.4**	**-2.2**
PAGZ	**Pagadian**	**1.94**	**136**	*e*P	**Pb**	**17 51 45.7**	**+0.4**
PAGZ				*e*S	**Sb**	**17 52 08.7**	**-1.0**
LLP	**Lapu-Lapu**	**2.17**	**61**⇓	*i*P	**Pb**	**17 51 49.1**	**-0.1**
LLP				*i* S	**Sg**	**17 52 16.1**	**-3.5**
ZCP	**Zamboanga City**	**2.32**	**179**⇓	*i*P	**Pn**	**17 51 49.5**	**+1.3**
ZCP				*i* S	**Sn**	**17 52 14.5**	**-2.4**
RCP	**Roxas**	**2.38**	**17**⇑	*e*P	**Pb**	**17 51 51.8**	**-1.1**
RCP				*e*S	**Sb**	**17 52 22.2**	**-0.2**
CGP	**Cagayan de Oro**	**2.75**	**107**⇑	*e*P	**Pb**	**17 51 57.0**	**-2.1**
CGP				*i* S	**Sb**	**17 52 29.7**	**-3.4**
MSLP	**Maasin**	**2.92**	**73**	*e*P	**Pb**	**17 52 00.4**	**-1.6**
MSLP				*e*S	**Sb**	**17 52 37.5**	**-0.3**
CTBH	**Cotabato--PC H**	**2.99**	**133**⇑	*i*P	**Pb**	**17 52 00.6**	**-2.6**
OCLP	**Ormoc**	**3.10**	**55**	*e*P	**Pb**	**17 52 01.4**	**-3.6**
ENPP	**El Nido**	**3.21**	**307**	*e*P	**Pn**	**17 52 00.8**	**+0.5**
BUSP	**Coron**	**3.26**	**327**	*e*P	**Pn**	**17 52 00.7**	**-0.4**
BUSP				*e*S	**Sn**	**17 52 37.5**	**-2.6**
SJMP	**San Jose**	**3.30**	**344**	*e*P	**Pn**	**17 52 02.5**	**+1.0**
SJMP				*e*S	**Sn**	**17 52 38.7**	**-2.3**
BUKP	**Musuan**	**3.30**	**114**	*e*P	**Pb**	**17 52 06.0**	**-2.5**
BUKP				*e*S	**Sb**	**17 52 48.4**	**-0.5**
BUTP	**Butuan**	**3.56**	**95**	*e*P	**Pb**	**17 52 08.7**	**-4.2**
KCP	**Kidapawan**	**3.77**	**126**⇑	*e*P	Pg	17 52 29.0	+7.1
CNP	**Catarman**	**4.13**	**39**	*e*P	**Pn**	**17 52 16.1**	**+3.1**
DAV	**Davao City (W)**	**4.14**	**122**	LR	LR	17 53 19.1	
	comp=Z,30nm,20.0s,baz=302,slow=34						
PGP	**Puerto Galera**	**4.34**	**346**⇓	*i*P	**Pg**	**17 52 32.3**	**-0.5**
PGP				*e*S	**Sn**	**17 53 05.1**	**-1.6**
LUBP	**Lubang**	**4.77**	**339**	*e*P	**Pn**	**17 52 22.2**	**+0.4**
TGY	**Tagaytay City**	**4.92**	**348**	LR	LR	17 54 24.3	
	comp=Z,44nm,20.0s,baz=200,slow=40						
KKM	**Kota Kinabalu**	**6.59**	**241**		**Pn**	**17 52 48.1**	**+1.1**
SBUM	**Sibu**	**11.87**	**236**		**Pn**	**17 53 59.9**	**+0.5**
WRA	**Warramunga Arr**	**31.46**	**157**	P	**P**	**17 57 31.3**	**-0.6**
	0.4nm,0.7s,baz=331,slow=11,SNR=5.3						
ASAR	**Alice Springs**	**34.73**	**161**	P	**P**	**17 58 00.8**	**+0.3**
	0.7nm,0.6s,baz=342,slow=7.2,SNR=19						
ASAR	**Alice Springs**	**34.73**	**161**	P	**P**	**17 58 01.2**	**+0.7**
MK31	**Makanchi Array**	**50.37**	**325**	P	**P**	**18 00 08.2**	**+0.9**
MKAR	**Makanchi Array**	**50.37**	**325**	P	**P**	**18 00 08.6**	**+1.3**
	1.9nm,0.7s,baz=129,slow=9.3,SNR=13						
MKAR	**Makanchi Array**	**50.37**	**325**	P	**P**	**18 00 08.5**	**+1.1**
KDJ	**Kajisay**	**51.13**	**318**	P	**P**	**18 00 15.1**	**+1.7**
KDJ				IAmb	IAmb	18 00 16.3	
	comp=Z,2.7nm,0.7s						
TARA	**Tarawa**	**51.23**	**96**	P	**P**	**18 00 13.5**	**-0.8**
AAK	**Ala-Archa**	**53.15**	**317**	P	**P**	**18 00 30.6**	**+2.3**
	comp=Z,0.8nm,0.6s,baz=177,slow=7.2,SNR=4.1						
KURBB	**Kurchatov Arra**	**54.59**	**327**	P	**P**	**18 00 40.1**	**+1.6**
	comp=Z,0.6nm,0.5s,baz=118,slow=9.3,SNR=10						
KURK	**Kurchatov**	**54.59**	**328**	P	**P**	**18 00 39.6**	**+1.1**
KURK				IAmb	IAmb	18 00 56.0	
	comp=Z,5.1nm,1.4s						
KKAR	**Karatay Array**	**56.02**	**316**	P	**P**	**18 00 49.6**	**+0.5**
KKAR	**Karatay Array**	**56.02**	**316**	P	**P**	**18 00 50.0**	**+1.0**
KKAR				IAmb	IAmb	18 00 51.1	
	comp=Z,1.4nm,0.8s						
BRVK	**Borovoye**	**60.23**	**327**	P	**P**	**18 01 19.1**	**+0.8**
BRVK				IAmb	IAmb	18 01 20.7	
	comp=Z,1.4nm,0.9s						
TIXI	**Tiksi**	**62.47**	**2**	P	**P**	**18 01 32.4**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=152,slow=3.3,SNR=6.0						
TIXI	**Tiksi**	**62.47**	**2**	P	**P**	**18 01 33.0**	**-0.1**
TIXI				IAmb	IAmb	18 01 33.8	
	comp=Z,1.4nm,0.8s						
ABKAR	**Akbulak array**	**64.94**	**320**	P	**P**	**18 01 50.4**	**+0.6**
SPU	**Mount Spurr**	**79.98**	**29**	P	**P**	**18 03 20.4**	**+1.0**
ARCES	**ARCESS Array B**	**83.67**	**339**	P	**P**	**18 03 38.6**	**+0.1**
	comp=Z,4.5nm,0.9s,baz=70,slow=8.0,SNR=3.6						
AKASG	**Malin Array Be**	**84.68**	**320**	P	**P**	**18 03 43.7**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=70,slow=6.3,SNR=1.9						
FINES	**FINESS Array B**	**84.77**	**331**	P	**P**	**18 03 44.1**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=35,slow=7.0,SNR=5.4						
FINES	**FINESS Array B**	**84.77**	**331**	P	**P**	**18 03 44.5**	**+0.2**
VNDA	**Vanda**	**89.50**	**172**	LR	LR	18 46 34.6	
	comp=Z,29nm,18.1s,baz=278,slow=37						

*IDC **15** 17:52:34.0±5.5, 18.°74S×177.°88W, h457km±55km, mb3.2/10, mb1 3.5/10, mb1mx3.1/45, mbtmp4.0/10, Error ellipse: s-maj=41.6km s-min=22.9km az=136.0*

*NEIC **15** 17:52:37.4±0.9, 18.°8S±0.°2×178.°0W±0.°2, h496km±7km, mb4.2/15, Error ellipse: s-maj=26.3km s-min=21.0km az=146.0*

ISC 15 17:52:37.4±0.6,**18.°8S**±0.°1×**178.°0W**±0.°1,**h500**km,**n73,** σ0**9**5**8**/71,**mb4.0**/17,**6C-6D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.92**	**285**	P	**P**	**17 53 54.4**	**-0.9**
NIUE	**Niue**	**7.62**	**94**	P	P	17 54 24.3	-5.7
CTA	**Charters Tower**	**33.72**	**262**	P	**P**	**17 58 37.1**	**+0.3**
	3.0nm,0.5s,baz=79,slow=10,SNR=12						
CTAO	**Charters Tower**	**33.72**	**262**	P	**P**	**17 58 36.7**	**-0.1**
STKA	**Stephens Creek**	**38.59**	**242**	P	**P**	**17 59 17.6**	**+0.7**
	1.4nm,0.3s,baz=84,slow=9.3,SNR=12						
STKA	**Stephens Creek**	**38.59**	**242**	P	**P**	**17 59 17.5**	**+0.5**
BBOO	**Buckleboo**	**43.36**	**242**	P	**P**	**17 59 54.0**	**-1.0**
BBOO				IAmb	IAmb	18 00 04.4	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**44.86**	**261**	P	**P**	**18 00 06.2**	**-0.7**
WB2	**Warramunga Arr**	**44.88**	**260**	P	**P**	**18 00 06.7**	**-0.3**
WB2				IAmb	IAmb	18 00 26.6	
	comp=Z,10nm,1.4s						
WRAB	**Tennant Creek**	**44.88**	**260**	P	**P**	**18 00 06.2**	**-0.8**
WRAB				IAmb	IAmb	18 00 08.4	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**44.89**	**260**	P	**P**	**18 00 06.5**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=96,slow=8.1,SNR=25						
WRA				PcP	**pP**	**18 01 38.9**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=92,slow=3.5,SNR=1.8						
WRA	**Warramunga Arr**	**44.89**	**260**	P	**P**	**18 00 06.2**	**-0.9**
AS31	**Alice Springs**	**44.96**	**255**	P	**P**	**18 00 07.8**	**+0.1**
ASAR	**Alice Springs**	**44.96**	**255**	P	**P**	**18 00 07.9**	**+0.2**
	comp=Z,4.4nm,0.6s,baz=90,slow=8.4,SNR=101						
ASAR	**Alice Springs**	**44.96**	**255**

comp=Z,3.5nm,0.6s
DAVOX **Davos/Dischmat 151.32 349** PKPbc **PKiKP** **18 11 34.9 +0.2**
PDG **Podgorica 152.25 332** ⇑P **PKiKP** **18 11 37.2 +0.8**

*IDC **15** 17:53:31.7±0.6,7.62N×94.27E,h0km,mb4.2/21, mb1 4.3/21,mb1mx4.0/49,mbtmp4.2/21,MS3.6/19, Ms1 3.6/19,ms1mx3.5/36,Error ellipse: s-maj=23.7km s-min=14.3km az=53.0*
*DJA **15** 17:53:33.2±0.3,8°N±4°×9°4E±°,h10km,M4.6/17,mb4.5/17, mB5.0/4,MLv4.7/7,Mw(mB)4.3/4*
*NEIC **15** 17:53:37.2±1.4,7.56N±0.08×94.29E±0.09,h39km±2km, mb4.6/32,Error ellipse: s-maj=14.2km s-min=9.2km az=54.0*

ISC 15 17:53:38.2±1.4,7.63N±0.06×94.29E±0.08,h46km±13km, n122,σ1ı09/115,mb4.5/34,MS3.6/17,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LHMI	**Lhok Sumawe**	**3.56**	**132**	P		Pn	17 54 21.3	-10
LHMI	**Lhok Sumawe**	**3.56**	**132**	Pn		Pn	**17 54 29.8**	**-1.2**
MLSI	**Meulaboh, Aceh**	**3.94**	**148**	P		**Pn**	**17 54 37.2**	**+0.9**
PBA	**Port Blair**	**4.29**	**339**	Pn		Pn	17 54 42.6	+1.6
KCSI	**Kotacane, Aceh**	**5.35**	**139**	P		**Pn**	**17 54 57.7**	**+2.1**
	0.3nm67nm,1.0s							
SNSI	**Sinabang, Aceh**	**5.57**	**159**	P		**Pn**	**17 54 56.3**	**-2.3**
	0.7nm101nm,0.8s							
PSI	**Prapat**	**6.65**	**136**	Pn		**Pn**	**17 55 15.4**	**+1.8**
	1.6nm,0.3s,baz=360,slow=10.0,SNR=7.1							
PSI				LR		LR	17 58 07.4	
	comp=Z,1μm,19.6s,baz=271,slow=41							
RPSI	**Rantau Prapat**	**6.73**	**136**			**Pn**	**17 55 12.8**	**-1.8**
RPSI	**Rantau Prapat**	**6.73**	**136**			**Pn**	**17 55 15.4**	**+0.9**
KULM	**Kulim**	**6.73**	**110**			**Pn**	**17 55 12.8**	**-1.8**
GSI	**Gunungsitoli**	**7.08**	**152**	P		**Pn**	**17 55 18.2**	**-1.2**
	0.7nm100nm,1.0s							
GSI	**Gunungsitoli**	**7.08**	**152**			**Pn**	**17 55 18.1**	**-1.3**
IPM	**Ipoh**	**7.39**	**115**			**Pn**	**17 55 21.0**	**-2.7**
BKNI	**Bangkinang**	**9.89**	**137**	P		**Pn**	**17 55 58.9**	**+1.0**
	56nm,1.2s							
PDSI	**Padang**	**10.48**	**144**	P		**Pn**	**17 56 05.4**	**-0.6**
	4.8nm,0.8s							
MYKOM	**Kota Tinggi**	**11.15**	**121**			**Pn**	**17 56 13.3**	**-1.8**
CM31	**Chiang Mai Arr**	**11.68**	**22**			**Pn**	**17 56 24.8**	**+2.4**
CMAR	**Chiang Mai Arr**	**11.68**	**22**	Pn		**Pn**	**17 56 24.1**	**+1.7**
	0.4nm,0.3s,baz=212,slow=15,SNR=9.3							
CMAR				LR		LR	18 00 54.6	
	comp=Z,305nm,18.7s,baz=222,slow=38							
CMAR	**Chiang Mai Arr**	**11.68**	**22**			**Pn**	**17 56 21.7**	**-0.7**
CHTO	**Chiang Mai**	**12.01**	**22**			**Pn**	**17 56 27.8**	**+1.0**
KSI	**Kapahiang**	**13.93**	**143**	P		**Pn**	**17 56 50.9**	**-2.3**
	21nm,1.0s							
MDSI	**Maura Dua**	**15.56**	**140**	P		**Pn**	**17 57 14.3**	**-0.3**
	9.9nm,0.9s							
SLVN	**Son La**	**16.49**	**33**	P		**P**	**17 57 28.9**	**+0.3**
KSM	**Kuching**	**17.09**	**110**	P		**P**	**17 57 35.1**	**-0.1**
KOHI	**KOHIMA**	**18.00**	**359**	*eP*		**Pn**	**17 57 43.1**	**-2.1**
SBUM	**Sibu**	**18.58**	**105**	P		**P**	**17 57 50.6**	**-1.0**
DBJI	**Dramaga**	**18.79**	**138**	P		**P**	**17 57 53.8**	**-0.1**
	1μm13nm,0.5s							
KMI	**Kunming**	**19.18**	**24**	P		**Pn**	**17 58 01.8**	**+2.2**
KMI				pmax		pmax		
	comp=Z,110nm,4.3s							
KMI				LR		LR		
	comp=N,240nm,11.8s							
KMI				LR		LR		
	comp=E,180nm,11.0s							
KMI				LR		LR		
	comp=Z,180nm,13.6s							
ZIRO	**ZIRO**	**19.80**	**359**	*eP*		**P**	**17 58 04.9**	**-0.1**
RAMN	**Ramite**	**20.56**	**340**	*eP*		**P**	**17 58 14.4**	**+1.0**
	comp=Z,43nm,0.7s							
TAPN	**Taplejung**	**20.59**	**343**	*eP*		**P**	**17 58 13.6**	**-0.1**
	comp=Z,57nm,0.9s							
JIRN	**Jiri**	**21.35**	**340**	*eP*		**P**	**17 58 21.5**	**-0.5**
PKI	**Pulchoki**	**21.55**	**338**	*eP*		**P**	**17 58 24.1**	**0.0**
	comp=Z,30nm,0.9s							
PKIN	**Phulchoki**	**21.56**	**338**	*eP*		**P**	**17 58 25.0**	**+0.9**
GUN	**Gumba**	**21.69**	**340**	*eP*		**P**	**17 58 24.6**	**-1.0**
DMN	**Daman**	**21.70**	**337**	*eP*		**P**	**17 58 25.5**	**-0.1**
LSA	**Lhasa**	**22.16**	**353**	P		**P**	**17 58 31.1**	**+0.3**
LSA				IAmb		IAmb	17 58 42.7	
	comp=Z,13nm,0.7s							
GKN	**Gorkha**	**22.23**	**337**	*eP*		**P**	**17 58 30.6**	**-0.6**
KOLN	**Koldanda**	**22.45**	**335**	*eP*		**P**	**17 58 33.2**	**-0.4**
	comp=Z,19nm,0.7s							
DANN	**Dangsing**	**22.89**	**336**	*eP*		**P**	**17 58 37.1**	**-1.3**
	comp=Z,19nm,0.5s							
PYUN	**Piuthan**	**23.00**	**334**	*eP*		**P**	**17 58 39.3**	**-0.1**
H08S3	**Diego Garcia H**	**26.50**	**236**	T		T	18 25 51.2	
	baz=55,slow=75,SNR=136							
H08S2	**Diego Garcia H**	**26.50**	**236**	T		T	18 25 46.9	
	baz=55,slow=75,SNR=177							
H08S1	**Diego Carcia H**	**26.52**	**236**	T		T	18 25 49.4	
	baz=55,slow=75,SNR=126							
MPSI	**Mapaga**	**26.54**	**105**	P		P	17 59 24.7	+13
NIL	**Nilore**	**32.38**	**326**	P		**P**	**18 00 03.6**	**-0.1**
BATI	**Baumata**	**34.20**	**121**	LR		LR	18 14 29.2	
	comp=Z,331nm,19.4s,baz=288,slow=37							
KSH	**Kashi**	**35.76**	**335**	P		**P**	**18 00 32.8**	**-0.1**
KSH				pP		pP	18 00 39.3	-5.4
KSH				sP		pwP	18 00 42.0	-5.5
KSH				pmax		pmax		
	comp=Z,18nm,1.2s							
KSH				pmax		pmax		
	comp=Z,120nm,4.8s							
SIJI	**Sorong**	**37.83**	**101**	P		**P**	**18 00 51.3**	**+0.5**
	comp=Z,4.1nm,0.7s,baz=275,slow=6.7,SNR=5.5							
PSA00	**Pilbara Seismi**	**38.35**	**140**	P		**P**	**18 00 55.9**	**+0.8**
PSA00				IAmb		IAmb	18 01 00.2	
	comp=Z,11nm,1.4s							
BTK	**Batken**	**38.52**	**331**	P		**P**	**18 00 55.5**	**-0.9**
BTK				IAmb		IAmb	18 01 07.7	
	comp=Z,7.6nm,0.9s							
ARSB	**Arslanbob**	**38.53**	**334**	P		**P**	**18 00 55.1**	**-1.3**
ARSB				IAmb		IAmb	18 01 02.7	
	comp=Z,14nm,1.1s							
AAK	**Ala-Archa**	**38.99**	**337**	P		**P**	**18 00 59.6**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=154,slow=11,SNR=3.0							
AAK				PcP		**PcP**	**18 03 10.8**	**+0.8**
	comp=Z,1.7nm,0.5s,baz=141,slow=4.9,SNR=5.0							
AAK	**Ala-Archa**	**38.99**	**337**	P		**P**	**18 00 59.4**	**-1.0**
FITZ	**Fitzroy Crossi**	**40.14**	**130**	LR		LR	18 20 19.3	
	comp=Z,72nm,18.4s,baz=304,slow=40							
MK31	**Makanchi Array**	**40.36**	**347**	P		**P**	**18 01 09.8**	**-1.7**
MKAR	**Makanchi Array**	**40.36**	**347**	P		**P**	**18 01 11.2**	**-0.3**
	comp=Z,3.1nm,0.7s,baz=163,slow=8.6,SNR=14							
MKAR				PcP		**PcP**	**18 03 14.8**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=167,slow=3.1,SNR=3.0							
MKAR				LR		LR	18 21 03.9	
	comp=Z,42nm,18.2s,baz=165,slow=41							
MKAR	**Makanchi Array**	**40.36**	**347**	P		**P**	**18 01 10.9**	**-0.6**
MKAR						**PcP**	**18 03 15.0**	**+0.9**
MAKZ	**Makanchi**	**40.44**	**347**	P		**P**	**18 01 11.1**	**-1.0**
MAKZ				IAmb		IAmb	18 01 18.7	
	comp=Z,4.1nm,0.7s							
KK31	**Karatay Array**	**41.05**	**333**	P		**P**	**18 01 17.2**	**0.0**
KKAR	**Karatay Array**	**41.05**	**333**	P		**P**	**18 01 17.5**	**+0.3**
KKAR	**Karatay Array**	**41.05**	**333**	P		**P**	**18 01 17.2**	**0.0**
KKAR				IAmb		IAmb	18 01 24.0	
	comp=Z,3.6nm,1.1s							
SONM	**Songino Array**	**41.37**	**12**	P		**P**	**18 01 20.0**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=193,slow=8.5,SNR=5.3							
SONM				PcP		**PcP**	**18 03 18.2**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=214,slow=2.6,SNR=3.9							
SONM				LR		LR	18 19 50.2	
	comp=Z,75nm,18.8s,baz=220,slow=38							
SONM	**Songino Array**	**41.37**	**12**	P		**P**	**18 01 20.9**	**+1.0**
SONM				PcP		**PcP**	**18 03 18.9**	**+1.4**
KSRS	**Korea Array**	**42.56**	**41**	LR		LR	18 19 08.6	
	comp=Z,53nm,20.9s,baz=214,slow=36							
GEYT	**Alibeck**	**44.48**	**318**	P		**P**	**18 01 45.7**	**+0.5**
	comp=Z,3.7nm,0.5s,baz=148,slow=8.7,SNR=9.7							
GEYT				LR		LR	18 23 28.9	
	comp=Z,65nm,18.4s,baz=30,slow=40							
GEYT	**Alibeck**	**44.48**	**318**	P		**P**	**18 01 45.6**	**+0.5**
KURBB	**Kurchatov Arra**	**44.82**	**346**	P		**P**	**18 01 48.0**	**+0.5**
	comp=Z,6.2nm,0.9s,baz=165,slow=7.1,SNR=34							
KURBB				PcP		**PcP**	**18 03 29.7**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=152,slow=2.6,SNR=7.2							
KURK	**Kurchatov**	**44.88**	**346**	P		**P**	**18 01 48.4**	**+0.3**
NWAO	**Narrogin (SRO)**	**45.86**	**153**	LR		LR	18 19 19.7	
	comp=Z,73nm,20.8s,baz=325,slow=34							
ZAA0	**Zalesovo Array**	**46.82**	**352**	P		**P**	**18 02 03.8**	**+0.5**
ZAA0				IAmb		IAmb	18 02 09.7	
	comp=Z,8.3nm,1.0s							
ZALV	**Zalesovo Beam**	**46.82**	**352**	P		**P**	**18 02 03.2**	**0.0**
	comp=Z,3.2nm,0.4s,baz=184,slow=7.2,SNR=28							
ZALV	**Zalesovo Beam**	**46.82**	**352**	P		**P**	**18 02 03.6**	**+0.4**
WB0	**Warramunga Arr**	**47.95**	**125**	P		**P**	**18 02 12.4**	**-0.2**
WB0				IAmb		IAmb	18 02 28.3	
	comp=Z,8.7nm,1.4s							
WRA	**Warramunga Arr**	**48.00**	**125**	P		**P**	**18 02 12.2**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=305,slow=8.4,SNR=6.8							
WB2	**Warramunga Arr**	**48.01**	**125**	P		**P**	**18 02 11.9**	**-1.2**
WB2				IAmb		IAmb	18 02 26.7	
	comp=Z,8.8nm,1.4s							
WR0	**Warramunga Arr**	**48.17**	**125**	P		**P**	**18 02 13.8**	**-0.5**
WR0				IAmb		IAmb	18 02 29.1	
	comp=Z,9.1nm,1.2s							
RAYN	**Ar Rayn**	**49.32**	**294**	P		**P**	**18 02 24.7**	**+1.5**
BRVK	**Borovoye**	**49.33**	**341**	P		**P**	**18 02 23.2**	**+0.5**
BRVK				IAmb		IAmb	18 02 29.0	
	comp=Z,7.0nm,1.2s							
ASAR	**Alice Springs**	**49.65**	**130**	P		**P**	**18 02 25.1**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=307,slow=7.0,SNR=15							
ASAR				PcP		**PcP**	**18 03 47.4**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=314,slow=3.7,SNR=7.2							
ASAR				LR		LR	18 26 33.4	
	comp=Z,66nm,18.7s,baz=318,slow=40							
ASAR	**Alice Springs**	**49.65**	**130**	P		**P**	**18 02 24.8**	**-0.8**
ASAR						**PcP**	**18 03 46.6**	**0.0**
ABKAR	**Akbulak array**	**50.52**	**331**	P		**P**	**18 02 32.0**	**+0.2**
ARU	**Arti**	**56.17**	**337**	P		**P**	**18 03 11.8**	**-1.4**
KBZ	**Phabaz**	**57.37**	**318**	P		**P**	**18 03 21.8**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=286,slow=2.8,SNR=3.7							
KBZ				LR		LR	18 31 07.3	
	comp=Z,24nm,20.2s,baz=73,slow=39							
KMBO	**Kilima Mbogo**	**57.54**	**264**	P		**P**	**18 03 26.1**	**+2.2**
	comp=Z,2.6nm,0.7s,baz=38,slow=13,SNR=3.0							
KMBO				LR		LR	18 24 46.9	
	comp=Z,98nm,21.0s,baz=91,slow=33							
KMBO	**Kilima Mbogo**	**57.54**	**264**	P		**P**	**18 03 25.4**	**+1.5**
KMBO				IAmb		IAmb	18 03 28.6	
	comp=Z,5.6nm,1.0s							
STKA	**Stephens Creek**	**59.83**	**134**	LR		LR	18 32 34.3	
	comp=Z,58nm,18.9s,baz=325,slow=39							
YAK	**Yakutsk**	**60.18**	**18**	P		**P**	**18 03 41.5**	**+0.5**
	comp=Z,1.9nm,0.6s,baz=192,slow=8.4,SNR=4.2							
YAK	**Yakutsk**	**60.18**	**18**	P		**P**	**18 03 41.6**	**+0.5**
YAK				IAmb		IAmb	18 03 48.9	
	comp=Z,5.1nm,0.9s							
NRIK	**Noril'sk**	**61.80**	**357**	P		**P**	**18 03 50.8**	**-1.1**
	comp=Z,2.0nm,0.4s,baz=188,slow=3.2,SNR=5.2							
BR131	**Keskin Array S**	**62.70**	**311**	P		**P**	**18 03 57.5**	**-1.2**
BR131				IAmb		IAmb	18 04 16.6	
	comp=Z,6.7nm,1.5s							
BRTR	**Keskin Array B**	**62.70**	**311**	P		**P**	**18 03 57.3**	**-1.4**
	comp=Z,0.9nm,0.6s,baz=128,slow=7.0,SNR=6.1							
BRTR				LR		LR	18 33 35.5	
	comp=Z,31nm,20.3s,baz=151,slow=38							
BRTR	**Keskin Array B**	**62.70**	**311**	P		**P**	**18 03 57.5**	**-1.2**
KLMR	**Klimovskoe**	**66.74**	**334**	*eP*		**P**	**18 04 21.9**	**-2.5**
KLMR					AMP		18 04 33.6	
	comp=Z,20nm,1.2s							
MA2	**Magadan**	**66.92**	**27**	LR		LR	18 34 38.0	
	comp=Z,18nm,20.7s,baz=276,slow=37							
TIXI	**Tiksi**	**67.45**	**11**	P		**P**	**18 04 28.8**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=205,slow=4.9,SNR=19							
TIXI	**Tiksi**	**67.45**	**11**	P		**P**	**18 04 28.5**	**-0.2**
PETK	**Petropavlovsk-**	**68.12**	**36**	LR		LR	18 35 53.2	
	comp=Z,38nm,18.7s,baz=251,slow=37							
AKASG	**Malin Array Be**	**68.44**	**322**	P		**P**	**18 04 34.7**	**-0.7**
FIA1	**FINESS Array S**	**73.00**	**332**	P		**P**	**18 05 03.0**	**+0.1**
FINES	**FINESS Array B**	**73.00**	**332**	P		**P**	**18 05 02.8**	**0.0**
	comp=Z,3.2nm,0.6s,baz=106,slow=5.4,SNR=16							
ARCES	**ARCESS Array B**	**75.55**	**340**	P		**P**	**18 05 17.8**	**+0.2**
	comp=Z,2.7nm,0.8s,baz=98,slow=6.2,SNR=6.8							
ARCES	**ARCESS Array B**	**75.55**	**340**	P		**P**	**18 05 18.2**	**+0.6**
BOSA	**Boshof**	**75.58**	**238**	P		**P**	**18 05 19.6**	**+0.9**
	comp=Z,2.3nm,0.7s,baz=73,slow=5.0,SNR=4.9							
BOSA				LR		LR	18 36 22.9	
	comp=Z,39nm,18.5s,baz=24,slow=34							
BOSA	**Boshof**	**75.58**	**238**	P		**P**	**18 05 17.3**	**-1.4**
BOSA				IAmb		IAmb	18 05 43.6	
	comp=Z,11nm,1.3s							
GERES	**GERESS Array B**	**78.11**	**318**	P		**P**	**18 05 32.9**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=76,slow=5.6,SNR=8.8							
GERES	**GERESS Array B**	**78.11**	**318**	P		**P**	**18 05 33.1**	**+0.5**
NC405	**NORSAR Array S**	**79.78**	**331**	P		**P**	**18 05 41.9**	**+0.5**
NB2	**NORSAR Subarra**	**80.02**	**331**	P		**P**	**18 05 42.1**	**-0.6**
	comp=Z,4.2nm,0.8s,baz=91,slow=5.3							
NOA	**NORSAR Array B**	**80.02**	**331**	P		**P**	**18 05 42.4**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=93,slow=5.6,SNR=8.0							
TORD	**Torodi Ar. Bea**	**90.80**	**283**	P		**P**	**18 06 34.9**	**-2.4**
	comp=Z,0.3nm,0.4s,baz=69,slow=2.4,SNR=3.3							
TORD				LR		LR	18 47 09.9	
	comp=Z,44nm,18.1s,baz=70,slow=36							
TORD	**Torodi Ar. Bea**	**90.80**	**283**	P		**P**	**18 06 35.0**	**-2.3**
ESDC	**Sonseca Array**	**91.49**	**310**	P		**P**	**18 06 40.3**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=54,slow=4.5,SNR=3.5							
ESDC				LR		LR	18 52 11.4	
	comp=Z,23nm,19.3s,baz=135,slow=38							
IMAR	**Indian Mountai**	**91.80**	**22**	P		**P**	**18 06 42.5**	**+1.6**
ILAR	**Eielson Array**	**94.92**	**22**	P		**P**	**18 06 54.5**	**-0.8**
	comp=Z,2.0nm,0.6s,baz=248,slow=3.8,SNR=2.5							
ILAR	**Eielson Array**	**94.92**	**22**	P		**P**	**18 06 54.9**	**-0.4**
PDAR	**Pinedale Array**	**125.34**	**21**	PKP		**PKPdf**	**18 12 34.8**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=235,slow=12,SNR=2.5							
PLCA	**Paso Flores**	**144.37**	**200**	PKP		PKPbc	18 13 08.7	+0.5
	comp=Z,1.8nm,0.8s,baz=208,slow=4.8,SNR=5.1							
PLCA	**Paso Flores**	**144.37**	**200**			PKPbc	18 13 08.8	+0.6
CPUP	**Villa Florida**	**147.23**	**232**	PKPbc		**PKPbc**	**18 13 17.2**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=119,slow=2.6,SNR=7.5							
CPUP	**Villa Florida**	**147.23**	**232**			**PKPbc**	**18 13 17.3**	**+0.1**
CMIG	**Matias Romero**	**153.82**	**20**	PKPab		**PKPab**	**18 13 46.3**	**+0.1**
	comp=Z,5.1nm,0.8s,baz=352,slow=6.7,SNR=3.8							

*IDC **15** 17:56:57.1±0.7,7.59N×94.20E,h0km,mb4.0/12, mb1 4.1/14,mb1mx3.8/54,mbtmp4.0/14,ML3.4/2,Error ellipse: s-maj=31.7km s-min=16.0km az=57.0*
*NEIC **15** 17:56:59.2±1.7,7.66N±0.10×94.32E±0.08,h10km±1km, mb4.5/9,Error ellipse: s-maj=18.9km s-min=10.1km az=216.0*

ISC 15 17:57:01.2±0.6,7.64N±0.09×94.3E±0.1,h24km,n53, σ1ı10/48,mb4.3/15,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LHMI	**Lhok Sumawe**	**3.54**	**132**	Pn		**Pn**	**17 57 53.5**	**-1.2**
PBA	**Port Blair**	**4.29**	**339**	Pn		Pn	17 58 04.5	-0.5
PSI	**Prapat**	**6.64**	**136**	Pn		**Pn**	**17 58 39.7**	**+2.3**
	0.4nm,0.3s,baz=180,slow=11,SNR=1.7							
KULM	**Kulim**	**6.71**	**110**			**Pn**	**17 58 38.7**	**+0.4**
RPSI	**Rantau Prapat**	**6.71**	**137**			**Pn**	**17 58 39.7**	**+1.3**
IPM	**Ipoh**	**7.37**	**115**			**Pn**	**17 58 47.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**11.66**	**22**	Pn		**Pn**	**17 59 47.0**	**+0.7**
	0.1nm,0.3s,baz=212,slow=14,SNR=2.7							
RAMN	**Ramite**	**20.56**	**340**	*eP*		Pn	18 01 40.8	-0.1
	26nm,0.6s							
TAPN	**Taplejung**	**20.59**	**343**	*eP*		Pn	18 01 40.4	-0.8
	25nm,0.7s							
JIRN	**Jiri**	**21.36**	**340**	*eP*		**P**	**18 01 50.3**	**+3.0**
PKI	**Pulchoki**	**21.55**	**338**	*eP*		**P**	**18 01 50.8**	**+1.4**
	10nm,0.6s							
PKIN	**Phulchoki**	**21.56**	**338**	*eP*		**P**	**18 01 51.5**	**+2.1**
GUN	**Gumba**	**21.69**	**339**	*eP*		**P**	**18 01 50.6**	**-0.3**
DMN	**Daman**	**21.70**	**337**	*eP*		**P**	**18 01 51.0**	**+0.1**
LSA	**Lhasa**	**22.15**	**353**	P		**P**	**18 01 57.0**	**+1.0**
GKN	**Gorkha**	**22.23**	**337**	*eP*		**P**	**18 01 55.4**	**-1.1**
KOLN	**Koldanda**	**22.45**	**334**	*eP*		**P**	**18 01 57.6**	**-1.3**
	9.6nm,0.7s							
H08S3	**Diego Garcia H**	**26.53**	**236**	T		T	18 29 23.4	
	baz=54,slow=75,SNR=17							
H08S2	**Diego Garcia H**	**26.54**	**236**	T		T	18 29 24.6	
	baz=54,slow=75,SNR=23							
H08S1	**Diego Carcia H**	**26.55**	**236**	T		T	18 29 24.8	
	baz=54,slow=75,SNR=20							
NIL	**Nilore**	**32.40**	**326**	P		**P**	**18 03 29.1**	**-0.2**
NIL				IAmb		IAmb	18 03 43.3	
	comp=Z,6.4nm,1.1s							
MK31	**Makanchi Array**	**40.36**	**347**	P		**P**	**18 04 37.1**	**0.0**
MKAR	**Makanchi Array**	**40.36**	**347**	P		**P**	**18 04 36.9**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=164,slow=8.5,SNR=8.6							
MKAR	**Makanchi Array**	**40.36**	**347**	P		**P**	**18 04 36.7**	**-0.4**
KKAR	**Karatay Array**	**41.05**	**333**	P		**P**	**18 04 44.0**	**+1.1**
KS19	**Wonju Array Si**	**42.52**	**41**	P		**P**	**18 04 53.8**	**-1.1**
GEYT	**Alibeck**	**44.50**	**318**	P		**P**	**18 05 10.6**	**-0.3**
	comp=Z,2.3nm,0.6s,baz=158,slow=9.0,SNR=4.9							
GEYT	**Alibeck**	**44.50**	**318**	P		**P**	**18 05 11.9**	**+1.0**
KURBB	**Kurchatov Arra**	**44.82**	**346**	P		**P**	**18 05 13.3**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=167,slow=7.2,SNR=12							
KURK	**Kurchatov**	**44.88**	**346**	P		**P**	**18 05 13.1**	**-0.6**
ZAA0	**Zalesovo Array**	**46.81**	**352**	P		**P**	**18 05 29.8**	**+0.9**
ZAA0				IAmb		IAmb	18 05 36.0	
	comp=Z,3.0nm,0.9s							
ZALV	**Zalesovo Beam**	**46.81**	**352**	P		**P**	**18 05 29.4**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=178,slow=7.6,SNR=7.5							
ZALV	**Zalesovo Beam**	**46.81**	**352**	P		**P**	**18 05 29.5**	**+0.6**
WRA	**Warramunga Arr**	**47.98**	**125**	P		**P**	**18 05 38.1**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=304,slow=8.7,SNR=5.5							
WB2	**Warramunga Arr**	**47.99**	**125**	P		**P**	**18 05 38.7**	**+0.1**
RAYN	**Ar Rayn**	**49.35**	**294**	P		**P**	**18 05 50.8**	**+1.7**
ASAR	**Alice Springs**	**49.62**	**130**	P		**P**	**18 05 50.0**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=302,slow=7.2,SNR=7.3							
ASAR				PcP		**PcP**	**18 07 13.2**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=302,slow=3.3,SNR=4.8							
ABKAR	**Akbulak array**	**50.53**	**331**	P		**P**	**18 05 56.9**	**-0.6**
BR131	**Keskin Array S**	**62.72**	**311**	P		**P**	**18 07 23.1**	**-1.6**
BR131				IAmb		IAmb	18 09 02.1	
	comp=Z,11nm,1.6s							
BRTR	**Keskin Array B**	**62.72**	**311**	P		**P**	**18 07 22.4**	**-2.3**
	comp=Z,0.8nm,0.6s,baz=126,slow=8.2,SNR=5.6							
BRTR	**Keskin Array B**	**62.72**	**311**	P		**P**	**18 07 23.2**	**-1.4**
TIXI	**Tiksi**	**67.43**	**11**	P		**P**	**18 07 54.1**	**-0.3**
TIXI				IAmb		IAmb	18 07 55.0	
	comp=Z,3.4nm,1.1s							
FINES	**FINESS Array B**	**73.00**	**332**	P		**P**	**18 08 28.2**	**-0.6**
	comp=Z,3.0nm,0.7s,baz=108,slow=6.4,SNR=10							
FINES	**FINESS Array B**	**73.00**	**332**	P		**P**	**18 08 28.6**	**-0.2**
BOSA	**Boshof**	**75.61**	**238**	P		**P**	**18 08 44.9**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=108,slow=6.0,SNR=4.6							
GERES	**GERESS Array B**	**78.12**	**318**	P		**P**	**18 08 58.3**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=74,slow=4.7,SNR=4.6							
GERES	**GERESS Array B**	**78.12**	**318**	P		**P**	**18 08 58.1**	**-0.5**
HFS	**Hagfors**	**78.75**	**330**	P		**P**	**18 09 01.3**	**-0.4**
	comp=Z,2.4nm,0.5s,baz=100,slow=6.1,SNR=3.6							
NB2	**NORSAR Subarra**	**80.03**	**331**	P		**P**	**18 09 07.6**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=96,slow=5.1							
NOA	**NORSAR Array B**	**80.03**	**331**	P		**P**	**18 09 07.5**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=95,slow=5.1,SNR=4.0							
IMAR	**Indian Mountai**	**91.78**	**22**	P		**P**	**18 10 47.8**	**+1.0**
CPUP	**Villa Florida**	**147.26**	**232**	PKPbc		**PKPbc**	**18 16 42.6**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=102,slow=6.1,SNR=4.7							
CPUP	**Villa Florida**	**147.26**	**232**			**PKPbc**	**18 16 43.6**	**+0.2**

*IDC **15** 18:09:43.1±1.8,13.74N×86.52W,h0km

PWJI	**Pagerwojo**	**2.67**	**80**	P		**Pn**	**18 13 58.0**	**+1.9**
GRJI	**Gresik**	**3.66**	**64**	P		**Pn**	**18 14 10.3**	**+0.6**
JAGI	**Jajag, Banyuwa**	**4.94**	**90**	P		**Pn**	**18 14 30.0**	**+2.6**
MDSI	**Maura Dua**	**6.36**	**309**	P		**Pn**	**18 14 48.5**	**+1.6**
	0.1nm7.7nm,1.4s							
FITZ	**Fitzroy Crossi**	**18.64**	**122**	P		**Pn**	**18 17 31.1**	**+0.1**
	0.1nm,0.3s,baz=280,slow=11,SNR=1.5							
WRA	**Warramunga Arr**	**26.88**	**118**	P		**P**	**18 18 50.7**	**-2.8**
	0.4nm,0.7s,baz=290,slow=12,SNR=3.7							
ASAR	**Alice Springs**	**28.07**	**125**	P		**P**	**18 19 04.0**	**-0.1**
	0.3nm,0.5s,baz=299,slow=8.9,SNR=8.6							
STKA	**Stephens Creek**	**38.05**	**132**	P		**P**	**18 20 31.1**	**+0.2**
	3.1nm,1.1s,baz=300,slow=4.9,SNR=3.7							
SONM	**Songino Array**	**56.16**	**358**	P		P	18 22 37.7	-14
	0.5nm,0.6s,baz=163,slow=1.5,SNR=1.8							
MKAR	**Makanchi Array**	**60.04**	**339**	P		P	18 23 07.7	-11
	0.2nm,0.3s,baz=151,slow=9.1,SNR=1.5							
BRTR	**Keskin Array B**	**84.43**	**311**	P		P	18 25 38.8	-6.2
	0.5nm,0.7s,baz=134,slow=5.3,SNR=3.7							

ECX ***15*** *18:16:09.7±0.5,31°.24N×115°.92W,h7km±4km, MD2.2, ML2.4*

MEX ***15*** *18:16:10.2±0.4,31°.19N×115°.92W,h5km, MD3.6*

ISC 15 18:16:08.2±1.2,31°.24N±0°.06×115°.91W±0°.04, h17km±10km, n12, σ0°27/19, 6C-3D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SVX	**San Vicente**	**0.30**	**287**	⇑*eP*		**Pb**	**18 16 15.2**	**0.0**
SVX				*eS*		**Sg**	**18 16 18.2**	**+0.2**
SPIG	**San Pedro Mart**	**0.43**	**117**	⇑*eP*		**Pb**	**18 16 17.6**	**+0.1**
SPIG				*eS*		**Sb**	**18 16 23.7**	**-0.2**
SPIG	**San Pedro Mart**	**0.43**	**117**	*eP*		**Pb**	**18 16 17.8**	**+0.2**
SPIG				*eS*		**Sb**	**18 16 23.7**	**-0.2**
CCX	**Cicese**	**0.90**	**314**	*eS*		**Sb**	**18 16 37.2**	**+0.2**
SFX	**San Felipe**	**0.93**	**102**	⇑*eP*		**Pg**	**18 16 26.4**	**0.0**
CBX	**Cerro Bola**	**1.25**	**329**	⇑*eP*		**Pb**	**18 16 31.5**	**+0.1**
CBX				*eS*		**Sn**	**18 16 47.9**	**+0.4**
CBX				⇓*e*			18 16 49.3	
CBX				IAML			18 16 49.3	
	comp=N,81nm,0.2s							
CBX				IAML			18 16 53.0	
	comp=E,114nm,0.3s							
CBX				*e*			18 16 53.0	
CBX	**Cerro Bola**	**1.25**	**329**	*eP*		**Pb**	**18 16 31.4**	**0.0**
CBX				*eS*		**Sn**	**18 16 47.7**	**+0.2**
ERMX	**Rumorosa**	**1.31**	**356**	*eP*		**Pb**	**18 16 32.5**	**0.0**
ERMX				⇑*e*			18 16 37.8	
ERMX				IAML			18 16 37.8	
	comp=E,40nm,0.3s							
ERMX				IAML			18 16 37.8	
	comp=N,88nm,0.3s							
ERMX				⇓*e*			18 16 37.8	
MBIG	**Mexicali**	**1.31**	**27**	*i P*		**Pn**	**18 16 32.0**	**+0.3**
MBIG				*eS*		**Sg**	**18 16 50.4**	**-0.3**
TJIG	**Tijuana**	**1.35**	**332**	⇑*eP*		**Pb**	**18 16 33.2**	**0.0**
TJIG	**Tijuana**	**1.35**	**332**	*i P*		**Pn**	**18 16 31.7**	**-0.7**
TJIG				*i S*		**Sb**	**18 16 50.4**	**+0.2**
BAR	**Barrett**	**1.57**	**336**	⇓*eP*		**Pb**	**18 16 36.9**	**0.0**

NIED ***15*** *18:19:00,39°.20N×142°.50E,h41km,Mw3.8 Best double couple: M0 5.59000×10^14 NP1:φ=251.00000°,δ=67.00000°, λ=94.00000°. NP2:φ=61.00000°,δ=23.00000°,λ=81.00000°.*

JMA ***15*** *18:19:48.5±0.1,39°.18N×142°.49E,h33km±1km,M3.7*

IDC ***15*** *18:19:50.2±3.2,39°.15N×142°.77E,h56km±29km,mb3.3/3, mb1 3.5/5,mb1mx3.1/36,mbtmp3.5/5,ML2.8/2,MS3.0/1, Ms1 3.0/1,ms1mx2.4/24, Error ellipse: s-maj=46.9km s-min=18.8km az=95.0*

ISC 15 18:19:48.6±2.0,39°.16N±0°.05×142°.46E±0°.10,h28km±12km, n22,σ1°§06/24,mb3.8/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
OFUJ	**Ofunato**	**0.62**	**263**	P		**Pb**	**18 20 01.0**	**+0.1**
OFUJ				S		**Sb**	**18 20 10.0**	**+0.7**
MIYJ	**Miyakonagasawa**	**0.64**	**310**	P		**Pb**	**18 20 01.0**	**-0.3**
MIYJ				S		**Sb**	**18 20 09.6**	**-0.4**
JKMT	**Kesennumamotoy**	**0.84**	**246**	P		**Pb**	**18 20 04.3**	**-0.4**
JKMT				S		**Sb**	**18 20 15.3**	**-0.3**
JTH	**Tanohata**	**0.90**	**329**	P		**Pb**	**18 20 04.7**	**-0.9**
JOM	**Ohasama**	**0.96**	**289**	P		**Pb**	**18 20 06.1**	**0.0**
JOM				*eS*		**Sb**	**18 20 18.9**	**+0.1**
JMK	**Ichinoseki**	**0.99**	**258**	P		**Pn**	**18 20 06.6**	**0.0**
JMK				*eS*		**Sb**	**18 20 19.7**	**0.0**
JIO	**Ouri**	**1.12**	**231**	P		**Pn**	**18 20 07.9**	**-0.5**
JIO				S		**Sn**	**18 20 21.8**	**-1.0**
JKZ	**Kuzumaki**	**1.20**	**314**	P		**Pn**	**18 20 09.7**	**+0.2**
JKZ				*eS*		**Sn**	**18 20 25.3**	**+0.4**
JANG	**Nango**	**1.41**	**329**	P		**Pn**	**18 20 12.3**	**-0.1**
JANG				*eS*		**Sn**	**18 20 30.0**	**-0.1**
JRG	**Rokugo**	**1.44**	**280**	P		**Pn**	**18 20 13.7**	**+1.0**
MJAR	**Matsushiro Arr**	**4.26**	**233**	P		**Pn**	**18 20 55.0**	**+3.4**
	0.2nm,0.3s,baz=41,slow=12,SNR=21							
ASAJ	**Asahikawa**	**4.95**	**1**	P		**Pn**	**18 21 02.3**	**+1.3**
	0.4nm,0.3s,baz=298,slow=5.5,SNR=2.0							
ASAJ				S		**Sn**	**18 21 58.8**	**+1.5**
	0.2nm,0.3s,baz=280,slow=26,SNR=1.6							
H11N2	**WAKE ISLAND Hy**	**28.62**	**126**	T		T	18 56 11.0	
	baz=318,slow=75,SNR=87							
H11N1	**WAKE ISLAND Hy**	**28.63**	**126**	T		T	18 56 10.6	
	baz=318,slow=75,SNR=105							
H11N3	**WAKE ISLAND Hy**	**28.64**	**126**	T		T	18 56 17.2	
	baz=318,slow=75,SNR=88							
H11S1	**WAKE ISLAND Hy**	**29.41**	**127**	T		T	18 57 07.6	
	baz=319,slow=76,SNR=7.7							
H11S3	**WAKE ISLAND Hy**	**29.41**	**128**	T		T	18 57 08.7	
	baz=319,slow=76,SNR=18							
H11S2	**WAKE ISLAND Hy**	**29.43**	**128**	T		T	18 57 09.6	
	baz=319,slow=76,SNR=7.9							
TLY	**Talaya**	**29.62**	**308**	LR		LR	18 38 22.4	
	comp=Z,27nm,18.1s,baz=250,slow=37							
MKAR	**Makanchi Array**	**43.72**	**300**	P		**P**	**18 27 52.0**	**+0.8**
	0.3nm,0.7s,baz=74,slow=11,SNR=3.0							
KURBB	**Kurchatov Arra**	**45.37**	**306**	P		**P**	**18 28 04.0**	**-0.2**
	0.5nm,0.4s,baz=80,slow=8.6,SNR=7.5							
WRA	**Warramunga Arr**	**59.28**	**189**	P		**P**	**18 29 46.1**	**-1.6**
	0.5nm,0.5s,baz=6.1,slow=7.0,SNR=8.3							

IDC ***15*** *18:40:02.9±2.9,5°.06S×129°.41E,h154km±35km, mb3.4/2, mb1 3.7/6,mb1mx3.3/31,mbtmp4.1/6, Error ellipse: s-maj=58.3km s-min=17.8km az=82.0*

NEIC ***15*** *18:40:03.9±1.9,5°.05S±0°.07×129°.7E±0°.1,h177km±16km, mb4.3/8, Error ellipse: s-maj=23.1km s-min=7.2km az=68.0.*

DJA ***15*** *18:40:04.6±0.2,5°.S±3°×13°.0E±°,h182km±4km,M4.2/13, mb3.9/6,MLv4.2/13,MLv4.3/3*

ISC 15 18:40:04.4±0.7,4°.99S±0°.06×129°.73E±0°.08,h182km,n31, σ1§42/33,mb3.7/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
BNDI	**Bandanaira**	**0.50**	**20**	P		**Pn**	**18 40 31.0**	**+1.6**
BNDI				S		**Sn**	**18 40 50.3**	**+1.6**
MSAI	**Masohi**	**1.82**	**334**	P		**Pn**	**18 40 40.2**	**+0.5**
AAI	**Ambon**	**2.01**	**310**	P		**Pn**	**18 40 42.8**	**+1.1**
NLAI	**Namlea**	**3.15**	**303**	P		**Pn**	**18 40 56.0**	**+1.1**
FAKI	**Fak Fak**	**3.25**	**51**	P		**Pn**	**18 40 56.6**	**+0.5**
FAKI	**Fak Fak**	**3.25**	**51**			**Pn**	**18 40 56.6**	**+0.5**
SAUI	**Saumlaki**	**3.36**	**152**	P		**Pn**	**18 40 59.0**	**+1.5**
SIJI	**Sorong**	**4.37**	**21**	P		**Pn**	**18 41 10.3**	**0.0**
	11nm,0.3s,baz=108,slow=23,SNR=164							
SIJI				S		**Sn**	**18 41 58.1**	**-4.0**
	31nm,0.3s,baz=53,slow=23,SNR=38							
SANI	**Sanana**	**4.74**	**308**	P		**Pn**	**18 41 15.3**	**+0.2**
LBMI	**Labuha**	**4.86**	**333**	P		**Pn**	**18 41 17.6**	**+0.9**
TNTI	**Ternate**	**6.19**	**338**			**Pn**	**18 41 34.8**	**+0.8**
MTN	**Manton Dam**	**7.92**	**170**			**Pn**	**18 41 56.6**	**-1.1**
MRSI	**Marisa**	**9.49**	**305**	P		**Pn**	**18 42 16.3**	**-1.0**
	16nm,1.0s							
KNRA	**Kununurra**	**10.66**	**185**	Pn		**Pn**	**18 42 30.6**	**-1.9**
FITZ	**Fitzroy Crossi**	**13.63**	**197**	P		**Pn**	**18 43 08.3**	**-2.1**
	0.2nm,0.3s,baz=22,slow=8.9,SNR=14							
FITZ	**Fitzroy Crossi**	**13.63**	**197**			**Pn**	**18 43 09.1**	**-1.3**
WB0	**Warramunga Arr**	**15.37**	**163**	P		**Pn**	**18 43 30.9**	**-1.1**
WB0				IAmb		IAmb	18 43 44.8	
	comp=Z,22nm,1.7s							
WRAB	**Tennant Creek**	**15.52**	**164**	P		**P**	**18 43 35.0**	**+0.8**
WRAB				IAmb		IAmb	18 43 45.5	
	comp=Z,13nm,0.4s							
WRA	**Warramunga Arr**	**15.52**	**164**	P		**Pn**	**18 43 32.9**	**-0.9**
	comp=Z,2.2nm,0.3s,baz=342,slow=13,SNR=64							
WRA	**Warramunga Arr**	**15.52**	**164**	P		**Pn**	**18 43 32.8**	**-1.1**
WB2	**Warramunga Arr**	**15.53**	**164**	P		**Pn**	**18 43 33.6**	**-0.3**
WB2				IAmb		IAmb	18 43 37.0	
	comp=Z,6.7nm,0.4s							
WR0	**Warramunga Arr**	**15.60**	**163**			**Pn**	**18 43 33.3**	**-1.5**
WR0				IAmb		IAmb	18 43 55.2	
	comp=Z,24nm,1.6s							
COEN	**Coen**	**15.96**	**125**			**Pn**	**18 43 39.6**	**+0.3**
AS31	**Alice Springs**	**19.00**	**168**	P		**Pn**	**18 44 14.0**	**-1.2**
AS31				IAmb		IAmb	18 44 14.9	
	comp=Z,5.2nm,0.6s							
ASAR	**Alice Springs**	**19.00**	**168**	P		**Pn**	**18 44 13.9**	**-1.2**
	comp=Z,2.3nm,0.3s,baz=350,slow=11,SNR=355							
ASAR	**Alice Springs**	**19.00**	**168**	P		**Pn**	**18 44 13.8**	**-1.4**
STKA	**Stephens Creek**	**28.97**	**159**	P		**P**	**18 45 47.6**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=327,slow=15,SNR=2.0							
STKA	**Stephens Creek**	**28.97**	**159**	P		**P**	**18 45 47.5**	**+0.6**
KSH	**Kashi**	**66.37**	**317**	P		**P**	**18 50 36.8**	**+2.8**
KSH				pmax		pmax		
	comp=Z,10.0nm,1.1s							
KSH				pmax		pmax		
	comp=Z,97nm,5.4s							
MKAR	**Makanchi Array**	**66.41**	**326**	P		**P**	**18 50 34.7**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=155,slow=7.8,SNR=6.0							
MKAR	**Makanchi Array**	**66.41**	**326**	P		**P**	**18 50 34.2**	**+0.2**

IDC ***15*** *18:47:38.1±0.8,7°.49N×81°.75W,h0km,mb3.9/11, mb1 4.2/11,mb1mx4.0/31,mbtmp3.9/11,MS3.2/11, Ms1 3.2/11,ms1mx3.0/35, Error ellipse: s-maj=76.0km s-min=16.0km az=63.0*

UPA ***15*** *18:47:38.6±3.2, 7°.17N×82°.36W,h5km±14km,MW4.9*

NEIC ***15*** *18:47:40.3±2.4, 7°.2N±0°.1×82°.33W±0°.09,h10km±1km, mb4.3/23, Error ellipse: s-maj=20.4km s-min=13.0km az=212.0*

ISC 15 18:47:38.9±1.6,7°.24N±0°.05×82°.31W±0°.03,h8km±9km,n94, σ1§83/116,mb4.1/19,MS3.2/6,5C-11D,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PVID3	**Puerto Vidal,**	**1.06**	**41**	*eP*		**Pn**	**18 47 59.7**	**-0.5**
PVID3				*eS*		**Sn**	**18 48 15.8**	**+0.6**
REME3	**Remedios, Chir**	**1.09**	**26**	*eP*		**Pb**	**18 47 59.8**	**-0.3**
REME3				*eS*		**Sb**	**18 48 14.4**	**-0.2**
PEDE3	**Pedregal, Chir**	**1.14**	**354**	*eP*		**Pb**	**18 48 00.0**	**-1.0**
NANC3	**Nancito, Chiri**	**1.15**	**30**	⇓*eP*		**Pg**	**18 48 01.4**	**+0.4**
CHIR3	**Chiriqui UPA,**	**1.15**	**359**	⇓*eP*		**Pb**	**18 48 00.5**	**-0.7**
CHIR3				*eS*		**Sn**	**18 48 19.5**	**+2.1**
LOCO3	**Loma Colorada,**	**1.17**	**355**	*eP*		**Pn**	**18 48 00.7**	**-1.0**
LOCO3				*eS*		**Sn**	**18 48 18.4**	**+0.5**
LOMA3	**Las Lomas, Chi**	**1.19**	**356**	*eP*		**Pn**	**18 48 00.7**	**-1.3**
LOMA3				*eS*		**Sn**	**18 48 20.0**	**+1.7**
DVD	**David**	**1.20**	**353**	⇑*eP*		**Pn**	**18 48 01.0**	**-1.0**
DVD				*eS*		**Sb**	**18 48 09.7**	**-8.0**
SBAR3	**San Bartolo, C**	**1.21**	**332**	⇓*eP*		**Pg**	**18 48 03.0**	**+0.7**
LESP3	**La Esperanza,**	**1.25**	**338**	*eP*		Pg	18 48 09.8	+6.7
LESP3				*eS*		**Sb**	**18 48 13.0**	**-6.2**
RSUS3	**Rio de Jesus,**	**1.36**	**57**	*eP*		**Pg**	**18 48 05.2**	**+0.2**
RSUS3				*eS*		**Sb**	**18 48 22.8**	**+0.5**
MARI3	**Mariato, Verag**	**1.37**	**73**	*eP*		**Pg**	**18 48 04.9**	**-0.4**
MARI3				*eS*		**Sn**	**18 48 17.1**	**-5.7**
MESA3	**La Mesa, Verag**	**1.44**	**51**	*eP*		**Pb**	**18 48 05.9**	**-0.1**
MESA3				*eS*		**Sg**	**18 48 26.0**	**+0.8**
PSOM3	**Paja de Sombre**	**1.44**	**360**	⇓*eP*		**Pb**	**18 48 05.4**	**-0.7**
CACAO	**El Cacao, Vera**	**1.44**	**86**	⇑*eP*		**Pn**	**18 48 04.4**	**-1.0**
CACAO				*eS*		**Sn**	**18 48 22.4**	**-2.4**
PONU3	**Ponuga, Veragu**	**1.47**	**64**	⇓*eP*		**Pb**	**18 48 06.1**	**-0.5**
PONU3				*eS*		**Sb**	**18 48 25.9**	**+0.4**
BCO2	**Palmira**	**1.49**	**352**	⇑*eP*		**Pn**	**18 48 05.1**	**-1.1**
BCO2				*eS*		**Sg**	**18 48 26.7**	**-0.2**
CNAZ3	**Canazas, Verag**	**1.55**	**45**	⇓*eP*		**Pb**	**18 48 07.2**	**-0.8**
CNAZ3				*eS*		**Sb**	**18 48 28.2**	**+0.4**
STIA3	**Santiago, Vera**	**1.58**	**57**	*eP*		**Pb**	**18 48 07.8**	**-0.7**
STIA3				*eS*		**Sb**	**18 48 28.8**	**+0.2**
BRU2	**Volcan**	**1.59**	**346**	*eP*		**Pn**	**18 48 06.2**	**-1.4**
BRU2				*eS*		**Sg**	**18 48 30.6**	**+0.4**
MLIR3	**Monte Lirio, C**	**1.63**	**342**	*eP*		**Pn**	**18 48 07.5**	**-0.6**
MLIR3				*eS*		**Sg**	**18 48 33.4**	**+2.1**
OCU3	**Ocu, Herrera**	**1.68**	**65**	*eP*		**Pb**	**18 48 09.2**	**-0.9**
OCU3				*eS*		**Sg**	**18 48 32.9**	**0.0**
SAFE3	**Santa Fe, Vera**	**1.76**	**44**	*eP*		**Pb**	**18 48 10.4**	**-1.2**
SAFE3				*eS*		**Sn**	**18 48 33.0**	**+0.5**
CALO3	**Calobre, Verag**	**1.81**	**53**	*eP*		**Pb**	**18 48 11.4**	**-1.0**
CALO3				*eS*		**Sb**	**18 48 36.0**	**+0.7**
PESE3	**Pese, Herrera**	**1.81**	**68**	*eP*		**Pb**	**18 48 11.2**	**-1.2**
PESE3				*eS*		**Sn**	**18 48 27.4**	**-6.3**
CRIS3	**El Cristo, Coc**	**1.96**	**59**	*eP*		**Pg**	**18 48 13.9**	**-1.0**
CRIS3				*eS*		**Sb**	**18 48 40.3**	**+0.8**
AZU	**Azuero**	**2.09**	**75**	⇓*eP*		**Pn**	**18 48 14.9**	**+0.6**
AZU				*eS*		**Sn**	**18 48 40.9**	**+0.2**
ACHO3	**Achotines, Los**	**2.13**	**85**	⇓*eP*		**Pn**	**18 48 14.4**	**-0.5**
ACHO3				*eS*		**Sn**	**18 48 41.2**	**-0.3**
PCRI3	**Pocri, Los San**	**2.21**	**79**	⇓*eP*		**Pn**	**18 48 16.4**	**+0.4**
DRK0	**Durika**	**2.21**	**335**	*eP*		**Pn**	**18 48 15.5**	**-0.7**
DRK0				*eS*		**Sn**	**18 48 44.5**	**+0.5**
PNME	**Penonome**	**2.32**	**58**	*eP*		**Pb**	**18 48 19.5**	**-1.7**
PNME				*eS*		**Sb**	**18 48 49.1**	**-1.0**
RGM0	**Gandoca**	**2.36**	**353**	*eP*		**Pb**	**18 48 21.2**	**-0.5**
RGM0				*eS*		**Sb**	**18 48 52.7**	**+1.7**
VTON	**El Valle, Cocl**	**2.57**	**58**	⇓*eP*		**Pb**	**18 48 23.8**	**-1.6**
VTON				*eS*		**Sb**	**18 48 58.6**	**+1.4**
ZANG	**Zanguenga, Cho**	**2.96**	**55**	*eP*		**Pg**	**18 48 34.1**	**-1.7**
BCIP	**Isla Barro Col**	**3.11**	**52**	⇓*eP*		**Pg**	**18 48 37.2**	**-1.4**
BCIP				*eS*		**Sb**	**18 49 12.5**	**-0.2**
BCIP	**Isla Barro Col**	**3.11**	**52**			**Pn**	**18 48 30.9**	**+2.5**
MLIR	**Monte Lirio**	**3.14**	**51**	*eP*		**Pb**	**18 48 34.6**	**-0.5**
FRIJ	**El Hiral**	**3.23**	**52**	⇓*eP*		**Pb**	**18 48 33.8**	**-2.8**
UPA	**Univ. de Panam**	**3.25**	**58**	*eP*		**Pb**	**18 48 37.8**	**+0.8**
UPA				*eS*		**Sb**	**18 49 20.2**	**+3.5**
HDC	**Heredia**	**3.27**	**327**	⇑*eP*		**Pn**	**18 48 30.8**	**0.0**
HDC				*eS*		**Sn**	**18 49 10.6**	**+0.5**
HDC	**Heredia**	**3.27**	**327**	Pn		**Pn**	**18 48 30.8**	**0.0**
JTS	**Las Juntas de**	**4.00**	**319**	Pn		**Pn**	**18 48 39.8**	**-0.9**
	37nm,0.3s,baz=235,slow=3.9,SNR=90							
JTS				Sn		Sn	18 49 14.5	-13
	baz=144,slow=21,SNR=3.6							
JTS				LR		LR	18 50 17.5	
	comp=Z,473nm,21.2s,baz=203,slow=38							
JTS	**Las Juntas de**	**4.00**	**319**			**Pn**	**18 48 39.4**	**-1.3**
ESPN	**Las Esperanzas**	**5.30**	**338**	Pn		**Pn**	**18 48 58.3**	**-0.3**
ACON	**Acoyapa**	**5.48**	**329**	Pn		**Pn**	**18 49 00.8**	**-0.3**
CSGN	**Cosiguina Volc**	**7.69**	**318**			**Pn**	**18 49 33.7**	**+2.2**
URIC	**Uribia, Colomb**	**11.10**	**66**			Pn	18 50 32.2	+14
APG	**El Apazote**	**11.11**	**315**	LR		LR	18 54 57.7	
	comp=Z,119nm,21.5s,baz=96,slow=39							
TEIG	**Tepich**	**14.15**	**336**	LR		LR	18 56 40.4	
	comp=Z,149nm,18.4s,baz=271,slow=38							
CMIG	**Matias Romero**	**15.70**	**310**	LR		LR	18 57 37.7	
	comp=Z,88nm,19.9s,baz=93,slow=38							
NNA	**Nana**	**19.86**	**164**	LR		LR	18 58 39.5	
	comp=Z,20nm,19.0s,baz=336,slow=33							
LPAZ	**La Paz**	**27.26**	**149**	P		**P**	**18 53 26.4**	**+1.7**
	0.4nm,0.4s,baz=349,slow=5.6,SNR=3.6							
LPAZ				LR		LR	19 05 27.5	
	comp=Z,56nm,18.1s,baz=318,slow=39							
LPAZ	**La Paz**	**27.26**	**149**	P		**P**	**18 53 26.1**	**+1.3**
LPAZ				IAmb		IAmb	18 53 29.9	
	comp=Z,6.9nm,1.4s							
PB16	**IPOC Station P**	**28.38**	**154**	P		**P**	**18 53 37.3**	**+2.7**
TXAR	**Lajitas Array**	**29.79**	**320**	P		**P**	**18 53 49.2**	**+2.6**
	comp=Z,0.1nm,0.4s,baz=126,slow=21,SNR=2.3							
TXAR				LR		LR	19 07 47.2	
	comp=Z,26nm,19.8s,baz=0.0,slow=40							
TXAR	**Lajitas Array**	**29.79**	**320**	P		**P**	**18 53 48.5**	**+1.9**
MNTX	**Cornudas Mount**	**32.49**	**322**	P		**P**	**18 54 11.5**	**+1.3**
MNTX				IAmb		IAmb	18 54 12.5	
	comp=Z,2.7nm,1.0s							
ANMO	**Albuquerque**	**35.40**	**325**	P		**P**	**18 54 37.6**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=157,slow=6.9,SNR=4.2							
ANMO	**Albuquerque**	**35.40**	**325**	P		**P**	**18 54 37.7**	**+1.9**
SADO	**Sadowa**	**37.49**	**4**	LR		LR	19 11 26.6	
	comp=Z,35nm,18.8s,baz=176,slow=38							
X16A	**Lo Mia Camp, P**	**38.11**	**319**	P		**P**	**18 55 01.8**	**+3.0**
WUAZ	**Wupatki**	**38.75**	**321**	P		**P**	**18 55 06.7**	**+2.5**
WUAZ				IAmb		IAmb	18 55 08.2	
	comp=Z,6.2nm,1.0s							
PV13	**Radium Mtn., P**	**39.02**	**326**	P		**P**	**18 55 09.1**	**+2.5**
PV13				IAmb		IAmb	18 55 10.0	
	comp=Z,4.5nm,0.9s							
PV18	**Skein Mesa, Pa**	**39.13**	**326**	P		**P**	**18 55 09.7**	**+2.2**
PV18				IAmb		IAmb	18 55 10.2	
	comp=Z,6.0nm,0.9s							
PV17	**East Wray Mesa**	**39.19**	**326**	P		**P**	**18 55 10.2**	**+2.3**
PV17				IAmb		IAmb	18 55 10.6	
	comp=Z,5.6nm,0.8s							
BDFB	**Brasilia**	**40.88**	**124**	LR		LR	19 12 08.6	
	comp=Z,54nm,18.2s,slow=36							
CPUP	**Villa Florida**	**41.25**	**145**	P		**P**	**18 55 24.1**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=355,slow=7.3,SNR=3.3							
CPUP				LR		LR	19 12 32.1	
	comp=Z,48nm,18.1s,baz=46,slow=36							
CPUP	**Villa Florida**	**41.25**	**145**	IAmb		IAmb	18 56 39.7	
	comp=Z,10nm,1.6s							
PSUT	**Pine Spring**	**42.20**	**322**	P		**P**	**18 55 35.2**	**+2.4**
TPNV	**Topopah Spring**	**42.75**	**319**	P		**P**	**18 55 38.1**	**+0.9**
TPNV				IAmb		IAmb	18 55 44.4	
	comp=Z,12nm,1.8s							
PDAR	**Pinedale Array**	**42.76**	**330**	P		**P**	**18 55 37.9**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=144,slow=13,SNR=3.9							
PDAR				LR		LR	19 16 52.7	
	comp=Z,24nm,19.3s,baz=29,slow=41							
PDAR	**Pinedale Array**	**42.76**	**330**	P		**P**	**18 55 37.2**	**0.0**
R11A	**Troy Canyon, C**	**43.15**	**321**	P		**P**	**18 55 42.7**	**+2.2**
IMW	**Indian Meadow**	**44.27**	**330**	P		**P**	**18 55 50.0**	**+0.4**
ULM	**Lac du Bonnet**	**44.35**	**348**	P		**P**	**18 55 47.5**	**-2.2**
	comp=Z,3.9nm,0.6s,baz=167,slow=9.6,SNR=4.2							
ULM	**Lac du Bonnet**	**44.35**	**348**	P		**P**	**18 55 48.5**	**-1.1**
ULM				IAmb		IAmb	18 55 49.1	
	comp=Z,8.4nm,1.1s							
ELK	**Elko**	**44.43**	**324**	P		**P**	**18 55 51.4**	**+0.6**
NV11	**Mina Array Sit**	**44.84**	**319**	P		**P**	**18 55 54.7**	**+0.7**
NV11				IAmb		IAmb	18 55 59.2	
	comp=Z,8.0nm,1.6s							
NVAR	**Mina Array Bea**	**44.93**	**319**	P		**P**	**18 55 56.4**	**+1.5**
	comp=Z,1.6nm,0.6s,baz=130,slow=6.9,SNR=15							
NVAR	**Mina Array Bea**	**44.93**	**319**	P		**P**	**18 55 56.1**	**+1.3**
WVOR	**Wild Horse Val**	**47.48**	**323**	P		**P**	**18 56 16.2**	**+1.5**
PLCA	**Paso Flores**	**48.95**	**168**	P		**P**	**18 56 25.9**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=348,slow=8.9,SNR=6.7							
PLCA	**Paso Flores**	**48.95**	**168**	P		**P**	**18 56 25.8**	**-0.1**
YKA	**Yellowknife Ar**	**59.98**	**343**	P		**P**	**18 57 45.4**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=134,slow=7.3,SNR=23							
DLBC	**Dease Lake**	**62.77**	**334**	P		**P**	**18 58 05.6**	**+0.7**
	comp=Z,1.1nm,0.4s,baz=104,slow=27,SNR=4.3							
DLBC	**Dease Lake**	**62.77**	**334**	P		**P**	**18 58 06.2**	**+1.3**
BCAR	**Beaver Creek A**	**70.07**	**335**	P		**P**	**18 58 52.3**	**+0.8**
DOT	**Dot Lake**	**71.24**	**335**	P		**P**	**18 59 00.4**	**

KSI	**Kapahiang**	**23.25**	**237**	P	P	19 01 34.1	+16
ENH	**Enshi**	**23.90**	**332**	P	**P**	**19 01 25.0**	**+0.5**
CMAR	**Chiang Mai Arr**	**24.13**	**295**	P	**P**	**19 01 24.3**	**-2.6**
	2.0nm,1.0s,baz=114,slow=7.0,SNR=13						
CMAR				LR	LR	19 10 58.0	
	comp=Z,91nm,18.9s,baz=128,slow=37						
CMAR	**Chiang Mai Arr**	**24.13**	**295**	P	**P**	**19 01 26.8**	**0.0**
CHTO	**Chiang Mai**	**24.25**	**295**	P	**P**	**19 01 27.6**	**-0.3**
JNU	**Nakatsue**	**25.06**	**18**	LR	LR	19 11 17.1	
	comp=Z,50nm,20.8s,baz=204,slow=36						
KNRA	**Kununurra**	**25.73**	**165**	P	**P**	**19 01 42.8**	**+1.6**
KNRA				IAmb	IAmb	19 02 03.8	
	comp=Z,18nm,1.1s						
KSRS	**Korea Array**	**28.51**	**10**	LR	LR	19 13 49.4	
	comp=Z,47nm,20.9s,baz=180,slow=37						
MJAR	**Matsushiro Arr**	**30.83**	**26**	LR	LR	19 13 16.8	
	comp=Z,44nm,20.9s,baz=230,slow=33						
WB0	**Warramunga Arr**	**31.38**	**157**	P	**P**	**19 02 31.2**	**-0.4**
WB0				IAmb	IAmb	19 03 33.9	
	comp=Z,14nm,1.6s						
WRA	**Warramunga Arr**	**31.52**	**157**	P	**P**	**19 02 31.4**	**-1.5**
	comp=Z,1.1nm,0.5s,baz=342,slow=9.2,SNR=19						
WRA	**Warramunga Arr**	**31.52**	**157**	P	**P**	**19 02 31.9**	**-1.1**
WB2	**Warramunga Arr**	**31.52**	**157**	P	**P**	**19 02 31.7**	**-1.3**
WR0	**Warramunga Arr**	**31.61**	**157**	P	**P**	**19 02 33.1**	**-0.6**
WR0				IAmb	IAmb	19 03 23.1	
	comp=Z,21nm,1.8s						
AS31	**Alice Springs**	**34.79**	**161**	P	**P**	**19 03 01.0**	**-0.5**
ASAR	**Alice Springs**	**34.79**	**161**	P	**P**	**19 03 00.8**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=342,slow=7.3,SNR=16						
ASAR	**Alice Springs**	**34.79**	**161**	P	**P**	**19 03 00.3**	**-1.2**
USRK	**Ussuriysk Ar.**	**35.81**	**12**	LR	LR	19 18 47.6	
	comp=Z,34nm,20.0s,baz=275,slow=38						
GTA	**Gaotai**	**35.93**	**330**	*e*P	**P**	**19 03 09.8**	**-1.4**
GTA				pP	sP	19 03 14.1	-1.7
GTA				sP	pwP	19 03 17.4	-2.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FORT	**Forrest**	**40.30**	**172**	P	**P**	**19 03 47.6**	**-0.3**
SONM	**Songino Array**	**40.59**	**344**	P	**P**	**19 03 50.4**	**0.0**
	comp=Z,0.9nm,0.6s,baz=172,slow=8.3,SNR=2.3						
SONM	**Songino Array**	**40.59**	**344**	P	**P**	**19 03 50.9**	**+0.5**
KLR	**Kul'dur**	**40.60**	**10**	P	**P**	**19 03 50.5**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=276,slow=5.7,SNR=5.8						
STKA	**Stephens Creek**	**45.05**	**156**	P	**P**	**19 04 26.3**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=210,slow=1.5,SNR=5.1						
STKA	**Stephens Creek**	**45.05**	**156**	P	**P**	**19 04 26.6**	**-0.1**
MK31	**Makanchi Array**	**50.31**	**325**	P	**P**	**19 05 08.1**	**+0.8**
MK31				IAmb	IAmb	19 05 09.6	
	comp=Z,7.5nm,0.9s						
MKAR	**Makanchi Array**	**50.31**	**325**	P	**P**	**19 05 07.7**	**+0.3**
	comp=Z,8.1nm,0.8s,baz=129,slow=8.8,SNR=57						
MKAR				LR	LR	19 27 00.4	
	comp=Z,46nm,18.2s,baz=124,slow=37						
MKAR	**Makanchi Array**	**50.31**	**325**	P	**P**	**19 05 08.3**	**+0.9**
PRZ	**Przheval'sk**	**50.43**	**319**	P	**P**	**19 05 10.9**	**+2.3**
TARG	**Taragay, Kyrgy**	**50.48**	**317**	P	**P**	**19 05 11.3**	**+2.2**
MAKZ	**Makanchi**	**50.50**	**325**	P	**P**	**19 05 09.9**	**+1.2**
MAKZ				IAmb	IAmb	19 05 11.1	
	comp=Z,8.9nm,1.1s						
KSH	**Kashi**	**50.80**	**314**	P	**P**	**19 05 13.3**	**+2.0**
KSH				pmax	pmax		
	comp=Z,15nm,1.1s						
KSH				pmax	pmax		
	comp=Z,200nm,4.7s						
NIL	**Nilore**	**50.84**	**306**	P	**P**	**19 05 12.6**	**+1.0**
KDJ	**Kajisay**	**51.08**	**318**	P	**P**	**19 05 14.5**	**+1.1**
KDJ				IAmb	IAmb	19 05 16.1	
	comp=Z,5.7nm,0.7s						
TARA	**Tarawa**	**51.26**	**96**	P	**P**	**19 05 14.2**	**-0.7**
PETK	**Petropavlovsk-**	**52.29**	**26**	P	**P**	**19 05 21.8**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=195,slow=4.6,SNR=4.3						
PETK	**Petropavlovsk-**	**52.29**	**26**	P	**P**	**19 05 22.2**	**+0.2**
KZA	**Kyzart**	**52.35**	**317**	P	**P**	**19 05 25.2**	**+2.0**
	SNR=6.4						
TKM2	**Tokmak 2**	**52.47**	**318**	P	**P**	**19 05 25.7**	**+1.9**
	SNR=5.2						
YAK	**Yakutsk**	**52.91**	**5**	P	**P**	**19 05 26.5**	**+0.1**
YAK				IAmb	IAmb	19 05 27.2	
	comp=Z,10nm,0.8s						
UCH	**Uchtor**	**52.91**	**317**	P	**P**	**19 05 29.5**	**+2.1**
	SNR=9.3						
AAK	**Ala-Archa**	**53.09**	**317**	P	**P**	**19 05 29.1**	**+0.7**
AML	**Almayashu**	**53.43**	**316**	P	**P**	**19 05 33.3**	**+2.2**
	SNR=6.0						
EKS2	**Erkin-Say**	**53.58**	**317**	P	**P**	**19 05 34.1**	**+2.1**
	SNR=5.2						
KBL	**Kabul**	**54.44**	**306**	P	**P**	**19 05 37.9**	**-0.5**
KBL				IAmb	IAmb	19 05 40.2	
	comp=Z,7.6nm,1.1s						
KURK	**Kurchatov**	**54.53**	**328**	P	**P**	**19 05 39.4**	**+0.9**
KURK				IAmb	IAmb	19 05 40.6	
	comp=Z,15nm,1.2s						
BTK	**Batken**	**54.69**	**313**	P	**P**	**19 05 40.5**	**+0.5**
KK31	**Karatay Array**	**55.97**	**316**	P	**P**	**19 05 50.2**	**+1.1**
KKAR	**Karatay Array**	**55.97**	**316**	P	**P**	**19 05 49.7**	**+0.6**
KKAR	**Karatay Array**	**55.97**	**316**	P	**P**	**19 05 50.1**	**+1.0**
KKAR				IAmb	IAmb	19 05 51.0	
	comp=Z,3.7nm,0.8s						
BRVK	**Borovoye**	**60.17**	**327**	P	**P**	**19 06 18.7**	**+0.4**
BRVK				IAmb	IAmb	19 06 20.1	
	comp=Z,6.9nm,1.1s						
TIXI	**Tiksi**	**62.41**	**2**	P	**P**	**19 06 32.6**	**-0.6**
GEYT	**Alibeck**	**63.77**	**308**	P	**P**	**19 06 43.2**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=116,slow=5.0,SNR=4.8						
GEYT				LR	LR	19 35 59.1	
	comp=Z,20nm,18.4s,baz=195,slow=38						
GEYT	**Alibeck**	**63.77**	**308**	P	**P**	**19 06 43.5**	**+0.7**
NRIK	**Noril'sk**	**63.94**	**347**	P	**P**	**19 06 42.9**	**-0.4**
	comp=Z,3.7nm,0.6s,baz=145,slow=6.9,SNR=5.4						
ABKAR	**Akbulak array**	**64.88**	**320**	P	**P**	**19 06 49.9**	**+0.1**
BILL	**Bilibino**	**65.48**	**17**	P	**P**	**19 06 52.5**	**-0.9**
BILL				IAmb	IAmb	19 06 54.5	
	comp=Z,6.1nm,1.2s						
ARU	**Arti**	**67.73**	**328**	P	**P**	**19 07 07.7**	**-0.3**
ARU				IAmb	IAmb	19 07 09.8	
	comp=Z,5.0nm,0.7s						
KLMR	**Klimovskoe**	**78.25**	**330**	*e*P	P	19 08 04.5	-5.7
KLMR				AMP		19 08 10.6	
	comp=Z,14nm,0.7s						
IMAR	**Indian Mountai**	**79.20**	**24**	P	**P**	**19 08 15.6**	**+0.3**
OBN	**Obninsk**	**79.81**	**324**	LR	LR	19 44 12.2	
	comp=Z,11nm,20.4s,baz=33,slow=36						
BPAW	**Bear Paw Mtn.**	**80.37**	**26**	P	**P**	**19 08 22.0**	**+0.2**
BPAW				IAmb	IAmb	19 10 03.5	
	comp=Z,13nm,1.9s						
ILAR	**Eielson Array**	**82.11**	**26**	P	**P**	**19 08 30.0**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=255,slow=6.0,SNR=2.8						
ILAR	**Eielson Array**	**82.11**	**26**	P	**P**	**19 08 30.7**	**-0.3**
FYU	**Fort Yukon**	**82.61**	**24**	P	**P**	**19 08 35.7**	**+2.2**
BMAR	**Burnt Mountain**	**82.77**	**23**	P	**P**	**19 08 35.7**	**+1.2**
BR131	**Keskin Array S**	**82.87**	**309**	P	**P**	**19 08 35.5**	**-0.2**
BR131				IAmb	IAmb	19 09 59.6	
	comp=Z,16nm,1.9s						
BRTR	**Keskin Array B**	**82.87**	**309**	P	**P**	**19 08 35.0**	**-0.6**
	comp=Z,1.7nm,0.8s,baz=101,slow=6.4,SNR=4.7						
RIDG	**Independent Ri**	**83.10**	**27**	P	**P**	**19 08 36.5**	**+0.3**
RIDG				IAmb	IAmb	19 10 26.9	
	comp=Z,3.9nm,0.7s						
ARCES	**ARCESS Array B**	**83.60**	**339**	P	**P**	**19 08 37.3**	**-1.4**
	comp=Z,2.9nm,0.8s,baz=77,slow=6.9,SNR=8.1						
ARCES	**ARCESS Array B**	**83.60**	**339**	P	**P**	**19 08 38.7**	**0.0**
BCAR	**Beaver Creek A**	**84.56**	**27**	P	**P**	**19 08 43.9**	**+0.1**
AKASG	**Malin Array Be**	**84.62**	**320**	P	**P**	**19 08 43.5**	**-0.7**
	comp=Z,3.5nm,0.7s,baz=69,slow=4.6,SNR=12						
AKASG	**Malin Array Be**	**84.62**	**320**	P	**P**	**19 08 43.4**	**-0.7**
FINES	**FINESS Array B**	**84.71**	**331**	P	**P**	**19 08 43.9**	**-0.5**
	comp=Z,3.9nm,0.7s,baz=53,slow=5.4,SNR=17						
FINES	**FINESS Array B**	**84.71**	**331**	P	**P**	**19 08 44.0**	**-0.4**
BARN	**Barnard Glacie**	**84.97**	**29**	P	**P**	**19 08 45.7**	**-0.3**
BARN				IAmb	IAmb	19 08 48.5	
	comp=Z,4.0nm,0.7s						
CTGM	**Chitina Glacie**	**85.14**	**29**	P	**P**	**19 08 47.7**	**+0.9**
DAWY	**Dawson**	**85.43**	**26**	P	**P**	**19 08 48.7**	**+0.6**
EPYK	**Eagle Plains**	**86.01**	**23**	P	**P**	**19 08 51.2**	**+0.3**
EPYK				IAmb	IAmb	19 08 52.4	
	comp=Z,5.6nm,0.9s						
INK	**Inuvik**	**86.69**	**21**	P	**P**	**19 08 54.6**	**+0.5**
INK				IAmb	IAmb	19 08 55.7	
	comp=Z,5.7nm,1.2s						
NOA	**NORSAR Array B**	**91.71**	**333**	LR	LR	19 55 14.5	
	comp=Z,20nm,19.1s,baz=325,slow=39						
TXAR	**Lajitas Array**	**121.58**	**47**	PKP	**PKPdf**	**19 15 05.1**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=257,slow=1.5,SNR=6.8						
PLCA	**Paso Flores**	**146.80**	**162**	PKPbc	**PKPbc**	**19 15 53.1**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=210,slow=5.9,SNR=5.0						
PLCA	**Paso Flores**	**146.80**	**162**		**PKPbc**	**19 15 53.5**	**+0.3**

NIED ***15*** *18:57:00.26˚.40N×128˚.90E, h20km, Mw3.9 Best double couple: M₀7.02000×10¹⁴ NP1:φ₀s47.00000°, δ76.00000°, λ129.00000°. NP2:φ₀s154.00000°, δ41.00000°, λ21.00000°.*
IDC ***15*** *18:57:26.6±0.9, 26˚.33N×128˚.66E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.7/38, mbtmp3.8/10, ML3.5/1, MS3.2.7/1, Ms1 2.7/1, ms1mx2.2/42, Error ellipse: s-maj=32.0km s-min=14.0km az=64.0*
NEIC ***15*** *18:57:29.8±3.0, 26˚.31N±0˚.09×128˚.74E±0˚.10, h25km±6km, mb4.3/7, Error ellipse: s-maj=12.7km s-min=12.4km az=181.0*
JMA ***15*** *18:57:29.1±0.2, 26˚.38N×128˚.91E, h30km±3km, M3.6*

ISC 15 18:57:27.8±1.8, 26.35N±0.05×128.91E±0.04, h13km±11km, n38, σ1s22/51, mb3.8/11, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**0.75**	**311**	Pn		Pn	**Pb**	**18 57 43.1**	**+0.4**
	117nm,0.3s,baz=64,slow=12,SNR=2513								
JOW				Sn		Sn	**Sb**	**18 57 52.6**	**-0.2**
JOW	**Kunigami**	**0.75**	**311**	P		P	**Pb**	**18 57 42.9**	**+0.2**
JOW				*e*S		S	**Sb**	**18 57 52.7**	**-0.1**
JOW	**Kunigami**	**0.75**	**311**				**Pb**	**18 57 42.9**	**+0.2**
JYRO	**Yoronjima**	**0.79**	**329**	P		P	**Pb**	**18 57 43.6**	**+0.2**
JYRO				S		S	**Sb**	**18 57 53.1**	**-1.0**
JNTH	**Nagotoyohara**	**0.81**	**282**	P		P	**Pb**	**18 57 43.9**	**+0.1**
JNTH				S		S	**Sb**	**18 57 54.9**	**+0.2**
JJT3	**Tamagusuku3**	**1.03**	**259**	P		P	**Pg**	**18 57 47.8**	**+0.1**
JJT3				S		S	**Sn**	**18 58 02.5**	**+0.2**
JOKE	**Okinoerabujima**	**1.05**	**343**	P		P	**Pn**	**18 57 47.9**	**-0.5**
JOKE				*e*S		S	**Sb**	**18 58 01.0**	**-0.7**
JIH	**Iheya**	**1.09**	**309**	P		P	**Pn**	**18 57 48.2**	**-0.6**
JIH				S		S	**Sb**	**18 58 02.1**	**-0.5**
JTK	**Tokunoshima**	**1.43**	**1**	P		P	**Pn**	**18 57 52.9**	**-0.7**
JTK				*e*S		S	**Sn**	**18 58 09.8**	**-2.5**
JAGN	**Aguni-jima**	**1.51**	**280**	P		P	**Pn**	**18 57 54.8**	**+0.2**
JAGN				S		S	**Sn**	**18 58 13.4**	**-0.8**
JAMN	**Amaminishikomi**	**1.90**	**7**	P		P	**Pn**	**18 58 00.2**	**+0.2**
JAMN				*e*S		S	**Sn**	**18 58 23.0**	**-0.8**
JKE	**Kume jima 2**	**1.91**	**270**	P		P	**Pn**	**18 57 59.4**	**-0.6**
JKE				*e*S		S	**Sn**	**18 58 23.3**	**-0.6**
JMZ	**Minamidaito 2**	**2.14**	**104**	P		P	**Pn**	**18 58 02.8**	**-0.5**
JMZ				S		S	**Sn**	**18 58 27.6**	**-2.2**
JKDJ	**Kitadaitoujima**	**2.18**	**100**	P		P	**Pn**	**18 58 03.5**	**-0.3**
JKDJ				*e*S		S	**Sn**	**18 58 29.5**	**-1.2**
JNU	**Nakatsue**	**6.96**	**14**	Pn		P	**Pn**	**18 59 10.6**	**+0.9**
	0.8nm,0.3s,baz=360,slow=4.6,SNR=8.2								
JNU				LR		LR		19 02 21.8	
	comp=Z,50nm,18.5s,baz=211,slow=42								
JNU	**Nakatsue**	**6.96**	**14**				**Pn**	**18 59 10.4**	**+0.8**
YULB	**Yu-li**	**7.51**	**249**	Pn		Pn	**Pn**	**18 59 14.0**	**-3.1**
SSLB	**Suanglung**	**7.65**	**252**	Pn		Pn	**Pn**	**18 59 16.0**	**-3.1**
TPUB	**Ta-pu**	**8.11**	**250**	Pn		Pn	**Pn**	**18 59 23.3**	**-2.1**
XAN	**Xi'an**	**18.88**	**299**	P		P	**Pn**	**19 01 48.5**	**-0.1**
SONM	**Songino Array**	**27.79**	**326**	P		P	**P**	**19 03 17.8**	**+1.2**
	1.5nm,0.6s,baz=142,slow=12,SNR=6.7								
SONM	**Songino Array**	**27.79**	**326**	P		P	**P**	**19 03 14.8**	**-1.9**
PETK	**Petropavlovsk-**	**34.28**	**31**	P		P	**P**	**19 04 16.0**	**+2.4**
	0.9nm,0.8s,baz=232,slow=7.1,SNR=1.6								
PETK	**Petropavlovsk-**	**34.28**	**31**	P		P	**P**	**19 04 15.8**	**+2.2**
ZALV	**Zalesovo Beam**	**42.52**	**323**	P		P	**P**	**19 05 21.6**	**-1.3**
	1.1nm,0.5s,baz=107,slow=9.3,SNR=6.3								
ZALV	**Zalesovo Beam**	**42.52**	**323**	P		P	**P**	**19 05 20.9**	**-2.0**
WRA	**Warramunga Arr**	**46.31**	**173**	P		P	**P**	**19 05 54.0**	**+0.5**
	1.2nm,0.7s,baz=353,slow=8.2,SNR=5.4								
WRA	**Warramunga Arr**	**46.31**	**173**	P		P	**P**	**19 05 53.6**	**+0.1**
KK31	**Karatay Array**	**49.84**	**305**	P		P	**P**	**19 06 21.4**	**+0.7**
KK31				IAmb		IAmb		19 06 23.0	
	comp=Z,2.6nm,0.8s								
KKAR	**Karatay Array**	**49.84**	**305**	P		P	**P**	**19 06 21.3**	**+0.6**
KKAR				IAmb		IAmb		19 06 23.0	
	comp=Z,2.6nm,0.8s								
ASAR	**Alice Springs**	**49.95**	**174**	P		P	**P**	**19 06 22.6**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=6.5,slow=14,SNR=7.9								
ASAR	**Alice Springs**	**49.95**	**174**	P		P	**P**	**19 06 22.0**	**+0.4**
OHAK	**Old Harbor**	**61.74**	**37**	P		P	**P**	**19 07 44.6**	**-1.1**
BCAR	**Beaver Creek A**	**66.55**	**30**	P		P	**P**	**19 08 18.4**	**+1.0**
FINES	**FINESS Array B**	**73.06**	**331**	P		P	**P**	**19 08 58.0**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=56,slow=3.5,SNR=2.2								
AKASG	**Malin Array Be**	**75.84**	**320**	P		P	**P**	**19 09 14.2**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=60,slow=5.9,SNR=2.6								
BRTR	**Keskin Array B**	**77.44**	**308**	P		P	**P**	**19 09 22.7**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=57,slow=5.3,SNR=2.0								
YKA	**Yellowknife Ar**	**78.16**	**25**	P		P	**P**	**19 09 27.4**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=307,slow=4.9,SNR=5.2								

MAN 15 19:04:34.0, 13.70N×120.78E, h19km, mb3.8, ML2.6, MS2.1, 1C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.26**	**139**	⇑*e*P		P	Sg	19 04 40.9	+0.9
PGP				*e*S		S	Sg	19 04 46.1	+2.0
LUBP	**Lubang**	**0.52**	**274**	*e*P		P	Pg	19 04 44.6	+0.2
LUBP				*e*S		S	Sb	19 04 51.7	+0.2
SJMP	**San Jose**	**1.28**	**165**	*e*P		P	Pb	19 04 57.8	+0.4
SJMP				*e*S		S	Sb	19 05 13.7	+0.2
ZCP	**Zamboanga City**	**6.85**	**169**	⇓*i*P		P	Pg	19 07 07.9	+23
ZCP				*i* S		S	Sn	19 07 22.1	-8.8

ROM 15 19:07:24.0±0.1, 43.498N±0.003×12.400E±0.005, h8km, ML1.1/9, Error ellipse: s-maj=0.3km s-min=0.3km az=58.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
APEC	**Apecchio**	**0.06**	**14**	P		P	Pg	19 07 26.2	+0.2
APEC				S		S	Sg	19 07 27.6	+0.2
APEC				AML		AML			
	comp=E,358μm,0.7s								
APEC				AML		AML			
	comp=N,348μm,0.2s								
APEC				AML		AML			
	comp=N,348μm,0.2s								
PIEI	**Pieia**	**0.10**	**69**	P		P	Pg	19 07 27.0	+0.4
PIEI	**Pieia**	**0.10**	**69**	P		P	Pg	19 07 27.0	+0.4
PIEI				S		S	Sg	19 07 29.1	+0.7
PIEI				AML		AML			
	comp=N,101μm,1.1s								
PIEI				AML		AML			
	comp=N,102μm,1.1s								
PIEI				AML		AML			
	comp=E,177μm,0.4s								
ATVO	**AVT- Monte Val**	**0.12**	**178**	P		P	Pg	19 07 27.1	+0.4
ATVO	**AVT- Monte Val**	**0.12**	**178**	P		P	Pg	19 07 27.1	+0.4
ATVO				S		S	Sg	19 07 29.3	+0.7
ATVO				AML		AML			
	comp=E,173μm,0.1s								
ATVO				AML		AML			
	comp=E,172μm,0.1s								
ATVO				AML		AML			
	comp=N,78μm,1.1s								
NARO	**Abbazia di Nar**	**0.17**	**49**	P		P	Pg	19 07 28.1	+0.4
NARO	**Abbazia di Nar**	**0.17**	**49**	P		P	Pg	19 07 28.1	+0.4
NARO				S		S	Sg	19 07 31.1	+1.0
NARO				AML		AML			
	comp=N,66μm,1.4s								
NARO				AML		AML			
	comp=E,51μm,0.2s								
NARO				AML		AML			
	comp=N,66μm,1.4s								
ATFO	**Monte Foce - G**	**0.18**	**136**	AML		AML			
	comp=E,114μm,0.2s								
ATFO				AML		AML			
	comp=N,102μm,0.1s								
PARC	**Parchiule**	**0.19**	**322**	P		P	Pg	19 07 28.7	+0.8
PARC	**Parchiule**	**0.19**	**322**	P		P	Pg	19 07 28.7	+0.8
PARC				S		S	Sg	19 07 32.3	+1.6
PARC				AML		AML			
	comp=E,41μm,1.6s								
PARC				AML		AML			
	comp=N,44μm,0.2s								
PE3	**Peglio**	**0.21**	**19**	AML		AML			
	comp=E,97μm,0.6s								
PE3				AML		AML			
	comp=E,98μm,0.6s								
PE3				AML		AML			
	comp=N,75μm,0.2s								
MURB	**Monte Urbino**	**0.25**	**159**	P		Pg		19 07 29.7	+0.6
MURB				S		Sb		19 07 34.2	-1.1
MURB				AML		AML			
	comp=E,107μm,0.4s								
MURB				AML		AML			
	comp=N,93μm,0.1s								
MURB	**Monte Urbino**	**0.25**	**159**	P		Pg		19 07 29.7	+0.6
CAFI	**Castiglion Fio**	**0.36**	**242**	P		Pg		19 07 31.8	+0.7
CAFI				S		Sb		19 07 37.4	-1.0
CAFI	**Castiglion Fio**	**0.36**	**242**	P		Pg		19 07 31.8	+0.7
ATCC	**AVT- Casa Cast**	**0.36**	**151**	P		Pg		19 07 31.7	+0.7
ATCC				S		Sb		19 07 38.0	-0.4
ATCC	**AVT- Casa Cast**	**0.36**	**151**	P		Pg		19 07 31.7	+0.7
ERBM	**Eremo**	**1.71**	**303**	P		Pn		19 07 45.6	-8.5
MNTV	**Mantova**	**2.02**	**326**	S		Sn		19 08 17.0	-6.6
MNTV	**Mantova**	**2.02**	**326**	S		Sn		19 08 17.0	-6.6
LEOD	**Capriano del C**	**2.55**	**321**	S		Sn		19 08 31.0	-5.8
LEOD	**Capriano del C**	**2.55**	**321**	S		Sn		19 08 31.0	-5.8
PTRJ	**Pietraroja**	**2.65**	**143**	P		Pn		19 07 57.5	-10
PTRJ	**Pietraroja**	**2.65**	**143**	P		Pn		19 07 57.5	-10
PTRJ				AML		AML			
	comp=E,1270μm,0.6s								
PTRJ				AML		AML			
	comp=N,2165μm,0.1s								
CDRU	**Civita di Ruta**	**3.71**	**143**	P		Pn		19 08 24.4	+2.8
CDRU	**Civita di Ruta**	**3.71**	**143**	P		Pn		19 08 24.4	+2.8
CDRU				S		Sn		19 09 10.0	+4.5
CDRU	**Civita di Ruta**	**3.71**	**143**	S		Sn		19 09 10.0	+4.5
PZUN	**Potenza**	**3.81**	**137**	P		Pn		19 08 15.2	-7.8
PZUN	**Potenza**	**3.81**	**137**	P		Pn		19 08 15.2	-7.8
TDS	**Terranova Siba**	**4.84**	**141**	P		Pn		19 08 27.4	-10
TDS	**Terranova Siba**	**4.84**	**141**	P		Pn		19 08 27.4	-10
CLTB	**Caltabellotta**	**5.95**	**174**	P		Pn		19 08 46.9	-5.4
CLTB	**Caltabellotta**	**5.95**	**174**	P		Pn		19 08 46.9	-5.4

TIR 15 19:07:35.7, 41.16N×20.05E, h8km, Md2.2/3, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.23**	**323**	*i* PG		Pg	Pg	19 07 41.4	+1.0
TIR				*i* SG		Sg	Sg	19 07 46.1	+2.6
PHP	**Peshkopia**	**0.60**	**29**	*i* PG		Pg	Pb	19 07 48.0	-0.5
PHP				*i* SG		Sg	Sb	19 07 56.9	-0.3
PUK	**Puka**	**0.89**	**352**	*i* PG		Pg	Pg	19 07 52.9	+0.1
PUK				*i* SG		Sb	Sb	19 08 06.1	+0.6

MAN 15 19:08:59.8, 14.14N×123.93E, h25km, mb4.1, ML2.9, MS2.6, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.58**	**158**	*e*P		Pb	Pb	19 09 11.7	+0.2
PVCP				*e*S		Sb	Sb	19 09 19.6	+0.3
CNP	**Catarman**	**1.77**	**156**	*e*P		Pn	Pg	19 09 29.6	+0.7
CNP				*e*S		Sn	Sb	19 09 51.1	+0.5
POLP	**Polilio Island**	**2.02**	**287**	*e*P		Pn	Pg	19 09 32.6	+0.3
POLP				*e*S		Sb	Sb	19 10 02.0	+1.5

NEIC ***15*** *19:17:21.5±0.7, 31.77S±0.10×178.7W±0.2, h10km±2km, mb4.4/9, Error ellipse: s-maj=33.8km s-min=11.3km az=111.0*
IDC ***15*** *19:17:26.9±2.6, 31.65S×178.49W, h62km±24km, mb3.9/5, mb1 4.1/7, mb1mx3.7/26, mbtmp4.2/7, ML4.2/2, MS3.5/3, Ms1 3.5/3, ms1mx2.8/28, Error ellipse: s-maj=30.3km s-min=23.3km az=96.0*

ISC 15 19:17:26.6±0.8, 31.71S±0.08×178.6W±0.2, h61km, n32, σ2s34/26, mb4.4/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.51**	**13**	P		P	**Pn**	**19 18 05.1**	**0.0**
	53nm,0.3s,baz=62,slow=15,SNR=5.2								
RAO				S		S	**Sn**	**19 18 29.5**	**-5.0**
	35nm,0.3s,baz=111,slow=21,SNR=1.9								
RAO	**Raoul Island**	**2.51**	**13**				**Pn**	**19 18 03.7**	**-1.4**
MXZ	**Matakaoa Point**	**6.38**	**203**	Pn		Pn	Pn	19 18 51.1	-6.9
URZ	**Urewera**	**7.43**

baz=59
ARSB ⇑*i*S **Sn** **19 20 30.5 +0.2**
baz=59
BRLS **Borolday** **3.15** **1** *e*P **Pn** **19 20 02.4 +1.9**
2.0nm,0.2s
BRLS *e*S **Sn** **19 20 37.9 -0.4**
15nm,0.2s
BRLS **Borolday** **3.15** **1** Pg **Pn** **19 20 02.4 +1.9**
2.0nm,0.2s
BRLS Lg Lg 19 20 38.3
3.1nm,0.4s
KK31 **Karatay Array** **3.27** **9** Pn **Pn** **19 20 04.2 +2.1**
0.4nm,0.2s,baz=185,slow=16,SNR=30
KK31 Sn **Sb** **19 20 49.4 +0.6**
4.2nm,0.3s,baz=183,slow=27,SNR=16
AML **Almayashu** **3.71** **51** ⇑*i*P **Pn** **19 20 09.7 +1.1**
baz=52
AML ⇑*e*S **Sn** **19 20 51.8 -0.7**
baz=52
MRKS **Merke** **3.86** **41** *e*P **Pb** **19 20 18.6 -0.4**
2.9nm,0.3s
MRKS *e*S **Sb** **19 21 06.0 +0.1**
14nm,0.4s
MRKS **Merke** **3.86** **41** Pg **Pb** **19 20 18.6 -0.4**
2.9nm,0.3s
MRKS Lg Lg 19 21 05.9
14nm,0.4s
UCH **Uchtor** **4.27** **55** ⇓*i*P **Pn** **19 20 17.6 +1.3**
baz=56
UCH ⇓*i*S **Sn** **19 21 05.2 -1.2**
baz=56
DGS **Degeres** **5.60** **51** *e*P **Pb** **19 20 50.2 +1.5**
0.9nm,0.5s
DGS *e*S **Sb** **19 21 59.8 +3.8**
5.2nm,0.6s
DGS **Degeres** **5.60** **51** Pg **Pb** **19 20 48.3 -0.4**
0.9nm,0.5s
DGS Lg Lg 19 21 56.8
5.2nm,0.6s
KST **Kastek** **5.61** **54** *e*P **Pb** **19 20 50.7 +1.8**
0.8nm,0.1s
KST *e*S **Sb** **19 22 00.6 +4.4**
2.7nm,0.6s
KST **Kastek** **5.61** **54** Pg **Pb** **19 20 50.8 +2.0**
1.5nm,0.3s
KST Lg Lg 19 22 00.9
2.7nm,0.6s

*THE **15** 19:25:05.7, 38˚.19N×20˚.40E, h10km, ML2.5/10, Error ellipse: s-maj=0.8km s-min=0.3km az=253.0*
*ATH **15** 19:25:05.6, 38˚.20N×20˚.42E, h11km±1km, ML2.4/1, Error ellipse: s-maj=2.3km s-min=1.4km az=243.0*
ISC 15 19:25:05.2±1.3, 38˚.19N±0˚.03×20˚.39E±0˚.05, h12km±5km, n20, σ0§37/38, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.04**	**290**	P	**Pg**	**19 25 07.7**	**+0.3**
KEF3				S	**Sg**	**19 25 08.9**	**-0.1**
LXRA	**Lixouri, Kepha**	**0.04**	**75**	P	**Pg**	**19 25 07.7**	**+0.3**
LXRA				S	**Sg**	**19 25 08.9**	**-0.1**
AGT1	**Agia Thekli**	**0.06**	**354**	P	**Pg**	**19 25 07.9**	**+0.3**
AGT1				S	**Sg**	**19 25 09.6**	**+0.2**
11μm,0.2s							
ARGA	**Argostoli. Kep**	**0.07**	**101**	P	**Pg**	**19 25 07.9**	**+0.3**
ARGA				S	**Sg**	**19 25 09.1**	**-0.4**
ARG2	**Argostoli**	**0.08**	**99**	P	**Pg**	**19 25 08.0**	**+0.3**
ARG2				S	**Sg**	**19 25 09.5**	**-0.1**
15μm,0.1s							
KEF2	**Argostoli. Kep**	**0.08**	**109**	P	**Pg**	**19 25 08.1**	**+0.3**
KEF2				S	**Sg**	**19 25 09.5**	**-0.1**
KEF1	**Kardakata, Kep**	**0.11**	**35**	P	**Pg**	**19 25 08.3**	**+0.2**
KEF1				S	**Sg**	**19 25 09.8**	**-0.4**
VLS	**Valsamata**	**0.16**	**95**	P	**Pg**	**19 25 09.0**	**+0.1**
VLS				S	**Sg**	**19 25 11.6**	**+0.2**
3μm,0.1s							
VLS	**Valsamata**	**0.16**	**95**	P	**Pg**	**19 25 08.8**	**-0.1**
VLS				S	**Sg**	**19 25 11.1**	**-0.4**
VLS				AML	AML	19 25 11.8	
comp=E,3966μm,0.1s							
VLS				AML	AML	19 25 11.8	
comp=N,6085μm,0.2s							
VSK1	**VASILIKIADES**	**0.26**	**32**	P	**Pg**	**19 25 10.8**	**+0.2**
VSK1				S	**Sg**	**19 25 14.6**	**+0.4**
comp=N,2μm,0.2s							
FSK	**Fiskardo**	**0.30**	**26**	P	**Pg**	**19 25 11.5**	**+0.2**
FSK				S	**Sg**	**19 25 16.3**	**+0.9**
comp=N,2μm,0.2s							
KFL	**Anninata**	**0.32**	**104**	P	**Pg**	**19 25 11.9**	**+0.1**
KFL				S	**Sg**	**19 25 16.9**	**+0.8**
comp=N,1μm,0.3s							
KFL	**Anninata**	**0.32**	**104**	P	**Pg**	**19 25 11.8**	**+0.1**
KFL				S	**Sg**	**19 25 16.7**	**+0.6**
EVGI	**Lefkada island**	**0.48**	**26**	P	**Pg**	**19 25 14.7**	**+0.1**
EVGI				S	**Sb**	**19 25 21.9**	**-0.6**
comp=N,218nm,0.1s							
EVGI	**Lefkada island**	**0.48**	**26**	P	**Pg**	**19 25 14.6**	**+0.1**
EVGI				S	**Sg**	**19 25 21.5**	**+0.5**
MGNA	**Meganis**	**0.56**	**34**	P	**Pg**	**19 25 16.0**	**-0.1**
KRI1	**kERI**	**0.62**	**147**	P	**Pg**	**19 25 17.8**	**+0.4**
KRI1				S	**Sb**	**19 25 26.5**	**-0.3**
comp=N,475nm,0.3s							
LKD2	**Lefkada island**	**0.63**	**19**	P	**Pg**	**19 25 17.7**	**+0.2**
LKD2				S	**Sb**	**19 25 27.1**	**+0.1**
comp=N,175nm,0.5s							
AST1	**Astakos**	**0.65**	**57**	P	**Pg**	**19 25 17.8**	**0.0**
AST1				S	**Sb**	**19 25 28.0**	**+0.5**
comp=N,720nm,0.3s							
LAKA	**Lakka**	**1.25**	**87**	P	**Pn**	**19 25 28.1**	**-0.4**

*IDC **15** 20:00:06.7±2.6, 43˚.90N×105˚.50W, h0km, mb1 3.4/3, mb1mx3.2/40, mbtmp2.9/3, ML3.3/3, Error ellipse: s-maj=40.6km s-min=18.5km az=145.0*
*NEIC **15** 20:00:06.5±1.1, 43˚.88N±0˚.07×105˚.38W±0˚.06, h0km±2km, ML2.9/43, Error ellipse: s-maj=12.7km s-min=6.8km az=20.0*
ISC 15 20:00:06.3±1.0, 43˚.83N±0˚.05×105˚.45W±0˚.05, h0km, n29, σ1§31/30, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.06**	**74**		**Pg**	**20 00 26.3**	**-0.3**
K22A	**Casper**	**1.42**	**214**	Pn	**Pn**	**20 00 32.7**	**-0.7**
RWWY	**Rawlins**	**2.50**	**212**	Pn	**Pn**	**20 00 49.6**	**+1.1**
RWWY				IAML		20 01 27.1	
67nm,1.0s							
RWWY				IAML		20 01 28.2	
72nm,0.8s							
PHWY	**Pilot Hill**	**2.53**	**180**	Pn	**Pn**	**20 00 49.7**	**+0.8**
PHWY				IAML		20 01 30.2	
39nm,0.5s							
LAO	**LASA Array**	**2.91**	**349**		**Pn**	**20 00 54.4**	**+0.5**
BW06	**Boulder Array**	**3.18**	**252**	Pn	**Pn**	**20 00 58.5**	**+0.7**
BW06				IAML		20 01 52.0	
comp=N,20nm,1.1s							
PD31	**Pinedale Array**	**3.18**	**252**	Pn	**Pn**	**20 00 59.1**	**+1.3**
PDAR	**Pinedale Array**	**3.18**	**252**	Pn	**Pn**	**20 01 00.6**	**+2.8**
comp=N,1.6nm,0.3s,baz=73,slow=16,SNR=24							
PDAR				Pg	**Pg**	**20 01 08.2**	**+1.0**
comp=N,2.1nm,0.3s,baz=72,slow=20,SNR=27							
PDAR				Lg	Lg	20 01 44.6	
comp=N,2.4nm,0.3s,baz=74,slow=34,SNR=6.6							
PDAR	**Pinedale Array**	**3.18**	**252**	Pn	**Pn**	**20 00 58.6**	**+0.9**
YNE	**Yellowstone No**	**3.47**	**291**	Pn	**Pn**	**20 01 02.7**	**+1.0**
YMP	**Mirror Lake Pl**	**3.50**	**287**		**Pn**	**20 01 02.5**	**+0.3**
H17A	**Grant Village**	**3.73**	**280**		**Pn**	**20 01 05.8**	**+0.4**
H17A				IAML		20 02 19.8	
comp=N,14nm,0.4s							
H17A				IAML		20 02 57.7	
comp=E,13nm,0.1s							
FLWY	**Flagg Ranch**	**3.80**	**276**		**Pn**	**20 01 07.2**	**+0.9**
FLWY				IAML		20 02 23.6	
comp=E,18nm,1.1s							
FLWY				IAML		20 02 24.2	
comp=E,19nm,1.0s							
YPP	**Pitchstone Pla**	**3.88**	**278**		**Pn**	**20 01 07.0**	**-0.5**
REDW	**Red Top Meadow**	**3.95**	**265**		**Pn**	**20 01 07.4**	**-0.9**
REDW				IAML		20 02 25.8	
comp=E,19nm,0.8s							
REDW				IAML		20 02 36.0	
comp=E,20nm,0.7s							
IMW	**Indian Meadow**	**3.97**	**273**		**Pn**	**20 01 08.7**	**0.0**
IMW				IAML		20 02 21.9	
comp=E,18nm,0.7s							
IMW				IAML		20 02 31.6	
comp=E,12nm,0.7s							
YHH	**Holmes Hill**	**3.99**	**286**	Pg	**Pg**	**20 01 20.5**	**-2.2**
TPAW	**Teton Pass**	**4.00**	**267**		**Pn**	**20 01 09.8**	**+0.7**
TPAW				IAML		20 02 32.7	
comp=E,13nm,0.8s							
TPAW				IAML		20 02 33.0	
comp=E,15nm,1.1s							
FXWY	**Fox Creek**	**4.04**	**269**	Pn	**Pn**	**20 01 11.2**	**+1.6**
YHB	**Horse Butte**	**4.22**	**285**		**Pn**	**20 01 13.8**	**+1.6**
O20A	**White River Ci**	**4.24**	**210**	Pn	**Pn**	**20 01 12.4**	**+0.1**
O20A				IAML		20 02 59.0	
comp=N,18nm,1.1s							
AHID	**Auburn Hatcher**	**4.26**	**257**		**Pn**	**20 01 13.2**	**+0.6**
AHID				IAML		20 01 52.9	
comp=E,9.4nm,2.0s							
AHID				IAML		20 01 54.6	
comp=N,9.3nm,2.6s							
E28A	**Huff**	**4.34**	**49**	Pn	**Pn**	**20 01 14.5**	**+1.0**
RDMU	**Red Mountain**	**4.47**	**225**	Pn	**Pn**	**20 01 15.0**	**-0.4**
SMCO	**Snowmass**	**4.79**	**194**		**Pb**	**20 01 31.2**	**-0.1**
PV23	**Carpenter Ridg**	**6.01**	**208**	Pn	**Pn**	**20 01 35.4**	**-1.2**
TMUT	**Trail Mountain**	**6.26**	**226**	Pn	**Pn**	**20 01 39.1**	**-1.0**
NVAR	**Mina Array Bea**	**11.09**	**245**	Pn	**Pn**	**20 02 50.0**	**+3.7**
comp=N,0.1nm,0.3s,baz=63,slow=8.2,SNR=4.1							
YKA	**Yellowknife Ar**	**19.45**	**347**	P	**P**	**20 04 33.7**	**-0.4**
comp=N,0.0nm,0.3s,baz=156,slow=12,SNR=2.9							

ISC 15 20:13:25.8±1.3, 50˚.01N±0˚.06×18˚.99E±0˚.05, h0km, n16, σ1§04/27, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.57**	**253**	*e*PG	**Pg**	**20 13 37.5**	**+0.8**
OKC				*e*SG	**Sb**	**20 13 46.7**	**-0.7**
comp=Z,27nm,0.7s							
MORC	**Moravsky Berou**	**0.97**	**257**	*e*PG	**Pg**	**20 13 44.7**	**+0.4**
MORC				*e*SG	**Sb**	**20 13 59.4**	**+0.7**
VYHS	**Vyhne**	**1.52**	**184**	*e*PN	**Pn**	**20 13 53.0**	**-1.2**
VYHS				*e*SN	**Sg**	**20 14 15.1**	**+0.6**
VRAC	**Vranov**	**1.71**	**247**	*e*PN	**Pn**	**20 13 56.0**	**-0.8**
VRAC				*e*SG	**Sg**	**20 14 21.5**	**+0.9**
DPC	**Dobruska-Polom**	**1.75**	**282**	*e*PG	**Pn**	**20 13 57.0**	**-0.4**
DPC				*e*SG	**Sb**	**20 14 21.7**	**+0.4**
comp=Z,35nm,0.5s							
KECS	**Kecovo**	**1.81**	**147**	*e*PN	**Pn**	**20 13 55.4**	**-2.8**
OSTC	**Ostas**	**1.86**	**288**	*e*PG	**Pn**	**20 13 58.6**	**-0.4**
OSTC				*e*SG	**Sb**	**20 14 24.9**	**+0.3**
comp=Z,15nm,0.5s							
KRUC	**Moravsky**	**1.94**	**242**	*e*PN	**Pn**	**20 14 00.4**	**+0.4**
KRUC				*e*SG	**Sg**	**20 14 28.9**	**+0.9**
CHVC	**Chvalec**	**1.97**	**288**	*e*PG	**Pn**	**20 14 00.4**	**0.0**
CHVC				*e*SG	**Sb**	**20 14 28.4**	**+0.7**
comp=Z,17nm,0.9s							
UPC	**Upice**	**1.98**	**286**	*e*SG	**Sb**	**20 14 28.9**	**+1.1**
comp=Z,10.0nm,0.5s							
KOLS	**Kolonicke sedl**	**2.40**	**115**	*e*PN	**Pn**	**20 14 07.7**	**+1.5**
GOPC	**GO Pecny, Ondr**	**2.72**	**270**	*e*SG	**Sg**	**20 14 52.6**	**-0.4**
comp=Z,6.5nm,0.3s							
PRU	**Pruhonice**	**2.87**	**271**	*e*SG	**Sg**	**20 14 56.7**	**-1.3**
comp=Z,10.0nm,0.9s							
BRG	**Berggiesshubel**	**3.34**	**287**	PG	**Pb**	**20 14 26.3**	**+0.4**
BRG				SG	**Sg**	**20 15 11.2**	**-1.9**
4.8nm,0.6s							
KHC	**Kasperske Hory**	**3.63**	**258**	*e*PN	**Pn**	**20 14 23.0**	**-0.3**
KHC				*e*PG	**Pg**	**20 14 34.5**	**-0.8**
KHC				*e*SG	**Sg**	**20 15 22.8**	**+0.4**
comp=Z,9.1nm,0.5s							
CLL	**Collm**	**4.03**	**291**	*e*Sg	**Sg**	**20 15 34.0**	**-1.1**
comp=Z,6.0nm,0.6s							

IDC 15 20:14:60.0±10.0, 2˚.18N×31˚.49W, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/42, mbtmp3.6/4, MS3.3/10, Ms1 3.3/10, ms1mx3.1/25, Error ellipse: s-maj=332.3km s-min=47.5km az=7.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BDFB	**Brasilia**	**24.09**	**222**	LR	LR	20 29 01.5	
comp=Z,72nm,19.3s,slow=35							
DBIC	**Dimbokro**	**26.92**	**80**	LR	LR	20 29 24.4	
comp=Z,94nm,18.7s,baz=255,slow=32							
TORD	**Torodi Ar. Bea**	**34.59**	**70**	P	P	20 21 50.5	-0.5
0.6nm,0.7s,baz=247,slow=8.8,SNR=4.1							
TORD				LR	LR	20 34 20.3	
comp=Z,63nm,19.1s,baz=210,slow=34							
LPAZ	**La Paz**	**40.58**	**242**	LR	LR	20 39 29.1	
comp=Z,86nm,20.0s,baz=87,slow=36							
ROSC	**El Rosal**	**42.83**	**275**	LR	LR	20 40 22.9	
comp=Z,101nm,20.0s,baz=68,slow=36							
ESDC	**Sonseca Array**	**44.93**	**30**	LR	LR	20 38 27.0	
comp=Z,10nm,21.8s,baz=260,slow=31							
PLCA	**Paso Flores**	**55.59**	**215**	LR	LR	20 46 54.1	
comp=Z,46nm,19.4s,baz=44,slow=34							
NOA	**NORSAR Array B**	**67.02**	**21**	LR	LR	20 50 21.0	
comp=Z,8.9nm,22.0s,baz=5.0,slow=32							
BRTR	**Keskin Array B**	**69.62**	**48**	P	P	20 26 12.5	+0.9
0.5nm,0.7s,baz=268,slow=8.4,SNR=2.8							
BRTR				LR	LR	20 56 12.1	
comp=Z,11nm,21.6s,baz=59,slow=36							
AKASG	**Malin Array Be**	**70.12**	**36**	P	P	20 26 13.8	-0.4
0.3nm,0.3s,baz=248,slow=6.0,SNR=1.7							
PDAR	**Pinedale Array**	**79.77**	**313**	LR	LR	20 57 20.3	
comp=Z,22nm,21.8s,baz=110,slow=32							
YKA	**Yellowknife Ar**	**84.89**	**332**	P	P	20 27 36.5	-0.1
0.4nm,0.8s,baz=96,slow=5.7,SNR=5.5							

*IDC **15** 20:21:48.7±3.7, 23˚.07N×120˚.47E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.3/49, mbtmp3.6/3, MS3.1/3, Ms1 3.1/3, ms1mx2.5/41, Error ellipse: s-maj=257.0km s-min=33.5km az=88.0*
*JMA **15** 20:21:51.5±0.1, 23˚.24N×120˚.46E, h0km, M3.6*
*ASIES **15** 20:21:52.6, 23˚.16N×120˚.49E, h20km, MW3.4*
*TAP **15** 20:21:52.2, 23˚.15N×120˚.49E, h15km, ML4.0, B*
ISC 15 20:21:52.4±0.7, 23˚.18N±0˚.01×120˚.48E±0˚.01, h17km±3km, n144, σ1§02/242, mb3.5/3, MS2.9/3, 15C-29D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNST	**Tainan City**	**0.05**	**25**	⇑*i*P	**Pg**	**20 21 55.7**	**+0.2**
baz=4.0							
SNST				*e*S	**Sg**	**20 21 58.1**	**+0.4**
baz=4.0							
CHN1	**Nanshi**	**0.05**	**79**	⇑*i*P	**Pg**	**20 21 55.5**	**0.0**
baz=46							
CHN1				*i* S	**Sg**	**20 21 58.0**	**+0.2**
baz=46							
TWK	**Hsinying**	**0.09**	**8**	⇑*i*P	**Pb**	**20 21 56.3**	**+0.3**
baz=14							
TWK				*e*S	**Sb**	**20 21 59.2**	**+0.8**
baz=14							
SGST	**Jiashian**	**0.14**	**133**	⇑*i*P	**Pg**	**20 21 55.6**	**-0.8**
baz=128							
SGST				S	**Sb**	**20 21 58.7**	**-0.5**
baz=128							
CHN3	**Shinhua**	**0.14**	**226**	⇓*i*P	**Pb**	**20 21 57.3**	**+0.8**
baz=245							
CHN3				S	**Sb**	**20 22 01.6**	**+2.3**
baz=245							
WTP	**Ta-pu**	**0.15**	**61**	⇓*i*P	**Pb**	**20 21 56.8**	**+0.2**
baz=45							
WTP				S	**Sb**	**20 22 00.2**	**+0.7**
baz=45							
TPUB	**Ta-pu**	**0.19**	**49**	⇓*i*P	**Pb**	**20 21 57.3**	**-0.1**
baz=40							
TPUB				*i* S	**Sb**	**20 22 01.0**	**+0.3**
baz=40							
CHN4	**Tsaushan**	**0.20**	**32**	⇑*i*P	**Pb**	**20 21 57.9**	**+0.2**
baz=31							
CHN4				*i* S	**Sb**	**20 22 02.1**	**+0.9**
baz=31							
SLGT	**Liugui**	**0.24**	**139**	⇓*i*P	**Pb**	**20 21 58.2**	**0.0**
baz=127							
SLGT				*e*S	**Sb**	**20 22 02.7**	**+0.5**
baz=127							
SCLT	**Jiali**	**0.26**	**270**	⇓*i*P	**Pb**	**20 21 59.0**	**+0.5**
baz=284							
SCLT				*e*S	**Sb**	**20 22 04.9**	**+2.2**
baz=284							
STYT	**Tauyuan**	**0.26**	**93**	⇓*i*P	**Pb**	**20 21 58.6**	**0.0**
baz=78							
STYT				*e*S	**Sb**	**20 22 03.3**	**+0.5**
baz=78							
TAI1	**Yung-k'ang**	**0.27**	**239**	⇓*i*P	**Pb**	**20 21 59.3**	**+0.7**
baz=250							
TAI1				*e*S	**Sb**	**20 22 03.8**	**+0.9**
baz=250							
CHN8	**Yiju**	**0.30**	**305**	⇓*i*P	**Pb**	**20 21 59.6**	**+0.4**
baz=320							
CHN8				*e*S	**Sb**	**20 22 05.7**	**+1.9**
baz=320							
CHY	**Chiayi**	**0.32**	**352**	P	**Pb**	**20 22 00.5**	**+0.8**
baz=351							
CHY				*e*S	**Sb**	**20 22 06.1**	**+1.5**
baz=351							
WLGB	**Puzi**	**0.34**	**332**	⇓P	**Pb**	**20 22 00.6**	**+0.7**
baz=332							
WLGB				*e*S	**Sb**	**20 22 07.2**	**+2.1**
baz=332							
TWM1	**Shoushan**	**0.35**	**188**	*e*P	**Pn**	**20 22 01.8**	**-0.9**
baz=179							
TWM1				*e*S	**Sb**	**20 22 07.2**	**+1.7**
baz=179							
CHN2	**Minshiung**	**0.35**	**0**	P	**Pb**	**20 22 01.1**	**+0.8**
baz=358							
CHN2				*e*S	**Sb**	**20 22 08.0**	**+2.5**
baz=358							
SNJT	**Kaohsiung City**	**0.44**	**197**	*e*P	**Pb**	**20 22 02.6**	**+1.0**
baz=201							
SNJT				*e*S	**Sn**	**20 22 11.4**	**+0.1**
baz=201							
SGLT	**Jiouru**	**0.45**	**178**	⇑*e*P	**Pn**	**20 22 03.5**	**-0.4**
baz=169							
SGLT				*e*S	**Sn**	**20 22 11.0**	**-0.6**
baz=169							
ALS	**Alishan**	**0.45**	**42**	⇓*i*P	**Pg**	**20 22 01.6**	**-0.1**
baz=45							
ALS				*e*S	**Sb**	**20 22 09.5**	**+1.0**
baz=45							
SSD	**Sandimen**	**0.45**	**161**	⇓*i*P	**Pb**	**20 22 02.0**	**+0.2**
baz=151							
SSD				*e*S	**Sb**	**20 22 09.1**	**+0.9**
baz=151							
CHN5	**Tsauling**	**0.46**	**24**	⇓*i*P	**Pb**	**20 22 02.3**	**+0.2**
baz=21							
CHN5				*e*S	**Sb**	**20 22 10.1**	**+1.5**
baz=21							
ELDTW	**Lidau**	**0.50**	**88**	⇓*i*P	**Pb**	**20 22 02.7**	**-0.1**
baz=85							
ELDTW				*e*S	**Sb**	**20 22 10.6**	**+0.9**
baz=85							
WDLH	**Douliu**	**0.51**	**6**	⇑*i*P	**Pb**	**20 22 03.7**	**+0.8**
baz=5.0							
WDLH				*e*S	**Sn**	**20 22 12.3**	**-0.9**
baz=5.0							
WGK	**Gukeng**	**0.51**	**9**	⇑*i*P	**Pb**	**20 22 04.0**	**+1.0**
baz=8.0							
WGK				*e*S	**Sn**	**20 22 12.6**	**-0.7**
baz=8.0							
WSF	**Szhu**	**0.52**	**333**	⇓*i*P	**Pb**	**20 22 03.5**	**+0.6**
baz=335							
WSF				*e*S	**Sb**	**20 22 12.2**	**+2.1**
baz=335							
YUS	**Yu-Shan**	**0.54**	**54**	⇓*i*P	**Pb**	**20 22 03.9**	**+0.2**
baz=58							
MASBT	**Mashibuluo**	**0.58**	**165**	*e*P	**Pb**	**20 22 04.0**	**0.0**
baz=158							
MASBT				*e*S	**Sb**	**20 22 12.5**	**+0.6**
baz=158							
KAU	**Kaohsiung**	**0.62**	**194**	*e*P	**Pn**	**20 22 06.1**	**-0.3**
baz=196							
KAU				*e*S	**Sn**	**20 22 16.8**	**+0.8**
baz=196							
WHYT	**Xinyi Township**	**0.62**	**34**	⇓*e*P	**Pb**	**20 22 05.2**	**+0.4**
baz=31							
WHYT				*e*S	**Sb**	**20 22 14.6**	**+1.3**
baz=31							
TWG	**Pinlang**	**0.65**	**123**	⇓*i*P	**Pb**	**20 22 05.6**	**+0.3**
baz=109							
TWG				*e*S	**Sn**	**20 22 15.5**	**-1.2**
baz=109							
TWGBT	**Beinan**	**0.66**	**122**	⇓*i*P	**Pb**	**20 22 05.6**	**+0.2**
baz=109							
TWGBT				*e*S	**Sb**	**20 22 15.2**	**+0.9**
baz=109							
WMLT	**Mailiao**	**0.67**	**340**	*e*P	**Pb**	**20 22 06.1**	**+0.5**
baz=340							
WMLT				*e*S	**Sb**	**20 22 16.3**	**+1.8**
baz=340							
WJS	**Zhushan**	**0.68**	**20**	⇑P	**Pb**	**20 22 06.5**	**+0.7**
baz=4.0							
WJS				*e*S	**Sn**	**20 22 17.3**	**-0.1**
baz=4.0							
SSPT	**Xinbi**	**0.69**	**173**	*e*P	**Pn**	**20 22 06.9**	**-0.5**
baz=159							
SSPT				*e*S	**Sn**	**20 22 18.5**	**+0.8**
baz=159							
WTCT	**Ta-ch'eng**	**0.71**	**345**	*e*P	**Pb**	**20 22 06.6**	**+0.4**
baz=346							
WTCT				*e*S	**Sb**	**20 22 17.5**	**+1.9**
baz=346							
RLNB	**Erlin**	**0.72**	**352**	*e*P	**Pb**	**20 22 06.8**	**+0.4**
baz=351							
RLNB				*e*S	**Sn**	**20 22 18.1**	**-0.2**
baz=351							
WNT	**Mingjian**	**0.72**	**15**	⇑*i*P	**Pb**	**20 22 07.2**	**+0.7**
baz=14							
WNT				*e*S	**Sn**	**20 22 18.2**	**-0.2**
baz=14							
ECL	**Taimali**	**0.73**	**142**	⇓*i*P	**Pb**	**20 22 06.7**	**+0.1**
baz=141							
ECL				*e*S	**Sb**	**20 22 16.4**	**+0.3**
baz=141							
TTN	**Taitung**	**0.75**	**124**	P	**Pn**	**20 22 08.0**	**-0.1**
baz=112							
TTN				*e*S	**Sn**	**20 22 19.9**	**+0.9**
baz=112							
SSLB	**Suanglung**	**0.75**	**36**	⇓*i*P	**Pb**	**20 22 07.2**	**+0.2**
baz=34							
SSLB				*e*S	**Sb**	**20 22 18.0**	**+1.1**
baz=34							
FULB	**Fuli**	**0.75**	**88**	⇓*i*P	**Pn**	**20 22 07.7**	**-0.5**
baz=77							
FULB				*e*S	**Sn**	**20 22 18.9**	**-0.4**
baz=77							
WDGT	**Dungji**	**0.75**	**277**	⇓*i*P	**Pg**	**20 22 06.9**	**-0.3**
baz=279							
WDGT				*e*S	**Sg**	**20 22 17.3**	**+0.1**
baz=279							
TWF1	**Yuli**	**0.78**	**77**	⇓*i*P	**Pb**	**20 22 07.5**	**+0.2**
baz=74							
TWF1				*e*S	**Sb**	**20 22 17.9**	**+0.2**
baz=74							
YULB	**Yu-li**	**0.79**	**74**	⇓*i*P	**Pb**	**20 22 07.5**	**-0.1**
baz=71							
YULB				*e*S	**Sb**	**20 22 17.8**	**-0.2**
baz=71							
SMLT	**Sun Moon Lake**	**0.81**	**29**	⇑*i*P	**Pb**	**20 22 08.4**	**+0.5**
baz=28							
SMLT				*e*S	**Sn**	**20 22 20.5**	**-0.1**
baz=28							
TYC	**Yuchr**	**0.81**	**26**	⇑*i*P	**Pb**	**20 22 08.5**	**+0.6**
baz=25							
TYC				*e*S	**Sn**	**20 22 20.8**	**+0.3**
baz=25							
SCZT	**Fangliau**	**0.81**	**170**	*e*P	**Pn**	**20 22 08.4**	**-0.5**
baz=159							
SCZT				*e*S	**Sn**	**20 22 20.6**	**0.0**
baz=159							
CHKT	**Chengkung**	**0.82**	**95**	*e*P	**Pn**	**20 22 08.9**	**-0.2**
baz=93							
CHKT				*e*S	**Sn**	**20 22 21.6**	**+0.7**
baz=93							
WLCH	**Liuqiu**

EAST					eS	Sn	20 22 22.6	+0.7	
	baz=148								
PHUB	**P'eng-hu**	**0.90**	**292**		eP	Pb	20 22 08.7	-0.7	
	baz=294								
PHUB					eS	Sb	20 22 20.8	-0.2	
	baz=294								
TAW	**Tawu**	**0.90**	**154**	⇓	iP	Pn	20 22 10.1	-0.2	
	baz=148								
TAW					eS	Sn	20 22 22.7	-0.1	
	baz=148								
WCHH	**Zhanghua**	**0.90**	**5**		eP	Pb	20 22 09.8	+0.2	
	baz=4.0								
WCHH					eS	Sg	20 22 22.6	+0.8	
	baz=4.0								
HGSD	**Ruisui**	**0.93**	**70**		eP	Pn	20 22 10.6	0.0	
	baz=72								
HGSD					eS	Sn	20 22 23.6	+0.1	
	baz=72								
PNG	**Penghu**	**0.93**	**295**	⇓	P	Pb	20 22 09.4	-0.6	
	baz=297								
PNG					eS	Sb	20 22 22.0	-0.1	
	baz=297								
DPDB	**Guoxing**	**0.95**	**26**		eP	Pb	20 22 10.5	+0.2	
	baz=24								
DPDB					eS	Sg	20 22 23.9	+0.5	
	baz=24								
TCU	**Taichung**	**0.98**	**11**		eP	Pb	20 22 11.3	+0.3	
	baz=359								
TCU					eS	Sn	20 22 25.3	+0.4	
	baz=359								
EGFH	**Guangfu**	**1.00**	**61**	⇑	iP	Pn	20 22 11.8	+0.2	
	baz=45								
EGFH					eS	Sg	20 22 25.1	0.0	
	baz=45								
OWD	**Renai**	**1.01**	**40**		eP	Pg	20 22 11.8	-0.1	
	baz=28								
OWD					eS	Sg	20 22 25.5	+0.3	
	baz=28								
TWH	**Lutao**	**1.03**	**116**		P	Pn	20 22 12.0	0.0	
	baz=107								
TWH					eS	Sn	20 22 27.4	+1.4	
	baz=107								
ESL	**Shilin**	**1.08**	**54**		P	Pg	20 22 13.3	-0.1	
	baz=52								
ESL					eS	Sn	20 22 28.7	+1.3	
	baz=52								
CHGB	**Renai**	**1.09**	**36**		eP	Pb	20 22 12.9	0.0	
	baz=34								
CHGB					eS	Sg	20 22 28.0	+0.1	
	baz=34								
WDJ	**Dajia District**	**1.18**	**7**		eP	Pb	20 22 14.8	+0.5	
	baz=7.0								
WDJ					eS	Sg	20 22 31.2	+0.7	
	baz=7.0								
HEN	**Hengchun**	**1.19**	**168**		eP	Pn	20 22 14.0	-0.2	
	baz=155								
HEN					eS	Sg	20 22 34.4	+3.4	
	baz=155								
TWQ1	**Liyutan**	**1.20**	**13**	⇑	iP	Pb	20 22 15.0	+0.4	
	baz=2.0								
TWQ1					eS	Sg	20 22 31.7	+0.5	
	baz=2.0								
WHF	**Hehuan Shan**	**1.21**	**37**	⇓	iP	Pg	20 22 15.5	-0.3	
	baz=36								
WHF					eS	Sg	20 22 32.6	+0.9	
	baz=36								
TDCB	**Techi**	**1.24**	**30**	⇑	iP	Pb	20 22 15.6	+0.1	
	baz=29								
TDCB					eS	Sg	20 22 32.6	-0.1	
	baz=29								
NSY	**Sanyi**	**1.26**	**12**		P	Pb	20 22 16.2	+0.5	
	baz=12								
NSY					eS	Sg	20 22 34.9	+1.6	
	baz=12								
TWK1	**Hengchun**	**1.26**	**166**		eP	Pb	20 22 15.3	-0.4	
	baz=164								
TWK1					eS	Sg	20 22 33.8	+0.5	
	baz=164								
TWKBT	**Hengchun**	**1.27**	**166**		eP	Pn	20 22 15.3	0.0	
	baz=164								
PTSB	**Yuanli**	**1.28**	**9**		eP	Pb	20 22 16.2	+0.1	
	baz=9.0								
PTSB					eS	Sg	20 22 34.0	+0.1	
	baz=9.0								
HWA	**Hwalien**	**1.31**	**52**		eP	Pg	20 22 17.5	-0.2	
	baz=51								
HWA					eS	Sg	20 22 36.0	+1.3	
	baz=51								
TSEB	**Hengchuen, Pin**	**1.33**	**163**		eP	Pg	20 22 17.6	-0.4	
	baz=163								
TSEB					eS	Sg	20 22 36.2	+0.8	
	baz=163								
TWD	**Chiawan**	**1.37**	**49**		eP	Pb	20 22 17.6	+0.2	
	baz=56								
TWD					eS	Sg	20 22 35.9	-0.7	
	baz=56								
ETLH	**Xiulin Townshi**	**1.38**	**42**		eP	Pb	20 22 18.1	+0.4	
	baz=40								
ETLH					eS	Sg	20 22 37.0	0.0	
	baz=40								
NMLH	**Miaoli**	**1.39**	**12**		eP	Pb	20 22 17.7	-0.1	
	baz=11								
NMLH					eS	Sg	20 22 37.0	-0.2	
	baz=11								
NACB	**Ninganchiao**	**1.43**	**46**		eP	Pb	20 22 18.3	-0.2	
	baz=61								
NACB					eS	Sg	20 22 37.5	-1.0	
	baz=61								
NNSB	**Datong**	**1.50**	**34**		eP	Pn	20 22 19.4	+0.8	
	baz=32								
NNSB					eS	Sb	20 22 39.3	+0.7	
	baz=32								
NNSH	**Datong**	**1.50**	**34**		eP	Pb	20 22 19.4	-0.4	
	baz=32								
NNSH					eS	Sb	20 22 39.6	+1.0	
	baz=32								
NNS	**Nan Shan**	**1.50**	**33**		eP	Pb	20 22 19.6	-0.3	
	baz=32								
NNS					eS	Sg	20 22 40.2	-0.8	
	baz=32								
LAY	**Lan-yu**	**1.51**	**138**		eP	Pn	20 22 18.3	-0.2	
	baz=135								
LAY					eS	Sb	20 22 38.9	+0.3	
	baz=135								
NSTT	**Nanjuang**	**1.53**	**18**		eP	Pn	20 22 19.5	+0.7	
	baz=17								
NSTT					eS	Sb	20 22 39.9	+0.7	
	baz=17								
LIOB	**Emei**	**1.54**	**19**		eP	Pn	20 22 19.5	+0.4	
	baz=17								
LIOB					eS	Sb	20 22 40.7	+0.9	
	baz=17								
SBCB	**Hsinchu**	**1.68**	**16**		eP	Pn	20 22 21.6	+0.7	
	baz=15								
SBCB					eS	Sg	20 22 46.2	-0.3	
	baz=15								
NSK	**Sanguang**	**1.70**	**28**		eP	Pn	20 22 22.0	+0.8	
	baz=11								
NSK					eS	Sb	20 22 45.1	+0.8	
	baz=11								
YHNB	**Yeheng**	**1.70**	**29**		eP	Pn	20 22 21.9	+0.6	
	baz=20								
YHNB					eS	Sb	20 22 44.2	-0.2	
	baz=20								
NDT	**Datong Townshi**	**1.71**	**34**		eP	Pb	20 22 22.8	-0.5	
	baz=33								
NDT					eS	Sg	20 22 48.3	+0.8	
	baz=33								
ENTT	**Nioudou**	**1.77**	**34**		eP	Pb	20 22 23.6	-0.7	
	baz=33								
ENTT					eS	Sg	20 22 49.6	+0.3	
	baz=33								
WLTB	**Daxi**	**1.81**	**23**		eP	Pb	20 22 24.4	-0.7	
	baz=21								
WLTB					eS	Sg	20 22 50.0	-0.9	
	baz=21								
NWLT	**Wulai**	**1.85**	**30**		eP	Pn	20 22 24.2	+0.9	
	baz=30								
TWE	**Neicheng**	**1.89**	**35**		eP	Pb	20 22 26.0	-0.3	
	baz=17								
SLBB	**Yuanshan**	**1.90**	**34**		eP	Pb	20 22 25.4	-1.1	
	baz=16								
NCUH	**Zhongli**	**1.90**	**20**		eP	Pn	20 22 24.7	+0.7	
	baz=7.0								
TWC	**Suao**	**1.90**	**41**		eP	Pb	20 22 26.2	-0.3	
	baz=54								
NHDH	**Xindian Distri**	**2.02**	**28**		eP	Pn	20 22 26.3	+0.7	
	baz=12								
VWUC	**VWUC**	**2.04**	**333**		eP	Pn	20 22 25.2	-0.6	
	baz=334								
EOS1	**EOS1**	**2.04**	**48**		eP	Pb	20 22 28.4	-0.5	
	baz=44								
TWA	**Mucha**	**2.06**	**29**		eP	Pb	20 22 30.0	+0.7	
	baz=35								
NTC	**Toucheng**	**2.08**	**36**		eP	Pb	20 22 28.3	-1.3	
	baz=34								
TWS1	**Kuangyinshan**	**2.10**	**24**		eP	Pn	20 22 27.8	+1.0	
	baz=9.0								
TIPB	**Shuangxi**	**2.17**	**34**		eP	Pn	20 22 28.8	+1.0	
	baz=18								
YM04	**YM04**	**2.19**	**26**		eP	Pn	20 22 28.1	0.0	
	baz=10.0								
YM01	**YM01**	**2.20**	**27**		eP	Pn	20 22 28.8	+0.7	
	baz=12								
YM10	**YM10**	**2.21**	**26**		eP	Pn	20 22 28.6	+0.4	
	baz=12								
ANP	**Anpu**	**2.22**	**25**		eP	Pn	20 22 28.6	+0.2	
	baz=10.0								
YM03	**YM03**	**2.22**	**26**		eP	Pn	20 22 28.2	-0.2	
	baz=10.0								
YM11	**YM11**	**2.22**	**27**		eP	Pn	20 22 28.7	+0.3	
	baz=11								
PTMZ	**Houxiangcun**	**2.23**	**327**		eP	Pn	20 22 27.6	-0.9	
	baz=327								
NWF	**Wu-fen Shan**	**2.23**	**32**		eP	Pb	20 22 31.8	-0.5	
	baz=31								
WFSB	**Wu-fen Shan**	**2.23**	**32**		eP	Pb	20 22 31.1	-1.1	
	baz=31								
KNM	**Kinmen**	**2.24**	**304**		eP	Pn	20 22 29.2	+0.6	
	baz=302								
YM08	**YM08**	**2.25**	**27**		eP	Pn	20 22 28.3	-0.5	
	baz=12								
KNMB	**Chin-men Tao**	**2.30**	**304**		eP	Pn	20 22 29.2	-0.2	
	baz=304								
TWY	**Chenhua**	**2.33**	**26**		eP	Pn	20 22 30.8	+1.0	
	baz=11								
PTTC	**Pingtan**	**2.40**	**345**		eP	Pn	20 22 30.3	-0.5	
	baz=347								
QZH	**Quanzhou**	**2.46**	**316**		Pn	Pn	20 22 31.3	-0.4	
QZH					Sn	Sn	20 22 58.8	-2.5	
QZH					smax	smax			
	comp=N,140nm,0.4s								
QZH					smax	smax			
	comp=E,120nm,0.3s								
JYNG	**Yonagunijimaku**	**2.59**	**60**		P	Pn	20 22 35.4	+1.9	
JYNG					S	Sn	20 23 06.8	+2.2	
ZPLA	**Ao Xicun**	**2.61**	**287**		eP	Pn	20 22 33.0	-0.7	
	baz=287								
YOJ	**Yonaguni jima**	**2.65**	**61**		eP	Pn	20 22 35.9	+1.6	
	baz=56								
YOJ	**Yonaguni jima**	**2.65**	**61**		P	Pn	20 22 36.3	+2.0	
YOJ					S	Sn	20 23 08.7	+2.7	
PCYT	**Pengchaiyu**	**2.84**	**30**		eP	Pn	20 22 35.4	-1.5	
	baz=30								
AXDP	**Jialang**	**2.86**	**307**		eP	Pn	20 22 36.8	-0.4	
	baz=307								
MATB	**Ma-tsu**	**3.00**	**351**		eP	Pn	20 22 38.5	-0.6	
	baz=353								
HATJ	**Hateruma jima**	**3.18**	**73**		P	Pn	20 22 43.4	+1.9	
HATJ					S	Sn	20 23 20.9	+1.9	
MHZQ	**Yeshan**	**3.19**	**336**		eP	Pn	20 22 41.5	-0.3	
	baz=338								
IRIF	**Iriomote-Funau**	**3.20**	**68**		P	Pn	20 22 44.1	+2.3	
IRIF					S	Sn	20 23 21.9	+2.4	
JKRS	**Kuro-shima**	**3.41**	**71**		P	Pn	20 22 47.1	+2.4	
JKRS					S	Sn	20 23 28.2	+3.5	
LYJJ	**Jianjiangzhen**	**3.42**	**349**		eP	Pn	20 22 44.6	-0.3	
	baz=352								
JIJ	**Ishigaki jima**	**3.56**	**70**		P	Pn	20 22 48.1	+1.3	
JIJ					S	Sn	20 23 29.6	+1.1	
XPSS	**Dashiqiu**	**3.75**	**356**		eP	Pn	20 22 48.6	-0.7	
	baz=358								
JISG	**Ishigakijimahi**	**3.78**	**67**		P	Pn	20 22 50.8	+1.0	
JISG					S	Sn	20 23 34.5	+0.6	
JTJ	**Tarama**	**4.13**	**69**		P	Pn	20 22 56.4	+1.7	
JTJ					S	Sn	20 23 45.8	+3.2	
JIRB	**Irabujima**	**4.60**	**68**		eS	Sn	20 23 55.8	+1.7	
JMJ2	**Miyako jima3**	**4.70**	**70**		eS	Sn	20 23 56.9	+0.2	
KLR	**Kul'dur**	**27.48**	**16**		LR	LR	20 38 36.1		
	comp=E,30nm,18.5s,baz=163,slow=36								
ASAJ	**Asahikawa**	**27.69**	**36**		LR	LR	20 39 17.3		
	comp=E,17nm,18.7s,baz=107,slow=38								
LEM	**Lembang**	**32.36**	**204**		LR	LR	20 40 16.1		
	comp=E,61nm,19.4s,baz=257,slow=34								
WRA	**Warramunga Arr**	**44.94**	**161**		P	P	20 30 04.6	-1.9	
	comp=E,0.6nm,0.8s,baz=343,slow=8.6,SNR=5.8								
ASAR	**Alice Springs**	**48.36**	**163**		P	P	20 30 31.8	-1.5	
	comp=E,0.2nm,0.5s,baz=345,slow=6.7,SNR=5.7								
ASAR					PcP	PcP	20 31 58.1	-1.7	
	comp=E,0.2nm,0.8s,baz=343,slow=2.9,SNR=1.7								
YKA	**Yellowknife Ar**	**84.14**	**23**		P	P	20 34 21.9	-0.3	
	comp=E,0.4nm,0.5s,baz=314,slow=4.4,SNR=7.3								

IDC ***15*** *20:23:19.2±2.9, 35.96N×97.28W, h0km, mb3.1/1, mb1 3.6/4, mb1mx3.3/42, mbtmp3.2/4, ML3.7/3, MS2.6/1, Ms1 2.6/1, ms1mx2.1/18, Error ellipse: s-maj=36.7km s-min=17.5km az=92.0*

TUL ***15*** *20:23:21.3±1.9, 35.78N±0.04×97.48W±0.04, h7km±6km, ML3.4, Mwr3.4/15(SLM), Error ellipse: s-maj=6.2km s-min=3.7km az=220.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr0.09; Mθθ1.14; Mϕϕ-1.22; Mrθ-0.32; Mθϕ0.73; Mϕr-0.10;*

NEIC ***15*** *20:23:21.6±2.5, 35.76N±0.03×97.46W±0.05, h5km±2km Error ellipse: s-maj=7.2km s-min=4.3km az=53.0*

ANF ***15*** *20:23:23.9±1.3, 35.71N×97.46W, h21km±11km, ML4.3/10, Error ellipse: s-maj=5.1km s-min=4.0km az=161.0*

ISC 15 20:23:21.4±0.9, 35.82N±0.03×97.44W±0.03, h9km±7km, n56, σ1839/64, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADOK	**Arcadia Dam**	**0.17**	**160**		**Pg**	**20 23 24.8**	**-0.3**
ADOK				Sg	**Sg**	20 23 27.3	-0.3
OK009	**Oakdale Elemen**	**0.24**	**176**	Pg	**Pg**	**20 23 25.6**	**-0.6**
OK009				Sg	**Sg**	20 23 28.9	-0.5
OK001	**Jones High Sch**	**0.28**	**154**	Pg	**Pg**	**20 23 26.9**	**-0.2**
OKCFA	**Oklahoma City**	**0.40**	**181**		**Pg**	**20 23 28.4**	**-0.8**
W35A	**Tecumseh**	**0.81**	**145**		**Pg**	**20 23 36.1**	**-0.8**
T35A	**Sooner Cattle**	**1.33**	**34**		**Pn**	**20 23 46.4**	**+0.3**
TUL1	**Leonard**	**1.34**	**86**	P	**Pn**	**20 23 46.0**	**-0.3**
	baz=266						
TUL1				S	**Sb**	**20 24 04.8**	**+0.8**
	baz=266						
TUL1	**Leonard**	**1.34**	**86**		**Pn**	**20 23 45.8**	**-0.5**
U32A	**Winter Ranch,**	**1.38**	**294**	Pn	**Pn**	**20 23 46.3**	**-0.6**
WMOK	**Wichita Mounta**	**1.54**	**226**	P	**Pn**	**20 23 48.2**	**-0.8**
	baz=45						
WMOK				S	**Sn**	**20 24 07.9**	**-1.1**
	baz=45						
WMOK	**Wichita Mounta**	**1.54**	**226**	Pn	**Pn**	**20 23 48.1**	**-0.8**
X37A	**Clayton**	**2.09**	**125**		**Pn**	**20 23 57.1**	**+0.5**
Z35A	**Perchaven, San**	**2.48**	**176**		**Pn**	**20 24 02.2**	**+0.3**
U38A	**Gravette**	**2.55**	**75**		**Pn**	**20 24 04.2**	**+1.3**
R32A	**Long Quarter,**	**2.79**	**339**		**Pn**	**20 24 08.1**	**+1.8**
HHAR	**Hobbs**	**2.88**	**80**		**Pn**	**20 24 07.6**	**+0.2**
W39A	**Magazine**	**3.05**	**101**	P	**Pn**	**20 24 10.8**	**+1.1**
	baz=282						
W39A				S	**Sn**	**20 24 47.7**	**+1.4**
	baz=282						
W39A	**Magazine**	**3.05**	**101**		**Pn**	**20 24 10.5**	**+0.8**
Z38A	**Mt. Pleasant**	**3.26**	**141**	Pn	**Pn**	**20 24 12.8**	**+0.2**
KSU1	**Kansas State U**	**3.34**	**11**	Sb	**Sg**	**20 25 08.0**	**-0.8**
	baz=192						
KSU1	**Kansas State U**	**3.34**	**11**	Pn	**Pn**	**20 24 15.3**	**+1.5**
MIAR	**Mount Ida**	**3.41**	**111**	P	**Pn**	**20 24 16.6**	**+1.9**
	baz=292						
MIAR				S	**Sn**	**20 24 57.6**	**+2.3**
	baz=292						
MIAR	**Mount Ida**	**3.41**	**111**		**Pn**	**20 24 15.4**	**+0.7**
CBKS	**Cedar Bluff**	**3.51**	**329**	P	**Pn**	**20 24 19.4**	**+3.4**
	baz=149						
CBKS				Sb	**Sg**	**20 25 13.0**	**-0.9**
	baz=149						
AMTX	**Amarillo**	**3.59**	**256**	P	**Pn**	**20 24 18.8**	**+1.6**
	baz=74						
ABTX	**Abilene, Hawle**	**3.67**	**210**		**Pn**	**20 24 17.1**	**-1.2**
U40A	**Yellville**	**3.76**	**80**		**Pn**	**20 24 19.0**	**-0.5**
WHTX	**Lake Whitney,**	**3.82**	**180**	Sb	**Sb**	**20 25 16.0**	**+0.9**
	baz=360						
WHTX	**Lake Whitney,**	**3.82**	**180**		**Pn**	**20 24 18.6**	**-1.7**
X40A	**Basin Creek Fa**	**4.00**	**108**	P	**Pn**	**20 24 24.2**	**+1.3**
	baz=290						
X40A	**Basin Creek Fa**	**4.00**	**108**	Pn	**Pn**	**20 24 22.3**	**-0.5**
237A	**Washetta, Mont**	**4.04**	**160**		**Pn**	**20 24 22.1**	**-1.2**
WLAR	**White Oak Lake**	**4.15**	**120**		**Pn**	**20 24 23.8**	**-1.1**
WHAR	**Wooly Hollow**	**4.24**	**96**		**Pn**	**20 24 26.4**	**+0.3**
W41B	**Gary Mavity, V**	**4.29**	**97**	P	**Pn**	**20 24 27.7**	**+1.0**
	baz=280						
W41B				Sb	**Sg**	**20 25 35.1**	**-4.0**
	baz=280						
UALR	**University of**	**4.30**	**103**		**Pn**	**20 24 24.9**	**-2.0**
FCAR	**Ozark Folk Cen**	**4.32**	**87**	Pn	**Pn**	**20 24 25.1**	**-2.1**
MSTX	**Muleshoe**	**4.75**	**249**		**Pn**	**20 24 31.2**	**-2.1**
R40A	**Maddies Statio**	**4.82**	**58**		**Pn**	**20 24 33.1**	**-0.9**
P38A	**Dawn**	**4.91**	**38**		**Pn**	**20 24 35.7**	**+0.5**
LCAR	**Lake Charles**	**5.11**	**85**	Pn	**Pn**	**20 24 38.6**	**+0.6**
KSCO	**Kaye Shedlock'**	**5.21**	**309**		**Pb**	**20 24 53.7**	**+1.0**
P40A	**Paris**	**5.66**	**47**		**Pb**	**20 25 04.0**	**+3.7**
JCT	**Junction City**	**5.68**	**201**		**Pb**	**20 25 01.2**	**+0.6**
SDCO	**Great Sand Dun**	**6.75**	**289**		**Pn**	**20 25 01.8**	**+1.0**
SCIA	**State Center**	**6.92**	**27**		**Pg**	**20 25 31.2**	**-2.6**
ANMO	**Albuquerque**	**7.41**	**266**	Pg	**Pb**	20 25 35.3	+5.1
	0.2nm,0.3s,baz=103,slow=10,SNR=4.1						
ANMO				Lg	Lg	20 27 14.2	
	0.7nm,0.3s,baz=351,slow=11,SNR=3.8						
MNTX	**Cornudas Mount**	**7.78**	**240**		**Pn**	**20 25 14.2**	**-0.5**
TX31	**Lajitas Ar. Si**	**8.33**	**221**	Pn	**Pn**	**20 25 21.7**	**-0.6**
TXAR	**Lajitas Array**	**8.33**	**221**	Pn	**Pn**	**20 25 22.8**	**+0.4**
	0.1nm,0.3s,baz=48,slow=11,SNR=2.4						
TXAR				Pg	**Pb**	**20 25 46.6**	**+0.9**
	0.3nm,0.3s,baz=42,slow=13,SNR=4.5						
TXAR				Lg	Lg	20 27 39.2	
	1.3nm,0.3s,baz=37,slow=25,SNR=4.9						
TXAR				LR	LR	20 28 52.0	
	comp=Z,40nm,21.8s,baz=0.0,slow=39						
TXAR	**Lajitas Array**	**8.33**	**221**		**Pn**	**20 25 22.5**	**+0.2**
L42A	**Oliver, Polo**	**8.65**	**42**		**Pn**	**20 25 26.8**	**+0.2**
PDAR	**Pinedale Array**	**11.67**	**310**	Pn	**Pn**	**20 26 08.5**	**+0.3**
	0.1nm,0.3s,baz=124,slow=13,SNR=3.6						
PDAR				Pg		20 26 52.8	
	0.1nm,0.3s,baz=111,slow=15,SNR=1.8						
PDAR				Lg	Lg	20 29 21.4	
	0.1nm,0.3s,baz=119,slow=26,SNR=3.3						
NVAR	**Mina Array Bea**	**16.84**	**285**	Pn	**P**	**20 27 19.9**	**+0.3**
	0.7nm,0.3s,baz=126,slow=12,SNR=9.5						
PSUB	**Penn St. - Bra**	**17.83**	**70**	Pn	**Pn**	**20 27 28.6**	**-1.0**
ILAR	**Eielson Array**	**41.16**	**330**	P	**P**	**20 31 02.8**	**-2.8**
	0.2nm,0.7s,baz=109,slow=9.6,SNR=2.1						

IDC 15 20:56:52.8±4.6, 4.99S×152.83E, h49km±40km, mb3.1/3, mb1 3.4/3, mb1mx3.1/40, mbtmp3.3/3, Error ellipse: s-maj=48.3km s-min=26.9km az=106.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.05**	**310**	P	Pn	20 57 11.1	-0.1
	60nm,0.3s,baz=141,slow=2.4,SNR=36						
KRVT				LR	LR	20 57 24.9	
	comp=Z,22nm,19.8s,baz=117,slow=31						
KRVT				S	Sn	20 57 25.1	+0.4
	159nm,0.3s,baz=139,slow=19,SNR=9.9						
WRA	**Warramunga Arr**	**23.34**	**229**	P	P	21 01 55.3	-1.7
	0.4nm,0.5s,baz=53,slow=9.7,SNR=2.4						
ASAR	**Alice Springs**	**26.03**	**223**	P	P	21 02 22.8	+1.2
	0.2nm,0.5s,baz=59,slow=8.3,SNR=4.3						
ILAR	**Eielson Array**	**82.33**	**22**	P	P	21 09 08.8	-0.2
	0.3nm,0.8s,baz=250,slow=5.3,SNR=3.3						
TORD	**Torodi Ar. Bea**	**150.39**	**288**	PKPbc	PKPbc	21 16 39.7	-0.2
	0.2nm,0.4s,baz=90,slow=1.8,SNR=5.1						

IDC 15 21:10:53.7±0.8, 19.19N×121.39E, h0km, mb3.7/10, mb1 3.9/12, mb1mx3.6/47, mbtmp3.7/12, ML3.6/2, Error ellipse: s-maj=30.9km s-min=17.0km az=66.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNU	**Nakatsue**	**16.27**	**30**	Pn	Pn	21 14 44.5	+0.8
	0.2nm,0.3s,baz=252,slow=6.4,SNR=2.1						
KSRS	**Korea Array**	**19.07**	**16**	P	P	21 15 17.1	-0.7
	0.2nm,0.3s,baz=196,slow=12,SNR=4.2						
CMAR	**Chiang Mai Arr**	**21.26**	**272**	P	P	21 15 41.5	-0.3
	0.7nm,0.7s,baz=81,slow=9.2,SNR=6.3						
WRA	**Warramunga Arr**	**40.91**	**161**	P	P	21 18 37.7	-0.3
	0.4nm,0.5s,baz=344,slow=9.1,SNR=17						
MKAR	**Makanchi Array**	**42.16**	**320**	P	P	21 18 47.9	-0.1
	1.0nm,0.8s,baz=122,slow=8.1,SNR=6.7						
MKAR	**Makanchi Array**	**42.16**	**320**	P	P	21 18 48.0	0.0
H11S3	**WAKE ISLAND Hy**	**42.78**	**83**	T	T	22 04 47.1	
	baz=279,slow=75						
H11S1	**WAKE ISLAND Hy**	**42.79**	**83**	T	T	22 04 42.9	
	baz=279,slow=75						
H11S2	**WAKE ISLAND Hy**	**42.80**	**83**	T	T	22 04 44.3	
	baz=279,slow=75						
H11N1	**WAKE ISLAND Hy**	**42.80**	**81**	T	T	22 04 42.0	
	baz=277,slow=75						
H11N2	**WAKE ISLAND Hy**	**42.81**	**81**	T	T	22 04 48.9	
	baz=277,slow=75						
H11N3	**WAKE ISLAND Hy**	**42.82**	**81**	T	T	22 04 45.1	
	baz=277,slow=75						
ASAR	**Alice Springs**	**44.31**	**163**	P	P	21 19 05.7	+0.1
	0.6nm,0.8s,baz=349,slow=7.3,SNR=13						
ZALV	**Zalesovo Beam**	**44.59**	**330**	P	P	21 19 08.1	+0.6
	0.2nm,0.2s,baz=108,slow=5.2,SNR=2.1						
AAK	**Ala-Archa**	**45.81**	**311**	P	P	21 19 18.6	+1.0
	0.3nm,0.3s,baz=176,slow=14,SNR=1.2						
KURBB	**Kurchatov Arra**	**46.12**	**323**	P	P	21 19 19.2	-0.5
	1.3nm,0.7s,baz=122,slow=7.7,SNR=13						
BVAR	**Borovoye Array**	**51.71**	**323**	P	P	21 20 02.8	+0.2
	0.3nm,0.6s,baz=116,slow=11,SNR=1.9						
ARCES	**ARCESS Array B**	**74.23**	**339**	P	P	21 22 30.7	-1.5
	2.1nm,0.9s,baz=54,slow=8.1,SNR=1.1						
YKA	**Yellowknife

	26nm,0.3s,baz=350,slow=17,SNR=1.3							
TATO	**Taipei**	**5.42**	**2**	Pn	Pn	21 12 18.8	-7.0	
KNMB	**Chin-men Tao**	**5.61**	**332**	Pn	Pn	21 12 22.8	-5.6	
LUBP	**Lubang**	**5.85**	**190**	*eP*	**Pn**	**21 12 32.3**	**+0.5**	
LUBP				*eS*	**Sn**	**21 13 43.9**	**+5.0**	
PGP	**Puerto Galera**	**6.00**	**183**	*eP*	Pn	21 12 39.8	+6.0	
PVCP	**Virac**	**6.50**	**155**	*eP*	**Pn**	**21 12 41.4**	**+0.8**	
HKPS	**Hong Kong Po S**	**7.25**	**293**		**Pn**	**21 12 47.2**	**-3.7**	
JOW	**Kunigami**	**9.68**	**40**	Pn	**Pn**	**21 13 26.4**	**+2.1**	
	0.2nm,0.3s,baz=325,slow=17,SNR=2.2							
JOW	**Kunigami**	**9.68**	**40**	Pn	Pn	21 13 14.1	-10	
QIZ	**Qiongzhong**	**10.85**	**269**	Pn	**Pn**	**21 13 37.9**	**-2.5**	
WHN	**Wuhan**	**12.65**	**331**	⇑P	**Pn**	**21 14 06.8**	**+1.9**	
WHN				LR	LR			
	comp=N,2μm,17.2s							
WHN				LR	LR			
	comp=E,790nm,16.6s							
WHN				LR	LR			
	comp=Z,2μm,17.8s							
JNU	**Nakatsue**	**16.01**	**30**	Pn	**P**	**21 14 53.5**	**-0.3**	
	0.2nm,0.3s,baz=194,slow=14,SNR=3.9							
KSRS	**Korea Array**	**18.77**	**17**	P	**Pn**	**21 15 27.1**	**+2.6**	
	0.8nm,0.3s,baz=198,slow=12,SNR=9.3							
SBUM	**Sibu**	**19.16**	**209**	P	**P**	**21 15 28.6**	**-0.1**	
INU	**Inuyama**	**20.99**	**38**		Pn	21 15 54.3	+3.3	
CMAR	**Chiang Mai Arr**	**21.18**	**271**	P	**P**	**21 15 51.5**	**+0.8**	
	2.0nm,0.7s,baz=74,slow=9.3,SNR=15							
CMAR				PcP	**PcP**	**21 19 55.1**	**-1.3**	
	0.9nm,0.8s,baz=131,slow=0.7,SNR=6.2							
TTSI	**Tana Toraja**	**22.48**	**184**	P	**P**	**21 16 04.6**	**+0.1**	
	16nm,1.0s							
SIJI	**Sorong**	**22.50**	**153**	P	**P**	**21 16 05.0**	**+0.2**	
	12nm,0.7s,baz=332,slow=6.6,SNR=11							
MJAR	**Matsushiro Arr**	**22.51**	**38**	P	**P**	**21 16 07.2**	**+2.4**	
	3.7nm,0.9s,baz=231,slow=12,SNR=6.7							
MJAR				LR	LR	21 24 15.8		
	comp=Z,85nm,21.9s,baz=245,slow=35							
SPSI	**Sidrap Palu**	**23.39**	**184**	P	**P**	**21 16 14.9**	**+0.9**	
	17nm,0.9s							
AAI	**Ambon**	**24.04**	**163**	P	**P**	**21 16 19.0**	**-1.3**	
	103μm2μm48nm,0.6s							
KAPI	**Kappang**	**24.44**	**184**	P	**P**	**21 16 21.6**	**-2.3**	
	4.4nm,0.6s,baz=292,slow=18,SNR=1.4							
FAKI	**Fak Fak**	**24.76**	**153**	P	**P**	**21 16 25.6**	**-1.3**	
	17nm,1.2s							
USRK	**Ussuriysk Ar.**	**26.17**	**18**	P	**P**	**21 16 42.2**	**+2.8**	
	2.8nm,0.9s,baz=187,slow=10.0,SNR=3.7							
SOEI	**Soe**	**29.24**	**174**		**PcP**	**21 20 12.3**	**-2.2**	
BATI	**Baumata**	**29.64**	**175**	P	**P**	**21 17 08.0**	**-2.7**	
	9.7nm,0.5s,baz=155,slow=2.3,SNR=3.8							
SONM	**Songino Array**	**30.73**	**340**	P	**P**	**21 17 23.6**	**+3.4**	
	1.2nm,0.7s,baz=165,slow=11,SNR=3.0							
PSA00	**Pilbara Seismi**	**40.87**	**182**	P	**P**	**21 18 44.8**	**-2.4**	
PSA00				IAmb	IAmb	21 18 46.0		
	comp=Z,18nm,0.8s							
WB0	**Warramunga Arr**	**41.10**	**161**	P	**P**	**21 18 47.0**	**-2.1**	
WB0				IAmb	IAmb	21 18 50.4		
	comp=Z,4.0nm,1.0s							
WRA	**Warramunga Arr**	**41.25**	**161**	P	**P**	**21 18 47.5**	**-2.8**	
	comp=Z,2.0nm,0.4s,baz=347,slow=8.7,SNR=33							
WRA				PcP	**PcP**	**21 20 49.2**	**-0.1**	
	comp=Z,2.0nm,0.8s,baz=343,slow=3.7,SNR=6.9							
WRA	**Warramunga Arr**	**41.25**	**161**	P	**P**	**21 18 47.0**	**-3.4**	
WB2	**Warramunga Arr**	**41.25**	**161**	P	**P**	**21 18 48.4**	**-2.0**	
WB2				IAmb	IAmb	21 18 51.6		
	comp=Z,9.0nm,1.1s							
WR0	**Warramunga Arr**	**41.33**	**161**	P	**P**	**21 18 49.5**	**-1.5**	
WR0				IAmb	IAmb	21 18 50.8		
	comp=Z,8.5nm,1.1s							
MKAR	**Makanchi Array**	**41.85**	**320**	P	**P**	**21 18 57.4**	**+2.2**	
	comp=Z,2.4nm,0.8s,baz=120,slow=9.2,SNR=13							
MKAR				PcP	**PcP**	**21 20 50.6**	**-0.3**	
	comp=Z,1.0nm,1.1s,baz=92,slow=5.6,SNR=1.3							
KSH	**Kashi**	**43.67**	**307**	P	**P**	**21 19 05.9**	**-4.2**	
KSH				pP	pP	21 19 09.1	-3.5	
KSH				sP	sP	21 19 11.6	-2.0	
KSH				pmax	pmax			
	comp=Z,12nm,1.1s							
KSH				pmax	pmax			
	comp=Z,160nm,4.2s							
PETK	**Petropavlovsk-**	**43.70**	**31**	P	**P**	**21 19 12.0**	**+1.9**	
	comp=Z,3.3nm,0.8s,baz=298,slow=3.2,SNR=5.8							
ZALV	**Zalesovo Beam**	**44.26**	**330**	P	**P**	**21 19 16.8**	**+2.3**	
	comp=Z,0.6nm,0.5s,baz=116,slow=9.8,SNR=4.9							
AS31	**Alice Springs**	**44.65**	**163**	P	**P**	**21 19 16.8**	**-1.1**	
ASAR	**Alice Springs**	**44.65**	**163**	P	**P**	**21 19 16.1**	**-1.9**	
	comp=Z,3.1nm,0.6s,baz=345,slow=6.9,SNR=26							
ASAR				PcP	**PcP**	**21 21 00.6**	**0.0**	
	comp=Z,0.6nm,0.7s,baz=339,slow=3.6,SNR=2.7							
KURBB	**Kurchatov Arra**	**45.81**	**323**	P	**P**	**21 19 28.6**	**+1.8**	
	comp=Z,2.8nm,0.7s,baz=121,slow=7.7,SNR=17							
MORW	**Morawa**	**48.58**	**186**	P	**P**	**21 19 46.9**	**-1.8**	
MORW				IAmb	IAmb	21 19 48.2		
	comp=Z,10nm,0.8s							
FORT	**Forrest**	**50.44**	**172**	P	**P**	**21 19 59.9**	**-2.8**	
BVAR	**Borovoye Array**	**51.40**	**323**	P	**P**	**21 20 11.8**	**+2.0**	
	comp=Z,0.4nm,0.6s,baz=106,slow=11,SNR=3.5							
BVAR				PcP	**PcP**	**21 21 25.3**	**+1.0**	
	comp=Z,0.6nm,0.8s,baz=149,slow=3.4,SNR=2.1							
NWAO	**Narrogin (SRO)**	**52.30**	**184**	P	**P**	**21 20 15.5**	**-1.2**	
	comp=Z,11nm,0.7s,baz=2.7,slow=6.6,SNR=9.9							
NWAO	**Narrogin (SRO)**	**52.30**	**184**	P	**P**	**21 20 14.2**	**-2.5**	
NWAO				IAmb	IAmb	21 20 15.9		
	comp=Z,20nm,1.1s							
NWAO	**Narrogin (SRO)**	**52.30**	**184**	P	**P**	**21 20 13.9**	**-2.8**	
NWAO				IAmb	IAmb	21 20 16.0		
	comp=Z,25nm,1.1s							
BBOO	**Buckleboo**	**53.92**	**165**	P	**P**	**21 20 26.1**	**-2.5**	
STKA	**Stephens Creek**	**54.68**	**159**	P	**P**	**21 20 32.4**	**-1.8**	
	comp=Z,3.7nm,0.7s,baz=328,slow=7.0,SNR=9.3							
STKA	**Stephens Creek**	**54.68**	**159**	P	**P**	**21 20 31.7**	**-2.5**	
ILAR	**Eielson Array**	**73.29**	**27**	P	**P**	**21 22 37.1**	**+0.8**	
	comp=Z,0.5nm,0.6s,baz=262,slow=6.1,SNR=5.2							
BMAR	**Burnt Mountain**	**73.71**	**24**	P	P	21 22 32.0	-6.7	
ARCES	**ARCESS Array B**	**73.89**	**339**	P	**P**	**21 22 40.4**	**+0.6**	
	comp=Z,2.3nm,0.9s,baz=61,slow=7.3,SNR=3.9							
FINES	**FINESS Array B**	**75.52**	**330**	P	**P**	**21 22 50.7**	**+1.4**	
	comp=Z,2.9nm,1.0s,baz=60,slow=5.6,SNR=2.4							
BSWZ	**Blackbirch Sta**	**77.93**	**143**		pwP	21 23 14.3	+8.3	
NOA	**NORSAR Array B**	**82.39**	**333**	P	**P**	**21 23 28.3**	**+1.2**	
	comp=Z,0.7nm,0.8s,baz=63,slow=5.1,SNR=2.0							
YKA	**Yellowknife Ar**	**87.19**	**23**	P	**P**	**21 23 53.0**	**+1.8**	
	comp=Z,5.6nm,0.8s,baz=315,slow=4.3,SNR=26							

TAP 15 21:11:25.4,21.42N×120.89E,h70km,ML2.7,C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TSEB	**Hengchuen, Pin**	**0.48**	**2**	P		Pn	21 11 38.5	+0.5
	baz=351							
TSEB				*eS*		Sn	21 11 48.8	+1.5
	baz=351							
TWKBT	**Hengchun**	**0.53**	**353**	P		Pn	21 11 38.8	+0.3
	baz=350							
TWKBT				S		Sn	21 11 48.6	+0.5
	baz=350							
TWK1	**Hengchun**	**0.53**	**352**	P		Pn	21 11 38.9	+0.4
	baz=350							
TWK1				S		Sn	21 11 48.9	+0.8
	baz=350							
HEN	**Hengchun**	**0.60**	**347**	*eP*		Pn	21 11 39.9	+0.6
	baz=340							
HEN				*eS*		Sn	21 11 50.2	+0.8
	baz=340							
LAY	**Lan-yu**	**0.88**	**45**	*eP*		Pn	21 11 43.5	+1.1
	baz=45							
TAW	**Tawu**	**0.94**	**1**	P		Pn	21 11 43.8	+0.7
	baz=353							
EAST	**Anshuo**	**0.96**	**358**	P		Pn	21 11 44.3	+0.9
	baz=359							
SCZT	**Fangliau**	**0.98**	**346**	P		Pn	21 11 44.6	+0.9
	baz=349							
ECL	**Taimali**	**1.18**	**3**	*eP*		Pn	21 11 47.8	+1.7
	baz=12							
MASBT	**Mashibuluo**	**1.21**	**349**	P		Pn	21 11 47.6	+1.0
	baz=354							
SSD	**Sandimen**	**1.34**	**350**	*eP*		Pn	21 11 49.4	+1.0
	baz=341							
TWH	**Lutao**	**1.40**	**23**	*eP*		Pn	21 11 49.5	+0.5
	baz=31							
SLGT	**Liugui**	**1.58**	**352**	*eP*		Pn	21 11 53.0	+1.5
	baz=342							
SGST	**Jiashian**	**1.68**	**350**	*eP*		Pn	21 11 53.7	+0.9
	baz=341							
STYT	**Tauyuan**	**1.74**	**356**	*eP*		Pn	21 11 55.4	+1.7
	baz=356							
ELDTW	**Lidau**	**1.77**	**4**	*eP*		Pn	21 11 56.4	+2.3
	baz=9.0							
CHN1	**Nanshi**	**1.79**	**349**	*eP*		Pn	21 11 55.8	+1.5
	baz=339							
FULB	**Fuli**	**1.81**	**12**	*eP*		Pn	21 11 55.7	+1.1
	baz=12							
WTP	**Ta-pu**	**1.84**	**352**	*eP*		Pn	21 11 56.3	+1.4
	baz=342							
TWK	**Hsinying**	**1.88**	**349**	*eP*		Pn	21 11 56.7	+1.2
	baz=339							
TPUB	**Ta-pu**	**1.89**	**353**	*eP*		Pn	21 11 56.8	+1.2
	baz=343							
TPUB	**Ta-pu**	**1.89**	**353**			Pn	21 11 57.0	+1.4
CHN4	**Tsaushan**	**1.94**	**352**	*eP*		Pn	21 11 57.7	+1.3
	baz=343							

TAP 15 21:12:03.7,21.74N×120.98E,h42km,ML3.6,D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TSEB	**Hengchuen, Pin**	**0.17**	**335**	*eP*		Pn	21 12 10.3	-0.8
	baz=324							
TSEB				*eS*		Sn	21 12 18.3	+2.1
	baz=324							
TWKBT	**Hengchun**	**0.25**	**322**	*eP*		Pn	21 12 12.2	+0.5
	baz=322							
TWKBT				*eS*		Sn	21 12 18.0	+0.7
	baz=322							
TWK1	**Hengchun**	**0.26**	**321**	P		Pn	21 12 12.0	+0.2
	baz=322							
TWK1				S		Sn	21 12 17.9	+0.6
	baz=322							
HEN	**Hengchun**	**0.34**	**320**	*eP*		Pn	21 12 13.0	+0.4
	baz=320							
HEN				*eS*		Sn	21 12 19.7	+0.8
	baz=320							
EAST	**Anshuo**	**0.65**	**349**	*eP*		Pn	21 12 17.1	+0.5
	baz=350							
EAST				*eS*		Sn	21 12 27.9	+2.2
	baz=350							
SCZT	**Fangliau**	**0.71**	**332**	*eP*		Pn	21 12 17.9	+0.6
	baz=332							
SCZT				*eS*		Sn	21 12 27.5	+0.4
	baz=332							
WLCH	**Liuqiu**	**0.82**	**318**	*eP*		Pn	21 12 19.5	+0.6
	baz=317							
WLCH				*eS*		Sn	21 12 31.1	+1.2
	baz=317							
TWP	**Hsiaoliuchiu**	**0.83**	**317**	*eS*		Sn	21 12 31.3	+1.3
	baz=316							
SSPT	**Xinbi**	**0.83**	**333**	*eP*		Pn	21 12 20.0	+1.0
	baz=332							
SSPT				*eS*		Sn	21 12 32.0	+1.9
	baz=332							
MASBT	**Mashibuluo**	**0.92**	**340**	*eP*		Pn	21 12 21.0	+0.8
	baz=339							
MASBT				*eS*		Sn	21 12 33.2	+0.8
	baz=339							
SSD	**Sandimen**	**1.05**	**342**	*eP*		Pn	21 12 22.9	+0.9
	baz=342							
SSD				*eS*		Sn	21 12 36.5	+1.0
	baz=342							
TWH	**Lutao**	**1.07**	**26**	*eP*		Pn	21 12 22.9	+0.6
	baz=26							
TWH				*eS*		Sn	21 12 36.2	+0.3
	baz=26							
SGLT	**Jiouru**	**1.08**	**335**	*eP*		Pn	21 12 23.4	+1.1
	baz=335							
SGLT				*eS*		Sn	21 12 37.5	+1.4
	baz=335							
TWG	**Pinlang**	**1.08**	**5**	*eP*		Pn	21 12 22.8	+0.4
	baz=5.0							
TWG				*eS*		Sn	21 12 36.8	+0.7
	baz=5.0							
SNJT	**Kaohsiung City**	**1.17**	**330**	*eP*		Pn	21 12 24.1	+0.5
	baz=329							
SNJT				*eS*		Sn	21 12 39.6	+1.2
	baz=329							
SLGT	**Liugui**	**1.28**	**346**	*eS*		Sn	21 12 42.7	+1.5
	baz=346							
SGST	**Jiashian**	**1.38**	**345**	*eP*		Pn	21 12 27.5	+1.0
	baz=344							
SGST				*eS*		Sn	21 12 44.4	+0.8
	baz=344							
STYT	**Tauyuan**	**1.43**	**352**	*eP*		Pn	21 12 28.1	+0.9
	baz=352							
STYT				*eS*		Sn	21 12 46.8	+2.0
	baz=352							
ELDTW	**Lidau**	**1.44**	**1**	*eP*		Pn	21 12 28.0	+0.6
	baz=1.0							
ELDTW				*eS*		Sn	21 12 47.1	+1.9
	baz=1.0							
CHN3	**Shinhua**	**1.44**	**337**	*eS*		Sn	21 12 47.7	+2.6
	baz=336							
CHN1	**Nanshi**	**1.50**	**344**	*eS*		Sn	21 12 47.4	+1.0
	baz=343							
WTP	**Ta-pu**	**1.53**	**347**	*eP*		Pn	21 12 29.8	+1.1
	baz=347							
WTP				*eS*		Sn	21 12 48.5	+1.1
	baz=347							
SNST	**Tainan City**	**1.54**	**343**	*eP*		Pn	21 12 29.7	+1.0
	baz=343							
SNST				*eS*		Sn	21 12 48.3	+0.9
	baz=343							
TPUB	**Ta-pu**	**1.58**	**348**	*eS*		Sn	21 12 49.5	+0.9
	baz=348							
SCLT	**Jiali**	**1.60**	**333**	*eP*		Pn	21 12 30.4	+0.9
	baz=333							
SCLT				*eS*		Sn	21 12 49.2	+0.3
	baz=333							
TWF1	**Yuli**	**1.63**	**10**	*eP*		Pn	21 12 30.9	+1.0
	baz=10.0							
TWF1				*eS*		Sn	21 12 50.8	+1.1
	baz=10.0							
CHN4	**Tsaushan**	**1.64**	**348**	*eP*		Pn	21 12 31.1	+1.0
	baz=347							
CHN4				*eS*		Sn	21 12 51.4	+1.4
	baz=347							
CHN8	**Yiju**	**1.75**	**336**	*eP*		Pn	21 12 32.4	+0.9
	baz=336							
CHN8				*eS*		Sn	21 12 53.0	+0.5
	baz=336							
CHY	**Chiayi**	**1.82**	**344**	*eP*		Pn	21 12 33.4	+0.8
	baz=343							
CHY				*eS*		Sn	21 12 54.8	+0.4
	baz=343							
WLGB	**Puzi**	**1.84**	**340**	*eP*		Pn	21 12 33.9	+1.1
	baz=340							
WLGB				*eS*		Sn	21 12 55.6	+0.8
	baz=340							
CHN2	**Minshiung**	**1.84**	**345**	*eS*		Sn	21 12 55.6	+0.7
	baz=345							
CHN5	**Tsauling**	**1.87**	**352**	*eS*		Sn	21 12 58.0	+2.3
	baz=351							
WHYT	**Xinyi Township**	**1.95**	**357**	*eS*		Sn	21 12 59.7	+2.1
	baz=356							
WGK	**Gukeng**	**1.97**	**349**	*eS*		Sn	21 12 59.9	+1.8
	baz=348							
WDLH	**Douliu**	**1.98**	**348**	*eP*		Pn	21 12 35.6	+0.9
	baz=348							
WDLH				*eS*		Sn	21 12 59.6	+1.3
	baz=348							
WSF	**Szhu**	**2.01**	**340**	*eP*		Pn	21 12 36.1	+0.9
	baz=339							
WSF				*eS*		Sn	21 12 58.7	-0.4
	baz=339							

*NIED **15** 21:33:00,28.40N×129.50E,h8km,Mw3.6 Best double couple: M₀3.32000×10¹⁴ NP1:φs100.00000°,δ50.00000°, λ-107.00000°. NP2:φs305.00000°,δ43.00000°, λ-71.00000°.*

JMA 15 21:33:23.1±0.2,28.46N×129.41E,h0km,M3.8,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JAM	**Amami Oshima**	**0.18**	**106**	P		Pg	21 33 26.5	0.0
JAM				S		Sg	21 33 28.9	+0.1
JAMN	**Amaminishikomi**	**0.30**	**224**	P		Pg	21 33 29.8	+1.0
JAMN				S		Sg	21 33 34.5	+1.8
JZK	**Kikaishima**	**0.52**	**106**	P		Pb	21 33 34.5	-0.5
JZK				*eS*		Sb	21 33 42.8	-0.3
JTAJ	**Takarajima**	**0.71**	**345**	P		Pg	21 33 37.3	+0.5
JTAJ				S		Sg	21 33 47.4	+1.3
JTK	**Tokunoshima**	**0.79**	**211**	P		Pg	21 33 38.1	0.0
JTK				S		Sg	21 33 49.0	+0.7
JOKE	**Okinoerabujima**	**1.32**	**214**	P		Pg	21 33 47.4	-1.1
JOKE				*eS*		Sg	21 34 04.7	-0.9
JNN	**Nakanoshima**	**1.44**	**16**	P		Pn	21 33 47.9	-2.5
JNN				*eS*		Sg	21 34 05.8	-3.5
JYRO	**Yoronjima**	**1.66**	**211**	P		Pn	21 33 52.6	-0.9
JYRO				S		Sn	21 34 13.7	-1.9
JOW	**Kunigami**	**1.91**	**212**	P		Pn	21 33 55.8	-1.1
JOW				S		Sn	21 34 18.5	-3.2
JIH	**Iheya**	**1.91**	**222**	P		Pn	21 33 55.6	-1.3
JIH				S		Sn	21 34 19.0	-2.7
JYAK	**Yakushimahirau**	**2.02**	**28**	P		Pn	21 33 55.9	-2.5
JYAK				S		Sn	21 34 19.7	-4.6
JKC	**Kuchinoerabu**	**2.11**	**19**	P		Pn	21 33 57.4	-2.3
JKC				S		Sn	21 34 22.7	-3.9
JNTH	**Nagotoyohara**	**2.29**	**213**	P		Pn	21 34 01.2	-1.0
JNTH				*eS*		Sn	21 34 29.1	-2.0
JMTN	**Minamitane**	**2.33**	**34**	P		Pn	21 34 01.5	-1.2
JMTN				*eS*		Sn	21 34 30.5	-1.5
JTN	**Tanegashima 3**	**2.58**	**32**	P		Pn	21 34 05.9	-0.2
JTN				*eS*		Sn	21 34 36.3	-1.9
JAGN	**Aguni-jima**	**2.68**	**226**	P		Pn	21 34 06.6	-0.9
JAGN				*eS*		Sn	21 34 38.8	-1.9
JKDJ	**Kitadaitoujima**	**3.01**	**146**	S		Sn	21 34 45.2	-3.7
JMZ	**Minamidaito 2**	**3.09**	**148**	*eS*		Sn	21 34 46.2	-4.5
JKE	**Kume jima 2**	**3.16**	**228**	P		Pn	21 34 13.5	-0.6
JKE				*eS*		Sn	21 34 51.0	-1.4

*NNC **15** 21:35:42.0±6.9,39.78N×73.95E,h0km,mb3.6,mpv3.3, Error ellipse: s-maj=53.2km s-min=25.8km az=170.0*
*SOME **15** 21:35:42.1,39.77N×74.67E,h15km*
*KRNET **15** 21:35:45.9±0.1,39.70N×74.33E,mb2.8*

ISC 15 21:35:48.8±1.8,39.80N±0.09×74.24E±0.05,h10km,n22, σ2s09/39,24C,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ARSB	**Arslanbob**	**1.79**	**328**	⇑*iP*		**Pb**	**21 36 21.1**	**-0.8**
	baz=28							
ARSB				⇑*iS*		**Sg**	**21 36 47.2**	**+0.7**
	baz=28							
AML	**Almayashu**	**2.36**	**350**	⇑*eP*		**Pn**	**21 36 28.8**	**+0.8**
	baz=49							
AML				⇑*iS*		**Sb**	**21 37 00.5**	**-0.5**
	baz=49							
KZA	**Kyzart**	**2.40**	**18**	⇑*eP*		**Pn**	**21 36 29.1**	**+0.6**
	baz=16							
KZA				⇑*iS*		**Sb**	**21 37 00.6**	**-1.5**
	baz=16							
UCH	**Uchtor**	**2.43**	**5**	⇑*iP*		**Pn**	**21 36 29.8**	**+0.8**
	baz=3.0							
UCH				⇑*iS*		**Sb**	**21 37 01.8**	**-1.3**
	baz=3.0							
ARK	**Arkit**	**2.63**	**320**	⇑*iP*		**Pn**	**21 36 32.7**	**+1.2**
	baz=20							
ARK				⇑*iS*		**Sb**	**21 37 06.8**	**-1.8**
	baz=20							
BTK	**Batken**	**2.64**	**277**	⇑*iP*		**Pn**	**21 36 32.6**	**+1.0**
	baz=79							
BTK				⇑*iS*		**Sb**	**21 37 06.4**	**-2.4**
	baz=79							
AAK	**Ala-Archa**	**2.84**	**4**	⇑*eP*		**Pn**	**21 36 35.6**	**+1.3**
	baz=2.0							
AAK				⇑*iS*		**Sb**	**21 37 11.7**	**-2.8**
	baz=2.0							
ULHL	**Ulahol**	**2.87**	**31**	⇑*eP*		**Pn**	**21 36 35.4**	**+0.5**
	baz=29							
ULHL				⇑*iS*		**Sn**	**21 37 11.4**	**+1.8**
	baz=29							
EKS2	**Erkin-Say**	**2.88**	**353**	⇑*eP*		**Pn**	**21 36 36.1**	**+1.3**
	baz=52							
EKS2				⇑*iS*		**Sb**	**21 37 12.7**	**-2.9**
	baz=52							
KBK	**Karagaybulak**	**2.90**	**10**	⇑*iP*		**Pn**	**21 36 36.1**	**+0.9**
	baz=9.0							
KBK				⇑*iS*		**Sn**	**21 37 12.7**	**+2.5**
	baz=9.0							
BOOM	**Boomskoye usch**	**2.98**	**25**	⇑*iP*		**Pn**	**21 36 36.9**	**+0.6**
	baz=23							
BOOM				⇑*iS*		**Sn**	**21 37 14.1**	**+2.0**
	baz=23							
MRKS	**Merke**	**3.04**	**346**	*eP*		**Pb**	**21 36 39.9**	**-3.1**
	2.7nm,0.4s							
MRKS				*eS*		**Sb**	**21 37 21.0**	**+0.9**
	4.6nm,0.7s							
MRKS	**Merke**	**3.04**	**346**	Pg		**Pn**	**21 36 39.4**	**+2.4**
	3.1nm,0.5s							
MRKS				Lg		Lg	21 37 20.6	
	4.6nm,0.7s							
TKM2	**Tokmak 2**	**3.28**	**18**	⇑*eP*		**Pn**	**21 36 41.2**	**+0.8**
	baz=16							
TKM2				⇑*iS*		**Sn**	**21 37 21.9**	**+2.3**
	baz=16							
KST	**Kastek**	**3.49**	**21**	*eP*		**Pn**	**21 36 44.9**	**+1.6**
	3.9nm,0.4s							
KST				*eS*		**Sb**	**21 37 29.3**	**-3.9**
	8.5nm,0.7s							
KST	**Kastek**	**3.49**	**21**	Pg		**Pn**	**21 36 45.4**	**+2.1**
	3.9nm,0.4s							
KST				Lg		Lg	21 37 30.8	
	8.5nm,0.7s							
DGS	**Degeres**	**3.62**	**18**	*eP*		**Pn**	**21 36 46.9**	**+1.8**
	1.8nm,0.4s							
DGS				*eS*		**Sb**	**21 37 32.6**	**-4.5**
	3.6nm,0.5s							
IZV	**Izvestkoviy**	**3.69**	**28**	*eP*		**Pn**	**21 36 47.1**	**+1.0**
	5.8nm,0.5s							
IZV				*eS*		**Sn**	**21 37 33.2**	**+3.5**
	4.2nm,0.3s							
IZV	**Izvestkoviy**	**3.69**	**28**	Pg		**Pb**	**21 36 53.0**	**-1.2**
	5.8nm,0.5s							
IZV				Lg		Lg	21 37 43.9	
	4.2nm,0.3s							
TNSS	**Tian-Shan**	**3.82**	**31**	*eP*		**Pn**	**21 36 49.4**	**+1.3**
	3.9nm,0.6s							

KPT	Kopyto	1.82	302	*e*P	Pn	21 49 51.3	+0.6
BDR	Baidarnaya	1.83	328	*e*P	Pn	21 49 51.1	+0.3
KLY	Klyuchi	1.83	315	*e*P	Pn	21 49 50.5	-0.3
KLY				*e*S	Sn	21 50 11.9	-0.9
SRKR	Sorokina	1.91	328	*e*P	Pn	21 49 52.1	+0.1
KOZ	Kozyrevsk	2.04	301	*e*P	Pn	21 49 54.5	+0.9
SRDR	Sredinnyy	2.25	306	*e*P	Pn	21 49 56.9	+0.4
KII	Karymskiy	2.29	245	*e*P	Pn	21 49 57.8	+0.6
SPN	Mys Shipunski	2.61	223	*e*P	Pn	21 50 00.3	-1.2
SPN				*e*S	Sn	21 50 29.6	-2.4
NLC	Nalytchevo	2.85	230	*e*P	Pn	21 50 05.0	+0.4
NLC				*e*S	Sn	21 50 36.6	-1.0
SDLR	Sedlovina	2.99	235	*e*P	Pn	21 50 07.3	+0.6
KRER	Koryakskii	3.04	237	*e*P	Pn	21 50 08.9	+1.4
SMAR	Somma	3.04	236	*e*P	Pn	21 50 08.0	+0.5
SMAR				*e*S	Sn	21 50 41.9	-0.8
KRX	Arik	3.05	238	*e*P	Pn	21 50 08.9	+1.2
UGLR	Uglovaya	3.06	235	*e*P	Pn	21 50 08.5	+0.8
AVH	Avacha	3.07	236	*e*P	Pn	21 50 09.1	+1.3
AVH				*e*S	Sn	21 50 44.6	+1.4
KOK	Koryaka	3.10	237	*e*P	Pn	21 50 09.6	+1.4
DALK	Dalny	3.21	233	*e*P	Pn	21 50 10.1	+0.5
DALK				*e*S	Sn	21 50 45.6	-0.9
KRMR	Karymshinskiy	3.62	234	*e*P	Pn	21 50 17.1	+1.8
KRMR				*e*S	Sn	21 50 58.6	+1.8
PETK	Petropavlovsk- 4.7nm,0.3s,baz=74,slow=19,SNR=91	3.67	240	Pn	Pn	21 50 17.0	+1.1
PETK				Sn	Sn	21 51 00.8	+2.9
	2.9nm,0.3s,baz=85,slow=18,SNR=1.8						
RUS	Russkaya	3.73	227	*e*P	Pn	21 50 16.6	-0.1
RUS				*e*S	Sn	21 50 57.6	-1.7
MTVR	Mutnovka	3.83	230	*e*P	Pn	21 50 19.2	+0.9
MTVR				*e*S	Sn	21 51 01.8	-0.3
GRL	Gorelyy	3.83	231	*e*P	Pn	21 50 20.0	+1.7
ASAK	Asacha	4.03	231	*e*P	Pn	21 50 22.1	+1.2
APC	Apacha	4.04	241	*e*P	Pn	21 50 23.1	+2.1
KDTR	Khodutka, Kamc	4.37	224	*e*P	Pn	21 50 25.4	-0.1
KDTR				*e*S	Sn	21 51 12.9	-2.2
TILK	Tilichiki	5.68	16	*e*P	Pn	21 50 44.5	+1.1
MA2	Magadan comp=Z,21nm,18.8s,baz=139,slow=44	8.02	309	LR	LR	21 54 56.7	
ILAR	Eielson Array 0.1nm,0.4s,baz=276,slow=8.1,SNR=2.1	26.24	48	P	P	21 54 51.1	-1.0
H11N2	WAKE ISLAND Hy baz=355,slow=76	35.38	174	T	T	22 33 31.7	
H11N3	WAKE ISLAND Hy baz=355,slow=76	35.39	174	T	T	22 33 37.7	
H11N1	WAKE ISLAND Hy baz=355,slow=76	35.39	174	T	T	22 33 32.6	
YKA	Yellowknife Ar 0.1nm,0.4s,baz=301,slow=7.7,SNR=2.3	40.58	45	P	P	21 56 57.5	+1.2
ZALV	Zalesovo Beam comp=Z,23nm,18.5s,baz=104,slow=38	43.16	302	LR	LR	22 16 05.2	
MKAR	Makanchi Array 0.2nm,0.4s,baz=59,slow=6.7,SNR=4.2	48.84	296	P	P	21 58 00.5	-1.8
FINES	FINESS Array B 3.2nm,1.0s,baz=22,slow=7.7,SNR=5.9	58.99	337	P	P	21 59 15.5	-0.5
AKASG	Malin Array Be 0.3nm,0.3s,baz=24,slow=6.9,SNR=3.1	67.79	330	P	P	22 00 13.8	-0.6
TXAR	Lajitas Array 0.2nm,0.5s,baz=353,slow=2.4,SNR=2.1	68.33	70	P	P	22 00 20.2	+1.9

KRSC 15 21:56:16.9±1.9, 49°12N×156°23E, h30km±24km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.57	357	*e*S	Sn	21 57 02.9	+1.0
ALID	Alaid	1.81	346	*e*P	Pn	21 56 45.9	-0.2
PAU	Pauzhetka	2.38	9	*e*S	Sb	21 57 26.4	-1.6
KDTR	Khodutka, Kamc	2.94	23	*e*P	Pb	21 57 05.3	-3.3
KDTR				*e*S	Sb	21 57 39.9	-4.1
MIPR	Malaya Ipel'ka	3.18	6	*e*P	Pn	21 57 06.9	+2.1
ASAK	Asacha	3.44	17	*e*P	Pn	21 57 12.4	+4.0
MTVR	Mutnovka	3.59	19	*e*P	Pn	21 57 14.9	+4.3
MTVR				*e*S	Sb	21 57 57.5	-5.3
RUS	Russkaya	3.62	23	*e*P	Pn	21 57 14.4	+3.6
RUS				*e*S	Sn	21 57 56.4	+3.9
GRL	Gorelyy	3.63	18	*e*P	Pb	21 57 15.9	-4.5
AVH	Avacha	4.44	20	*e*P	Pn	21 57 28.1	+5.9
KOK	Koryaka	4.44	19	*e*P	Pn	21 57 27.6	+5.3
SMAR	Somma	4.45	20	*e*P	Pn	21 57 27.2	+4.7
KRER	Koryakskii	4.48	20	*e*P	Pn	21 57 26.5	+3.6
SDLR	Sedlovina	4.49	21	*e*P	Pn	21 57 26.8	+3.9
KRX	Arik	4.51	19	*e*P	Pn	21 57 27.7	+4.5
SPN	Mys Shipunski	4.64	29	*e*P	Pn	21 57 29.4	+4.5
SPN				*e*S	Sn	21 58 22.6	+4.9
TUMD	Tumrok D	6.61	21	*e*P	Pn	21 57 57.5	+5.6
TUMR	Tumrok	6.62	20	*e*P	Pn	21 57 58.8	+6.6
KBTR	Krutoberegovo	8.15	27	*e*P	Pn	21 58 18.1	+5.1

IDC 15 22:02:47.5±999.0, 48°55N×60°98E, h0km, Error ellipse: s-maj=550.4km s-min=95.7km az=141.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I31KZ	AKTYUBINSK INF baz=130,slow=313,SNR=15	2.68	315	*i*		22 15 25.0	
I43RU	DUBNA INFRASON baz=114,slow=315,SNR=0.7	16.52	309	*i*		23 45 40.0	
I37NO	I37NO baz=113,slow=330,SNR=0.7	29.10	330	*i*		01 05 20.0	
I53US	FAIRBANKS INFR baz=340,slow=327,SNR=0.9	64.71	13	*i*		04 39 30.0	
I10CA	LAC DU BONNET baz=9.3,slow=330,SNR=1.6	79.16	345	*i*		06 15 30.0	

IDC 15 22:16:19.7±0.7,21°99S×68°30W,h101km±7km,mb3.8/7, mb1 4.0/12,mb1mx3.9/25,mbtmp4.2/12,MS3.3/2, Ms1 3.3/2,ms1mx2.6/33,Error ellipse: s-maj=18.8km s-min=15.3km az=132.0
VAO 15 22:16:19.6±0.5,21°94S×68°52W,h120km±4km,mb4.5
SJA 15 22:16:19.9±0.5,22°00S×68°53W,h119km±3km,ML4.0, MW4.0
NEIC 15 22:16:19.7±2.0,22°07S±0°03×68°43W±0°08,h116km±7km, Error ellipse: s-maj=11.3km s-min=2.5km az=73.0
GUC 15 22:16:21.2±0.4,21°98S×68°51W,h112km±2km,ML4.2

ISC 15 22:16:20.0±0.6, 21°99S±0°03×68°50W±0°05, h115km±5km, n138, σ1§20/158, mb4.2/9, 9C-7D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.72	286	⇑*i*P	Pn	22 16 40.1	+0.9
PB09				*i* S	Sn	22 16 54.4	+0.7
PB09	IPOC Station P	0.72	286		Pn	22 16 40.2	+0.9
PB09				Sn	Sn	22 16 54.9	+1.2
PB09	IPOC Station P	0.72	286	*i* P	Pn	22 16 40.0	+0.9
PB09				*e*S	Sn	22 16 54.8	+1.2
PB09				IAML		22 16 55.5	
	comp=Z,4μm,0.8s						
LVC	Limon Verde	0.72	212	P	Pn	22 16 40.1	+0.6
	comp=Z,1μm,0.3s,baz=20,slow=7.6,SNR=5185						
LVC				LR	LR	22 16 47.2	
	comp=Z,83nm,20.7s,baz=188,slow=33						
LVC				S	Sn	22 16 53.9	-0.2
	comp=Z,638nm,0.3s,baz=219,slow=19,SNR=11						
LVC	Limon Verde	0.72	212	⇓*i*P	Pn	22 16 40.1	+0.6
LVC				*e*S	Sn	22 16 54.2	+0.1
LVC	Limon Verde	0.72	212		Pn	22 16 40.1	+0.6
LVC				Sn	Sn	22 16 55.2	+1.1
LVC	Limon Verde	0.72	212	*i* P	Pn	22 16 40.2	+0.8
LVC				*e*S	Sn	22 16 55.3	+1.2
LVC				IAML		22 16 58.8	
	comp=Z,1μm,0.3s						
LVC	Limon Verde	0.72	212	*e*P	Pn	22 16 40.1	+0.6
PB03	IPOC Station P	1.17	267	⇑*i*P	Pn	22 16 44.0	+0.5
PB03				*i* S	Sn	22 17 01.4	+0.1
PB03				IAML		22 17 04.1	
	comp=E,4μm,0.5s						
PB06	IPOC Station P	1.22	234	⇑*i*P	Pn	22 16 45.0	+0.9
PB06				*e*S	Sn	22 17 02.9	+0.6
PB06				IAML		22 17 05.0	
	comp=N,6μm,0.4s						
PB06	IPOC Station P	1.22	234		Pn	22 16 44.5	+0.4
PB06	IPOC Station P	1.22	234	*i* P	Pn	22 16 44.8	+0.7
PB06				*e*S	Sn	22 17 03.3	+0.9
PB06				IAML		22 17 05.6	
	comp=Z,3μm,0.6s						
PB07	IPOC Station P	1.32	281	⇑*i*P	Pn	22 16 45.8	+0.6
PB07				*i* S	Sn	22 17 04.5	+0.2
PB07				IAML		22 17 05.9	
	comp=N,7μm,0.3s						
PB07	IPOC Station P	1.32	281		Pn	22 16 45.2	0.0
PB01	IPOC Station P	1.32	316	⇑*i*P	Pn	22 16 45.6	+0.4
PB01				*e*S	Sn	22 17 04.0	-0.2
PB01				IAML		22 17 07.5	
	comp=N,4μm,0.3s						
PB01	IPOC Station P	1.32	316		Pn	22 16 45.5	+0.4
PB02	IPOC Station P	1.47	297	⇑*e*P	Pn	22 16 47.0	+0.2
PB02				*e*S	Sn	22 17 06.9	-0.3
PB02				IAML		22 17 14.8	
	comp=E,5μm,0.3s						
PB15	IPOC Station P	1.51	217	⇑*i*P	Pn	22 16 48.4	+1.1
PB15				*i* S	Sn	22 17 09.5	+1.2
PB15	IPOC Station P	1.51	217		Pn	22 16 48.5	+1.1
PB15	IPOC Station P	1.51	217	*i* P	Pn	22 16 48.5	+1.1
PB15				*e*S	Sn	22 17 09.3	+1.1
PB15				IAML		22 17 11.2	
	comp=E,14μm,0.2s						
PB04	IPOC Station P	1.57	257	⇑*i*P	Pn	22 16 48.4	+0.4
PB04				*i* S	Sn	22 17 09.6	+0.1
PB04				IAML		22 17 13.1	
	comp=N,3μm,0.3s						
PB04	IPOC Station P	1.57	257		Pn	22 16 47.9	-0.2
PB04	IPOC Station P	1.57	257	*i* P	Pn	22 16 48.5	+0.5
PB04				IAML		22 17 20.9	
	comp=Z,2μm,0.4s						
PB05	IPOC Station P	1.79	241	⇑*i*P	Pn	22 16 51.0	+0.2
PB05				*e*S	Sn	22 17 14.1	-0.1
PB05				IAML		22 17 20.8	
	comp=E,2μm,0.4s						
PB05	IPOC Station P	1.79	241	*i* P	Pn	22 16 51.3	+0.5
PB05				IAML		22 17 22.5	
	comp=Z,1μm,0.4s						
PB08	IPOC Station P	1.94	341	⇓*i*P	Pn	22 16 54.7	+1.8
PB08				*e*S	Sn	22 17 19.6	+1.6
PB08				IAML		22 17 21.8	
	comp=E,2μm,0.6s						
PB08	IPOC Station P	1.94	341		Pn	22 16 54.7	+1.8
TA01	Diego Aracena	2.12	312	*e*P	Pn	22 16 54.8	+0.1
TA01				*i* S	Sn	22 17 20.8	-0.5
TA01	Diego Aracena	2.12	312		Pn	22 16 55.0	+0.3
TA02	Huaiquique	2.29	318	*e*P	Pn	22 16 56.9	-0.1
TA02				*i* S	Sn	22 17 24.6	-0.7
TA02				IAML		22 17 31.6	
	comp=N,3μm,0.1s						
GO01	Chusmiza	2.40	344	⇓*i*P	Pn	22 17 00.0	+1.2
GO01				*e*S	Sn	22 17 29.6	+1.1
GO01				IAML		22 17 33.5	
	comp=E,2μm,0.1s						
GO01	Chusmiza	2.40	344		Pn	22 17 00.1	+1.2
PB10	IPOC Station P	2.43	231	*e*P	Pn	22 16 59.1	+0.4
PB10				*i* S	Sn	22 17 27.5	-0.9
PB10				IAML		22 17 43.8	
	comp=N,772nm,0.3s						
PB10	IPOC Station P	2.43	231		Pn	22 16 59.6	+0.9
PB10	IPOC Station P	2.43	231	*i* P	Pn	22 16 59.5	+0.9
PB10				IAML		22 17 38.1	
	comp=Z,624nm,0.6s						
PB11	IPOC Station P	2.47	334	⇓*i*P	Pn	22 16 59.8	+0.4
PB11				*i* S	Sn	22 17 29.4	-0.2
PB11				IAML		22 17 31.5	
	comp=E,2μm,0.2s						
PB11	IPOC Station P	2.47	334		Pn	22 16 59.4	0.0
YJA	Yavi	2.77	94	*i* P	Pn	22 17 06.0	+2.4
YJA				IAML		22 17 58.6	
	comp=Z,38nm,1.8s						
PSGC	Pisagua	2.83	327	⇓*e*P	Pn	22 17 03.0	-0.9
PSGCX	Pisagua	2.83	327		Pn	22 17 03.2	-0.7
MNMC	Minye Minye	3.03	340	⇓*e*P	Pn	22 17 07.3	+0.5
MNMC	Minye Minye	3.03	340		Pn	22 17 07.3	+0.5
PB14	IPOC Station P	3.15	213	⇓*e*P	Pn	22 17 08.3	-0.1
PB14	IPOC Station P	3.15	213		Pn	22 17 08.4	0.0
PB14	IPOC Station P	3.15	213	*i* P	Pn	22 17 09.8	+1.4
PB14				IAML		22 17 56.5	
	comp=Z,894nm,0.6s						
PB16	IPOC Station P	3.76	345		Pn	22 17 17.6	+0.8
AZAP	Zapla	3.86	126	*i* P	Pn	22 17 19.5	+1.8
AZAP				IAML		22 18 19.6	
	comp=Z,38nm,1.3s						
AP01	Chacalluta	4.00	334	Pn	Pn	22 17 20.3	+0.9
AC02	Maricunga	4.86	187	Pn	Pn	22 17 30.9	-0.4
LPAZ	La Paz	5.69		P	Pn	22 17 43.6	+0.9
	comp=Z,6.2nm,0.3s,baz=179,slow=4.5,SNR=85						
LPAZ	La Paz	5.69	4		Pn	22 17 44.0	+1.2
GO03	Copiap	5.79	195	*i* P	Pn	22 17 42.0	-1.6
VCA	Vinchina	6.72	178	*i* P	Pn	22 17 57.1	+0.9
VCA				IAML		22 20 03.8	
	comp=Z,25nm,0.7s						
AC05	El Transito	7.00	193	Pn	Pn	22 17 57.6	-2.4
AGUA	GUANDACOL	7.46	180	*i* P	Pn	22 18 06.6	+0.3
AGUA				IAML		22 19 55.9	
	comp=Z,9.7nm,1.4s						
CO01	Juntas del Tor	8.08	190	Pn	Pn	22 18 13.3	-1.4
GO04	Tololo Observa	8.40	194	Pn	Pn	22 18 15.6	-3.5
CO03	El Pedregal	9.03	192	Pn	Pn	22 18 23.6	-3.7
SIV	Sa Ignacio comp=Z,6.2nm,0.3s,baz=179,slow=4.5,SNR=85	9.22	51	P	Pn	22 18 26.9	-3.1
SIV				LR	LR	22 22 19.5	
	comp=Z,54nm,21.0s,baz=152,slow=40						
CO02	Combarbal	9.44	193	Pn	Pn	22 18 28.8	-4.2
CFA	Coronel Fontan comp=Z,0.8nm,0.3s,baz=347,slow=11,SNR=4.6	9.58	179	P	Pn	22 18 32.8	-2.0
CO04	Los Peladeros	10.25	192	Pn	Pn	22 18 42.2	-1.9
VA03	San Esteban	10.88	189	Pn	Pn	22 18 51.3	-1.1
CPUP	Villa Florida comp=Z,0.2nm,0.3s,baz=291,slow=13,SNR=3.4	11.07	115	P	Pn	22 18 53.1	-1.8
CPUP	Villa Florida	11.07	115	Pn	Pn	22 18 54.6	-0.4
CPUP	Villa Florida	11.07	115	*e*P	Pn	22 18 55.0	0.0
ROC1	El Roble	11.16	191	Pn	Pn	22 18 55.5	-0.9
MT02	Curacav	11.46	191	Pn	Pn	22 18 58.9	-1.2
VILB	Vilhena	11.97	43	*e*P	Pn	22 19 05.9	-1.2
AQDB	Aquidauana	12.03	85	*e*P	Pn	22 19 05.0	-2.7
BO02	Sierra Bellavi	12.91	188		Pn	22 19 19.0	-0.2
ITQB	Itaqui	13.14	128	*e*P	Pn	22 19 22.2	+0.1
SALV	Santo Antonio	13.54	66	*e*P	Pn	22 19 25.1	-2.4
SAML	Samuel	13.94	22	Pn	Pn	22 19 33.1	+0.5
SAML	Samuel	13.94	22	*e*P	Pn	22 19 33.9	+1.3
TRCB	Terra Rica	14.70	96	*e*P	Pn	22 19 41.9	-0.4
BI02	San Fabin de	14.82	189	Pn	Pn	22 19 42.7	-1.0
C2SB	Chapadao do Su	15.03	80	*e*P	Pn	22 19 47.5	+1.1
PTGB	Pitanga	15.33	103	*e*P	Pn	22 19 51.5	+1.2
ITAB	Concordia	15.77	113	*e*P	P	22 19 56.7	-0.4
CPSB	Cacapava Do Su	15.89	125	*e*P	Pn	22 19 58.8	-0.3
PCMB	Pacaembu	16.01	92	*e*P	Pn	22 19 58.2	-0.5
CLDB	Colider	16.44	50	*e*P	Pn	22 20 03.4	-0.6
PLTB	Pedras Altas	16.45	129	*e*P	P	22 20 04.8	+0.1
ARAG	Araguaiana, MT	16.98	71	*e*P	Pn	22 20 10.4	-0.2
ITRB	Iturama	17.11	86	*e*P	P	22 20 11.6	-0.5
CNLB	Canela	17.49	118	*e*P	P	22 20 16.2	0.0
FRTB	Fartura	17.53	98	*e*P	P	22 20 17.0	+0.4
BB19B	Bebedouro	18.60	91	*e*P	P	22 20 28.3	-0.2
PLCA	Paso Flores comp=Z,0.4nm,0.3s,baz=351,slow=11,SNR=11	18.76	185	P	Pn	22 20 32.4	+0.5
PLCA	Paso Flores comp=Z,5.2nm,0.7s	18.76	185	IAmb	IAmb	22 20 37.2	
PLCA	Paso Flores	18.76	185	*e*P	P	22 20 29.2	-0.9
RCLB	Rio Claro- Sao	19.42	95	*e*P	P	22 20 37.1	-0.3
IPMB	Ipameri, GO	19.47	82	*e*P	P	22 20 37.3	-0.7
SPB	Sao Paulo	19.49	99	*e*P	P	22 20 38.0	0.0
NPGB	Novo Progresso	19.54	42	*e*P	P	22 20 36.6	-2.0
PET01	Itanhaem-SP	19.65	101	*e*P	P	22 20 39.7	-0.1
VAO	Valinhos	19.92	97	*e*P	P	22 20 42.1	-0.7
MACA	Manacapuru-AM	20.20	23	*e*P	P	22 20 43.9	-1.8
BDFB	Brasilia comp=Z,2.8nm,0.4s,baz=249,slow=9.2,SNR=6.0	20.38	75	P	P	22 20 47.0	-0.9
BDFB	Brasilia	20.38	75	P	P	22 20 47.0	-0.9
LL01	San Ignacio de	20.59	188	P	P	22 20 48.5	-1.1
LL01				IAmb	IAmb	22 20 53.4	
	comp=Z,16nm,0.7s						
PARB	Paraibuna	21.15	98	*e*P	P	22 20 54.7	-1.3
ITTB	Itaituba	21.45	37	*e*P	P	22 20 58.1	-1.1
BSCB	Bom Sucesso	22.09	92	*e*P	P	22 21 06.0	-0.1
MAN01	Angra dos Reis	22.69	97	*e*P	P	22 21 10.8	-1.2
VAS01	Vassouras-RJ	23.20	95	*e*P	P	22 21 16.7	-0.3
MC01	Montes Claros	23.74	82	*e*P	P	22 21 19.8	-2.2
JANB	Januaria	23.93	77	*e*P	P	22 21 22.1	-1.5
PRPB	Parauapebas	23.95	52	*e*P	P	22 21 22.5	-1.2
SMTB	Santa Maria do	23.97	60	*e*P	P	22 21 23.3	-0.6
MALB	Monte Alegre	24.34	37	*e*P	P	22 21 26.9	-0.3
SJMB	Sao Joao De Ma	25.80	88	*e*P	P	22 21 39.8	-0.7
BSFB	Barra de Sao F	26.09	88	*e*P	P	22 21 42.1	-1.0
RIB01	Linhares ES	26.42	89	*e*P	P	22 21 46.1	0.0
NAN01	Guarapari, ES	26.97	86	*e*P	P	22 21 50.2	-0.8
GDU01	Guandu, BA	28.69	78	*e*P	P	22 22 04.6	-1.8
GO09	Cerro Castillo	29.38	185	P	P	22 22 10.3	-1.7
GO09				IAmb	IAmb	22 22 14.0	
	comp=Z,4.8nm,1.0s						
RCBR	Riachuelo	35.37	68	P	P	22 23 03.6	-1.2
VNA3	Neumayer Olymp	59.49	161	P	P	22 26 12.6	+2.1
TXAR	Lajitas Array comp=Z,0.2nm,0.6s,baz=126,slow=9.1,SNR=3.2	61.25	325	P	P	22 26 24.0	+0.8
SNAA	Sanae	61.69	161	P	P	22 26 27.2	+1.7
LIC	Lamto comp=Z,8.0nm,0.4s	68.16	73	*e*P	P	22 27 08.1	-0.1
TIC	Toumodi	68.35	73	*e*P	P	22 27 09.4	-0.1
KIC	Kosan Boka comp=Z,17nm,0.5s	68.47	73	*e*P	P	22 27 10.3	+0.1
DBIC	Dimbokro comp=Z,4.9nm,0.4s,baz=221,slow=7.4,SNR=28	68.51	73	P	P	22 27 10.8	+0.4
DBIC	Dimbokro comp=Z,7.9nm,0.8s	68.51	73	IAmb	IAmb	22 27 11.6	
NVAR	Mina Array Bea comp=Z,0.8nm,0.8s,baz=158,slow=6.9,SNR=6.5	76.12	322	P	P	22 27 58.1	+2.7
VNDA	Vanda comp=Z,0.4nm,0.4s,baz=108,slow=6.4,SNR=3.6	76.43	190	P	P	22 27 58.4	+2.0
TORD	Torodi Ar. Bea comp=Z,4.6nm,0.5s,baz=255,slow=5.4,SNR=92	77.16	70	P	P	22 28 01.7	+0.2
YKA	Yellowknife Ar comp=Z,1.0nm,0.6s,baz=134,slow=4.8,SNR=16	91.78	340	P	P	22 29 15.6	+1.4
RPZ	Rata Peaks comp=Z,48nm,19.7s,baz=353,slow=30	94.86	219	LR	LR	23 03 26.5	
ASAR	Alice Springs	129.65	207	PKP	PKiKP	22 35 17.6	+0.6
	comp=Z,0.8nm,0.8s,baz=154,slow=1.5,SNR=7.4						
WRA	Warramunga Arr comp=Z,0.9nm,0.8s,baz=156,slow=1.8,SNR=2.7	132.72	210	PKP	PKiKP	22 35 23.6	+0.4
ZALV	Zalesovo Beam comp=Z,0.6nm,0.4s,baz=225,slow=4.0,SNR=3.9	142.23	26	PKP	PKPdf	22 35 39.9	+1.4
KSH	Kashi	145.11	52	PKP	PKPbc	22 35 41.3	-2.6
MKAR	Makanchi Array comp=Z,0.5nm,0.6s,baz=295,slow=1.3,SNR=4.5	145.80	37	PKPbc	PKPbc	22 35 46.1	+0.4
LZH	Lanzhou	164.45	24	*e*PKP	PKPdf	22 36 10.3	-0.2
LZH				pPKP	pPKPdf	22 36 38.4	-4.8
LZH				sPKP		22 36 48.4	

VAO 15 22:43:14.6±0.4,7°69S×79°05W,h10km,mb5.2
IDC 15 22:43:17.0±0.4,7°68S×79°66W,h60km±2km,mb4.4/27, mb1 4.5/33,mb1mx4.5/43,mbtmp4.7/33,MS3.8/31, Ms1 3.8/31,ms1mx3.8/38,Error ellipse: s-maj=8.0km s-min=5.7km az=173.0
ARE 15 22:43:17.1±2.8,7°62S±0°06×79°68W±0°04,h55km±4km, Error ellipse: s-maj=9.9km s-min=2.1km az=209.0
NEIC 15 22:43:17.9±1.7,7°60S±0°07×79°37W±0°10,h64km±1km, mb5.1/310,Error ellipse: s-maj=14.8km s-min=9.2km az=64.0
GCMT 15 22:43:18.9±0.2,7°70S±0°01×79°57W±0°02,h56km±1km, MW5.0/109,Moment Tensor Solution. s56,c69; s109,c178; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.36±.14; Mθθ1.56±.11; Mϕϕ-1.92±.13; Mrθ-1.70±.08; Mθϕ-3.38±.09; Mϕr1.81±.10; Best double couple: Mo4.49900×10¹⁶ NP1:ϕs252.00000°,δ63.00000°, λ166.00000°. NP2:ϕs349.00000°,δ78.00000°,λ28.00000°. Principal axes: T 4.8990, Plg28.0000°, Azm214.0000°; N -0.7960, Plg60.0000°, Azm10.0000°; P -4.0990, Plg10.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
BJI 15 22:43:19.0±0.0,7°60S×79°40W,h60km,mB5.5/7,Ms5.3/7, Ms7 5.1/6

ISC 15 22:43:17.1±0.4, 7°67S±0°04×79°46W±0°06, h62km:pP-P, n694, σ1§00/625, mb5.0/157, 2C-1D, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa 724nm,0.3s,baz=274,slow=6.1,SNR=1575	1.18	64	P	Pn	22 43 41.2	+3.2
ATAH				S	Sn	22 43 58.3	+4.8
	5μm,0.3s,baz=150,slow=22,SNR=30						
ATAH				LR	LR	22 44 15.8	
	comp=Z,10μm,18.0s,baz=238,slow=43						
NNA	Nana 164nm,0.3s,baz=324,slow=13,SNR=74	5.01	149	P	Pn	22 44 31.3	+1.5
NNA				S	Sn	22 45 29.2	+2.7
	440nm,0.3s,baz=219,slow=16,SNR=4.9						
NNA				LR	LR	22 47 04.1	
	comp=Z,376nm,21.9s,baz=316,slow=44						
NNA	Nana	5.01	149		Pn	22 44 30.8	+1.0
CUSE	Cuicocha Este	7.99	8	*e*P	Pn	22 45 13.5	+2.5
PUAC	Puerto Asis, P	8.66	20	*e*P	Pn	22 45 19.4	-0.4
CMBC	Cumbal	8.70	11	*e*P	Pn	22 45 26.1	+5.3

PB10 IPOC Station P 17.93 152 P 22 47 21.8 -0.3
SJCC San Jacinto, C 17.96 14 eP Pn 22 47 23.6 +0.8
LVC Limon Verde 18.00 147 P Pn 22 47 25.7 +2.2
comp=Z,3.7nm,0.3s,baz=316,slow=8.8,SNR=30
LVC LR LR 22 54 45.8
comp=Z,170nm,20.6s,baz=317,slow=38
LVC Limon Verde 18.00 147 P Pn 22 47 24.4 +1.0
LVC Limon Verde 18.00 147 eP P 22 47 22.4 -0.9
HDC Heredia 18.15 345 Pn 22 47 25.9 +0.7
HDC IAmb IAmb 22 47 50.4
comp=Z,112nm,1.1s
PB15 IPOC Station P 18.19 149 P P 22 47 25.4 +0.2
SDV Santo Domingo 18.65 28 P Pn 22 47 31.3 +0.1
comp=Z,2.5nm,0.3s,baz=168,slow=15,SNR=16
SDV LR LR 22 56 20.9
comp=Z,797nm,20.7s,baz=216,slow=42
SDV Santo Domingo 18.65 28 eP Pn 22 47 31.7 +0.4
SDV Santo Domingo 18.65 28 P Pn 22 47 31.6 +0.4
SDV Santo Domingo 18.65 28 eP Pn 22 47 31.1 -0.1
JTS Las Juntas de 18.66 343 P P 22 47 30.5 +0.4
comp=Z,0.3nm,0.3s,baz=245,slow=4.0,SNR=12
JTS LR LR 22 53 28.2
comp=Z,197nm,18.9s,baz=232,slow=33
JTS Las Juntas de 18.66 343 P Pn 22 47 31.6 +0.5
JTS IAmb IAmb 22 48 10.6
comp=Z,115nm,1.1s
PB14 IPOC Station P 18.96 154 P Pn 22 47 35.2 +0.2
MACA Manacapuru-AM 19.22 78 eP P 22 47 35.5 -0.9
GO02 Mina Guanaco 19.79 153 P Pn 22 47 44.4 -0.5
SIV San Ignacio 19.80 116 P Pn 22 47 43.8 -0.9
comp=Z,4.3nm,0.3s,baz=302,slow=10,SNR=131
SIV LR LR 22 55 25.9
comp=Z,764nm,18.3s,baz=290,slow=36
ESPN Las Esperanzas 20.31 346 P Pn 22 47 49.4 -1.3
ESPN IAmb IAmb 22 48 15.2
comp=Z,78nm,1.1s
ACON Acoyapa 20.32 344 P P 22 47 49.2 +1.0
ACON IAmb IAmb 22 48 15.3
comp=Z,65nm,0.9s
PTLB Pontes e Lacer 21.35 113 eP P 22 47 59.1 -0.3
AC02 Maricunga 21.44 154 P P 22 48 03.1 +2.3
AC02 IAmb IAmb 22 48 31.2
comp=Z,84nm,1.4s
MATN Matagalpa 21.44 343 P P 22 48 00.8 +0.3
MATN IAmb IAmb 22 48 16.4
comp=Z,87nm,1.0s
GO03 Copiap 21.66 157 P P 22 48 04.5 +1.7
GO03 IAmb IAmb 22 48 22.8
comp=Z,66nm,0.9s
CSGN Cosiguina Volc 22.03 339 P P 22 48 08.4 +1.7
AC05 El Transito 22.77 159 P P 22 48 17.5 +2.9
AC05 IAmb IAmb 22 48 55.7
comp=Z,88nm,1.2s
TGUH Tegucigalpa,Un 22.93 340 P P 22 48 17.9 +1.6
PCRV Puerto La Cruz 23.07 40 P P 22 48 18.0 +0.4
comp=Z,18nm,1.0s,baz=219,slow=4.9,SNR=2.5
PLCV Puerto La Cruz 23.09 40 P P 22 48 18.0 +0.2
CLDB Colider 23.57 100 eP P 22 48 21.5 -0.9
GO04 Tololo Observa 23.82 161 P P 22 48 25.0 +0.2
GO04 IAmb IAmb 22 49 06.3
comp=Z,83nm,1.0s
CO01 Juntas del Tor 23.88 160 P P 22 48 27.3 +2.0
NPGB Novo Progresso 23.91 90 eP P 22 48 25.2 -0.4
SALV Santo Antonio 24.64 112 eP P 22 48 33.4 +1.3
CO02 Combarbal 24.72 162 P P 22 48 33.8 +0.9
CO02 IAmb IAmb 22 49 16.1
comp=Z,40nm,0.8s
APG El Apazote 25.02 334 LR LR 22 56 39.5
comp=Z,190nm,20.6s,baz=222,slow=32
CO04 Los Peladeros 25.51 163 P P 22 48 41.1 +1.0
MALB Monte Alegre 25.76 78 eP P 22 48 42.5 +0.2
MTDJ Mount Denham 25.80 4 P P 22 48 42.1 -0.6
CFA Coronel Fontan 26.02 158 P P 22 48 45.5 +1.0
comp=Z,8.8nm,0.7s,baz=339,slow=7.9,SNR=17
CFA LR LR 22 57 29.4
comp=Z,168nm,21.1s,baz=320,slow=33
AQDB Aquidauana 26.28 121 eP P 22 48 48.1 +1.1
VA03 San Esteban 26.31 163 P P 22 48 48.2 +1.0
VA03 IAmb IAmb 22 49 08.8
comp=Z,51nm,0.9s
ROC1 El Roble 26.38 164 P P 22 48 49.5 +1.5
GRGR Grenville 26.46 42 P P 22 48 48.2 -0.5
MT02 Curacav 26.61 164 P P 22 48 51.6 +1.8
MT02 IAmb IAmb 22 49 12.8
comp=Z,35nm,0.8s
TOSP Speyside 26.64 45 P P 22 48 50.5 +0.3
MT01 Popeta 27.15 165 P P 22 48 54.0 -0.7
MT01 IAmb IAmb 22 49 20.1
comp=Z,72nm,1.9s
GTBY Guantanamo Bay 27.75 9 P P 22 49 00.9 +0.8
CPUP Villa Florida 28.06 134 P P 22 49 04.2 +1.3
comp=Z,12nm,0.8s,baz=320,slow=10,SNR=34
CPUP LR LR 23 01 58.1
comp=Z,206nm,20.1s,baz=316,slow=40
CPUP Villa Florida 28.06 134 P P 22 49 03.3 +0.4
CPUP Villa Florida 28.06 134 eP P 22 49 03.6 +0.7
GO05 Huala 28.08 167 P P 22 49 03.2 +0.2
C2SB Chapadao do Su 28.13 116 eP P 22 49 03.8 +0.3
BO02 Sierra Bellavi 28.16 165 P P 22 49 04.2 +0.5
ARAG Araguaiana, MT 28.20 109 eP P 22 49 04.8 +0.5
SJG San Juan 28.79 27 P P 22 49 10.4 +1.0
comp=Z,5.8nm,0.4s,baz=214,slow=8.6,SNR=2.5
SJG LR LR 23 02 26.1
comp=Z,187nm,20.9s,baz=256,slow=40
CMIG Matias Romero 28.94 328 LR LR 22 57 28.2
comp=Z,67nm,20.8s,baz=130,slow=30
TEIG Tepich 29.04 343 P P 22 49 11.0 -0.5
comp=Z,9.3nm,1.0s,baz=304,slow=0.0,SNR=1.9
TEIG Tepich 29.04 343 IAmb IAmb 22 49 34.3
comp=Z,79nm,1.4s
PRPB Paraupebas 29.47 89 eP P 22 49 15.4 -0.1
MDP Montagnes des 29.61 65 P P 22 49 16.9 +0.1
comp=Z,16nm,0.8s,baz=224,slow=9.7,SNR=4.4
MDP LR LR 23 01 40.6
comp=Z,294nm,20.3s,baz=256,slow=37
BI02 San Fabin de 29.82 167 P P 22 49 19.6 +1.2
BI02 IAmb IAmb 22 49 23.6
comp=Z,65nm,1.8s
PCMB Pacaembu 30.53 120 eP P 22 49 25.4 +0.5
ITRB Iturama 30.64 116 eP P 22 49 26.1 +0.2
ITQB Itaqui 30.65 139 eP P 22 49 27.1 +1.3
PTGB Pitanga 31.19 126 eP P 22 49 31.6 +0.9
SMTB Santa Maria do 31.56 94 eP P 22 49 34.7 +0.7
BDFB Brasilia 31.77 107 P P 22 49 36.7 +0.8
comp=Z,8.8nm,0.7s,baz=268,slow=10,SNR=12
BDFB Brasilia 31.77 107 P P 22 49 35.9 -0.1
BDFB IAmb IAmb 22 50 24.8
comp=Z,37nm,1.2s
LC01 Cunco 31.84 169 IAmb IAmb 22 49 38.3
comp=Z,22nm,0.8s
IPMB Ipameri, GO 32.10 112 eP P 22 49 38.9 +0.1
ITAB Concordia 32.40 130 eP P 22 49 41.8 +0.6
FRTB Fartura 32.65 122 eP P 22 49 43.6 +0.1
BB19B Bebedouro 32.71 117 eP P 22 49 44.1 0.0
PLCA Paso Flores 33.88 168 P P 22 49 54.1 +0.1
comp=Z,21nm,1.0s,baz=347,slow=11,SNR=25
PLCA LR LR 23 00 53.2
comp=Z,145nm,21.2s,baz=342,slow=31
PLCA Paso Flores 33.88 168 P P 22 49 54.4 +0.4
PLCA IAmb IAmb 22 49 57.4
comp=Z,37nm,1.2s
PLCA Paso Flores 33.88 168 eP P 22 49 55.9 +1.9
PLTB Pedras Altas 33.99 138 eP P 22 49 56.5 +1.4
RCLB Rio Claro- Sao 34.04 119 eP P 22 49 56.1 +0.4
CNLB Canela 34.46 132 eP P 22 50 00.2 +1.0
SPB Sao Paulo 34.55 121 sP 22 50 23.0 +0.3
SPB Sao Paulo 34.55 121 eP P 22 50 00.1 +0.1
VAO Valinhos 34.74 120 eP P 22 50 01.5 -0.2
PET01 Itanhaem-SP 34.95 122 eP P 22 50 03.4 -0.1
JANB Januaria 35.20 105 eP P 22 50 06.0 +0.2
ROSB Rosrio 35.49 84 eP P 22 50 08.5 +0.3
MC01 Montes Claros 35.81 108 eP P 22 50 10.9 -0.1
PARB Paraibuna 36.01 119 eP P 22 50 13.0 +0.3
BSCB Bom Sucesso 36.03 115 eP P 22 50 12.4 -0.4
ESAR Angra dos Reis 36.93 118 eP P 22 50 21.0 +0.6
MAN01 Angra dos Reis 37.30 118 eP P 22 50 24.0 +0.4
VAS01 Vassouras-RJ 37.58 117 eP P 22 50 26.4 +0.4
NBPS Pedro II - PI 37.94 87 eP P 22 50 29.3 +0.2
SJMB Sao Joao De Ma 38.76 110 eP P 22 50 35.8 -0.1
NBPN Ponto Novo - B 38.86 98 eP P 22 50 37.1 +0.3
BSFB Barra de Sao F 39.10 110 eP P 22 50 38.7 0.0
NBMO Morrinhos-CE 39.46 86 eP P 22 50 41.9 +0.1
NAN01 Guarapari, ES 39.60 109 eP P 22 50 43.2 +0.3
GDU01 Guandu, BA 39.62 102 eP P 22 50 43.3 +0.2

RIB01 Linhares ES 39.62 111 eP P 22 50 42.8 -0.2
NBPB Pedra_Branca-C 39.66 89 eP P 22 50 43.6 +0.1
NBIT Itapeh - BA 39.86 104 eP P 22 50 45.9 +0.8
154A Montrose 40.20 355 P P 22 50 47.5 -0.1
NBMA Muriti-CE 40.34 92 eP P 22 50 49.5 +0.4
344A Westbrook Farm 40.36 345 P P 22 50 49.4 +0.5
HKT Hockley 40.58 338 P P 22 50 51.5 +0.8
HKT IAmb IAmb 22 51 08.3
comp=Z,33nm,1.2s
342A Flagon Creek P 40.72 343 P P 22 50 52.5 +0.6
NBTA Tacaratu-PE 40.97 95 eP P 22 50 54.3 0.0
GOGA Godfrey 41.03 355 P P 22 50 53.7 -0.7
baz=174
GOGA Godfrey 41.03 355 P P 22 50 54.6 +0.2
NBCL Cascavel-CE 41.08 88 eP P 22 50 55.3 +0.1
LRAL Lakeview Retre 41.10 350 P P 22 50 54.3 -0.7
baz=168
LRAL Lakeview Retre 41.10 350 IAmb IAmb 22 51 10.7
comp=Z,47nm,1.0s
Z50A Ashland 41.15 352 P P 22 50 55.1 -0.3
baz=170
Z50A Ashland 41.15 352 P P 22 50 56.2 +0.8
Z50A IAmb IAmb 22 51 10.6
comp=Z,35nm,0.8s
NBLA Lagarto - SE 41.23 98 eP P 22 50 56.1 -0.3
Y59A Loris 41.43 1 P P 22 50 57.0 -0.7
baz=181
Y55A Saluda 41.44 357 P P 22 50 57.7 0.0
baz=176
Y60A Bolivia 41.46 2 P P 22 50 57.5 -0.4
baz=182
Y52A Lilburn 41.53 354 P P 22 50 58.3 -0.2
baz=173
HODGE Hodges 41.75 357 P P 22 50 59.8 -0.5
HODGE IAmb IAmb 22 51 52.1
comp=Z,32nm,1.4s
NATX Nacogdoches 41.81 340 P P 22 51 02.6 +1.8
baz=157
X56A White Oak 41.95 358 P P 22 51 01.7 -0.2
baz=178
X55A Gracelyn & Ava 41.96 357 P P 22 51 01.8 -0.2
baz=177
435B Jarrell 41.99 336 P P 22 51 03.1 +0.8
baz=152
X59A McDuffie Farm, 42.02 1 P P 22 51 01.6 -0.9
baz=181
X54A Belton 42.07 356 P P 22 51 02.0 -0.9
baz=176
W54A Cherokee Point 42.60 357 P P 22 51 06.6 -0.6
baz=176
Z41A Richland Creek 42.63 343 P P 22 51 08.3 +0.8
baz=160
JCT Junction City 42.65 334 P P 22 51 09.7 +1.9
baz=149
W61A Ground Anchor 42.67 3 P P 22 51 07.5 -0.3
baz=183
NBAN Anadia - AL 42.72 96 eP P 22 51 08.9 +0.3
WHTX Lake Whitney, 43.02 337 P P 22 51 11.3 +0.7
baz=153
V59A Middlesex 43.21 1 P P 22 51 13.1 +1.0
baz=182
V58A Windy Hill, Pi 43.23 0 P P 22 51 12.3 0.0
baz=180
V56A Mocksville 43.25 359 P P 22 51 11.9 -0.6
baz=178
V54A Nebo 43.27 357 P P 22 51 12.4 -0.3
baz=176
RCBR Riachuelo 43.29 90 P P 22 51 13.3 +0.1
comp=Z,6.2nm,0.8s,baz=280,slow=8.6,SNR=3.9
RCBR LR 23 10 32.3
comp=Z,492nm,19.9s,baz=258,slow=38
RCBR Riachuelo 43.29 90 IAmb IAmb 22 51 45.1
comp=Z,60nm,1.6s
RCBR Riachuelo 43.29 90 eP P 22 51 12.4 -0.8
V57A Coltrane Farms 43.32 360 P P 22 51 13.7 +0.7
baz=179
V52A Sevierville 43.45 355 P P 22 51 12.4 -1.7
V52A IAmb IAmb 22 51 28.9
comp=Z,21nm,0.9s
V51A Loudon 43.48 354 P P 22 51 13.9 -0.5
TXAR Lajitas Array 43.55 329 P P 22 51 15.2 +0.1
comp=Z,3.4nm,1.0s,baz=148,slow=8.9,SNR=23
TXAR Lajitas Array 43.55 329 P P 22 51 15.4 +0.3
V48A Smith Brothers 43.73 351 IAmb IAmb 22 51 31.2
comp=Z,24nm,0.8s
X40A Basin Creek Fa 43.79 344 P P 22 51 16.6 -0.2
baz=160,SNR=6.5
X40A Basin Creek Fa 43.79 344 P P 22 51 17.8 +1.0
X40A IAmb IAmb 22 51 34.4
comp=Z,28nm,0.9s
U59A Littleton 43.81 2 P P 22 51 16.6 -0.4
baz=182
U59A Littleton 43.81 2 P P 22 51 16.8 -0.2
U58A Oxford 43.83 1 P P 22 51 16.8 -0.4
baz=181
NBPV Pedro Velho 43.84 91 eP P 22 51 18.3 +0.7
U57A Blanch 43.86 0 P P 22 51 17.1 -0.3
baz=180
U55A TA2, Sparta 43.96 358 P P 22 51 17.7 -0.6
baz=178
U54A Nelsons Funny 44.01 357 P P 22 51 18.0 -0.6
baz=176
MIAR Mount Ida 44.05 343 P P 22 51 19.2 +0.2
baz=160,SNR=13
WVT Waverly 44.27 350 P P 22 51 20.0 -0.6
baz=168
W41B Gary Mavity, V 44.28 345 P P 22 51 20.9 +0.1
baz=162,SNR=9.0
T58A Grand View Acr 44.38 1 P P 22 51 21.5 0.0
baz=181
T57A Hurt 44.43 0 P P 22 51 21.5 -0.4
baz=180
T59A Double "B" Far 44.44 2 P P 22 51 21.7 -0.2
baz=182
ABTX Abilene, Hawle 44.44 335 P P 22 51 22.5 +0.3
baz=151,SNR=13
T56A Rocky Mt 44.46 359 P P 22 51 22.0 -0.2
baz=179
T53A Wise 44.51 356 P P 22 51 22.5 -0.2
baz=176
T54A Tazewell 44.53 358 P P 22 51 25.5 +2.6
baz=177
T55A Pulaski 44.56 358 P P 22 51 23.4 +0.3
baz=178
W39A Magazine 44.72 343 P P 22 51 24.5 +0.3
baz=160,SNR=8.2
S58A Poland Farm, P 45.06 2 P P 22 51 27.2 +0.3
baz=182
S56A Natural Bridge 45.11 360 P P 22 51 28.0 +0.7
baz=180
PARMO Parma 45.14 348 P P 22 51 27.2 -0.3
S57A Dark Hollow, R 45.19 1 P P 22 51 27.0 -1.0
baz=180
S55A Lewisburg 45.21 359 P P 22 51 27.6 -0.6
baz=178
R58B Mineral 45.42 2 P P 22 51 29.9 +0.2
baz=182
R58B Mineral 45.42 2 IAmb IAmb 22 51 45.6
comp=Z,22nm,0.9s
U40A Yellville 45.56 345 P P 22 51 31.1 +0.1
baz=161,SNR=14
R54A Victor 45.63 358 P P 22 51 31.3 -0.2
baz=178
CBN Corbin Frederi 45.67 2 P P 22 51 32.1 +0.3
baz=183
R59A King George, V 45.68 3 P P 22 51 33.5 +1.7
baz=183
R55A Marlinton 45.71 359 P P 22 51 32.8 +0.6
baz=179
R57A Stanardsville 45.73 1 P P 22 51 31.8 -0.4
baz=181
R58A Rapidan 45.75 2 P P 22 51 31.5 -0.8
baz=182
R50A Paris 45.93 355 P P 22 51 32.9 -0.9
WMOK Wichita Mounta 45.96 338 P P 22 51 34.1 0.0
baz=153,SNR=9.4
WMOK Wichita Mounta 45.96 338 IAmb IAmb 22 51 51.4
comp=Z,17nm,0.9s
TUL1 Leonard 45.99 341 P P 22 51 34.3 0.0
baz=157,SNR=8.7
WCI Wyandotte Cave 46.10 353 P P 22 51 34.6 -0.5
baz=170
MNTX Cornudas Mount 46.32 329 P P 22 51 37.0 0.0
baz=143,SNR=14
MNTX Cornudas Mount 46.32 329 IAmb IAmb 22 51 54.1
comp=Z,18nm,0.9s
Q53A Leroy 46.33 358 P P 22 51 36.7 -0.2
baz=177
Q58A Fox Den Farm, 46.40 2 P P 22 51 36.4 -1.1
baz=182
Q55A Buckhannon 46.42 359 P P 22 51 37.1 -0.6
baz=179
Q54A Coxs Mills 46.43 359 P P 22 51 37.2 -0.4
baz=178
Q54A Coxs Mills 46.43 359 IAmb IAmb 22 51 52.6
comp=Z,17nm,0.9s
Q51A Peebles 46.59 356 P P 22 51 38.2 -0.8
baz=174
Q51A Peebles 46.59 356 P P 22 51 38.2 -0.8
Q51A IAmb IAmb 22 52 11.7
comp=Z,24nm,1.2s
CCM Cathedral Cave 46.79 347 P P 22 51 40.3 -0.2
baz=164
CCM Cathedral Cave 46.79 347 P P 22 51 41.0 +0.5
CCM IAmb IAmb 22 51 59.8
comp=Z,14nm,0.7s
SDMD Soldier's Deli 46.90 3 P P 22 51 41.1 -0.3
P56A Dayton Farm, R 46.93 1 P P 22 51 41.2 -0.4
baz=181
MSTX Muleshoe 46.94 333 P P 22 51 42.0 +0.1
baz=147,SNR=7.3
P58A Pank, Wackersv 46.96 2 P P 22 51 41.8 0.0
baz=183
P51A Williamsport 47.03 356 P P 22 51 42.7 +0.4
baz=175
P52A Corning 47.12 357 P P 22 51 42.7 -0.5
baz=176
AMTX Amarillo 47.24 335 P P 22 51 44.6 +0.4
baz=149
R40A Maddies Statio 47.25 346 IAmb IAmb 22 52 00.2
comp=Z,33nm,0.9s
P60A Greenville 47.37 4 P P 22 51 44.8 -0.2
baz=185
U32A Winter Ranch, 47.50 339 pP 22 52 00.7 -1.4
MVL Millersville 47.51 3 P P 22 51 46.6 +0.5
MVL IAmb IAmb 22 52 02.5
comp=Z,33nm,1.2s
O52A Adamsville 47.59 358 P P 22 51 46.6 -0.1
baz=177
O52A Adamsville 47.59 358 P P 22 51 46.2 -0.5
O52A IAmb IAmb 22 52 02.1
comp=Z,15nm,0.9s
O58A Lewisberry 47.61 3 P P 22 51 46.9 +0.1
baz=183
O55A Ligonier 47.63 0 P P 22 51 47.1 0.0
baz=180
O57A Amberson 47.66 2 P P 22 51 47.4 +0.1
baz=182
O56A Blue Knob Stat 47.70 1 P P 22 51 47.2 -0.5
baz=181
O53A New Philadelph 47.70 358 P P 22 51 47.8 +0.2
baz=178
ACSO Alum Creek Sta 47.77 356 P P 22 51 48.4 +0.3
baz=175
O59A Robesonia 47.83 3 P P 22 51 48.7 +0.1
baz=184
O60A Telford 47.89 4 P P 22 51 49.2 +0.2
baz=185
O48A Farmland 47.97 354 P P 22 51 49.1 -0.6
baz=172
SSPA Standing Stone 48.08 2 P P 22 51 49.9 -0.6
baz=182
SSPA Standing Stone 48.08 2 P P 22 51 50.5 0.0
SSPA IAmb IAmb 22 52 06.4
comp=Z,31nm,1.1s
N55A Marion Center 48.21 0 P P 22 51 51.4 -0.2
baz=180
N57A Milroy 48.21 2 P P 22 51 52.2 +0.7
baz=182
121A Cookes Peak, D 48.23 327 P P 22 51 53.1 +1.0
baz=141
121A Cookes Peak, D 48.23 327 P P 22 51 52.8 +0.7
121A IAmb IAmb 22 52 09.8
comp=Z,22nm,1.0s
N50A Nevada 48.31 356 P P 22 51 51.5 -0.8
baz=175
SFIN Lafayette 48.32 352 P P 22 51 51.4 -1.0
baz=170
SFIN Lafayette 48.32 352 IAmb IAmb 22 52 06.4
comp=Z,27nm,1.2s
N58A Sunbury 48.33 3 P P 22 51 52.2 -0.3
baz=183,SNR=6.2
N58A Sunbury 48.33 3 IAmb IAmb 22 52 08.4
comp=Z,22nm,0.9s
N56A West Decatur 48.35 1 P P 22 51 52.8 +0.2
baz=181
N54A Moraine State 48.39 359 P P 22 51 53.2 +0.3
baz=179
N61A South Mountain 48.41 5 P P 22 51 53.4 +0.4
baz=187
N51A Ashland 48.42 357 P P 22 51 52.8 -0.3
baz=176
N59A State Game Lan 48.46 4 P P 22 51 53.7 +0.3
baz=185,SNR=6.0
N59A State Game Lan 48.46 4 P P 22 51 53.1 -0.3
N59A IAmb IAmb 22 52 09.9
comp=Z,23nm,0.8s
N60A Cedar Hill Far 48.46 4 P P 22 51 53.6 +0.1
baz=186
PAL Palisades 48.70 6 P P 22 51 55.2 -0.1
baz=187
M57A Sunshine Farm, 48.81 2 P P 22 51 56.1 0.0
baz=183
M57A Sunshine Farm, 48.81 2 IAmb IAmb 22 52 12.2
comp=Z,22nm,0.8s
HDIL Hopedale 48.83 350 P P 22 51 55.2 -1.1
M58A Price's Panora 48.87 3 P P 22 51 57.1 +0.4
baz=184
M55A Ridgway 48.90 1 P P 22 51 56.6 -0.2
baz=181
M55A Ridgway 48.90 1 P P 22 51 57.2 +0.3
M55A IAmb IAmb 22 52 12.2
comp=Z,25nm,1.0s
M56A Emporium 48.92 1 P P 22 51 56.8 -0.2
baz=182
M56A Emporium 48.92 1 IAmb IAmb 22 52 12.5
comp=Z,24nm,0.8s
M54A Oil Creek Stat 48.93 360 P P 22 51 56.9 -0.2
baz=180
M54A Oil Creek Stat 48.93 360 IAmb IAmb 22 52 12.8
comp=Z,12nm,0.8s
M49A Liberty Center 49.07 356 P P 22 51 57.9 -0.2
baz=174
M59A Waymart 49.10 4 P P 22 51 58.2 -0.2
baz=185
KSU1 Kansas State U 49.18 342 P P 22 51 59.6 +0.6
baz=157
M62A Hamden 49.24 7 P P 22 51 60.0 +0.6
baz=188
M63A Gales Ferry 49.30 7 P P 22 52 00.7 +0.9
baz=190
L53A Girard 49.38 359 P P 22 51 59.8 -0.7
baz=179
ANMO Albuquerque 49.46 331 P P 22 52 02.0 +0.6
baz=144
ANMO Albuquerque 49.46 331 P P 22 52 02.2 +0.8
ANMO IAmb IAmb 22 52 20.3
comp=Z,22nm,0.8s
L57A Andrews Acres 49.48 3 P P 22 52 00.9 -0.4
baz=183,SNR=6.4
ERPA Erie 49.54 359 P P 22 52 01.3 -0.4
baz=179
L50A Kingsville 49.56 357 P P 22 52 02.0 +0.2
baz=176
L58A Harry Jones Me 49.58 4 P P 22 52 02.0 0.0
baz=184
L56A Greenwood 49.59 2 P P 22 52 02.0 -0.1
baz=182
L56A Greenwood 49.59 2 IAmb IAmb 22 52 17.6
comp=Z,22nm,0.8s
L55A Hinsdale 49.62 1 P P 22 52 02.1 -0.2
baz=181
L60A Shokan 49.65 5 P P 22 52 02.5 +0.1
baz=187
L54A Sinclairville 49.66 0 P P 22 52 02.2 -0.4
baz=180
TUC Tucson 49.72 325 P P 22 52 03.8 +0.4
baz=137
TUC Tucson 49.72 325 P P 22 52 02.7 -0.7
TUC IAmb IAmb 22 52 20.8
comp=Z,12nm,0.8s
BINY Binghamton 49.72 3 P P 22 52 03.0 -0.1
baz=184,SNR=6.6
L59A Walton 49.78 4 P P 22 52 03.4 -0.2
baz=186,SNR=7.9

L59A **Walton** 49.78 4 P P 22 52 03.3 -0.2
L61A **Hillsdale 1, H** 49.91 6 P P 22 52 05.2 +0.7
baz=188
CBKS **Cedar Bluff** 49.94 339 P P 22 52 05.3 +0.5
baz=153
K54A **Basiliko Farm,** 50.04 1 P P 22 52 05.5 0.0
baz=181
K55A **Perry** 50.17 1 P P 22 52 05.7 -0.7
baz=182
MMNY **Mt. Morris Dam** 50.17 1 IAmb IAmb 22 52 21.7
comp=Z,27nm,1.0s
K52A **Tillsonburg** 50.22 359 P P 22 52 06.8 0.0
baz=178
K57A **Scipio Center** 50.23 3 P P 22 52 06.8 -0.1
baz=184
L61B **Northampton** 50.26 7 P P 22 52 07.4 +0.3
baz=189
K50A **Casco** 50.28 357 P P 22 52 07.1 -0.2
baz=176
K58A **Earlville** 50.31 4 P P 22 52 07.2 -0.4
baz=185
K58A **Earlville** 50.31 4 P P 22 52 04.3 -3.2
K58A IAmb IAmb 22 52 23.4
comp=Z,20nm,1.0s
K49A **Clarkson** 50.34 356 P P 22 52 07.1 -0.6
baz=175
K47A **Vermontville** 50.35 355 P P 22 52 07.3 -0.5
baz=173
K59A **Cooperstown** 50.37 4 P P 22 52 07.9 -0.2
baz=186
K48A **Perry** 50.41 356 P P 22 52 07.5 -0.7
baz=174
TRY **Troy** 50.43 6 P P 22 52 09.1 +0.7
HRV **Adam Dziewonsk** 50.45 8 P P 22 52 07.8 -0.8
baz=190
K62A **Royalston** 50.52 7 P P 22 52 08.5 -0.6
baz=189
MEDO **Medina** 50.59 1 P P 22 52 08.7 -0.9
MEDO IAmb IAmb 22 52 24.7
comp=Z,18nm,0.8s
K63A **Dunstable** 50.63 8 P P 22 52 09.5 -0.4
baz=190
214A **Organ Pipe Nat** 50.65 323 P P 22 52 10.8 +0.4
baz=135,SNR=6.7
214A **Organ Pipe Nat** 50.65 323 IAmb IAmb 22 52 28.4
comp=Z,23nm,1.0s
J52A **Paris** 50.67 359 P P 22 52 09.8 -0.4
baz=178
J55A **Hilton** 50.71 2 P P 22 52 09.9 -0.6
baz=182
J55A **Hilton** 50.71 2 P P 22 52 09.4 -1.0
J55A IAmb IAmb 22 52 25.6
comp=Z,18nm,0.8s
J56A **Wolcott** 50.75 2 P P 22 52 10.9 +0.1
baz=183
J48A **Bridge Port** 50.87 356 P P 22 52 11.2 -0.5
baz=174
J47A **Sunmer** 50.90 355 P P 22 52 12.1 +0.2
baz=173
X18A **Snowflake** 50.92 327 IAmb IAmb 22 52 32.3
comp=Z,11nm,0.8s
J58A **Remsen** 50.92 4 P P 22 52 11.9 -0.3
baz=185
J58A **Remsen** 50.92 4 P P 22 52 12.3 +0.1
J58A IAmb IAmb 22 52 27.9
comp=Z,21nm,1.1s
J57A **Williamstown** 50.93 3 P P 22 52 12.4 +0.2
baz=184
J60A **Lant Hill Farm** 50.96 6 P P 22 52 12.6 +0.2
baz=188
J59A **Piesco** 51.09 5 P P 22 52 13.3 -0.1
baz=186
J59A **Piesco** 51.09 5 IAmb IAmb 22 52 30.6
comp=Z,16nm,0.8s
J62A **Henniker** 51.12 7 P P 22 52 13.2 -0.5
baz=190
J61A **Chester** 51.16 6 P P 22 52 14.2 +0.3
baz=189
I51A **Listowel** 51.24 359 P P 22 52 14.7 +0.1
baz=178
W18A **Petrified Fore** 51.25 328 P P 22 52 15.8 +0.8
baz=140,SNR=8.9
I58A **Old Forge** 51.27 4 P P 22 52 14.7 -0.1
baz=186
SDCO **Great Sand Dun** 51.30 334 P P 22 52 15.7 +0.2
baz=146,SNR=16
I59A **Olmsteadville** 51.47 5 P P 22 52 16.3 +0.1
baz=187
I57A **Carthage** 51.48 4 P P 22 52 16.9 +0.6
baz=185
HNH **Hanover** 51.54 7 P P 22 52 16.6 -0.1
HNH IAmb IAmb 22 52 33.7
comp=Z,18nm,0.9s
I60A **Shoreham** 51.57 6 P P 22 52 17.3 +0.4
baz=188,SNR=8.8
X16A **Lo Mia Camp, P** 51.65 326 IAmb IAmb 22 52 39.5
comp=Z,12nm,0.8s
S22A **4UR Ranch, Cre** 51.90 332 P P 22 52 20.4 +0.4
baz=144
H53A **Bobcaygeon** 52.00 1 P P 22 52 20.0 -0.2
baz=181
H55A **Tweed** 52.01 2 P P 22 52 20.2 0.0
baz=183
H58A **Gabriels** 52.06 5 P P 22 52 20.2 -0.4
baz=186
H52A **Wyevale** 52.07 360 P P 22 52 20.2 -0.4
baz=179
H56A **Elgin** 52.09 3 P P 22 52 20.6 -0.3
baz=184
I63A **Otisfield** 52.10 8 P P 22 52 21.0 +0.1
baz=191
LBNH **Lisbon** 52.11 7 P P 22 52 20.6 -0.4
baz=189
Q24A **Divide** 52.17 335 P P 22 52 22.7 +0.8
baz=147
SADO **Sadowa** 52.19 0 P P 22 52 20.0 -1.6
comp=Z,13nm,1.1s,baz=154,slow=2.5,SNR=3.7
SADO LR LR 23 14 58.7
comp=Z,53nm,21.5s,baz=158,slow=36
SADO **Sadowa** 52.19 0 IAmb IAmb 22 53 50.4
comp=Z,18nm,1.1s
LONY **Lake Ozonia** 52.23 4 P P 22 52 21.6 -0.3
baz=186
LONY **Lake Ozonia** 52.23 4 IAmb IAmb 22 52 38.4
comp=Z,22nm,1.0s
H59A **Cadyville** 52.33 5 P P 22 52 22.6 +0.1
baz=187
WUAZ **Wupatki** 52.43 327 P P 22 52 24.3 +0.6
baz=139,SNR=9.1
WUAZ **Wupatki** 52.43 327 P P 22 52 24.0 +0.2
FRNY **Flat Rock** 52.52 5 P P 22 52 24.3 +0.3
H62A **Milan** 52.53 7 P P 22 52 23.6 -0.5
H62A IAmb IAmb 22 52 41.0
comp=Z,15nm,0.8s
GLA **Glamis** 52.63 322 P P 22 52 26.4 +1.2
G57A **Newington** 52.68 4 P P 22 52 25.0 -0.1
baz=185
G55A **Calabogie** 52.73 2 P P 22 52 25.3 -0.3
baz=183
G47A **Hillman** 52.74 356 P P 22 52 26.0 +0.4
baz=174
G54A **Lake Saint Pet** 52.83 1 P P 22 52 26.3 0.0
baz=182
Y12C **Blythe** 52.94 323 P P 22 52 28.3 +1.1
baz=134,SNR=5.1
PV01 **Paradox Valley** 53.03 331 IAmb IAmb 22 52 46.8
comp=Z,18nm,0.8s
ISCO **Idaho Springs** 53.06 335 P P 22 52 28.5 0.0
baz=147,SNR=7.4
ISCO **Idaho Springs** 53.06 335 IAmb IAmb 22 52 47.5
comp=Z,14nm,0.8s
H65A **Eastbrook** 53.09 10 P P 22 52 28.4 +0.3
baz=194
SMCO **Snowmass** 53.13 333 P P 22 52 30.2 +1.1
G61A **St-Isidore-de-** 53.19 7 P P 22 52 29.5 +0.6
baz=190
PV05 **Paradox Valley** 53.24 331 IAmb IAmb 22 52 53.4
comp=Z,16nm,0.9s
EMMW **East Machias** 53.24 11 P P 22 52 28.6 -0.7
EMMW IAmb IAmb 22 52 31.4
comp=Z,26nm,1.2s
G62A **West of Eustis** 53.25 8 P P 22 52 30.3 +0.9
baz=191
PV03 **Paradox Valley** 53.26 331 IAmb IAmb 22 52 48.5
comp=Z,16nm,0.8s
PV18 **Skein Mesa, Pa** 53.28 331 IAmb IAmb 22 52 48.6
comp=Z,22nm,0.7s
G63A **Kingsbury** 53.28 9 P P 22 52 30.6 +1.0
baz=192
PV07 **Paradox Valley** 53.31 331 IAmb IAmb 22 52 50.0
comp=Z,19nm,0.8s
PV17 **East Wray Mesa** 53.33 331 IAmb IAmb 22 52 48.5
comp=Z,16nm,0.8s
PV16 **Nyswonger Mesa** 53.33 331 IAmb IAmb 22 53 02.7
comp=Z,12nm,0.7s
PV19 **Morning Glory** 53.36 331 P P 22 52 32.0 +1.4
PV19 IAmb IAmb 22 52 54.4
comp=Z,10nm,0.8s
PV20 **West Nyswonger** 53.38 331 P P 22 52 31.8 +1.0
PV20 IAmb IAmb 22 53 06.8
comp=Z,9.6nm,0.7s
ALGO **Algonquin Park** 53.39 1 P P 22 52 30.4 0.0
baz=182
PV04 **Paradox Valley** 53.39 331 P P 22 52 32.0 +1.2
PV04 IAmb IAmb 22 52 49.1
comp=Z,12nm,0.8s
BC3 **Big Chuckawall** 53.43 322 P P 22 52 31.7 +0.6
baz=133
PV14 **Lion Creek, Pa** 53.43 331 P P 22 52 31.7 +0.6
PV14 IAmb IAmb 22 52 49.3
comp=Z,13nm,0.8s
PV10 **Paradox Valley** 53.44 331 P P 22 52 31.0 -0.3
PV10 IAmb IAmb 22 52 55.0
comp=Z,18nm,0.9s
PV22 **Blue Mesa, Par** 53.45 331 P P 22 52 31.9 +0.6
PV22 IAmb IAmb 22 52 49.5
comp=Z,13nm,0.9s
ECSD **EROS Data Cent** 53.47 345 P P 22 52 30.7 -0.4
baz=159
PV23 **Carpenter Ridg** 53.49 331 P P 22 52 32.3 +0.7
PV23 IAmb IAmb 22 52 51.3
comp=Z,15nm,0.8s
MONP2 **Monument Peak** 53.51 321 P P 22 52 31.4 -0.4
baz=132,SNR=5.6
W13A **Hualapai Mount** 53.52 325 IAmb IAmb 22 52 50.1
comp=Z,17nm,0.8s
BAR **Barrett** 53.52 321 P P 22 52 32.4 +0.7
PV21 **Cone Mtn., Par** 53.56 331 P P 22 52 32.5 +0.4
IRM **Iron Mountain** 53.59 323 P P 22 52 32.3 +0.2
baz=134
F60A **Warwick** 53.81 6 P P 22 52 33.4 0.0
baz=189
E54A **Lac Daplat, Po** 53.90 2 P P 22 52 34.1 +0.1
baz=183
F61A **St Evariste** 53.93 7 P P 22 52 34.4 +0.1
baz=190
E51A **G1948 Merrick** 53.96 360 P P 22 52 33.9 -0.6
baz=180
E48A **Lockeyer** 53.96 358 P P 22 52 34.7 +0.1
baz=176
BELC **Belle Mtn. Jos** 53.99 322 P P 22 52 36.0 +0.8
baz=133
TPFO **Pinon Flats** 54.01 322 P P 22 52 36.1 +0.8
baz=132
XPFO **Pion Flat** 54.01 322 P P 22 52 35.6 +0.2
PFO **Pinyon Flats O** 54.01 322 P P 22 52 35.6 +0.3
baz=132
PFO **Pinyon Flats O** 54.01 322 P P 22 52 36.1 +0.8
E57A **Chemin Saint G** 54.04 5 P P 22 52 34.4 -0.8
baz=186,SNR=10
E58A **La Victoria** 54.08 5 P P 22 52 35.5 +0.1
baz=187
E56A **St. Veronique** 54.11 4 P P 22 52 35.0 -0.6
baz=185,SNR=8.1
N23A **Red Feather La** 54.12 335 P P 22 52 36.5 +0.3
baz=147
F64A **Sherman** 54.21 10 P P 22 52 36.2 -0.1
baz=193
F64A **Sherman** 54.21 10 P P 22 52 36.7 +0.3
PHWY **Pilot Hill** 54.26 336 P P 22 52 37.4 +0.2
GMRC **Granite Mounta** 54.33 323 P P 22 52 38.1 +0.4
baz=134,SNR=5.3
O20A **White River Ci** 54.48 333 P P 22 52 38.7 -0.1
baz=144,SNR=11
D53A **Lac Vacive, Po** 54.52 1 P P 22 52 37.4 -1.3
baz=182
D53A **Lac Vacive, Po** 54.52 1 P P 22 52 37.9 -0.8
D53A IAmb IAmb 22 52 53.8
comp=Z,11nm,0.8s
D55A **Sainte-Anne-du** 54.56 3 P P 22 52 37.9 -1.0
baz=185
D47A **Chapleau** 54.58 357 P P 22 52 38.2 -0.8
baz=175
D54A **Lac Fusel, La** 54.63 2 P P 22 52 38.1 -1.3
baz=183
D56A **ZEC Mazanza, M** 54.63 4 P P 22 52 39.0 -0.5
baz=186
D48A **Paudash Townsh** 54.64 358 P P 22 52 38.5 -0.9
baz=177
D57A **Chemin Vers le** 54.66 5 P P 22 52 39.4 -0.3
baz=187,SNR=6.0
E63A **Oxbow** 54.74 9 P P 22 52 40.7 +0.5
HEC **Hector,Ludlow** 54.76 323 P P 22 52 41.2 +0.5
baz=133,SNR=8.4
SUSD **Miller** 54.77 343 P P 22 52 40.4 -0.1
baz=156
SUSD **Miller** 54.77 343 P P 22 52 41.2 +0.7
D58A **Chemin du LacG** 54.83 5 P P 22 52 40.5 -0.3
baz=188
LMN **Caledonia Moun** 54.87 12 P P 22 52 41.6 +0.4
LMN IAmb IAmb 22 52 58.1
comp=Z,23nm,0.9s
SZCU **Shurtz Canyon** 54.90 327 P P 22 52 42.5 +0.7
TUQ **Turquoise Moun** 54.94 324 P P 22 52 42.4 +0.4
baz=134,SNR=6.8
PQI **Presque Isle** 55.05 10 P P 22 52 43.4 +0.9
PQI IAmb IAmb 22 53 34.1
comp=Z,20nm,1.3s
LATQ **La Tuque** 55.13 6 P P 22 52 43.2 +0.3
baz=188
BFSC **Mount Baldy Ra** 55.17 321 P P 22 52 44.6 +0.9
baz=132
SHPR **Sheep Range** 55.24 325 IAmb IAmb 22 53 02.6
comp=Z,14nm,0.9s
D62A **Allapoint, All** 55.29 9 P P 22 52 44.5 +0.3
baz=182
D62A **Allapoint, All** 55.29 9 P P 22 52 45.0 +0.9
D62A IAmb IAmb 22 53 01.1
comp=Z,27nm,1.0s
RWWY **Rawlins** 55.30 335 P P 22 52 44.2 -0.6
RKT **Rikitea** 55.36 247 *e*T T 23 51 33.2
comp=Z,6.0nm,0.2s
GSC **Goldstone, Bar** 55.37 323 P P 22 52 45.7 +0.6
baz=133,SNR=5.1
GSC **Goldstone, Bar** 55.37 323 IAmb IAmb 22 53 03.4
comp=Z,13nm,1.0s
RDMU **Red Mountain** 55.44 332 P P 22 52 46.1 +0.4
EDW2 **Edwards Air Fo** 55.80 322 P P 22 52 48.6 +0.4
baz=132,SNR=6.1
K22A **Casper** 55.82 336 P P 22 52 48.1 -0.2
baz=147
K22A **Casper** 55.82 336 IAmb IAmb 22 53 05.5
comp=Z,19nm,0.8s
RSSD **Black Hills** 56.13 339 P P 22 52 51.0 +0.5
baz=134
RSSD **Black Hills** 56.13 339 P P 22 52 51.1 +0.6
RSSD IAmb IAmb 22 53 08.0
comp=Z,25nm,0.9s
NLU **North Lily Min** 56.15 330 P P 22 52 51.4 +0.7
TPNV **Topopah Spring** 56.18 325 P P 22 52 52.1 +1.1
baz=134
TPNV **Topopah Spring** 56.18 325 P P 22 52 51.7 +0.8
TPNV IAmb IAmb 22 53 21.5
comp=Z,12nm,0.8s
FURC **Furnace Creek,** 56.20 324 P P 22 52 51.3 +0.4
baz=134
MPMC **Manual Prospec** 56.29 323 P P 22 52 52.2 +0.4
baz=133
EYMN **Ely** 56.38 350 P P 22 52 51.6 -0.4
baz=166
LSQQ **Lebel-sur-Quev** 56.52 2 P P 22 52 52.1 -0.8
baz=183
ISA **Isabella, Lake** 56.62 322 P P 22 52 55.9 +1.9
baz=132
ISA **Isabella, Lake** 56.62 322 P P 22 52 54.3 +0.3
DUG **Dugway, Tooele** 56.70 330 P P 22 52 55.0 +0.4
baz=139,SNR=6.9
DUG **Dugway, Tooele** 56.70 330 IAmb IAmb 22 53 17.5
comp=Z,14nm,0.8s
TCUT **Toone Canyon** 56.73 331 P P 22 52 55.6 +0.7
CWC **Cottonwood Cre** 56.90 323 P P 22 52 56.8 +0.7
baz=132
PKM **Mcpherson Peak** 56.94 321 P P 22 52 57.1 +0.7
baz=130
VES **Vestal, Richgr** 57.11 322 P P 22 52 57.9 +0.6
baz=131
B35A **Bob, Littlefor** 57.18 349 IAmb IAmb 22 53 15.7
comp=Z,21nm,1.1s
BW06 **Boulder Array** 57.19 334 P P 22 52 57.9 -0.2
baz=144
PDAR **Pinedale Array** 57.19 334 P P 22 52 57.5 -0.6
comp=Z,3.1nm,0.8s,baz=137,slow=7.4,SNR=17
PDAR pP pP 22 53 13.7 -0.8
comp=Z,4.4nm,0.7s,baz=124,slow=7.9,SNR=13
PDAR LR LR 23 18 35.4
comp=Z,40nm,18.1s,baz=135,slow=37
PDAR **Pinedale Array** 57.19 334 P P 22 52 57.3 -0.8
MATQ **Matagami** 57.21 1 P P 22 52 57.1 -0.7
baz=182
E28A **Huff** 57.22 343 P P 22 52 58.8 +0.8
CHGQ **Chibougamau** 57.51 4 P P 22 52 59.8 -0.1
baz=186
AGMN **Agassiz Nation** 57.57 347 P P 22 52 59.8 -0.6
baz=160,SNR=8.1
PAGB **Antelope Grade** 57.75 321 P P 22 53 02.5 +0.6
PAGB IAmb IAmb 22 53 42.0
comp=Z,10nm,0.9s
AHID **Auburn Hatcher** 57.87 333 IAmb IAmb 22 53 21.4
comp=Z,17nm,0.8s
PMSA **Palmer Station** 58.05 172 LR LR 23 13 40.8
comp=Z,77nm,18.7s,baz=348,slow=31
MDND **Maddock** 58.07 344 P P 22 53 04.4 +0.5
OMMB **Old Mammoth Mi** 58.23 324 IAmb IAmb 22 53 23.8
comp=Z,17nm,1.0s
MDPB **Devils Postpil** 58.29 323 P P 22 53 07.1 +1.2
MDPB IAmb IAmb 22 53 41.7
comp=Z,21nm,1.3s
NV11 **Mina Array Sit** 58.29 325 IAmb IAmb 22 53 25.3
comp=Z,11nm,1.0s
ELK **Elko** 58.34 329 P P 22 53 06.3 +0.1
ELK IAmb IAmb 22 53 25.2
comp=Z,12nm,0.9s
NVAR **Mina Array Bea** 58.38 325 P P 22 53 07.0 +0.5
comp=Z,2.2nm,0.6s,baz=142,slow=6.5,SNR=17
NVAR pP pP 22 53 22.4 -0.5
comp=Z,5.9nm,0.7s,baz=149,slow=6.0,SNR=13
NVAR LR LR 23 17 44.2
comp=Z,47nm,18.0s,baz=196,slow=36
TPAW **Teton Pass** 58.38 333 IAmb IAmb 22 53 43.5
comp=Z,8.6nm,0.8s
PMPB **Monarch Peak** 58.41 321 P P 22 53 06.9 +0.3
RYN **Ryan** 58.64 325 P P 22 53 08.6 +0.4
IMW **Indian Meadow** 58.70 334 IAmb IAmb 22 53 28.2
comp=Z,8.2nm,0.8s
FLWY **Flagg Ranch** 58.74 334 IAmb IAmb 22 53 43.4
comp=Z,10nm,0.8s
H17A **Grant Village** 58.94 334 P P 22 53 12.2 +1.8
baz=143
RLMT **Red Lodge** 58.98 336 P P 22 53 10.5 -0.1
baz=145
RLMT **Red Lodge** 58.98 336 IAmb IAmb 22 53 27.1
comp=Z,9.6nm,0.9s
WAKR **Walker** 59.08 324 IAmb IAmb 22 53 30.8
comp=Z,20nm,1.3s
LAO **LASA Array** 59.13 339 P P 22 53 11.4 0.0
baz=149
CMB **Columbia Colle** 59.33 323 P P 22 53 13.6 +0.7
ULM **Lac du Bonnet** 59.42 348 P P 22 53 13.2 +0.1
comp=Z,3.8nm,0.6s,baz=156,slow=7.3,SNR=3.8
ULM LR LR 23 17 47.9
comp=Z,32nm,21.8s,baz=30,slow=35
PNTR **Pine Nut** 59.57 324 P P 22 53 16.0 +1.2
PNTR IAmb IAmb 22 53 36.6
comp=Z,15nm,0.8s
DRLN **Deer Lake** 59.85 16 P P 22 53 14.3 -1.9
PAHR **Pah Rah Range** 59.86 325 IAmb IAmb 22 53 39.8
comp=Z,11nm,0.9s
TAOE **Nuku Hiva Isla** 60.01 264 *e*LR LR 23 11 01.4
comp=Z,335nm,26.1s
DLMT **Dillon** 60.58 334 IAmb IAmb 22 53 42.0
comp=Z,16nm,1.1s
MFID **Camas Ranch** 60.60 330 IAmb IAmb 22 53 41.8
comp=Z,23nm,1.0s
WVOR **Wild Horse Val** 61.33 328 P P 22 53 27.2 +0.6
WVOR IAmb IAmb 22 54 14.6
comp=Z,12nm,1.1s
MOD **Modoc Plateau** 61.86 326 IAmb IAmb 22 53 33.1
comp=Z,22nm,1.1s
O02D **Mt. Diablo Mer** 62.14 324 P P 22 53 32.5 +0.5
baz=130
KCPM **Cahto Peak** 62.30 323 P P 22 53 34.9 +1.7
MSO **Missoula** 62.31 334 P P 22 53 33.3 +0.2
baz=141,SNR=8.8
N02D **Trinity Center** 62.60 324 P P 22 53 35.1 0.0
baz=130
M04C **Macdoel** 62.63 325 P P 22 53 36.1 +0.8
baz=131
KMRM **Mail Ridge** 62.71 323 IAmb IAmb 22 54 00.7
comp=Z,30nm,1.2s
K05A **Summer Lake** 62.74 327 IAmb IAmb 22 54 12.4
comp=Z,22nm,1.0s
I07A **Izee** 62.94 329 IAmb IAmb 22 53 40.4
comp=Z,16nm,1.2s
M02C **Callahan** 62.96 325 P P 22 53 38.0 +0.5
baz=130
YBH **Yreka Blue Hor** 63.09 325 P P 22 53 38.4 0.0
comp=Z,5.8nm,0.9s,baz=95,slow=6.0,SNR=15
KHMM **Horse Mountain** 63.14 324 P P 22 53 39.9 +1.2
KHMM IAmb IAmb 22 54 10.6
comp=Z,13nm,0.8s
SCHQ **Schefferville** 63.16 8 P P 22 53 38.6 +0.2
comp=Z,4.6nm,0.9s,baz=153,slow=6.3,SNR=4.5
SCHQ LR LR 23 22 13.6
comp=Z,50nm,19.9s,baz=209,slow=37
SCHQ **Schefferville** 63.16 8 P P 22 53 38.7 +0.2
SCHQ IAmb IAmb 22 53 54.6
comp=Z,16nm,1.0s
F10A **Beach Ranch, E** 63.16 331 IAmb IAmb 22 54 11.5
comp=Z,21nm,0.9s
JTMT **Jette** 63.17 334 P P 22 53 39.2 +0.4
L04D **Klamath Falls** 63.18 326 P P 22 53 39.0 0.0
baz=131,SNR=6.7
JCC **Jacoby Creek,** 63.28 323 P P 22 53 40.3 +0.8
JCC IAmb IAmb 22 54 04.3
comp=Z,19nm,1.0s
J05D **Fort Rock, OR** 63.30 327 P P 22 53 39.9 +0.1
baz=132,SNR=7.7
PINE **Pine Mountain** 63.49 328 IAmb IAmb 22 53 43.8
comp=Z,13nm,0.8s
KRMB **Red Mountain** 63.65 324 IAmb IAmb 22 54 02.2
comp=Z,27nm,1.4s
J04D **Umpqua Nationa** 63.75 326 P P 22 53 43.3 +0.5
baz=131
E09A **Wood Farm, Sta** 63.99 331 P P 22 53 44.9 +0.8
WALA **Waterton Lakes** 64.03 336 IAmb IAmb 22 54 03.5
comp=Z,25nm,0.8s
I05D **Terrebonne, OR** 64.07 328 P P 22 53 45.3 +0.6
baz=133
K02D **Willamette Mer** 64.26 325 P P 22 53 46.5 +0.5
baz=130,SNR=10
I04A **Tendick Farm,** 64.28 327 P P 22 53 46.0 -0.1
baz=131
G06A **Carlson Farm,** 64.32 329 P P 22 53 46.1 -0.2
G06A IAmb IAmb 22 54 32.8
comp=Z,34nm,1.6s
G05D **Wamic, OR** 64.67 329 P P 22 53 49.2 +0.7
baz=133
J01E **Myrtle Point** 64.71 325 P P 22 53 49.1 +0.4
baz=130
I03D **Drain, OR** 64.73 326 P P 22 53 49.8 +0.9
baz=130
NEW **Newport** 64.80 333 P P 22 53 49.0 -0.4
comp=Z,8.3nm,1.0s,baz=158,slow=7.2,SNR=7.4
NEW **Newport** 64.80 333 P P 22 53 49.7 +0.3
baz=138
NEW **Newport** 64.80 333 IAmb IAmb 22 54 07.5
comp=Z,15nm,1.0s
E07A **Sunnyside** 64.85 330 P P 22 53 48.9 -0.8
E07A IAmb IAmb 22 53 52.4
comp=Z,16nm,0.8s
H04D **Lebanon** 64.94 327 P P 22 53 51.1 +0.8
baz=131
FFC **Flin Flon** 64.96 346 P P 22 53 51.4 +1.2
F05D **White Salmon** 65.18 329 P P 22 53 53.2 +1.4
baz=133
F04A **Amboy** 65.71 329 P P 22 53 56.2 +1.0
F04A IAmb IAmb 22 54 19.3
comp=Z,25nm,1.2s
E04D **Cinebar** 66.20 329 P P 22 53 59.2 +0.9
baz=132
D03D **Eldon** 67.12 330 P P 22 54 04.7 +0.5
baz=132

B05A	**Bryant**	**67.13**	**331**	P	**P**	**22 54 04.8**	**+0.6**
	baz=133						
FCC	**Fort Churchill**	**67.25**	**352**	IAmb	IAmb	22 54 21.5	
	comp=Z,19nm,0.9s						
MEH	**Mehetia**	**67.37**	**254**	*e*T	T	00 06 29.9	
	comp=Z,19nm,0.3s						
NLWA	**Neilton Lookou**	**67.42**	**329**	P	**P**	**22 54 06.8**	**+0.6**
NLWA				IAmb	IAmb	22 54 51.4	
	comp=Z,35nm,1.4s						
PGC	**Sidney**	**68.05**	**330**	P	**P**	**22 54 10.6**	**+0.5**
LLLB	**Lillooet**	**68.65**	**333**	P	**P**	**22 54 13.9**	**+0.1**
TBI	**Tubuai**	**68.67**	**248**	*e*LR	LR	23 15 05.5	
	comp=Z,261nm,27.5s						
TBI	**Tubuai**	**68.67**	**248**	*e*T	T	00 08 10.0	
	comp=Z,22nm,0.3s						
PPT2	**Papeete2**	**68.81**	**254**	*e*LR	LR	23 15 02.8	
	comp=Z,492nm,27.2s						
PPT	**Papeete**	**68.81**	**254**	LR	LR	23 16 25.9	
	comp=Z,172nm,18.2s,baz=146,slow=29						
PMPS	**Porto Santo**	**72.28**	**52**	*e*P	**P**	**22 54 37.3**	**+1.0**
BBB	**Bella Bella**	**72.62**	**331**	P	**P**	**22 54 37.8**	**0.0**
	comp=Z,12nm,0.8s,baz=201,slow=1.2,SNR=3.2						
BBB	**Bella Bella**	**72.62**	**331**	IAmb	IAmb	22 55 22.0	
	comp=Z,43nm,1.4s						
YKA	**Yellowknife Ar**	**74.99**	**344**	P	**P**	**22 54 50.8**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=138,slow=5.7,SNR=34						
YKA				pP	**pP**	**22 55 07.0**	**-1.5**
	comp=Z,11nm,0.9s,baz=136,slow=6.0,SNR=22						
LIC	**Lamto**	**75.51**	**82**	*e*P	**P**	**22 54 54.8**	**-0.8**
	comp=Z,1.0nm,0.2s						
TIC	**Toumodi**	**75.59**	**81**	*e*P	**P**	**22 54 56.4**	**+0.3**
DBIC	**Dimbokro**	**75.76**	**81**	P	**P**	**22 54 58.1**	**+1.1**
	comp=Z,12nm,0.8s,baz=234,slow=6.8,SNR=15						
DBIC				pP	**pP**	**22 55 13.7**	**-0.4**
	comp=Z,17nm,0.7s,baz=246,slow=5.1,SNR=9.5						
DBIC				LR	LR	23 26 49.2	
	comp=Z,199nm,19.9s,baz=239,slow=34						
DBIC	**Dimbokro**	**75.76**	**81**	P	**P**	**22 54 56.7**	**-0.2**
DBIC				P	**P**	**22 54 58.0**	**+1.1**
DBIC				IAmb	IAmb	22 55 15.2	
	comp=Z,22nm,0.8s						
KIC	**Kosan Boka**	**75.82**	**81**	*e*P	**P**	**22 54 57.7**	**+0.4**
	comp=Z,48nm,1.0s						
VNA3	**Neumayer Olymp**	**76.34**	**162**	P	**P**	**22 55 00.3**	**+1.0**
VNA1	**Neumayer--Stat**	**76.62**	**161**	P	**P**	**22 55 01.8**	**+1.1**
VNA2	**Neumayer--Watz**	**76.97**	**161**	P	**P**	**22 55 03.8**	**+1.0**
DLBC	**Dease Lake**	**77.38**	**335**	P	**P**	**22 55 04.5**	**-0.8**
	comp=Z,7.7nm,0.8s,baz=145,slow=5.1,SNR=12						
DLBC				pP	**pP**	**22 55 22.5**	**+0.1**
	comp=Z,20nm,0.8s,baz=144,slow=5.7,SNR=14						
DLBC	**Dease Lake**	**77.38**	**335**	IAmb	IAmb	22 55 23.9	
	comp=Z,25nm,0.9s						
SNAA	**Sanae**	**78.57**	**162**	P	**P**	**22 55 12.7**	**+1.0**
SNAA	**Sanae**	**78.57**	**162**	P	**P**	**22 55 12.8**	**+1.0**
PCVE	**Castro Verde**	**80.20**	**50**	*e*pP	pP	22 55 39.1	+0.7
PMTG	**Montargil**	**80.50**	**48**	*e*P	**P**	**22 55 23.7**	**+1.0**
	comp=Z,16nm,1.0s						
PMTG				*e*pP	**pP**	**22 55 40.1**	**+0.1**
PVIS	**Viseu**	**81.25**	**47**	*e*P	**P**	**22 55 27.4**	**+0.6**
PVIS				*e*pP	**pP**	**22 55 44.3**	**+0.2**
HYT	**Haines Junctio**	**81.86**	**335**	P	**P**	**22 55 30.1**	**+0.5**
MVO	**Moncorvo**	**82.01**	**47**	*e*P	**P**	**22 55 31.8**	**+1.0**
	comp=Z,21nm,1.6s						
MVO				*e*pP	**pP**	**22 55 48.4**	**+0.3**
PBRG	**Braganca**	**82.41**	**46**	*e*pP	pP	22 55 50.0	-0.2
QSPA	**South Pole Qui**	**82.44**	**180**	P	**P**	**22 55 34.1**	**+1.5**
QSPA				IAmb	IAmb	22 55 35.1	
	comp=Z,36nm,1.1s						
C36M	**Paulatuk**	**82.73**	**345**	P	**P**	**22 55 33.8**	**0.0**
	baz=135						
TOA0	**Torodi Ar. Sit**	**83.20**	**76**	IAmb	IAmb	22 55 55.9	
	comp=Z,25nm,1.0s						
TORD	**Torodi Ar. Bea**	**83.20**	**76**	P	**P**	**22 55 37.7**	**+0.3**
	comp=Z,9.7nm,0.9s,baz=272,slow=4.7,SNR=42						
TORD				pP	**pP**	**22 55 54.2**	**-0.5**
	comp=Z,21nm,1.0s,baz=274,slow=4.3,SNR=18						
TORD				LR	LR	23 34 00.4	
	comp=Z,68nm,18.0s,baz=230,slow=36						
TORD	**Torodi Ar. Bea**	**83.20**	**76**	P	**P**	**22 55 37.5**	**+0.2**
BARN	**Barnard Glacie**	**83.74**	**334**	P	**P**	**22 55 39.9**	**+0.5**
BARN				IAmb	IAmb	22 55 58.0	
	comp=Z,25nm,1.6s						
ESDC	**Sonseca Array**	**83.84**	**49**	P	**P**	**22 55 41.1**	**+0.8**
	comp=Z,4.5nm,1.0s,baz=270,slow=5.7,SNR=18						
ESDC				pP	**pP**	**22 55 57.3**	**-0.4**
	comp=Z,8.5nm,1.1s,baz=267,slow=4.6,SNR=13						
ESDC				LR	LR	23 31 24.8	
	comp=Z,51nm,19.6s,baz=265,slow=34						
SUMG	**Summit**	**84.32**	**11**	P	**P**	**22 55 42.8**	**+0.4**
SUMG	**Summit**	**84.32**	**11**	*i* P	**P**	**22 55 42.4**	**0.0**
	comp=Z,29nm,1.0s						
SUMG				*i*		22 55 58.4	
MCARA	**McCarthy VSAT**	**84.47**	**334**	IAmb	IAmb	22 56 01.6	
	comp=Z,15nm,0.9s						
EPYK	**Eagle Plains**	**84.56**	**340**	P	**P**	**22 55 43.4**	**+0.1**
	baz=123						
EPYK	**Eagle Plains**	**84.56**	**340**	IAmb	IAmb	22 56 01.0	
	comp=Z,15nm,0.9s						
INK	**Inuvik**	**84.65**	**342**	P	**P**	**22 55 43.5**	**-0.1**
	comp=Z,11nm,1.1s,baz=127,slow=6.2,SNR=23						
INK				pP	**pP**	**22 56 00.3**	**-0.6**
	comp=Z,13nm,0.7s,baz=112,slow=5.8,SNR=15						
INK	**Inuvik**	**84.65**	**342**	IAmb	IAmb	22 56 02.4	
	comp=Z,29nm,1.1s						
BCAR	**Beaver Creek A**	**84.74**	**336**	P	**P**	**22 55 44.6**	**+0.3**
A36M	**Sachs Harbour**	**84.89**	**347**	P	**P**	**22 55 44.4**	**-0.3**
	baz=134						
RIDG	**Independent Ri**	**86.27**	**336**	IAmb	IAmb	22 55 54.5	
	comp=Z,19nm,1.0s						
HDA	**Harding Lake**	**87.39**	**336**	P	**P**	**22 55 57.1**	**-0.2**
	baz=113						
ILAR	**Eielson Array**	**87.52**	**337**	P	**P**	**22 55 57.4**	**-0.5**
	comp=Z,4.2nm,1.0s,baz=148,slow=3.5,SNR=25						
ILAR				pP	**pP**	**22 56 14.4**	**-0.8**
	comp=Z,4.8nm,1.0s,baz=144,slow=3.4,SNR=6.8						
ILAR				PP	**PP**	**22 59 26.2**	**+2.7**
	comp=Z,1.6nm,1.0s,baz=112,slow=6.6,SNR=5.0						
ILAR				LR	LR	23 39 25.0	
	comp=Z,29nm,18.2s,baz=124,slow=38						
ILAR	**Eielson Array**	**87.52**	**337**	P	**P**	**22 55 56.8**	**-1.1**
FYU	**Fort Yukon**	**87.64**	**339**	P	**P**	**22 55 57.7**	**-0.7**
FYU				IAmb	IAmb	22 56 19.5	
	comp=Z,18nm,0.9s						
BMAR	**Burnt Mountain**	**87.78**	**339**	P	**P**	**22 55 59.1**	**0.0**
POKR	**Poker Plat Res**	**87.87**	**337**	P	**P**	**22 56 01.1**	**+1.6**
	baz=113						
WRH	**Wood River Hil**	**87.87**	**336**	IAmb	IAmb	22 56 02.0	
	comp=Z,11nm,1.0s						
MCK	**McKinley**	**87.94**	**335**	IAmb	IAmb	22 56 40.5	
	comp=Z,10nm,0.8s						
TAM	**Tamanrasset**	**88.34**	**67**	P	**P**	**22 56 02.1**	**-0.8**
TRF	**Thorofare Moun**	**88.40**	**335**	IAmb	IAmb	22 56 26.0	
	comp=Z,8.6nm,0.8s						
ESK	**Eskdalemuir**	**88.52**	**34**	P	**P**	**22 56 02.5**	**-0.3**
ESK				IAmb	IAmb	22 56 20.2	
	comp=Z,15nm,0.9s						
VNDA	**Vanda**	**88.52**	**191**	P	**P**	**22 56 03.9**	**+1.4**
	comp=Z,2.9nm,0.9s,baz=120,slow=3.3,SNR=17						
VNDA				LR	LR	23 28 23.6	
	comp=Z,71nm,18.1s,baz=126,slow=31						
COLD	**Coldfoot**	**89.70**	**338**	IAmb	IAmb	22 56 28.5	
	comp=Z,8.5nm,0.9s						
TOLK	**Toolik Lake Re**	**89.99**	**340**	P	**P**	**22 56 09.4**	**0.0**
	baz=111						
CHGN	**Chignik**	**90.24**	**327**	IAmb	IAmb	22 56 32.5	
	comp=Z,11nm,0.9s						
IMAR	**Indian Mountai**	**90.63**	**337**	P	**P**	**22 56 11.8**	**-0.7**
DAG	**Danmarks Havn**	**91.01**	**12**	*i* P	**P**	**22 56 14.3**	**+0.3**
	comp=Z,3.2nm,0.9s						
DAG				*i*		22 56 30.4	
DOU	**Dourbes**	**92.02**	**40**	pP	pP	22 56 36.5	-0.2
BMRD	**Maredsous**	**92.17**	**40**	pP	pP	22 56 37.1	-0.3
SYO	**Syowa Base**	**92.86**	**162**⇑	*e*P	pP	**22 56 22.2**	**-0.6**
SYO	**Syowa Base**	**92.86**	**162**⇑	*e*pP	pP	22 56 39.8	-0.4
SYO	**Syowa Base**	**92.86**	**162**⇓	*i*sP	sP	22 56 48.0	+1.0
WLF	**Walferdange**	**92.95**	**40**	pP	pP	22 56 41.1	0.0
KEST	**Kesra**	**93.46**	**55**	LR	LR	23 37 09.5	
	comp=Z,52nm,20.5s,baz=281,slow=34						
URZ	**Urewera**	**95.71**	**230**	P	**P**	**22 56 37.5**	**+0.9**
	comp=Z,2.9nm,0.3s,baz=265,slow=4.6,SNR=8.2						
NOA	**NORSAR Array B**	**96.98**	**29**	LR	LR	23 37 47.2	
	comp=Z,27nm,20.9s,baz=260,slow=34						
CLL	**Collm**	**97.47**	**39**	*e*pP	pP	22 57 02.0	+0.3
GERES	**GERESS Array B**	**97.80**	**42**	LR	LR	23 38 37.7	
	comp=Z,17nm,21.2s,baz=318,slow=34						
BRG	**Berggiesshubel**	**98.04**	**40**	*e*P	pP	22 57 05.8	+1.5
	comp=Z,5.6nm,1.3s						
BOSA	**Boshof**	**99.11**	**121**	LR	LR	23 39 08.2	
	comp=Z,57nm,18.9s,baz=312,slow=34						
DZM	**Mont Dzumac**	**109.02**	**244**	*e*LR	LR	23 33 41.8	
	comp=Z,251nm,27.9s						
KLMR	**Klimovskoe**	**110.53**	**27**	*e*PP	**PP**	**23 02 19.6**	**+0.9**
KLMR				AMP		23 02 25.3	
	comp=Z,10.0nm,1.4s						
KBZ	**Khabaz**	**118.42**	**44**	PKP	**PKiKP**	**23 01 58.0**	**+0.1**
	comp=Z,2.7nm,0.9s,baz=250,slow=3.2,SNR=5.3						
STKA	**Stephens Creek**	**124.49**	**223**	PKP	**PKPdf**	**23 02 09.7**	**-0.4**
	comp=Z,3.2nm,0.6s,baz=57,slow=2.2,SNR=7.6						
STKA				pPKP	**pPKPdf**	**23 02 26.8**	**-1.3**
	comp=Z,2.6nm,0.6s,baz=109,slow=3.3,SNR=4.2						
AKTO	**Aktyubinsk**	**124.68**	**32**	PKP	**PKiKP**	**23 02 10.3**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=343,slow=1.9,SNR=3.5						
ABKAR	**Akbulak array**	**126.39**	**32**		**PKiKP**	**23 02 13.9**	**+0.4**
BRVK	**Borovoye**	**128.49**	**23**		**PKiKP**	**23 02 17.5**	**-0.1**
BVAR	**Borovoye Array**	**128.56**	**23**	PKP	**PKiKP**	**23 02 17.6**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=294,slow=1.5,SNR=13						
BVAR				pPKP	**pPKPdf**	**23 02 35.1**	**-0.1**
	comp=Z,4.5nm,0.8s,baz=327,slow=2.5,SNR=12						
GEYT	**Alibeck**	**131.28**	**45**	pPKP	pPKPdf	23 02 39.1	-1.8
	comp=Z,3.8nm,0.9s,baz=238,slow=5.1,SNR=5.1						
GEYT	**Alibeck**	**131.28**	**45**		pPKPdf	23 02 40.7	-0.2
ZALV	**Zalesovo Beam**	**132.13**	**12**	PKP	**PKPdf**	**23 02 23.7**	**-0.1**
	comp=Z,3.1nm,0.5s,baz=270,slow=1.5,SNR=16						
ZALV				pPKP	**pPKPdf**	**23 02 42.0**	**+0.1**
	comp=Z,25nm,1.0s,baz=318,slow=2.0,SNR=13						
ZALV	**Zalesovo Beam**	**132.13**	**12**		**PKPdf**	**23 02 23.5**	**-0.3**
KURK	**Kurchatov**	**133.38**	**19**		**PKiKP**	**23 02 27.0**	**-0.6**
KURK					**pPKPdf**	**23 02 44.5**	**+0.2**
KURBB	**Kurchatov Arra**	**133.43**	**19**	PKP	**PKiKP**	**23 02 27.1**	**-0.6**
	comp=Z,2.5nm,0.6s,baz=322,slow=2.2,SNR=17						
KURBB				pPKP	**pPKPdf**	**23 02 44.7**	**+0.2**
	comp=Z,7.2nm,1.0s,baz=320,slow=2.6,SNR=11						
ASAR	**Alice Springs**	**134.92**	**225**	PKhKP	PKPpre	23 02 21.0	
	comp=Z,0.5nm,0.7s,baz=149,slow=3.0,SNR=5.1						
ASAR				PKP	**PKPdf**	**23 02 28.4**	**-1.7**
	comp=Z,3.2nm,0.7s,baz=115,slow=1.9,SNR=27						
ASAR				pPKP	pPKPdf	23 02 47.9	-0.3
	comp=Z,4.3nm,0.7s,baz=115,slow=1.8,SNR=8.6						
ASAR				PP	**PP**	**23 05 02.2**	**-2.1**
	comp=Z,0.4nm,0.7s,baz=111,slow=5.4,SNR=4.1						
ASAR				SKPbc	**SKPbc**	**23 05 54.4**	**-1.1**
	comp=Z,1.5nm,0.9s,baz=137,slow=4.5,SNR=4.2						
ASAR	**Alice Springs**	**134.92**	**225**		**PKPdf**	**23 02 27.7**	**-2.4**
WRA	**Warramunga Arr**	**136.88**	**230**	PKP	**PKPdf**	**23 02 32.8**	**-1.0**
	comp=Z,8.6nm,0.8s,baz=144,slow=1.5,SNR=21						
WRA				pPKP	**pPKPdf**	**23 02 51.5**	**-0.3**
	comp=Z,6.6nm,0.7s,baz=121,slow=1.8,SNR=7.1						
WRA	**Warramunga Arr**	**136.88**	**230**		PKPpre	23 02 27.2	
CN2	**Changchun**	**137.93**	**333**	*e*PKP	**PKPdf**	**23 02 32.6**	**-2.4**
MKAR	**Makanchi Array**	**137.99**	**19**	PKP	**PKPdf**	**23 02 35.0**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=341,slow=2.5,SNR=11						
MKAR				pPKP	**pPKPdf**	**23 02 52.7**	**-0.4**
	comp=Z,8.5nm,1.0s,baz=338,slow=2.9,SNR=11						
MKAR	**Makanchi Array**	**137.99**	**19**		**PKPdf**	**23 02 35.0**	**-0.1**
SONM	**Songino Array**	**139.66**	**354**	PKP	**PKPdf**	**23 02 38.2**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=6.9,slow=1.8,SNR=6.8						
SONM	**Songino Array**	**139.66**	**354**		**PKPdf**	**23 02 37.8**	**-0.5**
KSRS	**Korea Array**	**141.32**	**324**	PKP	**PKPdf**	**23 02 41.1**	**-0.2**
	comp=Z,2.4nm,0.9s,baz=47,slow=1.4,SNR=7.6						
KSAR	**Wonju Array Be**	**141.35**	**324**		**PKPdf**	**23 02 40.9**	**-0.5**
KSH	**Kashi**	**141.38**	**31**	PKP	**PKPdf**	**23 02 35.9**	**-5.7**
KSH				sPKP		23 03 15.6	
WMQ	**Urumqi**	**142.27**	**15**	*e*PKP	**PKPdf**	**23 02 42.6**	**-0.4**
WMQ				LR	LR		
	comp=Z,80nm,6.7s						
WMQ				LR	LR		
	comp=Z,40nm,6.7s						
WMQ				LR	LR		
	comp=Z,160nm,29.0s						
NIL	**Nilore**	**143.89**	**40**		PKPbc	23 02 44.3	+0.4
FITZ	**Fitzroy Crossi**	**144.37**	**224**	PKP	**PKPab**	**23 02 45.6**	**+0.1**
	comp=Z,32nm,0.8s,baz=174,slow=4.0,SNR=58						
FITZ				pPKP	**pPKPdf**	**23 03 04.3**	**-1.1**
	comp=Z,37nm,1.0s,baz=189,slow=4.0,SNR=11						
FITZ	**Fitzroy Crossi**	**144.37**	**224**		PKPbc	23 02 45.7	0.0
HHC	**Hu-ho-hao-te**	**145.52**	**345**	*e*PKPbc	**PKPdf**	**23 02 44.8**	**-4.0**
HHC				LR	LR		
	comp=Z,200nm,30.6s						
HHC				LR	LR		
	comp=Z,130nm,27.2s						
BTO	**Baotou**	**146.12**	**347**	*e*PKPbc	**PKPdf**	**23 02 49.4**	**-0.4**
TIA	**Tai'an**	**147.80**	**334**	PKPbc	**PKPdf**	**23 02 53.5**	**+0.9**
SIJI	**Sorong**	**148.20**	**256**	PKPbc	**PKPbc**	**23 02 56.6**	**-0.7**
	comp=Z,5.6nm,0.5s,baz=162,slow=2.3,SNR=6.5						
GTA	**Gaotai**	**148.39**	**1**	*e*PKPbc	**PKPbc**	**23 02 56.8**	**-0.4**
NJ2	**Nanjing**	**150.34**	**327**	*e*PKPbc	**PKPdf**	**23 02 56.8**	**0.0**
LZH	**Lanzhou**	**151.55**	**354**	*e*PKPbc	**PKPbc**	**23 03 02.1**	**-2.9**
LZH				pPKP	PKPab	23 03 12.6	-0.9
LZH				LR	LR		
	comp=Z,98nm,18.0s						
LZH				LR	LR		
	comp=Z,100nm,18.2s						
LZH				LR	LR		
	comp=Z,120nm,20.1s						
HYB	**Hyderabad**	**156.48**	**64**	*i* PKP	**PKPab**	**23 03 35.0**	**+0.1**
CD2	**Chengdu**	**156.68**	**353**	PKP	**PKPdf**	**23 03 04.6**	**-1.4**
GYA	**Guiyang**	**160.42**	**343**	*e*PKP	**PKPdf**	**23 03 09.3**	**-1.4**
GYA				PKPab	**PKPab**	**23 03 52.6**	**+1.0**
GYA				PKS	**PKSdf**	**23 06 41.4**	**-3.0**
GYA				PP	**PP**	**23 07 36.5**	**+3.8**
GYA				AMB	AMB		
	comp=Z,120nm,7.9s						
CMAR	**Chiang Mai Arr**	**169.16**	**8**	PKP	**PKPdf**	**23 03 18.1**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=281,slow=1.9,SNR=9.4						
CMAR				pPKP	**pPKPdf**	**23 03 36.1**	**-0.4**
	comp=Z,3.4nm,0.9s,baz=294,slow=1.9,SNR=6.0						
CMAR				PKPab	**PKPab**	**23 04 29.6**	**-0.5**
	comp=Z,2.6nm,0.9s,baz=332,slow=5.6,SNR=8.9						
CMAR				pPKPab	**pPKPab**	**23 04 46.1**	**-1.4**
	comp=Z,7.2nm,0.9s,baz=332,slow=5.1,SNR=9.8						
CMAR	**Chiang Mai Arr**	**169.16**	**8**		**PKPdf**	**23 03 17.5**	**-0.8**
CMAR					**pPKPdf**	**23 03 35.7**	**-0.8**
CMAR					**PKPab**	**23 04 29.2**	**-0.8**
CMAR					**pPKPab**	**23 04 45.7**	**-1.8**

MAN 15 22:53:48.9, 6°48N × 126°20E, h20km, mb4.7, ML3.6, MS3.4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.47**	**7**	*e*P	Pb	22 53 59.0	+0.6
KCP	**Kidapawan**	**1.22**	**296**⇓	*i*P	Pn	22 54 10.3	-0.6
KCP				*i* S	Sb	22 54 18.5	-8.2
SKMP	**Bagumbayan, Su**	**1.65**	**271**	*e*P	Pn	22 54 16.4	-0.3
SKMP				*e*S	Sb	22 54 42.6	+3.7
BUKP	**Musuan**	**1.79**	**321**	*e*P	Pb	22 54 22.1	+1.1
BUKP				*e*S	Sn	22 54 35.0	-5.9

*IDC **15** 22:55:24.8s 3.9, 35°.18N × 71°.49E, h0km, mb3.6/5, mb1 3.7/11, mb1mx3.5/53, mbtmp3.7/11, ML3.5/6, MS2.8/1, Ms1 2.8/1, ms1mx2.1/32, Error ellipse: s-maj=64.9km s-min=30.5km az=155.0*

*NNC **15** 22:55:49.9s 8.9, 37°.08N × 70°.68E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=82.3km s-min=49.1km az=157.0*

ISC 15 22:55:44.0s 0.8, 36°.32N ±0°.07 × 71°.03E ±0°.07, h100km, n34, σ1s98/39, mb3.2/4, 5C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**5.48**	**134**	*e*P	**Pn**	**22 57 07.0**	**+3.8**
THN				*e*S	**Sn**	**22 58 05.5**	**+0.6**
AML	**Almayashu**	**6.16**	**19**	P	**Pn**	**22 57 14.3**	**+1.5**
	SNR=42						
UCH	**Uchtor**	**6.49**	**24**	P	**Pn**	**22 57 19.1**	**+1.8**
	SNR=16						
KZA	**Kyzart**	**6.62**	**28**	P	**Pn**	**22 57 21.1**	**+2.0**
	SNR=8.6						
EKS2	**Erkin-Say**	**6.68**	**18**	P	**Pn**	**22 57 21.8**	**+2.1**
	SNR=8.9						
KK31	**Karatay Array**	**6.79**	**357**	P	**Pn**	**22 57 22.8**	**+1.8**
	20nm,0.5s,baz=181,slow=13,SNR=220						
KK31				⇑S	**Sn**	**22 58 34.4**	**-2.3**
	3.7nm,0.3s,baz=185,slow=22,SNR=10						
AAK	**Ala-Archa**	**6.86**	**22**	Pn	**Pn**	**22 57 24.1**	**+2.0**
	3.0nm,0.3s,baz=135,slow=3.6,SNR=29						
AAK				Sn	**Sn**	**22 58 37.5**	**-1.1**
	2.2nm,0.3s,baz=334,slow=13,SNR=18						
AAK	**Ala-Archa**	**6.86**	**22**	P	**Pn**	**22 57 24.2**	**+2.2**
	SNR=15						
AAK	**Ala-Archa**	**6.86**	**22**	⇑P	**Pn**	**22 57 24.9**	**+2.8**
	4.0nm,0.4s						
AAK				⇓S	**Sn**	**22 58 36.3**	**-2.4**
	46nm,0.8s						
ULHL	**Ulahol**	**7.17**	**33**	P	**Pn**	**22 57 27.9**	**+1.5**
	SNR=9.2						
CHMS	**Chumysh**	**7.26**	**22**	P	**Pn**	**22 57 29.1**	**+1.7**
	SNR=8.4						
TKM2	**Tokmak 2**	**7.48**	**27**	P	**Pn**	**22 57 32.7**	**+2.2**
	SNR=12						
TKM2	**Tokmak 2**	**7.48**	**27**	⇑P	**Pn**	**22 57 32.4**	**+1.9**
	7.1nm,0.7s						
TKM2				⇑S	**Sn**	**22 58 51.4**	**-2.3**
	12nm,0.8s						
GEYT	**Alibeck**	**10.44**	**283**	Pn	**Pn**	**22 58 06.5**	**-4.1**
	0.2nm,0.3s,baz=97,slow=10,SNR=2.7						
GEYT				Sn	**Sn**	**23 00 05.9**	**+0.3**
	0.7nm,0.3s,baz=225,slow=55,SNR=2.4						
PYUN	**Piuthan**	**13.02**	**126**	*e*P	**Pn**	**22 58 44.0**	**-1.4**
	11nm,0.3s						
DANN	**Dangsing**	**13.37**	**123**	*e*P	**Pn**	**22 58 49.7**	**-0.3**
	8.6nm,0.3s						
MKAR	**Makanchi Array**	**13.43**	**35**	Pn	**Pn**	**22 58 48.1**	**-2.3**
	0.1nm,0.3s,baz=243,slow=13,SNR=2.1						
KOLN	**Koldanda**	**13.64**	**125**	*e*P	**Pn**	**22 58 51.9**	**-1.6**
	8.9nm,0.5s						
GKN	**Gorkha**	**14.19**	**122**	*e*P	**Pn**	**22 58 59.5**	**-1.0**
	11nm,0.2s						
KKN	**Kakani**	**14.76**	**121**	*e*P	**Pn**	**22 59 06.3**	**-1.6**
	9.8nm,0.5s						
PKIN	**Phulchoki**	**14.98**	**122**	*e*P	**Pn**	**22 59 08.9**	**-1.8**
	7.4nm,0.4s						
PKI	**Pulchoki**	**14.99**	**122**	*e*P	**Pn**	**22 59 10.0**	**-0.9**
GUN	**Gumba**	**15.11**	**120**	*e*P	**Pn**	**22 59 10.8**	**-1.6**
	9.4nm,0.5s						
AB31	**Akbulak array**	**15.26**	**331**	P	**Pn**	**22 59 13.9**	**+0.1**
	1.5nm,0.5s,baz=150,slow=12,SNR=56						
KURBB	**Kurchatov Arra**	**15.29**	**18**	Pn	**Pn**	**22 59 13.7**	**-0.5**
	0.0nm,0.3s,baz=208,slow=11,SNR=7.5						
BVAR	**Borovoye Array**	**16.71**	**359**	P	**P**	**22 59 32.7**	**+0.1**
	0.7nm,0.3s,baz=169,slow=13,SNR=18						
AKTO	**Aktyubinsk**	**16.95**	**330**	P	**P**	**22 59 37.3**	**+2.1**
	0.4nm,0.3s,baz=135,slow=12,SNR=20						
AKTO	**Aktyubinsk**	**16.95**	**330**	⇑P	**P**	**22 59 36.2**	**+1.1**
	5.8nm,0.8s						
ZALV	**Zalesovo Beam**	**20.07**	**24**	P	**P**	**23 00 07.6**	**-1.6**
	1.3nm,0.3s,baz=227,slow=11,SNR=10						
ARU	**Arti**	**21.81**	**341**	P	**P**	**23 00 30.7**	**+2.8**
	0.7nm,0.5s,baz=280,slow=4.7,SNR=3.7						
KIRV	**Kirov**	**26.41**	**334**	LR	LR	23 13 28.2	
	comp=Z,19nm,20.6s,baz=62,slow=39						
ARCES	**ARCESS Array B**	**41.32**	**338**	P	**P**	**23 03 22.1**	**+2.7**
	1.7nm,0.8s,baz=90,slow=6.2,SNR=4.5						
NOA	**NORSAR Array B**	**44.54**	**323**	P	**P**	**23 03 46.2**	**+0.7**
	0.2nm,0.5s,baz=99,slow=8.0,SNR=1.1						
YKA	**Yellowknife Ar**	**81.43**	**3**	P	**P**	**23 07 49.2**	**-0.3**
	0.1nm,0.4s,baz=354,slow=5.3,SNR=6.2						

*SJA **15** 23:01:29.2s 0.8, 19°.49S × 69°.05W, h120km ±4km, ML3.8, MW3.7*

*NEIC **15** 23:01:29.7s 1.9, 19°.48S ±0°.03 × 68°.95W ±0°.09, h119km ±5km, mb4.0/8, ML3.8(GUC), Error ellipse: s-maj=11.8km s-min=4.8km az=86.0*

*GUC **15** 23:01:30.5s 0.6, 19°.48S × 68°.99W, h115km ±2km, ML4.0*

*ID

PB07	**IPOC Station P**	**2.36**	**200**			**Pn**	**23 02 08.9**	**+1.3**
PB03	**IPOC Station P**	**2.62**	**195**	*e*P		**Pn**	**23 02 11.7**	**+0.7**
PB03				*e*S		**Sn**	**23 02 40.3**	**-2.7**
PB03				IAML			23 02 50.0	
	comp=E,448nm,0.5s							
PB04	**IPOC Station P**	**3.01**	**201**	*e*P		**Pn**	**23 02 17.0**	**+1.1**
PB04				*i* S		**Sn**	**23 02 49.8**	**-2.1**
PB04	**IPOC Station P**	**3.01**	**201**			**Pn**	**23 02 16.9**	**+0.9**
PB04	**IPOC Station P**	**3.01**	**201**	*i* P		**Pn**	**23 02 17.4**	**+1.4**
PB04				IAML			23 03 02.9	
	comp=Z,308nm,0.4s							
LVC	**Limon Verde**	**3.09**	**178**	P		**Pn**	**23 02 19.3**	**+2.1**
	comp=Z,18nm,0.3s,baz=12,slow=8.8,SNR=44							
LVC				S		**Sn**	**23 02 54.9**	**+0.9**
	comp=Z,34nm,0.3s,baz=61,slow=23,SNR=16							
LVC	**Limon Verde**	**3.09**	**178**			**Pn**	**23 02 19.0**	**+1.9**
LVC	**Limon Verde**	**3.09**	**178**	*i* P		**Pn**	**23 02 18.9**	**+1.7**
LVC				IAML			23 03 02.0	
	comp=Z,86nm,0.9s							
PB06	**IPOC Station P**	**3.23**	**189**	⇑*e*P		**Pn**	**23 02 19.6**	**+0.7**
PB06	**IPOC Station P**	**3.23**	**189**	*i* P		**Pn**	**23 02 19.7**	**+0.9**
PB06				IAML			23 03 07.2	
	comp=Z,266nm,0.7s							
LPAZ	**La Paz**	**3.31**	**15**	P		**Pn**	**23 02 22.8**	**+2.4**
	comp=Z,9.7nm,0.3s,baz=211,slow=6.4,SNR=157							
LPAZ	**La Paz**	**3.31**	**15**	*e*P		**Pn**	**23 02 22.5**	**+2.1**
PB05	**IPOC Station P**	**3.51**	**198**	⇓*e*P		**Pn**	**23 02 22.7**	**+0.2**
PB05	**IPOC Station P**	**3.51**	**198**	*i* P		**Pn**	**23 02 23.2**	**+0.7**
PB05				IAML			23 03 30.4	
	comp=Z,138nm,0.5s							
PB15	**IPOC Station P**	**3.71**	**187**	*i* P		**Pn**	**23 02 26.9**	**+1.7**
PB15				IAML			23 03 21.4	
	comp=Z,426nm,0.3s							
YJA	**Yavi**	**4.21**	**130**	*i* P		**Pn**	**23 02 34.3**	**+2.2**
PB14	**IPOC Station P**	**5.26**	**194**	Pn		**Pn**	**23 02 45.4**	**-0.6**
PB14	**IPOC Station P**	**5.26**	**194**	*i* P		**Pn**	**23 02 45.7**	**-0.3**
PB14				IAML			23 04 03.2	
	comp=Z,52nm,1.0s							
AZAP	**Zapla**	**5.95**	**143**	*i* P		**Pn**	**23 02 56.1**	**+0.8**
AZAP				IAML			23 04 07.0	
	comp=Z,15nm,0.6s							
AC02	**Maricunga**	**7.29**	**181**	Pn		**Pn**	**23 03 13.3**	**-0.4**
GO03	**Copiap**	**8.13**	**188**	Pn		**Pn**	**23 03 25.1**	**+0.6**
SIV	**San Ignacio**	**8.33**	**66**	P		**Pn**	**23 03 24.8**	**-2.5**
	comp=Z,10nm,0.3s,baz=270,slow=9.9,SNR=131							
AC05	**El Transito**	**9.36**	**187**	Pn		**Pn**	**23 03 40.8**	**-0.4**
AGUA	**GUANDACOL**	**9.95**	**177**	*i* P		**Pn**	**23 03 47.7**	**-1.4**
AGUA				IAML			23 05 57.0	
	comp=Z,5.1nm,2.8s							
GO04	**Tololo Observa**	**10.74**	**188**	Pn		**Pn**	**23 03 57.3**	**-2.6**
GO04	**Tololo Observa**	**10.74**	**188**	*i* P		**Pn**	**23 03 57.3**	**-2.6**
CO03	**El Pedregal**	**11.38**	**187**	Pn		**Pn**	**23 04 09.9**	**+1.5**
CO02	**Combarbal**	**11.79**	**188**	Pn		**Pn**	**23 04 12.8**	**-0.9**
SAML	**Samuel**	**11.91**	**29**	Pn		**Pn**	**23 04 15.4**	**0.0**
TCA	**Tanti**	**12.43**	**162**	*i* P		**Pn**	**23 04 21.2**	**-0.9**
CO04	**Los Peladeros**	**12.61**	**188**	Pn		**Pn**	**23 04 23.7**	**-0.9**
CPUP	**Villa Florida**	**12.72**	**124**	P		**Pn**	**23 04 24.9**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=314,slow=11,SNR=3.6							
MT02	**Curacav**	**13.83**	**187**	Pn		**Pn**	**23 04 40.2**	**+0.1**
MT01	**Popeta**	**14.44**	**188**	Pn		**Pn**	**23 04 48.9**	**+1.0**
BO02	**Sierra Bellavi**	**15.31**	**186**	Pn		**P**	**23 04 59.8**	**-1.0**
BO02				IAmb		IAmb	23 05 05.1	
	comp=Z,13nm,0.7s							
TRCB	**Terra Rica**	**15.62**	**105**	*e*P		**Pn**	**23 05 03.2**	**+0.4**
PTGB	**Pitanga**	**16.53**	**111**	*e*P		**P**	**23 05 14.6**	**+0.1**
PCMB	**Pacaembu**	**16.75**	**100**	*e*P		**Pn**	**23 05 16.5**	**-0.2**
BI02	**San Fabin de**	**17.21**	**186**	P		**Pn**	**23 05 22.6**	**+0.4**
ITAB	**Concordia**	**17.29**	**120**	*e*P		**Pn**	**23 05 23.6**	**+0.5**
ITRB	**Iturama**	**17.57**	**94**	*e*P		**P**	**23 05 25.8**	**-0.1**
NPGB	**Novo Progresso**	**18.14**	**49**	*e*P		**P**	**23 05 31.3**	**-1.0**
PLTB	**Pedras Altas**	**18.46**	**134**	*e*P		**Pn**	**23 05 37.0**	**-0.1**
FRTB	**Fartura**	**18.50**	**105**	*e*P		**P**	**23 05 36.1**	**0.0**
CNLB	**Canela**	**19.18**	**124**	*e*P		**Pn**	**23 05 44.5**	**-1.2**
BB19B	**Bebedouro**	**19.27**	**98**	*e*P		**P**	**23 05 44.3**	**-0.3**
IPMB	**Ipameri, GO**	**19.75**	**89**	*e*P		**P**	**23 05 49.5**	**-0.3**
BDFB	**Brasilia**	**20.38**	**82**	P		**P**	**23 05 55.8**	**-0.8**
	comp=Z,2.6nm,0.5s							
BDFB	**Brasilia**	**20.38**	**82**	P		**P**	**23 05 56.0**	**-0.6**
BDFB				IAmb		IAmb	23 06 03.2	
	comp=Z,7.9nm,1.1s							
SPB	**Sao Paulo**	**20.47**	**105**	*e*P		**P**	**23 05 57.2**	**-0.2**
VAO	**Valinhos**	**20.83**	**103**	*e*P		**P**	**23 06 00.3**	**-1.1**
PLCA	**Paso Flores**	**21.20**	**183**	P		**P**	**23 06 08.1**	**+2.9**
	comp=Z,5.7nm,0.8s,baz=2.1,slow=12,SNR=12							
PLCA	**Paso Flores**	**21.20**	**183**	P		**P**	**23 06 07.4**	**+2.3**
PLCA				IAmb		IAmb	23 06 09.6	
	comp=Z,7.6nm,0.9s							
PLCA	**Paso Flores**	**21.20**	**183**	*e*P		**P**	**23 06 08.0**	**+2.9**
PARB	**Paraibuna**	**22.09**	**104**	*e*P		**P**	**23 06 13.7**	**-1.1**
MALB	**Monte Alegre**	**22.71**	**41**	*e*P		**P**	**23 06 19.5**	**-1.5**
PRPB	**Parauapebas**	**22.89**	**57**	*e*P		**P**	**23 06 21.1**	**-1.6**
SMTB	**Santa Maria do**	**23.28**	**66**	*e*P		**P**	**23 06 25.3**	**-1.0**
JANB	**Januaria**	**23.98**	**83**	*e*P		**P**	**23 06 31.6**	**-1.2**
RUSC	**La Rusia**	**25.56**	**351**	P		**P**	**23 06 48.6**	**+1.1**
NBPB	**Pedra_Branca-C**	**31.82**	**68**	*e*P		**P**	**23 07 40.5**	**-2.2**
LIC	**Lamto**	**67.93**	**75**	*e*P		**P**	**23 12 14.7**	**-0.7**
	comp=Z,4.6nm,0.3s							
TIC	**Toumodi**	**68.11**	**74**	*e*P		**P**	**23 12 15.8**	**-0.7**
KIC	**Kosan Boka**	**68.25**	**75**	*e*P		**P**	**23 12 16.9**	**-0.5**
	comp=Z,10nm,0.3s							
DBIC	**Dimbokro**	**68.27**	**74**	P		**P**	**23 12 17.2**	**-0.2**
	comp=Z,9.3nm,0.8s,baz=214,slow=6.0,SNR=14							
DBIC	**Dimbokro**	**68.27**	**74**	IAmb		IAmb	23 12 18.0	
	comp=Z,8.4nm,0.8s							
QSPA	**South Pole Qui**	**70.67**	**180**	P		**P**	**23 12 33.9**	**+2.3**
	comp=Z,0.5nm,0.4s,baz=146,slow=0.9,SNR=1.9							
QSPA	**South Pole Qui**	**70.67**	**180**	IAmb		IAmb	23 12 50.2	
	comp=Z,1.6nm,1.1s							
TORD	**Torodi Ar. Bea**	**76.78**	**71**	P		**P**	**23 13 07.4**	**-0.5**
	comp=Z,1.9nm,0.4s,baz=255,slow=5.2,SNR=38							
TORD	**Torodi Ar. Bea**	**76.78**	**71**	P		**P**	**23 13 07.3**	**-0.5**
YKA	**Yellowknife Ar**	**89.29**	**341**	P		**P**	**23 14 12.8**	**+1.6**
	comp=Z,0.6nm,0.8s,baz=132,slow=5.1,SNR=11							
YKA				pP		**pP**	**23 14 44.0**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=132,slow=4.9,SNR=4.6							

*IDC **15** 23:39:36.2±3.3, 36°42N×71°34E, h140km±29km, mb3.3/10, mb1 3.5/17, mb1mx3.3/44, mbtmpb3.9/17, Error ellipse: s-maj=24.2km s-min=17.6km az=176.0*
*NNC **15** 23:39:37.3±9.1, 36°85N×70°76E, h0km, mb4.3, mpv4.2, Error ellipse: s-maj=95.6km s-min=63.0km az=7.0*
*NEIC **15** 23:39:40.6±2.0, 36°69N±0°05×71°38E±0°1, h182km±6km, mb4.0/6, Error ellipse: s-maj=12.0km s-min=7.4km az=101.0*

ISC 15 23:39:41.2±0.5, **36°68N**±0°05×**71°38E**±0°06, **h200km**, **n77, σ1s96/89, mb3.4**/10, **6C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.86**	**222**	Op Pn		**Pn**	**23 40 28.6**	**-0.9**
CEP	**Cherat**	**2.88**	**171**	P		**Pn**	**23 40 31.2**	**+1.5**
CHCP	**Chirah Chowk**	**3.39**	**152**	P		**Pn**	**23 40 35.9**	**+0.3**
NIL	**Nilore**	**3.39**	**153**	Pn		**Pn**	**23 40 36.0**	**+0.4**
BTK	**Batken**	**3.40**	**353**	Pn		**Pn**	**23 40 35.9**	**+0.2**
BTK				Sn		**Sn**	**23 41 15.2**	**-3.2**
THW	**Thamme Wali**	**3.89**	**176**	P		**Pn**	**23 40 41.3**	**-0.4**
ARSB	**Arslanbob**	**4.80**	**15**	Pn		**Pn**	**23 40 51.8**	**-1.4**
SARP	**Sargodha**	**4.87**	**167**	P		**Pn**	**23 40 52.7**	**-1.3**
TAS	**Tashkent**	**4.91**	**341**	Pn		**Pn**	**23 40 53.7**	**-0.7**
THN	**Thein Dam**	**5.54**	**139**	*e*P		**Pn**	**23 41 03.0**	**+0.4**
THN				*e*S		**Sn**	**23 42 04.0**	**-2.9**
AML	**Almayashu**	**5.73**	**18**	P		**Pn**	**23 41 04.4**	**-0.9**
	SNR=170			S		**Sn**	**23 42 23.3**	**-4.1**
UCH	**Uchtor**	**6.04**	**23**	P		**Pn**	**23 41 08.6**	**-0.8**
	SNR=73							
KZA	**Kyzart**	**6.17**	**28**	P		**Pn**	**23 41 09.7**	**-1.2**
	SNR=12							
EKS2	**Erkin-Say**	**6.25**	**16**	P		**Pn**	**23 41 11.1**	**-0.6**
	SNR=18							
AAK	**Ala-Archa**	**6.41**	**21**	P		**Pn**	**23 41 12.9**	**-1.0**
	5.7nm,0.3s,baz=185,slow=5.0,SNR=43							
AAK				S		**Sn**	**23 42 23.3**	**-4.1**
	2.9nm,0.3s,baz=153,slow=23,SNR=18							
AAK	**Ala-Archa**	**6.41**	**21**	P		**Pn**	**23 41 12.9**	**-1.0**
	SNR=21							
AAK	**Ala-Archa**	**6.41**	**21**	⇓P		**Pn**	**23 41 13.5**	**-0.5**
	8.7nm,0.4s							
AAK				⇑S		**Sn**	**23 42 23.1**	**-4.3**
	46nm,0.7s							
AAK	**Ala-Archa**	**6.41**	**21**			**Pn**	**23 41 13.4**	**-0.5**
KK31	**Karatay Array**	**6.45**	**354**	⇑P		**Pn**	**23 41 13.5**	**-0.7**
	6.2nm,0.2s,baz=181,slow=13,SNR=176							
KK31				⇑S		**Sn**	**23 42 22.6**	**-5.4**
	25nm,0.5s,baz=183,slow=26,SNR=5.1							
KK31	**Karatay Array**	**6.45**	**354**			**Pn**	**23 41 13.8**	**-0.4**
KK31				Sn		**Sn**	**23 42 23.0**	**-5.0**
KKAR	**Karatay Array**	**6.45**	**354**			**Pn**	**23 41 13.5**	**-0.7**
KKAR				Sn		**Sn**	**23 42 23.2**	**-4.8**
KKAR	**Karatay Array**	**6.45**	**354**			**Pn**	**23 41 13.8**	**-0.4**
KKAR				Sn		**Sn**	**23 42 23.5**	**-4.5**
KBK	**Karagaybulak**	**6.57**	**24**	P		**Pn**	**23 41 17.3**	**+1.4**
	SNR=11							
FRU1	**Bishkek**	**6.61**	**21**	Pn		**Pn**	**23 41 15.8**	**-0.5**
FRU1				Sn		**Sn**	**23 42 30.3**	**-1.6**
ULHL	**Ulahol**	**6.71**	**33**	P		**Pn**	**23 41 18.5**	**+0.7**
	SNR=11							
BOOM	**Boomskoye usch**	**6.79**	**30**	Pn		**Pn**	**23 41 18.3**	**-0.4**
CHMS	**Chumysh**	**6.82**	**21**	P		**Pn**	**23 41 18.2**	**-0.8**
	SNR=14							
TKM2	**Tokmak 2**	**7.03**	**26**	P		**Pn**	**23 41 21.8**	**-0.1**
	SNR=22							
TKM2	**Tokmak 2**	**7.03**	**26**	⇑P		**Pn**	**23 41 21.5**	**-0.4**
	10nm,0.6s							
TKM2				⇑S		**Sn**	**23 42 37.5**	**-4.3**
	9.4nm,0.7s							
KDJ	**Kajisay**	**7.05**	**38**			**Pn**	**23 41 21.2**	**-1.0**
TARG	**Taragay, Kyrgy**	**7.09**	**43**			**Pn**	**23 41 22.3**	**-0.6**
SMLA	**Simla**	**7.33**	**137**	*e*P		**Pn**	**23 41 25.3**	**-0.5**
SMLA				*e*S		**Sn**	**23 42 44.2**	**-4.7**
SMLA				IAML			23 42 46.9	
	comp=N,141nm,0.3s							
SMLA				IAML			23 42 47.0	
	comp=E,100nm,0.2s							
HRA	**Herat**	**7.79**	**256**	Pn		**Pn**	**23 41 28.9**	**-3.1**
PRZ	**Przheval'sk**	**7.93**	**41**	Pn		**Pn**	**23 41 32.5**	**-1.2**
GEYT	**Alibeck**	**10.64**	**281**	P		**Pn**	**23 42 05.1**	**-3.6**
	comp=E,0.2nm,0.3s,baz=129,slow=11,SNR=2.5							
GYA0B	**ALIBECK ARRAY**	**10.64**	**281**	Pn		**Pn**	**23 42 06.6**	**-2.1**
MAKZ	**Makanchi**	**12.83**	**35**			**Pn**	**23 42 36.3**	**-0.1**
MK31	**Makanchi Array**	**12.96**	**35**	Pn		**Pn**	**23 42 38.0**	**-0.1**
MKAR	**Makanchi Array**	**12.96**	**35**	P		**Pn**	**23 42 37.5**	**-0.6**
	comp=E,0.2nm,0.3s,baz=224,slow=13,SNR=14							
MKAR	**Makanchi Array**	**12.96**	**35**			**Pn**	**23 42 38.5**	**+0.4**
PYUN	**Piuthan**	**13.01**	**128**	*e*P		**Pn**	**23 42 39.3**	**+0.3**
	comp=E,27nm,0.5s							
DANN	**Dangsing**	**13.34**	**125**	*e*P		**Pn**	**23 42 44.3**	**+1.1**
	comp=E,5.7nm,0.3s							
KOLN	**Koldanda**	**13.62**	**127**	*e*P		**P**	**23 42 47.8**	**-1.3**
	comp=E,3.0nm,0.3s							
GKN	**Gorkha**	**14.15**	**124**	*e*P		**P**	**23 42 54.4**	**-0.4**
	comp=E,11nm,0.3s							
KKN	**Kakani**	**14.72**	**123**	*e*P		**P**	**23 43 01.5**	**+0.3**
	comp=E,17nm,0.5s							
KURBB	**Kurchatov Arra**	**14.85**	**18**	P		**Pn**	**23 43 00.4**	**-1.0**
	comp=E,0.3nm,0.3s,baz=208,slow=10,SNR=31							
PKIN	**Phulchoki**	**14.93**	**123**	*e*P		**P**	**23 43 04.3**	**+0.6**
PKI	**Pulchoki**	**14.95**	**123**	*e*P		**P**	**23 43 04.4**	**+0.5**
	comp=E,17nm,0.5s							
KURK	**Kurchatov**	**14.96**	**18**	P		**Pn**	**23 43 01.5**	**-1.3**
GUN	**Gumba**	**15.05**	**121**	*e*P		**P**	**23 43 06.3**	**+1.3**
AB31	**Akbulak array**	**15.08**	**330**	⇑P		**P**	**23 43 06.4**	**+1.7**
	comp=E,0.7nm,0.3s							
ABKAR	**Akbulak array**	**15.08**	**330**	P		**P**	**23 43 03.5**	**-1.3**
JIRN	**Jiri**	**15.42**	**121**	*e*P		**P**	**23 43 10.0**	**+0.9**
	comp=E,24nm,0.4s							
RAMN	**Ramite**	**16.15**	**123**	*e*P		**Pn**	**23 43 18.1**	**+0.5**
	comp=E,13nm,0.7s							
BVAR	**Borovoye Array**	**16.36**	**358**	P		**Pn**	**23 43 19.4**	**-0.2**
	comp=E,0.8nm,0.3s,baz=153,slow=9.1,SNR=13							
BRVK	**Borovoye**	**16.39**	**358**	P		**Pn**	**23 43 19.7**	**-0.3**
BRVK				IAmb		IAmb	23 43 23.7	
	comp=Z,2.8nm,0.5s							
TAPN	**Taplejung**	**16.66**	**119**	*e*P		**Pn**	**23 43 23.9**	**+0.1**
AKTO	**Aktyubinsk**	**16.78**	**329**	P		**Pn**	**23 43 25.2**	**+0.6**
	comp=E,0.5nm,0.3s,baz=145,slow=7.8,SNR=7.6							
AKTO				S		**Sn**	**23 46 31.6**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=147,slow=23,SNR=7.8							
AKTO	**Aktyubinsk**	**16.78**	**329**	⇓P		**Pn**	**23 43 25.6**	**+1.0**
	comp=Z,1.1nm,0.4s							
ZAA0	**Zalesovo Array**	**19.62**	**24**	P		**P**	**23 43 55.1**	**+0.8**
ZAA0				IAmb		IAmb	23 44 00.4	
	comp=Z,5.1nm,0.7s							
ZALV	**Zalesovo Beam**	**19.62**	**24**	P		**Pn**	**23 43 55.9**	**-2.3**
	comp=E,1.2nm,0.3s,baz=216,slow=11,SNR=24							
ZALV	**Zalesovo Beam**	**19.62**	**24**	P		**P**	**23 43 55.7**	**+1.4**
SOCY	**Socotra**	**28.98**	**217**	P		**P**	**23 45 19.2**	**-3.2**
BR131	**Keskin Array S**	**29.67**	**288**	P		**P**	**23 45 28.5**	**+0.1**
BRTR	**Keskin Array B**	**29.67**	**288**	P		**P**	**23 45 29.6**	**+1.2**
	comp=E,0.5nm,0.7s,baz=103,slow=10,SNR=3.5							
BRTR	**Keskin Array B**	**29.67**	**288**	P		**P**	**23 45 29.4**	**+1.0**
NRIK	**Noril'sk**	**33.89**	**10**	P		**P**	**23 46 07.4**	**+2.8**
	comp=E,1.4nm,0.6s,baz=232,slow=3.0,SNR=3.9							
FINES	**FINESS Array B**	**37.51**	**326**	P		**P**	**23 46 38.1**	**+2.7**
	comp=E,1.3nm,0.9s,baz=123,slow=12,SNR=4.2							
ARCES	**ARCESS Array B**	**41.09**	**337**	P		**P**	**23 47 07.5**	**+2.5**
	comp=E,2.4nm,0.8s,baz=101,slow=6.3,SNR=3.7							
NB2	**NORSAR Subarra**	**44.42**	**323**	P		**P**	**23 47 34.2**	**+2.4**
	comp=Z,0.3nm,0.5s,baz=96,slow=7.9							
NOA	**NORSAR Array B**	**44.42**	**323**	P		**P**	**23 47 34.1**	**+2.3**
	comp=Z,0.4nm,0.5s,baz=96,slow=7.7,SNR=3.6							
ESDC	**Sonseca Array**	**57.64**	**298**	P		**P**	**23 49 12.7**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=54,slow=6.5,SNR=1.9							
TORD	**Torodi Ar. Bea**	**66.03**	**269**	P		**P**	**23 50 07.2**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=51,slow=5.6,SNR=11							
TORD	**Torodi Ar. Bea**	**66.03**	**269**	P		**P**	**23 50 07.5**	**+0.8**
YKA	**Yellowknife Ar**	**81.05**	**3**	P		**P**	**23 51 36.6**	**+3.3**
	comp=Z,0.2nm,0.6s,baz=357,slow=5.2,SNR=4.2							
WRA	**Warramunga Arr**	**81.83**	**122**	P		**P**	**23 51 39.2**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=322,slow=5.5,SNR=2.4							
ASAR	**Alice Springs**	**84.11**	**125**	P		**P**	**23 51 51.3**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=307,slow=4.7,SNR=6.2							

*INET **16** 00:05:41.7, 13°51N×91°21W, h15km, ML4.1*
*GCG **16** 00:05:48.8±0.5, 13°53N×90°70W, h26km±9km, MD4.4*
*SNET **16** 00:05:49.1±0.9, 13°57N×90°59W, h25km±3km, ML4.4*
*UCR **16** 00:05:49.3±0.9, 13°58N×90°59W, h26km±3km, ML4.3, mb4.1(NEIC)*
*NEIC **16** 00:05:50.8±2.2, 13°7N±0°1×90°57W±0°08, h67km±11km, mb4.1/21, Md4.4(SNET), Error ellipse: s-maj=17.2km s-min=7.8km az=208.0*
*MEX **16** 00:05:52.7±0.5, 14°08N×90°50W, h84km±35km, MD4.1*
*IDC **16** 00:05:53.1±1.9, 13°88N×90°15W, h84km±13km, mb3.3/7, mb1 3.6/10, mb1mx3.4/42, mbtmpb3.7/10, MS2.9/8, Ms1 2.9/8, ms1mx2.7/27, Error ellipse: s-maj=43.2km s-min=13.2km az=43.0*

ISC 16 00:05:49.1±1.1, **13°56N**±0°07×**90°64W**±0°04, **h57**km±9km, **n96**, σ1s40/114, **mb4.0**/15, **MS3.1**/5, **2C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.64**	**18**	*i*P		**Pn**	**00 06 01.6**	**-1.0**
IXG	**Ixpaco**	**0.64**	**18**	*i* P		**Pn**	**00 06 02.5**	**-0.1**
IXG	**Ixpaco**	**0.64**	**18**	⇑*i*P		**Pn**	**00 06 01.6**	**-1.0**
PCG	**Pacaya**	**0.82**	**2**	*e*P		**Pn**	**00 06 05.3**	**+0.3**
FUG	**Fuego 3**	**0.90**	**347**	*e*P		**Pn**	**00 06 06.1**	**+0.1**
CEVE	**Cerro Verde**	**1.02**	**75**	*e*P		**Pn**	**00 06 07.5**	**0.0**
CEVE				*e*S		**Sn**	**00 06 22.0**	**+0.8**
CEVE				IAML			00 06 24.1	
	comp=Z,17μm,0.3s							
CEVE	**Cerro Verde**	**1.02**	**75**	*e*P		**Pn**	**00 06 07.5**	**0.0**
CEVE				*e*S		**Sn**	**00 06 22.0**	**+0.8**
CEVE				IAML			00 06 24.1	
	comp=Z,17μm,0.3s							
RTR	**El Retiro**	**1.02**	**71**	*e*P		**Pn**	**00 06 07.6**	**+0.1**
RTR	**El Retiro**	**1.02**	**71**	*e*P		**Pn**	**00 06 07.6**	**+0.1**
SBLS	**San Blas**	**1.02**	**74**	*e*P		**Pn**	**00 06 07.3**	**-0.2**
SBLS	**San Blas**	**1.02**	**74**	*e*P		**Pn**	**00 06 07.3**	**-0.2**
SNJE	**San Jose**	**1.05**	**73**	*e*P		**Pn**	**00 06 07.8**	**-0.1**
SNJE	**San Jose**	**1.05**	**73**	*e*P		**Pn**	**00 06 07.8**	**-0.1**
NBG	**Las Nubes**	**1.06**	**16**	*i* P		**Pn**	**00 06 09.5**	**+1.4**
LALI	**Alcalda de L**	**1.28**	**93**	*e*P		**Pn**	**00 06 10.7**	**0.0**
LALI				*e*S		**Sn**	**00 06 27.1**	**+0.1**
LALI	**Alcalda de L**	**1.28**	**93**	*e*P		**Pn**	**00 06 10.7**	**0.0**
LALI				*e*S		**Sn**	**00 06 27.1**	**+0.1**
BOQS	**Boqueron**	**1.33**	**82**	*e*P		**Pn**	**00 06 12.1**	**+0.4**
BOQS	**Boqueron**	**1.33**	**82**	*e*P		**Pn**	**00 06 12.1**	**+0.4**
UEES	**Universidad Ev**	**1.37**	**83**	*e*P		**Pn**	**00 06 12.3**	**+0.3**
UEES				IAML			00 06 32.2	
	comp=Z,5μm,0.2s							
UEES	**Universidad Ev**	**1.37**	**83**	*e*P		**Pn**	**00 06 12.3**	**+0.3**
UEES				IAML			00 06 32.2	
	comp=Z,5μm,0.2s							

SNET	**Serv Nac Est T**	**1.37**	**85**	*e*P		**Pn**	**00 06 12.4**	**+0.3**
SNET				*e*S		**Sn**	**00 06 29.8**	**+0.5**
SNET	**Serv Nac Est T**	**1.37**	**85**			**Pn**	**00 06 12.4**	**+0.3**
SNET	**Serv Nac Est T**	**1.37**	**85**	*e*P		**Pn**	**00 06 12.4**	**+0.3**
SNET				*e*S		**Sn**	**00 06 29.8**	**+0.5**
APG	**El Apazote**	**1.44**	**7**	P		**Pn**	**00 06 13.8**	**+0.7**
	comp=Z,148nm,0.3s,baz=208,slow=14,SNR=832							
APG				S		**Sn**	**00 06 33.6**	**+2.4**
	comp=Z,434nm,0.3s,baz=184,slow=14,SNR=14							
APG				LR		LR	00 06 51.9	
	comp=Z,318nm,18.3s,baz=194,slow=51							
STG3	**Santiaguito 3,**	**1.46**	**322**	*e*P		**Pn**	**00 06 13.8**	**+0.5**
MTO3	**Montecristo**	**1.49**	**56**	*e*P		**Pn**	**00 06 13.7**	**-0.1**
MTO3				*e*S		**Sn**	**00 06 34.5**	**+2.1**
MTO3	**Montecristo**	**1.49**	**56**	*e*P		**Pn**	**00 06 13.7**	**-0.1**
MTO3				*e*S		**Sn**	**00 06 34.5**	**+2.1**
LFRS	**El Faro**	**1.54**	**88**	*e*P		**Pn**	**00 06 14.6**	**+0.3**
LFRS	**El Faro**	**1.54**	**88**	*e*P		**Pn**	**00 06 14.6**	**+0.3**
LBRS	**Las Brisas**	**1.56**	**83**	*e*P		**Pn**	**00 06 15.2**	**+0.6**
LBRS	**Las Brisas**	**1.56**	**83**	*e*P		**Pn**	**00 06 15.2**	**+0.6**
ESQI	**Esquipulas**	**1.60**	**52**	*e*P		**Pn**	**00 06 15.5**	**+0.3**
COEG	**Centro de Oper**	**1.71**	**88**	*e*S		**Sn**	**00 06 39.2**	**+1.7**
COEG				IAML			00 06 44.7	
	comp=Z,3μm,0.3s							
COEG	**Centro de Oper**	**1.71**	**88**	*e*S		**Sn**	**00 06 39.2**	**+1.7**
COEG				IAML			00 06 44.7	
	comp=Z,3μm,0.3s							
MRL	**Marmol**	**1.77**	**31**	*i* P		**Pn**	**00 06 19.0**	**+1.4**
HUEH	**Huehuetenango**	**1.94**	**334**	*e*S		**Sn**	**00 06 46.3**	**+3.2**
ALJI	**Alcalda de J**	**2.03**	**96**	*e*P		**Pn**	**00 06 21.2**	**+0.4**
ALJI				*e*S		**Sn**	**00 06 46.0**	**+0.9**
ALJI	**Alcalda de J**	**2.03**	**96**	*e*P		**Pn**	**00 06 21.2**	**+0.4**
ALJI				*e*S		**Sn**	**00 06 46.0**	**+0.9**
COEB	**Comit de Eme**	**2.05**	**92**	*e*P		**Pn**	**00 06 21.8**	**+0.5**
COEB				*e*S		**Sn**	**00 06 46.5**	**+0.7**
COEB	**Comit de Eme**	**2.05**	**92**	*e*P		**Pn**	**00 06 21.8**	**+0.5**
COEB				*

Error ellipse: s-maj=5.4km s-min=2.4km az=27.0
ISC 16 00:37:16.6±1.1,**31°18N**±0.03×**115°88W**±0.03,**h14**km±9km,
n38,σ0**85/59**,**7C-9D**,**Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVX	**San Vicente**	**0.35**	**296**	⇑*iP*	**Pg**	**00 37 23.7**	**+0.1**
SVX				*eS*	**Sg**	**00 37 28.1**	**-0.4**
SPIG	**San Pedro Mart**	**0.38**	**110**	⇑*eP*	**Pb**	**00 37 25.1**	**-0.2**
SPIG				*eS*	**Sb**	**00 37 30.8**	**-0.4**
SPIG	**San Pedro Mart**	**0.38**	**110**	*eP*	**Pb**	**00 37 25.3**	**0.0**
SPIG				*eS*	**Sb**	**00 37 30.7**	**-0.4**
SQX	**San Quintin**	**0.60**	**179**	⇓*eP*	**Pb**	**00 37 29.1**	**+0.3**
SQX				*eS*	**Sb**	**00 37 37.7**	**+0.6**
SQX				IAML		00 37 39.0	
	comp=N,6μm,0.3s						
SQX				⇑*e*		00 37 40.2	
SQX				IAML		00 37 40.2	
	comp=E,7μm,0.4s						
ESJX	**Sierra Juarez**	**0.83**	**356**	⇓*eP*	**Pg**	**00 37 31.8**	**-0.9**
ESJX				*eS*	**Sg**	**00 37 42.2**	**-1.4**
SFX	**San Felipe**	**0.90**	**99**	⇑*eP*	**Pb**	**00 37 33.5**	**-0.4**
SFX				*eS*	**Sb**	**00 37 45.4**	**-0.3**
CCX	**Cicese**	**0.96**	**316**	⇓*eP*	**Pb**	**00 37 33.4**	**-1.6**
CBX	**Cerro Bola**	**1.31**	**330**	⇓*eP*	**Pn**	**00 37 39.8**	**-0.8**
CBX				IAML		00 37 58.8	
	comp=N,1μm,0.2s						
CBX	**Cerro Bola**	**1.31**	**330**	*eP*	**Pn**	**00 37 39.9**	**-0.8**
CBX				*eS*	**Sb**	**00 37 56.8**	**-1.0**
MBIG	**Mexicali**	**1.36**	**25**	*eP*	**Pn**	**00 37 40.9**	**-0.2**
MBIG				*iP*	**Pg**	**00 37 43.3**	**+0.6**
MBIG				*iS*	**Sn**	**00 37 58.6**	**-0.3**
MBIG				*iS*	**Sg**	**00 38 01.9**	**+1.4**
ERMX	**Rumorosa**	**1.38**	**355**	*eP*	**Pn**	**00 37 41.6**	**+0.1**
ERMX				*eS*	**Sn**	**00 37 58.7**	**-0.9**
ERMX				⇑*e*		00 38 04.9	
ERMX				IAML		00 38 04.9	
	comp=E,706nm,0.5s						
TJIG	**Tijuana**	**1.42**	**332**	⇓*eP*	**Pn**	**00 37 41.5**	**-0.5**
TJIG	**Tijuana**	**1.42**	**332**	*eP*	**Pn**	**00 37 41.5**	**-0.5**
TJIG				*iS*	**Sn**	**00 37 58.9**	**-1.6**
IKP	**In-Ko-Pah, Jac**	**1.48**	**353**	⇓*eP*	**Pb**	**00 37 43.4**	**-0.6**
IKP				*eS*	**Sn**	**00 38 01.9**	**-0.2**
IKP	**In-Ko-Pah, Jac**	**1.48**	**353**	P	**Pb**	**00 37 43.4**	**-0.6**
	baz=174,SNR=135						
IKP				S	**Sn**	**00 38 01.4**	**-0.7**
	baz=174						
BAR	**Barrett**	**1.64**	**336**	⇓*eP*	**Pn**	**00 37 45.1**	**0.0**
TJX	**Tijuana**	**1.66**	**323**	⇑*eP*	**Pb**	**00 37 46.1**	**-0.8**
OLP	**Otay Lakes Par**	**1.68**	**328**	⇓*eP*	**Pn**	**00 37 46.2**	**+0.6**
SWSC	**Sam W. Stewart**	**1.77**	**2**	P	**Pn**	**00 37 46.4**	**-0.3**
	baz=184						
SWSC				S	**Sn**	**00 38 08.4**	**-0.6**
	baz=184						
MONP2	**Monument Peak**	**1.77**	**345**	⇓*eP*	**Pn**	**00 37 47.8**	**+0.8**
MONP2	**Monument Peak**	**1.77**	**345**	P	**Pn**	**00 37 47.8**	**+0.8**
	baz=166,SNR=162						
MONP2				S	**Sn**	**00 38 09.6**	**+0.2**
	baz=166						
SDRC	**San Diego Road**	**1.80**	**330**	⇑*eP*	**Pn**	**00 37 48.0**	**+0.9**
EML	**El Monte Cty P**	**1.90**	**335**	*eP*	**Pn**	**00 37 49.1**	**+0.6**
109C	**Camp Elliot, M**	**2.00**	**329**	P	**Pn**	**00 37 50.8**	**+0.9**
	baz=150,SNR=13						
109C				S	**Sn**	**00 38 15.6**	**+0.9**
	baz=150						
GLA	**Glamis**	**2.07**	**25**	P	**Pn**	**00 37 50.8**	**-0.2**
	baz=207,SNR=7.4						
GLA				S	**Sn**	**00 38 15.4**	**-1.2**
	baz=207						
PFO	**Pinyon Flats O**	**2.48**	**349**	P	**Pn**	**00 37 56.8**	**+0.2**
	baz=170,SNR=35						
PFO				Sb	**Sb**	**00 38 31.7**	**+0.4**
	baz=170						
BC3	**Big Chuckawall**	**2.50**	**8**	P	**Pn**	**00 37 57.1**	**+0.2**
	baz=190,SNR=7.2						
MURC	**Murrieta**	**2.66**	**336**	P	**Pn**	**00 38 00.2**	**+1.2**
	baz=156,SNR=26						
214A	**Organ Pipe Nat**	**2.74**	**73**	P	**Pn**	**00 38 00.5**	**+0.5**
	baz=255						
214A				S	**Sn**	**00 38 31.9**	**-1.1**
	baz=255						
Y12C	**Blythe**	**2.81**	**24**	P	**Pn**	**00 38 00.4**	**-0.7**
	baz=205						
BELC	**Belle Mtn. Jos**	**2.82**	**358**	P	**Pn**	**00 38 01.7**	**+0.4**
	baz=179,SNR=49						
BELC				Sb	**Sb**	**00 38 42.1**	**+0.9**
	baz=179						
IRM	**Iron Mountain**	**3.04**	**12**	P	**Pn**	**00 38 04.1**	**-0.1**
	baz=193						
CIS	**Catalina Islan**	**3.08**	**317**	S	**Sn**	**00 38 41.6**	**0.0**
	baz=136						
BBRC	**Big Bear Solar**	**3.20**	**344**	Sb	**Sb**	**00 38 52.5**	**+0.3**
	baz=165						
GMRC	**Granite Mounta**	**3.60**	**3**	Pb	**Pb**	**00 38 21.5**	**+1.4**
	baz=184						
HEC	**Hector,Ludlow**	**3.66**	**354**	Pb	**Pb**	**00 38 22.6**	**+1.5**
	baz=175						
EDW2	**Edwards Air Fo**	**4.10**	**335**	P	**Pn**	**00 38 20.3**	**+1.4**
	baz=154						
GSC	**Goldstone, Bar**	**4.19**	**350**	Pb	**Pb**	**00 38 32.3**	**+2.2**
	baz=170						

BJI ***16*** *00:40:15.5±0.0,22.°75S×172.°50E,h7km,mB5.3/51, mb5.0/37,Ms5.3/53,Ms7 5.1/51*

NEIC ***16*** *00:40:15.7±1.9,22.°53S±0.°07×173.°00E±0.°07,h9km±1km, mb5.4/161,Ms_20 5.3/719,Mwb5.5/22,Mww5.5, Mwc5.5(GCMT),Error ellipse: s-maj=12.0km s-min=10.8km az=163.0*

NEIC ***16*** *00:40:16,22.°51S×173.°08E,h9km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.20; Mθθ=0.61; Mϕϕ=-0.41; Mrθ=1.62; Mθϕ=-0.57; Mϕr=0.61; Fault plane solution: M₀1.90000×10¹⁷ NP1:ϕs251.57000°, δ86.94000°,λ-113.73000°. NP2:ϕs154.65000°, δ23.92000°,λ-7.56000°. Principal axes: T 1.8742, Plg37.0000°, Azm3.0000°; N 0.0471, Plg24.0000°, Azm253.0000°; P -1.9213, Plg43.0000°, Azm139.0000°;*

IDC ***16*** *00:40:20.0±2.9,22.°78S×172.°91E,h34km±21km,mb4.5/24, mb1 4.6/26,mb1mx4.6/33,mbtmp4.7/26,ML5.0/2,MS5.1/30, Ms1 5.1/30,ms1mx5.0/38 Error ellipse: s-maj=16.2km s-min=13.4km az=97.0*

NEIC ***16*** *00:40:21,22.°52S×173.°02E,h12km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.50; Mθθ=0.66; Mϕϕ=0.16; Mrθ=1.96; Mθϕ=-0.24; Mϕr=0.21; Fault plane solution: M₀2.08000×10¹⁷ NP1:ϕs84.00000°, δ81.00000°,λ,94.00000°. NP2:ϕs238.00000°,δ9.00000°, λ65.00000°. Principal axes: T 1.9676, Plg53.0000°, Azm359.0000°; N 0.2031, Plg4.0000°, Azm263.0000°; P -2.1707, Plg36.0000°, Azm170.0000°;*

GCMT ***16*** *00:40:22.7±0.1,22.°64S±0.°01×172.°86E±0.°01,h12km, MW5.5/137,Moment Tensor Solution. s119,c195; s137,c247; Duration: 1s3 Moment tensor: Scale 10¹⁷ Nm; Mrr=0.77±.01; Mθθ-0.91±.01; Mϕϕ0.13±.01; Mrθ1.85±.03; Mθϕ-0.25±.01; Mϕr0.28±.04; Best double couple: M₀2.06300×10¹⁷ NP1:ϕs251.00000°,δ13.00000°, λ,80.00000°. NP2:ϕs81.00000°,δ78.00000°,λ92.00000°. Principal axes: T 1.9700, Plg57.0000°, Azm354.0000°; N 0.1850, Plg2.0000°, Azm261.0000°; P -2.1550, Plg33.0000°, Azm169.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***16*** *00:40:23,22.°66S×172.°88E,h12km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.83; Mθθ-0.98; Mϕϕ0.16; Mrθ1.94; Mθϕ-0.27; Mϕr0.47; Fault plane solution: M₀2.21000×10¹⁷ NP1:ϕs76.00000°, δ77.00000°,λ,89.00000°. NP2:ϕs259.00000°,δ13.00000°, λ,93.00000°. Principal axes: T 2.0959, Plg58.0000°, Azm346.0000°; N 0.2161, Plg1.0000°, Azm77.0000°; P -2.3120, Plg32.0000°, Azm167.0000°;*

ISC 16 00:40:17.4±0.6,**22.°65S**±0.°04×**173.°00E**±0.°04,**h19**km±2km,
h19km:**pP-P**,**n790**,σ1**961**/489,**mb5.3**/107,**MS5.3**/419,
14C-16D,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.09**	**274**	*ePn*	**Pn**	**00 41 46.7**	**+0.1**
	490nm,0.8s						
DZM				*eSn*	**Sn**	**00 42 51.9**	**-4.0**
	1μm,0.7s						
DZM				*e*LR	LR	00 43 07.0	
	comp=Z,14μm,24.4s						
DZM	**Mont Dzumac**	**6.09**	**274**	Pn	**Pn**	**00 41 47.0**	**+0.3**
	24nm,0.3s,baz=95,slow=16,SNR=53						
DZM				Sn	**Sn**	**00 42 52.4**	**-3.6**
	28nm,0.3s,baz=92,slow=17,SNR=2.3						
DZM	**Mont Dzumac**	**6.09**	**274**		**Pn**	**00 41 46.6**	**0.0**
MSVF	**Nonsavu**	**6.81**	**45**	Pn	**Pn**	**00 41 53.9**	**-2.6**
NFK	**Norfolk Island**	**7.83**	**215**	P	**Pn**	**00 42 09.9**	**-0.5**
	baz=7.8,SNR=46						
RAO	**Raoul Island**	**10.49**	**131**	LR	LR	00 45 56.1	
	comp=Z,23μm,20.2s,baz=3.0,slow=32						
RAO	**Raoul Island**	**10.49**	**131**	Pn	**Pn**	**00 42 46.9**	**0.0**
OUZ	**Omahuta**	**12.54**	**178**	P	**Pn**	**00 43 17.5**	**+2.6**
OUZ	**Omahuta**	**12.54**	**178**		**Pn**	**00 43 17.2**	**+2.3**
LHI	**Lord Howe Isla**	**15.22**	**232**	P	**Pn**	**00 43 53.4**	**+2.0**
	baz=15,SNR=3.1						
LHI	**Lord Howe Isla**	**15.22**	**232**		**Pn**	**00 43 48.4**	**-3.1**
LHI				IAmb	IAmb	00 44 00.5	
	comp=Z,137nm,1.0s						
FUNA	**Funafuti**	**15.25**	**24**		**Pn**	**00 43 47.9**	**-4.0**
FUNA				IAmb	IAmb	00 44 12.5	
	comp=Z,311nm,1.6s						
MXZ	**Matakaoa Point**	**15.55**	**164**	Pn	**Pn**	**00 43 56.0**	**+0.3**
HIZ	**Hauiti**	**15.89**	**175**		**Pn**	**00 44 01.2**	**+1.0**
HIZ				IAmb	IAmb	00 44 14.9	
	comp=Z,373nm,1.3s						
URZ	**Urewera**	**15.96**	**168**	Pn	**P**	**00 44 03.6**	**-0.8**
	comp=Z,1.1nm,0.3s,baz=358,slow=8.3,SNR=18						
URZ				LR	LR	00 48 46.4	
	comp=Z,17μm,19.9s,baz=46,slow=32						
URZ	**Urewera**	**15.96**	**168**		**Pn**	**00 44 02.6**	**+1.7**
URZ				IAmb	IAmb	00 44 09.1	
	comp=Z,231nm,1.0s						
MWZ	**Matawai**	**16.11**	**167**	P	**P**	**00 44 09.1**	**+2.9**
NIUE	**Niue**	**16.35**	**81**	P	**Pn**	**00 44 06.9**	**+0.8**
	baz=16,SNR=4.3						
NIUE	**Niue**	**16.35**	**81**		**Pn**	**00 44 04.7**	**-1.4**
NIUE				IAmb	IAmb	00 44 11.1	
	comp=Z,447nm,1.2s						
BKZ	**Black Stump Fm**	**16.73**	**171**	P	**P**	**00 44 16.9**	**+3.8**
BKZ	**Black Stump Fm**	**16.73**	**171**	P	**Pn**	**00 44 11.6**	**+0.6**
BKZ				IAmb	IAmb	00 44 16.3	
	comp=Z,665nm,1.7s						
AFI	**Afiamalu**	**16.86**	**62**	Pn	**Pn**	**00 44 10.8**	**-1.9**
MOVZ	**Moawhango**	**16.87**	**173**	P	**P**	**00 44 18.1**	**+3.4**
KWHZ	**Kaweka Forest**	**16.98**	**171**	P	**P**	**00 44 19.0**	**+3.2**
BHHZ	**Black Hill Sta**	**16.99**	**172**	P	**P**	**00 44 18.5**	**+2.6**
KRHZ	**Kereru**	**17.18**	**171**	P	**P**	**00 44 21.7**	**+3.6**
KAHZ	**Kahuranaki**	**17.41**	**170**	P	**P**	**00 44 21.3**	**+0.7**
PNHZ	**Pukenui**	**17.43**	**172**	P	**P**	**00 44 24.1**	**+3.3**
TSZ	**Takapari Road**	**17.54**	**172**	P	**P**	**00 44 24.7**	**+2.8**
PXZ	**Pawanui**	**17.64**	**170**	P	**P**	**00 44 24.0**	**+1.0**
DVHZ	**Dannevirke**	**17.80**	**172**	P	**P**	**00 44 27.2**	**+2.3**
ANWZ	**Angora Road**	**18.00**	**171**	P	**P**	**00 44 28.6**	**+1.6**
MRZ	**Mangatainoka R**	**18.09**	**174**	P	**P**	**00 44 29.4**	**+1.3**
QRZ	**Quartz Range**	**18.13**	**181**	P	**P**	**00 44 30.9**	**+2.5**
QRZ	**Quartz Range**	**18.13**	**181**	P	**P**	**00 44 29.7**	**+1.3**
HNR	**Honiara**	**18.14**	**314**	P	**P**	**00 44 31.1**	**+2.4**
	comp=Z,8.1nm,0.3s,baz=230,slow=5.1,SNR=12						
HNR				LR	LR	00 50 32.9	
	comp=Z,9μm,19.7s,baz=152,slow=34						
HNR	**Honiara**	**18.14**	**314**	P	**Pn**	**00 44 27.4**	**-1.1**
BFZ	**Birch Farm**	**18.19**	**172**	P	**P**	**00 44 30.2**	**+1.1**
BFZ	**Birch Farm**	**18.19**	**172**	P	**Pn**	**00 44 29.4**	**+0.4**
OGWZ	**Otaki Gorge**	**18.21**	**175**	P	**P**	**00 44 31.5**	**+2.2**
HOWZ	**Holdsworth Sta**	**18.32**	**174**	P	**P**	**00 44 31.7**	**+1.1**
NNZ	**Nelson**	**18.52**	**179**	P	**Pn**	**00 44 34.6**	**+1.7**
NNZ				IAmb	IAmb	00 44 55.2	
	comp=Z,567nm,1.6s						
SNZO	**South Karori**	**18.66**	**176**	P	**P**	**00 44 34.8**	**+0.5**
SNZO				IAmb	IAmb	00 44 38.7	
	comp=Z,277nm,1.2s						
TUWZ	**Tuamarina**	**18.75**	**178**	P	**Pn**	**00 44 37.0**	**+1.3**
BHW	**Baring Head**	**18.77**	**176**	P	**Pn**	**00 44 37.1**	**+1.1**
MSWZ	**Moikau Station**	**18.81**	**175**	P	**P**	**00 44 36.6**	**+0.6**
PLWZ	**Palliser**	**18.96**	**175**	P	**Pn**	**00 44 39.2**	**+0.9**
BSWZ	**Blackbirch Sta**	**19.03**	**178**	P	**Pn**	**00 44 39.6**	**+0.5**
THZ	**Tophouse**	**19.06**	**180**	P	**Pn**	**00 44 41.4**	**+1.8**
THZ	**Tophouse**	**19.06**	**180**	P	**Pn**	**00 44 40.6**	**+1.1**
THZ				IAmb	IAmb	00 44 48.3	
	comp=Z,232nm,1.4s						
CMWZ	**Cape Campbell**	**19.07**	**177**	P	**Pn**	**00 44 40.5**	**+0.8**
KHZ	**Kahutara**	**19.72**	**179**	P	**Pn**	**00 44 47.2**	**-0.2**
KHZ				IAmb	IAmb	00 44 51.1	
	comp=Z,208nm,1.1s						
LTZ	**Lake Taylor**	**20.09**	**182**	P	**P**	**00 44 51.3**	**+1.4**
LTZ					Pn	00 44 51.4	-0.4
LTZ				IAmb	IAmb	00 44 55.6	
	comp=Z,230nm,0.9s						
EIDS	**Eidsvold**	**20.20**	**258**	P	Pn	00 44 53.5	+0.3
	baz=20,SNR=14						
EIDS	**Eidsvold**	**20.20**	**258**	P	**P**	**00 44 51.7**	**+0.5**
EIDS				IAmb	IAmb	00 45 00.3	
	comp=Z,150nm,1.0s						
ARMA	**Armidale**	**20.60**	**243**	P	**P**	**00 44 57.0**	**+1.2**
	baz=20,SNR=11						
ARMA	**Armidale**	**20.60**	**243**	P	Pn	00 44 58.2	+0.1
OXZ	**Oxford**	**20.64**	**182**	P	**P**	**00 44 57.1**	**+1.2**
OXZ				IAmb	IAmb	00 45 01.1	
	comp=Z,225nm,0.8s						
FOZ	**Fox Glacier**	**21.00**	**186**	P	**P**	**00 45 02.0**	**+2.3**
FOZ				IAmb	IAmb	00 45 24.7	
	comp=Z,146nm,1.0s						
MQZ	**McQueen's Vall**	**21.00**	**181**	P	**P**	**00 45 00.7**	**+0.9**
MQZ	**McQueen's Vall**	**21.00**	**181**	P	**P**	**00 45 01.7**	**+1.9**
RPZ	**Rata Peaks**	**21.07**	**184**	P	**P**	**00 45 00.1**	**-0.5**
	comp=Z,39nm,0.8s,baz=26,slow=3.3,SNR=17						
RPZ				LR	LR	00 52 39.2	
	comp=Z,17μm,18.4s,baz=330,slow=35						
RPZ	**Rata Peaks**	**21.07**	**184**	IAmb	IAmb	00 45 08.3	
	comp=Z,191nm,1.0s						
RPZ				IAMs_20	IAMs_20	00 51 58.8	
	comp=Z,16μm,20.0s						
JCZ	**Jackson Bay**	**21.65**	**188**	P	**P**	**00 45 08.9**	**+2.0**
LBZ	**Lake Benmore**	**21.81**	**185**	IAmb	IAmb	00 45 11.0	
	comp=Z,138nm,1.1s						
LBZ				IAMs_20	IAMs_20	00 52 20.2	
	comp=Z,9μm,20.0s						
MGCD	**Mangrove Creek**	**21.97**	**237**	P	**P**	**00 45 10.4**	**+0.1**
	baz=22,SNR=6.2						
RMQ	**Roma**	**22.36**	**255**	P	**P**	**00 45 16.7**	**+2.1**
	baz=22,SNR=16						
WKZ	**Wanaka**	**22.36**	**187**	P	**P**	**00 45 16.0**	**+1.5**
WKZ				IAmb	IAmb	00 45 41.5	
	comp=Z,181nm,1.2s						
WKZ				IAMs_20	IAMs_20	00 52 43.0	
	comp=Z,10μm,20.0s						
ODZ	**Otahua Downs**	**22.42**	**184**	IAmb	IAmb	00 45 18.8	
	comp=Z,118nm,1.2s						
ODZ				IAMs_20	IAMs_20	00 53 00.6	
	comp=Z,12μm,20.0s						
MLZ	**Mavora Lakes**	**23.01**	**189**	P	**P**	**00 45 22.5**	**+1.2**
MLZ				IAMs_20	IAMs_20	00 52 52.4	
	comp=Z,8μm,21.0s						
DCZ	**Deep Cove**	**23.26**	**190**	IAmb	IAmb	00 45 28.6	
	comp=Z,95nm,1.0s						
DCZ				IAMs_20	IAMs_20	00 52 35.9	
	comp=Z,10μm,21.0s						
WHZ	**Wether Hill Ro**	**23.55**	**189**	IAMs_20	IAMs_20	00 53 09.9	
	comp=Z,8μm,20.0s						
TARA	**Tarawa**	**23.86**	**360**	P	**P**	**00 45 28.6**	**-1.2**
TARA				IAmb	IAmb	00 45 35.5	
	comp=Z,136nm,1.2s						
TARA	**Tarawa**	**23.86**	**360**	IAMs_20	IAMs_20	00 52 27.0	
	comp=Z,10μm,21.0s						
PYZ	**Puysegur Point**	**24.02**	**191**	P	**P**	**00 45 30.9**	**-0.2**
PYZ				IAmb	IAmb	00 45 33.8	
	comp=Z,102nm,1.1s						
PYZ				IAMs_20	IAMs_20	00 53 07.2	
	comp=Z,9μm,20.0s						
CNB	**Canberra Magne**	**24.15**	**233**	P	**P**	**00 45 33.8**	**+1.2**
	baz=24,SNR=38						
CAN	**Canberra**	**24.42**	**234**	P	**P**	**00 45 35.9**	**+0.8**
CAN				IAmb	IAmb	00 45 49.8	
	comp=Z,94nm,1.3s						
YNG	**Young**	**24.48**	**236**	P	**P**	**00 45 37.0**	**+1.5**
	baz=24,SNR=11						
KNTN	**Kanton**	**24.70**	**39**	P	**P**	**00 45 35.8**	**-1.8**
CTA	**Charters Tower**	**25.02**	**271**	P	**P**	**00 45 40.9**	**+0.3**
	comp=Z,14nm,0.7s,baz=100,slow=11,SNR=14						
CTA				LR	LR	00 55 01.5	
	comp=Z,2μm,18.1s,baz=96,slow=35						
CTAO	**Charters Tower**	**25.02**	**271**	P	**P**	**00 45 41.3**	**+0.8**
MILA	**Mila**	**25.08**	**230**	P	**P**	**00 45 42.4**	**+1.4**
	baz=25,SNR=4.9						
RAR	**Rarotonga**	**25.29**	**92**	LR	LR	00 55 39.5	
	comp=Z,2μm,18.4s,baz=260,slow=36						
RAR	**Rarotonga**	**25.29**	**92**	P	**P**	**00 45 41.5**	**-1.5**
RAR				IAmb	IAmb	00 45 43.5	
	comp=Z,193nm,1.6s						
CMSA	**Cobar Meteorol**	**25.82**	**244**	P	**P**	**00 45 48.2**	**+0.6**
	baz=26,SNR=49						
QLP	**Quilpie**	**26.41**	**256**	P	**P**	**00 45 53.8**	**+0.7**
	baz=26,SNR=11						
MTSU	**Mount Surprise**	**27.23**	**274**	P	**P**	**00 46 01.9**	**+1.3**
	baz=27,SNR=14						
KRVT	**Keravat (AS076**	**27.28**	**309**	P	**P**	**00 46 02.5**	**+1.5**
	comp=Z,84nm,0.8s,baz=72,slow=24,SNR=4.5						
TOO	**Toolangi**	**27.93**	**232**	P	**P**	**00 46 07.7**	**+1.1**
	baz=28,SNR=12						
TOO	**Toolangi**	**27.93**	**232**	P	**P**	**00 46 07.0**	**+0.3**
TOO				IAMs_20	IAMs_20	00 55 09.4	
	comp=Z,7μm,19.0s						
PMG	**Port Moresby**	**28.04**	**294**	P	**P**	**00 46 07.8**	**0.0**
	comp=Z,14nm,0.9s,baz=207,slow=11,SNR=2.0						
PMG				LR	LR	00 56 09.1	
	comp=Z,4μm,18.8s,baz=124,slow=34						
PMG	**Port Moresby**	**28.04**	**294**	P	**P**	**00 46 07.0**	**-0.8**
STKA	**Stephens Creek**	**29.30**	**245**	P	**P**	**00 46 19.4**	**+0.5**
	baz=29,SNR=13						
STKA	**Stephens Creek**	**29.30**	**245**	P	**P**	**00 46 19.2**	**+0.3**
	comp=Z,17nm,1.0s,baz=76,slow=10.0,SNR=18						
STKA				LR	LR	00 57 08.3	
	comp=Z,3μm,18.9s,baz=73,slow=35						
STKA	**Stephens Creek**	**29.30**	**245**	P	**P**	**00 46 18.7**	**-0.2**
STKA					**P**	**00 46 19.7**	**+0.8**
TAU	**Tasmania Unive**	**29.37**	**220**	P	**P**	**00 46 18.9**	**-0.5**
TAU	**Tasmania Unive**	**29.37**	**220**	IAMs_20	IAMs_20	00 55 12.8	
	comp=Z,7μm,21.0s						
COEN	**Coen**	**29.55**	**282**	IAMs_20	IAMs_20	00 56 36.0	
	comp=Z,5μm,21.0s						
ARPS	**Mount Arapiles**	**30.35**	**235**	P	**P**	**00 46 28.7**	**+0.6**
	baz=30,SNR=7.5						
KWAJ	**Kwajalein Atol**	**31.70**	**350**	IAMs_20	IAMs_20	00 57 01.7	
	comp=Z,5μm,20.0s						
HTT	**Hallett**	**31.80**	**243**	P	**P**	**00 46 41.5**	**+0.5**
	baz=32,SNR=3.9						
BBOO	**Buckleboo**	**34.08**	**245**	P	**P**	**00 47 01.0**	**+0.1**
	baz=34,SNR=10						
BBOO	**Buckleboo**	**34.08**	**245**	P	**P**	**00 47 00.7**	**-0.2**
BBOO				IAMs_20	IAMs_20	01 00 30.5	
	comp=Z,5μm,18.0s						
TBI	**Tubuai**	**34.51**	**99**	*e*S	**S**	**00 52 36.9**	**+4.3**
	comp=Z,663nm,27.0s						
TBI				*e*LQ	LQ	00 54 50.1	
	comp=Z,867nm,24.0s						
TBI				*e*LR	LR	00 56 18.4	
	comp=Z,3μm,25.2s,baz=262						
PPT2	**Papeete2**	**35.44**	**89**	*e*S	**S**	**00 52 51.5**	**+4.3**
	comp=Z,856nm,25.5s						
PPT2				*e*LQ	LQ	00 55 12.9	
PPT2				*e*LR	LR	00 56 42.8	
	comp=Z,2μm,24.0s,baz=246						
PPT	**Papeete**	**35.45**	**89**	LR	LR	00 57 53.7	
	comp=Z,1μm,20.0s,baz=251,slow=30						
PPTF	**Pamatai, Papee**	**35.45**	**89**	P	**P**	**00 47 09.2**	**-3.8**
AS31	**Alice Springs**	**35.88**	**261**	P	**P**	**00 47 15.6**	**-1.0**
ASAR	**Alice Springs**	**35.88**	**261**	P	**P**	**00 47 15.9**	**-0.7**
	comp=Z,17nm,0.9s,baz=87,slow=8.8,SNR=90						
ASAR				ScP	**ScP**	**00 53 26.9**	**-2.2**
	comp=Z,2.2nm,1.0s,baz=150,slow=3.9,SNR=5.6						
ASAR				LR	LR	01 01 45.7	
	comp=Z,2μm,19.2s,baz=96,slow=36						
ASAR	**Alice Springs**	**35.88**	**261**	P	**P**	**00 47 15.0**	**-1.6**
ASAR					**ScP**	**00 53 26.5**	**-2.5**
WB0	**Warramunga Arr**	**36.04**	**267**	P	**P**	**00 47 16.7**	**-1.3**
WB8	**Warramunga Arr**	**36.04**	**267**	IAMs_20	IAMs_20	01 03 09.8	
	comp=Z,4μm,18.0s						
WB2	**Warramunga Arr**	**36.04**	**267**	P	**P**	**00 47 16.2**	**-1.7**
WRAB	**Tennant Creek**	**36.04**	**267**	P	**P**	**00 47 17.3**	**-0.7**
WRAB				IAmb	IAmb	00 47 33.3	
	comp=Z,69nm,1.6s						
WRA	**Warramunga Arr**	**36.05**	**267**	P	**P**	**00 47 16.3**	**-1.8**
	comp=Z,3.8nm,0.4s,baz=98,slow=8.3,SNR=15						
WRA				LR	LR	01 01 35.3	
	comp=Z,934nm,18.1s,baz=90,slow=36						
WRA	**Warramunga Arr**	**36.05**	**267**	P	**P**	**00 47 16.6**	**-1.4**
JAY	**Jayapura**	**37.17**	**298**	P	**P**	**00 47 27.1**	**-0.5**
	comp=Z,361nmcomp=Z,19nm,1.7s						
GENI	**Genyem**	**37.56**	**297**	P	P	00 47 36.5	+5.6
KDU	**Kakadu**	**39.75**	**277**	P	**P**	**00 47 47.6**	**-1.7**
	baz=40,SNR=6.3						
FORT	**Forrest**	**40.73**	**249**	P	**P**	**00 47 57.6**	**+0.3**
	baz=41,SNR=22						
FORT	**Forrest**	**40.73**	**249**	P	**P**	**00 47 56.3**	**-1.0**
WRKA	**Warakurna**	**40.82**	**257**	P	**P**	**00 47 57.4**	**-0.7**
	baz=41,SNR=42						
MTN	**Manton Dam**	**40.92**	**

comp=Z,3µm,20.0s
MBWA Marble Bar 49.22 261 IAMs_20 IAMs_20 01 11 17.3
comp=Z,3µm,18.0s
MEEK Meekatharra 49.29 254 P **P** **00 49 05.0 -0.5**
baz=49,SNR=11
LBMI Labuha 49.33 290 P **P** **00 49 07.9 +2.1**
comp=Z,2µmcomp=Z,73nm,1.0s
KLBR Kellerberrin 49.53 247 P **P** **00 49 06.6 -0.6**
baz=49,SNR=20
NWAO Narrogin (SRO) 49.89 245 P **P** **00 49 10.1 +0.1**
baz=50,SNR=12
NWAO Narrogin (SRO) 49.89 245 P **P** **00 49 10.3 +0.3**
NWAO IAmb IAmb 00 49 11.1
comp=Z,49nm,0.8s
NWAO Narrogin (SRO) 49.89 245 P **P** **00 49 08.8 -1.1**
NWAO IAmb IAmb 00 49 11.0
comp=Z,40nm,0.8s
NWAO IAMs_20 IAMs_20 01 08 39.7
comp=Z,2µm,21.0s
BLDU Ballidu 50.50 248 P **P** **00 49 14.3 -0.3**
baz=50,SNR=7.9
MUN Mundaring 50.82 247 P **P** **00 49 16.7 -0.3**
baz=51,SNR=7.5
EDFI Ende, Flores 51.04 277 P **P** **00 49 18.9 -0.1**
comp=Z,501nmcomp=Z,12nm,1.4s
MORW Morawa 51.24 250 P **P** **00 49 19.8 -0.5**
baz=51,SNR=19
MORW Morawa 51.24 250 P **P** **00 49 20.1 -0.2**
MORW IAmb IAmb 00 49 21.2
comp=Z,48nm,0.8s
MORW IAMs_20 IAMs_20 01 10 13.3
comp=Z,3µm,22.0s
MIDW Midway 51.41 11 IAMs_20 IAMs_20 01 07 25.7
comp=Z,3µm,20.0s
KHU Kahuku 51.71 39 IAMs_20 IAMs_20 01 07 56.7
comp=Z,3µm,20.0s
KEKH Kekaha 51.72 33 IAMs_20 IAMs_20 01 07 07.9
comp=Z,3µm,19.0s
KHLU Kahalu`u 51.82 38 IAMs_20 IAMs_20 01 10 05.6
comp=Z,3µm,18.0s
HPAH Hawaii Prepara 52.28 38 IAMs_20 IAMs_20 01 06 55.8
comp=Z,2µm,20.0s
HLK Haleakala 52.55 37 IAMs_20 IAMs_20 01 06 08.3
comp=Z,3µm,19.0s
KHLH Kahului Airpor 52.56 37 IAMs_20 IAMs_20 01 06 53.2
comp=Z,3µm,19.0s
LUWI Luwuk 53.28 287 P **P** **00 49 36.9 +1.4**
comp=Z,8µmcomp=Z,82nm,1.0s
BKSI Bulukumba 53.81 280 P **P** **00 49 39.9 +0.5**
comp=Z,610nmcomp=Z,31nm,0.9s
GIRL Giralia 53.90 258 IAMs_20 IAMs_20 01 12 06.6
comp=Z,2µm,20.0s
KAPI Kappang 54.27 281 P **P** **00 49 42.1 -0.7**
APSI Ampana 54.34 286 P **P** **00 49 44.7 +1.4**
comp=Z,640nmcomp=Z,42nm,1.0s
SPSI Sidrap Palu 54.69 282 P **P** **00 49 44.8 -1.0**
comp=Z,24nm,1.0s
MRSI Marisa 54.73 288 P **P** **00 49 45.1 -1.0**
comp=Z,23nm,0.9s
TTSI Tana Toraja 55.03 283 P **P** **00 49 51.2 +2.9**
VNDA Vanda 55.19 183 P **P** **00 49 47.9 -0.7**
comp=Z,3.7nm,0.7s,baz=5.0,slow=7.5,SNR=40
VNDA ScP **ScP** **00 54 45.9 -1.3**
comp=Z,5.6nm,1.3s,baz=6.4,slow=3.9,SNR=4.2
VNDA LR LR 01 11 15.8
comp=Z,4µm,18.0s,baz=18,slow=34
VNDA Vanda 55.19 183 P **P** **00 49 49.5 +1.0**
MPSI Mapaga 56.46 286 P **P** **00 49 59.0 +0.4**
comp=Z,1µmcomp=Z,45nm,0.9s
JAGI Jajag, Banyuwa 58.07 274 P **P** **00 50 08.3 -1.7**
CASY Casey 58.47 205 P **P** **00 50 11.6 -0.3**
CASY IAmb IAmb 00 50 12.9
comp=Z,53nm,1.2s
CASY Casey 58.47 205 IAMs_20 IAMs_20 01 10 08.8
comp=Z,2µm,20.0s
CISI Cisompet, Garu 64.25 272 IAMs_20 IAMs_20 01 15 35.2
comp=Z,2µm,20.0s
SBUM Sibu 64.25 285 P **P** **00 50 51.7 -0.2**
SBUM Sibu 64.25 285 P P 00 50 57.0 +5.1
KSM Kuching 65.55 283 P **P** **00 51 01.0 +0.7**
DBJI Dramaga 65.60 273 P **P** **00 51 01.3 +0.6**
comp=Z,94nm,0.7s
MJAR Matsushiro Arr 67.42 330 P **P** **00 51 12.5 +0.7**
comp=Z,3.4nm,0.6s,baz=209,slow=46,SNR=3.4
MJAR LR LR 01 15 58.9
comp=Z,1µm,21.9s,baz=125,slow=32
MAJO Matsushiro 67.42 330 IAMs_20 IAMs_20 01 15 25.7
comp=Z,2µm,22.0s
MAT Matsushiro 67.42 330 P **P** **00 51 10.4 -1.4**
QSPA South Pole Qui 67.42 180 LR LR 01 18 20.6
comp=Z,2µm,18.2s,baz=40,slow=34
QSPA South Pole Qui 67.42 180 P **P** **00 51 12.1 +0.4**
QSPA South Pole Qui 67.42 180 IAMs_20 IAMs_20 01 17 50.7
comp=Z,2µm,19.0s
KASI Kota Agung 68.06 273 P **P** **00 51 19.3 +2.9**
YHNB Yeheng 68.72 310 IAMs_20 IAMs_20 01 16 56.1
comp=Z,1µm,20.0s
MDSI Maura Dua 68.74 274 P **P** **00 51 19.4 -1.2**
comp=Z,6µmcomp=Z,41nm,0.9s
PMBI Palembang 68.80 276 IAMs_20 IAMs_20 01 18 58.6
comp=Z,1µm,19.0s
TATO Taipei 68.83 310 IAMs_20 IAMs_20 01 16 46.8
comp=Z,2µm,22.0s
RPN Rapa Nui 69.55 112 LR LR 01 14 15.0
comp=Z,1µm,21.4s,baz=248,slow=29
QZH Quanzhou 70.88 309 P **P** **00 51 34.0 +0.5**
QZH S **S** **01 00 48.8 +0.7**
QZH pmax pmax
comp=Z,340nm,11.8s
QZH LR LR
comp=Z,480nm,20.8s
QZH LR LR
comp=Z,400nm,20.8s
QZH LR LR
comp=Z,690nm,20.4s
MYKOM Kota Tinggi 71.53 280 IAMs_20 IAMs_20 01 23 27.9
comp=Z,1µm,18.0s
JKA Kamikawa-asahi 72.04 337 P **P** **00 51 41.8 +1.7**
ASAJ Asahikawa 72.04 337 P **P** **00 51 41.8 +1.6**
comp=Z,8.3nm,0.6s,baz=234,slow=1.4
SSE Sheshan 72.95 315 P **P** **00 51 47.0 +1.2**
SSE S **S** **01 01 10.3 -1.4**
SSE pmax pmax
comp=Z,15nm,0.7s
SSE pmax pmax
comp=Z,120nm,8.9s
SSE LR LR
comp=Z,180nm,18.1s
SSE LR LR
comp=Z,250nm,19.6s
PPSI Pulau Pagai 73.24 274 P **P** **00 51 52.4 +4.4**
KSRS Korea Array 73.30 324 P **P** **00 51 48.5 +0.8**
comp=Z,1.5nm,0.8s,baz=126,slow=6.4,SNR=6.2
KSRS LR LR 01 23 57.1
comp=Z,494nm,18.2s,baz=154,slow=36
KSAR Wonju Array Be 73.31 324 P **P** **00 51 48.5 +0.7**
BKNI Bangkinang 73.50 277 IAMs_20 IAMs_20 01 22 28.3
comp=Z,1µm,21.0s
INCN Inchon 74.03 323 P **P** **00 51 52.4 +0.3**
INCN IAmb IAmb 00 52 00.8
comp=Z,70nm,1.6s
QIZ Qiongzhong 74.30 299 P **P** **00 51 53.4 -0.6**
QIZ S **S** **01 01 28.3 +0.8**
QIZ LR LR
comp=Z,280nm,18.0s
QIZ LR LR
comp=Z,320nm,16.3s
QIZ LR LR
comp=Z,490nm,22.1s
YSS Yuzh-Sakhalins 74.47 339 P **P** **00 51 53.1 -1.2**
ADK Adak 74.76 7 P **P** **00 51 55.6 -0.3**
SMY Shemya 75.06 1 P **P** **00 51 56.2 -1.4**
SMY IAMs_20 IAMs_20 01 23 49.5
comp=Z,1µm,20.0s
NJ2 Nanjing 75.09 315 *e*P **P** **00 51 59.8 +1.5**
NJ2 pP **sP** **00 52 04.9 -0.1**
NJ2 S **S** **01 01 35.8 0.0**
NJ2 sS **sS** **01 01 46.8 +3.4**
NJ2 pmax pmax
comp=Z,19nm,0.6s
NJ2 pmax pmax
comp=Z,200nm,3.7s
NJ2 LR LR
comp=Z,650nm,17.1s
NJ2 LR LR
comp=Z,820nm,19.4s
NJ2 LR LR
comp=Z,980nm,18.5s
IPM Ipoh 75.20 281 P **P** **00 51 57.8 -1.7**
ATKA Atka Island 75.37 8 P **P** **00 51 59.4 0.0**
KULM Kulim 75.88 282 P **P** **00 52 01.8 -1.5**
KULM Kulim 75.88 282 P P 00 51 58.0 -5.3
PET Petropavlovsk 76.38 351 P **P** **00 52 05.2 0.0**
PET IAMs_20 IAMs_20 01 18 55.6
comp=Z,2µm,22.0s
USA0B Ussuriysk Arra 76.38 331 P **P** **00 52 04.6 -0.8**
USA0B IAmb IAmb 00 52 13.6
comp=Z,84nm,1.9s
USA0B IAMs_20 IAMs_20 01 20 27.9
comp=Z,1µm,22.0s
USRK Ussuriysk Ar. 76.38 331 P **P** **00 52 06.0 +0.6**
comp=Z,2.6nm,0.6s,baz=125,slow=4.6,SNR=9.1
USRK LR LR 01 20 49.7
comp=Z,1µm,22.0s,baz=136,slow=32
USRK Ussuriysk Ar. 76.38 331 P **P** **00 52 05.1 -0.3**
USRK **P** **00 52 05.5 +0.1**
RPSI Rantau Prapat 76.39 279 P **P** **00 52 05.8 -0.3**
RPSI IAmb IAmb 00 52 18.9
comp=Z,26nm,1.2s
RPSI IAMs_20 IAMs_20 01 27 56.7
comp=Z,1µm,20.0s
MAW Mawson 76.59 202 P **P** **00 52 06.7 +0.3**
baz=76,SNR=71
MAW Mawson 76.59 202 P **P** **00 52 06.7 +0.3**
comp=Z,54nm,0.8s,baz=111,slow=7.1,SNR=96
MAW LR LR 01 23 07.9
comp=Z,1µm,18.3s,baz=82,slow=34
MAW Mawson 76.59 202 P **P** **00 52 06.7 +0.3**
PEA0B Petropavlovsk- 76.60 351 P **P** **00 52 06.6 +0.1**
PEA0B IAMs_20 IAMs_20 01 20 32.5
comp=Z,2µm,20.0s
PETK Petropavlovsk- 76.60 351 P **P** **00 52 08.0 +1.5**
comp=Z,13nm,0.9s,baz=149,slow=7.9,SNR=18
PETK LR LR 01 20 54.5
comp=Z,1µm,20.2s,baz=174,slow=32
PETK Petropavlovsk- 76.60 351 P **P** **00 52 06.9 +0.4**
NIKH Nikolski High 76.94 11 P **P** **00 52 08.9 +0.6**
GSI Gunungsitoli 77.06 277 P **P** **00 52 10.2 +0.2**
comp=Z,154nm,0.7s
GSI Gunungsitoli 77.06 277 P **P** **00 52 08.6 -1.5**
WHN Wuhan 77.23 311 P P 00 52 18.0 +7.5
MDJ Mudanjiang 77.80 330 P **P** **00 52 16.0 +2.6**
MDJ pP sP 00 52 19.9 -0.1
MDJ PP **PP** **00 55 13.3 +3.9**
MDJ S **S** **01 02 13.3 +8.3**
MDJ pmax pmax
comp=Z,16nm,1.2s
MDJ pmax pmax
comp=Z,440nm,4.4s
MDJ LR LR
comp=Z,530nm,10.3s
MDJ LR LR
comp=Z,660nm,12.4s
MDJ LR LR
comp=Z,1µm,21.0s
MDJ Mudanjiang 77.80 330 IAMs_20 IAMs_20 01 21 48.4
comp=Z,1µm,22.0s
DL2 Dalian 77.85 321 P **P** **00 52 17.3 +3.5**
DL2 S **S** **01 02 09.0 +3.2**
DL2 pmax pmax
comp=Z,20nm,1.1s
DL2 pmax pmax
comp=Z,380nm,9.2s
DL2 LR LR
comp=Z,980nm,18.2s
DL2 LR LR
comp=Z,530nm,21.6s
DL2 LR LR
comp=Z,1µm,26.5s
SNY Shenyang 78.77 325 ⇑P **P** **00 52 18.0 -0.8**
SNY S **S** **01 02 17.1 +1.6**
SNY pmax pmax
comp=Z,220nm,8.8s
SNY LR LR
comp=Z,580nm,20.5s
SNY LR LR
comp=Z,660nm,23.0s
SNY LR LR
comp=Z,1µm,21.8s
TIA Tai'an 78.81 317 P **P** **00 52 18.3 -0.9**
TIA S **S** **01 02 13.4 -2.9**
TIA pmax pmax
comp=Z,6.0nm,1.9s
TIA pmax pmax
comp=Z,320nm,11.8s
TIA LR LR
comp=Z,710nm,21.6s
TIA LR LR
comp=Z,500nm,22.6s
TIA LR LR
comp=Z,1µm,23.3s
CN2 Changchun 79.20 327 *e*P **P** **00 52 23.8 +2.7**
CN2 *e*S **S** **01 02 22.3 +2.2**
CN2 pmax pmax
comp=Z,10.0nm,1.3s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,600nm,20.0s
CN2 LR LR
comp=Z,600nm,20.0s
CN2 LR LR
comp=Z,700nm,19.0s
KLR Kul'dur 80.43 334 P **P** **00 52 28.9 +1.2**
comp=Z,2.5nm,0.6s,baz=129,slow=4.8,SNR=2.4
GYA Guiyang 80.63 304 ⇑*i*P **P** **00 52 29.1 -0.4**
GYA PP **PP** **00 55 28.8 -4.7**
GYA S **S** **01 02 38.0 +1.8**
GYA pmax pmax
comp=Z,10.0nm,0.5s
GYA pmax pmax
comp=Z,150nm,5.0s
GYA LR LR
comp=Z,340nm,20.5s
GYA LR LR
comp=Z,410nm,18.2s
GYA LR LR
comp=Z,530nm,19.8s
SDPT Sand Point 80.92 15 IAMs_20 IAMs_20 01 20 15.3
comp=Z,2µm,22.0s
BJI Beijing 81.79 320 P **P** **00 52 38.8 +3.7**
BJI S **S** **01 02 47.9 +0.5**
BJI pmax pmax
comp=Z,10.0nm,1.6s
BJI pmax pmax
comp=Z,250nm,4.7s
BJI LR LR
comp=Z,760nm,25.5s
BJI LR LR
comp=Z,570nm,24.9s
BJI LR LR
comp=Z,2µm,27.5s
PMSA Palmer Station 82.50 159 P **P** **00 52 39.4 +0.8**
SYO Syowa Base 82.62 195 ⇓*i*P **P** **00 52 37.2 -1.9**
SYO Syowa Base 82.62 195 ⇓*i*pP **P** **00 52 41.0 +1.9**
SYO Syowa Base 82.62 195 ⇓*i*PcP **PcP** **00 52 44.4 +0.3**
TIY Taiyuan 82.71 316 *e*P **P** **00 52 43.9 +3.8**
TIY S **S** **01 02 59.5 +2.4**
TIY pmax pmax
comp=Z,220nm,6.1s
TIY LR LR
comp=Z,150nm,12.8s
TIY LR LR
comp=Z,400nm,15.4s
TIY LR LR
comp=Z,680nm,16.7s
XAN Xi'an 82.99 311 P P 00 52 46.6 +5.0
XAN S **S** **01 02 56.0 -4.1**
XAN pmax pmax
comp=Z,320nm,10.6s
XAN LR LR
comp=Z,470nm,21.6s
XAN LR LR
comp=Z,590nm,22.6s
XAN LR LR
comp=Z,680nm,22.6s
KMI Kunming 83.04 301 P **P** **00 52 42.1 -0.2**
KMI pP pP 00 52 44.0 -3.1
KMI S **S** **01 03 01.8 +0.5**
KMI pmax pmax
comp=Z,7.0nm,0.6s
KMI pmax pmax
comp=Z,180nm,7.6s
KMI LR LR
comp=Z,210nm,21.3s
KMI LR LR
comp=Z,430nm,21.2s
KMI LR LR
comp=Z,780nm,22.4s
CMAR Chiang Mai Arr 83.08 293 P **P** **00 52 43.0 +0.5**
comp=Z,1.0nm,0.3s,baz=138,slow=5.5,SNR=4.3
CMAR LR LR 01 32 03.5
comp=Z,342nm,19.5s,baz=131,slow=37
MA2 Magadan 83.94 349 P **P** **00 52 49.1 +3.3**
comp=Z,2.4nm,0.4s,baz=155,slow=11,SNR=1.4
SNCC San Nicolas Is 84.98 51 IAMs_20 IAMs_20 01 28 29.2
comp=Z,810nm,18.0s
CD2 Chengdu 85.08 306 P **P** **00 52 52.0 -0.4**
CD2 SKS **SKSac** **01 03 16.6 +0.2**
CD2 S **S** **01 03 22.8 +1.6**
CD2 SS **SS** **01 08 58.3 +2.9**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,290nm,6.9s
CD2 LR LR
comp=Z,630nm,19.4s
CD2 LR LR
comp=Z,1µm,24.1s
CD2 LR LR
comp=Z,1µm,21.2s
HHC Hu-ho-hao-te 85.08 318 *e*P P 00 52 58.1 +5.9
HHC SKS **SKSac** **01 03 15.8 -0.3**
HHC S **S** **01 03 27.6 +6.6**
HHC pmax pmax
comp=Z,12nm,0.9s
HHC pmax pmax
comp=Z,100nm,6.6s
HHC LR LR
comp=Z,300nm,20.8s
HHC LR LR
comp=Z,480nm,20.0s
HHC LR LR
comp=Z,660nm,21.0s
KDAK Kodiak Island 85.13 18 P **P** **00 52 53.5 +1.6**
comp=Z,6.1nm,1.0s,baz=213,slow=4.3,SNR=3.5
KDAK LR LR 01 23 54.1
comp=Z,3µm,21.0s,baz=219,slow=31
KDAK Kodiak Island 85.13 18 IAmb IAmb 00 52 59.6
comp=Z,48nm,1.5s
SAO San Andreas Ge 85.48 47 IAMs_20 IAMs_20 01 22 50.3
comp=Z,1µm,20.0s
PKM Mcpherson Peak 85.62 49 P **P** **00 52 56.4 +1.3**
baz=239
PMPB Monarch Peak 85.63 48 P **P** **00 52 54.1 -0.9**
PMPB IAmb IAmb 00 53 33.1
comp=Z,31nm,1.2s
PMPB IAMs_20 IAMs_20 01 23 45.3
comp=Z,1µm,20.0s
KCPM Cahto Peak 85.67 44 P **P** **00 52 54.4 -0.9**
KCPM IAmb IAmb 00 53 04.9
comp=Z,69nm,1.7s
PAGB Antelope Grade 85.75 49 IAMs_20 IAMs_20 01 22 14.6
comp=Z,968nm,22.0s
HIA Hailar 85.83 328 IAMs_20 IAMs_20 01 25 54.0
comp=Z,1µm,22.0s
SNAA Sanae 85.89 181 P **P** **00 52 54.5 -1.4**
SNAA Sanae 85.89 181 P **P** **00 52 55.0 -0.9**
SNAA IAmb IAmb 00 52 56.0
comp=Z,36nm,0.9s
SNAA IAMs_20 IAMs_20 01 27 19.5
comp=Z,1µm,21.0s
JCC Jacoby Creek, 86.03 43 IAMs_20 IAMs_20 01 24 35.5
comp=Z,1µm,19.0s
OSI Osito Audit: C 86.25 50 IAMs_20 IAMs_20 01 28 26.8
comp=Z,962nm,19.0s
VNA3 Neumayer Olymp 86.34 179 P **P** **00 52 56.6 -1.4**
GO10 Punta Arenas 86.44 147 P **P** **00 52 59.0 +0.1**
O02D Mt. Diablo Mer 86.45 44 P **P** **00 53 01.0 +1.9**
baz=236
KRMB Red Mountain 86.50 42 IAMs_20 IAMs_20 01 27 09.0
comp=Z,1µm,18.0s
VNA2 Neumayer--Watz 86.68 180 P **P** **00 52 58.5 -1.1**
baz=164,slow=4.4
BAR Barrett 86.76 53 IAMs_20 IAMs_20 01 29 45.6
comp=Z,812nm,18.0s
GO09 Cerro Castillo 86.81 145 P **P** **00 53 01.1 +0.4**
WDC Whiskeytown Da 86.83 43 P **P** **00 53 00.1 -0.6**
SEY Seymchan 86.84 351 P **P** **00 53 00.5 +0.2**
comp=Z,4.3nm,0.7s,baz=156,slow=3.3,SNR=8.6
CMB Columbia Colle 86.87 47 P **P** **00 53 01.4 +0.3**
CMB IAmb IAmb 00 53 11.6
comp=Z,23nm,1.3s
CMB IAMs_20 IAMs_20 01 23 03.1
comp=Z,1µm,21.0s
EDW2 Edwards Air Fo 86.90 50 P **P** **00 53 02.3 +1.0**
baz=240
N02D Trinity Center 86.95 43 P **P** **00 53 03.3 +1.9**
baz=236
VNA1 Neumayer--Stat 86.95 180 P **P** **00 53 00.0 -0.9**
ISA Isabella, Lake 86.96 49 P **P** **00 53 02.5 +0.9**
baz=239
ISA Isabella, Lake 86.96 49 P **P** **00 53 01.1 -0.5**
ISA IAmb IAmb 00 53 10.0
comp=Z,18nm,0.9s
AFDM Forest Hills D 86.97 46 P **P** **00 53 01.1 -0.4**
GAMB Gambell 86.97 7 IAMs_20 IAMs_20 01 25 46.3
comp=Z,2µm,21.0s
MONP2 Monument Peak 87.05 53 P **P** **00 53 03.6 +1.3**
baz=241
MG01 Puerto William 87.07 150 P **P** **00 53 01.2 -0.6**
M02C Callahan 87.08 43 P **P** **00 53 03.6 +1.5**
baz=236
O03E Paynes Creek 87.15 44 P **P** **00 53 03.4 +1.0**
baz=237
IKP In-Ko-Pah, Jac 87.16 53 P **P** **00 53 03.8 +1.1**
baz=241
K02D Willamette Mer 87.31 41 P **P** **00 53 05.4 +2.3**
baz=236
YBH Yreka Blue Hor 87.36 42 P **P** **00 53 04.3 +0.9**
comp=Z,4.4nm,0.8s,baz=46,slow=2.4,SNR=16
YBH LR LR 01 23 28.2
comp=Z,965nm,21.5s,baz=256,slow=30
YBH Yreka Blue Hor 87.36 42 P **P** **00 53 04.9 +1.4**
YBH IAmb IAmb 00 53 27.2
comp=Z,35nm,1.7s
YBH IAMs_20 IAMs_20 01 27 47.8
comp=Z,1µm,19.0s
PFO Pinyon Flats O 87.37 52 LR LR 01 24 53.2
comp=Z,552nm,20.3s,baz=249,slow=30
PFO Pinyon Flats O 87.37 52 P **P** **00 53 03.4 -0.3**
PFO Pinyon Flats O 87.37 52 IAMs_20 IAMs_20 01 29 30.8
comp=Z,843nm,19.0s
XPFO Pion Flat 87.38 52 P **P** **00 53 03.0 -0.8**
XPFO Pion Flat 87.38 52 IAMs_20 IAMs_20 01 29 30.8
comp=Z,847nm,19.0s
MDPB Devils Postpil 87.54 47 P **P** **00 53 03.2 -1.4**
MDPB IAmb IAmb 00 53 13.8
comp=Z,29nm,1.6s
MDPB IAMs_20 IAMs_20 01 23 35.0
comp=Z,1µm,21.0s
OMMB Old Mammoth Mi 87.59 47 P **P** **00 53 03.9 -1.0**
OMMB **PcP** **00 53 04.1 -2.7**
OMMB IAMs_20 IAMs_20 01 23 03.1
comp=Z,1µm,22.0s
LZH Lanzhou 87.61 311 ⇑P **P** **00 53 04.3 -0.5**
LZH sP pP 00 53 08.4 -1.2
LZH SKS **SKSac** **01 03 32.5 +0.4**
LZH S **S** **01 03 44.5 -1.4**
LZH pmax pmax
comp=Z,15nm,1.0s
LZH pmax pmax
comp=Z,79nm,5.4s
LZH LR LR
comp=Z,510nm,19.0s
LZH LR LR
comp=Z,580nm,19.5s
LZH LR LR
comp=Z,690nm,18.4s
CWC Cottonwood Cre 87.62 49 P **P** **00 53 06.0 +1.1**
baz=240
WAKR Walker 87.75 47 P **P** **00 53 04.3 -1.3**
LPIG La Paz 87.78 63 LR LR 01 27 24.9
comp=Z,497nm,18.1s,baz=246,slow=32
MPMC Manual Prospec 87.84 49 P **P** **00 53 06.8 +0.8**
baz=240
BEKR Beckworth 87.86 45 P **P** **00 53 05.3 -0.7**
BEKR IAmb IAmb 00 53 20.2
comp=Z,43nm,1.8s
L04D Klamath Falls 87.88 42 P **P** **00 53 06.8 +0.8**

baz=237
BELC Belle Mtn. Jos 87.90 52 P P 00 53 07.0 +0.7
baz=241
PNTR Pine Nut 87.95 46 P P 00 53 05.6 -0.9
GSC Goldstone, Bar 87.95 50 P P 00 53 07.4 +1.0
baz=240
GSC Goldstone, Bar 87.95 50 IAms_20 IAms_20 01 30 48.0
comp=Z,753nm,18.0s
SEW Seward 87.96 18 P P 00 53 04.1 -1.6
SEW IAmb IAmb 00 53 05.3
comp=Z,20nm,1.1s
VCNR Virginia City 88.02 46 IAms_20 IAms_20 01 24 20.5
comp=Z,2µm,20.0s
BC3 Big Chuckawall 88.13 52 P P 00 53 08.6 +1.3
baz=241
GLA Glamis 88.30 53 P P 00 53 09.2 +1.1
baz=242
GLA Glamis 88.30 53 IAms_20 IAms_20 01 30 58.4
comp=Z,892nm,18.0s
MID Middleton Isla 88.33 19 IAms_20 IAms_20 01 26 41.4
comp=Z,1µm,19.0s
PAHR Pah Rah Range 88.41 46 P P 00 53 07.9 -0.7
PAHR IAmb IAmb 00 53 22.8
comp=Z,48nm,1.7s
RYN Ryan 88.43 47 P P 00 53 07.7 -1.0
RYN IAmb IAmb 00 53 31.9
comp=Z,40nm,1.9s
RYN IAMs_20 IAMs_20 01 24 46.4
comp=Z,1µm,20.0s
NVAR Mina Array Bea 88.48 47 P P 00 53 10.1 +1.1
comp=Z,2.8nm,0.8s,baz=230,slow=6.9,SNR=16
NVAR LR LR 01 24 21.3
comp=Z,1µm,21.9s,baz=236,slow=30
NVAR Mina Array Bea 88.48 47 P P 00 53 08.2 -0.8
GMRC Granite Mounta 88.52 51 P P 00 53 10.0 +0.9
baz=241
NV11 Mina Array Sit 88.58 47 P P 00 53 09.6 +0.2
NV11 IAMs_20 IAMs_20 01 23 57.3
comp=Z,1µm,22.0s
COR Corvallis 88.59 40 IAMs_20 IAMs_20 01 23 59.1
comp=Z,1µm,22.0s
IRM Iron Mountain 88.59 52 P P 00 53 10.1 +0.7
baz=241
TUQ Turquoise Moun 88.65 51 P P 00 53 10.6 +0.9
baz=241
I04A Tendick Farm, 88.68 41 P P 00 53 11.0 +1.4
baz=237
RC01 Rabbit Creek A 88.70 17 P P 00 53 09.1 -0.2
RC01 IAmb IAmb 00 53 22.0
comp=Z,60nm,1.9s
TTA Tatalina 88.75 14 P P 00 53 07.5 -2.0
Y12C Blythe 88.86 53 P P 00 53 10.6 0.0
Y12C IAmb IAmb 00 53 25.1
comp=Z,64nm,2.0s
KVN Kaiserville 88.93 47 P P 00 53 10.9 -0.1
KVN IAmb IAmb 00 53 25.2
comp=Z,43nm,1.8s
KVN IAMs_20 IAMs_20 01 25 11.5
comp=Z,1µm,20.0s
113A Mohawk Valley, 88.95 54 P P 00 53 11.8 +0.7
113A IAmb IAmb 00 53 25.4
comp=Z,33nm,1.7s
MOD Modoc Plateau 88.97 43 P P 00 53 11.1 0.0
MOD IAmb IAmb 00 53 24.3
comp=Z,48nm,1.8s
MOD IAMs_20 IAMs_20 01 26 23.4
comp=Z,1µm,20.0s
K05A Summer Lake 89.03 42 P P 00 53 11.6 +0.1
K05A IAMs_20 IAMs_20 01 30 48.1
comp=Z,1µm,18.0s
J05D Fort Rock, OR 89.12 42 P P 00 53 13.4 +1.6
baz=237
TPNV Topopah Spring 89.15 49 P P 00 53 12.9 +0.8
baz=241
TPNV Topopah Spring 89.15 49 P P 00 53 12.2 +0.1
H04A Detroit Lake 89.31 40 IAMs_20 IAMs_20 01 24 47.2
comp=Z,1µm,21.0s
PDMCI Parker Dam,Lak 89.39 52 P P 00 53 14.7 +1.6
baz=242
PINE Pine Mountain 89.58 41 P P 00 53 13.7 -0.4
PINE IAMs_20 IAMs_20 01 24 51.4
comp=Z,888nm,21.0s
PPLA Purkeypile 89.60 15 IAMs_20 IAMs_20 01 28 54.7
comp=Z,1µm,20.0s
RAGM Ragged Mountai 89.61 20 IAMs_20 IAMs_20 01 30 11.1
comp=Z,1µm,19.0s
I05D Terrebonne, OR 89.63 41 P P 00 53 15.5 +1.5
baz=237
SML Sawmill 89.68 17 IAMs_20 IAMs_20 01 29 48.0
comp=Z,1µm,19.0s
SHPR Sheep Range 89.70 50 P P 00 53 14.4 -0.4
SHPR IAmb IAmb 00 53 29.2
comp=Z,28nm,1.6s
SHPR IAMs_20 IAMs_20 01 32 53.4
comp=Z,788nm,18.0s
F04A Amboy 89.86 39 IAMs_20 IAMs_20 01 25 38.6
comp=Z,1µm,20.0s
SCM Sheep Creek Mo 89.98 18 IAMs_20 IAMs_20 01 27 01.9
comp=Z,1µm,20.0s
Y14A Wickenburg 90.06 53 IAMs_20 IAMs_20 01 32 01.0
comp=Z,863nm,18.0s
E04D Cinebar 90.11 39 P P 00 53 18.5 +2.3
baz=236
R11A Troy Canyon, C 90.29 48 P P 00 53 18.4 +0.9
baz=241
R11A Troy Canyon, C 90.29 48 P P 00 53 16.6 -0.8
WVOR Wild Horse Val 90.30 43 P P 00 53 16.1 -1.3
WVOR IAmb IAmb 00 53 31.8
comp=Z,58nm,1.9s
D03D Eldon 90.36 37 P P 00 53 19.7 +2.4
baz=236
SIT Sitka 90.44 25 IAMs_20 IAMs_20 01 29 12.4
comp=Z,1µm,19.0s
YAH Yahtse 90.52 21 P P 00 53 18.6 +0.6
YAH IAmb IAmb 00 53 33.5
comp=Z,24nm,1.3s
TRF Thorofare Moun 90.53 16 IAMs_20 IAMs_20 01 25 26.4
comp=Z,2µm,22.0s
G06A Carlson Farm, 90.53 40 P P 00 53 18.1 -0.2
G06A IAMs_20 IAMs_20 01 25 35.6
comp=Z,1µm,21.0s
BILL Bilibino 90.55 357 P P 00 53 18.2 +0.5
BILL IAmb IAmb 00 53 26.4
comp=Z,38nm,1.6s
BILL IAMs_20 IAMs_20 01 32 06.6
comp=Z,1µm,20.0s
I07A Izee 90.61 42 P P 00 53 18.1 -0.6
I07A IAMs_20 IAMs_20 01 32 38.7
comp=Z,1µm,18.0s
VRDI Verde Repeater 90.64 19 P P 00 53 18.9 +0.4
VRDI IAmb IAmb 00 53 32.3
comp=Z,34nm,1.5s
VRDI IAMs_20 IAMs_20 01 26 38.4
comp=Z,1µm,21.0s
GLB Gilahina Butte 90.69 19 IAMs_20 IAMs_20 01 27 02.9
comp=Z,1µm,21.0s
DHAK Deception Hill 90.79 23 IAMs_20 IAMs_20 01 30 46.4
comp=Z,1µm,19.0s
D05A Enumclaw 90.79 38 IAMs_20 IAMs_20 01 26 06.4
comp=Z,1µm,20.0s
BALM Baldy 90.84 20 IAMs_20 IAMs_20 01 27 22.6
comp=Z,1µm,20.0s
RND Reindeer 90.86 16 P P 00 53 19.3 -0.1
RND IAmb IAmb 00 53 33.5
comp=Z,17nm,1.1s
J08A Circle Bar Ran 90.88 43 P P 00 53 20.1 +0.1
J08A IAmb IAmb 00 53 37.3
comp=Z,35nm,1.7s
MCARA McCarthy VSAT 90.89 20 P P 00 53 19.0 -0.5
MCARA IAmb IAmb 00 53 29.1
comp=Z,29nm,1.3s
MCARA IAMs_20 IAMs_20 01 30 54.5
comp=Z,852nm,20.0s
DHY Denali Highway 90.97 17 P P 00 53 20.7 +0.7
DHY IAmb IAmb 00 53 33.6
comp=Z,30nm,1.6s
TUC Tucson 90.99 55 P P 00 53 22.3 +1.5
baz=244
TUC Tucson 90.99 55 P P 00 53 19.9 -0.9
TUC IAmb IAmb 00 53 34.3
comp=Z,38nm,2.0s
CTGM Chitina Glacie 91.11 20 P P 00 53 21.0 +0.3
CTGM IAmb IAmb 00 53 34.8
comp=Z,25nm,1.5s
CTGM IAMs_20 IAMs_20 01 27 10.2
comp=Z,1µm,20.0s
YAK Yakutsk 91.19 341 IAMs_20 IAMs_20 01 33 20.8
comp=Z,1µm,19.0s
WRAK Wrangell Islan 91.22 27 IAMs_20 IAMs_20 01 28 23.1
comp=Z,904nm,19.0s
LCMT Little Creek M 91.30 50 P P 00 53 21.5 -0.7
F07A Phinny Hill Vi 91.30 40 IAMs_20 IAMs_20 01 25 47.9
comp=Z,1µm,22.0s
B05A Bryant 91.32 37 P P 00 53 23.0 +1.3
baz=237
X16A Lo Mia Camp, P 91.43 53 P P 00 53 22.1 -0.8
CCUT Cedar City 91.47 50 P P 00 53 22.7 -0.3
G08A Pilot Rock 91.57 41 P P 00 53 22.5 -0.7
G08A IAMs_20 IAMs_20 01 31 02.0
comp=Z,1µm,19.0s
PSUT Pine Spring 91.58 49 P P 00 53 23.5 0.0
LTY Liberty 91.59 39 P P 00 53 22.6 -0.6
LTY IAmb IAmb 00 54 07.3
comp=Z,29nm,1.9s
KNB Kanab 91.60 50 P P 00 53 23.1 -0.5
JIS Juneau Island 91.65 25 IAMs_20 IAMs_20 01 29 21.2
comp=Z,1µm,20.0s
BESE Bessie Mountai 91.67 24 IAMs_20 IAMs_20 01 30 16.9
comp=Z,1µm,19.0s
ELK Elko 91.68 46 P P 00 53 21.6 -2.3
ELK IAmb IAmb 00 53 37.9
comp=Z,22nm,1.6s
ULN Ulaanbaatar 91.69 322 IAMs_20 IAMs_20 01 31 18.4
comp=Z,841nm,21.0s
E07A Sunnyside 91.69 40 IAMs_20 IAMs_20 01 26 28.3
comp=Z,891nm,20.0s
U15A North Rim 91.72 51 P P 00 53 24.3 +0.1
319A Douglas 91.74 57 P P 00 53 24.5 +0.2
MLY Manley 91.75 15 IAMs_20 IAMs_20 01 32 22.6
comp=Z,1µm,19.0s
NEA Nenana 91.77 15 IAMs_20 IAMs_20 01 28 26.5
comp=Z,1µm,20.0s
HAWA Hanford 91.80 40 P P 00 53 24.6 +0.6
HAWA IAmb IAmb 00 54 13.7
comp=Z,30nm,1.6s
HAWA IAMs_20 IAMs_20 01 26 13.0
comp=Z,1µm,21.0s
IMAR Indian Mountai 91.90 13 P P 00 53 23.4 -0.6
WRH Wood River Hil 91.92 16 P P 00 53 24.1 0.0
WUAZ Wupatki 91.97 52 P P 00 53 26.6 +1.3
baz=244
WUAZ Wupatki 91.97 52 P P 00 53 24.8 -0.5
GTA Gaotai 92.01 312 *e*P P **00 53 23.4 -1.9**
GTA pP PcP 00 53 27.6 +1.5
GTA sP sP 00 53 31.0 -1.1
GTA SKS **SKSac 01 03 54.3 -3.3**
GTA S **SKKSac 01 04 19.6 +5.2**
GTA sS ScS 01 04 30.0 +1.0
GTA pmax pmax
comp=Z,2.0nm,0.8s
GTA pmax pmax
comp=Z,62nm,6.2s
GTA LR LR
comp=Z,380nm,21.0s
GTA LR LR
comp=Z,540nm,21.3s
GTA LR LR
comp=Z,720nm,21.6s
SONM Songino Array 92.05 322 P P 00 53 25.4 +0.1
comp=Z,0.5nm,0.4s,baz=79,slow=3.2,SNR=4.6
SONM LR LR 01 32 59.1
comp=Z,465nm,21.8s,baz=113,slow=34
SONM Songino Array 92.05 322 P P 00 53 25.4 +0.1
SKAG Skagway 92.10 24 P P 00 53 25.1 +0.1
SKAG IAmb IAmb 00 53 31.4
comp=Z,32nm,1.7s
SKAG IAMs_20 IAMs_20 01 30 03.2
comp=Z,868nm,19.0s
E08A Dider Farm, El 92.13 40 P P 00 53 25.4 -0.2
E08A IAMs_20 IAMs_20 01 26 33.8
comp=Z,1µm,21.0s
CCB Clear Creek Bu 92.14 16 P P 00 53 24.6 -0.5
CCB IAmb IAmb 00 53 37.3
comp=Z,16nm,1.3s
HDA Harding Lake 92.17 16 P P 00 53 25.9 +0.6
RIDG Independent Ri 92.19 17 P P 00 53 26.8 +1.3
HYT Haines Junctio 92.28 22 IAMs_20 IAMs_20 01 27 05.9
comp=Z,1µm,20.0s
MDM Murphy Dome 92.29 15 P P 00 53 26.0 +0.1
MDM IAmb IAmb 00 53 32.8
comp=Z,18nm,1.3s
COLA College 92.31 16 P P 00 53 25.9 0.0
DOT Dot Lake 92.34 18 P P 00 53 26.2 0.0
BMO Blue Mountains 92.36 42 P P 00 53 27.1 +0.3
BMO IAMs_20 IAMs_20 01 26 31.0
comp=Z,1µm,22.0s
IL31 92.47 16 P P 00 53 26.7 0.0
IL31 IAmb IAmb 00 53 38.9
comp=Z,32nm,1.5s
ILAR Eielson Array 92.47 16 P P 00 53 25.1 -1.6
comp=Z,1.8nm,0.6s,baz=243,slow=4.0,SNR=3.1
ILAR PKKPbc **PKKPdf 01 10 39.6 -1.7**
comp=Z,0.9nm,1.0s,baz=29,slow=3.1,SNR=5.6
ILAR LR LR 01 29 16.7
comp=Z,2µm,20.1s,baz=236,slow=32
ILAR Eielson Array 92.47 16 P P 00 53 26.1 -0.6
D08A Wollman Farm, 92.50 39 P P 00 53 26.8 -0.5
D08A IAMs_20 IAMs_20 01 29 48.6
comp=Z,1µm,20.0s
MTPU Mount Pierson 92.52 50 P P 00 53 28.0 0.0
BCAR Beaver Creek A 92.55 19 P P 00 53 26.9 -0.3
MFID Camas Ranch 92.58 44 P P 00 53 27.6 -0.3
X18A Snowflake 92.59 54 P P 00 53 28.1 -0.2
SCRK Sand Creek 92.62 18 P P 00 53 27.0 -0.5
SCRK IAmb IAmb 00 53 41.5
comp=Z,17nm,1.3s
E09A Wood Farm, Sta 92.68 40 IAMs_20 IAMs_20 01 28 49.5
comp=Z,1µm,20.0s
MSU Marysvale 92.74 49 P P 00 53 28.9 0.0
HPIG 92.77 62 IAMs_20 IAMs_20 01 33 56.4
comp=Z,710nm,18.0s
B08A Colville Reser 92.93 38 IAMs_20 IAMs_20 01 28 05.0
comp=Z,1µm,20.0s
F10A Beach Ranch, E 92.96 41 IAMs_20 IAMs_20 01 28 34.9
comp=Z,1µm,20.0s
DUG Dugway, Tooele 93.06 48 IAMs_20 IAMs_20 01 26 30.9
comp=Z,1µm,22.0s
C09A Chrisman Ranch 93.26 39 IAMs_20 IAMs_20 01 28 53.6
comp=Z,1µm,20.0s
PLCA Paso Flores 93.66 137 P P 00 53 32.3 -0.8
comp=Z,10nm,1.0s,baz=212,slow=5.1,SNR=11
PLCA LR LR 01 29 32.1
comp=Z,596nm,18.4s,baz=242,slow=32
PLCA Paso Flores 93.66 137 IAmb IAmb 00 53 35.2
comp=Z,12nm,0.9s
ZAIG Zacatecas 93.71 67 IAMs_20 IAMs_20 01 33 39.5
comp=Z,786nm,19.0s
LC01 Cunco 93.82 135 IAMs_20 IAMs_20 01 25 35.8
comp=Z,1µm,20.0s
DAWY Dawson 94.02 19 IAMs_20 IAMs_20 01 27 28.6
comp=Z,1µm,22.0s
SRU San Rafael Swe 94.16 49 P P 00 53 34.2 -1.2
BI03 Tigo 94.16 133 IAMs_20 IAMs_20 01 35 11.6
comp=Z,1µm,18.0s
HWUT Hardware Ranch 94.54 47 IAMs_20 IAMs_20 01 29 20.0
comp=Z,1µm,20.0s
MNTX Cornudas Mount 94.90 58 P P 00 53 39.5 +0.7
baz=246
PV14 Lion Creek, Pa 94.90 50 IAMs_20 IAMs_20 01 38 32.0
comp=Z,877nm,19.0s
PV17 East Wray Mesa 94.91 51 IAMs_20 IAMs_20 01 22 55.9
comp=Z,1µm,22.0s
PV18 Skein Mesa, Pa 94.93 51 IAMs_20 IAMs_20 01 35 35.8
comp=Z,730nm,18.0s
PV04 Paradox Valley 95.00 51 IAMs_20 IAMs_20 01 32 52.5
comp=Z,1µm,22.0s
PV01 Paradox Valley 95.13 51 IAMs_20 IAMs_20 01 35 31.0
comp=Z,851nm,18.0s
MCMT McKenzie Canyo 95.14 43 P P 00 53 39.2 -0.5
PV15 Paradox Valley 95.28 51 IAMs_20 IAMs_20 01 35 01.9
comp=Z,664nm,18.0s
TXAR Lajitas Array 95.34 61 P P 00 53 42.2 +1.4
comp=Z,1.2nm,0.9s,baz=207,slow=5.2,SNR=5.8
TXAR PKKPbc **PKKPbc 01 10 34.2 +0.2**
comp=Z,0.2nm,0.4s,baz=116,slow=3.9,SNR=5.9
TXAR LR LR 01 28 15.8
comp=Z,377nm,21.7s,baz=0.0,slow=30
TXAR Lajitas Array 95.34 61 P P 00 53 40.4 -0.5
AHID Auburn Hatcher 95.36 46 IAMs_20 IAMs_20 01 30 22.6
comp=Z,1µm,19.0s
ANMO Albuquerque 95.38 54 LR LR 01 27 53.1
comp=Z,305nm,21.7s,baz=265,slow=30
BI02 San Fabin de 95.44 133 P P 00 53 41.2 -0.2
BI02 IAmb IAmb 00 53 44.1
comp=Z,11nm,0.8s
BI02 IAMs_20 IAMs_20 01 36 10.0
comp=Z,984nm,18.0s
JTMT Jette 95.59 40 IAMs_20 IAMs_20 01 29 02.3
comp=Z,1µm,20.0s
TPAW Teton Pass 95.77 45 IAMs_20 IAMs_20 01 29 20.5
comp=Z,849nm,20.0s
REDW Red Top Meadow 95.78 45 IAMs_20 IAMs_20 01 28 59.8
comp=Z,849nm,20.0s
FXWY Fox Creek 95.78 45 IAMs_20 IAMs_20 01 29 22.9
comp=Z,801nm,20.0s
SNOW Snow King Moun 95.89 45 IAMs_20 IAMs_20 01 29 02.6
comp=Z,901nm,21.0s
IMW Indian Meadow 95.95 45 IAMs_20 IAMs_20 01 28 24.3
comp=Z,868nm,22.0s
FLWY Flagg Ranch 96.19 45 IAMs_20 IAMs_20 01 28 21.6
comp=Z,1µm,22.0s
O20A White River Ci 96.19 49 IAMs_20 IAMs_20 01 31 57.9
comp=Z,827nm,19.0s
YHL Hebgen Lake 96.21 44 P P 00 53 44.5 -0.3
BW06 Boulder Array 96.38 46 IAMs_20 IAMs_20 01 31 08.8
comp=Z,978nm,20.0s
PDAR Pinedale Array 96.38 46 P P 00 53 47.2 +1.7
comp=Z,0.2nm,0.5s,baz=270,slow=1.8,SNR=6.5
PDAR PP **PP 00 57 43.8 +4.2**
comp=Z,0.9nm,0.9s,baz=258,slow=7.0,SNR=5.5
WALA Waterton Lakes 96.41 39 IAMs_20 IAMs_20 01 29 34.0
comp=Z,1µm,21.0s
EPYK Eagle Plains 96.46 18 IAMs_20 IAMs_20 01 30 40.1
comp=Z,1µm,20.0s
SMCO Snowmass 96.69 50 IAMs_20 IAMs_20 01 36 16.4
comp=Z,879nm,18.0s
BO02 Sierra Bellavi 96.80 132 P P 00 53 48.0 +0.5
BO02 IAMs_20 IAMs_20 01 27 06.5
comp=Z,808nm,21.0s
MT01 Popeta 96.99 131 P P 00 53 47.2 -1.1
RWWY Rawlins 97.53 48 IAMs_20 IAMs_20 01 31 32.4
comp=Z,1µm,20.0s
PEL Peldehue 97.78 131 IAMs_20 IAMs_20 01 36 27.1
comp=Z,1µm,19.0s
K22A Casper 98.38 47 IAMs_20 IAMs_20 01 31 46.7
comp=Z,1µm,20.0s
EGMT Eagleton 98.45 41 IAMs_20 IAMs_20 01 31 08.1
comp=Z,868nm,20.0s
INK Inuvik 98.69 18 P Pdif 00 53 58.2 +3.3
comp=Z,6.8nm,1.2s,baz=97,slow=26,SNR=4.0
INK PP **PP 00 57 59.2 +2.9**
comp=Z,1.1nm,0.9s,baz=250,slow=4.6,SNR=3.2
INK Inuvik 98.69 18 IAmb IAmb 00 54 01.7
comp=Z,15nm,1.4s
ABTX Abilene, Hawle 99.76 59 IAMs_20 IAMs_20 01 37 14.2
comp=Z,779nm,18.0s
735A Kenedy 99.93 63 IAMs_20 IAMs_20 01 37 47.0
comp=Z,1µm,18.0s
CO01 Juntas del Tor 99.93 128 IAMs_20 IAMs_20 01 28 32.1
comp=Z,1µm,22.0s
OGNE Ogallala 100.87 50 IAMs_20 IAMs_20 01 38 36.9
comp=Z,703nm,18.0s
WHTX Lake Whitney, 101.28 60 IAMs_20 IAMs_20 01 37 27.7
comp=Z,921nm,18.0s
Z35A Perchaven, San 101.89 59 IAMs_20 IAMs_20 01 37 16.6
comp=Z,708nm,18.0s
HKT Hockley 101.92 62 IAMs_20 IAMs_20 01 39 19.7
comp=Z,961nm,18.0s
C36M Paulatuk 102.05 19 IAMs_20 IAMs_20 01 32 12.1
comp=Z,1µm,22.0s
WMQ Urumqi 102.09 312 *e*P **Pdif 00 54 12.3 +1.5**
WMQ pmax pmax
comp=Z,13nm,0.7s
WMQ pmax pmax
comp=Z,44nm,4.5s
WMQ LR LR
comp=Z,200nm,22.3s
WMQ LR LR
comp=Z,300nm,27.7s
WMQ LR LR
comp=Z,790nm,29.3s
YKA Yellowknife Ar 102.09 27 P Pdif 00 54 12.6 +2.4
comp=Z,0.2nm,0.6s,baz=241,slow=4.4,SNR=2.4
YKA PP **PP 00 58 17.1 -5.1**
comp=Z,0.5nm,0.9s,baz=245,slow=6.2,SNR=4.3
YKA PKKPbc **PKKPbc 01 10 13.7 -2.3**
comp=Z,0.2nm,0.5s,baz=48,slow=2.7,SNR=5.3
237A Washetta, Mont 102.61 61 IAMs_20 IAMs_20 01 37 53.8
comp=Z,664nm,18.0s
PB10 IPOC Station P 103.05 122 IAMs_20 IAMs_20 01 34 00.3
comp=Z,723nm,20.0s
NATX Nacogdoches 103.46 61 IAMs_20 IAMs_20 01 37 57.3
comp=Z,774nm,18.0s
Z38A Mt. Pleasant 103.67 60 IAMs_20 IAMs_20 01 39 54.7
comp=Z,853nm,18.0s
K31A O'Neill 103.74 49 IAMs_20 IAMs_20 01 33 42.7
comp=Z,968nm,21.0s
X37A Clayton 103.77 58 IAMs_20 IAMs_20 01 41 44.4
comp=Z,848nm,18.0s
BGNE Belgrade 103.79 51 IAMs_20 IAMs_20 01 36 50.2
comp=Z,865nm,19.0s
N33A J Bar K, Exete 104.09 52 IAMs_20 IAMs_20 01 34 39.2
comp=Z,731nm,21.0s
SUSD Miller 104.16 48 IAMs_20 IAMs_20 01 34 51.7
comp=Z,1µm,20.0s
U38A Gravette 105.10 57 IAMs_20 IAMs_20 01 37 29.3
comp=Z,691nm,20.0s
W39A Magazine 105.20 58 IAMs_20 IAMs_20 01 39 27.2
comp=Z,755nm,19.0s
L34A Svendsen Farm, 105.23 51 IAMs_20 IAMs_20 01 38 53.2
comp=Z,861nm,19.0s
PSGCX Pisagua 105.44 119 IAMs_20 IAMs_20 01 30 01.5
comp=Z,583nm,18.0s
N35A Tabor 105.44 52 IAMs_20 IAMs_20 01 35 30.9
comp=Z,683nm,20.0s
ECSD EROS Data Cent 105.56 49 IAMs_20 IAMs_20 01 34 58.0
comp=Z,877nm,21.0s
D32A Dogwood Acres, 106.24 45 IAMs_20 IAMs_20 01 40 17.5
comp=Z,937nm,19.0s
S39A Bolivar 106.27 56 IAMs_20 IAMs_20 01 47 58.3
comp=Z,729nm,18.0s
F33A 5 Mile Ranch, 106.37 47 IAMs_20 IAMs_20 01 42 25.0
comp=Z,583nm,18.0s
143A Socs Landing, 106.37 61 IAMs_20 IAMs_20 01 40 15.5
comp=Z,678nm,19.0s
WHAR Wooly Hollow 106.40 58 IAMs_20 IAMs_20 01 39 45.9
comp=Z,722nm,19.0s
MKAR Makanchi Array 106.62 314 Pdiff Pdif 00 54 33.7 +2.9
comp=Z,0.3nm,0.6s,baz=89,slow=5.9,SNR=2.2
MKAR PP **PP 00 58 58.8 +2.3**
comp=Z,0.4nm,0.8s,baz=90,slow=7.2,SNR=1.9
MKAR PKKPbc **PKKPbc 01 10 00.8 -1.1**
comp=Z,1.5nm,0.8s,baz=292,slow=3.8,SNR=7.9
FCAR Ozark Folk Cen 106.69 58 IAMs_20 IAMs_20 01 41 53.7
comp=Z,743nm,18.0s
ZALV Zalesovo Beam 106.94 322 PP PP 00 59 01.9 +3.3
comp=Z,0.3nm,0.3s,baz=146,slow=27,SNR=1.1
N38A Joes South For 107.17 52 IAMs_20 IAMs_20 01 39 05.9
comp=Z,739nm,20.0s
R40A Maddies Statio 107.23 55 IAMs_20 IAMs_20 01 39 56.8
comp=Z,594nm,19.0s
SCIA State Center 107.48 51 IAMs_20 IAMs_20 01 40 24.9
comp=Z,644nm,19.0s
I37A Lemond, Waseca 107.88 49 IAMs_20 IAMs_20 01 36 17.8
comp=Z,686nm,20.0s
CCM Cathedral Cave 107.95 56 IAMs_20 IAMs_20 01 39 07.8
comp=Z,681nm,19.0s
K38A Parkersburg 107.98 51 IAMs_20 IAMs_20 01 38 15.2
comp=Z,1µm,20.0s
LPAR Lepanto 108.05 58 IAMs_20 IAMs_20 01 41 53.6
comp=Z,577nm,18.0s
MET Memphis--Engin 108.21 59 IAMs_20 IAMs_20 01 44 17.0
comp=Z,659nm,18.0s
F36A Milaca 108.24 47 IAMs_20 IAMs_20 01 41 41.7
comp=Z,603nm,19.0s
PBMO Poplar Bluff 108.25 57 IAMs_20 IAMs_20 01 40 55.8
comp=Z,579nm,19.0s
OXF Oxford 108.47 60 IAMs_20 IAMs_20 01 41 47.8
comp=Z,751nm,18.0s
SPMN Marine on St. 108.58 48 IAMs_20 IAMs_20 01 39 13.8
comp=Z,931nm,20.0s
PVMO Portageville 108.72 58 IAMs_20 IAMs_20 01 43 21.5
comp=Z,612nm,18.0s
LPAZ La Paz 108.77 117 PP PP 00 59 12.0 -1.0
comp=Z,1.3nm,0.8s,baz=265,slow=6.5,SNR=4.1
PENMO Penman 108.79 58 IAMs_20 IAMs_20 01 44 58.2
comp=Z,617nm,18.0s
LNXT Lenox 108.81 58 IAMs_20 IAMs_20 01 38 32.7
comp=Z,557nm,19.0s
SLM Saint Louis 108.86 55 IAMs_20 IAMs_20 01 45 42.9
comp=Z,816nm,20.0s

N41A	Harden Midland	108.90	53	IAMs_20	IAMs_20	01 40 39.7			
	comp=Z,642nm,20.0s								
L40A	Anamosa	108.96	52	IAMs_20	IAMs_20	01 39 23.0			
	comp=Z,954nm,20.0s								
HENM	Henderson Moun	108.98	57	IAMs_20	IAMs_20	01 44 57.1			
	comp=Z,674nm,19.0s								
GLAT	Glass	109.01	58	IAMs_20	IAMs_20	01 42 56.0			
	comp=Z,623nm,18.0s								
HICK	Hickman	109.12	58	IAMs_20	IAMs_20	01 45 01.0			
	comp=Z,617nm,18.0s								
Z47A	Carrollton	109.20	61	IAMs_20	IAMs_20	01 41 30.5			
	comp=Z,666nm,20.0s								
NRIK	Noril'sk	109.38	338	PP	PP	00 59 14.9	-1.0		
	comp=Z,1.0nm,0.5s,baz=81,slow=4.8,SNR=4.7								
S44A	Carbondale	109.39	56	IAMs_20	IAMs_20	01 39 44.4			
	comp=Z,622nm,20.0s								
SIUC	Southern Illin	109.42	56	IAMs_20	IAMs_20	01 39 44.2			
	comp=Z,619nm,20.0s								
P43A	Skaggs, Pawnee	109.64	54	IAMs_20	IAMs_20	01 37 55.5			
	comp=Z,689nm,21.0s								
T45A	Paducah	109.70	57	IAMs_20	IAMs_20	01 50 40.1			
	comp=Z,548nm,18.0s								
E38A	The Farm, Brul	109.74	47	IAMs_20	IAMs_20	01 42 19.4			
	comp=Z,736nm,19.0s								
I40A	Norwalk	109.80	50	IAMs_20	IAMs_20	01 38 26.3			
	comp=Z,642nm,20.0s								
JFWS	Jewell Farm	109.85	51	IAMs_20	IAMs_20	01 37 49.7			
	comp=Z,842nm,20.0s								
Q44A	Meyer Farm, Va	109.85	55	IAMs_20	IAMs_20	01 37 23.1			
	comp=Z,672nm,21.0s								
KURK	Kurchatov	109.90	318	IAMs_20	IAMs_20	01 42 25.5			
	comp=Z,1µm,22.0s								
HDIL	Hopedale	110.02	53	IAMs_20	IAMs_20	01 41 36.4			
	comp=Z,764nm,20.0s								
EYMN	Ely	110.06	45	IAMs_20	IAMs_20	01 39 44.7			
	comp=Z,807nm,20.0s								
L42A	Oliver, Polo	110.07	52	IAMs_20	IAMs_20	01 40 07.6			
	comp=Z,772nm,20.0s								
X48A	Hartselle	110.34	60	IAMs_20	IAMs_20	01 42 55.5			
	comp=Z,740nm,18.0s								
250A	Grady	110.37	63	IAMs_20	IAMs_20	01 29 31.4			
	comp=Z,916nm,18.0s								
G40A	Rib Lake	110.39	48	IAMs_20	IAMs_20	01 40 28.6			
	comp=Z,877nm,19.0s								
OLIL	Olney	110.51	56	IAMs_20	IAMs_20	01 44 58.6			
	comp=Z,544nm,18.0s								
O44A	Mansfield	110.55	54	IAMs_20	IAMs_20	01 42 08.4			
	comp=Z,769nm,19.0s								
Y49A	Blount Mountai	110.71	61	IAMs_20	IAMs_20	01 43 21.3			
	comp=Z,900nm,18.0s								
T47A	Sharon Grove	110.89	58	IAMs_20	IAMs_20	01 47 23.7			
	comp=Z,563nm,18.0s								
FRU1	Bishkek	110.99	309	IAMs_20	IAMs_20	01 44 21.2			
	comp=Z,742nm,22.0s								
I42A	Draeger Farm,	111.01	50	IAMs_20	IAMs_20	01 39 03.8			
	comp=Z,853nm,20.0s								
M44A	Midewin, Midew	111.13	53	IAMs_20	IAMs_20	01 40 38.6			
	comp=Z,782nm,20.0s								
K43A	Burlington	111.19	51	IAMs_20	IAMs_20	01 42 20.0			
	comp=Z,861nm,19.0s								
COWI	Conover	111.28	48	IAMs_20	IAMs_20	01 42 07.2			
	comp=Z,718nm,19.0s								
352A	Blakely	111.35	64	IAMs_20	IAMs_20	01 36 52.6			
	comp=Z,704nm,20.0s								
P46A	Rosedale	111.38	55	IAMs_20	IAMs_20	01 42 11.5			
	comp=Z,916nm,20.0s								
L44A	Lake County Fo	111.39	52	IAMs_20	IAMs_20	01 42 48.3			
	comp=Z,822nm,19.0s								
FPAL	Fort Paine	111.51	60	IAMs_20	IAMs_20	01 44 49.6			
	comp=Z,633nm,18.0s								
SFIN	Lafayette	111.62	54	IAMs_20	IAMs_20	01 40 15.8			
	comp=Z,723nm,21.0s								
WCI	Wyandotte Cave	111.79	56	IAMs_20	IAMs_20	01 43 04.4			
	comp=Z,670nm,20.0s								
BLO	Bloomington	111.81	55	IAMs_20	IAMs_20	01 40 15.9			
	comp=Z,612nm,19.0s								
D41A	Chassel	111.84	47	IAMs_20	IAMs_20	01 43 34.0			
	comp=Z,865nm,19.0s								
ARSB	Arslanbob	111.89	307	IAMs_20	IAMs_20	01 51 56.6			
	comp=Z,666nm,21.0s								
W50A	Signal Mountai	111.90	60	IAMs_20	IAMs_20	01 42 27.8			
	comp=Z,551nm,19.0s								
H43A	Windswept, Lux	111.93	50	IAMs_20	IAMs_20	01 39 27.4			
	comp=Z,692nm,20.0s								
X51A	Calhoun	112.13	61	IAMs_20	IAMs_20	01 43 44.8			
	comp=Z,676nm,19.0s								
L46A	Eue Claire	112.53	52	IAMs_20	IAMs_20	01 43 34.8			
	comp=Z,899nm,19.0s								
Y52A	Lilburn	112.61	61	IAMs_20	IAMs_20	01 44 22.8			
	comp=Z,650nm,18.0s								
R49A	Shelbyville	112.66	57	IAMs_20	IAMs_20	01 41 53.6			
	comp=Z,747nm,21.0s								
P48A	Milroy	112.70	55	IAMs_20	IAMs_20	01 42 51.4			
	comp=Z,690nm,19.0s								
J45A	Montague	112.72	51	IAMs_20	IAMs_20	01 39 25.6			
	comp=Z,963nm,22.0s								
E43A	Lone Tree Farm	112.79	48	IAMs_20	IAMs_20	01 43 40.2			
	comp=Z,813nm,19.0s								
V51A	Loudon	112.80	59	IAMs_20	IAMs_20	01 44 57.5			
	comp=Z,528nm,18.0s								
W52A	Murphy	112.99	60	IAMs_20	IAMs_20	01 43 21.5			
	comp=Z,586nm,20.0s								
R50A	Paris	113.31	57	IAMs_20	IAMs_20	01 42 52.8			
	comp=Z,685nm,19.0s								
G45A	Suttons Bay	113.51	49	IAMs_20	IAMs_20	01 41 40.2			
	comp=Z,731nm,20.0s								
E44A	Grand Marais A	113.56	48	IAMs_20	IAMs_20	01 40 10.6			
	comp=Z,921nm,22.0s								
M48A	Edgerton	113.60	53	IAMs_20	IAMs_20	01 46 52.1			
	comp=Z,727nm,18.0s								
S51A	Beattyville	113.76	58	IAMs_20	IAMs_20	01 42 23.5			
	comp=Z,614nm,20.0s								
J47A	Sunmer	113.82	51	IAMs_20	IAMs_20	01 40 21.6			
	comp=Z,925nm,21.0s								
HODGE	Hodges	114.16	61	IAMs_20	IAMs_20	01 44 42.6			
	comp=Z,882nm,18.0s								
GLMI	Grayling	114.20	50	IAMs_20	IAMs_20	01 41 32.7			
	comp=Z,694nm,20.0s								
P51A	Williamsport	114.50	56	IAMs_20	IAMs_20	01 42 26.2			
	comp=Z,625nm,20.0s								
AAM	Ann Arbor	114.52	52	IAMs_20	IAMs_20	01 44 33.2			
	comp=Z,870nm,19.0s								
J48A	Bridge Port	114.57	51	IAMs_20	IAMs_20	01 40 33.7			
	comp=Z,880nm,21.0s								
PAULI	Pauline	114.63	61	IAMs_20	IAMs_20	01 44 13.1			
	comp=Z,813nm,20.0s								
E46A	Sault Ste Mari	114.64	48	IAMs_20	IAMs_20	01 40 54.9			
	comp=Z,832nm,20.0s								
ACSO	Alum Creek Sta	114.69	55	IAMs_20	IAMs_20	01 44 10.0			
	comp=Z,752nm,19.0s								
U54A	Nelsons Funny	114.95	59	IAMs_20	IAMs_20	01 45 56.3			
	comp=Z,782nm,18.0s								
KMSC	Kings Mountain	115.08	61	IAMs_20	IAMs_20	01 45 46.0			
	comp=Z,547nm,18.0s								
H48A	Harrisville	115.10	50	IAMs_20	IAMs_20	01 43 31.4			
	comp=Z,636nm,19.0s								
R53A	Hurricane	115.16	57	IAMs_20	IAMs_20	01 44 52.8			
	comp=Z,772nm,18.0s								
N51A	Ashland	115.25	54	IAMs_20	IAMs_20	01 43 19.9			
	comp=Z,820nm,19.0s								
V55A	Taylorsville	115.31	60	IAMs_20	IAMs_20	01 45 00.9			
	comp=Z,767nm,19.0s								
BRVK	Borovoye	115.34	319	IAMs_20	IAMs_20	01 47 56.2			
	comp=Z,713nm,20.0s								
K50A	Casco	115.34	52	IAMs_20	IAMs_20	01 40 04.0			
	comp=Z,832nm,21.0s								
O52A	Adamsville	115.54	55	IAMs_20	IAMs_20	01 44 55.5			
	comp=Z,747nm,20.0s								
BIRD	Birdtown, Kers	115.69	61	IAMs_20	IAMs_20	01 47 20.3			
	comp=Z,745nm,18.0s								
P53A	Whipple	115.78	56	IAMs_20	IAMs_20	01 41 39.0			
	comp=Z,702nm,21.0s								
M52A	Chesterland	116.10	54	IAMs_20	IAMs_20	01 46 58.4			
	comp=Z,856nm,18.0s								
Q54A	Coxs Mills	116.13	56	IAMs_20	IAMs_20	01 51 57.4			
	comp=Z,622nm,19.0s								
W57A	Gilead	116.16	61	IAMs_20	IAMs_20	01 46 36.7			
	comp=Z,744nm,19.0s								
BLA	Blacksburg	116.17	58	IAMs_20	IAMs_20	01 46 52.7			
	comp=Z,528nm,18.0s								
N53A	Lisbon	116.39	54	IAMs_20	IAMs_20	01 44 15.1			
	comp=Z,780nm,19.0s								
R55A	Marlinton	116.58	57	IAMs_20	IAMs_20	01 45 55.3			
	comp=Z,754nm,18.0s								
O54A	Avella	116.65	55	IAMs_20	IAMs_20	01 45 01.1			
	comp=Z,885nm,20.0s								
V58A	Windy Hill, Pi	116.98	60	IAMs_20	IAMs_20	01 46 37.2			
	comp=Z,656nm,18.0s								

ALLY	Alegheny Colle	117.02	54	IAMs_20	IAMs_20	01 46 33.6			
	comp=Z,830nm,19.0s								
N54A	Moraine State	117.05	54	IAMs_20	IAMs_20	01 53 55.5			
	comp=Z,797nm,18.0s								
T57A	Hurt	117.06	59	IAMs_20	IAMs_20	01 47 12.2			
	comp=Z,743nm,19.0s								
ERPA	Erie	117.19	53	IAMs_20	IAMs_20	01 49 11.1			
	comp=Z,578nm,18.0s								
M54A	Oil Creek Stat	117.36	54	IAMs_20	IAMs_20	01 47 37.6			
	comp=Z,763nm,18.0s								
Q56A	Snyder Ridge,	117.41	57	IAMs_20	IAMs_20	01 42 23.2			
	comp=Z,605nm,21.0s								
S57A	Dark Hollow, R	117.41	58	IAMs_20	IAMs_20	01 44 28.4			
	comp=Z,673nm,20.0s								
M55A	Ridgway	118.03	54	IAMs_20	IAMs_20	01 53 54.3			
	comp=Z,795nm,18.0s								
O56A	Blue Knob Stat	118.04	55	IAMs_20	IAMs_20	01 46 39.8			
	comp=Z,598nm,20.0s								
SADO	Sadowa	118.07	50	IAMs_20	IAMs_20	01 44 14.1			
	comp=Z,658nm,20.0s								
S58A	Poland Farm, P	118.10	58	IAMs_20	IAMs_20	01 44 49.6			
	comp=Z,663nm,19.0s								
U59A	Littleton	118.12	60	IAMs_20	IAMs_20	01 47 21.5			
	comp=Z,722nm,19.0s								
WVNY	West Valley, N	118.24	53	IAMs_20	IAMs_20	01 51 05.9			
	comp=Z,772nm,18.0s								
R58B	Mineral	118.28	58	IAMs_20	IAMs_20	01 45 02.4			
	comp=Z,703nm,20.0s								
P57A	Homestead Farm	118.37	56	IAMs_20	IAMs_20	01 45 32.6			
	comp=Z,795nm,20.0s								
T59A	Double "B" Far	118.40	59	IAMs_20	IAMs_20	01 48 27.8			
	comp=Z,554nm,19.0s								
M56A	Emporium	118.46	54	IAMs_20	IAMs_20	01 47 01.9			
	comp=Z,779nm,19.0s								
SSPA	Standing Stone	118.59	55	IAMs_20	IAMs_20	01 45 14.2			
	comp=Z,855nm,20.0s								
CBN	Corbin Frederi	118.71	58	IAMs_20	IAMs_20	01 43 32.7			
	comp=Z,691nm,21.0s								
MMNY	Mt. Morris Dam	118.79	53	IAMs_20	IAMs_20	01 43 18.3			
	comp=Z,982nm,21.0s								
L56A	Greenwood	118.99	53	IAMs_20	IAMs_20	01 51 37.7			
	comp=Z,753nm,19.0s								
T60A	Surry	119.07	59	IAMs_20	IAMs_20	01 50 51.5			
	comp=Z,678nm,19.0s								
HRA	Hart	119.07	298	IAMs_20	IAMs_20	01 57 12.6			
	comp=Z,502nm,20.0s								
DELO	Deloro Mine	119.14	51	IAMs_20	IAMs_20	01 45 05.3			
	comp=Z,653nm,20.0s								
M57A	Sunshine Farm,	119.24	54	IAMs_20	IAMs_20	01 46 09.4			
	comp=Z,541nm,20.0s								
PAGS	Pennsylvania G	119.44	56	IAMs_20	IAMs_20	01 49 32.8			
	comp=Z,732nm,18.0s								
N58A	Sunbury	119.50	55	IAMs_20	IAMs_20	01 47 38.4			
	comp=Z,508nm,20.0s								
SPB	San Paulo	119.52	137	IAMs_20	IAMs_20	01 46 18.0			
	comp=Z,674nm,19.0s								
PECO	Prince Edward	119.54	51	IAMs_20	IAMs_20	01 44 29.2			
	comp=Z,892nm,20.0s								
PLVO	Plevna	119.55	50	IAMs_20	IAMs_20	01 43 54.3			
	comp=Z,903nm,22.0s								
J56A	Wolcott	119.60	52	IAMs_20	IAMs_20	01 44 00.7			
	comp=Z,830nm,21.0s								
MVL	Millersville	119.70	56	IAMs_20	IAMs_20	01 47 14.7			
	comp=Z,797nm,20.0s								
Q60A	Greensboro	119.99	57	IAMs_20	IAMs_20	01 46 25.6			
	comp=Z,765nm,19.0s								
N59A	State Game Lan	120.22	55	IAMs_20	IAMs_20	01 48 09.5			
	comp=Z,638nm,19.0s								
P60A	Greenville	120.23	56	IAMs_20	IAMs_20	01 48 08.8			
	comp=Z,786nm,19.0s								
J57A	Williamstown	120.23	52	IAMs_20	IAMs_20	01 45 20.5			
	comp=Z,858nm,20.0s								
KSPA	Keystone Colle	120.28	54	IAMs_20	IAMs_20	01 44 37.8			
	comp=Z,605nm,21.0s								
BOSA	Boshof	120.29	213	PKP	PKPdf	00 59 07.6	-0.6		
	comp=Z,1.9nm,0.9s,baz=146,slow=7.3,SNR=1.6								
PSUB	Penn St. - Bra	120.38	56	IAMs_20	IAMs_20	01 48 20.8			
	comp=Z,826nm,19.0s								
K58A	Earlville	120.45	53	IAMs_20	IAMs_20	01 47 37.3			
	comp=Z,810nm,19.0s								
P61A	Hammonton	120.86	56	IAMs_20	IAMs_20	01 48 36.6			
	comp=Z,813nm,19.0s								
ODNJ	Ogdensburg	121.11	55	IAMs_20	IAMs_20	01 46 32.1			
	comp=Z,617nm,20.0s								
BRNJ	Basking Ridge	121.12	55	IAMs_20	IAMs_20	01 53 00.2			
	comp=Z,541nm,19.0s								
SOCY	Socotra	121.22	271	IAMs_20	IAMs_20	02 00 09.1			
	comp=Z,641nm,18.0s								
LONY	Lake Ozonia	121.31	51	IAMs_20	IAMs_20	01 44 57.8			
	comp=Z,866nm,21.0s								
NCB	Newmb	121.55	51	IAMs_20	IAMs_20	01 49 00.1			
	comp=Z,500nm,20.0s								
PAL	Palisades	121.64	55	IAMs_20	IAMs_20	01 46 57.9			
	comp=Z,739nm,20.0s								
TRY	Troy	121.90	53	IAMs_20	IAMs_20	01 45 32.8			
	comp=Z,900nm,21.0s								
ACCN	Adirondack Com	121.93	52	IAMs_20	IAMs_20	01 45 37.3			
	comp=Z,746nm,20.0s								
KSCT	Kent School, K	121.99	54	IAMs_20	IAMs_20	01 49 55.3			
	comp=Z,781nm,19.0s								
WSPT	Westport, CT	122.08	55	IAMs_20	IAMs_20	01 47 46.2			
	comp=Z,884nm,20.0s								
VT1	Waterbury	122.61	51	IAMs_20	IAMs_20	01 45 14.8			
	comp=Z,882nm,21.0s								
GEYT	Alibeck	122.80	301	PKP	PKiKP	00 59 13.6	+0.9		
	comp=Z,0.8nm,0.6s,baz=116,slow=6.7,SNR=1.7								
HNH	Hanover	122.94	52	IAMs_20	IAMs_20	01 51 04.1			
	comp=Z,630nm,20.0s								
KBS	Kingsbay	123.00	356	IAMs_20	IAMs_20	01 50 41.5			
	comp=Z,565nm,20.0s								
LBNH	Lisbon	123.20	51	IAMs_20	IAMs_20	01 45 22.0			
	comp=Z,949nm,22.0s								
I62A	Tamworth	123.63	52	IAMs_20	IAMs_20	01 46 11.3			
	comp=Z,783nm,21.0s								
I63A	Otisfield	124.17	51	IAMs_20	IAMs_20	01 45 39.7			
	comp=Z,947nm,22.0s								
BDFB	Brasilia	124.68	130	PKP	PKPdf	00 59 16.0	-0.9		
	comp=Z,0.8nm,0.3s,baz=130,slow=7.9,SNR=2.0								
SCHQ	Schefferville	125.51	38	IAMs_20	IAMs_20	01 59 50.6			
	comp=Z,732nm,19.0s								
SUMG	Summit	127.05	11	IAMs_20	IAMs_20	01 49 32.3			
	comp=Z,768nm,21.0s								
ARCES	ARCESS Array B	129.23	346	PKP	PKPdf	00 59 22.9	-0.9		
	comp=Z,1.4nm,0.6s,baz=29,slow=2.8,SNR=9.7								
DAMY	Dhamar	130.83	270	IAMs_20	IAMs_20	01 51 11.9			
	comp=Z,465nm,21.0s								
KMBO	Kilima Mbogo	130.85	247	IAMs_20	IAMs_20	01 54 39.5			
	comp=Z,540nm,18.0s								
ATD	Arta Tunnel	131.29	266	IAMs_20	IAMs_20	01 51 45.2			
	comp=Z,455nm,20.0s								
RAYN	Ar Rayn	131.92	282	IAMs_20	IAMs_20	02 04 24.6			
	comp=Z,411nm,18.0s								
KIV	Kislovodsk	134.14	310	IAMs_20	IAMs_20	02 03 58.7			
	comp=Z,692nm,21.0s								
FURI	Furi	134.15	260	IAMs_20	IAMs_20	01 54 23.2			
	comp=Z,608nm,20.0s								
FINES	FINESS Array B	135.05	338	PKP	PKPdf	00 59 33.0	-2.0		
	comp=Z,0.9nm,0.7s,baz=186,slow=1.9,SNR=3.5								
FINES				SKPbc	SKPbc	01 03 02.8	-1.9		
	comp=Z,3.2nm,0.9s,baz=74,slow=6.8,SNR=5.2								
NB2	NORSAR Subarra	139.60	346	PKPdf	PKPdf	00 59 34.1	-9.4		
	comp=Z,1.1nm,0.9s,baz=31,slow=1.9								
NOA	NORSAR Array B	139.60	346	PKP	PKPdf	00 59 42.6	-0.9		
	comp=Z,0.4nm,0.6s,baz=37,slow=2.2,SNR=1.6								
DIKM	Dikmen	139.98	308	⇓P	PKiKP	01 00 02.9	+16		
AKASG	Malin Array Be	140.30	324	PKP	PKPdf	00 59 43.4	-1.6		
	comp=Z,0.2nm,0.3s,baz=48,slow=1.4,SNR=1.8								
AKBB	Malin Array Si	140.30	324	IAMs_20	IAMs_20	02 04 11.6			
	comp=Z,701nm,22.0s								
ILGA	Ilgaz	141.26	308	IAMs_20	IAMs_20	02 10 57.4			
	comp=Z,534nm,21.0s								
BRTR	Keskin Array B	141.66	306	PKP	PKPdf	00 59 45.7	-2.3		
	comp=Z,0.3nm,0.5s,baz=68,slow=1.2,SNR=2.5								
CSS	Mathiatis	142.82	298	IAMs_20	IAMs_20	02 05 27.3			
	comp=Z,537nm,22.0s								
TESR	Tescani	143.90	319	⇓P	PKPab	00 59 48.9	+0.2		
HARR	Harsova	143.95	316	⇓P	PKPbc	00 59 50.2	+0.6		
BIZ	Bicaz	144.01	320	⇓P	PKPbc	00 59 49.9	+0.2		
BURAR	Bucovina Array	144.16	322	⇑P	PKPbc	00 59 50.7	+0.5		
BURAR	Bucovina Array	144.16	322		PKPab	00 59 50.0	+0.1		
VRI	Vrincioaia	144.17	318	⇑P	PKPab	00 59 48.9	-0.9		
PLOR	Plostina	144.22	319	⇑P	PKPab	00 59 50.4	+0.4		
MLR	Muntele Rosu	144.83	318	⇓P	PKPab	00 59 52.0	-0.4		
MLR	Muntele Rosu	144.83	318		PKPab	00 59 51.3	-1.1		
DOPR	Dopca	144.93	319	⇑P	PKPab	00 59 52.3	-0.3		
ARCR	ARCALIA	144.94	322	⇓P	PKPbc	00 59 53.2	+0.6		
SECR		144.97	318	⇑P	PKPbc	00 59 53.1	+0.4		
MCD	Coleburn Disti	145.00	356	*eP*	PKPab	00 59 50.8	-1.6		

KOLS	Kolonicke sedl	145.00	326	*e*PKP	PKPbc	00 59 52.6	-0.2		
BMR	Baia Mare	145.10	323	⇓P	PKPbc	00 59 53.3	+0.2		
ELL	Elmali	145.22	302		PKPdf	00 59 55.2	+0.9		
KPL	Plockton	145.33	359	*e*P	PKPbc	00 59 52.5	-1.0		
TRPA	Tarpa	145.35	324	⇓P	PKPbc	00 59 53.6	-0.2		
OJC	Ojcow	145.40	329	*e*PKP	PKPbc	00 59 53.2	-0.8		
OJC				LMZ	LR	02 02 19.8			
	comp=Z,1.2nm,23.9s								
OJC	Ojcow	145.40	329		PKPbc	00 59 53.1	-0.9		
VOIR		145.40	319	⇑P	PKPab	00 59 55.2	+0.8		
DRUM	Mains of Drumt	145.62	356	*e*P	PKPdf	00 59 53.0	-1.1		
ARR	Arges	145.69	319	⇑P	PKPdf	00 59 54.9	+0.1		
HUMR	Humele	145.90	317	⇓P	PKPdf	00 59 54.7	-0.4		
ELND	Elena	146.06	314	⇑P	PKPbc	00 59 56.4	+0.1		
INVG	Invergeldie, C	146.19	357	*e*P	PKPdf	00 59 55.0	-0.1		
LAWE	Loch Awe, Argy	146.41	358	*e*P	PKPdf	00 59 55.8	+0.3		
OKC	Ostrava-Krasne	146.43	330	AMS	AMS	02 03 10.0			
	comp=Z,800nm,18.7s								
EAB	Aberfoyle	146.44	357	*e*P	PKPdf	00 59 55.7	0.0		
KSP	Ksiaz	146.51	333	*e*PKP	PKPdf	00 59 56.8	+0.9		
KSP				LMZ	LR	02 03 17.7			
	comp=Z,1.4nm,22.8s								
ESY	Stoneypath	146.61	356	*e*P	PKPdf	00 59 56.0	+0.1		
MORC	Moravsky Berou	146.75	331	*e*P	PKPdf	00 59 57.2	+0.8		
MORC	Moravsky Berou	146.75	331	⇓P	PKPbc	00 59 58.0	-0.1		
OSTC	Ostas	146.76	333	*e*PKP	PKPdf	00 59 57.6	+1.2		
OSTC				AMS	AMS	02 03 10.0			
	comp=Z,1µm,21.7s								
EBL	Broad Law	146.79	356	*e*P	PKPdf	00 59 56.9	+0.6		
GZR	Gura Zlata	146.79	320	⇑P	PKPbc	00 59 58.0	-0.4		
CHVC	Chvalec	146.81	333	*e*PKP	PKPdf	00 59 56.1	-0.4		
CHVC				*ex*	x	01 00 02.2			
CHVC				AMS	AMS	02 03 20.0			
	comp=Z,1µm,21.2s								
DPC	Dobruska-Polom	146.87	332	*e*PKP	PKPdf	00 59 57.7	+1.1		
DPC				*ex*	x	01 00 06.0			
DPC				AMS	AMS	02 01 30.0			
	comp=Z,1µm,27.1s								
KRLC	Kraliky	146.87	332	*e*PKP	PKPdf	00 59 50.4	-6.2		
KRLC				*ex*	x	00 59 52.9			
KRLC				AMS	AMS	02 05 20.0			
	comp=Z,1µm,20.7s								
PSZ	Piszkesteto	146.87	326	⇓P	PKPdf	00 59 58.0	+1.2		
UPC	Upice	146.88	333	*e*PKP	PKPdf	00 59 57.6	+1.0		
UPC				*ex*	x	01 00 04.9			
UPC				AMS	AMS	02 03 00.0			
	comp=Z,1µm,22.5s								
VYHS	Vyhne	147.03	328	*e*PKP	PKPdf	00 59 57.7	+0.8		
ESK	Eskdalemuir	147.25	356	*e*P	PKPdf	00 59 57.7	+0.7		
ESK	Eskdalemuir	147.25	356		PKPdf	00 59 58.5	+1.5		
HERR	Herculane	147.28	320	⇓P	PKPdf	00 59 57.9	+0.5		
BZS	Buzias	147.34	321	⇑P	PKPdf	00 59 58.5	+1.0		
JAV	Velka Javorina	147.34	329	*e*P	PKPbc	01 00 00.2	+0.3

DAVA	**Damuels**	**151.91**	**335**	*e*PKiKP	**PKPbc**	**01 00 11.1**	**-0.3**	
	comp=Z,7.0nm,0.8s							
NRCA	**Norcia**	**153.82**	**325**	IAMs_20	IAMs_20	02 17 37.4		
	comp=Z,591nm,21.0s							
PAOL	**Paolisi**	**154.20**	**320**	IAMs_20	IAMs_20	02 25 43.1		
	comp=Z,652nm,22.0s							
OSSC	**Osservatorio P**	**154.28**	**328**	IAMs_20	IAMs_20	02 08 56.8		
	comp=Z,604nm,21.0s							
CEL	**Celeste**	**154.96**	**314**	IAMs_20	IAMs_20	02 16 09.4		
	comp=Z,537nm,20.0s							
SSB	**Saint Sauveur**	**155.53**	**340**	IAMs_20	IAMs_20	02 18 54.6		
	comp=Z,558nm,20.0s							
WDD	**Wied Dalam**	**157.14**	**310**	IAMs_20	IAMs_20	02 19 45.6		
	comp=Z,582nm,20.0s							
ESDC	**Sonseca Array**	**162.83**	**352**	PKPab	**PKPab**	**01 01 07.8**	**+0.3**	
	comp=Z,1.5nm,1.0s,baz=354,slow=4.8,SNR=5.1							
DBIC	**Dimbokro**	**163.98**	**188**	PKPab	**PKPab**	**01 01 12.7**	**-0.4**	
	comp=Z,8.9nm,1.0s,baz=152,slow=9.1,SNR=4.5							
DBIC				PP	**PP**	**01 04 57.3**	**+0.2**	
	comp=Z,6.1nm,1.0s,baz=177,slow=5.4,SNR=4.4							
DBIC	**Dimbokro**	**163.98**	**188**		**PKPab**	**01 01 13.2**	**+0.1**	
MESJ	**Messejana**	**164.82**	**4**	*e*PKPdf	**PKPdf**	**01 00 19.7**	**-0.8**	
MESJ				AMS	AMS	02 10 06.6		
	comp=Z,689nm,14.0s							
TORD	**Torodi Ar. Bea**	**167.44**	**223**	PKP	**PKPdf**	**01 00 22.4**	**-0.8**	
	comp=Z,1.2nm,1.0s,baz=42,slow=0.6,SNR=5.5							
TORD				PKPab	**PKPab**	**01 01 28.1**	**-0.4**	
	comp=Z,5.0nm,0.9s,baz=113,slow=4.4,SNR=13							
TORD				PP	**PP**	**01 05 14.5**	**-1.6**	
	comp=Z,2.5nm,1.0s,baz=124,slow=2.8,SNR=4.2							
TORD	**Torodi Ar. Bea**	**167.44**	**223**	PKPab	**PKPab**	**01 01 27.3**	**-1.2**	

NEIC ***16*** *00:48:56.1±2.1,59.°74N±0.°03×141.°47W±0.°07,h3km±7km, Error ellipse: s-maj=6.1km s-min=3.9km az=47.0*
PGC ***16*** *00:48:57.8±1.4,59.°80N×141.°46W,h1km,ML3.4/12,ML3.3, 124km Wnw of Yakutat, Ak Southeastern Alaska*
AEIC ***16*** *00:48:59±2.7,59.°85N±0.°04×141.°39W±0.°06,h16km±6km, ML3.2,ML3.4(OTT),Mwr3.7/30(SLM), Error ellipse: s-maj=7.3km s-min=1.4km az=216.0,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}3.74; $M_{\theta\theta}$-3.61; $M_{\phi\phi}$-0.14; $M_{r\theta}$-0.06; $M_{\theta\phi}$-0.73; $M_{\phi r}$0.22;*

ISC 16 00:48:57.1±1.3,59.79N±0.04×141.47W±0.03,h8km±10km, n121,σ1§20/146,Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHX	**Chaix Hills**	**0.33**	**33**		**Pg**	**00 49 03.0**	**-0.6**
YAH	**Yahtse**	**0.59**	**347**	Pg	**Pg**	**00 49 09.8**	**+1.1**
YAH				Sg	**Sb**	**00 49 19.5**	**+0.9**
YKU2	**Yakutat**	**0.95**	**106**		**Pg**	**00 49 14.4**	**-1.0**
PNL	**Peninsula**	**1.06**	**96**	P	**Pg**	**00 49 17.6**	**+0.2**
PNL				S	**Sb**	**00 49 32.3**	**+0.7**
PNL	**Peninsula**	**1.06**	**96**		**Pg**	**00 49 17.6**	**+0.2**
PNL					**Sn**	**00 49 32.8**	**-0.4**
CTGM	**Chitina Glacie**	**1.18**	**3**	P	**Pb**	**00 49 18.5**	**-1.4**
CTGM				S	**Sb**	**00 49 33.9**	**-1.6**
CTGM	**Chitina Glacie**	**1.18**	**3**	Pn	**Pb**	**00 49 18.5**	**-1.4**
CTGM	**Chitina Glacie**	**1.18**	**3**		**Sb**	**00 49 34.7**	**-0.8**
KIAG	**Kiagna River**	**1.22**	**339**	P	**Pb**	**00 49 19.7**	**-0.9**
KIAG				S	**Sb**	**00 49 35.7**	**-0.9**
KIAG	**Kiagna River**	**1.22**	**339**		**Pb**	**00 49 19.7**	**-0.9**
KIAG					**Sb**	**00 49 36.1**	**-0.5**
BARN	**Barnard Glacie**	**1.28**	**356**		**Pn**	**00 49 20.0**	**-1.5**
BALM	**Baldy**	**1.33**	**341**	P	**Pn**	**00 49 21.2**	**-0.9**
BALM				S	**Sb**	**00 49 39.1**	**-0.4**
BALM	**Baldy**	**1.33**	**341**	Pn	**Pn**	**00 49 21.3**	**-0.7**
BALM	**Baldy**	**1.33**	**341**		**Sg**	**00 49 41.4**	**+1.7**
PTPK	**Patty Peak**	**1.49**	**341**	Pn	**Pn**	**00 49 23.9**	**-0.5**
PTPK				Sn	**Sg**	**00 49 45.3**	**+0.3**
PTPK	**Patty Peak**	**1.49**	**341**		**Pn**	**00 49 23.8**	**-0.6**
RAGM	**Ragged Mountai**	**1.71**	**292**		**Pb**	**00 49 29.1**	**+0.2**
VRDI	**Verde Repeater**	**1.75**	**327**		**Pn**	**00 49 28.2**	**+0.3**
VRDI					**Sb**	**00 49 51.5**	**-0.2**
MCARA	**McCarthy VSAT**	**1.77**	**335**	Pn	**Pn**	**00 49 28.1**	**0.0**
DHAK	**Deception Hill**	**1.81**	**111**		**Pn**	**00 49 29.4**	**+0.8**
DHAK					**Sn**	**00 49 52.3**	**+0.7**
GOAT	**Goat Mountain**	**1.81**	**297**		**Pn**	**00 49 30.1**	**+1.4**
YUK7	**Dusty Glacier**	**1.82**	**64**	Pn	**Pn**	**00 49 30.0**	**+1.0**
YUK7				Sn	**Sn**	**00 49 52.9**	**+0.5**
YUK7	**Dusty Glacier**	**1.82**	**64**		**Pn**	**00 49 30.0**	**+1.0**
YUK7					**Sn**	**00 49 53.2**	**+0.8**
YUK6	**Outpost Mounta**	**1.93**	**52**	Pn	**Pn**	**00 49 31.6**	**+1.1**
YUK6				Sn	**Sn**	**00 49 55.9**	**+0.8**
YUK6	**Outpost Mounta**	**1.93**	**52**		**Pn**	**00 49 31.6**	**+1.1**
GLB	**Gilahina Butte**	**2.02**	**326**		**Pn**	**00 49 31.9**	**+0.4**
GLB					**Sb**	**00 49 59.2**	**-0.2**
YUK2	**White River**	**2.03**	**8**	Pn	**Pn**	**00 49 32.9**	**+1.2**
YUK2				Sn	**Sb**	**00 49 58.7**	**-1.1**
YUK2	**White River**	**2.03**	**8**		**Pn**	**00 49 32.9**	**+1.2**
YUK3	**Moose Creek**	**2.06**	**14**	Pn	**Pn**	**00 49 33.2**	**+1.0**
YUK3				Sn	**Sb**	**00 50 00.8**	**+0.3**
YUK3	**Moose Creek**	**2.06**	**14**		**Pn**	**00 49 33.2**	**+1.0**
YUK4	**Talbot Arm**	**2.10**	**41**	Pn	**Pb**	**00 49 35.5**	**0.0**
YUK4				Sn	**Sb**	**00 50 01.1**	**-0.6**
HYT	**Haines Junctio**	**2.23**	**60**	Pn	**Pn**	**00 49 34.7**	**+0.2**
HYT				Sn	**Sn**	**00 50 01.7**	**-0.6**
HYT	**Haines Junctio**	**2.23**	**60**		**Pn**	**00 49 35.0**	**+0.5**
YUK5	**Granite Creek**	**2.24**	**51**	Pn	**Pn**	**00 49 35.8**	**+1.2**
YUK5				Sn	**Sn**	**00 50 02.4**	**-0.2**
YUK5	**Granite Creek**	**2.24**	**51**		**Pn**	**00 49 35.6**	**+1.0**
EYAK	**Cordova Ski Ar**	**2.27**	**291**		**Pn**	**00 49 36.5**	**+1.6**
YUK1	**Sand Pete Hill**	**2.42**	**11**	Pn	**Pn**	**00 49 38.4**	**+1.3**
YUK1				Sn	**Sb**	**00 50 10.0**	**-1.0**
YUK1	**Sand Pete Hill**	**2.42**	**11**		**Pn**	**00 49 38.4**	**+1.3**
PS12	**TAPS Pump St12**	**2.48**	**315**		**Pn**	**00 49 39.6**	**+1.8**
MID	**Middleton Isla**	**2.50**	**264**	Pn	**Pn**	**00 49 37.1**	**-0.9**
HIN	**Hinchinbrook I**	**2.59**	**286**		**Pn**	**00 49 38.7**	**-0.7**
PLBC	**Pleasant Camp**	**2.62**	**95**	Pn	**Pn**	**00 49 40.4**	**+0.8**
PLBC				Sn	**Sn**	**00 50 12.1**	**+0.5**
PLBC	**Pleasant Camp**	**2.62**	**95**		**Pn**	**00 49 40.7**	**+1.0**
BVCY	**Beaver Creek**	**2.65**	**6**	Pn	**Pn**	**00 49 41.7**	**+1.6**
BVCY	**Beaver Creek**	**2.65**	**6**		**Pn**	**00 49 41.8**	**+1.6**
FID	**Port Fidalgo**	**2.67**	**293**		**Pn**	**00 49 40.9**	**+0.4**
JPK	**Jack Peak**	**2.84**	**299**		**Pn**	**00 49 44.1**	**+1.3**
GLI	**Glacier Island**	**3.00**	**294**		**Pn**	**00 49 44.4**	**-0.6**
PS11	**TAPS Pump St11**	**3.02**	**321**		**Pn**	**00 49 47.0**	**+1.9**
SKAG	**Skagway**	**3.14**	**93**		**Pn**	**00 49 45.8**	**-1.1**
HARP	**HAARP**	**3.17**	**327**	Pn	Pg	00 50 09.2	+11
BCD		**3.29**	**358**		**Pn**	**00 49 49.5**	**+0.6**
BCAR	**Beaver Creek A**	**3.29**	**358**		**Pn**	**00 49 49.0**	**0.0**
MENT	**Mentasta**	**3.34**	**342**		**Pn**	**00 49 49.9**	**+0.3**
WHY	**Whitehorse**	**3.40**	**72**	Pn	**Pn**	**00 49 51.0**	**+0.4**
WHY				Sn	**Sn**	**00 50 30.9**	**-0.3**
WHY	**Whitehorse**	**3.40**	**72**		**Pn**	**00 49 51.1**	**+0.6**
SCM	**Sheep Creek Mo**	**3.53**	**308**		**Pn**	**00 49 53.8**	**+1.5**
PWL	**Port Wells**	**3.58**	**290**		**Pn**	**00 49 54.3**	**+1.4**
BESE	**Bessie Mountai**	**3.61**	**107**	Pn	**Pn**	**00 49 54.4**	**+0.9**
BESE				Sn	**Sn**	**00 50 32.7**	**-3.6**
BESE				Sg	**Sb**	**00 50 44.7**	**-0.5**
BESE	**Bessie Mountai**	**3.61**	**107**		**Pn**	**00 49 53.4**	**0.0**
KNK	**Knik Glacier**	**3.81**	**298**		**Pn**	**00 49 57.9**	**+1.8**
SML	**Sawmill**	**3.92**	**304**		**Pn**	**00 49 58.8**	**+1.1**
JIS	**Juneau Island**	**3.96**	**109**	Pn	**Pn**	**00 49 57.5**	**-0.7**
SEW	**Seward**	**4.03**	**278**	Pn	**Pn**	**00 49 57.9**	**-1.1**
DOT	**Dot Lake**	**4.07**	**343**	Pn	**Pn**	**00 49 59.9**	**+0.3**
DOT	**Dot Lake**	**4.07**	**343**		**Sg**	**00 49 59.4**	**-0.2**
GHO	**Glory Hole Cre**	**4.16**	**302**		**Pn**	**00 49 59.5**	**-1.4**
PMR	**Palmer**	**4.18**	**299**		**Pn**	**00 50 00.4**	**-0.7**
SIT	**Sitka**	**4.24**	**128**		**Pn**	**00 50 02.1**	**+0.2**
RIDG	**Independent Ri**	**4.28**	**339**		**Pn**	**00 50 03.5**	**+0.9**
RC01	**Rabbit Creek A**	**4.30**	**291**		**Pn**	**00 50 03.7**	**+0.9**
DHY	**Denali Highway**	**4.35**	**322**		**Pn**	**00 50 04.4**	**+0.8**
SCRK	**Sand Creek**	**4.37**	**345**		**Pn**	**00 50 03.3**	**-0.6**
DAWY	**Dawson**	**4.41**	**12**	Pn	**Pn**	**00 50 05.2**	**+1.0**
DAWY				Pg	**Pb**	**00 50 18.4**	**+3.7**
DAWY				Sg	**Sg**	**00 51 14.9**	**-3.5**
DAWY	**Dawson**	**4.41**	**12**		**Pn**	**00 50 05.1**	**+0.9**
SLKM	**Skilak Lake**	**4.43**	**283**		**Pn**	**00 50 05.6**	**+0.9**
WAT2	**Susitna Watana**	**4.67**	**316**		**Pn**	**00 50 10.6**	**+2.6**
BRSE	**Bradley Lake S**	**4.69**	**273**		**Pn**	**00 50 10.9**	**+2.7**
CNPM	**China Poot**	**4.96**	**271**		**Pn**	**00 50 11.4**	**-0.5**
EGAK	**Eagle**	**5.01**	**2**		**Pn**	**00 50 13.9**	**+1.4**
RND	**Reindeer**	**5.06**	**319**		**Pn**	**00 50 14.0**	**+0.7**
HDA	**Harding Lake**	**5.30**	**333**		**Pn**	**00 50 17.4**	**+0.9**
MCK	**McKinley**	**5.31**	**321**		**Pn**	**00 50 14.9**	**-1.8**
STLK	**Strandline Lak**	**5.38**	**293**		**Pn**	**00 50 19.2**	**+1.5**
TRF	**Thorofare Moun**	**5.58**	**315**		**Pn**	**00 50 21.4**	**+0.8**
IL31		**5.60**	**336**		**Pn**	**00 50 21.8**	**+1.2**
ILAR	**Eielson Array**	**5.60**	**336**		**Pn**	**00 50 21.5**	**+0.9**
WRH	**Wood River Hil**	**5.63**	**329**		**Pn**	**00 50 22.1**	**+1.1**
DFR	**Drift River**	**5.65**	**283**		**Pn**	**00 50 23.1**	**+1.7**
SPWE	**Spurr West**	**5.67**	**290**		**Pn**	**00 50 23.2**	**+1.5**
RSO	**Redoubt South**	**5.68**	**282**	Pn	**Pn**	**00 50 21.9**	**0.0**
CCB	**Clear Creek Bu**	**5.70**	**331**		**Pn**	**00 50 22.4**	**+0.4**
RDWB	**Redoubt West**	**5.72**	**282**		**Pn**	**00 50 24.3**	**+1.8**
SPNN	**North Nagishla**	**5.76**	**291**		**Pn**	**00 50 24.3**	**+1.3**
BWN	**Browne**	**5.79**	**323**	Pn	**Pn**	**00 50 20.5**	**-2.7**
KTH	**Kantishna Hill**	**5.87**	**314**		**Pn**	**00 50 23.9**	**-0.5**
WRAK	**Wrangell Islan**	**5.90**	**121**	Pn	**Pn**	**00 50 23.8**	**-0.9**
NEA	**Nenana**	**5.98**	**327**		**Pn**	**00 50 24.7**	**-1.2**
POKR	**Poker Plat Res**	**6.02**	**335**		**Pn**	**00 50 27.1**	**+0.7**
PPLA	**Purkeypile**	**6.03**	**306**	Pn	**Pn**	**00 50 27.5**	**+0.9**
DLBC	**Dease Lake**	**6.05**	**98**	Pn	**Pn**	**00 50 24.8**	**-2.1**
DLBC	**Dease Lake**	**6.05**	**98**	Pn	**Pn**	**00 50 25.0**	**-1.9**
MDM	**Murphy Dome**	**6.07**	**332**	Pn	**Pn**	**00 50 25.7**	**-1.3**
AUH	**Augustine H**	**6.10**	**271**		**Pn**	**00 50 30.9**	**+3.3**
KDAK	**Kodiak Island**	**6.12**	**256**	Pn	**Pn**	**00 50 27.4**	**-0.4**
BPAW	**Bear Paw Mtn.**	**6.23**	**318**		**Pn**	**00 50 29.8**	**+0.5**
OHAK	**Old Harbor**	**6.70**	**253**	Pn	**Pn**	**00 50 35.7**	**0.0**
MLY	**Manley**	**6.79**	**325**		**Pn**	**00 50 37.3**	**+0.3**
EPYK	**Eagle Plains**	**6.95**	**16**	Pn	**Pn**	**00 50 38.7**	**-0.4**
FYU	**Fort Yukon**	**7.01**	**348**	Pn	**Pn**	**00 50 39.9**	**-0.1**
TT01	**Tatalina**	**7.66**	**300**		**Pn**	**00 50 51.4**	**+2.6**
TTA	**Tatalina**	**7.66**	**301**		**Pn**	**00 50 47.9**	**-1.0**
BM03	**Burnt Mountain**	**7.79**	**351**		**Pn**	**00 50 51.7**	**+1.0**
BMAR	**Burnt Mountain**	**7.79**	**351**		**Pn**	**00 50 50.6**	**-0.2**
IM03		**8.36**	**323**		**Pn**	**00 50 58.3**	**-0.1**
IMAR	**Indian Mountai**	**8.36**	**323**		**Pn**	**00 50 58.0**	**-0.4**
COLD	**Coldfoot**	**8.42**	**336**	Pn	**Pn**	**00 50 58.9**	**-0.3**
INK	**Inuvik**	**9.22**	**19**	Pn	**Pn**	**00 51 10.2**	**0.0**
TOLK	**Toolik Lake Re**	**9.55**	**342**	Pn	**Pn**	**00 51 14.3**	**-0.5**
DHRN	**Dharma Camp**	**12.16**	**44**	P	**Pn**	**00 51 51.3**	**+0.9**
KUKN	**Kugluktuk,NWT**	**14.04**	**44**	P	**Pn**	**00 52 15.4**	**-0.7**

BJI ***16*** *01:05:03.5±0.0, 17.°30S×71.°90W,h15km,Ms4.9/1*
NEIC ***16*** *01:05:06.5±1.7, 17.°49S±0.°03×71.°73W±0.°10,h21km±5km, Error ellipse: s-maj=13.5km s-min=4.6km az=84.0*
ARE ***16*** *01:05:10±2.1, 17.°46S±0.°08×71.°5W±0.°1,h54km±7km, mb4.2/2(NEIC),Error ellipse: s-maj=16.9km s-min=10.9km az=105.0*
IDC ***16*** *01:05:13.9±1.5, 17.°64S×71.°27W,h103km±15km,mb3.2/4, mb1 3.8/9,mb1mx3.5/43,mbtmp4.0/9,MS3.3/1,Ms1 3.3/1, ms1mx2.4/14,Error ellipse: s-maj=16.3km s-min=13.4km az=60.0*

ISC 16 01:05:10.8±2.0, 17.°60S±0.°07×71.°5W±0.°1, h71km±20km, n45,σ1§17/44,mb3.3/5,3D,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AP01	**Chacalluta**	**1.37**	**124**	*i* P	**Pn**	**01 05 34.0**	**0.0**
AP01				*i* S	**Sn**	**01 05 51.7**	**+0.2**
AP01				IAML		01 05 57.0	
	comp=E,24μm,0.3s						
AP01	**Chacalluta**	**1.37**	**124**		**Pn**	**01 05 34.1**	**0.0**
PB12	**IPOC Station P**	**1.52**	**132**	↓*i* P	**Pn**	**01 05 35.8**	**-0.5**
PB12				*i* S	**Sn**	**01 05 56.0**	**+0.6**
PB12				IAML		01 06 00.3	
	comp=N,4μm,0.4s						
PB12	**IPOC Station P**	**1.52**	**132**		**Pn**	**01 05 35.7**	**-0.5**
PB16	**IPOC Station P**	**2.06**	**111**	↓*i* P	**Pn**	**01 05 43.1**	**-0.7**
PB16				*i* S	**Sn**	**01 06 07.1**	**-1.8**
PB16				IAML		01 06 15.8	
	comp=E,956nm,0.6s						
PB16	**IPOC Station P**	**2.06**	**111**		**Pn**	**01 05 43.5**	**-0.4**
MNMC	**Minye Minye**	**2.39**	**130**	*i* P	**Pn**	**01 05 47.6**	**-0.3**
MNMC				*i* S	**Sn**	**01 06 17.4**	**+1.0**
MNMC	**Minye Minye**	**2.39**	**130**	Pn	**Pn**	**01 05 47.2**	**-0.7**
PSGC	**Pisagua**	**2.39**	**146**	*i* P	**Pn**	**01 05 47.8**	**-0.2**
PSGC				*i* S	**Sn**	**01 06 15.4**	**-0.9**
PSGCX	**Pisagua**	**2.39**	**146**		**Pn**	**01 05 47.3**	**-0.6**
PB11	**IPOC Station P**	**2.79**	**141**		**Pn**	**01 05 52.7**	**-0.6**
GO01	**Chusmiza**	**3.02**	**133**	*i* P	**Pn**	**01 05 57.1**	**+0.3**
GO01				*i* S	**Sn**	**01 06 34.9**	**+2.8**
GO01				IAML		01 06 44.7	
	comp=E,1μm,0.2s						
GO01	**Chusmiza**	**3.02**	**133**		**Pn**	**01 05 57.1**	**+0.3**
TA01	**Diego Aracena**	**3.21**	**157**		**Pn**	**01 05 59.0**	**+0.1**
PB08	**IPOC Station P**	**3.38**	**139**		**Pn**	**01 06 01.8**	**+0.2**
LPAZ	**La Paz**	**3.50**	**69**	P	**Pn**	**01 06 04.8**	**+1.4**
	comp=E,51nm,0.3s,baz=264,slow=7.9,SNR=361						
LPAZ				S	**Sn**	**01 06 43.8**	**-0.3**
	comp=E,1.9nm,0.3s,baz=183,slow=19,SNR=1.1						
LPAZ	**La Paz**	**3.50**	**69**		**Pn**	**01 06 04.4**	**+0.9**
PB01	**IPOC Station P**	**3.93**	**151**		**Pn**	**01 06 06.4**	**-2.5**
PB07	**IPOC Station P**	**4.39**	**160**		**Pn**	**01 06 14.4**	**-0.8**
PB04	**IPOC Station P**	**4.89**	**165**		**Pn**	**01 06 21.7**	**-0.3**
PB06	**IPOC Station P**	**5.40**	**160**		**Pn**	**01 06 27.3**	**-1.7**
LVC	**Limon Verde**	**5.56**	**154**	P	**Pn**	**01 06 31.9**	**+0.6**
	comp=E,8.3nm,0.3s,baz=338,slow=8.7,SNR=68						
LVC				S	**Sn**	**01 07 34.4**	**+0.3**
	comp=E,9.2nm,0.3s,baz=163,slow=17,SNR=6.7						
PB15	**IPOC Station P**	**5.91**	**161**		**Pn**	**01 06 35.5**	**-0.4**
PB10	**IPOC Station P**	**5.96**	**171**		**Pn**	**01 06 35.8**	**-0.6**
PB14	**IPOC Station P**	**7.07**	**172**		**Pn**	**01 06 50.8**	**-1.1**
NNA	**Nana**	**7.58**	**317**	P	Pn	01 07 05.8	+7.0
	comp=E,4.4nm,0.3s,baz=158,slow=7.8,SNR=9.1						
NNA				S	Sn	01 08 30.8	+7.5
	comp=E,1.6nm,0.3s,baz=197,slow=17,SNR=1.7						
GO03	**Copiap**	**10.02**	**173**	Pn	**Pn**	**01 07 31.2**	**-0.8**
SIV	**San Ignacio**	**10.14**	**82**	P	**Pn**	**01 07 31.4**	**-2.3**
	comp=E,4.9nm,0.3s,baz=286,slow=9.9,SNR=119						
SIV				LR	LR	01 11 11.5	
	comp=E,149nm,18.1s,baz=290,slow=36						
CFA	**Coronel Fontan**	**14.26**	**169**	P	**Pn**	**01 08 31.9**	**+2.6**
	comp=E,0.4nm,0.3s,baz=348,slow=14,SNR=6.8						
H03N1	**Juan Fernandez**	**17.11**	**201**	T	T	01 26 52.7	
	baz=26,slow=73,SNR=558						
H03N2	**Juan Fernandez**	**17.12**	**201**	T	T	01 26 50.9	
	baz=26,slow=73,SNR=304						
H03N3	**Juan Fernandez**	**17.13**	**201**	T	T	01 26 51.5	
	baz=26,slow=73,SNR=313						
RUSC	**La Rusia**	**23.39**	**356**	P	**P**	**01 10 12.7**	**-1.5**
GO09	**Cerro Castillo**	**33.60**	**181**	P	**P**	**01 11 44.8**	**+0.6**
GO09				IAmb	IAmb	01 12 02.6	
	comp=Z,3.2nm,1.0s						
TXAR	**Lajitas Array**	**56.03**	**326**	P	**P**	**01 14 42.8**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=148,slow=8.6,SNR=4.0						
PDAR	**Pinedale Array**	**69.52**	**331**	P	**P**	**01 16 13.1**	**+0.9**
	comp=Z,0.1nm,0.6s,baz=153,slow=6.1,SNR=2.0						
TORD	**Torodi Ar. Bea**	**78.45**	**72**	P	**P**	**01 17 02.9**	**-1.7**
	comp=Z,0.7nm,0.4s,baz=257,slow=5.5,SNR=10						
YKA	**Yellowknife Ar**	**86.71**	**341**	P	**P**	**01 17 46.4**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=134,slow=5.4,SNR=12						
H11N3	**WAKE ISLAND Hyd**	**24.83**	**282**	T	T	03 41 37.5	
	baz=98,slow=74,SNR=11						
H11S2	**WAKE ISLAND Hyd**	**24.84**	**281**	T	T	03 41 40.9	
	baz=99,slow=75,SNR=40						
H11N2	**WAKE ISLAND Hyd**	**24.84**	**282**	T	T	03 41 38.6	
	baz=98,slow=74,SNR=18						
H11N1	**WAKE ISLAND Hyd**	**24.84**	**282**	T	T	03 41 34.1	
	baz=98,slow=74,SNR=12						
H11S1	**WAKE ISLAND Hyd**	**24.84**	**281**	T	T	03 41 23.2	
	baz=99,slow=75,SNR=11						
H11S3	**WAKE ISLAND Hyd**	**24.86**	**281**	T	T	03 41 33.3	
	baz=99,slow=75,SNR=12						
KSH	**Kashi**	**144.36**	**46**	PKP	PKPbc	01 24 39.3	+1.5
KSH				PP	**PP**	**01 27 57.3**	**+2.1**
KSH				PKS	**PKSdf**	**01 28 14.3**	**-0.7**
KSH				SS	SS	01 46 42.1	+6.0
KSH				LR	LR		
	comp=Z,44nm,8.8s						
KSH				LR	LR		
	comp=Z,38nm,9.4s						

IDC 16 01:23:24.6±4.6, 5.°21S×151.°34E,h0km,mb3.1/2, mb1 3.4/2,mb1mx3.2/41,mbtmp3.2/2,Error ellipse: s-maj=212.2km s-min=52.2km az=118.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.09**	**227**	P	P	01 28 21.5	-0.2
	0.3nm,0.5s,baz=52,slow=9.4,SNR=2.0						
ASAR	**Alice Springs**	**24.88**	**221**	P	P	01 28 49.4	+0.1
	0.6nm,0.8s,baz=50,slow=9.6,SNR=5.7						
TORD	**Torodi Ar. Bea**	**149.04**	**287**	PKPbc	PKPbc	01 43 15.3	-0.6
	0.3nm,0.6s,baz=88,slow=2.1,SNR=5.6						

SKHL ***16*** *01:25:41.9±0.5, 43.°26N×147.°27E,h68km±5km,mb4.6/6*
JMA ***16*** *01:25:41.8±0.2, 43.°24N×147.°27E,h43km,M4.0*
MOS ***16*** *01:25:42.6±0.9, 43.°40N×147.°14E,h62km,mb4.2/7, Error ellipse: s-maj=11.7km s-min=8.2km az=129.0*
IDC ***16*** *01:25:44.0±2.6, 43.°47N×147.°29E,h59km±21km,mb3.7/21, mb1 3.9/24,mb1mx3.6/67,mbtmp3.9/24,ML3.0/3,Error ellipse: s-maj=26.2km s-min=13.2km az=173.0*
NEIC ***16*** *01:25:44.6±1.0, 43.°45N±0.°06×147.°3E±0.°1,h66km±6km, mb4.1/8,Error ellipse: s-maj=11.6km s-min=8.1km az=100.0*

ISC 16 01:25:42.8±1.0, 43.°33N±0.°06×147.°25E±0.°05, h55km±8km, n86,σ1§11/105,mb4.0/28,1C-4D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.10**	**272**	P	**Pn**	**01 26 01.5**	**-0.4**
NEM2				*e*S	**Sn**	**01 26 16.2**	**+0.1**
NMR	**Nemuro--Hokkai**	**1.11**	**272**	*i* P	**Pn**	**01 26 00.7**	**-1.4**
NMR				*i* S	**Sn**	**01 26 15.2**	**-1.2**
NMR	**Nemuro--Hokkai**	**1.11**	**272**	↓*i* PN	**Pn**	**01 26 00.6**	**-1.5**
NMR				*i* S	**Sn**	**01 26 15.8**	**-0.6**
YUK	**Yuzh-Kuril'sk**	**1.23**	**305**	*i* P	**Pn**	**01 26 03.6**	**-0.1**
YUK				AMB	AMB	01 26 05.0	
	50nm,0.2s						
YUK				AMB	AMB	01 26 05.0	
	40nm,0.2s						
YUK				AMB	AMB	01 26 05.0	
	160nm,0.2s						
YUK				*i* S	**Sn**	**01 26 19.8**	**+0.6**
YUK				A	A	01 26 22.0	
	240nm,0.3s						
YUK				A	A	01 26 22.0	
	2μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.23**	**305**	*d* iPN	**Pn**	**01 26 03.6**	**-0.1**
YUK				*i* S	**Sn**	**01 26 19.8**	**+0.6**
YUK				pmax	pmax		
	comp=N,447nm,0.2s						
YUK				pmax	pmax		
	comp=Z,2μm,0.2s						
YUK				pmax	pmax		
	comp=E,426nm,0.1s						
YUK				smax	smax		
	comp=E,2μm,0.2s						
YUK				smax	smax		
	comp=N,2μm,0.3s						
GRPR	**Tuman**	**1.26**	**302**	*i* P	**Pn**	**01 26 04.0**	**-0.1**
GRPR				AMB	AMB	01 26 04.0	
	comp=N,120nm,0.2s						
GRPR				*i* S	**Sn**	**01 26 20.7**	**+0.7**
GRPR				A	A	01 26 21.0	
	comp=N,310nm,0.2s						
GRPR				A	A	01 26 21.0	
	comp=N,260nm,0.2s						
GRPR	**Tuman**	**1.26**	**302**	↓*i* PN	**Pn**	**01 26 04.0**	**-0.1**
GRPR				*i* S

baz=330,slow=75,SNR=36
H11S1 WAKE ISLAND Hy 29.70 140 T T 02 03 40.4
baz=331,slow=76,SNR=83
H11S3 WAKE ISLAND Hy 29.71 140 T T 02 03 32.4
baz=331,slow=76,SNR=107
H11S2 WAKE ISLAND Hy 29.72 140 T T 02 03 36.8
baz=331,slow=76,SNR=38
NRIK Noril'sk 39.65 331 *i* P **P** **01 33 05.8 -3.0**
NRIK pmax pmax
comp=Z,2.0nm,1.2s
DGZ Jazzator, Alta 40.69 301 *i* P **P** **01 33 17.4 -0.4**
DGZ pmax pmax
comp=Z,2.0nm,1.2s
ZALV Zalesovo Beam 41.31 307 P **P** **01 33 22.5 -0.1**
comp=Z,0.4nm,0.3s,baz=48,slow=4.3,SNR=3.6
ILAR Eielson Array 41.78 36 P **P** **01 33 26.6 +0.2**
comp=Z,0.4nm,0.5s,baz=271,slow=8.4,SNR=7.8
RIDG Independent Ri 42.74 37 P **P** **01 33 34.0 -0.2**
MK31 Makanchi Array 44.84 298 P **P** **01 33 51.8 +0.5**
MK31 pmax pmax
comp=Z,3.0nm,0.7s
MK31 Makanchi Array 44.84 298 P **P** **01 33 51.8 +0.5**
MK31 IAmb IAmb 01 33 52.8
comp=Z,2.5nm,0.7s
MKAR Makanchi Array 44.84 298 P **P** **01 33 52.0 +0.7**
comp=Z,2.0nm,0.6s,baz=80,slow=8.9,SNR=14
KURK Kurchatov 45.82 304 *e*P **P** **01 33 59.9 +0.9**
KURK Kurchatov 45.82 304 P **P** **01 33 59.9 +0.9**
KURK Kurchatov 45.82 304 P **P** **01 33 59.0 0.0**
KURK IAmb IAmb 01 34 00.8
comp=Z,5.2nm,1.2s
KURBB Kurchatov Arra 45.91 304 P **P** **01 33 59.9 +0.2**
comp=Z,1.3nm,0.5s,baz=76,slow=8.5,SNR=11
HYT Haines Junctio 46.60 41 P **P** **01 34 05.3 +0.2**
INK Inuvik 46.73 30 P **P** **01 34 06.5 +0.7**
comp=Z,0.7nm,0.4s,baz=277,slow=5.9,SNR=7.8
INK Inuvik 46.73 30 P **P** **01 34 05.5 -0.3**
INK IAmb IAmb 01 34 08.2
comp=Z,3.5nm,1.4s
BESE Bessie Mountai 48.50 43 pP 01 34 36.3 +2.7
KK31 Karatay Array 53.97 298 P **P** **01 35 00.3 -0.6**
KK31 pmax pmax
comp=Z,2.0nm,0.9s
KK31 Karatay Array 53.97 298 P **P** **01 35 00.3 -0.6**
KK31 IAmb IAmb 01 35 02.0
comp=Z,1.5nm,0.8s
KKAR Karatay Array 53.97 298 P **P** **01 35 00.3 -0.6**
KKAR pmax pmax
comp=Z,2.0nm,0.9s
KKAR Karatay Array 53.97 298 P **P** **01 35 00.3 -0.6**
YKA Yellowknife Ar 56.11 34 P **P** **01 35 16.2 +0.2**
comp=Z,0.8nm,0.7s,baz=298,slow=6.2,SNR=14
YKA pP **pP** **01 35 31.9 +1.8**
comp=Z,0.3nm,0.6s,baz=300,slow=6.3,SNR=3.8
AKTO Aktyubinsk 57.86 311 P **P** **01 35 29.1 +0.5**
comp=Z,1.2nm,0.6s,baz=77,slow=8.3
ARCES ARCESS Array B 59.66 340 P **P** **01 35 40.9 +0.1**
comp=Z,1.3nm,0.8s,baz=52,slow=8.5,SNR=5.7
WRA Warramunga Arr 64.07 194 P **P** **01 36 13.0 +2.1**
comp=Z,0.6nm,0.8s,baz=6.6,slow=6.5,SNR=2.5
GEYT Ailbeck 64.70 299 P **P** **01 36 15.9 +0.9**
comp=Z,0.7nm,0.6s,baz=96,slow=5.8,SNR=1.9
FINES FINESS Array B 65.28 333 P **P** **01 36 18.1 -0.3**
comp=Z,1.7nm,0.6s,baz=46,slow=5.9,SNR=15
NVAR Mina Array Bea 67.74 58 P **P** **01 36 35.1 +0.3**
comp=Z,0.7nm,0.6s,baz=289,slow=7.1,SNR=7.9
NB2 NORSAR Subarra 70.02 339 P **P** **01 36 48.3 0.0**
comp=Z,1.2nm,0.5s,baz=31,slow=6.5
NOA NORSAR Array B 70.02 339 P **P** **01 36 48.3 0.0**
comp=Z,1.1nm,0.4s,baz=32,slow=6.6,SNR=12
NOA NORSAR Array B 70.02 339 *e*P **P** **01 36 48.3 0.0**
NOA pmax pmax
comp=Z,2.0nm,0.4s
HFS Hagfors 70.10 337 P **P** **01 36 48.6 -0.2**
comp=Z,4.3nm,0.5s,baz=44,slow=6.6,SNR=32
PDAR Pinedale Array 70.12 50 P **P** **01 36 49.6 +0.1**
comp=Z,0.2nm,0.6s,baz=318,slow=2.0,SNR=4.1
KBZ Khabaz 70.13 312 P **P** **01 36 50.4 +1.2**
comp=Z,1.9nm,0.8s,baz=37,slow=7.2,SNR=5.7
AKASG Malin Array Be 71.96 324 P **P** **01 37 00.1 0.0**
comp=Z,1.6nm,0.5s,baz=38,slow=6.1,SNR=6.3
MLR Muntele Rosu 77.33 322 P **P** **01 37 32.1 +0.6**
comp=Z,0.7nm,0.3s,baz=105,slow=20,SNR=2.3
MLR Muntele Rosu 77.33 322 P **P** **01 37 32.1 +0.6**
MLR pmax pmax
comp=Z,21nm,1.7s
EKA Eskdalemuir Ar 78.54 343 P **P** **01 37 38.0 +0.1**
comp=Z,0.4nm,0.5s,baz=33,slow=5.3,SNR=4.6
EKA Eskdalemuir Ar 78.54 343 P **P** **01 37 38.0 +0.1**
TXAR Lajitas Array 82.82 56 P **P** **01 38 01.1 -0.3**
comp=Z,0.7nm,0.5s,baz=295,slow=3.5,SNR=14
TORD Torodi Ar. Bea 115.57 322 PKP **PKiKP** **01 44 17.6 -1.4**
comp=Z,0.2nm,0.5s,baz=27,slow=2.0,SNR=1.8
BDFB Brasilia 149.48 30 PKPbc **PKPbc** **01 45 26.4 +0.2**
comp=Z,0.5nm,0.4s,baz=46,slow=16,SNR=3.0

IDC **16** *01:33:19.7±2.4, 32.°95N×87.°55E, h0km, mb3.4/3, mb1 3.6/6, mb1mx3.3/55, mbtmp3.5/6, ML3.4/3, Error ellipse: s-maj=55.9km s-min=31.7km az=58.0*
ISC 16 01:33:25.8±0.9, 33.°27N±0.°09×88.°1E±0.°2, h35km, n11, σ1§35/10, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUN	**Gumba**	**5.67**	**200**	*e*P	**Pn**	**01 34 49.2**	**+1.4**
	19nm,0.6s						
JIRN	**Jiri**	**5.82**	**197**	*e*P	**Pn**	**01 34 51.5**	**+1.5**
	14nm,0.5s						
TAPN	**Taplejung**	**5.90**	**183**	*e*P	**Pn**	**01 34 52.2**	**+1.1**
	33nm,0.5s						
ODAN	**Odare**	**6.41**	**186**	*e*P	**Pn**	**01 34 57.9**	**-0.1**
	48nm,0.4s						
RAMN	**Ramite**	**6.42**	**192**	*e*P	**Pn**	**01 34 57.5**	**-0.7**
	23nm,0.5s						
MKAR	**Makanchi Array**	**14.22**	**344**	Pn	**Pn**	**01 36 44.4**	**-0.2**
	0.1nm,0.3s,baz=160,slow=13,SNR=1.6						
CMAR	**Chiang Mai Arr**	**17.67**	**144**	P	**Pn**	**01 37 27.8**	**-1.4**
	0.3nm,0.3s,baz=322,slow=10,SNR=4.2						
KURBB	**Kurchatov Arra**	**18.72**	**341**	P	**P**	**01 37 41.0**	**-0.1**
	0.0nm,0.3s,baz=154,slow=12,SNR=9.8						
SONM	**Songino Array**	**20.06**	**38**	P	**Pn**	**01 37 59.9**	**+1.9**
	0.6nm,0.4s,baz=230,slow=11,SNR=5.4						
ZALV	**Zalesovo Beam**	**20.81**	**355**	P	Pn	01 38 05.9	-0.6
	0.6nm,0.6s,baz=186,slow=9.7,SNR=3.6						
NOA	**NORSAR Array B**	**55.28**	**325**	P	**P**	**01 42 54.4**	**-1.1**
	0.7nm,0.8s,baz=74,slow=7.9,SNR=3.4						

IDC **16** *02:13:09.9±1.3, 26.°48N×129.°05E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/38, mbtmp3.5/5, Error ellipse: s-maj=25.5km s-min=11.3km az=24.0*
JMA **16** *02:13:12.3±0.3, 26.°36N×128.°92E, h27km±4km, M3.2*
ISC 16 02:13:11.2±1.6, 26.°41N±0.°06×128.°95E±0.°04, h13km±11km, n16, σ0§95/24, mb3.5/5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**0.74**	**305**	Pg	**Pb**	**02 13 26.5**	**+0.6**
	43nm,0.3s,baz=56,slow=12,SNR=612						
JOW				Lg	Lg	02 13 34.6	
	34nm,0.3s,baz=118,slow=17,SNR=22						
JOW	**Kunigami**	**0.74**	**305**	P	**Pb**	**02 13 26.3**	**+0.4**
JOW				S	**Sb**	**02 13 36.2**	**+0.2**
JYRO	**Yoronjima**	**0.76**	**324**	P	**Pn**	**02 13 27.0**	**-0.6**
JYRO				S	**Sn**	**02 13 38.0**	**-1.0**
JNTH	**Nagotoyohara**	**0.84**	**278**	P	**Pg**	**02 13 27.4**	**0.0**
JNTH				*e*S	**Sg**	**02 13 38.1**	**-0.3**
JOKE	**Okinoerabujima**	**1.01**	**340**	P	**Pn**	**02 13 31.4**	**+0.3**
JJT3	**Tamagusuku3**	**1.08**	**256**	P	**Pb**	**02 13 31.6**	**-0.1**
JJT3				*e*S	**Sb**	**02 13 45.4**	**-0.3**
JIH	**Iheya**	**1.08**	**306**	P	**Pb**	**02 13 31.8**	**+0.1**
JIH				S	**Sb**	**02 13 45.8**	**0.0**
JTK	**Tokunoshima**	**1.38**	**0**	P	**Pb**	**02 13 36.5**	**-0.3**
JAGN	**Aguni-jima**	**1.54**	**277**	P	**Pn**	**02 13 38.3**	**-0.1**
JAGN				S	**Sn**	**02 13 57.2**	**-1.1**
JMZ	**Minamidaito 2**	**2.12**	**105**	P	**Pn**	**02 13 46.3**	**-0.1**
JMZ				*e*S	**Sn**	**02 14 10.5**	**-2.1**
JKDJ	**Kitadaitoujima**	**2.16**	**102**	P	**Pn**	**02 13 47.0**	**+0.2**
JKDJ				*e*S	**Sn**	**02 14 13.5**	**+0.1**
SONM	**Songino Array**	**27.76**	**326**	P	**P**	**02 19 02.0**	**+2.3**
	0.8nm,0.5s,baz=126,slow=10,SNR=4.2						
ZALV	**Zalesovo Beam**	**42.50**	**322**	P	**P**	**02 21 05.5**	**-0.5**
	0.3nm,0.4s,baz=108,slow=9.5,SNR=2.0						
WRA	**Warramunga Arr**	**46.37**	**173**	P	**P**	**02 21 38.0**	**+0.7**
	0.6nm,0.6s,baz=353,slow=8.3,SNR=3.2						
ILAR	**Eielson Array**	**63.98**	**28**	P	**P**	**02 23 42.3**	**-1.6**
	0.2nm,0.5s,baz=253,slow=5.6,SNR=2.5						
YKA	**Yellowknife Ar**	**78.09**	**25**	P	**P**	**02 25 10.8**	**+1.2**
	0.2nm,0.8s,baz=305,slow=4.7,SNR=1.9						

IDC 16 02:21:04.8±4.5, 6.°05S×150.°19E, h0km, mb3.2/2, mb1 3.6/2, mb1mx3.3/27, mbtmp3.3/2, Error ellipse: s-maj=190.3km s-min=51.2km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.69**	**227**	P	P	02 25 47.6	+0.8
	1.4nm,0.6s,baz=51,slow=11,SNR=5.8						
ASAR	**Alice Springs**	**23.51**	**220**	P	P	02 26 15.7	-1.0
	0.3nm,0.6s,baz=54,slow=10,SNR=1.8						
TORD	**Torodi Ar. Bea**	**148.18**	**285**	PKPbc	PKPbc	02 40 53.3	-0.5
	0.2nm,0.5s,baz=74,slow=2.5,SNR=5.6						

AEIC **16** *02:27:17.7±1.9, 67.°69N±0.°07×162.°25W±0.°08, h2km±4km, ML3.9, mb4.1/6(NEIC), Error ellipse: s-maj=11.0km s-min=2.2km az=159.0*
NEIC **16** *02:27:17.6±2.2, 67.°78N±0.°06×162.°5W±0.°2, h5km±4km, Error ellipse: s-maj=10.3km s-min=7.1km az=142.0*
IDC **16** *02:27:18.7±1.0, 68.°02N×162.°15W, h0km, mb3.8/8, mb1 4.1/11, mb1mx3.7/50, mbtmp3.8/11, ML3.8/3, MS3.3/2, Ms1 3.4/2, ms1mx2.8/47, Error ellipse: s-maj=29.2km s-min=16.0km az=33.0*
ISC 16 02:27:18.4±0.6, 67.°75N±0.°06×162.°40W±0.°05, h10km, n80, σ1§44/84, mb4.0/9, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.36**	**328**		**Pg**	**02 27 25.7**	**+0.2**
RDOG	**Red Dog Mine**	**0.36**	**328**		**Sg**	**02 27 32.0**	**+1.7**
ANM	**Nome**	**3.42**	**202**		**Pn**	**02 28 10.5**	**-1.1**
IM03		**3.85**	**113**		**Pn**	**02 28 17.1**	**-0.3**
PS05	**TAPS Pump Stn5**	**4.65**	**96**		**Pn**	**02 28 28.6**	**+0.1**
PS05					**Sn**	**02 29 24.4**	**+1.9**
COLD	**Coldfoot**	**4.72**	**91**		**Pn**	**02 28 30.7**	**+1.2**
TOLK	**Toolik Lake Re**	**4.87**	**74**	P	**Pn**	**02 28 32.4**	**+0.9**
	baz=264						
TOLK				S	**Sn**	**02 29 29.9**	**+2.0**
	baz=264						
TOLK	**Toolik Lake Re**	**4.87**	**74**		**Pn**	**02 28 31.5**	**0.0**
TOLK	**Toolik Lake Re**	**4.87**	**74**		**Sn**	**02 29 29.4**	**+1.5**
MLY	**Manley**	**5.42**	**115**		**Pn**	**02 28 39.3**	**+0.1**
MLY	**Manley**	**5.42**	**115**		**Sn**	**02 29 43.5**	**+2.0**
TTA	**Tatalina**	**5.53**	**148**		**Pn**	**02 28 40.0**	**-0.6**
GAMB	**Gambell**	**5.53**	**228**	Pn	**Pn**	**02 28 36.8**	**-3.8**
GAMB					Pb	02 28 40.2	-15
TT01	**Tatalina**	**5.55**	**148**		**Pn**	**02 28 40.3**	**-0.6**
PS01	**TAPS Pump Stn**	**5.56**	**57**		**Pn**	**02 28 41.6**	**+0.7**
CHUM	**Lake Minchumin**	**5.68**	**128**		**Pn**	**02 28 42.7**	**+0.1**
BPAW	**Bear Paw Mtn.**	**5.93**	**123**		**Pn**	**02 28 46.1**	**-0.1**
PS07	**TAPS Pump Stn7**	**6.15**	**107**		**Pn**	**02 28 49.4**	**+0.3**
NEA	**Nenana**	**6.26**	**114**		**Pn**	**02 28 50.0**	**-0.7**
KTH	**Kantishna Hill**	**6.34**	**126**		**Pn**	**02 28 51.7**	**-0.1**
MDM	**Murphy Dome**	**6.35**	**110**		**Pn**	**02 28 52.1**	**+0.3**
BWN	**Browne**	**6.38**	**118**		**Pn**	**02 28 53.2**	**+0.9**
PPLA	**Purkeypile**	**6.48**	**134**		**Pn**	**02 28 53.5**	**-0.2**
TCOL	**CIGO, UAF Yank**	**6.53**	**109**	P	**Pn**	**02 28 55.0**	**+0.8**
	baz=302						
TCOL				S	**Sn**	**02 30 07.0**	**-1.6**
	baz=302						
COLA	**College**	**6.53**	**109**		**Pn**	**02 28 54.6**	**+0.3**
POKR	**Poker Plat Res**	**6.55**	**107**	P	**Pn**	**02 28 54.8**	**+0.2**
	baz=300						
POKR	**Poker Plat Res**	**6.55**	**107**		**Pn**	**02 28 54.7**	**0.0**
TRF	**Thorofare Moun**	**6.61**	**125**		**Pn**	**02 28 55.3**	**-0.3**
CCB	**Clear Creek Bu**	**6.67**	**111**		**Pn**	**02 28 56.5**	**+0.3**
WRH	**Wood River Hil**	**6.67**	**113**		**Pn**	**02 28 56.0**	**-0.3**
BM03	**Burnt Mountain**	**6.81**	**85**		**Pn**	**02 28 58.6**	**+0.4**
MCK	**McKinley**	**6.85**	**120**		**Pn**	**02 28 58.7**	**-0.1**
IL31		**6.93**	**108**		**Pn**	**02 28 60.0**	**+0.2**
ILAR	**Eielson Array**	**6.93**	**108**	Pn	**Pn**	**02 28 59.8**	**-0.1**
	7.4nm,0.3s,baz=302,slow=13,SNR=541						
ILAR				Sn	**Sn**	**02 30 17.9**	**-0.8**
	1.2nm,0.3s,baz=302,slow=24,SNR=11						
ILAR				LR	LR	02 32 08.8	
	comp=Z,84nm,18.9s,baz=316,slow=42						
PS08	**TAPS Pump Stn8**	**7.08**	**110**		**Pn**	**02 29 01.8**	**-0.1**
RND	**Reindeer**	**7.10**	**121**		**Pn**	**02 29 02.1**	**-0.1**
HDA	**Harding Lake**	**7.11**	**111**	P	**Pn**	**02 29 02.2**	**-0.2**
	baz=305						
HDA	**Harding Lake**	**7.11**	**111**		**Pn**	**02 29 02.3**	**0.0**
WAT2	**Susitna Watana**	**7.50**	**123**		**Pn**	**02 29 08.2**	**+0.4**
STLK	**Strandline Lak**	**7.73**	**139**		**Pn**	**02 29 10.3**	**-0.6**
SPWE	**Spurr West**	**7.75**	**142**		**Pn**	**02 29 11.7**	**+0.4**
DHY	**Denali Highway**	**7.81**	**120**		**Pn**	**02 29 12.2**	**+0.2**
RIDG	**Independent Ri**	**8.25**	**111**		**Pn**	**02 29 17.8**	**-0.2**
DFR	**Drift River**	**8.33**	**145**		**Pn**	**02 29 18.4**	**-0.7**
SCRK	**Sand Creek**	**8.42**	**108**		**Pn**	**02 29 20.2**	**-0.3**
SML	**Sawmill**	**8.45**	**128**		**Pn**	**02 29 21.1**	**+0.5**
RED	**Redoubt Volcan**	**8.47**	**146**		**Pn**	**02 29 19.4**	**-1.6**
PAX	**Paxson**	**8.53**	**116**		**Pn**	**02 29 21.3**	**-0.5**
SCM	**Sheep Creek Mo**	**8.73**	**126**		**Pn**	**02 29 24.2**	**-0.4**
EGAK	**Eagle**	**9.05**	**99**		**Pn**	**02 29 28.6**	**-0.2**
BC03		**9.76**	**109**		**Pn**	**02 29 38.4**	**-0.1**
DAWY	**Dawson**	**10.07**	**101**		**Pn**	**02 29 40.5**	**-2.4**
EPYK	**Eagle Plains**	**10.09**	**86**	P	**Pn**	**02 29 43.5**	**+0.5**
	baz=289						
EPYK	**Eagle Plains**	**10.09**	**86**		**Pn**	**02 29 42.7**	**-0.4**
GLB	**Gilahina Butte**	**10.15**	**120**	Pn	**Pn**	**02 29 47.8**	**+3.8**
INK	**Inuvik**	**10.78**	**74**	Pn	**Pn**	**02 29 51.3**	**-1.2**
	0.9nm,0.3s,baz=306,slow=8.0,SNR=25						
INK				Sn	**Sn**	**02 31 45.8**	**-7.2**
	0.5nm,0.3s,baz=347,slow=12,SNR=6.0						
INK				Lg	Lg	02 32 45.8	
	0.2nm,0.3s,baz=300,slow=31,SNR=1.4						
INK	**Inuvik**	**10.78**	**74**		**Pn**	**02 29 51.0**	**-1.5**
KDAK	**Kodiak Island**	**10.95**	**151**	Pn	**Pn**	**02 29 56.1**	**+1.3**
	0.2nm,0.3s,baz=358,slow=13,SNR=4.9						
BILL	**Bilibino**	**11.73**	**286**		**Pn**	**02 30 03.0**	**-2.5**
C36M	**Paulatuk**	**13.96**	**66**	P	**Pn**	**02 30 33.4**	**-2.4**
	baz=281						
C36M	**Paulatuk**	**13.96**	**66**		**Pn**	**02 30 35.2**	**-0.6**
DLBC	**Dease Lake**	**17.14**	**107**	S	Sn	02 34 11.9	-16
	0.1nm,0.3s,baz=180,slow=20,SNR=1.6						
DLBC				Lg	Lg	02 36 17.4	
	0.2nm,0.3s,baz=254,slow=24,SNR=1.6						
SEY	**Seymchan**	**19.10**	**277**	P	**Pn**	**02 31 44.4**	**+2.8**
	0.3nm,0.3s,baz=37,slow=5.4,SNR=4.0						
YKA	**Yellowknife Ar**	**20.33**	**82**	P	**P**	**02 31 54.4**	**+0.2**
	2.8nm,0.7s,baz=309,slow=12,SNR=26						
RES	**Resolute Bay**	**21.55**	**42**	S	**S**	**02 36 02.4**	**-3.1**
	4.6nm,1.1s,baz=105,slow=12,SNR=1.1						
YHH	**Holmes Hill**	**35.13**	**104**	P	**P**	**02 34 11.8**	**-0.2**
YNE	**Yellowstone No**	**35.26**	**103**	P	**P**	**02 34 14.3**	**+1.3**
PD31	**Pinedale Array**	**37.35**	**105**	P	**P**	**02 34 31.2**	**+0.3**
PD31				IAmb	IAmb	02 34 46.3	
	comp=Z,3.0nm,1.3s						
PDAR	**Pinedale Array**	**37.35**	**105**	P	**P**	**02 34 31.8**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=340,slow=7.4,SNR=7.4						
NVAR	**Mina Array Bea**	**38.08**	**118**	P	**P**	**02 34 38.8**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=311,slow=6.7,SNR=7.5						
MSU	**Marysvale**	**40.13**	**111**	P	**P**	**02 34 55.6**	**+1.4**
ARCES	**ARCESS Array B**	**42.87**	**356**	PcP	**PcP**	**02 37 07.3**	**+0.6**
	comp=Z,2.8nm,0.9s,baz=342,slow=5.7,SNR=4.3						
MNTX	**Cornudas Mount**	**48.68**	**108**	P	**P**	**02 36 02.2**	**-0.2**
MNTX				IAmb	IAmb	02 36 21.0	
	comp=Z,5.7nm,1.8s						
ZALV	**Zalesovo Beam**	**48.80**	**314**	P	**P**	**02 36 03.2**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=36,slow=7.5,SNR=1.6						
FINES	**FINESS Array B**	**50.96**	**355**	P	**P**	**02 36 20.6**	**+1.3**
	comp=Z,2.9nm,1.0s,baz=48,slow=8.4,SNR=3.8						
TX31	**Lajitas Ar. Si**	**51.45**	**107**	P	**P**	**02 36 24.3**	**+0.9**
TX32	**Lajitas Array**	**51.45**	**107**	P	**P**	**02 36 23.8**	**+0.3**
TX32				IAmb	IAmb	02 36 25.8	
	comp=Z,1.8nm,0.8s						
TXAR	**Lajitas Array**	**51.45**	**107**	P	**P**	**02 36 24.5**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=331,slow=6.0,SNR=21						
TXAR				LR	LR	03 01 37.6	
	comp=Z,91nm,20.7s,baz=0.0,slow=40						
MKAR	**Makanchi Array**	**55.95**	**311**	P	**P**	**02 36 55.6**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=42,slow=8.8,SNR=3.9						
ESDC	**Sonseca Array**	**71.66**	**17**	P	**P**	**02 38 41.1**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=342,slow=6.4,SNR=1.9						

JMA **16** *02:39:44.0±0.1, 28.°00N×129.°38E, h42km±2km, M3.6*

JMA Felt II J1.
IDC **16** *02:39:45.6±2.3, 27.°84N×129.°53E, h63km±20km, mb3.1/5, mb1 3.4/7, mb1mx3.1/63, mbtmp3.5/7, Error ellipse: s-maj=33.3km s-min=14.8km az=116.0*
ISC 16 02:39:40.0±1.4, 27.°90N±0.°03×129.°50E±0.°04, h10km±9km, n29, σ1§59/44, mb3.4/5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMN	**Amaminishikomi**	**0.45**	**320**	P	**Pn**	**02 39 52.4**	**-0.1**
JAMN				*e*S	**Sb**	**02 39 59.1**	**+2.4**
JTK	**Tokunoshima**	**0.50**	**257**	P	**Pn**	**02 39 54.1**	**+0.8**
JTK				*e*S	**Sb**	**02 40 01.8**	**+3.5**
JAM	**Amami Oshima**	**0.52**	**10**	P	**Pn**	**02 39 54.0**	**+0.5**
JAM				*e*S	**Sb**	**02 40 01.7**	**+3.0**
JZK	**Kikaishima**	**0.58**	**45**	P	**Pn**	**02 39 56.8**	**+2.4**
JZK				*e*S	**Sn**	**02 40 07.8**	**+3.7**
JOKE	**Okinoerabujima**	**0.99**	**237**	P	**Pn**	**02 40 01.2**	**+1.2**
JOKE				*e*S	**Sn**	**02 40 14.4**	**+0.4**
JTAJ	**Takarajima**	**1.27**	**348**	P	**Pg**	**02 40 03.8**	**-0.7**
JTAJ				*e*S	**Sg**	**02 40 18.4**	**-2.6**
JYRO	**Yoronjima**	**1.28**	**227**	P	**Pn**	**02 40 05.3**	**+1.3**
JYRO				*e*S	**Sg**	**02 40 21.2**	**0.0**
JOW	**Kunigami**	**1.53**	**226**	P	**Pg**	**02 40 09.6**	**+0.3**
	9.8nm,0.3s,baz=84,slow=17,SNR=28						
JOW				S	**Sb**	**02 40 29.1**	**+1.3**
	33nm,0.3s,baz=81,slow=20,SNR=12						
JOW	**Kunigami**	**1.53**	**226**	P	**Pn**	**02 40 08.6**	**+1.2**
JIH	**Iheya**	**1.61**	**238**	P	**Pb**	**02 40 10.1**	**+0.2**
JIH				*e*S	**Sn**	**02 40 29.9**	**+0.4**
JNN	**Nakanoshima**	**1.96**	**10**	P	**Pn**	**02 40 14.4**	**+1.0**
JNN				*e*S	**Sn**	**02 40 37.1**	**-0.9**
JAGN	**Aguni-jima**	**2.40**	**237**	P	**Pn**	**02 40 21.0**	**+1.6**
JAGN				*e*S	**Sn**	**02 40 49.0**	**+0.1**
JYAK	**Yakushimahirau**	**2.49**	**21**	P	**Pn**	**02 40 21.7**	**+1.1**
JYAK				*e*S	**Sn**	**02 40 50.1**	**-1.0**
JKDJ	**Kitadaitoujima**	**2.52**	**140**	P	**Pn**	**02 40 22.2**	**+1.2**
JKDJ				*e*S	**Sn**	**02 40 50.4**	**-1.4**
JMZ	**Minamidaito 2**	**2.58**	**143**	P	**Pn**	**02 40 22.7**	**+0.8**
JMZ				*e*S	**Sn**	**02 40 51.3**	**-2.0**
JKC	**Kuchinoerabu**	**2.62**	**13**	P	**Pn**	**02 40 23.6**	**+1.2**
JKC				*e*S	**Sn**	**02 40 53.5**	**-0.8**
JMTN	**Minamitane**	**2.77**	**26**	P	**Pn**	**02 40 25.6**	**+1.1**
JMTN				*e*S	**Sn**	**02 40 58.0**	**-0.1**
JKE	**Kume jima 2**	**2.89**	**238**	P	**Pn**	**02 40 26.9**	**+0.8**
JKE				*e*S	**Sn**	**02 40 59.2**	**-1.7**
JTN	**Tanegashima 3**	**3.03**	**25**	P	**Pn**	**02 40 29.0**	**+0.9**
JTN				*e*S	**Sn**	**02 41 04.0**	**-0.5**
JNU	**Nakatsue**	**5.34**	**13**	P	**Pn**	**02 41 03.0**	**+3.2**
	5.0nm,0.3s,baz=185,slow=16,SNR=25						
JNU				S	**Sn**	**02 42 00.9**	**-0.5**
	0.9nm,0.3s,baz=251,slow=5.6,SNR=2.0						
KSRS	**Korea Array**	**9.62**	**352**	P	Pn	02 42 04.0	+5.5
	0.2nm,0.3s,baz=178,slow=12,SNR=2.8						
H11N2	**WAKE ISLAND Hy**	**35.06**	**95**	T	T	03 23 58.2	
	baz=290,slow=74						
H11N1	**WAKE ISLAND Hy**	**35.06**	**95**	T	T	03 23 55.3	
	baz=290						
H11N3	**WAKE ISLAND Hy**	**35.07**	**95**	T	T	03 24 03.2	
	baz=290,slow=74						
MKAR	**Makanchi Array**	**41.30**	**310**	P	**P**	**02 47 26.6**	**+1.0**
	0.4nm,0.7s,baz=91,slow=12,SNR=2.4						
KURBB	**Kurchatov Arra**	**44.45**	**315**	P	**P**	**02 47 50.5**	**-0.6**
	0.2nm,0.4s,baz=101,slow=9.5,SNR=4.2						
ASAR	**Alice Springs**	**51.44**	**175**	P	**P**	**02 48 44.9**	**-0.6**
	0.3nm,0.6s,baz=2.1,slow=12,SNR=2.3						
FINES	**FINESS Array B**	**71.97**	**331**	P	**P**	**02 51 01.6**	**-1.9**
	0.6nm,0.3s,baz=66,slow=5.2,SNR=7.8						
YKA	**Yellowknife Ar**	**76.53**	**25**	P	**P**	**02 51 28.9**	**-1.2**
	0.1nm,0.3s,baz=294,slow=4.7,SNR=1.8						

DSN **16** *03:28:54.5±1.4, 27.°94N×54.°23E, h15km, ML4.8/8, Error ellipse: s-maj=25.8km s-min=13.1km az=70.0*
IDC **16** *03:29:01.8±0.5, 27.°17N×54.°40E, h0km, mb4.2/31, mb1 4.3/35, mb1mx4.2/63, mbtmp4.2/35, ML3.9/4, MS3.7/25, Ms1 3.7/25, ms1mx3.4/52, Error ellipse: s-maj=12.4km s-min=11.9km az=164.0*
GII **16** *03:29:02.3±0.0, 26.°97N×54.°45E, h10km*
MOS **16** *03:29:02.4±1.3, 27.°06N×54.°42E, h18km, mb4.6/26, Error ellipse: s-maj=7.0km s-min=4.9km az=96.6*
NEIC **16** *03:29:03.6±1.7, 27.°08N±0.°05×54.°36E±0.°04, h10km±1km, mb4.4/44, mb_Lg4.4(TEH), ML4.2(THR), Error ellipse: s-maj=8.9km s-min=6.5km az=354.0*
TEH **16** *03:29:03.2, 27.°13N×54.°47E, h10km, ML4.4*
THR **16** *03:29:06.1±0.3, 27.°20N×54

GHWR Ruwais 3.41 205 *e*Pn **Pn 03 29 59.0 +2.3**
SOHO SOHO 3.49 147 P **Pn 03 29 59.1 +1.3**
SOHO SOHO 3.49 147 *e*Pn **Pn 03 29 59.5 +1.7**
KRBR Kerman 3.54 35 IAML 03 30 56.7
comp=N,750nm,0.9s
TVBK TV Kerman 3.54 35 *e*Pn **Pn 03 30 00.4 +1.6**
TVBK *e* 03 30 46.5
KHGB Koh Gabri 3.74 28 *e*Pn **Pn 03 30 02.8 +1.4**
KHGB *e* 03 30 51.0
CHMN Cheshme madani 3.89 44 *e*Pn **Pn 03 30 05.9 +2.3**
CHMN *e* 03 31 05.6
SLWR Sila 3.90 220 *e*Pn **Pn 03 30 06.3 +3.0**
ARQ Araqi 4.18 153 P **Pn 03 30 09.4 +2.1**
IMEH Mehriz 4.29 2 *e*Pn **Pn 03 30 10.4 +1.3**
HOQ Hoqain 4.35 143 P **Pn 03 30 10.8 +1.2**
UMZA Um Al Zommool 4.40 171 *e*Pn **Pn 03 30 12.4 +2.1**
IBAF Bafgh 4.60 12 *e*Pn **Pn 03 30 14.5 +1.3**
KLNJ Kolanjah 4.64 328 *e*Pn **Pn 03 30 13.8 -0.1**
ISAD Sadrabad 4.86 352 *e*Pn **Pn 03 30 17.9 +1.0**
IRAM Rameshеh 5.04 340 *e*Pn **Pn 03 30 20.0 +0.7**
SMDO Samad 5.17 140 P **Pn 03 30 23.1 +2.1**
SNR=17
WSAR Wadi Sarin 5.39 134 Pn **Pn 03 30 25.2 +1.3**
comp=N,5.9nm,0.3s,baz=326,slow=8.6,SNR=56
WSAR Sn **Sn 03 31 24.3 -1.4**
comp=N,2.6nm,0.3s,baz=142,slow=19,SNR=1.2
WSAR LR LR 03 33 02.8
comp=N,442nm,19.6s,baz=330,slow=44
WSAR Wadi Sarin 5.39 134 P **Pn 03 30 26.0 +2.0**
SNR=52
WSAR S **Sn 03 31 25.9 +0.3**
IGAR Gharneh 5.70 339 *e*Pn **Pn 03 30 29.7 +1.4**
ROKH ROKH 6.02 331 *e*Pn **Pn 03 30 32.9 +0.1**
WBK Wadi Bani Khal 6.06 136 P **Pn 03 30 34.1 +0.9**
SNR=24
WBK S **Sn 03 31 40.4 -1.8**
IZEF Zefreh 6.07 343 *e*Pn **Pn 03 30 32.7 -0.9**
JHBN Jahan bin 6.09 328 *e*Pn **Pn 03 30 34.3 +0.5**
ANAR Anarak 6.12 354 *e*Pn **Pn 03 30 35.0 +1.0**
TPRV Parvadeh(Tabas 6.24 18 *e*Pn **Pn 03 30 36.8 +1.2**
BSRN Basiran 6.35 39 *e*P **Pn 03 30 37.2 -0.1**
BSRN Basiran 6.35 39 *e*Pn **Pn 03 30 37.2 -0.1**
IPIR Pirpir 6.37 332 *e*Pn **Pn 03 30 38.2 +0.5**
NHDN Nehbandan 6.52 47 *e*Pn **Pn 03 30 40.2 +0.7**
IKOO Kooshah 6.64 36 *e*Pn **Pn 03 30 42.4 +1.1**
IKLH Kolahrood 6.69 339 *e*Pn **Pn 03 30 42.9 +0.9**
MHTO MHTO 6.87 151 P **Pn 03 30 45.6 +1.3**
MHTO S **Sn 03 32 01.4 -0.7**
TKDS Koohdasht(Taba 6.91 19 *e*Pn **Pn 03 30 46.3 +1.4**
TABS Tabas 6.94 19 *e*P **Pn 03 30 46.3 +1.0**
TABS Tabas 6.94 19 *e*Pn **Pn 03 30 46.3 +1.0**
TNSJ Nastanj 7.11 15 *e*Pn **Pn 03 30 49.4 +1.8**
AFRZ Afriz 7.46 31 *e*Pn **Pn 03 30 53.7 +1.3**
SHRT Shahrakht 8.26 36 *e*P **Pn 03 31 03.7 +0.3**
SHRT Shahrakht 8.26 36 *e*Pn **Pn 03 31 03.7 +0.3**
IKMR Kamar-syah 8.28 322 *e*Pn **Pn 03 31 04.9 +1.4**
IKFM Kafar-mosalman 8.58 320 *e*Pn **Pn 03 31 09.7 +2.0**
IDOB Doab 8.59 323 *e*Pn **Pn 03 31 08.3 +0.2**
HSAM Samen 8.70 326 *e*Pn **Pn 03 31 08.3 -1.3**
RAYN Ar Rayn 8.83 248 P **Pn 03 31 10.3 -0.9**
RAYN Ar Rayn 8.83 248 **Pn 03 31 10.3 -0.9**
SHAO Shalim 9.09 173 P **Pn 03 31 14.6 -0.1**
SHAO S **Sn 03 32 55.0 -1.5**
WHFO Wadi Hawf 9.14 184 P **Pn 03 31 15.7 +0.2**
SNR=129
IRAZ Razeghan 9.15 336 *e*Pn **Pn 03 31 16.2 +0.5**
IKOM Komasi 9.25 322 *e*Pn **Pn 03 31 16.1 -0.9**
IPRN Peran 9.30 349 *e*Pn **Pn 03 31 18.5 +0.7**
DMTO DMTO 9.34 177 P **Pn 03 31 18.0 -0.1**
SNR=12
RBK Rabkut 9.54 181 P **Pn 03 31 21.6 +0.7**
SNR=10
SBZV Sabzevar 9.66 15 *e*Pn **Pn 03 31 23.2 +0.5**
ABTO Aybut 9.74 186 P **Pn 03 31 24.1 +0.3**
SNR=11
IGHG Ghaleghazi 9.90 319 *e*Pn **Pn 03 31 26.3 +0.3**
HRA Herat 9.90 41 **Pn 03 31 28.7 +2.7**
IDHR Dehrash 10.27 320 *e*Pn **Pn 03 31 30.3 -0.7**
IMYA Miami 10.41 26 *e*Pn **Pn 03 31 32.9 -0.1**
GEYT Alibeck 11.25 15 Pn **Pn 03 31 45.8 +1.5**
comp=N,0.8nm,0.3s,baz=171,slow=9.9,SNR=2.0
GEYT Lg Lg 03 34 54.7
comp=N,0.4nm,0.3s,baz=211,slow=18,SNR=1.3
GEYT LR LR 03 37 07.8
comp=N,720nm,21.4s,baz=190,slow=44
GYA0B ALIBECK ARRAY 11.25 15 Pn **Pn 03 31 45.0 +0.6**
CUKT Cukurca 13.66 321 *e*P **Pn 03 32 15.4 -1.9**
KBL Kabul 14.57 56 P **Pn 03 32 30.8 +0.8**
KBL Kabul 14.57 56 Pn **Pn 03 32 30.8 +0.8**
AKDM Akdamar-Van 14.78 322 *e*P **Pn 03 32 28.5 -4.1**
DAMY Dhamar 15.58 219 **Pn 03 32 40.9 -2.6**
DAMY IAmb IAmb 03 32 58.0
comp=Z,27nm,0.9s
AGRB Hanur-Agry 15.69 325 *e*P **P 03 32 50.2 +1.5**
MAZI Mazidag 15.70 315 *e*P **P 03 32 50.0 +1.2**
ASF Jabal al Asfar 16.07 293 Pn **Pn 03 32 48.7 -0.9**
comp=Z,0.4nm,0.3s,baz=68,slow=4.4,SNR=5.8
ASF Sn Sn 03 35 34.5 -13
comp=Z,0.3nm,0.3s,baz=85,slow=11,SNR=2.2
ASF Lg Lg 03 37 57.9
baz=143,slow=20,SNR=0.7
KARS Kars 16.46 328 *e*P **Pn 03 32 53.6 -0.9**
BNGB Bingl 16.53 319 *e*P **P 03 32 59.9 +1.9**
TBLG Delisi 16.64 334 P **Pn 03 32 56.8 +0.1**
TBLG pmax pmax
comp=Z,12nm,0.9s
TBLG Delisi 16.64 334 Pn **Pn 03 32 56.8 +0.1**
URFA Urfa 16.74 312 *e*P **P 03 33 00.2 -0.1**
AKH Akhalkalaki 16.89 331 **Pn 03 32 59.2 -0.8**
AKH P **P 03 33 01.6 -0.4**
YEDI Yedisu-Bingol 16.91 320 *e*P **P 03 33 06.0 +3.8**
SVRC Sivrice-ELAZID 16.97 315 *e*P **P 03 33 04.7 +1.8**
GHAJ Ghor Haditha 17.00 289 Pn **Pn 03 33 01.0 -0.3**
DSI Dead Sea 17.21 290 Pn **Pn 03 33 03.3 -0.6**
HMDT Nahal Hemdat 17.22 292 Pn **Pn 03 33 03.3 -0.7**
ZFRI Zfri 17.23 286 Pn **Pn 03 33 03.7 -0.4**
PTK Pertek 17.23 317 *e*P **P 03 33 07.1 +1.3**
NATI Neve Ativ 17.30 295 Pn **Pn 03 33 03.8 -1.1**
HRFI Mount Harif 17.30 284 Pn **Pn 03 33 04.3 -0.7**
KSDI Kefar Szold 17.34 295 Pn **Pn 03 33 04.3 -1.2**
GEM Giv'at Ha'Em 17.34 295 Pn **Pn 03 33 04.3 -1.2**
EIL Elat 17.34 283 P **P 03 33 07.0 +0.1**
comp=Z,0.7nm,0.3s,baz=75,slow=6.2,SNR=7.2
EIL S **S 03 36 27.7 +1.0**
comp=Z,0.1nm,0.3s,baz=359,slow=18,SNR=1.7
EIL Lg Lg 03 38 39.9
comp=Z,0.2nm,0.3s,baz=357,slow=18,SNR=1.5
EIL LR LR 03 40 43.8
comp=Z,54nm,19.4s,baz=96,slow=41
EIL Elat 17.34 283 Pn **Pn 03 33 04.2 -1.4**
MMLI Mount Malkishu 17.35 292 Pn **Pn 03 33 05.7 0.0**
PRNI Paran 17.36 285 Pn **Pn 03 33 05.2 -0.6**
YTIR Yattir 17.39 289 Pn **Pn 03 33 06.2 -0.1**
MALT Malatya 17.49 314 *e*P **P 03 33 10.2 +1.6**
MMA0B Mount Meron ar 17.50 294 Pn **Pn 03 33 06.9 -0.7**
MMAI Mount Meron Ar 17.50 294 P **Pn 03 33 07.9 +0.3**
comp=Z,1.7nm,0.3s,baz=99,slow=15,SNR=9.8
MMAI S **Sn 03 36 18.2 -3.8**
comp=Z,2.3nm,0.3s,baz=109,slow=29,SNR=3.0
GROC Groznyy 17.55 339 *e*P **P 03 33 11.4 +2.4**
GROC pmax pmax
comp=Z,27nm,0.6s
BLGI Bet Lehem HaGe 17.60 293 Pn **Pn 03 33 08.4 -0.4**
SLTI Sal'it 17.62 292 Pn **Pn 03 33 08.6 -0.4**
GAZ Gaziantep 17.70 309 **Pn 03 33 09.8 -0.2**
GAZ IAmb IAmb 03 33 15.3
comp=Z,18nm,0.9s
OFRI `Ofer 17.75 293 Pn **Pn 03 33 10.4 -0.2**
ZEI Tsey 17.87 334 *e*P **P 03 33 14.8 +2.0**
ZEI pmax pmax
comp=Z,25nm,0.6s
KZIT Kziot 17.94 287 Pn **Pn 03 33 12.0 -1.0**
YAYL Yayladag 17.97 304 *e*P **Pn 03 33 13.2 -0.2**
TAHT Tahtakopru-Hat 18.06 305 *e*P **Pn 03 33 11.4 -3.0**
KMRS Kahramanmaras 18.08 309 *e*P **P 03 33 15.5 +0.5**
DARE Darende-Malaty 18.25 313 *e*P **Pn 03 33 16.5 -0.3**
NCK Nalchik 18.59 335 *i* P **Pn 03 33 21.7 +0.9**
NCK pmax pmax
comp=Z,32nm,1.1s
TAS Tashkent 18.74 37 P **Pn 03 33 24.0 +1.3**
TAS pmax pmax
comp=Z,148nm,0.3s

TAS Tashkent 18.74 37 P **Pn 03 33 24.0 +1.3**
BTK Batken 18.77 42 P **Pn 03 33 24.1 +1.0**
BTK pmax pmax
comp=Z,11nm,0.9s
BTK Batken 18.77 42 P **Pn 03 33 24.1 +1.0**
ATD Arta Tunnel 18.93 217 P **Pn 03 33 28.2 +3.0**
comp=Z,0.4nm,0.3s,baz=27,slow=12,SNR=4.0
ATD Lg Lg 03 39 30.2
comp=Z,1.3nm,0.3s,baz=34,slow=18,SNR=1.6
ATD LR LR 03 42 04.7
comp=Z,518nm,18.5s,baz=11,slow=41
KBZ Khabaz 19.05 334 P **Pn 03 33 26.1 -0.3**
comp=Z,0.1nm,0.3s,baz=137,slow=8.1,SNR=14
KBZ Khabaz 19.05 334*ce*P **Pn 03 33 27.5 +1.1**
SHA1 Shidzhatmaz 19.16 333 *i* P **P 03 33 26.2 -0.8**
KVAR Kislovodsk Arr 19.32 334 P **Pn 03 33 30.1 +0.3**
baz=270,slow=20,SNR=1.5
KIV Kislovodsk 19.33 334*ce*P **Pn 03 33 30.4 +0.6**
KIV *eS* **S 03 37 10.6 +3.8**
KIV pmax pmax
comp=Z,22nm,1.0s
KIV MLR MLR
comp=Z,47nm,18.0s
KIV Kislovodsk 19.33 334 P **Pn 03 33 29.9 0.0**
KIV IAmb IAmb 03 33 41.9
comp=Z,20nm,0.9s
SVSK Karacayir 19.33 316 *e*P **Pn 03 33 29.8 0.0**
MERS Mersin 19.48 305 *e*P **Pn 03 33 32.2 +0.5**
BNN Bunyan 19.48 312 *e*P **Pn 03 33 32.5 +0.8**
CSS Mathiatis 19.70 299 Pn **P 03 33 32.8 0.0**
CSS Mathiatis 19.70 299 P **P 03 33 32.7 -0.1**
CSS IAmb IAmb 03 33 45.8
comp=Z,30nm,0.9s
GOF Gofitskoye 20.13 336*i* *e*P Pn 03 33 40.9 +1.7
YOZ Yozgat 20.24 313 *e*P Pn 03 33 41.0 +0.2
SOC Sochi 20.33 328 *e*P **P 03 33 39.2 -0.3**
SOC *e* 03 33 57.6
SOC *eS* **S 03 37 26.3 -0.3**
SOC *e*SSS SSS 03 38 06.1
SOC pmax pmax
comp=Z,32nm,0.8s
SOC MLR MLR
comp=Z,115nm,12.0s
KK31 Karatay Array 20.64 35 P **P 03 33 43.7 +0.8**
KK31 pmax pmax
comp=Z,9.0nm,0.9s
KK31 Karatay Array 20.64 35 P **P 03 33 43.7 +0.8**
KKAR Karatay Array 20.64 35 P **P 03 33 43.7 +0.8**
KKAR pmax pmax
comp=Z,9.0nm,0.9s
KKAR Karatay Array 20.64 35 P **P 03 33 43.7 +0.8**
BR131 Keskin Array S 21.40 311 P **P 03 33 51.6 +0.4**
SNR=17
BR131 Keskin Array S 21.40 311*c i* P **P 03 33 50.8 -0.5**
BR131 Keskin Array S 21.40 311 P **P 03 33 51.7 +0.4**
BR131 IAmb IAmb 03 33 56.5
comp=Z,22nm,1.1s
BRTR Keskin Array B 21.40 311 P **P 03 33 51.4 +0.1**
comp=Z,11nm,0.7s,baz=130,slow=13,SNR=47
BRTR LR LR 03 44 32.7
comp=Z,72nm,18.9s,baz=99,slow=44
BR231 Keskin MP Arra 22.04 311 P **P 03 33 58.5 +0.4**
BR231 IAmb IAmb 03 34 03.3
comp=Z,20nm,0.9s
ILGA Ilgaz 22.04 314 P **P 03 33 58.8 +0.5**
ANTO Ankara 22.04 311 P **P 03 33 58.3 +0.2**
ANTO pmax pmax
comp=Z,39nm,1.3s
ANTO Ankara 22.04 311 P **P 03 33 58.3 +0.2**
ANN Anapa 22.33 327 *e*P **P 03 33 59.7 -1.3**
ANN *e**PP **sP 03 34 08.1 -0.6**
ANN *e* 03 34 23.7
ANN *eS* **S 03 38 04.9 -0.8**
ANN pmax pmax
comp=Z,29nm,1.1s
AAK Ala-Archa 22.53 41 P **P 03 34 05.2 +1.8**
comp=Z,4.7nm,0.8s,baz=220,slow=13,SNR=13
AAK LR LR 03 44 36.1
comp=Z,282nm,18.2s,baz=236,slow=42
AAK Ala-Archa 22.53 41*ce*P **P 03 34 04.1 +0.6**
AAK pmax pmax
comp=Z,21nm,1.7s
AAK Ala-Archa 22.53 41 P **P 03 34 05.3 +1.8**
AAK IAmb IAmb 03 34 25.9
comp=Z,11nm,0.8s
FRU1 Bishkek 22.72 41 P **P 03 34 06.4 +1.1**
FRU1 pmax pmax
comp=Z,48nm,0.6s
FRU1 Bishkek 22.72 41 P **P 03 34 06.4 +1.1**
ELL Elmali 22.89 301 P **P 03 34 07.6 +0.3**
ELL pmax pmax
comp=Z,87nm,1.1s
ELL Elmali 22.89 301 P **P 03 34 07.6 +0.3**
AKTO Aktyubinsk 23.48 6 P **P 03 34 13.4 +0.5**
comp=Z,6.0nm,0.6s,baz=183,slow=10,SNR=11
AKTO S **S 03 38 26.1 +0.5**
comp=Z,0.8nm,0.5s,baz=104,slow=22,SNR=1.4
AKTO LR LR 03 45 24.0
comp=Z,248nm,18.7s,baz=174,slow=42
TARG Taragay, Kyrgy 24.09 47 P **P 03 34 21.6 +2.2**
VRH Novokhopyorsk 25.95 342 *e*P **P 03 34 35.2 -0.4**
VRH pmax pmax
comp=Z,10.0nm,0.9s
IDI Anoyia 26.50 295 P **P 03 34 40.7 -0.2**
comp=Z,7.3nm,0.5s,baz=82,slow=12,SNR=8.7
VSR Storozhevoye 26.74 338 *e*P **P 03 34 46.5 +3.7**
VSR pmax pmax
comp=Z,10.0nm,0.7s
LPSR Galich'ya Gora 28.01 340 *e*P **P 03 34 55.5 +1.4**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
BRVK Borovoye 28.50 20*ce*P **P 03 34 57.8 -0.8**
BRVK pmax pmax
comp=Z,2.0nm,0.8s
BRVK Borovoye 28.50 20 P **P 03 34 59.5 +0.9**
BRVK IAmb IAmb 03 34 59.7
comp=Z,3.0nm,0.6s
BVAR Borovoye Array 28.51 20 P **P 03 34 58.2 -0.4**
comp=Z,2.5nm,0.5s,baz=205,slow=6.6,SNR=14
MLR Muntele Rosu 29.18 317 P **P 03 35 06.5 +1.7**
comp=Z,1.1nm,0.5s,baz=184,slow=15,SNR=1.9
MLR LR LR 03 47 40.3
comp=Z,69nm,19.8s,baz=118,slow=38
MLR Muntele Rosu 29.18 317 P **P 03 35 06.5 +1.7**
MLR pmax pmax
comp=Z,7.0nm,1.0s
MLR Muntele Rosu 29.18 317 IAmb IAmb 03 36 07.3
comp=Z,6.5nm,1.0s
MAKZ Makanchi 29.29 40 P **P 03 35 07.8 +2.1**
MAKZ pmax pmax
comp=Z,8.0nm,1.2s
MAKZ Makanchi 29.29 40 P **P 03 35 07.8 +2.1**
MAKZ IAmb IAmb 03 35 09.9
comp=Z,7.8nm,1.1s
MK31 Makanchi Array 29.46 41 P **P 03 35 08.6 +1.4**
MK31 pmax pmax
comp=Z,9.0nm,1.6s
MK31 Makanchi Array 29.46 41 P **P 03 35 08.6 +1.4**
MK31 IAmb IAmb 03 35 59.0
comp=Z,9.3nm,1.6s
MKAR Makanchi Array 29.46 41 P **P 03 35 07.5 +0.3**
comp=Z,1.1nm,0.6s,baz=229,slow=8.0,SNR=7.4
MKAR LR LR 03 48 47.4
comp=Z,139nm,21.1s,baz=236,slow=40
ARU Arti 29.47 5 LR LR 03 48 49.4
comp=Z,129nm,18.2s,baz=180,slow=40
KURBB Kurchatov Arra 29.82 32 P **P 03 35 10.2 0.0**
comp=Z,2.0nm,0.9s,baz=232,slow=8.4,SNR=5.0
KURBB PcP **PcP 03 38 12.8 -0.5**
comp=Z,0.3nm,0.3s,baz=224,slow=4.0,SNR=2.1
KURK Kurchatov 29.93 31 *i* P **P 03 35 09.9 -1.3**
KURK pmax pmax
comp=Z,2.0nm,1.0s
KURK Kurchatov 29.93 31 P **P 03 35 11.5 +0.3**
KURK Kurchatov 29.93 31 **PcP 03 38 12.8 -0.8**
AKASG Malin Array Be 30.41 328 P **P 03 35 13.9 -1.6**
comp=Z,0.4nm,0.2s,baz=140,slow=8.3,SNR=5.6
AKBB Malin Array Si 30.41 328*ce*P **P 03 35 16.7 +1.3**
OBN Obninsk 30.89 340 *e*P **P 03 35 20.9 +1.3**
OBN pmax pmax
comp=Z,6.0nm,1.0s
OBN MLR MLR
comp=Z,61nm,18.0s
WMQ Urumqi 31.56 49 *e*P **P 03 35 29.0 +3.2**
WMQ pP pP 03 35 31.4 -0.1
WMQ sP sP 03 35 35.9 +2.1
WMQ pmax pmax
comp=Z,20nm,0.8s
WMQ pmax pmax
comp=Z,51nm,4.1s
WMQ LR LR
comp=N,48nm,29.2s
WMQ LR LR
comp=E,370nm,29.2s
WMQ LR LR
comp=Z,140nm,26.1s
KIRV Kirov 31.68 355 LR LR 03 50 31.3
comp=Z,86nm,20.4s,baz=189,slow=41
KMBO Kilima Mbogo 32.57 213 P **P 03 35 36.8 +1.7**
comp=Z,2.0nm,0.8s,baz=41,slow=20,SNR=3.1
KMBO Kilima Mbogo 32.57 213 P **P 03 35 36.8 +1.7**
KMBO pmax pmax
comp=Z,10.0nm,1.5s
KMBO Kilima Mbogo 32.57 213 IAmb IAmb 03 35 45.4
comp=Z,9.7nm,1.4s
KOLS Kolonicke sedl 33.05 320 *e*P **P 03 35 40.9 +2.1**
KOLS Kolonicke sedl 33.05 320 *e*P **P 03 35 40.9 +2.1**
DGZ Jazzator, Alta 33.90 39 *i* P **P 03 35 45.6 -0.8**
DGZ pmax pmax
comp=Z,4.0nm,1.0s
ZAA0 Zalesovo Array 34.92 31 P **P 03 35 55.1 +0.2**
ZALV Zalesovo Beam 34.92 31 P **P 03 35 54.5 -0.5**
comp=Z,4.9nm,0.5s,baz=238,slow=9.4,SNR=24
ZALV LR LR 03 51 45.3
comp=Z,114nm,19.1s,baz=231,slow=39
KLMR Klimovskoe 35.25 347 *e*P **P 03 35 57.5 -0.1**
KLMR pmax pmax
comp=Z,8.0nm,0.9s
KLMR Klimovskoe 35.25 347 *e*P **P 03 35 57.5 -0.1**
KLMR AMP 03 36 00.7
comp=Z,8.0nm,0.9s
KBA Koelnbreinsper 37.83 313 *e*P **P 03 36 20.4 +0.3**
comp=Z,7.7nm,1.1s
GERES GERESS Array B 38.16 316 P **P 03 36 23.6 +0.9**
comp=Z,0.6nm,0.6s,baz=96,slow=3.9,SNR=2.2
KHC Kasperske Hory 38.34 316*ce*P **P 03 36 22.2 -2.0**
KHC pmax pmax
comp=Z,16nm,1.7s
KHC Kasperske Hory 38.34 316 *e*P **P 03 36 24.3 +0.1**
CTI Castel Tesino 38.68 311 IAmb IAmb 03 36 49.0
comp=Z,6.2nm,0.7s
WTTA Wattenberg 39.00 313 P **P 03 36 28.7 -1.2**
comp=Z,3.8nm,0.5s
WATA Walderalm 39.06 313 *e*P **P 03 36 30.4 0.0**
comp=Z,8.4nm,1.0s
SQTA Sankt Quirin 39.27 312 *e*P **P 03 36 31.0 -1.1**
comp=Z,5.7nm,0.6s
FINES FINESS Array B 39.27 339 P **P 03 36 30.8 -0.9**
comp=Z,2.1nm,0.5s,baz=139,slow=10,SNR=16
FINES LR LR 03 53 07.5
comp=Z,28nm,19.0s,baz=196,slow=37
MOTA Moosalm 39.37 313 *e*P **P 03 36 32.7 -0.3**
comp=Z,5.5nm,0.8s
CLL Collm 39.46 319 *e*P **P 03 36 33.0 -0.4**
CLL *e*PP **PP 03 38 03.0 -1.0**
CLL Collm 39.46 319 *e*P **P 03 36 33.0 -0.4**
GTA Gaotai 39.51 60 *e*P **P 03 36 35.1 +0.9**
GTA pP pP 03 36 39.6 -0.4
GTA sP sP 03 36 42.8 +0.6
GTA pmax pmax
comp=Z,9.0nm,0.8s
FETA Feichten 39.54 312 *e*P **P 03 36 32.4 -2.0**
comp=Z,6.7nm,0.7s
RETA Reutte 39.63 313 *e*P **P 03 36 34.3 -0.7**
comp=Z,3.4nm,0.7s
FUORN Ofenpass-Fuorn 39.75 311 P **P 03 36 36.0 -0.3**
DAVA Damuels 40.16 312 *e*P **P 03 36 38.3 -1.3**
comp=Z,14nm,0.6s
CHTO Chiang Mai 41.63 92 P **P 03 36 52.9 +1.1**
CHTO pmax pmax
comp=Z,19nm,0.6s
CHTO Chiang Mai 41.63 92 P **P 03 36 52.9 +1.1**
SENIN Lac Senin/Sane 41.70 310 P **P 03 36 51.9 -0.4**
SENIN IAmb IAmb 03 37 00.7
comp=Z,3.8nm,0.6s
CMAR Chiang Mai Arr 41.75 92 P **P 03 36 54.0 +1.2**
comp=Z,1.4nm,0.4s,baz=266,slow=11,SNR=1.4
CMAR LR LR 03 57 39.3
comp=Z,37nm,18.5s,baz=256,slow=41
CMAR Chiang Mai Arr 41.75 92 P **P 03 36 54.0 +1.2**
BNI Bardonecchia 41.90 308 P **P 03 36 53.1 -0.8**
BNI pmax pmax
comp=Z,8.0nm,1.1s
BNI Bardonecchia 41.90 308 P **P 03 36 53.1 -0.8**
BNI IAmb IAmb 03 37 06.6
comp=Z,8.4nm,1.1s
LZH Lanzhou 42.65 65 *e*P **P 03 37 00.0 -0.2**
LZH pP pP 03 37 04.1 -2.0
LZH sP sP 03 37 07.5 -0.7
LZH PP **PP 03 38 40.6 +1.5**
LZH pmax pmax
comp=Z,24nm,1.0s
LZH pmax pmax
comp=Z,130nm,5.4s
HFS Hagfors 43.10 331 P **P 03 37 02.2 -1.1**
comp=Z,1.8nm,0.5s,baz=116,slow=10,SNR=9.5
MEM Membach 43.45 316 P **P 03 37 04.7 -1.5**
BGES Gesves 43.97 316 P **P 03 37 12.4 +2.0**
BMRD Maredsous 44.15 315 P **P 03 37 12.3 +0.5**
TLY Talaya 44.19 43 *i* P **P 03 37 11.5 -0.7**
TLY pmax pmax
comp=Z,2.0nm,0.8s
DOU Dourbes 44.21 315 P **P 03 37 13.3 +1.0**
DOU pP **pP 03 37 16.6 -1.5**
TAM Tamanrasset 44.34 276 P **P 03 37 14.4 +0.4**
TAM pmax pmax
comp=Z,15nm,1.8s
TAM Tamanrasset 44.34 276 P **P 03 37 14.3 +0.4**
TAM IAmb IAmb 03 37 17.3
comp=Z,15nm,1.8s
NB2 NORSAR Subarra 44.62 332 P **P 03 37 13.8 -1.7**
comp=Z,1.1nm,0.8s,baz=118,slow=8.6
NOA NORSAR Array B 44.62 332 P **P 03 37 14.0 -1.5**
comp=Z,0.9nm,0.6s,baz=117,slow=7.8,SNR=8.2
NOA LR LR 03 59 51.4
comp=Z,42nm,18.7s,baz=115,slow=42
SONM Songino Array 45.18 48 P **P 03 37 20.6 +0.3**
comp=Z,3.1nm,0.9s,baz=263,slow=8.3,SNR=12
SONM LR LR 03 58 42.4
comp=Z,142nm,21.2s,baz=258,slow=39
ULN Ulaanbaatar 45.63 48*ce*P **P 03 37 23.4 -0.5**
ULN pmax pmax
comp=Z,4.0nm,1.0s
ULN Ulaanbaatar 45.63 48 P **P 03 37 25.8 +2.0**
ULN IAmb IAmb 03 37 28.7
comp=Z,3.3nm,0.8s
ARCES ARCESS Array B 45.70 346 P **P 03 37 23.4 -0.6**
comp=Z,2.5nm,0.8s,baz=138,slow=9.3,SNR=9.2
ARCES LR LR 03 58 13.1
comp=Z,42nm,18.7s,baz=174,slow=38
NRIK Noril'sk 46.49 16 P **P 03 37 30.5 +0.3**
comp=Z,1.9nm,0.6s,baz=236,slow=6.3,SNR=2.7
NRIK LR LR 04 00 37.0
comp=Z,184nm,18.2s,baz=233,slow=41
HHC Hu-ho-hao-te 48.53 58 *e*P **P 03 37 48.8 +2.2**
HHC pmax pmax
comp=Z,13nm,0.9s
HHC pmax pmax
comp=Z,39nm,6.6s
ESDC Sonseca Array 49.57 300 P **P 03 37 54.3 -0.2**
comp=Z,1.3nm,0.6s,baz=64,slow=7.4,SNR=20
EKA Eskdalemuir Ar 49.86 321 P **P 03 37 55.0 -1.4**
comp=Z,0.7nm,0.3s,baz=105,slow=7.5,SNR=14
EKA Eskdalemuir Ar 49.86 321 P **P 03 37 55.0 -1.4**
MDT Midelt 50.92 292 P **P 03 38 05.2 +0.4**
comp=Z,1.5nm,0.4s,baz=94,slow=8.3,SNR=5.9
TOA0 Torodi Ar. Sit 51.09 265 P **P 03 38 05.6 -0.6**
TORD Torodi Ar. Bea 51.09 265 P **P 03 38 05.5 -0.7**
comp=Z,2.7nm,0.5s,baz=66,slow=7.8,SNR=34
TORD LR LR 04 01 59.0
comp=Z,92nm,19.8s,baz=100,slow=39
BOD Bodaibo 51.37 36 *e*P **P 03 38 07.0 -0.7**
BOD pmax pmax
comp=Z,9.0nm,1.5s
WHN Wuhan 52.08 71 P **P 03 38 12.6 -0.8**
SPITS Spitsbergen Ar 53.99 351 P **P 03 38 27.4 +0.5**
comp=Z,4.9nm,0.9s,baz=169,slow=10,SNR=1.5
HIA Hailar 54.11 47 *i* P **P 03 38 26.9 -1.3**
HIA pmax pmax
comp=Z,3.0nm,0.8s
YAK Yakutsk 59.57 32 LR LR 04 07 32.7

comp=Z,113nm,18.8s,baz=2.5,slow=39
DBIC Dimbokro 59.70 262 P **P** **03 39 07.9 -0.4**
comp=Z,2.9nm,0.4s,baz=51,slow=5.3,SNR=9.3
DBIC LR LR 04 05 43.2
comp=Z,67nm,18.9s,baz=56,slow=37
DBIC Dimbokro 59.70 262 P **P** **03 39 07.9 -0.4**
DBIC pmax pmax
comp=Z,8.0nm,0.9s
KIC Kosan Boka 59.74 261 *e*PKP1 **P** **03 39 08.2 -0.4**
comp=Z,5.2nm,0.7s
TIC Toumodi 59.86 262 *e*PKP1 **P** **03 39 08.9 -0.5**
LIC Lamto 60.06 261 *e*PKP1 **P** **03 39 08.8 -2.0**
comp=Z,3.1nm,0.4s
KSRS Korea Array 61.58 60 P **P** **03 39 20.0 -0.8**
comp=Z,1.0nm,0.6s,baz=279,slow=6.8,SNR=5.0
KLR Kul'dur 61.94 46 *i* P **P** **03 39 21.7 -1.3**
KLR pmax pmax
comp=Z,3.0nm,0.9s
BOSA Boshof 62.05 209 P **P** **03 39 24.4 +0.3**
comp=Z,3.4nm,0.5s,baz=18,slow=5.5,SNR=14
BOSA LR LR 04 05 52.7
comp=Z,81nm,21.7s,baz=31,slow=36
BOSA Boshof 62.05 209 P **P** **03 39 24.4 +0.3**
BOSA pmax pmax
comp=Z,64nm,2.0s
SEY Seymchan 69.74 29 *i* P **P** **03 40 10.3 -2.7**
MA2 Magadan 70.13 33 LR LR 04 15 36.9
comp=Z,56nm,18.0s,baz=254,slow=40
BILL Bilibino 72.85 21 *e*P **P** **03 40 30.6 -1.1**
BILL pmax pmax
comp=Z,2.0nm,0.9s
BILL MLR MLR
comp=Z,87nm,20.0s
PETK Petropavlovsk- 76.23 37 LR LR 04 16 55.3
comp=Z,53nm,18.8s,baz=238,slow=38
FITZ Fitzroy Crossi 82.33 115 P **P** **03 41 26.1 +0.6**
comp=Z,2.0nm,0.6s,baz=301,slow=4.8,SNR=10
INK Inuvik 84.71 3 P **P** **03 41 36.5 -0.3**
comp=Z,0.8nm,0.7s,baz=153,slow=7.6,SNR=3.6
INK Inuvik 84.71 3 IAmb IAmb 03 42 06.5
comp=Z,3.3nm,1.1s
MLY Manley 86.13 10 P **P** **03 41 44.6 +0.5**
MLY IAmb IAmb 03 41 58.3
comp=Z,2.2nm,0.9s
BPAW Bear Paw Mtn. 86.95 11 P **P** **03 41 48.3 +0.2**
ILAR Eielson Array 86.95 9 P **P** **03 41 47.0 -1.1**
comp=Z,0.5nm,0.8s,baz=317,slow=3.9,SNR=5.2
EGAK Eagle 87.64 7 P **P** **03 41 52.7 +1.3**
JAY Jayapura 87.81 94 LR LR 04 23 30.0
comp=Z,60nm,21.4s,baz=352,slow=37
YKA Yellowknife Ar 90.30 355 P **P** **03 42 03.9 -0.1**
comp=Z,0.6nm,0.7s,baz=13,slow=5.0,SNR=12
WRA Warramunga Arr 90.37 112 P **P** **03 42 05.5 +0.5**
comp=Z,0.8nm,0.7s,baz=315,slow=4.1,SNR=3.2
ASAR Alice Springs 91.79 116 P **P** **03 42 12.5 +1.0**
comp=Z,0.3nm,0.7s,baz=308,slow=4.6,SNR=2.1
PSUB Penn St. - Bra 98.64 323 P **P** **03 42 40.6 -2.0**
TXAR Lajitas Array 120.11 338 PKP **PKPdf** **03 47 54.5 -0.3**
comp=Z,0.2nm,0.8s,baz=270,slow=2.7,SNR=2.4

VIE ***16*** *03:37:03.7±0.9,51˚.49N×16˚.12E, h0km, mb2.6/6, ml3.1/6, Error ellipse: s-maj=10.6km s-min=5.7km az=40.0 76 km NW of Wroclaw Suspected Mining induced.*
IDC ***16*** *03:37:04.5±0.8,51˚.52N×16˚.05E, h0km, mb3.2/1, mb1 3.4/7, mb1mx3.2/46, mbtmp3.3/7, ML2.8/5, Error ellipse: s-maj=14.6km s-min=8.1km az=109.0*
BGR ***16*** *03:37:04.4±0.3,51˚.49N×16˚.10E, h1km, ML3.1/11, Error ellipse: s-maj=4.4km s-min=3.3km az=178.0*
UPP ***16*** *03:37:07.2±3.1,51˚.86N×15˚.68E, h0km, ML2.2, Suspected explosion*
ISC 16 03:37:01.6±0.6, 51˚.60N±0˚.03×16˚.18E±0˚.03, h0km, n52, σ1⇟77/88, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.76**	**174**	*e*Pg	**Pg**	**03 37 17.0**	**+1.0**
CHVC	**Chvalec**	**1.01**	**184**	*e*PG	**Pg**	**03 37 21.8**	**+0.9**
CHVC				*e*SG	**Sg**	**03 37 33.7**	**-0.3**
	comp=Z,118nm,0.5s						
OSTC	**Ostas**	**1.04**	**179**	*e*PG	**Pb**	**03 37 22.5**	**+0.1**
OSTC				*e*SG	**Sg**	**03 37 35.1**	**+0.2**
	comp=Z,143nm,0.5s						
UPC	**Upice**	**1.09**	**186**	*e*PG	**Pg**	**03 37 23.1**	**+0.6**
UPC				*e*SG	**Sg**	**03 37 36.3**	**-0.4**
	comp=Z,164nm,0.4s						
DPC	**Dobruska-Polom**	**1.25**	**176**	*e*Pg	**Pg**	**03 37 25.8**	**+0.3**
DPC				*e*Sg	**Sg**	**03 37 41.7**	**0.0**
DPC	**Dobruska-Polom**	**1.25**	**176**	*e*PG	**Pg**	**03 37 25.7**	**+0.2**
DPC				*e*SG	**Sg**	**03 37 41.4**	**-0.3**
	comp=Z,84nm,0.7s						
BRG	**Berggiesshubel**	**1.58**	**244**	PN	**Pn**	**03 37 31.4**	**+0.6**
BRG				PG	**Pb**	**03 37 32.5**	**+0.8**
BRG				SG	**Sn**	**03 37 52.4**	**+0.5**
	334nm,0.3s						
GKP	**Gorka Klasztor**	**1.80**	**21**	*e*Sg	**Sg**	**03 38 05.2**	**+5.8**
FBE	**Freiberg**	**1.90**	**250**	*e*Pg	**Pb**	**03 37 37.9**	**+0.9**
FBE				*e*Sg	**Sn**	**03 38 01.4**	**+1.6**
GOPC	**GO Pecny, Ondr**	**1.90**	**208**	*e*PG	**Pn**	**03 37 36.1**	**+0.8**
GOPC				*e*SG	**Sb**	**03 38 01.4**	**0.0**
	comp=Z,54nm,0.5s						
PRU	**Pruhonice**	**1.91**	**213**	*e*PG	**Pn**	**03 37 36.2**	**+0.8**
PRU				*e*SG	**Sb**	**03 38 02.0**	**+0.2**
	comp=Z,100nm,0.5s						
CLL	**Collm**	**2.01**	**263**	*e*Pn	**Pn**	**03 37 37.7**	**+1.0**
CLL	**Collm**	**2.01**	**263**	*e*Pn	**Pn**	**03 37 38.0**	**+1.3**
CLL				*e*Pg	**Pb**	**03 37 40.0**	**+1.1**
CLL				*i*		03 37 41.8	
CLL				*i* Sg	**Sg**	**03 38 07.4**	**+1.4**
	comp=Z,39nm,0.6s						
MORC	**Moravsky Berou**	**2.02**	**154**	*e*PN	**Pn**	**03 37 37.0**	**+0.1**
MORC				*e*SG	**Sb**	**03 38 05.5**	**+0.7**
MORC	**Moravsky Berou**	**2.02**	**154**	*e*Pn	**Pn**	**03 37 37.3**	**+0.4**
OKC	**Ostrava-Krasne**	**2.16**	**144**	*e*Sg	**Sg**	**03 38 10.4**	**-0.4**
OKC	**Ostrava-Krasne**	**2.16**	**144**	*e*PN	**Pn**	**03 37 40.2**	**+1.4**
OKC				*e*PG	**Pg**	**03 37 42.8**	**-0.1**
OKC				*e*SG	**Sg**	**03 38 10.6**	**-0.3**
	comp=Z,54nm,0.5s						
VRAC	**Vranov**	**2.30**	**173**	Pn	**Pn**	**03 37 42.0**	**+1.2**
	comp=Z,1.9nm,0.3s,baz=350,slow=17,SNR=27						
VRAC				Sn	**Sb**	**03 38 12.2**	**-0.8**
	comp=Z,6.6nm,0.3s,baz=62,slow=18,SNR=3.8						
VRAC	**Vranov**	**2.30**	**173**	*e*PN	**Pn**	**03 37 41.5**	**+0.7**
VRAC				*e*SG	**Sb**	**03 38 14.5**	**+1.5**
TREC	**Trest**	**2.34**	**191**	*e*SG	**Sb**	**03 38 15.8**	**+1.6**
	comp=Z,40nm,0.6s						
PBCC	**Pribram**	**2.36**	**217**	*e*PG	**Pb**	**03 37 45.8**	**+0.8**
PBCC				*e*SG	**Sb**	**03 38 15.6**	**+0.9**
KRUC	**Moravsky**	**2.54**	**177**	*e*PN	**Pn**	**03 37 45.3**	**+1.3**
KRUC				*e*SG	**Sg**	**03 38 21.9**	**-1.2**
TANN	**Tannenbergstha**	**2.63**	**245**	*e*Pn	**Pn**	**03 37 45.7**	**+0.4**
TANN				*e*Sg	**Sb**	**03 38 23.8**	**+0.9**
OJC	**Ojcow**	**2.67**	**120**	*e*Pn	**Pn**	**03 37 46.3**	**+0.5**
NKC	**Novy Kostel**	**2.73**	**241**	*e*PN	**Pn**	**03 37 47.6**	**+1.0**
NKC				*e*SG	**Sg**	**03 38 29.4**	**+0.3**
	comp=Z,132nm,0.4s						
KHC	**Kasperske Hory**	**2.98**	**215**	*e*PN	**Pn**	**03 37 50.7**	**+0.6**
KHC				*e*PG	**Pb**	**03 37 56.7**	**+1.2**
KHC				*e*SN	**Sn**	**03 38 26.1**	**-0.3**
KHC				*e*SG	**Sg**	**03 38 35.5**	**-1.6**
	comp=Z,26nm,0.5s						
MOX	**Moxa**	**3.03**	**253**	*e*Sg	**Sg**	**03 38 38.9**	**+0.1**
MANZ	**Manzenberg**	**3.04**	**240**	*e*Pn	**Pn**	**03 37 51.5**	**+0.6**
MANZ				*e*Sg	**Sg**	**03 38 38.0**	**-1.3**
ROTZ	**Rotzenmuhle**	**3.12**	**236**	*e*Pn	**Pn**	**03 37 52.6**	**+0.6**
GEC2	**GERESS Array S**	**3.18**	**211**	*e*Pn	**Pn**	**03 37 53.8**	**+0.9**
GEC2				*e*Sg	**Sb**	**03 38 40.5**	**+2.2**
GERES	**GERESS Array B**	**3.18**	**211**	Pn	**Pn**	**03 37 54.2**	**+1.4**
	comp=Z,1.7nm,0.3s,baz=30,slow=12,SNR=21						
GERES				Pg	**Pb**	**03 38 00.7**	**+1.7**
	comp=Z,2.9nm,0.3s,baz=25,slow=19,SNR=15						
GERES				Lg	Lg	03 38 41.0	
	comp=Z,6.7nm,0.3s,baz=28,slow=29,SNR=12						
WET	**Wettzell**	**3.24**	**222**	*e*Pn	**Pn**	**03 37 54.2**	**+0.5**
MODS	**Modra-Piesok**	**3.30**	**167**	*e*PG	**Pg**	**03 38 04.4**	**-0.4**
MODS				*e*SG	**Sg**	**03 38 48.7**	**+1.1**
MODS				*e*LG	Lg	03 38 53.1	
VYHS	**Vyhne**	**3.54**	**150**	*e*PN	**Pn**	**03 37 58.7**	**+0.8**
VYHS				*e*SG	**Sg**	**03 38 58.9**	**+3.5**
BSD	**Bornholm Skovb**	**3.61**	**348**	*i* P	**Pn**	**03 37 59.2**	**+0.6**
BSD				*e*S	**Sn**	**03 38 38.6**	**-3.3**
CONA	**Conrad Observa**	**3.68**	**183**	*e*Pn	**Pn**	**03 38 01.0**	**+1.3**
	comp=Z,0.6nm,0.1s						
CONA				Sg	**Sg**	**03 38 58.9**	**-0.7**
	comp=Z,12nm,0.4s						
MOA	**Molln**	**3.95**	**199**	*e*Pn	**Pn**	**03 38 04.4**	**+1.0**
	comp=Z,1.9nm,0.2s						
ARSA	**Arzberg**	**4.37**	**186**	*e*Pn	**Pn**	**03 38 10.4**	**+1.2**
	comp=Z,2.7nm,0.3s						
ARSA				Sg	**Sg**	**03 39 20.0**	**-1.9**
	comp=Z,23nm,0.8s						
BLEU	**Blekinge**	**4.72**	**358**	P	**Pn**	**03 38 14.7**	**+0.7**
BLEU				S	**Sn**	**03 39 06.4**	**-3.0**
KOLS	**Kolonicke sedl**	**4.73**	**122**	*e*PN	**Pn**	**03 38 15.6**	**+1.5**
BJUU	**Bjuv**	**4.86**	**339**	P	**Pn**	**03 38 15.9**	**0.0**
BJUU				S	**Sn**	**03 39 09.1**	**-3.7**
KBA	**Koelnbreinsper**	**4.88**	**203**	*e*Pn	**Pn**	**03 38 17.8**	**+1.4**
	comp=Z,2.3nm,0.3s						
DEL	**Delary**	**5.07**	**345**	P	**Pn**	**03 38 19.1**	**+0.3**
VXJU	**Vaexsjoe**	**5.39**	**353**	P	**Pn**	**03 38 24.3**	**+1.2**
OSKU	**Oskarshamn**	**5.61**	**360**	P	**Pn**	**03 38 27.4**	**+1.2**
EKSU	**Eksjoe**	**6.01**	**355**	P	**Pn**	**03 38 32.8**	**+1.1**
AKASG	**Malin Array Be**	**8.26**	**91**	Pn	**Pn**	**03 39 02.5**	**0.0**
	comp=Z,1.5nm,0.3s,baz=282,slow=12,SNR=5.1						
HFS	**Hagfors**	**8.67**	**352**	Pn	**Pn**	**03 39 09.2**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=134,slow=12,SNR=1.6						
HFS				Sn	**Sn**	**03 40 41.4**	**-5.1**
	comp=Z,0.2nm,0.3s,baz=175,slow=22,SNR=2.3						
FINES	**FINESS Array B**	**11.27**	**25**	Pn	**Pn**	**03 39 44.2**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=207,slow=21,SNR=1.5						
FINES				Sn	**Sn**	**03 41 41.8**	**-8.4**
	comp=Z,0.2nm,0.3s,baz=222,slow=26,SNR=2.1						
EKA	**Eskdalemuir Ar**	**12.11**	**296**	Pn	**Pn**	**03 39 51.9**	**-3.3**
	baz=105,slow=14,SNR=2.1						
ARCES	**ARCESS Array B**	**18.53**	**10**	Pn	**P**	**03 41 18.6**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=184,slow=13,SNR=1.9						
YKA	**Yellowknife Ar**	**59.80**	**336**	P	**P**	**03 47 10.8**	**+2.9**
	comp=Z,0.2nm,0.8s,baz=32,slow=7.0,SNR=4.1						

NIED ***16*** *04:00:00,36˚.30N×137˚.60E, h5km, Mw4.2 Best double couple: M0 2.06000×10¹⁵ NP1:ϕs188.00000°,δ85.00000°, λ52.00000°. NP2:ϕs91.00000°,δ38.00000°,λ171.00000°.*
JMA ***16*** *04:00:05.5,36˚.29N×137˚.60E, h2km±1km, M3.7 Broadband fault plane solution: P waves. NP1: ϕs98.00000°,δ55.00000°,λ171.00000°. NP2: ϕs194.00000°,δ82.00000°,λ35.00000°. Principal axes: T Plg30.0000°, Azm62.0000°; N Plg54.0000°, Azm204.0000°; P Plg18.0000°, Azm321.0000°;*
JMA Felt II J1.
IDC ***16*** *04:00:06.7±0.9,36˚.23N×137˚.71E, h0km, mb3.6/6, mb1 3.8/8, mb1mx3.6/42, mbtmp3.5/8, ML2.8/2, MS3.3/9, Ms1 3.3/9, ms1mx3.0/43 Error ellipse: s-maj=29.2km s-min=8.6km az=146.0*
ISC 16 04:00:07.4±0.7, 36˚.27N±0˚.04×137˚.62E±0˚.03, h10km, n24, σ1⇟66/22, mb3.5/6, MS3.4/8, 2C-2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.25**	**259**	⇑P	**Pg**	**04 00 10.4**	**-2.2**
JGN				S	**Sg**	**04 00 14.0**	**-2.1**
JTT	**Ttatey**	**0.41**	**325**	⇓P	**Pg**	**04 00 13.4**	**-2.1**
JTT				S	**Sg**	**04 00 23.4**	**-1.5**
JNG	**Nsakai**	**0.41**	**70**	⇑P	**Pg**	**04 00 13.9**	**-1.6**
JNG				S	**Sg**	**04 00 19.8**	**-1.1**
MAT	**Matsushiro**	**0.54**	**60**	P	**Pg**	**04 00 16.2**	**-1.8**
MAT				S	**Sg**	**04 00 24.2**	**-1.0**
MAT	**Matsushiro**	**0.54**	**60**	P	**Pg**	**04 00 16.2**	**-1.8**
MAT				S	**Sg**	**04 00 23.9**	**-1.3**
MJAR	**Matsushiro Arr**	**0.55**	**60**	Pg	**Pg**	**04 00 16.6**	**-1.4**
	68nm,0.3s,baz=246,slow=19,SNR=2361						
MJAR				Lg	Lg	04 00 24.6	
	104nm,0.3s,baz=247,slow=36,SNR=32						
JNT	**Takato**	**0.57**	**133**	⇓P	**Pg**	**04 00 17.1**	**-1.5**
JNT				S	**Sg**	**04 00 25.2**	**-1.0**
JHJ	**Hachijo jima 2**	**3.61**	**150**	Pn	**Pb**	**04 01 10.0**	**-1.4**
	10.0nm,0.3s,baz=197,slow=11,SNR=2.1						
JNU	**Nakatsue**	**6.38**	**242**	Pn	**Pn**	**04 01 43.2**	**+1.6**
	0.1nm,0.3s,baz=246,slow=17,SNR=2.0						
JNU				Lg	Lg	04 03 28.8	
	0.2nm,0.3s,baz=188,slow=12,SNR=4.9						
KSRS	**Korea Array**	**7.87**	**282**	Pn	**Pn**	**04 02 03.9**	**+2.0**
	0.4nm,0.3s,baz=95,slow=14,SNR=3.1						
USRK	**Ussuriysk Ar.**	**9.01**	**333**	LR	LR	04 05 42.2	
	comp=Z,68nm,19.5s,baz=148,slow=37						
SONM	**Songino Array**	**25.73**	**306**	P	**P**	**04 05 40.3**	**+2.2**
	0.6nm,0.7s,baz=108,slow=9.4,SNR=2.2						
SONM				LR	LR	04 16 14.4	
	comp=Z,116nm,18.7s,baz=106,slow=38						
TLY	**Talaya**	**28.58**	**313**	LR	LR	04 17 21.9	
	comp=Z,45nm,19.7s,baz=90,slow=36						
ZALV	**Zalesovo Beam**	**40.19**	**313**	LR	LR	04 25 01.2	
	comp=Z,23nm,18.1s,baz=84,slow=37						
MKAR	**Makanchi Array**	**41.94**	**302**	LR	LR	04 26 08.8	
	comp=Z,40nm,20.3s,baz=95,slow=37						
NRIK	**Noril'sk**	**42.71**	**336**	LR	LR	04 26 51.2	
	comp=Z,75nm,18.8s,baz=126,slow=38						
WRA	**Warramunga Arr**	**55.99**	**184**	P	**P**	**04 09 46.5**	**+0.3**
	0.8nm,1.0s,baz=1.4,slow=7.6,SNR=2.8						
ASAR	**Alice Springs**	**59.72**	**184**	P	**P**	**04 10 13.2**	**+0.8**
	0.8nm,0.9s,baz=6.7,slow=8.8,SNR=4.6						
ARCES	**ARCESS Array B**	**63.62**	**339**	LR	LR	04 41 53.7	
	comp=Z,38nm,19.4s,baz=118,slow=39						
YKA	**Yellowknife Ar**	**65.97**	**29**	P	**P**	**04 10 53.5**	**0.0**
	0.4nm,0.8s,baz=296,slow=6.3,SNR=6.1						
NOA	**NORSAR Array B**	**73.67**	**336**	LR	LR	04 47 21.8	
	comp=Z,20nm,18.0s,baz=35,slow=38						
BRTR	**Keskin Array B**	**77.04**	**310**	LR	LR	04 48 55.8	
	comp=Z,12nm,18.0s,baz=314,slow=38						
NVAR	**Mina Array Bea**	**77.86**	**51**	P	**P**	**04 12 07.3**	**+1.7**
	0.1nm,0.3s,baz=286,slow=4.6,SNR=1.9						
PDAR	**Pinedale Array**	**80.34**	**44**	P	**P**	**04 12 19.2**	**0.0**
	0.2nm,0.6s,baz=268,slow=2.6,SNR=2.4						

ZUR ***16*** *04:21:39.5,47˚.47N×7˚.19E, h10km, MLh2.1/62, Error ellipse: s-maj=1.6km s-min=0.6km az=240.0*
BGR ***16*** *04:21:39.8±0.6,47˚.49N×7˚.20E, h10km, ML2.1/6, Error ellipse: s-maj=3.3km s-min=2.2km az=48.0*
LDG ***16*** *04:21:39.8±0.1,47˚.46N×7˚.22E, h10km, Md2.5/2, Ml2.5/29, Error ellipse: s-maj=1.1km s-min=0.9km az=147.0*
STR ***16*** *04:21:40.0±0.5,47˚N±2˚×±˚, h13km±6km, MLv2.0/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/haslach_taup-2.11 preliminary*
ISC 16 04:21:38.9±0.8, 47˚.46N±0˚.01×7˚.18E±0˚.01, h19km±2km, n115, σ1⇟02/200, 43C-13D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOURR	**Bourrignon**	**0.07**	**152**	⇓Pg	**Pg**	**04 21 42.4**	**-0.2**
	1.0nm,SNR=28						
BOURR				Sg	**Sg**	**04 21 44.3**	**-0.7**
BOURR	**Bourrignon**	**0.07**	**152**	⇓*i*Pg	**Pg**	**04 21 42.4**	**-0.2**
BOURR				Sg	**Sg**	**04 21 44.2**	**-0.7**
LOMF	**Lomont**	**0.26**	**246**	⇑Pg	**Pb**	**04 21 45.6**	**+0.7**
LOMF	**Lomont**	**0.26**	**246**	Pg	**Pb**	**04 21 45.7**	**+0.7**
LOMF	**Lomont**	**0.26**	**246**	Sg	**Sb**	**04 21 50.0**	**+0.9**
MATTE	**Schuetzenmatte**	**0.28**	**71**	⇓Pg	**Pg**	**04 21 45.1**	**-0.1**
MATTE				⇓Pg	**Pg**	**04 21 45.1**	**-0.1**
	0.2nm,SNR=1.5						
SBIS2	**Binningen**	**0.29**	**73**	⇑Pg	**Pb**	**04 21 45.4**	**0.0**
	0.9nm,SNR=4.1						
SBAM2	**Basel, Mnster**	**0.30**	**71**	⇑Pg	**Pb**	**04 21 45.6**	**-0.1**
	1.4nm,SNR=2.5						
SBAW	**Basel, Wirtsch**	**0.30**	**73**	⇑Pg	**Pb**	**04 21 45.7**	**0.0**
	1.0nm,SNR=2.3						
SBAF	**Basel-Friedhof**	**0.31**	**66**	⇑Pg	**Pb**	**04 21 45.7**	**-0.1**
	0.8nm,SNR=1.8						
OTER2	**Otterbach 2 (B**	**0.31**	**67**	⇓Pg	**Pg**	**04 21 45.2**	**-0.5**
	29nm,SNR=2.2						
OTER2				⇓Pg	**Pg**	**04 21 45.2**	**-0.5**
SRHB	**Riehen-Baumlih**	**0.32**	**70**	⇑Pg	**Pb**	**04 21 46.1**	**-0.1**
	1.0nm,SNR=2.3						
SOLB	**Solothurn Schu**	**0.34**	**138**	Sg	**Sg**	**04 21 51.6**	**+0.5**
SRHE	**Riehen, Erlens**	**0.34**	**68**	⇑Pg	**Pb**	**04 21 46.4**	**-0.1**
	1.7nm,SNR=2.1						
SRHH	**Riehen, Zur Ho**	**0.34**	**69**	⇑Pg	**Pg**	**04 21 46.3**	**+0.1**
	0.6nm,SNR=5.1						
SBEG	**Bettingen Gewe**	**0.35**	**71**	⇑Pg	**Pg**	**04 21 46.3**	**0.0**
	0.3nm,SNR=3.4						
SOLZ	**Solothurn, Zeu**	**0.35**	**136**	Sg	**Sg**	**04 21 51.6**	**+0.2**
BALST	**Balsthal**	**0.37**	**109**	⇑Pg	**Pg**	**04 21 46.8**	**0.0**
BALST				⇑Pg	**Pg**	**04 21 46.8**	**0.0**
	0.4nm,SNR=13						
BALST	**Balsthal**	**0.37**	**109**	⇑*i*Pg	**Pg**	**04 21 46.8**	**0.0**
BALST				Sg	**Sg**	**04 21 51.8**	**-0.3**
SKAF	**Kaiseraugst-Fr**	**0.38**	**78**	⇑Pg	**Pg**	**04 21 46.7**	**-0.1**
	0.5nm,SNR=4.4						
SAUR	**Augst-Roemermu**	**0.38**	**78**	⇑*i*Pg	**Pg**	**04 21 46.7**	**-0.1**
	0.8nm,SNR=6.2						
MOF	**Molkenrain**	**0.39**	**355**	⇓*i*Pg	**Pb**	**04 21 47.6**	**+0.2**
MOF				Sg	**Sb**	**04 21 53.2**	**0.0**
MOF	**Molkenrain**	**0.39**	**355**	Pg	**Pb**	**04 21 47.6**	**+0.2**
MOF	**Molkenrain**	**0.39**	**355**	Sg	**Sb**	**04 21 53.3**	**0.0**
HINF	**Hinteralfeld**	**0.42**	**328**	*e*Pg	**Pg**	**04 21 47.8**	**+0.2**
HINF				*e*Sg	**Sg**	**04 21 53.5**	**0.0**
	22nm,0.2s						
ENDD	**Endenburg**	**0.46**	**56**	⇑*i*Pg	**Pg**	**04 21 47.9**	**-0.3**
ENDD				P*	**Pb**	**04 21 48.7**	**+0.2**
ENDD				Sg	**Sg**	**04 21 53.5**	**-1.0**
ENDD				SmS		04 21 57.2	
ROTHE	**Rothenfluh**	**0.50**	**88**	⇑Pg	**Pg**	**04 21 49.3**	**+0.2**
	0.2nm,SNR=5.1						
ROTHE				⇑Pg	**Pg**	**04 21 49.3**	**+0.2**
EMMET	**Emmethof**	**0.57**	**92**	⇑Pg	**Pg**	**04 21 50.3**	**+0.1**
EMMET				⇑Pg	**Pg**	**04 21 50.3**	**+0.1**
	0.2nm,SNR=5.2						
SULZ	**Cheisacher**	**0.64**	**84**	⇑Pg	**Pg**	**04 21 51.5**	**-0.1**
	0.2nm,SNR=4.7						
SULZ				⇑Pg	**Pg**	**04 21 51.5**	**-0.1**
SULZ	**Cheisacher**	**0.64**	**84**	⇑*i*Pg	**Pg**	**04 21 51.5**	**-0.1**
SULZ				Sg	**Sg**	**04 21 59.8**	**-0.2**
STAF	**Tafers**	**0.66**	**178**	⇓Pg	**Pb**	**04 21 52.7**	**+0.9**
	0.2nm,SNR=1.8						
TORNY	**Torny/Romont**	**0.70**	**192**	⇓Pg	**Pb**	**04 21 53.7**	**+1.1**
	0.3nm,SNR=5.2						
TORNY				⇓Pg	**Pb**	**04 21 53.7**	**+1.1**
KIZ	**Kirchzarten**	**0.70**	**45**	⇑Pg	**Pg**	**04 21 52.6**	**-0.2**
	0.2nm,SNR=9.1						
KIZ				⇑Pg	**Pg**	**04 21 52.6**	**-0.2**
KIZ				Sg	**Sg**	**04 22 01.4**	**-0.8**
KIZ	**Kirchzarten**	**0.70**	**45**	Pg	**Pg**	**04 21 52.6**	**-0.2**
KIZ				Sg	**Sg**	**04 22 01.4**	**-0.8**
KIZ				SmS		04 22 03.3	
KIZ	**Kirchzarten**	**0.70**	**45**	Sg	**Sg**	**04 22 01.5**	**-0.7**
KIZ	**Kirchzarten**	**0.70**	**45**	Pg	**Pg**	**04 21 52.6**	**-0.2**
BRANT	**Les Verrieres**	**0.71**	**223**	⇑Pg	**Pb**	**04 21 53.9**	**+1.1**
BRANT				⇑Pg	**Pb**	**04 21 53.9**	**+1.1**
	0.2nm,SNR=4.2						
ECH	**Echery**	**0.76**	**359**	⇓Pg	**Pb**	**04 21 53.9**	**+0.4**
	0.2nm,SNR=8.1						
ECH				⇓Pg	**Pb**	**04 21 53.9**	**+0.4**
ECH	**Echery**	**0.76**	**359**	Pg	**Pb**	**04 21 53.9**	**+0.4**
ECH				PmP		04 21 54.4	
ECH				Sg	**Sb**	**04 22 03.9**	**+0.5**
ECH				SmS		04 22 04.9	
ECH	**Echery**	**0.76**	**359**	Pg	**Pb**	**04 21 54.2**	**+0.6**
ECH				Sg	**Sb**	**04 22 04.0**	**+0.5**
ECH	**Echery**	**0.76**	**359**	Pg	**Pb**	**04 21 54.0**	**+0.5**
ECH				Sg	**Sb**	**04 22 04.5**	**+1.0**
METMA	**Mettma DE**	**0.77**	**70**	⇑Pg	**Pg**	**04 21 53.5**	**-0.5**
	0.2nm,SNR=7.5						
METMA				⇑Pg	**Pg**	**04 21 53.5**	**-0.5**
METMA	**Mettma DE**	**0.77**	**70**	Pg	**Pg**	**04 21 53.6**	**-0.5**
METMA				PmP		04 21 54.1	
METMA				Sg	**Sg**	**04 22 03.6**	**-0.6**
HAMIK	**Hmikon, Dlik**	**0.77**	**106**	⇑Pg	**Pb**	**04 21 54.2**	**+0.4**
HAMIK				⇑Pg	**Pb**	**04 21 54.2**	**+0.4**
	1.9nm,SNR=1.6						
HAU	**Haudompre**	**0.78**	**315**	*e*Pg	**Pb**	**04 21 54.6**	**+0.6**
HAU				*e*Sg	**Sb**	**04 22 05.1**	**+0.8**
	50nm,0.2s						
BERGE	**Lenzkirch (DE)**	**0.79**	**58**	⇑Pg	**Pg**	**04 21 54.0**	**-0.4**
	0.2nm,SNR=8.9						
BERGE				⇑Pg	**Pg**	**04 21 54.0**	**-0.4**
BERGE	**Lenzkirch (DE)**	**0.79**	**58**	⇑*e*Pg	**Pg**	**04 21 54.1**	**-0.4**
BERGE				*e*Sg	**Sg**	**04 22 04.1**	**-0.9**
BOBI	**Bbikon, Wasse**	**0.79**	**83**	⇑Pg	**Pb**	**04 21 54.5**	**+0.4**
BOBI				⇑Pg	**Pb**	**04 21 54.5**	**+0.4**
	0.9nm,SNR=0.9						
EWZT2	**Wettswil, ZR**	**0.90**	**97**	⇑Pn	**Pb**	**04 21 56.6**	**+0.6**
	1.2nm,SNR=1.4						
EWZT2				⇑Pn	**Pb**	**04

	0.3nm,0.1s							
MOTA				Sg	Sg	04 23 03.2	-1.5	
	0.7nm,0.2s							
AVF	**Avril sur Loir**	**2.70**	**257**	*e*Pn	**Pn**	**04 22 22.0**	**+0.7**	
AVF	**Avril sur Loir**	**2.70**	**257**	*e*Pg	**Pg**	**04 22 30.0**	**-0.6**	
AVF				*e*Sn	**Sn**	**04 22 53.9**	**+0.5**	
AVF				*e*Sg	**Sg**	**04 23 05.1**	**-0.5**	
	1.5nm,0.3s							
ORIF	**Oris-en-Rattie**	**2.70**	**200**	*e*Pn	**Pn**	**04 22 22.0**	**+0.6**	
ORIF	**Oris-en-Rattie**	**2.70**	**200**	*e*Pg	**Pg**	**04 22 29.6**	**-1.0**	
ORIF				*e*Sg	**Sg**	**04 23 04.1**	**-1.5**	
	5.4nm,0.3s							
MBDF	**Montbardon**	**2.75**	**186**	*e*Pn	**Pn**	**04 22 23.4**	**+1.2**	
MBDF	**Montbardon**	**2.75**	**186**	*e*Pg	**Pg**	**04 22 30.9**	**-0.7**	
MBDF				*e*Sg	**Sg**	**04 23 05.9**	**-1.3**	
	1.1nm,0.3s							
SQTA	**Sankt Quirin**	**2.75**	**94**	Pg	**Pg**	**04 22 31.1**	**-0.6**	
	0.8nm,0.1s							
SQTA				Sg	**Sg**	**04 23 06.0**	**-1.3**	
	1.4nm,0.2s							
TNS	**Taunus Mts**	**2.89**	**16**	*e*Sg	**Sg**	**04 23 10.6**	**-1.1**	
HYF	**Humbligny**	**3.09**	**268**	*e*P	**Pn**	**04 22 30.5**	**+3.8**	
HYF	**Humbligny**	**3.09**	**268**	*e*Pg	**Pg**	**04 22 37.6**	**-0.6**	
HYF				*e*Sg	**Sg**	**04 23 17.5**	**-0.7**	
BGF	**Bois d'Agland**	**3.10**	**255**	*e*Pn	**Pn**	**04 22 27.0**	**+0.2**	
BGF	**Bois d'Agland**	**3.10**	**255**	*e*Pg	**Pg**	**04 22 37.3**	**-1.0**	
BGF				*e*Sn	**Sn**	**04 23 03.6**	**+0.2**	
BGF				*e*Sg	**Sg**	**04 23 17.5**	**-0.9**	
	5.1nm,0.4s							
VIVF	**Saint-Julien-l**	**3.13**	**215**	*e*Pn	**Pn**	**04 22 27.8**	**+0.5**	
VIVF	**Saint-Julien-l**	**3.13**	**215**	*e*Pg	**Pg**	**04 22 37.4**	**-1.5**	
VIVF				*e*Sn	**Sn**	**04 23 03.9**	**-0.4**	
VIVF				*e*Sg	**Sg**	**04 23 17.0**	**-2.5**	
	4.5nm,0.2s							
BAIF	**Baives**	**3.26**	**324**	*e*Pn	**Pn**	**04 22 29.7**	**+0.7**	
BAIF				*e*Sn	**Sn**	**04 23 07.6**	**+0.3**	
BAIF				*e*Sg	**Sg**	**04 23 22.3**	**-1.3**	
	1.3nm,0.3s							
SBF	**Sospel**	**3.60**	**177**	*e*Pn	**Pn**	**04 22 34.4**	**+0.6**	
SBF				*e*Sn	**Sn**	**04 23 15.0**	**-0.9**	
	4.3nm,0.4s							
TCF	**Toulx Ste Croi**	**3.60**	**253**	*e*Pn	**Pn**	**04 22 33.8**	**0.0**	
TCF	**Toulx Ste Croi**	**3.60**	**253**	*e*Pg	**Pg**	**04 22 46.7**	**-1.2**	
TCF				*e*Sn	**Sn**	**04 23 15.0**	**-0.9**	
TCF				*e*Sg	**Sg**	**04 23 32.8**	**-1.8**	
	1.9nm,0.3s							
SMRF	**Simiane la Rot**	**3.66**	**198**	*e*P	**Pn**	**04 22 37.9**	**+3.3**	
SMRF	**Simiane la Rot**	**3.66**	**198**	*e*Pg	**Pg**	**04 22 46.9**	**-2.1**	
SMRF				*e*Sg	**Sg**	**04 23 34.7**	**-1.8**	
	0.5nm,0.2s							
LASF	**Ste Croix**	**4.11**	**216**	*e*Pn	**Pn**	**04 22 41.1**	**+0.4**	
LASF	**Ste Croix**	**4.11**	**216**	*e*P	**Pn**	**04 22 45.1**	**+4.4**	
LASF	**Ste Croix**	**4.11**	**216**	*e*Pg	**Pg**	**04 22 55.7**	**-1.8**	
LASF				*e*Sg	**Sg**	**04 23 48.1**	**-2.6**	
	1.4nm,0.2s							
CAF	**Calviac**	**4.36**	**236**	*e*Pn	**Pn**	**04 22 45.5**	**+1.3**	
CAF	**Calviac**	**4.36**	**236**	*e*Pg	**Pg**	**04 23 01.1**	**-1.3**	
CAF				*e*Sn	**Sn**	**04 23 33.7**	**-0.9**	
CAF				*e*Sg	**Sg**	**04 23 56.4**	**-2.5**	
	0.9nm,0.3s							
RJF	**Les Rejaudoux**	**4.47**	**243**	*e*Pg	**Pg**	**04 23 02.6**	**-1.9**	
RJF				*e*Sg	**Sg**	**04 24 00.2**	**-2.2**	
	0.5nm,0.2s							
LDF	**La Druitiere**	**5.03**	**286**	*e*Sg	**Sg**	**04 24 17.9**	**-2.3**	
	1.0nm,0.3s							
LFF	**La Frestale**	**5.13**	**243**	*e*Pn	**Pn**	**04 22 55.4**	**+0.6**	
LFF				*e*Sn	**Sn**	**04 23 52.3**	**-1.2**	
	2.8nm,0.4s							
FLN	**La Foliniere**	**5.29**	**287**	*e*Sg	**Sg**	**04 24 26.1**	**-2.6**	
	2.1nm,0.3s							
MTLF	**Montolieu**	**5.40**	**222**	*e*Sg	**Sg**	**04 24 28.8**	**-3.4**	
	0.6nm,0.3s							
GRR	**Gorron**	**5.48**	**283**	*e*Sg	**Sg**	**04 24 32.1**	**-2.7**	
	1.7nm,0.2s							

TAP ***16*** *04:31:18.9,24°.80N×121°.97E,h6km,ML2.5,C*
JMA ***16*** *04:31:18.8±0.1,24°.81N×122°.01E,h0km,M2.3*

ISC 16 04:31:19.3±0.9,24°.81N±0°.02×122°.00E±0°.02,h13km±7km, n47,σ0s51/78,7C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NTC	**Toucheng**	**0.16**	**286**	⇑*e*P	**Pg**	**04 31 23.1**	**+0.1**
	baz=291						
NTC				*e*S	**Sg**	**04 31 25.4**	**-0.2**
	baz=291						
TWB1	**Santiao Chiao**	**0.20**	**358**	⇑*i*P	**Pg**	**04 31 23.6**	**-0.1**
	baz=6.0						
TWB1				*i* S	**Sg**	**04 31 26.5**	**-0.2**
	baz=6.0						
TIPB	**Shuangxi**	**0.22**	**316**	⇑*i*P	**Pg**	**04 31 24.3**	**+0.2**
	baz=321						
TIPB				*i* S	**Sg**	**04 31 27.4**	**0.0**
	baz=321						
TWC	**Suao**	**0.24**	**214**	⇑*i*P	**Pg**	**04 31 24.4**	**0.0**
	baz=207						
TWC				*i* S	**Sg**	**04 31 27.4**	**-0.4**
	baz=207						
EOS1	**EOS1**	**0.29**	**155**	P	**Pb**	**04 31 25.7**	**-0.5**
	baz=150						
EOS1				S	**Sb**	**04 31 30.7**	**-0.3**
	baz=150						
TWE	**Neicheng**	**0.31**	**253**	P	**Pb**	**04 31 25.9**	**-0.8**
	baz=251						
TWE				S	**Sg**	**04 31 29.9**	**0.0**
	baz=251						
NWF	**Wu-fen Shan**	**0.32**	**323**	⇑*i*P	**Pb**	**04 31 26.5**	**-0.5**
	baz=327						
NWF				*i* S	**Sb**	**04 31 31.6**	**-0.6**
	baz=327						
WFSB	**Wu-fen Shan**	**0.32**	**323**	⇑P	**Pb**	**04 31 26.4**	**-0.6**
	baz=327						
WFSB				S	**Sb**	**04 31 31.5**	**-0.6**
	baz=327						
SLBB	**Yuanshan**	**0.33**	**260**	P	**Pb**	**04 31 26.6**	**-0.5**
	baz=260						
SLBB				S	**Sb**	**04 31 31.5**	**-0.8**
	baz=260						
ENTT	**Nioudou**	**0.43**	**247**	P	**Pb**	**04 31 28.2**	**-0.5**
	baz=245						
ENTT				S	**Sb**	**04 31 34.0**	**-1.0**
	baz=245						
ENA	**Nanau**	**0.45**	**211**	P	**Pb**	**04 31 28.8**	**-0.3**
	baz=208						
ENA				S	**Sb**	**04 31 34.9**	**-0.7**
	baz=208						
NWLT	**Wulai**	**0.45**	**266**	P	**Pb**	**04 31 28.9**	**-0.2**
	baz=266						
NWLT				*e*S	**Sb**	**04 31 34.8**	**-0.9**
	baz=266						
NHDH	**Xindian Distri**	**0.45**	**290**	*e*S	**Sb**	**04 31 35.5**	**-0.3**
	baz=291						
NDT	**Datong Townshi**	**0.49**	**245**	P	**Pb**	**04 31 29.3**	**-0.4**
	baz=244						
NDT				*e*S	**Sb**	**04 31 36.8**	**+0.1**
	baz=244						
YM01	**YM01**	**0.51**	**311**	*i* P	**Pb**	**04 31 30.0**	**-0.1**
	baz=313						
YM11	**YM11**	**0.52**	**313**	P	**Pb**	**04 31 30.4**	**0.0**
	baz=315						
YM11				*e*S	**Sb**	**04 31 37.9**	**0.0**
	baz=315						
YM10	**YM10**	**0.52**	**311**	P	**Pb**	**04 31 30.2**	**-0.2**
	baz=313						
YM05	**YM05**	**0.53**	**312**	⇑P	**Pb**	**04 31 30.4**	**0.0**
	baz=314						
YM08	**YM08**	**0.53**	**316**	P	**Pb**	**04 31 30.3**	**-0.2**
	baz=317						
YM04	**YM04**	**0.54**	**309**	P	**Pb**	**04 31 30.4**	**-0.2**
	baz=311						
YHNB	**Yeheng**	**0.58**	**256**	*e*P	**Pb**	**04 31 30.9**	**-0.5**
	baz=256						
TWY	**Chenhua**	**0.59**	**322**	*i* P	**Pb**	**04 31 31.5**	**0.0**
	baz=324						
TWY				*i* S	**Sb**	**04 31 39.6**	**-0.1**
	baz=324						
TWS1	**Kuangyinshan**	**0.60**	**299**	*e*P	**Pb**	**04 31 31.4**	**-0.2**
	baz=300						
TWS1				S	**Sb**	**04 31 39.9**	**-0.1**
	baz=300						
NNSB	**Datong**	**0.68**	**236**	*e*P	**Pg**	**04 31 32.4**	**0.0**
	baz=235						
NNSB				*e*S	**Sb**	**04 31 42.7**	**+0.3**
	baz=235						
NNSH	**Datong**	**0.68**	**236**	*e*P	**Pg**	**04 31 31.9**	**-0.5**
	baz=235						
NNSH				*e*S	**Sb**	**04 31 41.9**	**-0.5**
	baz=235						
NNS	**Nan Shan**	**0.68**	**237**	P	**Pb**	**04 31 32.6**	**-0.4**
	baz=235						
NNS				*e*S	**Sb**	**04 31 41.7**	**-0.7**
	baz=235						
WLTB	**Daxi**	**0.68**	**274**	*e*P	**Pb**	**04 31 32.8**	**-0.2**
	baz=274						
NACB	**Ninganchiao**	**0.73**	**210**	P	**Pb**	**04 31 33.7**	**-0.2**
	baz=208						
NACB				S	**Sb**	**04 31 43.5**	**-0.4**
	baz=208						
NCU	**National Centr**	**0.75**	**282**	*e*P	**Pg**	**04 31 33.6**	**-0.3**
	baz=282						
NCU				*e*S	**Sb**	**04 31 44.1**	**-0.3**
	baz=282						
NCUH	**Zhongli**	**0.75**	**282**	*e*S	**Sb**	**04 31 45.4**	**+1.0**
	baz=282						
ETLH	**Xiulin Townshi**	**0.76**	**218**	P	**Pb**	**04 31 34.0**	**-0.4**
	baz=216						
ETLH				*e*S	**Sb**	**04 31 45.8**	**+1.0**
	baz=216						
PCYT	**Pengchaiyu**	**0.82**	**5**	*e*P	**Pb**	**04 31 35.7**	**+0.3**
	baz=6.0						
LIOB	**Emei**	**0.91**	**260**	*e*P	**Pb**	**04 31 37.5**	**+0.6**
	baz=259						
NSTT	**Nanjuang**	**0.92**	**259**	*e*S	**Sb**	**04 31 49.8**	**+0.5**
	baz=258						
TWT	**Tachien**	**0.93**	**234**	*e*P	**Pg**	**04 31 36.8**	**-0.4**
	baz=233						
TWT				*e*S	**Sb**	**04 31 51.0**	**+1.2**
	baz=233						
JYNG	**Yonagunijimaku**	**0.94**	**112**	P	**Pg**	**04 31 37.1**	**-0.2**
JYNG				S	**Sb**	**04 31 50.1**	**+0.4**
WHF	**Hehuan Shan**	**0.94**	**225**	P	**Pg**	**04 31 37.3**	**-0.2**
	baz=224						
WHF				S	**Sb**	**04 31 50.2**	**-0.1**
	baz=224						
TDCB	**Techi**	**0.94**	**234**	*e*P	**Pb**	**04 31 37.3**	**-0.3**
	baz=233						
TDCB				*e*S	**Sb**	**04 31 51.0**	**+0.9**
	baz=233						
YOJ	**Yonaguni jima**	**0.99**	**110**	P	**Pg**	**04 31 37.8**	**-0.5**
YOJ				S	**Sg**	**04 31 51.2**	**0.0**
CHGB	**Renai**	**1.06**	**225**	*e*P	**Pb**	**04 31 39.6**	**0.0**
	baz=224						
CHGB				*e*S	**Sb**	**04 31 54.2**	**+0.8**
	baz=224						
ESL	**Shilin**	**1.12**	**207**	*e*P	**Pg**	**04 31 40.1**	**-0.7**
	baz=206						
ESL				*e*S	**Sb**	**04 31 55.4**	**+0.4**
	baz=206						
OWD	**Renai**	**1.13**	**221**	*e*P	**Pn**	**04 31 41.4**	**+0.3**
	baz=220						
OWD				*e*S	**Sb**	**04 31 56.5**	**+0.9**
	baz=220						
NSY	**Sanyi**	**1.19**	**251**	*e*S	**Sb**	**04 31 58.1**	**+1.0**
	baz=250						
VWDT	**VWDT**	**1.31**	**217**	*e*P	**Pb**	**04 31 44.1**	**+0.4**
	baz=215						
VWDT				*e*S	**Sb**	**04 32 01.4**	**+0.9**
	baz=215						
SSLB	**Suanglung**	**1.39**	**223**	*e*P	**Pb**	**04 31 45.3**	**+0.1**
	baz=222						
HGSD	**Ruisui**	**1.41**	**202**	*e*P	**Pn**	**04 31 45.1**	**+0.4**
	baz=200						
YULB	**Yu-li**	**1.55**	**204**	*e*P	**Pn**	**04 31 47.2**	**+0.6**
	baz=203						

IDC ***16*** *04:31:33.0±1.2, 19°.68N×99°.74E,h0km,mb3.8/5, mb1 3.8/5,mb1mx3.5/40,mbtmp3.8/5,MS3.2/4,Ms1 3.3/4, ms1mx2.8/37,Error ellipse: s-maj=36.8km s-min=12.9km az=111.0*

ISC 16 04:31:37.2±0.9,19°.54N±0°.09×99°.73E±0°.08,h35km,n15, σ1s74/12,mb3.8/5,MS3.1/3,Thailand

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYA	**Payao**	**0.23**	**144**	P	**Pn**	**04 31 41.7**	**-2.7**
PAYA				S	**Sn**	**04 31 46.1**	**-3.0**
LAMP	**Lampang**	**1.02**	**185**	P	**Pn**	**04 31 55.3**	**+0.3**
CMMT	**Chiang Mai**	**1.04**	**226**	P	**Pn**	**04 31 54.3**	**-1.0**
PHRA	**Phrae**	**1.14**	**155**	P	**Pn**	**04 31 58.2**	**+1.5**
NANT	**Nan**	**1.18**	**129**	P	**Pn**	**04 31 57.6**	**+0.3**
CMAR	**Chiang Mai Arr**	**1.31**	**215**	Pg	**Pn**	**04 31 59.2**	**+0.1**
	460nm,0.3s,baz=16,slow=16,SNR=220						
CMAR				Lg	Lg	04 32 19.1	
	334nm,0.3s,baz=335,slow=4.9,SNR=15						
CMAR				LR	LR	04 32 47.5	
	comp=Z,999nm,18.5s,baz=5.0,slow=52						
PSI	**Prapat**	**16.66**	**183**	LR	LR	04 43 17.9	
	comp=Z,181nm,18.2s,baz=280,slow=42						
SONM	**Songino Array**	**28.74**	**9**	P	**P**	**04 37 31.6**	**+0.2**
	1.7nm,0.8s,baz=198,slow=10,SNR=9.7						
MKAR	**Makanchi Array**	**30.70**	**336**	P	**P**	**04 37 48.6**	**-0.1**
	1.3nm,0.8s,baz=138,slow=9.2,SNR=8.6						
ZALV	**Zalesovo Beam**	**36.20**	**345**	P	**P**	**04 38 34.9**	**-1.6**
	0.8nm,0.5s,baz=140,slow=7.0,SNR=5.5						
GEYT	**Alibeck**	**40.44**	**306**	LR	LR	04 56 59.9	
	comp=Z,23nm,19.4s,baz=180,slow=38						
JAY	**Jayapura**	**45.83**	**114**	LR	LR	04 58 17.2	
	comp=Z,27nm,21.6s,baz=224,slow=35						
ASAR	**Alice Springs**	**54.36**	**141**	P	**P**	**04 41 01.8**	**+1.1**
	0.3nm,0.6s,baz=322,slow=7.1,SNR=2.3						
NOA	**NORSAR Array B**	**72.40**	**329**	LR	LR	05 19 04.6	
	comp=Z,14nm,19.5s,baz=335,slow=39						
YKA	**Yellowknife Ar**	**93.84**	**15**	P	**P**	**04 44 52.6**	**+2.0**
	0.2nm,0.9s,baz=335,slow=2.8,SNR=2.5						

NNC ***16*** *04:32:37.8±1.5,42°.66N×78°.45E,h0km±6km,mb2.8, mpv2.7,Error ellipse: s-maj=11.2km s-min=5.1km az=165.0*
SOME ***16*** *04:32:39.4,42°.73N×78°.40E,h15km*
KRNET ***16*** *04:32:40.3±0.1,42°.59N×78°.28E,h30km,mb2.5*

ISC 16 04:32:39.5±1.0,42°.68N±0°.03×78°.44E±0°.03,h25km±8km, n34,σ1s11/64,10C-2D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.20**	**188**	⇓*i*P	**Pb**	**04 32 46.5**	**+1.2**
	baz=38						
PRZ				⇓*i*S	**Sb**	**04 32 51.1**	**+2.0**
	baz=38						
SATY	**Saty**	**0.38**	**357**	*e*P	**Pb**	**04 32 46.1**	**-1.8**
	12nm,0.1s						
SATY				*e*S	**Sb**	**04 32 51.2**	**-2.4**
	127nm,0.1s						
SATY	**Saty**	**0.38**	**357**	P	**Pb**	**04 32 46.1**	**-1.8**
	12nm,0.1s						
SATY				S	**Sb**	**04 32 51.2**	**-2.4**
	127nm,0.1s						
ANVS	**Anan'yevo**	**0.58**	**281**	⇑*i*P	**Pb**	**04 32 50.8**	**-0.3**
	baz=93						
ANVS				⇑*i*S	**Sb**	**04 32 58.7**	**-0.3**
	baz=93						
PDGK	**Podgornoye**	**1.01**	**50**	P	**Pn**	**04 32 57.0**	**-1.2**
	0.2nm,0.1s						
PDGK				S	**Sn**	**04 33 09.9**	**-1.9**
	2.0nm,0.1s						
TARG	**Taragay, Kyrgy**	**1.06**	**207**	⇑*i*P	**Pn**	**04 32 58.0**	**-1.1**
	baz=3.0						
TARG				⇑*i*S	**Sn**	**04 33 11.1**	**-2.1**
	baz=3.0						
KDJ	**Kajisay**	**1.08**	**240**	⇑*i*P	**Pn**	**04 32 57.9**	**-1.3**
	baz=40						
KDJ				⇑*i*S	**Sn**	**04 33 10.5**	**-3.0**
	baz=40						
TNSS	**Tian-Shan**	**1.15**	**289**	*e*P	**Pn**	**04 33 00.3**	**-0.1**
	baz=95						
TNSS				*e*S	**Sn**	**04 33 15.3**	**-0.3**
	baz=95						
TNSS	**Tian-Shan**	**1.15**	**289**	*e*P	**Pn**	**04 33 00.3**	**-0.1**
	1.3nm,0.3s						
TNSS				*e*S	**Sn**	**04 33 15.2**	**-0.3**
	2.8nm,0.2s						
TNSS	**Tian-Shan**	**1.15**	**289**	P	**Pn**	**04 33 00.3**	**-0.1**
	1.3nm,0.3s						
TNSS				S	**Sn**	**04 33 15.2**	**-0.3**
	2.8nm,0.2s						
IZV	**Izvestkoviy**	**1.39**	**286**	*e*P	**Pn**	**04 33 03.5**	**+0.1**
	baz=90						
IZV				*e*S	**Sn**	**04 33 20.8**	**-0.3**
	baz=90						
IZV	**Izvestkoviy**	**1.39**	**286**	*e*P	**Pn**	**04 33 03.5**	**+0.1**
	2.1nm,0.2s						
IZV				*e*S	**Sn**	**04 33 20.8**	**-0.3**
	6.2nm,0.2s						
IZV	**Izvestkoviy**	**1.39**	**286**	P	**Pn**	**04 33 03.5**	**+0.1**
	2.1nm,0.2s						
IZV				S	**Sn**	**04 33 20.8**	**-0.3**
	6.2nm,0.2s						
MNBS	**Baschi**	**1.40**	**359**	*e*P	**Pb**	**04 33 05.1**	**0.0**
	baz=7.0						
MNBS				*e*S	**Sb**	**04 33 23.6**	**+1.1**
	baz=7.0						
MNBS	**Baschi**	**1.40**	**359**	*e*P	**Pb**	**04 33 05.1**	**0.0**
	6.2nm,0.1s						
MNBS				*e*S	**Sb**	**04 33 23.6**	**+1.1**
	5.5nm,0.2s						
MNBS	**Baschi**	**1.40**	**359**	P	**Pb**	**04 33 05.1**	**0.0**
	6.2nm,0.1s						
MNBS				S	**Sb**	**04 33 23.6**	**+1.1**
	5.5nm,0.2s						
ARXS	**Arharly**	**1.60**	**344**	*e*P	**Pn**	**04 33 07.9**	**+1.6**
	5.0nm,0.5s						
ARXS				*e*S	**Sb**	**04 33 28.1**	**0.0**
	6.7nm,0.6s						
ARXS	**Arharly**	**1.60**	**344**	P	**Pn**	**04 33 07.9**	**+1.6**
	5.0nm,0.5s						
ARXS				S	**Sb**	**04 33 28.1**	**0.0**
	6.7nm,0.6s						
KTMS	**Ketmen**	**1.60**	**61**	*e*P	**Pn**	**04 33 06.9**	**+0.5**
	1.5nm,0.1s						
KTMS				*e*S	**Sn**	**04 33 26.7**	**+0.4**
	16nm,0.4s						
KTMS	**Ketmen**	**1.60**	**61**	P	**Pn**	**04 33 06.9**	**+0.5**
	1.5nm,0.1s						
KTMS				S	**Sn**	**04 33 26.7**	**+0.4**
	16nm,0.4s						
KTBS	**Karatobe**	**1.65**	**309**	*e*P	**Pb**	**04 33 09.3**	**+0.1**
	1.9nm,0.2s						
KTBS				*e*S	**Sb**	**04 33 30.7**	**+1.1**
	5.0nm,0.2s						
KTBS	**Karatobe**	**1.65**	**309**	P	**Pb**	**04 33 09.3**	**+0.1**
	1.9nm,0.2s						
KTBS				S	**Sb**	**04 33 30.7**	**+1.1**
	5.0nm,0.2s						
BOOM	**Boomskoye usch**	**1.85**	**265**	⇑*i*P	**Pn**	**04 33 09.9**	**+0.1**
	baz=67						
BOOM				⇑*i*S	**Sn**	**04 33 32.2**	**-0.3**
	baz=67						
DJR	**Jarkent**	**1.93**	**30**	*e*P	**Pb**	**04 33 13.9**	**0.0**
	1.7nm,0.2s						
DJR				*e*S	**Sb**	**04 33 38.6**	**+1.1**
	5.1nm,0.3s						
DJR	**Jarkent**	**1.93**	**30**	P	**Pb**	**04 33 13.9**	**0.0**
	2.1nm,0.4s						
DJR				S	**Sb**	**04 33 38.6**	**+1.1**
	5.0nm,0.3s						
KUU	**Kurty**	**1.95**	**309**	*e*P	**Pb**	**04 33 14.5**	**+0.1**
	2.8nm,0.2s						
KUU				*e*S	**Sb**	**04 33 39.7**	**+1.4**
	11nm,0.3s						
KUU	**Kurty**	**1.95**	**309**	P	**Pb**	**04 33 14.5**	**+0.1**
	2.8nm,0.2s						
KUU				S	**Sb**	**04 33 39.7**	**+1.4**
	11nm,0.3s						
DGS	**Degeres**	**2.04**	**287**	*e*P	**Pb**	**04 33 16.3**	**+0.5**
	1.5nm,0.4s						
DGS				*e*S	**Sb**	**04 33 42.7**	**+1.9**
	5.3nm,0.6s						
DGS	**Degeres**	**2.04**	**287**	Pg	**Pb**	**04 33 16.3**	**+0.5**
	1.5nm,0.4s						
DGS				Lg	Lg	04 33 42.7	
	5.3nm,0.6s						
TKM2	**Tokmak 2**	**2.10**	**278**	⇑Pg	**Pb**	**04 33 17.9**	**+0.8**
	1.1nm,0.7s						
TKM2				⇑Lg	Lg	04 33 46.1	
	1.9nm,0.6s						
KRBS	**Karabastau**	**2.26**	**298**	*e*P	**Pb**	**04 33 19.0**	**-0.6**
	0.6nm,0.2s						
KRBS				*e*S	**Sb**	**04 33 47.4**	**+0.2**
	3.0nm,0.3s						
KRBS	**Karabastau**	**2.26**	**298**	Pg	**Pb**	**04 33 19.0**	**-0.6**
	0.6nm,0.2s						
KRBS				Lg	Lg	04 33 47.4	
	3.0nm,0.3s						
KAPS	**Kapalarasan**	**2.69**	**14**	*e*P	**Pb**	**04 33 27.0**	**0.0**
	0.5nm,0.1s						
KAPS				*e*S	**Sb**	**04 34 01.7**	**+2.2**
	1.4nm,0.2s						
KAPS	**Kapalarasan**	**2.69**	**14**	Pg	**Pb**	**04 33 27.0**	**0.0**
	0.7nm,0.3s						
KAPS				Lg	Lg	04 34 01.7	
	1.7nm,0.6s						

NEIC ***16*** *04:50:40.8±2.7,6°.0S±0°.2×151°.1E±0°.2,h51km±5km, mb4.4/4,Error ellipse: s-maj=43.6km s-min=9.8km az=131.0*
IDC ***16*** *04:50:41.8±2.7,5°.93S×151°.06E,h53km±26km,mb3.5/8, mb1 3.7/8,mb1mx3.6/24,mbtmp3.8/8,MS3.1/2,Ms1 3.1/2, ms1mx2.6/26,Error ellipse: s-maj=53.5km s-min=18.5km az=125.0*

ISC 16 04:50:39.5±1.1,6°.2S±0°.2×151°.2E±0°.2,h43km,n19, σ1s75/18,mb3.7/10,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.02**	**24**	P	**Pn**	**04 51 11.4**	**+0.3**
	81nm,0.3s,baz=183,slow=2.4,SNR=18						
KRVT				S	**Sn**	**04 51 37.6**	**+2.6**
	43nm,0.3s,baz=202,slow=12,SNR=5.1						
KRVT				LR	LR	04 51 40.7	
	comp=Z,174nm,21.3s,baz=233,slow=31						
RABL	**Rabaul**	**2.18**	**26**		**Pn**	**04 51 13.5**	**+0.2**
PMG	**Port Moresby**	**5.14**	**231**	S	**Sn**	**04 52 53.7**	**+1.7**
	1.7nm,0.3s,baz=90,slow=18,SNR=1.8						
PMG	**Port Moresby**	**5.14**	**231**	Pn	**Pn**	**04 51 54.3**	**+0.3**
WRAB	**Tennant Creek**	**21.34**	**229**	P	**P**	**04 55 21.6**	**-1.5**
WB2	**Warramunga Arr**	**21.35**	**229**	P	**P**	**04 55 20.4**	**-2.7**
WB2				IAmb	IAmb	04 55 34.4	
	comp=Z,30nm,1.8s						
WRA	**Warramunga Arr**	**21.36**	**229**	P	**P**	**04 55 25.2**	**+1.9**
	comp=Z,1.2nm,0.6s,baz=53,slow=0,SNR=9.3						
DZM	**Mont Dzumac**	**21.62**	**139**	LR	LR	05 02 10.8	
	comp=Z,108nm,21.4s,baz=268,slow=32						
ASAR	**Alice Springs**	**24.08**	**222**	P	**P**	**04 55 53.7**	**+2.6**
	comp=Z,1.0nm,0.6s,baz=59,slow=8.8,SNR=15						
STKA	**Stephens Creek**	**27.11**	**198**	LR	LR	05 07 41.5	
	comp=Z,25nm,20.4s,baz=21,slow=37						
FITZ	**Fitzroy Crossi**	**27.61**	**242**	P	**P**	**04 56 23.6**	**+0.4**
	comp=Z,3.5nm,0.9s,baz=66,slow=10.0,SNR=2.7						
SONM	**Songino Array**	**66.64**	**329**	P	**P**	**05

NWAO	**Narrogin (SRO)**	**3.72**	**174**	P		Pn	05 13 29.8	0.0
	baz=3.7							

IDC ***16*** *05:40:15.8±5.8, 16°.90N×100°.93W, h0km, mb3.7/3, mb1 3.9/6, mb1mx3.7/39, mbtmp3.6/6, ML3.2/3, MS3.2/11, Ms1 3.3/11, ms1mx3.0/37, Error ellipse: s-maj=134.4km s-min=28.4km az=32.0*

MEX ***16*** *05:40:17.4±1.8, 16°.95N×100°.88W, h8km, MD4.2*

NEIC ***16*** *05:40:18.7±3.4, 17°.05N±0°.05×100°.75W±0°.04, h10km±2km, Error ellipse: s-maj=8.5km s-min=6.6km az=171.0*

ISC 16 05:40:16.8±1.4, 17°.07N±0°.04×100°.82W±0°.03, h2km±9km, n82, σ1§82/91, mb3.9/6, MS3.2/6, 1C, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.53**	**92**	⇑*i* P	**Pg**	**05 40 27.8**	**+0.9**
	baz=262,slow=14						
CAIG				*i* S	**Sb**	**05 40 35.9**	**-0.9**
CAIG	**El Cayaco**	**0.53**	**92**		**Pg**	**05 40 27.8**	**+0.9**
CAIG					**Sb**	**05 40 35.9**	**-0.9**
ZIIG	**Zihuatanejo**	**0.82**	**311**	*e*P	**Pg**	**05 40 31.3**	**-1.3**
ZIIG				*e*S	**Sg**	**05 40 41.6**	**-1.6**
ZIIG	**Zihuatanejo**	**0.82**	**311**		**Pg**	**05 40 31.3**	**-1.3**
ZIIG					Pn	05 40 41.6	+6.2
ARIG	**Puente Sto Nin**	**1.29**	**20**	*e*P	**Pn**	**05 40 40.3**	**-1.6**
ARIG				*e*S	**Sg**	**05 40 57.6**	**-0.6**
ARIG				*e*S	**Sg**	**05 40 57.9**	**-0.3**
ARIG	**Puente Sto Nin**	**1.29**	**20**		**Pn**	**05 40 40.3**	**-1.6**
ARIG					**Sg**	**05 40 57.9**	**-0.3**
UON	**La Union**	**1.31**	**313**	*e*P	**Pn**	**05 40 40.1**	**-2.0**
UON				*e*S	**Sb**	**05 40 57.3**	**-2.1**
MEIG	**Mezcala**	**1.43**	**53**	*e*P	**Pn**	**05 40 43.0**	**-0.8**
MEIG				*e*S	**Sg**	**05 41 02.8**	**+0.1**
MEIG	**Mezcala**	**1.43**	**53**		**Pn**	**05 40 43.0**	**-0.8**
MEIG					**Sg**	**05 41 02.8**	**+0.1**
CRIG	**Cruz Grande**	**1.65**	**101**	*e*P	**Pn**	**05 40 45.0**	**-1.7**
CRIG				*i* S	**Sb**	**05 41 08.8**	**-0.3**
PLIG	**Platanillo**	**1.82**	**43**	*e*P	**Pn**	**05 40 48.6**	**-0.6**
PLIG				*e*S	**Sb**	**05 41 12.1**	**-2.0**
PLIG	**Platanillo**	**1.82**	**43**		**Pn**	**05 40 48.6**	**-0.6**
PLIG					**Sb**	**05 41 12.1**	**-2.0**
TLIG	**Tlapa**	**2.21**	**77**	*e*P	**Pn**	**05 40 54.2**	**-0.4**
TLIG				*e*S	**Sn**	**05 41 21.4**	**-1.0**
TLIG	**Tlapa**	**2.21**	**77**		**Pn**	**05 40 54.1**	**-0.4**
MAVM	**Malinalco, Edo**	**2.26**	**34**	*e*P	**Pn**	**05 40 54.4**	**-1.1**
MAVM	**Malinalco, Edo**	**2.26**	**34**		**Pn**	**05 40 54.4**	**-1.1**
TOVM	**TOLUCA**	**2.46**	**26**	*e*P	**Pn**	**05 40 58.5**	**+0.3**
TOVM	**TOLUCA**	**2.46**	**26**		**Pn**	**05 40 58.5**	**+0.3**
MOIG	**Morelia**	**2.62**	**352**		**Pn**	**05 41 02.0**	**+1.6**
MOIG				Sn	**Sb**	**05 41 35.3**	**-2.1**
PNIG	**Pinotepa**	**2.66**	**104**	*e*P	**Pn**	**05 40 59.6**	**-1.2**
PNIG				*e*S	**Sg**	**05 41 41.9**	**-0.5**
PNIG	**Pinotepa**	**2.66**	**104**		**Pn**	**05 40 59.6**	**-1.2**
PNIG					Lg	05 41 41.9	
FTIG	**Fresnillo de T**	**2.69**	**72**	*e*P	**Pn**	**05 41 01.1**	**-0.2**
FTIG				*e*S	**Sb**	**05 41 38.6**	**-0.8**
MMIG	**Aquila**	**2.70**	**297**	*e*P	**Pn**	**05 40 59.6**	**-1.6**
MMIG				*i* S	**Sb**	**05 41 43.2**	**+3.7**
MMIG	**Aquila**	**2.70**	**297**		**Pn**	**05 40 59.6**	**-1.6**
MMIG					LR	05 41 43.2	
UNM	**Universidad Na**	**2.74**	**34**		**Pb**	**05 41 05.0**	**-1.6**
UNM				Sn	**Sb**	**05 41 40.9**	**+0.2**
AZVM	**Cuida Lopez Ma**	**2.90**	**30**	*e*P	**Pn**	**05 41 04.1**	**-0.1**
AZVM	**Cuida Lopez Ma**	**2.90**	**30**		**Pn**	**05 41 04.1**	**-0.1**
TXIG	**Tlaxiaco**	**2.92**	**86**	*i* P	**Pn**	**05 41 04.3**	**-0.3**
TXIG				*e*S	**Sb**	**05 41 47.1**	**+1.1**
HLIG	**Huajuapan de L**	**2.97**	**75**	*e*P	**Pn**	**05 41 05.0**	**-0.2**
YOIG	**Yosondua**	**3.14**	**93**	*i* P	**Pn**	**05 41 07.3**	**-0.3**
YOIG				*i* S	**Sb**	**05 41 51.1**	**-1.2**
ZUVM	**ZUMPANGO**	**3.20**	**31**	*e*P	**Pn**	**05 41 08.8**	**+0.3**
ZUVM	**ZUMPANGO**	**3.20**	**31**		**Pn**	**05 41 08.8**	**+0.3**
TPIG	**Tehuac#an**	**3.56**	**67**	*e*P	**Pn**	**05 41 12.8**	**-0.4**
TPIG				*e*S	**Sb**	**05 42 00.7**	**-3.6**
TPIG	**Tehuac#an**	**3.56**	**67**		**Pn**	**05 41 12.8**	**-0.4**
TPIG					**Sb**	**05 42 00.7**	**-3.6**
TOIG	**Toxpalan**	**3.72**	**73**	*e*P	**Pn**	**05 41 15.1**	**-0.3**
TOIG				*i* S	**Sb**	**05 42 04.8**	**-4.2**
CMIG	**Matias Romero**	**5.67**	**89**	Pn	**Pn**	**05 41 42.2**	**+0.1**
	0.7nm,0.3s,baz=267,slow=7.6,SNR=7.8						
CMIG				Sn	**Sn**	**05 42 45.9**	**-2.0**
	2.4nm,0.3s,baz=280,slow=16,SNR=3.8						
CMIG				LR	LR	05 44 12.0	
	comp=Z,562nm,18.1s,baz=264,slow=41						
H06E1	**SOCORRO T-PHAS**	**9.77**	**282**	T	T	05 52 30.1	
	SNR=52						
APG	**El Apazote**	**10.16**	**100**	Pn	**Pn**	**05 42 46.0**	**+1.9**
	0.3nm,0.3s,baz=348,slow=15,SNR=4.3						
APG				LR	LR	05 46 38.4	
	comp=Z,233nm,18.7s,baz=290,slow=37						
LPIG	**La Paz**	**11.31**	**310**	LR	LR	05 46 26.8	
	comp=Z,75nm,21.5s,baz=56,slow=33						
TEIG	**Tepich**	**12.29**	**73**	Pn	**Pn**	**05 43 12.4**	**-0.6**
TXAR	**Lajitas Array**	**12.49**	**348**	Pn	**Pn**	**05 43 20.1**	**+4.4**
	0.0nm,0.3s,baz=172,slow=9.7,SNR=5.9						
TXAR				LR	LR	05 48 50.7	
	comp=Z,81nm,19.4s,baz=0.0,slow=41						
MATN	**Matagalpa**	**14.96**	**104**	P	**P**	**05 43 54.8**	**-0.5**
HSIG		**15.11**	**324**	P	**P**	**05 43 55.7**	**-1.1**
HSIG				IAmb	IAmb	05 44 05.1	
	comp=Z,5.7nm,0.7s						
MNTX	**Cornudas Mount**	**15.15**	**345**	P	**P**	**05 43 57.7**	**+0.5**
WHTX	**Lake Whitney,**	**15.17**	**11**	P	**P**	**05 43 59.4**	**+2.0**
NATX	**Nacogdoches**	**15.66**	**20**	P	**P**	**05 44 04.4**	**+1.5**
342A	**Flagon Creek P**	**16.20**	**27**	P	**P**	**05 44 09.6**	**+0.7**
MSTX	**Muleshoe**	**16.92**	**354**	P	**P**	**05 44 16.4**	**-0.7**
MSTX				IAmb	IAmb	05 44 18.7	
	comp=Z,14nm,1.4s						
214A	**Organ Pipe Nat**	**18.39**	**326**	P	**P**	**05 44 35.6**	**+2.6**
ANMO	**Albuquerque**	**18.51**	**345**	Pn	**Pn**	**05 44 38.5**	**+3.9**
	comp=Z,0.1nm,0.3s,baz=154,slow=16,SNR=6.5						
ANMO				LR	LR	05 52 32.2	
	comp=Z,40nm,19.8s,baz=162,slow=40						
ANMO	**Albuquerque**	**18.51**	**345**	P	**Pn**	**05 44 38.5**	**+3.9**
W39A	**Magazine**	**19.11**	**18**	P	**Pn**	**05 44 43.7**	**+1.9**
W39A				IAmb	IAmb	05 44 45.9	
	comp=Z,7.3nm,0.9s						
TUL1	**Leonard**	**19.29**	**12**	P	**P**	**05 44 43.0**	**0.0**
TUL1				IAmb	IAmb	05 44 46.6	
	comp=Z,12nm,1.1s						
113A	**Mohawk Valley,**	**19.52**	**326**	P	**Pn**	**05 44 48.8**	**+2.1**
113A				IAmb	IAmb	05 44 53.3	
	comp=Z,7.9nm,1.4s						
X16A	**Lo Mia Camp, P**	**19.73**	**333**	P	**Pn**	**05 44 52.0**	**+2.7**
Y14A	**Wickenburg**	**20.05**	**329**	P	Pn	05 44 53.7	+0.6
HHAR	**Hobbs**	**20.09**	**16**	P	Pn	05 44 52.4	-1.1
HHAR				IAmb	IAmb	05 44 56.2	
	comp=Z,8.4nm,1.3s						
FCAR	**Ozark Folk Cen**	**20.28**	**21**	P	**P**	**05 44 54.4**	**+0.6**
FCAR				IAmb	IAmb	05 44 55.7	
	comp=Z,7.5nm,1.1s						
U40A	**Yellville**	**20.47**	**19**	P	Pn	05 44 57.9	-0.1
WUAZ	**Wupatki**	**20.64**	**335**	P	Pn	05 45 01.1	+1.0
WUAZ				IAmb	IAmb	05 45 09.5	
	comp=Z,8.4nm,1.3s						
Y12C	**Blythe**	**20.68**	**326**	P	Pn	05 45 01.7	+1.2
LCAR	**Lake Charles**	**20.78**	**23**	P	**P**	**05 44 60.0**	**+0.8**
LCAR				IAmb	IAmb	05 45 05.2	
	comp=Z,14nm,1.5s						
PLAL	**Pickwick Lake**	**21.16**	**30**	P	**P**	**05 45 05.5**	**+2.1**
PLAL				IAmb	IAmb	05 45 22.7	
	comp=Z,7.1nm,1.1s						
PFO	**Pinyon Flats O**	**21.66**	**322**	LR	LR	05 54 36.5	
	comp=Z,85nm,18.9s,baz=138,slow=40						
MTPU	**Mount Pierson**	**23.16**	**337**	P	**P**	**05 45 28.6**	**+3.5**
TKL	**Tuckaleechee C**	**23.93**	**36**	LR	LR	05 55 29.6	
	comp=Z,19nm,21.7s,baz=266,slow=38						
TPNV	**Topopah Spring**	**24.05**	**328**	P	**P**	**05 45 36.1**	**+2.5**
TPNV				IAmb	IAmb	05 45 44.2	
	comp=Z,4.1nm,1.1s						
OMMB	**Old Mammoth Mi**	**25.98**	**326**	P	**P**	**05 45 53.7**	**+2.4**
MDPB	**Devils Postpil**	**26.04**	**325**	P	**P**	**05 45 54.1**	**+2.3**
MDPB				IAmb	IAmb	05 46 00.2	
	comp=Z,4.8nm,1.1s						
PDAR	**Pinedale Array**	**26.68**	**346**	P	**P**	**05 45 59.3**	**+1.8**
	comp=Z,0.8nm,0.9s,baz=140,slow=7.7,SNR=4.8						
SDV	**Santo Domingo**	**30.48**	**102**	LR	LR	05 59 23.7	
	comp=Z,36nm,20.1s,baz=66,slow=38						
NNA	**Nana**	**37.35**	**139**	LR	LR	05 59 38.5	
	comp=Z,57nm,21.7s,baz=316,slow=31						
LPAZ	**La Paz**	**46.22**	**134**	LR	LR	06 06 19.8	
	comp=Z,37nm,19.0s,baz=354,slow=34						

YKA	**Yellowknife Ar**	**46.40**	**351**	P		**P**	**05 48 43.2**	**-1.3**
	comp=Z,0.8nm,0.8s,baz=157,slow=7.2,SNR=9.8							
YKA				LR		LR	06 10 09.3	
	comp=Z,66nm,18.8s,baz=0.0,slow=38							
H03N2	**Juan Fernandez**	**54.40**	**157**	T		T	06 48 23.8	
	baz=335,slow=77,SNR=60							
H03N1	**Juan Fernandez**	**54.41**	**157**	T		T	06 48 25.1	
	baz=335,slow=77,SNR=92							
H03N3	**Juan Fernandez**	**54.41**	**157**	T		T	06 48 26.7	
	baz=335,slow=77,SNR=57							
INK	**Inuvik**	**55.25**	**346**	P		**P**	**05 49 51.6**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=115,slow=6.2,SNR=6.7							
INK	**Inuvik**	**55.25**	**346**	P		**P**	**05 49 51.7**	**+0.6**
INK				IAmb		IAmb	05 49 53.9	
	comp=Z,1.4nm,0.9s							
SCM	**Sheep Creek Mo**	**55.31**	**335**	P		**P**	**05 49 52.9**	**+1.1**
LZH	**Lanzhou**	**122.21**	**336**	*e*PKP		**PKPdf**	**05 59 07.8**	**-6.2**
LZH				pPKP		pPKPdf	05 59 18.5	+4.1
LZH				sPKP			05 59 22.6	
KSH	**Kashi**	**123.63**	**3**	PKP		**PKPdf**	**05 59 15.4**	**-1.2**

IDC ***16*** *05:43:32.3±4.8, 37°.23N×72°.21E, h187km±32km, mb3.3/5, mb1 3.3/11, mb1mx3.0/47, mbtmp3.8/11, MS2.5/1, Ms1 2.5/1, ms1mx2.0/31, Error ellipse: s-maj=51.6km s-min=27.9km az=155.0*

NEIC ***16*** *05:43:34.2±1.5, 37°.48N±0°.06×72°.22E±0°.10, h193km±8km, mb4.0/8, Error ellipse: s-maj=11.0km s-min=8.4km az=105.0*

NNC ***16*** *05:43:39.1±2.4, 37°.92N×72°.19E, h215km±36km, mb2.5, mpv3.6, Error ellipse: s-maj=27.0km s-min=14.0km az=20.0*

ISC 16 05:43:34.1±0.7, 37°.51N±0°.05×72°.20E±0°.08, h200km, n45, σ1§67/53, mb3.6/8, 6C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**3.86**	**9**		**Pn**	**05 44 34.0**	**-0.2**
ARSB				Sn	**Sn**	**05 45 19.5**	**-2.0**
KBL	**Kabul**	**3.91**	**222**		**Pn**	**05 44 35.2**	**+0.2**
KBL				Sn	**Sn**	**05 45 19.1**	**-3.6**
NIL	**Nilore**	**3.94**	**167**		**Pn**	**05 44 35.1**	**-0.1**
NIL				Sn	**Sn**	**05 45 20.4**	**-2.7**
AML	**Almayashu**	**4.76**	**14**	P	**Pn**	**05 44 46.0**	**+0.3**
	SNR=46						
IUG	**Iuzhnay**	**4.93**	**341**	Lg	Lg	05 45 42.8	
	289nm,0.5s						
UCH	**Uchtor**	**5.04**	**20**	P	**Pn**	**05 44 49.8**	**+0.5**
	SNR=29						
KZA	**Kyzart**	**5.13**	**26**	P	**Pn**	**05 44 50.3**	**-0.2**
	SNR=5.6						
EKS2	**Erkin-Say**	**5.29**	**13**	P	**Pn**	**05 44 53.6**	**+1.4**
	SNR=28						
MRKS	**Merke**	**5.29**	**8**	Lg	Lg	05 45 50.8	
	49nm,0.4s						
AAK	**Ala-Archa**	**5.42**	**18**	P	**Pn**	**05 44 54.8**	**+0.9**
	4.5nm,0.3s,baz=178,slow=2.8,SNR=32						
AAK				S	**Sn**	**05 45 56.0**	**-1.0**
	2.7nm,0.3s,baz=339,slow=22,SNR=15						
AAK	**Ala-Archa**	**5.42**	**18**	P	**Pn**	**05 44 54.8**	**+0.9**
	SNR=17						
AAK	**Ala-Archa**	**5.42**	**18**	⇑P	**Pn**	**05 44 54.2**	**+0.3**
	8.3nm,0.4s						
AAK				⇑S	**Sn**	**05 45 54.8**	**-2.2**
	17nm,0.6s						
AAK	**Ala-Archa**	**5.42**	**18**		**Pn**	**05 44 54.7**	**+0.9**
AAK				Sn	**Sn**	**05 45 55.2**	**-1.8**
KK31	**Karatay Array**	**5.74**	**348**	P	**Pn**	**05 44 58.1**	**+0.3**
	1.3nm,0.2s,baz=160,slow=11,SNR=36						
KK31				⇑S	**Sn**	**05 46 00.9**	**-3.3**
	14nm,0.4s,baz=152,slow=18,SNR=23						
KK31	**Karatay Array**	**5.74**	**348**		**Pn**	**05 44 58.5**	**+0.6**
KK31				Sn	**Sn**	**05 46 01.6**	**-2.6**
KKAR	**Karatay Array**	**5.74**	**348**		**Pn**	**05 44 58.5**	**+0.6**
KKAR				Sn	**Sn**	**05 46 01.6**	**-2.6**
TKM2	**Tokmak 2**	**6.00**	**25**	P	**Pn**	**05 45 02.3**	**+0.8**
	SNR=5.1						
TKM2	**Tokmak 2**	**6.00**	**25**	⇑P	**Pn**	**05 45 01.6**	**+0.2**
	2.6nm,0.6s						
TKM2				⇑S	**Sn**	**05 46 08.4**	**-2.2**
	4.7nm,0.9s						
KDJ	**Kajisay**	**6.00**	**38**	Pn	**Pn**	**05 45 01.3**	**-0.2**
KST	**Kastek**	**6.23**	**26**	P	**Pn**	**05 45 04.5**	**+0.1**
DGS	**Degeres**	**6.34**	**24**	P	**Pn**	**05 45 06.2**	**+0.4**
KRBS	**Karabastau**	**6.72**	**22**	P	**Pn**	**05 45 10.5**	**-0.1**
PRZ	**Przheval'sk**	**6.88**	**42**	Pn	**Pn**	**05 45 11.2**	**-1.6**
MKAR	**Makanchi Array**	**11.91**	**36**	P	**P**	**05 46 20.8**	**-1.8**
	0.2nm,0.3s,baz=216,slow=9.7,SNR=5.6						
KURBB	**Kurchatov Arra**	**13.87**	**17**	P	**P**	**05 46 45.6**	**+1.4**
	0.1nm,0.3s,baz=202,slow=11,SNR=15						
KURK	**Kurchatov**	**13.98**	**17**	P	**Pn**	**05 46 44.4**	**+0.9**
AB31	**Akbulak array**	**14.72**	**327**	⇑P	**Pn**	**05 46 53.4**	**+0.8**
	0.5nm,0.4s,baz=133,slow=12,SNR=26						
AB31				⇓S	**S**	**05 49 30.1**	**-5.9**
	0.9nm,0.4s,baz=150,slow=24,SNR=6.7						
BVAR	**Borovoye Array**	**15.57**	**356**	P	**P**	**05 47 04.0**	**+1.0**
	0.4nm,0.3s,baz=164,slow=9.6,SNR=4.1						
AKTO	**Aktyubinsk**	**16.43**	**326**	P	**Pn**	**05 47 14.9**	**+1.5**
	0.8nm,0.3s,baz=127,slow=9.3,SNR=8.3						
AKTO	**Aktyubinsk**	**16.43**	**326**	⇓P	**Pn**	**05 47 14.8**	**+1.5**
	1.6nm,0.5s						
ZAA0	**Zalesovo Array**	**18.61**	**24**	P	**P**	**05 47 37.2**	**+1.0**
ZAA0				IAmb	IAmb	05 47 38.3	
	comp=Z,7.3nm,0.6s						
ZALV	**Zalesovo Beam**	**18.61**	**24**	P	**P**	**05 47 37.1**	**+0.9**
	comp=Z,1.3nm,0.3s,baz=222,slow=10,SNR=17						
OBN	**Obninsk**	**29.82**	**318**	LR	LR	06 03 29.4	
	comp=Z,9.9nm,22.0s,baz=358,slow=40						
FINES	**FINESS Array B**	**37.20**	**325**	P	**P**	**05 50 26.7**	**+1.1**
	comp=Z,0.5nm,0.4s,baz=113,slow=11,SNR=3.8						
ARCES	**ARCESS Array B**	**40.59**	**337**	P	**P**	**05 50 55.5**	**+1.8**
	comp=Z,1.8nm,0.7s,baz=109,slow=9.0,SNR=10.0						
CASP	**Castiglione de**	**46.28**	**297**	P	**P**	**05 51 41.0**	**+1.5**
TOA0	**Torodi Ar. Sit**	**66.70**	**269**	P	**P**	**05 54 03.8**	**0.0**
TOA0				IAmb	IAmb	05 54 09.6	
	comp=Z,3.7nm,1.5s						
TORD	**Torodi Ar. Bea**	**66.70**	**269**	P	**P**	**05 54 03.4**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=47,slow=5.6,SNR=5.0						
TOLK	**Toolik Lake Re**	**69.70**	**15**	P	**P**	**05 54 23.1**	**+1.5**
TOLK				IAmb	IAmb	05 54 38.5	
	comp=Z,3.5nm,1.4s						
INK	**Inuvik**	**72.75**	**10**	P	**P**	**05 54 41.4**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=355,slow=5.5,SNR=4.6						
INK	**Inuvik**	**72.75**	**10**	P	**P**	**05 54 41.4**	**+1.6**
C36M	**Paulatuk**	**72.78**	**6**	P	**P**	**05 54 41.0**	**+1.0**
PPLA	**Purkeypile**	**73.82**	**19**	P	**P**	**05 54 47.0**	**+0.6**
PPLA				IAmb	IAmb	05 54 53.1	
	comp=Z,3.7nm,1.4s						
SCRK	**Sand Creek**	**74.87**	**16**	P	**P**	**05 54 53.6**	**+1.2**
YKA	**Yellowknife Ar**	**80.19**	**3**	P	**P**	**05 55 22.8**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=353,slow=5.4,SNR=11						

KRAR ***16*** *05:45:16.1±0.2, 54°.38N×87°.21E, M2.1, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC 16 05:45:18.6±3.5, 54°.33N×87°.28E, h0km, mb1 3.0/2, mb1mx2.9/44, mbtmp3.0/2, ML2.2/2, Error ellipse: s-maj=31.9km s-min=20.7km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.50**	**256**	*i*		05 53 01.6	
	baz=76,slow=315,SNR=3.3						
ZALV	**Zalesovo Beam**	**1.50**	**256**	Pg	Pn	05 45 44.1	-2.5
	0.9nm,0.3s,baz=74,slow=16,SNR=14						
ZALV				Lg	Lg	05 46 07.4	
	1.1nm,0.3s,baz=78,slow=26,SNR=6.8						
ZALV				Rg	Rg	05 46 22.5	
	2.1nm,0.5s,baz=76,slow=26,SNR=1.9						
KURBB	**Kurchatov Arra**	**6.50**	**239**	Pn	Pn	05 46 55.3	-0.2
	0.1nm,0.3s,baz=57,slow=14,SNR=6.3						
MKAR	**Makanchi Array**	**8.18**	**205**	Pn	Pn	05 47 21.1	+2.5
	0.0nm,0.3s,baz=26,slow=15,SNR=2.1						

LVSN 16 05:50:04.9±5.5, 57°.24N×22°.59E, h0km±135km, ML2.6, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.42**	**337**	*e*P	Pg	05 50 11.9	-1.0
SLIT				IAML		05 50 35.0	
	comp=Z,654nm,0.6s						
SLIT	**Slitere, Latvi**	**0.42**	**337**	*e*P	Pg	05 50 12.1	-0.9
SLIT				*e*S	Sg	05 50 16.9	-1.5
SLIT				AML	AML	05 50 32.1	
	comp=N,657nm,0.5s						
SLIT				AML	AML	05 50 34.7	
	comp=Z,764nm,0.7s						
SLIT				AML	AML	05 50 35.2	
	comp=E,1μm,0.6s						
PBUR	**Paburge**	**1.27**	**197**	*e*P	Pn	05 50 35.5	+5.5
PBUR				IAML		05 51 35.3	
	comp=Z,50nm,0.3s						
MTSE	**Matsula**	**1.61**	**23**	*e*P	Pn	05 50 34.2	-0.4
MTSE				*e*S	Sn	05 50 55.0	-1.1
VSU	**Vasula**	**2.53**	**59**	*e*P	Sn	05 51 13.4	-5.2
VSU	**Vasula**	**2.53**	**59**	*e*S	Sn	05 51 13.1	-5.6
VSU				AML	AML	05 51 37.3	
	comp=N,38nm,0.4s						
VSU				AML	AML	05 51 47.0	
	comp=Z,29nm,0.4s						
VSU				AML	AML	05 51 47.2	
	comp=E,53nm,0.3s						

IDC ***16*** *05:52:43.5±2.0, 38°.07S×75°.28W, h0km, mb3.6/3, mb1 3.9/5, mb1mx3.6/19, mbtmp3.6/5, ML3.5/2, MS2.5/2, Ms1 2.4/2, ms1mx2.3/14, Error ellipse: s-maj=45.5km s-min=28.2km az=41.0*

NEIC ***16*** *05:52:44.9±1.9, 38°.02S±0°.07×75°.2W±0°.2, h18km±5km, Error ellipse: s-maj=20.6km s-min=10.5km az=94.0*

GUC ***16*** *05:52:46.2±0.6, 38°.12S×74°.91W, h5km±12km, ML3.9*

ISC 16 05:52:48.2±0.9, 37°.97S±0°.07×75°.17W±0°.07, h35km, n40, σ1§83/46, mb3.6/6, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**1.99**	**56**	*e*P	**Pn**	**05 53 18.6**	**-0.8**
CCSP				*i* S	**Sn**	**05 53 43.0**	**0.0**
CCSP				IAML		05 53 45.2	
	comp=N,700nm,0.8s						
BI03	**Tigo**	**2.05**	**57**	*e*P	**Pn**	**05 53 18.8**	**-1.3**
BI03				*e*S	**Sn**	**05 53 44.3**	**-0.2**
BI03				IAML		05 53 46.9	
	comp=N,3μm,0.3s						
BI03	**Tigo**	**2.05**	**57**		**Pn**	**05 53 18.4**	**-1.7**
LAJA	**Laja**	**2.07**	**71**	*e*P	**Pn**	**05 53 18.9**	**-1.6**
LAJA				*e*S	**Sn**	**05 53 43.6**	**-1.5**
LC01	**Cunco**	**2.75**	**111**	*e*P	**Pn**	**05 53 28.0**	**-1.8**
LC01				*e*S	**Sn**	**05 53 59.1**	**-2.8**
BI02	**San Fabin de**	**3.37**	**68**	*e*P	**Pn**	**05 53 37.8**	**-0.7**
BI02				*e*S	**Sn**	**05 54 17.7**	**+0.4**
BI02	**San Fabin de**	**3.37**	**68**		**Pn**	**05 53 37.7**	**-0.7**
GO05	**Huala**	**3.94**	**42**	*e*P	**Pn**	**05 53 45.6**	**-0.7**
GO05	**Huala**	**3.94**	**42**		**Pn**	**05 53 45.1**	**-1.2**
PLCA	**Paso Flores**	**4.52**	**129**	Pn	**Pn**	**05 53 52.6**	**-1.7**
	comp=N,0.6nm,0.3s,baz=310,slow=14,SNR=18						
PLCA				Sn	**Sn**	**05 54 49.4**	**+3.7**
	comp=N,2.1nm,0.3s,baz=25,slow=19,SNR=6.0						
PLCA				LR	LR	05 55 44.4	
	comp=N,31nm,20.7s,baz=324,slow=40						
PLCA	**Paso Flores**	**4.52**	**129**		**Pn**	**05 53 53.0**	**-1.3**
BO02	**Sierra Bellavi**	**4.75**	**50**		**Pn**	**05 53 56.4**	**-1.1**
LL01	**San Ignacio de**	**4.89**	**155**	Pn	**Pn**	**05 53 55.2**	**-3.9**
H03S1	**Juan Fernandez**	**5.11**	**323**	Pn	**Pn**	**05 53 59.6**	**-2.4**
	baz=117,slow=8.7,SNR=16						
H03S1				T	T	05 59 17.9	
	baz=146,slow=72,SNR=18						
H03S2	**Juan Fernandez**	**5.12**	**322**	Pn	**Pn**	**05 53 59.5**	**-2.7**
	baz=117,slow=8.7,SNR=11						
H03S2				T	T	05 59 34.4	
	baz=146,slow=72,SNR=17						
H03S3	**Juan Fernandez**	**5.13**	**323**	Pn	**Pn**	**05 53 59.8**	**-2.5**
	baz=117,slow=8.7,SNR=9.6						
H03S3				T	T	05 59 25.2	
	baz=146,slow=72,SNR=20						
MT01	**Popeta**	**5.19**	**39**		**Pn**	**05 54 02.0**	**-1.4**
H03N3	**Juan Fernandez**	**5.44**	**325**	Pn	**Pn**	**05 54 04.4**	**-2.2**
	baz=202,slow=80,SNR=23						
H03N1	**Juan Fernandez**	**5.45**	**325**	Pn	**Pn**	**05 54 04.3**	**-2.3**
	baz=202,slow=80,SNR=35						
H03N2	**Juan Fernandez**	**5.46**	**325

0.5nm,0.4s,baz=286,slow=5.7,SNR=8.9
YKA Yellowknife Ar 71.48 28 P P 06 15 32.6 +4.6
0.4nm,0.4s,baz=299,slow=5.8,SNR=13
KBZ Khabaz 75.23 312 P **P 06 15 51.8 +2.1**
1.0nm,0.4s,baz=113,slow=3.2,SNR=4.5
NVAR Mina Array Bea 80.97 51 P P 06 16 27.6 +6.4
0.7nm,0.5s,baz=290,slow=6.0,SNR=7.4

NNC ***16*** *06:18:42.2±1.9, 41°.68N×71°.72E, h4km±30km, mb3.2, mpv3.0, Error ellipse: s-maj=32.6km s-min=8.0km az=167.0*
SOME ***16*** *06:18:42.4, 41°.67N×71°.78E, h15km*
KRNET ***16*** *06:18:43.0±0.1, 41°.72N×71°.76E, h18km, mb2.6*
ISC 16 06:18:42.4±1.0, 41°.68N±0'.04×71°.78E±0'.03, h14km±8km, n24, σ1§54/42, 21C-3D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.18**	**50**	⇑*iP*		**Pg**	**06 18 46.8**	**0.0**
	baz=70							
ARK				⇑*iS*		**Sg**	**06 18 49.6**	**-0.1**
	baz=70							
ARSB	**Arslanbob**	**0.97**	**111**	⇑*iP*		**Pn**	**06 19 01.8**	**0.0**
	baz=13							
ARSB				⇑*iS*		**Sn**	**06 19 15.3**	**-0.2**
	baz=13							
IUG	**Iuzhnay**	**1.38**	**290**	*e*P		**Pb**	**06 19 08.2**	**+0.2**
	4.6nm,0.1s							
IUG				*e*S		**Sg**	**06 19 26.7**	**-0.3**
	25nm,0.2s							
IUG	**Iuzhnay**	**1.38**	**290**	P		**Pb**	**06 19 08.2**	**+0.2**
	4.6nm,0.1s							
IUG				S		**Sg**	**06 19 26.7**	**-0.3**
	25nm,0.2s							
AML	**Almayashu**	**1.50**	**72**	⇑*iP*		**Pb**	**06 19 10.7**	**+0.5**
	baz=73							
AML				⇑*iS*		**Sg**	**06 19 31.2**	**+0.4**
	baz=73							
MRKS	**Merke**	**1.51**	**45**	*e*P		**Pb**	**06 19 10.6**	**+0.3**
	7.2nm,0.2s							
MRKS				*e*S		**Sg**	**06 19 30.7**	**-0.4**
	26nm,0.4s							
MRKS	**Merke**	**1.51**	**45**	P		**Pb**	**06 19 10.6**	**+0.3**
	7.2nm,0.2s							
MRKS				S		**Sg**	**06 19 31.4**	**+0.3**
	26nm,0.4s							
KK31	**Karatay Array**	**1.70**	**327**	⇑P		**Pb**	**06 19 13.3**	**-0.1**
	0.4nm,0.2s,baz=149,slow=17,SNR=8.4							
KK31				⇑S		**Sb**	**06 19 34.0**	**-0.8**
	1.8nm,0.3s,baz=155,slow=32,SNR=8.3							
BTK	**Batken**	**1.78**	**204**	⇑*iP*		**Pg**	**06 19 16.2**	**-0.3**
	baz=4.0							
BTK				⇑*iS*		**Sg**	**06 19 40.1**	**+0.5**
	baz=4.0							
EKS2	**Erkin-Say**	**1.78**	**56**	⇑*iP*		**Pb**	**06 19 15.4**	**+0.5**
	baz=57							
EKS2				⇑*iS*		**Sg**	**06 19 39.1**	**-0.6**
	baz=57							
UCH	**Uchtor**	**2.11**	**74**	⇑*iP*		**Pb**	**06 19 20.7**	**0.0**
	baz=75							
UCH				⇑*iS*		**Sb**	**06 19 47.9**	**+0.9**
	baz=75							
AAK	**Ala-Archa**	**2.23**	**64**	⇑Pg		**Pg**	**06 19 24.4**	**-0.9**
	4.2nm,0.3s							
AAK				⇓Lg		Lg	06 19 55.8	
	3.7nm,0.4s							
KBK	**Karagaybulak**	**2.55**	**67**	⇑*iP*		**Pb**	**06 19 26.6**	**-1.4**
	baz=67							
KBK				⇑*iS*		**Sb**	**06 19 58.0**	**-1.3**
	baz=67							
CHMS	**Chumysh**	**2.57**	**58**	⇑*iP*		**Pb**	**06 19 26.6**	**-1.6**
	baz=59							
CHMS				⇑*iS*		**Sb**	**06 19 58.0**	**-1.7**
	baz=59							
KZA	**Kyzart**	**2.62**	**80**	⇑*iP*		**Pb**	**06 19 27.9**	**-1.5**
	baz=81							
KZA				⇑*iS*		**Sb**	**06 20 00.3**	**-1.3**
	baz=81							
TKM2	**Tokmak 2**	**3.09**	**65**	⇓Pg		**Pb**	**06 19 38.2**	**+0.9**
	2.1nm,0.5s							
TKM2				⇓Lg		Lg	06 20 20.0	
	4.6nm,0.6s							
DGS	**Degeres**	**3.34**	**61**	*e*P		**Pb**	**06 19 42.4**	**+0.9**
	1.2nm,0.2s							
DGS				*e*S		**Sb**	**06 20 25.5**	**+3.5**
	6.1nm,0.5s							
DGS	**Degeres**	**3.34**	**61**	Pg		**Pb**	**06 19 42.4**	**+0.9**
	1.2nm,0.2s							
DGS				Lg		Lg	06 20 25.5	
	6.1nm,0.5s							
KST	**Kastek**	**3.39**	**65**	*e*P		**Pb**	**06 19 44.8**	**+2.5**
	3.4nm,0.4s							
KST				*e*S		**Sg**	**06 20 29.3**	**-1.9**
	9.2nm,0.6s							
KST	**Kastek**	**3.39**	**65**	Pg		**Pb**	**06 19 44.7**	**+2.5**
	3.4nm,0.4s							
KST				Lg		Lg	06 20 29.3	
	9.2nm,0.6s							
KRBS	**Karabastau**	**3.51**	**54**	*e*P		**Pb**	**06 19 45.5**	**+1.2**
	1.3nm,0.3s							
KRBS				*e*S		**Sb**	**06 20 30.5**	**+3.7**
	2.1nm,0.6s							
KRBS	**Karabastau**	**3.51**	**54**	Pg		**Pb**	**06 19 45.5**	**+1.2**
	1.3nm,0.3s							
KRBS				Lg		Lg	06 20 30.5	
	2.1nm,0.6s							
KUU	**Kurty**	**4.02**	**55**	*e*P		**Pb**	**06 19 55.5**	**+2.6**
	0.3nm,0.2s							
KUU				*e*S		**Sg**	**06 20 47.9**	**-3.5**
	2.9nm,0.5s							
KUU	**Kurty**	**4.02**	**55**	Pg		**Pb**	**06 19 55.5**	**+2.6**
	1.8nm,0.4s							
KUU				Lg		Lg	06 20 47.9	
	2.8nm,0.4s							

NNC ***16*** *06:22:13.0±1.2, 44°.71N×81°.97E, h0km±7km, mb3.8, mpv3.4, Error ellipse: s-maj=10.5km s-min=4.6km az=126.0*
SOME ***16*** *06:22:13.6, 44°.65N×81°.90E, h10km*
ISC 16 06:22:10.2±1.2, 44°.65N±0'.05×82°.28E±0'.06, h10km, n34, σ1§96/53, 3C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.81**	**261**	*e*P		**Pg**	**06 22 44.3**	**-0.7**
	9.2nm,0.2s							
DJR				*e*S		**Sb**	**06 23 06.5**	**+0.1**
	14nm,0.2s							
DJR	**Jarkent**	**1.81**	**261**	P		**Pg**	**06 22 44.3**	**-0.7**
	19nm,0.4s							
DJR				S		**Sb**	**06 23 07.2**	**+0.8**
	14nm,0.2s							
KTMS	**Ketmen**	**1.84**	**230**	*e*P		**Pb**	**06 22 43.6**	**-0.5**
	4.0nm,0.1s							
KTMS				*e*S		**Sn**	**06 23 05.3**	**-0.1**
	58nm,0.4s							
KTMS	**Ketmen**	**1.84**	**230**	P		**Pb**	**06 22 43.6**	**-0.5**
	4.0nm,0.1s							
KTMS				S		**Sn**	**06 23 05.3**	**-0.1**
	58nm,0.4s							
MK31	**Makanchi Array**	**2.14**	**0**	⇓Pn		**Pb**	**06 22 49.3**	**+0.2**
	14nm,0.3s,baz=188,slow=16,SNR=435							
MK31					Sn	**Sb**	**06 23 16.6**	**+0.9**
	6.0nm,0.3s,baz=189,slow=27,SNR=20							
MAKZ	**Makanchi**	**2.17**	**354**	⇑Pn		**Pb**	**06 22 49.4**	**-0.2**
	9.2nm,0.5s							
MAKZ				⇑Sn		**Sb**	**06 23 17.1**	**+0.7**
	24nm,0.5s							
KAPS	**Kapalarasan**	**2.17**	**288**	*e*P		**Pb**	**06 22 49.1**	**-0.5**
	4.0nm,0.2s							
KAPS				*e*S		**Sn**	**06 23 14.7**	**+1.2**
	29nm,0.4s							
KAPS	**Kapalarasan**	**2.17**	**288**	Pg		**Pb**	**06 22 49.1**	**-0.5**
	5.8nm,0.2s							
KAPS				Lg		Lg	06 23 15.4	
	29nm,0.4s							
PDGK	**Podgornoye**	**2.41**	**238**	Pg		**Pb**	**06 22 54.4**	**+0.7**
	3.6nm,0.3s							
PDGK				Lg		Lg	06 23 23.8	
	29nm,0.6s							
MNBS	**Baschi**	**2.84**	**260**	*e*P		**Pb**	**06 23 01.9**	**+0.8**
MNBS				*e*S		**Sb**	**06 23 36.6**	**+0.6**
MNBS	**Baschi**	**2.84**	**260**	Pg		**Pb**	**06 23 01.9**	**+0.8**
MNBS				Lg		Lg	06 23 36.6	
ARXS	**Arharly**	**3.22**	**264**	*e*P		**Pb**	**06 23 07.5**	**0.0**
	11nm,0.5s							
ARXS				*e*S		**Sb**	**06 23 47.0**	**+0.1**
	25nm,0.4s							
ARXS	**Arharly**	**3.22**	**264**	Pg		**Pb**	**06 23 07.5**	**0.0**
	11nm,0.5s							
ARXS				Lg		Lg	06 23 47.0	
	25nm,0.4s							
SATY	**Saty**	**3.23**	**242**	*e*P		**Pb**	**06 23 07.5**	**-0.1**
	7.9nm,0.3s							
SATY				*e*S		**Sb**	**06 23 46.5**	**-0.6**
	32nm,0.5s							
SATY	**Saty**	**3.23**	**242**	Pg		**Pb**	**06 23 07.6**	**-0.1**
	7.9nm,0.3s							
SATY				Lg		Lg	06 23 46.5	
	32nm,0.5s							
ZSN	**Zaisan**	**3.33**	**32**	*e*P		**Pg**	**06 23 13.2**	**-0.7**
	2.6nm,0.2s							
ZSN				*e*S		**Sg**	**06 23 55.8**	**-1.2**
	9.1nm,0.6s							
ZSN	**Zaisan**	**3.33**	**32**	Pg		**Pg**	**06 23 13.2**	**-0.7**
	4.2nm,0.4s							
ZSN				Lg		Lg	06 23 55.7	
	8.1nm,0.7s							
KOTS	**Kotyrbulak**	**4.00**	**251**	*e*P		**Pb**	**06 23 22.3**	**+1.5**
	12nm,0.4s							
KOTS				*e*S		**Sb**	**06 24 11.5**	**+2.3**
	26nm,0.3s							
KOTS	**Kotyrbulak**	**4.00**	**251**	Pg		**Pb**	**06 23 22.3**	**+1.5**
	12nm,0.4s							
KOTS				Lg		Lg	06 24 11.5	
	26nm,0.3s							
KTBS	**Karatobe**	**4.14**	**259**	*e*P		**Pb**	**06 23 24.0**	**+0.9**
	2.6nm,0.3s							
KTBS				*e*S		**Sb**	**06 24 14.7**	**+1.5**
	18nm,0.6s							
KTBS	**Karatobe**	**4.14**	**259**	Pg		**Pb**	**06 23 24.0**	**+0.9**
	2.6nm,0.3s							
KTBS				Lg		Lg	06 24 14.7	
	18nm,0.6s							
TNSS	**Tian-Shan**	**4.18**	**249**	*e*P		**Pb**	**06 23 25.7**	**+1.5**
	3.8nm,0.3s							
TNSS				*e*S		**Sb**	**06 24 18.0**	**+3.1**
	6.3nm,0.4s							
TNSS	**Tian-Shan**	**4.18**	**249**	Pg		**Pb**	**06 23 25.7**	**+1.5**
	3.8nm,0.3s							
TNSS				Lg		Lg	06 24 18.0	
	6.3nm,0.4s							
KUU	**Kurty**	**4.34**	**262**	*e*P		**Pb**	**06 23 27.8**	**+1.3**
	2.1nm,0.7s							
KUU				*e*S		**Sb**	**06 24 21.2**	**+2.3**
	9.6nm,0.5s							
KUU	**Kurty**	**4.34**	**262**	Pg		**Pb**	**06 23 27.8**	**+1.3**
	2.1nm,0.7s							
KUU				Lg		Lg	06 24 21.2	
	9.6nm,0.5s							
IZV	**Izvestkoviy**	**4.41**	**250**	*e*P		**Pb**	**06 23 29.2**	**+1.3**
	2.7nm,0.4s							
IZV				*e*S		**Sb**	**06 24 23.3**	**+2.2**
	6.0nm,0.4s							
IZV	**Izvestkoviy**	**4.41**	**250**	Pg		**Pb**	**06 23 29.2**	**+1.3**
	2.7nm,0.4s							
IZV				Lg		Lg	06 24 23.3	
	6.0nm,0.4s							
KST	**Kastek**	**4.85**	**253**	*e*P		**Pb**	**06 23 38.6**	**+3.3**
	2.8nm,0.4s							
KST				*e*S		**Sb**	**06 24 39.8**	**+6.1**
	3.6nm,0.5s							
KST	**Kastek**	**4.85**	**253**	Pg		**Pb**	**06 23 38.6**	**+3.3**
	2.8nm,0.4s							
KST				Lg		Lg	06 24 39.7	
	3.6nm,0.5s							
KRBS	**Karabastau**	**4.85**	**261**	*e*P		**Pb**	**06 23 37.6**	**+2.4**
	1.5nm,0.5s							
KRBS				*e*S		**Sb**	**06 24 38.4**	**+4.8**
	1.5nm,0.2s							
KRBS	**Karabastau**	**4.85**	**261**	Pg		**Pb**	**06 23 37.6**	**+2.4**
	1.5nm,0.5s							
KRBS				Lg		Lg	06 24 38.4	
	1.5nm,0.2s							
DGS	**Degeres**	**4.91**	**256**	*e*P		**Pg**	**06 23 40.9**	**-3.4**
	2.8nm,0.3s							
DGS				*e*S		**Sg**	**06 24 43.2**	**-4.5**
	8.5nm,0.6s							
DGS	**Degeres**	**4.91**	**256**	Pg		**Pg**	**06 23 40.9**	**-3.4**
	2.8nm,0.3s							
DGS				Lg		Lg	06 24 43.3	
	8.5nm,0.6s							
KURK	**Kurchatov**	**6.55**	**339**	⇓Pn		**Pn**	**06 23 47.1**	**+0.6**
	2.1nm,0.6s							
KURK				⇑Lg		Lg	06 25 33.7	
	2.8nm,0.5s							

BGR ***16*** *06:32:03.9±0.0, 28°.19N×68°.18E, h33km, mb5.1*
IDC ***16*** *06:32:07.2±0.6, 29°.38N×67°.73E, h0km, mb4.5/32, mb1 4.6/34, mb1mx4.5/47, mbtmp4.5/34, ML4.5/2, MS4.1/29, Ms1 4.1/29, ms1mx4.0/35, Error ellipse: s-maj=15.2km s-min=11.3km az=169.0*
BJI ***16*** *06:32:09.3±0.0, 29°.71N×67°.74E, h11km, mB4.9/44, mb4.8/54, Ms4.8/52, Ms7 4.6/50*
NEIC ***16*** *06:32:10.7±1.7, 29°.47N±0°.07×67°.70E±0°.08, h19km±2km, mb4.9/98, Error ellipse: s-maj=10.8km s-min=9.4km az=133.0*
MOS ***16*** *06:32:10.4±1.1, 29°.51N×67°.73E, h28km, mb5.1/63, MS4.6/4, Error ellipse: s-maj=5.9km s-min=4.0km az=113.0*
GCMT ***16*** *06:32:11.7±0.3, 29°.30N±0°.03×67°.75E±0°.03, h16km, MW4.8/109, Moment Tensor Solution. s40,c50; s109,c146; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.16±.10; $M_{\theta\theta}$-1.35±.08; $M_{\phi\phi}$-0.80±.07; $M_{r\theta}$-0.11±.24; $M_{r\phi}$-0.99±.05; $M_{\theta r}$-0.27±.23; Best double couple: M_o2.15300×10^{16} NP1:ϕ_s56.00000°,δ42.00000°, λ95.00000°. NP2:ϕ_s229.00000°,δ48.00000°,λ85.00000°. Principal axes: T 2.1840, Plg85.0000°, Azm95.0000°; N -0.0580, Plg4.0000°, Azm232.0000°; P -2.1220, Plg3.0000°, Azm322.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 16 06:32:08.9±0.6, 29°.32N±0°.04×67°.67E±0°.03, h11km±3km, h11km:pP-P, n445, σ1§69/471, mb4.9/166, MS4.2/42, 26C-13D, Pakistan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
THW	**Thamme Wali**	**4.92**	**44**	P		**Pn**	**06 33 22.7**	**-0.2**
SARP	**Sargodha**	**5.03**	**58**	P		**Pn**	**06 33 23.4**	**-1.0**
KBL	**Kabul**	**5.33**	**12**	P		**Pn**	**06 33 30.9**	**+2.2**
	SNR=27							
KBL				S		**Sn**	**06 34 32.7**	**+2.4**
KBL	**Kabul**	**5.33**	**12**	P		**Pn**	**06 33 29.7**	**+1.0**
KBL	**Kabul**	**5.33**	**12**			**Pn**	**06 33 29.7**	**+1.0**
CEP	**Cherat**	**5.76**	**38**	P		**Pn**	**06 33 36.5**	**+1.9**
CEP				S		**Sn**	**06 34 42.0**	**+1.2**
NIL	**Nilore**	**6.43**	**46**	P		**Pn**	**06 33 43.5**	**-0.1**
NIL	**Nilore**	**6.43**	**46**			**Pn**	**06 33 43.5**	**-0.1**
CHCP	**Chirah Chowk**	**6.44**	**46**	P		**Pn**	**06 33 43.4**	**-0.4**
AJM	**Ajmer**	**6.79**	**113**	*e*P		**Pn**	**06 33 48.0**	**-0.6**
HRA	**Herat**	**6.84**	**319**			**Pn**	**06 33 50.2**	**+0.9**
THN	**Thein Dam**	**7.58**	**64**	*e*P		**Pn**	**06 34 00.0**	**+0.7**
THN				*ex*		x	06 35 21.5	
BHK	**Bhakra**	**7.84**	**72**	*e*P		**Pn**	**06 34 01.4**	**-1.6**
BHK				*ex*		x	06 35 26.2	
NDI	**New Delhi**	**8.39**	**92**	*ex*		**Pn**	**06 34 07.0**	**-3.4**
NDI				*ex*		x	06 35 36.0	
WSAR	**Wadi Sarin**	**10.12**	**235**	Pn		**Pn**	**06 34 33.9**	**-0.3**
	31nm,0.3s,baz=88,slow=11,SNR=161							
WSAR					Sn	Sn	06 36 18.4	-9.3
	18nm,0.3s,baz=2.9,slow=22,SNR=14							
WSAR				LR		LR	06 39 57.7	
	comp=Z,2μm,18.8s,baz=101,slow=46							
WSAR	**Wadi Sarin**	**10.12**	**235**	P		**Pn**	**06 34 33.9**	**-0.3**
	SNR=16							
WSAR				S		Sn	06 36 18.6	-9.2
WBK	**Wadi Bani Khal**	**10.29**	**231**	P		**Pn**	**06 34 36.5**	**0.0**
	SNR=126							
WBK				S		Sn	06 36 22.3	-10
JLN	**Jalan Bani Buh**	**10.31**	**228**	P		**Pn**	**06 34 36.8**	**-0.1**
	SNR=7.5							
JLN				S		**Sn**	**06 36 25.5**	**-6.9**
BIDO	**Bidbid**	**10.32**	**238**	P		**Pn**	**06 34 37.5**	**+0.6**
	SNR=22							
BIDO				S		**Sn**	**06 36 25.1**	**-7.5**
BANOM	**Banah**	**10.63**	**254**	*i* Pn		**Pn**	**06 34 41.1**	**-0.1**
	SNR=14							
BANOM				Sn		Sn	06 36 30.8	-10
BANOM	**Banah**	**10.63**	**254**	P		**Pn**	**06 34 41.7**	**+0.4**
	SNR=14							
BANOM				S		**Sn**	**06 36 32.8**	**-7.6**
SMDO	**Samad**	**10.65**	**236**	P		**Pn**	**06 34 42.3**	**+0.7**
	SNR=25							
SHME	**Shamm**	**10.72**	**255**	Pn		**Pn**	**06 34 43.2**	**+0.7**
MDH	**Madha**	**10.87**	**251**	*i* Pn		**Pn**	**06 34 43.5**	**-1.1**
	SNR=7.4							
MDH	**Madha**	**10.87**	**251**	P		**Pn**	**06 34 44.2**	**-0.4**
	SNR=7.4							
HOQ	**Hoqain**	**10.89**	**241**	P		**Pn**	**06 34 44.7**	**-0.2**
	SNR=20							
MSFE	**Esma-Masafi**	**10.96**	**252**	Pn		**Pn**	**06 34 47.1**	**+1.3**
JMDO	**Jabal Madar**	**11.04**	**233**	P		**Pn**	**06 34 48.2**	**+1.3**
	SNR=52							
JMDO				S		**Sn**	**06 36 43.3**	**-7.2**
	SNR=9.6							
UOSS	**Minazif**	**11.10**	**250**	Pn		**Pn**	**06 34 47.0**	**-0.6**
UOSS	**Minazif**	**11.10**	**250**			**Pn**	**06 34 46.7**	**-1.0**
HATD	**Hatta, Dubai**	**11.21**	**249**	*i* Pn		**Pn**	**06 34 48.1**	**-1.1**
	SNR=8.6							
HATD	**Hatta, Dubai**	**11.21**	**249**	P		**Pn**	**06 34 48.7**	**-0.5**
	SNR=8.6							
SOHO	**SOHO**	**11.21**	**245**	P		**Pn**	**06 34 48.8**	**-0.4**
	SNR=37							
ASHO	**Ashiyiah**	**11.33**	**249**	*i* Pn		**Pn**	**06 34 50.9**	**+0.1**
	SNR=34							
ASHO	**Ashiyiah**	**11.33**	**249**	P		**Pn**	**06 34 51.2**	**+0.3**
	SNR=34							
BOM	**Bombay**	**11.39**	**155**	AMS		AMS	06 39 21.8	
	comp=Z,966nm,3.3s							
NAZ	**Nazwa, Dubai**	**11.53**	**251**	Pn		**Pn**	**06 34 53.6**	**+0.2**
NAZ	**Nazwa, Dubai**	**11.53**	**251**	P		**Pn**	**06 34 56.3**	**+2.8**
	SNR=7.4							
ARQ	**Araqi**	**11.63**	**242**	P		**Pn**	**06 34 58.0**	**+3.0**
	SNR=12							
ARQ				S		**Sn**	**06 37 01.4**	**-3.5**
FAQ	**Al Faqa, Dubai**	**11.69**	**250**	Pn		**Pn**	**06 34 58.2**	**+2.5**
GEYT	**Alibeck**	**11.70**	**320**	Pn		**Pn**	**06 34 56.2**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=126,slow=17,SNR=13							
GYA0B	**ALIBECK ARRAY**	**11.70**	**320**			**Pn**	**06 34 56.5**	**+0.6**
ALNE	**Al Ain**	**11.87**	**247**	*i* Pn		**Pn**	**06 35 00.0**	**+1.8**
	SNR=14							
POO	**Poona**	**12.14**	**151**	*e*P		**Pn**	**06 35 01.5**	**-0.4**
	comp=Z,20nm,1.0s							
POO				*ex*		x	06 35 11.5	
POO				*ex*		x	06 35 20.0	
POO				*i* x		x	06 37 25.5	
POO				*ex*		x	06 37 39.5	
KSH	**Kashi**	**12.26**	**32**	P		Pn	06 34 57.1	-6.5
KSH				pP		P	06 35 00.3	-16
KSH				PP		**PnPn**	**06 35 07.3**	**-4.1**
KSH				S		Sn	06 37 04.8	-15
KSH				SS		SnSn	06 37 15.8	-17
KSH				pmax		pmax		
	comp=Z,150nm,1.3s							
KSH				pmax		pmax		
	comp=Z,750nm,3.8s							
KSH				LR		LR		
	comp=Z,3μm,8.5s							
KSH				LR		LR		
	comp=Z,1μm,8.1s							
KSH				LR		LR		
	comp=Z,3μm,8.9s							
ARSB	**Arslanbob**	**12.73**	**18**	P		**Pn**	**06 35 08.9**	**-1.2**
ARSB	**Arslanbob**	**12.73**	**18**			**Pn**	**06 35 08.9**	**-1.2**
NGP	**Nagpur**	**13.12**	**126**	*e*P		**Pn**	**06 35 14.8**	**-0.5**
NGP				IVmB_BB			06 35 20.2	
	comp=Z,565nm,1.0s							
NGP				*i* x		x	06 35 20.2	
PYUN	**Piuthan**	**13.51**	**91**	*e*P		**Pn**	**06 35 18.3**	**-2.4**
	comp=Z,294nm,0.5s							
AML	**Almayashu**	**13.68**	**19**	P		**Pn**	**06 35 20.6**	**-2.6**
	SNR=27							
KLRI	**Killari**	**13.86**	**142**	*e*P		**Pn**	**06 35 25.3**	**-0.1**
KLRI				IVms_BB		IVms_BB	06 41 51.8	
	comp=Z,1μm,10.0s							
KK31	**Karatay Array**	**13.94**	**9**	P		**Pn**	**06 35 23.9**	**-2.6**
KK31	**Karatay Array**	**13.94**	**9**			**Pn**	**06 35 23.9**	**-2.6**
KKAR	**Karatay Array**	**13.94**	**9**	P		**Pn**	**06 35 23.4**	**-3.0**
KKAR	**Karatay Array**	**13.94**	**9**			**Pn**	**06 35 23.4**	**-3.0**
UCH	**Uchtor**	**14.02**	**21**	P		**Pn**	**06 35 25.2**	**-2.6**
	SNR=12							
KOLN	**Koldanda**	**14.09**	**92**	*e*P		**Pn**	**06 35 25.9**	**-2.8**
	comp=Z,57nm,0.4s							
DANN	**Dangsing**	**14.14**	**90**	*e*P		**Pn**	**06 35 26.7**	**-2.8**
	comp=Z,118nm,0.5s							
EKS2	**Erkin-Say**	**14.19**	**19**	P		**Pn**	**06 35 27.5**	**-2.5**
	SNR=24							
SRSP	**Sriramsagar**	**14.20**	**134**	*e*P		**Pn**	**06 35 29.2**	**-1.0**
SRSP				IVMs_BB		IVMs_BB	06 41 54.6	
	comp=Z,2μm,9.7s							
AAK	**Ala-Archa**	**14.38**	**21**	Pn		**Pn**	**06 35 29.8**	**-2.8**
	comp=Z,3.4nm,0.3s,baz=179,slow=6.5,SNR=30							
AAK				LR		LR	06 42 29.5	
	comp=Z,697nm,20.6s,baz=194,slow=44							
AAK	**Ala-Archa**	**14.38**	**21**	*c* P		**Pn**	**06 35 29.7**	**-3.0**
	SNR=20							
AAK	**Ala-Archa**	**14.38**	**21**	*c* P		**Pn**	**06 35 29.3**	**-3.3**
AAK				pmax		pmax		
	comp=Z,41nm,1.7s							
AAK	**Ala-Archa**	**14.38**	**21**			**Pn**	**06 35 29.6**	**-3.0**
RPR	**Rampur**	**14.86**	**132**	*e*P		**Pn**	**06 35 38.3**	**-0.8**
RPR				IVMs_BB		IVMs_BB	06 42 15.6	
	comp=Z,1μm,10.3s							
TARG	**Taragay, Kyrgy**	**14.86**	**31**			**Pn**	**06 35 35.6**	**-3.8**
KDJ	**Kajisay**	**14.92**	**29**	P		**Pn**	**06 35 35.3**	**-4.7**
KDJ	**Kajisay**	**14.92**	**29**			**Pn**	**06 35 35.3**	**-4.7**
GKN	**Gorkha**	**14.96**	**91**	*e*P		**Pn**	**06 35 37.1**	**-3.4**
	comp=Z,107nm,0.6s							
TKM2	**Tokmak 2**	**15.00**	**23**	P		**Pn**	**06 35 41.1**	**+0.1**
	SNR=23							
DMN	**Daman**	**15.43**	**92**	*e*P		**Pn**	**06 35 43.5**	**-3.4**
	comp=Z,47nm,0.6s							
HYBB	**Hyderabad (bro**	**15.49**	**138**	*e*P		**Pn**	**06 35 45.4**	**-2.1**
HYBB				IVMs_BB		IVMs_BB	06 42 48.0	
	comp=Z,2μm,8.8s							
HYB	**Hyderabad**	**15.49**	**138**	*i* P		**Pn**	**06 35 46.5**	**-1.0**
HYB				*e*S		**Sn**	**06 38 44.0**	**+4.9**
KKN	**Kakani**	**15.55**	**91**	*e*P		**Pn**	**06 35 44.8**	**-3.6**
	comp=Z,46nm,0.5s							
PKIN	**Phulchoki**	**15.69**	**92**	*e*P		**Pn**	**06 35 46.1**	**-4.2**
	comp=Z,36nm,0.4

SKHT IVMs_BB IVMs_BB 06 44 47.9
comp=Z,991nm,9.1s
AKT Akhty 20.23 312 *e*P **P** **06 36 44.7 +0.6**
AKT *e* 06 37 01.9
AKT pmax pmax
comp=Z,54nm,1.3s
LSA Lhasa 20.44 83 P Pn 06 36 48.3 -0.7
LSA PP **PnPn** **06 37 12.0 +8.1**
LSA S **S** **06 40 27.8 -8.2**
LSA pmax pmax
comp=Z,49nm,2.0s
LSA pmax pmax
comp=Z,300nm,3.0s
LSA LR LR
comp=Z,2μm,10.0s
LSA LR LR
comp=Z,4μm,11.4s
LSA LR LR
comp=Z,5μm,10.7s
LSA Lhasa 20.44 83 P Pn 06 36 48.2 -0.8
LSA pmax pmax
comp=Z,54nm,1.1s
LSA Lhasa 20.44 83 P Pn 06 36 48.2 -0.8
LSA IAmb IAmb 06 37 06.4
comp=Z,54nm,1.1s
RAYN Ar Rayn 20.66 259 P **P** **06 36 49.6 +0.7**
RAYN pmax pmax
comp=Z,72nm,0.9s
RAYN Ar Rayn 20.66 259 P **P** **06 36 49.6 +0.7**
RAYN IAmb IAmb 06 36 51.2
comp=Z,72nm,0.9s
MAKZ Makanchi 20.72 29 P **P** **06 36 47.7 -1.6**
MAKZ pmax pmax
comp=Z,17nm,0.7s
MAKZ Makanchi 20.72 29 P **P** **06 36 47.7 -1.6**
NAX Nakhchivan 20.75 304 P **P** **06 36 50.8 +1.0**
GANJ Ganja 20.77 309 P **P** **06 36 50.9 +1.0**
MK31 Makanchi Array 20.84 29 P **P** **06 36 48.8 -1.8**
MK31 pmax pmax
comp=Z,14nm,0.9s
MK31 Makanchi Array 20.84 29 P **P** **06 36 48.8 -1.8**
MKAR Makanchi Array 20.84 29 P **P** **06 36 49.1 -1.5**
comp=Z,5.6nm,0.6s,baz=210,slow=9.5,SNR=60
MKAR LR LR 06 46 33.6
comp=Z,1μm,18.3s,baz=217,slow=42
ZKTA Zakatala 21.02 311 P **P** **06 36 53.5 +0.9**
WMQ Urumqi 21.56 42 *e*P **P** **06 36 59.1 +0.7**
WMQ sP sP 06 37 08.0 +4.9
WMQ PP **PnPn** **06 37 20.9 +2.1**
WMQ PcP **PcP** **06 41 03.9 +3.4**
WMQ SS Sn 06 41 24.6 +19
WMQ PcS **PcS** **06 44 36.0 -2.7**
WMQ pmax pmax
comp=Z,19nm,1.5s
WMQ pmax pmax
comp=Z,73nm,3.6s
WMQ LR LR
comp=Z,1μm,19.9s
WMQ LR LR
comp=Z,1μm,22.9s
WMQ LR LR
comp=Z,500nm,20.1s
SHL Shillong 21.80 94 P **P** **06 37 05.3 +4.0**
SNR=14
SHL Shillong 21.80 94 P **P** **06 37 01.1 -0.2**
SHL pmax pmax
comp=Z,37nm,0.8s
SHL Shillong 21.80 94 P **P** **06 37 01.1 -0.2**
SHL IAmb IAmb 06 37 18.5
comp=Z,37nm,0.8s
AKTO Aktyubinsk 22.31 344 P **P** **06 37 05.1 -1.3**
comp=Z,31nm,0.8s,baz=167,slow=10,SNR=29
AKTO LR LR 06 47 02.0
comp=Z,473nm,18.1s,baz=144,slow=40
TBLG Delisi 22.32 310 P **P** **06 37 06.0 -0.5**
TBLG pmax pmax
comp=Z,44nm,1.1s
TBLG Delisi 22.32 310 P **P** **06 37 06.0 -0.5**
TBLG IAmb IAmb 06 37 14.6
comp=Z,44nm,1.1s
GROC Groznyy 22.34 314 *e*P **P** **06 37 07.0 +0.3**
GROC *e* 06 37 32.8
GROC pmax pmax
comp=Z,28nm,0.5s
KZRT Kazreti 22.40 309 P **P** **06 37 11.0 +3.6**
KURBB Kurchatov Arra 22.80 18 P **P** **06 37 09.7 -1.8**
comp=Z,7.1nm,0.5s,baz=208,slow=10,SNR=61
KURK Kurchatov 22.91 18*c i*P **P** **06 37 10.9 -1.7**
KURK pmax pmax
comp=Z,43nm,1.7s
KURK Kurchatov 22.91 18 P **P** **06 37 10.7 -1.9**
KURK IAmb IAmb 06 37 21.6
comp=Z,89nm,1.4s
AKH Akhalkalaki 23.03 308 P **P** **06 37 15.0 +0.8**
AKH pmax pmax
comp=Z,46nm,1.3s
AKH Akhalkalaki 23.03 308 P **P** **06 37 15.0 +0.8**
AKH IAmb IAmb 06 37 23.7
comp=Z,46nm,1.3s
ZEI Tsey 23.35 312 *e*P **P** **06 37 19.3 +1.8**
ZEI pmax pmax
comp=Z,30nm,0.9s
BVAR Borovoye Array 23.77 4 P **P** **06 37 20.3 -1.0**
comp=Z,5.0nm,0.6s,baz=170,slow=9.9,SNR=34
BRVK Borovoye 23.79 4*c i*P **P** **06 37 20.5 -1.0**
BRVK pmax pmax
comp=Z,14nm,1.0s
BRVK Borovoye 23.79 4 P **P** **06 37 20.6 -1.0**
BRVK IAmb IAmb 06 37 37.5
comp=Z,43nm,1.2s
KBZ Khabaz 24.43 313 P **P** **06 37 28.3 +0.7**
comp=Z,5.0nm,0.7s,baz=134,slow=9.4,SNR=13
KBZ Khabaz 24.43 313*c i*P **P** **06 37 28.1 +0.5**
KIV Kislovodsk 24.68 313*c i*P **P** **06 37 30.7 +0.8**
KIV pmax pmax
comp=Z,27nm,1.7s
KIV Kislovodsk 24.68 313 P **P** **06 37 30.5 +0.6**
GOF Gofitskoye 24.99 316⇑ *e*P **P** **06 37 33.9 +1.3**
DGZ Jazzator, Alta 25.29 31*d i*P **P** **06 37 36.8 +1.4**
DGZ pmax pmax
comp=Z,26nm,1.5s
DAMY Dhamar 26.03 241 P **P** **06 37 47.7 +5.1**
SNR=16
DAMY Dhamar 26.03 241 P **P** **06 37 45.9 +3.2**
SOC Sochi 26.46 310 *e*P **P** **06 37 45.4 -0.5**
SOC *e* 06 38 24.2
SOC *e*S **S** **06 42 19.5 0.0**
SOC *e*SSS SSS 06 43 38.5
SOC pmax pmax
comp=Z,11nm,0.6s
SOC MLR MLR
comp=Z,209nm,10.0s
ASF Jabal al Asfar 26.55 284 P **P** **06 37 48.1 +1.1**
comp=Z,18nm,0.9s,baz=56,slow=3.9,SNR=23
GAZ Gaziantep 26.57 295 P **P** **06 37 47.6 +0.6**
ZAA0 Zalesovo Array 27.60 22 P **P** **06 37 57.1 +1.0**
ZALV Zalesovo Beam 27.60 22 P **P** **06 37 54.5 -1.5**
comp=Z,1.6nm,0.4s,baz=232,slow=12,SNR=8.6
MMAI Mount Meron Ar 27.79 286 LR LR 06 50 56.5
comp=Z,367nm,18.7s,baz=80,slow=41
ARU Arti 27.85 349 P **P** **06 37 58.1 -0.2**
comp=Z,1.1nm,0.3s,baz=169,slow=10,SNR=7.3
ARU LR LR 06 51 03.5
comp=Z,538nm,21.1s,baz=153,slow=41
ARU Arti 27.85 349*c i*P **P** **06 37 58.0 -0.3**
ARU 06 38 39.9
ARU S **S** **06 42 41.4 +0.1**
ARU SS **SnSn** **06 43 50.9 -3.5**
ARU pmax pmax
comp=Z,14nm,1.3s
ARU MLR MLR
comp=Z,491nm,13.0s
ARU Arti 27.85 349 P **P** **06 37 57.8 -0.5**
GTA Gaotai 28.25 61 *e*P **P** **06 38 02.8 +0.6**
GTA pP sP 06 38 06.9 -0.1
GTA sP pP 06 38 10.3 +4.7
GTA S **S** **06 42 48.9 +0.7**
GTA sS sS 06 42 59.9 +6.1
GTA pmax pmax
comp=Z,5.0nm,0.8s
GTA pmax pmax
comp=Z,51nm,5.8s
GTA LR LR
comp=Z,1μm,16.1s
GTA LR LR
comp=Z,660nm,12.4s
GTA LR LR
comp=Z,810nm,13.1s
EIL Elat 28.43 279 P **P** **06 38 05.1 +1.4**
comp=Z,3.1nm,0.6s,baz=52,slow=12,SNR=2.4
EIL LR LR 06 50 44.5
comp=Z,285nm,19.7s,baz=89,slow=39
ANN Anapa 28.44 311 *e*P **P** **06 38 02.1 -1.6**
ANN *e**PP **pP** **06 38 05.4 -1.7**
ANN *e*S **S** **06 42 49.3 -1.5**
ANN pmax pmax
comp=Z,7.0nm,0.6s
ATD Arta Tunnel 29.12 238 LR LR 06 52 13.7
comp=Z,339nm,18.4s,baz=85,slow=41
VRH Novokhopyorsk 29.22 326 *e*P **P** **06 38 09.4 -1.1**
VRH pmax pmax
comp=Z,8.0nm,0.4s
CSS Mathiatis 29.52 290 P **P** **06 38 12.6 -0.8**
BR131 Keskin Array S 29.74 300 P **P** **06 38 14.6 -0.8**
BR131 pmax pmax
comp=Z,4.0nm,1.0s
BR131 Keskin Array S 29.74 300 P **P** **06 38 14.6 -0.8**
BRTR Keskin Array B 29.74 300 P **P** **06 38 14.4 -1.0**
comp=Z,2.6nm,0.9s,baz=115,slow=8.3,SNR=12
BRTR LR LR 06 50 41.4
comp=Z,193nm,21.8s,baz=92,slow=37
CHTO Chiang Mai 30.33 103 P **P** **06 38 21.0 +0.3**
CHTO pmax pmax
comp=Z,10.0nm,1.3s
CHTO Chiang Mai 30.33 103 P **P** **06 38 21.0 +0.3**
CMAR Chiang Mai Arr 30.48 104 P **P** **06 38 25.7 +3.7**
comp=Z,0.6nm,0.3s,baz=294,slow=6.8,SNR=9.0
CMAR LR LR 06 54 06.8
comp=Z,295nm,18.6s,baz=306,slow=43
VSR Storozhevoye 30.52 324 *e*P **P** **06 38 20.1 -1.9**
VSR pmax pmax
comp=Z,20nm,1.0s
SIM Simferopol' 30.70 310 P **P** **06 38 24.8 +1.1**
SIM pmax pmax
comp=Z,13nm,0.7s
LZH Lanzhou 31.05 68 *e*P **P** **06 38 28.8 +1.7**
LZH pP sP 06 38 32.3 +0.3
LZH sP pP 06 38 34.8 +4.2
LZH pmax pmax
comp=Z,19nm,1.0s
LZH pmax pmax
comp=Z,130nm,5.4s
LZH LR LR
comp=Z,660nm,14.6s
LZH LR LR
comp=Z,610nm,14.1s
LZH LR LR
comp=Z,750nm,14.6s
CD2 Chengdu 31.18 78 P **P** **06 38 27.6 -0.5**
CD2 S **S** **06 43 34.3 +0.1**
CD2 pmax pmax
comp=Z,30nm,0.4s
CD2 LR LR
comp=Z,2μm,18.7s
CD2 LR LR
comp=Z,850nm,14.4s
CD2 LR LR
comp=Z,1μm,12.9s
LPSR Galich'ya Gora 31.45 326 *e*P **P** **06 38 29.1 -1.1**
LPSR pmax pmax
comp=Z,20nm,0.8s
KIRV Kirov 31.85 342 LR LR 06 52 43.7
comp=Z,355nm,18.1s,baz=154,slow=39
KIRV Kirov 31.85 342⇓ *e*P **P** **06 38 34.0 +0.4**
ISP Isparta 31.92 295 P **P** **06 38 33.6 -1.1**
ISP pmax pmax
comp=Z,22nm,0.8s
ISP Isparta 31.92 295 P **P** **06 38 33.6 -1.1**
ISP IAmb IAmb 06 38 47.4
comp=Z,22nm,0.8s
ELL Elmali 32.35 293 P **P** **06 38 38.6 +0.1**
ELL pmax pmax
comp=Z,108nm,1.0s
ELL Elmali 32.35 293 P **P** **06 38 38.6 +0.1**
MOS Moscow 33.97 330 *e*P **P** **06 38 50.7 -1.5**
MOS *e* 06 39 04.3
MOS *e* 06 40 05.6
MOS pmax pmax
comp=Z,64nm,0.8s
ZAK Zakamensk 34.02 42 *e*P **P** **06 38 51.6 -1.3**
ZAK pmax pmax
comp=Z,5.0nm,1.1s
OBN Obninsk 34.07 328 P **P** **06 38 53.7 +0.7**
comp=Z,7.3nm,0.3s,baz=163,slow=16,SNR=7.4
OBN Obninsk 34.07 328⇓ *i*P **P** **06 38 53.7 +0.7**
OBN *i* 06 39 06.9
OBN *e* 06 40 04.8
OBN *e*S **S** **06 44 18.7 +0.3**
OBN *e*SS **SnSn** **06 46 30.1 +4.7**
OBN pmax pmax
comp=Z,69nm,1.7s
OBN Obninsk 34.07 328 P **P** **06 38 53.1 +0.1**
GYA Guiyang 34.48 85 *e*P **P** **06 38 57.3 +0.1**
GYA PP **PP** **06 40 14.9 -0.3**
GYA S **S** **06 44 26.3 +0.6**
GYA SS **SnSn** **06 46 33.5 -2.9**
GYA pmax pmax
comp=Z,10.0nm,0.5s
GYA pmax pmax
comp=Z,40nm,3.5s
GYA LR LR
comp=Z,390nm,17.9s
GYA LR LR
comp=Z,230nm,14.9s
GYA LR LR
comp=Z,460nm,13.1s
TLY Talaya 34.79 40 LR LR 06 56 08.0
comp=Z,266nm,19.8s,baz=240,slow=42
CFR Carcaliu 34.83 308⇑ P **P** **06 39 00.3 +0.5**
SONM Songino Array 35.01 47 P **P** **06 39 02.2 +0.6**
comp=Z,1.3nm,0.5s,baz=248,slow=8.4,SNR=5.9
SONM LR LR 06 55 59.0
comp=Z,1μm,18.4s,baz=258,slow=41
ULN Ulaanbaatar 35.44 47⇓ *e*P **P** **06 39 06.3 +1.0**
ULN pmax pmax
comp=Z,10.0nm,2.0s
AKASG Malin Array Be 35.81 317 P **P** **06 39 08.2 0.0**
comp=Z,18nm,0.9s,baz=102,slow=7.5,SNR=43
AKASG LR LR 06 57 50.0
comp=Z,172nm,18.0s,baz=125,slow=43
AKBB Malin Array Si 35.81 317*c i*P **P** **06 39 07.9 -0.3**
AKBB Malin Array Si 35.81 317 P **P** **06 39 08.2 0.0**
VRI Vrincioaia 35.95 309⇓ P **P** **06 39 10.6 +1.1**
PLOR Plostina 36.00 309⇓ P **P** **06 39 11.5 +1.5**
TESR Tescani 36.16 310⇑ P **P** **06 39 11.8 +0.6**
MLR Muntele Rosu 36.41 308⇓ P **P** **06 39 15.2 +1.6**
MLR Muntele Rosu 36.41 308 P **P** **06 39 15.4 +1.8**
MLR pmax pmax
comp=Z,24nm,0.9s
MLR Muntele Rosu 36.41 308 P **P** **06 39 15.3 +1.8**
MLR IAmb IAmb 06 39 16.9
comp=Z,24nm,0.9s
KLMR Klimovskoe 36.70 337 *e*P **P** **06 39 13.8 -1.8**
KLMR pmax pmax
comp=Z,38nm,1.3s
KLMR Klimovskoe 36.70 337 *e*P **P** **06 39 13.9 -1.7**
KLMR AMP 06 39 30.0
comp=Z,38nm,1.3s
DOPR Dopca 36.89 309⇓ P **P** **06 39 18.5 +1.0**
MTUR Matau 36.97 307⇑ P **P** **06 39 19.7 +1.4**
VOIR 37.02 308⇑ P **P** **06 39 19.9 +1.2**
ARR Arges 37.29 307⇑ P **P** **06 39 21.6 +0.6**
HHC Hu-ho-hao-te 37.36 60 *e*P **P** **06 39 22.5 +0.8**
HHC pmax pmax
comp=Z,13nm,0.9s
HHC pmax pmax
comp=Z,58nm,6.6s
HHC LR LR
comp=Z,250nm,11.7s
HHC LR LR
comp=Z,310nm,11.1s
HHC LR LR
comp=Z,310nm,11.3s
BURAR Bucovina Array 37.37 311⇑ P **P** **06 39 23.2 +1.5**
BUR08 Bucovina Ar. S 37.39 311 P **P** **06 39 22.0 +0.2**
VTS Vitosha 37.91 303⇑ P **P** **06 39 27.4 +1.1**
VTS Vitosha 37.91 303 P **P** **06 39 26.7 +0.4**
VTS pmax pmax
comp=Z,6.0nm,1.0s
VTS Vitosha 37.91 303 P **P** **06 39 26.7 +0.4**
LVV L'vov 38.69 314 *e*P **P** **06 39 32.9 +0.3**
TRPA Tarpa 39.24 311⇓ P **P** **06 39 38.6 +1.4**
MDVR Moldovita 39.25 306⇑ P **P** **06 39 37.9 +0.5**
IIGN Ignalina 39.30 323 *e*P **P** **06 39 39.2 +1.5**
BZS Buzias 39.43 307⇓ P **P** **06 39 39.9 +1.0**
ISAL Salakas 39.44 324 *e*P **P** **06 39 40.0 +1.1**
IZAR Zarasai 39.46 324 *e*P **P** **06 39 40.2 +1.3**
UZH Uzhgorod 39.51 312⇑ *i*P **P** **06 39 40.3 +0.8**
UZH *i* 06 39 47.3
KOLS Kolonicke sedl 39.59 313 *e*P **P** **06 39 41.5 +1.3**
KOLS pmax pmax
comp=Z,20nm,1.0s
KOLS Kolonicke sedl 39.59 313 *e*P **P** **06 39 41.5 +1.3**
TMCR Tamitsa 39.60 340 *e*P **P** **06 39 38.8 -1.2**
QIZ Qiongzhong 39.63 95 P **P** **06 39 41.3 +0.4**
QIZ S **S** **06 45 44.6 +0.5**
QIZ LR LR
comp=Z,330nm,13.7s
QIZ LR LR
comp=Z,320nm,14.7s
QIZ LR LR
comp=Z,270nm,14.1s
WHN Wuhan 40.25 76 P **P** **06 39 47.8 +1.9**
VSU Vasula 40.42 328 *e*P **P** **06 39 47.1 +0.1**
VSU Vasula 40.42 328 *e*P **P** **06 39 46.4 -0.5**
SUW Suwalki 40.45 320 P **P** **06 39 47.1 -0.1**
SUW pmax pmax
comp=Z,33nm,0.7s
SUW Suwalki 40.45 320 P **P** **06 39 47.1 -0.1**
SUW IAmb IAmb 06 39 48.0
comp=Z,33nm,0.7s
PABE Paberze 40.55 323 *e*P **P** **06 39 48.3 +0.3**
KECS Kecovo 40.66 311 *e*P **P** **06 39 49.9 +0.9**
KECS pmax pmax
comp=Z,9.0nm,1.2s
KECS Kecovo 40.66 311 *e*P **P** **06 39 49.9 +0.9**
BJI Beijing 40.85 62 P **P** **06 39 52.1 +1.3**
BJI S **S** **06 45 59.5 -2.4**
BJI pmax pmax
comp=Z,4.0nm,1.1s
BJI LR LR
comp=Z,750nm,20.8s
BJI LR LR
comp=Z,180nm,14.2s
BJI LR LR
comp=Z,220nm,20.8s
PSZ Piszkesteto 40.95 311⇑ P **P** **06 39 53.5 +2.0**
PSZ Piszkesteto 40.95 311 P **P** **06 39 52.5 +1.0**
PSZ pmax pmax
comp=Z,24nm,1.1s
PSZ Piszkesteto 40.95 311 P **P** **06 39 52.5 +1.0**
PSZ IAmb IAmb 06 39 59.6
comp=Z,24nm,1.1s
OJC Ojcow 41.43 314 *e*P **P** **06 39 56.0 +0.6**
OJC Ojcow 41.43 314 P **P** **06 39 56.0 +0.6**
OJC pmax pmax
comp=Z,15nm,1.1s
OJC Ojcow 41.43 314 P **P** **06 39 56.0 +0.6**
NRIK Noril'sk 41.67 10 P **P** **06 39 57.6 +0.5**
comp=Z,8.3nm,1.0s,baz=213,slow=5.9,SNR=15
NRIK LR LR 06 58 57.2
comp=Z,393nm,19.6s,baz=202,slow=39
VYHS Vyhne 41.74 311 *e*P **P** **06 39 58.9 +0.9**
VYHS pmax pmax
comp=Z,18nm,1.2s
VYHS Vyhne 41.74 311 *e*P **P** **06 39 58.9 +0.9**
TIA Tai'an 41.79 67 P **P** **06 39 59.3 +0.8**
TIA S **S** **06 46 16.1 +0.2**
TIA pmax pmax
comp=Z,12nm,1.4s
TIA LR LR
comp=Z,440nm,15.2s
TIA LR LR
comp=Z,390nm,15.2s
TIA LR LR
comp=Z,500nm,14.7s
PBUR Paburge 41.81 323 *e*P **P** **06 39 59.0 +0.6**
KMBO Kilima Mbogo 41.97 229 LR LR 06 56 59.0
comp=Z,159nm,20.9s,baz=58,slow=36
FIA1 FINESS Array S 42.17 332 P **P** **06 40 01.5 +0.2**
FIA1 IAmb IAmb 06 40 06.5
comp=Z,22nm,0.9s
FINES FINESS Array B 42.17 332 P **P** **06 40 00.9 -0.4**
comp=Z,12nm,0.9s,baz=111,slow=11,SNR=22
FINES LR LR 06 59 57.8
comp=Z,561nm,18.1s,baz=172,slow=40
SLIT Slitere, Latvi 42.21 325 *e*P **P** **06 40 01.2 -0.4**
KLNR Kaliningrad 42.29 320⇑ *e*P **P** **06 40 03.9 +1.6**
OKC Ostrava-Krasne 42.41 313 *e*P **P** **06 40 04.7 +1.3**
OKC Ostrava-Krasne 42.41 313 *e*P **P** **06 40 04.7 +1.3**
JAVC Velka Javorina 42.56 312 *e*P **P** **06 40 05.9 +1.2**
MODS Modra-Piesok 42.75 311 *e*P **P** **06 40 06.0 -0.2**
MODS pmax pmax
comp=Z,33nm,1.1s
MODS Modra-Piesok 42.75 311 *e*P **P** **06 40 06.0 -0.2**
BOD Bodaibo 42.76 35 *e*P **P** **06 40 05.4 -0.7**
BOD pmax pmax
comp=Z,6.0nm,1.6s
MORC Moravsky Berou 42.78 313 *e*P **P** **06 40 07.1 +0.6**
MORC Moravsky Berou 42.78 313⇓ P **P** **06 40 07.7 +1.2**
MORC Moravsky Berou 42.78 313 P **P** **06 40 06.8 +0.3**
MORC pmax pmax
comp=Z,19nm,0.9s
MORC Moravsky Berou 42.78 313 P **P** **06 40 06.8 +0.3**
MORC IAmb IAmb 06 40 08.5
comp=Z,19nm,0.9s
ZST Bratislava 42.84 311 *e*P **P** **06 40 06.5 -0.4**
ZST pmax pmax
comp=Z,28nm,1.2s
ZST Bratislava 42.84 311 *e*P **P** **06 40 06.5 -0.4**
KRLC Kraliky 43.32 313 *e*P **P** **06 40 07.6 -3.2**
KRLC Kraliky 43.32 313 *e*P **P** **06 40 07.6 -3.2**
VRAC Vranov 43.32 312 *e*P **P** **06 40 11.4 +0.6**
APA Apatity 43.37 342⇓ *i*P P 06 40 18.6 +7.7
APA pmax pmax
comp=Z,9.0nm,0.9s
APA MLR MLR
comp=Z,700nm,10.0s
KRUC Moravsky 43.42 312 *e*P **P** **06 40 11.9 +0.3**
CONA Conrad Observa 43.64 310 *e*P **P** **06 40 14.1 +0.6**
comp=Z,7.0nm,1.1s
DPC Dobruska-Polom 43.65 314 *e*P **P** **06 40 14.4 +0.9**
DPC Dobruska-Polom 43.65 314 *e*P **P** **06 40 14.4 +0.9**
KSP Ksiaz 43.75 314 *e*P **P** **06 40 15.3 +1.1**
OSTC Ostas 43.75 314 *e*P **P** **06 40 15.8 +1.5**
GROS Grobnik 43.75 308 *i* P **P** **06 40 14.5 +0.1**
NJ2 Nanjing 43.77 73 *e*P **P** **06 40 15.4 +0.8**
NJ2 pmax pmax
comp=Z,16nm,0.5s
NJ2 LR LR
comp=Z,470nm,10.7s
NJ2 LR LR
comp=Z,570nm,13.2s
NJ2 LR LR
comp=Z,410nm,10.4s
ARSA Arzberg 43.80 309 *e*P **P** **06 40 15.1 +0.3**
comp=Z,19nm,1.4s
LEGS Legarje 43.84 307 *e*P **P** **06 40 15.2 +0.1**
CHVC Chvalec 43.86 314 *e*P **P** **06 40 16.3 +1.2**
UPC Upice 43.87 314 *e*P **P** **06 40 16.8 +1.6**
UPC Upice 43.87 314 *e*P **P** **06 40 16.8 +1.6**
MYKOM Kota Tinggi 43.98 122 P **P** **06 40 21.0 +4.5**
MYKOM IAmb IAmb 06 40 25.1
comp=Z,23nm,0.9s
SOKA Soboth 44.09 308 *e*P **P** **06 40 17.8 +0.7**
comp=Z,6.9nm,1.1s
LJU Ljubljana 44.40 307 *i* P **P** **06 40 20.1 +0.6**
MOA Molln 44.70 310 *e*P **P** **06 40 22.8 +0.9**
comp=Z,20nm,0.8s
PRU Pruhonice 44.73 313 *e*P **P** **06 40 23.0 +0.9**
PRU Pruhonice 44.73 313 *e*P **P** **06 40 23.0 +0.9**
GEC2 GERESS Array S 45.16 311 *e*P **P** **06 40 25.9 +0.3**
comp=Z,22nm,1.2s,baz=96,slow=7.7
GEC2 GERESS Array S 45.16 311 P **P** **06 40 25.8 +0.1**
GEC2 IAmb IAmb 06 40 27.3
comp=Z,14nm,0.9s
GERES GERESS Array B 45.16 311 P **P** **06 40 25.9 +0.3**
comp=Z,7.8nm,0.8s,baz=94,slow=8.0,SNR=20
BRG Berggiesshubel 45.23 314 *i* P **P** **06 40 27.2 +1.2**
comp=Z,41nm,1.3s
BRG S S 06 47 16.0 +10
BRG SS SS 06 50 40.0 +12
BRG Berggiesshubel 45.23 314 *e*P **P** **06 40 27.1 +1.0**
comp=Z,41nm,1.3s,baz=96,slow=7.7

BRG	**Berggiesshubel**	**45.23**	**314**	*i*	P		**P**	**06 40 27.2**	**+1.2**
BRG					S		S	06 47 16.0	+10
BRG					pmax		pmax		
	comp=Z,41nm,1.3s								
KHC	**Kasperske Hory**	**45.27**	**312**	*c*	*i* P		**P**	**06 40 26.5**	**+0.1**
KHC					pmax		pmax		
	comp=Z,29nm,1.1s								
KHC	**Kasperske Hory**	**45.27**	**312**		*e*P		**P**	**06 40 26.9**	**+0.5**
KHC					*ex*		x	06 40 35.3	
KHC	**Kasperske Hory**	**45.27**	**312**		P		**P**	**06 40 26.6**	**+0.1**
KBA	**Koelnbreinspер**	**45.27**	**309**		P		**P**	**06 40 26.8**	**+0.2**
	comp=Z,15nm,1.2s								
BSD	**Bornholm Skovb**	**45.38**	**320**	*i*	P		**P**	**06 40 25.8**	**-1.3**
BSD					pmax		pmax		
	comp=Z,23nm,0.9s								
BSD	**Bornholm Skovb**	**45.38**	**320**	*i*	P		**P**	**06 40 25.8**	**-1.3**
	comp=Z,23nm,0.9s								
FBE	**Freiberg**	**45.60**	**314**	*e*	P		**P**	**06 40 30.5**	**+1.5**
	comp=Z,70nm,1.4s,baz=96,slow=7.7								
RJOB	**Jochberg**	**45.68**	**310**	*e*	P		**P**	**06 40 29.7**	**0.0**
	comp=Z,16nm,1.1s,baz=96,slow=7.7								
MURB	**Monte Urbino**	**45.79**	**303**		P		**P**	**06 40 31.5**	**+0.8**
ABTA	**Abfaltersbach**	**45.83**	**308**	*e*	P		**P**	**06 40 31.1**	**+0.2**
	comp=Z,13nm,1.0s,SNR=5.2								
CLL	**Collm**	**45.87**	**314**	*i*	P		**P**	**06 40 32.8**	**+1.7**
	comp=Z,10.0nm,1.2s								
CLL				*i*	pP		**sP**	**06 40 37.0**	**+1.0**
CLL				*e*				06 42 42.0	
CLL				*e*	S		**S**	**06 47 16.0**	**+0.9**
CLL				*e*	SS		**SS**	**06 50 42.0**	**+2.6**
CLL	**Collm**	**45.87**	**314**	*e*	P		**P**	**06 40 32.6**	**+1.5**
	comp=Z,10.0nm,1.2s,baz=96,slow=7.7								
CLL	**Collm**	**45.87**	**314**	*i*	P		**P**	**06 40 32.8**	**+1.7**
CLL				*i*				06 40 37.0	
CLL				*e*	S		**S**	**06 47 16.0**	**+0.9**
CLL					pmax		pmax		
	comp=Z,10.0nm,1.2s								
CLL	**Collm**	**45.87**	**314**		P		**P**	**06 40 32.5**	**+1.5**
NKC	**Novy Kostel**	**46.10**	**313**	*e*	P		**P**	**06 40 34.2**	**+1.2**
NKC	**Novy Kostel**	**46.10**	**313**	*e*	P		**P**	**06 40 34.2**	**+1.2**
TANN	**Tannenbergstha**	**46.11**	**313**	*e*	P		**P**	**06 40 33.5**	**+0.4**
	comp=Z,20nm,1.0s,baz=96,slow=7.7								
WERN	**Wernitzgruen**	**46.15**	**313**	*e*	P		**P**	**06 40 34.3**	**+0.8**
	comp=Z,23nm,1.5s,baz=96,slow=7.7								
GUNZ	**Gunzen**	**46.19**	**313**	*e*	P		**P**	**06 40 34.6**	**+0.9**
	comp=Z,13nm,1.1s,baz=96,slow=7.7								
ROTZ	**Rotzenmuhle**	**46.21**	**312**	*e*	P		**P**	**06 40 34.6**	**+0.7**
	comp=Z,12nm,1.2s,baz=96,slow=7.7								
MANZ	**Manzenberg**	**46.30**	**313**	*e*	P		**P**	**06 40 35.8**	**+1.3**
	comp=Z,25nm,1.3s,baz=96,slow=7.7								
PLN	**Plauen**	**46.31**	**313**	*e*	P		**P**	**06 40 35.4**	**+0.8**
	comp=Z,14nm,1.0s,baz=96,slow=7.7								
WTTA	**Wattenberg**	**46.44**	**309**	*e*	P		**P**	**06 40 35.6**	**-0.4**
	comp=Z,21nm,1.0s,SNR=7.0								
WATA	**Walderalm**	**46.49**	**309**	*e*	P		**P**	**06 40 35.5**	**-0.7**
	comp=Z,21nm,1.4s								
MOX	**Moxa**	**46.67**	**313**	*e*	P		**P**	**06 40 38.6**	**+1.1**
	comp=Z,43nm,1.1s,baz=96,slow=7.7								
SQTA	**Sankt Quirin**	**46.73**	**309**	*e*	P		**P**	**06 40 37.7**	**-0.4**
	comp=Z,14nm,0.9s								
MOTA	**Moosalm**	**46.81**	**309**	*e*	P		**P**	**06 40 38.1**	**-0.6**
	comp=Z,15nm,0.9s,SNR=6.6								
GRA1	**Grafenberg Arr**	**46.85**	**312**		P		**P**	**06 40 40.2**	**+1.3**
GRF	**Grafenberg Arr**	**46.85**	**312**	*e*	P		**P**	**06 40 39.7**	**+0.9**
	comp=Z,34nm,1.0s,baz=96,slow=7.7								
GRF	**Grafenberg Arr**	**46.85**	**312**		P		**P**	**06 40 40.2**	**+1.3**
GRF					pmax		pmax		
	comp=Z,33nm,1.0s								
ARCES	**ARCESS Array B**	**46.86**	**341**		P		**P**	**06 40 38.5**	**-0.2**
	comp=Z,4.1nm,0.7s,baz=126,slow=5.8,SNR=19								
RETA	**Reutte**	**47.04**	**309**	*e*	P		**P**	**06 40 40.1**	**-0.4**
	comp=Z,8.9nm,0.8s								
FETA	**Feichten**	**47.06**	**308**	*e*	P		**P**	**06 40 40.5**	**-0.2**
	comp=Z,14nm,1.0s,SNR=9.1								
FUORN	**Ofenpass-Fuorn**	**47.37**	**308**		P		**P**	**06 40 43.5**	**+0.3**
FUORN					IAmb		IAmb	06 40 51.2	
	comp=Z,9.6nm,0.8s								
UBR	**Ueberruh**	**47.49**	**309**	*e*	P		**P**	**06 40 43.4**	**-0.6**
	comp=Z,29nm,1.1s,baz=96,slow=7.7								
CLZ	**Clausthal**	**47.56**	**315**	*e*	P		**P**	**06 40 45.0**	**+0.6**
	comp=Z,37nm,1.6s,baz=96,slow=7.7								
DAVA	**Damuels**	**47.64**	**309**	*e*	P		**P**	**06 40 44.8**	**-0.5**
	comp=Z,21nm,0.9s,SNR=7.4								
UBBA	**Unterbreizbach**	**47.71**	**314**	*e*	P		**P**	**06 40 46.3**	**+0.9**
	comp=Z,15nm,1.3s,baz=96,slow=7.7								
NRDL	**Niedersach Rie**	**47.78**	**316**	*e*	P		**P**	**06 40 46.7**	**+0.7**
	comp=Z,15nm,1.2s,baz=96,slow=7.7								
GTTG	**Gottingen**	**47.78**	**315**	*e*	P		**P**	**06 40 47.2**	**+1.1**
	comp=Z,43nm,1.8s,baz=96,slow=7.7								
BSEG	**Bad Segeberg**	**47.82**	**318**	*e*	P		**P**	**06 40 46.7**	**+0.4**
	comp=Z,15nm,0.9s,baz=96,slow=7.7								
NC405	**NORSAR Array S**	**48.45**	**327**		P		**P**	**06 40 49.8**	**-1.3**
NC303	**NORSAR Array S**	**48.64**	**328**		P		**P**	**06 40 52.0**	**-0.6**
NB2	**NORSAR Subarra**	**48.66**	**327**		P		**P**	**06 40 51.2**	**-1.6**
	comp=Z,3.9nm,0.8s,baz=106,slow=7.9								
NOA	**NORSAR Array B**	**48.66**	**327**		P		**P**	**06 40 51.6**	**-1.1**
	comp=Z,9.1nm,1.0s,baz=107,slow=7.5,SNR=18								
NOA					LR		LR	07 04 00.5	
	comp=Z,186nm,19.3s,baz=115,slow=39								
BFO	**Black Forest**	**48.70**	**310**	*e*	P		**P**	**06 40 52.6**	**-0.7**
	comp=Z,11nm,1.1s,baz=96,slow=7.7								
BFO	**Black Forest**	**48.70**	**310**		P		**P**	**06 40 51.8**	**-1.5**
BFO					pmax		pmax		
	comp=Z,10.0nm,1.0s								
BFO	**Black Forest**	**48.70**	**310**		P		**P**	**06 40 51.8**	**-1.5**
BFO					IAmb		IAmb	06 40 53.9	
	comp=Z,10nm,1.0s								
KEST	**Kesra**	**48.97**	**293**		P		**P**	**06 40 56.9**	**+1.3**
	comp=Z,14nm,1.0s,baz=94,slow=13,SNR=7.0								
KEST					LR		LR	07 04 43.4	
	comp=Z,69nm,21.6s,baz=342,slow=40								
KEST	**Kesra**	**48.97**	**293**		P		**P**	**06 40 56.7**	**+1.0**
KEST					IAmb		IAmb	06 40 58.0	
	comp=Z,25nm,1.1s								
ZEA	**Zeya**	**49.11**	**43**	*e*	P		**P**	**06 40 56.9**	**+0.6**
ZEA					pmax		pmax		
	comp=Z,20nm,1.0s								
ZEA					MLR		MLR		
	comp=Z,800nm,15.0s								
ZEA					MLR		MLR		
	comp=E,500nm,14.0s								
ZEA					MLR		MLR		
	comp=N,400nm,12.0s								
IBBN	**Ibbenburen**	**49.20**	**315**	*e*	P		**P**	**06 40 57.8**	**+0.8**
	comp=N,15nm,0.7s,baz=96,slow=7.7								
INCN	**Inchon**	**49.20**	**64**		P		**P**	**06 40 57.7**	**+0.4**
INCN					pmax		pmax		
	comp=Z,58nm,1.4s								
INCN	**Inchon**	**49.20**	**64**		P		**P**	**06 40 57.7**	**+0.4**
SENIN	**Lac Senin/Sane**	**49.42**	**308**		P		**P**	**06 40 59.0**	**-0.1**
SENIN					IAmb		IAmb	06 41 01.1	
	comp=Z,9.8nm,0.9s								
BUG	**Bochum--Univer**	**49.46**	**314**	*e*	P		**P**	**06 41 00.0**	**+1.1**
	comp=Z,42nm,1.7s,baz=96,slow=7.7								
ECH	**Echery**	**49.48**	**310**		P		**P**	**06 40 59.2**	**0.0**
ECH					pmax		pmax		
	comp=Z,29nm,1.1s								
ECH	**Echery**	**49.48**	**310**		P		**P**	**06 40 59.2**	**0.0**
AHRW	**Bad Neuenahr-A**	**49.55**	**313**	*e*	P		**P**	**06 41 00.9**	**+1.2**
	comp=Z,19nm,1.3s,baz=96,slow=7.7								
BNI	**Bardonecchia**	**49.92**	**306**		P		**P**	**06 41 01.8**	**-1.0**
BNI					pmax		pmax		
	comp=Z,10.0nm,1.0s								
BNI	**Bardonecchia**	**49.92**	**306**		P		**P**	**06 41 01.8**	**-1.0**
TJN	**Taejon**	**49.96**	**66**	‖ *e*	P		**P**	**06 41 02.6**	**-0.4**
SBUM	**Sibu**	**50.03**	**114**		P		**P**	**06 41 04.0**	**+0.2**
WLF	**Walferdange**	**50.13**	**312**		P		**P**	**06 41 05.9**	**+1.7**
WLF	**Walferdange**	**50.13**	**312**	*e*	P		**P**	**06 41 05.4**	**+1.2**
	comp=Z,51nm,1.3s,baz=96,slow=7.7								
WLF	**Walferdange**	**50.13**	**312**		P		**P**	**06 41 05.7**	**+1.5**
WLF					pmax		pmax		
	comp=Z,55nm,1.3s								
WLF	**Walferdange**	**50.13**	**312**		P		**P**	**06 41 05.7**	**+1.5**
KSRS	**Korea Array**	**50.22**	**64**		P		**P**	**06 41 04.5**	**-0.4**
	comp=Z,4.0nm,0.6s,baz=267,slow=6.8,SNR=16								
KSRS					LR		LR	07 03 14.7	
	comp=Z,187nm,20.1s,baz=284,slow=37								
BMRD	**Maredsous**	**51.03**	**313**		P		**P**	**06 41 11.3**	**+0.4**
BMRD					pP		**sP**	**06 41 16.4**	**+0.5**
BMRD					x		x	06 41 21.0	
BMRD					x		x	06 41 26.0	
DOU	**Dourbes**	**51.14**	**312**		P		**P**	**06 41 12.2**	**+0.5**
	comp=Z,11nm,1.3s								
DOU					pP		**sP**	**06 41 17.4**	**+0.7**
DOU					x		x	06 41 21.6	
DOU					x		x	06 41 26.8	
DOU					PcP		**PcP**	**06 42 23.5**	**-3.7**
SNF	**Seneffe**	**51.33**	**313**		P		**P**	**06 41 14.2**	**+1.1**
SNF					pP		**sP**	**06 41 18.2**	**+0.1**
SNF					x		x	06 41 23.2	
YAK	**Yakutsk**	**51.47**	**32**		P		**P**	**06 41 13.2**	**-0.8**
YAK					pmax		pmax		
	comp=Z,23nm,0.5s								
YAK	**Yakutsk**	**51.47**	**32**		P		**P**	**06 41 13.2**	**-0.8**
KLR	**Kul'dur**	**51.82**	**49**		P		**P**	**06 41 16.6**	**-0.2**
	comp=Z,6.5nm,0.8s,baz=281,slow=6.6,SNR=11								
KLR	**Kul'dur**	**51.82**	**49**	*ce*	P		**P**	**06 41 16.6**	**-0.2**
KLR					pmax		pmax		
	comp=Z,15nm,1.1s								
USRK	**Ussuriysk Ar.**	**52.36**	**55**		P		**P**	**06 41 20.3**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=271,slow=8.0,SNR=5.6								
USRK					LR		LR	07 05 41.9	
	comp=Z,425nm,18.3s,baz=276,slow=38								
CLF	**Chambon-Foret**	**52.77**	**310**		P		**P**	**06 41 23.6**	**-0.3**
TIXI	**Tiksi**	**53.46**	**20**		P		**P**	**06 41 27.9**	**-0.7**
	comp=Z,2.7nm,0.6s,baz=253,slow=5.3,SNR=6.5								
TIXI	**Tiksi**	**53.46**	**20**	*ce*	P		**P**	**06 41 27.7**	**-0.9**
TIXI					pmax		pmax		
	comp=Z,5.0nm,0.8s								
TIXI	**Tiksi**	**53.46**	**20**		P		**P**	**06 41 27.4**	**-1.2**
TAM	**Tamanrasset**	**55.65**	**279**		P		**P**	**06 41 45.0**	**-0.5**
TAM	**Tamanrasset**	**55.65**	**279**		P		**P**	**06 41 45.0**	**-0.5**
TAM					IAmb		IAmb	06 41 47.0	
	comp=Z,11nm,1.0s								
MJAR	**Matsushiro Arr**	**58.46**	**63**		P		**P**	**06 42 05.5**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=303,slow=7.3,SNR=4.5								
MJAR					LR		LR	07 11 33.6	
	comp=Z,148nm,19.1s,baz=260,slow=40								
ESDC	**Sonseca Array**	**58.52**	**301**		P		**P**	**06 42 05.0**	**-0.4**
	comp=Z,7.3nm,0.9s,baz=63,slow=7.2,SNR=27								
ESDC					LR		LR	07 08 57.2	
	comp=Z,57nm,20.8s,baz=45,slow=38								
PAB	**San Pablo**	**58.84**	**301**		P		**P**	**06 42 07.5**	**-0.2**
PAB					pmax		pmax		
	comp=Z,16nm,1.0s								
PAB	**San Pablo**	**58.84**	**301**		P		**P**	**06 42 07.5**	**-0.2**
PAB					IAmb		IAmb	06 42 08.6	
	comp=Z,16nm,0.9s								
NOR	**Nord**	**60.36**	**350**	*i*	P		**P**	**06 42 17.1**	**-0.3**
NOR					pmax		pmax		
	comp=Z,8.0nm,1.2s								
NOR	**Nord**	**60.36**	**350**	*i*	P		**P**	**06 42 17.1**	**-0.3**
	comp=Z,7.5nm,1.2s								
MVO	**Moncorvo**	**60.43**	**303**	*e*	P		**P**	**06 42 19.1**	**+0.5**
	comp=Z,34nm,1.6s								
DAG	**Danmarks Havn**	**60.85**	**345**	*i*	P		**P**	**06 42 20.4**	**-0.5**
DAG					pmax		pmax		
	comp=Z,10.0nm,1.0s								
DAG	**Danmarks Havn**	**60.85**	**345**	*i*	P		**P**	**06 42 20.4**	**-0.5**
	comp=Z,10nm,1.0s								
MTE	**Manteigas**	**61.00**	**302**	*e*	P		**P**	**06 42 22.2**	**-0.4**
	comp=Z,27nm,1.2s								
MTE	**Manteigas**	**61.00**	**302**		P		**P**	**06 42 23.0**	**+0.5**
PCBR	**Castelo Branco**	**61.10**	**302**	*e*	P		**P**	**06 42 23.6**	**+0.5**
	comp=Z,30nm,1.1s								
PGAV	**Gavieira, Arco**	**61.13**	**304**	*e*	P		**P**	**06 42 24.4**	**+1.0**
	comp=Z,45nm,1.5s								
PMRV	**Marv??o**	**61.15**	**301**	*e*	P		**P**	**06 42 23.1**	**-0.4**
PVIS	**Viseu**	**61.18**	**303**	*e*	P		**P**	**06 42 24.5**	**+0.8**
	comp=Z,31nm,2.4s								
MA2	**Magadan**	**61.78**	**35**	⇑ *e*	P		**P**	**06 42 28.0**	**+0.6**
MA2					pmax		pmax		
	comp=Z,19nm,3.7s								
EVO	**Evora**	**61.86**	**300**	*e*	P		**P**	**06 42 28.9**	**+0.6**
	comp=Z,16nm,1.1s								
MESJ	**Messejana**	**62.21**	**300**	*e*	P		**P**	**06 42 32.6**	**+1.9**
	comp=Z,38nm,1.5s								
PNCL	**Nicolau / Gran**	**62.37**	**300**	*e*	P		**P**	**06 42 32.0**	**+0.3**
	comp=Z,42nm,2.1s								
TOA0	**Torodi Ar. Sit**	**62.84**	**270**		P		**P**	**06 42 35.1**	**-0.1**
	SNR=22								
TOA0					P		**P**	**06 42 35.1**	**-0.1**
	SNR=22								
TOA0	**Torodi Ar. Sit**	**62.84**	**270**		P		**P**	**06 42 34.8**	**-0.4**
TORD	**Torodi Ar. Bea**	**62.84**	**270**		P		**P**	**06 42 35.0**	**-0.2**
	comp=Z,16nm,0.8s,baz=57,slow=5.4,SNR=63								
TORD					LR		LR	07 13 51.2	
	comp=Z,262nm,18.2s,baz=85,slow=40								
BILL	**Bilibino**	**66.28**	**24**	*ce*	P		**P**	**06 42 57.1**	**+0.3**
BILL				*i*				06 43 10.4	
BILL					*e*S		**S**	**06 51 47.5**	**+1.7**
BILL					pmax		pmax		
	comp=Z,14nm,1.7s								
BILL					MLR		MLR		
	comp=Z,362nm,14.0s								
BILL	**Bilibino**	**66.28**	**24**		P		**P**	**06 42 56.6**	**-0.2**
BILL					IAmb		IAmb	06 43 07.2	
	comp=Z,10nm,1.1s								
SUMG	**Summit**	**66.95**	**342**	*i*	P		**P**	**06 43 01.7**	**+0.2**
SUMG					pmax		pmax		
	comp=Z,29nm,1.1s								
SUMG	**Summit**	**66.95**	**342**		P		**P**	**06 43 00.6**	**-1.0**
SUMG					IAmb		IAmb	06 43 12.7	
	comp=Z,10nm,0.8s								
SUMG	**Summit**	**66.95**	**342**	*i*	P		**P**	**06 43 01.7**	**+0.2**
	comp=Z,29nm,1.1s								
LBTB	**Lobatse**	**67.46**	**221**		P		**P**	**06 43 07.7**	**+2.7**
LBTB					pmax		pmax		
	comp=Z,13nm,1.1s								
LBTB	**Lobatse**	**67.46**	**221**		P		**P**	**06 43 07.7**	**+2.7**
LBTB					IAmb		IAmb	06 43 16.3	
	comp=Z,13nm,1.1s								
BOSA	**Boshof**	**70.44**	**219**		P		**P**	**06 43 24.8**	**+1.3**
	comp=Z,4.0nm,0.8s,baz=37,slow=7.3,SNR=6.1								
BOSA					LR		LR	07 15 44.3	
	comp=Z,41nm,19.0s,baz=33,slow=37								
BOSA	**Boshof**	**70.44**	**219**		P		**P**	**06 43 25.0**	**+1.5**
BOSA					pmax		pmax		
	comp=Z,12nm,1.3s								
BOSA	**Boshof**	**70.44**	**219**		P		**P**	**06 43 25.0**	**+1.5**
BOSA					IAmb		IAmb	06 43 34.5	
	comp=Z,12nm,1.3s								
DBIC	**Dimbokro**	**71.53**	**267**		P		**P**	**06 43 30.9**	**+0.5**
	comp=Z,8.0nm,1.0s,baz=90,slow=3.0,SNR=2.3								
DBIC					LR		LR	07 18 33.9	
	comp=Z,134nm,18.1s,baz=38,slow=39								
DBIC	**Dimbokro**	**71.53**	**267**		P		**P**	**06 43 31.4**	**+1.0**
DBIC					pmax		pmax		
	comp=Z,32nm,1.4s								
DBIC	**Dimbokro**	**71.53**	**267**		P		**P**	**06 43 31.4**	**+1.0**
MACI	**Morro de la Ar**	**72.09**	**293**		P		**P**	**06 43 33.9**	**+0.1**
RDOG	**Red Dog Mine**	**75.94**	**17**		P		**P**	**06 43 55.4**	**0.0**
RDOG					IAmb		IAmb	06 43 57.1	
	comp=Z,19nm,1.4s								
TOLK	**Toolik Lake Re**	**78.54**	**13**		P		**P**	**06 44 10.2**	**+0.1**
COLD	**Coldfoot**	**79.61**	**14**		P		**P**	**06 44 15.3**	**-0.5**
COLD					IAmb		IAmb	06 44 31.5	
	comp=Z,12nm,1.2s								
WRA	**Warramunga Arr**	**80.78**	**119**		P		**P**	**06 44 22.4**	**-0.5**
	comp=Z,4.8nm,1.1s,baz=322,slow=4.9,SNR=5.6								
WRA					LR		LR	07 25 02.9	
	comp=Z,52nm,18.0s,baz=310,slow=39								
FYU	**Fort Yukon**	**81.18**	**13**		P		**P**	**06 44 24.8**	**+0.5**
MLY	**Manley**	**81.33**	**15**		P		**P**	**06 44 25.1**	**-0.1**
MLY					IAmb		IAmb	06 44 26.4	
	comp=Z,15nm,1.2s								
INK	**Inuvik**	**81.40**	**8**		P		**P**	**06 44 25.5**	**+0.1**
INK					pmax		pmax		
	comp=Z,24nm,1.4s								
INK	**Inuvik**	**81.40**	**8**		P		**P**	**06 44 25.5**	**+0.1**
INK					IAmb		IAmb	06 44 26.9	
	comp=Z,24nm,1.4s								
TTA	**Tatalina**	**81.70**	**19**		P		**P**	**06 44 27.0**	**-0.2**
TTA					pmax		pmax		
	comp=Z,14nm,1.5s								
TTA	**Tatalina**	**81.70**	**19**		P		**P**	**06 44 27.0**	**-0.2**
MDM	**Murphy Dome**	**81.96**	**15**		P		**P**	**06 44 28.5**	**0.0**
MDM					IAmb		IAmb	06 44 29.8	
	comp=Z,20nm,1.1s								
PRP	**Porcupine Dome**	**82.05**	**13**		P		**P**	**06 44 28.9**	**-0.1**
PRP					IAmb		IAmb	06 44 39.5	
	comp=Z,14nm,1.4s								
BPAW	**Bear Paw Mtn.**	**82.06**	**16**		P		**P**	**06 44 28.1**	**-0.9**
BPAW					IAmb		IAmb	06 44 30.9	
	comp=Z,15nm,1.3s								
NEA	**Nenana**	**82.10**	**15**		P		**P**	**06 44 28.4**	**-0.7**
NEA					IAmb		IAmb	06 44 30.0	
	comp=Z,20nm,1.1s								
COLA	**College**	**82.12**	**15**	*c* *i* P			**P**	**06 44 29.4**	**+0.2**
COLA					pmax		pmax		
	comp=Z,15nm,1.2s								
COLA	**College**	**82.12**	**15**		P		**P**	**06 44 28.5**	**-0.8**
COLA					IAmb		IAmb	06 44 30.4	
	comp=Z,15nm,1.1s								
CCB	**Clear Creek Bu**	**82.33**	**15**		P		**P**	**06 44 29.3**	**-1.1**
WRH	**Wood River Hil**	**82.41**	**15**		P		**P**	**06 44 29.9**	**-0.9**
IL31		**82.42**	**14**		P		**P**	**06 44 29.8**	**-1.0**
IL31					IAmb		IAmb	06 44 40.5	
	comp=Z,10.0nm,1.1s								
ILAR	**Eielson Array**	**82.42**	**14**		P		**P**	**06 44 29.7**	**-1.1**
	comp=Z,16nm,1.3s,baz=319,slow=3.5,SNR=26								
KTH	**Kantishna Hill**	**82.53**	**16**		P		**P**	**06 44 31.6**	**0.0**
KTH					IAmb		IAmb	06 44 46.5	
	comp=Z,11nm,1.2s								
ASAR	**Alice Springs**	**82.64**	**122**		P		**P**	**06 44 32.2**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=304,slow=4.5,SNR=11								
HDA	**Harding Lake**	**82.72**	**14**		P		**P**	**06 44 31.6**	**-0.9**
TRF	**Thorofare Moun**	**82.77**	**16**		P		**P**	**06 44 32.4**	**-0.5**
EPYK	**Eagle Plains**	**82.80**	**10**		P		**P**	**06 44 32.3**	**-0.5**
EPYK					IAmb		IAmb	06 44 42.4	
	comp=Z,14nm,1.3s								
MCK	**McKinley**	**82.86**	**16**		P		**P**	**06 44 32.3**	**-0.9**
MCK					pmax		pmax		
	comp=Z,16nm,1.3s								
MCK	**McKinley**	**82.86**	**16**		P		**P**	**06 44 32.3**	**-0.9**
MCK					IAmb		IAmb	06 44 49.3	
	comp=Z,16nm,1.3s								
RND	**Reindeer**	**83.15**	**16**		P		**P**	**06 44 33.3**	**-1.5**
RND					pmax		pmax		
	comp=Z,13nm,1.2s								
RND	**Reindeer**	**83.15**	**16**		P		**P**	**06 44 33.3**	**-1.5**
RND					IAmb		IAmb	06 44 34.9	
	comp=Z,13nm,1.2s								
EGAK	**Eagle**	**83.55**	**12**		P		**P**	**06 44 36.2**	**-0.5**
EGAK					IAmb		IAmb	06 44 51.6	
	comp=Z,18nm,1.2s								
SCRK	**Sand Creek**	**83.72**	**13**		P		**P**	**06 44 36.8**	**-1.0**
SCRK					IAmb		IAmb	06 44 39.1	
	comp=Z,16nm,1.4s								
RIDG	**Independent Ri**	**83.76**	**14**		P		**P**	**06 44 37.0**	**-0.9**
RIDG					IAmb		IAmb	06 44 52.0	
	comp=Z,7.5nm,1.1s								
DHY	**Denali Highway**	**83.78**	**15**		P		**P**	**06 44 37.1**	**-1.0**
DHY					IAmb		IAmb	06 44 38.9	
	comp=Z,7.7nm,1.1s								
DOT	**Dot Lake**	**84.00**	**14**		P		**P**	**06 44 38.6**	**-0.4**
DOT					IAmb		IAmb	06 44 53.5	
	comp=Z,6.4nm,1.0s								
DAWY	**Dawson**	**84.51**	**12**		P		**P**	**06 44 42.1**	**+0.4**
GHO	**Glory Hole Cre**	**84.53**	**17**		P		**P**	**06 44 41.6**	**-0.2**
PMR	**Palmer**	**84.64**	**17**		P		**P**	**06 44 41.3**	**-0.9**
PMR					pmax		pmax		
	comp=Z,11nm,1.1s								
PMR	**Palmer**	**84.64**	**17**		P		**P**	**06 44 41.3**	**-0.9**
PMR					IAmb		IAmb	06 44 56.5	
	comp=Z,11nm,1.1s								
SML	**Sawmill**	**84.65**	**16**		P		**P**	**06 44 42.1**	**-0.4**
KNK	**Knik Glacier**	**84.96**	**17**		P		**P**	**06 44 43.8**	**-0.2**
CHGN	**Chignik**	**86.17**	**24**		P		**P**	**06 44 49.3**	**-0.7**
CHGN					IAmb		IAmb	06 45 04.0	
	comp=Z,8.8nm,1.1s								
VRDI	**Verde Repeater**	**86.29**	**15**		P		**P**	**06 44 50.9**	**+0.1**
VRDI					IAmb		IAmb	06 45 06.3	
	comp=Z,12nm,1.2s								
BALM	**Baldy**	**86.70**	**14**		P		**P**	**06 44 53.1**	**+0.3**
BALM					IAmb		IAmb	06 44 53.7	
	comp=Z,7.0nm,1.1s								
KDAK	**Kodiak Island**	**86.88**	**20**		P		**P**	**06 44 52.9**	**-0.6**
KDAK					pmax		pmax		
	comp=Z,22nm,1.4s								
KDAK	**Kodiak Island**	**86.88**	**20**		P	

LPAZ	**La Paz**	**7.85**	**355**		**Pn**	**06 38 54.7 +0.4**
BDFB	**Brasilia**	**20.07**	**69**	P	**P**	**06 41 19.7 0.0**
BDFB				IAmb	IAmb	06 41 20.5
	comp=Z,4.4nm,0.9s					

JMA 16 06:37:53.5±0.1, 24°.93N×123°.38E, h23km±4km, M2.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.57**	**216**	P	Pb	06 38 04.5	-0.4
YOJ				*e*S	Sb	06 38 12.0	-0.7
JYNG	**Yonagunijimaku**	**0.62**	**220**	P	Pb	06 38 05.4	-0.3
JYNG				*e*S	Sb	06 38 14.0	0.0
IRIF	**Iriomote-Funau**	**0.67**	**152**	P	Pb	06 38 06.3	-0.3
IRIF				S	Sb	06 38 15.3	-0.2
JIJ	**Ishigaki jima**	**0.89**	**129**	P	Pb	06 38 09.7	-0.6
JIJ				S	Sb	06 38 20.7	-1.1
JKRS	**Kuro-shima**	**0.90**	**140**	P	Pb	06 38 10.0	-0.4
JKRS				S	Sb	06 38 21.9	0.0
JISG	**Ishigakijimahi**	**0.91**	**112**	P	Pb	06 38 10.2	-0.4
JISG				S	Sb	06 38 22.1	-0.3
HATJ	**Hateruma jima**	**0.95**	**156**	P	Pb	06 38 10.9	-0.4
HATJ				S	Sb	06 38 23.5	0.0

IDC ***16*** *06:37:56.8±2.2, 39°.93N×77°.58E, h0km, mb3.9/4, mb1 4.0/6, mb1mx3.6/47, mbtmp4.0/6, ML4.0/2, Error ellipse: s-maj=46.0km s-min=26.1km az=25.0*
KRNET ***16*** *06:38:02.4±0.1, 40°.30N×77°.03E, h13km, mb4.4*
BJI ***16*** *06:38:03.0±0.0, 40°.36N×76°.95E, h9km, ML3.7/5*
NNC ***16*** *06:38:08.5±1.3, 40°.52N×76°.96E, h3km±9km, mb4.8, mpv4.4, Error ellipse: s-maj=8.3km s-min=6.8km az=165.0*
SOME ***16*** *06:38:08.7, 40°.58N×77°.03E, h5km*

ISC 16 06:38:05.4±1.6, 40°.48N±0°.05×76°.89E±0°.03, h7km±11km, n87, σ1s67/128, mb3.8/4, 34C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.19**	**217**	Pg	**Pn**	**06 38 31.1**	**+2.6**
KSH				Sg	**Sn**	**06 38 51.3**	**+6.3**
KSH	comp=N,3μm,0.3s			smax	smax		
KSH	comp=E,2μm,0.6s			smax	smax		
TARG	**Taragay, Kyrgy** baz=22	**1.43**	**29**	⇓*i*P	**Pb**	**06 38 31.8**	**-0.8**
TARG	baz=22			⇓*i*S	**Sg**	**06 38 52.9**	**+1.4**
KDJ	**Kajisay** baz=4.0	**1.67**	**7**	⇑*i*P	**Pb**	**06 38 36.8**	**+0.3**
KDJ	baz=4.0			⇑*i*S	**Sg**	**06 39 01.5**	**+2.5**
ULHL	**Ulahol** baz=43	**1.83**	**345**	⇑*i*P	**Pb**	**06 38 40.2**	**+0.8**
ULHL	baz=43			⇑*i*S	**Sg**	**06 39 07.7**	**+3.3**
ULHL	**Ulahol** SNR=12	**1.83**	**345**	P	**Pb**	**06 38 39.4**	**0.0**
KZA	**Kyzart** baz=24	**2.02**	**323**	⇑*i*P	**Pb**	**06 38 43.2**	**+0.5**
KZA	baz=24			⇑*i*S	**Sg**	**06 39 12.4**	**+2.0**
KZA	**Kyzart** SNR=101	**2.02**	**323**	P	**Pb**	**06 38 43.0**	**+0.3**
BOOM	**Boomskoye usch** baz=40	**2.13**	**341**	⇓*i*P	**Pb**	**06 38 44.6**	**+0.1**
BOOM	baz=40			⇓*i*S	**Sg**	**06 39 14.8**	**+0.8**
PRZ	**Przheval'sk** baz=25	**2.31**	**29**	⇑*i*P	**Pb**	**06 38 45.7**	**-1.7**
PRZ	baz=25			⇑*i*S	**Sb**	**06 39 17.1**	**+1.0**
ANVS	**Anan'yevo** baz=11	**2.38**	**14**	⇓*i*P	**Pb**	**06 38 47.1**	**-1.5**
ANVS	baz=11			⇓*i*S	**Sb**	**06 39 19.7**	**+1.5**
UCH	**Uchtor** baz=16	**2.50**	**315**	⇑*i*P	**Pb**	**06 38 49.8**	**-1.1**
UCH	baz=16			⇑*i*S	**Sb**	**06 39 23.8**	**+1.7**
UCH	**Uchtor** SNR=30	**2.50**	**315**	P	**Pb**	**06 38 49.6**	**-1.3**
TNSS	**Tian-Shan** 432nm,0.6s	**2.56**	**1**	*e*P	**Pg**	**06 38 55.5**	**+1.0**
TNSS	533nm,0.4s			*e*S	**Sg**	**06 39 29.6**	**+1.9**
TNSS	**Tian-Shan** 432nm,0.6s	**2.56**	**1**	Pg	**Pg**	**06 38 55.5**	**+1.0**
TNSS	533nm,0.4s			Lg	Lg	06 39 29.6	
IZV	**Izvestkoviy** 189nm,0.5s	**2.57**	**355**	*e*P	**Pg**	**06 38 54.3**	**-0.3**
IZV	535nm,0.4s			*e*S	**Sg**	**06 39 27.2**	**-0.6**
IZV	**Izvestkoviy** 189nm,0.5s	**2.57**	**355**	Pg	**Pg**	**06 38 54.3**	**-0.3**
IZV	535nm,0.4s			Lg	Lg	06 39 27.2	
KBK	**Karagaybulak** baz=27	**2.62**	**327**	⇑*i*P	**Pb**	**06 38 51.5**	**-1.3**
KBK	baz=27			⇑*i*S	**Sb**	**06 39 26.8**	**+1.6**
KBK	**Karagaybulak** SNR=29	**2.62**	**327**	P	**Pb**	**06 38 54.5**	**+1.8**
TKM2	**Tokmak 2** baz=38	**2.63**	**339**	⇑*i*P	**Pb**	**06 38 51.5**	**-1.4**
TKM2	baz=38			⇑*i*S	**Sb**	**06 39 26.9**	**+1.5**
TKM2	**Tokmak 2** SNR=24	**2.63**	**339**	P	**Pb**	**06 38 52.0**	**-0.9**
TKM2	**Tokmak 2** 61nm,0.4s	**2.63**	**339**	⇑Pn	**Pb**	**06 38 51.6**	**-1.3**
TKM2	176nm,0.6s			⇑Lg	Lg	06 39 31.3	
KST	**Kastek** 99nm,0.5s	**2.66**	**345**	*e*P	**Pg**	**06 38 57.5**	**+1.2**
KST	336nm,0.3s			*e*S	**Sg**	**06 39 32.8**	**+2.0**
KST	**Kastek** 172nm,0.7s	**2.66**	**345**	Pg	**Pg**	**06 38 57.5**	**+1.2**
KST	336nm,0.3s			Lg	Lg	06 39 32.8	
MTBS	**Maitube** 111nm,0.8s	**2.67**	**353**	*e*P	**Pg**	**06 38 57.5**	**+0.9**
MTBS	502nm,0.4s			*e*S	**Sg**	**06 39 32.8**	**+1.5**
MTBS	**Maitube** 111nm,0.8s	**2.67**	**353**	Pg	**Pg**	**06 38 57.5**	**+0.9**
MTBS	502nm,0.4s			Lg	Lg	06 39 32.8	
MDOK	**Medeo** 177nm,0.6s	**2.69**	**2**	*e*P	**Pg**	**06 38 57.3**	**+0.4**
MDOK	333nm,0.4s			*e*S	**Sg**	**06 39 32.7**	**+0.9**
MDOK	**Medeo** 173nm,0.6s	**2.69**	**2**	⇑Pg	**Pb**	**06 38 55.0**	**+1.1**
MDOK	199nm,0.4s			⇑Lg	Lg	06 39 32.9	
MDOK	**Medeo** 177nm,0.6s	**2.69**	**2**	Pg	**Pg**	**06 38 57.3**	**+0.4**
MDOK	333nm,0.4s			Lg	Lg	06 39 32.7	
AAA	**Alma-Ata** 74nm,0.3s	**2.73**	**0**	*e*P	**Pg**	**06 38 59.2**	**+1.4**
AAA	351nm,0.4s			*e*S	**Sg**	**06 39 35.4**	**+2.3**
AAA	**Alma-Ata** 163nm,0.6s	**2.73**	**0**	Pg	**Pg**	**06 38 59.2**	**+1.4**
AAA	351nm,0.4s			Lg	Lg	06 39 35.4	
KNDC	**Almaty** 201nm,0.6s	**2.74**	**1**	⇓Pg	**Pb**	**06 38 56.1**	**+1.4**
KNDC	660nm,0.5s			⇓Lg	Lg	06 39 35.3	
KOTS	**Kotyrbulak** 233nm,0.5s	**2.76**	**3**	*e*P	**Pg**	**06 38 59.4**	**+1.0**
KOTS	2μm,0.6s			*e*S	**Sg**	**06 39 35.8**	**+1.7**
KOTS	**Kotyrbulak** 348nm,0.5s	**2.76**	**3**	Pg	**Pg**	**06 38 59.3**	**+1.0**
KOTS	2μm,0.6s			Lg	Lg	06 39 35.8	
AAK	**Ala-Archa**	**2.81**	**321**	Pn	**Pb**	**06 38 54.1**	**-1.9**
	15nm,0.3s,baz=111,slow=10.0,SNR=27						
AAK				Sn	**Sg**	**06 39 37.1**	**+1.4**
	27nm,0.3s,baz=341,slow=22,SNR=16						
AAK	**Ala-Archa** baz=22	**2.81**	**321**	⇑*e*P	**Pb**	**06 38 53.8**	**-2.2**
AAK	baz=22			⇑*i*S	**Sb**	**06 39 31.4**	**+0.8**
AAK	**Ala-Archa** SNR=5.7	**2.81**	**321**	P	**Pb**	**06 38 54.3**	**-1.7**
AAK	**Ala-Archa** 82nm,0.6s	**2.81**	**321**	⇑Pn	**Pb**	**06 38 54.6**	**-1.4**
AAK	281nm,1.1s			⇑Lg	Lg	06 39 35.8	
FRU1	**Bishkek** baz=25	**2.88**	**325**	⇑*i*P	**Pb**	**06 38 55.0**	**-2.1**
FRU1	baz=25			⇑*i*S	**Sb**	**06 39 33.0**	**+0.4**
DGS	**Degeres** 156nm,0.6s	**2.89**	**344**	*e*P	**Pg**	**06 39 01.3**	**+0.6**
DGS	477nm,0.6s			*e*S	**Sg**	**06 39 39.1**	**+1.0**
DGS	**Degeres** 264nm,0.5s	**2.89**	**344**	Pg	**Pg**	**06 39 01.3**	**+0.6**
DGS	477nm,0.6s			Lg	Lg	06 39 39.1	
AML	**Almayashu** baz=7.0	**2.92**	**306**	⇑*i*P	**Pn**	**06 38 55.4**	**+2.8**
AML	baz=7.0			⇑*i*S	**Sb**	**06 39 34.0**	**0.0**
AML	**Almayashu** SNR=10.0	**2.92**	**306**	P	**Pn**	**06 38 55.5**	**+3.0**
CHMS	**Chumysh** baz=28	**2.98**	**328**	⇓*i*P	**Pn**	**06 38 56.1**	**+2.9**
CHMS	baz=28			⇓*i*S	**Sb**	**06 39 35.5**	**0.0**
CHMS	**Chumysh** SNR=9.7	**2.98**	**328**	P	**Pb**	**06 38 56.8**	**-2.1**
ARSB	**Arslanbob** baz=90	**3.08**	**287**	⇑*i*P	**Pn**	**06 38 56.8**	**+2.2**
ARSB	baz=90			⇑*i*S	**Sb**	**06 39 36.4**	**-2.0**
UZB	**Uzynbulak** 29nm,0.5s	**3.11**	**30**	*e*P	**Pg**	**06 39 05.3**	**+0.3**
UZB	73nm,0.7s			*e*S	**Sg**	**06 39 45.8**	**+0.5**
KURS	**Kuram** 44nm,0.5s	**3.16**	**17**	*e*P	**Pg**	**06 39 05.8**	**-0.1**
KURS	148nm,0.6s			*e*S	**Sg**	**06 39 46.7**	**-0.1**
EKS2	**Erkin-Say** baz=15	**3.20**	**314**	⇑*i*P	**Pn**	**06 38 58.9**	**+2.8**
EKS2	baz=15			⇑*i*S	**Sb**	**06 39 40.3**	**-1.4**
EKS2	**Erkin-Say** SNR=16	**3.20**	**314**	P	**Pb**	**06 39 00.2**	**-2.4**
KTBS	**Karatobe** 70nm,0.5s	**3.24**	**357**	*e*P	**Pg**	**06 39 06.8**	**-0.6**
KTBS	315nm,0.4s			*e*S	**Sg**	**06 39 48.6**	**-0.8**
KTBS	**Karatobe** 84nm,0.5s	**3.24**	**357**	Pg	**Pg**	**06 39 06.8**	**-0.6**
KTBS	315nm,0.4s			Lg	Lg	06 39 49.4	
KPKS	**Kokpek** 56nm,0.4s	**3.27**	**24**	*e*P	**Pg**	**06 39 08.1**	**-0.1**
KPKS	491nm,0.5s			*e*S	**Sg**	**06 39 50.5**	**0.0**
USP	**Ospenovka** baz=28	**3.31**	**328**	⇑*e*P	**Pn**	**06 39 00.7**	**+3.1**
USP	baz=28			⇑*i*S	**Sb**	**06 39 43.2**	**-1.7**
USP	**Ospenovka** SNR=6.9	**3.31**	**328**	P	**Sg**	**06 39 51.6**	**-0.1**
KRBS	**Karabastau** 131nm,0.9s	**3.34**	**345**	*e*P	**Pg**	**06 39 09.5**	**0.0**
KRBS	217nm,1.1s			*e*S	**Sg**	**06 39 53.4**	**+0.7**
KRBS	**Karabastau** 131nm,0.9s	**3.34**	**345**	Pg	**Pg**	**06 39 09.5**	**0.0**
KRBS	217nm,1.1s			Lg	Lg	06 39 53.4	
CHKK	**Chushkaly** 53nm,0.5s	**3.38**	**1**	*e*P	**Pg**	**06 39 09.4**	**-0.7**
CHKK	401nm,0.3s			*e*S	**Sg**	**06 39 53.4**	**-0.4**
CHKK	**Chushkaly** 130nm,0.5s	**3.38**	**1**	Pg	**Pg**	**06 39 09.4**	**-0.7**
CHKK	401nm,0.3s			Lg	Lg	06 39 53.4	
KUU	**Kurty** 45nm,0.5s	**3.44**	**353**	*e*P	**Pg**	**06 39 09.9**	**-1.3**
KUU	118nm,0.4s			*e*S	**Sg**	**06 39 54.2**	**-1.7**
KUU	**Kurty** 45nm,0.5s	**3.44**	**353**	Pg	**Pg**	**06 39 09.9**	**-1.3**
KUU	118nm,0.4s			Lg	Lg	06 39 54.6	
PDGK	**Podgornoye** 21nm,0.6s	**3.45**	**33**	Pg	**Pg**	**06 39 09.9**	**-1.6**
PDGK	99nm,0.8s			Lg	Lg	06 39 54.7	
MRKS	**Merke** 66nm,0.4s	**3.56**	**311**	*e*P	**Pg**	**06 39 12.7**	**-0.9**
MRKS	49nm,0.7s			*e*S	**Sg**	**06 39 59.0**	**-0.8**
MRKS	**Merke** 66nm,0.4s	**3.56**	**311**	Pg	**Pg**	**06 39 12.7**	**-0.9**
MRKS	49nm,0.7s			Lg	Lg	06 39 59.0	
MNBS	**Baschi** 51nm,0.7s	**3.77**	**17**	*e*P	**Pg**	**06 39 16.9**	**-0.7**
MNBS	108nm,0.3s			*e*S	**Sg**	**06 40 06.1**	**-0.4**
MNBS	**Baschi** 51nm,0.7s	**3.77**	**17**	Pg	**Pg**	**06 39 16.9**	**-0.7**
MNBS	108nm,0.3s			Lg	Lg	06 40 06.1	
ARXS	**Arharly** 73nm,0.6s	**3.80**	**10**	*e*P	**Pg**	**06 39 17.6**	**-0.6**
ARXS	206nm,0.6s			*e*S	**Sg**	**06 40 07.0**	**-0.4**
ARXS	**Arharly** 73nm,0.6s	**3.80**	**10**	Pg	**Pg**	**06 39 17.6**	**-0.6**
ARXS	206nm,0.6s			Lg	Lg	06 40 07.0	
KTMS	**Ketmen** 16nm,0.6s	**3.93**	**40**	*e*P	**Pb**	**06 39 16.7**	**+1.6**
KTMS	92nm,0.8s			*e*S	**Sb**	**06 40 05.6**	**+2.7**
KTMS	**Ketmen** 16nm,0.6s	**3.93**	**40**	Pg	**Pb**	**06 39 16.7**	**+1.6**
KTMS	92nm,0.8s			Lg	Lg	06 40 05.6	
DJR	**Jarkent** 3.6nm,0.2s	**4.41**	**28**	*e*P	**Pg**	**06 39 27.8**	**-2.2**
DJR	32nm,0.6s			*e*S	**Sg**	**06 40 24.4**	**-2.6**
DJR	**Jarkent** 28nm,0.6s	**4.41**	**28**	Pg	**Pg**	**06 39 27.7**	**-2.2**
DJR	32nm,0.6s			Lg	Lg	06 40 24.4	
TDK	**Taldyqorghan** 139nm,0.9s	**4.66**	**13**	*e*P	**Pg**	**06 39 32.4**	**-2.2**
TDK	146nm,0.4s			*e*S	**Sg**	**06 40 33.1**	**-1.9**
TDK	**Taldyqorghan** 139nm,0.9s	**4.66**	**13**	Pg	**Pg**	**06 39 32.4**	**-2.2**
TDK	146nm,0.4s			Lg	Lg	06 40 33.1	
BTLS	**Baital** 13nm,0.6s	**5.02**	**336**	*e*P	**Pg**	**06 39 39.4**	**-2.1**
BTLS	45nm,0.5s			*e*S	**Sg**	**06 40 44.2**	**-2.3**
KAPS	**Kapalarasan** 4.0nm,0.4s	**5.14**	**20**	*e*P	**Pg**	**06 39 41.0**	**-2.8**
KAPS	43nm,0.8s			*e*S	**Sg**	**06 40 47.3**	**-3.0**
KAPS	**Kapalarasan** 16nm,0.6s	**5.14**	**20**	Pg	**Pg**	**06 39 41.0**	**-2.8**
KAPS	43nm,0.8s			Lg	Lg	06 40 47.3	
IUG	**Iuzhnay** 18nm,0.3s	**5.43**	**290**	*e*P	**Pg**	**06 39 48.9**	**-0.5**
IUG	26nm,0.5s			*e*S	**Sg**	**06 41 00.8**	**+1.2**
IUG	**Iuzhnay** 16nm,0.4s	**5.43**	**290**	Pg	**Pg**	**06 39 48.9**	**-0.5**
IUG	40nm,0.8s			Lg	Lg	06 41 00.9	
KK31	**Karatay Array** 20nm,0.8s,baz=129,slow=17,SNR=13	**5.44**	**301**	⇑Pg	**Pg**	**06 39 46.7**	**-2.9**
KK31	15nm,0.7s,baz=127,slow=29,SNR=5.0			⇑Lg	Lg	06 41 00.4	
MKAR	**Makanchi Array** 0.3nm,0.3s,baz=214,slow=18,SNR=6.6	**7.43**	**30**	Pn	**Pn**	**06 39 55.8**	**+1.6**
MKAR	0.6nm,0.3s,baz=220,slow=29,SNR=3.8			Lg	Lg	06 42 02.3	
OTUK	**Ortayu** 2.7nm,1.2s	**8.42**	**339**	Pg	Pg	06 40 42.1	-4.4
OTUK	20nm,1.9s			Lg	Lg	06 42 31.2	
WMQ	**Urumqi**	**8.70**	**64**	*e*P	**Pn**	**06 40 11.0**	**-0.6**
WMQ	comp=N,10.0nm,0.7s			smax	smax		
WMQ	comp=E,19nm,0.9s			smax	smax		
BVAR	**Borovoye Array** 0.5nm,0.3s,baz=152,slow=13,SNR=4.5	**13.31**	**343**	Pn	**Pn**	**06 41 15.0**	**+0.3**
BRTR	**Keskin Array B** 0.9nm,0.7s,baz=82,slow=8.8,SNR=4.2	**32.85**	**283**	P	**P**	**06 44 37.7**	**-2.1**
ARCES	**ARCESS Array B** 1.7nm,0.9s,baz=97,slow=9.9,SNR=4.7	**39.40**	**334**	P	**P**	**06 45 34.3**	**-1.0**
PETK	**Petropavlovsk-** 4.8nm,1.1s,baz=289,slow=7.2,SNR=4.8	**53.89**	**47**	P	P	06 47 19.5	-10
YKA	**Yellowknife Ar** 0.5nm,0.7s,baz=347,slow=5.5,SNR=5.4	**76.96**	**5**	P	**P**	**06 49 55.1**	**-3.0**

TAP 16 06:38:25.2, 24°.46N×121°.34E, h11km, ML1.1, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNS	**Nan Shan** baz=123	**0.03**	**127**	*e*P	Pg	06 38 27.5	+0.1
NNS	baz=123			S	Sg	06 38 29.4	+0.4
NNSB	**Datong** baz=131	**0.05**	**132**	*e*P	Pg	06 38 28.4	+0.9
NNSB	baz=131			S	Sg	06 38 29.8	+0.6
NNSH	**Datong** baz=131	**0.05**	**132**	*e*P	Pg	06 38 28.4	+0.8
NNSH	baz=131			S	Sg	06 38 29.6	+0.4
NDT	**Datong Townshi** baz=47	**0.21**	**48**	P	Pb	06 38 30.7	-0.4
NDT	baz=47			*e*S	Sg	06 38 35.0	+2.3
YHNB	**Yeheng** baz=8.0	**0.21**	**8**	*e*P	Pb	06 38 30.5	-0.6
YHNB	baz=8.0			*e*S	Sg	06 38 34.4	+1.6
TWT	**Tachien** baz=218	**0.26**	**216**	P	Pb	06 38 31.4	-0.6
TWT	baz=218			*e*S	Sb	06 38 36.8	+0.3
ENTT	**Nioudou** baz=50	**0.27**	**49**	*e*P	Pg	06 38 31.3	+0.5
ENTT	baz=50			S	Sb	06 38 36.5	-0.3
ETLH	**Xiulin Townshi** baz=153	**0.28**	**153**	P	Pb	06 38 32.2	-0.2
ETLH	baz=153			*e*S	Sb	06 38 36.8	-0.4
NSTT	**Nanjuang** baz=298	**0.35**	**299**	*e*S	Sb	06 38 38.7	-0.4
ENA	**Nanau** baz=95	**0.36**	**95**	P	Pg	06 38 33.1	+0.6
ENA	baz=95			*e*S	Sb	06 38 39.6	+0.2

IDC ***16*** *06:42:58.2±5.4, 37°.10N×71°.36E, h108km±32km, mb3.4/3, mb1 3.6/8, mb1mx3.2/45, mbtmp4.0/8, Error ellipse: s-maj=72.2km s-min=22.6km az=147.0*
NNC ***16*** *06:42:58.5±3.8, 37°.22N×71°.20E, h142km±67km, mb3.5, mpv4.1, Error ellipse: s-maj=36.7km s-min=24.7km az=33.0*

ISC 16 06:42:58.4±1.9, 37°.2N±0°.2×71°.2E±0°.1, h100km, n19, σ1s27/22, mb3.7/3, 5C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=18	**5.29**	**20**	P	**Pn**	**06 44 16.0**	**+0.6**
UCH	**Uchtor** SNR=7.7	**5.63**	**26**	P	**Pn**	**06 44 20.9**	**+0.8**
KZA	**Kyzart** SNR=5.2	**5.79**	**31**	P	**Pn**	**06 44 22.6**	**+0.5**
KK31	**Karatay Array** 8.6nm,0.4s,baz=173,slow=11,SNR=112	**5.93**	**355**	⇑P	**Pn**	**06 44 23.5**	**-0.2**
KK31	5.7nm,0.3s,baz=183,slow=23,SNR=6.3			S	**Sn**	**06 45 31.4**	**+1.1**
AAK	**Ala-Archa** 3.2nm,0.3s,baz=162,slow=6.4,SNR=19	**5.99**	**24**	P	**Pn**	**06 44 25.7**	**+1.0**
AAK	1.2nm,0.3s,baz=348,slow=20,SNR=2.1			S	**Sn**	**06 45 33.4**	**+1.4**
AAK	**Ala-Archa** SNR=6.5	**5.99**	**24**	P	**Pn**	**06 44 25.7**	**+1.0**
AAK	**Ala-Archa** 7.2nm,0.5s	**5.99**	**24**	⇑P	**Pn**	**06 44 25.4**	**+0.7**
AAK	12nm,0.8s			⇑S	**Sn**	**06 45 32.6**	**+0.6**
CHMS	**Chumysh** SNR=7.3	**6.40**	**24**	P	**Pn**	**06 44 30.7**	**+0.6**
TKM2	**Tokmak 2** SNR=8.4	**6.63**	**29**	P	**Pn**	**06 44 33.6**	**+0.1**
TKM2	**Tokmak 2** 6.6nm,0.5s	**6.63**	**29**	⇑P	**Pn**	**06 44 33.6**	**+0.1**
GEYT	**Alibeck** 1.4nm,0.3s,baz=93,slow=15,SNR=5.6	**10.43**	**278**	P	**Pn**	**06 45 26.6**	**+1.6**
MKAR	**Makanchi Array** baz=224,slow=14,SNR=3.4	**12.63**	**37**	P	**Pn**	**06 45 53.3**	**-1.0**
AB31	**Akbulak array** 3.7nm,0.4s,baz=139,slow=14,SNR=104	**14.57**	**329**	⇓P	**Pn**	**06 46 15.3**	**-4.3**
AKTO	**Aktyubinsk** 2.2nm,0.3s,baz=129,slow=10,SNR=24	**16.28**	**329**	P	**Pn**	**06 46 41.1**	**+0.2**
AKTO	**Aktyubinsk** 5.4nm,0.4s	**16.28**	**329**	⇑P	**Pn**	**06 46 40.5**	**-0.4**
ZALV	**Zalesovo Beam** 0.5nm,0.3s,baz=217,slow=11,SNR=4.2	**19.21**	**25**	P	**P**	**06 47 13.5**	**-0.7**
BRTR	**Keskin Array B** 0.5nm,0.5s,baz=97,slow=6.7,SNR=3.8	**29.40**	**287**	P	**P**	**06 48 52.3**	**-0.1**
FINES	**FINESS Array B** 1.8nm,0.9s,baz=116,slow=13,SNR=2.2	**37.01**	**326**	P	**P**	**06 49 57.8**	**-0.2**
ARCES	**ARCESS Array B** 0.5nm,0.4s,baz=99,slow=7.5,SNR=7.9	**40.58**	**337**	P	**P**	**06 50 28.2**	**+0.5**

JMA ***16*** *07:16:38.5±0.1, 23°.79N×121°.55E, h36km±2km, M3.0*
TAP ***16*** *07:16:39.0, 23°.84N×121°.57E, h36km, ML3.4, B*

ISC 16 07:16:37.3±1.0, 23°.82N±0°.01×121°.61E±0°.02, h15km±8km, n102, σ1s09/193, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=16	**0.16**	**359**	*e*P	**Pb**	**07 16 45.6**	**+3.6**
HWA	baz=16			*e*S	**Sb**	**07 16 50.6**	**+5.6**
ESL	**Shilin** baz=255	**0.16**	**268**	*e*P	**Pb**	**07 16 45.9**	**+3.9**
ESL	baz=255			S	**Sb**	**07 16 50.5**	**+5.4**
EGFH	**Guangfu** baz=217	**0.22**	**228**	*i* P	**Pb**	**07 16 46.3**	**+3.2**
EGFH	baz=217			S	**Sb**	**07 16 51.3**	**+4.3**
TWD	**Chiawan** baz=7.0	**0.26**	**358**	*e*P	**Pn**	**07 16 47.2**	**+0.6**
TWD	baz=7.0			S	**Sn**	**07 16 52.7**	**+0.3**
NACB	**Ninganchiao** baz=3.0	**0.35**	**358**	*i* P	**Pn**	**07 16 47.8**	**-0.1**
NACB	baz=3.0			S	**Sn**	**07 16 53.7**	**-1.1**
HGSD	**Ruisui** baz=201	**0.37**	**207**	*i* P	**Pn**	**07 16 48.6**	**+0.5**
HGSD	baz=201			S	**Sn**	**07 16 56.1**	**+1.0**
ETLH	**Xiulin Townshi** baz=347	**0.40**	**343**	*i* P	**Pn**	**07 16 48.4**	**-0.3**
ETLH	baz=347			S	**Sn**	**07 16 54.5**	**-1.6**
EHY	**Hungye** baz=213	**0.41**	**220**	P	**Pn**	**07 16 48.6**	**-0.1**

EHY				S		Sn	07 16 54.5	-1.5
	baz=213							
OWD	**Renai**	**0.42**	**289**	P		Pn	07 16 48.5	-0.4
	baz=287							
OWD				S		Sn	07 16 54.6	-1.9
	baz=287							
VWDT	**VWDT**	**0.43**	**261**	*i* P		Pn	07 16 49.0	+0.1
	baz=257							
VWDT				S		Sn	07 16 55.5	-1.1
	baz=257							
WHF	**Hehuan Shan**	**0.45**	**316**	*i* P		Pn	07 16 49.3	-0.4
	baz=317							
WHF				S		Sn	07 16 56.2	-1.5
	baz=317							
CHGB	**Renai**	**0.46**	**301**	*i* P		Pn	07 16 49.3	-0.4
	baz=300							
CHGB				S		Sn	07 16 56.1	-1.7
	baz=300							
YULB	**Yu-li**	**0.51**	**214**	*e*P		Pn	07 16 49.1	-1.0
	baz=209							
YULB				S		Sn	07 16 58.5	-0.1
	baz=209							
TWF1	**Yuli**	**0.55**	**212**	P		Pn	07 16 49.3	-1.3
	baz=206							
TWF1				S		Sn	07 16 59.3	-0.2
	baz=206							
TWT	**Tachien**	**0.58**	**318**	*e*P		Pn	07 16 51.0	-0.3
	baz=317							
TWT				S		Sn	07 16 59.0	-1.7
	baz=317							
TDCB	**Techi**	**0.59**	**317**	*e*P		Pn	07 16 51.0	-0.4
	baz=317							
TDCB				S		Sn	07 16 58.8	-2.1
	baz=317							
SSLB	**Suanglung**	**0.60**	**267**	P		Pn	07 16 50.7	-0.7
	baz=264							
SSLB				S		Sb	07 16 58.5	+0.7
	baz=264							
ENA	**Nanau**	**0.62**	**11**	P		Pn	07 16 51.2	-0.4
	baz=15							
ENA				*e*S		Sn	07 16 59.7	-1.5
	baz=15							
NNSB	**Datong**	**0.64**	**341**	*i* P		Pn	07 16 51.8	-0.2
	baz=343							
NNSB				S		Sn	07 17 00.2	-1.8
	baz=343							
NNSH	**Datong**	**0.64**	**341**	P		Pn	07 16 51.8	-0.2
	baz=343							
NNSH				*e*S		Sn	07 17 01.1	-0.9
	baz=343							
SMLT	**Sun Moon Lake**	**0.65**	**276**	P		Pn	07 16 51.4	-0.7
	baz=273							
SMLT				S		Sn	07 17 01.2	-1.0
	baz=273							
NNS	**Nan Shan**	**0.65**	**341**	*i* P		Pn	07 16 52.0	-0.2
	baz=343							
NNS				S		Sn	07 17 00.9	-1.4
	baz=343							
DPDB	**Guoxing**	**0.66**	**289**	*e*P		Pn	07 16 51.8	-0.4
	baz=287							
DPDB				S		Sn	07 17 00.8	-1.5
	baz=287							
FULB	**Fuli**	**0.68**	**205**	P		Pn	07 16 51.9	-0.6
	baz=201							
FULB				*e*S		Sn	07 17 04.3	+1.5
	baz=201							
YUS	**Yu-Shan**	**0.69**	**241**	P		Pn	07 16 52.4	-0.5
	baz=237							
YUS				*e*S		Sn	07 17 02.4	-1.2
	baz=237							
TYC	**Yuchr**	**0.69**	**277**	P		Pn	07 16 52.1	-0.5
	baz=275							
TYC				*e*S		Sn	07 17 01.9	-1.2
	baz=275							
WHYT	**Xinyi Township**	**0.70**	**260**	*i* P		Pn	07 16 52.6	-0.2
	baz=257							
WHYT				S		Sn	07 17 02.3	-1.1
	baz=257							
CHKT	**Chengkung**	**0.75**	**197**	P		Pn	07 16 53.3	-0.1
	baz=193							
CHKT				S		Sn	07 17 04.2	-0.3
	baz=193							
WHP	**Taichung City**	**0.76**	**307**	P		Pn	07 16 53.5	-0.1
	baz=307							
WHP				*e*S		Sn	07 17 03.3	-1.5
	baz=307							
NDT	**Datong Townshi**	**0.78**	**354**	*i* P		Pn	07 16 53.7	-0.2
	baz=355							
NDT				S		Sn	07 17 04.8	-0.6
	baz=355							
ALS	**Alishan**	**0.80**	**247**	*i* P		Pn	07 16 54.3	0.0
	baz=244							
ALS				S		Sn	07 17 05.7	-0.4
	baz=244							
WJS	**Zhushan**	**0.81**	**270**	P		Pn	07 16 54.1	-0.1
	baz=268							
WJS				S		Sn	07 17 05.5	-0.4
	baz=268							
TWC	**Suao**	**0.82**	**16**	*i* P		Pn	07 16 54.5	+0.2
	baz=19							
TWC				S		Sn	07 17 07.0	+0.9
	baz=19							
ENTT	**Nioudou**	**0.82**	**357**	*i* P		Pn	07 16 54.2	-0.2
ENTT				S		Sn	07 17 05.0	-1.3
ELDTW	**Lidau**	**0.83**	**221**	P		Pb	07 16 53.5	0.0
	baz=217							
ELDTW				*e*S		Sn	07 17 06.1	-0.5
	baz=217							
WNT	**Mingjian**	**0.85**	**274**	*i* P		Pn	07 16 54.8	+0.1
	baz=272							
WNT				*i* S		Sn	07 17 05.9	-1.0
	baz=272							
EOS1	**EOS1**	**0.87**	**33**	*e*P		Pn	07 16 55.4	+0.4
	baz=35							
YHNB	**Yeheng**	**0.87**	**346**	P		Pn	07 16 55.2	0.0
	baz=347							
YHNB				S		Sn	07 17 06.4	-1.3
	baz=347							
CHN5	**Tsauling**	**0.88**	**256**	P		Pn	07 16 55.3	+0.1
	baz=253							
CHN5				S		Sn	07 17 06.6	-1.2
	baz=253							
NSK	**Sanguang**	**0.88**	**345**	P		Pn	07 16 55.4	+0.1
	baz=347							
NSK				S		Sg	07 17 06.2	+0.2
	baz=347							
TWE	**Neicheng**	**0.90**	**3**	P		Pn	07 16 55.3	-0.1
	baz=6.0							
TCU	**Taichung**	**0.91**	**291**	P		Pn	07 16 55.9	+0.3
	baz=290							
TCU				S		Sn	07 17 08.6	+0.1
	baz=290							
TWQ1	**Liyutan**	**0.93**	**305**	P		Pn	07 16 55.4	-0.4
	baz=304							
TWQ1				S		Sn	07 17 08.1	-0.8
	baz=304							
SLBB	**Yuanshan**	**0.93**	**2**	P		Pn	07 16 55.9	0.0
	baz=3.0							
SLBB				S		Sn	07 17 08.2	-0.9
	baz=3.0							
NWLT	**Wulai**	**0.96**	**354**	P		Pn	07 16 56.3	0.0
	baz=356							
NWLT				*e*S		Sg	07 17 08.6	+0.1
	baz=356							
WGK	**Gukeng**	**0.97**	**262**	*e*P		Pg	07 16 55.5	-0.5
	baz=260							
WGK				S		Sn	07 17 09.9	0.0
	baz=260							
NSY	**Sanyi**	**0.97**	**308**	P		Pn	07 16 56.1	-0.4
	baz=307							
NSY				*e*S		Sn	07 17 08.9	-1.2
	baz=307							
NSTT	**Nanjuang**	**0.98**	**326**	P		Pn	07 16 57.1	+0.6
	baz=326							
NSTT				S		Sn	07 17 10.0	-0.2
	baz=326							
LIOB	**Emei**	**0.98**	**327**	*e*P		Pn	07 16 57.0	+0.3
	baz=327							
LIOB				S		Sn	07 17 09.7	-0.6
	baz=327							
WDLH	**Douliu**	**0.99**	**263**	P		Pn	07 16 56.3	-0.3
	baz=260							
WDLH				S		Sn	07 17 09.3	-1.0
	baz=260							
WCHH	**Zhanghua**	**0.99**	**285**	P		Pn	07 16 56.8	+0.1
	baz=284							
WCHH				S		Sn	07 17 10.1	-0.4
	baz=284							
STYT	**Tauyuan**	**1.02**	**230**	P		Pn	07 16 57.3	+0.2
	baz=227							
STYT				S		Sn	07 17 11.2	-0.1
	baz=227							
WDJ	**Dajia District**	**1.03**	**301**	P		Pn	07 16 57.4	+0.1
	baz=300							
WDJ				S		Sn	07 17 10.6	-0.7
	baz=300							
NMLH	**Miaoli**	**1.03**	**314**	P		Pn	07 16 58.4	+1.1
	baz=314							
NMLH				S		Sg	07 17 10.1	-0.6
	baz=314							
PTSB	**Yuanli**	**1.03**	**307**	P		Pn	07 16 57.1	-0.2
	baz=307							
PTSB				S		Sg	07 17 10.5	-0.3
	baz=307							
TPUB	**Ta-pu**	**1.03**	**240**	P		Pn	07 16 57.8	+0.5
	baz=238							
TPUB				S		Sn	07 17 11.6	0.0
	baz=238							
CHN4	**Tsaushan**	**1.04**	**244**	P		Pn	07 16 58.0	+0.7
	baz=241							
CHN4				S		Sn	07 17 12.4	+0.8
	baz=241							
NTC	**Toucheng**	**1.05**	**11**	P		Pg	07 16 57.9	+0.3
	baz=13							
NTC				*e*S		Sg	07 17 11.2	-0.2
	baz=13							
WTP	**Ta-pu**	**1.08**	**238**	P		Pg	07 16 58.3	+0.2
	baz=235							
WTP				S		Sn	07 17 12.3	-0.3
	baz=235							
CHN2	**Minshiung**	**1.08**	**255**	P		Pg	07 16 58.9	+0.8
	baz=252							
CHN2				S		Sn	07 17 13.1	+0.5
	baz=252							
WLTB	**Daxi**	**1.08**	**343**	*e*P		Pg	07 16 58.4	+0.3
	baz=343							
WLTB				*e*S		Sn	07 17 12.1	-0.5
	baz=343							
TWG	**Pinlang**	**1.11**	**206**	*e*P		Pg	07 16 58.8	0.0
	baz=203							
TWG				*e*S		Sn	07 17 13.7	+0.3
	baz=203							
TWGBT	**Beinan**	**1.11**	**206**	*e*P		Pg	07 16 59.0	+0.3
	baz=203							
TWH	**Lutao**	**1.11**	**186**	P		Pn	07 16 58.0	-0.3
	baz=183							
TWH				S		Sn	07 17 13.6	+0.2
	baz=183							
CHY	**Chiayi**	**1.13**	**254**	*e*P		Pg	07 16 59.1	0.0
	baz=251							
CHY				S		Sn	07 17 13.5	-0.4
	baz=251							
NHDH	**Xindian Distri**	**1.14**	**356**	P		Pg	07 16 59.2	-0.1
	baz=357							
NHDH				*e*S		Sg	07 17 14.4	+0.2
	baz=357							
RLNB	**Erlin**	**1.15**	**274**	P		Pg	07 16 58.9	-0.5
	baz=272							
RLNB				*e*S		Sn	07 17 13.4	-0.8
	baz=272							
TATO	**Taipei**	**1.16**	**355**	P		Pg	07 16 59.3	-0.3
	baz=356							
TATO				*e*S		Sg	07 17 15.3	+0.6
	baz=356							
TWA	**Mucha**	**1.16**	**359**	P		Pg	07 16 59.4	-0.2
TWA				*e*S		Sb	07 17 13.9	0.0
TIPB	**Shuangxi**	**1.16**	**10**	P		Pg	07 16 59.6	-0.1
	baz=11							
TIPB				*e*S		Sn	07 17 14.4	-0.4
	baz=11							
TWK	**Hsinying**	**1.17**	**242**	P		Pg	07 16 59.6	-0.2
	baz=239							
TWK				*e*S		Sn	07 17 14.0	-0.9
	baz=239							
CHN1	**Nanshi**	**1.18**	**238**	P		Pg	07 16 59.8	-0.1
	baz=235							
CHN1				*e*S		Sn	07 17 14.5	-0.6
	baz=235							
SNST	**Tainan City**	**1.18**	**240**	P		Pb	07 16 59.2	-0.3
	baz=237							
SNST				S		Sg	07 17 14.9	-0.6
	baz=237							
SGST	**Jiashian**	**1.19**	**232**	P		Pb	07 16 59.2	-0.5
	baz=229							
SGST				S		Sg	07 17 15.3	-0.6
	baz=229							
SLGT	**Liugui**	**1.21**	**227**	P		Pg	07 17 00.7	+0.1
	baz=225							
SLGT				S		Sg	07 17 16.7	+0.4
	baz=225							
WTCT	**Ta-ch'eng**	**1.22**	**272**	P		Pb	07 16 59.4	-0.6
	baz=270							
WTCT				S		Sn	07 17 15.3	-0.7
	baz=270							
TWB1	**Santiao Chiao**	**1.23**	**16**	P		Pg	07 17 00.8	-0.3
	baz=18							
WLGB	**Puzi**	**1.25**	**254**	*e*P		Pb	07 17 00.2	-0.3
	baz=252							
WLGB				*e*S		Sg	07 17 16.4	-1.1
	baz=252							
NWF	**Wu-fen Shan**	**1.26**	**7**	P		Pb	07 17 00.7	-0.1
	baz=8.0							
WFSB	**Wu-fen Shan**	**1.26**	**7**	P		Pb	07 17 00.8	+0.1
	baz=8.0							
WSF	**Szhu**	**1.28**	**262**	P		Pb	07 17 00.4	-0.7
	baz=260							
WSF				S		Sn	07 17 17.2	-0.4
	baz=260							
TWS1	**Kuangyinshan**	**1.29**	**352**	P		Pb	07 17 01.2	-0.1
	baz=353							
TWS1				S		Sg	07 17 19.0	+0.1
	baz=353							
YM01	**YM01**	**1.32**	**359**	*e*P		Pn	07 17 01.2	-0.1
	baz=359							
YM01				*e*S		Sb	07 17 18.2	-0.4
	baz=359							
YM04	**YM04**	**1.33**	**357**	P		Pn	07 17 01.0	-0.4
	baz=358							
YM10	**YM10**	**1.33**	**358**	*e*P		Pb	07 17 01.6	-0.4
	baz=359							
YM11	**YM11**	**1.34**	**359**	*e*P		Pn	07 17 01.2	-0.4
ECL	**Taimali**	**1.36**	**206**	*e*P		Pg	07 17 02.8	-0.7
	baz=204							
CHN8	**Yiju**	**1.36**	**250**	S		Sb	07 17 19.0	-0.8
	baz=248							
JYNG	**Yonaguni jima**	**1.38**	**63**	P		Pg	07 17 03.4	-0.4
JYNG				*e*S		Sb	07 17 20.9	+0.8
SSD	**Sandimen**	**1.40**	**220**	*e*P		Pb	07 17 02.7	-0.4
	baz=218							
SSD				*e*S		Sb	07 17 20.1	-0.6
	baz=218							
YOJ	**Yonaguni jima**	**1.43**	**63**	*e*P		Pb	07 17 04.2	+0.5
	baz=64							
YOJ				S		Sg	07 17 23.4	-0.1
	baz=64							
YOJ	**Yonaguni jima**	**1.43**	**63**	P		Pb	07 17 04.2	+0.5
YOJ				*e*S		Sb	07 17 22.5	+0.7
MASBT	**Mashibuluo**	**1.50**	**217**	P		Pb	07 17 04.7	-0.2
	baz=215							
MASBT				S		Sb	07 17 23.7	-0.1
	baz=215							
EAST	**Anshuo**	**1.59**	**206**	*e*P		Pg	07 17 07.4	-0.5
	baz=204							
EAST				*e*S		Sn	07 17 25.4	0.0
	baz=204							
SCZT	**Fangliau**	**1.70**	**212**	*e*P		Pb	07 17 08.2	-0.2
	baz=210							
SCZT				S		Sb	07 17 29.0	-0.6
	baz=210							
PCYT	**Pengchaiyu**	**1.85**	**13**	*e*P		Pn	07 17 07.5	-1.0
	baz=14							
PCYT				*e*S		Sn	07 17 31.0	-0.7
	baz=14							
WDGT	**Dungji**	**1.87**	**253**	P		Pn	07 17 07.5	-1.3
	baz=251							
WDGT				S		Sn	07 17 29.5	-2.7
	baz=251							
IRIF	**Iriomote-Funau**	**2.01**	**75**	P		Pb	07 17 12.4	-1.1
IRIF				*e*S		Sb	07 17 37.3	-1.0
HATJ	**Hateruma jima**	**2.02**	**83**	P		Pn	07 17 12.0	+1.1
HATJ				*e*S		Sn	07 17 37.3	+1.3
JKRS	**Kuro-shima**	**2.23**	**79**	P		Pb	07 17 15.6	-1.8
JKRS				*e*S		Sb	07 17 43.3	-1.6
JIJ	**Ishigaki jima**	**2.38**	**76**	P		Pn	07 17 17.1	+1.3
JIJ				S		Sn	07 17 44.7	-0.1
JISG	**Ishigakijimahi**	**2.58**	**72**	P		Pn	07 17 19.9	+1.3
JISG				S		Sn	07 17 49.9	+0.1

IDC ***16*** *07:28:47.2±1.1,27°.08N×140°.31E,h453km±12km, mb3.3/15,mb1 3.4/18,mb1mx3.3/38,mbtmp4.1/18,Error ellipse: s-maj=21.6km s-min=10.0km az=81.0*

JMA ***16*** *07:28:48.1±0.3,27°.34N×140°.41E,h439km±5km,M3.9*

ISC 16 07:28:46.7±0.6,27°.19N±0°.09×140°.4E±0°.1,h443km,n25,
σ1§46/29,mb3.8/15,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.58**	**93**	*e*S			**S**	**07 30 31.0**	**-0.1**
JCJ	**Chichijima**	**1.58**	**93**	P			**P**	**07 29 45.6**	**+1.2**
	30nm,0.3s,baz=272,slow=20,SNR=6.2								
JCJ				S			**S**	**07 30 29.2**	**-2.0**
	56nm,0.3s,baz=228,slow=21,SNR=12								
JHH2	**Haha-jima-NKT2**	**1.67**	**109**	P			**P**	**07 29 46.5**	**+1.7**
JHH2				S			**S**	**07 30 32.4**	**+0.5**
JRY	**Ryogami san**	**8.90**	**352**	P			**P**	**07 30 53.7**	**+2.1**
JAG	**Ashikaga**	**9.25**	**355**	P			**P**	**07 30 56.1**	**+0.7**
JAG				*e*S			**S**	**07 32 37.0**	**-4.4**
JNU	**Nakatsue**	**10.15**	**308**	P			**P**	**07 31 08.0**	**+2.6**
	1.8nm,0.3s,baz=24,slow=4.0,SNR=9.8								
JSJ	**Shimokoshiki**	**10.35**	**298**	P			**P**	**07 31 09.0**	**+1.5**
KSRS	**Korea Array**	**14.69**	**317**	P			**P**	**07 31 54.6**	**+0.1**
	0.2nm,0.3s,baz=127,slow=13,SNR=4.6								
USRK	**Ussuriysk Ar.**	**18.29**	**340**	P			**P**	**07 32 33.2**	**+0.9**
	baz=159,slow=8.7,SNR=12								
KLR	**Kul'dur**	**23.01**	**345**	P			**P**	**07 33 15.3**	**-0.2**
	0.6nm,0.3s,baz=181,slow=8.6,SNR=5.5								
SONM	**Songino Array**	**33.56**	**317**	P			**P**	**07 34 48.6**	**+0.5**
	0.5nm,0.5s,baz=132,slow=8.5,SNR=2.8								
SEY	**Seymchan**	**36.60**	**9**	P			**P**	**07 35 15.0**	**+1.8**
	1.3nm,0.5s,baz=164,slow=8.1,SNR=6.9								
WRA	**Warramunga Arr**	**47.22**	**188**	P			**P**	**07 36 37.0**	**-1.2**
	2.5nm,0.4s,baz=2.6,slow=7.5,SNR=36								
ZALV	**Zalesovo Beam**	**48.39**	**319**	P			**P**	**07 36 46.1**	**-0.5**
	1.9nm,0.3s,baz=116,slow=7.8,SNR=8.2								
MKAR	**Makanchi Array**	**49.20**	**310**	P			**P**	**07 36 52.4**	**-0.4**
	0.7nm,0.4s,baz=87,slow=11,SNR=11								
MKAR				ScP			**ScP**	**07 41 18.8**	**-1.5**
	0.5nm,0.5s,baz=83,slow=6.1,SNR=4.6								
ASAR	**Alice Springs**	**50.95**	**188**	P			**P**	**07 37 04.7**	**-1.2**
	0.3nm,0.4s,baz=356,slow=4.1,SNR=14								
NRIK	**Noril'sk**	**51.99**	**339**	P			**P**	**07 37 13.0**	**+0.1**
	4.0nm,0.6s,baz=107,slow=9.4,SNR=7.9								
STKA	**Stephens Creek**	**58.75**	**179**	P			**P**	**07 37 60.0**	**-0.7**
	0.8nm,0.4s,baz=336,slow=11,SNR=3.9								
YKA	**Yellowknife Ar**	**72.80**	**28**	P			**P**	**07 39 29.2**	**+0.6**
	0.5nm,0.4s,baz=298,slow=5.6,SNR=17								
ARCES	**ARCESS Array B**	**72.93**	**341**	P			**P**	**07 39 29.8**	**+0.5**
	1.1nm,0.4s,baz=73,slow=8.7,SNR=18								
KBZ	**Khabaz**	**76.79**	**312**	P			**P**	**07 39 51.5**	**+0.1**
	1.7nm,0.5s,baz=94,slow=4.0,SNR=5.3								
FINES	**FINESS Array B**	**77.16**	**333**	P			**P**	**07 39 52.8**	**-0.4**
	4.7nm,0.4s,baz=69,slow=4.8,SNR=32								
AKASG	**Malin Array Be**	**81.61**	**323**	P			**P**	**07 40 16.2**	**-0.8**
	1.3nm,0.5s,baz=52,slow=5.2,SNR=7.0								
NB2	**NORSAR Subarra**	**82.93**	**338**	P			**P**	**07 40 22.7**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=45,slow=4.6								
NOA	**NORSAR Array B**	**82.93**	**338**	P			**P**	**07 40 22.8**	**-0.9**
	comp=Z,1.1nm,0.4s,baz=45,slow=4.9,SNR=6.1								

IDC ***16*** *07:35:34.5±1.2,23°.10S×66°.45W,h209km±19km,mb3.1/1, mb1 3.2/7,mb1mx3.1/22,mbtmp3.7/7,Error ellipse: s-maj=27.1km s-min=17.5km az=116.0*

NEIC ***16*** *07:35:35.4±2.1,23°.06S±0°.04×66°.8W±0°.3,h251km±29km, Error ellipse: s-maj=35.5km s-min=3.6km az=96.0*

GUC ***16*** *07:35:36.3±0.6,23°.06S×66°.94W,h264km±8km,ML4.0*

ISC 16 07:35:35.0±0.9,23°.06S±0°.05×66°.8W±0°.1,h249km±12km,
n50,σ1§49/79,4C-8D,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.99**	**283**	P			**Pn**	**07 36 18.6**	**+0.8**
	11nm,0.3s,baz=96,slow=10,SNR=183								
LVC				S			**S**	**07 36 50.9**	**-0.4**
	9.3nm,0.3s,baz=240,slow=21,SNR=17								
LVC	**Limon Verde**	**1.99**	**283**	⇓*i* P			**Pn**	**07 36 18.6**	**+0.8**
LVC				*i* S			**S**	**07 36 51.1**	**-0.2**
PB15	**IPOC Station P**	**2.46**	**266**	⇓*i* P			**Pn**	**07 36 23.3**	**+1.2**
PB15				*i* S			**S**	**07 36 59.5**	**+0.5**
PB15	**IPOC Station P**	**2.46**	**266**				**Pn**	**07 36 23.2**	**+1.2**
PB15				S			**S**	**07 36 59.4**	**+0.3**
PB06	**IPOC Station P**	**2.57**	**277**	⇑*i* P			**Pn**	**07 36 24.7**	**+1.5**
PB06				*i* S			**S**	**07 37 01.0**	**-0.1**
PB06				IAML				07 37 04.6	
	comp=N,179nm,0.1s								
PB06	**IPOC Station P**	**2.57**	**277**				**Pn**	**07 36 24.1**	**+1.0**
PB06				S			**S**	**07 37 00.6**	**-0.5**
PB09	**IPOC Station P**	**2.58**	**299**	*e*P			**Pn**	**07 36 25.1**	**+1.8**
PB09				*i* S			**S**	**07 37 01.4**	**+0.1**
PB09				IAML				07 37 05.9	
	comp=E,134nm,0.2s								
PB09	**IPOC Station P**	**2.58**	**299**				**Pn**	**07 36 24.2**	**+1.0**
PB09				S			**S**	**07 37 01.4**	**+0.1**
PB03	**IPOC Station P**	**2.90**	**290**	⇓*i* P			**Pn**	**07 36 27.8**	**+1.1**
PB03				*i* S			**S**	**07 37 06.8**	**-0.6**
PB03				IAML				07 37 10.0	
	comp=N,301nm,0.1s								
PB05	**IPOC Station P**	**3.14**	**273**	⇓*i* P			**Pn**	**07 36 30.5**	**+1.4**
PB05				*i* S			**S**	**07 37 11.0**	**-0.8**
PB07	**IPOC Station P**	**3.14**	**294**	⇓*i* P			**Pn**	**07 36 30.5**	**+1.2**
PB07				*i* S			**S**	**07 37 11.1**	**-0.9**
PB07	**IPOC Station P**	**3.14**	**294**				**Pn**	**07 36 30.3**	**+1.0**
PB07				S			**S**	**07 37 10.7**	**-1.4**
PB04	**IPOC Station P**	**3.17**	**283**	⇓*i* P			**Pn**	**07 36 30.9**	**+1.4**
PB04				*i* S			**S**	**07 37 11.8**	**-0.7**
PB04	**IPOC Station P**	**3.17**	**283**				**Pn**	**07 36 30.7**	**+1.2**
PB04				S			**S**	**07 37 11.4**	**-1.1**
PB01	**IPOC Station P**	**3.20**	**308**	*e*P			**Pn**	**07 36 31.1**	**+1.3**
PB01				*e*S			**S**	**07 37 12.8**	**-0.3**
PB01	**IPOC Station P**	**3.20**	**308**				**Pn**	**07 36 30.6**	**+0.8**
PB01				S			**S**	**07 37 12.3**	**-0.7**
GO02	**Mina Guanaco**	**3.29**	**230**	⇓*i* P			**Pn**	**07 36 32.5**	**+1.5**
GO02				*i* S			**S**	**07 37 15.9**	**+0.7**
GO02	**Mina Guanaco**	**3.29**	**230**				**Pn**	**07 36 32.0**	**+1.1**
PB02	**IPOC Station P**	**3.35**	**301**	*e*P			**Pn**	**07 36 32.5**	**+1.0**
PB02				*i* S			**S**	**07 37 15.0**	**-1.0**
PB10	**IPOC Station P**	**3.47**	**262**	⇑*i* P			**Pn**	**07 36 34.2**	**+1.5**
PB10				*i* S			**S**	**07 37 17.4**	**-1.0**
PB10	**IPOC Station P**	**3.47**	**262**				**Pn**	**07 36 34.0**	**+1.3**
PB10				S			**S**	**07 37 17.0**	**-1.4**
PB08	**IPOC Station P**	**3.63**	**323**	*e*P			**Pn**	**07 36 36.9**	**+1.9**
PB08	**IPOC Station P**	**3.63**	**323**				**Pn**	**07 36 36.6**	**+1.6**
PB08				S			**S**	**07 37 22.9**	**+0.4**
PB14	**IPOC Station P**	**3.64**	**244**	⇑*i* P			**Pn**	**07 36 36.1**	**+1.1**
PB14				*i* S			**S**	**07 37 21.9**	**-0.5**
PB14	**IPOC Station P**	**3.64**	**244**				**Pn**	**07 36 36.1**	**+1.1**
PB14				S			**S**	**07 37 21.1**	**-1.3**
TA01	**Diego Aracena**	**4.00**	**308**	⇓*i* P			**Pn**	**07 36 39.6**	**+0.7**
TA01				*i* S			**S**	**07 37 27.3**	**-2.1**
**T

BDFB	**Brasilia**	**19.20**	**71**	P	**P**	**07 39 40.6**	**-0.3**
	comp=N,0.3nm,0.3s,baz=234,slow=11,SNR=7.2						
BDFB	**Brasilia**	**19.20**	**71**	P	**P**	**07 39 40.5**	**-0.3**
BDFB				IAmb	IAmb	07 39 41.5	
	comp=Z,4.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**76.07**	**69**	P	**P**	**07 46 56.3**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=260,slow=4.8,SNR=5.1						
KSH	**Kashi**	**144.51**	**54**	PKP	**PKiKP**	**07 54 47.4**	**+1.6**
KSH				pPKP	pPKPdf	07 55 45.3	-1.9
MKAR	**Makanchi Array**	**145.69**	**39**	PKPbc	**PKiKP**	**07 54 48.1**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=316,slow=2.0,SNR=5.2						

NEIC ***16*** *07:53:06.2±1.1,59.72N±0.03×152.90W±0.08,h97km±4km, Error ellipse: s-maj=6.0km s-min=4.9km az=106.0*

AEIC 16 07:53:07.1±1.4,59.70N±0.03×152.88W±0.08,h90km±4km, ML2.6, Error ellipse: s-maj=5.8km s-min=3.9km az=89.0, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILS	**Iliamna Low So**	**0.28**	**340**		Pn	07 53 20.3	-0.2
IVE	**Iliamna Volcan**	**0.33**	**348**		Pn	07 53 20.5	-0.3
IVE					Sn	07 53 30.9	-0.1
ILW	**Iliamna West**	**0.39**	**340**		Pn	07 53 21.0	-0.2
ILW					Sn	07 53 32.8	+1.0
AU2	**Augustine Isla**	**0.41**	**218**		Pn	07 53 21.1	0.0
AUL	**Augustine Lava**	**0.42**	**222**		Pn	07 53 21.3	+0.1
AUL					Sn	07 53 32.7	+1.0
AUP	**Augustine Pinn**	**0.43**	**220**		Pn	07 53 21.5	+0.1
AUH	**Augustine H**	**0.44**	**221**		Pn	07 53 21.5	+0.1
AUJK	**Augustine Jueg**	**0.44**	**218**		Pn	07 53 21.4	+0.1
AUW	**Augustine West**	**0.45**	**223**		Pn	07 53 21.5	+0.1
HOM	**Homer**	**0.63**	**93**		Pn	07 53 23.1	+0.3
HOM					Sn	07 53 36.1	+1.5
RED	**Redoubt Volcan**	**0.73**	**4**		Pn	07 53 23.5	-0.4
RED					Sn	07 53 36.3	-0.2
RSO	**Redoubt South**	**0.77**	**5**		Pn	07 53 23.8	-0.7
RDWB	**Redoubt West**	**0.80**	**1**		Pn	07 53 24.2	-0.5
RDWB					Sn	07 53 37.3	-0.6
CNPM	**China Poot**	**0.85**	**101**		Pn	07 53 24.9	-0.2
CNPM					Sn	07 53 38.5	-0.1
RDJH	**Redoubt Jeurge**	**0.90**	**2**		Pn	07 53 25.3	-0.4
RDJH					Sn	07 53 39.6	-0.2
DFR	**Drift River**	**0.91**	**6**		Pn	07 53 25.4	-0.3
DFR					Sn	07 53 39.3	-0.4
BRLK	**Bradley Lake**	**1.01**	**85**		Pn	07 53 26.4	-0.4
BRSE	**Bradley Lake S**	**1.08**	**87**		Pn	07 53 27.1	-0.6
BRSE					Sn	07 53 43.3	+0.1
CAPN	**Captain Cook N**	**1.38**	**38**		Pn	07 53 32.6	+1.4
KAHC	**Katmai Hardscr**	**1.52**	**227**		Pn	07 53 32.8	-0.3
SPCR	**Spurr Chakacha**	**1.55**	**12**		Pn	07 53 33.1	-0.3
SLKM	**Skilak Lake**	**1.56**	**57**		Pn	07 53 33.3	-0.2
SLKM					Sn	07 53 53.5	-0.1
SPWE	**Spurr West**	**1.59**	**6**		Pn	07 53 34.0	0.0
SPCG	**Spurr Capps Gl**	**1.66**	**14**		Pn	07 53 34.2	-0.2
SPCG					Sn	07 53 57.4	+1.4
SPNN	**North Nagishla**	**1.68**	**3**		Pn	07 53 35.0	-0.2
SPNN					Sn	07 53 56.8	+0.2
SEW	**Seward**	**1.77**	**75**		Pn	07 53 35.6	-0.5
SEW	**Seward**	**1.77**	**75**		Sn	07 53 58.0	-0.4
STLK	**Strandline Lak**	**1.88**	**15**		Pn	07 53 37.4	-0.3
KABU	**Katmai Buttres**	**1.90**	**222**		Pn	07 53 38.0	+0.1
KABU					Sn	07 54 00.7	-0.7
KDAK	**Kodiak Island**	**1.92**	**175**		Pn	07 53 37.6	-0.6
KDAK					Sn	07 54 01.2	-0.7
KDAK	**Kodiak Island**	**1.92**	**175**	Pn	Pn	07 53 36.9	-1.2
CAHL	**Cahill**	**2.07**	**218**		Pn	07 53 40.5	+0.3
RC01	**Rabbit Creek A**	**2.09**	**47**		Pn	07 53 39.8	-0.6
RC01					Sn	07 54 05.4	-0.5
OHAK	**Old Harbor**	**2.49**	**185**		Pn	07 53 44.6	-1.0
OHAK					Sn	07 54 13.4	-1.8
PWL	**Port Wells**	**2.55**	**61**		Pn	07 53 45.1	-1.2
PWL					Sn	07 54 14.6	-2.0
PMR	**Palmer**	**2.65**	**42**		Pn	07 53 46.7	-1.1
PMR					Sn	07 54 16.1	-3.0
PLK3	**Peulik 3**	**2.68**	**223**		Pn	07 53 48.6	+0.4
PLK1	**Peulik 1**	**2.72**	**227**		Pn	07 53 49.0	+0.4
KNK	**Knik Glacier**	**2.78**	**50**		Pn	07 53 48.6	-0.9
KNK					Sn	07 54 19.7	-2.5
GHO	**Glory Hole Cre**	**2.85**	**41**		Pn	07 53 49.4	-1.1
GHO					Sn	07 54 21.4	-2.6
SML	**Sawmill**	**3.08**	**45**		Pn	07 53 52.3	-1.2
GLI	**Glacier Island**	**3.11**	**65**		Pn	07 53 52.2	-1.8
PPLA	**Purkeypile**	**3.23**	**6**		Pn	07 53 55.5	-0.2
HIN	**Hinchinbrook I**	**3.27**	**75**		Pn	07 53 54.6	-1.5
FID	**Port Fidalgo**	**3.36**	**69**		Pn	07 53 55.1	-2.2
JPK	**Jack Peak**	**3.40**	**64**		Pn	07 53 56.5	-1.4
SCM	**Sheep Creek Mo**	**3.46**	**49**		Pn	07 53 57.7	-1.0
TT01	**Tatalina**	**3.56**	**336**		Pn	07 53 59.1	-0.9
EYAK	**Cordova Ski Ar**	**3.67**	**73**		Pn	07 53 59.6	-1.8
WAT1	**Susitna Watana**	**3.77**	**32**		Pn	07 54 02.5	-0.4
WAT2	**Susitna Watana**	**3.88**	**30**		Pn	07 54 03.8	-0.6
TRF	**Thorofare Moun**	**3.97**	**17**		Pn	07 54 05.6	0.0
KTH	**Kantishna Hill**	**3.98**	**13**		Pn	07 54 04.6	-1.1
GOAT	**Goat Mountain**	**4.17**	**74**		Pn	07 54 06.9	-1.4
RAGM	**Ragged Mountai**	**4.17**	**77**		Pn	07 54 06.6	-1.7
RND	**Reindeer**	**4.19**	**26**		Pn	07 54 07.7	-0.9
DHY	**Denali Highway**	**4.30**	**36**		Pn	07 54 09.3	-0.8
CHGN	**Chignik**	**4.50**	**223**	Pn	Pn	07 54 12.4	-0.3
BPAW	**Bear Paw Mtn.**	**4.51**	**11**		Pn	07 54 13.1	+0.2
BERG	**Berg Lake**	**4.65**	**77**		Pn	07 54 14.2	-0.6
GLB	**Gilahina Butte**	**4.80**	**65**		Pn	07 54 15.4	-1.5
VRDI	**Verde Repeater**	**4.91**	**68**		Pn	07 54 17.0	-1.5
PS10	**TAPS Pump St10**	**5.05**	**39**		Pn	07 54 19.6	-0.6
MCARA	**McCarthy VSAT**	**5.15**	**67**	Pn	Pn	07 54 21.7	+0.1
NEA	**Nenana**	**5.21**	**18**		Pn	07 54 20.6	-1.8
WRH	**Wood River Hil**	**5.29**	**23**		Pn	07 54 22.4	-1.0
KNG	**Kiagna River**	**5.37**	**72**		Pn	07 54 24.0	-0.8
BALM	**Baldy**	**5.40**	**71**		Pn	07 54 24.4	-0.6
HDA	**Harding Lake**	**5.49**	**28**		Pn	07 54 24.8	-1.3
CCB	**Clear Creek Bu**	**5.51**	**23**		Pn	07 54 24.9	-1.4
RIDG	**Independent Ri**	**5.57**	**40**		Pn	07 54 26.5	-0.8
YAH	**Yahtse**	**5.62**	**78**		Pn	07 54 27.4	-0.7
MDM	**Murphy Dome**	**5.71**	**20**	Pn	Pn	07 54 28.2	-0.9
BARN	**Barnard Glacie**	**5.73**	**71**		Pn	07 54 29.6	0.0
DOT	**Dot Lake**	**5.77**	**43**	Pn	Pn	07 54 28.6	-1.4
IL31		**5.81**	**26**		Pn	07 54 29.2	-1.2
CTGM	**Chitina Glacie**	**5.87**	**73**	Pn	Pn	07 54 30.9	-0.7
CHX	**Chaix Hills**	**5.93**	**81**		Pn	07 54 32.4	+0.1
SCRK	**Sand Creek**	**6.01**	**41**		Pn	07 54 32.2	-1.1
BC03		**6.31**	**53**		Pn	07 54 36.6	-0.6
YUK1	**Sand Pete Hill**	**6.50**	**62**		Pn	07 54 39.8	-0.3
PNL	**Peninsula**	**6.83**	**84**		Pn	07 54 43.7	-0.7
YUK6	**Outpost Mounta**	**7.32**	**74**		Pn	07 54 50.5	-0.8
EGAK	**Eagle**	**7.47**	**42**	Pn	Pn	07 54 52.5	-0.6
DHAK	**Deception Hill**	**7.51**	**88**		Pn	07 54 54.3	+0.6
DAWY	**Dawson**	**7.73**	**50**	Pn	Pn	07 54 55.9	-0.8
HYT	**Haines Junctio**	**7.73**	**75**	Pn	Pn	07 54 57.2	+0.4
WHY	**Whitehorse**	**9.02**	**76**		Pn	07 55 14.2	-0.1
INK	**Inuvik**	**12.05**	**36**	Pn	Pn	07 55 56.7	+1.6

IDC ***16*** *07:55:26.6±1.2,40.44S×175.78E,h0km, mb4.1/3, mb1 4.2/5, mb1mx3.9/29, mbtmp4.0/5, ML3.4/2, Error ellipse: s-maj=34.4km s-min=22.0km az=122.0*

WEL ***16*** *07:55:30.9,40.6S±0.6×175.9E±0.9,h32km±1km, M4.2/18, ML4.6/18, MLv4.2/18, Error ellipse: s-maj=0.0km s-min=0.0km az=88.4*

NEIC ***16*** *07:55:30.7±2.6,40.63S±0.03×175.90E±0.07,h33km±4km, Error ellipse: s-maj=8.4km s-min=4.0km az=113.0*

ISC 16 07:55:31.0±0.7,40.66S±0.02×175.97E±0.03,h33km±2km, n186,σ1§30/206,mb4.3/10,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRWZ	**Pori Road**	**0.10**	**0**	P	**Pb**	**07 55 36.6**	**-0.3**
PRWZ				S	**Sb**	**07 55 40.9**	**0.0**
TIWZ	**Tintock**	**0.13**	**209**	P	**Pb**	**07 55 37.6**	**+0.5**
TIWZ				S	**Sb**	**07 55 42.5**	**+1.2**
BFZ	**Birch Farm**	**0.21**	**96**	P	**Pb**	**07 55 38.3**	**+0.5**
BFZ				S	**Sb**	**07 55 43.6**	**+1.2**
BFZ	**Birch Farm**	**0.21**	**96**		**Pb**	**07 55 38.3**	**+0.5**
BFZ				Sg	**Sb**	**07 55 43.6**	**+1.2**
MRZ	**Mangatainoka R**	**0.30**	**270**	P	**Pb**	**07 55 38.5**	**-0.3**
MRZ				S	**Sn**	**07 55 43.8**	**+0.2**
CPWZ	**Castlepoint**	**0.31**	**145**	P	**Pn**	**07 55 40.8**	**+1.8**
POWZ	**Post Office Ro**	**0.31**	**330**	P	**Pb**	**07 55 38.0**	**-0.9**
POWZ				S	**Sn**	**07 55 43.3**	**-0.7**
DVHZ	**Dannevirke**	**0.39**	**23**	P	**Pb**	**07 55 39.2**	**-0.8**
DVHZ				S	**Sb**	**07 55 45.6**	**-0.6**
HOWZ	**Holdsworth Sta**	**0.42**	**235**	P	**Pn**	**07 55 40.9**	**+0.1**
ANWZ	**Angora Road**	**0.43**	**63**	P	**Pn**	**07 55 41.0**	**+0.1**
TMWZ	**Te Maipa**	**0.45**	**188**	P	**Pn**	**07 55 42.4**	**+1.1**
TSZ	**Takapari Road**	**0.60**	**359**	P	**Pn**	**07 55 42.2**	**-1.0**
MTW	**Mount Morrison**	**0.61**	**215**	P	**Pb**	**07 55 43.8**	**+0.4**
OGWZ	**Otaki Gorge**	**0.63**	**255**	P	**Pn**	**07 55 43.9**	**+0.3**
PRHZ	**Porangahau**	**0.64**	**53**	P	**Pn**	**07 55 43.7**	**0.0**
OHWZ	**Ohakea**	**0.68**	**312**	P	**Pn**	**07 55 44.3**	**+0.2**
WPHZ	**Waipukurau**	**0.69**	**31**	P	**Pn**	**07 55 44.5**	**+0.1**
PNHZ	**Pukenui**	**0.77**	**13**	P	**Pn**	**07 55 45.0**	**-0.5**
TRWZ	**Traveller**	**0.77**	**196**	P	**Pb**	**07 55 46.3**	**+0.2**
CAW	**Cannon Point**	**0.82**	**237**	P	**Pn**	**07 55 46.5**	**+0.3**
KIW	**Kapiti Island**	**0.83**	**256**	P	**Pn**	**07 55 46.8**	**+0.4**
PAWZ	**Paruwai Farm**	**0.83**	**209**	P	**Pb**	**07 55 46.9**	**-0.2**
PXZ	**Pawanui**	**0.93**	**48**	P	**Pn**	**07 55 47.4**	**-0.2**
MSWZ	**Moikau Station**	**0.93**	**216**	P	**Pn**	**07 55 47.9**	**+0.1**
MSWZ	**Moikau Station**	**0.93**	**216**		**Pn**	**07 55 47.8**	**+0.1**
MSWZ					Sn	**07 56 00.7**	**-0.2**
PLWZ	**Palliser**	**1.06**	**210**	P	**Pn**	**07 55 49.5**	**0.0**
PLWZ	**Palliser**	**1.06**	**210**		**Pn**	**07 55 49.5**	**0.0**
PLWZ					Sn	**07 56 03.8**	**+0.6**
KRHZ	**Kereru**	**1.06**	**17**	P	**Pn**	**07 55 49.3**	**-0.2**
WEL	**Wellington**	**1.10**	**235**	P	**Pn**	**07 55 50.3**	**+0.2**
KAHZ	**Kahuranaki**	**1.11**	**39**	P	**Pn**	**07 55 49.9**	**-0.3**
BHW	**Baring Head**	**1.12**	**228**	P	**Pn**	**07 55 50.3**	**0.0**
BHW	**Baring Head**	**1.12**	**228**		**Pn**	**07 55 50.3**	**0.0**
BHW					Sn	**07 56 04.8**	**+0.3**
SNZO	**South Karori**	**1.16**	**235**		**Pn**	**07 55 50.9**	**+0.1**
SNZO					**Sn**	**07 56 06.0**	**+0.5**
BHHZ	**Black Hill Sta**	**1.17**	**4**	P	**Pn**	**07 55 51.0**	**-0.1**
WAZ	**Wanganui**	**1.18**	**320**	P	**Pn**	**07 55 52.1**	**+0.9**
MOVZ	**Moawhango**	**1.26**	**352**	P	**Pn**	**07 55 52.4**	**0.0**
KWHZ	**Kaweka Forest**	**1.28**	**16**	P	**Pn**	**07 55 52.4**	**-0.2**
CKHZ	**Cape Kidnapper**	**1.31**	**41**	P	**Pn**	**07 55 52.7**	**-0.3**
MTVZ	**Mangateitei**	**1.33**	**343**	P	**Pn**	**07 55 53.7**	**+0.4**
MCHZ	**McNeill Hill**	**1.33**	**25**	P	**Pn**	**07 55 53.2**	**-0.1**
TCW	**Tory Channel**	**1.40**	**246**	P	**Pn**	**07 55 54.1**	**0.0**
TRVZ	**Turoa**	**1.40**	**346**	P	**Pn**	**07 55 54.7**	**+0.3**
TUVZ	**Tukino**	**1.41**	**350**	P	**Pn**	**07 55 55.2**	**+0.7**
DRZ	**Dome Shelter**	**1.42**	**347**	P	**Pn**	**07 55 55.6**	**+0.9**
FWVZ	**Far West T-bar**	**1.44**	**347**	P	**Pn**	**07 55 55.3**	**+0.4**
PKVZ	**Pokaka**	**1.45**	**340**	P	**Pn**	**07 55 55.4**	**+0.5**
NGZ	**Ngauruhoe**	**1.51**	**349**	P	**Pn**	**07 55 56.5**	**+0.6**
BKZ	**Black Stump Fm**	**1.54**	**15**	P	**Pn**	**07 55 55.7**	**-0.5**
BKZ	**Black Stump Fm**	**1.54**	**15**		**Pn**	**07 55 55.7**	**-0.5**
BKZ					Sn	**07 56 14.6**	**-0.6**
DUWZ	**D'Urville Isla**	**1.56**	**264**	P	**Pn**	**07 55 56.6**	**+0.1**
WTVZ	**West Tongariro**	**1.57**	**349**	P	**Pn**	**07 55 57.3**	**+0.5**
KRVZ	**Karewarewa**	**1.58**	**351**	P	**Pn**	**07 55 57.4**	**+0.6**
ARHZ	**Aropaoanui**	**1.60**	**30**	P	**Pn**	**07 55 56.8**	**-0.1**
TWVZ	**Taurewa**	**1.64**	**345**	P	**Pn**	**07 55 57.9**	**+0.3**
RITZ	**Rihia Road**	**1.68**	**357**	P	**Pn**	**07 55 58.6**	**+0.5**
NMHZ	**Naumai**	**1.69**	**23**	P	**Pn**	**07 55 58.1**	**-0.1**
KATZ	**Kakaramea**	**1.69**	**353**	P	**Pn**	**07 55 59.0**	**+0.6**
LREZ	**Lake Rotokare**	**1.70**	**314**	P	**Pb**	**07 56 00.5**	**-1.1**
CMWZ	**Cape Campbell**	**1.71**	**230**	P	**Pn**	**07 55 58.7**	**+0.2**
CMWZ	**Cape Campbell**	**1.71**	**230**		**Pn**	**07 55 58.2**	**-0.3**
TUWZ	**Tuamarina**	**1.72**	**243**	P	**Pn**	**07 55 57.9**	**-0.6**
TUWZ	**Tuamarina**	**1.72**	**243**		**Pn**	**07 55 57.8**	**-0.7**
HATZ	**Hinemaiaia**	**1.77**	**3**	P	**Pn**	**07 55 59.2**	**-0.1**
VRZ	**Vera Road**	**1.79**	**328**	P	**Pn**	**07 56 00.2**	**+0.6**
RATZ	**Rangitukua**	**1.80**	**355**	P	**Pn**	**07 55 60.0**	**+0.3**
MRHZ	**Matea Rd**	**1.85**	**11**	P	**Pn**	**07 56 00.1**	**-0.4**
WHHZ	**Waihua**	**1.86**	**32**	P	**Pn**	**07 56 00.2**	**-0.3**
BSWZ	**Blackbirch Sta**	**1.90**	**236**	P	**Pn**	**07 56 00.5**	**-0.5**
BSWZ	**Blackbirch Sta**	**1.90**	**236**		**Pn**	**07 56 00.5**	**-0.5**
PREZ	**Palmer Road**	**1.92**	**313**	P	**Pn**	**07 56 03.0**	**+1.7**
MTHZ	**Maungataniwha**	**1.93**	**21**	P	**Pn**	**07 56 00.9**	**-0.5**
RAHZ	**Arahi**	**1.94**	**27**	P	**Pn**	**07 56 01.0**	**-0.6**
WATZ	**Wairara**	**1.96**	**355**	P	**Pn**	**07 56 01.8**	**-0.1**
WHTZ	**Whakaora**	**1.99**	**360**	P	**Pn**	**07 56 02.5**	**+0.1**
DREZ	**Durham Road**	**2.00**	**317**	P	**Pn**	**07 56 04.2**	**+1.7**
MHEZ	**Mangahewa**	**2.03**	**321**	P	**Pn**	**07 56 04.6**	**+1.8**
KHEZ	**Kahui Hut**	**2.03**	**312**	P	**Pn**	**07 56 04.5**	**+1.6**
NMEZ	**Namu Road**	**2.03**	**307**	P	**Pn**	**07 56 04.7**	**+1.8**
NNZ	**Nelson**	**2.04**	**253**	P	**Pn**	**07 56 02.9**	**-0.1**
NNZ	**Nelson**	**2.04**	**253**		**Pn**	**07 56 02.9**	**-0.1**
NNZ					**Sn**	**07 56 27.4**	**+0.1**
KNZ	**Kokohu**	**2.10**	**39**	P	**Pn**	**07 56 02.5**	**-1.2**
ALRZ	**Allen Road**	**2.11**	**8**	P	**Pn**	**07 56 03.2**	**-0.8**
PKE	**Pukeiti**	**2.11**	**313**	P	**Pn**	**07 56 05.7**	**+1.7**
MHGZ	**Mahia Peninsul**	**2.12**	**45**	P	**Pn**	**07 56 03.0**	**-1.0**
NBEZ	**Newall Road No**	**2.13**	**310**	P	**Pn**	**07 56 04.2**	**+2.0**
WPRZ	**Whakapapataran**	**2.14**	**4**	P	**Pn**	**07 56 03.9**	**-0.5**
SNGZ	**Shannon Statio**	**2.15**	**30**	P	**Pn**	**07 56 03.6**	**-1.0**
KUTZ	**Kaahu Road**	**2.17**	**357**	P	**Pn**	**07 56 04.6**	**-0.2**
PRRZ	**Plateau Road**	**2.18**	**9**	P	**Pn**	**07 56 04.2**	**-0.7**
RTZ	**Ruatahuna**	**2.19**	**21**	P	**Pn**	**07 56 04.3**	**-0.8**
PRGZ	**Paritu Road**	**2.28**	**41**	P	**Pn**	**07 56 05.0**	**-1.2**
HRRZ	**Handcock Road**	**2.28**	**6**	P	**Pn**	**07 56 05.9**	**-0.4**
GRRZ	**Galatos Road**	**2.31**	**3**	P	**Pn**	**07 56 08.0**	**+1.3**
HIZ	**Hauiti**	**2.31**	**338**	P	**Pn**	**07 56 07.1**	**+0.3**
HIZ	**Hauiti**	**2.31**	**338**		**Pn**	**07 56 07.0**	**+0.3**
TLZ	**Tolley Road**	**2.35**	**352**	P	**Pn**	**07 56 06.7**	**-0.6**
HSRZ	**Hossack Road**	**2.35**	**5**	P	**Pn**	**07 56 06.9**	**-0.5**
RRRZ	**Republican Roa**	**2.35**	**10**	P	**Pn**	**07 56 06.9**	**-0.4**
RIGZ	**Rimuhau**	**2.39**	**36**	P	**Pn**	**07 56 06.6**	**-1.3**
HLRZ	**Highlands Stat**	**2.42**	**7**	P	**Pn**	**07 56 08.6**	**+0.3**
RAGZ	**Rawiri**	**2.43**	**28**	P	**Pn**	**07 56 07.2**	**-1.2**
TARZ	**Mount Tarawera**	**2.46**	**10**	P	**Pn**	**07 56 08.2**	**-0.6**
UTU	**Utuhina**	**2.48**	**4**	P	**Pn**	**07 56 11.8**	**+2.6**
KHZ	**Kahutara**	**2.53**	**225**	P	**Pn**	**07 56 08.5**	**-1.3**
KHZ	**Kahutara**	**2.53**	**225**		**Pn**	**07 56 08.3**	**-1.4**
URZ	**Urewera**	**2.55**	**21**	Pn	**Pn**	**07 56 08.2**	**-1.8**
	5.1nm,0.3s,baz=251,slow=5.0,SNR=33						
URZ					Sn	**07 56 37.0**	**-2.9**
	34nm,0.3s,baz=281,slow=18,SNR=12						
URZ	**Urewera**	**2.55**	**21**	P	**Pn**	**07 56 08.2**	**-1.8**
URZ	**Urewera**	**2.55**	**21**		**Pn**	**07 56 10.9**	**+0.9**
THZ	**Tophouse**	**2.56**	**244**	P	**Pn**	**07 56 09.3**	**-0.9**
THZ	**Tophouse**	**2.56**	**244**		**Pn**	**07 56 09.0**	**-1.2**
OMRZ	**Omania**	**2.57**	**7**	P	**Pb**	**07 56 16.0**	**-0.4**
MWZ	**Matawai**	**2.62**	**28**	P	**Pn**	**07 56 09.2**	**-1.8**
QRZ	**Quartz Range**	**2.62**	**265**	P	**Pn**	**07 56 11.8**	**-0.2**
QRZ	**Quartz Range**	**2.62**	**265**		**Pn**	**07 56 11.0**	**-0.9**
KARZ	**Kaharoa**	**2.64**	**5**	P	**Pn**	**07 56 14.1**	**+2.8**
TKGZ	**Te Karaka**	**2.65**	**34**	P	**Pn**	**07 56 09.5**	**-1.9**
CNGZ	**Carnagh Statio**	**2.78**	**39**	P	**Pn**	**07 56 11.9**	**-1.2**
KMRZ	**Kaimai**	**2.81**	**360**	P	**Pn**	**07 56 14.2**	**+0.6**
TGRZ	**Tauranga**	**2.94**	**5**	P	**Pn**	**07 56 16.4**	**+1.1**
TOZ	**Tahuroa Road**	**2.95**	**353**	P	**Pn**	**07 56 15.5**	**+0.1**
RUGZ	**Raukumara Rang**	**3.00**	**27**	P	**Pn**	**07 56 14.7**	**-1.6**
PUZ	**Puketiti**	**3.13**	**35**	P	**Pn**	**07 56 15.9**	**-2.2**
GVZ	**Greta Valley S**	**3.18**	**223**	P	**Pn**	**07 56 17.1**	**-1.6**
PKGZ	**Pakihiroa**	**3.21**	**31**	P	**Pn**	**07 56 17.7**	**-1.5**
HAZ	**Te Kaha**	**3.22**	**26**	P	**Pn**	**07 56 17.9**	**-1.3**
DSZ	**Dennistone Nort**	**3.33**	**250**	P	**Pn**	**07 56 19.9**	**-0.7**
WMGZ	**Waiomatatini S**	**3.41**	**35**	P	**Pn**	**07 56 20.0**	**-1.8**
LTZ	**Lake Taylor**	**3.49**	**231**	P	**Pn**	**07 56 21.2**	**-1.7**
LTZ	**Lake Taylor**	**3.49**	**231**		**Pn**	**07 56 21.4**	**-1.6**
LTZ					**Sn**	**07 57 01.8**	**-1.3**
AMZ	**Amberley**	**3.53**	**223**	P	**Pn**	**07 56 22.4**	**-1.0**
MXZ	**Matakaoa Point**	**3.59**	**31**	P	**Pn**	**07 56 23.4**	**-0.9**
MXZ	**Matakaoa Point**	**3.59**	**31**		**Pn**	**07 56 23.3**	**-0.9**
MXZ					**Sn**	**07 57 04.2**	**-1.3**
MKAZ	**Moumakai**	**3.60**	**350**	P	**Pn**	**07 56 24.4**	**-0.1**
KBAZ	**Karaka Road Bo**	**3.66**	**346**	P	**Pn**	**07 56 26.1**	**+0.9**
AWAZ	**Awhitu Peninsu**	**3.74**	**343**	P	**Pn**	**07 56 27.0**	**+0.7**
OKCZ	**Okains Bay**	**3.75**	**214**	P	**Pn**	**07 56 24.6**	**-1.9**
ETAZ	**East Tamaki Re**	**3.79**	**347**	P	Pn	07 56 31.9	+4.8
WTAZ	**Waiatarua**	**3.88**	**343**	P	**Pn**	**07 56 29.3**	**+1.1**
KUZ	**Kuaotunu**	**3.91**	**357**	P	**Pn**	**07 56 28.2**	**-0.5**
WIAZ	**Waiheke Island**	**3.92**	**350**	P	**Pn**	**07 56 28.6**	**-0.1**
MQZ	**McQueen's Vall**	**3.92**	**218**	P	**Pn**	**07 56 26.0**	**-2.7**
MQZ	**McQueen's Vall**	**3.92**	**218**	Pn	**Pn**	**07 56 26.3**	**-2.5**
MQZ				Sn	**Sn**	**07 57 09.1**	**-4.4**
AKCZ	**Akaroa Harbour**	**3.93**	**214**	P	**Pn**	**07 56 27.5**	**-1.5**
OXZ	**Oxford**	**3.96**	**226**	P	**Pn**	**07 56 26.8**	**-2.6**
OXZ	**Oxford**	**3.96**	**226**		**Pn**	**07 56 27.2**	**-2.2**
OXZ					**Sn**	**07 57 10.7**	**-4.0**
INZ	**Inchbonnie**	**3.97**	**237**	P	**Pn**	**07 56 27.8**	**-1.6**
MBAZ	**Motutapu North**	**3.97**	**347**	P	**Pn**	**07 56 30.1**	**+0.5**
RVAZ	**Riverhead Bore**	**4.03**	**344**	P	**Pn**	**07 56 31.2**	**+0.8**
RPZ	**Rata Peaks**	**4.76**	**228**	Pn	**Pn**	**07 56 39.2**	**-1.2**
	2.5nm,0.3s,baz=261,slow=1.6,SNR=15						
RPZ					Sn	**07 57 30.1**	**-4.3**
	12nm,0.3s,baz=142,slow=21,SNR=17						
RPZ	**Rata Peaks**	**4.76**	**228**	P	**Pn**	**07 56 38.9**	**-1.5**
RPZ	**Rata Peaks**	**4.76**	**228**	Pn	**Pn**	**07 56 38.6**	**-1.8**
RPZ				Sn	**Sn**	**07 57 29.9**	**-4.5**
FOZ	**Fox Glacier**	**5.40**	**236**	P	**Pn**	**07 56 46.7**	**-2.4**
FOZ	**Fox Glacier**	**5.40**	**236**	Pn	**Pn**	**07 56 46.3**	**-2.8**
FOZ				Sn	**Sn**	**07 57 46.6**	**-3.6**
LBZ	**Lake Benmore**	**5.67**	**227**	P	**Pn**	**07 56 51.3**	**-1.5**
LBZ	**Lake Benmore**	**5.67**	**227**	Pn	**Pn**	**07 56 51.1**	**-1.8**
OUZ	**Omahuta**	**5.75**	**340**	P	**Pn**	**07 56 54.5**	**+0.6**
OUZ	**Omahuta**	**5.75**	**340**	Pn	**Pn**	**07 56 54.2**	**+0.3**
ODZ	**Otahua Downs**	**5.88**	**220**	P	**Pn**	**07 56 53.4**	**-2.3**
ODZ	**Otahua Downs**	**5.88**	**220**	Pn	**Pn**	**07 56 53.6**	**-2.0**
CTZ	**Chatham Island**	**6.30**	**122**	P	**Pn**	**07 57 01.6**	**+0.1**
JCZ	**Jackson Bay**	**6.32**	**235**	P	**Pn**	**07 56 59.1**	**-2.8**
WKZ	**Wanaka**	**6.60**	**229**	Pn	**Pn**	**07 57 04.3**	**-1.4**
MLZ	**Manapua Lakes**	**7.43**	**228**	P	**Pn**	**07 57 15.1**	**-1.9**
SYZ	**Scrubby Hill**	**7.69**	**218**	P	**Pn**	**07 57 19.7**	**-0.8**
RAR	**Rarotonga**	**28.28**	**54**	P	**P**	**08 01 20.4**	**-0.9**
RAR				IAmb	IAmb	08 01 20

PCMB	Pacaembu	24.69	120	eP	P	P	08 06 29.6	-0.5
GRGR	Grenville	25.36	29	P	P	P	08 06 36.1	0.0
PTGB	Pitanga	25.45	127	eP	P	P	08 06 37.0	-0.1
SMTB	Santa Maria do	26.16	89	eP	P	P	08 06 42.7	-0.7
IPMB	Ipameri, GO	26.25	110	eP	P	P	08 06 43.5	-0.8
ITAB	Concordia	26.77	132	eP	P	P	08 06 47.4	-1.3
FRTB	Fartura	26.83	122	eP	P	P	08 06 48.2	-1.1
BB19B	Bebedouro	26.85	117	eP	P	P	08 06 48.1	-1.5
CPSB	Cacapava Do Su	27.84	139	eP	P	P	08 06 57.2	-1.1
CRPR	Cabo Rojo, PR	28.82	14	P	P	P	08 07 07.2	+0.2
CRPR				IAmb	IAmb	IAmb	08 07 15.3	
	comp=Z,23nm,1.1s							
VAO	Valinhos	28.89	120	eP	P	P	08 07 06.8	-1.0
MPR	Mayaguez	29.01	14	P	P	P	08 07 09.2	+0.5
PET01	Itanhaem-SP	29.13	122	eP	P	P	08 07 08.7	-1.1
AOPR	Arecibo Observ	29.24	14	P	P	P	08 07 11.4	+0.7
MTP	Monte Pirata	29.32	17	P	P	P	08 07 10.5	-0.9
MTP				IAmb	IAmb	IAmb	08 07 11.7	
	comp=Z,9.9nm,0.8s							
GCPR	Guaynabo City	29.37	16	P	P	P	08 07 14.0	+2.1
GCPR				IAmb	IAmb	IAmb	08 07 14.3	
	comp=Z,16nm,0.7s							
CBYP	Canovanas	29.40	16	P	P	P	08 07 11.6	-0.5
JANB	Januaria	29.44	103	eP	P	P	08 07 11.5	-1.2
CUPR	Culebra, Puert	29.59	17	P	P	P	08 07 12.4	-1.4
OGAUY	Aigu	29.89	147	eP	P	P	08 07 14.8	-1.6
ROSB	Rosrio	30.61	78	eP	P	P	08 07 21.8	-1.1
GRTK	Grand Turk	31.61	5	P	P	P	08 07 32.4	+0.9
TEIG	Tepich	33.27	335	P	P	P	08 07 47.1	+1.0
Y49A	Blount Mountai	45.32	346	P	P	P	08 09 24.6	-1.2
Y49A				IAmb	IAmb	IAmb	08 09 43.7	
	comp=Z,14nm,1.4s							
FPAL	Fort Paine	45.78	347	P	P	P	08 09 29.0	-0.4
FPAL				IAmb	IAmb	IAmb	08 09 40.4	
	comp=Z,16nm,1.2s							
NATX	Nacogdoches	46.10	335	P	P	P	08 09 32.6	+0.6
NATX				IAmb	IAmb	IAmb	08 09 33.9	
	comp=Z,14nm,0.7s							
SWET	Sewanee	46.50	347	P	P	P	08 09 34.1	-1.0
SWET				IAmb	IAmb	IAmb	08 09 46.8	
	comp=Z,20nm,1.5s							
V48A	Smith Brothers	47.21	346	P	P	P	08 09 39.7	-0.8
U49A	Red Boiling Sp	47.71	347	P	P	P	08 09 43.2	-1.2
U49A				IAmb	IAmb	IAmb	08 09 46.1	
	comp=Z,12nm,1.4s							
UALR	University of	47.92	340	P	P	P	08 09 45.1	-0.9
UALR				IAmb	IAmb	IAmb	08 09 46.2	
	comp=Z,13nm,0.8s							
MIAR	Mount Ida	48.15	338	P	P	P	08 09 48.2	+0.4
WHAR	Wooly Hollow	48.37	340	P	P	P	08 09 49.0	-0.4
WHAR				IAmb	IAmb	IAmb	08 09 49.6	
	comp=Z,8.0nm,0.9s							
R55A	Marlinton	48.52	354	P	P	P	08 09 51.8	+1.2
R55A				IAmb	IAmb	IAmb	08 09 58.7	
	comp=Z,19nm,1.2s							
TX31	Lajitas Ar. Si	48.53	325	P	P	P	08 09 51.4	+0.4
TX32	Lajitas Array	48.53	325	P	P	P	08 09 51.4	+0.4
TXAR	Lajitas Array	48.53	325	P	P	P	08 09 51.3	+0.3
	comp=Z,1.4nm,0.6s,baz=151,slow=8.9,SNR=30							
LCAR	Lake Charles	48.72	342	P	P	P	08 09 51.2	-0.9
W39A	Magazine	48.81	338	P	P	P	08 09 53.4	+0.6
W39A				IAmb	IAmb	IAmb	08 09 54.2	
	comp=Z,16nm,1.4s							
FCAR	Ozark Folk Cen	48.87	340	P	P	P	08 09 52.7	-0.5
FCAR				IAmb	IAmb	IAmb	08 09 52.8	
	comp=Z,7.3nm,0.7s							
X37A	Clayton	48.87	337	P	P	P	08 09 54.0	+0.8
X37A				IAmb	IAmb	IAmb	08 10 00.2	
	comp=Z,11nm,0.8s							
ABTX	Abilene, Hawle	49.05	331	P	P	P	08 09 54.8	+0.1
PBMO	Poplar Bluff	49.16	343	P	P	P	08 09 54.7	-0.7
PBMO				IAmb	IAmb	IAmb	08 09 54.9	
	comp=Z,6.5nm,0.7s							
Q54A	Coxs Mills	49.29	353	P	P	P	08 09 56.6	+0.2
Q54A				IAmb	IAmb	IAmb	08 09 57.1	
	comp=Z,13nm,0.8s							
U40A	Yellville	49.53	340	P	P	P	08 09 58.0	-0.3
U40A				IAmb	IAmb	IAmb	08 09 58.4	
	comp=Z,7.1nm,0.7s							
T42A	Van Buren	49.59	342	P	P	P	08 09 57.2	-1.4
HHAR	Hobbs	49.84	339	P	P	P	08 10 00.4	-0.2
U38A	Gravette	50.14	339	P	P	P	08 10 02.8	-0.1
TUL1	Leonard	50.19	337	P	P	P	08 10 03.5	+0.2
TUL1				IAmb	IAmb	IAmb	08 10 04.3	
	comp=Z,18nm,1.1s							
WMOK	Wichita Mounta	50.41	333	P	P	P	08 10 05.6	+0.6
CCM	Cathedral Cave	50.58	342	P	P	P	08 10 04.9	-1.2
Q44A	Meyer Farm, Va	50.76	345	P	P	P	08 10 06.6	-0.8
S39A	Bolivar	50.90	340	P	P	P	08 10 07.8	-0.7
S39A				IAmb	IAmb	IAmb	08 10 08.5	
	comp=Z,7.2nm,0.7s							
R40A	Maddies Statio	51.11	342	P	P	P	08 10 09.2	-0.9
R40A				IAmb	IAmb	IAmb	08 10 09.7	
	comp=Z,5.3nm,0.7s							
T35A	Sooner Cattle	51.35	337	P	P	P	08 10 12.4	+0.5
T35A				IAmb	IAmb	IAmb	08 10 13.1	
	comp=Z,5.8nm,0.8s							
P43A	Skaggs, Pawnee	51.58	345	P	P	P	08 10 13.1	-0.5
BINY	Binghamton	52.13	358	P	P	P	08 10 18.7	+1.1
HDIL	Hopedale	52.39	345	P	P	P	08 10 18.2	-1.3
WVNY	West Valley, N	52.47	356	P	P	P	08 10 20.8	+0.6
WVNY				IAmb	IAmb	IAmb	08 10 21.1	
	comp=Z,15nm,0.9s							
P38A	Dawn	52.72	341	P	P	P	08 10 21.3	-0.7
P38A				IAmb	IAmb	IAmb	08 10 21.8	
	comp=Z,6.7nm,0.8s							
J56A	Wolcott	53.24	357	P	P	P	08 10 25.9	+0.2
319A	Douglas	53.32	322	P	P	P	08 10 27.1	+0.3
319A				IAmb	IAmb	IAmb	08 10 28.5	
	comp=Z,4.6nm,0.8s							
J59A	Piesco	53.37	360	P	P	P	08 10 27.7	+1.0
J59A				IAmb	IAmb	IAmb	08 10 28.3	
	comp=Z,8.0nm,1.1s							
R32A	Long Quarter,	53.52	336	P	P	P	08 10 28.3	+0.4
R32A				IAmb	IAmb	IAmb	08 10 28.5	
	comp=Z,7.8nm,0.7s							
ANMO	Albuquerque	54.33	327	P	P	P	08 10 34.9	+0.8
DELO	Deloro Mine	54.52	357	P	P	P	08 10 35.0	0.0
DELO				IAmb	IAmb	IAmb	08 10 35.9	
	comp=Z,13nm,1.0s							
PLVO	Plevna	55.01	357	P	P	P	08 10 38.6	+0.1
PLVO				IAmb	IAmb	IAmb	08 10 39.1	
	comp=Z,6.6nm,0.8s							
PKME	Peaks-Kenny Pk	55.34	4	P	P	P	08 10 41.8	+0.9
PKME				IAmb	IAmb	IAmb	08 10 42.2	
	comp=Z,6.1nm,0.8s							
G65A	Princeton	55.42	6	P	P	P	08 10 41.9	+0.4
G65A				IAmb	IAmb	IAmb	08 10 42.6	
	comp=Z,12nm,0.9s							
L34A	Svendsen Farm,	55.77	340	P	P	P	08 10 43.6	-0.4
SDCO	Great Sand Dun	56.00	330	P	P	P	08 10 46.8	+0.7
WUAZ	Wupatki	57.48	324	P	P	P	08 10 57.1	+0.6
WUAZ				IAmb	IAmb	IAmb	08 10 58.8	
	comp=Z,4.5nm,0.9s							
SPMN	Marine on St.	57.66	344	P	P	P	08 10 56.0	-1.3
PV01	Paradox Valley	57.85	328	P	P	P	08 10 59.8	+0.7
PV01				IAmb	IAmb	IAmb	08 11 00.6	
	comp=Z,4.3nm,0.9s							
PV13	Radium Mtn., P	58.00	328	P	P	P	08 11 00.5	+0.3
PV13				IAmb	IAmb	IAmb	08 11 01.4	
	comp=Z,5.5nm,0.7s							
VLDQ	Val d'Or	58.09	357	P	P	P	08 11 00.5	+0.3
VLDQ				IAmb	IAmb	IAmb	08 11 01.5	
	comp=Z,10nm,0.9s							
SRU	San Rafael Swe	59.60	328	P	P	P	08 11 11.3	+0.3
RDMU	Red Mountain	60.19	329	P	P	P	08 11 14.6	-0.6
B35A	Bob, Littlefor	60.80	345	P	P	P	08 11 17.6	-1.3
B35A				IAmb	IAmb	IAmb	08 11 19.0	
	comp=Z,4.1nm,0.7s							
DRLN	Deer Lake	60.93	12	P	P	P	08 11 19.6	-0.1
PSUT	Pine Spring	61.01	325	P	P	P	08 11 21.6	+0.9
JLU	Jordanelle	61.17	328	P	P	P	08 11 22.2	+0.4
AGMN	Agassiz Nation	61.31	344	P	P	P	08 11 21.4	-0.8
AGMN				IAmb	IAmb	IAmb	08 11 22.6	
	comp=Z,4.7nm,0.8s							
TCUT	Toone Canyon	61.53	329	P	P	P	08 11 24.7	+0.4
DUG	Dugway, Tooele	61.60	327	P	P	P	08 11 25.3	+0.7
DUG				IAmb	IAmb	IAmb	08 11 26.3	
	comp=Z,3.7nm,0.8s							
PDAR	Pinedale Array	61.85	331	P	P	P	08 11 25.6	-0.7
	comp=Z,0.6nm,0.6s,baz=120,slow=8.4,SNR=7.9							
HWUT	Hardware Ranch	61.97	329	P	P	P	08 11 26.8	-0.3
HWUT				IAmb	IAmb	IAmb	08 11 27.9	
	comp=Z,5.0nm,0.7s							
MDND	Maddock	62.04	341	P	P	P	08 11 27.4	+0.3
ULM	Lac du Bonnet	63.10	344	P	P	P	08 11 33.5	-0.6
	comp=Z,6.8nm,0.6s,baz=146,slow=7.2,SNR=7.1							
ULM	Lac du Bonnet	63.10	344	P	P	P	08 11 33.4	-0.7
ULM				IAmb	IAmb	IAmb	08 11 34.2	
	comp=Z,8.1nm,0.7s							
IMW	Indian Meadow	63.36	331	P	P	P	08 11 35.7	-0.7
RLMT	Red Lodge	63.52	333	P	P	P	08 11 36.4	-0.9
YNE	Yellowstone No	63.77	332	P	P	P	08 11 39.2	+0.3
YHH	Holmes Hill	63.99	332	P	P	P	08 11 41.1	+0.6
YHB	Horse Butte	64.12	331	P	P	P	08 11 41.0	-0.3
YHL	Hebgen Lake	64.19	332	P	P	P	08 11 42.6	+0.8
GCMT	Greycliff	64.22	333	P	P	P	08 11 42.2	+0.4
PAHR	Pah Rah Range	65.00	323	P	P	P	08 11 48.2	+1.2
MFID	Camas Ranch	65.47	328	P	P	P	08 11 50.7	+0.8
MFID				IAmb	IAmb	IAmb	08 11 51.7	
	comp=Z,4.4nm,0.8s							
MOD	Modoc Plateau	66.93	324	P	P	P	08 11 60.0	+0.7
I07A	Izee	67.88	326	P	P	P	08 12 06.1	+1.0
FFC	Flin Flon	68.78	343	P	P	P	08 12 10.4	+0.1
DBIC	Dimbokro	70.94	79	P	P	P	08 12 24.9	+0.5
	comp=Z,3.7nm,0.8s,baz=248,slow=7.1,SNR=3.3							
DBIC	Dimbokro	70.94	79	P	P	P	08 12 25.1	+0.7
TORD	Torodi Ar. Bea	78.70	74	P	P	P	08 13 09.5	+0.5
	comp=Z,3.7nm,1.1s,baz=266,slow=5.0,SNR=9.0							
YKA	Yellowknife Ar	78.92	342	P	P	P	08 13 09.3	+0.1
	comp=Z,4.0nm,0.7s,baz=140,slow=6.3,SNR=121							
ESDC	Sonseca Array	81.55	47	P	P	P	08 13 25.6	+1.7
	comp=Z,0.9nm,0.6s,baz=259,slow=5.3,SNR=5.9							
SUMG	Summit	85.76	10	P	P	P	08 13 45.4	+0.3
SUMG				IAmb	IAmb	IAmb	08 13 48.1	
	comp=Z,10nm,0.9s							
SUMG	Summit	85.76	10	*i* P	P	P	08 13 45.0	0.0
INK	Inuvik	88.66	341	P	P	P	08 13 59.1	+0.6
INK				IAmb	IAmb	IAmb	08 14 00.1	
	comp=Z,5.4nm,0.9s							
SYO	Syowa Base	88.79	161	⇑*i* pP	pP	pP	08 14 36.8	-0.5
EGAK	Eagle	89.66	337	P	P	P	08 14 04.2	+0.9
DAG	Danmarks Havn	92.40	11	*i* P	P	P	08 14 16.1	+0.3
	comp=Z,2.2nm,0.8s							
MKAR	Makanchi Array	138.34	24	PKP	PKPdf	PKPdf	08 20 31.6	+1.2
	comp=Z,0.6nm,0.8s,baz=30,slow=3.2,SNR=4.3							
KSH	Kashi	140.44	37	PKP	PKPdf	PKPdf	08 20 32.3	-2.4
KSH				sPKP			08 21 32.8	
LZH	Lanzhou	154.12	4	*e*PKPbc	PKPdf	PKPdf	08 20 52.8	-4.5
LZH				pPKP	PKPab	PKPab	08 21 17.8	-1.7
LZH				sPKP			08 21 33.1	

KRNET ***16*** *08:10:50.6±0.1, 42°.88N×78°.67E, h26km, mb2.3*
SOME ***16*** *08:10:51.7, 42°.93N×78°.53E, h10km*
NNC ***16*** *08:10:51.1±0.7, 42°.94N×78°.59E, h0km, mb2.9, mpv2.7, Error ellipse: s-maj=5.5km s-min=2.3km az=172.0*

ISC 16 08:10:50.8±1.0, 42°.90N±0°.03×78°.59E±0°.03, h11km±7km, n29, σ0s61/54, 9C-3D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**0.21**	**319**	*e*P	**Pg**	**08 10 55.2**	**0.0**
SATY	15nm,0.1s			*e*S	**Sg**	**08 10 57.9**	**-0.4**
	218nm,0.1s						
SATY	**Saty**	**0.21**	**319**	P	**Pg**	**08 10 55.2**	**0.0**
SATY	15nm,0.1s			S	**Sg**	**08 10 57.9**	**-0.4**
	218nm,0.1s						
UZB	**Uzynbulak**	**0.40**	**52**	*e*P	**Pg**	**08 10 58.9**	**+0.2**
UZB	baz=43			*e*S	**Sg**	**08 11 04.2**	**+0.2**
	baz=43						
UZB	**Uzynbulak**	**0.40**	**52**	*e*P	**Pg**	**08 10 58.8**	**+0.1**
UZB	2.8nm,0.1s			*e*S	**Sg**	**08 11 04.2**	**+0.2**
	15nm,0.1s						
UZB	**Uzynbulak**	**0.40**	**52**	P	**Pg**	**08 10 58.9**	**+0.2**
UZB	2.8nm,0.1s			S	**Sg**	**08 11 04.2**	**+0.2**
	15nm,0.1s						
PRZ	**Przheval'sk**	**0.44**	**199**	⇑*i* P	**Pg**	**08 10 59.5**	**0.0**
PRZ	baz=6.0			⇑*i* S	**Sg**	**08 11 06.2**	**+0.8**
	baz=6.0						
KPKS	**Kokpek**	**0.57**	**7**	*e*P	**Pg**	**08 11 01.8**	**0.0**
KPKS	baz=0.0			*e*S	**Sg**	**08 11 09.0**	**-0.3**
	baz=0.0						
KPKS	**Kokpek**	**0.57**	**7**	*e*P	**Pg**	**08 11 01.8**	**0.0**
KPKS	19nm,0.1s			*e*S	**Sg**	**08 11 08.9**	**-0.3**
	17nm,0.3s						
ANVS	**Anan'yevo**	**0.69**	**260**	⇑*i* P	**Pb**	**08 11 05.2**	**+0.2**
ANVS	baz=63			⇑*i* S	**Sb**	**08 11 15.1**	**+0.5**
	baz=63						
PDGK	**Podgornoye**	**0.78**	**57**	P	**Pg**	**08 11 05.7**	**-0.2**
PDGK	0.4nm,0.1s			S	**Sg**	**08 11 15.8**	**-0.3**
	2.6nm,0.4s						
KDJ	**Kajisay**	**1.30**	**234**	⇓*i* P	**Pn**	**08 11 15.0**	**-0.1**
KDJ	baz=36			⇓*i* S	**Sn**	**08 11 32.9**	**+0.4**
	baz=36						
TARG	**Taragay, Kyrgy**	**1.31**	**207**	⇑*i* P	**Pn**	**08 11 14.6**	**-0.8**
TARG	baz=10.0			⇑*i* S	**Sb**	**08 11 31.6**	**-1.1**
	baz=10.0						
ARXS	**Arharly**	**1.42**	**337**	*e*P	**Pb**	**08 11 17.2**	**-0.2**
ARXS	5.5nm,0.1s			*e*S	**Sn**	**08 11 35.5**	**0.0**
	6.8nm,0.2s						
ARXS	**Arharly**	**1.42**	**337**	P	**Pb**	**08 11 17.2**	**-0.2**
ARXS	5.5nm,0.1s			S	**Sn**	**08 11 35.5**	**0.0**
	6.8nm,0.2s						
KTBS	**Karatobe**	**1.61**	**301**	*e*P	**Pb**	**08 11 20.4**	**-0.2**
KTBS	3.5nm,0.4s			*e*S	**Sb**	**08 11 40.9**	**-0.1**
	13nm,0.6s						
KTBS	**Karatobe**	**1.61**	**301**	P	**Pb**	**08 11 20.4**	**-0.2**
KTBS	3.5nm,0.4s			S	**Sb**	**08 11 40.9**	**-0.1**
	13nm,0.6s						
DJR	**Jarkent**	**1.67**	**31**	*e*P	**Pb**	**08 11 22.1**	**+0.5**
DJR	2.2nm,0.1s			*e*S	**Sg**	**08 11 43.9**	**-0.6**
	7.4nm,0.3s						
DJR	**Jarkent**	**1.67**	**31**	P	**Pb**	**08 11 22.1**	**+0.5**
DJR	2.2nm,0.1s			S	**Sg**	**08 11 43.9**	**-0.6**
	7.4nm,0.3s						
ULHL	**Ulahol**	**1.86**	**250**	⇑*i* P	**Pb**	**08 11 24.0**	**-0.8**
ULHL	baz=51			⇑*i* S	**Sb**	**08 11 48.0**	**-0.2**
	baz=51						
KUU	**Kurty**	**1.92**	**302**	*e*P	**Pb**	**08 11 25.7**	**-0.1**
KUU	baz=2.0			*e*S	**Sb**	**08 11 50.2**	**+0.5**
	baz=2.0						
KUU	**Kurty**	**1.92**	**302**	*e*P	**Pb**	**08 11 25.7**	**-0.1**
KUU	2.2nm,0.3s			*e*S	**Sb**	**08 11 50.2**	**+0.5**
	6.5nm,0.1s						
KUU	**Kurty**	**1.92**	**302**	P	**Pb**	**08 11 25.7**	**-0.1**
KUU	2.2nm,0.3s			S	**Sb**	**08 11 50.2**	**+0.5**
	6.5nm,0.1s						
DGS	**Degeres**	**2.09**	**280**	*e*P	**Pb**	**08 11 29.4**	**+0.5**
DGS	1.5nm,0.5s			*e*S	**Sb**	**08 11 56.4**	**+1.5**
	5.1nm,0.5s						
DGS	**Degeres**	**2.09**	**280**	Pg	**Pb**	**08 11 29.4**	**+0.5**
DGS	1.5nm,0.5s			Lg	Lg	08 11 56.4	
	5.1nm,0.5s						
TKM2	**Tokmak 2**	**2.20**	**271**	⇑Pg	**Pb**	**08 11 31.3**	**+0.6**
TKM2	1.9nm,1.1s			⇓Lg	Lg	08 12 00.3	
	1.3nm,0.4s						
KRBS	**Karabastau**	**2.27**	**291**	*e*P	**Pb**	**08 11 32.4**	**+0.6**
KRBS	0.9nm,0.3s			*e*S	**Sb**	**08 12 01.5**	**+1.5**
	1.8nm,0.2s						
KRBS	**Karabastau**	**2.27**	**291**	Pg	**Pb**	**08 11 32.4**	**+0.6**
KRBS	0.9nm,0.3s			Lg	Lg	08 12 01.5	
	1.8nm,0.2s						
KAPS	**Kapalarasan**	**2.44**	**13**	*e*P	**Pb**	**08 11 35.7**	**+0.9**
KAPS	0.5nm,0.2s			*e*S	**Sg**	**08 12 07.1**	**-2.1**
	5.9nm,0.4s						
KAPS	**Kapalarasan**	**2.44**	**13**	Pg	**Pb**	**08 11 35.7**	**+0.9**
KAPS	0.5nm,0.2s			Lg	Lg	08 12 07.1	
	5.9nm,0.4s						

NNC ***16*** *08:29:35.5±2.7, 54°.12N×87°.12E, h0km, mb2.7, mpv2.6, Error ellipse: s-maj=29.1km s-min=17.6km az=0.0, Suspected Mining explosion.*
KRAR ***16*** *08:29:37.1±0.2, 54°.35N×87°.28E, M2.1, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC 16 08:29:34.5±3.1, 54°.23N×87°.19E, h0km, mb1 3.0/2, mb1mx2.9/36, mbtmp3.0/2, ML2.6/2, 4C-2D, Error ellipse: s-maj=29.0km s-min=18.4km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.43**	**259**	*i*		08 38 30.0	
	baz=79,slow=314,SNR=2.3						
ZAA0	**Zalesovo Array**	**1.43**	**259**	⇑P	Pn	08 30 00.7	-0.9
ZAA0	0.3nm,0.2s			⇓S	Sg	08 30 19.9	-0.3
	5.1nm,0.8s						
ZALV	**Zalesovo Beam**	**1.43**	**259**	Pg	Pn	08 30 00.4	-1.2
	2.8nm,0.3s,baz=75,slow=16,SNR=13						
ZALV	1.0nm,0.3s,baz=76,slow=27,SNR=6.5			Lg	Lg	08 30 19.5	
KURBB	**Kurchatov Arra**	**6.41**	**239**	Pn	Pn	08 31 11.1	+1.0
	0.1nm,0.3s,baz=55,slow=14,SNR=5.0						
KURBB	**Kurchatov Arra**	**6.41**	**239**	⇑Pn	Pn	08 31 11.1	+1.0
	1.5nm,0.6s,baz=54,slow=16						
KURBB	4.4nm,0.8s			⇑Sn	Sn	08 32 22.7	-1.2
KURBB	8.4nm,0.8s			⇑Lg	Lg	08 32 56.8	
MK31	**Makanchi Array**	**8.07**	**205**	⇓Lg	Lg	08 33 50.7	
	4.4nm,1.1s,baz=38,slow=31,SNR=5.1						
MKAR	**Makanchi Array**	**8.07**	**205**	Pn	Pn	08 31 34.0	+1.0
	0.1nm,0.3s,baz=28,slow=14,SNR=6.4						
MKAR	0.0nm,0.3s,baz=27,slow=32,SNR=2.7			Lg	Lg	08 33 51.4	

MOS ***16*** *08:44:15.5±1.1, 46°.15N×149°.99E, h171km, mb3.9/7, Error ellipse: s-maj=15.5km s-min=8.3km az=59.2*
NEIC ***16*** *08:44:17.1±1.3, 46°.2N±0°.1×149°.9E±0.2, h169km±8km, mb4.0/13, Error ellipse: s-maj=21.4km s-min=11.5km az=140.0*
SKHL ***16*** *08:44:18.2±0.1, 45°.86N×149°.60E, h187km±7km, mb5.0/4, msh5.6/3*
IDC ***16*** *08:44:19.1±2.7, 46°.21N×149°.83E, h189km±26km, mb3.3/9, mb1 3.5/13, mb1mx3.2/47, mbtmp3.8/13, MS3.1/2, Ms1 3.1/2, ms1mx2.4/23, Error ellipse: s-maj=22.5km s-min=13.0km az=124.0*
JMA ***16*** *08:44:19.4±0.4, 45°.32N×150°.02E, h180km, M3.9*

ISC 16 08:44:18.1±0.6, 45°.84N±0°.07×149°.72E±0°.07, h200km, n88, σ2s05/91, mb3.9/19, 3C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.44**	**246**	*e*P	**Pn**	**08 44 52.1**	**+0.9**
KUR	120nm,0.2s			AMB	AMB	08 44 52.6	
KUR	420nm,0.3s			*i* S	**Sn**	**08 45 18.6**	**+1.8**
KUR	240nm,0.3s			A	A	08 45 19.0	
KUR				A	A	08 45 19.0	
KUR	**Kuril'sk**	**1.44**	**246**	PN	**Pn**	**08 44 52.4**	**+1.2**
KUR	comp=N,38nm,0.2s			*i* S	**Sn**	**08 45 18.6**	**+1.8**
KUR				pmax	pmax		
KUR	comp=E,42nm,0.2s			pmax	pmax		
KUR	comp=Z,119nm,0.2s			pmax	pmax		
KUR	comp=N,423nm,0.3s			smax	smax		
KUR	comp=E,237nm,0.2s			smax	smax		
YUK	**Yuzh-Kuril'sk**	**3.28**	**238**	*e*P	**Pn**	**08 45 12.3**	**+1.3**
YUK	comp=E,50nm,0.2s			AMB	AMB	08 45 15.0	
YUK	comp=E,130nm,0.2s			AMB	AMB	08 45 15.0	
YUK	comp=E,140nm,0.2s			AMB	AMB	08 45 15.0	
YUK				*e*S	**Sn**	**08 45 54.5**	**+2.1**
YUK	comp=E,160nm,0.3s			A	A	08 45 58.0	
YUK	comp=E,250nm,0.3s			A	A	08 45 58.0	
YUK	**Yuzh-Kuril'sk**	**3.28**	**238**	PN	**Pn**	**08 45 12.3**	**+1.3**
YUK				*e*S	**Sn**	**08 45 54.5**	**+2.1**
YUK	comp=Z,137nm,0.2s			pmax	pmax		
YUK	comp=N,49nm,0.1s			pmax	pmax		
YUK	comp=E,128nm,0.2s			pmax	pmax		
YUK	comp=N,160nm,0.2s			smax	smax		
YUK	comp=E,248nm,0.2s			smax	smax		
LAGR	**Lagunnoye**	**3.31**	**239**	*i* S	**Sn**	**08 45 55.1**	**+2.0**
GRPR	**Tuman**	**3.36**	**238**	*e*P	**Pn**	**08 45 13.8**	**+1.8**
GRPR	comp=E,60nm,0.2s			AMB	AMB	08 45 15.0	
GRPR				*i* S	**Sn**	**08 45 56.3**	**+2.2**
GRPR	comp=E,220nm,0.4s			A	A	08 45 58.0	
GRPR	comp=E,290nm,0.4s			A	A	08 45 58.0	
GRPR	**Tuman**	**3.36**	**238**	PN	**Pn**	**08 45 13.8**	**+1.8**
GRPR				*i* S	**Sn**	**08 45 56.3**	**+2.2**
GRPR	comp=N,33nm,0.2s			pmax	pmax		
GRPR	comp=Z,60nm,0.2s			pmax	pmax		
GRPR	comp=E,294nm,0.2s			smax	smax		
GRPR	comp=N,224nm,0.3s			smax	smax		
NEM2	**Nemuro 2**	**3.77**	**230**	P	**Pn**	**08 45 16.3**	**-0.7**
NEM2				*e*S	**Sn**	**08 46 00.7**	**-2.4**
NMR	**Nemuro--Hokkai**	**3.77**	**230**	*i* P	**Pn**	**08 45 15.9**	**-1.1**
NMR				*i* S	**Sn**	**08 46 00.8**	**-2.4**
NMR	**Nemuro--Hokkai**	**3.77**	**230**	⇑*i* PN	**Pn**	**08 45 15.6**	**-1.4**
JTKR	**Abashiri--Toko**	**4.53**	**248**	P	**Pn**	**08 45 28.3**	**+1.8**
JAK	**Akkeshi**	**4.58**	**233**	P	**Pn**	**08 45 27.1**	**-

JSR	**Shiriuchi**	**8.00**	**241**	P		**Pn**	**08 46 11.5**	**+0.2**
JSR				*e*S		**Sn**	**08 47 38.6**	**-2.8**
JTM	**Tenmabayashi**	**8.08**	**234**	P		**Pn**	**08 46 11.6**	**-0.7**
JTM				*e*S		**Sn**	**08 47 38.3**	**-5.0**
JANG	**Nango**	**8.11**	**231**	P		**Pn**	**08 46 11.4**	**-1.4**
JANG				*e*S		**Sn**	**08 47 38.3**	**-5.8**
JTH	**Tanohata**	**8.24**	**227**	*e*S		**Sn**	**08 47 39.3**	**-8.0**
PEA0B	**Petropavlovsk-**	**8.94**	**33**	PN		Pn	08 46 17.7	-5.7
PEA0B	**Petropavlovsk-**	**8.94**	**33**	Pn		Pn	08 46 17.7	-5.7
JRG	**Rokugo**	**9.29**	**229**	P		**Pn**	**08 46 27.9**	**-0.2**
USA0B	**Ussuriysk Arra**	**12.65**	**269**	PN		**P**	**08 47 14.0**	**-0.8**
USA0B	**Ussuriysk Arra**	**12.65**	**269**	Pn		**P**	**08 47 14.0**	**-0.8**
USRK	**Ussuriysk Ar.**	**12.65**	**269**	P		**P**	**08 47 13.4**	**-1.5**
	baz=75,slow=12,SNR=7.2							
MJAR	**Matsushiro Arr**	**12.69**	**227**	P		P	08 47 19.9	+4.5
	comp=N,0.1nm,0.3s,baz=27,slow=12,SNR=3.1							
EKMR	**Ekimchan**	**13.07**	**310**	*e*P		**Pn**	**08 47 16.4**	**+0.1**
BMKR	**Bomnak**	**15.97**	**311**	*e*P		**Pn**	**08 47 51.8**	**-0.1**
SEY	**Seymchan**	**17.20**	**4**	P		**P**	**08 48 01.6**	**-3.2**
	comp=N,0.2nm,0.3s,baz=180,slow=14,SNR=10							
SEY	**Seymchan**	**17.20**	**4**	*e*P		**P**	**08 48 02.5**	**-2.3**
KSRS	**Korea Array**	**18.27**	**250**	P		**Pn**	**08 48 22.6**	**+3.4**
	comp=N,0.4nm,0.3s,baz=59,slow=10,SNR=5.5							
YAK	**Yakutsk**	**19.91**	**332**	*e*P		**P**	**08 48 32.9**	**-1.2**
YAK	**Yakutsk**	**19.91**	**332**	*e*P		**P**	**08 48 32.9**	**-1.2**
H11N2	**WAKE ISLAND Hy**	**29.64**	**146**	T		T	09 21 30.9	
	baz=335,slow=75,SNR=49							
H11N1	**WAKE ISLAND Hy**	**29.66**	**146**	T		T	09 21 27.0	
	baz=335,slow=75,SNR=43							
H11N3	**WAKE ISLAND Hy**	**29.66**	**146**	T		T	09 21 27.9	
	baz=335,slow=75,SNR=54							
H11S1	**WAKE ISLAND Hy**	**30.68**	**147**	T		T	09 22 39.6	
	baz=336,slow=76,SNR=72							
H11S3	**WAKE ISLAND Hy**	**30.68**	**147**	T		T	09 22 46.9	
	baz=336,slow=76,SNR=52							
H11S2	**WAKE ISLAND Hy**	**30.70**	**147**	T		T	09 22 41.0	
	baz=336,slow=76,SNR=40							
CNBA	**Chernabura Isl**	**32.92**	**55**	P		**P**	**08 50 32.2**	**-1.1**
TTA	**Tatalina**	**34.66**	**41**	P		**P**	**08 50 47.5**	**-0.7**
TTA				pmax		pmax		
	comp=Z,2.0nm,1.3s							
TTA	**Tatalina**	**34.66**	**41**	P		**P**	**08 50 47.5**	**-0.7**
MLY	**Manley**	**37.08**	**37**	P		**P**	**08 51 07.8**	**-0.9**
TOLK	**Toolik Lake Re**	**37.76**	**31**	P		**P**	**08 51 13.7**	**-0.6**
TOLK				IAmb		IAmb	08 51 28.2	
	comp=Z,4.8nm,1.5s							
COLA	**College**	**38.30**	**38**	*e*P		**P**	**08 51 18.5**	**-0.3**
COLA				pmax		pmax		
	comp=Z,2.0nm,0.7s							
CCB	**Clear Creek Bu**	**38.33**	**38**	P		**P**	**08 51 18.5**	**-0.5**
CCB				IAmb		IAmb	08 51 19.3	
	comp=Z,4.5nm,1.4s							
NRIK	**Noril'sk**	**38.34**	**330**	*e*P		**P**	**08 51 20.0**	**+0.9**
NRIK				pmax		pmax		
	comp=Z,1.0nm,0.5s							
ILAR	**Eielson Array**	**38.72**	**38**	P		**P**	**08 51 21.2**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=276,slow=8.2,SNR=9.5							
FYU	**Fort Yukon**	**39.35**	**35**	P		**P**	**08 51 27.7**	**+0.2**
FYU				IAmb		IAmb	08 51 28.0	
	comp=Z,1.7nm,0.6s							
VRDI	**Verde Repeater**	**40.64**	**43**	P		**P**	**08 51 38.2**	**-0.2**
VRDI				IAmb		IAmb	08 51 39.7	
	comp=Z,6.9nm,1.3s							
INK	**Inuvik**	**43.67**	**32**	P		**P**	**08 52 02.1**	**-0.4**
	comp=Z,0.6nm,0.2s,baz=302,slow=9.4,SNR=18							
INK	**Inuvik**	**43.67**	**32**	P		**P**	**08 52 02.3**	**-0.2**
INK				pmax		pmax		
	comp=Z,5.0nm,1.4s							
INK	**Inuvik**	**43.67**	**32**	P		**P**	**08 52 02.3**	**-0.2**
INK				IAmb		IAmb	08 52 10.6	
	comp=Z,4.6nm,1.4s							
DAV	**Davao City (W)**	**43.90**	**216**	LR		LR	09 09 24.2	
	comp=Z,17nm,21.9s,baz=168,slow=34							
MKAR	**Makanchi Array**	**45.26**	**297**	P		**P**	**08 52 16.6**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=32,slow=12,SNR=7.2							
MKAR	**Makanchi Array**	**45.26**	**297**	*e*P		**P**	**08 52 16.9**	**+1.5**
MKAR	**Makanchi Array**	**45.26**	**297**	*e*P		**P**	**08 52 16.9**	**+1.5**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
C36M	**Paulatuk**	**46.77**	**29**	P		**P**	**08 52 26.3**	**-0.6**
C36M				IAmb		IAmb	08 52 38.7	
	comp=Z,9.6nm,1.4s							
RES	**Resolute Bay**	**52.43**	**18**	P		**P**	**08 53 08.6**	**-0.8**
RES				pmax		pmax		
	comp=Z,14nm,1.2s							
RES	**Resolute Bay**	**52.43**	**18**	P		**P**	**08 53 08.6**	**-0.8**
YKA	**Yellowknife Ar**	**53.04**	**35**	P		**P**	**08 53 13.5**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=304,slow=6.7,SNR=6.8							
KIRV	**Kirov**	**57.07**	**322**	LR		LR	09 19 46.7	
	comp=Z,21nm,20.1s,baz=3.9,slow=37							
FINES	**FINESS Array B**	**63.83**	**334**	P		**P**	**08 54 28.5**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=32,slow=7.6,SNR=8.6							
WRAB	**Tennant Creek**	**66.93**	**196**	P		P	08 54 53.2	+4.3
WRAB				pmax		pmax		
	comp=Z,6.0nm,1.3s							
WRAB	**Tennant Creek**	**66.93**	**196**	P		P	08 54 53.1	+4.3
WRAB				IAmb		IAmb	08 55 00.4	
	comp=Z,5.8nm,1.2s							
WRA	**Warramunga Arr**	**66.94**	**196**	P		**P**	**08 54 52.8**	**+3.8**
	comp=Z,0.4nm,0.6s,baz=8.7,slow=6.9,SNR=6.1							
NC405	**NORSAR Array S**	**68.11**	**340**	P		**P**	**08 54 56.4**	**+0.5**
NB2	**NORSAR Subarra**	**68.30**	**340**	P		**P**	**08 54 56.3**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=30,slow=6.2							
NOA	**NORSAR Array B**	**68.30**	**340**	P		P	**08 54 57.3**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=28,slow=6.4,SNR=4.9							
ASAR	**Alice Springs**	**70.65**	**195**	P		P	08 55 16.7	+4.8
	comp=Z,0.4nm,0.5s,baz=10,slow=6.2,SNR=9.3							
BUR0B	**Bucovina Ar. S**	**74.99**	**325**	P		**P**	**08 55 39.1**	**+1.8**
TXAR	**Lajitas Array**	**79.98**	**58**	P		**P**	**08 56 06.0**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=315,slow=5.7,SNR=4.4							
TXAR	**Lajitas Array**	**79.98**	**58**	P		**P**	**08 56 06.0**	**+0.7**

UPP **16** *08:56:26.4±2.2,57.75°N×23.28°E, h0km, ML2.5, Suspected explosion*
HEL **16** *08:56:30.3±0.3,57.82°N×22.74°E, h0km, ML1.8, Explosion*
EST **16** *08:56:30.9±0.1,57.88°N×22.75°E, h0km, ML1.8(HEL), Explosion*
LVSN **16** *08:56:30.8±1.4,58.00°N×22.47°E, h0km±186km, ML2.8*
NAO **16** *08:56:30.2±2.0,57.90°N×22.67°E, ML2.1*
BER **16** *08:56:32.4±3.8,57.86°N×22.59°E, h0km, ML2.1(NAO), Suspected explosion*

ISC 16 08:56:30.5±0.8, 57.95N±0.03×22.59E±0.02, h0km, n41, σ1§19/69, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.36**	**207**	*e*P	**Pg**	**08 56 37.0**	**-0.3**
SLIT				*e*S	**Sg**	**08 56 42.4**	**+0.5**
SLIT				IAML		08 56 46.1	
	comp=Z,505nm,0.1s						
SLIT	**Slitere, Latvi**	**0.36**	**207**	*e*P	**Pg**	**08 56 37.3**	**-0.1**
SLIT				*e*S	**Sg**	**08 56 43.1**	**+1.2**
SLIT				AML	AML	08 56 58.4	
	comp=N,868nm,0.5s						
SLIT				AML	AML	08 57 05.3	
	comp=E,904nm,0.7s						
SLIT				AML	AML	08 57 09.9	
	comp=Z,1μm,0.6s						
SLIT	**Slitere, Latvi**	**0.36**	**207**	*i* P	**Pg**	**08 56 37.1**	**-0.3**
SLIT				*e*S	**Sg**	**08 56 42.6**	**+0.7**
MTSE	**Matsula**	**1.00**	**39**	*e*P	**Pg**	**08 56 49.0**	**-0.8**
MTSE				*e*S	**Sg**	**08 57 01.2**	**-1.6**
MTSE	**Matsula**	**1.00**	**39**	*e*P	**Pg**	**08 56 49.0**	**-0.8**
PBUR	**Paburge**	**1.96**	**191**	*e*P	**Pn**	**08 57 04.4**	**-0.6**
GOTU	**Gotland**	**2.17**	**265**	P	**Pn**	**08 57 08.1**	**+0.2**
GOTU				S	**Sg**	**08 57 39.5**	**-0.7**
VSU	**Vasula**	**2.25**	**75**	Pn	**Pn**	**08 57 09.3**	**+0.3**
VSU				Sn	**Sn**	**08 57 36.9**	**-0.6**
VSU	**Vasula**	**2.25**	**75**	*e*P	**Pn**	**08 57 08.5**	**-0.5**
VSU				IAML		08 57 41.2	
	comp=Z,93nm,0.2s						
VSU	**Vasula**	**2.25**	**75**	*e*S	**Sn**	**08 57 37.5**	**+0.1**
VSU				AML	AML	08 57 59.4	
	comp=Z,66nm,0.3s						
VSU				AML	AML	08 58 00.8	
	comp=N,81nm,0.2s						
VSU				AML	AML	08 58 05.3	
	comp=E,124nm,0.3s						
VSU	**Vasula**	**2.25**	**75**	*e*P	**Pn**	**08 57 08.2**	**-0.8**
VSU				*e*SB	**Sn**	**08 57 36.9**	**-0.6**
VSU	**Vasula**	**2.25**	**75**	Pn	**Pn**	**08 57 09.3**	**+0.3**
VSU				Sn	**Sn**	**08 57 36.9**	**-0.6**
ARBE	**Arbavere**	**2.32**	**48**	*e*PB	**Pn**	**08 57 10.6**	**+0.7**
ARBE				*e*S	**Sn**	**08 57 38.5**	**-0.5**
ARBE				*e*SG	**Sb**	**08 57 41.4**	**-0.9**
MEF	**Metsahovi**	**2.46**	**21**	*e*PB	**Pb**	**08 57 13.9**	**-1.7**
MEF				*e*SB	**Sb**	**08 57 46.5**	**+0.1**
MEF				MSG		08 57 48.2	
	comp=Z,5.3nm,0.1s						
PABE	**Paberze**	**2.56**	**162**	*e*P	**Pn**	**08 57 12.6**	**-0.6**
AAL	**Aland**	**2.61**	**330**	P	**Pn**	**08 57 15.3**	**+1.4**
AAL				S	**Sg**	**08 57 54.2**	**-0.1**
AAL	**Aland**	**2.61**	**330**	*e*P	**Pn**	**08 57 15.5**	**+1.6**
AAL				*e*PB	**Pb**	**08 57 17.1**	**-1.0**
AAL				*e*SG	**Sg**	**08 57 54.6**	**+0.3**
NYNU	**Nynaeshamn**	**2.63**	**296**	P	**Pn**	**08 57 15.0**	**+0.8**
NRTU	**Norrtaelje**	**2.69**	**312**	P	**Pn**	**08 57 15.9**	**+0.9**
NRTU				S	**Sg**	**08 57 56.7**	**-0.3**
PVF	**Pernaja**	**3.10**	**31**	*e*P	**Pn**	**08 57 22.1**	**+1.5**
PVF				*e*SB	**Sb**	**08 58 04.1**	**-0.7**
PVF				MSG		08 58 11.8	
	comp=Z,2.8nm,0.2s						
RAF	**Rauma**	**3.12**	**353**	*e*P	**Pn**	**08 57 21.9**	**+1.0**
RAF				MSG		08 58 11.4	
	comp=Z,1.6nm,0.1s						
VIKU	**Vikbolandet**	**3.17**	**283**	P	**Pn**	**08 57 23.6**	**+2.1**
GRAU	**Graesoe**	**3.18**	**321**	P	**Pn**	**08 57 22.0**	**+0.3**
VSTU	**Vaestervik**	**3.25**	**268**	P	**Pn**	**08 57 24.4**	**+1.7**
FLYU	**Flymyra**	**3.27**	**314**	P	**Pn**	**08 57 24.4**	**+1.4**
IIGN	**Ignalina**	**3.29**	**141**	*e*P	**Pn**	**08 57 22.1**	**-1.1**
BACU	**Backbrunna**	**3.43**	**306**	P	**Pn**	**08 57 26.8**	**+1.6**
ESKU	**Eskilstuna**	**3.49**	**294**	P	**Pn**	**08 57 26.9**	**+0.9**
OSKU	**Oskarshamn**	**3.58**	**261**	P	**Pn**	**08 57 28.4**	**+1.2**
VJF	**Virojoki**	**3.64**	**42**	*e*PG	**Pb**	**08 57 37.1**	**+1.5**
FIA0	**FINESS Array S**	**3.93**	**25**	Pn	**Pn**	**08 57 32.5**	**+0.5**
	baz=195,slow=12						
FIA0				Sn	**Sn**	**08 58 19.9**	**+1.1**
	baz=193,slow=22						
FIA0				Lg	Lg	08 58 35.8	
	baz=210,slow=28						
FIA0	**FINESS Array S**	**3.93**	**25**	*e*P	**Pn**	**08 57 33.0**	**+1.0**
FIA0				*e*PG	**Pb**	**08 57 42.5**	**+1.9**
FIA0				*e*SG	**Sb**	**08 58 31.6**	**+3.0**
FIA0				MSG		08 58 33.3	
	comp=Z,0.9nm,0.1s						
FIA0	**FINESS Array S**	**3.93**	**25**	Pn	**Pn**	**08 57 32.5**	**+0.5**
	baz=195,slow=12						
FIA0				Sn	**Sn**	**08 58 19.9**	**+1.1**
	baz=193,slow=22						
FIA0				Sg	**Sg**	**08 58 35.8**	**-0.8**
	baz=210,slow=28						
FIA1	**FINESS Array S**	**3.93**	**25**	*e*P	**Pn**	**08 57 33.0**	**+0.9**
FIA1				*e*PG	**Pb**	**08 57 42.7**	**+2.1**
KEF	**Keuruu**	**4.39**	**14**	*e*PG	**Pb**	**08 57 50.3**	**+1.9**
KEF				MSG		08 58 51.6	
	comp=Z,1.4nm,0.1s						
HFS	**Hagfors**	**5.09**	**299**	Pn	**Pn**	**08 57 48.3**	**+0.3**
	baz=123,slow=16						
HFS				Sn	**Sn**	**08 58 46.7**	**-0.7**
	baz=107,slow=28						
HFS				Lg	Lg	08 59 10.3	
	baz=113,slow=28						
HFS	**Hagfors**	**5.09**	**299**	Pn	**Pn**	**08 57 48.3**	**+0.3**
	baz=123,slow=16						
HFS				Sn	**Sn**	**08 58 46.7**	**-0.7**
	baz=107,slow=28						
HFS				Sg	**Sg**	**08 59 10.3**	**-3.6**
	baz=113,slow=28						
NRA0	**NORESS Array S**	**6.31**	**301**	Pn	**Pn**	**08 58 05.0**	**+0.3**
	baz=99,slow=11						
NRA0				Sn	**Sn**	**08 59 16.9**	**-0.5**
	baz=101,slow=37						
NRA0				Lg	Lg	08 59 50.1	
	baz=121,slow=28						
NRA0	**NORESS Array S**	**6.31**	**301**	Pn	**Pn**	**08 58 05.0**	**+0.3**
	baz=99,slow=11						
NRA0				Sn	**Sn**	**08 59 16.9**	**-0.5**
	baz=101,slow=37						
NRA0				Sg	**Sg**	**08 59 50.1**	**-2.7**
	baz=121,slow=28						
NB2	**NORSAR Subarra**	**6.57**	**303**	Pn	**Pn**	**08 58 07.5**	**-0.8**
	baz=114,slow=14						
NB2	**NORSAR Subarra**	**6.57**	**303**	Pn	**Pn**	**08 58 07.5**	**-0.8**
	baz=114,slow=14						

IDC **16** *09:00:54.4±1.1,26.21°N×140.62E, h335km±12km, mb3.3/13, mb1 3.4/17, mb1mx3.2/50, mbtmp4.0/17, Error ellipse: s-maj=21.3km s-min=9.5km az=87.0*
JMA **16** *09:00:56.8±0.2,26.69°N×141.36E, h343km±2km, M4.5*

ISC 16 09:00:56.0±0.9, 26.54N±0.09×141.0E±0.2, h350km, n26, σ2§55/29, mb3.5/13, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**1.03**	**84**	P	**Pn**	**09 01 40.9**	**-1.0**
JHH2				S	**S**	**09 02 15.8**	**-2.8**
CBIJ	**Chichi jima**	**1.18**	**61**	P	**Pn**	**09 01 41.5**	**-1.0**
CBIJ				S	**S**	**09 02 15.9**	**-3.9**
JCJ	**Chichijima**	**1.18**	**61**	P	**Pn**	**09 01 41.5**	**-1.0**
	118nm,0.3s,baz=219,slow=2.8,SNR=28						
JCJ				S	**S**	**09 02 16.2**	**-3.5**
	101nm,0.3s,baz=117,slow=23,SNR=21						
JHJ	**Hachijo jima 2**	**6.65**	**351**	P	**Pn**	**09 02 36.0**	**+1.7**
	15nm,0.3s,baz=244,slow=22,SNR=2.0						
JHJ				S	**S**	**09 03 51.4**	**-2.6**
	15nm,0.3s,baz=89,slow=23,SNR=7.0						
BSO1	**Boso 1**	**8.09**	**360**	P	**Pn**	**09 02 52.1**	**+1.5**
BSO1				*e*S	**S**	**09 04 22.1**	**-2.1**
BSO3	**Boso 3**	**8.25**	**357**	S	**S**	**09 04 24.3**	**-3.8**
JNY	**Yasuok**	**9.21**	**344**	P	**P**	**09 03 05.8**	**-0.8**
JHU	**Hanno**	**9.41**	**351**	P	**Pn**	**09 03 07.1**	**+0.3**
JHU				S	**S**	**09 04 47.8**	**-6.1**
JYT	**Yasato**	**9.69**	**356**	S	**S**	**09 04 55.4**	**-4.6**
JAG	**Ashikaga**	**9.95**	**353**	P	**Pn**	**09 03 12.9**	**-0.4**
MJAR	**Matsushiro Arr**	**10.26**	**347**	P	**Pn**	**09 03 17.0**	**0.0**
	0.2nm,0.3s,baz=43,slow=31,SNR=8.0						
KSRS	**Korea Array**	**15.54**	**318**	P	**P**	**09 04 16.1**	**-0.3**
	baz=126,slow=10,SNR=4.9						
USRK	**Ussuriysk Ar.**	**19.08**	**340**	P	**P**	**09 04 55.6**	**+1.4**
	baz=143,slow=9.4,SNR=11						
KLR	**Kul'dur**	**23.77**	**345**	P	**P**	**09 05 39.8**	**+1.7**
	1.0nm,0.4s,baz=167,slow=10,SNR=8.1						
PETK	**Petropavlovsk-**	**29.32**	**21**	P	P	09 06 31.6	+4.3
	1.3nm,0.6s,baz=217,slow=8.0,SNR=4.2						
SEY	**Seymchan**	**37.16**	**9**	P	**P**	**09 07 37.8**	**+3.4**
	1.7nm,0.5s,baz=180,slow=10,SNR=7.5						
WRA	**Warramunga Arr**	**46.65**	**189**	P	P	09 08 47.6	-3.2
	6.0nm,0.5s,baz=11,slow=8.7,SNR=100						
ZALV	**Zalesovo Beam**	**49.24**	**320**	P	**P**	**09 09 09.2**	**-0.8**
	1.1nm,0.3s,baz=98,slow=8.1,SNR=4.5						
MKAR	**Makanchi Array**	**50.04**	**310**	P	**P**	**09 09 15.4**	**-0.8**
	0.5nm,0.5s,baz=88,slow=10,SNR=5.6						
ASAR	**Alice Springs**	**50.38**	**188**	P	P	09 09 15.3	-3.6
	0.2nm,0.3s,baz=1.9,slow=4.5,SNR=12						
STKA	**Stephens Creek**	**58.09**	**179**	P	**P**	**09 10 11.7**	**-2.1**
	2.7nm,0.5s,baz=348,slow=8.0,SNR=12						
ILAR	**Eielson Array**	**58.70**	**29**	P	**P**	**09 10 19.8**	**+2.2**
	0.7nm,0.8s,baz=243,slow=6.0,SNR=8.5						
INK	**Inuvik**	**63.96**	**24**	P	**P**	**09 10 55.1**	**+2.6**
	0.2nm,0.4s,baz=289,slow=3.6,SNR=3.9						
YKA	**Yellowknife Ar**	**73.12**	**28**	P	**P**	**09 11 51.0**	**+2.3**
	0.3nm,0.7s,baz=292,slow=5.6,SNR=5.4						
ARCES	**ARCESS Array B**	**73.73**	**341**	P	**P**	**09 11 53.1**	**+1.0**
	1.3nm,0.7s,baz=72,slow=7.8,SNR=5.9						
FINES	**FINESS Array B**	**77.99**	**334**	P	**P**	**09 12 16.0**	**-0.1**
	0.9nm,0.4s,baz=46,slow=5.5,SNR=8.9						

JMA **16** *09:09:35.3±0.3,45.08°N×141.71E, h294km±3km, M2.9*
IDC **16** *09:09:36.5±1.1,45.19°N×141.75E, h280km±12km, mb3.1/10, mb1 3.3/12, mb1mx3.0/47, mbtmp3.7/12, Error ellipse: s-maj=20.7km s-min=16.5km az=150.0*

ISC 16 09:09:36.4±0.7, 44.99N±0.07×141.78E±0.07, h287km±6km, n30, σ1§11/38, mb3.1/10, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWK2	**Keihoku**	**0.34**	**14**	P	**Pn**	**09 10 12.8**	**-0.3**
JWK2				*e*S	**S**	**09 10 41.4**	**-0.8**
JSS	**Shosan**	**0.59**	**175**	P	**Pn**	**09 10 14.3**	**+0.4**
JSS				*e*S	**S**	**09 10 44.4**	**+0.8**
JYG	**Yagishiri**	**0.62**	**204**	P	**Pn**	**09 10 13.8**	**-0.1**
ASAJ	**Asahikawa**	**1.05**	**146**	P	**Pn**	**09 10 16.2**	**+0.5**
	15nm,0.3s,baz=284,slow=6.3,SNR=94						
ASAJ	**Asahikawa**	**1.05**	**146**	P	Pn	**09 10 16.1**	**+0.4**
JKK2	**Kamakawa 2**	**1.31**	**148**	P	**Pn**	**09 10 17.9**	**+0.7**
JAB	**Ashibetsu**	**1.52**	**168**	P	**Pn**	**09 10 19.1**	**+0.6**
JFR	**Furan**	**1.92**	**162**	P	**Pn**	**09 10 21.6**	**+0.1**
JEW	**Eniwo**	**2.16**	**186**	P	**Pn**	**09 10 24.2**	**+0.7**
JEW				*e*S	**S**	**09 11 01.6**	**+0.7**
JAR	**Ashorobuto**	**2.22**	**139**	P	**Pn**	**09 10 25.0**	**+1.1**
JAR				*e*S	**S**	**09 11 02.9**	**+1.2**
JCH	**Churui**	**2.64**	**154**	P	**Pn**	**09 10 27.0**	**-0.8**
JCH				*e*S	**S**	**09 11 05.7**	**-2.9**
JNBK	**Urakawa-nobuka**	**2.80**	**165**	P	**Pn**	**09 10 29.5**	**+0.1**
JNBK				*e*S	**S**	**09 11 11.8**	**+0.3**
JAK	**Akkeshi**	**2.90**	**132**	*e*S	**S**	**09 11 12.2**	**-1.0**
JKB	**Kayabe**	**3.15**	**190**	P	**Pn**	**09 10 32.1**	**-0.8**
JKB				*e*S	**S**	**09 11 16.9**	**-1.0**
NEM2	**Nemuro 2**	**3.28**	**118**	P	**Pn**	**09 10 33.6**	**-0.6**
NEM2				*e*S	**S**	**09 11 18.5**	**-1.7**
JOSM	**Okushiri--Mats**	**3.36**	**211**	P	**Pn**	**09 10 34.4**	**-0.6**
KLR	**Kul'dur**	**8.05**	**305**	P	**Pn**	**09 11 28.4**	**-2.0**
	0.2nm,0.3s,baz=120,slow=12,SNR=9.0						
MJAR	**Matsushiro Arr**	**8.86**	**199**	P	**Pn**	**09 11 39.9**	**-0.8**
	0.1nm,0.3s,baz=5.4,slow=13,SNR=6.8						
PETK	**Petropavlovsk-**	**13.20**	**46**	P	**P**	**09 12 35.5**	**+1.3**
	0.1nm,0.3s,baz=219,slow=12,SNR=2.8						
SEY	**Seymchan**	**18.98**	**15**	P	**P**	**09 13 35.6**	**-1.3**
	1.1nm,0.3s,baz=196,slow=9.1,SNR=32						
SONM	**Songino Array**	**24.43**	**289**	P	**P**	**09 14 28.4**	**-1.0**
	0.4nm,0.5s,baz=77,slow=7.1,SNR=2.5						
MKAR	**Makanchi Array**	**40.58**	**295**	P	**P**	**09 16 49.9**	**+1.5**
	0.2nm,0.5s,baz=86,slow=11,SNR=2.8						
KDAK	**Kodiak Island**	**41.25**	**48**	P	**P**	**09 16 53.9**	**+0.3**
	2.4nm,0.6s,baz=349,slow=3.2,SNR=5.0						
ILAR	**Eielson Array**	**42.78**	**37**	P	**P**	**09 17 04.3**	**-1.5**
	0.7nm,0.6s,baz=278,slow=8.1,SNR=12						
INK	**Inuvik**	**47.27**	**30**	P	**P**	**09 17 40.0**	**-0.8**
	0.1nm,0.3s,baz=282,slow=5.3,SNR=17						
RES	**Resolute Bay**	**54.85**	**16**	P	**P**	**09 18 35.6**	**-1.2**
	4.3nm,1.0s,baz=293,slow=7.7,SNR=4.0						
YKA	**Yellowknife Ar**	**56.87**	**33**	P	**P**	**09 18 50.9**	**-0.3**
	0.5nm,0.6s,baz=308,slow=6.4,SNR=23						
ASAR	**Alice Springs**	**68.70**	**188**	P	**P**	**09 20 10.7**	**+1.4**
	0.2nm,0.5s,baz=5.1,slow=6.0,SNR=4.1						
PDAR	**Pinedale Array**	**71.97**	**47**	P	**P**	**09 20 29.6**	**+0.5**
	0.5nm,0.6s,baz=327,slow=1.3,SNR=6.8						
TXAR	**Lajitas Array**	**85.07**	**53**	P	**P**	**09 21 41.9**	**+1.5**
	0.2nm,0.8s,baz=268,slow=5.3,SNR=2.2						

NEIC **16** *09:30:31.1±2.2,59.85°N±0.03×141.39°W±0.04, h11km±6km, Error ellipse: s-maj=5.1km s-min=2.4km az=197.0*

AEIC 16 09:30:31±2.3, 59.86N±0.03×141.36W±0.06, h16km±6km, ML3.0, Error ellipse: s-maj=5.8km s-min=3.7km az=220.0, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHX	**Chaix Hills**	**0.24**	**30**		Pg	09 30 35.6	-0.9
YAH	**Yahtse**	**0.55**	**340**		Pg	09 30 42.0	+0.1
YAH				Sg	Sb	09 30 51.5	+1.5
YKU2	**Yakutat**	**0.92**	**111**		Pb	09 30 47.9	-0.7
PNL	**Peninsula**	**1.01**	**100**		Pb	09 30 50.1	0.0
PNL					Sn	09 31 05.4	+1.0
CTGM	**Chitina Glacie**	**1.11**	**1**		Pb	09 30 51.1	-0.9
CTGM					Sb	09 31 05.6	-0.7
KIAG	**Kiagna River**	**1.18**	**336**		Pn	09 30 52.1	-0.9
BARN	**Barnard Glacie**	**1.22**	**353**		Pn	09 30 52.6	-0.9
BALM	**Baldy**	**1.28**	**338**		Pn	09 30 53.7	-0.7
BALM					Sb	09 31 08.9	-2.1
PTPK	**Patty Peak**	**1.44**	**338**		Pn	09 30 56.2	-0.4
VRDI	**Verde Repeater**	**1.72**	**324**		Pn	09 31 00.5	0.0
MCARA	**McCarthy VSAT**	**1.74**	**333**		Pn	09 31 00.8	+0.3
RAGM	**Ragged Mountai**	**1.74**	**289**		Pn	09 31 01.5	+0.9

BUSP	**Coron**	**1.87**	**192**	*eP*	**Pn**	**09 43 01.8**	**+0.1**
BUSP				*eS*	**Sn**	**09 43 30.0**	**+1.0**
SCZP	**Santa Cruz**	**2.03**	**341**	*eP*	**Pn**	**09 43 03.4**	**0.0**
SCZP				*eS*	**Sn**	**09 43 31.0**	**-1.1**
SMPP	**San Manuel, Pa**	**2.29**	**2**	*eP*	**Pn**	**09 43 06.3**	**-0.1**
SMPP				*eS*	**Sn**	**09 43 36.4**	**-1.1**
WRA	**Warramunga Arr**	**36.20**	**158**	P	**P**	**09 49 10.9**	**-1.9**
	0.2nm,0.3s,baz=341,slow=9.0,SNR=17						
ASAR	**Alice Springs**	**39.49**	**161**	P	**P**	**09 49 39.7**	**-0.7**
	0.6nm,0.4s,baz=335,slow=6.7,SNR=18						
KURBB	**Kurchatov Arra**	**50.01**	**326**	P	**P**	**09 51 04.7**	**+1.5**
	0.9nm,0.5s,baz=133,slow=7.7,SNR=6.2						
ARCES	**ARCESS Array B**	**78.91**	**339**	P	**P**	**09 54 10.8**	**+0.4**
	0.9nm,0.7s,baz=68,slow=7.1,SNR=4.1						
YKA	**Yellowknife Ar**	**92.68**	**22**	P	**P**	**09 55 18.6**	**+0.1**
	0.1nm,0.5s,baz=310,slow=4.1,SNR=6.8						
TXAR	**Lajitas Array**	**119.44**	**44**	PKP	**PKiKP**	**10 00 56.2**	**-0.1**
	0.1nm,0.5s,baz=309,slow=1.9,SNR=1.5						

ASRS ***16*** *09:48:22.6,54.°14N×87.°17E,M1.7,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC ***16*** *09:48:25.7±2.6,54.°07N×87.°13E,h0km,mb3.0,mpv2.8, Error ellipse: s-maj=24.1km s-min=13.2km az=19.0, Suspected Mining explosion.*

IDC 16 09:48:26.0±2.9,54.°19N×87.°22E,h0km,mb 3.1/2, mb1mx3.0/43,mbtmp3.1/2,ML2.9/2,7C-1D,Error ellipse: s-maj=26.8km s-min=17.8km az=50.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.44**	**261**	*i*		09 56 40.0	
	baz=78,slow=315,SNR=1.9						
ZAA0	**Zalesovo Array**	**1.44**	**261**	⇑P	Pn	09 48 50.7	-2.6
	0.4nm,0.2s						
ZAA0				⇑S	Sg	09 49 10.2	-1.9
	3.9nm,0.7s						
ZALV	**Zalesovo Beam**	**1.44**	**261**	Pg	Pn	09 48 50.9	-2.4
	3.3nm,0.3s,baz=82,slow=17,SNR=20						
ZALV				Lg	Lg	09 49 12.6	
	2.8nm,0.3s,baz=84,slow=30,SNR=8.1						
KURBB	**Kurchatov Arra**	**6.41**	**240**	Pn	Pn	09 50 02.2	+0.7
	0.2nm,0.3s,baz=55,slow=14,SNR=13						
KURBB				Lg	Lg	09 51 47.8	
	0.0nm,0.3s,baz=60,slow=33,SNR=4.9						
KURBB	**Kurchatov Arra**	**6.41**	**240**	⇑Pn	Pn	09 50 01.8	+0.3
	3.9nm,0.9s						
KURBB				⇓Sn	Sn	09 51 12.5	-2.8
	6.6nm,0.8s						
KURBB				⇑Lg	Lg	09 51 46.4	
	17nm,0.9s						
MK31	**Makanchi Array**	**8.04**	**205**	⇑Pn	Pn	09 50 24.4	+0.4
	0.2nm,0.3s,baz=28,slow=13,SNR=16						
MK31				⇑Sn	Sn	09 51 51.9	-3.7
	0.5nm,0.5s,baz=171,slow=15,SNR=2.8						
MK31				⇑Lg	Lg	09 52 36.7	
	9.4nm,1.1s,baz=23,slow=32,SNR=5.5						
MKAR	**Makanchi Array**	**8.04**	**205**	Pn	Pn	09 50 25.4	+1.4
	0.2nm,0.3s,baz=26,slow=14,SNR=12						

NEIC ***16*** *09:52:39.5±1.1,18.°9S±0.°2×173.°73W±0.°05,h10km±2km, mb4.5/7,Error ellipse: s-maj=30.1km s-min=7.5km az=3.0*

IDC ***16*** *09:52:42.1±8.4,18.°09S×174.°36W,h0km,mb3.5/3, mb1 3.9/3,mb1mx3.5/38,mbtmp3.5/3,Error ellipse: s-maj=366.7km s-min=40.6km az=142.0*

ISC 16 09:52:41.7±0.9,18.°9S±0.°2×173.°73W±0.°08,h28km,n13, σ1§26/14,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**3.60**	**94**	Pn	**Pn**	**09 53 34.2**	**-1.5**
MSVF	**Nonsavu**	**7.89**	**277**	Pn	**Pn**	**09 54 33.1**	**-1.6**
MSVF				Sn	**Sn**	**09 56 03.8**	**+0.6**
DZM	**Mont Dzumac**	**18.85**	**257**	P	**P**	**09 56 58.1**	**-1.7**
DZM				IAmb	IAmb	09 57 13.0	
	comp=Z,33nm,0.7s						
BSWZ	**Blackbirch Sta**	**25.12**	**202**	P	**P**	**09 58 04.5**	**+0.3**
WB0	**Warramunga Arr**	**48.81**	**260**	P	**P**	**10 01 24.4**	**-0.4**
ASAR	**Alice Springs**	**48.82**	**255**	P	**P**	**10 01 27.0**	**+2.0**
	comp=Z,0.7nm,0.8s,baz=92,slow=9.1,SNR=4.9						
WB2	**Warramunga Arr**	**48.82**	**260**	P	**P**	**10 01 25.2**	**+0.3**
WB2				IAmb	IAmb	10 01 30.6	
	comp=Z,8.2nm,1.3s						
WRAB	**Tennant Creek**	**48.83**	**260**	P	**P**	**10 01 25.6**	**+0.7**
WRAB				IAmb	IAmb	10 01 41.1	
	comp=Z,3.3nm,1.1s						
WRA	**Warramunga Arr**	**48.84**	**260**	P	**P**	**10 01 25.9**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=96,slow=8.6,SNR=5.9						
FITZ	**Fitzroy Crossi**	**57.25**	**260**	P	**P**	**10 02 27.3**	**+0.2**
FITZ				IAmb	IAmb	10 02 37.3	
	comp=Z,10nm,1.2s						
VNDA	**Vanda**	**59.93**	**186**	P	**P**	**10 02 45.4**	**+0.6**
VNDA				IAmb	IAmb	10 03 01.5	
	comp=Z,2.3nm,1.3s						
QSPA	**South Pole Qui**	**71.21**	**180**	P	**P**	**10 03 58.7**	**+0.7**
ILAR	**Eielson Array**	**85.87**	**11**	P	**P**	**10 05 20.1**	**+1.7**
	comp=Z,0.4nm,0.9s,baz=205,slow=4.0,SNR=4.4						

NEIC ***16*** *10:02:03.3±2.2,51.°28N±0.°07×174.°76W±0.°06,h17km±3km, Error ellipse: s-maj=10.8km s-min=4.7km az=165.0*

AEIC ***16*** *10:02:04.9±2.0,51.°25N±0.°07×174.°68W±0.°06,h29km±3km, ML4.4,mb4.7/220(NEIC),Error ellipse: s-maj=10.5km s-min=4.8km az=165.0*

IDC ***16*** *10:02:05.7±3.1,51.°48N×174.°71W,h26km±20km,mb4.3/32, mb1 4.4/34,mb1mx4.4/52,mbtmp4.4/34,ML4.1/2,MS3.8/20, Ms1 3.8/20,ms1mx3.7/39,Error ellipse: s-maj=15.7km s-min=10.6km az=172.0*

MOS ***16*** *10:02:05.1±1.0,51.°47N×174.°64W,h35km,mb4.9/57, Error ellipse: s-maj=8.0km s-min=5.5km az=100.2*

BJI ***16*** *10:02:07.3±0.0,51.°84N×175.°25W,h37km,mb5.0/41, mb5.1/54,Ms4.5/24,Ms7 4.2/26*

BGR ***16*** *10:02:10.8±0.0,52.°50N×176.°25W,h33km,mb4.9*

ISC 16 10:02:05.3±0.9,51.°32N±0.°05×174.°76W±0.°03,h27km±5km, n716,σ1§15/697,mb4.8/197,MS4.1/26,20C-31D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	**0.95**	**21**		**Pb**	**10 02 22.3**	**-0.8**
ATKA	**Atka Island**	**0.95**	**21**		**Sn**	**10 02 36.7**	**+1.2**
KOFP	**Korovin Flat P**	**1.04**	**23**		**Pn**	**10 02 24.0**	**-0.1**
KOKL	**Mount Kliuchef**	**1.06**	**19**		**Pb**	**10 02 24.5**	**-0.5**
GSMY	**Great Sitkin M**	**1.09**	**312**		**Pb**	**10 02 25.1**	**-0.3**
GSCK	**Great Sitkin C**	**1.12**	**309**		**Pb**	**10 02 25.9**	**-0.1**
GSCK					**Sn**	**10 02 41.8**	**+2.2**
KOSE	**Korovin Southe**	**1.12**	**23**		**Pb**	**10 02 25.4**	**-0.6**
KOSE					**Sn**	**10 02 41.5**	**+1.9**
GSTR	**Great Sitkin T**	**1.12**	**314**		**Pb**	**10 02 25.8**	**-0.2**
GSTD	**Great Sitkin T**	**1.14**	**311**		**Pb**	**10 02 25.9**	**-0.4**
ETKA	**Kagalaska Isla**	**1.16**	**299**		**Pb**	**10 02 26.4**	**-0.3**
GSSP	**Great Sitkin S**	**1.18**	**312**		**Pb**	**10 02 26.8**	**-0.1**
ADAG	**Mount Adagdak**	**1.33**	**301**		**Pb**	**10 02 29.2**	**-0.2**
ADK	**Adak**	**1.33**	**296**	P	**Pb**	**10 02 28.6**	**-0.9**
ADK						10 02 45.2	
ADK	**Adak**	**1.33**	**296**		**Pb**	**10 02 28.6**	**-0.9**
ADK				Sn	**Sn**	**10 02 45.2**	**+0.5**
KIRH	**Kanaga Island**	**1.57**	**293**		**Pb**	**10 02 32.5**	**-1.0**
KIKV	**Kanaga Island**	**1.61**	**291**		**Pb**	**10 02 32.8**	**-1.5**
KIMD	**Kanaga Island**	**1.61**	**287**		**Pn**	**10 02 32.5**	**+0.7**
KICM	**Kanaga Island**	**1.64**	**293**		**Pn**	**10 02 33.1**	**+0.9**
TAPA	**Tanaga Point A**	**1.97**	**286**		**Pn**	**10 02 38.1**	**+1.3**
TAFP	**Tanaga Falls P**	**2.09**	**287**		**Pn**	**10 02 40.1**	**+1.6**
TAFP					**Sb**	**10 03 07.1**	**-1.0**
TASE	**Tanaga Southea**	**2.11**	**285**		**Pn**	**10 02 40.4**	**+1.6**
NIKH	**Nikolski High**	**4.00**	**63**		**Pn**	**10 03 04.0**	**-0.6**
NIKH	**Nikolski High**	**4.00**	**63**		**Sn**	**10 03 50.5**	**0.0**
OKCE	**Okmok Cone E**	**4.56**	**60**		**Pn**	**10 03 14.0**	**+1.6**
OKFG	**Magazine Ridge**	**4.69**	**61**		**Pn**	**10 03 15.3**	**+1.2**
MREP	**Makushin Rep't**	**5.49**	**60**		**Pn**	**10 03 26.7**	**+1.5**
MSW	**Makushin Switc**	**5.51**	**59**		**Pn**	**10 03 26.7**	**+1.3**
MNAT	**Makushin Natee**	**5.55**	**59**		**Pn**	**10 03 27.5**	**+1.5**
MNAT					**Sn**	**10 04 31.4**	**+2.6**
UNV	**Unalaska Valle**	**5.63**	**60**		**Pn**	**10 03 28.6**	**+1.5**
UNV	**Unalaska Valle**	**5.63**	**60**		**Sn**	**10 04 31.3**	**+0.6**
AKBBA	**Akutan Broad B**	**6.04**	**59**		**Pn**	**10 03 34.0**	**+1.3**
AHB	**Akutan Harbor**	**6.11**	**59**		**Pn**	**10 03 35.6**	**+1.9**
AKUT	**Akutan**	**6.14**	**59**	Pn	**Pn**	**10 03 34.8**	**+0.7**
SPIA	**Saint Paul Isl**	**6.44**	**22**		**Sn**	**10 04 55.5**	**+5.0**
SPIA	**Saint Paul Isl**	**6.44**	**22**		**Pn**	**10 03 40.9**	**+2.8**
SMY	**Shemya**	**7.02**	**286**	P	**Pn**	**10 03 44.5**	**-1.7**
SMY	**Shemya**	**7.02**	**286**		**Pn**	**10 03 44.5**	**-1.7**
SSBA	**Shishaldin**	**7.28**	**58**		**Pn**	**10 03 52.1**	**+2.3**
FALS	**False Pass**	**7.69**	**58**	Pn	**Pn**	**10 03 56.4**	**+1.1**
SDPT	**Sand Point**	**9.45**	**59**		**Pn**	**10 04 17.5**	**-1.8**
CNBA	**Chernabura Isl**	**9.78**	**63**		**Pn**	**10 04 22.9**	**-1.0**
CHGN	**Chignik**	**10.87**	**56**	Pn	**Pn**	**10 04 38.0**	**-0.8**
GAMB	**Gambell**	**12.60**	**6**	Pn	**Pn**	**10 05 01.9**	**-0.5**
OHAK	**Old Harbor**	**13.84**	**56**		**Pn**	**10 05 16.4**	**-2.9**
ANM	**Nome**	**14.16**	**17**	P	**P**	**10 05 28.5**	**-2.5**
ANM	**Nome**	**14.16**	**17**		**P**	**10 05 28.5**	**-2.5**
KDAK	**Kodiak Island**	**14.36**	**55**	Pn	**Pn**	**10 05 23.3**	**-3.2**
	1.1nm,0.3s,baz=304,slow=3.8,SNR=20						
RSO	**Redoubt South**	**15.29**	**45**	Pn	**Pn**	**10 05 39.3**	**+0.1**
HOM	**Homer**	**15.46**	**48**	Pn	**Pn**	**10 05 40.7**	**-0.5**
HOM				IAmb	IAmb	10 05 57.7	
	comp=Z,34nm,0.6s						
CNPM	**China Poot**	**15.61**	**49**		**Pn**	**10 05 41.1**	**-2.0**
BRLK	**Bradley Lake**	**15.86**	**49**		**Pn**	**10 05 44.3**	**-2.1**
PET	**Petropavlovsk**	**16.37**	**286**	*eP*	**P**	**10 05 58.2**	**+2.7**
PET				*eS*	**Sn**	**10 08 56.3**	**+2.8**
PET				pmax	pmax		
	comp=Z,40nm,1.1s						
PET				MLR	MLR		
	comp=Z,400nm,15.0s						
PET				MLR	MLR		
	comp=Z,300nm,13.0s						
PET	**Petropavlovsk**	**16.37**	**286**	Pn	**Pn**	**10 05 53.7**	**+0.8**
PET				IAmb	IAmb	10 05 59.2	
	comp=Z,40nm,1.1s						
SEW	**Seward**	**16.66**	**48**		**Pn**	**10 05 54.7**	**-1.7**
PPLA	**Purkeypile**	**16.76**	**38**	P	**P**	**10 06 00.3**	**+0.4**
PPLA				IAmb	IAmb	10 06 09.4	
	comp=Z,37nm,1.0s						
RC01	**Rabbit Creek A**	**16.90**	**45**	P	**Pn**	**10 05 58.4**	**-1.1**
PEA0B	**Petropavlovsk-**	**16.94**	**287**	P	**Pn**	**10 05 59.3**	**-0.8**
PEA0B				pmax	pmax		
	comp=Z,78nm,1.4s						
PEA0B	**Petropavlovsk-**	**16.94**	**287**	P	**Pn**	**10 05 59.3**	**-0.8**
PEA0B				IAmb	IAmb	10 06 07.1	
	comp=Z,78nm,1.4s						
PETK	**Petropavlovsk-**	**16.94**	**287**	Pn	**P**	**10 06 01.6**	**-0.3**
	comp=Z,1.2nm,0.3s,baz=98,slow=13,SNR=24						
PETK				LR	LR	10 12 03.9	
	comp=Z,364nm,21.6s,baz=67,slow=35						
PMR	**Palmer**	**17.38**	**44**	P	**Pn**	**10 06 05.2**	**-0.3**
PMR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PMR	**Palmer**	**17.38**	**44**	P	**Pn**	**10 06 05.2**	**-0.3**
GHO	**Glory Hole Cre**	**17.54**	**43**	P	**Pn**	**10 06 06.7**	**-0.9**
KNK	**Knik Glacier**	**17.60**	**45**	P	**Pn**	**10 06 05.9**	**-2.4**
KTH	**Kantishna Hill**	**17.60**	**37**	P	**Pn**	**10 06 08.5**	**+0.2**
KTH				IAmb	IAmb	10 06 12.4	
	comp=Z,50nm,1.3s						
TRF	**Thorofare Moun**	**17.78**	**38**	P	**Pn**	**10 06 10.8**	**+0.1**
SML	**Sawmill**	**17.81**	**44**	P	**Pn**	**10 06 10.3**	**-0.7**
BPAW	**Bear Paw Mtn.**	**17.88**	**35**	P	**P**	**10 06 12.4**	**+0.2**
SCM	**Sheep Creek Mo**	**18.26**	**44**	P	**Pn**	**10 06 14.6**	**-1.9**
SCM				pmax	pmax		
	comp=Z,15nm,0.7s						
SCM	**Sheep Creek Mo**	**18.26**	**44**	P	**Pn**	**10 06 14.6**	**-1.9**
FID	**Port Fidalgo**	**18.26**	**48**	P	**Pn**	**10 06 14.8**	**-1.6**
SKR	**Severo-Kuril's**	**18.29**	**279**	*eP*	Pn	10 06 02.6	-14
SKR				pmax	pmax		
	comp=Z,1.0nm,19.0s						
RND	**Reindeer**	**18.32**	**39**	P	**P**	**10 06 15.3**	**-1.8**
RND				pmax	pmax		
	comp=Z,15nm,0.8s						
RND	**Reindeer**	**18.32**	**39**	P	**P**	**10 06 15.3**	**-1.8**
MCK	**McKinley**	**18.45**	**38**	P	**P**	**10 06 17.4**	**-1.0**
MCK				pmax	pmax		
	comp=Z,20nm,0.9s						
MCK	**McKinley**	**18.45**	**38**	P	**P**	**10 06 17.4**	**-1.0**
BWN	**Browne**	**18.48**	**36**	P	**Pn**	**10 06 22.0**	**+3.1**
BWN				IAmb	IAmb	10 06 32.1	
	comp=Z,43nm,0.8s						
MLY	**Manley**	**18.51**	**33**	P	**P**	**10 06 17.7**	**-1.5**
DHY	**Denali Highway**	**18.75**	**41**	P	**P**	**10 06 21.2**	**-0.7**
NEA	**Nenana**	**18.84**	**35**	P	**Pn**	**10 06 24.6**	**+1.2**
RAGM	**Ragged Mountai**	**19.01**	**50**	P	**P**	**10 06 24.5**	**-0.2**
WRH	**Wood River Hil**	**19.14**	**36**	P	**P**	**10 06 24.5**	**-1.5**
BILL	**Bilibino**	**19.16**	**338**	*cP*	**Pn**	**10 06 27.1**	**-0.1**
BILL				*eS*	**Sn**	**10 10 00.5**	**-0.2**
BILL				pmax	pmax		
	comp=Z,70nm,1.3s						
BILL				MLR	MLR		
	comp=Z,367nm,21.0s						
BILL	**Bilibino**	**19.16**	**338**	P	**P**	**10 06 26.3**	**+0.1**
BILL				IAmb	IAmb	10 06 33.9	
	comp=Z,89nm,1.0s						
CCB	**Clear Creek Bu**	**19.34**	**36**	P	**P**	**10 06 26.6**	**-1.6**
MDM	**Murphy Dome**	**19.35**	**35**	P	**P**	**10 06 28.0**	**-0.3**
COLA	**College**	**19.44**	**35**	P	**P**	**10 06 29.5**	**+0.2**
COLA				pmax	pmax		
	comp=Z,20nm,0.8s						
COLA	**College**	**19.44**	**35**	P	**P**	**10 06 29.5**	**+0.2**
COLA				IAmb	IAmb	10 06 38.7	
	comp=Z,20nm,0.8s						
PAX	**Paxson**	**19.50**	**42**	P	**P**	**10 06 28.0**	**-2.1**
PAX				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PAX	**Paxson**	**19.50**	**42**	P	**P**	**10 06 28.0**	**-2.1**
HDA	**Harding Lake**	**19.54**	**37**	P	**P**	**10 06 29.4**	**-1.0**
	baz=241,SNR=44						
HDA	**Harding Lake**	**19.54**	**37**	P	**P**	**10 06 29.2**	**-1.2**
HDA				IAmb	IAmb	10 06 37.2	
	comp=Z,36nm,0.8s						
GLB	**Gilahina Butte**	**19.71**	**47**	P	**P**	**10 06 30.9**	**-1.4**
POKR	**Poker Plat Res**	**19.72**	**35**	P	**P**	**10 06 32.5**	**+0.1**
	baz=239						
IL31		**19.75**	**36**	P	**P**	**10 06 29.5**	**-3.1**
ILAR	**Eielson Array**	**19.75**	**36**	P	**P**	**10 06 29.7**	**-2.9**
	comp=Z,1.6nm,0.3s,baz=229,slow=9.1,SNR=88						
ILAR				LR	LR	10 14 46.5	
	comp=Z,263nm,18.0s,baz=238,slow=39						
VRDI	**Verde Repeater**	**19.81**	**48**	P	**P**	**10 06 33.6**	**0.0**
MCARA	**McCarthy VSAT**	**20.05**	**48**	P	**P**	**10 06 35.4**	**-0.6**
RIDG	**Independent Ri**	**20.07**	**40**	P	**P**	**10 06 36.2**	**-0.1**
RIDG				IAmb	IAmb	10 06 43.3	
	comp=Z,22nm,0.7s						
MENT	**Mentasta**	**20.23**	**43**	P	**P**	**10 06 38.5**	**+0.5**
BALM	**Baldy**	**20.28**	**49**	P	**P**	**10 06 37.4**	**-1.2**
DOT	**Dot Lake**	**20.35**	**41**	P	**P**	**10 06 37.4**	**-1.8**
DOT				IAmb	IAmb	10 06 55.4	
	comp=Z,17nm,0.7s						
YAH	**Yahtse**	**20.42**	**51**	P	**P**	**10 06 39.9**	**-0.3**
YAH				IAmb	IAmb	10 06 56.0	
	comp=Z,20nm,0.7s						
SCRK	**Sand Creek**	**20.51**	**40**	P	**P**	**10 06 39.3**	**-1.8**
BARN	**Barnard Glacie**	**20.61**	**49**	P	**P**	**10 06 41.4**	**-0.9**
PRP	**Porcupine Dome**	**20.62**	**35**	P	**P**	**10 06 41.4**	**-0.8**
CTGM	**Chitina Glacie**	**20.75**	**49**	P	**P**	**10 06 41.7**	**-2.0**
CTGM				IAmb	IAmb	10 06 59.3	
	comp=Z,11nm,0.6s						
MA2	**Magadan**	**21.01**	**307**	P	**P**	**10 06 47.7**	**+1.3**
	comp=Z,9.5nm,1.0s,baz=126,slow=15,SNR=2.7						
MA2	**Magadan**	**21.01**	**307**	*ceP*	**P**	**10 06 48.2**	**+1.8**
MA2				pmax	pmax		
	comp=Z,11nm,1.0s						
MA2	**Magadan**	**21.01**	**307**	P	**P**	**10 06 47.2**	**+0.8**
MA2				IAmb	IAmb	10 06 57.4	
	comp=Z,21nm,1.0s						
SEY	**Seymchan**	**21.02**	**316**	P	**P**	**10 06 47.0**	**+0.6**
	comp=Z,5.4nm,0.8s,baz=118,slow=8.5,SNR=33						
TOLK	**Toolik Lake Re**	**21.17**	**26**	P	**P**	**10 06 48.3**	**+0.2**
	baz=228						
TOLK	**Toolik Lake Re**	**21.17**	**26**	P	**P**	**10 06 48.1**	**0.0**
TOLK				IAmb	IAmb	10 06 49.5	
	comp=Z,28nm,0.8s						
FYU	**Fort Yukon**	**21.25**	**33**	P	**P**	**10 06 47.8**	**-1.1**
FYU				IAmb	IAmb	10 06 56.1	
	comp=Z,30nm,1.3s						
EGAK	**Eagle**	**21.96**	**39**	P	**P**	**10 06 55.0**	**-1.5**
EGAK				IAmb	IAmb	10 06 58.5	
	comp=Z,28nm,0.8s						
DAWY	**Dawson**	**22.44**	**42**	P	**P**	**10 07 00.9**	**-0.8**
HYT	**Haines Junctio**	**22.56**	**51**	P	**P**	**10 07 02.4**	**-0.7**
SKAG	**Skagway**	**23.52**	**54**	P	**P**	**10 07 12.6**	**-0.1**
SIT	**Sitka**	**23.52**	**60**	IAmb	IAmb	10 07 20.9	
	comp=Z,18nm,1.0s						
EPYK	**Eagle Plains**	**24.25**	**37**	P	**P**	**10 07 18.6**	**-1.0**
	baz=251						
EPYK	**Eagle Plains**	**24.25**	**37**	P	**P**	**10 07 18.4**	**-1.2**
EPYK				IAmb	IAmb	10 07 23.0	
	comp=Z,20nm,1.3s						
CRAG	**Craig**	**24.89**	**64**	IAmb	IAmb	10 07 28.7	
	comp=Z,17nm,0.9s						
WRAK	**Wrangell Islan**	**25.21**	**62**	P	**P**	**10 07 29.3**	**+1.0**
WRAK				IAmb	IAmb	10 07 31.7	
	comp=Z,35nm,0.9s						
INK	**Inuvik**	**26.07**	**34**	P	**P**	**10 07 35.5**	**-0.5**
	comp=Z,5.0nm,0.8s,baz=236,slow=9.4,SNR=20						
INK				PcP	**PcP**	**10 11 03.6**	**+0.7**
	comp=Z,3.3nm,0.7s,baz=317,slow=1.9,SNR=6.2						
INK	**Inuvik**	**26.07**	**34**	P	**P**	**10 07 34.3**	**-1.7**
INK						10 11 02.6	
INK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
INK	**Inuvik**	**26.07**	**34**	P	**P**	**10 07 34.2**	**-1.7**
INK					**PcP**	**10 11 02.6**	**-0.3**
DLBC	**Dease Lake**	**26.28**	**57**	P	**P**	**10 07 40.7**	**+2.6**
	comp=Z,9.8nm,0.9s,baz=310,slow=4.6,SNR=13						
DLBC	**Dease Lake**	**26.28**	**57**	P	**P**	**10 07 39.1**	**+1.1**
DLBC				IAmb	IAmb	10 07 43.3	
	comp=Z,18nm,1.1s						
TIXI	**Tiksi**	**31.95**	**330**	P	**P**	**10 08 28.1**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=112,slow=15,SNR=2.3						
TIXI				PcP	**PcP**	**10 11 17.9**	**+0.3**
	comp=Z,7.4nm,0.7s,baz=98,slow=1.7,SNR=15						
TIXI	**Tiksi**	**31.95**	**330**	*eP*	**P**	**10 08 27.5**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,6.0nm,2.5s						
TIXI	**Tiksi**	**31.95**	**330**	P	**P**	**10 08 26.9**	**-1.2**
YKA	**Yellowknife Ar**	**33.43**	**47**	P	**P**	**10 08 40.6**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=276,slow=9.1,SNR=11						
YKA				PcP	**PcP**	**10 11 22.5**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=285,slow=2.7,SNR=11						
YKA				ScP	**ScP**	**10 15 03.9**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=286,slow=3.0,SNR=6.0						
YKA				LR	LR	10 23 51.6	
	comp=Z,355nm,18.9s,baz=0.0,slow=39						
B05A	**Bryant**	**33.53**	**74**	P	**P**	**10 08 43.0**	**+0.7**
	baz=296						
KLR	**Kul'dur**	**33.62**	**288**	P	**P**	**10 08 43.1**	**0.0**
	comp=Z,7.4nm,0.5s,baz=69,slow=7.1,SNR=44						
KLR	**Kul'dur**	**33.62**	**288**	*ceP*	**P**	**10 08 43.2**	**+0.1**
KLR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**34.67**	**211**	T	T	10 45 42.4	
	baz=18,slow=76,SNR=142						
H11N3	**WAKE ISLAND Hy**	**34.68**	**211**	T	T	10 45 45.8	
	baz=18,slow=76,SNR=91						
H11N1	**WAKE ISLAND Hy**	**34.69**	**211**	T	T	10 45 55.2	
	baz=18,slow=76,SNR=95						
B08A	**Colville Reser**	**35.15**	**73**	IAmb	IAmb	10 09 12.1	
	comp=Z,11nm,0.8s						
I04A	**Tendick Farm,**	**35.46**	**81**	P	**P**	**10 08 59.2**	**+0.1**
	baz=302						
USA0B	**Ussuriysk Arra**	**35.81**	**280**	P	**P**	**10 09 02.8**	**+0.8**
USA0B				pmax	pmax		
	comp=Z,24nm,1.2s						
USA0B	**Ussuriysk Arra**	**35.81**	**280**	P	**P**	**10 09 02.8**	**+0.8**
USA0B				IAmb	IAmb	10 09 03.6	
	comp=Z,24nm,1.1s						
USRK	**Ussuriysk Ar.**	**35.81**	**280**	P	**P**	**10 09 02.1**	**+0.1**
	comp=Z,10nm,0.6s,baz=57,slow=10,SNR=18						
USRK				LR	LR	10 23 27.2	
	comp=Z,124nm,20.8s,baz=44,slow=36						
I05D	**Terrebonne, OR**	**35.84**	**80**	P	**P**	**10 09 02.4**	**0.0**
	baz=301						
H11S1	**WAKE ISLAND Hy**	**35.88**	**211**	T	T	10 48 09.6	
	baz=20,slow=76,SNR=102						
H11S2	**WAKE ISLAND Hy**	**35.90**	**211**	T	T	10 48 10.4	
	baz=20,slow=76,SNR=104						
H11S3	**WAKE ISLAND Hy**	**35.90**	**211**	T	T	10 48 03.2	
	baz=20,slow=76,SNR=33						
MAJO	**Matsushiro**	**36.29**	**265**	P	**P**	**10 09 07.8**	**+1.5**
MAJO				pmax	pmax		
	comp=Z,37nm,1.2s						
MAJO	**Matsushiro**	**36.29**	**265**	P	**P**	**10 09 07.8**	**+1.5**
MAT	**Matsushiro**	**36.29**	**265**	P	**P**	**10 09 07.7**	**+1.4**
MJAR	**Matsushiro Arr**	**36.29**	**265**	P	**P**	**10 09 07.5**	**+1.2**
	comp=Z,8.0nm,0.9s,baz=49,slow=11,SNR=10

FFC pmax pmax
comp=Z,7.0nm,0.7s
FFC Flin Flon 42.10 56 P P 10 09 55.0 +0.4
FFC lAmb lAmb 10 09 55.5
comp=Z,6.7nm,0.7s
YNR Norris Junctio 42.14 73 P P 10 09 54.5 -0.8
GCMT Greycliff 42.17 71 P P 10 09 54.0 -1.3
KSRS Korea Array 42.17 274 P P 10 09 56.5 +1.2
comp=Z,14nm,0.8s,baz=57,slow=7.8,SNR=44
KSRS LR LR 10 27 07.0
comp=Z,68nm,19.6s,baz=52,slow=36
KS19 Wonju Array Si 42.18 274 P P 10 09 55.4 0.0
KS19 lAmb lAmb 10 09 59.5
comp=Z,14nm,0.8s
H17A Grant Village 42.37 73 P P 10 09 57.6 +0.3
baz=303
H17A Grant Village 42.37 73 P P 10 09 55.2 -2.1
H17A lAmb lAmb 10 10 14.5
comp=Z,15nm,1.2s
YNE Yellowstone No 42.38 72 P P 10 09 57.7 +0.4
LKWY Lake 42.39 73 P P 10 09 57.7 +0.4
LKWY pmax pmax
comp=Z,7.0nm,0.9s
LKWY Lake 42.39 73 P P 10 09 57.7 +0.4
LKWY lAmb lAmb 10 10 14.3
comp=Z,7.1nm,0.8s
CWC Cottonwood Cre 42.40 88 P P 10 09 57.9 +0.5
baz=309
ISA Isabella, Lake 42.65 89 P P 10 09 59.4 +0.1
baz=310
TPAW Teton Pass 42.65 75 P P 10 09 58.3 -1.2
RLMT Red Lodge 42.76 72 P P 10 10 01.0 +0.6
baz=303
RLMT Red Lodge 42.76 72 P P 10 09 58.2 -2.2
RLMT lAmb lAmb 10 10 15.8
comp=Z,19nm,1.2s
REDW Red Top Meadow 42.78 75 lAmb lAmb 10 10 17.6
comp=Z,12nm,1.3s
R11A Troy Canyon, C 42.78 84 P P 10 10 01.9 +1.3
baz=308
R11A Troy Canyon, C 42.78 84 P P 10 09 57.8 -2.7
MPMC Manual Prospec 43.01 88 P P 10 10 03.1 +0.7
baz=310
JNU Nakatsue 43.09 267 P P 10 10 04.3 +1.4
JNU lAmb lAmb 10 10 05.6
comp=Z,30nm,1.0s
TJN Taejon 43.19 273 *d iP* **P 10 10 06.9 +3.3**
TPNV Topopah Spring 43.23 86 P P 10 10 03.8 -0.3
TPNV pmax pmax
comp=Z,4.0nm,0.9s
TPNV Topopah Spring 43.23 86 P P 10 10 04.8 +0.6
baz=309
TPNV Topopah Spring 43.23 86 P P 10 10 03.8 -0.3
DUG Dugway, Tooele 43.40 80 P P 10 10 03.7 -1.7
DUG pmax pmax
comp=Z,7.0nm,1.0s
DUG Dugway, Tooele 43.40 80 P P 10 10 05.9 +0.5
baz=307
DUG Dugway, Tooele 43.40 80 P P 10 10 03.7 -1.7
CTU Camp Tracy 43.76 78 P P 10 10 06.0 -2.4
BW06 Boulder Array 43.90 75 P P 10 10 09.2 -0.4
baz=305
BW06 Boulder Array 43.90 75 P P 10 10 08.5 -1.1
BW06 lAmb lAmb 10 10 25.3
comp=Z,11nm,1.0s
PD31 Pinedale Array 43.90 75 P P 10 10 08.8 -0.8
PD31 lAmb lAmb 10 10 25.3
comp=Z,10nm,1.0s
PDAR Pinedale Array 43.90 75 P P 10 10 09.6 +0.1
comp=Z,5.2nm,0.7s,baz=306,slow=4.2,SNR=22
PDAR LR LR 10 28 33.4
comp=Z,90nm,19.1s,baz=314,slow=36
GSC Goldstone, Bar 43.92 88 P P 10 10 08.6 -1.0
GSC pmax pmax
comp=Z,7.0nm,1.0s
GSC Goldstone, Bar 43.92 88 P P 10 10 10.6 +1.0
baz=310
GSC Goldstone, Bar 43.92 88 P P 10 10 08.6 -1.0
GSC lAmb lAmb 10 10 24.4
comp=Z,6.7nm,0.9s
DGMT Dagmar 43.94 65 P P 10 10 08.5 -1.0
baz=302
DGMT Dagmar 43.94 65 P P 10 10 08.2 -1.3
DGMT lAmb lAmb 10 10 23.8
comp=Z,13nm,0.9s
JLU Jordanelle 44.00 78 P P 10 10 10.6 +0.3
BFSC Mount Baldy Ra 44.07 90 P P 10 10 12.8 +1.9
baz=311
FCC Fort Churchill 44.15 48 P P 10 10 11.2 +0.2
FCC pmax pmax
comp=Z,4.0nm,0.8s
FCC Fort Churchill 44.15 48 P P 10 10 11.2 +0.2
GMRC Granite Mounta 44.97 88 P P 10 10 19.2 +1.1
baz=311
TPFO Pinon Flats 45.24 90 P P 10 10 21.9 +1.7
baz=312
KNB Kanab 45.33 83 P P 10 10 23.5 +2.6
KNB pmax pmax
comp=Z,10.0nm,1.5s
KNB Kanab 45.33 83 P P 10 10 23.5 +2.6
SRU San Rafael Swe 45.46 79 P P 10 10 20.7 -1.3
SRU pmax pmax
comp=Z,5.0nm,0.8s
SRU San Rafael Swe 45.46 79 P P 10 10 20.7 -1.3
NRIK Noril'sk 45.73 331 P P 10 10 23.0 -0.4
comp=Z,3.8nm,0.7s,baz=90,slow=6.6,SNR=4.9
NRIK PcP PcP **10 12 02.0 +1.2**
comp=Z,5.0nm,0.9s,baz=72,slow=1.8,SNR=4.8
NRIK Noril'sk 45.73 331 P P 10 10 23.0 -0.4
NRIK 10 12 02.0
MONP2 Monument Peak 45.73 90 P P 10 10 24.9 +0.7
baz=312
K22A Casper 45.79 73 P P 10 10 24.0 -0.6
baz=306
K22A Casper 45.79 73 P P 10 10 22.1 -2.5
K22A lAmb lAmb 10 10 39.6
comp=Z,11nm,1.2s
O20A White River Ci 46.24 77 P P 10 10 27.6 -0.6
baz=308
RSSD Black Hills 46.42 70 P P 10 10 26.7 -2.8
RSSD pmax pmax
comp=Z,10.0nm,1.2s
RSSD Black Hills 46.42 70 P P 10 10 28.8 -0.7
baz=306
RSSD Black Hills 46.42 70 P P 10 10 26.7 -2.8
RSSD lAmb lAmb 10 10 43.9
comp=Z,10nm,1.2s
PV09 Paradox Valley 46.69 79 P P 10 10 30.6 -1.2
PV21 Cone Mtn., Par 46.75 79 P P 10 10 31.8 -0.4
PV21 lAmb lAmb 10 10 40.1
comp=Z,4.4nm,0.9s
MDND Maddock 46.86 63 P P 10 10 30.9 -1.7
baz=304
PV04 Paradox Valley 46.90 79 lAmb lAmb 10 10 39.1
comp=Z,5.4nm,0.9s
PV17 East Wray Mesa 46.94 79 lAmb lAmb 10 10 50.7
comp=Z,6.3nm,0.6s
PV16 Nyswonger Mesa 46.94 79 lAmb lAmb 10 10 39.5
comp=Z,7.4nm,1.1s
PV11 David Mesa, Pa 46.98 79 lAmb lAmb 10 10 54.6
comp=Z,11nm,1.0s
PV12 Saucer Basin, 47.01 79 lAmb lAmb 10 10 56.5
comp=Z,12nm,1.2s
PV03 Paradox Valley 47.02 79 lAmb lAmb 10 10 40.1
comp=Z,7.2nm,1.0s
PV13 Radium Mtn., P 47.10 79 lAmb lAmb 10 10 41.3
comp=Z,11nm,0.9s
N23A Red Feather La 47.18 75 P P 10 10 35.5 0.0
baz=307
WUAZ Wupatki 47.18 84 P P 10 10 35.5 0.0
baz=310
PV01 Paradox Valley 47.27 79 lAmb lAmb 10 10 52.1
comp=Z,5.3nm,0.8s
ULM Lac du Bonnet 47.57 59 P P 10 10 37.9 -0.2
comp=Z,1.9nm,0.3s,baz=303,slow=7.2,SNR=5.2
ULM LR LR 10 31 36.1
comp=Z,131nm,19.3s,baz=337,slow=37
ULM Lac du Bonnet 47.57 59 P P 10 10 36.7 -1.5
ULM pmax pmax
comp=Z,7.0nm,1.0s
ULM Lac du Bonnet 47.57 59 P P 10 10 36.7 -1.5
ULM lAmb lAmb 10 10 39.7
comp=Z,6.8nm,0.9s
BJI Beijing 47.85 285 P P 10 10 41.8 +1.4
BJI pmax pmax
comp=Z,22nm,0.9s
BJI LR LR
comp=Z,190nm,15.2s
BJI LR LR
comp=Z,150nm,20.8s
BJI LR LR
comp=Z,290nm,20.8s
BJT Baijiatuau 47.87 285 P P 10 10 41.7 +1.1
BJT pmax pmax
comp=Z,22nm,1.0s
BJT Baijiatuau 47.87 285 P P 10 10 41.6 +1.1
MVCO Mesa Verde 47.89 80 P P 10 10 40.5 -0.6
baz=310
ISCO Idaho Springs 48.05 75 P P 10 10 41.8 -0.5
baz=308
TLY Talaya 48.21 304 *de* **P P 10 10 43.6 +0.5**
TLY pmax pmax
comp=Z,14nm,1.1s
ULN Ulaanbaatar 48.54 298 ⇓ *iP* **P 10 10 46.1 +0.2**
ULN pmax pmax
comp=Z,7.0nm,1.0s
ULN Ulaanbaatar 48.54 298 P P 10 10 44.6 -1.3
ULN lAmb lAmb 10 10 46.7
comp=Z,5.9nm,0.9s
S22A 4UR Ranch, Cre 48.58 78 P P 10 10 46.7 +0.3
baz=310
214A Organ Pipe Nat 48.63 89 P P 10 10 46.4 -0.1
AGMN Agassiz Nation 48.68 61 P P 10 10 45.9 -0.9
baz=305
AGMN Agassiz Nation 48.68 61 P P 10 10 46.3 -0.4
AGMN lAmb lAmb 10 11 04.3
comp=Z,16nm,1.1s
SONM Songino Array 48.92 299 P P 10 10 48.9 +0.1
comp=Z,4.7nm,0.7s,baz=50,slow=9.2,SNR=24
SONM PcP **PcP 10 12 12.7 0.0**
comp=Z,3.8nm,0.8s,baz=52,slow=3.0,SNR=8.4
SONM LR LR 10 34 43.2
comp=Z,202nm,18.2s,baz=74,slow=40
ZAK Zakamensk 49.13 303 *eP* **P 10 10 50.5 +0.2**
ZAK *e* 10 12 14.5
ZAK pmax pmax
comp=Z,12nm,1.4s
ZAK pmax pmax
comp=Z,8.0nm,1.0s
SDCO Great Sand Dun 49.40 78 P P 10 10 52.8 +0.1
baz=310
MOY Mondy 49.59 306 *eP* **P 10 10 54.4 +0.6**
MOY pmax pmax
comp=Z,18nm,1.4s
TUC Tucson 49.66 87 P P 10 10 55.0 +0.5
baz=313
TIA Tai'an 49.68 280 P P 10 10 55.3 +0.8
TIA pmax pmax
comp=Z,20nm,0.7s
B35A Bob, Littlefor 49.81 60 P P 10 10 55.1 -0.2
B35A lAmb lAmb 10 11 09.7
comp=Z,7.1nm,0.7s
F33A 5 Mile Ranch, 49.88 64 P P 10 10 55.0 -0.9
F33A lAmb lAmb 10 11 09.0
comp=Z,7.5nm,0.8s
KBS Kingsbay 49.95 358 ⇑ *eP* **P 10 10 57.1 +1.0**
KBS pmax pmax
comp=Z,24nm,1.3s
HHC Hu-ho-hao-te 50.13 288 *eP* **P 10 10 59.6 +1.6**
HHC pmax pmax
comp=Z,12nm,0.9s
HHC pmax pmax
comp=Z,47nm,5.3s
HHC LR LR
comp=Z,180nm,19.4s
HHC LR LR
comp=Z,96nm,18.2s
HHC LR LR
comp=Z,62nm,16.3s
KSCO Kaye Shedlock' 50.35 74 P P 10 10 59.7 0.0
baz=310
K31A O'Neill 50.41 68 P P 10 10 59.4 -0.6
K31A lAmb lAmb 10 11 16.8
comp=Z,16nm,1.0s
T25A Trinidad 50.45 77 P P 10 10 60.0 -0.7
baz=310
ANMO Albuquerque 50.61 81 ⇑ *eP* **P 10 11 02.9 +1.0**
ANMO pmax pmax
comp=Z,3.0nm,1.5s
ANMO Albuquerque 50.61 81 P P 10 11 01.7 -0.2
baz=311
ECSD EROS Data Cent 50.96 66 P P 10 11 03.7 -0.5
baz=308
ECSD EROS Data Cent 50.96 66 lAmb lAmb 10 11 17.8
comp=Z,5.8nm,0.8s
EYMN Ely 51.26 59 P P 10 11 04.9 -1.4
baz=307
EYMN Ely 51.26 59 lAmb lAmb 10 11 23.8
comp=Z,12nm,1.0s
NJ2 Nanjing 51.34 275 *eP* **P 10 11 08.4 +1.3**
NJ2 pmax pmax
comp=Z,17nm,0.6s
E38A The Farm, Brul 52.04 60 lAmb lAmb 10 11 25.7
comp=Z,13nm,0.8s
CBKS Cedar Bluff 52.21 73 P P 10 11 13.2 -0.4
baz=310
CBKS Cedar Bluff 52.21 73 lAmb lAmb 10 11 30.5
comp=Z,10.0nm,0.8s
SUMG Summit 52.72 15 P P 10 11 16.5 -0.8
SUMG pmax pmax
comp=Z,5.0nm,0.8s
SUMG Summit 52.72 15 P P 10 11 16.5 -0.8
SUMG lAmb lAmb 10 11 17.9
comp=Z,5.2nm,0.8s
N35A Tabor 53.32 68 P P 10 11 21.4 -0.3
MNTX Cornudas Mount 53.45 83 P P 10 11 22.7 -0.1
baz=313
MNTX Cornudas Mount 53.45 83 P P 10 11 24.0 +1.2
MSTX Muleshoe 53.54 79 P P 10 11 23.8 +0.3
baz=312
MSTX Muleshoe 53.54 79 P P 10 11 23.1 -0.4
MSTX lAmb lAmb 10 11 40.5
comp=Z,9.8nm,1.1s
G40A Rib Lake 53.61 61 lAmb lAmb 10 11 37.5
comp=Z,8.7nm,0.8s
E43A Lone Tree Farm 54.64 58 lAmb lAmb 10 11 48.5
comp=Z,16nm,0.9s
N38A Joes South For 54.76 67 lAmb lAmb 10 11 46.8
comp=Z,19nm,1.1s
JFWS Jewell Farm 55.09 63 P P 10 11 33.9 -0.6
baz=311
P38A Dawn 55.35 68 lAmb lAmb 10 11 55.3
comp=Z,24nm,1.4s
WMOK Wichita Mounta 55.47 76 P P 10 11 37.8 +0.3
baz=313
SSLB Suanglung 55.83 266 P P 10 11 40.8 +0.6
D46A Sault St. Mari 55.86 56 P P 10 11 38.8 -1.2
baz=311
ZALV Zalesovo Beam 55.88 315 P P 10 11 39.6 -0.5
comp=Z,1.0nm,0.4s,baz=52,slow=6.3,SNR=3.1
ZALV PcP **PcP 10 12 39.3 +0.8**
comp=Z,3.4nm,0.6s,baz=38,slow=2.6,SNR=9.0
ZALV LR LR 10 37 22.3
comp=Z,165nm,18.4s,baz=64,slow=38
TX31 Lajitas Ar. Si 56.15 84 lAmb lAmb 10 11 59.7
comp=Z,11nm,1.1s
TX32 Lajitas Array 56.15 84 P P 10 11 40.6 -1.8
TXAR Lajitas Array 56.15 84 P P 10 11 42.2 -0.2
comp=Z,0.7nm,0.8s,baz=298,slow=5.2,SNR=10
XAN Xi'an 56.15 284 P P 10 11 40.5 -1.8
XAN pmax pmax
comp=Z,26nm,1.1s
XAN Xi'an 56.15 284 P P 10 11 40.5 -1.8
D47A Chapleau 56.24 55 P P 10 11 41.9 -0.9
baz=311
P40A Paris 56.28 67 lAmb lAmb 10 11 58.7
comp=Z,13nm,0.7s
ABTX Abilene, Hawle 56.37 78 P P 10 11 44.6 +0.7
baz=314
G46A Petoskey 56.46 58 P P 10 11 44.1 -0.2
baz=311
TUL1 Leonard 56.48 73 P P 10 11 44.7 0.0
baz=313
E47A Iron Bridge 56.54 56 P P 10 11 44.6 -0.3
baz=312
D48A Paudash Townsh 56.82 54 P P 10 11 46.8 -0.1
baz=312,SNR=7.1
R40A Maddies Statio 56.98 69 lAmb lAmb 10 12 01.5
comp=Z,5.9nm,0.6s
D49A Beulah Townshi 56.99 54 P P 10 11 47.9 -0.2
baz=312,SNR=6.1
E48A Lockeyer 57.10 55 P P 10 11 47.7 -1.2
baz=312
MATQ Matagami 57.17 50 P P 10 11 47.8 -1.5
baz=312
HDIL Hopedale 57.17 65 P P 10 11 49.3 -0.2
baz=312
DGZ Jazzator, Alta 57.54 310 *c iP* **P 10 11 52.5 +0.4**
DGZ pmax pmax
comp=Z,15nm,1.3s
F49A Sandfield 57.64 56 P P 10 11 52.2 -0.5
baz=312
JCT Junction City 57.75 80 P P 10 11 52.8 -0.9
baz=315
LZH Lanzhou 57.82 289 ⇑ **P P 10 11 55.4 +1.1**
LZH pP pwP 10 12 06.0 -1.2
LZH sP sP 10 12 10.6 +6.7
LZH pmax pmax
comp=Z,26nm,1.0s
LZH pmax pmax
comp=Z,85nm,4.3s
LZH LR LR
comp=Z,200nm,16.8s
LZH LR LR
comp=Z,260nm,17.4s
LZH LR LR
comp=Z,280nm,18.4s
D50A G1974 Best Tow 57.83 53 P P 10 11 53.6 -0.4
baz=313,SNR=6.5
E50A Wahnapitae 57.87 55 P P 10 11 54.0 -0.3
baz=313
GTA Gaotai 57.92 294 *eP* **P 10 11 55.3 +0.4**
GTA pmax pmax
comp=Z,5.0nm,1.1s
U40A Yellville 57.94 71 P P 10 11 53.2 -1.7
baz=313
LSQQ Lebel-sur-Quev 57.96 50 P P 10 11 53.9 -0.9
baz=313
D51A Lot 18 Range I 58.11 53 P P 10 11 55.4 -0.5
baz=313
WHTX Lake Whitney, 58.15 77 P P 10 11 57.2 +0.7
baz=314
W39A Magazine 58.17 72 P P 10 11 55.3 -1.2
baz=314
J48A Bridge Port 58.38 59 P P 10 11 57.4 -0.5
baz=313
E51A G1948 Merrick 58.43 54 P P 10 11 57.8 -0.4
baz=313,SNR=6.7
SCHQ Schefferville 58.45 40 LR LR 10 38 25.3
comp=Z,172nm,18.2s,baz=328,slow=37
SFIN Lafayette 58.53 63 P P 10 11 57.5 -1.5
baz=313
ARCES ARCESS Array B 58.55 352 P P 10 11 57.7 -1.0
comp=Z,9.0nm,0.7s,baz=26,slow=8.5,SNR=25
ARCES PcP **PcP 10 12 48.9 +0.2**
comp=Z,7.9nm,0.7s,baz=15,slow=5.0,SNR=12
ARCES LR LR 10 39 54.3
comp=Z,56nm,18.1s,baz=276,slow=39
CHGQ Chibougamau 58.61 48 P P 10 11 58.1 -1.4
baz=314,SNR=8.0
F51A Arnstein 58.63 55 P P 10 11 59.5 -0.1
baz=313
FCAR Ozark Folk Cen 58.68 70 P P 10 11 58.5 -1.6
FCAR lAmb lAmb 10 12 12.6
comp=Z,12nm,1.1s
MIAR Mount Ida 58.74 73 P P 10 11 59.8 -0.8
baz=314
MIAR Mount Ida 58.74 73 lAmb lAmb 10 12 06.0
comp=Z,8.9nm,1.1s
L48A N Adams 58.95 61 P P 10 12 02.1 +0.2
baz=313
D53A Lac Vacive, Po 58.96 52 P P 10 12 01.7 -0.2
baz=314
D53A Lac Vacive, Po 58.96 52 P P 10 12 01.5 -0.4
F52A Sundridge 59.02 54 P P 10 12 02.3 -0.1
baz=314,SNR=6.9
E52A Mattawa 59.02 54 P P 10 12 02.2 -0.1
baz=314
PBMO Poplar Bluff 59.07 69 lAmb lAmb 10 12 15.6
comp=Z,17nm,1.4s
W41B Gary Mavity, V 59.10 71 P P 10 12 01.4 -1.7
baz=314
D54A Lac Fusel, La 59.42 52 P P 10 12 04.2 -0.9
baz=314,SNR=5.4
E53A Dumoine, Ponti 59.46 53 P P 10 12 05.1 -0.2
baz=314
H52A Wyevale 59.52 56 P P 10 12 06.0 +0.2
baz=314
ALGO Algonquin Park 59.56 53 P P 10 12 06.0 0.0
baz=314,SNR=6.0
E54A Lac Daplat, Po 59.66 53 P P 10 12 06.3 -0.4
baz=314
O48A Farmland 59.70 62 P P 10 12 06.0 -1.1
baz=314
G53A Haliburton 59.84 54 P P 10 12 08.1 +0.1
baz=314,SNR=13
G54A Lake Saint Pet 59.92 54 P P 10 12 08.6 0.0
baz=314,SNR=7.9
D55A Sainte-Anne-du 60.10 51 P P 10 12 09.1 -0.6
baz=315,SNR=16
E55A Montcerf-Lytto 60.20 52 P P 10 12 08.2 -2.3
baz=315
H53A Bobcaygeon 60.24 55 P P 10 12 10.8 0.0
baz=314
D56A ZEC Mazanza, M 60.42 51 P P 10 12 11.0 -1.0
baz=315,SNR=7.8
WCI Wyandotte Cave 60.46 65 P P 10 12 12.3 0.0
baz=314
F55A Otter Lake 60.49 53 P P 10 12 11.9 -0.5
baz=315
O50A Cable 60.63 62 P P 10 12 12.7 -0.7
baz=314
E56A St. Veronique 60.65 51 P P 10 12 12.7 -0.8
baz=315,SNR=6.0
G55A Calabogie 60.72 53 P P 10 12 14.0 0.0
baz=315,SNR=9.2
T47A Sharon Grove 60.86 66 lAmb lAmb 10 12 20.2
comp=Z,15nm,1.0s
KURK Kurchatov 60.87 316 *ce* **P P 10 12 14.8 -0.1**
KURK pmax pmax
comp=Z,22nm,1.0s
KURK Kurchatov 60.87 316 P P 10 12 14.7 -0.2
D57A Chemin Vers le 60.87 50 P P 10 12 14.0 -1.0
baz=315,SNR=6.3
P50A Jamestown 60.90 62 P P 10 12 15.1 -0.2
baz=314
I55A Frankford 60.95 55 P P 10 12 16.1 +0.5
baz=315,SNR=7.9
H55A Tweed 60.98 54 P P 10 12 16.1 +0.4
baz=315,SNR=11
J54A Appleton 61.12 56 P P 10 12 16.9 +0.2
baz=315
LATQ La Tuque 61.14 49 P P 10 12 16.3 -0.4
baz=316
LATQ La Tuque 61.14 49 lAmb lAmb 10 12 17.1
comp=Z,8.9nm,0.9s
E57A Chemin Saint G 61.17 51 P P 10 12 16.2 -0.9
baz=316,SNR=9.0
ORIO Orleans, Innes 61.18 52 P P 10 12 16.2 -0.9
baz=315
ORIO Orleans, Innes 61.18 52 lAmb lAmb 10 12 17.4
comp=Z,8.5nm,0.9s
L53A Girard 61.19 58 P P 10 12 14.3 -3.0
baz=315
OXF Oxford 61.24 70 P P 10 12 16.9 -0.8
baz=315
D58A Chemin du LacG 61.30 50 P P 10 12 16.9 -1.0
baz=316,SNR=5.6
M53A WI Miller and 61.33 59 P P 10 12 18.4 +0.2
baz=315
H56A Elgin 61.41 54 P P 10 12 18.7 0.0
baz=315,SNR=14
WMQ Urumqi 61.48 305 *eP* **P 10 12 20.4 +1.2**
WMQ pP pwP 10 12 30.1 -2.1
WMQ PcP **PcP 10 13 03.4 +2.4**
WMQ pmax pmax
comp=Z,28nm,0.7s
WMQ pmax pmax
comp=Z,71nm,4.1s
WMQ LR LR
comp=Z,240nm,28.9s
WMQ LR LR
comp=Z,180nm,24.9s
WMQ LR LR
comp=Z,180nm,29.2s
L54A Sinclairville 61.50 57 P P 10 12 19.9 +0.5
baz=315
J55A Hilton 61.55 56 P P 10 12 19.7 +0.1
baz=315,SNR=5.1
K54A Basiliko Farm, 61.56 57 P P 10 12 19.8 0.0
baz=315

Q51A	Peebles		61.56	62	P		P	10 12 19.7	-0.1
	baz=315								
E58A	La Victoria		61.62	50	P		P	10 12 19.1	-0.9
	baz=316								
O52A	Adamsville		61.63	61	P		P	10 12 20.5	+0.3
	baz=315								
G57A	Newington		61.69	52	P		P	10 12 19.8	-0.8
	baz=316,SNR=7.6								
WVNY	West Valley, N		61.75	57	P		P	10 12 21.1	+0.1
K55A	Perry		61.80	56	P		P	10 12 21.9	+0.5
	baz=315								
D59A	Saint-Raymond		61.86	49	P		P	10 12 21.2	-0.5
	baz=316								
O53A	New Philadelph		61.88	60	P		P	10 12 22.4	+0.5
	baz=315								
L55A	Hinsdale		62.00	57	P		P	10 12 23.1	+0.4
	baz=315								
MK31	Makanchi Array		62.03	311	P		P	10 12 21.6	-1.3
MK31					pmax		pmax		
	comp=Z,6.0nm,0.6s								
MK31	Makanchi Array		62.03	311	P		P	10 12 21.6	-1.3
MK31					lAmb		lAmb	10 12 23.1	
	comp=Z,5.8nm,0.6s								
MKAR	Makanchi Array		62.03	311	P		P	10 12 22.4	-0.5
	comp=Z,5.7nm,0.3s,baz=41,slow=6.7,SNR=165								
MKAR					LR		LR	10 41 46.3	
	comp=Z,122nm,18.0s,baz=36,slow=38								
J56A	Wolcott		62.04	55	P		P	10 12 23.2	+0.3
	baz=316,SNR=9.5								
J56A	Wolcott		62.04	55	P		P	10 12 21.7	-1.2
G58A	Ormstown		62.12	52	P		P	10 12 22.8	-0.7
	baz=316								
MAKZ	Makanchi		62.16	311	P		P	10 12 23.3	-0.5
MAKZ	Makanchi		62.16	311	P		P	10 12 23.3	-0.5
MAKZ					lAmb		lAmb	10 12 24.1	
	comp=Z,6.6nm,0.7s								
I57A	Carthage		62.18	54	P		P	10 12 23.8	-0.1
	baz=316,SNR=6.1								
K56A	Middlesex		62.21	56	P		P	10 12 24.7	+0.6
	baz=316,SNR=12								
LONY	Lake Ozonia		62.23	53	P		P	10 12 23.4	-0.8
	baz=316,SNR=5.9								
LONY	Lake Ozonia		62.23	53	P		P	10 12 23.9	-0.3
LONY					lAmb		lAmb	10 12 24.6	
	comp=Z,16nm,1.1s								
F59A	Saint Guilaume		62.24	51	P		P	10 12 23.6	-0.6
	baz=316								
P53A	Whipple		62.32	61	P		P	10 12 24.6	-0.3
	baz=315								
M55A	Ridgway		62.33	58	P		P	10 12 25.0	+0.1
	baz=316								
M55A	Ridgway		62.33	58	P		P	10 12 25.8	+0.8
D60A	Saint Jean D'O		62.36	49	P		P	10 12 24.2	-0.8
	baz=317								
O54A	Avella		62.38	60	P		P	10 12 24.1	-1.2
	baz=315								
J57A	Williamstown		62.39	54	P		P	10 12 25.5	+0.2
	baz=316,SNR=9.2								
J57A	Williamstown		62.39	54	P		P	10 12 25.7	+0.4
BORG	Borgarnes		62.45	12	LR		LR	10 40 26.3	
	comp=Z,33nm,19.8s,baz=349,slow=37								
L56A	Greenwood		62.49	56	P		P	10 12 25.9	-0.1
	baz=316,SNR=6.2								
L56A	Greenwood		62.49	56	P		P	10 12 26.7	+0.6
D61A	St Aubert, Com		62.49	48	P		P	10 12 25.1	-0.8
	baz=317								
E60A	Ste Agathe de		62.50	49	P		P	10 12 25.0	-1.0
	baz=317								
F60A	Warwick		62.55	50	P		P	10 12 25.4	-0.9
	baz=317								
BRVK	Borovoye		62.55	322	P		P	10 12 26.5	+0.3
BRVK					pmax		pmax		
	comp=Z,6.0nm,0.5s								
BRVK	Borovoye		62.55	322	P		P	10 12 26.5	+0.3
BRVK					lAmb		lAmb	10 12 28.6	
	comp=Z,6.2nm,0.5s								
H58A	Gabriels		62.58	53	P		P	10 12 26.1	-0.5
	baz=316								
G59A	Clarenceville		62.60	51	P		P	10 12 26.3	-0.4
	baz=316								
K57A	Scipio Center		62.60	55	P		P	10 12 26.9	+0.1
	baz=316,SNR=7.2								
M56A	Emporium		62.63	57	P		P	10 12 27.4	+0.4
	baz=316								
H59A	Cadyville		62.66	52	P		P	10 12 26.5	-0.6
	baz=316								
Q53A	Leroy		62.69	61	P		P	10 12 27.2	-0.2
	baz=315								
N55A	Marion Center		62.70	58	P		P	10 12 26.9	-0.5
	baz=316								
I58A	Old Forge		62.71	54	P		P	10 12 27.3	-0.1
	baz=316,SNR=5.4								
P54A	Burton		62.73	60	P		P	10 12 27.0	-0.6
	baz=316								
J58A	Remsen		62.78	54	P		P	10 12 27.9	0.0
	baz=316,SNR=8.1								
J58A	Remsen		62.78	54	P		P	10 12 27.7	-0.3
GYA	Guiyang		62.84	279⇑	*i*P		P	10 12 29.3	+0.6
GYA					pP		pwP	10 12 43.4	+2.1
GYA					PP		PP	10 14 49.6	+2.8
GYA					S		S	10 20 51.6	-4.9
GYA					sS		sS	10 21 10.3	+2.3
GYA					SS		SS	10 24 52.5	-8.8
GYA					pmax		pmax		
	comp=Z,10.0nm,1.0s								
GYA					pmax		pmax		
	comp=Z,90nm,3.5s								
GYA					LR		LR		
	comp=Z,90nm,7.0s								
GYA					LR		LR		
	comp=Z,100nm,5.3s								
GYA					LR		LR		
	comp=Z,50nm,5.9s								
E61A	Lac Etchemin		62.91	49	P		P	10 12 28.3	-0.5
	baz=317								
O55A	Ligonier		62.94	59	P		P	10 12 28.7	-0.3
	baz=316								
L57A	Andrews Acres		62.95	56	P		P	10 12 29.2	+0.1
	baz=316,SNR=6.4								
N56A	West Decatur		62.97	58	P		P	10 12 29.3	0.0
	baz=316								
G60A	Masonville		63.00	51	P		P	10 12 29.6	+0.3
	baz=317								
F61A	St Evariste		63.01	49	P		P	10 12 28.9	-0.5
	baz=317								
K58A	Earlville		63.03	55	P		P	10 12 29.9	+0.3
	baz=316,SNR=6.8								
K58A	Earlville		63.03	55	P		P	10 12 30.4	+0.8
J59A	Piesco		63.10	53	P		P	10 12 29.7	-0.4
	baz=316,SNR=6.5								
D62A	Allapoint, All		63.11	48	P		P	10 12 29.8	-0.2
	baz=318,SNR=7.9								
P55A	Reedsville		63.15	60	P		P	10 12 31.1	+0.6
	baz=316								
I59A	Olmsteadville		63.18	53	P		P	10 12 30.3	-0.3
	baz=317,SNR=5.2								
H60A	Morristown		63.21	52	P		P	10 12 30.1	-0.6
	baz=317								
G61A	St-Isidore-de-		63.26	50	P		P	10 12 30.5	-0.5
	baz=317								
BINY	Binghamton		63.26	55	P		P	10 12 31.2	0.0
	baz=316								
M57A	Sunshine Farm,		63.28	57	P		P	10 12 31.6	+0.3
	baz=316								
O56A	Blue Knob Stat		63.29	58	P		P	10 12 32.7	+1.3
	baz=316								
Q55A	Buckhannon		63.38	60	P		P	10 12 32.3	+0.3
	baz=316								
SSPA	Standing Stone		63.39	58	P		P	10 12 32.5	+0.5
	baz=316								
SSPA	Standing Stone		63.39	58	P		P	10 12 32.0	0.0
K59A	Cooperstown		63.43	54	P		P	10 12 32.3	0.0
	baz=316,SNR=5.1								
I60A	Shoreham		63.44	52	P		P	10 12 31.8	-0.4
	baz=317								
L58A	Harry Jones Me		63.44	55	P		P	10 12 32.6	+0.2
	baz=316,SNR=11								
T53A	Wise		63.46	63	P		P	10 12 32.3	-0.3
	baz=316								
R54A	Victor		63.46	62	P		P	10 12 33.4	+0.9
	baz=316								
N57A	Milroy		63.48	57	P		P	10 12 32.5	-0.1
	baz=316								
S54A	Dingess, Beckl		63.56	62	P		P	10 12 33.3	+0.1
	baz=316								
D63A	Stockholm		63.58	47	P		P	10 12 32.6	-0.5
	baz=318								
ACCN	Adirondack Com		63.58	53	P		P	10 12 33.1	-0.2
H61A	Lyndonville		63.61	51	P		P	10 12 32.8	-0.6
	baz=317								
M58A	Price's Panora		63.61	56	P		P	10 12 33.4	-0.1
	baz=316,SNR=5.5								
P56A	Dayton Farm, R		63.69	59	P		P	10 12 33.5	-0.5
	baz=316								
L59A	Walton		63.75	55	P		P	10 12 33.7	-0.7
	baz=317,SNR=7.9								
L59A	Walton		63.75	55	P		P	10 12 35.2	+0.7
G62A	West of Eustis		63.78	50	P		P	10 12 34.2	-0.3
	baz=318,SNR=6.1								
J60A	Lant Hill Farm		63.81	53	P		P	10 12 34.4	-0.3
	baz=317,SNR=9.1								
LBNH	Lisbon		63.82	51	P		P	10 12 34.4	-0.5
	baz=317								
O57A	Amberson		63.83	58	P		P	10 12 35.1	+0.2
	baz=316								
KSPA	Keystone Colle		63.84	56	P		P	10 12 35.2	+0.3
N58A	Sunbury		63.86	57	P		P	10 12 34.5	-0.6
	baz=316								
E63A	Oxbow		63.89	48	P		P	10 12 34.2	-1.0
	baz=318,SNR=5.6								
E63A	Oxbow		63.89	48	P		P	10 12 34.2	-1.0
I61A	Oroboro, Fairl		63.91	52	P		P	10 12 35.2	-0.2
	baz=317								
T54A	Tazewell		63.94	63	P		P	10 12 36.0	+0.3
	baz=316								
ARU	Arti		63.95	330	P		P	10 12 35.3	-0.2
	comp=Z,1.4nm,0.3s,baz=356,slow=3.7,SNR=5.9								
ARU	Arti		63.95	330	*d i*P		P	10 12 36.1	+0.7
ARU								10 13 10.6	
ARU								10 14 53.2	
ARU						S	S	10 21 09.6	+0.4
ARU						SS	SS	10 25 15.7	-1.2
ARU						pmax	pmax		
	comp=Z,5.0nm,0.6s								
ARU	Arti		63.95	330		lAmb	lAmb	10 12 52.4	
	comp=Z,6.2nm,0.5s								
H62A	Milan		63.95	51	P		P	10 12 35.2	-0.5
	baz=318,SNR=8.1								
M59A	Waymart		64.02	55	P		P	10 12 36.6	+0.4
	baz=317,SNR=7.7								
S55A	Lewisburg		64.02	62	P		P	10 12 37.1	+0.8
	baz=316								
F63A	Nahmakanta, Br		64.10	49	P		P	10 12 35.9	-0.7
	baz=318								
P57A	Homestead Farm		64.15	59	P		P	10 12 37.1	+0.1
	baz=316								
E64A	Bridgewater		64.17	47	P		P	10 12 36.2	-0.8
	baz=318,SNR=8.7								
J61A	Chester		64.17	52	P		P	10 12 37.1	0.0
	baz=317								
Q57A	Strasburg		64.26	59	P		P	10 12 39.1	+1.4
	baz=316								
O58A	Lewisberry		64.27	57	P		P	10 12 38.3	+0.5
	baz=317								
G63A	Kingsbury		64.29	49	P		P	10 12 37.1	-0.8
	baz=318								
N59A	State Game Lan		64.30	56	P		P	10 12 38.2	+0.2
	baz=317								
L60A	Shokan		64.32	54	P		P	10 12 38.5	+0.4
	baz=317								
F64A	Sherman		64.34	48	P		P	10 12 37.5	-0.6
	baz=318,SNR=5.0								
PKME	Peaks-Kenny Pk		64.34	49	P		P	10 12 37.6	-0.6
	baz=318								
I62A	Tamworth		64.38	51	P		P	10 12 37.5	-1.0
	baz=318								
H63A	New Sharon		64.43	50	P		P	10 12 38.2	-0.5
	baz=318								
L61A	Hillsdale 1, H		64.51	54	P		P	10 12 38.9	-0.4
	baz=317								
O59A	Robesonia		64.52	57	P		P	10 12 39.5	+0.1
	baz=317								
M60A	Port Jervis		64.59	55	P		P	10 12 39.9	0.0
	baz=317,SNR=6.7								
G64A	Maxfield		64.60	49	P		P	10 12 39.3	-0.6
	baz=318								
S56A	Natural Bridge		64.61	61	P		P	10 12 40.3	+0.3
	baz=316								
I63A	Otisfield		64.62	51	P		P	10 12 40.0	0.0
	baz=318								
J62A	Henniker		64.62	52	P		P	10 12 39.2	-0.8
	baz=318								
U55A	TAZ, Sparta		64.63	63	P		P	10 12 40.3	0.0
	baz=316								
V54A	Nebo		64.65	64	P		P	10 12 41.0	+0.7
	baz=316								
N60A	Cedar Hill Far		64.68	56	P		P	10 12 40.7	+0.2
	baz=317								
Q58A	Fox Den Farm,		64.72	59	P		P	10 12 40.7	-0.1
	baz=317								
R57A	Stanardsville		64.73	60	P		P	10 12 41.0	+0.2
	baz=317								
L61B	Northampton		64.76	53	P		P	10 12 40.7	-0.2
	baz=318								
K62A	Royalston		64.83	53	P		P	10 12 41.1	-0.3
	baz=318								
H64A	Troy		64.84	49	P		P	10 12 40.7	-0.7
	baz=318								
KLMR	Klimovskoe		64.85	342	*e*P		P	10 12 38.7	-2.5
KLMR					pmax		pmax		
	comp=Z,12nm,1.1s								
KLMR	Klimovskoe		64.85	342	*e*P		P	10 12 38.7	-2.5
KLMR					AMP			10 12 40.9	
	comp=Z,12nm,1.1s								
P59A	Jarrettsville		64.90	58	P		P	10 12 41.8	-0.1
	baz=317								
M61A	Granite Spring		65.05	55	P		P	10 12 42.4	-0.4
	baz=318								
K63A	Dunstable		65.16	52	P		P	10 12 43.4	-0.1
	baz=318								
I64A	Boothbay		65.17	50	P		P	10 12 43.1	-0.5
	baz=318								
G65A	Princeton		65.20	48	P		P	10 12 43.1	-0.7
	baz=319								
H65A	Eastbrook		65.26	49	P		P	10 12 43.1	-1.0
	baz=319								
HRV	Adam Dziewonsk		65.28	52	P		P	10 12 44.0	-0.3
	baz=318								
KMSC	Kings Mountain		65.45	64	P		P	10 12 45.8	+0.2
	baz=317								
H66A	Whiting		65.63	48	P		P	10 12 45.6	-0.9
	baz=319								
X55A	Gracelyn & Ava		65.77	65	P		P	10 12 46.7	-1.0
	baz=317								
T59A	Double "B" Far		66.22	60	P		P	10 12 51.4	+1.0
	baz=317								
KMI	Kunming		66.24	281	P		P	10 12 53.0	+2.0
KMI					pmax		pmax		
	comp=Z,18nm,0.9s								
FINES	FINESS Array B		66.36	349	P		P	10 12 49.6	-1.4
	comp=Z,4.7nm,0.6s,baz=12,slow=7.7,SNR=16								
FINES					LR		LR	10 45 08.9	
	comp=Z,61nm,19.8s,baz=43,slow=39								
FINES	FINESS Array B		66.36	349	*i* P		P	10 12 49.9	-1.0
FINES					pmax		pmax		
	comp=Z,5.0nm,0.6s								
X58A	Rowland		67.00	63	P		P	10 12 56.8	+1.3
	baz=318								
NC204	NORSAR Array S		67.67	357	P		P	10 12 59.0	-0.4
NC204					PcP		PcP	10 13 24.1	-2.1
NC303	NORSAR Array S		67.70	357	P		P	10 12 58.9	-0.6
NOA	NORSAR Array B		67.89	357	P		P	10 13 00.0	-0.7
	comp=Z,8.8nm,0.8s,baz=3.5,slow=6.3,SNR=23								
NOA					LR		LR	10 43 00.2	
	comp=Z,34nm,20.1s,baz=355,slow=36								
TARG	Taragay, Kyrgy		67.94	310	lAmb		lAmb	10 13 04.2	
	comp=Z,5.2nm,0.6s								
NAO01	NORSAR Array S		68.10	357	P		P	10 13 01.1	-0.9
SLVN	Son La		68.30	277	P		P	10 13 02.6	-1.4
SLVN					lAmb		lAmb	10 13 07.4	
	comp=Z,9.1nm,0.7s								
AAK	Ala-Archa		68.81	312	*c i*P		P	10 13 07.7	+0.7
AAK					pmax		pmax		
	comp=Z,7.0nm,0.7s								
AAK	Ala-Archa		68.81	312	P		P	10 13 06.8	-0.1
AAK					lAmb		lAmb	10 13 08.7	
	comp=Z,16nm,1.2s								
PMG	Port Moresby		68.84	221⇑	*e*P		P	10 13 10.0	+2.9
PMG					pmax		pmax		
	comp=Z,144nm,1.3s								
AKTO	Aktyubinsk		69.16	327	P		P	10 13 08.9	+0.1
	comp=Z,8.4nm,0.6s,baz=59,slow=7.5,SNR=26								
AKTO					LR		LR	10 44 40.5	
	comp=Z,24nm,21.6s,baz=39,slow=37								
VSU	Vasula		69.18	348	*de*P		P	10 13 08.2	-0.5
VSU					pmax		pmax		
	comp=Z,50nm,0.7s								
PMOR	Pomariorio Ree		70.08	152	*e*T		T	11 29 43.3	
	comp=Z,3.0nm,0.3s								
KK31	Karatay Array		70.26	315	P		P	10 13 16.1	+0.4
KK31					pmax		pmax		
	comp=Z,7.0nm,0.8s								
KK31	Karatay Array		70.26	315	P		P	10 13 16.1	+0.4
KK31					lAmb		lAmb	10 13 16.9	
	comp=Z,6.7nm,0.8s								
KKAR	Karatay Array		70.26	315	P		P	10 13 16.0	+0.3
KKAR					pmax		pmax		
	comp=Z,7.0nm,0.8s								
KKAR	Karatay Array		70.26	315	P		P	10 13 16.0	+0.3
KKAR					lAmb		lAmb	10 13 16.9	
	comp=Z,6.7nm,0.8s								
KSH	Kashi		70.53	309	P		P	10 13 21.8	+4.2
KSH					sP		PcP	10 13 41.3	+2.6
KSH					PP		PP	10 15 56.6	+3.2
KSH					S		S	10 22 30.3	+1.1
KSH					SKS		SKSac	10 23 15.5	-2.1
KSH					SS		SS	10 27 03.8	+4.0
KSH					pmax		pmax		
	comp=Z,64nm,1.1s								
KSH					pmax		pmax		
	comp=Z,310nm,4.2s								
KSH					LR		LR		
	comp=Z,110nm,8.1s								
KSH					LR		LR		
	comp=Z,140nm,11.9s								
KSH					LR		LR		
	comp=Z,200nm,13.8s								
ARSB	Arslanbob		70.54	312	P		P	10 13 17.6	0.0
ARSB					pmax		pmax		
	comp=Z,13nm,0.9s								
ARSB	Arslanbob		70.54	312	P		P	10 13 17.6	0.0
ARSB					lAmb		lAmb	10 13 20.0	
	comp=Z,13nm,0.9s								
OBN	Obninsk		70.78	342⇓	*e*P		P	10 13 18.0	-0.6
OBN					*e*			10 15 53.3	
OBN					pmax		pmax		
	comp=Z,15nm,1.0s								
PPT	Papeete		72.05	155	LR		LR	10 38 23.4	
	comp=Z,97nm,21.7s,baz=324,slow=30								
PPT2	Papeete2		72.07	155	*e*LR		LR	10 35 46.2	
	comp=Z,108nm,21.5s								
PPT2	Papeete2		72.07	155	*e*T		T	11 32 11.3	
	comp=Z,2.9nm,0.3s								
LPSR	Galich'ya Gora		72.63	339	*e*P		P	10 13 28.8	-1.0
LPSR					pmax		pmax		
	comp=Z,10.0nm,0.6s								
CMAR	Chiang Mai Arr		73.53	279	P		P	10 13 36.5	+0.8
	comp=Z,2.9nm,0.7s,baz=27,slow=6.8,SNR=15								
CMAR					LR		LR	10 49 01.8	
	comp=Z,30nm,19.6s,baz=95,slow=38								
CMAR	Chiang Mai Arr		73.53	279	*i* P		P	10 13 36.7	+1.0
CMAR					pmax		pmax		
	comp=Z,3.0nm,0.6s								
TAPN	Taplejung		73.58	293	*e*P		P	10 13 37.4	+1.2
	comp=Z,77nm,0.8s								
GAR	Garm		73.63	313	P		P	10 13 36.4	+0.2
VSR	Storozhevoye		73.87	339	*e*P		P	10 13 36.0	-1.1
VSR					pmax		pmax		
	comp=Z,30nm,1.3s								
ODAN	Odare		74.14	293	*e*P		P	10 13 40.3	+0.9
	comp=Z,46nm,1.0s								
GUN	Gumba		74.21	295	*e*P		P	10 13 41.1	+1.1
	comp=Z,104nm,0.6s								
JIRN	Jiri		74.22	294	*e*P		P	10 13 41.3	+1.2
	comp=Z,215nm,0.7s								
CHGR	Chuyangaron		74.44	313	P		P	10 13 40.5	-0.3
RAMN	Ramite		74.53	294	*e*P		P	10 13 42.6	+0.9
	comp=Z,140nm,0.7s								
KKN	Kakani		74.64	295	*e*P		P	10 13 43.4	+1.1
	comp=Z,42nm,0.6s								
PKI	Pulchoki		74.73	295	*e*P		P	10 13 43.7	+0.7
	comp=Z,100nm,1.1s								
PKIN	Phulchoki		74.73	295	*e*P		P	10 13 43.6	+0.7
	comp=Z,83nm,1.0s								
GKN	Gorkha		74.84	296	*e*P		P	10 13 44.1	+0.7
	comp=Z,73nm,0.7s								
DMN	Daman		74.88	295	*e*P		P	10 13 44.8	+1.1
	comp=Z,66nm,0.9s								
BSEG	Bad Segeberg		75.03	357	*e*P		P	10 13 44.3	+0.5
	comp=Z,22nm,0.9s,baz=4.7,slow=5.6								
DANN	Dangsing		75.07	297	*e*P		P	10 13 45.9	+1.0
	comp=Z,148nm,0.8s								
KOLN	Koldanda		75.60	296	*e*P		P	10 13 48.6	+0.7
	comp=Z,48nm,0.6s								
PYUN	Piuthan		75.69	297	*e*P		P	10 13 49.4	+1.0
RETH	RethemAller,		76.26	357	*e*P		P	10 13 51.1	+0.3
	comp=Z,14nm,1.1s,baz=4.7,slow=5.6								
AKASG	Malin Array Be		76.33	345	P		P	10 13 50.1	-1.3
	comp=Z,2.9nm,0.3s,baz=18,slow=5.9,SNR=11								
AKBB	Malin Array Si		76.33	345	P		P	10 13 50.1	-1.2
AKBB					pmax		pmax		
	comp=Z,7.0nm,0.5s								
AKBB	Malin Array Si		76.33	345	P		P	10 13 50.1	-1.2
AKBB					lAmb		lAmb	10 13 50.9	
	comp=Z,7.1nm,0.5s								
NRDL	Niedersach Rie		76.48	357	*e*P		P	10 13 52.2	+0.2
	comp=Z,8.4nm,1.1s,baz=4.7,slow=5.6								
NIL	Nilore		76.50	307	P		P	10 13 53.8	+1.1
NIL					pmax		pmax		
	comp=Z,36nm,0.9s								
NIL	Nilore		76.50	307	P		P	10 13 53.8	+1.1
IBBN	Ibbenburen		76.73	358	*e*P		P	10 13 53.8	+0.2
	comp=Z,30nm,0.8s,baz=4.7,slow=5.6								
ASSE	Asse, Remlinge		76.82	357	*e*P		P	10 13 54.2	+0.2
	comp=Z,14nm,1.1s,baz=4.7,slow=5.6								
CLZ	Clausthal		77.12	357	*e*P		P	10 13 56.2	+0.3
	comp=Z,17nm,0.9s,baz=4.7,slow=5.6								
GTTG	Gottingen		77.43	357	*e*P		P	10 13 58.0	+0.5
	comp=Z,19nm,1.0s,baz=4.7,slow=5.6								
SBUM	Sibu		77.52	258	P		P	10 13 59.8	+1.3
SBUM					lAmb		lAmb	10 14 00.5	
	comp=Z,3.0nm,0.6s								
CLL	Collm		77.54	355	*i* P		P	10 13 59.0	+0.9
	comp=Z,9.0nm,0.7s								
CLL	Collm		77.54	355	*e*P		P	10 13 58.5	+0.4
	comp=Z,9.1nm,0.7s,baz=4.7,slow=5.6								
CLL	Collm		77.54	355	*i* P		P	10 13 59.0	+0.9
CLL					pmax		pmax		
	comp=Z,9.0nm,0.7s								
BUG	Bochum--Univer		77.60	359	*e*P		P	10 13 58.1	-0.4
	comp=Z,16nm,1.0s,baz=4.7,slow=5.6								
TBI	Tubuai		77.61	156	*e*LR		LR	10 38 12.8	
	comp=Z,101nm,23.0s								
NEUB	Neuenburg		77.70	356	*e*P		P	10 13 58.7	-0.3
	baz=4.7,slow=5.6								
KBL	Kabul		77.83	311	P		P	10 14 00.0	-0.4
KBL					pmax		pmax		
	comp=Z,25nm,0.8s								
KBL	Kabul		77.83	311	P		P	10 13 60.0	-0.4
FBE	Freiberg		77.90	355	*e*P		P	10 14 00

WERN Wernitzgruen 78.59 355 *e*P **P 10 14 04.2 +0.1**
comp=Z,12nm,0.9s,baz=4.7,slow=5.6
NKC Novy Kostel 78.64 355 *e*P **P 10 14 04.2 -0.1**
NKC Novy Kostel 78.64 355 *e*P **P 10 14 04.2 -0.1**
BMRD Maredsous 78.75 0 P **P 10 14 05.0 +0.2**
comp=Z,14nm,0.9s
TNS Taunus Mts 78.80 358 *e*P **P 10 14 05.3 +0.1**
comp=Z,14nm,0.8s,baz=4.7,slow=5.6
MANZ Manzenberg 78.90 355 *e*P **P 10 14 05.8 0.0**
comp=Z,5.8nm,1.0s,baz=4.7,slow=5.6
DOU Dourbes 78.96 0 P **P 10 14 03.1 -2.9**
comp=Z,11nm,1.0s
KOLS Kolonicke sedl 79.07 349 *e*P **P 10 14 06.6 -0.1**
KOLS pmax pmax
comp=Z,5.0nm,1.2s
KOLS Kolonicke sedl 79.07 349 *e*P **P 10 14 06.6 -0.1**
ROTZ Rotzenmuhle 79.12 355 *e*P **P 10 14 06.8 -0.2**
comp=Z,3.7nm,0.8s,baz=4.7,slow=5.6
GRF Grafenberg Arr 79.24 356 *e*P **P 10 14 07.7 +0.2**
comp=Z,17nm,0.9s,baz=4.7,slow=5.6
VRAC Vranov 79.28 352 ⇓P **P 10 14 08.1 +0.3**
VRAC Vranov 79.28 352 ⇓P **P 10 14 08.1 +0.3**
WLF Walferdange 79.39 359 P **P 10 14 08.4 0.0**
WLF Walferdange 79.39 359 *e*P **P 10 14 09.1 +0.7**
comp=Z,8.9nm,0.6s,baz=4.7,slow=5.6
KHC Kasperske Hory 79.68 354⇓*e*P **P 10 14 09.5 -0.5**
KHC pmax pmax
comp=Z,20nm,1.3s
KHC Kasperske Hory 79.68 354 *e*P **P 10 14 09.8 -0.2**
KHC e*p*P **PcP 10 14 18.3 +0.5**
KHC Kasperske Hory 79.68 354 P **P 10 14 09.6 -0.4**
KIV Kislovodsk 79.71 333⇓*e*P **P 10 14 10.9 +0.6**
KIV pmax pmax
comp=Z,4.0nm,0.7s
GEYT Alibeck 79.80 320 P **P 10 14 11.4 +0.5**
comp=Z,7.4nm,0.8s,baz=321,slow=4.0,SNR=14
GEYT LR LR 10 54 02.1
comp=Z,87nm,19.4s,baz=170,slow=39
GYA0B ALIBECK ARRAY 79.80 320 P **P 10 14 10.8 0.0**
GYA0B IAmb IAmb 10 14 13.2
comp=Z,9.8nm,0.8s
TRPA Tarpa 79.83 348 ⇑P **P 10 14 10.5 -0.2**
KBZ Khabaz 79.86 333 P **P 10 14 11.3 +0.3**
comp=Z,2.3nm,0.7s,baz=67,slow=2.5,SNR=6.8
VYHS Vyhne 79.89 351 *e*P **P 10 14 10.8 -0.3**
VYHS Vyhne 79.89 351 *e*P **P 10 14 10.8 -0.3**
BUR08 Bucovina Ar. S 79.94 346 P **P 10 14 11.3 -0.2**
BUR08 IAmb IAmb 10 14 12.6
comp=Z,5.9nm,0.9s
GEC2 GERESS Array S 79.95 354 *e*P **P 10 14 11.5 -0.1**
comp=Z,4.5nm,1.0s,baz=4.7,slow=5.6
GEC2 GERESS Array S 79.95 354 P **P 10 14 11.4 -0.2**
GEC2 IAmb IAmb 10 14 12.4
comp=Z,3.7nm,0.8s
GERES GERESS Array B 79.95 354 P **P 10 14 10.9 -0.7**
comp=Z,3.3nm,0.8s,baz=15,slow=5.5,SNR=10
BURAR Bucovina Array 79.96 346 ⇓P **P 10 14 11.5 -0.2**
BURAR Bucovina Array 79.96 346 ⇓P **P 10 14 11.5 -0.2**
MODS Modra-Piesok 80.15 352 *e*P **P 10 14 12.2 -0.4**
MODS pmax pmax
comp=Z,9.0nm,1.1s
MODS Modra-Piesok 80.15 352 *e*P **P 10 14 12.2 -0.4**
ZEI Tsey 80.43 332 *e*P **P 10 14 13.6 -0.8**
ZEI pmax pmax
comp=Z,7.0nm,1.1s
BIZ Bicaz 80.49 346 ⇓P **P 10 14 14.7 +0.3**
BFO Black Forest 80.69 358 *e*P **P 10 14 15.6 +0.1**
comp=Z,4.7nm,0.8s,baz=4.7,slow=5.6
CONA Conrad Observa 80.71 353 *e*P **P 10 14 15.8 +0.1**
comp=Z,4.0nm,0.8s
ECH Echery 80.83 359 P **P 10 14 15.6 -0.7**
ECH pmax pmax
comp=Z,10.0nm,1.0s
ECH Echery 80.83 359 P **P 10 14 15.6 -0.7**
ECH IAmb IAmb 10 14 17.3
comp=Z,10nm,1.0s
CLF Chambon-Foret 81.00 2 P **P 10 14 16.1 -1.0**
HRA Herat 81.08 315 P **P 10 14 17.8 -0.3**
HRA IAmb IAmb 10 14 19.7
comp=Z,15nm,0.8s
RJOB Jochberg 81.11 355 *e*P **P 10 14 18.0 +0.3**
comp=Z,8.4nm,1.3s,baz=4.7,slow=5.6
WATA Walderalm 81.58 356 *e*P **P 10 14 20.9 +0.6**
comp=Z,3.2nm,0.5s
MOTA Moosalm 81.59 356 *e*P **P 10 14 21.2 +0.8**
comp=Z,7.4nm,1.1s
WTTA Wattenberg 81.64 356 *e*P **P 10 14 21.1 +0.4**
comp=Z,5.1nm,0.7s
DAVA Damuels 81.69 357 *e*PcP **P 10 14 21.9 +0.9**
comp=Z,7.9nm,1.2s
SQTA Sankt Quirin 81.71 356 *e*P **P 10 14 21.1 +0.1**
comp=Z,5.2nm,1.0s
KBA Koelnbreinsper 81.73 354 *e*P **P 10 14 21.9 +0.7**
comp=Z,11nm,0.8s
TLCR 81.74 343 ⇓P **P 10 14 21.2 +0.2**
TLCR 81.74 343 ⇓P **P 10 14 21.2 +0.2**
SIRR Siria 81.77 349 ⇑P **P 10 14 21.3 +0.1**
CFR Carcaliu 81.86 344 ⇓P **P 10 14 22.8 +1.1**
CFR Carcaliu 81.86 344 ⇓P **P 10 14 22.8 +1.1**
MLR Muntele Rosu 81.92 345 ⇓P **P 10 14 23.7 +1.5**
MLR Muntele Rosu 81.92 345 ⇓P **P 10 14 23.7 +1.5**
FETA Feichten 81.93 356 *e*P **P 10 14 22.4 +0.2**
comp=Z,5.8nm,1.0s
SOKA Soboth 82.02 353 *e*P **P 10 14 22.7 +0.1**
comp=Z,8.8nm,0.9s
VOIR 82.11 346 ⇓P **P 10 14 24.8 +1.6**
VOIR 82.11 346 ⇓P **P 10 14 24.8 +1.6**
OBKA Obir 82.22 354 *e*P **P 10 14 24.4 +0.7**
comp=Z,4.1nm,0.8s
ARR Arges 82.25 346 ⇓P **P 10 14 24.7 +0.9**
HARR Harsova 82.37 344 ⇑P **P 10 14 24.8 +0.4**
HARR Harsova 82.37 344 ⇑P **P 10 14 24.8 +0.4**
BZS Buzias 82.41 348 ⇓P **P 10 14 24.7 +0.1**
BZS Buzias 82.41 348 ⇓P **P 10 14 24.7 +0.1**
GZR Gura Zlata 82.48 348 ⇑P **P 10 14 25.1 +0.1**
GZR Gura Zlata 82.48 348 ⇑P **P 10 14 25.1 +0.1**
TIRR Tirgusor 82.51 343 ⇓P **P 10 14 25.8 +0.7**
TIRR Tirgusor 82.51 343 ⇓P **P 10 14 25.8 +0.7**
HERR Herculane 83.03 348 ⇓P **P 10 14 28.2 +0.4**
WB0 Warramunga Arr 83.60 227 P **P 10 14 30.2 -0.7**
WB0 IAmb IAmb 10 14 31.7
comp=Z,11nm,1.3s
WR0 Warramunga Arr 83.70 227 P **P 10 14 31.2 -0.2**
WR0 IAmb IAmb 10 14 47.9
comp=Z,3.0nm,0.8s
WRAB Tennant Creek 83.77 227⇑*e*P **P 10 14 33.7 +1.9**
WRAB pmax pmax
comp=Z,17nm,2.5s
WRA Warramunga Arr 83.78 227 P **P 10 14 31.4 -0.5**
comp=Z,1.2nm,0.7s,baz=32,slow=5.6,SNR=7.1
WRA Warramunga Arr 83.78 227 *i* P **P 10 14 31.3 -0.6**
WRA pmax pmax
comp=Z,1.0nm,0.7s
BNI Bardonecchia 84.00 359 P **P 10 14 33.3 +0.3**
BNI pmax pmax
comp=Z,7.0nm,1.0s
BNI Bardonecchia 84.00 359 P **P 10 14 33.3 +0.3**
BNI IAmb IAmb 10 14 36.7
comp=Z,7.2nm,1.0s
PLVB Pleven 84.18 346 ⇓P **P 10 14 34.4 +0.6**
VTS Vitosha 85.14 347 ⇑P **P 10 14 37.2 -1.6**
VTS Vitosha 85.14 347 P **P 10 14 38.4 -0.4**
VTS pmax pmax
comp=Z,7.0nm,0.7s
VTS Vitosha 85.14 347 P **P 10 14 38.4 -0.4**
VTS IAmb IAmb 10 14 39.6
comp=Z,6.7nm,0.7s
PDG Podgorica 85.84 350 ⇑P **P 10 14 41.2 -0.8**
BR131 Keskin Array S 85.99 338 P **P 10 14 43.2 +0.1**
BR131 pmax pmax
comp=Z,4.0nm,1.0s
BR131 Keskin Array S 85.99 338 P **P 10 14 43.1 +0.1**
BR131 IAmb IAmb 10 14 44.0
comp=Z,4.0nm,1.0s
BRTR Keskin Array B 85.99 338 P **P 10 14 42.7 -0.3**
comp=Z,3.2nm,1.0s,baz=43,slow=2.2,SNR=13
BRTR Keskin Array B 85.99 338 *i* P **P 10 14 43.2 +0.1**
BRTR pmax pmax
comp=Z,3.0nm,1.0s
ASAR Alice Springs 87.21 226 P **P 10 14 49.1 +0.2**
comp=Z,2.4nm,0.9s,baz=19,slow=5.3,SNR=16
ESDC Sonseca Array 89.03 7 P **P 10 14 57.0 -0.6**
comp=Z,3.4nm,1.1s,baz=342,slow=4.6,SNR=9.0
STKA Stephens Creek 91.31 216 P **P 10 15 08.8 +0.9**
comp=Z,1.6nm,0.8s,baz=356,slow=10,SNR=4.0
STKA Stephens Creek 91.31 216 P **P 10 15 08.0 +0.1**
STKA pmax pmax
comp=Z,2.0nm,1.1s
STKA Stephens Creek 91.31 216 P **P 10 15 08.0 +0.1**
RAYN Ar Rayn 97.50 323 P **P 10 15 36.1 -0.7**
RAYN pmax pmax
comp=Z,7.0nm,1.0s
RAYN Ar Rayn 97.50 323 P **P 10 15 36.1 -0.7**
TORD Torodi Ar. Bea 115.73 4 PKP **PKiKP 10 20 44.8 -0.4**
comp=Z,0.8nm,0.7s,baz=3.1,slow=2.4,SNR=4.6
H03N2 Juan Fernandez 118.70 108 T T 12 31 22.8
baz=317,slow=77,SNR=7.3
H03N1 Juan Fernandez 118.72 108 T T 12 31 19.6
baz=317,slow=77,SNR=14
H03N3 Juan Fernandez 118.72 108 T T 12 31 09.1
baz=317,slow=77,SNR=11
PLCA Paso Flores 128.54 110 PKP **PKPdf 10 21 09.2 +0.2**
comp=Z,1.2nm,0.7s,baz=303,slow=3.1,SNR=2.9
PLCA Paso Flores 128.54 110 PKIKP **PKPdf 10 21 08.4 -0.6**
PLCA Paso Flores 128.54 110 **PKPdf 10 21 08.4 -0.6**
MAW Mawson 147.98 218 PKPbc **PKPbc 10 21 47.1 +0.6**
comp=Z,6.5nm,0.8s,baz=78,slow=1.0,SNR=12
MAW Mawson 147.98 218 PKP2 **PKPbc 10 21 46.5 0.0**
MAW Mawson 147.98 218 **PKPbc 10 21 46.5 0.0**
SNAA Sanae 159.25 173 PKPab **PKPab 10 22 38.1 +1.2**
SNAA Sanae 159.25 173 PKPab **PKPab 10 22 38.2 +1.2**
comp=Z,1.6nm,0.9s,baz=216,slow=8.0,SNR=5.6

*IDC **16** 10:13:26.9±0.6, 16°.42S×173°.29W, h0km, mb4.5/14, mb1 4.7/15, mb1mx4.5/33, mbtmp4.5/15, ML3.5/1, MS3.7/7, Ms1 3.7/7, ms1mx3.3/32, Error ellipse: s-maj=25.7km s-min=15.9km az=139.0*
*NEIC **16** 10:13:28.3±1.7, 16°.30S±0°.06×173°.15W±0°.08, h10km±1km, mb4.7/114, Error ellipse: s-maj=12.6km s-min=9.5km az=100.0*
ISC 16 10:13:30.6±0.6, 16°.38S±0°.05×173°.10W±0°.06, h31km±3km**, h31**km**:pP-P, n245,** σ1s**41**/230**, mb4.7**/67**, MS3.7**/9**, 14C-8D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.76**	**28**	Pn	**Pn**	**10 14 11.1**	**-1.7**
AFI				Sn	**Sn**	**10 14 40.5**	**-4.8**
NIUE	**Niue**	**4.04**	**132**		**Pn**	**10 14 30.7**	**+0.3**
NIUE				Sn	**Sn**	**10 15 13.3**	**-3.4**
MSVF	**Nonsavu**	**8.58**	**260**	Pn	**Pn**	**10 15 31.3**	**-1.5**
RAR	**Rarotonga**	**13.50**	**113**	Pn	**Pn**	**10 16 40.3**	**+0.2**
	2.5nm,0.3s,baz=270,slow=7.9,SNR=6.2						
RAR				LR	LR	10 20 45.9	
	comp=Z,244nm,19.6s,baz=341,slow=32						
RAR	**Rarotonga**	**13.50**	**113**	Pn	**Pn**	**10 16 40.7**	**+0.6**
KNTN	**Kanton**	**13.58**	**6**	Pn	**Pn**	**10 16 40.2**	**-1.1**
DZM	**Mont Dzumac**	**20.13**	**250**	*e*P	Pn	10 18 06.6	+2.3
	93nm,0.9s						
DZM				*e*S	**S**	**10 21 46.2**	**-0.8**
	143nm,25.4s						
DZM				*e*LR	LR	10 22 57.0	
	comp=Z,659nm,25.7s						
DZM	**Mont Dzumac**	**20.13**	**250**	LR	LR	10 24 32.9	
	comp=Z,416nm,21.5s,baz=70,slow=33						
PAE	**Paea**	**22.52**	**97**	*e*T	T	10 41 47.0	
	5.1nm,0.3s						
PPT	**Papeete**	**22.52**	**96**	LR	LR	10 25 04.2	
	comp=Z,113nm,19.8s,baz=273,slow=31						
PPT2	**Papeete2**	**22.52**	**96**	*e*S	**S**	**10 22 28.3**	**-5.3**
	123nm,25.8s						
PPT2				*e*LR	LR	10 23 49.4	
	comp=Z,302nm,24.8s,baz=245						
PPT2	**Papeete2**	**22.52**	**96**	*e*T	T	10 41 48.4	
	10nm,0.4s						
TIAR	**Tiarei**	**22.75**	**96**	*e*T	T	10 42 04.3	
	4.4nm,0.3s						
TVO	**Taravao**	**22.83**	**97**	*e*T	T	10 42 10.9	
	3.3nm,0.4s						
TBI	**Tubuai**	**23.27**	**111**	*e*S	**S**	**10 22 42.4**	**-3.7**
	174nm,27.0s						
TBI				*e*LR	LR	10 24 15.1	
	comp=Z,360nm,26.0s						
TBI	**Tubuai**	**23.27**	**111**	*e*T	T	10 42 45.4	
	21nm,0.3s						
URZ	**Urewera**	**23.44**	**200**	P	**P**	**10 18 37.8**	**+0.6**
	15nm,0.8s,baz=305,slow=5.9,SNR=7.4						
URZ	**Urewera**	**23.44**	**200**	P	**P**	**10 18 35.7**	**-1.6**
URZ				IAmb	IAmb	10 18 51.1	
	comp=Z,34nm,1.2s						
MEH	**Mehetia**	**23.96**	**97**	*e*T	T	10 43 35.4	
	comp=Z,9.0nm,0.2s						
PMOR	**Pomariorio Ree**	**24.30**	**90**	*e*T	T	10 43 59.3	
	comp=Z,5.5nm,0.3s						
BKZ	**Black Stump Fm**	**24.47**	**200**	P	**P**	**10 18 47.5**	**+0.6**
BKZ				IAmb	IAmb	10 18 58.2	
	comp=Z,30nm,1.3s						
VAH	**Vaihoa**	**24.53**	**91**	*e*T	T	10 44 16.5	
	comp=Z,14nm,0.3s						
HNR	**Honiara**	**27.15**	**281**	LR	LR	10 28 14.9	
	comp=Z,519nm,20.9s,baz=115,slow=33						
TAOE	**Nuku Hiva Isla**	**32.97**	**81**	*e*T	T	10 54 48.0	
	comp=Z,56nm,0.2s						
ARMA	**Armidale**	**35.10**	**240**	P	**P**	**10 20 20.2**	**-1.3**
ARMA				IAmb	IAmb	10 20 33.6	
	comp=Z,7.3nm,0.6s						
RKT	**Rikitea**	**36.42**	**107**	*e*T	T	10 59 10.7	
	comp=Z,9.0nm,0.3s						
CTAO	**Charters Tower**	**38.72**	**258**	P	**P**	**10 20 49.8**	**-2.5**
H11S2	**WAKE ISLAND Hy**	**39.95**	**329**	T	T	11 02 41.0	
	baz=149,slow=76,SNR=38						
H11S3	**WAKE ISLAND Hy**	**39.96**	**329**	T	T	11 02 41.5	
	baz=149,slow=76,SNR=25						
H11S1	**WAKE ISLAND Hy**	**39.96**	**329**	T	T	11 02 44.2	
	baz=149,slow=76,SNR=33						
H11N3	**WAKE ISLAND Hy**	**40.90**	**331**	T	T	11 03 56.2	
	baz=150,slow=76,SNR=54						
H11N1	**WAKE ISLAND Hy**	**40.90**	**331**	T	T	11 03 53.4	
	baz=150,slow=76,SNR=38						
H11N2	**WAKE ISLAND Hy**	**40.92**	**331**	T	T	11 03 57.5	
	baz=150,slow=76,SNR=55						
TOO	**Toolangi**	**42.09**	**232**	P	**P**	**10 21 18.9**	**-1.0**
COEN	**Coen**	**42.22**	**267**	P	**P**	**10 21 20.1**	**-1.1**
COEN				IAmb	IAmb	10 21 23.5	
	comp=Z,17nm,1.1s						
STKA	**Stephens Creek**	**43.81**	**241**	P	**P**	**10 21 32.6**	**-1.4**
	comp=Z,7.4nm,0.8s,baz=84,slow=9.7,SNR=16						
STKA				LR	LR	10 37 14.2	
	comp=Z,48nm,19.9s,baz=26,slow=33						
STKA	**Stephens Creek**	**43.81**	**241**	P	**P**	**10 21 32.9**	**-1.0**
BBOO	**Buckleboo**	**48.58**	**241**	P	**P**	**10 22 10.6**	**-0.9**
WR0	**Warramunga Arr**	**49.72**	**258**	P	**P**	**10 22 19.4**	**-1.0**
WR0				IAmb	IAmb	10 22 33.7	
	comp=Z,10nm,1.4s						
WB0	**Warramunga Arr**	**49.88**	**258**	P	**P**	**10 22 20.2**	**-1.3**
WB0				IAmb	IAmb	10 22 31.0	
	comp=Z,14nm,1.4s						
WB2	**Warramunga Arr**	**49.90**	**258**	P	**P**	**10 22 20.2**	**-1.6**
WRA	**Warramunga Arr**	**49.91**	**258**	P	**P**	**10 22 19.7**	**-2.2**
	comp=Z,2.5nm,0.7s,baz=97,slow=6.7,SNR=32						
WRA				PcP	**PcP**	**10 23 42.7**	**+0.7**
	comp=Z,2.2nm,0.7s,baz=88,slow=3.7,SNR=7.4						
AS31	**Alice Springs**	**50.09**	**253**	P	**P**	**10 22 21.8**	**-1.4**
AS31				IAmb	IAmb	10 22 24.5	
	comp=Z,4.7nm,0.7s						
ASAR	**Alice Springs**	**50.09**	**253**	P	**P**	**10 22 21.1**	**-2.1**
	comp=Z,16nm,0.6s,baz=89,slow=7.6,SNR=140						
ASAR				LR	LR	10 42 59.2	
	comp=Z,97nm,18.4s,baz=74,slow=36						
MTN	**Manton Dam**	**53.95**	**266**	P	**P**	**10 22 51.2**	**-0.8**
MTN				IAmb	IAmb	10 22 53.5	
	comp=Z,12nm,1.0s						
FORT	**Forrest**	**55.24**	**244**	P	**P**	**10 22 58.3**	**-2.8**
KNRA	**Kununurra**	**55.72**	**262**	P	**P**	**10 23 02.4**	**-2.4**
FITZ	**Fitzroy Crossi**	**58.30**	**259**	P	**P**	**10 23 20.8**	**-2.2**
FITZ				IAmb	IAmb	10 23 38.6	
	comp=Z,9.1nm,1.4s						
SOEI	**Soe**	**61.18**	**268**	P	**P**	**10 23 44.1**	**+1.0**
VNDA	**Vanda**	**62.44**	**186**	P	**P**	**10 23 49.4**	**-1.0**
PSA00	**Pilbara Seismi**	**63.21**	**254**	P	**P**	**10 23 54.4**	**-2.0**
MJAR	**Matsushiro Arr**	**69.87**	**320**	P	**P**	**10 24 39.1**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=146,slow=5.6,SNR=4.2						
KMRM	**Mail Ridge**	**72.65**	**38**	P	**P**	**10 24 57.9**	**+2.5**
ISA	**Isabella, Lake**	**73.14**	**44**	P	**P**	**10 24 59.8**	**+1.3**
ISA				IAmb	IAmb	10 25 15.2	
	comp=Z,6.7nm,1.1s						
CMB	**Columbia Colle**	**73.30**	**41**	P	**P**	**10 25 00.8**	**+1.5**
CMB				IAmb	IAmb	10 25 16.2	
	comp=Z,5.5nm,0.8s						
KRMB	**Red Mountain**	**73.38**	**36**	P	**P**	**10 25 02.1**	**+2.3**
KRMB				IAmb	IAmb	10 25 03.3	
	comp=Z,7.7nm,1.0s						
PEA0B	**Petropavlovsk-**	**73.64**	**342**	P	**P**	**10 25 02.6**	**+1.7**
PETK	**Petropavlovsk-**	**73.64**	**342**	P	**P**	**10 25 01.9**	**+1.0**
	comp=Z,11nm,0.7s,baz=145,slow=9.5,SNR=14						
QSPA	**South Pole Qui**	**73.67**	**180**	P	**P**	**10 25 03.5**	**+2.2**
GSC	**Goldstone, Bar**	**74.06**	**45**	P	**P**	**10 25 05.5**	**+1.6**
GSC				IAmb	IAmb	10 25 20.3	
	comp=Z,5.3nm,0.8s						
BEKR	**Beckworth**	**74.43**	**39**	P	**P**	**10 25 08.2**	**+2.1**
BEKR				IAmb	IAmb	10 25 22.5	
	comp=Z,6.5nm,0.8s						
PNTR	**Pine Nut**	**74.43**	**40**	P	**P**	**10 25 06.8**	**+0.6**
VCNR	**Virginia City**	**74.52**	**40**	P	**P**	**10 25 07.2**	**+0.6**
VCNR				IAmb	IAmb	10 25 23.6	
	comp=Z,5.5nm,0.7s						
YERR	**Yerington**	**74.59**	**41**	P	**P**	**10 25 07.7**	**+0.6**
YERR				IAmb	IAmb	10 25 23.4	
	comp=Z,6.8nm,0.8s						
Y12C	**Blythe**	**74.81**	**47**	P	**P**	**10 25 08.1**	**-0.1**
RYN	**Ryan**	**74.83**	**41**	P	**P**	**10 25 09.0**	**+0.6**
RYN				IAmb	IAmb	10 25 25.0	
	comp=Z,5.5nm,0.9s						
113A	**Mohawk Valley,**	**74.83**	**49**	P	**P**	**10 25 09.5**	**+1.2**
NVAR	**Mina Array Bea**	**74.86**	**42**	P	**P**	**10 25 10.7**	**+2.1**
	comp=Z,3.2nm,0.8s,baz=228,slow=10,SNR=27						
PAHR	**Pah Rah Range**	**74.93**	**40**	P	**P**	**10 25 09.6**	**+0.7**
NV11	**Mina Array Sit**	**74.95**	**42**	P	**P**	**10 25 10.2**	**+1.1**
NV11				IAmb	IAmb	10 25 25.7	
	comp=Z,8.4nm,1.0s						
KVN	**Kaiserville**	**75.35**	**41**	P	**P**	**10 25 13.2**	**+1.8**
TPNV	**Topopah Spring**	**75.35**	**44**	P	**P**	**10 25 12.8**	**+1.3**
TPNV				IAmb	IAmb	10 25 28.1	
	comp=Z,5.5nm,0.8s						
MOD	**Modoc Plateau**	**75.71**	**38**	P	**P**	**10 25 15.1**	**+1.8**
SHPR	**Sheep Range**	**75.84**	**45**	P	**P**	**10 25 16.5**	**+2.2**
K05A	**Summer Lake**	**75.87**	**37**	P	**P**	**10 25 17.0**	**+2.7**
Y14A	**Wickenburg**	**75.98**	**48**	P	**P**	**10 25 16.9**	**+1.9**
Y14A				IAmb	IAmb	10 25 31.5	
	comp=Z,4.6nm,0.8s						
H04A	**Detroit Lake**	**76.38**	**35**	P	**P**	**10 25 18.7**	**+1.7**
H04A				IAmb	IAmb	10 25 33.1	
	comp=Z,7.6nm,0.8s						
PINE	**Pine Mountain**	**76.51**	**36**	P	**P**	**10 25 20.2**	**+2.3**
R11A	**Troy Canyon, C**	**76.57**	**43**	P	**P**	**10 25 19.4**	**+1.0**
TUC	**Tucson**	**76.78**	**50**	P	**P**	**10 25 21.7**	**+2.1**
WVOR	**Wild Horse Val**	**77.01**	**38**	P	**P**	**10 25 22.7**	**+1.9**
WVOR				IAmb	IAmb	10 25 37.3	
	comp=Z,4.6nm,0.8s						
KSRS	**Korea Array**	**77.06**	**316**	LR	LR	10 54 21.5	
	comp=Z,19nm,20.9s,baz=345,slow=32						
X16A	**Lo Mia Camp, P**	**77.34**	**48**	P	**P**	**10 25 23.6**	**+0.7**
X16A				IAmb	IAmb	10 25 39.8	
	comp=Z,4.9nm,0.8s						
LCMT	**Little Creek M**	**77.41**	**45**	P	**P**	**10 25 24.9**	**+1.8**
I07A	**Izee**	**77.50**	**36**	P	**P**	**10 25 25.0**	**+1.6**
I07A				IAmb	IAmb	10 25 40.1	
	comp=Z,6.8nm,1.0s						
CCUT	**Cedar City**	**77.61**	**45**	P	**P**	**10 25 26.4**	**+2.1**
J08A	**Circle Bar Ran**	**77.66**	**37**	P	**P**	**10 25 25.9**	**+1.6**
J08A				IAmb	IAmb	10 25 40.9	
	comp=Z,10.0nm,1.2s						
KNB	**Kanab**	**77.70**	**45**	P	**P**	**10 25 27.3**	**+2.6**
U15A	**North Rim**	**77.76**	**46**	P	**P**	**10 25 27.8**	**+2.6**
PSUT	**Pine Spring**	**77.81**	**44**	P	**P**	**10 25 26.6**	**+1.2**
ELK	**Elko**	**78.12**	**41**	P	**P**	**10 25 27.6**	**+0.5**
PKCU	**Pink Cliffs**	**78.27**	**45**	P	**P**	**10 25 29.7**	**+1.6**
USRK	**Ussuriysk Ar.**	**78.33**	**323**	P	**P**	**10 25 29.9**	**+2.0**
	comp=Z,0.8nm,0.6s,baz=74,slow=6.8,SNR=4.1						
G08A	**Pilot Rock**	**78.55**	**36**	P	**P**	**10 25 30.1**	**+0.9**
G08A				IAmb	IAmb	10 25 45.6	
	comp=Z,6.1nm,0.9s						
MTPU	**Mount Pierson**	**78.67**	**45**	P	**P**	**10 25 33.4**	**+3.0**
MSU	**Marysvale**	**78.91**	**44**	P	**P**	**10 25 33.5**	**+2.0**
BMO	**Blue Mountains**	**79.22**	**37**	P	**P**	**10 25 34.1**	**+1.2**
MFID	**Camas Ranch**	**79.26**	**39**	P	**P**	**10 25 35.3**	**+2.2**
DUG	**Dugway, Tooele**	**79.38**	**43**	P	**P**	**10 25 35.3**	**+1.4**
RC01	**Rabbit Creek A**	**79.44**	**11**	P	**P**	**10 25 34.4**	**+0.9**
RC01				IAmb	IAmb	10 25 35.4	
	comp=Z,8.2nm,1.0s						
F10A	**Beach Ranch, E**	**79.93**	**36**	P	**P**	**10 25 38.0**	**+1.3**
F10A				IAmb	IAmb	10 25 52.5	
	comp=Z,8.6nm,0.8s						
TMUT	**Trail Mountain**	**79.97**	**44**	P	**P**	**10 25 40.4**	**+3.1**
KNK	**Knik Glacier**	**79.98**	**12**	P	**P**	**10 25 37.5**	**+1.0**
KNK				IAmb	IAmb	10 25 38.3	
	comp=Z,6.5nm,0.8s						
PMR	**Palmer**	**80.01**	**11**	P	**P**	**10 25 37.4**	**+0.8**
PMR				IAmb	IAmb	10 25 38.5	
	comp=Z,13nm,1.4s						
TTA	**Tatalina**	**80.17**	**8**		**P**	**10 25 39.2**	**+1.6**
GHO	**Glory Hole Cre**	**80.22**	**11**	P	**P**	**10 25 38.9**	**+1.0**
SRU	**San Rafael Swe**	**80.33**	**44**	P	**P**	**10 25 40.9**	**+1.8**
SCM	**Sheep Creek Mo**	**80.59**	**12**	P	**P**	**10 25 40.2**	**+1.0**
PV05	**Paradox Valley**	**80.79**	**46**	P	**P**	**10 25 43.6**	**+1.9**
PV05				IAmb	IAmb	10 25 58.9	
	comp=Z,5.8nm,0.8s						
TX31	**Lajitas Ar. Si**	**80.91**	**56**	P	**P**	**10 25 44.9**	**+2.5**
TX32	**Lajitas Array**	**80.91**	**56**	P	**P**	**10 25 44.3**	**+1.9**
TXAR	**Lajitas Array**	**80.91**	**56**	P	**P**	**10 25 44.4**	**+2.0**
	comp=Z,1.9nm,1.2s,baz=224,slow=5.2,SNR=9.9						
PV14	**Lion Creek, Pa**	**80.98**	**46**	IAmb	IAmb	10 25 59.3	
	comp=Z,6.9nm,0.9s						
PV03	**Paradox Valley**	**81.05**	**46**	IAmb	IAmb	10 25 59.6	
	comp=Z,9.6nm,1.3s						
PV11	**David Mesa, Pa**	**81.05**	**46**	P	**P**	**10 25 43.7**	**+0.6**
PV11				IAmb	IAmb	10 26 00.3	
	comp=Z,8.2nm,1.1s						
PV21	**Cone Mtn., Par**	**81.11**	**46**	IAmb	IAmb	10 26 00.1	
	comp=Z,6.2nm,0.7s						
BARN	**Barnard Glacie**	**81.17**	**15**	P	**P**	**10 25 44.2**	**+1.1**
BARN				IAmb	IAmb	10 25 45.3	
	comp=Z,8.3nm,1.0s						
MA2	**Magadan**	**81.18**	**342**	P	**P**	**10 25 41.6**	**-1.3**
MA2				IAmb	IAmb	10 25 44.3	
	comp=Z,8.8nm,0.8s						
ANMO	**Albuquerque**	**81.20**	**50**	P	**P**	**10 25 45.2**	**+1.3**
KTH	**Kantishna Hill**	**81.52**	**10**	P	**P**	**10 25 45.4**	**+0.6**
TRF	**Thorofare Moun**	**81.53**	**10**	P	**P**	**10 25 45.4**	**+0.4**
TRF				IAmb	IAmb	10 25 46.2	
	comp=Z,6.0nm,0.7s						
RND	**Reindeer**	**81.74**	**11**	P	**P**	**10 25 46.9**	**+0.9**
RND			

SCRK				IAmb	IAmb	10 25 55.7	
	comp=Z,6.0nm,0.9s						
COLA	**College**	**83.26**	**11**	P	**P**	**10 25 53.9**	**+0.2**
ILAR	**Eielson Array**	**83.34**	**11**	P	**P**	**10 25 54.6**	**+0.5**
	comp=Z,1.7nm,0.5s,baz=231,slow=6.2,SNR=42						
RLMT	**Red Lodge**	**84.15**	**40**	P	**P**	**10 25 59.7**	**+0.7**
DAWY	**Dawson**	**84.29**	**14**	P	**P**	**10 25 59.8**	**+0.7**
H03S2	**Juan Fernandez**	**84.42**	**123**	T	T	11 59 46.7	
	baz=252,slow=75,SNR=12						
H03S1	**Juan Fernandez**	**84.44**	**123**	T	T	11 59 47.7	
	baz=252,slow=75,SNR=11						
H03S3	**Juan Fernandez**	**84.44**	**123**	T	T	11 59 45.5	
	baz=252,slow=75,SNR=12						
EGAK	**Eagle**	**84.50**	**13**	P	**P**	**10 26 00.4**	**+0.4**
EGAK				IAmb	IAmb	10 26 02.3	
	comp=Z,4.4nm,0.8s						
H03N2	**Juan Fernandez**	**84.53**	**123**	T	T	11 59 47.0	
	baz=257,slow=73,SNR=4.7						
H03N3	**Juan Fernandez**	**84.53**	**123**	T	T	11 59 48.7	
	baz=257,slow=73,SNR=4.2						
H03N1	**Juan Fernandez**	**84.54**	**123**	T	T	11 59 47.4	
	baz=257,slow=73,SNR=5.8						
ABTX	**Abilene, Hawle**	**85.39**	**54**	P	**P**	**10 26 05.9**	**+0.5**
BILL	**Bilibino**	**85.51**	**352**	P	**P**	**10 26 05.6**	**+0.5**
EPYK	**Eagle Plains**	**86.84**	**14**	P	**P**	**10 26 12.9**	**+1.2**
EPYK				IAmb	IAmb	10 26 13.8	
	comp=Z,5.7nm,1.0s						
GYA	**Guiyang**	**88.76**	**298**	*e*P	**P**	**10 26 19.3**	**-2.6**
GYA				PP	**PP**	**10 29 53.9**	**+2.6**
GYA	**Guiyang**	**88.76**	**298**	S	**S**	**10 37 08.8**	**+1.3**
GYA	**Guiyang**	**88.76**	**298**	SS	SS	10 43 00.8	+0.7
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA				pmax	pmax		
	comp=Z,60nm,3.5s						
GYA				LR	LR		
	comp=N,70nm,4.3s						
GYA				LR	LR		
	comp=E,60nm,5.8s						
GYA				LR	LR		
	comp=Z,70nm,9.8s						
HHC	**Hu-ho-hao-te**	**89.90**	**313**	*e*P	**P**	**10 26 28.4**	**+1.4**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,39nm,6.0s						
YKA	**Yellowknife Ar**	**90.87**	**23**	P	**P**	**10 26 31.9**	**+1.2**
	comp=Z,1.2nm,0.9s,baz=230,slow=4.1,SNR=15						
SYO	**Syowa Base**	**91.70**	**191**	⇑*es*P	P	10 26 41.0	+6.3
VNA3	**Neumayer Olymp**	**91.86**	**175**	P	**P**	**10 26 37.5**	**+2.0**
SNAA	**Sanae**	**91.92**	**177**	P	**P**	**10 26 37.0**	**+1.2**
SNAA	**Sanae**	**91.92**	**177**	P	**P**	**10 26 37.5**	**+1.7**
	comp=Z,3.1nm,1.0s,baz=193,slow=3.2,SNR=6.6						
SNAA	**Sanae**	**91.92**	**177**	P	**P**	**10 26 37.1**	**+1.3**
SNAA				IAmb	IAmb	10 26 38.5	
	comp=Z,3.2nm,0.9s						
VNA2	**Neumayer--Watz**	**92.36**	**175**	P	**P**	**10 26 39.9**	**+2.1**
	baz=168,slow=3.2						
VNA1	**Neumayer--Stat**	**92.56**	**175**	P	**P**	**10 26 41.3**	**+2.7**
CMAR	**Chiang Mai Arr**	**93.20**	**288**	P	**P**	**10 26 43.9**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=70,slow=2.4,SNR=5.1						
LZH	**Lanzhou**	**94.03**	**306**	*e*P	**P**	**10 26 48.5**	**+2.2**
LZH				pP	pP	10 26 52.4	-2.9
LZH				sP	pwP	10 26 54.9	-3.6
LZH				PP	**PP**	**10 30 31.9**	**-1.1**
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,4.9s						
LZH				LR	LR		
	comp=N,140nm,18.4s						
LZH				LR	LR		
	comp=E,160nm,17.3s						
LZH				LR	LR		
	comp=Z,190nm,19.0s						
KSH	**Kashi**	**116.29**	**306**	PKP	**PKiKP**	**10 32 14.1**	**+2.6**
ARCES	**ARCESS Array B**	**125.61**	**352**	PKP	**PKiKP**	**10 32 29.1**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=29,slow=1.9,SNR=12						
FINES	**FINESS Array B**	**132.95**	**348**	PKP	**PKiKP**	**10 32 43.2**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=306,slow=6.6,SNR=3.7						
CLL	**Collm**	**144.81**	**353**	⇓*i*PKPdf	**PKPdf**	**10 33 05.3**	**+0.9**
	comp=Z,7.0nm,0.8s						
CLL				*ep*PKiKP	**pPKPdf**	**10 33 14.0**	**+0.3**
OSTC	**Ostas**	**145.09**	**350**	*e*PKP	**PKPdf**	**10 33 06.1**	**+1.1**
OSTC				*ex*	x	10 33 17.6	
BRG	**Berggiesshubel**	**145.12**	**352**	*e*(PKP)	**PKPbc**	**10 33 01.6**	**-2.9**
	comp=Z,2.2nm,0.6s						
DPC	**Dobruska-Polom**	**145.27**	**349**	*e*PKP	**PKPdf**	**10 33 06.3**	**+1.0**
DPC				*ex*	x	10 33 20.1	
BUR08	**Bucovina Ar. S**	**145.36**	**338**		**PKPab**	**10 33 06.2**	**+0.5**
KMBO	**Kilima Mbogo**	**145.36**	**243**	PKPbc	**PKiKP**	**10 33 09.7**	**-1.1**
	comp=Z,7.4nm,1.0s,baz=141,slow=3.0,SNR=5.4						
BURAR	**Bucovina Array**	**145.38**	**338**	⇓P	**PKPab**	**10 33 06.6**	**+0.9**
OKC	**Ostrava-Krasne**	**145.40**	**347**	*e*PKP	**PKPab**	**10 33 06.2**	**+0.6**
KRLC	**Kraliky**	**145.45**	**349**	*e*PKP	**PKPbc**	**10 33 02.8**	**-2.8**
KRLC				*ex*	x	10 33 16.3	
MORC	**Moravsky Berou**	**145.59**	**348**	*e*PKP	**PKPab**	**10 33 07.2**	**+0.9**
MORC	**Moravsky Berou**	**145.59**	**348**	⇓P	**PKPab**	**10 33 06.7**	**+0.4**
MORC	**Moravsky Berou**	**145.59**	**348**		**PKPab**	**10 33 06.4**	**+0.1**
BIZ	**Bicaz**	**145.62**	**336**	⇓P	**PKPab**	**10 33 07.6**	**+1.1**
TESR	**Tescani**	**145.75**	**336**	⇑P	**PKPab**	**10 33 07.4**	**+0.4**
MEM	**Membach**	**145.84**	**1**	PKPdf	**PKPab**	**10 33 07.9**	**+0.7**
MEM				PKiKP	**PKiKP**	**10 33 11.5**	**+1.2**
BSTI	**Sart Tilman**	**145.86**	**2**	PKPdf	**PKPab**	**10 33 08.0**	**+0.7**
BSTI				PKiKP	**PKiKP**	**10 33 11.9**	**+1.6**
BSTI				x	x	10 33 22.0	
TLCR		**145.89**	**332**	⇑P	**PKPab**	**10 33 08.2**	**+0.7**
PRU	**Pruhonice**	**145.91**	**351**	*e*PKP	**PKPab**	**10 33 08.2**	**+0.7**
PRU				*ex*	x	10 33 17.0	
NKC	**Novy Kostel**	**145.93**	**354**	*e*PKP	**PKPab**	**10 33 08.2**	**+0.6**
GOPC	**GO Pecny, Ondr**	**145.94**	**351**	*e*PKP	**PKPab**	**10 33 08.4**	**+0.8**
GOPC				*ex*	x	10 33 22.2	
BCLA	**Clavier**	**146.02**	**2**	PKPdf	**PKPab**	**10 33 09.0**	**+1.1**
BCLA				x	x	10 33 22.7	
KECS	**Kecovo**	**146.10**	**344**	*e*PKP	**PKiKP**	**10 33 09.6**	**-1.3**
BMRD	**Maredsous**	**146.11**	**2**	PKPdf	**PKPab**	**10 33 09.1**	**+0.9**
CFR	**Carcaliu**	**146.20**	**333**	⇑P	**PKPab**	**10 33 09.0**	**+0.3**
VRAC	**Vranov**	**146.22**	**349**	*e*PKP	**PKPab**	**10 33 09.3**	**+0.6**
VRAC	**Vranov**	**146.22**	**349**	⇑P	**PKPab**	**10 33 09.4**	**+0.6**
VRI	**Vrincioaia**	**146.25**	**335**	⇑P	**PKPab**	**10 33 09.1**	**+0.2**
PLOR	**Plostina**	**146.29**	**335**	⇓P	**PKPab**	**10 33 09.6**	**+0.5**
DOU	**Dourbes**	**146.31**	**3**	PKPdf	**PKPab**	**10 33 09.9**	**+0.9**
TOPG	**Topolog**	**146.32**	**332**	⇑P	**PKPab**	**10 33 09.9**	**+0.7**
JAVC	**Velka Javorina**	**146.43**	**347**	*e*PKP	**PKiKP**	**10 33 11.1**	**-0.6**
KRUC	**Moravsky**	**146.49**	**349**	*e*PKP	**PKPab**	**10 33 10.0**	**+0.3**
VYHS	**Vyhne**	**146.51**	**346**	*e*PKP	**PKPab**	**10 33 10.5**	**+0.7**
GRF	**Grafenberg Arr**	**146.59**	**355**	*e*PKP	**PKPab**	**10 33 09.8**	**-0.3**
	baz=7.8,slow=1.7						
GRF				*ep*PKP	sPKPab	10 33 23.6	+1.1
HARR	**Harsova**	**146.67**	**332**	⇓P	**PKPab**	**10 33 11.0**	**+0.4**
DOPR	**Dopca**	**146.70**	**336**	⇑P	**PKiKP**	**10 33 11.4**	**-0.8**
PSZ	**Piszkesteto**	**146.78**	**344**	⇑P	**PKPbc**	**10 33 10.0**	**+0.2**
PSZ	**Piszkesteto**	**146.78**	**344**	PKPdf	**PKPdf**	**10 33 08.7**	**+0.7**
WLF	**Walferdange**	**146.79**	**1**	PKPdf	**PKiKP**	**10 33 11.7**	**-0.7**
WLF				x	x	10 33 25.3	
MLR	**Muntele Rosu**	**146.87**	**335**	PKPbc	**PKPab**	**10 33 11.6**	**+0.1**
	comp=Z,12nm,0.8s,baz=189,slow=5.3,SNR=17						
MLR	**Muntele Rosu**	**146.87**	**335**	⇑P	**PKPab**	**10 33 11.9**	**+0.4**
MLR	**Muntele Rosu**	**146.87**	**335**		**PKPab**	**10 33 11.3**	**-0.2**
KHC	**Kasperske Hory**	**146.88**	**352**	*e*PKP	**PKPab**	**10 33 11.4**	**+0.1**
KHC				*ex*	x	10 33 24.8	
KHC	**Kasperske Hory**	**146.88**	**352**		**PKPab**	**10 33 11.0**	**-0.3**
MODS	**Modra-Piesok**	**146.97**	**347**	*e*PKP	**PKPab**	**10 33 11.3**	**-0.3**
BR131	**Keskin Array S**	**147.09**	**320**		**PKPab**	**10 33 11.7**	**-0.9**
BRTR	**Keskin Array B**	**147.09**	**320**	PKPbc	**PKPab**	**10 33 11.7**	**-0.9**
	comp=Z,11nm,0.8s,baz=115,slow=2.4,SNR=65						
GEC2	**GERESS Array S**	**147.14**	**352**		**PKPbc**	**10 33 10.4**	**-0.3**
GERES	**GERESS Array B**	**147.14**	**352**	PKPbc	**PKPab**	**10 33 11.7**	**-0.7**
	comp=Z,4.8nm,0.7s,baz=46,slow=3.9,SNR=17						
VOIR		**147.27**	**336**	⇑P	**PKPab**	**10 33 13.0**	**0.0**
ARR	**Arges**	**147.49**	**336**	⇑P	**PKiKP**	**10 33 13.8**	**-0.2**
CONA	**Conrad Observa**	**147.68**	**349**	*e*PKPab	**PKiKP**	**10 33 13.7**	**-0.6**
	comp=Z,9.8nm,0.6s,SNR=7.2						
CONA				*i* sPKiKP	**sPKPdf**	**10 33 23.0**	**+1.0**
	comp=Z,9.6nm,0.8s						
SIRR	**Siria**	**147.75**	**341**	⇓P	**PKPbc**	**10 33 12.7**	**+0.2**
MOA	**Molln**	**148.03**	**351**	*i* PKiKP	**PKPab**	**10 33 15.3**	**-0.6**
	comp=Z,5.5nm,0.6s						
BFO	**Black Forest**	**148.11**	**358**		**PKiKP**	**10 33 14.1**	**-1.0**
BZS	**Buzias**	**148.35**	**340**	⇑P	**PKiKP**	**10 33 15.0**	**-0.6**
ARSA	**Arzberg**	**148.40**	**349**	*e*PKiKP	**PKiKP**	**10 33 15.2**	**-0.6**
	comp=Z,6.7nm,1.2s						
ARSA				*es*PKPab	**pPKPbc**	**10 33 25.1**	**+1.7**
	comp=Z,8.5nm,0.9s						
ASF	**Jabal al Asfar**	**148.60**	**306**	PKPbc	**PKiKP**	**10 33 16.8**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=114,slow=7.5,SNR=4.7						
HERR	**Herculane**	**148.72**	**339**	⇓P	**PKPbc**	**10 33 14.7**	**-0.3**
RETA	**Reutte**	**148.81**	**355**	*e*PKiKP	**PKiKP**	**10 33 16.2**	**-0.5**
	comp=Z,3.7nm,0.8s						
RETA				*i* sPKPab	**sPKPbc**	**10 33 27.1**	**-0.6**
	comp=Z,14nm,1.2s						
WATA	**Walderalm**	**148.89**	**354**	*e*PKiKP	**PKiKP**	**10 33 16.5**	**-0.4**
	comp=Z,12nm,1.3s						
KBA	**Koelnbreinsper**	**148.92**	**351**	*e*PKiKP	**PKiKP**	**10 33 17.0**	**0.0**
	comp=Z,3.8nm,0.6s						
MOTA	**Moosalm**	**148.92**	**354**	*e*PKiKP	**PKiKP**	**10 33 16.6**	**-0.4**
	comp=Z,10nm,1.1s						
MOTA				*es*PKPab	**sPKPbc**	**10 33 27.7**	**-0.4**
	comp=Z,14nm,1.2s						
WTTA	**Wattenberg**	**148.95**	**354**	*e*PKiKP	**PKiKP**	**10 33 17.1**	**0.0**
	comp=Z,11nm,0.8s,SNR=5.7						
WTTA				*es*PKPab	**sPKPbc**	**10 33 28.0**	**-0.2**
	comp=Z,11nm,0.6s						
SQTA	**Sankt Quirin**	**149.04**	**354**	*e*PKiKP	**PKiKP**	**10 33 16.8**	**-0.4**
	comp=Z,7.5nm,0.9s						
SQTA				*i* sPKPab	**sPKPbc**	**10 33 28.2**	**-0.1**
	comp=Z,11nm,0.8s						
SOKA	**Soboth**	**149.04**	**349**	*e*PKiKP	**PKiKP**	**10 33 16.6**	**-0.5**
	comp=Z,5.9nm,0.8s						
SOKA				*es*PKPab	**sPKPbc**	**10 33 27.4**	**-0.9**
	comp=Z,12nm,1.2s						
DAVA	**Damuels**	**149.08**	**356**	*e*PKiKP	**PKiKP**	**10 33 16.7**	**-0.6**
	comp=Z,9.6nm,1.0s						
FETA	**Feichten**	**149.28**	**355**	*e*PKiKP	**PKiKP**	**10 33 17.8**	**+0.1**
	comp=Z,9.0nm,1.1s						
ABTA	**Abfaltersbach**	**149.36**	**352**	*e*PKiKP	**PKiKP**	**10 33 17.4**	**-0.4**
	comp=Z,12nm,0.8s						
ABTA				*i* sPKPab	**sPKPbc**	**10 33 28.4**	**-0.7**
	comp=Z,15nm,0.8s						
MMAI	**Mount Meron Ar**	**149.40**	**308**	PKPbc	**PKiKP**	**10 33 18.8**	**+0.5**
	comp=Z,1.3nm,0.4s,baz=70,slow=5.4,SNR=4.5						
FUORN	**Ofenpass-Fuorn**	**149.71**	**355**		**PKiKP**	**10 33 18.6**	**-0.2**
CTI	**Castel Tesino**	**150.15**	**353**		**PKPbc**	**10 33 17.1**	**-1.5**
VTS	**Vitosha**	**150.34**	**335**	⇑P	**PKiKP**	**10 33 20.5**	**+0.4**
VTS	**Vitosha**	**150.34**	**335**		**PKiKP**	**10 33 19.8**	**-0.3**

ATH 16 10:30:50.3,38.30N×20.45E,h10km±2km,ML1.9/3,Error ellipse: s-maj=2.4km s-min=0.9km az=253.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF1	**Kardakata, Kep**	**0.03**	**148**	P	Pg	10 30 52.1	0.0
KEF1				S	Sg	10 30 53.4	+0.1
KEF4	**Livadi, Kephal**	**0.05**	**207**	P	Pg	10 30 52.2	0.0
KEF4				S	Sg	10 30 53.9	+0.2
ARGA	**Argostoli. Kep**	**0.13**	**170**	P	Pg	10 30 53.8	+0.6
ARGA				S	Sg	10 30 55.5	+0.2
KEF3	**Kipouria, Keph**	**0.13**	**220**	P	Pg	10 30 53.1	-0.2
KEF3				S	Sg	10 30 55.5	+0.1
KEF2	**Argostoli. Kep**	**0.14**	**169**	P	Pg	10 30 53.5	+0.1
KEF2				S	Sg	10 30 55.7	+0.1
VLS	**Valsamata**	**0.17**	**139**	P	Pg	10 30 53.8	-0.1
VLS				S	Sg	10 30 56.0	-0.4
VLS				AML	AML	10 30 56.9	
	comp=E,3196μm,0.1s						
VLS				AML	AML	10 30 57.4	
	comp=N,1026μm,0.1s						
FSK	**Fiskardo**	**0.18**	**29**	P	Pg	10 30 54.2	+0.1
FSK				S	Sg	10 30 56.7	-0.1
FSK				AML	AML	10 30 57.6	
	comp=N,1038μm,0.2s						
FSK				AML	AML	10 30 57.9	
	comp=E,1563μm,0.1s						
KFL	**Anninata**	**0.33**	**126**	P	Pg	10 30 56.5	-0.3
KFL				S	Sg	10 31 01.7	+0.5
KFL				AML	AML	10 31 02.5	
	comp=E,560μm,0.4s						
KFL				AML	AML	10 31 02.9	
	comp=N,357μm,0.3s						
EVGI	**Lefkada island**	**0.36**	**27**	P	Pg	10 30 57.3	-0.1
EVGI				S	Sg	10 31 03.2	+1.0
LKD2	**Lefkada island**	**0.51**	**18**	P	Pg	10 31 00.3	0.0

KRAR ***16*** *10:52:48.7±0.1,53.82N×86.87E,M2.0,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC ***16*** *10:52:51.8±2.8,53.65N×86.69E,h0km,mb2.4,mpv2.4, Error ellipse: s-maj=27.0km s-min=15.9km az=44.0, Suspected Mining explosion.*

IDC 16 10:52:50.8±2.7,53.72N×86.84E,h0km,mb1 3.1/2, mb1mx2.9/43,mbtmp3.1/2,ML2.7/2,3C-3D,Error ellipse: s-maj=25.9km s-min=14.5km az=65.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**1.22**	**281**	⇑P	Pg	10 53 13.3	-0.8
	0.2nm,0.3s						
ZAA0				⇓S	Sg	10 53 29.9	0.0
	3.7nm,1.1s						
ZALV	**Zalesovo Beam**	**1.22**	**281**	Pg	Pg	10 53 13.1	-1.0
	1.9nm,0.3s,baz=103,slow=17,SNR=12						
ZALV				Lg	Lg	10 53 30.3	
	1.7nm,0.3s,baz=101,slow=27,SNR=7						
ZALV				Rg	Rg	10 53 36.1	
	1.7nm,0.4s,baz=106,slow=30,SNR=2.8						
I46RU	**ZALESOVO INFRA**	**1.22**	**281**	*i*		11 00 30.0	
	baz=99,slow=310,SNR=0.8						
KURBB	**Kurchatov Arra**	**5.98**	**242**	Pn	Pn	10 54 22.1	+1.6
	0.1nm,0.3s,baz=57,slow=13,SNR=4.6						
KURBB	**Kurchatov Arra**	**5.98**	**242**	⇑Pn	Pn	10 54 21.1	+0.6
	1.5nm,0.6s						
KURBB				⇑Sn	Sn	10 55 28.0	-1.6
	4.5nm,0.7s						
KURBB				⇓Lg	Lg	10 55 55.8	
	3.7nm,0.8s						
MK31	**Makanchi Array**	**7.53**	**205**	⇓Pn	Pn	10 54 42.6	+0.9
	baz=25,slow=13,SNR=6.7						
MKAR	**Makanchi Array**	**7.53**	**205**	Pn	Pn	10 54 42.6	+0.9
	0.2nm,0.3s,baz=25,slow=13,SNR=8.5						

SOME ***16*** *11:01:39.0±0.0,17.06N×60.32W,h10km,Ms5.5/2*

BJI ***16*** *11:01:40.0±0.0,17.10N×60.40W,h10km,mB5.8/49, Ms6.2/64,Ms7 5.9/61*

OSPL ***16*** *11:01:40.6±4.2,17.85N×59.89W,h5km±999km,ML6.0*

NEIC ***16*** *11:01:40.0±1.4,17.09N±0.05×60.37W±0.04,h5km±2km, mb5.8/638,Ms_20 5.6/768,Mwb5.9/103,Mww5.9, Mwc5.9(GCMT), Error ellipse: s-maj=7.5km s-min=4.0km az=208.0*

TRN ***16*** *11:01:41.6,17.08N×60.32W,h30km,MD5.9*

TRN Felt in Antigua and Guadeloupe MMI IV, MontserratEast o f Antigua. Felt in Antigua and Guadeloupe MMI IV, Montserratand Saint Lu cia III.III.and Saint Lucia III.

BGR ***16*** *11:01:42.4±0.0,16.48N×60.54W,h51km±1km,mb6.3*

MOS ***16*** *11:01:42.8±0.9,17.09N×60.35W,h33km,mb6.1/76, MS5.7/53,Error ellipse: s-maj=6.3km s-min=4.5km az=64.6*

IDC ***16*** *11:01:42.6±2.2,17.06N×60.31W,h20km±13km,mb5.4/47, mb1 5.5/51,mb1mx5.5/58,mbtmp5.6/51,ML4.7/4,MS5.5/51, Ms1 5.5/51,ms1mx5.4/55,Error ellipse: s-maj=8.9km s-min=7.3km az=127.0*

NEIC ***16*** *11:01:42.6,17.10N×60.36W,h6km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=2.52; Mθθ1.50; Mφφ1.02; Mrθ-1.74; Mθφ-2.31; Mφr8.34; Fault plane solution: Mo9.09000×10¹⁷ NP1:φs165.37000°, δ82.22000°,λ-76.20000°. NP2:φs284.22000°,δ15.80000°, λ-150.21000°. Principal axes: T 8.9019, Plg36.0000°, Azm243.0000°; N 0.3744, Plg14.0000°, Azm343.0000°; P -9.2762, Plg51.0000°, Azm91.0000°;*

UPA ***16*** *11:01:44.8±1.7,16.60N×60.57W,h10km±83km,MW6.1*

NEIC ***16*** *11:01:47,17.21N×60.29W,h12km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=4.27; Mθθ0.59; Mφφ3.67; Mrθ-0.17; Mθφ-5.22; Mφr4.74; Fault plane solution: Mo8.11000×10¹⁷ NP1:φs171.00000°, δ69.00000°,λ-56.00000°. NP2:φs290.00000°,δ39.00000°, λ-146.00000°. Principal axes: T 8.7951, Plg17.0000°, Azm237.0000°; N -1.6123, Plg31.0000°, Azm338.0000°; P -7.1828, Plg53.0000°, Azm122.0000°;*

GCMT ***16*** *11:01:47.0±0.1,17.18N×60.24W,h12km,MW5.9/145, Moment Tensor Solution. s144,c284; s145,c441;*

Duration: 2≥1 Moment tensor: Scale 10¹⁷Nm; Mrr=4.28±.04; Mθθ0.63±.04; Mφφ3.66±.04; Mrθ-0.30±.12; Mθφ-4.94±.04; Mφr4.87±.12; Best double couple: Mo7.90800×10¹⁷ NP1:φs291.00000°,δ37.00000°, λ-144.00000°. NP2:φs170.00000°,δ69.00000°, λ-59.00000°. Principal axes: T 8.6680, Plg18.0000°, Azm238.0000°; N -1.5140, Plg29.0000°, Azm338.0000°; P -7.1480, Plg55.0000°, Azm120.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

NEIC ***16*** *11:01:47,17.19N×60.18W,h16km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=4.26; Mθθ1.25; Mφφ3.01; Mrθ1.03; Mθφ-3.75; Mφr6.11; Fault plane solution: Mo8.17000×10¹⁷ NP1:φs174.00000°, δ73.00000°,λ-61.00000°. NP2:φs294.00000°,δ33.00000°, λ-146.00000°. Principal axes: T 7.7407, Plg23.0000°, Azm243.0000°; N 0.8035, Plg27.0000°, Azm345.0000°; P -8.5442, Plg54.0000°, Azm119.0000°;*

ISC 16 11:01:43.1±0.4,17.02N±0.02×60.39W±0.02,h25km±2km, h25km:pP-P,n2201,o1956/2124,mb5.8/489,MS5.6/507, 63C-130D,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H05N1	**Guadeloupe/Mar**	**0.94**	**222**	Pn	**Pn**	**11 02 00.9**	**+0.1**
H05N1				Sn	**Sn**	**11 02 14.4**	**+1.0**
ABD	**La Joyeuse, An**	**1.18**	**243**	*e*P	**Pb**	**11 02 04.5**	**-0.3**
ABD				*e*S	**Sb**	**11 02 22.3**	**+2.6**
MAGL	**Barre de l'ile**	**1.36**	**219**	*e*P	**Pn**	**11 02 06.9**	**+0.4**
MAGL				*e*S	**Sb**	**11 02 25.7**	**+0.8**
ANWB	**Willy Bob**	**1.48**	**296**	*i* P	**Pn**	**11 02 07.7**	**-0.5**
ANWB				*e*S	**Sb**	**11 02 28.0**	**-0.2**
ANWB	**Willy Bob**	**1.48**	**296**		**Pn**	**11 02 07.6**	**-0.5**
ANWB				Sn	**Sn**	**11 02 25.6**	**-1.0**
CBE	**Ff, Capester**	**1.50**	**231**	*e*P	**Pb**	**11 02 09.8**	**-0.5**
CBE				*e*S	**Sb**	**11 02 30.3**	**+1.4**
TDBA	**Terre de Bas,**	**1.67**	**226**	*e*P	**Pn**	**11 02 11.6**	**+0.9**
TDBA				*e*S	**Sb**	**11 02 33.5**	**-0.2**
DWS	**Wesley**	**1.69**	**212**	*e*P	**Pn**	**11 02 11.7**	**+0.7**
DWS				*e*S	**Sb**	**11 02 33.5**	**-0.9**
MDPV	**Dominica, Penn**	**1.70**	**216**	*e*P	**Pn**	**11 02 12.3**	**+1.1**
MDPV				*e*S	**Sb**	**11 02 34.9**	**+0.3**
MDVC	**Dominica, Viel**	**1.70**	**215**	*e*P	**Pn**	**11 02 12.1**	**+0.9**
MDVC				*e*S	**Sb**	**11 02 34.0**	**-0.7**
MLYT	**Lee's Yard**	**1.75**	**261**	*e*S	**Sb**	**11 02 36.3**	**+0.4**
MDN	**Morne-Daniel**	**1.94**	**210**	*e*P	**Pn**	**11 02 15.7**	**+1.2**
MDN				*e*S	**Sb**	**11 02 40.4**	**-1.3**
DPMT	**Pointe Michel**	**1.99**	**209**	*e*P	**Pn**	**11 02 16.4**	**+1.4**
NVDO	**Nevis, Disaste**	**2.13**	**273**	*e*P	**Pn**	**11 02 17.8**	**+0.7**
SKI	**Saint Kitts**	**2.26**	**278**	*e*P	**Pn**	**11 02 19.8**	**+0.9**
SKI				*e*S	**Sn**	**11 02 47.5**	**+1.4**
SKI	**Saint Kitts**	**2.26**	**278**	P	**Pn**	**11 02 19.8**	**+0.9**
SKI	**Saint Kitts**	**2.26**	**278**		**Pn**	**11 02 19.8**	**+0.9**
ILAM	**Ilet Lapin Mar**	**2.28**	**192**	*e*P	**Pn**	**11 02 19.8**	**+0.7**
ILAM				*e*S	**Sn**	**11 02 47.1**	**+0.8**
SVN	**Savane Anatole**	**2.29**	**199**	*e*P	**Pn**	**11 02 19.5**	**+0.2**
BAMF	**Morne Balai**	**2.31**	**198**	⇑*e*P	**Pn**	**11 02 19.9**	**+0.3**
CXM	**Morne La Croix**	**2.32**	**199**	⇑*e*P	**Pn**	**11 02 20.1**	**+0.4**
PCM	**Pelee Case Pet**	**2.33**	**200**	*e*P	**Pn**	**11 02 19.9**	**+0.1**
GBMF	**Grand Be**	**2.33**	**199**	⇑*e*P	**Pn**	**11 02 20.2**	**+0.3**
PML	**Morne Lenard**	**2.35**	**199**	*e*P	**Pn**	**11 02 20.6**	**+0.4**
FDF	**Fort de France**	**2.39**	**198**	*e*P	**Pn**	**11 02 21.2**	**+0.6**
FDF				*e*S	**Sn**	**11 02 50.8**	**+1.6**
FDF	**Fort de France**	**2.39**	**198**	P	**Pn**	**11 02 21.0**	**+0.4**
FDF						11 02 50.7	
FDF	**Fort de France**	**2.39**	**198**		**Pn**	**11 02 21.0**	**+0.4**
FDF				Sn	**Sn**	**11 02 50.7**	**+1.6**
LPMF	**Morne Lapointe**	**2.49**	**193**	⇑*e*P	**Pn**	**11 02 22.0**	**-0.1**
ZAM	**Aeronautique**	**2.51**	**194**	⇑*e*P	**Pn**	**11 02 22.3**	**+0.1**
TRMF	**Trois Ilets**	**2.55**	**194**	*e*P	**Pn**	**11 02 24.0**	**+1.2**
BIM	**Bigot**	**2.57**	**195**	*e*P	**Pn**	**11 02 24.7**	**+1.5**
BIM				*e*S	**Sn**	**11 02 54.7**	**+1.0**
MPOM	**Morne Pois Mar**	**2.60**	**190**	*e*P	**Pn**	**11 02

PLCV Puerto La Cruz 7.94 211 Pn Pn 11 03 38.8 +1.9
PCRV Puerto La Cruz 7.95 212 Pn Pn 11 03 38.8 +1.7
comp=Z,47nm,0.3s,baz=29,slow=2.4,SNR=100
PCRV LR LR 11 07 27.2
comp=Z,27µm,20.3s,slow=43
ORIV Oritupano 8.43 201 eP Pn 11 03 45.4 +1.8
ORIV Oritupano 8.43 201 eS Sn 11 05 15.0 -3.1
SDD Santo Domingo 9.18 280 i P Pn 11 03 56.1 +2.1
SDD eS Sn 11 05 36.6 0.0
SDDR Presa de Saban 10.55 282 eP Pn 11 04 13.1 +0.3
SDDR Presa de Saban 10.55 282 eS Sn 11 06 39.9 -6.3
SDDR Presa de Saban 10.55 282 i P Pn 11 04 11.8 -1.0
SDDR Presa de Saban 10.55 282 i P Pn 11 04 11.7 -1.0
SDDR IAML 11 06 18.1
comp=Z,764nm,0.5s
BAUV El Baul 10.95 224 eP Pn 11 04 18.3 +0.1
GRTK Grand Turk 11.08 295 Pn 11 04 15.5 -4.5
PAPH Port-au-Prince 11.44 279 i P Pn 11 04 25.1 +0.1
PAPH IAML 11 06 38.5
comp=Z,413nm,0.8s
LGNH Logne 11.73 279 Pn 11 04 27.3 -1.6
LGNH Logne 11.73 279 i P Pn 11 04 29.1 +0.3
URIC Uribia, Colomb 12.42 246 eP Pn 11 04 33.6 -4.7
URIC Uribia, Colomb 12.42 246 Pn 11 04 35.7 -2.6
SDV Santo Domingo 12.84 232 Pn Pn 11 04 44.4 +0.2
comp=Z,15nm,0.3s,baz=64,slow=8.6,SNR=201
SDV Santo Domingo 12.84 232 eP Pn 11 04 43.4 -0.9
SDV Santo Domingo 12.84 232 eP Pn 11 04 43.6 -0.6
MDP Montagnes des 14.07 146 Pn Pn 11 04 54.8 -6.2
comp=Z,6.9nm,0.3s,baz=337,slow=16,SNR=27
MDP Sn Sn 11 07 21.4 -15
comp=Z,55nm,0.3s,baz=86,slow=14,SNR=14
MDP LR LR 11 10 24.0
comp=Z,24µm,21.2s,baz=325,slow=37
SMRC Santa Marta, M 14.62 248 eP Pn 11 05 04.5 -3.9
ARGC Ariguani, Magd 15.23 244 eP Pn 11 05 13.5 -3.1
TAMC Tame, Arauca 15.32 228 eP Pn 11 05 18.2 +0.3
OCAC Ocana 15.33 237 eP Pn 11 05 17.6 -0.5
PAMC Pamplona, Colo 15.39 233 eP Pn 11 05 18.9 -0.3
SMLC San Martn de 15.63 240 eP Pn 11 05 19.3 -2.5
BBSR BB Station 15.78 346 Pn 11 05 17.6 -6.0
SJCC San Jacinto, C 16.02 246 eP Pn 11 05 23.0 -3.9
BRRC Barranca, Sant 16.32 234 eP Pn 11 05 29.5 -1.2
MTDJ Mount Denham 16.38 277 Pn 11 05 29.3 -2.2
MTDJ IAmb IAmb 11 05 35.3
comp=Z,990nm,0.9s
RUSC La Rusia 16.63 230 eP Pn 11 05 33.6 -1.5
RUSC La Rusia 16.63 230 Pn 11 05 34.8 -0.3
ZARC Zaragoza, Cauc 17.00 238 eP Pn 11 05 36.8 -2.5
PTGC Puerto Gaitan, 17.17 223 eP Pn 11 05 39.4 -2.0
PTBC PUERTO BERRIO, 17.23 235 eP Pn 11 05 39.9 -2.5
UREC San Jos de Ur 17.41 240 eP Pn 11 05 39.9 -4.5
SPBC San Pablo de B 17.52 231 eP Pn 11 05 45.0 -0.8
LCBC Los crdobas, 17.54 244 eP Pn 11 05 46.1 +0.1
CHIC Chingaza 17.96 228 eP Pn 11 05 50.3 -1.3
NORC Norcasia 18.18 233 eP Pn 11 05 51.4 -2.5
ROSC El Rosal 18.24 230 P P 11 05 55.7 +0.6
comp=Z,12nm,0.3s,baz=44,slow=7.2,SNR=199
ROSC LR LR 11 14 54.7
comp=Z,32µm,19.1s,baz=52,slow=43
ROSC El Rosal 18.24 230 eP Pn 11 05 54.2 -0.8
ROSC El Rosal 18.24 230 P P 11 05 55.4 +0.3
VILC Villavicencio, 18.30 227 eP P 11 05 56.0 +0.6
HELC Santa Helena 18.30 235 eP Pn 11 05 53.2 -2.6
DBBC Dabeiba 18.37 239 eP P 11 05 54.7 -1.6
CAPC Capurgana 18.50 245 eP P 11 05 55.9 -1.7
GUVC San Jose del G 18.75 221 eP P 11 05 59.8 -0.5
GUY2C Guyana, Caldas 18.77 233 eP P 11 05 59.3 -1.7
CBOC Ciudad Bolivar 18.88 236 eP P 11 05 58.3 -3.6
RREF El Recreo 18.97 232 eP P 11 06 02.1 -1.2
UPD2 Meteti 19.12 246 i P Pn 11 06 05.9 +0.5
UPD2 eS Sn 11 09 32.4 -6.6
TOLC Tolima 19.15 232 eP P 11 06 03.5 -1.6
ANIL Santa Ana 19.27 231 eP P 11 06 06.9 +0.5
PRAC Prado 19.42 229 eP P 11 06 03.7 -4.0
ORTC Ortega, Tolima 19.55 230 eP P 11 06 05.9 -3.2
PTAC Punta Ardita, 19.63 242 eP P 11 06 09.6 -0.4
MALB Monte Alegre 19.70 162 eP P 11 06 10.5 -0.2
MALB epP pP 11 06 14.9 -1.3
MACC Macarena, Meta 19.84 223 eP P 11 06 11.2 -1.0
UPA Univ. de Panam 20.27 249 i P P 11 06 17.2 +0.2
UPA eS S 11 10 00.0 -3.3
YOTC Yotoco, Valle 20.32 232 eP P 11 06 14.8 -2.8
BCIP Isla Barro Col 20.47 250 eP P 11 06 18.0 -1.1
BCIP Isla Barro Col 20.47 250 i P P 11 06 19.6 +0.5
BCIP eS S 11 10 08.1 +0.9
BCIP Isla Barro Col 20.47 250 P P 11 06 18.7 -0.4
BCIP pmax pmax
comp=Z,2µm,1.0s
BCIP Isla Barro Col 20.47 250 P P 11 06 18.7 -0.4
PIZC Pizarro, Choco 20.49 236 eP P 11 06 19.1 -0.2
BETC Betania 20.53 228 eP P 11 06 18.6 -1.3
PRVC Isla de Provid 20.55 263 eP P 11 06 18.0 -2.0
ZANG Zanguenga, Cho 20.58 250 eP P 11 06 21.0 +0.7
ZANG eS S 11 10 09.2 -0.3
GARC Garzon, Huila 20.92 227 eP P 11 06 22.3 -2.0
VTON El Valle, Cocl 20.95 249 j i P P 11 06 25.4 +1.0
VTON eS Sn 11 14 24.8 +1.7
060A Indiantown 21.00 302 P P 11 06 24.3 -0.4
061Z Ochoppi 21.00 298 P P 11 06 24.3 -0.5
MALC Bahia Malaga 21.05 234 eP P 11 06 24.8 -0.6
PNME Penonome 21.19 249 i P P 11 06 27.5 +0.5
PNME eS S 11 10 20.0 -1.6
AZU Azuero 21.45 247 i P P 11 06 30.4 +0.7
AZU eS S 11 10 25.3 -1.3
PCON Cinco Dias 21.46 229 eP P 11 06 27.9 -2.5
ACHO3 Achotines, Los 21.54 246 j i P P 11 06 32.2 +1.6
ITTB Itaituba 21.74 167 eP P 11 06 35.6 +2.8
SOTA Rioblanco 21.75 229 eP P 11 06 30.7 -2.7
PTLC Puerto Leguiza 21.95 222 eP P 11 06 36.5 +1.5
PONU3 Ponuga, Veragu 22.03 248 eP P 11 06 35.9 -0.1
PONU3 eS S 11 10 10.6 -27
CACAO El Cacao, Vera 22.17 247 i P P 11 06 37.4 0.0
CACAO eS S 11 10 39.9 -0.7
BBAC Balboa, Cauca 22.29 230 eP P 11 06 34.5 -4.4
DWPF Disney Wildern 22.31 303 P P 11 06 38.6 -0.2
baz=115
DWPF Disney Wildern 22.31 303 P P 11 06 37.6 -1.2
DWPF IAmb IAmb 11 06 59.1
comp=Z,407nm,0.8s
GR1C Gorgona, Isla 22.33 233 eP P 11 06 37.0 -2.2
CRUC La Cruz 22.38 228 eP P 11 06 37.0 -3.1
PUAC Puerto Asis, P 22.84 226 eP P 11 06 40.8 -3.8
GCUF Volcan Galeras 22.90 229 eP P 11 06 42.5 -3.2
BCO2 Palmira 23.08 252 eP P 11 06 47.9 +0.6
V62A Hyde County Ai 23.09 326 P P 11 06 45.5 -1.4
baz=139
BRU2 Volcan 23.20 252 i P P 11 06 48.7 +0.3
BRU2 i S S 11 11 01.5 +2.4
BRU2 Volcan 23.20 252 i P P 11 06 48.4 -0.1
Y60A Bolivia 23.28 320 P P 11 06 47.8 -1.1
baz=132
W61A Ground Anchor 23.37 324 P P 11 06 49.0 -0.7
baz=136
LESP3 La Esperanza, 23.44 251 eP P 11 06 51.5 +0.9
EDSV San Vito 23.45 252 eP P 11 06 52.0 +1.1
Z59A Georgetown, SC 23.46 317 P P 11 06 50.3 -0.3
baz=129
TUMC Tumaco 23.52 232 P P 11 06 50.7 -0.6
X60A Albert Glenn T 23.52 321 P P 11 06 50.4 -0.9
baz=134
DRK0 Durika 23.53 254 j i P P 11 06 52.6 +0.8
DRK0 eS S 11 11 06.8 +2.2
DRK0 Durika 23.53 254 i P P 11 06 52.0 +0.3
EDBA Buenos Aires 23.59 254 eP P 11 06 52.6 +0.4
V61A Roper 23.59 326 P P 11 06 50.8 -1.1
baz=138
ESPN Las Esperanzas 23.62 262 P P 11 06 52.0 -0.3
ESPN IAMs_20 IAMs_20 11 15 34.3
comp=Z,30µm,21.0s
Y59A Loris 23.68 319 P P 11 06 51.7 -1.0
baz=131
Y59A Loris 23.68 319 P P 11 06 52.4 -0.4
W60A Pink Hill 23.70 323 P P 11 06 52.4 -0.5
baz=135
CVTR Volcan Turrial 23.74 256 i P P 11 06 54.8 +0.7
158A Hollywood 23.76 315 P P 11 06 53.3 -0.2
baz=126
CSU Charleston Sou 23.82 316 P P 11 06 54.0 -0.2
EDLM Las Mercedes 23.84 254 eP P 11 06 54.4 -0.2
EDLM Las Mercedes 23.84 254 eP P 11 06 55.0 +0.4
PTJ1 Puerto Jimnez 23.86 252 eP P 11 06 56.3 +1.7
PTJ1 eS S 11 11 16.1 +6.7
RGRS Roger Stewart 23.86 315 P P 11 06 54.6 +0.1
Z58A St. Stephen 23.86 317 P P 11 06 53.9 -0.6
baz=128
X59A McDuffie Farm, 23.90 320 P P 11 06 54.3 -0.6
baz=132
257A Skidaway Islan 23.90 312 IAMs_20 IAMs_20 11 17 19.4
comp=Z,15µm,19.0s
U61A Possum Corner 23.93 327 P P 11 06 54.5 -0.7
baz=139
CNNC Cliffs of the 23.93 323 P P 11 06 54.8 -0.4
baz=135
CNNC Cliffs of the 23.93 323 P P 11 06 54.1 -1.1
CNNC IAmb IAmb 11 07 40.3
comp=Z,174nm,0.9s
V60A Jim Taylor Roa 23.95 324 P P 11 06 54.9 -0.4
baz=137
V60A Jim Taylor Roa 23.95 324 P P 11 06 55.1 -0.3
V60A IAmb IAmb 11 07 14.2
comp=Z,201nm,0.8s
456A Hilliard 23.97 309 IAmb IAmb 11 07 15.3
comp=Z,414nm,0.9s
456A IAMs_20 IAMs_20 11 16 35.4
comp=Z,16µm,20.0s
NHSC New Hope 23.97 316 P P 11 06 54.8 -0.7
baz=127
NHSC New Hope 23.97 316 P P 11 06 54.1 -1.4
NHSC IAMs_20 IAMs_20 11 14 50.1
comp=Z,17µm,21.0s
LCR2 La Lucha 2 24.06 256 j i P P 11 06 57.6 +0.7
HDC Heredia 24.08 256 i P P 11 06 58.5 +1.6
HDC i S S 11 11 16.9 +3.7
HDC Heredia 24.08 256 eP P 11 06 57.3 +0.4
HDC Heredia 24.08 256 P P 11 06 57.0 +0.1
HDC IAMs_20 IAMs_20 11 15 41.7
comp=Z,24µm,21.0s
EDDO Dominical 24.10 254 eP P 11 06 57.9 +1.0
Y58A Scranton 24.13 318 P P 11 06 57.5 +0.6
baz=129,SNR=6.1
Y58A Scranton 24.13 318 P P 11 06 57.3 +0.3
Y58A IAmb IAmb 11 07 16.6
comp=Z,391nm,1.0s
W59A Clinton 24.21 322 P P 11 06 57.6 -0.1
baz=134
157A Early Branch 24.27 314 P P 11 06 57.8 -0.5
baz=125,SNR=7.8
CUSE Cuicocha Este 24.30 229 eP P 11 07 00.3 +1.1
X58A Rowland 24.34 319 P P 11 06 58.7 -0.2
baz=131
X58A Rowland 24.34 319 P P 11 06 58.7 -0.2
X58A IAmb IAmb 11 07 17.6
comp=Z,172nm,1.0s
U60A Pendleton 24.41 326 P P 11 06 59.6 0.0
baz=138
NPGB Novo Progresso 24.42 168 eP P 11 07 00.1 +0.2
NPGB eS S 11 11 22.7 +4.3
Z57A Bowman 24.43 315 P P 11 06 60.0 +0.1
baz=127
FORC Fortuna 24.45 258 eP P 11 06 59.9 -0.3
CEDE Laguna Cedeo 24.47 258 eP P 11 07 00.4 -0.1
CEDE Laguna Cedeo 24.47 258 i P P 11 07 01.8 +1.3
ARE1 Arenal 1 24.50 258 i P P 11 07 02.0 +1.4
ACON Acoyapa 24.50 261 P P 11 07 00.5 -0.1
ACON IAmb IAmb 11 07 19.1
comp=Z,255nm,1.0s
ACON IAMs_20 IAMs_20 11 15 58.7
comp=Z,29µm,22.0s
V59A Middlesex 24.50 323 P P 11 07 01.2 +0.8
baz=135,SNR=5.3
CASO Castillo 24.52 258 eP P 11 07 01.6 +0.7
W58A Raeford 24.58 320 P P 11 07 01.6 +0.5
baz=132
S61A Accomac 24.59 330 P P 11 07 01.2 0.0
baz=143
Y57A Sumter 24.66 317 P P 11 07 02.0 +0.1
baz=128
Y57A Sumter 24.66 317 P P 11 07 01.6 -0.3
Y57A IAmb IAmb 11 07 20.5
comp=Z,170nm,1.0s
PTEN Parque Tenorio 24.67 258 eP P 11 07 02.4 +0.2
U59A Littleton 24.67 325 P P 11 07 02.5 +0.6
baz=137
U59A Littleton 24.67 325 P P 11 07 00.8 -1.2
T60A Surry 24.70 327 P P 11 07 01.3 -0.8
baz=140
T60A Surry 24.70 327 P P 11 07 01.6 -0.5
ACAL Aguas Claras 24.74 258 eP P 11 07 03.7 +0.9
JTS Las Juntas de 24.77 258 P P 11 07 02.5 -0.6
comp=Z,78nm,0.9s,baz=135,slow=2.6,SNR=35
JTS LR LR 11 16 02.3
comp=Z,18µm,21.9s,baz=130,slow=35
JTS Las Juntas de 24.77 258 c i P P 11 07 03.2 +0.1
JTS pmax pmax
comp=Z,119nm,0.9s
JTS Las Juntas de 24.77 258 P P 11 07 01.8 -1.2
JTS IAmb IAmb 11 07 15.2
comp=Z,161nm,1.0s
JTS Las Juntas de 24.77 258 IAMs_20 IAMs_20 11 15 49.0
comp=Z,18µm,22.0s
CUI Cuipilapa 24.85 258 eP P 11 07 03.6 -0.3
COLC Colonia 24.89 259 eP P 11 07 03.9 -0.2
GUAB Guayabo de Bag 24.90 259 eP P 11 07 04.9 +0.6
Z56A Williston 24.90 315 P P 11 07 04.8 +0.7
baz=126,SNR=16
255A Hazlehurst 24.91 311 P P 11 07 03.3 -0.9
255A IAMs_20 IAMs_20 11 16 22.3
comp=Z,15µm,20.0s
LIM1 Limonal 24.92 259 eP P 11 07 04.6 +0.1
R61A Willards 24.95 331 P P 11 07 04.1 -0.3
baz=144
MATN Matagalpa 24.99 264 P P 11 07 05.2 0.0
MATN IAmb IAmb 11 07 22.9
comp=Z,308nm,0.9s
GPS1 Guardaparques 24.99 259 eP P 11 07 05.1 -0.1
T59A Double "B" Far 25.00 326 P P 11 07 04.7 -0.2
baz=138
T59A Double "B" Far 25.00 326 P P 11 07 05.0 +0.1
T59A IAmb IAmb 11 07 34.0
comp=Z,258nm,1.8s
GPS2 Hotel Rincn d 25.00 259 j eP P 11 07 05.3 0.0
GPS3 Bodega del ICE 25.01 259 eP P 11 07 04.7 -0.6
GB1A Borinquen Arri 25.02 259 eP P 11 07 06.1 +0.6
V58A Windy Hill, Pi 25.03 322 P P 11 07 05.4 +0.2
baz=134,SNR=5.0
V58A Windy Hill, Pi 25.03 322 P P 11 07 05.4 +0.2
V58A IAmb IAmb 11 07 23.6
comp=Z,119nm,1.0s
BUEV Buena Vista 25.04 259 eP P 11 07 06.1 +0.5
LAPC Finca la Perla 25.07 259 eP P 11 07 04.9 -0.9
S60A Water View 25.09 328 P P 11 07 05.5 -0.1
baz=141
GBS3 Finca Las Img 25.09 259 eP P 11 07 05.6 -0.4
BIRD Birdtown, Kers 25.10 318 P P 11 07 06.3 +0.4
BIRD IAmb IAmb 11 07 27.2
comp=Z,126nm,0.9s
U58A Oxford 25.13 324 P P 11 07 06.3 +0.3
baz=135,SNR=11
Y56A Pelion 25.13 316 P P 11 07 06.2 0.0
baz=126
W57A Gilead 25.14 320 P P 11 07 06.7 +0.6
baz=131,SNR=5.5
W57A Gilead 25.14 320 IAmb IAmb 11 07 40.1
comp=Z,156nm,1.1s
PRPB Parauapebas 25.30 155 eP P 11 07 07.9 0.0
PRPB eS S 11 11 34.9 +2.2
X56A White Oak 25.38 317 P P 11 07 09.2 +0.8
baz=128,SNR=19
Q61A Milford 25.39 332 P P 11 07 08.0 -0.4
baz=145
S59A Mechanicsville 25.46 328 P P 11 07 09.1 +0.1
baz=140
ROSB Rosrio 25.49 139 eP P 11 07 09.2 -0.3
TIGA Tifton 25.49 309 P P 11 07 10.3 +0.9
baz=119,SNR=17
TIGA Tifton 25.49 309 IAMs_20 IAMs_20 11 17 32.7
comp=Z,17µm,21.0s
R60A Leonardtown, M 25.49 329 P P 11 07 08.3 -1.1
baz=142
V57A Coltrane Farms 25.49 321 P P 11 07 09.0 -0.4
baz=132
W56A Indian Trail 25.49 319 P P 11 07 09.7 +0.3
baz=130,SNR=11
T58A Grand View Acr 25.51 325 P P 11 07 09.6 0.0
baz=136,SNR=10
Y55A Saluda 25.59 315 P P 11 07 10.8 +0.5
baz=126,SNR=28
U57A Blanch 25.60 323 P P 11 07 10.4 0.0
baz=134,SNR=6.2
R59A King George, V 25.70 328 P P 11 07 09.7 -1.5
baz=141
154A Montrose 25.73 311 IAMs_20 IAMs_20 11 18 43.8
comp=Z,15µm,19.0s
Q60A Greensboro 25.73 331 P P 11 07 11.4 -0.1
baz=144
S58A Poland Farm, P 25.74 326 P P 11 07 11.1 -0.5
baz=138
X55A Gracelyn & Ava 25.76 316 P P 11 07 12.5 +0.7
baz=127,SNR=14
P61A Hammonton 25.82 334 P P 11 07 11.8 -0.5
baz=147
CBN Corbin Frederi 25.83 328 P P 11 07 12.1 -0.4
baz=140
V56A Mocksville 25.88 320 P P 11 07 12.4 -0.5
baz=131
R58B Mineral 25.91 327 P P 11 07 12.0 -1.2
baz=139
R58B Mineral 25.91 327 P P 11 07 12.2 -0.9
R58B IAmb IAmb 11 07 46.5
comp=Z,188nm,1.4s
SAML Samuel 25.95 186 P P 11 07 14.5 +0.8
SAML pmax pmax
comp=Z,359nm,1.1s
SAML Samuel 25.95 186 P P 11 07 14.5 +0.8
SAML IAmb IAmb 11 07 23.2
comp=Z,359nm,1.1s
SAML Samuel 25.95 186 eP P 11 07 14.7 +1.1
SAML eS S 11 11 44.7 +1.9
T57A Hurt 25.95 324 P P 11 07 14.6 +1.0
baz=135,SNR=6.4
KMSC Kings Mountain 25.97 318 P P 11 07 14.3 +0.5
baz=129,SNR=12
KMSC Kings Mountain 25.97 318 IAmb IAmb 11 07 32.9
comp=Z,113nm,0.9s
O61A Allentown 26.07 335 P P 11 07 14.2 -0.4
baz=148
PAULI Pauline 26.09 317 IAmb IAmb 11 07 34.0
comp=Z,122nm,0.9s
CRIN San Cristobal 26.11 264 P P 11 07 15.8 +0.5
M64A Tiverton 26.16 341 P P 11 07 15.2 -0.1
baz=156
U56A King 26.16 321 P P 11 07 15.2 -0.3
baz=132
U56A King 26.16 321 IAmb IAmb 11 07 35.1
comp=Z,171nm,1.0s
R58A Rapidan 26.23 327 P P 11 07 15.7 -0.4
baz=139
M63A Gales Ferry 26.29 340 P P 11 07 16.9 +0.3
baz=154,SNR=6.3
P60A Greenville 26.29 333 P P 11 07 15.9 -0.7
baz=145
X54A Belton 26.29 316 P P 11 07 17.6 +0.9
baz=126,SNR=24
V55A Taylorsville 26.35 319 P P 11 07 17.9 +0.7
baz=130,SNR=6.2
L64A Middleborough 26.40 342 P P 11 07 17.0 -0.5
baz=157
GOGA Godfrey 26.40 313 P P 11 07 18.3 +0.6
baz=122,SNR=14
GOGA S S 11 11 51.3 +1.5
baz=122
GOGA Godfrey 26.40 313 IAmb IAmb 11 07 36.3
comp=Z,162nm,1.1s
GOGA Godfrey 26.40 313 IAMs_20 IAMs_20 11 19 15.7
comp=Z,16µm,20.0s
T56A Rocky Mt 26.42 323 P P 11 07 17.2 -0.6
baz=134
P59A Jarrettsville 26.49 331 P P 11 07 18.5 +0.1
baz=144
W54A Cherokee Point 26.49 317 P P 11 07 19.1 +0.7
baz=127,SNR=8.5
R57A Stanardsville 26.50 327 P P 11 07 19.1 +0.7
baz=138
YLE Yale 26.51 339 IAmb IAmb 11 07 40.8
comp=Z,161nm,1.0s
352A Blakely 26.52 307 IAMs_20 IAMs_20 11 18 34.9
comp=Z,14µm,20.0s
N61A South Mountain 26.53 336 P P 11 07 18.7 0.0
baz=149
Q58A Fox Den Farm, 26.55 329 P P 11 07 18.6 -0.4
baz=140
Q58A S S 11 11 53.3 +1.2
baz=140
L63A North Scituate 26.57 341 P P 11 07 18.2 -0.8
baz=155
BRNJ Basking Ridge 26.57 335 IAmb IAmb 11 07 40.1
comp=Z,247nm,1.4s
PAL Palisades 26.60 337 P P 11 07 19.0 -0.3
baz=150
TEIG Tepich 26.60 281 P P 11 07 19.7 +0.1
S56A Natural Bridge 26.61 324 P P 11 07 19.6 +0.1
baz=136
M62A Hamden 26.61 339 P P 11 07 19.6 +0.1
baz=152,SNR=5.8
O60A Telford 26.61 334 P P 11 07 19.1 -0.3
baz=146
U55A TA2, Sparta 26.67 321 P P 11 07 21.1 +1.0
baz=131,SNR=7.1
V54A Nebo 26.76 318 P P 11 07 21.8 +0.8
baz=129,SNR=8.6
V54A S S 11 11 58.9 +3.5
baz=129
BLA Blacksburg 26.77 323 P P 11 07 20.6 -0.4
BLA pmax pmax
comp=Z,260nm,0.9s
BLA MLR MLR
comp=Z,8µm,22.0s
BLA Blacksburg 26.77 323 P P 11 07 21.9 +0.9
baz=133,SNR=5.8
BLA Blacksburg 26.77 323 P P 11 07 20.6 -0.4
BLA IAmb IAmb 11 07 43.1
comp=Z,260nm,0.8s
P58A Pank, Wackersv 26.80 330 P P 11 07 20.6 -0.5
baz=142
M61A Granite Spring 26.81 337 P P 11 07 20.7 -0.5
baz=151
T55A Pulaski 26.92 322 P P 11 07 22.1 -0.3
baz=133
152A Waverly Hall 26.92 310 IAmb IAmb 11 07 40.9
comp=Z,122nm,0.8s
O59A Robesonia 26.94 333 P P 11 07 22.9 +0.4
baz=145,SNR=7.9
O59A S S 11 12 00.7 +2.5
baz=145
N60A Cedar Hill Far 26.95 335 P P 11 07 22.4 -0.2
baz=148
N60A S S 11 11 58.7 +0.5
baz=148
Q57A Strasburg 26.99 328 P P 11 07 22.1 -0.9
baz=139
Q57A S S 11 12 02.1 +3.1
baz=139
Y52A Lilburn 27.07 313 P P 11 07 24.7 +1.0
baz=122,SNR=12
Y52A S S 11 12 02.5 +2.2
baz=122
Y52A Lilburn 27.07 313 IAMs_20 IAMs_20 11 19 25.2
comp=Z,15µm,20.0s
KSCT Kent School, K 27.07 338 IAmb IAmb 11 07 41.9
comp=Z,240nm,1.8s
O58A Lewisberry 27.12 331 P P 11 07 23.8 -0.3
baz=143
O58A S S 11 12 02.9 +1.9
baz=143
P57A Homestead Farm 27.14 329 P P 11 07 24.0 -0.2
baz=141
HRV Adam Dziewonsk 27.14 342 P P 11 07 24.0 -0.2
HRV pmax pmax
comp=Z,66nm,1.1s
HRV Adam Dziewonsk 27.14 342 P P 11 07 23.8 -0.4
baz=156
HRV Adam Dziewonsk 27.14 342 P P 11 07 24.0 -0.2
M60A Port Jervis 27.15 336 P P 11 07 23.8 -0.5
baz=149
M60A S S 11 12 03.4 +2.1
baz=149
U54A Nelsons Funny 27.15 320 P P 11 07 24.8 +0.3
baz=130
U54A Nelsons Funny 27.15 320 IAmb IAmb 11 07 51.4
comp=Z,92nm,0.8s
S55A Lewisburg 27.20 323 P P 11 07 25.1 +0.2
baz=134
S55A S S 11 12 04.8 +2.4
baz=134
N59A State Game Lan 27.27 334 P P 11 07 25.3 -0.1

	baz=146						
K63A	**Dunstable**	**27.30**	**342**	P	**P**	**11 07 25.2**	**-0.4**
	baz=156						
K63A				S	**S**	**11 12 06.0**	**+2.4**
	baz=156						
R55A	**Marlinton**	**27.35**	**325**	P	**P**	**11 07 26.6**	**+0.4**
	baz=135						
R55A				S	**S**	**11 12 09.2**	**+4.5**
	baz=135						
T54A	**Tazewell**	**27.35**	**321**	P	**P**	**11 07 27.3**	**+1.0**
	baz=131,SNR=9.2						
Q56A	**Snyder Ridge,**	**27.40**	**327**	P	**P**	**11 07 26.9**	**+0.3**
	baz=138						
Q56A				S	**S**	**11 12 09.0**	**+3.6**
	baz=138						
L61B	**Northampton**	**27.44**	**340**	P	**P**	**11 07 26.0**	**-0.9**
	baz=154						
K62A	**Royalston**	**27.49**	**341**	P	**P**	**11 07 26.7**	**-0.6**
	baz=155						
L61A	**Hillsdale 1, H**	**27.51**	**339**	P	**P**	**11 07 28.2**	**+0.7**
	baz=152,SNR=8.1						
L61A				S	**S**	**11 12 07.9**	**+0.9**
	baz=152						
O57A	**Amberson**	**27.52**	**331**	P	**P**	**11 07 27.8**	**+0.1**
	baz=142						
O57A				S	**S**	**11 12 10.3**	**+3.0**
	baz=142						
P56A	**Dayton Farm, R**	**27.56**	**328**	P	**P**	**11 07 28.0**	**-0.1**
	baz=139						
P56A				S	**S**	**11 12 11.6**	**+3.6**
	baz=139						
L60A	**Shokan**	**27.57**	**337**	P	**P**	**11 07 28.2**	**+0.1**
	baz=150,SNR=6.3						
L60A				S	**S**	**11 12 09.6**	**+1.7**
	baz=150						
N58A	**Sunbury**	**27.61**	**333**	P	**P**	**11 07 28.0**	**-0.5**
	baz=145						
M59A	**Waymart**	**27.65**	**335**	P	**P**	**11 07 29.2**	**+0.4**
	baz=148,SNR=9.2						
M59A				S	**S**	**11 12 11.7**	**+2.4**
	baz=148						
W52A	**Murphy**	**27.65**	**315**	IAMs_20	IAMs_20	11 18 54.6	
	comp=Z,14µm,21.0s						
S54A	**Dingess, Beckl**	**27.69**	**323**	P	**P**	**11 07 28.9**	**-0.4**
	baz=133						
J63A	**Strafford**	**27.71**	**343**	P	**P**	**11 07 28.3**	**-1.0**
	baz=158						
250A	**Grady**	**27.76**	**307**	IAMs_20	IAMs_20	11 18 04.9	
	comp=Z,13µm,22.0s						
R54A	**Victor**	**27.77**	**323**	P	**P**	**11 07 31.5**	**+1.6**
	baz=134						
KSPA	**Keystone Colle**	**27.80**	**335**	IAmb	IAmb	11 07 48.5	
	comp=Z,136nm,1.1s						
K61A	**Williamstown**	**27.83**	**339**	P	**P**	**11 07 30.8**	**+0.4**
	baz=153,SNR=9.4						
K61A				S	**S**	**11 12 13.3**	**+1.3**
	baz=153						
Q55A	**Buckhannon**	**27.84**	**326**	P	**P**	**11 07 30.4**	**-0.2**
	baz=136						
Q55A				S	**S**	**11 12 16.7**	**+4.3**
	baz=136						
J62A	**Henniker**	**27.87**	**342**	P	**P**	**11 07 30.7**	**-0.1**
	baz=156						
J62A				S	**S**	**11 12 17.3**	**+4.7**
	baz=156						
TKL	**Tuckaleechee C**	**27.87**	**316**	P	**P**	**11 07 32.1**	**+1.3**
	comp=Z,70nm,1.2s,baz=145,slow=11,SNR=13						
TKL				LR	LR	11 19 55.4	
	comp=Z,3µm,19.5s,baz=138,slow=39						
TKL	**Tuckaleechee C**	**27.87**	**316**	IAmb	IAmb	11 07 47.9	
	comp=Z,245nm,1.6s						
T53A	**Wise**	**27.89**	**320**	P	**P**	**11 07 30.2**	**-0.8**
	baz=130						
N57A	**Milroy**	**27.91**	**331**	P	**P**	**11 07 29.5**	**-1.7**
	baz=143						
M58A	**Price's Panora**	**27.93**	**334**	P	**P**	**11 07 29.4**	**-2.0**
	baz=146						
I64A	**Boothbay**	**27.93**	**346**	P	**P**	**11 07 29.9**	**-1.4**
	baz=161						
SSPA	**Standing Stone**	**27.98**	**331**	P	**P**	**11 07 31.8**	**0.0**
SNET	**Serv Nac Est T**	**27.99**	**267**	P	**P**	**11 07 32.2**	**0.0**
X51A	**Calhoun**	**28.00**	**313**	IAMs_20	IAMs_20	11 19 54.9	
	comp=Z,13µm,20.0s						
O56A	**Blue Knob Stat**	**28.01**	**329**	P	**P**	**11 07 32.3**	**+0.2**
	baz=141						
O56A				S	**S**	**11 12 18.2**	**+3.1**
	baz=141						
O56A	**Blue Knob Stat**	**28.01**	**329**	IAmb	IAmb	11 07 51.1	
	comp=Z,120nm,1.3s						
L59A	**Walton**	**28.05**	**336**	P	**P**	**11 07 32.4**	**0.0**
	baz=149						
P55A	**Reedsville**	**28.07**	**327**	P	**P**	**11 07 32.8**	**+0.1**
	baz=138						
P55A				S	**S**	**11 12 19.3**	**+3.2**
	baz=138						
CLDB	**Colider**	**28.08**	**170**	*e*P	**P**	**11 07 32.7**	**-0.2**
S53A	**Williamson**	**28.09**	**321**	P	**P**	**11 07 32.6**	**-0.2**
	baz=131						
Z50A	**Ashland**	**28.09**	**310**	P	**P**	**11 07 33.5**	**+0.6**
	baz=119,SNR=19						
Z50A				S	**S**	**11 12 19.2**	**+2.7**
	baz=119						
Z50A	**Ashland**	**28.09**	**310**	IAMs_20	IAMs_20	11 18 42.5	
	comp=Z,12µm,21.0s						
M57A	**Sunshine Farm,**	**28.19**	**333**	P	**P**	**11 07 33.3**	**-0.4**
	baz=144						
MCWV	**Mont Chateau**	**28.20**	**327**	P	**P**	**11 07 33.1**	**-0.6**
	baz=138						
MCWV				S	**S**	**11 12 21.8**	**+3.9**
	baz=138						
J61A	**Chester**	**28.20**	**341**	P	**P**	**11 07 33.0**	**-0.7**
	baz=155						
Q54A	**Coxs Mills**	**28.24**	**325**	P	**P**	**11 07 34.2**	**+0.1**
	baz=135						
Q54A	**Coxs Mills**	**28.24**	**325**	IAmb	IAmb	11 07 57.5	
	comp=Z,138nm,1.4s						
EMMW	**East Machias**	**28.24**	**349**	P	**P**	**11 07 33.7**	**-0.3**
L58A	**Harry Jones Me**	**28.24**	**335**	P	**P**	**11 07 33.7**	**-0.4**
	baz=147						
L58A				S	**S**	**11 12 22.0**	**+3.4**
	baz=147						
CPCT	**Cooper Cave**	**28.25**	**315**	IAmb	IAmb	11 07 54.2	
	comp=Z,299nm,1.9s						
CPCT				IAMs_20	IAMs_20	11 17 20.5	
	comp=Z,13µm,22.0s						
H66A	**Whiting**	**28.29**	**350**	P	**P**	**11 07 33.8**	**-0.6**
	baz=166						
I63A	**Otisfield**	**28.29**	**344**	P	**P**	**11 07 35.1**	**+0.6**
	baz=159,SNR=8.9						
GBN	**Guysborough**	**28.32**	**358**	IAmb	IAmb	11 07 51.9	
	comp=Z,276nm,1.8s						
I62A	**Tamworth**	**28.33**	**343**	P	**P**	**11 07 34.6**	**-0.2**
	baz=158						
I62A				S	**S**	**11 12 22.1**	**+2.2**
	baz=158						
O55A	**Ligonier**	**28.33**	**328**	P	**P**	**11 07 35.1**	**+0.1**
	baz=139						
O55A				S	**S**	**11 12 23.3**	**+3.3**
	baz=139						
V51A	**Loudon**	**28.34**	**316**	IAMs_20	IAMs_20	11 19 27.8	
	comp=Z,12µm,20.0s						
H65A	**Eastbrook**	**28.37**	**348**	P	**P**	**11 07 34.9**	**-0.3**
	baz=164						
H65A				S	**S**	**11 12 22.1**	**+1.6**
	baz=164						
N56A	**West Decatur**	**28.39**	**331**	P	**P**	**11 07 35.4**	**0.0**
	baz=142						
N56A				S	**S**	**11 12 23.7**	**+2.8**
	baz=142						
J60A	**Lant Hill Farm**	**28.39**	**340**	P	**P**	**11 07 36.3**	**+0.9**
	baz=153,SNR=6.8						
J60A				S	**S**	**11 12 23.6**	**+2.7**
	baz=153						
R53A	**Hurricane**	**28.42**	**323**	P	**P**	**11 07 36.0**	**+0.2**
	baz=132						
R53A				S	**S**	**11 12 24.0**	**+2.6**
	baz=132						
R53A	**Hurricane**	**28.42**	**323**	IAmb	IAmb	11 07 54.3	
	comp=Z,123nm,1.1s						
BINY	**Binghamton**	**28.43**	**335**	P	**P**	**11 07 35.7**	**-0.1**
	baz=147						
BINY				S	**S**	**11 12 24.0**	**+2.5**
	baz=147						
BINY	**Binghamton**	**28.43**	**335**	IAmb	IAmb	11 07 53.7	
	comp=Z,173nm,1.4s						
HNH	**Hanover**	**28.45**	**342**	IAmb	IAmb	11 07 53.6	
	comp=Z,270nm,1.9s						
K59A	**Cooperstown**	**28.48**	**337**	P	**P**	**11 07 36.9**	**+0.7**
	baz=150,SNR=5.7						
K59A				S	**S**	**11 12 24.6**	**+2.2**
	baz=150						
P54A	**Burton**	**28.49**	**326**	P	**P**	**11 07 36.0**	**-0.4**
	baz=136						
P54A				S	**S**	**11 12 26.6**	**+4.0**
	baz=136						
FPAL	**Fort Paine**	**28.51**	**313**	IAmb	IAmb	11 07 38.8	
	comp=Z,81nm,0.9s						
FPAL				IAMs_20	IAMs_20	11 20 29.5	
	comp=Z,12µm,20.0s						
H64A	**Troy**	**28.52**	**347**	P	**P**	**11 07 36.7**	**+0.2**
	baz=162,SNR=6.4						
GGN	**Saint George**	**28.53**	**350**	IAmb	IAmb	11 07 54.4	
	comp=Z,170nm,1.4s						
Q53A	**Leroy**	**28.54**	**324**	P	**P**	**11 07 37.1**	**+0.3**
	baz=134,SNR=5.1						
WVL	**Waterville**	**28.55**	**346**	IAMs_20	IAMs_20	11 19 39.3	
	comp=Z,12µm,19.0s						
N55A	**Marion Center**	**28.61**	**330**	P	**P**	**11 07 36.9**	**-0.6**
	baz=140						
L57A	**Andrews Acres**	**28.62**	**334**	P	**P**	**11 07 38.0**	**+0.5**
	baz=146,SNR=6.6						
I61A	**Oroboro, Fairl**	**28.63**	**342**	P	**P**	**11 07 38.2**	**+0.6**
	baz=156,SNR=6.1						
I61A				S	**S**	**11 12 27.9**	**+3.2**
	baz=156						
W50A	**Signal Mountai**	**28.65**	**314**	IAmb	IAmb	11 07 56.9	
	comp=Z,108nm,0.9s						
W50A				IAMs_20	IAMs_20	11 20 37.2	
	comp=Z,11µm,20.0s						
H63A	**New Sharon**	**28.73**	**346**	P	**P**	**11 07 37.1**	**-1.2**
	baz=161						
G65A	**Princeton**	**28.73**	**349**	P	**P**	**11 07 37.1**	**-1.3**
	baz=166						
G65A				S	**S**	**11 12 27.1**	**+0.9**
	baz=166						
G65A	**Princeton**	**28.73**	**349**	IAmb	IAmb	11 07 56.4	
	comp=Z,446nm,1.9s						
Y49A	**Blount Mountai**	**28.74**	**311**	IAMs_20	IAMs_20	11 20 38.7	
	comp=Z,11µm,19.0s						
K58A	**Earlville**	**28.77**	**336**	P	**P**	**11 07 38.6**	**-0.2**
	baz=148,SNR=5.2						
K58A				S	**S**	**11 12 29.7**	**+2.7**
	baz=148						
M56A	**Emporium**	**28.78**	**332**	P	**P**	**11 07 38.5**	**-0.4**
	baz=143						
M56A				S	**S**	**11 12 30.1**	**+2.9**
	baz=143						
LRAL	**Lakeview Retre**	**28.79**	**309**	P	**P**	**11 07 39.9**	**+0.9**
	baz=117,SNR=16						
LRAL				S	**S**	**11 12 30.5**	**+3.2**
	baz=117						
LRAL	**Lakeview Retre**	**28.79**	**309**	IAMs_20	IAMs_20	11 19 34.0	
	comp=Z,13µm,19.0s						
LBNH	**Lisbon**	**28.83**	**343**	P	**P**	**11 07 38.2**	**-1.1**
	baz=157						
LBNH				S	**S**	**11 12 30.4**	**+2.6**
	baz=157						
O54A	**Avella**	**28.86**	**327**	P	**P**	**11 07 36.7**	**-2.9**
	baz=137						
I60A	**Shoreham**	**28.89**	**340**	P	**P**	**11 07 40.0**	**+0.2**
	baz=154,SNR=8.1						
P53A	**Whipple**	**28.90**	**325**	P	**P**	**11 07 39.9**	**0.0**
	baz=135						
H62A	**Milan**	**28.93**	**344**	P	**P**	**11 07 40.1**	**-0.1**
	baz=158,SNR=10						
H62A	**Milan**	**28.93**	**344**	IAmb	IAmb	11 07 58.5	
	comp=Z,199nm,1.6s						
J59A	**Piesco**	**28.96**	**338**	P	**P**	**11 07 40.8**	**+0.3**
	baz=151,SNR=7.0						
J59A				S	**S**	**11 12 32.8**	**+3.0**
	baz=151						
APG	**El Apazote**	**28.96**	**270**	P	**P**	**11 07 42.2**	**+1.2**
	comp=Z,126nm,1.1s,baz=78,slow=5.6,SNR=43						
APG				LR	LR	11 20 04.2	
	comp=Z,19µm,20.2s,baz=76,slow=38						
G64A	**Maxfield**	**29.01**	**348**	P	**P**	**11 07 40.9**	**+0.1**
	baz=163,SNR=12						
G64A				S	**S**	**11 12 32.4**	**+1.8**
	baz=163						
Q52A	**Bidwell**	**29.03**	**323**	P	**P**	**11 07 41.3**	**+0.1**
	baz=133,SNR=7.6						
L56A	**Greenwood**	**29.03**	**333**	P	**P**	**11 07 40.4**	**-0.7**
	baz=144						
L56A	**Greenwood**	**29.03**	**333**	IAmb	IAmb	11 07 59.7	
	comp=Z,245nm,1.7s						
I59A	**Olmsteadville**	**29.03**	**340**	P	**P**	**11 07 38.8**	**-2.4**
	baz=153						
I59A				S	**S**	**11 12 34.4**	**+3.4**
	baz=153						
M55A	**Ridgway**	**29.04**	**331**	P	**P**	**11 07 42.1**	**+0.9**
	baz=142,SNR=7.1						
M55A				S	**S**	**11 12 33.7**	**+2.5**
	baz=142						
M55A	**Ridgway**	**29.04**	**331**	IAmb	IAmb	11 07 59.9	
	comp=Z,474nm,2.0s						
G63A	**Kingsbury**	**29.06**	**346**	P	**P**	**11 07 41.9**	**+0.5**
	baz=162,SNR=14						
K57A	**Scipio Center**	**29.09**	**335**	P	**P**	**11 07 42.1**	**+0.5**
	baz=147,SNR=6.2						
SWET	**Sewanee**	**29.09**	**313**	IAMs_20	IAMs_20	11 20 49.8	
	comp=Z,12µm,20.0s						
H61A	**Lyndonville**	**29.10**	**343**	P	**P**	**11 07 42.4**	**+0.7**
	baz=157,SNR=8.9						
PKME	**Peaks-Kenny Pk**	**29.13**	**347**	P	**P**	**11 07 42.5**	**+0.6**
	baz=162,SNR=7.6						
PKME	**Peaks-Kenny Pk**	**29.13**	**347**	IAmb	IAmb	11 07 58.5	
	comp=Z,178nm,1.7s						
PKME				IAMs_20	IAMs_20	11 19 55.6	
	comp=Z,11µm,19.0s						
J58A	**Remsen**	**29.15**	**337**	P	**P**	**11 07 42.6**	**+0.5**
	baz=150,SNR=7.0						
J58A				S	**S**	**11 12 35.7**	**+2.9**
	baz=150						
N54A	**Moraine State**	**29.24**	**329**	P	**P**	**11 07 43.2**	**+0.2**
	baz=139						
N54A				S	**S**	**11 12 36.5**	**+2.1**
	baz=139						
I58A	**Old Forge**	**29.32**	**338**	P	**P**	**11 07 45.0**	**+1.3**
	baz=151,SNR=30						
I58A				S	**S**	**11 12 38.0**	**+2.5**
	baz=151						
O53A	**New Philadelph**	**29.35**	**326**	P	**P**	**11 07 44.7**	**+0.8**
	baz=136,SNR=5.2						
H60A	**Morristown**	**29.35**	**342**	P	**P**	**11 07 42.8**	**-1.1**
	baz=155						
G62A	**West of Eustis**	**29.37**	**345**	P	**P**	**11 07 45.1**	**+1.0**
	baz=160,SNR=7.4						
G62A				S	**S**	**11 12 38.7**	**+2.4**
	baz=160						
K56A	**Middlesex**	**29.39**	**334**	P	**P**	**11 07 43.1**	**-1.2**
	baz=145						
K56A				S	**S**	**11 12 38.0**	**+1.3**
	baz=145						
P52A	**Corning**	**29.41**	**324**	P	**P**	**11 07 43.7**	**-0.8**
	baz=134						
J57A	**Williamstown**	**29.45**	**337**	P	**P**	**11 07 45.7**	**+0.9**
	baz=148,SNR=9.2						
J57A	**Williamstown**	**29.45**	**337**	IAmb	IAmb	11 08 03.5	
	comp=Z,149nm,1.1s						
L55A	**Hinsdale**	**29.45**	**332**	P	**P**	**11 07 45.7**	**+0.7**
	baz=143,SNR=6.6						
X48A	**Hartselle**	**29.49**	**311**	IAmb	IAmb	11 08 29.6	
	comp=Z,242nm,1.9s						
X48A				IAMs_20	IAMs_20	11 21 01.5	
	comp=Z,12µm,20.0s						
M54A	**Oil Creek Stat**	**29.50**	**330**	P	**P**	**11 07 44.9**	**-0.4**
	baz=140						
F63A	**Nahmakanta, Br**	**29.51**	**348**	P	**P**	**11 07 45.8**	**+0.5**
	baz=163,SNR=9.7						
F63A				S	**S**	**11 12 41.3**	**+2.8**
	baz=163						
F64A	**Sherman**	**29.52**	**349**	P	**P**	**11 07 45.9**	**+0.5**
	baz=164,SNR=13						
F64A	**Sherman**	**29.52**	**349**	IAmb	IAmb	11 08 03.1	
	comp=Z,145nm,1.4s						
F64A				IAMs_20	IAMs_20	11 21 07.8	
	comp=Z,10µm,18.0s						
N53A	**Lisbon**	**29.55**	**327**	P	**P**	**11 07 45.7**	**-0.1**
	baz=137						
O52A	**Adamsville**	**29.59**	**325**	P	**P**	**11 07 45.8**	**-0.3**
	baz=135						
Z47A	**Carrollton**	**29.66**	**308**	IAMs_20	IAMs_20	11 20 03.2	
	comp=Z,12µm,20.0s						
J56A	**Wolcott**	**29.68**	**335**	P	**P**	**11 07 47.2**	**+0.4**
	baz=147,SNR=10						
J56A	**Wolcott**	**29.68**	**335**	IAmb	IAmb	11 08 04.9	
	comp=Z,157nm,1.1s						
G61A	**St-Isidore-de-**	**29.68**	**344**	P	**P**	**11 07 47.9**	**+1.0**
	baz=158,SNR=7.8						
H58A	**Gabriels**	**29.69**	**340**	P	**P**	**11 07 45.6**	**-1.3**
	baz=153						
U49A	**Red Boiling Sp**	**29.69**	**316**	IAMs_20	IAMs_20	11 20 08.6	
	comp=Z,12µm,21.0s						
Q51A	**Peebles**	**29.70**	**322**	P	**P**	**11 07 48.0**	**+0.9**
	baz=131,SNR=7.6						
Q51A	**Peebles**	**29.70**	**322**	IAmb	IAmb	11 08 05.8	
	comp=Z,103nm,0.9s						
WVNY	**West Valley, N**	**29.71**	**332**	IAmb	IAmb	11 08 05.7	
	comp=Z,162nm,1.2s						
H59A	**Cadyville**	**29.73**	**341**	P	**P**	**11 07 48.1**	**+0.8**
	baz=154,SNR=8.3						
H59A				S	**S**	**11 12 45.3**	**+3.4**
	baz=154						
K55A	**Perry**	**29.73**	**333**	P	**P**	**11 07 46.4**	**-1.0**
	baz=144						
G60A	**Masonville**	**29.73**	**343**	P	**P**	**11 07 47.9**	**+0.6**
	baz=156,SNR=6.9						
I57A	**Carthage**	**29.78**	**337**	P	**P**	**11 07 48.3**	**+0.6**
	baz=150,SNR=7.3						
I57A				S	**S**	**11 12 49.4**	**+6.7**
	baz=150						
VILB	**Vilhena**	**29.78**	**180**	*e*P	**P**	**11 07 49.4**	**+1.4**
P51A	**Williamsport**	**29.83**	**323**	P	**P**	**11 07 48.6**	**+0.4**
	baz=132,SNR=5.6						
P51A	**Williamsport**	**29.83**	**323**	IAmb	IAmb	11 08 06.7	
	comp=Z,95nm,1.0s						
FRNY	**Flat Rock**	**29.87**	**341**	IAmb	IAmb	11 08 06.4	
	comp=Z,115nm,1.2s						
ATAH	**Atahualpa**	**29.88**	**218**	P	**P**	**11 07 50.3**	**+1.0**
	comp=Z,427nm,0.9s,baz=27,slow=4.5,SNR=79						
ATAH				S	**S**	**11 12 45.0**	**-0.5**
	comp=Z,15nm,0.9s,baz=272,slow=24,SNR=6.3						
L54A	**Sinclairville**	**29.90**	**331**	P	**P**	**11 07 48.7**	**-0.1**
	baz=142						
K54A	**Basiliko Farm,**	**29.91**	**332**	P	**P**	**11 07 48.7**	**-0.2**
	baz=143						
K54A				S	**S**	**11 12 45.8**	**+1.0**
	baz=143						
M53A	**WI Miller and**	**29.94**	**329**	P	**P**	**11 07 48.6**	**-0.6**
	baz=138						
E64A	**Bridgewater**	**29.96**	**350**	P	**P**	**11 07 49.7**	**+0.5**
	baz=166,SNR=17						
V48A	**Smith Brothers**	**29.98**	**314**	IAmb	IAmb	11 08 16.0	
	comp=Z,121nm,1.0s						
V48A				IAMs_20	IAMs_20	11 21 17.4	
	comp=Z,11µm,20.0s						
LONY	**Lake Ozonia**	**30.00**	**340**	P	**P**	**11 07 49.1**	**-0.5**
	baz=152						
N52A	**McGinn's Farm,**	**30.00**	**327**	P	**P**	**11 07 49.4**	**-0.3**
	baz=136						
346A	**Big Creek Wild**	**30.01**	**304**	IAmb	IAmb	11 07 52.6	
	comp=Z,144nm,0.9s						
346A				IAMs_20	IAMs_20	11 21 46.5	
	comp=Z,16µm,20.0s						
O51A	**Pataskala**	**30.03**	**325**	P	**P**	**11 07 49.2**	**-0.8**
	baz=134						
J55A	**Hilton**	**30.06**	**334**	P	**P**	**11 07 49.8**	**-0.4**
	baz=145						
E63A	**Oxbow**	**30.07**	**349**	P	**P**	**11 07 51.1**	**+0.8**
	baz=165,SNR=9.7						
E63A	**Oxbow**	**30.07**	**349**	IAmb	IAmb	11 08 08.1	
	comp=Z,112nm,1.2s						
ERPA	**Erie**	**30.12**	**330**	P	**P**	**11 07 51.2**	**+0.4**
	baz=140						
L53A	**Girard**	**30.12**	**330**	P	**P**	**11 07 49.9**	**-0.9**
	baz=140						
146A	**Union**	**30.18**	**306**	IAMs_20	IAMs_20	11 19 10.9	
	comp=Z,12µm,22.0s						
F61A	**St Evariste**	**30.19**	**345**	P	**P**	**11 07 50.0**	**-1.4**
	baz=160						
ACSO	**Alum Creek Sta**	**30.30**	**324**	P	**P**	**11 07 53.5**	**+1.1**
	baz=133,SNR=6.8						
G58A	**Ormstown**	**30.30**	**341**	P	**P**	**11 07 52.8**	**+0.5**
	baz=153						
R49A	**Shelbyville**	**30.34**	**319**	IAMs_20	IAMs_20	11 18 13.0	
	comp=Z,11µm,22.0s						
P50A	**Jamestown**	**30.34**	**323**	P	**P**	**11 07 52.8**	**0.0**
	baz=131						
M52A	**Chesterland**	**30.36**	**328**	P	**P**	**11 07 52.8**	**-0.1**
	baz=137						
CCIG	**Comitan**	**30.41**	**273**	P	**P**	**11 07 53.7**	**-0.1**
CCIG				IAMs_20	IAMs_20	11 22 24.6	
	comp=Z,14µm,19.0s						
J54A	**Appleton**	**30.42**	**333**	P	**P**	**11 07 53.0**	**-0.4**
	baz=144						
J54A	**Appleton**	**30.42**	**333**	IAmb	IAmb	11 08 11.6	
	comp=Z,148nm,1.2s						
F60A	**Warwick**	**30.43**	**344**	P	**P**	**11 07 53.4**	**-0.1**
	baz=158,SNR=6.8						
N51A	**Ashland**	**30.44**	**326**	P	**P**	**11 07 54.1**	**+0.5**
	baz=135						
PLAL	**Pickwick Lake**	**30.49**	**311**	IAmb	IAmb	11 07 56.5	
	comp=Z,168nm,0.8s						
PLAL				IAMs_20	IAMs_20	11 21 41.9	
	comp=Z,13µm,20.0s						
E61A	**Lac Etchemin**	**30.50**	**346**	P	**P**	**11 07 54.8**	**+0.6**
	baz=161,SNR=12						
BATG	**Bathurst New B**	**30.54**	**352**	IAMs_20	IAMs_20	11 20 46.6	
	comp=Z,11µm,19.0s						
G57A	**Newington**	**30.56**	**339**	P	**P**	**11 07 55.2**	**+0.6**
	baz=152,SNR=8.3						
H56A	**Elgin**	**30.57**	**337**	P	**P**	**11 07 55.1**	**+0.5**
	baz=149,SNR=8.0						
O50A	**Cable**	**30.60**	**324**	P	**P**	**11 07 56.4**	**+1.3**
	baz=132,SNR=5.4						
D63A	**Stockholm**	**30.61**	**350**	P	**P**	**11 07 56.1**	**+1.2**
	baz=165,SNR=36						
M51A	**Elyria**	**30.64**	**327**	P	**P**	**11 07 55.3**	**-0.1**
	baz=136						
E60A	**Ste Agathe de**	**30.68**	**345**	P	**P**	**11 07 55.0**	**-0.6**
	baz=159						
N50A	**Nevada**	**30.76**	**325**	P	**P**	**11 07 56.8**	**+0.3**
	baz=134,SNR=6.6						
I55A	**Frankford**	**30.79**	**335**	P	**P**	**11 07 57.2**	**+0.5**
	baz=146,SNR=7.2						
D62A	**Allapoint, All**	**30.82**	**348**	P	**P**	**11 07 57.4**	**+0.5**
	baz=164,SNR=28						
D62A	**Allapoint, All**	**30.82**	**348**	IAmb	IAmb	11 08 14.7	
	comp=Z,100nm,1.1s						
D62A				IAMs_20	IAMs_20	11 21 58.3	
	comp=Z,10µm,19.0s						
P49A	**Miami Univ. Ec**	**30.84**	**322**	P	**P**	**11 07 58.0**	**+0.9**
	baz=130,SNR=10						
T47A	**Sharon Grove**	**30.84**	**315**	IAmb	IAmb	11 08 16.1	
	comp=Z,147nm,1.3s						
T47A				IAMs_20	IAMs_20	11 19 03.1	
	comp=Z,11µm,22.0s						
H55A	**Tweed**	**30.88**	**336**	P	**P**	**11 07 57.8**	**+0.4**
	baz=147,SNR=7.9						
WVT	**Waverly**	**30.89**	**313**	P	**P**	**11 07 57.2**	**-0.4**
WVT				pmax	pmax		
	comp=Z,69nm,0.9s						
WVT				MLR	MLR		
	comp=Z,12µm,22.0s						
WVT	**Waverly**	**30.89**	**313**	P	**P**	**11 07 58.2**	**+0.6**
	baz=121						
WVT				S	**S**	**11 13 02.7**	**+2.4**
	baz=121						
WVT	**Waverly**	**30.89**	**313**	P	**P**	**11 07 57.2**	**-0.4**
WVT				IAmb	IAmb	11 08 16.1	
	comp=Z,69nm,0.9s						
WVT	**Waverly**	**30.89**	**313**	IAMs_20	IAMs_20	11 18 52.3	
	comp=Z,12µm,22.0s						
K52A	**Tillsonburg**	**30.97**	**330**	P	**P**	**11 07 57.4**	**-0.9**
	baz=140						
WCI	**Wyandotte Cave**	**31.01**	**318**	P	**P**	**11 07 58.8**	**+0.1**
WCI				pmax	pmax		
	comp=Z,296nm,1.7s						
WCI				MLR	MLR		

F57A Harrington 31.09 340 P P 11 07 59.5 +0.3
baz=153
VBMS Vicksburg 31.15 305 P P 11 08 01.0 +1.0
baz=112
VBMS S S 11 13 10.2 +5.7
baz=112
VBMS Vicksburg 31.15 305 P P 11 08 00.6 +0.7
VBMS IAmb IAmb 11 08 02.9
comp=Z,91nm,0.9s
VBMS IAMs_20 IAMs_20 11 22 42.8
comp=Z,16µm,21.0s
E58A La Victoria 31.17 343 P P 11 07 59.6 -0.3
baz=156
D61A St Aubert, Com 31.17 347 P P 11 08 00.8 +0.9
baz=162,SNR=5.4
J52A Paris 31.21 331 P P 11 08 00.5 +0.1
baz=141
OXF Oxford 31.24 309 P P 11 08 01.5 +0.7
baz=116,SNR=53
OXF Oxford 31.24 309 IAMs_20 IAMs_20 11 22 51.2
comp=Z,11µm,21.0s
I53A Kortright Cn E 31.27 333 P P 11 07 59.7 -1.2
baz=143
G55A Calabogie 31.30 338 P P 11 08 01.1 0.0
baz=149,SNR=5.8
K51A Iona Station 31.31 329 P P 11 08 01.7 +0.4
baz=138
D59A Saint-Raymond 31.37 345 P P 11 08 01.1 -0.6
baz=159
W45A Hickory Valley 31.37 311 IAMs_20 IAMs_20 11 22 17.4
comp=Z,10µm,20.0s
H53A Bobcaygeon 31.45 335 P P 11 08 02.8 +0.3
baz=145,SNR=11
E57A Chemin Saint G 31.46 342 P P 11 08 03.0 +0.5
baz=154,SNR=15
L50A Kingsville 31.47 327 P P 11 08 01.3 -1.4
baz=136
O48A Farmland 31.56 322 P P 11 08 03.7 +0.2
baz=130,SNR=10
F55A Otter Lake 31.67 339 P P 11 08 04.1 -0.2
baz=150
M49A Liberty Center 31.70 325 P P 11 08 04.1 -0.6
baz=133
BLO Bloomington 31.71 319 IAmb IAmb 11 08 24.6
comp=Z,67nm,0.7s
D58A Chemin du LacG 31.72 344 P P 11 08 04.9 +0.1
baz=157,SNR=6.5
I52A Shelburne 31.73 332 P P 11 08 03.4 -1.5
baz=142
USIN University of 31.75 317 IAMs_20 IAMs_20 11 19 42.1
comp=Z,11µm,21.0s
HALT Halls 31.84 312 IAMs_20 IAMs_20 11 22 22.7
comp=Z,14µm,20.0s
SADO Sadowa 31.84 334 P P 11 08 06.4 +0.5
comp=Z,33nm,0.7s,baz=164,slow=9.4,SNR=4.0
SADO LR LR 11 19 08.0
comp=Z,7µm,21.7s,baz=161,slow=33
SADO Sadowa 31.84 334 IAmb IAmb 11 08 23.5
comp=Z,198nm,1.2s
E56A St. Veronique 31.85 341 P P 11 08 06.0 +0.1
baz=153,SNR=7.9
N48A Decatur 31.87 323 P P 11 08 06.5 +0.2
baz=131,SNR=8.3
I51A Listowel 31.90 331 P P 11 08 06.6 +0.1
baz=140
MET Memphis--Engin 31.90 310 IAMs_20 IAMs_20 11 21 12.4
comp=Z,11µm,20.0s
K50A Casco 31.90 328 P P 11 08 05.9 -0.6
baz=137
G53A Haliburton 31.92 335 P P 11 08 06.3 -0.3
baz=146,SNR=8.1
D57A Chemin Vers le 31.93 342 P P 11 08 06.6 -0.1
baz=155,SNR=11
G54A Lake Saint Pet 31.94 336 P P 11 08 06.8 0.0
baz=147,SNR=6.9
G54A S S 11 13 16.8 +0.4
baz=147
LATQ La Tuque 31.96 344 P P 11 08 07.5 +0.6
baz=157,SNR=8.1
GLAT Glass 31.98 312 IAMs_20 IAMs_20 11 22 27.2
comp=Z,13µm,20.0s
HDBT Hernando Brdge 32.01 310 IAMs_20 IAMs_20 11 21 33.3
comp=Z,10µm,21.0s
143A Socs Landing, 32.03 305 IAMs_20 IAMs_20 11 23 10.0
comp=Z,15µm,20.0s
LNXT Lenox 32.04 312 IAMs_20 IAMs_20 11 22 28.9
comp=Z,15µm,20.0s
H52A Wyevale 32.05 333 P P 11 08 07.9 +0.1
baz=143
HICK Hickman 32.07 313 IAMs_20 IAMs_20 11 22 10.6
comp=Z,11µm,20.0s
AAM Ann Arbor 32.10 327 P P 11 08 08.6 +0.4
baz=135
AAM Ann Arbor 32.10 327 IAmb IAmb 11 08 26.8
comp=Z,75nm,0.8s
E55A Montcerf-Lytto 32.10 339 P P 11 08 08.2 0.0
baz=151
M48A Edgerton 32.11 324 P P 11 08 08.3 -0.1
baz=132
M48A Edgerton 32.11 324 IAMs_20 IAMs_20 11 23 25.8
comp=Z,9µm,18.0s
D56A ZEC Mazanza, M 32.22 341 P P 11 08 09.9 +0.7
baz=154,SNR=18
D56A S S 11 13 23.2 +2.4
baz=154
DRLN Deer Lake 32.24 4 P P 11 08 09.2 -0.1
DRLN IAmb IAmb 11 08 25.3
comp=Z,304nm,1.4s
L48A N Adams 32.27 325 P P 11 08 10.3 +0.6
baz=133,SNR=10
PTLB Pontes e Lacer 32.28 178 eP P 11 08 10.1 +0.1
PTLB eS S 11 13 26.3 +4.1
PENMO Penman 32.30 313 IAMs_20 IAMs_20 11 22 38.9
comp=Z,13µm,21.0s
342A Flagon Creek P 32.30 302 IAmb IAmb 11 08 13.6
comp=Z,152nm,1.0s
PEBM Pemiscott Bayo 32.31 312 IAMs_20 IAMs_20 11 22 36.1
comp=Z,13µm,20.0s
HENM Henderson Moun 32.32 313 IAMs_20 IAMs_20 11 22 28.4
comp=Z,11µm,20.0s
K49A Clarkson 32.34 327 P P 11 08 10.7 +0.4
baz=136
PVMO Portageville 32.34 312 IAMs_20 IAMs_20 11 22 38.8
comp=Z,15µm,21.0s
X43A Marvell 32.34 308 P P 11 08 11.6 +1.2
baz=115,SNR=10.0
X43A S S 11 13 26.8 +3.8
baz=115
GNAR Gosnell 32.35 311 IAMs_20 IAMs_20 11 22 57.2
comp=Z,11µm,21.0s
LPAR Lepanto 32.39 311 IAmb IAmb 11 08 12.6
comp=Z,116nm,0.9s
LPAR IAMs_20 IAMs_20 11 23 18.2
comp=Z,10µm,20.0s
ALGO Algonquin Park 32.39 337 P P 11 08 10.5 -0.2
baz=147
P46A Rosedale 32.40 319 IAmb IAmb 11 08 31.0
comp=Z,138nm,0.8s
D55A Sainte-Anne-du 32.41 341 P P 11 08 11.3 +0.4
baz=152,SNR=13
OLIL Olney 32.46 317 IAmb IAmb 11 08 28.4
comp=Z,331nm,1.8s
OLIL IAMs_20 IAMs_20 11 21 45.8
comp=Z,10µm,21.0s
E54A Lac Daplat, Po 32.48 338 P P 11 08 09.7 -1.8
baz=149
PARMO Parma 32.49 313 IAMs_20 IAMs_20 11 22 32.9
comp=Z,12µm,21.0s
M47A Cromwell 32.54 323 P P 11 08 10.7 -1.4
baz=131
J49A Marlette 32.59 328 P P 11 08 11.8 -0.6
baz=137
E53A Dumoine, Ponti 32.60 338 P P 11 08 11.8 -0.8
baz=148
E53A S S 11 13 27.7 +0.8
baz=148
HBAR Harrisburg 32.62 310 IAMs_20 IAMs_20 11 23 33.5
comp=Z,11µm,20.0s
SIUC Southern Illin 32.65 315 IAMs_20 IAMs_20 11 20 21.4
comp=Z,10µm,21.0s
S44A Carbondale 32.67 315 IAMs_20 IAMs_20 11 20 10.4
comp=Z,10µm,21.0s
K48A Perry 32.69 327 P P 11 08 13.9 +0.5
baz=135,SNR=7.7
F52A Sundridge 32.75 335 P P 11 08 14.1 +0.3
baz=145,SNR=9.6
CCAR Cane Creek 32.77 307 IAMs_20 IAMs_20 11 20 52.6
comp=Z,13µm,21.0s

SFIN Lafayette 32.79 321 P P 11 08 15.2 +0.9
baz=128,SNR=5.3
SFIN Lafayette 32.79 321 IAmb IAmb 11 08 33.6
comp=Z,56nm,0.8s
SIV San Ignacio 32.81 181 P P 11 08 15.7 +1.1
comp=Z,59nm,0.6s,baz=16,slow=8.9,SNR=95
SIV LR LR 11 21 50.9
comp=Z,5µm,20.4s,baz=8.5,slow=37
441A DeRidder 32.82 301 IAMs_20 IAMs_20 11 23 37.1
comp=Z,15µm,22.0s
I49A Point Hope 32.86 329 P P 11 08 13.9 -0.9
baz=138
J48A Bridge Port 32.87 328 P P 11 08 14.3 -0.6
baz=136
J48A Bridge Port 32.87 328 IAmb IAmb 11 08 32.4
comp=Z,66nm,0.9s
E52A Mattawa 32.90 336 P P 11 08 14.1 -1.0
baz=146
E52A S S 11 13 32.2 +0.8
baz=146
D54A Lac Fusel, La 32.92 339 P P 11 08 15.0 -0.3
baz=150,SNR=12
D54A S S 11 13 31.9 +0.2
baz=150
CMIG Matias Romero 32.95 275 LR LR 11 21 59.6
comp=Z,12µm,21.6s,baz=78,slow=37
PBMO Poplar Bluff 33.03 312 IAmb IAmb 11 08 18.5
comp=Z,131nm,0.9s
PBMO IAMs_20 IAMs_20 11 23 09.0
comp=Z,15µm,20.0s
SALV Santo Antonio 33.04 172 eP P 11 08 17.8 +1.2
SALV eS S 11 13 38.4 +4.4
K47A Vermontville 33.07 326 P P 11 08 16.9 +0.1
baz=133,SNR=11
NNA Nana 33.09 210 deP P 11 08 17.9 +0.7
NNA pmax pmax
comp=Z,185nm,1.0s
NNA MLR MLR
comp=Z,19µm,16.0s
NNA Nana 33.09 210 P P 11 08 17.3 +0.1
NNA IAmb IAmb 11 08 19.7
comp=Z,97nm,1.0s
NNA Nana 33.09 210 IAMs_20 IAMs_20 11 23 16.8
comp=Z,14µm,20.0s
F51A Arnstein 33.10 335 P P 11 08 16.7 -0.2
baz=144,SNR=7.8
Q44A Peyar Farm, Va 33.15 317 IAMs_20 IAMs_20 11 20 14.1
comp=Z,11µm,22.0s
RCBR Riachuelo 33.19 131 P P 11 08 18.1 0.0
comp=Z,140nm,1.0s,baz=316,slow=8.4,SNR=38
RCBR LR LR 11 20 42.9
comp=Z,11µm,19.6s,baz=316,slow=34
RCBR Riachuelo 33.19 131 P P 11 08 18.2 +0.1
RCBR pmax pmax
comp=Z,252nm,1.2s
RCBR MLR MLR
comp=Z,9µm,20.0s
RCBR Riachuelo 33.19 131 P P 11 08 18.2 +0.1
RCBR Riachuelo 33.19 131 IAMs_20 IAMs_20 11 20 41.9
comp=Z,9µm,20.0s
RCBR Riachuelo 33.19 131 eP P 11 08 18.3 +0.3
D53A Lac Vacive, Po 33.21 338 P P 11 08 17.1 -0.8
baz=149
D53A S S 11 13 38.4 +2.2
baz=149
D53A Lac Vacive, Po 33.21 338 IAmb IAmb 11 08 35.2
comp=Z,163nm,1.6s
LCAR Lake Charles 33.22 311 IAMs_20 IAMs_20 11 23 43.2
comp=Z,12µm,19.0s
Z41A Richland Creek 33.32 305 P P 11 08 20.0 +0.9
baz=111,SNR=9.6
Z41A S S 11 13 43.1 +4.7
baz=111
L46A Eue Claire 33.35 324 P P 11 08 18.3 -0.9
baz=130
L46A Eue Claire 33.35 324 IAMs_20 IAMs_20 11 24 22.0
comp=Z,12µm,20.0s
J47A Sunmer 33.37 327 P P 11 08 19.8 +0.5
baz=134,SNR=8.5
J47A Sunmer 33.37 327 IAmb IAmb 11 08 37.0
comp=Z,117nm,0.9s
E51A G1948 Merrick 33.43 336 P P 11 08 20.0 +0.2
baz=145,SNR=8.6
I48A Sherman Twp 33.47 329 P P 11 08 19.3 -0.9
baz=137
O44A Mansfield 33.50 319 IAmb IAmb 11 08 43.1
comp=Z,179nm,1.1s
K46A Dorr 33.51 325 P P 11 08 19.6 -0.9
baz=132
UALR University of 33.55 308 IAmb IAmb 11 08 50.2
comp=Z,142nm,1.4s
UALR IAMs_20 IAMs_20 11 22 24.0
comp=Z,8µm,20.0s
ARAG Araguaiana, MT 33.60 165 eP P 11 08 22.2 +0.7
ARAG eS S 11 13 45.4 +2.6
W41B Gary Mavity, V 33.64 309 P P 11 08 22.5 +0.8
baz=114,SNR=56
W41B S S 11 13 45.0 +1.9
baz=114
H48A Harrisville 33.66 330 P P 11 08 20.7 -1.2
baz=138
WHAR Wooly Hollow 33.71 309 IAmb IAmb 11 08 24.5
comp=Z,126nm,0.9s
WHAR IAMs_20 IAMs_20 11 24 35.4
comp=Z,11µm,19.0s
WLAR White Oak Lake 33.72 306 IAMs_20 IAMs_20 11 23 42.8
comp=Z,15µm,19.0s
I47A Gladwin 33.75 328 P P 11 08 22.2 -0.4
baz=135
I47A S S 11 13 46.9 +2.1
baz=135
I47A Gladwin 33.75 328 IAmb IAmb 11 08 41.3
comp=Z,192nm,1.3s
X40A Basin Creek Fa 33.80 307 P P 11 08 24.0 +0.8
baz=113,SNR=44
X40A S S 11 13 49.2 +3.5
baz=113
X40A Basin Creek Fa 33.80 307 IAmb IAmb 11 08 25.4
comp=Z,90nm,0.9s
X40A IAMs_20 IAMs_20 11 21 23.9
comp=Z,12µm,22.0s
E50A Wahnapitae 33.84 334 P P 11 08 22.1 -1.3
baz=143
E50A S S 11 13 48.8 +2.8
baz=143
D51A Lot 18 Range I 33.84 336 P P 11 08 23.6 +0.2
baz=146,SNR=8.9
FCAR Ozark Folk Cen 33.84 310 IAmb IAmb 11 08 41.9
comp=Z,126nm,0.9s
FCAR IAMs_20 IAMs_20 11 24 20.8
comp=Z,11µm,20.0s
F49A Sandfield 33.88 332 P P 11 08 22.4 -1.2
baz=141
F49A S S 11 13 47.5 +0.9
baz=141
P43A Skaggs, Pawnee 33.88 318 IAMs_20 IAMs_20 11 22 18.4
comp=Z,9µm,21.0s
LPAZ La Paz 33.96 193 P P 11 08 25.8 +0.4
comp=Z,59nm,1.0s,baz=5.8,slow=7.9,SNR=76
LPAZ LR LR 11 24 42.9
comp=Z,14µm,19.7s,baz=1.0,slow=41
LPAZ La Paz 33.96 193 P P 11 08 25.6 +0.2
LPAZ pmax pmax
comp=Z,96nm,1.2s
LPAZ La Paz 33.96 193 P P 11 08 25.6 +0.2
LPAZ IAmb IAmb 11 08 49.9
comp=Z,96nm,1.1s
LPAZ La Paz 33.96 193 eP P 11 08 25.7 +0.4
LPAZ eS S 11 13 48.8 -0.7
H47A Mio 34.02 329 P P 11 08 24.8 -0.2
baz=136
VLDQ Val d'Or 34.02 339 IAmb IAmb 11 08 44.0
comp=Z,87nm,1.0s
D50A G1974 Best Tow 34.08 336 P P 11 08 25.7 +0.2
baz=145,SNR=11
I46A Reed City 34.18 327 P P 11 08 25.7 -0.7
baz=134
F48A Evansville 34.18 332 P P 11 08 25.1 -1.2
baz=140
CCM Cathedral Cave 34.21 314 P P 11 08 26.8 +0.1
CCM pmax pmax
comp=Z,147nm,0.8s
CCM MLR MLR
comp=Z,10µm,21.0s
CCM Cathedral Cave 34.21 314 P P 11 08 26.9 +0.2
baz=119
CCM Cathedral Cave 34.21 314 P P 11 08 26.8 +0.1
CCM IAmb IAmb 11 08 45.1
comp=Z,147nm,0.8s
CCM Cathedral Cave 34.21 314 IAMs_20 IAMs_20 11 23 37.3
comp=Z,10µm,21.0s
HDIL Hopedale 34.25 319 P P 11 08 27.9 +0.9
baz=125,SNR=15
HDIL S S 11 13 54.6 +2.1
baz=125
HDIL Hopedale 34.25 319 IAmb IAmb 11 08 46.6
comp=Z,133nm,0.8s
HDIL IAMs_20 IAMs_20 11 20 35.1
comp=Z,11µm,22.0s
G47A Hillman 34.27 330 P P 11 08 26.4 -0.7
baz=138
PAYG Puerto Ayora 34.31 242 P P 11 08 28.9 +1.1
PAYG Puerto Ayora 34.31 242 IAMs_20 IAMs_20 11 22 00.4
comp=Z,10µm,21.0s
NATX Nacogdoches 34.32 302 P P 11 08 29.0 +1.3
baz=107,SNR=23
NATX S S 11 13 58.0 +4.2
baz=107
NATX Nacogdoches 34.32 302 IAMs_20 IAMs_20 11 23 58.8
comp=Z,11µm,20.0s
J45A Montague 34.34 326 P P 11 08 26.8 -0.9
baz=132
L44A Lake County Fo 34.38 323 P P 11 08 28.8 +0.7
baz=128,SNR=5.7
L44A Lake County Fo 34.38 323 IAMs_20 IAMs_20 11 20 21.9
comp=Z,9µm,21.0s
GLMI Grayling 34.38 329 P P 11 08 28.8 +0.6
baz=136,SNR=6.7
MIAR Mount Ida 34.39 307 P P 11 08 28.6 +0.3
baz=112,SNR=21
MIAR S S 11 13 57.1 +2.2
baz=112
MIAR Mount Ida 34.39 307 IAMs_20 IAMs_20 11 21 52.5
comp=Z,12µm,22.0s
H46A Fife Lake 34.47 328 P P 11 08 26.7 -2.2
baz=135
E48A Lockeyer 34.49 333 P P 11 08 29.5 +0.5
baz=141,SNR=10
U40A Yellville 34.58 310 P P 11 08 30.2 +0.2
baz=115,SNR=87
U40A S S 11 13 58.0 +0.3
baz=115
U40A Yellville 34.58 310 IAmb IAmb 11 08 32.2
comp=Z,132nm,0.9s
U40A IAMs_20 IAMs_20 11 24 53.2
comp=Z,11µm,20.0s
I45A Fountain 34.66 326 P P 11 08 30.4 -0.1
baz=133
BDFB Brasilia 34.67 159 P P 11 08 31.7 +0.7
comp=Z,32nm,0.7s,baz=333,slow=14,SNR=55
BDFB LR LR 11 24 02.3
comp=Z,7µm,20.0s,baz=322,slow=39
BDFB Brasilia 34.67 159 P P 11 08 31.6 +0.6
BDFB pmax pmax
comp=Z,56nm,0.8s
BDFB MLR MLR
comp=Z,8µm,20.0s
BDFB Brasilia 34.67 159 P P 11 08 31.6 +0.6
BDFB IAMs_20 IAMs_20 11 23 40.3
comp=Z,8µm,20.0s
LSQQ Lebel-sur-Quev 34.69 341 P P 11 08 29.8 -0.9
baz=151
CHGQ Chibougamau 34.70 344 P P 11 08 31.2 +0.4
baz=156,SNR=44
D49A Beulah Townshi 34.77 335 P P 11 08 31.9 +0.4
baz=143,SNR=6.1
W39A Magazine 34.80 308 P P 11 08 33.6 +1.8
baz=113,SNR=61
W39A S S 11 14 04.3 +3.2
baz=113
W39A Magazine 34.80 308 IAmb IAmb 11 08 34.8
comp=Z,183nm,0.9s
W39A IAMs_20 IAMs_20 11 23 15.2
comp=Z,11µm,20.0s
HKT Hockley 34.81 298 P P 11 08 32.1 +0.2
HKT pmax pmax
comp=Z,347nm,1.9s
HKT MLR MLR
comp=Z,16µm,22.0s
HKT Hockley 34.81 298 P P 11 08 32.1 +0.2
HKT IAmb IAmb 11 08 48.8
comp=Z,347nm,1.9s
HKT Hockley 34.81 298 IAMs_20 IAMs_20 11 24 13.3
comp=Z,16µm,22.0s
G46A Petoskey 34.86 329 P P 11 08 32.8 +0.6
baz=136
D48A Paudash Townsh 34.88 334 P P 11 08 32.4 0.0
baz=142
D48A S S 11 14 01.5 -0.6
baz=142
K43A Burlington 34.95 323 IAmb IAmb 11 08 51.4
comp=Z,106nm,1.1s
E47A Iron Bridge 34.96 332 P P 11 08 33.4 +0.4
baz=140,SNR=8.5
E47A S S 11 14 04.9 +1.6
baz=140
H45A Beulah 34.96 327 P P 11 08 33.2 +0.1
baz=134
R40A Maddies Statio 35.03 314 IAmb IAmb 11 08 35.2
comp=Z,96nm,0.8s
R40A IAMs_20 IAMs_20 11 24 23.0
comp=Z,12µm,20.0s
Z38A Mt. Pleasant 35.04 304 IAMs_20 IAMs_20 11 24 09.9
comp=Z,11µm,19.0s
G45A Suttons Bay 35.06 328 P P 11 08 34.0 +0.1
baz=135
PICO Pico 35.20 46 eP P 11 08 36.1 +0.8
comp=Z,348nm,1.2s
L42A Oliver, Polo 35.32 321 IAmb IAmb 11 08 54.6
comp=Z,222nm,1.0s
N41A Harden Midland 35.32 318 IAmb IAmb 11 08 55.4
comp=Z,121nm,0.9s
N41A IAMs_20 IAMs_20 11 21 43.5
comp=Z,10µm,21.0s
237A Washetta, Mont 35.32 302 IAMs_20 IAMs_20 11 24 41.4
comp=Z,11µm,21.0s
D47A Chapleau 35.34 333 P P 11 08 36.2 -0.1
baz=140,SNR=11
D47A S S 11 14 08.9 -0.3
baz=140
HHAR Hobbs 35.34 309 IAMs_20 IAMs_20 11 25 44.9
comp=Z,13µm,21.0s
E46A Sault Ste Mari 35.36 331 IAmb IAmb 11 08 54.9
comp=Z,195nm,1.1s
ROSA Rosais 35.43 46 eP P 11 08 37.6 +0.4
comp=Z,391nm,1.1s
ROSA Rosais 35.43 46 P P 11 08 37.2 0.0
ROSA IAMs_20 IAMs_20 11 19 32.3
comp=Z,14µm,19.0s
F45A CMU Biological 35.44 329 P P 11 08 37.3 +0.1
baz=136
P40A Paris 35.48 316 IAmb IAmb 11 08 39.3
comp=Z,140nm,0.9s
P40A IAMs_20 IAMs_20 11 23 49.0
comp=Z,12µm,21.0s
S39A Bolivar 35.49 312 IAMs_20 IAMs_20 11 24 54.4
comp=Z,11µm,19.0s
MATQ Matagami 35.51 341 P P 11 08 38.0 +0.2
baz=151,SNR=11
JANB Januaria 35.60 153 eP P 11 08 38.8 -0.2
D46A Sault St. Mari 35.63 332 P P 11 08 38.6 -0.2
baz=139
U38A Gravette 35.74 309 IAMs_20 IAMs_20 11 25 56.2
comp=Z,12µm,20.0s
PGRA Graciosa 35.75 46 eP P 11 08 39.3 -0.7
comp=Z,434nm,2.0s
H43A Windswept, Lux 35.77 326 IAmb IAmb 11 08 58.5
comp=Z,120nm,0.9s
X37A Clayton 35.79 306 IAmb IAmb 11 08 42.7
comp=Z,97nm,1.0s
X37A IAMs_20 IAMs_20 11 25 17.6
comp=Z,11µm,20.0s
I42A Draeger Farm, 36.03 324 IAmb IAmb 11 09 00.1
comp=Z,97nm,1.0s
I42A IAMs_20 IAMs_20 11 26 12.9
comp=Z,12µm,20.0s
KVTX Kingsville 36.12 294 P P 11 08 44.2 +1.0
KVTX IAMs_20 IAMs_20 11 26 18.0
comp=Z,10µm,21.0s
JFWS Jewell Farm 36.20 322 P P 11 08 44.0 +0.2
baz=126,SNR=9.1
JFWS S S 11 14 23.1 +0.7
baz=126
JFWS Jewell Farm 36.20 322 IAMs_20 IAMs_20 11 21 29.6
comp=Z,9µm,22.0s
PB16 IPOC Station P 36.26 195 P P 11 08 44.1 -1.0

PB16 IAMs_20 IAMs_20 11 25 58.8
comp=Z,10µm,20.0s
735A Kenedy 36.27 296 P **P** **11 08 45.4 +0.9**
735A IAmb IAmb 11 08 46.7
comp=Z,190nm,0.8s
735A IAMs_20 IAMs_20 11 25 36.8
comp=Z,9µm,22.0s
L40A Anamosa 36.30 320 IAmb IAmb 11 09 03.6
comp=Z,123nm,0.8s
L40A IAMs_20 IAMs_20 11 21 47.6
comp=Z,8µm,21.0s
E44A Grand Marais A 36.31 330 P **P** **11 08 44.2 -0.5**
baz=136
C2SB Chapadao do Su 36.33 168 *e*P **P** **11 08 47.0 +1.9**
TLIG Tlapa 36.41 277 P **P** **11 08 46.3 +0.3**
TLIG IAmb IAmb 11 08 50.9
comp=Z,240nm,1.0s
TLIG IAMs_20 IAMs_20 11 24 13.6
comp=Z,14µm,21.0s
435B Jarrell 36.48 299 P **P** **11 08 47.2 +0.9**
baz=103,SNR=10
435B S **S** **11 14 28.6 +1.5**
baz=103
AP01 Chacalluta 36.50 196 IAMs_20 IAMs_20 11 25 34.3
comp=Z,12µm,19.0s
P38A Dawn 36.53 315 IAmb IAmb 11 09 05.0
comp=Z,131nm,0.8s
P38A IAMs_20 IAMs_20 11 21 42.7
comp=Z,12µm,22.0s
TUL1 Leonard 36.58 308 P **P** **11 08 47.8 +0.7**
baz=112,SNR=42
TUL1 S **S** **11 14 30.2 +1.7**
baz=112
TUL1 Leonard 36.58 308 IAmb IAmb 11 09 05.8
comp=Z,164nm,0.8s
TUL1 IAMs_20 IAMs_20 11 24 18.5
comp=Z,10µm,20.0s
WHTX Lake Whitney, 36.67 301 P **P** **11 08 48.6 +0.6**
baz=105,SNR=36
WHTX S **S** **11 14 31.3 +1.4**
baz=105
WHTX Lake Whitney, 36.67 301 IAmb IAmb 11 08 50.0
comp=Z,108nm,0.9s
WHTX IAMs_20 IAMs_20 11 25 35.1
comp=Z,8µm,20.0s
PB12 IPOC Station P 36.73 196 P **P** **11 08 46.7 -1.9**
PB12 IAMs_20 IAMs_20 11 25 41.4
comp=Z,10µm,18.0s
IPMB Ipameri, GO 36.79 160 *e*P **P** **11 08 49.7 +0.6**
IPMB *ep*P **pP** **11 08 52.5 -2.6**
PSET Sete Cidades 36.80 49 *e*P **P** **11 08 48.6 -0.4**
comp=Z,478nm,1.6s
UNM Universidad Na 36.87 280 IAMs_20 IAMs_20 11 26 06.7
comp=Z,11µm,21.0s
Z35A Perchaven, San 36.87 303 IAmb IAmb 11 08 52.1
comp=Z,202nm,1.1s
Z35A IAMs_20 IAMs_20 11 25 17.4
comp=Z,12µm,20.0s
PSMA Santa Maria 36.90 50 *e*P **P** **11 08 48.4 -1.4**
comp=Z,186nm,1.3s
N38A Joes South For 36.91 317 IAMs_20 IAMs_20 11 24 33.5
comp=Z,11µm,21.0s
CMLA Cha da Macela 36.92 49 *e*P **P** **11 08 50.0 0.0**
comp=Z,401nm,0.9s
CMLA Cha da Macela 36.92 49 P **P** **11 08 49.6 -0.4**
CMLA pmax pmax
comp=Z,352nm,1.0s
CMLA Cha da Macela 36.92 49 P **P** **11 08 49.6 -0.4**
PSMN Pico do Norte, 36.95 50 *e*P **P** **11 08 49.3 -0.9**
comp=Z,186nm,1.7s
I40A Norwalk 37.00 323 IAmb IAmb 11 09 08.8
comp=Z,163nm,1.1s
I40A IAMs_20 IAMs_20 11 26 52.7
comp=Z,9µm,20.0s
MNMC Minye Minye 37.05 195 P **P** **11 08 50.0 -1.4**
MNMC IAmb IAmb 11 08 52.8
comp=Z,172nm,1.1s
MNMC IAMs_20 IAMs_20 11 26 34.6
comp=Z,11µm,19.0s
SCIA State Center 37.46 318 P **P** **11 08 55.0 +0.5**
baz=122,SNR=7.4
SCIA State Center 37.46 318 IAmb IAmb 11 09 14.0
comp=Z,179nm,1.2s
SCIA IAMs_20 IAMs_20 11 22 58.5
comp=Z,10µm,22.0s
GO01 Chusmiza 37.47 194 P **P** **11 08 54.4 -0.9**
GO01 IAmb IAmb 11 08 57.8
comp=Z,259nm,1.1s
GO01 IAMs_20 IAMs_20 11 26 50.4
comp=Z,14µm,21.0s
T35A Sooner Cattle 37.50 309 IAMs_20 IAMs_20 11 27 08.7
comp=Z,9µm,21.0s
AQDB Aquidauana 37.55 173 *e*P **P** **11 08 56.5 +1.1**
AQDB *ep*P **pP** **11 08 59.5 -1.9**
833A Chaparral WMA, 37.55 294 P **P** **11 08 55.4 -0.1**
baz=99,SNR=44
833A S **S** **11 14 44.1 +0.7**
baz=99
COWI Conover 37.57 327 IAMs_20 IAMs_20 11 22 30.0
comp=Z,8µm,22.0s
K38A Parkersburg 37.58 320 IAmb IAmb 11 09 14.6
comp=Z,206nm,1.0s
K38A IAMs_20 IAMs_20 11 26 56.2
comp=Z,7µm,21.0s
G40A Rib Lake 37.61 325 IAMs_20 IAMs_20 11 27 01.7
comp=Z,11µm,19.0s
PSGCX Pisagua 37.62 195 P **P** **11 08 53.8 -2.3**
PSGCX IAMs_20 IAMs_20 11 27 01.9
comp=Z,10µm,18.0s
PB11 IPOC Station P 37.66 194 P **P** **11 08 54.9 -1.7**
PB11 IAMs_20 IAMs_20 11 26 45.2
comp=Z,8µm,18.0s
OKCFA Oklahoma City 37.68 306 IAmb IAmb 11 08 58.1
comp=Z,153nm,0.9s
OKCFA IAMs_20 IAMs_20 11 24 07.5
comp=Z,15µm,21.0s
D41A Chassel 37.92 328 IAmb IAmb 11 09 17.1
comp=Z,216nm,1.2s
PB08 IPOC Station P 37.92 193 IAmb IAmb 11 09 01.8
comp=Z,185nm,1.1s
PB08 IAMs_20 IAMs_20 11 27 05.7
comp=Z,11µm,20.0s
SCHQ Schefferville 38.06 354 P **P** **11 09 00.0 +0.6**
comp=Z,94nm,0.5s,baz=179,slow=7.3,SNR=87
SCHQ LR LR 11 25 23.6
comp=Z,6µm,18.2s,baz=176,slow=37
SCHQ Schefferville 38.06 354 P **P** **11 08 59.6 +0.2**
SCHQ IAmb IAmb 11 09 02.9
comp=Z,90nm,0.6s
SCHQ IAMs_20 IAMs_20 11 25 12.8
comp=Z,7µm,19.0s
JCT Junction City 38.28 298 P **P** **11 09 01.7 0.0**
baz=101,SNR=45
JCT S **S** **11 14 54.8 +0.3**
baz=101
JCT Junction City 38.28 298 IAmb IAmb 11 09 18.4
comp=Z,152nm,0.8s
JCT IAMs_20 IAMs_20 11 25 31.0
comp=Z,9µm,22.0s
KSU1 Kansas State U 38.43 312 P **P** **11 09 02.5 -0.3**
baz=115,SNR=35
KSU1 S **S** **11 14 55.3 -1.2**
baz=115
KSU1 Kansas State U 38.43 312 IAmb IAmb 11 09 18.3
comp=Z,132nm,0.7s
KSU1 Kansas State U 38.43 312 IAMs_20 IAMs_20 11 26 35.1
comp=Z,10µm,19.0s
WMOK Wichita Mounta 38.50 305 P **P** **11 09 03.3 -0.2**
baz=107,SNR=47
WMOK S **S** **11 14 58.7 +1.0**
baz=107
WMOK Wichita Mounta 38.50 305 IAMs_20 IAMs_20 11 25 08.3
comp=Z,11µm,21.0s
N35A Tabor 38.54 315 IAmb IAmb 11 09 22.0
comp=Z,175nm,0.9s
N35A IAMs_20 IAMs_20 11 26 13.8
comp=Z,10µm,20.0s
TA01 Diego Aracena 38.57 195 P **P** **11 09 02.7 -1.2**
ABTX Abilene, Hawle 38.62 301 P **P** **11 09 04.8 +0.3**
baz=104,SNR=71
ABTX S **S** **11 14 59.9 +0.4**
baz=104
ABTX Abilene, Hawle 38.62 301 IAmb IAmb 11 09 06.2
comp=Z,204nm,0.9s
ABTX IAMs_20 IAMs_20 11 26 34.7
comp=Z,10µm,20.0s
I37A Lemond, Waseca 38.71 321 IAmb IAmb 11 09 26.9
comp=Z,502nm,1.9s

I37A IAMs_20 IAMs_20 11 22 59.1
comp=Z,9µm,22.0s
MOIG Morelia 38.75 280 P **P** **11 09 06.1 +0.1**
PATCX Punta Patache 38.80 195 IAmb IAmb 11 09 08.2
comp=Z,342nm,1.2s
PB01 IPOC Station P 38.86 194 P **P** **11 09 05.5 -1.1**
PB01 IAmb IAmb 11 09 08.2
comp=Z,175nm,1.1s
PB01 IAMs_20 IAMs_20 11 28 07.8
comp=Z,10µm,20.0s
SPMN Marine on St. 39.05 323 P **P** **11 09 08.1 +0.3**
baz=126,SNR=14
SPMN S **S** **11 15 04.8 -0.8**
baz=126
SPMN Marine on St. 39.05 323 IAmb IAmb 11 09 25.9
comp=Z,169nm,1.2s
SPMN IAMs_20 IAMs_20 11 28 16.8
comp=Z,8µm,20.0s
E38A The Farm, Brul 39.18 326 IAMs_20 IAMs_20 11 28 00.2
comp=Z,9µm,19.0s
U32A Winter Ranch, 39.18 307 IAmb IAmb 11 09 28.0
comp=Z,236nm,0.9s
U32A IAMs_20 IAMs_20 11 24 41.3
comp=Z,9µm,22.0s
PCMB Pacaembu 39.42 167 *e*P **P** **11 09 12.3 +1.2**
PCMB *ep*P **pP** **11 09 15.8 -1.4**
L34A Svendsen Farm, 39.54 317 IAmb IAmb 11 09 27.5
comp=Z,198nm,0.7s
L34A IAMs_20 IAMs_20 11 24 15.3
comp=Z,11µm,22.0s
PB07 IPOC Station P 39.61 194 IAmb IAmb 11 09 12.9
comp=Z,117nm,0.8s
R32A Long Quarter, 39.68 310 IAmb IAmb 11 09 32.2
comp=Z,287nm,0.8s
R32A IAMs_20 IAMs_20 11 28 19.2
comp=Z,12µm,20.0s
N33A J Bar K, Exete 39.71 314 IAMs_20 IAMs_20 11 27 17.9
comp=Z,8µm,20.0s
F36A Milaca 39.83 323 IAMs_20 IAMs_20 11 28 31.1
comp=Z,10µm,18.0s
ZAIG Zacatecas 39.97 285 P **P** **11 09 17.1 +1.0**
EYMN Ely 39.99 327 P **P** **11 09 15.9 +0.2**
baz=130,SNR=8.8
EYMN S **S** **11 15 19.7 -0.1**
baz=130
EYMN Ely 39.99 327 IAMs_20 IAMs_20 11 23 53.7
comp=Z,7µm,22.0s
SJMB Sao Joao De Ma 40.21 151 *e*P **P** **11 09 18.1 +0.3**
SJMB *ep*P **pP** **11 09 21.7 -2.3**
LVC Limon Verde 40.26 192 P **P** **11 09 18.2 -0.3**
LVC pmax pmax
comp=Z,95nm,0.8s
LVC MLR MLR
comp=Z,15µm,20.0s
LVC Limon Verde 40.26 192 P **P** **11 09 18.2 -0.3**
LVC Limon Verde 40.26 192 *e*P **P** **11 09 18.5 0.0**
LVC *ep*P **pP** **11 09 22.4 -2.2**
PB04 IPOC Station P 40.26 194 IAMs_20 IAMs_20 11 29 10.8
comp=Z,7µm,20.0s
TRCB Terra Rica 40.29 169 *e*P **P** **11 09 19.5 +1.1**
TRCB *ep*P **pP** **11 09 22.5 -2.0**
BGNE Belgrade 40.48 315 P **P** **11 09 20.2 +0.4**
baz=116,SNR=44
BGNE S **S** **11 15 28.0 +0.8**
baz=116
BGNE Belgrade 40.48 315 IAMs_20 IAMs_20 11 27 33.1
comp=Z,8µm,20.0s
BSFB Barra de Sao F 40.48 151 *e*P **P** **11 09 20.3 +0.3**
PB06 IPOC Station P 40.49 193 P **P** **11 09 19.2 -0.9**
ECSD EROS Data Cent 40.55 319 P **P** **11 09 20.3 -0.1**
baz=120,SNR=56
ECSD S **S** **11 15 26.9 -1.3**
baz=120
ECSD EROS Data Cent 40.55 319 P **P** **11 09 20.3 -0.1**
ECSD EROS Data Cent 40.55 319 IAMs_20 IAMs_20 11 24 20.7
comp=Z,10µm,21.0s
CBKS Cedar Bluff 40.57 310 P **P** **11 09 20.9 +0.3**
CBKS pmax pmax
comp=Z,239nm,1.0s
CBKS MLR MLR
comp=Z,11µm,20.0s
CBKS Cedar Bluff 40.57 310 P **P** **11 09 21.0 +0.4**
baz=111,SNR=45
CBKS S **S** **11 15 29.1 +0.4**
baz=111
CBKS Cedar Bluff 40.57 310 P **P** **11 09 20.9 +0.3**
CBKS IAmb IAmb 11 09 39.7
comp=Z,239nm,0.9s
CBKS IAMs_20 IAMs_20 11 28 56.8
comp=Z,11µm,20.0s
BSCB Bom Sucesso 40.77 157 *e*P **P** **11 09 22.0 -0.4**
BSCB *e*S **S** **11 15 35.1 +3.2**
AMTX Amarillo 40.83 304 P **P** **11 09 23.2 +0.3**
baz=105
AMTX S **S** **11 15 34.2 +1.4**
baz=105
AMTX Amarillo 40.83 304 P **P** **11 09 23.2 +0.3**
AMTX IAmb IAmb 11 09 41.5
comp=Z,348nm,1.2s
AMTX IAMs_20 IAMs_20 11 26 31.1
comp=Z,10µm,22.0s
TX31 Lajitas Ar. Si 41.41 295 IAmb IAmb 11 09 46.1
comp=Z,92nm,0.8s
TX32 Lajitas Array 41.41 295 P **P** **11 09 27.9 +0.1**
TXAR Lajitas Array 41.41 295 P **P** **11 09 27.9 +0.2**
comp=Z,21nm,0.7s,baz=112,slow=7.8,SNR=173
TXAR ScP **ScP** **11 15 13.9 -0.3**
comp=Z,6.0nm,1.1s,baz=101,slow=3.9,SNR=4.2
TXAR LR LR 11 30 45.8
comp=Z,5µm,21.7s,baz=0.0,slow=42
K31A O'Neill 41.41 316 IAmb IAmb 11 09 47.9
comp=Z,222nm,0.9s
K31A IAMs_20 IAMs_20 11 27 54.8
comp=Z,10µm,19.0s
B35A Bob, Littlefor 41.42 326 IAMs_20 IAMs_20 11 29 19.9
comp=Z,6µm,19.0s
F33A 5 Mile Ranch, 41.43 322 IAMs_20 IAMs_20 11 28 44.9
comp=Z,9µm,21.0s
MSTX Muleshoe 41.48 302 P **P** **11 09 28.4 0.0**
baz=103
MSTX S **S** **11 15 43.8 +1.2**
baz=103
MSTX Muleshoe 41.48 302 IAmb IAmb 11 09 30.1
comp=Z,294nm,1.1s
MSTX IAMs_20 IAMs_20 11 28 25.5
comp=Z,13µm,20.0s
FRTB Fartura 41.49 165 *e*P **P** **11 09 28.8 +0.5**
FRTB *ep*P **pP** **11 09 32.5 -1.9**
FRTB *e*S **S** **11 15 44.6 +2.2**
PB10 IPOC Station P 41.49 194 P **P** **11 09 27.0 -1.2**
PB10 IAMs_20 IAMs_20 11 29 59.9
comp=Z,10µm,20.0s
MACI Morro de la Ar 41.81 67 P **P** **11 09 30.6 -0.6**
MACI IAmb IAmb 11 09 46.8
comp=Z,121nm,0.9s
VAO Valinhos 41.89 161 *e*P **P** **11 09 32.2 +0.6**
PMOZ Porto Moniz, M 41.91 60 P **P** **11 09 32.0 +0.2**
SNR=16
PMOZ Porto Moniz, M 41.91 60 *e*P **P** **11 09 31.3 -0.5**
comp=Z,555nm,1.0s
PMOZ *e*S **S** **11 15 52.9 +4.0**
PMOZ *e*LR LR 11 20 33.5
comp=Z,5µm,20.0s
PMOZ Porto Moniz, M 41.91 60 P **P** **11 09 31.4 -0.4**
PTGB Pitanga 42.27 169 *e*P **P** **11 09 34.8 +0.1**
PTGB *ep*P **pP** **11 09 39.0 -1.8**
PTGB *e*S **S** **11 15 56.3 +2.3**
SPB Sao Paulo 42.30 162 P **P** **11 09 35.4 +0.5**
SPB IAMs_20 IAMs_20 11 27 50.1
comp=Z,8µm,22.0s
SPB Sao Paulo 42.30 162 *e*P **P** **11 09 34.7 -0.2**
SPB *ep*P **pP** **11 09 39.2 -1.7**
SUSD Miller 42.37 319 P **P** **11 09 35.2 -0.1**
baz=118,SNR=5.9
SUSD Miller 42.37 319 IAmb IAmb 11 09 54.5
comp=Z,179nm,0.9s
SUSD IAMs_20 IAMs_20 11 27 22.9
comp=Z,10µm,21.0s
VAS01 Vassouras-RJ 42.44 156 *e*P **P** **11 09 36.2 +0.1**
PB14 IPOC Station P 42.53 194 P **P** **11 09 36.2 -0.8**
PB14 IAmb IAmb 11 09 40.5
comp=Z,146nm,1.1s
PB14 IAMs_20 IAMs_20 11 29 47.9
comp=Z,7µm,20.0s
AGMN Agassiz Nation 42.54 325 P **P** **11 09 36.3 -0.3**
baz=125,SNR=32

AGMN S **S** **11 15 55.7 -1.7**
baz=125
AGMN Agassiz Nation 42.54 325 P **P** **11 09 36.2 -0.4**
AGMN IAMs_20 IAMs_20 11 30 04.1
comp=Z,8µm,19.0s
D32A Dogwood Acres, 42.54 323 IAMs_20 IAMs_20 11 29 00.3
comp=Z,8µm,20.0s
PARB Paraibuna 42.63 160 *e*P **P** **11 09 38.9 +1.3**
PMPS Porto Santo 42.67 60 *e*P **P** **11 09 38.1 +0.3**
comp=Z,174nm,1.5s
PMPST Porto Santo, M 42.67 59 *e*P **P** **11 09 37.8 -0.1**
comp=Z,272nm,1.2s
KSCO Kaye Shedlock' 42.76 310 P **P** **11 09 39.3 +0.6**
baz=109,SNR=21
KSCO S **S** **11 16 03.4 +2.1**
baz=109
KSCO Kaye Shedlock' 42.76 310 IAmb IAmb 11 09 57.4
comp=Z,236nm,0.9s
KSCO IAMs_20 IAMs_20 11 27 49.9
comp=Z,8µm,21.0s
MAN01 Angra dos Reis 42.77 157 *e*P **P** **11 09 39.6 +0.8**
GO02 Mina Guanaco 42.87 192 IAmb IAmb 11 10 00.4
comp=Z,162nm,0.7s
GO02 IAMs_20 IAMs_20 11 29 58.5
comp=Z,6µm,19.0s
HPIG 42.93 291 IAmb IAmb 11 09 42.2
comp=Z,116nm,1.0s
HPIG IAMs_20 IAMs_20 11 30 37.5
comp=Z,9µm,22.0s
OGNE Ogallala 42.98 312 IAmb IAmb 11 09 58.9
comp=Z,246nm,1.2s
OGNE IAMs_20 IAMs_20 11 29 46.6
comp=Z,11µm,20.0s
PET01 Itanhaem-SP 43.01 162 *e*P **P** **11 09 40.8 +0.2**
PET01 *ep*P **pP** **11 09 45.0 -1.8**
CPUP Villa Florida 43.19 176 P **P** **11 09 41.8 -0.2**
comp=Z,35nm,0.8s,baz=357,slow=7.9,SNR=76
CPUP LR LR 11 29 52.5
comp=Z,3µm,21.3s,baz=356,slow=39
CPUP Villa Florida 43.19 176 P **P** **11 09 41.6 -0.4**
MNTX Cornudas Mount 43.21 298 P **P** **11 09 43.0 +0.7**
baz=99,SNR=309
MNTX S **S** **11 16 09.9 +2.1**
baz=99
MNTX Cornudas Mount 43.21 298 IAmb IAmb 11 09 45.2
comp=Z,181nm,1.0s
MNTX IAMs_20 IAMs_20 11 29 58.4
comp=Z,8µm,21.0s
T25A Trinidad 43.56 306 P **P** **11 09 45.8 +0.5**
baz=105,SNR=76
T25A S **S** **11 16 16.3 +3.0**
baz=105
ULM Lac du Bonnet 43.68 327 P **P** **11 09 44.4 -1.4**
comp=Z,8.9nm,0.6s,baz=122,slow=8.0,SNR=14
ULM LR LR 11 29 27.6
comp=Z,5µm,19.1s,baz=131,slow=38
ULM Lac du Bonnet 43.68 327 *c iP* **P** **11 09 45.4 -0.4**
ULM Lac du Bonnet 43.68 327 IAMs_20 IAMs_20 11 29 25.3
comp=Z,7µm,18.0s
EPT El Paso 44.16 298 IAMs_20 IAMs_20 11 30 17.7
comp=Z,7µm,21.0s
AC02 Maricunga 44.41 191 IAMs_20 IAMs_20 11 31 03.7
comp=Z,9µm,20.0s
MDND Maddock 44.41 323 P **P** **11 09 51.4 -0.3**
baz=120
MDND S **S** **11 16 23.1 -1.9**
baz=120
MDND Maddock 44.41 323 IAmb IAmb 11 10 14.5
comp=Z,133nm,1.0s
MDND IAMs_20 IAMs_20 11 31 31.8
comp=Z,8µm,18.0s
E28A Huff 44.44 320 IAmb IAmb 11 10 09.8
comp=Z,261nm,1.7s
E28A IAMs_20 IAMs_20 11 31 06.7
comp=Z,6µm,20.0s
SDCO Great Sand Dun 44.55 307 P **P** **11 09 54.1 +0.7**
baz=105,SNR=110
SDCO S **S** **11 16 30.8 +3.0**
baz=105
SDCO Great Sand Dun 44.55 307 IAMs_20 IAMs_20 11 29 12.5
comp=Z,6µm,20.0s
Q24A Divide 44.62 309 P **P** **11 09 54.2 +0.3**
baz=106,SNR=15
Q24A S **S** **11 16 31.3 +2.5**
baz=106
ANMO Albuquerque 44.66 303 ScP **ScP** **11 15 27.7 +0.3**
comp=Z,4.8nm,1.0s,baz=148,slow=9.1,SNR=3.7
ANMO LR LR 11 30 18.8
comp=Z,9µm,20.8s,baz=110,slow=38
ANMO Albuquerque 44.66 303 *c iP* **P** **11 09 55.1 +0.9**
ANMO pmax pmax
comp=Z,100nm,1.7s
ANMO MLR MLR
comp=Z,9µm,21.0s
ANMO Albuquerque 44.66 303 P **P** **11 09 55.1 +0.9**
baz=101
ANMO S **S** **11 16 32.3 +2.9**
baz=101
ANMO Albuquerque 44.66 303 P **P** **11 09 53.7 -0.5**
ANMO Albuquerque 44.66 303 IAMs_20 IAMs_20 11 29 56.7
comp=Z,8µm,20.0s
ITAB Concordia 44.71 170 *e*P **P** **11 09 55.3 +1.0**
ITAB *ep*P **pP** **11 09 58.8 -1.6**
Y22D IRIS PASSCAL I 44.88 301 P **P** **11 09 57.1 +1.3**
baz=100,SNR=11
Y22D S **S** **11 16 36.8 +4.4**
baz=100
Y22D IRIS PASSCAL I 44.88 301 IAMs_20 IAMs_20 11 30 44.4
comp=Z,11µm,20.0s
IVI Ivigtut 44.99 8 P **P** **11 09 55.9 -0.1**
IVI IAMs_20 IAMs_20 11 27 34.7
comp=Z,7µm,20.0s
ISCO Idaho Springs 45.20 310 P **P** **11 09 59.3 +0.8**
baz=107,SNR=53
ISCO S **S** **11 16 39.8 +2.6**
baz=107
ISCO Idaho Springs 45.20 310 IAMs_20 IAMs_20 11 29 17.6
comp=Z,8µm,20.0s
121A Cookes Peak, D 45.35 299 P **P** **11 10 01.2 +1.6**
baz=98,SNR=127
121A S **S** **11 16 44.6 +5.3**
baz=98
NRS Narsarsuaq 45.37 10 ⇓ *iP* **P** **11 09 59.9 +0.8**
NRS pmax pmax
comp=Z,110nm,0.8s
NRS MLR MLR
comp=Z,7µm,20.0s
NRS Narsarsuaq 45.37 10 IAMs_20 IAMs_20 11 27 37.7
comp=Z,7µm,20.0s
NRS Narsarsuaq 45.37 10 ⇓ *iP* **P** **11 09 59.9 +0.8**
comp=Z,107nm,0.8s
comp=Z,7µm,20.0s
RSSD Black Hills 45.54 316 P **P** **11 10 01.1 +0.1**
RSSD pmax pmax
comp=Z,183nm,1.5s
RSSD Black Hills 45.54 316 P **P** **11 10 01.2 +0.2**
baz=112
RSSD S **S** **11 16 44.8 +3.0**
baz=112
RSSD Black Hills 45.54 316 P **P** **11 10 01.1 +0.1**
RSSD IAmb IAmb 11 10 19.7
comp=Z,183nm,1.5s
PHWY Pilot Hill 45.54 312 IAmb IAmb 11 10 20.2
comp=Z,149nm,1.1s
PHWY IAMs_20 IAMs_20 11 32 07.3
comp=Z,8µm,19.0s
S22A 4UR Ranch, Cre 45.57 306 P **P** **11 10 02.3 +0.8**
baz=104,SNR=70
S22A S **S** **11 16 45.4 +2.7**
baz=104
N23A Red Feather La 45.76 311 P **P** **11 10 03.7 +0.8**
baz=108,SNR=39
N23A S **S** **11 16 48.0 +2.8**
baz=108
SMCO Snowmass 46.04 308 IAMs_20 IAMs_20 11 30 08.7
comp=Z,7µm,20.0s
319A Douglas 46.47 297 IAmb IAmb 11 10 11.6
comp=Z,119nm,0.9s
K22A Casper 46.72 313 P **P** **11 10 11.1 +0.8**
baz=109,SNR=66
MVCO Mesa Verde 46.75 305 P **P** **11 10 11.2 +0.5**
baz=102,SNR=21
MVCO S **S** **11 17 02.2 +2.8**
baz=102
MVCO Mesa Verde 46.75 305 IAMs_20 IAMs_20 11 29 50.6
comp=Z,11µm,21.0s
RWWY Rawlins 46.91 312 IAmb IAmb 11 10 30.3
comp=Z,135nm,1.2s

RWWY IAMs_20 IAMs_20 11 32 59.6
comp=Z,7µm,18.0s
CNLB Canela 46.97 169 *e*P **P 11 10 12.6 +0.5**
PV01 Paradox Valley 47.00 307 IAMs_20 IAMs_20 11 32 42.3
comp=Z,6µm,20.0s
FRB Frobisher Bay 47.02 355 LR LR 11 30 37.0
comp=Z,3µm,18.1s,baz=165,slow=37
LPIG La Paz 47.07 287 P **P 11 10 14.2 +1.1**
comp=Z,187nm,1.0s,baz=145,slow=0.9,SNR=24
PV13 Radium Mtn., P 47.20 307 IAMs_20 IAMs_20 11 32 49.5
comp=Z,7µm,21.0s
PV12 Saucer Basin, 47.22 307 IAmb IAmb 11 10 33.9
comp=Z,99nm,0.9s
PV12 IAMs_20 IAMs_20 11 32 50.2
comp=Z,6µm,21.0s
O20A White River Ci 47.23 309 P **P 11 10 15.4 +1.0**
baz=105,SNR=36
O20A S **S 11 17 10.2 +4.0**
baz=105
O20A White River Ci 47.23 309 IAmb IAmb 11 10 33.7
comp=Z,106nm,1.1s
O20A IAMs_20 IAMs_20 11 30 37.3
comp=Z,8µm,20.0s
PV03 Paradox Valley 47.24 307 IAMs_20 IAMs_20 11 32 49.6
comp=Z,6µm,21.0s
PV11 David Mesa, Pa 47.27 307 IAMs_20 IAMs_20 11 32 51.5
comp=Z,7µm,22.0s
PV18 Skein Mesa, Pa 47.28 307 IAMs_20 IAMs_20 11 32 51.8
comp=Z,6µm,21.0s
PV16 Nyswonger Mesa 47.30 307 IAMs_20 IAMs_20 11 32 52.5
comp=Z,5µm,21.0s
PV04 Paradox Valley 47.31 307 IAMs_20 IAMs_20 11 30 53.7
comp=Z,6µm,22.0s
W18A Petrified Fore 47.34 302 P **P 11 10 16.3 +1.1**
baz=99,SNR=32
W18A S **S 11 17 10.9 +3.0**
baz=99
W18A Petrified Fore 47.34 302 IAMs_20 IAMs_20 11 32 04.6
comp=Z,7µm,21.0s
PV20 West Nyswonger 47.35 307 IAMs_20 IAMs_20 11 32 53.5
comp=Z,5µm,22.0s
PV19 Morning Glory 47.36 307 IAMs_20 IAMs_20 11 32 53.8
comp=Z,6µm,22.0s
PV05 Paradox Valley 47.40 306 IAMs_20 IAMs_20 11 32 52.5
comp=Z,7µm,21.0s
PV14 Lion Creek, Pa 47.40 307 IAMs_20 IAMs_20 11 32 56.0
comp=Z,6µm,22.0s
PV10 Paradox Valley 47.41 307 IAMs_20 IAMs_20 11 32 54.9
comp=Z,7µm,21.0s
DGMT Dagmar 47.42 321 P **P 11 10 16.1 +0.7**
baz=116,SNR=24
DGMT Dagmar 47.42 321 IAmb IAmb 11 10 35.4
comp=Z,69nm,0.8s
DGMT Dagmar 47.42 321 IAMs_20 IAMs_20 11 28 18.4
comp=Z,7µm,22.0s
X18A Snowflake 47.43 301 IAMs_20 IAMs_20 11 32 28.9
comp=Z,6µm,21.0s
CO01 Juntas del Tor 47.65 191 P **P 11 10 18.6 +1.0**
CO01 IAMs_20 IAMs_20 11 33 26.5
comp=Z,9µm,22.0s
HSIG 47.72 294 P **P 11 10 18.6 +0.6**
HSIG IAmb IAmb 11 10 37.9
comp=Z,52nm,1.1s
HSIG IAMs_20 IAMs_20 11 34 14.1
comp=Z,8µm,22.0s
TUC Tucson 47.84 298 P **P 11 10 19.5 +0.5**
TUC pmax pmax
comp=Z,89nm,1.1s
TUC Tucson 47.84 298 P **P 11 10 20.6 +1.5**
baz=96
TUC S **S 11 17 19.0 +4.2**
baz=96
TUC Tucson 47.84 298 P **P 11 10 19.5 +0.5**
TUC IAmb IAmb 11 10 39.6
comp=Z,89nm,1.1s
LAO LASA Array 47.94 318 P **P 11 10 20.6 +1.0**
baz=112,SNR=29
LAO S **S 11 17 18.0 +2.2**
baz=112
LAO LASA Array 47.94 318 IAmb IAmb 11 10 42.4
comp=Z,113nm,0.9s
LAO IAMs_20 IAMs_20 11 28 51.4
comp=Z,9µm,22.0s
GO04 Tololo Observa 47.98 192 IAMs_20 IAMs_20 11 34 18.2
comp=Z,6µm,21.0s
H06E1 SOCORRO T-PHAS 47.99 280 P **P 11 10 20.7 +0.4**
H06S1 SOCORRO T 48.02 280 P **P 11 10 21.4 +0.8**
H06N1 SOCORRO T-PHAS 48.04 280 P **P 11 10 21.2 +0.5**
SNR=8.7
FCC Fort Churchill 48.46 337 P **P 11 10 23.0 -0.3**
FCC pmax pmax
comp=Z,92nm,1.1s
FCC MLR MLR
comp=Z,5µm,19.0s
FCC Fort Churchill 48.46 337 P **P 11 10 23.0 -0.3**
FCC IAmb IAmb 11 10 40.9
comp=Z,92nm,1.1s
FCC IAMs_20 IAMs_20 11 31 18.2
comp=Z,5µm,19.0s
CO03 El Pedregal 48.60 192 P **P 11 10 25.2 +0.4**
CO03 IAMs_20 IAMs_20 11 32 51.7
comp=Z,6µm,22.0s
X16A Lo Mia Camp, P 48.63 301 IAmb IAmb 11 10 28.5
comp=Z,115nm,1.0s
X16A IAMs_20 IAMs_20 11 31 02.8
comp=Z,7µm,21.0s
WUAZ Wupatki 48.73 303 P **P 11 10 27.4 +1.4**
baz=98,SNR=143
WUAZ S **S 11 17 31.7 +4.2**
baz=98
WUAZ Wupatki 48.73 303 IAMs_20 IAMs_20 11 33 10.3
comp=Z,8µm,21.0s
SRIG Santa Rosalia 48.80 292 IAmb IAmb 11 10 34.0
comp=Z,91nm,1.2s
BW06 Boulder Array 48.89 312 P **P 11 10 27.6 +0.4**
baz=106,SNR=84
BW06 S **S 11 17 30.5 +0.8**
baz=106
BW06 Boulder Array 48.89 312 IAMs_20 IAMs_20 11 30 44.9
comp=Z,8µm,21.0s
PD31 Pinedale Array 48.89 312 IAmb IAmb 11 10 46.0
comp=Z,132nm,1.1s
PDAR Pinedale Array 48.89 312 P **P 11 10 27.7 +0.5**
comp=Z,41nm,0.8s,baz=110,slow=9.4,SNR=318
PDAR LR LR 11 31 06.9
comp=Z,6µm,21.7s,baz=124,slow=36
CFA Coronel Fontan 48.93 189 P **P 11 10 27.6 +0.4**
comp=Z,72nm,1.1s,baz=356,slow=7.1,SNR=58
CO02 Combarbal 49.02 192 IAmb IAmb 11 10 31.7
comp=Z,191nm,1.2s
TTIG Tnine Tigouga, 49.02 64 P **P 11 10 27.0 -1.2**
SNR=8.6
TTIG P **P 11 10 27.0 -1.2**
SNR=8.6
FFC Flin Flon 49.30 329 P **P 11 10 29.0 -0.8**
FFC pmax pmax
comp=Z,32nm,1.0s
FFC MLR MLR
comp=Z,10µm,19.0s
FFC Flin Flon 49.30 329 P **P 11 10 29.0 -0.8**
RLMT Red Lodge 49.39 315 P **P 11 10 31.9 +1.0**
baz=108,SNR=86
RLMT S **S 11 17 38.0 +1.5**
baz=108
RLMT Red Lodge 49.39 315 IAmb IAmb 11 10 54.8
comp=Z,126nm,1.1s
RLMT IAMs_20 IAMs_20 11 34 43.9
comp=Z,9µm,20.0s
PMAFR Mafra 49.42 53 *e*S **S 11 17 41.0 +4.2**
PFVI Vila Bisbo 49.45 55 *e*P **P 11 10 31.0 -0.2**
PFVI Vila Bisbo 49.45 55 IAMs_20 IAMs_20 11 29 36.9
comp=Z,5µm,18.0s
LIS Lisbon 49.48 53 *e*P **P 11 10 30.9 -0.5**
LIS *e*S **S 11 17 37.5 0.0**
LIS AMS AMS 11 27 42.2
comp=Z,12µm,16.1s
LIS Lisbon 49.48 53 *e*P **P 11 10 30.9 -0.5**
LIS *e*S **S 11 17 37.5 0.0**
LIS Lisbon 49.48 53 *e*P **P 11 10 31.0 -0.5**
comp=Z,233nm,1.6s
214A Organ Pipe Nat 49.52 298 P **P 11 10 33.4 +1.5**
baz=94,SNR=36
214A S **S 11 17 43.7 +5.3**
baz=94
214A Organ Pipe Nat 49.52 298 IAmb IAmb 11 11 03.3
comp=Z,194nm,1.8s
OUK Oukaimeden 49.56 63 P **P 11 10 33.1 +0.5**
SNR=12
OUK P **P 11 10 33.1 +0.5**
SNR=12
PTEO Sao Teotonio 49.60 55 *e*P **P 11 10 32.1 -0.3**
comp=Z,75nm,1.2s
U15A North Rim 49.60 304 IAmb IAmb 11 10 36.0
comp=Z,110nm,1.0s
MORF Marmelete 49.62 55 *e*P **P 11 10 32.1 -0.4**
MORF *e*S **S 11 17 39.7 +0.1**
MORF AMS AMS 11 30 14.4
comp=Z,6µm,17.4s
MORF Marmelete 49.62 55 *e*P **P 11 10 32.1 -0.4**
MORF *e*S **S 11 17 39.7 +0.1**
MORF Marmelete 49.62 55 *e*P **P 11 10 32.2 -0.4**
comp=Z,176nm,1.4s
MORF *e*S **S 11 17 43.0 +3.4**
SRHM Skhour des Reh 49.62 62 P **P 11 10 33.0 +0.2**
SNR=15
SRHM P **P 11 10 33.0 +0.2**
SNR=15
CO04 Los Peladeros 49.83 192 IAmb IAmb 11 10 38.8
comp=Z,133nm,1.0s
PNCL Nicolau / Gran 49.85 54 *e*P **P 11 10 34.0 -0.3**
comp=Z,162nm,1.4s
PNCL *e*S **S 11 17 46.4 +3.7**
Y14A Wickenburg 49.86 300 IAmb IAmb 11 10 37.4
comp=Z,106nm,0.9s
Y14A IAMs_20 IAMs_20 11 33 36.4
comp=Z,9µm,20.0s
SNOW Snow King Moun 49.92 313 IAmb IAmb 11 10 54.3
comp=Z,201nm,1.4s
AHID Auburn Hatcher 49.98 312 IAmb IAmb 11 10 54.4
comp=Z,136nm,1.1s
LKWY Lake 49.99 314 IAmb IAmb 11 10 53.1
comp=Z,148nm,1.8s
HWUT Hardware Ranch 50.04 310 IAmb IAmb 11 10 55.5
comp=Z,173nm,1.1s
HWUT IAMs_20 IAMs_20 11 35 43.4
comp=Z,7µm,20.0s
MESJ Messejana 50.04 55 *e*P **P 11 10 35.3 -0.5**
MESJ *e*S **S 11 17 45.5 0.0**
MESJ AMS AMS 11 27 02.2
comp=Z,7µm,22.2s
MESJ Messejana 50.04 55 *e*P **P 11 10 35.2 -0.5**
MESJ *e*S **S 11 17 45.4 0.0**
MESJ Messejana 50.04 55 *e*P **P 11 10 35.8 +0.1**
comp=Z,126nm,1.7s
FLWY Flagg Ranch 50.05 314 IAmb IAmb 11 10 55.2
comp=Z,111nm,1.1s
FLWY IAMs_20 IAMs_20 11 34 08.7
comp=Z,9µm,21.0s
H17A Grant Village 50.06 314 P **P 11 10 37.2 +1.1**
baz=106,SNR=12
H17A Grant Village 50.06 314 IAmb IAmb 11 11 19.7
comp=Z,118nm,1.8s
TPAW Teton Pass 50.07 313 IAmb IAmb 11 10 59.0
comp=Z,233nm,1.5s
AVE Averroes 50.10 61 P **P 11 10 36.5 +0.2**
SNR=7.4
PCVE Castro Verde 50.15 55 *e*P **P 11 10 36.4 -0.2**
comp=Z,91nm,0.9s
PCVE *e*S **S 11 17 51.1 +4.2**
PBDV Barranco-do-Ve 50.17 55 *e*P **P 11 10 37.0 +0.2**
comp=Z,172nm,1.4s
PBDV *e*S **S 11 17 49.5 +2.2**
PCAS Casmilo, Conde 50.24 52 *e*P **P 11 10 37.0 -0.2**
comp=Z,185nm,1.3s
PCAS *e*S **S 11 17 50.8 +2.7**
PMTG Montargil 50.25 53 *e*P **P 11 10 36.9 -0.4**
comp=Z,150nm,1.5s
PMTG *e*S **S 11 17 49.8 +1.5**
EVO Evora 50.32 54 *e*P **P 11 10 37.3 -0.6**
comp=Z,76nm,1.1s
COI Coimbra 50.33 52 P **P 11 10 37.2 -0.7**
COI pmax pmax
comp=Z,191nm,0.9s
COI Coimbra 50.33 52 *e*P **P 11 10 37.7 -0.2**
comp=Z,308nm,1.3s
COI *e*S **S 11 17 51.4 +2.0**
COI Coimbra 50.33 52 P **P 11 10 37.2 -0.7**
COI IAMs_20 IAMs_20 11 28 52.1
comp=Z,8µm,18.0s
PBEJ Beja 50.35 54 *e*P **P 11 10 38.0 -0.1**
comp=Z,101nm,2.2s
SFJD Kangerlussuaq 50.35 5 LR LR 11 28 49.7
comp=Z,2µm,21.6s,baz=181,slow=32
SFJD Kangerlussuaq 50.35 5 *e*P **P 11 10 38.7 +1.1**
SFJD MLR MLR
comp=Z,330nm,19.0s
SFJD Kangerlussuaq 50.35 5 P **P 11 10 37.5 -0.1**
SFJD Kangerlussuaq 50.35 5 IAMs_20 IAMs_20 11 32 30.5
comp=Z,5µm,19.0s
SFJD Kangerlussuaq 50.35 5 *i* P **P 11 10 38.7 +1.1**
comp=Z,320nm,19.0s
PVAQ Vaqueiros 50.37 55 *e*P **P 11 10 38.1 -0.1**
comp=Z,129nm,1.6s
PVAQ *e*S **S 11 17 52.9 +2.9**
PVAQ *e*LR LR 11 24 51.0
comp=Z,5µm,18.0s
PVAQ Vaqueiros 50.37 55 IAMs_20 IAMs_20 11 30 03.2
comp=Z,5µm,19.0s
VA03 San Esteban 50.45 191 P **P 11 10 39.6 +0.8**
VA03 IAmb IAmb 11 10 57.9
comp=Z,136nm,1.1s
OUZM OUZ 50.48 64 P **P 11 10 39.1 -0.2**
SNR=15
OUZM P **P 11 10 39.1 -0.2**
SNR=15
DUG Dugway, Tooele 50.66 308 P **P 11 10 41.8 +1.2**
baz=101,SNR=151
DUG S **S 11 17 57.8 +3.5**
baz=101
DUG Dugway, Tooele 50.66 308 IAmb IAmb 11 11 00.2
comp=Z,117nm,0.9s
EGMT Eagleton 50.66 319 P **P 11 10 41.3 +0.9**
baz=110,SNR=34
EGMT S **S 11 17 55.5 +1.5**
baz=110
EGMT Eagleton 50.66 319 IAmb IAmb 11 10 59.4
comp=Z,88nm,1.1s
PESTR Estremoz 50.70 53 *e*S **S 11 17 55.9 +1.2**
W13A Hualapai Mount 50.71 302 IAmb IAmb 11 10 44.3
comp=Z,66nm,0.9s
ROC1 El Roble 50.74 192 P **P 11 10 41.4 +0.1**
ZHG ZHG 50.76 61 P **P 11 10 41.0 -0.3**
SNR=18
ZHG P **P 11 10 41.0 -0.3**
SNR=18
PGAV Gavieira, Arco 50.81 49 *e*P **P 11 10 41.2 -0.5**
comp=Z,177nm,1.6s
PGAV *e*S **S 11 17 57.0 +0.7**
PGAV *e*LR LR 11 24 59.8
comp=Z,10µm,20.0s
PVIS Viseu 50.82 51 *e*P **P 11 10 41.1 -0.6**
comp=Z,126nm,1.2s
PDMCI Parker Dam,Lak 50.84 301 P **P 11 10 43.2 +1.4**
baz=96,SNR=20
PEL Peldehue 50.84 191 P **P 11 10 42.3 +0.5**
PEL pmax pmax
comp=Z,453nm,2.0s
PEL Peldehue 50.84 191 P **P 11 10 42.3 +0.5**
PCAB Cabril 50.93 50 *e*P **P 11 10 41.6 -0.9**
comp=Z,152nm,1.3s
PMRV Marv??o 50.95 53 *e*P **P 11 10 41.7 -1.0**
comp=Z,130nm,1.8s
PMRV *e*S **S 11 17 58.1 0.0**
PMRV *e*LR LR 11 24 44.3
comp=Z,7µm,20.0s
PCBR Castelo Branco 50.97 52 *e*P **P 11 10 42.1 -0.6**
comp=Z,107nm,1.5s
MTE Manteigas 51.02 52 *e*P **P 11 10 42.5 -0.7**
comp=Z,169nm,1.5s
MTE *e*S **S 11 18 00.0 +0.9**
MTE *e*LR LR 11 24 04.0
comp=Z,8µm,18.0s
MTE Manteigas 51.02 52 P **P 11 10 42.3 -0.9**
MTE IAmb IAmb 11 10 44.9
comp=Z,113nm,0.8s
MTE IAMs_20 IAMs_20 11 29 22.3
comp=Z,9µm,19.0s
MT02 Curacav 51.04 192 IAmb IAmb 11 10 47.4
comp=Z,304nm,1.6s
PVRL Vila Real 51.07 50 *e*P **P 11 10 43.2 -0.3**
comp=Z,158nm,2.0s
MT05 Renca 51.09 191 IAmb IAmb 11 10 48.0
comp=Z,160nm,1.1s
Y12C Blythe 51.10 300 P **P 11 10 45.1 +1.3**
baz=95,SNR=18
Y12C S **S 11 18 05.5 +5.2**
baz=95
Y12C Blythe 51.10 300 IAMs_20 IAMs_20 11 34 24.9
comp=Z,5µm,20.0s
NEE2 Needles Airpor 51.27 301 P **P 11 10 46.7 +1.6**
baz=96,SNR=7.5
GLA Glamis 51.30 299 P **P 11 10 46.7 +1.3**
baz=94,SNR=14
GLA S **S 11 18 08.6 +5.4**
baz=94
ZGR Zagora 51.44 65 P **P 11 10 46.0 -0.6**
SNR=17
MVO Moncorvo 51.55 51 *e*P **P 11 10 46.8 -0.4**
comp=Z,166nm,1.7s
MVO *e*S **S 11 18 07.9 +1.4**
MVO *e*LR LR 11 25 16.1
comp=Z,7µm,18.0s
MT01 Popeta 51.65 192 IAmb IAmb 11 11 22.7
comp=Z,93nm,1.1s
IRM Iron Mountain 51.65 300 P **P 11 10 49.6 +1.7**
baz=95,SNR=117
IRM S **S 11 18 13.8 +5.9**
baz=95
H10N3 ASCENSION HYDR 51.66 115 T T 12 06 51.4
baz=297,slow=76,SNR=375
H10N2 ASCENSION HYDR 51.66 115 T T 12 06 51.9
baz=297,slow=76,SNR=292
H10N1 ASCENSION HYDR 51.68 115 T T 12 06 53.0
baz=297,slow=76,SNR=386
LPA La Plata 51.69 177 *e*P **P 11 10 44.4 -3.6**
LPA PCP **PcP 11 11 57.7 -3.6**
LPA S S 11 17 58.8 -9.2
LPA PKIKP **PKiKP 11 18 43.3 +0.3**
DLMT Dillon 51.71 315 IAmb IAmb 11 11 08.0
comp=Z,138nm,1.1s
DLMT IAMs_20 IAMs_20 11 36 09.3
comp=Z,8µm,21.0s
ASCN Ascension 51.83 115 IAMs_20 IAMs_20 11 28 13.8
comp=Z,5µm,20.0s
BC3 Big Chuckawall 51.87 300 P **P 11 10 51.0 +1.3**
baz=94,SNR=78
BC3 S **S 11 18 16.5 +5.5**
baz=94
PBRG Braganca 51.89 50 *e*P **P 11 10 49.2 -0.5**
comp=Z,142nm,1.8s
SICH Sidi Chahed 51.91 60 P **P 11 10 51.0 +1.0**
SNR=5.6
SICH P **P 11 10 51.0 +1.0**
SNR=5.6
H10S3 ASCENSION HYDR 52.06 116 T T 12 07 52.8
baz=285,slow=74,SNR=334
CZD Col de Zad 52.07 61 P **P 11 10 52.0 +0.6**
SNR=25
H10S2 ASCENSION HYDR 52.08 116 T T 12 07 33.5
baz=295,slow=74,SNR=106
SWSC Sam W. Stewart 52.11 299 P **P 11 10 52.7 +1.4**
baz=94,SNR=28
SWSC S **S 11 18 21.3 +7.2**
baz=94
GMRC Granite Mounta 52.13 301 P **P 11 10 53.0 +1.3**
baz=95,SNR=78
GMRC S **S 11 18 20.1 +5.4**
baz=95
BELC Belle Mtn. Jos 52.34 300 P **P 11 10 54.7 +1.4**
baz=94,SNR=52
IKP In-Ko-Pah, Jac 52.35 298 P **P 11 10 54.8 +1.5**
baz=93,SNR=22
TUQ Turquoise Moun 52.40 302 P **P 11 10 55.1 +1.4**
baz=95,SNR=81
MDT Midelt 52.42 61 P **P 11 10 53.4 -0.4**
comp=Z,38nm,0.9s,baz=285,slow=7.8,SNR=51
BO02 Sierra Bellavi 52.46 191 IAMs_20 IAMs_20 11 35 21.0
comp=Z,5µm,22.0s
R11A Troy Canyon, C 52.47 306 P **P 11 10 55.4 +1.2**
baz=98,SNR=72
ILULI Ilulissat 52.50 4 *i* P **P 11 10 54.0 +0.4**
ILULI Ilulissat 52.50 4 IAMs_20 IAMs_20 11 33 28.1
comp=Z,6µm,19.0s
ILULI Ilulissat 52.50 4 *i* P **P 11 10 54.0 +0.4**
ELK Elko 52.58 309 IAMs_20 IAMs_20 11 37 25.8
comp=Z,8µm,20.0s
MONP2 Monument Peak 52.62 299 P **P 11 10 57.0 +1.6**
baz=93,SNR=92
HEC Hector,Ludlow 52.69 301 P **P 11 10 57.3 +1.6**
baz=95,SNR=50
XPFO Pion Flat 52.70 299 P **P 11 10 56.8 +0.9**
XPFO IAmb IAmb 11 11 19.7
comp=Z,156nm,1.9s
PFO Pinyon Flats O 52.70 299 P **P 11 10 57.2 +1.3**
comp=Z,18nm,1.1s,baz=103,slow=5.6,SNR=37
PFO Pinyon Flats O 52.70 299 *c i* P **P 11 10 57.2 +1.3**
PFO pmax pmax
comp=Z,78nm,1.4s
PFO MLR MLR
comp=Z,7µm,20.0s
PFO Pinyon Flats O 52.70 299 P **P 11 10 57.5 +1.5**
baz=94,SNR=19
PFO Pinyon Flats O 52.70 299 P **P 11 10 56.7 +0.8**
PFO IAmb IAmb 11 11 19.6
comp=Z,156nm,1.9s
SHOC Shoshone, Teco 52.73 302 P **P 11 10 57.5 +1.5**
baz=96,SNR=25
TPNV Topopah Spring 52.82 304 P **P 11 10 58.6 +1.8**
baz=96,SNR=105
TPNV Topopah Spring 52.82 304 IAmb IAmb 11 11 21.4
comp=Z,118nm,1.1s
GO05 Huala 52.89 192 P **P 11 10 57.4 +0.4**
MSO Missoula 53.00 316 P **P 11 10 58.6 +0.7**
baz=106,SNR=13
GSC Goldstone, Bar 53.11 302 P **P 11 11 00.3 +1.4**
baz=95,SNR=54
GSC Goldstone, Bar 53.11 302 IAMs_20 IAMs_20 11 35 40.4
comp=Z,7µm,20.0s
BBRC Big Bear Solar 53.12 300 P **P 11 11 01.0 +1.9**
baz=94,SNR=42
109C Camp Elliot, M 53.20 299 P **P 11 11 00.8 +1.4**
baz=93,SNR=7.4
109C Camp Elliot, M 53.20 299 IAmb IAmb 11 11 02.1
comp=Z,74nm,1.1s
RRX Edison Barstow 53.23 301 P **P 11 11 01.6 +1.9**
baz=94,SNR=5.7
FURC Furnace Creek, 53.26 303 P **P 11 11 01.4 +1.6**
baz=96,SNR=73
PAB San Pablo 53.30 53 P **P 11 10 59.3 -0.9**
PAB pmax pmax
comp=Z,44nm,0.9s
PAB San Pablo 53.30 53 P **P 11 10 59.3 -0.9**
PAB San Pablo 53.30 53 IAMs_20 IAMs_20 11 28 15.7
comp=Z,6µm,20.0s
MURC Murrieta 53.31 299 P **P 11 11 01.6 +1.3**
baz=93,SNR=25
JTMT Jette 53.47 317 P **P 11 11 01.0 -0.4**
JTMT IAmb IAmb 11 11 18.3
comp=Z,70nm,0.8s
JTMT IAMs_20 IAMs_20 11 32 08.9
comp=Z,9µm,22.0s
MFID Camas Ranch 53.50 312 IAmb IAmb 11 11 20.8
comp=Z,79nm,1.1s
MFID IAMs_20 IAMs_20 11 37 16.1
comp=Z,7µm,18.0s
ESDC Sonseca Array 53.61 53 P **P 11 11 01.9 -0.5**
comp=Z,36nm,0.8s,baz=258,slow=8.1,SNR=108
ESDC LR LR 11 29 34.7
comp=Z,6µm,19.4s,baz=260,slow=31
GRAC Grapevine Rang 53.72 304 P **P 11 11 04.9 +1.7**
baz=96,SNR=24
MPMC Manual Prospec 53.73 302 P **P 11 11 04.7 +1.2**
baz=95,SNR=66
BFSC Mount Baldy Ra 53.73 300 P **P 11 11 04.7 +1.2**
baz=93,SNR=35
LRMC Laurel Mtn Rad 53.84 302 P **P 11 11 05.6 +1.4**
baz=94,SNR=26
EDW2 Edwards Air Fo 54.05 301 P **P 11 11 07.0 +1.2**
baz=94,SNR=77
MWC Mount Wilson 54.06 300 IAmb IAmb 11 11 08.5
comp=Z,65nm,1.1s
MWC IAMs_20 IAMs_20 11 36 07.7
comp=Z,6µm,20.0s
PASC Pasadena Art C 54.17 300 IAmb IAmb 11 11 09.0
comp=Z,69nm,1.0s
PASC Pasadena Art C 54.17 300 IAMs_20 IAMs_20 11 36 10.4
comp=Z,6µm,21.0s
FMP Fort Macarthur 54.23 300 P **P 11 11 07.8 +0.8**
baz=93
CWC Cottonwood Cre 54.24 303 P **P 11 11 08.2 +1.0**
baz=95
DECC Green Verdugo 54.29 300 P **P 11 11 08.2 +0.7**

baz=93,SNR=6.2
CIS Catalina Islan 54.32 299 P **P** **11 11 09.1 +1.4**
baz=92,SNR=12
BI02 San Fabin de 54.37 191 IAmb IAmb 11 11 30.5
comp=Z,86nm,0.8s
BI02 IAMs_20 IAMs_20 11 37 52.5
comp=Z,6µm,22.0s
TIN Tinemaha, Big 54.41 304 P **P** **11 11 10.0 +1.6**
baz=95,SNR=8.1
SCI2 San Clemente I 54.41 299 P **P** **11 11 10.0 +1.7**
baz=92,SNR=9.0
BORG Borgarnes 54.45 19 LR LR 11 29 29.0
comp=Z,4µm,21.8s,baz=233,slow=31
BORG Borgarnes 54.45 19 P **P** **11 11 08.3 +0.3**
BORG pmax pmax
comp=Z,260nm,1.6s
BORG Borgarnes 54.45 19 P **P** **11 11 08.3 +0.3**
BORG IAmb IAmb 11 11 25.2
comp=Z,260nm,1.6s
NV11 Mina Array Sit 54.49 305 IAmb IAmb 11 11 36.7
comp=Z,153nm,1.3s
ISA Isabella, Lake 54.49 302 P **P** **11 11 10.4 +1.4**
baz=94,SNR=36
ISA Isabella, Lake 54.49 302 IAmb IAmb 11 11 26.8
comp=Z,74nm,1.1s
NVAR Mina Array Bea 54.60 305 P **P** **11 11 10.8 +0.9**
comp=Z,30nm,0.8s,baz=92,slow=7.0,SNR=261
NVAR ScP **ScP** **11 16 10.0 +0.2**
comp=Z,4.0nm,0.9s,baz=115,slow=4.9,SNR=4.6
NVAR LR LR 11 35 26.1
comp=Z,9µm,21.0s,baz=113,slow=37
NVAR PKP2bc 11 41 41.6
comp=Z,0.8nm,1.0s,baz=253,slow=4.4,SNR=5.5
OSI Osito Audit: C 54.63 301 P **P** **11 11 09.6 -0.4**
baz=93
OSI Osito Audit: C 54.63 301 IAMs_20 IAMs_20 11 34 50.8
comp=Z,5µm,19.0s
ARVC Arvin 54.75 301 P **P** **11 11 12.5 +1.8**
baz=93,SNR=31
BMO Blue Mountains 54.83 313 IAMs_20 IAMs_20 11 33 37.1
comp=Z,7µm,22.0s
BI03 Tigo 54.88 192 IAmb IAmb 11 11 31.5
comp=Z,83nm,0.7s
BI03 IAMs_20 IAMs_20 11 37 41.1
comp=Z,4µm,21.0s
MLAC Mammoth, Mammo 54.94 304 P **P** **11 11 14.2 +1.8**
baz=95,SNR=23
VES Vestal, Richgr 55.00 302 P **P** **11 11 14.1 +1.5**
baz=94,SNR=41
TIC Toumodi 55.01 94 *e*P **P** **11 11 10.9 -2.0**
OMMB Old Mammoth Mi 55.07 304 IAmb IAmb 11 11 16.3
comp=Z,79nm,0.9s
LIC Lamto 55.12 94 *e*P **P** **11 11 11.7 -2.0**
comp=Z,166nm,1.3s
MDPB Devils Postpil 55.13 304 IAmb IAmb 11 11 16.8
comp=Z,70nm,0.9s
DBIC Dimbokro 55.16 94 P **P** **11 11 12.0 -2.0**
comp=Z,62nm,0.9s,baz=276,slow=7.9,SNR=40
DBIC LR LR 11 30 35.5
comp=Z,10µm,20.7s,baz=256,slow=32
DBIC Dimbokro 55.16 94 P **P** **11 11 12.6 -1.3**
DBIC pmax pmax
comp=Z,77nm,1.0s
DBIC Dimbokro 55.16 94 P **P** **11 11 12.6 -1.3**
DBIC IAmb IAmb 11 11 14.9
comp=Z,77nm,1.0s
DSB Dublin 55.23 36 P **P** **11 11 13.3 -0.6**
DSB IAmb IAmb 11 11 16.6
comp=Z,71nm,1.0s
SNCC San Nicolas Is 55.24 299 P **P** **11 11 15.1 +0.7**
baz=92
SNCC San Nicolas Is 55.24 299 P **P** **11 11 14.8 +0.4**
SNCC IAmb IAmb 11 11 16.9
comp=Z,152nm,1.2s
VOG Valley Oaks Go 55.27 303 P **P** **11 11 14.5 0.0**
baz=94
KIC Kosan Boka 55.35 94 *e*P **P** **11 11 13.6 -1.8**
comp=Z,156nm,1.1s
SCZ2 Santa Cruz Isl 55.36 300 P **P** **11 11 15.7 +0.5**
baz=92,SNR=6.6
WVOR Wild Horse Val 55.37 310 IAMs_20 IAMs_20 11 37 59.4
comp=Z,5µm,18.0s
YERR Yerington 55.39 306 IAMs_20 IAMs_20 11 35 23.5
comp=Z,9µm,22.0s
J08A Circle Bar Ran 55.39 311 IAmb IAmb 11 11 34.7
comp=Z,69nm,0.9s
J08A IAMs_20 IAMs_20 11 39 04.3
comp=Z,7µm,20.0s
SBC Santa Barbara 55.44 300 P **P** **11 11 15.7 0.0**
baz=92
NEW Newport 55.45 317 LR LR 11 36 07.4
comp=Z,4µm,21.1s,baz=108,slow=37
NEW Newport 55.45 317 P **P** **11 11 15.9 +0.2**
baz=104,SNR=75
NEW S **S** **11 19 00.0 +0.9**
baz=104
NEW Newport 55.45 317 IAmb IAmb 11 11 33.3
comp=Z,91nm,0.8s
NEW Newport 55.45 317 IAMs_20 IAMs_20 11 33 57.1
comp=Z,7µm,21.0s
PKM Mcpherson Peak 55.54 301 P **P** **11 11 18.0 +1.3**
baz=93,SNR=21
HTL Hartland 55.64 39⇓*e*P **P** **11 11 16.0 -0.9**
HTL IAmb IAmb 11 11 19.8
comp=Z,82nm,1.1s
HTL IAMs_20 IAMs_20 11 31 33.6
comp=Z,7µm,17.6s
PNTR Pine Nut 55.68 306 IAmb IAmb 11 12 37.2
comp=Z,133nm,1.6s
SMMC Simmler 55.71 301 P **P** **11 11 19.5 +1.7**
baz=93,SNR=56
SMMC S **S** **11 19 08.8 +5.8**
baz=93
VCNR Virginia City 55.74 306 IAMs_20 IAMs_20 11 35 35.5
comp=Z,8µm,22.0s
E09A Wood Farm, Sta 55.74 315 IAMs_20 IAMs_20 11 36 59.0
comp=Z,8µm,20.0s
RSBS Rosebush, Pemb 55.77 38⇓*e*P **P** **11 11 17.0 -0.7**
RSBS IAmb IAmb 11 11 18.4
comp=Z,113nm,0.9s
PAGB Antelope Grade 55.94 302 IAMs_20 IAMs_20 11 37 50.3
comp=Z,6µm,20.0s
G08A Pilot Rock 56.06 313 IAmb IAmb 11 11 38.8
comp=Z,88nm,1.4s
G08A IAMs_20 IAMs_20 11 37 44.7
comp=Z,8µm,20.0s
C09A Chrisman Ranch 56.10 317 IAmb IAmb 11 11 38.8
comp=Z,153nm,1.6s
RUBR Rubicon Trail 56.10 306 IAmb IAmb 11 11 44.4
comp=Z,52nm,0.9s
RUBR IAMs_20 IAMs_20 11 36 09.3
comp=Z,7µm,21.0s
I07A Izee 56.24 312 IAmb IAmb 11 11 40.4
comp=Z,117nm,1.2s
I07A IAMs_20 IAMs_20 11 39 02.6
comp=Z,6µm,19.0s
BEKR Beckworth 56.34 307 IAMs_20 IAMs_20 11 38 55.4
comp=Z,7µm,20.0s
WPS Cemaes, Angles 56.34 37⇓*e*P **P** **11 11 21.4 -0.4**
WPS IAmb IAmb 11 11 22.5
comp=Z,75nm,1.1s
WPS IAMs_20 IAMs_20 11 30 37.2
comp=Z,8µm,18.8s
E08A Dider Farm, El 56.35 315 IAMs_20 IAMs_20 11 37 37.3
comp=Z,7µm,20.0s
WLF1 Llynfaes 56.37 37⇓*e*P **P** **11 11 21.7 -0.3**
WLF1 IAmb IAmb 11 11 24.5
comp=Z,186nm,1.0s
D08A Wollman Farm, 56.37 316 IAmb IAmb 11 11 41.0
comp=Z,137nm,1.3s
D08A IAMs_20 IAMs_20 11 37 06.7
comp=Z,6µm,19.0s
PMPB Monarch Peak 56.41 302 IAmb IAmb 11 11 24.8
comp=Z,63nm,1.1s
YLL Llanberis 56.45 37 *e*P **P** **11 11 22.4 -0.2**
WME Myndd Eilian 56.45 37 *e*P **P** **11 11 22.1 -0.5**
MOD Modoc Plateau 56.52 309 IAMs_20 IAMs_20 11 36 18.1
comp=Z,5µm,20.0s
IOMK Kirk Michael 56.58 36 *e*P **P** **11 11 23.0 -0.5**
IOMK IAmb IAmb 11 11 26.0
comp=Z,208nm,1.2s
IOMK IAMs_20 IAMs_20 11 33 58.5
comp=Z,17µm,17.0s
LC01 Cunco 56.65 191 P **P** **11 11 24.4 +0.2**
LC01 IAmb IAmb 11 11 44.6
comp=Z,132nm,1.1s
HAWA Hanford 56.66 315 IAmb IAmb 11 11 43.0
comp=Z,76nm,1.0s
HAWA IAMs_20 IAMs_20 11 37 48.3
comp=Z,7µm,20.0s
LLW Llanuwychllyn 56.66 37⇓*e*P **P** **11 11 23.2 -1.0**
LLW IAmb IAmb 11 11 24.7
comp=Z,22nm,0.9s
LLW IAMs_20 IAMs_20 11 31 06.8
comp=Z,6µm,19.2s
GAL1 Galloway 56.69 35⇓*e*P **P** **11 11 23.7 -0.6**
GAL1 IAmb IAmb 11 11 26.5
comp=Z,97nm,1.0s
GAL1 IAMs_20 IAMs_20 11 31 08.0
comp=Z,5µm,17.0s
AFDM Forest Hills D 56.73 306 IAMs_20 IAMs_20 11 35 54.8
comp=Z,7µm,21.0s
MCH1 Michaelchurch 56.81 38⇓*e*P **P** **11 11 24.5 -0.7**
MCH1 IAMs_20 IAMs_20 11 34 31.5
comp=Z,5µm,17.8s
F07A Phinny Hill Vi 56.84 314 IAmb IAmb 11 11 44.4
comp=Z,71nm,1.2s
MONM Monmouth 56.89 39⇓*e*P **P** **11 11 25.4 -0.3**
MONM IAmb IAmb 11 11 26.6
comp=Z,143nm,1.2s
MONM IAMs_20 IAMs_20 11 34 31.9
comp=Z,5µm,18.6s
E07A Sunnyside 56.91 315 IAmb IAmb 11 11 45.1
comp=Z,131nm,1.3s
E07A IAMs_20 IAMs_20 11 37 54.9
comp=Z,5µm,20.0s
B08A Colville Reser 56.91 317 IAMs_20 IAMs_20 11 34 50.8
comp=Z,8µm,22.0s
FOEL Foel Wylfa 56.94 37⇓*e*P **P** **11 11 25.6 -0.6**
FOEL IAmb IAmb 11 11 28.6
comp=Z,113nm,1.0s
FOEL IAMs_20 IAMs_20 11 31 24.6
comp=Z,13µm,19.0s
SAO San Andreas Ge 56.96 303 IAmb IAmb 11 11 55.5
comp=Z,76nm,1.2s
OLDB Oldbury-Upon-S 56.99 39⇓*e*P **P** **11 11 26.0 -0.5**
OLDB IAmb IAmb 11 11 29.2
comp=Z,273nm,1.2s
OLDB IAMs_20 IAMs_20 11 33 17.4
comp=Z,7µm,16.7s
SUMG Summit 56.99 8⇓*i*P **P** **11 11 26.9 +0.2**
SUMG pmax pmax
comp=Z,370nm,1.1s
SUMG MLR MLR
comp=Z,13µm,18.0s
SUMG Summit 56.99 8 P **P** **11 11 26.2 -0.5**
SUMG IAMs_20 IAMs_20 11 36 29.9
comp=Z,6µm,20.0s
SUMG Summit 56.99 8⇓*i*P **P** **11 11 26.9 +0.2**
comp=Z,369nm,1.1s
comp=Z,13µm,18.0s
HLM1 Long Mynd 57.02 38⇓*e*P **P** **11 11 26.1 -0.6**
HLM1 IAmb IAmb 11 11 29.2
comp=Z,247nm,1.2s
HLM1 IAMs_20 IAMs_20 11 32 47.0
comp=Z,8µm,18.9s
NEWG New Galloway 57.03 35⇓*e*P **P** **11 11 26.0 -0.7**
NEWG IAmb IAmb 11 11 27.3
comp=Z,65nm,0.8s
NEWG IAMs_20 IAMs_20 11 31 18.1
comp=Z,7µm,18.1s
KPL Plockton 57.05 32 *e*P **P** **11 11 25.1 -1.7**
KPL IAMs_20 IAMs_20 11 31 05.8
comp=Z,5µm,18.8s
K05A Summer Lake 57.06 310 IAMs_20 IAMs_20 11 36 26.2
comp=Z,6µm,21.0s
ORV Orroville 57.19 306 IAmb IAmb 11 11 30.5
comp=Z,102nm,1.1s
ORV IAMs_20 IAMs_20 11 39 33.9
comp=Z,7µm,20.0s
G06A Carlson Farm, 57.22 313 IAMs_20 IAMs_20 11 38 21.3
comp=Z,7µm,19.0s
PINE Pine Mountain 57.23 311 IAMs_20 IAMs_20 11 36 28.6
comp=Z,5µm,20.0s
STRD Stroud 57.26 39⇓*e*P **P** **11 11 28.1 -0.3**
STRD IAmb IAmb 11 11 29.1
comp=Z,136nm,1.1s
STRD IAMs_20 IAMs_20 11 33 25.6
comp=Z,7µm,17.5s
EANR 'Ain N'Sour 57.28 58 P **P** **11 11 29.6 +0.7**
KAC Achnashellach 57.29 32⇓*e*P **P** **11 11 27.3 -1.2**
J05D Fort Rock, OR 57.37 311 P **P** **11 11 30.4 +0.8**
baz=97,SNR=23
J05D S **S** **11 19 29.9 +4.9**
baz=97
SWN1 Swindon 57.41 39⇓*e*P **P** **11 11 29.2 -0.2**
SWN1 IAmb IAmb 11 11 32.1
comp=Z,184nm,1.2s
SWN1 IAMs_20 IAMs_20 11 34 35.0
comp=Z,6µm,16.3s
ETRT Tiaret 57.43 59 P **P** **11 11 30.9 +0.9**
O03E Paynes Creek 57.48 307 P **P** **11 11 30.3 0.0**
baz=95,SNR=82
O03E S **S** **11 19 28.5 +2.2**
baz=95
ECHA Ech Chlef 57.51 58 P **P** **11 11 30.0 -0.4**
INVG Invergeldie, C 57.56 33⇓*e*P **P** **11 11 29.4 -1.1**
INVG IAmb IAmb 11 11 30.5
comp=Z,54nm,1.1s
INVG IAMs_20 IAMs_20 11 36 03.4
comp=Z,4µm,18.9s
STNC Stoke 57.58 37 *e*P **P** **11 11 30.1 -0.5**
STNC IAMs_20 IAMs_20 11 31 44.3
comp=Z,12µm,19.3s
LTY Liberty 57.58 316 IAmb IAmb 11 11 49.5
comp=Z,196nm,1.3s
LTY IAMs_20 IAMs_20 11 37 53.6
comp=Z,5µm,20.0s
I05D Terrebonne, OR 57.59 312 P **P** **11 11 32.1 +1.1**
baz=98,SNR=20
I05D S **S** **11 19 33.0 +5.4**
baz=98
KULLO Kullorsuaq 57.60 1 *i*P **P** **11 11 30.5 +0.1**
KULLO MLR MLR
comp=Z,8µm,19.0s
KULLO Kullorsuaq 57.60 1 *i*P **P** **11 11 30.5 +0.1**
comp=Z,8µm,19.0s
EBNR Beni Rached 57.64 58 P **P** **11 11 32.5 +1.0**
M04C Macdoel 57.65 309 P **P** **11 11 32.1 +0.6**
baz=96,SNR=47
M04C S **S** **11 19 33.6 +5.1**
baz=96
ESK Eskdalemuir 57.65 35⇓*e*P **P** **11 11 30.0 -1.2**
ESK IAMs_20 IAMs_20 11 31 37.0
comp=Z,6µm,19.5s
ESK Eskdalemuir 57.65 35 P **P** **11 11 30.3 -0.8**
ESK pmax pmax
comp=Z,252nm,1.7s
ESK Eskdalemuir 57.65 35 P **P** **11 11 30.3 -0.8**
ESK IAmb IAmb 11 11 46.7
comp=Z,252nm,1.7s
ESK Eskdalemuir 57.65 35 IAMs_20 IAMs_20 11 31 50.0
comp=Z,6µm,19.0s
K04D Chiloquin, OR 57.67 310 P **P** **11 11 32.5 +0.8**
baz=96,SNR=6.9
K04D S **S** **11 19 34.6 +5.7**
baz=96
EKA Eskdalemuir Ar 57.68 35 LR LR 11 31 54.9
comp=Z,5µm,19.2s,baz=265,slow=32
G05D Wamic, OR 57.70 313 P **P** **11 11 33.3 +1.6**
baz=98,SNR=11
G05D S **S** **11 19 33.9 +4.9**
baz=98
WOL Wolverton 57.71 40⇓*e*P **P** **11 11 31.1 -0.5**
WOL IAmb IAmb 11 11 32.3
comp=Z,141nm,1.0s
C06D Leavenworth 57.85 316 P **P** **11 11 32.5 -0.2**
baz=100
EBL Broad Law 57.88 34⇓*e*P **P** **11 11 31.9 -0.8**
F05D White Salmon 57.89 314 P **P** **11 11 34.5 +1.5**
baz=99,SNR=21
F05D S **S** **11 19 35.6 +4.2**
baz=99
LBWR Ladybower, Pea 57.94 37⇓*e*P **P** **11 11 32.7 -0.4**
LBWR IAmb IAmb 11 11 35.8
comp=Z,321nm,1.0s
LBWR IAMs_20 IAMs_20 11 32 05.2
comp=Z,13µm,19.0s
J04D Umpqua Nationa 58.00 311 P **P** **11 11 34.8 +0.7**
baz=96,SNR=24
J04D S **S** **11 19 39.1 +5.8**
baz=96
CWF Charnwood Fore 58.01 38⇓*e*P **P** **11 11 32.5 -1.1**
CWF IAmb IAmb 11 11 36.0
comp=Z,118nm,1.1s
CWF IAMs_20 IAMs_20 11 34 25.1
comp=Z,6µm,18.4s
L04D Klamath Falls 58.04 309 P **P** **11 11 34.7 +0.5**
baz=96,SNR=31
L04D S **S** **11 19 38.0 +4.3**
baz=96
WDC Whiskeytown Da 58.06 307 IAMs_20 IAMs_20 11 37 06.1
comp=Z,5µm,22.0s
EDU Dundee 58.14 33 *e*P **P** **11 11 33.8 -0.7**
HPK Haverah Park 58.14 37⇓*e*P **P** **11 11 33.6 -1.0**
HPK IAmb IAmb 11 11 36.9
comp=Z,113nm,1.0s
HPK IAMs_20 IAMs_20 11 31 12.2
comp=Z,8µm,20.1s
ESY Stoneypath 58.16 34⇓*e*P **P** **11 11 33.9 -0.8**
MCCM Marconi Confer 58.17 305 IAmb IAmb 11 11 37.8
comp=Z,116nm,0.9s
MCCM IAMs_20 IAMs_20 11 38 02.1
comp=Z,7µm,21.0s
EDMD Edmundbyers 58.19 35⇓*e*P **P** **11 11 33.9 -1.1**
EDMD IAmb IAmb 11 11 37.0
comp=Z,136nm,1.3s
EDMD IAMs_20 IAMs_20 11 33 57.0
comp=Z,6µm,17.8s
N02D Trinity Center 58.22 308 P **P** **11 11 34.8 -0.7**
baz=95,SNR=14
N02D S **S** **11 19 37.5 +1.5**
baz=95
O02D Mt. Diablo Mer 58.22 307 P **P** **11 11 34.6 -0.9**
baz=94,SNR=15
O02D S **S** **11 19 36.9 +0.9**
baz=94
PLCA Paso Flores 58.23 189 P **P** **11 11 35.6 +0.3**
comp=Z,34nm,0.8s,baz=4.5,slow=7.7,SNR=40
PLCA LR LR 11 38 23.1
comp=Z,2µm,20.5s,baz=4.5,slow=38
PLCA Paso Flores 58.23 189 P **P** **11 11 35.5 +0.2**
PLCA IAmb IAmb 11 11 54.5
comp=Z,57nm,0.9s
PLCA Paso Flores 58.23 189 *e*P **P** **11 11 36.0 +0.7**
PLCA *e*pP **pP** **11 11 39.8 -1.9**
H04A Detroit Lake 58.23 312 IAmb IAmb 11 11 55.0
comp=Z,108nm,1.2s
SCO Scoresbysund 58.28 14 *i* P **P** **11 11 34.2 -1.0**
SCO MLR MLR
comp=Z,2µm,17.0s
SCO Scoresbysund 58.28 14 IAmb IAmb 11 11 51.4
comp=Z,312nm,2.0s
SCO Scoresbysund 58.28 14 *i* P **P** **11 11 34.2 -1.0**
comp=Z,2µm,17.0s
I04A Tendick Farm, 58.28 311 P **P** **11 11 35.6 -0.2**
baz=97,SNR=6.2
I04A S **S** **11 19 38.9 +2.2**
baz=97
YBH Yreka Blue Hor 58.29 309 P **P** **11 11 35.9 0.0**
comp=Z,7.9nm,0.8s,baz=228,slow=15,SNR=4.4
YBH LR LR 11 37 47.9
comp=Z,4µm,20.6s,baz=102,slow=37
YBH Yreka Blue Hor 58.29 309 IAMs_20 IAMs_20 11 41 02.0
comp=Z,4µm,20.0s
BIGH Upper Bighouse 58.33 31 *e*P **P** **11 11 35.7 -0.1**
BIGH IAMs_20 IAMs_20 11 33 25.7
comp=Z,6µm,17.1s
B06A Marblemount 58.34 317 IAMs_20 IAMs_20 11 35 56.8
comp=Z,7µm,22.0s
MCD Coleburn Disti 58.35 32 *e*P **P** **11 11 34.8 -1.2**
HOPS Hopland Field 58.37 306 P **P** **11 11 37.5 +1.1**
HOPS IAmb IAmb 11 11 56.7
comp=Z,112nm,1.1s
M02C Callahan 58.37 308 P **P** **11 11 36.5 0.0**
baz=95,SNR=12
M02C S **S** **11 19 40.1 +2.1**
baz=95
D05A Enumclaw 58.46 315 IAmb IAmb 11 12 15.5
comp=Z,124nm,1.4s
D05A IAMs_20 IAMs_20 11 38 22.4
comp=Z,5µm,19.0s
DRUM Mains of Drumt 58.53 33 *e*P **P** **11 11 35.7 -1.5**
DRUM IAMs_20 IAMs_20 11 33 11.6
comp=Z,4µm,16.8s
MLA1 Latheron 58.54 31⇓*e*P **P** **11 11 36.5 -0.7**
F04A Amboy 58.56 314 IAmb IAmb 11 11 54.3
comp=Z,65nm,0.8s
F04A IAMs_20 IAMs_20 11 39 01.8
comp=Z,6µm,20.0s
HMNX Herstmonceux 58.57 40⇓*e*P **P** **11 11 37.5 -0.1**
HMNX IAmb IAmb 11 11 39.1
comp=Z,262nm,0.9s
HMNX IAMs_20 IAMs_20 11 32 01.0
comp=Z,15µm,19.3s
H04D Lebanon 58.60 312 P **P** **11 11 38.1 +0.2**
baz=97,SNR=9.3
H04D S **S** **11 19 43.6 +2.9**
baz=97
B05A Bryant 58.70 316 P **P** **11 11 37.0 -1.5**
baz=100,SNR=9.5
GDLE Glaisdale, N Y 58.72 36⇓*e*P **P** **11 11 37.9 -0.7**
GDLE IAmb IAmb 11 11 41.0
comp=Z,242nm,1.0s
GDLE IAMs_20 IAMs_20 11 35 20.3
comp=Z,6µm,18.1s
E04D Cinebar 58.75 314 P **P** **11 11 38.3 -0.6**
baz=98,SNR=6.3
LMK Market Rasen 58.76 37⇓*e*P **P** **11 11 38.5 -0.3**
LMK IAmb IAmb 11 11 41.4
comp=Z,201nm,1.1s
LMK IAMs_20 IAMs_20 11 32 30.1
comp=Z,13µm,18.2s
KCPM Cahto Peak 58.80 306 IAmb IAmb 11 11 59.5
comp=Z,52nm,0.9s
KCPM IAMs_20 IAMs_20 11 37 43.6
comp=Z,7µm,21.0s
YKA Yellowknife Ar 58.84 334 P **P** **11 11 38.4 -0.9**
comp=Z,22nm,0.7s,baz=107,slow=7.7,SNR=335
YKA LR LR 11 35 20.5
comp=Z,4µm,21.7s,baz=0.0,slow=34
YKA PKP2bc 11 41 23.6
comp=Z,2.1nm,0.9s,baz=314,slow=2.0,SNR=10
I03D Drain, OR 58.95 311 P **P** **11 11 40.3 0.0**
baz=96,SNR=5.7
I03D S **S** **11 19 47.3 +2.1**
baz=96
D04E Lakebay 58.98 315 P **P** **11 11 39.8 -0.7**
baz=98
KHMM Horse Mountain 58.99 308 IAMs_20 IAMs_20 11 37 47.6
comp=Z,5µm,22.0s
LLLB Lillooet 58.99 319 IAMs_20 IAMs_20 11 37 26.7
comp=Z,8µm,21.0s
F04D Rainier, OR 58.99 314 P **P** **11 11 39.2 -1.5**
baz=98
COR Corvallis 59.01 312 P **P** **11 11 41.0 +0.2**
COR pmax pmax
comp=Z,255nm,1.5s
COR MLR MLR
comp=Z,7µm,19.0s
COR Corvallis 59.01 312 P **P** **11 11 41.0 +0.2**
COR Corvallis 59.01 312 IAMs_20 IAMs_20 11 40 51.9
comp=Z,7µm,19.0s
G03D McMinnville, O 59.06 313 P **P** **11 11 41.4 +0.3**
baz=97,SNR=13
G03D S **S** **11 19 49.8 +3.3**
baz=97
K02D Willamette Mer 59.08 310 P **P** **11 11 40.5 -1.0**
baz=95,SNR=8.3
K02D S **S** **11 19 50.2 +3.1**
baz=95
ELSH Elham, Standar 59.12 40⇓*e*P **P** **11 11 40.7 -0.7**
ELSH IAmb IAmb 11 11 41.9
comp=Z,105nm,0.9s
ELSH IAMs_20 IAMs_20 11 32 29.3
comp=Z,14µm,19.6s
WACR West Acre 59.15 38⇓*e*P **P** **11 11 40.8 -0.8**
WACR IAmb IAmb 11 11 42.4
comp=Z,276nm,0.9s
WACR IAMs_20 IAMs_20 11 35 41.5
comp=Z,7µm,18.3s
KRMB Red Mountain 59.17 308 IAmb IAmb 11 12 04.9
comp=Z,81nm,1.5s
A04D Lummi Island 59.18 317 P **P** **11 11 41.2 -0.7**
baz=99
JCC Jacoby Creek, 59.21 308 IAMs_20 IAMs_20 11 41 38.4
comp=Z,4µm,19.0s
D03D Eldon 59.25 316 P **P** **11 11 41.1 -1.3**
baz=98,SNR=5.1
CLF Chambon-Foret 59.29 44 P **P** **11 11 42.5 -0.2**
CLF IAMs_20 IAMs_20 11 36 39.9
comp=Z,6µm,18.0s

J01E **Myrtle Point** **59.32 310** P **P** **11 11 43.3 +0.3**
baz=95,SNR=6.3
J01E S **S** **11 19 55.1 +5.1**
baz=95
I02D **Swisshome** **59.35 311** P **P** **11 11 43.2 +0.1**
baz=96
I02D S **S** **11 19 54.2 +3.9**
baz=96
F03A **Seaside** **59.35 314** IAMs_20 IAMs_20 11 39 37.7
comp=Z,6µm,20.0s
E03A **Lebam** **59.43 314** IAMs_20 IAMs_20 11 41 05.8
comp=Z,7µm,20.0s
PGC **Sidney** **59.66 317** IAmb IAmb 11 12 03.0
comp=Z,187nm,1.7s
PGC IAMs_20 IAMs_20 11 38 40.4
comp=Z,5µm,20.0s
NLWA **Neilton Lookou** **59.75 315** IAMs_20 IAMs_20 11 42 29.1
comp=Z,6µm,19.0s
TOA0 **Torodi Ar. Sit** **59.87 84** P **P** **11 11 45.4 -1.8**
TOA0 IAmb IAmb 11 11 46.5
comp=Z,100nm,0.8s
TORD **Torodi Ar. Bea** **59.87 84** P **P** **11 11 45.0 -2.2**
comp=Z,98nm,0.8s,baz=293,slow=6.3,SNR=457
TORD LR LR 11 34 31.3
comp=Z,13µm,19.9s,baz=280,slow=33
TORD PKP2ab 11 41 30.7
comp=Z,2.0nm,1.1s,baz=81,slow=1.9,SNR=6.1
LL01 **San Ignacio de** **60.13 190** P **P** **11 11 48.6 +0.3**
LL01 IAmb IAmb 11 12 15.2
comp=Z,94nm,0.9s
LL01 IAMs_20 IAMs_20 11 42 23.9
comp=Z,5µm,22.0s
SSB **Saint Sauveur** **60.52 47** P **P** **11 11 51.2 0.0**
SSB pmax pmax
comp=Z,118nm,0.9s
SSB **Saint Sauveur** **60.52 47** P **P** **11 11 51.2 0.0**
SSB IAmb IAmb 11 11 52.8
comp=Z,118nm,0.9s
RES **Resolute Bay** **60.66 350** P **P** **11 11 51.5 -0.1**
comp=Z,15nm,0.6s,baz=150,slow=7.7,SNR=5.4
RES LR LR 11 38 44.9
comp=Z,3µm,18.3s,baz=139,slow=37
RES **Resolute Bay** **60.66 350** P **P** **11 11 51.5 -0.1**
RES pmax pmax
comp=Z,195nm,1.7s
RES MLR MLR
comp=Z,6µm,18.0s
RES **Resolute Bay** **60.66 350** IAmb IAmb 11 12 09.6
comp=Z,195nm,1.6s
RES IAMs_20 IAMs_20 11 40 21.2
comp=Z,6µm,18.0s
SET **Setif** **60.77 58** P **P** **11 11 54.0 +0.8**
TAM **Tamanrasset** **61.81 73** P **P** **11 12 00.3 -0.2**
TAM pmax pmax
comp=Z,31nm,0.9s
TAM **Tamanrasset** **61.81 73** P **P** **11 12 00.3 -0.2**
WLF **Walferdange** **62.06 42** *e*P **P** **11 12 01.2 -0.3**
comp=Z,488nm,1.9s,baz=266,slow=6.5
WLF *e*S **S** **11 20 25.1 +0.2**
baz=268,slow=12
SENIN **Lac Senin/Sane** **62.53 46** IAmb IAmb 11 12 26.4
comp=Z,102nm,1.2s
ECH **Echery** **62.58 44** IAMs_20 IAMs_20 11 35 25.7
comp=Z,5µm,19.0s
AHRW **Bad Neuenahr-A** **62.75 42** *e*P **P** **11 12 06.2 +0.1**
comp=Z,495nm,1.5s,baz=266,slow=6.5
AHRW *e*S **S** **11 20 35.3 +1.8**
baz=268,slow=12
BUG **Bochum--Univer** **62.97 41** *e*P **P** **11 12 07.0 -0.5**
comp=Z,561nm,1.9s,baz=266,slow=6.5
BUG *e*S **S** **11 20 37.6 +1.5**
baz=268,slow=12
SHEL **Horse Pasture** **63.06 118** IAMs_20 IAMs_20 11 33 44.1
comp=Z,4µm,22.0s
KMY **Karmoy** **63.10 32** *e*P **P** **11 12 07.8 -0.5**
SUE **Sulen** **63.28 30** *e*P **P** **11 12 09.9 +0.6**
ASK **Askoy** **63.35 30** *e*P **P** **11 12 10.3 +0.4**
BFO **Black Forest** **63.36 44** *e*P **P** **11 12 09.6 -0.8**
comp=Z,311nm,2.1s,baz=266,slow=6.5
BFO *e*pP **pwP** **11 12 24.1 +1.1**
BFO *e*S **S** **11 20 41.2 -0.1**
baz=268,slow=12
BFO **Black Forest** **63.36 44** P **P** **11 12 09.5 -0.8**
BFO pmax pmax
comp=Z,214nm,1.8s
BFO **Black Forest** **63.36 44** P **P** **11 12 09.5 -0.8**
BFO IAMs_20 IAMs_20 11 36 05.5
comp=Z,5µm,19.0s
IBBN **Ibbenburen** **63.37 40** *e*P **P** **11 12 09.8 -0.3**
comp=Z,712nm,1.7s,baz=266,slow=6.5
BER **Bergen** **63.40 30** *e*P **P** **11 12 10.4 +0.3**
DAG **Danmarks Havn** **63.42 10** *i* P **P** **11 12 09.8 -0.3**
DAG pmax pmax
comp=Z,45nm,0.9s
DAG MLR MLR
comp=Z,6µm,20.0s
DAG **Danmarks Havn** **63.42 10** *i* P **P** **11 12 09.8 -0.3**
comp=Z,45nm,0.9s
comp=Z,6µm,20.0s
TNS **Taunus Mts** **63.59 42** *e*P **P** **11 12 11.4 -0.4**
comp=Z,317nm,1.5s,baz=266,slow=6.5
HLG **Helgoland** **63.67 38** *e*P **P** **11 12 11.8 -0.4**
comp=Z,359nm,1.4s,baz=266,slow=6.5
HLG *e*S **S** **11 20 45.1 +0.2**
baz=268,slow=12
BLS5 **Blasjo** **63.75 32** *e*P **P** **11 12 12.9 +0.3**
ODD1 **Odda** **63.93 31** *e*P **P** **11 12 15.0 +1.2**
SNART **Snartemo** **63.93 33** *e*P **P** **11 12 13.9 +0.1**
TUE **Stuetta** **63.95 46** IAmb IAmb 11 12 25.1
comp=Z,75nm,0.9s
HYA **Hoyanger** **63.98 30** *e*P **P** **11 12 14.4 +0.4**
KEST **Kesra** **63.98 58** P **P** **11 12 14.7 0.0**
comp=Z,229nm,0.8s,baz=171,slow=2.0,SNR=119
KEST LR LR 11 37 11.6
comp=Z,3µm,19.3s,baz=236,slow=33
KEST **Kesra** **63.98 58** P **P** **11 12 14.7 0.0**
KEST IAMs_20 IAMs_20 11 40 08.8
comp=Z,4µm,19.0s
MSSA **Maissana** **64.00 49** IAmb IAmb 11 12 40.0
comp=Z,68nm,0.9s
DAVOX **Davos/Dischmat** **64.33 46** P **P** **11 12 16.8 -0.1**
comp=Z,92nm,0.7s,baz=250,slow=6.1,SNR=86
DAVOX LR LR 11 35 38.2
comp=Z,5µm,19.8s,baz=273,slow=32
DAVA **Damuels** **64.35 45** *e*pP **P** **11 12 16.8 -0.2**
comp=Z,217nm,0.9s,SNR=78
RETH **Rethem/Aller,** **64.39 39** *e*P **P** **11 12 16.8 -0.1**
comp=Z,359nm,1.5s,baz=266,slow=6.5
UBR **Ueberruh** **64.52 45** *e*P **P** **11 12 17.4 -0.5**
comp=Z,94nm,1.3s,baz=266,slow=6.5
UBR *e*S **S** **11 20 59.4 +3.6**
baz=268,slow=12
AKN **Aaknes** **64.57 29** *e*P **P** **11 12 18.4 +0.5**
HOMB **Homborsund** **64.60 33** *e*P **P** **11 12 18.0 -0.1**
UBBA **Unterbreizbach** **64.63 41** *e*P **P** **11 12 18.1 -0.3**
comp=Z,221nm,1.6s,baz=266,slow=6.5
SKMB **Sankelmark Bun** **64.64 37** *e*P **P** **11 12 18.5 +0.1**
comp=Z,1µm,1.7s,baz=266,slow=6.5
RPN **Rapa Nui** **64.65 228** LR LR 11 37 40.2
comp=Z,1µm,21.8s,baz=43,slow=33
GTTG **Gottingen** **64.66 41** *e*P **P** **11 12 18.3 -0.4**
comp=Z,346nm,1.7s,baz=266,slow=6.5
GTTG *e*S **S** **11 20 57.9 +0.7**
baz=268,slow=12
MUD **Monsted U'grnd** **64.70 35** *i* P **P** **11 12 18.9 +0.1**
MUD MLR MLR
comp=Z,8µm,19.0s
MUD **Monsted U'grnd** **64.70 35** *i* P **P** **11 12 18.9 +0.1**
comp=Z,8µm,19.0s
GOET **G??ttrup** **64.80 34** *i* P **P** **11 12 19.3 -0.2**
comp=Z,137nm,0.9s
GOET *i* 11 12 33.4
NRDL **Niedersach Rie** **64.82 40** *e*P **P** **11 12 19.6 0.0**
comp=Z,421nm,1.6s,baz=266,slow=6.5
NRDL *e*pP **pwP** **11 12 33.5 +1.2**
NRDL *e*S **S** **11 20 59.9 +0.9**
baz=268,slow=12
SKAR **Skarslia** **64.89 30** *e*P **P** **11 12 20.6 +0.5**
MOL **Molde** **64.90 28** *e*P **P** **11 12 20.5 +0.5**
FETA **Feichten** **64.92 46** *e*P **P** **11 12 20.2 -0.4**
comp=Z,338nm,0.9s,SNR=200
CLZ **Clausthal** **64.93 40** *e*P **P** **11 12 20.1 -0.5**
comp=Z,274nm,1.5s,baz=266,slow=6.5
CLZ *e*S **S** **11 21 01.6 +0.9**
baz=268,slow=12
RETA **Reutte** **64.95 45** *e*P **P** **11 12 20.4 -0.4**
comp=Z,164nm,1.0s,SNR=68

CASP **Castiglione de** **64.97 50** IAMs_20 IAMs_20 11 35 47.9
comp=Z,6µm,20.0s
DLBC **Dease Lake** **65.00 327** P **P** **11 12 22.3 +1.4**
baz=86,slow=4.9
DLBC LR LR 11 40 19.7
comp=Z,7µm,21.3s,baz=94,slow=36
DLBC **Dease Lake** **65.00 327** IAmb IAmb 11 12 41.2
comp=Z,82nm,0.8s
C36M **Paulatuk** **65.01 339** P **P** **11 12 19.3 -1.3**
baz=109,SNR=6.0
C36M S **S** **11 20 55.8 -5.1**
baz=109
C36M **Paulatuk** **65.01 339** IAmb IAmb 11 12 36.4
comp=Z,79nm,1.4s
C36M IAMs_20 IAMs_20 11 45 36.5
comp=Z,3µm,20.0s
ZCCA **Zocca** **65.05 49** IAmb IAmb 11 12 25.6
comp=Z,85nm,0.9s
BSEG **Bad Segeberg** **65.07 38** *e*P **P** **11 12 20.8 -0.5**
comp=Z,231nm,1.3s,baz=266,slow=6.5
BSEG *e*pP **pwP** **11 12 35.2 +1.1**
BSEG *e*S **S** **11 21 01.9 -0.2**
baz=268,slow=12
ASSE **Asse, Remlinge** **65.14 40** *e*P **P** **11 12 21.7 0.0**
comp=Z,747nm,1.8s,baz=266,slow=6.5
ASSE *e*S **S** **11 21 03.4 +0.5**
baz=268,slow=12
MOTA **Moosalm** **65.18 45** *e*P **P** **11 12 21.7 -0.7**
comp=Z,186nm,1.0s,SNR=56
OSSC **Osservatorio P** **65.24 49** IAmb IAmb 11 12 25.8
comp=Z,84nm,0.8s
SQTA **Sankt Quirin** **65.25 45** *e*P **P** **11 12 22.1 -0.7**
comp=Z,259nm,0.9s,SNR=82
FUR **Furstenfeldbru** **65.32 44** *e*P **P** **11 12 22.5 -0.6**
comp=Z,515nm,2.0s,baz=266,slow=6.5
FUR *e*S **S** **11 21 06.6 +1.0**
baz=268,slow=12
GRF **Grafenberg Arr** **65.34 43** *e*P **P** **11 12 22.6 -0.6**
comp=Z,286nm,1.4s,baz=266,slow=6.5
GRF *e*pP **pwP** **11 12 36.8 +0.8**
GRF *e*S **S** **11 21 06.8 +1.0**
baz=268,slow=12
GRF *e*PKPPKP 11 41 14.0
baz=104,slow=2.1
KONO **Kongsberg** **65.37 32** *de*P **P** **11 12 22.9 -0.2**
KONO pmax pmax
comp=Z,107nm,1.7s
KONO **Kongsberg** **65.37 32** P **P** **11 12 22.8 -0.4**
KONO **Kongsberg** **65.37 32** IAMs_20 IAMs_20 11 37 46.8
comp=Z,4µm,20.0s
KONO **Kongsberg** **65.37 32** *e*P **P** **11 12 23.2 +0.1**
DOMB **Dombas** **65.50 29** *e*P **P** **11 12 24.4 +0.4**
WATA **Walderalm** **65.50 45** *i* P **P** **11 12 23.7 -0.7**
comp=Z,105nm,0.9s,SNR=43
CTI **Castel Tesino** **65.53 47** P **P** **11 12 24.0 -0.6**
CTI pmax pmax
comp=Z,207nm,1.0s
CTI **Castel Tesino** **65.53 47** P **P** **11 12 24.0 -0.6**
CTI IAMs_20 IAMs_20 11 35 18.1
comp=Z,6µm,20.0s
WTTA **Wattenberg** **65.54 45** *i* P **P** **11 12 24.0 -0.8**
comp=Z,134nm,0.9s,SNR=57
MOX **Moxa** **65.64 42** *e*P **P** **11 12 24.5 -0.6**
comp=Z,168nm,1.8s,baz=266,slow=6.5
MOX *e*pP **pwP** **11 12 38.9 +1.0**
MOX *e*S **S** **11 21 11.6 +2.3**
baz=268,slow=12
NEUB **Neuenburg** **65.77 41** *e*P **P** **11 12 25.4 -0.5**
comp=Z,742nm,2.0s,baz=266,slow=6.5
NEUB *e*S **S** **11 21 12.0 +1.2**
baz=268,slow=12
MANZ **Manzenberg** **65.93 42** *e*P **P** **11 12 26.6 -0.4**
comp=Z,358nm,1.4s,baz=266,slow=6.5
MANZ *e*S **S** **11 21 13.3 +0.3**
baz=268,slow=12
PLN **Plauen** **65.98 42** *e*P **P** **11 12 26.6 -0.7**
comp=Z,268nm,1.8s,baz=266,slow=6.5
PLN *e*S **S** **11 21 14.5 +1.1**
baz=268,slow=12
ROTZ **Rotzenmuhle** **65.99 43** *e*P **P** **11 12 26.9 -0.4**
comp=Z,298nm,1.7s,baz=266,slow=6.5
ROTZ *e*pP **pwP** **11 12 41.2 +1.1**
ROTZ *e*S **S** **11 21 13.4 -0.1**
baz=268,slow=12
WRAK **Wrangell Islan** **66.01 325** P **P** **11 12 27.8 +0.5**
GUNZ **Gunzen** **66.09 42** *e*P **P** **11 12 27.4 -0.6**
comp=Z,176nm,1.7s,baz=266,slow=6.5
WERN **Weitzgruen** **66.11 42** *e*P **P** **11 12 27.8 -0.4**
comp=Z,311nm,1.8s,baz=266,slow=6.5
ABTA **Abfaltersbach** **66.14 46** *e*P **P** **11 12 27.3 -1.2**
comp=Z,170nm,0.9s,SNR=68
NKC **Novy Kostel** **66.16 42** *e*P **P** **11 12 28.7 +0.2**
NKC *e* 11 12 42.8
NKC MLR MLR
comp=Z,7µm,17.5s
NKC **Novy Kostel** **66.16 42** *e*P **P** **11 12 28.7 +0.2**
NKC *ex* x 11 12 42.8
NKC AMS AMS 11 41 00.0
comp=Z,7µm,17.5s
TANN **Tannenbergstha** **66.17 42** *e*P **P** **11 12 28.0 -0.6**
comp=Z,509nm,1.6s,baz=266,slow=6.5
TANN *e*pP **pwP** **11 12 42.7 +1.4**
TANN *e*S **S** **11 21 17.3 +1.4**
baz=268,slow=12
NAO01 **NORSAR Array S** **66.17 30** *e*P **P** **11 12 28.6 +0.3**
MURB **Monte Urbino** **66.17 50** IAMs_20 IAMs_20 11 41 20.3
comp=Z,4µm,19.0s
A36M **Sachs Harbour** **66.24 342** P **P** **11 12 27.1 -1.5**
baz=109
A36M S **S** **11 21 12.2 -3.6**
baz=109
TBLU **Trondheim** **66.25 28** *e*P **P** **11 12 29.9 +1.1**
RJOB **Jochberg** **66.33 45** *e*P **P** **11 12 28.8 -0.9**
comp=Z,45nm,0.9s,baz=266,slow=6.5
NB2 **NORSAR Subarra** **66.36 30** P **P** **11 12 29.4 -0.2**
comp=Z,306nm,1.4s,baz=261,slow=6.9
NB2 **NORSAR Subarra** **66.36 30** P **P** **11 12 29.4 -0.2**
baz=261,slow=6.9
NOA **NORSAR Array B** **66.36 30** P **P** **11 12 29.6 0.0**
comp=Z,32nm,0.9s,baz=262,slow=6.4,SNR=110
NOA LR LR 11 35 48.1
comp=Z,4µm,21.9s,baz=260,slow=31
CRAG **Craig** **66.37 324** IAmb IAmb 11 12 49.5
comp=Z,56nm,1.2s
WET **Wettzell** **66.41 43** *e*P **P** **11 12 29.3 -0.8**
comp=Z,237nm,1.4s,baz=266,slow=6.5
WET *e*S **S** **11 21 19.8 +1.0**
baz=268,slow=12
CLL **Collm** **66.54 41** ||*i*P **P** **11 12 31.3 +0.4**
comp=Z,154nm,1.0s
CLL *e*Pmax 11 12 32.0
CLL *i* P(2) 11 12 33.7
comp=Z,160nm,1.1s
CLL *i* 11 12 45.0
comp=Z,267nm,1.4s
CLL *e* 11 20 24.0
CLL *e*S **S** **11 21 23.0 +2.8**
CLL *e*SS SS 11 25 18.0 -19
CLL *e*SSS SSS 11 28 54.0
CLL Lm MLR 11 36 00.0
comp=N,2µm,19.5s
CLL Lm MLR 11 36 00.0
comp=E,4µm,20.1s
CLL Lm MLR 11 36 00.0
comp=Z,6µm,20.0s
CLL Lmax 11 38 00.0
CLL **Collm** **66.54 41** *e*P **P** **11 12 31.2 +0.4**
comp=Z,267nm,1.4s,baz=266,slow=6.5
CLL *e*S **S** **11 21 21.4 +1.2**
baz=268,slow=12
CLL **Collm** **66.54 41** ||*i*P **P** **11 12 31.3 +0.4**
CLL *i* *PP **pwP** **11 12 45.0 +1.4**
CLL *e*S **S** **11 21 23.0 +2.8**
CLL pmax pmax
comp=Z,154nm,1.0s
CLL MLR MLR
comp=Z,6µm,20.0s
CLL **Collm** **66.54 41** IAMs_20 IAMs_20 11 36 51.5
comp=Z,6µm,20.0s
NRCA **Norcia** **66.62 50** P **P** **11 12 30.1 -1.5**
NRCA IAmb IAmb 11 12 33.7
comp=Z,96nm,1.1s
KBA **Koelnbreinsper** **66.71 46** *e*P **P** **11 12 31.2 -1.0**
comp=Z,115nm,0.9s,SNR=45
FBE **Freiberg** **66.75 41** *e*P **P** **11 12 31.9 -0.3**
comp=Z,322nm,1.5s,baz=266,slow=6.5
AQU **L'Aquila** **66.85 51** ||*i*P **P** **11 12 32.5 -0.6**

AQU **L'Aquila** **66.85 51** IAMs_20 IAMs_20 11 38 29.2
comp=Z,6µm,20.0s
KHC **Kasperske Hory** **66.87 43** *d*||P **P** **11 12 32.4 -0.6**
KHC pmax pmax
comp=Z,216nm,1.7s
KHC MLR MLR
comp=Z,8µm,17.0s
KHC **Kasperske Hory** **66.87 43** *e*P **P** **11 12 32.5 -0.6**
KHC *ex* x 11 12 41.7
KHC *ex* x 11 12 46.3
KHC *e*S **S** **11 21 21.5 -2.9**
KHC AMS AMS 11 41 30.0
comp=Z,4µm,17.0s
KHC **Kasperske Hory** **66.87 43** P **P** **11 12 32.1 -0.9**
KHC IAmb IAmb 11 12 48.8
comp=Z,130nm,1.8s
RGN **Rugen** **66.88 37** *e*P **P** **11 12 32.1 -0.8**
RGN **Rugen** **66.88 37** *e*P **P** **11 12 32.7 -0.2**
comp=Z,660nm,2.0s,baz=266,slow=6.5
MYKA **Terra Mystica** **66.91 46** *i* P **P** **11 12 32.3 -1.1**
comp=Z,70nm,1.0s,SNR=31
GEC2 **GERESS Array S** **66.95 44** *e*P **P** **11 12 32.7 -0.9**
comp=Z,232nm,1.5s,baz=266,slow=6.5
GEC2 *e*pP **pwP** **11 12 46.9 +0.5**
GEC2 *e*S **S** **11 21 25.7 +0.2**
baz=268,slow=12
GEC2 **GERESS Array S** **66.95 44** P **P** **11 12 32.8 -0.9**
GEC2 IAmb IAmb 11 12 34.1
comp=Z,99nm,1.0s
GEC2 IAMs_20 IAMs_20 11 40 09.3
comp=Z,3µm,19.0s
GERES **GERESS Array B** **66.95 44** P **P** **11 12 32.5 -1.1**
comp=Z,58nm,0.9s,baz=261,slow=5.0,SNR=134
GERES LR LR 11 38 28.1
comp=Z,1µm,18.2s,baz=261,slow=33
CLTB **Caltabellotta** **66.97 56** P **P** **11 12 33.5 -0.5**
CLTB IAmb IAmb 11 12 49.0
comp=Z,76nm,1.2s
CADS **Cadrg** **66.98 47** *i* P **P** **11 12 33.1 -0.8**
TRI **Trieste** **67.01 47** IAMs_20 IAMs_20 11 43 20.2
comp=Z,4µm,18.0s
CORL **Corleone** **67.02 56** IAmb IAmb 11 12 51.4
comp=Z,109nm,1.0s
RUE **Ruedersdorf** **67.06 40** *e*P **P** **11 12 33.8 -0.3**
RUE **Ruedersdorf** **67.06 40** *e*P **P** **11 12 33.5 -0.6**
comp=Z,451nm,1.9s,baz=266,slow=6.5
RUE *e*S **S** **11 21 25.7 -0.7**
baz=268,slow=12
NOR **Nord** **67.08 6** *i* P **P** **11 12 33.1 -0.7**
NOR **Nord** **67.08 6** *i* P **P** **11 12 33.1 -0.7**
VOJS **Vojsko** **67.09 47** *i* P **P** **11 12 34.0 -0.6**
VOJS *e*S **S** **11 21 29.4 +2.2**
BRG **Berggiesshubel** **67.13 41** *i* P **P** **11 12 34.2 -0.4**
comp=Z,138nm,0.9s
BRG *i* 11 12 48.3
comp=Z,210nm,1.3s
BRG S **S** **11 21 26.0 -1.3**
comp=N,3µm,18.5s
comp=E,3µm,18.9s
comp=Z,4µm,18.6s
BRG **Berggiesshubel** **67.13 41** *e*P **P** **11 12 34.0 -0.6**
comp=Z,211nm,1.4s,baz=266,slow=6.5
BRG *e*S **S** **11 21 27.2 -0.1**
baz=268,slow=12
BRG **Berggiesshubel** **67.13 41** *i* P **P** **11 12 34.2 -0.4**
BRG *i* 11 12 48.3
BRG S **S** **11 21 26.0 -1.3**
BRG pmax pmax
comp=Z,138nm,0.9s
BRG pmax pmax
comp=Z,210nm,1.3s
BRG MLR MLR
comp=N,3µm,18.5s
BRG MLR MLR
comp=E,3µm,18.9s
BRG MLR MLR
comp=Z,4µm,18.6s
PBCC **Pribram** **67.14 43** *e*P **P** **11 12 34.9 +0.1**
PBCC *ex* x 11 12 49.8
SKDS **Skadanscina** **67.19 47** *e*P **P** **11 12 33.8 -1.4**
SKDS *e*S **S** **11 21 30.9 +2.5**
NSS **Namsos** **67.19 27** *e*P **P** **11 12 35.0 +0.3**
INTR **Introdacqua** **67.24 51** IAmb IAmb 11 12 37.0
comp=Z,77nm,1.0s
JIS **Juneau Island** **67.27 327** IAmb IAmb 11 12 55.2
comp=Z,65nm,1.2s
MOA **Molln** **67.33 45** *e*P **P** **11 12 34.9 -1.0**
comp=Z,48nm,0.8s,SNR=16
CRNS **Crni Vrh** **67.35 47** *i* P **P** **11 12 35.4 -0.8**
CRNS *e* 11 12 49.5
HFS **Hagfors** **67.47 31** P **P** **11 12 36.0 -0.6**
comp=Z,34nm,0.7s,baz=251,slow=4.4,SNR=6.4
HFS LR LR 11 37 50.5
comp=Z,3µm,20.2s,baz=260,slow=32
CEY **Cerknica** **67.47 47** ||*i*P **P** **11 12 36.3 -0.7**
PRU **Pruhonice** **67.50 42** *e*P **P** **11 12 37.2 +0.2**
PRU *e* 11 12 46.0
PRU *e* 11 12 52.3
PRU *e*S **S** **11 21 34.1 +2.3**
PRU MLR MLR
comp=Z,6µm,17.7s
PRU **Pruhonice** **67.50 42** *e*P **P** **11 12 37.2 +0.2**
PRU *ex* x 11 12 46.0
PRU *ex* x 11 12 52.3
PRU *e*S **S** **11 21 34.1 +2.3**
PRU AMS AMS 11 39 10.0
comp=Z,6µm,17.7s
RIY **Rijeka** **67.53 47** ||*i*P **P** **11 12 36.3 -0.9**
LJU **Ljubljana** **67.54 47** *i* P **P** **11 12 37.1 -0.2**
LJU *e* 11 12 51.0
LJU **Ljubljana** **67.54 47** ||*i*P **P** **11 12 36.8 -0.5**
BESE **Bessie Mountai** **67.54 327** IAmb IAmb 11 12 56.5
comp=Z,57nm,1.0s
OBKA **Obir** **67.54 46** *i* P **P** **11 12 36.5 -1.0**
comp=Z,208nm,0.8s,SNR=64
GOPC **GO Pecny, Ondr** **67.66 43** *e*P **P** **11 12 38.1 +0.1**
GOPC *e* 11 12 53.0
GOPC *e*S **S** **11 21 30.3 -3.5**
GOPC MLR MLR
comp=Z,6µm,18.1s
GOPC **GO Pecny, Ondr** **67.66 43** *e*P **P** **11 12 38.1 +0.1**
GOPC *ex* x 11 12 53.0
GOPC *e*S **S** **11 21 30.3 -3.5**
GOPC AMS AMS 11 39 10.0
comp=Z,6µm,18.1s
SIT **Sitka** **67.69 325** IAmb IAmb 11 12 58.1
comp=Z,62nm,1.0s
WHY **Whitehorse** **67.72 329** IAmb IAmb 11 12 57.0
comp=Z,162nm,1.8s
WHY IAMs_20 IAMs_20 11 45 21.7
comp=Z,5µm,19.0s
PAOL **Paolisi** **67.79 52** IAMs_20 IAMs_20 11 38 02.1
comp=Z,5µm,19.0s
BSD **Bornholm Skovb** **67.82 37** ||*i*P **P** **11 12 38.0 -0.9**
BSD pmax pmax
comp=Z,47nm,1.0s
BSD MLR MLR
comp=Z,7µm,17.0s
BSD **Bornholm Skovb** **67.82 37** ||*i*P **P** **11 12 38.0 -0.9**
comp=Z,47nm,1.0s
comp=Z,7µm,17.0s
NVLJ **Novalja** **67.83 48** *i* P **P** **11 12 38.3 -0.8**
SKAG **Skagway** **67.85 328** IAmb IAmb 11 12 58.3
comp=Z,50nm,1.2s
SOKA **Soboth** **67.87 46** *i* P **P** **11 12 38.0 -1.5**
comp=Z,76nm,0.9s,SNR=56
VAE **Valguarnera** **67.93 56** P **P** **11 12 40.6 +0.6**
comp=Z,48nm,0.9s,baz=78,slow=14,SNR=8.3
DUGI **Dugi Otok** **67.99 49** *i* P **P** **11 12 39.2 -1.0**
INK **Inuvik** **68.08 337** LR LR 11 40 31.5
comp=Z,2µm,21.9s,baz=90,slow=34
INK **Inuvik** **68.08 337** IAMs_20 IAMs_20 11 46 24.8
comp=Z,6µm,20.0s
TREC **Trest** **68.12 43** *e*P **P** **11 12 40.6 -0.3**
TREC *e* 11 12 54.2
TREC MLR MLR
comp=Z,3µm,17.2s
TREC **Trest** **68.12 43** *e*P **P** **11 12 40.6 -0.3**
TREC *ex* x 11 12 54.2
TREC AMS AMS 11 40 40.0
comp=Z,3µm,17.2s
WDD **Wied Dalam** **68.17 58** IAMs_20 IAMs_20 11 38 39.7
comp=Z,5µm,20.0s
ARSA **Arzberg** **68.19 45** *e*P **P** **11 12 40.2 -1.2**
comp=Z,87nm,0.9s,SNR=39
CRES **Cresnjev** **68.19 47** ||*i*P **P** **11 12 40.8 -0.6**

CONA	**Conrad Observa**	68.40	45	*i* P		**P**	**11 12 41.9**	**-0.9**
	comp=Z,57nm,1.0s,SNR=50							
EFI	**East Falkland**	68.43	178	P		**P**	**11 12 43.9**	**+1.4**
EFI				pmax		pmax		
	comp=Z,81nm,0.8s							
EFI				MLR		MLR		
	comp=Z,3µm,22.0s							
EFI	**East Falkland**	68.43	178	P		**P**	**11 12 43.9**	**+1.4**
EFI				IAmb		IAmb	11 12 45.1	
	comp=Z,81nm,0.8s							
EFI	**East Falkland**	68.43	178	IAMs_20		IAMs_20	11 46 30.4	
	comp=Z,3µm,22.0s							
ZIRJ	**Zirje**	68.43	49	*i* P		**P**	**11 12 41.8**	**-1.1**
MOR8	**Moi Rana**	68.44	25	*e*P		**P**	**11 12 43.6**	**+1.0**
UPC	**Upice**	68.44	42	*e*P		**P**	**11 12 42.7**	**-0.2**
UPC				*e*			11 12 56.3	
UPC				*e*S		**S**	**11 21 35.0**	**-8.1**
UPC				MLR		MLR		
	comp=Z,8µm,17.7s							
UPC	**Upice**	68.44	42	*e*P		**P**	**11 12 42.7**	**-0.2**
UPC				*ex*		x	11 12 56.3	
UPC				*e*S		**S**	**11 21 35.0**	**-8.1**
UPC				AMS		AMS	11 39 40.0	
	comp=Z,8µm,17.7s							
MORI	**Morici**	68.46	49	*i* P		**P**	**11 12 41.8**	**-1.3**
PTJ	**Puntijarka**	68.55	47	P		**P**	**11 12 43.4**	**-0.4**
OSTC	**Ostas**	68.57	42	*e*P		**P**	**11 12 43.6**	**-0.1**
OSTC				*ex*		x	11 12 57.2	
OSTC				AMS		AMS	11 39 50.0	
	comp=Z,8µm,18.0s							
KSP	**Ksiaz**	68.61	41	*e*pP		**pP**	**11 12 57.4**	**+6.9**
KSP				*e*S		**S**	**11 21 45.5**	**+0.4**
KSP				LMZ		LR	11 37 28.5	
	comp=Z,5.6nm,20.7s							
KSP	**Ksiaz**	68.61	41	*e*pP		**pP**	**11 12 57.4**	**+6.9**
KSP				*e*S		**S**	**11 21 45.5**	**+0.4**
KSP				LMZ		LR	11 37 28.5	
	comp=Z,5.6nm,20.7s							
DPC	**Dobruska-Polom**	68.64	42	*e*P		**P**	**11 12 44.0**	**-0.2**
DPC				*e*			11 12 57.5	
DPC				*e*S		**S**	**11 21 36.9**	**-8.7**
DPC				MLR		MLR		
	comp=Z,7µm,18.1s							
DPC	**Dobruska-Polom**	68.64	42	*e*P		**P**	**11 12 44.0**	**-0.2**
DPC				*ex*		x	11 12 57.5	
DPC				*e*S		**S**	**11 21 36.9**	**-8.7**
DPC				AMS		AMS	11 40 00.0	
	comp=Z,7µm,18.1s							
KRUC	**Moravsky**	68.72	43	⇓*i* P		**P**	**11 12 43.7**	**-1.0**
KRUC				*e*			11 12 58.3	
KRUC				*e*S		**S**	**11 21 46.1**	**-0.3**
GO09	**Cerro Castillo**	68.80	188	IAMs_20		IAMs_20	11 46 57.2	
	comp=Z,4µm,20.0s							
VRAC	**Vranov**	68.84	43	P		**P**	**11 12 44.8**	**-0.7**
	comp=Z,74nm,0.8s,baz=271,slow=6.9,SNR=78							
VRAC	**Vranov**	68.84	43	⇓*i* P		**P**	**11 12 44.8**	**-0.7**
VRAC				*e*			11 12 59.2	
VRAC				*e*S		**S**	**11 21 47.4**	**-0.5**
VRAC	**Vranov**	68.84	43	⇑*i* P		**P**	**11 12 44.8**	**-0.7**
KALN	**Kalnik**	68.88	47	*i* P		**P**	**11 12 45.4**	**-0.3**
KRLC	**Kraliky**	68.94	42	*e*P		**P**	**11 12 42.1**	**-4.0**
KRLC				*e*			11 12 55.9	
KRLC				MLR		MLR		
	comp=Z,5µm,17.6s							
KRLC	**Kraliky**	68.94	42	*e*P		**P**	**11 12 42.1**	**-4.0**
KRLC				*ex*		x	11 12 55.9	
KRLC				AMS		AMS	11 42 40.0	
	comp=Z,5µm,17.6s							
KIJV	**Kijevo**	68.96	49	*i* P		**P**	**11 12 46.0**	**-0.3**
STEI	**Steigen**	68.96	23	*e*P		**P**	**11 12 46.0**	**+0.2**
HYT	**Haines Junctio**	69.01	329	IAMs_20		IAMs_20	11 47 44.0	
	comp=Z,5µm,19.0s							
CEL	**Celeste**	69.03	55	IAMs_20		IAMs_20	11 43 00.2	
	comp=Z,3µm,19.0s							
EPYK	**Eagle Plains**	69.06	335	P		**P**	**11 12 45.7**	**-0.8**
	baz=96							
EPYK				S		**S**	**11 21 47.3**	**-2.7**
	baz=96							
EPYK	**Eagle Plains**	69.06	335	IAMs_20		IAMs_20	11 45 45.8	
	comp=Z,5µm,18.0s							
GKP	**Gorka Klasztor**	69.17	39	*e*P		**P**	**11 12 47.5**	**+0.1**
GKP				*e*pP		**pwP**	**11 13 00.9**	**+0.9**
GKP				LMZ		LR	11 38 37.3	
	comp=Z,12nm,20.0s							
GKP	**Gorka Klasztor**	69.17	39	*e*P		**P**	**11 12 47.5**	**+0.1**
GKP				*e*pP		**pwP**	**11 13 00.9**	**+0.9**
GKP				LMZ		LR	11 38 37.3	
	comp=Z,12nm,20.0s							
ZST	**Bratislava**	69.22	44	*e*P		**P**	**11 12 46.6**	**-1.2**
ZST				pmax		pmax		
	comp=Z,106nm,1.2s							
ZST	**Bratislava**	69.22	44	*e*P		**P**	**11 12 46.6**	**-1.2**
DHAK	**Deception Hill**	69.31	327	P		**P**	**11 12 48.4**	**+0.2**
DHAK				IAmb		IAmb	11 13 08.5	
	comp=Z,124nm,1.4s							
MODS	**Modra-Piesok**	69.33	44	*e*P		**P**	**11 12 47.2**	**-1.3**
MODS				pmax		pmax		
	comp=Z,140nm,1.0s							
MODS	**Modra-Piesok**	69.33	44	*e*P		**P**	**11 12 47.2**	**-1.3**
MGRS	**Mrkonjic Grad**	69.42	48	⇑*i* P		**P**	**11 12 49.4**	**+0.3**
SMOL	**Smolenice**	69.42	44	*e*P		**P**	**11 12 49.3**	**+0.2**
SMOL				pmax		pmax		
	comp=Z,26nm,0.9s							
SMOL	**Smolenice**	69.42	44	*e*P		**P**	**11 12 49.3**	**+0.2**
MATE	**Matera**	69.43	52	⇓P		**P**	**11 12 48.8**	**-0.5**
MORC	**Moravsky Berou**	69.44	43	⇓*i* P		**P**	**11 12 48.7**	**-0.5**
MORC				*e*			11 13 03.1	
MORC				*e*S		**S**	**11 21 56.1**	**+1.0**
MORC	**Moravsky Berou**	69.44	43	⇓P		**P**	**11 12 48.8**	**-0.5**
MORC	**Moravsky Berou**	69.44	43	IAMs_20		IAMs_20	11 41 57.4	
	comp=Z,4µm,18.0s							
MAKA	**Makarska**	69.45	50	*i* P		**P**	**11 12 48.6**	**-0.7**
BLY	**Banja Luka**	69.47	48	⇓*i* P		**P**	**11 12 48.6**	**-0.8**
RICI	**Ricice**	69.52	49	P		**P**	**11 12 49.0**	**-0.7**
JAVC	**Velka Javorina**	69.57	44	⇓*i* P		**P**	**11 12 50.2**	**+0.2**
JAVC				*e*			11 13 04.7	
JAVC				*e*S		**S**	**11 21 57.6**	**+1.0**
TIP	**Timpagrande**	69.61	54	IAmb		IAmb	11 13 04.6	
	comp=Z,44nm,0.8s							
OKC	**Ostrava-Krasne**	69.83	43	*e*P		**P**	**11 12 51.6**	**+0.1**
OKC				*e*			11 13 07.0	
OKC				*e*S		S	11 21 49.0	-11
OKC				MLR		MLR		
	comp=Z,3µm,17.0s							
OKC	**Ostrava-Krasne**	69.83	43	*e*P		**P**	**11 12 51.6**	**+0.1**
OKC				*ex*		x	11 13 07.0	
OKC				*e*S		S	11 21 49.0	-11
OKC				AMS		AMS	11 43 40.0	
	comp=Z,3µm,17.0s							
STON	**Ston**	69.98	50	⇓*i* P		**P**	**11 12 51.6**	**-0.9**
STON	**Ston**	69.98	50	*i* P		**P**	**11 12 51.6**	**-0.9**
KBS	**Kingsbay**	70.03	11	*de*P		**P**	**11 12 53.2**	**+1.0**
KBS				pmax		pmax		
	comp=Z,59nm,1.3s							
KBS	**Kingsbay**	70.03	11	P		**P**	**11 12 52.9**	**+0.6**
KBS	**Kingsbay**	70.03	11	IAMs_20		IAMs_20	11 43 34.3	
	comp=Z,3µm,20.0s							
KBS	**Kingsbay**	70.03	11	*e*P		**P**	**11 12 53.5**	**+1.2**
DBRK	**Dubrovnik**	70.33	50	*i* P		**P**	**11 12 54.1**	**-0.6**
VYHS	**Vyhne**	70.36	44	*e*P		**P**	**11 12 54.5**	**-0.3**
VYHS				pmax		pmax		
	comp=Z,75nm,1.0s							
VYHS	**Vyhne**	70.36	44	*e*P		**P**	**11 12 54.5**	**-0.3**
HSPB	**Hornsund (broa**	70.37	13	*e*P		**P**	**11 12 58.0**	**+3.6**
HSPB				*e*pP		**pwP**	**11 13 09.1**	**+1.9**
HSPB				*e*S		**S**	**11 22 08.2**	**+3.3**
HSPB	**Hornsund (broa**	70.37	13	*e*P		**P**	**11 12 58.0**	**+3.6**
HSPB				*e*pP		**pwP**	**11 13 09.1**	**+1.9**
HSPB				*e*S		**S**	**11 22 08.2**	**+3.3**
HSPB	**Hornsund (broa**	70.37	13	*e*P		**P**	**11 12 54.5**	**+0.1**
MORH	**Mrgy, Hungar**	70.39	46	⇓*i* P		**P**	**11 12 54.3**	**-0.7**
TRO	**Tromso**	70.45	21	*e*P		**P**	**11 12 55.1**	**+0.2**
TREB	**Trebinje**	70.47	50	*e*P		**P**	**11 12 55.0**	**-0.6**
GO10	**Punta Arenas**	70.49	187	P		**P**	**11 12 56.6**	**+1.3**
BRY	**Bratogost**	70.59	50	*e*P		**P**	**11 12 56.3**	**-0.2**
BRY	**Bratogost**	70.59	50	⇓*i* P		**P**	**11 12 56.4**	**-0.1**
HCY	**Herceg Novi**	70.61	50	*e*P		**P**	**11 12 56.1**	**-0.3**
HCY	**Herceg Novi**	70.61	50	⇓*i* P		**P**	**11 12 56.4**	**0.0**
LANS	**Liptovska Anna**	70.73	43	*e*P		**P**	**11 12 58.4**	**+1.3**
LANS				pmax		pmax		
	comp=Z,34nm,1.2s							
LANS	**Liptovska Anna**	70.73	43	*e*P		**P**	**11 12 58.4**	**+1.3**
SPA0	**Spitsbergen Ar**	70.74	12	*e*P		**P**	**11 12 57.2**	**+0.6**
SPITS	**Spitsbergen Ar**	70.74	12	LR		LR	11 38 35.4	
	comp=Z,1µm,21.4s,baz=240,slow=31							
HAPS	**Han Pijesak,Bl**	70.78	49	*e*P		**P**	**11 12 56.5**	**-1.1**
SCTE	**Santa Cesarea**	70.83	53	IAmb		IAmb	11 12 59.4	
	comp=Z,96nm,0.8s							
UPM	**Unac-Piva**	70.83	50	*e*P		**P**	**11 12 58.3**	**+0.2**
UPM	**Unac-Piva**	70.83	50	⇑*i* P		**P**	**11 12 58.2**	**+0.2**
OJC	**Ojcow**	70.88	42	*e*P		**P**	**11 12 57.7**	**-0.3**
OJC				*e*pP		**pwP**	**11 13 11.6**	**+0.9**
OJC				*e*S		**S**	**11 22 11.8**	**+0.1**
OJC				LMZ		LR	11 42 50.8	
	comp=Z,7.5nm,18.0s							
OJC	**Ojcow**	70.88	42	*e*P		**P**	**11 12 57.7**	**-0.3**
OJC				*e*pP		**pwP**	**11 13 11.6**	**+0.9**
OJC				*e*S		**S**	**11 22 11.8**	**+0.1**
OJC				LMZ		LR	11 42 50.8	
	comp=Z,7.5nm,18.0s							
KLNR	**Kaliningrad**	70.89	37	*de*P		**P**	**11 12 57.8**	**0.0**
KLNR				pmax		pmax		
	comp=Z,221nm,1.3s							
KLNR				MLR		MLR		
	comp=Z,4µm,17.0s							
CTGM	**Chitina Glacie**	70.89	329	IAMs_20		IAMs_20	11 46 56.6	
	comp=Z,5µm,20.0s							
CEME	**Cevo**	70.91	50	⇓*i* P		**P**	**11 12 57.3**	**-1.0**
NKME	**Niksic**	70.91	50	⇓*i* P		**P**	**11 12 58.4**	**+0.1**
BUM	**Brajici-Budva**	70.91	50	⇓*i* P		**P**	**11 12 58.4**	**0.0**
NKY	**Niksic**	70.94	50	⇓*i* P		**P**	**11 12 58.7**	**+0.1**
PSZ	**Piszkesteto**	71.11	44	⇓P		**P**	**11 12 59.2**	**-0.2**
PSZ	**Piszkesteto**	71.11	44	IAMs_20		IAMs_20	11 41 14.4	
	comp=Z,5µm,20.0s							
RUDO	**Rudo**	71.13	49	*e*P		**P**	**11 12 58.9**	**-0.7**
BBLS	**Lazići**	71.13	49	⇓*i* P		**P**	**11 12 59.2**	**-0.5**
DRME	**Dracevica, Mon**	71.14	51	⇓*i* P		**P**	**11 12 59.6**	**-0.1**
DRME	**Dracevica, Mon**	71.14	51	⇓*i* P		**P**	**11 12 59.3**	**-0.4**
PDG	**Podgorica**	71.17	50	⇓P		**P**	**11 12 59.9**	**+0.1**
PDG	**Podgorica**	71.17	50	⇓*i* P		**P**	**11 12 59.6**	**-0.2**
PDG	**Podgorica**	71.17	50	IAMs_20		IAMs_20	11 41 41.5	
	comp=Z,4µm,19.0s							
TTG	**Podgorica**	71.17	50	⇓*i* P		**P**	**11 12 59.8**	**0.0**
PLE	**Pljevlja**	71.17	49	⇓*i* P		**P**	**11 12 59.9**	**-0.1**
ULC	**Ulcinj**	71.21	51	⇓*i* P		**P**	**11 13 00.6**	**+0.5**
NIE	**Niedzica**	71.26	43	*e*P		**P**	**11 13 01.2**	**+0.9**
NIE				*e*pP		**pwP**	**11 13 15.0**	**+2.0**
NIE				*e*S		**S**	**11 22 17.9**	**+1.7**
NIE				LMZ		LR	11 41 42.4	
	comp=Z,1.5nm,19.2s							
NIE	**Niedzica**	71.26	43	*e*P		**P**	**11 13 01.2**	**+0.9**
NIE				*e*pP		**pwP**	**11 13 15.0**	**+2.0**
NIE				*e*S		**S**	**11 22 17.9**	**+1.7**
NIE				LMZ		LR	11 41 42.4	
	comp=Z,1.5nm,19.2s							
FRGS	**Fruska Gora**	71.29	47	⇓*i* P		**P**	**11 13 00.1**	**-0.5**
KOME	**Kolasin**	71.31	50	⇓*i* P		**P**	**11 13 01.1**	**+0.3**
BALM	**Baldy**	71.38	329	IAmb		IAmb	11 13 20.6	
	comp=Z,92nm,1.2s							
BEL	**Belsk**	71.39	40	*e*P		**P**	**11 13 01.2**	**+0.3**
BEL				*e*pP		**pwP**	**11 13 15.2**	**+1.5**
BEL				LMZ		LR	11 41 03.4	
	comp=Z,6.1nm,19.7s							
BEL	**Belsk**	71.39	40	*e*P		**P**	**11 13 01.2**	**+0.3**
BEL				*e*pP		**pwP**	**11 13 15.2**	**+1.5**
BEL				LMZ		LR	11 41 03.4	
	comp=Z,6.1nm,19.7s							
KECS	**Kecovo**	71.45	44	*e*P		**P**	**11 13 02.1**	**+0.6**
KECS				pmax		pmax		
	comp=Z,36nm,1.0s							
KECS	**Kecovo**	71.45	44	*e*P		**P**	**11 13 02.1**	**+0.6**
DIVS	**Divibare**	71.53	48	⇓*i* P		**P**	**11 13 01.8**	**-0.3**
IVA	**Berane**	71.59	50	⇓*i* P		**P**	**11 13 02.8**	**+0.3**
PVY	**Plav**	71.67	50	⇓*i* P		**P**	**11 13 03.4**	**+0.4**
MCARA	**McCarthy VSAT**	71.70	330	IAMs_20		IAMs_20	11 45 06.9	
	comp=Z,4µm,20.0s							
TIR	**Tirane**	71.74	51	⇓P		**P**	**11 13 03.7**	**+0.4**
TIR	**Tirane**	71.74	51	IAMs_20		IAMs_20	11 42 09.7	
	comp=Z,4µm,19.0s							
KEK	**Kerkira**	71.89	53	P		**P**	**11 13 04.7**	**+0.4**
SLIT	**Slitere, Latvi**	71.90	34	*e*P		**P**	**11 13 03.2**	**-0.7**
MG01	**Puerto William**	71.93	184	P		**P**	**11 13 05.0**	**+1.1**
MG01				IAMs_20		IAMs_20	11 45 38.0	
	comp=Z,4µm,22.0s							
KTK1	**Kautokeino**	71.97	22	*e*P		**P**	**11 13 04.3**	**+0.2**
SCRK	**Sand Creek**	72.05	333	IAmb		IAmb	11 13 23.6	
	comp=Z,181nm,1.6s							
GLB	**Gilahina Butte**	72.07	330	IAmb		IAmb	11 13 23.6	
	comp=Z,144nm,1.4s							
GLB				IAMs_20		IAMs_20	11 47 45.8	
	comp=Z,5µm,19.0s							
DOT	**Dot Lake**	72.10	332	IAmb		IAmb	11 13 21.7	
	comp=Z,244nm,1.9s							
HAMF	**Hammerfest**	72.11	20	*e*P		**P**	**11 13 05.3**	**+0.4**
PHP	**Peshkopia**	72.13	51	P		**P**	**11 13 06.6**	**+0.9**
RIDG	**Independent Ri**	72.44	332	IAmb		IAmb	11 13 35.0	
	comp=Z,105nm,1.4s							
SIRR	**Siria**	72.47	46	⇑P		**P**	**11 13 07.1**	**-0.5**
OHR	**Ohrid**	72.47	52	*i* P		**P**	**11 13 08.7**	**+0.9**
OHR	**Ohrid**	72.47	52	*i* P		**P**	**11 13 08.7**	**+0.9**
HOPEN	**Hopen**	72.50	14	*e*P		**P**	**11 13 08.0**	**+0.9**
BZS	**Buzias**	72.51	47	⇓P		**P**	**11 13 07.5**	**-0.3**
KOLS	**Kolonicke sedl**	72.59	43	*e*P		**P**	**11 13 08.8**	**+0.5**
KOLS				pmax		pmax		
	comp=Z,26nm,1.0s							
KOLS	**Kolonicke sedl**	72.59	43	*e*P		**P**	**11 13 08.8**	**+0.5**
UZH	**Uzhgorod**	72.64	44	⇑*i* P		**P**	**11 13 06.9**	**-1.6**
UZH				*e*			11 13 17.7	
UZH				*i*			11 13 20.3	
UZH				*i* S		**S**	**11 22 27.0**	**-5.0**
UZH				*i* PS		**PnS**	**11 22 57.2**	**-7.4**
UZH				*e*PS			11 23 18.7	
PRP	**Porcupine Dome**	72.65	334	IAmb		IAmb	11 13 27.5	
	comp=Z,158nm,1.2s							
PRP				IAMs_20		IAMs_20	11 50 58.6	
	comp=Z,5µm,20.0s							
SUW	**Suwalki**	72.66	38	*e*P		**P**	**11 13 08.2**	**-0.4**
SUW				*e*pP		**pwP**	**11 13 21.9**	**+0.5**
SUW				*e*S		**S**	**11 22 31.9**	**-0.1**
SUW				LMZ		LR	11 41 02.6	
	comp=Z,3.9nm,20.5s							
SUW	**Suwalki**	72.66	38	*e*P		**P**	**11 13 08.2**	**-0.4**
SUW				*e*pP		**pwP**	**11 13 21.9**	**+0.5**
SUW				*e*S		**S**	**11 22 31.9**	**-0.1**
SUW				LMZ		LR	11 41 02.6	
	comp=Z,3.9nm,20.5s							
SUW	**Suwalki**	72.66	38	P		**P**	**11 13 07.9**	**-0.6**
SUW				pmax		pmax		
	comp=Z,560nm,1.6s							
SUW				MLR		MLR		
	comp=Z,5µm,19.0s							
SUW	**Suwalki**	72.66	38	P		**P**	**11 13 07.9**	**-0.6**
LKD2	**Lefkada island**	72.68	54	P		**P**	**11 13 09.2**	**+0.2**
MDVR	**Moldovita**	72.68	48	⇑P		**P**	**11 13 08.5**	**-0.4**
EVGI	**Lefkada island**	72.70	54	P		**P**	**11 13 09.4**	**+0.3**
VLS	**Valsamata**	72.71	55	P		**P**	**11 13 09.0**	**-0.2**
ARCES	**ARCESS Array B**	72.76	22	P		**P**	**11 13 08.8**	**0.0**
	comp=Z,55nm,0.8s,baz=275,slow=5.6,SNR=111							
ARCES				LR		LR	11 41 25.8	
	comp=Z,1µm,18.9s,baz=264,slow=33							
ARE0	**ARCESS Array S**	72.76	22	P		**P**	**11 13 08.8**	**-0.1**
ARE0	**ARCESS Array S**	72.76	22	*e*P		**P**	**11 13 09.0**	**+0.1**
PAX	**Paxson**	72.77	332	IAmb		IAmb	11 13 28.4	
	comp=Z,85nm,1.1s							
TRPA	**Tarpa**	72.85	44	⇓P		**P**	**11 13 09.6**	**-0.2**
KFL	**Anninata**	72.87	55	P		**P**	**11 13 10.2**	**0.0**
FNA	**Florina**	72.95	52	P		**P**	**11 13 10.8**	**+0.2**
FNA	**Florina**	72.95	52	*e*P		**P**	**11 13 10.8**	**+0.2**
FNA	**Florina**	72.95	52	IAMs_20		IAMs_20	11 45 14.8	
	comp=Z,3µm,19.0s							
PABE	**Paberze**	72.98	36	*e*P		**P**	**11 13 10.5**	**+0.1**
KPRO	**Kipourio**	73.05	53	P		**P**	**11 13 11.9**	**+0.6**
EYAK	**Cordova Ski Ar**	73.07	329	IAmb		IAmb	11 13 30.8	
	comp=Z,75nm,1.1s							
HERR	**Herculane**	73.16	47	⇑P		**P**	**11 13 11.6**	**-0.1**
IL31		73.27	333	P		**P**	**11 13 11.6**	**-0.3**
ILAR	**Eielson Array**	73.27	333	P		**P**	**11 13 11.4**	**-0.6**
	comp=Z,25nm,0.9s,baz=96,slow=5.2,SNR=73							
ILAR				LR		LR	11 48 56.3	
	comp=Z,2µm,18.4s,baz=100,slow=39							
KEV	**Kevo**	73.27	21	P		**P**	**11 13 11.6**	**-0.3**
KEV				pmax		pmax		
	comp=Z,585nm,2.0s							
KEV	**Kevo**	73.27	21	P		**P**	**11 13 11.6**	**-0.3**
KZN	**Kozani**	73.31	52	P		**P**	**11 13 13.1**	**+0.3**
HDA	**Harding Lake**	73.32	333	P		**P**	**11 13 11.4**	**-0.9**
	baz=86,SNR=23							
HDA				S		**S**	**11 22 36.0**	**-3.3**
	baz=86							
HDA				S		**S**	**11 22 36.0**	**-3.3**
	baz=86							
HDA	**Harding Lake**	73.32	333	IAmb		IAmb	11 13 28.0	
	comp=Z,235nm,2.0s							
GZR	**Gura Zlata**	73.35	47	⇑P		**P**	**11 13 12.7**	**-0.2**
DEV	**Deva**	73.37	46	⇓P		**P**	**11 13 13.6**	**+0.6**
FID	**Port Fidalgo**	73.41	329	IAmb		IAmb	11 13 32.5	
	comp=Z,91nm,0.8s							
STIP	**Stip**	73.42	51	*i* P		**P**	**11 13 14.2**	**+0.9**
STIP	**Stip**	73.42	51	*i* P		**P**	**11 13 14.2**	**+0.9**
MID	**Middleton Isla**	73.47	328	IAMs_20		IAMs_20	11 49 52.8	
	comp=Z,4µm,18.0s							
POKR	**Poker Plat Res**	73.47	334	P		**P**	**11 13 13.3**	**+0.1**
	baz=85,SNR=17							
POKR				S		**S**	**11 22 38.6**	**-2.4**
	baz=85							
FINES	**FINESS Array B**	73.54	30	P		**P**	**11 13 13.0**	**-0.6**
	comp=Z,49nm,0.5s,baz=270,slow=3.8,SNR=154							
FINES				LR		LR	11 41 50.0	
	comp=Z,4µm,19.7s,baz=276,slow=33							
FIA1	**FINESS Array S**	73.54	30	P		**P**	**11 13 13.2**	**-0.4**
EVR	**Evrytania**	73.55	54	P		**P**	**11 13 15.4**	**+1.2**
BMR	**Baia Mare**	73.55	44	⇑P		**P**	**11 13 13.9**	**0.0**
THL	**Klokotos Trika**	73.61	53	P		**P**	**11 13 14.6**	**+0.2**
DRO	**Drossia**	73.62	55	P		**P**	**11 13 15.4**	**+0.8**
DHY	**Denali Highway**	73.62	332	IAmb		IAmb	11 13 32.7	
	comp=Z,189nm,1.9s							
DHY				IAMs_20		IAMs_20	11 51 55.7	
	comp=Z,4µm,20.0s							
LVV	**L'vov**	73.63	42	*c i* P		**P**	**11 13 14.3**	**-0.1**
LVV				*e*S		**SKiKP**	**11 22 42.6**	**-0.3**
LVV				pmax		pmax		
	comp=Z,220nm,1.6s							
COLA	**College**	73.67	334	*d i* P		**P**	**11 13 14.5**	**+0.2**
COLA				pmax		pmax		
	comp=Z,94nm,1.4s							
COLA				MLR		MLR		
	comp=Z,4µm,21.0s							
COLA	**College**	73.67	334	P		**P**	**11 13 13.9**	**-0.4**
COLA	**College**	73.67	334	IAMs_20		IAMs_20	11 50 41.9	
	comp=Z,5µm,22.0s							
CCB	**Clear Creek Bu**	73.67	333	IAmb		IAmb	11 13 32.2	
	comp=Z,45nm,0.8s							
TCOL	**CIGO, UAF Yank**	73.67	334	P		**P**	**11 13 14.2**	**-0.2**
	baz=85,SNR=23							
TCOL				S		**SKiKP**	**11 22 39.9**	**-2.6**
	baz=85							
AMT	**Artemida-Makis**	73.68	55	P		**P**	**11 13 15.2**	**+0.2**
ANX	**Ano Chora**	73.68	54	P		**P**	**11 13 16.3**	**+1.3**
EFP	**Efpalio**	73.70	54	P		**P**	**11 13 15.7**	**+0.7**
GLI	**Glacier Island**	73.70	329	IAmb		IAmb	11 13 32.2	
	comp=Z,59nm,0.7s							
GLI				IAMs_20		IAMs_20	11 46 19.9	
	comp=Z,5µm,21.0s							
SCM	**Sheep Creek Mo**	73.72	330	IAMs_20		IAMs_20	11 48 12.4	
	comp=Z,4µm,20.0s							
CJR	**Cluj-Napoca**	73.74	45	⇓P		**P**	**11 13 14.9**	**-0.3**
VAY	**Valandovo**	73.76	51	*i* P		**P**	**11 13 15.5**	**+0.2**
VAY	**Valandovo**	73.76	51	*i* P		**P**	**11 13 15.5**	**+0.2**
MAKR	**Makrakomi, Fth**	73.78	54	P		**P**	**11 13 15.6**	**+0.1**
LAKA	**Lakka**	73.78	54	P		**P**	**11 13 16.6**	**+1.1**
PYL	**PYLOS**	73.81	56	P		**P**	**11 13 15.7**	**0.0**
SERG	**Sergoula**	73.81	54	P		**P**	**11 13 16.7**	**+1.0**
MDM	**Murphy Dome**	73.82	334	IAmb		IAmb	11 13 34.1	
	comp=Z,103nm,0.9s							
TRIZ	**Trizonia**	73.83	54	P		**P**	**11 13 16.5**	**+0.7**
KALE	**Kalithea**	73.88	54	P		**P**	**11 13 15.6**	**-0.6**
LIT	**Litokhoron**	73.89	52	P		**P**	**11 13 15.6**	**-0.5**
LIT	**Litokhoron**	73.89	52	IAmb		IAmb	11 13 20.8	
	comp=Z,71nm,0.9s							
LIT				IAMs_20		IAMs_20

NACGM eLR LR 11 41 48.0
NACGM LRM MLR 11 43 08.0
comp=Z,26nm,18.0s
BUR08 Bucovina Ar. S 74.69 44 P **P 11 13 21.2 +0.4**
BURAR Bucovina Array 74.71 44 ⇓P **P 11 13 20.8 0.0**
NVR Nevrokopi 74.72 51 P **P 11 13 21.3 +0.3**
PGB Panagyurishte 74.75 50 P **P 11 13 20.9 -0.3**
SKIA Skiathos 74.78 53 P **P 11 13 21.1 -0.2**
VLI Veliai 74.78 56 P **P 11 13 21.8 +0.4**
PAIG Paliouri 74.82 52 P **P 11 13 21.2 -0.3**
VILL Villia 74.83 54 P **P 11 13 21.5 -0.2**
KRND KRANIDI 74.84 55 P **P 11 13 20.9 -0.8**
MLY Manley 74.87 334 IAMs_20 IAMs_20 11 50 06.6
comp=Z,4µm,20.0s
DID Didima 74.89 55 P **P 11 13 21.2 -0.8**
TRF Thorofare Moun 74.89 332 IAmb IAmb 11 13 38.2
comp=Z,122nm,0.8s
VOIR 74.92 47 ⇑P **P 11 13 21.6 -0.5**
PLVB Pleven 74.95 49 ⇑P **P 11 13 21.8 -0.4**
MRKA Markates 74.95 54 P **P 11 13 21.9 -0.4**
SEW Seward 74.95 329 IAmb IAmb 11 13 40.9
comp=Z,71nm,1.1s
RC01 Rabbit Creek A 74.96 330 IAmb IAmb 11 13 41.3
comp=Z,103nm,1.2s
OUR Ouranopolis 74.98 52 P **P 11 13 22.9 +0.5**
OUR Ouranopolis 74.98 52 *e*P **P 11 13 22.7 +0.3**
HUMR Humele 75.02 48 ⇓P **P 11 13 23.0 +0.4**
DOPR Dopca 75.08 46 ⇑P **P 11 13 22.6 -0.3**
AOS Alonnisos 75.10 53 *e*P **P 11 13 23.6 +0.5**
BPAW Bear Paw Mtn. 75.11 333 IAmb IAmb 11 13 41.5
comp=Z,156nm,1.3s
PLD Plovdiv 75.22 50 P **P 11 13 23.8 0.0**
PLD Plovdiv 75.22 50 *e*P **P 11 13 23.7 0.0**
COPA Copaceanca 75.25 48 ⇓P **P 11 13 23.6 -0.3**
VLY Voula,Athens 75.26 55 P **P 11 13 24.0 -0.1**
KAVA Kavala 75.26 51 P **P 11 13 24.1 +0.1**
RZN Rozhen 75.30 50 P **P 11 13 24.4 -0.1**
DION Dionisos Attik 75.33 54 P **P 11 13 24.7 +0.2**
MICGM Minsk 75.34 37 ⇓*e*P **P 11 13 24.0 -0.2**
MICGM PM 11 13 25.0
comp=Z,0.6nm,1.0s
MICGM *e*PcP **PcP 11 13 38.0 +0.6**
MICGM *e*PP **PP 11 16 10.0 -2.8**
MICGM *e*PPP PPP 11 18 12.0
MICGM *e*S **S 11 23 04.0 +1.8**
MICGM *e*PS **PnS 11 23 47.0 +7.4**
MICGM *e*SS **SS 11 27 50.0 -2.0**
MICGM *e*SSS SSS 11 31 05.0
MICGM *e*LR LR 11 37 12.0
MICGM LRM MLR 11 43 00.0
comp=E,10nm,19.0s
MICGM LRM MLR 11 43 03.0
comp=Z,22nm,20.0s
MNK Minsk 75.34 37 ⇓*e*P **P 11 13 24.0 -0.2**
MNK *e* 11 13 38.0
MNK *e* 11 16 10.0
MNK *e*S **S 11 23 04.0 +1.8**
MNK *e*PS **PnS 11 23 47.0 +7.4**
MNK *e*SS **SS 11 27 50.0 -2.0**
MNK *e*SSS SSS 11 31 05.0
MNK pmax pmax
comp=Z,550nm,1.0s
KYMI Kymi, Euboea I 75.36 54 P **P 11 13 24.3 -0.4**
BIZ Bicaz 75.41 45 ⇑P **P 11 13 25.3 +0.5**
PRAR RASCA 75.42 45 ⇓P **P 11 13 24.9 0.0**
THAS Thassos island 75.48 52 P **P 11 13 25.4 +0.1**
PVL Pavlikeni 75.49 49 P **P 11 13 24.4 -0.9**
MLR Muntele Rosu 75.54 46 P **P 11 13 25.4 -0.3**
comp=Z,153nm,0.8s,baz=288,slow=4.3,SNR=165
MLR LR LR 11 43 42.1
comp=Z,3µm,19.1s,baz=282,slow=33
MLR Muntele Rosu 75.54 46 ⇓P **P 11 13 25.7 -0.1**
SECR 75.70 47 ⇑P **P 11 13 26.2 -0.3**
BRLK Bradley Lake 75.72 329 IAmb IAmb 11 13 45.6
comp=Z,84nm,1.1s
KARY Karystos 75.73 54 P **P 11 13 26.8 0.0**
SGRR Singureni 75.77 48 ⇓P **P 11 13 26.4 -0.5**
KDZ Kurdzhali 75.82 50 P **P 11 13 26.4 -0.8**
KDZ Kurdzhali 75.82 50 *e*P **P 11 13 26.5 -0.8**
PUL Pulkovo 75.83 31 ⇓*e*P **P 11 13 27.5 +0.6**
PUL pmax pmax
comp=Z,100nm,0.4s
PUL MLR MLR
comp=Z,4µm,17.0s
DIM Dimitrovgrad 75.83 50 P **P 11 13 27.9 +0.6**
IMMV Iera Moni Meta 75.84 57 P **P 11 13 27.9 +0.4**
IMMV Iera Moni Meta 75.84 57 *e*P **P 11 13 28.1 +0.6**
TESR Tescani 75.85 45 ⇓P **P 11 13 26.9 -0.4**
APA Apatity 75.86 23 ⇓*i*P **P 11 13 26.0 -0.9**
APA *i* 11 13 39.0
APA pmax pmax
comp=Z,42nm,0.8s
APA MLR MLR
comp=Z,3µm,17.0s
SULR 75.89 47 ⇑P **P 11 13 26.9 -0.7**
SZH Strazhica 75.91 49 P **P 11 13 27.7 0.0**
SERI Serifos 75.93 55 P **P 11 13 26.7 -1.3**
ELND Elena 75.93 49 ⇓P **P 11 13 27.8 -0.1**
CNPM China Poot 75.93 328 P **P 11 13 27.3 -0.2**
CNPM IAmb IAmb 11 13 46.4
comp=Z,99nm,1.1s
CNPM IAMs_20 IAMs_20 11 51 32.9
comp=Z,4µm,19.0s
MHLO Agia Marina, M 75.95 56 P **P 11 13 27.7 -0.4**
LIA Limnos Island 75.96 52 P **P 11 13 28.5 +0.5**
PLOR Plostina 75.96 46 ⇑P **P 11 13 27.1 -1.0**
RDO Rodhopi 76.00 51 P **P 11 13 28.3 +0.1**
RDO Rodhopi 76.00 51 *e*P **P 11 13 28.1 -0.1**
VRI Vrincioaia 76.02 46 ⇓P **P 11 13 27.4 -0.9**
VRI Vrincioaia 76.02 46 *e*P **P 11 13 28.2 -0.1**
VAM Vamos 76.03 57 P **P 11 13 28.9 +0.3**
GVD Gavdhos 76.05 58 P **P 11 13 28.6 -0.1**
GVD Gavdhos 76.05 58 *e*P **P 11 13 28.9 +0.2**
BISRR Bisoca 76.06 46 ⇑P **P 11 13 28.7 +0.1**
HOM Homer 76.11 328 IAMs_20 IAMs_20 11 51 47.8
comp=Z,4µm,19.0s
LVZ Lovozero 76.27 23 P **P 11 13 29.2 -0.1**
LVZ pmax pmax
comp=Z,90nm,1.1s
LVZ MLR MLR
comp=Z,2µm,18.0s
LVZ Lovozero 76.27 23 P **P 11 13 29.2 -0.1**
LVZ IAmb IAmb 11 13 45.4
comp=Z,90nm,1.1s
LVZ IAMs_20 IAMs_20 11 49 47.5
comp=Z,2µm,18.0s
RAZG Razgrad 76.27 48 ⇓P **P 11 13 29.7 0.0**
GRER 76.27 46 ⇑P **P 11 13 30.0 +0.3**
ALN Alexandroupoli 76.42 51 P **P 11 13 30.5 -0.2**
ALN Alexandroupoli 76.42 51 *e*P **P 11 13 30.7 0.0**
ALN Alexandroupoli 76.42 51 IAmb IAmb 11 13 31.7
comp=Z,60nm,0.8s
ALN IAMs_20 IAMs_20 11 43 57.7
comp=Z,2µm,20.0s
GADA Gvkgeada 76.44 52 P **P 11 13 30.6 -0.2**
GADA Gvkgeada 76.44 52 *e*P **P 11 13 30.3 -0.5**
GHRR 76.45 46 ⇑P **P 11 13 31.4 +0.7**
JMB Yambol 76.53 49 P **P 11 13 31.1 -0.1**
SIGR SIGRI 76.60 53 P **P 11 13 32.0 +0.3**
SIGR SIGRI 76.60 53 *e*P **P 11 13 32.0 +0.3**
IDI Anoyia 76.61 57 P **P 11 13 32.4 +0.5**
IDI Anoyia 76.61 57 *e*P **P 11 13 32.0 +0.2**
comp=Z,297nm,0.8s,baz=299,slow=6.1,SNR=85
IDI Anoyia 76.61 57 ⇓P **P 11 13 32.1 +0.2**
IDI Anoyia 76.61 57 *e*P **P 11 13 32.3 +0.4**
IOSP Ios island 76.64 55 P **P 11 13 31.0 -1.0**
SORM Soroca 76.70 43 ⇓P **P 11 13 31.0 -1.1**
EDRB Edirne 76.76 50 P **P 11 13 32.0 -0.6**
EDRB Edirne 76.76 50 *e*P **P 11 13 32.4 -0.2**
APE Apeiranthos 76.76 55 ⇓P **P 11 13 32.0 -0.7**
APE Apeiranthos 76.76 55 *e*P **P 11 13 30.7 -2.0**
AKASG Malin Array Be 76.79 41 P **P 11 13 31.5 -1.0**
comp=Z,28nm,0.7s,baz=268,slow=4.8,SNR=62
AKASG LR LR 11 44 18.9
comp=Z,7µm,19.6s,baz=285,slow=33
AKBB Malin Array Si 76.79 41 *d*iP **P 11 13 31.7 -0.8**
AKBB Malin Array Si 76.79 41 IAmb IAmb 11 13 48.0
comp=Z,180nm,1.6s
ERIK Erikli-Kesan 76.81 51 *e*P **P 11 13 33.8 +0.9**
UKOP Uzunkopru-Edir 76.81 51 *e*P **P 11 13 33.8 +0.9**
EZN Ezine 76.84 52 *e*P **P 11 13 32.8 -0.2**
GELI Tayfur-Gelibol 76.84 52 *e*P **P 11 13 32.8 -0.2**

SCHL Schela 76.84 46 ⇓P **P 11 13 31.9 -1.0**
SANT Santorini 76.84 56 ⇓P **P 11 13 32.3 -0.9**
NEF NEVSHA 76.88 49 P **P 11 13 33.1 -0.1**
CHOS Chios island 76.91 54 P **P 11 13 33.8 +0.2**
CHOS Chios island 76.91 54 *e*P **P 11 13 33.9 +0.3**
KDAK Kodiak Island 76.94 327 *e*P **P 11 13 35.9 +2.7**
PRD Provadia 76.98 49 P **P 11 13 33.9 +0.2**
LPK Lapseki 77.06 52 *e*P **P 11 13 34.5 +0.2**
HARR Harsova 77.07 47 ⇑P **P 11 13 33.5 -0.7**
ICOR Ion Corvin 77.09 48 ⇑P **P 11 13 34.0 -0.4**
AMGA Amorgos Island 77.10 55 P **P 11 13 33.8 -0.8**
ANAF Anafi Island 77.10 56 P **P 11 13 34.1 -0.5**
LAST Lasithi 77.10 57 P **P 11 13 34.4 -0.3**
CFR Carcaliu 77.11 46 ⇓P **P 11 13 32.6 -1.9**
TLBR Topalu 77.18 47 ⇓P **P 11 13 34.6 -0.2**
KIS Kishinev 77.23 45 ⇑*i*P **P 11 13 36.0 +0.9**
comp=Z,180nm,1.2s
KIS Kishinev 77.23 45 *i* PcP **PcP 11 13 49.0 +3.3**
KIS *e*S **S 11 23 20.0 -3.2**
KIS *e*ScS **ScS 11 23 50.0 -1.2**
KIS Kishinev 77.23 45 *e*PS PnS 11 24 28.0 +24
KIS LRM MLR 11 46 24.0
comp=Z,2µm,18.0s
KIS Kishinev 77.23 45 ⇑*i*P **P 11 13 36.0 +0.9**
KIS *i* 11 13 49.0
KIS *e*S **S 11 23 20.0 -3.2**
KIS *e* 11 23 50.0
KIS *e*PS PnS 11 24 28.0 +24
KIS pmax pmax
comp=Z,180nm,1.2s
MILM Milestii Mici 77.24 45 ⇓P **P 11 13 33.6 -1.5**
RKY Sarkoy-Tekirda 77.31 51 *e*P **P 11 13 34.9 -0.8**
URLA Izmir 77.33 54 *e*P **P 11 13 36.4 +0.5**
TOPG Topolog 77.34 47 ⇓P **P 11 13 34.6 -1.2**
PHSR Pinarhisar 77.38 50 *e*P **P 11 13 36.6 +0.6**
OHAK Old Harbor 77.42 326 IAmb IAmb 11 13 55.6
comp=Z,78nm,1.1s
OHAK IAMs_20 IAMs_20 11 48 31.5
comp=Z,4µm,20.0s
DKL Dikili 77.43 53 *e*P **P 11 13 35.9 -0.4**
PSN Preselentsi 77.44 48 P **P 11 13 36.3 -0.1**
TIRR Tirgusor 77.45 47 ⇑P **P 11 13 35.9 -0.5**
TIRR Tirgusor 77.45 47 ⇑P **P 11 13 35.9 -0.5**
KRBG Karabiga-Canak 77.46 51 *e*P **P 11 13 35.9 -0.6**
TLCR 77.58 46 ⇓P **P 11 13 36.9 -0.2**
MRMT Marmara Adasi 77.64 51 *e*P **P 11 13 36.8 -0.8**
BLCB Balcova 77.67 53 *e*P **P 11 13 37.9 +0.2**
EFOR EFORIE 77.68 48 ⇑P **P 11 13 37.8 +0.1**
ZKR Zakros 77.71 57 *e*P **P 11 13 37.9 -0.1**
EDC Edincik 77.89 51 *e*P **P 11 13 37.9 -1.0**
SLVT Silivri 77.96 50 *e*P **P 11 13 39.4 +0.1**
GCAM G?zelcaml? 77.96 54 *e*P **P 11 13 39.0 -0.4**
BALB Balikesir 78.05 52 *e*P **P 11 13 39.4 -0.4**
BODT Bodrum 78.16 55 P **P 11 13 39.5 -1.0**
BODT Bodrum 78.16 55 *e*P **P 11 13 39.7 -0.8**
CTKS Kestanelik-??a 78.18 50 *e*P **P 11 13 40.1 -0.4**
KCTX Karacabey (Bur 78.27 51 *e*P **P 11 13 41.2 +0.1**
KARP Karpathos 78.37 56 P **P 11 13 41.5 -0.3**
KARP Karpathos 78.37 56 *e*P **P 11 13 41.4 -0.3**
KARP Karpathos 78.37 56 P **P 11 13 41.2 -0.5**
KARP IAMs_20 IAMs_20 11 47 40.5
comp=Z,2µm,20.0s
BGKT Bogazkoy 78.39 50 *e*P **P 11 13 41.1 -0.5**
AYDB Zeytinkoy-Aydi 78.42 54 *e*P **P 11 13 41.7 -0.4**
DAT Datca 78.44 55 P **P 11 13 40.9 -1.3**
DAT Datca 78.44 55 *e*P **P 11 13 41.1 -1.1**
TMCR Tamitsa 78.46 26 *e*P **P 11 13 41.2 -0.4**
TMCR pmax pmax
comp=Z,53nm,0.5s
KLYT Kilyos 78.57 50 *e*P **P 11 13 42.4 -0.2**
ARMT Armutlu 78.59 51 *e*P **P 11 13 42.0 -0.8**
ISK Istanbul-Kandi 78.62 50 P **P 11 13 42.4 -0.6**
ISK Istanbul-Kandi 78.62 50 *e*P **P 11 13 42.6 -0.4**
KAVV Kandilli-Istan 78.62 50 *e*P **P 11 13 43.2 +0.2**
GEMT Gemlik 78.86 51 *e*P **P 11 13 43.9 -0.4**
KULA Kula-Manisa 78.89 53 P **P 11 13 44.4 -0.2**
KULA Kula-Manisa 78.89 53 *e*P **P 11 13 44.3 -0.3**
YER Yerkesik 78.90 55 *e*P **P 11 13 43.8 -0.9**
YLV Yalova 78.97 51 *e*P **P 11 13 44.4 -0.6**
ARG Arkhangelos 78.98 55 *e*P **P 11 13 44.9 -0.1**
SIMA Simav-Kutahya 79.00 52 *e*P **P 11 13 45.3 +0.1**
SILT Sile 79.03 50 *e*P **P 11 13 44.9 -0.3**
HRT Hereke 79.13 51 *e*P **P 11 13 45.4 -0.4**
DALY Dalyan (Mula) 79.26 55 *e*P **P 11 13 45.6 -0.9**
ADVT Abdulvahap 79.27 51 *e*P **P 11 13 46.4 -0.1**
TVSB Tavsanli 79.28 52 *e*P **P 11 13 46.6 -0.2**
GEDZ Gediz 79.34 52 *e*P **P 11 13 47.9 +0.9**
FETY Fethiye 79.64 55 *e*P **P 11 13 47.7 -1.0**
GULT Gulveren 79.84 51 *e*P **P 11 13 49.5 -0.3**
BORA Eskisehir 79.93 51 *e*P **P 11 13 50.1 -0.1**
SRCK Saricakaya, Es 80.02 51 *e*P **P 11 13 49.9 -0.7**
KLMR Klimovskoe 80.04 29 *e*P **P 11 13 48.7 -1.5**
KLMR *e*S **S 11 23 52.3 -0.5**
KLMR pmax pmax
comp=Z,425nm,1.5s
KLMR Klimovskoe 80.04 29 *e*P **P 11 13 48.8 -1.5**
KLMR AMP 11 14 06.0
comp=Z,425nm,1.5s
KLMR *e*S **S 11 23 52.3 -0.5**
KLMR *e*S **S 11 23 52.3 -0.5**
KLMR LQ LQ 11 41 04.9
KLMR LQ LQ 11 41 04.9
KLMR LR LR 11 42 45.8
KLMR AMP 11 45 33.8
comp=Z,4µm,18.9s
OBN Obninsk 80.13 35 P **P 11 13 50.8 0.0**
comp=Z,51nm,0.5s,baz=280,slow=0.4,SNR=32
OBN Obninsk 80.13 35 ⇓P **P 11 13 51.0 +0.2**
OBN Obninsk 80.13 35 *d*iP **P 11 13 50.9 0.0**
OBN *e* 11 13 58.8
OBN *i* 11 14 04.1
OBN *e* 11 16 52.1
OBN *e*S **S 11 23 53.6 -0.3**
OBN *e*SS **SS 11 29 05.3 +1.3**
OBN pmax pmax
comp=Z,276nm,0.8s
OBN MLR MLR
comp=Z,6µm,17.0s
OBN Obninsk 80.13 35 P **P 11 13 50.9 0.0**
AKAS Kas 80.14 55 *e*P **P 11 13 49.9 -1.6**
ELL Elmali 80.26 55 *e*P **P 11 13 52.8 +0.7**
SHUT Suhut-Afyon 80.32 53 *e*P **P 11 13 52.6 +0.2**
MDUB Mudurnu 80.34 51 *e*P **P 11 13 52.4 -0.1**
CHGN Chignik 80.38 326 IAmb IAmb 11 14 12.0
comp=Z,238nm,1.4s
ISP Isparta 80.47 53 *e*P **P 11 13 53.2 -0.1**
ISP Isparta 80.47 53 IAmb IAmb 11 13 54.0
comp=Z,70nm,0.8s
ISP Isparta 80.47 53 IAMs_20 IAMs_20 11 53 14.6
comp=Z,2µm,19.0s
CIFT Cifteler, Eski 80.51 52 *e*P **P 11 13 53.4 0.0**
MOS Moscow 80.54 35 *e*P **P 11 13 50.6 -2.4**
MOS *e* 11 14 00.2
MOS *e*S **S 11 23 54.8 -3.4**
MOS pmax pmax
comp=Z,121nm,1.0s
MOS pmax pmax
comp=Z,200nm,1.2s
MOS MLR MLR
comp=Z,4µm,17.0s
KORT Korkueli 80.54 54 *e*P **P 11 13 55.1 +1.4**
BCK Bucak 80.61 54 *e*P **P 11 13 54.0 0.0**
YUVA Yuva-Kibriscik 80.72 51 *e*P **P 11 13 54.7 +0.2**
AUSIV SIVRIHISAR 80.85 52 *e*P **P 11 13 56.8 +1.6**
KIZT Kizilcal 81.25 52 *e*P **P 11 13 57.2 -0.2**
SIM Simferopol' 81.29 46 *c*iP **P 11 13 57.9 +0.6**
SIM *e*S **S 11 24 11.0 +4.5**
SIM pmax pmax
comp=Z,92nm,0.8s
SIM MLR MLR
comp=E,2µm,17.0s
PMSA Palmer Station 81.58 182 P **P 11 14 00.3 +2.1**
comp=E,68nm,0.8s,baz=16,slow=2.8,SNR=17
PMSA Palmer Station 81.58 182 P **P 11 13 59.5 +1.3**
PMSA IAmb IAmb 11 14 01.4
comp=Z,73nm,0.8s
PMSA Palmer Station 81.58 182 IAMs_20 IAMs_20 11 53 15.2
comp=Z,3µm,20.0s
PMSA Palmer Station 81.58 182 *e*P **P 11 13 59.0 +0.8**
LOD Lodumlu 81.65 51 *e*P **P 11 13 59.9 +0.5**
BR231 Keskin MP Arra 81.67 51 P **P 11 13 60.0 +0.4**
ANTO Ankara 81.67 51 ⇓P **P 11 13 59.4 -0.2**

ANTO Ankara 81.67 51 *e*P **P 11 13 59.9 +0.3**
ANTO Ankara 81.67 51 P **P 11 13 59.6 0.0**
ANTO pmax pmax
comp=Z,183nm,0.9s
ANTO Ankara 81.67 51 P **P 11 13 59.6 0.0**
ANTO Ankara 81.67 51 IAMs_20 IAMs_20 11 45 40.6
comp=Z,2µm,21.0s
SDPT Sand Point 81.77 325 IAMs_20 IAMs_20 11 51 37.7
comp=Z,3µm,21.0s
LADK Ladik-KONYA 81.79 53 *e*P **P 11 14 00.3 0.0**
KONT Konya--Tatoy 81.85 53 *e*P **P 11 14 00.8 +0.3**
AFSR Afar-Bala (An 81.99 51 *e*P **P 11 14 01.4 +0.1**
BZK Bozkurt 82.01 49 ⇑P **P 11 14 00.4 -0.7**
BZK Bozkurt 82.01 49 *e*P **P 11 14 01.0 -0.1**
ILGA Ilgaz 82.04 50 IAMs_20 IAMs_20 11 49 28.2
comp=Z,3µm,19.0s
KULU Kulu 82.05 52 *e*P **P 11 14 02.4 +0.8**
CANT Cankiri 82.09 50 *e*P **P 11 14 02.1 +0.4**
LPSR Galich'ya Gora 82.19 37 *e*P **P 11 14 01.5 -0.4**
LPSR *e* 11 14 16.1
LPSR pmax pmax
comp=Z,170nm,0.9s
GAZI Gazipasa 82.26 55 *e*P **P 11 14 01.1 -1.6**
BR131 Keskin Array S 82.34 51 P **P 11 14 02.9 -0.3**
BR131 pmax pmax
comp=Z,93nm,0.9s
BR131 Keskin Array S 82.34 51 P **P 11 14 02.9 -0.3**
BR131 IAmb IAmb 11 14 04.4
comp=Z,93nm,0.8s
BRTR Keskin Array B 82.34 51 P **P 11 14 02.5 -0.7**
comp=Z,83nm,0.9s,baz=266,slow=3.7,SNR=277
BRTR LR LR 11 46 22.7
comp=Z,2µm,21.1s,baz=262,slow=33
BRTR Keskin Array B 82.34 51 *e*P **P 11 14 02.7 -0.5**
SERE Sereflikochisa 82.50 52 *e*P **P 11 14 04.2 +0.2**
PRGR Permogore 82.56 28 *e*P **P 11 14 03.5 -0.1**
PRGR *e*S **S 11 24 22.2 +3.3**
PRGR pmax pmax
comp=Z,101nm,0.8s
VORR Voronezh 82.63 38 *e*P **P 11 14 03.0 -1.2**
VORR pmax pmax
comp=Z,500nm,1.8s
SULT Sultanhani-AKS 82.66 52 *e*P **P 11 14 05.2 +0.4**
VSR Storozhevoye 82.75 39 *e*P **P 11 14 03.6 -1.2**
VSR *e* 11 14 17.7
VSR pmax pmax
comp=Z,130nm,0.7s
TAOE Nuku Hiva Isla 82.89 259 *e*S **S 11 24 21.5 -2.7**
comp=Z,1µm,26.6s
TAOE Nuku Hiva Isla 82.89 259 *e*LR LR 11 40 07.7
comp=Z,4µm,22.2s
VORD Divnogorie 82.90 39 *e*P **P 11 14 05.0 -0.6**
VORD *e* 11 14 19.1
VORD pmax pmax
comp=Z,130nm,0.7s
TEKE Tekeli-Mersin 82.91 55 *e*P **P 11 14 05.1 -0.9**
BERE Bereket-Mersin 82.94 54 *e*P **P 11 14 06.0 -0.4**
DIKM Dikmen 82.99 49 ⇑P **P 11 14 06.4 +0.1**
DIKM Dikmen 82.99 49 *e*P **P 11 14 06.9 +0.6**
LEF Lefka 83.01 56 ⇓P **P 11 14 05.3 -1.3**
LEF Lefka 83.01 56 *e*P **P 11 14 05.2 -1.3**
RKT Rikitea 83.07 243 *e*S **S 11 24 26.0 +0.6**
comp=Z,1µm,24.8s
RKT *e*SS **SS 11 29 51.1 +1.1**
comp=Z,2µm,27.5s
RKT *e*LQ LQ 11 36 38.7
comp=Z,1µm,27.0s
RKT *e*LR LR 11 40 05.5
comp=Z,4µm,34.8s
TEVE Tevekalti-Mers 83.09 54 *e*P **P 11 14 06.9 -0.1**
AKKU Akkuyu-Mersin 83.25 54 *e*P **P 11 14 07.7 0.0**
KEBE Keben-Mersin 83.29 54 *e*P **P 11 14 08.3 +0.2**
IKL Isikli 83.33 54 *e*P **P 11 14 06.9 -1.3**
CSS Mathiatis 83.40 56 *e*P **P 11 14 08.4 -0.2**
CSS Mathiatis 83.40 56 P **P 11 14 08.5 -0.2**
CSS IAmb IAmb 11 14 12.1
comp=Z,72nm,0.8s
CSS IAMs_20 IAMs_20 11 53 10.8
comp=Z,2µm,20.0s
SILI Silifke-Mersin 83.48 54 *e*P **P 11 14 07.9 -1.0**
FALS False Pass 83.53 325 IAMs_20 IAMs_20 11 54 50.2
comp=Z,3µm,20.0s
ANN Anapa 83.60 45 *e*P **P 11 14 06.6 -2.7**
ANN *i* 11 14 23.7
ANN *e*S **S 11 24 27.9 -2.2**
ANN pmax pmax
comp=Z,217nm,0.9s
KIZK Mersin 83.62 54 *e*P **P 11 14 09.0 -0.6**
KVT Kavak 83.73 49 *e*P **P 11 14 10.1 -0.1**
MERS Mersin 83.80 53 *e*P **P 11 14 10.9 +0.2**
EREN Erenkoy 83.90 55 *e*P **P 11 14 10.8 -0.3**
CMRD Camardi-Nigde 83.93 53 *e*P **P 11 14 11.2 -0.2**
KARA Karaisali 84.09 53 *e*P **P 11 14 11.1 -1.0**
BNN Bunyan 84.23 51 *e*P **P 11 14 12.9 0.0**
VRH Novokhopyorsk 84.27 38 *e*P **P 11 14 12.6 -0.1**
VRH *e* 11 14 26.6
VRH pmax pmax
comp=Z,90nm,0.8s
VRH MLR MLR
comp=Z,5µm,17.0s
TOKT Tokat 84.31 50 *e*P **P 11 14 13.0 -0.2**
KOZT Kozan 84.62 53 *e*P **P 11 14 14.2 -0.6**
TSUM Tsumeb 84.65 112 P **P 11 14 15.1 -0.2**
TSUM IAmb IAmb 11 14 16.7
comp=Z,54nm,0.9s
CEYT Ceyhan 84.70 53 *e*P **P 11 14 14.9 -0.2**
SVSK Karacayir 84.77 50 *e*P **P 11 14 15.3 -0.1**
SARI SarD1z-Kayseri 84.79 52 *e*P **P 11 14 15.9 +0.1**
RSDY Resadiye-TOKAT 84.86 49 *e*P **P 11 14 15.4 -0.5**
AKUT Akutan 85.07 325 IAMs_20 IAMs_20 11 55 31.0
comp=Z,3µm,20.0s
TAHT Tahtakopru-Hat 85.22 54 *e*P **P 11 14 17.8 0.0**
KZIT Kziot 85.41 59 *e*P **P 11 14 19.2 +0.3**
KMRS Kahramanmaras 85.43 52 *e*P **P 11 14 19.2 +0.4**
DARE Darende-Malaty 85.54 51 *e*P **P 11 14 19.2 -0.3**
SOC Sochi 85.54 46 *e*P **P 11 14 17.7 -1.5**
SOC *e* 11 17 33.3
SOC *e*PPP PPP 11 19 35.8
SOC *e*S **S 11 24 42.7 -6.8**
SOC *e*SS **SS 11 30 18.9 -6.0**
SOC *e*SSS SSS 11 33 52.6
SOC pmax pmax
comp=Z,173nm,0.9s
SOC MLR MLR
comp=Z,2µm,17.0s
BHL Bhannes 85.55 56 *e*P **P 11 14 18.7 -0.8**
UNV Unalaska Valle 85.58 325 IAMs_20 IAMs_20 11 55 22.5
comp=Z,3µm,20.0s
MMAI Mount Meron Ar 85.61 57 P **P 11 14 20.1 +0.2**
comp=Z,56nm,0.9s,baz=324,slow=5.2,SNR=43
ESPY Espiye-Giresun 85.71 49 *e*P **P 11 14 19.8 -0.3**
GAZ Gaziantep 85.76 53 *e*P **P 11 14 21.3 +0.7**
GAZ Gaziantep 85.76 53 IAmb IAmb 11 14 38.5
comp=Z,107nm,1.0s
GAZ IAMs_20 IAMs_20 11 52 14.0
comp=Z,2µm,19.0s
MMLI Mount Malkishu 85.80 58 *e*P **P 11 14 22.3 +1.5**
ARPR Arapgir-MALATY 86.00 50 *e*P **P 11 14 22.9 +1.1**
HRFI Mount Harif 86.20 60 *e*P **P 11 14 23.3 +0.5**
EIL Elat 86.23 60 P **P 11 14 23.3 +0.3**
comp=Z,19nm,0.8s,baz=285,slow=1.1,SNR=18
EIL Elat 86.23 60 *e*P **P 11 14 24.9 +2.0**
MALT Malatya 86.32 51 *e*P **P 11 14 23.6 +0.2**
PTK Pertek 86.85 50 *e*P **P 11 14 26.5 +0.5**
URFA Urfa 86.90 52 *e*P **P 11 14 26.8 +0.6**
SVRC Sivrice-ELAZID 86.95 51 *e*P **P 11 14 27.2 +0.7**
ASF Jabal al Asfar 87.07 57 P **P 11 14 27.9 +0.8**
comp=Z,25nm,0.9s,baz=224,slow=2.0,SNR=49
CHOM Cayeli-Rize 87.10 48 *e*P **P 11 14 27.3 +0.3**
NIKH Nikolski High 87.22 325 IAMs_20 IAMs_20 11 56 18.9
comp=Z,3µm,20.0s
GOF Gofitskoye 87.27 44 ⇑*e*P **P 11 14 27.9 +0.2**
GOF pmax pmax
comp=Z,173nm,0.9s
KIV Kislovodsk 87.43 45 *d*iP **P 11 14 29.1 +0.5**
KIV *i* 11 14 44.6
KIV *e*S **S 11 25 12.3 +4.1**
KIV *e*SS **SS 11 30 54.0 +1.3**
KIV pmax pmax
comp=Z,115nm,1.0s
KIV MLR MLR
comp=Z,1µm,17.0s
KIV Kislovodsk 87.43 45 P **P 11 14 28.7 0.0**

KIV IAMs_20 IAMs_20 11 52 50.3
comp=Z,2µm,19.0s
YEDI Yedisu-Bingol 87.51 50 *e*P **P 11 14 30.3 +1.1**
BATM Batumi 87.58 47 ⇓P **P 11 14 29.3 0.0**
BATM Batumi 87.58 47 *e*P **P 11 14 28.9 -0.4**
BCA Borcka 87.59 47 ⇑P **P 11 14 28.9 -0.5**
KBZ Khabaz 87.66 45 P **P 11 14 30.5 +1.0**
comp=Z,75nm,0.9s,baz=282,slow=4.1,SNR=107
KBZ LR LR 11 51 37.2
comp=Z,2µm,20.4s,baz=304,slow=34
KBZ Khabaz 87.66 45*d i*P **P 11 14 30.3 +0.8**
KBZ MLR MLR
comp=Z,2µm,17.0s
DYBB Diyarbakir 87.71 51 *e*P **P 11 14 30.7 +0.6**
BNGB Bingl 87.76 50 *e*P **P 11 14 31.0 +0.7**
MAZI Mazidag 88.11 51 *e*P **P 11 14 32.4 +0.3**
NCK Nalchik 88.21 45⇑*e*P **P 11 14 34.0 +1.7**
NCK pmax pmax
comp=Z,232nm,0.8s
KOPR Koprukoy-ERZUR 88.27 49 *e*P **P 11 14 33.8 +1.0**
SENK Senkaya-Erzuru 88.42 48 *e*P **P 11 14 34.1 +0.5**
SVAN Silvan-Diyarba 88.43 51 *e*P **P 11 14 33.8 +0.3**
ONI Oni 88.45 46 *e*P **P 11 14 34.1 +0.6**
ZEI Tsey 88.68 46 *e*P **P 11 14 33.6 -1.2**
ZEI pmax pmax
comp=Z,104nm,1.1s
BILL Bilibino 88.71 344*d i*P **P 11 14 34.2 +0.2**
BILL *i* 11 14 49.7
BILL *e* 11 18 01.9
BILL *i* S **SKSac 11 25 08.0 +6.4**
BILL *e*SS **SS 11 31 08.3 -1.4**
BILL pmax pmax
comp=Z,51nm,1.7s
BILL MLR MLR
comp=Z,4µm,21.0s
BILL Bilibino 88.71 344 P **P 11 14 34.3 +0.2**
BILL IAmb IAmb 11 14 50.7
comp=Z,98nm,1.2s
KARS Kars 88.91 48 *e*P **P 11 14 37.6 +1.8**
AKH Akhalkalaki 88.91 47 ⇓P **P 11 14 36.2 +0.4**
AKH Akhalkalaki 88.91 47 *e*P **P 11 14 36.6 +0.8**
AKH Akhalkalaki 88.91 47 IAMs_20 IAMs_20 11 52 59.8
comp=Z,2µm,20.0s
BGD Bogdanovka 89.04 47 *e*P **P 11 14 38.9 +2.4**
HPAH Hawaii Prepara 89.09 291 IAMs_20 IAMs_20 11 50 20.2
comp=Z,3µm,20.0s
AGRB Hanur-Agry 89.23 49 *e*P **P 11 14 38.5 +1.1**
KHLU Kahalu`u 89.40 290 IAMs_20 IAMs_20 11 50 16.2
comp=Z,4µm,22.0s
TBLG Delisi 89.66 46 *e*P **P 11 14 40.4 +1.3**
TBLG Delisi 89.66 46 P **P 11 14 39.5 +0.4**
TBLG Delisi 89.66 46 P **P 11 14 39.5 +0.4**
AKDM Akdamar-Van 89.68 50 *e*P **P 11 14 40.6 +1.1**
GROC Groznyy 89.81 45 *e*P **P 11 14 39.8 +0.1**
GROC *e* 11 18 14.6
GROC pmax pmax
comp=Z,125nm,1.2s
VANB Van 89.88 50 *e*P **P 11 14 41.3 +1.0**
TASB TASBURUN-IGDIR 89.97 48 *e*P **P 11 14 40.4 -0.3**
CLDR Caldiran 90.06 49 *e*P **P 11 14 42.5 +1.2**
ATKA Atka Island 90.48 326 IAMs_20 IAMs_20 12 00 45.9
comp=Z,3µm,18.0s
KIP Kipapa 90.72 293⇑*e*P **P 11 14 43.7 -0.7**
ARU Arti 90.89 29*d i*P **P 11 14 44.6 +0.2**
ARU 11 18 20.3
ARU PPP PPP 11 20 17.1
ARU S **S 11 25 31.9 -7.9**
ARU SP **SPn 11 26 57.9 +11**
ARU SS **SS 11 31 38.0 -3.8**
ARU pmax pmax
comp=Z,34nm,0.9s
ARU MLR MLR
comp=Z,5µm,18.0s
ARU Arti 90.89 29 P **P 11 14 44.7 +0.2**
NRIK Noril'sk 90.91 11 P **P 11 14 44.2 -0.1**
comp=Z,4.2nm,0.6s,baz=286,slow=1.9,SNR=6.9
NRIK LR LR 11 57 04.9
comp=Z,4µm,19.6s,baz=348,slow=37
MAK Makhachkala 91.05 44*c i*P **P 11 14 43.0 -2.5**
MAK *e* 11 18 21.8
MAK *e* 11 25 11.9
MAK pmax pmax
comp=Z,145nm,1.0s
MAK MLR MLR
comp=Z,3µm,18.0s
MBAR Mbarara 91.26 90 P **P 11 14 46.8 -0.4**
MBAR pmax pmax
comp=Z,16nm,1.1s
MBAR MLR MLR
comp=Z,10µm,18.0s
MBAR Mbarara 91.26 90 P **P 11 14 46.8 -0.4**
TIXI Tiksi 91.33 357*de*P **P 11 14 46.1 -0.1**
TIXI pmax pmax
comp=Z,24nm,1.3s
TIXI MLR MLR
comp=Z,2µm,20.0s
TIXI Tiksi 91.33 357 P **P 11 14 46.3 +0.1**
TIXI IAmb IAmb 11 15 01.5
comp=Z,62nm,1.2s
TIXI IAMs_20 IAMs_20 11 54 18.5
comp=Z,2µm,20.0s
SVE Sverdlovsk 91.61 28*ce*P **P 11 14 47.5 -0.3**
SVE *e*S **SKSac 11 25 20.4 +1.6**
SVE *e* 11 31 55.1
SVE pmax pmax
comp=Z,99nm,1.6s
SVE MLR MLR
comp=Z,5µm,19.0s
SUR Sutherland 91.79 123 P **P 11 14 49.5 +0.1**
ADK Adak 91.97 326 IAMs_20 IAMs_20 11 59 26.3
comp=Z,3µm,19.0s
LBTB Lobatse 93.53 115 P **P 11 14 57.1 -0.3**
LBTB pmax pmax
comp=Z,36nm,1.0s
LBTB Lobatse 93.53 115 P **P 11 14 57.1 -0.3**
LBTB IAmb IAmb 11 14 59.7
comp=Z,36nm,0.9s
PPT Papeete 94.26 253 LR LR 11 53 30.2
comp=Z,1µm,18.7s,baz=61,slow=33
PPT2 Papeete2 94.26 253 *e*PP PP 11 18 42.2 -6.0
comp=Z,313nm,24.5s
PPT2 *e*SKSac **SKSac 11 25 31.5 -3.4**
comp=Z,1µm,25.0s
PPT2 *e*SP SP 11 27 26.9 +0.8
comp=Z,3µm,24.5s
PPT2 *e*SS **SS 11 32 34.0 +0.7**
comp=Z,2µm,26.8s
PPT2 *e*LQ LQ 11 41 19.6
comp=Z,2µm,30.2s
PPT2 *e*LR LR 11 45 21.2
comp=Z,6µm,23.0s
VNA1 Neumayer--Stat 94.50 165 P **P 11 15 00.5 -0.1**
VNA3 Neumayer Olymp 94.55 165 P **P 11 15 00.3 -0.6**
VNA2 Neumayer--Watz 94.90 165 P **P 11 15 02.9 +0.4**
TBI Tubuai 95.76 247 *e*PP **PP 11 18 53.6 -6.0**
comp=Z,264nm,26.8s
TBI *e*SKSac **SKSac 11 25 40.0 -2.5**
comp=Z,1µm,29.0s
TBI *e*SP SP 11 27 38.9 -3.4
comp=Z,2µm,26.5s
TBI *e*SS **SS 11 32 54.2 0.0**
comp=Z,2µm,27.5s
TBI *e*LQ LQ 11 41 56.0
comp=Z,1µm,24.8s
TBI *e*LR LR 11 46 03.0
comp=Z,4µm,36.8s
SMY Shemya 96.14 330 IAMs_20 IAMs_20 12 02 38.2
comp=Z,3µm,20.0s
SEY Seymchan 96.28 346⇓*e*P **P 11 15 09.7 +0.6**
SNAA Sanae 96.52 164 P **P 11 15 10.2 +0.3**
SNAA Sanae 96.52 164 P **P 11 15 10.0 0.0**
SNAA pmax pmax
comp=Z,6.0nm,1.0s
SNAA MLR MLR
comp=Z,2µm,21.0s
SNAA Sanae 96.52 164 P **P 11 15 10.0 0.0**
SNAA IAMs_20 IAMs_20 12 01 12.8
comp=Z,2µm,21.0s
RAYN Ar Rayn 97.19 63 P **P 11 15 13.2 -1.0**
RAYN pmax pmax
comp=Z,6.0nm,1.3s
RAYN MLR MLR
comp=Z,6µm,19.0s
RAYN Ar Rayn 97.19 63 P **P 11 15 13.2 -1.0**
KMBO Kilima Mbogo 97.64 89 LR LR 11 57 34.8
comp=Z,6µm,18.9s,baz=252,slow=34
BRVK Borovoye 98.31 28*d i*P Pdif 11 15 18.5 0.0
BRVK pmax pmax
comp=Z,7.0nm,0.8s
BRVK MLR MLR
comp=Z,4µm,17.0s
BRVK Borovoye 98.31 28 P **P 11 15 18.1 -0.3**
BRVK IAmb IAmb 11 15 34.2
comp=Z,11nm,0.8s
BVAR Borovoye Array 98.38 28 PKKP 11 31 51.9
comp=Z,0.5nm,0.5s,baz=94,slow=5.9,SNR=4.5
ATD Arta Tunnel 99.03 75 PP **PP 11 19 24.0 -0.9**
comp=Z,3.5nm,0.3s,baz=307,slow=7.3,SNR=4.2
GEYT Alibeck 100.55 45 P **Pdif 11 15 28.9 0.0**
comp=Z,1.8nm,0.7s,baz=270,slow=5.6,SNR=4.3
YAK Yakutsk 100.81 355 IAMs_20 IAMs_20 12 03 22.8
comp=Z,3µm,21.0s
PET Petropavlovsk 102.53 337 *e*P **Pdif 11 15 38.9 +1.6**
PET *e*S **Sdif 11 27 16.0 -4.3**
PET Petropavlovsk 102.53 337 IAMs_20 IAMs_20 12 08 40.6
comp=Z,2µm,21.0s
ZALV Zalesovo Beam 103.29 20 PKiKP **PKiKP 11 19 60.0 +0.2**
comp=Z,1.8nm,0.7s,baz=259,slow=1.5,SNR=4.3
KURK Kurchatov 103.57 25 P **Pdif 11 15 39.7 -2.3**
KURK Kurchatov 103.57 25 **Pdif 11 15 39.6 -2.3**
KURBB Kurchatov Arra 103.60 26 PKKPbc PKKPbc 11 31 35.5 -0.3
comp=Z,0.5nm,0.3s,baz=154,slow=2.7,SNR=4.8
MIDW Midway 104.25 306 IAMs_20 IAMs_20 11 59 33.0
comp=Z,3µm,20.0s
HRA Herat 105.26 46 IAMs_20 IAMs_20 12 11 25.4
comp=Z,1µm,18.0s
BTLS Baital 105.65 32 *e*PP **PP 11 20 16.2 +3.1**
BTLS *e*LR LR 12 00 11.6
SGDS Sogindy 107.07 33 *e*PP **PP 11 20 21.8 -1.8**
SGDS *e*LR LR 12 02 29.4
KUU Kurty 107.62 31 *e*PP **PP 11 20 33.2 +5.6**
KUU *e*LR LR 11 59 07.4
TDK Taldyqorghan 107.80 29 *e*LR LR 12 00 22.2
MKAR Makanchi Array 108.15 26 Pdiff **Pdif 11 16 04.9 +2.4**
comp=Z,0.1nm,0.4s,baz=276,slow=4.2,SNR=2.7
MKAR PKiKP **PKiKP 11 20 09.7 +0.7**
comp=Z,0.7nm,0.7s,baz=357,slow=0.8,SNR=3.6
MKAR PKKPbc **PKKPbc 11 31 22.9 +1.0**
comp=Z,1.6nm,0.8s,baz=114,slow=5.4,SNR=9.4
MKAR PKKP **PKKPdf 11 31 35.8 +0.7**
comp=Z,2.3nm,0.8s,baz=125,slow=6.1,SNR=9.7
AAA Alma-Ata 108.41 31 *e*LR LR 12 01 45.1
comp=Z,1µm,18.2s
MDOK Medeo 108.50 31 *e*PP **PP 11 20 31.2 -3.0**
MDOK *e*PS PS 11 30 05.6 +6.0
MDOK *e*LR LR 12 01 39.8
comp=Z,1µm,18.3s
ZSN Zaisan 108.66 24 *e*LR LR 12 04 03.7
KPKS Kokpek 109.08 30 *e*LR LR 12 06 40.4
SATY Saty 109.25 31 *e*LR LR 12 08 02.1
SYO Syowa Base 109.34 158⇑*e*X **Pdif 11 16 03.0 -4.0**
KBL Kabul 109.73 43 IAMs_20 IAMs_20 12 07 56.2
comp=Z,1µm,19.0s
TLY Talaya 110.19 11 IAMs_20 IAMs_20 12 08 37.7
comp=Z,2µm,21.0s
KSH Kashi 110.57 35 PKP **PKiKP 11 20 13.0 -1.0**
KSH PP **PP 11 20 48.0 -1.3**
KSH SKKS 11 27 42.9
KSH SS **SS 11 36 16.0 -0.2**
KSH AMB AMB
comp=Z,880nm,5.8s
KSH LR LR
comp=Z,930nm,10.0s
KSH LR LR
comp=Z,660nm,12.8s
KSH LR LR
comp=Z,810nm,13.1s
ZAK Zakamensk 111.37 11 *e*PKIKP **PKiKP 11 20 08.2 -6.9**
ZAK pmax pmax
comp=Z,4.0nm,1.9s
WMQ Urumqi 112.78 25 *e*PKP **PKiKP 11 20 17.5 -0.5**
WMQ PP **PP 11 21 11.8 +7.1**
WMQ PKS 11 23 49.1
WMQ AMB AMB
comp=Z,87nm,11.8s
WMQ LR LR
comp=Z,2µm,18.1s
WMQ LR LR
comp=Z,2µm,23.5s
WMQ LR LR
comp=Z,3µm,23.5s
NIL Nilore 112.98 41 IAMs_20 IAMs_20 12 13 15.4
comp=Z,1µm,20.0s
SONM Songino Array 114.37 10 PKP **PKiKP 11 20 20.6 -0.3**
comp=Z,1.7nm,0.8s,baz=315,slow=0.6,SNR=7.7
SONM PKKPbc **PKKPbc 11 30 59.1 -2.7**
comp=Z,1.0nm,0.7s,baz=189,slow=2.3,SNR=4.8
SONM PKKPab **PKKPab 11 31 06.4 -2.8**
comp=Z,3.1nm,0.9s,baz=154,slow=5.5,SNR=9.0
ULN Ulaanbaatar 114.44 9⇓*i*PKIKP **PKiKP 11 20 21.1 0.0**
ULN Ulaanbaatar 114.44 9 IAMs_20 IAMs_20 12 18 55.2
comp=Z,2µm,19.0s
MDJ Mudanjiang 117.99 352 PKP **PKPdf 11 20 27.4 -0.4**
MAW Mawson 118.02 159 PKP **PKiKP 11 20 27.3 +0.3**
comp=Z,1.1nm,0.8s,baz=233,slow=2.6,SNR=20
MAW Mawson 118.02 159 **PKiKP 11 20 27.2 +0.1**
USRK Ussuriysk Ar. 118.04 350 PKP **PKPdf 11 20 27.5 -0.4**
comp=Z,3.2nm,0.7s,baz=284,slow=1.6,SNR=8.6
GTA Gaotai 120.90 18 *e*PKP **PKiKP 11 20 33.9 0.0**
GTA PP **PP 11 22 03.3 +2.0**
GTA SKS **SKSdf 11 27 47.5 +3.0**
GTA SS **SS 11 38 32.3 +1.6**
GTA AMB AMB
comp=Z,180nm,7.6s
GTA LR LR
comp=Z,2µm,17.5s
GTA LR LR
comp=Z,2µm,18.9s
GTA LR LR
comp=Z,4µm,17.5s
SNY Shenyang 121.34 357 SS SS 11 39 09.1 +33
SNY AMB AMB
comp=Z,210nm,4.9s
SNY LR LR
comp=N,2µm,18.6s
SNY LR LR
comp=E,820nm,19.8s
SNY LR LR
comp=Z,2µm,18.6s
HHC Hu-ho-hao-te 121.95 7 *e*PKP **PKiKP 11 20 38.4 +2.5**
HHC PP **PP 11 22 08.5 +0.2**
HHC SS SS 11 38 51.8 +8.1
HHC AMB AMB
comp=Z,120nm,9.0s
HHC LR LR
comp=Z,1µm,18.8s
HHC LR LR
comp=Z,980nm,19.4s
HHC LR LR
comp=Z,2µm,18.3s
DANN Dangsing 123.10 38 *e*P **PKPdf 11 20 38.5 0.0**
comp=Z,121nm,0.8s
BJI Beijing 123.15 3 PKP **PKiKP 11 20 38.1 0.0**
BJI SS SS 11 38 59.0 +0.3
BJI AMB AMB
comp=Z,260nm,5.9s
BJI LR LR
comp=Z,2µm,20.0s
BJI LR LR
comp=Z,940nm,20.8s
BJI LR LR
comp=Z,1µm,19.6s
BJT Baijiatuau 123.17 3 IAMs_20 IAMs_20 12 20 51.1
comp=Z,1µm,20.0s
KOLN Koldanda 123.44 39 *e*P **PKPdf 11 20 38.0 -1.1**
comp=Z,22nm,0.7s
MAJO Matsushiro 123.90 342 PKIKP **PKPdf 11 20 39.2 -0.3**
MAJO Matsushiro 123.90 342 **PKPdf 11 20 39.2 -0.3**
MAJO IAMs_20 IAMs_20 12 21 52.5
comp=Z,1µm,19.0s
MAT Matsushiro 123.90 342 PKP **PKPdf 11 20 38.5 -1.0**
MJAR Matsushiro Arr 123.90 342 PKP **PKPdf 11 20 39.1 -0.4**
comp=Z,5.8nm,0.5s,baz=110,slow=0.6,SNR=14
DL2 Dalian 124.34 358 PKP **PKPdf 11 20 37.0 -3.2**
DL2 AMB AMB
comp=Z,150nm,6.7s
DL2 LR LR
comp=Z,990nm,20.2s
DL2 LR LR
comp=Z,1µm,17.5s
DL2 LR LR
comp=Z,2µm,17.1s
KKN Kakani 124.41 37 *e*P **PKPdf 11 20 40.5 -0.4**
comp=Z,56nm,0.8s
DMN Daman 124.44 38 *e*P **PKPdf 11 20 40.6 -0.5**
comp=Z,38nm,0.8s
PKIN Phulchoki 124.64 37 *e*P **PKPdf 11 20 40.8 -0.7**
comp=Z,45nm,0.8s
PKI Pulchoki 124.65 37 *e*P **PKPdf 11 20 40.8 -0.8**
comp=Z,46nm,0.9s
GUN Gumba 124.66 37 *e*P **PKPdf 11 20 41.3 -0.3**
comp=Z,57nm,0.8s
JIRN Jiri 125.03 37 *e*P **PKPdf 11 20 41.8 -0.5**
comp=Z,52nm,0.9s
LZH Lanzhou 125.12 16⇑PKP **PKiKP 11 20 43.0 +0.6**
LZH PP **PP 11 22 30.8 +1.0**
LZH SS SS 11 39 30.9 +6.7
LZH AMB AMB
comp=Z,350nm,7.6s
LZH LR LR
comp=Z,3µm,17.9s
LZH LR LR
comp=Z,2µm,17.9s
LZH LR LR
comp=Z,4µm,18.4s
TIY Taiyuan 125.14 7 *e*PKP **PKiKP 11 20 46.0 +3.7**
TIY PP **PP 11 22 30.6 +0.8**
TIY AMB AMB
comp=Z,200nm,7.1s
TIY LR LR
comp=Z,3µm,20.5s
TIY LR LR
comp=Z,2µm,19.9s
TIY LR LR
comp=Z,3µm,20.1s
KLRI Killari 125.16 53 *e*PKiKP **PKPdf 11 20 41.8 -0.6**
KLRI IVMs_BB IVMs_BB 12 17 18.4
comp=Z,816nm,19.0s
KSRS Korea Array 125.26 352 PKP **PKPdf 11 20 41.6 -0.4**
comp=Z,5.1nm,0.8s,baz=56,slow=2.4,SNR=24
INU Inuyama 125.36 343 IAMs_20 IAMs_20 12 15 21.0
comp=Z,1µm,21.0s
INCN Inchon 125.39 353 IAMs_20 IAMs_20 12 24 59.2
comp=Z,2µm,20.0s
URZ Urewera 125.73 235 IAMs_20 IAMs_20 12 11 28.0
comp=Z,1µm,21.0s
RAMN Ramite 125.81 37 *e*P **PKPdf 11 20 43.4 -0.3**
comp=Z,88nm,0.8s
SRSP Sriramsagar 125.94 50 *e*PKiKP **PKPdf 11 20 43.1 -0.7**
SRSP IVMs_BB IVMs_BB 12 19 10.2
comp=Z,463nm,16.6s
LSA Lhasa 126.05 31 PKIKP **PKiKP 11 20 44.8 0.0**
LSA Lhasa 126.05 31 **PKiKP 11 20 44.8 0.0**
LSA IAMs_20 IAMs_20 12 22 50.6
comp=Z,2µm,19.0s
BKZ Black Stump Fm 126.11 234 IAMs_20 IAMs_20 12 11 31.8
comp=Z,2µm,20.0s
TAPN Taplejung 126.13 36 *e*P **PKPdf 11 20 44.4 0.0**
ODAN Odare 126.33 36 *e*P **PKPdf 11 20 44.5 -0.2**
comp=Z,52nm,0.7s
GTK Tadong 126.64 35 *i* x **PKPdf 11 20 51.0 +5.9**
RPR Rampur 126.69 50 *e*PKiKP **PKPdf 11 20 44.9 -0.3**
RPR IVMs_BB IVMs_BB 12 19 52.4
comp=Z,494nm,21.3s
TIA Tai'an 127.01 3 PKP **PKPdf 11 20 45.3 -0.1**
TIA PP **PP 11 22 41.5 -0.5**
TIA AMB AMB
comp=Z,230nm,8.1s
TIA LR LR
comp=Z,2µm,17.2s
TIA LR LR
comp=Z,2µm,21.6s
TIA LR LR
comp=Z,2µm,16.1s
HYBB Hyderabad (bro 127.03 52 *e*PKiKP **PKPdf 11 20 45.3 -0.6**
HYBB IVMs_BB IVMs_BB 12 18 52.1
comp=Z,566nm,18.8s
HYB Hyderabad 127.03 52 *i* PKP **PKPdf 11 20 46.0 +0.1**
SNZO South Karori 127.13 231 IAMs_20 IAMs_20 12 10 27.9
comp=Z,2µm,21.0s
HIZ Hauiti 127.46 234 IAMs_20 IAMs_20 12 15 47.7
comp=Z,1µm,19.0s
URV Uravakonda 127.51 55 *e*PKiKP **PKPdf 11 20 46.5 -0.4**
URV IVMs_BB IVMs_BB 12 16 18.2
comp=Z,934nm,21.8s
BOK Bokaro 127.75 40 *ex* **PKPdf 11 20 47.4 +0.2**
SRLM Srisailam 128.09 53 *e*PKiKP **PKPdf 11 20 47.4 -0.6**
SRLM IVMs_BB IVMs_BB 12 22 09.2
comp=Z,442nm,16.8s
NJS Nagarjunasagar 128.13 52 *e*PKiKP **PKPdf 11 20 47.7 -0.3**
NJS IVMs_BB IVMs_BB 12 20 43.3
comp=Z,393nm,17.9s
XAN Xi'an 128.22 11 PKP **PKPdf 11 20 47.9 +0.1**
XAN PKPab **sPKPdf 11 21 03.0 +6.0**
XAN PP **PP 11 22 50.8 +0.7**
XAN AMB AMB
comp=Z,210nm,12.7s
XAN LR LR
comp=Z,2µm,17.7s
XAN LR LR
comp=Z,2µm,18.8s
XAN LR LR
comp=Z,2µm,18.6s
XAN Xi'an 128.22 11 PKIKP **PKPdf 11 20 47.6 -0.2**
XAN Xi'an 128.22 11 **PKPdf 11 20 47.6 -0.2**
THZ Tophouse 128.37 230 IAMs_20 IAMs_20 12 08 48.6
comp=Z,2µm,22.0s
OXZ Oxford 128.65 228 IAMs_20 IAMs_20 12 12 50.7
comp=Z,2µm,21.0s
JNU Nakatsue 128.99 348 IAMs_20 IAMs_20 12 18 14.7
comp=Z,1µm,21.0s
MYLAV Mylavaram 129.00 51 *e*PKiKP **PKPdf 11 20 49.4 -0.2**
MYLAV IVMs_BB IVMs_BB 12 19 16.7
comp=Z,520nm,17.9s
ADKI Addanki 129.07 52 *e*PKiKP **PKPdf 11 20 49.9 +0.1**
ADKI IVMs_BB IVMs_BB 12 18 27.7
comp=Z,328nm,20.5s
RPZ Rata Peaks 129.25 227 PKP **PKiKP 11 20 50.1 0.0**
comp=Z,16nm,0.9s,baz=286,slow=3.8,SNR=4.5
PVM Polavaram 129.41 50 *e*PKiKP **PKPdf 11 20 50.4 0.0**
PVM IVMs_BB IVMs_BB 12 20 57.8
comp=Z,417nm,21.0s
SHL Shillong 129.80 33 *ex* **PKPdf 11 20 47.7 -3.6**
SHL *i* x x 11 24 09.1
SHL Shillong 129.80 33 PKIKP **PKPdf 11 20 50.7 -0.6**
SHL MLR MLR
comp=Z,2µm,20.0s
SHL Shillong 129.80 33 **PKPdf 11 20 50.7 -0.6**
CD2 Chengdu 129.97 18 PKP **PKPdf 11 20 49.5 -1.8**
CD2 SKS **SKSdf 11 27 56.8 -4.8**
CD2 SS **SS 11 40 24.9 +0.4**
CD2 AMB AMB
comp=Z,330nm,6.5s
CD2 LR LR
comp=Z,3µm,18.6s
CD2 LR LR
comp=Z,2µm,19.2s
CD2 LR LR
comp=Z,4µm,20.6s
SKHT Srikalahasti 130.14 55 *e*PKiKP **PKPdf 11 20 51.5 -0.3**
SKHT IVMs_BB IVMs_BB 12 16 03.5
comp=Z,384nm,19.5s
CASY Casey 130.41 175 **PKPdf 11 20 51.3 +0.4**
KOHI KOHIMA 130.80 31 *ex* **PKPdf 11 20 51.6 -1.5**
KOHI *i* x x 11 24 16.5
MDRS Chennai 130.96 55 *ex* **PKPdf 11 20 55.2 +1.8**
NJ2 Nanjing 131.21 1 *e*PKP **PKPdf 11 20 52.4 -1.1**
NJ2 PP **PP 11 23 11.3 +1.9**
NJ2 SS SS 11 40 43.0 +3.9
NJ2 AMB AMB
comp=Z,210nm,4.2s
NJ2 LR LR
comp=Z,2µm,18.8s
NJ2 LR LR
comp=Z,3µm,20.0s
NJ2 LR LR
comp=Z,3µm,19.2s
SSE Sheshan 132.14 358 PKP **PKPdf 11 20 52.1 -3.2**
SSE SS SS 11 40 58.1 +7.6
SSE AMB AMB
comp=Z,82nm,11.7s
SSE LR LR
comp=Z,860nm,20.4s
SSE LR LR
comp=Z,330nm,22.9s
WHN Wuhan 132.44 6 PKP **PKPdf 11 20 53.9 -2.0**
WHN SS SS 11 40 52.8 -1.4

WHN					LR	LR			
	comp=Z,6μm,19.4s								
WHN					LR	LR			
	comp=Z,3μm,18.2s								
WHN					LR	LR			
	comp=Z,6μm,18.6s								
GYA	**Guiyang**	**134.99**	**16**		PKP	**PKPdf**	**11 21 01.3**	**+0.4**	
GYA					PP	**PP**	**11 23 40.9**	**+6.9**	
GYA					PKS		11 24 32.0		
GYA					SKKS		11 30 29.3		
GYA					AMB	AMB			
	comp=Z,220nm,7.3s								
GYA					LR	LR			
	comp=Z,1μm,18.9s								
GYA					LR	LR			
	comp=Z,1μm,20.7s								
GYA					LR	LR			
	comp=Z,2μm,19.6s								
KMI	**Kunming**	**135.00**	**22**		PKP	**PKPdf**	**11 21 00.3**	**-0.8**	
KMI					PP	**PP**	**11 23 38.8**	**+4.4**	
KMI					SS	SS	11 41 24.9	-1.3	
KMI					AMB	AMB			
	comp=Z,330nm,13.4s								
KMI					LR	LR			
	comp=Z,2μm,20.2s								
KMI					LR	LR			
	comp=Z,720nm,17.5s								
KMI					LR	LR			
	comp=Z,1μm,20.8s								
KMI	**Kunming**	**135.00**	**22**		IAMs_20	IAMs_20	12 19 29.3		
	comp=Z,2μm,21.0s								
DZM	**Mont Dzumac**	**135.71**	**256**	*e*LR	LR		12 04 35.4		
	comp=Z,1μm,24.6s								
TATO	**Taipei**	**138.22**	**357**		IAMs_20	IAMs_20	12 33 40.7		
	comp=Z,2μm,18.0s								
QZH	**Quanzhou**	**138.28**	**1**		PKPbc	PKPdf	11 20 57.1	-10	
QZH				*e*	PP	**PP**	**11 23 47.6**	**-6.7**	
YOJ	**Yonaguni jima**	**138.64**	**355**		IAMs_20	IAMs_20	12 27 46.7		
	comp=Z,2μm,20.0s								
SLVN	**Son La**	**138.89**	**23**			**PKPdf**	**11 21 07.8**	**-0.4**	
CHTO	**Chiang Mai**	**139.00**	**31**		PKIKP	**PKPdf**	**11 21 07.8**	**-0.6**	
CHTO	**Chiang Mai**	**139.00**	**31**			**PKPdf**	**11 21 07.8**	**-0.6**	
CHTO	**Chiang Mai**	**139.00**	**31**		IAMs_20	IAMs_20	12 29 51.1		
	comp=Z,2μm,20.0s								
NACB	**Ninganchiao**	**139.01**	**357**		IAMs_20	IAMs_20	12 27 33.7		
	comp=Z,2μm,20.0s								
CM31	**Chiang Mai Arr**	**139.31**	**31**			**PKPdf**	**11 21 09.0**	**0.0**	
CMAR	**Chiang Mai Arr**	**139.31**	**31**		PKhKP	PKPpre	11 20 59.3		
	comp=Z,2.2nm,0.6s,baz=304,slow=4.9,SNR=5.1								
CMAR					PKP	**PKPdf**	**11 21 08.6**	**-0.4**	
	comp=Z,15nm,0.8s,baz=309,slow=2.8,SNR=58								
CMAR					PP	**PP**	**11 24 00.9**	**-0.4**	
	comp=Z,1.5nm,0.8s,baz=317,slow=5.2,SNR=2.3								
CMAR					SKPbc	**SKPbc**	**11 24 42.1**	**-0.7**	
	comp=Z,3.7nm,0.9s,baz=318,slow=3.4,SNR=4.9								
SSLB	**Suanglung**	**139.42**	**358**			**PKPdf**	**11 21 08.9**	**-0.2**	
TPUB	**Ta-pu**	**139.91**	**359**		IAMs_20	IAMs_20	12 30 29.6		
	comp=Z,1μm,19.0s								
HNR	**Honiara**	**140.07**	**276**		IAMs_20	IAMs_20	12 16 52.0		
	comp=Z,2μm,22.0s								
GUMO	**Guam**	**140.66**	**319**		IAMs_20	IAMs_20	12 26 18.5		
	comp=Z,1μm,20.0s								
QIZ	**Qiongzhong**	**142.91**	**15**		PKP	**PKPdf**	**11 21 13.1**	**-2.3**	
QIZ					PP	**PP**	**11 24 21.6**	**-1.3**	
QIZ					SS	SS	11 42 59.0	+0.2	
QIZ					AMB	AMB			
	comp=Z,430nm,6.7s								
QIZ					LR	LR			
	comp=Z,1μm,18.0s								
QIZ					LR	LR			
	comp=Z,570nm,17.1s								
QIZ					LR	LR			
	comp=Z,2μm,18.4s								
RABL	**Rabaul**	**145.63**	**288**			**PKPdf**	**11 21 20.3**	**0.0**	
SZP	**Santa**	**145.64**	**359**		IAMs_20	IAMs_20	12 33 48.1		
	comp=Z,1μm,20.0s								
KRVT	**Keravat (AS076**	**145.80**	**288**		PKPbc	**PKPdf**	**11 21 20.7**	**+0.1**	
	comp=Z,51nm,0.5s,baz=249,slow=1.4,SNR=14								
ARMA	**Armidale**	**147.91**	**240**			**PKiKP**	**11 21 28.4**	**-0.3**	
CAN	**Canberra**	**148.11**	**229**		PKIKP	**PKPdf**	**11 21 24.8**	**+0.9**	
CAN	**Canberra**	**148.11**	**229**			**PKPdf**	**11 21 24.8**	**+0.9**	
MLSI	**Meulaboh, Aceh**	**148.81**	**49**		PKP	**PKPdf**	**11 21 24.8**	**-0.8**	
TGY	**Tagaytay City**	**149.05**	**357**		PKPbc	**PKPbc**	**11 21 30.4**	**+0.3**	
	comp=Z,205nm,0.4s,baz=103,slow=1.6,SNR=4.9								
DLV	**T Lat**	**149.20**	**22**			**PKPdf**	**11 21 26.2**	**-0.2**	
TOO	**Toolangi**	**149.38**	**223**		PKHKP	**PKPdf**	**11 21 26.6**	**+0.7**	
TOO	**Toolangi**	**149.38**	**223**			**PKPdf**	**11 21 26.6**	**+0.7**	
EIDS	**Eidsvold**	**149.56**	**249**		IAMs_20	IAMs_20	12 43 17.7		
	comp=Z,1μm,19.0s								
TPTI		**150.06**	**50**		PKP	**PKPdf**	**11 21 28.7**	**+1.1**	
KCSI	**Kotacane, Aceh**	**150.31**	**49**		PKP	**PKPdf**	**11 21 27.3**	**-0.7**	
KULM	**Kulim**	**150.98**	**42**			**PKPdf**	**11 21 28.7**	**-0.3**	
KULM					PKPbc	**PKPbc**	**11 21 34.8**	**+0.1**	
GSI	**Gunungsitoli**	**151.65**	**52**		PKP	**PKPdf**	**11 21 31.0**	**+0.9**	
MNSI	**Mandailing Nat**	**153.48**	**50**		PKP	**PKPdf**	**11 21 32.1**	**-0.6**	
CTAO	**Charters Tower**	**154.56**	**259**		PKIKP	**PKPdf**	**11 21 34.9**	**+0.8**	
CTAO	**Charters Tower**	**154.56**	**259**			**PKPdf**	**11 21 34.9**	**+0.8**	
CTAO						**PKPab**	**11 21 57.5**	**+0.4**	
STKA	**Stephens Creek**	**155.18**	**229**		PKP	**PKPdf**	**11 21 35.0**	**+0.4**	
	comp=Z,3.9nm,0.8s,baz=302,slow=2.2,SNR=6.4								
STKA	**Stephens Creek**	**155.18**	**229**		PKIKP	**PKPdf**	**11 21 35.0**	**+0.4**	
STKA	**Stephens Creek**	**155.18**	**229**			**PKPdf**	**11 21 34.8**	**+0.2**	
GENI	**Genyem**	**155.23**	**303**		PKP	**PKPdf**	**11 21 35.9**	**+0.7**	
KCP	**Kidapawan**	**155.52**	**347**	‖*e*P		**PKPdf**	**11 21 34.6**	**-1.1**	
KRJI	**Kerinci**	**156.80**	**52**		PKP	**PKPdf**	**11 21 37.6**	**+0.2**	
KKM	**Kota Kinabalu**	**156.84**	**9**			**PKPdf**	**11 21 37.9**	**+0.5**	
BBOO	**Buckleboo**	**158.37**	**220**		PKPdf	**PKPdf**	**11 21 39.9**	**+1.2**	
BBOO						**PKPab**	**11 22 13.8**	**+0.7**	
SBUM	**Sibu**	**159.33**	**21**			**PKPdf**	**11 21 40.5**	**+0.1**	
SBUM					IAMs_20	IAMs_20	12 43 31.6		
	comp=Z,1μm,20.0s								
LHSI	**Lahat**	**159.48**	**52**		PKP	**PKPdf**	**11 21 39.6**	**-0.9**	
MDSI	**Maura Dua**	**160.41**	**52**		PKP	**PKPdf**	**11 21 40.2**	**-1.3**	
FAKI	**Fak Fak**	**161.28**	**317**			**PKPdf**	**11 21 42.0**	**-0.6**	
KASI	**Kota Agung**	**161.31**	**54**		PKP	**PKPdf**	**11 21 41.1**	**-1.4**	
MPSI	**Mapaga**	**162.75**	**359**		PKP	**PKPdf**	**11 21 43.2**	**-0.8**	
DBJI	**Dramaga**	**163.69**	**52**		PKP	**PKPdf**	**11 21 44.8**	**-0.1**	
LUWI	**Luwuk**	**163.82**	**349**		PKP	**PKPdf**	**11 21 45.0**	**0.0**	
NWAO	**Narrogin (SRO)**	**164.01**	**173**		PKP	**PKPdf**	**11 21 44.6**	**0.0**	
	comp=Z,17nm,0.9s,baz=145,slow=2.6,SNR=5.3								
NWAO					PKPab	**PKPab**	**11 22 37.7**	**+0.2**	
	comp=Z,19nm,0.8s,baz=240,slow=2.9,SNR=6.5								
FORT	**Forrest**	**164.28**	**208**			**PKPdf**	**11 21 44.3**	**-0.7**	
FORT						**PKPab**	**11 22 38.9**	**0.0**	
ASAR	**Alice Springs**	**165.05**	**241**		PKP	**PKPdf**	**11 21 45.0**	**-0.9**	
	comp=Z,7.1nm,0.9s,baz=106,slow=1.2,SNR=18								
ASAR					PKPab	**PKPab**	**11 22 44.5**	**+1.8**	
	comp=Z,7.8nm,0.9s,baz=109,slow=4.1,SNR=6.7								
WB0	**Warramunga Arr**	**165.70**	**257**			**PKPdf**	**11 21 45.8**	**-0.7**	
WB2	**Warramunga Arr**	**165.71**	**256**			**PKPdf**	**11 21 45.7**	**-0.8**	
WRAB	**Tennant Creek**	**165.72**	**256**		PKIKP	**PKPdf**	**11 21 46.1**	**-0.4**	
WRAB	**Tennant Creek**	**165.72**	**256**			**PKPdf**	**11 21 46.0**	**-0.4**	
WRA	**Warramunga Arr**	**165.72**	**256**		PKP	**PKPdf**	**11 21 45.9**	**-0.7**	
	comp=Z,10nm,0.8s,baz=43,slow=0.4,SNR=24								
TTSI	**Tana Toraja**	**166.11**	**359**		PKP	**PKPdf**	**11 21 48.0**	**+1.0**	
MORW	**Morawa**	**167.57**	**165**			**PKPdf**	**11 21 47.3**	**-0.3**	

*IDC **16** 11:02:01.5±29.0, 19.29S×177.76W, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.9/49, mbtmp4.2/4, Error ellipse: s-maj=550.9km s-min=140.4km az=87.0*

*NEIC **16** 11:02:34.5±1.3, 20.1S±0.3×177.4W±0.1, h336km±17km, mb4.1/21, Error ellipse: s-maj=41.5km s-min=9.3km az=199.0*

ISC 16 11:02:36.1±2.6, 20.1S±0.3×177.5W±0.3, h350km, n26, σ1s04/26, mb3.9/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.83**	**298**		**Pn**	**11 03 52.9**	**-1.1**
DZM	**Mont Dzumac**	**15.14**	**260**	P	**Pn**	**11 05 55.5**	**+0.8**
BKZ	**Black Stump Fm**	**19.72**	**194**	P	**P**	**11 06 37.9**	**-3.3**
BKZ				IAmb	IAmb	11 06 46.0	
	comp=Z,18nm,1.1s						
WKZ	**Wanaka**	**27.11**	**201**	P	**P**	**11 07 47.0**	**-1.0**
EIDS	**Eidsvold**	**29.43**	**254**	P	**P**	**11 08 07.9**	**-0.8**
ARMA	**Armidale**	**29.69**	**244**	P	**P**	**11 08 11.5**	**+0.4**
ARMA				IAmb	IAmb	11 08 18.4	
	comp=Z,4.5nm,1.0s						
CAN	**Canberra**	**33.15**	**236**	P	**P**	**11 08 41.3**	**+0.3**
CAN				IAmb	IAmb	11 08 41.4	
	comp=Z,6.9nm,1.1s						
CTAO	**Charters Tower**	**34.02**	**264**	P	**P**	**11 08 49.2**	**+0.6**
TOO	**Toolangi**	**36.54**	**233**	P	**P**	**11 09 09.8**	**+0.2**
TOO				IAmb	IAmb	11 09 17.1	
	comp=Z,11nm,1.4s						
STKA	**Stephens Creek**	**38.41**	**244**	P	**P**	**11 09 25.6**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=83,slow=10,SNR=5.9						
STKA	**Stephens Creek**	**38.41**	**244**	P	**P**	**11 09 25.5**	**+0.3**
BBOO	**Buckleboo**	**43.17**	**243**	P	**P**	**11 10 03.1**	**-0.6**
BBOO				IAmb	IAmb	11 10 09.6	
	comp=Z,18nm,1.4s						
WR0	**Warramunga Arr**	**44.96**	**262**	P	**P**	**11 10 17.9**	**0.0**
AS31	**Alice Springs**	**45.09**	**256**	P	**P**	**11 10 19.4**	**+0.4**
ASAR	**Alice Springs**	**45.09**	**256**	P	**P**	**11 10 19.0**	**0.0**
	comp=Z,2.3nm,0.3s,baz=88,slow=8.1,SNR=47						
WB0	**Warramunga Arr**	**45.12**	**262**	P	**P**	**11 10 19.1**	**-0.1**
WB0				IAmb	IAmb	11 10 20.1	
	comp=Z,4.0nm,0.6s						
WB2	**Warramunga Arr**	**45.14**	**262**	P	**P**	**11 10 19.1**	**-0.2**
WB2				IAmb	IAmb	11 10 20.7	
	comp=Z,9.1nm,1.1s						
WRA	**Warramunga Arr**	**45.15**	**262**	P	**P**	**11 10 19.2**	**-0.2**
	comp=Z,1.5nm,0.3s,baz=97,slow=7.8,SNR=109						
FORT	**Forrest**	**49.91**	**246**	P	**P**	**11 10 55.1**	**-0.5**
KNRA	**Kununurra**	**51.18**	**266**	P	**P**	**11 11 05.6**	**+0.5**
KNRA				IAmb	IAmb	11 11 09.8	
	comp=Z,25nm,1.4s						
FITZ	**Fitzroy Crossi**	**53.57**	**262**	P	**P**	**11 11 23.3**	**+0.9**
	comp=Z,1.3nm,0.5s,baz=71,slow=4.6,SNR=13						
FITZ	**Fitzroy Crossi**	**53.57**	**262**	P	**P**	**11 11 23.2**	**+0.7**
FITZ				IAmb	IAmb	11 11 31.0	
	comp=Z,9.7nm,1.5s						
PSA00	**Pilbara Seismi**	**58.24**	**257**	P	**P**	**11 11 55.1**	**-0.2**
PSA00				IAmb	IAmb	11 11 55.9	
	comp=Z,11nm,0.8s						
VNDA	**Vanda**	**58.37**	**185**	P	**P**	**11 11 57.6**	**+2.4**
GIRL	**Giralia**	**63.14**	**254**	P	**P**	**11 12 28.8**	**+0.8**
QSPA	**South Pole Qui**	**69.99**	**180**	P	**P**	**11 13 09.6**	**-0.8**

*JMA **16** 11:03:05.8±0.1, 24.29N×122.16E, h61km±2km, M2.5*

*TAP **16** 11:03:06.6, 24.35N×122.13E, h57km, ML3.0, C*

ISC 16 11:03:07.2±1.2, 24.32N±0.03×122.19E±0.02, h47km±8km, n87, σ1s05/163, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.24**	**346**	*i* P	**Pn**	**11 03 15.8**	**+0.3**
EOS1				S	**Sn**	**11 03 23.2**	**+1.9**
ENA	**Nanau**	**0.43**	**285**	P	**Pn**	**11 03 17.2**	**-0.2**
	baz=282						
ENA				S	**Sn**	**11 03 25.2**	**+0.5**
	baz=282						
TWC	**Suao**	**0.43**	**313**	*i* P	**Pn**	**11 03 17.1**	**-0.4**
	baz=316						
TWC				S	**Sn**	**11 03 24.3**	**-0.4**
	baz=316						
NACB	**Ninganchiao**	**0.56**	**256**	P	**Pn**	**11 03 18.3**	**-0.8**
	baz=245						
NACB				S	**Sn**	**11 03 27.3**	**-0.3**
	baz=245						
TWD	**Chiawan**	**0.59**	**247**	P	**Pn**	**11 03 18.9**	**-0.6**
	baz=233						
TWD				S	**Sn**	**11 03 28.1**	**-0.2**
	baz=233						
ILA	**Ilan**	**0.60**	**318**	S	**Sn**	**11 03 29.9**	**+1.4**
	baz=326						
TWE	**Neicheng**	**0.63**	**310**	P	**Pn**	**11 03 19.7**	**-0.2**
	baz=309						
TWE				*e*S	**Sn**	**11 03 28.4**	**-0.6**
	baz=309						
NTC	**Toucheng**	**0.63**	**328**	*e*P	**Pn**	**11 03 20.9**	**+0.9**
	baz=339						
NTC				S	**Sn**	**11 03 29.6**	**+0.5**
	baz=339						
HWA	**Hwalien**	**0.64**	**238**	*e*P	**Pn**	**11 03 20.2**	**+0.3**
	baz=225						
HWA				*e*S	**Sn**	**11 03 30.0**	**+0.9**
	baz=225						
ENTT	**Nioudou**	**0.66**	**300**	*i* P	**Pn**	**11 03 19.9**	**-0.4**
	baz=295						
ENTT				S	**Sn**	**11 03 29.6**	**-0.1**
	baz=295						
ETLH	**Xiulin Townshi**	**0.66**	**261**	P	**Pn**	**11 03 19.7**	**-0.7**
	baz=250						
ETLH				*e*S	**Sn**	**11 03 28.2**	**-1.7**
	baz=250						
SLBB	**Yuanshan**	**0.67**	**311**	P	**Pn**	**11 03 20.6**	**+0.1**
	baz=312						
SLBB				*e*S	**Sn**	**11 03 29.8**	**-0.3**
	baz=312						
NDT	**Datong Townshi**	**0.68**	**295**	P	**Pn**	**11 03 20.1**	**-0.5**
	baz=292						
NDT				S	**Sn**	**11 03 30.5**	**+0.2**
	baz=292						
JYNG	**Yonagunijimaku**	**0.70**	**79**	P	**Pn**	**11 03 20.6**	**-0.2**
JYNG				S	**Sn**	**11 03 31.4**	**+0.7**
TWB1	**Santiao Chiao**	**0.71**	**345**	P	**Pn**	**11 03 21.6**	**+0.6**
	baz=350						
TWB1				S	**Sn**	**11 03 29.4**	**-1.6**
	baz=350						
TIPB	**Shuangxi**	**0.73**	**333**	*e*P	**Pn**	**11 03 20.9**	**-0.5**
	baz=340						
TIPB				*e*S	**Sn**	**11 03 30.5**	**-1.1**
	baz=340						
NNSB	**Datong**	**0.75**	**279**	P	**Pn**	**11 03 20.9**	**-0.7**
	baz=277						
NNSB				*e*S	**Sn**	**11 03 31.1**	**-0.9**
	baz=277						
NNSH	**Datong**	**0.75**	**279**	P	**Pn**	**11 03 20.8**	**-0.8**
	baz=277						
NNSH				*e*S	**Sn**	**11 03 30.5**	**-1.5**
	baz=277						
NNS	**Nan Shan**	**0.76**	**280**	P	**Pn**	**11 03 20.7**	**-1.0**
	baz=277						
NNS				S	**Sn**	**11 03 30.6**	**-1.6**
	baz=277						
YOJ	**Yonaguni jima**	**0.76**	**79**	P	**Pn**	**11 03 21.5**	**-0.1**
YOJ				S	**Sn**	**11 03 33.0**	**+0.9**
NWLT	**Wulai**	**0.78**	**306**	*e*P	**Pn**	**11 03 21.6**	**-0.3**
	baz=300						
NWLT				S	**Sn**	**11 03 32.3**	**-0.3**
	baz=300						
YHNB	**Yeheng**	**0.82**	**295**	*i* P	**Pn**	**11 03 22.1**	**-0.5**
	baz=288						
YHNB				S	**Sn**	**11 03 33.2**	**-0.6**
	baz=288						
NWF	**Wu-fen Shan**	**0.84**	**334**	*e*P	**Pn**	**11 03 22.2**	**-0.6**
	baz=346						
NWF				S	**Sn**	**11 03 33.6**	**-0.5**
	baz=346						
WFSB	**Wu-fen Shan**	**0.84**	**334**	*e*P	**Pn**	**11 03 23.1**	**+0.4**
	baz=346						
WFSB				S	**Sn**	**11 03 33.2**	**-0.8**
	baz=346						
NSK	**Sanguang**	**0.84**	**295**	P	**Pn**	**11 03 22.2**	**-0.6**
	baz=288						
NSK				S	**Sn**	**11 03 33.2**	**-1.0**
	baz=288						
ESL	**Shilin**	**0.86**	**234**	P	**Pn**	**11 03 22.2**	**-0.8**
	baz=239						
ESL				S	**Sn**	**11 03 33.3**	**-1.1**
	baz=239						
TWA	**Mucha**	**0.86**	**320**	P	**Pn**	**11 03 23.3**	**+0.2**
	baz=332						
TWA				*e*S	**Sn**	**11 03 34.7**	**+0.1**
	baz=332						
WHF	**Hehuan Shan**	**0.86**	**259**	*e*P	**Pn**	**11 03 22.5**	**-0.9**
	baz=255						
WHF				*e*S	**Sn**	**11 03 34.5**	**-0.7**
	baz=255						
NHDH	**Xindian Distri**	**0.89**	**317**	P	**Pn**	**11 03 23.4**	**+0.1**
	baz=326						
NHDH				S	**Sn**	**11 03 35.2**	**0.0**
	baz=326						
TWT	**Tachien**	**0.93**	**266**	P	**Pn**	**11 03 24.0**	**-0.1**
	baz=263						
TWT				S	**Sn**	**11 03 36.4**	**-0.1**
	baz=263						
TDCB	**Techi**	**0.95**	**266**	P	**Pn**	**11 03 24.2**	**-0.1**
	baz=263						
TDCB				*e*S	**Sn**	**11 03 36.0**	**-0.8**
	baz=263						
EGFH	**Guangfu**	**0.95**	**228**	*e*P	**Pn**	**11 03 23.9**	**-0.3**
	baz=216						
EGFH				S	**Sn**	**11 03 36.1**	**-0.7**
	baz=216						
CHGB	**Renai**	**0.96**	**255**	P	**Pn**	**11 03 24.3**	**-0.3**
	baz=242						
CHGB				S	**Sn**	**11 03 36.8**	**-0.5**
	baz=242						
OWD	**Renai**	**1.00**	**249**	P	**Pn**	**11 03 24.2**	**-0.7**
	baz=238						
OWD				*e*S	**Sn**	**11 03 36.8**	**-1.2**
	baz=238						
YM01	**YM01**	**1.00**	**326**	P	**Pn**	**11 03 24.9**	**0.0**
	baz=338						
YM01				S	**Sn**	**11 03 37.9**	**-0.1**
	baz=338						
YM10	**YM10**	**1.01**	**326**	*e*P	**Pn**	**11 03 23.3**	**-1.9**
	baz=338						
YM10				*e*S	**Sn**	**11 03 38.0**	**-0.3**
	baz=338						
YM11	**YM11**	**1.02**	**326**	*e*P	**Pn**	**11 03 26.0**	**+0.8**
	baz=338						
YM11				*e*S	**Sn**	**11 03 37.7**	**-0.7**
	baz=338						
YM04	**YM04**	**1.02**	**325**	*e*P	**Pn**	**11 03 23.6**	**-1.7**
	baz=337						
YM04				S	**Sn**	**11 03 37.1**	**-1.4**
	baz=337						
TWS1	**Kuangyinshan**	**1.05**	**318**	P	**Pn**	**11 03 25.4**	**-0.2**
	baz=329						
TWS1				S	**Sn**	**11 03 38.8**	**-0.4**
	baz=329						
HGSD	**Ruisui**	**1.08**	**221**	*e*P	**Pn**	**11 03 26.3**	**+0.3**
	baz=217						
HGSD				*e*S	**Sn**	**11 03 39.6**	**-0.3**
	baz=217						
TWY	**Chenhua**	**1.10**	**331**	*e*P	**Pn**	**11 03 26.0**	**-0.2**
	baz=344						
TWY				*e*S	**Sn**	**11 03 39.4**	**-0.9**
	baz=344						
VWDT	**VWDT**	**1.11**	**240**	P	**Pn**	**11 03 26.1**	**-0.3**
	baz=228						
VWDT				S	**Sn**	**11 03 39.7**	**-0.9**
	baz=228						
LIOB	**Emei**	**1.12**	**287**	P	**Pn**	**11 03 26.5**	**-0.1**
	baz=287						
LIOB				S	**Sn**	**11 03 41.5**	**+0.6**
	baz=287						
NCU	**National Centr**	**1.12**	**306**	*e*P	**Pn**	**11 03 26.6**	**+0.1**
	baz=307						
NCU				*e*S	**Sn**	**11 03 40.7**	**-0.2**
	baz=307						
NSTT	**Nanjuang**	**1.13**	**286**	P	**Pn**	**11 03 26.3**	**-0.4**
	baz=286						
NSTT				*e*S	**Sn**	**11 03 41.2**	**+0.1**
	baz=286						
EHY	**Hungye**	**1.13**	**225**	P	**Pn**	**11 03 26.1**	**-0.6**
	baz=221						
EHY				S	**Sn**	**11 03 39.1**	**-2.1**
	baz=221						
WHP	**Taichung City**	**1.14**	**268**	*e*P	**Pn**	**11 03 27.3**	**+0.5**
	baz=261						
WHP				S	**Sn**	**11 03 41.2**	**-0.2**
	baz=261						
YULB	**Yu-li**	**1.23**	**222**	*e*P	**Pn**	**11 03 26.7**	**-1.3**
	baz=218						
YULB				*e*S	**Sn**	**11 03 41.8**	**-1.8**
	baz=218						
SSLB	**Suanglung**	**1.25**	**245**	P	**Pn**	**11 03 28.4**	**+0.1**
	baz=236						
SSLB				S	**Sn**	**11 03 43.3**	**-0.7**
	baz=236						
SMLT	**Sun Moon Lake**	**1.26**	**250**	*e*P	**Pn**	**11 03 28.7**	**+0.2**
	baz=240						
SMLT				*e*S	**Sn**	**11 03 43.4**	**-0.9**
	baz=240						
TWF1	**Yuli**	**1.26**	**221**	*e*P	**Pn**	**11 03 28.6**	**+0.1**
	baz=226						
TWF1				S	**Sn**	**11 03 43.0**	**-1.3**
	baz=226						
TYC	**Yuchr**	**1.29**	**252**	*e*P	**Pn**	**11 03 28.5**	**-0.3**
	baz=242						
TYC				*e*S	**Sn**	**11 03 43.4**	**-1.5**
	baz=242						
TWQ1	**Liyutan**	**1.30**	**272**	P	**Pn**	**11 03 29.1**	**+0.2**
	baz=269						
TWQ1				S	**Sn**	**11 03 46.1**	**+1.0**
	baz=269						
NMLH	**Miaoli**	**1.30**	**280**	P	**Pn**	**11 03 29.0**	**+0.1**
	baz=278						
NMLH				*e*S	**Sn**	**11 03 43.7**	**-1.4**
	baz=278						
NSY	**Sanyi**	**1.31**	**275**	*e*P	**Pn**	**11 03 29.6**	**+0.5**
	baz=273						
WHYT	**Xinyi Township**	**1.37**	**244**	*e*P	**Pn**	**11 03 30.5**	**+0.5**
	baz=236						
WHYT				*e*S	**Sn**	**11 03 45.9**	**-1.2**
	baz=236						
FULB	**Fuli**	**1.39**	**217**	*e*P	**Pn**	**11 03 30.2**	**0.0**
	baz=205						
FULB				*e*S	**Sn**	**11 03 46.3**	**-1.0**
	baz=205						
IRIF	**Iriomote-Funau**	**1.40**	**89**	P	**Pn**	**11 03 29.8**	**-0.5**
IRIF				*e*S	**Sn**	**11 03 47.6**	**-0.1**
YUS	**Yu-Shan**	**1.40**	**234**	P	**Pn**	**11 03 30.7**	**-0.1**
	baz=223						
YUS				*e*S	**Sn**	**11 03 47.3**	**-1.1**
	baz=223						
WJS	**Zhushan**	**1.43**	**250**	*e*P	**Pn**	**11 03 30.7**	**0.0**
	baz=238						
WJS				S	**Sn**	**11 03 50.2**	**+1.9**
	baz=238						
CHKT	**Chengkung**	**1.43**	**212**	S	**Sn**	**11 03 45.2**	**-3.1**
	baz=200						
WNT	**Mingjian**	**1.45**	**253**	P	**Pn**	**11 03 32.6**	**+1.6**
	baz=249						
WNT				S	**Sn**	**11 03 50.4**	**+1.6**
	baz=249						
HATJ	**Hateruma jima**	**1.50**	**100**	P	**Pn**	**11 03 32.2**	**+0.6**
ALS	**Alishan**	**1.50**	**238**	*e*P	**Pn**	**11 03 32.3**	**+0.3**
	baz=226						
ALS				S	**Sn**	**11 03 51.3**	**+0.7**
	baz=226						
ELDTW	**Lidau**	**1.56**	**224**	*e*P	**Pn**	**11 03 32.7**	**+0.2**
	baz=216						
ELDTW				*i* S	**Sn**	**11 03 50.8**	**-0.8**
	baz=216						
CHN5	**Tsauling**	**1.56**	**243**

CHN1				S		Sn	11 04 02.4	+2.5
	baz=231							
SNST	**Tainan City**	**1.90**	**235**	S		Sn	11 04 02.1	+2.2
	baz=232							
SGST	**Jiashian**	**1.92**	**231**	P		Pn	11 03 37.6	+0.1
	baz=219							
SGST				S		Sn	11 04 02.2	+1.8
	baz=219							
WSF	**Szhu**	**1.93**	**250**	S		Sn	11 04 02.2	+1.7
	baz=257							
SLGT	**Liugui**	**1.94**	**227**	P		Pn	11 03 38.6	+0.9
	baz=224							
SLGT				S		Sn	11 04 02.4	+1.6
	baz=224							
JISG	**Ishigakijimahi**	**1.95**	**82**	P		Pn	11 03 37.0	-0.8
JISG				*eS*		Sn	11 04 00.2	-0.9
JTJ	**Tarama**	**2.31**	**81**	P		Pn	11 03 42.8	0.0
JTJ				*eS*		Sn	11 04 10.1	+0.1

IDC **16** *11:07:51.8±1.0, 17°.06N×60°.38W, h0km, mb4.2/9, mb1 4.4/9, mb1mx4.0/65, mbtmp4.2/9, Error ellipse: s-maj=37.7km s-min=16.0km az=127.0*

NEIC **16** *11:07:53.3±1.4, 17°.09N±0°.01×60°.42W±0°.06, h10km±1km, mb4.7/10, Error ellipse: s-maj=10.3km s-min=2.9km az=89.0*

TRN **16** *11:07:56.0, 17°.02N×60°.35W, h38km, MD3.6*

ISC 16 11:07:54.9±1.3, 17°.07N±0°.03×60°.39W±0°.04, h20km±5km, n70, σ1s09/93, mb4.4/12, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H05N1	**Guadeloupe/Mar**	**0.98**	**221**	Pn		**Pn**	**11 08 13.7**	**0.0**
H05N1				Sn		**Sn**	**11 08 27.1**	**+0.1**
	SNR=18							
ABD	**La Joyeuse, An**	**1.21**	**241**	*eP*		**Pg**	**11 08 18.1**	**-0.2**
ABD	**La Joyeuse, An**	**1.21**	**241**	*e*		Pg	11 08 26.8	+8.5
ABD				*eS*		**Sg**	**11 08 34.6**	**+0.5**
MAGL	**Barre de l'ile**	**1.40**	**218**	*eP*		**Pb**	**11 08 20.2**	**-0.3**
MAGL				*eS*		**Sb**	**11 08 38.7**	**+0.7**
ANWB	**Willy Bob**	**1.46**	**294**	*eP*		**Pn**	**11 08 20.7**	**+0.5**
ANWB				*eS*		**Sg**	**11 08 41.6**	**-0.6**
ANWB	**Willy Bob**	**1.46**	**294**	Pn		**Pn**	**11 08 20.2**	**0.0**
ANWB				Sn		**Sn**	**11 08 38.1**	**-0.6**
CBE	**Ff, Capester**	**1.53**	**230**	*eP*		**Pb**	**11 08 22.5**	**-0.1**
CBE				*eS*		**Sb**	**11 08 43.0**	**+1.3**
TDBA	**Terre de Bas,**	**1.70**	**225**	*eP*		**Pb**	**11 08 25.4**	**-0.1**
TDBA				*eS*		**Sb**	**11 08 46.2**	**-0.3**
DWS	**Wesley**	**1.73**	**211**	*eP*		**Pn**	**11 08 24.1**	**+0.1**
DWS				*eS*		**Sn**	**11 08 46.4**	**+1.0**
MDPV	**Dominica, Penn**	**1.74**	**215**	*eP*		**Pn**	**11 08 24.3**	**+0.3**
MDPV				*eS*		**Sn**	**11 08 46.9**	**+1.1**
MDVC	**Dominica, Viel**	**1.74**	**214**	*eP*		**Pn**	**11 08 24.6**	**+0.5**
MDVC				*eS*		**Sn**	**11 08 46.2**	**+0.4**
MLYT	**Lee's Yard**	**1.76**	**259**	*eP*		**Pb**	**11 08 26.5**	**0.0**
MLYT				*eS*		**Sb**	**11 08 48.2**	**+0.6**
MDN	**Morne-Daniel**	**1.99**	**209**	*eP*		**Pn**	**11 08 28.3**	**+0.9**
MDN				*eS*		**Sn**	**11 08 51.7**	**-0.1**
NVDO	**Nevis, Disaste**	**2.13**	**272**	*eP*		**Pn**	**11 08 31.0**	**+1.5**
NVDO				*eS*		**Sb**	**11 08 57.7**	**-1.3**
SKI	**Saint Kitts**	**2.26**	**277**	*eP*		**Pb**	**11 08 33.6**	**-1.5**
SKI				*eS*		**Sn**	**11 09 00.7**	**+2.2**
SKI	**Saint Kitts**	**2.26**	**277**	Pn		**Pn**	**11 08 32.3**	**+1.1**
BAMF	**Morne Balai**	**2.35**	**198**	*eP*		**Pn**	**11 08 34.4**	**+1.9**
CXM	**Morne La Croix**	**2.36**	**199**	*eP*		**Pn**	**11 08 34.1**	**+1.3**
PCM	**Pelee Case Pet**	**2.37**	**200**	*eP*		**Pb**	**11 08 35.4**	**-1.6**
GBMF	**Grand Be**	**2.38**	**198**	*eP*		**Pn**	**11 08 33.6**	**+0.7**
PML	**Morne Lenard**	**2.40**	**199**	*eP*		**Pn**	**11 08 35.4**	**+2.3**
FDF	**Fort de France**	**2.43**	**198**	*eP*		**Pn**	**11 08 34.8**	**+1.2**
FDF				*eS*		**Sn**	**11 09 03.1**	**+0.3**
FDF	**Fort de France**	**2.43**	**198**	Pn		**Pn**	**11 08 34.5**	**+0.9**
LPMF	**Morne Lapointe**	**2.54**	**193**	*eP*		**Pn**	**11 08 35.9**	**+0.8**
ZAM	**Aeronautique**	**2.56**	**194**	*eP*		**Pn**	**11 08 36.3**	**+1.1**
BIM	**Bigot**	**2.62**	**195**	*eP*		**Pn**	**11 08 37.4**	**+1.2**
BIM				*eS*		**Sn**	**11 09 07.2**	**-0.2**
MPOM	**Morne Pois Mar**	**2.65**	**190**	*eP*		**Pn**	**11 08 37.0**	**+0.5**
MPOM				*eS*		**Sn**	**11 09 07.1**	**-0.9**
H05S1	**Guadeloupe/Mar**	**2.66**	**189**	Sn		**Sn**	**11 09 08.5**	**+0.1**
SMRT	**St. Maarten**	**2.74**	**291**	*eP*		**Pn**	**11 08 40.4**	**+2.6**
SMRT				*eS*		**Sn**	**11 09 12.3**	**+1.9**
SABA	**Saba**	**2.78**	**282**	*eP*		**Pn**	**11 08 39.7**	**+1.3**
SABA	**Saba**	**2.78**	**282**	*e*		Pg	11 08 55.2	+7.0
SABA				*eS*		**Sn**	**11 09 13.4**	**+2.0**
SLBI	**Saint Lucia, B**	**3.08**	**191**	*eP*		**Pn**	**11 08 43.7**	**+1.3**
SLBI				*eS*		**Sn**	**11 09 17.8**	**-0.9**
SLAC	**Saint Lucia, A**	**3.19**	**189**	*eP*		**Pn**	**11 08 44.7**	**+0.7**
SLAC				*eS*		**Sn**	**11 09 20.3**	**-1.2**
MCLT	**Moule a Chique**	**3.38**	**189**	*eP*		**Pn**	**11 08 48.1**	**+1.5**
MCLT				*eS*		**Sn**	**11 09 25.6**	**-0.6**
MCLT	**Moule a Chique**	**3.38**	**189**	Pn		**Pn**	**11 08 47.9**	**+1.3**
SSV	**Crater Summit**	**3.80**	**192**	*eS*		**Sn**	**11 09 35.8**	**-0.8**
SVV	**Soufriere Volc**	**3.81**	**192**	*eS*		**Sn**	**11 09 36.2**	**-0.7**
SVCV	**St. Vincent, C**	**3.84**	**191**	*eP*		**Pn**	**11 08 55.2**	**+2.2**
SVCV				*eS*		**Sn**	**11 09 36.9**	**-0.7**
SVB	**Belmont**	**3.86**	**193**	*eS*		**Sn**	**11 09 36.9**	**-1.3**
BCHC	**Barbados, Cave**	**3.98**	**169**	*eS*		**Sn**	**11 09 40.7**	**-0.2**
BBSP	**Saint Philip**	**4.04**	**167**	*eS*		**Sn**	**11 09 42.6**	**+0.1**
GCMP	**Grenada, Carri**	**4.66**	**193**	*eP*		**Pn**	**11 09 05.3**	**+1.1**
GCMP	**Grenada, Carri**	**4.66**	**193**	*eS*		**Sn**	**11 09 56.1**	**-1.7**
HUMP	**Col San Antoni**	**5.32**	**282**	Pn		**Pn**	**11 09 12.2**	**-1.1**
CBYP	**Canovanas**	**5.35**	**284**	Pn		**Pn**	**11 09 12.1**	**-1.7**
CBYP				Sn		**Sn**	**11 10 15.2**	**+0.4**
AOPR	**Arecibo Observ**	**6.20**	**283**	Pn		**Pn**	**11 09 25.5**	**+0.1**
TRN	**Trinidad (W)**	**6.46**	**189**	*eS*		**Sn**	**11 10 38.8**	**-3.3**
GUIV	**Guiria**	**6.62**	**196**	*eS*		**Sn**	**11 10 43.5**	**-2.7**
DR12	**Loma Pena Alta**	**8.73**	**283**	Pn		**Pn**	**11 10 00.8**	**+0.6**
DR12				Sn		**Sn**	**11 11 37.7**	**-0.4**
SDDR	**Presa de Saban**	**10.54**	**282**	Pn		**Pn**	**11 10 24.8**	**-0.2**
BCIP	**Isla Barro Col**	**20.49**	**250**	P		**P**	**11 12 31.4**	**-0.4**
BCIP				IAmb		IAmb	11 12 42.6	
	comp=Z,50nm,1.2s							
ACON	**Acoyapa**	**24.51**	**261**	P		**P**	**11 13 13.0**	**-0.3**
ACON				IAmb		IAmb	11 13 19.3	
	comp=Z,30nm,1.5s							
255A	**Hazlehurst**	**24.88**	**311**	P		**P**	**11 13 15.9**	**-0.6**
SCHQ	**Schefferville**	**38.02**	**354**	P		**P**	**11 15 12.8**	**+1.1**
	comp=Z,6.7nm,0.5s,baz=173,slow=7.2,SNR=5.6							
SCHQ	**Schefferville**	**38.02**	**354**	P		**P**	**11 15 11.7**	**0.0**
SCHQ				IAmb		IAmb	11 15 13.3	
	comp=Z,7.3nm,0.6s							
LVC	**Limon Verde**	**40.30**	**192**	P		**P**	**11 15 30.7**	**-0.8**
LVC				IAmb		IAmb	11 15 39.1	
	comp=Z,24nm,1.4s							
PB06	**IPOC Station P**	**40.54**	**193**	P		**P**	**11 15 33.1**	**0.0**
PB06				IAmb		IAmb	11 15 49.3	
	comp=Z,27nm,0.9s							
PB15	**IPOC Station P**	**41.00**	**193**	P		**P**	**11 15 38.1**	**+1.0**
YKA	**Yellowknife Ar**	**58.80**	**334**	P		**P**	**11 17 50.9**	**-0.7**
	comp=Z,1.6nm,0.7s,baz=107,slow=7.5,SNR=6.1							
CLL	**Collm**	**66.51**	**41**	*eP*		**P**	**11 18 44.0**	**+0.7**
CLL				*e*			11 18 57.0	
	comp=Z,7.0nm,0.9s							
GERES	**GERESS Array B**	**66.91**	**44**	P		**P**	**11 18 45.5**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=280,slow=1.8,SNR=2.7							
INK	**Inuvik**	**68.04**	**337**	P		**P**	**11 18 52.7**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=83,slow=4.4,SNR=4.3							
INK	**Inuvik**	**68.04**	**337**	P		**P**	**11 18 52.5**	**-0.1**
INK				IAmb		IAmb	11 18 53.3	
	comp=Z,5.1nm,1.2s							
ARCES	**ARCESS Array B**	**72.72**	**22**	P		**P**	**11 19 21.6**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=260,slow=5.4,SNR=3.7							
ILAR	**Eielson Array**	**73.23**	**333**	P		**P**	**11 19 24.1**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=135,slow=6.7,SNR=4.2							
FINES	**FINESS Array B**	**73.49**	**30**	P		**P**	**11 19 25.9**	**-0.1**
	comp=Z,2.3nm,0.6s,baz=256,slow=1.6,SNR=8.4							
TRF	**Thorofare Moun**	**74.85**	**332**	P		**P**	**11 19 34.5**	**+0.4**
BPAW	**Bear Paw Mtn.**	**75.07**	**333**	P		**P**	**11 19 34.8**	**-0.4**
MLR	**Muntele Rosu**	**75.50**	**46**	P		**P**	**11 19 39.1**	**+0.9**
	comp=Z,4.5nm,0.9s,baz=256,slow=8.4,SNR=3.2							
BRTR	**Keskin Array B**	**82.31**	**51**	P		**P**	**11 20 15.3**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=268,slow=4.2,SNR=4.3							

IDC **16** *11:11:41.2±2.1, 8°.12S×127°.84E, h114km±25km, mb3.5/2, mb1 4.0/7, mb1mx3.6/44, mbtmp4.3/7, MS4.0/1, Ms1 4.0/1, ms1mx2.8/28, Error ellipse: s-maj=23.0km s-min=19.7km az=151.0*

NEIC **16** *11:11:41.7±2.3, 7°.93S±0°.06×127°.77E±0°.05, h93km±10km, mb4.2/14, Error ellipse: s-maj=10.3km s-min=5.5km az=150.0*

ISC 16 11:11:41.7±0.6, 8°.04S±0°.05×127°.78E±0°.05, h100km, n33, σ2s48/40, mb4.1/6, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SOEI	**Soe**	**3.87**	**244**			**Pn**	**11 12 39.5**	**+0.2**
SOEI				Sn		**Sn**	**11 13 22.9**	**-1.0**
BATI	**Baumata**	**4.60**	**242**	P		**Pn**	**11 12 49.6**	**+0.5**
	15nm,0.3s,baz=110,slow=12,SNR=9.6							
BATI				S		**Sn**	**11 13 41.4**	**-0.1**
	19nm,0.3s,baz=271,slow=20,SNR=6.4							
MTN	**Manton Dam**	**5.80**	**146**			**Pn**	**11 13 06.1**	**+0.7**
MTN				Sn		**Sn**	**11 14 11.5**	**+0.8**
FAKI	**Fak Fak**	**6.76**	**41**	Pn		**Pn**	**11 13 16.9**	**-1.6**
FAKI				Sn		**Sn**	**11 14 32.6**	**-1.3**
KNRA	**Kununurra**	**7.65**	**173**			**Pn**	**11 13 30.7**	**+0.2**
KNRA				Sn		**Sn**	**11 14 52.9**	**-2.8**
SIJI	**Sorong**	**7.92**	**26**	P		**Pn**	**11 13 33.8**	**-0.6**
	2.1nm,0.3s,baz=243,slow=22,SNR=10							
LUWI	**Luwuk**	**8.56**	**324**	Pn		**Pn**	**11 13 42.0**	**-0.9**
FITZ	**Fitzroy Crossi**	**10.21**	**192**	P		**Pn**	**11 14 04.1**	**-1.3**
	1.1nm,0.3s,baz=11,slow=11,SNR=29							
FITZ				S		**Sn**	**11 15 52.7**	**-5.3**
	1.4nm,0.3s,baz=38,slow=11,SNR=2.6							
FITZ	**Fitzroy Crossi**	**10.21**	**192**			**Pn**	**11 14 03.9**	**-1.5**
FITZ						**Sn**	**11 15 56.3**	**-1.8**
WB0	**Warramunga Arr**	**13.30**	**152**			**Pn**	**11 14 44.0**	**-2.8**
WRAB	**Tennant Creek**	**13.43**	**152**			**Pn**	**11 14 45.7**	**-2.6**
WRA	**Warramunga Arr**	**13.43**	**152**	P		**Pn**	**11 14 45.3**	**-3.1**
	5.3nm,0.3s,baz=338,slow=9.4,SNR=112							
WRA				S		**Sn**	**11 17 07.7**	**-8.6**
	4.7nm,0.3s,baz=332,slow=23,SNR=14							
WB2	**Warramunga Arr**	**13.44**	**152**			**Pn**	**11 14 45.6**	**-2.8**
WR0	**Warramunga Arr**	**13.54**	**152**			**Pn**	**11 14 47.3**	**-2.5**
PSA00	**Pilbara Seismi**	**15.48**	**209**	Pn		**Pn**	**11 15 13.2**	**-1.4**
PSA00				IAmb		IAmb	11 15 27.0	
	comp=Z,23nm,1.2s							
COEN	**Coen**	**16.21**	**113**	Pn		**Pn**	**11 15 23.5**	**-0.3**
COEN				IAmb		IAmb	11 15 26.6	
	comp=Z,25nm,1.2s							
AS31	**Alice Springs**	**16.61**	**160**			**Pn**	**11 15 28.2**	**-0.5**
ASAR	**Alice Springs**	**16.61**	**160**	P		**Pn**	**11 15 26.9**	**-1.8**
	comp=Z,1.8nm,0.3s,baz=332,slow=10,SNR=67							
ASAR				S		Sn	11 18 20.7	-12
	comp=Z,0.4nm,0.3s,baz=328,slow=15,SNR=4.4							
KKM	**Kota Kinabalu**	**18.13**	**320**	P		**P**	**11 15 46.0**	**-0.4**
KKM				IAmb		IAmb	11 16 03.9	
	comp=Z,20nm,1.3s							
GIRL	**Giralia**	**19.50**	**220**	P		**Pn**	**11 16 04.5**	**+1.1**
CTA	**Charters Tower**	**21.52**	**126**	LR		LR	11 26 07.7	
	comp=Z,389nm,19.7s,baz=331,slow=40							
FORT	**Forrest**	**22.62**	**179**	P		**P**	**11 16 36.6**	**+2.3**
MORW	**Morawa**	**23.66**	**206**	P		**P**	**11 16 45.5**	**+1.3**
MORW				IAmb		IAmb	11 16 54.6	
	comp=Z,11nm,1.1s							
BBOO	**Buckleboo**	**25.82**	**164**	P		**P**	**11 17 06.3**	**+2.6**
BBOO				IAmb		IAmb	11 17 10.4	
	comp=Z,11nm,1.1s							
NWAO	**Narrogin (SRO)**	**26.62**	**200**	P		**P**	**11 17 12.6**	**+1.6**
STKA	**Stephens Creek**	**26.98**	**153**	P		**P**	**11 17 16.8**	**+2.5**
CAN	**Canberra**	**33.40**	**147**	P		**P**	**11 18 14.6**	**+3.7**
CAN				IAmb		IAmb	11 18 16.6	
	comp=Z,8.3nm,1.1s							
TOO	**Toolangi**	**33.50**	**154**	P		**P**	**11 18 14.8**	**+3.1**
CMAR	**Chiang Mai Arr**	**38.77**	**313**	P		**P**	**11 18 56.3**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=143,slow=6.8,SNR=6.5							
TUWZ	**Tuamarina**	**52.60**	**137**	P		**P**	**11 20 47.3**	**+1.9**
MK31	**Makanchi Array**	**67.91**	**328**	P		**P**	**11 22 27.6**	**-2.1**
MK31				IAmb		IAmb	11 22 38.7	
	comp=Z,2.6nm,1.2s							
MKAR	**Makanchi Array**	**67.91**	**328**	P		**P**	**11 22 28.1**	**-1.6**
	comp=Z,0.5nm,0.4s,baz=126,slow=8.0,SNR=8.6							
QSPA	**South Pole Qui**	**81.94**	**180**	P		**P**	**11 23 51.7**	**+1.4**

BGR **16** *11:11:55.2±0.0, 16°.36N×61°.63W, h47km, mb5.4*

OSPL **16** *11:11:58.4±3.6, 18°.40N×59°.52W, h15km±999km, ML4.9*

IDC **16** *11:12:02.5±0.4, 17°.05N×60°.26W, h0km, mb4.7/42, mb1 4.8/45, mb1mx4.7/70, mbtmp4.7/45, ML3.9/3, Error ellipse: s-maj=11.0km s-min=9.5km az=127.0*

BJI **16** *11:12:02.0±0.0, 17°.10N×60°.30W, h10km, mB5.3/3, Ms5.3/2, Ms7 5.1/2*

NEIC **16** *11:12:04.0±1.3, 17°.10N±0°.03×60°.33W±0°.04, h10km±1km, mb5.0/159, Error ellipse: s-maj=6.9km s-min=4.3km az=59.0*

TRN **16** *11:12:04.9, 17°.08N×60°.33W, h28km, MD4.5*

MOS **16** *11:12:05.4±0.8, 17°.09N×60°.34W, h30km, mb5.2/24, Error ellipse: s-maj=8.9km s-min=6.8km az=57.8*

ISC 16 11:12:05.2±0.6, 17°.04N±0°.03×60°.31W±0°.03, h20km±2km, h20km:pP-P, n530, σ1s17/529, mb5.0/143, 17C-35D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H05N1	**Guadeloupe/Mar**	**1.02**	**225**	Pn		**Pg**	**11 12 24.2**	**-0.8**
H05N1				Sn		**Sg**	**11 12 37.6**	**-0.8**
ABD	**La Joyeuse, An**	**1.26**	**244**	*eP*		**Pb**	**11 12 28.4**	**+0.1**
ABD				*eS*		**Sb**	**11 12 45.4**	**+1.2**
MAGL	**Barre de l'ile**	**1.43**	**221**	*eP*		**Pb**	**11 12 30.5**	**-0.7**
MAGL				*eS*		**Sg**	**11 12 50.8**	**-0.8**
ANWB	**Willy Bob**	**1.54**	**294**	*i* P		**Pn**	**11 12 30.7**	**-0.9**
ANWB				*eS*		**Sn**	**11 12 49.7**	**-1.4**
ANWB	**Willy Bob**	**1.54**	**294**			**Pn**	**11 12 30.7**	**-0.9**
ANWB				Sn		**Sn**	**11 12 49.3**	**-1.7**
CBE	**Ff, Capester**	**1.58**	**232**	*eP*		**Pb**	**11 12 33.1**	**-0.6**
CBE				*eS*		**Sb**	**11 12 53.1**	**-0.2**
TDBA	**Terre de Bas,**	**1.74**	**227**	*eP*		**Pb**	**11 12 35.5**	**-1.0**
TDBA				*eS*		**Sb**	**11 12 57.3**	**-0.6**
DWS	**Wesley**	**1.75**	**213**	*eP*		**Pb**	**11 12 35.2**	**-1.5**
DWS				*eS*		**Sb**	**11 12 56.7**	**-1.6**
MDPV	**Dominica, Penn**	**1.77**	**217**	*eP*		**Pb**	**11 12 36.1**	**-0.8**
MDPV				*eS*		**Sb**	**11 12 57.7**	**-1.0**
MDVC	**Dominica, Viel**	**1.77**	**217**	*eP*		**Pb**	**11 12 35.7**	**-1.3**
MDVC				*eS*		**Sb**	**11 12 57.7**	**-1.1**
MLYT	**Lee's Yard**	**1.83**	**260**	*eP*		**Pn**	**11 12 36.9**	**+1.3**
MLYT				*eS*		**Sb**	**11 13 00.8**	**+0.2**
MDN	**Morne-Daniel**	**2.01**	**211**	*eP*		**Pb**	**11 12 39.6**	**-1.4**
NVDO	**Nevis, Disaste**	**2.21**	**272**	*eP*		**Pn**	**11 12 41.2**	**+0.4**
NVDO				*eS*		**Sn**	**11 13 08.6**	**+1.0**
SVN	**Savane Anatole**	**2.34**	**201**	*eP*		**Pn**	**11 12 43.3**	**+0.7**
SKI	**Saint Kitts**	**2.34**	**277**	*eP*		**Pn**	**11 12 43.1**	**+0.5**
SKI				*eS*		**Sn**	**11 13 11.3**	**+0.5**
SKI	**Saint Kitts**	**2.34**	**277**	P		**Pn**	**11 12 43.1**	**+0.5**
SKI	**Saint Kitts**	**2.34**	**277**			**Pn**	**11 12 43.1**	**+0.5**
BAMF	**Morne Balai**	**2.36**	**200**	*eP*		**Pn**	**11 12 43.7**	**+0.8**
CXM	**Morne La Croix**	**2.37**	**201**	*eP*		**Pn**	**11 12 44.0**	**+0.9**
PCM	**Pelee Case Pet**	**2.38**	**202**	*eP*		**Pn**	**11 12 43.8**	**+0.7**
GBMF	**Grand Be**	**2.38**	**200**	*eP*		**Pn**	**11 12 43.8**	**+0.6**
PML	**Morne Lenard**	**2.40**	**201**	*eP*		**Pn**	**11 12 44.2**	**+0.8**
FDF	**Fort de France**	**2.44**	**200**	*eP*		**Pn**	**11 12 44.8**	**+0.8**
FDF				*eS*		**Sn**	**11 13 13.8**	**+0.6**
FDF	**Fort de France**	**2.44**	**200**	P		**Pn**	**11 12 44.6**	**+0.7**
FDF							11 13 12.9	
FDF	**Fort de France**	**2.44**	**200**			**Pn**	**11 12 44.6**	**+0.7**
FDF				Sn		**Sn**	**11 13 12.9**	**-0.3**
LPMF	**Morne Lapointe**	**2.54**	**195**	*eP*		**Pn**	**11 12 45.5**	**+0.3**
ZAM	**Aeronautique**	**2.55**	**196**	*eP*		**Pn**	**11 12 46.0**	**+0.5**
TRMF	**Trois Ilets**	**2.59**	**196**	*eP*		**Pn**	**11 12 46.6**	**+0.5**
BIM	**Bigot**	**2.62**	**196**	*eP*		**Pn**	**11 12 47.4**	**+1.0**
BIM				*eS*		**Sn**	**11 13 18.6**	**+1.0**
MPOM	**Morne Pois Mar**	**2.64**	**192**	*eP*		**Pn**	**11 12 47.8**	**+1.1**
MPOM				*eS*		**Sn**	**11 13 20.1**	**-3.6**
H05S1	**Guadeloupe/Mar**	**2.65**	**191**	Pn		**Pn**	**11 12 47.5**	**+0.6**
H05S1				Sn		**Sn**	**11 13 19.0**	**+0.5**
	SNR=2634							
SMRT	**St. Maarten**	**2.82**	**291**	*eP*		**Pn**	**11 12 48.6**	**-0.7**
SMRT				*eS*		**Sn**	**11 13 22.6**	**-0.1**
SMRT	**St. Maarten**	**2.82**	**291**			**Pn**	**11 12 48.5**	**-0.7**
SMRT				Sn		**Sn**	**11 13 20.2**	**-2.5**
SABA	**Saba**	**2.86**	**282**	*eP*		**Pn**	**11 12 50.1**	**+0.4**
SABA	**Saba**	**2.86**	**282**	*e*		Pg	11 13 06.7	+6.6
SABA	**Saba**	**2.86**	**282**			**Pn**	**11 12 50.1**	**+0.4**
SLBI	**Saint Lucia, B**	**3.07**	**192**	*eP*		**Pn**	**11 12 53.5**	**+0.9**
SLBI				*eS*		**Sn**	**11 13 29.2**	**+0.5**
SLAC	**Saint Lucia, A**	**3.18**	**190**	*eP*		**Pn**	**11 12 55.0**	**+0.9**
SLAC				*eS*		**Sn**	**11 13 32.9**	**+1.4**
SLPA	**Patience**	**3.23**	**191**	*eP*		**Pn**	**11 12 56.4**	**+1.6**
SLDE	**Delcer**	**3.30**	**193**	*eP*		**Pn**	**11 12 57.1**	**+1.3**
SLDE				*eS*		**Sn**	**11 13 35.5**	**+1.0**
MCLT	**Moule a Chique**	**3.37**	**191**	*eP*		**Pn**	**11 12 57.6**	**+0.9**
MCLT				*eS*		**Sn**	**11 13 36.8**	**+0.6**
MCLT	**Moule a Chique**	**3.37**	**191**			**Pn**	**11 12 57.2**	**+0.5**
SSV	**Crater Summit**	**3.79**	**193**	*eP*		**Pn**	**11 13 04.7**	**+2.0**
SSV				*eS*		**Sn**	**11 13 46.9**	**+0.2**
SVV	**Soufriere Volc**	**3.81**	**193**	*eP*		**Pn**	**11 13 05.0**	**+2.3**
SVV				*eS*		**Sn**	**11 13 48.0**	**+1.0**
SVCV	**St. Vincent, C**	**3.83**	**192**	*eP*		**Pn**	**11 13 04.4**	**+1.2**
SVCV				*eS*		**Sn**	**11 13 47.5**	**-0.3**
SVB	**Belmont**	**3.86**	**194**	*eP*		**Pn**	**11 13 05.0**	**+1.4**
SVB				*eS*		**Sn**	**11 13 48.4**	**+0.1**
SVB	**Belmont**	**3.86**	**194**	Pn		**Pn**	**11 13 04.9**	**+1.4**
BCHC	**Barbados, Cave**	**3.94**	**170**	*eP*		**Pn**	**11 13 06.5**	**+1.9**
BCHC				*eS*		**Sn**	**11 13 51.4**	**+1.1**
BBGH	**Gun Hill**	**3.94**	**169**	*eP*		**Pn**	**11 13 05.9**	**+1.3**
BBGH	**Gun Hill**	**3.94**	**169**	*eS*		**Sn**	**11 13 51.5**	**+1.1**
BBGH	**Gun Hill**	**3.94**	**169**	Pn		**Pn**	**11 13 05.9**	**+1.3**
BBSP	**Saint Philip**	**4.00**	**168**	*eP*		**Pn**	**11 13 07.3**	**+1.9**
BBSP	**Saint Philip**	**4.00**	**168**	*eS*		**Sn**	**11 13 53.3**	**+1.5**
CDVI	**St. Croix**	**4.31**	**280**	*eP*		**Pn**	**11 13 10.1**	**+0.4**
CDVI	**St. Croix**	**4.31**	**280**	*eS*		**Sn**	**11 13 57.6**	**-1.9**
CDVI	**St. Croix**	**4.31**	**280**			**Pn**	**11 13 09.7**	**0.0**
STVI	**Saint Thomas**	**4.62**	**287**			**Pn**	**11 13 12.9**	**-1.0**
GCMP	**Grenada, Carri**	**4.66**	**194**	*eP*		**Pn**	**11 13 15.6**	**+1.1**
GCMP	**Grenada, Carri**	**4.66**	**194**	*eS*		**Sn**	**11 14 08.0**	**+0.1**
GRSS	**Sisters**	**4.88**	**195**	*eP*		**Pn**	**11 13 19.9**	**+2.4**
GRSS	**Sisters**	**4.88**	**195**	*eS*		**Sn**	**11 14 13.4**	**-0.1**
CUPR	**Culebra, Puert**	**4.91**	**286**			**Pn**	**11 13 16.8**	**-1.0**
GRHS	**Sauteurs**	**4.96**	**195**	*eP*		**Pn**	**11 13 20.8**	**+2.2**
GRHS	**Sauteurs**	**4.96**	**195**	*eS*		**Sn**	**11 14 15.4**	**-0.1**
GRGR	**Grenville**	**5.05**	**195**	*eP*		**Pn**	**11 13 21.1**	**+1.2**
GRGR	**Grenville**	**5.05**	**195**	*eS*		**Sn**	**11 14 17.0**	**-0.8**
GRGR	**Grenville**	**5.05**	**195**			**Pn**	**11 13 21.1**	**+1.2**
MTP	**Monte Pirata**	**5.11**	**283**			**Pn**	**11 13 20.4**	**-0.3**
HUMP	**Col San Antoni**	**5.40**	**283**			**Pn**	**11 13 24.5**	**-0.1**
CBYP	**Canovanas**	**5.43**	**284**			**Pn**	**11 13 24.6**	**-0.5**
IGPR	**InterUniversit**	**5.61**	**280**			**Pn**	**11 13 28.4**	**+0.9**
GCPR	**Guaynabo City**	**5.65**	**284**			**Pn**	**11 13 27.4**	**-0.7**
SJG	**San Juan**	**5.67**	**282**	Pn		**Pn**	**11 13 28.

E63A Oxbow 30.06 349 P P 11 18 14.4 +1.4
baz=164
E63A Oxbow 30.06 349 P P 11 18 13.2 +0.2
CCIG Comitan 30.48 273 P P 11 18 17.9 +0.6
CCIG IAmb IAmb 11 18 44.6
comp=Z,25nm,0.8s
PLAL Pickwick Lake 30.54 311 P P 11 18 17.8 +0.4
PLAL IAmb IAmb 11 18 34.4
comp=Z,24nm,0.9s
H56A Elgin 30.57 337 P P 11 18 17.7 +0.2
baz=149
D63A Stockholm 30.60 349 P P 11 18 19.2 +1.5
baz=165,SNR=5.2
D62A Allapoint, All 30.82 348 P P 11 18 20.5 +0.9
baz=164,SNR=5.2
D62A Allapoint, All 30.82 348 P P 11 18 20.5 +0.9
D62A IAmb IAmb 11 18 35.0
comp=Z,13nm,0.8s
H55A Tweed 30.89 336 P P 11 18 20.5 +0.1
baz=147
WVT Waverly 30.93 313 P P 11 18 22.2 +1.4
baz=121
D61A St Aubert, Com 31.16 347 P P 11 18 22.7 0.0
baz=162
E58A La Victoria 31.17 343 P P 11 18 23.1 +0.3
baz=156
J52A Paris 31.23 331 P P 11 18 22.9 -0.5
baz=141
OXF Oxford 31.29 309 P P 11 18 24.4 +0.4
OXF pmax pmax
comp=Z,61nm,0.9s
OXF Oxford 31.29 309 P P 11 18 24.9 +0.9
baz=116
OXF Oxford 31.29 309 P P 11 18 24.4 +0.4
D59A Saint-Raymond 31.36 345 P P 11 18 25.7 +1.2
baz=159
H53A Bobcaygeon 31.46 335 P P 11 18 27.3 +1.9
baz=145
SADO Sadowa 31.86 334 P P 11 18 29.4 +0.6
comp=Z,8.5nm,0.7s,baz=145,slow=5.7,SNR=4.5
SADO Sadowa 31.86 334 P P 11 18 28.7 -0.2
SADO IAmb IAmb 11 18 43.3
comp=Z,12nm,0.8s
D56A ZEC Mazanza, M 32.22 341 P P 11 18 32.5 +0.5
baz=154
ALGO Algonquin Park 32.40 337 P P 11 18 34.0 +0.4
baz=147
D55A Sainte-Anne-du 32.42 340 P P 11 18 34.8 +1.0
baz=152
J49A Marlette 32.61 328 P P 11 18 35.8 +0.3
baz=137
K48A Perry 32.72 327 P P 11 18 36.5 0.0
baz=134
F52A Sundridge 32.77 335 P P 11 18 37.7 +0.9
baz=145
D54A Lac Fusel, La 32.92 339 P P 11 18 38.4 +0.2
baz=150
RCBR Riachuelo 33.14 131 P P 11 18 41.0 +0.5
comp=Z,18nm,1.0s,baz=46,slow=2.4,SNR=5.1
RCBR Riachuelo 33.14 131 *ce*P P 11 18 41.7 +1.2
RCBR pmax pmax
comp=Z,43nm,1.7s
RCBR Riachuelo 33.14 131 P P 11 18 41.0 +0.5
J47A Sunmer 33.39 327 P P 11 18 42.6 +0.3
baz=134
E51A G1948 Merrick 33.44 336 P P 11 18 43.1 +0.4
baz=145
W41B Gary Mavity, V 33.69 309 P P 11 18 45.5 +0.5
baz=114
D51A Lot 18 Range I 33.85 336 P P 11 18 47.2 +0.9
baz=146
X40A Basin Creek Fa 33.86 307 P P 11 18 47.7 +1.2
baz=113
D50A G1974 Best Tow 34.09 336 P P 11 18 49.2 +0.8
baz=145
CCM Cathedral Cave 34.25 314 P P 11 18 50.5 +0.6
baz=119
U40A Yellville 34.62 310 P P 11 18 52.3 -0.9
baz=115
CHGQ Chibougamau 34.70 344 P P 11 18 54.5 +0.8
baz=156,SNR=6.0
W39A Magazine 34.85 308 P P 11 18 57.0 +1.9
baz=113
G46A Petoskey 34.88 329 P P 11 18 56.5 +1.3
baz=136
D48A Paudash Townsh 34.90 334 P P 11 18 56.2 +0.8
baz=142
E47A Iron Bridge 34.98 332 P P 11 18 56.6 +0.5
baz=140
D47A Chapleau 35.36 333 P P 11 19 00.1 +0.8
baz=140
PB16 IPOC Station P 36.30 195 P P 11 19 07.4 -0.9
PB16 IAmb IAmb 11 19 09.1
comp=Z,29nm,1.9s
TLIG Tlapa 36.49 277 P P 11 19 09.4 -0.1
TLIG IAmb IAmb 11 19 27.2
comp=Z,16nm,1.0s
TUL1 Leonard 36.63 308 P P 11 19 10.8 +0.3
baz=112
WHTX Lake Whitney, 36.73 301 P P 11 19 12.1 +0.9
baz=105
GO01 Chusmiza 37.51 194 P P 11 19 17.6 -0.9
833A Chaparral WMA, 37.62 294 P P 11 19 20.1 +1.2
baz=99
PB11 IPOC Station P 37.71 194 P P 11 19 18.0 -1.8
PB11 IAmb IAmb 11 19 40.6
comp=Z,17nm,0.8s
PB08 IPOC Station P 37.96 194 P P 11 19 21.5 -0.7
SCHQ Schefferville 38.05 354 P P 11 19 23.1 +1.0
comp=Z,23nm,0.5s,baz=186,slow=7.4,SNR=20
SCHQ Schefferville 38.05 354 P P 11 19 22.6 +0.4
JCT Junction City 38.34 298 P P 11 19 24.8 -0.2
JCT pmax pmax
comp=Z,17nm,1.1s
JCT Junction City 38.34 298 P P 11 19 25.8 +0.8
baz=101
JCT Junction City 38.34 298 P P 11 19 24.8 -0.2
WMOK Wichita Mounta 38.55 305 P P 11 19 26.8 +0.1
baz=107
ABTX Abilene, Hawle 38.68 301 P P 11 19 28.5 +0.7
baz=104
ABTX Abilene, Hawle 38.68 301 P P 11 19 27.6 -0.2
ABTX IAmb IAmb 11 19 48.2
comp=Z,28nm,1.1s
PATCX Punta Patache 38.85 195 P P 11 19 28.9 -0.3
PATCX IAmb IAmb 11 19 31.6
comp=Z,39nm,1.2s
PB01 IPOC Station P 38.91 194 P P 11 19 28.9 -0.9
SPMN Marine on St. 39.08 323 P P 11 19 31.0 0.0
baz=126
PB07 IPOC Station P 39.66 194 P P 11 19 35.2 -1.0
PB07 IAmb IAmb 11 19 51.5
comp=Z,62nm,1.8s
ZAIG Zacatecas 40.04 285 P P 11 19 39.7 +0.1
LVC Limon Verde 40.30 192 P P 11 19 41.6 -0.1
comp=Z,14nm,1.0s,baz=350,slow=2.3,SNR=6.7
LVC Limon Verde 40.30 192 *ce*P P 11 19 42.2 +0.5
LVC pmax pmax
comp=Z,13nm,0.8s
LVC Limon Verde 40.30 192 P P 11 19 41.3 -0.4
BGNE Belgrade 40.52 315 P P 11 19 43.6 +0.6
baz=116
BGNE Belgrade 40.52 315 P P 11 19 43.2 +0.2
ECSD EROS Data Cent 40.58 319 P P 11 19 43.9 +0.4
baz=120
CBKS Cedar Bluff 40.62 310 P P 11 19 44.0 +0.1
baz=111
AMTX Amarillo 40.88 304 P P 11 19 46.9 +0.7
baz=105
AMTX Amarillo 40.88 304 P P 11 19 46.1 -0.1
TXAR Lajitas Array 41.47 295 P P 11 19 51.3 +0.2
comp=Z,1.5nm,0.7s,baz=104,slow=7.3,SNR=7.7
TXAR PcP PcP 11 21 50.0 +1.2
comp=Z,1.7nm,0.8s,baz=122,slow=5.7,SNR=4.8
MSTX Muleshoe 41.54 302 P P 11 19 52.6 +0.9
baz=103
MSTX Muleshoe 41.54 302 P P 11 19 51.7 +0.1
MSTX IAmb IAmb 11 20 12.8
comp=Z,42nm,1.2s
AGMN Agassiz Nation 42.56 325 P P 11 19 59.2 -0.4
baz=125
KSCO Kaye Shedlock' 42.80 309 P P 11 20 02.8 +0.8
baz=109
GO02 Mina Guanaco 42.91 192 P P 11 20 03.0 0.0
GO02 IAmb IAmb 11 20 04.5
comp=Z,31nm,0.8s
HPIG 43.00 291 P P 11 20 03.8 +0.1

OGNE Ogallala 43.03 312 P P 11 20 04.1 +0.4
baz=111
CPUP Villa Florida 43.21 176 P P 11 20 04.6 -0.4
comp=Z,5.6nm,0.8s,baz=2.4,slow=8.1,SNR=8.0
CPUP Villa Florida 43.21 176 P P 11 20 04.9 -0.1
CPUP pmax pmax
comp=Z,10.0nm,1.0s
CPUP Villa Florida 43.21 176 P P 11 20 04.9 -0.1
MNTX Cornudas Mount 43.27 298 P P 11 20 05.7 +0.1
baz=95,SNR=13
T25A Trinidad 43.61 306 P P 11 20 09.0 +0.5
baz=105
AC02 Maricunga 44.45 191 P P 11 20 16.4 +0.8
AC02 IAmb IAmb 11 20 33.2
comp=Z,22nm,0.9s
SDCO Great Sand Dun 44.60 307 P P 11 20 17.5 +0.9
baz=105
ANMO Albuquerque 44.72 303 P P 11 20 18.4 +0.8
comp=Z,1.6nm,0.7s,baz=102,slow=8.2,SNR=7.8
ANMO Albuquerque 44.72 303 *eP* P 11 20 17.7 +0.2
ANMO pmax pmax
comp=Z,5.0nm,1.3s
ANMO Albuquerque 44.72 303 P P 11 20 18.3 +0.8
baz=101
ANMO Albuquerque 44.72 303 P P 11 20 17.6 +0.2
ISCO Idaho Springs 45.25 310 P P 11 20 22.5 +0.8
baz=107
121A Cookes Peak, D 45.41 299 P P 11 20 24.5 +1.5
baz=98
121A Cookes Peak, D 45.41 299 IAmb IAmb 11 20 45.0
comp=Z,17nm,0.9s
RSSD Black Hills 45.58 316 P P 11 20 24.5 +0.3
baz=112
S22A 4UR Ranch, Cre 45.62 306 P P 11 20 25.5 +0.7
baz=104
N23A Red Feather La 45.81 311 P P 11 20 26.1 0.0
baz=108
319A Douglas 46.53 297 P P 11 20 32.2 +0.4
319A IAmb IAmb 11 20 52.1
comp=Z,11nm,0.9s
AC05 El Transito 46.62 192 P P 11 20 32.1 -0.2
K22A Casper 46.77 313 P P 11 20 34.1 +0.6
baz=109
K22A Casper 46.77 313 P P 11 20 33.2 -0.3
MVCO Mesa Verde 46.80 305 P P 11 20 34.9 +1.0
baz=102
FRB Frobisher Bay 47.00 355 P P 11 20 35.3 +0.5
comp=Z,16nm,0.6s,baz=164,slow=8.4,SNR=25
O20A White River Ci 47.28 309 P P 11 20 37.9 +0.3
baz=105
PV03 Paradox Valley 47.29 307 IAmb IAmb 11 20 54.6
comp=Z,12nm,1.0s
W18A Petrified Fore 47.40 302 P P 11 20 39.5 +0.9
baz=99
DGMT Dagmar 47.45 321 P P 11 20 39.1 +0.6
baz=116
DGMT Dagmar 47.45 321 P P 11 20 38.6 +0.1
DGMT IAmb IAmb 11 20 54.9
comp=Z,9.8nm,0.8s
CO01 Juntas del Tor 47.69 192 IAmb IAmb 11 20 43.0
comp=Z,24nm,1.2s
TUC Tucson 47.90 298 P P 11 20 42.9 +0.5
TUC pmax pmax
comp=Z,7.0nm,0.9s
TUC Tucson 47.90 298 P P 11 20 44.1 +1.7
baz=96
TUC Tucson 47.90 298 P P 11 20 42.9 +0.5
LAO LASA Array 47.98 318 P P 11 20 43.5 +0.8
baz=112
X16A Lo Mia Camp, P 48.69 301 IAmb IAmb 11 21 06.7
comp=Z,11nm,1.0s
WUAZ Wupatki 48.78 302 P P 11 20 50.6 +1.3
baz=98,SNR=6.4
WUAZ Wupatki 48.78 302 IAmb IAmb 11 21 05.3
comp=Z,16nm,1.1s
BW06 Boulder Array 48.94 312 P P 11 20 50.8 +0.4
baz=106,SNR=5.8
BW06 Boulder Array 48.94 312 IAmb IAmb 11 21 06.3
comp=Z,24nm,1.4s
PD31 Pinedale Array 48.94 312 P P 11 20 51.0 +0.6
PD31 IAmb IAmb 11 21 07.3
comp=Z,10nm,0.9s
PDAR Pinedale Array 48.94 312 P P 11 20 51.0 +0.6
comp=Z,3.2nm,0.6s,baz=112,slow=9.4,SNR=22
RLMT Red Lodge 49.43 315 P P 11 20 55.0 +0.9
baz=108
RLMT Red Lodge 49.43 315 IAmb IAmb 11 21 10.9
comp=Z,13nm,1.1s
PTEO Sao Teotonio 49.52 55 *eP* P 11 20 54.8 +0.2
MORF Marmelete 49.53 55 *eP* P 11 20 55.3 +0.5
comp=Z,75nm,1.6s
214A Organ Pipe Nat 49.58 298 P P 11 20 57.1 +1.8
baz=94
PNCL Nicolau / Gran 49.77 54 *eP* P 11 20 57.1 +0.6
MESJ Messejana 49.96 55 *eP* P 11 20 58.7 +0.7
SNOW Snow King Moun 49.97 313 IAmb IAmb 11 21 16.1
comp=Z,16nm,1.1s
REDW Red Top Meadow 50.01 313 IAmb IAmb 11 21 15.8
comp=Z,16nm,1.1s
AHID Auburn Hatcher 50.03 312 IAmb IAmb 11 21 15.7
comp=Z,16nm,0.9s
PCVE Castro Verde 50.07 55 *eP* P 11 20 59.6 +0.8
comp=Z,41nm,1.6s
HWUT Hardware Ranch 50.08 310 IAmb IAmb 11 21 16.7
comp=Z,15nm,0.9s
PBDV Barranco-do-Ve 50.09 55 *eP* P 11 20 59.7 +0.7
comp=Z,90nm,1.9s
TPAW Teton Pass 50.11 313 IAmb IAmb 11 21 16.5
comp=Z,24nm,1.2s
PCAS Casmilo, Conde 50.16 52 *eP* P 11 20 59.8 +0.3
comp=Z,30nm,1.3s
PMTG Montargil 50.17 53 *eP* P 11 20 59.6 0.0
comp=Z,17nm,1.6s
FXWY Fox Creek 50.20 313 IAmb IAmb 11 21 18.5
comp=Z,17nm,1.4s
PBEJ Beja 50.27 54 *eP* P 11 21 00.3 0.0
comp=Z,28nm,1.4s
SFJD Kangerlussuaq 50.32 5 P P 11 21 01.0 +0.8
comp=Z,8.1nm,0.8s,baz=181,slow=7.7,SNR=5.5
SFJD Kangerlussuaq 50.32 5 P P 11 21 01.0 +0.8
SFJD pmax pmax
comp=Z,165nm,2.0s
SFJD Kangerlussuaq 50.32 5 IAmb IAmb 11 21 01.9
comp=Z,165nm,1.9s
EGMT Eagleton 50.70 319 P P 11 21 04.6 +1.1
baz=110
DUG Dugway, Tooele 50.71 308 P P 11 21 05.1 +1.3
baz=101
DUG Dugway, Tooele 50.71 308 IAmb IAmb 11 21 20.4
comp=Z,19nm,1.1s
PGAV Gavieira, Arco 50.73 49 *eP* P 11 21 04.2 +0.3
comp=Z,34nm,1.6s
PVIS Viseu 50.74 51 *eP* P 11 21 04.0 +0.1
PMRV Marv??o 50.88 53 *eP* P 11 21 04.9 0.0
PCBR Castelo Branco 50.88 52 *eP* P 11 21 05.3 +0.3
MTE Manteigas 50.94 52 *eP* P 11 21 05.4 -0.1
comp=Z,32nm,1.1s
MTE Manteigas 50.94 52 P P 11 21 05.2 -0.3
MTE IAmb IAmb 11 21 06.3
comp=Z,21nm,1.0s
PVRL Vila Real 50.99 50 *eP* P 11 21 06.1 +0.3
comp=Z,38nm,1.7s
MVO Moncorvo 51.48 51 *eP* P 11 21 09.8 +0.3
comp=Z,26nm,1.6s
H10N3 ASCENSION HYDR 51.59 115 T T 12 17 20.6
baz=297,slow=76,SNR=8.4
H10N2 ASCENSION HYDR 51.60 115 T T 12 17 16.0
baz=297,slow=76,SNR=3.6
H10N1 ASCENSION HYDR 51.62 115 T T 12 17 22.3
baz=297,slow=76,SNR=6.3
IRM Iron Mountain 51.71 300 P P 11 21 13.2 +1.9
baz=95,SNR=5.7
BC3 Big Chuckawall 51.92 300 P P 11 21 15.1 +2.1
baz=94
GMRC Granite Mounta 52.19 301 P P 11 21 16.7 +1.7
baz=95
MDT Midelt 52.33 61 P P 11 21 16.4 +0.3
comp=Z,4.1nm,1.0s,baz=271,slow=7.9,SNR=4.6
BELC Belle Mtn. Jos 52.40 300 P P 11 21 18.6 +2.0
baz=94
IKP In-Ko-Pah, Jac 52.41 298 P P 11 21 18.6 +2.0
baz=93
TUQ Turquoise Moun 52.46 302 P P 11 21 18.8 +1.8
baz=95
R11A Troy Canyon, C 52.52 305 P P 11 21 19.0 +1.5
baz=98
MONP2 Monument Peak 52.69 299 P P 11 21 20.5 +1.7
baz=93
HEC Hector,Ludlow 52.74 301 P P 11 21 20.9 +1.9
baz=95
PFO Pinyon Flats O 52.76 299 *eP* P 11 21 19.4 +0.2
PFO pmax pmax
comp=Z,9.0nm,2.5s
TPNV Topopah Spring 52.88 304 P P 11 21 21.6 +1.5
baz=96,SNR=7.3
GO05 Huala 52.93 192 IAmb IAmb 11 21 36.0
comp=Z,23nm,0.8s
GSC Goldstone, Bar 53.17 302 P P 11 21 23.9 +1.7
baz=95
GSC Goldstone, Bar 53.17 302 IAmb IAmb 11 21 38.1
comp=Z,26nm,1.9s
BBRC Big Bear Solar 53.18 300 P P 11 21 24.2 +1.7
baz=94
FURC Furnace Creek, 53.32 303 P P 11 21 24.9 +1.8
baz=96
MURC Murrieta 53.37 299 P P 11 21 25.9 +2.2
baz=93
ESDC Sonseca Array 53.53 53 P P 11 21 24.8 +0.1
comp=Z,4.6nm,0.9s,baz=259,slow=7.9,SNR=17
MFID Camas Ranch 53.55 312 P P 11 21 25.5 +0.6
MPMC Manual Prospec 53.78 302 P P 11 21 28.4 +1.6
baz=95
LRMC Laurel Mtn Rad 53.90 302 P P 11 21 29.0 +1.4
baz=94
EDW2 Edwards Air Fo 54.11 301 P P 11 21 30.9 +1.9
baz=94
CWC Cottonwood Cre 54.29 303 P P 11 21 32.1 +1.7
baz=95
BI02 San Fabin de 54.41 191 P P 11 21 31.4 +0.4
BI02 IAmb IAmb 11 21 51.2
comp=Z,14nm,1.1s
NV11 Mina Array Sit 54.54 305 P P 11 21 33.3 +1.0
NV11 IAmb IAmb 11 21 52.8
comp=Z,34nm,1.9s
NVAR Mina Array Bea 54.65 305 P P 11 21 34.4 +1.3
comp=Z,1.8nm,0.7s,baz=92,slow=6.9,SNR=17
VES Vestal, Richgr 55.06 302 P P 11 21 37.9 +2.1
baz=94
DBIC Dimbokro 55.08 94 P P 11 21 35.6 -0.7
comp=Z,2.6nm,0.5s,baz=280,slow=5.3,SNR=7.1
DBIC Dimbokro 55.08 94 P P 11 21 35.7 -0.5
DBIC pmax pmax
comp=Z,14nm,1.2s
DBIC Dimbokro 55.08 94 P P 11 21 35.7 -0.5
DBIC IAmb IAmb 11 21 51.4
comp=Z,14nm,1.1s
OMMB Old Mammoth Mi 55.12 304 IAmb IAmb 11 21 54.1
comp=Z,10nm,1.0s
SCZ2 Santa Cruz Isl 55.42 300 P P 11 21 40.0 +1.5
baz=92
NEW Newport 55.49 317 P P 11 21 39.3 +0.5
comp=Z,10nm,0.6s,baz=104,slow=6.0,SNR=17
NEW Newport 55.49 317 P P 11 21 38.9 +0.1
baz=104,SNR=10
NEW Newport 55.49 317 IAmb IAmb 11 21 55.8
comp=Z,15nm,0.9s
SMMC Simmler 55.77 301 P P 11 21 42.9 +1.9
baz=93
SUMG Summit 56.96 8 ⇓*i*P P 11 21 49.7 +0.4
SUMG *i* 11 22 03.5
SUMG pmax pmax
comp=Z,81nm,1.1s
SUMG Summit 56.96 8 P P 11 21 49.4 +0.1
SUMG Summit 56.96 8 ⇓*i*P P 11 21 49.7 +0.4
comp=Z,81nm,1.1s
SUMG *i* 11 22 03.5
K05A Summer Lake 57.10 310 IAmb IAmb 11 22 08.1
comp=Z,18nm,1.0s
J05D Fort Rock, OR 57.42 311 P P 11 21 54.2 +1.4
baz=97
O03E Paynes Creek 57.53 307 P P 11 21 55.3 +1.7
baz=95
EKA Eskdalemuir Ar 57.62 35 P P 11 21 53.7 -0.1
comp=Z,1.7nm,0.6s,baz=251,slow=8.8,SNR=7.1
LTY Liberty 57.62 315 IAmb IAmb 11 22 11.3
comp=Z,14nm,1.0s
I05D Terrebonne, OR 57.63 312 P P 11 21 56.2 +2.1
baz=98
F05D White Salmon 57.94 314 P P 11 21 57.9 +1.8
baz=99
J04D Umpqua Nationa 58.05 311 P P 11 21 58.6 +1.3
baz=96
PLCA Paso Flores 58.26 189 P P 11 21 59.4 +0.9
comp=Z,4.0nm,0.7s,baz=16,slow=8.4,SNR=8.0
I04A Tendick Farm, 58.33 311 P P 11 21 59.1 +0.1
baz=97
YKA Yellowknife Ar 58.86 334 P P 11 22 01.6 -0.6
comp=Z,6.8nm,0.6s,baz=106,slow=7.6,SNR=87
TORD Torodi Ar. Bea 59.78 84 P P 11 22 08.2 -1.3
comp=Z,8.0nm,0.8s,baz=290,slow=6.6,SNR=31
SSB Saint Sauveur 60.44 47 IAmb IAmb 11 22 15.6
comp=Z,11nm,0.8s
RES Resolute Bay 60.65 350 P P 11 22 14.6 +0.2
comp=Z,2.1nm,0.7s,baz=166,slow=8.3,SNR=5.0
RES Resolute Bay 60.65 350 IAmb IAmb 11 22 25.8
comp=Z,15nm,1.1s
BMRD Maredsous 61.18 42 P P 11 22 16.5 -2.0
BMRD pP pP 11 22 18.9 -4.3
BMRD sP sP 11 22 23.0 -2.1
BMRD PcP PcP 11 22 57.8 -3.3
MEM Membach 62.01 41 P P 11 22 24.5 +0.4
SENIN Lac Senin/Sane 62.45 46 IAmb IAmb 11 22 29.3
comp=Z,17nm,1.2s
DAG Danmarks Havn 63.38 10 ⇓*i*P P 11 22 32.8 +0.1
DAG *i* 11 22 46.0
DAG pmax pmax
comp=Z,14nm,0.9s
DAG Danmarks Havn 63.38 10 ⇓*i*P P 11 22 32.8 +0.1
comp=Z,14nm,0.9s
DAG *i* 11 22 46.0
KEST Kesra 63.90 58 P P 11 22 37.8 +0.8
comp=Z,20nm,0.8s,baz=233,slow=2.4,SNR=19
KEST Kesra 63.90 58 P P 11 22 37.5 +0.5
DAVOX Davos/Dischmat 64.25 46 P P 11 22 40.5 +1.3
comp=Z,8.9nm,0.6s,baz=211,slow=9.6,SNR=12
DAVA Damuels 64.27 45 *eP* P 11 22 39.8 +0.5
comp=Z,33nm,1.1s,SNR=8.3
FUORN Ofenpass-Fuorn 64.51 46 P P 11 22 41.6 +0.6
FETA Feichten 64.84 46 *eP* P 11 22 43.5 +0.5
comp=Z,27nm,0.8s,SNR=16
RETA Reutte 64.88 45 *eP* P 11 22 43.9 +0.7
comp=Z,22nm,1.1s,SNR=7.4
DLBC Dease Lake 65.03 327 P P 11 22 45.4 +1.4
comp=Z,3.7nm,0.7s,baz=117,slow=5.5,SNR=9.4
DLBC Dease Lake 65.03 327 IAmb IAmb 11 22 59.9
comp=Z,8.3nm,0.9s
MOTA Moosalm 65.11 45 *eP* P 11 22 44.8 0.0
comp=Z,20nm,0.9s,SNR=7.3
SQTA Sankt Quirin 65.17 45 *eP* P 11 22 45.4 +0.2
comp=Z,24nm,0.9s,SNR=7.4
GRF Grafenberg Arr 65.27 43 *eP* P 11 22 45.7 +0.1
comp=Z,26nm,1.1s,baz=264,slow=6.8
GRF *ep*P pwP 11 22 58.9 +2.1
WTTA Wattenberg 65.47 45 *eP* P 11 22 47.5 +0.3
comp=Z,8.7nm,0.8s
ABTA Abfaltersbach 66.06 46 *eP* P 11 22 51.0 +0.1
comp=Z,16nm,0.8s,SNR=7.9
NBO00 NORSAR Array S 66.08 30 P P 11 22 51.5 +0.8
NKC Novy Kostel 66.08 42 *eP* P 11 22 51.3 +0.4
NKC *e* 11 23 04.3
NKC Novy Kostel 66.08 42 *eP* P 11 22 51.3 +0.4
NKC *ex* x 11 23 04.3
NB2 NORSAR Subarra 66.30 30 P P 11 22 52.5 +0.4
comp=Z,22nm,1.2s,baz=260,slow=6.5
NB2 NORSAR Subarra 66.30 30 P P 11 22 52.5 +0.4
baz=260,slow=6.5
NOA NORSAR Array B 66.30 30 P P 11 22 52.7 +0.6
comp=Z,5.2nm,0.9s,baz=261,slow=6.2,SNR=10
CLL Collm 66.47 41 ⇓*i*P P 11 22 54.5 +1.2
comp=Z,26nm,1.2s
CLL *i* 11 23 07.6
comp=Z,20nm,1.0s
CLL Collm 66.47 41 ⇓*i*P P 11 22 54.5 +1.2
CLL *i* *PP pwP 11 23 07.6 +3.1
CLL pmax pmax
comp=Z,26nm,1.2s
KBA Koelnbreinsper 66.63 46 *eP* P 11 22 54.3 -0.3
comp=Z,13nm,1.0s,SNR=5.3
KHC Kasperske Hory 66.79 43 *d*iP P 11 22 55.4 -0.1
KHC pmax pmax
comp=Z,41nm,2.0s
KHC Kasperske Hory 66.79 43 *eP* P 11 22 55.5 0.0
KHC *ex* x 11 23 08.9
KHC Kasperske Hory 66.79 43 IAmb IAmb 11 22 56.6

	comp=Z,19nm,2.0s								
MYKA	**Terra Mystica**	**66.84**	**46**	*i*	P		**P**	**11 22 56.0**	**+0.1**
	comp=Z,23nm,1.5s								
GEC2	**GERESS Array S**	**66.87**	**44**		IAmb		IAmb	11 22 56.9	
	comp=Z,16nm,1.1s								
GERES	**GERESS Array B**	**66.87**	**44**		P		**P**	**11 22 55.7**	**-0.3**
	comp=Z,5.5nm,0.8s,baz=251,slow=4.1,SNR=18								
NOR	**Nord**	**67.05**	**6**	⇓	*i*P		**P**	**11 22 56.3**	**-0.2**
NOR					*i*			11 23 09.5	
NOR						pmax	pmax		
	comp=Z,8.0nm,0.8s								
NOR	**Nord**	**67.05**	**6**	⇓	*i*P		**P**	**11 22 56.3**	**-0.2**
	comp=Z,7.5nm,0.8s								
NOR					*i*			11 23 09.5	
BRG	**Berggiesshubel**	**67.05**	**41**		*e*P		**P**	**11 22 57.1**	**+0.1**
	comp=Z,18nm,0.9s								
BRG					*i*			11 23 19.6	
BRG	**Berggiesshubel**	**67.05**	**41**		*e*P		**P**	**11 22 57.1**	**+0.1**
BRG					*i*			11 23 19.5	
BRG						pmax	pmax		
	comp=Z,19nm,0.9s								
HFS	**Hagfors**	**67.41**	**31**		P		**P**	**11 22 59.5**	**+0.4**
	comp=Z,4.8nm,0.8s,baz=251,slow=4.5,SNR=7.1								
PRU	**Pruhonice**	**67.43**	**42**		*e*P		**P**	**11 22 59.9**	**+0.5**
PRU					*e*			11 23 12.6	
PRU	**Pruhonice**	**67.43**	**42**		*e*P		**P**	**11 22 59.9**	**+0.5**
PRU					*ex*		x	11 23 12.6	
OBKA	**Obir**	**67.47**	**46**		*e*P		**P**	**11 22 59.6**	**-0.2**
	comp=Z,24nm,0.8s,SNR=8.8								
SOKA	**Soboth**	**67.79**	**46**		*e*P		**P**	**11 23 01.3**	**-0.6**
	comp=Z,12nm,1.0s,SNR=5.5								
INK	**Inuvik**	**68.09**	**337**		P		**P**	**11 23 03.1**	**-0.1**
	comp=Z,6.5nm,0.6s,baz=88,slow=6.3,SNR=46								
INK	**Inuvik**	**68.09**	**337**		P		**P**	**11 23 03.2**	**-0.1**
INK						pmax	pmax		
	comp=Z,7.0nm,0.7s								
INK	**Inuvik**	**68.09**	**337**		P		**P**	**11 23 03.1**	**-0.1**
INK						IAmb	IAmb	11 23 03.8	
	comp=Z,7.1nm,0.7s								
ARSA	**Arzberg**	**68.11**	**45**		*e*P		**P**	**11 23 03.4**	**-0.4**
	comp=Z,13nm,0.9s,SNR=5.4								
CONA	**Conrad Observa**	**68.32**	**45**		*e*P		**P**	**11 23 05.4**	**+0.2**
	comp=Z,8.4nm,1.2s,SNR=7.5								
UPC	**Upice**	**68.37**	**42**		*e*P		**P**	**11 23 05.8**	**+0.5**
UPC					*e*			11 23 18.9	
UPC	**Upice**	**68.37**	**42**		*e*P		**P**	**11 23 05.8**	**+0.5**
UPC					*ex*		x	11 23 18.9	
OSTC	**Ostas**	**68.50**	**42**		*e*P		**P**	**11 23 06.6**	**+0.4**
OSTC					*ex*		x	11 23 19.5	
DPC	**Dobruska-Polom**	**68.57**	**42**		*e*P		**P**	**11 23 07.1**	**+0.4**
DPC					*e*			11 23 20.2	
DPC	**Dobruska-Polom**	**68.57**	**42**		*e*P		**P**	**11 23 07.1**	**+0.4**
DPC					*ex*		x	11 23 20.2	
KRUC	**Moravsky**	**68.65**	**43**		*e*P		**P**	**11 23 07.2**	**+0.1**
KRUC					*e*			11 23 20.3	
VRAC	**Vranov**	**68.77**	**43**		P		**P**	**11 23 08.0**	**+0.1**
	comp=Z,11nm,0.9s,baz=277,slow=6.5,SNR=10								
VRAC	**Vranov**	**68.77**	**43**		*e*P		**P**	**11 23 08.3**	**+0.4**
VRAC					*e*			11 23 21.2	
HYT	**Haines Junctio**	**69.03**	**329**		IAmb		IAmb	11 23 25.7	
	comp=Z,8.9nm,1.0s								
EPYK	**Eagle Plains**	**69.07**	**335**		P		**P**	**11 23 09.5**	**0.0**
	baz=95								
MODS	**Modra-Piesok**	**69.25**	**44**		*e*P		**P**	**11 23 10.1**	**-0.8**
MODS	**Modra-Piesok**	**69.25**	**44**		*e*P		**P**	**11 23 10.1**	**-0.8**
MORC	**Moravsky Berou**	**69.37**	**43**		*e*P		**P**	**11 23 12.1**	**+0.4**
MORC					*e*			11 23 25.3	
MORC	**Moravsky Berou**	**69.37**	**43**	⇑	P		**P**	**11 23 12.4**	**+0.7**
MORC	**Moravsky Berou**	**69.37**	**43**		IAmb		IAmb	11 23 13.1	
	comp=Z,14nm,1.0s								
JAVC	**Velka Javorina**	**69.49**	**44**		*e*P		**P**	**11 23 13.7**	**+1.3**
JAVC					*e*			11 23 26.6	
DAWY	**Dawson**	**70.05**	**333**		IAmb		IAmb	11 23 31.2	
	comp=Z,30nm,1.8s								
OJC	**Ojcow**	**70.80**	**42**		*e*P		**P**	**11 23 21.0**	**+0.7**
OJC					*ep*P		**pwP**	**11 23 33.8**	**+2.1**
CTGM	**Chitina Glacie**	**70.91**	**329**		IAmb		IAmb	11 23 39.1	
	comp=Z,10nm,1.0s								
PSZ	**Piszkesteto**	**71.03**	**44**		P		**P**	**11 23 21.8**	**-0.1**
PSZ						pmax	pmax		
	comp=Z,19nm,1.3s								
PSZ	**Piszkesteto**	**71.03**	**44**		P		**P**	**11 23 21.8**	**-0.1**
PSZ						IAmb	IAmb	11 23 23.3	
	comp=Z,19nm,1.3s								
BARN	**Barnard Glacie**	**71.07**	**329**		IAmb		IAmb	11 23 42.2	
	comp=Z,8.8nm,1.1s								
MENT	**Mentasta**	**71.99**	**331**		IAmb		IAmb	11 23 43.1	
	comp=Z,19nm,1.1s								
SIRR	**Siria**	**72.39**	**46**	⇓	P		**P**	**11 23 30.8**	**+0.8**
BZS	**Buzias**	**72.43**	**47**	⇓	P		**P**	**11 23 31.3**	**+1.0**
BZS	**Buzias**	**72.43**	**47**	⇓	P		**P**	**11 23 31.3**	**+1.0**
UZH	**Uzhgorod**	**72.56**	**44**		*e*P		**P**	**11 23 31.5**	**+0.5**
UZH					*e*			11 23 36.0	
UZH					*i*			11 23 44.8	
PRP	**Porcupine Dome**	**72.66**	**334**		IAmb		IAmb	11 25 23.4	
	comp=Z,8.6nm,0.5s								
ARCES	**ARCESS Array B**	**72.71**	**22**		P		**P**	**11 23 31.9**	**+0.4**
	comp=Z,7.8nm,0.7s,baz=262,slow=5.4,SNR=21								
TRPA	**Tarpa**	**72.78**	**44**	⇓	P		**P**	**11 23 33.3**	**+1.0**
GZR	**Gura Zlata**	**73.27**	**47**	⇓	P		**P**	**11 23 36.0**	**+0.7**
GZR	**Gura Zlata**	**73.27**	**47**	⇓	P		**P**	**11 23 36.0**	**+0.7**
IL31		**73.28**	**333**		P		**P**	**11 23 34.7**	**-0.2**
ILAR	**Eielson Array**	**73.28**	**333**		P		**P**	**11 23 34.7**	**-0.3**
	comp=Z,3.9nm,0.7s,baz=96,slow=5.2,SNR=39								
HDA	**Harding Lake**	**73.34**	**333**		P		**P**	**11 23 35.1**	**-0.1**
	baz=86								
FINES	**FINESS Array B**	**73.47**	**30**		P		**P**	**11 23 36.2**	**+0.1**
	comp=Z,9.4nm,0.6s,baz=255,slow=3.8,SNR=44								
FIA1	**FINESS Array S**	**73.48**	**30**		P		**P**	**11 23 36.1**	**0.0**
POKR	**Poker Plat Res**	**73.49**	**334**		P		**P**	**11 23 36.4**	**+0.3**
	baz=85								
COLA	**College**	**73.69**	**334**	⇓	*e*P		**P**	**11 23 37.4**	**+0.1**
COLA						pmax	pmax		
	comp=Z,14nm,2.0s								
TCOL	**CIGO, UAF Yank**	**73.69**	**334**		P		**P**	**11 23 37.6**	**+0.3**
	baz=85								
WRH	**Wood River Hil**	**73.83**	**333**		IAmb		IAmb	11 23 52.8	
	comp=Z,21nm,1.8s								
TOLK	**Toolik Lake Re**	**74.01**	**338**		P		**P**	**11 23 39.6**	**+0.4**
	baz=84								
VSU	**Vasula**	**74.11**	**33**	*d*	*e*P		**P**	**11 23 39.8**	**-0.1**
VSU						pmax	pmax		
	comp=Z,40nm,0.6s								
NEA	**Nenana**	**74.24**	**333**		IAmb		IAmb	11 23 55.2	
	comp=Z,13nm,1.0s								
RND	**Reindeer**	**74.27**	**332**		IAmb		IAmb	11 23 44.1	
	comp=Z,23nm,1.6s								
ARR	**Arges**	**74.57**	**47**	⇓	P		**P**	**11 23 43.6**	**+0.6**
BURAR	**Bucovina Array**	**74.63**	**44**	⇑	P		**P**	**11 23 44.5**	**+1.2**
BURAR	**Bucovina Array**	**74.63**	**44**	⇑	P		**P**	**11 23 44.5**	**+1.2**
VOIR		**74.85**	**47**	⇓	P		**P**	**11 23 44.9**	**+0.3**
VOIR		**74.85**	**47**	⇓	P		**P**	**11 23 44.9**	**+0.3**
TRF	**Thorofare Moun**	**74.91**	**332**		IAmb		IAmb	11 23 45.9	
	comp=Z,13nm,0.8s								
KTH	**Kantishna Hill**	**75.17**	**332**		IAmb		IAmb	11 24 01.1	
	comp=Z,17nm,1.1s								
BIZ	**Bicaz**	**75.33**	**45**	⇑	P		**P**	**11 23 48.6**	**+1.3**
MLR	**Muntele Rosu**	**75.46**	**46**		P		**P**	**11 23 48.3**	**+0.2**
	comp=Z,20nm,0.8s,baz=209,slow=4.0,SNR=21								
MLR	**Muntele Rosu**	**75.46**	**46**	⇓	P		**P**	**11 23 48.8**	**+0.6**
MLR	**Muntele Rosu**	**75.46**	**46**	⇓	P		**P**	**11 23 48.8**	**+0.6**
TESR	**Tescani**	**75.78**	**45**	⇓	P		**P**	**11 23 50.3**	**+0.5**
PPLA	**Purkeypile**	**75.84**	**332**		IAmb		IAmb	11 23 51.9	
	comp=Z,27nm,1.6s								
ELND	**Elena**	**75.85**	**49**	⇓	P		**P**	**11 23 50.2**	**-0.1**
VRI	**Vrincioaia**	**75.94**	**46**	⇑	P		**P**	**11 23 51.8**	**+1.1**
VRI	**Vrincioaia**	**75.94**	**46**	⇑	P		**P**	**11 23 51.8**	**+1.1**
IDI	**Anoyia**	**76.52**	**57**	⇑	P		**P**	**11 23 55.7**	**+1.3**
	comp=Z,39nm,1.0s,baz=281,slow=9.5,SNR=12								
IDI	**Anoyia**	**76.52**	**57**		P		**P**	**11 23 55.6**	**+1.3**
IDI	**Anoyia**	**76.52**	**57**		P		**P**	**11 23 54.8**	**+0.4**
SORM	**Soroca**	**76.63**	**43**	⇑	P		**P**	**11 23 54.2**	**-0.4**
SORM	**Soroca**	**76.63**	**43**	⇑	P		**P**	**11 23 54.2**	**-0.4**
AKASG	**Malin Array Be**	**76.72**	**41**		P		**P**	**11 23 54.6**	**-0.4**
	comp=Z,5.6nm,0.8s,baz=272,slow=5.0,SNR=12								
AKBB	**Malin Array Si**	**76.72**	**41**		IAmb		IAmb	11 24 08.9	
	comp=Z,10.0nm,1.1s								
HARR	**Harsova**	**76.99**	**47**	⇓	P		**P**	**11 23 56.4**	**-0.3**
HARR	**Harsova**	**76.99**	**47**	⇓	P		**P**	**11 23 56.4**	**-0.3**
KLMR	**Klimovskoe**	**79.97**	**29**		*e*P		**P**	**11 24 11.6**	**-1.2**
KLMR						AMP		11 24 27.7	
	comp=Z,28nm,1.2s								
OBN	**Obninsk**	**80.06**	**35**		P		**P**	**11 24 13.8**	**+0.4**
	comp=Z,7.8nm,0.3s,baz=300,slow=0.9,SNR=6.2								
OBN	**Obninsk**	**80.06**	**35**	⇓	*e*P		**P**	**11 24 13.8**	**+0.4**
OBN					*i*			11 24 27.9	
OBN						pmax	pmax		
	comp=Z,43nm,0.7s								
OBN	**Obninsk**	**80.06**	**35**		P		**P**	**11 24 13.8**	**+0.4**
ANTO	**Ankara**	**81.60**	**51**		P		**P**	**11 24 22.2**	**+0.1**
ANTO						pmax	pmax		
	comp=Z,25nm,0.8s								
ANTO	**Ankara**	**81.60**	**51**		P		**P**	**11 24 22.2**	**+0.1**
LPSR	**Galich'ya Gora**	**82.11**	**37**		*e*P		**P**	**11 24 22.3**	**-2.1**
LPSR					*e*			11 24 36.6	
LPSR						pmax	pmax		
	comp=Z,20nm,0.9s								
BR131	**Keskin Array S**	**82.26**	**51**		P		**P**	**11 24 25.6**	**-0.1**
BR131						pmax	pmax		
	comp=Z,17nm,1.0s								
BR131	**Keskin Array S**	**82.26**	**51**		P		**P**	**11 24 25.6**	**-0.1**
BR131						IAmb	IAmb	11 24 40.5	
	comp=Z,17nm,0.9s								
BRTR	**Keskin Array B**	**82.26**	**51**		P		**P**	**11 24 25.7**	**0.0**
	comp=Z,8.6nm,0.8s,baz=268,slow=4.0,SNR=40								
VSR	**Storozhevoye**	**82.68**	**39**		*e*P		**P**	**11 24 26.3**	**-1.1**
VSR					*e*			11 24 39.9	
VSR						pmax	pmax		
	comp=Z,20nm,0.5s								
VRH	**Novokhopyorsk**	**84.20**	**38**		*e*P		**P**	**11 24 35.4**	**+0.2**
VRH					*e*			11 24 48.8	
VRH						pmax	pmax		
	comp=Z,10.0nm,0.8s								
SOC	**Sochi**	**85.46**	**46**		*e*P		**P**	**11 24 41.7**	**0.0**
SOC					*e*			11 28 01.0	
SOC					*e*S		**S**	**11 35 06.0**	**-6.2**
SOC					*e*SS		**SS**	**11 40 42.9**	**-4.2**
SOC					*e*SSS		SSS	11 44 11.1	
SOC						pmax	pmax		
	comp=Z,23nm,0.8s								
KIRV	**Kirov**	**85.47**	**30**		P		**P**	**11 24 41.7**	**+0.3**
	comp=Z,21nm,0.6s,baz=160,slow=2.1,SNR=7.1								
ASF	**Jabal al Asfar**	**86.98**	**57**		P		**P**	**11 24 50.9**	**+1.2**
	comp=Z,3.2nm,0.8s,baz=251,slow=2.9,SNR=7.1								
KIV	**Kislovodsk**	**87.36**	**45**	*d*	*i*P		**P**	**11 24 52.2**	**+1.0**
KIV					*i*			11 25 05.0	
KIV					*e*			11 28 22.9	
KIV					*e*S		**S**	**11 35 26.6**	**-4.3**
KIV						pmax	pmax		
	comp=Z,19nm,1.0s								
KIV						MLR	MLR		
	comp=Z,478nm,17.0s								
KBZ	**Khabaz**	**87.58**	**45**		P		**P**	**11 24 53.5**	**+1.5**
	comp=Z,9.9nm,0.9s,baz=283,slow=1.4,SNR=17								
NCK	**Nalchik**	**88.14**	**45**	⇑	*e*P		**P**	**11 24 56.6**	**+1.8**
NCK						pmax	pmax		
	comp=Z,37nm,0.6s								
ZEI	**Tsey**	**88.61**	**46**		*e*P		**P**	**11 24 57.7**	**+0.4**
ZEI					*e*			11 25 11.6	
BILL	**Bilibino**	**88.71**	**344**	*d*	*e*P		**P**	**11 24 57.3**	**+0.3**
BILL						pmax	pmax		
	comp=Z,4.0nm,0.7s								
BILL	**Bilibino**	**88.71**	**344**		P		**P**	**11 24 57.0**	**+0.1**
ARU	**Arti**	**90.83**	**29**		P		**P**	**11 25 08.0**	**+0.9**
	comp=Z,1.1nm,0.2s,baz=66,slow=4.9,SNR=4.0								
ARU	**Arti**	**90.83**	**29**		P		**P**	**11 25 07.4**	**+0.3**
ARU								11 28 41.6	
ARU					S		**SKSac**	**11 35 38.3**	**+0.4**
TIXI	**Tiksi**	**91.31**	**357**	⇓	*e*P		**P**	**11 25 09.1**	**+0.1**
TIXI						pmax	pmax		
	comp=Z,3.0nm,0.8s								
SEY	**Seymchan**	**96.27**	**346**		P		**P**	**11 25 33.0**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=163,slow=5.2,SNR=4.8								
SEY	**Seymchan**	**96.27**	**346**	⇑	*e*P		**P**	**11 25 33.2**	**+1.2**
BRVK	**Borovoye**	**98.25**	**28**	⇓	*e*P		Pdif	11 25 41.3	+0.1
SYO	**Syowa Base**	**109.33**	**158**	⇓	*e*Pdiff		**Pdif**	**11 26 30.6**	**+0.7**
SYO	**Syowa Base**	**109.33**	**158**	⇓	*e*PKiKP		**PKiKP**	**11 30 34.0**	**+0.7**
KSH	**Kashi**	**110.50**	**35**		PKP		**PKiKP**	**11 30 36.9**	**+0.1**
WMQ	**Urumqi**	**112.72**	**25**		*e*PKP		**PKiKP**	**11 30 40.9**	**+0.1**
MAW	**Mawson**	**118.01**	**159**		PKP		**PKiKP**	**11 30 50.4**	**+0.4**
	comp=Z,2.8nm,0.8s,baz=279,slow=6.4,SNR=5.4								
MAW	**Mawson**	**118.01**	**159**		PKIKP		**PKiKP**	**11 30 50.2**	**+0.2**
MAW	**Mawson**	**118.01**	**159**				**PKiKP**	**11 30 50.2**	**+0.2**
HHC	**Hu-ho-hao-te**	**121.91**	**7**		*e*PKP		**PKiKP**	**11 31 00.1**	**+1.3**
HHC					PP		**PP**	**11 32 37.3**	**+6.4**
HHC					AMB		AMB		
	comp=Z,55nm,8.6s								
LZH	**Lanzhou**	**125.07**	**16**		*e*PKP		**PKPdf**	**11 31 01.0**	**-3.9**
LZH					LR		LR		
	comp=Z,170nm,18.4s								
LZH					LR		LR		
	comp=Z,150nm,16.3s								
LZH					LR		LR		
	comp=Z,190nm,18.6s								
CD2	**Chengdu**	**129.92**	**18**		PKP		**PKPdf**	**11 31 12.9**	**-1.2**
NJ2	**Nanjing**	**131.18**	**1**		*e*PKP		**PKPdf**	**11 31 15.5**	**-0.9**
GYA	**Guiyang**	**134.94**	**17**		*e*PKP		**PKPdf**	**11 31 24.3**	**+0.5**
GYA					PP		**PP**	**11 33 59.6**	**+3.0**
GYA					AMB		AMB		
	comp=Z,120nm,7.8s								
CMAR	**Chiang Mai Arr**	**139.24**	**31**		PKP		**PKPdf**	**11 31 32.2**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=314,slow=2.9,SNR=9.9								
RABL	**Rabaul**	**145.70**	**288**				**PKPbc**	**11 31 43.5**	**-0.2**
CAN	**Canberra**	**148.19**	**229**		PKP2		**PKPbc**	**11 31 50.3**	**0.0**
CAN	**Canberra**	**148.19**	**229**				**PKPbc**	**11 31 50.3**	**0.0**
KULM	**Kulim**	**150.90**	**42**				**PKiKP**	**11 31 57.6**	**-0.5**
PSI	**Prapat**	**151.56**	**48**		PKIKP		**PKPbc**	**11 31 59.0**	**-0.2**
RPSI	**Rantau Prapat**	**151.63**	**48**				**PKPbc**	**11 31 59.0**	**-0.2**
ASAR	**Alice Springs**	**165.14**	**241**		PKP		**PKPdf**	**11 32 09.0**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=252,slow=0.9,SNR=3.0								
WRA	**Warramunga Arr**	**165.81**	**256**		PKP		**PKPdf**	**11 32 08.8**	**-0.8**
	comp=Z,2.2nm,0.8s,baz=15,slow=0.4,SNR=11								

TRN 16 11:15:52.6, 17.10N×60.22W, h42km, MD3.8, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABD	**La Joyeuse, An**	**1.37**	**243**	*e*P		Pn	11 16 16.4	+1.2
ABD				*e*S		Sn	11 16 34.8	+2.7
MAGL	**Barre de l'ile**	**1.53**	**222**	*e*P		Pn	11 16 18.9	+1.3
MAGL				*e*S		Sn	11 16 37.3	+1.0
ANWB	**Willy Bob**	**1.60**	**291**	*e*P		Pn	11 16 19.4	+1.0
ANWB				*e*S		Sn	11 16 38.7	+0.8
CBE	**Ff, Capester**	**1.68**	**233**	*e*P		Pn	11 16 21.5	+1.9
CBE				*e*S		Sn	11 16 42.1	+2.2
TDBA	**Terre de Bas,**	**1.84**	**228**	*e*P		Pn	11 16 24.5	+2.8
TDBA				*e*S		Sn	11 16 46.1	+2.3
DWS	**Wesley**	**1.85**	**215**	*e*P		Pn	11 16 23.9	+2.1
DWS				*e*S		Sn	11 16 47.2	+3.2
MDPV	**Dominica, Penn**	**1.86**	**218**	*e*P		Pn	11 16 24.3	+2.2
MDPV				*e*S		Sn	11 16 46.6	+2.2
MDVC	**Dominica, Viel**	**1.87**	**218**	*e*P		Pn	11 16 23.7	+1.6
MDVC				*e*S		Sn	11 16 47.0	+2.6
MLYT	**Lee's Yard**	**1.93**	**259**	*e*P		Pn	11 16 25.3	+2.3
MDN	**Morne-Daniel**	**2.10**	**213**	*e*P		Pn	11 16 26.4	+1.1
MDN				*e*S		Sn	11 16 51.2	+1.0
NVDO	**Nevis, Disaste**	**2.30**	**271**	*e*P		Pn	11 16 29.8	+1.8
NVDO				*e*S		Sn	11 16 56.5	+1.5
SKI	**Saint Kitts**	**2.42**	**276**	*e*P		Pn	11 16 32.0	+2.3
SKI				*e*S		Sn	11 16 60.0	+1.8
SVN	**Savane Anatole**	**2.42**	**202**	*e*P		Pn	11 16 30.9	+1.1
BAMF	**Morne Balai**	**2.44**	**202**	*e*P		Pn	11 16 32.5	+2.4
CXM	**Morne La Croix**	**2.45**	**202**	*e*P		Pn	11 16 32.7	+2.4
GBMF	**Grand Be**	**2.46**	**202**	*e*P		Pn	11 16 32.2	+1.8
PCM	**Pelee Case Pet**	**2.46**	**203**	*e*P		Pn	11 16 32.7	+2.3
PML	**Morne Lenard**	**2.49**	**202**	*e*P		Pn	11 16 32.5	+1.9
FDF	**Fort de France**	**2.52**	**201**	*e*P		Pn	11 16 32.4	+1.3
FDF				*e*S		Sn	11 17 01.5	+0.9
LPMF	**Morne Lapointe**	**2.61**	**196**	*e*P		Pn	11 16 33.7	+1.3
ZAM	**Aeronautique**	**2.63**	**197**	*e*P		Pn	11 16 34.0	+1.4
TRMF	**Trois Ilets**	**2.67**	**198**	*e*P		Pn	11 16 34.7	+1.6
BIM	**Bigot**	**2.70**	**198**	*e*P		Pn	11 16 35.0	+1.4
BIM				*e*S		Sn	11 17 06.7	+1.7
MPOM	**Morne Pois Mar**	**2.71**	**193**	*e*P		Pn	11 16 35.6	+1.9
MPOM				*e*S		Sn	11 17 07.8	+2.6
SMRT	**St. Maarten**	**2.88**	**290**	*e*P		Pn	11 16 37.4	+1.3
SMRT				*e*S		Sn	11 17 11.9	+2.4
SABA	**Saba**	**2.94**	**281**	*e*P		Pn	11 16 38.3	+1.5
SLBI	**Saint Lucia, B**	**3.15**	**193**	*e*P		Pn	11 16 41.5	+1.8
SLBI				*e*S		Sn	11 17 17.6	+1.6
SLAC	**Saint Lucia, A**	**3.25**	**192**	*e*P		Pn	11 16 42.9	+1.7
SLAC				*e*S		Sn	11 17 19.6	+1.0
SLB	**Belfond**	**3.35**	**194**	*e*P		Pn	11 16 43.7	+1.2
SLB	**Belfond**	**3.35**	**194**	*e*P		Pn	11 16 43.7	+1.2
MCLT	**Moule a Chique**	**3.44**	**192**	*e*P		Pn	11 16 46.3	+2.5
MCLT				*e*S		Sn	11 17 25.8	+2.5
SSV	**Crater Summit**	**3.87**	**194**	*e*P		Pn	11 16 52.2	+2.5
SVV	**Soufriere Volc**	**3.88**	**195**	*e*P		Pn	11 16 51.2	+1.4
SVCV	**St. Vincent, C**	**3.91**	**193**	*e*P		Pn	11 16 52.1	+1.9
SVCV				*e*S		Sn	11 17 36.4	+1.6
SVB	**Belmont**	**3.94**	**195**	*e*P		Pn	11 16 51.9	+1.3
SVB				*e*S		Sn	11 17 35.8	+0.3
GCMP	**Grenada, Carri**	**4.73**	**194**	*e*P		Pn	11 17 04.2	+2.6
GCMP	**Grenada, Carri**	**4.73**	**194**	*e*S		Sn	11 17 55.5	+0.3
GRGR	**Grenville**	**5.13**	**196**	*e*P		Pn	11 17 09.5	+2.5

BGR ***16*** *11:26:10.2±0.0,51.01N×160.75E,h33km,mb5.0*
KRSC ***16*** *11:26:26.6±1.4,51.48N×157.52E,h148km±8km,ML5.2, FELT [III-IV] at Severo-Kurilsk; [III] at lighthouse Krugliy; [II] at river Karimshina (stationary KF GS).*
BJI ***16*** *11:26:28.3±0.0,51.99N×157.21E,h146km,mB4.9/31, mb4.7/38*
MOS ***16*** *11:26:28.4±0.9,51.64N×157.22E,h153km,mb4.7/52, Error ellipse: s-maj=7.6km s-min=3.1km az=77.6*
MOS Felt (III-IV) at Severo-Kuril'sk.
NEIC ***16*** *11:26:29.8±1.5,51.66N±0.08×157.3E±0.1,h148km±5km, mb4.7/242,Error ellipse: s-maj=11.9km s-min=9.9km az=139.0*
IDC ***16*** *11:26:30.9±0.5,51.74N×157.11E,h156km±3km,mb4.2/44, mb1 4.3/50,mb1mx4.2/72,mbtmp4.7/50,Error ellipse: s-maj=8.8km s-min=6.1km az=143.0*

ISC 16 11:26:29.0±0.4, 51.57N±0.04×157.39E±0.04, h143km±3km, h143km:pP-P,n745,σ1.9s03/741,mb4.7/202,20C-13D,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**0.38**	**254**	*e*P		Pn	**11 26 49.1**	**+0.1**
PAU				*e*S		Sn	**11 27 04.5**	**+0.3**
PAU	**Pauzhetka**	**0.38**	**254**		PN	Pn	**11 26 49.1**	**+0.1**
PAU					S	Sn	**11 27 04.5**	**+0.3**
KDTR	**Khodutka, Kamc**	**0.49**	**61**	*e*P		Pn	**11 26 48.7**	**-0.8**
KDTR				*e*S		Sn	**11 27 02.9**	**-2.2**
KDTR	**Khodutka, Kamc**	**0.49**	**61**		PN	Pn	**11 26 48.7**	**-0.8**
KDTR					S	Sn	**11 27 02.9**	**-2.2**
MIPR	**Malaya Ipel'ka**	**0.81**	**331**	*e*P		Pn	**11 26 51.9**	**+0.4**
MIPR				*e*S		Sn	**11 27 08.7**	**-0.1**
MIPR	**Malaya Ipel'ka**	**0.81**	**331**		PN	Pn	**11 26 51.9**	**+0.4**
MIPR					S	Sn	**11 27 08.7**	**-0.1**
ASAK	**Asacha**	**0.87**	**21**	*e*P		Pn	**11 26 52.4**	**+0.3**
ASAK				*e*S		Sn	**11 27 10.2**	**+0.4**
ASAK	**Asacha**	**0.87**	**21**		PN	Pn	**11 26 52.4**	**+0.3**
ASAK					S	Sn	**11 27 10.2**	**+0.4**
MTVR	**Mutnovka**	**1.03**	**28**	*e*P		Pn	**11 26 53.9**	**+0.3**
MTVR				*e*S		Sn	**11 27 11.5**	**-0.9**
MTVR	**Mutnovka**	**1.03**	**28**		PN	Pn	**11 26 53.6**	**+0.3**
MT

SRDR **Sredinnyy** 4.95 15 *e*P Pn 11 27 42.2 +0.7
SRDR **Sredinnyy** 4.95 15 PN Pn 11 27 42.2 +0.7
CIRR **Tsirk** 4.97 22 *e*P Pn 11 27 43.1 +1.2
CIRR **Tsirk** 4.97 22 PN Pn 11 27 43.1 +1.2
KRSR **Krestovskiy** 5.02 21 *e*P Pn 11 27 42.8 +0.3
KRSR **Krestovskiy** 5.02 21 PN Pn 11 27 42.8 +0.3
KLY **Klyuchi** 5.12 21 *e*P Pn 11 27 45.1 +1.3
KLY **Klyuchi** 5.12 21 PN Pn 11 27 45.1 +1.3
BDR **Baidarnaya** 5.49 23 *e*P Pn 11 27 49.7 +1.0
BDR **Baidarnaya** 5.49 23 PN Pn 11 27 49.7 +1.0
SRKR **Sorokina** 5.55 22 *e*P Pn 11 27 50.4 +0.8
SRKR **Sorokina** 5.55 22 PN Pn 11 27 50.4 +0.8
KBG **Krutoberegovo** 5.64 32 *e*P Pn 11 27 50.6 -0.1
KBG **Krutoberegovo** 5.64 32 PN Pn 11 27 50.6 -0.1
KBTR **Krutoberegovo** 5.64 33 *e*P Pn 11 27 50.3 -0.4
KBTR *e*S Sn 11 28 50.5 -4.1
KBTR **Krutoberegovo** 5.64 33 PN Pn 11 27 50.3 -0.4
KBTR S Sn 11 28 50.5 -4.1
BKI **Bering** 6.29 51 *e*P Pn 11 27 58.6 -0.8
BKI **Bering** 6.29 51 PN Pn 11 27 58.6 -0.8
PALN **Palana** 7.67 10 *e*P Pn 11 28 18.5 +0.7
PALN **Palana** 7.67 10 PN Pn 11 28 18.5 +0.7
OSSR **Ossora** 8.34 20 *e*P Pn 11 28 26.0 -0.7
OSSR **Ossora** 8.34 20 PN Pn 11 28 26.0 -0.7
MA2 **Magadan** 8.85 338 P Pn 11 28 33.7 +0.1
1.9nm,0.3s,baz=149,slow=9.2,SNR=43
MA2 **Magadan** 8.85 338 Pn 11 28 33.5 0.0
KUR **Kuril'sk** 8.96 229 *e*PN Pn 11 28 36.9 +1.8
KUR *i* S Sn 11 30 11.4 -3.0
KUR pmax pmax
comp=N,10.0nm,0.2s
KUR pmax pmax
comp=E,14nm,0.2s
KUR pmax pmax
comp=Z,39nm,0.2s
TILK **Tilichiki** 10.14 25 *e*P Pn 11 28 48.7 -2.1
TILK **Tilichiki** 10.14 25 PN Pn 11 28 48.7 -2.1
SMY **Shemya** 10.34 77 PN Pn 11 28 54.1 +0.7
SMY 11 30 45.6
SMY **Shemya** 10.34 77 Pn Pn 11 28 54.1 +0.7
SMY Sn 11 30 45.6 -1.9
GRPR **Tuman** 10.88 230 *e*PN Pn 11 28 59.1 -1.6
GRPR pmax pmax
comp=Z,158nm,0.3s
GRPR pmax pmax
comp=N,95nm,0.1s
SEY **Seymchan** 11.70 349 P Pn 11 29 11.8 +0.5
comp=N,0.2nm,0.3s,baz=153,slow=11,SNR=34
KMSK **Kamenskaya** 11.91 20 *e*P Pn 11 29 14.9 +0.9
KMSK **Kamenskaya** 11.91 20 PN Pn 11 29 14.9 +0.9
JKA **Kamikawa-asahi** 12.41 239 Pn 11 29 21.4 +0.7
ASAJ **Asahikawa** 12.41 239 P Pn 11 29 21.4 +0.7
comp=N,3.1nm,0.3s,baz=64,slow=8.0,SNR=17
KLR **Kul'dur** 16.49 272 P P 11 30 12.5 +0.7
comp=N,0.3nm,0.3s,baz=60,slow=13,SNR=17
KLR **Kul'dur** 16.49 272‖ *e*P P 11 30 13.1 +1.2
BILL **Bilibino** 17.08 11 *d i*P P 11 30 18.5 +0.3
BILL pmax pmax
comp=Z,39nm,1.0s
BILL **Bilibino** 17.08 11 P P 11 30 18.2 0.0
BILL IAmb IAmb 11 30 20.8
comp=Z,33nm,0.9s
YAK **Yakutsk** 18.27 316 P P 11 30 30.1 -1.2
comp=Z,0.6nm,0.3s,baz=83,slow=1.0,SNR=59
YAK **Yakutsk** 18.27 316 *c i*P P 11 30 29.8 -1.6
YAK *e*S S 11 33 46.9 -5.7
YAK pmax pmax
comp=Z,129nm,0.7s
YAK pmax pmax
comp=E,37nm,0.7s
YAK pmax pmax
comp=N,22nm,0.8s
YAK smax smax
comp=E,151nm,2.3s
YAK smax smax
comp=N,146nm,2.0s
YAK **Yakutsk** 18.27 316 P P 11 30 29.7 -1.6
ZEA **Zeya** 18.35 289 *e*P P 11 30 31.6 -0.6
ZEA pmax pmax
comp=Z,29nm,1.0s
USRK **Ussuriysk Ar.** 18.50 256 P P 11 30 33.4 -0.6
baz=66,slow=10,SNR=8.1
SPIA **Saint Paul Isl** 19.54 61 P P 11 30 46.0 +0.9
MJB9 **Matsu-Tunnel** 20.30 230 P P 11 30 54.0 +0.5
MAJO **Matsushiro** 20.30 230 P P 11 30 54.2 +0.7
MAJO pmax pmax
comp=Z,17nm,0.6s
MAJO **Matsushiro** 20.30 230 P P 11 30 54.1 +0.7
MAJO IAmb IAmb 11 30 57.8
comp=Z,16nm,0.6s
MAT **Matsushiro** 20.30 230 P P 11 30 54.0 +0.5
MJAR **Matsushiro Arr** 20.30 230 P P 11 30 54.1 +0.7
comp=Z,6.2nm,0.6s,baz=33,slow=7.9,SNR=4.1
UNV **Unalaska Valle** 21.85 70 P P 11 31 09.3 -0.5
UNV IAmb IAmb 11 31 12.4
comp=Z,47nm,1.3s
CN2 **Changchun** 22.72 263 *e*P P 11 31 21.9 +3.4
CN2 pmax pmax
comp=Z,10.0nm,0.5s
ANM **Nome** 23.18 42 P P 11 31 22.9 +0.4
ANM pmax pmax
comp=Z,58nm,1.3s
ANM **Nome** 23.18 42 P P 11 31 22.9 +0.4
ANM IAmb IAmb 11 31 31.9
comp=Z,58nm,1.3s
TIXI **Tiksi** 23.82 338 P P 11 31 27.2 -1.0
comp=Z,74nm,0.7s,baz=130,slow=9.7,SNR=229
TIXI pP pP 11 31 59.3 +2.7
comp=Z,16nm,0.7s,baz=124,slow=9.8,SNR=3.1
TIXI **Tiksi** 23.82 338 *c i*P P 11 31 27.2 -1.0
TIXI pmax pmax
comp=Z,87nm,0.7s
TIXI **Tiksi** 23.82 338 P P 11 31 27.5 -0.8
HIA **Hailar** 23.93 279 P P 11 31 28.5 -1.0
HIA pmax pmax
comp=Z,35nm,0.8s
HIA **Hailar** 23.93 279 P P 11 31 28.5 -1.0
KSRS **Korea Array** 25.10 247 P P 11 31 41.2 +1.0
comp=Z,1.6nm,0.7s,baz=44,slow=8.1,SNR=5.6
RDOG **Red Dog Mine** 25.24 34 P P 11 31 41.0 -0.2
RDOG IAmb IAmb 11 31 42.6
comp=Z,18nm,0.7s
BOD **Bodaibo** 25.47 301 *e*P P 11 31 41.6 -1.8
BOD pmax pmax
comp=Z,11nm,1.4s
CNBA **Chernabura Isl** 25.68 66 P P 11 31 44.1 -1.1
JNU **Nakatsue** 26.67 237 P P 11 31 54.6 +0.1
TTA **Tatalina** 27.00 47 P P 11 31 57.2 0.0
TTA pmax pmax
comp=Z,7.0nm,0.8s
TTA **Tatalina** 27.00 47 P P 11 31 57.2 0.0
OHAK **Old Harbor** 28.73 59 IAmb IAmb 11 32 12.6
comp=Z,16nm,0.8s
KDAK **Kodiak Island** 29.01 58 P P 11 32 14.3 -0.6
comp=Z,8.6nm,0.8s,baz=323,slow=1.6,SNR=17
KDAK **Kodiak Island** 29.01 58 P P 11 32 14.3 -0.6
KDAK pmax pmax
comp=Z,12nm,0.9s
KDAK **Kodiak Island** 29.01 58 P P 11 32 14.2 -0.6
KDAK IAmb IAmb 11 32 15.3
comp=Z,12nm,0.9s
KTH **Kantishna Hill** 29.32 46 P P 11 32 18.3 +0.5
CNPM **China Poot** 29.45 54 IAmb IAmb 11 32 20.0
comp=Z,13nm,0.8s
TRF **Thorofare Moun** 29.61 46 P P 11 32 20.5 +0.2
TOLK **Toolik Lake Re** 30.17 36 P P 11 32 25.6 +0.4
baz=263,SNR=13
TOLK **Toolik Lake Re** 30.17 36 IAmb IAmb 11 32 26.5
comp=Z,9.3nm,0.6s
MCK **McKinley** 30.20 45 IAmb IAmb 11 32 26.5
comp=Z,12nm,0.9s
RND **Reindeer** 30.25 46 IAmb IAmb 11 32 26.5
comp=Z,13nm,0.9s
SEW **Seward** 30.27 53 P P 11 32 25.3 -0.6
WRH **Wood River Hil** 30.55 44 IAmb IAmb 11 32 37.1
comp=Z,18nm,1.0s
KNK **Knik Glacier** 30.59 50 IAmb IAmb 11 32 29.7
comp=Z,16nm,0.8s
SML **Sawmill** 30.61 49 P P 11 32 28.8 -0.3
TCOL **CIGO, UAF Yank** 30.64 43 P P 11 32 29.4 +0.1
baz=271,SNR=6.5
COLA **College** 30.65 43 *d i*P P 11 32 29.0 -0.3
COLA pmax pmax
comp=Z,16nm,0.8s
COLA **College** 30.65 43 P P 11 32 29.7 +0.4
COLA IAmb IAmb 11 32 30.7
comp=Z,16nm,0.8s
POKR **Poker Plat Res** 30.82 43 P P 11 32 31.2 +0.3
baz=271
HDA **Harding Lake** 31.05 44 P P 11 32 32.7 -0.2
baz=273,SNR=11
HDA **Harding Lake** 31.05 44 IAmb IAmb 11 32 33.8
comp=Z,7.2nm,0.6s
IL31 31.06 43 P P 11 32 32.9 0.0
ILAR **Eielson Array** 31.06 43 P P 11 32 32.7 -0.3
comp=Z,6.7nm,0.8s,baz=261,slow=7.9,SNR=58
ILAR PcP PcP 11 35 23.8 -1.0
comp=Z,1.4nm,0.9s,baz=286,slow=4.5,SNR=4.7
SCM **Sheep Creek Mo** 31.08 49 IAmb IAmb 11 32 34.2
comp=Z,15nm,0.9s
RIDG **Independent Ri** 32.02 45 IAmb IAmb 11 32 41.7
comp=Z,12nm,1.0s
ULN **Ulaanbaatar** 32.23 284‖ *e*P P 11 32 43.3 -0.3
ULN pmax pmax
comp=Z,4.0nm,1.2s
SCRK **Sand Creek** 32.38 45 IAmb IAmb 11 32 52.2
comp=Z,12nm,1.0s
H11N2 **WAKE ISLAND Hy** 32.65 163 T T 12 07 03.2
baz=349,slow=76,SNR=96
H11N3 **WAKE ISLAND Hy** 32.66 163 T T 12 07 04.4
baz=349,slow=76,SNR=129
H11N1 **WAKE ISLAND Hy** 32.66 163 T T 12 07 11.2
baz=349,slow=76,SNR=71
TLY **Talaya** 32.73 292 *ce*P P 11 32 47.6 -0.1
TLY pmax pmax
comp=Z,10.0nm,0.9s
TLY **Talaya** 32.73 292 P P 11 32 47.8 +0.1
HHC **Hu-ho-hao-te** 32.96 269 *e*P P 11 32 52.8 +2.8
HHC pmax pmax
comp=Z,6.0nm,0.9s
HHC pmax pmax
comp=Z,79nm,5.3s
ZAK **Zakamensk** 33.44 290 *e*P P 11 32 56.7 +2.7
ZAK pmax pmax
comp=Z,7.0nm,1.2s
EGAK **Eagle** 33.51 43 P P 11 32 54.0 -0.3
EGAK IAmb IAmb 11 32 54.8
comp=Z,14nm,0.8s
H11S1 **WAKE ISLAND Hy** 33.81 164 T T 12 08 35.8
baz=350,slow=76,SNR=51
H11S3 **WAKE ISLAND Hy** 33.82 164 T T 12 08 28.0
baz=350,slow=76,SNR=75
H11S2 **WAKE ISLAND Hy** 33.82 164 T T 12 08 31.5
baz=350,slow=76,SNR=77
YAH **Yahtse** 34.00 51 IAmb IAmb 11 33 00.8
comp=Z,14nm,0.8s
CTGM **Chitina Glacie** 34.07 50 IAmb IAmb 11 33 01.2
comp=Z,10nm,0.8s
NJ2 **Nanjing** 34.19 250 *e*P P 11 33 02.1 +1.6
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
MOY **Mondy** 34.27 293 *e*P P 11 33 01.5 +0.4
MOY pmax pmax
comp=Z,19nm,1.2s
EPYK **Eagle Plains** 35.13 40 P P 11 33 08.9 +0.6
baz=278,SNR=10
EPYK **Eagle Plains** 35.13 40 P P 11 33 08.9 +0.6
EPYK IAmb IAmb 11 33 10.2
comp=Z,12nm,0.9s
INK **Inuvik** 36.08 36 P P 11 33 17.1 +0.9
comp=Z,10nm,0.5s,baz=271,slow=6.6,SNR=73
INK **Inuvik** 36.08 36 P P 11 33 17.0 +0.7
INK pmax pmax
comp=Z,13nm,0.8s
INK **Inuvik** 36.08 36 P P 11 33 17.0 +0.7
INK IAmb IAmb 11 33 18.2
comp=Z,13nm,0.8s
NRIK **Noril'sk** 36.21 326‖ *e*P P 11 33 14.7 -2.7
NRIK pmax pmax
comp=Z,6.0nm,1.7s
WHY **Whitehorse** 37.20 49 IAmb IAmb 11 33 28.7
comp=Z,11nm,0.8s
SKAG **Skagway** 37.36 51 IAmb IAmb 11 33 30.1
comp=Z,15nm,1.0s
JIS **Juneau Island** 38.22 52 P P 11 33 35.2 +0.8
JIS IAmb IAmb 11 33 37.2
comp=Z,13nm,1.0s
A36M **Sachs Harbour** 38.27 29 P P 11 33 34.2 -0.5
baz=281
C36M **Paulatuk** 39.24 33 P P 11 33 43.3 +0.6
baz=285,SNR=12
C36M **Paulatuk** 39.24 33 P P 11 33 43.4 +0.6
QZH **Quanzhou** 39.71 243 SS SS 11 42 02.9 -39
QZH AMB AMB
comp=Z,290nm,13.3s
QZH LR LR
comp=N,2μm,18.1s
QZH LR LR
comp=E,680nm,15.6s
QZH LR LR
comp=Z,2μm,17.1s
DLBC **Dease Lake** 40.29 51 P P 11 33 53.9 +2.2
comp=Z,7.7nm,0.9s,baz=284,slow=8.9,SNR=14
DLBC **Dease Lake** 40.29 51 P P 11 33 53.4 +1.7
LZH **Lanzhou** 40.66 269 *e*P P 11 33 56.3 +1.2
LZH pP pP 11 34 31.0 +4.4
LZH sP sP 11 34 42.8 +0.1
LZH PP PnPn 11 35 37.5 +0.5
LZH pmax pmax
comp=Z,22nm,1.1s
LZH pmax pmax
comp=Z,160nm,5.4s
LZH LR LR
comp=Z,320nm,15.2s
LZH LR LR
comp=Z,490nm,15.8s
LZH LR LR
comp=Z,500nm,16.1s
GTA **Gaotai** 41.12 276 *e*P P 11 33 58.9 +0.1
GTA pmax pmax
comp=Z,5.0nm,1.0s
ZAA0 **Zalesovo Array** 42.20 303 P P 11 34 05.5 -1.7
ZALV **Zalesovo Beam** 42.20 303 P P 11 34 05.4 -1.9
comp=Z,6.7nm,0.8s,baz=55,slow=6.7,SNR=16
ZALV pP pP 11 34 40.0 +0.9
comp=Z,4.9nm,0.8s,baz=54,slow=7.5,SNR=4.6
DGZ **Jazzator, Alta** 42.85 296‖ *e*P P 11 34 12.2 -0.6
DGZ pmax pmax
comp=Z,16nm,0.9s
RES **Resolute Bay** 45.35 21 P P 11 34 32.7 +0.6
comp=Z,6.4nm,0.8s,baz=326,slow=5.0,SNR=14
RES **Resolute Bay** 45.35 21 P P 11 34 32.5 +0.4
RES pmax pmax
comp=Z,8.0nm,1.0s
RES **Resolute Bay** 45.35 21 P P 11 34 32.5 +0.4
YKA **Yellowknife Ar** 45.40 41 P P 11 34 33.3 +0.6
comp=Z,10nm,0.8s,baz=300,slow=7.5,SNR=110
YKA PcP PcP 11 36 09.8 +0.5
comp=Z,1.6nm,0.9s,baz=304,slow=3.0,SNR=6.9
WMQ **Urumqi** 45.90 289 *e*P P 11 34 38.0 +1.0
WMQ pP pP 11 35 12.4 +3.2
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ pmax pmax
comp=Z,150nm,6.1s
WMQ LR LR
comp=Z,460nm,25.7s
WMQ LR LR
comp=Z,980nm,29.1s
WMQ LR LR
comp=Z,560nm,29.0s
WMQ **Urumqi** 45.90 289 P P 11 34 37.1 +0.1
WMQ pmax pmax
comp=Z,16nm,0.5s
WMQ **Urumqi** 45.90 289 P P 11 34 37.1 +0.1
NOR **Nord** 47.03 359 *i* P P 11 34 44.4 -0.8
NOR pmax pmax
comp=Z,4.0nm,0.8s
NOR **Nord** 47.03 359 *i* P P 11 34 44.4 -0.8
comp=Z,3.6nm,0.8s
KURK **Kurchatov** 47.12 302 *c i*P P 11 34 44.6 -1.7
KURK pmax pmax
comp=Z,42nm,0.7s
KURK **Kurchatov** 47.12 302 P P 11 34 45.0 -1.3
KURBB **Kurchatov Arra** 47.22 302 P P 11 34 45.6 -1.4
comp=Z,23nm,0.6s,baz=62,slow=7.7,SNR=99
KURBB pP pP 11 35 20.8 +1.4
comp=Z,11nm,0.7s,baz=60,slow=7.9,SNR=8.1
KURBB ScP ScP 11 39 56.5 +0.4
comp=Z,0.6nm,0.8s,baz=60,slow=3.7,SNR=5.5
MK31 **Makanchi Array** 47.31 295 P P 11 34 46.6 -1.2
MK31 pmax pmax
comp=Z,26nm,1.5s
MK31 **Makanchi Array** 47.31 295 P P 11 34 46.6 -1.2
MK31 IAmb IAmb 11 34 47.5
comp=Z,26nm,1.5s
MKAR **Makanchi Array** 47.31 295 P P 11 34 46.5 -1.3
comp=Z,8.3nm,0.7s,baz=60,slow=6.9,SNR=69
MKAR pP pP 11 35 21.6 +1.3
comp=Z,18nm,1.1s,baz=63,slow=9.0,SNR=8.3
MKAR ScP ScP 11 39 56.2 -0.4
comp=Z,1.1nm,0.9s,baz=47,slow=2.1,SNR=3.9
MKAR **Makanchi Array** 47.31 295 *i* P P 11 34 46.5 -1.3
MKAR pmax pmax
comp=Z,9.0nm,0.7s
MAKZ **Makanchi** 47.48 296 P P 11 34 47.7 -1.5
MAKZ pmax pmax
comp=Z,8.0nm,0.8s
MAKZ **Makanchi** 47.48 296 P P 11 34 47.6 -1.5
KBS **Kingsbay** 48.14 352 P P 11 34 53.7 -0.1
KBS pmax pmax
comp=Z,13nm,0.7s
KBS **Kingsbay** 48.14 352 P P 11 34 53.7 -0.1
KBS IAmb IAmb 11 34 54.6
comp=Z,13nm,0.7s
LLLB **Lillooet** 48.22 57 P P 11 34 55.7 +0.9
SPA0 **Spitsbergen Ar** 48.35 350 P P 11 34 54.6 -0.8
SPA0 IAmb IAmb 11 34 58.6
comp=Z,24nm,1.1s
SPITS **Spitsbergen Ar** 48.35 350 P P 11 34 54.3 -1.1
comp=Z,6.4nm,0.4s,baz=56,slow=6.4,SNR=85
D03D **Eldon** 49.34 61 P P 11 35 04.6 +1.3
baz=306,SNR=5.2
B05A **Bryant** 49.45 60 P P 11 35 05.1 +1.0
baz=306
BVAR **Borovoye Array** 50.03 308 P P 11 35 06.6 -1.8
comp=Z,20nm,0.5s,baz=56,slow=7.9,SNR=105
BVAR pP pP 11 35 41.8 +0.7
comp=Z,3.9nm,0.6s,baz=60,slow=7.0,SNR=3.8
BVAR PcP PcP 11 36 25.5 -0.6
comp=Z,2.3nm,0.6s,baz=96,slow=2.9,SNR=3.8
BVAR PP PP 11 37 01.0 -3.4
comp=Z,1.7nm,0.6s,baz=56,slow=8.0,SNR=3.7
BRVK **Borovoye** 50.06 308 *c i*P P 11 35 06.9 -1.8
BRVK pmax pmax
comp=Z,24nm,0.6s
BRVK **Borovoye** 50.06 308 P P 11 35 07.0 -1.6
E04D **Cinebar** 50.21 62 P P 11 35 11.2 +1.3
baz=307
B08A **Colville Reser** 50.88 59 IAmb IAmb 11 35 16.7
comp=Z,14nm,0.9s
I02D **Swisshome** 50.98 65 P P 11 35 17.1 +1.4
baz=308
H04D **Lebanon** 51.35 64 P P 11 35 20.2 +1.7
baz=308
I03D **Drain, OR** 51.52 66 P P 11 35 21.2 +1.5
baz=309
J01E **Myrtle Point** 51.52 66 P P 11 35 21.0 +1.3
baz=309
H04A **Detroit Lake** 51.56 64 IAmb IAmb 11 35 22.1
comp=Z,16nm,1.1s
G05D **Wamic, OR** 51.70 63 P P 11 35 22.4 +1.3
baz=308
C09A **Chrisman Ranch** 51.79 59 P P 11 35 22.1 +0.4
DAG **Danmarks Havn** 51.90 359‖ *i*P P 11 35 21.6 -0.5
DAG pmax pmax
comp=Z,25nm,0.7s
DAG **Danmarks Havn** 51.90 359‖ *i*P P 11 35 21.6 -0.5
comp=Z,25nm,0.7s
K02D **Willamette Mer** 51.97 67 P P 11 35 24.3 +1.2
baz=309
I04A **Tendick Farm,** 51.99 65 P P 11 35 24.6 +1.3
baz=309
NEW **Newport** 52.11 58 P P 11 35 24.6 +0.5
comp=Z,5.9nm,0.9s,baz=321,slow=7.5,SNR=6.5
NEW **Newport** 52.11 58 P P 11 35 24.6 +0.5
baz=308
SVE **Sverdlovsk** 52.24 316 *e*P P 11 35 23.7 -1.1
SVE pmax pmax
comp=Z,45nm,0.9s
I05D **Terrebonne, OR** 52.25 64 P P 11 35 26.5 +1.3
baz=309
J04D **Umpqua Nationa** 52.51 65 P P 11 35 29.1 +1.7
baz=309
J05D **Fort Rock, OR** 52.98 65 P P 11 35 32.5 +1.8
baz=310,SNR=9.5
KDJ **Kajisay** 53.05 293 P P 11 35 30.4 -0.9
KDJ pmax pmax
comp=Z,12nm,0.7s
KDJ **Kajisay** 53.05 293 P P 11 35 30.4 -0.9
L04D **Klamath Falls** 53.05 66 P P 11 35 32.8 +1.6
baz=310,SNR=9.5
KHMM **Horse Mountain** 53.09 69 P P 11 35 33.4 +1.8
KHMM IAmb IAmb 11 35 34.7
comp=Z,21nm,1.1s
K04D **Chiloquin, OR** 53.10 66 P P 11 35 33.2 +1.6
baz=310
YBH **Yreka Blue Hor** 53.12 67 P P 11 35 33.7 +2.0
comp=Z,5.3nm,0.7s,baz=353,slow=2.0,SNR=7.8
YBH **Yreka Blue Hor** 53.12 67 IAmb IAmb 11 35 34.8
comp=Z,11nm,1.1s
M02C **Callahan** 53.26 68 P P 11 35 34.8 +2.1
baz=310,SNR=7.5
WALA **Waterton Lakes** 53.28 55 IAmb IAmb 11 35 34.5
comp=Z,20nm,1.2s
ARU **Arti** 53.38 317 P P 11 35 31.2 -2.1
comp=Z,8.6nm,0.5s,baz=35,slow=5.4,SNR=26
ARU **Arti** 53.38 317 *c i*P P 11 35 31.1 -2.1
ARU *PP pP 11 36 04.8 -1.6
ARU 11 37 30.3
ARU S S 11 42 53.2 -0.5
ARU pmax pmax
comp=Z,43nm,1.3s
ARU **Arti** 53.38 317 P P 11 35 31.2 -2.1
KMRM **Mail Ridge** 53.52 69 IAmb IAmb 11 35 37.3
comp=Z,16nm,0.9s
M04C **Macdoel** 53.59 67 P P 11 35 36.9 +1.7
baz=310,SNR=8.5
N02D **Trinity Center** 53.62 68 P P 11 35 37.3 +2.0
baz=310,SNR=8.4
O02D **Mt. Diablo Mer** 54.08 69 P P 11 35 40.6 +1.9
baz=311,SNR=8.1
ARCES **ARCESS Array B** 54.20 341 P P 11 35 36.7 -2.3
comp=Z,1.5nm,0.6s,baz=44,slow=7.9,SNR=8.9
AAK **Ala-Archa** 54.25 296 P P 11 35 39.1 -0.9
comp=Z,7.0nm,0.6s,baz=107,slow=5.0,SNR=17
AAK pP pP 11 36 15.0 +1.9
comp=Z,5.8nm,0.8s,baz=117,slow=6.5,SNR=3.9
AAK **Ala-Archa** 54.25 296 *ce*P P 11 35 38.9 -1.0
AAK pmax pmax
comp=Z,8.0nm,0.7s
AAK **Ala-Archa** 54.25 296 P P 11 35 39.1 -0.9
AAK IAmb IAmb 11 35 40.2
comp=Z,8.0nm,0.7s
MOD **Modoc Plateau** 54.39 65 P P 11 35 42.3 +1.4
J08A **Circle Bar Ran** 54.48 63 IAmb IAmb 11 35 44.2
comp=Z,13nm,1.3s
O03E **Paynes Creek** 54.58 68 P P 11 35 43.4 +1.2
baz=311,SNR=19
MSO **Missoula** 54.69 57 P P 11 35 43.7 +0.7
baz=310,SNR=9.0
MSO **Missoula** 54.69 57 IAmb IAmb 11 35 44.9
comp=Z,14nm,1.1s
GDXM **Geysers** 54.98 70 P P 11 35 46.7 +1.5
GDXM IAmb IAmb 11 35 48.2
comp=Z,17nm,1.0s
WVOR **Wild Horse Val** 54.98 64 IAmb IAmb 11 35 47.8
comp=Z,16nm,0.9s
FFC **Flin Flon** 55.27 44 P P 11 35 47.3 +0.4
FFC pmax pmax
comp=Z,12nm,0.9s
FFC **Flin Flon** 55.27 44 P P 11 35 47.3 +0.4
FFC IAmb IAmb 11 35 48.7
comp=Z,12nm,0.8s
SHL **Shillong** 55.31 268 P P 11 35 47.8 -0.1
SHL pmax pmax
comp=Z,17nm,0.9s
SHL **Shillong** 55.31 268 P P 11 35 47.8 -0.1
KSH **Kashi** 55.44 292 P P 11 35 52.8 +4.3
KSH pP pP 11 36 25.5 +3.6
KSH PP PP 11 38 02.8 +9.3
KSH S S 11 43 24.5 +2.4
KSH pmax pmax
comp=Z,39nm,1.1s
KSH pmax pmax
comp=Z,79nm,5.3s

KSH LR LR
comp=Z,290nm,10.9s
KSH LR LR
comp=Z,140nm,10.6s
KSH LR LR
comp=Z,900nm,14.4s
KIRV Kirov 55.62 323⇓ *e*P **P 11 35 48.3 -1.0**
SUMG Summit 55.65 6 P **P 11 35 49.8 -0.1**
SUMG pmax pmax
comp=Z,27nm,1.1s
SUMG Summit 55.65 6 P **P 11 35 49.8 -0.1**
SUMG Summit 55.65 6 *i* P **P 11 35 49.9 0.0**
comp=Z,71nm,1.1s
FCC Fort Churchill 55.70 37 P **P 11 35 50.0 +0.1**
FCC pmax pmax
comp=Z,13nm,0.7s
FCC Fort Churchill 55.70 37 P **P 11 35 50.0 +0.1**
RABL Rabaul 55.73 186 P **P 11 35 51.5 +0.9**
MFID Camas Ranch 55.90 61 IAmb IAmb 11 35 54.0
comp=Z,11nm,1.3s
CHTO Chiang Mai 55.96 257 P **P 11 35 53.5 +1.2**
CHTO pmax pmax
comp=Z,8.0nm,0.8s
CHTO Chiang Mai 55.96 257 P **P 11 35 53.5 +1.2**
CHTO IAmb IAmb 11 35 55.7
comp=Z,7.5nm,0.8s
EGMT Eagleton 56.06 54 P **P 11 35 52.9 +0.1**
baz=312
EGMT Eagleton 56.06 54 IAmb IAmb 11 35 54.4
comp=Z,14nm,1.1s
KK31 Karatay Array 56.16 298 P **P 11 35 52.6 -0.9**
KK31 pmax pmax
comp=Z,10.0nm,1.4s
KK31 Karatay Array 56.16 298 P **P 11 35 52.6 -0.9**
CMAR Chiang Mai Arr 56.23 257 P **P 11 35 55.6 +1.4**
comp=Z,3.2nm,0.7s,baz=26,slow=7.3,SNR=14
PAHR Pah Rah Range 56.36 67 IAmb IAmb 11 35 57.5
comp=Z,16nm,1.3s
VCNR Virginia City 56.48 67 IAmb IAmb 11 35 58.6
comp=Z,11nm,1.0s
TAPN Taplejung 56.64 273 *e*P **P 11 35 57.8 +0.4**
comp=Z,26nm,0.9s
PNTR Pine Nut 56.65 68 IAmb IAmb 11 35 59.8
comp=Z,10nm,0.7s
SIJI Sorong 56.74 212 P **P 11 35 58.8 +1.0**
comp=Z,14nm,0.9s,baz=28,slow=7.3,SNR=5.8
WAKR Walker 57.14 68 IAmb IAmb 11 36 03.3
comp=Z,10nm,0.9s
KLMR Klimovskoe 57.42 329 *e*P **P 11 35 58.9 -3.0**
KLMR pmax pmax
comp=Z,10.0nm,1.3s
KLMR Klimovskoe 57.42 329 *e*P **P 11 35 59.0 -3.0**
KLMR AMP 11 36 05.6
comp=Z,10.0nm,1.3s
KVN Kaiserville 57.54 67 IAmb IAmb 11 36 06.0
comp=Z,13nm,1.0s
RYN Ryan 57.58 67 IAmb IAmb 11 36 06.1
comp=Z,9.4nm,0.9s
AKTO Aktyubinsk 57.61 312 P **P 11 36 01.4 -2.1**
comp=Z,5.6nm,0.6s,baz=66,slow=8.6,SNR=18
RAMN Ramite 57.62 274 *e*P **P 11 36 03.6 -0.6**
comp=Z,44nm,0.8s
NVAR Mina Array Bea 57.84 67 P **P 11 36 07.0 +1.4**
comp=Z,5.0nm,0.6s,baz=293,slow=7.5,SNR=56
KKN Kakani 57.84 275 *e*P **P 11 36 05.9 +0.2**
comp=Z,20nm,0.6s
PKI Pulchoki 57.92 275 *e*P **P 11 36 05.6 -0.8**
comp=Z,18nm,0.7s
PKIN Phulchoki 57.92 275 *e*P **P 11 36 05.8 -0.6**
comp=Z,21nm,0.8s
NV11 Mina Array Sit 57.92 67 IAmb IAmb 11 36 08.6
comp=Z,10nm,1.1s
MDPB Devils Postpil 57.93 69 IAmb IAmb 11 36 08.8
comp=Z,8.2nm,1.0s
LKWY Lake 58.05 57 IAmb IAmb 11 36 10.7
comp=Z,11nm,0.8s
H17A Grant Village 58.07 58 P **P 11 36 09.9 +2.7**
baz=313,SNR=18
DMN Daman 58.08 275 *e*P **P 11 36 06.9 -0.5**
comp=Z,23nm,0.8s
GKN Gorkha 58.09 276 *e*P **P 11 36 07.0 -0.4**
IMW Indian Meadow 58.22 58 IAmb IAmb 11 36 11.2
comp=Z,14nm,1.2s
FLWY Flagg Ranch 58.22 58 IAmb IAmb 11 36 11.3
comp=Z,8.6nm,0.9s
SCO Scoresbysund 58.25 360 *i* P **P 11 36 07.6 0.0**
SCO pmax pmax
comp=Z,7.0nm,0.8s
SCO Scoresbysund 58.25 360 P **P 11 36 07.7 0.0**
SCO IAmb IAmb 11 36 09.3
comp=Z,6.6nm,0.8s
SCO Scoresbysund 58.25 360 *i* P **P 11 36 07.6 0.0**
comp=Z,6.7nm,0.8s
RLMT Red Lodge 58.26 56 P **P 11 36 10.0 +1.6**
baz=313,SNR=22
FXWY Fox Creek 58.35 58 IAmb IAmb 11 36 11.9
comp=Z,6.9nm,0.9s
DANN Dangsing 58.39 277 *e*P **P 11 36 09.3 -0.3**
comp=Z,26nm,0.7s
TPAW Teton Pass 58.49 59 IAmb IAmb 11 36 13.2
comp=Z,13nm,1.0s
DGMT Dagmar 58.51 51 P **P 11 36 10.9 +1.1**
baz=314,SNR=5.8
SNOW Snow King Moun 58.61 58 IAmb IAmb 11 36 14.1
comp=Z,12nm,1.0s
LAO LASA Array 58.74 53 P **P 11 36 12.9 +1.4**
baz=314,SNR=8.4
KOLN Koldanda 58.90 276 *e*P **P 11 36 12.3 -0.8**
comp=Z,16nm,0.6s
AHID Auburn Hatcher 58.90 59 IAmb IAmb 11 36 15.4
comp=Z,11nm,1.0s
SMMC Simmler 58.99 71 P **P 11 36 14.6 +1.3**
baz=314
GAR Garm 59.03 295 P **P 11 36 13.1 -0.7**
VES Vestal, Richgr 59.16 70 P **P 11 36 15.4 +1.0**
baz=314
CWC Cottonwood Cre 59.33 69 P **P 11 36 17.1 +1.2**
baz=314
GRAC Grapevine Rang 59.36 68 P **P 11 36 17.8 +1.9**
baz=314
PKM Mcpherson Peak 59.39 71 P **P 11 36 17.2 +0.9**
baz=314
HWUT Hardware Ranch 59.45 61 IAmb IAmb 11 36 19.2
comp=Z,11nm,1.0s
R11A Troy Canyon, C 59.45 66 P **P 11 36 17.8 +1.1**
baz=314
R11A Troy Canyon, C 59.45 66 P **P 11 36 16.8 +0.1**
R11A IAmb IAmb 11 36 18.9
comp=Z,7.9nm,1.0s
ISA Isabella, Lake 59.64 70 P **P 11 36 18.3 +0.4**
baz=314
BW06 Boulder Array 59.73 58 P **P 11 36 19.9 +1.4**
baz=314,SNR=19
BW06 Boulder Array 59.73 58 IAmb IAmb 11 36 20.7
comp=Z,14nm,0.9s
PD31 Pinedale Array 59.73 58 P **P 11 36 19.3 +0.7**
PD31 IAmb IAmb 11 36 20.7
comp=Z,13nm,0.9s
PDAR Pinedale Array 59.73 58 P **P 11 36 19.6 +1.0**
comp=Z,9.3nm,0.8s,baz=336,slow=3.3,SNR=62
PDAR PcP **PcP 11 37 05.9 +1.9**
comp=Z,1.7nm,0.7s,baz=312,slow=4.8,SNR=4.0
DUG Dugway, Tooele 59.74 62 P **P 11 36 20.3 +1.7**
baz=314,SNR=12
DUG Dugway, Tooele 59.74 62 IAmb IAmb 11 36 21.1
comp=Z,12nm,1.0s
CHGR Chuyangaron 59.92 295 P **P 11 36 18.7 -1.1**
MPMC Manual Prospec 59.94 69 P **P 11 36 21.4 +1.3**
baz=314,SNR=9.4
CTU Camp Tracy 59.98 61 P **P 11 36 21.1 +0.9**
FURC Furnace Creek, 60.02 68 P **P 11 36 22.1 +1.7**
baz=314,SNR=31
TPNV Topopah Spring 60.04 67 P **P 11 36 21.4 +0.7**
TPNV pmax pmax
comp=Z,16nm,1.0s
TPNV Topopah Spring 60.04 67 P **P 11 36 22.2 +1.5**
baz=314,SNR=18
TPNV Topopah Spring 60.04 67 P **P 11 36 21.4 +0.7**
SCZ2 Santa Cruz Isl 60.12 72 P **P 11 36 22.3 +1.3**
baz=315
LRMC Laurel Mtn Rad 60.23 69 P **P 11 36 23.1 +1.1**
baz=314,SNR=7.4
EDW2 Edwards Air Fo 60.47 70 P **P 11 36 24.7 +1.2**
baz=315,SNR=7.9
SHOC Shoshone, Teco 60.76 68 P **P 11 36 26.2 +0.8**
baz=315
FIA1 FINESS Array S 60.84 336 P **P 11 36 23.8 -1.7**
FIA1 IAmb IAmb 11 36 40.0
comp=Z,10nm,1.2s
FINES FINESS Array B 60.84 336 P **P 11 36 23.6 -1.9**
comp=Z,3.5nm,0.6s,baz=37,slow=7.5,SNR=28
GSC Goldstone, Bar 60.87 69 P **P 11 36 27.5 +1.2**
baz=315,SNR=6.5
GSC Goldstone, Bar 60.87 69 IAmb IAmb 11 36 28.3
comp=Z,12nm,1.0s
NIL Nilore 61.04 288 P **P 11 36 26.8 -0.6**
NIL pmax pmax
comp=Z,25nm,0.9s
NIL Nilore 61.04 288 P **P 11 36 26.8 -0.6**
ULM Lac du Bonnet 61.07 45 P **P 11 36 27.8 +0.5**
comp=Z,2.5nm,0.5s,baz=317,slow=5.8,SNR=4.7
BFSC Mount Baldy Ra 61.11 70 P **P 11 36 29.2 +1.2**
baz=315,SNR=5.1
MDND Maddock 61.12 49 P **P 11 36 28.5 +0.8**
baz=316
K22A Casper 61.40 57 P **P 11 36 30.1 +0.2**
baz=315
K22A Casper 61.40 57 IAmb IAmb 11 36 32.9
comp=Z,14nm,1.4s
HEC Hector,Ludlow 61.47 69 P **P 11 36 31.7 +1.4**
baz=315,SNR=5.7
SCI2 San Clemente I 61.47 72 P **P 11 36 31.4 +1.2**
baz=315
BBRC Big Bear Solar 61.53 70 P **P 11 36 31.7 +0.8**
baz=315
RSSD Black Hills 61.64 54 P **P 11 36 32.1 +0.6**
RSSD pmax pmax
comp=Z,18nm,0.9s
RSSD Black Hills 61.64 54 P **P 11 36 32.1 +0.6**
baz=316
RSSD Black Hills 61.64 54 P **P 11 36 32.1 +0.6**
SBUM Sibu 61.79 234 P **P 11 36 33.5 +1.0**
MURC Murrieta 61.84 71 P **P 11 36 33.8 +1.1**
baz=315
GMRC Granite Mounta 61.90 69 P **P 11 36 34.6 +1.4**
baz=315,SNR=14
BELC Belle Mtn. Jos 62.25 70 P **P 11 36 36.4 +0.8**
baz=316,SNR=9.3
PFO Pinyon Flats O 62.26 70 P **P 11 36 36.0 +0.3**
PFO pmax pmax
comp=Z,4.0nm,0.8s
PFO Pinyon Flats O 62.26 70 P **P 11 36 36.4 +0.7**
baz=316
PFO Pinyon Flats O 62.26 70 P **P 11 36 36.0 +0.3**
XPFO Pion Flat 62.26 70 P **P 11 36 36.0 +0.3**
O20A White River Ci 62.27 60 P **P 11 36 36.9 +1.1**
baz=316,SNR=8.2
AGMN Agassiz Nation 62.51 46 P **P 11 36 37.3 +0.3**
baz=318,SNR=6.1
AGMN Agassiz Nation 62.51 46 IAmb IAmb 11 36 38.0
comp=Z,8.7nm,0.9s
IRM Iron Mountain 62.64 69 P **P 11 36 39.5 +1.5**
baz=316,SNR=16
U15A North Rim 62.67 65 IAmb IAmb 11 36 41.1
comp=Z,11nm,1.4s
MONP2 Monument Peak 62.79 71 P **P 11 36 40.1 +0.8**
baz=316,SNR=5.5
BC3 Big Chuckawall 62.82 69 P **P 11 36 40.3 +1.0**
baz=316,SNR=7.8
N23A Red Feather La 62.96 58 P **P 11 36 41.8 +1.4**
baz=316,SNR=7.1
PDMCI Parker Dam,Lak 63.12 68 P **P 11 36 42.0 +0.9**
baz=316
SWSC Sam W. Stewart 63.12 70 P **P 11 36 42.3 +1.1**
baz=316
IKP In-Ko-Pah, Jac 63.15 71 P **P 11 36 42.6 +1.1**
baz=316,SNR=6.2
PV04 Paradox Valley 63.16 62 P **P 11 36 42.3 +0.7**
VSU Vasula 63.19 333⇓ *e*P **P 11 36 40.5 -0.7**
VSU pmax pmax
comp=Z,27nm,0.7s
Y12C Blythe 63.29 69 P **P 11 36 43.7 +1.4**
baz=316
GLA Glamis 63.62 70 P **P 11 36 45.3 +0.8**
GLA pmax pmax
comp=Z,15nm,0.9s
GLA Glamis 63.62 70 P **P 11 36 46.0 +1.5**
baz=316,SNR=6.2
GLA Glamis 63.62 70 P **P 11 36 45.3 +0.8**
WUAZ Wupatki 63.84 65 P **P 11 36 47.8 +1.7**
baz=316,SNR=7.5
WUAZ Wupatki 63.84 65 P **P 11 36 47.2 +1.1**
WUAZ IAmb IAmb 11 36 48.7
comp=Z,16nm,1.2s
ISCO Idaho Springs 63.92 58 P **P 11 36 48.3 +1.6**
baz=317,SNR=14
ISCO Idaho Springs 63.92 58 IAmb IAmb 11 36 49.3
comp=Z,14nm,1.1s
MVCO Mesa Verde 64.23 62 P **P 11 36 50.0 +1.2**
baz=316,SNR=11
MVCO Mesa Verde 64.23 62 IAmb IAmb 11 36 50.8
comp=Z,12nm,0.8s
NC204 NORSAR Array S 64.38 343 P **P 11 36 47.7 -1.4**
NB2 NORSAR Subarra 64.52 343 P **P 11 36 48.6 -1.4**
comp=Z,14nm,0.5s,baz=25,slow=6.5
NOA NORSAR Array B 64.52 343 P **P 11 36 48.5 -1.4**
comp=Z,1.7nm,0.4s,baz=16,slow=5.3,SNR=14
X16A Lo Mia Camp, P 64.59 66 IAmb IAmb 11 36 53.7
comp=Z,11nm,0.9s
EYMN Ely 64.71 44 P **P 11 36 51.7 +0.3**
baz=320,SNR=11
S22A 4UR Ranch, Cre 64.76 61 P **P 11 36 53.9 +1.7**
baz=317,SNR=17
HFS Hagfors 64.86 341 P **P 11 36 50.6 -1.6**
comp=Z,2.9nm,0.5s,baz=53,slow=5.7,SNR=20
OGNE Ogallala 64.96 55 P **P 11 36 54.3 +1.1**
baz=318
SDCO Great Sand Dun 65.48 60 P **P 11 36 58.1 +1.2**
baz=317,SNR=8.4
SDCO Great Sand Dun 65.48 60 IAmb IAmb 11 36 59.1
comp=Z,10nm,1.3s
ECSD EROS Data Cent 65.57 50 P **P 11 36 57.3 +0.3**
baz=315,SNR=9.2
214A Organ Pipe Nat 65.58 69 P **P 11 36 58.5 +1.3**
baz=317,SNR=8.4
214A Organ Pipe Nat 65.58 69 IAmb IAmb 11 36 59.5
comp=Z,16nm,1.2s
KULM Kulim 65.64 246 P **P 11 36 58.5 +0.7**
KULM IAmb IAmb 11 37 08.3
comp=Z,23nm,1.5s
KSCO Kaye Shedlock' 66.07 57 P **P 11 37 01.0 +0.6**
baz=318
SPMN Marine on St. 66.21 47 P **P 11 37 01.1 0.0**
baz=320
SPMN Marine on St. 66.21 47 IAmb IAmb 11 37 02.0
comp=Z,11nm,0.9s
GEYT Alibeck 66.50 302 P **P 11 37 02.5 -0.6**
comp=Z,3.6nm,0.5s,baz=34,slow=5.6,SNR=6.9
TUC Tucson 66.50 67 P **P 11 37 04.4 +1.2**
baz=317
T25A Trinidad 66.51 60 P **P 11 37 04.0 +0.6**
baz=318,SNR=5.4
ANMO Albuquerque 67.01 63 *de*P **P 11 37 07.5 +1.0**
ANMO pmax pmax
comp=Z,8.0nm,1.0s
ANMO Albuquerque 67.01 63 P **P 11 37 07.7 +1.1**
baz=318
ANMO Albuquerque 67.01 63 P **P 11 37 07.4 +0.9**
CBKS Cedar Bluff 67.72 55 P **P 11 37 10.6 -0.2**
baz=319
CBKS Cedar Bluff 67.72 55 IAmb IAmb 11 37 11.3
comp=Z,14nm,0.9s
121A Cookes Peak, D 68.05 65 P **P 11 37 15.0 +1.9**
baz=318
E44A Grand Marais A 68.11 42 P **P 11 37 13.5 +0.5**
baz=323
I40A Norwalk 68.23 46 IAmb IAmb 11 37 14.4
comp=Z,14nm,0.9s
D46A Sault St. Mari 68.66 40 P **P 11 37 15.4 -1.0**
baz=324
MATQ Matagami 68.73 35 P **P 11 37 16.3 -0.4**
baz=327
D47A Chapleau 68.90 40 P **P 11 37 16.9 -1.0**
baz=324
AKASG Malin Array Be 69.03 328 P **P 11 37 16.4 -2.2**
comp=Z,3.9nm,0.5s,baz=30,slow=6.5,SNR=8.5
AKBB Malin Array Si 69.03 328 P **P 11 37 16.6 -2.0**
AKBB pmax pmax
comp=Z,4.0nm,0.7s
AKBB Malin Array Si 69.03 328 P **P 11 37 16.6 -2.0**
D48A Paudash Townsh 69.31 39 P **P 11 37 19.4 -1.1**
baz=325
SRIG Santa Rosalia 69.32 72 P **P 11 37 21.1 +0.3**
SRIG IAmb IAmb 11 37 22.5
comp=Z,12nm,0.8s
KIV Kislovodsk 69.38 315⇓ *e*P **P 11 37 19.2 -1.9**
KIV pmax pmax
comp=Z,5.0nm,0.5s
D49A Beulah Townshi 69.41 38 P **P 11 37 19.9 -1.1**
baz=325
KBZ Khabaz 69.47 315 P **P 11 37 20.6 -0.9**
comp=Z,2.5nm,0.6s,baz=71,slow=4.6,SNR=7.5
KBZ pP **pP 11 37 56.5 +0.3**
comp=Z,3.3nm,0.8s,baz=113,slow=3.1,SNR=3.6
KBZ Khabaz 69.47 315 *ce*P **P 11 37 20.3 -1.1**
KBZ pmax pmax
comp=Z,6.0nm,1.1s
LSQQ Lebel-sur-Quev 69.55 35 P **P 11 37 21.7 -0.2**
baz=327
AMTX Amarillo 69.66 59 P **P 11 37 23.4 +0.5**
baz=319
AMTX Amarillo 69.66 59 P **P 11 37 23.0 +0.1**
AMTX IAmb IAmb 11 37 24.5
comp=Z,9.6nm,0.8s
CHGQ Chibougamau 69.73 33 P **P 11 37 22.7 -0.3**
baz=329
MSTX Muleshoe 69.76 61 P **P 11 37 24.2 +0.7**
baz=319,SNR=8.0
MNTX Cornudas Mount 70.02 64 P **P 11 37 26.1 +1.0**
baz=319,SNR=17
MNTX Cornudas Mount 70.02 64 P **P 11 37 25.6 +0.5**
MNTX IAmb IAmb 11 37 27.2
comp=Z,12nm,0.9s
D50A G1974 Best Tow 70.08 38 P **P 11 37 24.7 -0.4**
baz=326
VLDQ Val d'Or 70.18 36 P **P 11 37 24.2 -1.5**
VLDQ IAmb IAmb 11 37 25.0
comp=Z,17nm,1.0s
D53A Lac Vacive, Po 70.95 36 P **P 11 37 29.9 -0.6**
baz=327
P40A Paris 70.98 50 IAmb IAmb 11 37 31.6
comp=Z,12nm,0.8s
D54A Lac Fusel, La 71.28 36 P **P 11 37 31.5 -0.8**
baz=328
J47A Sunmer 71.29 43 P **P 11 37 32.2 -0.3**
baz=324
WMOK Wichita Mounta 71.31 58 P **P 11 37 33.1 +0.2**
baz=320,SNR=9.6
WMOK Wichita Mounta 71.31 58 IAmb IAmb 11 37 34.1
comp=Z,10nm,0.9s
K46A Dorr 71.33 44 P **P 11 37 32.4 -0.4**
baz=324
F52A Sundridge 71.42 38 P **P 11 37 32.5 -0.7**
baz=327
HDIL Hopedale 71.47 48 P **P 11 37 33.4 -0.2**
baz=323
K47A Vermontville 71.68 44 P **P 11 37 35.0 +0.2**
baz=324
J48A Bridge Port 71.68 42 P **P 11 37 35.2 +0.4**
baz=325
E54A Lac Daplat, Po 71.69 36 P **P 11 37 34.0 -0.9**
baz=328
D55A Sainte-Anne-du 71.82 35 P **P 11 37 35.3 -0.3**
baz=329
R40A Maddies Statio 71.85 51 IAmb IAmb 11 37 36.5
comp=Z,12nm,0.8s
TUL1 Leonard 71.96 55 P **P 11 37 36.8 +0.2**
baz=321
CTAO Charters Tower 72.02 191 P **P 11 37 37.1 +0.1**
CTAO pmax pmax
comp=Z,26nm,1.4s
CTAO Charters Tower 72.02 191 P **P 11 37 37.1 +0.1**
CTAO IAmb IAmb 11 37 49.2
comp=Z,26nm,1.4s
D56A ZEC Mazanza, M 72.05 35 P **P 11 37 36.8 -0.2**
baz=329
E55A Montcerf-Lytto 72.09 36 P **P 11 37 36.8 -0.4**
baz=328
EKA Eskdalemuir Ar 72.24 348 P **P 11 37 37.6 -0.3**
comp=Z,5.1nm,0.4s,baz=17,slow=5.2,SNR=40
K49A Clarkson 72.24 42 P **P 11 37 38.5 +0.3**
baz=325
G53A Haliburton 72.25 38 P **P 11 37 37.9 -0.4**
baz=327
ESK Eskdalemuir 72.26 348 P **P 11 37 37.7 -0.4**
ESK pmax pmax
comp=Z,12nm,0.6s
ESK Eskdalemuir 72.26 348 P **P 11 37 37.7 -0.4**
ESK IAmb IAmb 11 37 38.2
comp=Z,12nm,0.6s
D57A Chemin Vers le 72.38 34 P **P 11 37 39.0 0.0**
baz=329,SNR=6.8
E56A St. Veronique 72.38 35 P **P 11 37 38.7 -0.3**
baz=329
ABTX Abilene, Hawle 72.48 60 P **P 11 37 40.4 +0.6**
baz=321
ABTX Abilene, Hawle 72.48 60 IAmb IAmb 11 37 41.2
comp=Z,10nm,0.8s
L48A N Adams 72.51 44 P **P 11 37 39.6 -0.3**
baz=325
CCM Cathedral Cave 72.53 50 P **P 11 37 39.8 -0.2**
baz=323
HHAR Hobbs 72.61 53 IAmb IAmb 11 37 40.9
comp=Z,14nm,1.0s
SFIN Lafayette 72.61 46 P **P 11 37 40.1 -0.3**
baz=324
D58A Chemin du LacG 72.66 33 P **P 11 37 40.4 -0.2**
baz=330
M48A Edgerton 72.77 44 P **P 11 37 41.2 -0.1**
baz=325
TX32 Lajitas Array 72.78 65 IAmb IAmb 11 37 43.7
comp=Z,19nm,0.8s
TXAR Lajitas Array 72.78 65 P **P 11 37 42.6 +0.9**
comp=Z,22nm,0.9s,baz=296,slow=4.4,SNR=137
E57A Chemin Saint G 72.81 35 P **P 11 37 41.2 -0.3**
baz=329
G55A Calabogie 72.86 37 P **P 11 37 41.3 -0.5**
baz=328
BUR08 Bucovina Ar. S 73.01 328 P **P 11 37 41.4 -1.4**
BURAR Bucovina Array 73.03 328 ⇑P **P 11 37 41.6 -1.3**
UZH Uzhgorod 73.06 331⇓ *i*P **P 11 37 46.9 +4.0**
U40A Yellville 73.09 53 P **P 11 37 42.9 -0.4**
baz=322,SNR=15
J52A Paris 73.09 40 P **P 11 37 42.9 -0.4**
baz=327
M49A Liberty Center 73.09 44 P **P 11 37 43.4 +0.1**
baz=325
N48A Decatur 73.14 45 P **P 11 37 43.2 -0.3**
baz=325
ORIO Orleans, Innes 73.14 36 P **P 11 37 43.3 -0.2**
baz=329
E58A La Victoria 73.15 34 P **P 11 37 43.3 -0.2**
baz=330
CLL Collm 73.15 338 *i* P **P 11 37 43.4 0.0**
comp=Z,11nm,0.8s
CLL Collm 73.15 338 *i* P **P 11 37 43.4 0.0**
CLL pmax pmax
comp=Z,11nm,0.8s
CLL Collm 73.15 338 P **P 11 37 43.4 0.0**
CLL IAmb IAmb 11 37 44.8
comp=Z,11nm,0.9s
H55A Tweed 73.28 37 P **P 11 37 43.5 -0.8**
baz=328
BRG Berggiesshubel 73.33 337 *e*P **P 11 37 44.1 -0.3**
comp=Z,3.5nm,0.9s
BRG Berggiesshubel 73.33 337 *e*P **P 11 37 44.1 -0.3**
BRG pmax pmax
comp=Z,4.0nm,0.9s
I55A Frankford 73.38 38 P **P 11 37 44.1 -0.8**
baz=328
MORC Moravsky Berou 73.40 334 *e*P **P 11 37 44.7 -0.3**
MORC Moravsky Berou 73.40 334 P **P 11 37 44.2 -0.8**
MORC pmax pmax
comp=Z,8.0nm,1.1s
MORC Moravsky Berou 73.40 334 P **P 11 37 44.2 -0.8**
TRPA Tarpa 73.42 330 ⇓P **P 11 37 44.9 -0.1**
LANS Liptovska Anna 73.43 333 *e*P **P 11 37 45.5 +0.3**
LANS pmax pmax
comp=Z,8.0nm,1.3s
LANS Liptovska Anna 73.43 333 *e*P **P 11 37 45.5 +0.3**
D61A St Aubert, Com 73.47 32 P **P 11 37 45.0 -0.3**
baz=331
D60A Saint Jean D'O 73.48 32 P **P 11 37 44.8 -0.6**
baz=331
TESR Tescani 73.51 327 ⇑P **P 11 37 44.1 -1.6**
W39A Magazine 73.54 54 P **P 11 37 45.8 -0.2**
baz=322
O48A Farmland 73.58 45 P **P 11 37 45.7 -0.4**
baz=325
G57A Newington 73.63 36 P **P 11 37 45.8 -0.5**
baz=329

E60A	Ste Agathe de		73.78	33	P		P	11 37 47.1	-0.1
	baz=331								
J54A	Appleton		73.80	39	P		P	11 37 47.3	0.0
	baz=328								
FCAR	Ozark Folk Cen		73.82	52	IAmb		IAmb	11 37 47.9	
	comp=Z,15nm,1.0s								
WB0	Warramunga Arr		73.84	203	IAmb		IAmb	11 37 48.8	
	comp=Z,9.7nm,0.8s								
D62A	Allapoint, All		73.95	31	P		P	11 37 48.1	0.0
	baz=332								
M51A	Elyria		73.97	43	P		P	11 37 48.6	+0.2
	baz=326								
WRAB	Tennant Creek		74.01	203	⇓	*e*P	P	11 37 48.8	+0.1
WRAB						pmax	pmax		
	comp=Z,9.0nm,0.8s								
WRAB	Tennant Creek		74.01	203		P	P	11 37 49.1	+0.4
WB2	Warramunga Arr		74.02	203		IAmb	IAmb	11 37 49.5	
	comp=Z,9.8nm,0.8s								
WRA	Warramunga Arr		74.02	203		P	P	11 37 48.9	+0.1
	comp=Z,7.7nm,0.7s,baz=16,slow=6.1,SNR=30								
N50A	Nevada		74.03	43		P	P	11 37 49.2	+0.5
	baz=326								
JCT	Junction City		74.04	61		P	P	11 37 49.3	+0.2
	baz=321,SNR=6.3								
JCT	Junction City		74.04	61		IAmb	IAmb	11 37 50.3	
	comp=Z,14nm,0.9s								
VRI	Vrinciaia		74.05	327	⇑	P	P	11 37 45.7	-3.1
E61A	Lac Etchemin		74.05	32		P	P	11 37 48.6	-0.1
	baz=331								
VRAC	Vranov		74.08	335		P	P	11 37 49.4	+0.4
	comp=Z,4.5nm,0.7s,baz=32,slow=6.4,SNR=6.2								
VRAC	Vranov		74.08	335	*e*	P	P	11 37 48.9	0.0
J55A	Hilton		74.13	39		P	P	11 37 48.5	-0.7
	baz=328								
WHTX	Lake Whitney,		74.14	58		P	P	11 37 50.2	+0.7
	baz=321								
M52A	Chesterland		74.15	42		P	P	11 37 49.4	-0.1
	baz=326								
CFR	Carcaliu		74.15	325	⇓	P	P	11 37 48.1	-1.2
MIAR	Mount Ida		74.15	54		P	P	11 37 49.6	0.0
	baz=322,SNR=5.1								
LONY	Lake Ozonia		74.19	36		P	P	11 37 48.7	-0.9
	baz=329								
JAVC	Velka Javorina		74.20	334	*e*	P	P	11 37 50.5	+0.8
WHAR	Wooly Hollow		74.21	53		IAmb	IAmb	11 37 50.6	
	comp=Z,22nm,1.2s								
N51A	Ashland		74.24	43		P	P	11 37 49.8	-0.1
	baz=326								
L53A	Girard		74.26	41		P	P	11 37 49.6	-0.5
	baz=327								
F61A	St Evariste		74.28	33		P	P	11 37 50.4	+0.3
	baz=331								
D63A	Stockholm		74.29	30		P	P	11 37 50.0	-0.2
	baz=333								
W41B	Gary Mavity, V		74.33	53		P	P	11 37 50.7	+0.2
	baz=323,SNR=6.4								
K54A	Basiliko Farm,		74.34	40		P	P	11 37 50.8	+0.3
	baz=326								
O50A	Cable		74.34	44		P	P	11 37 50.5	-0.1
	baz=326								
P49A	Miami Univ. Ec		74.36	45		P	P	11 37 50.5	-0.1
	baz=325								
KRUC	Moravsky		74.36	335	*e*	P	P	11 37 50.5	0.0
I57A	Carthage		74.38	37		P	P	11 37 50.4	-0.3
	baz=329								
L54A	Sinclairville		74.40	40		P	P	11 37 51.1	+0.2
	baz=327								
DIKM	Dikmen		74.42	319	⇑	P	P	11 37 49.8	-1.1
K55A	Perry		74.48	39		P	P	11 37 51.2	-0.2
	baz=328								
J56A	Wolcott		74.49	38		P	P	11 37 51.3	-0.1
	baz=328								
H59A	Cadyville		74.49	35		P	P	11 37 50.8	-0.6
	baz=330								
H58A	Gabriels		74.51	36		P	P	11 37 51.2	-0.3
	baz=330								
M53A	Wl Miller and		74.52	41		P	P	11 37 51.6	0.0
	baz=327								
G60A	Masonville		74.58	34		P	P	11 37 51.4	-0.5
	baz=330								
N52A	McGinn's Farm,		74.61	42		P	P	11 37 52.0	-0.2
	baz=326								
MLR	Muntele Rosu		74.64	327		P	P	11 37 51.9	-0.5
	comp=Z,3.2nm,0.6s,baz=139,slow=2.5,SNR=7.0								
MLR	Muntele Rosu		74.64	327	⇑	P	P	11 37 51.9	-0.5
G61A	St-Isidore-de-		74.70	33		P	P	11 37 52.6	+0.1
	baz=331								
P50A	Jamestown		74.70	45		P	P	11 37 52.4	-0.3
	baz=326								
J57A	Williamstown		74.70	37		P	P	11 37 52.7	+0.1
	baz=329								
WCI	Wyandotte Cave		74.72	47		P	P	11 37 52.9	+0.2
	baz=325								
FITZ	Fitzroy Crossi		74.72	211		P	P	11 37 53.7	+0.9
	comp=Z,5.3nm,0.7s,baz=10,slow=4.4,SNR=8.5								
FITZ	Fitzroy Crossi		74.72	211		P	P	11 37 53.5	+0.7
E63A	Oxbow		74.73	31		P	P	11 37 52.5	-0.2
	baz=332								
O51A	Pataskala		74.78	43		P	P	11 37 53.1	0.0
	baz=326								
L55A	Hinsdale		74.80	40		P	P	11 37 53.0	-0.2
	baz=328								
K56A	Middlesex		74.80	39		P	P	11 37 52.9	-0.3
	baz=328								
M54A	Oil Creek Stat		74.87	41		P	P	11 37 53.4	-0.2
	baz=327								
E64A	Bridgewater		74.92	31		P	P	11 37 53.3	-0.5
	baz=333								
N53A	Lisbon		74.98	42		P	P	11 37 54.2	-0.1
	baz=327								
VOIR			74.99	327	⇓	P	P	11 37 52.9	-1.4
J58A	Remsen		75.01	37		P	P	11 37 53.8	-0.6
	baz=329								
KHC	Kasperske Hory		75.03	336	*de*	P	P	11 37 54.4	0.0
KHC						pmax	pmax		
	comp=Z,24nm,0.9s								
KHC	Kasperske Hory		75.03	336	*e*	P	P	11 37 54.1	-0.3
KHC					*ex*		x	11 37 58.1	
KHC	Kasperske Hory		75.03	336		P	P	11 37 54.1	-0.3
GRF	Grafenberg Arr		75.08	338	*e*	P	P	11 37 54.5	-0.1
	comp=Z,14nm,1.0s,baz=18,slow=4.9								
G62A	West of Eustis		75.10	33		P	P	11 37 55.3	+0.5
	baz=332								
O52A	Adamsville		75.13	43		P	P	11 37 55.0	-0.1
	baz=326								
F63A	Nahmakanta, Br		75.15	32		P	P	11 37 55.1	-0.1
	baz=332								
I59A	Olmsteadville		75.16	36		P	P	11 37 54.6	-0.6
	baz=330								
L56A	Greenwood		75.19	39		P	P	11 37 55.1	-0.4
	baz=328,SNR=5.0								
ARR	Arges		75.19	328	⇑	P	P	11 37 56.1	+0.6
N54A	Moraine State		75.20	41		P	P	11 37 55.4	-0.1
	baz=327								
J59A	Plesco		75.22	36		P	P	11 37 55.0	-0.5
	baz=330								
H61A	Lyndonville		75.22	34		P	P	11 37 55.7	+0.2
	baz=331								
F64A	Sherman		75.25	31		P	P	11 37 55.6	-0.1
	baz=333								
GERES	GERESS Array B		75.26	336		P	P	11 37 55.0	-0.8
	comp=Z,2.7nm,0.6s,baz=49,slow=6.1,SNR=9.6								
GERES	GERESS Array B		75.26	336		P	P	11 37 55.0	-0.8
M55A	Ridgway		75.27	40		P	P	11 37 55.9	0.0
	baz=328								
O53A	New Philadelph		75.28	42		P	P	11 37 56.2	+0.2
	baz=327								
I60A	Shoreham		75.33	35		P	P	11 37 55.9	-0.3
	baz=330								
MEM	Membach		75.33	342		P	P	11 37 56.0	-0.1
	comp=Z,21nm,0.7s								
SIRR	Siria		75.36	330	⇓	P	P	11 37 55.7	-0.6
Q51A	Peebles		75.38	45		P	P	11 37 56.7	+0.2
	baz=326								
K58A	Earlville		75.39	37		P	P	11 37 56.5	0.0
	baz=329								
BSTI	Sart Tilman		75.44	342		P	P	11 37 57.0	+0.4
H62A	Milan		75.45	34		P	P	11 37 57.6	+0.7
	baz=331,SNR=7.8								
H62A	Milan		75.45	34		P	P	11 37 57.0	+0.1
PKME	Peaks-Kenny Pk		75.47	32		P	P	11 37 57.1	+0.2
	baz=332								
M56A	Emporium		75.49	40		P	P	11 37 56.8	-0.4
	baz=328								
G63A	Kingsbury		75.50	32		P	P	11 37 57.7	+0.6
	baz=332								
CONA	Conrad Observa		75.54	334	*e*	P	P	11 37 57.6	+0.2
	comp=Z,6.6nm,1.0s								
BHOU	Houvegnez		75.58	342		P	P	11 37 57.5	+0.1
L57A	Andrews Acres		75.58	39		P	P	11 37 57.5	-0.2
	baz=329								
I61A	Oroboro, Fairl		75.64	35		P	P	11 37 58.3	+0.4
	baz=331								
BCLA	Clavier		75.65	342		P	P	11 37 57.6	-0.3
	comp=Z,14nm,0.8s								
G64A	Maxfield		75.66	32		P	P	11 37 57.6	-0.4
	baz=332								
K59A	Cooperstown		75.68	37		P	P	11 37 58.1	-0.2
	baz=330								
O54A	Avella		75.69	42		P	P	11 37 58.3	0.0
	baz=327								
WVT	Waverly		75.70	49		P	P	11 37 58.9	+0.4
	baz=324								
BGES	Gesves		75.73	342		P	P	11 37 57.8	-0.5
	comp=Z,11nm,0.9s								
BINY	Binghamton		75.74	38		P	P	11 37 58.4	-0.2
	baz=329								
H63A	New Sharon		75.76	33		P	P	11 37 59.0	+0.4
	baz=332								
SNF	Seneffe		75.76	343		P	P	11 37 58.3	-0.2
	comp=Z,19nm,0.7s								
N55A	Marion Center		75.76	41		P	P	11 37 58.6	-0.1
	baz=328								
J60A	Lant Hill Farm		75.80	36		P	P	11 37 58.4	-0.5
	baz=330								
P53A	Whipple		75.84	43		P	P	11 37 59.1	-0.1
	baz=327								
BMRD	Maredsous		75.87	342		P	P	11 37 58.9	-0.2
	comp=Z,14nm,0.9s								
Q52A	Bidwell		75.91	44		P	P	11 38 00.2	+0.6
	baz=326								
N56A	West Decatur		75.93	40		P	P	11 37 59.9	+0.2
	baz=328								
L58A	Harry Jones Me		75.93	38		P	P	11 37 59.3	-0.3
	baz=329								
833A	Chaparral WMA,		75.94	62		P	P	11 38 01.3	+1.4
	baz=321								
I62A	Tamworth		76.00	34		P	P	11 38 00.4	+0.5
	baz=331								
J61A	Chester		76.03	35		P	P	11 38 00.3	+0.2
	baz=331								
M57A	Sunshine Farm,		76.03	39		P	P	11 38 00.1	-0.1
	baz=329								
H64A	Troy		76.05	32		P	P	11 38 00.3	+0.1
	baz=332								
G65A	Princeton		76.09	31		P	P	11 38 00.4	-0.1
	baz=333								
DOU	Dourbes		76.10	342		P	P	11 37 59.9	-0.5
I63A	Otisfield		76.11	33		P	P	11 38 01.4	+0.8
	baz=332								
L59A	Walton		76.11	37		P	P	11 38 00.8	+0.1
	baz=330								
O55A	Ligonier		76.11	41		P	P	11 38 01.0	+0.3
	baz=328								
P54A	Burton		76.13	42		P	P	11 38 01.3	+0.4
	baz=327								
OXF	Oxford		76.25	51		P	P	11 38 02.0	+0.4
	baz=324								
M58A	Price's Panora		76.27	39		P	P	11 38 01.2	-0.4
	baz=329								
Q53A	Leroy		76.31	43		P	P	11 38 02.0	+0.2
	baz=327								
H65A	Eastbrook		76.32	32		P	P	11 38 02.2	+0.4
	baz=333								
SSPA	Standing Stone		76.33	40		P	P	11 38 01.7	-0.2
	baz=328								
K61A	Williamstown		76.36	36		P	P	11 38 02.2	+0.2
	baz=330								
N57A	Milroy		76.36	40		P	P	11 38 02.0	-0.1
	baz=328								
O56A	Blue Knob Stat		76.36	41		P	P	11 38 02.5	+0.3
	baz=328								
T50A	Nancy		76.37	47		IAmb	IAmb	11 38 03.0	
	comp=Z,12nm,0.8s								
J62A	Henniker		76.40	35		P	P	11 38 02.1	-0.1
	baz=331								
P55A	Reedsville		76.49	42		P	P	11 38 03.3	+0.5
	baz=328								
PLAL	Pelwick Lake		76.52	50		IAmb	IAmb	11 38 03.7	
	comp=Z,15nm,1.1s								
H66A	Whiting		76.54	31		P	P	11 38 02.9	-0.1
	baz=333								
R53A	Hurricane		76.57	44		P	P	11 38 03.7	+0.4
	baz=327								
L60A	Shokan		76.59	37		P	P	11 38 03.3	-0.1
	baz=330								
J63A	Strafford		76.61	34		P	P	11 38 03.7	+0.3
	baz=331								
N58A	Sunbury		76.62	39		P	P	11 38 03.4	-0.1
	baz=329								
L61A	Hillsdale 1, H		76.67	36		P	P	11 38 04.0	+0.2
	baz=330								
BR131	Keskin Array S		76.70	319		P	P	11 38 03.3	-0.9
BR131						pmax	pmax		
	comp=Z,2.0nm,0.8s								
BR131	Keskin Array S		76.70	319		P	P	11 38 03.3	-0.9
BRTR	Keskin Array B		76.70	319		P	P	11 38 02.8	-1.4
	comp=Z,1.7nm,0.7s,baz=30,slow=3.7,SNR=8.6								
BRTR	Keskin Array B		76.70	319	*i*	P	P	11 38 03.2	-0.9
BRTR						pmax	pmax		
	comp=Z,2.0nm,0.7s								
K62A	Royalston		76.74	35		P	P	11 38 03.2	-1.0
	baz=331								
L61B	Northampton		76.76	36		P	P	11 38 04.3	0.0
	baz=331								
O57A	Amberson		76.79	40		P	P	11 38 04.5	0.0
	baz=328								
EIDS	Eidsvold		76.81	186		P	P	11 38 05.7	+1.2
Q55A	Buckhannon		76.81	42		P	P	11 38 05.1	+0.4
	baz=327								
P56A	Dayton Farm, R		76.90	41		P	P	11 38 05.7	+0.5
	baz=328								
SOKA	Soboth		76.91	334	*e*	P	P	11 38 04.9	-0.3
	comp=Z,4.6nm,0.6s								
N59A	State Game Lan		76.92	39		P	P	11 38 05.2	0.0
	baz=329								
K63A	Dunstable		76.97	35		P	P	11 38 05.7	+0.3
	baz=331								
KBA	Koelnbreinsper		76.99	336	*e*	P	P	11 38 06.1	+0.4
	comp=Z,19nm,0.7s,SNR=12								
BFO	Black Forest		77.01	339		P	P	11 38 04.9	-0.8
BFO						pmax	pmax		
	comp=Z,7.0nm,0.7s								
BFO	Black Forest		77.01	339		P	P	11 38 04.9	-0.8
M60A	Port Jervis		77.01	38		P	P	11 38 05.9	+0.2
	baz=330								
R54A	Victor		77.11	44		P	P	11 38 06.7	+0.3
	baz=327								
Q56A	Snyder Ridge,		77.15	42		P	P	11 38 07.0	+0.4
	baz=328								
O58A	Lewisberry		77.15	40		P	P	11 38 06.8	+0.2
	baz=329								
WATA	Walderalm		77.19	337	*e*	P	P	11 38 06.9	+0.1
	comp=Z,6.0nm,0.5s								
OBKA	Obir		77.20	335	*e*	P	P	11 38 06.8	-0.1
	comp=Z,8.6nm,0.8s								
N60A	Cedar Hill Far		77.22	38		P	P	11 38 07.0	+0.1
	baz=330								
WTTA	Wattenberg		77.25	337	*e*	P	P	11 38 07.3	+0.1
	comp=Z,8.0nm,0.7s,SNR=6.1								
RETA	Reutte		77.25	338	*i*	P	P	11 38 07.0	-0.1
	comp=Z,6.7nm,0.8s								
O59A	Robesonia		77.28	39		P	P	11 38 07.1	-0.1
	baz=329								
MOTA	Moosalm		77.30	337	*e*	P	P	11 38 07.4	-0.1
	comp=Z,13nm,0.9s,SNR=6.8								
MYKA	Terra Mystica		77.33	335	*e*	P	P	11 38 06.9	-0.6
	comp=Z,2.8nm,0.7s								
M61A	Granite Spring		77.35	37		P	P	11 38 07.5	-0.1
	baz=330								
ECH	Echery		77.37	340		P	P	11 38 07.3	-0.4
ECH						pmax	pmax		
	comp=Z,8.0nm,0.8s								
ECH	Echery		77.37	340		P	P	11 38 07.2	-0.4
SQTA	Sankt Quirin		77.39	337	*i*	P	P	11 38 08.3	+0.4
	comp=Z,13nm,0.8s								
R55A	Marlinton		77.39	43		P	P	11 38 08.4	+0.4
	baz=328								
T53A	Wise		77.43	45		P	P	11 38 08.4	+0.2
	baz=327								
ABTA	Abfaltersbach		77.51	336	*e*	P	P	11 38 08.8	+0.3
	comp=Z,12nm,0.9s								
P58A	Pank, Wackersv		77.54	40		P	P	11 38 09.1	+0.4
	baz=329								
PAL	Palisades		77.56	37		P	P	11 38 09.3	+0.5
	baz=330								
DAVA	Damuels		77.64	338	*e*	P	P	11 38 09.8	+0.5
	comp=Z,7.9nm,0.6s,SNR=5.0								
S55A	Lewisburg		77.66	43		P	P	11 38 09.7	+0.3
	baz=327								
FETA	Feichten		77.69	337	*e*	P	P	11 38 10.0	+0.4
	comp=Z,10nm,0.7s,SNR=5.6								
AS31	Alice Springs		77.70	202		P	P	11 38 10.3	+0.7
ASAR	Alice Springs		77.71	202		P	P	11 38 10.7	+1.0
	comp=Z,5.5nm,0.7s,baz=14,slow=5.4,SNR=44								
T54A	Tazewell		77.79	45		P	P	11 38 10.9	+0.7
	baz=327								
L64A	Middleborough		77.88	35		P	P	11 38 10.9	+0.5
	baz=332								
DAVOX	Davos/Dischmat		78.12	338		P	P	11 38 12.4	+0.4
	comp=Z,12nm,0.5s,baz=351,slow=5.8,SNR=18								
U54A	Nelsons Funny		78.13	45		P	P	11 38 12.1	-0.1
	baz=327								
FUORN	Ofenpass-Fuorn		78.18	338		P	P	11 38 12.5	+0.1
FUORN						IAmb	IAmb	11 38 13.5	
	comp=Z,12nm,0.7s								
U55A	TA2, Sparta		78.49	44		P	P	11 38 14.0	-0.1
	baz=327								
TUE	Stuetta		78.53	338		P	P	11 38 14.1	-0.3
LRAL	Lakeview Retre		78.62	51		P	P	11 38 14.6	-0.1
	baz=325								
V54A	Nebo		78.70	46		P	P	11 38 15.4	+0.2
	baz=327								
Z50A	Ashland		78.95	50		P	P	11 38 16.4	-0.2
	baz=326								
W54A	Cherokee Point		79.17	46		P	P	11 38 17.9	+0.2
	baz=327								
T58A	Grand View Acr		79.19	42		P	P	11 38 18.1	+0.3
	baz=328								
V56A	Mocksville		79.31	44		P	P	11 38 18.7	+0.3
	baz=328								
R61A	Willards		79.32	40		P	P	11 38 18.0	-0.5
	baz=330								
KMSC	Kings Mountain		79.50	45		P	P	11 38 19.8	+0.3
	baz=327								
X54A	Belton		79.53	46		P	P	11 38 20.2	+0.5
	baz=327								
T59A	Double "B" Far		79.58	42		P	P	11 38 20.1	+0.2
	baz=329								
U58A	Oxford		79.66	43		P	P	11 38 20.7	+0.4
	baz=328								
MANT	Manisa		79.79	322		P	P	11 38 20.1	-1.2
VLC	Villacollemand		80.46	337		P	P	11 38 24.9	+0.4
BNI	Bardonecchia		80.48	339		P	P	11 38 25.4	+0.6
BNI						pmax	pmax		
	comp=Z,9.0nm,0.6s								
BNI	Bardonecchia		80.48	339		P	P	11 38 25.4	+0.6
BNI						IAmb	IAmb	11 38 26.2	
	comp=Z,9.1nm,0.6s								
MSSA	Maissana		80.53	337		P	P	11 38 24.2	-0.8
MSSA						IAmb	IAmb	11 38 24.3	
	comp=Z,12nm,0.8s								
SSB	Saint Sauveur		80.72	341		P	P	11 38 26.2	+0.3
SSB						pmax	pmax		
	comp=Z,10.0nm,0.7s								
SSB	Saint Sauveur		80.72	341		P	P	11 38 26.2	+0.3
SSB						IAmb	IAmb	11 38 27.1	
	comp=Z,9.8nm,0.7s								
TIGA	Tifton		81.56	49		P	P	11 38 31.1	+0.6
	baz=327								
STKA	Stephens Creek		84.25	193		P	P	11 38 44.6	+0.5
	comp=Z,4.2nm,0.8s,baz=346,slow=6.6,SNR=8.5								
STKA	Stephens Creek		84.25	193		P	P	11 38 44.7	+0.6
RAYN	Ar Rayn		84.46	301		P	P	11 38 44.8	-0.8
RAYN						pmax	pmax		
	comp=Z,9.0nm,0.8s								
RAYN	Ar Rayn		84.46	301		P	P	11 38 44.8	-0.8
RAYN						IAmb	IAmb	11 38 45.6	
	comp=Z,9.4nm,0.8s								
FORT	Forrest		85.96	205		P	P	11 38 53.3	+0.7
ESDC	Sonseca Array		87.68	346		P	P	11 39 01.8	+0.7
	comp=Z,1.0nm,0.6s,baz=12,slow=3.2,SNR=5.2								
KEST	Kesra		88.65	334		P	P	11 39 06.1	+0.2
	comp=Z,10nm,0.8s,baz=351,slow=3.5,SNR=7.7								
KEST	Kesra		88.65	334		P	P	11 39 05.5	-0.4
TOO	Toolangi		89.38	189		P	P	11 39 09.9	+1.1
TOO						pmax	pmax		
	comp=Z,13nm,1.3s								
TOO	Toolangi		89.38	189		P	P	11 39 09.9	+1.1
TOO						IAmb	IAmb	11 39 15.8	
	comp=Z,13nm,1.2s								
H03N2	Juan Fernandez		135.88	88		T	T	14 16 24.9	
	baz=314,slow=77,SNR=284								
H03N1	Juan Fernandez		135.90	88		T	T	14 16 26.2	
	baz=314,slow=77,SNR=449								
H03N3	Juan Fernandez		135.90	88		T	T	14 16 26.0	
	baz=314,slow=77,SNR=372								
CPUP	Villa Florida		143.62	60		PKP	PKPbc	11 45 44.8	+0.5
	comp=Z,1.5nm,0.7s,baz=14,slow=4.3,SNR=4.0								
PLCA	Paso Flores		145.65	91		PKPbc	**PKPbc**	11 45 50.5	+0.2
	comp=Z,5.3nm,0.8s,baz=281,slow=3.3,SNR=8.2								
SNAA	Sanae		157.98	197		PKPab	**PKPab**	11 46 41.1	-0.1
SNAA	Sanae		157.98	197		PKPab	**PKPab**	11 46 41.1	-0.1
	comp=Z,6.3nm,1.0s,baz=121,slow=3.3,SNR=14								
VNA2	Neumayer--Watz		159.38	194		PKPab	**PKPab**	11 46 47.7	+0.5
	baz=174,slow=1.6								
VNA3	Neumayer Olymp		159.41	192		PKPab	**PKPab**	11 46 47.0	-0.3
VNA1	Neumayer--Stat		159.75	194		PKPab	**PKPab**	11 46 48.6	-0.2

NIED ***16*** *11:27:00,36.50N×141.80E,h26km,Mw3.9 Best double couple: M₀9.22000×10¹⁴ NP1:ϕ₁158.00000°,δ83.00000°, λ-65.00000°. NP2:ϕ₂264.00000°,δ26.00000°, λ-163.00000°.*

IDC ***16*** *11:27:25.3±1.0,36.44N×142.12E,h0km,mb3.7/4, mb1 4.1/8,mb1mx3.7/65,mbtmp3.9/8,ML3.9/4,MS3.3/2, Ms1 3.3/2,ms1mx3.0/43,Error ellipse: s-maj=31.1km s-min=20.2km az=117.0*

JMA ***16*** *11:27:29.3±0.2,36.53N×141.80E,h56km,M3.9*

NEIC ***16*** *11:27:29.8±1.4,36.49N±0.07×142.0E±0.1,h33±6km, mb4.4/11,Error ellipse: s-maj=11.9km s-min=10.1km az=104.0*

ISC 16 11:27:27.7±0.7,**36.49N**±0.05×**142.00E**±0.07,**h19**km,**n55,** σ1°**22**/55,**mb4.3**/11,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	1.14	303	P	Pn	11 27 47.4	-1.3
JHYU	Hitachinakayam	1.15	263	P	Pn	11 27 47.5	-1.2
JHO	Hitachi	1.16	277	P	Pn	11 27 47.0	-1.9
CHOJ	Chosi	1.21	230	P	Pn	11 27 49.5	-0.1
JMM	Marumori	1.68	325	P	Pn	11 27 54.6

KSRS					Sn	11 32 13.2	-0.8
KSRS	**Korea Array**	**11.30 279**	pP		**Sn**	**11 32 13.2**	**-0.8**
	2.8nm,1.0s,baz=46,slow=11,SNR=3.5						
XAN	**Xi'an**	**27.05 275**	P		**P**	**11 33 09.8**	**+0.9**
XAN			IAmb		IAmb	11 33 11.4	
	comp=Z,9.4nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**27.46 121**	T		T	12 02 35.1	
	baz=313,slow=75,SNR=23						
H11N1	**WAKE ISLAND Hy**	**27.47 121**	T		T	12 02 34.4	
	baz=313,slow=75,SNR=20						
H11N3	**WAKE ISLAND Hy**	**27.48 121**	T		T	12 02 37.8	
	baz=313,slow=75,SNR=14						
ULN	**Ulaanbaatar**	**28.05 305**	P		**P**	**11 33 16.5**	**-1.4**
H11S1	**WAKE ISLAND Hy**	**28.17 123**	T		T	12 03 30.8	
	baz=312,slow=74						
H11S3	**WAKE ISLAND Hy**	**28.17 123**	T		T	12 03 14.5	
	baz=312						
H11S2	**WAKE ISLAND Hy**	**28.18 123**	T		T	12 03 06.6	
	baz=312,slow=74						
SONM	**Songino Array**	**28.48 305**	pP		**P**	**11 33 20.1**	**-1.6**
	comp=Z,1.3nm,0.5s,baz=88,slow=8.2,SNR=4.3						
SONM	**Songino Array**	**28.48 305**	P		**P**	**11 33 20.1**	**-1.6**
FAKI	**Fak Fak**	**40.24 195**	P		**P**	**11 35 04.1**	**+0.7**
MTN	**Manton Dam**	**50.12 194**	P		**P**	**11 36 22.1**	**+0.4**
MTN			IAmb		IAmb	11 36 22.8	
	comp=Z,5.1nm,1.0s						
KNRA	**Kununurra**	**53.37 196**	P		**P**	**11 36 46.0**	**+0.1**
WB0	**Warramunga Arr**	**56.41 189**	P		**P**	**11 37 08.3**	**+0.4**
WB0			IAmb		IAmb	11 37 16.0	
	comp=Z,6.6nm,1.2s						
FITZ	**Fitzroy Crossi**	**56.45 199**	P		**P**	**11 37 08.5**	**+0.3**
FITZ			IAmb		IAmb	11 37 13.6	
	comp=Z,4.1nm,1.2s						
WR0	**Warramunga Arr**	**56.58 188**	P		**P**	**11 37 08.6**	**-0.6**
WR0			IAmb		IAmb	11 37 13.5	
	comp=Z,6.4nm,1.2s						
WB2	**Warramunga Arr**	**56.59 189**	P		**P**	**11 37 09.0**	**-0.2**
WB2			IAmb		IAmb	11 37 11.0	
	comp=Z,5.1nm,1.2s						
WRA	**Warramunga Arr**	**56.59 189**	P		**P**	**11 37 09.3**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=359,slow=6.8,SNR=8.5						
WRA	**Warramunga Arr**	**56.59 189**	P		**P**	**11 37 09.3**	**+0.1**
ASAR	**Alice Springs**	**60.31 189**	P		**P**	**11 37 35.6**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=358,slow=6.0,SNR=6.4						
ASAR	**Alice Springs**	**60.31 189**	P		**P**	**11 37 35.6**	**+0.4**
YKA	**Yellowknife Ar**	**64.04 30**	P		**P**	**11 38 00.2**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=304,slow=5.9,SNR=5.3						
YKA	**Yellowknife Ar**	**64.04 30**	P		**P**	**11 38 00.2**	**+0.4**
NB201	**NORSAR Array S**	**74.84 338**	P		**P**	**11 39 06.5**	**0.0**
NVAR	**Mina Array Bea**	**74.94 53**	P		**P**	**11 39 09.0**	**+1.2**
	comp=Z,0.7nm,0.8s,baz=286,slow=5.9,SNR=3.8						
NVAR	**Mina Array Bea**	**74.94 53**	P		**P**	**11 39 09.0**	**+1.2**

*NAO **16** 11:29:01.9±1.9,69°.61N×30°.23E, ML2.5*
*HEL **16** 11:29:03.7±0.4,69°.64N×30°.01E, h0km, ML1.8, Explosion*
*BER **16** 11:29:04.3±3.6,69°.57N×30°.20E, h0km, ML1.7, Suspected explosion*
*KOLA **16** 11:29:04.9,69°.24N×28°.74E, h0km*

ISC 16 11:29:01.4±1.3,69°.67N±0°.07×30°.14E±0°.05,h0km,n20, σ1s07/42,Norway-Murmansk border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEV	**Kevo**	**1.10 276**		*eP*	**Pg**	**11 29 22.8**	**+0.4**
KEV				*eS*	**Sg**	**11 29 36.0**	**-0.6**
ARA0	**ARCESS Array S**	**1.63 267**		Pg	**Pn**	**11 29 31.9**	**+0.6**
	baz=86,slow=16						
ARA0				Lg	Lg	11 29 54.2	
	baz=87,slow=28						
ARA0				Rg	Rg	11 30 03.0	
	baz=84,slow=37						
ARA0	**ARCESS Array S**	**1.63 267**		Pg	**Pn**	**11 29 31.9**	**+0.6**
	baz=86,slow=16						
ARA0				Sg	**Sg**	**11 29 54.2**	**+0.6**
	baz=87,slow=28						
ARA0				Rg	Rg	11 30 03.0	
	baz=84,slow=37						
VRF	**Varrio**	**1.94 186**		*eP*	**Pb**	**11 29 37.4**	**-0.2**
VRF				*eS*	**Sb**	**11 30 01.6**	**-0.7**
VRF				MSG		11 30 04.5	
	comp=Z,5.6nm,0.1s						
APA0	**Apatity Array**	**2.32 152**		Pn	**Pn**	**11 29 41.1**	**+0.3**
	baz=320,slow=16						
APA0				Pg	**Pb**	**11 29 44.2**	**+0.2**
APA0				Lg	Lg	11 30 11.9	
	baz=345,slow=37						
APA0	**Apatity Array**	**2.32 152**		P	**Pb**	**11 29 43.1**	**-0.9**
APA0				S	**Sb**	**11 30 11.6**	**-1.6**
APA0	**Apatity Array**	**2.32 152**		Pn	**Pn**	**11 29 41.1**	**+0.3**
	baz=320,slow=16						
APA0				Pg	**Pb**	**11 29 44.2**	**+0.2**
APA0				Sg	**Sb**	**11 30 11.9**	**-1.3**
	baz=345,slow=37						
HAMF	**Hammerfest**	**2.41 297**		Pn	**Pn**	**11 29 43.0**	**+1.0**
HAMF				Sn	**Sb**	**11 30 15.2**	**-0.6**
HAMF	**Hammerfest**	**2.41 297**		Pn	**Pn**	**11 29 43.0**	**+1.0**
HAMF				Sn	**Sb**	**11 30 15.2**	**-0.6**
APA	**Apatity**	**2.43 149**		P	**Pb**	**11 29 45.0**	**-0.9**
APA				S	**Sb**	**11 30 14.8**	**-1.4**
KTK1	**Kautokeino**	**2.54 258**		Pn	**Pn**	**11 29 44.1**	**+0.3**
KTK1				Sn	**Sn**	**11 30 16.9**	**+1.6**
KTK1	**Kautokeino**	**2.54 258**		*eP*	**Pn**	**11 29 44.6**	**+0.8**
KTK1				*eS*	**Sn**	**11 30 15.9**	**+0.6**
KTK1				IAML		11 30 20.4	
	comp=Z,8.4nm,0.7s						
HEF	**Hetta**	**2.65 245**		Pn	**Pn**	**11 29 45.9**	**+0.6**
HEF				Sn	**Sn**	**11 30 20.1**	**+1.9**
HEF	**Hetta**	**2.65 245**		*eP*	**Pn**	**11 29 47.2**	**+1.8**
HEF				*eS*	**Sn**	**11 30 18.8**	**+0.6**
HEF				MSG		11 30 23.6	
	comp=Z,3.9nm,0.1s						
HEF	**Hetta**	**2.65 245**		Pn	**Pn**	**11 29 45.9**	**+0.6**
HEF				*eP*	**Pb**	**11 29 46.9**	**-2.8**
HEF				*eS*	**Sn**	**11 30 18.9**	**+0.7**
HEF				Sn	**Sn**	**11 30 21.1**	**+1.9**
LANU	**Lannavaara**	**3.37 245**		*eP*	**Pn**	**11 29 56.2**	**+0.9**
LANU				*eS*	**Sn**	**11 30 36.0**	**+0.1**
KIF	**Kilpisjarvi**	**3.38 263**		Pn	**Pn**	**11 29 55.5**	**+0.2**
KIF				Sn	**Sn**	**11 30 36.3**	**+0.3**
KIF	**Kilpisjarvi**	**3.38 263**		*eP*	**Pn**	**11 29 56.2**	**+1.0**
KIF				*eS*	**Sn**	**11 30 35.9**	**-0.1**
KIF	**Kilpisjarvi**	**3.38 263**		Pn	**Pn**	**11 29 55.5**	**+0.2**
KIF				Sn	**Sn**	**11 30 36.3**	**+0.3**
KU6	**Riekki**	**3.66 182**		*eP*	**Pn**	**11 30 01.6**	**+2.4**
KU6				*eS*	**Sn**	**11 30 42.6**	**-0.5**

TRN 16 11:29:05.3,17°.10N×60°.25W,h27km,MD3.7,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABD	**La Joyeuse, An**	**1.34 242**		*eP*	Pb	11 29 30.2	+0.4
ABD				*eS*	Sb	11 29 47.7	+1.2
MAGL	**Barre de l'ile**	**1.51 221**		*eP*	Pb	11 29 31.9	-0.9
MAGL				*eS*	Sb	11 29 52.1	+0.6
ANWB	**Willy Bob**	**1.57 291**		*eP*	Pb	11 29 32.8	-1.0
ANWB				*eS*	Sb	11 29 53.1	-0.1
CBE	**Ff, Capester**	**1.66 232**		*eP*	Pb	11 29 34.0	-1.2
CBE				*eS*	Sb	11 29 55.6	-0.1
TDBA	**Terre de Bas,**	**1.82 227**		*eP*	Pb	11 29 37.0	-1.0
TDBA				*eS*	Sb	11 29 59.3	-1.1
DWS	**Wesley**	**1.83 214**		*eP*	Pn	11 29 36.2	+1.1
DWS				*eS*	Sb	11 29 59.8	-1.0
MDPV	**Dominica, Penn**	**1.85 218**		*eP*	Pn	11 29 36.1	+0.8
MDPV				*eS*	Sb	11 30 00.7	-0.4
MLYT	**Lee's Yard**	**1.90 259**		*eP*	Pb	11 29 38.9	-0.4
MLYT				*eS*	Sb	11 30 02.4	-0.2
MDN	**Morne-Daniel**	**2.08 212**		*eP*	Pn	11 29 39.9	+1.3
MDN				*eS*	Sb	11 30 06.5	-1.5
ILAM	**Ilet Lapin Mar**	**2.39 195**		*eP*	Pn	11 29 44.3	+1.5
ILAM				*eS*	Sn	11 30 12.4	+1.2
SKI	**Saint Kitts**	**2.39 276**		*eP*	Pn	11 29 44.7	+1.9
SKI				*eS*	Sn	11 30 13.6	+2.3
BAMF	**Morne Balai**	**2.43 201**		*eP*	Pb	11 29 48.1	-0.3
CXM	**Morne La Croix**	**2.44 201**		*eP*	Pb	11 29 46.5	-2.1
FDF	**Fort de France**	**2.51 200**		*eP*	Pn	11 29 45.6	+1.2
FDF				*eS*	Sn	11 30 16.9	+2.7
ZAM	**Aeronautique**	**2.62 197**		*eP*	Pn	11 29 48.6	+2.6
BIM	**Bigot**	**2.69 197**		*eP*	Pn	11 29 48.4	+1.5
BIM				*eS*	Sn	11 30 20.6	+2.0
MPOM	**Morne Pois Mar**	**2.70 193**		*eP*	Pn	11 29 48.9	+1.8
MPOM				*eS*	Sn	11 30 21.4	+2.4
SLBI	**Saint Lucia, B**	**3.14 193**		*eP*	Pn	11 29 55.4	+2.3
SLAC	**Saint Lucia, A**	**3.25 191**		*eP*	Pn	11 29 57.1	+2.5
MCLT	**Moule a Chique**	**3.44 191**		*eP*	Pn	11 29 58.6	+1.4

*IDC **16** 11:53:39.0±4.1,16°.62S×178°.04W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.8/22, mbtmp4.0/4, Error ellipse: s-maj=177.7km s-min=33.9km az=138.0*
*NEIC **16** 11:54:39.1±1.5,17°.92S±0°.07×178°.3W±0°.2, h620km±12km, mb4.3/13, Error ellipse: s-maj=25.9km s-min=8.8km az=80.0*

ISC 16 11:54:37.7±1.1,17°.9S±0°.1×178°.3W±0°.2,h600km,n22, σ0s61/21,mb4.2/11,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.47 272**		P	P	11 56 05.9	+6.1
FUNA	**Funafuti**	**9.62 345**		P	**P**	**11 56 53.2**	**+0.3**
FOZ	**Fox Glacier**	**27.46 199**		P	**P**	**11 59 36.6**	**-0.7**
MLZ	**Mavora Lakes**	**29.64 200**		P	**P**	**11 59 57.0**	**+0.8**
ARMA	**Armidale**	**30.03 240**		P	**P**	**12 00 00.3**	**+0.4**
ARMA				IAmb	IAmb	12 00 15.5	
	comp=Z,21nm,1.4s						
CAN	**Canberra**	**33.79 233**		P	**P**	**12 00 32.0**	**+0.5**
CAN				IAmb	IAmb	12 00 49.8	
	comp=Z,12nm,1.4s						
COEN	**Coen**	**37.20 270**		P	**P**	**12 01 00.3**	**+0.3**
STKA	**Stephens Creek**	**38.72 241**		P	**P**	**12 01 12.2**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=94,slow=16,SNR=5.0						
STKA	**Stephens Creek**	**38.72 241**		P	**P**	**12 01 11.9**	**0.0**
BBOO	**Buckleboo**	**43.50 241**		P	**P**	**12 01 49.4**	**-0.3**
BBOO				IAmb	IAmb	12 01 49.4	
	comp=Z,14nm,1.4s						
WR0	**Warramunga Arr**	**44.54 260**		P	**P**	**12 01 57.5**	**-0.3**
WR0				IAmb	IAmb	12 02 00.9	
	comp=Z,7.2nm,1.2s						
WB2	**Warramunga Arr**	**44.72 260**		P	**P**	**12 01 58.6**	**-0.6**
WB2				IAmb	IAmb	12 02 09.1	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	**44.73 260**		P	**P**	**12 01 58.5**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=93,slow=7.2,SNR=26						
WRA	**Warramunga Arr**	**44.73 260**		P	**P**	**12 01 58.5**	**-0.9**
AS31	**Alice Springs**	**44.88 254**		P	**P**	**12 02 00.2**	**-0.3**
ASAR	**Alice Springs**	**44.89 254**		P	**P**	**12 01 59.9**	**-0.6**
	comp=Z,3.3nm,0.6s,baz=87,slow=8.3,SNR=55						
ASAR	**Alice Springs**	**44.89 254**		P	**P**	**12 01 59.9**	**-0.6**
FAKI	**Fak Fak**	**50.67 281**		P	**P**	**12 02 43.4**	**-0.2**
FAKI				IAmb	IAmb	12 02 47.2	
	comp=Z,9.3nm,1.1s						
QSPA	**South Pole Qui**	**72.16 180**		P	**P**	**12 05 02.7**	**+0.1**
PEA0B	**Petropavlovsk-**	**73.69 345**		P	**P**	**12 05 12.1**	**+0.8**
PEA0B				IAmb	IAmb	12 05 30.3	
	comp=Z,15nm,1.1s						
ILAR	**Eielson Array**	**85.85 13**		P	**P**	**12 06 13.7**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=224,slow=5.5,SNR=5.4						
ILAR	**Eielson Array**	**85.85 13**		P	**P**	**12 06 13.7**	**-0.8**

*IDC **16** 12:20:02.9±2.0,51°.65N×174°.70W, h0km, mb3.7/8, mb1 3.8/11, mb1mx3.6/58, mbtmp3.7/11, ML3.4/3, Error ellipse: s-maj=54.7km s-min=17.6km az=168.0*
*AEIC **16** 12:20:05±2.0,51°.32N±0°.05×174°.71W±0°.04, h9km±6km, ML3.5, mb3.8/9(NEIC), Error ellipse: s-maj=7.6km s-min=3.7km az=174.0*
*NEIC **16** 12:20:06.1±1.3,51°.30N±0°.04×174°.66W±0°.05, h30km±8km, Error ellipse: s-maj=6.5km s-min=3.4km az=206.0*

ISC 16 12:20:07.9±1.6,51°.4N±0°.1×174°.68W±0°.04,h48km±13km, n43,σ1s35/50,mb3.9/8,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.86 20**			**Pn**	**12 20 22.6**	**-0.9**
ATKA	**Atka Island**	**0.86 20**			**Sn**	**12 20 36.3**	**+1.2**
KOFP	**Korovin Flat P**	**0.95 22**			**Pn**	**12 20 24.6**	**-0.3**
KOWE	**Korovin West**	**1.00 15**			**Pn**	**12 20 25.3**	**-0.2**
KOSE	**Korovin Southe**	**1.02 22**			**Pn**	**12 20 25.9**	**0.0**
GSMY	**Great Sitkin M**	**1.07 307**			**Pn**	**12 20 25.6**	**-0.9**
GSMY					**Sn**	**12 20 42.0**	**+1.8**
GSTR	**Great Sitkin T**	**1.10 310**			**Pn**	**12 20 26.5**	**-0.5**
GSTR					**Sn**	**12 20 41.1**	**0.0**
GSTD	**Great Sitkin T**	**1.12 306**			**Pn**	**12 20 26.4**	**-0.8**
GSTD					**Sn**	**12 20 42.4**	**+0.8**
ADAG	**Mount Adagdak**	**1.33 297**			**Pn**	**12 20 29.9**	**-0.1**
ADK	**Adak**	**1.34 292**			**Pn**	**12 20 29.0**	**-1.1**
ADK				Sn	**Sn**	**12 20 47.2**	**+0.5**
KIKV	**Kanaga Island**	**1.62 288**			**Pn**	**12 20 33.3**	**-0.7**
KIMD	**Kanaga Island**	**1.64 284**			**Pn**	**12 20 33.1**	**-1.0**
KICM	**Kanaga Island**	**1.65 289**			**Pn**	**12 20 33.9**	**-0.5**
TAPA	**Tanaga Point A**	**2.00 283**			**Pn**	**12 20 39.1**	**0.0**
TAFP	**Tanaga Falls P**	**2.12 285**			**Pn**	**12 20 40.7**	**-0.1**
TAFP					**Sn**	**12 21 06.8**	**+0.9**
TASE	**Tanaga Southea**	**2.14 283**			**Pn**	**12 20 41.1**	**0.0**
NIKH	**Nikolski High**	**3.91 64**			**Pn**	**12 21 05.1**	**-0.2**
NIKH				Sn	**Sn**	**12 21 49.5**	**-0.5**
OKCE	**Okmok Cone E**	**4.47 60**			**Pn**	**12 21 14.6**	**+1.5**
MREP	**Makushin Rep't**	**5.40 60**			**Pn**	**12 21 27.2**	**+1.3**
MSW	**Makushin Switc**	**5.42 59**			**Pn**	**12 21 27.0**	**+0.9**
UNV	**Unalaska Valle**	**5.55 61**			**Pn**	**12 21 27.6**	**-0.1**
SPIA	**Saint Paul Isl**	**6.34 22**			**Pn**	**12 21 41.4**	**+2.8**
KDAK	**Kodiak Island**	**14.27 55**		Pn	**Pn**	**12 23 24.3**	**-2.6**
	0.2nm,0.3s,baz=140,slow=1.2,SNR=16						
KDAK				Sn	**S**	**12 26 15.6**	**-6.4**
	0.1nm,0.3s,baz=67,slow=23,SNR=6.8						
KDAK	**Kodiak Island**	**14.27 55**			**Pn**	**12 23 25.8**	**-1.1**
PETK	**Petropavlovsk-**	**16.96 287**		Pn	**Pn**	**12 24 01.1**	**-0.4**
	0.1nm,0.3s,baz=90,slow=15,SNR=3.0						
BILL	**Bilibino**	**19.10 338**		P	**Pn**	**12 24 27.9**	**+0.5**
BILL				IAmb	IAmb	12 24 34.1	
	comp=Z,6.1nm,1.0s						
CCB	**Clear Creek Bu**	**19.25 36**		P	**Pn**	**12 24 28.6**	**-0.5**
HDA	**Harding Lake**	**19.45 37**		P	**P**	**12 24 30.5**	**+0.4**
HDA				IAmb	IAmb	12 24 37.4	
	comp=Z,4.0nm,0.6s						
IL31		**19.65 36**		P	**P**	**12 24 32.7**	**+0.5**
ILAR	**Eielson Array**	**19.65 36**		P	**P**	**12 24 31.2**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=222,slow=7.6,SNR=30						
DOT	**Dot Lake**	**20.26 41**		P	**P**	**12 24 39.1**	**+0.2**
DOT				IAmb	IAmb	12 24 49.9	
	comp=Z,2.3nm,0.6s						
SCRK	**Sand Creek**	**20.42 40**		P	**P**	**12 24 40.3**	**-0.4**
SEY	**Seymchan**	**20.99 316**		P	**P**	**12 24 46.5**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=85,slow=11,SNR=1.7						
TOLK	**Toolik Lake Re**	**21.08 26**		P	**P**	**12 24 48.5**	**+0.8**
TOLK				IAmb	IAmb	12 24 50.5	
	comp=Z,9.9nm,1.4s						
EGAK	**Eagle**	**21.86 39**		P	**P**	**12 24 55.9**	**-0.2**
INK	**Inuvik**	**25.98 34**		P	**P**	**12 25 36.2**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=183,slow=9.4,SNR=5.9						
INK	**Inuvik**	**25.98 34**		P	**P**	**12 25 35.8**	**+0.3**
INK				IAmb	IAmb	12 25 48.1	
	comp=Z,4.0nm,1.4s						
USRK	**Ussuriysk Ar.**	**35.84 280**		P	**P**	**12 27 03.1**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=55,slow=8.2,SNR=4.3						
KSRS	**Korea Array**	**42.22 274**		P	**P**	**12 27 57.5**	**+1.7**
	comp=Z,0.6nm,0.4s,baz=52,slow=8.0,SNR=4.2						
PDAR	**Pinedale Array**	**43.83 75**		P	**P**	**12 28 10.8**	**+1.7**
	comp=Z,0.6nm,0.6s,baz=316,slow=5.0,SNR=3.7						
SONM	**Songino Array**	**48.92 299**		P	**P**	**12 28 49.6**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=75,slow=7.6,SNR=2.4						
MKAR	**Makanchi Array**	**62.01 311**		P	**P**	**12 30 22.9**	**0.0**
	comp=Z,1.2nm,0.3s,baz=43,slow=6.5,SNR=34						
FINES	**FINESS Array B**	**66.29 349**		P	**P**	**12 30 50.1**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=27,slow=9.4,SNR=3.6						

IDC 16 12:20:43.7±56.0,21°.10S×177°.88W,h0km,mb4.1/3, mb1 4.3/3,mb1mx3.7/36,mbtmp4.1/3,Error ellipse: s-maj=1031.0km s-min=157.6km az=84.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.63 245**		P	P	12 28 00.4	-0.1
	1.6nm,0.5s,baz=78,slow=10,SNR=6.0						
ASAR	**Alice Springs**	**44.49 257**		P		12 28 57.0	-0.3
	2.2nm,0.7s,baz=100,slow=7.2,SNR=31						
WRA	**Warramunga Arr**	**44.63 263**		P	P	12 28 58.3	0.0
	1.0nm,0.2s,baz=96,slow=8.4,SNR=77						

*BGR **16** 12:30:09.2±0.0,15°.26N×62°.40W, h48km, mb5.3*

*BJI **16** 12:30:18.0±0.0,17°.10N×60°.40W, h10km, Ms4.9/1, Ms7 4.6/1*
*IDC **16** 12:30:19.3±0.4,17°.10N×60°.30W, h0km, mb4.6/32, mb1 4.8/36, mb1mx4.7/48, mbtmp4.7/36, ML4.2/4, MS4.0/15, Ms1 4.0/15, ms1mx3.8/45, Error ellipse: s-maj=11.5km s-min=9.6km az=113.0*
*NEIC **16** 12:30:20.8±1.6,17°.11N±0°.05×60°.39W±0°.06, h10km±1km, mb4.9/187, Error ellipse: s-maj=11.1km s-min=6.6km az=59.0*
*TRN **16** 12:30:21.0,17°.19N×60°.25W, h45km, MD4.4*
*OSPL **16** 12:31:03.4±1.4,18°.20N×62°.99W, h432km±48km, ML4.2*

ISC 16 12:30:21.6±0.5,17°.11N±0°.03×60°.39W±0°.03,h15km±2km, h15km:pP-P,n412,σ1s16/414,mb4.9/137,MS4.0/12, 17C-7D,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H05N1	**Guadeloupe/Mar**	**1.01 219**		Pn	**Pn**	**12 30 41.8**	**+0.4**
ABD	**La Joyeuse, An**	**1.23 239**		*eP*	**Pn**	**12 30 44.6**	**+0.3**
ABD				*eS*	**Sg**	**12 31 03.8**	**+2.6**
MAGL	**Barre de l'ile**	**1.44 217**		*eP*	**Pn**	**12 30 47.8**	**+0.6**
MAGL				*eS*	**Sb**	**12 31 07.3**	**+1.1**
ANWB	**Willy Bob**	**1.45 293**		*eP*	**Pn**	**12 30 47.5**	**+0.2**
ANWB				*eS*	**Sb**	**12 31 07.0**	**+0.4**
ANWB	**Willy Bob**	**1.45 293**			**Pn**	**12 30 47.5**	**+0.2**
ANWB				Sn	**Sn**	**12 31 05.1**	**-1.0**
CBE	**Ff, Capester**	**1.56 229**		*eP*	**Pb**	**12 30 50.0**	**-0.2**
CBE				*eS*	**Sg**	**12 31 11.5**	**-0.4**
TDBA	**Terre de Bas,**	**1.73 224**		*eP*	**Pb**	**12 30 52.6**	**-0.5**
TDBA				*eS*	**Sb**	**12 31 15.5**	**+0.7**
DWS	**Wesley**	**1.77 210**		*eP*	**Pn**	**12 30 52.3**	**+0.6**
DWS				*eS*	**Sn**	**12 31 15.3**	**+1.3**
MLYT	**Lee's Yard**	**1.77 258**		*eP*	**Pb**	**12 30 53.6**	**-0.2**
MLYT				*eS*	**Sb**	**12 31 17.2**	**+1.4**
MDPV	**Dominica, Penn**	**1.77 214**		*eP*	**Pb**	**12 30 53.5**	**-0.4**
MDPV				*eS*	**Sb**	**12 31 16.4**	**+0.4**
MDVC	**Dominica, Viel**	**1.78 213**		*eP*	**Pn**	**12 30 52.9**	**+1.0**
MDVC				*eS*	**Sb**	**12 31 16.2**	**+0.1**
DLPL	**La Plaine**	**1.95 205**		*eP*	**Pn**	**12 30 54.8**	**+0.5**
DLPL				*eS*	**Sb**	**12 31 20.2**	**-0.8**
DLPL	**La Plaine**	**1.95 205**			**Sn**	**12 31 17.8**	**-0.7**
MDN	**Morne-Daniel**	**2.02 209**		*eP*	**Pb**	**12 30 57.0**	**-1.1**
MDN				*eS*	**Sn**	**12 31 21.3**	**+1.0**
NVDO	**Nevis, Disaste**	**2.13 271**		*iP*	**Pn**	**12 30 58.1**	**+1.3**
NVDO				*eS*	**Sn**	**12 31 24.1**	**+1.1**
SKI	**Saint Kitts**	**2.26 276**		*eP*	**Pn**	**12 31 00.1**	**+1.6**
SKI				*eS*	**Sn**	**12 31 27.2**	**+1.0**
ILAM	**Ilet Lapin Mar**	**2.37 191**		*eP*	**Pn**	**12 31 00.3**	**+0.4**
ILAM				*eS*	**Sn**	**12 31 29.1**	**+0.4**
SVN	**Savane Anatole**	**2.37 199**		*eP*	**Pn**	**12 31 00.6**	**+0.4**
BAMF	**Morne Balai**	**2.39 198**		*eP*	**Pn**	**12 31 00.9**	**+0.5**
CXM	**Morne La Croix**	**2.40 198**		*eP*	**Pn**	**12 31 01.1**	**+0.5**
PCM	**Pelee Case Pet**	**2.41 199**		*eP*	**Pn**	**12 31 01.0**	**+0.3**
GBMF	**Grand Be**	**2.42 198**		*eP*	**Pn**	**12 31 01.2**	**+0.5**
PML	**Morne Lenard**	**2.44 198**		*eP*	**Pn**	**12 31 01.6**	**+0.6**
FDF	**Fort de France**	**2.47 197**		*eP*	**Pn**	**12 31 01.9**	**+0.4**
FDF				*eS*	**Sn**	**12 31 32.2**	**+0.7**
FDF	**Fort de France**	**2.47 197**			**Pn**	**12 31 01.7**	**+0.3**
FDF				Sn	**Sn**	**12 31 30.2**	**-1.2**
LPMF	**Morne Lapointe**	**2.58 193**		*eP*	**Pn**	**12 31 03.2**	**+0.3**
ZAM	**Aeronautique**	**2.59 194**		*eP*	**Pn**	**12 31 03.5**	**+0.4**
TRMF	**Trois Ilets**	**2.63 194**		*eP*	**Pn**	**12 31 04.1**	**+0.5**
BIM	**Bigot**	**2.66 194**		*eP*	**Pn**	**12 31 04.9**	**+0.8**
BIM				*eS*	**Sn**	**12 31 36.0**	**-0.1**
MPOM	**Morne Pois Mar**	**2.69 190**		*eP*	**Pn**	**12 31 04.7**	**+0.3**
MPOM				*eS*	**Sn**	**12 31 37.2**	**+0.6**
H05S1	**Guadeloupe/Mar**	**2.70 189**		Pn	**Pn**	**12 31 05.7**	**+1.1**
SMRT	**St. Maarten**	**2.73 291**		*eP*	**Pn**	**12 31 05.2**	**+0.2**
SMRT				*eS*	**Sn**	**12 31 37.1**	**-0.6**
SMRT	**St. Maarten**	**2.73 291**		Pn	**Pn**	**12 31 05.2**	**+0.2**
SMRT				Sn	**Sn**	**12 31 37.0**	**-0.8**
SABA	**Saba**	**2.77 281**		*eP*	**Pn**	**12 31 06.9**	**+1.3**
SABA				*eS*	**Sn**	**12 31 39.2**	**+0.3**
SABA	**Saba**	**2.77 281**			**Pn**	**12 31 06.1**	**+0.5**
SLBI	**Saint Lucia, B**	**3.12 191**		*eP*	**Pn**	**12

MDP Montagnes des 14.14 147 Pn Pn 12 33 35.3 -6.3
comp=Z,1.4nm,0.3s,baz=339,slow=18,SNR=7.5
MDP Sn Sn 12 36 00.7 -18
comp=Z,7.7nm,0.3s,baz=222,slow=13,SNR=14
MDP LR LR 12 39 41.2
comp=Z,617nm,20.0s,baz=332,slow=40
GTBY Guantanamo Bay 14.24 284 Pn **Pn 12 33 42.0 -0.9**
SMRC Santa Marta, M 14.66 248 *eP* **Pn 12 33 44.5 -4.2**
ARGC Ariguani, Magd 15.28 244 *eP* **P 12 34 00.7 -1.1**
OCAC Ocana 15.38 237 *eP* **Pn 12 33 58.4 -0.1**
PAMC Pamplona, Colo 15.45 233 *eP* **Pn 12 34 00.1 +0.4**
SMLC San Martn de 15.68 240 *eP* **Pn 12 34 00.1 -2.1**
SJCC San Jacinto, C 16.06 245 *eP* **Pn 12 34 07.3 +0.1**
BRRC Barranca, Sant 16.37 234 *eP* **Pn 12 34 11.4 +0.2**
MTDJ Mount Denham 16.38 276 **Pn 12 34 11.3 0.0**
MTDJ IAmb IAmb 12 34 14.8
comp=Z,82nm,0.8s
RUSC La Rusia 16.69 230 *eP* **Pn 12 34 15.7 +0.1**
RUSC La Rusia 16.69 230 **Pn 12 34 15.3 -0.3**
ZARC Zaragoza, Cauc 17.05 238 *eP* **Pn 12 34 17.3 -2.5**
PTBC PUERTO BERRIO, 17.30 234 *eP* **Pn 12 34 19.9 -3.0**
URCC San Jos de Ur 17.46 240 *eP* **Pn 12 34 22.2 -2.5**
SPBC San Pablo de B 17.58 231 *eP* **Pn 12 34 26.8 +0.4**
LCBC Los crdobas, 17.59 244 *eP* **Pn 12 34 26.8 +0.3**
CHIC Chingaza 18.02 228 *eP* **P 12 34 33.2 +0.6**
NORC Norcasia 18.23 233 *eP* **Pn 12 34 33.6 -0.8**
ROSC El Rosal 18.30 230 P **Pn 12 34 34.2 -1.3**
comp=Z,7.4nm,0.3s,baz=56,slow=6.9,SNR=36
ROSC LR LR 12 43 23.0
comp=Z,888nm,18.7s,baz=46,slow=43
ROSC El Rosal 18.30 230 *eP* **P 12 34 36.1 +0.4**
ROSC El Rosal 18.30 230 P **P 12 34 36.0 +0.3**
ROSC IAmb IAmb 12 34 38.5
comp=Z,114nm,0.9s
HELC Santa Helena 18.36 236 *eP* **Pn 12 34 34.1 -2.2**
VILC Villavicencio, 18.36 227 *eP* **Pn 12 34 36.8 +0.7**
DBBC Dabeiba 18.42 233 *eP* **P 12 34 35.2 -1.5**
CAPC Capurgana 18.54 245 *eP* **P 12 34 37.7 -0.3**
CBCY The Bluff, Cay 18.56 281 P **P 12 34 35.9 -2.2**
GUY2C Guyana, Caldas 18.83 233 *eP* **P 12 34 40.1 -1.5**
CBOC Ciudad Bolivar 18.93 236 *eP* **P 12 34 41.2 -1.3**
RREF El Recreo 19.02 232 *eP* **Pn 12 34 44.5 -0.1**
TOLC Tolima 19.21 231 *eP* **P 12 34 44.7 -1.0**
ANIL Santa Ana 19.34 231 *eP* **Pn 12 34 48.1 +0.1**
PRAC Prado 19.48 229 *eP* **P 12 34 47.0 -1.3**
ORTC Ortega, Tolima 19.61 230 *eP* **Pn 12 34 50.8 -0.2**
MALB Monte Alegre 19.79 162 *eP* **P 12 34 52.2 +0.7**
MACC Macarena, Meta 19.90 223 *eP* **P 12 34 52.1 -0.8**
MACA Manacapuru-AM 20.14 181 *eP* Pn 12 34 57.1 -0.2
YOTC Yotoco, Valle 20.37 232 *eP* **P 12 34 56.2 -1.9**
BCIP Isla Barro Col 20.50 250 *eP* **P 12 34 59.0 -0.4**
BCIP Isla Barro Col 20.50 250 P **P 12 34 59.6 +0.2**
GARC Garzon, Huila 20.98 227 *eP* **P 12 35 04.0 -0.8**
PCON Cinco Dias 21.52 229 *eP* **P 12 35 10.2 -0.8**
POPC Popayan, Colom 21.58 230 *eP* **P 12 35 08.9 -2.4**
SOTA Rioblanco 21.81 229 *eP* **P 12 35 14.0 0.0**
PTLC Puerto Leguiza 22.01 222 *eP* **P 12 35 17.0 +1.3**
HDC Heredia 24.11 256 P **P 12 35 37.2 0.0**
NPGB Novo Progresso 24.51 168 *eP* **P 12 35 41.2 +0.5**
NPGB *eS* **S 12 40 03.6 +2.8**
JTS Las Juntas de 24.79 257 P **P 12 35 42.1 -1.2**
comp=Z,6.3nm,0.6s,baz=36,slow=18,SNR=2.5
JTS LR LR 12 45 03.3
comp=Z,388nm,20.9s,baz=144,slow=36
JTS Las Juntas de 24.79 257 P **P 12 35 42.5 -0.9**
JTS IAmb IAmb 12 35 55.4
comp=Z,26nm,1.4s
MATN Matagalpa 25.00 264 P **P 12 35 44.8 -0.6**
MATN IAmb IAmb 12 36 03.9
comp=Z,32nm,1.0s
PRPB Paraupebas 25.38 155 *eP* **P 12 35 49.3 +0.7**
PRPB *eS* **S 12 40 17.4 +2.5**
ROSB Rosrio 25.55 140 *eP* **P 12 35 50.5 +0.4**
SAML Samuel 26.04 186 P **P 12 35 55.9 +1.4**
SAML IAmb IAmb 12 36 00.9
comp=Z,24nm,0.8s
TGUH Tegucigalpa,Un 26.07 267 P **P 12 35 55.6 +0.6**
TEIG Tepich 26.59 281 P **P 12 35 59.6 +0.1**
TKL Tuckaleechee C 27.81 316 LR LR 12 47 26.7
comp=Z,161nm,20.8s,baz=148,slow=37
CLDB Colider 28.17 170 *eP* **P 12 36 14.1 +0.4**
APG El Apazote 28.96 270 P **P 12 36 21.1 0.0**
comp=Z,9.0nm,0.6s,baz=167,slow=2.5,SNR=5.0
APG LR LR 12 48 41.3
comp=Z,385nm,19.8s,baz=92,slow=38
VILB Vilhena 29.87 180 *eP* **P 12 36 29.8 +1.0**
VILB *eS* **S 12 41 30.4 +4.8**
ATAH Atahualpa 29.95 218 P **P 12 36 29.8 -0.2**
comp=Z,24nm,0.8s,baz=8.6,slow=4.3,SNR=11
CCIG Comitan 30.41 273 P **P 12 36 33.9 +0.1**
PLAL Pickwick Lake 30.43 311 P **P 12 36 34.4 +0.8**
PLAL IAmb IAmb 12 36 37.6
comp=Z,11nm,0.9s
D62A Allapoint, All 30.74 348 P **P 12 36 37.3 +1.2**
D62A IAmb IAmb 12 36 53.1
comp=Z,8.3nm,0.8s
SADO Sadowa 31.76 334 P **P 12 36 45.3 0.0**
comp=Z,3.9nm,0.8s,baz=168,slow=5.9,SNR=3.7
SADO Sadowa 31.76 334 IAmb IAmb 12 37 01.8
comp=Z,13nm,0.7s
PTLB Pontes e Lacer 32.37 178 *eP* **P 12 36 52.5 +1.7**
S44A Carbondale 32.61 315 IAmb IAmb 12 36 57.2
comp=Z,13nm,0.9s
SIV San Ignacio 32.90 181 P **P 12 36 56.4 +0.9**
comp=Z,13nm,0.5s,baz=18,slow=7.1,SNR=49
CMIG Matias Romero 32.95 275 P **P 12 36 52.5 -3.5**
comp=Z,2.0nm,0.4s,baz=58,slow=9.4,SNR=4.9
PBMO Poplar Bluff 32.97 312 P **P 12 36 56.3 +0.3**
PBMO IAmb IAmb 12 37 15.2
comp=Z,8.3nm,0.8s
SALV Santo Antonio 33.12 172 *eP* **P 12 36 58.3 +0.8**
ARAG Araguaiana, MT 33.69 165 *eP* **P 12 37 03.5 +1.2**
ARAG *eS* **S 12 42 25.5 +0.4**
FCAR Ozark Folk Cen 33.79 310 P **P 12 37 03.9 +0.7**
LPAZ La Paz 34.05 193 P **P 12 37 06.5 +0.3**
comp=Z,5.4nm,0.9s,baz=32,slow=5.3,SNR=12
LPAZ La Paz 34.05 193 P **P 12 37 06.0 -0.2**
LPAZ La Paz 34.05 193 *eP* **P 12 37 06.6 +0.4**
LPAZ *ep*P **pP 12 37 09.2 0.0**
CCM Cathedral Cave 34.15 314 P **P 12 37 06.9 +0.6**
CCM IAmb IAmb 12 37 09.4
comp=Z,9.0nm,0.7s
NATX Nacogdoches 34.28 302 P **P 12 37 08.7 +1.2**
PAYG Puerto Ayora 34.35 242 P **P 12 37 08.8 +0.6**
U40A Yellville 34.52 310 P **P 12 37 10.3 +0.4**
W39A Magazine 34.75 308 IAmb IAmb 12 37 15.9
comp=Z,12nm,1.0s
BDFB Brasilia 34.75 159 P **P 12 37 11.4 -0.3**
comp=Z,5.8nm,0.7s,baz=345,slow=13,SNR=8.0
BDFB Brasilia 34.75 159 P **P 12 37 12.0 +0.3**
P40A Paris 35.43 316 IAmb IAmb 12 37 20.4
comp=Z,11nm,1.0s
JANB Januaria 35.68 153 *eP* **P 12 37 20.1 +0.4**
JANB *ep*P **sP 12 37 23.4 -0.5**
PB16 IPOC Station P 36.34 195 P **P 12 37 24.2 -1.7**
TLIG Tlapa 36.41 277 P **P 12 37 25.1 -0.9**
TLIG IAmb IAmb 12 37 30.4
comp=Z,21nm,1.0s
P38A Dawn 36.47 315 P **P 12 37 26.2 -0.1**
TUL1 Leonard 36.53 308 P **P 12 37 27.3 +0.5**
TUL1 IAmb IAmb 12 37 30.2
comp=Z,11nm,0.8s
IPMB Ipameri, GO 36.87 160 *eP* **P 12 37 30.7 +0.9**
T35A Sooner Cattle 37.45 309 IAmb IAmb 12 37 37.8
comp=Z,16nm,0.9s
GO01 Chusmiza 37.56 194 P **P 12 37 34.6 -1.5**
PB11 IPOC Station P 37.75 194 P **P 12 37 35.5 -1.8**
PB11 IAmb IAmb 12 37 35.9
comp=Z,26nm,0.8s
SCHQ Schefferville 37.98 354 P **P 12 37 38.9 +0.1**
comp=Z,12nm,0.5s,baz=160,slow=8.1,SNR=13
SCHQ Schefferville 37.98 354 P **P 12 37 39.5 +0.7**
SCHQ IAmb IAmb 12 37 55.5
comp=Z,16nm,0.7s
PB08 IPOC Station P 38.00 193 IAmb IAmb 12 37 39.2
comp=Z,12nm,0.7s
JCT Junction City 38.24 298 P **P 12 37 41.2 -0.3**
JCT IAmb IAmb 12 37 58.8
comp=Z,12nm,0.8s
WMOK Wichita Mounta 38.45 305 P **P 12 37 42.9 -0.3**
ABTX Abilene, Hawle 38.58 301 IAmb IAmb 12 38 01.2
comp=Z,13nm,0.8s
PB01 IPOC Station P 38.95 194 P **P 12 37 45.8 -1.6**

PB07 IPOC Station P 39.70 194 P **P 12 37 52.3 -1.4**
PB07 IAmb IAmb 12 37 52.9
comp=Z,22nm,0.6s
ZAIG Zacatecas 39.95 285 P **P 12 37 55.9 -0.2**
SJMB Sao Joao De Ma 40.29 151 *eP* **P 12 37 59.2 +0.8**
LVC Limon Verde 40.34 192 P **P 12 37 58.5 -0.8**
comp=Z,9.4nm,0.5s,baz=15,slow=5.4,SNR=15
LVC Limon Verde 40.34 192 P **P 12 37 58.3 -1.0**
LVC IAmb IAmb 12 37 59.3
comp=Z,11nm,0.6s
LVC Limon Verde 40.34 192 *eP* **P 12 37 58.9 -0.4**
BGNE Belgrade 40.42 315 P **P 12 37 59.3 -0.2**
ECSD EROS Data Cent 40.48 319 P **P 12 38 00.3 +0.3**
CBKS Cedar Bluff 40.52 310 P **P 12 38 00.9 +0.6**
AMTX Amarillo 40.79 304 P **P 12 38 02.9 +0.2**
AMTX IAmb IAmb 12 38 05.7
comp=Z,21nm,1.4s
BSCB Bom Sucesso 40.85 157 *eP* **P 12 38 03.4 +0.2**
BSCB *ep*P **pP 12 38 05.9 -0.3**
TXAR Lajitas Array 41.37 295 P **P 12 38 07.7 +0.1**
comp=Z,1.6nm,0.6s,baz=122,slow=8.9,SNR=13
TXAR PcP **PcP 12 40 07.0 +1.2**
comp=Z,0.9nm,0.8s,baz=123,slow=4.6,SNR=4.1
TXAR LR LR 12 59 03.8
comp=Z,178nm,21.5s,baz=0.0,slow=42
TX31 Lajitas Ar. Si 41.37 295 P **P 12 38 07.8 +0.3**
MSTX Muleshoe 41.44 302 P **P 12 38 07.9 -0.2**
MSTX IAmb IAmb 12 38 26.3
comp=Z,16nm,0.9s
FRTB Fartura 41.57 165 *eP* **P 12 38 09.7 +0.7**
FRTB *ep*P **sP 12 38 12.6 -0.7**
AGMN Agassiz Nation 42.47 325 P **P 12 38 16.3 +0.2**
VAS01 Vassouras-RJ 42.52 156 *eP* **P 12 38 16.8 0.0**
GO02 Mina Guanaco 42.96 192 P **P 12 38 19.8 -0.9**
GO02 IAmb IAmb 12 38 20.8
comp=Z,23nm,0.7s
CPUP Villa Florida 43.28 176 P **P 12 38 22.1 -0.7**
comp=Z,2.8nm,0.7s,baz=353,slow=6.5,SNR=6.8
CPUP Villa Florida 43.28 176 P **P 12 38 22.2 -0.6**
ULM Lac du Bonnet 43.61 327 LR LR 12 56 29.6
comp=Z,197nm,20.0s,baz=118,slow=36
AC02 Maricunga 44.50 191 P **P 12 38 33.8 +0.5**
ANMO Albuquerque 44.62 303 P **P 12 38 35.0 +1.1**
comp=Z,1.5nm,0.7s,baz=96,slow=6.2,SNR=7.4
ANMO Albuquerque 44.62 303 P **P 12 38 34.3 +0.4**
319A Douglas 46.43 297 IAmb IAmb 12 39 07.3
comp=Z,16nm,0.9s
AC05 El Transito 46.66 192 P **P 12 38 49.7 -0.2**
K22A Casper 46.66 313 IAmb IAmb 12 39 07.5
comp=Z,9.8nm,0.9s
SLBS Sierra La Lagu 46.73 287 P **P 12 38 50.9 +0.3**
SLBS IAmb IAmb 12 38 53.3
comp=Z,15nm,1.4s
FRB Frobisher Bay 46.93 355 P **P 12 38 52.1 +0.7**
comp=Z,12nm,0.7s,baz=161,slow=10.0,SNR=11
PV05 Paradox Valley 47.35 306 IAmb IAmb 12 38 58.8
comp=Z,6.5nm,1.0s
X18A Snowflake 47.38 301 IAmb IAmb 12 39 12.4
comp=Z,7.1nm,0.8s
CO01 Juntas del Tor 47.74 191 P **P 12 38 58.9 +0.4**
CO01 IAmb IAmb 12 39 16.0
comp=Z,12nm,0.8s
TUC Tucson 47.80 298 P **P 12 38 59.7 +0.9**
GO04 Tololo Observa 48.06 192 P **P 12 39 00.8 -0.1**
WUAZ Wupatki 48.69 302 IAmb IAmb 12 39 22.6
comp=Z,6.5nm,0.8s
CO03 El Pegal 48.69 192 P **P 12 39 05.5 -0.1**
BW06 Boulder Array 48.84 312 IAmb IAmb 12 39 10.4
comp=Z,7.4nm,1.0s
PD31 Pinedale Array 48.84 312 IAmb IAmb 12 39 10.4
comp=Z,7.4nm,1.1s
PDAR Pinedale Array 48.84 312 P **P 12 39 07.8 +0.9**
comp=Z,4.4nm,0.9s,baz=114,slow=9.9,SNR=25
PDAR PcP **PcP 12 40 31.8 +0.3**
comp=Z,1.4nm,0.9s,baz=115,slow=6.1,SNR=1.3
RLMT Red Lodge 49.33 315 IAmb IAmb 12 39 14.4
comp=Z,10nm,1.1s
MORF Marmelete 49.56 55 *eP* **P 12 39 12.3 0.0**
MORF AMb AMB 12 39 19.3
comp=Z,57nm,1.6s
MORF Marmelete 49.56 55 *eP* **P 12 39 12.4 +0.1**
PNCL Nicolau / Gran 49.79 54 *eP* **P 12 39 14.3 +0.4**
comp=Z,32nm,1.5s
CO04 Los Peladeros 49.91 192 P **P 12 39 14.8 -0.4**
CO04 IAmb IAmb 12 39 30.0
comp=Z,16nm,0.9s
AHID Auburn Hatcher 49.93 312 IAmb IAmb 12 39 18.7
comp=Z,10nm,1.0s
HWUT Hardware Ranch 49.98 310 IAmb IAmb 12 39 19.2
comp=Z,13nm,1.2s
MESJ Messejana 49.99 55 *eP* **P 12 39 15.5 +0.1**
MESJ AMb AMB 12 39 25.4
comp=Z,23nm,1.5s
MESJ Messejana 49.99 55 *eP* **P 12 39 16.1 +0.7**
PCVE Castro Verde 50.09 55 *eP* **P 12 39 16.4 +0.1**
PCAS Casmilo, Conde 50.18 52 *eP* **P 12 39 17.2 +0.3**
comp=Z,46nm,1.6s
PMTG Montargil 50.20 53 *eP* **P 12 39 16.7 -0.3**
comp=Z,20nm,1.8s
EVO Evora 50.26 54 *eP* **P 12 39 17.5 0.0**
comp=Z,23nm,1.4s
SFJD Kangerlussuaq 50.27 5 P **P 12 39 17.2 +0.2**
comp=Z,4.9nm,0.8s,baz=126,slow=5.1,SNR=4.5
SFJD Kangerlussuaq 50.27 5 P **P 12 39 17.8 +0.8**
PBEJ Beja 50.29 55 *eP* **P 12 39 17.9 +0.1**
comp=Z,24nm,1.2s
PVAQ Vaqueiros 50.31 55 *eP* **P 12 39 18.2 +0.3**
DUG Dugway, Tooele 50.61 308 IAmb IAmb 12 39 24.5
comp=Z,11nm,1.2s
PGAV Gavieira, Arco 50.75 49 *eP* **P 12 39 21.4 +0.1**
comp=Z,27nm,0.9s
PVIS Viseu 50.76 51 *eP* **P 12 39 21.1 -0.2**
comp=Z,22nm,2.2s
PMRV Marv??o 50.90 53 *eP* **P 12 39 21.7 -0.6**
comp=Z,20nm,1.6s
PCBR Castelo Branco 50.91 52 *eP* **P 12 39 22.1 -0.3**
MTE Manteigas 50.96 52 *eP* **P 12 39 22.8 -0.1**
comp=Z,24nm,1.0s
MTE Manteigas 50.96 52 P **P 12 39 22.6 -0.3**
MTE IAmb IAmb 12 39 23.4
comp=Z,22nm,1.1s
PVRL Vila Real 51.01 50 *eP* **P 12 39 23.2 0.0**
MVO Moncorvo 51.49 51 *eP* **P 12 39 26.7 -0.2**
comp=Z,18nm,1.5s
H10N3 ASCENSION HYDR 51.69 115 T T 13 35 24.0
baz=297,slow=76,SNR=18
H10N2 ASCENSION HYDR 51.70 115 T T 13 35 28.8
baz=297,slow=76,SNR=14
H10N1 ASCENSION HYDR 51.71 115 T T 13 35 26.0
baz=297,slow=76,SNR=15
PBRG Braganca 51.83 50 *eP* **P 12 39 29.5 +0.1**
comp=Z,27nm,2.0s
H10S3 ASCENSION HYDR 52.09 116 T T 13 35 57.8
baz=287,slow=74,SNR=22
H10S2 ASCENSION HYDR 52.11 116 T T 13 35 54.4
baz=293,slow=74,SNR=6.9
ILULI Ilulissat 52.41 4 *i* P **P 12 39 33.5 +0.4**
ILULI *i* 12 39 47.1
ESDC Sonseca Array 53.55 53 P **P 12 39 41.5 -0.6**
comp=Z,5.2nm,0.9s,baz=262,slow=8.2,SNR=22
BORG Borgarnes 54.37 19 LR LR 12 59 24.7
comp=Z,62nm,19.2s,baz=281,slow=32
NV11 Mina Array Sit 54.44 305 P **P 12 39 49.6 +0.9**
NV11 IAmb IAmb 12 39 52.8
comp=Z,10nm,1.3s
NVAR Mina Array Bea 54.55 305 P **P 12 39 51.1 +1.4**
comp=Z,1.7nm,0.7s,baz=91,slow=6.6,SNR=13
DBIC Dimbokro 55.16 94 P **P 12 39 52.7 -1.3**
comp=Z,5.5nm,0.6s,baz=275,slow=5.9,SNR=10
DBIC LR LR 12 59 16.9
comp=Z,238nm,21.9s,baz=282,slow=32
DBIC Dimbokro 55.16 94 P **P 12 39 52.8 -1.3**
DBIC IAmb IAmb 12 39 53.6
comp=Z,14nm,1.1s
NEW Newport 55.39 317 P **P 12 39 55.9 +0.6**
comp=Z,7.5nm,0.9s,baz=118,slow=8.0,SNR=7.9
NEW Newport 55.39 317 IAmb IAmb 12 40 11.9
comp=Z,11nm,0.8s
I07A Izee 56.19 312 IAmb IAmb 12 40 18.8
comp=Z,6.5nm,0.9s
LC01 Cunco 56.74 191 P **P 12 40 05.2 +0.3**
SUMG Summit 56.91 8 P **P 12 40 06.7 +0.5**
SUMG Summit 56.91 8 *i* P **P 12 40 06.7 +0.5**
comp=Z,69nm,1.1s
SUMG *i* 12 40 21.2
K05A Summer Lake 57.00 310 IAmb IAmb 12 40 25.1
comp=Z,15nm,1.1s
ORV Oroville 57.14 306 P **P 12 40 08.8 +0.9**
ORV IAmb IAmb 12 40 11.7
comp=Z,7.7nm,1.0s
LTY Liberty 57.52 315 IAmb IAmb 12 40 27.5
comp=Z,5.9nm,0.7s
ESK Eskdalemuir 57.58 35 P **P 12 40 11.2 +0.5**
ESK IAmb IAmb 12 40 14.9
comp=Z,17nm,1.2s
PLCA Paso Flores 58.31 189 P **P 12 40 16.4 +0.3**
comp=Z,2.9nm,0.6s,baz=298,slow=5.8,SNR=3.6
PLCA LR LR 13 10 37.6
comp=Z,194nm,18.2s,baz=19,slow=42
PLCA Paso Flores 58.31 189 P **P 12 40 16.6 +0.5**
PLCA IAmb IAmb 12 40 33.8
comp=Z,12nm,1.1s
PLCA Paso Flores 58.31 189 *eP* **P 12 40 16.6 +0.5**
PLCA *ep*P **sP 12 40 20.0 -0.4**
YKA Yellowknife Ar 58.76 334 P **P 12 40 18.4 -0.5**
comp=Z,4.4nm,0.7s,baz=106,slow=7.7,SNR=53
YKA LR LR 13 03 31.0
comp=Z,148nm,21.5s,baz=0.0,slow=34
LLLB Lillooet 58.93 319 IAmb IAmb 12 40 23.6
comp=Z,13nm,1.0s
CLF Chambon-Foret 59.23 44 P **P 12 40 23.0 +0.6**
TOA0 Torodi Ar. Sit 59.85 85 P **P 12 40 25.7 -1.5**
TOA0 IAmb IAmb 12 40 26.5
comp=Z,11nm,0.9s
TORD Torodi Ar. Bea 59.85 85 P **P 12 40 25.5 -1.7**
comp=Z,7.4nm,0.8s,baz=292,slow=6.7,SNR=49
TORD LR LR 13 03 01.2
comp=Z,242nm,20.0s,baz=345,slow=33
SSB Saint Sauveur 60.45 47 P **P 12 40 30.8 -0.1**
SSB IAmb IAmb 12 40 32.7
comp=Z,12nm,0.8s
RES Resolute Bay 60.58 350 P **P 12 40 32.1 +0.9**
RES IAmb IAmb 12 40 35.5
comp=Z,20nm,1.4s
DOU Dourbes 61.05 42 P **P 12 40 34.8 0.0**
DOU Dourbes 61.05 42 PcP **PcP 12 41 17.9 0.0**
BMRD Maredsus 61.18 42 P **P 12 40 35.9 +0.1**
BGES Gesves 61.40 42 P **P 12 40 37.4 +0.2**
TAM Tamanrasset 61.78 73 P **P 12 40 40.6 +0.2**
TAM IAmb IAmb 12 40 41.4
comp=Z,3.9nm,0.7s
BNI Bardonecchia 61.94 48 P **P 12 40 41.7 +0.6**
BNI IAmb IAmb 12 40 43.3
comp=Z,16nm,1.3s
DAG Danmarks Havn 63.33 10 ⇓ *i* P **P 12 40 49.7 0.0**
DAG *i* 12 41 03.6
KEST Kesra 63.93 58 P **P 12 40 55.1 +0.7**
comp=Z,29nm,0.8s,baz=213,slow=1.9,SNR=24
KEST Kesra 63.93 58 P **P 12 40 54.9 +0.4**
DAVA Damuels 64.28 45 *eP* **P 12 40 57.4 +0.7**
comp=Z,34nm,1.0s,SNR=10
FETA Feichten 64.85 46 *eP* **P 12 41 01.1 +0.7**
comp=Z,39nm,0.9s,SNR=20
RETA Reutte 64.89 45 *eP* **P 12 41 00.9 +0.3**
comp=Z,27nm,1.1s,SNR=6.4
DLBC Dease Lake 64.93 327 P **P 12 41 01.8 +1.2**
DLBC IAmb IAmb 12 41 18.2
comp=Z,12nm,0.8s
MOTA Moosalm 65.12 45 *eP* **P 12 41 02.3 +0.2**
comp=Z,22nm,1.0s,SNR=7.7
SQTA Sankt Quirin 65.18 45 *eP* **P 12 41 02.8 +0.3**
comp=Z,32nm,0.9s,SNR=9.1
GRF Grafenberg Arr 65.28 43 *eP* **P 12 41 02.6 -0.4**
comp=Z,19nm,1.1s,baz=264,slow=6.7
GRF *ep*P **pwP 12 41 16.2 +3.6**
WATA Walderalm 65.44 45 *eP* **P 12 41 04.4 +0.2**
comp=Z,4.9nm,0.6s
CTI Castel Tesino 65.47 47 P **P 12 41 03.8 -0.5**
WTTA Wattenberg 65.48 45 *eP* **P 12 41 04.4 0.0**
comp=Z,17nm,1.0s,SNR=5.2
NBO00 NORSAR Array S 66.07 30 P **P 12 41 08.0 +0.2**
NBO00 IAmb IAmb 12 41 13.2
comp=Z,12nm,1.4s
ABTA Abfaltersbach 66.07 46 P **P 12 41 08.1 -0.1**
comp=Z,25nm,1.1s,SNR=6.6
NB2 NORSAR Subarra 66.28 30 P **P 12 41 09.3 +0.1**
comp=Z,1.7nm,0.6s,baz=262,slow=6.9
NOA NORSAR Array B 66.28 30 P **P 12 41 09.7 +0.5**
comp=Z,5.4nm,0.9s,baz=261,slow=6.3,SNR=13
NOA LR LR 13 06 15.0
comp=Z,61nm,19.2s,baz=95,slow=32
NC602 NORSAR Array S 66.40 31 IAmb IAmb 12 41 13.5
comp=Z,14nm,1.1s
CLL Collm 66.47 41 *i* P **P 12 41 11.2 +0.6**
comp=Z,21nm,1.1s
CLL *e* 12 41 25.0
KBA Koelnbreinsper 66.64 46 *eP* **P 12 41 11.9 -0.1**
comp=Z,9.9nm,1.2s,SNR=6.3
KHC Kasperske Hory 66.80 43 *eP* **P 12 41 12.4 -0.4**
MYKA Terra Mystica 66.85 46 *eP* **P 12 41 13.0 -0.1**
comp=Z,25nm,1.4s,SNR=5.9
GEC2 GERESS Array S 66.88 44 P **P 12 41 13.0 -0.4**
GERES GERESS Array B 66.88 44 P **P 12 41 13.0 -0.4**
comp=Z,6.0nm,0.9s,baz=257,slow=5.3,SNR=17
NOR Nord 66.99 6 *i* P **P 12 41 13.1 -0.3**
comp=Z,10nm,1.1s
NOR *i* 12 41 27.2
BRG Berggiesshubel 67.06 41 *i* P **P 12 41 14.2 -0.1**
comp=Z,6nm,1.0s
PRU Pruhonice 67.43 42 *eP* **P 12 41 16.8 +0.1**
OBKA Obir 67.48 46 *eP* **P 12 41 17.2 0.0**
comp=Z,24nm,0.9s,SNR=9.5
SOKA Soboth 67.81 46 *eP* **P 12 41 18.7 -0.5**
comp=Z,12nm,1.0s,SNR=5.3
INK Inuvik 68.00 337 P **P 12 41 19.6 -0.2**
comp=Z,5.7nm,0.8s,baz=76,slow=5.0,SNR=28
INK Inuvik 68.00 337 P **P 12 41 19.7 -0.2**
ARSA Arzberg 68.12 45 *eP* **P 12 41 20.4 -0.8**
comp=Z,9.4nm,0.8s
CONA Conrad Observa 68.33 45 *eP* **P 12 41 22.1 -0.4**
comp=Z,12nm,1.3s
UPC Upice 68.37 42 *eP* **P 12 41 22.6 0.0**
OSTC Ostas 68.50 42 *eP* **P 12 41 23.6 +0.1**
DPC Dobruska-Polom 68.57 42 *eP* **P 12 41 23.8 -0.2**
DPC *ex* x 12 41 39.5
KRUC Moravsky 68.65 43 *eP* **P 12 41 24.0 -0.4**
KRUC *e* 12 41 39.1
VRAC Vranov 68.78 43 *eP* **P 12 41 24.9 -0.3**
VRAC *e* 12 41 40.0
KRLC Kraliky 68.88 42 *eP* **P 12 41 22.2 -3.6**
KRLC *ex* x 12 41 37.4
HYT Haines Junctio 68.94 329 IAmb IAmb 12 41 44.0
comp=Z,8.6nm,0.8s
MODS Modra-Piesok 69.26 44 *eP* **P 12 41 27.4 -0.8**
MORC Moravsky Berou 69.38 43 *eP* **P 12 41 28.9 -0.1**
MORC *e* 12 41 43.3
MORC Moravsky Berou 69.38 43 ⇓ P **P 12 41 29.8 +0.8**
MORC Moravsky Berou 69.38 43 P **P 12 41 28.8 -0.2**
MORC IAmb IAmb 12 41 30.0
comp=Z,14nm,1.1s
JAVC Velka Javorina 69.50 44 *eP* **P 12 41 30.4 +0.6**
JAVC *e* 12 41 45.4
DAWY Dawson 69.95 333 IAmb IAmb 12 41 50.0
comp=Z,11nm,0.8s
VYHS Vyhne 70.29 44 *eP* **P 12 41 34.4 -0.2**
EGAK Eagle 70.74 333 IAmb IAmb 12 41 53.5
comp=Z,11nm,0.8s
OJC Ojcow 70.81 42 *eP* **P 12 41 37.8 +0.1**
OJC *ep*PcP **PcP 12 41 53.4 -4.9**
BARN Barnard Glacie 70.97 329 IAmb IAmb 12 41 43.3
comp=Z,13nm,1.3s
PSZ Piszkesteto 71.04 45 P **P 12 41 39.1 -0.1**
PSZ IAmb IAmb 12 41 40.3
comp=Z,18nm,1.4s
NIE Niedzica 71.19 43 *eP* **P 12 41 41.5 +1.4**
SCRK Sand Creek 71.98 333 IAmb IAmb 12 42 01.4
comp=Z,7.5nm,0.9s
RIDG Independent Ri 72.37 332 IAmb IAmb 12 42 03.7
comp=Z,7.0nm,0.8s
BZS Buzias 72.45 47 ⇓ P **P 12 41 48.2 +0.5**
ARCES ARCESS Array B 72.68 22 P **P 12 41 47.8 -0.8**
comp=Z,7.9nm,0.8s,baz=270,slow=5.8,SNR=21
TRPA Tarpa 72.79 44 ⇑ P **P 12 41 50.4 +0.8**
IL31 73.19 333 P **P 12 41 51.6 0.0**
IL31 IAmb IAmb 12 42 07.8
comp=Z,10nm,0.8s
ILAR Eielson Array 73.19 333 P **P 12 41 51.5 -0.1**
comp=Z,2.7nm,0.8s,baz=95,slow=5.0,SNR=29
HDA Harding Lake 73.25 333 IAmb IAmb 12 42 08.7
comp=Z,6.2nm,0.7s
GZR Gura Zlata 73.28 47 ⇓ P **P 12 41 53.1 +0.4**

FINES	**FINES Array B**	**73.46**	**30**	P		**P**	**12 41 53.2**	**-0.1**
	comp=Z,11nm,0.6s,baz=261,slow=4.2,SNR=66							
FIA1	**FINES Array S**	**73.46**	**30**	P		**P**	**12 41 53.2**	**-0.1**
FIA1				IAmb		IAmb	12 41 54.0	
	comp=Z,12nm,0.8s							
CCB	**Clear Creek Bu**	**73.59**	**333**	IAmb		IAmb	12 42 10.0	
	comp=Z,7.8nm,0.7s							
ITM	**Ithomi**	**73.86**	**55**	P		**P**	**12 41 56.6**	**+0.4**
VTS	**Vitosha**	**74.00**	**50**	⇑P		**P**	**12 41 57.6**	**+0.5**
VTS	**Vitosha**	**74.00**	**50**	IAmb		IAmb	12 41 57.8	
	comp=Z,7.1nm,0.8s							
RND	**Reindeer**	**74.18**	**332**	IAmb		IAmb	12 42 15.9	
	comp=Z,12nm,1.0s							
GHO	**Glory Hole Cre**	**74.41**	**330**	IAmb		IAmb	12 42 15.7	
	comp=Z,9.1nm,0.8s							
PMR	**Palmer**	**74.53**	**330**	IAmb		IAmb	12 42 16.7	
	comp=Z,7.8nm,1.0s							
ARR	**Arges**	**74.58**	**47**	⇑P		**P**	**12 42 00.8**	**+0.5**
BUR08	**Bucovina Ar. S**	**74.63**	**44**	P		**P**	**12 42 01.0**	**+0.4**
BUR08				IAmb		IAmb	12 42 02.3	
	comp=Z,22nm,1.2s							
BURAR	**Bucovina Array**	**74.64**	**44**	⇑P		**P**	**12 42 01.6**	**+1.0**
MLY	**Manley**	**74.80**	**334**	IAmb		IAmb	12 42 17.3	
	comp=Z,5.8nm,0.8s							
VOIR		**74.86**	**47**	⇓P		**P**	**12 42 02.4**	**+0.4**
BPAW	**Bear Paw Mtn.**	**75.03**	**333**	IAmb		IAmb	12 42 18.6	
	comp=Z,11nm,0.8s							
BIZ	**Bicaz**	**75.34**	**45**	⇑P		**P**	**12 42 05.7**	**+1.1**
MLR	**Muntele Rosu**	**75.47**	**46**	⇑P		**P**	**12 42 05.9**	**+0.4**
PPLA	**Purkeypile**	**75.75**	**332**	IAmb		IAmb	12 42 23.8	
	comp=Z,10nm,0.9s							
VRI	**Vrincioaia**	**75.95**	**46**	⇑P		**P**	**12 42 09.1**	**+1.0**
BISRR	**Bisoca**	**75.99**	**46**	⇓P		**P**	**12 42 09.0**	**+0.6**
RAZG	**Razgrad**	**76.21**	**48**	⇓P		**P**	**12 42 09.6**	**0.0**
IDI	**Anoyia**	**76.55**	**57**	⇑P		**P**	**12 42 12.7**	**+0.9**
IDI	**Anoyia**	**76.55**	**57**	P		**P**	**12 42 11.6**	**-0.2**
SORM	**Soroca**	**76.63**	**43**	⇑P		**P**	**12 42 11.4**	**-0.4**
AKASG	**Malin Array Be**	**76.72**	**41**	P		**P**	**12 42 11.8**	**-0.5**
	comp=Z,3.8nm,0.7s,baz=266,slow=4.9,SNR=9.8							
AKBB	**Malin Array Si**	**76.72**	**41**	P		**P**	**12 42 11.7**	**-0.6**
AKBB				IAmb		IAmb	12 42 12.1	
	comp=Z,4.5nm,0.6s							
CFR	**Carcaliu**	**77.05**	**47**	⇑P		**P**	**12 42 13.4**	**-0.9**
TLBR	**Topalu**	**77.11**	**47**	⇑P		**P**	**12 42 14.4**	**-0.3**
KARP	**Karpathos**	**78.31**	**56**	P		**P**	**12 42 21.3**	**-0.4**
MANT	**Manisa**	**78.75**	**53**	P		**P**	**12 42 23.7**	**-0.5**
KLMR	**Klimovskoe**	**79.96**	**29**	*e*P		**P**	**12 42 28.4**	**-1.6**
KLMR				AMP			12 42 44.9	
	comp=Z,19nm,1.1s							
ANTO	**Ankara**	**81.61**	**51**	P		**P**	**12 42 39.5**	**0.0**
BR131	**Keskin Array S**	**82.28**	**51**	P		**P**	**12 42 42.6**	**-0.4**
BR131				IAmb		IAmb	12 42 43.7	
	comp=Z,11nm,0.9s							
BRTR	**Keskin Array B**	**82.28**	**51**	P		**P**	**12 42 42.8**	**-0.4**
	comp=Z,7.4nm,0.8s,baz=270,slow=3.7,SNR=33							
TSUM	**Tsumeb**	**84.68**	**112**	P		**P**	**12 42 55.5**	**-0.1**
TSUM				IAmb		IAmb	12 42 56.3	
	comp=Z,5.8nm,0.8s							
KBZ	**Khabaz**	**87.59**	**45**	P		**P**	**12 43 10.9**	**+1.5**
	comp=Z,8.8nm,0.9s,baz=287,slow=1.9,SNR=19							
BILL	**Bilibino**	**88.62**	**344**	P		**P**	**12 43 13.8**	**-0.1**
BILL				IAmb		IAmb	12 43 30.6	
	comp=Z,5.3nm,0.8s							
AKH	**Akhalkalaki**	**88.85**	**47**	P		**P**	**12 43 15.9**	**+0.2**
TIXI	**Tiksi**	**91.24**	**357**	P		**P**	**12 43 25.5**	**-0.5**
TIXI				IAmb		IAmb	12 43 41.7	
	comp=Z,5.0nm,0.9s							
KSH	**Kashi**	**110.49**	**35**	PKP		**PKiKP**	**12 48 57.1**	**+3.0**
WMQ	**Urumqi**	**112.69**	**25**	*e*PKP		**PKiKP**	**12 48 57.9**	**-0.2**
MAW	**Mawson**	**118.10**	**159**	PKP		**PKiKP**	**12 49 07.9**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=272,slow=5.9,SNR=4.7							
MAW	**Mawson**	**118.10**	**159**			**PKiKP**	**12 49 07.5**	**+0.1**
HHC	**Hu-ho-hao-te**	**121.86**	**7**	*e*PKP		**PKiKP**	**12 49 17.4**	**+1.4**
MJAR	**Matsushiro Arr**	**123.82**	**342**	PKP		**PKPdf**	**12 49 18.9**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=50,slow=0.9,SNR=2.7							
LZH	**Lanzhou**	**125.03**	**16**	*e*PKP		**PKPdf**	**12 49 17.6**	**-4.5**
LZH				LR		LR		
	comp=Z,98nm,18.0s							
LZH				LR		LR		
	comp=Z,100nm,18.2s							
LZH				LR		LR		
	comp=Z,120nm,20.1s							
KSRS	**Korea Array**	**125.17**	**352**	PKP		**PKPdf**	**12 49 21.4**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=18,slow=2.0,SNR=5.2							
CD2	**Chengdu**	**129.88**	**18**	PKP		**PKPdf**	**12 49 29.9**	**-1.5**
NJ2	**Nanjing**	**131.12**	**1**	*e*PKP		**PKPdf**	**12 49 31.4**	**-2.2**
CMAR	**Chiang Mai Arr**	**139.23**	**31**	PKP		**PKPdf**	**12 49 48.4**	**-0.7**
	comp=Z,2.7nm,0.8s,baz=309,slow=3.2,SNR=12							
KULM	**Kulim**	**150.91**	**42**			**PKPbc**	**12 50 14.6**	**-0.2**
GSI	**Gunungsitoli**	**151.60**	**52**			**PKPbc**	**12 50 16.5**	**+0.1**
IPM	**Ipoh**	**151.76**	**42**			**PKPbc**	**12 50 16.2**	**-0.6**
ASAR	**Alice Springs**	**165.10**	**242**	PKP		**PKPdf**	**12 50 25.1**	**-1.1**
	comp=Z,1.3nm,0.9s,baz=74,slow=1.2,SNR=8.7							
ASAR				PKPab		**PKPab**	**12 51 23.9**	**+0.8**
	comp=Z,0.7nm,0.9s,baz=104,slow=4.1,SNR=6.4							
WRA	**Warramunga Arr**	**165.75**	**256**	PKP		**PKPdf**	**12 50 25.9**	**-0.9**
	comp=Z,1.9nm,0.8s,baz=40,slow=0.3,SNR=13							
WRA				PKPab		**pPKPab**	**12 51 27.6**	**-1.7**
	comp=Z,0.4nm,0.7s,baz=98,slow=3.8,SNR=4.5							

*IDC **16** 12:34:51.1±0.5, 17°.05N×60°.23W, h0km, mb4.2/26, mb1 4.4/29, mb1mx4.3/50, mbtmp4.3/29, ML3.5/3, Error ellipse: s-maj=14.4km s-min=11.9km az=96.0*

*NEIC **16** 12:34:52.9±1.2, 17°.08N±0°.05×60°.32W±0°.06, h10km±1km, mb4.6/90, Error ellipse: s-maj=11.2km s-min=4.8km az=51.0*

*TRN **16** 12:34:54.3, 17°.09N×60°.29W, h39km, MD4.3*

ISC 16 12:34:53.3±1.9, 17°.08N±0°.03×60°.31W±0°.04, h14km±12km, n199, σ0s91/209, mb4.6/73, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H05N1	**Guadeloupe/Mear**	**1.05**	**224**	Pn	**Pn**	**12 35 13.7**	**+0.1**
	SNR=2741						
ABD	**La Joyeuse, An**	**1.28**	**242**	*e*P	**Pg**	**12 35 17.8**	**-0.2**
ABD				*e*S	**Sn**	**12 35 34.7**	**+1.0**
MAGL	**Barre de l'île**	**1.46**	**220**	*e*P	**Pn**	**12 35 19.6**	**+0.3**
MAGL				*e*S	**Sn**	**12 35 38.4**	**+0.2**
ANWB	**Willy Bob**	**1.53**	**293**	*e*P	**Pn**	**12 35 20.6**	**+0.5**
ANWB				*e*S	**Sn**	**12 35 40.2**	**+0.4**
ANWB	**Willy Bob**	**1.53**	**293**		**Pn**	**12 35 19.8**	**-0.3**
ANWB				Sn	**Sn**	**12 35 38.7**	**-1.1**
CBE	**Ff, Capester**	**1.60**	**231**	*e*P	**Pn**	**12 35 22.2**	**+1.0**
CBE				*e*S	**Sb**	**12 35 43.3**	**+0.6**
TDBA	**Terre de Bas,**	**1.77**	**226**	*e*P	**Pb**	**12 35 24.9**	**-0.6**
TDBA				*e*S	**Sn**	**12 35 45.8**	**0.0**
DWS	**Wesley**	**1.79**	**213**	*e*P	**Pn**	**12 35 24.3**	**+0.5**
DWS				*e*S	**Sn**	**12 35 46.3**	**+0.2**
MDPV	**Dominica, Penn**	**1.80**	**217**	*e*P	**Pn**	**12 35 24.5**	**+0.6**
MDPV				*e*S	**Sn**	**12 35 47.6**	**+1.1**
MDVC	**Dominica, Viel**	**1.80**	**216**	*e*P	**Pn**	**12 35 25.1**	**+1.2**
MDVC				*e*S	**Sn**	**12 35 46.8**	**+0.3**
MLYT	**Lee's Yard**	**1.84**	**259**	*e*P	**Pb**	**12 35 26.1**	**-0.7**
MLYT				*e*S	**Sn**	**12 35 47.5**	**-0.1**
DLPL	**La Plaine**	**1.96**	**208**	*e*P	**Pn**	**12 35 26.9**	**+0.7**
DLPL				*e*S	**Sn**	**12 35 49.9**	**-0.6**
DLPL	**La Plaine**	**1.96**	**208**		**Pn**	**12 35 26.2**	**+0.1**
DLPL				Sn	**Sn**	**12 35 50.9**	**+0.4**
MDN	**Morne-Daniel**	**2.04**	**211**	*e*P	**Pn**	**12 35 28.5**	**+1.3**
MDN				*e*S	**Sn**	**12 35 52.9**	**+0.5**
NVDO	**Nevis, Disaste**	**2.21**	**271**	*e*P	**Pn**	**12 35 30.1**	**+0.5**
NVDO				*e*S	**Sn**	**12 35 57.6**	**+0.9**
SKI	**Saint Kitts**	**2.34**	**277**	*e*P	**Pn**	**12 35 32.7**	**+1.3**
SKI				*e*S	**Sn**	**12 36 00.3**	**+0.4**
SKI	**Saint Kitts**	**2.34**	**277**	Pn	**Pn**	**12 35 32.5**	**+1.2**
ILAM	**Ilet Lapin Mar**	**2.36**	**193**	*e*P	**Pn**	**12 35 31.9**	**+0.4**
ILAM				*e*S	**Sn**	**12 35 60.0**	**-0.3**
SVN	**Savane Anatole**	**2.38**	**201**	*e*P	**Pn**	**12 35 33.1**	**+1.3**
BAMF	**Morne Balai**	**2.39**	**200**	*e*P	**Pn**	**12 35 33.8**	**+1.6**
CXM	**Morne La Croix**	**2.40**	**200**	*e*P	**Pn**	**12 35 33.5**	**+1.2**
PCM	**Pelee Case Pet**	**2.41**	**201**	*e*P	**Pn**	**12 35 33.6**	**+1.2**
GBMF	**Grand Be**	**2.42**	**200**	*e*P	**Pn**	**12 35 33.1**	**+0.7**
PML	**Morne Lenard**	**2.44**	**200**	*e*P	**Pn**	**12 35 33.5**	**+0.7**
FDF	**Fort de France**	**2.47**	**199**	*e*P	**Pn**	**12 35 34.0**	**+0.8**
FDF				*e*S	**Sn**	**12 36 04.0**	**+0.9**
FDF	**Fort de France**	**2.47**	**199**		**Pn**	**12 35 34.0**	**+0.8**
FDF				Sn	**Sn**	**12 36 02.1**	**-1.1**
LPMF	**Morne Lapointe**	**2.57**	**194**	*e*P	**Pn**	**12 35 34.7**	**+0.2**
ZAM	**Aeronautique**	**2.59**	**196**	*e*P	**Pn**	**12 35 35.0**	**+0.3**
TRMF	**Trois Ilets**	**2.63**	**196**	*e*P	**Pn**	**12 35 35.7**	**+0.4**
BIM	**Bigot**	**2.65**	**196**	*e*P	**Pn**	**12 35 36.6**	**+0.9**
BIM				*e*S	**Sn**	**12 36 07.5**	**-0.2**
MPOM	**Morne Pois Mar**	**2.67**	**192**	*e*P	**Pn**	**12 35 36.4**	**+0.4**
MPOM				*e*S	**Sn**	**12 36 08.1**	**0.0**
H05S1	**Guadeloupe/Mar**	**2.69**	**191**	Pn	**Pn**	**12 35 37.1**	**+1.0**
SMRT	**St. Maarten**	**2.81**	**290**	*e*P	**Pn**	**12 35 38.2**	**+0.4**
SMRT				*e*S	**Sn**	**12 36 11.2**	**-0.3**
SMRT	**St. Maarten**	**2.81**	**290**		**Pn**	**12 35 37.7**	**-0.1**
SMRT				Sn	**Sn**	**12 36 12.1**	**+0.6**
SABA	**Saba**	**2.85**	**281**	*e*P	**Pn**	**12 35 39.8**	**+1.3**
SABA	**Saba**	**2.85**	**281**		**Pn**	**12 35 38.7**	**+0.3**
SLBI	**Saint Lucia, B**	**3.11**	**192**	*e*P	**Pn**	**12 35 42.6**	**+0.7**
SLBI				*e*S	**Sn**	**12 36 18.3**	**-0.5**
SLAC	**Saint Lucia, A**	**3.22**	**190**	*i* P	**Pn**	**12 35 44.2**	**+0.8**
SLAC				*e*S	**Sn**	**12 36 20.8**	**-0.7**
SLPA	**Patience**	**3.26**	**191**	*e*P	**Pn**	**12 35 45.4**	**+1.3**
SLB	**Belfond**	**3.31**	**192**	*e*P	**Pn**	**12 35 46.0**	**+1.3**
SLB				*e*S	**Sn**	**12 36 23.7**	**-0.2**
SLDE	**Delcer**	**3.34**	**193**	*e*P	**Pn**	**12 35 46.3**	**+1.2**
SLDE				*e*S	**Sn**	**12 36 24.0**	**-0.6**
MCLT	**Moule a Chique**	**3.41**	**190**	*e*P	**Pn**	**12 35 47.4**	**+1.4**
MCLT				*e*S	**Sn**	**12 36 25.8**	**-0.4**
MCLT	**Moule a Chique**	**3.41**	**190**		**Pn**	**12 35 45.2**	**-0.8**
SSV	**Crater Summit**	**3.83**	**193**	*e*P	**Pn**	**12 35 53.8**	**+1.8**
SSV				*e*S	**Sn**	**12 36 35.2**	**-1.6**
SVV	**Soufriere Volc**	**3.84**	**193**	*e*P	**Pn**	**12 35 54.0**	**+2.0**
SVV				*e*S	**Sn**	**12 36 35.7**	**-1.3**
SVCV	**St. Vincent, C**	**3.87**	**192**	*e*P	**Pn**	**12 35 53.8**	**+1.3**
SVCV				*e*S	**Sn**	**12 36 37.2**	**-0.5**
SVB	**Belmont**	**3.90**	**194**	*e*S	**Sn**	**12 36 37.6**	**-0.7**
BBGH	**Gun Hill**	**3.98**	**169**	*e*P	**Pn**	**12 35 55.2**	**+1.3**
BBGH	**Gun Hill**	**3.98**	**169**	Pn	**Pn**	**12 35 55.4**	**+1.4**
CDVI	**St. Croix**	**4.31**	**280**		**Pn**	**12 35 58.4**	**0.0**
STVI	**Saint Thomas**	**4.61**	**287**		**Pn**	**12 36 01.9**	**-0.6**
GCMP	**Grenada, Carri**	**4.69**	**193**	*e*P	**Pn**	**12 36 04.9**	**+1.2**
GCMP	**Grenada, Carri**	**4.69**	**193**	*e*S	**Sn**	**12 36 57.6**	**-0.4**
CUPR	**Culebra, Puert**	**4.90**	**285**		**Pn**	**12 36 06.4**	**-0.1**
GRSS	**Sisters**	**4.92**	**195**	*e*P	**Pn**	**12 36 08.7**	**+1.8**
GRHS	**Sauteurs**	**5.00**	**195**	*e*S	**Sn**	**12 37 03.7**	**-1.8**
GRGR	**Grenville**	**5.09**	**195**	*e*P	**Pn**	**12 36 10.8**	**+1.6**
GRGR	**Grenville**	**5.09**	**195**	*e*S	**Sn**	**12 37 06.3**	**-1.5**
GRGR	**Grenville**	**5.09**	**195**		**Pn**	**12 36 10.0**	**+0.8**
MTP	**Monte Pirata**	**5.10**	**282**		**Pn**	**12 36 09.3**	**0.0**
HUMP	**Col San Antoni**	**5.39**	**282**		**Pn**	**12 36 13.8**	**+0.5**
CBYP	**Canovanas**	**5.42**	**283**		**Pn**	**12 36 13.9**	**+0.1**
IGPR	**InterUniversit**	**5.60**	**280**		**Pn**	**12 36 17.8**	**+1.6**
SJG	**San Juan**	**5.67**	**281**	Pn	**Pn**	**12 36 16.8**	**-0.2**
	6.1nm,0.3s,baz=89,slow=18,SNR=3.6						
SJG				Sn	**Sn**	**12 37 21.2**	**-0.8**
	7.2nm,0.3s,baz=329,slow=3.3,SNR=4.2						
SJG	**San Juan**	**5.67**	**281**		**Pn**	**12 36 17.2**	**+0.1**
TOSP	**Speyside**	**5.75**	**182**	*e*P	**Pn**	**12 36 19.3**	**+1.0**
TOSP	**Speyside**	**5.75**	**182**	*e*S	**Sn**	**12 37 22.2**	**-1.9**
ICMP	**Isla Caja de M**	**5.99**	**279**		**Pn**	**12 36 22.1**	**+0.6**
OBIP	**Obispado Ponce**	**6.08**	**280**		**Pn**	**12 36 22.5**	**-0.3**
AOPR	**Arecibo Observ**	**6.27**	**283**	*e*P	**Pn**	**12 36 26.6**	**+1.1**
AOPR	**Arecibo Observ**	**6.27**	**283**	*e*S	**Sn**	**12 37 34.4**	**-2.5**
AOPR	**Arecibo Observ**	**6.27**	**283**		**Pn**	**12 36 26.1**	**+0.6**
TRN	**Trinidad (W)**	**6.48**	**190**	*e*P	**Pn**	**12 36 29.9**	**+1.6**
MLPR	**Magueyes Islan**	**6.49**	**279**		**Pn**	**12 36 28.3**	**-0.1**
GUIV	**Guiria**	**6.66**	**196**	*e*P	**Pn**	**12 36 32.0**	**+1.3**
PLCV	**Puerto La Cruz**	**8.04**	**212**		**Pn**	**12 36 49.4**	**-0.3**
PCRV	**Puerto La Cruz**	**8.05**	**212**	Pn	**Pn**	**12 36 49.4**	**-0.5**
	0.7nm,0.3s,baz=32,slow=2.2,SNR=2.7						
ORIV	**Oritupano**	**8.52**	**201**	*e*P	**Pn**	**12 36 57.6**	**+1.3**
SDDR	**Presa de Saban**	**10.62**	**282**		**Pn**	**12 37 24.4**	**-0.7**
SDV	**Santo Domingo**	**12.94**	**232**	Pn	**Pn**	**12 37 55.3**	**-1.7**
	0.5nm,0.3s,baz=45,slow=20,SNR=1.9						
SDV	**Santo Domingo**	**12.94**	**232**	Pn	**Pn**	**12 37 56.2**	**-0.8**
MDP	**Montagnes des**	**14.07**	**147**	Sn	Sn	12 40 35.0	-14
	1.8nm,0.3s,baz=73,slow=22,SNR=4.8						
MTDJ	**Mount Denham**	**16.46**	**277**	Pn	**Pn**	**12 38 44.1**	**0.0**
RUSC	**La Rusia**	**16.73**	**230**	P	**Pn**	**12 38 48.5**	**+0.6**
ROSC	**El Rosal**	**18.34**	**230**	P	**P**	**12 39 08.7**	**+0.8**
BCIP	**Isla Barro Col**	**20.57**	**250**	P	**P**	**12 39 31.7**	**-0.1**
BCIP				IAmb	IAmb	12 39 36.1	
	comp=Z,32nm,0.9s						
SAML	**Samuel**	**26.02**	**186**	P	**P**	**12 40 26.1**	**0.0**
SAML				IAmb	IAmb	12 40 30.1	
	comp=Z,12nm,0.8s						
SIV	**San Ignacio**	**32.87**	**181**	P	**P**	**12 41 27.1**	**+0.2**
	comp=Z,4.7nm,0.9s,baz=13,slow=8.6,SNR=5.9						
FCAR	**Ozark Folk Cen**	**33.87**	**310**	P	**P**	**12 41 35.8**	**+0.3**
FCAR				IAmb	IAmb	12 41 49.7	
	comp=Z,7.2nm,1.1s						
LPAZ	**La Paz**	**34.04**	**194**	P	**P**	**12 41 38.8**	**+0.9**
	comp=Z,2.8nm,0.9s,baz=82,slow=3.4,SNR=4.6						
LPAZ	**La Paz**	**34.04**	**194**	P	**P**	**12 41 37.9**	**+0.1**
CCM	**Cathedral Cave**	**34.23**	**314**	P	**P**	**12 41 39.0**	**+0.3**
BDFB	**Brasilia**	**34.70**	**159**	P	**P**	**12 41 43.6**	**+0.6**
	comp=Z,1.8nm,0.3s,baz=344,slow=10.0,SNR=3.5						
BDFB	**Brasilia**	**34.70**	**159**	P	**P**	**12 41 43.2**	**+0.2**
BDFB				IAmb	IAmb	12 42 02.4	
	comp=Z,8.0nm,1.3s						
W39A	**Magazine**	**34.83**	**308**	P	**P**	**12 41 43.9**	**0.0**
W39A				IAmb	IAmb	12 42 00.0	
	comp=Z,7.3nm,0.8s						
GO01	**Chusmiza**	**37.55**	**194**	P	**P**	**12 42 06.9**	**-0.8**
GO01				IAmb	IAmb	12 42 07.5	
	comp=Z,16nm,1.4s						
PSGCX	**Pisagua**	**37.70**	**195**	P	**P**	**12 42 06.4**	**-2.2**
PSGCX				IAmb	IAmb	12 42 09.1	
	comp=Z,15nm,1.3s						
PB11	**IPOC Station P**	**37.75**	**194**	P	**P**	**12 42 07.6**	**-1.5**
PB11				IAmb	IAmb	12 42 08.2	
	comp=Z,10nm,0.8s						
SCHQ	**Schefferville**	**38.01**	**354**	P	**P**	**12 42 11.8**	**+1.0**
	comp=Z,3.9nm,0.5s,baz=178,slow=8.8,SNR=4.4						
SCHQ	**Schefferville**	**38.01**	**354**	P	**P**	**12 42 11.4**	**+0.6**
JCT	**Junction City**	**38.33**	**298**	P	**P**	**12 42 13.5**	**-0.4**
JCT				IAmb	IAmb	12 42 28.1	
	comp=Z,9.8nm,1.0s						
PB01	**IPOC Station P**	**38.94**	**194**	P	**P**	**12 42 18.2**	**-0.9**
PB07	**IPOC Station P**	**39.69**	**194**	P	**P**	**12 42 24.7**	**-0.7**
PB07				IAmb	IAmb	12 42 24.9	
	comp=Z,12nm,0.9s						
LVC	**Limon Verde**	**40.34**	**192**	P	**P**	**12 42 30.4**	**-0.6**
	comp=Z,2.4nm,0.5s,baz=342,slow=6.5,SNR=3.6						
LVC	**Limon Verde**	**40.34**	**192**	P	**P**	**12 42 30.8**	**-0.2**
BGNE	**Belgrade**	**40.49**	**315**	P	**P**	**12 42 31.9**	**+0.2**
TXAR	**Lajitas Array**	**41.45**	**295**	P	**P**	**12 42 40.6**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=121,slow=8.5,SNR=4.8						
TX32	**Lajitas Array**	**41.46**	**295**	P	**P**	**12 42 40.2**	**+0.2**
MSTX	**Muleshoe**	**41.52**	**302**	IAmb	IAmb	12 42 55.6	
	comp=Z,10nm,1.1s						
CPUP	**Villa Florida**	**43.25**	**176**	P	**P**	**12 42 54.0**	**-0.3**
	comp=Z,3.8nm,0.8s,baz=2.0,slow=8.3,SNR=7.4						
ANMO	**Albuquerque**	**44.70**	**303**	P	**P**	**12 43 06.9**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=139,slow=8.2,SNR=4.0						
ANMO	**Albuquerque**	**44.70**	**303**	IAmb	IAmb	12 43 08.9	
	comp=Z,2.4nm,0.9s						
FRB	**Frobisher Bay**	**46.97**	**355**	P	**P**	**12 43 23.5**	**+0.1**
	comp=Z,10nm,1.1s,baz=122,slow=13,SNR=2.7						
PV13	**Radium Mtn., P**	**47.23**	**306**	IAmb	IAmb	12 43 41.8	
	comp=Z,8.1nm,1.0s						
X18A	**Snowflake**	**47.47**	**301**	IAmb	IAmb	12 43 43.9	
	comp=Z,5.3nm,0.9s						
CO01	**Juntas del Tor**	**47.73**	**191**	P	**P**	**12 43 30.5**	**+0.5**
GO04	**Tololo Observa**	**48.05**	**192**	P	**P**	**12 43 32.8**	**+0.2**
X16A	**Lo Mia Camp, P**	**48.67**	**301**	IAmb	IAmb	12 43 54.0	
	comp=Z,4.6nm,1.1s						
CO03	**El Pedregal**	**48.68**	**192**	P	**P**	**12 43 37.2**	**-0.1**
WUAZ	**Wupatki**	**48.77**	**302**	P	**P**	**12 43 38.0**	**-0.1**
WUAZ				IAmb	IAmb	12 43 53.9	
	comp=Z,7.5nm,1.0s						
PD31	**Pinedale Array**	**48.91**	**312**	P	**P**	**12 43 39.6**	**+0.4**
PD31				IAmb	IAmb	12 43 54.2	
	comp=Z,4.8nm,1.1s						
PDAR	**Pinedale Array**	**48.91**	**312**	P	**P**	**12 43 40.1**	**+0.9**
	comp=Z,1.3nm,0.8s,baz=117,slow=9.0,SNR=8.2						
BW06	**Boulder Array**	**48.91**	**312**	IAmb	IAmb	12 43 54.2	
	comp=Z,5.1nm,1.1s						
RLMT	**Red Lodge**	**49.40**	**315**	IAmb	IAmb	12 43 58.2	
	comp=Z,8.8nm,1.1s						
U15A	**North Rim**	**49.63**	**303**	IAmb	IAmb	12 44 01.0	
	comp=Z,5.0nm,0.9s						
REDW	**Red Top Meadow**	**49.98**	**313**	IAmb	IAmb	12 44 06.5	
	comp=Z,5.9nm,1.1s						
AHID	**Auburn Hatcher**	**50.01**	**312**	IAmb	IAmb	12 44 02.5	
	comp=Z,10.0nm,1.1s						
HWUT	**Hardware Ranch**	**50.06**	**310**	IAmb	IAmb	12 43 50.8	
	comp=Z,7.2nm,1.2s						
VA03	**San Esteban**	**50.52**	**191**	P	**P**	**12 43 52.1**	**+0.8**
DUG	**Dugway, Tooele**	**50.69**	**308**	P	**P**	**12 43 53.6**	**+1.0**
DUG				IAmb	IAmb	12 43 56.2	
	comp=Z,8.7nm,1.2s						
DLMT	**Dillon**	**51.72**	**315**	IAmb	IAmb	12 44 16.1	
	comp=Z,6.6nm,0.9s						
BO02	**Sierra Bellavi**	**52.54**	**191**	P	**P**	**12 44 07.0**	**+0.7**
ELK	**Elko**	**52.60**	**308**	P	**P**	**12 44 07.7**	**+0.6**
ESDC	**Sonseca Array**	**53.51**	**53**	P	**P**	**12 44 12.9**	**-0.7**
	comp=Z,1.4nm,0.9s,baz=251,slow=9.2,SNR=5.4						
NV11	**Mina Array Sit**	**54.52**	**305**	P	**P**	**12 44 21.4**	**+0.3**
NV11				IAmb	IAmb	12 44 24.5	
	comp=Z,8.3nm,1.4s						
NVAR	**Mina Array Bea**	**54.63**	**305**	P	**P**	**12 44 23.4**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=90,slow=7.5,SNR=4.7						
DBIC	**Dimbokro**	**55.08**	**94**	P	**P**	**12 44 24.2**	**-1.0**
	comp=Z,4.6nm,1.0s,baz=226,slow=7.0,SNR=3.1						
DBIC	**Dimbokro**	**55.08**	**94**	P	**P**	**12 44 25.0**	**-0.3**
LC01	**Cunco**	**56.73**	**191**	P	**P**	**12 44 36.0**	**-0.6**
SUMG	**Summit**	**56.92**	**8**	P	**P**	**12 44 38.8**	**+0.7**
ORV	**Oroville**	**57.22**	**306**	P	**P**	**12 44 41.6**	**+1.4**
ORV				IAmb	IAmb	12 44 42.8	
	comp=Z,8.9nm,1.4s						
PLCA	**Paso Flores**	**58.30**	**189**	P	**P**	**12 44 47.0**	**-0.7**
	comp=Z,2.1nm,0.7s,baz=9.2,slow=8.0,SNR=6.5						
PLCA	**Paso Flores**	**58.30**	**189**	P	**P**	**12 44 47.9**	**+0.2**
PLCA				IAmb	IAmb	12 44 56.3	
	comp=Z,12nm,1.4s						
YKA	**Yellowknife Ar**	**58.82**	**334**	P	**P**	**12 44 51.0**	**0.0**
	comp=Z,1.8nm,0.8s,baz=107,slow=7.8,SNR=13						
TOA0	**Torodi Ar. Sit**	**59.78**	**85**	P	**P**	**12 44 57.7**	**-0.7**
TOA0				IAmb	IAmb	12 44 58.3	
	comp=Z,5.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**59.78**	**85**	P	**P**	**12 44 57.1**	**-1.3**
	comp=Z,4.3nm,0.9s,baz=293,slow=7.0,SN

CPUP	**Villa Florida**	**28.20**	**357**	LR	LR	13 05 13.3
	comp=Z,177nm,21.3s,baz=353,slow=38					
QSPA	**South Pole Qui**	**35.72**	**180**	P	**P**	**12 54 33.8 +3.7**
PB16	**IPOC Station P**	**37.67**	**338**	P	**P**	**12 54 47.6 0.0**
PB16				IAmb	IAmb	12 54 56.2
	comp=Z,14nm,1.7s					
MAW	**Mawson**	**49.91**	**154**	P	P	12 56 31.3 +6.6
TORD	**Torodi Ar. Bea**	**82.93**	**56**	P	**P**	**12 59 54.1 -2.4**
	comp=Z,0.8nm,0.9s,baz=208,slow=4.7,SNR=3.9					
YKA	**Yellowknife Ar**	**125.47**	**331**	PKP	**PKPdf**	**13 06 31.0 -0.4**
	comp=Z,0.1nm,0.4s,baz=136,slow=2.0,SNR=2.0					
KURBB	**Kurchatov Arra**	**152.25**	**79**	PKPbc	**PKPbc**	**13 07 24.6 -1.8**
	comp=Z,0.6nm,0.4s,baz=264,slow=1.9,SNR=1.1					
MKAR	**Makanchi Array**	**152.57**	**89**	PKPbc	**PKPbc**	**13 07 25.4 -2.0**
	comp=Z,0.3nm,0.5s,baz=261,slow=2.7,SNR=4.0					

TRN 16 12:48:47.5,17˚.10N×60˚.32W,h45km,MD3.7,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABD	**La Joyeuse, An**	**1.28**	**241**	*e*P	Pn	12 49 09.8	+0.9
ABD				*e*S	Sn	12 49 27.8	+2.9
MAGL	**Barre de l'ile**	**1.47**	**219**	*e*P	Pn	12 49 12.6	+1.1
MAGL				*e*S	Sn	12 49 31.5	+1.9
ANWB	**Willy Bob**	**1.50**	**292**	*e*P	Pn	12 49 12.5	+0.5
ANWB				*e*S	Sn	12 49 31.8	+1.3
CBE	**Ff, Capester**	**1.60**	**230**	*e*P	Pn	12 49 15.2	+1.8
CBE				*e*S	Sn	12 49 36.2	+3.0
TDBA	**Terre de Bas,**	**1.77**	**225**	*e*P	Pn	12 49 18.1	+2.3
TDBA				*e*S	Sn	12 49 39.5	+2.4
DWS	**Wesley**	**1.80**	**212**	*e*P	Pn	12 49 17.3	+1.3
DWS				*e*S	Sn	12 49 39.5	+1.9
MDPV	**Dominica, Penn**	**1.81**	**216**	*e*P	Pn	12 49 18.2	+2.0
MDPV				*e*S	Sn	12 49 40.3	+2.3
MDVC	**Dominica, Viel**	**1.81**	**215**	*e*P	Pn	12 49 18.0	+1.8
MDVC				*e*S	Sn	12 49 39.9	+2.0
MLYT	**Lee's Yard**	**1.83**	**258**	*e*P	Pn	12 49 19.2	+2.7
MLYT				*e*S	Sn	12 49 41.0	+2.5
DLPL	**La Plaine**	**1.97**	**207**	*e*P	Pn	12 49 20.4	+1.9
DLPL				*e*S	Sn	12 49 43.1	+1.1
MDN	**Morne-Daniel**	**2.05**	**210**	*e*P	Pn	12 49 21.9	+2.4
MDN				*e*S	Sn	12 49 46.4	+2.5
NVDO	**Nevis, Disaste**	**2.19**	**271**	*e*P	Pn	12 49 23.2	+1.7
NVDO				*e*S	Sn	12 49 48.9	+1.5
SKI	**Saint Kitts**	**2.32**	**276**	*e*P	Pn	12 49 25.5	+2.2
SKI				*e*S	Sn	12 49 52.5	+1.9
ILAM	**Ilet Lapin Mar**	**2.38**	**193**	*e*P	Pn	12 49 25.3	+1.3
ILAM	**Ilet Lapin Mar**	**2.38**	**193**	*e*P	Pn	12 49 25.6	+1.6
ILAM				*e*S	Sn	12 49 53.3	+1.4
SVN	**Savane Anatole**	**2.39**	**200**	*e*P	Pn	12 49 26.3	+2.0
BAMF	**Morne Balai**	**2.41**	**199**	*e*P	Pn	12 49 26.2	+1.7
CXM	**Morne La Croix**	**2.42**	**200**	*e*P	Pn	12 49 27.1	+2.3
PCM	**Pelee Case Pet**	**2.43**	**201**	*e*P	Pn	12 49 26.4	+1.7
GBMF	**Grand Be**	**2.43**	**200**	*e*P	Pn	12 49 26.4	+1.5
FDF	**Fort de France**	**2.49**	**199**	*e*P	Pn	12 49 27.3	+1.7
FDF				*e*S	Sn	12 49 56.3	+1.5
LPMF	**Morne Lapointe**	**2.59**	**194**	*e*P	Pn	12 49 28.3	+1.4
BIM	**Bigot**	**2.67**	**196**	*e*P	Pn	12 49 30.4	+2.3
BIM				*e*S	Sn	12 50 00.1	+0.9
MPOM	**Morne Pois Mar**	**2.69**	**191**	*e*P	Pn	12 49 30.0	+1.6
MPOM				*e*S	Sn	12 50 01.1	+1.3
SMRT	**St. Maarten**	**2.79**	**290**	*e*S	Sn	12 50 03.3	+1.2
SLBI	**Saint Lucia, B**	**3.13**	**192**	*e*P	Pn	12 49 36.4	+2.1
SLBI				*e*S	Sn	12 50 11.4	+1.0
SLAC	**Saint Lucia, A**	**3.23**	**190**	*e*P	Pn	12 49 37.7	+1.9
SLAC				*e*S	Sn	12 50 13.6	+0.4
SLB	**Belfond**	**3.33**	**192**	*e*P	Pn	12 49 39.7	+2.6
SLB				*e*S	Sn	12 50 17.0	+1.4
MCLT	**Moule a Chique**	**3.43**	**190**	*e*P	Pn	12 49 40.8	+2.3
MCLT				*e*S	Sn	12 50 18.2	+0.3
SVV	**Soufriere Volc**	**3.86**	**193**	*e*P	Pn	12 49 45.7	+1.3
SVCV	**St. Vincent, C**	**3.89**	**192**	*e*P	Pn	12 49 46.6	+1.8
SVCV				*e*S	Sn	12 50 31.2	+1.9
GCMP	**Grenada, Carri**	**4.71**	**193**	*e*S	Sn	12 50 50.2	+0.7
AOPR	**Arecibo Observ**	**6.25**	**282**	*e*P	Pn	12 50 20.1	+2.8
AOPR	**Arecibo Observ**	**6.25**	**282**	*e*S	Sn	12 51 26.0	-1.4

HEL **16** *12:49:48.4±0.3,57˚.12N×21˚.39E, h0km, ML2.1, Explosion*
EST **16** *12:49:49.5±0.3,57˚.19N×21˚.31E, h0km, ML2.0(HEL), Explosion*
LVSN **16** *12:49:50.9±2.0,57˚.26N×21˚.24E, h0km±13km, ML1.6*
UPP **16** *12:49:51.2±0.9,57˚.27N×21˚.13E, h0km, ML2.7, Suspected explosion*
IDC **16** *12:49:52.8±2.5,57˚.47N×21˚.23E, h0km, mb1 3.0/4, mb1mx2.8/45, mbtmp2.9/4, ML2.5/4, Error ellipse: s-maj=25.9km s-min=10.3km az=167.0*
BER **16** *12:49:52.7±4.4,57˚.34N×21˚.24E, h0km, ML2.2(NAO), Suspected explosion*
NAO **16** *12:49:53.2±2.5,57˚.49N×21˚.21E, ML2.2*

ISC 16 12:49:48.5±0.8,57˚.19N±0˚.03×21˚.24E±0˚.02,h0km,n47, σ1s79/82,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.72**	**52**	*e*P	**Pg**	**12 50 02.4**	**0.0**
SLIT				*e*S	**Sg**	**12 50 11.7**	**0.0**
SLIT				IAML		12 50 18.2	
	comp=Z,394nm,0.1s						
SLIT	**Slitere, Latvi**	**0.72**	**52**	*e*P	**Pg**	**12 50 02.6**	**+0.2**
SLIT				*e*S	**Sg**	**12 50 12.7**	**+0.9**
SLIT				AML	AML	12 50 18.4	
	comp=E,274nm,0.1s						
SLIT				AML	AML	12 50 18.9	
	comp=Z,151nm,0.1s						
SLIT				AML	AML	12 50 20.6	
	comp=N,199nm,0.2s						
SLIT	**Slitere, Latvi**	**0.72**	**52**	*e*P	**Pg**	**12 50 02.5**	**0.0**
SLIT				*e*S	**Sg**	**12 50 11.2**	**-0.5**
PBUR	**Paburge**	**1.23**	**161**	*e*P	**Pb**	**12 50 12.4**	**-0.2**
PBUR				*e*S	**Sn**	**12 50 30.2**	**+0.1**
PBUR				IAML		12 50 40.2	
	comp=Z,35nm,0.2s						
PBUR	**Paburge**	**1.23**	**161**	*e*P	**Pb**	**12 50 12.5**	**-0.1**
PBUR				*e*S	**Sn**	**12 50 30.3**	**+0.1**
GOTU	**Gotland**	**1.52**	**290**	P	**Pn**	**12 50 17.4**	**+0.4**
GOTU				S	**Sb**	**12 50 38.9**	**+1.4**
MTSE	**Matsula**	**2.06**	**41**	*e*P	**Pb**	**12 50 25.3**	**+1.0**
MTSE				*e*S	**Sn**	**12 50 50.2**	**-0.1**
MTSE	**Matsula**	**2.06**	**41**	*e*P	**Pb**	**12 50 25.2**	**+0.8**
MTSE				*e*S	**Sn**	**12 50 50.2**	**-0.4**
PABE	**Paberze**	**2.27**	**137**	*e*P	**Pb**	**12 50 29.6**	**-0.8**
PABE				IAML		12 51 02.1	
	comp=Z,19nm,0.2s						
PABE	**Paberze**	**2.27**	**137**	*e*P	**Pb**	**12 50 29.5**	**-0.8**
PABE				*e*S	**Sb**	**12 50 58.1**	**-0.8**
NYNU	**Nynaeshamn**	**2.50**	**318**	P	**Pn**	**12 50 32.0**	**+1.6**
NYNU				S	**Sb**	**12 51 06.8**	**+1.2**
VSTU	**Vaestervik**	**2.58**	**283**	P	**Pn**	**12 50 33.7**	**+2.2**
VIKU	**Vikbolandet**	**2.76**	**300**	P	**Pn**	**12 50 36.1**	**+2.2**
OSKU	**Oskarshamn**	**2.79**	**272**	P	**Pn**	**12 50 36.6**	**+2.2**
AAL	**Aland**	**3.07**	**348**	P	**Pn**	**12 50 39.2**	**+1.0**
AAL	**Aland**	**3.07**	**348**	*e*P	**Pn**	**12 50 39.0**	**+0.7**
AAL				*e*S	**Sn**	**12 51 16.5**	**+0.9**
BLEU	**Blekinge**	**3.11**	**256**	P	**Pn**	**12 50 40.7**	**+1.9**
ISAL	**Salakas**	**3.17**	**119**	*e*P	**Pn**	**12 50 40.5**	**+1.0**
VSU	**Vasula**	**3.21**	**64**	*e*SG	**Sb**	**12 51 26.4**	**+0.6**
EKSU	**Eksjoe**	**3.24**	**279**	P	**Pn**	**12 50 42.6**	**+2.1**
LNKU	**Linkoeping**	**3.25**	**291**	P	**Pn**	**12 50 43.0**	**+2.3**
IIGN	**Ignalina**	**3.34**	**121**	*e*P	**Pb**	**12 50 47.3**	**-1.2**
ARBE	**Arbavere**	**3.37**	**46**	*e*PB	**Pb**	**12 50 47.3**	**-1.8**
ARBE				*e*SG	**Sb**	**12 51 31.5**	**+0.9**
MEF	**Metsahovi**	**3.46**	**27**	*e*P	**Pn**	**12 50 45.2**	**+1.6**
MEF				MSG		12 51 43.9	
	comp=Z,5.1nm,0.1s						
RAF	**Rauma**	**3.86**	**4**	*e*P	**Pn**	**12 50 49.8**	**+0.8**
RAF				*e*S	**Sn**	**12 51 34.7**	**-0.3**
RAF				MSG		12 51 54.2	
	comp=Z,3.4nm,0.1s						
BSD	**Bornholm Skovb**	**4.10**	**242**	*e*P	**Pn**	**12 50 53.1**	**+0.8**
BSD				AML	AML	12 50 53.2	
	comp=Z,0.5nm,1.0s						
BSD				*e*S	**Sn**	**12 51 42.1**	**+1.1**
BSD				AML	AML	12 52 00.9	
	comp=E,0.4nm,0.6s						
BSD				AML	AML	12 52 01.2	
	comp=N,0.4nm,0.5s						
BSD	**Bornholm Skovb**	**4.10**	**242**	*i* P	**Pn**	**12 50 53.0**	**+0.6**
BSD				*i* S	**Sn**	**12 51 41.6**	**+0.6**
PVF	**Pernaja**	**4.14**	**34**	*e*P	**Pn**	**12 50 53.3**	**+0.4**
PVF				*e*PG	**Pb**	**12 51 02.9**	**+0.8**
PVF				*e*S	**Sn**	**12 51 40.8**	**-1.1**
PVF				*e*SG	**Sb**	**12 51 55.7**	**+3.1**
PVF				MSG		12 52 01.1	
	comp=Z,3.7nm,0.2s						
VJF	**Virojoki**	**4.70**	**42**	*e*P	**Pn**	**12 51 01.2**	**+0.7**
VJF				MSG		12 52 00.9	
	comp=Z,1.2nm,0.1s						
HFS	**Hagfors**	**4.92**	**310**	Pn	**Pn**	**12 51 05.3**	**+1.6**
	baz=122,slow=14						
HFS				Sn	**Sn**	**12 51 58.5**	**-2.7**
	baz=132,slow=28						
HFS				Lg	Lg	12 52 19.9	
	baz=117,slow=37						
HFS	**Hagfors**	**4.92**	**310**	Pn	**Pn**	**12 51 05.2**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=115,slow=15,SNR=16						
HFS				Lg	Lg	12 52 20.4	
	comp=Z,0.8nm,0.3s,baz=117,slow=32,SNR=7.9						
HFS	**Hagfors**	**4.92**	**310**	Pn	**Pn**	**12 51 05.3**	**+1.6**
	baz=122,slow=14						
HFS				Sn	**Sn**	**12 51 58.5**	**-2.7**
	baz=132,slow=28						
HFS				Sg	**Sb**	**12 52 19.9**	**+4.8**
	baz=117,slow=37						
FIA0	**FINESS Array S**	**4.94**	**28**	Pn	**Pn**	**12 51 04.7**	**+0.8**
	baz=217,slow=12						
FIA0				Sn	**Sn**	**12 52 00.8**	**-0.8**
	baz=207,slow=18						
FIA0				Lg	Lg	12 52 20.7	
	baz=220,slow=22						
FIA0	**FINESS Array S**	**4.94**	**28**	*e*P	**Pn**	**12 51 04.3**	**+0.5**
FIA0				*e*S	**Sn**	**12 51 59.5**	**-2.1**
FIA0				*e*SG	**Sb**	**12 52 20.6**	**+5.1**
FIA0				MSG		12 52 28.1	
	comp=Z,1.6nm,0.1s						
FIA0	**FINESS Array S**	**4.94**	**28**	Pn	**Pn**	**12 51 04.7**	**+0.8**
	baz=217,slow=12						
FIA0				Sn	**Sn**	**12 52 00.8**	**-0.8**
	baz=207,slow=18						
FIA0				Sg	**Sb**	**12 52 20.7**	**+5.1**
	baz=220,slow=22						
FINES	**FINESS Array B**	**4.94**	**28**	Pn	**Pn**	**12 51 04.7**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=212,slow=13,SNR=17						
FINES				Pg	**Pb**	**12 51 14.9**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=216,slow=14,SNR=8.1						
FINES				Sn	**Sn**	**12 52 00.6**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=208,slow=17,SNR=2.2						
FINES				Lg	Lg	12 52 20.6	
	comp=Z,0.4nm,0.3s,baz=214,slow=22,SNR=2.8						
FIA1	**FINESS Array S**	**4.94**	**28**	*e*P	**Pn**	**12 51 04.3**	**+0.5**
FIA1				*e*S	**Sn**	**12 51 59.5**	**-2.2**
FIA1				MSG		12 52 28.0	
	comp=Z,1.9nm,0.1s						
KEF	**Keuruu**	**5.32**	**19**	*e*P	**Pn**	**12 51 10.4**	**+1.3**
KEF				*e*S	**Sn**	**12 52 09.9**	**-1.2**
KAF	**Kangasniemi**	**5.57**	**25**	*e*P	**Pn**	**12 51 13.4**	**+0.8**
KAF				*e*S	**Sn**	**12 52 15.1**	**-2.0**
NRA0	**NORESS Array S**	**6.15**	**309**	Pn	**Pn**	**12 51 21.0**	**+0.5**
	baz=127,slow=10						
NRA0				Sn	**Sn**	**12 52 32.9**	**+1.5**
NRA0				Lg	Lg	12 53 01.6	
	baz=124,slow=37						
NRA0	**NORESS Array S**	**6.15**	**309**	Pn	**Pn**	**12 51 21.0**	**+0.5**
	baz=127,slow=10						
NRA0				Sn	**Sn**	**12 52 32.9**	**+1.5**
NRA0				Sg	**Sg**	**12 53 01.6**	**-4.1**
	baz=124,slow=37						
NB2	**NORSAR Subarra**	**6.44**	**311**	Pn	**Pn**	**12 51 24.4**	**-0.2**
	baz=124,slow=14						
NB2				Lg	Lg	12 53 10.9	
	baz=115,slow=37						
NB2	**NORSAR Subarra**	**6.44**	**311**	Pn	**Pn**	**12 51 24.4**	**-0.2**
	baz=124,slow=14						
NB2				Sg	**Sg**	**12 53 10.9**	**-4.3**
	baz=115,slow=37						
NOA	**NORSAR Array B**	**6.44**	**311**	Pn	**Pn**	**12 51 23.4**	**-1.2**
	comp=Z,0.0nm,0.3s,baz=178,slow=2.3,SNR=6.4						
NOA				Lg	Lg	12 53 10.4	
	comp=Z,0.1nm,0.3s,baz=95,slow=15,SNR=4.3						
ARA0	**ARCESS Array S**	**12.54**	**7**	Pn	**Pn**	**12 52 45.0**	**-2.9**
	baz=184,slow=14						
ARA0	**ARCESS Array S**	**12.54**	**7**	Pn	**Pn**	**12 52 45.0**	**-2.9**
	baz=184,slow=14						
ARCES	**ARCESS Array B**	**12.54**	**7**	Pn	**Pn**	**12 52 44.9**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=190,slow=13,SNR=7.9						

IDC 16 12:52:22.2±7.2,15˚.29S×173˚.60W,h0km,mb3.6/3, mb1 3.9/3,mb1mx3.5/29,mbtmp3.6/3,Error ellipse: s-maj=409.8km s-min=40.4km az=145.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**49.68**	**257**	P	P	13 01 16.8	+0.4
	0.8nm,1.1s,baz=91,slow=7.6,SNR=1.7						
ASAR	**Alice Springs**	**49.96**	**252**	P	P	13 01 18.1	-0.4
	0.9nm,0.6s,baz=89,slow=7.4,SNR=17						
YKA	**Yellowknife Ar**	**90.07**	**23**	P	P	13 05 23.6	-0.1
	0.1nm,0.6s,baz=234,slow=3.8,SNR=3.8						

TRN 16 13:10:20.3,17˚.05N×60˚.29W,h30km,MD3.8,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEG	**La Desirade**	**1.04**	**226**	*e*P	Pb	13 10 40.1	+0.3
DEG				*e*S	Sb	13 10 54.2	+1.2
ABD	**La Joyeuse, An**	**1.28**	**244**	*e*P	Pb	13 10 43.6	-0.2
ABD				*e*S	Sb	13 11 01.7	+1.7
MAGL	**Barre de l'ile**	**1.45**	**221**	*e*P	Pb	13 10 45.8	-0.8
MAGL				*e*S	Sb	13 11 04.8	+0.1
ANWB	**Willy Bob**	**1.56**	**294**	*e*P	Pn	13 10 46.5	+0.6
ANWB				*e*S	Sb	13 11 07.8	-0.1
CBE	**Ff, Capester**	**1.59**	**233**	*e*P	Pb	13 10 48.4	-0.7
CBE				*e*S	Sb	13 11 08.6	-0.3
TDBA	**Terre de Bas,**	**1.76**	**228**	*e*P	Pb	13 10 51.1	-0.8
TDBA				*e*S	Sb	13 11 12.6	-1.0
DWS	**Wesley**	**1.77**	**214**	*e*P	Pn	13 10 49.7	+0.8
DWS				*e*S	Sb	13 11 12.2	-1.7
MDPV	**Dominica, Penn**	**1.78**	**218**	*e*P	Pn	13 10 49.9	+0.8
MDPV				*e*S	Sb	13 11 13.1	-1.2
MDVC	**Dominica, Viel**	**1.78**	**217**	*e*P	Pn	13 10 50.4	+1.3
MDVC				*e*S	Sb	13 11 13.2	-1.1
MLYT	**Lee's Yard**	**1.85**	**260**	*e*P	Pb	13 10 52.5	-1.0
MLYT				*e*S	Sb	13 11 16.0	-0.3
DLPL	**La Plaine**	**1.94**	**209**	*e*P	Pn	13 10 52.8	+1.5
DLPL				*e*S	Sn	13 11 15.7	+1.1
MDN	**Morne-Daniel**	**2.02**	**212**	*e*P	Pn	13 10 53.6	+1.3
MDN				*e*S	Sb	13 11 19.1	-2.0
NVDO	**Nevis, Disaste**	**2.23**	**272**	*e*P	Pn	13 10 57.1	+1.9
NVDO				*e*S	Sn	13 11 23.8	+2.0
ILAM	**Ilet Lapin Mar**	**2.33**	**194**	*e*P	Pn	13 10 58.4	+1.8
ILAM				*e*S	Sn	13 11 26.3	+2.1
SVN	**Savane Anatole**	**2.35**	**201**	*e*P	Pb	13 10 59.8	-2.3
SKI	**Saint Kitts**	**2.36**	**277**	*e*P	Pn	13 10 58.4	+1.3
SKI				*e*S	Sn	13 11 27.2	+2.2
CXM	**Morne La Croix**	**2.38**	**201**	*e*P	Pn	13 10 59.4	+2.0
GBMF	**Grand Be**	**2.39**	**201**	*e*P	Pn	13 10 59.6	+2.0
PML	**Morne Lenard**	**2.41**	**201**	*e*P	Pn	13 10 59.5	+1.7
FDF	**Fort de France**	**2.44**	**200**	*e*P	Pn	13 10 59.7	+1.4
FDF				*e*S	Sn	13 11 29.1	+1.9
LPMF	**Morne Lapointe**	**2.54**	**195**	*e*P	Pn	13 11 00.9	+1.3
ZAM	**Aeronautique**	**2.56**	**196**	*e*P	Pn	13 11 01.6	+1.8
BIM	**Bigot**	**2.62**	**197**	*e*P	Pn	13 11 02.4	+1.7
BIM				*e*S	Sn	13 11 33.1	+1.5
MPOM	**Morne Pois Mar**	**2.64**	**192**	*e*P	Pn	13 11 02.7	+1.8
MPOM				*e*S	Sn	13 11 33.4	+1.4
SMRT	**St. Maarten**	**2.84**	**291**	*e*P	Pn	13 11 05.1	+1.5
SMRT				*e*S	Sn	13 11 38.1	+1.3
SABA	**Saba**	**2.88**	**282**	*e*P	Pn	13 11 05.4	+1.2
SABA				*e*S	Sn	13 11 39.4	+1.6
SLBI	**Saint Lucia, B**	**3.08**	**192**	*e*P	Pn	13 11 09.1	+2.2
SLBI				*e*S	Sn	13 11 44.3	+1.6
SLAC	**Saint Lucia, A**	**3.19**	**191**	*e*P	Pn	13 11 10.3	+1.9
SLAC				*e*S	Sn	13 11 46.7	+1.3
SLPA	**Patience**	**3.23**	**191**	*e*S	Sn	13 11 47.4	+0.8
SLB	**Belfond**	**3.28**	**193**	*e*P	Pn	13 11 12.0	+2.2
SLB				*e*S	Sn	13 11 49.5	+1.7
MCLT	**Moule a Chique**	**3.38**	**191**	*e*P	Pn	13 11 12.7	+1.6
MCLT				*e*S	Sn	13 11 53.0	+2.9
SSV	**Crater Summit**	**3.80**	**193**	*e*P	Pn	13 11 18.9	+1.9
SSV				*e*S	Sn	13 12 01.5	+0.8
SVV	**Soufriere Volc**	**3.81**	**194**	*e*P	Pn	13 11 19.8	+2.7
SVV				*e*S	Sn	13 12 03.2	+2.2
SVCV	**St. Vincent, C**	**3.84**	**193**	*e*P	Pn	13 11 20.2	+2.8
SVCV				*e*S	Sn	13 12 03.2	+1.6
SVB	**Belmont**	**3.87**	**194**	*e*P	Pn	13 11 20.4	+2.6
SVB				*e*S	Sn	13 12 02.7	+0.5
GCMP	**Grenada, Carri**	**4.67**	**194**	*e*P	Pn	13 11 31.5	+2.7
GCMP	**Grenada, Carri**	**4.67**	**194**	*e*S	Sn	13 12 22.4	+0.4
TOSP	**Speyside**	**5.72**	**182**	*e*P	Pn	13 11 46.1	+2.8
TOSP	**Speyside**	**5.72**	**182**	*e*S	Sn	13 12 48.3	+0.4
GUIV	**Guiria**	**6.63**	**197**	*e*P	Pn	13 11 58.0	+2.2
GUIV	**Guiria**	**6.63**	**197**	*e*S	Sn	13 13 09.1	-1.4

TRN 16 13:16:27.8,17˚.04N×60˚.30W,h30km,MD3.9,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEG	**La Desirade**	**1.02**	**226**	*e*P	Pb	13 16 46.9	-0.1
DEG				*e*S	Sb	13 17 01.3	+1.2
ABD	**La Joyeuse, An**	**1.27**	**244**	*e*P	Pb	13 16 50.8	-0.3
ABD				*e*S	Sb	13 17 08.0	+1.0
MAGL	**Barre de l'ile**	**1.43**	**221**	*e*P	Pb	13 16 52.6	+0.9
MAGL				*e*S	Sb	13 17 11.9	+0.1
ANWB	**Willy Bob**	**1.55**	**294**	*e*P	Pn	13 16 54.0	+0.7
ANWB				*e*S	Sb	13 17 14.9	-0.3
CBE	**Ff, Capester**	**1.58**	**233**	*e*P	Pb	13 16 55.4	-0.9
CBE				*e*S	Sb	13 17 16.3	+0.4
TDBA	**Terre de Bas,**	**1.74**	**228**	*e*P	Pb	13 16 58.2	-0.9
TDBA				*e*S	Sb	13 17 19.9	-0.7
DWS	**Wesley**	**1.75**	**214**	*e*P	Pb	13 16 58.0	-1.3
DWS				*e*S	Sb	13 17 19.9	-1.0
MDPV	**Dominica, Penn**	**1.77**	**218**	*e*P	Pn	13 16 57.7	+1.4
MDPV				*e*S	Sb	13 17 20.1	-1.2
MDVC	**Dominica, Viel**	**1.77**	**217**	*e*P	Pn	13 16 57.8	+1.4
MDVC				*e*S	Sb	13 17 20.6	-0.7
MLYT	**Lee's Yard**	**1.84**	**261**	*e*P	Pb	13 16 59.4	-1.3
MLYT				*e*S	Sb	13 17 22.1	-1.2
DLPL	**La Plaine**	**1.92**	**208**	*e*P	Pn	13 16 59.4	+0.9
DLPL				*e*S	Sn	13 17 22.8	+1.1
MDN	**Morne-Daniel**	**2.00**	**212**	*e*P	Pn	13 17 01.6	+2.0
MDN				*e*S	Sn	13 17 25.4	+1.7
NVDO	**Nevis, Disaste**	**2.22**	**272**	*e*P	Pn	13 17 04.2	+1.6
NVDO				*e*S	Sn	13 17 31.1	+2.1
ILAM	**Ilet Lapin Mar**	**2.31**	**194**	*e*P	Pn	13 17 05.6	+1.7
ILAM				*e*S	Sn	13 17 33.3	+1.9
SVN	**Savane Anatole**	**2.33**	**201**	*e*P	Pn	13 17 06.6	+2.3
SKI	**Saint Kitts**	**2.35**	**278**	*e*S	Sn	13 17 35.0	+2.7
BAMF	**Morne Balai**	**2.35**	**200**	*e*P	Pn	13 17 06.7	+2.3
CXM	**Morne La Croix**	**2.36**	**201**	*e*P	Pn	13 17 06.7	+2.0
PCM	**Pelee Case Pet**	**2.38**	**202**	*e*P	Pn	13 17 06.7	+1.9
GBMF	**Grand Be**	**2.38**	**201**	*e*P	Pn	13 17 06.1	+1.3
PML	**Morne Lenard**	**2.40**	**201**	*e*P	Pn	13 17 06.5	+1.4
FDF	**Fort de France**	**2.43**	**200**	*e*P	Pn	13 17 06.4	+0.8
FDF				*e*S	Sn	13 17 35.8	+1.5
LPMF	**Morne Lapointe**	**2.53**	**195**	*e*P	Pn	13 17 07.9	+1.1
ZAM	**Aeronautique**	**2.55**	**196**	*e*P	Pn	13 17 08.4	+1.4
TRMF	**Trois Ilets**	**2.59**	**196**	*e*P	Pn	13 17 09.4	+1.8
BIM	**Bigot**	**2.61**	**197**	*e*P	Pn	13 17 09.4	+1.4
BIM	**Bigot**	**2.61**	**197**	*e*P	Pn	13 17 09.7	+1.7
BIM				*e*S	Sn	13 17 40.7	+2.0
MPOM	**Morne Pois Mar**	**2.63**	**192**	*e*P	Pn	13 17 09.5	+1.3
MPOM				*e*S	Sn	13 17 40.4	+1.2
SMRT	**St. Maarten**	**2.83**	**291**	*e*P	Pn	13 17 12.9	+1.9
SMRT				*e*S	Sn	13 17 45.6	+1.4
SLBI	**Saint Lucia, B**	**3.06**	**192**	*e*P	Pn	13 17 15.8	+1.7
SLBI				*e*S	Sn	13 17 51.0	+1.1
SLAC	**Saint Lucia, A**	**3.17**	**191**	*e*P	Pn	13 17 17.1	+1.4
SLAC				*e*S	Sn	13 17 54.6	+2.1
SLB	**Belfond**	**3.27**	**193**	*e*P	Pn	13 17 20.1	+3.0
SLB				*e*S

MMRI	**Maumere**	**1.92**	**284**	P	**Pn**	14 05 22.5	**+0.1**
MMRI				S	**Sn**	14 05 46.6	**+0.2**
EDFI	**Ende, Flores**	**2.43**	**278**	P	**Pn**	14 05 29.4	**+0.3**
BASI	**Baing, Sumba**	**3.67**	**252**	P	**Pn**	14 05 46.5	**+0.9**
BBSI	**Bau Bau**	**3.90**	**337**	P	**Pn**	14 05 49.2	**+0.5**
WBSI	**Waikabubak, Su**	**4.70**	**263**	P	**Pn**	14 05 59.4	**-0.2**
KAPI	**Kappang**	**5.94**	**313**	P	**Pn**	14 06 16.2	**-0.1**
	2.5nm,0.3s,baz=147,slow=5.9,SNR=8.3						
BNSI	**Bone**	**6.13**	**319**	P	**Pn**	**14 06 21.7**	**+2.7**
	0.1nm45nm,1.1s						
PLAI	**Plampang**	**6.28**	**272**	P	**Pn**	**14 06 21.5**	**+0.6**
	0.5nm83nm,0.7s						
FITZ	**Fitzroy Crossi**	**9.07**	**171**	P	**Pn**	**14 06 58.8**	**-0.2**
	1.8nm,0.3s,baz=2.3,slow=10,SNR=54						
FITZ				S	**Sn**	**14 08 34.2**	**-5.1**
	8.3nm,0.3s,baz=206,slow=4.1,SNR=16						
WRA	**Warramunga Arr**	**14.62**	**139**	P	**Pn**	**14 08 12.4**	**-0.5**
	0.9nm,0.3s,baz=317,slow=15,SNR=46						
WRA				S	Sn	14 10 43.8	-10
	1.5nm,0.3s,baz=309,slow=24,SNR=10						
ASAR	**Alice Springs**	**17.25**	**148**	P	**P**	**14 08 46.2**	**+0.6**
	0.5nm,0.3s,baz=320,slow=11,SNR=37						
ASAR				S	Sn	14 11 49.0	-8.6
	0.6nm,0.3s,baz=314,slow=19,SNR=18						
CTA	**Charters Tower**	**24.01**	**120**	P	**P**	**14 09 58.8**	**+2.3**
	2.0nm,0.3s,baz=272,slow=13,SNR=3.6						
STKA	**Stephens Creek**	**27.88**	**147**	P	**P**	**14 10 33.2**	**+1.9**
	0.8nm,0.4s,baz=322,slow=10,SNR=3.3						
HNR	**Honiara**	**35.35**	**93**	LR	LR	14 26 37.9	
	comp=Z,55nm,18.1s,baz=108,slow=37						
CMAR	**Chiang Mai Arr**	**36.97**	**318**	P	**P**	**14 11 51.4**	**+0.6**
	2.3nm,0.8s,baz=145,slow=6.6,SNR=14						
ODAN	**Odare**	**50.47**	**316**	*eP*	**P**	**14 13 38.8**	**-0.2**
	16nm,0.6s						
TAPN	**Taplejung**	**50.57**	**317**	*eP*	**P**	**14 13 39.7**	**-0.1**
	16nm,0.5s						
RAMN	**Ramite**	**51.07**	**316**	*eP*	**P**	**14 13 43.6**	**0.0**
	44nm,0.5s						
JIRN	**Jiri**	**51.80**	**316**	*eP*	**P**	**14 13 48.9**	**-0.2**
	27nm,0.6s						
GUN	**Gumba**	**52.17**	**316**	*eP*	**P**	**14 13 51.6**	**-0.3**
	26nm,0.5s						
PKI	**Pulchoki**	**52.28**	**315**	*eP*	**P**	**14 13 52.0**	**-0.7**
	28nm,0.5s						
PKIN	**Phulchoki**	**52.29**	**315**	*eP*	**P**	**14 13 52.1**	**-0.6**
	26nm,0.5s						
DMN	**Daman**	**52.52**	**315**	*eP*	**P**	**14 13 53.9**	**-0.4**
	15nm,0.6s						
GKN	**Gorkha**	**53.08**	**315**	*eP*	**P**	**14 13 58.1**	**-0.3**
	27nm,0.4s						
USRK	**Ussuriysk Ar.**	**53.52**	**7**	P	**P**	**14 13 59.5**	**-1.5**
	1.3nm,0.6s,baz=142,slow=5.7,SNR=4.9						
KOLN	**Koldanda**	**53.67**	**314**	*eP*	**P**	**14 14 02.2**	**-0.5**
	16nm,0.5s						
DANN	**Dangsing**	**53.91**	**315**	*eP*	**P**	**14 14 04.1**	**-0.5**
	64nm,0.5s						
KSH	**Kashi**	**65.78**	**321**	P	**P**	**14 15 28.9**	**+3.4**
KSH				pP	PcP	14 15 55.3	-0.6
KSH				sP	sP	14 16 08.8	+8.7
KSH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,55nm,4.5s						
MKAR	**Makanchi Array**	**66.95**	**330**	P	**P**	**14 15 31.8**	**-0.9**
	comp=Z,2.1nm,0.7s,baz=137,slow=7.9,SNR=21						
AAK	**Ala-Archa**	**68.52**	**323**	P	**P**	**14 15 42.2**	**-0.6**
	comp=Z,1.9nm,0.5s,baz=81,slow=4.5,SNR=4.5						
ZALV	**Zalesovo Beam**	**71.03**	**337**	P	**P**	**14 15 55.5**	**-2.2**
	comp=Z,1.1nm,0.7s,baz=131,slow=4.5,SNR=6.4						
VNDA	**Vanda**	**71.15**	**172**	P	**P**	**14 15 58.0**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=318,slow=6.3,SNR=5.8						
KURBB	**Kurchatov Arra**	**71.39**	**331**	P	**P**	**14 15 58.4**	**-1.6**
	comp=Z,1.4nm,0.8s,baz=141,slow=5.4,SNR=14						
SEY	**Seymchan**	**75.03**	**13**	P	**P**	**14 16 20.8**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=86,slow=23,SNR=6.7						
AKTO	**Aktyubinsk**	**82.23**	**324**	P	**P**	**14 17 00.3**	**-0.7**
	comp=Z,1.4nm,0.5s,baz=103,slow=9.3,SNR=6.1						
CPUP	**Villa Florida**	**144.76**	**178**	PKP	**PKPdf**	**14 24 17.6**	**+0.9**
	comp=Z,2.1nm,0.9s,baz=166,slow=2.3,SNR=4.3						

NIED **16** *14:15:00,38.˚50N×142.˚30E,h35km,Mw3.8 Best double couple: M₀5.26000×10¹⁴ NP1:φ₅36.00000°,δ55.00000°, λ116.00000°. NP2:φ₅175.00000°,δ43.00000°,λ58.00000°.*
JMA **16** *14:15:10.5±0.1,38.˚53N×142.˚25E,h42km±1km,M3.7*
JMA Felt I J1.
IDC **16** *14:15:12.3±3.1,38.˚51N×142.˚26E,h57km±28km,mb3.3/7, mb1 3.4/10,mb1mx3.2/52,mbtmp3.5/10,ML2.9/3,MS2.7/1, Ms1 2.7/1,ms1mx2.2/24,Error ellipse: s-maj=31.3km s-min=19.6km az=114.0*

ISC 16 14:15:11.1±1.0,38.˚55N±0.˚05×142.˚27E±0.˚08,h42km±9km, n29,σ1⁰55/35,mb3.6/7,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.67**	**250**	P	**Pn**	**14 15 23.3**	**-0.9**
JIKH				S	**Sn**	**14 15 32.2**	**-1.4**
JKMT	**Kesennumamotoy**	**0.67**	**293**	P	**Pn**	**14 15 23.7**	**-0.6**
JKMT				S	**Sn**	**14 15 32.9**	**-0.8**
OFUJ	**Ofunato**	**0.71**	**319**	P	**Pn**	**14 15 24.3**	**-0.4**
OFUJ				S	**Sn**	**14 15 33.9**	**-0.6**
JIO	**Ouri**	**0.73**	**263**	P	**Pn**	**14 15 24.2**	**-0.8**
JIO				S	**Sn**	**14 15 33.7**	**-1.2**
JMK	**Ichinoseki**	**0.91**	**297**	P	**Pn**	**14 15 27.1**	**-0.4**
JMK				*eS*	**Sn**	**14 15 38.8**	**-0.7**
JOM	**Ohasama**	**1.20**	**321**	P	**Pn**	**14 15 31.4**	**0.0**
JOM				*eS*	**Sn**	**14 15 46.5**	**+0.1**
JOU	**Okura**	**1.27**	**262**	P	**Pn**	**14 15 32.0**	**-0.5**
JOU				S	**Sn**	**14 15 47.9**	**-0.4**
JMM	**Marumori**	**1.35**	**240**	P	**Pn**	**14 15 32.4**	**-1.0**
JMM				S	**Sn**	**14 15 49.2**	**-0.9**
JRG	**Rokugo**	**1.53**	**304**	P	**Pn**	**14 15 36.2**	**+0.2**
JYK	**Kaneyama**	**1.54**	**284**	P	**Pn**	**14 15 36.0**	**-0.1**
JFK	**Kawauchi**	**1.61**	**223**	P	**Pn**	**14 15 36.1**	**-1.1**
JFK				*eS*	**Sn**	**14 15 55.1**	**-1.7**
JYS	**Shirataka**	**1.76**	**260**	P	**Pn**	**14 15 39.3**	**+0.1**
MAT	**Matsushiro**	**3.80**	**239**	P	**Pn**	**14 16 08.9**	**+1.7**
MAT				*eS*	**Sn**	**14 16 57.2**	**+6.6**
MJAR	**Matsushiro Arr**	**3.80**	**239**	P	**Pn**	**14 16 08.4**	**+1.2**
	0.3nm,0.3s,baz=47,slow=13,SNR=23						
ASAJ	**Asahikawa**	**5.57**	**2**	P	**Pn**	**14 16 31.4**	**-0.1**
	1.3nm,0.3s,baz=188,slow=13,SNR=14						
ASAJ				LR	LR	14 19 04.7	
	comp=Z,80nm,20.9s,baz=155,slow=41						
USRK	**Ussuriysk Ar.**	**9.56**	**309**	P	**Pn**	**14 17 28.7**	**+2.5**
	baz=105,slow=16,SNR=2.7						
SEY	**Seymchan**	**25.18**	**11**	P	**P**	**14 20 33.0**	**+0.7**
	0.9nm,0.5s,baz=209,slow=10,SNR=5.4						
H11N2	**WAKE ISLAND Hy**	**28.39**	**124**	T	T	14 51 28.4	
	baz=317,slow=75,SNR=163						
H11N1	**WAKE ISLAND Hy**	**28.40**	**124**	T	T	14 51 29.1	
	baz=317,slow=75,SNR=166						
H11N3	**WAKE ISLAND Hy**	**28.41**	**124**	T	T	14 51 28.0	
	baz=317,slow=75,SNR=147						
H11S1	**WAKE ISLAND Hy**	**29.16**	**126**	T	T	14 52 23.9	
	baz=318,slow=76,SNR=69						
H11S3	**WAKE ISLAND Hy**	**29.16**	**126**	T	T	14 52 25.4	
	baz=318,slow=76,SNR=100						
H11S2	**WAKE ISLAND Hy**	**29.18**	**126**	T	T	14 52 22.7	
	baz=318,slow=76,SNR=96						
ZALV	**Zalesovo Beam**	**41.41**	**311**	P	**P**	**14 22 52.6**	**-0.7**
	0.4nm,0.5s,baz=68,slow=12,SNR=2.2						
MKAR	**Makanchi Array**	**43.91**	**301**	P	**P**	**14 23 13.4**	**-0.3**
	0.6nm,0.7s,baz=86,slow=10.0,SNR=3.0						
KURBB	**Kurchatov Arra**	**45.62**	**307**	P	**P**	**14 23 26.2**	**-1.0**
	0.7nm,0.4s,baz=80,slow=8.0,SNR=2.5						
ILAR	**Eielson Array**	**47.86**	**33**	P	**P**	**14 23 44.9**	**+0.4**
	0.2nm,0.7s,baz=272,slow=7.0,SNR=1.6						
ILAR				pP	**pP**	**14 23 57.6**	**+1.6**
	0.2nm,0.6s,baz=272,slow=6.4,SNR=5.2						
INK	**Inuvik**	**52.73**	**28**	P	**P**	**14 24 20.7**	**-0.5**
	0.3nm,0.4s,baz=293,slow=4.6,SNR=2.0						
WRA	**Warramunga Arr**	**58.66**	**189**	P	**P**	**14 25 03.1**	**-1.1**
	0.2nm,0.4s,baz=9.2,slow=4.8,SNR=6.4						
WRA				pP	**pP**	**14 25 15.8**	**-0.3**
	1.0nm,0.9s,baz=5.5,slow=7.5,SNR=3.8						

DJA 16 14:18:21.1±0.2,1˚S±2˚×12˚4E±˚,h10km,M4.1/13,mb4.2/2, MLv4.1/13,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.04**	**286**	P	Pg	14 18 39.6	-1.5
LUWI				S	Sg	14 18 53.5	-1.1
KMSI	**Cibinong**	**1.90**	**6**	P	Pn	14 18 54.0	+0.4
KMSI				S	Sn	14 19 18.2	+0.5
APSI	**Ampana**	**2.16**	**281**	P	Pn	14 18 56.8	-0.4
SANI	**Sanana**	**2.33**	**108**	P	Pn	14 18 58.0	-1.5
SANI				S	Sn	14 19 29.5	+1.3
MRSI	**Marisa**	**2.56**	**314**	P	Pn	14 19 02.4	-0.3
LBMI	**Labuha**	**3.79**	**80**	P	Pn	14 19 18.9	-0.8
LBMI				S	Sn	14 20 05.4	+1.0
NLAI	**Namlea**	**3.83**	**120**	P	Pn	14 19 20.6	+0.4
MPSI	**Mapaga**	**4.21**	**293**	P	Pn	14 19 25.3	-0.1
BBSI	**Bau Bau**	**4.30**	**196**	P	Pn	14 19 27.6	+1.0
TTSI	**Tana Toraja**	**4.30**	**247**	P	Pn	14 19 25.8	-0.8
BNSI	**Bone**	**4.76**	**230**	P	Pn	14 19 33.5	+0.5
SPSI	**Sidrap Palu**	**4.78**	**237**	P	Pn	14 19 34.3	+1.1
EDFI	**Ende, Flores**	**7.66**	**196**	P	Pn	14 20 12.6	-0.3
	0.0nm7.7nm,0.8s						

IDC **16** *14:41:16.4±0.8,64.˚77N×17.˚56W,h0km,mb3.6/8, mb1 3.8/12,mb1mx3.6/48,mbtmp3.6/12,ML2.7/3,MS3.6/20, Ms1 3.6/20,ms1mx3.4/42,Error ellipse: s-maj=29.1km s-min=10.5km az=11.0*
REY **16** *14:41:16.4,64.˚70N×17.˚33W,h1km*
NEIC **16** *14:41:17.3±2.1,64.˚64N±0.˚09×17.˚7W±0.˚1,h8km±4km, mb4.3/3,Error ellipse: s-maj=12.6km s-min=9.1km az=186.0*

ISC 16 14:41:17.2±0.5,64.˚69N±0.˚02×17.˚37W±0.˚02,h10km,n55, σ1⁰45/61,mb3.7/9,MS3.5/16,Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.17**	**265**	P	**Pg**	**14 41 20.4**	**-0.4**
	baz=263						
IVON				S	**Sg**	**14 41 23.5**	**+0.2**
	baz=263						
IGRF	**Grimsfjall**	**0.29**	**171**	P	**Pg**	**14 41 22.7**	**-0.3**
	baz=174						
IGRF				S	**Sb**	**14 41 27.4**	**-2.0**
	baz=174						
IHUS	**Husbondi**	**0.41**	**198**	P	**Pg**	**14 41 24.9**	**-0.5**
	baz=199						
IVOT	**Vottur**	**0.43**	**169**	P	**Pg**	**14 41 24.8**	**-0.8**
	baz=171						
IVOT				S	**Sb**	**14 41 31.6**	**-1.8**
	baz=171						
IKRE	**Kreppuhraun**	**0.43**	**77**	P	**Pg**	**14 41 24.6**	**-1.1**
	baz=77						
IKRE				S	**Sg**	**14 41 31.0**	**-0.5**
	baz=77						
IASK	**Askja**	**0.48**	**40**	P	**Pg**	**14 41 25.4**	**-1.2**
	baz=39						
IASK				S	**Sg**	**14 41 32.2**	**-0.6**
	baz=39						
IJOK	**Jokulheimar**	**0.53**	**225**	P	**Pg**	**14 41 26.6**	**-0.8**
	baz=226						
IJOK				S	**Sb**	**14 41 34.8**	**-1.4**
	baz=226						
IMKO	**Mokollar**	**0.53**	**56**	P	**Pg**	**14 41 26.3**	**-1.2**
	baz=56						
IMKO				S	**Sg**	**14 41 33.9**	**-0.5**
	baz=56						
ISVA	**Svartarkot**	**0.65**	**4**	P	**Pg**	**14 41 28.4**	**-1.4**
	baz=2.9						
ISVA				S	**Sg**	**14 41 37.5**	**-0.9**
	baz=2.9						
IKSK	**Karasker**	**0.66**	**143**	P	**Pg**	**14 41 27.9**	**-1.9**
	baz=145						
IKSK				S	**Sg**	**14 41 37.0**	**-1.4**
	baz=145						
IIEY	**Innrieyrar**	**0.68**	**209**	P	**Pg**	**14 41 29.3**	**-1.0**
	baz=210						
IIEY				S	**Sb**	**14 41 39.2**	**-1.3**
	baz=210						
IHAE	**Haedir**	**0.69**	**166**	P	**Pg**	**14 41 28.7**	**-1.7**
	baz=167						
IHAE				S	**Sg**	**14 41 39.0**	**-0.4**
	baz=167						
IVSH	**V-Sauoahnukur**	**0.71**	**80**	P	**Pg**	**14 41 29.2**	**-1.8**
	baz=80						
IVSH				S	**Sg**	**14 41 39.2**	**-1.1**
	baz=80						
IKAL	**Kalfafell**	**0.76**	**191**	P	**Pg**	**14 41 30.3**	**-1.4**
	baz=192						
IKAL				S	**Sb**	**14 41 41.3**	**-1.3**
	baz=192						
IADA	**Aoalbol**	**0.84**	**66**	P	**Pg**	**14 41 31.2**	**-2.1**
	baz=66						
IADA				S	**Sg**	**14 41 42.6**	**-1.5**
	baz=66						
IVAT	**Vatnsfell**	**0.84**	**234**	P	**Pg**	**14 41 32.2**	**-1.1**
	baz=234						
IVAT				S	**Sb**	**14 41 44.8**	**-0.4**
	baz=234						
IFAG	**Fagurholsmyri**	**0.87**	**159**	P	**Pg**	**14 41 32.2**	**-1.8**
	baz=160						
IFAG				S	**Sg**	**14 41 44.8**	**-0.5**
	baz=160						
IHVE	**Hveravellir**	**0.96**	**282**	P	**Pg**	**14 41 33.5**	**-2.1**
	baz=281						
IHVE				S	**Sg**	**14 41 46.9**	**-1.2**
	baz=281						
IREN	**Reynihlio**	**0.98**	**11**	P	**Pg**	**14 41 33.8**	**-2.3**
	baz=10						
BORG	**Borgarnes**	**1.70**	**274**	Pg	**Pn**	**14 41 45.5**	**-1.4**
	43nm,0.3s,baz=98,slow=10,SNR=116						
BORG				Lg	Lg	14 42 07.2	
	15nm,0.3s,baz=249,slow=9.4,SNR=3.4						
BORG	**Borgarnes**	**1.70**	**274**		**Pn**	**14 41 45.7**	**-1.1**
SCO	**Scoresbysund**	**6.08**	**345**	Pn	**Pn**	**14 42 48.3**	**+1.4**
SCO					**Sn**	**14 43 59.2**	**+2.8**
SCO	**Scoresbysund**	**6.08**	**345**	*i* P	**Pn**	**14 42 48.1**	**+1.2**
SCO				*i* S	**Sn**	**14 43 57.8**	**+1.4**
EKA	**Eskdalemuir Ar**	**11.74**	**136**	Pn	**Pn**	**14 44 05.1**	**+0.6**
	baz=326,slow=13,SNR=11						
ESK	**Eskdalemuir**	**11.74**	**137**	Pn	**Pn**	**14 44 05.2**	**+0.8**
NC204	**NORSAR Array S**	**13.18**	**92**	Pn	**Pn**	**14 44 22.2**	**-1.9**
NOA	**NORSAR Array B**	**13.48**	**93**	Pn	**Pn**	**14 44 26.5**	**-1.7**
	0.0nm,0.3s,baz=300,slow=13,SNR=2.1						
NOA				LR	LR	14 49 47.0	
	comp=Z,156nm,18.7s,baz=300,slow=38						
SFJD	**Kangerlussuaq**	**13.71**	**295**	LR	LR	14 49 19.5	
	comp=Z,487nm,20.6s,baz=92,slow=36						
SFJD	**Kangerlussuaq**	**13.71**	**295**	Pn	**Pn**	**14 44 27.4**	**-3.9**
HFS	**Hagfors**	**14.99**	**93**	Pn	**Pn**	**14 44 49.0**	**+0.2**
	0.1nm,0.3s,baz=309,slow=9.1,SNR=1.9						
HFS				LR	LR	14 50 43.8	
	comp=Z,160nm,18.2s,baz=282,slow=38						
KBS	**Kingsbay**	**16.60**	**19**	P	**P**	**14 45 13.2**	**+1.2**
KBS				IAmb	IAmb	14 45 19.3	
	comp=Z,40nm,1.4s						
SPA0	**Spitsbergen Ar**	**16.83**	**23**	P	**P**	**14 45 16.2**	**+1.6**
SPA0				IAmb	IAmb	14 45 35.1	
	comp=Z,50nm,1.3s						
FIA1	**FINESS Array S**	**19.65**	**79**	P	**Pn**	**14 45 47.6**	**+0.6**
FIA1				IAmb	IAmb	14 46 03.6	
	comp=Z,7.0nm,1.2s						
FINES	**FINESS Array B**	**19.65**	**79**	P	**Pn**	**14 45 47.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=304,slow=15,SNR=1.9						
FINES				LR	LR	14 52 45.4	
	comp=Z,130nm,21.3s,baz=344,slow=35						
CLL	**Collm**	**20.66**	**116**	*i* P	Pn	14 45 59.7	+0.6
	comp=Z,9.0nm,1.4s						
BRG	**Berggiesshubel**	**21.37**	**115**	*eP*	**P**	**14 46 05.5**	**+1.2**
	comp=Z,6.3nm,1.0s						
FRB	**Frobisher Bay**	**21.79**	**291**	LR	LR	14 54 10.0	
	comp=Z,180nm,19.8s,baz=28,slow=36						
GERES	**GERESS Array B**	**22.92**	**119**	P	**P**	**14 46 22.6**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=313,slow=12,SNR=2.3						
GERES				LR	LR	14 56 19.0	
	comp=Z,212nm,19.1s,baz=285,slow=39						
VRAC	**Vranov**	**23.65**	**114**	LR	LR	14 57 20.3	
	comp=Z,211nm,18.1s,baz=304,slow=41						
SCHQ	**Schefferville**	**26.09**	**271**	LR	LR	14 56 01.6	
	comp=Z,100nm,18.6s,baz=92,slow=34						
ESDC	**Sonseca Array**	**26.25**	**156**	LR	LR	14 56 45.8	
	comp=Z,73nm,19.4s,baz=200,slow=35						
RES	**Resolute Bay**	**26.48**	**324**	LR	LR	14 57 16.6	
	comp=Z,120nm,20.1s,baz=90,slow=36						
AKASG	**Malin Array Be**	**27.79**	**98**	P	**P**	**14 47 06.1**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=318,slow=9.4,SNR=1.3						
AKASG				LR	LR	14 57 50.9	
	comp=Z,99nm,20.7s,baz=335,slow=36						
KEST	**Kesra**	**33.14**	**138**	LR	LR	15 00 55.3	
	comp=Z,93nm,18.1s,baz=308,slow=36						
BRTR	**Keskin Array B**	**38.43**	**105**	P	**P**	**14 48 40.5**	**+1.7**
	comp=Z,1.3nm,0.8s,baz=352,slow=7.5,SNR=6.4						
KBZ	**Khabaz**	**39.06**	**93**	P	**P**	**14 48 46.0**	**+2.3**
	comp=Z,1.0nm,0.4s,baz=295,slow=7.0,SNR=4.4						
KBZ				LR	LR	15 04 50.3	
	comp=Z,126nm,21.1s,baz=348,slow=36						
YKA	**Yellowknife Ar**	**39.24**	**313**	P	**P**	**14 48 44.3**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=49,slow=8.4,SNR=7.8						
YKA				LR	LR	15 04 48.3	
	comp=Z,69nm,20.4s,baz=0.0,slow=36						
ULM	**Lac du Bonnet**	**41.65**	**289**	LR	LR	15 05 19.5	
	comp=Z,77nm,19.7s,baz=114,slow=35						
ILAR	**Eielson Array**	**45.69**	**332**	P	**P**	**14 49 37.2**	**-0.3**
	comp=Z,1.5nm,1.1s,baz=28,slow=4.0,SNR=9.1						
GEYT	**Alibeck**	**50.37**	**84**	LR	LR	15 12 11.1	
	comp=Z,54nm,20.6s,baz=205,slow=37						
TORD	**Torodi Ar. Bea**	**53.14**	**157**	P	**P**	**14 50 36.9**	**+2.1**
	comp=Z,0.6nm,0.8s,baz=330,slow=9.2,SNR=3.2						
PDAR	**Pinedale Array**	**53.22**	**293**	P	**P**	**14 50 36.5**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=46,slow=6.4,SNR=6.5						
PDAR				LR	LR	15 12 46.4	
	comp=Z,124nm,18.5s,baz=42,slow=36						
NVAR	**Mina Array Bea**	**60.34**	**297**	LR	LR	15 17 38.2	
	comp=Z,184nm,18.7s,baz=3.5,slow=36						
TXAR	**Lajitas Array**	**62.33**	**280**	LR	LR	15 18 03.6	
	comp=Z,125nm,19.0s,baz=0.0,slow=36						
LPAZ	**La Paz**	**89.45**	**228**	LR	LR	15 32 42.8	
	comp=Z,12nm,18.6s,baz=322,slow=34						

NEIC **16** *14:47:52.3±1.9,3.˚2N±0.˚1×124.˚46E±0.˚10,h332km±12km, mb4.3/6,Error ellipse: s-maj=17.9km s-min=12.8km az=206.0*
IDC **16** *14:47:53.8±1.9,3.˚16N×124.˚41E,h350km±21km,mb3.6/7, mb1 3.8/10,mb1mx3.3/37,mbtmp4.4/10,Error ellipse: s-maj=33.3km s-min=11.1km az=68.0*
DJA **16** *14:47:53.4±0.4,3.˚N±5.˚×12.˚4E±.˚,h315km±3km,M4.2/12, mb4.3/10,mB4.7/4,MLv4.2/12,Mw(mB)3.9/4*

ISC 16 14:47:53.2±0.7,3.˚18N±0.˚07×124.˚47E±0.˚08,h350km,n41, σ1⁰60/42,mb3.9/11,1C-1D,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**2.63**	**191**	P	**Pn**	**14 48 48.1**	**-1.4**
KMSI				S	**S**	**14 49 30.2**	**-4.4**
DDMP	**Don Marcelino,**	**3.16**	**23**	*eP*	**Pn**	**14 48 50.9**	**-3.1**
SKMP	**Bagumbayan, Su**	**3.32**	**1**	*eP*	**Pn**	**14 48 53.4**	**-2.1**
MRSI	**Marisa**	**3.69**	**223**	P	**Pn**	**14 48 57.5**	**-1.6**
TNTI	**Ternate**	**3.76**	**130**	P	**Pn**	**14 48 58.4**	**-1.4**
TNTI				S	**S**	**14 49 49.4**	**-4.1**
TNTI	**Ternate**	**3.76**	**130**		**Pn**	**14 48 58.9**	**-1.0**
KCP	**Kidapawan**	**3.85**	**9**	*iP*	**Pn**	**14 49 00.5**	**-0.4**
CTBH	**Cotabato--PC H**	**4.02**	**357**	*iP*	**Pn**	**14 49 02.0**	**-0.5**
MATI	**Mati**	**4.14**	**25**	*eP*	**Pn**	**14 49 00.7**	**-3.0**
LUWI	**Luwuk**	**4.53**	**202**	P	**Pn**	**14 49 06.4**	**-1.4**
LUWI	**Luwuk**	**4.53**	**202**		**Pn**	**14 49 06.0**	**-1.8**
PAGZ	**Pagadian**	**4.76**	**347**	*eP*	Pn	14 48 59.0	-11
LBMI	**Labuha**	**4.86**	**141**	P	**Pn**	**14 49 10.0**	**-1.3**
MPSI	**Mapaga**	**5.37**	**238**	P	**Pn**	**14 49 14.1**	**-2.9**
	0.0nm9.9nm,0.7s						
TTSI	**Tana Toraja**	**7.74**	**217**	P	**Pn**	**14 49 44.2**	**-0.1**
	0.1nm27nm,0.9s						
MSAI	**Masohi**	**7.87**	**145**	P	**Pn**	**14 49 46.5**	**+0.6**
	0.1nm346nm9.1nm,0.6s						
SIJI	**Sorong**	**7.90**	**121**	P	**Pn**	**14 49 47.3**	**+1.0**
	2.8nm,0.3s,baz=313,slow=15,SNR=10.0						
SPSI	**Sidrap Palu**	**8.51**	**214**	P	**Pn**	**14 49 53.4**	**-0.1**
	2µm28nm,0.7s						
BNSI	**Bone**	**8.70**	**210**	P	**Pn**	**14 49 56.1**	**+0.3**
	56nm,0.8s						
KKM	**Kota Kinabalu**	**8.70**	**289**	Pn	**Pn**	**14 49 54.6**	**-1.3**
FAKI	**Fak Fak**	**9.86**	**128**	P	**Pn**	**14 50 10.5**	**+0.9**
	33nm,0.7s						
FAKI	**Fak Fak**	**9.86**	**128**	P	**Pn**	**14 50 10.3**	**+0.7**
SBUM	**Sibu**	**12.26**	**267**	P	**Pn**	**14 50 39.1**	**+1.0**
SOEI	**Soe**	**12.85**	**181**	P	**Pn**	**14 50 47.6**	**+2.3**
BATI	**Baumata**	**13.32**	**183**	P	**Pn**	**14 50 50.4**	**-0.3**
	24nm,0.3s,baz=335,slow=1.5,SNR=22						
BATI	**Baumata**	**13.32**	**183**	P	**Pn**	**14 50 50.9**	**+0.2**
	71nm,0.6s						
JAY	**Jayapura**	**17.19**	**109**	P	**P**	**14 51 32.7**	**+1.0**
	1.0nm,0.3s,baz=233,slow=11,SNR=6.5						
KNRA	**Kununurra**	**19.21**	**167**	P	**P**	**14 51 53.1**	**-0.1**
KNRA				IAmb	IAmb	14 51 56.5	
	comp=Z,15nm,0.8s						
FITZ	**Fitzroy Crossi**	**21.18**	**177**	P	**P**	**14 52 12.5**	**+0.4**
	comp=Z,26nm,0.4s,baz=360,slow=7.0,SNR=164

YHNB	**Yeheng**	**3.09 268**		**Pn**	**15 13 27.4**	**+0.7**
YULB	**Yu-li**	**3.47 247**		**Pn**	**15 13 31.3**	**-0.6**
SSLB	**Suanglung**	**3.63 255**		**Pn**	**15 13 34.9**	**+0.8**
JOW	**Kunigami**	**3.75 57**	Pn	**Pn**	**15 13 36.0**	**+0.3**
	1.3nm,0.3s,baz=324,slow=21,SNR=20					
JOW	**Kunigami**	**3.75 57**		**Pn**	**15 13 35.7**	**0.0**
TWG	**Pinlang**	**3.92 241**		**Pn**	**15 13 36.6**	**-1.5**
TPUB	**Ta-pu**	**4.07 249**		**Pn**	**15 13 41.5**	**+1.4**
WHN	**Wuhan**	**10.86 304**	P	Pn	15 15 17.5	+4.2
KSRS	**Korea Array**	**12.90 11**	Pn	**Pn**	**15 15 42.0**	**+0.9**
	baz=179,slow=12,SNR=4.4					
MJAR	**Matsushiro Arr**	**16.43 41**	Pn	**P**	**15 16 31.5**	**+0.3**
	0.0nm,0.3s,baz=202,slow=6.9,SNR=1.9					
USA0B	**Ussuriysk Arra**	**20.23 15**	P	**P**	**15 17 10.5**	**-2.4**
USA0B			IAmb	IAmb	15 17 27.3	
	comp=Z,4.3nm,0.7s					
ERM	**Erimo**	**22.95 37**	P	**P**	**15 17 41.0**	**-1.0**
CMAR	**Chiang Mai Arr**	**24.80 260**	P	**P**	**15 17 58.8**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=61,slow=7.2,SNR=6.4					
KLR	**Kul'dur**	**24.99 11**	LR	LR	15 28 49.5	
	comp=Z,29nm,18.4s,baz=274,slow=39					
PSI	**Prapat**	**33.15 233**	P	**P**	**15 19 14.8**	**+0.2**
	comp=Z,4.3nm,0.8s,baz=360,slow=5.3,SNR=2.1					
RPSI	**Rantau Prapat**	**33.23 233**	P	**P**	**15 19 14.8**	**-0.3**
PETK	**Petropavlovsk-**	**37.56 33**	P	**P**	**15 19 52.8**	**+0.8**
	comp=Z,2.4nm,0.9s,baz=225,slow=7.7,SNR=1.7					
MKAR	**Makanchi Array**	**40.22 314**	P	**P**	**15 20 13.6**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=101,slow=11,SNR=5.3					
ZALV	**Zalesovo Beam**	**41.56 325**	P	**P**	**15 20 24.2**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=124,slow=13,SNR=2.1					
KSH	**Kashi**	**43.33 302**	P	**P**	**15 20 44.1**	**+4.0**
KSH			pP	sP	15 20 47.8	+1.7
KSH			sP	pP	15 20 52.4	+8.0
KSH			pmax	pmax		
	comp=Z,14nm,1.2s					
KURK	**Kurchatov**	**43.76 318**	P	**P**	**15 20 41.9**	**-1.3**
KURBB	**Kurchatov Arra**	**43.78 318**	P	**P**	**15 20 41.9**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=106,slow=9.1,SNR=2.3					
WB0	**Warramunga Arr**	**45.28 167**	P	**P**	**15 20 56.3**	**+0.6**
WB0			IAmb	IAmb	15 21 04.9	
	comp=Z,9.1nm,1.3s					
WRA	**Warramunga Ar**	**45.44 167**	P	**P**	**15 20 56.8**	**-0.1**
	comp=Z,1.9nm,0.9s,baz=347,slow=8.9,SNR=6.2					
WR0	**Warramunga Ar**	**45.49 167**	P	**P**	**15 20 57.8**	**+0.4**
WR0			IAmb	IAmb	15 20 58.8	
	comp=Z,7.3nm,1.4s					
ASAR	**Alice Springs**	**48.99 169**	P	**P**	**15 21 25.7**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=354,slow=7.0,SNR=11					
BRTR	**Keskin Array B**	**75.42 307**	P	**P**	**15 24 21.6**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=76,slow=6.5,SNR=2.4					
ATD	**Arta Tunnel**	**78.00 277**	LR	LR	15 57 24.6	
	comp=Z,12nm,18.2s,baz=158,slow=34					
YKA	**Yellowknife Ar**	**81.11 24**	P	**P**	**15 24 53.0**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=308,slow=4.9,SNR=14					

NIED **16** *15:14:00.24˝.80N×124˝.80E.h5km.Mw4.0 Best double couple: M₀1.06000×10¹⁵ NP1:φs7.00000°, δ64.00000°, λ-85.00000°. NP2:φs175.00000°, δ26.00000°, λ-101.00000°.*

IDC **16** *15:14:11.9±1.1,24˝.78N×124˝.75E,h0km,mb3.7/5, mb1 3.9/7,mb1mx3.5/46,mbtmp3.6/7,ML2.4/3,MS2.9/4, Ms1 2.9/4,ms1mx2.5/50,Error ellipse: s-maj=28.2km s-min=23.0km az=110.0*

JMA **16** *15:14:12.8,24˝.86N×124˝.75E,h7km±2km,M3.8*

JMA Felt I J1.

NEIC **16** *15:14:16.6±1.7,24˝.8N±0˝.1×124˝.79E±0˝.07,h37km±10km, mb4.4/3,Error ellipse: s-maj=17.6km s-min=5.9km az=152.0*

ISC 16 15:14:13.7±0.9,24°73N±0°.07×124°81E±0°.03,h14km±7km, n32,σ0°73/39,mb3.9/8,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	**Tarama**	**0.13**	**227**	P	**Pg**	**15 14 17.5**	**+0.2**
JTJ				S	**Sb**	**15 14 20.6**	**-0.1**
JIRB	**Irabujima**	**0.35**	**73**	P	**Pg**	**15 14 20.3**	**-0.5**
JIRB				S	**Sg**	**15 14 25.8**	**+0.2**
JIKM	**Ikemajima**	**0.44**	**64**	P	**Pg**	**15 14 21.9**	**-0.7**
JIKM				eS	**Sg**	**15 14 28.5**	**-0.1**
JMJ2	**Miyako jima3**	**0.47**	**89**	P	**Pb**	**15 14 23.4**	**-0.4**
JMJ2				eS	**Sb**	**15 14 30.5**	**-0.1**
JISG	**Ishigakijimahi**	**0.47**	**253**	P	**Pg**	**15 14 22.3**	**-0.8**
JISG				S	**Sg**	**15 14 28.8**	**-0.7**
JOGS	**Gusukube**	**0.55**	**87**	P	**Pg**	**15 14 24.6**	**+0.1**
JOGS				eS	**Sb**	**15 14 32.9**	**+0.2**
JIJ	**Ishigaki jima**	**0.71**	**239**	P	**Pg**	**15 14 26.9**	**-0.6**
JIJ				S	**Sg**	**15 14 36.6**	**-0.2**
JKRS	**Kuro-shima**	**0.88**	**236**	P	**Pb**	**15 14 30.7**	**0.0**
JKRS				S	**Sg**	**15 14 43.2**	**+1.0**
IRIF	**Iriomote-Funau**	**1.06**	**248**	P	**Pb**	**15 14 32.8**	**-0.9**
IRIF				S	**Sb**	**15 14 47.4**	**0.0**
HATJ	**Hateruma jima**	**1.13**	**234**	P	**Pn**	**15 14 35.0**	**-0.1**
HATJ				S	**Sg**	**15 14 50.6**	**+0.2**
YOJ	**Yonaguni jima**	**1.66**	**261**	Pn	**Pb**	**15 14 44.0**	**0.0**
NACB	**Ninganchiao**	**2.98**	**260**	Pn	**Pn**	**15 15 00.9**	**+0.4**
TATO	**Taipei**	**3.02**	**275**		**Pn**	**15 15 01.7**	**+0.6**
YHNB	**Yeheng**	**3.12**	**270**	Pn	**Pn**	**15 15 03.8**	**+1.3**
YULB	**Yu-li**	**3.47**	**248**	Pn	**Pn**	**15 15 06.8**	**-0.5**
SSLB	**Suanglung**	**3.63**	**258**	Pn	**Pn**	**15 15 10.4**	**+0.7**
JOW	**Kunigami**	**3.76**	**55**	Pn	**Pn**	**15 15 11.4**	**+0.1**
	0.2nm,0.3s,baz=161,slow=15,SNR=1.3						
TWG	**Pinlang**	**3.91**	**242**	Pn	**Pn**	**15 15 12.6**	**-0.8**
TPUB	**Ta-pu**	**4.08**	**250**	Pn	**Pn**	**15 15 17.1**	**+1.5**
JNU	**Nakatsue**	**9.91**	**31**	LR	LR	15 19 50.4	
	comp=Z,62nm,21.8s,baz=196,slow=34						
KSRS	**Korea Array**	**12.96**	**11**	Pn	**Pn**	**15 17 18.2**	**+0.9**
	0.1nm,0.3s,baz=186,slow=13,SNR=2.5						
JCJ	**Chichijima**	**15.81**	**78**	LR	LR	15 23 15.0	
	comp=Z,50nm,19.2s,baz=269,slow=34						
MJAR	**Matsushiro Arr**	**16.46**	**41**	Pn	**P**	**15 18 06.4**	**-0.5**
	0.0nm,0.3s,baz=214,slow=8.2,SNR=3.0						
MJAR				LR	LR	15 24 14.7	
	comp=Z,36nm,18.8s,baz=155,slow=37						
CMAR	**Chiang Mai Arr**	**24.82**	**261**	P	**P**	**15 19 36.2**	**+0.6**
	1.6nm,0.8s,baz=68,slow=7.2,SNR=8.5						
PETK	**Petropavlovsk-**	**37.60**	**32**	LR	LR	15 37 55.6	
	comp=Z,20nm,18.6s,baz=242,slow=38						
MKAR	**Makanchi Array**	**40.29**	**314**	P	**P**	**15 21 49.4**	**-0.9**
	0.4nm,0.7s,baz=104,slow=9.6,SNR=3.5						
WRAB	**Tennant Creek**	**45.36**	**167**	P	**P**	**15 22 29.8**	**-1.8**
WRAB				IAmb	IAmb	15 22 39.8	
	comp=Z,6.7nm,1.2s						
WRA	**Warramunga Ar**	**45.36**	**167**	P	**P**	**15 22 32.4**	**+0.7**
	comp=Z,2.0nm,1.0s,baz=348,slow=8.5,SNR=4.8						
WB2	**Warramunga Arr**	**45.37**	**167**	P	**P**	**15 22 31.6**	**-0.1**
WB2				IAmb	IAmb	15 22 39.9	
	comp=Z,8.8nm,1.3s						
WR0	**Warramunga Arr**	**45.42**	**167**	P	**P**	**15 22 33.1**	**+1.0**
WR0				IAmb	IAmb	15 22 33.9	
	comp=Z,6.5nm,1.1s						
ASAR	**Alice Springs**	**48.91**	**169**	P	**P**	**15 23 00.4**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=2.1,slow=7.4,SNR=2.1						
YKA	**Yellowknife Ar**	**81.16**	**24**	P	**P**	**15 26 28.4**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=304,slow=5.0,SNR=6.1						

IDC 16 15:30:47.9±56.0,17°03S×179°80E,h0km,mb3.9/3, mb1 4.1/3,mb1mx3.6/35,mbtmp3.9/3,Error ellipse: s-maj=1006.0km s-min=152.0km az=77.0,Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.57**	**240**	P	P	15 38 04.3	+0.1
	0.7nm,0.4s,baz=81,slow=13,SNR=4.8						
WRA	**Warramunga Ar**	**43.11**	**259**	P	P	15 38 50.3	-0.1
	0.4nm,0.4s,baz=93,slow=7.9,SNR=15						
ASAR	**Alice Springs**	**43.39**	**253**	P	P	15 38 52.2	-0.3
	3.7nm,0.6s,baz=88,slow=8.2,SNR=104						

IDC **16** *15:42:45.6±3.1,35˝.93N×21˝.98E,h0km,mb3.7/8, mb1 3.7/12,mb1mx3.5/44,mbtmp3.6/12,ML3.0/4,MS3.0/4, Ms1 3.0/4,ms1mx2.5/50,Error ellipse: s-maj=62.8km s-min=20.7km az=27.0*

ATH **16** *15:42:52.9,36˝.30N×22˝.67E,h21km±1km,ML3.3/25,Error ellipse: s-maj=2.4km s-min=1.1km az=43.0*

THE **16** *15:42:53.0,36˝.31N×22˝.59E,h4km±1km,ML3.3/6,Error ellipse: s-maj=1.3km s-min=0.4km az=32.0*

ISC 16 15:42:52.4±1.2,36°33N±0°.03×22°63E±0°.03,h17km±9km, n93,σ1°34/100,mb3.6/8,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTHA	**Kythira Island**	**0.36**	**101**	P	**Pb**	**15 43 00.6**	**+0.3**
KTHA				S	**Sb**	**15 43 05.9**	**+0.2**
	7µm,0.3s						
KTHA	**Kythira Island**	**0.36**	**101**	P	**Pb**	**15 43 00.6**	**+0.3**
KTHA				S	**Sb**	**15 43 05.4**	**-0.3**
KTHA				AML	AML	15 43 06.3	
	comp=N,10948µm,0.5s						
KTHA				AML	AML	15 43 06.9	
	comp=E,17690µm,0.2s						
VLI	**Veliai**	**0.46**	**33**	P	**Pb**	**15 43 02.7**	**+0.6**
VLI				S	**Sb**	**15 43 09.9**	**+1.2**
	comp=E,3µm,0.3s						
VLI	**Veliai**	**0.46**	**33**	P	**Pb**	**15 43 02.6**	**+0.4**
VLI				S	**Sb**	**15 43 09.6**	**+0.9**
VLI				AML	AML	15 43 10.9	
	comp=E,5526µm,0.8s						
VLI				AML	AML	15 43 11.5	
	comp=N,7644µm,0.3s						
MNVA	**Monemvasia**	**0.49**	**43**	P	**Pb**	**15 43 03.3**	**+0.7**
MNVA				S	**Sb**	**15 43 10.2**	**+0.8**
PYL	**PYLOS**	**0.91**	**309**	P	**Pg**	**15 43 09.4**	**-0.7**
PYL				S	**Sb**	**15 43 23.3**	**+1.8**
	comp=N,2µm,0.6s						
PYL	**PYLOS**	**0.91**	**309**	P	**Pg**	**15 43 09.6**	**-0.5**
PYL				AML	AML	15 43 28.5	
	comp=N,3180µm,0.6s						
PYL				AML	AML	15 43 28.9	
	comp=E,3036µm,0.4s						
ITM	**Ithomi**	**1.02**	**327**	P	**Pg**	**15 43 11.8**	**-0.4**
ITM				S	**Sn**	**15 43 27.6**	**+1.7**
	comp=E,2µm,0.5s						
ITM	**Ithomi**	**1.02**	**327**	P	**Pb**	**15 43 12.2**	**+0.6**
ITM				S	**Sn**	**15 43 28.2**	**+2.3**
ITM				AML	AML	15 43 29.4	
	comp=N,3111µm,0.5s						
ITM				AML	AML	15 43 34.0	
	comp=E,2891µm,0.4s						
VLX	**Vlachokerasia**	**1.06**	**349**	P	**Pb**	**15 43 12.7**	**+0.3**
VLX	**Vlachokerasia**	**1.06**	**349**	P	**Pn**	**15 43 13.0**	**+0.4**
VLX				AML	AML	15 43 38.9	
	comp=E,5348µm,0.7s						
VLX				AML	AML	15 43 40.2	
	comp=N,4366µm,0.6s						
KRND	**KRANIDI**	**1.14**	**22**	P	**Pn**	**15 43 14.9**	**+1.4**
KRND	**KRANIDI**	**1.14**	**22**	P	**Pn**	**15 43 14.9**	**+1.4**
KRND				AML	AML	15 43 35.1	
	comp=N,2336µm,0.4s						
KRND				AML	AML	15 43 36.4	
	comp=E,2350µm,0.5s						
RODP	**Rodopos**	**1.20**	**129**	P	**Pn**	**15 43 15.4**	**+1.1**
RODP				S	**Sn**	**15 43 32.9**	**+2.7**
	comp=E,505nm,0.5s						
YDRA	**Hydra**	**1.22**	**33**	P	**Pg**	**15 43 16.4**	**+0.3**
YDRA				AML	AML	15 43 36.5	
	comp=E,2769µm,0.5s						
YDRA				AML	AML	15 43 38.6	
	comp=N,2396µm,0.6s						
TRIP	**Tripoli**	**1.23**	**347**	P	**Pg**	**15 43 15.8**	**-0.5**
TRIP	**Tripoli**	**1.23**	**347**	P	**Pg**	**15 43 16.2**	**-0.1**
TRIP				AML	AML	15 43 43.6	
	comp=N,2151µm,0.6s						
TRIP				AML	AML	15 43 45.3	
	comp=E,2218µm,0.7s						
DID	**Didima**	**1.27**	**22**	P	**Pg**	**15 43 17.1**	**0.0**
DID	**Didima**	**1.27**	**22**	P	**Pg**	**15 43 17.0**	**0.0**
DID				AML	AML	15 43 39.5	
	comp=E,2724µm,0.5s						
DID				AML	AML	15 43 43.4	
	comp=N,1983µm,0.8s						
IMMV	**Iera Moni Meta**	**1.40**	**128**	P	**Pb**	**15 43 18.4**	**+0.3**
IMMV				S	**Sg**	**15 43 38.4**	**+0.7**
	comp=N,2µm,0.8s						
IMMV	**Iera Moni Meta**	**1.40**	**128**	P	**Pb**	**15 43 18.5**	**+0.4**
IMMV				AML	AML	15 43 47.5	
	comp=E,3427µm,0.9s						
IMMV				AML	AML	15 43 50.2	
	comp=N,2837µm,0.8s						
CHAN	**Chania**	**1.41**	**125**	P	**Pb**	**15 43 18.7**	**+0.5**
AMT	**Artemida-Makis**	**1.41**	**329**	P	**Pb**	**15 43 18.7**	**+0.4**
AMT	**Artemida-Makis**	**1.41**	**329**	P	**Pg**	**15 43 19.2**	**-0.5**
AMT				AML	AML	15 43 45.4	
	comp=E,4220µm,0.8s						
AMT				AML	AML	15 43 48.0	
	comp=N,4258µm,0.6s						
MHLO	**Agia Marina, M**	**1.48**	**75**	P	**Pg**	**15 43 19.9**	**-1.0**
MHLO	**Agia Marina, M**	**1.48**	**75**	AML	AML	15 43 42.9	
	comp=N,5340µm,0.5s						
MHLO				AML	AML	15 43 44.4	
	comp=E,5379µm,0.6s						
MHLA	**Plaka, Milos I**	**1.51**	**73**	P	**Pb**	**15 43 20.0**	**+0.1**
VAM	**Vamos**	**1.57**	**125**	P	**Pb**	**15 43 21.2**	**+0.1**
VAM	**Vamos**	**1.57**	**125**	P	**Pb**	**15 43 21.4**	**+0.3**
LOUT	**Loutraki**	**1.68**	**9**	P	**Pg**	**15 43 24.2**	**-0.5**
SERI	**Serifos**	**1.71**	**60**	P	**Pn**	**15 43 22.0**	**+0.6**
SERI	**Serifos**	**1.71**	**60**	P	**Pn**	**15 43 22.5**	**+1.1**
SERI				AML	AML	15 43 44.2	
	comp=N,815µm,0.3s						
SERI				AML	AML	15 43 44.8	
	comp=E,537µm,0.4s						
KLV	**Kalavryta, Ach**	**1.75**	**348**	P	**Pb**	**15 43 24.8**	**+0.6**
KLV				AML	AML	15 43 59.8	
	comp=N,742µm,0.7s						
KLV				AML	AML	15 44 00.8	
	comp=E,935µm,0.8s						
DRO	**Drossia**	**1.78**	**336**	P	**Pg**	**15 43 25.8**	**-0.8**
DRO				AML	AML	15 44 02.5	
	comp=N,1675µm,0.6s						
DRO				AML	AML	15 44 05.0	
	comp=E,3494µm,0.7s						
VLY	**Voula,Athens**	**1.79**	**31**	P	**Pn**	**15 43 23.8**	**+1.3**
VLY	**Voula,Athens**	**1.79**	**31**	P	**Pb**	**15 43 24.1**	**-0.6**
VLY				AML	AML	15 43 55.6	
	comp=N,1352µm,0.7s						
VLY				AML	AML	15 43 58.6	
	comp=E,1097µm,0.6s						
ATHU	**Athens Univers**	**1.88**	**29**	P	**Pb**	**15 43 25.8**	**-0.5**
GVD	**Gavdhos**	**1.90**	**141**	P	**Pn**	**15 43 25.9**	**+1.8**
GVD	**Gavdhos**	**1.90**	**141**	P	**Pb**	**15 43 26.9**	**+0.2**
VILL	**Vilia**	**1.91**	**16**	P	**Pb**	**15 43 26.7**	**-0.2**
PROD	**Prodromos**	**1.94**	**6**	P	**Pb**	**15 43 27.7**	**+0.4**
VIL2	**Platees**	**1.95**	**15**	P	**Pb**	**15 43 26.8**	**-0.7**
VIL2				AML	AML	15 43 58.6	
	comp=N,739µm,0.8s						
VIL2				AML	AML	15 44 02.8	
	comp=E,1073µm,0.7s						
RLS	**Riolos of Patr**	**1.96**	**332**	P	**Pb**	**15 43 28.6**	**+0.9**
RLS				AML	AML	15 44 07.5	
	comp=N,761µm,0.7s						
RLS				AML	AML	15 44 12.4	
	comp=E,718µm,1.0s						
LAKA	**Lakka**	**1.98**	**345**	P	**Pb**	**15 43 28.6**	**+0.6**
LAKA				AML	AML	15 44 08.8	
	comp=N,834µm,1.1s						
LAKA				AML	AML	15 44 13.6	
	comp=E,658µm,1.3s						
DION	**Dionisos Attik**	**2.04**	**30**	P	**Pb**	**15 43 27.7**	**-1.3**
DION	**Dionisos Attik**	**2.04**	**30**	P	**Pb**	**15 43 27.9**	**-1.1**
TRIZ	**Trizonia**	**2.08**	**348**	P	**Pb**	**15 43 30.1**	**+0.4**
KALE	**Kalithea**	**2.10**	**350**	P	**Pb**	**15 43 30.3**	**+0.3**
KALE				AML	AML	15 44 13.3	
	comp=E,508µm,0.7s						
KALE				AML	AML	15 44 14.2	
	comp=N,635µm,0.4s						
IDI	**Anoyia**	**2.11**	**119**	P	**Pn**	**15 43 28.1**	**+1.1**
IDI	**Anoyia**	**2.11**	**119**	Pn	**Pn**	**15 43 28.5**	**+1.5**
	comp=N,6.2nm,0.3s,baz=217,slow=7.2,SNR=38						
IDI				Sn	**Sb**	**15 43 55.5**	**-0.7**
	comp=N,13nm,0.3s,baz=37,slow=16,SNR=7.2						
IDI	**Anoyia**	**2.11**	**119**	P	**Pn**	**15 43 28.3**	**+1.3**
SERG	**Sergoula**	**2.13**	**348**	P	**Pb**	**15 43 30.7**	**+0.2**
EFP	**Efpalio**	**2.17**	**345**	P	**Pb**	**15 43 30.6**	**-0.6**
IOSP	**Ios island**	**2.18**	**79**	P	**Pn**	**15 43 29.1**	**+1.2**
KARY	**Karystos**	**2.23**	**40**	P	**Pn**	**15 43 30.0**	**+1.4**
KARY	**Karystos**	**2.23**	**40**	P	**Pn**	**15 43 30.0**	**+1.4**
KARY				AML	AML	15 44 04.8	
	comp=E,289µm,0.7s						
KARY				AML	AML	15 44 09.2	
	comp=N,413µm,1.0s						
THR3	**Thira Island,**	**2.24**	**87**	P	**Pn**	**15 43 30.8**	**+2.1**
KFL	**Anninata**	**2.31**	**321**	P	**Pb**	**15 43 33.4**	**-0.2**
ANX	**Ano Chora**	**2.33**	**346**	P	**Pb**	**15 43 33.6**	**-0.4**
ANX				AML	AML	15 44 22.0	
	comp=E,762µm,0.8s						
ANX				AML	AML	15 44 22.2	
	comp=N,1147µm,0.7s						
LKR	**Lokris**	**2.34**	**7**	P	**Pb**	**15 43 32.5**	**-1.6**
LKR	**Lokris**	**2.34**	**7**	P	**Pb**	**15 43 32.7**	**-1.4**
LKR				AML	AML	15 44 08.6	
	comp=E,446µm,0.4s						
LKR				AML	AML	15 44 10.0	
	comp=N,254µm,0.4s						
APE	**Apeiranthos**	**2.45**	**72**	P	**Pn**	**15 43 33.4**	**+1.8**
VLS	**Valsamata**	**2.46**	**319**	P	**Pn**	**15 43 34.2**	**+2.5**
MRKA	**Markates**	**2.50**	**18**	P	**Pn**	**15 43 34.7**	**+2.4**
MRKA				AML	AML	15 44 07.5	
	comp=E,572µm,1.2s						
MRKA				AML	AML	15 44 08.6	
	comp=N,424µm,0.8s						
ANAF	**Anafi Island**	**2.54**	**88**	P	**Pn**	**15 43 35.1**	**+2.3**
KYMI	**Kymi, Euboea I**	**2.58**	**27**	P	**Pn**	**15 43 35.4**	**+2.0**
KYMI	**Kymi, Euboea I**	**2.58**	**27**	P	**Pn**	**15 43 35.6**	**+2.2**
KYMI				AML	AML	15 44 21.8	
	comp=E,306µm,0.9s						
KYMI				AML	AML	15 44 22.9	
	comp=N,373µm,1.1s						
KEF1	**Kardakata, Kep**	**2.60**	**319**	P	**Pn**	**15 43 36.3**	**+2.7**
LAST	**Lasithi**	**2.60**	**116**	P	**Pn**	**15 43 34.6**	**+0.9**
LAST	**Lasithi**	**2.60**	**116**	P	**Pn**	**15 43 34.8**	**+1.1**
EVR	**Evrytania**	**2.67**	**346**	P	**Pb**	**15 43 38.5**	**-1.2**
AMGA	**Amorgos Island**	**2.68**	**78**	P	**Pn**	**15 43 36.3**	**+1.6**
AGG	**Agios Georgios**	**2.70**	**355**	P	**Pb**	**15 43 39.0**	**-1.3**
EVGI	**Lefkada island**	**2.77**	**326**	P	**Pb**	**15 43 39.8**	**-1.7**
LKD2	**Lefkada island**	**2.91**	**328**	P	**Pn**	**15 43 40.7**	**+2.7**
SKIA	**Skiathos**	**2.91**	**13**	P	**Pn**	**15 43 40.5**	**+2.6**
CHOS	**Chios island**	**3.42**	**52**	P	**Pn**	**15 43 46.5**	**+1.5**
KARP	**Karpathos**	**3.76**	**101**	P	**Pn**	**15 43 51.4**	**+1.7**
BRTR	**Keskin Array B**	**9.33**	**65**	Pn	Pn	15 45 13.2	+7.0
	comp=N,0.1nm,0.3s,baz=250,slow=14,SNR=3.9						
VRAC	**Vranov**	**13.70**	**343**	LR	LR	15 53 02.4	
	comp=N,67nm,19.3s,baz=122,slow=44						
GERES	**GERESS Array B**	**14.12**	**335**	Pn	**Pn**	**15 46 10.2**	**-1.3**
	comp=N,0.0nm,0.3s,baz=142,slow=10.0,SNR=2.1						
GERES				LR	LR	15 52 41.9	
	comp=N,60nm,19.3s,baz=108,slow=42						
KHC	**Kasperske Hory**	**14.40**	**335**	*eP*	**P**	**15 46 23.0**	**+0.7**
GOPC	**GO Pecny, Ondr**	**14.72**	**340**	*eP*	**P**	**15 46 26.3**	**+0.5**
KBZ	**Khabaz**	**17.17**	**58**	P	**P**	**15 46 55.8**	**+2.9**
	comp=N,0.1nm,0.3s,baz=247,slow=16,SNR=2.1						
HFS	**Hagfors**	**24.51**	**349**	P	**P**	**15 48 09.4**	**-1.2**
	comp=N,1.7nm,0.6s,baz=152,slow=10,SNR=14						
HFS				LR	LR	15 59 10.2	
	comp=N,23nm,21.8s,baz=201,slow=40						
FINES	**FINESS Array B**	**25.23**	**4**	P	**P**	**15 48 16.1**	**-1.0**
	comp=N,1.2nm,0.7s,baz=163,slow=7.4,SNR=4.4						
NOA	**NORSAR Array B**	**25.78**	**347**	P	**P**	**15 48 21.1**	**-1.0**
	comp=N,1.6nm,1.1s,baz=157,slow=9.5,SNR=3.4						
EKA	**Eskdalemuir Ar**	**25.90**	**325**	P	**P**	**15 48 18.6**	**-4.6**
	comp=N,0.7nm,0.5s,baz=94,slow=6.8,SNR=2.4						
ARCES	**ARCESS Array B**	**33.30**	**2**	P	**P**	**15 49 28.6**	**-0.1**
	comp=N,2.0nm,1.0s,baz=183,slow=9.5,SNR=3.6						
KMBO	**Kilima Mbogo**	**39.67**	**157**	LR	LR	16 08 21.2	
	comp=N,28nm,19.0s,baz=94,slow=39						
MKAR	**Makanchi Array**	**44.87**	**57**	P	**P**	**15 51 05.4**	**-0.3**
	comp=N,0.3nm,0.4s,baz=266,slow=7.7,SNR=8.0						
ZALV	**Zalesovo Beam**	**45.70**	**47**	P	**P**	**15 51 12.1**	**-0.1**
	comp=N,0.3nm,0.3s,baz=291,slow=12,SNR=1.5						
YKA	**Yellowknife Ar**	**75.69**	**341**	P	**P**	**15 54 34.1**	**-2.3**
	comp=N,0.1nm,0.3s,baz=37,slow=5.9,SNR=1.9						

IDC **16** *15:45:29.0±5.8,3˝.50N×126˝.61E,h62km±60km,mb3.2/5, mb1 3.4/6,mb1mx3.1/43,mbtmp3.6/6,ML3.9/1,Error ellipse: s-maj=83.9km s-min=25.9km az=70.0*

ISC 16 15:45:28.7±1.0,3°4N±0°.2×126°5E±0°.3,h53km,n7,σ0°56/7, mb3.3/5,1C,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**3.83**	**338**	*eP*	Pn	15 46 32.0	+0.6
KCP				eS	**Sn**	**15 47 09.5**	**+0.5**
SIJI	**Sorong**	**6.39**	**132**	P	**Pn**	**15 47 00.4**	**+0.1**
	2.4nm,0.3s,baz=337,slow=19,SNR=12						
FITZ	**Fitzroy Crossi**	**21.41**	**182**	P	**P**	**15 50 12.8**	**+0.5**
	0.8nm,0.7s,baz=10,slow=11,SNR=1.1						
WRA	**Warramunga Ar**	**24.47**	**162**	P	**P**	**15 50 42.2**	**-0.7**
	0.7nm,0.3s,baz=338,slow=10,SNR=30						
ASAR	**Alice Springs**	**27.88**	**165**	P	**P**	**15 51 13.8**	**0.0**
	0.2nm,0.3s,baz=343,slow=10,SNR=17						
STKA	**Stephens Creek**	**37.93**	**159**	P	**P**	**15 52 41.2**	**+0.1**
	1.3nm,0.8s,baz=346,slow=8.3,SNR=4.2						
MKAR	**Makanchi Array**	**57.68**	**325**	P	**P**	**15 55 13.3**	**-0.5**
	0.1

PB02				*e*S	**Sn**	16 11 01.4	**-0.9**
PB02				IAML		16 11 03.0	
	comp=E,258nm,0.4s						
PB04	**IPOC Station P**	**2.65**	**259**	*e*P	**Pn**	**16 10 31.9**	**-0.5**
PB04				*e*S	**Sn**	**16 11 05.0**	**-2.0**
GO01	**Chusmiza**	**2.77**	**321**	⇑*i*P	**Pn**	**16 10 36.1**	**+1.8**
GO01				*e*S	**Sn**	**16 11 12.6**	**+2.4**
PATCX	**Punta Patache**	**2.81**	**291**	⇓*e*P	**Pn**	**16 10 34.8**	**+0.6**
PATCX				*e*S	**Sn**	**16 11 08.8**	**-1.5**
PATCX				IAML		16 11 11.2	
	comp=E,349nm,0.4s						
TA01	**Diego Aracena**	**2.93**	**295**	*e*P	**Pn**	**16 10 36.0**	**+0.3**
TA01				*i* S	**Sn**	**16 11 11.3**	**-1.5**
TA01				IAML		16 11 12.9	
	comp=N,153nm,0.5s						
PB11	**IPOC Station P**	**2.99**	**313**	*e*P	**Pn**	**16 10 37.4**	**+0.8**
PB11				*i* S	**Sn**	**16 11 14.3**	**-0.2**
PB11				IAML		16 11 15.9	
	comp=N,242nm,0.2s						
MNMC	**Minye Minye**	**3.42**	**322**	*e*P	**Pn**	**16 10 43.5**	**+1.4**
MNMC				*e*S	**Sn**	**16 11 24.8**	**+0.6**
PSGC	**Pisagua**	**3.43**	**310**	*e*P	**Pn**	**16 10 41.8**	**-0.2**
PSGC				*e*S	**Sn**	**16 11 22.1**	**-1.9**
LPAZ	**La Paz**	**5.57**	**352**	P	**Pn**	**16 11 11.8**	**+1.8**
	comp=N,1.8nm,0.3s,baz=157,slow=6.4,SNR=24						
SIV	**San Ignacio**	**8.31**	**47**	P	**Pn**	**16 11 43.6**	**-2.0**
	comp=N,0.6nm,0.3s,baz=233,slow=6.5,SNR=12						
SIV				S	**Sn**	**16 13 12.6**	**-6.1**
	comp=N,0.3nm,0.3s,baz=242,slow=3.9,SNR=3.1						
JTS	**Las Juntas de**	**36.31**	**330**	LR	LR	16 32 53.5	
	comp=N,31nm,19.2s,baz=170,slow=38						
TORD	**Torodi Ar. Bea**	**76.11**	**70**	P	**P**	**16 21 16.7**	**0.0**
	comp=N,1.1nm,0.5s,baz=256,slow=5.3,SNR=14						
MKAR	**Makanchi Array**	**145.04**	**37**	PKP	**PKPdf**	**16 29 05.0**	**+0.9**
	comp=N,0.2nm,0.5s,baz=304,slow=3.3,SNR=2.8						

NIED ***16*** *16:11:00,35.˚70N×139.˚90E,h53km,Mw3.7 Best double couple: M₀3.84000×10¹⁴ NP1:φₛ219.00000°,δ78.00000°, λ-110.00000°. NP2:φₛ101.00000°,δ23.00000°, λ-31.00000°.*

IDC ***16*** *16:11:50.8±1.9,35.˚60N×140.˚03E,h61km±17km,mb3.5/9, mb1 3.7/12,mb1mx3.4/49,mbtmp3.9/12,MS2.6/2, Ms1 2.6/2,ms1mx2.3/36,Error ellipse: s-maj=25.8km s-min=6.9km az=66.0*

JMA ***16*** *16:11:51.2±0.1,35.˚68N×139.˚91E,h56km±2km,M3.5 Broadband fault plane solution: P waves. NP1: φₛ111.00000°,δ44.00000°,λ-22.00000°. NP2: φₛ217.00000°,δ75.00000°,λ-132.00000°. Principal axes: T Plg19.0000°, Azm337.0000°; N Plg40.0000°, Azm230.0000°; P Plg44.0000°, Azm86.0000°;*

JMA Felt I J1.

ISC 16 16:11:51.0±0.9,35.˚61N±0.˚04×139.˚95E±0.˚06,h62km±8km, n31,σ0.˚79/33,mb3.8/9,5C-4D,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCN	**Nagara**	**0.28**	**133**	⇑P	**Pn**	**16 12 01.9**	**+0.7**
JSMT	**Sammumatsuo**	**0.41**	**86**	⇑P	**Pn**	**16 12 02.7**	**+0.5**
JOD2	**Odawara 2**	**0.79**	**244**	⇓P	**Pn**	**16 12 06.3**	**-0.1**
JOD2				S	**Sn**	**16 12 17.0**	**-0.7**
JAG	**Ashikaga**	**0.90**	**334**	⇑P	**Pn**	**16 12 07.1**	**-0.8**
JAG				S	**Sn**	**16 12 18.8**	**-1.5**
BSO3	**Boso 3**	**0.93**	**150**	⇑P	**Pn**	**16 12 08.0**	**0.0**
JRY	**Ryogami san**	**0.94**	**296**	⇓P	**Pn**	**16 12 08.3**	**-0.1**
JRY				S	**Sn**	**16 12 21.4**	**+0.2**
JIM2	**Oshima 3**	**0.99**	**205**	P	**Pn**	**16 12 08.6**	**-0.4**
JIM2				S	**Sn**	**16 12 21.5**	**-0.8**
JFNN	**Fujinakano**	**1.11**	**248**	⇓P	**Pn**	**16 12 10.7**	**+0.1**
JFNN				S	**Sn**	**16 12 25.2**	**+0.1**
JYN	**Shimob**	**1.15**	**265**	⇓P	**Pn**	**16 12 11.1**	**0.0**
JKT	**Katashina**	**1.28**	**334**	⇑P	**Pn**	**16 12 12.0**	**-0.9**
JKT				S	**Sn**	**16 12 28.1**	**-1.2**
MJAR	**Matsushiro Arr**	**1.69**	**304**	P	**Pn**	**16 12 18.4**	**+0.2**
	4.7nm,0.3s,baz=141,slow=14,SNR=184						
MJAR				S	**Sn**	**16 12 39.5**	**+0.7**
	7.8nm,0.3s,baz=135,slow=22,SNR=5.9						
MAT	**Matsushiro**	**1.69**	**304**	P	**Pn**	**16 12 18.5**	**+0.2**
MAT				S	**Sn**	**16 12 39.3**	**+0.4**
JHJ	**Hachijo jima 2**	**2.49**	**183**	P	**Pn**	**16 12 29.2**	**+0.1**
	98nm,0.3s,baz=343,slow=13,SNR=31						
JHJ				S	**Sn**	**16 12 58.6**	**+0.1**
	102nm,0.3s,baz=247,slow=23,SNR=9.3						
JCJ	**Chichijima**	**8.71**	**167**	P	**Pn**	**16 13 52.5**	**-1.7**
	12nm,0.3s,baz=289,slow=18,SNR=4.7						
KSRS	**Korea Array**	**9.85**	**284**	P	**Pn**	**16 14 12.0**	**+2.2**
	0.1nm,0.3s,baz=95,slow=14,SNR=8.1						
KSRS				LR	LR	16 17 55.3	
	comp=Z,26nm,18.3s,baz=85,slow=37						
KLR	**Kul'dur**	**14.88**	**339**	LR	LR	16 21 34.4	
	comp=Z,28nm,18.8s,baz=128,slow=39						
MA2	**Magadan**	**24.99**	**13**	P	**P**	**16 17 08.9**	**+0.3**
	2.9nm,0.6s,baz=183,slow=14,SNR=3.6						
SONM	**Songino Array**	**27.64**	**307**	P	**P**	**16 17 32.6**	**-0.2**
	0.5nm,0.4s,baz=107,slow=9.3,SNR=1.9						
H11N2	**WAKE ISLAND Hy**	**28.51**	**117**	T	T	16 47 19.6	
	baz=308,slow=75,SNR=41						
H11N1	**WAKE ISLAND Hy**	**28.51**	**117**	T	T	16 47 17.0	
	baz=308,slow=75,SNR=30						
H11N3	**WAKE ISLAND Hy**	**28.52**	**117**	T	T	16 47 18.3	
	baz=308,slow=75,SNR=35						
H11S3	**WAKE ISLAND Hy**	**29.15**	**119**	T	T	16 48 04.6	
	baz=310,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**29.15**	**119**	T	T	16 48 15.0	
	baz=310,slow=76,SNR=16						
H11S2	**WAKE ISLAND Hy**	**29.17**	**119**	T	T	16 48 16.8	
	baz=310,slow=76,SNR=13						
ZALV	**Zalesovo Beam**	**42.01**	**314**	P	**P**	**16 19 35.7**	**-0.2**
	1.9nm,0.4s,baz=93,slow=6.5,SNR=9.9						
MKAR	**Makanchi Array**	**43.88**	**303**	P	**P**	**16 19 52.2**	**+1.0**
	0.9nm,0.5s,baz=90,slow=9.4,SNR=8.5						
NRIK	**Noril'sk**	**44.07**	**336**	P	**P**	**16 19 52.0**	**-0.3**
	1.0nm,0.6s,baz=327,slow=8.7,SNR=3.6						
ILAR	**Eielson Array**	**51.32**	**32**	P	**P**	**16 20 48.7**	**+0.1**
	0.2nm,0.6s,baz=275,slow=7.1,SNR=4.3						
WRA	**Warramunga Arr**	**55.51**	**186**	P	**P**	**16 21 19.6**	**-0.1**
	0.7nm,0.8s,baz=2.8,slow=7.6,SNR=8.8						
ASAR	**Alice Springs**	**59.23**	**186**	P	**P**	**16 21 46.5**	**+0.5**
	0.2nm,0.3s,baz=22,slow=11,SNR=7.7						
FINES	**FINESS Array B**	**69.51**	**332**	P	**P**	**16 22 51.9**	**-0.7**
	0.7nm,0.6s,baz=54,slow=9.3,SNR=2.3						

ROM ***16*** *16:16:10.7±0.2,38.˚92N±0.˚01×15.˚49E±0.˚02,h212km±1km, ML3.7/2,Error ellipse: s-maj=2.1km s-min=0.9km az=110.0*

LDG ***16*** *16:16:10.7,38.˚90N×15.˚49E,h216km*

IDC ***16*** *16:16:11.5±0.6,39.˚06N×15.˚30E,h228km±10km,mb3.4/16, mb1 3.4/21,mb1mx3.2/59,mbtmp3.9/21,Error ellipse: s-maj=16.0km s-min=13.5km az=77.0*

ISC 16 16:16:10.3±0.6,38.˚98N±0.˚06×15.˚50E±0.˚05,h215km±5km, n134,σ1.˚30/123,mb3.8/15,5C-1D,Sicily

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IST3	**Stromboli F**	**0.28**	**229**	P	**Pn**	**16 16 39.3**	**+0.8**
JOPP	**Joppolo**	**0.48**	**141**	P	**Pn**	**16 16 39.1**	**-0.1**
JOPP				S	**S**	**16 17 00.2**	**-1.3**
JOPP				AML	AML		
	comp=E,1460μm,0.3s						
JOPP				AML	AML		
	comp=N,1280μm,0.3s						
JOPP				AML	AML		
	comp=N,1455μm,1.2s						
JOPP				AML	AML		
	comp=E,1480μm,0.3s						
CAR1	**CAROLEI**	**0.62**	**64**	P	**Pn**	**16 16 39.9**	**+0.3**
CAR1				S	**S**	**16 17 01.0**	**-1.5**
CAR1				AML	AML		
	comp=E,2495μm,0.6s						
CAR1				AML	AML		
	comp=N,4515μm,0.7s						
CAR1				AML	AML		
	comp=E,2495μm,0.6s						
CAR1				AML	AML		
	comp=N,4520μm,0.7s						
CAR1				AML	AML		
	comp=E,3205μm,0.6s						
CAR1				AML	AML		
	comp=E,3210μm,0.6s						
CAR1				AML	AML		
	comp=N,3895μm,0.8s						
CET2	**Cetraro**	**0.65**	**33**	P	**Pn**	**16 16 40.3**	**+0.5**
CET2				S	**S**	**16 17 01.7**	**-1.1**
CET2				AML	AML		
	comp=E,3490μm,0.7s						
CET2				AML	AML		
	comp=N,1805μm,1.0s						
CET2				AML	AML		
	comp=E,3485μm,0.7s						
CET2				AML	AML		
	comp=N,1800μm,1.0s						
LLI	**Lipari**	**0.69**	**219**	AML	AML		
	comp=E,6175μm,1.6s						
LLI				AML	AML		
	comp=N,7970μm,0.4s						
MSRU	**Castanea**	**0.72**	**179**	AML	AML		
	comp=E,3205μm,1.2s						
MSRU				AML	AML		
	comp=N,2285μm,0.3s						
VPL	**Vulcano Piano**	**0.72**	**214**	P	**Pn**	**16 16 40.3**	**+0.2**
VPL				AML	AML		
	comp=E,2565μm,0.8s						
VPL				AML	AML		
	comp=N,3335μm,0.5s						
GRI	**Girifalco**	**0.74**	**102**	P	**Pn**	**16 16 40.8**	**+0.6**
GRI				S	**S**	**16 17 03.5**	**+0.2**
GRI				AML	AML		
	comp=E,1274μm,0.3s						
GRI				AML	AML		
	comp=N,1555μm,0.3s						
GRI				AML	AML		
	comp=E,1274μm,0.3s						
MILZ	**Milazzo**	**0.74**	**196**	P	**Pn**	**16 16 40.0**	**-0.1**
MILZ				S	**S**	**16 17 02.5**	**-0.8**
MILZ				AML	AML		
	comp=E,2170μm,0.4s						
MILZ				AML	AML		
	comp=N,3175μm,1.5s						
MILZ				AML	AML		
	comp=N,3180μm,1.5s						
MSCL	**Scilla**	**0.78**	**163**	P	**Pn**	**16 16 40.2**	**-0.3**
MSCL				S	**S**	**16 17 02.2**	**-1.7**
MSCL				AML	AML		
	comp=E,6165μm,0.5s						
MSCL				AML	AML		
	comp=N,5875μm,0.6s						
CEL	**Celeste**	**0.79**	**157**	P	**Pn**	**16 16 40.1**	**-0.4**
CEL				S	**S**	**16 17 02.3**	**-1.6**
CEL				AML	AML		
	comp=E,2080μm,0.5s						
CEL				AML	AML		
	comp=E,1715μm,0.5s						
CEL				AML	AML		
	comp=N,1905μm,0.8s						
CEL				AML	AML		
	comp=N,2335μm,0.8s						
T0702	**Acquaformosa (**	**0.87**	**31**	P	**Pn**	**16 16 41.4**	**+0.6**
T0702				S	**S**	**16 17 04.0**	**-0.8**
T0702				AML	AML		
	comp=N,1107μm,1.2s						
T0702				AML	AML		
	comp=E,2595μm,0.5s						
T0702				AML	AML		
	comp=N,1099μm,1.2s						
CELI	**Celico**	**0.89**	**62**	AML	AML		
	comp=E,3800μm,0.4s						
CELI				AML	AML		
	comp=N,2780μm,0.7s						
PLAC	**Placanica**	**0.91**	**125**	AML	AML		
	comp=E,2115μm,0.8s						
PLAC				AML	AML		
	comp=E,2290μm,0.6s						
PLAC				AML	AML		
	comp=N,2035μm,0.8s						
PLAC				AML	AML		
	comp=N,2415μm,0.6s						
SERS	**Sersale**	**0.93**	**86**	AML	AML		
	comp=N,1240μm,0.4s						
SERS				AML	AML		
	comp=E,1540μm,0.9s						
SERS				AML	AML		
	comp=E,1365μm,0.4s						
SERS				AML	AML		
	comp=N,1615μm,0.9s						
MCSR	**Castroreale**	**0.94**	**192**	AML	AML		
	comp=E,2850μm,0.8s						
MCSR				AML	AML		
	comp=N,3345μm,0.4s						
TDS	**Terranova Siba**	**0.94**	**44**	P	**Pn**	**16 16 42.4**	**+1.2**
TDS				S	**S**	**16 17 05.5**	**+0.2**
TDS				AML	AML		
	comp=E,514μm,0.5s						
TDS				AML	AML		
	comp=N,510μm,0.6s						
TDS				AML	AML		
	comp=E,514μm,0.5s						
MMN	**Mormanno**	**0.98**	**23**	P	**Pn**	**16 16 42.3**	**+0.9**
MMN				AML	AML		
	comp=E,170μm,0.5s						
MMN				AML	AML		
	comp=N,322μm,0.2s						
NOV	**Novara**	**0.99**	**197**	P	**Pn**	**16 16 42.1**	**+0.4**
NOV				AML	AML		
	comp=E,2235μm,0.4s						
NOV				AML	AML		
	comp=N,2060μm,0.4s						
NOV				AML	AML		
	comp=N,2065μm,0.4s						
NOV				AML	AML		
	comp=E,2240μm,0.4s						
IACL	**Alicudi**	**1.00**	**244**	P	**Pn**	**16 16 42.0**	**+0.4**
IACL				AML	AML		
	comp=E,305μm,1.4s						
IACL				AML	AML		
	comp=N,459μm,1.6s						
IACL				AML	AML		
	comp=E,306μm,1.4s						
IACL				AML	AML		
	comp=N,460μm,1.6s						
TIP	**Timpagrande**	**1.00**	**78**	P	**Pn**	**16 16 42.6**	**+0.9**
TIP				S	**S**	**16 17 05.8**	**-0.2**
TIP				AML	AML		
	comp=E,839μm,0.5s						
TIP				AML	AML		
	comp=N,1037μm,0.7s						
TIP				AML	AML		
	comp=E,704μm,0.6s						
TIP				AML	AML		
	comp=N,1038μm,0.7s						
TIP				AML	AML		
	comp=N,1320μm,0.7s						
SOI	**Samo**	**1.01**	**154**	P	**Pn**	**16 16 41.9**	**+0.2**
SOI				S	**S**	**16 17 04.8**	**-1.2**
SOI				AML	AML		
	comp=E,2540μm,1.6s						
SOI				AML	AML		
	comp=E,2535μm,1.6s						
SOI				AML	AML		
	comp=N,1870μm,0.5s						
AIO	**Antillo**	**1.03**	**192**	P	**Pn**	**16 16 42.3**	**+0.4**
AIO				AML	AML		
	comp=E,1085μm,1.6s						
AIO				AML	AML		
	comp=N,992μm,1.6s						
CUC	**Castrocucco**	**1.04**	**14**	P	**Pn**	**16 16 42.6**	**+0.8**
CUC				S	**S**	**16 17 06.3**	**-0.3**
CUC				AML	AML		
	comp=N,198μm,0.5s						
CUC				AML	AML		
	comp=E,256μm,0.5s						
CUC				AML	AML		
	comp=N,174μm,0.6s						
CUC				AML	AML		
	comp=N,198μm,0.5s						
CUC				AML	AML		
	comp=E,256μm,0.5s						
CUC				AML	AML		
	comp=N,152μm,0.6s						
CUC				AML	AML		
	comp=E,318μm,0.7s						
MCPD	**Capo d'Orlando**	**1.05**	**215**	P	**Pn**	**16 16 42.0**	**0.0**
MCPD				S	**S**	**16 17 05.8**	**-0.6**
MCPD				AML	AML		
	comp=E,223μm,1.0s						
MCPD				AML	AML		
	comp=N,248μm,0.6s						
MUCR	**Ucria**	**1.06**	**208**	P	**Pn**	**16 16 42.0**	**-0.2**
MUCR				AML	AML		
	comp=E,663μm,1.6s						
MUCR				AML	AML		
	comp=E,664μm,1.6s						
MUCR				AML	AML		
	comp=N,774μm,0.5s						
BULG	**Bulgheria - Ca**	**1.10**	**355**	P	**Pn**	**16 16 43.7**	**+1.4**
BULG				AML	AML		
	comp=E,298μm,0.7s						
BULG				AML	AML		
	comp=E,318μm,0.7s						
BULG				AML	AML		
	comp=N,397μm,0.7s						
BULG				AML	AML		
	comp=N,396μm,0.7s						
BULG				AML	AML		
	comp=E,318μm,0.7s						
BULG				AML	AML		
	comp=N,384μm,0.7s						
MPAZ	**Palizzi**	**1.10**	**159**	AML	AML		
	comp=E,2745μm,0.2s						
MPAZ				AML	AML		
	comp=N,3125μm,1.1s						
PIPA	**Pietrapaola**	**1.14**	**63**	P	**Pn**	**16 16 43.8**	**+1.3**
PIPA				AML	AML		
	comp=E,1245μm,0.3s						
PIPA				AML	AML		
	comp=E,1215μm,0.3s						
PIPA				AML	AML		
	comp=E,1250μm,0.3s						
PIPA				AML	AML		
	comp=N,1020μm,0.9s						
PIPA				AML	AML		
	comp=E,1220μm,0.3s						
PIPA				AML	AML		
	comp=N,1165μm,0.9s						
PIPA				AML	AML		
	comp=N,1022μm,0.9s						
PIPA				AML	AML		
	comp=N,1170μm,0.9s						
MGR	**Morigerati**	**1.16**	**2**	P	**Pn**	**16 16 43.8**	**+1.2**
MGR				AML	AML		
	comp=E,256μm,0.8s						
MGR				AML	AML		
	comp=E,256μm,0.8s						
MGR				AML	AML		
	comp=N,290μm,0.8s						
MGR				AML	AML		
	comp=N,290μm,0.8s						
MSFR	**San Fratello**	**1.18**	**217**	AML	AML		
	comp=N,206μm,0.9s						
MSFR				AML	AML		
	comp=E,161μm,0.3s						
LADO	**San Nicola del**	**1.19**	**75**	P	**Pn**	**16 16 43.7**	**+0.8**
LADO				S	**S**	**16 17 08.4**	**+0.2**
LADO				AML	AML		
	comp=E,758μm,1.3s						
LADO				AML	AML		
	comp=N,958μm,0.5s						
LADO				AML	AML		
	comp=N,958μm,0.5s						
MNO	**Monte Soro**	**1.22**	**211**	P	**Pn**	**16 16 44.6**	**+1.2**
MNO				AML	AML		
	comp=E,891μm,0.6s						
MNO				AML	AML		
	comp=N,1980μm,0.9s						
SIRI	**Monte Sirino -**	**1.23**	**13**	AML	AML		
	comp=N,378μm,0.8s						
SIRI				AML	AML		
	comp=E,343μm,0.4s						
EMSG	**Monte Spagnolo**	**1.24**	**201**	AML	AML		
	comp=E,1198μm,0.6s						
EMSG				AML	AML		
	comp=N,1585μm,0.7s						
EPZF	**Pizzo Felice**	**1.26**	**204**	AML	AML		
	comp=N,976μm,1.5s						
EPZF				AML	AML		
	comp=E,1240μm,1.1s						
SCHR	**S. Chirico Rap**	**1.30**	**20**	P	**Pn**	**16 16 45.4**	**+1.6**
SCHR				AML	AML		
	comp=E,182μm,1.5s						
SCHR				AML	AML		
	comp=E,182μm,0.6s						
SCHR				AML	AML		
	comp=N,219μm,0.2s						
MTSN	**Montesano sull**	**1.30**	**9**	AML	AML		
	comp=N,206μm,0.6s						
MTSN				AML	AML		
	comp=E,202μm,0.7s						
ORI	**Oriolo Calabro**	**1.31**	**34**	AML	AML		
	comp=N,1475μm,0.4s						
ORI				AML	AML		
	comp=E,1580μm,1.6s						
CMPR	**Campora**	**1.34**	**354**	AML	AML		
	comp=E,171μm,0.6s						
CMPR				AML	AML		
	comp=N,303μm,0.4s						
MCEL	**Monticello**	**1.36**	**10**	AML	AML		
	comp=E,426μm,0.3s						
MCEL				AML	AML		
	comp=N,274μm,0.5s						
MCEL				AML	AML		
	comp=E,439μm,0.3s						
MCEL				AML	AML		
	comp=N,286μm,1.0s						
SLCN	**Sala Consilina**	**1.41**	**4**	P	**Pn**	**16 16 45.9**	**+1.3**
SLCN				AML	AML		
	comp=E,520μm,0.4s						
SLCN				AML	AML		
	comp=N,357μm,0.3s						
CDRU	**Civita di Ruta**	**1.51**	**354**	AML	AML		
	comp=E,115μm,0.4s						
CDRU				AML	AML		
	comp=N,86μm,0.5s						
HLNI	**Lentini**	**1.70**	**197**	AML	AML		
	comp=N,317μm,1.3s						
HLNI				AML	AML		
	comp=E,392μm,1.1s						
HAGA	**Augusta**	**1.71**	**189**	P	**Pn**	**16 16 46.8**	**-0.4**
HAGA				AML	AML		
	comp=E,246μm,1.3s						
HAGA				AML	AML		
	comp=N,378μm,0.6s						
VAE	**Valguarnera**	**1.73**	**210**	P	**Pn**	**16 16 49.8**	**+2.3**
	comp=N,10nm,0.3s,baz=291,slow=2.2,SNR=6.7						
VAE				S	**S**	**16 17 20.3**	**+4.2**
	comp=N,4.8nm,0.3s,baz=59,slow=23,SNR=5.7						
AGST	**Augusta-Monte**	**1.73**	**187**	P	**Pn**	**16 16 46.9**	**-0.5**
AGST				AML	AML		
	comp=E,550μm,0.4s						
AGST				AML	AML		
	comp=N,838μm,1.0s						
AGST				AML	AML		
	comp=E,550μm,0.4s						
AGST				AML	AML		
	comp=N,840μm,1.0s						
HCRL	**Carlentini**	**1.73**	**192**	AML	AML		
	comp=N,699μm,0.7s						
HCRL				AML	AML		
	comp=E,660μm,0.9s						
RESU	**Resuttano**	**1.75**	**221**	AML	AML		
	comp=E,188μm,0.7s						
RESU				AML	AML		
	comp=N,283μm,0.7s						
MRLC	**Muro Lucano**	**1.77**	**360**	AML	AML		
	comp=E,117μm,0.6s						
MRLC				AML	AML		
	comp=N,137μm,0.4s						
MIGL	**Miglionico**	**1.78**	**24**	AML	AML		
	comp=N,766μm,1.2s						
MIGL				AML	AML		
	comp=E,554μm,0.6s						
ACER	**Acerenza**	**1.84**	**11**	AML	AML		
	comp=E,254μm,0.9s						
ACER				AML	AML		
	comp=N,278μm,0.3s						
SSY	**Sortino**	**1.85**	**191**	AML	AML		
	comp=E,335μm,1.0s						
SSY				AML	AML		
	comp=N,563μm,1.0s						
CORL	**Corleone**	**2.04**	**238**	AML	AML		
	comp=E,238μm,1.5s						
CORL				AML	AML		
	comp=N,309μm,0.8s						
HAVL	**Avola**	**2.04**	**188**	AML	AML		
	comp=N,863μm,0.4s						
HAVL				AML	AML		
	comp=E,810μm,1.0s						
SG1	**Sgolgore (BA)**	**2.07**	**26**	⇑*i*P	**Pn**	**16 16 50.7**	**+0.1**

SG1				S		**S**	**16 17 22.1 +0.2**		
TAR1	**Taranto**	**2.07**	**41**	⇑*i*P		**Pn**	**16 16 50.3 -0.2**		
AMUR	**Altamura**	**2.10**	**24**	AML	AML				
	comp=E,263µm,0.6s								
AMUR				AML	AML				
	comp=N,281µm,0.6s								
MRVN	**Minervino Murg**	**2.15**	**14**	AML	AML				
	comp=E,177µm,0.6s								
MRVN				AML	AML				
	comp=N,220µm,0.3s								
NOCI	**Noci**	**2.17**	**33**	AML	AML				
	comp=E,470µm,0.9s								
NOCI				AML	AML				
	comp=N,502µm,0.6s								
CLTA	**Licata**	**2.19**	**214**	AML	AML				
	comp=E,434µm,1.5s								
CLTA				AML	AML				
	comp=N,850µm,1.6s								
BAI	**Bari**	**2.37**	**26**⇑	*i*P		**Pn**	**16 16 54.0 +0.3**		
BAI				S		**S**	**16 17 28.0 +0.6**		
SCTE	**Santa Cesarea**	**2.54**	**64**	AML	AML				
	comp=N,564µm,1.2s								
SCTE				AML	AML				
	comp=E,480µm,1.1s								
BSSO	**Busso**	**2.65**	**345**	AML	AML				
	comp=N,47µm,1.0s								
BSSO				AML	AML				
	comp=E,36µm,0.5s								
AQU	**L'Aquila**	**3.73**	**335**	*e*Pn		**Pn**	**16 17 11.8 +2.5**		
TERO	**Teramo**	**3.91**	**339**	AML	AML				
	comp=N,24µm,1.2s								
TERO				AML	AML				
	comp=E,16µm,0.5s								
HCY	**Herceg Novi**	**4.14**	**32**	*e*Pn		**Pn**	**16 17 14.3 0.0**		
DBRK	**Dubrovnik**	**4.20**	**28**	*i* P		**Pn**	**16 17 16.0 +1.1**		
STON	**Ston**	**4.23**	**23**	*e*Pn		**Pn**	**16 17 16.2 +0.9**		
STON	**Ston**	**4.23**	**23**	AML	AML				
	comp=N,51µm,0.4s								
STON				AML	AML				
	comp=E,60µm,1.6s								
STON	**Ston**	**4.23**	**23**	*i* P		**Pn**	**16 17 16.1 +0.8**		
DRME	**Dracevica, Mon**	**4.26**	**40**	*e*Pn		**Pn**	**16 17 16.6 +0.9**		
TREB	**Trebinje**	**4.31**	**29**	*e*Pn		**Pn**	**16 17 17.2 +0.8**		
MAKA	**Makarska**	**4.45**	**14**	*i* P		**Pn**	**16 17 19.1 +1.0**		
PDG	**Podgorica**	**4.47**	**38**	*e*Pn		**Pn**	**16 17 19.1 +0.7**		
PUK	**Puka**	**4.54**	**46**	AML	AML				
	comp=E,35µm,1.2s								
PUK				AML	AML				
	comp=N,55µm,1.1s								
BRY	**Bratogost**	**4.54**	**29**	*e*Pn		**Pn**	**16 17 19.9 +0.5**		
RICI	**Ricice**	**4.67**	**15**	P		**Pn**	**16 17 22.1 +1.2**		
MORI	**Morici**	**4.88**	**2**	*i* P		**Pn**	**16 17 24.3 +0.8**		
UPM	**Unac-Piva**	**4.94**	**30**	*e*Pn		**Pn**	**16 17 25.6 +1.2**		
DUGI	**Dugi Otok**	**5.02**	**356**	*i* P		**Pn**	**16 17 25.7 +0.6**		
KIJV	**Kijevo**	**5.07**	**7**	*i* P		**Pn**	**16 17 27.1 +1.3**		
RUDO	**Rudo**	**5.47**	**31**	*e*Pn		**Pn**	**16 17 33.0 +2.0**		
MGRS	**Mrkonjic Grad**	**5.56**	**12**	*e*Pn		**Pn**	**16 17 32.6 +0.5**		
NVLJ	**Novalja**	**5.60**	**355**	*i* P		**Pn**	**16 17 33.2 +0.7**		
HAPS	**Han Pijesak,BI**	**5.72**	**26**	*e*Pn		**Pn**	**16 17 34.8 +0.6**		
KEST	**Kesra**	**5.88**	**238**	P		**Pn**	**16 17 37.6 +1.3**		
	comp=N,0.2nm,0.3s,baz=248,slow=6.0,SNR=5.0								
PGF	**Pioggiola**	**6.08**	**308**	*e*Pn		**Pn**	**16 17 40.5 +1.6**		
PGF				*e*Sn		**S**	**16 18 48.7 -0.3**		
	comp=N,0.3nm,0.2s								
DIVS	**Divibare**	**6.12**	**32**	*e*Pn		**Pn**	**16 17 40.0 +0.7**		
MDVR	**Moldovita**	**7.42**	**37**	⇑P		**Pn**	**16 17 57.6 +1.6**		
OBKA	**Obir**	**7.56**	**355**	*e*Pn		**Pn**	**16 17 59.3 +1.5**		
	comp=N,8.4nm,0.6s								
MORH	**Mrgy, Hungar**	**7.59**	**17**	*e*Pn		**Pn**	**16 17 58.5 +0.4**		
SOKA	**Soboth**	**7.70**	**358**	*e*Pn		**Pn**	**16 18 00.6 +1.0**		
	comp=N,4.6nm,0.9s								
SBF	**Sospel**	**7.78**	**311**	*e*P		**Pn**	**16 18 01.7 +1.1**		
SBF				*e*Sn		**S**	**16 19 27.8 -0.9**		
	comp=N,1.5nm,0.3s								
BZS	**Buzias**	**8.03**	**32**	⇓P		**Pn**	**16 18 05.5 +1.7**		
LMR	**La Mourre**	**8.05**	**306**	*e*P		**Pn**	**16 18 06.2 +2.1**		
LMR				*e*Sn		**S**	**16 19 34.0 -1.1**		
	comp=N,0.5nm,0.4s								
ABTA	**Abfaltersbach**	**8.06**	**345**	*e*Pn		**Pn**	**16 18 05.5 +1.2**		
	comp=N,4.8nm,0.7s								
FRF	**La Foret Royal**	**8.08**	**307**	*e*P		**Pn**	**16 18 06.6 +2.1**		
FRF				*e*Sn		**S**	**16 19 34.8 -1.0**		
	comp=N,1.4nm,0.6s								
MBDF	**Montbardon**	**8.68**	**314**	*e*P		**Pn**	**16 18 15.0 +2.7**		
MBDF				*e*Sn		**S**	**16 19 49.1 -1.0**		
	comp=N,0.6nm,0.2s								
FETA	**Feichten**	**8.76**	**338**	*e*Pn		**Pn**	**16 18 16.2 +2.8**		
	comp=N,3.4nm,0.7s								
DAVOX	**Davos/Dischmat**	**8.82**	**334**	P		**Pn**	**16 18 14.7 +0.6**		
	comp=N,0.3nm,0.3s,baz=184,slow=19,SNR=3.3								
MOTA	**Moosalm**	**8.95**	**340**	*e*Pn		**Pn**	**16 18 17.1 +1.3**		
	comp=N,1.5nm,0.5s								
SMRF	**Simiane la Rot**	**8.96**	**307**	*e*P		**Pn**	**16 18 17.6 +1.7**		
SMRF				*e*Sn		**S**	**16 19 55.4 -1.3**		
	comp=N,0.7nm,0.2s								
LPG	**La Plagne**	**9.19**	**318**	*e*P		**Pn**	**16 18 21.6 +2.6**		
LPL	**La Plagne**	**9.21**	**318**	*e*P		**Pn**	**16 18 21.7 +2.5**		
ORIF	**Oris-en-Rattie**	**9.30**	**313**	*e*P		**Pn**	**16 18 22.4 +2.1**		
GERES	**GERESS Array B**	**9.95**	**353**	P		**Pn**	**16 18 29.2 +0.7**		
	comp=N,0.2nm,0.3s,baz=162,slow=14,SNR=5.9								
VIVF	**Saint-Julien-l**	**9.97**	**310**	*e*P		**Pn**	**16 18 30.8 +1.9**		
CEI	**Carei**	**10.06**	**28**	⇑P		Pn	16 18 14.0 -16		
LASF	**Ste Croix**	**10.10**	**304**	*e*P		**Pn**	**16 18 32.7 +2.2**		
LASF				*e*Sn		**S**	**16 20 21.8 -2.0**		
	comp=N,0.5nm,0.2s								
CABF	**La Chapelle**	**10.29**	**321**	*e*P		**Pn**	**16 18 35.4 +2.5**		
MTLF	**Montolieu**	**10.92**	**298**	*e*Sn		**S**	**16 20 40.9 -2.1**		
	comp=N,0.4nm,0.2s								
CDF	**Champ du Feu**	**11.14**	**330**	*e*P		**Pn**	**16 18 46.2 +2.4**		
LOR	**Lormes**	**11.86**	**318**	*e*P		**Pn**	**16 18 55.0 +2.1**		
SSF	**Saint Saulge**	**11.91**	**317**	*e*P		**Pn**	**16 18 55.6 +2.0**		
ESDC	**Sonseca Array**	**15.08**	**279**	P		**Pn**	**16 19 33.2 +0.3**		
	comp=N,0.2nm,0.3s,baz=78,slow=11,SNR=6.4								
AKASG	**Malin Array Be**	**15.20**	**35**	P		**Pn**	**16 19 33.9 -0.2**		
	comp=N,0.9nm,0.3s,baz=225,slow=10,SNR=5.0								
EKA	**Eskdalemuir Ar**	**20.59**	**329**	P		**P**	**16 20 31.5 -1.2**		
	comp=N,1.1nm,0.3s,baz=142,slow=11,SNR=5.2								
KBZ	**Khabaz**	**21.06**	**68**	P		**P**	**16 20 39.4 +1.6**		
	comp=N,1.5nm,0.5s,baz=272,slow=3.2,SNR=5.0								
HFS	**Hagfors**	**21.27**	**358**	P		**P**	**16 20 37.7 -1.4**		
	comp=N,1.5nm,0.3s,baz=172,slow=11,SNR=33								
NB2	**NORSAR Subarra**	**22.24**	**354**	P		**P**	**16 20 48.0 -1.3**		
	comp=Z,0.3nm,0.3s,baz=172,slow=11								
NOA	**NORSAR Array B**	**22.24**	**354**	P		**P**	**16 20 48.0 -1.3**		
	comp=Z,0.5nm,0.5s,baz=168,slow=10,SNR=5.5								
FINES	**FINESS Array B**	**23.42**	**13**	P		**P**	**16 20 59.7 -0.1**		
	comp=Z,4.9nm,0.5s,baz=188,slow=8.2,SNR=48								
TORD	**Torodi Ar. Bea**	**28.49**	**209**	P		**P**	**16 21 45.6 -0.1**		
	comp=Z,0.2nm,0.5s,baz=23,slow=9.9,SNR=1.9								
ARCES	**ARCESS Array B**	**31.08**	**7**	P		**P**	**16 22 07.2 -0.8**		
	comp=Z,1.0nm,0.3s,baz=195,slow=9.1,SNR=25								
SPITS	**Spitsbergen Ar**	**39.31**	**0**	P		**P**	**16 23 18.1 +0.1**		
	comp=Z,22nm,1.1s,baz=151,slow=11,SNR=5.5								
NRIK	**Noril'sk**	**47.86**	**27**	P		**P**	**16 24 25.6 -0.5**		
	comp=Z,2.0nm,0.7s,baz=249,slow=4.7,SNR=6.7								
ZALV	**Zalesovo Beam**	**48.09**	**48**	P		**P**	**16 24 28.4 +0.4**		
	comp=Z,1.3nm,0.3s,baz=285,slow=8.9,SNR=5.5								
MKAR	**Makanchi Array**	**48.22**	**58**	P		**P**	**16 24 30.0 +0.8**		
	comp=Z,1.8nm,0.3s,baz=283,slow=7.1,SNR=44								
TIXI	**Tiksi**	**60.24**	**20**	P		**P**	**16 25 55.6 +0.3**		
	comp=Z,0.8nm,0.3s,baz=334,slow=6.9,SNR=3.9								
YKA	**Yellowknife Ar**	**71.23**	**338**	P		**P**	**16 27 03.6 -1.9**		
	comp=Z,0.5nm,0.6s,baz=44,slow=6.1,SNR=10.0								
SEY	**Seymchan**	**72.73**	**19**	P		**P**	**16 27 14.7 +0.2**		
	comp=Z,0.7nm,0.6s,baz=300,slow=4.5,SNR=4.3								
CMAR	**Chiang Mai Arr**	**73.64**	**79**	P		**P**	**16 27 21.0 +0.4**		
	comp=Z,0.5nm,0.7s,baz=309,slow=6.1,SNR=4.9								
MA2	**Magadan**	**75.08**	**22**	P		**P**	**16 27 28.7 +0.5**		
	comp=Z,2.1nm,0.5s,baz=315,slow=7.1,SNR=3.4								

*IDC **16** 16:18:21.2±1.7,49°.79N×179°.49W,h0km,mb3.4/6,*
mb1 3.7/7,mb1mx3.4/57,mbtmp3.5/7,ML3.0/1,Error
ellipse: s-maj=43.1km s-min=24.8km az=160.0
*NEIC **16** 16:18:27.2±1.0,50°.24N±0°.07×179°.7W±0°.1,h20km±5km,*
Error ellipse: s-maj=15.4km s-min=4.2km az=132.0
*AEIC **16** 16:18:28±1.8,50°.0N±0°.1×179°.1W±0°.1,h26km±6km,ML3.2,*
Error ellipse: s-maj=16.2km s-min=11.0km az=143.0
ISC 16 16:18:23.6±1.1,49°.9N±0°.1×179°.42W±0°.08,h12km,n26,
σ1§18/31,mb3.5/5,South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TASE	**Tanaga Southea**	**2.10**	**24**		**Pn**	**16 19 00.1**	**+1.5**
TASE					**Sn**	**16 19 24.1**	**-0.6**
TAPA	**Tanaga Point A**	**2.14**	**28**		**Pn**	**16 18 59.4**	**+0.2**
TAFP	**Tanaga Falls P**	**2.17**	**24**		**Pn**	**16 19 01.1**	**+1.5**
TAFP					**Sn**	**16 19 25.5**	**-0.9**
KIMD	**Kanaga Island**	**2.30**	**36**		**Pn**	**16 19 01.4**	**+0.1**
KIKV	**Kanaga Island**	**2.42**	**35**		**Pn**	**16 19 03.4**	**+0.5**
KIKV					**Sn**	**16 19 31.2**	**-1.2**
KICM	**Kanaga Island**	**2.44**	**34**		**Pn**	**16 19 04.1**	**+0.9**
KIRH	**Kanaga Island**	**2.46**	**36**		**Pn**	**16 19 04.2**	**+0.7**
KINC	**Kanaga Island**	**2.47**	**35**		**Pn**	**16 19 04.3**	**+0.6**
ADK	**Adak**	**2.61**	**41**		**Pn**	**16 19 06.3**	**+0.7**
ADK	**Adak**	**2.61**	**41**	Pn	**Pn**	**16 19 06.1**	**+0.5**
GSTD	**Great Sitkin T**	**2.97**	**43**		**Pn**	**16 19 11.3**	**+0.8**
GSTD					**Sn**	**16 19 45.3**	**-0.8**
GSMY	**Great Sitkin M**	**3.00**	**44**		**Pn**	**16 19 11.8**	**+0.8**
GSTR	**Great Sitkin T**	**3.03**	**43**		**Pn**	**16 19 12.6**	**+1.1**
ATKA	**Atka Island**	**4.00**	**53**		**Pn**	**16 19 24.7**	**0.0**
ATKA					**Sn**	**16 20 08.9**	**-2.6**
KOFP	**Korovin Flat P**	**4.09**	**53**		**Pn**	**16 19 27.4**	**+1.4**
NIKH	**Nikolski High**	**7.27**	**61**		**Pn**	**16 20 10.8**	**+1.2**
OKCE	**Okmok Cone E**	**7.82**	**59**		**Pn**	**16 20 19.6**	**+2.4**
MREP	**Makushin Rep't**	**8.75**	**59**		**Pn**	**16 20 31.6**	**+1.7**
MSW	**Makushin Switc**	**8.77**	**58**		**Pn**	**16 20 31.4**	**+1.2**
PETK	**Petropavlovsk-**	**14.58**	**291**	Pn	**Pn**	**16 21 50.1**	**+0.6**
	0.4nm,0.3s,baz=96,slow=18,SNR=11						
SEY	**Seymchan**	**20.09**	**321**	P	**P**	**16 22 56.8**	**+0.1**
	0.7nm,0.6s,baz=101,slow=22,SNR=4.1						
ILAR	**Eielson Array**	**22.63**	**37**	P	**P**	**16 23 23.6**	**-0.5**
	0.1nm,0.5s,baz=236,slow=9.2,SNR=1.9						
KLR	**Kul'dur**	**31.22**	**288**	P	**P**	**16 24 42.7**	**+0.1**
	1.4nm,0.6s,baz=63,slow=7.1,SNR=4.0						
YKA	**Yellowknife Ar**	**36.53**	**45**	P	**P**	**16 25 29.9**	**+1.4**
	0.5nm,0.8s,baz=279,slow=7.4,SNR=8.8						
MKAR	**Makanchi Array**	**60.62**	**309**	P	**P**	**16 28 33.0**	**-1.0**
	0.3nm,0.7s,baz=47,slow=6.8,SNR=2.0						
WRA	**Warramunga Arr**	**80.69**	**224**	P	**P**	**16 30 35.1**	**-1.3**
	0.6nm,1.0s,baz=27,slow=5.6,SNR=1.8						

*SJA **16** 16:26:39.9±0.6,36°.74S×74°.23W,h10km,ML4.5,MW4.6*
*IDC **16** 16:26:47.3±0.6,36°.69S×73°.20W,h0km,mb4.0/13,*
mb1 4.2/16,mb1mx4.2/29,mbtmp4.1/16,ML4.3/3,MS4.3/11,
Ms1 4.2/11,ms1mx4.0/29,Error ellipse: s-maj=25.3km
s-min=13.0km az=85.0
*NEIC **16** 16:26:48.0±2.2,36°.63S±0°.04×73°.51W±0°.05,h8km±3km,*
Error ellipse: s-maj=6.9km s-min=5.1km az=217.0
*GUC **16** 16:26:48.6±0.5,36°.74S×73°.47W,h27km±2km,ML4.7*
*VAO **16** 16:26:56.3±1.0,36°.76S×72°.82W,h52km±10km,mb4.5*
ISC 16 16:26:48.8±1.5,36°.72S±0°.03×73°.32W±0°.05,h16km±8km,
n130,σ1§75/130,mb4.3/13,MS4.3/11,6C-2D,Near coast
of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**0.21**	**127**	⇓*i*P	**Pb**	**16 26 55.9**	**+1.6**
CCSP				*i* S	**Sb**	**16 27 00.2**	**+2.2**
CCSP				IAML		16 27 01.3	
	comp=E,166µm,0.2s						
BI03	**Tigo**	**0.27**	**118**	⇓*i*P	**Pb**	**16 26 56.9**	**+1.6**
BI03				*i* S	**Sb**	**16 27 01.8**	**+2.2**
BI03	**Tigo**	**0.27**	**118**		**Pb**	**16 26 56.9**	**+1.6**
BI03				Sg	**Sb**	**16 27 01.9**	**+2.4**
LAJA	**Laja**	**0.74**	**139**	*e*P	**Pg**	**16 27 03.2**	**-0.1**
LAJA				*e*S	**Sg**	**16 27 13.3**	**+0.2**
BI02	**San Fabin de**	**1.64**	**89**		**Pn**	**16 27 18.6**	**+1.5**
BI04	**Isla Mocha**	**1.75**	**195**⇑	*e*P	**Pn**	**16 27 16.9**	**-1.7**
BI04				*i* S	**Sn**	**16 27 37.7**	**-2.9**
BI04				IAML		16 27 48.7	
	comp=N,18µm,0.4s						
GO05	**Huala**	**2.04**	**34**	*e*P	**Pn**	**16 27 23.0**	**+0.4**
GO05				*e*S	**Sn**	**16 27 48.3**	**+0.5**
GO05	**Huala**	**2.04**	**34**		**Pn**	**16 27 23.5**	**+0.9**
GO05	**Huala**	**2.04**	**34**	*i* P	**Pn**	**16 27 24.0**	**+1.4**
GO05				*i* S	**Sg**	**16 27 55.9**	**+1.4**
CANA	**Caviahue**	**2.14**	**124**	*i* P	**Pb**	**16 27 27.0**	**-0.4**
CANA				*e*S	**Sb**	**16 27 56.8**	**+2.9**
CANA				IAML		16 28 04.6	
	comp=Z,2µm,1.1s						
LC01	**Cunco**	**2.46**	**153**⇑	*i*P	**Pn**	**16 27 28.9**	**+0.6**
LC01				*e*S	**Sn**	**16 27 58.4**	**+0.3**
LC01				IAML		16 28 09.4	
	comp=E,3µm,0.6s						
LC01	**Cunco**	**2.46**	**153**		**Pn**	**16 27 29.4**	**+1.1**
BO02	**Sierra Bellavi**	**2.82**	**48**		**Pn**	**16 27 34.3**	**+1.0**
EDS3	**Malargue**	**3.30**	**75**	*i* P	**Pb**	**16 27 44.9**	**-2.3**
MT01	**Popeta**	**3.31**	**31**	*e*P	**Pn**	**16 27 40.3**	**+0.3**
MT01	**Popeta**	**3.31**	**31**		**Pn**	**16 27 40.4**	**+0.4**
PUMA	**Malargue**	**3.36**	**70**	*i* P	**Pb**	**16 27 45.8**	**-2.3**
LAMA	**Las Malvinas**	**3.78**	**63**	*i* P	**Pn**	**16 27 50.7**	**+4.2**
RCDM	**Rinconada Maip**	**3.82**	**33**	*e*P	**Pn**	**16 27 47.7**	**+0.6**
RCDM				*e*S	**Sn**	**16 28 33.3**	**+1.5**
LMEL	**Las Melosas**	**3.83**	**43**⇑	*e*P	**Pn**	**16 27 48.9**	**+1.6**
MT02	**Curacav**	**3.89**	**28**		**Pn**	**16 27 48.0**	**+0.1**
MT05	**Renca**	**3.93**	**33**		**Pn**	**16 27 49.7**	**+1.0**
MT03	**Universidad Ad**	**3.95**	**36**⇑	*e*P	**Pn**	**16 27 49.9**	**+0.9**
FSR	**Penalolen**	**3.96**	**36**⇑	*e*P	**Pn**	**16 27 51.1**	**+2.2**
FSR				*e*S	**Sn**	**16 28 37.9**	**+2.8**
PEL	**Peldehue**	**4.17**	**32**		**Pn**	**16 27 53.0**	**+1.1**
PEL	**Peldehue**	**4.17**	**32**	*i* P	**Pn**	**16 27 52.9**	**+1.1**
PEL				*e*S	**Sb**	**16 28 57.2**	**+5.2**
VA03	**San Esteban**	**4.55**	**31**		**Pn**	**16 27 57.5**	**+0.3**
PLCA	**Paso Flores**	**4.55**	**153**	Pn	**Pn**	**16 27 59.4**	**+2.2**
	comp=E,5.7nm,0.3s,baz=323,slow=12,SNR=139						
PLCA				Lg	Lg	16 29 10.8	
	comp=E,16nm,0.3s,baz=255,slow=20,SNR=6.6						
PLCA				LR	LR	16 30 00.4	
	comp=E,2µm,18.3s,baz=322,slow=42						
PLCA	**Paso Flores**	**4.55**	**153**⇑	*e*P	**Pn**	**16 27 59.2**	**+2.0**
PLCA	**Paso Flores**	**4.55**	**153**	*i* P	**Pn**	**16 27 59.4**	**+2.2**
PLCA				IAML		16 29 32.6	
	comp=Z,248nm,1.1s						
PLCA	**Paso Flores**	**4.55**	**153**	*e*P	**Pn**	**16 27 59.6**	**+2.4**
CO04	**Los Peladeros**	**5.05**	**23**		**Pn**	**16 28 03.5**	**-0.6**
ARCO	**CERRO ARCO**	**5.29**	**44**	*i* P	**Pn**	**16 28 09.6**	**+2.2**
ARCO				IAML		16 29 59.1	
	comp=Z,129nm,2.0s						
LL01	**San Ignacio de**	**5.70**	**173**		**Pn**	**16 28 13.5**	**+0.7**
CO02	**Combarbal**	**5.83**	**20**		**Pn**	**16 28 14.6**	**-0.2**
CO03	**El Pedregal**	**6.26**	**21**		**Pn**	**16 28 20.9**	**+0.3**
CFA	**Coronel Fontan**	**6.61**	**41**	Pn	**Pn**	**16 28 24.9**	**-0.5**
	comp=Z,4.1nm,0.3s,baz=210,slow=13,SNR=31						
CFA				Sn	**Sn**	**16 29 40.9**	**+0.4**
	comp=Z,2.1nm,0.3s,baz=203,slow=13,SNR=4.6						
CFA				Lg	Lg	16 29 59.0	
	comp=Z,1.8nm,0.3s,baz=320,slow=17,SNR=6.5						
GO04	**Tololo Observa**	**6.86**	**19**		**Pn**	**16 28 29.2**	**+0.2**
CO01	**Juntas del Tor**	**7.24**	**23**		**Pn**	**16 28 34.9**	**+0.6**
AC05	**El Transito**	**8.27**	**19**		**Pn**	**16 28 47.9**	**-0.4**
AC02	**Maricunga**	**10.47**	**21**		**Pn**	**16 29 18.2**	**-0.6**
LPA	**La Plata**	**12.62**	**86**	*e*P	**Pn**	**16 29 48.5**	**+0.9**
LPA				S	**Sn**	**16 31 01.5**	**-6.4**
LPA				PCP	**PcP**	**16 35 22.4**	**-3.0**
LPA				PKIKP	**PKiKP**	**16 43 21.0**	**-1.7**
LPA				PKIKS		16 46 55.1	
LPA				SKIKS		16 50 24.5	
LVC	**Limon Verde**	**14.57**	**16**	LR	LR	16 36 27.7	
	comp=Z,456nm,18.2s,baz=204,slow=40						
LVC	**Limon Verde**	**14.57**	**16**	Pn	Pn	16 30 10.0	-4.7
PB01	**IPOC Station P**	**15.97**	**13**		**Pn**	**16 30 31.7**	**-1.3**
CPUP	**Villa Florida**	**17.09**	**57**	Pn	**Pn**	**16 30 47.5**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=222,slow=8.4,SNR=5.4						
CPUP				LR	LR	16 38 01.3	
	comp=Z,1µm,18.9s,baz=234,slow=40						
CPUP	**Villa Florida**	**17.09**	**57**	P	**Pn**	**16 30 45.1**	**-2.0**
MNMC	**Minye Minye**	**17.82**	**12**	P	**Pn**	**16 30 56.4**	**-0.1**
MNMC				IAmb	IAmb	16 31 07.6	
	comp=Z,17nm,0.8s						
ITAB	**Concordia**	**20.27**	**68**	*e*P	**P**	**16 31 24.1**	**+0.3**
ITAB				*e*S	**S**	**16 35 05.9**	**-4.7**
LPAZ	**La Paz**	**20.86**	**14**	P	Pn	16 31 32.4	-0.9
	comp=Z,2.0nm,0.8s,baz=178,slow=7.5,SNR=8.0						
LPAZ	**La Paz**	**20.86**	**14**		Pn	16 31 32.9	-0.4
LPAZ				IAmb	IAmb	16 31 47.0	
	comp=Z,8.6nm,0.8s						
LPAZ	**La Paz**	**20.86**	**14**	*e*P	Pn	16 31 33.9	+0.5
SIV	**San Ignacio**	**23.33**	**31**	P	**P**	**16 31 56.0**	**-0.4**
	comp=Z,4.8nm,1.0s,baz=250,slow=11,SNR=6.6						
SIV				LR	LR	16 42 44.2	
	comp=Z,428nm,19.9s,baz=248,slow=41						
PCMB	**Pacaembu**	**24.36**	**58**	*e*P	**P**	**16 32 06.5**	**+0.3**
FRTB	**Fartura**	**24.43**	**64**	*e*P	**P**	**16 32 06.8**	**-0.1**
NNA	**Nana**	**24.83**	**352**	LR	LR	16 40 04.7	
	comp=Z,201nm,18.2s,baz=178,slow=32						
C2SB	**Chapadao do Su**	**25.37**	**51**	*e*P	**P**	**16 32 16.9**	**+1.6**
PET01	**Itanhaem-SP**	**25.54**	**68**	*e*P	**P**	**16 32 18.6**	**+1.8**
SPB	**Sao Paulo**	**25.83**	**67**	*e*P	**P**	**16 32 20.2**	**+0.6**
SALV	**Santo Antonio**	**25.98**	**42**	*e*P	**P**	**16 32 21.2**	**+0.3**
ITRB	**Iturama**	**26.29**	**56**	*e*P	**P**	**16 32 25.3**	**+1.6**
VILB	**Vilhena**	**26.43**	**30**	*e*P	**P**	**16 32 28.2**	**+3.2**
VAO	**Valinhos**	**26.52**	**66**	*e*P	**P**	**16 32 25.6**	**-0.3**
BB19B	**Bebedouro**	**26.61**	**61**	*e*P	**P**	**16 32 26.1**	**-0.6**
ESAR	**Angra dos Reis**	**28.39**	**69**	*e*P	**P**	**16 32 43.1**	**+0.6**
PMSA	**Palmer Station**	**28.63**	**172**	LR	LR	16 43 35.9	
	comp=Z,366nm,18.5s,baz=3.5,slow=35						
BSCB	**Bom Sucesso**	**29.35**	**66**	*e*P	**P**	**16 32 50.7**	**-0.5**
VAS01	**Vassouras-RJ**	**29.57**	**69**	*e*P	**P**	**16 32 53.6**	**+0.5**
CLDB	**Colider**	**30.20**	**36**	*e*P	**P**	**16 32 57.3**	**-1.4**
BDFB	**Brasilia**	**30.75**	**54**	P	**P**	**16 33 03.9**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=164,slow=14,SNR=1.8						
BDFB				LR	LR	16 46 53.9	
	comp=Z,778nm,18.6s,baz=241,slow=39						
BDFB	**Brasilia**	**30.75**	**54**	IAmb	IAmb	16 33 09.8	
	comp=Z,9.0nm,1.1s						
MC01	**Montes Claros**	**32.74**	**60**	*e*P	**P**	**16 33 19.8**	**-1.4**
SJMB	**Sao Joao De Ma**	**33.42**	**66**	*e*P	**P**	**16 33 27.1**	**+0.1**
BSFB	**Barra de Sao F**	**33.59**	**67**	*e*P	**P**	**16 33 28.6**	**+0.2**
RIB01	**Linhares ES**	**33.62**	**68**	*e*P	**P**	**16 33 29.0**	**+0.3**
NPGB	**Novo Progresso**	**33.78**	**33**	*e*P	**P**	**16 33 30.9**	**+0.8**
MACA	**Manacapuru-AM**	**35.36**	**22**	*e*P	**P**	**16 33 47.4**	**+3.7**
ITTB	**Itaituba**	**36.02**	**31**	*e*P	**P**	**16 33 52.1**	**+2.7**
SMTB	**Santa Maria do**	**36.25**	**47**	*e*P	**P**	**16 33 51.7**	**+0.3**
PRPB	**Parauapebas**	**37.23**	**41**	*e*P	**P**	**16 34 01.7**	**+2.0**
GDU01	**Guandu, BA**	**37.85**	**62**	*e*P	**P**	**16 34 06.1**	**+1.1**
NBPN	**Ponto Novo - B**	**39.43**	**58**	*e*P	**P**	**16 34 18.1**	**-0.2**
NBTA	**Tacaratu-PE**	**42.12**	**58**	*e*P	**P**	**16 34 41.1**	**+0.6**
RUSC	**La Rusia**	**42.39**	**0**	P	**P**	**16 34 43.3**	**+0.2**
NBMA	**Muriti-CE**	**42.93**	**56**	*e*P	**P**	**16 34 47.6**	**+0.5**
ROSB	**Rosrio**	**43.08**	**46**	*e*P	**P**	**16 34 49.0**	**+0.8**
NBPS	**Pedro II - PI**	**43.47**	**50**	*e*P	**P**	**16 34 51.8**	**+0.2**
NBPB	**Pedra_Branca-C**	**43.76**	**53**	*e*P	**P**

LCY	Lacayo	1.30	77	*e*P	Pn	16 29 55.6	-0.1
IXG	Ixpaco	1.32	322	*e*P	Pn	16 29 55.7	-0.3
BLLM	Bellamira	1.36	77	*e*P	Pn	16 29 56.4	-0.1
BLLM	Bellamira	1.36	77	*e*P	Pn	16 29 56.4	-0.1
NBG	Las Nubes	1.62	333	*e*P	Pb	16 30 01.7	-0.8
CNCH	Conchagua	1.72	85	*e*P	Pn	16 30 01.4	-0.1
CNCH				*e*S	Sn	16 30 23.1	+0.4
CNCH				IAML		16 30 27.2	
	comp=Z,2µm,0.2s						
CNCH	Conchagua	1.72	85	*e*P	Pn	16 30 01.4	-0.1
CNCH				*e*S	Sn	16 30 23.1	+0.4
CNCH				IAML		16 30 27.2	
	comp=Z,2µm,0.2s						
FUG	Fuego 3	1.78	317	*e*P	Pn	16 30 02.6	+0.2
FUG				*e*S	Sn	16 30 24.5	+0.1
MRL	Marmol	1.94	358	*e*P	Pn	16 30 04.8	+0.1
MRL	Marmol	1.94	358	*e*P	Pn	16 30 04.8	+0.1
STG3	Santiaguito 3,	2.48	310	*e*P	Pn	16 30 13.1	+1.1
STG3				*e*S	Sn	16 30 41.0	-0.5

ISK ***16*** *16:39:11.6, 36°.32N×30°.69E, h88km, ML2.7/26*
NIC ***16*** *16:39:12.8±0.0, 36°.50N×31°.03E, h55km±7km, Ml3.0/3*
DDA ***16*** *16:39:12.0, 36°.06N×30°.64E, h83km±1km, ML2.4*
GII ***16*** *16:39:16.1±0.2, 36°.11N×31°.07E, h28km*

ISC 16 16:39:12.0±1.3**, 36°.25N**±0°.04×**30°.70E**±0°.03**, h89**km±8km**, n61**, σ1¶33/84**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUM	**Antalya-Kumluc**	**0.30**	**284**	*i* P	**Pn**	**16 39 24.7**	**-0.5**
AKUM				*i* S	**Sn**	**16 39 34.2**	**-0.8**
KEMT	**Kemer-ANTALYA**	**0.37**	**341**	PG	**Pn**	**16 39 25.6**	**0.0**
DEMR	**Demre-Antalya**	**0.65**	**269**	PG	**Pn**	**16 39 28.3**	**+0.5**
DEMR				SG	**Sn**	**16 39 39.0**	**-0.6**
ANTB	**Antalya**	**0.65**	**356**	PG	**Pn**	**16 39 27.5**	**-0.3**
KORT	**Korkueli**	**0.80**	**339**	PG	**Pn**	**16 39 29.9**	**+0.4**
KORT	**Korkueli**	**0.80**	**339**	*i* P	**Pn**	**16 39 30.9**	**+1.4**
KORT				*i* S	**Sn**	**16 39 44.4**	**+1.8**
KORT				IAML		16 39 46.0	
	comp=E,68nm,0.5s						
ELL	**Elmali**	**0.81**	**308**	PG	**Pn**	**16 39 29.3**	**-0.3**
ELL	**Elmali**	**0.81**	**308**	P	**Pn**	**16 39 29.8**	**+0.2**
ELL				S	**Sn**	**16 39 43.3**	**+0.5**
AKAS	**Kas**	**0.89**	**269**	PG	**Pn**	**16 39 30.9**	**+0.5**
KEPZ	**Antalya-Kepez**	**0.97**	**48**	*i* P	**Pn**	**16 39 31.1**	**-0.2**
KEPZ				*i* S	**Sn**	**16 39 44.6**	**-1.2**
KEPZ				IAML		16 39 46.0	
	comp=N,46nm,0.2s						
KEPZ				IAML		16 39 46.0	
	comp=E,57nm,0.3s						
ALAN	**Alanya-ANTALYA**	**1.11**	**74**	PN	**Pn**	**16 39 32.7**	**-0.2**
GAZI	**Gazipasa**	**1.30**	**90**	PN	**Pn**	**16 39 35.6**	**+0.4**
GAZI	**Gazipasa**	**1.30**	**90**	*i* P	**Pn**	**16 39 35.7**	**+0.5**
GAZI				*i* S	**Sn**	**16 39 52.4**	**-0.3**
GAZI				IAML		16 39 56.0	
	comp=E,54nm,0.3s						
FETY	**Fethiye**	**1.36**	**287**	PN	**Pn**	**16 39 35.9**	**0.0**
SEYD	**Seydisehir-KON**	**1.47**	**38**	PN	**Pn**	**16 39 36.6**	**-0.7**
ISP	**Isparta**	**1.57**	**355**	PN	**Pn**	**16 39 38.8**	**+0.1**
BASM	**Basmaki-Afyon**	**1.74**	**343**	PN	**Pn**	**16 39 40.4**	**-0.5**
DALY	**Dalyan (Mula)**	**1.75**	**289**	PN	**Pn**	**16 39 40.6**	**-0.1**
TURN	**Turunc**	**1.80**	**291**	PN	**Pn**	**16 39 45.6**	**+4.1**
AKMS	**Akamas**	**1.81**	**132**	P	**Pn**	**16 39 42.5**	**+0.9**
AKMS				AML	AML	16 40 04.7	
	comp=E,0.3nm,0.2s						
AKMS				AML	AML	16 40 04.7	
	comp=E,0.3nm,0.2s						
AKMS				S	**Sn**	**16 40 04.7**	**+0.5**
AKMS				AML	AML	16 40 04.9	
	comp=E,0.4nm,0.5s						
AKMS				AML	AML	16 40 04.9	
	comp=E,0.4nm,0.5s						
ERMK	**Ermenek**	**1.82**	**77**	*i* P	**Pn**	**16 39 44.2**	**+2.2**
ERMK				*i* S	**Sn**	**16 40 09.0**	**+4.2**
ERMK				IAML		16 40 11.0	
	comp=N,49nm,0.3s						
TAVA	**DENIZLI_Tavas**	**1.88**	**311**	*i* P	**Pn**	**16 39 42.8**	**+0.2**
TAVA				*i* S	**Sn**	**16 40 04.3**	**-1.6**
ALFC	**Alefka**	**1.89**	**125**	P	**Pn**	**16 39 42.4**	**-0.3**
ALFC				S	**Sn**	**16 40 05.4**	**-0.7**
ALFC				AML	AML	16 40 06.3	
	comp=N,0.5nm,0.2s						
ALFC				AML	AML	16 40 06.3	
	comp=N,0.5nm,0.2s						
ALFC				AML	AML	16 40 06.8	
	comp=N,0.5nm,0.2s						
ALFC				AML	AML	16 40 06.8	
	comp=N,0.5nm,0.2s						
TEKE	**Tekeli-Mersin**	**1.95**	**93**	PN	**Pn**	**16 39 45.2**	**+1.7**
BERE	**Bereket-Mersin**	**2.04**	**87**	PN	**Pn**	**16 39 46.5**	**+1.8**
KZIL	**AFYON_Kizioren**	**2.05**	**348**	*i* P	**Pn**	**16 39 44.6**	**-0.3**
KZIL				*i* S	**Sn**	**16 40 09.4**	**-0.6**
ARG	**Arkhangelos**	**2.08**	**270**	PN	**Pn**	**16 39 45.5**	**+0.3**
LEF	**Lefka**	**2.11**	**122**	PN	**Pn**	**16 39 46.8**	**+1.3**
NATA	**Nata**	**2.12**	**133**	S	**Sn**	**16 40 12.6**	**+1.2**
YER	**Yerkesik**	**2.14**	**295**	PN	**Pn**	**16 39 46.7**	**+0.7**
KONT	**Konya--Tatoy**	**2.15**	**38**	PN	**Pn**	**16 39 46.4**	**+0.3**
TEVE	**Tevekalti-Mers**	**2.22**	**84**	PN	**Pn**	**16 39 48.9**	**+1.8**
KRMN	**Karaman**	**2.25**	**65**	PN	**Pn**	**16 39 48.2**	**+0.7**
GULN	**MERSIN_Gulnar**	**2.30**	**91**	*i* P	**Pn**	**16 39 49.4**	**+1.4**
GULN				*i* S	**Sn**	**16 40 16.7**	**+1.1**
SHUT	**Suhut-Afyon**	**2.30**	**357**	PN	**Pn**	**16 39 48.2**	**0.0**
AKKU	**Akkuyu-Mersin**	**2.30**	**92**	PN	**Pn**	**16 39 49.4**	**+1.3**
SZAC	**Souni**	**2.32**	**129**	P	**Pn**	**16 39 48.8**	**+0.3**
SZAC				S	**Sn**	**16 40 17.4**	**+1.1**
SZAC				AML	AML	16 40 19.4	
	comp=N,0.2nm,0.2s						
SZAC				AML	AML	16 40 19.4	
	comp=N,0.2nm,0.2s						
SZAC				AML	AML	16 40 22.1	
	comp=N,0.1nm,0.2s						
SZAC				AML	AML	16 40 22.1	
	comp=N,0.1nm,0.2s						
LADK	**Ladik-KONYA**	**2.35**	**34**	PN	**Pn**	**16 39 49.1**	**+0.2**
IKL	**Isikli**	**2.41**	**89**	PN	**Pn**	**16 39 50.5**	**+1.0**
KEBE	**Keben-Mersin**	**2.44**	**85**	PN	**Pn**	**16 39 50.9**	**+0.9**
CSS	**Mathiatis**	**2.50**	**120**	*i* P	**Pn**	**16 39 52.2**	**+1.5**
CSS				*i* S	**Sn**	**16 40 19.5**	**-1.0**
CSS	**Mathiatis**	**2.50**	**120**	Pn	**Pn**	**16 39 50.5**	**-0.2**
ASGA	**Asgata**	**2.54**	**124**	P	**Pn**	**16 39 52.1**	**+0.9**
ASGA				S	**Sn**	**16 40 21.4**	**-0.1**
DAT	**Datca**	**2.56**	**282**	PN	**Pn**	**16 39 52.9**	**+1.2**
MVOU	**Mavrovouni**	**2.69**	**117**	P	**Pn**	**16 39 52.9**	**-0.4**
MVOU				S	**Sn**	**16 40 23.2**	**-1.7**
KIZT	**Kizilcal**	**2.78**	**19**	PN	**Pn**	**16 39 54.5**	**-0.2**
BODT	**Bodrum**	**2.85**	**287**	PN	**Pn**	**16 39 55.5**	**+0.1**
KARP	**Karpathos**	**2.96**	**257**	PN	**Pn**	**16 39 57.8**	**+0.8**
SIMA	**Simav-Kutahya**	**3.14**	**335**	PN	**Pn**	**16 40 00.5**	**+1.1**
TVSB	**Tavsanli**	**3.34**	**343**	PN	**Pn**	**16 40 02.1**	**0.0**
OSC2	**CSNet OBS 4**	**3.42**	**157**	P	**Pn**	**16 40 06.0**	**+2.8**
HNTI	**Hanita**	**4.85**	**129**	Pn	**Pn**	**16 40 23.1**	**+0.5**
HNTI				Sn	**Sn**	**16 41 15.7**	**-1.9**
MMA0B	**Mount Meron ar**	**5.04**	**128**	Pn	**Pn**	**16 40 24.5**	**-0.7**
OFRI	**`Ofer**	**5.06**	**134**	Pn	**Pn**	**16 40 26.1**	**+0.6**
GEM	**Giv'at Ha'Em**	**5.09**	**125**	Pn	**Pn**	**16 40 26.5**	**+0.7**
GEM				Sn	**Sn**	**16 41 20.2**	**-3.0**
KSDI	**Kefar Szold**	**5.10**	**125**	Pn	**Pn**	**16 40 26.5**	**+0.6**
KSDI				Sn	**Sn**	**16 41 20.9**	**-2.5**
NATI	**Neve Ativ**	**5.11**	**124**	Pn	**Pn**	**16 40 26.2**	**+0.2**
NATI				Sn	**Sn**	**16 41 20.8**	**-2.8**
MMLI	**Mount Malkishu**	**5.45**	**133**	Pn	**Pn**	**16 40 31.1**	**+0.4**
MMLI				Sn	**Sn**	**16 41 29.6**	**-2.5**
HMDT	**Nahal Hemdat**	**5.64**	**134**	Pn	**Pn**	**16 40 34.5**	**+1.2**
HMDT				Sn	**Sn**	**16 41 35.0**	**-1.8**
DSI	**Dead Sea**	**6.08**	**139**	Pn	**Pn**	**16 40 40.5**	**+1.3**
YTIR	**Yattir**	**6.10**	**142**	Pn	**Pn**	**16 40 41.0**	**+1.3**
YTIR				Sn	**Sn**	**16 41 46.0**	**-2.2**

BGR ***16*** *16:52:15.0±0.0, 15°.91N×61°.79W, h33km, mb4.9*
IDC ***16*** *16:52:21.7±0.4, 17°.08N×60°.24W, h0km, mb4.4/30, mb1 4.6/34, mb1mx4.4/53, mbtmp4.4/34, ML3.8/4, MS4.1/7, Ms1 4.1/7, ms1mx3.6/54, Error ellipse: s-maj=13.2km s-min=10.0km az=92.0*
TRN ***16*** *16:52:23.7, 17°.11N×60°.25W, h31km, MD4.2*
NEIC ***16*** *16:52:24.4±2.0, 17°.05N±0°.06×60°.44W±0°.09, h10km±1km, mb4.7/73, Error ellipse: s-maj=15.6km s-min=9.2km az=69.0*

ISC 16 16:52:24.0±0.9**, 17°.08N**±0°.03×**60°.31W**±0°.04**, h14**km±5km**,*

n246, σ1¶10/253, mb4.7/73, MS4.0/8, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H05N1	**Guadeloupe/Mar**	**1.04**	**223**	T	T	16 53 00.7	
ABD	**La Joyeuse, An**	**1.28**	**242**	*e*P	**Pn**	**16 52 47.8**	**+0.3**
ABD				*e*S	**Sn**	**16 53 06.4**	**+2.0**
MAGL	**Barre de l'ile**	**1.46**	**220**	*e*P	**Pn**	**16 52 49.9**	**-0.1**
MAGL				*e*S	**Sn**	**16 53 10.4**	**+1.4**
ANWB	**Willy Bob**	**1.52**	**293**	*e*P	**Pn**	**16 52 49.8**	**-1.1**
CBE	**Ff, Capester**	**1.60**	**231**	*e*P	**Pn**	**16 52 52.2**	**+0.3**
CBE				*e*S	**Sn**	**16 53 13.5**	**+1.1**
TDBA	**Terre de Bas,**	**1.76**	**226**	*e*P	**Pn**	**16 52 54.5**	**+0.4**
TDBA				*e*S	**Sn**	**16 53 16.9**	**+0.4**
DWS	**Wesley**	**1.78**	**213**	*e*P	**Pn**	**16 52 54.1**	**-0.3**
DWS				*e*S	**Sn**	**16 53 17.0**	**+0.1**
MDPV	**Dominica, Penn**	**1.79**	**217**	*e*P	**Pn**	**16 52 55.7**	**+1.0**
MDPV				*e*S	**Sn**	**16 53 18.2**	**+1.0**
MDVC	**Dominica, Viel**	**1.79**	**216**	*e*P	**Pn**	**16 52 54.8**	**+0.2**
MDVC				*e*S	**Sn**	**16 53 18.5**	**+1.3**
MLYT	**Lee's Yard**	**1.83**	**259**	*e*P	**Pn**	**16 52 56.5**	**+1.3**
MLYT				*e*S	**Sn**	**16 53 19.2**	**+1.0**
DLPL	**La Plaine**	**1.95**	**207**	*e*P	**Pn**	**16 52 56.4**	**-0.5**
DLPL				*e*S	**Sn**	**16 53 20.8**	**-0.5**
DLPL	**La Plaine**	**1.95**	**207**		**Pn**	**16 52 56.6**	**-0.2**
MDN	**Morne-Daniel**	**2.03**	**211**	*e*P	**Pn**	**16 52 58.9**	**+0.9**
MDN				*e*S	**Sn**	**16 53 23.9**	**+0.7**
DPMT	**Pointe Michel**	**2.08**	**210**	*e*P	**Pn**	**16 52 59.5**	**+1.0**
DPMT				*e*S	**Sn**	**16 53 24.1**	**-0.1**
NVDO	**Nevis, Disaste**	**2.21**	**271**	*e*P	**Pn**	**16 53 00.4**	**+0.2**
NVDO				*e*S	**Sn**	**16 53 27.7**	**+0.3**
SKI	**Saint Kitts**	**2.33**	**277**	*e*P	**Pn**	**16 53 02.8**	**+0.7**
SKI				*e*S	**Sn**	**16 53 30.3**	**-0.3**
SKI	**Saint Kitts**	**2.33**	**277**		**Pn**	**16 53 02.8**	**+0.7**
ILAM	**Ilet Lapin Mar**	**2.35**	**193**	*e*P	**Pn**	**16 53 02.4**	**+0.1**
ILAM	**Ilet Lapin Mar**	**2.35**	**193**	*e*P	**Pn**	**16 53 02.8**	**+0.5**
ILAM				*e*S	**Sn**	**16 53 30.3**	**-0.7**
SVN	**Savane Anatole**	**2.37**	**200**	*e*P	**Pn**	**16 53 02.6**	**0.0**
BAMF	**Morne Balai**	**2.39**	**200**	*e*P	**Pn**	**16 53 03.0**	**+0.1**
CXM	**Morne La Croix**	**2.40**	**200**	*e*P	**Pn**	**16 53 03.4**	**+0.3**
PCM	**Pelee Case Pet**	**2.41**	**201**	*e*P	**Pn**	**16 53 03.4**	**+0.2**
GBMF	**Grand Be**	**2.41**	**200**	*e*P	**Pn**	**16 53 03.3**	**+0.1**
PML	**Morne Lenard**	**2.43**	**200**	*e*P	**Pn**	**16 53 03.8**	**+0.3**
FDF	**Fort de France**	**2.47**	**199**	*e*P	**Pn**	**16 53 03.9**	**0.0**
FDF				*e*S	**Sn**	**16 53 34.5**	**+0.6**
FDF	**Fort de France**	**2.47**	**199**		**Pn**	**16 53 03.9**	**0.0**
FDF				Sn	**Sn**	**16 53 33.5**	**-0.4**
LPMF	**Morne Lapointe**	**2.57**	**194**	*e*P	**Pn**	**16 53 04.9**	**-0.4**
ZAM	**Aeronautique**	**2.58**	**196**	*e*P	**Pn**	**16 53 05.3**	**-0.2**
TRMF	**Trois Ilets**	**2.62**	**196**	*e*P	**Pn**	**16 53 07.0**	**+0.9**
BIM	**Bigot**	**2.65**	**196**	*e*P	**Pn**	**16 53 06.3**	**-0.1**
BIM				*e*S	**Sn**	**16 53 37.7**	**-0.7**
MPOM	**Morne Pois Mar**	**2.67**	**191**	*e*P	**Pn**	**16 53 06.3**	**-0.3**
MPOM				*e*S	**Sn**	**16 53 38.0**	**-0.9**
H05S1	**Guadeloupe/Mar**	**2.69**	**191**	T	T	16 56 18.4	
	SNR=12						
SMRT	**St. Maarten**	**2.81**	**291**	*e*P	**Pn**	**16 53 08.4**	**-0.2**
SMRT				*e*S	**Sn**	**16 53 42.2**	**-0.1**
SMRT	**St. Maarten**	**2.81**	**291**		**Pn**	**16 53 08.0**	**-0.6**
SABA	**Saba**	**2.85**	**281**	*e*P	**Pn**	**16 53 10.0**	**+0.9**
SABA				*e*S	**Sn**	**16 53 43.3**	**-0.1**
SABA	**Saba**	**2.85**	**281**		**Pn**	**16 53 09.8**	**+0.6**
SLBI	**Saint Lucia, B**	**3.10**	**192**	*e*P	**Pn**	**16 53 12.5**	**-0.1**
SLBI				*e*S	**Sn**	**16 53 49.1**	**-0.5**
SLAC	**Saint Lucia, A**	**3.21**	**190**	*e*P	**Pn**	**16 53 14.0**	**-0.2**
SLAC				*e*S	**Sn**	**16 53 51.2**	**-1.1**
SLPA	**Patience**	**3.26**	**190**	*e*P	**Pn**	**16 53 16.0**	**+1.2**
SLB	**Belfond**	**3.31**	**192**	*e*P	**Pn**	**16 53 16.5**	**+1.0**
SLB				*e*S	**Sn**	**16 53 54.7**	**0.0**
SLDE	**Delcer**	**3.33**	**193**	*e*P	**Pn**	**16 53 16.4**	**+0.6**
MCLT	**Moule a Chique**	**3.40**	**190**	*e*P	**Pn**	**16 53 17.5**	**+0.7**
MCLT				*e*S	**Sn**	**16 53 56.6**	**-0.5**
MCLT	**Moule a Chique**	**3.40**	**190**		**Pn**	**16 53 17.6**	**+0.9**
SFAN	**Fancy Village**	**3.77**	**193**	*e*P	**Pn**	**16 53 23.1**	**+1.3**
SFAN				*e*S	**Sn**	**16 54 05.9**	**0.0**
SSV	**Crater Summit**	**3.83**	**193**	*e*P	**Pn**	**16 53 24.7**	**+2.0**
SVV	**Soufriere Volc**	**3.84**	**193**	*e*P	**Pn**	**16 53 24.1**	**+1.3**
SVV				*e*S	**Sn**	**16 54 07.5**	**-0.2**
SVCV	**St. Vincent, C**	**3.87**	**192**	*e*P	**Pn**	**16 53 23.8**	**+0.6**
SVCV				*e*S	**Sn**	**16 54 08.0**	**-0.5**
SVB	**Belmont**	**3.89**	**194**	*e*P	**Pn**	**16 53 24.0**	**+0.5**
SVB				*e*S	**Sn**	**16 54 08.6**	**-0.5**
SVB	**Belmont**	**3.89**	**194**		**Pn**	**16 53 24.3**	**+0.8**
BCHC	**Barbados, Cave**	**3.98**	**170**	*e*P	**Pn**	**16 53 25.0**	**+0.4**
BCHC				*e*S	**Sn**	**16 54 10.0**	**-1.1**
CDVI	**St. Croix**	**4.30**	**280**	*e*P	**Pn**	**16 53 30.9**	**+1.7**
CDVI	**St. Croix**	**4.30**	**280**		**Pn**	**16 53 29.6**	**+0.5**
STVI	**Saint Thomas**	**4.60**	**287**		**Pn**	**16 53 32.3**	**-1.0**
GCMP	**Grenada, Carri**	**4.69**	**193**	*e*P	**Pn**	**16 53 34.9**	**+0.4**
GCMP	**Grenada, Carri**	**4.69**	**193**	*e*S	**Sn**	**16 54 28.1**	**-0.7**
CUPR	**Culebra, Puert**	**4.89**	**285**		**Pn**	**16 53 36.8**	**-0.4**
GRSS	**Sisters**	**4.92**	**195**	*e*P	**Pn**	**16 53 39.1**	**+1.5**
GRSS	**Sisters**	**4.92**	**195**	*e*S	**Sn**	**16 54 33.5**	**-0.8**
GRHS	**Sauteurs**	**4.99**	**195**	*e*P	**Pn**	**16 53 39.5**	**+0.8**
GRHS	**Sauteurs**	**4.99**	**195**	*e*S	**Sn**	**16 54 34.3**	**-1.9**
GRGR	**Grenville**	**5.08**	**195**	*e*P	**Pn**	**16 53 40.4**	**+0.5**
GRGR	**Grenville**	**5.08**	**195**	*e*S	**Sn**	**16 54 37.8**	**-0.8**
GRGR	**Grenville**	**5.08**	**195**		**Pn**	**16 53 41.2**	**+1.3**
MTP	**Monte Pirata**	**5.10**	**282**		**Pn**	**16 53 39.7**	**-0.4**
HUMP	**Col San Antoni**	**5.39**	**282**		**Pn**	**16 53 43.8**	**-0.3**
CBYP	**Canovanas**	**5.42**	**283**		**Pn**	**16 53 45.0**	**+0.4**
SJG	**San Juan**	**5.66**	**281**	Pn	**Pn**	**16 53 48.1**	**+0.3**
	10.0nm,0.3s,baz=86,slow=11,SNR=17						
SJG				Sn	**Sn**	**16 54 50.4**	**-2.3**
	11nm,0.3s,baz=268,slow=8.6,SNR=4.4						
SJG	**San Juan**	**5.66**	**281**	*e*P	**Pn**	**16 53 47.7**	**-0.1**
TOSP	**Speyside**	**5.75**	**182**	*e*P	**Pn**	**16 53 49.8**	**+0.8**
TOSP	**Speyside**	**5.75**	**182**	*e*S	**Sn**	**16 54 52.5**	**-2.4**
AOPR	**Arecibo Observ**	**6.27**	**283**	*e*P	**Pn**	**16 53 57.4**	**+1.2**
AOPR	**Arecibo Observ**	**6.27**	**283**	*e*S	**Sn**	**16 55 05.5**	**-2.2**
AOPR	**Arecibo Observ**	**6.27**	**283**		**Pn**	**16 53 55.7**	**-0.5**
TRN	**Trinidad (W)**	**6.48**	**190**	*e*P	**Pn**	**16 54 00.3**	**+1.3**
TRN	**Trinidad (W)**	**6.48**	**190**	*e*S	**Sn**	**16 55 10.4**	**-2.4**
MLPR	**Magueyes Islan**	**6.48**	**279**		**Pn**	**16 53 58.4**	**-0.8**
CRPR	**Cabo Rojo, PR**	**6.55**	**279**		**Pn**	**16 53 59.4**	**-0.7**
TBH	**Brigand Hill**	**6.60**	**186**	*e*P	**Pn**	**16 54 01.4**	**+0.7**
GUIV	**Guiria**	**6.66**	**196**	*e*P	**Pn**	**16 54 02.9**	**+1.4**
GUIV	**Guiria**	**6.66**	**196**	*e*S	**Sn**	**16 55 14.5**	**-2.7**
TPP	**Pointe-a-Pierr**	**6.81**	**189**	*e*P	**Pn**	**16 54 03.9**	**+0.3**
PCRV	**Puerto La Cruz**	**8.04**	**212**	Pn	**Pn**	**16 54 20.3**	**-0.4**
	3.5nm,0.3s,baz=74,slow=2.7,SNR=15						
ORIV	**Oritupano**	**8.51**	**201**	*e*P	**Pn**	**16 54 28.4**	**+1.4**
ORIV	**Oritupano**	**8.51**	**201**	*e*S	**Sn**	**16 55 58.4**	**-4.5**
DR12	**Loma Pena Alta**	**8.80**	**283**		**Pn**	**16 54 30.2**	**-0.8**
BANI	**BANI**	**9.66**	**279**		**Pn**	**16 54 44.9**	**+2.0**
SC01	**Santiago de lo**	**10.17**	**285**		**Pn**	**16 54 48.4**	**-1.3**
SDDR	**Presa de Saban**	**10.61**	**282**		**Pn**	**16 54 53.7**	**-2.1**
BAUV	**El Baul**	**11.05**	**224**	*e*P	**Pn**	**16 55 01.8**	**0.0**
BAUV	**El Baul**	**11.05**	**224**	*e*S	Sn	**16 56 57.5**	**-7.8**
SDV	**Santo Domingo**	**12.94**	**232**	Pn	**Pn**	**16 55 27.0**	**-0.7**
	0.8nm,0.3s,baz=44,slow=6.0,SNR=12						
SDV	**Santo Domingo**	**12.94**	**232**	*e*P	**Pn**	**16 55 25.5**	**-2.3**
SDV	**Santo Domingo**	**12.94**	**232**		**Pn**	**16 55 27.5**	**-0.3**
SDV	**Santo Domingo**	**12.94**	**232**	*e*P	**Pn**	**16 55 27.1**	**-0.6**
SDV				*e*S	**Sn**	**16 57 54.5**	**+2.7**
MDP	**Montagnes des**	**14.08**	**147**	Pn	Pn	16 55 37.0	-6.2
	1.3nm,0.3s,baz=336,slow=15,SNR=5.7						
MDP				Sn	Sn	16 58 04.8	-15
	3.4nm,0.3s,baz=68,slow=20,SNR=9.1						
OCAC	**Ocana**	**15.43**	**237**	*e*P	**Pn**	**16 56 01.2**	**-0.4**
PAMC	**Pamplona, Colo**	**15.49**	**233**	*e*P	**Pn**	**16 56 02.7**	**0.0**
SMLC	**San Martn de**	**15.72**	**240**	*e*P	**Pn**	**16 56 03.5**	**-1.8**
SJCC	**San Jacinto, C**	**16.12**	**246**	*e*P	**Pn**	**16 56 09.9**	**-0.5**
MTDJ	**Mount Denham**	**16.45**	**277**	P	**Pn**	**16 56 14.8**	**0.0**
MTDJ				IAmb	IAmb	16 56 17.5	
	comp=Z,40nm,0.8s						
RUSC	**La Rusia**	**16.73**	**230**	*e*P	**Pn**	**16 56 18.8**	**+0.2**
RUSC	**La Rusia**	**16.73**	**230**	P	**Pn**	**16 56 20.0**	**+1.4**
ZARC	**Zaragoza, Cauc**	**17.10**	**238**	*e*P	**Pn**	**16 56 21.3**	**-1.5**
PTBC	**PUERTO BERRIO,**	**17.34**	**235**	*e*P	**Pn**	**16 56 24.3**	**-1.7**
UREC	**San Jos de Ur**	**17.50**	**240**	*e*P	**Pn**	**16 56 27.7**	**-0.2**
SPBC	**San Pablo de B**	**17.62**	**231**	*e*P	**Pn**	**16 56 27.4**	**-2.0**
CHIC	**Chingaza**	**18.06**	**228**	*e*P	**Pn**	**16 56 36.1**	**+0.9**
NORC	**Norcasia**	**18.28**	**233**	*e*P	**Pn**	**16 56 35.6**	**-1.9**
ROSC	**El Rosal**	**18.34**	**230**	Pn	**P**	**16 56 39.1**	**+0.4**
	comp=Z,3.5nm,0.3s,baz=53,slow=6.9,SNR=10						
ROSC	**El Rosal**	**18.34**	**230**	P	**P**	**16 56 38.6**	**0.0**
ROSC				IAmb	IAmb	16 56 47.2	
	comp=Z,63nm,1.1s						
VILC	**Villavicencio,**	**18.39**	**227**	*e*P	**Pn**	**16 56 41.7**	**+2.7**
HELC	**Santa Helena**	**18.40**	**236**	*e*P	**P**	**16 56 37.1**	**-2.2**
CAPC	**Capurgana**	**18.60**	**245**	*e*P	**P**	**16 56 41.1**	**0.0**
CBCY	**The Bluff, Cay**	**18.64**	**281**	P	**P**	**16 56 38.3**	**-3.2**
GUY2C	**Guyana, Caldas**	**18.87**	**233**	*e*P	**P**	**16 56 43.4**	**-1.2**
CBOC	**Ciudad Bolivar**	**18.98**	**236**	*e*P	**P**	**16 56 43.8**	**-1.7**
PRAC	**Prado**	**19.52**	**229**	*e*P	**P**	**16 56 50.5**	**-0.8**
MALB	**Monte Alegre**	**19.73**	**162**	*e*P	**P**	**16 56 53.6**	**+0.1**
MACC	**Macarena, Meta**	**19.93**	**223**	*e*P	**P**	**16 56 54.9**	**-0.8**
YOTC	**Yotoco, Valle**	**20.41**	**232**	*e*P	**P**	**16 56 59.2**	**-1.9**
BCIP	**Isla Barro Col**	**20.56**	**250**	P	**P**	**16 57 02.4**	**-0.2**
GARC	**Garzon, Huila**	**21.02**	**227**	*e*P	**P**	**16 57 06.8**	**-1.0**
NPGB	**Novo Progresso**	**24.46**	**168**	*e*P	**P**	**16 57 43.3**	**+0.4**
NPGB				*e*S	**S**	**17 02 06.3**	**+3.5**
JTS	**Las Juntas de**	**24.86**	**257**	LR	LR	17 06 31.4	
	comp=Z,488nm,21.8s,baz=173,slow=34						
PRPB	**Parauapebas**	**25.32**	**155**	*e*P	**P**	**16 57 51.2**	**+0.6**
ROSB	**Rosrio**	**25.48**	**140**	*e*P	**P**	**16 57 51.9**	**-0.1**
SAML	**Samuel**	**26.02**	**186**	P	**P**	**16 57 58.1**	**+1.2**
SAML	**Samuel**	**26.02**	**186**	*e*P	**P**	**16 57 58.2**	**+1.3**
SAML				*e*pP	**pP**	**16 58 00.3**	**+0.8**
TKL	**Tuckaleechee C**	**27.88**	**316**	P	**P**	**16 58 13.9**	**+0.3**
	comp=Z,2.8nm,0.7s,baz=132,slow=12,SNR=2.0						
SMTB	**Santa Maria do**	**28.68**	**153**	*e*P	**P**	**16 58 20.3**	**-0.5**
APG	**El Apazote**	**29.04**	**270**	LR	LR	17 10 56.7	
	comp=Z,928nm,20.3s,baz=82,slow=38						
VILB	**Vilhena**	**29.84**	**180**	*e*P	**P**	**16 58 31.0**	**-0.1**
ATAH	**Atahualpa**	**29.97**	**218**	P	**P**	**16 58 33.1**	**+0.3**
	comp=Z,19nm,0.6s,baz=42,slow=7.0,SNR=4.5						
PLAL	**Pickwick Lake**	**30.51**	**311**	P	**P**	**16 58 37.5**	**+0.6**
PLAL				IAmb	IAmb	16 58 38.7	
	comp=Z,9.9nm,0.7s						
SADO	**Sadowa**	**31.82**	**334**	P	**P**	**16 58 48.1**	**

MOTA	**Moosalm**	**65.08**	**45**	*e*P		**P**	**17 03 05.2**	**+0.7**
	comp=Z,8.3nm,1.0s								
SQTA	**Sankt Quirin**	**65.15**	**45**	*e*P		**P**	**17 03 05.8**	**+0.9**
	comp=Z,9.8nm,1.1s								
GRF	**Grafenberg Arr**	**65.25**	**43**	*e*P		**P**	**17 03 05.0**	**-0.3**
	comp=Z,12nm,1.5s,baz=264,slow=6.8								
ABTA	**Abfaltersbach**	**66.04**	**46**	*e*P		**P**	**17 03 11.1**	**+0.6**
	comp=Z,7.4nm,1.0s								
NB2	**NORSAR Subarra**	**66.27**	**30**	P		**P**	**17 03 13.0**	**+1.3**
	comp=Z,0.8nm,0.8s,baz=262,slow=6.9								
NOA	**NORSAR Array B**	**66.27**	**30**	P		**P**	**17 03 12.2**	**+0.5**
	comp=Z,2.5nm,1.0s,baz=261,slow=5.9,SNR=5.8								
CLL	**Collm**	**66.45**	**41**	*e*P		**P**	**17 03 14.0**	**+1.0**
	comp=Z,13nm,1.4s								
CLL					Lm	MLR	17 32 00.0		
	comp=Z,200nm,20.2s								
KBA	**Koelnbreinsper**	**66.61**	**46**	*e*P		**P**	**17 03 14.8**	**+0.5**
	comp=Z,12nm,1.6s								
MYKA	**Terra Mystica**	**66.81**	**46**	*e*P		**P**	**17 03 16.2**	**+0.6**
	comp=Z,7.6nm,1.1s								
GERES	**GERESS Array B**	**66.85**	**44**	P		**P**	**17 03 14.8**	**-0.9**
	comp=Z,2.1nm,1.0s,baz=251,slow=4.1,SNR=13								
NOR	**Nord**	**67.01**	**6**	*i* P		**P**	**17 03 16.4**	**+0.3**
	comp=Z,3.0nm,0.9s								
BRG	**Berggiesshubel**	**67.03**	**41**	*e*P		**P**	**17 03 17.8**	**+1.1**
	comp=Z,7.7nm,1.1s								
BRG				*e*			17 04 03.1		
	comp=Z,5.2nm,0.8s								
OBKA	**Obir**	**67.44**	**46**	*e*P		**P**	**17 03 20.2**	**+0.6**
	comp=Z,11nm,0.9s								
SOKA	**Soboth**	**67.77**	**46**	P		**P**	**17 03 21.7**	**0.0**
	comp=Z,5.6nm,1.2s								
INK	**Inuvik**	**68.06**	**337**	P		**P**	**17 03 22.8**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=70,slow=5.7,SNR=14								
INK	**Inuvik**	**68.06**	**337**	P		**P**	**17 03 22.6**	**-0.2**
HYT	**Haines Junctio**	**69.00**	**329**	IAmb		IAmb	17 03 46.2		
	comp=Z,10nm,1.5s								
VYHS	**Vyhne**	**70.26**	**44**	*e*P		**P**	**17 03 37.6**	**+0.6**
EGAK	**Eagle**	**70.80**	**333**	IAmb		IAmb	17 03 58.8		
	comp=Z,3.6nm,0.7s								
MENT	**Mentasta**	**71.95**	**331**	IAmb		IAmb	17 04 00.7		
	comp=Z,5.4nm,0.7s								
ARCES	**ARCESS Array B**	**72.68**	**22**	P		**P**	**17 03 50.1**	**-1.1**
	comp=Z,2.3nm,0.8s,baz=296,slow=12,SNR=4.6								
IL31		**73.25**	**333**	P		**P**	**17 03 55.9**	**+1.4**
ILAR	**Eielson Array**	**73.25**	**333**	P		**P**	**17 03 54.4**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=96,slow=5.0,SNR=18								
FINES	**FINESS Array B**	**73.45**	**30**	P		**P**	**17 03 55.4**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=299,slow=3.5,SNR=8.0								
NEA	**Nenana**	**74.21**	**333**	IAmb		IAmb	17 04 01.9		
	comp=Z,6.4nm,0.8s								
BUR08	**Bucovina Ar. S**	**74.59**	**44**	P		**P**	**17 04 04.3**	**+1.3**
BUR08				IAmb		IAmb	17 04 05.2		
	comp=Z,11nm,1.3s								
TRF	**Thorofare Moun**	**74.88**	**332**	IAmb		IAmb	17 04 24.1		
	comp=Z,7.1nm,0.8s								
KTH	**Kantishna Hill**	**75.14**	**332**			**PcP**	**17 04 18.5**	**-0.8**
KTH				IAmb		IAmb	17 04 19.2		
	comp=Z,12nm,1.4s								
MLR	**Muntele Rosu**	**75.44**	**46**	LR		LR	17 35 09.4		
	comp=Z,52nm,18.4s,baz=296,slow=34								
MLR	**Muntele Rosu**	**75.44**	**46**	P		**P**	**17 04 08.7**	**+0.8**
AKASG	**Malin Array Be**	**76.69**	**41**	P		**P**	**17 04 14.1**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=273,slow=4.6,SNR=6.9								
RDOG	**Red Dog Mine**	**78.93**	**338**	IAmb		IAmb	17 04 30.1		
	comp=Z,6.8nm,0.7s								
BRTR	**Keskin Array B**	**82.24**	**51**	P		**P**	**17 04 45.8**	**+0.3**
	comp=Z,3.0nm,1.0s,baz=270,slow=3.7,SNR=15								
KBZ	**Khabaz**	**87.56**	**45**	P		**P**	**17 05 12.9**	**+1.0**
	comp=Z,2.1nm,0.7s,baz=261,slow=1.5,SNR=6.8								
BILL	**Bilibino**	**88.67**	**344**	P		**P**	**17 05 18.2**	**+1.5**
KSH	**Kashi**	**110.47**	**35**	PKP		**PKiKP**	**17 10 58.4**	**+1.8**
WMQ	**Urumqi**	**112.69**	**25**	*e*PKP		**PKiKP**	**17 11 01.1**	**+0.5**
HHC	**Hu-ho-hao-te**	**121.88**	**7**	*e*PKP		**PKiKP**	**17 11 20.4**	**+1.8**
LZH	**Lanzhou**	**125.04**	**16**	*e*PKP		**PKPdf**	**17 11 21.0**	**-3.7**
LZH				sPKP			17 11 32.4		
NJ2	**Nanjing**	**131.14**	**1**	*e*PKP		**PKPdf**	**17 11 35.6**	**-0.6**
CMAR	**Chiang Mai Arr**	**139.21**	**31**	PKP		**PKPdf**	**17 11 51.8**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=306,slow=3.4,SNR=5.5								
KRVT	**Keravat (AS076**	**145.86**	**288**	PKPbc		**PKPdf**	**17 12 03.5**	**0.0**
	comp=Z,8.2nm,0.5s,baz=358,slow=2.5,SNR=5.6								
STKA	**Stephens Creek**	**155.28**	**229**	PKPab		**PKPab**	**17 12 42.4**	**-0.2**
	comp=Z,1.8nm,1.0s,baz=80,slow=6.6,SNR=2.9								
ASAR	**Alice Springs**	**165.15**	**241**	PKP		**PKPdf**	**17 12 27.3**	**-1.5**
	comp=Z,0.8nm,1.0s,baz=148,slow=0.9,SNR=5.3								
ASAR				PKPab		**PKPab**	**17 13 25.4**	**-0.5**	
	comp=Z,0.3nm,0.6s,baz=127,slow=3.9,SNR=5.8								
WRA	**Warramunga Arr**	**165.81**	**256**	PKP		**PKPdf**	**17 12 27.9**	**-1.5**
	comp=Z,1.3nm,1.0s,baz=71,slow=0.6,SNR=5.3								

*IDC **16** 16:54:07.8±1.2,38.92N×111.25W,h0km,mb3.3/1, mb1 3.5/4,mb1mx3.3/50,mbtmp3.1/4,ML3.2/3,Error ellipse: s-maj=16.7km s-min=11.1km az=122.0*
*NEIC **16** 16:54:07.8±2.3,39.01N±0.04×111.49W±0.06,h1km±9km, Error ellipse: s-maj=6.6km s-min=6.2km az=103.0*
*UUSS **16** 16:54:07.0,38.96N×111.41W,h8km*
*ANF **16** 16:54:08.7±0.5,38.98N×111.46W,h10km,ML3.8/12, Error ellipse: s-maj=5.4km s-min=4.2km az=151.0*

ISC 16 16:54:08.0±0.8,38°93N±0°03×111°46W±0°03,h7km,n62, σ1§61/72,**Utah**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
TMUT	**Trail Mountain**	**0.42**	**29**			**Pg**	**16 54 14.5**	**-1.7**
MSU	**Marysvale**	**0.70**	**233**			**Pg**	**16 54 21.4**	**-0.1**
SRU	**San Rafael Swe**	**0.75**	**76**			**Pg**	**16 54 20.2**	**-2.3**
P17A	**Butcher Ranch,**	**0.78**	**46**			**Pg**	**16 54 20.6**	**-2.5**
MTPU	**Mount Pierson**	**1.05**	**213**			**Pb**	**16 54 28.5**	**-0.3**
NLU	**North Lily Min**	**1.13**	**335**			**Pg**	**16 54 28.8**	**-0.9**
PKCU	**Pink Cliffs**	**1.63**	**204**			**Pg**	**16 54 38.7**	**-0.5**
DUG	**Dugway, Tooele**	**1.64**	**321**	P		**Pn**	**16 54 36.8**	**-0.6**
	baz=138,SNR=149							
DUG	**Dugway, Tooele**	**1.64**	**321**			**Pn**	**16 54 36.8**	**-0.6**
JLU	**Jordanelle**	**1.67**	**0**			**Pn**	**16 54 37.5**	**-0.4**
CTU	**Camp Tracy**	**1.77**	**353**			**Pn**	**16 54 38.6**	**-0.7**
SZCU	**Shurtz Canyon**	**1.85**	**224**			**Pb**	**16 54 41.7**	**-0.5**
PV09	**Paradox Valley**	**1.87**	**103**			**Pn**	**16 54 41.4**	**+0.6**
PSUT	**Pine Spring**	**1.91**	**259**			**Pn**	**16 54 42.3**	**+1.1**
PV10	**Paradox Valley**	**1.98**	**106**			**Pb**	**16 54 43.4**	**-1.2**
PV23	**Carpenter Ridg**	**1.98**	**103**			**Pn**	**16 54 43.0**	**+0.9**
PV21	**Cone Mtn., Par**	**1.98**	**100**			**Pn**	**16 54 42.8**	**+0.6**
PV14	**Lion Creek, Pa**	**1.99**	**106**			**Pn**	**16 54 43.0**	**+0.7**
CCUT	**Cedar City**	**2.03**	**228**			**Pb**	**16 54 44.7**	**-0.7**
PV19	**Morning Glory**	**2.04**	**107**			**Pn**	**16 54 43.8**	**+0.8**
PV05	**Paradox Valley**	**2.04**	**114**			**Pb**	**16 54 44.9**	**-0.7**
PV20	**West Nyswonger**	**2.04**	**106**			**Pn**	**16 54 43.8**	**+0.8**
PV17	**East Wray Mesa**	**2.07**	**108**			**Pn**	**16 54 44.2**	**+0.9**
PV04	**Paradox Valley**	**2.07**	**104**			**Pn**	**16 54 44.3**	**+0.8**
PV18	**Skein Mesa, Pa**	**2.12**	**108**			**Pn**	**16 54 45.0**	**+1.0**
PV11	**David Mesa, Pa**	**2.13**	**106**			**Pn**	**16 54 45.1**	**+0.9**
PV22	**Blue Mesa, Par**	**2.13**	**100**			**Pn**	**16 54 45.1**	**+0.9**
TCUT	**Toone Canyon**	**2.18**	**1**			**Pn**	**16 54 45.5**	**+0.5**
KNB	**Kanab**	**2.19**	**210**			**Pb**	**16 54 47.3**	**-0.8**
RDMU	**Red Mountain**	**2.19**	**41**			**Pn**	**16 54 46.6**	**+1.5**
PV13	**Radium Mtn., P**	**2.21**	**110**			**Pn**	**16 54 46.2**	**+0.8**
BGU	**Big Grassy Mou**	**2.33**	**329**			**Pn**	**16 54 46.0**	**-0.9**
LCMT	**Little Creek M**	**2.38**	**217**			**Pb**	**16 54 49.8**	**-1.4**
PV01	**Paradox Valley**	**2.41**	**108**			**Pn**	**16 54 48.2**	**+0.1**
PV15	**Paradox Valley**	**2.41**	**103**			**Pn**	**16 54 48.8**	**+0.7**
SPUT	**South Promonto**	**2.49**	**343**			**Pn**	**16 54 48.5**	**-0.7**
U15A	**North Rim**	**2.58**	**195**			**Pb**	**16 54 52.9**	**-2.0**
HWUT	**Hardware Ranch**	**2.67**	**358**			**Pn**	**16 54 51.8**	**+0.1**
O20A	**White River Ci**	**2.77**	**63**	P		**Pn**	**16 54 53.2**	**+0.2**
	baz=245,SNR=85							
O20A					Sb	**Sb**	**16 55 33.0**	**+0.9**
	baz=245							
O20A	**White River Ci**	**2.77**	**63**			**Pn**	**16 54 55.2**	**+2.2**
MVCO	**Mesa Verde**	**2.90**	**125**	P		**Pn**	**16 54 56.3**	**+1.4**
	baz=308,SNR=19							
MVCO					Sb	**Sg**	**16 55 38.1**	**-3.2**
	baz=308							
MVCO	**Mesa Verde**	**2.90**	**125**			**Pn**	**16 54 56.2**	**+1.3**
R11A	**Troy Canyon, C**	**3.28**	**261**	Pb		**Pb**	**16 55 06.9**	**+0.2**
	baz=78							
WUAZ	**Wupatki**	**3.41**	**179**	P		**Pn**	**16 55 03.1**	**+1.4**
	baz=360,SNR=36							
WUAZ					Sb	**Sg**	**16 55 55.0**	**-2.5**
	baz=360							
S22A	**4UR Ranch, Cre**	**3.83**	**107**	P		**Pn**	**16 55 08.6**	**+0.9**
	baz=290,SNR=6.9							
S22A					Sb	**Sg**	**16 56 07.2**	**-3.9**
	baz=290							
W18A	**Petrified Fore**	**4.05**	**160**	P		**Pn**	**16 55 11.4**	**+0.8**
	baz=341,SNR=8.7							
W18A					Sb	**Sg**	**16 56 15.5**	**-2.6**
	baz=341							
PDAR	**Pinedale Array**	**4.09**	**20**	Pn		**Pn**	**16 55 12.2**	**+1.0**
	0.4nm,0.3s,baz=183,slow=9.7,SNR=14							
PDAR					Pg	**Pb**	**16 55 21.5**	**+0.9**
	1.4nm,0.3s,baz=208,slow=13,SNR=34							
PDAR					Lg	Lg	16 56 15.1	
	0.5nm,0.3s,baz=195,slow=31,SNR=2.1							
RWWY	**Rawlins**	**4.26**	**48**	Pn		**Pn**	**16 55 14.7**	**+1.1**
TPNV	**Topopah Spring**	**4.27**	**244**	P		**Pn**	**16 55 14.1**	**+0.5**
	baz=61							
TPNV	**Topopah Spring**	**4.27**	**244**			**Pn**	**16 55 14.0**	**+0.4**
ISCO	**Idaho Springs**	**4.62**	**77**	Pb		**Pb**	**16 55 29.2**	**-0.3**
	baz=261							
ISCO					Sb	**Sb**	**16 56 28.8**	**+3.3**
	baz=261							
N23A	**Red Feather La**	**4.68**	**63**	Pb		**Pb**	**16 55 30.3**	**-0.2**
	baz=247							
N23A					Sb	**Sb**	**16 56 30.6**	**+3.5**
	baz=247							
FXWY	**Fox Creek**	**4.71**	**4**			**Pn**	**16 55 17.0**	**-2.8**
SDCO	**Great Sand Dun**	**4.83**	**102**	P		**Pn**	**16 55 22.0**	**+0.5**
	baz=286,SNR=6.7							
SDCO	**Great Sand Dun**	**4.83**	**102**			**Pn**	**16 55 22.5**	**+1.0**
IMW	**Indian Meadow**	**4.98**	**4**			**Pn**	**16 55 24.5**	**+1.1**
K22A	**Casper**	**5.28**	**44**	P		**Pn**	**16 55 27.8**	**+0.4**
	baz=227							
K22A					Sb	**Sb**	**16 56 49.1**	**+4.7**
	baz=227							
NVAR	**Mina Array Bea**	**5.38**	**267**	Pn		**Pn**	**16 55 32.5**	**+3.6**
	0.1nm,0.3s,baz=80,slow=13,SNR=8.9							
ANMO	**Albuquerque**	**5.65**	**133**	Pn		**Pn**	**16 55 32.3**	**-0.3**
	0.7nm,0.3s,baz=320,slow=13,SNR=15							
ANMO					Pg	**Pb**	**16 55 49.7**	**+2.7**
	0.7nm,0.3s,baz=331,slow=14,SNR=10							
ANMO					Lg	Lg	16 57 01.9	
	0.7nm,0.3s,baz=218,slow=18,SNR=2.8							
ANMO	**Albuquerque**	**5.65**	**133**			**Pn**	**16 55 33.0**	**+0.4**
RSSD	**Black Hills**	**7.61**	**45**			**Pn**	**16 55 57.2**	**-2.4**
YKA	**Yellowknife Ar**	**23.67**	**356**	P		**P**	**16 59 21.6**	**+1.8**
	0.8nm,0.9s,baz=171,slow=9.9,SNR=12							

*IDC **16** 16:54:59.3±0.8,17°27N×60°23W,h0km,mb4.0/18, mb1 4.2/18,mb1mx4.0/50,mbtmp4.0/18,Error ellipse: s-maj=22.1km s-min=19.5km az=25.0*
*NEIC **16** 16:55:00.3±1.5,17°19N±0°07×60°34W±0°09,h10km±1km, mb4.4/3,Error ellipse: s-maj=16.7km s-min=7.0km az=231.0*
*TRN **16** 16:55:01.5,17°04N×60°29W,h29km,MD4.1*

ISC 16 16:55:00.3±3.3,17°10N±0°04×60°28W±0°05,h11km±21km,
n87,σ1§11/112,**mb4.2**/25,**Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
DEG	**La Desirade**	**1.08**	**224**	*e*P		Pn	16 55 31.1	+10
DEG				*e*S		Sn	16 55 53.4	+17
ABD	**La Joyeuse, An**	**1.32**	**242**	*e*P		**Pb**	**16 55 25.0**	**0.0**
ABD				*e*S		**Sb**	**16 55 41.3**	**-0.6**
MAGL	**Barre de l'ile**	**1.49**	**220**	*e*P		**Pn**	**16 55 26.5**	**-0.5**
MAGL				*e*S		**Sn**	**16 55 45.2**	**-1.3**
ANWB	**Willy Bob**	**1.55**	**292**	*e*P		**Pn**	**16 55 26.7**	**-1.2**
ANWB	**Willy Bob**	**1.55**	**292**	Pn		**Pn**	**16 55 26.6**	**-1.3**
CBE	**Ff, Capester**	**1.63**	**232**	*e*P		**Pn**	**16 55 29.2**	**+0.2**
CBE				*e*S		**Sn**	**16 55 50.4**	**+0.3**
TDBA	**Terre de Bas,**	**1.80**	**227**	*e*P		**Pn**	**16 55 32.1**	**+0.9**
TDBA				*e*S		**Sn**	**16 55 54.1**	**0.0**
DWS	**Wesley**	**1.81**	**213**	*e*P		**Pn**	**16 55 31.1**	**-0.3**
DWS				*e*S		**Sn**	**16 55 53.5**	**-1.0**
MDPV	**Dominica, Penn**	**1.83**	**217**	*e*P		**Pn**	**16 55 31.8**	**+0.1**
MDPV				*e*S		**Sn**	**16 55 55.0**	**+0.2**
MDVC	**Dominica, Viel**	**1.83**	**217**	*e*P		**Pn**	**16 55 31.7**	**0.0**
MDVC				*e*S		**Sn**	**16 55 55.0**	**+0.1**
MLYT	**Lee's Yard**	**1.87**	**259**	*e*P		**Pb**	**16 55 32.7**	**-0.9**
MLYT				*e*S		**Sn**	**16 55 55.9**	**0.0**
DLPL	**La Plaine**	**1.98**	**208**	*e*P		**Pn**	**16 55 33.7**	**-0.2**
DLPL				*e*S		**Sn**	**16 55 57.2**	**-1.5**
DLPL	**La Plaine**	**1.98**	**208**	Pn		**Pn**	**16 55 33.7**	**-0.2**
MDN	**Morne-Daniel**	**2.07**	**211**	*e*P		**Pn**	**16 55 35.9**	**+1.0**
MDN				*e*S		**Sn**	**16 55 59.8**	**-0.9**
NVDO	**Nevis, Disaste**	**2.24**	**271**	*e*P		**Pn**	**16 55 37.7**	**+0.3**
NVDO				*e*S		**Sn**	**16 56 04.5**	**-0.5**
SKI	**Saint Kitts**	**2.37**	**276**	*e*P		**Pn**	**16 55 39.6**	**+0.5**
SKI	**Saint Kitts**	**2.37**	**276**	*e*P		**Pn**	**16 55 40.4**	**+1.2**
SKI				*e*S		**Sn**	**16 56 09.0**	**+0.8**
SKI	**Saint Kitts**	**2.37**	**276**	Pn		**Pn**	**16 55 38.7**	**-0.4**
ILAM	**Ilet Lapin Mar**	**2.38**	**194**	*e*P		**Pn**	**16 55 39.4**	**+0.1**
ILAM				*e*S		**Sn**	**16 56 07.4**	**-1.0**
SVN	**Savane Anatole**	**2.40**	**201**	*e*P		**Pn**	**16 55 39.7**	**+0.1**
BAMF	**Morne Balai**	**2.42**	**200**	*e*P		**Pn**	**16 55 40.4**	**+0.5**
CXM	**Morne La Croix**	**2.43**	**201**	*e*P		**Pn**	**16 55 40.6**	**+0.6**
PCM	**Pelee Case Pet**	**2.44**	**202**	*e*P		**Pn**	**16 55 40.1**	**0.0**
GBMF	**Grand Be**	**2.44**	**201**	*e*P		**Pn**	**16 55 40.4**	**+0.3**
PML	**Morne Lenard**	**2.46**	**201**	*e*P		**Pn**	**16 55 40.3**	**-0.1**
FDF	**Fort de France**	**2.49**	**200**	*e*P		**Pn**	**16 55 41.0**	**+0.1**
FDF				*e*S		**Sn**	**16 56 10.4**	**-0.9**
LPMF	**Morne Lapointe**	**2.59**	**195**	*e*P		**Pn**	**16 55 41.9**	**-0.3**
ZAM	**Aeronautique**	**2.61**	**196**	*e*P		**Pn**	**16 55 42.2**	**-0.2**
TRMF	**Trois Ilets**	**2.65**	**196**	*e*P		**Pn**	**16 55 42.9**	**-0.1**
BIM	**Bigot**	**2.67**	**197**	*e*P		**Pn**	**16 55 44.1**	**+0.8**
BIM				*e*S		**Sn**	**16 56 15.3**	**-0.5**
MPOM	**Morne Pois Mar**	**2.69**	**192**	*e*P		**Pn**	**16 55 43.8**	**+0.2**
MPOM				*e*S		**Sn**	**16 56 14.9**	**-1.3**
SMRT	**St. Maarten**	**2.83**	**290**	*e*P		**Pn**	**16 55 46.2**	**+0.6**
SMRT				*e*S		**Sn**	**16 56 20.0**	**+0.3**
SABA	**Saba**	**2.88**	**281**	*e*P		**Pn**	**16 55 47.9**	**+1.7**
SABA				*e*S		**Sn**	**16 56 20.1**	**-0.8**
SLBI	**Saint Lucia, B**	**3.13**	**193**	*e*P		**Pn**	**16 55 49.7**	**-0.2**
SLBI				*e*S		**Sn**	**16 56 25.1**	**-1.8**
SLAC	**Saint Lucia, A**	**3.23**	**191**	*e*P		**Pn**	**16 55 51.4**	**+0.4**
SLAC				*e*S		**Sn**	**16 56 28.1**	**-1.5**
SLPA	**Patience**	**3.28**	**191**	*e*P		**Pn**	**16 55 52.4**	**+0.7**
SLPA				*e*S		**Sn**	**16 56 29.6**	**-1.1**
SLB	**Belfond**	**3.33**	**193**	*e*P		**Pn**	**16 55 53.5**	**+1.1**
SLB				*e*S		**Sn**	**16 56 30.0**	**-2.0**
MCLT	**Moule a Chique**	**3.43**	**191**	*e*P		**Pn**	**16 55 54.1**	**+0.5**
MCLT				*e*S		**Sn**	**16 56 32.9**	**-1.4**
MCLT	**Moule a Chique**	**3.43**	**191**	Pn		**Pn**	**16 55 54.1**	**+0.5**
SSV	**Crater Summit**	**3.85**	**193**	*e*P		**Pn**	**16 56 00.1**	**+0.6**
SSV				*e*S		**Sn**	**16 56 43.1**	**-1.8**
SVV	**Soufriere Volc**	**3.86**	**194**	*e*P		**Pn**	**16 56 00.5**	**+0.8**
SVV				*e*S		**Sn**	**16 56 42.9**	**-2.2**
SVCV	**St. Vincent, C**	**3.89**	**193**	*e*P		**Pn**	**16 56 00.9**	**+0.8**
SVCV				*e*S		**Sn**	**16 56 43.9**	**-1.9**
SVB	**Belmont**	**3.92**	**194**	*e*P		**Pn**	**16 55 51.8**	**+1.3**
SVB				*e*S		**Sn**	**16 56 44.1**	**-2.3**
SVB	**Belmont**	**3.92**	**194**	Pn		**Pn**	**16 56 01.5**	**+1.1**
STVI	**Saint Thomas**	**4.63**	**286**	Pn		**Pn**	**16 56 09.5**	**-0.7**
GCMP	**Grenada, Carri**	**4.71**	**194**	*e*P		**Pn**	**16 56 11.7**	**+0.3**
GCMP	**Grenada, Carri**	**4.71**	**194**	*e*S		**Sn**	**16 57 03.9**	**-2.2**
CUPR	**Culebra, Puert**	**4.92**	**285**	Pn		**Pn**	**16 56 13.6**	**-0.6**
GRGR	**Grenville**	**5.11**	**195**	*e*P		**Pn**	**16 56 18.0**	**+1.2**
GRGR	**Grenville**	**5.11**	**195**	*e*S		**Sn**	**16 57 13.2**	**-2.7**
MTP	**Monte Pirata**	**5.13**	**282**	Pn		**Pn**	**16 56 16.6**	**-0.5**
TOSP	**Speyside**	**5.77**	**183**	*e*P		**Pn**	**16 56 26.2**	**+0.4**
TOSP	**Speyside**	**5.77**	**183**	*e*S		**Sn**	**16 57 29.1**	**-2.9**
TOSP	**Speyside**	**5.77**	**183**	Pn		**Pn**	**16 56 27.0**	**+1.1**
TRN	**Trinidad (W)**	**6.50**	**190**	*e*P		**Pn**	**16 56 37.8**	**+1.8**
SDD	**Santo Domingo**	**9.28**	**280**	Pn		**Pn**	**16 57 12.8**	**-1.3**
SDDR	**Presa de Saban**	**10.64**	**282**	Pn		**Pn**	**16 57 31.4**	**-1.4**
SDV	**Santo Domingo**	**12.97**	**232**	Pn		**Pn**	**16 58 03.6**	**-1.2**
MDP	**Montagnes des**	**14.07**	**147**	Sn		Sn	17 00 40.2	-16
	1.1nm,0.3s,baz=320,slow=23,SNR=1.5							
MTDJ	**Mount Denham**	**16.49**	**277**	P		**Pn**	**16 58 52.9**	**+1.1**
MTDJ					IAmb	IAmb	16 58 59.1	
	comp=Z,43nm,1.4s							
RUSC	**La Rusia**	**16.76**	**230**	P		**P**	**16 58 59.0**	**+1.0**
CBCY	**The Bluff, Cay**	**18.67**	**281**	P		**P**	**16 59 16.6**	**-1.9**
SIV	**San Ignacio**	**32.89**	**181**	P		**P**	**17 01 38.0**	**+3.4**
	comp=Z,1.9nm,0.6s,baz=19,slow=11,SNR=2.5							
SCHQ	**Schefferville**	**38.00**	**354**	P		**P**	**17 02 18.6**	**+0.4**
	comp=Z,2.7nm,0.4s,baz=181,slow=8.0,SNR=4.2							
TXAR	**Lajitas Array**	**41.48**	**295**	P		**P**	**17 02 48.7**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=115,slow=6.1,SNR=3.5							
CPUP	**Villa Florida**	**43.26**	**176**	P		**P**	**17 03 03.4**	**+1.5**
	comp=Z,1.5nm,0.8s,baz=50,slow=6.8,SNR=2.9							
PDAR	**Pinedale Array**	**48.92**	**312**	P		**P**	**17 03 46.2**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=111,slow=7.0,SNR=2.1							
MDT	**Midelt**	**52.28**	**62**	P		**P**	**17 04 12.5**	**+0.4**
	comp=Z,7.5nm,0.8s,baz=247,slow=9.1,SNR=5.2							
ESDC	**Sonseca Array**	**53.47**	**53**	P		**P**	**17 04 19.9**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=258,slow=6.4,SNR=4.1							
NVAR	**Mina Array Bea**	**54.65**	**305**	P		**P**	**17 04 29.7**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=101,slow=8.4,SNR=2.2							
YKA	**Yellowknife Ar**	**58.82**	**334**	P		**P**	**17 04 58.4**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=101,slow=7.9,SNR=3.6							
TORD	**Torodi Ar. Bea**	**59.75**	**85**	P		**P**	**17 05 04.5**	**-1.2**
	comp=Z,1.6nm,0.8s,baz=292,slow=7.0,SNR=4.5							
DAVA	**Damuels**	**64.21**	**45**	*e*pP		**P**	**17 05 36.4**	**+0.9**
	comp=Z,5.7nm,1.0s							
FETA	**Feichten**	**64.78**	**46**	*i* P		**P**	**17 05 40.1**	**+0.9**
	comp=Z,3.9nm,0.7s							
MOTA	**Moosalm**	**65.05**	**45**	*i* P		**P**	**17 05 41.3**	**+0.4**
	comp=Z,5.3nm,1.1s							
SQTA	**Sankt Quirin**	**65.11**	**45**	*e*P		**P**	**17 05 41.7**	**+0.4**
	comp=Z,7.3nm,1.0s							
ABTA	**Abfaltersbach**	**66.00**	**46**	*e*P		**P**	**17 05 47.1**	**+0.1**
	comp=Z,3.6nm,0.9s							
NOA	**NORSAR Array B**	**66.23**	**30**	P		**P**	**17 05 48.3**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=262,slow=6.7,SNR=3.5							
CLL	**Collm**	**66.41**	**41**	*e*P		**P**	**17 05 50.0**	**+0.6**
	comp=Z,7.0nm,1.2s							
CLL				*e*			17 06 03.0	
GERES	**GERESS Array B**	**66.81**	**44**	P		**P**	**17 05 52.8**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=256,slow=5.4,SNR=5.5							
BRG	**Berggiesshubel**	**66.99**	**41**	*e*P		**P**	**17 05 50.5**	**-2.6**
	comp=Z,1.9nm,0.8s							
INK	**Inuvik**	**68.06**	**337**	P		**P**	**17 05 58.6**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=270,slow=1.4,SNR=2.1							
ILAR	**Eielson Array**	**73.25**	**333**	P		**P**	**17 06 30.0**	**-1.

GO02 Mina Guanaco 1.90 208 Pn 17 09 03.4 -0.6
PB14 IPOC Station P 2.00 235 ⇑ iP Pn 17 09 03.9 -1.4
PB14 eS Sn 17 09 28.1 -2.3
PB14 IPOC Station P 2.00 235 Pn 17 09 03.9 -1.4
PB14 IPOC Station P 2.00 235 i P Pn 17 09 04.2 -1.1
PB14 i S Sn 17 09 27.0 -3.5
PB14 IAML 17 09 31.9
comp=Z,16μm,0.4s
PB07 IPOC Station P 2.10 326 ⇑ iP Pn 17 09 06.1 -0.4
PB07 eS Sn 17 09 31.3 -1.3
PB07 IAML 17 09 34.5
comp=E,42μm,0.4s
PB07 IPOC Station P 2.10 326 Pn 17 09 05.7 -0.8
PB02 IPOC Station P 2.45 331 ⇑ eP Pn 17 09 10.4 -0.5
PB02 i S Sn 17 09 40.1 -0.5
PB02 IAML 17 09 44.5
comp=E,29μm,0.3s
PB01 IPOC Station P 2.55 341 ⇑ iP Pn 17 09 12.1 -0.1
PB01 i S Sn 17 09 41.0 -1.9
PB01 IAML 17 09 46.7
comp=E,21μm,0.4s
PB01 IPOC Station P 2.55 341 Pn 17 09 11.8 -0.5
PATCX Punta Patache 3.00 331 ⇑ eP Pn 17 09 16.7 -1.5
PATCX eS Sn 17 09 47.3 -6.3
PATCX Punta Patache 3.00 331 Pn 17 09 16.6 -1.5
YJA Yavi 3.14 66 i P Pn 17 09 23.8 +3.4
TA01 Diego Aracena 3.24 333 eP Pn 17 09 19.6 -1.7
TA01 eS Sn 17 09 59.4 +0.3
TA01 Diego Aracena 3.24 333 Pn 17 09 19.5 -1.7
AZAP Zapla 3.33 104 i P Pn 17 09 25.9 +3.1
AZAP IAML 17 10 21.7
comp=Z,3μm,1.7s
PB08 IPOC Station P 3.35 351 ⇑ eP Pn 17 09 23.2 0.0
PB08 IPOC Station P 3.35 351 Pn 17 09 23.0 -0.1
AC02 Maricunga 3.38 188 Pn 17 09 23.6 0.0
TA02 Huaiquique 3.48 336 ⇑ eP Pn 17 09 23.2 -1.4
PB11 IPOC Station P 3.82 345 Pn 17 09 27.5 -1.7
GO01 Chusmiza 3.82 352 Pn 17 09 28.9 -0.7
ASTB Santa Barbara 3.84 98 i P Pn 17 09 31.9 +2.4
ASTB IAML 17 10 54.8
comp=Z,2μm,1.6s
PSGCX Pisagua 4.10 340 Pn 17 09 30.2 -2.8
MNMC Minye Minye 4.42 348 eP Pn 17 09 35.9 -1.5
MNMC Minye Minye 4.42 348 Pn 17 09 35.7 -1.7
PB12 IPOC Station P 5.09 341 Pn 17 09 43.1 -3.2
PB16 IPOC Station P 5.18 351 Pn 17 09 47.3 -0.7
VCA Vinchina 5.25 176 i P Pn 17 09 49.2 +0.6
VCA IAML 17 11 35.7
comp=Z,2μm,2.0s
AP01 Chacalluta 5.33 342 Pn 17 09 46.9 -2.6
AC05 El Transito 5.55 195 Pn 17 09 49.5 -3.0
CO01 Juntas del Tor 6.61 191 Pn 17 10 04.5 -2.6
GO04 Tololo Observa 6.95 196 Pn 17 10 06.9 -4.8
LPAZ La Paz 7.16 4 P Pn 17 10 15.2 +0.2
comp=Z,35nm,0.3s,baz=191,slow=3.8,SNR=790
LPAZ S Sn 17 11 34.8 -0.3
comp=Z,4.3nm,0.3s,baz=43,slow=7.7,SNR=1.1
LPAZ LR LR 17 13 05.7
comp=Z,3μm,21.0s,baz=196,slow=39
LPAZ La Paz 7.16 4 Pn 17 10 15.0 0.0
LPAZ La Paz 7.16 4 eP Pn 17 10 14.8 -0.1
CO03 El Pedregal 7.57 194 Pn 17 10 15.2 -4.7
CO02 Combarbal 7.99 195 Pn 17 10 19.8 -5.8
CFA Coronel Fontan 8.11 178 P Pn 17 10 24.6 -2.6
comp=Z,207nm,0.3s,baz=0.6,slow=12,SNR=410
CFA S Sn 17 11 50.0 -7.2
comp=Z,26nm,0.3s,baz=152,slow=20,SNR=1.1
CO04 Los Peladeros 8.79 193 Pn 17 10 30.7 -6.0
VA03 San Esteban 9.41 190 Pn 17 10 39.7 -5.2
PEL Peldehue 9.81 190 P Pn 17 10 44.7 -5.6
PEL Peldehue 9.81 190 Pn 17 10 44.7 -5.6
MT05 Renca 10.06 190 Pn 17 10 49.1 -4.6
SIV San Ignacio 10.29 45 P Pn 17 10 53.7 -3.2
comp=Z,36nm,0.3s,baz=247,slow=12,SNR=221
SIV S Sn 17 12 42.2 -8.1
comp=Z,16nm,0.3s,baz=132,slow=20,SNR=6.5
MT01 Popeta 10.61 192 Pn 17 10 53.4 -7.7
CPUP Villa Florida 10.63 108 P Pn 17 11 00.2 -1.2
comp=Z,0.4nm,0.3s,baz=284,slow=12,SNR=22
CPUP LR LR 17 15 22.0
comp=Z,1μm,19.3s,baz=275,slow=39
CPUP Villa Florida 10.63 108 Pn 17 10 59.4 -2.1
CPUP Villa Florida 10.63 108 eP Pn 17 10 59.6 -1.9
GO05 Huala 11.85 193 Pn 17 11 09.1 -8.8
PTLB Pontes e Lacer 11.98 50 eP Pn 17 11 15.9 -3.7
AQDB Aquidauana 12.35 79 eP Pn 17 11 21.8 -2.6
ITQB Itaqui 12.38 122 eP Pn 17 11 24.0 -0.7
VILB Vilhena 13.16 39 eP Pn 17 11 32.8 -2.4
H03N1 Juan Fernandez 13.43 220 T T 17 24 00.9
baz=44
H03N2 Juan Fernandez 13.44 220 T T 17 23 56.8
baz=44
H03N3 Juan Fernandez 13.45 220 T T 17 23 57.8
baz=44
NNA Nana 13.85 324 P Pn 17 11 44.3 +0.1
comp=Z,1.2nm,0.3s,baz=162,slow=9.2,SNR=1.7
NNA S Sn 17 14 12.4 -4.3
comp=Z,2.0nm,0.3s,baz=78,slow=23,SNR=2.3
NNA LR LR 17 17 26.0
comp=Z,954nm,20.0s,baz=182,slow=39
NNA Nana 13.85 324 P Pn 17 11 44.1 0.0
BI03 Tigo 13.86 195 P Pn 17 11 41.0 -3.1
SALV Santo Antonio 14.30 61 eP Pn 17 11 47.8 -2.2
TRCB Terra Rica 14.72 91 eP Pn 17 11 54.4 -0.9
PTGB Pitanga 15.17 98 eP Pn 17 12 00.3 -0.7
CPSB Cacapava Do Su 15.19 120 eP Pn 17 11 59.6 -1.5
SAML Samuel 15.35 21 P Pn 17 12 00.1 -3.1
SAML pmax pmax
comp=Z,240nm,1.6s
SAML Samuel 15.35 21 P Pn 17 12 00.1 -3.1
SAML Samuel 15.35 21 eP Pn 17 12 00.2 -3.0
ITAB Concordia 15.37 108 eP Pn 17 12 02.6 -0.8
C2SB Chapadao do Su 15.45 75 eP Pn 17 12 04.2 -0.2
LC01 Cunco 15.63 189 P Pn 17 12 03.5 -3.0
PLTB Pedras Altas 15.65 125 eP Pn 17 12 03.8 -3.1
PCMB Pacaembu 16.14 87 eP Pn 17 12 12.8 -0.3
PCMB eS Sn 17 15 13.1 +1.0
OGAUY Aigu 16.27 135 eP Pn 17 12 14.1 -0.5
CNLB Canela 16.94 114 eP Pn 17 12 21.3 -1.6
PLCA Paso Flores 17.29 185 P P 17 12 25.5 -1.4
comp=Z,2.2nm,0.3s,baz=1.3,slow=9.5,SNR=29
PLCA S S 17 15 43.4 +2.0
baz=119,slow=8.4,SNR=1.6
PLCA Paso Flores 17.29 185 P P 17 12 24.5 -2.4
PLCA pmax pmax
comp=Z,186nm,1.2s
PLCA Paso Flores 17.29 185 P P 17 12 24.5 -2.4
PLCA Paso Flores 17.29 185 eP P 17 12 25.2 -1.7
ITRB Iturama 17.39 81 eP P 17 12 27.9 -0.3
FRTB Fartura 17.49 93 eP P 17 12 28.8 -0.4
CLDB Colider 17.50 46 eP P 17 12 27.3 -2.1
ARAG Araguaiana, MT 17.61 67 eP P 17 12 29.8 -0.7
BB19B Bebedouro 18.75 87 eP Pn 17 12 44.1 -0.5
ATAH Atahualpa 18.77 328 P P 17 12 43.9 +0.2
comp=Z,0.9nm,0.3s,baz=163,slow=9.6,SNR=16
ATAH S S 17 16 12.7 +0.6
comp=Z,0.2nm,0.3s,baz=6.2,slow=18,SNR=1.8
LL01 San Ignacio de 19.12 189 P P 17 12 46.1 -0.8
LL01 IAmb IAmb 17 13 22.4
comp=Z,356nm,1.4s
SPB Sao Paulo 19.43 95 P P 17 12 49.4 -1.0
SPB IAmb IAmb 17 12 54.5
comp=Z,186nm,1.0s
SPB S 17 16 24.2 -0.2
SPB Sao Paulo 19.43 95 eP P 17 12 50.3 -0.1
RCLB Rio Claro- Sao 19.45 91 eP P 17 12 51.0 +0.3
PET01 Itanhaem-SP 19.53 97 eP P 17 12 51.4 -0.2
IPMB Ipameri, GO 19.84 78 eP P 17 12 53.9 -1.2
VAO Valinhos 19.90 93 eP P 17 12 54.6 -1.1
NPGB Novo Progresso 20.71 40 eP P 17 13 03.2 -1.1
BDFB Brasilia 20.90 72 P P 17 13 05.2 -1.3
comp=Z,374nm,1.0s,baz=249,slow=11,SNR=198
BDFB LR LR 17 22 43.7
comp=Z,2μm,18.9s,baz=247,slow=41
BDFB Brasilia 20.90 72 P P 17 13 04.4 -2.1
BDFB IAmb IAmb 17 13 07.5
comp=Z,303nm,0.9s
PARB Paraibuna 21.10 94 eP P 17 13 08.1 -0.5
MACA Manacapuru-AM 21.60 22 eP P 17 13 12.9 -0.9
BSCB Bom Sucesso 22.20 88 eP P 17 13 19.6 -0.7
ESAR Angra dos Reis 22.21 94 eP P 17 13 20.1 -0.1
MAN01 Angra dos Reis 22.67 93 eP P 17 13 24.3 -0.7
ITTB Itaituba 22.70 35 eP P 17 13 23.6 -1.7

VAS01 Vassouras-RJ 23.22 92 eP P 17 13 29.6 -0.7
MC01 Montes Claros 24.11 78 eP P 17 13 38.3 -0.1
PTLC Puerto Leguiza 24.26 345 eP P 17 13 36.4 -3.3
JANB Januaria 24.39 74 eP P 17 13 39.0 -2.0
SMTB Santa Maria do 24.82 58 eP P 17 13 44.1 -0.8
SMTB eS S 17 17 58.0 -2.2
PRPB Parauapebas 24.96 49 eP P 17 13 44.6 -1.6
PUAC Puerto Asis, P 25.10 341 eP P 17 13 48.4 +1.0
MALB Monte Alegre 25.60 35 eP P 17 13 50.8 -1.1
SJMB Sao Joao De Ma 26.01 85 eP P 17 13 55.5 -0.1
BSFB Barra de Sao F 26.29 85 eP P 17 13 57.4 -0.7
GARC Garzon, Huila 26.37 344 eP P 17 13 59.8 +0.7
RIB01 Linhares ES 26.58 86 eP P 17 14 00.2 -0.5
BBAC Balboa, Cauca 26.70 340 eP P 17 14 02.9 +0.9
BETC Betania 26.83 345 eP P 17 14 04.5 +1.4
TUMC Tumaco 27.00 337 P P 17 14 05.2 +0.7
POPC Popayan, Colom 27.02 342 eP P 17 14 06.3 +1.3
NAN01 Guarapari, ES 27.21 83 eP P 17 14 06.5 0.0
PRAC Prado 27.70 346 eP P 17 14 10.3 -0.5
PTGC Puerto Gaitan, 27.72 352 eP P 17 14 10.3 -0.5
GO09 Cerro Castillo 27.90 185 P P 17 14 13.2 +1.0
GO09 IAmb IAmb 17 14 46.5
comp=Z,172nm,1.6s
ORTC Ortega, Tolima 27.97 346 eP P 17 14 13.7 +0.5
YOTC Yotoco, Valle 28.31 344 eP P 17 14 16.3 0.0
ROSC El Rosal 28.68 348 P P 17 14 18.9 -1.0
comp=Z,12nm,0.4s,baz=128,slow=17,SNR=2.5
ROSC LR LR 17 26 45.7
comp=Z,1μm,18.6s,baz=184,slow=38
ROSC El Rosal 28.68 348 P P 17 14 19.1 -0.8
NBIT Itapeh - BA 28.79 78 eP P 17 14 20.2 -0.3
GDU01 Guandu, BA 29.13 76 eP P 17 14 22.4 -1.1
GUY2C Guyana, Caldas 29.27 346 eP P 17 14 25.5 +0.2
EFI East Falkland 29.31 167 P P 17 14 24.2 -0.5
EFI pmax pmax
comp=Z,172nm,1.2s
EFI East Falkland 29.31 167 P P 17 14 24.2 -0.5
EFI IAmb IAmb 17 15 02.8
comp=Z,172nm,1.2s
SPBC San Pablo de B 29.43 349 eP P 17 14 24.9 -1.3
NORC Norcasia 29.50 347 eP P 17 14 25.5 -1.3
RUSC La Rusia 29.51 351 eP P 17 14 27.1 -0.2
RUSC La Rusia 29.51 351 P P 17 14 27.1 -0.2
GO10 Punta Arenas 29.70 183 P P 17 14 29.3 +1.2
GO10 IAmb IAmb 17 15 16.3
comp=Z,209nm,1.4s
CBOC Ciudad Bolivar 30.04 345 eP P 17 14 30.8 -0.9
HELC Santa Helena 30.25 346 eP P 17 14 32.4 -1.3
PAMC Pamplona, Colo 30.88 352 eP P 17 14 37.7 -1.8
PAYG Puerto Ayora 30.92 314 P P 17 14 40.9 +1.6
PAYG IAmb IAmb 17 14 53.8
comp=Z,90nm,1.2s
DBBC Dabeiba 31.20 345 eP P 17 14 42.4 +0.6
ROSB Rosrio 31.30 53 eP P 17 14 41.5 -1.1
ZARC Zaragoza, Cauc 31.37 348 eP P 17 14 41.2 -2.0
MG01 Puerto William 31.43 179 P P 17 14 40.5 -2.7
NBLA Lagarto - SE 31.87 72 eP P 17 14 46.5 -1.1
SDV Santo Domingo 32.22 356 P P 17 14 49.0 -1.9
SDV Santo Domingo 32.22 356 eP P 17 14 49.4 -1.4
NBPS Pedro II - PI 32.36 58 eP P 17 14 50.6 -1.5
NBTA Tacaratu-PE 32.52 69 eP P 17 14 52.2 -1.2
SMLC San Martn de 32.52 350 eP P 17 14 50.1 -3.1
NBMA Muriti-CE 32.82 66 eP P 17 14 55.6 -0.4
NBPB Pedra_Branca-C 33.16 62 eP P 17 14 57.8 -1.2
NBAN Anadia - AL 33.80 71 eP P 17 15 03.4 -1.1
NBMO Morrinhos-CE 34.13 58 eP P 17 15 05.9 -1.4
NBCL Cascavel-CE 34.97 61 eP P 17 15 13.4 -1.1
URIC Uribia, Colomb 35.11 354 P P 17 15 12.3 -3.4
TOSP Speyside 35.45 14 P P 17 15 18.6 +0.1
GRGR Grenville 36.03 12 P P 17 15 22.8 -0.8
RCBR Riachuelo 36.04 66 P P 17 15 23.4 -0.4
comp=Z,146nm,1.2s,baz=231,slow=10,SNR=18
RCBR Riachuelo 36.04 66 ceP P 17 15 25.4 +1.6
RCBR pmax pmax
comp=Z,116nm,1.3s
RCBR Riachuelo 36.04 66 P P 17 15 23.1 -0.7
RCBR IAmb IAmb 17 15 26.9
comp=Z,124nm,1.2s
RCBR Riachuelo 36.04 66 eP P 17 15 21.7 -2.2
NBPV Pedro Velho 36.25 67 eP P 17 15 25.6 +0.1
HDC Heredia 36.56 334 P P 17 15 30.4 +2.1
RPN Rapa Nui 36.88 256 P P 17 15 32.8 +2.0
comp=Z,48nm,0.8s,baz=357,slow=3.6,SNR=3.8
RPN Rapa Nui 36.88 256 P P 17 15 31.9 +1.1
JTS Las Juntas de 37.17 333 P P 17 15 33.7 +0.4
comp=Z,4.7nm,0.4s,baz=152,slow=3.3,SNR=12
JTS Las Juntas de 37.17 333 d iP P 17 15 35.0 +1.7
JTS pmax pmax
comp=Z,104nm,1.5s
JTS Las Juntas de 37.17 333 P P 17 15 34.1 +0.9
JTS IAmb IAmb 17 15 37.2
comp=Z,113nm,1.4s
SVB Belmont 37.22 12 P P 17 15 30.6 -3.0
ESPN Las Esperanzas 38.63 335 P P 17 15 44.6 -0.9
ESPN IAmb IAmb 17 16 27.3
comp=Z,152nm,2.0s
FDF Fort de France 38.67 12 P P 17 15 43.6 -2.3
FDF pmax pmax
comp=Z,107nm,0.6s
FDF Fort de France 38.67 12 P P 17 15 43.6 -2.3
ACON Acoyapa 38.77 334 P P 17 15 46.9 +0.2
ACON IAmb IAmb 17 16 26.8
comp=Z,99nm,1.6s
HOPE Hope Point 39.03 150 P P 17 15 49.3 +0.8
HOPE pmax pmax
comp=Z,211nm,1.2s
HOPE Hope Point 39.03 150 P P 17 15 49.3 +0.8
MATN Matagalpa 39.95 333 P P 17 15 56.2 -0.4
CSGN Cosiguina Volc 40.69 331 P P 17 16 04.0 +1.3
SKI Saint Kitts 40.96 9 P P 17 16 04.4 -0.4
SKI pmax pmax
comp=Z,124nm,1.2s
SKI Saint Kitts 40.96 9 P P 17 16 04.4 -0.4
SKI IAmb IAmb 17 16 41.5
comp=Z,124nm,1.2s
MLPR Magueyes Islan 41.22 2 P P 17 16 04.8 -2.0
MLPR IAmb IAmb 17 16 44.2
comp=Z,193nm,1.6s
CRPR Cabo Rojo, PR 41.25 2 P P 17 16 05.5 -1.6
OBIP Obispado Ponce 41.31 3 P P 17 16 05.6 -2.0
OBIP IAmb IAmb 17 16 46.4
comp=Z,122nm,1.2s
SJG San Juan 41.40 4 P P 17 16 05.9 -2.5
SJG pmax pmax
comp=Z,117nm,1.3s
SJG San Juan 41.40 4 P P 17 16 05.9 -2.5
SJG IAmb IAmb 17 16 45.2
comp=Z,117nm,1.3s
PMSA Palmer Station 41.40 177 P P 17 16 10.1 +2.3
comp=Z,10nm,0.8s,baz=348,slow=14,SNR=1.9
PMSA Palmer Station 41.40 177 eP P 17 16 08.2 +0.4
ANWB Willy Bob 41.43 10 P P 17 16 08.1 -0.5
MPR Mayaguez 41.45 2 P P 17 16 06.8 -2.0
MPR IAmb IAmb 17 16 46.1
comp=Z,181nm,1.6s
AOPR Arecibo Observ 41.60 3 P P 17 16 08.0 -2.1
AOPR IAmb IAmb 17 16 22.1
comp=Z,66nm,0.5s
SMRT St. Maarten 41.62 8 P P 17 16 06.3 -3.9
SMRT IAmb IAmb 17 16 19.2
comp=Z,56nm,0.5s
APG El Apazote 43.81 329 P P 17 16 29.4 +1.2
comp=Z,21nm,0.8s,baz=158,slow=5.9,SNR=14
TLIG Tlapa 50.19 322 P P 17 17 18.2 +0.5
TLIG IAmb IAmb 17 17 20.0
comp=Z,36nm,0.8s
ZAIG Zacatecas 56.59 322 P P 17 18 05.7 +1.0
352A Blakely 56.83 343 P P 17 18 05.5 -0.3
158A Hollywood 56.98 348 P P 17 18 07.5 +0.7
baz=167
157A Early Branch 57.07 348 P P 17 18 08.2 +0.7
baz=166
Z59A Georgetown, SC 57.31 349 P P 17 18 09.9 +0.8
baz=168
NHSC New Hope 57.33 348 P P 17 18 10.3 +1.0
baz=167
NHSC New Hope 57.33 348 P P 17 18 09.9 +0.6
154A Montrose 57.46 345 P P 17 18 09.5 -0.7
Z58A St. Stephen 57.49 349 P P 17 18 11.0 +0.6
baz=168
Z57A Bowman 57.62 348 P P 17 18 11.6 +0.3
baz=167
Y60A Bolivia 57.88 351 P P 17 18 13.6 +0.5
baz=170
152A Waverly Hall 57.91 344 P P 17 18 12.2 -1.1
152A IAmb IAmb 17 18 13.4
comp=Z,40nm,1.1s
Y59A Loris 57.97 350 P P 17 18 14.1 +0.4
baz=169
Y58A Scranton 58.02 349 P P 17 18 14.5 +0.4
baz=168
VNA3 Neumayer Olymp 58.13 161 P P 17 18 14.9 +0.4
Y56A Pelion 58.21 348 P P 17 18 15.6 +0.2
baz=166
Y57A Sumter 58.26 349 P P 17 18 15.9 +0.2
baz=167
GOGA Godfrey 58.31 345 P P 17 18 15.4 -0.7
GOGA pmax pmax
comp=Z,42nm,1.3s
GOGA Godfrey 58.31 345 P P 17 18 15.6 -0.5
baz=164
GOGA Godfrey 58.31 345 P P 17 18 15.4 -0.7
GOGA IAmb IAmb 17 18 16.4
comp=Z,42nm,1.2s
VNA1 Neumayer--Stat 58.34 160 P P 17 18 16.9 +1.0
X60A Albert Glenn T 58.41 351 P P 17 18 16.6 -0.2
baz=170
Y55A Saluda 58.47 347 P P 17 18 17.3 0.0
baz=166,SNR=7.9
X59A McDuffie Farm, 58.50 350 P P 17 18 17.9 +0.5
baz=169
X58A Rowland 58.60 350 P P 17 18 18.5 +0.3
baz=168
X58A Rowland 58.60 350 P P 17 18 17.9 -0.2
X58A IAmb IAmb 17 18 19.3
comp=Z,68nm,0.9s
X57A Johnson Farm, 58.64 349 P P 17 18 18.7 +0.3
baz=168
VNA2 Neumayer--Watz 58.71 160 P P 17 18 18.9 +0.3
baz=292,slow=7.5
Z50A Ashland 58.77 343 P P 17 18 18.6 -0.8
baz=161,SNR=17
Z50A Ashland 58.77 343 P P 17 18 17.2 -2.2
Z50A IAmb IAmb 17 18 20.0
comp=Z,57nm,0.8s
HODGE Hodges 58.83 347 P P 17 18 18.8 -1.0
X56A White Oak 58.84 348 P P 17 18 20.1 +0.3
baz=167,SNR=7.9
W60A Pink Hill 58.84 351 P P 17 18 20.0 +0.3
baz=170
LRAL Lakeview Retre 58.86 342 P P 17 18 19.1 -0.9
baz=160,SNR=7.6
LRAL Lakeview Retre 58.86 342 P P 17 18 19.0 -0.9
LRAL IAmb IAmb 17 18 19.9
comp=Z,30nm,0.9s
W61A Ground Anchor 58.87 352 P P 17 18 20.4 +0.5
baz=171
BIRD Birdtown, Kers 58.88 349 P P 17 18 20.4 +0.4
Y52A Lilburn 58.88 345 P P 17 18 19.6 -0.5
baz=163
Y52A Lilburn 58.88 345 P P 17 18 19.1 -1.0
X55A Gracelyn & Ava 58.94 347 P P 17 18 20.6 +0.1
baz=166,SNR=8.4
W58A Raeford 59.04 350 P P 17 18 21.8 +0.7
baz=169,SNR=10.0
CNNC Cliffs of the 59.05 351 P P 17 18 21.1 -0.1
baz=170
W59A Clinton 59.06 351 P P 17 18 21.7 +0.4
baz=170
342A Flagon Creek P 59.08 336 P P 17 18 21.9 +0.4
146A Union 59.11 340 P P 17 18 20.8 -1.0
V62A Hyde County Ai 59.12 353 P P 17 18 22.1 +0.4
baz=172
X54A Belton 59.16 347 P P 17 18 22.3 +0.3
baz=165,SNR=7.0
W57A Gilead 59.29 349 P P 17 18 23.3 +0.4
baz=168,SNR=8.0
W57A Gilead 59.29 349 P P 17 18 22.5 -0.4
PAULI Pauline 59.31 347 P P 17 18 23.1 +0.1
Z47A Carrollton 59.33 341 P P 17 18 22.5 -0.7
Z47A IAmb IAmb 17 18 23.1
comp=Z,53nm,1.0s
W56A Indian Trail 59.38 349 P P 17 18 23.8 +0.3
baz=167,SNR=10.0
V61A Roper 59.42 352 P P 17 18 24.2 +0.4
baz=172
833A Chaparral WMA, 59.43 328 P P 17 18 24.3 +0.3
baz=147,SNR=13
Y49A Blount Mountai 59.48 343 P P 17 18 22.7 -1.5
Y49A IAmb IAmb 17 18 24.1
comp=Z,36nm,1.1s
V60A Jim Taylor Roa 59.48 352 P P 17 18 24.8 +0.6
baz=171
V60A Jim Taylor Roa 59.48 352 P P 17 18 24.2 +0.1
KMSC Kings Mountain 59.53 348 P P 17 18 24.8 +0.3
baz=166,SNR=8.7
KMSC Kings Mountain 59.53 348 P P 17 18 24.5 -0.1
V59A Middlesex 59.62 351 P P 17 18 25.7 +0.6
baz=170,SNR=7.2
W54A Cherokee Point 59.64 347 P P 17 18 25.6 +0.3
baz=166,SNR=11
BG3 Lake Jocassee 59.71 346 P P 17 18 25.5 -0.3
X51A Calhoun 59.74 345 P P 17 18 24.8 -1.3
V58A Windy Hill, Pi 59.78 350 P P 17 18 26.6 +0.4
baz=169,SNR=8.5
V58A Windy Hill, Pi 59.78 350 P P 17 18 25.8 -0.5
V58A sP 17 19 05.5 +0.8
FPAL Fort Paine 59.91 344 P P 17 18 26.7 -0.5
FPAL IAmb IAmb 17 18 27.2
comp=Z,67nm,1.3s
U61A Possum Corner 59.94 353 P P 17 18 27.9 +0.6
baz=172
U61A Possum Corner 59.94 353 P P 17 18 28.1 +0.8
U61A sP 17 19 06.7 +0.9
143A Socs Landing, 59.95 338 P P 17 18 27.5 0.0
V57A Coltrane Farms 59.97 350 P P 17 18 27.8 +0.3
baz=168,SNR=11
V56A Mocksville 60.02 349 P P 17 18 28.5 +0.6
baz=167,SNR=13
U59A Littleton 60.13 351 P P 17 18 29.2 +0.6
baz=170,SNR=10
U59A Littleton 60.13 351 P P 17 18 29.0 +0.4
U59A sP 17 19 07.2 +0.1
U60A Pendleton 60.16 352 P P 17 18 29.2 +0.4
baz=171
V55A Taylorsville 60.19 348 P P 17 18 29.8 +0.7
baz=167,SNR=13
V55A Taylorsville 60.19 348 P P 17 18 29.2 +0.1
X48A Hartselle 60.21 342 P P 17 18 28.5 -0.7
X48A sP 17 19 07.3 -0.3
V54A Nebo 60.26 348 P P 17 18 29.9 +0.3
baz=166,SNR=13
U58A Oxford 60.28 351 P P 17 18 30.2 +0.6
baz=170,SNR=6.9
NATX Nacogdoches 60.31 334 P P 17 18 30.6 +0.6
baz=152
NATX Nacogdoches 60.31 334 P P 17 18 29.4 -0.5
NATX IAmb IAmb 17 18 31.4
comp=Z,69nm,1.0s
V53A Saluda 60.34 347 P P 17 18 29.9 -0.2
V53A IAmb IAmb 17 18 30.7
comp=Z,41nm,0.9s
SNAA Sanae 60.34 161 P P 17 18 30.1 +0.3
SNAA Sanae 60.34 161 P P 17 18 30.0 +0.3
comp=Z,52nm,1.0s,baz=285,slow=6.2,SNR=178
SNAA S S 17 26 36.4 +0.5
comp=Z,0.9nm,1.0s,baz=132,slow=24,SNR=1.7
SNAA Sanae 60.34 161 P P 17 18 29.4 -0.4
SNAA pmax pmax
comp=Z,76nm,1.0s
SNAA Sanae 60.34 161 P P 17 18 29.4 -0.4
Y45A Yeager Farm, C 60.40 340 P P 17 18 30.1 -0.4
RKT Rikitea 60.42 256 eS S 17 26 39.4 +1.2
comp=Z,1μm,25.8s
U57A Blanch 60.44 350 P P 17 18 31.2 +0.5
baz=169,SNR=11
W50A Signal Mountai 60.46 344 P P 17 18 30.4 -0.6
CPCT Cooper Cave 60.51 345 P P 17 18 30.7 -0.6
U56A King 60.53 349 P P 17 18 32.1 +0.7
baz=168,SNR=6.2
U56A King 60.53 349 P P 17 18 31.7 +0.3
TKL Tuckaleechee C 60.53 346 LR LR 17 49 10.1
comp=Z,334nm,18.4s,baz=190,slow=40
TKL Tuckaleechee C 60.53 346 P P 17 18 30.7 -0.7
TKL pmax pmax
comp=Z,51nm,0.9s
TKL Tuckaleechee C 60.53 346 P P 17 18 30.7 -0.7
TKL IAmb IAmb 17 18 31.7
comp=Z,51nm,0.8s

SWET	Sewanee	60.63 344	P	P	17 18 31.4	-0.7	
SWET				sP	17 19 10.8	+0.2	
V52A	Sevierville	60.67 346	P	P	17 18 31.1	-1.3	
435B	Jarrell	60.68 331	P	P	17 18 32.5	0.0	
	baz=149						
T59A	Double "B" Far	60.71 352	P	P	17 18 33.0	+0.5	
	baz=171,SNR=10						
T59A	Double "B" Far	60.71 352	P	P	17 18 32.6	+0.1	
T59A			IAmb	IAmb	17 18 33.7		
	comp=Z,58nm,0.9s						
T60A	Surry	60.77 353	P	P	17 18 33.6	+0.7	
	baz=171						
U55A	TA2, Sparta	60.80 349	P	P	17 18 33.5	+0.3	
	baz=167,SNR=5.8						
V51A	Loudon	60.81 345	P	P	17 18 32.6	-0.7	
T58A	Grand View Acr	60.82 351	P	P	17 18 34.0	+0.7	
	baz=170,SNR=15						
Z41A	Richland Creek	60.95 337	P	P	17 18 34.5	+0.3	
	baz=155						
OXF	Oxford	60.95 340	P	P	17 18 32.8	-1.5	
OXF			pmax	pmax			
	comp=Z,76nm,0.9s						
OXF	Oxford	60.95 340	P	P	17 18 33.1	-1.1	
	baz=158,SNR=5.9						
OXF	Oxford	60.95 340	P	P	17 18 32.8	-1.5	
U54A	Nelsons Funny	60.96 348	P	P	17 18 34.4	+0.1	
	baz=166,SNR=9.4						
U54A	Nelsons Funny	60.96 348	P	P	17 18 34.0	-0.4	
T57A	Hurt	60.98 350	P	P	17 18 35.0	+0.6	
	baz=169,SNR=7.8						
T57A	Hurt	60.98 350	P	P	17 18 34.2	-0.2	
T57A			PcP	sP	17 19 13.5	+0.6	
237A	Washetta, Mont	60.98 334	P	P	17 18 34.6	+0.1	
237A			IAmb	IAmb	17 18 36.0		
	comp=Z,68nm,1.0s						
PLAL	Pickwick Lake	61.00 342	P	P	17 18 32.7	-1.9	
PLAL			IAmb	IAmb	17 18 34.8		
	comp=Z,68nm,1.1s						
T56A	Rocky Mt	61.13 350	P	P	17 18 36.3	+0.9	
	baz=168,SNR=12						
CCAR	Cane Creek	61.18 338	P	P	17 18 35.2	-0.6	
S60A	Water View	61.32 353	P	P	17 18 36.7	+0.1	
	baz=172						
T55A	Pulaski	61.35 349	P	P	17 18 37.6	+0.7	
	baz=167						
V48A	Smith Brothers	61.36 343	P	P	17 18 36.3	-0.7	
BLA	Blacksburg	61.38 349	P	P	17 18 37.5	+0.3	
BLA			pmax	pmax			
	comp=Z,137nm,1.4s						
BLA	Blacksburg	61.38 349	P	P	17 18 37.9	+0.8	
	baz=168,SNR=6.2						
BLA	Blacksburg	61.38 349	P	P	17 18 37.5	+0.3	
S58A	Poland Farm, P	61.40 351	P	P	17 18 37.8	+0.6	
	baz=170						
S58A	Poland Farm, P	61.40 351	P	P	17 18 37.2	0.0	
S58A			IAmb	IAmb	17 19 18.5		
	comp=Z,70nm,1.3s						
X43A	Marvell	61.43 339	P	P	17 18 37.4	0.0	
	baz=157,SNR=6.1						
JCT	Junction City	61.43 329	P	P	17 18 37.4	-0.3	
JCT			pmax	pmax			
	comp=Z,38nm,0.8s						
JCT	Junction City	61.43 329	P	P	17 18 37.8	+0.2	
	baz=147,SNR=18						
JCT	Junction City	61.43 329	P	P	17 18 37.4	-0.3	
JCT			IAmb	IAmb	17 18 38.9		
	comp=Z,38nm,0.8s						
T54A	Tazewell	61.44 348	P	P	17 18 37.6	0.0	
	baz=166,SNR=6.9						
WLAR	White Oak Lake	61.44 337	P	P	17 18 38.3	+0.7	
WLAR				pP	17 19 04.7	+0.3	
S59A	Mechanicsville	61.45 352	P	P	17 18 38.0	+0.5	
	baz=171						
W45A	Hickory Valley	61.48 341	P	P	17 18 36.6	-1.2	
W45A				pP	17 19 04.0	-0.7	
T53A	Wise	61.55 347	P	P	17 18 38.1	-0.2	
	baz=166,SNR=7.4						
CLTN	Cedars of Leba	61.56 344	P	P	17 18 37.8	-0.5	
CLTN				pP	17 19 04.1	-1.0	
HPIG		61.59 322	P	P	17 18 39.3	+0.3	
HPIG			IAmb	IAmb	17 18 40.7		
	comp=Z,36nm,0.8s						
WHTX	Lake Whitney,	61.66 332	P	P	17 18 39.1	0.0	
	baz=150,SNR=5.2						
WHTX	Lake Whitney,	61.66 332	P	P	17 18 38.9	-0.2	
WHTX			PcP	PcP	17 19 19.0	-0.6	
S57A	Dark Hollow, R	61.68 351	P	P	17 18 39.7	+0.6	
	baz=169,SNR=9.4						
S57A	Dark Hollow, R	61.68 351	P	P	17 18 39.5	+0.4	
S56A	Natural Bridge	61.69 350	P	P	17 18 39.8	+0.6	
	baz=169,SNR=6.3						
R58B	Mineral	61.73 352	P	P	17 18 40.2	+0.7	
	baz=170,SNR=11						
R58B	Mineral	61.73 352	P	P	17 18 40.1	+0.7	
R58B			IAmb	IAmb	17 18 40.9		
	comp=Z,54nm,0.9s						
R61A	Willards	61.80 354	P	P	17 18 40.6	+0.8	
	baz=173						
U49A	Red Boiling Sp	61.83 344	P	P	17 18 39.4	-0.7	
U49A			IAmb	IAmb	17 18 40.9		
	comp=Z,103nm,1.6s						
R59A	King George, V	61.86 352	P	P	17 18 41.2	+0.9	
	baz=171						
R60A	Leonardtown, M	61.87 353	P	P	17 18 41.1	+0.8	
	baz=172						
CBN	Corbin Frederi	61.90 352	P	P	17 18 41.0	+0.5	
	baz=171						
S55A	Lewisburg	61.94 349	P	P	17 18 41.6	+0.7	
	baz=168,SNR=16						
WVT	Waverly	62.00 342	P	P	17 18 40.3	-1.0	
WVT			pmax	pmax			
	comp=Z,57nm,0.8s						
WVT	Waverly	62.00 342	P	P	17 18 40.4	-0.8	
	baz=160						
WVT	Waverly	62.00 342	P	P	17 18 40.3	-1.0	
WVT			IAmb	IAmb	17 18 41.5		
	comp=Z,57nm,0.8s						
X40A	Basin Creek Fa	62.06 337	P	P	17 18 41.3	-0.4	
	baz=155						
X40A	Basin Creek Fa	62.06 337	P	P	17 18 41.0	-0.7	
R58A	Rapidan	62.07 352	P	P	17 18 42.4	+0.6	
	baz=170						
T50A	Nancy	62.08 345	P	P	17 18 40.9	-0.9	
S54A	Dingess, Beckl	62.10 349	P	P	17 18 42.0	0.0	
	baz=167,SNR=5.8						
S54A	Dingess, Beckl	62.10 349	P	P	17 18 41.7	-0.3	
S54A			IAmb	IAmb	17 18 42.7		
	comp=Z,50nm,0.8s						
R57A	Stanardsville	62.14 351	P	P	17 18 43.1	+0.9	
	baz=170,SNR=9.0						
S53A	Williamson	62.14 348	P	P	17 18 41.9	-0.3	
	baz=166						
UALR	University of	62.15 338	P	P	17 18 41.9	-0.4	
UALR			IAmb	IAmb	17 18 42.7		
	comp=Z,37nm,0.9s						
R55A	Marlinton	62.37 350	P	P	17 18 44.8	+1.0	
	baz=168,SNR=9.4						
R55A	Marlinton	62.37 350	P	P	17 18 43.9	+0.1	
MIAR	Mount Ida	62.38 337	P	P	17 18 43.3	-0.6	
MIAR			pmax	pmax			
	comp=Z,143nm,1.6s						
MIAR	Mount Ida	62.38 337	P	P	17 18 43.7	-0.2	
	baz=154,SNR=17						
MIAR	Mount Ida	62.38 337	P	P	17 18 43.3	-0.6	
S51A	Beattyville	62.40 347	P	P	17 18 43.2	-0.7	
TX32	Lajitas Array	62.40 326	P	P	17 18 43.9	-0.3	
TXAR	Lajitas Array	62.40 326	P	P	17 18 44.6	+0.4	
	comp=Z,5.1nm,0.7s,baz=150,slow=8.5,SNR=71						
TXAR			PKP2bc		17 47 53.5		
	comp=Z,0.9nm,1.0s,baz=336,slow=2.7,SNR=4.8						
TX31	Lajitas Ar. Si	62.40 326	P	P	17 18 43.9	-0.3	
TX31			IAmb	IAmb	17 18 45.5		
	comp=Z,80nm,1.1s						
R54A	Victor	62.42 349	P	P	17 18 44.2	+0.1	
	baz=167						
Q59A	Harwood	62.47 353	P	P	17 18 44.9	+0.6	
	baz=172						
W41B	Gary Mavity, V	62.48 338	P	P	17 18 44.0	-0.5	
	baz=156,SNR=8.0						
GNAR	Gosnell	62.49 341	P	P	17 18 44.4	-0.1	
Q60A	Greensboro	62.51 354	P	P	17 18 44.6	0.0	
	baz=172						
PEBM	Pemiscott Bayo	62.58 341	P	P	17 18 45.0	-0.1	
WHAR	Wooly Hollow	62.60 338	P	P	17 18 44.2	-1.1	
T47A	Sharon Grove	62.61 343	P	P	17 18 44.1	-1.3	
Q58A	Fox Den Farm,	62.66 352	P	P	17 18 46.1	+0.5	
	baz=171						
Z35A	Perchaven, San	62.73 333	P	P	17 18 46.1	-0.2	
R53A	Hurricane	62.74 348	P	P	17 18 46.0	-0.2	
	baz=166						
Q57A	Strasburg	62.85 351	P	P	17 18 48.2	+1.3	
	baz=170,SNR=13						
LCAR	Lake Charles	62.94 340	P	P	17 18 46.4	-1.1	
LCAR			IAmb	IAmb	17 18 48.1		
	comp=Z,178nm,1.9s						
Q56A	Snyder Ridge,	62.97 351	P	P	17 18 48.7	+1.0	
	baz=169						
W39A	Magazine	63.04 337	P	P	17 18 48.6	+0.4	
	baz=154,SNR=18						
W39A	Magazine	63.04 337	P	P	17 18 48.1	-0.1	
W39A			IAmb	IAmb	17 18 49.3		
	comp=Z,48nm,0.8s						
PARMO	Parma	63.05 341	P	P	17 18 47.6	-0.7	
Q55A	Buckhannon	63.06 350	P	P	17 18 49.3	+0.9	
	baz=168,SNR=9.4						
T45A	Paducah	63.06 342	P	P	17 18 47.9	-0.4	
X37A	Clayton	63.09 335	P	P	17 18 48.4	-0.2	
FCAR	Ozark Folk Cen	63.09 339	P	P	17 18 47.5	-1.1	
P58A	Pank, Wackersv	63.16 352	P	P	17 18 49.7	+0.8	
	baz=171,SNR=5.2						
ABTX	Abilene, Hawle	63.16 331	P	P	17 18 49.1	0.0	
	baz=148,SNR=8.6						
ABTX	Abilene, Hawle	63.16 331	P	P	17 18 48.7	-0.5	
ABTX			IAmb	IAmb	17 18 49.9		
	comp=Z,50nm,1.1s						
Q53A	Leroy	63.17 349	P	P	17 18 49.1	0.0	
	baz=167,SNR=5.3						
Q54A	Coxs Mills	63.17 349	P	P	17 18 49.0	0.0	
	baz=167,SNR=5.6						
Q54A	Coxs Mills	63.17 349	P	P	17 18 48.6	-0.5	
Q54A			IAmb	IAmb	17 18 50.0		
	comp=Z,97nm,1.6s						
R50A	Paris	63.17 346	P	P	17 18 47.6	-1.4	
R50A			IAmb	IAmb	17 18 50.0		
	comp=Z,126nm,1.9s						
P59A	Jarrettsville	63.18 353	P	P	17 18 50.0	+0.9	
	baz=170,SNR=9.7						
P57A	Homestead Farm	63.24 352	P	P	17 18 50.6	+1.2	
	baz=170,SNR=9.0						
P57A	Homestead Farm	63.24 352	P	P	17 18 49.9	+0.5	
P57A			IAmb	IAmb	17 18 51.9		
	comp=Z,106nm,1.4s						
P60A	Greenville	63.30 354	P	P	17 18 50.2	+0.4	
	baz=173						
PBMO	Poplar Bluff	63.36 341	P	P	17 18 49.1	-1.2	
P56A	Dayton Farm, R	63.37 351	P	P	17 18 51.3	+1.0	
	baz=170,SNR=6.9						
R49A	Shelbyville	63.37 345	P	P	17 18 49.1	-1.2	
Q52A	Bidwell	63.41 348	P	P	17 18 50.4	-0.1	
	baz=166						
O61A	Allentown	63.48 355	P	P	17 18 51.4	+0.5	
	baz=174						
P55A	Reedsville	63.52 350	P	P	17 18 52.1	+0.7	
	baz=168,SNR=6.4						
MVL	Millersville	63.55 353	P	P	17 18 51.3	-0.2	
WCI	Wyandotte Cave	63.58 345	P	P	17 18 50.2	-1.5	
WCI			pmax	pmax			
	comp=Z,49nm,0.8s						
WCI	Wyandotte Cave	63.58 345	P	P	17 18 50.8	-0.9	
	baz=162						
WCI	Wyandotte Cave	63.58 345	P	P	17 18 50.2	-1.5	
WCI			IAmb	IAmb	17 18 51.4		
	comp=Z,49nm,0.8s						
MCWV	Mont Chateau	63.67 350	P	P	17 18 52.7	+0.4	
	baz=168,SNR=6.5						
MCWV	Mont Chateau	63.67 350	P	P	17 18 51.7	-0.6	
Q51A	Peebles	63.68 347	P	P	17 18 51.7	-0.7	
	baz=165,SNR=5.4						
Q51A	Peebles	63.68 347	P	P	17 18 51.4	-1.0	
P54A	Burton	63.72 350	P	P	17 18 52.9	+0.3	
	baz=168,SNR=16						
O58A	Lewisberry	63.74 353	P	P	17 18 53.6	+0.9	
	baz=172						
P53A	Whipple	63.76 349	P	P	17 18 52.7	-0.2	
	baz=167,SNR=8.0						
P53A	Whipple	63.76 349	P	P	17 18 52.7	-0.2	
P53A			IAmb	IAmb	17 18 54.3		
	comp=Z,81nm,1.1s						
U40A	Yellville	63.76 338	P	P	17 18 52.4	-0.6	
	baz=155,SNR=21						
U40A	Yellville	63.76 338	P	P	17 18 52.0	-1.0	
U40A			IAmb	IAmb	17 18 53.3		
	comp=Z,45nm,0.8s						
O60A	Telford	63.77 354	P	P	17 18 53.5	+0.6	
	baz=173						
T42A	Van Buren	63.80 340	P	P	17 18 52.2	-0.9	
PAGS	Pennsylvania G	63.82 353	P	P	17 18 53.5	+0.2	
O59A	Rosesonia	63.84 354	P	P	17 18 54.0	+0.6	
	baz=172						
S44A	Carbondale	63.86 342	P	P	17 18 52.5	-1.1	
SIUC	Southern Illin	63.87 342	P	P	17 18 52.7	-0.9	
SIUC			IAmb	IAmb	17 18 53.7		
	comp=Z,49nm,0.8s						
O57A	Amberson	63.91 352	P	P	17 18 54.8	+1.0	
	baz=171,SNR=5.8						
P52A	Corning	64.03 348	P	P	17 18 54.2	-0.5	
	baz=166						
P51A	Williamsport	64.06 348	P	P	17 18 54.4	-0.5	
	baz=165,SNR=6.5						
P51A	Williamsport	64.06 348	P	P	17 18 53.6	-1.2	
P51A			IAmb	IAmb	17 18 55.5		
	comp=Z,105nm,1.4s						
HHAR	Hobbs	64.07 337	P	P	17 18 54.2	-0.8	
O56A	Blue Knob Stat	64.09 352	P	P	17 18 55.9	+0.9	
	baz=170,SNR=13						
O56A	Blue Knob Stat	64.09 352	P	P	17 18 55.0	-0.1	
O56A			IAmb	IAmb	17 18 57.3		
	comp=Z,67nm,1.1s						
N61A	South Mountain	64.11 355	P	P	17 18 56.0	+0.9	
	baz=174						
O55A	Ligonier	64.13 351	P	P	17 18 55.9	+0.6	
	baz=169,SNR=11						
W35A	Tecumseh	64.17 334	P	P	17 18 54.6	-1.1	
N62A	Caumsett State	64.23 356	P	P	17 18 56.5	+0.6	
	baz=175						
N63A	Mattituck	64.23 357	P	P	17 18 56.9	+1.0	
	baz=176						
O54A	Avella	64.27 350	P	P	17 18 56.2	0.0	
	baz=168,SNR=5.1						
O54A	Avella	64.27 350	P	P	17 18 55.8	-0.5	
N60A	Cedar Hill Far	64.30 355	P	P	17 18 56.9	+0.5	
	baz=173						
PAL	Palisades	64.33 356	P	P	17 18 56.9	+0.3	
	baz=175						
P50A	Jamestown	64.34 347	P	P	17 18 56.1	-0.6	
	baz=164,SNR=8.4						
SSPA	Standing Stone	64.36 352	P	P	17 18 56.7	0.0	
SSPA			IAmb	IAmb	17 19 37.6		
	comp=Z,122nm,1.7s						
U38A	Gravette	64.37 337	P	P	17 18 56.0	-1.0	
N59A	State Game Lan	64.40 354	P	P	17 18 58.0	+0.9	
	baz=173,SNR=5.2						
N59A	State Game Lan	64.40 354	P	P	17 18 57.3	+0.2	
N59A			IAmb	IAmb	17 19 38.1		
	comp=Z,125nm,1.8s						
TUL1	Leonard	64.42 336	P	P	17 18 57.0	-0.3	
	baz=152,SNR=7.1						
TUL1	Leonard	64.42 336	P	P	17 18 56.8	-0.4	
TUL1			IAmb	IAmb	17 18 58.4		
	comp=Z,88nm,1.2s						
M66A	Nantucket	64.42 359	P	P	17 18 58.3	+1.2	
	baz=178						
N58A	Sunbury	64.42 353	P	P	17 18 58.0	+0.9	
	baz=172,SNR=7.5						
N58A	Sunbury	64.42 353	P	P	17 18 57.3	+0.1	
N58A			IAmb	IAmb	17 18 59.3		
	comp=Z,62nm,1.2s						
N57A	Milroy	64.44 352	P	P	17 18 57.9	+0.6	
	baz=171,SNR=9.0						
O52A	Adamsville	64.45 349	P	P	17 18 57.2	-0.2	
	baz=167,SNR=5.7						
O52A	Adamsville	64.45 349	P	P	17 18 56.7	-0.7	
O52A			IAmb	IAmb	17 18 57.8		
	comp=Z,42nm,0.8s						
P49A	Miami Univ. Ec	64.46 346	P	P	17 18 56.5	-0.9	
	baz=164,SNR=8.9						
ODNJ	Ogdensburg	64.47 355	P	P	17 18 57.3	-0.2	
O53A	New Philadelph	64.47 349	P	P	17 18 57.3	-0.2	
	baz=167,SNR=6.1						
OLIL	Olney	64.52 343	P	P	17 18 56.4	-1.5	
OLIL			IAmb	IAmb	17 18 58.1		
	comp=Z,182nm,1.9s						
BLO	Bloomington	64.53 345	P	P	17 18 56.7	-1.2	
BLO			pmax	pmax			
	comp=Z,41nm,0.8s						
BLO	Bloomington	64.53 345	P	P	17 18 56.7	-1.2	
			IAmb	IAmb	17 18 57.6		
	comp=Z,41nm,0.8s						
P48A	Milroy	64.55 346	P	P	17 18 56.1	-1.9	
WMOK	Wichita Mounta	64.59 333	P	P	17 18 57.6	-0.8	
WMOK			pmax	pmax			
	comp=Z,13nm,0.8s						
WMOK	Wichita Mounta	64.59 333	P	P	17 18 57.8	-0.7	
	baz=149,SNR=7.8						
WMOK	Wichita Mounta	64.59 333	P	P	17 18 57.6	-0.8	
O51A	Pataskala	64.62 348	P	P	17 18 58.1	-0.4	
	baz=166,SNR=10						
M63A	Gales Ferry	64.62 357	P	P	17 18 59.4	+0.9	
	baz=176						
M61A	Granite Spring	64.63 356	P	P	17 18 59.1	+0.6	
	baz=175						
N55A	Marion Center	64.65 351	P	P	17 18 59.4	+0.7	
	baz=170,SNR=22						
N56A	West Decatur	64.69 352	P	P	17 18 59.5	+0.5	
	baz=170,SNR=5.6						
M62A	Hamden	64.70 356	P	P	17 18 59.5	+0.5	
	baz=176						
M60A	Port Jervis	64.71 355	P	P	17 18 59.8	+0.7	
	baz=174						
M64A	Tiverton	64.74 358	P	P	17 18 59.7	+0.5	
	baz=177						
ACSO	Alum Creek Sta	64.78 348	P	P	17 18 58.9	-0.6	
	baz=165,SNR=8.8						
ACSO	Alum Creek Sta	64.78 348	P	P	17 18 58.3	-1.2	
ACSO			IAmb	IAmb	17 19 00.2		
	comp=Z,77nm,1.1s						
CCM	Cathedral Cave	64.79 340	P	P	17 18 59.0	-0.6	
CCM			pmax	pmax			
	comp=Z,58nm,0.8s						
CCM	Cathedral Cave	64.79 340	P	P	17 18 59.1	-0.5	
	baz=157						
CCM	Cathedral Cave	64.79 340	P	P	17 18 59.0	-0.6	
CCM			IAmb	IAmb	17 18 59.9		
	comp=Z,58nm,0.8s						
O50A	Cable	64.82 347	P	P	17 18 59.1	-0.7	
	baz=165,SNR=8.0						
NVL	N'lazarevskaya	64.90 159	iP	P	17 18 57.4	-2.6	
NVL			pmax	pmax			
	comp=Z,93nm,1.0s						
M58A	Price's Panora	64.92 353	P	P	17 19 01.4	+0.9	
	baz=172,SNR=11						
Q44A	Meyer Farm, Va	64.92 343	P	P	17 18 59.3	-1.2	
Q44A			IAmb	IAmb	17 19 00.5		
	comp=Z,58nm,1.1s						
N53A	Lisbon	64.95 350	P	P	17 19 00.7	0.0	
	baz=168						
N53A	Lisbon	64.95 350	P	P	17 19 00.2	-0.4	
N53A			IAmb	IAmb	17 19 02.2		
	comp=Z,102nm,1.5s						
M57A	Sunshine Farm,	64.96 353	P	P	17 19 01.6	+0.9	
	baz=171,SNR=8.1						
M57A	Sunshine Farm,	64.96 353	P	P	17 19 01.1	+0.4	
M57A			IAmb	IAmb	17 19 02.3		
	comp=Z,37nm,0.8s						
N54A	Moraine State	64.97 351	P	P	17 19 01.1	+0.4	
	baz=168,SNR=12						
N54A	Moraine State	64.97 351	P	P	17 19 00.6	-0.2	
M59A	Waymart	64.99 354	P	P	17 19 01.8	+0.9	
	baz=173,SNR=13						
KSPA	Keystone Colle	65.04 354	P	P	17 19 01.7	+0.5	
KSPA			IAmb	IAmb	17 19 02.7		
	comp=Z,38nm,0.8s						
L63A	North Scituate	65.06 358	P	P	17 19 02.3	+1.0	
	baz=177,SNR=7.8						
N52A	McGinn's Farm,	65.10 349	P	P	17 19 01.4	-0.2	
	baz=167						
L64A	Middleborough	65.11 358	P	P	17 19 02.4	+0.9	
	baz=178						
BRYW	Bryant College	65.11 358	P	P	17 19 01.6	-0.1	
P46A	Rosedale	65.12 344	P	P	17 18 60.0	-1.7	
MNTX	Cornudas Mount	65.17 326	P	P	17 19 02.0	-0.2	
	baz=143,SNR=49						
MNTX	Cornudas Mount	65.17 326	P	P	17 19 01.7	-0.6	
MNTX			IAmb	IAmb	17 19 03.5		
	comp=Z,117nm,1.8s						
MNTX			pP	pP	17 19 28.8	-0.5	
M56A	Emporium	65.23 352	P	P	17 19 03.0	+0.5	
	baz=170,SNR=9.6						
M56A	Emporium	65.23 352	P	P	17 19 02.0	-0.4	
M56A			IAmb	IAmb	17 19 04.3		
	comp=Z,135nm,1.4s						
O48A	Farmland	65.25 346	P	P	17 19 01.6	-1.0	
	baz=163,SNR=12						
M55A	Ridgway	65.29 352	P	P	17 19 03.4	+0.5	
	baz=170,SNR=14						
M55A	Ridgway	65.29 352	P	P	17 19 03.2	+0.4	
M55A			IAmb	IAmb	17 19 04.5		
	comp=Z,111nm,1.1s						
N51A	Ashland	65.33 349	P	P	17 19 02.5	-0.6	
	baz=166						
N51A	Ashland	65.33 349	P	P	17 19 02.1	-0.9	
N51A			IAmb	IAmb	17 19 03.1		
	comp=Z,40nm,0.9s						
R40A	Maddies Statio	65.33 340	P	P	17 19 02.3	-0.8	
N50A	Nevada	65.33 348	P	P	17 19 02.5	-0.5	
	baz=165,SNR=6.5						
L60A	Shokan	65.34 355	P	P	17 19 04.3	+1.2	
	baz=174,SNR=6.8						
M54A	Oil Creek Stat	65.46 351	P	P	17 19 04.2	+0.3	
	baz=169,SNR=16						
M54A	Oil Creek Stat	65.46 351	P	P	17 19 03.6	-0.3	
M54A			IAmb	IAmb	17 19 05.4		
	comp=Z,89nm,0.9s						
L61A	Hillsdale 1, H	65.49 356	P	P	17 19 05.0	+0.9	
	baz=175,SNR=6.5						
L58A	Harry Jones Me	65.53 354	P	P	17 19 05.4	+1.1	
	baz=173,SNR=12						
M53A	WI Miller and	65.54 350	P	P	17 19 04.2	-0.2	
	baz=168,SNR=6.2						
T35A	Sooner Cattle	65.57 336	P	P	17 19 04.2	-0.5	
T35A			IAmb	IAmb	17 19 06.1		
	comp=Z,76nm,1.1s						
L57A	Andrews Acres	65.59 353	P	P	17 19 05.4	+0.6	
	baz=172,SNR=6.6						
L59A	Walton	65.60 355	P	P	17 19 05.8	+1.0	
	baz=174,SNR=15						
L59A	Walton	65.60 355	P	P	17 19 04.9	+0.1	
ALLY	Alegheny Colle	65.67 351	P	P	17 19 05.4	+0.2	
ALLY			IAmb	IAmb	17 19 06.5		
	comp=Z,80nm,0.9s						
M51A	Elyria	65.69 349	P	P	17 19 05.2	-0.2	
	baz=166						
BINY	Binghamton	65.69 354	P	P	17 19 06.3	+0.9	
	baz=173,SNR=11						
BINY	Binghamton	65.69 354	P	P	17 19 05.8	+0.4	
BINY			IAmb	IAmb	17 19 07.7		
	comp=Z,104nm,1.2s						
L61B	Northampton	65.70 357	P	P	17 19 06.3	+0.9	
	baz=176,SNR=8.6						
HRV	Adam Dziewonsk	65.70 358	P	P	17 19 06.1	+0.7	
HRV			pmax	pmax			
	comp=Z,67nm,0.9s						
HRV	Adam Dziewonsk	65.70 358	P	P	17 19 06.4	+1.0	
	baz=177						
HRV	Adam Dziewonsk	65.70 358	P	P	17 19 06.1	+0.7	
HRV			IAmb	IAmb	17 19 07.1		
	comp=Z,67nm,0.9s						
MSTX	Muleshoe	65.72 329	P	P	17 19 05.7	-0.2	
	baz=146,SNR=22						
MSTX	Muleshoe	65.72 329	P	P	17 19 04.9	-1.0	
M52A	Chesterland	65.75 350	P	P	17 19 05.8	0.0	
	baz=167						
P43A	Skaggs, Pawnee	65.75 342	P	P	17 19 04.4	-1.4	
SRIG	Santa Rosalia	65.76 318	P	P	17 19 06.6	+0.5	
SRIG			IAmb	IAmb	17 19 08.3		
	comp=Z,41nm,0.9s						
N48A	Decatur	65.80 346	P	P	17 19 05.2	-0.8	
	baz=164,SNR=8.5						
L56A	Greenwood	65.80 353	P	P	17 19 06.5	+0.4	
	baz=171,SNR=10.0						
L56A	Greenwood	65.80 353	P	P	17 19 05.8	-0.3	
L56A			IAmb	IAmb	17

K62A Royalston 65.89 357 P **P** 17 19 07.8 +1.1
baz=176
K62A Royalston 65.89 357 P **P** 17 19 07.1 +0.4
K62A IAmb IAmb 17 19 47.6
comp=Z,96nm,1.5s
K60A Five Rivers En 65.94 356 P **P** 17 19 08.2 +1.3
baz=175
K61A Williamstown 65.95 356 P **P** 17 19 08.2 +1.1
baz=175,SNR=6.3
L55A Hinsdale 65.95 352 P **P** 17 19 07.7 +0.6
baz=170,SNR=10
AMTX Amarillo 65.97 331 P **P** 17 19 07.3 -0.1
baz=147
AMTX Amarillo 65.97 331 P **P** 17 19 06.5 -0.9
L53A Girard 65.98 351 P **P** 17 19 07.3 +0.1
baz=168,SNR=6.8
TRY Troy 66.04 356 P **P** 17 19 07.7 +0.2
ERPA Erie 66.10 351 P **P** 17 19 08.1 +0.1
baz=169,SNR=7.7
ERPA Erie 66.10 351 P **P** 17 19 07.2 -0.8
L54A Sinclairville 66.12 351 P **P** 17 19 08.8 +0.6
baz=169,SNR=18
K59A Cooperstown 66.17 355 P **P** 17 19 09.5 +1.0
baz=174,SNR=27
M49A Liberty Center 66.17 347 P **P** 17 19 07.7 -0.7
baz=165,SNR=12
WVNY West Valley, N 66.19 352 P **P** 17 19 08.1 -0.5
HSIG 66.21 320 P **P** 17 19 09.5 +0.5
K58A Earlville 66.22 354 P **P** 17 19 09.7 +0.9
baz=173,SNR=14
K58A Earlville 66.22 354 P **P** 17 19 08.4 -0.4
K58A IAmb IAmb 17 19 10.3
comp=Z,75nm,0.9s
K57A Scipio Center 66.27 354 P **P** 17 19 09.4 +0.3
baz=172,SNR=7.1
K56A Middlesex 66.33 353 P **P** 17 19 09.9 +0.4
baz=171,SNR=7.5
M48A Edgerton 66.33 347 P **P** 17 19 08.9 -0.6
baz=164
P40A Paris 66.39 340 P **P** 17 19 09.1 -0.8
M47A Cromwell 66.40 346 P **P** 17 19 09.2 -0.8
baz=163
K54A Basiliko Farm, 66.41 352 P **P** 17 19 10.5 +0.5
baz=170,SNR=8.5
MMNY Mt. Morris Dam 66.43 353 P **P** 17 19 08.9 -1.2
MMNY IAmb IAmb 17 19 11.8
comp=Z,120nm,1.3s
J62A Henniker 66.43 357 P **P** 17 19 11.2 +1.1
baz=177,SNR=6.3
K55A Perry 66.44 352 P **P** 17 19 10.4 +0.2
baz=170
J63A Strafford 66.46 358 P **P** 17 19 09.7 -0.5
baz=178
L50A Kingsville 66.50 349 P **P** 17 19 09.7 -0.8
baz=166
J60A Lant Hill Farm 66.53 356 P **P** 17 19 11.8 +1.1
baz=175,SNR=8.2
HDIL Hopedale 66.55 343 P **P** 17 19 09.7 -1.1
baz=159
HDIL Hopedale 66.55 343 P **P** 17 19 09.4 -1.4
HDIL IAmb IAmb 17 19 10.5
comp=Z,49nm,0.8s
J61A Chester 66.58 357 P **P** 17 19 12.5 +1.5
baz=176,SNR=10
ACCN Adirondack Com 66.69 356 P **P** 17 19 11.7 0.0
ACCN IAmb IAmb 17 19 14.3
comp=Z,118nm,1.5s
L48A N Adams 66.71 347 P **P** 17 19 11.0 -0.9
baz=164,SNR=15
QSPA South Pole Qui 66.73 180 P **P** 17 19 13.2 +1.2
comp=Z,62nm,0.6s,baz=332,slow=0.4,SNR=685
QSPA pP **PcP** 17 19 40.0 -0.2
comp=Z,65nm,0.9s,baz=136,slow=4.3,SNR=7.5
QSPA S **S** 17 27 56.4 +1.0
comp=Z,2.4nm,1.2s,baz=12,slow=23,SNR=6.4
QSPA South Pole Qui 66.73 180 P **P** 17 19 12.2 +0.2
QSPA pP **pP** 17 19 39.5 +0.4
J58A Remsen 66.78 355 P **P** 17 19 13.0 +0.7
baz=173,SNR=7.6
J58A Remsen 66.78 355 P **P** 17 19 12.1 -0.2
J58A IAmb IAmb 17 19 14.6
comp=Z,59nm,1.2s
J59A Piesco 66.83 355 P **P** 17 19 13.7 +1.1
baz=174,SNR=30
J59A Piesco 66.83 355 P **P** 17 19 12.6 0.0
J59A sP **sP** 17 19 51.8 +0.2
J56A Wolcott 66.85 353 P **P** 17 19 13.2 +0.5
baz=172,SNR=9.0
J56A Wolcott 66.85 353 P **P** 17 19 12.2 -0.5
J56A IAmb IAmb 17 19 14.0
comp=Z,78nm,0.8s
K52A Tillsonburg 66.86 350 P **P** 17 19 12.6 -0.2
baz=168
J57A Williamstown 66.90 354 P **P** 17 19 13.6 +0.6
baz=173,SNR=12
J57A Williamstown 66.90 354 P **P** 17 19 13.2 +0.2
J57A IAmb IAmb 17 19 14.8
comp=Z,94nm,1.1s
J57A **sP** 17 19 52.3 +0.3
AAM Ann Arbor 66.90 348 P **P** 17 19 12.7 -0.4
baz=165
MEDO Medina 66.92 352 P **P** 17 19 13.0 -0.2
MEDO sP **sP** 17 19 51.6 -0.5
K51A Iona Station 66.93 350 P **P** 17 19 12.9 -0.3
baz=167
HNH Hanover 66.93 357 P **P** 17 19 14.8 +1.6
J55A Hilton 66.94 353 P **P** 17 19 13.4 +0.1
baz=171
J55A Hilton 66.94 353 P **P** 17 19 12.6 -0.7
J55A IAmb IAmb 17 19 15.0
comp=Z,175nm,1.8s
J55A sP **sP** 17 19 52.6 +0.3
P38A Dawn 66.95 339 P **P** 17 19 12.4 -1.0
P38A IAmb IAmb 17 19 13.8
comp=Z,68nm,0.8s
319A Douglas 67.01 323 P **P** 17 19 15.1 +0.9
319A IAmb IAmb 17 19 16.4
comp=Z,51nm,0.8s
J54A Appleton 67.05 352 P **P** 17 19 14.2 +0.3
baz=170
J54A Appleton 67.05 352 P **P** 17 19 13.5 -0.5
J54A IAmb IAmb 17 19 15.0
comp=Z,41nm,0.8s
I62A Tamworth 67.06 358 P **P** 17 19 15.2 +1.2
baz=177,SNR=6.3
I62A Tamworth 67.06 358 P **P** 17 19 14.8 +0.7
I62A IAmb IAmb 17 19 16.6
comp=Z,52nm,1.1s
I64A Boothbay 67.07 359 P **P** 17 19 15.5 +1.4
baz=179
121A Cookes Peak, D 67.08 325 P **P** 17 19 16.4 +1.7
baz=141,SNR=25
121A Cookes Peak, D 67.08 325 P **P** 17 19 15.3 +0.6
I58A Old Forge 67.08 355 P **P** 17 19 15.2 +0.9
baz=174,SNR=21
I59A Olmsteadville 67.11 356 P **P** 17 19 15.4 +1.0
baz=175,SNR=21
I60A Shoreham 67.12 356 P **P** 17 19 15.5 +1.1
baz=175,SNR=20
I61A Oroboro, Fairl 67.15 357 P **P** 17 19 16.1 +1.5
baz=176
K50A Casco 67.17 349 P **P** 17 19 14.1 -0.6
baz=166
K50A Casco 67.17 349 P **P** 17 19 13.8 -1.0
L46A Eue Claire 67.18 346 P **P** 17 19 13.8 -1.0
baz=162
L46A Eue Claire 67.18 346 P **P** 17 19 13.3 -1.5
L46A IAmb IAmb 17 19 14.3
comp=Z,62nm,0.8s
I63A Otisfield 67.21 358 P **P** 17 19 16.3 +1.3
baz=178,SNR=7.4
I63A Otisfield 67.21 358 P **P** 17 19 16.6 +1.6
J52A Paris 67.27 351 P **P** 17 19 15.3 -0.1
baz=168,SNR=16
NCB Newcomb 67.31 356 P **P** 17 19 15.7 0.0
NCB IAmb IAmb 17 19 17.8
comp=Z,89nm,1.3s
K49A Clarkson 67.33 348 P **P** 17 19 15.2 -0.6
baz=165
I57A Carthage 67.39 354 P **P** 17 19 16.9 +0.7
baz=173,SNR=16
LBNH Lisbon 67.45 357 P **P** 17 19 18.1 +1.6
LBNH *SP **sP** 17 19 55.9 +0.3
LBNH pmax pmax
comp=Z,97nm,1.2s
LBNH Lisbon 67.45 357 P **P** 17 19 17.7 +1.2
baz=177,SNR=9.1
LBNH Lisbon 67.45 357 P **P** 17 19 18.1 +1.6
LBNH IAmb IAmb 17 19 19.2
comp=Z,97nm,1.2s
LBNH sP **sP** 17 19 55.9 +0.3
K48A Perry 67.48 348 P **P** 17 19 16.0 -0.7
baz=165,SNR=23
PECO Prince Edward 67.51 353 P **P** 17 19 16.9 0.0
PECO IAmb IAmb 17 19 18.6
comp=Z,127nm,1.3s
PECO sP **sP** 17 19 56.6 +0.7
K47A Vermontville 67.53 347 P **P** 17 19 16.0 -1.0
baz=164,SNR=9.7
KSU1 Kansas State U 67.54 337 P **P** 17 19 16.7 -0.5
baz=152
KSU1 Kansas State U 67.54 337 P **P** 17 19 16.1 -1.0
KSU1 IAmb IAmb 17 19 17.4
comp=Z,39nm,0.8s
K46A Dorr 67.71 346 P **P** 17 19 17.1 -1.0
baz=163
WVL Waterville 67.71 359 P **P** 17 19 18.6 +0.5
WVL IAmb IAmb 17 19 20.6
comp=Z,70nm,1.0s
WVL sP **sP** 17 19 58.1 +0.9
L44A Lake County Fo 67.71 345 P **P** 17 19 17.5 -0.7
baz=161
I53A Kortright Cn E 67.72 351 P **P** 17 19 18.0 -0.1
baz=169
R32A Long Quarter, 67.73 335 P **P** 17 19 18.2 -0.3
H61A Lyndonville 67.74 357 P **P** 17 19 19.8 +1.5
baz=177,SNR=13
H58A Gabriels 67.75 356 P **P** 17 19 19.3 +0.9
baz=174,SNR=25
H62A Milan 67.75 358 P **P** 17 19 19.7 +1.3
baz=177,SNR=5.6
H62A Milan 67.75 358 P **P** 17 19 18.9 +0.5
H62A IAmb IAmb 17 20 00.0
comp=Z,164nm,1.9s
H64A Troy 67.78 360 P **P** 17 19 19.9 +1.3
baz=179,SNR=7.4
H60A Morristown 67.80 357 P **P** 17 19 20.0 +1.3
baz=176,SNR=7.9
H63A New Sharon 67.81 359 P **P** 17 19 20.2 +1.4
baz=179,SNR=12
J49A Marlette 67.83 349 P **P** 17 19 17.8 -1.1
baz=166,SNR=7.3
H65A Eastbrook 67.84 0 P **P** 17 19 20.0 +1.1
baz=180,SNR=7.4
Y22D IRIS PASSCAL I 67.84 326 P **P** 17 19 21.1 +1.7
baz=142
EMMW East Machias 67.86 1 P **P** 17 19 19.5 +0.5
EMMW IAmb IAmb 17 19 20.8
comp=Z,50nm,0.9s
EMMW sP **sP** 17 19 58.7 +0.6
I55A Frankford 67.87 353 P **P** 17 19 19.4 +0.3
baz=171,SNR=18
J48A Bridge Port 67.89 348 P **P** 17 19 18.7 -0.6
baz=165,SNR=8.6
J48A Bridge Port 67.89 348 P **P** 17 19 18.2 -1.1
J48A IAmb IAmb 17 19 19.3
comp=Z,79nm,0.8s
I51A Listowel 67.91 350 P **P** 17 19 19.3 -0.1
baz=168,SNR=9.0
N38A Joes South For 67.91 340 P **P** 17 19 18.4 -1.1
N38A IAmb IAmb 17 19 20.2
comp=Z,64nm,0.8s
H66A Whiting 67.94 1 P **P** 17 19 20.7 +1.2
baz=181,SNR=7.3
H59A Caledville 67.94 356 P **P** 17 19 20.6 +1.0
baz=175,SNR=14
LONY Lake Ozonia 67.98 355 P **P** 17 19 20.8 +0.9
baz=174,SNR=18
LONY Lake Ozonia 67.98 355 P **P** 17 19 20.3 +0.5
LONY IAmb IAmb 17 19 22.0
comp=Z,130nm,1.4s
LONY sP **sP** 17 19 59.8 +0.9
L42A Oliver, Polo 68.00 343 P **P** 17 19 19.0 -1.0
J47A Sunmer 68.03 347 P **P** 17 19 19.3 -0.9
baz=164,SNR=5.4
J47A Sunmer 68.03 347 P **P** 17 19 19.1 -1.1
J47A IAmb IAmb 17 19 20.2
comp=Z,63nm,0.8s
I52A Shelburne 68.04 351 P **P** 17 19 20.5 +0.2
baz=169
H56A Elgin 68.09 354 P **P** 17 19 21.2 +0.7
baz=172,SNR=16
FRNY Flat Rock 68.13 356 P **P** 17 19 21.2 +0.5
FRNY IAmb IAmb 17 19 23.0
comp=Z,104nm,1.1s
FRNY sP **sP** 17 20 00.3 +0.5
H55A Tweed 68.14 353 P **P** 17 19 21.3 +0.5
baz=172,SNR=16
DELO Deloro Mine 68.16 353 P **P** 17 19 19.8 -1.1
DELO IAmb IAmb 17 19 22.7
comp=Z,131nm,1.6s
DELO sP **sP** 17 19 59.6 -0.4
G63A Kingsbury 68.26 359 P **P** 17 19 22.7 +1.2
baz=179,SNR=17
GGN Saint George 68.28 1 P **P** 17 19 22.1 +0.5
GGN sP **sP** 17 20 00.9 +0.2
GGN IAmb IAmb 17 20 02.7
comp=Z,103nm,1.4s
ANMO Albuquerque 68.29 327*d* iP **P** 17 19 23.3 +1.0
ANMO pmax pmax
comp=Z,50nm,0.9s
ANMO Albuquerque 68.29 327 P **P** 17 19 23.8 +1.5
baz=143
ANMO Albuquerque 68.29 327 P **P** 17 19 23.0 +0.7
K43A Burlington 68.31 344 P **P** 17 19 21.2 -0.7
G60A Masonville 68.32 357 P **P** 17 19 23.2 +1.2
baz=176,SNR=11
H53A Bolvgeon 68.33 352 P **P** 17 19 22.1 +0.1
baz=170,SNR=12
I49A Point Hope 68.34 349 P **P** 17 19 21.3 -0.8
baz=166
I49A Point Hope 68.34 349 P **P** 17 19 20.7 -1.4
I49A IAmb IAmb 17 19 22.5
comp=Z,55nm,0.8s
G65A Princeton 68.35 1 P **P** 17 19 23.2 +1.2
baz=181,SNR=6.2
G65A Princeton 68.35 1 P **P** 17 19 22.3 +0.2
G65A IAmb IAmb 17 19 24.4
comp=Z,90nm,1.3s
G65A sP **sP** 17 20 01.9 +0.7
G59A Clarenceville 68.35 357 P **P** 17 19 23.1 +1.1
baz=176
G62A West of Eustis 68.38 359 P **P** 17 19 23.8 +1.5
baz=178,SNR=26
G62A West of Eustis 68.38 359 P **P** 17 19 22.9 +0.6
G62A sP **sP** 17 20 02.5 +1.1
G64A Maxfield 68.39 360 P **P** 17 19 23.3 +1.0
baz=180,SNR=11
PKME Peaks-Kenny Pk 68.41 359 P **P** 17 19 23.5 +1.1
baz=179,SNR=12
PKME Peaks-Kenny Pk 68.41 359 P **P** 17 19 22.7 +0.2
PKME IAmb IAmb 17 19 24.2
comp=Z,54nm,0.8s
G58A Ormstown 68.47 356 P **P** 17 19 23.5 +0.7
baz=175
G61A St-Isidore-de- 68.47 358 P **P** 17 19 24.4 +1.5
baz=177,SNR=14
CBKS Cedar Bluff 68.48 334 P **P** 17 19 23.4 +0.3
CBKS pmax pmax
comp=Z,188nm,1.2s
CBKS Cedar Bluff 68.48 334 P **P** 17 19 23.7 +0.6
baz=149,SNR=20
CBKS Cedar Bluff 68.48 334 P **P** 17 19 23.4 +0.3
L40A Anamosa 68.48 342 P **P** 17 19 22.2 -0.8
L40A IAmb IAmb 17 19 23.7
comp=Z,89nm,0.8s
G57A Newington 68.49 355 P **P** 17 19 23.9 +0.9
baz=174,SNR=19
J45A Montague 68.55 346 P **P** 17 19 22.5 -1.0
baz=162
TUC Tucson 68.56 322 P **P** 17 19 24.3 +0.5
TUC pmax pmax
comp=Z,159nm,1.6s
TUC Tucson 68.56 322 P **P** 17 19 25.0 +1.2
baz=139
TUC Tucson 68.56 322 P **P** 17 19 24.3 +0.5
TUC IAmb IAmb 17 19 26.7
comp=Z,159nm,1.6s
H52A Wyevale 68.56 351 P **P** 17 19 23.4 -0.1
baz=169,SNR=8.7
SADO Sadowa 68.59 352 P **P** 17 19 23.0 -0.6
SADO IAmb IAmb 17 19 24.9
comp=Z,146nm,1.4s
PLVO Plevna 68.62 354 P **P** 17 19 24.0 +0.2
PLVO IAmb IAmb 17 19 25.7
comp=Z,137nm,1.5s
LIC Lamto 68.69 73 *e*P **P** 17 19 24.9 -0.1
comp=Z,10nm,0.5s
I47A Gladwin 68.72 348 P **P** 17 19 23.7 -0.7
baz=164
I47A Gladwin 68.72 348 P **P** 17 19 23.6 -0.9
I47A IAmb IAmb 17 19 24.4
comp=Z,56nm,0.8s
I48A Sherman Twp 68.73 348 P **P** 17 19 24.0 -0.6
baz=165,SNR=9.0
N35A Tabor 68.76 338 P **P** 17 19 23.8 -1.0
N35A IAmb IAmb 17 19 25.1
comp=Z,82nm,0.8s
G55A Calabogie 68.79 354 P **P** 17 19 25.3 +0.5
baz=172,SNR=15
I46A Reed City 68.84 347 P **P** 17 19 24.1 -1.1
baz=163,SNR=8.0
F63A Nahmakanta, Br 68.84 360 P **P** 17 19 26.2 +1.0
baz=180,SNR=7.4
F63A Nahmakanta, Br 68.84 360 P **P** 17 19 25.7 +0.5
F63A IAmb IAmb 17 20 07.2
comp=Z,121nm,1.6s
GBN Guysborough 68.85 5 P **P** 17 19 25.2 0.0
GBN IAmb IAmb 17 20 05.6
comp=Z,104nm,1.8s
G53A Haliburton 68.87 352 P **P** 17 19 25.7 +0.4
baz=170,SNR=21
ORIO Orleans, Innes 68.88 355 P **P** 17 19 26.0 +0.6
baz=173
TIC Toumodi 68.89 73 *e*P **P** 17 19 26.9 +0.7
SCIA State Center 68.92 341 P **P** 17 19 25.5 -0.3
baz=156,SNR=5.9
SCIA State Center 68.92 341 P **P** 17 19 25.5 -0.3
SCIA IAmb IAmb 17 19 26.8
comp=Z,133nm,1.3s
JFWS Jewell Farm 69.00 343 P **P** 17 19 25.6 -0.7
JFWS pmax pmax
comp=Z,69nm,0.7s
JFWS Jewell Farm 69.00 343 P **P** 17 19 26.0 -0.2
baz=159,SNR=18
JFWS Jewell Farm 69.00 343 P **P** 17 19 25.6 -0.7
JFWS IAmb IAmb 17 19 26.5
comp=Z,69nm,0.7s
F64A Sherman 69.00 0 P **P** 17 19 27.3 +1.1
baz=180,SNR=13
F64A Sherman 69.00 0 P **P** 17 19 26.0 -0.1
F64A IAmb IAmb 17 19 27.9
comp=Z,48nm,0.8s
F64A sP **sP** 17 20 05.3 0.0
KIC Kosan Boka 69.00 73 *e*P **P** 17 19 26.8 -0.1
comp=Z,27nm,0.5s
DBIC Dimbokro 69.05 73 P **P** 17 19 27.7 +0.5
comp=Z,19nm,0.7s,baz=216,slow=7.1,SNR=37
DBIC pP **pP** 17 19 54.2 0.0
comp=Z,15nm,0.5s,baz=239,slow=3.4,SNR=3.1
DBIC S **S** 17 28 23.0 -1.3
comp=Z,6.1nm,1.0s,baz=129,slow=23,SNR=8.3
DBIC LR LR 17 49 05.9
comp=Z,349nm,20.3s,baz=220,slow=35
DBIC Dimbokro 69.05 73 P **P** 17 19 27.1 0.0
DBIC IAmb IAmb 17 19 33.7
comp=Z,78nm,1.1s
LMN Caledonia Moun 69.08 3 P **P** 17 19 26.8 +0.1
T25A Trinidad 69.08 330 P **P** 17 19 28.3 +1.1
baz=145,SNR=18
G54A Lake Saint Pet 69.08 353 P **P** 17 19 27.0 +0.4
baz=171,SNR=11
I45A Fountain 69.09 346 P **P** 17 19 25.7 -1.0
baz=163
F59A Saint Guilaume 69.09 357 P **P** 17 19 27.3 +0.6
baz=176
F61A St Evariste 69.15 358 P **P** 17 19 27.8 +0.7
baz=178,SNR=7.0
H48A Harrisville 69.16 349 P **P** 17 19 26.8 -0.4
baz=166
H48A Harrisville 69.16 349 P **P** 17 19 26.2 -1.0
H48A IAmb IAmb 17 19 57.3
comp=Z,72nm,0.7s
F58A St-Lin Laurent 69.17 356 P **P** 17 19 27.7 +0.5
baz=175
F57A Harrington 69.17 355 P **P** 17 19 27.5 +0.3
baz=174
F60A Warwick 69.17 358 P **P** 17 19 27.7 +0.5
baz=177,SNR=11
H47A Mio 69.22 348 P **P** 17 19 27.0 -0.6
baz=165
N33A J Bar K, Exete 69.28 337 P **P** 17 19 27.9 -0.2
F55A Otter Lake 69.33 354 P **P** 17 19 28.5 +0.3
baz=172
214A Organ Pipe Nat 69.45 321 P **P** 17 19 31.0 +1.7
baz=137,SNR=49
214A Organ Pipe Nat 69.45 321 P **P** 17 19 30.8 +1.5
K38A Parkersburg 69.46 341 P **P** 17 19 28.4 -0.7
K38A IAmb IAmb 17 19 29.2
comp=Z,51nm,0.9s
GLMI Grayling 69.52 348 P **P** 17 19 28.8 -0.6
baz=164
E60A Ste Agathe de 69.56 358 P **P** 17 19 30.2 +0.7
baz=177,SNR=5.4
E63A Oxbow 69.56 0 P **P** 17 19 30.6 +1.0
baz=180,SNR=6.5
E63A Oxbow 69.56 0 P **P** 17 19 30.4 +0.8
E63A IAmb IAmb 17 20 11.5
comp=Z,126nm,1.6s
E64A Bridgewater 69.56 1 P **P** 17 19 30.6 +1.0
baz=181,SNR=7.4
TRQ Mont Tremblant 69.57 356 P **P** 17 19 29.9 +0.1
TRQ **PcP** 17 19 49.2 -2.9
I42A Draeger Farm, 69.57 344 P **P** 17 19 29.1 -0.6
I42A IAmb IAmb 17 19 30.1
comp=Z,74nm,0.8s
E61A Lac Etchemin 69.59 359 P **P** 17 19 31.1 +1.2
baz=178,SNR=6.1
H45A Beulah 69.61 347 P **P** 17 19 29.3 -0.7
baz=163
F52A Sundridge 69.62 352 P **P** 17 19 30.2 +0.2
baz=170,SNR=14
ALGO Algonquin Park 69.62 353 P **P** 17 19 30.2 +0.2
baz=171,SNR=17
TAOE Nuku Hiva Isla 69.63 269 *e*LR LR 17 40 49.2
comp=Z,2µm,27.9s
E58A La Victoria 69.64 357 P **P** 17 19 30.8 +0.7
baz=175,SNR=10
E59A St. Maurice 69.71 357 P **P** 17 19 31.5 +1.1
baz=176
G47A Hillman 69.71 349 P **P** 17 19 30.3 -0.3
baz=165
E57A Chemin Saint G 69.73 356 P **P** 17 19 31.2 +0.5
baz=175,SNR=8.2
X18A Snowflake 69.77 324 P **P** 17 19 32.5 +1.1
PQI Presque Isle 69.81 0 P **P** 17 19 32.0 +0.8
PQI IAmb IAmb 17 20 12.9
comp=Z,170nm,1.7s
F51A Arnstein 69.83 352 P **P** 17 19 31.2 0.0
baz=169,SNR=10
KSCO Kaye Shedlock' 69.84 332 P **P** 17 19 32.5 +0.9
baz=147
KSCO Kaye Shedlock' 69.84 332 P **P** 17 19 32.6 +0.9
KSCO IAmb IAmb 17 19 33.3
comp=Z,76nm,0.7s
H43A Windswept, Lux 69.85 346 P **P** 17 19 30.5 -0.9
H43A IAmb IAmb 17 19 31.6
comp=Z,70nm,0.8s
E55A Montcerf-Lytto 69.92 355 P **P** 17 19 32.3 +0.5
baz=173,SNR=6.0
E56A St. Veronique 69.93 355 P **P** 17 19 32.3 +0.5
baz=174,SNR=16
G45A Suttons Bay 69.93 347 P **P** 17 19 31.2 -0.7
baz=163
G45A Suttons Bay 69.93 347 P **P** 17 19 31.2 -0.7
G45A IAmb IAmb 17 20 18.3
comp=Z,60nm,0.7s
F49A Sandfield 69.98 350 P **P** 17 19 31.8 -0.3
baz=167
E53A Dumoine, Ponti 70.00 353 P **P** 17 19 32.7 +0.4
baz=171,SNR=11
E54A Lac Daplat, Po 70.01 354 P **P** 17 19 32.7 +0.4
baz=172
I40A Norwalk 70.01 343 P **P** 17 19 31.6 -0.8
E52A Mattawa 70.02 353 P **P** 17 19 32.3 -0.1
baz=170,SNR=6.9
G46A Petoskey 70.04 348 P **P** 17 19 31.8 -0.7
baz=164
SDCO Great Sand Dun 70.08 330 P **P** 17 19 34.5 +1.2

baz=144,SNR=54
SDCO Great Sand Dun 70.08 330 P **P** **17 19 33.8 +0.5**
SDCO IAmb IAmb 17 19 36.0
comp=Z,179nm,1.8s
D60A Saint Jean D'O 70.08 358 P **P** **17 19 33.7 +0.9**
baz=178
W18A Petrified Fore 70.11 325 P **P** **17 19 34.9 +1.5**
baz=140,SNR=24
W18A Petrified Fore 70.11 325 P **P** **17 19 34.4 +0.9**
W18A IAmb IAmb 17 19 36.3
comp=Z,161nm,1.6s
BGNE Belgrade 70.12 337 P **P** **17 19 33.6 +0.3**
baz=151,SNR=10
BGNE Belgrade 70.12 337 P **P** **17 19 33.3 +0.1**
F48A Evansville 70.13 350 P **P** **17 19 32.9 -0.2**
baz=166
D63A Stockholm 70.18 0 P **P** **17 19 34.5 +1.1**
baz=180,SNR=7.0
D59A Saint-Raymond 70.21 358 P **P** **17 19 34.4 +0.9**
baz=177
D62A Allapoint, All 70.22 360 P **P** **17 19 34.7 +1.0**
baz=180,SNR=17
D62A Allapoint, All 70.22 360 P **P** **17 19 34.1 +0.4**
D62A pP **pP** **17 20 01.4 +0.3**
D62A sP **sP** **17 20 14.2 +1.4**
D57A Chemin Vers le 70.32 356 P **P** **17 19 35.1 +0.8**
baz=175,SNR=28
D58A Chemin du LacG 70.34 357 P **P** **17 19 35.1 +0.8**
baz=176,SNR=23
D61A St Aubert, Com 70.36 359 P **P** **17 19 35.5 +1.0**
baz=178
E51A G1948 Merrick 70.37 352 P **P** **17 19 34.8 +0.3**
baz=169,SNR=11
D56A ZEC Mazanza, M 70.41 356 P **P** **17 19 35.3 +0.5**
baz=174,SNR=15
E50A Wahnapitae 70.43 351 P **P** **17 19 34.7 -0.2**
baz=168,SNR=11
D55A Sainte-Anne-du 70.43 355 P **P** **17 19 35.3 +0.3**
baz=173,SNR=28
BATG Bathurst New B 70.45 2 P **P** **17 19 35.9 +0.8**
BATG **PcP** **17 19 53.4 -2.3**
BATG pP **pP** **17 20 02.2 -0.4**
BATG sP **sP** **17 20 15.2 +1.0**
BATG IAmb IAmb 17 20 16.9
comp=Z,155nm,1.7s
X16A Lo Mia Camp, P 70.49 323 P **P** **17 19 37.2 +1.3**
F45A CMU Biological 70.52 348 P **P** **17 19 35.1 -0.4**
baz=164,SNR=6.3
113A Mohawk Valley, 70.59 321 P **P** **17 19 37.1 +0.9**
LATQ La Tuque 70.62 357 P **P** **17 19 36.8 +0.7**
baz=176
D54A Lac Fusel, La 70.67 354 P **P** **17 19 36.2 -0.2**
baz=172,SNR=15
E48A Lockeyer 70.70 350 P **P** **17 19 36.5 0.0**
baz=167,SNR=12
D53A Lac Vacive, Po 70.70 353 P **P** **17 19 36.9 +0.4**
baz=171
D53A Lac Vacive, Po 70.70 353 P **P** **17 19 36.5 0.0**
D53A IAmb IAmb 17 19 38.0
comp=Z,66nm,0.8s
S22A 4UR Ranch, Cre 70.70 329 P **P** **17 19 38.3 +1.1**
baz=143,SNR=8.7
E47A Iron Bridge 70.85 349 P **P** **17 19 37.3 -0.1**
baz=166,SNR=14
I37A Lemond, Waseca 70.90 341 P **P** **17 19 37.2 -0.7**
I37A IAmb IAmb 17 19 38.2
comp=Z,66nm,0.7s
D51A Lot 18 Range I 70.90 352 P **P** **17 19 37.8 +0.1**
baz=170,SNR=6.9
Q24A Divide 70.90 331 P **P** **17 19 39.6 +1.2**
baz=145
E46A Sault Ste Mari 70.95 349 P **P** **17 19 37.0 -1.1**
E46A IAmb IAmb 17 19 38.3
comp=Z,53nm,0.8s
D50A G1974 Best Tow 71.03 352 P **P** **17 19 38.7 +0.1**
baz=169,SNR=21
MVCO Mesa Verde 71.09 327 P **P** **17 19 40.6 +1.1**
baz=142,SNR=17
MVCO Mesa Verde 71.09 327 P **P** **17 19 40.0 +0.5**
G40A Rib Lake 71.18 344 P **P** **17 19 38.9 -0.6**
G40A IAmb IAmb 17 19 40.8
comp=Z,111nm,1.8s
OGNE Ogallala 71.22 334 P **P** **17 19 40.6 +0.6**
baz=148
OGNE Ogallala 71.22 334 P **P** **17 19 40.4 +0.5**
OGNE IAmb IAmb 17 19 42.1
comp=Z,174nm,1.5s
WUAZ Wupatki 71.28 324 P **P** **17 19 42.4 +1.8**
baz=139,SNR=31
WUAZ Wupatki 71.28 324 P **P** **17 19 41.9 +1.4**
D48A Paudash Townsh 71.32 351 P **P** **17 19 40.0 -0.2**
baz=167,SNR=13
D49A Beulah Townshi 71.35 351 P **P** **17 19 40.5 +0.1**
baz=168,SNR=24
D46A Sault St. Mari 71.41 349 P **P** **17 19 40.2 -0.6**
baz=165,SNR=7.7
D47A Chapleau 71.41 350 P **P** **17 19 40.4 -0.5**
baz=166,SNR=13
GLA Glamis 71.42 320 P **P** **17 19 42.5 +1.2**
GLA pmax pmax
comp=Z,30nm,0.9s
GLA Glamis 71.42 320 P **P** **17 19 42.8 +1.5**
baz=136,SNR=9.1
GLA Glamis 71.42 320 P **P** **17 19 42.5 +1.2**
E43A Lone Tree Farm 71.49 347 P **P** **17 19 40.7 -0.6**
E43A IAmb IAmb 17 19 42.1
comp=Z,42nm,0.7s
E44A Grand Marais A 71.50 348 P **P** **17 19 41.5 +0.1**
baz=163
ECSD EROS Data Cent 71.65 339 P **P** **17 19 42.2 -0.2**
baz=153,SNR=19
ECSD EROS Data Cent 71.65 339 P **P** **17 19 41.8 -0.5**
VLDQ Val d'Or 71.69 354 P **P** **17 19 42.8 +0.3**
VLDQ IAmb IAmb 17 19 44.3
comp=Z,90nm,1.2s
COWI Conover 71.70 345 P **P** **17 19 42.5 -0.2**
Y12C Blythe 71.74 321 P **P** **17 19 44.6 +1.5**
baz=136,SNR=12
Y12C Blythe 71.74 321 P **P** **17 19 44.4 +1.3**
Y12C IAmb IAmb 17 19 46.2
comp=Z,79nm,1.2s
ISCO Idaho Springs 71.79 331 P **P** **17 19 43.9 +0.2**
ISCO pmax pmax
comp=Z,123nm,1.8s
ISCO Idaho Springs 71.79 331 P **P** **17 19 44.6 +0.9**
baz=144,SNR=13
ISCO Idaho Springs 71.79 331 P **P** **17 19 43.9 +0.2**
ISCO IAmb IAmb 17 19 46.4
comp=Z,122nm,1.8s
SPMN Marine on St. 71.84 342 P **P** **17 19 43.0 -0.5**
baz=157,SNR=6.5
SPMN Marine on St. 71.84 342 P **P** **17 19 42.4 -1.0**
SPMN IAmb IAmb 17 19 44.1
comp=Z,108nm,1.4s
PV01 Paradox Valley 71.85 328 P **P** **17 19 45.3 +1.3**
IKP In-Ko-Pah, Jac 71.90 319 P **P** **17 19 45.8 +1.6**
baz=135,SNR=12
SMCO Snowmass 71.91 330 P **P** **17 19 45.7 +1.2**
SWSC Sam W. Stewart 71.92 320 P **P** **17 19 45.7 +1.5**
baz=135,SNR=7.4
PDMCI Parker Dam,Lak 71.92 322 P **P** **17 19 45.3 +1.2**
baz=136,SNR=8.0
PV15 Paradox Valley 71.97 328 P **P** **17 19 45.8 +1.1**
PV15 IAmb IAmb 17 19 47.9
comp=Z,172nm,1.5s
PV02 Paradox Valley 71.99 328 P **P** **17 19 45.8 +0.9**
PV02 IAmb IAmb 17 19 47.8
comp=Z,102nm,1.5s
PV13 Radium Mtn., P 71.99 328 P **P** **17 19 45.5 +0.7**
PV13 IAmb IAmb 17 19 47.6
comp=Z,97nm,1.5s
PV05 Paradox Valley 72.07 327 P **P** **17 19 45.8 +0.5**
PV05 IAmb IAmb 17 19 47.9
comp=Z,104nm,1.6s
PV03 Paradox Valley 72.08 328 P **P** **17 19 45.6 +0.3**
PV18 Skein Mesa, Pa 72.10 328 P **P** **17 19 46.2 +0.7**
PV12 Saucer Basin, 72.11 328 P **P** **17 19 46.3 +0.8**
PV07 Paradox Valley 72.12 328 P **P** **17 19 46.7 +1.1**
PV11 David Mesa, Pa 72.13 328 P **P** **17 19 46.3 +0.7**
PV17 East Wray Mesa 72.16 328 P **P** **17 19 46.3 +0.6**
PV17 IAmb IAmb 17 19 48.5
comp=Z,106nm,1.7s
PV16 Nyswonger Mesa 72.16 328 P **P** **17 19 46.8 +1.0**
PV16 IAmb IAmb 17 19 48.6
comp=Z,104nm,1.8s
PV19 Morning Glory 72.19 328 P **P** **17 19 47.1 +1.1**
PV19 IAmb IAmb 17 19 48.7
comp=Z,106nm,1.8s
PV20 West Nyswonger 72.21 328 P **P** **17 19 46.8 +0.7**
BC3 Big Chuckawall 72.22 320 P **P** **17 19 47.6 +1.4**
baz=135,SNR=30
PV04 Paradox Valley 72.22 328 P **P** **17 19 47.0 +0.9**
PV04 IAmb IAmb 17 19 49.0
comp=Z,135nm,1.9s
MONP2 Monument Peak 72.25 319 P **P** **17 19 48.0 +1.5**
baz=134,SNR=16
BAR Barrett 72.26 319 P **P** **17 19 47.5 +1.2**
BAR IAmb IAmb 17 19 49.0
comp=Z,148nm,1.8s
PV14 Lion Creek, Pa 72.26 328 P **P** **17 19 47.2 +0.8**
PV14 IAmb IAmb 17 19 49.1
comp=Z,151nm,1.9s
PV10 Paradox Valley 72.27 328 P **P** **17 19 47.2 +0.6**
PV22 Blue Mesa, Par 72.27 328 P **P** **17 19 47.2 +0.7**
PV23 Carpenter Ridg 72.31 328 P **P** **17 19 47.4 +0.6**
W13A Hualapai Mount 72.35 322 P **P** **17 19 48.6 +1.6**
PV21 Cone Mtn., Par 72.38 328 P **P** **17 19 48.0 +0.8**
PV21 IAmb IAmb 17 19 50.1
comp=Z,94nm,1.6s
IRM Iron Mountain 72.39 321 P **P** **17 19 48.7 +1.6**
baz=136,SNR=37
PV09 Paradox Valley 72.41 328 P **P** **17 19 48.4 +1.0**
U15A North Rim 72.45 324 P **P** **17 19 48.5 +0.8**
U15A IAmb IAmb 17 19 51.2
comp=Z,222nm,1.9s
D41A Chassel 72.48 346 P **P** **17 19 47.1 -0.2**
NEE2 Needles Airpor 72.53 322 P **P** **17 19 49.1 +1.3**
baz=136
LSQQ Lebel-sur-Quev 72.58 354 P **P** **17 19 47.8 0.0**
baz=172
F36A Milaca 72.62 342 P **P** **17 19 47.4 -0.7**
109C Camp Elliot, M 72.66 319 P **P** **17 19 49.9 +1.2**
baz=134
XPFO Pion Flat 72.78 320 P **P** **17 19 50.0 +0.5**
PFO Pinyon Flats O 72.78 320 *d* *i* P **P** **17 19 51.1 +1.6**
PFO pmax pmax
comp=Z,49nm,1.0s
PFO Pinyon Flats O 72.78 320 P **P** **17 19 51.1 +1.6**
baz=135,SNR=12
PFO Pinyon Flats O 72.78 320 P **P** **17 19 50.0 +0.5**
BELC Belle Mtn. Jos 72.78 320 P **P** **17 19 51.0 +1.5**
baz=135,SNR=18
N23A Red Feather La 72.83 331 P **P** **17 19 50.9 +1.1**
baz=144,SNR=20
PHWY Pilot Hill 72.95 332 P **P** **17 19 51.0 +0.5**
PHWY IAmb IAmb 17 19 53.0
comp=Z,114nm,1.7s
SUSD Miller 73.07 338 P **P** **17 19 50.2 -0.6**
baz=151
DRLN Deer Lake 73.07 8 P **P** **17 19 50.9 +0.2**
DRLN IAmb IAmb 17 20 31.2
comp=Z,129nm,1.6s
TBI Tubuai 73.12 251 *e*S **S** **17 29 11.7 +0.4**
comp=Z,280nm,27.2s
TBI Tubuai 73.12 251 *e*LR LR 17 42 27.1
comp=Z,452nm,27.8s
GMRC Granite Mounta 73.14 321 P **P** **17 19 53.3 +1.7**
baz=136,SNR=42
KNB Kanab 73.18 324 P **P** **17 19 53.4 +1.5**
KNB pmax pmax
comp=Z,340nm,1.7s
KNB Kanab 73.18 324 P **P** **17 19 53.4 +1.5**
MURC Murrieta 73.21 319 P **P** **17 19 53.5 +1.6**
baz=134,SNR=7.6
PKCU Pink Cliffs 73.22 325 P **P** **17 19 53.2 +0.9**
CHGQ Chibougamau 73.23 356 P **P** **17 19 51.6 0.0**
baz=174,SNR=9.3
O20A White River Ci 73.27 329 P **P** **17 19 53.7 +1.4**
baz=142,SNR=23
O20A White River Ci 73.27 329 P **P** **17 19 52.9 +0.6**
O20A IAmb IAmb 17 19 54.3
comp=Z,58nm,0.8s
MATQ Matagami 73.34 354 P **P** **17 19 52.2 -0.1**
baz=171
LCMT Little Creek M 73.40 324 P **P** **17 19 54.2 +1.2**
F33A 5 Mile Ranch, 73.43 340 P **P** **17 19 51.8 -1.0**
BBRC Big Bear Solar 73.51 320 P **P** **17 19 55.6 +1.7**
baz=134
HEC Hector,Ludlow 73.56 321 P **P** **17 19 55.9 +1.9**
baz=135,SNR=8.4
SRU San Rafael Swe 73.57 327 P **P** **17 19 54.4 +0.3**
SRU pmax pmax
comp=Z,42nm,0.7s
SRU San Rafael Swe 73.57 327 P **P** **17 19 54.4 +0.3**
MTPU Mount Pierson 73.61 325 P **P** **17 19 55.5 +0.9**
SCI2 San Clemente I 73.61 318 P **P** **17 19 55.7 +1.5**
baz=133
Q16A Castle Valley 73.75 327 P **P** **17 19 55.9 +0.7**
SZCU Shurtz Canyon 73.75 325 P **P** **17 19 56.6 +1.3**
TUQ Turquoise Moun 73.75 321 P **P** **17 19 56.6 +1.4**
baz=135,SNR=12
CIS Calina Islan 73.81 318 P **P** **17 19 56.7 +1.2**
baz=133,SNR=6.8
CCUT Cedar City 73.86 324 P **P** **17 19 57.2 +1.3**
BFSC Mount Baldy Ra 73.93 319 P **P** **17 19 57.5 +1.3**
baz=134,SNR=12
FMP Fort Macarthur 73.95 319 P **P** **17 19 57.7 +1.5**
baz=133
MSU Marysvale 73.95 326 P **P** **17 19 57.4 +1.0**
MSU Marysvale 73.95 326 P **P** **17 19 57.4 +1.0**
P17A Butcher Ranch, 73.96 327 P **P** **17 19 57.0 +0.6**
P17A PcP **PcP** **17 20 12.1 +0.9**
P17A **pP** **17 20 24.3 +0.4**
RRX Edison Barstow 73.98 320 P **P** **17 19 58.2 +1.9**
baz=134
EYMN Ely 74.00 344 P **P** **17 19 55.7 -0.4**
baz=158,SNR=19
EYMN Ely 74.00 344 P **P** **17 19 54.9 -1.3**
EYMN IAmb IAmb 17 19 57.0
comp=Z,142nm,1.7s
RWWY Rawlins 74.03 331 P **P** **17 19 57.4 +0.6**
TMUT Trail Mountain 74.06 327 P **P** **17 19 57.4 +0.3**
SHPR Sheep Range 74.08 323 P **P** **17 19 58.2 +1.1**
SHPR IAmb IAmb 17 20 00.4
comp=Z,151nm,1.9s
MWC Mount Wilson 74.16 319 P **P** **17 19 58.4 +0.8**
MWC pmax pmax
comp=Z,224nm,2.0s
MWC Mount Wilson 74.16 319 P **P** **17 19 58.4 +0.8**
MWC IAmb IAmb 17 20 00.6
comp=Z,224nm,1.9s
GSC Goldstone, Bar 74.17 321 P **P** **17 19 58.5 +0.9**
GSC pmax pmax
comp=Z,139nm,1.7s
GSC Goldstone, Bar 74.17 321 P **P** **17 19 59.1 +1.6**
baz=135
GSC Goldstone, Bar 74.17 321 P **P** **17 19 58.5 +0.9**
GSC IAmb IAmb 17 20 00.8
comp=Z,139nm,1.7s
PASC Pasadena Art C 74.20 319 P **P** **17 19 58.1 +0.4**
PASC IAmb IAmb 17 20 00.6
comp=Z,108nm,1.4s
RDMU Red Mountain 74.24 329 P **P** **17 19 58.5 +0.5**
SHOC Shoshone, Teco 74.28 321 P **P** **17 19 59.4 +1.3**
baz=135,SNR=13
DECC Green Verdugo 74.34 319 P **P** **17 19 60.0 +1.4**
baz=133
SNCC San Nicolas Is 74.39 318 P **P** **17 19 59.7 +1.0**
baz=132
PMOZ Porto Moniz, M 74.43 43 *e*LR LR 17 44 38.7
comp=Z,144nm,18.0s
K22A Casper 74.51 332 P **P** **17 20 00.5 +1.0**
baz=144,SNR=17
K22A Casper 74.51 332 *j* P **P** **17 20 00.0 +0.6**
SYO Syowa Base 74.57 159 *j* *i* P **P** **17 19 58.8 -0.5**
SYO Syowa Base 74.57 159 *j* *i* X P 17 20 07.4 +8.1
EDW2 Edwards Air Fo 74.57 320 P **P** **17 20 00.9 +1.0**
baz=134,SNR=20
RSSD Black Hills 74.68 334 P **P** **17 20 00.9 +0.4**
RSSD pmax pmax
comp=Z,151nm,1.7s
RSSD Black Hills 74.68 334 P **P** **17 20 01.3 +0.8**
baz=147
RSSD Black Hills 74.68 334 P **P** **17 20 00.9 +0.4**
RSSD IAmb IAmb 17 20 02.6
comp=Z,151nm,1.6s
LRMC Laurel Mtn Rad 74.80 320 P **P** **17 20 02.7 +1.5**
baz=134,SNR=20
D32A Dogwood Acres, 74.81 340 P **P** **17 20 00.4 -0.4**
D32A IAmb IAmb 17 20 01.5
comp=Z,66nm,0.8s
OSI Osito Audit: C 74.83 319 P **P** **17 20 02.5 +1.2**
baz=133
PSUT Pine Spring 74.85 325 P **P** **17 20 02.3 +0.7**
SCZ2 Santa Cruz Isl 74.96 318 P **P** **17 20 03.2 +1.1**
baz=132
VNDA Vanda 74.96 190 P **P** **17 20 03.1 +1.7**
comp=Z,11nm,0.9s,baz=134,slow=5.2,SNR=65
VNDA pP **pP** **17 20 30.6 +1.5**
comp=Z,7.4nm,1.1s,baz=135,slow=4.7,SNR=2.6
VNDA LR LR 17 52 25.2
comp=Z,105nm,20.1s,baz=142,slow=35
VNDA Vanda 74.96 190 P **P** **17 20 02.3 +0.9**
B35A Bob, Littlefor 74.97 343 P **P** **17 20 00.6 -1.1**
NLU North Lily Min 74.99 327 P **P** **17 20 03.1 +0.7**
TPNV Topopah Spring 75.01 322 P **P** **17 20 03.7 +1.2**
TPNV pmax pmax
comp=Z,45nm,0.9s
TPNV Topopah Spring 75.01 322 P **P** **17 20 04.3 +1.8**
baz=136,SNR=52
TPNV Topopah Spring 75.01 322 P **P** **17 20 03.7 +1.2**
FURC Furnace Creek, 75.02 321 P **P** **17 20 04.0 +1.8**
baz=135,SNR=30
MPMC Manual Prospec 75.09 321 P **P** **17 20 04.1 +1.1**
baz=134,SNR=29
PPT2 Papeete2 75.13 257 *e*S **S** **17 29 34.0 -0.1**
comp=Z,2µm,24.8s
PPT2 Papeete2 75.13 257 *e*LR LR 17 43 23.8
comp=Z,2µm,33.5s
PPT Papeete 75.14 257 P **P** **17 20 05.6 +2.1**
comp=Z,10nm,0.4s,baz=23,slow=2.0,SNR=3.6
PPT LR LR 17 46 20.3
comp=Z,172nm,19.8s,baz=118,slow=30
JLU Jordanelle 75.17 328 P **P** **17 20 04.4 +0.9**
ARVC Arvin 75.24 319 P **P** **17 20 04.8 +1.2**
baz=133
SBC Santa Barbara 75.31 318 P **P** **17 20 04.9 +0.9**
baz=132
CTU Camp Tracy 75.39 328 P **P** **17 20 05.6 +1.0**
ISA Isabella, Lake 75.39 320 P **P** **17 20 05.7 +1.1**
ISA pmax pmax
comp=Z,41nm,0.8s
ISA Isabella, Lake 75.39 320 P **P** **17 20 06.3 +1.7**
baz=134,SNR=28
ISA Isabella, Lake 75.39 320 P **P** **17 20 05.7 +1.1**
AGMN Agassiz Nation 75.50 342 P **P** **17 20 04.6 -0.2**
baz=154,SNR=24
AGMN Agassiz Nation 75.50 342 P **P** **17 20 04.2 -0.6**
E28A Huff 75.52 338 P **P** **17 20 05.7 +0.7**
DUG Dugway, Tooele 75.54 327 P **P** **17 20 06.1 +0.7**
DUG pmax pmax
comp=Z,30nm,0.9s
DUG Dugway, Tooele 75.54 327 P **P** **17 20 06.8 +1.4**
baz=139,SNR=28
DUG Dugway, Tooele 75.54 327 P **P** **17 20 06.1 +0.7**
TCUT Toone Canyon 75.54 328 P **P** **17 20 06.4 +0.8**
R11A Troy Canyon, C 75.64 324 P **P** **17 20 07.9 +1.7**
baz=136,SNR=53
R11A Troy Canyon, C 75.64 324 P **P** **17 20 07.1 +1.0**
PKM Mcpherson Peak 75.67 319 P **P** **17 20 08.0 +1.6**
baz=132,SNR=18
GRAC Grapevine Rang 75.68 322 P **P** **17 20 07.9 +1.7**
baz=135,SNR=11
CWC Cottonwood Cre 75.70 321 P **P** **17 20 08.0 +1.5**
baz=134
VES Vestal, Richgr 75.88 320 P **P** **17 20 08.7 +1.5**
baz=133,SNR=6.8
PD31 Pinedale Array 75.95 330 P **P** **17 20 07.2 -0.6**
PDAR Pinedale Array 75.95 330 P **P** **17 20 08.3 +0.6**
comp=Z,3.7nm,0.5s,baz=142,slow=7.5,SNR=39
PDAR pP **pP** **17 20 37.3 +1.7**
comp=Z,2.2nm,0.5s,baz=120,slow=5.9,SNR=2.8
BW06 Boulder Array 75.95 330 P **P** **17 20 08.3 +0.5**
baz=142,SNR=12
BW06 Boulder Array 75.95 330 P **P** **17 20 07.8 0.0**
HWUT Hardware Ranch 75.99 328 P **P** **17 20 08.4 +0.4**
HWUT IAmb IAmb 17 20 11.1
comp=Z,38nm,0.7s
SMMC Simmler 76.07 319 P **P** **17 20 10.2 +1.8**
baz=132,SNR=14
SPUT South Promonto 76.20 328 P **P** **17 20 09.8 +0.7**
BGU Big Grassy Mou 76.20 327 P **P** **17 20 09.8 +0.6**
TIN Tinemaha, Big 76.21 321 P **P** **17 20 10.8 +1.5**
baz=134
MDND Maddock 76.26 339 P **P** **17 20 09.9 +0.8**
baz=151,SNR=18
MDND Maddock 76.26 339 P **P** **17 20 09.6 +0.4**
MDND pP **pP** **17 20 37.2 +0.3**
VOG Valley Oaks Go 76.38 320 P **P** **17 20 10.7 +0.6**
baz=133
PAGB Antelope Grade 76.50 319 P **P** **17 20 11.8 +1.0**
AHID Auburn Hatcher 76.66 329 P **P** **17 20 12.2 +0.4**
AHID IAmb IAmb 17 20 13.4
comp=Z,57nm,0.8s
HVU Hansel Valley 76.72 328 P **P** **17 20 12.3 +0.3**
HVU pmax pmax
comp=Z,50nm,1.2s
HVU Hansel Valley 76.72 328 P **P** **17 20 12.3 +0.3**
MLAC Mammoth, Mammo 76.96 321 P **P** **17 20 15.4 +1.7**
baz=134
REDW Red Top Meadow 77.01 330 P **P** **17 20 14.4 +0.6**
SNOW Snow King Moun 77.04 330 P **P** **17 20 14.5 +0.6**
OMMB Old Mammoth Mi 77.04 321 P **P** **17 20 15.1 +0.9**
OMMB IAmb IAmb 17 20 16.8
comp=Z,212nm,1.8s
MDPB Devils Postpil 77.10 321 P **P** **17 20 15.2 +0.7**
NV11 Mina Array Sit 77.13 322 P **P** **17 20 15.3 +0.9**
TPAW Teton Pass 77.15 330 P **P** **17 20 15.3 +0.7**
TPAW IAmb IAmb 17 20 17.1
comp=Z,164nm,1.8s
PMPB Monarch Peak 77.16 319 P **P** **17 20 15.9 +1.4**
PMPB IAmb IAmb 17 20 17.6
comp=Z,58nm,0.9s
ELK Elko 77.19 326 P **P** **17 20 15.2 +0.3**
ELK pmax pmax
comp=Z,26nm,0.9s
ELK Elko 77.19 326 P **P** **17 20 15.2 +0.3**
NVAR Mina Array Bea 77.21 322 P **P** **17 20 16.3 +1.3**
comp=Z,9.6nm,0.9s,baz=155,slow=6.8,SNR=62
NVAR pP **pP** **17 20 42.7 -0.1**
comp=Z,4.1nm,0.8s,baz=136,slow=5.6,SNR=4.0
ULM Lac du Bonnet 77.27 342 P **P** **17 20 14.7 -0.1**
comp=Z,28nm,0.5s,baz=155,slow=6.0,SNR=38
ULM pP **pP** **17 20 42.6 0.0**
comp=Z,13nm,0.4s,baz=146,slow=4.9,SNR=4.0
ULM LR LR 17 57 06.7
comp=Z,185nm,20.7s,baz=132,slow=38
ULM Lac du Bonnet 77.27 342 P **P** **17 20 14.3 -0.4**
ULM IAmb IAmb 17 20 16.1
comp=Z,184nm,1.6s
ULM pP **pP** **17 20 41.4 -1.2**
FXWY Fox Creek 77.30 330 P **P** **17 20 16.0 +0.6**
IMW Indian Meadow 77.46 330 P **P** **17 20 16.9 +0.5**
IMW IAmb IAmb 17 20 19.1
comp=Z,164nm,1.8s
FLWY Flagg Ranch 77.49 330 P **P** **17 20 17.4 +0.9**
FLWY IAmb IAmb 17 20 18.8
comp=Z,62nm,0.8s
KVN Kaiserville 77.53 323 P **P** **17 20 17.3 +0.6**
KVN pmax pmax
comp=Z,37nm,0.9s
KVN Kaiserville 77.53 323 P **P** **17 20 17.3 +0.6**
LAO LASA Array 77.67 335 P **P** **17 20 18.0 +0.9**
baz=145,SNR=8.5
LAO LASA Array 77.67 335 P **P** **17 20 17.1 -0.1**
LAO IAmb IAmb 17 20 18.8
comp=Z,66nm,0.9s
RLMT Red Lodge 77.67 332 P **P** **17 20 18.5 +1.1**
baz=142,SNR=35
RLMT Red Lodge 77.67 332 P **P** **17 20 17.8 +0.4**
H17A Grant Village 77.68 331 P **P** **17 20 19.2 +1.7**
baz=141,SNR=9.9
H17A Grant Village 77.68 331 P **P** **17 20 17.9 +0.3**
YPP Pitchstone Pla 77.69 330 P **P** **17 20 18.7 +1.1**
LKWY Lake 77.73 331 P **P** **17 20 19.1 +1.3**
LKWY pmax pmax
comp=Z,159nm,1.9s
LKWY Lake 77.73 331 P **P** **17 20 19.1 +1.3**
LKWY IAmb IAmb 17 20 22.6
comp=Z,159nm,1.9s
YMP Mirror Lake Pl 77.76 331 P **P** **17 20 18.9 +0.8**
TOA0 Torodi Ar. Sit 77.77 70 P **P** **17 20 18.2 -0.1**
TOA0 pP **pP** **17 20 45.6 -0.3**
TORD Torodi Ar. Bea 77.77 70 P **P** **17 20 18.4 +0.1**
comp=Z,82nm,0.6s,baz=258,slow=5.1,SNR=595
TORD pP **pP** **17 20 46.5 +0.6**

comp=Z,39nm,0.8s,baz=257,slow=5.1,SNR=4.1
TORD S **S** **17 30 01.3 -1.4**
comp=Z,11nm,1.3s,baz=258,slow=9.5,SNR=15
TORD LR LR 17 54 48.2
comp=Z,312nm,18.4s,baz=240,slow=36
WAKR Walker 77.90 322 P **P** **17 20 19.7 +0.8**
WAKR lAmb lAmb 17 20 22.2
comp=Z,155nm,1.8s
YNR Norris Junctio 77.98 331 P **P** **17 20 20.3 +1.2**
SCHQ Schefferville 78.00 1 P **P** **17 20 19.1 +0.4**
comp=Z,25nm,0.8s,baz=186,slow=4.9,SNR=28
SCHQ Schefferville 78.00 1 P **P** **17 20 18.4 -0.3**
SCHQ lAmb lAmb 17 20 39.9
comp=Z,36nm,0.6s
YMR Madison River 78.07 331 P **P** **17 20 20.5 +0.9**
YHH Holmes Hill 78.11 331 P **P** **17 20 21.0 +1.1**
YHH pP **pP** **17 20 48.7 +0.8**
YERR Yerington 78.12 322 P **P** **17 20 21.1 +1.1**
YERR lAmb lAmb 17 20 23.1
comp=Z,181nm,1.8s
YERR pP **pP** **17 20 49.6 +1.8**
CMB Columbia Colle 78.13 321 P **P** **17 20 19.8 -0.1**
CMB pmax pmax
comp=Z,74nm,1.9s
CMB Columbia Colle 78.13 321 P **P** **17 20 19.8 -0.1**
YHB Horse Butte 78.24 330 P **P** **17 20 21.3 +0.8**
YHL Hebgen Lake 78.31 331 P **P** **17 20 22.1 +1.1**
YHL pP **pP** **17 20 50.4 +1.5**
GCMT Greycliff 78.37 332 P **P** **17 20 21.7 +0.5**
DGMT Dagmar 78.38 337 P **P** **17 20 22.3 +1.3**
baz=147,SNR=16
DGMT Dagmar 78.38 337 P **P** **17 20 22.0 +1.0**
DGMT lAmb lAmb 17 20 23.0
comp=Z,92nm,0.8s
DGMT pP **pP** **17 20 50.1 +1.2**
PNTR Pine Nut 78.40 322 P **P** **17 20 22.4 +0.8**
PNTR lAmb lAmb 17 20 24.4
comp=Z,55nm,0.8s
QLMT Earthquake Lak 78.40 330 P **P** **17 20 22.8 +1.3**
VCNR Virginia City 78.57 322 P **P** **17 20 23.3 +0.8**
RUBR Rubicon Trail 78.69 322 P **P** **17 20 24.0 +0.8**
PAHR Pah Rah Range 78.70 322 P **P** **17 20 24.2 +1.1**
PAHR lAmb lAmb 17 20 25.5
comp=Z,74nm,0.9s
MCMT McKenzie Canyo 79.05 330 P **P** **17 20 26.1 +1.0**
AFDM Forest Hills D 79.08 321 P **P** **17 20 25.6 +0.5**
TSUM Tsumeb 79.22 106 P **P** **17 20 26.8 +0.3**
TSUM pP **pP** **17 20 54.5 +0.3**
DLMT Dillon 79.34 330 P **P** **17 20 26.9 +0.4**
DLMT lAmb lAmb 17 20 29.4
comp=Z,108nm,1.6s
BEKR Beckworth 79.36 322 P **P** **17 20 27.8 +1.0**
BEKR lAmb lAmb 17 20 29.6
comp=Z,179nm,1.8s
MFID Camas Ranch 79.44 327 P **P** **17 20 27.5 +0.5**
LRM Limekiln Ridge 79.63 331 P **P** **17 20 28.8 +0.6**
ORV Oroville 79.80 321 P **P** **17 20 29.7 +0.8**
ORV *PP **pP** **17 20 57.4 +0.6**
ORV pmax pmax
comp=Z,261nm,1.7s
ORV Oroville 79.80 321 P **P** **17 20 29.7 +0.8**
ORV pP **pP** **17 20 57.4 +0.6**
GDXM Geysers 80.06 320 P **P** **17 20 31.6 +1.1**
EGMT Eagleton 80.17 333 P **P** **17 20 31.3 +0.4**
baz=142
EGMT Eagleton 80.17 333 P **P** **17 20 31.1 +0.2**
EGMT lAmb lAmb 17 20 32.8
comp=Z,72nm,1.2s
WVOR Wild Horse Val 80.18 325 P **P** **17 20 31.4 +0.3**
WVOR pmax pmax
comp=Z,91nm,1.9s
WVOR Wild Horse Val 80.18 325 P **P** **17 20 31.4 +0.3**
HOPS Hopland Field 80.34 320 P **P** **17 20 32.7 +0.8**
HOPS lAmb lAmb 17 20 34.8
comp=Z,152nm,1.8s
O03E Paynes Creek 80.46 322 P **P** **17 20 32.6 0.0**
baz=132,SNR=18
MOD Modoc Plateau 80.71 324 P **P** **17 20 34.6 +0.7**
J08A Circle Bar Ran 80.75 326 P **P** **17 20 34.8 +0.8**
J08A lAmb lAmb 17 20 36.8
comp=Z,113nm,1.5s
O02D Mt. Diablo Met 80.95 321 P **P** **17 20 35.7 +0.5**
baz=131,SNR=14
MSO Missoula 81.06 330 P **P** **17 20 36.9 +1.3**
baz=139,SNR=14
MSO Missoula 81.06 330 P **P** **17 20 36.5 +0.8**
WDC Whiskeytown Da 81.07 321 P **P** **17 20 34.7 -1.0**
WDC pmax pmax
comp=Z,27nm,0.7s
WDC Whiskeytown Da 81.07 321 P **P** **17 20 34.7 -1.0**
KCPM Cahto Peak 81.09 320 P **P** **17 20 37.2 +1.2**
KCPM lAmb lAmb 17 20 39.2
comp=Z,227nm,1.8s
BMO Blue Mountains 81.21 327 P **P** **17 20 36.6 +0.1**
BMO pmax pmax
comp=Z,110nm,1.5s
BMO Blue Mountains 81.21 327 P **P** **17 20 36.6 +0.1**
BMO lAmb lAmb 17 20 38.9
comp=Z,110nm,1.5s
N02D Trinity Center 81.43 322 P **P** **17 20 37.7 0.0**
baz=131,SNR=11
M04C Macdoel 81.47 323 P **P** **17 20 38.8 +0.8**
baz=132,SNR=29
KMRM Mail Ridge 81.51 321 P **P** **17 20 39.4 +1.2**
KMRM lAmb lAmb 17 20 41.2
comp=Z,205nm,1.7s
KMRM pP **pP** **17 21 06.6 +0.5**
K05A Summer Lake 81.59 324 P **P** **17 20 39.7 +1.1**
I07A Izee 81.79 326 P **P** **17 20 40.3 +0.8**
M02C Callahan 81.79 322 P **P** **17 20 39.9 +0.3**
baz=131,SNR=17
JTMT Jette 81.91 331 P **P** **17 20 40.7 +0.6**
YBH Yreka Blue Hor 81.93 322 P **P** **17 20 39.6 -0.7**
YBH pmax pmax
comp=Z,12nm,0.8s
YBH Yreka Blue Hor 81.93 322 P **P** **17 20 39.6 -0.7**
KHMM Horse Mountain 81.95 321 P **P** **17 20 41.2 +0.7**
F10A Beach Ranch, E 81.98 328 P **P** **17 20 41.0 +0.6**
K04D Chiloquin, OR 81.99 323 P **P** **17 20 41.6 +0.9**
baz=132
L04D Klamath Falls 82.02 323 P **P** **17 20 41.1 +0.2**
baz=132,SNR=14
JCC Jacoby Creek, 82.08 321 P **P** **17 20 41.2 +0.2**
JCC pP **pP** **17 21 10.9 +1.9**
J05D Fort Rock, OR 82.15 324 P **P** **17 20 42.6 +1.0**
baz=133,SNR=18
BOSA Boshof 82.29 118 P **P** **17 20 42.8 0.0**
comp=Z,23nm,0.8s,baz=179,slow=0.8,SNR=30
BOSA pP **pP** **17 21 12.2 +1.6**
comp=Z,6.5nm,0.5s,baz=183,slow=0.6,SNR=2.7
BOSA Boshof 82.29 118 P **P** **17 20 42.1 -0.6**
PINE Pine Mountain 82.34 325 P **P** **17 20 42.9 +0.4**
PINE lAmb lAmb 17 20 44.7
comp=Z,55nm,0.8s
G08A Pilot Rock 82.35 327 P **P** **17 20 42.7 +0.3**
MAW Mawson 82.37 163 P **P** **17 20 43.0 +0.9**
comp=Z,55nm,0.6s,baz=218,slow=6.8,SNR=71
MAW pP **pP** **17 21 11.5 +1.5**
comp=Z,33nm,0.8s,baz=248,slow=7.3,SNR=4.7
MAW LR LR 17 56 53.3
comp=Z,231nm,20.9s,baz=230,slow=35
MAW Mawson 82.37 163 P **P** **17 20 42.2 +0.1**
MAW pP **pP** **17 21 11.9 +1.9**
KRMB Red Mountain 82.47 321 P **P** **17 20 43.1 -0.1**
J04D Umpqua Nationa 82.60 324 P **P** **17 20 44.7 +0.8**
baz=132,SNR=11
WALA Waterton Lakes 82.73 332 P **P** **17 20 44.4 +0.1**
PTEO Sao Teotonio 82.77 44 *eP* **P** **17 20 47.6 +2.9**
MDT Midelt 82.81 50 P **P** **17 20 46.4 +1.4**
comp=Z,10nm,0.8s,baz=233,slow=4.8,SNR=2.2
RAR Rarotonga 82.81 250 P **P** **17 20 47.5 +2.2**
comp=Z,6.7nm,0.5s,baz=73,slow=20,SNR=1.7
RAR LR LR 17 50 34.9
comp=Z,163nm,19.6s,baz=90,slow=30
RAR Rarotonga 82.81 250 P **P** **17 20 46.4 +1.1**
RAR pmax pmax
comp=Z,263nm,2.0s
RAR Rarotonga 82.81 250 P **P** **17 20 46.4 +1.1**
E09A Wood Farm, Sta 82.81 328 P **P** **17 20 45.1 +0.4**
I05D Terrebonne, OR 82.92 325 P **P** **17 20 46.7 +1.4**
baz=133,SNR=28
FFC Flin Flon 82.98 341 P **P** **17 20 44.8 -0.5**
FFC pP **pP** **17 21 13.2 -0.4**
K02D Willamette Mer 83.10 323 P **P** **17 20 47.5 +1.2**
baz=131,SNR=23
PBDV Barranco-do-Ve 83.10 44 *eP* **P** **17 20 48.2 +1.8**
comp=Z,112nm,1.8s
I04A Tendick Farm, 83.13 324 P **P** **17 20 46.7 +0.3**
baz=132,SNR=13
G06A Carlson Farm, 83.17 326 P **P** **17 20 47.5 +0.9**
PNCL Nicolau / Gran 83.24 44 *eP* **P** **17 20 48.5 +1.5**
PCVE Castro Verde 83.26 44 *eP* **P** **17 20 48.9 +1.7**
MESJ Messejana 83.27 44 *eP* **P** **17 20 48.0 +0.8**
MESJ Messejana 83.27 44 *eP* **P** **17 20 49.0 +1.8**
PVAQ Vaqueiros 83.33 44 *eP* **P** **17 20 49.2 +1.6**
comp=Z,56nm,1.7s
PVAQ Vaqueiros 83.33 44 *eS* S 17 31 17.2 +17
PVAQ Vaqueiros 83.33 44 *eLR* LR 17 49 00.8
comp=Z,246nm,18.0s
HAWA Hanford 83.41 327 P **P** **17 20 48.2 +0.4**
HAWA pP **pP** **17 21 16.2 +0.4**
G05D Wamic, OR 83.52 326 P **P** **17 20 49.8 +1.4**
baz=133,SNR=8.2
J01E Myrtle Point 83.55 323 P **P** **17 20 49.6 +1.1**
baz=131
D08A Wollman Farm, 83.57 328 P **P** **17 20 48.6 0.0**
D08A lAmb lAmb 17 20 50.1
comp=Z,97nm,1.8s
I03D Drain, OR 83.58 323 P **P** **17 20 49.5 +0.8**
baz=131,SNR=8.2
NEW Newport 83.58 330 P **P** **17 20 48.7 +0.1**
baz=136
H04A Detroit Lake 83.60 325 P **P** **17 20 48.5 -0.3**
PBEJ Beja 83.61 44 *eP* **P** **17 20 50.5 +1.5**
comp=Z,34nm,1.7s
C09A Chrisman Ranch 83.79 329 P **P** **17 20 50.0 +0.3**
C09A lAmb lAmb 17 20 51.2
comp=Z,52nm,0.8s
C09A **pP** **17 21 17.6 -0.2**
H04D Lebanon 83.79 324 P **P** **17 20 50.2 +0.5**
baz=132
EVO Evora 83.81 43 *eP* **P** **17 20 51.4 +1.4**
LBTB Lobatse 83.95 115 P **P** **17 20 51.0 -0.3**
LBTB *PP **pP** **17 21 19.2 0.0**
LBTB pmax pmax
comp=Z,43nm,1.0s
LBTB Lobatse 83.95 115 P **P** **17 20 51.0 -0.3**
LBTB lAmb lAmb 17 20 52.5
comp=Z,43nm,0.9s
LBTB **pP** **17 21 19.2 0.0**
PMTG Montargil 84.00 43 *eP* **P** **17 20 52.2 +1.3**
comp=Z,87nm,1.8s
F05D White Salmon 84.03 326 P **P** **17 20 51.8 +0.8**
baz=133
I02D Swisshome 84.11 323 P **P** **17 20 52.7 +1.3**
baz=131
COR Corvallis 84.14 324 P **P** **17 20 52.0 +0.6**
COR pmax pmax
comp=Z,367nm,2.0s
COR Corvallis 84.14 324 P **P** **17 20 52.0 +0.6**
PCAS Casmilo, Conde 84.42 42 *eP* **P** **17 20 54.4 +1.4**
comp=Z,46nm,1.6s
G03D McMinnville, O 84.53 325 P **P** **17 20 54.3 +0.9**
baz=131
F04A Amboy 84.56 326 P **P** **17 20 53.8 +0.2**
F04A lAmb lAmb 17 20 55.5
comp=Z,174nm,1.8s
LTY Liberty 84.57 327 P **P** **17 20 53.8 +0.1**
LTY lAmb lAmb 17 20 55.8
comp=Z,141nm,1.8s
LTY **pP** **17 21 20.9 -1.0**
FCC Fort Churchill 84.61 347 P **P** **17 20 53.4 -0.1**
FCC lAmb lAmb 17 20 54.6
comp=Z,38nm,0.7s
FCC **pP** **17 21 19.9 -1.8**
B08A Colville Reser 84.68 329 P **P** **17 20 54.0 -0.2**
B08A lAmb lAmb 17 20 55.8
comp=Z,103nm,1.8s
B08A **pP** **17 21 21.9 -0.5**
PMRV Marv??o 84.73 43 *eP* **P** **17 20 56.0 +1.4**
comp=Z,32nm,1.7s
PMRV Marv??o 84.73 43 *eS* **S** **17 31 18.1 +4.3**
PMRV Marv??o 84.73 43 *eLR* LR 17 49 14.8
comp=Z,179nm,22.0s
PCBR Castelo Branco 84.92 43 *eP* **P** **17 20 56.5 +1.0**
comp=Z,44nm,1.9s
F04D Rainier, OR 84.97 325 P **P** **17 20 56.8 +1.1**
baz=132
E04D Cinebar 85.05 326 P **P** **17 20 56.5 +0.5**
baz=132
C06D Leavenworth 85.14 328 P **P** **17 20 56.4 -0.1**
baz=133
D05A Enumclaw 85.18 327 P **P** **17 20 56.3 -0.3**
PVIS Viseu 85.18 42 *eP* **P** **17 20 57.8 +0.9**
comp=Z,55nm,1.6s
MTE Manteigas 85.21 42 *eP* **P** **17 20 58.1 +1.0**
comp=Z,59nm,1.7s
MTE Manteigas 85.21 42 *eS* **S** **17 31 21.1 +2.5**
MTE Manteigas 85.21 42 *eLR* LR 17 49 39.3
comp=Z,262nm,22.0s
MTE Manteigas 85.21 42 P **P** **17 20 57.3 +0.2**
TAM Tamanrasset 85.47 63 P **P** **17 20 58.5 -0.4**
TAM *PP **pP** **17 21 25.7 -1.2**
TAM pmax pmax
comp=Z,60nm,1.4s
TAM Tamanrasset 85.47 63 P **P** **17 20 58.5 -0.4**
TAM pP **pP** **17 21 25.7 -1.2**
TAM lAmb lAmb 17 21 29.4
comp=Z,60nm,1.4s
E03A Lebam 85.56 325 P **P** **17 20 59.2 +0.6**
E03A lAmb lAmb 17 21 00.0
comp=Z,41nm,0.8s
D04E Lakebay 85.57 326 P **P** **17 20 59.5 +1.0**
baz=132
PGAV Gavieira, Arco 85.70 41 *eP* **P** **17 21 00.2 +0.7**
comp=Z,57nm,1.6s
PGAV Gavieira, Arco 85.70 41 *eS* **S** **17 31 30.0 +6.6**
PGAV Gavieira, Arco 85.70 41 *eLR* LR 17 49 57.9
comp=Z,282nm,20.0s
B06A Marblemount 85.83 328 P **P** **17 20 59.0 -0.8**
B06A lAmb lAmb 17 21 00.3
comp=Z,35nm,0.8s
B05A Bryant 85.96 327 P **P** **17 21 00.4 -0.1**
baz=132
D03D Eldon 85.97 326 P **P** **17 21 01.3 +0.7**
baz=132
MVO Moncorvo 85.98 42 *eP* **P** **17 21 01.9 +1.0**
comp=Z,70nm,1.7s
MVO Moncorvo 85.98 42 *eLR* LR 17 49 50.3
comp=Z,197nm,22.0s
NLWA Neilton Lookou 86.27 326 P **P** **17 21 02.3 +0.1**
NLWA lAmb lAmb 17 21 04.3
comp=Z,90nm,1.5s
A04D Lummi Island 86.57 327 P **P** **17 21 04.1 +0.7**
baz=132
PAB San Pablo 86.73 44 P **P** **17 21 04.5 -0.1**
PAB pP **pP** **17 21 32.4 -0.3**
PAB lAmb lAmb 17 21 35.6
comp=Z,46nm,1.2s
PAB sP **sP** **17 21 45.9 +1.8**
PGC Sidney 86.89 327 P **P** **17 21 05.3 +0.3**
PGC lAmb lAmb 17 21 06.4
comp=Z,52nm,0.9s
PGC pP **pP** **17 21 32.8 -0.5**
ESDC Sonseca Array 87.05 44 P **P** **17 21 07.0 +0.9**
comp=Z,5.2nm,0.9s,baz=246,slow=4.9,SNR=19
ESDC pP **pP** **17 21 34.6 +0.3**
comp=Z,23nm,1.3s,baz=232,slow=4.7,SNR=6.0
ESDC sP **sP** **17 21 45.6 -0.1**
comp=Z,13nm,1.2s,baz=234,slow=5.6,SNR=4.5
ESDC LR LR 18 00 24.9
comp=Z,228nm,18.1s,baz=240,slow=36
LLLB Lillooet 87.44 329 P **P** **17 21 07.1 -0.6**
LLLB **pP** **17 21 35.7 -0.4**
CASY Casey 90.53 180 P **P** **17 21 21.7 -0.4**
CASY pP **pP** **17 21 51.3 +0.8**
URZ Urewera 93.03 226 P **P** **17 21 36.1 +1.9**
comp=Z,18nm,1.1s,baz=98,slow=18,SNR=4.2
URZ LR LR 17 55 52.3
comp=Z,110nm,20.5s,baz=135,slow=30
YKA Yellowknife Ar 93.13 340 P **P** **17 21 34.1 +0.2**
comp=Z,23nm,0.7s,baz=134,slow=4.8,SNR=301
YKA pP **pP** **17 22 03.4 +1.0**
comp=Z,7.8nm,0.6s,baz=134,slow=4.9,SNR=8.5
YKA PKKPbc **PKKPdf** **17 38 42.5 -1.0**
comp=Z,0.1nm,0.6s,baz=324,slow=3.5,SNR=4.0
YKA LR LR 18 06 33.9
comp=Z,137nm,21.9s,baz=0.0,slow=37
RPZ Rata Peaks 93.64 219 P **P** **17 21 39.1 +2.2**
comp=Z,15nm,1.0s,baz=88,slow=10,SNR=2.8
RPZ LR LR 17 56 18.9
comp=Z,89nm,19.4s,baz=102,slow=31
RPZ Rata Peaks 93.64 219 P **P** **17 21 37.4 +0.4**
NNZ Nelson 93.74 222 P **P** **17 21 36.2 -1.2**
RAO Raoul Island 94.17 236 P **P** **17 21 42.2 +2.6**
comp=Z,189nm,0.5s,baz=39,slow=20,SNR=1.7
RAO Raoul Island 94.17 236 P **P** **17 21 40.4 +0.7**
RAO pmax pmax
comp=Z,614nm,1.1s
RAO Raoul Island 94.17 236 P **P** **17 21 40.4 +0.7**
KEST Kesra 94.27 53 P **P** **17 21 41.0 +1.1**
comp=Z,3.7nm,0.7s,baz=238,slow=5.6,SNR=2.1
KEST LR LR 18 07 29.6
comp=Z,266nm,18.1s,baz=180,slow=38
KEST Kesra 94.27 53 P **P** **17 21 40.3 +0.4**
KEST lAmb lAmb 17 22 09.8
comp=Z,38nm,1.8s
BORG Borgarnes 95.20 18 P **P** **17 21 44.9 +1.6**
comp=Z,7.4nm,0.8s,baz=350,slow=7.5,SNR=1.9
BORG Borgarnes 95.20 18 P **P** **17 21 44.5 +1.2**
CLF Chambon-Foret 95.26 40 P **P** **17 21 43.0 -1.0**
CLF **pP** **17 22 10.5 -1.8**
SSB Saint Sauveur 95.31 43 P **P** **17 21 44.4 -0.1**
SSB **pP** **17 22 12.8 +0.1**
SSB lAmb lAmb 17 22 15.7
comp=Z,45nm,1.7s
WRAK Wrangell Islan 95.94 330 P **P** **17 21 46.9 0.0**
WRAK lAmb lAmb 17 21 48.5
comp=Z,23nm,1.3s
WRAK **pP** **17 22 14.8 -0.6**
DLBC Dease Lake 96.07 332 P **P** **17 21 47.0 -0.6**
DLBC lAmb lAmb 17 21 49.5
comp=Z,26nm,1.2s
EKA Eskdalemuir Ar 96.15 32 P **P** **17 21 47.3 -0.5**
comp=Z,5.2nm,1.0s,baz=333,slow=0.4,SNR=5.6
LATE Laterza 98.88 47 P **P** **17 21 58.7 -1.9**
DAVA Damuels 99.52 43 *e*Pdiff **Pdif** **17 22 04.5 +1.0**
comp=Z,6.3nm,1.2s
FETA Feichten 99.94 43 *e*Pdiff **Pdif** **17 22 06.3 +0.9**
comp=Z,6.4nm,1.1s
RETA Reutte 100.15 43 *i* Pdiff **Pdif** **17 22 07.1 +0.9**
comp=Z,2.9nm,0.6s
MOTA Moosalm 100.31 43 *e*Pdiff **Pdif** **17 22 07.6 +0.7**
comp=Z,9.5nm,1.0s
SQTA Sankt Quirin 100.32 43 *e*Pdiff **Pdif** **17 22 08.1 +1.1**
comp=Z,11nm,0.7s
WATA Walderalm 100.60 43 *e*Pdiff **Pdif** **17 22 08.3 +0.1**
comp=Z,4.8nm,0.7s
WTTA Wattenberg 100.61 43 *e*Pdiff **Pdif** **17 22 09.5 +1.1**
comp=Z,11nm,1.0s
ABTA Abfaltersbach 100.96 44 *e*Pdiff **Pdif** **17 22 10.8 +1.0**
comp=Z,4.6nm,0.9s
KBA Koelnbreinsper 101.62 44 *e*Pdiff **Pdif** **17 22 13.2 +0.4**
comp=Z,4.4nm,0.9s
GERES GERESS Array B 102.49 42 P **Pdif** **17 22 17.1 +0.5**
comp=Z,0.3nm,0.5s,baz=256,slow=5.4,SNR=4.2
GERES PKiKP **PKiKP** **17 26 36.8 -0.7**
comp=Z,0.4nm,0.5s,baz=211,slow=0.6,SNR=4.1
A36M Sachs Harbour 102.67 345 P **Pdif** **17 22 16.7 +0.1**
baz=128
DAWY Dawson 102.87 335 **Pdif** **17 22 17.5 -0.4**
INK Inuvik 102.88 340 PKKPbc PKKPbc 17 38 16.3 -1.5
comp=Z,1.2nm,0.8s,baz=235,slow=1.4,SNR=3.3
INK Inuvik 102.88 340 **Pdif** **17 22 16.3 -1.4**
INK **pPdif** **17 22 46.0 -0.3**
CLL Collm 102.96 40 *e*Pdif **Pdif** **17 22 20.0 +1.5**
CLL *e*PP **PP** **17 26 36.0 +1.6**
CLL *e*PS PS 17 35 42.0 -2.6
CLL *e*PPS PPS 17 36 24.0
CLL Collm 102.96 40 *e*P **Pdif** **17 22 20.0 +1.5**
CLL *e* 17 26 36.0
EPYK Eagle Plains 102.97 337 P **Pdif** **17 22 18.2 0.0**
baz=119
EGAK Eagle 103.88 335 **Pdif** **17 22 21.7 -0.5**
HDA Harding Lake 106.03 334 P **Pdif** **17 22 31.8 0.0**
baz=111
ILAR Eielson Array 106.13 334 Pdiff **Pdif** **17 22 31.6 -0.6**
comp=Z,0.5nm,0.8s,baz=142,slow=2.1,SNR=5.6
ILAR PP **PP** **17 26 57.6 +0.1**
comp=Z,0.8nm,0.9s,baz=110,slow=5.1,SNR=6.3
ILAR PKKPbc **PKKPbc** **17 38 05.5 -2.4**
comp=Z,0.2nm,0.7s,baz=271,slow=4.7,SNR=4.1
POKR Poker Plat Res 106.47 334 P **Pdif** **17 22 33.6 -0.2**
baz=110
RND Reindeer 106.47 332 **Pdif** **17 22 33.5 -0.4**
RND pPdif **pPdif** **17 23 02.0 -0.5**
TCOL CIGO, UAF Yank 106.56 334 P **Pdif** **17 22 33.9 -0.2**
baz=110
BPAW Bear Paw Mtn. 107.59 333 **Pdif** **17 22 38.5 -0.3**
TOLK Toolik Lake Re 108.40 338 P **PKiKP** **17 26 47.6 -0.1**
baz=107
DZM Mont Dzumac 109.87 234 *e*LR LR 17 59 28.3
comp=Z,439nm,34.5s
FINES FINESS Array B 112.55 31 PKKPbc PKKPbc 17 37 46.5 -0.6
comp=Z,0.5nm,0.6s,baz=93,slow=4.7,SNR=5.8
AKASG Malin Array Be 112.66 43 PKiKP **PKiKP** **17 26 56.0 -0.1**
comp=Z,1.0nm,0.4s,baz=266,slow=2.5,SNR=8.6
AKASG PP **PP** **17 27 46.8 +1.7**
comp=Z,0.3nm,0.3s,baz=254,slow=7.6,SNR=4.2
AKASG PKKPab **PKKPab** **17 37 53.7 +1.9**
comp=Z,0.1nm,0.3s,baz=72,slow=4.3,SNR=6.4
ARCES ARCESS Array B 113.20 22 PKKPbc PKKPbc 17 37 43.1 -1.9
comp=Z,1.0nm,0.6s,baz=84,slow=3.8,SNR=10
MMAI Mount Meron Ar 113.68 63 PKiKP **PKiKP** **17 26 59.5 +0.7**
comp=Z,1.2nm,0.5s,baz=41,slow=2.7,SNR=6.4
MMAI PKKPab **PKKPab** **17 37 51.0 +2.7**
comp=Z,0.3nm,0.3s,baz=45,slow=5.1,SNR=5.1
BRTR Keskin Array B 113.73 55 PKiKP **PKiKP** **17 26 59.2 +0.5**
comp=Z,2.5nm,0.8s,baz=182,slow=3.1,SNR=14
BRTR PP **PP** **17 27 54.8 +1.5**
comp=Z,0.8nm,0.8s,baz=223,slow=8.1,SNR=3.9
BRTR PKKPab **PKKPab** **17 37 49.9 +2.1**
comp=Z,0.7nm,0.7s,baz=83,slow=4.1,SNR=4.7
OBN Obninsk 117.54 39 PKP **PKiKP** **17 27 05.9 +0.5**
comp=Z,1.8nm,0.4s,baz=137,slow=11,SNR=4.3
OBN Obninsk 117.54 39 *i* PKiKP **PKiKP** **17 27 05.9 +0.5**
OBN *i* 17 27 35.1
OBN *e* 17 28 27.5
OBN *e*SS SS 17 44 40.1 +18
OBN pmax pmax
comp=Z,16nm,1.3s
OBN Obninsk 117.54 39 **PKiKP** **17 27 05.5 +0.1**
STKA Stephens Creek 117.84 209 PKP **PKPdf** **17 27 06.8 0.0**
comp=Z,1.8nm,0.7s,baz=260,slow=0.8,SNR=4.1
STKA PKKPbc **PKKPbc** **17 37 29.2 +1.2**
comp=Z,1.3nm,0.7s,baz=238,slow=2.7,SNR=3.3
SOC Sochi 118.81 52 *c i* PKiKP **PKiKP** **17 27 09.5 +1.2**
SOC pmax pmax
comp=Z,9.0nm,0.5s
LPSR Galich'ya Gora 118.86 42 *e*PKiKP **PKiKP** **17 27 08.2 +0.1**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 118.97 43 *e*PKiKP **PKPdf** **17 27 07.0 -1.3**
VSR pmax pmax
comp=Z,8.0nm,0.7s
KLMR Klimovskoe 119.03 32 *e*PKiKP **PKPdf** **17 27 06.5 -1.5**
KLMR *e* 17 27 36.7
KLMR pmax pmax
comp=Z,36nm,1.4s
KLMR Klimovskoe 119.03 32 *e*PKPdf **PKPdf** **17 27 06.6 -1.5**
KLMR AMP 17 27 09.6
comp=Z,36nm,1.4s
KLMR *e*pPKPdf **pPKPdf** **17 27 36.7 -0.8**
VORD Divnogorie 119.04 43 *e*PKiKP **PKPdf** **17 27 07.7 -0.7**
VORD pmax pmax
comp=Z,7.0nm,0.6s
RAYN Ar Rayn 120.11 76 PKiKP **PKPdf** **17 27 10.8 -0.6**
RAYN 17 27 40.5
RAYN Ar Rayn 120.11 76 **PKPdf** **17 27 10.8 -0.6**
RAYN **pPKPdf** **17 27 40.5 -0.3**
VRH Novokhopyorsk 120.57 43 *e*PKiKP **PKPdf** **17 27 11.3 0.0**
VRH pmax pmax
comp=Z,20nm,1.0s
KIV Kislovodsk 120.99 52 *d i* PKiKP **PKPdf** **17 27 12.4 -0.1**
KIV *i* 17 27 41.4
KIV *e* 17 28 42.5
KIV *e*PS **PS** **17 38 32.8 -3.9**
KIV pmax pmax
comp=Z,12nm,1.0s
KIV Kislovodsk 120.99 52 **PKPdf** **17 27 12.1 -0.4**
KIV **pPKPdf** **17 27 41.9 -0.1**
KVAR Kislovodsk Arr 120.99 52 PKP **PKPdf** **17 27 12.1 -0.5**
comp=Z,2.0nm,0.4s,baz=92,slow=23,SNR=2.4
KBZ Khabaz 121.13 52 PKiKP **PKiKP** **17 27 13.0 +0.3**
comp=Z,12nm,0.9s,baz=215,slow=2.9,SNR=24

KBZ PKP **pPKPdf** 17 27 43.0 +1.0
comp=Z,6.5nm,1.0s,baz=222,slow=3.8,SNR=3.8
NCK Nalchik 121.62 52⇑ *i*PKIKP **PKiKP** 17 27 14.0 +0.2
ZEI Tsey 121.80 53 *i* PKIKP **PKPdf** 17 27 13.7 -0.6
ZEI *e* 17 27 43.2
ZEI pmax pmax
comp=Z,6.0nm,0.9s
KIRV Kirov 124.29 34 PKP **PKiKP** 17 27 19.1 +0.6
comp=Z,7.6nm,0.6s,baz=342,slow=1.1,SNR=5.6
KIRV pPKP **pPKPdf** 17 27 48.0 +0.3
comp=Z,8.4nm,0.6s,baz=321,slow=3.7,SNR=3.5
BILL Bilibino 124.45 338 *d* iPKIKP **PKiKP** 17 27 18.9 +0.3
BILL *i* 17 27 49.3
BILL *e* 17 29 13.8
BILL pmax pmax
comp=Z,7.0nm,1.0s
BILL Bilibino 124.45 338 **PKPdf** 17 27 18.4 +0.1
BILL **pPKPdf** 17 27 48.2 +0.5
BILL PP **PP** 17 29 02.7 -3.1
AKT Akhty 124.58 55 *e*PKIKP **PKiKP** 17 27 20.4 +0.5
AKT *e* 17 27 50.0
AKT *e* 17 29 10.1
AKT pmax pmax
comp=Z,10.0nm,0.8s
AS31 Alice Springs 128.29 207 **PKPdf** 17 27 26.6 -0.5
AS31 pPKPdf **pPKPdf** 17 27 55.9 -0.9
ASAR Alice Springs 128.29 207 PKP **PKPdf** 17 27 27.4 +0.2
comp=Z,14nm,0.9s,baz=131,slow=1.8,SNR=80
ASAR pPKP **pPKPdf** 17 27 57.7 +0.9
comp=Z,7.3nm,0.8s,baz=143,slow=2.2,SNR=9.2
ARU Arti 129.61 35 *i* PKIKP **PKiKP** 17 27 29.5 +0.2
ARU 17 29 38.0
ARU 17 34 30.5
ARU Arti 129.61 35 **PKiKP** 17 27 29.1 -0.1
ARU **pPKPdf** 17 27 57.7 -0.2
TIXI Tiksi 130.77 353 *d* iPKIKP **PKPdf** 17 27 30.1 -0.2
TIXI Tiksi 130.77 353 **PKPdf** 17 27 29.9 -0.4
TIXI pPKPdf **pPKPdf** 17 27 59.5 -0.3
WR0 Warramunga Arr 131.28 209 **PKPdf** 17 27 32.6 -0.3
WR0 **pPKPdf** 17 28 02.3 -0.2
WB2 Warramunga Arr 131.38 209 **PKPdf** 17 27 32.8 -0.3
WB2 **pPKPdf** 17 28 02.5 -0.2
WRA Warramunga Arr 131.39 209 PKP **PKPdf** 17 27 33.4 +0.2
comp=Z,12nm,0.8s,baz=150,slow=1.6,SNR=56
WRA pPKP **pPKPdf** 17 28 02.7 0.0
comp=Z,22nm,1.1s,baz=164,slow=1.6,SNR=11
WRA SKPbc **SKPab** 17 30 49.5 +0.1
comp=Z,4.1nm,1.1s,baz=156,slow=3.5,SNR=5.6
WRAB Tennant Creek 131.39 209 ||*i*PKIKP **PKiKP** 17 27 33.3 +0.2
WRAB Tennant Creek 131.39 209 **PKPdf** 17 27 32.9 -0.2
WRAB **pPKPdf** 17 28 02.3 -0.4
WB0 Warramunga Arr 131.52 209 **PKPdf** 17 27 33.2 -0.2
WB0 **pPKPdf** 17 28 02.7 -0.2
RABL Rabaul 131.66 241 **PKPdf** 17 27 33.8 +0.1
KRVT Keravat (AS076 131.70 240 PKP **PKiKP** 17 27 34.4 -0.4
comp=Z,20nm,1.0s,baz=58,slow=8.0,SNR=5.3
NRIK Noril'sk 131.94 11 PKP **PKiKP** 17 27 33.6 0.0
comp=Z,5.4nm,0.8s,baz=293,slow=0.9,SNR=13
NRIK pPKP **pPKPdf** 17 28 03.0 +0.8
comp=Z,12nm,1.1s,baz=77,slow=0.9,SNR=7.0
SEY Seymchan 132.01 336 ||*e*PKIKP **PKiKP** 17 27 34.2 +0.3
GEYT Alibeck 132.59 59 PKP **PKiKP** 17 27 35.9 -0.1
comp=Z,2.6nm,0.5s,baz=216,slow=4.8,SNR=13
GYA0B ALIBECK ARRAY 132.59 59 **PKPdf** 17 27 34.8 0.0
GYA0B pPKPdf **pPKPdf** 17 28 04.5 +0.2
PETK Petropavlovsk- 134.29 322 PKhKP PKPpre 17 27 28.7
comp=Z,2.8nm,0.9s,baz=181,slow=2.2,SNR=4.3
PETK PKP **PKiKP** 17 27 38.5 -0.3
comp=Z,5.6nm,0.6s,baz=129,slow=2.0,SNR=23
PETK pPKP pPKPdf 17 28 08.2 +1.1
comp=Z,6.2nm,0.9s,baz=96,slow=4.6,SNR=2.5
MA2 Magadan 134.60 333 *d* iPKIKP **PKPdf** 17 27 38.5 +0.7
MA2 Magadan 134.60 333 **PKPdf** 17 27 37.6 -0.3
HRA Herat 136.01 64 **PKPdf** 17 27 41.7 +0.2
HRA pPKPdf **pPKPdf** 17 28 10.6 -0.4
FITZ Fitzroy Crossi 136.40 200 **PKPdf** 17 27 42.5 0.0
FITZ **pPKPdf** 17 28 11.8 -0.2
BRVK Borovoye 137.17 36 ||*e*PKIKP **PKiKP** 17 27 44.2 -0.5
BRVK Borovoye 137.17 36 PKPpre PKPpre 17 27 33.1
BRVK **PKPdf** 17 27 43.3 +0.5
BRVK pPKPdf 17 28 13.4 +1.1
BVAR Borovoye Array 137.25 36 PKP **PKiKP** 17 27 44.4 -0.5
comp=Z,5.4nm,0.7s,baz=254,slow=2.2,SNR=19
BVAR pPKP **pPKPdf** 17 28 11.9 -0.5
comp=Z,12nm,1.1s,baz=318,slow=2.0,SNR=6.0
YAK Yakutsk 139.49 347 *e*PKHKP PKPpre 17 27 39.1
YAK pmax pmax
comp=Z,22nm,0.9s
YAK pmax pmax
comp=N,8.0nm,1.5s
YAK pmax pmax
comp=E,9.0nm,1.8s
YAK pmax pmax
comp=Z,37nm,2.4s
YAK pmax pmax
comp=N,55nm,2.5s
YAK pmax pmax
comp=E,75nm,3.8s
YAK Yakutsk 139.49 347 PKPpre 17 27 38.2
YAK PKPdf **PKPdf** 17 27 47.2 +0.4
YAK pPKPdf 17 28 15.9 -0.4
CHGR Chuyangaron 141.15 57 **PKPdf** 17 27 50.2 -0.5
JAY Jayapura 141.50 232 PKP **PKPdf** 17 27 53.4 +1.4
comp=E,10.0nm,0.9s,baz=286,slow=5.1,SNR=3.8
KURK Kurchatov 142.81 35 *d* iPKIKP **PKPdf** 17 27 54.1 +1.0
KURK Kurchatov 142.81 35 **PKPdf** 17 27 50.1 -3.0
KURK **pPKPdf** 17 28 19.7 -2.9
EKS2 Erkin-Say 143.51 49 P PKPbc 17 27 53.5 +1.1
SNR=13
ZAA0 Zalesovo Array 143.60 26 PKPbc 17 27 52.2 +0.1
ZAA0 PKPdf pPKPdf 17 28 21.9 -2.0
ZALV Zalesovo Beam 143.60 26 PKhKP PKPpre 17 27 53.1
comp=E,24nm,0.6s,baz=297,slow=4.2,SNR=98
ZALV pPKP pPKPdf 17 28 22.7 -1.2
comp=E,20nm,0.9s,baz=316,slow=4.1,SNR=3.2
AML Almayashu 143.63 50 P **PKPdf** 17 27 54.3 -1.1
SNR=12
AAK Ala-Archa 144.02 49 P **PKPdf** 17 27 55.5 -0.2
SNR=28
AAK Ala-Archa 144.02 49 *d* iPKIKP **PKPdf** 17 27 55.4 -0.4
AAK Ala-Archa 144.02 49 **PKPdf** 17 27 54.9 -0.9
FRU1 Bishkek 144.05 49 PKIKP **PKPdf** 17 27 55.2 -0.5
FRU1 Bishkek 144.05 49 **PKPdf** 17 27 55.2 -0.5
CHMS Chumysh 144.07 48 P **PKPdf** 17 27 54.9 -0.7
SNR=16
UCH Uchtor 144.17 50 P **PKPdf** 17 27 56.6 +0.1
SNR=45
KBK Karagaybulak 144.33 49 P **PKPdf** 17 27 56.5 +0.2
SNR=66
BATI Baumata 144.44 201 PKP **PKPdf** 17 27 57.1 -0.1
comp=E,40nm,0.6s,baz=299,slow=0.4,SNR=3.8
SOEI Soe 144.65 202 PKPbc 17 27 56.7 +0.1
TKM2 Tokmak 2 144.68 48 P **PKPdf** 17 27 57.2 +0.3
SNR=81
POO Poona 144.68 91 *e*P **PKPab** 17 27 56.2 -0.2
POO *i* x x 17 28 23.4
KZA Kyzart 144.74 50 P **PKPdf** 17 27 57.9 +0.5
SNR=66
NIL Nilore 145.18 64 PKP2 **PKPbc** 17 27 57.4 -0.3
NIL Nilore 145.18 64 **PKPbc** 17 27 57.4 -0.3
ULHL Ulahol 145.37 49 P **PKPab** 17 28 00.3 +1.8
SNR=24
BOD Bodaibo 145.63 358 *e*PKIKP **PKPdf** 17 27 57.8 0.0
BOD *e* 17 28 27.0
BOD pmax pmax
comp=Z,254nm,1.7s
YSS Yuzh-Sakhalins 145.65 321 *e*PKP2 **PKPab** 17 27 59.2 +0.1
YSS Yuzh-Sakhalins 145.65 321 **PKPab** 17 27 59.0 -0.1
KDJ Kajisay 146.06 48 PKP2 **PKPab** 17 28 00.8 -0.3
KDJ Kajisay 146.06 48 **PKPab** 17 28 00.8 -0.3
KSH Kashi 146.09 53 PKPbc **PKPab** 17 28 01.3 +0.1
KSH pPKP pPKPdf 17 28 28.8 -0.1
KSH sPKP 17 28 39.8
KSH PP **PP** 17 31 24.3 +1.0
KSH PKS **PKSdf** 17 31 35.5 +0.7
KSH SKKS 17 38 00.9
KSH SS **SS** 17 50 10.9 0.0
KSH AMB AMB
comp=Z,220nm,5.3s
KSH LR LR
comp=Z,140nm,11.5s
KSH LR LR
comp=Z,280nm,7.5s
KSH LR LR
comp=Z,310nm,9.0s
MMRI Maumere 146.37 200 **PKPdf** 17 28 00.1 -0.3
MMRI pPKPdf **pPKPdf** 17 28 30.2 +0.3
TARG Taragay, Kyrgy 146.64 49 **PKPdf** 17 28 01.0 +0.4
PRZ Przheval'sk 146.75 47 PKP2 **PKPbc** 17 28 01.9 -0.5
PRZ Przheval'sk 146.75 47 **PKPbc** 17 28 01.9 -0.5
PRZ pPKPab 17 28 32.4 -0.1
FAKI Fak Fak 146.81 221 **PKPbc** 17 28 02.5 -0.6
GUMO Guam 146.84 259 **PKPdf** 17 28 01.4 +0.3
GUMO **pPKPdf** 17 28 30.6 -0.2
MAKZ Makanchi 146.85 38 **PKPdf** 17 28 00.4 +0.1
MAKZ pPKPdf **pPKPdf** 17 28 30.4 +0.6
MK31 Makanchi Array 147.04 38 PKIKP **PKPdf** 17 28 01.0 +0.4
MK31 17 28 30.9
MK31 Makanchi Array 147.04 38 **PKPdf** 17 28 01.0 +0.4
MK31 pPKPdf **pPKPdf** 17 28 30.9 +0.8
MKAR Makanchi Array 147.04 38 PKPbc **PKPbc** 17 28 01.9 -0.9
comp=Z,50nm,0.8s,baz=321,slow=1.2,SNR=130
MKAR pPKPbc **pPKPbc** 17 28 31.9 -0.1
comp=Z,44nm,1.0s,baz=232,slow=2.9,SNR=6.5
KLRI Killari 147.09 93 *e*PKPbc **PKPdf** 17 28 02.1 +0.6
ZEA Zeya 147.49 342 *e*PKIKP **PKPdf** 17 28 01.9 +0.8
ZEA *e* 17 28 32.0
ZEA pmax pmax
comp=Z,800nm,2.0s
ZEA pmax pmax
comp=Z,240nm,1.6s
ERM Erimo 147.76 313 *ce*PKIKP **PKPdf** 17 28 03.1 +1.2
ERM Erimo 147.76 313 **PKPdf** 17 28 02.4 +0.6
DGZ Jazzator, Alta 147.79 30 *d* iPKIKP **PKPdf** 17 28 02.7 +0.8
JAGI Jajag, Banyuwa 148.14 185 **PKPdf** 17 28 03.5 +0.1
JAGI **pPKPbc** 17 28 35.5 -0.5
SKHT Srikalahasti 148.52 102 *e*PKPbc **PKPdf** 17 28 05.1 +1.2
SKHT *e*PKiKP **PKPbc** 17 28 08.3 +0.7
SRLM Srisailam 148.61 98 *e*PKPbc **PKPdf** 17 28 05.0 +0.9
SRLM *e*PKiKP **PKPbc** 17 28 08.3 +0.5
HYB Hyderabad 148.70 95 *i* PKP **PKPdf** 17 28 05.0 +0.8
HYB *e*pPKP **pPKPbc** 17 28 38.0 +0.7
HYB *e*PP **PP** 17 31 36.0 -3.2
HYB Hyderabad 148.70 95 *e*P **PKPdf** 17 28 04.3 +0.1
HYB *ex* x 17 28 07.8
HYB *i* x x 17 28 36.0
HYBB Hyderabad (bro 148.70 95 *e*PKPbc **PKPdf** 17 28 05.6 +1.4
HYBB *e*PKiKP **PKPbc** 17 28 08.6 +0.5
MDRS Chennai 148.74 104 *e*P **PKPdf** 17 28 05.2 +0.9
MDRS *ex* x 17 28 08.7
MDRS *i* x x 17 28 35.6
BHPL Bhopal 148.86 84 *e*P **PKPdf** 17 28 05.3 +1.0
BHPL *i* x x 17 28 37.1
SRSP Sriramsagar 148.91 92 *e*PKPbc **PKPdf** 17 28 05.0 +0.5
SRSP *e*PKiKP **PKPbc** 17 28 08.6 +0.1
CISI Cisompet, Garu 148.97 173 **PKPdf** 17 28 03.6 -1.2
CISI PKPbc **PKPbc** 17 28 09.3 +0.5
CISI **pPKPbc** 17 28 37.9 -0.3
SIJI Sorong 149.03 221 PKP **PKPdf** 17 28 05.6 +0.7
comp=Z,50nm,0.8s,baz=81,slow=2.5,SNR=9.1
SIJI PKPbc **PKPbc** 17 28 09.6 +0.6
comp=Z,50nm,0.8s,baz=68,slow=2.1,SNR=30
SIJI pPKPbc **pPKPbc** 17 28 39.4 +0.9
comp=Z,33nm,0.9s,baz=14,slow=5.6,SNR=4.7
NJS Nagarjunasagar 149.13 97 *e*PKPbc **PKPdf** 17 28 05.9 +1.0
NJS *e*PKiKP **PKPbc** 17 28 09.4 +0.3
ADKI Addanki 149.51 99 *e*PKiKP **PKPbc** 17 28 10.6 +0.5
DDI Dehra Dun 149.58 70 *e*P **PKPdf** 17 28 06.4 +1.1
DDI *i* x x 17 28 11.1
DDI *ex* x 17 28 40.8
SMRI Semarang 149.65 178 PKPdf **PKPdf** 17 28 05.4 -0.4
SMRI **PKiKP** 17 28 11.1 -0.4
KLR Kul'dur 149.70 333 PKPbc **PKPbc** 17 28 10.0 +0.5
comp=Z,13nm,0.5s,baz=35,slow=2.5,SNR=11
KLR pPKPbc **pPKPbc** 17 28 39.0 -0.1
comp=Z,7.7nm,0.8s,baz=56,slow=3.4,SNR=2.7
KLR Kul'dur 149.70 333 *d* iPKHKP **PKPdf** 17 28 05.3 +0.5
RPR Rampur 149.76 93 *e*PKPdf **PKPdf** 17 28 06.4 +0.6
RPR *e*PKiKP **PKPbc** 17 28 10.9 +0.3
TEY Ternei 150.26 322 ||*e*PKIKP **PKiKP** 17 28 11.8 0.0
TEY pmax pmax
comp=Z,40nm,1.7s
TEY pmax pmax
comp=Z,100nm,3.6s
MYLAV Mylavaram 150.40 97 *e*PKPbc **PKPdf** 17 28 08.2 +1.3
MYLAV *e*PKiKP **PKPbc** 17 28 12.1 -0.1
KAPI Kappang 150.53 197 PKPbc **PKiKP** 17 28 13.5 +0.2
KAPI PKPab **PKPab** 17 28 20.7 +1.2
KAPI Kappang 150.53 197 *c* iPKIKP **PKiKP** 17 28 14.0 +0.7
KAPI pmax pmax
comp=Z,185nm,1.7s
KAPI Kappang 150.53 197 **PKPbc** 17 28 12.9 +0.3
KAPI **pPKPbc** 17 28 42.6 +0.6
KAPI pPKPab **pPKPab** 17 28 49.3 +1.1
MOY Mondy 150.73 13 *e*PKIKP **PKPdf** 17 28 07.7 +1.2
MOY pmax pmax
comp=Z,187nm,1.8s
IRK Irkutsk 150.76 9 *e*PKIKP **PKPdf** 17 28 07.4 +1.0
IRK *e* 17 28 36.6
IRK pmax pmax
comp=Z,158nm,2.2s
TLY Talaya 151.21 10 PKP **PKPdf** 17 28 08.7 +1.6
comp=Z,3.4nm,0.4s,baz=236,slow=3.0,SNR=3.6
TLY PKPbc **PKiKP** 17 28 14.6 +1.0
comp=Z,15nm,0.5s,baz=283,slow=3.3,SNR=8.2
TLY PKPab **PKPab** 17 28 22.3 +1.0
comp=Z,8.8nm,0.6s,baz=342,slow=5.1,SNR=7.1
TLY Talaya 151.21 10 *c* iPKIKP **PKPdf** 17 28 08.9 +1.8
TLY *e* 17 28 21.9
TLY pmax pmax
comp=Z,65nm,1.5s
TLY Talaya 151.21 10 PKPdf **PKPdf** 17 28 08.9 +1.8
TLY **PKiKP** 17 28 13.7 0.0
TLY **PKPab** 17 28 21.8 +0.5
TLY pPKPdf **pPKPdf** 17 28 37.9 +1.1
TLY **pPKPbc** 17 28 43.5 +0.8
PVM Polavaram 151.46 97 *e*PKPdf **PKPdf** 17 28 06.1 -2.4
PVM *e*PKiKP **PKiKP** 17 28 14.9 -0.2
WMQ Urumqi 151.87 38 *e*PKPbc **PKPdf** 17 28 09.0 +0.6
WMQ PKP pPKPdf 17 28 38.6 +0.6
WMQ sPKP 17 28 45.4
WMQ LR LR
comp=Z,360nm,29.0s
WMQ LR LR
comp=Z,690nm,29.1s
WMQ LR LR
comp=Z,280nm,26.1s
ZAK Zakamensk 152.40 11 *e*PKIKP **PKPdf** 17 28 10.5 +1.4
ZAK pmax pmax
comp=Z,29nm,1.6s
TNTI Ternate 152.62 217 PKP **PKPab** 17 28 29.2 +1.0
TNTI Ternate 152.62 217 PKPdf **PKPdf** 17 28 09.9 -0.4
TNTI **PKPbc** 17 28 16.6 -0.8
TNTI PKPab **PKPab** 17 28 28.0 -0.2
LUWI Luwuk 153.23 206 PKPdf **PKPdf** 17 28 11.9 +0.6
LUWI **PKiKP** 17 28 19.3 +0.3
LUWI PKPab **PKPab** 17 28 31.7 +0.9
LUWI **pPKPdf** 17 28 42.1 +1.3
USA0B Ussuriysk Arra 153.30 326 PKIKP **PKiKP** 17 28 18.6 +0.5
USA0B 17 28 29.8
USA0B Ussuriysk Arra 153.30 326 **PKPdf** 17 28 10.9 +0.5
USA0B **PKiKP** 17 28 18.6 +0.5
USA0B PKPab **PKPab** 17 28 29.8 -0.5
USRK Ussuriysk Ar. 153.30 326 PKP **PKPdf** 17 28 11.4 +1.0
comp=Z,7.7nm,1.0s,baz=301,slow=1.1,SNR=14
USRK PKPbc **PKiKP** 17 28 18.5 +0.4
comp=Z,15nm,0.8s,baz=43,slow=1.8,SNR=20
USRK PKPab **PKPab** 17 28 30.8 +0.5
comp=Z,1.9nm,0.6s,baz=39,slow=7.3,SNR=5.4
HIA Hailar 153.43 348 PKPdf **PKPdf** 17 28 10.9 +0.4
HIA **PKPbc** 17 28 17.9 -0.3
HIA **PKPab** 17 28 30.8 +0.1
HIA **pPKPbc** 17 28 47.8 +0.2
HIA pPKPab **pPKPab** 17 28 59.9 +0.5
MJAR Matsushiro Arr 153.47 306 PKP **PKPdf** 17 28 11.4 +0.5
comp=Z,6.0nm,1.2s,baz=51,slow=1.7,SNR=7.9
MJAR PKPbc **PKiKP** 17 28 19.2 +0.4
comp=Z,14nm,0.9s,baz=135,slow=0.5,SNR=19
MJAR PKPab **PKPab** 17 28 32.1 +0.7
comp=Z,17nm,1.0s,baz=50,slow=1.4,SNR=13
MJAR pPKPbc **pPKPbc** 17 28 48.1 -0.1
comp=Z,10nm,1.1s,baz=99,slow=0.7,SNR=3.2
MJAR pPKPab **sPKPbc** 17 28 59.3 -0.1
comp=Z,11nm,0.9s,baz=89,slow=2.4,SNR=4.1
MAJO Matsushiro 153.47 306 PKIKP **PKPdf** 17 28 10.9 -0.1
MAJO 17 28 31.6
MAJO Matsushiro 153.47 306 PKPdf **PKPdf** 17 28 10.9 -0.1
MAJO **PKPbc** 17 28 18.6 -0.1
MAJO PKPab **PKPab** 17 28 31.6 +0.2
MAT Matsushiro 153.47 306 PKP **PKPbc** 17 28 18.6 -0.1
MJB9 Matsu-Tunnel 153.47 306 PKPdf **PKPdf** 17 28 10.4 -0.5
MJB9 **PKiKP** 17 28 18.9 +0.1
MJB9 PKPab **PKPab** 17 28 31.3 -0.1
PYUN Piuthan 154.05 74 *e*P **PKPdf** 17 28 12.3 0.0
MDJ Mudanjiang 154.18 329 PKPbc **PKPdf** 17 28 12.0 +0.3
MDJ AMB AMB
comp=Z,310nm,3.8s
MDJ Mudanjiang 154.18 329 **PKPdf** 17 28 11.6 0.0
MDJ **PKPbc** 17 28 19.0 -0.9
GSI **PKPdf** 17 28 09.8 -2.9
GSI **PKPab** 17 28 36.3 +1.4
KOLN Koldanda 154.61 74 *e*P **PKPdf** 17 28 13.1 0.0
DANN Dangsing 154.71 73 *e*P **PKPdf** 17 28 14.1 +0.8
INU Inuyama 154.81 304 **PKPdf** 17 28 11.7 -1.1
BKNI Bangkinang 154.89 155 PKPdf **PKPdf** 17 28 11.7 -1.9
BKNI **PKPab** 17 28 37.8 0.0
SONM Songino Array 155.37 8 PKP **PKPdf** 17 28 14.6 +1.2
comp=Z,5.3nm,0.8s,baz=293,slow=0.8,SNR=31
SONM PKPbc PKPbc 17 28 23.3
comp=Z,3.3nm,0.5s,baz=325,slow=1.0,SNR=12
SONM PKPab **PKPab** 17 28 40.1 +1.0
comp=Z,8.2nm,0.7s,baz=326,slow=4.0,SNR=15
SONM pPKPab **pPKPab** 17 29 07.0 -0.6
comp=Z,5.4nm,0.9s,baz=333,slow=3.5,SNR=2.6
ULN Ulaanbaatar 155.41 7 PKIKP **PKPdf** 17 28 13.8 +0.3
ULN 17 28 40.5
ULN Ulaanbaatar 155.41 7 **PKPdf** 17 28 13.8 +0.3
ULN PKPab **PKPab** 17 28 40.5 +1.2
GKN Gorkha 155.51 74 *e*P **PKPdf** 17 28 14.3 +0.1
DMN Daman 155.95 75 *e*P **PKPdf** 17 28 15.0 0.0
RPSI Rantau Prapat 156.08 148 PKPdf **PKPdf** 17 28 13.5 -1.6
RPSI **PKPab** 17 28 43.0 +0.1
KKN Kakani 156.09 74 *e*P **PKPdf** 17 28 15.2 +0.1
PSI Prapat 156.17 148 PKP **PKPdf** 17 28 15.0 -0.4
comp=Z,1.7nm,0.4s,baz=181,slow=5.8,SNR=4.9
PSI PKPab **PKPab** 17 28 44.0 +0.6
comp=Z,24nm,0.9s,baz=182,slow=2.6,SNR=12
PSI Prapat 156.17 148 PKIKP **PKPdf** 17 28 13.5 -2.0
PSI 17 28 43.0
PKIN Phulchoki 156.21 75 *e*P **PKPdf** 17 28 15.1 -0.2
PKI Pulchoki 156.22 75 *e*P **PKPdf** 17 28 15.2 -0.2
GUN Gumba 156.61 74 *e*P **PKPdf** 17 28 16.0 +0.1
comp=Z,13nm,0.8s
BOK Bokaro 156.64 84 *e*P **PKPdf** 17 28 15.3 -0.4
BOK *i* x x 17 28 45.0
BOK *ex* x 17 29 13.6
CN2 Changchun 156.65 334 *e*PKP **PKPdf** 17 28 15.3 +0.3
JIRN Jiri 156.91 74 *e*P **PKPdf** 17 28 16.3 0.0
RAMN Ramite 157.32 76 *e*P **PKPdf** 17 28 17.0 +0.3
ODAN Odare 158.03 76 *e*P **PKPdf** 17 28 17.9 +0.3
comp=Z,18nm,0.8s
KSM Kuching 158.11 177 **PKPdf** 17 28 17.9 +0.1
KSM **pPKPdf** 17 28 48.0 +0.5
KSM **pPKPab** 17 29 20.0 -0.2
TAPN Taplejung 158.28 75 *e*P **PKPdf** 17 28 18.1 +0.1
comp=Z,25nm,1.2s
KCP Kidapawan 158.99 221 ⇑*i*P **PKPdf** 17 28 19.9 +1.0
KCP *i* S **PKPab** 17 28 51.1 -4.5
KSRS Korea Array 160.11 318 PKP **PKPdf** 17 28 20.4 +1.0
comp=Z,16nm,1.1s,baz=56,slow=0.8,SNR=46
KSRS pPKP **pPKPdf** 17 28 50.1 +1.0
comp=Z,17nm,1.1s,baz=56,slow=0.6,SNR=6.4
KSRS PKPab **sPKPdf** 17 29 00.9 +0.7
comp=Z,6.4nm,0.8s,baz=57,slow=4.4,SNR=12
KSRS pPKPab **pPKPab** 17 29 28.5 +0.1
comp=Z,3.1nm,0.8s,baz=53,slow=4.4,SNR=2.0
JNU Nakatsue 160.35 304 PKPab **PKPab** 17 29 02.0 +0.8
comp=Z,5.0nm,0.7s,baz=109,slow=7.7,SNR=2.6
LSA Lhasa 160.88 67 PKP **PKPdf** 17 28 22.3 +1.2
LSA Lhasa 160.88 67 PKP2 **PKPab** 17 29 03.6 -0.5
LSA 18 28 21.1
LSA 18 28 51.3
LSA Lhasa 160.88 67 **PKPdf** 17 28 21.1 0.0
LSA pPKPdf **pPKPdf** 17 28 51.3 +0.6
LSA **PKPab** 17 29 03.6 -0.5
LSA **pPKPab** 17 29 32.7 +0.2
GTA Gaotai 161.32 29 PKP **PKPdf** 17 28 21.8 +1.0
GTA pPKP pPKPdf 17 28 51.3 +0.9
GTA sPKP 17 29 05.4
GTA LR LR
comp=Z,110nm,19.2s
GTA LR LR
comp=Z,69nm,16.5s
GTA LR LR
comp=Z,140nm,21.3s
SHL Shillong 162.13 79 *e*P **PKPdf** 17 28 21.9 -0.3
SHL *ex* x 17 28 49.4
SHL *i* x x 17 29 34.5
SHL Shillong 162.13 79 **PKPdf** 17 28 21.9 -0.3
SHL pPKPdf **pPKPdf** 17 28 51.3 -0.5
SHL PKPab **PKPab** 17 29 09.1 -0.3
SHL pPKPab **pPKPab** 17 29 36.9 -0.9
HHC Hu-ho-hao-te 162.67 360 *e*PKP **PKPdf** 17 28 19.3 -2.8
BTO Baotou 162.88 4 *e*PKP **PKPdf** 17 28 22.8 +0.5
BJI Beijing 162.99 347 PKP **PKPdf** 17 28 23.3 +1.0
BJI pPKP **pPKPdf** 17 28 50.8 -1.2
BJI PP **PP** 17 32 53.3 -3.0
BJI SS SS 17 53 14.6 +3.1
BJI AMB AMB
comp=Z,140nm,5.3s
KOHI KOHIMA 164.13 78 *e*P **PKPdf** 17 28 24.5 +0.5
KOHI *i* x x 17 28 52.4
LZH Lanzhou 165.83 26 ⇑PKP **PKPdf** 17 28 27.4 +2.2
LZH pPKP pPKPdf 17 28 57.1 +2.1
LZH sPKP 17 29 03.3
LZH LR LR
comp=Z,130nm,18.3s
LZH LR LR
comp=Z,190nm,17.2s
LZH LR LR
comp=Z,200nm,21.1s
TIA Tai'an 166.37 340 PKP **PKPdf** 17 28 26.3 +0.9
CM31 Chiang Mai Arr 167.35 111 **PKPdf** 17 28 25.9 -0.7
CM31 **pPKPdf** 17 28 55.9 -0.4
CM31 PKPab **PKPab** 17 29 31.5 -0.8
CM31 pPKPab **pPKPab** 17 29 58.8 -1.9
CMAR Chiang Mai Arr 167.35 111 PKP **PKPdf** 17 28 27.0 +0.4
comp=Z,3.1nm,0.9s,baz=280,slow=2.2,SNR=23
CMAR pPKP **pPKPdf** 17 28 57.0 +0.7
comp=Z,9.9nm,1.3s,baz=262,slow=1.6,SNR=5.2
CMAR PKPab **PKPab** 17 29 32.4 +0.1
comp=Z,3.5nm,0.9s,baz=252,slow=4.6,SNR=10
CMAR PP **PP** 17 33 23.9 +3.0
comp=Z,1.5nm,1.1s,baz=262,slow=5.3,SNR=4.4
CHTO Chiang Mai 167.50 109 **PKPdf** 17 28 26.7 0.0
CHTO **pPKPdf** 17 28 56.1 -0.3
CHTO **PKPab** 17 29 32.7 -0.2
CHTO **pPKPab** 17 30 01.9 +0.6
PBKT Sadao Pong 168.05 123 **PKPdf** 17 28 27.3 +0.3
PBKT **pPKPdf** 17 28 56.9 +0.1
PBKT PKPab **PKPab** 17 29 35.6 +0.3
PBKT pPKPab **pPKPab** 17 30 04.8 +1.2
NJ2 Nanjing 169.20 324 *e*PKP **PKPdf** 17 28 27.8 +0.4
XAN Xi'an 169.25 11 **PKPdf** 17 28 27.4 -0.1
XAN **pPKPdf** 17 28 57.6 +0.4
XAN PKPab **PKPab** 17 29 40.7 +0.6
XAN pPKPab **pPKPab** 17 30 09.4 +0.9
CD2 Chengdu 169.96 41 PKP **PKPdf** 17 28 26.9 -1.1
CD2 pPKP pPKPdf 17 28 57.3 -0.5
CD2 PP **PP** 17 33 32.8 -0.3
CD2 SKS **SKSdf** 17 35 20.9 -1.4
CD2 SKKS **SKKSac** 17 40 07.9 -3.0
CD2 SS **SS** 17 54 23.8 +0.2
CD2 AMB AMB
comp=Z,190nm,10.1s
CD2 LR LR
comp=Z,170nm,8.6s
CD2 LR LR
comp=Z,180nm,7.9s
CD2 LR LR
comp=Z,330nm,43.1s
SSLB Suanglung 171.22 274 **PKPdf** 17 28 28.5 -0.4
SSLB pPKPdf **pPKPdf** 17 28 58.6 0.0
WHN Wuhan 172.48 340 PKP **PKPdf** 17 28 29.9 +0.7
WHN SS SS 17 54 40.3 -6.6
WHN LR LR
comp=Z,690nm,33.9s
SLVN Son La 172.76 106 **PKPdf** 17 28 29.6 0.0
SLVN pPKPdf **pPKPdf** 17 28 59.7 +0.2
SLVN PKPab **PKPab** 17 29 54.8 -1.5

ENH	**Enshi**	**173.02**	**14**		**PKPdf**	**17 28 29.1**	**-0.5**
ENH					**pPKPdf**	**17 28 58.5**	**-0.8**
ENH				PKPab	**PKPab**	**17 29 56.9**	**+0.1**
QZH	**Quanzhou**	**173.26**	**284**	*e*PKP	**PKPdf**	**17 28 29.3**	**-0.4**
QZH				pPKP	**pPKPdf**	**17 28 59.3**	**-0.1**
QZH				PKPab	**PKPab**	**17 30 00.4**	**+2.1**
QZH				PP	**PP**	**17 33 51.4**	**+0.8**
QZH				AMB	AMB		
	comp=Z,160nm,8.3s						
QZH				LR	LR		
	comp=Z,150nm,19.4s						
GYA	**Guiyang**	**174.79**	**54⇑**	*i*PKP	**PKPdf**	**17 28 31.3**	**+0.9**
GYA				pPKP	pPKPdf	17 29 00.8	+0.6
GYA				PP	**PP**	**17 33 56.3**	**-1.2**
GYA				SKKS		17 40 32.5	
GYA				SS	**SS**	**17 55 07.1**	**-4.7**
GYA				AMB	AMB		
	comp=Z,60nm,7.4s						
GYA				LR	LR		
	comp=Z,90nm,4.5s						
GYA				LR	LR		
	comp=Z,60nm,3.8s						
GYA				LR	LR		
	comp=Z,80nm,6.7s						

UPP ***16*** *17:18:01.0±2.3,57.°74N×23.°03E, h0km, ML2.4, Suspected explosion*
HEL ***16*** *17:18:03.5±0.4,57.°73N×22.°22E, h0km, ML2.0, Explosion*
IDC ***16*** *17:18:05.5±2.2,57.°90N×22.°57E, h0km, mb1 3.2/4, mb1mx3.0/51, mbtmp3.1/4, ML2.4/4, Error ellipse: s-maj=22.2km s-min=9.0km az=164.0*
EST ***16*** *17:18:05.6±0.1,57.°89N×22.°47E, h0km, ML1.9(HEL), Explosion*
LVSN ***16*** *17:18:05.3±3.4,57.°86N×22.°62E, h0km±19km, ML2.5*

ISC 16 17:18:05.4±0.8, 57.°91N±0.°03×22.°38E±0.°03, h0km, n37, σ1§11/52, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.28**	**189**	*e*P	**Pg**	**17 18 10.0**	**-0.8**
SLIT				IAML		17 18 32.5	
	comp=Z,3μm,0.6s						
SLIT	**Slitere, Latvi**	**0.28**	**189**	*e*P	**Pg**	**17 18 10.4**	**-0.4**
SLIT				AML	AML	17 18 32.0	
	comp=Z,4μm,0.6s						
SLIT				AML	AML	17 18 32.1	
	comp=N,5μm,0.6s						
SLIT				AML	AML	17 18 34.4	
	comp=E,3μm,0.5s						
SLIT	**Slitere, Latvi**	**0.28**	**189**	*i* P	**Pg**	**17 18 10.3**	**-0.4**
SLIT				*e*S	**Sg**	**17 18 14.7**	**+0.3**
MTSE	**Matsula**	**1.11**	**43**	*e*P	**Pg**	**17 18 25.3**	**-1.4**
MTSE	**Matsula**	**1.11**	**43**	*e*P	**Pg**	**17 18 25.2**	**-1.4**
PBUR	**Paburge**	**1.90**	**188**	*e*P	**Pn**	**17 18 39.7**	**+0.6**
PBUR				*e*S	**Sb**	**17 19 05.3**	**+0.1**
GOTU	**Gotland**	**2.05**	**265**	P	**Pn**	**17 18 41.1**	**+0.1**
GOTU				S	**Sg**	**17 19 11.8**	**+0.6**
VSU	**Vasula**	**2.38**	**75**	*e*P	**Pn**	**17 18 45.8**	**+0.3**
VSU	**Vasula**	**2.38**	**75**	*e*P	**Pn**	**17 18 45.5**	**-0.1**
VSU				AML	AML	17 18 47.3	
	comp=Z,78nm,0.2s						
VSU				*e*S	**Sn**	**17 19 16.2**	**+0.9**
VSU				AML	AML	17 19 18.1	
	comp=E,109nm,0.7s						
VSU				AML	AML	17 19 23.7	
	comp=N,64nm,0.5s						
VSU	**Vasula**	**2.38**	**75**	*e*P	**Pn**	**17 18 45.4**	**-0.1**
VSU				*e*SB	**Sn**	**17 19 15.6**	**+0.3**
ARBE	**Arbavere**	**2.43**	**49**	*e*PB	**Pn**	**17 18 47.1**	**+0.8**
ARBE				*e*SG	**Sb**	**17 19 19.1**	**-1.2**
MEF	**Metsahovi**	**2.54**	**23**	*e*P	**Pb**	**17 18 49.9**	**-1.9**
MEF				*e*S	**Sb**	**17 19 23.3**	**-0.3**
MEF	**Metsahovi**	**2.54**	**23**	*e*PB	**Pn**	**17 18 49.1**	**+1.3**
MEF				MSG		17 19 26.2	
	comp=Z,7.8nm,0.1s						
NYNU	**Nynaeshamn**	**2.55**	**297**	P	**Pn**	**17 18 48.8**	**+0.9**
AAL	**Aland**	**2.59**	**333**	P	**Pn**	**17 18 48.6**	**+0.1**
AAL				S	**Sb**	**17 19 25.8**	**+0.9**
AAL	**Aland**	**2.59**	**333**	*e*P	**Pn**	**17 18 49.2**	**+0.8**
NRTU	**Norrtaelje**	**2.64**	**314**	P	**Pn**	**17 18 49.6**	**+0.5**
VIKU	**Vikbolandet**	**3.06**	**284**	P	**Pn**	**17 18 55.4**	**+0.4**
GRAU	**Graesoe**	**3.14**	**323**	P	**Pn**	**17 18 55.9**	**-0.1**
VSTU	**Vaestervik**	**3.14**	**268**	P	**Pn**	**17 18 57.0**	**+1.1**
RAF	**Rauma**	**3.14**	**355**	*e*P	**Pn**	**17 18 56.9**	**+0.9**
RAF				*e*S	**Sb**	**17 19 40.5**	**-0.3**
RAF				AML	AML	17 19 44.9	
	comp=Z,4.9nm,0.3s						
RAF				AML	AML	17 19 51.8	
	comp=E,6.7nm,0.4s						
RAF				AML	AML	17 19 53.9	
	comp=N,4.5nm,0.4s						
RAF	**Rauma**	**3.14**	**355**	*e*P	**Pn**	**17 18 56.3**	**+0.2**
RAF				MSG		17 19 43.4	
	comp=Z,2.5nm,0.1s						
PVF	**Pernaja**	**3.20**	**33**	*e*P	**Pn**	**17 18 57.3**	**+0.5**
PVF				MSG		17 19 49.5	
	comp=Z,3.0nm,0.1s						
FLYU	**Flymyra**	**3.22**	**316**	P	**Pn**	**17 18 57.5**	**+0.4**
IIGN	**Ignalina**	**3.33**	**139**	*e*P	Pn	17 18 51.9	-6.8
IIGN				IAML		17 18 55.0	
	comp=Z,3.1nm,0.6s						
BACU	**Backbrunna**	**3.36**	**308**	P	**Pn**	**17 18 60.0**	**+0.9**
OSKU	**Oskarshamn**	**3.46**	**261**	P	**Pn**	**17 19 00.7**	**+0.3**
VJF	**Virojoki**	**3.75**	**43**	*e*PG	**Pb**	**17 19 12.9**	**+0.5**
VJF				*e*SG	**Sb**	**17 20 00.4**	**+2.1**
VJF				MSG		17 20 04.5	
	comp=Z,1.8nm,0.1s						
FIA0	**FINESS Array S**	**4.01**	**26**	*e*P	**Pn**	**17 19 08.3**	**+0.3**
FIA0				*e*SG	**Sb**	**17 20 08.6**	**+2.7**
FINES	**FINESS Array B**	**4.01**	**26**	Pn	**Pn**	**17 19 08.4**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=206,slow=12,SNR=26						
FINES				Pg	**Pb**	**17 19 18.6**	**+1.7**
	comp=Z,1.1nm,0.3s,baz=208,slow=13,SNR=29						
FINES				Sn	**Sn**	**17 19 56.3**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=204,slow=23,SNR=3.5						
FINES				Lg	Lg	17 20 10.3	
	comp=Z,1.2nm,0.3s,baz=209,slow=25,SNR=11						
FIA1	**FINESS Array S**	**4.01**	**26**	*e*P	**Pn**	**17 19 08.3**	**+0.3**
KEF	**Keuruu**	**4.45**	**15**	*e*P	**Pn**	**17 19 15.3**	**+1.2**
KAF	**Kangasniemi**	**4.66**	**23**	*e*P	**Pn**	**17 19 17.2**	**+0.4**
BSD	**Bornholm Skovb**	**4.99**	**239**	*i* P	**Pn**	**17 19 19.0**	**-2.4**
HFS	**Hagfors**	**5.01**	**300**	Pn	**Pn**	**17 19 22.2**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=118,slow=16,SNR=33						
HFS				Pg	**Pb**	**17 19 34.8**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=113,slow=15,SNR=1.8						
HFS				Sn	**Sn**	**17 20 20.0**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=113,slow=26,SNR=2.0						
HFS				Lg	Lg	17 20 42.4	
	comp=Z,0.7nm,0.3s,baz=111,slow=29,SNR=6.5						
NOA	**NORSAR Array B**	**6.50**	**304**	Pn	**Pn**	**17 19 41.4**	**-0.7**
	comp=Z,0.0nm,0.3s,baz=114,slow=14,SNR=8.3						
NOA				Sn	**Sn**	**17 20 56.5**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=129,slow=18,SNR=1.6						
NOA				Lg	Lg	17 21 35.3	
	comp=Z,0.0nm,0.3s,baz=127,slow=21,SNR=4.6						
ARCES	**ARCESS Array B**	**11.76**	**5**	Pn	**Pn**	**17 20 50.2**	**-3.9**
	comp=Z,0.1nm,0.3s,baz=185,slow=13,SNR=6.9						

BJI ***16*** *17:29:21.5±0.0,2.°83S×139.°17E, h65km, mB5.0/21, mb4.7/31, Ms4.5/8, Ms7 4.2/8*
NEIC ***16*** *17:29:26.0±2.0,2.°59S±0.°08×138.°86E±0.°06, h67km±5km, mb4.7/48, Error ellipse: s-maj=11.7km s-min=7.8km az=192.0*
DJA ***16*** *17:29:25.6±0.3,2.°3S×13.°9E±.°, h58km±4km, M4.5/7, mb4.7/7, mB5.1/4, MLv4.5/7, Mw(mB)4.4/4*
IDC ***16*** *17:29:26.5±0.6,2.°51S×138.°94E, h68km±5km, mb3.9/14, mb1 4.1/17, mb1mx3.9/39, mbtmp4.3/17, MS3.6/5, Ms1 3.6/5, ms1mx3.2/38, Error ellipse: s-maj=12.5km s-min=7.4km az=9.0*

ISC 16 17:29:25.9±0.5, 2.°60S±0.°04×138.°88E±0.°04, h62km±4km, h62km:pP-P, n103, σ1§60/120, mb4.6/41, 1C, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.63**	**345**	P	**Pn**	**17 29 38.4**	**-1.0**
SMPI				S	**Sn**	**17 29 45.5**	**-3.8**
GENI	**Genyem**	**1.29**	**90**	P	**Pn**	**17 29 48.6**	**+0.8**
GENI				S	**Sn**	**17 30 04.4**	**+0.1**
JAY	**Jayapura**	**1.83**	**87**	P	**Pn**	**17 29 55.1**	**0.0**
	104nm,0.3s,baz=242,slow=9.9,SNR=424						
JAY				S	**Sn**	**17 30 16.6**	**-0.7**
	94nm,0.3s,baz=111,slow=14,SNR=9.0						
JAY				LR	LR	17 30 34.9	
	comp=Z,276nm,18.8s,baz=208,slow=39						
JAY	**Jayapura**	**1.83**	**87**	P	**Pn**	**17 29 55.1**	**0.0**
JAY				S	**Sn**	**17 30 15.7**	**-1.6**
SRPI	**Serui, Papua**	**2.73**	**285**	P	**Pn**	**17 30 07.0**	**-0.3**
SRPI				S	**Sn**	**17 30 37.4**	**-1.8**
RKPI	**Ransiki, Papua**	**4.82**	**283**	P	**Pn**	**17 30 35.4**	**-0.5**
MMPI	**Merauke**	**6.02**	**166**	P	**Pn**	**17 30 54.5**	**+2.1**
	2.7nm353nm,1.1s						
FAKI	**Fak Fak**	**6.63**	**267**	P	**Pn**	**17 31 01.0**	**+0.3**
	0.2nm722nm58nm,0.9s						
FAKI	**Fak Fak**	**6.63**	**267**		**Pn**	**17 31 00.8**	**+0.1**
FAKI				Sn	**Sn**	**17 32 12.0**	**-2.9**
SIJI	**Sorong**	**7.80**	**283**	P	**Pn**	**17 31 18.0**	**+1.2**
	8.2nm,0.3s,baz=94,slow=14,SNR=24						
SIJI				S	**Sn**	**17 32 40.7**	**-3.0**
	baz=308,slow=23,SNR=1.8						
COEN	**Coen**	**12.06**	**160**	Pn	**Pn**	**17 32 13.2**	**-1.9**
MTN	**Manton Dam**	**12.74**	**217**		**Pn**	**17 32 23.2**	**-1.1**
RABL	**Rabaul**	**13.36**	**97**	Pn	**Pn**	**17 32 31.8**	**-0.9**
SOEI	**Soe**	**16.16**	**243**	P	**P**	**17 33 15.4**	**+3.9**
SOEI	**Soe**	**16.16**	**243**	P	**Pn**	**17 33 09.8**	**+0.5**
SOEI				IAmb	IAmb	17 33 17.1	
	comp=Z,87nm,1.2s						
KNRA	**Kununurra**	**16.37**	**217**		**Pn**	**17 33 10.6**	**-1.2**
DAV	**Davao City (W)**	**16.38**	**306**	LR	LR	17 40 34.9	
	comp=Z,56nm,18.2s,baz=163,slow=41						
BATI	**Baumata**	**16.89**	**243**	P	**Pn**	**17 33 18.4**	**0.0**
	comp=Z,2.0nm,0.3s,baz=281,slow=21,SNR=2.3						
BATI	**Baumata**	**16.89**	**243**	P	**P**	**17 33 25.7**	**+6.2**
WB0	**Warramunga Arr**	**17.62**	**194**	P	**Pn**	**17 33 25.8**	**-1.4**
WR0	**Warramunga Arr**	**17.77**	**193**	P	**Pn**	**17 33 28.0**	**-1.0**
WRAB	**Tennant Creek**	**17.79**	**194**	P	**Pn**	**17 33 28.2**	**-1.1**
WB2	**Warramunga Arr**	**17.80**	**194**	P	**Pn**	**17 33 28.2**	**-1.2**
WRA	**Warramunga Arr**	**17.80**	**194**	P	**Pn**	**17 33 28.1**	**-1.3**
	comp=Z,2.3nm,0.3s,baz=16,slow=12,SNR=84						
WRA				S	Sn	17 36 36.2	-11
	comp=Z,1.0nm,0.3s,baz=12,slow=21,SNR=6.3						
CTA	**Charters Tower**	**18.82**	**158**	P	**Pn**	**17 33 41.5**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=331,slow=6.0,SNR=2.1						
CTAO	**Charters Tower**	**18.82**	**158**	P	**P**	**17 33 39.8**	**-0.9**
CTAO				IAmb	IAmb	17 34 26.9	
	comp=Z,51nm,1.6s						
PCI	**Palu**	**19.10**	**275**	P	P	17 33 35.0	-8.8
KAPI	**Kappang**	**19.23**	**262**	P	**P**	**17 33 44.4**	**-0.8**
FITZ	**Fitzroy Crossi**	**20.14**	**219**	P	**P**	**17 33 55.4**	**+0.3**
	comp=Z,3.4nm,0.9s,baz=62,slow=11,SNR=9.7						
FITZ				S	S	17 37 26.8	-11
	comp=Z,4.7nm,0.7s,baz=62,slow=21,SNR=3.2						
FITZ				LR	LR	17 42 35.8	
	comp=Z,95nm,20.5s,baz=66,slow=39						
FITZ	**Fitzroy Crossi**	**20.14**	**219**	P	**P**	**17 33 54.9**	**-0.2**
FITZ					**S**	**17 37 33.0**	**-4.1**
AS31	**Alice Springs**	**21.49**	**193**	P	**P**	**17 34 09.6**	**+0.1**
AS31					**S**	**17 38 03.6**	**-1.0**
ASAR	**Alice Springs**	**21.49**	**193**	P	**P**	**17 34 09.9**	**+0.4**
	comp=Z,6.2nm,0.5s,baz=16,slow=9.7,SNR=159						
ASAR				S	**S**	**17 38 03.2**	**-1.4**
	comp=Z,1.9nm,0.7s,baz=15,slow=26,SNR=5.2						
ASAR				LR	LR	17 43 47.3	
	comp=Z,135nm,18.1s,baz=126,slow=40						
KKM	**Kota Kinabalu**	**24.20**	**291**	P	**P**	**17 34 34.6**	**-2.4**
EIDS	**Eidsvold**	**25.51**	**154**	P	**P**	**17 34 47.6**	**-1.0**
EIDS				IAmb	IAmb	17 34 52.7	
	comp=Z,52nm,1.4s						
PSAD1	**Pilbara Seismi**	**26.36**	**223**	P	**P**	**17 34 55.3**	**-1.0**
PSAD1				IAmb	IAmb	17 35 31.8	
	comp=Z,22nm,1.2s						
PSAD2	**Pilbara Seismi**	**26.38**	**223**	P	**P**	**17 34 55.6**	**-1.0**
PSAD2				IAmb	IAmb	17 35 41.2	
	comp=Z,59nm,1.6s						
PSAC2	**Pilbara Seismi**	**26.38**	**223**	P	**P**	**17 34 55.0**	**-1.5**
PSAC2				IAmb	IAmb	17 35 37.8	
	comp=Z,54nm,1.6s						
PSAA3	**Pilbara Seismi**	**26.43**	**223**	P	**P**	**17 34 57.1**	**+0.2**
PSAA3				IAmb	IAmb	17 34 57.2	
	comp=Z,71nm,1.8s						
PSAC1	**Pilbara Seismi**	**26.43**	**223**	P	**P**	**17 34 56.6**	**-0.4**
PSAC1				IAmb	IAmb	17 35 45.1	
	comp=Z,71nm,1.7s						
PSA00	**Pilbara Seismi**	**26.43**	**223**	P	**P**	**17 34 56.0**	**-1.0**
PSA00				IAmb	IAmb	17 35 34.9	
	comp=Z,44nm,1.6s						
PSAB3	**Pilbara Seismi**	**26.43**	**223**	P	**P**	**17 34 56.6**	**-0.5**
PSAB3				IAmb	IAmb	17 34 57.6	
	comp=Z,49nm,1.6s						
PSAB1	**Pilbara Seismi**	**26.44**	**223**	P	**P**	**17 34 56.9**	**-0.2**
PSAB1				IAmb	IAmb	17 35 04.3	
	comp=Z,27nm,1.3s						
STKA	**Stephens Creek**	**29.23**	**175**	P	**P**	**17 35 23.5**	**+1.5**
	comp=Z,2.4nm,0.7s,baz=352,slow=11,SNR=6.6						
STKA	**Stephens Creek**	**29.23**	**175**	P	**P**	**17 35 23.1**	**+1.2**
FORT	**Forrest**	**29.84**	**199**	P	**P**	**17 35 28.0**	**+0.7**
FORT				IAmb	IAmb	17 35 51.5	
	comp=Z,11nm,0.9s						
BBOO	**Buckleboo**	**30.17**	**185**	P	**P**	**17 35 30.0**	**-0.2**
ARMA	**Armidale**	**30.19**	**158**	P	**P**	**17 35 30.7**	**+0.1**
ARMA				IAmb	IAmb	17 35 40.6	
	comp=Z,24nm,1.4s						
CAN	**Canberra**	**33.89**	**165**	P	**P**	**17 36 06.1**	**+3.2**
CAN				IAmb	IAmb	17 36 06.2	
	comp=Z,10nm,1.1s						
MORW	**Morawa**	**34.13**	**217**	P	**P**	**17 36 05.2**	**+0.3**
RGRI	**Rengat**	**36.59**	**273**	P	**P**	**17 36 28.2**	**+1.8**
MAJO	**Matsushiro**	**38.95**	**359**	P	**P**	**17 36 43.4**	**-2.5**
MAT	**Matsushiro**	**38.95**	**359**	P	**P**	**17 36 43.9**	**-2.0**
MJB9	**Matsu-Tunnel**	**38.95**	**359**	P	**P**	**17 36 43.7**	**-2.2**
MJB9				IAmb	IAmb	17 37 12.1	
	comp=Z,9.0nm,1.4s						
NJ2	**Nanjing**	**39.35**	**333**	*e*P	**P**	**17 36 48.4**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ENH	**Enshi**	**43.08**	**322**	P	**P**	**17 37 18.2**	**-1.8**
CMAR	**Chiang Mai Arr**	**44.53**	**300**	P	**P**	**17 37 31.2**	**-0.5**
	comp=Z,1.5nm,1.1s,baz=126,slow=5.4,SNR=6.6						
CMAR				pP	**pP**	**17 37 49.0**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=111,slow=6.5,SNR=2.9						
CMAR				PcP	**PcP**	**17 39 14.1**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=136,slow=2.0,SNR=5.7						
KMI	**Kunming**	**44.58**	**310**	P	**P**	**17 37 33.8**	**+1.5**
KMI				pmax	pmax		
	comp=Z,23nm,0.5s						
BJI	**Beijing**	**47.26**	**336**	P	**P**	**17 37 53.1**	**+0.2**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BJI				LR	LR		
	comp=Z,91nm,4.5s						
BJI				LR	LR		
	comp=Z,130nm,13.3s						
MDJ	**Mudanjiang**	**47.73**	**351**	P	**P**	**17 37 56.3**	**-0.2**
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,220nm,3.7s						
TUWZ	**Tuamarina**	**49.87**	**146**	P	**P**	**17 38 13.0**	**+0.1**
LTZ	**Lake Taylor**	**49.87**	**148**	P	**P**	**17 38 14.1**	**+1.1**
LTZ				PcP	**PcP**	**17 39 31.1**	**-1.6**
BKZ	**Black Stump Fm**	**49.95**	**142**	P	**P**	**17 38 13.9**	**+0.2**
LBZ	**Lake Benmore**	**49.96**	**151**	P	**P**	**17 38 13.8**	**+0.2**
KHZ	**Kahutara**	**50.30**	**147**	P	**P**	**17 38 16.2**	**0.0**
LZH	**Lanzhou**	**50.49**	**323**	*e*P	**P**	**17 38 18.6**	**+0.6**
LZH				PP	**PP**	**17 40 18.8**	**+4.5**
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,5.4s						
LZH				LR	LR		
	comp=Z,220nm,16.2s						
LZH				LR	LR		
	comp=Z,430nm,16.0s						
LZH				LR	LR		
	comp=Z,590nm,18.0s						
KLR	**Kul'dur**	**51.99**	**354**	P	**P**	**17 38 28.0**	**-0.7**
	comp=Z,1.8nm,0.6s,baz=145,slow=5.3,SNR=8.4						
SONM	**Songino Array**	**57.69**	**335**	P	**P**	**17 39 10.0**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=138,slow=5.5,SNR=3.1						
YAK	**Yakutsk**	**64.84**	**355**	P	**P**	**17 39 57.7**	**-0.2**
WMQ	**Urumqi**	**65.03**	**322**	*e*P	**P**	**17 40 01.3**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,46nm,3.7s						
WMQ				LR	LR		
	comp=Z,190nm,28.9s						
WMQ				LR	LR		
	comp=Z,100nm,29.2s						
WMQ				LR	LR		
	comp=Z,190nm,22.5s						
SEY	**Seymchan**	**66.15**	**7**	P	**P**	**17 40 06.5**	**0.0**
	comp=Z,0.5nm,0.5s,baz=197,slow=9.9,SNR=2.5						
CASY	**Casey**	**66.61**	**192**	P	**P**	**17 40 10.2**	**+0.8**
CASY				IAmb	IAmb	17 41 54.2	
	comp=Z,17nm,1.6s						
MK31	**Makanchi Array**	**69.80**	**322**	P	**P**	**17 40 29.6**	**-0.1**
MKAR	**Makanchi Array**	**69.80**	**322**	P	**P**	**17 40 29.7**	**-0.1**
	comp=Z,3.8nm,0.3s,baz=99,slow=8.0,SNR=89						
MKAR				pP	**pP**	**17 40 48.2**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=120,slow=7.0,SNR=2.7						
MAKZ	**Makanchi**	**70.00**	**322**	P	**P**	**17 40 30.5**	**-0.5**
KSH	**Kashi**	**71.13**	**313**	P	**P**	**17 40 39.8**	**+1.7**
KSH				PcP	**sP**	**17 41 01.8**	**-0.7**
KSH				S	**S**	**17 49 53.0**	**+2.6**
KSH				SS	**SS**	**17 54 30.5**	**+5.3**
KSH				pmax	pmax		
	comp=Z,27nm,1.2s						
KSH				pmax	pmax		
	comp=Z,190nm,4.5s						
KSH				LR	LR		
	comp=Z,110nm,10.1s						
KSH				LR	LR		
	comp=Z,110nm,12.0s						
KSH				LR	LR		
	comp=Z,170nm,9.3s						
ZALV	**Zalesovo Beam**	**71.92**	**330**	P	**P**	**17 40 41.4**	**-1.1**
	comp=Z,1.7nm,0.6s,baz=106,slow=6.5,SNR=6.8						
ZALV				pP	**PcP**	**17 41 00.2**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=27,slow=30,SNR=1.9						
GAR	**Garm**	**75.15**	**311**	P	**P**	**17 41 01.3**	**-0.6**
VNDA	**Vanda**	**75.88**	**175**	P	**P**	**17 41 05.4**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=327,slow=7.3,SNR=25						
VNDA	**Vanda**	**75.88**	**175**	P	**P**	**17 41 05.1**	**0.0**
CHGR	**Chuyangaron**	**75.93**	**311**	P	**P**	**17 41 05.3**	**-1.1**
BRVK	**Borovoye**	**79.39**	**325**	P	**P**	**17 41 24.5**	**-0.6**
BRVK				IAmb	IAmb	17 41 25.7	
	comp=Z,6.5nm,0.8s						
NRIK	**Noril'sk**	**79.66**	**344**	P	**P**	**17 41 25.8**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=145,slow=5.3,SNR=3.7						
NRIK				pP	**pP**	**17 41 44.8**	**+1.1**
	comp=Z,1.3nm,0.6s,baz=151,slow=5.5,SNR=1.7						
KDAK	**Kodiak Island**	**80.92**	**30**	P	**P**	**17 41 33.6**	**+0.4**
KDAK				IAmb	IAmb	17 43 56.7	
	comp=Z,16nm,1.2s						
MAW	**Mawson**	**82.29**	**202**	P	**P**	**17 41 41.0**	**+0.8**
	comp=Z,3.0nm,0.9s,baz=79,slow=10,SNR=3.6						
MAW				pP	**pP**	**17 41 59.2**	**+1.5**
	comp=Z,1.6nm,0.8s,baz=328,slow=10,SNR=2.2						
MAW	**Mawson**	**82.29**	**202**	P	**P**	**17 41 40.2**	**0.0**
MAW				IAmb	IAmb	17 44 03.0	
	comp=Z,8.5nm,0.5s						
MLY	**Manley**	**84.17**	**24**	P	**P**	**17 41 50.5**	**+0.4**
MLY				IAmb	IAmb	17 41 53.0	
	comp=Z,8.8nm,1.8s						
GEYT	**Ailbeck**	**84.30**	**308**	P	**P**	**17 41 51.5**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=183,slow=2.8,SNR=6.3						
RND	**Reindeer**	**84.45**	**26**	P	**P**	**17 41 50.3**	**-1.4**
RND				IAmb	IAmb	17 41 51.4	
	comp=Z,5.0nm,1.0s						
NEA	**Nenana**	**84.71**	**24**	P	**P**	**17 41 50.0**	**-2.8**
NEA				IAmb	IAmb	17 41 56.5	
	comp=Z,5.9nm,1.2s						
IL31		**85.66**	**24**	P	**P**	**17 41 55.8**	**-1.7**
ILAR	**Eielson Array**	**85.66**	**24**	P	**P**	**17 41 56.0**	**-1.6**
	comp=Z,1.5nm,0.7s,baz=255,slow=4.8,SNR=15						
ILAR				pP	**pP**	**17 42 16.5**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=36,slow=22,SNR=3.0						
AKTO	**Aktyubinsk**	**86.17**	**321**	LR	LR	18 22 32.4	
	comp=Z,86nm,21.7s,baz=300,slow=37						
ARU	**Arti**	**86.80**	**327**	LR	LR	18 22 44.1	
	comp=Z,74nm,20.5s,baz=306,slow=37						
QSPA	**South Pole Qui**	**87.35**	**180**	P	**P**	**17 42 05.3**	**-0.7**
QSPA				IAmb	IAmb	17 42 07.0	
	comp=Z,14nm,1.4s						
DAWY	**Dawson**	**88.70**	**26**	P	**P**	**17 42 10.8**	**-1.5**
DAWY				IAmb	IAmb	17 42 13.6	
	comp=Z,5.6nm,1.1s						
SYO	**Syowa Base**	**90.92**	**201⇑**	*e*P	**P**	**17 42 22.8**	**+0.3**
TORD	**Torodi Ar. Bea**	**136.38**	**286**	PKP	**PKPdf**	**17 48 41.9**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=91,slow=2.1,SNR=4.5						
DBIC	**Dimbokro**	**143.63**	**278**	PKP	PKPbc	17 48 52.1	-0.3
	comp=Z,1.7nm,0.6s,baz=97,slow=2.3,SNR=1.9						
MNMC	**Minye Minye**	**144.65**	**129**		**PKPdf**	**17 48 57.0**	**+0.2**
CPUP	**Villa Florida**	**147.25**	**152**	PKPbc	**PKPbc**	**17 49 03.5**	**+0.5**
	comp=Z,5.4nm,0.9s,baz=237,slow=3.8,SNR=9.0						
CPUP	**Villa Florida**	**147.25**	**152**		**PKPbc**	**17 49 03.0**	**0.0**
LPAZ	**La Paz**	**147.38**	**126**	PKPbc	**PKPbc**	**17 49 04.9

SMRT	**St. Maarten**	**2.80 289**	*eP*	**Pn**	**17 38 44.5 +0.8**		
SMRT			*eS*	**Sn**	**17 39 17.7 +0.2**		
SMRT	**St. Maarten**	**2.80 289**		**Pn**	**17 38 44.1 +0.4**		
SABA	**Saba**	**2.85 280**	Pn	**Pn**	**17 38 45.2 +0.7**		
SLBI	**Saint Lucia, B**	**3.19 192**	*eP*	**Pn**	**17 38 50.0 +0.9**		
SLBI			*eS*	**Sn**	**17 39 25.8 -1.3**		
SLAC	**Saint Lucia, A**	**3.30 190**	*eP*	**Pn**	**17 38 51.2 +0.6**		
SLAC			*eS*	**Sn**	**17 39 28.5 -1.2**		
SLB	**Belfond**	**3.39 192**	*eP*	**Pn**	**17 38 52.0 0.0**		
SLB			*eS*	**Sn**	**17 39 31.9 -0.3**		
MCLT	**Moule a Chique**	**3.49 190**	*eP*	**Pn**	**17 38 54.0 +0.8**		
MCLT			*eS*	**Sn**	**17 39 33.9 -0.6**		
MCLT	**Moule a Chique**	**3.49 190**	Pn	**Pn**	**17 38 54.1 +0.8**		
SSV	**Crater Summit**	**3.91 193**	*eP*	**Pn**	**17 39 01.0 +1.9**		
SVV	**Soufriere Volc**	**3.92 193**	*eP*	**Pn**	**17 39 00.1 +0.9**		
SVCV	**St. Vincent, C**	**3.95 192**	*eP*	**Pn**	**17 39 00.7 +1.1**		
SVCV			*eS*	**Sn**	**17 39 45.4 -0.6**		
SVB	**Belmont**	**3.98 194**	*eP*	**Pn**	**17 39 01.6 +1.6**		
SVB			*eS*	**Sn**	**17 39 45.9 -0.7**		
SVB	**Belmont**	**3.98 194**		**Pn**	**17 39 01.4 +1.4**		
STVI	**Saint Thomas**	**4.60 286**	Pn	**Pn**	**17 39 08.2 -0.3**		
GCMP	**Grenada, Carri**	**4.78 193**	*eP*	**Pn**	**17 39 11.2 +0.3**		
GCMP	**Grenada, Carri**	**4.78 193**	*eS*	**Sn**	**17 40 03.2 -3.1**		
CUPR	**Culebra, Puert**	**4.89 284**	Pn	**Pn**	**17 39 10.9 -1.6**		
MTP	**Monte Pirata**	**5.10 281**	Pn	**Pn**	**17 39 15.5 +0.1**		
GRGR	**Grenville**	**5.17 195**	*eP*	**Pn**	**17 39 17.2 +0.8**		
GRGR	**Grenville**	**5.17 195**	Pn	**Pn**	**17 39 16.4 +0.1**		
CBYP	**Canovanas**	**5.42 283**	Pn	**Pn**	**17 39 20.5 +0.7**		
GCPR	**Guaynabo City**	**5.64 283**	Pn	**Pn**	**17 39 20.1 -2.6**		
SJG	**San Juan**	**5.66 280**	Pn	**Pn**	**17 39 22.8 -0.4**		
	7.3nm,0.3s,baz=300,slow=20,SNR=5.4						
SJG				Sn	**Sn**	**17 40 27.8 -0.4**	
	2.5nm,0.3s,baz=50,slow=5.1,SNR=5.0						
TOSP	**Speyside**	**5.83 182**	Pn	**Pn**	**17 39 27.8 +2.4**		
EMPR	**Esperanza - Ma**	**6.08 283**	Pn	**Pn**	**17 39 26.2 -2.7**		
OBIP	**Obispado Ponce**	**6.08 279**	Pn	**Pn**	**17 39 27.2 -1.7**		
AOPR	**Arecibo Observ**	**6.27 282**	*eP*	**Pn**	**17 39 33.0 +1.5**		
AOPR	**Arecibo Observ**	**6.27 282**	Pn	**Pn**	**17 39 29.8 -1.7**		
MLPR	**Magueyes Islan**	**6.49 278**	Pn	**Pn**	**17 39 33.3 -1.2**		
CRPR	**Cabo Rojo, PR**	**6.56 278**	Pn	**Pn**	**17 39 34.8 -0.6**		
AGPR	**Aguadilla, PR**	**6.62 282**	Pn	**Pn**	**17 39 36.8 +0.5**		
PCDR	**Punta Cana, DR**	**7.82 281**	Pn	**Pn**	**17 39 51.6 -1.2**		
PLCV	**Puerto La Cruz**	**8.11 212**		**Pn**	**17 39 57.6 +0.8**		
PCRV	**Puerto La Cruz**	**8.12 212**	Pn	**Pn**	**17 39 57.6 +0.6**		
	0.8nm,0.3s,baz=23,slow=7.7,SNR=2.0						
ORIV	**Oritupano**	**8.60 201**	*e*	**Pn**	**17 40 07.9 +4.5**		
DR12	**Loma Pena Alta**	**8.80 282**	Pn	**Pn**	**17 40 06.7 +0.4**		
BANI	**BANI**	**9.67 279**	Pn	**Pn**	**17 40 18.2 0.0**		
SDDR	**Presa de Saban**	**10.61 281**		**Pn**	**17 40 30.5 -0.6**		
GRTK	**Grand Turk**	**11.11 295**	Pn	**Pn**	**17 40 36.0 -1.8**		
RUSC	**La Rusia**	**16.79 230**		**P**	**17 41 56.9 -0.1**		
ROSC	**El Rosal**	**18.41 230**		**Pn**	**17 42 15.0 +0.3**		
ROSC				IAmb	IAmb	17 42 47.7	
	comp=Z,30nm,1.4s						
SAML	**Samuel**	**26.10 187**	P	**P**	**17 43 30.6 -2.3**		
SIV	**San Ignacio**	**32.95 181**	P	**P**	**17 44 34.3 +0.4**		
	comp=Z,0.5nm,0.6s,baz=342,slow=20,SNR=2.1						
CCM	**Cathedral Cave**	**34.18 144**	P	**P**	**17 44 44.2 -0.2**		
SCHQ	**Schefferville**	**37.94 354**	P	**P**	**17 45 16.3 0.0**		
	comp=Z,2.9nm,0.7s,baz=143,slow=6.2,SNR=2.4						
TXAR	**Lajitas Array**	**41.43 295**	P	**P**	**17 45 46.8 +0.9**		
	comp=Z,0.2nm,0.6s,baz=102,slow=3.0,SNR=2.8						
FRB	**Frobisher Bay**	**46.89 355**	P	**P**	**17 46 28.6 -0.5**		
	comp=Z,2.6nm,0.6s,baz=151,slow=11,SNR=3.6						
PDAR	**Pinedale Array**	**48.87 312**	P	**P**	**17 46 45.4 +0.3**		
	comp=Z,0.6nm,0.6s,baz=112,slow=12,SNR=4.3						
ESDC	**Sonseca Array**	**53.45 53**	P	**P**	**17 47 19.2 -0.1**		
	comp=Z,0.7nm,0.7s,baz=262,slow=7.6,SNR=4.7						
NVAR	**Mina Array Bea**	**54.60 305**	P	**P**	**17 47 28.0 +0.1**		
	comp=Z,0.3nm,0.6s,baz=77,slow=7.9,SNR=3.8						
YKA	**Yellowknife Ar**	**58.76 334**	P	**P**	**17 47 56.6 -0.2**		
	comp=Z,0.9nm,0.7s,baz=106,slow=7.6,SNR=17						
TORD	**Torodi Ar. Bea**	**59.76 85**	P	**P**	**17 48 03.4 -1.1**		
	comp=Z,0.9nm,0.8s,baz=288,slow=6.6,SNR=6.2						
GERES	**GERESS Array B**	**66.78 44**	P	**P**	**17 48 50.7 0.0**		
	comp=Z,0.4nm,0.4s,baz=256,slow=5.4,SNR=5.9						
INK	**Inuvik**	**67.99 337**	P	**P**	**17 48 57.2 -0.6**		
INK			IAmb	IAmb	17 49 12.8		
	comp=Z,3.5nm,1.1s						
ILAR	**Eielson Array**	**73.18 333**	P	**P**	**17 49 29.9 +0.4**		
	comp=Z,0.6nm,0.8s,baz=94,slow=5.7,SNR=7.0						
FINES	**FINESS Array B**	**73.37 30**	P	**P**	**17 49 31.2 +0.5**		
	comp=Z,2.2nm,0.8s,baz=262,slow=3.9,SNR=9.0						
BRTR	**Keskin Array B**	**82.18 51**	P	**P**	**17 50 21.1 +0.7**		
	comp=Z,1.0nm,0.7s,baz=272,slow=5.5,SNR=7.6						
KBZ	**Khabaz**	**87.49 45**	P	**P**	**17 50 48.9 +2.0**		
	comp=Z,1.3nm,0.8s,baz=259,slow=6.7,SNR=2.1						
CMAR	**Chiang Mai Arr**	**139.13 31**	PKP	**PKPdf**	**17 57 26.1 -0.7**		
	comp=Z,0.4nm,0.3s,baz=325,slow=1.4,SNR=4.2						

IDC 16 17:40:59.8±56.0**, 18°06'S**×**177°32'E, h0**km**, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.6**/29**, mbtmp4.0**/3**, Error ellipse: s-maj=995.6km s-min=148.4km az=77.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.01**	**240**	P	P	17 47 54.9	+0.7
	1.2nm,0.5s,baz=97,slow=8.1,SNR=3.0						
WRA	**Warramunga Arr**	**40.60**	**260**	P	P	17 48 41.6	0.0
	0.5nm,0.5s,baz=96,slow=7.7,SNR=31						
ASAR	**Alice Springs**	**40.83**	**255**	P	P	17 48 43.0	-0.7
	3.2nm,0.7s,baz=86,slow=8.8,SNR=59						

*AEIC **16** 18:03:26.6±3.5,51°.41N±0°.04×174°.66W±0°.10, h14km±4km, ML3.7, mb3.8/39(NEIC), Error ellipse: s-maj=9.2km s-min=5.5km az=114.0*

*NEIC **16** 18:03:28.7±2.2,51°.51N±0°.08×174°.66W±0°.07, h48km±7km, Error ellipse: s-maj=12.2km s-min=5.5km az=160.0*

*IDC **16** 18:03:29.4±1.0,51°.62N×174°.62W, h47km±5km, mb3.6/15, mb1 3.7/18, mb1mx3.5/58, mbtmp3.8/18, MS3.3/1, Ms1 3.3/1, ms1mx2.6/35, Error ellipse: s-maj=27.4km s-min=14.2km az=166.0*

ISC 16 18:03:27.9±0.6**, 51°49N**±0°.09×**174°66W**±0°.04**, h38**km**, n113**, σ1§35/115**, mb3.8**/18**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.77**	**22**		**Pn**	**18 03 42.3**	**+0.1**
ATKA	**Atka Island**	**0.77**	**22**		**Sn**	**18 03 55.4**	**+2.8**
KOFP	**Korovin Flat P**	**0.86**	**24**		**Pn**	**18 03 44.1**	**+0.6**
KOKL	**Mount Kliuchef**	**0.88**	**19**		**Pn**	**18 03 44.5**	**+0.7**
KOWE	**Korovin West**	**0.91**	**16**		**Pn**	**18 03 45.3**	**+1.0**
KOSE	**Korovin Southe**	**0.94**	**24**		**Pn**	**18 03 45.6**	**+1.0**
KONE	**Korovin Northe**	**0.96**	**20**		**Pn**	**18 03 46.3**	**+1.4**
KONE					**Sn**	**18 04 01.4**	**+4.0**
GSMY	**Great Sitkin M**	**1.03**	**303**		**Pn**	**18 03 46.1**	**+0.3**
GSTR	**Great Sitkin T**	**1.06**	**305**		**Pn**	**18 03 47.0**	**+0.7**
GSTD	**Great Sitkin T**	**1.08**	**302**		**Pn**	**18 03 47.1**	**+0.5**
GSTD					**Sn**	**18 04 03.1**	**+2.7**
ETKA	**Kagalaska Isla**	**1.15**	**290**		**Pn**	**18 03 47.6**	**+0.2**
ADAG	**Mount Adagdak**	**1.30**	**293**		**Pn**	**18 03 50.7**	**+1.1**
ADK	**Adak**	**1.32**	**288**		**Pn**	**18 03 49.9**	**+0.1**
KIRH	**Kanaga Island**	**1.57**	**286**		**Pn**	**18 03 54.1**	**+0.9**
KIWB	**Kanaga Island**	**1.59**	**284**		Pn	18 03 47.5	-6.0
KINC	**Kanaga Island**	**1.60**	**287**		**Pn**	**18 03 54.6**	**+1.0**
KINC					**Sn**	**18 04 16.2**	**+3.3**
KIKV	**Kanaga Island**	**1.61**	**285**		**Pn**	**18 03 54.3**	**+0.5**
KIMD	**Kanaga Island**	**1.63**	**281**		**Pn**	**18 03 54.2**	**+0.2**
KICM	**Kanaga Island**	**1.63**	**286**		**Pn**	**18 03 55.1**	**+1.0**
TAPA	**Tanaga Point A**	**1.99**	**281**		**Pn**	**18 03 59.8**	**+0.7**
TAFP	**Tanaga Falls P**	**2.11**	**282**		**Pn**	**18 04 01.7**	**+1.1**
TAFP					**Sn**	**18 04 29.0**	**+3.4**
TASE	**Tanaga Southea**	**2.13**	**281**		**Pn**	**18 04 02.1**	**+1.1**
NIKH	**Nikolski High**	**3.87**	**65**		**Pn**	**18 04 24.7**	**-0.1**
OKCE	**Okmok Cone E**	**4.42**	**61**		**Pn**	**18 04 34.4**	**+2.0**
UNV	**Unalaska Valle**	**5.50**	**61**	Pn	**Pn**	**18 04 46.3**	**-0.8**
AKUT	**Akutan**	**6.00**	**60**	Pn	**Pn**	**18 04 56.3**	**+2.2**
SPIA	**Saint Paul Isl**	**6.25**	**23**	Pn	**Pn**	**18 04 57.9**	**+0.4**
SDPT	**Sand Point**	**9.31**	**60**	Pn	**Pn**	**18 05 40.9**	**+1.5**
CNBA	**Chernabura Isl**	**9.65**	**64**	Pn	**Pn**	**18 05 44.7**	**+0.7**
CHGN	**Chignik**	**10.72**	**57**	Pn	**Pn**	**18 06 00.1**	**+1.4**
OHAK	**Old Harbor**	**13.69**	**57**	Pn	**Pn**	**18 06 37.2**	**-2.0**
KDAK	**Kodiak Island**	**14.21**	**55**	P	**Pn**	**18 06 44.4**	**-2.0**
	0.2nm,0.3s,baz=258,slow=18,SNR=1.1						
KDAK	**Kodiak Island**	**14.21**	**55**	Pn	**Pn**	**18 06 46.0**	**-0.4**
SVW2	**Sparrevohn**	**14.25**	**40**	Pn	**Pn**	**18 06 46.4**	**-0.5**
RSO	**Redoubt South**	**15.13**	**45**	Pn	**P**	**18 07 01.7**	**-1.8**
TTA	**Tatalina**	**15.20**	**34**	Pn	**Pn**	**18 07 00.2**	**+0.6**
CNPM	**China Poot**	**15.45**	**50**	Pn	**Pn**	**18 07 01.5**	**-1.3**
CNPM				IAmb	IAmb	18 07 27.9	
	comp=Z,10nm,1.2s						
BRLK	**Bradley Lake**	**15.70**	**49**	Pn	**Pn**	**18 07 04.0**	**-2.1**
BRLK				IAmb	IAmb	18 07 42.3	
	comp=Z,6.9nm,0.8s						
PPLA	**Purkeypile**	**16.58**	**38**	P	**Pn**	**18 07 15.9**	**-1.5**
PPLA				IAmb	IAmb	18 07 40.9	
	comp=Z,5.3nm,0.9s						
PEA0B	**Petropavlovsk-**	**16.94**	**286**		**Pn**	**18 07 19.5**	**-2.3**
PETK	**Petropavlovsk-**	**16.94**	**286**	P	**P**	**18 07 23.4**	**0.0**
	comp=Z,0.1nm,0.3s,baz=94,slow=13,SNR=3.8						
GHO	**Glory Hole Cre**	**17.38**	**44**		**Pn**	**18 07 26.7**	**-0.5**
KTH	**Kantishna Hill**	**17.42**	**37**	P	**Pn**	**18 07 27.1**	**-0.7**
KTH				IAmb	IAmb	18 08 03.4	
	comp=Z,10nm,1.2s						
TRF	**Thorofare Moun**	**17.61**	**38**		**Pn**	**18 07 30.1**	**-0.1**
TRF				IAmb	IAmb	18 07 49.6	
	comp=Z,11nm,1.4s						
SML	**Sawmill**	**17.65**	**44**		**Pn**	**18 07 29.1**	**-1.4**
BPAW	**Bear Paw Mtn.**	**17.70**	**35**	P	**Pn**	**18 07 30.6**	**-0.7**
BPAW				IAmb	IAmb	18 07 54.1	
	comp=Z,5.0nm,0.9s						
GLI	**Glacier Island**	**17.86**	**48**		**Pn**	**18 07 31.6**	**-1.5**
GLI				IAmb	IAmb	18 07 46.9	
	comp=Z,8.5nm,1.4s						
HIN	**Hinchinbrook I**	**17.98**	**49**		**Pn**	**18 07 33.3**	**-1.4**
HIN				IAmb	IAmb	18 07 42.4	
	comp=Z,10nm,1.0s						
SCM	**Sheep Creek Mo**	**18.09**	**45**		**Pn**	**18 07 35.3**	**-0.7**
FID	**Port Fidalgo**	**18.10**	**48**		**Pn**	**18 07 33.3**	**-2.8**
FID				IAmb	IAmb	18 08 09.0	
	comp=Z,6.1nm,1.0s						
RND	**Reindeer**	**18.14**	**39**	P	**Pn**	**18 07 35.6**	**-1.1**
MLY	**Manley**	**18.33**	**33**	P	**Pn**	**18 07 39.4**	**+0.5**
DHY	**Denali Highway**	**18.59**	**41**	P	**P**	**18 07 41.2**	**-0.4**
DHY				IAmb	IAmb	18 07 51.7	
	comp=Z,3.0nm,0.6s						
RAGM	**Ragged Mountai**	**18.85**	**50**	P	**P**	**18 07 44.0**	**-0.5**
RAGM				IAmb	IAmb	18 08 18.6	
	comp=Z,12nm,1.2s						
WRH	**Wood River Hil**	**18.97**	**37**		**P**	**18 07 44.5**	**-1.2**
BILL	**Bilibino**	**19.02**	**338**	P	**P**	**18 07 44.2**	**-2.0**
CCB	**Clear Creek Bu**	**19.17**	**36**	P	**Pn**	**18 07 48.8**	**-0.1**
HDA	**Harding Lake**	**19.37**	**38**	P	**P**	**18 07 50.0**	**0.0**
GLB	**Gilahina Butte**	**19.55**	**47**	P	**P**	**18 07 51.9**	**-0.2**
GLB				IAmb	IAmb	18 08 13.5	
	comp=Z,5.0nm,1.3s						
IL31		**19.57**	**37**	P	**P**	**18 07 52.4**	**+0.2**
IL31				IAmb	IAmb	18 08 07.6	
	comp=Z,2.5nm,0.5s						
ILAR	**Eielson Array**	**19.57**	**37**	P	**P**	**18 07 51.6**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=218,slow=8.4,SNR=13						
VRDI	**Verde Repeater**	**19.65**	**48**	P	**Pn**	**18 07 54.1**	**-0.8**
RIDG	**Independent Ri**	**19.90**	**41**	P	**P**	**18 07 51.2**	**-4.6**
RIDG				IAmb	IAmb	18 08 02.6	
	comp=Z,3.7nm,0.5s						
DOT	**Dot Lake**	**20.18**	**41**	P	**P**	**18 07 57.5**	**-1.4**
DOT				IAmb	IAmb	18 08 11.9	
	comp=Z,7.2nm,0.8s						
SCRK	**Sand Creek**	**20.34**	**40**	P	**P**	**18 07 60.0**	**-0.8**
SCRK				IAmb	IAmb	18 08 07.1	
	comp=Z,6.6nm,0.8s						
CTGM	**Chitina Glacie**	**20.59**	**50**	P	**P**	**18 08 03.3**	**-0.2**
CTGM				IAmb	IAmb	18 08 22.2	
	comp=Z,3.1nm,0.8s						
SEY	**Seymchan**	**20.93**	**316**	P	Pn	18 08 08.3	-1.3
	comp=Z,0.8nm,0.7s,baz=74,slow=18,SNR=3.1						
TOLK	**Toolik Lake Re**	**20.99**	**26**	P	**P**	**18 08 08.4**	**+0.7**
TOLK				IAmb	IAmb	18 08 29.5	
	comp=Z,5.9nm,0.8s						
EGAK	**Eagle**	**21.79**	**40**	P	**P**	**18 08 15.9**	**-0.2**
HYT	**Haines Junctio**	**22.41**	**51**	P	**P**	**18 08 25.0**	**+2.0**
HYT				IAmb	IAmb	18 08 45.8	
	comp=Z,4.8nm,1.4s						
INK	**Inuvik**	**25.90**	**34**	P	**P**	**18 08 55.5**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=244,slow=10,SNR=6.8						
INK	**Inuvik**	**25.90**	**34**	P	**P**	**18 08 56.5**	**+0.7**
INK				IAmb	IAmb	18 09 19.2	
	comp=Z,3.7nm,1.2s						
TIXI	**Tiksi**	**31.82**	**330**	P	**P**	**18 09 44.4**	**-4.0**
	comp=Z,0.3nm,0.3s,baz=123,slow=5.2,SNR=6.2						
TIXI				PcP	**PcP**	**18 12 38.5**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=114,slow=3.1,SNR=6.4						
YKA	**Yellowknife Ar**	**33.27**	**47**	PcP	**PcP**	**18 12 43.0**	**+0.5**
	comp=Z,0.1nm,0.6s,baz=286,slow=2.8,SNR=3.7						
YKA				pPcP		18 12 56.1	
	comp=Z,0.4nm,0.6s,baz=286,slow=2.3,SNR=7.0						
H11N2	**WAKE ISLAND Hy**	**34.85**	**211**	T	`T	18 47 09.6	
	baz=18,slow=76,SNR=13						
H11N3	**WAKE ISLAND Hy**	**34.86**	**211**	T	`T	18 47 13.2	
	baz=18,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy**	**34.87**	**211**	T	`T	18 47 11.0	
	baz=18,slow=76,SNR=19						
USRK	**Ussuriysk Ar.**	**35.84**	**280**	P	**P**	**18 10 23.4**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=63,slow=11,SNR=7.1						
H11S1	**WAKE ISLAND Hy**	**36.06**	**211**	T	`T	18 49 30.2	
	baz=19,slow=76,SNR=14						
H11S2	**WAKE ISLAND Hy**	**36.08**	**211**	T	`T	18 49 25.6	
	baz=19,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy**	**36.08**	**211**	T	`T	18 49 25.4	
	baz=19,slow=76,SNR=7.2						
MJAR	**Matsushiro Arr**	**36.37**	**264**	LR	LR	18 24 08.0	
	comp=Z,53nm,20.9s,baz=50,slow=34						
NVAR	**Mina Array Bea**	**40.96**	**86**	pP	pP	18 11 22.3	+5.8
	comp=Z,0.3nm,0.5s,baz=321,slow=8.5,SNR=2.6						
KSRS	**Korea Array**	**42.22**	**274**	P	**P**	**18 11 18.9**	**+1.9**
	comp=Z,2.0nm,0.9s,baz=54,slow=7.6,SNR=7.2						
PDAR	**Pinedale Array**	**43.79**	**75**	P	**P**	**18 11 30.6**	**+0.6**
	comp=Z,1.8nm,0.9s,baz=313,slow=2.8,SNR=7.8						
PDAR				pP	**sP**	**18 11 43.5**	**0.0**
	comp=Z,0.9nm,0.6s,baz=309,slow=4.7,SNR=5.9						
SONM	**Songino Array**	**48.89**	**299**	P	**P**	**18 12 09.8**	**0.0**
	comp=Z,0.2nm,0.5s,baz=55,slow=7.8,SNR=3.7						
ZALV	**Zalesovo Beam**	**55.80**	**315**	PcP	**PcP**	**18 14 00.5**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=48,slow=4.8,SNR=3.7						
MK31	**Makanchi Array**	**61.96**	**311**	P	**P**	**18 13 43.0**	**-0.7**
MK31				IAmb	IAmb	18 13 50.6	
	comp=Z,0.8nm,0.9s						
MKAR	**Makanchi Array**	**61.96**	**311**	P	**P**	**18 13 43.5**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=48,slow=6.3,SNR=24						
MKAR				pP	**pwP**	**18 13 56.9**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=47,slow=5.4,SNR=2.8						
MAKZ	**Makanchi**	**62.10**	**311**	P	**P**	**18 13 44.7**	**+0.2**
BVAR	**Borovoye Array**	**62.44**	**322**	P	**P**	**18 13 47.2**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=52,slow=5.3,SNR=14						
BVAR				pP	**pwP**	**18 14 00.6**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=48,slow=4.4,SNR=6.0						
BVAR				PcP	**PcP**	**18 14 26.6**	**+0.8**
	comp=Z,2.1nm,0.6s,baz=62,slow=3.5,SNR=7.7						
BVAR				pPcP		18 14 40.4	
	comp=Z,1.7nm,0.7s,baz=58,slow=3.4,SNR=5.3						
BRVK	**Borovoye**	**62.45**	**322**	P	**P**	**18 13 47.4**	**+0.6**
FINES	**FINESS Array B**	**66.20**	**349**	P	**P**	**18 14 10.2**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=11,slow=1.9,SNR=2.7						
NOA	**NORSAR Array B**	**67.72**	**357**	P	**P**	**18 14 20.8**	**0.0**
	comp=Z,0.4nm,0.8s,baz=3.8,slow=7.4,SNR=2.4						
NOA				pP	**pwP**	**18 14 33.9**	**-1.6**
	comp=Z,0.6nm,0.8s,baz=2.9,slow=6.5,SNR=2.4						
HFS	**Hagfors**	**68.53**	**356**	P	**P**	**18 14 25.3**	**-0.6**
	comp=Z,1.2nm,0.4s,baz=10,slow=1.7,SNR=16						
HFS				pP	**pP**	**18 14 38.2**	**+1.8**
	comp=Z,1.8nm,0.7s,baz=0.0,slow=4.8,SNR=3.4						
GAR	**Garm**	**73.55**	**313**	P	**P**	**18 14 56.9**	**0.0**
CMAR	**Chiang Mai Arr**	**73.56**	**279**	P	**P**	**18 14 58.6**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=13,slow=5.7,SNR=3.0						
CMAR				pP	**sP**	**18 15 10.8**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=27,slow=8.2,SNR=6.8						
TAPN	**Taplejung**	**73.57**	**293**	*eP*	**P**	**18 14 58.3**	**+0.9**
	comp=Z,15nm,0.7s						
GUN	**Gumba**	**74.19**	**295**	*eP*	**P**	**18 15 02.1**	**+1.1**
	comp=Z,22nm,0.5s						
JIRN	**Jiri**	**74.20**	**294**	*eP*	**P**	**18 15 02.3**	**+1.2**
	comp=Z,38nm,0.7s						
RAMN	**Ramite**	**74.51**	**294**	*eP*	**P**	**18 15 03.6**	**+0.8**
	comp=Z,22nm,0.6s						
KKN	**Kakani**	**74.62**	**295**	*eP*	**P**	**18 15 04.3**	**+0.9**
	comp=Z,8.5nm,0.6s						
PKI	**Pulchoki**	**74.71**	**295**	*eP*	**P**	**18 15 04.6**	**+0.5**
	comp=Z,5.7nm,0.6s						
PKIN	**Phulchoki**	**74.72**	**295**	*eP*	**P**	**18 15 04.6**	**+0.6**
	comp=Z,5.5nm,0.5s						
GKN	**Gorkha**	**74.82**	**296**	*eP*	**P**	**18 15 05.2**	**+0.7**
	comp=Z,11nm,0.6s						
DANN	**Dangsing**	**75.04**	**297**	*eP*	**P**	**18 15 06.9**	**+1.0**
	comp=Z,25nm,0.7s						
KOLN	**Koldanda**	**75.58**	**296**	*eP*	**P**	**18 15 09.7**	**+0.8**
	comp=Z,8.4nm,0.5s						
PYUN	**Piuthan**	**75.67**	**297**	*eP*	**P**	**18 15 10.2**	**+0.8**
	comp=Z,32nm,0.7s						
AKASG	**Malin Array Be**	**76.18**	**345**	P	**P**	**18 15 10.1**	**-1.5**
	comp=Z,0.5nm,0.4s,baz=20,slow=6.0,SNR=4.0						
NIL	**Nilore**	**76.44**	**307**	P	**P**	**18 15 13.8**	**+0.3**
KBL	**Kabul**	**77.77**	**311**	P	**P**	**18 15 20.6**	**-0.5**
GERES	**GERESS Array B**	**79.79**	**354**	P	**P**	**18 15 31.8**	**0.0**
	comp=Z,0.1nm,0.3s,baz=339,slow=5.2,SNR=3.6						
ASAR	**Alice Springs**	**87.37**	**226**	P	**P**	**18 16 10.6**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=21,slow=5.0,SNR=6.0						

*DDA **16** 18:12:18.4,34°.88N×34°.51E, h8km,2km, MW3.5*

*GRAL **16** 18:12:19.7±0.3,34°.83N×34°.26E, h0km,5km, MD3.5*

*NIC **16** 18:12:19.0±0.0,35°.00N×34°.49E, h4km,2km, Ml3.2/3*

*IDC **16** 18:12:19.4±1.1,34°.85N×34°.39E, h0km, mb3.6/6, mb1 3.6/12, mb1mx3.4/49, mbtmp3.5/12, ML3.2/6, Error ellipse: s-maj=27.2km s-min=14.7km az=71.0*

*ISK **16** 18:12:22.5,35°.07N×34°.24E, h8km, ML3.4/29*

*GII **16** 18:12:23.2±0.0,34°.87N×34°.45E, h25km, MD2.4/7, Mm2.8/8*

ISC 16 18:12:20.1±1.1**, 34°88N**±0°.02×**34°43E**±0°.02**, h5**km±8**km, n114, σ1§05/147, mb3.5**/6**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PARAL	**Paralimni**	**0.34**	**290**	P	**Pg**	**18 12 27.2**	**+0.6**
PARAL				AML	AML	18 12 31.5	
	42nm,0.2s						
PARAL				AML	AML	18 12 31.5	
	42nm,0.2s						
PARAL				S	**Sg**	**18 12 31.8**	**+0.7**
MVOU	**Mavrovouni**	**0.67**	**282**	P	**Pg**	**18 12 32.4**	**-0.5**
MVOU				S	**Sb**	**18 12 43.8**	**+0.1**
MVOU				AML	AML	18 12 44.0	
	4.6nm,0.4s						
MVOU				AML	AML	18 12 44.0	
	4.6nm,0.4s						
MVOU				AML	AML	18 12 49.4	
	4.7nm,0.4s						
MVOU				AML	AML	18 12 49.4	
	4.7nm,0.4s						
EREN	**Erenkoy**	**0.68**	**342**	PG	**Pg**	**18 12 32.4**	**-0.8**
ATHAL	**Athalassa**	**0.89**	**287**	P	**Pg**	**18 12 37.3**	**+0.2**
CSS	**Mathiatis**	**0.90**	**276**	PG	**Pg**	**18 12 37.5**	**0.0**
CSS				SG	**Sg**	**18 12 48.4**	**-0.8**
CSS	**Mathiatis**	**0.90**	**276**	P	**Pg**	**18 12 37.7**	**+0.2**
CSS	**Mathiatis

DSI	**Dead Sea**	**3.40 166**	Pn	**Pn**	**18 13 14.9 +1.2**
ASF	**Jabal al Asfar**	**3.40 142**	Pn	**Pn**	**18 13 15.1 +1.3**
	0.9nm,0.3s,baz=287,slow=12,SNR=9.5				
ASF			Sn	**Sn**	**18 13 51.8 -2.7**
	1.1nm,0.3s,baz=107,slow=4.7,SNR=4.7				
ASF	**Jabal al Asfar**	**3.40 142**	P	**Pb**	**18 13 17.4 -3.4**
GULA	**Gulagac**	**3.46 358**	PN	**Pn**	**18 13 15.6 +0.9**
WALJ	**Wala**	**3.51 160**	P	**Pn**	**18 13 16.4 +1.2**
YTIR	**Yattir**	**3.56 170**	Pn	**Pn**	**18 13 17.0 +1.0**
YTIR			Sn	**Sn**	**18 13 58.2 -0.2**
MDBI	**Mazsada**	**3.64 167**	P	**Pn**	**18 13 18.8 +1.8**
GHAJ	**Ghor Haditha**	**3.69 165**	P	**Pn**	**18 13 20.1 +2.3**
GHAJ	**Ghor Haditha**	**3.69 165**	Pn	**Pn**	**18 13 18.9 +1.1**
LISJ	**El Lisan**	**3.74 166**	P	**Pn**	**18 13 20.7 +2.4**
KARJ	**KARJ**	**3.89 164**	Pn	Pn	18 13 09.4 -11
KZIT	**Kziot**	**3.96 180**	Pn	**Pn**	**18 13 22.1 +0.6**
KZIT			Sn	**Sn**	**18 14 07.8 -0.6**
JDRJ	**Daraweish**	**4.27 166**	P	**Pn**	**18 13 28.6 +2.7**
ZFRI	**Zfri**	**4.36 171**	Pn	**Pn**	**18 13 27.6 +0.7**
PRNI	**Paran**	**4.54 174**	Pn	**Pn**	**18 13 30.5 +1.0**
KRMI	**Paran Flat**	**4.76 177**	P	**Pn**	**18 13 33.6 +1.2**
HRFI	**Mount Harif**	**4.86 174**	P	**Pn**	**18 13 35.8 +2.0**
HRFI	**Mount Harif**	**4.86 174**	Pn	**Pn**	**18 13 35.1 +1.3**
BRTR	**Keskin Array B**	**4.88 353**	Pn	**Pn**	**18 13 36.1 +1.9**
	0.2nm,0.3s,baz=172,slow=11,SNR=4.5				
MBRI	**Mt Berech**	**5.09 175**	P	**Pn**	**18 13 38.8 +1.7**
MBRI	**Mt Berech**	**5.09 175**	Pn	**Pn**	**18 13 38.2 +1.1**
EIL	**Elat**	**5.21 175**	Pn	**Pn**	**18 13 38.9 +0.2**
	1.4nm,0.3s,baz=349,slow=9.9,SNR=14				
EIL			Sn	**Sn**	**18 14 38.2 -1.0**
	1.5nm,0.3s,baz=200,slow=12,SNR=5.8				
EIL	**Elat**	**5.21 175**	Pn	**Pn**	**18 13 39.8 +1.1**
IDI	**Anoyia**	**7.83 276**	Pn	**Pn**	**18 14 14.0 -0.6**
	0.6nm,0.3s,baz=97,slow=16,SNR=1.9				
IDI			Sn	**Sn**	**18 15 39.9 -3.8**
	0.6nm,0.3s,baz=39,slow=12,SNR=1.5				
GEYT	**Alibeck**	**19.30 74**	P	**Pn**	**18 16 47.5 +0.6**
	0.2nm,0.3s,baz=263,slow=12,SNR=4.6				
FINES	**FINESS Array B**	**27.11 351**	P	**P**	**18 18 03.3 -0.3**
	1.1nm,0.6s,baz=158,slow=11,SNR=9.1				
ARCES	**ARCESS Array B**	**35.06 355**	P	**P**	**18 19 13.9 +0.3**
	0.7nm,0.6s,baz=156,slow=6.8,SNR=4.3				
MKAR	**Makanchi Array**	**37.57 57**	P	**P**	**18 19 36.0 +0.7**
	0.4nm,0.7s,baz=264,slow=8.2,SNR=4.0				
ZALV	**Zalesovo Beam**	**39.74 45**	P	**P**	**18 19 52.7 -0.6**
	0.4nm,0.5s,baz=265,slow=10,SNR=2.0				
CMAR	**Chiang Mai Arr**	**59.01 88**	P	**P**	**18 22 20.9 -0.2**
	0.4nm,0.6s,baz=307,slow=9.0,SNR=3.3				
YKA	**Yellowknife Ar**	**79.81 346**	P	**P**	**18 24 30.4 +1.4**
	0.3nm,0.9s,baz=40,slow=5.0,SNR=2.8				

JMA ***16*** *18:23:53.1±0.2,23.66N×122.45E,h25km,M2.5*
TAP ***16*** *18:23:54.7,23.69N×122.51E,h34km±1km,ML3.0,D*
ISC 16 18:23:51.2±1.1**,23.65N**±0.02×**122.51E**±0.02**,h7**km±9km**,**
n111,σ0.979/207**,2C-10D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.89**	**27**	P	**Pn**	**18 24 10.2**	**+0.1**
JYNG				S	**Sb**	**18 24 21.6**	**+0.6**
HWA	**Hwalien**	**0.89**	**291**	P	**Pn**	**18 24 09.8**	**-0.4**
	baz=279						
HWA				S	**Sg**	**18 24 20.3**	**+0.4**
	baz=279						
YOJ	**Yonaguni jima**	**0.93**	**30**	⇑P	**Pn**	**18 24 11.3**	**+0.7**
	baz=30						
YOJ				*e*S	**Sb**	**18 24 22.3**	**+0.2**
	baz=30						
YOJ	**Yonaguni jima**	**0.93**	**30**	P	**Pn**	**18 24 10.9**	**+0.3**
YOJ				S	**Sb**	**18 24 22.3**	**+0.2**
TWD	**Chiawan**	**0.94**	**297**	⇓*i*P	**Pn**	**18 24 10.4**	**-0.4**
	baz=284						
TWD				*i* S	**Sg**	**18 24 21.8**	**+0.3**
	baz=284						
EOS1	**EOS1**	**0.96**	**339**	P	**Pn**	**18 24 11.7**	**+0.7**
	baz=327						
EOS1				S	**Sb**	**18 24 23.0**	**0.0**
	baz=327						
NACB	**Ninganchiao**	**0.98**	**302**	⇓P	**Pn**	**18 24 11.1**	**-0.4**
	baz=289						
NACB				S	**Sb**	**18 24 23.4**	**-0.3**
	baz=289						
EGFH	**Guangfu**	**0.99**	**271**	*i* P	**Pn**	**18 24 11.9**	**+0.3**
	baz=268						
EGFH				*e*S	**Sb**	**18 24 24.4**	**+0.4**
	baz=268						
ESL	**Shilin**	**1.00**	**279**	⇓*i*P	**Pb**	**18 24 11.1**	**+0.2**
	baz=277						
ESL				S	**Sg**	**18 24 22.6**	**-0.9**
	baz=277						
HGSD	**Ruisui**	**1.01**	**261**	⇓P	**Pn**	**18 24 11.8**	**+0.1**
	baz=258						
HGSD				S	**Sg**	**18 24 23.9**	**+0.2**
	baz=258						
ENA	**Nanau**	**1.04**	**318**	*i* P	**Pn**	**18 24 12.7**	**+0.5**
	baz=316						
ENA				*i* S	**Sn**	**18 24 26.4**	**-0.6**
	baz=316						
ETLH	**Xiulin Townshi**	**1.09**	**301**	P	**Pn**	**18 24 12.7**	**-0.3**
	baz=298						
ETLH				S	**Sg**	**18 24 26.5**	**+0.1**
	baz=298						
EHY	**Hungye**	**1.10**	**263**	⇓*i*P	**Pn**	**18 24 13.4**	**+0.4**
	baz=260						
EHY				*i* S	**Sb**	**18 24 27.4**	**+0.3**
	baz=260						
TWC	**Suao**	**1.13**	**328**	P	**Pn**	**18 24 14.3**	**+0.9**
	baz=326						
TWC				S	**Sg**	**18 24 27.1**	**-0.4**
	baz=326						
YULB	**Yu-li**	**1.14**	**257**	P	**Pn**	**18 24 14.0**	**+0.4**
	baz=255						
YULB				S	**Sb**	**18 24 28.6**	**+0.2**
	baz=255						
TWF1	**Yuli**	**1.15**	**255**	⇓*i*P	**Pn**	**18 24 14.2**	**+0.5**
	baz=253						
TWF1				S	**Sg**	**18 24 28.4**	**0.0**
	baz=253						
CHKT	**Chengkung**	**1.19**	**243**	P	**Pn**	**18 24 14.2**	**0.0**
	baz=240						
CHKT				*i* S	**Sg**	**18 24 28.6**	**-0.8**
	baz=240						
FULB	**Fuli**	**1.21**	**248**	*i* P	**Pn**	**18 24 14.7**	**+0.2**
	baz=237						
FULB				*i* S	**Sg**	**18 24 29.2**	**-0.9**
	baz=237						
WHF	**Hehuan Shan**	**1.24**	**293**	⇓*i*P	**Pn**	**18 24 15.4**	**0.0**
	baz=282						
WHF				S	**Sg**	**18 24 30.7**	**-0.5**
	baz=282						
HATJ	**Hateruma jima**	**1.25**	**71**	P	**Pg**	**18 24 15.7**	**+0.4**
HATJ				*e*S	**Sn**	**18 24 33.2**	**+1.0**
OWD	**Renai**	**1.26**	**284**	P	**Pg**	**18 24 15.8**	**+0.4**
	baz=282						
OWD				*e*S	**Sg**	**18 24 31.3**	**-0.5**
	baz=282						
VWDT	**VWDT**	**1.26**	**275**	⇓P	**Pg**	**18 24 15.9**	**+0.5**
	baz=272						
VWDT				S	**Sb**	**18 24 31.6**	**-0.1**
	baz=272						
NNSB	**Datong**	**1.29**	**307**	P	**Pg**	**18 24 16.4**	**+0.5**
	baz=305						
NNSB				S	**Sb**	**18 24 31.8**	**-0.8**
	baz=305						
NNSH	**Datong**	**1.29**	**307**	*e*P	**Pg**	**18 24 16.4**	**+0.4**
	baz=305						
NNSH				*e*S	**Sb**	**18 24 31.8**	**-0.9**
	baz=305						
CHGB	**Renai**	**1.29**	**289**	⇓P	**Pg**	**18 24 16.1**	**+0.1**
	baz=286						
CHGB				S	**Sg**	**18 24 31.8**	**-0.9**
	baz=286						
NNS	**Nan Shan**	**1.30**	**307**	*i* P	**Pg**	**18 24 16.5**	**+0.3**
	baz=305						
NNS				*i* S	**Sb**	**18 24 32.5**	**-0.5**
	baz=305						
IRIF	**Iriomote-Funau**	**1.30**	**58**	P	**Pg**	**18 24 16.6**	**+0.3**
IRIF				S	**Sn**	**18 24 34.2**	**+0.7**
ENTT	**Nioudou**	**1.31**	**319**	*i* P	**Pg**	**18 24 16.8**	**+0.5**
	baz=317						
ENTT				*i* S	**Sb**	**18 24 32.9**	**-0.2**
	baz=317						
NDT	**Datong Townshi**	**1.31**	**316**	P	**Pg**	**18 24 17.1**	**+0.6**
	baz=314						
NDT				S	**Sb**	**18 24 32.7**	**-0.5**
	baz=314						
TWE	**Neicheng**	**1.31**	**324**	*i* P	**Pg**	**18 24 17.0**	**+0.6**
	baz=323						
TWE				*i* S	**Sn**	**18 24 33.5**	**-0.2**
	baz=323						
TWH	**Lutao**	**1.34**	**226**	⇑*i*P	**Pb**	**18 24 16.7**	**+0.1**
	baz=223						
TWH				*i* S	**Sb**	**18 24 32.3**	**-1.6**
	baz=223						
NTC	**Toucheng**	**1.35**	**333**	P	**Pg**	**18 24 17.7**	**+0.6**
	baz=331						
NTC				*e*S	**Sb**	**18 24 33.0**	**-1.2**
	baz=331						
TWT	**Tachien**	**1.36**	**296**	*i* P	**Pg**	**18 24 17.9**	**+0.5**
	baz=285						
TWT				S	**Sb**	**18 24 33.9**	**-0.8**
	baz=285						
TDCB	**Techi**	**1.37**	**296**	P	**Pg**	**18 24 17.7**	**+0.1**
	baz=285						
TDCB				S	**Sb**	**18 24 34.3**	**-0.8**
	baz=285						
SSLB	**Suanglung**	**1.43**	**276**	P	**Pb**	**18 24 18.4**	**+0.1**
	baz=273						
SSLB				S	**Sn**	**18 24 35.6**	**-1.1**
	baz=273						
ELDTW	**Lidau**	**1.45**	**252**	*i* P	**Pb**	**18 24 18.3**	**-0.2**
	baz=249						
ELDTW				*i* S	**Sn**	**18 24 35.4**	**-1.8**
	baz=249						
NWLT	**Wulai**	**1.45**	**321**	*e*P	**Pg**	**18 24 18.9**	**-0.2**
	baz=319						
NWLT				*e*S	**Sn**	**18 24 35.8**	**-1.3**
	baz=319						
YHNB	**Yeheng**	**1.45**	**315**	P	**Pb**	**18 24 18.6**	**+0.1**
	baz=313						
YHNB				S	**Sn**	**18 24 36.4**	**-0.8**
	baz=313						
TIPB	**Shuangxi**	**1.45**	**335**	*i* P	**Pg**	**18 24 18.8**	**-0.3**
	baz=333						
TIPB				S	**Sn**	**18 24 36.1**	**-1.1**
	baz=333						
NSK	**Sanguang**	**1.46**	**314**	*i* P	**Pg**	**18 24 19.1**	**-0.3**
	baz=313						
NSK				*i* S	**Sn**	**18 24 36.1**	**-1.4**
	baz=313						
JKRS	**Kuro-shima**	**1.49**	**67**	P	**Pg**	**18 24 19.4**	**-0.4**
SMLT	**Sun Moon Lake**	**1.49**	**279**	*i* P	**Pg**	**18 24 19.6**	**-0.3**
	baz=277						
SMLT				*i* S	**Sn**	**18 24 37.0**	**-1.3**
	baz=277						
DPDB	**Guoxing**	**1.50**	**285**	*i* P	**Pg**	**18 24 19.8**	**-0.2**
	baz=275						
DPDB				S	**Sn**	**18 24 36.8**	**-1.6**
	baz=275						
WHYT	**Xinyi Township**	**1.52**	**272**	*e*P	**Pg**	**18 24 20.4**	**-0.1**
	baz=270						
WHYT				*e*S	**Sn**	**18 24 37.4**	**-1.4**
	baz=270						
TYC	**Yuchr**	**1.54**	**280**	⇓*i*P	**Pb**	**18 24 20.1**	**+0.1**
	baz=277						
TYC				S	**Sn**	**18 24 38.8**	**-0.3**
	baz=277						
TTN	**Taitung**	**1.54**	**235**	*e*P	**Pb**	**18 24 19.6**	**-0.5**
	baz=233						
TTN				S	**Sn**	**18 24 37.9**	**-1.4**
	baz=233						
TWGBT	**Beinan**	**1.56**	**238**	P	**Pb**	**18 24 20.5**	**+0.1**
	baz=228						
TWGBT				*e*S	**Sn**	**18 24 39.0**	**-0.7**
	baz=228						
NWF	**Wu-fen Shan**	**1.56**	**335**	P	**Pb**	**18 24 20.1**	**-0.4**
	baz=348						
WFSB	**Wu-fen Shan**	**1.56**	**335**	P	**Pb**	**18 24 20.3**	**-0.1**
	baz=349						
WFSB				S	**Sb**	**18 24 40.0**	**-0.3**
	baz=349						
WHP	**Taichung City**	**1.56**	**294**	*e*P	**Pg**	**18 24 21.3**	**+0.1**
	baz=292						
WHP				*e*S	**Sb**	**18 24 40.2**	**-0.2**
	baz=292						
TWG	**Pinlang**	**1.56**	**238**	P	**Pb**	**18 24 20.0**	**-0.5**
	baz=228						
TWG				S	**Sn**	**18 24 38.2**	**-1.6**
	baz=228						
TWA	**Mucha**	**1.57**	**328**	*e*P	**Pb**	**18 24 20.6**	**0.0**
	baz=326						
TWA				S	**Sn**	**18 24 39.6**	**-0.4**
	baz=326						
ALS	**Alishan**	**1.57**	**265**	*i* P	**Pg**	**18 24 21.4**	**0.0**
	baz=263						
ALS				S	**Sn**	**18 24 39.4**	**-1.1**
	baz=263						
NHDH	**Xindian Distri**	**1.58**	**326**	P	**Pg**	**18 24 21.8**	**+0.2**
	baz=324						
NHDH				S	**Sb**	**18 24 40.6**	**-0.4**
	baz=324						
TATO	**Taipei**	**1.61**	**325**	*e*P	**Pg**	**18 24 22.1**	**0.0**
	baz=323						
TATO				S	**Sb**	**18 24 41.5**	**-0.4**
	baz=323						
WJS	**Zhushan**	**1.64**	**276**	*e*P	**Pg**	**18 24 22.8**	**0.0**
	baz=274						
WJS				*e*S	**Sg**	**18 24 44.1**	**0.0**
	baz=274						
JIJ	**Ishigaki jima**	**1.65**	**64**	P	**Pb**	**18 24 21.1**	**-0.9**
CHN5	**Tsauling**	**1.68**	**268**	P	**Pg**	**18 24 23.3**	**-0.2**
	baz=266						
CHN5				S	**Sb**	**18 24 44.2**	**+0.3**
	baz=266						
STYT	**Tauyuan**	**1.68**	**253**	*i* P	**Pb**	**18 24 22.7**	**+0.2**
	baz=244						
STYT				S	**Sn**	**18 24 42.7**	**-0.3**
	baz=244						
LIOB	**Emei**	**1.69**	**306**	P	**Pg**	**18 24 23.4**	**-0.1**
	baz=294						
LIOB				*e*S	**Sn**	**18 24 43.0**	**0.0**
	baz=294						
NSTT	**Nanjuang**	**1.69**	**306**	P	**Pb**	**18 24 22.4**	**-0.2**
	baz=304						
NSTT				S	**Sb**	**18 24 43.7**	**-0.3**
	baz=304						
WNT	**Mingjian**	**1.69**	**278**	P	**Pb**	**18 24 22.7**	**+0.1**
	baz=276						
WNT				*e*S	**Sn**	**18 24 42.7**	**-0.2**
	baz=276						
YM01	**YM01**	**1.71**	**330**	*i* P	**Pb**	**18 24 23.0**	**-0.1**
	baz=343						
YM01				S	**Sn**	**18 24 43.9**	**+0.1**
	baz=343						
YM10	**YM10**	**1.73**	**330**	P	**Pb**	**18 24 22.6**	**-0.8**
	baz=343						
YM10				S	**Sn**	**18 24 43.4**	**-0.6**
	baz=343						
TWQ1	**Liyutan**	**1.73**	**294**	*i* P	**Pg**	**18 24 24.2**	**-0.2**
	baz=292						
TWQ1				*i* S	**Sb**	**18 24 45.6**	**+0.2**
	baz=292						
TCU	**Taichung**	**1.75**	**287**	P	**Pg**	**18 24 25.0**	**+0.2**
	baz=284						
TCU				*e*S	**Sn**	**18 24 43.7**	**-0.8**
	baz=284						
TWS1	**Kuangyinshan**	**1.75**	**326**	*e*P	**Pb**	**18 24 23.8**	**+0.1**
	baz=324						
TWS1				S	**Sn**	**18 24 44.9**	**+0.4**
	baz=324						
TPUB	**Ta-pu**	**1.76**	**259**	P	**Pb**	**18 24 24.2**	**+0.3**
	baz=257						
TPUB				S	**Sn**	**18 24 44.9**	**+0.1**
	baz=257						
NSY	**Sanyi**	**1.77**	**296**	P	**Pb**	**18 24 24.2**	**+0.2**
	baz=280						
NSY				*e*S	**Sb**	**18 24 46.4**	**-0.1**
	baz=280						
ANP	**Anpu**	**1.77**	**330**	*e*P	**Pb**	**18 24 23.5**	**-0.6**
	baz=344						
ANP				*e*S	**Sn**	**18 24 43.7**	**-1.5**
	baz=344						
ECL	**Taimali**	**1.78**	**234**	P	**Pn**	**18 24 23.0**	**+0.6**
	baz=244						
ECL				S	**Sn**	**18 24 43.1**	**-2.1**
	baz=244						
CHN4	**Tsaushan**	**1.79**	**261**	P	**Pg**	**18 24 25.0**	**-0.5**
	baz=258						
CHN4				S	**Sb**	**18 24 47.5**	**+0.7**
	baz=258						
WGK	**Gukeng**	**1.79**	**271**	P	**Pb**	**18 24 24.8**	**+0.5**
	baz=269						
WGK				S	**Sb**	**18 24 47.0**	**+0.1**
	baz=269						
WTP	**Ta-pu**	**1.79**	**257**	P	**Pb**	**18 24 24.8**	**+0.5**
	baz=255						
WTP				S	**Sb**	**18 24 47.1**	**+0.2**
	baz=255						
NMLH	**Miaoli**	**1.80**	**300**	*e*P	**Pg**	**18 24 25.6**	**-0.2**
	baz=284						
NMLH				*e*S	**Sb**	**18 24 47.1**	**-0.1**
	baz=284						
WDLH	**Douliu**	**1.81**	**271**	*e*P	**Pg**	**18 24 26.0**	**+0.1**
	baz=269						
WDLH				S	**Sb**	**18 24 48.4**	**+0.9**
	baz=269						
HSN	**Hsinchu**	**1.81**	**309**	*e*P	**Pn**	**18 24 23.6**	**+0.8**
	baz=309						
HSN				*e*S	**Sb**	**18 24 46.7**	**-0.9**
	baz=309						
TWY	**Chenhua**	**1.81**	**333**	*e*P	**Pb**	**18 24 24.1**	**-0.6**
	baz=332						
TWY				*e*S	**Sn**	**18 24 45.1**	**-1.0**
	baz=332						
LAY	**Lan-yu**	**1.83**	**209**	P	**Pn**	**18 24 23.0**	**-0.2**
	baz=208						
LAY				S	**Sn**	**18 24 45.3**	**-1.3**
	baz=208						
SLGT	**Liugui**	**1.83**	**249**	P	**Pb**	**18 24 25.4**	**+0.3**
	baz=242						
SLGT				S	**Sn**	**18 24 47.5**	**+0.9**
	baz=242						
WCHH	**Zhanghua**	**1.84**	**284**	*e*P	**Pg**	**18 24 26.2**	**-0.3**
	baz=281						
WCHH				*e*S	**Sb**	**18 24 49.2**	**+0.9**
	baz=281						
WDJ	**Dajia District**	**1.84**	**292**	*e*S	**Sb**	**18 24 49.2**	**+0.6**
	baz=290						
SGST	**Jiashian**	**1.86**	**253**	P	**Pb**	**18 24 24.8**	**-0.8**
	baz=250						
SGST				S	**Sb**	**18 24 49.6**	**+0.6**
	baz=250						
CHN2	**Minshiung**	**1.87**	**267**	*e*P	**Pg**	**18 24 27.2**	**+0.1**
	baz=264						
CHN2				*e*S	**Sb**	**18 24 50.0**	**+0.7**
	baz=264						
CHN1	**Nanshi**	**1.88**	**256**	*e*P	**Pb**	**18 24 26.4**	**+0.5**
	baz=254						
CHN1				*e*S	**Sb**	**18 24 49.6**	**0.0**
	baz=254						
JISG	**Ishigakijimahi**	**1.89**	**60**	P	**Pn**	**18 24 24.2**	**+0.3**
TWK	**Hsinying**	**1.90**	**259**	*e*P	**Pb**	**18 24 26.6**	**+0.4**
	baz=256						
TWK				*e*S	**Sb**	**18 24 50.0**	**-0.1**
	baz=256						
SNST	**Tainan City**	**1.90**	**257**	*e*P	**Pg**	**18 24 27.0**	**-0.6**
	baz=255						
SNST				*e*S	**Sb**	**18 24 51.2**	**+1.1**
	baz=255						
CHY	**Chiayi**	**1.92**	**266**	*e*P	**Pb**	**18 24 27.0**	**+0.5**
	baz=263						
CHY				*e*S	**Sb**	**18 24 51.2**	**+0.5**
	baz=263						
SSD	**Sandimen**	**1.95**	**243**	*e*P	**Pb**	**18 24 27.0**	**0.0**
	baz=236						
SSD				*e*S	**Sn**	**18 24 49.8**	**+0.4**
	baz=236						
RLNB	**Erlin**	**1.98**	**277**	*e*S	**Sb**	**18 24 52.2**	**-0.3**
	baz=275						
EAST	**Anshuo**	**1.99**	**231**	*e*P	**Pn**	**18 24 25.8**	**+0.6**
	baz=238						
EAST				*e*S	**Sn**	**18 24 49.0**	**-1.4**
	baz=238						
MASBT	**Mashibuluo**	**2.02**	**239**	*e*P	**Pb**	**18 24 27.5**	**-0.7**
	baz=233						
MASBT				*e*S	**Sn**	**18 24 49.8**	**-1.3**
	baz=233						
CHN8	**Yiju**	**2.13**	**262**	P	**Pb**	**18 24 29.9**	**-0.3**
	baz=260						
CHN8				S	**Sb**	**18 24 56.3**	**-0.5**
	baz=260						
SCZT	**Fangliau**	**2.16**	**234**	*e*P	**Pb**	**18 24 29.3**	**-1.3**
	baz=233						
SCZT				*e*S	**Sn**	**18 24 54.0**	**-0.6**
	baz=233						
TSEB	**Hengchuen, Pin**	**2.29**	**221**	*e*S	**Sn**	**18 24 58.9**	**+1.1**
	baz=229						
HEN	**Hengchun**	**2.32**	**225**	*e*S	**Sn**	**18 24 59.4**	**+0.9**
	baz=225						
TWKBT	**Hengchun**	**2.32**	**223**	*e*P	**Pn**	**18 24 31.1**	**+1.3**
	baz=223						
TWKBT				*e*S	**Sn**	**18 24 58.3**	**-0.1**
	baz=223						
WDGT	**Dungji**	**2.65**	**262**	P	**Pn**	**18 24 36.2**	**+1.9**
	baz=259						
WDGT				*e*S	**Sn**	**18 25 06.5**	**-0.2**
	baz=259						
PHUB	**P'eng-hu**	**2.70**	**268**	P	**Pn**	**18 24 36.8**	**+1.8**
	baz=265						
PHUB				S	**Sn**	**18 25 07.7**	**-0.2**
	baz=265						
PNG	**Penghu**	**2.71**	**269**	P	**Pn**	**18 24 37.4**	**+2.2**
	baz=266						
PNG				S	**Sn**	**18 25 08.3**	**+0.1**
	baz=266						
VCHM	**Qimei**	**2.86**	**262**	*e*P	**Pn**	**18 24 39.2**	**+1.9**
	baz=259						
VCHM				*e*S	**Sn**	**18 25 12.8**	**+0.8**
	baz=259						
VWUC	**VWUC**	**3.09**	**296**	*e*P	**Pn**	**18 24 41.1**	**+0.6**
	baz=294						
PTTC	**Pingtan**	**3.10**	**307**	*e*P	**Pn**	**18 24 41.5**	**+0.9**
	baz=305						
PTMZ	**Houxiangcun**	**3.39**	**295**	*e*P	**Pn**	**18 24 45.8**	**+1.3**
	baz=292						
MATB	**Ma-tsu**	**3.41**	**317**	*e*S	**Sn**	**18 25 23.1**	**-2.3**
	baz=315						
KNM	**Kinmen**	**3.80**	**282**	*e*P	**Pn**	**18 24 53.5**	**+3.2**
	baz=278						
KNM				*e*S	**Sn**	**18 25 37.0**	**+1.8**
	baz=278						
KNMB	**Chin-men Tao**	**3.85**	**283**	*e*P	**Pn**	**18 24 52.2**	**+1.3**
	baz=279						
KNMB				*e*S	**Sn**	**18 25 35.7**	**-0.7**
	baz=279						
XPSS	**Dashiqiu**	**3.88**	**328**	*e*P	**Pn**	**18 24 52.4**	**+1.2**
	baz=337						
AXDP	**Jialang**	**4.33**	**288**	*e*P	**Pn**	**18 24 59.1**	**+1.8**
	baz=284						
ZPLA	**Ao Xicun**	**4.37**	**275**	*e*P	**Pn**	**18 24 59.5**	**+1.6**
	baz=281						

IDC 16 18:25:35.2±6.3**,22.68S**×**137.86W,h0**km**,mb3.7**/2,**
mb1 4.1/2**,mb1mx3.6**/27**,mbtmp3.7**/2**,Error ellipse:**
s-maj=406.7km s-min=41.6km az=128.0,Tuamotu
Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NVAR	**Mina Array Bea**	**63.50**	**17**	P	P	18 36 07.4	0.0
	1.3nm,0.8s,baz=190,slow=8.8,SNR=8.0						
ASAR	**Alice Springs**	**79.68**	**249**	P	P	18 37 45.3	0.0
	0.4nm,0.9s,baz=119,slow=7.6,SNR=2.8						
SONM	**Songino Array**	**123.62**	**313**	PKP	PKPdf	18 44 34.4	-0.4
	0.8nm,0.7s,baz=85,slow=1.8,SNR=3.9						
CMAR	**Chiang Mai Arr**	**126.92**	**277**	PKP	PKPdf	18 44 41.7	-0.1
	0.9nm,0.8s,baz=119,slow=1.1,SNR=5.6						

JMA ***16*** *18:49:57.5±0.1,41.93N×142.43E,h64km±2km,M3.7*
JMA Felt I J1.
IDC ***16*** *18:49:59.8±1.5,41.98N×142.45E,h81km±12km,mb3.2/12,*
mb1 3.3/16,mb1mx3.2/54,mbtmp3.5/16,Error ellipse:
s-maj=22.6km s-min=11.1km az=105.0
ISC 16 18:49:58.2±0.8**,41.94N**±0.04×**142.43E**±0.03**,h62**km±7km**,**
n43,σ1.904/55**,mb3.5**/12**,3C-7D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNBK	**Urakawa-nobuka**	**0.42**	**36**	⇑P	**Pn**	**18 50 08.6**	**-0.9**
JNBK				*e*S	**Sn**	**18 50 17.3**	**-0.3**
JSHD	**Hidakashinhida**	**0

JCH	**Churui**	**0.97**	**46**	P		**Pn**	**18 50 15.6**	**-0.2**
JCH				*eS*		**Sn**	**18 50 28.9**	**0.0**
JKB	**Kayabe**	**1.04**	**267**	⇓P		**Pn**	**18 50 16.2**	**-0.6**
JKB				*eS*		**Sn**	**18 50 29.8**	**-0.8**
JEW	**Eniwo**	**1.15**	**321**	⇓P		**Pn**	**18 50 18.2**	**-0.1**
JEW				*eS*		**Sn**	**18 50 32.9**	**-0.3**
JNB	**Noboribetsu**	**1.16**	**298**	⇓P		**Pn**	**18 50 17.4**	**-0.9**
JNB				*eS*		**Sn**	**18 50 32.7**	**-0.6**
JOT	**Ohata**	**1.17**	**242**	⇓P		**Pn**	**18 50 18.1**	**-0.4**
JOT				*eS*		**Sn**	**18 50 32.9**	**-0.8**
JFR	**Furan**	**1.23**	**6**	P		**Pn**	**18 50 18.9**	**-0.4**
JFR				*eS*		**Sn**	**18 50 35.1**	**+0.1**
JOB	**Onbets**	**1.42**	**47**	P		**Pn**	**18 50 22.3**	**+0.5**
JOB				*eS*		**Sn**	**18 50 40.8**	**+1.3**
JISS	**Ishikarishitsu**	**1.53**	**331**	P		**Pn**	**18 50 23.1**	**-0.1**
JISS				*eS*		**Sn**	**18 50 42.0**	**-0.1**
JTM	**Tenmabayashi**	**1.54**	**222**	P		**Pn**	**18 50 23.5**	**0.0**
JTM				*eS*		**Sn**	**18 50 43.0**	**+0.5**
JYM2	**Yakumo 2**	**1.54**	**277**	P		**Pn**	**18 50 22.9**	**-0.5**
JSR	**Shiriuchi**	**1.56**	**255**	P		**Pn**	**18 50 23.2**	**-0.5**
JSR				*eS*		**Sn**	**18 50 42.8**	**-0.1**
JAB	**Ashibetsu**	**1.57**	**355**	P		**Pn**	**18 50 23.9**	**+0.1**
JAB				*eS*		**Sn**	**18 50 44.3**	**+1.1**
JAR	**Ashorobuto**	**1.68**	**36**	P		**Pn**	**18 50 24.9**	**-0.4**
JANG	**Nango**	**1.71**	**204**	P		**Pn**	**18 50 25.6**	**-0.2**
JANG				*eS*		**Sn**	**18 50 46.7**	**+0.1**
ASAJ	**Asahikawa**	**2.18**	**3**	P		**Pn**	**18 50 32.5**	**+0.4**
	22nm,0.3s,baz=198,slow=13,SNR=91							
ASAJ				S		**Sn**	**18 51 00.0**	**+2.1**
	15nm,0.3s,baz=268,slow=30,SNR=9.3							
MJAR	**Matsushiro Arr**	**6.31**	**213**	P		**Pn**	**18 51 31.3**	**+2.7**
	0.1nm,0.3s,baz=81,slow=24,SNR=2.4							
USRK	**Ussuriysk Ar.**	**7.97**	**290**	P		**Pn**	**18 51 54.1**	**+2.9**
	baz=86,slow=14,SNR=4.1							
JHJ	**Hachijo jima 2**	**9.05**	**194**	P		**Pn**	**18 52 08.1**	**+1.9**
	9.1nm,0.3s,baz=148,slow=9.5,SNR=2.6							
KSRS	**Korea Array**	**12.03**	**253**	P		**Pn**	**18 52 49.7**	**+2.9**
	0.2nm,0.3s,baz=61,slow=15,SNR=4.5							
SEY	**Seymchan**	**21.83**	**12**	P		**P**	**18 54 42.9**	**-2.1**
	0.4nm,0.5s,baz=206,slow=14,SNR=1.8							
SONM	**Songino Array**	**26.03**	**295**	P		**P**	**18 55 25.7**	**+0.2**
	0.3nm,0.4s,baz=72,slow=9.0,SNR=2.2							
H11N2	**WAKE ISLAND Hy**	**30.33**	**129**	T		T	19 27 32.7	
	baz=323,slow=75,SNR=25							
H11N1	**WAKE ISLAND Hy**	**30.34**	**129**	T		T	19 27 33.5	
	baz=323,slow=75,SNR=22							
H11N3	**WAKE ISLAND Hy**	**30.35**	**129**	T		T	19 27 34.1	
	baz=323,slow=75,SNR=19							
H11S1	**WAKE ISLAND Hy**	**31.19**	**131**	T		T	19 28 41.5	
	baz=325,slow=76,SNR=30							
H11S3	**WAKE ISLAND Hy**	**31.19**	**131**	T		T	19 28 45.2	
	baz=325,slow=76,SNR=29							
H11S2	**WAKE ISLAND Hy**	**31.21**	**131**	T		T	19 28 44.7	
	baz=325,slow=76,SNR=21							
ZALV	**Zalesovo Beam**	**39.34**	**308**	P		**P**	**18 57 20.6**	**-0.5**
	0.5nm,0.3s,baz=89,slow=8.8,SNR=3.3							
MKAR	**Makanchi Array**	**42.35**	**298**	P		**P**	**18 57 45.5**	**-0.5**
	0.8nm,0.7s,baz=82,slow=9.2,SNR=7.1							
ILAR	**Eielson Array**	**44.98**	**35**	P		**P**	**18 58 07.9**	**+1.0**
	0.2nm,0.7s,baz=298,slow=7.8,SNR=1.8							
YKA	**Yellowknife Ar**	**59.20**	**32**	P		**P**	**18 59 52.4**	**0.0**
	0.2nm,0.7s,baz=309,slow=5.4,SNR=4.2							
WRA	**Warramunga Arr**	**62.02**	**189**	P		**P**	**19 00 11.0**	**-1.0**
	0.3nm,0.8s,baz=5.9,slow=6.8,SNR=5.8							
FINES	**FINESS Array B**	**64.86**	**332**	P		**P**	**19 00 29.5**	**-0.8**
	0.7nm,0.5s,baz=64,slow=7.5,SNR=9.1							
ASAR	**Alice Springs**	**65.75**	**189**	P		**P**	**19 00 36.3**	**-0.2**
	0.5nm,1.0s,baz=5.0,slow=8.0,SNR=2.7							
HFS	**Hagfors**	**69.95**	**335**	P		**P**	**19 01 01.2**	**-1.3**
	0.7nm,0.3s,baz=46,slow=6.4,SNR=8.6							
NOA	**NORSAR Array B**	**69.97**	**337**	P		**P**	**19 01 01.8**	**-0.8**
	0.4nm,0.6s,baz=26,slow=4.3,SNR=1.6							
AKASG	**Malin Array Be**	**70.91**	**322**	P		**P**	**19 01 07.9**	**-0.6**
	0.3nm,0.3s,baz=44,slow=6.3,SNR=4.0							

MDD ***16*** *18:50:54.9±0.6,36°.81N×4°.20W,h59km±6km,mb3.1/17, Error ellipse: s-maj=6.2km s-min=3.4km az=165.0, PRXIMO*

INMG ***16*** *18:50:54.9±1.3,36°.81N×4°.22W,h57km±5km,ML2.0,Error ellipse: s-maj=2.9km s-min=2.3km az=178.0*

SFS ***16*** *18:50:54.0,36°.79N×4°.18W,h63km,ML2.7,IZNATE (MALAGA)*

IGIL ***16*** *18:50:55.3,36°.81N×4°.21W,h60km,ML1.7*

ISC 16 18:50:52.9±1.4,36°.80N±0°.05×4°.19W±0°.03,h70km±8km, n51,σ1$47/95,1D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMAL	**Malaga-Limoner**	**0.20**	**260**	⇓*iP*	**Pn**	**18 51 04.0**	**+0.6**
EMAL				*eS*	**Sn**	**18 51 10.5**	**-0.7**
EGOR	**Sierra Gorda,**	**0.32**	**11**	P	**Pn**	**18 51 04.9**	**+0.5**
	1.7nm,0.1s,SNR=7.9						
EGOR				S	**Sn**	**18 51 12.4**	**-0.4**
	14nm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	**0.45**	**81**	P	**Pn**	**18 51 05.9**	**+0.5**
	11nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**18 51 14.0**	**-0.5**
	59nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**0.53**	**244**	P	**Pn**	**18 51 06.5**	**+0.5**
	6.3nm,0.1s,SNR=26						
EMIJ				S	**Sn**	**18 51 14.9**	**-0.7**
	9.7nm,0.1s,SNR=5.0						
EQUE	**Quentar**	**0.72**	**56**	P	**Pn**	**18 51 09.2**	**+1.1**
	1.0nm,0.1s,SNR=5.9						
EQUE				S	**Sn**	**18 51 19.2**	**-0.2**
	10.0nm,0.3s,SNR=7.9						
EBER	**Berja**	**1.04**	**84**	P	**Pn**	**18 51 12.6**	**+0.4**
	1.8nm,0.2s,SNR=6.3						
EBER				S	**Sn**	**18 51 25.6**	**-0.9**
	3.9nm,0.3s,SNR=5.0						
EQES	**Quesada**	**1.34**	**41**	P	**Pn**	**18 51 17.0**	**+1.1**
	1.3nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**18 51 32.8**	**-0.3**
	4.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**1.40**	**347**	P	**Pn**	**18 51 17.5**	**+0.9**
	1.5nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**18 51 33.4**	**-1.0**
	5.5nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**1.61**	**323**	P	**Pn**	**18 51 19.9**	**+0.6**
	0.2nm,0.1s,SNR=5.5						
ECAB				S	**Sn**	**18 51 38.0**	**-1.3**
	5.0nm,0.2s,SNR=6.4						
SESP	**Santiago Espad**	**1.86**	**44**	P	**Pn**	**18 51 23.7**	**+0.9**
	1.1nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**18 51 44.7**	**-0.7**
	2.8nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.21**	**297**	P	**Pn**	**18 51 27.9**	**+0.5**
	1.5nm,0.1s,SNR=14						
EMIN				S	**Sn**	**18 51 51.8**	**-1.8**
	3.6nm,0.2s,SNR=5.0						
EGRO	**El Granado**	**2.73**	**287**	P	**Pn**	**18 51 34.7**	**+0.3**
	1.3nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**18 52 05.5**	**-0.9**
	1.9nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**2.75**	**357**	P	**Pn**	**18 51 36.1**	**+1.4**
	0.5nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**18 52 04.6**	**-2.3**
	0.3nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**2.79**	**48**	P	**Pn**	**18 51 36.2**	**+0.9**
	0.9nm,0.1s,SNR=6.0						
ETOB				S	**Sn**	**18 52 05.4**	**-2.5**
	1.0nm,0.1s,SNR=8.3						
ESDC	**Sonseca Array**	**2.88**	**3**	P	**Pn**	**18 51 38.3**	**+1.8**
	2.2nm,0.2s,baz=184,slow=12,SNR=8.7						
ESDC				S	**Sn**	**18 52 08.6**	**-1.4**
	1.2nm,0.3s,baz=185,slow=22,SNR=3.6						
PVAQ	**Vaqueiros**	**2.89**	**283**	P	**Pn**	**18 51 37.2**	**+0.6**
PVAQ				S	**Sn**	**18 52 08.5**	**-1.7**
	4.8nm,0.2s						
PVAQ	**Vaqueiros**	**2.89**	**283**	*eP*	**Pn**	**18 51 37.2**	**+0.6**
PVAQ				*eS*	**Sn**	**18 52 08.5**	**-1.7**
PVAQ				A	A	18 52 10.7	
	4.8nm,0.2s						
EBAD	**Badajoz**	**2.97**	**312**	P	**Pn**	**18 51 39.2**	**+1.5**
	1.1nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**18 52 10.7**	**-1.5**
	5.0nm,0.2s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**3.03**	**280**	P	**Pn**	**18 51 39.7**	**+1.2**
PBDV				S	**Sn**	**18 52 12.2**	**-1.5**
PBDV	**Barranco-do-Ve**	**3.03**	**280**	*eP*	**Pn**	**18 51 39.7**	**+1.2**
PBDV				*eS*	**Sn**	**18 52 12.2**	**-1.5**
PCVE	**Castro Verde**	**3.19**	**286**	P	**Pn**	**18 51 41.9**	**+1.3**
PCVE				S	**Sn**	**18 52 16.8**	**-0.7**
PCVE	**Castro Verde**	**3.19**	**286**	*eP*	**Pn**	**18 51 41.9**	**+1.3**
PCVE				*eS*	**Sn**	**18 52 16.8**	**-0.7**
MESJ	**Messejana**	**3.38**	**289**	*eP*	**Pn**	**18 51 43.9**	**+0.6**
MESJ				*eS*	**Sn**	**18 52 19.7**	**-2.5**
MESJ				AML	AML	18 52 22.4	
	comp=E,2.2nm,0.0s						
MESJ	**Messejana**	**3.38**	**289**	P	**Pn**	**18 51 44.3**	**+1.0**
MESJ				S	**Sn**	**18 52 21.2**	**-1.0**
	comp=E,5.3nm,0.1s						
MESJ	**Messejana**	**3.38**	**289**	*eP*	**Pn**	**18 51 44.3**	**+1.0**
MESJ				*eS*	**Sn**	**18 52 21.2**	**-1.0**
MESJ				A	A	18 52 46.8	
	comp=E,5.3nm,0.1s						
PESTR	**Estremoz**	**3.40**	**308**	*eS*	**Sn**	**18 52 22.0**	**-0.6**
EPLA	**Plasencia**	**3.58**	**336**	P	**Pn**	**18 51 47.9**	**+1.8**
	comp=E,0.6nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**18 52 24.5**	**-2.7**
	comp=E,1.0nm,0.1s,SNR=7.9						
MORF	**Marmelete**	**3.61**	**279**	P	**Pn**	**18 51 48.1**	**+1.7**
MORF				S	**Sn**	**18 52 27.4**	**-0.4**
	comp=E,2.0nm,0.5s						
MORF	**Marmelete**	**3.61**	**279**	*eP*	**Pn**	**18 51 48.1**	**+1.7**
MORF				*eS*	**Sn**	**18 52 27.4**	**-0.4**
MORF				A	A	18 52 28.6	
	comp=E,2.0nm,0.5s						
PMRV	**Marv??o**	**3.65**	**317**	P	**Pn**	**18 51 48.5**	**+1.6**
PMRV				S	**Sn**	**18 52 27.0**	**-1.7**
	comp=E,2.2nm,0.7s						
PMRV	**Marv??o**	**3.65**	**317**	*eP*	**Pn**	**18 51 48.5**	**+1.6**
PMRV				*eS*	**Sn**	**18 52 27.0**	**-1.7**
PMRV				A	A	18 52 28.6	
	comp=E,2.2nm,0.7s						
PNCL	**Nicolau / Gran**	**3.70**	**292**	P	**Pn**	**18 51 49.1**	**+1.5**
PNCL				S	**Sn**	**18 52 28.5**	**-1.4**
	comp=E,1.9nm,0.6s						
PNCL	**Nicolau / Gran**	**3.70**	**292**	*eP*	**Pn**	**18 51 49.1**	**+1.5**
PNCL				*eS*	**Sn**	**18 52 28.5**	**-1.4**
PNCL				A	A	18 52 36.5	
	comp=E,1.9nm,0.6s						
PTEO	**Sao Teotonio**	**3.70**	**283**	S	**Sn**	**18 52 29.8**	**-0.2**
PTEO	**Sao Teotonio**	**3.70**	**283**	*eS*	**Sn**	**18 52 29.8**	**-0.2**
PFVI	**Vila Bisbo**	**3.73**	**277**	P	**Pn**	**18 51 49.0**	**+0.9**
	comp=E,1.4nm,0.2s,SNR=7.9						
PFVI				S	**Sn**	**18 52 28.2**	**-2.6**
	comp=E,3.7nm,0.3s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.73**	**277**	*eP*	**Pn**	**18 51 49.8**	**+1.7**
PFVI				*eS*	**Sn**	**18 52 28.6**	**-2.2**
PFVI				A	A	18 52 31.9	
	comp=E,4.9nm,0.7s						
GUD	**Guadarrama**	**3.84**	**0**	P	**Pn**	**18 51 51.3**	**+1.6**
	comp=E,1.1nm,0.2s,SNR=6.0						
GUD				S	**Sn**	**18 52 31.8**	**-1.8**
	comp=E,1.2nm,0.4s,SNR=5.0						
PMTG	**Montargil**	**3.92**	**307**	P	**Pn**	**18 51 52.2**	**+1.6**
PMTG				S	**Sn**	**18 52 33.6**	**-1.7**
	comp=E,2.1nm,0.5s						
PMTG	**Montargil**	**3.92**	**307**	*eP*	**Pn**	**18 51 52.2**	**+1.6**
PMTG				*eS*	**Sn**	**18 52 33.6**	**-1.7**
PMTG				A	A	18 52 34.6	
	comp=E,2.1nm,0.5s						
PCBR	**Castelo Branco**	**3.99**	**321**	P	**Pn**	**18 51 53.4**	**+1.8**
PCBR				S	**Sn**	**18 52 36.6**	**-0.5**
	comp=E,1.2nm,0.4s						
PCBR	**Castelo Branco**	**3.99**	**321**	*eP*	**Pn**	**18 51 53.4**	**+1.8**
PCBR				*eS*	**Sn**	**18 52 36.6**	**-0.5**
PCBR				A	A	18 52 36.9	
	comp=E,2.3nm,0.4s						
ETOR	**Torete**	**4.35**	**22**	P	**Pn**	**18 51 57.4**	**+0.8**
	comp=E,1.9nm,0.2s,SNR=7.9						
ETOR				S	**Sn**	**18 52 43.0**	**-3.0**
	comp=E,8.3nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**4.57**	**300**	S	**Sn**	**18 52 48.8**	**-2.5**
	comp=E,14nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**4.57**	**300**	*eS*	**Sn**	**18 52 50.4**	**-1.0**
PMAFR				A	A	18 52 54.1	
	comp=E,12nm,0.6s						
MVO	**Moncorvo**	**4.89**	**334**	P	**Pn**	**18 52 06.0**	**+2.0**
	comp=E,5.3nm,0.1s,SNR=18						
MVO				S	**Sn**	**18 52 56.2**	**-3.0**
	comp=E,1.3nm,0.3s,SNR=5.0						
MVO	**Moncorvo**	**4.89**	**334**	*eP*	**Pn**	**18 52 05.9**	**+2.0**
MVO				*eS*	**Sn**	**18 52 58.5**	**-0.7**
PBRG	**Braganca**	**5.38**	**339**	P	**Pn**	**18 52 12.4**	**+1.8**
PBRG	**Braganca**	**5.38**	**339**	*eP*	**Pn**	**18 52 12.4**	**+1.8**
PCAB	**Cabril**	**5.74**	**330**	P	**Pn**	**18 52 17.9**	**+2.4**
PCAB				S	**Sn**	**18 53 19.1**	**-0.9**
PCAB	**Cabril**	**5.74**	**330**	*eP*	**Pn**	**18 52 17.9**	**+2.4**
PCAB				*eS*	**Sn**	**18 53 19.1**	**-0.9**

ISU ***16*** *19:11:31.7,40°.72N×73°.14E,h15km*

KRNET ***16*** *19:11:31.1±0.1,40°.63N×73°.13E,h16km,mb3.5*

SOME ***16*** *19:11:32.6,40°.87N×73°.05E,h0km*

NNC ***16*** *19:11:34.0±0.7,40°.82N×73°.04E,h0km,mb3.9,mpv3.7, Error ellipse: s-maj=6.6km s-min=2.8km az=174.0*

ISC 16 19:11:30.4±1.1,40°.68N±0°.03×73°.19E±0°.02,h15km±10km, n73,σ1$49/113,40C-12D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.66**	**346**	⇑*iP*	**Pn**	**19 11 44.5**	**-0.9**
	baz=51						
ARSB				⇑*iS*	**Sn**	**19 11 54.2**	**-1.4**
	baz=51						
ARSB	**Arslanbob**	**0.66**	**346**	*eP*	**Pb**	**19 11 44.0**	**+0.2**
ARSB				*eS*	**Sb**	**19 11 53.3**	**+0.5**
FRG	**Fergana**	**1.07**	**273**	*i* P	**Pn**	**19 11 51.0**	**+0.1**
FRG				*i* S	**Sg**	**19 12 04.8**	**-0.3**
NAM	**Namangan**	**1.20**	**285**	*eP*	**Pg**	**19 11 53.9**	**+0.3**
NAM				*eS*	**Sg**	**19 12 09.4**	**+0.1**
CHMI	**Chimion**	**1.34**	**252**	*eP*	**Pn**	**19 11 54.6**	**0.0**
CHMI				*eS*	**Sg**	**19 12 16.4**	**+2.8**
ARK	**Arkit**	**1.45**	**321**	⇓*iP*	**Pg**	**19 11 57.9**	**-0.4**
	baz=23						
ARK				⇓*iS*	**Sg**	**19 12 17.9**	**+0.8**
	baz=23						
ARK	**Arkit**	**1.45**	**321**	*eP*	**Pb**	**19 11 57.3**	**+0.1**
ARK				*eS*	**Sg**	**19 12 16.4**	**-0.7**
AML	**Almayashu**	**1.49**	**15**	⇓*iP*	**Pg**	**19 12 00.1**	**+0.9**
	baz=16						
AML				⇓*iS*	**Sg**	**19 12 20.9**	**+2.2**
	baz=16						
AML	**Almayashu**	**1.49**	**15**	P	**Pg**	**19 12 00.6**	**+1.4**
	SNR=150						
UCH	**Uchtor**	**1.83**	**32**	⇑*iP*	**Pg**	**19 12 06.3**	**+0.6**
	baz=33						
UCH				⇑*iS*	**Sg**	**19 12 31.8**	**+2.2**
	baz=33						
UCH	**Uchtor**	**1.83**	**32**	P	**Pg**	**19 12 06.8**	**+1.0**
	SNR=127						
BTK	**Batken**	**1.92**	**252**	⇑*iP*	**Pb**	**19 12 05.5**	**+0.3**
	baz=53						
BTK				⇑*iS*	**Sb**	**19 12 30.2**	**+1.3**
	baz=53						
BTK	**Batken**	**1.92**	**252**	*i* P	**Pb**	**19 12 05.8**	**+0.6**
BTK				*i* S	**Sb**	**19 12 29.5**	**+0.6**
EKS2	**Erkin-Say**	**2.02**	**12**	⇑*iP*	**Pg**	**19 12 08.9**	**-0.4**
	baz=13						
EKS2				⇑*iS*	**Sg**	**19 12 36.7**	**+1.1**
	baz=13						
EKS2	**Erkin-Say**	**2.02**	**12**	P	**Pg**	**19 12 10.1**	**+0.8**
	SNR=59						
MRKS	**Merke**	**2.06**	**1**	*eP*	**Pg**	**19 12 09.9**	**0.0**
	182nm,0.2s						
MRKS				*eS*	**Sg**	**19 12 36.9**	**+0.2**
	275nm,0.2s						
MRKS	**Merke**	**2.06**	**1**	Pg	**Pg**	**19 12 09.9**	**0.0**
	182nm,0.2s						
MRKS				Lg	Lg	19 12 37.5	
	275nm,0.2s						
KZA	**Kyzart**	**2.08**	**47**	⇑*iP*	**Pg**	**19 12 09.9**	**-0.6**
	baz=47						
KZA				⇑*iS*	**Sg**	**19 12 38.0**	**+0.5**
	baz=47						
KZA	**Kyzart**	**2.08**	**47**	P	**Pg**	**19 12 11.0**	**+0.6**
	SNR=34						
AAK	**Ala-Archa**	**2.18**	**26**	⇑*iP*	**Pg**	**19 12 11.2**	**-1.1**
	baz=27						
AAK				⇑*iS*	**Sg**	**19 12 40.4**	**-0.2**
	baz=27						
AAK	**Ala-Archa**	**2.18**	**26**	P	**Pg**	**19 12 11.8**	**-0.5**
	SNR=47						
AAK	**Ala-Archa**	**2.18**	**26**	⇓Pn	**Pg**	**19 12 11.5**	**-0.8**
	9.9nm,0.2s						
AAK				⇓Lg	Lg	19 12 41.7	
	198nm,0.6s						
KBK	**Karagaybulak**	**2.37**	**33**	⇑*iP*	**Pb**	**19 12 13.9**	**+1.0**
	baz=33						
KBK				⇑*iS*	**Sg**	**19 12 45.0**	**-1.6**
	baz=33						
KBK	**Karagaybulak**	**2.37**	**33**	P	**Pg**	**19 12 15.0**	**-0.9**
	SNR=29						
FRU1	**Bishkek**	**2.38**	**26**	⇑*iP*	**Pb**	**19 12 14.1**	**+1.0**
	baz=27						
FRU1				⇑*iS*	**Sg**	**19 12 45.3**	**-1.7**
	baz=27						
CHMS	**Chumysh**	**2.59**	**26**	⇑*iP*	**Pb**	**19 12 16.7**	**+0.1**
	baz=27						
CHMS				⇑*iS*	**Sb**	**19 12 50.1**	**+1.8**
	baz=27						
CHMS	**Chumysh**	**2.59**	**26**	P	**Pb**	**19 12 17.6**	**+1.0**
	SNR=9.2						
DZA	**Taraz**	**2.61**	**328**	*eP*	**Pg**	**19 12 19.1**	**-1.3**
	30nm,0.1s						
DZA				*eS*	**Sg**	**19 12 52.3**	**-1.9**
	210nm,0.2s						
DZA	**Taraz**	**2.61**	**328**	Pg	**Pg**	**19 12 19.1**	**-1.3**
	30nm,0.1s						
DZA				Lg	Lg	19 12 52.3	
	210nm,0.2s						
CHRV	**Charvak**	**2.62**	**292**	*eP*	**Pg**	**19 12 20.5**	**-0.3**
CHRV				*eS*	**Sg**	**19 12 52.0**	**-2.8**
BOOM	**Boomskoye usch**	**2.74**	**48**	⇓*iP*	**Pb**	**19 12 19.1**	**-0.2**
	baz=48						
BOOM				⇓*iS*	**Sb**	**19 12 54.2**	**+1.5**
	baz=48						
USP	**Ospenovka**	**2.76**	**20**	⇑*iP*	**Pb**	**19 12 19.2**	**-0.3**
	baz=21						
USP				⇑*iS*	**Sb**	**19 12 54.1**	**+1.0**
	baz=21						
USP	**Ospenovka**	**2.76**	**20**	P	**Pg**	**19 12 23.9**	**+0.6**
	SNR=11						
ULHL	**Ulahol**	**2.77**	**55**	⇑*iP*	**Pb**	**19 12 19.5**	**-0.3**
	baz=54						
ULHL				⇑*iS*	**Sb**	**19 12 54.7**	**+1.0**
	baz=54						
ULHL	**Ulahol**	**2.77**	**55**	P	**Pb**	**19 12 19.9**	**0.0**
	SNR=22						
GAR	**Garm**	**2.78**	**234**	⇑*iP*	**Pb**	**19 12 17.7**	**-2.2**
	baz=34						
GAR				⇑*iS*	**Sb**	**19 12 51.5**	**-2.3**
	baz=34						
IUG	**Iuzhnay**	**2.79**	**303**	*eP*	**Pb**	**19 12 21.6**	**+1.5**
	29nm,0.2s						
IUG				*eS*	**Sg**	**19 12 56.9**	**-3.1**
	379nm,0.3s						
IUG	**Iuzhnay**	**2.79**	**303**	Pg	**Pb**	**19 12 21.6**	**+1.5**
	58nm,0.1s						
IUG				Lg	Lg	19 12 57.3	
	379nm,0.3s						
TKM2	**Tokmak 2**	**2.87**	**38**	⇑*iP*	**Pb**	**19 12 20.7**	**-0.8**
	baz=38						
TKM2				⇑*iS*	**Sb**	**19 12 57.0**	**+0.5**
	baz=38						
TKM2	**Tokmak 2**	**2.87**	**38**	P	**Pb**	**19 12 21.2**	**-0.3**
	SNR=9.1						
TKM2	**Tokmak 2**	**2.87**	**38**	⇓Pn	**Pb**	**19 12 21.1**	**-0.3**
	3.2nm,0.2s						
TKM2				⇓Lg	Lg	19 13 04.2	
	13nm,0.2s						
TAS	**Tashkent**	**3.02**	**284**	⇑*iP*	**Pb**	**19 12 21.4**	**-2.5**
	baz=85						
TAS				⇑*iS*	**Sb**	**19 12 58.1**	**-2.4**
	baz=85						
KK31	**Karatay Array**	**3.14**	**321**	⇑Pn	**Pn**	**19 12 22.2**	**+2.8**
	0.1nm,0.2s,baz=135,slow=15,SNR=133						
KK31				⇑Pg	**Pb**	**19 12 26.9**	**+1.0**
	2.0nm,0.2s,baz=139,slow=16,SNR=82						
KK31				⇑Lg	Lg	19 13 06.4	
	49nm,0.7s,baz=135,slow=29,SNR=11						
KST	**Kastek**	**3.14**	**40**	*eP*	**Pg**	**19 12 30.6**	**0.0**
	7.3nm,0.4s						
KST				*eS*	**Sg**	**19 13 12.6**	**+1.4**
	40nm,0.4s						
KST	**Kastek**	**3.14**	**40**	Pg	**Pg**	**19 12 30.6**	**0.0**
	9.8nm,0.2s						
KST				Lg	Lg	19 13 12.6	
	31nm,0.3s						
DGS	**Degeres**	**3.20**	**36**	*eP*	**Pg**	**19 12 32.2**	**+0.4**
	12nm,0.5s						
DGS				*eS*	**Sg**	**19 13 14.6**	**+1.3**
	41nm,0.3s						
DGS	**Degeres**	**3.20**	**36**	Pg	**Pg**	**19 12 32.2**	**+0.4**
	12nm,0.5s						
DGS				Lg	Lg	19 13 14.6	
	41nm,0.3s						
KDJ	**Kajisay**	**3.33**	**63**	⇑*iP*	**Pb**	**19 12 27.2**	**-2.1**
	baz=63						
KDJ				⇑*iS*	**Sb**	**19 13 08.1**	**-1.6**
	baz=63						
IZV	**Izvestkoviy**	**3.47**	**46**	*eP*	**Pg**	**19 12 35.9**	**-1.1**
	8.2nm,0.6s						
IZV				*eS*	**Sg**	**19 13 21.4**	**-0.6**
	46nm,0.5s						

ARXS	**Arharly**	**4.92**	**43**	Pg	**Pg**	**19 13 02.3**	**-2.3**
	6.1nm,0.4s							
ARXS				Lg	Lg	19 14 06.6		
	22nm,0.6s							
KPKS	**Kokpek**	**4.94**	**54**	*eP*	**Pg**	**19 13 04.5**	**-0.6**
	4.6nm,0.4s							
KPKS				*eS*	**Sg**	**19 14 10.6**	**+1.5**
	30nm,0.6s							
DJR	**Jarkent**	**6.09**	**51**	Pg	**Pg**	**19 13 24.2**	**-2.8**
	2.1nm,0.5s							
DJR				Lg	Lg	19 14 43.9		
	5.5nm,0.7s							
KAPS	**Kapalarasan**	**6.45**	**42**	Pg	**Pg**	**19 13 30.8**	**-3.1**
	1.1nm,0.5s							
KAPS				Lg	Lg	19 14 55.1		
	5.0nm,0.8s							
OTUK	**Ortayu**	**7.58**	**356**	⇑Lg	Lg	19 15 28.0		
	9.3nm,1.0s							
KURBB	**Kurchatov Arra**	**10.62**	**19**	⇑Lg	Lg	19 17 08.2		
	12nm,0.8s							

*IDC **16** 19:17:12.8±1.2,51°.51N×174°.72W,h0km, mb3.6/12, mb1 3.7/14,mb1mx3.5/57,mbtmp3.6/14,ML3.7/2, MS2.9/1, Ms1 2.9/1,ms1mx2.3/42,Error ellipse: s-maj=33.9km s-min=17.6km az=176.0*

*AEIC **16** 19:17:16.2±2.3,51°.36N±0°.04×174°.62W±0°.07,h24km±5km, ML3.4,mb3.7/23(NEIC),Error ellipse: s-maj=6.2km s-min=5.1km az=83.0*

*NEIC **16** 19:17:16.7±1.8,51°.35N±0°.04×174°.60W±0°.08,h34km±6km, Error ellipse: s-maj=7.2km s-min=5.2km az=108.0*

ISC 16 19:17:17.6±0.7,51°.35N±0°.08×174°.57W±0°.05,h38km,n75, σ1s26/75,mb3.9/13,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.89**	**15**		**Pn**	**19 17 32.3**	**-1.2**
ATKA	**Atka Island**	**0.89**	**15**		**Sn**	**19 17 45.4**	**+0.2**
KOFP	**Korovin Flat P**	**0.98**	**17**		**Pn**	**19 17 34.2**	**-0.6**
KOKL	**Mount Kliuchef**	**1.01**	**13**		**Pn**	**19 17 34.8**	**-0.4**
KOKL					**Sn**	**19 17 48.8**	**+0.7**
KOSE	**Korovin Southe**	**1.05**	**18**		**Pn**	**19 17 35.6**	**-0.2**
KOSE					**Sn**	**19 17 51.2**	**+2.0**
KONE	**Korovin Northe**	**1.09**	**15**		**Pn**	**19 17 36.3**	**+0.1**
GSMY	**Great Sitkin M**	**1.16**	**308**		**Pn**	**19 17 36.1**	**-1.1**
GSTR	**Great Sitkin T**	**1.19**	**310**		**Pn**	**19 17 37.1**	**-0.6**
GSTD	**Great Sitkin T**	**1.21**	**307**		**Pn**	**19 17 37.1**	**-0.9**
GSTD					**Sn**	**19 17 53.6**	**+0.4**
GSSP	**Great Sitkin S**	**1.25**	**307**		**Pn**	**19 17 37.8**	**-0.6**
ADAG	**Mount Adagdak**	**1.42**	**297**		**Pn**	**19 17 40.7**	**-0.1**
ADK	**Adak**	**1.42**	**293**		**Pn**	**19 17 39.7**	**-1.1**
KIWB	**Kanaga Island**	**1.69**	**289**	Pn	Pn	19 17 37.6	-6.9
KINC	**Kanaga Island**	**1.70**	**291**		**Pn**	**19 17 44.4**	**-0.2**
KIKV	**Kanaga Island**	**1.71**	**289**		**Pn**	**19 17 44.3**	**-0.4**
KIMD	**Kanaga Island**	**1.71**	**285**		**Pn**	**19 17 44.2**	**-0.6**
KICM	**Kanaga Island**	**1.73**	**290**		**Pn**	**19 17 45.1**	**0.0**
TAPA	**Tanaga Point A**	**2.08**	**284**		**Pn**	**19 17 50.1**	**+0.3**
TAFP	**Tanaga Falls P**	**2.20**	**286**		**Pn**	**19 17 51.8**	**+0.3**
TAFP					**Sn**	**19 18 18.6**	**+1.2**
TASE	**Tanaga Southea**	**2.22**	**284**		**Pn**	**19 17 52.1**	**+0.4**
NIKH	**Nikolski High**	**3.88**	**63**		**Pn**	**19 18 13.4**	**-1.1**
AKUT	**Akutan**	**6.03**	**59**	Pn	**Pn**	**19 18 43.0**	**-1.1**
SPIA	**Saint Paul Isl**	**6.37**	**22**	Pn	**Pn**	**19 18 51.4**	**+2.7**
SDPT	**Sand Point**	**9.33**	**59**	Pn	**Pn**	**19 19 30.5**	**+1.2**
CNBA	**Chernabura Isl**	**9.66**	**63**	Pn	**Pn**	**19 19 34.5**	**+0.7**
OHAK	**Old Harbor**	**13.72**	**56**	Pn	**Pn**	**19 20 26.0**	**-3.2**
KDAK	**Kodiak Island**	**14.25**	**55**	Pn	**Pn**	**19 20 35.6**	**-0.8**
	0.3nm,0.3s,baz=158,slow=2.9,SNR=6.3							
KDAK	**Kodiak Island**	**14.25**	**55**	Pn	**Pn**	**19 20 33.8**	**-2.6**
TTA	**Tatalina**	**15.29**	**34**	Pn	**Pn**	**19 20 48.6**	**-1.8**
CNPM	**China Poot**	**15.50**	**49**	Pn	**Pn**	**19 20 53.1**	**+0.1**
CNPM				IAmb	IAmb	19 21 24.6		
	comp=Z,13nm,1.3s							
BRLK	**Bradley Lake**	**15.75**	**48**	Pn	**Pn**	**19 20 56.4**	**+0.1**
BRLK				IAmb	IAmb	19 21 25.1		
	comp=Z,11nm,1.4s							
GHO	**Glory Hole Cre**	**17.44**	**43**	Pn	**Pn**	**19 21 16.3**	**-1.4**
GHO				IAmb	IAmb	19 21 42.5		
	comp=Z,7.6nm,1.4s							
KTH	**Kantishna Hill**	**17.51**	**37**		**P**	**19 21 20.8**	**+1.5**
KTH				IAmb	IAmb	19 21 39.7		
	comp=Z,8.4nm,1.4s							
SML	**Sawmill**	**17.71**	**44**	Pn	**Pn**	**19 21 19.9**	**-1.1**
SML				IAmb	IAmb	19 21 45.1		
	comp=Z,5.9nm,1.4s							
BPAW	**Bear Paw Mtn.**	**17.79**	**35**	P	**P**	**19 21 22.4**	**+0.1**
HIN	**Hinchinbrook I**	**18.04**	**49**	P	**Pn**	**19 21 23.9**	**-1.0**
SCM	**Sheep Creek Mo**	**18.16**	**44**	P	**P**	**19 21 24.7**	**-1.7**
SCM				IAmb	IAmb	19 21 25.6		
	comp=Z,11nm,1.5s							
MLY	**Manley**	**18.42**	**33**	P	**P**	**19 21 26.5**	**-2.9**
DHY	**Denali Highway**	**18.66**	**41**	P	**P**	**19 21 31.8**	**-0.2**
DHY				IAmb	IAmb	19 21 35.9		
	comp=Z,5.2nm,0.7s							
CCB	**Clear Creek Bu**	**19.25**	**36**	P	**P**	**19 21 36.7**	**-1.6**
HDA	**Harding Lake**	**19.45**	**37**	P	**P**	**19 21 41.1**	**+0.6**
HDA				IAmb	IAmb	19 22 08.8		
	comp=Z,7.1nm,1.4s							
GLB	**Gilahina Butte**	**19.60**	**47**	P	**P**	**19 21 37.9**	**-4.3**
IL31		**19.65**	**36**	P	**P**	**19 21 41.7**	**-1.0**
ILAR	**Eielson Array**	**19.65**	**36**	P	**P**	**19 21 42.2**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=227,slow=7.9,SNR=12							
VRDI	**Verde Repeater**	**19.71**	**48**	P	**P**	**19 21 41.8**	**-1.8**
VRDI				IAmb	IAmb	19 21 52.0		
	comp=Z,6.4nm,1.4s							
RIDG	**Independent Ri**	**19.97**	**40**	P	**P**	**19 21 45.8**	**-0.5**
RIDG				IAmb	IAmb	19 22 03.4		
	comp=Z,2.1nm,0.6s							
BALM	**Baldy**	**20.18**	**49**	P	**P**	**19 21 46.7**	**-1.9**
BALM				IAmb	IAmb	19 21 57.4		
	comp=Z,2.3nm,0.8s							
SCRK	**Sand Creek**	**20.42**	**40**	P	**P**	**19 21 49.9**	**-1.2**
SCRK				IAmb	IAmb	19 22 04.3		
	comp=Z,2.7nm,0.6s							
SEY	**Seymchan**	**21.08**	**316**	P	**P**	**19 21 57.3**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=17,slow=23,SNR=1.6							
MA2	**Magadan**	**21.09**	**306**	LR	LR	19 30 12.9		
	comp=Z,32nm,18.5s,baz=332,slow=37							
EGAK	**Eagle**	**21.86**	**39**	P	**P**	**19 22 05.6**	**-0.9**
EGAK				IAmb	IAmb	19 22 14.8		
	comp=Z,3.0nm,0.7s							
BESE	**Bessie Mountai**	**23.63**	**57**	P	**P**	**19 22 24.8**	**-0.1**
KLR	**Kul'dur**	**33.73**	**288**	P	**P**	**19 23 54.3**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=86,slow=6.9,SNR=6.2							
USRK	**Ussuriysk Ar.**	**35.92**	**280**	P	**P**	**19 24 13.7**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=60,slow=8.5,SNR=2.7							
H11S1	**WAKE ISLAND Hy**	**35.96**	**211**	T	T	20 03 24.1		
	baz=20,slow=76,SNR=14							
H11S2	**WAKE ISLAND Hy**	**35.98**	**211**	T	T	20 03 17.0		
	baz=20,slow=76,SNR=6.7							
H11S3	**WAKE ISLAND Hy**	**35.98**	**211**	T	T	20 03 21.8		
	baz=20,slow=76,SNR=4.4							
PDAR	**Pinedale Array**	**43.78**	**75**	P	**P**	**19 25 20.3**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=349,slow=2.8,SNR=3.7							
SONM	**Songino Array**	**49.01**	**299**	P	**P**	**19 25 59.9**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=40,slow=9.4,SNR=2.5							
TXAR	**Lajitas Array**	**56.03**	**84**	P	**P**	**19 26 55.6**	**+3.1**
	comp=Z,0.1nm,0.5s,baz=296,slow=6.6,SNR=2.4							
ARCES	**ARCESS Array B**	**58.54**	**352**	P	**P**	**19 27 09.7**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=359,slow=12,SNR=1.4							
KURK	**Kurchatov**	**60.93**	**316**	P	**P**	**19 27 25.7**	**-0.5**
KURBB	**Kurchatov Arra**	**61.03**	**316**	P	**P**	**19 27 26.6**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=43,slow=6.8,SNR=12							
MK31	**Makanchi Array**	**62.10**	**311**	P	**P**	**19 27 33.5**	**-0.6**
MKAR	**Makanchi Array**	**62.10**	**311**	P	**P**	**19 27 33.4**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=45,slow=6.8,SNR=19							
MAKZ	**Makanchi**	**62.23**	**311**	P	**P**	**19 27 34.5**	**-0.6**
BVAR	**Borovoye Array**	**62.59**	**322**	P	**P**	**19 27 37.0**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=53,slow=5.7,SNR=6.8							
BVAR				PcP	**PcP**	**19 28 16.5**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=67,slow=1.8,SNR=3.8							
FINES	**FINESS Array B**	**66.36**	**349**	P	**P**	**19 28 00.8**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=4.2,slow=7.5,SNR=1.8							
ODAN	**Odare**	**74.23**	**293**	*eP*	**P**	**19 28 52.1**	**+1.3**
	comp=Z,2.3nm,0.4s							
GUN	**Gumba**	**74.30**	**295**	*eP*	**P**	**19 28 52.0**	**+0.7**
	comp=Z,7.9nm,0.4s							
JIRN	**Jiri**	**74.31**	**295**	*eP*	**P**	**19 28 52.2**	**+0.8**
	comp=Z,11nm,0.5s							
RAMN	**Ramite**	**74.62**	**294**	*eP*	**P**	**19 28 53.6**	**+0.5**
	comp=Z,8.1nm,0.5s							
GKN	**Gorkha**	**74.93**	**296**	*eP*	**P**	**19 28 55.1**	**+0.4**
	comp=Z,3.7nm,0.4s							
DANN	**Dangsing**	**75.16**	**297**	*eP*	**P**	**19 28 56.8**	**+0.6**
	comp=Z,9.9nm,0.7s							
ASAR	**Alice Springs**	**87.31**	**226**	P	**P**	**19 30 00.4**	**+0.3**
	comp=Z,0.1nm,0.6s,baz=19,slow=6.0,SNR=4.2							

*GCG **16** 19:18:38.5±0.7, 13°.67N×92°.64W, h15km±283km, MD4.1*

*IDC **16** 19:18:42.9±1.3, 14°.02N×92°.25W, h0km, mb3.9/7, mb1 4.0/9,mb1mx3.8/41,mbtmp3.8/9,ML3.0/2,MS3.2/5, Ms1 3.2/5,ms1mx2.7/38,Error ellipse: s-maj=25.2km s-min=16.8km az=175.0*

*MEX **16** 19:18:43.8±0.6, 13°.65N×92°.28W, h15km±197km, MD3.8*

ISC 16 19:18:44.0±1.0,13°.86N±0°.08×92°.30W±0°.05,h10km,n24, σ1s29/26,mb3.8/7,MS3.0/5,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.04**	**2**	*eP*	**Pn**	**19 19 03.4**	**-1.2**
THIG				*i* S	**Sb**	**19 19 18.0**	**+0.2**
STG3	**Santiaguito 3,**	**1.10**	**40**	*eP*	**Pn**	**19 19 04.6**	**-1.0**
FUG	**Fuego 3**	**1.53**	**67**	*eP*	**Pn**	**19 19 10.5**	**-1.0**
FUG				*eS*	**Sg**	**19 19 35.4**	**+2.1**
PCG	**Pacaya**	**1.72**	**72**	*eP*	**Pn**	**19 19 13.9**	**-0.4**
IXG	**Ixpaco**	**1.83**	**80**	*eP*	**Pn**	**19 19 14.8**	**-0.9**
NBG	**Las Nubes**	**2.03**	**69**	*eP*	**Pn**	**19 19 17.7**	**-0.8**
PCIG		**2.04**	**334**	*eP*	**Pn**	**19 19 17.1**	**-1.2**
PCIG				*i* S	**Sn**	**19 19 42.9**	**-0.9**
APG	**El Apazote**	**2.11**	**57**	Pn	**Pn**	**19 19 19.6**	**0.0**
	26nm,0.3s,baz=222,slow=8.6,SNR=201							
APG				Lg	Lg	19 19 45.5		
	13nm,0.3s,baz=347,slow=17,SNR=4.1							
CCIG	**Comitan**	**2.41**	**4**	*i* P	**Pn**	**19 19 23.7**	**+0.1**
CCIG				*i* S	**Sn**	**19 19 53.3**	**-0.1**
MRL	**Marmol**	**2.81**	**64**	*eS*	**Sb**	**19 20 08.3**	**-0.7**
CMIG	**Matias Romero**	**4.06**	**323**	Pn	**Pn**	**19 19 46.1**	**-0.1**
	0.8nm,0.3s,baz=163,slow=12,SNR=12							
CMIG				Sn	**Sn**	**19 20 36.6**	**+2.7**
	6.3nm,0.3s,baz=96,slow=18,SNR=6.5							
TXAR	**Lajitas Array**	**18.65**	**327**	Pn	**P**	**19 23 04.2**	**+2.1**
	0.0nm,0.3s,baz=153,slow=12,SNR=6.8							
TKL	**Tuckaleechee C**	**23.02**	**18**	LR	LR	19 34 32.8		
	comp=Z,53nm,18.0s,baz=179,slow=42							
ANMO	**Albuquerque**	**24.58**	**331**	P	**P**	**19 24 02.7**	**-1.8**
	0.7nm,0.4s,baz=133,slow=14,SNR=2.7							
ANMO				LR	LR	19 35 56.3		
	comp=Z,39nm,18.3s,baz=266,slow=42							
ATAH	**Atahualpa**	**25.02**	**146**	P	**P**	**19 24 10.2**	**+1.4**
	3.4nm,0.5s,baz=8.7,slow=13,SNR=2.2							
NNA	**Nana**	**29.91**	**148**	LR	LR	19 34 20.5		
	comp=Z,20nm,21.7s,baz=2.0,slow=31							
NVAR	**Mina Array Bea**	**33.59**	**322**	P	**P**	**19 25 26.3**	**+1.6**
	0.6nm,0.7s,baz=130,slow=10,SNR=4.4							
ULM	**Lac du Bonnet**	**36.40**	**356**	P	**P**	**19 25 49.0**	**+0.4**
	2.5nm,0.5s,baz=294,slow=3.6,SNR=2.2							
SCHQ	**Schefferville**	**45.45**	**20**	LR	LR	19 47 00.9		
	comp=Z,54nm,19.9s,baz=130,slow=38							
YKA	**Yellowknife Ar**	**51.09**	**347**	P	**P**	**19 27 44.9**	**-1.5**
	1.1nm,0.9s,baz=145,slow=7.9,SNR=14							
YKA				PcP	**PcP**	**19 29 01.6**	**-0.6**
	0.1nm,0.2s,baz=144,slow=4.3,SNR=7.2							
INK	**Inuvik**	**60.49**	**344**	P	**P**	**19 28 52.2**	**-1.6**
	1.4nm,0.8s,baz=152,slow=5.4,SNR=5.4							
ILAR	**Eielson Array**	**62.85**	**337**	P	**P**	**19 29 08.8**	**-1.0**
	0.2nm,0.7s,baz=90,slow=5.4,SNR=4.4							
MDT	**Midelt**	**80.72**	**58**	LR	LR	20 07 06.0		
	comp=Z,17nm,18.2s,baz=310,slow=36							
CMAR	**Chiang Mai Arr**	**146.03**	**341**	PKPbc	**PKPbc**	**19 38 25.1**	**0.0**
	2.0nm,0.7s,baz=330,slow=3.7,SNR=12							

NNC 16 19:20:24.5±2.9,54°.05N×87°.47E,h2km±34km,mb3.6, mpv3.3,6C-1D,Error ellipse: s-maj=38.9km s-min=14.9km az=33.0,Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**1.57**	**267**	⇑P	Pn	19 20 52.7	-0.7
	2.2nm,0.5s						
ZAA0				⇑S	Sb	19 21 14.5	0.0
	5.6nm,0.7s						
KURBB	**Kurchatov Arra**	**6.46**	**242**	⇓Pn	Pn	19 22 01.7	+1.1
	5.8nm,0.5s						
KURBB				⇑Sn	Sn	19 23 13.7	-1.2
	8.5nm,0.6s						
KURBB				⇑Lg	Lg	19 23 49.2	
	8.3nm,0.7s						
MK31	**Makanchi Array**	**7.98**	**207**	Pn	Pn	19 22 22.6	+1.1
	0.5nm,0.2s,baz=25,slow=13,SNR=8.9						
MK31				⇑Sn	Sn	19 23 54.7	+2.4
	2.2nm,0.8s,baz=28,slow=27,SNR=2.9						
MK31				⇑Lg	Lg	19 24 36.7	
	1.4nm,0.7s,baz=29,slow=26,SNR=3.6						

IDC 16 19:35:11.7±3.7,11°.85N×92°.07E,h0km,mb3.4/3, mb1 3.5/4,mb1mx3.3/33,mbtmp3.3/4,ML3.4/1,Error ellipse: s-maj=96.4km s-min=31.1km az=82.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.33**	**44**	Pn	Pn	19 37 26.7	-0.9
	0.1nm,0.3s,baz=238,slow=14,SNR=4.1						
H08S3	**Diego Garcia H**	**27.46**	**226**	T	T	20 10 01.8	
	baz=45,slow=76,SNR=24						
H08S2	**Diego Garcia H**	**27.46**	**226**	T	T	20 10 03.4	
	baz=45,slow=76,SNR=35						
H08S1	**Diego Carcia H**	**27.48**	**226**	T	T	20 10 03.3	
	baz=45,slow=76,SNR=15						
SONM	**Songino Array**	**37.83**	**16**	P	P	19 42 30.4	+0.3
	0.3nm,0.6s,baz=216,slow=7.1,SNR=2.2						
WRA	**Warramunga Arr**	**52.24**	**127**	P	P	19 44 24.9	-0.2
	0.4nm,0.5s,baz=304,slow=9.0,SNR=12						
ASAR	**Alice Springs**	**54.03**	**131**	P	P	19 44 38.1	-0.1
	0.2nm,0.6s,baz=312,slow=6.4,SNR=5.2						

IDC 16 19:38:54.1±1.7,14°.99S×69°.56W,h219km±40km,mb3.0/3, mb1 3.3/3,mb1mx3.1/25,mbtmp3.6/3,Error ellipse: s-maj=143.9km s-min=36.6km az=25.0,Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.89**	**133**	P	Pn	19 39 33.9	+0.3
	13nm,0.3s,baz=307,slow=7.6,SNR=141						
LPAZ				S	S	19 40 04.8	+0.5
	4.5nm,0.3s,baz=61,slow=23,SNR=8.8						
TXAR	**Lajitas Array**	**55.01**	**323**	P	P	19 48 02.9	-0.3
	0.1nm,0.4s,baz=146,slow=9.8,SNR=1.7						
TORD	**Torodi Ar. Bea**	**75.85**	**72**	P	P	19 50 16.6	-0.3
	0.7nm,1.0s,baz=268,slow=4.8,SNR=2.2						
YKA	**Yellowknife Ar**	**84.87**	**341**	P	P	19 51 03.5	-0.3
	0.8nm,0.7s,baz=132,slow=5.3,SNR=11						
SONM	**Songino Array**	**147.08**	**5**	PKPbc	PKPbc	19 58 11.6	+0.2
	0.3nm,0.4s,baz=21,slow=1.0,SNR=2.8						

IDC 16 19:40:09.3±2.0,3°.97N×123°.65E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.2/37,mbtmp3.3/3,Error ellipse: s-maj=218.9km s-min=28.0km az=63.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.98**	**157**	P	P	19 45 44.0	+0.1
	0.1nm,0.4s,baz=335,slow=10,SNR=5.9						
ASAR	**Alice Springs**	**29.23**	**160**	P	P	19 46 13.0	0.0
	0.2nm,0.8s,baz=333,slow=7.9,SNR=1.5						
MKAR	**Makanchi Array**	**55.64**	**327**	P	P	19 49 47.0	-0.1
	0.1nm,0.3s,baz=130,slow=7.1,SNR=4.5						

*NIED **16** 19:52:00,24°.90N×124°.80E, h8km, Mw3.8 Best double couple: M0 5.83000×10^14 NP1:φs 343.00000°, δ60.00000°, λ-93.00000°. NP2:φs 169.00000°, δ31.00000°, λ-85.00000°.*

*IDC **16** 19:52:26.0±1.1,24°.85N×124°.78E, h0km,mb3.6/5, mb1 3.8/5,mb1mx3.4/48,mbtmp3.6/5,ML2.6/1,MS2.7/2, Ms1 2.9/2,ms1mx2.4/33,Error ellipse: s-maj=28.8km s-min=25.7km az=89.0*

*JMA **16** 19:52:27.0±0.1,24°.86N×124°.75E, h7km±2km, M3.8*

JMA Felt I J1.

*NEIC **16** 19:52:30.4±2.6,24°.6N±0°.1×124°.79E±0°.06,h35km±5km, mb4.5/4, Error ellipse: s-maj=15.6km s-min=7.4km az=165.0*

ISC 16 19:52:27.0±1.1,24°.74N±0°.08×124°.85E±0°.04,h11km±8km, n31,σ1s09/39,mb3.6/7,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	**Tarama**	**0.16**	**235**	P	**Pb**	**19 52 31.6**	**-0.5**
JTJ				*eS*	**Sg**	**19 52 34.2**	**+1.0**
JIRB	**Irabujima**	**0.31**	**73**	P	**Pb**	**19 52 34.5**	**-0.1**
JIRB				S	**Sb**	**19 52 40.1**	**+0.5**
JIKM	**Ikemajima**	**0.41**	**63**	P	**Pn**	**19 52 36.0**	**-2.9**
JIKM				S	**Sb**	**19 52 42.9**	**+0.4**
JMJ2	**Miyako jima3**	**0.44**	**89**	P	**Pn**	**19 52 37.6**	**-1.6**
JMJ2				S	**Sb**	**19 52 44.7**	**+1.4**
JOGS	**Gusukube**	**0.51**	**87**	P	**Pn**	**19 52 38.8**	**-1.4**
JOGS				*eS*	**Sn**	**19 52 47.2**	**-1.7**
JISG	**Ishigakijimahi**	**0.51**	**253**	P	**Pg**	**19 52 36.5**	**-0.5**
JISG				S	**Sg**	**19 52 43.1**	**-0.7**
JIJ	**Ishigaki jima**	**0.74**	**240**	P	**Pg**	**19 52 41.1**	**-0.3**
JIJ				S	**Sg**	**19 52 50.9**	**-0.2**
JKRS	**Kuro-shima**	**0.91**	**237**	P	**Pg**	**19 52 44.5**	**-0.1**
JKRS				S	**Sg**	**19 52 57.3**	**+0.8**
IRIF	**Iriomote-Funau**	**1.09**	**249**	P	**Pb**	**19 52 46.9**	**-1.0**
IRIF				S	**Sb**	**19 53 01.5**	**-0.7**
HATJ	**Hateruma jima**	**1.17**	**235**	P	**Pn**	**19 52 49.0**	**-0.3**
HATJ				S	**Sb**	**19 53 04.5**	**+0.2**
YOJ	**Yonaguni jima**	**1.69**	**261**		**Pn**	**19 52 55.0**	**-1.5**
NACB	**Ninganchiao**	**3.02**	**260**		**Pn**	**19 53 14.8**	**+0.1**
TATO	**Taipei**	**3.06**	**275**		**Pn**	**19 53 15.4**	**+0.1**
YHNB	**Yeheng**	**3.16**	**270**		**Pn**	**19 53 17.1**	**+0.3**
YULB	**Yu-li**	**3.51**	**248**		**Pn**	**19 53 20.6**	**-1.0**
SSLB	**Suanglung**	**3.68**	**256**		**Pn**	**19 53 24.1**	**+0.2**
JOW	**Kunigami**	**3.73**	**55**	Pn	**Pn**	**19 53 25.6**	**+1.0**
	1.0nm,0.3s,baz=333,slow=18,SNR=13						
JOW	**Kunigami**	**3.73**	**55**		**Pn**	**19 53 25.3**	**+0.8**
TWG	**Pinlang**	**3.95**	**242**		**Pn**	**19 53 26.3**	**-1.3**
TPUB	**Ta-pu**	**4.11**	**251**		**Pn**	**19 53 31.0**	**+1.1**
JNU	**Nakasue**	**9.88**	**31**	LR	LR	19 58 55.2		
	comp=Z,42nm,19.1s,baz=176,slow=40							
KSRS	**Korea Array**	**12.95**	**11**	Pn	P	19 55 35.3	-6.3
	0.1nm,0.3s,baz=190,slow=12,SNR=3.6							
CMAR	**Chiang Mai Arr**	**24.86**	**261**	P	**P**	**19 57 50.0**	**+0.2**
	0.7nm,0.8s,baz=55,slow=10.0,SNR=5.4							
CMAR				LR	LR	20 08 38.8		
	comp=Z,19nm,18.5s,baz=90,slow=39							
MKAR	**Makanchi Array**	**40.31**	**314**	P	**P**	**20 00 04.4**	**0.0**
	1.0nm,1.0s,baz=93,slow=9.4,SNR=3.6							
FITZ	**Fitzroy Crossi**	**42.58**	**179**	P	**P**	**20 00 23.1**	**-0.1**
WB0	**Warramunga Arr**	**45.20**	**167**	P	**P**	**20 00 45.7**	**+1.5**
WB0				IAmb	IAmb	20 01 00.5		
	comp=Z,11nm,1.6s							
WRA	**Warramunga Arr**	**45.36**	**167**	P	**P**	**20 00 46.7**	**+1.2**
	comp=Z,1.9nm,1.0s,baz=351,slow=8.5,SNR=5.0							
WB2	**Warramunga Arr**	**45.36**	**167**	P	**P**	**20 00 46.4**	**+0.9**
WB2				IAmb	IAmb	20 01 05.8		
	comp=Z,9.1nm,1.3s							
WR0	**Warramunga Arr**	**45.42**	**167**	P	**P**	**20 00 47.6**	**+1.6**
ASAR	**Alice Springs**	**48.91**	**169**	P	**P**	**20 01 15.2**	**+2.1**
	comp=Z,0.4nm,0.9s,baz=355,slow=8.1,SNR=5.6							
YKA	**Yellowknife Ar**	**81.14**	**24**	P	**P**	**20 04 42.2**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=305,slow=5.2,SNR=6.3							

*TUL **16** 20:00:00.7±2.0,36°.16N±0°.03×96°.86W±0°.04,h8km±4km, ML3.1,Error ellipse: s-maj=6.3km s-min=2.2km az=129.0*

*NEIC **16** 20:00:01.6±2.2,36°.18N±0°.04×96°.87W±0°.05,h8km±6km, Error ellipse: s-maj=7.5km s-min=0.7km az=134.0*

*ANF **16** 20:00:01.2±0.8,36°.14N×96°.82W, h7km±4km,ML3.9/7, Error ellipse: s-maj=4.6km s-min=3.6km az=169.0*

ISC 16 20:00:00.0±1.2,36°.18N±0°.03×96°.89W±0°.03,h4km±11km, n49,σ1s17/54,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.65**	**217**	Pg	**Pg**	**20 00 12.2**	**-0.4**
T35A	**Sooner Cattle**	**0.80**	**22**		**Pg**	**20 00 16.2**	**+0.9**
T35A				Sg	**Sg**	**20 00 26.8**	**+1.1**
OKCFA	**Oklahoma City**	**0.89**	**211**	Pg	**Pg**	**20 00 16.7**	**-0.3**
OKCFA				Sg

ENA				S	Sn	20 01 20.2	-0.3
	baz=256						
ENTT	**Nioudou**	**1.30 268**		P	Pn	20 01 03.8	+0.5
	baz=267						
ENTT				S	Sn	20 01 22.5	-0.4
	baz=267						
NDT	**Datong Townshi**	**1.35 267**		*e*P	Pn	20 01 04.6	+0.7
	baz=266						
NDT				*e*S	Sn	20 01 23.8	-0.1
	baz=266						
YM08	**YM08**	**1.37 291**		*e*P	Pn	20 01 04.9	+0.9
	baz=291						
NACB	**Ninganchiao**	**1.38 248**		*e*P	Pn	20 01 03.5	-0.6
	baz=248						
NACB				S	Sn	20 01 24.1	-0.2
	baz=248						
TWD	**Chiawan**	**1.41 245**		*e*S	Sn	20 01 24.6	-0.4
	baz=244						
ETLH	**Xiulin Townshi**	**1.46 251**		*e*P	Pn	20 01 05.4	+0.3
	baz=250						
ETLH				*e*S	Sn	20 01 26.1	-0.1
	baz=250						
YHNB	**Yeheng**	**1.47 270**		P	Pn	20 01 05.6	+0.4
	baz=269						
YHNB				S	Sn	20 01 25.9	-0.5
	baz=269						
NSK	**Sanguang**	**1.49 270**		*e*P	Pn	20 01 05.3	-0.2
	baz=269						
NSK				S	Sn	20 01 26.2	-0.5
	baz=269						
TWS1	**Kuangyinshan**	**1.49 286**		*e*P	Pn	20 01 06.2	+0.8
	baz=285						
TWS1				*e*S	Sn	20 01 26.9	+0.4
	baz=285						
NNSB	**Datong**	**1.49 260**		*e*P	Pn	20 01 05.4	-0.1
	baz=259						
NNSB				*e*S	Sn	20 01 26.2	-0.6
	baz=259						
NNSH	**Datong**	**1.49 260**		*e*P	Pn	20 01 05.3	-0.2
	baz=259						
NNSH				*e*S	Sn	20 01 26.4	-0.4
	baz=259						
NNS	**Nan Shan**	**1.50 261**		*e*P	Pn	20 01 06.3	+0.7
	baz=260						
NNS				*e*S	Sn	20 01 26.1	-0.9
	baz=260						
NCU	**National Centr**	**1.67 280**		*e*P	Pn	20 01 08.1	+0.7
	baz=279						
NCU				*e*S	Sn	20 01 29.9	-0.3
	baz=279						
WHF	**Hehuan Shan**	**1.67 251**		*e*P	Pn	20 01 08.3	+0.4
	baz=250						
WHF				*e*S	Sn	20 01 30.1	-0.9
	baz=250						
ESL	**Shilin**	**1.67 239**		P	Pn	20 01 07.6	+0.1
	baz=238						
ESL				S	Sn	20 01 29.9	-0.4
	baz=238						
EGFH	**Guangfu**	**1.76 235**		*e*P	Pn	20 01 08.4	0.0
	baz=234						
EGFH				*e*S	Sn	20 01 32.9	+0.8
	baz=234						
CHGB	**Renai**	**1.78 250**		*e*P	Pn	20 01 09.5	+0.6
	baz=249						
CHGB				*e*S	Sn	20 01 33.1	+0.2
	baz=249						
OWD	**Renai**	**1.81 247**		*e*P	Pn	20 01 09.3	0.0
	baz=246						
OWD				*e*S	Sn	20 01 32.9	-0.6
	baz=246						
HSN	**Hsinchu**	**1.85 274**		*e*P	Pn	20 01 09.3	-0.2
	baz=274						
HSN				*e*S	Sn	20 01 32.9	-1.0
	baz=274						
HGSD	**Ruisui**	**1.87 231**		*e*P	Pn	20 01 10.4	+0.6
	baz=230						
HGSD				*e*S	Sn	20 01 34.2	-0.3
	baz=230						
WHP	**Taichung City**	**1.91 258**		P	Pn	20 01 10.9	+0.5
	baz=257						
WHP				*e*S	Sn	20 01 35.0	-0.5
	baz=257						
EHY	**Hungye**	**1.93 233**		*e*P	Pn	20 01 11.2	+0.7
	baz=232						
EHY				*e*S	Sn	20 01 35.7	-0.1
	baz=232						
VWDT	**VWDT**	**1.93 242**		*e*P	Pn	20 01 10.9	+0.3
	baz=241						
VWDT				*e*S	Sn	20 01 35.0	-0.8
	baz=241						
YULB	**Yu-li**	**2.02 231**		*e*S	Sn	20 01 38.0	+0.2
	baz=230						
NSY	**Sanyi**	**2.05 263**		*e*S	Sn	20 01 38.4	-0.1
	baz=262						
SSLB	**Suanglung**	**2.07 245**		*e*S	Sn	20 01 38.2	-0.7
	baz=244						
JMJ	**Miyako jima 2**	**2.09 86**		*e*P	Pn	20 01 13.4	+0.9
	baz=86						
PTSB	**Yuanli**	**2.10 264**		*e*P	Pn	20 01 13.0	+0.4
	baz=263						
PTSB				*e*S	Sn	20 01 39.3	-0.3
	baz=263						
FULB	**Fuli**	**2.15 227**		*e*S	Sn	20 01 40.7	-0.1
	baz=226						
WHYT	**Xinyi Township**	**2.19 244**		*e*S	Sn	20 01 40.7	-1.0
	baz=243						

JMA 16 20:00:42.9±0.1,24°.87N×124°.75E,h1km±1km,M1.2,
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	**Tarama**	**0.23**	**191**	P	Pg	20 00 47.7	+0.3
JTJ				S	Sg	20 00 51.2	+0.8
JIRB	**Irabujima**	**0.39**	**96**	P	Pg	20 00 50.8	+0.5
JIRB				*e*S	Sg	20 00 56.6	+1.3
JIKM	**Ikemajima**	**0.46**	**83**	P	Pg	20 00 52.3	+0.7
JIKM				*e*S	Sg	20 00 58.5	+1.0
JISG	**Ishigakijimahi**	**0.49**	**235**	P	Pg	20 00 52.6	+0.3
JISG				S	Sg	20 00 59.5	+0.9
JMJ2	**Miyako jima3**	**0.54**	**104**	P	Pg	20 00 53.8	+0.5
JMJ2				*e*S	Sg	20 01 01.4	+1.1
JOGS	**Gusukube**	**0.61**	**100**	P	Pg	20 00 55.1	+0.6
JOGS				*e*S	Sg	20 01 03.4	+1.0
JIJ	**Ishigaki jima**	**0.75**	**228**	P	Pg	20 00 57.4	+0.2
JIJ				S	Sg	20 01 06.8	-0.2
JKRS	**Kuro-shima**	**0.92**	**227**	P	Pg	20 01 00.9	+0.3
JKRS				S	Sg	20 01 13.5	+0.9

NEIC ***16*** *20:16:33.8±1.6, 6°.82N±0°.06×72°.97W±0°.07, h157km±4km, mb4.3/50, Error ellipse: s-maj=11.6km s-min=7.6km az=122.0*

IDC ***16*** *20:16:34.1±0.6, 6°.80N×72°.98W, h163km±6km, mb3.7/14, mb1 3.9/20, mb1mx3.7/41, mbtmp4.3/20, Error ellipse: s-maj=12.6km s-min=6.9km az=135.0*

RSNC ***16*** *20:16:34.6±0.9, 6°.81N×73°.16W, h150km±4km, ML4.4, Mw4.4, Fault plane solution: NP1:φs72.00000°, δ56.00000°, λ-172.00000°.*

ISC 16 20:16:33.2±0.5,6°.84N±0°.03×73°.06W±0°.03,h156km±5km,
n167,σ1s69/213,mb4.3/36,21C-6D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**0.61**	**35**	⇓*i*P	**Pn**	**20 16 57.9**	**+1.4**
PAMC				*e*S	**Sn**	**20 17 14.7**	**+0.6**
PAMC				*i*		20 17 17.1	
	comp=Z,7μm,0.4s						
BRRC	**Barranca, Sant**	**0.70**	**293**	⇑*i*P	**Pn**	**20 16 56.9**	**+0.5**
BRRC				*e*S	**Sn**	**20 17 13.4**	**-0.6**
BRRC				*i*		20 17 19.8	
	comp=Z,3μm,0.5s						
RUSC	**La Rusia**	**0.94**	**182**	⇑*e*P	**Pn**	**20 16 59.0**	**+0.3**
RUSC				*e*S	**Sn**	**20 17 17.1**	**-0.9**
RUSC				*i*		20 17 18.8	
	comp=Z,5μm,0.3s						
RUSC	**La Rusia**	**0.94**	**182**		**Pn**	**20 16 59.0**	**+0.3**
RUSC				Sn	**Sn**	**20 17 18.3**	**+0.3**
TAMC	**Tame, Arauca**	**1.32**	**107**	⇓*i*P	Pn	20 17 03.5	+2.0
TAMC				*e*S	**Sn**	**20 17 24.7**	**+1.6**
OCAC	**Ocana**	**1.42**	**349**	⇑*e*P	**Pn**	**20 17 03.1**	**+0.5**
OCAC				*e*S	**Sn**	**20 17 24.5**	**-0.6**
OCAC				*i*		20 17 29.7	
	comp=Z,2μm,0.5s						
PTBC	**PUERTO BERRIO,**	**1.42**	**258**	⇑*i*P	**Pn**	**20 17 01.4**	**-1.0**
PTBC				*e*S	**Sn**	**20 17 22.5**	**-2.3**
PTBC				*i*		20 17 29.4	
	comp=Z,4μm,0.5s						
SPBC	**San Pablo de B**	**1.55**	**221**	⇑*i*P	**Pn**	**20 17 03.8**	**-0.1**
SPBC				*e*S	**Sn**	**20 17 25.2**	**-2.1**
SPBC				*i*		20 17 28.5	
	comp=Z,5μm,0.3s						
CTAU	**Tausa, Cundina**	**1.90**	**211**	⇓*e*P	**Pn**	**20 17 08.8**	**+0.7**
CTAU				*e*S	**Sn**	**20 17 31.0**	**-3.8**
CTAU				*i*		20 17 41.9	
	comp=Z,4μm,0.4s						
SMLC	**San Martn de**	**2.20**	**333**	*e*P	**Pn**	**20 17 10.8**	**-0.2**
SMLC				*e*S	**Sn**	**20 17 39.0**	**-1.1**
SMLC				*i*		20 17 43.3	
	comp=Z,2μm,0.5s						
NORC	**Norcasia**	**2.20**	**235**	⇑*i*P	**Pn**	**20 17 10.6**	**-0.6**
NORC				*e*S	**Sn**	**20 17 38.2**	**-2.1**
NORC				*i*		20 17 43.5	
	comp=Z,2μm,0.4s						
CNOCA	**NORCASIA, CALD**	**2.20**	**235**	*e*P	**Pn**	**20 17 10.9**	**-0.3**
CNOCA				*e*S	**Sn**	**20 17 38.3**	**-2.0**
CHIC	**Chingaza**	**2.29**	**197**	⇑*e*P	**Pn**	**20 17 12.9**	**+0.3**
CHIC				*e*S	**Sn**	**20 17 42.3**	**-0.6**
CHIC				*i*		20 17 45.7	
	comp=Z,3μm,0.4s						
ROSC	**El Rosal**	**2.35**	**212**	P	**Pn**	**20 17 14.7**	**+1.4**
	comp=Z,1μm,0.3s,baz=279,slow=5.6,SNR=1248						
ROSC				S	**Sn**	**20 17 46.4**	**+2.4**
	comp=Z,939nm,0.3s,baz=21,slow=23,SNR=19						
ROSC	**El Rosal**	**2.35**	**212**	⇑*e*P	**Pn**	**20 17 14.6**	**+1.4**
ROSC				*e*S	**Sn**	**20 17 45.0**	**+1.0**
ROSC				*i*		20 17 53.2	
	comp=Z,3μm,0.3s						
ROSC	**El Rosal**	**2.35**	**212**		**Pn**	**20 17 14.6**	**+1.4**
ROSC				Sn	**Sn**	**20 17 46.5**	**+2.5**
CVER	**Cruz Verde, Cu**	**2.51**	**204**	⇑*e*P	**Pn**	**20 17 16.4**	**+1.1**
HELC	**Santa Helena**	**2.54**	**256**	*e*P	**Pn**	**20 17 14.1**	**-1.4**
HELC				*e*S	**Sn**	**20 17 46.2**	**-1.8**
HELC				*i*		20 17 53.9	
	comp=Z,2μm,0.5s						
UREC	**San Jos de Ur**	**2.62**	**290**	*e*P	**Pn**	**20 17 14.7**	**-1.4**
UREC				*e*S	**Sn**	**20 17 46.0**	**-3.2**
UREC				*i*		20 17 57.7	
	comp=Z,1μm,0.3s						
PTGC	**Puerto Gaitan,**	**2.78**	**161**	⇓*e*P	**Pn**	**20 17 18.2**	**+0.1**
PTGC				*e*S	**Sn**	**20 17 50.7**	**-2.1**
PTGC				*i*		20 17 56.4	
	comp=Z,3μm,0.3s						
VILC	**Villavicencio,**	**2.78**	**193**	⇑*e*P	**Pn**	**20 17 18.3**	**+0.1**
VILC				*e*S	**Sn**	**20 17 52.0**	**-1.0**
VILC				*i*		20 17 55.4	
	comp=Z,3μm,0.5s						
GUY2C	**Guyana, Caldas**	**2.80**	**235**	⇑*e*P	**Pn**	**20 17 18.8**	**0.0**
GUY2C				*e*S	**Sn**	**20 17 52.3**	**-1.6**
GUY2C				*i*		20 18 00.9	
	comp=Z,2μm,0.4s						
RREF	**El Recreo**	**2.98**	**230**	⇑*e*P	**Pn**	**20 17 21.0**	**-0.3**
RREF				*e*S	**Sn**	**20 17 59.8**	**+1.5**
RREF				*i*		20 18 06.8	
	comp=Z,2μm,0.7s						
CBOC	**Ciudad Bolivar**	**3.09**	**252**	*e*P	**Pn**	**20 17 22.6**	**+0.4**
CBOC				*e*S	**Sn**	**20 17 57.7**	**-2.3**
CBOC				*i*		20 18 13.5	
	comp=Z,693nm,0.8s						
DBBC	**Dabeiba**	**3.13**	**273**	⇓*e*P	**Pn**	**20 17 22.4**	**-0.2**
SDV	**Santo Domingo**	**3.15**	**50**	P	**Pn**	**20 17 24.5**	**+1.6**
	comp=Z,57nm,0.3s,baz=209,slow=21,SNR=257						
SDV				S	**Sn**	**20 18 02.0**	**+0.6**
	comp=Z,370nm,0.3s,baz=52,slow=21,SNR=54						
SDV	**Santo Domingo**	**3.15**	**50**	⇑*e*P	**Pn**	**20 17 24.5**	**+1.6**
SDV				*e*S	**Sn**	**20 18 01.4**	**0.0**
SDV				*i*		20 18 05.3	
	comp=Z,972nm,0.6s						
TOLC	**Tolima**	**3.17**	**225**	*e*P	**Pn**	**20 17 23.2**	**-0.1**
TOLC				*i*		20 18 08.5	
	comp=Z,721nm,0.5s						
ARGC	**Ariguani, Magd**	**3.23**	**339**	⇑*e*P	**Pn**	**20 17 25.2**	**+1.5**
ARGC				*e*S	**Sn**	**20 18 03.6**	**+0.7**
ARGC				*i*		20 18 15.3	
	comp=Z,954nm,0.3s						
ANIL	**Santa Ana**	**3.30**	**225**	*e*P	**Pn**	**20 17 25.4**	**+0.5**
ANIL				*e*S	**Sn**	**20 18 03.5**	**-1.4**
ELOV	**Elorza**	**3.55**	**87**	⇓*i*P	Pn	20 17 29.4	+1.5
PRAC	**Prado**	**3.60**	**211**	⇑*e*P	**Pn**	**20 17 27.9**	**-0.6**
PRAC				*e*S	**Sn**	**20 18 10.4**	**-1.0**
PRAC				*i*		20 18 14.9	
	comp=Z,2μm,0.3s						
ORTC	**Ortega, Tolima**	**3.63**	**217**	⇑*e*P	**Pn**	**20 17 28.7**	**-0.3**
ORTC				*e*S	**Sn**	**20 18 12.9**	**+0.6**
ORTC				*i*		20 18 16.2	
	comp=Z,931nm,0.4s						
CAPC	**Capurgana**	**4.62**	**293**	*e*P	**Pn**	**20 17 38.9**	**-2.8**
CAPC				*e*S	**Sn**	**20 18 29.9**	**-5.2**
CAPC				*i*		20 18 33.3	
	comp=Z,195nm,0.2s						
SJCC	**San Jacinto, C**	**3.69**	**326**	*e*P	**Pn**	**20 17 28.6**	**-1.1**
SJCC				*e*S	**Sn**	**20 18 09.8**	**-3.9**
SJCC				*i*		20 18 13.7	
	comp=Z,461nm,0.9s						
GUVC	**San Jose del G**	**4.28**	**174**	*e*P	**Pn**	**20 17 37.3**	**-0.1**
GUVC				*e*S	**Sn**	**20 18 25.7**	**-1.8**
GUVC				*i*		20 18 31.4	
	comp=Z,1μm,0.2s						
YOTC	**Yotoco, Valle**	**4.33**	**229**	⇑*e*P	**Pn**	**20 17 37.2**	**-0.9**
YOTC				*e*S	**Sn**	**20 18 26.3**	**-2.3**
SMRC	**Santa Marta, M**	**4.45**	**345**	*e*P	**Pn**	**20 17 39.5**	**-0.1**
SMRC				*e*S	**Sn**	**20 18 27.9**	**-3.4**
SMRC				*i*		20 18 31.3	
	comp=Z,425nm,0.4s						
CAPC	**Capurgana**	**4.62**	**293**	*e*P	**Pn**	**20 17 38.9**	**-2.8**
CAPC				*e*S	**Sn**	**20 18 29.9**	**-5.2**
CAPC				*i*		20 18 33.3	
	comp=Z,195nm,0.2s						
PIZC	**Pizarro, Choco**	**4.67**	**247**	*e*P	**Pn**	**20 17 43.6**	**+1.2**
PIZC				*e*S	**Sn**	**20 18 34.3**	**-2.0**
PIZC				*i*		20 18 51.3	
	comp=Z,268nm,0.6s						
DABV	**Dabajuro**	**4.71**	**30**	⇑*i*P	**Pn**	**20 17 43.9**	**+0.9**
MACC	**Macarena, Meta**	**4.73**	**190**	⇑*e*P	**Pn**	**20 17 41.8**	**-1.4**
MACC				*e*S	**Sn**	**20 18 32.4**	**-5.5**
MACC				*i*		20 18 39.5	
	comp=Z,513nm,0.8s						
PTAC	**Punta Ardita,**	**4.73**	**274**	*e*P	**Pn**	**20 17 41.8**	**-1.4**
PTAC				*e*S	**Sn**	**20 18 35.0**	**-2.7**
PTAC				*i*		20 18 37.6	
	comp=Z,423nm,0.3s						
BETC	**Betania**	**4.76**	**210**	*e*P	**Pn**	**20 17 42.3**	**-1.4**
BETC				*e*S	**Sn**	**20 18 34.1**	**-4.6**
HORQ	**Saladito**	**4.87**	**227**	*e*P	**Pn**	**20 17 44.7**	**-0.7**
HORQ				*e*S	**Sn**	**20 18 39.7**	**-1.8**
HORQ				*i*		20 18 47.3	
	comp=Z,174nm,1.4s						
URIC	**Uribia, Colomb**	**4.95**	**12**	⇑*e*P	**Pn**	**20 17 45.3**	**-0.8**
URIC				*e*S	**Sn**	**20 18 39.5**	**-3.6**
URIC				*i*		20 18 44.6	
	comp=Z,125nm,0.7s						
URIC	**Uribia, Colomb**	**4.95**	**12**		**Pn**	**20 17 45.2**	**-0.9**
MALC	**Bahia Malaga**	**5.10**	**237**	*e*P	**Pn**	**20 17 48.7**	**+0.6**
MALC				*e*S	**Sn**	**20 18 48.4**	**+1.8**
MALC				*i*		20 19 02.2	
	comp=Z,207nm,0.6s						
GARC	**Garzon, Huila**	**5.22**	**208**	*e*P	**Pn**	**20 17 49.0**	**-0.9**
GARC				*e*S	**Sn**	**20 18 42.8**	**-7.0**
GARC				*i*		20 18 51.3	
	comp=Z,398nm,0.2s						
PCON	**Cinco Dias**	**5.58**	**217**	*e*P	**Pn**	**20 17 55.5**	**+0.5**
PCON				*i*		20 19 22.5	
	comp=Z,117nm,0.5s						
POPC	**Popayan, Colom**	**5.59**	**220**	*e*P	**Pn**	**20 17 54.2**	**-0.6**
POPC				*e*S	**Sn**	**20 18 55.8**	**-2.7**
SOTA	**Rioblanco**	**5.86**	**217**	⇑*e*P	**Pn**	**20 17 59.3**	**+0.6**
SOTA				*e*S	**Sn**	**20 18 59.9**	**-5.5**
SOTA				*i*		20 19 21.7	
	comp=Z,109nm,0.8s						
GR1C	**Gorgona, Isla**	**6.36**	**233**	*e*P	**Pn**	**20 18 04.2**	**-0.6**
CRUC	**La Cruz**	**6.51**	**217**	*e*P	**Pn**	**20 18 08.7**	**+1.5**
CRUC				*i*		20 19 25.0	
	comp=Z,81nm,0.9s						
GCUF	**Volcan Galeras**	**7.02**	**218**	*e*P	**Pn**	**20 18 14.0**	**-0.2**
BCIP	**Isla Barro Col**	**7.10**	**289**	Pn	**Pn**	**20 18 12.6**	**-2.1**
TUMC	**Tumaco**	**7.53**	**229**	Pn	**Pn**	**20 18 23.7**	**+3.2**
PCRV	**Puerto La Cruz**	**8.97**	**68**	P	**Pn**	**20 18 40.6**	**+1.0**
	comp=Z,2.4nm,0.3s,baz=284,slow=2.8,SNR=11						
PCRV				S	**Sn**	**20 20 16.5**	**-2.8**
	comp=Z,0.5nm,0.3s,baz=216,slow=19,SNR=2.0						
PLCV	**Puerto La Cruz**	**9.00**	**68**		**Pn**	**20 18 40.6**	**+0.5**
PLCV					**Sn**	**20 20 16.5**	**-3.7**
BANI	**BANI**	**11.78**	**13**	Pn	**Pn**	**20 19 16.0**	**-0.7**
MTDJ	**Mount Denham**	**12.13**	**339**		**Pn**	**20 19 23.6**	**+2.3**
SDDR	**Presa de Saban**	**12.20**	**8**		**Pn**	**20 19 21.9**	**-0.1**
JTS	**Las Juntas de**	**12.25**	**287**	P	**P**	**20 19 31.2**	**+2.5**
	comp=Z,5.7nm,0.3s,baz=276,slow=1.4,SNR=19						
DR12	**Loma Pena Alta**	**12.41**	**16**	Pn	**Pn**	**20 19 22.1**	**-2.7**
GRGR	**Grenville**	**12.42**	**64**		**P**	**20 19 29.5**	**-0.9**
MLPR	**Magueyes Islan**	**12.52**	**27**	Pn	**Pn**	**20 19 24.3**	**-1.9**
CRPR	**Cabo Rojo, PR**	**12.53**	**27**	Pn	**Pn**	**20 19 24.0**	**-2.2**
ICMP	**Isla Caja de M**	**12.70**	**30**	Pn	**Pn**	**20 19 27.5**	**-0.9**
AGPR	**Aguadilla, PR**	**12.93**	**26**	Pn	**Pn**	**20 19 30.7**	**-0.7**
AOPR	**Arecibo Observ**	**12.99**	**28**	Pn	**Pn**	**20 19 32.6**	**+0.4**
SJG	**San Juan**	**13.07**	**30**	P	**Pn**	**20 19 33.1**	**-0.2**
	comp=Z,6.8nm,0.3s,baz=204,slow=20,SNR=6.8						
SJG	**San Juan**	**13.07**	**30**	Pn	**Pn**	**20 19 32.9**	**-0.4**
TOSP	**Speyside**	**13.13**	**69**		**P**	**20 19 36.9**	**-1.5**
GTBY	**Guantanamo Bay**	**13.16**	**351**		**P**	**20 19 37.8**	**-1.0**
HUMP	**Col San Antoni**	**13.25**	**31**	Pn	**Pn**	**20 19 35.2**	**-0.3**
GCPR	**Guaynabo City**	**13.28**	**30**	Pn	**Pn**	**20 19 35.5**	**-0.4**
CBYP	**Canovanas**	**13.36**	**31**	Pn	**Pn**	**20 19 36.6**	**-0.3**
MTP	**Monte Pirata**	**13.37**	**32**	Pn	**Pn**	**20 19 36.6**	**-0.4**
CDVI	**St. Croix**	**13.53**	**36**	Pn	**P**	**20 19 40.6**	**-2.3**
CUPR	**Culebra, Puert**	**13.69**	**33**	Pn	**P**	**20 19 41.8**	**-2.8**
MCLT	**Moule a Chique**	**13.74**	**59**	P	**P**	**20 19 47.7**	**+2.5**
STVI	**Saint Thomas**	**13.91**	**34**	Pn	**P**	**20 19 44.9**	**-2.1**
FDF	**Fort de France**	**14.08**	**55**	P	**P**	**20 19 46.1**	**-2.9**
CBCY	**The Bluff, Cay**	**14.38**	**334**	P	**P**	**20 19 53.7**	**+1.5**
SKI	**Saint Kitts**	**14.51**	**43**		**P**	**20 19 53.3**	**-0.4**
ATAH	**Atahualpa**	**14.86**	**201**	P	**P**	**20 19 58.3**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=72,slow=6.7,SNR=2.8						
PTGA	**Pitinga**	**15.07**	**119**	P	**P**	**20 19 58.0**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=301,slow=19,SNR=2.6						
PTGA	**Pitinga**	**15.07**	**119**	P	**P**	**20 19 58.5**	**-1.5**
SAML	**Samuel**	**18.51**	**148**	P	**Pn**	**20 20 38.2**	**-1.7**
SAML					**Sn**	**20 24 03.2**	**-5.3**
APG	**El Apazote**	**18.91**	**297**	P	**P**	**20 20 42.8**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=3.2,slow=6.2,SNR=5.8						
TEIG	**Tepich**	**19.88**	**314**	P	**P**	**20 20 54.0**	**+1.4**
CCIG	**Comitan**	**20.90**	**298**	P	**P**	**20 21 05.8**	**+2.1**
PB11	**IPOC Station P**	**26.64**	**173**	P	**P**	**20 21 57.9**	**+0.1**
PB11				IAmb	IAmb	20 22 00.6	
	comp=Z,16nm,1.4s						
Z50A	**Ashland**	**28.87**	**337**	P	**P**	**20 22 19.8**	**+2.4**
Z50A				IAmb	IAmb	20 22 20.0	
	comp=Z,11nm,1.2s						
PB06	**IPOC Station P**	**29.56**	**173**	P	**P**	**20 22 24.5**	**+0.8**
PB06				IAmb	IAmb	20 22 48.8	
	comp=Z,8.4nm,0.7s						
U40A	**Yellville**	**34.51**	**331**	P	**P**	**20 23 07.7**	**+1.0**
CCM	**Cathedral Cave**	**35.18**	**335**	P	**P**	**20 23 13.4**	**+1.1**
CCM				IAmb	IAmb	20 23 14.5	
	comp=Z,8.9nm,0.8s						
TX32	**Lajitas Array**	**36.50**	**312**	P	**P**	**20 23 24.9**	**+1.0**
TX32				IAmb	IAmb	20 23 25.5	
	comp=Z,3.1nm,0.8s						
TXAR	**Lajitas Array**	**36.50**	**312**	P	**P**	**20 23 24.7**	**+0.9**
	comp=Z,1.9nm,0.4s,baz=129,slow=8.9,SNR=13						
P40A	**Paris**	**36.76**	**335**	P	**P**	**20 23 26.6**	**+0.8**
P40A				IAmb	IAmb	20 23 27.2	
	comp=Z,4.0nm,0.7s						
MNTX	**Cornudas Mount**	**39.01**	**314**	P	**P**	**20 23 45.9**	**+1.2**
MNTX				IAmb	IAmb	20 23 47.3	
	comp=Z,6.1nm,0.8s						
RCBR	**Riachuelo**	**39.16**	**108**	P	**P**	**20 23 45.4**	**-0.8**
	comp=Z,9.0nm,1.1s,baz=100,slow=6.1,SNR=2.3						
RCBR	**Riachuelo**	**39.16**	**108**	P	**P**	**20 23 45.4**	**-0.8**
LMN	**Caledonia Moun**	**39.52**	**9**	P	**P**	**20 23 50.3**	**+1.5**
D62A	**Allapoint, All**	**40.25**	**4**	P	**P**	**20 23 56.8**	**+2.0**
SDCO	**Great Sand Dun**	**42.58**	**321**	P	**P**	**20 24 15.2**	**+0.9**
EYMN	**Ely**	**43.88**	**342**	P	**P**	**20 24 24.9**	**+0.7**
EYMN				IAmb	IAmb	20 24 27.7	
	comp=Z,18nm,1.6s						
X16A	**Lo Mia Camp, P**	**44.76**	**313**	P	**P**	**20 24 32.8**	**+1.1**
PV13	**Radium Mtn., P**	**44.93**	**319**	P	**P**	**20 24 34.4**	**+1.4**
PV13				IAmb	IAmb	20 24 35.4	
	comp=Z,6.0nm,0.7s						
WUAZ	**Wupatki**	**45.25**	**315**	P	**P**	**20 24 37.4**	**+1.9**
WUAZ				IAmb	IAmb	20 24 38.6	
	comp=Z,7.2nm,0.8s						
Y14A	**Wickenburg**	**45.69**	**312**	P	**P**	**20 24 40.0**	**+1.3**
Y14A				IAmb	IAmb	20 24 41.0	
	comp=Z,5.8nm,0.7s						
RSSD	**Black Hills**	**45.96**	**329**	P	**P**	**20 24 42.2**	**+1.2**
U15A	**North Rim**	**46.35**	**315**	P	**P**	**20 24 45.5**	**+1.3**
U15A				IAmb	IAmb	20 24 47.0	
	comp=Z,5.1nm,0.9s						
KNB	**Kanab**	**47.01**	**316**	P	**P**	**20 24 50.8**	**+1.5**
MTPU	**Mount Pierson**	**47.10**	**317**	P	**P**	**20 24 51.6**	**+1.5**
ULM	**Lac du Bonnet**	**47.29**	**340**	P	**P**	**20 24 50.5**	**-0.4**
	comp=Z,3.7nm,0.4s,baz=143,slow=8.1,SNR=4.6						
ULM	**Lac du Bonnet**	**47.29**	**340**	P	**P**	**20 24 51.5**	**+0.5**
ULM				IAmb	IAmb	20 24 52.2	
	comp=Z,4.9nm,0.5s						
MSU	**Marysvale**	**47.34**	**318**	P	**P**	**20 24 53.5**	**+1.7**
PD31	**Pinedale Array**	**48.10**	**324**	P	**P**	**20 24 58.3**	**+0.7**
PDAR	**Pinedale Array**	**48.

comp=Z,1.8nm,0.8s,baz=290,slow=4.5,SNR=6.2
VNA3 Neumayer Olymp 88.17 163 P **P** **20 29 05.1 -1.0**
VNA2 Neumayer--Watz 88.69 163 P **P** **20 29 07.6 -1.0**
SNAA Sanae 90.33 163 P **P** **20 29 15.2 -1.1**
ZALV Zalesovo Beam 116.64 14 PKP **PKPdf** **20 34 59.0 +0.2**
comp=Z,0.6nm,0.3s,baz=321,slow=1.9,SNR=5.1
MKAR Makanchi Array 122.29 20 PKP **PKPdf** **20 35 09.9 -0.1**
comp=Z,0.3nm,0.3s,baz=313,slow=2.2,SNR=8.3
SONM Songino Array 125.56 0 PKP **PKiKP** **20 35 17.2 +0.4**
comp=Z,0.2nm,0.5s,baz=343,slow=4.1,SNR=2.2
LZH Lanzhou 137.21 4 *e*PKP **PKPdf** **20 35 37.6 -1.2**
LZH pPKP pPKPdf 20 36 18.3 -2.3
LZH sPKP 20 36 36.0
ASAR Alice Springs 149.17 234 PKP **PKPdf** **20 35 59.9 0.0**
comp=Z,2.4nm,0.7s,baz=112,slow=1.7,SNR=11
ASAR PKPbc **PKPbc** **20 36 03.6 -0.6**
comp=Z,2.3nm,0.5s,baz=118,slow=3.7,SNR=16
WRA Warramunga Arr 150.40 241 PKPbc **PKPbc** **20 36 06.7 -0.6**
comp=Z,2.4nm,0.4s,baz=108,slow=2.7,SNR=16
CMAR Chiang Mai Arr 153.66 17 PKPbc **PKiKP** **20 36 15.7 +0.9**
comp=Z,0.5nm,0.3s,baz=324,slow=3.0,SNR=2.7

IDC ***16*** *20:40:04.5±1.8, 6˚.38S×147˚.15E, h52km±16km, mb4.1/19, mb1 4.3/26, mb1mx4.2/42, mbtmp4.4/26, ML4.3/6, MS3.7/19, Ms1 3.7/19, ms1mx3.5/42, Error ellipse: s-maj=13.8km s-min=9.0km az=112.0*
NEIC ***16*** *20:40:04.3±1.8, 6˚.42S±0˚.07×147˚.14E±0˚.07, h49km±5km, mb4.6/28, Error ellipse: s-maj=10.1km s-min=9.5km az=94.0*
DJA ***16*** *20:40:04.6±0.5, 6˚S±3˚×14˚7E±˚, h40km±5km, M4.8/30, mb4.7/30, mB5.2/8, MLv5.0/4, Mw(mB)4.6/8, Mwp6.0/1*
ISC 16 20:40:04.5±0.4, 6˚40S±0˚.05×147˚15E±0˚.06, h49km, n105, σ1§49/98, mb4.5/29, MS3.7/16, 3C, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.98**	**180**	P		**Pn**	**20 40 49.2**	**-0.2**
	31nm,0.3s,baz=56,slow=5.0,SNR=55							
PMG				S		**Sn**	**20 41 29.5**	**+5.6**
	96nm,0.3s,baz=34,slow=16,SNR=5.8							
PMG	**Port Moresby**	**2.98**	**180**			**Pn**	**20 40 49.0**	**-0.4**
PMG						**Sn**	**20 41 24.2**	**+0.3**
KRVT	**Keravat (AS076**	**5.28**	**67**	P		**Pn**	**20 41 22.1**	**+1.2**
	12nm,0.3s,baz=12,slow=1.7,SNR=12							
KRVT				LR		LR	20 43 14.1	
	comp=Z,2μm,18.6s,baz=267,slow=36							
RABL	**Rabaul**	**5.45**	**66**			**Pn**	**20 41 23.7**	**+0.4**
JAY	**Jayapura**	**7.50**	**301**	P		**Pn**	**20 41 52.3**	**+0.9**
	1.1nm,0.3s,baz=76,slow=8.0,SNR=8.1							
JAY				LR		LR	20 45 20.9	
	comp=Z,594nm,18.8s,baz=174,slow=42							
JAY	**Jayapura**	**7.50**	**301**	P		**Pn**	**20 41 53.2**	**+1.8**
	0.1nm11nm,1.2s							
GENI	**Genyem**	**7.92**	**298**	P		**Pn**	**20 41 58.8**	**+1.6**
	0.5nm46nm,0.8s							
COEN	**Coen**	**8.46**	**207**			**Pn**	**20 42 03.6**	**-1.0**
COEN						**Sn**	**20 43 34.8**	**-4.0**
SMPI	**Sarmi**	**9.49**	**297**	P		**Pn**	**20 42 18.5**	**-0.1**
	11nm,1.4s							
HNR	**Honiara**	**13.02**	**104**	P		**Pn**	**20 43 06.2**	**-0.7**
	2.1nm,0.3s,baz=186,slow=7.7,SNR=1.2							
HNR	**Honiara**	**13.02**	**104**			**Pn**	**20 43 05.7**	**-1.3**
CTA	**Charters Tower**	**13.63**	**184**	P		**Pn**	**20 43 16.8**	**+1.5**
	0.9nm,0.3s,baz=356,slow=13,SNR=9.4							
SIJI	**Sorong**	**16.77**	**288**	P		**Pn**	**20 43 55.0**	**-1.2**
	3.4nm,0.3s,baz=79,slow=10,SNR=15							
SIJI				LR		LR	20 52 00.2	
	comp=Z,428nm,18.6s,baz=36,slow=43							
MTN	**Manton Dam**	**17.04**	**247**			**Pn**	**20 43 58.4**	**-1.0**
MTN				IAmb		IAmb	20 44 16.4	
	comp=Z,33nm,0.9s							
WB0	**Warramunga Arr**	**18.17**	**222**	P		**P**	**20 44 11.8**	**-1.4**
WR0	**Warramunga Arr**	**18.21**	**221**	P		**P**	**20 44 12.2**	**-1.4**
WR0				IAmb		IAmb	20 44 22.1	
	comp=Z,32nm,0.9s							
WRAB	**Tennant Creek**	**18.32**	**222**	P		**P**	**20 44 13.3**	**-1.5**
WRAB				IAmb		IAmb	20 44 30.9	
	comp=Z,33nm,1.1s							
WB2	**Warramunga Arr**	**18.32**	**222**	P		**P**	**20 44 13.4**	**-1.4**
WRA	**Warramunga Arr**	**18.33**	**222**	P		**P**	**20 44 13.4**	**-1.6**
	comp=Z,0.8nm,0.3s,baz=44,slow=11,SNR=29							
WRA				S		**Sn**	**20 47 39.9**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=45,slow=24,SNR=5.0							
AAI	**Ambon**	**19.07**	**277**	P		**P**	**20 44 23.0**	**-0.1**
	comp=Z,84nm,0.8s							
NLAI	**Namlea**	**20.23**	**278**	P		Pn	20 44 48.6	+11
KNRA	**Kununurra**	**20.25**	**241**	P		Pn	20 44 37.5	-0.7
KNRA				IAmb		IAmb	20 45 10.2	
	comp=Z,34nm,0.8s							
LBMI	**Labuha**	**20.43**	**286**	P		Pn	20 44 40.3	0.0
	comp=Z,1μmcomp=Z,77nm,1.0s							
TNTI	**Ternate**	**21.00**	**289**	P		Pn	20 44 45.8	-1.3
	comp=Z,585nmcomp=Z,37nm,1.1s							
TNTI	**Ternate**	**21.00**	**289**	P		**P**	**20 44 43.7**	**-0.3**
AS31	**Alice Springs**	**21.37**	**215**	P		**P**	**20 44 48.2**	**+0.2**
ASAR	**Alice Springs**	**21.38**	**215**	P		**P**	**20 44 47.8**	**-0.3**
	comp=Z,8.6nm,0.7s,baz=45,slow=9.3,SNR=75							
ASAR				S		**S**	**20 48 43.5**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=53,slow=21,SNR=1.7							
BATI	**Baumata**	**23.54**	**259**	P		**P**	**20 45 11.9**	**+1.3**
	comp=Z,15nm,0.6s,baz=184,slow=15,SNR=3.5							
BATI				LR		LR	20 56 29.9	
	comp=Z,366nm,21.4s,baz=97,slow=42							
FITZ	**Fitzroy Crossi**	**23.99**	**239**	P		**P**	**20 45 14.6**	**-0.1**
	comp=Z,8.0nm,0.7s,baz=55,slow=14,SNR=32							
FITZ				LR		LR	20 54 05.1	
	comp=Z,203nm,20.3s,baz=59,slow=35							
FITZ	**Fitzroy Crossi**	**23.99**	**239**	P		**P**	**20 45 14.0**	**-0.7**
FITZ				IAmb		IAmb	20 45 47.2	
	comp=Z,15nm,0.8s							
KMSI	**Cibinong**	**24.14**	**286**	P		P	20 45 28.4	+12
ARMA	**Armidale**	**24.26**	**171**	P		**P**	**20 45 18.1**	**+1.0**
ARMA				IAmb		IAmb	20 45 30.7	
	comp=Z,42nm,1.4s							
DZM	**Mont Dzumac**	**24.29**	**132**	P		**P**	**20 45 18.2**	**+0.7**
	comp=Z,11nm,0.8s,baz=12,slow=14,SNR=2.4							
DZM				LR		LR	20 53 55.4	
	comp=Z,263nm,21.7s,baz=251,slow=34							
DZM	**Mont Dzumac**	**24.29**	**132**	P		**P**	**20 45 17.7**	**+0.1**
LUWI	**Luwuk**	**24.90**	**281**	P		**P**	**20 45 24.7**	**+1.6**
	comp=Z,2μmcomp=Z,121nm,1.0s							
LUWI	**Luwuk**	**24.90**	**281**	P		**P**	**20 45 22.8**	**-0.2**
EDFI	**Ende, Flores**	**25.34**	**263**	P		**P**	**20 45 28.5**	**+1.2**
	comp=Z,13nm,1.2s							
KCP	**Kidapawan**	**25.73**	**301**	*i*P		**P**	**20 45 30.4**	**-0.3**
STKA	**Stephens Creek**	**25.87**	**191**	P		**P**	**20 45 31.4**	**-0.3**
	comp=Z,8.4nm,0.9s,baz=3.9,slow=9.3,SNR=14							
STKA				LR		LR	20 56 29.2	
	comp=Z,555nm,18.2s,baz=15,slow=38							
STKA	**Stephens Creek**	**25.87**	**191**	P		**P**	**20 45 30.9**	**-0.8**
MRSI	**Marisa**	**26.07**	**284**	P		P	20 45 48.6	+15
KAPI	**Kappang**	**27.30**	**271**	LR		LR	20 58 36.7	
	comp=Z,81nm,18.4s,baz=100,slow=41							
PCI	**Palu**	**27.79**	**280**	P		P	20 45 39.7	-10
MPSI	**Mapaga**	**28.01**	**283**	P		**P**	**20 45 51.0**	**-0.2**
	comp=Z,12nm,1.1s							
SBUM	**Sibu**	**35.97**	**283**	P		**P**	**20 47 01.4**	**+0.5**
NWAO	**Narrogin (SRO)**	**38.34**	**223**	P		**P**	**20 47 20.1**	**-0.7**
	comp=Z,3.9nm,0.8s,baz=256,slow=19,SNR=1.4							
NWAO	**Narrogin (SRO)**	**38.34**	**223**	P		**P**	**20 47 20.3**	**-0.5**
NWAO				IAmb		IAmb	20 47 43.0	
	comp=Z,17nm,1.1s							
YHNB	**Yeheng**	**39.80**	**322**	P		**P**	**20 47 33.0**	**-0.2**
RPZ	**Rata Peaks**	**42.68**	**154**	P		**P**	**20 47 56.1**	**-0.4**
	comp=Z,7.1nm,0.9s,baz=89,slow=13,SNR=1.8							
RPZ	**Rata Peaks**	**42.68**	**154**	P		**P**	**20 47 55.6**	**-0.9**
KSRS	**Korea Array**	**47.18**	**339**	P		**P**	**20 48 31.9**	**-0.4**
	comp=Z,3.9nm,0.9s,baz=156,slow=8.6,SNR=15							
KSRS				LR		LR	21 06 38.4	
	comp=Z,108nm,20.8s,baz=158,slow=34							
IPM	**Ipoh**	**47.30**	**282**	P		**P**	**20 48 33.9**	**+0.2**
ASAJ	**Asahikawa**	**50.45**	**356**	LR		LR	21 11 57.0	
	comp=Z,40nm,18.6s,baz=358,slow=38							
USRK	**Ussuriysk Ar.**	**52.20**	**346**	P		**P**	**20 49 09.5**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=174,slow=8.0,SNR=4.6							
RAR	**Rarotonga**	**53.35**	**112**	LR		LR	21 08 09.9	
	comp=Z,51nm,19.9s,baz=298,slow=32							
CMAR	**Chiang Mai Arr**	**53.57**	**298**	P		**P**	**20 49 22.0**	**+1.0**
	comp=Z,3.7nm,0.7s,baz=121,slow=5.8,SNR=16							
CMAR				LR		LR	21 14 29.1	
	comp=Z,12nm,18.0s,baz=130,slow=38							
CHTO	**Chiang Mai**	**53.71**	**299**	P		**P**	**20 49 22.9**	**+0.9**
CHTO				IAmb		IAmb	20 49 28.5	
	comp=Z,9.9nm,1.2s							
KLR	**Kulʲdur**	**57.01**	**348**	LR		LR	21 11 07.7	
	comp=Z,42nm,19.7s,baz=158,slow=33							
PETK	**Petropavlovsk-**	**59.96**	**7**	P		**P**	**20 50 05.5**	**-0.1**
	comp=Z,6.0nm,0.9s,baz=167,slow=6.6,SNR=7.4							
PETK				LR		LR	21 12 38.8	
	comp=Z,98nm,20.8s,baz=241,slow=33							
SHL	**Shillong**	**62.36**	**303**	P		**P**	**20 50 21.6**	**-1.1**
SHL				IAmb		IAmb	20 50 24.3	
	comp=Z,7.7nm,1.0s							
GTA	**Gaotai**	**63.15**	**320**	*e*P		**P**	**20 50 28.1**	**+0.5**
GTA				pP		pP	20 50 32.4	-10
GTA				sP		sP	20 50 36.0	-12
GTA				pmax		pmax		
	comp=Z,2.0nm,0.6s							
LSA	**Lhasa**	**64.60**	**307**	P		**P**	**20 50 37.6**	**-0.2**
LSA				IAmb		IAmb	20 50 45.7	
	comp=Z,3.6nm,0.6s							
SONM	**Songino Array**	**64.83**	**331**	P		**P**	**20 50 38.3**	**-0.2**
	comp=Z,2.2nm,1.0s,baz=145,slow=5.7,SNR=14							
TAPN	**Taplejung**	**66.50**	**303**	*e*P		**P**	**20 50 49.9**	**0.0**
	comp=Z,18nm,1.1s							
ODAN	**Odare**	**66.59**	**303**	*e*P		**P**	**20 50 49.9**	**-0.5**
	comp=Z,8.4nm,0.7s							
JIRN	**Jiri**	**67.87**	**303**	*e*P		**P**	**20 50 58.4**	**-0.2**
	comp=Z,12nm,0.8s							
GUN	**Gumba**	**68.21**	**303**	*e*P		**P**	**20 51 00.2**	**-0.6**
	comp=Z,22nm,0.8s							
PKI	**Pulchoki**	**68.49**	**303**	*e*P		**P**	**20 51 01.5**	**-1.0**
	comp=Z,5.2nm,0.8s							
PKIN	**Phulchoki**	**68.50**	**303**	*e*P		**P**	**20 51 01.9**	**-0.6**
	comp=Z,4.5nm,0.6s							
DMN	**Daman**	**68.76**	**303**	*e*P		**P**	**20 51 03.5**	**-0.6**
	comp=Z,25nm,1.0s							
TLY	**Talaya**	**68.77**	**333**	LR		LR	21 21 00.8	
	comp=Z,40nm,20.9s,baz=122,slow=36							
DANN	**Dangsing**	**70.12**	**303**	*e*P		**P**	**20 51 11.8**	**-0.7**
	comp=Z,6.6nm,0.5s							
VNDA	**Vanda**	**71.50**	**177**	P		**P**	**20 51 20.2**	**+0.6**
	comp=Z,3.1nm,0.8s,baz=338,slow=6.7,SNR=23							
VNDA				LR		LR	21 20 56.0	
	comp=Z,62nm,18.1s,baz=356,slow=34							
VNDA	**Vanda**	**71.50**	**177**	P		**P**	**20 51 20.5**	**+0.8**
VNDA				IAmb		IAmb	20 51 28.9	
	comp=Z,10.0nm,1.2s							
HYB	**Hyderabad**	**71.74**	**291**	*i*P		**P**	**20 51 27.0**	**+4.8**
MKAR	**Makanchi Array**	**77.90**	**320**	P		**P**	**20 51 56.2**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=97,slow=9.2,SNR=15							
TIXI	**Tiksi**	**78.83**	**354**	P		**P**	**20 52 01.9**	**+0.2**
ZAA0	**Zalesovo Array**	**79.43**	**328**	P		**P**	**20 52 03.2**	**-2.3**
ZALV	**Zalesovo Beam**	**79.43**	**328**	P		**P**	**20 52 03.6**	**-1.9**
	comp=Z,2.2nm,0.5s,baz=113,slow=6.0,SNR=13							
ZALV				LR		LR	21 27 28.0	
	comp=Z,42nm,19.6s,baz=66,slow=36							
KSH	**Kashi**	**79.76**	**312**	P		**P**	**20 52 11.3**	**+3.5**
KSH				pP		sP	20 52 26.3	-2.5
KSH				sP		pP	20 52 33.3	+10
KSH				pmax		pmax		
	comp=Z,13nm,1.1s							
KSH				pmax		pmax		
	comp=Z,190nm,5.7s							
AAK	**Ala-Archa**	**81.73**	**315**	P		**P**	**20 52 17.4**	**-0.8**
AAK				IAmb		IAmb	20 52 36.3	
	comp=Z,6.2nm,0.7s							
MAW	**Mawson**	**81.94**	**203**	P		**P**	**20 52 18.3**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=79,slow=10,SNR=2.8							
MAW	**Mawson**	**81.94**	**203**	P		**P**	**20 52 18.8**	**+0.2**
MAW				IAmb		IAmb	20 52 45.4	
	comp=Z,3.4nm,0.8s							
QSPA	**South Pole Qui**	**83.57**	**180**	P		**P**	**20 52 27.1**	**-0.2**
NRIK	**Norilʲsk**	**85.70**	**342**	P		**P**	**20 52 36.6**	**-1.2**
	comp=Z,4.6nm,0.9s,baz=86,slow=5.6,SNR=7.7							
NRIK				LR		LR	21 29 15.4	
	comp=Z,44nm,21.5s,baz=72,slow=34							
ILAR	**Eielson Array**	**85.79**	**23**	P		**P**	**20 52 36.9**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=248,slow=5.0,SNR=9.8							
ILAR				LR		LR	21 26 19.2	
	comp=Z,41nm,20.9s,baz=272,slow=32							
DAWY	**Dawson**	**88.57**	**25**	P		**P**	**20 52 51.7**	**-0.1**
DAWY				IAmb		IAmb	20 52 53.1	
	comp=Z,6.1nm,1.4s							
SYO	**Syowa Base**	**90.27**	**200**	*e*pP		pP	20 53 12.6	-1.9
SYO	**Syowa Base**	**90.27**	**200**	*e*sP		sP	20 53 17.6	-2.4
YKA	**Yellowknife Ar**	**99.45**	**28**	P		**Pdif**	**20 53 39.1**	**-2.6**
	comp=Z,0.4nm,1.0s,baz=277,slow=4.9,SNR=3.9							
SNAA	**Sanae**	**99.62**	**189**	P		**Pdif**	**20 53 49.0**	**+6.5**
GERES	**GERESS Array B**	**122.32**	**325**	PKP		**PKPdf**	**20 58 53.8**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=41,slow=3.1,SNR=2.3							
LPAZ	**La Paz**	**138.44**	**123**	PKP		**PKiKP**	**20 59 27.5**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=230,slow=2.3,SNR=4.5							
LPAZ	**La Paz**	**138.44**	**123**			**PKPdf**	**20 59 27.1**	**+0.7**
SDV	**Santo Domingo**	**142.48**	**84**			**PKPdf**	**20 59 29.7**	**-3.6**
TOA0	**Torodi Ar. Sit**	**145.34**	**284**			**PKPab**	**20 59 38.4**	**+0.3**
TORD	**Torodi Ar. Bea**	**145.34**	**284**	PKPbc		**PKPab**	**20 59 38.2**	**+0.2**
	comp=Z,27nm,1.0s,baz=68,slow=3.5,SNR=106							
SJG	**San Juan**	**145.51**	**67**	PKPbc		**PKPdf**	**20 59 38.1**	**-0.1**
	comp=Z,6.1nm,0.3s,baz=303,slow=13,SNR=2.6							
HUMP	**Col San Antoni**	**145.78**	**67**			**PKPdf**	**20 59 38.8**	**+0.2**
SAML	**Samuel**	**146.13**	**116**			**PKPdf**	**20 59 39.8**	**+0.4**
PTGA	**Pitinga**	**152.02**	**104**			**PKPdf**	**20 59 49.0**	**+0.1**
PTGA				PKPbc		**PKPbc**	**20 59 55.5**	**0.0**
PTGA						**pPKPdf**	**21 00 04.4**	**-0.5**
DBIC	**Dimbokro**	**152.19**	**272**	PKPbc		**PKiKP**	**20 59 56.5**	**+0.4**
	comp=Z,9.0nm,1.1s,baz=103,slow=2.3,SNR=4.7							
DBIC	**Dimbokro**	**152.19**	**272**			**PKiKP**	**20 59 56.1**	**0.0**
BDFB	**Brasilia**	**153.44**	**146**	PKPbc		**PKPbc**	**20 59 57.8**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=170,slow=11,SNR=1.8							
BDFB	**Brasilia**	**153.44**	**146**			**PKPbc**	**20 59 57.2**	**-1.5**

BGR ***16*** *21:11:12.0±0.0, 13˚.18S×13˚.74W, h33km, mb4.8*
MOS ***16*** *21:11:27.3±1.0, 10˚.40S×13˚.20W, h12km, mb5.2/28, Error ellipse: s-maj=10.5km s-min=5.8km az=60.7*
IDC ***16*** *21:11:27.5±0.5, 10˚.46S×13˚.17W, h0km, mb4.4/26, mb1 4.4/27, mb1mx4.4/37, mbtmp4.3/27, ML3.5/1, MS4.0/21, Ms1 4.0/21, ms1mx4.0/24, Error ellipse: s-maj=15.2km s-min=12.3km az=144.0*
BJI ***16*** *21:11:28.4±0.0, 10˚.81S×12˚.96W, h10km, mB5.5/3, mb5.4/4, Ms5.2/4, Ms7 4.9/4*
NEIC ***16*** *21:11:29.1±1.3, 10˚.40S±0˚.08×13˚.23W±0˚.09, h10km±1km, mb5.1/136, Error ellipse: s-maj=16.1km s-min=11.3km az=229.0*
GCMT ***16*** *21:11:30.1±0.2, 10˚.40S±0˚.03×13˚.19W±0˚.02, h14km±1km, MW4.9/109, Moment Tensor Solution. s21,c25; s109,c147; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.38±.17; Mθθ0.48±.09; Mϕϕ1.90±.10; Mrθ1.49±.27; Mθϕ-0.70±.05; Mϕr0.91±.21; Best double couple: M₀2.73200×10¹⁶ NP1:ϕs316.00000°, δ46.00000°, λ-128.00000°. NP2:ϕs184.00000°, δ55.00000°, λ-58.00000°. Principal axes: T 2.2100, Plg5.0000°, Azm252.0000°; N 1.0460, Plg26.0000°, Azm344.0000°; P -3.2530, Plg63.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 16 21:11:29.1±0.5, 10˚.43S±0˚.06×13˚.20W±0˚.05, h12km±3km, h12km:pP-P, n356, σ1§10/349, mb5.0/144, MS4.3/36, 23C-29D, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**2.04**	**315**	Pn		**Pn**	**21 12 02.4**	**-0.7**
H10S3	**ASCENSION HYDR**	**2.06**	**315**	Pn		**Pn**	**21 12 02.7**	**-0.6**
ASCN	**Ascension**	**2.73**	**335**			**Pn**	**21 12 12.1**	**-0.7**
H10N1	**ASCENSION HYDR**	**2.86**	**334**	Pn		**Pn**	**21 12 14.4**	**+0.1**
	baz=155,slow=19,SNR=20							
H10N3	**ASCENSION HYDR**	**2.87**	**333**	Pn		**Pn**	**21 12 14.5**	**0.0**
	baz=155,slow=19,SNR=32							
H10N2	**ASCENSION HYDR**	**2.88**	**334**	Pn		**Pn**	**21 12 14.6**	**0.0**
	baz=155,slow=19,SNR=32							
SHEL	**Horse Pasture**	**9.10**	**128**	P		**Pn**	**21 13 41.6**	**+1.1**
SHEL	**Horse Pasture**	**9.10**	**128**	Pn		**Pn**	**21 13 41.6**	**+1.1**
LIC	**Lamto**	**18.43**	**27**	*e*P		**Pn**	**21 15 45.8**	**+1.1**
	40nm,1.0s							
KIC	**Kosan Boka**	**18.68**	**27**	*e*P		**P**	**21 15 47.5**	**+0.2**
	102nm,1.4s							
TIC	**Toumodi**	**18.81**	**26**	*e*P		**Pn**	**21 15 49.8**	**+0.5**
DBIC	**Dimbokro**	**18.91**	**26**	P		**Pn**	**21 15 51.2**	**+0.8**
	0.2nm,0.3s,baz=176,slow=11,SNR=5.3							
DBIC				LR		LR	21 21 26.7	
	comp=Z,694nm,20.1s,baz=185,slow=32							
DBIC	**Dimbokro**	**18.91**	**26**	P		**Pn**	**21 15 50.3**	**-0.1**
DBIC				pmax		pmax		
	comp=Z,49nm,1.5s							
DBIC	**Dimbokro**	**18.91**	**26**	P		**Pn**	**21 15 50.3**	**-0.1**
RCBR	**Riachuelo**	**22.93**	**280**	LR		LR	21 23 05.6	
	comp=Z,679nm,21.2s,baz=87,slow=30							
RCBR	**Riachuelo**	**22.93**	**280**	P		**P**	**21 16 32.0**	**-1.4**
RCBR				pmax		pmax		
	comp=Z,25nm,1.5s							
RCBR	**Riachuelo**	**22.93**	**280**			**P**	**21 16 31.9**	**-1.4**
GDUI01	**Guandu, BA**	**26.00**	**260**	*e*P		**P**	**21 17 03.1**	**+0.9**
H09W1	**TRISTAN DA CUN**	**26.57**	**178**	T		T	21 44 43.0	
	SNR=4.0							
TOA0	**Torodi Ar. Sit**	**27.70**	**33**	P		**P**	**21 17 16.7**	**-0.7**
TORD	**Torodi Ar. Bea**	**27.70**	**33**	P		**P**	**21 17 16.6**	**-0.8**
	comp=Z,7.0nm,1.1s,baz=219,slow=7.1,SNR=23							
TORD				LR		LR	21 26 51.7	
	comp=Z,564nm,18.9s,baz=225,slow=33							
BSFB	**Barra de Sao F**	**28.00**	**249**	*e*P		**P**	**21 17 21.4**	**+1.3**
BSFB				*e*pP		**sP**	**21 17 24.7**	**+0.5**
JANB	**Januaria**	**30.68**	**258**	*e*P		**P**	**21 17 43.8**	**-0.2**
JANB				*e*pP		**sP**	**21 17 48.6**	**+0.4**
TSUM	**Tsumeb**	**30.97**	**110**	P		**P**	**21 17 48.6**	**+1.9**
	comp=Z,5.5nm,0.9s,baz=243,slow=12,SNR=4.6							
SMTB	**Santa Maria do**	**33.93**	**270**	*e*P		**P**	**21 18 14.0**	**+1.5**
BDFB	**Brasilia**	**34.29**	**258**	P		**P**	**21 18 15.7**	**0.0**
	comp=Z,2.3nm,0.6s,baz=89,slow=13,SNR=3.2							
BDFB				LR		LR	21 29 27.3	
	comp=Z,641nm,21.4s,baz=105,slow=32							
BDFB	**Brasilia**	**34.29**	**258**	P		**P**	**21 18 15.6**	**-0.1**
BDFB				pmax		pmax		
	comp=Z,17nm,1.4s							
BDFB	**Brasilia**	**34.29**	**258**	P		**P**	**21 18 15.6**	**-0.1**
VAO	**Valinhos**	**34.58**	**244**	*e*P		**P**	**21 18 18.4**	**+0.3**
SPB	**Sao Paulo**	**35.15**	**244**	P		**P**	**21 18 22.1**	**-0.9**
SPB				IAmb		IAmb	21 18 29.7	
	comp=Z,45nm,1.4s							
FRTB	**Fartura**	**36.98**	**245**	*e*P		**P**	**21 18 39.5**	**+0.8**
TAM	**Tamanrasset**	**37.76**	**29**	P		**P**	**21 18 45.4**	**0.0**
TAM				pmax		pmax		
	comp=Z,9.0nm,1.4s							
TAM	**Tamanrasset**	**37.76**	**29**	P		**P**	**21 18 45.4**	**0.0**
ARAG	**Araguaiana, MT**	**37.94**	**258**	*e*P		**P**	**21 18 48.0**	**+1.1**
PCMB	**Pacaembu**	**38.14**	**248**	*e*P		**P**	**21 18 49.5**	**+1.0**
LBTB	**Lobatse**	**39.54**	**117**	P		**P**	**21 19 00.3**	**0.0**
	comp=Z,7.3nm,1.1s,baz=278,slow=6.6,SNR=3.7							
LBTB	**Lobatse**	**39.54**	**117**	P		**P**	**21 19 00.2**	**-0.1**
LBTB				pmax		pmax		
	comp=Z,22nm,1.4s							
LBTB	**Lobatse**	**39.54**	**117**	P		**P**	**21 19 00.2**	**-0.1**
BOSA	**Boshof**	**40.27**	**122**	LR		LR	21 32 45.6	
	comp=Z,204nm,21.9s,baz=273,slow=32							
LSZ	**Lusaka**	**40.59**	**101**	P		**P**	**21 19 08.9**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=280,slow=7.4,SNR=6.1							
MATP	**Matopo**	**41.30**	**109**	P		**P**	**21 19 13.8**	**-1.2**
	comp=Z,7.1nm,0.8s,baz=277,slow=6.8,SNR=12							
SALV	**Santo Antonio**	**41.68**	**258**	*e*P		**P**	**21 19 19.2**	**+1.2**
NPGB	**Novo Progresso**	**41.78**	**271**	*e*P		**P**	**21 19 19.8**	**+0.9**
PLTB	**Pedras Altas**	**42.93**	**234**	*e*P		**P**	**21 19 29.6**	**+1.6**
CPUP	**Villa Florida**	**44.53**	**243**	P		**P**	**21 19 41.0**	**0.0**
	comp=Z,3.4nm,0.8s,baz=50,slow=9.8,SNR=7.7							
CPUP				LR		LR	21 35 26.7	
	comp=Z,400nm,20.1s,baz=89,slow=32							
CPUP	**Villa Florida**	**44.53**	**243**	P		**P**	**21 19 41.6**	**+0.6**
CPUP				pmax		pmax		
	comp=Z,8.0nm,1.1s							

CASP	**Castiglione de**	**57.35**	**21**	P	**P**	**21 21 15.8 -1.4**
CASP				IAmb	IAmb	21 21 25.2
	comp=Z,30nm,1.1s					
ROC1	**El Roble**	**57.47**	**238**	P	**P**	**21 21 17.4 -1.2**
BO02	**Sierra Bellavi**	**57.58**	**235**	P	**P**	**21 21 19.7 +0.6**
BO02				IAmb	IAmb	21 21 25.7
	comp=Z,26nm,1.1s					
MT02	**Curacav**	**57.61**	**237**	P	**P**	**21 21 19.7 +0.3**
MT02				IAmb	IAmb	21 21 25.6
	comp=Z,27nm,1.1s					
ITM	**Ithomi**	**57.69**	**33**	P	**P**	**21 21 19.1 -0.6**
ITM				IAmb	IAmb	21 21 26.2
	comp=Z,47nm,1.5s					
SSB	**Saint Sauveur**	**57.71**	**15**	P	**P**	**21 21 19.7 0.0**
SSB				pmax	pmax	
	comp=Z,12nm,1.3s					
SSB	**Saint Sauveur**	**57.71**	**15**	P	**P**	**21 21 19.7 0.0**
INTR	**Introdacqua**	**57.81**	**24**	P	**P**	**21 21 21.0 +0.5**
INTR				IAmb	IAmb	21 21 24.6
	comp=Z,36nm,1.5s					
AQU	**L'Aquila**	**57.91**	**23**	P	**P**	**21 21 22.2 +1.0**
AQU				pmax	pmax	
	comp=Z,57nm,1.5s					
AQU	**L'Aquila**	**57.91**	**23**	P	**P**	**21 21 22.1 +1.0**
IDI	**Anoyia**	**57.99**	**37**	P	**P**	**21 21 22.3 +0.4**
IDI				IAmb	IAmb	21 21 30.5
	comp=Z,44nm,1.5s					
BNI	**Bardonecchia**	**58.07**	**16**	P	**P**	**21 21 23.1 +0.8**
BNI				pmax	pmax	
	comp=Z,19nm,1.5s					
BNI	**Bardonecchia**	**58.07**	**16**	P	**P**	**21 21 23.1 +0.8**
NRCA	**Norcia**	**58.21**	**23**	IAmb	IAmb	21 21 25.2
	comp=Z,17nm,1.3s					
BI02	**San Fabin de**	**58.32**	**233**	IAmb	IAmb	21 21 30.3
	comp=Z,17nm,1.0s					
MURB	**Monte Urbino**	**58.36**	**22**	P	**P**	**21 21 24.4 +0.1**
MURB				IAmb	IAmb	21 21 33.7
	comp=Z,23nm,1.3s					
PLCA	**Paso Flores**	**58.66**	**229**	LR	LR	21 43 11.2
	comp=Z,180nm,20.6s,baz=82,slow=32					
ZCCA	**Zocca**	**58.76**	**20**	P	**P**	**21 21 26.9 -0.1**
MTP	**Monte Pirata**	**58.94**	**298**	P	**P**	**21 21 29.1 +0.4**
MTP				IAmb	IAmb	21 21 34.2
	comp=Z,29nm,1.2s					
LC01	**Cunco**	**59.24**	**231**	P	**P**	**21 21 27.1 -3.5**
SALO	**Salr**	**59.73**	**19**	P	**P**	**21 21 33.4 -0.4**
CLF	**Chambon-Foret**	**59.79**	**12**	IAmb	IAmb	21 21 42.4
	comp=Z,19nm,1.2s					
AOPR	**Arecibo Observ**	**60.08**	**298**	P	**P**	**21 21 36.2 -0.5**
FNA	**Florina**	**60.13**	**30**	P	**P**	**21 21 36.5 -0.1**
FNA				pmax	pmax	
	comp=Z,19nm,1.4s					
FNA	**Florina**	**60.13**	**30**	P	**P**	**21 21 36.5 -0.1**
FNA				IAmb	IAmb	21 21 39.4
	comp=Z,18nm,1.4s					
VNA1	**Neumayer--Stat**	**60.25**	**178**	P	**P**	**21 21 37.0 +0.1**
SDV	**Santo Domingo**	**60.29**	**286**	P	**P**	**21 21 37.7 -0.7**
SDV				IAmb	IAmb	21 21 51.5
	comp=Z,31nm,1.3s					
SDV	**Santo Domingo**	**60.29**	**286**	*eP*	**P**	**21 21 40.1 +1.7**
AGPR	**Aguadilla, PR**	**60.44**	**298**	P	**P**	**21 21 39.8 +0.7**
VNA2	**Neumayer--Watz**	**60.56**	**178**	P	**P**	**21 21 38.6 -0.4**
	baz=350,slow=8.2					
VNA3	**Neumayer Olymp**	**60.81**	**179**	P	**P**	**21 21 38.9 -1.9**
DAVA	**Damuels**	**61.02**	**18**	*eP*	**P**	**21 21 42.5 -0.3**
	comp=Z,7.1nm,0.9s					
FETA	**Feichten**	**61.05**	**18**	*eP*	**P**	**21 21 42.8 -0.1**
	comp=Z,10nm,1.0s					
ECH	**Echery**	**61.11**	**15**	P	**P**	**21 21 42.2 -0.9**
ECH				pmax	pmax	
	comp=Z,15nm,1.4s					
ECH	**Echery**	**61.11**	**15**	P	**P**	**21 21 42.2 -0.9**
SQTA	**Sankt Quirin**	**61.38**	**19**	*eP*	**P**	**21 21 45.0 -0.1**
	comp=Z,20nm,1.3s					
ABTA	**Abfaltersbach**	**61.38**	**20**	*eP*	**P**	**21 21 45.9 +0.9**
	comp=Z,10nm,1.2s					
MOTA	**Moosalm**	**61.45**	**19**	*eP*	**P**	**21 21 45.5 -0.2**
	comp=Z,11nm,1.2s					
RETA	**Reutte**	**61.47**	**18**	*eP*	**P**	**21 21 45.1 -0.5**
	comp=Z,5.9nm,1.0s					
BFO	**Black Forest**	**61.52**	**16**	P	**P**	**21 21 45.8 -0.1**
BFO				pmax	pmax	
	comp=Z,7.0nm,1.0s					
BFO	**Black Forest**	**61.52**	**16**	P	**P**	**21 21 45.8 -0.1**
SNAA	**Sanae**	**61.53**	**176**	P	**P**	**21 21 45.2 -0.5**
SNAA	**Sanae**	**61.53**	**176**	P	**P**	**21 21 45.2 -0.5**
	comp=Z,5.7nm,1.0s,baz=338,slow=4.9,SNR=11					
SNAA	**Sanae**	**61.53**	**176**	*d iP*	**P**	**21 21 44.6 -1.1**
SNAA	**Sanae**	**61.53**	**176**	P	**P**	**21 21 45.3 -0.4**
SNAA				IAmb	IAmb	21 21 52.0
	comp=Z,16nm,1.1s					
WTTA	**Wattenberg**	**61.55**	**19**	*eP*	**P**	**21 21 46.0 -0.3**
	comp=Z,12nm,1.2s					
WATA	**Walderalm**	**61.59**	**19**	*eP*	**P**	**21 21 46.3 -0.3**
	comp=Z,5.9nm,1.1s					
RUSC	**La Rusia**	**61.80**	**282**	P	**P**	**21 21 49.5 +0.5**
OBKA	**Obir**	**61.88**	**21**	*eP*	**P**	**21 21 49.2 +0.7**
	comp=Z,7.9nm,1.4s					
KBA	**Koelnbreinsper**	**61.95**	**20**	*eP*	**P**	**21 21 49.2 +0.2**
	comp=Z,4.5nm,1.2s					
ELL	**Elmali**	**61.98**	**38**	P	**P**	**21 21 50.3 +0.9**
ELL				pmax	pmax	
	comp=Z,28nm,1.1s					
ELL	**Elmali**	**61.98**	**38**	P	**P**	**21 21 50.3 +0.9**
WLF	**Walferdange**	**62.20**	**14**	P	**P**	**21 21 51.4 +1.0**
WLF				pmax	pmax	
	comp=Z,15nm,1.3s					
WLF	**Walferdange**	**62.20**	**14**	P	**P**	**21 21 51.4 +1.0**
WLF				IAmb	IAmb	21 21 57.4
	comp=Z,15nm,1.3s					
SOKA	**Soboth**	**62.20**	**22**	*eP*	**P**	**21 21 51.7 +1.1**
	comp=Z,12nm,1.7s					
NNA	**Nana**	**62.33**	**262**	P	**P**	**21 21 51.4 -0.7**
NNA				pmax	pmax	
	comp=Z,44nm,1.5s					
NNA	**Nana**	**62.33**	**262**	P	**P**	**21 21 51.4 -0.7**
URIC	**Uribia, Colomb**	**62.42**	**289**	P	**P**	**21 21 52.9 +0.3**
VTS	**Vitosha**	**62.42**	**30**	⇓P	**P**	**21 21 52.7 +0.4**
VTS	**Vitosha**	**62.42**	**30**	⇓P	**P**	**21 21 52.7 +0.4**
VTS	**Vitosha**	**62.42**	**30**	IAmb	IAmb	21 21 54.3
	comp=Z,18nm,1.5s					
ROSC	**El Rosal**	**62.72**	**281**	P	**P**	**21 21 56.6 +1.5**
	comp=Z,9.1nm,0.4s,baz=119,slow=9.0,SNR=9.0					
ROSC				LR	LR	21 47 45.1
	comp=Z,279nm,20.0s,baz=107,slow=35					
ROSC	**El Rosal**	**62.72**	**281**	P	**P**	**21 21 55.8 +0.7**
ARSA	**Arzberg**	**62.86**	**22**	*eP*	**P**	**21 21 55.6 +0.7**
	comp=Z,8.7nm,1.2s					
MDVR	**Moldovita**	**63.37**	**27**	⇑P	**P**	**21 21 59.4 +1.1**
CONA	**Conrad Observa**	**63.56**	**21**	*eP*	**P**	**21 22 00.4 +0.8**
	comp=Z,10nm,1.1s					
GRA1	**Grafenberg Arr**	**63.58**	**17**	P	**P**	**21 21 59.5 -0.1**
GRF	**Grafenberg Arr**	**63.58**	**17**	*eP*	**P**	**21 21 59.5 -0.1**
	comp=Z,7.4nm,1.3s,baz=206,slow=6.8					
GRF	**Grafenberg Arr**	**63.58**	**17**	P	**P**	**21 21 59.5 -0.1**
GRF				pmax	pmax	
	comp=Z,10.0nm,1.3s					
GEC2	**GERESS Array S**	**63.60**	**19**	IAmb	IAmb	21 22 06.5
	comp=Z,14nm,1.3s					
GERES	**GERESS Array B**	**63.60**	**19**	P	**P**	**21 22 00.1 +0.2**
	comp=Z,2.4nm,0.9s,baz=187,slow=5.4,SNR=14					
GERES				LR	LR	21 48 50.7
	comp=Z,214nm,21.9s,baz=262,slow=35					
PLVB	**Pleven**	**63.67**	**30**	⇑P	**P**	**21 22 00.9 +0.5**
HERR	**Herculane**	**63.76**	**27**	⇓P	**P**	**21 22 02.6 +1.7**
KHC	**Kasperske Hory**	**63.81**	**19**	⇓*eP*	**P**	**21 22 00.6 -0.6**
KHC				pmax	pmax	
	comp=Z,16nm,1.4s					
KHC	**Kasperske Hory**	**63.81**	**19**	*eP*	**P**	**21 22 00.8 -0.4**
KHC				AMS	AMS	21 49 20.0
	comp=Z,200nm,19.8s					
BZS	**Buzias**	**63.97**	**26**	⇓P	**P**	**21 22 01.7 -0.6**
BZS	**Buzias**	**63.97**	**26**	⇓P	**P**	**21 22 01.7 -0.6**
NKC	**Novy Kostel**	**64.42**	**18**	AMS	AMS	21 49 30.0
	comp=Z,300nm,22.7s					
MODS	**Modra-Piesok**	**64.45**	**22**	*eP*	**P**	**21 22 06.0 +0.6**
MODS				pmax	pmax	
	comp=Z,43nm,1.7s					
MODS	**Modra-Piesok**	**64.45**	**22**	*eP*	**P**	**21 22 06.0 +0.6**
SIRR	**Siria**	**64.50**	**26**	⇓P	**P**	**21 22 07.0 +1.2**
TREC	**Trest**	**64.59**	**20**	AMS	AMS	21 51 20.0
	comp=Z,200nm,16.5s					
KRUC	**Moravsky**	**64.71**	**21**	*eP*	**P**	**21 22 06.9 -0.1**
DEV	**Deva**	**64.75**	**27**	⇓P	**P**	**21 22 08.1 +0.7**
DEV	**Deva**	**64.75**	**27**	⇓P	**P**	**21 22 08.1 +0.7**
PRU	**Pruhonice**	**64.87**	**19**	AMS	AMS	21 48 30.0
	comp=Z,200nm,22.0s					
GOPC	**GO Pecny, Ondr**	**64.89**	**20**	AMS	AMS	21 50 50.0
	comp=Z,200nm,17.0s					
VRAC	**Vranov**	**64.99**	**21**	*eP*	**P**	**21 22 08.7 -0.1**
VRAC	**Vranov**	**64.99**	**21**	⇓P	**P**	**21 22 08.3 -0.5**
VRAC	**Vranov**	**64.99**	**21**	⇓P	**P**	**21 22 08.3 -0.6**
JAVC	**Velka Javorina**	**65.00**	**22**	*eP*	**P**	**21 22 10.2 +1.2**
PSZ	**Piszkesteto**	**65.08**	**24**	⇓P	**P**	**21 22 10.0 +0.4**
PSZ	**Piszkesteto**	**65.08**	**24**	⇓P	**P**	**21 22 10.0 +0.4**
VYHS	**Vyhne**	**65.13**	**23**	*eP*	**P**	**21 22 10.2 +0.4**
VYHS				pmax	pmax	
	comp=Z,22nm,1.4s					
VYHS	**Vyhne**	**65.13**	**23**	*eP*	**P**	**21 22 10.2 +0.4**
ARR	**Arges**	**65.15**	**28**	⇓P	**P**	**21 22 10.3 +0.2**
MDUB	**Mudurnu**	**65.17**	**36**	P	**P**	**21 22 11.1 +0.8**
VOIR		**65.40**	**29**	⇑P	**P**	**21 22 12.0 +0.3**
VOIR		**65.40**	**29**	⇑P	**P**	**21 22 12.0 +0.3**
BRG	**Berggiesshubel**	**65.45**	**19**	*eP*	**P**	**21 22 11.0 -0.8**
	comp=Z,5.2nm,1.2s					
BRG	**Berggiesshubel**	**65.45**	**19**	*eP*	**P**	**21 22 11.0 -0.8**
BRG				pmax	pmax	
	comp=Z,5.0nm,1.2s					
CLL	**Collm**	**65.54**	**18**	*eP*	**P**	**21 22 13.0 +0.7**
CLL				*e*PP	**PP**	**21 24 36.0 -0.8**
CLL				*e*S	**S**	**21 31 00.0 +2.8**
CLL				*e*SS	**SS**	**21 35 06.0 -5.3**
CLL				*e*SSS	SSS	21 37 54.0
CLL	**Collm**	**65.54**	**18**	*eP*	**P**	**21 22 13.0 +0.7**
BR231	**Keskin MP Arra**	**65.69**	**37**	P	**P**	**21 22 14.4 +0.6**
BR231				IAmb	IAmb	21 22 16.3
	comp=Z,23nm,1.3s					
KRLC	**Kraliky**	**65.70**	**21**	*eP*	**P**	**21 22 09.9 -3.6**
KRLC				*e*		21 22 16.0
KRLC				MLR	MLR	
	comp=Z,200nm,15.8s					
KRLC	**Kraliky**	**65.70**	**21**	*eP*	**P**	**21 22 09.9 -3.6**
KRLC				*e*pP	**pP**	**21 22 16.0 -0.6**
KRLC				AMS	AMS	21 52 40.0
	comp=Z,200nm,15.8s					
MORC	**Moravsky Berou**	**65.72**	**21**	*eP*	**P**	**21 22 14.1 +0.5**
MORC	**Moravsky Berou**	**65.72**	**21**	⇓P	**P**	**21 22 13.6 0.0**
MORC	**Moravsky Berou**	**65.72**	**21**	⇓P	**P**	**21 22 13.6 0.0**
ANTO	**Ankara**	**65.72**	**37**	P	**P**	**21 22 13.9 0.0**
ANTO				pmax	pmax	
	comp=Z,11nm,0.8s					
ANTO	**Ankara**	**65.72**	**37**	P	**P**	**21 22 13.9 0.0**
ANTO				IAmb	IAmb	21 22 22.7
	comp=Z,11nm,0.8s					
KECS	**Kecovo**	**65.77**	**24**	*eP*	**P**	**21 22 14.9 +1.0**
KECS				pmax	pmax	
	comp=Z,9.0nm,1.3s					
KECS	**Kecovo**	**65.77**	**24**	*eP*	**P**	**21 22 14.9 +1.0**
DPC	**Dobruska-Polom**	**65.77**	**20**	AMS	AMS	21 50 10.0
	comp=Z,200nm,21.6s					
UPC	**Upice**	**65.80**	**20**	AMS	AMS	21 52 30.0
	comp=Z,200nm,18.1s					
MLR	**Muntele Rosu**	**65.86**	**29**	⇑P	**P**	**21 22 13.9 -0.9**
MLR	**Muntele Rosu**	**65.86**	**29**	⇑P	**P**	**21 22 13.9 -0.9**
OSTC	**Ostas**	**65.91**	**20**	*eP*	**P**	**21 22 14.0 -0.8**
OSTC				*ex*	x	21 22 21.1
OSTC				AMS	AMS	21 50 30.0
	comp=Z,200nm,18.0s					
OKC	**Ostrava-Krasne**	**65.98**	**22**	AMS	AMS	21 51 20.0
	comp=Z,200nm,16.2s					
BR131	**Keskin Array S**	**66.14**	**38**	IAmb	IAmb	21 22 18.8
	comp=Z,24nm,1.5s					
BRTR	**Keskin Array B**	**66.14**	**38**	P	**P**	**21 22 17.4 +0.8**
	comp=Z,5.9nm,1.1s,baz=202,slow=6.4,SNR=26					
BRTR				LR	LR	21 54 01.0
	comp=Z,45nm,18.9s,baz=194,slow=39					
BRTR	**Keskin Array B**	**66.14**	**38**	*i* P	**P**	**21 22 17.8 +1.1**
BRTR				pmax	pmax	
	comp=Z,6.0nm,1.1s					
OZUR		**66.23**	**29**	⇑P	**P**	**21 22 17.5 +0.5**
ARCR	**ARCALIA**	**66.32**	**27**	⇑P	**P**	**21 22 17.8 +0.3**
TRPA	**Tarpa**	**66.33**	**25**	⇓P	**P**	**21 22 17.6 +0.1**
TIRR	**Tirgusor**	**66.34**	**31**	⇑P	**P**	**21 22 17.2 -0.4**
TIRR	**Tirgusor**	**66.34**	**31**	⇑P	**P**	**21 22 17.3 -0.4**
PLOR	**Plostina**	**66.47**	**29**	⇑P	**P**	**21 22 18.5 0.0**
PLOR	**Plostina**	**66.47**	**29**	⇑P	**P**	**21 22 18.5 0.0**
VRI	**Vrincioaia**	**66.51**	**29**	⇑P	**P**	**21 22 18.1 -0.7**
VRI	**Vrincioaia**	**66.51**	**29**	⇑P	**P**	**21 22 18.1 -0.7**
RAYN	**Ar Rayn**	**66.56**	**59**	P	**P**	**21 22 20.0 +0.4**
RAYN				pmax	pmax	
	comp=Z,4.0nm,1.3s					
RAYN	**Ar Rayn**	**66.56**	**59**	P	**P**	**21 22 19.9 +0.4**
UZH	**Uzhgorod**	**66.62**	**25**	*eP*	**P**	**21 22 19.5 +0.1**
UZH				*i*		21 22 25.0
TOPG	**Topolog**	**66.62**	**31**	⇓P	**P**	**21 22 18.3 -1.2**
CFR	**Carcaliu**	**66.71**	**31**	⇓P	**P**	**21 22 19.4 -0.6**
CFR	**Carcaliu**	**66.71**	**31**	⇓P	**P**	**21 22 19.4 -0.6**
KOLS	**Kolonicke sedl**	**66.85**	**25**	*eP*	**P**	**21 22 21.9 +1.0**
KOLS				pmax	pmax	
	comp=Z,14nm,1.6s					
KOLS	**Kolonicke sedl**	**66.85**	**25**	*eP*	**P**	**21 22 21.8 +0.9**
GAZ	**Gaziantep**	**66.88**	**42**	P	**P**	**21 22 22.3 +0.9**
GAZ				IAmb	IAmb	21 22 24.0
	comp=Z,24nm,1.4s					
OJC	**Ojcow**	**66.91**	**22**	*eP*	**P**	**21 22 21.6 +0.4**
OJC	**Ojcow**	**66.91**	**22**	IAmb	IAmb	21 22 22.6
	comp=Z,13nm,1.1s					
TESR	**Tescani**	**66.95**	**29**	⇓P	**P**	**21 22 20.9 -0.6**
BIZ	**Bicaz**	**67.00**	**28**	⇑P	**P**	**21 22 22.7 +0.8**
ILGA	**Ilgaz**	**67.01**	**37**	P	**P**	**21 22 22.2 -0.1**
ILGA				IAmb	IAmb	21 22 24.1
	comp=Z,22nm,1.3s					
SYO	**Syowa Base**	**67.54**	**162**	⇓*eX*	P	21 22 20.0 -4.9
LVV	**L'vov**	**68.26**	**25**	*eP*	**P**	**21 22 29.6 -0.1**
DIKM	**Dikmen**	**68.29**	**37**	⇑P	**P**	**21 22 29.2 -0.9**
AKASG	**Malin Array Be**	**71.15**	**27**	P	**P**	**21 22 47.0 -0.5**
	comp=Z,6.8nm,0.7s,baz=224,slow=6.7,SNR=24					
AKASG				LR	LR	21 55 24.1
	comp=Z,94nm,19.9s,baz=225,slow=37					
SUW	**Suwalki**	**71.20**	**22**	*eP*	**P**	**21 22 47.5 -0.3**
SUW	**Suwalki**	**71.20**	**22**	P	**P**	**21 22 47.3 -0.4**
SUW				pmax	pmax	
	comp=Z,39nm,1.2s					
SUW	**Suwalki**	**71.20**	**22**	P	**P**	**21 22 47.3 -0.4**
ANN	**Anapa**	**71.46**	**35**	*eP*	**P**	**21 22 47.2 -2.3**
ANN				*i* *PP	**pP**	**21 22 50.3 -2.3**
ANN				*e*		21 23 05.8
ANN				*e*		21 25 22.7
ANN				*e*PPP	PPP	21 27 09.8
ANN				*e*S	**S**	**21 32 06.0 -1.9**
ANN				*e*SS	**SS**	**21 36 42.7 -0.3**
ANN				pmax	pmax	
	comp=Z,35nm,1.4s					
CBCY	**The Bluff, Cay**	**72.05**	**295**	P	**P**	**21 22 53.7 +0.1**
SOC	**Sochi**	**72.09**	**38**	*eP*	**P**	**21 22 52.1 -1.2**
SOC				*e*		21 25 29.8
SOC				*e*PPP	PPP	21 27 13.9
SOC				*e*S	**S**	**21 32 16.1 +0.9**
SOC				*e*SS	**SS**	**21 36 54.8 +2.0**
SOC				pmax	pmax	
	comp=Z,19nm,1.1s					
BATM	**Batumi**	**72.22**	**40**	⇑P	**P**	**21 22 55.8 +1.6**
BATM	**Batumi**	**72.22**	**40**	⇑P	**P**	**21 22 55.8 +1.6**
LMN	**Caledonia Moun**	**72.64**	**325**	P	**P**	**21 22 57.3 +0.7**
LMN				IAmb	IAmb	21 22 59.4
	comp=Z,17nm,1.1s					
AKH	**Akhalkalaki**	**73.27**	**41**	⇓P	**P**	**21 23 00.7 +0.1**
NB2	**NORSAR Subarra**	**73.81**	**12**	P	**P**	**21 23 03.2 0.0**
	comp=Z,6.4nm,1.1s,baz=202,slow=6.5					
NOA	**NORSAR Array B**	**73.81**	**12**	P	**P**	**21 23 03.5 +0.3**
	comp=Z,1.3nm,0.8s,baz=203,slow=6.5,SNR=7.5					
NOA				LR	LR	21 57 10.3
	comp=Z,46nm,18.1s,baz=205,slow=37					
NC204	**NORSAR Array S**	**73.93**	**12**	P	**P**	**21 23 04.8 +0.9**
NC204				IAmb	IAmb	21 23 05.3
	comp=Z,20nm,1.1s					
NC405	**NORSAR Array S**	**73.97**	**12**	P	**P**	**21 23 04.8 +0.7**
NC405				IAmb	IAmb	21 23 10.6
	comp=Z,26nm,1.4s					
NC303	**NORSAR Array S**	**74.00**	**12**	P	**P**	**21 23 04.3 0.0**
KIV	**Kislovodsk**	**74.09**	**38**	⇑P	**P**	**21 23 05.6 +0.3**
KIV	**Kislovodsk**	**74.09**	**38**	*de*P	**P**	**21 23 05.7 +0.3**
KIV				*i*		21 23 11.0
KIV				*e*S	**SKSac**	**21 33 10.6 -2.2**
KIV				pmax	pmax	
	comp=Z,35nm,1.5s					
KIV				MLR	MLR	
	comp=Z,28nm,18.0s					
KIV	**Kislovodsk**	**74.09**	**38**	P	**P**	**21 23 05.8 +0.5**
KIV				IAmb	IAmb	21 23 07.9
	comp=Z,36nm,1.4s					
KBZ	**Khabaz**	**74.10**	**39**	P	**P**	**21 23 05.9 +0.7**
	comp=Z,2.3nm,0.5s,baz=245,slow=5.2,SNR=9.9					
BATG	**Bathurst New B**	**74.17**	**326**	P	**P**	**21 23 05.8 +0.2**
BATG				IAmb	IAmb	21 23 12.9
	comp=Z,23nm,1.3s					
TBLG	**Delisi**	**74.24**	**41**	P	**P**	**21 23 06.8 +0.6**
TBLG				pmax	pmax	
	comp=Z,13nm,1.0s					
TBLG	**Delisi**	**74.24**	**41**	P	**P**	**21 23 06.8 +0.6**
NCK	**Nalchik**	**74.41**	**39**	⇑*eP*	**P**	**21 23 08.5 +1.4**
NCK				pmax	pmax	
	comp=Z,36nm,1.4s					
F64A	**Sherman**	**74.68**	**324**	P	**P**	**21 23 08.9 +0.3**
GOF	**Gofitskoye**	**74.89**	**38**	⇑*i*P	**P**	**21 23 10.3 +0.5**
GOF				pmax	pmax	
	comp=Z,29nm,1.3s					
HRV	**Adam Dziewonsk**	**74.90**	**319**	P	**P**	**21 23 10.0 +0.1**
HRV				pmax	pmax	
	comp=Z,39nm,1.4s					
HRV	**Adam Dziewonsk**	**74.90**	**319**	P	**P**	**21 23 10.0 +0.1**
HRV				IAmb	IAmb	21 23 16.0
	comp=Z,39nm,1.4s					
PKME	**Peaks-Kenny Pk**	**74.92**	**323**	P	**P**	**21 23 10.5 +0.6**
PKME				IAmb	IAmb	21 23 12.9
	comp=Z,25nm,1.4s					
MAW	**Mawson**	**75.12**	**157**	P	**P**	**21 23 10.8 0.0**
	comp=Z,2.4nm,0.8s,baz=283,slow=14,SNR=4.2					
MAW				LR	LR	21 48 24.8
	comp=Z,89nm,21.3s,baz=30,slow=30					
MAW	**Mawson**	**75.12**	**157**	P	**P**	**21 23 11.1 +0.3**
MAW				pmax	pmax	
	comp=Z,2.0nm,1.1s					
MAW	**Mawson**	**75.12**	**157**	P	**P**	**21 23 11.1 +0.3**
GROC	**Groznyy**	**75.64**	**40**	*eP*	**P**	**21 23 14.3 +0.1**
GROC				*e*		21 23 27.1
GROC				*e*		21 26 03.8
GROC				pmax	pmax	
	comp=Z,35nm,1.5s					
D62A	**Allapoint, All**	**75.75**	**324**	P	**P**	**21 23 14.8 +0.1**
D62A				IAmb	IAmb	21 23 17.9
	comp=Z,15nm,1.1s					
KSCT	**Kent School, K**	**75.77**	**318**	P	**P**	**21 23 13.3 -1.7**
VSU	**Vasula**	**75.90**	**20**	⇓*eP*	**P**	**21 23 17.1 +1.8**
VSU				pmax	pmax	
	comp=Z,32nm,1.2s					
VORD	**Divnogorie**	**76.14**	**31**	*eP*	**P**	**21 23 16.3 -0.6**
VORD				pmax	pmax	
	comp=Z,20nm,1.2s					
UOSS	**Minazif**	**76.19**	**61**	P	**P**	**21 23 14.6 -3.2**
VSR	**Storozhevoye**	**76.23**	**31**	*eP*	**P**	**21 23 16.4 -0.9**
VSR				pmax	pmax	
	comp=Z,30nm,1.6s					
T59A	**Double "B" Far**	**76.51**	**312**	P	**P**	**21 23 18.5 -0.8**
T59A				IAmb	IAmb	21 23 27.3
	comp=Z,39nm,1.4s					
LPSR	**Galich'ya Gora**	**76.94**	**30**	*eP*	**P**	**21 23 20.6 -0.8**
LPSR				pmax	pmax	
	comp=Z,10.0nm,1.2s					
OBN	**Obninsk**	**77.41**	**27**	*eP*	**P**	**21 23 23.7 -0.2**
OBN				*i*		21 23 27.7
OBN				*e*		21 26 21.9
OBN				*e*S	S	21 33 27.6 +13
OBN				*e*SS	**SS**	**21 38 16.5 +3.3**
OBN				pmax	pmax	
	comp=Z,14nm,1.2s					
OBN				MLR	MLR	
	comp=Z,186nm,20.0s					
VRH	**Novokhopyorsk**	**77.53**	**32**	*eP*	**P**	**21 23 24.0 -0.7**
VRH				pmax	pmax	
	comp=Z,20nm,1.4s					
FINES	**FINESS Array B**	**77.98**	**18**	P	**P**	**21 23 27.3 +0.3**
	comp=Z,3.1nm,0.8s,baz=215,slow=2.3,SNR=11					
FINES				LR	LR	21 58 38.2
	comp=Z,101nm,20.3s,baz=219,slow=36					
FIA1	**FINESS Array S**	**77.98**	**18**	IAmb	IAmb	21 23 29.2
	comp=Z,14nm,1.1s					
MOS	**Moscow**	**78.28**	**27**	*eP*	**P**	**21 23 26.2 -2.5**
MOS				*e*		21 26 24.7
MOS				pmax	pmax	
	comp=Z,28nm,0.9s					
255A	**Hazlehurst**	**78.39**	**306**	P	**P**	**21 23 28.6 -1.3**
TRQ	**Mont Tremblant**	**78.58**	**322**	P	**P**	**21 23 30.2 -0.6**
L56A	**Greenwood**	**78.67**	**317**	P	**P**	**21 23 31.4 0.0**
J56A	**Wolcott**	**78.70**	**318**	P	**P**	**21 23 30.3 -1.1**
J56A				IAmb	IAmb	21 23 34.4
	comp=Z,20nm,1.1s					
SCHQ	**Schefferville**	**79.00**	**332**	LR	LR	21 51 04.6
	comp=Z,59nm,21.5s,baz=344,slow=30					
M54A	**Oil Creek Stat**	**79.85**	**316**	P	**P**	**21 23 37.3 -0.4**
Y52A	**Lilburn**	**80.30**	**307**	P	**P**	**21 23 39.9 -0.4**
Y52A				IAmb	IAmb	21 23 49.6
	comp=Z,20nm,1.1s					
SADO	**Sadowa**	**80.83**	**319**	P	**P**	**21 23 43.2 +0.3**
O52A	**Adamsville**	**80.83**	**314**	P	**P**	**21 23 43.2 +0.2**
O52A				IAmb	IAmb	21 23 46.4
	comp=Z,40nm,1.5s					
SCO	**Scoresbysund**	**80.94**	**357**	P	**P**	**21 23 44.5 +1.6**
SCO				pmax	pmax	
	comp=Z,9.0nm,1.3s					
SCO	**Scoresbysund**	**80.94**	**357**	P	**P**	**21 23 44.5 +1.6

comp=Z,11nm,0.8s
R40A **Maddies Statio** **87.95** **309** P **P** **21 24 19.5 +0.4**
R40A IAmb IAmb 21 24 21.7
comp=Z,19nm,1.4s
P40A **Paris** **88.10** **311** P **P** **21 24 19.4 -0.4**
P40A IAmb IAmb 21 24 22.9
comp=Z,6.5nm,0.9s
I40A **Norwalk** **88.24** **315** P **P** **21 24 20.8 +0.3**
I40A IAmb IAmb 21 24 22.8
comp=Z,13nm,1.1s
S39A **Bolivar** **88.60** **309** P **P** **21 24 21.7 -0.6**
HHAR **Hobbs** **88.74** **307** P **P** **21 24 23.4 +0.4**
HHAR IAmb IAmb 21 24 30.0
comp=Z,13nm,1.3s
TLIG **Tlapa** **88.75** **288** P **P** **21 24 22.6 -1.0**
TLIG IAmb IAmb 21 24 22.8
comp=Z,19nm,1.5s
ARU **Arti** **88.76** **32***d* *i*P **P** **21 24 23.7 +1.1**
ARU 21 27 53.7
ARU S **SKSac** **21 34 52.2 +0.5**
ARU pmax pmax
comp=Z,20nm,2.0s
ARU **Arti** **88.76** **32** P **P** **21 24 23.6 +1.0**
U38A **Gravette** **89.13** **307** IAmb IAmb 21 24 27.2
comp=Z,23nm,1.4s
P38A **Dawn** **89.24** **310** P **P** **21 24 25.3 +0.1**
P38A IAmb IAmb 21 24 43.0
comp=Z,9.1nm,1.1s
N38A **Joes South For** **89.30** **312** P **P** **21 24 24.4 -1.1**
N38A IAmb IAmb 21 24 26.4
comp=Z,9.1nm,0.6s
KBL **Kabul** **89.53** **55** P **P** **21 24 26.7 -0.3**
KBL pmax pmax
comp=Z,13nm,1.5s
KBL **Kabul** **89.53** **55** P **P** **21 24 26.7 -0.3**
KBL IAmb IAmb 21 24 34.7
comp=Z,13nm,1.4s
CHGR **Chuyangaron** **90.54** **51** P **P** **21 24 32.0 +0.6**
CHGR IAmb IAmb 21 24 39.8
comp=Z,24nm,1.4s
VNDA **Vanda** **92.16** **179** P **P** **21 24 37.8 -0.3**
comp=Z,0.8nm,0.9s,baz=267,slow=3.8,SNR=5.1
ULM **Lac du Bonnet** **93.29** **320** LR LR 22 00 34.1
comp=Z,53nm,19.5s,baz=80,slow=32
BRVK **Borovoye** **94.35** **37**‖ *e*P **P** **21 24 50.2 +1.6**
BRVK pmax pmax
comp=Z,3.0nm,1.4s
AAK **Ala-Archa** **95.28** **48**↑ *e*P **P** **21 24 56.4 +3.0**
AAK pmax pmax
comp=Z,6.0nm,1.3s
TXAR **Lajitas Array** **95.43** **299** P **P** **21 24 54.9 +0.6**
comp=Z,0.6nm,0.7s,baz=110,slow=6.8,SNR=8.9
TXAR LR LR 22 04 25.4
comp=Z,16nm,22.0s,baz=0.0,slow=33
KSH **Kashi** **95.91** **51** P **P** **21 24 56.1 -0.1**
KSH pP sP 21 25 01.5 +0.8
KSH PP **PP** **21 28 48.5 -0.1**
KSH S **S** **21 36 08.5 -6.2**
KSH LR LR
comp=Z,51nm,5.0s
KSH LR LR
comp=Z,45nm,4.0s
KSH LR LR
comp=Z,360nm,5.9s
KURBB **Kurchatov Arra** **99.06** **40** P **Pdif** **21 25 10.7 +0.7**
comp=Z,0.1nm,0.2s,baz=270,slow=4.6,SNR=5.0
LZH **Lanzhou** **117.88** **55** *e*PKP **PKPdf** **21 30 12.0 -4.3**
LZH sPKP 21 30 24.9
LZH LR LR
comp=Z,130nm,17.3s
LZH LR LR
comp=Z,190nm,17.2s
LZH LR LR
comp=Z,210nm,20.1s
CD2 **Chengdu** **118.37** **61** PKP **PKPdf** **21 30 16.5 -0.7**
GYA **Guiyang** **121.25** **65** *e*PKP **PKPdf** **21 30 22.3 -0.7**
GYA PP **PP** **21 31 53.3 -0.3**
GYA SKKS 21 38 45.6
GYA SS **SS** **21 48 29.4 +1.5**
GYA AMB AMB
comp=Z,20nm,5.2s
GYA LR LR
comp=Z,80nm,6.2s
GYA LR LR
comp=Z,80nm,5.2s
GYA LR LR
comp=Z,60nm,5.5s
BILL **Bilibino** **122.45** **0**‖ *e*PKIKP **PKiKP** **21 30 24.1 0.0**
BILL pmax pmax
comp=Z,5.0nm,1.4s
HHC **Hu-ho-hao-te** **122.86** **48** *e*PKP **PKiKP** **21 30 27.3 +1.4**
TAOE **Nuku Hiva Isla** **123.84** **252** *e*LR LR 22 08 40.7
comp=Z,182nm,35.1s
TBI **Tubuai** **125.62** **231** *e*LR LR 22 09 45.7
comp=Z,115nm,32.2s
PPT2 **Papeete2** **128.70** **237** *e*LR LR 22 11 07.4
comp=Z,106nm,23.2s
NJ2 **Nanjing** **130.88** **57** *e*PKP **PKPdf** **21 30 40.5 -0.6**
CN2 **Changchun** **131.20** **39** *e*PKP **PKPdf** **21 30 41.3 0.0**
MSAI **Masohi** **139.88** **108** PKP **PKPdf** **21 30 53.1 -5.3**

MOS ***16*** *21:20:21.6±1.0, 4.7°S×103.2°E, h48km, mb5.2/37, Error ellipse: s-maj=12.3km s-min=5.4km az=118.0*
IDC ***16*** *21:20:23.7±2.3, 4.7°S×103.1°E, h52km±19km, mb4.5/35, mb1 4.6/36, mb1mx4.4/47, mbtmp4.8/36, ML3.2/1, MS3.5/9, Ms1 3.5/9, ms1mx3.2/37, Error ellipse: s-maj=17.9km s-min=9.4km az=49.0*
NEIC ***16*** *21:20:24±1.4, 4.9°S±0.6°×102.9°E±0.7°, h63km±4km, mb5.0/98, Error ellipse: s-maj=11.2km s-min=8.2km az=64.0*
DJA ***16*** *21:20:24.8±0.2, 5°S±2°×10°E±°, h61km±2km, M4.7/37, mb4.9/37, mB5.1/12, MLv5.0/21, Mw(mB)4.5/12*
BJI ***16*** *21:20:24.0±0.0, 4.9°S×103.0°E, h66km, mB5.0/35, mb5.0/53, Ms4.6/16, Ms7 4.3/9*
KLM ***16*** *21:20:26.0, 4.9°S×103.0°E, h53km, mb4.8*
ISC 16 21:20:24.8±0.6, **4.9°S**±0.05°×**103.0°E**±0.05°, **h69**km±5km, **n495**, **σ 19**/496, **mb5.0**/136, **37C-25D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNAI	**Manna**	**0.57**	**353**	P	**Pn**	**21 20 37.7**	**-0.6**
MNAI				S	**Sn**	**21 20 47.5**	**-0.7**
MNAI	**Manna**	**0.57**	**353**		**Pn**	**21 20 37.5**	**-0.8**
LWLI	**Liwa**	**1.03**	**95**	P	**Pn**	**21 20 43.4**	**-0.4**
LHSI	**Lahat**	**1.21**	**24**	P	**Pn**	**21 20 46.5**	**+0.6**
MASI	**Maura Aman, Be**	**1.94**	**336**	P	**Pn**	**21 20 56.5**	**+0.7**
MASI				S	**Sn**	**21 21 20.1**	**+0.8**
BLSI	**Bandar Lampung**	**2.25**	**101**	P	**Pn**	**21 21 00.4**	**+0.5**
PMBI	**Palembang**	**2.65**	**41**	P	**Pn**	**21 21 06.1**	**+0.8**
PMBI	**Palembang**	**2.65**	**41**		**Pn**	**21 21 05.6**	**+0.3**
KRJI	**Kerinci**	**3.23**	**331**	P	**Pn**	**21 21 14.5**	**+1.3**
PPSi	**Pulau Pagai**	**3.70**	**306**	P	**Pn**	**21 21 20.3**	**+0.7**
DBJI	**Dramaga**	**4.04**	**114**	P	**Pn**	**21 21 25.9**	**+1.6**
SDSI	**Sungai Dareh**	**4.28**	**338**	P	**Pn**	**21 21 28.3**	**+0.8**
RGRI	**Rengat**	**4.61**	**351**	P	**Pn**	**21 21 33.7**	**+1.7**
CNJI	**Cibinong**	**4.72**	**120**	P	**Pn**	**21 21 34.3**	**+0.8**
PDSI	**Padang**	**4.74**	**327**	P	**Pn**	**21 21 34.2**	**+0.3**
LEM	**Lembang**	**4.94**	**113**	P	**Pn**	**21 21 39.6**	**+2.9**
	5.9nm,0.3s,baz=182,slow=8.5,SNR=20						
LEM				S	**Sn**	**21 22 33.8**	**+1.1**
	8.9nm,0.3s,baz=260,slow=7.6,SNR=5.2						
LEM				LR	LR	21 23 58.3	
	comp=Z,319nm,21.0s,baz=326,slow=43						
LEM	**Lembang**	**4.94**	**113**	P	**Pn**	**21 21 39.6**	**+2.9**
	0.4nm1µm104nm,1.0s						
SISI	**Saibi**	**5.32**	**312**	P	**Pn**	**21 21 41.7**	**0.0**
	1.3nm98nm,0.8s						
CISI	**Cisompet, Garu**	**5.43**	**119**	P	**Pn**	**21 21 43.7**	**+0.4**
	1.5nm3µm177nm,0.6s						
CISI	**Cisompet, Garu**	**5.43**	**119**		**Pn**	**21 21 43.4**	**+0.1**
BKNI	**Bangkinang**	**5.59**	**339**	P	**Pn**	**21 21 46.6**	**+1.2**
	1.7nm2µm148nm,0.6s						
BKNI	**Bangkinang**	**5.59**	**339**		**Pn**	**21 21 45.0**	**-0.4**
TPRI	**Tanjung Pinang**	**6.00**	**15**	P	**Pn**	**21 21 53.1**	**+2.0**
	0.7nm4µm177nm,0.6s						
XMIS	**Christmas Isla**	**6.10**	**155**	Pn	**Pn**	**21 21 48.4**	**-4.0**
MNSI	**Mandailing Nat**	**6.65**	**329**	P	**Pn**	**21 21 59.1**	**-0.8**
	0.3nm993nm53nm,0.8s						
MYKOM	**Kota Tinggi**	**6.73**	**7**	P	**Pn**	**21 22 03.0**	**+2.0**
SMRI	**Semarang**	**7.67**	**106**	Pn	**Pn**	**21 22 13.7**	**-0.3**
UGM	**Wanagama**	**8.02**	**112**	P	**Pn**	**21 22 20.7**	**+2.0**
	127nm,1.4s						
UGM	**Wanagama**	**8.02**	**112**	Pn	**Pn**	**21 22 19.5**	**+0.8**
GSI	**Gunungsitoli**	**8.25**	**319**	P	**Pn**	**21 22 20.5**	**-1.3**
	175nm,0.8s						
GSI	**Gunungsitoli**	**8.25**	**319**		**Pn**	**21 22 20.0**	**-1.8**
RPSI	**Rantau Prapat**	**8.61**	**332**	Pn	**Pn**	**21 22 25.7**	**-1.1**
PSI	**Prapat**	**8.71**	**332**	P	Pn	21 22 23.0	-5.2
	0.3nm,0.3s,baz=358,slow=20,SNR=1.9						
PSI				LR	LR	21 25 15.7	
	comp=Z,174nm,18.4s,baz=98,slow=34						
PSI	**Prapat**	**8.71**	**332**	P	**Pn**	**21 22 25.7**	**-2.5**
COCO	**West Island**	**9.46**	**220**	P	**Pn**	**21 22 36.7**	**-1.6**
COCO	**West Island**	**9.46**	**220**		**Pn**	**21 22 36.7**	**-1.6**
IPM	**Ipoh**	**9.56**	**348**		**Pn**	**21 22 40.1**	**+0.3**
IPM	**Ipoh**	**9.56**	**348**	P	**Pn**	**21 22 41.0**	**+1.2**
KSM	**Kuching**	**9.67**	**49**		**Pn**	**21 22 41.1**	**-0.2**
KSM	**Kuching**	**9.67**	**49**	P	**Pn**	**21 22 43.0**	**+1.8**
KULM	**Kulim**	**10.43**	**347**		**Pn**	**21 22 52.0**	**+0.3**
JAGI	**Jajag, Banyuwa**	**11.60**	**108**	P	**Pn**	**21 23 08.5**	**+0.9**
	91nm,0.7s						
JAGI	**Jajag, Banyuwa**	**11.60**	**108**		**Pn**	**21 23 08.2**	**+0.6**
SBUM	**Sibu**	**11.76**	**52**		**Pn**	**21 23 09.6**	**-0.2**
PLAI	**Plampang**	**15.15**	**106**	P	**P**	**21 23 57.9**	**-0.7**
	69nm,0.6s						
KAPI	**Kappang**	**16.67**	**91**	P	**Pn**	**21 24 10.0**	**-4.1**
	2.7nm,0.3s,baz=217,slow=14,SNR=1.6						
SPSI	**Sidrap Palu**	**16.72**	**87**	P	**P**	**21 24 18.2**	**+2.2**
	35nm,0.8s						
BNSI	**Bone**	**17.04**	**89**	P	**P**	**21 24 21.9**	**+2.4**
	54nm,1.0s						
BKSI	**Bulukumba**	**17.04**	**92**	P	**P**	**21 24 21.3**	**+1.8**
	467nm57nm,0.8s						
KKM	**Kota Kinabalu**	**17.10**	**51**	P	**Pn**	**21 24 19.3**	**-0.3**
MPSI	**Mapaga**	**17.65**	**73**	P	**P**	**21 24 29.7**	**+3.4**
	31nm,0.7s						
PBA	**Port Blair**	**19.40**	**328**	P	P	21 24 45.0	-0.4
PBA				IAmb	IAmb	21 25 01.9	
	comp=Z,64nm,1.1s						
MMRI	**Maumere**	**19.43**	**102**	P	**P**	**21 24 46.1**	**+0.2**
MMRI				IAmb	IAmb	21 24 58.0	
	comp=Z,36nm,0.6s						
MRSI	**Marisa**	**19.65**	**75**	P	**Pn**	**21 24 49.9**	**-0.3**
	comp=Z,644nmcomp=Z,87nm,0.7s						
LUWI	**Luwuk**	**20.09**	**80**	P	**P**	**21 24 53.9**	**+0.8**
LUWI				IAmb	IAmb	21 25 11.1	
	comp=Z,69nm,0.9s						
BATI	**Baumata**	**21.11**	**106**	P	**P**	**21 25 04.1**	**0.0**
	comp=Z,30nm,0.4s,baz=21,slow=2.6,SNR=11						
BATI				S	**S**	**21 28 50.2**	**-5.2**
	comp=Z,30nm,0.5s,baz=130,slow=21,SNR=7.0						
BATI	**Baumata**	**21.11**	**106**	P	**P**	**21 25 05.5**	**+1.4**
	comp=Z,32nm,0.8s						
PBKT	**Sadao Pong**	**21.46**	**355**	P	**P**	**21 25 08.0**	**+0.3**
SOEI	**Soe**	**21.60**	**104**	P	**P**	**21 25 11.3**	**+1.9**
	comp=Z,70nm,0.7s						
SOEI	**Soe**	**21.60**	**104**	P	**P**	**21 25 08.8**	**-0.6**
SOEI				IAmb	IAmb	21 25 16.6	
	comp=Z,50nm,0.9s						
CMAR	**Chiang Mai Arr**	**23.59**	**350**	P	**P**	**21 25 27.7**	**-1.9**
	comp=Z,11nm,0.8s,baz=182,slow=8.7,SNR=36						
CMAR				PcP	**PcP**	**21 29 14.6**	**+1.5**
	comp=Z,1.5nm,0.7s,baz=210,slow=3.5,SNR=6.7						
CMAR				ScP	**ScP**	**21 32 46.4**	**+1.0**
	comp=Z,0.8nm,0.9s,baz=197,slow=2.8,SNR=2.0						
CMAR				LR	LR	21 33 55.9	
	comp=Z,115nm,20.3s,baz=176,slow=35						
CHTO	**Chiang Mai**	**23.94**	**350**	P	**P**	**21 25 31.5**	**-1.2**
CHTO				pmax	pmax		
	comp=Z,17nm,0.9s						
CHTO	**Chiang Mai**	**23.94**	**350**	P	**P**	**21 25 31.5**	**-1.2**
NLAI	**Namlea**	**24.07**	**87**	P	**P**	**21 25 36.2**	**+2.2**
	comp=Z,21nm,0.7s						
LBMI	**Labuha**	**24.81**	**81**	P	**P**	**21 25 42.2**	**+1.4**
	comp=Z,828nmcomp=Z,102nm,0.8s						
TNTI	**Ternate**	**24.97**	**78**	P	**P**	**21 25 41.9**	**-0.3**
KCP	**Kidapawan**	**25.02**	**62**‖ *i*P		**P**	**21 25 44.2**	**+1.5**
FITZ	**Fitzroy Crossi**	**25.69**	**122**	P	**P**	**21 25 49.4**	**+0.7**
	comp=Z,13nm,0.6s,baz=317,slow=7.0,SNR=81						
FITZ	**Fitzroy Crossi**	**25.69**	**122**	P	**P**	**21 25 48.7**	**0.0**
TGY	**Tagaytay City**	**25.95**	**43**	LR	LR	21 37 59.4	
	comp=Z,83nm,21.0s,baz=125,slow=41						
SIJI	**Sorong**	**28.49**	**83**	P	**P**	**21 26 13.4**	**-0.5**
	comp=Z,5.5nm,0.7s,baz=331,slow=4.3,SNR=4.7						
MTN	**Manton Dam**	**28.84**	**108**	P	**P**	**21 26 17.4**	**+0.4**
	baz=29,SNR=14						
MTN	**Manton Dam**	**28.84**	**108**	P	**P**	**21 26 17.0**	**0.0**
FAKI	**Fak Fak**	**29.22**	**87**	P	**P**	**21 26 19.7**	**-0.7**
FAKI				IAmb	IAmb	21 26 24.9	
	comp=Z,21nm,0.8s						
KMI	**Kunming**	**29.88**	**359**	P	P	21 26 31.3	+5.0
KMI				pP	pP	21 26 41.1	-1.7
KMI				sP	sP	21 26 51.0	+0.1
KMI				pmax	pmax		
	comp=Z,64nm,1.0s						
KMI				LR	LR		
	comp=Z,140nm,15.8s						
KMI				LR	LR		
	comp=Z,130nm,13.9s						
H08S2	**Diego Garcia H**	**30.46**	**263**	T	T	21 58 42.2	
	baz=86,slow=76,SNR=33						
H08S3	**Diego Garcia H**	**30.47**	**263**	T	T	21 58 42.8	
	baz=86,slow=76,SNR=36						
H08S1	**Diego Garcia H**	**30.48**	**263**	T	T	21 58 43.6	
	baz=86,slow=76,SNR=25						
NWAO	**Narrogin (SRO)**	**30.85**	**156**	P	**P**	**21 26 33.4**	**-1.1**
NWAO				pmax	pmax		
	comp=Z,27nm,1.4s						
NWAO	**Narrogin (SRO)**	**30.85**	**156**	P	**P**	**21 26 32.8**	**-1.7**
NWAO				IAmb	IAmb	21 26 36.4	
	comp=Z,27nm,1.4s						
NWAO	**Narrogin (SRO)**	**30.85**	**156**	P	**P**	**21 26 33.4**	**-1.1**
H01W3	**Cape Leeuwin H**	**31.53**	**162**	T	T	21 59 49.5	
	baz=340,slow=76,SNR=61						
H01W2	**Cape Leeuwin H**	**31.54**	**162**	T	T	21 59 47.5	
	baz=340,slow=76,SNR=49						
H01W1	**Cape Leeuwin H**	**31.54**	**162**	T	T	21 59 48.5	
	baz=340,slow=76,SNR=46						
SHL	**Shillong**	**32.19**	**341**	IAmb	IAmb	21 26 46.5	
	comp=Z,17nm,0.5s						
TPUB	**Ta-pu**	**32.91**	**31**	P	**P**	**21 26 53.0**	**+0.3**
TPUB				IAmb	IAmb	21 26 54.3	
	comp=Z,13nm,0.8s						
YULB	**Yu-li**	**33.33**	**32**	P	**P**	**21 26 56.3**	**-0.1**
SSLB	**Suanglung**	**33.48**	**31**	P	**P**	**21 26 58.2**	**+0.6**
WB0	**Warramunga Arr**	**33.91**	**119**	P	**P**	**21 27 01.9**	**+0.3**
WB0				IAmb	IAmb	21 27 03.4	
	comp=Z,14nm,0.6s						
WRA	**Warramunga Arr**	**33.93**	**119**	P	**P**	**21 27 02.0**	**+0.4**
	comp=Z,12nm,0.5s,baz=302,slow=8.9,SNR=147						
WRA				PcP	**PcP**	**21 29 39.7**	**+0.8**
	comp=Z,3.1nm,0.6s,baz=299,slow=2.0,SNR=6.5						
WRA				S	**S**	**21 32 17.8**	**-4.0**
	comp=Z,1.8nm,1.0s,baz=295,slow=15,SNR=4.6						
WRAB	**Tennant Creek**	**33.94**	**119**	*ce*P	**P**	**21 27 02.1**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WRAB	**Tennant Creek**	**33.94**	**119**	P	**P**	**21 27 01.3**	**-0.5**
WB2	**Warramunga Arr**	**33.94**	**119**	P	**P**	**21 27 01.8**	**+0.1**
WB2				IAmb	IAmb	21 27 04.1	
	comp=Z,15nm,0.6s						
WR0	**Warramunga Arr**	**34.11**	**119**	P	**P**	**21 27 03.2**	**-0.1**
WR0				IAmb	IAmb	21 27 05.1	
	comp=Z,14nm,0.5s						
NACB	**Ninganchiao**	**34.12**	**31**	P	**P**	**21 27 02.8**	**-0.4**
NACB				IAmb	IAmb	21 27 12.7	
	comp=Z,15nm,0.9s						
ODAN	**Odare**	**35.04**	**335**	*e*P	**P**	**21 27 11.2**	**-0.2**
	comp=Z,23nm,0.5s						
ODAN	**Odare**	**35.04**	**335**	*e*P	**PcP**	**21 29 43.9**	**+1.7**
	comp=Z,24nm,0.6s						
ASAR	**Alice Springs**	**35.10**	**125**	P	**P**	**21 27 12.9**	**+1.1**
	comp=Z,14nm,0.8s,baz=294,slow=7.7,SNR=175						
ASAR				PcP	**PcP**	**21 29 43.6**	**+1.4**
	comp=Z,5.7nm,0.8s,baz=304,slow=2.3,SNR=16						
ASAR				S	**S**	**21 32 38.6**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=297,slow=17,SNR=8.0						
ASAR				ScP	**ScP**	**21 33 23.3**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=298,slow=2.8,SNR=4.2						
ASAR				LR	LR	21 43 13.0	
	comp=Z,53nm,18.9s,baz=255,slow=39						
AS31	**Alice Springs**	**35.10**	**125**	P	**P**	**21 27 12.7**	**+0.9**
TAPN	**Taplejung**	**35.34**	**336**	*e*P	**P**	**21 27 14.1**	**0.0**
	comp=Z,52nm,0.8s						
TAPN	**Taplejung**	**35.34**	**336**	*e*P	**PcP**	**21 29 44.9**	**+1.7**
	comp=Z,8.6nm,0.6s						
RAMN	**Ramite**	**35.45**	**334**	*e*P	**P**	**21 27 15.1**	**+0.1**
	comp=Z,15nm,0.5s						
RAMN	**Ramite**	**35.45**	**334**	*e*P	**PcP**	**21 29 45.1**	**+1.6**
	comp=Z,19nm,0.7s						
ENH	**Enshi**	**35.55**	**10**	P	**P**	**21 27 15.2**	**-0.3**
ENH				IAmb	IAmb	21 27 16.9	
	comp=Z,9.8nm,0.7s						
CD2	**Chengdu**	**35.65**	**1**	P	**P**	**21 27 17.0**	**+0.7**
CD2				pmax	pmax		
	comp=Z,90nm,0.9s						
JIRN	**Jiri**	**36.25**	**334**	*e*P	**P**	**21 27 21.8**	**-0.1**
	comp=Z,81nm,1.0s						
JIRN	**Jiri**	**36.25**	**334**	*e*P	**PcP**	**21 29 47.3**	**+1.3**
	comp=Z,22nm,0.8s						
LSA	**Lhasa**	**36.27**	**342**	P	**P**	**21 27 21.8**	**-0.4**
LSA				pmax	pmax		
	comp=Z,57nm,1.3s						
LSA	**Lhasa**	**36.27**	**342**	P	**P**	**21 27 22.0**	**-0.2**
LSA				pmax	pmax		
	comp=Z,18nm,1.1s						
LSA	**Lhasa**	**36.27**	**342**	P	**P**	**21 27 22.0**	**-0.2**
LSA				IAmb	IAmb	21 27 23.0	
	comp=Z,18nm,1.1s						
PKI	**Pulchoki**	**36.52**	**333**	*e*P	**P**	**21 27 24.0**	**-0.2**
	comp=Z,15nm,0.7s						
PKIN	**Phulchoki**	**36.53**	**333**	*e*P	**P**	**21 27 24.0**	**-0.2**
	comp=Z,13nm,0.5s						
GUN	**Gumba**	**36.60**	**334**	*e*P	**P**	**21 27 24.9**	**0.0**
	comp=Z,61nm,0.5s						
GUN	**Gumba**	**36.60**	**334**	*e*P	**PcP**	**21 29 48.4**	**+1.4**
	comp=Z,25nm,0.7s						
DMN	**Daman**	**36.69**	**333**	*e*P	**P**	**21 27 25.5**	**0.0**
	comp=Z,27nm,0.9s						
DMN	**Daman**	**36.69**	**333**	*e*P	**PcP**	**21 29 48.5**	**+1.4**
	comp=Z,29nm,0.7s						
KKN	**Kakani**	**36.77**	**333**	*e*P	**P**	**21 27 25.8**	**-0.3**
	comp=Z,42nm,0.7s						
WHN	**Wuhan**	**36.91**	**16**	P	**P**	**21 27 26.8**	**-0.2**
GKN	**Gorkha**	**37.24**	**333**	*e*P	**P**	**21 27 29.8**	**-0.3**
	comp=Z,50nm,0.6s						
KOLN	**Koldanda**	**37.53**	**331**	*e*P	**P**	**21 27 33.1**	**+0.5**
	comp=Z,80nm,0.7s						
KOLN	**Koldanda**	**37.53**	**331**	*e*P	**PcP**	**21 29 50.6**	**+1.0**
	comp=Z,14nm,0.6s						
DANN	**Dangsing**	**37.94**	**332**	*e*P	**P**	**21 27 36.1**	**-0.1**
	comp=Z,142nm,0.7s						
DANN	**Dangsing**	**37.94**	**332**	*e*P	**PcP**	**21 29 51.9**	**+0.9**
	comp=Z,26nm,0.7s						
PYUN	**Piuthan**	**38.10**	**331**	*e*P	**P**	**21 27 37.7**	**+0.3**
	comp=Z,94nm,0.7s						
PYUN	**Piuthan**	**38.10**	**331**	*e*P	**PcP**	**21 29 52.2**	**+0.8**
	comp=Z,35nm,0.8s						
QIS	**Mount Isa**	**38.78**	**117**	P	**P**	**21 27 43.7**	**+0.7**
	baz=39,SNR=6.3						
XAN	**Xi'an**	**39.16**	**8**	P	**P**	**21 27 45.4**	**-0.6**
XAN				pmax	pmax		
	comp=Z,19nm,0.8s						
XAN	**Xi'an**	**39.16**	**8**	P	**P**	**21 27 45.8**	**-0.2**
XAN				pmax	pmax		
	comp=Z,17nm,0.9s						
XAN	**Xi'an**	**39.16**	**8**	P	**P**	**21 27 45.8**	**-0.2**
XAN				IAmb	IAmb	21 27 45.9	
	comp=Z,17nm,0.9s						
NJ2	**Nanjing**	**39.75**	**21**	*e*P	**P**	**21 27 51.8**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
COEN	**Coen**	**40.55**	**106**	P	**P**	**21 27 57.1**	**-0.7**
	baz=41,SNR=4.1						
COEN	**Coen**	**40.55**	**106**	P	**P**	**21 27 57.1**	**-0.7**
LZH	**Lanzhou**	**40.81**	**1**	*e*P	**P**	**21 28 00.1**	**+0.3**
LZH				pP	pP	21 28 20.4	+3.5
LZH				sP	sP	21 28 24.4	-0.4
LZH				PP	**PnPn**	**21 29 41.3**	**+1.4**
LZH				pmax	pmax		
	comp=Z,35nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,5.4s						
LZH				LR	LR		
	comp=Z,160nm,16.3s						
LZH				LR	LR		
	comp=Z,140nm,14.1s						
LZH				LR	LR		
	comp=Z,180nm,17.2s						
PMG	**Port Moresby**	**43.99**	**98**	LR	LR	21 49 30.8	
	comp=Z,56nm,18.1s,baz=234,slow=40						
PMG	**Port Moresby**	**43.99**	**98**‖ *e*P		**P**	**21 28 25.4**	**-0.4**
PMG				pmax	pmax		
	comp=Z,220nm,2.3s						
PMG	**Port Moresby**	**43.99**	**98**	P	**P**	**21 28 24.2**	**-1.6**
PMG				IAmb	IAmb	21 28 30.0	
	comp=Z,43nm,1.1s						
GTA	**Gaotai**	**44.22**	**356**	*e*P	**P**	**21 28 27.3**	**-0.1**
GTA				pmax	pmax		
	comp=Z,11nm,0.8s						
CTAO	**Charters Tower**	**44.65**	**114**	P	**P**	**21 28 31.1**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,33nm,0.8s						
CTAO	**Charters Tower**	**44.65**	**114**	P	**P**	**21 28 31.1**	**+0.1**
STKA	**Stephens Creek**	**44.96**	**131**	P	**P**	**21 28 34.9**	**+1.5**
	baz=45,SNR=51						
STKA	**Stephens Creek**	**44.96**	**131**	P	**P**	**21 28 34.8**	**+1.5**
	comp=Z,15nm,0.7s,baz=307,slow=7.8,SNR=42						
STKA				PcP	**PcP**	**21 30 15.2**	**+1.6**
	comp=Z,4.5nm,0.8s,baz=301,slow=8.0,SNR=2.2						
STKA	**Stephens Creek**	**44.96**	**131**	P	**P**	**21 28 33.4**	**+0.1**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
STKA	**Stephens Creek**	**44.96**	**131**	P	**P**	**21 28 33.4**	**+0.1**
JNU	**Nakatsue**	**46.15**	**33**	P	**P**	**21 28 42.1**	**-0.6**
	comp=Z,14nm,0.7s,baz=262,slow=2.9,SNR=10						
JNU	**Nakatsue**	**46.15**	**33**	IAmb	IAmb	21 28 45.9	
	comp=Z,17nm,0.8s						
HHC	**Hu-ho-hao-te**	**46.23**	**9**	*e*P	**P**	**21 28 44.8**	**+1.6**
HHC				pP	pP	21 28 56.3	-4.3
HHC				S	**S**	**21 35 28.8**	**+3.9**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,73nm,5.2s						
HHC				LR	LR		
	comp=Z,90nm,17.1s						
HHC				LR	LR		
	comp=Z,120nm,17.8s						
BJT	**Baijiatuan**	**46.34**	**14**	P	**P**	**21 28 43.4**	**-0.6**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJT	**Baijiatuan**	**46.34**	**14**	P	**P**	**21 28 43.4**	**-0.6**
BJT				IAmb	IAmb	21 28 44.7	
	comp=Z,10nm,0.7s						
BJI	**Beijing**	**46.36**	**14**	P	**P**	**21 28 44.0**	**-0.1**
BJI

KSH sP sP 21 29 40.4 -3.1
KSH PcP **PcP** **21 30 36.6 +2.2**
KSH S **S** **21 36 22.9 -6.2**
KSH SS **SS** **21 39 58.0 -6.7**
KSH pmax pmax
comp=Z,39nm,0.7s
KSH pmax pmax
comp=Z,200nm,4.0s
KSH LR LR
comp=Z,200nm,5.4s
KSH LR LR
comp=Z,96nm,5.1s
KSH LR LR
comp=Z,250nm,5.7s
INU Inuyama 51.24 36 P **P** **21 29 20.7 -0.9**
INU IAmb IAmb 21 29 23.8
comp=Z,20nm,1.2s
WSAR Wadi Sarin 51.59 305 P **P** **21 29 23.9 -0.5**
comp=Z,7.7nm,1.1s,baz=174,slow=11,SNR=2.4
SOCY Socotra 51.63 290 P **P** **21 29 25.4 +0.4**
TARG Taragay, Kyrgy 51.83 336 IAmb IAmb 21 29 27.4
comp=Z,11nm,1.0s
PRZ Przheval'sk 52.23 337 P **P** **21 29 29.8 +0.7**
PRZ pmax pmax
comp=Z,65nm,1.2s
PRZ Przheval'sk 52.23 337 P **P** **21 29 29.8 +0.7**
SONM Songino Array 52.63 3 P **P** **21 29 32.2 +0.3**
comp=Z,16nm,0.7s,baz=182,slow=9.4,SNR=100
SONM PcP **PcP** **21 30 41.4 +0.3**
comp=Z,7.5nm,0.8s,baz=190,slow=4.2,SNR=14
SONM LR LR 21 54 23.3
comp=Z,51nm,18.6s,baz=196,slow=39
ULN Ulaanbaatar 52.69 3*c i*P **P** **21 29 32.5 +0.1**
ULN pmax pmax
comp=Z,15nm,1.3s
ULN Ulaanbaatar 52.69 3 P **P** **21 29 33.0 +0.6**
ULN IAmb IAmb 21 29 33.6
comp=Z,11nm,1.0s
MAJO Matsushiro 52.76 36 P **P** **21 29 31.5 -1.5**
MAJO pmax pmax
comp=Z,14nm,0.9s
MAJO Matsushiro 52.76 36 P **P** **21 29 31.5 -1.5**
MAJO IAmb IAmb 21 29 32.2
comp=Z,14nm,0.9s
MAT Matsushiro 52.76 36 P **P** **21 29 31.4 -1.6**
MJAR Matsushiro Arr 52.76 36 P **P** **21 29 31.6 -1.3**
comp=Z,10nm,0.8s,baz=221,slow=8.0,SNR=26
MJAR LR LR 21 52 32.0
comp=Z,16nm,19.0s,baz=30,slow=37
MJB9 Matsu-Tunnel 52.76 36 P **P** **21 29 31.2 -1.8**
GAR Garm 53.15 328 IAmb IAmb 21 29 37.3
comp=Z,13nm,0.6s
KZA Kyzart 53.18 334 P **P** **21 29 36.7 +0.2**
SNR=11
CHGR Chuyangaron 53.52 327 IAmb IAmb 21 29 46.5
comp=Z,26nm,1.2s
CHGR PcP **PcP** **21 30 46.6 +2.0**
ARSB Arslanbob 53.60 332 PcP **PcP** **21 30 45.4 +0.4**
UCH Uchtor 53.62 334 P **P** **21 29 39.9 +0.2**
SNR=9.7
BTK Batken 53.68 329 IAmb IAmb 21 29 40.9
comp=Z,9.1nm,0.6s
BTK PcP **PcP** **21 30 45.9 +0.7**
TKM2 Tokmak 2 53.73 335 P **P** **21 29 40.2 0.0**
SNR=51
MSHR Mys Shultsa 53.75 26⇑*i*P **P** **21 29 39.4 -0.6**
MSHR pmax pmax
comp=Z,6.0nm,0.7s
KBK Karagaybulak 53.78 335 P **P** **21 29 41.0 +0.5**
SNR=27
AML Almayashu 53.91 333 P **P** **21 29 41.8 0.0**
SNR=14
AAK Ala-Archa 53.96 334 P **P** **21 29 42.0 +0.1**
comp=Z,4.6nm,0.6s,baz=139,slow=6.3,SNR=17
AAK PcP **PcP** **21 30 48.0 +1.7**
comp=Z,9.8nm,0.8s,baz=157,slow=5.8,SNR=9.1
AAK Ala-Archa 53.96 334 P **P** **21 29 41.7 -0.1**
SNR=7.9
AAK Ala-Archa 53.96 334*c i*P **P** **21 29 41.9 +0.1**
AAK pmax pmax
comp=Z,4.0nm,0.8s
AAK Ala-Archa 53.96 334 P **P** **21 29 41.9 +0.1**
AAK PcP **PcP** **21 30 47.5 +1.2**
FRU1 Bishkek 54.05 334 P **P** **21 29 42.0 -0.3**
FRU1 pmax pmax
comp=Z,19nm,0.9s
FRU1 Bishkek 54.05 334 P **P** **21 29 42.0 -0.3**
FRU1 IAmb IAmb 21 29 43.3
comp=Z,19nm,0.8s
CHMS Chumysh 54.15 335 P **P** **21 29 42.7 -0.3**
SNR=5.6
EKS2 Erkin-Say 54.30 334 P **P** **21 29 44.6 +0.4**
SNR=32
USP Ospenovka 54.47 335 P **P** **21 29 45.2 -0.2**
SNR=7.2
MK31 Makanchi Array 54.68 343 IAmb IAmb 21 29 47.2
comp=Z,11nm,0.8s
MKAR Makanchi Array 54.68 343 P **P** **21 29 46.2 -0.5**
comp=Z,15nm,0.7s,baz=144,slow=8.1,SNR=106
MAKZ Makanchi 54.79 342 P **P** **21 29 47.1 -0.5**
MAKZ pmax pmax
comp=Z,8.0nm,0.8s
MAKZ Makanchi 54.79 342 P **P** **21 29 47.1 -0.5**
MAKZ IAmb IAmb 21 29 49.4
comp=Z,7.9nm,0.8s
HRA Herat 54.84 319 P **P** **21 29 47.3 -1.1**
ZAK Zakamensk 55.09 0 *e*P **P** **21 29 49.7 -0.1**
ZAK pmax pmax
comp=Z,5.0nm,0.9s
USRK Ussuriysk Ar. 55.41 25 P **P** **21 29 51.7 -0.4**
comp=Z,22nm,0.7s,baz=216,slow=5.6,SNR=104
DGZ Jazzator, Alta 56.07 348*c i*P **P** **21 29 56.8 -0.1**
DGZ pmax pmax
comp=Z,29nm,0.8s
TLY Talaya 56.40 0 P **P** **21 30 00.1 +1.1**
comp=Z,6.7nm,0.6s,baz=210,slow=4.7,SNR=3.8
TLY Talaya 56.40 0*ce*P **P** **21 29 59.7 +0.7**
TLY pmax pmax
comp=Z,11nm,0.9s
TLY Talaya 56.40 0 P **P** **21 29 59.1 +0.1**
TLY IAmb IAmb 21 30 01.1
comp=Z,9.9nm,0.9s
MOY Mondy 56.41 358 *e*P **P** **21 29 59.3 +0.1**
KURBB Kurchatov Arra 59.22 342 P **P** **21 30 18.4 -0.4**
comp=Z,7.2nm,0.6s,baz=159,slow=6.6,SNR=28
KURBB PcP **PcP** **21 31 06.8 +0.4**
comp=Z,4.6nm,0.7s,baz=156,slow=3.5,SNR=10
KURK Kurchatov 59.28 342*c i*P **P** **21 30 18.5 -0.7**
KURK pmax pmax
comp=Z,22nm,1.0s
KURK Kurchatov 59.28 342 P **P** **21 30 18.8 -0.3**
KLR Kul'dur 59.45 21 P **P** **21 30 19.7 -0.8**
comp=Z,6.8nm,0.6s,baz=244,slow=5.1,SNR=24
KLR Kul'dur 59.45 21*ce*P **P** **21 30 19.6 -0.8**
KLR pmax pmax
comp=Z,12nm,0.9s
GEYT Alibeck 59.62 320 P **P** **21 30 22.1 +0.3**
comp=Z,8.2nm,0.6s,baz=141,slow=7.6,SNR=23
GYA0B ALIBECK ARRAY 59.62 320 P **P** **21 30 21.7 -0.1**
GYA0B IAmb IAmb 21 30 23.1
comp=Z,16nm,1.0s
ZALV Zalesovo Beam 60.62 348 P **P** **21 30 27.6 -0.7**
comp=Z,15nm,0.4s,baz=167,slow=5.0,SNR=87
ZEA Zeya 61.90 16 *e*P **P** **21 30 36.9 0.0**
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=E,30nm,1.0s
ZEA pmax pmax
comp=Z,35nm,1.0s
YSS Yuzh-Sakhalins 62.44 30 *e*P **P** **21 30 40.3 -0.4**
YSS *e* 21 30 54.6
YSS pmax pmax
comp=Z,70nm,1.3s
RAYN Ar Rayn 62.79 299 P **P** **21 30 44.9 +1.3**
RAYN pmax pmax
comp=Z,4.0nm,0.9s
RAYN Ar Rayn 62.79 299 P **P** **21 30 44.9 +1.3**
BOD Bodaibo 63.17 7 *e*P **P** **21 30 44.7 -0.7**
BOD pmax pmax
comp=Z,10.0nm,1.1s
DZM Mont Dzumac 63.55 112 P **P** **21 30 49.4 +0.7**
BRVK Borovoye 64.04 339*c i*P **P** **21 30 50.3 -0.9**
BRVK pmax pmax
comp=Z,9.0nm,0.6s
BRVK Borovoye 64.04 339 P **P** **21 30 50.5 -0.7**

BRVK IAmb IAmb 21 30 51.2
comp=Z,12nm,0.7s
AKTO Aktyubinsk 67.37 331 P **P** **21 31 11.9 -0.8**
comp=Z,1.5nm,0.3s,baz=140,slow=4.3,SNR=9.5
AKT Akhty 68.29 318 *e*P **P** **21 31 19.7 +0.9**
AKT *e**PP **pP** **21 31 38.6 +1.6**
AKT *e* 21 31 44.7
AKT pmax pmax
comp=Z,13nm,0.6s
YAK Yakutsk 69.85 13 P **P** **21 31 26.5 -1.4**
comp=Z,14nm,0.5s,baz=226,slow=1.9,SNR=7.7
YAK Yakutsk 69.85 13 P **P** **21 31 26.6 -1.2**
YAK pmax pmax
comp=Z,24nm,0.8s
YAK Yakutsk 69.85 13 P **P** **21 31 26.6 -1.2**
YAK IAmb IAmb 21 31 27.9
comp=Z,24nm,0.8s
GROC Groznyy 70.36 319 *e*P **P** **21 31 32.1 +0.7**
GROC *e**PP **pP** **21 31 51.0 +1.4**
GROC *e*S **S** **21 40 38.7 +0.1**
GROC pmax pmax
comp=Z,20nm,0.8s
TBLG Delisi 70.40 317 P **P** **21 31 31.8 0.0**
TBLG pmax pmax
comp=Z,15nm,1.0s
TBLG Delisi 70.40 317 P **P** **21 31 31.8 0.0**
TBLG IAmb IAmb 21 31 33.8
comp=Z,15nm,1.0s
SVE Sverdlovsk 70.54 337 *e*P **P** **21 31 32.3 +0.1**
SVE pmax pmax
comp=Z,18nm,0.9s
ARU Arti 71.09 336 P **P** **21 31 35.3 -0.3**
comp=Z,2.1nm,0.6s,baz=142,slow=2.7,SNR=14
ARU Arti 71.09 336*c i*P **P** **21 31 35.2 -0.3**
ARU S **S** **21 40 48.6 +2.0**
ARU SS **SS** **21 45 25.2 +3.7**
ARU pmax pmax
comp=Z,19nm,1.2s
ARU Arti 71.09 336 P **P** **21 31 34.7 -0.9**
ARU IAmb IAmb 21 31 36.3
comp=Z,18nm,1.1s
ZEI Tsey 71.42 318 *e*P **P** **21 31 37.6 -0.5**
ZEI pmax pmax
comp=Z,8.0nm,0.7s
NCK Nalchik 71.93 319⇑*e*P **P** **21 31 41.8 +0.9**
NCK pmax pmax
comp=Z,13nm,0.7s
NEY Neytrino 72.40 318⇓*e*P **P** **21 31 46.8 +2.8**
NEY pmax pmax
comp=Z,3.0nm,0.7s
KBZ Khabaz 72.49 319 P **P** **21 31 45.0 +0.8**
comp=Z,11nm,0.8s,baz=112,slow=4.4,SNR=31
KBZ Khabaz 72.49 319*c i*P **P** **21 31 44.7 +0.5**
KIV Kislovodsk 72.72 319*ce*P **P** **21 31 46.0 +0.3**
KIV pmax pmax
comp=Z,6.0nm,0.7s
KIV Kislovodsk 72.72 319 P **P** **21 31 45.7 0.0**
PETK Petropavlovsk- 73.79 31 P **P** **21 31 50.5 -1.2**
comp=Z,4.3nm,0.9s,baz=243,slow=4.0,SNR=4.3
GAZ Gaziantep 74.06 311 P **P** **21 31 54.2 +0.5**
GAZ IAmb IAmb 21 31 56.0
comp=Z,12nm,0.8s
BFZ Birch Farm 74.09 131 P **P** **21 31 54.7 +1.0**
BKZ Black Stump Fm 74.09 129 P **P** **21 31 53.4 -0.5**
BKZ IAmb IAmb 21 31 55.2
comp=Z,16nm,0.7s
URZ Urewera 74.47 128 P **P** **21 31 56.1 +0.1**
URZ IAmb IAmb 21 32 06.1
comp=Z,35nm,1.4s
MA2 Magadan 74.49 23 P **P** **21 31 53.6 -2.0**
comp=Z,4.0nm,0.4s,baz=162,slow=5.7,SNR=4.3
MA2 Magadan 74.49 23*de*P **P** **21 31 55.6 0.0**
MA2 pmax pmax
comp=Z,3.0nm,0.5s
SOC Sochi 74.54 318 *e*P **P** **21 31 55.0 -1.3**
SOC *e* 21 34 41.7
SOC *e*PPP PPP 21 36 27.0
SOC *e*S **S** **21 41 25.3 -1.0**
SOC *e*SS **SS** **21 46 17.7 +3.1**
SOC pmax pmax
comp=Z,11nm,0.7s
NRIK Noril'sk 74.87 354 P **P** **21 31 56.8 -0.9**
comp=Z,3.4nm,0.4s,baz=158,slow=3.8,SNR=7.4
SYO Syowa Base 76.10 199⇓*e*pP pP 21 32 22.2 -0.6
SYO Syowa Base 76.10 199⇓*e*sP sP 21 32 29.5 -0.8
CSS Mathiatis 76.39 308 P **P** **21 32 07.2 +0.1**
CSS IAmb IAmb 21 32 09.5
comp=Z,17nm,0.9s
VRH Novokhopyorsk 76.43 325 *e*P **P** **21 32 06.3 -0.6**
VRH pmax pmax
comp=Z,20nm,0.6s
BOSA Boshof 76.92 242 LR LR 22 00 07.8
comp=Z,106nm,18.1s,baz=267,slow=31
SEY Seymchan 77.24 21 P **P** **21 32 10.6 -0.6**
comp=Z,4.2nm,0.6s,baz=231,slow=7.7,SNR=22
SEY Seymchan 77.24 21⇓*i*P **P** **21 32 11.1 -0.1**
BR131 Keskin Array S 77.52 312 P **P** **21 32 13.2 -0.3**
BR131 pmax pmax
comp=Z,9.0nm,0.8s
BR131 Keskin Array S 77.52 312 P **P** **21 32 13.2 -0.3**
BR131 IAmb IAmb 21 32 14.5
comp=Z,9.5nm,0.8s
BRTR Keskin Array B 77.52 312 P **P** **21 32 13.6 +0.1**
comp=Z,7.3nm,0.8s,baz=135,slow=7.1,SNR=63
VORD Divnogorie 77.72 325 *e*P **P** **21 32 12.7 -1.5**
VORD pmax pmax
comp=Z,8.0nm,0.5s
VSR Storozhevoye 77.90 325 *e*P **P** **21 32 13.9 -1.2**
VSR pmax pmax
comp=Z,20nm,0.6s
BZK Bozkurt 77.93 315⇓P **P** **21 32 16.7 +1.2**
TIXI Tiksi 78.29 8 P **P** **21 32 15.3 -1.6**
comp=Z,2.3nm,0.4s,baz=178,slow=2.3,SNR=20
TIXI Tiksi 78.29 8 *i* P **P** **21 32 14.9 -2.0**
TIXI pmax pmax
comp=Z,2.0nm,0.5s
LPSR Galich'ya Gora 78.59 326 *e*P **P** **21 32 18.5 -0.4**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
VNDA Vanda 78.72 169 P **P** **21 32 20.6 +1.3**
comp=Z,1.3nm,1.1s,baz=268,slow=5.5,SNR=5.2
SIM Simferopol' 78.79 318 *e*P **P** **21 32 21.1 +0.9**
SIM pmax pmax
comp=Z,18nm,0.8s
MDUB Mudurnu 79.52 313 P **P** **21 32 24.5 0.0**
ELL Elmali 79.54 309 P **P** **21 32 24.6 -0.1**
ELL pmax pmax
comp=Z,20nm,0.7s
ELL Elmali 79.54 309 P **P** **21 32 24.6 -0.1**
ELL IAmb IAmb 21 32 27.0
comp=Z,20nm,0.7s
PRGR Permogore 79.55 336 *e*P **P** **21 32 24.1 +0.1**
PRGR pmax pmax
comp=Z,18nm,0.8s
OBN Obninsk 80.86 328 P **P** **21 32 32.4 +1.2**
OBN Obninsk 80.86 328*ce*P **P** **21 32 31.4 +0.2**
OBN pmax pmax
comp=Z,8.0nm,0.6s
OBN Obninsk 80.86 328 P **P** **21 32 31.5 +0.3**
OBN IAmb IAmb 21 32 32.7
comp=Z,20nm,0.8s
MANT Manisa 81.00 310 P **P** **21 32 31.9 -0.7**
KLMR Klimovskoe 81.77 334 *e*P **P** **21 32 33.7 -2.1**
KLMR pmax pmax
comp=Z,36nm,1.3s
KLMR Klimovskoe 81.77 334 *e*P **P** **21 32 33.8 -2.1**
KLMR AMP 21 32 37.9
comp=Z,36nm,1.3s
JURR Jurilovca 82.30 316 P **P** **21 32 40.3 +1.3**
TIRR Tirgusor 82.55 316⇑P **P** **21 32 41.7 +1.4**
TIRR Tirgusor 82.55 316⇑P **P** **21 32 41.7 +1.4**
TLBR Topalu 82.82 316 P **P** **21 32 42.7 +1.0**
MILM Milestii Mici 82.90 318⇑P **P** **21 32 42.7 +0.6**
CFR Carcaliu 82.92 317⇑P **P** **21 32 43.1 +0.9**
CFR Carcaliu 82.92 317⇑P **P** **21 32 43.1 +0.9**
HARR Harsova 82.94 316⇑P **P** **21 32 43.3 +1.0**
HARR Harsova 82.94 316⇑P **P** **21 32 43.3 +1.0**
VARL Varlezi 83.29 317 P **P** **21 32 46.1 +2.0**
ALN Alexandroupoli 83.43 312 P **P** **21 32 44.9 -0.1**
ALN pmax pmax
comp=Z,19nm,1.5s
ALN Alexandroupoli 83.43 312 P **P** **21 32 44.9 -0.1**
ALN IAmb IAmb 21 32 58.4
comp=Z,19nm,1.5s
VASR Vaslui 83.51 318 P **P** **21 32 45.5 +0.2**

SORM Soroca 83.51 319⇑P **P** **21 32 46.0 +0.8**
SORM Soroca 83.51 319⇑P **P** **21 32 46.0 +0.8**
AKASG Malin Array Be 83.64 322 P **P** **21 32 45.4 -0.4**
comp=Z,23nm,0.4s,baz=95,slow=5.7,SNR=60
AKBB Malin Array Si 83.64 322 P **P** **21 32 44.8 -1.0**
AKBB pmax pmax
comp=Z,8.0nm,0.9s
AKBB Malin Array Si 83.64 322 P **P** **21 32 44.8 -1.0**
RAZG Razgrad 83.67 315 P **P** **21 32 47.1 +0.9**
TMCR Tamitsa 83.81 336 *e*P **P** **21 32 46.1 -0.3**
TMCR pmax pmax
comp=Z,28nm,0.8s
ELND Elena 83.98 314⇑P **P** **21 32 49.0 +1.2**
VRI Vrincioaia 84.04 317⇑P **P** **21 32 49.4 +1.4**
VRI Vrincioaia 84.04 317⇑P **P** **21 32 49.4 +1.4**
PLOR Plostina 84.09 317⇓P **P** **21 32 50.1 +1.8**
PLOR Plostina 84.09 317⇓P **P** **21 32 50.1 +1.8**
TESR Tescani 84.24 318⇑P **P** **21 32 50.4 +1.4**
MLR Muntele Rosu 84.49 316⇓P **P** **21 32 52.2 +1.7**
MLR Muntele Rosu 84.49 316⇓P **P** **21 32 52.2 +1.7**
MLR Muntele Rosu 84.49 316 P **P** **21 32 50.1 -0.4**
MLR IAmb IAmb 21 32 52.9
comp=Z,20nm,1.1s
BIZ Bicaz 84.70 318⇑P **P** **21 32 52.8 +1.4**
PRAR RASCA 84.72 318⇑P **P** **21 32 53.0 +1.6**
DOPR Dopca 84.97 317⇑P **P** **21 32 54.8 +2.0**
PLVB Pleven 84.98 314⇓P **P** **21 32 54.1 +1.3**
ARR Arges 85.37 316⇑P **P** **21 32 55.7 +1.0**
BURAR Bucovina Array 85.44 318⇓P **P** **21 32 57.2 +2.1**
BURAR Bucovina Array 85.44 318⇓P **P** **21 32 57.2 +2.1**
BUR08 Bucovina Ar. S 85.46 318 IAmb IAmb 21 32 58.0
comp=Z,9.9nm,0.8s
VTS Vitosha 85.83 313⇓P **P** **21 32 58.5 +1.3**
VTS Vitosha 85.83 313⇓P **P** **21 32 58.5 +1.3**
VTS Vitosha 85.83 313 P **P** **21 32 56.9 -0.3**
VTS IAmb IAmb 21 32 59.1
comp=Z,6.4nm,0.8s
AGG Agios Georgios 85.87 310 P **P** **21 32 56.8 -0.6**
AGG pmax pmax
comp=Z,12nm,1.2s
AGG Agios Georgios 85.87 310 P **P** **21 32 56.8 -0.6**
AGG IAmb IAmb 21 33 08.4
comp=Z,12nm,1.2s
ITM Ithomi 85.89 308 P **P** **21 32 57.5 0.0**
ARCR ARCALIA 85.91 318⇑P **P** **21 32 59.3 +2.0**
LIT Litokhoron 85.94 311 P **P** **21 32 57.3 -0.4**
LIT pmax pmax
comp=Z,38nm,1.2s
LIT Litokhoron 85.94 311 P **P** **21 32 57.2 -0.4**
CJR Cluj-Napoca 86.34 317⇓P **P** **21 33 01.3 +1.8**
CJR Cluj-Napoca 86.34 317⇓P **P** **21 33 01.3 +1.8**
LVZ Lovozero 86.57 339 P **P** **21 32 59.7 -0.5**
LVZ pmax pmax
comp=Z,24nm,1.1s
LVZ Lovozero 86.57 339 P **P** **21 32 59.7 -0.5**
IIGN Ignalina 86.57 326 *e*P **P** **21 33 02.1 +1.7**
BMR Baia Mare 86.59 318⇓P **P** **21 33 02.8 +2.2**
BMR Baia Mare 86.59 318⇓P **P** **21 33 02.8 +2.2**
IZAR Zarasai 86.65 327 *e*P **P** **21 33 02.4 +1.7**
DEV Deva 86.66 316⇑P **P** **21 33 03.1 +2.1**
DEV Deva 86.66 316⇑P **P** **21 33 03.1 +2.1**
LVV L'vov 86.67 320 *e*P **P** **21 33 01.3 +0.3**
ISAL Salakas 86.68 326 *e*P **P** **21 33 02.4 +1.5**
FNA Florina 86.89 311 P **P** **21 33 00.1 -2.2**
FNA pmax pmax
comp=Z,7.0nm,1.3s
FNA Florina 86.89 311 P **P** **21 33 00.1 -2.2**
VSU Vasula 87.05 329 *e*P **P** **21 33 03.5 +0.9**
VSU Vasula 87.05 329*c i*P **P** **21 33 03.3 +0.7**
VSU pmax pmax
comp=Z,58nm,0.8s
TRPA Tarpa 87.31 319⇑P **P** **21 33 05.5 +1.3**
BZS Buzias 87.50 316⇓P **P** **21 33 06.4 +1.3**
BZS Buzias 87.50 316⇓P **P** **21 33 06.4 +1.3**
UZH Uzhgorod 87.56 319 *e*P P 21 33 10.8 +5.5
UZH *i* 21 33 26.8
SIRR Siria 87.58 317⇓P **P** **21 33 07.0 +1.5**
KOLS Kolonicke sedl 87.63 319 *e*P **P** **21 33 07.5 +1.8**
KOLS pmax pmax
comp=Z,19nm,0.9s
KOLS Kolonicke sedl 87.63 319 *e*P **P** **21 33 07.5 +1.8**
PABE Paberze 87.86 326 *e*P **P** **21 33 07.5 +1.0**
ADK Adak 87.87 38 P **P** **21 33 05.7 -1.0**
ADK pmax pmax
comp=Z,19nm,1.1s
ADK Adak 87.87 38 P **P** **21 33 05.7 -1.0**
SUW Suwalki 88.01 324 P **P** **21 33 07.0 -0.3**
SUW pmax pmax
comp=Z,46nm,0.9s
SUW Suwalki 88.01 324 P **P** **21 33 07.0 -0.3**
FIA1 FINESS Array S 88.10 332 P **P** **21 33 07.8 +0.2**
FINES FINESS Array B 88.10 332 P **P** **21 33 08.2 +0.7**
comp=Z,10.0nm,0.6s,baz=111,slow=5.6,SNR=87
FINES FINESS Array B 88.10 332 *i* P **P** **21 33 08.1 +0.5**
FINES pmax pmax
comp=Z,11nm,0.6s
PDG Podgorica 88.70 313 P **P** **21 33 10.6 -0.3**
PDG IAmb IAmb 21 33 27.2
comp=Z,16nm,1.2s
PBUR Paburge 89.09 326 *e*P P 21 33 07.4 -5.0
KEV Kevo 89.79 340 P **P** **21 33 14.7 -0.6**
KEV pmax pmax
comp=Z,19nm,1.2s
KEV Kevo 89.79 340 P **P** **21 33 14.7 -0.6**
VYHS Vyhne 89.81 319 *e*P **P** **21 33 16.9 +0.9**
VYHS pmax pmax
comp=Z,7.0nm,1.3s
VYHS Vyhne 89.81 319 *e*P **P** **21 33 16.8 +0.8**
KLNR Kaliningrad 89.83 325⇑*e*P **P** **21 33 17.4 +1.6**
KLNR pmax pmax
comp=Z,67nm,0.7s
ARCES ARCESS Array B 90.24 340 P **P** **21 33 17.7 +0.2**
comp=Z,7.5nm,0.8s,baz=97,slow=5.5,SNR=22
ARE0 ARCESS Array S 90.24 340 P **P** **21 33 17.6 +0.1**
OKC Ostrava-Krasne 90.43 320 *e*P **P** **21 33 20.6 +1.8**
OKC Ostrava-Krasne 90.43 320 *e*P **P** **21 33 20.6 +1.8**
JAVC Velka Javorina 90.62 319 *e*P **P** **21 33 22.2 +2.4**
MORC Moravsky Berou 90.81 320 *e*P **P** **21 33 22.4 +1.8**
MORC Moravsky Berou 90.81 320 P **P** **21 33 20.4 -0.2**
MORC pmax pmax
comp=Z,7.0nm,0.8s
MORC Moravsky Berou 90.81 320 P **P** **21 33 20.4 -0.2**
MORC IAmb IAmb 21 33 23.1
comp=Z,6.7nm,0.8s
KRLC Kraliky 91.33 320 *e*P **P** **21 33 20.2 -2.9**
KRLC Kraliky 91.33 320 *e*P **P** **21 33 20.2 -2.9**
DPC Dobruska-Polom 91.65 320 *e*P **P** **21 33 26.3 +1.8**
DPC Dobruska-Polom 91.65 320 *e*P **P** **21 33 26.3 +1.8**
OSTC Ostas 91.74 320 *e*P **P** **21 33 26.3 +1.4**
CHVC Chvalec 91.85 320 *e*P **P** **21 33 26.3 +0.9**
SOKA Soboth 92.17 316 *e*PcP **P** **21 33 28.1 +1.0**
comp=Z,4.7nm,0.9s
OBKA Obir 92.49 316 *i* PcP **P** **21 33 28.5 0.0**
comp=Z,6.1nm,1.2s
PRU Pruhonice 92.76 320 *e*P **P** **21 33 30.9 +1.3**
PRU Pruhonice 92.76 320 *e*P **P** **21 33 30.9 +1.3**
BRG Berggiesshubel 93.21 321 *e*P **P** **21 33 32.7 +1.1**
comp=Z,4.2nm,0.7s
BRG Berggiesshubel 93.21 321 *e*P **P** **21 33 32.7 +1.1**
BRG pmax pmax
comp=Z,4.0nm,0.7s
GERES GERESS Array B 93.23 319 P **P** **21 33 32.7 +0.8**
comp=Z,1.4nm,0.7s,baz=85,slow=2.8,SNR=8.7
KHC Kasperske Hory 93.33 319⇓*e*P **P** **21 33 32.7 +0.5**
KHC Kasperske Hory 93.33 319 *e*P **P** **21 33 32.8 +0.5**
CLL Collm 93.83 321 *e*P **P** **21 33 36.0 +1.5**
CLL Collm 93.83 321 *e*P **P** **21 33 36.0 +1.5**
WTTA Wattenberg 94.53 317 *i* PcP **P** **21 33 38.8 +0.7**
comp=Z,5.5nm,1.2s
SQTA Sankt Quirin 94.82 317 *e*PcP **P** **21 33 39.6 +0.3**
comp=Z,5.2nm,1.5s
NC405 NORSAR Array S 94.92 331 P **P** **21 33 39.9 +0.6**
NC602 NORSAR Array S 95.00 330 P **P** **21 33 39.8 +0.2**
NC602 IAmb IAmb 21 33 41.1
comp=Z,8.1nm,0.9s
RETA Reutte 95.13 317 *e*PcP **P** **21 33 41.1 +0.4**
comp=Z,2.1nm,0.8s
NB2 NORSAR Subarra 95.16 331 P **P** **21 33 40.9 +0.5**
comp=Z,1.1nm,0.7s,baz=90,slow=4.6
NOA NORSAR Array B 95.16 331 P **P** **21 33 39.9 -0.5**
comp=Z,1.4nm,0.7s,baz=95,slow=4.9,SNR=7.9
YKA Yellowknife Ar 116.23 18 PKP **PKPdf** **21 38 59.7 -0.3**
comp=Z,0.6nm,0.8s,baz=342,slow=1.9,SNR=8.6

I03D	Drain, OR	123.88	39	P		PKiKP	21 39 16.8	+1.3
	baz=300							
K02D	Willamette Mer	124.17	40	P		PKiKP	21 39 17.3	+1.0
	baz=299							
I04A	Tendick Farm,	124.42	39	P		PKiKP	21 39 17.7	+1.0
	baz=301							
KHMM	Horse Mountain	124.98	42			PKiKP	21 39 18.7	+0.6
YBH	Yreka Blue Hor	125.25	41	PKP		PKiKP	21 39 19.7	+1.3
	comp=Z,1.0nm,0.6s,baz=14,slow=5.7,SNR=2.3							
L04D	Klamath Falls	125.28	40	P		PKiKP	21 39 19.4	+0.8
	baz=300							
M02C	Callahan	125.32	41	P		PKiKP	21 39 20.0	+1.4
	baz=299							
J05D	Fort Rock, OR	125.41	39	P		PKiKP	21 39 20.4	+1.6
	baz=302							
O02D	Mt. Diablo Mer	125.94	43	P		PKiKP	21 39 21.3	+1.4
	baz=298							
F10A	Beach Ranch, E	126.27	34			PKPdf	21 39 19.6	-0.4
O03E	Paynes Creek	126.55	42	P		PKiKP	21 39 21.3	+0.2
	baz=299							
NVAR	Mina Array Bea	129.83	42	PKP		PKiKP	21 39 28.9	+1.0
	comp=Z,0.9nm,0.6s,baz=308,slow=2.4,SNR=7.6							
MPMC	Manual Prospec	131.59	45	P		PKiKP	21 39 32.2	+0.7
	baz=300							
R11A	Troy Canyon, C	131.68	41	P		PKiKP	21 39 32.5	+0.9
	baz=304							
PDAR	Pinedale Array	132.53	33	PKP		PKPdf	21 39 32.5	+0.4
	comp=Z,0.4nm,0.4s,baz=168,slow=1.5,SNR=6.4							
GMRC	Granite Mounta	133.53	45	P		PKiKP	21 39 36.5	+1.1
	baz=301							
T35A	Sooner Cattle	143.48	27	PKPdf		PKPab	21 39 49.0	+0.5
CPUP	Villa Florida	143.55	211	PKhKP		PKPab	21 39 49.8	+0.8
	comp=Z,1.5nm,0.7s,baz=105,slow=7.9,SNR=2.7							
R40A	Maddies Statio	144.00	21	PKPdf		PKPab	21 39 50.3	0.0
WMOK	Wichita Mounta	144.12	31	P		PKPab	21 39 51.1	+0.1
	baz=321							
N59A	State Game Lan	144.16	358	P		PKPbc	21 39 51.9	+0.5
	baz=2.1							
O50A	Cable	144.44	9	P		PKPbc	21 39 52.5	+0.3
	baz=349							
ACSO	Alum Creek Sta	144.44	8	P		PKPbc	21 39 52.2	0.0
	baz=350							
CCM	Cathedral Cave	144.56	20	PKIKP		PKPab	21 39 52.2	-0.2
CCM	Cathedral Cave	144.56	20	P		PKPab	21 39 52.3	-0.2
	baz=335							
CCM	Cathedral Cave	144.56	20			PKPab	21 39 52.2	-0.2
O51A	Pataskala	144.58	7	P		PKPab	21 39 52.3	-0.2
	baz=350							
O53A	New Philadelph	144.63	6	P		PKPab	21 39 52.7	0.0
	baz=353							
TUL1	Leonard	144.64	27	P		PKPbc	21 39 53.0	0.0
	baz=326							
CO01	Juntas del Tor	144.67	190			PKPdf	21 39 55.1	+0.4
O52A	Adamsville	144.70	6	P		PKPab	21 39 52.7	-0.3
	baz=352							
O59A	Robesonia	144.77	359	P		PKPab	21 39 53.3	+0.1
	baz=1.4							
O54A	Avella	144.77	5	P		PKPab	21 39 53.1	-0.1
	baz=354							
BDFB	Brasilia	144.78	234	PKP		PKPdf	21 39 56.0	+1.0
	comp=Z,6.1nm,0.6s,baz=136,slow=3.6,SNR=10							
BDFB	Brasilia	144.78	234	PKIKP		PKPdf	21 39 54.7	-0.3
BDFB	Brasilia	144.78	234			PKPdf	21 39 54.7	-0.3
O56A	Blue Knob Stat	144.79	2	P		PKPab	21 39 53.3	-0.1
	baz=357							
P49A	Miami Univ. Ec	144.85	10	P		PKPab	21 39 53.2	-0.3
	baz=347							
P50A	Jamestown	144.93	9	P		PKPab	21 39 53.4	-0.4
	baz=348							
O58A	Lewisberry	144.97	360	P		PKPab	21 39 53.5	-0.4
	baz=0.2							
TX31	Lajitas Ar. Si	144.98	43			PKPdf	21 39 55.6	+0.6
TX32	Lajitas Array	144.98	43			PKPdf	21 39 55.5	+0.5
TXAR	Lajitas Array	144.98	43	PKP		PKPdf	21 39 55.4	+0.3
	comp=Z,10nm,0.7s,baz=280,slow=1.4,SNR=116							
MVL	Millersville	145.09	359			PKPdf	21 39 54.5	-0.2
P52A	Corning	145.14	7	P		PKPbc	21 39 53.8	-0.6
	baz=351							
P51A	Williamsport	145.17	8	P		PKPbc	21 39 53.9	-0.7
	baz=350							
ABTX	Abilene, Hawle	145.25	35	P		PKPdf	21 39 55.4	+0.1
	baz=318							
P60A	Greenville	145.26	358	P		PKPbc	21 39 54.6	-0.3
	baz=2.4							
MCWV	Mont Chateau	145.33	4	P		PKPdf	21 39 55.2	0.0
	baz=355							
P54A	Burton	145.34	5	P		PKPdf	21 39 55.2	0.0
	baz=354							
P53A	Whipple	145.37	6	P		PKPbc	21 39 54.9	-0.3
	baz=352							
P59A	Jarrettsville	145.48	359	P		PKPdf	21 39 55.4	0.0
	baz=1.0							
P55A	Reedsville	145.49	4	P		PKPdf	21 39 55.4	-0.1
	baz=355							
U40A	Yellville	145.49	23	P		PKPdf	21 39 55.4	-0.2
	baz=331							
P56A	Dayton Farm, R	145.54	3	P		PKPdf	21 39 55.6	0.0
	baz=357							
Q51A	Peebles	145.57	9	P		PKPdf	21 39 55.6	0.0
	baz=349							
P57A	Homestead Farm	145.59	1	P		PKPdf	21 39 55.7	+0.1
	baz=358							
P58A	Pank, Wackersv	145.60	0	P		PKPbc	21 39 55.9	0.0
	baz=360							
SDMD	Soldier's Deli	145.68	360			PKPbc	21 39 56.2	+0.1
Q52A	Bidwell	145.79	7	P		PKPdf	21 39 56.3	+0.3
	baz=351							
WCI	Wyandotte Cave	145.79	13	PKIKP		PKPbc	21 39 56.7	+0.1
WCI	Wyandotte Cave	145.79	13	P		PKPbc	21 39 56.7	+0.1
	baz=344							
WCI	Wyandotte Cave	145.79	13			PKPbc	21 39 56.7	+0.1
Q54A	Coxs Mills	145.93	5	P		PKPbc	21 39 57.1	+0.1
	baz=353							
Q55A	Buckhannon	145.98	4	P		PKPbc	21 39 57.2	0.0
	baz=355							
Q53A	Leroy	145.98	6	P		PKPbc	21 39 57.1	0.0
	baz=352							
Q56A	Snyder Ridge,	145.99	3	P		PKPbc	21 39 57.1	0.0
	baz=356							
Q57A	Strasburg	146.03	2	P		PKPbc	21 39 57.2	-0.1
	baz=358							
R50A	Paris	146.14	10			PKPbc	21 39 57.6	0.0
R53A	Hurricane	146.45	7	P		PKPbc	21 39 58.5	-0.1
	baz=351							
JCT	Junction City	146.71	38	P		PKPbc	21 40 00.1	+0.5
	baz=315							
MIAR	Mount Ida	146.76	25	P		PKPab	21 40 00.7	-0.2
	baz=329							
R57A	Stanardsville	146.76	2	P		PKPbc	21 39 59.5	+0.1
	baz=357							
W41B	Gary Mavity, V	146.76	23	P		PKPab	21 40 00.4	-0.4
	baz=332							
T47A	Sharon Grove	146.77	15			PKPab	21 40 00.7	-0.2
R58A	Rapidan	146.78	1	P		PKPbc	21 39 59.6	+0.1
	baz=358							
R60A	Leonardtown, M	146.82	359	P		PKPbc	21 39 59.9	+0.3
	baz=0.8							
S53A	Williamson	147.07	8	P		PKPab	21 40 02.0	+0.1
	baz=351							
R58B	Mineral	147.11	1			PKPbc	21 40 00.6	+0.2
WVT	Waverly	147.39	16	PKP2		PKPbc	21 40 01.2	-0.1
WVT	Waverly	147.39	16	P		PKPbc	21 40 01.5	+0.2
	baz=340							
WVT	Waverly	147.39	16			PKPbc	21 40 01.2	-0.1
T54A	Tazewell	147.75	7	P		PKPbc	21 40 02.3	-0.1
	baz=352							
T56A	Rocky Mt	147.93	5	P		PKPbc	21 40 02.7	0.0
	baz=354							
T59A	Double "B" Far	148.11	1	P		PKPbc	21 40 03.6	+0.4
	baz=359							
U55A	TA2, Sparta	148.36	6	P		PKPbc	21 40 04.0	0.0
	baz=352							
U57A	Blanch	148.58	4	P		PKPbc	21 40 04.6	+0.2
	baz=356							
U60A	Pendleton	148.61	0	P		PKPbc	21 40 05.0	+0.5
	baz=360							
U59A	Littleton	148.72	1	P		PKPbc	21 40 05.4	+0.6
	baz=358							
TKL	Tuckaleechee C	148.79	11	PKPbc		PKPbc	21 40 05.2	+0.2
	comp=Z,8.4nm,0.5s,baz=151,slow=5.8,SNR=7.4							
V55A	Taylorsville	148.98	7	P		PKPbc	21 40 05.5	0.0
	baz=352							
V57A	Coltrane Farms	149.09	4	P		PKPbc	21 40 05.8	0.0
	baz=355							
V56A	Mocksville	149.10	6	P		PKPbc	21 40 06.1	+0.3
	baz=353							
V59A	Middlesex	149.30	2	P		PKiKP	21 40 06.9	-0.5
	baz=358							
W52A	Murphy	149.31	11	PKPbc		PKPbc	21 40 06.4	+0.1
HKT	Hockley	149.40	33	PKP2		PKiKP	21 40 08.8	+1.1
HKT	Hockley	149.40	33			PKiKP	21 40 08.8	+1.1
BG3	Lake Jocassee	149.59	10	PKPab		PKPab	21 40 11.4	-0.7
KMSC	Kings Mountain	149.67	7	P		PKPbc	21 40 07.5	+0.3
	baz=352							
X54A	Belton	150.11	9	P		PKPbc	21 40 08.5	+0.2
	baz=349							
X55A	Gracelyn & Ava	150.29	8	P		PKPbc	21 40 09.0	+0.2
	baz=351							
Y52A	Lilburn	150.47	12	PKPab		PKPab	21 40 15.8	0.0
Y55A	Saluda	150.79	8	P		PKPbc	21 40 10.2	+0.3
	baz=350							
SDDR	Presa de Saban	164.97	339			PKPab	21 41 19.5	+0.9

ZUR 16 21:20:29.8, 46°24′N×7°90′E, h2km, MLh0.6/8, 17C, Error ellipse: s-maj=1.8km s-min=0.3km az=187.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVIT	**Visp-Terbiners**	**0.05**	**347**	↑Pg	Pg	21 20 31.1	+0.2
	0.7nm,SNR=7.2						
SVIT				↑Pg	Pg	21 20 31.1	+0.2
SVIT				Sg	Sg	21 20 31.8	+0.3
SVIO	**Visp Obere Sta**	**0.05**	**344**	↑Pg	Pg	21 20 31.1	+0.2
SVIO				↑Pg	Pg	21 20 31.1	+0.2
	0.5nm,SNR=3.5						
SVIO				Sg	Sg	21 20 31.9	+0.2
EMBD	**Embd, Matterta**	**0.05**	**240**	Pg	Pg	21 20 31.2	+0.2
EMBD				Pg	Pg	21 20 31.2	+0.2
	0.3nm,SNR=15						
EMBD				Sg	Sg	21 20 32.0	+0.3
BIBA	**Brigerbad**	**0.06**	**20**	↑Pg	Pg	21 20 31.4	+0.2
	0.3nm,SNR=2.1						
BIBA				↑Pg	Pg	21 20 31.4	+0.2
SGRA	**Graechen Ausbl**	**0.07**	**222**	↑Pg	Pg	21 20 31.6	+0.3
SGRA				↑Pg	Pg	21 20 31.6	+0.3
	0.2nm,SNR=1.3						
SGRA				Sg	Sg	21 20 32.8	+0.6
SIMPL	**Simplonpass**	**0.08**	**93**	↑Pg	Pg	21 20 31.8	+0.3
	SNR=2.7						
SIMPL				Sg	Sg	21 20 33.1	+0.4
LAUCH	**Lauchernalp**	**0.19**	**333**	↑Pg	Pg	21 20 33.9	+0.3
	SNR=1.0						
LAUCH				↑Pg	Pg	21 20 33.9	+0.3
MMK	**Mattmark**	**0.20**	**167**	↑Pg	Pg	21 20 33.9	+0.2
MMK				↑Pg	Pg	21 20 33.9	+0.2
	SNR=1.4						
VANNI	**Vissoie, Val d**	**0.21**	**261**	Pg	Pg	21 20 34.0	0.0
VANNI				Pg	Pg	21 20 34.0	0.0
	SNR=1.5						
FIESA	**Fiescheralp**	**0.24**	**37**	↑Pg	Pg	21 20 34.7	+0.2
FIESA				↑Pg	Pg	21 20 34.7	+0.2
	SNR=0.7						
SATI	**Passo dei Sala**	**0.37**	**183**	Pg	Pg	21 20 36.9	-0.1
DIX	**Grande Dixence**	**0.38**	**245**	↑Pg	Pg	21 20 36.9	-0.2
	SNR=1.0						
DIX				↑Pg	Pg	21 20 36.9	-0.2
GRIMS	**Grimsel Gerste**	**0.44**	**41**	Pg	Pg	21 20 38.4	0.0
	SNR=1.1						
GRIMS				Pg	Pg	21 20 38.4	0.0

*UCR **16** 21:22:24.1±2.6, 7°.50N×82°.36W, h2km±14km, MD4.4*
*UPA **16** 21:22:25.0±2.7, 7°.76N×82°.31W, h1km±11km, MW4.6*
ISC 16 21:22:24.1±1.5, 7°.69N±0°.06×82°.30W±0°.04, h3km±11km, n30, σ1°55/42, 4C-1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PEDE3	**Pedregal, Chir**	**0.70**	**350**	*e*S	**Sg**	**21 22 47.2**	**+0.5**
CHIR3	**Chiriqui UPA,**	**0.70**	**357**	↓*i*P	**Pg**	**21 22 38.3**	**+0.7**
CHIR3				*e*S	**Sb**	**21 22 49.8**	**+0.7**
DVD	**David**	**0.76**	**348**	*e*P	**Pg**	**21 22 38.5**	**-0.2**
DVD				*e*S	**Sg**	**21 22 49.9**	**+1.4**
PVID3	**Puerto Vidal,**	**0.77**	**62**	*e*P	**Pg**	**21 22 39.3**	**+0.4**
BCO2	**Palmira**	**1.05**	**347**	↑*i*P	**Pg**	**21 22 44.0**	**-0.3**
BCO2				*e*S	**Sg**	**21 22 55.3**	**-2.6**
GMAL	**Guarumal, Vera**	**1.06**	**86**	*e*P	**Pb**	**21 22 43.2**	**-1.9**
GMAL				*e*S	**Sg**	**21 22 57.8**	**-0.3**
GMAL	**Guarumal, Vera**	**1.06**	**86**	*e*P	**Pb**	**21 22 43.5**	**-1.5**
BRU2	**Volcan**	**1.17**	**340**	↑*i*P	**Pn**	**21 22 46.0**	**-1.5**
BRU2				*e*S	**Sb**	**21 22 59.1**	**-3.5**
CHGR2	**Aguacate**	**1.25**	**7**	*e*P	**Pg**	**21 22 50.0**	**+1.9**
MARI3	**Mariato, Verag**	**1.29**	**92**	*e*S	**Sg**	**21 23 07.6**	**+1.8**
PTJ1	**Puerto Jimnez**	**1.30**	**310**	*e*P	**Pb**	**21 22 49.0**	**-0.2**
PTJ1				*e*S	**Sn**	**21 23 06.5**	**-0.7**
PTJ1	**Puerto Jimnez**	**1.30**	**310**	*e*P	**Pb**	**21 22 49.1**	**-0.2**
EDSV	**San Vito**	**1.31**	**329**	*e*P	**Pg**	**21 22 51.1**	**+1.9**
CACAO	**El Cacao, Vera**	**1.46**	**103**	*e*P	**Pb**	**21 22 58.8**	**-1.2**
CACAO				*e*S	**Sg**	**21 23 10.9**	**-0.3**
EDPN	**Palmar Norte**	**1.71**	**318**	*e*P	**Pb**	**21 22 55.3**	**-0.9**
EDPN				*e*S	**Sg**	**21 23 19.6**	**+0.5**
RGM0	**Gandoca**	**1.91**	**351**	*e*P	**Pb**	**21 23 00.8**	**+1.1**
AZU	**Azuero**	**2.01**	**87**	↑*e*P	**Pb**	**21 22 59.7**	**-1.5**
AZU				*e*S	**Sn**	**21 23 24.3**	**-0.3**
AZU	**Azuero**	**2.01**	**87**	*e*P	**Pn**	**21 22 59.4**	**+0.5**
AZU				*e*S	**Sb**	**21 23 27.0**	**+0.3**
PNME	**Penonome**	**2.10**	**68**	↑*i*P	**Pb**	**21 23 02.0**	**-0.9**
PCRI3	**Pocri, Los San**	**2.16**	**91**	*e*S	**Sg**	**21 23 32.5**	**-1.0**
EDDO	**Dominical**	**2.19**	**315**	*e*P	**Pn**	**21 23 02.2**	**+0.7**
EDDO				*e*S	**Sg**	**21 23 33.9**	**-0.9**
LCR2	**La Lucha 2**	**2.65**	**321**	*e*P	**Pn**	**21 23 08.7**	**+0.8**
ZANG	**Zanguenga, Cho**	**2.71**	**62**	*e*P	**Pb**	**21 23 10.9**	**-2.4**
CVTR	**Volcan Turrial**	**2.73**	**328**	*e*P	**Pb**	**21 23 12.2**	**-1.7**
BCIP	**Isla Barro Col**	**2.84**	**59**	*e*P	**Pb**	**21 23 13.1**	**-2.4**
BCIP				*e*S	**Sn**	**21 23 48.0**	**+2.9**
BCIP	**Isla Barro Col**	**2.84**	**59**	*e*P	**Pb**	**21 23 13.5**	**-2.0**
HDC	**Heredia**	**2.92**	**322**	*e*P	**Pb**	**21 23 15.1**	**-1.8**
UPA	**Univ. de Panam**	**3.02**	**65**	*e*P	**Pn**	**21 23 15.3**	**+2.4**
JTS	**Las Juntas de**	**3.68**	**315**	*e*P	**Pn**	**21 23 23.6**	**+1.6**
PLVR	**Palo Verde**	**4.01**	**311**	*e*P	**Pn**	**21 23 27.6**	**+0.9**

*IDC **16** 21:24:41.6±9.7, 28°.17N×101°.42E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.1/57, mbtmp3.5/2, Error ellipse: s-maj=202.1km s-min=77.8km az=129.0*
ISC 16 21:24:44.0±2.8, 28°.0N±0°.1×101°.6E±0°.2, h10km, n5, σ2°.26/6, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**3.06**	**160**	Pg	**Pb**	**21 25 36.3**	**-2.4**
KMI				Sg	**Sb**	**21 26 18.5**	**+2.3**
KMI				smax	smax		
	comp=N,110nm,1.0s						
KMI				smax	smax		
	comp=E,150nm,1.0s						
GYA	**Guiyang**	**4.79**	**108**	↑*i*Pn	**Pn**	**21 25 57.8**	**+1.5**
GYA				Pg	**Pg**	**21 26 14.6**	**-1.2**
GYA				Sn	Sn	21 26 42.8	-9.2
GYA				Sg	Sb	21 26 56.5	-9.4
GYA				smax	smax		
	comp=N,30nm,0.8s						
GYA				smax	smax		
	comp=E,30nm,0.9s						
CMAR	**Chiang Mai Arr**	**9.81**	**195**	Pg	Pn	21 27 43.5	+38
	comp=E,0.1nm,0.3s,baz=7.2,slow=18,SNR=5.5						
CMAR				Lg	Lg	21 29 51.4	
	comp=E,0.1nm,0.3s,baz=7.0,slow=31,SNR=4.1						
WRA	**Warramunga Arr**	**57.25**	**143**	P	**P**	**21 34 32.2**	**+0.4**
	comp=E,0.7nm,0.6s,baz=331,slow=7.9,SNR=5.7						
ASAR	**Alice Springs**	**60.10**	**146**	P	**P**	**21 34 52.4**	**+0.8**
	comp=E,0.2nm,0.6s,baz=325,slow=7.9,SNR=1.4						

PRU 16 21:30:02.3±0.0, 50°.25N×19°.30E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.85**	**241**	*e*PG	Pg	21 30 18.8	+0.2
OKC				*e*SG	Sg	21 30 30.2	+0.6
	comp=Z,4.6nm,0.5s						
MORC	**Moravsky Berou**	**1.23**	**248**	*e*PG	Pg	21 30 25.8	0.0
MORC				*e*SG	Sg	21 30 42.2	+0.5
VYHS	**Vyhne**	**1.78**	**190**	*e*PN	Pn	21 30 32.8	-1.6
VYHS				*e*SN	Sn	21 30 56.1	-1.6
DPC	**Dobruska-Polom**	**1.91**	**274**	*e*SG	Sg	21 31 03.2	-0.5
	comp=Z,1.9nm,0.4s						
OSTC	**Ostas**	**2.00**	**280**	*e*SG	Sg	21 31 06.2	-0.2

IDC 16 21:39:49.2±7.4, 49°.33S×125°.46E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/24, mbtmp3.6/3, MS3.7/5, Ms1 3.7/5, ms1mx3.3/15, Error ellipse: s-maj=450.5km s-min=29.3km az=92.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**17.50**	**336**	LR	LR	21 48 34.4	
	comp=Z,179nm,20.8s,baz=132,slow=30						
ASAR	**Alice Springs**	**26.46**	**18**	P	P	21 45 27.5	-0.5
	1.2nm,0.9s,baz=191,slow=9.4,SNR=7.4						
WRA	**Warramunga Arr**	**30.17**	**17**	P	P	21 46 00.6	-0.4
	0.4nm,0.8s,baz=192,slow=9.8,SNR=1.1						
VNDA	**Vanda**	**31.49**	**166**	P	P	21 46 11.5	-0.6
	0.8nm,0.8s,baz=310,slow=7.9,SNR=1.6						
BATI	**Baumata**	**39.03**	**357**	LR	LR	22 04 01.3	
	comp=Z,156nm,18.1s,baz=217,slow=37						
PSI	**Prapat**	**56.78**	**328**	LR	LR	22 10 01.0	
	comp=Z,139nm,19.5s,baz=258,slow=32						
PPT	**Papeete**	**73.64**	**98**	LR	LR	22 16 40.8	
	comp=Z,52nm,19.8s,baz=144,slow=30						
KSRS	**Korea Array**	**86.44**	**2**	LR	LR	22 34 53.2	
	comp=Z,24nm,19.6s,baz=292,slow=38						
YKA	**Yellowknife Ar**	**145.23**	**45**	PKPbc	PKPdf	21 59 27.4	0.0
	1.9nm,0.9s,baz=272,slow=3.0,SNR=11						

IDC 16 21:54:17.1±1.6, 19°.61N×120°.49E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/50, mbtmp3.6/4, Error ellipse: s-maj=178.7km s-min=22.0km az=66.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**30.39**	**341**	P	P	22 00 32.0	+0.9
	0.2nm,0.3s,baz=136,slow=7.2,SNR=2.1						
WRA	**Warramunga Arr**	**41.59**	**160**	P	P	22 02 06.3	-0.6
	0.4nm,0.6s,baz=343,slow=9.0,SNR=5.7						
ASAR	**Alice Springs**	**44.96**	**162**	P	P	22 02 34.5	+0.4
	0.7nm,0.7s,baz=347,slow=6.9,SNR=8.3						
KURBB	**Kurchatov Arra**	**45.27**	**323**	P	P	22 02 35.6	-0.8
	0.9nm,0.8s,baz=123,slow=7.8,SNR=8.3						

*IDC **16** 22:54:03.8±1.2, 12°.59N×126°.40E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.7/33, mbtmp3.8/8, Error ellipse: s-maj=62.1km s-min=17.7km az=64.0*
ISC 16 22:54:09.7±1.0, 12°.5N±0°.1×126°.3E±0°.2, h41km, n9, σ0°73/9, mb3.8/8, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCP	**Roxas**	**3.57**	**255**	↑*e*P	**Pn**	**22 55 02.2**	**-0.4**
CMAR	**Chiang Mai Arr**	**26.96**	**286**	P	**P**	**22 59 48.2**	**+0.6**
	2.1nm,0.8s,baz=98,slow=7.6,SNR=10						
WRA	**Warramunga Arr**	**33.22**	**166**	P	**P**	**23 00 43.0**	**0.0**
	0.6nm,0.7s,baz=352,slow=15,SNR=3.2						
ASAR	**Alice Springs**	**36.73**	**168**	P	**P**	**23 01 13.5**	**+0.3**
	1.1nm,0.7s,baz=346,slow=6.6,SNR=8.4						
SONM	**Songino Array**	**38.93**	**339**	P	**P**	**23 01 31.7**	**0.0**
	0.8nm,0.6s,baz=158,slow=8.6,SNR=4.5						
STKA	**Stephens Creek**	**46.52**	**162**	P	**P**	**23 02 33.1**	**-0.1**
	1.1nm,0.6s,baz=326,slow=12,SNR=2.9						
MKAR	**Makanchi Array**	**50.26**	**322**	P	**P**	**23 03 03.0**	**+1.1**
	1.3nm,0.8s,baz=117,slow=8.9,SNR=12						
ZALV	**Zalesovo Beam**	**52.67**	**331**	P	**P**	**23 03 18.6**	**-1.2**
	0.9nm,0.5s,baz=113,slow=9.8,SNR=5.6						
BRTR	**Keskin Array B**	**84.11**	**309**	P	**P**	**23 06 36.8**	**0.0**
	0.4nm,0.7s,baz=103,slow=3.9,SNR=4.5						

TRN 16 23:01:23.8, 17°.16N×60°.33W, h3km, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABD	**La Joyeuse, An**	**1.30**	**239**	*e*P	Pg	23 01 47.5	-1.3
ABD	**La Joyeuse, An**	**1.30**	**239**	*e*P	Pb	23 01 55.6	+6.7
ANWB	**Willy Bob**	**1.48**	**290**	*e*P	Pn	23 01 49.7	-1.6
ANWB	**Willy Bob**	**1.48**	**290**	*e*P	Pg	23 01 59.6	+7.5
MAGL	**Barre de l'ile**	**1.51**	**217**	*e*P	Pn	23 01 49.3	-2.5
MAGL	**Barre de l'ile**	**1.51**	**217**	*e*P	Pg	23 01 57.9	+5.1
CBE	**Ff, Capester**	**1.64**	**229**	*e*P	Pn	23 01 52.2	-1.3
CBE	**Ff, Capester**	**1.64**	**229**	*e*P	Pg	23 02 00.3	+5.1
TDBA	**Terre de Bas,**	**1.81**	**224**	*e*P	Pn	23 01 54.7	-1.2
TDBA	**Terre de Bas,**	**1.81**	**224**	*e*P	Pg	23 02 01.1	+2.7
MLYT	**Lee's Yard**	**1.83**	**256**	*e*P	Pn	23 01 54.5	-1.8
SVN	**Savane Anatole**	**2.44**	**199**	*e*P	Pn	23 02 03.6	-1.1
BAMF	**Morne Balai**	**2.46**	**199**	*e*P	Pn	23 02 03.0	-1.9
CXM	**Morne La Croix**	**2.47**	**199**	*e*P	Pn	23 02 02.8	-2.3
PCM	**Pelee Case Pet**	**2.48**	**200**	*e*P	Pn	23 02 05.2	0.0
GBMF	**Grand Be**	**2.48**	**199**	*e*P	Pn	23 02 02.4	-2.8
FDF	**Fort de France**	**2.54**	**198**	*e*P	Pn	23 02 05.2	-0.8
LPMF	**Morne Lapointe**	**2.64**	**193**	*e*P	Pn	23 02 04.5	-2.9
ZAM	**Aeronautique**	**2.66**	**195**	*e*P	Pn	23 02 05.4	-2.2
BIM	**Bigot**	**2.72**	**195**	*e*P	Pn	23 02 06.9	-1.6
**M

JFY	**Yanaizu**	**1.38**	**280**	P		**Pn**	**23 20 39.1**	**-0.8**
JFY				S		**Sn**	**23 20 55.5**	**-2.0**
JYS	**Shirataka**	**1.49**	**315**	P		**Pn**	**23 20 40.7**	**-0.6**
JYS				*e*S		**Sn**	**23 20 57.8**	**-2.3**
JAG	**Ashikaga**	**1.74**	**245**	P		**Pn**	**23 20 44.7**	**+0.1**
JKT	**Katashina**	**1.78**	**257**	P		**Pn**	**23 20 45.5**	**+0.3**
JMK	**Ichinoseki**	**1.78**	**355**	P		**Pn**	**23 20 45.3**	**+0.2**
JHK	**Hiroka**	**1.91**	**273**	P		**Pn**	**23 20 46.3**	**-0.6**
JYK	**Kaneyama**	**1.93**	**335**	P		**Pn**	**23 20 47.0**	**-0.1**
MJAR	**Matsushiro Arr**	**2.64**	**257**	P		**Pn**	**23 20 57.0**	**+0.2**
	1.9nm,0.3s,baz=80,slow=14,SNR=32							
MJAR				S		**Sn**	**23 21 29.9**	**+2.1**
	3.3nm,0.3s,baz=90,slow=30,SNR=3.6							
MAT	**Matsushiro**	**2.64**	**257**	P		**Pn**	**23 20 57.3**	**+0.5**
MAT				S		**Sn**	**23 21 30.2**	**+2.4**
JHJ	**Hachijo jima 2**	**4.26**	**199**	P		**Pn**	**23 21 18.2**	**-0.6**
	13nm,0.3s,baz=25,slow=19,SNR=1.6							
JHJ				S		**Sn**	**23 22 05.3**	**-2.0**
	88nm,0.3s,baz=68,slow=22,SNR=8.3							
USRK	**Ussuriysk Ar.**	**10.01**	**317**	P		**Pn**	**23 22 37.3**	**0.0**
	baz=124,slow=13,SNR=6.9							
KSRS	**Korea Array**	**10.74**	**276**	P		**Pn**	**23 22 49.0**	**+1.7**
	0.1nm,0.3s,baz=90,slow=13,SNR=6.0							
SEY	**Seymchan**	**26.65**	**11**	P		**P**	**23 25 48.1**	**+0.1**
	1.4nm,0.7s,baz=193,slow=6.8,SNR=5.7							
SONM	**Songino Array**	**27.70**	**304**	P		**P**	**23 25 56.8**	**-1.0**
	1.5nm,0.7s,baz=98,slow=10,SNR=7.0							
H11N2	**WAKE ISLAND Hy**	**28.23**	**121**	T		T	23 56 39.3	
	baz=315,slow=75,SNR=34							
H11N1	**WAKE ISLAND Hy**	**28.23**	**121**	T		T	23 56 24.6	
	baz=315,slow=75,SNR=36							
H11N3	**WAKE ISLAND Hy**	**28.24**	**121**	T		T	23 56 28.8	
	baz=315,slow=75,SNR=38							
H11S1	**WAKE ISLAND Hy**	**28.94**	**123**	T		T	23 57 11.4	
	baz=132,slow=74,SNR=23							
H11S3	**WAKE ISLAND Hy**	**28.94**	**123**	T		T	23 57 02.0	
	baz=314,slow=74,SNR=22							
ZALV	**Zalesovo Beam**	**41.81**	**312**	P		**P**	**23 28 00.5**	**+1.7**
	0.5nm,0.5s,baz=76,slow=7.6,SNR=1.9							
MKAR	**Makanchi Array**	**44.04**	**302**	P		**P**	**23 28 16.0**	**-0.9**
	0.8nm,0.9s,baz=71,slow=6.7,SNR=4.1							
ILAR	**Eielson Array**	**49.38**	**32**	P		**P**	**23 28 59.3**	**+1.0**
	0.7nm,0.8s,baz=270,slow=6.3,SNR=8.8							
INK	**Inuvik**	**54.26**	**27**	P		**P**	**23 29 35.2**	**+0.7**
	0.6nm,0.6s,baz=308,slow=5.5,SNR=5.3							
YKA	**Yellowknife Ar**	**63.69**	**30**	P		**P**	**23 30 39.5**	**-0.3**
	0.2nm,0.6s,baz=306,slow=6.0,SNR=5.1							
NB2	**NORSAR Subarra**	**74.05**	**337**	P		**P**	**23 31 43.5**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=39,slow=6.2							
NOA	**NORSAR Array B**	**74.05**	**337**	P		**P**	**23 31 43.1**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=38,slow=5.9,SNR=4.1							
LPAZ	**La Paz**	**146.62**	**59**	PKPbc		**PKPbc**	**23 39 51.7**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=10.0,slow=4.9,SNR=6.6							

*IDC **16** 23:30:22.5±7.8, 34°.61N×70°.53E, h88km±70km, mb3.1/3, mb1 3.1/6, mb1mx2.9/54, mbtmp3.4/6, ML3.3/3, MS2.8/1, Ms1 2.8/1, ms1mx2.1/27, Error ellipse: s-maj=91.2km s-min=46.9km az=131.0*

ISC 16 23:30:14.0±1.1, 34°.46N±0°.08×70°.22E±0°.10, h10km, n19, σ1§92/22, mb3.6/3, 2D, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**5.02**	**112**	*e*P	**Pg**	**23 31 51.0**	**+0.8**
THN				*e*S	**Sn**	**23 32 30.5**	**+3.0**
KK31	**Karatay Array**	**8.63**	**1**	P	**Pn**	**23 32 20.9**	**+1.8**
	0.7nm,0.3s,baz=176,slow=12,SNR=19						
KK31				⇓S	**Sn**	**23 33 57.5**	**+1.0**
	1.3nm,0.4s,baz=189,slow=23,SNR=6.9						
AAK	**Ala-Archa**	**8.82**	**21**	P	**Pn**	**23 32 23.6**	**+1.9**
	0.8nm,0.3s,baz=186,slow=8.0,SNR=7.0						
AAK				S	**Sn**	**23 33 59.8**	**-1.5**
	0.2nm,0.3s,baz=12,slow=19,SNR=1.4						
AAK	**Ala-Archa**	**8.82**	**21**	⇓P	**Pn**	**23 32 23.2**	**+1.5**
	1.5nm,0.4s						
AAK				S	**Sn**	**23 33 59.8**	**-1.5**
	3.3nm,0.7s						
PYUN	**Piuthan**	**12.62**	**117**	*e*P	**Pn**	**23 33 12.4**	**-1.5**
	7.1nm,0.3s						
DANN	**Dangsing**	**13.07**	**114**	*e*P	**Pn**	**23 33 18.6**	**-1.4**
	7.1nm,0.4s						
KOLN	**Koldanda**	**13.26**	**117**	*e*P	**Pn**	**23 33 21.4**	**-1.1**
	3.6nm,0.2s						
GKN	**Gorkha**	**13.91**	**114**	*e*P	**Pn**	**23 33 29.5**	**-1.9**
	9.0nm,0.3s						
PKIN	**Phulchoki**	**14.70**	**114**	*e*P	**Pn**	**23 33 40.2**	**-2.2**
	5.0nm,0.3s						
PKI	**Pulchoki**	**14.72**	**114**	*e*P	**Pn**	**23 33 40.3**	**-2.3**
	5.8nm,0.4s						
GUN	**Gumba**	**14.90**	**112**	*e*P	**Pn**	**23 33 42.9**	**-2.2**
	4.7nm,0.3s						
JIRN	**Jiri**	**15.27**	**112**	*e*P	**Pn**	**23 33 47.1**	**-2.9**
	10nm,0.3s						
MKAR	**Makanchi Array**	**15.33**	**33**	P	**Pn**	**23 33 51.6**	**+1.1**
	0.2nm,0.3s,baz=202,slow=11,SNR=9.5						
RAMN	**Ramite**	**15.94**	**114**	*e*P	**Pn**	**23 33 55.8**	**-2.9**
	3.0nm,0.2s						
KURBB	**Kurchatov Arra**	**17.26**	**18**	P	**Pn**	**23 34 15.4**	**+0.5**
	0.0nm,0.3s,baz=207,slow=11,SNR=3.4						
ZALV	**Zalesovo Beam**	**22.04**	**23**	P	**P**	**23 35 06.8**	**-1.7**
	1.0nm,0.3s,baz=213,slow=10,SNR=6.2						
ARU	**Arti**	**23.38**	**344**	LR	LR	23 45 60.0	
	comp=Z,21nm,19.3s,baz=178,slow=40						
NOA	**NORSAR Array B**	**45.64**	**324**	P	**P**	**23 38 34.0**	**-0.4**
	0.3nm,0.6s,baz=100,slow=7.9,SNR=3.4						
TORD	**Torodi Ar. Bea**	**65.04**	**269**	P	**P**	**23 40 55.4**	**+0.6**
	0.2nm,0.4s,baz=46,slow=5.3,SNR=2.1						

*UPP **16** 23:36:33.1±0.4, 67°.84N×20°.09E, h0km, ML2.7, Explosion*
*HEL **16** 23:36:34.6±0.2, 67°.86N×20°.18E, h0km, ML2.1(UPP), Explosion*
*NAO **16** 23:36:35.9±1.1, 67°.76N×20°.84E, ML2.5*
*BER **16** 23:36:37.8±5.0, 67°.79N×20°.72E, h0km, ML2.1, Suspected explosion*

ISC 16 23:36:33.8±0.8, 67°.83N±0°.02×20°.54E±0°.03, h0km, n30, σ1§95/45, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.15**	**329**	P	**Pg**	**23 36 36.1**	**-0.5**
KUA				S	**Sg**	**23 36 38.5**	**-0.1**
KUA	**Kurravaara**	**0.15**	**329**	*i* P	**Pg**	**23 36 36.1**	**-0.5**
KUA				*i* S	**Sg**	**23 36 38.5**	**-0.1**
KOVU	**Salmi**	**0.42**	**340**	S	**Sg**	**23 36 46.0**	**-1.3**
KOVU	**Salmi**	**0.42**	**340**	*i* S	**Sg**	**23 36 46.0**	**-1.3**
LANU	**Lannavaara**	**0.59**	**67**	*e*P	**Pb**	**23 36 47.2**	**+0.3**
LANU				*e*S	**Sb**	**23 36 55.4**	**-0.5**
DUNU	**Dundret**	**0.71**	**179**	S	**Sg**	**23 36 57.6**	**+1.2**
DUNU	**Dundret**	**0.71**	**179**	*i* S	**Sg**	**23 36 57.6**	**+1.2**
KIF	**Kilpisjarvi**	**1.19**	**5**	*e*PB	**Pb**	**23 36 57.1**	**0.0**
KIF				MSG		23 37 06.3	
KIF	**Kilpisjarvi**	**1.19**	**5**	*e*P	**Pg**	**23 36 55.8**	**-0.7**
HEF	**Hetta**	**1.31**	**62**	Pg	**Pn**	**23 36 59.5**	**+0.3**
HEF				Lg	Lg	23 37 16.4	
HEF	**Hetta**	**1.31**	**62**	MSG		23 37 14.9	
HEF				*e*SB	**Sn**	**23 37 18.9**	**+1.5**
HEF	**Hetta**	**1.31**	**62**	Pg	**Pn**	**23 36 59.5**	**+0.3**
HEF				Sg	**Sb**	**23 37 16.4**	**0.0**
ERTU	**Ertsjaerv**	**1.43**	**153**	*e*PN	**Pb**	**23 37 03.5**	**+2.3**
ERTU				*e*SB	**Sn**	**23 37 22.0**	**+1.6**
KTK1	**Kautokeino**	**1.55**	**39**	Pg	**Pg**	**23 37 03.5**	**0.0**
KTK1				Sn	**Sn**	**23 37 26.7**	**+3.2**
KTK1	**Kautokeino**	**1.55**	**39**	Pg	**Pg**	**23 37 03.5**	**0.0**
KTK1				Sn	**Sn**	**23 37 26.7**	**+3.2**
TOF	**Tornio**	**2.30**	**138**	*e*P	**Pb**	**23 37 15.5**	**-0.5**
TOF				MSG		23 37 48.8	
SGF	**Sodankyl**	**2.32**	**97**	*e*SG	**Sg**	**23 37 52.0**	**+3.8**
RNF	**Rovaniemi**	**2.46**	**117**	*e*PB	**Pb**	**23 37 18.8**	**+0.1**
RNF				*e*SB	**Sg**	**23 37 52.9**	**+0.4**
ARA0	**ARCESS Array S**	**2.50**	**44**	Pn	**Pb**	**23 37 18.1**	**-1.3**
	baz=224,slow=16						
ARA0				Sn	**Sb**	**23 37 49.8**	**-0.9**
	baz=236,slow=22						
ARA0	**ARCESS Array S**	**2.50**	**44**	Pn	**Pb**	**23 37 18.1**	**-1.3**
	baz=224,slow=16						
ARA0				Sn	**Sb**	**23 37 49.8**	**-0.9**
	baz=236,slow=22						
MOR8	**Moi Rana**	**2.92**	**238**	Pn	**Pn**	**23 37 23.8**	**+2.4**
MOR8				Sn	**Sn**	**23 37 57.4**	**+0.4**
MOR8	**Moi Rana**	**2.92**	**238**	*e*P	**Pn**	**23 37 23.2**	**+1.8**
MOR8				*e*S	**Sn**	**23 37 57.3**	**+0.3**
MOR8				IAML		23 38 06.1	
	comp=Z,17nm,0.4s						
APA0	**Apatity Array**	**4.75**	**87**	Sn	**Sn**	**23 38 42.3**	**+0.3**
	baz=270,slow=18						
APA0				Lg	Lg	23 39 01.7	
	baz=275,slow=28						
APA0	**Apatity Array**	**4.75**	**87**	Sn	**Sn**	**23 38 42.3**	**+0.3**
	baz=270,slow=18						
APA0				Sg	**Sg**	**23 39 01.7**	**-4.3**
	baz=275,slow=28						
FIA0	**FINESS Array S**	**6.83**	**157**	Pn	**Pn**	**23 38 15.3**	**+0.2**
	baz=349,slow=22						
FIA0				Sn	**Sn**	**23 39 33.6**	**+0.2**
	baz=348,slow=22						
FIA0				Lg	Lg	23 40 06.3	
	baz=353,slow=28						
FIA0	**FINESS Array S**	**6.83**	**157**	Pn	**Pn**	**23 38 15.3**	**+0.2**
	baz=349,slow=22						
FIA0				Sn	**Sn**	**23 39 33.6**	**+0.2**
	baz=348,slow=22						
FIA0				Sg	**Sg**	**23 40 06.3**	**-6.6**
	baz=353,slow=28						
NB2	**NORSAR Subarra**	**7.91**	**215**	Lg	Lg	23 40 42.3	
NB2	**NORSAR Subarra**	**7.91**	**215**	Sg	**Sg**	**23 40 42.3**	**-5.1**
HFS	**Hagfors**	**8.28**	**204**	Pn	**Pn**	**23 38 36.3**	**+1.4**
	baz=27,slow=14						
HFS	**Hagfors**	**8.28**	**204**	Pn	**Pn**	**23 38 36.3**	**+1.4**
	baz=27,slow=14						

*IDC **16** 23:38:34.9±2.8, 37°.17N×144°.85E, h0km, mb3.5/3, mb1 3.8/5, mb1mx3.4/49, mbtmp3.7/5, ML3.5/2, MS2.5/1, Ms1 2.5/1, ms1mx2.1/28, Error ellipse: s-maj=59.0km s-min=35.1km az=54.0*
*JMA **16** 23:38:41.7±0.3, 37°.33N×144°.40E, h52km, M3.7*

ISC 16 23:38:39.8±1.4, 37°.35N±0°.06×144°.62E±0°.10, h35km, n27, σ2§07/32, mb3.5/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.68**	**292**	*e*S	**Sn**	**23 39 50.5**	**-1.0**
JIO	**Ouri**	**2.81**	**294**	P	**Pn**	**23 39 23.5**	**+1.3**
JIO				*e*S	**Sn**	**23 39 54.8**	**-0.1**
JKMT	**Kesennumamotoy**	**2.88**	**301**	P	**Pn**	**23 39 24.4**	**+1.3**
JKMT				*e*S	**Sn**	**23 39 56.4**	**-0.2**
JFK	**Kawauchi**	**2.98**	**271**	P	**Pn**	**23 39 25.6**	**+1.0**
JFK				*e*S	**Sn**	**23 39 58.4**	**-0.8**
ONAJ	**Iwakimizuishiy**	**3.06**	**267**	P	**Pn**	**23 39 26.4**	**+0.7**
ONAJ				S	**Sn**	**23 39 59.6**	**-1.5**
JMK	**Ichinoseki**	**3.12**	**302**	S	**Sn**	**23 40 02.6**	**+0.1**
JFT	**Otama**	**3.41**	**274**	P	**Pn**	**23 39 32.4**	**+1.9**
JFT				S	**Sn**	**23 40 10.4**	**+0.6**
JRY	**Ryogami san**	**4.79**	**256**	P	**Pn**	**23 39 49.7**	**+0.3**
JRY				*e*S	**Sn**	**23 40 41.2**	**-2.4**
JOD2	**Odawara 2**	**4.93**	**247**	*e*S	**Sn**	**23 40 44.3**	**-2.8**
MJAR	**Matsushiro Arr**	**5.20**	**263**	Pn	**Pn**	**23 39 56.7**	**+1.6**
	0.4nm,0.3s,baz=91,slow=13,SNR=12						
MJAR				Sn	**Sn**	**23 40 53.7**	**-0.1**
	0.3nm,0.3s,baz=87,slow=29,SNR=5.9						
MAT	**Matsushiro**	**5.20**	**263**	P	**Pn**	**23 39 57.1**	**+2.0**
MAT				S	**Sn**	**23 40 55.6**	**+1.8**
JKB	**Kayabe**	**5.31**	**330**	P	**Pn**	**23 39 59.1**	**+2.6**
JKB				*e*S	**Sn**	**23 40 55.7**	**-0.8**
JCH	**Churui**	**5.35**	**350**	P	**Pn**	**23 39 56.5**	**-0.5**
JCH				*e*S	**Sn**	**23 40 53.1**	**-4.3**
JHJ2	**Mitsune**	**5.77**	**224**	P	**Pn**	**23 40 02.1**	**-0.8**
JHJ	**Hachijo jima 2**	**5.79**	**225**	Pn	**Pn**	**23 40 00.7**	**-2.4**
	17nm,0.3s,baz=264,slow=21,SNR=1.2						
JHJ				Sn	**Sn**	**23 41 03.3**	**-4.9**
	41nm,0.3s,baz=241,slow=22,SNR=5.2						
NEM2	**Nemuro 2**	**6.07**	**8**	P	**Pn**	**23 40 04.3**	**-2.6**
JTKR	**Abashiri--Toko**	**6.64**	**356**	P	**Pn**	**23 40 14.4**	**-0.3**
JTKR				*e*S	**Sn**	**23 41 24.6**	**-4.5**
ASAJ	**Asahikawa**	**6.93**	**348**	LR	LR	23 43 16.0	
	comp=Z,36nm,20.8s,baz=218,slow=39						
H11N2	**WAKE ISLAND Hy**	**26.18**	**126**	T	T	00 11 06.4	
	baz=317,slow=74,SNR=55						
H11N1	**WAKE ISLAND Hy**	**26.19**	**126**	T	T	00 11 10.1	
	baz=317,slow=74,SNR=28						
H11N3	**WAKE ISLAND Hy**	**26.20**	**126**	T	T	00 11 06.7	
	baz=317,slow=74,SNR=40						
H11S1	**WAKE ISLAND Hy**	**26.96**	**128**	T	T	00 12 03.4	
	baz=318,slow=74						
H11S3	**WAKE ISLAND Hy**	**26.96**	**128**	T	T	00 12 02.7	
	baz=318						
H11S2	**WAKE ISLAND Hy**	**26.97**	**128**	T	T	00 12 08.8	
	baz=318,slow=74						
MKAR	**Makanchi Array**	**46.12**	**302**	P	**P**	**23 47 02.4**	**+1.9**
	0.2nm,0.7s,baz=80,slow=7.8,SNR=1.8						
WRA	**Warramunga Arr**	**57.80**	**191**	P	**P**	**23 48 27.0**	**-0.6**
	0.8nm,0.5s,baz=9.6,slow=7.0,SNR=5.7						
ASAR	**Alice Springs**	**61.52**	**191**	P	**P**	**23 48 52.9**	**-0.3**
	0.2nm,0.5s,baz=10,slow=8.5,SNR=1.8						

*HLW **16** 23:43:37.0, 35°.94N×27°.96E, h60km±49km, Md4.1*
*IDC **16** 23:43:36.6±1.1, 35°.99N×27°.87E, h68km±16km, mb3.3/5, mb1 3.5/12, mb1mx3.3/48, mbtmp3.6/12, Error ellipse: s-maj=20.2km s-min=8.9km az=164.0*
*ISK **16** 23:43:37.1, 36°.06N×27°.86E, h89km, ML3.6/30*
*DDA **16** 23:43:38.8, 36°.07N×27°.92E, h52km±4km, MW3.5*
*ATH **16** 23:43:38.2, 36°.06N×27°.80E, h75km±3km, ML3.5/13, Error ellipse: s-maj=4.2km s-min=1.4km az=111.0*
*NIC **16** 23:43:39.5±0.0, 35°.73N×28°.13E, h47km±4km, MI3.6/2*
*THE **16** 23:43:39.4, 36°.04N×27°.90E, h79km±1km, ML3.6/6, Error ellipse: s-maj=1.9km s-min=0.7km az=98.0*
*GII **16** 23:43:40.4±0.6, 35°.79N×28°.26E, h60km, MD2.7/3, Mm3.3/4*

ISC 16 23:43:36.5±0.7, 35°.96N±0°.03×27°.94E±0°.03, h78km±6km, n174, σ1§92/232, mb3.4/5, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.30**	**30**	P	**Pn**	**23 43 50.6**	**+2.0**
ARG				S	**Sn**	**23 43 59.3**	**+1.8**
	4μm,0.2s						
ARG	**Arkhangelos**	**0.30**	**30**	P	**Pn**	**23 43 50.7**	**+2.0**
ARG				S	**Sn**	**23 43 59.0**	**+1.4**
ARG				AML	AML	23 44 00.6	
	comp=E,9137μm,0.3s						
ARG				AML	AML	23 44 01.9	
	comp=N,5927μm,0.4s						
ARG	**Arkhangelos**	**0.30**	**30**	PG	**Pn**	**23 43 50.3**	**+1.7**
ARG	**Arkhangelos**	**0.30**	**30**	P	**Pn**	**23 43 50.6**	**+2.0**
ARG				S	**Sn**	**23 43 58.9**	**+1.4**
KARP	**Karpathos**	**0.76**	**238**	P	**Pn**	**23 43 54.8**	**+2.1**
KARP				S	**Sn**	**23 44 06.2**	**+1.6**
	comp=N,7μm,0.2s						
KARP	**Karpathos**	**0.76**	**238**	P	**Pn**	**23 43 54.6**	**+2.0**
KARP				S	**Sn**	**23 44 06.3**	**+1.6**
KARP				AML	AML	23 44 07.1	
	comp=N,14033μm,0.3s						
KARP				AML	AML	23 44 07.4	
	comp=E,12714μm,0.2s						
KARP	**Karpathos**	**0.76**	**238**	PG	**Pn**	**23 43 54.6**	**+2.0**
KARP	**Karpathos**	**0.76**	**238**	P	**Pn**	**23 43 54.8**	**+2.1**
KARP				S	**Sn**	**23 44 06.4**	**+1.8**
KARP				AML	AML	23 44 06.9	
	comp=E,14nm,0.3s						
KARP				AML	AML	23 44 06.9	
	comp=E,14nm,0.3s						
KARP				AML	AML	23 44 07.0	
	comp=E,12nm,0.2s						
KARP				AML	AML	23 44 07.0	
	comp=E,12nm,0.2s						
MRSB	**Marmaris-Mugla**	**0.79**	**15**	PG	**Pn**	**23 43 54.4**	**+1.4**
DAT	**Datca**	**0.83**	**339**	P	**Pn**	**23 43 54.4**	**+0.9**
DAT				S	**Sn**	**23 44 05.9**	**-0.2**
DAT	**Datca**	**0.83**	**339**	PG	**Pn**	**23 43 54.6**	**+1.0**
DAT				SG	**Sn**	**23 44 06.0**	**-0.2**
DAT	**Datca**	**0.83**	**339**	*i* P	**Pn**	**23 43 54.5**	**+1.0**
DAT				IAML		23 44 06.0	
	comp=N,782nm,0.3s						
DAT				IAML		23 44 06.0	
	comp=E,689nm,0.3s						
DALY	**Dalyan (Mula)**	**1.03**	**34**	PG	**Pn**	**23 43 57.7**	**+1.9**
DALY	**Dalyan (Mula)**	**1.03**	**34**	*i* P	**Pn**	**23 43 57.7**	**+1.9**
DALY				*i* S	**Sn**	**23 44 10.8**	**+0.5**
DALY				IAML		23 44 12.0	
	comp=E,495nm,0.5s						
DALY				IAML		23 44 15.0	
	comp=N,834nm,0.3s						
TURN	**Turunc**	**1.06**	**30**	PG	**Pn**	**23 43 55.1**	**-1.0**
TURN	**Turunc**	**1.06**	**30**	*i* P	**Pn**	**23 43 55.4**	**-0.8**
TURN				*i* S	**Sn**	**23 44 08.0**	**-2.9**
TURN				IAML		23 44 08.0	
	comp=N,3μm,0.3s						
TURN				IAML		23 44 08.0	
	comp=E,2μm,0.4s						
KOSK	**Kos Island**	**1.11**	**316**	P	**Pn**	**23 43 58.0**	**+1.2**
KOSK				S	**Sn**	**23 44 12.6**	**+0.6**
	comp=E,360nm,0.6s						
KOSK	**Kos Island**	**1.11**	**316**	PG	**Pn**	**23 43 57.9**	**+1.2**
FETY	**Fethiye**	**1.14**	**53**	P	**Pn**	**23 43 58.8**	**+1.6**
FETY				S	**Sn**	**23 44 13.8**	**+1.0**
FETY	**Fethiye**	**1.14**	**53**	PN	**Pn**	**23 43 58.9**	**+1.6**
FETY	**Fethiye**	**1.14**	**53**	*i* P	**Pn**	**23 43 58.9**	**+1.6**
FETY				IAML		23 44 14.0	
	comp=N,737nm,0.5s						
FETY				IAML		23 44 14.0	
	comp=E,582nm,0.4s						
FETY				*i* S	**Sn**	**23 44 14.1**	**+1.3**
BDRM	**Kayabasi**	**1.18**	**340**	*i* P	**Pn**	**23 43 58.4**	**+0.7**
BDRM				IAML		23 44 13.0	
	comp=E,1μm,0.3s						
BDRM				*i* S	**Sn**	**23 44 13.1**	**-0.4**
BDRM				IAML		23 44 14.0	
	comp=N,965nm,0.3s						
YER	**Yerkesik**	**1.21**	**13**	P	**Pn**	**23 43 59.6**	**+1.5**
YER	**Yerkesik**	**1.21**	**13**	PN	**Pn**	**23 43 59.7**	**+1.6**
BODT	**Bodrum**	**1.22**	**335**	P	**Pn**	**23 43 58.9**	**+0.8**
BODT				S	**Sn**	**23 44 13.7**	**-0.7**
BODT	**Bodrum**	**1.22**	**335**	PN	**Pn**	**23 43 58.9**	**+0.8**
AKAS	**Kas**	**1.38**	**78**	PN	**Pn**	**23 44 02.7**	**+2.4**
AKAS	**Kas**	**1.38**	**78**	*i* P	**Pn**	**23 44 02.7**	**+2.4**
AKAS				IAML		23 44 22.0	
	comp=N,511nm,0.4s						
AKAS				IAML		23 44 25.0	
	comp=E,393nm,0.4s						
DEMR	**Demre-Antalya**	**1.61**	**79**	PN	**Pn**	**23 44 06.1**	**+2.9**
ZKR	**Zakros**	**1.64**	**240**	P	**Pn**	**23 44 06.2**	**+2.7**
ZKR				S	**Sn**	**23 44 26.9**	**+2.8**
ZKR	**Zakros**	**1.64**	**240**	P	**Pn**	**23 44 06.3**	**+2.7**
ZKR				S	**Sn**	**23 44 26.1**	**+2.0**
ZKR				AML	AML	23 44 29.8	
	comp=N,1093μm,0.6s						
ZKR				AML	AML	23 44 33.4	
	comp=E,1428μm,0.5s						
ZKR	**Zakros**	**1.64**	**240**	PN	**Pn**	**23 44 05.7**	**+2.1**
ZKR	**Zakros**	**1.64**	**240**	P	**Pn**	**23 44 06.4**	**+2.8**
ZKR				S	**Sn**	**23 44 26.1**	**+2.0**
ZKR				AML	AML	23 44 29.2	
	comp=E,1.1nm,0.6s						
ZKR				AML	AML	23 44 29.2	
	comp=E,1.1nm,0.6s						
ZKR				AML	AML	23 44 32.8	
	comp=E,1.4nm,0.5s						
ZKR				AML	AML	23 44 32.8	
	comp=E,1.4nm,0.5s						
STIA	**Sitia Lasithi**	**1.69**	**244**	P	**Pn**	**23 44 06.5**	**+2.3**
TAVA	**DENIZLI_Tavas**	**1.70**	**27**	*i* P	**Pn**	**23 44 05.8**	**+1.4**
TAVA				*i* S	**Sn**	**23 44 26.6**	**+1.1**
TAVA				IAML		23 44 31.0	
	comp=N,232nm,0.2s						
TAVA				IAML		23 44 32.0	
	comp=E,183nm,1.1s						
AYDN	**Tasoluk**	**1.70**	**358**	*i* P	**Pn**	**23 44 05.7**	**+1.2**
AYDN				*i* S	**Sn**	**23 44 23.9**	**-1.8**
AYDN				IAML		23 44 26.0	
	comp=N,308nm,0.3s						
AYDN				IAML		23 44 27.0	
	comp=E,391nm,0.4s						
ELL	**Elmali**	**1.77**	**63**	PN	**Pn**	**23 44 08.3**	**+2.8**
ELL	**Elmali**	**1.77**	**63**	P	**Pn**	**23 44 08.1**	**+2.7**
ELL				S	**Sn**	**23 44 29.6**	**+2.2**
ANAF	**Anafi Island**	**1.80**	**283**	P	**Pn**	**23 44 07.3**	**+1.6**
ANAF				S	**Sn**	**23 44 28.0**	**+0.1**
	comp=E,7μm,0.3s						
ANAF	**Anafi Island**	**1.80**	**283**	P	**Pn**	**23 44 07.2**	**+1.5**
ANAF				S	**Sn**	**23 44 27.2**	**-0.7**
GOLH	**Golhisar**	**1.82**	**45**	*i* P	**Pn**	**23 44 08.7**	**+2.6**
GOLH				*i* S	**Sn**	**23 44 31.0**	**+2.4**
GOLH				IAML		23 44 32.0	
	comp=N,308nm,0.8s						
GOLH				IAML		23 44 59.0	
	comp=E,85nm,1.3s						
GCAM	**G?zelcami?**	**1.83**	**342**	PN	**Pn**	**23 44 07.1**	**+1.0**
GCAM	**G?zelcami?**	**1.83**	**342**	*i* P	**Pn**	**23 44 07.2**	**+1.0**
GCAM				IAML		23 44 28.0	
	comp=N,260nm,0.4s						
GCAM				IAML		23 44 28.0	
	comp=E,225nm,0.5s						
AMGA	**Amorgos Island**	**1.87**	**298**	P	**Pn**	**23 44 07.6**	**+1.0**
AMGA				S	**Sn**	**23 44 29.3**	**-0.2**
	comp=E,460nm,0.4s						
AMGA	**Amorgos Island**	**1.87**	**298**	P	**Pn**

comp=N,56nm,0.5s
BLCB Balcova 2.53 344 P Pn 23 44 15.9 +0.5
BLCB Balcova 2.53 344 PN **Pn 23 44 16.1 +0.7**
IDI Anoyia 2.57 256 P **Pn 23 44 17.2 +1.1**
IDI Anoyia 2.57 256 P **Pn 23 44 17.3 +1.2**
comp=N,12nm,0.3s,baz=26,slow=8.7,SNR=99
IDI S **Sn 23 44 45.4 -1.1**
comp=N,35nm,0.3s,baz=267,slow=18,SNR=21
IDI Anoyia 2.57 256 P **Pn 23 44 17.3 +1.2**
IDI AML AML 23 44 48.7
comp=E,893µm,0.3s
IDI AML AML 23 44 50.8
comp=N,772µm,0.6s
IDI Anoyia 2.57 256 PN **Pn 23 44 17.6 +1.5**
MANT Manisa 2.58 11 *i* P **Pn 23 44 16.8 +0.5**
MANT *i* S **Sn 23 44 45.6 -1.2**
MANT IAML 23 44 47.0
comp=E,44nm,0.4s
MANT IAML 23 44 47.0
comp=N,54nm,0.3s
BASM Basmaki-Afyon 2.59 40 PN **Pn 23 44 17.3 +1.0**
BCK Bucak 2.60 54 PN **Pn 23 44 19.0 +2.5**
KULA Kula-Manisa 2.62 12 PN **Pn 23 44 17.2 +0.5**
URLA Izmir 2.63 336 PN **Pn 23 44 17.5 +0.7**
KHAL Karahalli 2.71 27 *i* P **Pn 23 44 18.9 +0.9**
KHAL IAML 23 44 49.0
comp=N,46nm,0.4s
KHAL *i* S **Sn 23 44 49.4 -0.5**
KHAL IAML 23 44 54.0
comp=E,49nm,0.5s
SIVA Sivas 2.72 251 P **Pn 23 44 20.8 +2.7**
SIVA Sivas 2.72 251 P **Pn 23 44 20.7 +2.7**
SIVA AML AML 23 44 54.4
comp=E,1173µm,0.5s
SIVA AML AML 23 44 57.2
comp=N,1105µm,0.6s
GOMA Golmarmara-Man 2.75 360 PN **Pn 23 44 18.5 +0.1**
ISP Isparta 2.78 47 PN **Pn 23 44 20.9 +1.9**
ISP Isparta 2.78 47 Pn **Pn 23 44 20.4 +1.4**
CHOS Chios island 2.86 329 P **Pn 23 44 21.0 +1.1**
CHOS S **Sn 23 44 52.5 -0.8**
CHOS Chios island 2.86 329 PN **Pn 23 44 20.2 +0.3**
USAK Uak-Merkez 2.88 17 *i* P **Pn 23 44 21.2 +0.9**
USAK IAML 23 44 52.0
comp=N,82nm,1.3s
USAK IAML 23 44 59.0
comp=E,56nm,0.8s
AKS Akhisar 2.92 358 PN **Pn 23 44 20.2 -0.5**
SERI Serifos 3.03 294 P **Pn 23 44 23.8 +1.5**
VAM Vamos 3.10 261 P **Pn 23 44 24.7 +1.6**
DKL Dikili 3.22 345 PN **Pn 23 44 25.3 +0.6**
SIMA Simav-Kutahya 3.23 15 PN **Pn 23 44 25.9 +0.9**
SMAA Simav-Kutahya 3.25 14 PN **Pn 23 44 26.1 +0.9**
IMMV Iera Moni Meta 3.26 262 P **Pn 23 44 26.6 +1.3**
IMMV AML AML 23 45 08.3
comp=E,960µm,0.4s
IMMV AML AML 23 45 08.4
comp=N,756µm,0.3s
GEDZ Gediz 3.30 20 PN **Pn 23 44 27.0 +1.1**
GVD Gavdhos 3.34 252 P **Pn 23 44 28.6 +2.2**
GVD AML AML 23 45 07.6
comp=E,1124µm,0.4s
GVD AML AML 23 45 13.5
comp=N,780µm,0.2s
PRK Paraskevi 3.54 339 P **Pn 23 44 31.2 +2.0**
SIGR SIGRI 3.65 334 P **Pn 23 44 31.8 +1.3**
SIGR SIGRI 3.65 334 PN **Pn 23 44 31.4 +0.8**
BALB Balikesir 3.68 359 PN **Pn 23 44 31.4 +0.4**
OSC1 CSNet OBS 1 3.68 131 P **Pn 23 44 31.4 +0.4**
OSC1 S **Sn 23 45 10.9 -2.3**
AKMS Akamas 3.71 103 P **Pn 23 44 32.8 +1.4**
ALFC Alefka 3.88 101 P **Pn 23 44 34.6 +0.9**
NATA Nata 3.96 106 P **Pn 23 44 36.0 +1.1**
SZAC Souni 4.21 105 P **Pn 23 44 39.3 +1.0**
ASGA Asgata 4.49 104 P **Pn 23 44 43.2 +1.1**
CSS Mathiatis 4.51 101 Pn **Pn 23 44 42.6 +0.2**
CSS Mathiatis 4.51 101 P **Pn 23 44 43.3 +0.9**
MATC Matruh 4.64 188 P **Pn 23 44 45.9 +1.8**
baz=188
MATC S **Sn 23 45 35.2 -1.4**
baz=188
MVOU Mavrovouni 4.74 100 P **Pn 23 44 46.7 +1.3**
SLUM Salum 5.00 208 P **Pn 23 44 50.2 +1.2**
baz=208
SLUM S **Sn 23 45 42.5 -3.0**
baz=208
BRTR Keskin Array B 5.87 48 P **Pn 23 45 02.5 +1.5**
comp=N,1.2nm,0.3s,baz=227,slow=15,SNR=36
BRTR S **Sn 23 46 08.1 +1.1**
comp=N,0.4nm,0.3s,baz=217,slow=25,SNR=5.3
HNTI Hanita 6.62 114 Pn **Pn 23 45 11.5 +0.3**
HNTI Sn **Sn 23 46 22.2 -3.0**
OFRI `Ofer 6.71 118 Pn **Pn 23 45 12.2 -0.2**
MMA0B Mount Meron ar 6.82 113 Pn **Pn 23 45 14.5 +0.5**
MMA0B Sn **Sn 23 46 28.1 -2.1**
MMAI Mount Meron Ar 6.82 113 P **Pn 23 45 14.1 +0.1**
comp=N,5.9nm,0.3s,baz=306,slow=13,SNR=40
MMAI S **Sn 23 46 26.8 -3.5**
comp=N,8.5nm,0.3s,baz=304,slow=25,SNR=16
KOT Kottamia 6.84 150 P **Pn 23 45 15.6 +1.3**
baz=150
KOT S **Sn 23 46 27.2 -3.5**
baz=150
HHAG Hagoal 6.93 149 P **Pn 23 45 17.7 +2.3**
baz=148
GEM Giv'at Ha'Em 6.93 111 Pn **Pn 23 45 15.8 +0.4**
GEM Sn **Sn 23 46 29.3 -3.5**
KSDI Kefar Szold 6.94 111 Pn **Pn 23 45 15.8 +0.3**
SLTI Sal'it 6.96 120 Pn **Pn 23 45 15.1 -0.7**
SLTI Sn **Sn 23 46 31.0 -2.4**
NATI Neve Ativ 6.96 110 Pn **Pn 23 45 16.1 +0.3**
NATI Sn **Sn 23 46 30.6 -3.0**
HSAF As Saff 7.01 153 P **Pn 23 45 17.9 +1.3**
baz=153
SWA2 7.01 198 P **Pn 23 45 17.7 +1.2**
baz=199
SWA2 S **Sn 23 46 30.7 -4.2**
baz=199
GLL Jalalah 7.11 152 P **Pn 23 45 19.2 +1.3**
baz=152
AMAZ Amatzia 7.29 125 Pn **Pn 23 45 20.7 +0.3**
HMDT Nahal Hemdat 7.29 118 Pn **Pn 23 45 21.0 +0.7**
SUZ Suez 7.35 145 P **Pn 23 45 22.4 +1.2**
baz=144
KZIT Kziot 7.38 131 Pn **Pn 23 45 21.8 +0.3**
KZIT Sn **Sn 23 46 41.1 -2.6**
YTIR Yattir 7.53 125 Pn **Pn 23 45 23.8 +0.1**
YTIR Sn **Sn 23 46 45.7 -1.9**
DSI Dead Sea 7.58 123 Pn **Pn 23 45 24.6 +0.3**
ZNM Zenema 7.77 146 P **Pn 23 45 28.7 +1.9**
baz=146
ZFRI Zfri 8.11 130 Pn **Pn 23 45 31.8 +0.4**
PRNI Paran 8.14 131 Pn **Pn 23 45 31.7 -0.2**
KRMI Paran Flat 8.14 134 Pn **Pn 23 45 32.0 0.0**
ASF Jabal al Asfar 8.33 114 P **Pn 23 45 35.9 +1.3**
comp=N,0.3nm,0.3s,baz=268,slow=6.7,SNR=3.4
ASF S **Sn 23 47 02.4 -4.8**
comp=N,0.3nm,0.3s,baz=122,slow=22,SNR=4.3
HRFI Mount Harif 8.38 133 Pn **Pn 23 45 35.5 +0.2**
MBRI Mt Berech 8.49 134 Pn **Pn 23 45 37.3 +0.5**
HRDS Abu Rudays 8.52 146 P **Pn 23 45 39.2 +2.0**
baz=146
EIL Elat 8.61 135 P **Pn 23 45 38.5 +0.3**
comp=N,1.2nm,0.3s,baz=223,slow=5.9,SNR=15
EIL S **Sn 23 47 10.6 -3.2**
comp=N,3.9nm,0.3s,baz=127,slow=16,SNR=13
EIL Elat 8.61 135 Pn **Pn 23 45 38.3 0.0**
TAMRE El Minia 8.63 162 P **Pn 23 45 39.9 +1.3**
baz=162
HFRF Wahat Farafira 8.79 178 P **Pn 23 45 41.8 +1.1**
baz=177
HBST Basata 8.83 138 P **Pn 23 45 42.4 +1.0**
baz=137
TR1 Tor 1 9.42 146 P **Pn 23 45 50.5 +1.0**
baz=145
HHRG Al Ghardaqah 9.94 150 P **Pn 23 46 00.2 +3.6**
baz=150
DBRK Dubrovnik 10.12 314 *e*Pn **Pn 23 46 00.1 +1.3**
DBRK Sn **Sn 23 47 46.5 -4.1**
STON Ston 10.51 314 *e*Pn **Pn 23 46 04.5 +0.4**
STON Sn **Sn 23 47 55.3 -4.6**
VAE Valguarnera 10.97 282 P **Pn 23 46 12.1 +1.5**
comp=N,0.4nm,0.3s,baz=125,slow=15,SNR=1.5
VAE S **Sn 23 48 04.0 -7.4**
comp=N,1.7nm,0.3s,baz=354,slow=7.7,SNR=6.7
MAKA Makarska 11.15 314 *i* Pn **Pn 23 46 13.2 +0.3**
MAKA Sn **Sn 23 48 12.0 -3.7**
RICI Ricice 11.22 315 *e*Pn **Pn 23 46 14.8 +1.0**
RICI Sn **Sn 23 48 14.9 -2.4**
HVAR Hvar 11.43 313 *e*Pn **Pn 23 46 15.1 -1.6**
HVAR Sn **Sn 23 48 15.4 -6.9**
KIJV Kijevo 11.95 316 *e*Pn **Pn 23 46 24.0 +0.3**
KIJV Sn **Sn 23 48 31.8 -3.3**
MORI Morici 12.26 314 *e*Pn **Pn 23 46 28.1 +0.1**
MORI Sn **Sn 23 48 37.9 -4.9**
DUGI Dugi Otok 12.72 313 *e*Pn **Pn 23 46 34.5 +0.3**
DUGI Sn **Sn 23 48 48.9 -5.0**
NVLJ Novalja 13.16 315 *e*Pn **Pn 23 46 39.9 -0.2**
KEST Kesra 15.09 275 P **P 23 47 09.9 +1.1**
comp=N,0.2nm,0.3s,baz=218,slow=3.1,SNR=6.1
VRAC Vranov 15.72 332 P **P 23 47 16.7 +1.1**
comp=N,0.2nm,0.3s,baz=132,slow=7.6,SNR=6.3
GERES GERESS Array B 16.59 325 P **P 23 47 25.9 +0.5**
comp=N,0.1nm,0.3s,baz=156,slow=13,SNR=5.7
SQTA Sankt Quirin 16.79 317 *e*Pn **P 23 47 29.3 +1.6**
comp=N,1.4nm,0.4s
MOTA Moosalm 16.93 317 *e*Pn **P 23 47 30.6 +1.4**
comp=N,2.3nm,0.7s
FETA Feichten 16.95 316 *e*P **P 23 47 31.8 +2.4**
comp=N,6.8nm,1.0s
DAVA Damuels 17.57 316 *i* Pn **P 23 47 38.1 +1.8**
comp=N,2.1nm,0.5s
ESDC Sonseca Array 25.41 288 P **P 23 48 57.5 +0.9**
comp=N,1.0nm,0.5s,baz=85,slow=9.3,SNR=20
FINES FINESS Array B 25.54 358 P **P 23 48 57.2 -0.3**
comp=N,1.1nm,1.0s,baz=167,slow=9.2,SNR=4.0
HFS Hagfors 25.89 344 P **P 23 48 59.9 -0.8**
comp=N,0.9nm,0.7s,baz=146,slow=10,SNR=1.7
TORD Torodi Ar. Bea 32.76 233 P **P 23 50 03.5 +1.4**
comp=N,0.2nm,0.5s,baz=34,slow=9.0,SNR=4.0
MKAR Makanchi Array 41.44 58 P **P 23 51 17.1 +1.8**
comp=N,0.4nm,0.6s,baz=277,slow=7.5,SNR=5.4

NIED ***16*** *23:49:00,24.80N×124.80E,h5km,Mw4.2 Best double couple: M₀2.24000×10¹⁵ NP1:φ₀2.00000°,δ62.00000°, λ-92.00000°. NP2:φ₀186.00000°,δ28.00000°, λ-86.00000°.*
JMA ***16*** *23:49:07.9±0.1,24.87N×124.74E,h7km±3km,M4.6*
JMA Felt I J1.
IDC ***16*** *23:49:07.2±0.6,24.84N×124.70E,h0km,mb3.9/15, mb1 4.0/17,mb1mx3.9/38,mbtmpg3.9/17,ML3.1/2,MS3.0/6, Ms1 3.1/6,ms1mx2.8/46,Error ellipse: s-maj=21.4km s-min=14.4km az=73.0*
NEIC ***16*** *23:49:11.0±3.2,24.66N±0.09×124.84E±0.07,h35km±5km, mb4.3/15,Error ellipse: s-maj=14.0km s-min=8.4km az=154.0*

ISC 16 23:49:09.0±0.8,24.74N±0.06×124.79E±0.03,h17km±5km, n55,σt¹9/63,mb4.1/23,MS3.1/3,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTJ	**Tarama**	**0.13**	**217**	P	**Pg**	**23 49 12.6**	**-0.3**
JTJ				eS	**Sg**	**23 49 16.4**	**+1.0**
JIRB	**Irabujima**	**0.36**	**77**	P	**Pg**	**23 49 15.6**	**-0.9**
JIRB				eS	**Sg**	**23 49 21.5**	**-0.1**
JIKM	**Ikemajima**	**0.45**	**67**	P	**Pg**	**23 49 17.1**	**-1.1**
JIKM				S	**Sg**	**23 49 24.0**	**-0.4**
JISG	**Ishigakijimahi**	**0.46**	**250**	P	**Pg**	**23 49 17.5**	**-0.9**
JISG				S	**Sg**	**23 49 24.0**	**-0.6**
JMJ2	**Miyako jima3**	**0.49**	**90**	P	**Pg**	**23 49 18.6**	**-0.3**
JMJ2				S	**Sg**	**23 49 25.4**	**-0.1**
JOGS	**Gusukube**	**0.56**	**88**	P	**Pg**	**23 49 19.8**	**-0.4**
JOGS				eS	**Sg**	**23 49 28.4**	**+0.6**
JIJ	**Ishigaki jima**	**0.70**	**237**	P	**Pg**	**23 49 22.2**	**-0.6**
JIJ				eS	**Sg**	**23 49 31.6**	**-0.5**
JKRS	**Kuro-shima**	**0.87**	**235**	P	**Pb**	**23 49 25.5**	**-0.2**
JKRS				eS	**Sb**	**23 49 37.8**	**+0.7**
IRIF	**Iriomote-Funau**	**1.05**	**247**	P	**Pg**	**23 49 27.9**	**-1.4**
IRIF				S	**Sb**	**23 49 42.5**	**+0.3**
HATJ	**Hateruma jima**	**1.13**	**233**	P	**Pb**	**23 49 30.2**	**+0.1**
HATJ				S	**Sn**	**23 49 46.0**	**+0.8**
YOJ	**Yonaguni jima**	**1.64**	**260**		**Pn**	**23 49 36.1**	**-1.0**
NACB	**Ninganchiao**	**2.96**	**260**		**Pn**	**23 49 56.0**	**+0.6**
TATO	**Taipei**	**3.01**	**275**		**Pn**	**23 49 56.9**	**+0.9**
YHNB	**Yeheng**	**3.10**	**269**		**Pn**	**23 49 57.8**	**+0.4**
YULB	**Yu-li**	**3.46**	**248**		**Pn**	**23 50 01.6**	**-0.6**
SSLB	**Suanglung**	**3.63**	**256**		**Pn**	**23 50 05.1**	**+0.6**
JOW	**Kunigami**	**3.77**	**56**	Pn	**Pn**	**23 50 06.5**	**0.0**
	2.1nm,0.3s,baz=47,slow=14,SNR=22						
JOW	**Kunigami**	**3.77**	**56**		**Pn**	**23 50 06.2**	**-0.2**
TWG	**Pinlang**	**3.91**	**241**		**Pn**	**23 50 07.6**	**-0.7**
TPUB	**Ta-pu**	**4.07**	**250**		**Pn**	**23 50 11.6**	**+1.1**
JNU	**Nakatsue**	**9.90**	**31**	LR	LR	23 55 36.3	
	comp=Z,83nm,18.9s,baz=208,slow=39						
KSRS	**Korea Array**	**12.95**	**1**	Pn	**Pn**	**23 52 14.8**	**+2.4**
	0.1nm,0.3s,baz=182,slow=12,SNR=4.8						
KSRS				LR	LR	23 56 23.6	
	comp=Z,32nm,20.0s,baz=182,slow=34						
MJAR	**Matsushiro Arr**	**16.46**	**41**	Pn	**P**	**23 53 00.6**	**-1.3**
	0.1nm,0.3s,baz=226,slow=7.9,SNR=1.8						
MJAR				LR	LR	23 59 21.6	
	comp=Z,76nm,21.9s,baz=210,slow=37						
USA0B	**Ussuriysk Arra**	**20.28**	**15**	P	**P**	**23 53 43.7**	**-0.1**
CHTO	**Chiang Mai**	**24.69**	**261**	P	**P**	**23 54 29.5**	**+0.1**
CHTO				IAmb	IAmb	23 54 32.7	
	comp=Z,5.1nm,1.0s						
CMAR	**Chiang Mai Arr**	**24.81**	**260**	P	**P**	**23 54 31.4**	**+1.0**
	comp=Z,1.2nm,0.3s,baz=61,slow=8.2,SNR=9.1						
CMAR				LR	LR	00 04 15.7	
	comp=Z,55nm,19.0s,baz=63,slow=37						
SONM	**Songino Array**	**27.26**	**332**	P	**P**	**23 54 54.1**	**+1.5**
	comp=Z,0.7nm,0.8s,baz=152,slow=6.5,SNR=3.0						
PETK	**Petropavlovsk-**	**37.60**	**32**	LR	LR	00 11 16.2	
	comp=Z,33nm,21.6s,baz=239,slow=35						
MK31	**Makanchi Array**	**40.27**	**314**	P	**P**	**23 56 44.0**	**-1.1**
MKAR	**Makanchi Array**	**40.27**	**314**	P	**P**	**23 56 43.3**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=99,slow=10,SNR=8.5						
MAKZ	**Makanchi**	**40.48**	**314**	P	**P**	**23 56 45.9**	**-1.0**
ZALV	**Zalesovo Beam**	**41.61**	**325**	P	**P**	**23 56 54.0**	**-2.1**
	comp=Z,0.7nm,0.4s,baz=116,slow=10,SNR=4.8						
ZALV				LR	LR	00 17 17.5	
	comp=Z,15nm,20.4s,baz=72,slow=41						
FITZ	**Fitzroy Crossi**	**42.59**	**179**	P	**P**	**23 57 04.7**	**+0.4**
	comp=Z,4.0nm,0.8s,baz=88,slow=2.3,SNR=5.6						
FITZ	**Fitzroy Crossi**	**42.59**	**179**	P	**P**	**23 57 03.4**	**-0.9**
FITZ				IAmb	IAmb	23 57 05.9	
	comp=Z,3.6nm,0.8s						
KURK	**Kurchatov**	**43.81**	**319**	P	**P**	**23 57 12.9**	**-1.1**
KURK	**Kurchatov**	**43.81**	**319**	IAmb	IAmb	23 57 19.7	
	comp=Z,1.2nm,0.5s						
KURBB	**Kurchatov Arra**	**43.84**	**318**	P	**P**	**23 57 12.9**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=109,slow=8.3,SNR=4.5						
WB0	**Warramunga Arr**	**45.22**	**167**	P	**P**	**23 57 25.2**	**-0.3**
WRAB	**Tennant Creek**	**45.37**	**167**	P	**P**	**23 57 24.1**	**-2.6**
WRA	**Warramunga Arr**	**45.38**	**167**	P	**P**	**23 57 28.8**	**+2.0**
	comp=Z,5.5nm,0.9s,baz=348,slow=8.4,SNR=8.4						
WB2	**Warramunga Arr**	**45.38**	**167**	P	**P**	**23 57 26.0**	**-0.9**
WB2				IAmb	IAmb	23 57 29.2	
	comp=Z,6.2nm,0.8s						
KBL	**Kabul**	**48.90**	**295**	P	**P**	**23 57 54.4**	**-0.1**
KBL				IAmb	IAmb	23 57 58.4	
	comp=Z,4.1nm,0.9s						
ASAR	**Alice Springs**	**48.93**	**169**	P	**P**	**23 57 56.0**	**+1.5**
	comp=Z,1.1nm,0.7s,baz=3.7,slow=6.9,SNR=7.6						
ASAR				PcP	**PcP**	**23 59 19.4**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=344,slow=2.7,SNR=4.4						
NRIK	**Noril'sk**	**49.75**	**344**	P	**P**	**23 57 58.5**	**-1.7**
	comp=Z,1.1nm,0.6s,baz=112,slow=10,SNR=3.8						
GEYT	**Alibeck**	**57.35**	**300**	P	**P**	**23 58 56.6**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=86,slow=4.6,SNR=4.5						
BBOO	**Buckleboo**	**58.23**	**169**	P	**P**	**23 59 00.5**	**-2.1**
BBOO				IAmb	IAmb	23 59 04.1	
	comp=Z,2.8nm,0.8s						
STKA	**Stephens Creek**	**58.55**	**163**	P	**P**	**23 59 05.8**	**+1.1**
	comp=Z,1.2nm,0.7s,baz=310,slow=9.0,SNR=2.9						
BPAW	**Bear Paw Mtn.**	**65.53**	**29**	P	**P**	**23 59 48.3**	**-3.1**
BPAW				IAmb	IAmb	00 00 00.9	
	comp=Z,1.9nm,1.0s						
MLY	**Manley**	**65.54**	**28**	P	**P**	**23 59 50.6**	**-0.8**
MLY				IAmb	IAmb	00 00 04.3	
	comp=Z,5.1nm,1.2s						
RND	**Reindeer**	**66.56**	**29**	P	**P**	**23 59 57.9**	**-0.2**
ILAR	**Eielson Array**	**67.20**	**28**	P	**P**	**00 00 04.2**	**+2.2**
	comp=Z,0.4nm,0.7s,baz=300,slow=10,SNR=6.8						
RAYN	**Ar Rayn**	**71.31**	**288**	P	**P**	**00 00 27.9**	**-0.4**
RAYN				IAmb	IAmb	00 00 28.1	
	comp=Z,1.8nm,1.0s						
FINES	**FINESS Array B**	**72.61**	**330**	P	**P**	**00 00 36.8**	**+1.5**
	comp=Z,1.1nm,0.9s,baz=100,slow=4.5,SNR=3.6						
BRTR	**Keskin Array B**	**75.47**	**307**	P	**P**	**00 00 54.5**	**+1.9**
	comp=Z,0.4nm,0.7s,baz=84,slow=4.4,SNR=4.2						
YKA	**Yellowknife Ar**	**81.16**	**24**	P	**P**	**00 01 23.0**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=305,slow=5.0,SNR=21						

IDC 16 23:52:22.7±2.7,6.59S×129.88E,h139km±37km,mb3.3/1, mb1 3.3/5,mb1mx3.1/24,mbtmpg3.7/5,MS3.8/1,Ms1 3.8/1, ms1mx2.6/15,Error ellipse: s-maj=68.4km s-min=20.5km az=89.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong 5.85 14**			P	Pn	23 53 47.7	+0.4
	2.6nm,0.3s,baz=241,slow=23,SNR=35						
SIJI				S	Sn	23 54 49.8	-3.6
	2.4nm,0.3s,baz=231,slow=22,SNR=7.4						
FITZ	**Fitzroy Crossi 12.16 200**			P	Pn	23 55 10.6	-1.0
	0.4nm,0.3s,baz=21,slow=9.1,SNR=19						
FITZ				S	Sn	23 57 20.5	-5.3
	0.4nm,0.3s,baz=199,slow=19,SNR=2.8						
WRA	**Warramunga Arr 13.96 162**			P	Pn	23 55 34.1	-0.6
	0.3nm,0.3s,baz=348,slow=13,SNR=4.5						
ASAR	**Alice Springs 17.41 168**			P	Pn	23 56 17.9	+0.7
	0.2nm,0.3s,baz=346,slow=10,SNR=13						
RAO	**Raoul Island 54.02 121**			LR	LR	00 22 16.0	
	comp=Z,80nm,18.8s,baz=180,slow=33						
MKAR	**Makanchi Array 67.82 327**			P	P	00 03 05.7	-0.1
	0.4nm,0.5s,baz=115,slow=5.9,SNR=6.5						

IDC 17 00:07:28.4±686.0,29.21N×80.41W,h0km,Error ellipse: s-maj=324.0km s-min=209.7km az=33.0,Florida Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I51GB	**BERMUDA INFRAS 3.87 73**			*i*		01 33 30.0	
	baz=261,slow=328,SNR=1.7						
I10CA	**LAC DU BONNET 24.07 335**			*i*		02 29 50.0	
	baz=142,slow=331,SNR=5.2						
I18DK	**QAANAQ INFRAS 58.62 3**			*i*		05 09 20.0	
	baz=195,slow=328,SNR=1.4						
I53US	**FAIRBANKS INFR 54.40 331**			*i*		05 46 40.0	
	baz=98,slow=327,SNR=2.1						

IDC ***17*** *00:09:37.9±0.9,7.73S×38.48E,h0km,mb3.8/11, mb1 4.0/13,mb1mx3.8/56,mbtmpg3.9/13,ML4.0/2,MS3.4/8, Ms1 3.4/8,ms1mx2.9/46,Error ellipse: s-maj=24.3km s-min=19.8km az=117.0*
NEIC ***17*** *00:09:37.9±2.6,7.85S±0.08×38.40E±0.09,h10km±1km, mb4.3/8,Error ellipse: s-maj=15.2km s-min=13.1km az=103.0*

ISC 17 00:09:38.0±0.5,7.81S±0.05×38.14E±0.07,h10km,n35, σt³18/37,mb4.0/12,MS3.3/6,Tanzania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIBK	**Kibwezi 5.43 359**			*i* P	**Pn**	**00 10 59.8**	**+0.6**
KIBK				*i* S	Sn	00 11 51.7	-10
KMBO	**Kilima Mbogo 6.70 352**			Pn	**Pn**	**00 11 16.9**	**+0.2**
	3.8nm,0.3s,baz=171,slow=14,SNR=44						
KMBO				Sn	**Sn**	**00 12 26.3**	**-7.0**
	3.8nm,0.3s,baz=108,slow=15,SNR=4.2						
KMBO				Lg	Lg	00 12 59.3	
	9.1nm,0.3s,baz=222,slow=24,SNR=4.4						
KMBO	**Kilima Mbogo 6.70 352**			*i* P	**Pn**	**00 11 15.1**	**-1.6**
KMBO				*i* S	**Sn**	**00 12 25.8**	**-7.5**
KMBO	**Kilima Mbogo 6.70 352**				**Pn**	**00 11 16.1**	**-0.6**
ZOMB	**Zomba 8.01 200**			*i* P	**Pn**	**00 11 36.0**	**+1.4**
ZOMB				S	**Sn**	**00 13 03.5**	**-1.9**
ZOMB	**Zomba 8.01 200**			*i* P	**Pn**	**00 11 36.0**	**+1.4**
ZOMB				S	**Sn**	**00 13 03.5**	**-1.9**
MBAR	**Mbarara 10.28 314**			Pn	**Pn**	**00 12 06.0**	**+0.1**
	3.5nm,0.3s,baz=126,slow=20,SNR=7.6						
MBAR				Sn	**Sn**	**00 13 54.9**	**-6.5**
	15nm,0.3s,baz=227,slow=23,SNR=5.8						
MBAR				Lg	Lg	00 15 03.1	
	baz=163,slow=16,SNR=11						
MBAR	**Mbarara 10.28 314**				**Pn**	**00 12 07.2**	**+1.3**
LSZ	**Lusaka 12.25 232**			Pn	**Pn**	**00 12 34.7**	**+2.0**
	0.9nm,0.3s,baz=45,slow=11,SNR=9.4						
LSZ				Sn	**Sn**	**00 14 47.4**	**-2.2**
	0.8nm,0.3s,baz=338,slow=12,SNR=3.4						
LSZ				Lg	Lg	00 16 06.5	
	0.7nm,0.3s,baz=3.0,slow=20,SNR=3.6						
LSZ				LR	LR	00 17 20.4	
	comp=Z,196nm,18.0s,baz=50,slow=37						
LSZ	**Lusaka 12.25 232**				**Pn**	**00 12 35.1**	**+2.3**
OPO	**Ambohidratompo 13.85 141**			Pn	**Pn**	**00 12 52.5**	**-2.2**
	0.5nm,0.3s,baz=317,slow=12,SNR=6.3						
OPO				Sn	Sn	00 15 13.6	-15
	0.3nm,0.3s,baz=2.5,slow=17,SNR=1.4						
ABPO	**Ambohimpanom 14.21 143**			Pn	**Pn**	**00 12 57.1**	**-2.6**
MATP	**Matopo 15.63 216**			Pn	**Pn**	**00 13 18.1**	**-0.6**
	1.8nm,0.3s,baz=42,slow=13,SNR=27						
MATP				Sn	**Sn**	**00 16 03.9**	**-8.3**
	1.4nm,0.3s,baz=120,slow=11,SNR=8.1						
MATP				Lg	Lg	00 18 00.8	
	baz=144,slow=19,SNR=1.0						
MATP				LR	LR	00 18 54.2	
	comp=Z,136nm,19.1s,baz=46,slow=35						
ATD	**Arta Tunnel 19.77 14**			P	**P**	**00 14 08.1**	**-0.4**
ATD				IAmb	IAmb	00 14 14.6	
	comp=Z,12nm,1.1s						
LBTB	**Lobatse 20.89 214**			P	Pn	00 14 25.8	+2.7
	comp=Z,2.3nm,0.7s,baz=28,slow=10,SNR=3.5						
LBTB				S	**S**	**00 18 08.0**	**-5.8**
	comp=Z,4.3nm,0.7s,baz=357,slow=10.0,SNR=3.5						
LBTB				Lg	Lg	00 20 37.6	
	comp=Z,1.4nm,0.6s,baz=88,slow=23,SNR=1.0						
LBTB				LR	LR	00 23 04.8	
	comp=Z,113nm,18.4s,baz=36,slow=38						
LBTB	**Lobatse 20.89 214**			P	Pn	00 14 23.1	-0.1
TSUM	**Tsumeb 22.94 238**			LR	LR	00 23 23.2	
	comp=Z,110nm,20.5s,baz=54,slow=36						
BOSA	**Boshof 24.00 209**			P	**P**	**00 14 56.7**	**+3.5**
	comp=Z,2.1nm,0.7s,baz=359,slow=8.0,SNR=4.1						
BOSA				LR	LR	00 24 21.4	
	comp=Z,152nm,20.5s,baz=325,slow=36						
BOSA	**Boshof 24.00 209**			P	**P**	**00 14 54.3**	**+1.2**
BOSA				IAmb	IAmb	00 15 09.4	
	comp=Z,8.8nm,1.0s						
SOCY	**Socotra 25.35 39**			P	**P**	**00 15 05.8**	**+0.2**
SUR	**Sutherland 29.28 211**			LR	LR	00 27 10.5	
	comp=Z,84nm,21.4s,baz=32,slow=36						
TORD	**Torodi Ar. Bea 41.76 300**			P	**P**	**00 17 31.4**	**+3.5**
	comp=Z,1.5nm,1.1s,baz=140,slow=5.3,SNR=5.5						
CSS	**Mathiatis 42.78 354**			P	P	00 17 31.1	-4.8
CSS				IAmb	IAmb	00 17 34.9	
	comp=Z,13nm,1.1s						
DBIC	**Dimbokro 45.23 287**			P	**P**

mb1 3.2/3, mb1mx2.7/53, mbtmp4.0/3, Error ellipse: s-maj=68.0km s-min=40.3km az=23.0

ISC 17 00:10:23.7±1.3, **22.7**S±0.1×**178.7**W±0.3, **h500**km, **n9**, σ0**s75**/10, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**15.89**	**192**	P	**P**	**00 13 42.7**	**-0.3**
	0.8nm,0.3s,baz=13,slow=19,SNR=2.1						
URZ				S	**S**	**00 16 27.4**	**+0.1**
	0.7nm,0.3s,baz=49,slow=14,SNR=1.8						
ASAR	**Alice Springs**	**43.45**	**259**	P	**P**	**00 17 42.5**	**+0.4**
	1.0nm,0.7s,baz=109,slow=7.0,SNR=9.4						
ASAR				PcP	**PcP**	**00 19 20.3**	**+0.8**
	0.5nm,0.6s,baz=114,slow=3.7,SNR=4.9						
WRA	**Warramunga Arr**	**43.73**	**264**	P	**P**	**00 17 43.9**	**-0.4**
	0.9nm,0.5s,baz=93,slow=8.2,SNR=8.8						
ARCES	**ARCESS Array B**	**131.00**	**349**	PKP	**PKPdf**	**00 28 37.4**	**+0.1**
	1.2nm,0.9s,baz=52,slow=2.0,SNR=4.1						
FINES	**FINESS Array B**	**137.73**	**343**	PKP	**PKiKP**	**00 28 51.8**	**-0.3**
	0.6nm,0.7s,baz=54,slow=2.6,SNR=3.7						
HFS	**Hagfors**	**141.64**	**350**	PKhKP	PKPpre	00 28 52.3	
	0.7nm,0.5s,baz=72,slow=4.8,SNR=7.5						
AKASG	**Malin Array Be**	**144.64**	**329**	PKP	**PKPdf**	**00 29 01.7**	**-1.0**
	0.9nm,0.4s,baz=44,slow=4.0,SNR=5.1						
EKA	**Eskdalemuir Ar**	**147.28**	**5**	PKPbc	**PKPbc**	**00 29 11.4**	**+1.2**
	0.3nm,0.4s,baz=4.3,slow=3.3,SNR=4.0						
BRTR	**Keskin Array B**	**147.83**	**309**	PKPbc	**PKPbc**	**00 29 11.8**	**-0.5**
	0.5nm,0.6s,baz=120,slow=3.1,SNR=4.6						

*IDC **17** 00:10:56.8±4.2, 50.09N×179.15W, h0km, mb3.2/3, mb1 3.7/5, mb1mx3.3/64, mbtmp3.5/5, ML3.2/2, MS2.6/1, Ms1 2.6/1, ms1mx2.1/24, Error ellipse: s-maj=93.4km s-min=44.5km az=178.0*

*NEIC **17** 00:11:00.4±0.9, 50.1N±0.1×179.3W±0.2, h29km±14km, Error ellipse: s-maj=19.8km s-min=17.1km az=182.0*

*AEIC **17** 00:11:00.1±1.3, 50.2N±0.2×179.3W±0.2, h85km±9km, ML3.1, Error ellipse: s-maj=26.1km s-min=15.6km az=150.0*

ISC 17 00:10:58.4±1.5, **50.1N**±0.1×**179.28W**±0.09, **h12**km, **n21**, σ0**s76**/23, **mb3.4**/3, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TASE	**Tanaga Southea**	**1.91**	**24**		**Pn**	**00 11 31.2**	**+0.4**
TAPA	**Tanaga Point A**	**1.96**	**28**		**Pn**	**00 11 31.8**	**+0.4**
TAFP	**Tanaga Falls P**	**1.98**	**24**		**Pn**	**00 11 32.1**	**+0.3**
TAFP					**Sn**	**00 11 56.7**	**+0.1**
KIMD	**Kanaga Island**	**2.11**	**37**		**Pn**	**00 11 33.8**	**+0.3**
KIKV	**Kanaga Island**	**2.23**	**36**		**Pn**	**00 11 35.6**	**+0.4**
KICM	**Kanaga Island**	**2.25**	**35**		**Pn**	**00 11 36.3**	**+0.9**
KIRH	**Kanaga Island**	**2.27**	**37**		**Pn**	**00 11 36.4**	**+0.7**
ADK	**Adak**	**2.43**	**42**		**Pn**	**00 11 38.2**	**+0.4**
ADK				Sn	**Sn**	**00 12 07.4**	**-0.1**
GSTD	**Great Sitkin T**	**2.79**	**44**		**Pn**	**00 11 43.6**	**+0.7**
GSTD					**Sn**	**00 12 16.9**	**+0.5**
GSMY	**Great Sitkin M**	**2.82**	**45**		**Pn**	**00 11 44.1**	**+0.9**
GSTR	**Great Sitkin T**	**2.85**	**44**		**Pn**	**00 11 44.7**	**+1.0**
GSTR	**Great Sitkin T**	**2.85**	**44**	Sn	**Sn**	**00 12 18.7**	**+0.7**
ATKA	**Atka Island**	**3.83**	**55**		**Pn**	**00 11 57.2**	**+0.1**
KOFP	**Korovin Flat P**	**3.92**	**54**		**Pn**	**00 11 59.4**	**+0.9**
NIKH	**Nikolski High**	**7.11**	**62**		**Pn**	**00 12 43.3**	**+1.1**
PETK	**Petropavlovsk-**	**14.60**	**291**	Pn	**Pn**	**00 14 25.2**	**+0.5**
	0.2nm,0.3s,baz=100,slow=17,SNR=1.7						
KDAK	**Kodiak Island**	**17.41**	**54**	P	**Pn**	**00 14 59.8**	**-1.1**
	0.2nm,0.3s,baz=285,slow=12,SNR=1.6						
ILAR	**Eielson Array**	**22.45**	**37**	P	**P**	**00 15 55.4**	**-1.5**
	0.3nm,0.5s,baz=242,slow=8.6,SNR=4.9						
TIXI	**Tiksi**	**31.61**	**332**	LR	LR	00 30 30.0	
	comp=Z,11nm,19.7s,baz=154,slow=37						
YKA	**Yellowknife Ar**	**36.35**	**45**	P	**P**	**00 18 02.2**	**+0.5**
	0.6nm,0.8s,baz=276,slow=6.6,SNR=8.7						
PDAR	**Pinedale Array**	**47.01**	**71**	P	**P**	**00 19 28.9**	**-0.6**
	0.2nm,0.6s,baz=303,slow=8.2,SNR=2.5						

*MAN **17** 00:11:24.6, 4.45N×127.61E, h13km, mb4.9, ML3.9, MS3.9*

*IDC **17** 00:11:27.5±4.3, 4.41N×127.65E, h124km±45km, mb3.5/5, mb1 3.7/6, mb1mx3.2/56, mbtmp4.0/6, Error ellipse: s-maj=122.2km s-min=22.2km az=66.0*

*DJA **17** 00:11:32.3±0.7, 4°N±6'×12°8E±1', h10km, M4.3/6, mB5.0/2, mb4.9/2, MLv4.0/6, Mw(mB)4.3/2*

ISC 17 00:11:25.0±0.9, **4.6N**±0.1×**127.8E**±0.1, **h100**km, **n12**, σ1**s61**/17, **mb3.6**/5, **1C**, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**2.57**	**305**	*e*P	**Pn**	**00 12 05.4**	**+0.3**
DDMP				*e*S	**Sn**	**00 12 36.8**	**+1.0**
KCP	**Kidapawan**	**3.61**	**311**	⇑*i*P	**Pn**	**00 12 20.7**	**+1.7**
KCP				*i* S	**Sn**	**00 12 59.7**	**-1.1**
SKMP	**Bagumbayan, Su**	**3.77**	**300**	*e*P	**Pn**	**00 12 22.5**	**+1.4**
SKMP				*e*S	**Sn**	**00 13 03.4**	**-1.2**
BUKP	**Musuan**	**4.24**	**320**	*e*P	Pn	00 12 45.9	+18
BUKP				*e*S	**Sn**	**00 13 15.8**	**-0.3**
SIJI	**Sorong**	**6.45**	**148**	P	**Pn**	**00 13 00.3**	**+2.9**
	16nm,0.3s,baz=209,slow=23,SNR=26						
SIJI				S	**Sn**	**00 14 08.9**	**-0.7**
	4.2nm,0.3s,baz=107,slow=22,SNR=6.3						
MRSI	**Marisa**	**7.18**	**235**	P	**Pn**	**00 13 08.5**	**+1.1**
FAKI	**Fak Fak**	**8.70**	**149**	P	**Pn**	**00 13 31.1**	**+3.0**
WRA	**Warramunga Arr**	**25.24**	**166**	P	**P**	**00 16 40.7**	**-1.1**
	1.7nm,0.6s,baz=340,slow=10,SNR=12						
ASAR	**Alice Springs**	**28.74**	**168**	P	**P**	**00 17 12.7**	**-0.5**
	1.1nm,0.4s,baz=355,slow=7.7,SNR=26						
ASAR				PcP	**PcP**	**00 20 19.5**	**-1.8**
	0.2nm,0.4s,baz=358,slow=3.1,SNR=1.7						
STKA	**Stephens Creek**	**38.59**	**161**	P	**P**	**00 18 37.2**	**-1.2**
	1.2nm,0.5s,baz=355,slow=10,SNR=6.6						
MKAR	**Makanchi Array**	**57.46**	**324**	P	**P**	**00 21 03.8**	**+0.2**
	0.3nm,0.5s,baz=107,slow=8.5,SNR=5.3						
VNDA	**Vanda**	**94.17**	**173**	P	**P**	**00 23 43.1**	**-1.5**
	0.4nm,0.5s,baz=310,slow=3.2,SNR=2.3						

ISC 17 00:11:44.6±1.7, **44.48N**±0.05×**17.33E**±0.07, **h7**km±13km, **n8**, σ0**s78**/16, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MGRS	**Mrkonjic Grad**	**0.18**	**250**	*e*Pg	**Pg**	**00 11 48.1**	**-0.3**
MGRS				*e*Sg	**Sg**	**00 11 50.5**	**-0.4**
BLY	**Banja Luka**	**0.29**	**340**	*e*Pg	**Pb**	**00 11 52.3**	**+0.2**
BLY				*e*Sg	**Sb**	**00 11 56.6**	**-0.5**
KIJV	**Kijevo**	**0.81**	**235**	*e*Pg	**Pg**	**00 11 59.9**	**-0.4**
KIJV				Sg	**Sg**	**00 12 11.0**	**+0.2**
RICI	**Ricice**	**0.99**	**188**	*e*Pg	**Pg**	**00 12 03.2**	**-0.5**
RICI				Sg	**Sg**	**00 12 16.6**	**-0.1**
MAKA	**Makarska**	**1.21**	**191**	*i* Pg	**Pn**	**00 12 07.8**	**-0.1**
MAKA				Sg	**Sb**	**00 12 22.9**	**-0.7**
MORI	**Morici**	**1.32**	**243**	*e*Pg	**Pn**	**00 12 09.1**	**-0.3**
MORI				Sg	**Sg**	**00 12 27.1**	**+0.2**
ZIRJ	**Zirje**	**1.47**	**236**	*e*Pg	**Pg**	**00 12 14.2**	**+1.5**
ZIRJ				Sg	**Sg**	**00 12 32.4**	**+0.7**
STON	**Ston**	**1.63**	**170**	*i* Pn	**Pg**	**00 12 14.8**	**-0.1**
STON				Sn	**Sg**	**00 12 38.7**	**+1.7**

*SJA **17** 00:14:07.9±0.6, 24.28S×67.01W, h195km±9km, ML4.7, MW4.3*

*NEIC **17** 00:14:07.5±1.7, 24.17S±0.06×66.88W±0.08, h172km±5km, mb4.6/237, Error ellipse: s-maj=10.8km s-min=8.6km az=83.0*

*IDC **17** 00:14:08.2±0.8, 24.14S×66.82W, h175km±6km, mb4.1/24, mb1 4.1/31, mb1mx4.1/42, mbtmp4.5/31, MS2.8/3, Ms1 2.8/3, ms1mx2.5/33, Error ellipse: s-maj=10.0km s-min=7.9km az=56.0*

*VAO **17** 00:14:08.9±0.4, 24.19S×66.97W, h197km±4km, mb4.4*

*GUC **17** 00:14:10.7±0.6, 24.01S×67.53W, h227km±6km, ML5.3*

ISC 17 00:14:08.6±0.6, **24.15S**±0.04×**67.00W**±0.04, **h184**km±5km, **n591**, σ1**s21**/579, **mb4.5**/120, **15C-2D**, **Salta Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AZAP	**Zapla**	**1.76**	**93**	*i* P	**Pn**	**00 14 45.0**	**+1.3**
AZAP				*e*S	**Sn**	**00 15 11.9**	**+1.1**
LVC	**Limon Verde**	**2.34**	**311**	P	**Pn**	**00 14 51.6**	**+1.6**
	780nm,0.3s,baz=161,slow=7.5,SNR=4557						
LVC				LR	LR	00 15 16.4	
	comp=Z,222nm,20.1s,baz=57,slow=28						
LVC				S	**Sn**	**00 15 22.7**	**+0.5**
	462nm,0.3s,baz=283,slow=21,SNR=16						
LVC	**Limon Verde**	**2.34**	**311**	⇓*i*P	**Pn**	**00 14 51.7**	**+1.6**
LVC				*e*S	**Sn**	**00 15 23.3**	**+1.1**
LVC	**Limon Verde**	**2.34**	**311**		**Pn**	**00 14 51.4**	**+1.4**
LVC	**Limon Verde**	**2.34**	**311**	*i* P	**Pn**	**00 14 51.6**	**+1.6**
LVC				*e*S	**Sn**	**00 15 23.9**	**+1.7**
LVC				IAML		00 15 27.6	
	comp=Z,708nm,0.3s						
LVC	**Limon Verde**	**2.34**	**311**	*e*P	**Pn**	**00 14 51.7**	**+1.6**
YJA	**Yavi**	**2.39**	**35**	*i* P	**Pn**	**00 14 53.0**	**+2.2**
YJA				*e*S	**Sn**	**00 15 26.8**	**+3.3**
PB15	**IPOC Station P**	**2.46**	**292**	⇑*i*P	**Pn**	**00 14 52.6**	**+1.4**
PB15				*i* S	**Sn**	**00 15 24.6**	**+0.2**
PB15	**IPOC Station P**	**2.46**	**292**		**Pn**	**00 14 51.7**	**+0.4**
PB15				Sn	**Sn**	**00 15 24.4**	**+0.1**
PB15	**IPOC Station P**	**2.46**	**292**	*i* P	**Pn**	**00 14 52.7**	**+1.4**
PB15				*e*S	**Sn**	**00 15 24.5**	**+0.2**
GO02	**Mina Guanaco**	**2.57**	**246**	⇓*i*P	**Pn**	**00 14 53.1**	**+0.6**
GO02				*i* S	**Sn**	**00 15 26.6**	**-0.2**
GO02				IAML		00 15 27.2	
	comp=E,15μm,0.5s						
GO02	**Mina Guanaco**	**2.57**	**246**		**Pn**	**00 14 53.2**	**+0.6**
GO02				Sn	**Sn**	**00 15 26.6**	**-0.2**
PB06	**IPOC Station P**	**2.77**	**301**	⇑*i*P	**Pn**	**00 14 56.1**	**+1.2**
PB06				*e*S	**Sn**	**00 15 30.3**	**-0.6**
PB06				IAML		00 15 34.0	
	comp=E,7μm,0.6s						
PB06	**IPOC Station P**	**2.77**	**301**		**Pn**	**00 14 55.4**	**+0.5**
PB06				Sn	**Sn**	**00 15 30.8**	**0.0**
PB06	**IPOC Station P**	**2.77**	**301**	*i* P	**Pn**	**00 14 56.1**	**+1.2**
PB06				IAML		00 15 36.3	
	comp=Z,4μm,0.3s						
PB09	**IPOC Station P**	**3.13**	**318**	⇑*i*P	**Pn**	**00 15 00.8**	**+1.6**
PB09				*e*S	**Sn**	**00 15 38.7**	**0.0**
PB09	**IPOC Station P**	**3.13**	**318**		**Pn**	**00 15 00.8**	**+1.6**
PB09	**IPOC Station P**	**3.13**	**318**	*i* P	**Pn**	**00 15 00.7**	**+1.5**
PB09				IAML		00 15 49.0	
	comp=Z,978nm,0.6s						
PB14	**IPOC Station P**	**3.14**	**261**	⇑*e*P	**Pn**	**00 14 59.4**	**0.0**
PB14				*i* S	**Sn**	**00 15 37.0**	**-2.1**
PB14				IAML		00 15 41.6	
	comp=E,3μm,0.3s						
PB14	**IPOC Station P**	**3.14**	**261**		**Pn**	**00 14 59.4**	**0.0**
PB14	**IPOC Station P**	**3.14**	**261**	*i* P	**Pn**	**00 14 59.5**	**0.0**
PB14				IAML		00 15 45.2	
	comp=Z,2μm,0.2s						
PB05	**IPOC Station P**	**3.22**	**293**	⇑*i*P	**Pn**	**00 15 00.7**	**+0.5**
PB05				*i* S	**Sn**	**00 15 38.5**	**-1.9**
PB05				IAML		00 15 44.8	
	comp=E,3μm,0.2s						
PB05	**IPOC Station P**	**3.22**	**293**	*i* P	**Pn**	**00 15 00.9**	**+0.7**
PB05				IAML		00 15 44.1	
	comp=Z,1μm,0.3s						
PB03	**IPOC Station P**	**3.29**	**309**	⇑*i*P	**Pn**	**00 15 01.9**	**+0.8**
PB03				*e*S	**Sn**	**00 15 41.0**	**-1.2**
PB03				IAML		00 15 45.3	
	comp=N,3μm,0.5s						
AC02	**Maricunga**	**3.29**	**215**		**Pn**	**00 15 01.6**	**+0.2**
PB10	**IPOC Station P**	**3.32**	**280**	⇑*i*P	**Pn**	**00 15 01.9**	**+0.5**
PB10				*e*S	**Sn**	**00 15 40.5**	**-2.0**
PB10				IAML		00 15 47.0	
	comp=E,4μm,0.3s						
PB10	**IPOC Station P**	**3.32**	**280**		**Pn**	**00 15 01.3**	**0.0**
PB10	**IPOC Station P**	**3.32**	**280**	*i* P	**Pn**	**00 15 01.9**	**+0.5**
PB10				IAML		00 15 46.3	
	comp=Z,3μm,0.3s						
PB04	**IPOC Station P**	**3.42**	**301**	⇑*i*P	**Pn**	**00 15 03.3**	**+0.5**
PB04				*i* S	**Sn**	**00 15 43.5**	**-1.5**
PB04				IAML		00 15 47.3	
	comp=N,5μm,0.4s						
PB04	**IPOC Station P**	**3.42**	**301**		**Pn**	**00 15 03.3**	**+0.5**
PB04	**IPOC Station P**	**3.42**	**301**	*i* P	**Pn**	**00 15 03.6**	**+0.9**
PB04				IAML		00 15 51.6	
	comp=Z,3μm,0.4s						
PB07	**IPOC Station P**	**3.60**	**312**	⇑*i*P	**Pn**	**00 15 05.6**	**+0.6**
PB07				*e*S	**Sn**	**00 15 47.5**	**-1.5**
PB07	**IPOC Station P**	**3.60**	**312**		**Pn**	**00 15 05.5**	**+0.6**
PB01	**IPOC Station P**	**3.86**	**323**	⇑*i*P	**Pn**	**00 15 08.5**	**+0.4**
PB01				*e*S	**Sn**	**00 15 53.6**	**-1.2**
PB01	**IPOC Station P**	**3.86**	**323**		**Pn**	**00 15 08.5**	**+0.4**
PB02	**IPOC Station P**	**3.89**	**316**	*i* P	**Pn**	**00 15 08.7**	**+0.2**
PB02				*e*S	**Sn**	**00 15 53.8**	**-1.6**
PATCX	**Punta Patache**	**4.42**	**318**	⇑*e*P	**Pn**	**00 15 14.6**	**-0.6**
PATCX				*e*S	**Sn**	**00 16 04.6**	**-3.0**
PATCX	**Punta Patache**	**4.42**	**318**		**Pn**	**00 15 14.7**	**-0.6**
PB08	**IPOC Station P**	**4.47**	**333**	⇑*i*P	**Pn**	**00 15 17.3**	**+1.1**
PB08				*e*S	**Sn**	**00 16 08.9**	**-0.2**
PB08	**IPOC Station P**	**4.47**	**333**		**Pn**	**00 15 16.9**	**+0.7**
TA01	**Diego Aracena**	**4.63**	**320**	*e*P	**Pn**	**00 15 16.9**	**-1.0**
TA01				*e*S	**Sn**	**00 16 09.8**	**-2.5**
TA01	**Diego Aracena**	**4.63**	**320**		**Pn**	**00 15 17.1**	**-0.8**
VCA	**Vinchina**	**4.69**	**193**	*e*P	**Pn**	**00 15 19.4**	**+0.6**
TA02	**Huaiquique**	**4.83**	**322**	*e*P	**Pn**	**00 15 19.2**	**-1.3**
TA02				*i* S	**Sn**	**00 16 15.3**	**-1.8**
GO01	**Chusmiza**	**4.91**	**335**	⇑*e*P	**Pn**	**00 15 22.3**	**+0.4**
GO01				*e*S	**Sn**	**00 16 19.0**	**-0.5**
GO01	**Chusmiza**	**4.91**	**335**		**Pn**	**00 15 22.4**	**+0.4**
PB11	**IPOC Station P**	**5.02**	**330**	⇑*i*P	**Pn**	**00 15 22.4**	**-0.7**
PB11				*i* S	**Sn**	**00 16 18.7**	**-2.9**
PSGC	**Pisagua**	**5.38**	**327**	⇑*i*P	**Pn**	**00 15 25.8**	**-2.0**
PSGC				*e*S	**Sn**	**00 16 24.2**	**-5.8**
PSGCX	**Pisagua**	**5.38**	**327**		**Pn**	**00 15 25.7**	**-2.0**
MNMC	**Minye Minye**	**5.55**	**334**		**Pn**	**00 15 29.6**	**-0.5**
AROD	**Rodeo**	**6.38**	**200**	*i* P	**Pn**	**00 15 40.5**	**-0.4**
AP01	**Chacalluta**	**6.55**	**331**	Pn	**Pn**	**00 15 42.3**	**-0.5**
RTLL	**Cerro Villicun**	**7.27**	**190**	*i* P	**Pn**	**00 15 50.7**	**-1.6**
CO03	**El Pedregal**	**7.42**	**205**		**Pn**	**00 15 51.4**	**-2.9**
CFA	**Coronel Fontan**	**7.50**	**188**	P	**Pn**	**00 15 53.6**	**-1.8**
	comp=Z,4.4nm,0.3s,baz=346,slow=8.8,SNR=38						
CFA				S	Sn	00 17 11.4	-8.6
	comp=Z,35nm,0.3s,baz=185,slow=17,SNR=23						
CFA				LR	LR	00 19 01.2	
	comp=Z,52nm,20.7s,baz=76,slow=39						
CFA	**Coronel Fontan**	**7.50**	**188**	*i* P	**Pn**	**00 15 53.5**	**-1.8**
CFA				IAML		00 17 21.5	
	comp=Z,60nm,0.5s						
RTCV	**Cerro Valdivia**	**7.80**	**190**	*i* P	**Pn**	**00 15 58.1**	**-1.2**
RTCV				IAML		00 17 53.0	
	comp=Z,48nm,3.8s						
CO02	**Combarbal**	**7.87**	**206**		**Pn**	00 15 56.5	-3.7
LPAZ	**La Paz**	**7.90**	**352**	P	**Pn**	**00 16 02.1**	**+0.9**
	comp=Z,7.6nm,0.3s,baz=165,slow=7.1,SNR=162						
LPAZ				S	**Sn**	**00 17 28.4**	**-1.9**
	comp=Z,1.9nm,0.3s,baz=262,slow=21,SNR=4.3						
LPAZ	**La Paz**	**7.90**	**352**		**Pn**	**00 16 01.3**	**+0.1**
LPAZ	**La Paz**	**7.90**	**352**		**Pn**	**00 16 01.7**	**+0.5**
LPAZ	**La Paz**	**7.90**	**352**	*e*P	**Pn**	**00 16 01.9**	**+0.7**
CO04	**Los Peladeros**	**8.61**	**203**	Pn	**Pn**	00 16 06.6	-3.5
CPUP	**Villa Florida**	**9.02**	**106**	P	**Pn**	**00 16 12.5**	**-2.7**
	comp=Z,0.6nm,0.3s,baz=279,slow=10,SNR=15						
CPUP	**Villa Florida**	**9.02**	**106**		**Pn**	**00 16 14.0**	**-1.2**
CPUP	**Villa Florida**	**9.02**	**106**	*e*P	**Pn**	**00 16 13.9**	**-1.2**
VA03	**San Esteban**	**9.13**	**199**		**Pn**	**00 16 14.4**	**-2.3**
ROC1	**El Roble**	**9.47**	**201**	Pn	**Pn**	**00 16 19.2**	**-2.2**
PEL	**Peldehue**	**9.52**	**199**	Pn	**Pn**	**00 16 21.2**	**-0.7**
MT05	**Renca**	**9.77**	**199**	Pn	**Pn**	**00 16 24.5**	**-0.6**
MT02	**Curacav**	**9.77**	**201**	Pn	**Pn**	**00 16 22.6**	**-2.5**
SIV	**San Ignacio**	**9.84**	**35**	P	**Pn**	**00 16 25.0**	**-1.1**
	comp=Z,2.9nm,0.3s,baz=224,slow=13,SNR=124						
SIV				S	Sn	00 18 03.5	-12
	comp=Z,0.4nm,0.3s,baz=243,slow=16,SNR=6.0						
MT01	**Popeta**	**10.37**	**200**	Pn	**Pn**	00 16 29.4	-3.4
ITQB	**Itaqui**	**10.76**	**123**	*e*P	**Pn**	**00 16 37.0**	**-0.9**
AQDB	**Aquidauana**	**11.08**	**73**	*e*P	**Pn**	**00 16 42.2**	**+0.1**
BO02	**Sierra Bellavi**	**11.10**	**196**		**Pn**	**00 16 40.1**	**-2.2**
PTLB	**Pontes e Lacer**	**11.38**	**42**	*e*P	**Pn**	**00 16 45.1**	**-1.0**
VILB	**Vilhena**	**12.87**	**31**	*e*P	**Pn**	**00 17 05.7**	**+0.6**
BI02	**San Fabin de**	**13.00**	**195**		**Pn**	**00 17 06.0**	**-0.7**
TRCB	**Terra Rica**	**13.25**	**87**	*e*P	**Pn**	**00 17 10.0**	**+0.2**
SALV	**Santo Antonio**	**13.42**	**54**	*e*P	**Pn**	**00 17 11.2**	**-0.8**
CPSB	**Cacapava Do Su**	**13.56**	**120**	*e*P	**Pn**	**00 17 12.5**	**-1.2**
PTGB	**Pitanga**	**13.61**	**95**	*e*P	**Pn**	**00 17 14.6**	**+0.2**
BI03	**Tigo**	**13.67**	**201**	Pn	**Pn**	**00 17 13.6**	**-1.3**
ITAB	**Concordia**	**13.75**	**106**	*e*P	**Pn**	**00 17 15.1**	**-0.9**
PLTB	**Pedras Altas**	**14.04**	**126**	*e*P	**Pn**	**00 17 17.6**	**-2.1**
C2SB	**Chapadao do Su**	**14.22**	**71**	*e*P	**P**	**00 17 23.0**	**-1.1**
PCMB	**Pacaembu**	**14.72**	**83**	*e*P	**Pn**	**00 17 27.3**	**-0.9**
NNA	**Nana**	**15.29**	**321**	P	**P**	**00 17 37.2**	**+1.3**
	comp=Z,1.4nm,0.3s,baz=150,slow=2.5,SNR=1.9						
NNA	**Nana**	**15.29**	**321**	P	**Pn**	**00 17 35.5**	**+0.3**
CNLB	**Canela**	**15.31**	**113**	*e*P	**Pn**	**00 17 34.3**	**-1.1**
SAML	**Samuel**	**15.55**	**14**	P	**Pn**	**00 17 37.5**	**-0.9**
SAML				IAmb	IAmb	00 17 39.5	
	comp=Z,21nm,0.8s						
SAML	**Samuel**	**15.55**	**14**	*e*P	**Pn**	**00 17 37.9**	**-0.5**
FRTB	**Fartura**	**15.98**	**91**	*e*P	**Pn**	**00 17 43.4**	**-0.2**
FRTB				*e*S	**S**	**00 20 40.0**	**-1.0**
ITRB	**Iturama**	**16.06**	**77**	*e*P	**P**	**00 17 44.1**	**-0.2**
ARAG	**Araguaiana, MT**	**16.55**	**62**	*e*P	**Pn**	**00 17 50.8**	**+0.3**
PLCA	**Paso Flores**	**16.80**	**189**	P	**P**	**00 17 52.5**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=9.8,slow=12,SNR=11						
PLCA	**Paso Flores**	**16.80**	**189**	P	**P**	**00 17 51.4**	**-1.0**
PLCA				IAmb	IAmb	00 18 00.4	
	comp=Z,12nm,0.8s						
PLCA	**Paso Flores**	**16.80**	**189**	*e*P	**P**	**00 17 52.4**	**0.0**
CLDB	**Colider**	**16.97**	**41**	*e*P	**P**	**00 17 53.3**	**-1.1**
BB19B	**Bebedouro**	**17.33**	**83**	*e*P	**P**	**00 17 58.0**	**-0.3**
SPB	**Sao Paulo**	**17.90**	**92**	P	**P**	**00 18 03.7**	**-0.8**
SPB				IAmb	IAmb	00 18 07.2	
	comp=Z,13nm,0.7s						
SPB	**Sao Paulo**	**17.90**	**92**	*e*P	**P**	**00 18 04.3**	**-0.3**
RCLB	**Rio Claro- Sao**	**17.97**	**88**	*e*P	**P**	**00 18 04.3**	**-1.0**
PET01	**Itanhaem-SP**	**17.99**	**94**	*e*P	**P**	**00 18 04.8**	**-0.6**
VAO	**Valinhos**	**18.40**	**90**	*e*P	**P**	**00 18 09.3**	**-0.7**
IPMB	**Ipameri, GO**	**18.57**	**74**	*e*P	**P**	**00 18 11.8**	**-0.1**
IPMB				*e*S	**S**	**00 21 33.6**	**-0.4**
LL01	**San Ignacio de**	**18.72**	**193**	P	**P**	**00 18 13.7**	**+0.4**
LL01				IAmb	IAmb	00 18 14.4	
	comp=Z,20nm,0.9s						
PARB	**Paraibuna**	**19.58**	**92**	*e*P	**P**	**00 18 22.6**	**-0.2**
BDFB	**Brasilia**	**19.74**	**68**	P	**P**	**00 18 24.4**	**-0.2**
	comp=Z,4.2nm,0.3s,baz=249,slow=8.7,SNR=25						
BDFB				S	**S**	**00 21 53.5**	**-3.7**
	comp=Z,0.3nm,0.3s,baz=224,slow=26,SNR=1.9						
BDFB	**Brasilia**	**19.74**	**68**	P	**P**	**00 18 24.0**	**-0.6**
BDFB				IAmb	IAmb	00 18 26.2	
	comp=Z,22nm,1.0s						
ATAH	**Atahualpa**	**20.15**	**325**	P	**P**	**00 18 30.4**	**+1.2**
	comp=Z,5.7nm,0.7s,baz=257,slow=1.8,SNR=3.5						
NPGB	**Novo Progresso**	**20.35**	**35**	*e*P	**P**	**00 18 28.9**	**-2.1**
ESAR	**Angra dos Reis**	**20.70**	**91**	*e*P	**P**	**00 18 33.7**	**-0.9**
BSCB	**Bom Sucesso**	**20.75**	**86**	*e*P	**P**	**00 18 34.1**	**-1.3**
MAN01	**Angra dos Reis**	**21.16**	**91**	*e*P	**P**	**00 18 37.9**	**-1.8**
VAS01	**Vassouras-RJ**	**21.72**	**90**	*e*P	**P**	**00 18 44.6**	**-0.8**
MACA	**Manacapuru-AM**	**21.74**	**17**	*e*P	**P**	**00 18 44.6**	**-1.0**
MC01	**Montes Claros**	**22.82**	**75**	*e*P	**P**	**00 18 54.9**	**-1.0**
JANB	**Januaria**	**23.18**	**71**	*e*P	**P**	**00 18 58.0**	**-1.2**
SMTB	**Santa Maria do**	**23.98**	**54**	*e*P	**P**	**00 19 05.4**	**-1.0**
PTGA	**Pitinga**	**24.26**	**17**	P	**P**	**00 19 08.6**	**-0.4**
	comp=Z,3.2nm,0.3s,baz=287,slow=22,SNR=13						
PTGA				LR	LR	00 30 10.3	
	comp=Z,36nm,20.8s,baz=162,slow=40

SNAA Sanae 59.20 161 P P 00 23 50.1 +0.1
comp=Z,8.7nm,0.7s,baz=284,slow=7.2,SNR=27
SNAA PcP PcP 00 24 35.8 -0.6
comp=Z,1.9nm,0.6s,baz=270,slow=6.1,SNR=4.3
SNAA Sanae 59.20 161 P P 00 23 50.2 +0.1
SNAA IAmb IAmb 00 23 51.1
comp=Z,9.8nm,0.8s
GOGA Godfrey 59.36 344 P P 00 23 51.5 +0.1
GOGA IAmb IAmb 00 23 52.2
comp=Z,7.5nm,0.6s
Y55A Saluda 59.48 346 P P 00 23 52.7 +0.5
baz=164
X57A Johnson Farm, 59.61 347 P P 00 23 53.6 +0.5
baz=166
X56A White Oak 59.83 347 P P 00 23 55.2 +0.5
baz=165,SNR=5.2
HODGE Hodges 59.85 345 P P 00 23 55.2 +0.5
BIRD Birdtown, Kers 59.86 347 P P 00 23 55.5 +0.7
BIRD IAmb IAmb 00 23 56.5
comp=Z,12nm,0.9s
Z50A Ashland 59.87 342 P P 00 23 55.0 +0.1
baz=160,SNR=8.0
Z50A Ashland 59.87 342 P P 00 23 55.0 +0.1
X55A Gracelyn & Ava 59.94 346 P P 00 23 56.1 +0.7
baz=164
Y52A Lilburn 59.94 344 P P 00 23 55.3 -0.1
baz=162
LRAL Lakeview Retre 59.98 341 P P 00 23 55.7 0.0
baz=159
LRAL Lakeview Retre 59.98 341 P P 00 23 55.7 0.0
LRAL IAmb IAmb 00 23 56.0
comp=Z,5.3nm,0.8s
W58A Raeford 59.98 348 P P 00 23 55.0 -0.6
baz=167
X54A Belton 60.18 345 P P 00 23 57.5 +0.5
baz=164
W57A Gilead 60.26 348 P P 00 23 58.1 +0.6
baz=166
W57A Gilead 60.26 348 P P 00 23 57.9 +0.4
W57A IAmb IAmb 00 23 58.7
comp=Z,17nm,0.9s
PAULI Pauline 60.31 346 P P 00 23 58.6 +0.7
PAULI IAmb IAmb 00 23 59.3
comp=Z,9.8nm,0.6s
W56A Indian Trail 60.36 347 P P 00 23 58.7 +0.5
baz=166
KMSC Kings Mountain 60.52 347 P P 00 23 59.4 +0.1
baz=165
V59A Middlesex 60.54 350 P P 00 23 58.5 -0.9
baz=168
Y49A Blount Mountai 60.58 341 P P 00 23 59.7 0.0
Y49A IAmb IAmb 00 24 00.3
comp=Z,9.6nm,0.9s
W54A Cherokee Point 60.65 346 P P 00 24 00.9 +0.7
baz=164
BG3 Lake Jocassee 60.73 345 P P 00 24 01.3 +0.5
BG3 IAmb IAmb 00 24 02.2
comp=Z,4.6nm,0.8s
833A Chaparral WMA, 60.80 327 P P 00 24 02.5 +1.2
baz=146,SNR=6.7
FPAL Fort Paine 60.99 342 IAmb IAmb 00 24 03.3
comp=Z,11nm,0.7s
V56A Mocksville 60.99 347 P P 00 24 03.2 +0.7
baz=166
V55A Taylorsville 61.18 347 P P 00 24 04.5 +0.7
baz=165
V55A Taylorsville 61.18 347 P P 00 24 04.7 +1.0
V54A Nebo 61.26 346 P P 00 24 04.8 +0.5
baz=164
V53A Saluda 61.35 345 P P 00 24 05.3 +0.3
CPCT Cooper Cave 61.56 344 P P 00 24 06.5 +0.2
CPCT IAmb IAmb 00 24 07.0
comp=Z,7.7nm,0.7s
TKL Tuckaleechee C 61.57 344 P P 00 24 06.5 +0.1
TKL IAmb IAmb 00 24 06.6
comp=Z,8.4nm,0.6s
NATX Nacogdoches 61.57 333 P P 00 24 07.9 +1.5
baz=151
NATX Nacogdoches 61.57 333 P P 00 24 07.8 +1.3
T60A Surry 61.65 351 P P 00 24 06.7 -0.2
baz=170
V52A Sevierville 61.70 345 P P 00 24 07.3 +0.1
V52A IAmb IAmb 00 24 07.6
comp=Z,9.4nm,0.7s
T58A Grand View Acr 61.74 350 P P 00 24 07.3 -0.1
baz=168
U55A TA2, Sparta 61.77 347 P P 00 24 08.1 +0.3
baz=165
V51A Loudon 61.85 344 P P 00 24 08.4 +0.2
V51A IAmb IAmb 00 24 21.4
comp=Z,7.0nm,1.1s
U54A Nelsons Funny 61.95 346 P P 00 24 09.6 +0.6
baz=165
U54A Nelsons Funny 61.95 346 P P 00 24 09.6 +0.6
PLAL Pickwick Lake 62.12 340 IAmb IAmb 00 24 10.4
comp=Z,7.3nm,0.8s
T55A Pulaski 62.31 348 P P 00 24 11.9 +0.6
baz=166
T54A Tazewell 62.42 347 P P 00 24 12.2 +0.2
baz=165
T53A Wise 62.55 346 P P 00 24 12.8 -0.1
baz=164
WLAR White Oak Lake 62.66 336 P P 00 24 15.2 +1.5
R59A King George, V 62.75 351 P P 00 24 14.5 +0.4
baz=170
JCT Junction City 62.78 328 P P 00 24 15.3 +0.7
baz=146,SNR=6.6
JCT Junction City 62.78 328 P P 00 24 15.1 +0.5
S55A Lewisburg 62.89 348 P P 00 24 15.8 +0.6
baz=166
U49A Red Boiling Sp 62.89 343 IAmb IAmb 00 24 15.2
comp=Z,6.7nm,0.5s
WHTX Lake Whitney, 62.97 331 P P 00 24 16.2 +0.5
baz=149,SNR=5.4
S54A Dingess, Beckl 63.08 347 P P 00 24 16.6 +0.2
baz=165
S54A Dingess, Beckl 63.08 347 P P 00 24 15.3 -1.1
WVT Waverly 63.11 341 P P 00 24 16.1 -0.5
baz=159
WVT Waverly 63.11 341 P P 00 24 16.0 -0.5
T50A Nancy 63.13 344 IAmb IAmb 00 24 17.1
comp=Z,6.8nm,0.6s
X40A Basin Creek Fa 63.27 336 P P 00 24 17.6 -0.1
baz=154
R55A Marlinton 63.32 348 P P 00 24 18.5 +0.5
R55A IAmb IAmb 00 24 33.5
comp=Z,9.7nm,1.1s
MIAR Mount Ida 63.60 336 P P 00 24 20.3 +0.5
baz=153
MIAR Mount Ida 63.60 336 P P 00 24 20.3 +0.5
MIAR IAmb IAmb 00 24 20.7
comp=Z,5.5nm,0.7s
W41B Gary Mavity, V 63.67 337 P P 00 24 20.9 +0.6
baz=154
TXAR Lajitas Array 63.80 324 P P 00 24 22.4 +1.0
comp=Z,1.7nm,0.6s,baz=153,slow=8.3,SNR=25
TX31 Lajitas Ar. Si 63.81 324 IAmb IAmb 00 24 22.9
comp=Z,8.5nm,0.8s
HICK Hickman 63.91 340 P P 00 24 22.1 +0.3
Q55A Buckhannon 64.00 349 P P 00 24 22.7 +0.2
baz=167
Z35A Perchaven, San 64.02 332 P P 00 24 23.3 +0.7
Q54A Coxs Mills 64.13 348 P P 00 24 23.2 +0.1
baz=166
Q53A Leroy 64.14 347 P P 00 24 23.9 +0.6
baz=165
R50A Paris 64.20 345 P P 00 24 23.3 -0.3
R50A IAmb IAmb 00 24 23.9
comp=Z,5.0nm,0.6s
W39A Magazine 64.25 336 P P 00 24 25.2 +1.1
baz=153
W39A Magazine 64.25 336 IAmb IAmb 00 24 26.0
comp=Z,8.4nm,0.8s
FCAR Ozark Folk Cen 64.28 337 P P 00 24 24.1 -0.1
Q52A Bidwell 64.39 347 P P 00 24 25.0 +0.1
baz=164
R49A Shelbyville 64.42 344 P P 00 24 25.0 -0.1
R49A IAmb IAmb 00 24 25.4
comp=Z,6.1nm,0.6s
P55A Reedsville 64.46 349 P P 00 24 25.9 +0.5
baz=167
ABTX Abilene, Hawle 64.49 330 P P 00 24 26.8 +1.1
baz=147
ABTX Abilene, Hawle 64.49 330 IAmb IAmb 00 24 28.0
comp=Z,7.0nm,0.6s
PBMO Poplar Bluff 64.51 339 IAmb IAmb 00 24 26.6
comp=Z,15nm,0.8s

WCI Wyandotte Cave 64.64 343 P P 00 24 26.4 -0.1
baz=160
WCI Wyandotte Cave 64.64 343 P P 00 24 26.0 -0.5
P54A Burton 64.66 349 P P 00 24 26.3 -0.4
baz=166
Q51A Peebles 64.69 346 P P 00 24 27.2 +0.4
baz=163
P53A Whipple 64.72 348 P P 00 24 27.3 +0.3
baz=165
P53A Whipple 64.72 348 P P 00 24 26.3 -0.7
P53A IAmb IAmb 00 24 27.7
comp=Z,11nm,1.0s
U40A Yellville 64.95 337 P P 00 24 29.1 +0.5
baz=154
U40A Yellville 64.95 337 P P 00 24 28.1 -0.5
U40A IAmb IAmb 00 24 29.2
comp=Z,5.8nm,0.8s
O56A Blue Knob Stat 64.99 350 P P 00 24 28.6 -0.2
baz=168
P52A Corning 65.01 347 P P 00 24 29.0 +0.1
baz=165
O55A Ligonier 65.05 350 P P 00 24 29.1 0.0
baz=168
O54A Avella 65.21 349 P P 00 24 30.4 +0.3
baz=166
HHAR Hobbs 65.28 336 P P 00 24 30.7 0.0
HHAR IAmb IAmb 00 24 31.4
comp=Z,6.3nm,1.0s
P50A Jamestown 65.34 346 P P 00 24 30.9 -0.2
baz=163
O52A Adamsville 65.42 348 P P 00 24 31.7 +0.2
baz=165
O52A Adamsville 65.42 348 P P 00 24 31.5 0.0
O52A IAmb IAmb 00 24 32.4
comp=Z,7.4nm,0.7s
O53A New Philadelph 65.43 348 P P 00 24 31.0 -0.6
baz=166
P49A Miami Univ. Ec 65.48 345 P P 00 24 31.3 -0.6
baz=162,SNR=5.5
N55A Marion Center 65.56 350 P P 00 24 33.2 +0.7
baz=168
U38A Gravette 65.58 336 IAmb IAmb 00 24 33.2
comp=Z,5.4nm,0.9s
O51A Pataskala 65.60 347 P P 00 24 32.7 0.0
baz=164
TUL1 Leonard 65.65 335 P P 00 24 34.1 +1.0
baz=151
ACSO Alum Creek Sta 65.76 347 P P 00 24 34.0 +0.3
baz=164
M58A Price's Panora 65.78 352 P P 00 24 34.1 +0.2
baz=170
O50A Cable 65.82 346 P P 00 24 34.0 -0.1
baz=163
M59A Waymart 65.83 353 P P 00 24 34.2 +0.1
baz=172
M57A Sunshine Farm, 65.83 352 P P 00 24 34.9 +0.7
M57A IAmb IAmb 00 24 42.1
comp=Z,9.6nm,1.1s
WMOK Wichita Mounta 65.88 332 P P 00 24 35.2 +0.5
baz=148
KSPA Keystone Colle 65.88 353 P P 00 24 34.4 0.0
KSPA IAmb IAmb 00 24 45.9
comp=Z,10nm,1.1s
N54A Moraine State 65.90 349 P P 00 24 35.0 +0.4
baz=167
CCM Cathedral Cave 65.94 339 P P 00 24 35.2 +0.3
baz=156
CCM Cathedral Cave 65.94 339 P P 00 24 35.0 +0.1
QSPA South Pole Qui 66.05 180 P P 00 24 36.2 +0.7
comp=Z,7.0nm,0.5s,baz=349,slow=4.0,SNR=90
QSPA South Pole Qui 66.05 180 P P 00 24 36.1 +0.7
QSPA IAmb IAmb 00 24 37.0
comp=Z,8.1nm,0.7s
M56A Emporium 66.12 351 P P 00 24 36.2 +0.2
baz=169
M56A Emporium 66.12 351 P P 00 24 36.4 +0.4
P46A Rosedale 66.19 343 P P 00 24 35.7 -0.7
P46A IAmb IAmb 00 24 36.4
comp=Z,7.7nm,0.6s
M55A Ridgway 66.19 350 P P 00 24 36.9 +0.4
baz=168
M55A Ridgway 66.19 350 P P 00 24 37.2 +0.7
M55A IAmb IAmb 00 24 37.5
comp=Z,6.3nm,0.8s
O48A Farmland 66.28 345 P P 00 24 36.4 -0.5
baz=162,SNR=5.6
L58A Harry Jones Me 66.37 353 P P 00 24 38.3 +0.7
baz=171
M54A Oil Creek Stat 66.38 350 P P 00 24 37.7 0.0
baz=167
M54A Oil Creek Stat 66.38 350 P P 00 24 37.6 0.0
M54A IAmb IAmb 00 24 39.4
comp=Z,7.4nm,0.8s
L59A Walton 66.43 353 P P 00 24 38.6 +0.6
L59A IAmb IAmb 00 24 39.9
comp=Z,8.4nm,0.9s
R40A Maddies Statio 66.49 339 IAmb IAmb 00 24 38.9
comp=Z,6.8nm,0.7s
MNTX Coudas Mount 66.58 325 P P 00 24 39.3 +0.2
baz=142,SNR=12
MNTX Cornudas Mount 66.58 325 IAmb IAmb 00 24 40.3
comp=Z,4.8nm,0.8s
L56A Greenwood 66.68 351 P P 00 24 39.4 -0.2
baz=169
T35A Sooner Cattle 66.81 335 P P 00 24 38.6 -1.9
T35A IAmb IAmb 00 24 55.5
comp=Z,8.1nm,0.9s
N48A Decatur 66.82 345 P P 00 24 39.7 -0.7
baz=162
L55A Hinsdale 66.85 351 P P 00 24 40.1 -0.5
baz=169
SFIN Lafayette 66.88 343 P P 00 24 40.3 -0.4
baz=160
L53A Girard 66.91 349 P P 00 24 41.4 +0.4
baz=167
L54A Sinclairville 67.03 350 P P 00 24 42.5 +0.8
baz=168
K58A Earlville 67.06 353 P P 00 24 42.3 +0.4
baz=171
MSTX Muleshoe 67.07 328 P P 00 24 43.2 +0.9
baz=145
MSTX Muleshoe 67.07 328 P P 00 24 42.8 +0.5
M49A Liberty Center 67.17 346 P P 00 24 42.6 +0.1
baz=163
J63A Strafford 67.20 357 P P 00 24 43.1 +0.3
baz=176
AMTX Amarillo 67.30 330 P P 00 24 44.3 +0.6
baz=146
L50A Kingsville 67.47 347 P P 00 24 44.4 -0.1
baz=164
P40A Paris 67.54 339 IAmb IAmb 00 24 45.9
comp=Z,13nm,0.8s
J59A Piesco 67.64 354 P P 00 24 45.2 -0.3
baz=172
J59A Piesco 67.64 354 P P 00 24 44.4 -1.1
HDIL Hopedale 67.64 342 P P 00 24 44.8 -0.8
baz=158,SNR=6.0
J56A Wolcott 67.71 352 P P 00 24 45.9 0.0
baz=170
DBIC Dimbokro 67.85 71 P P 00 24 47.9 +0.5
comp=Z,1.5nm,0.6s,baz=198,slow=6.4,SNR=1.4
DBIC Dimbokro 67.85 71 IAmb IAmb 00 24 56.4
comp=Z,4.5nm,1.1s
I58A Old Forge 67.91 354 P P 00 24 47.5 +0.3
baz=172
J54A Appleton 67.94 351 P P 00 24 48.0 +0.7
baz=168
I63A Otisfield 67.95 357 P P 00 24 48.2 +0.8
baz=176
K50A Casco 68.14 348 P P 00 24 49.0 +0.4
baz=165
J52A Paris 68.20 349 P P 00 24 49.4 +0.4
baz=167
L46A Eue Claire 68.21 345 P P 00 24 48.8 -0.4
baz=161
K48A Perry 68.47 347 P P 00 24 50.5 -0.2
baz=163
121A Cookes Peak, D 68.50 324 P P 00 24 53.5 +2.1
baz=140,SNR=6.6
121A Cookes Peak, D 68.50 324 IAmb IAmb 00 24 54.5
comp=Z,8.3nm,0.8s
K47A Vermontville 68.53 346 P P 00 24 50.9 -0.2
baz=162
K46A Dorr 68.73 345 P P 00 24 51.5 -0.8
baz=162
I55A Frankford 68.74 352 P P 00 24 52.4 +0.1
baz=169

KSU1 Kansas State U 68.76 336 P P 00 24 53.0 +0.4
baz=151
I51A Listowel 68.84 349 P P 00 24 53.3 +0.3
baz=166
J48A Bridge Port 68.87 347 P P 00 24 53.4 +0.2
baz=164
R32A Long Quarter, 68.99 334 IAmb IAmb 00 24 55.4
comp=Z,12nm,0.7s
H55A Tweed 69.00 352 P P 00 24 54.7 +0.8
baz=170
J47A Sunmer 69.04 346 P P 00 24 54.3 +0.1
baz=162
L42A Oliver, Polo 69.09 342 IAmb IAmb 00 24 54.6
comp=Z,16nm,1.0s
G64A Maxfield 69.09 359 P P 00 24 54.4 0.0
baz=178
G59A Clarenceville 69.13 355 P P 00 24 54.4 -0.3
baz=174
I49A Point Hope 69.30 348 P P 00 24 55.7 0.0
baz=164
GBN Guysborough 69.41 4 P P 00 24 56.4 0.0
GBN IAmb IAmb 00 25 04.2
comp=Z,7.7nm,1.2s
ANMO Albuquerque 69.68 326 P P 00 25 00.3 +1.8
baz=142
ANMO Albuquerque 69.68 326 P P 00 25 00.3 +1.8
ANMO IAmb IAmb 00 25 00.8
comp=Z,5.7nm,0.7s
F64A Sherman 69.69 359 P P 00 24 58.9 +0.8
LMN Caledonia Moun 69.70 2 P P 00 24 58.5 +0.3
LMN IAmb IAmb 00 24 58.8
comp=Z,5.5nm,0.7s
CBKS Cedar Bluff 69.74 333 P P 00 25 00.1 +1.4
baz=148
CBKS Cedar Bluff 69.74 333 P P 00 24 59.3 +0.6
G53A Haliburton 69.75 351 P P 00 24 58.8 +0.3
baz=169
I46A Reed City 69.84 346 P P 00 24 59.1 -0.1
baz=162
G54A Lake Saint Pet 69.95 352 P P 00 25 00.1 +0.3
baz=169
TUC Tucson 70.00 321 P P 00 25 02.6 +2.1
baz=138
TUC Tucson 70.00 321 P P 00 25 01.7 +1.2
JFWS Jewell Farm 70.09 342 P P 00 25 00.7 +0.1
baz=157,SNR=9.3
H48A Harrisville 70.13 348 P P 00 25 00.6 -0.2
baz=164
H47A Mio 70.21 347 P P 00 25 01.2 -0.1
baz=163
TRQ Mont Tremblant 70.38 354 P P 00 25 02.9 +0.5
T25A Trinidad 70.42 329 P P 00 25 04.8 +1.8
baz=144,SNR=7.4
F52A Sundridge 70.51 351 P P 00 25 02.5 -0.7
baz=168
I42A Draeger Farm, 70.64 343 IAmb IAmb 00 25 04.9
comp=Z,16nm,0.7s
E56A St. Veronique 70.74 354 P P 00 25 04.3 -0.2
baz=172
F49A Sandfield 70.92 349 P P 00 25 05.5 0.0
baz=165
214A Organ Pipe Nat 70.92 320 P P 00 25 08.1 +2.1
baz=136,SNR=6.6
214A Organ Pipe Nat 70.92 320 P P 00 25 07.9 +1.9
214A IAmb IAmb 00 25 08.7
comp=Z,5.0nm,0.7s
D62A Allapoint, All 70.92 359 P P 00 25 05.7 +0.1
baz=178
D62A Allapoint, All 70.92 359 P P 00 25 06.1 +0.6
G46A Petoskey 71.03 347 P P 00 25 06.1 -0.1
baz=163
F48A Evansville 71.08 349 P P 00 25 06.9 +0.3
baz=165
D57A Chemin Vers le 71.11 355 P P 00 25 07.0 +0.3
baz=173
D58A Chemin du LacG 71.11 356 P P 00 25 06.9 +0.2
baz=174
KSCO Kaye Shedlock' 71.14 331 P P 00 25 08.8 +1.6
baz=146
D56A ZEC Mazanza, M 71.21 354 P P 00 25 07.6 +0.2
baz=172
D55A Sainte-Anne-du 71.25 354 P P 00 25 07.6 0.0
baz=172
LATQ La Tuque 71.39 356 P P 00 25 09.0 +0.7
baz=174
SDCO Great Sand Dun 71.42 329 P P 00 25 10.9 +1.8
baz=143,SNR=12
SDCO Great Sand Dun 71.42 329 IAmb IAmb 00 25 12.8
comp=Z,4.7nm,0.7s
F45A CMU Biological 71.52 346 P P 00 25 09.0 -0.2
baz=162
D53A Lac Vacive, Po 71.56 352 P P 00 25 09.8 +0.4
baz=170
D53A Lac Vacive, Po 71.56 352 P P 00 25 09.7 +0.3
D53A IAmb IAmb 00 25 10.3
comp=Z,7.1nm,1.1s
E48A Lockeyer 71.63 349 P P 00 25 10.4 +0.5
baz=165
E47A Iron Bridge 71.81 348 P P 00 25 11.6 +0.7
baz=164
E46A Sault Ste Mari 71.92 347 IAmb IAmb 00 25 12.3
comp=Z,16nm,0.7s
D50A G1974 Best Tow 71.93 351 P P 00 25 11.9 +0.3
baz=168
S22A 4UR Ranch, Cre 72.06 328 P P 00 25 14.3 +1.3
baz=142
Q24A Divide 72.23 330 P P 00 25 15.5 +1.5
baz=144
D48A Paudash Townsh 72.24 349 P P 00 25 13.1 -0.4
baz=166
G40A Rib Lake 72.26 343 IAmb IAmb 00 25 14.6
comp=Z,4.0nm,0.6s
D49A Beulah Townshi 72.27 350 P P 00 25 13.7 +0.1
baz=166
D47A Chapleau 72.36 349 P P 00 25 14.4 +0.2
baz=164
D46A Sault St. Mari 72.37 348 P P 00 25 14.1 -0.1
baz=164
MVCO Mesa Verde 72.47 326 P P 00 25 17.1 +1.6
baz=141,SNR=5.8
MVCO Mesa Verde 72.47 326 P P 00 25 17.0 +1.6
MVCO IAmb IAmb 00 25 19.0
comp=Z,6.5nm,0.8s
OGNE Ogallala 72.49 333 P P 00 25 16.6 +1.4
baz=147
E44A Grand Marais A 72.50 346 P P 00 25 15.6 +0.6
baz=162
E43A Lone Tree Farm 72.50 346 IAmb IAmb 00 25 15.9
comp=Z,11nm,0.6s
WUAZ Wupatki 72.71 323 P P 00 25 18.7 +2.0
baz=138,SNR=7.4
WUAZ Wupatki 72.71 323 P P 00 25 19.0 +2.3
WUAZ IAmb IAmb 00 25 19.9
comp=Z,8.4nm,0.8s
COWI Conover 72.75 344 IAmb IAmb 00 25 17.3
comp=Z,5.1nm,0.7s
ECSD EROS Data Cent 72.82 338 P P 00 25 17.2 +0.2
baz=152,SNR=6.3
ECSD EROS Data Cent 72.82 338 IAmb IAmb 00 25 17.7
comp=Z,6.1nm,0.7s
GLA Glamis 72.89 319 P P 00 25 19.9 +2.2
baz=135
GLA Glamis 72.89 319 P P 00 25 18.4 +0.7
GLA IAmb IAmb 00 25 20.5
comp=Z,6.1nm,0.7s
SPMN Marine on St. 72.95 341 P P 00 25 18.0 +0.3
baz=155
SPMN Marine on St. 72.95 341 P P 00 25 16.9 -0.7
SPMN IAmb IAmb 00 25 18.4
comp=Z,11nm,0.8s
ISCO Idaho Springs 73.12 330 P P 00 25 20.8 +1.6
baz=143,SNR=5.2
ISCO Idaho Springs 73.12 330 P P 00 25 20.6 +1.4
Y12C Blythe 73.21 320 P P 00 25 21.6 +2.1
baz=135
Y12C Blythe 73.21 320 P P 00 25 19.8 +0.3
Y12C IAmb IAmb 00 25 22.1
comp=Z,4.2nm,0.6s
PV01 Paradox Valley 73.22 327 P P 00 25 19.4 -0.4
SMCO Snowmass 73.26 329 IAmb IAmb 00 25 22.7
comp=Z,6.1nm,0.7s
PV15 Paradox Valley 73.34 327 P P 00 25 21.6 +1.1
PV13 Radium Mtn., P 73.37 327 P P 00 25 19.8 -0.8
PDMCI Parker Dam,Lak 73.38 321 P P 00 25 22.7 +2.3
baz=136
LSQQ Lebel-sur-Quev 73.42 353 P P 00 25 20.2 -0.2
baz=170

PV18	**Skein Mesa, Pa**	**73.48**	**327**	P	**P**	**00 25 21.5 +0.3**
PV12	**Saucer Basin,**	**73.48**	**327**	P	**P**	**00 25 21.5 +0.2**
DRLN	**Deer Lake**	**73.57**	**6**	P	**P**	**00 25 21.8 +0.6**
DRLN				IAmb	IAmb	00 25 21.9
	comp=Z,11nm,0.7s					
PV22	**Blue Mesa, Par**	**73.64**	**327**	P	**P**	**00 25 24.2 +2.0**
BC3	**Big Chuckawall**	**73.69**	**319**	P	**P**	**00 25 24.3 +1.8**
	baz=135					
F36A	**Milaca**	**73.74**	**341**	IAmb	IAmb	00 25 23.1
	comp=Z,12nm,0.7s					
MONP2	**Monument Peak**	**73.74**	**318**	P	**P**	**00 25 24.8 +1.9**
	baz=134					
BAR	**Barrett**	**73.75**	**318**	P	**P**	**00 25 23.6 +0.9**
BAR				IAmb	IAmb	00 25 25.5
	comp=Z,5.0nm,0.7s					
E38A	**The Farm, Brul**	**73.85**	**343**	P	**P**	**00 25 23.0 +0.1**
E38A				IAmb	IAmb	00 25 23.4
	comp=Z,5.9nm,0.8s					
IRM	**Iron Mountain**	**73.86**	**320**	P	**P**	**00 25 25.3 +2.0**
	baz=135,SNR=8.0					
N23A	**Red Feather La**	**74.15**	**330**	P	**P**	**00 25 26.7 +1.5**
	baz=143					
MATQ	**Matagami**	**74.19**	**353**	P	**P**	**00 25 24.3 -0.4**
	baz=170					
BELC	**Belle Mtn. Jos**	**74.26**	**319**	P	**P**	**00 25 28.1 +2.3**
	baz=134					
XPFO	**Pion Flat**	**74.26**	**319**	P	**P**	**00 25 27.5 +1.8**
PFO	**Pinyon Flats O**	**74.26**	**319**	P	**P**	**00 25 27.5 +1.7**
VNDA	**Vanda**	**74.55**	**190**	P	**P**	**00 25 28.4 +1.8**
	comp=Z,1.7nm,0.9s,baz=132,slow=2.2,SNR=7.7					
VNDA	**Vanda**	**74.55**	**190**	P	**P**	**00 25 29.1 +2.4**
KNB	**Kanab**	**74.60**	**323**	P	**P**	**00 25 30.2 +2.5**
GMRC	**Granite Mounta**	**74.60**	**320**	P	**P**	**00 25 29.8 +2.1**
	baz=135,SNR=14					
O20A	**White River Ci**	**74.61**	**328**	P	**P**	**00 25 29.5 +1.7**
	baz=141,SNR=6.6					
O20A	**White River Ci**	**74.61**	**328**	IAmb	IAmb	00 25 30.6
	comp=Z,8.9nm,0.8s					
MURC	**Murrieta**	**74.70**	**318**	P	**P**	**00 25 30.6 +2.4**
	baz=133					
LCMT	**Little Creek M**	**74.83**	**323**	P	**P**	**00 25 30.5 +1.5**
SRU	**San Rafael Swe**	**74.95**	**326**	P	**P**	**00 25 31.1 +1.4**
MTPU	**Mount Pierson**	**75.01**	**325**	P	**P**	**00 25 30.4 +0.1**
HEC	**Hector,Ludlow**	**75.03**	**320**	P	**P**	**00 25 32.5 +2.4**
	baz=134					
EYMN	**Ely**	**75.07**	**343**	P	**P**	**00 25 30.4 +0.5**
	baz=157					
SCI2	**San Clemente I**	**75.11**	**317**	P	**P**	**00 25 33.1 +2.6**
	baz=132					
Q16A	**Castle Valley**	**75.14**	**326**	P	**P**	**00 25 31.8 +1.0**
CCUT	**Cedar City**	**75.28**	**324**	P	**P**	**00 25 32.8 +1.1**
CIS	**Catalina Islan**	**75.31**	**317**	P	**P**	**00 25 34.1 +2.4**
	baz=132					
P17A	**Butcher Ranch,**	**75.34**	**326**	P	**P**	**00 25 32.4 +0.5**
SHPR	**Sheep Range**	**75.53**	**322**	P	**P**	**00 25 33.1 +0.1**
RDMU	**Red Mountain**	**75.59**	**328**	P	**P**	**00 25 33.6 +0.3**
GSC	**Goldstone, Bar**	**75.64**	**320**	P	**P**	**00 25 35.6 +2.0**
	baz=134					
GSC	**Goldstone, Bar**	**75.64**	**320**	P	**P**	**00 25 33.4 -0.2**
SUR	**Sutherland**	**75.73**	**119**	P	**P**	**00 25 35.3 +0.8**
	comp=Z,5.4nm,0.8s,baz=294,slow=8.4,SNR=1.9					
K22A	**Casper**	**75.81**	**331**	P	**P**	**00 25 35.6 +1.1**
	baz=143					
K22A	**Casper**	**75.81**	**331**	P	**P**	**00 25 33.4 -1.1**
RSSD	**Black Hills**	**75.95**	**333**	P	**P**	**00 25 36.5 +1.2**
RSSD				IAmb	IAmb	00 25 38.8
	comp=Z,5.1nm,0.6s					
EDW2	**Edwards Air Fo**	**76.06**	**319**	P	**P**	**00 25 37.4 +1.5**
	baz=133					
B35A	**Bob, Littlefor**	**76.06**	**342**	P	**P**	**00 25 35.3 -0.3**
B35A				IAmb	IAmb	00 25 36.6
	comp=Z,15nm,0.7s					
PSUT	**Pine Spring**	**76.27**	**324**	P	**P**	**00 25 38.4 +1.2**
NLU	**North Lily Min**	**76.38**	**326**	P	**P**	**00 25 38.1 +0.3**
TPNV	**Topopah Spring**	**76.46**	**321**	P	**P**	**00 25 40.5 +2.2**
	baz=135					
TPNV	**Topopah Spring**	**76.46**	**321**	P	**P**	**00 25 39.1 +0.8**
TPNV				IAmb	IAmb	00 25 41.2
	comp=Z,5.8nm,0.7s					
FURC	**Furnace Creek,**	**76.48**	**321**	P	**P**	**00 25 40.4 +2.2**
	baz=134					
JLU	**Jordanelle**	**76.55**	**327**	P	**P**	**00 25 39.0 +0.2**
MPMC	**Manual Prospec**	**76.56**	**320**	P	**P**	**00 25 40.8 +1.9**
	baz=134					
TOA0	**Torodi Ar. Sit**	**76.62**	**69**	P	**P**	**00 25 38.6 -0.9**
TORD	**Torodi Ar. Bea**	**76.62**	**69**	P	**P**	**00 25 39.0 -0.4**
	comp=Z,1.9nm,0.4s,baz=257,slow=5.4,SNR=74					
AGMN	**Agassiz Nation**	**76.63**	**341**	P	**P**	**00 25 39.0 +0.3**
	baz=153,SNR=6.3					
AGMN	**Agassiz Nation**	**76.63**	**341**	P	**P**	**00 25 38.7 -0.1**
AGMN				IAmb	IAmb	00 25 39.6
	comp=Z,7.7nm,0.6s					
ISA	**Isabella, Lake**	**76.87**	**319**	P	**P**	**00 25 42.5 +2.0**
	baz=133					
ISA	**Isabella, Lake**	**76.87**	**319**	P	**P**	**00 25 42.0 +1.5**
DUG	**Dugway, Tooele**	**76.93**	**326**	P	**P**	**00 25 42.7 +1.9**
	baz=138,SNR=5.8					
DUG	**Dugway, Tooele**	**76.93**	**326**	P	**P**	**00 25 43.0 -0.5**
R11A	**Troy Canyon, C**	**77.08**	**323**	P	**P**	**00 25 44.0 +2.3**
	baz=135,SNR=7.1					
PKM	**Mcpherson Peak**	**77.17**	**318**	P	**P**	**00 25 44.5 +2.2**
	baz=132					
CWC	**Cottonwood Cre**	**77.17**	**320**	P	**P**	**00 25 44.1 +1.8**
	baz=133					
PD31	**Pinedale Array**	**77.28**	**329**	P	**P**	**00 25 43.1 +0.3**
PDAR	**Pinedale Array**	**77.28**	**329**	P	**P**	**00 25 43.8 +0.9**
	comp=Z,1.5nm,0.5s,baz=132,slow=8.1,SNR=28					
HWUT	**Hardware Ranch**	**77.36**	**327**	IAmb	IAmb	00 25 46.5
	comp=Z,5.9nm,0.6s					
VES	**Vestal, Richgr**	**77.36**	**319**	P	**P**	**00 25 45.3 +2.2**
	baz=132					
SMMC	**Simmler**	**77.56**	**318**	P	**P**	**00 25 46.7 +2.4**
	baz=132					
SPUT	**South Promonto**	**77.58**	**327**	P	**P**	**00 25 45.0 +0.5**
BGU	**Big Grassy Mou**	**77.58**	**326**	P	**P**	**00 25 43.6 -0.9**
TSUM	**Tsumeb**	**77.61**	**106**	P	**P**	**00 25 44.4 -0.7**
	comp=Z,2.7nm,0.6s,baz=234,slow=6.9,SNR=5.8					
REDW	**Red Top Meadow**	**78.35**	**329**	P	**P**	**00 25 48.6 -0.1**
ULM	**Lac du Bonnet**	**78.37**	**342**	P	**P**	**00 25 48.5 +0.2**
	comp=Z,9.6nm,0.6s,baz=152,slow=5.7,SNR=9.9					
ULM	**Lac du Bonnet**	**78.37**	**342**	IAmb	IAmb	00 25 49.4
	comp=Z,11nm,0.6s					
TPAW	**Teton Pass**	**78.49**	**329**	P	**P**	**00 25 51.3 +1.8**
OMMB	**Old Mammoth Mi**	**78.51**	**320**	P	**P**	**00 25 51.3 +1.5**
OMMB				IAmb	IAmb	00 25 52.1
	comp=Z,4.9nm,0.8s					
ELK	**Elko**	**78.60**	**325**	P	**P**	**00 25 51.0 +0.8**
PMPB	**Monarch Peak**	**78.65**	**318**	P	**P**	**00 25 51.2 +1.0**
PMPB				IAmb	IAmb	00 26 06.4
	comp=Z,15nm,1.1s					
NVAR	**Mina Array Bea**	**78.66**	**321**	P	**P**	**00 25 52.2 +1.7**
	comp=Z,1.2nm,0.6s,baz=137,slow=5.5,SNR=9.6					
SCHQ	**Schefferville**	**78.66**	**0**	P	**P**	**00 25 49.8 -0.1**
	comp=Z,3.0nm,0.6s,baz=178,slow=2.5,SNR=8.4					
SCHQ	**Schefferville**	**78.66**	**0**	IAmb	IAmb	00 25 51.1
	comp=Z,3.1nm,0.7s					
RYN	**Ryan**	**78.92**	**321**	P	**P**	**00 25 50.8 -1.0**
RYN				IAmb	IAmb	00 25 54.7
	comp=Z,2.9nm,0.4s					
LAO	**LASA Array**	**78.93**	**334**	P	**P**	**00 25 53.0 +1.4**
	baz=144					
LAO	**LASA Array**	**78.93**	**334**	P	**P**	**00 25 53.0 +1.4**
LAO				IAmb	IAmb	00 25 53.7
	comp=Z,8.8nm,0.8s					
KVN	**Kaiserville**	**78.97**	**322**	IAmb	IAmb	00 25 54.5
	comp=Z,6.8nm,0.6s					
RLMT	**Red Lodge**	**78.98**	**331**	P	**P**	**00 25 53.6 +1.5**
	baz=141,SNR=12					
RLMT	**Red Lodge**	**78.98**	**331**	IAmb	IAmb	00 25 54.1
	comp=Z,6.1nm,0.7s					
H17A	**Grant Village**	**79.01**	**330**	P	**P**	**00 25 54.2 +1.9**
	baz=140					
YNE	**Yellowstone No**	**79.22**	**330**	P	**P**	**00 25 55.0 +1.5**
DGMT	**Dagmar**	**79.60**	**336**	P	**P**	**00 25 56.7 +1.6**
	baz=146,SNR=6.5					
PNTR	**Pine Nut**	**79.85**	**321**	P	**P**	**00 25 57.9 +1.0**
PNTR				IAmb	IAmb	00 25 60.0
	comp=Z,9.6nm,0.8s					
PAHR	**Pah Rah Range**	**80.15**	**322**	IAmb	IAmb	00 26 01.4
	comp=Z,8.8nm,0.9s					
BOSA	**Boshof**	**80.66**	**117**	P	**P**	**00 26 01.1 -0.4**
	comp=Z,3.4nm,0.6s,baz=182,slow=1.4,SNR=17					
BOSA	**Boshof**	**80.66**	**117**	IAmb	IAmb	00 26 03.0
	comp=Z,4.9nm,0.9s					
DLMT	**Dillon**	**80.68**	**329**	IAmb	IAmb	00 26 03.4
	comp=Z,6.0nm,0.7s					
MCCM	**Marconi Confer**	**81.16**	**319**	P	**P**	**00 26 04.0 +0.4**
MAW	**Mawson**	**81.29**	**163**	P	**P**	**00 26 04.5 +0.7**
	comp=Z,9.8nm,0.9s,baz=227,slow=5.7,SNR=15					
MAW	**Mawson**	**81.29**	**163**	P	**P**	**00 26 04.6 +0.7**
EGMT	**Eagleton**	**81.45**	**333**	P	**P**	**00 26 06.0 +0.9**
	baz=141					
O03E	**Paynes Creek**	**81.92**	**321**	P	**P**	**00 26 08.4 +0.7**
	baz=131					
J08A	**Circle Bar Ran**	**82.15**	**325**	P	**P**	**00 26 10.7 +1.9**
J08A				IAmb	IAmb	00 26 11.4
	comp=Z,7.4nm,0.6s					
LBTB	**Lobatse**	**82.32**	**114**	P	**P**	**00 26 10.2 -0.2**
	comp=Z,4.0nm,0.5s,baz=248,slow=5.8,SNR=13					
LBTB	**Lobatse**	**82.32**	**114**	IAmb	IAmb	00 26 10.4
	comp=Z,7.6nm,1.1s					
MSO	**Missoula**	**82.39**	**330**	P	**P**	**00 26 11.8 +1.8**
	baz=138					
MSO	**Missoula**	**82.39**	**330**	P	**P**	**00 26 11.4 +1.4**
WDC	**Whiskeytown Da**	**82.53**	**321**	P	**P**	**00 26 10.5 -0.3**
BMO	**Blue Mountains**	**82.59**	**326**	P	**P**	**00 26 12.5 +1.4**
N02D	**Trinity Center**	**82.88**	**321**	P	**P**	**00 26 14.4 +1.7**
	baz=130					
M04C	**Macdoel**	**82.92**	**322**	P	**P**	**00 26 14.5 +1.6**
	baz=131					
K05A	**Summer Lake**	**83.02**	**323**	IAmb	IAmb	00 26 16.2
	comp=Z,9.3nm,0.7s					
JTMT	**Jette**	**83.23**	**330**	IAmb	IAmb	00 26 17.4
	comp=Z,5.9nm,0.6s					
M02C	**Callahan**	**83.24**	**321**	P	**P**	**00 26 16.2 +1.7**
	baz=130					
F10A	**Beach Ranch, E**	**83.34**	**327**	IAmb	IAmb	00 26 21.5
	comp=Z,5.6nm,0.6s					
YBH	**Yreka Blue Hor**	**83.38**	**321**	P	**P**	**00 26 15.1 -0.1**
	comp=Z,1.1nm,0.7s,baz=135,slow=3.1,SNR=5.2					
L04D	**Klamath Falls**	**83.47**	**322**	P	**P**	**00 26 16.9 +1.2**
	baz=131					
J05D	**Fort Rock, OR**	**83.58**	**323**	P	**P**	**00 26 17.8 +1.5**
	baz=132					
G08A	**Pilot Rock**	**83.74**	**326**	P	**P**	**00 26 18.2 +1.3**
PINE	**Pine Mountain**	**83.76**	**324**	IAmb	IAmb	00 26 19.9
	comp=Z,6.7nm,0.7s					
KRMB	**Red Mountain**	**83.93**	**321**	P	**P**	**00 26 19.2 +1.2**
J04D	**Umpqua Nationa**	**84.03**	**323**	P	**P**	**00 26 20.3 +1.7**
	baz=131					
FFC	**Flin Flon**	**84.11**	**340**	P	**P**	**00 26 18.6 +0.1**
I05D	**Terrebonne, OR**	**84.34**	**324**	P	**P**	**00 26 21.5 +1.6**
	baz=132					
TAM	**Tamanrasset**	**84.46**	**62**	P	**P**	**00 26 20.9 -0.3**
K02D	**Willamette Mer**	**84.54**	**322**	P	**P**	**00 26 23.0 +1.9**
	baz=130					
I04A	**Tendick Farm,**	**84.56**	**323**	P	**P**	**00 26 22.2 +1.1**
	baz=131					
NEW	**Newport**	**84.92**	**329**	P	**P**	**00 26 24.5 +1.8**
	comp=Z,2.0nm,0.5s,baz=250,slow=5.2,SNR=4.1					
NEW	**Newport**	**84.92**	**329**	P	**P**	**00 26 22.4 -0.4**
J01E	**Myrtle Point**	**84.99**	**322**	P	**P**	**00 26 25.0 +1.9**
	baz=130					
I03D	**Drain, OR**	**85.01**	**323**	P	**P**	**00 26 25.1 +1.9**
	baz=130					
C09A	**Chrisman Ranch**	**85.14**	**328**	IAmb	IAmb	00 26 25.8
	comp=Z,11nm,0.6s					
F05D	**White Salmon**	**85.43**	**325**	P	**P**	**00 26 26.9 +1.6**
	baz=132					
I02D	**Swisshome**	**85.55**	**323**	P	**P**	**00 26 27.7 +1.8**
	baz=130					
LTY	**Liberty**	**85.95**	**327**	P	**P**	**00 26 29.2 +1.3**
LTY				IAmb	IAmb	00 26 29.6
	comp=Z,3.4nm,0.7s					
PAB	**San Pablo**	**86.19**	**43**	P	**P**	**00 26 29.4 +0.2**
E04D	**Cinebar**	**86.45**	**325**	P	**P**	**00 26 31.8 +1.5**
	baz=131					
ESDC	**Sonseca Array**	**86.50**	**44**	P	**P**	**00 26 31.4 +0.7**
	comp=Z,0.8nm,0.7s,baz=249,slow=4.8,SNR=6.0					
E03A	**Lebam**	**86.97**	**325**	P	**P**	**00 26 33.6 +0.8**
E03A				IAmb	IAmb	00 26 34.4
	comp=Z,7.1nm,0.6s					
BBB	**Bella Bella**	**92.81**	**327**	LR	LR	01 11 15.3
	comp=Z,130nm,21.7s,baz=122,slow=37					
YKA	**Yellowknife Ar**	**94.27**	**340**	P	**P**	**00 27 06.8 +0.5**
	comp=Z,7nm,0.5s,baz=129,slow=4.8,SNR=112					
DLBC	**Dease Lake**	**97.36**	**332**	P	Pdif	00 27 21.6 +0.9
	comp=Z,0.8nm,0.5s,baz=149,slow=3.3,SNR=3.2					
DLBC	**Dease Lake**	**97.36**	**332**	IAmb	IAmb	00 27 22.5
	comp=Z,1.8nm,0.8s					
ASAR	**Alice Springs**	**128.32**	**205**	PKP	**PKPdf**	**00 32 54.0 0.0**
	comp=Z,1.1nm,0.5s,baz=138,slow=1.8,SNR=23					
WRA	**Warramunga Arr**	**131.49**	**207**	PKP	**PKPdf**	**00 33 00.3 +0.3**
	comp=Z,1.2nm,0.4s,baz=159,slow=1.7,SNR=28					
WRA				SKPbc	**SKPbc**	**00 36 07.6 -0.6**
	comp=Z,1.9nm,0.8s,baz=154,slow=3.6,SNR=7.4					
WRAB	**Tennant Creek**	**131.50**	**207**		PKPpre	00 32 46.2
PETK	**Petropavlovsk-**	**135.74**	**323**	PKP	**PKPdf**	**00 33 08.0 +1.0**
	comp=Z,1.5nm,0.8s,baz=97,slow=1.8,SNR=6.0					
ZAA0	**Zalesovo Array**	**143.53**	**28**		PKPbc	00 33 19.3 +0.5
ZALV	**Zalesovo Beam**	**143.53**	**28**	PKP	PKPbc	00 33 19.6 +0.7
	comp=Z,7.2nm,0.5s,baz=297,slow=3.9,SNR=45					
ZALV				SKPbc	**SKPbc**	**00 36 43.0 +0.7**
	comp=Z,0.5nm,0.6s,baz=298,slow=6.1,SNR=4.2					
KSH	**Kashi**	**145.28**	**55**	PKPbc	**PKPdf**	**00 33 25.3 +0.6**
KSH				pPKP	pPKPdf	00 34 16.6 +2.6
KSH				PP	**PP**	**00 36 49.8 +3.6**
KSH				PKS	**PKSdf**	**00 36 54.1 -6.2**
KSH				SKKS		00 43 10.3
TARG	**Taragay, Kyrgy**	**145.95**	**50**		**PKPbc**	**00 33 28.0 +0.8**
MAKZ	**Makanchi**	**146.45**	**40**		**PKPdf**	**00 33 27.3 +1.0**
MK31	**Makanchi Array**	**146.64**	**40**		**PKPdf**	**00 33 27.6 +1.0**
MKAR	**Makanchi Array**	**146.64**	**40**	PKPbc	**PKPdf**	**00 33 27.3 +0.6**
	comp=Z,7.9nm,0.5s,baz=329,slow=1.5,SNR=87					
MKAR				SKPbc	**SKPbc**	**00 36 50.3 +0.6**
	comp=Z,0.4nm,0.7s,baz=348,slow=2.8,SNR=3.7					
MJAR	**Matsushiro Arr**	**155.07**	**306**	PKPab	**PKPab**	**00 34 06.0 +0.7**
	comp=Z,1.6nm,0.4s,baz=64,slow=8.5,SNR=5.2					
SONM	**Songino Array**	**155.79**	**11**	PKPab	**PKPab**	**00 34 08.8 +0.7**
	comp=Z,1.1nm,0.6s,baz=332,slow=4.6,SNR=7.2					

IDC ***17*** *00:16:23.8±0.8, 7.°22S×155.°18E, h0km, mb4.2/13, mb1 4.3/14, mb1mx4.0/46, mbtmp4.1/14, ML4.0/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/36, Error ellipse: s-maj=27.3km s-min=17.0km az=111.0*
NEIC ***17*** *00:16:28.6±1.8, 7.°40S±0.°09×155.°19E±0.°08, h36km±7km, mb4.4/35, Error ellipse: s-maj=14.3km s-min=11.1km az=211.0*

ISC 17 00:16:28.0±0.5, 7.°37S±0.°07×155.°16E±0.°08, h31km, n60, σ1s01/61, mb4.3/31, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**4.34**	**316**	Pn		**Pn**		**00 17 32.2**	**+0.4**
KRVT	**Keravat (AS076**	**4.35**	**314**	Pn		**Pn**		**00 17 31.3**	**-0.7**
	8.3nm,0.3s,baz=347,slow=7.6,SNR=1.9								
KRVT				Sn		**Sn**		**00 18 21.0**	**-0.7**
	13nm,0.3s,baz=204,slow=6.5,SNR=4.2								
HNR	**Honiara**	**5.17**	**114**	LR		LR		00 19 36.3	
	comp=Z,219nm,19.8s,baz=254,slow=37								
HNR	**Honiara**	**5.17**	**114**	Pn		**Pn**		**00 17 42.2**	**-1.0**
PMG	**Port Moresby**	**8.17**	**255**	Pn		**Pn**		**00 18 23.7**	**-0.8**
COEN	**Coen**	**13.47**	**240**	Pn		**Pn**		**00 19 33.9**	**-3.3**
DZM	**Mont Dzumac**	**18.23**	**145**	LR		LR		00 26 29.8	
	comp=Z,82nm,20.8s,baz=75,slow=33								
ARMA	**Armidale**	**23.17**	**188**	P		**P**		**00 21 31.5**	**-0.7**
FAKI	**Fak Fak**	**23.23**	**280**	P		**P**		**00 21 32.6**	**-0.2**
FAKI				IAmb		IAmb		00 21 38.5	
	comp=Z,12nm,1.1s								
WR0	**Warramunga Arr**	**23.58**	**236**	P		**P**		**00 21 36.9**	**+0.7**
WR0				IAmb		IAmb		00 21 39.0	
	comp=Z,16nm,0.8s								
WB0	**Warramunga Arr**	**23.61**	**236**	P		**P**		**00 21 38.1**	**+1.5**
WB2	**Warramunga Arr**	**23.73**	**236**	P		**P**		**00 21 38.3**	**+0.6**
WB2				IAmb		IAmb		00 21 40.4	
	comp=Z,10nm,0.9s								
WRA	**Warramunga Arr**	**23.74**	**236**	P		**P**		**00 21 38.5**	**+0.7**
	comp=Z,9.5nm,0.8s,baz=61,slow=9.6,SNR=15								
WRA				PcP		**PcP**		**00 25 23.1**	**+1.7**
	comp=Z,0.2nm,0.4s,baz=59,slow=2.5,SNR=6.4								
MTN	**Manton Dam**	**24.26**	**255**	P		**P**		**00 21 43.4**	**+0.8**
MTN				IAmb		IAmb		00 21 59.7	
	comp=Z,15nm,1.1s								
AS31	**Alice Springs**	**26.05**	**229**	P		**P**		**00 21 58.4**	**-0.4**
ASAR	**Alice Springs**	**26.05**	**229**	P		**P**		**00 22 00.0**	**+1.1**
	comp=Z,2.3nm,0.7s,baz=56,slow=9.4,SNR=17								
ASAR				PcP		**PcP**		**00 25 28.1**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=65,slow=2.7,SNR=1.9								
STKA	**Stephens Creek**	**27.47**	**206**	P		**P**		**00 22 13.9**	**+1.5**
	comp=Z,2.0nm,0.4s,baz=31,slow=11,SNR=7.9								
STKA	**Stephens Creek**	**27.47**	**206**	P		**P**		**00 22 13.9**	**+2.4**
FITZ	**Fitzroy Crossi**	**30.65**	**247**	P		**P**		**00 22 40.6**	**+0.7**
FITZ				IAmb		IAmb		00 22 41.6	
	comp=Z,5.6nm,0.6s								
BBOO	**Buckleboo**	**30.91**	**212**	P		**P**		**00 22 41.3**	**-0.7**
BBOO				IAmb		IAmb		00 22 47.9	
	comp=Z,6.2nm,1.1s								
FORT	**Forrest**	**34.43**	**224**	P		**P**		**00 23 13.5**	**+0.6**
QRZ	**Quartz Range**	**36.75**	**158**	P		**P**		**00 23 31.4**	**-1.2**
BHW	**Baring Head**	**38.16**	**156**	P		**P**		**00 23 44.2**	**-0.4**
PETK	**Petropavlovsk-**	**60.28**	**2**	P		**P**		**00 26 33.7**	**+0.2**
	comp=Z,2.3nm,0.7s,baz=151,slow=8.7,SNR=4.5								
CMAR	**Chiang Mai Arr**	**61.09**	**296**	P		**P**		**00 26 41.2**	**+1.6**
	comp=Z,0.9nm,0.4s,baz=103,slow=5.4,SNR=6.1								
SONM	**Songino Array**	**69.73**	**327**	P		**P**		**00 27 34.7**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=140,slow=5.0,SNR=3.9								
SEY	**Seymchan**	**70.13**	**359**	P		**P**		**00 27 37.2**	**+0.1**
	comp=Z,0.7nm,0.2s,baz=354,slow=23,SNR=1.8								
CNPM	**China Peot**	**79.03**	**25**			**P**		**00 28 27.9**	**-1.0**
BRLK	**Bradley Lake**	**79.31**	**25**	P		**P**		**00 28 30.3**	**-0.1**
TTA	**Tatalina**	**79.31**	**21**	P		**P**		**00 28 31.2**	**+0.8**
RC01	**Rabbit Creek A**	**80.54**	**24**	P		**P**		**00 28 36.6**	**-0.4**
PPLA	**Purkeypile**	**80.66**	**22**	P		**P**		**00 28 37.6**	**-0.1**
KNK	**Knik Glacier**	**81.23**	**24**	P		**P**		**00 28 40.5**	**-0.2**
KNK				IAmb		IAmb		00 28 55.4	
	comp=Z,4.3nm,0.6s								
SML	**Sawmill**	**81.50**	**24**	P		**P**		**00 28 42.9**	**+0.7**
SML				IAmb		IAmb		00 28 50.8	
	comp=Z,4.4nm,0.9s								
KTH	**Kantishna Hill**	**81.51**	**21**	P		**P**		**00 28 41.8**	**-0.4**
KTH				IAmb		IAmb		00 28 42.4	
	comp=Z,3.0nm,1.0s								
TRF	**Thorofare Moun**	**81.68**	**22**	P		**P**		**00 28 43.1**	**-0.1**
TRF				IAmb		IAmb		00 28 44.8	
	comp=Z,2.7nm,0.7s								
BPAW	**Bear Paw Mtn.**	**81.81**	**21**	P		**P**		**00 28 42.6**	**-1.1**
SCM	**Sheep Creek Mo**	**81.91**	**24**	P		**P**		**00 28 44.5**	**+0.1**
SCM				IAmb		IAmb		00 29 04.0	
	comp=Z,2.7nm,0.9s								
RND	**Reindeer**	**82.19**	**22**	P		**P**		**00 28 45.4**	**-0.4**
RND				IAmb		IAmb		00 28 46.0	
	comp=Z,3.0nm,0.8s								
RAGM	**Ragged Mountai**	**82.27**	**26**	P		**P**		**00 28 46.2**	**0.0**
MLY	**Manley**	**82.44**	**20**	P		**P**		**00 28 47.3**	**+0.2**
DHY	**Denali Highway**	**82.56**	**23**	P		**P**		**00 28 48.5**	**+0.6**
DHY				IAmb		IAmb		00 28 50.2	
	comp=Z,1.7nm,0.6s								
QSPA	**South Pole Qui**	**82.61**	**180**	P		**P**		**00 28 49.2**	**+1.1**
GLB	**Gilahina Butte**	**83.16**	**25**	P		**P**		**00 28 50.8**	**0.0**
GLB				IAmb		IAmb		00 28 58.9	
	comp=Z,5.5nm,1.2s								
VRDI	**Verde Repeater**	**83.20**	**25**	P		**P**		**00 28 50.8**	**-0.5**
VRDI				IAmb		IAmb		00 28 58.7	
	comp=Z,3.1nm,1.0s								
IL31		**83.66**	**21**	P		**P**		**00 28 52.5**	**-0.7**
ILAR	**Eielson Array**	**83.66**	**21**	P		**P**		**00 28 52.3**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=246,slow=5.5,SNR=25								
MKAR	**Makanchi Array**	**83.79**	**319**	P		**P**		**00 28 53.6**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=104,slow=5.7,SNR=5.5								
RIDG	**Independent Ri**	**83.88**	**23**	P		**P**		**00 28 54.7**	**+0.2**
BARN	**Barnard Glacie**	**83.89**	**26**	P		**P**		**00 28 55.3**	**+0.5**
BARN				IAmb		IAmb		00 28 56.2	
	comp=Z,2.7nm,0.6s								
CTGM	**Chitina Glacie**	**83.99**	**26**	P		**P**		**00 28 52.2**	**-3.1**
CTGM				IAmb		IAmb		00 28 57.7	
	comp=Z,3.6nm,0.8s								
MAW	**Mawson**	**84.12**	**203**	P		**P**		**00 28 56.6**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=90,slow=2.0,SNR=3.9								
ZALV	**Zalesovo Beam**	**84.57**	**326**	P		**P**		**00 28 57.5**	**-0.6**
	comp=Z,0

TARG	**Taragay, Kyrgy**	**1.05**	**210**	⇑*i*P		**Pb**	**00 39 52.4**	**-0.4**
	baz=14							
TARG				⇑*i*S		**Sb**	**00 40 06.0**	**-0.6**
	baz=14							
KDJ	**Kajisay**	**1.11**	**243**	⇓*i*P		**Pb**	**00 39 53.8**	**+0.2**
	baz=45							
KDJ				⇓*i*S		**Sn**	**00 40 09.4**	**+0.4**
	baz=45							
KOTS	**Kotyrbulak**	**1.18**	**300**	*e*P		**Pn**	**00 39 54.7**	**0.0**
	1.6nm,0.2s							
KOTS				*e*S		**Sb**	**00 40 10.1**	**+0.2**
	4.1nm,0.2s							
KOTS	**Kotyrbulak**	**1.18**	**300**	P		**Pn**	**00 39 54.8**	**0.0**
	2.8nm,0.2s							
KOTS				S		**Sb**	**00 40 10.2**	**+0.2**
	4.1nm,0.3s							
MDOK	**Medeo**	**1.19**	**296**	*e*P		**Pn**	**00 39 54.9**	**-0.1**
	0.4nm,0.1s							
MDOK				*e*S		**Sb**	**00 40 10.4**	**+0.1**
	2.0nm,0.1s							
MDOK	**Medeo**	**1.19**	**296**	⇓P		**Pg**	**00 39 55.4**	**0.0**
	1.8nm,0.8s							
MDOK				⇑S		**Sb**	**00 40 09.9**	**-0.3**
	2.3nm,0.5s							
MDOK	**Medeo**	**1.19**	**296**	Pg		**Pn**	**00 39 54.8**	**-0.1**
	0.6nm,0.2s							
MDOK				Lg		Lg	00 40 10.2	
	2.2nm,0.3s							
TNSS	**Tian-Shan**	**1.21**	**289**	*e*P		**Pn**	**00 39 55.5**	**+0.1**
	0.5nm,0.0s							
TNSS				*e*S		**Sn**	**00 40 11.5**	**-0.3**
	1.2nm,0.1s							
IZV	**Izvestkoviy**	**1.44**	**286**	*e*P		**Pn**	**00 39 58.9**	**+0.5**
	0.5nm,0.1s							
IZV				*e*S		**Sn**	**00 40 17.4**	**+0.1**
	2.9nm,0.1s							
IZV	**Izvestkoviy**	**1.44**	**286**	P		**Pn**	**00 39 58.7**	**+0.3**
	1.2nm,0.1s							
IZV				S		**Sn**	**00 40 16.8**	**-0.4**
	2.6nm,0.2s							
KTMS	**Ketmen**	**1.57**	**59**	*e*P		**Pb**	**00 40 02.4**	**+0.8**
	0.6nm,0.0s							
KTMS				*e*S		**Sg**	**00 40 23.3**	**-0.1**
	1.8nm,0.1s							
CHKK	**Chushkaly**	**1.64**	**318**	*e*P		**Pb**	**00 40 03.0**	**+0.4**
	0.7nm,0.1s							
CHKK				*e*S		**Sg**	**00 40 24.3**	**-1.0**
	5.2nm,0.1s							
CHKK	**Chushkaly**	**1.64**	**318**	P		**Pb**	**00 40 03.0**	**+0.4**
	1.1nm,0.1s							
CHKK				S		**Sb**	**00 40 24.1**	**+1.0**
	7.8nm,0.2s							
ARXS	**Arharly**	**1.64**	**343**	*e*P		**Pb**	**00 40 03.1**	**+0.4**
	1.6nm,0.1s							
ARXS				*e*S		**Sg**	**00 40 24.7**	**-0.8**
	3.2nm,0.1s							
ARXS	**Arharly**	**1.64**	**343**	P		**Pb**	**00 40 03.2**	**+0.5**
	1.5nm,0.2s							
ARXS				S		**Sg**	**00 40 24.4**	**-1.1**
	4.3nm,0.1s							
KTBS	**Karatobe**	**1.70**	**309**	*e*P		**Pb**	**00 40 04.4**	**+0.7**
	1.2nm,0.1s							
KTBS				*e*S		**Sg**	**00 40 26.8**	**-0.7**
	3.7nm,0.2s							
KTBS	**Karatobe**	**1.70**	**309**	P		**Pb**	**00 40 04.4**	**+0.7**
	1.3nm,0.1s							
KTBS				S		**Sg**	**00 40 26.7**	**-0.7**
	6.3nm,0.2s							
KST	**Kastek**	**1.91**	**283**	Pg		**Pg**	**00 40 09.6**	**+0.4**
	1.3nm,0.3s							
KST				Lg		Lg	00 40 35.4	
	2.0nm,0.3s							
DJR	**Jarkent**	**1.93**	**29**	*e*P		**Pb**	**00 40 08.0**	**+0.4**
	1.1nm,0.1s							
DJR				*e*S		**Sb**	**00 40 33.0**	**+1.5**
	2.2nm,0.1s							
DJR	**Jarkent**	**1.93**	**29**	P		**Pb**	**00 40 08.0**	**+0.4**
	3.0nm,0.2s							
DJR				S		**Sb**	**00 40 32.8**	**+1.3**
	3.5nm,0.3s							
KUU	**Kurty**	**2.01**	**309**	*e*P		**Pb**	**00 40 09.9**	**+1.0**
	0.7nm,0.2s							
KUU				*e*S		**Sg**	**00 40 36.2**	**-1.1**
	8.3nm,0.2s							
KUU	**Kurty**	**2.01**	**309**	Pg		**Pg**	**00 40 10.5**	**-0.7**
	0.7nm,0.2s							
KUU				Lg		Lg	00 40 37.1	
	9.3nm,0.2s							
DGS	**Degeres**	**2.09**	**287**	Pg		**Pg**	**00 40 11.8**	**-0.9**
	1.4nm,0.4s							
DGS				Lg		Lg	00 40 39.1	
	3.0nm,0.4s							
TKM2	**Tokmak 2**	**2.15**	**278**	⇓P		**Pb**	**00 40 12.4**	**+0.8**
	2.0nm,0.7s							
TKM2				⇑S		**Sb**	**00 40 37.9**	**-0.3**
	2.6nm,0.6s							

NEIC ***17*** *00:50:21.1±1.8,56.°0S±0.°2×27.°8W±0.°1,h85km±6km, mb4.3/10,Error ellipse: s-maj=22.8km s-min=7.8km az=199.0*

IDC ***17*** *00:50:22.1±5.2,55.°95S×27.°61W,h92km±45km, mb3.9/8, mb1 4.0/9,mb1mx3.8/21,mbtmp4.2/9,MS3.0/2,Ms1 3.0/2, ms1mx2.7/21,Error ellipse: s-maj=29.5km s-min=15.0km az=63.0*

ISC 17 00:50:24.0±0.6,56.°0S±0.°1×28.°0W±0.°1,h112km,n33, σ1§12/34,mb4.1/8,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
HOPE	**Hope Point**	**5.16**	**286**	Pn	**Pn**		**00 51 36.6**	**-2.2**
HOPE				Sn	Sn		00 52 31.3	-5.7
VNA3	**Neumayer Olymp**	**17.17**	**160**	P	**P**		**00 54 15.4**	**-1.1**
VNA2	**Neumayer--Watz**	**17.39**	**157**	P	**P**		**00 54 17.0**	**-1.8**
	baz=316,slow=12							
EFI	**East Falkland**	**18.16**	**271**	P	**P**		**00 54 27.4**	**-0.1**
EFI				IAmb	IAmb		00 54 43.3	
	comp=Z,29nm,1.1s							
SNAA	**Sanae**	**18.96**	**156**	P	**P**		**00 54 34.1**	**-2.0**
SNAA	**Sanae**	**18.96**	**156**	P	**P**		**00 54 34.0**	**-2.0**
	comp=Z,0.9nm,0.3s,baz=301,slow=11,SNR=41							
SNAA				LR	LR		01 00 34.4	
	comp=Z,39nm,19.7s,baz=180,slow=32							
SNAA	**Sanae**	**18.96**	**156**	P	**P**		**00 54 34.2**	**-1.8**
QSPA	**South Pole Qui**	**34.22**	**180**	P	**P**		**00 56 59.5**	**+1.0**
	comp=Z,1.8nm,0.6s,baz=192,slow=2.4,SNR=16							
QSPA				PcP	**PcP**		**00 59 32.6**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=232,slow=1.4,SNR=2.2							
QSPA	**South Pole Qui**	**34.22**	**180**	P	**P**		**00 56 59.8**	**+1.2**
QSPA				IAmb	IAmb		00 57 16.9	
	comp=Z,1.6nm,0.8s							
CPUP	**Villa Florida**	**36.45**	**312**	P	**P**		**00 57 18.3**	**+0.5**
	comp=Z,2.8nm,0.8s,baz=128,slow=5.8,SNR=7.6							
CPUP				PcP	**PcP**		**00 59 38.9**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=196,slow=3.6,SNR=4.5							
CPUP				LR	LR		01 09 41.7	
	comp=Z,26nm,20.6s,baz=204,slow=32							
CPUP	**Villa Florida**	**36.45**	**312**	P	**P**		**00 57 17.8**	**0.0**
CPUP				IAmb	IAmb		00 57 19.6	
	comp=Z,4.8nm,1.1s							
MAW	**Mawson**	**40.45**	**144**	P	**P**		**00 57 50.7**	**0.0**
	comp=Z,0.7nm,0.3s,baz=267,slow=6.8,SNR=2.4							
GO02	**Mina Guanaco**	**43.06**	**298**	P	**P**		**00 58 13.7**	**+0.7**
GO02				IAmb	IAmb		00 58 14.8	
	comp=Z,5.6nm,0.6s							
BDFB	**Brasilia**	**43.11**	**331**	P	**P**		**00 58 13.5**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=155,slow=14,SNR=2.3							
BDFB	**Brasilia**	**43.11**	**331**	P	**P**		**00 58 12.3**	**-0.9**
BDFB				IAmb	IAmb		00 58 27.6	
	comp=Z,2.9nm,1.0s							
VNDA	**Vanda**	**46.57**	**183**	P	**P**		**00 58 41.2**	**+1.5**
	comp=Z,1.1nm,0.8s,baz=179,slow=4.8,SNR=7.7							
GO01	**Chusmiza**	**47.53**	**303**	P	**P**		**00 58 49.7**	**+1.3**
H10S2	**ASCENSION HYDR**	**48.12**	**18**	T	T		01 50 54.1	
	baz=31,slow=74,SNR=4.9							
H10S3	**ASCENSION HYDR**	**48.12**	**18**	T	T		01 50 53.1	
	baz=189,slow=74,SNR=12							
MNMC	**Minye Minye**	**48.19**	**303**	P	**P**		**00 58 54.3**	**+1.1**
LPAZ	**La Paz**	**49.98**	**306**	P	**P**		**00 59 08.7**	**+1.3**
	comp=Z,4.1nm,0.6s,baz=141,slow=5.7,SNR=19							
LPAZ				PcP	**PcP**		**01 00 27.1**	**+1.3**
	comp=Z,0.7nm,0.5s,baz=221,slow=8.9,SNR=2.1							
LPAZ	**La Paz**	**49.98**	**306**	P	**P**		**00 59 08.8**	**+1.5**
LPAZ				IAmb	IAmb		00 59 09.6	
	comp=Z,5.0nm,0.8s							
TORD	**Torodi Ar. Bea**	**73.27**	**30**	P	**P**		**01 01 42.5**	**-0.3**
	comp=Z,3.5nm,0.6s,baz=202,slow=6.4,SNR=57							
ASAR	**Alice Springs**	**99.15**	**163**	P	**Pdif**		**01 03 51.7**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=177,slow=4.6,SNR=2.7							
PDAR	**Pinedale Array**	**119.93**	**303**	PKP	**PKPdf**		**01 08 59.6**	**-1.0**
	comp=Z,0.1nm,0.5s,baz=129,slow=3.7,SNR=2.0							
NVAR	**Mina Array Bea**	**120.95**	**294**	PKP	**PKiKP**		**01 09 03.1**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=123,slow=3.3,SNR=2.5							
FINES	**FINESS Array B**	**124.58**	**28**	PKP	**PKPdf**		**01 09 07.7**	**-0.8**
	comp=Z,1.5nm,1.0s,baz=288,slow=0.6,SNR=5.4							
ARCES	**ARCESS Array B**	**131.10**	**22**	PKP	**PKPdf**		**01 09 20.4**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=198,slow=2.6,SNR=2.0							
YKA	**Yellowknife Ar**	**135.84**	**318**	PKP	**PKPdf**		**01 09 30.3**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=124,slow=2.6,SNR=17							
INK	**Inuvik**	**145.49**	**321**	PKPbc	**PKPab**		**01 09 47.9**	**+0.1**
	comp=Z,4.9nm,0.6s,baz=72,slow=3.2,SNR=28							
ILAR	**Eielson Array**	**149.75**	**312**	PKPbc	**PKPbc**		**01 09 59.5**	**+0.5**
	comp=Z,7.2nm,0.7s,baz=134,slow=1.9,SNR=65							
KDAK	**Kodiak Island**	**150.39**	**297**	PKPbc	**PKiKP**		**01 10 01.9**	**+0.4**
	comp=Z,8.8nm,0.6s,baz=188,slow=2.7,SNR=19							
SONM	**Songino Array**	**151.20**	**87**	PKPbc	**PKPbc**		**01 10 03.0**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=221,slow=3.7,SNR=10							

NIED ***17*** *00:50:00,36.°50N×142.°60E,h8km,Mw4.6 Best double couple: M0.15000×10*^{15} *NP1:φ0.14.00000°,δ54.00000°, λ78.00000°. NP2:φ0.214.00000°,δ38.00000°,λ106.00000°.*

BGR ***17*** *00:50:27.9±0.0,34.°95N×143.°05E,h42km,mb4.7*

IDC ***17*** *00:50:29.1±0.6,36.°44N×142.°60E,h0km,mb4.2/29, mb1 4.3/36,mb1mx4.2/54,mbtmp4.2/36,ML3.9/5,MS3.9/26, Ms1 3.9/26,ms1mx3.7/45,Error ellipse: s-maj=15.2km s-min=13.0km az=130.0*

JMA ***17*** *00:50:30.9±0.2,36.°45N×142.°62E,h32km,M4.6*

BJI ***17*** *00:50:30.0±0.0,36.°60N×142.°60E,h10km,mB5.0/28, mb4.7/36,Ms4.6/33,Ms7 4.4/29*

MOS ***17*** *00:50:33.2±0.9,36.°65N×142.°57E,h32km,mb4.8/51, MS4.5/9,Error ellipse: s-maj=7.9km s-min=4.9km az=114.9*

NEIC ***17*** *00:50:33.2±1.6,36.°39N±0.°05×142.°68E±0.°10,h32km±4km, mb4.5/134,Error ellipse: s-maj=11.2km s-min=7.4km az=100.0*

ISC 17 00:50:32.8±0.7,36.°40N±0.°04×142.°71E±0.°05,h29km±4km, h29km:pP-P,n325,σ1§48/319,mb4.5/113,MS4.3/44, 10C-8D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
CHOJ	**Chosi**	**1.65**	**246**	P	**Pn**		**00 50 58.2**	**-1.6**
CHOJ				S	**Sn**		**00 51 18.2**	**-1.9**
ONAJ	**Iwakimizuishiy**	**1.69**	**295**	P	**Pn**		**00 50 58.3**	**-2.1**
JHYU	**Hitachinakayam**	**1.71**	**269**	P	**Pn**		**00 50 58.7**	**-2.0**
JHYU				S	**Sn**		**00 51 18.5**	**-3.1**
JHO	**Hitachi**	**1.74**	**278**	P	**Pn**		**00 50 58.6**	**-2.4**
JFK	**Kawauchi**	**1.76**	**304**	P	**Pn**		**00 50 58.7**	**-2.7**
JFT	**Otama**	**2.20**	**301**	P	**Pn**		**00 51 06.1**	**-1.4**
JAG	**Ashikaga**	**2.62**	**272**	P	**Pn**		**00 51 11.3**	**-2.0**
JMK	**Ichinoseki**	**2.81**	**336**	P	**Pn**		**00 51 13.9**	**-1.9**
JRY	**Ryogami san**	**3.10**	**264**	P	**Pn**		**00 51 18.0**	**-1.8**
JRY				S	**Sn**		**00 51 53.0**	**-2.9**
JYK	**Kaneyama**	**3.13**	**324**	P	**Pn**		**00 51 18.6**	**-1.6**
JOD2	**Odawara 2**	**3.15**	**250**	P	**Pn**		**00 51 19.3**	**-1.2**
JOM	**Ohasama**	**3.27**	**340**	S	**Sn**		**00 51 58.3**	**-1.7**
JYN	**Shimob**	**3.50**	**256**	P	**Pn**		**00 51 24.5**	**-0.8**
JYN				S	**Sn**		**00 52 04.5**	**-1.2**
MJAR	**Matsushiro Arr**	**3.63**	**274**	Pn	**Pn**		**00 51 25.9**	**-1.2**
	2.4nm,0.3s,baz=94,slow=11,SNR=178							
MJAR				LR	LR		00 53 06.5	
	comp=Z,1μm,19.4s,baz=105,slow=45							
MAJO	**Matsushiro**	**3.63**	**274**	P	**Pn**		**00 51 26.8**	**-0.3**
MAJO	**Matsushiro**	**3.63**	**274**		**Pn**		**00 51 26.8**	**-0.3**
MAT	**Matsushiro**	**3.63**	**274**	P	**Pn**		**00 51 26.3**	**-0.8**
MAT				*e*S	**Sn**		**00 52 08.3**	**-0.7**
MAT	**Matsushiro**	**3.63**	**274**	P	**Pn**		**00 51 26.6**	**-0.5**
MJB9	**Matsu-Tunnel**	**3.63**	**274**		**Pn**		**00 51 27.0**	**-0.1**
JSD	**Sado**	**3.91**	**296**	P	**Pn**		**00 51 30.3**	**-0.6**
JHJ2	**Mitsune**	**4.05**	**217**	Pn	**Pn**		**00 51 33.2**	**+0.3**
JHJ	**Hachijo jima 2**	**4.06**	**217**	Pn	**Pn**		**00 51 30.9**	**-2.1**
	49nm,0.3s,baz=80,slow=19,SNR=2.0							
JHJ				Sn	**Sn**		**00 52 14.7**	**-4.9**
	118nm,0.3s,baz=194,slow=22,SNR=6.4							
INU	**Inuyama**	**4.74**	**259**		**Pn**		**00 51 42.0**	**-0.3**
ERM	**Erimo**	**5.62**	**3**	⇑*e*P	**Pn**		**00 51 51.5**	**-2.9**
ERM	**Erimo**	**5.62**	**3**		**Pn**		**00 51 52.3**	**-2.0**
ERM					**Sn**		**00 52 55.9**	**-2.0**
NMR	**Nemuro--Hokkai**	**7.34**	**18**	⇓*i*P	**Pn**		**00 52 15.0**	**-3.0**
NMR				*i* S	Sn		00 53 30.6	-10
ASAJ	**Asahikawa**	**7.71**	**359**	Pn	**Pn**		**00 52 21.6**	**-1.5**
	8.1nm,0.3s,baz=179,slow=10,SNR=14							
ASAJ				Sn	**Sn**		**00 53 42.1**	**-7.3**
	0.7nm,0.3s,baz=63,slow=8.2,SNR=1.8							
JKA	**Kamikawa-asahi**	**7.71**	**359**		**Pn**		**00 52 21.6**	**-1.5**
JKA					**Sn**		**00 53 42.1**	**-7.3**
GRPR	**Tuman**	**7.94**	**16**	P	**Pn**		**00 52 23.2**	**-3.0**
GRPR				*i* S	Sn		00 53 45.5	-9.5
JCJ	**Chichijima**	**9.29**	**183**	Pn	**Pn**		**00 52 45.0**	**+0.3**
	18nm,0.3s,baz=276,slow=16,SNR=7.4							
JCJ				Sn	Sn		00 54 17.6	-11
	6.1nm,0.3s,baz=131,slow=20,SNR=1.6							
KUR	**Kuril'sk**	**9.65**	**22**	P	**Pn**		**00 52 47.6**	**-2.0**
KUR				S	**Sn**		**00 54 31.4**	**-5.6**
TEY	**Ternei**	**9.79**	**334**	*e*P	Pn		00 52 56.1	+4.5
JNU	**Nakatsue**	**10.27**	**255**	Pn	**Pn**		**00 52 56.6**	**-1.5**
	0.5nm,0.3s,baz=77,slow=4.2,SNR=7.9							
JNU				LR	LR		00 56 56.0	
	comp=Z,539nm,19.9s,baz=74,slow=38							
JNU	**Nakatsue**	**10.27**	**255**		**Pn**		**00 52 55.8**	**-2.4**
YSS	**Yuzh-Sakhalins**	**10.55**	**0**	*e*P	**Pn**		**00 53 00.4**	**-1.5**
YSS				pmax	pmax			
	comp=Z,60nm,0.7s							
YSS				MLR	MLR			
	comp=Z,1μm,17.0s							
YSS	**Yuzh-Sakhalins**	**10.55**	**0**	Pn	**Pn**		**00 53 00.8**	**-1.1**
MSHR	**Mys Shultsa**	**10.85**	**308**	⇑*e*P	**Pn**		**00 53 06.9**	**+0.8**
MSHR				pmax	pmax			
	comp=Z,6.0nm,0.6s							
USA0B	**Ussuriysk Arra**	**11.29**	**317**	P	**Pn**		**00 53 11.5**	**-0.7**
USA0B	**Ussuriysk Arra**	**11.29**	**317**	Pn	**Pn**		**00 53 11.4**	**-0.7**
USRK	**Ussuriysk Ar.**	**11.29**	**317**	Pn	**Pn**		**00 53 12.2**	**0.0**
	baz=125,slow=14,SNR=16							
KSRS	**Korea Array**	**11.88**	**279**	Pn	**Pn**		**00 53 22.1**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=100,slow=14,SNR=19							
KSRS				LR	LR		00 58 06.5	
	comp=Z,243nm,18.7s,baz=92,slow=39							
KS19	**Wonju Array Si**	**11.93**	**280**	Pn	**Pn**		**00 53 18.6**	**-2.2**
TJN	**Taejon**	**12.37**	**274**	⇓*e*P	**Pn**		**00 53 27.9**	**+1.0**
TYV	**Tymovskoe**	**14.46**	**360**	*e*P	**Pn**		**00 53 55.6**	**+0.2**
TYV				*e*S	**Sn**		**00 56 34.7**	**+0.1**
TYV				pmax	pmax			
	comp=Z,29nm,1.3s							
TYV				smax	smax			
	comp=E,23nm,1.3s							
KLR	**Kul'dur**	**15.11**	**331**	Pn	**Pn**		**00 54 01.6**	**-2.5**
	comp=E,0.2nm,0.3s,baz=132,slow=17,SNR=5.4							
KLR	**Kul'dur**	**15.11**	**331**	⇓*e*P	**Pn**		**00 54 02.2**	**-2.0**
CN2	**Changchun**	**15.12**	**305**	*e*P	**P**		**00 54 09.6**	**+0.4**
CN2				*e*S	**Sn**		**00 56 55.5**	**+4.7**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
CN2				pmax	pmax			
	comp=Z,400nm,8.0s							
CN2				LR	LR			
	comp=N,1μm,13.0s							
CN2				LR	LR			
	comp=E,1μm,13.0s							
CN2				LR	LR			
	comp=Z,900nm,15.0s							
DL2	**Dalian**	**16.88**	**285**	P	P		00 54 36.3	+7.6
DL2				S	S		00 57 54.8	+12
DL2				pmax	pmax			
	comp=Z,18nm,1.4s							
DL2				pmax	pmax			
	comp=Z,180nm,5.4s							
DL2				LR	LR			
	comp=N,280nm,16.3s							
DL2				LR	LR			
	comp=E,960nm,14.5s							
DL2				LR	LR			
	comp=Z,1μm,14.0s							
SKR	**Severo-Kuril's**	**17.23**	**30**	*e*P	**P**		**00 54 35.4**	**+2.9**
SKR				*e*S	**Sn**		**00 57 43.6**	**+1.7**
SKR				pmax	pmax			
	comp=Z,147nm,1.3s							
SKR				pmax	pmax			
	comp=Z,400nm,4.0s							
SKR				pmax	pmax			
	comp=Z,1μm,4.6s							
SKR				MLR	MLR			
	comp=Z,600nm,15.0s							
SKR				MLR	MLR			
	comp=Z,800nm,15.0s							
PETK	**Petropavlovsk-**	**19.74**	**27**	LR	LR		01 04 32.4	
	comp=Z,324nm,18.3s,baz=236,slow=43							
ZEA	**Zeya**	**20.41**	**333**	*e*P	**P**		**00 55 07.2**	**-0.2**
ZEA				pmax	pmax			
	comp=N,35nm,0.7s							
ZEA				pmax	pmax			
	comp=Z,35nm,0.7s							
ZEA				MLR	MLR			
	comp=E,900nm,16.0s							
ZEA				MLR	MLR			
	comp=Z,1μm,16.0s							
TIA	**Tai'an**	**20.61**	**277**	P	**P**		**00 55 07.3**	**-2.4**
TIA				pmax	pmax			
	comp=Z,4.0nm,0.5s							
TPUB	**Ta-pu**	**23.11**	**242**	P	**P**		**00 55 36.0**	**-0.5**
TPUB				IAmb	IAmb		00 55 54.2	
	comp=Z,13nm,1.1s							
MA2	**Magadan**	**23.77**	**10**	P	**P**		**00 55 42.5**	**-0.2**
	comp=Z,7.8nm,0.6s,baz=201,slow=9.9,SNR=5.2							
MA2	**Magadan**	**23.77**	**10**	⇓*e*P	**P**		**00 55 42.8**	**+0.2**
MA2				pmax	pmax			
	comp=Z,7.0nm,0.6s							
MA2	**Magadan**	**23.77**	**10**	IAmb	IAmb		00 55 44.1	
	comp=Z,9.2nm,0.7s							
KNMB	**Chin-men Tao**	**24.04**	**247**	P	**P**		**00 55 45.2**	**-0.1**
WHN	**Wuhan**	**24.32**	**264**	P	**P**		**00 55 47.5**	**-0.4**
WHN				S	**S**		**01 00 10.3**	**+5.1**
WHN				LR	LR			
	comp=Z,580nm,9.2s							
WHN				LR	LR			
	comp=Z,2μm,13.4s							
WHN				LR	LR			
	comp=Z,2μm,14.2s							
CIT	**Chita**	**25.85**	**316**	*e*P	**P**		**00 56 03.0**	**+1.2**
CIT				*e*			00 56 12.1	
YAK	**Yakutsk**	**26.92**	**346**	P	**P**		**00 56 10.8**	**-0.3**
	comp=Z,12nm,0.4s,baz=158,slow=0.6,SNR=6.5							
YAK				LR	LR		01 07 04.8	
	comp=Z,319nm,19.6s,baz=154,slow=37							
YAK	**Yakutsk**	**26.92**	**346**	*e*P	**P**		**00 56 11.1**	**-0.1**
YAK				*e**PP	**pP**		**00 56 18.3**	**+0.3**
YAK				*e*			00 56 54.5	
YAK				*e*PPP	PPP		00 57 01.2	
YAK				*e*S	**S**		**01 00 48.2**	**+2.1**
YAK				*e*SS	**SnSn**		**01 01 53.3**	**+0.9**
YAK				pmax	pmax			
	comp=E,5.0nm,0.9s							
YAK				pmax	pmax			
	comp=Z,29nm,0.8s							
YAK				pmax	pmax			
	comp=N,4.0nm,0.9s							
YAK				pmax	pmax			
	comp=E,3.0nm,0.4s							
YAK				pmax	pmax			
	comp=Z,15nm,0.4s							
YAK				pmax	pmax			
	comp=N,29nm,1.2s							
YAK				smax	smax			
	comp=N,385nm,15.8s							
YAK				MLR	MLR			
	comp=Z,825nm,13.0s							
YAK				MLR	MLR			
	comp=N,708nm,13.0s							
YAK				MLR	MLR			
	comp=E,131nm,13.0s							
YAK	**Yakutsk**	**26.92**	**346**	P	**P**		**00 56 11.0**	**-0.2**
H11N2	**WAKE ISLAND Hy**	**26.93**	**122**	T	T		01 24 30.4	
	baz=313,slow=75,SNR=14							
H11N1	**WAKE ISLAND Hy**	**26.94**	**122**	T	T		01 24 32.5	
	baz=313,slow=75,SNR=12							
H11N3	**WAKE ISLAND Hy**	**26.95**	**122**	T	T		01 24 30.0	
	baz=313,slow=75,SNR=13							
SEY	**Seymchan**	**27.23**	**10**	P	**P**		**00 56 15.0**	**+1.1**
	comp=E,2.9nm,0.6s,baz=201,slow=7.6,SNR=14							
XAN	**Xi'an**	**27.62**	**275**	P	**P**		**00 56 17.8**	**-0.1**
XAN				pP	sP		00 56 27.3	-0.4
XAN				sP	pwP		00 56 32.0	+0.3
XAN				S	**S**		**01 00 57.4**	**-0.4**
XAN				pmax	pmax			
	comp=E,14nm,0.7s							
XAN				pmax	pmax			
	comp=E,170nm,5.9s							
XAN				LR	LR			
	comp=E,320nm,14.3s							
XAN				LR	LR			
	comp=E,470nm,13.9s							
XAN				LR	LR			
	comp=E,510nm,13.3s							
XAN	**Xi'an**	**27.62**	**275**	P	**P**		**00 56 18.2**	**+0.3**
XAN				pmax	pmax			
	comp=Z,24nm,1.1s							
XAN	**Xi'an**	**27.62**	**275**	P	**P**		**00 56 18.2**	**+0.3**
XAN				IAmb	IAmb		00 56 29.6	
	comp=Z,24nm,1.1s							
H11S1	**WAKE ISLAND Hy**	**27.64**	**124**	T	T		01 25 32.0	
	baz=315,slow=76,SNR=13							
H11S3	**WAKE ISLAND Hy**	**27.64**	**124**	T	T		01 25 31.4	
	baz=315,slow=76,SNR=11							
H11S2	**WAKE ISLAND Hy**	**27.66**	**124**	T	T		01 25 32.0	
	baz=315,slow=76,SNR=11							
ENH	**Enshi**	**28.33**	**267**	P	**P**		**00 56 22.8**	**

ZALV pmax pmax
comp=Z,5.0nm,0.6s
NRIK Noril'sk 44.28 335 P **P** **00 58 38.7 -0.7**
comp=Z,1.3nm,0.6s,baz=121,slow=3.5,SNR=4.0
NRIK LR LR 01 19 11.1
comp=Z,435nm,19.3s,baz=76,slow=39
MK31 Makanchi Array 45.34 303 P **P** **00 58 48.1 -0.1**
MK31 pmax pmax
comp=Z,10.0nm,1.1s
MK31 Makanchi Array 45.34 303 P **P** **00 58 48.1 -0.1**
MK31 IAmb IAmb 00 59 03.7
comp=Z,10.0nm,1.1s
MKAR Makanchi Array 45.34 303 P **P** **00 58 48.4 +0.2**
comp=Z,3.6nm,0.6s,baz=89,slow=10.0,SNR=23
MKAR LR LR 01 16 43.2
comp=Z,97nm,21.2s,baz=105,slow=35
MAKZ Makanchi 45.55 303 P **P** **00 58 50.2 +0.3**
MAKZ pmax pmax
comp=Z,15nm,1.2s
MAKZ Makanchi 45.55 303 P **P** **00 58 50.2 +0.3**
MAKZ IAmb IAmb 00 59 05.5
comp=Z,15nm,1.1s
PMG Port Moresby 45.75 174 P **P** **00 58 51.9 +0.2**
PMG pmax pmax
comp=Z,31nm,1.0s
PMG Port Moresby 45.75 174 P **P** **00 58 51.9 +0.2**
KDAK Kodiak Island 46.88 42 P **P** **00 59 01.0 +0.9**
comp=Z,2.6nm,0.7s,baz=293,slow=13,SNR=2.0
KDAK Kodiak Island 46.88 42 P **P** **00 59 01.0 +0.9**
KDAK Kodiak Island 46.88 42 P **P** **00 59 00.8 +0.7**
KDAK IAmb IAmb 00 59 18.6
comp=Z,5.8nm,1.1s
TAPN Taplejung 47.03 275 *e*P **P** **00 59 02.8 +0.7**
comp=Z,10nm,0.6s
PPLA Purkeypile 47.10 35 P **P** **00 59 02.1 +0.2**
KURK Kurchatov 47.14 309*c i*P **P** **00 59 01.8 -0.5**
KURK pmax pmax
comp=Z,11nm,0.7s
KURK Kurchatov 47.14 309 P **P** **00 59 01.9 -0.3**
KURBB Kurchatov Arra 47.21 309 P **P** **00 59 02.6 -0.2**
comp=Z,7.3nm,0.7s,baz=84,slow=7.8,SNR=82
ODAN Odare 47.50 275 *e*P **P** **00 59 05.8 +0.1**
comp=Z,7.3nm,0.6s
BPAW Bear Paw Mtn. 47.69 33 P **P** **00 59 06.7 +0.3**
KTH Kantishna Hill 47.70 34 P **P** **00 59 07.0 +0.5**
BRLK Bradley Lake 47.70 39 P **P** **00 59 05.7 -0.9**
BRLK IAmb IAmb 00 59 10.5
comp=Z,10nm,1.1s
MLY Manley 47.84 32 P **P** **00 59 08.1 +0.5**
MLY IAmb IAmb 00 59 18.4
comp=Z,2.6nm,0.8s
RAMN Ramite 48.09 275 *e*P **P** **00 59 10.2 -0.1**
comp=Z,20nm,0.8s
JIRN Jiri 48.12 276 *e*P **P** **00 59 12.0 +1.4**
comp=Z,21nm,0.7s
GUN Gumba 48.26 277 *e*P **P** **00 59 12.8 +1.1**
comp=Z,12nm,0.6s
PMR Palmer 48.52 36 P **P** **00 59 13.8 +1.0**
PMR pmax pmax
comp=Z,7.0nm,1.0s
PMR Palmer 48.52 36 P **P** **00 59 13.8 +1.0**
PMR IAmb IAmb 00 59 26.7
comp=Z,7.1nm,1.0s
TOLK Toolik Lake Re 48.56 27 P **P** **00 59 13.7 +0.5**
TOLK IAmb IAmb 00 59 15.0
comp=Z,2.0nm,0.7s
MCK McKinley 48.59 33 P **P** **00 59 14.6 +1.3**
MCK pmax pmax
comp=Z,5.0nm,1.2s
MCK McKinley 48.59 33 P **P** **00 59 14.6 +1.3**
MCK IAmb IAmb 00 59 32.4
comp=Z,5.1nm,1.2s
GHO Glory Hole Cre 48.61 36 P **P** **00 59 14.8 +1.2**
GHO IAmb IAmb 00 59 21.7
comp=Z,4.1nm,0.5s
RND Reindeer 48.62 34 P **P** **00 59 13.7 0.0**
RND pmax pmax
comp=Z,3.0nm,1.2s
RND Reindeer 48.62 34 P **P** **00 59 13.7 0.0**
RND IAmb IAmb 00 59 29.4
comp=Z,3.3nm,1.2s
KNK Knik Glacier 48.84 37 P **P** **00 59 16.8 +1.4**
KNK IAmb IAmb 00 59 34.8
comp=Z,4.0nm,0.8s
SML Sawmill 48.89 36 P **P** **00 59 17.0 +1.2**
SML IAmb IAmb 00 59 33.4
comp=Z,4.4nm,1.0s
MDM Murphy Dome 48.90 32 P **P** **00 59 16.3 +0.5**
MDM IAmb IAmb 00 59 20.8
comp=Z,3.6nm,1.0s
WRH Wood River Hil 48.96 32 P **P** **00 59 17.2 +1.0**
WRH IAmb IAmb 00 59 34.0
comp=Z,2.9nm,0.5s
PRZ Przheval'sk 48.98 298 P **P** **00 59 16.7 -0.2**
PRZ pmax pmax
comp=Z,22nm,1.1s
PRZ Przheval'sk 48.98 298 P **P** **00 59 16.7 -0.2**
SOEI Soe 49.08 204 P **P** **00 59 17.6 -0.1**
SCM Sheep Creek Mo 49.37 36 P **P** **00 59 21.2 +1.8**
SCM pmax pmax
comp=Z,9.0nm,0.8s
SCM Sheep Creek Mo 49.37 36 P **P** **00 59 21.2 +1.8**
HDA Harding Lake 49.45 33 P **P** **00 59 19.9 0.0**
HDA IAmb IAmb 00 59 26.8
comp=Z,2.3nm,0.8s
IL31 49.48 32 P **P** **00 59 20.4 +0.3**
IL31 IAmb IAmb 00 59 34.0
comp=Z,3.5nm,0.9s
ILAR Eielson Array 49.48 32 P **P** **00 59 21.2 +1.1**
comp=Z,1.3nm,0.8s,baz=261,slow=5.6,SNR=15
GLI Glacier Island 49.53 37 P **P** **00 59 21.4 +0.8**
TARG Taragay, Kyrgy 49.61 297 P **P** **00 59 22.1 +0.1**
DANN Dangsing 49.77 278 *e*P **P** **00 59 23.5 +0.3**
comp=Z,24nm,0.6s
PYUN Piuthan 50.49 279 *e*P **P** **00 59 28.6 0.0**
comp=Z,15nm,0.5s
BOOM Boomskoye usch 50.73 299 P **P** **00 59 30.5 +0.4**
BOOM pmax pmax
comp=Z,7.0nm,1.0s
BOOM Boomskoye usch 50.73 299 P **P** **00 59 30.5 +0.4**
BOOM IAmb IAmb 00 59 48.3
comp=Z,6.5nm,0.9s
DOT Dot Lake 50.76 33 P **P** **00 59 31.3 +1.4**
DOT IAmb IAmb 00 59 45.0
comp=Z,9.0nm,0.9s
SCRK Sand Creek 50.77 33 P **P** **00 59 30.9 +0.9**
MENT Mentasta 50.97 34 P **P** **00 59 31.2 -0.3**
GLB Gilahina Butte 51.07 36 P **P** **00 59 33.4 +1.1**
VRDI Verde Repeater 51.27 37 P **P** **00 59 33.0 -1.0**
KSH Kashi 51.61 295 P **P** **00 59 41.1 +4.3**
KSH pP pP 00 59 44.3 +0.1
KSH sP sP 00 59 47.0 +0.4
KSH pmax pmax
comp=Z,16nm,0.8s
KSH pmax pmax
comp=Z,160nm,4.7s
AAK Ala-Archa 51.70 299‖ *e*P **P** **00 59 37.7 +0.2**
AAK pmax pmax
comp=Z,7.0nm,1.9s
AAK Ala-Archa 51.70 299 P **P** **00 59 36.9 -0.6**
AAK IAmb IAmb 00 59 53.8
comp=Z,4.7nm,0.8s
BRVK Borovoye 51.82 313‖ *e*P **P** **00 59 38.5 +0.5**
BRVK pmax pmax
comp=Z,12nm,2.0s
BRVK Borovoye 51.82 313 P **P** **00 59 37.7 -0.2**
BRVK IAmb IAmb 00 59 40.3
comp=Z,3.0nm,0.8s
JAGI Jajag, Banyuwa 52.08 217 P **P** **00 59 40.8 +0.6**
LHMI Lhok Sumawe 52.12 245 P **P** **00 59 39.0 -1.6**
ARSB Arslanbob 53.19 298 P **P** **00 59 48.3 -0.1**
ARSB pmax pmax
comp=Z,13nm,0.9s
ARSB Arslanbob 53.19 298 P **P** **00 59 48.3 -0.1**
HYT Haines Junctio 54.19 36 P **P** **00 59 57.5 +2.1**
HYT IAmb IAmb 01 00 13.3
comp=Z,6.4nm,1.2s
DHAK Deception Hill 54.20 39 P **P** **00 59 56.1 +0.6**
KK31 Karatay Array 54.34 301 IAmb IAmb 01 00 02.9
comp=Z,4.6nm,0.9s
KKAR Karatay Array 54.34 301 IAmb IAmb 01 00 02.9
comp=Z,4.6nm,0.9s
GSI Gunungsitoli 54.38 241 P **P** **00 59 57.3 0.0**
INK Inuvik 54.48 27 P **P** **00 59 58.4 +1.2**
comp=Z,1.0nm,0.8s,baz=280,slow=7.4,SNR=5.2

CISI Cisompet, Garu 54.62 224 P **P** **00 59 57.9 -1.1**
BTK Batken 55.16 297 IAmb IAmb 01 00 19.9
comp=Z,4.7nm,0.9s
WHY Whitehorse 55.48 36 P **P** **01 00 05.0 +0.2**
NIL Nilore 55.80 289 P **P** **01 00 06.5 -0.9**
NIL pmax pmax
comp=Z,7.0nm,0.8s
NIL Nilore 55.80 289 P **P** **01 00 06.5 -0.9**
NIL IAmb IAmb 01 00 20.0
comp=Z,7.1nm,0.8s
GAR Garm 55.91 296 P **P** **01 00 08.4 +0.2**
SVE Sverdlovsk 56.31 319 *e*P **P** **01 00 11.6 +1.0**
SVE pmax pmax
comp=Z,16nm,1.5s
WB0 Warramunga Arr 56.41 189 P **P** **01 00 12.1 +0.4**
WB0 IAmb IAmb 01 00 27.2
comp=Z,4.3nm,0.7s
WRA Warramunga Arr 56.59 189 P **P** **01 00 14.2 +1.2**
comp=Z,1.4nm,0.8s,baz=7.0,slow=7.3,SNR=6.7
WRA Warramunga Arr 56.59 189 *i* P **P** **01 00 17.1 +4.1**
WRA pmax pmax
comp=Z,1.0nm,0.7s
CHGR Chuyangaron 56.88 296 P **P** **01 00 15.3 +0.3**
ARU Arti 57.52 319 LR LR 01 26 38.5
comp=Z,70nm,19.4s,baz=64,slow=38
ARU Arti 57.52 319*c i*P **P** **01 00 19.4 +0.2**
ARU 01 01 14.9
ARU 01 02 27.3
ARU S **S** **01 08 14.7 0.0**
ARU pmax pmax
comp=Z,9.0nm,0.8s
ARU MLR MLR
comp=Z,241nm,15.0s
ARU Arti 57.52 319 P **P** **01 00 19.4 +0.2**
ARU IAmb IAmb 01 00 19.9
comp=Z,7.3nm,0.8s
C36M Paulatuk 57.57 25 P **P** **01 00 17.6 -1.7**
DLBC Dease Lake 58.48 38 P **P** **01 00 27.0 +0.9**
KBL Kabul 58.61 292 P **P** **01 00 26.7 -0.8**
KBL pmax pmax
comp=Z,5.0nm,0.9s
KBL Kabul 58.61 292 P **P** **01 00 26.7 -0.8**
KBL IAmb IAmb 01 00 38.9
comp=Z,5.1nm,0.9s
AKTO Aktyubinsk 59.87 313 LR LR 01 28 35.6
comp=Z,94nm,18.5s,baz=60,slow=38
ASAR Alice Springs 60.32 189 P **P** **01 00 38.9 -0.1**
comp=Z,0.6nm,0.8s,baz=2.0,slow=6.6,SNR=4.5
KIRV Kirov 61.38 323 LR LR 01 31 38.9
comp=Z,184nm,18.4s,baz=39,slow=40
DZM Mont Dzumac 62.33 155 *e*LR LR 01 19 06.0
comp=Z,161nm,20.9s
HRA Herat 63.72 295 P **P** **01 01 02.0 -0.2**
HRA IAmb IAmb 01 01 04.2
comp=Z,3.4nm,0.7s
YKA Yellowknife Ar 63.83 30 P **P** **01 01 02.9 +0.8**
comp=Z,0.7nm,0.8s,baz=304,slow=6.4,SNR=11
KLMR Klimovskoe 64.84 328 *e*P **P** **01 01 07.4 -1.3**
KLMR pmax pmax
comp=Z,19nm,1.3s
KLMR Klimovskoe 64.84 328 *e*P **P** **01 01 07.5 -1.3**
KLMR AMP 01 01 21.8
comp=Z,19nm,1.3s
KLMR LQ LQ 01 25 31.5
KLMR LQ LQ 01 25 31.5
KLMR LR LR 01 29 43.8
ARCES ARCESS Array B 64.95 340 P **P** **01 01 08.4 -0.9**
comp=Z,2.2nm,0.8s,baz=17,slow=6.3,SNR=4.7
ARCES LR LR 01 32 43.3
comp=Z,68nm,21.0s,baz=320,slow=39
GEYT Alibeck 65.05 300 P **P** **01 01 10.4 -0.2**
comp=Z,1.3nm,0.7s,baz=48,slow=2.2,SNR=4.3
MOS Moscow 68.38 324 *e*P **P** **01 01 29.1 -2.2**
MOS *e* 01 01 41.5
OBN Obninsk 69.22 324 *i* P **P** **01 01 36.8 +0.2**
OBN *i* 01 01 47.6
OBN *i* 01 01 59.7
OBN *i* S **S** **01 10 37.9 -2.6**
OBN pmax pmax
comp=Z,4.0nm,0.5s
OBN MLR MLR
comp=Z,135nm,14.0s
LPSR Galich'ya Gora 69.45 321 *e*P **P** **01 01 36.9 -1.2**
LPSR pmax pmax
comp=Z,9.0nm,0.6s
LPSR MLR MLR
comp=Z,470nm,15.0s
FINES FINESS Array B 69.86 333 P **P** **01 01 40.8 +0.4**
comp=Z,5.9nm,0.7s,baz=58,slow=7.5,SNR=28
FINES LR LR 01 35 07.4
comp=Z,191nm,18.4s,baz=43,slow=38
VSR Storozhevoye 70.09 319 *e*P **P** **01 01 40.6 -1.5**
VSR pmax pmax
comp=Z,10.0nm,0.7s
VSR MLR MLR
comp=Z,350nm,15.0s
VSU Vasula 71.52 330‖ *e*P **P** **01 01 51.0 +0.4**
VSU pmax pmax
comp=Z,19nm,0.8s
WSAR Wadi Sarin 72.04 286 LR LR 01 35 14.4
comp=Z,27nm,21.2s,baz=104,slow=37
TBLG Delisi 72.06 309 P **P** **01 01 54.7 +0.5**
TBLG pmax pmax
comp=Z,5.0nm,0.8s
TBLG Delisi 72.06 309 P **P** **01 01 54.7 +0.5**
TBLG IAmb IAmb 01 01 56.2
comp=Z,4.8nm,0.8s
KBZ Khabaz 72.10 311 P **P** **01 01 55.0 +0.7**
comp=Z,5.0nm,0.8s,baz=54,slow=1.0,SNR=17
KIV Kislovodsk 72.11 312 *i* P **P** **01 01 55.3 +0.8**
KIV *i* 01 02 05.8
KIV *i* 01 02 16.5
KIV *i* 01 04 40.8
KIV pmax pmax
comp=Z,5.0nm,0.8s
KIV Kislovodsk 72.11 312 P **P** **01 01 56.5 +1.9**
NEY Neytrino 72.47 311‖ *e*P **P** **01 01 57.9 +1.0**
NEY pmax pmax
comp=Z,1.0nm,0.7s
AKH Akhalkalaki 73.01 309 P **P** **01 02 01.4 +1.3**
AKH pmax pmax
comp=Z,4.0nm,1.0s
AKH Akhalkalaki 73.01 309 P **P** **01 02 01.4 +1.3**
AKH IAmb IAmb 01 02 02.7
comp=Z,3.8nm,1.0s
TOO Toolangi 73.65 178 P **P** **01 02 03.0 -0.4**
TOO pmax pmax
comp=Z,8.0nm,1.1s
TOO Toolangi 73.65 178 P **P** **01 02 03.0 -0.4**
TOO IAmb IAmb 01 02 19.9
comp=Z,7.6nm,1.1s
FFC Flin Flon 73.67 33 P **P** **01 02 04.1 +0.6**
FFC pmax pmax
comp=Z,3.0nm,0.8s
FFC Flin Flon 73.67 33 P **P** **01 02 04.1 +0.6**
FFC IAmb IAmb 01 02 20.3
comp=Z,2.5nm,0.8s
LRM Limekiln Ridge 73.87 45 P **P** **01 02 04.5 -0.6**
PMPB Monarch Peak 74.11 57 P **P** **01 02 05.2 -1.3**
KVN Kaiserville 74.31 53 P **P** **01 02 08.6 +0.8**
KVN pmax pmax
comp=Z,1.0nm,1.1s
KVN Kaiserville 74.31 53 P **P** **01 02 08.6 +0.8**
NVAR Mina Array Bea 74.53 54 P **P** **01 02 10.1 +1.0**
comp=Z,0.5nm,0.6s,baz=290,slow=5.7,SNR=4.7
NVAR LR LR 01 32 47.9
comp=Z,34nm,19.0s,baz=276,slow=34
NC405 NORSAR Array S 74.96 338 P **P** **01 02 11.2 +0.3**
NC405 IAmb IAmb 01 02 18.4
comp=Z,4.2nm,0.8s
HFS Hagfors 75.09 336 P **P** **01 02 11.1 -0.5**
comp=Z,2.2nm,0.7s,baz=119,slow=5.2,SNR=4.8
HFS LR LR 01 38 33.9
comp=Z,214nm,18.2s,baz=41,slow=38
NB2 NORSAR Subarra 75.17 338 P **P** **01 02 12.8 +0.6**
comp=Z,11nm,1.2s,baz=38,slow=5.9
NOA NORSAR Array B 75.17 338 P **P** **01 02 10.9 -1.2**
comp=Z,1.1nm,0.8s,baz=38,slow=5.7,SNR=6.4
NOA LR LR 01 39 28.1
comp=Z,176nm,19.5s,baz=40,slow=39
NAO01 NORSAR Array S 75.42 338 P **P** **01 02 12.3 -1.3**
AKASG Malin Array Be 75.43 323 P **P** **01 02 12.9 -0.9**
comp=Z,4.2nm,0.7s,baz=46,slow=6.1,SNR=11
AKASG LR LR 01 37 36.4
comp=Z,85nm,18.1s,baz=55,slow=38

AKBB Malin Array Si 75.43 323‖ *e*P **P** **01 02 13.6 -0.2**
AKBB Malin Array Si 75.43 323 IAmb IAmb 01 02 26.7
comp=Z,5.7nm,0.7s
SUW Suwalki 75.98 328 P **P** **01 02 16.2 -0.6**
SUW pmax pmax
comp=Z,9.0nm,0.9s
SUW Suwalki 75.98 328 P **P** **01 02 16.2 -0.6**
SUW IAmb IAmb 01 02 28.9
comp=Z,9.1nm,0.9s
FXWY Fox Creek 75.98 46 P **P** **01 02 16.5 -0.9**
ISA Isabella, Lake 75.98 56 P **P** **01 02 16.8 -0.5**
ISA pmax pmax
comp=Z,4.0nm,1.1s
ISA Isabella, Lake 75.98 56 P **P** **01 02 16.8 -0.5**
ISA IAmb IAmb 01 02 20.4
comp=Z,4.1nm,1.1s
R11A Troy Canyon, C 76.33 52 P **P** **01 02 19.4 0.0**
BGU Big Grassy Mou 76.41 49 P **P** **01 02 18.8 -1.0**
FRB Frobisher Bay 77.15 14 P **P** **01 02 24.2 +1.0**
comp=Z,2.9nm,0.7s,baz=333,slow=4.9,SNR=5.8
PDAR Pinedale Array 77.36 46 P **P** **01 02 27.1 +1.9**
comp=Z,0.2nm,0.5s,baz=336,slow=2.0,SNR=2.0
JLU Jordanelle 77.57 49 P **P** **01 02 26.3 -0.1**
NLU North Lily Min 77.58 49 P **P** **01 02 26.5 +0.1**
SHPR Sheep Range 77.68 54 P **P** **01 02 26.2 -0.8**
CCUT Cedar City 78.22 52 P **P** **01 02 29.6 -0.4**
SZCU Shurtz Canyon 78.37 52 P **P** **01 02 29.7 -1.2**
PFO Pinyon Flats O 78.52 57 P **P** **01 02 31.8 +0.1**
PFO pmax pmax
comp=Z,3.0nm,1.2s
PFO Pinyon Flats O 78.52 57 P **P** **01 02 31.8 +0.1**
PFO IAmb IAmb 01 02 36.1
comp=Z,3.4nm,1.1s
XPFO Pion Flat 78.53 57 P **P** **01 02 31.6 0.0**
XPFO IAmb IAmb 01 02 36.1
comp=Z,3.4nm,1.1s
LCMT Little Creek M 78.62 52 P **P** **01 02 32.1 0.0**
MTPU Mount Pierson 78.67 51 P **P** **01 02 32.1 -0.6**
P17A Butcher Ranch, 78.69 49 P **P** **01 02 33.0 +0.5**
RDMU Red Mountain 78.72 48 P **P** **01 02 32.5 -0.2**
Q16A Castle Valley 78.76 50 P **P** **01 02 32.6 -0.4**
KNB Kanab 78.88 52 P **P** **01 02 34.6 +0.9**
KNB pmax pmax
comp=Z,4.0nm,1.1s
KNB Kanab 78.88 52 P **P** **01 02 34.5 +0.9**
BAR Barrett 78.92 58 P **P** **01 02 33.5 -0.2**
BUR08 Bucovina Ar. S 79.44 322 IAmb IAmb 01 02 50.1
comp=Z,3.8nm,1.0s
RSSD Black Hills 79.60 42 P **P** **01 02 37.4 -0.1**
RSSD pmax pmax
comp=Z,1.0nm,0.5s
RSSD Black Hills 79.60 42 P **P** **01 02 37.4 -0.1**
BR131 Keskin Array S 80.05 312 P **P** **01 02 39.6 -0.3**
BR131 pmax pmax
comp=Z,2.0nm,1.1s
BR131 Keskin Array S 80.05 312 P **P** **01 02 39.5 -0.3**
BRTR Keskin Array B 80.05 312 P **P** **01 02 41.2 +1.3**
comp=Z,0.8nm,0.7s,baz=115,slow=3.5,SNR=8.8
BRTR LR LR 01 42 49.8
comp=Z,70nm,18.0s,baz=21,slow=39
BRTR Keskin Array B 80.05 312 *i* P **P** **01 02 41.0 +1.1**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
OJC Ojcow 80.14 327 P **P** **01 02 40.4 +0.4**
OJC pmax pmax
comp=Z,7.0nm,1.1s
OJC Ojcow 80.14 327 P **P** **01 02 40.4 +0.4**
OJC IAmb IAmb 01 02 55.4
comp=Z,6.5nm,1.1s
PV10 Paradox Valley 80.41 49 P **P** **01 02 42.0 0.0**
PV10 IAmb IAmb 01 02 57.7
comp=Z,12nm,1.1s
PV14 Lion Creek, Pa 80.42 49 P **P** **01 02 42.1 +0.1**
PV14 IAmb IAmb 01 02 52.7
comp=Z,3.7nm,1.1s
PV22 Blue Mesa, Par 80.46 49 P **P** **01 02 42.4 +0.1**
PV20 West Nyswonger 80.47 49 P **P** **01 02 41.6 -0.7**
PV20 IAmb IAmb 01 02 57.5
comp=Z,5.4nm,1.1s
PV04 Paradox Valley 80.48 49 P **P** **01 02 42.9 +0.6**
PV04 IAmb IAmb 01 02 53.2
comp=Z,3.1nm,1.0s
PV17 East Wray Mesa 80.52 49 P **P** **01 02 41.8 -0.7**
PV17 IAmb IAmb 01 02 57.2
comp=Z,7.7nm,1.1s
PV16 Nyswonger Mesa 80.52 49 P **P** **01 02 42.2 -0.4**
PV16 IAmb IAmb 01 02 58.0
comp=Z,6.9nm,1.2s
PV11 David Mesa, Pa 80.56 49 P **P** **01 02 42.7 -0.1**
PV11 IAmb IAmb 01 02 58.8
comp=Z,5.7nm,1.2s
PV18 Skein Mesa, Pa 80.57 49 P **P** **01 02 43.0 +0.2**
PV12 Saucer Basin, 80.59 49 P **P** **01 02 42.0 -0.9**
PV03 Paradox Valley 80.60 49 P **P** **01 02 43.5 +0.5**
PV07 Paradox Valley 80.61 49 P **P** **01 02 43.4 +0.4**
PHWY Pilot Hill 80.66 45 P **P** **01 02 42.6 -0.8**
PV13 Radium Mtn., P 80.68 49 P **P** **01 02 43.9 +0.5**
PV13 IAmb IAmb 01 02 47.9
comp=Z,3.0nm,1.1s
PV02 Paradox Valley 80.70 49 P **P** **01 02 42.5 -1.1**
PV02 IAmb IAmb 01 02 42.6
comp=Z,5.2nm,1.0s
WUAZ Wupatki 80.72 53 P **P** **01 02 43.9 +0.2**
PV01 Paradox Valley 80.85 49 P **P** **01 02 43.6 -0.8**
AGMN Agassiz Nation 80.86 35 P **P** **01 02 43.2 -0.7**
OKC Ostrava-Krasne 81.15 327 *e*P **P** **01 02 45.5 +0.1**
OKC MLR MLR
comp=Z,200nm,13.8s
OKC Ostrava-Krasne 81.15 327 *e*P **P** **01 02 45.5 +0.1**
OKC AMS AMS 01 47 50.0
comp=Z,200nm,13.8s
KSP Ksiaz 81.18 329 *e*P **P** **01 02 46.4 +0.8**
OSTC Ostas 81.43 329 AMS AMS 01 43 10.0
comp=Z,200nm,16.2s
MVCO Mesa Verde 81.47 50 P **P** **01 02 44.1 -3.6**
CHVC Chvalec 81.48 329 AMS AMS 01 43 20.0
comp=Z,200nm,14.5s
DPC Dobruska-Polom 81.54 329 AMS AMS 01 44 10.0
comp=Z,200nm,14.2s
UPC Upice 81.56 329 AMS AMS 01 43 10.0
comp=Z,200nm,15.6s
QRZ Quartz Range 81.58 158 P **P** **01 02 46.5 -1.1**
PSZ Piszkesteto 81.77 325 P **P** **01 02 48.9 0.0**
PSZ pmax pmax
comp=Z,3.0nm,0.7s
PSZ Piszkesteto 81.77 325 P **P** **01 02 48.9 0.0**
PSZ IAmb IAmb 01 02 50.8
comp=Z,2.7nm,0.7s
VYHS Vyhne 81.83 326 *e*P **P** **01 02 50.1 +1.0**
VYHS Vyhne 81.83 326 *e*P **P** **01 02 50.1 +1.0**
RAYN Ar Rayn 81.86 293 P **P** **01 02 50.5 +0.8**
RAYN pmax pmax
comp=Z,6.0nm,1.2s
RAYN Ar Rayn 81.86 293 P **P** **01 02 50.5 +0.8**
RAYN IAmb IAmb 01 03 02.8
comp=Z,6.3nm,1.1s
SOCY Socotra 81.86 279 P **P** **01 02 48.3 -1.5**
CLL Collm 82.16 331 *i* P **P** **01 02 51.8 +1.1**
comp=Z,4.0nm,0.8s
CLL *es*P **sP** **01 03 03.0 +2.1**
CLL *e*S **S** **01 13 10.0 +6.4**
CLL Collm 82.16 331 *i* P **P** **01 02 51.8 +1.1**
CLL *e* 01 03 03.0
CLL *e*S **S** **01 13 10.0 +6.4**
CLL pmax pmax
comp=Z,4.0nm,0.8s
CLL Collm 82.16 331 P **P** **01 02 51.3 +0.6**
CLL IAmb IAmb 01 03 04.9
comp=Z,3.2nm,0.7s
GOPC GO Pecny, Ondr 82.52 329 AMS AMS 01 43 50.0
comp=Z,200nm,16.1s
PRU Pruhonice 82.56 329 *e*P **P** **01 02 53.6 +0.7**
PRU *e* 01 03 04.3
PRU MLR MLR
comp=Z,300nm,16.9s
PRU Pruhonice 82.56 329 *e*P **P** **01 02 53.6 +0.7**
PRU *ep*P **sP** **01 03 04.3 +1.3**
PRU AMS AMS 01 45 10.0
comp=Z,300nm,16.9s
TUWZ Tuamarina 82.57 157 P **P** **01 02 52.1 -0.6**
TREC Trest 82.70 328 AMS AMS 01 46 00.0
comp=Z,300nm,17.0s
MSWZ Moikau Station 82.98 156 P **P** **01 02 54.9 0.0**
TUC Tucson 83.10 55 P **P** **01 02 56.4 +0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TUC				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TUC	**Tucson**	**83.10**	**55**	P	**P**	**01 02 56.4**	**+0.3**
NKC	**Novy Kostel**	**83.22**	**330**	AMS	AMS	01 48 10.0	
	comp=Z,200nm,12.1s						
PPT	**Papeete**	**83.42**	**117**	LR	LR	01 39 46.5	
	comp=Z,51nm,18.1s,baz=356,slow=35						
PPT2	**Papeete2**	**83.43**	**117**	*e*LR	LR	01 29 03.4	
	comp=Z,139nm,26.8s						
KHC	**Kasperske Hory**	**83.62**	**329**⇓	*e*P	**P**	**01 02 59.2**	**+0.8**
KHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KHC	**Kasperske Hory**	**83.62**	**329**	*e*P	**P**	**01 02 58.3**	**-0.1**
KHC				*e*pP	**sP**	**01 03 09.5**	**+0.9**
KHC				*e*x	x	01 03 19.6	
KHC				AMS	AMS	01 45 40.0	
	comp=Z,300nm,11.7s						
KHC	**Kasperske Hory**	**83.62**	**329**	P	**P**	**01 02 58.7**	**+0.3**
GERES	**GERESS Array B**	**83.79**	**329**	P	**P**	**01 02 59.9**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=55,slow=5.1,SNR=7.1						
GERES				LR	LR	01 44 09.2	
	comp=Z,94nm,18.8s,baz=64,slow=38						
GRA1	**Grafenberg Arr**	**84.14**	**331**	P	**P**	**01 03 00.8**	**-0.2**
GRA1				IAmb	IAmb	01 03 13.3	
	comp=Z,4.6nm,1.0s						
GRF	**Grafenberg Arr**	**84.14**	**331**	*e*P	**P**	**01 03 00.1**	**-0.8**
	comp=Z,7.7nm,1.2s,baz=44,slow=4.6						
GRF				*e*pP	**sP**	**01 03 12.5**	**+1.6**
GRF	**Grafenberg Arr**	**84.14**	**331**	P	**P**	**01 03 00.8**	**-0.2**
GRF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ANMO	**Albuquerque**	**84.19**	**51**	P	**P**	**01 03 02.5**	**+0.7**
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ANMO	**Albuquerque**	**84.19**	**51**	P	**P**	**01 03 02.5**	**+0.7**
ELL	**Elmali**	**84.21**	**312**	P	**P**	**01 03 02.0**	**+0.2**
ELL				pmax	pmax		
	comp=Z,37nm,1.0s						
ELL	**Elmali**	**84.21**	**312**	P	**P**	**01 03 02.0**	**+0.2**
TAOE	**Nuku Hiva Isla**	**85.01**	**105**	*e*LR	LR	01 29 47.8	
	comp=Z,104nm,21.6s						
ECH	**Echery**	**86.90**	**332**	P	**P**	**01 03 15.3**	**+0.5**
ECH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ECH	**Echery**	**86.90**	**332**	P	**P**	**01 03 15.2**	**+0.5**
ECH				IAmb	IAmb	01 03 23.7	
	comp=Z,1.6nm,0.9s						
FUORN	**Ofenpass-Fuorn**	**86.98**	**329**	P	**P**	**01 03 14.8**	**-0.7**
FUORN				IAmb	IAmb	01 03 28.8	
	comp=Z,4.5nm,0.8s						
TBI	**Tubuai**	**87.31**	**122**	*e*LR	LR	01 30 50.9	
	comp=Z,101nm,26.2s						
T35A	**Sooner Cattle**	**88.71**	**44**	P	**P**	**01 03 22.0**	**-1.6**
L44A	**Lake County Fo**	**89.16**	**35**	P	**P**	**01 03 23.2**	**-2.5**
TXAR	**Lajitas Array**	**89.68**	**53**	P	**P**	**01 03 29.8**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=297,slow=2.7,SNR=7.5						
TXAR				LR	LR	01 44 31.7	
	comp=Z,59nm,18.0s,baz=0.0,slow=36						
I49A	**Point Hope**	**89.98**	**31**	P	**P**	**01 03 29.2**	**-0.2**
KEST	**Kesra**	**96.15**	**323**	LR	LR	01 52 03.5	
	comp=Z,116nm,18.0s,baz=272,slow=38						
ESDC	**Sonseca Array**	**98.31**	**335**	LR	LR	01 52 45.4	
	comp=Z,127nm,19.1s,baz=355,slow=38						
LPAZ	**La Paz**	**146.09**	**62**	PKPbc	**PKPbc**	**01 10 12.0**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=24,slow=3.0,SNR=7.0						
LPAZ	**La Paz**	**146.09**	**62**	PKPdf	**PKPdf**	**01 10 11.6**	**+1.2**

TRN 17 00:51:26.0, 17°.13N×60°.21W, h29km, MD3.8, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEG	**La Desirade**	**1.15**	**225**	*e*P	Pb	00 51 47.4	0.0
DEG				*e*S	Sn	00 51 58.9	-2.2
ABD	**La Joyeuse, An**	**1.39**	**242**	*e*P	Pb	00 51 51.3	-0.1
ABD	**La Joyeuse, An**	**1.39**	**242**	*e*	Pb	00 52 01.0	+10
ABD				*e*S	Sb	00 52 08.9	+0.1
ABD				*e*S	Sn	00 52 12.1	+5.2
MAGL	**Barre de l'ile**	**1.56**	**222**	*e*P	Pn	00 51 52.9	+1.0
MAGL				*e*S	Sn	00 52 11.7	+0.6
MAGL				*e*S	Sb	00 52 12.7	-1.0
ANWB	**Willy Bob**	**1.60**	**290**	*e*P	Pn	00 51 53.5	+1.1
ANWB				*e*S	Sb	00 52 13.6	-1.2
CBE	**Ff, Capester**	**1.71**	**232**	*e*P	Pb	00 51 55.5	-1.3
CBE				*e*S	Sb	00 52 17.1	-0.8
TDBA	**Terre de Bas,**	**1.87**	**227**	*e*P	Pb	00 51 58.5	-1.1
TDBA				*e*S	Sb	00 52 21.3	-1.2
TDBA				*e*S	Sn	00 52 22.6	+3.8
DWS	**Wesley**	**1.88**	**215**	*e*P	Pn	00 51 56.8	+0.6
DWS				*e*S	Sb	00 52 21.1	-1.7
MDPV	**Dominica, Penn**	**1.90**	**218**	*e*P	Pb	00 51 58.7	-1.3
MDPV				*e*S	Sn	00 52 20.6	+1.1
MDPV				*e*S	Sb	00 52 22.7	-0.6
MDVC	**Dominica, Viel**	**1.90**	**218**	*e*P	Pn	00 51 58.1	+1.6
MDVC				*e*S	Sn	00 52 21.1	+1.7
MLYT	**Lee's Yard**	**1.94**	**258**	*e*P	Pb	00 51 59.4	-1.4
MLYT				*e*S	Sb	00 52 23.4	-1.3
MLYT				*e*S	Sn	00 52 26.3	+5.7
MDN	**Morne-Daniel**	**2.13**	**213**	*e*P	Pb	00 52 02.3	-1.7
ILAM	**Ilet Lapin Mar**	**2.43**	**195**	*e*P	Pn	00 52 06.0	+2.2
ILAM				*e*S	Sn	00 52 33.1	+0.6
SKI	**Saint Kitts**	**2.43**	**275**	*e*P	Pn	00 52 06.3	+2.5
SKI				*e*S	Sn	00 52 35.1	+2.5
SVN	**Savane Anatole**	**2.46**	**202**	*e*P	Pn	00 52 05.8	+1.6
BAMF	**Morne Balai**	**2.47**	**202**	*e*P	Pn	00 52 06.4	+1.9
CXM	**Morne La Croix**	**2.48**	**202**	*e*P	Pn	00 52 06.2	+1.5
GBMF	**Grand Be**	**2.50**	**202**	*e*P	Pn	00 52 06.3	+1.5
PCM	**Pelee Case Pet**	**2.50**	**203**	*e*P	Pn	00 52 06.1	+1.4
PML	**Morne Lenard**	**2.52**	**202**	*e*P	Pn	00 52 06.6	+1.6
FDF	**Fort de France**	**2.55**	**201**	*e*P	Pn	00 52 07.2	+1.7
FDF				*e*S	Sn	00 52 37.5	+1.9
LPMF	**Morne Lapointe**	**2.64**	**196**	*e*P	Pn	00 52 07.9	+1.2
ZAM	**Aeronautique**	**2.66**	**197**	*e*P	Pn	00 52 08.4	+1.4
BIM	**Bigot**	**2.73**	**198**	*e*P	Pn	00 52 10.4	+2.5
BIM	**Bigot**	**2.73**	**198**	*e*	Pb	00 52 23.4	+9.2
BIM				*e*S	Sn	00 52 41.8	+1.8
MPOM	**Morne Pois Mar**	**2.74**	**193**	*e*P	Pn	00 52 09.7	+1.6
MPOM				*e*S	Sn	00 52 41.5	+1.3
SLBI	**Saint Lucia, B**	**3.18**	**194**	*e*P	Pn	00 52 15.9	+1.8
SLBI				*e*S	Sn	00 52 52.8	+1.8
SLAC	**Saint Lucia, A**	**3.28**	**192**	*e*P	Pn	00 52 17.6	+2.1
SLAC				*e*S	Sn	00 52 54.7	+1.1
SLB	**Belfond**	**3.38**	**194**	*e*P	Pn	00 52 18.4	+1.4
SLB				*e*S	Sn	00 52 58.7	+2.6
MCLT	**Moule a Chique**	**3.47**	**192**	*e*P	Pn	00 52 19.9	+1.7
MCLT				*e*S	Sn	00 53 01.6	+3.2
SSV	**Crater Summit**	**3.90**	**194**	*e*P	Pn	00 52 25.6	+1.5
SSV	**Crater Summit**	**3.90**	**194**	*e*P	Pn	00 52 28.0	+3.9
SVV	**Soufriere Volc**	**3.91**	**195**	*e*P	Pn	00 52 27.3	+3.0
SVV				*e*S	Sn	00 53 09.8	+0.6
SVCV	**St. Vincent, C**	**3.94**	**193**	*e*P	Pn	00 52 26.7	+2.1
SVB	**Belmont**	**3.97**	**195**	*e*P	Pn	00 52 27.9	+2.9
SVB	**Belmont**	**3.97**	**195**	*e*S	Sn	00 53 13.2	+2.7
GCMP	**Grenada, Carri**	**4.76**	**195**	*e*P	Pn	00 52 38.3	+2.4
GCMP	**Grenada, Carri**	**4.76**	**195**	*e*S	Sn	00 53 32.0	+1.8
GRGR	**Grenville**	**5.16**	**196**	*e*P	Pn	00 52 42.3	+0.9
GRGR	**Grenville**	**5.16**	**196**	*e*S	Sn	00 53 41.2	+1.1
TOSP	**Speyside**	**5.80**	**183**	*e*P	Pn	00 52 51.6	+1.4
TRN	**Trinidad (W)**	**6.55**	**190**	*e*P	Pn	00 53 03.5	+3.0
TRN	**Trinidad (W)**	**6.55**	**190**	*e*S	Sn	00 54 12.4	-1.7
GUIV	**Guiria**	**6.74**	**197**	*e*P	Pn	00 53 07.5	+4.5
GUIV	**Guiria**	**6.74**	**197**	*e*S	Sn	00 54 19.3	+0.5

*JMA **17** 01:28:28.5±0.4, 44°.64N×149°.06E, h30km, M4.1*
*SKHL **17** 01:28:28.0±0.3, 44°.39N×149°.18E, h33km±5km, mb4.7/2*
ISC 17 01:28:22.3±3.6**, 44°.25N**±0°.09×**149°.7E**±0°.2**, h59**km±54km**, n22, σ3s.07**/34**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.61**	**309**	*i* P	**Pn**	**01 28 48.7**	**+0.3**
KUR				AMB	AMB	01 28 49.0	
	240nm,0.4s						
KUR				AMB	AMB	01 28 49.0	
	500nm,0.4s						
KUR				*i* S	**Sn**	**01 29 04.0**	**-4.1**
KUR				A	A	01 29 08.0	
	2μm,0.5s						
KUR				A	A	01 29 08.0	
	1μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.73**	**267**	*i* P	**Pn**	**01 29 06.3**	**+2.6**
YUK				*i* S	**Sn**	**01 29 35.2**	**-0.4**
LAGR	**Lagunnoye**	**2.79**	**267**	*e*S	**Sn**	**01 29 35.6**	**-1.2**
GRPR	**Tuman**	**2.80**	**266**	*i* P	**Pn**	**01 29 06.5**	**+1.8**
GRPR				*e*S	**Sn**	**01 29 35.9**	**-1.4**
GRPR				A	A	01 29 38.0	
	460nm,0.4s						
GRPR				A	A	01 29 38.0	
	150nm,0.4s						
NEM2	**Nemuro 2**	**2.96**	**254**	P	**Pn**	**01 29 09.0**	**+2.2**
NEM2				*e*S	**Sn**	**01 29 39.1**	**-2.0**
NMR	**Nemuro--Hokkai**	**2.97**	**254**	*i* P	**Pn**	**01 29 08.0**	**+1.1**
NMR				*e*S	**Sn**	**01 29 39.5**	**-1.8**
GLVR	**Golovnino**	**3.02**	**262**	*e*P	**Pn**	**01 29 10.2**	**+2.6**
GLVR				*e*S	**Sn**	**01 29 41.9**	**-0.7**
GLVR				A	A	01 29 44.0	
	700nm,0.8s						
GLVR				A	A	01 29 44.0	
	770nm,0.8s						
JRA	**Rausu**	**3.28**	**266**	P	**Pn**	**01 29 14.3**	**+3.2**
JNK	**Nakash**	**3.62**	**261**	P	**Pn**	**01 29 18.9**	**+3.0**
JAK	**Akkeshi**	**3.81**	**253**	P	**Pn**	**01 29 20.9**	**+2.5**
JAK				*e*S	**Sn**	**01 29 59.7**	**-2.1**
JTKR	**Abashiri--Toko**	**4.14**	**268**	P	**Pn**	**01 29 26.4**	**+3.4**
JAR	**Ashorobuto**	**4.36**	**259**	P	**Pn**	**01 29 29.5**	**+3.5**
JAR				*e*S	**Sn**	**01 30 15.5**	**0.0**
JOB	**Onbets**	**4.43**	**254**	P	**Pn**	**01 29 29.7**	**+2.8**
JCH	**Churui**	**4.86**	**253**	P	**Pn**	**01 29 36.1**	**+3.3**
JCH				*e*S	**Sn**	**01 30 26.8**	**-0.9**
JKK2	**Kamakawa 2**	**4.99**	**268**	P	**Pn**	**01 29 38.7**	**+4.1**
YSS	**Yuzh-Sakhalins**	**5.54**	**302**	*i* P	**Pn**	**01 29 44.6**	**+2.5**
YSS				AMB	AMB	01 29 44.7	
	20nm,0.3s						
YSS				*e*S	**Sn**	**01 30 40.9**	**-3.6**
YSS				A	A	01 30 44.6	
	20nm,0.2s						
YSS				A	A	01 30 44.6	
	30nm,0.2s						
JNB	**Noboribetsu**	**6.52**	**257**	P	**Pn**	**01 29 58.9**	**+3.3**
JNB				*e*S	**Sn**	**01 31 06.9**	**-1.7**
JKB	**Kayabe**	**6.74**	**253**	P	**Pn**	**01 30 01.0**	**+2.5**
JKB				*e*S	**Sn**	**01 31 09.5**	**-4.3**
JTM	**Tenmabayashi**	**7.22**	**244**	*e*S	**Sn**	**01 31 21.2**	**-4.4**
OFUJ	**Ofunato**	**7.89**	**232**	*e*S	**Sn**	**01 31 37.4**	**-4.8**
JRG	**Rokugo**	**8.29**	**237**	*e*S	**Sn**	**01 31 48.0**	**-4.0**
JIO	**Ouri**	**8.51**	**230**	*e*S	**Sn**	**01 31 52.1**	**-5.1**

*IDC **17** 01:30:25.6±1.1, 2°.19S×120°.91E, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.7/34, mbtmp3.8/6, ML3.8/1, MS3.1/6, Ms1 3.1/6, ms1mx2.8/35, Error ellipse: s-maj=49.6km s-min=19.2km az=65.0*
*DJA **17** 01:30:27.9±0.2, 2°S±3°×12°1E±°, h10km, M4.3/10, mb4.2/2, MLv4.3/10*
ISC 17 01:30:26.1±1.7**, 2°.24S**±0°.05×**120°.79E**±0°.07**, h2**km±12km**, n18, σ0s.68**/19**, mb3.8**/5**, MS2.8**/3**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**1.26**	**231**	P	**Pg**	**01 30 50.1**	**-0.1**
TTSI				S	**Sb**	**01 31 07.4**	**+0.2**
APSI	**Ampana**	**1.58**	**33**	P	**Pn**	**01 30 55.0**	**-0.1**
APSI				S	**Sg**	**01 31 17.1**	**+0.3**
SPSI	**Sidrap Palu**	**1.99**	**211**	P	**Pb**	**01 31 02.6**	**-0.5**
SPSI				S	**Sb**	**01 31 28.4**	**0.0**
BNSI	**Bone**	**2.25**	**198**	P	**Pn**	**01 31 04.9**	**+0.5**
LUWI	**Luwuk**	**2.31**	**59**	P	**Pn**	**01 31 05.9**	**+0.7**
LUWI				S	**Sn**	**01 31 34.9**	**+0.6**
MPSI	**Mapaga**	**2.71**	**341**	P	**Pn**	**01 31 11.2**	**+0.5**
MRSI	**Marisa**	**2.94**	**23**	P	**Pn**	**01 31 14.0**	**+0.2**
KAPI	**Kappang**	**2.94**	**201**	Pn	**Pn**	**01 31 14.9**	**+1.0**
	13nm,0.3s,baz=18,slow=8.2,SNR=17						
KAPI				Sn	**Sn**	**01 31 49.7**	**-0.1**
	15nm,0.3s,baz=57,slow=7.3,SNR=3.7						
KAPI				LR	LR	01 32 36.2	
	comp=Z,223nm,19.4s,baz=24,slow=43						
BKSI	**Bulukumba**	**3.13**	**192**	P	**Pn**	**01 31 16.8**	**+0.3**
BBSI	**Bau Bau**	**3.68**	**151**	P	Pg	01 31 44.6	+7.9
BATI	**Baumata**	**8.41**	**160**	LR	LR	01 35 56.1	
	comp=Z,383nm,18.8s,baz=330,slow=39						
FITZ	**Fitzroy Crossi**	**16.46**	**164**	LR	LR	01 41 16.0	
	comp=Z,61nm,18.3s,baz=353,slow=40						
WRA	**Warramunga Arr**	**22.02**	**144**	P	**P**	**01 35 21.4**	**-0.7**
	3.3nm,0.9s,baz=318,slow=12,SNR=12						
ASAR	**Alice Springs**	**24.80**	**150**	P	**P**	**01 35 49.6**	**-0.1**
	0.9nm,0.6s,baz=324,slow=7.5,SNR=12						
ASAR				LR	LR	01 46 59.0	
	comp=Z,57nm,19.0s,baz=0.5,slow=40						
CMAR	**Chiang Mai Arr**	**29.76**	**315**	P	**P**	**01 36 35.8**	**+1.4**
	0.6nm,0.3s,baz=144,slow=8.5,SNR=2.5						
CMAR				LR	LR	01 51 08.9	
	comp=Z,18nm,18.0s,baz=145,slow=42						
STKA	**Stephens Creek**	**35.40**	**149**	LR	LR	01 51 42.5	
	comp=Z,16nm,18.7s,baz=18,slow=36						
SONM	**Songino Array**	**51.44**	**348**	P	**P**	**01 39 31.9**	**-0.9**
	1.0nm,1.1s,baz=181,slow=8.6,SNR=1.7						
MKAR	**Makanchi Array**	**59.40**	**330**	P	**P**	**01 40 29.3**	**-0.8**
	0.4nm,0.6s,baz=120,slow=7.3,SNR=5.0						

*JMA **17** 01:45:31.7, 24°.17N×121°.69E, h13km±1km, M2.5*
*TAP **17** 01:45:32.1, 24°.21N×121°.73E, h15km, ML3.4, B*
ISC 17 01:45:32.3±0.8**, 24°.19N**±0°.01×**121°.75E**±0°.02**, h11**km±6km**, n100, σ0s.59**/165**, 14D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.14**	**262**⇓	*i*P	**Pg**	**01 45 35.5**	**-0.1**
	baz=255						
NACB				S	**Sg**	**01 45 37.9**	**-0.1**
	baz=255						
TWD	**Chiawan**	**0.18**	**231**	*i* P	**Pg**	**01 45 36.3**	**+0.1**
	baz=223						
TWD				*e*S	**Sg**	**01 45 39.3**	**+0.4**
	baz=223						
ENA	**Nanau**	**0.23**	**358**⇓	*i*P	**Pg**	**01 45 37.2**	**0.0**
	baz=5.0						
ENA				*e*S	**Sg**	**01 45 40.7**	**+0.2**
	baz=5.0						
ETLH	**Xiulin Townshi**	**0.24**	**273**⇓	*i*P	**Pg**	**01 45 37.2**	**-0.2**
	baz=271						
ETLH				*e*S	**Sg**	**01 45 40.5**	**-0.3**
	baz=271						
HWA	**Hwalien**	**0.25**	**212**	*e*P	**Pb**	**01 45 38.3**	**-0.5**
	baz=215						
HWA				*e*S	**Sb**	**01 45 43.3**	**+0.1**
	baz=215						
NNSB	**Datong**	**0.41**	**305**⇓	*i*P	**Pg**	**01 45 40.2**	**-0.2**
	baz=305						
NNSB				*e*S	**Sg**	**01 45 45.5**	**-0.4**
	baz=305						
NNSH	**Datong**	**0.41**	**305**⇓	*i*P	**Pg**	**01 45 40.2**	**-0.2**
	baz=305						
NNSH				*e*S	**Sg**	**01 45 45.4**	**-0.4**
	baz=305						
NNS	**Nan Shan**	**0.42**	**306**⇓	*i*P	**Pg**	**01 45 40.4**	**-0.3**
	baz=306						
NNS				*e*S	**Sg**	**01 45 45.9**	**-0.4**
	baz=306						
TWC	**Suao**	**0.42**	**12**⇓	*i*P	**Pg**	**01 45 40.7**	**+0.1**
	baz=9.0						
TWC				*e*S	**Sg**	**01 45 46.4**	**+0.1**
	baz=9.0						
WHF	**Hehuan Shan**	**0.45**	**264**⇓	*i*P	**Pg**	**01 45 40.9**	**-0.2**
	baz=262						
WHF				*e*S	**Sg**	**01 45 46.9**	**-0.2**
	baz=262						
NDT	**Datong Townshi**	**0.46**	**332**⇓	*i*P	**Pg**	**01 45 41.4**	**+0.1**
	baz=333						
NDT				*e*S	**Sg**	**01 45 47.7**	**+0.2**
	baz=333						
ESL	**Shilin**	**0.47**	**218**	*e*P	**Pg**	**01 45 41.5**	**-0.1**
	baz=221						
ESL				*e*S	**Sg**	**01 45 48.0**	**+0.1**
	baz=221						
ENTT	**Nioudou**	**0.48**	**339**⇓	*i*P	**Pg**	**01 45 41.6**	**0.0**
	baz=341						
ENTT				*e*S	**Sg**	**01 45 47.9**	**-0.1**
	baz=341						
EOS1	**EOS1**	**0.49**	**44**	P	**Pb**	**01 45 42.9**	**-0.1**
	baz=40						
EOS1				*e*S	**Sb**	**01 45 51.2**	**+1.0**
	baz=40						
TWT	**Tachien**	**0.53**	**277**	P	**Pb**	**01 45 42.9**	**-0.8**
	baz=275						
TWT				*e*S	**Sg**	**01 45 49.7**	**+0.1**
	baz=275						
TWE	**Neicheng**	**0.53**	**352**	*e*P	**Pg**	**01 45 42.7**	**+0.1**
	baz=354						
TWE				*e*S	**Sg**	**01 45 49.9**	**+0.2**
	baz=354						
CHGB	**Renai**	**0.54**	**256**⇓	*i*P	**Pg**	**01 45 42.9**	**0.0**
	baz=250						
CHGB				*e*S	**Sg**	**01 45 49.7**	**-0.4**
	baz=250						
TDCB	**Techi**	**0.54**	**276**⇓	*i*P	**Pg**	**01 45 43.0**	**+0.1**
	baz=276						
TDCB				*e*S	**Sg**	**01 45 49.0**	**-1.1**
	baz=276						
SLBB	**Yuanshan**	**0.57**	**349**	*e*P	**Pg**	**01 45 43.3**	**-0.1**
	baz=350						
SLBB				*e*S	**Sg**	**01 45 50.7**	**-0.2**
	baz=350						
ILA	**Ilan**	**0.57**	**360**	*e*P	**Pg**	**01 45 43.4**	**0.0**
	baz=354						
OWD	**Renai**	**0.58**	**246**	*e*P	**Pg**	**01 45 43.4**	**-0.1**
	baz=244						
OWD				*e*S	**Sg**	**01 45 50.4**	**-0.7**
	baz=244						
YHNB	**Yeheng**	**0.58**	**324**⇓	*i*P	**Pg**	**01 45 43.5**	**-0.1**
	baz=325						
YHNB				*e*S	**Sg**	**01 45 51.1**	**-0.3**
	baz=325						
EGFH	**Guangfu**	**0.60**	**210**	*e*P	**Pg**	**01 45 44.0**	**+0.1**
	baz=222						
EGFH				*e*S	**Sb**	**01 45 53.1**	**-0.1**
	baz=222						
NSK	**Sanguang**	**0.60**	**324**⇓	*i*P	**Pg**	**01 45 43.7**	**-0.2**
	baz=324						
NSK				*e*S	**Sg**	**01 45 51.4**	**-0.5**
	baz=324						
NWLT	**Wulai**	**0.62**	**339**	P	**Pg**	**01 45 44.4**	**0.0**
	baz=345						
NWLT				*e*S	**Sg**	**01 45 51.9**	**-0.8**
	baz=345						
NTC	**Toucheng**	**0.66**	**6**	*e*P	**Pg**	**01 45 45.1**	**0.0**
	baz=7.0						
VWDT	**VWDT**	**0.71**	**232**	*e*P	**Pg**	**01 45 45.8**	**-0.2**
	baz=231						
VWDT				*e*S	**Sb**	**01 45 56.0**	**-0.3**
	baz=231						
WHP	**Taichung City**	**0.74**	**277**	*e*P	**Pb**	**01 45 46.7**	**-0.5**
	baz=276						
WHP				*e*S	**Sg**	**01 45 56.0**	**-0.3**
	baz=276						
HGSD	**Ruisui**	**0.76**	**203**	*e*P	**Pb**	**01 45 47.4**	**-0.1**
	baz=216						
HGSD				*e*S	**Sb**	**01 45 59.0**	**+1.2**
	baz=216						
DPDB	**Guoxing**	**0.77**	**258**	*e*P	**Pb**	**01 45 47.3**	**-0.4**
	baz=258						
DPDB				*e*S	**Sb**	**01 45 57.4**	**-0.8**
	baz=258						
TIPB	**Shuangxi**	**0.78**	**5**	P	**Pg**	**01 45 47.3**	**-0.1**
	baz=357						
TIPB				*e*S	**Sg**	**01 45 56.6**	**-1.0**
	baz=357						
EHY	**Hungye**	**0.79**	**210**	*e*P	**Pg**	**01 45 46.8**	**-0.7**
	baz=220						
NHDH	**Xindian Distri**	**0.79**	**345**	*e*P	**Pb**	**01 45 48.4**	**+0.3**
	baz=345						
NHDH				*e*S	**Sg**	**01 45 57.5**	**-0.5**
	baz=345						
TWA	**Mucha**	**0.80**	**349**	*e*P	**Pb**	**01 45 48.2**	**0.0**
	baz=350						
TWA				*e*S	**Sg**	**01 45 58.1**	**0.0**
	baz=350						
LIOB	**Emei**	**0.81**	**304**	*i* P	**Pb**	**01 45 48.5**	**+0.1**
	baz=304						
NSTT	**Nanjuang**	**0.81**	**303**	*e*P	**Pb**	**01 45 48.1**	**-0.3**
	baz=303						
NSTT				*e*S	**Sg**	**01 45 57.9**	**-0.6**
	baz=303						
TATO	**Taipei**	**0.81**	**343**	*e*P	**Pg**	**01 45 47.7**	**-0.3**
	baz=343						
TATO				*e*S	**Sg**	**01 45 58.4**	**-0.3**
	baz=343						
SSLB	**Suanglung**	**0.83**	**241**	*e*P	**Pg**	**01 45 48.0**	**-0.4**
	baz=248						
SSLB				*e*S	**Sg**	**01 45 58.0**	**-1.2**
	baz=248						
SMLT	**Sun Moon Lake**	**0.84**	**249**	*e*P	**Pg**	**01 45 48.3**	**-0.1**
	baz=241						
SMLT				*e*S	**Sg**	**01 45 59.1**	**-0.3**
	baz=241						
TWB1	**Santiao Chiao**	**0.84**	**15**	*e*P	**Pg**	**01 45 48.3**	**-0.2**
	baz=15						
TWB1				*e*S	**Sg**	**01 45 58.4**	**-1.2**
	baz=15						
TYC	**Yuchr**	**0.86**	**251**	*e*P	**Pg**	**01 45 48.6**	**-0.3**
	baz=243						
TYC				*e*S	**Sg**	**01 45 59.9**	**-0.3**
	baz=243						
NWF	**Wu-fen Shan**	**0.88**	**2**	*e*P	**Pb**	**01 45 49.3**	**-0.2**
	baz=353						
NWF				*e*S	**Sg**	**01 46 00.4**	**-0.2**
	baz=353						
WFSB	**Wu-fen Shan**	**0.88**	**2**	*e*P	**Pg**	**01 45 49.1**	**-0.1**
	baz=355						
WFSB				*e*S	**Sg**	**01 45 59.4**	**-1.2**
	baz=355						
YULB	**Yu-li**	**0.90**	**208**	*e*P	**Pg**	**01 45 47.9**	**-1.7**
	baz=218						
YULB				*e*S	**Sb**	**01 46 02.2**	**+0.4**
	baz=218						
TWQ1	**Liyutan**	**0.91**	**280**	*e*P	**Pn**	**01 45 51.6**	**+0.7**
	baz=280						
TWQ1				*e*S	**Sg**	**01 46 01.1**	**-0.4**
	baz=280						
SBCB	**Hsinchu**	**0.92**	**311**	*e*P	**Pg**	**01 45 49.4**	**-0.6**
	baz=311						
NCUH	**Zhongli**	**0.93**	**326**	*e*P	**Pb**	**01 45 50.2**	**-0.1**
	baz=326						
NCU	**National Centr**	**0.93**	**327**	*e*P	**Pn**	**01 45 51.5**	**+0.2**
	baz=327						
NCU				*e*S	**Sn**	**01 46 04.1**	**-0.5**
	baz=327						
NSY	**Sanyi**	**0.93**	**284**	*e*P	**Pb**	**01 45 50.7**	**+0.3**
	baz=284						
NSY				*e*S	**Sb**	**01 46 02.2**	**-0.6**
	baz=284						
TWF1	**Yuli**	**0.93**	**206**	*e*P	**Pg**	**01 45 48.5**	**-1.8**
	baz=216						
TWF1				*e*S	**Sb**	**01 46 04.0**	**+1.1**
	baz=216						
NMLH	**Miaoli**	**0.94**	**292**	*e*P	**Pn**	**01 45 51.2**	**-0.2**
	baz=291						
TWS1	**Kuangyinshan**	**0.95**	**342**	*e*P	**Pb**	**01 45 51.2**	**+0.3**
	baz=348						
TWS1				*e*S	**Sb**	**01 46 04.1**	**+0.6**
	baz=348						
WHYT	**Xinyi Township**	**0.96**	**239**	*e*P	**Pb**	**01 45 50.7**	**-0.2**
	baz=239						
YM01	**YM01**	**0.96**	**350**	*e*P	**Pb**	**01 45 51.0**	**-0.1**
	baz=358						
YM01				*e*S	**Sb**	**01 46 03.7**	**-0.1**
	baz=358						
YM10	**YM10**	**0.97**	**350**	*e*P	**Pb**	**01 45 51.6**	**+0.4**
	baz=338						
YM10				*e*S	**Sg**	**01 46 03.6**	**-0.1**
	baz=338						
YM04	**YM04**	**0.98**	**349**	*e*P	**Pb**	**01 45 51.5**	**+0.2**
	baz=356						
YM04				*e*S	**Sg**	**01 46 03.7**	**-0.1**
	baz=356						
YM05	**YM05**	**0.98**	**350**	*e*P	**Pb**	**01 45 51.8**	**+0.5**
	baz=337						
TCU	**Taichung**	**0.98**	**268**	*e*P	**Pn**	**01 45 52.5**	**+0.5**
	baz=267						
YM11	**YM11**	**0.98**	**351**	*e*P	**Pb**	**01 45 51.8**	**+0.4**
	baz=336						
PTSB	**Yuanli**	**0.99**	**285**	*e*P	**Pn**	**01 45 52.4**	**+0.4**
	baz=285						
YM03	**YM03**	**1.00**	**349**	*e*P	**Pb**	**01 45 51.8**	**+0.1**
	baz=349						
NTST	**Danshui**	**1.00**	**344**	*e*P	**Pg**	**01 45 51.3**	**-0.3**
	baz=352						
NTST				*e*S	**Sn**	**01 46 06.2**	**-0.3**
	baz=352						
WJS	**Zhushan**	**1.00**	**249**	*e*P	**Pn**	**01 45 52.2**	**-0.1**
	baz=244						
WJS				*e*S	**Sn**	**01 46 06.5**	**+0.1**
	baz=244						
ANP	**Anpu**	**1.01**	**348**	*e*P	**Pb**	**01 45 51.7**	**-0.2**
	baz=348						

WDJ	**Dajia District**	**1.02**	**279**	*eP*	**Pn**	**01 45 53.0**	**+0.5**
	baz=279						
WDJ				*eS*	**Sn**	**01 46 08.3**	**+1.3**
	baz=279						
WNT	**Mingjian**	**1.02**	**252**	*eP*	**Pn**	**01 45 53.0**	**+0.4**
	baz=249						
WNT				*eS*	**Sn**	**01 46 07.6**	**+0.7**
	baz=249						
FULB	**Fuli**	**1.07**	**203**	*eP*	**Pg**	**01 45 52.2**	**-0.7**
	baz=215						
TWY	**Chenhua**	**1.09**	**353**	*eP*	**Pn**	**01 45 54.0**	**+0.6**
	baz=339						
WCHH	**Zhanghua**	**1.09**	**264**	*eP*	**Pn**	**01 45 54.5**	**+1.0**
	baz=265						
WCHH				*eS*	**Sn**	**01 46 09.6**	**+0.9**
	baz=265						
ALS	**Alishan**	**1.10**	**232**	*eP*	**Pg**	**01 45 53.2**	**-0.3**
	baz=220						
ALS				*eS*	**Sb**	**01 46 08.6**	**+0.7**
	baz=220						
JYNG	**Yonagunijimaku**	**1.12**	**76**	P	**Pg**	**01 45 53.9**	**+0.1**
CHN5	**Tsauling**	**1.15**	**239**	*eP*	**Pb**	**01 45 54.4**	**+0.2**
	baz=241						
CHN5				*eS*	**Sn**	**01 46 10.8**	**+0.7**
	baz=241						
YOJ	**Yonaguni jima**	**1.18**	**77**	*eP*	**Pg**	**01 45 54.5**	**-0.5**
	baz=76						
YOJ	**Yonaguni jima**	**1.18**	**77**	P	**Pg**	**01 45 54.6**	**-0.4**
YOJ				*eS*	**Sg**	**01 46 10.4**	**0.0**
ELDTW	**Lidau**	**1.20**	**214**	*eP*	**Pg**	**01 45 53.7**	**-1.7**
	baz=214						
WDLH	**Douliu**	**1.22**	**246**	*eP*	**Pn**	**01 45 56.1**	**+0.9**
	baz=230						
RLNB	**Erlin**	**1.31**	**257**	*eP*	**Pb**	**01 45 56.9**	**+0.1**
	baz=258						
RLNB				*eS*	**Sn**	**01 46 15.2**	**+1.3**
	baz=258						
CHN4	**Tsaushan**	**1.35**	**232**	*eP*	**Pg**	**01 45 58.1**	**-0.1**
	baz=235						
CHN4				*eS*	**Sn**	**01 46 16.7**	**+1.7**
	baz=235						
TPUB	**Ta-pu**	**1.36**	**229**	*eP*	**Pb**	**01 45 57.8**	**0.0**
	baz=232						
TPUB				*eS*	**Sn**	**01 46 16.9**	**+1.8**
	baz=232						
CHY	**Chiayi**	**1.40**	**241**	*eP*	**Pg**	**01 45 59.3**	**+0.2**
	baz=241						
WTP	**Ta-pu**	**1.40**	**228**	*eP*	**Pb**	**01 45 58.6**	**+0.1**
	baz=229						
PCYT	**Pengchaiyu**	**1.46**	**11**	*eP*	**Pn**	**01 45 56.4**	**-2.1**
	baz=8.0						
TWK	**Hsinying**	**1.48**	**232**	*eP*	**Pb**	**01 45 59.9**	**+0.1**
	baz=233						
CHN1	**Nanshi**	**1.50**	**228**	*eP*	**Pb**	**01 46 00.6**	**+0.4**
	baz=232						
CHN1				*eS*	**Sg**	**01 46 20.1**	**-0.6**
	baz=232						
SLGT	**Liugui**	**1.56**	**221**	*eP*	**Pb**	**01 46 01.2**	**0.0**
	baz=223						
ECL	**Taimali**	**1.75**	**205**	*eP*	**Pn**	**01 46 01.7**	**-0.8**
	baz=191						
SSD	**Sandimen**	**1.77**	**216**	*eP*	**Pb**	**01 46 05.3**	**+0.6**
	baz=229						
IRIF	**Iriomote-Funau**	**1.81**	**85**	P	**Pn**	**01 46 03.1**	**-0.3**
IRIF				*eS*	**Sn**	**01 46 27.0**	**+0.6**
MASBT	**Mashibuluo**	**1.88**	**213**	*eP*	**Pb**	**01 46 06.2**	**-0.4**
	baz=218						
MASBT				*eS*	**Sb**	**01 46 30.2**	**+0.1**
	baz=218						
HATJ	**Hateruma jima**	**1.88**	**94**	P	**Pn**	**01 46 05.1**	**+0.7**
EAST	**Anshuo**	**1.98**	**205**	*eP*	**Pn**	**01 46 05.4**	**-0.4**
	baz=193						
JKRS	**Kuro-shima**	**2.06**	**88**	P	**Pn**	**01 46 07.4**	**+0.5**
JKRS				S	**Sn**	**01 46 33.4**	**+0.8**
SCZT	**Fangliau**	**2.09**	**210**	*eP*	**Pn**	**01 46 07.9**	**+0.7**
	baz=193						
PNG	**Penghu**	**2.10**	**253**	*eP*	**Pn**	**01 46 07.4**	**0.0**
	baz=254						
WDGT	**Dungji**	**2.13**	**245**	*eP*	**Pn**	**01 46 08.0**	**+0.2**
	baz=247						
JIJ	**Ishigaki jima**	**2.19**	**85**	P	**Pn**	**01 46 08.5**	**-0.1**
JIJ				*eS*	**Sn**	**01 46 35.6**	**-0.1**
VWUC	**VWUC**	**2.24**	**291**	*eP*	**Pn**	**01 46 08.4**	**-0.9**
	baz=279						
JISG	**Ishigakijimahi**	**2.37**	**80**	P	**Pn**	**01 46 10.6**	**-0.4**
JISG				*eS*	**Sn**	**01 46 40.6**	**+0.5**
PTMZ	**Houxiangcun**	**2.54**	**290**	*eP*	**Pn**	**01 46 12.6**	**-0.8**
	baz=289						
MATB	**Ma-tsu**	**2.54**	**320**	*eP*	**Pn**	**01 46 13.0**	**-0.5**
	baz=319						

*ATH **17** 01:51:36.7, 37˚.22N×20˚.64E, h20$^{km}_{\pm}$1^{km}, ML3.5/27, Error ellipse: s-maj=2.0km s-min=0.8km az=36.0*
*THE **17** 01:51:37.7, 37˚.26N×20˚.64E, h0$^{km}_{\pm}$1^{km}, ML3.5/11, Error ellipse: s-maj=1.8km s-min=0.5km az=228.0*
*PDG **17** 01:51:38.7±0.9, 37˚.53N×20˚.56E, h10$^{km}_{\pm}$1^{km}, ML3.4/14, Error ellipse: s-maj=2.7km s-min=2.1km az=90.0*

ISC 17 01:51:36.3±1.5,**37˚21N**±0˚.05×**20˚.56E**±0˚.04,**h16**$^{km}_{\pm}$**8**^{km}**, n125,**σ**1°85/175,7C-7D,Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRI1	**kERI**	**0.49**	**25**	P	**Pg**	**01 51 46.4**	**+0.2**
KRI1				S	**Sg**	**01 51 52.0**	**-0.8**
VTN	**Vitineika**	**0.86**	**35**	P	**Pg**	**01 51 52.9**	**-0.2**
VTN				S	**Sb**	**01 52 04.0**	**-0.2**
KFL	**Anninata**	**0.91**	**12**	P	**Pg**	**01 51 53.4**	**-0.6**
KFL				S	**Sb**	**01 52 06.0**	**+0.4**
	6μm,0.4s						
KFL	**Anninata**	**0.91**	**12**	P	**Pg**	**01 51 53.6**	**-0.5**
KFL				S	**Sb**	**01 52 06.0**	**+0.4**
KFL				AML	AML	01 52 10.7	
	comp=E,11605μm,0.3s						
KFL				AML	AML	01 52 17.1	
	comp=N,10966μm,0.4s						
KEF2	**Argostoli. Kep**	**0.95**	**357**	P	**Pg**	**01 51 54.8**	**+0.1**
KEF2				S	**Sb**	**01 52 08.5**	**+1.8**
VLS	**Valsamata**	**0.96**	**2**	P	**Pg**	**01 51 54.9**	**-0.1**
VLS				S	**Sb**	**01 52 08.7**	**+1.6**
	comp=N,2μm,0.1s						
VLS	**Valsamata**	**0.96**	**2**	P	**Pg**	**01 51 54.6**	**-0.3**
VLS				S	**Sb**	**01 52 08.6**	**+1.6**
ARGA	**Argostoli. Kep**	**0.96**	**356**	P	**Pg**	**01 51 55.2**	**+0.3**
ARG2	**Argostoli**	**0.96**	**357**	P	**Pb**	**01 51 55.7**	**+1.1**
ARG2				S	**Sn**	**01 52 09.6**	**+1.1**
AMT	**Artemida-Makis**	**0.97**	**71**	P	**Pg**	**01 51 54.6**	**-0.6**
AMT				S	**Sb**	**01 52 08.0**	**+0.7**
	comp=N,4μm,0.6s						
AMT	**Artemida-Makis**	**0.97**	**71**	P	**Pg**	**01 51 54.5**	**-0.6**
AMT				S	**Sg**	**01 52 06.2**	**-1.7**
AMT				AML	AML	01 52 16.2	
	comp=E,8177μm,0.4s						
AMT				AML	AML	01 52 22.5	
	comp=N,7856μm,0.5s						
LXRA	**Lixouri, Kepha**	**0.99**	**355**	P	**Pg**	**01 51 55.9**	**+0.5**
PYL	**PYLOS**	**1.00**	**108**	P	**Pg**	**01 51 55.9**	**+0.3**
PYL				S	**Sb**	**01 52 09.8**	**+1.7**
	comp=N,1μm,0.7s						
PYL	**PYLOS**	**1.00**	**108**	P	**Pg**	**01 51 55.2**	**-0.5**
PYL				AML	AML	01 52 14.1	
	comp=N,2114μm,0.7s						
PYL				AML	AML	01 52 17.1	
	comp=E,2772μm,0.6s						
KEF3	**Kipouria, Keph**	**1.00**	**351**	P	**Pg**	**01 51 56.0**	**+0.3**
KEF3				S	**Sn**	**01 52 10.4**	**+1.0**
AGT1	**Agia Thekli**	**1.04**	**353**	P	**Pg**	**01 51 56.6**	**+0.1**
AGT1				S	**Sn**	**01 52 11.6**	**+1.2**
KEF4	**Livadi, Kephal**	**1.05**	**354**	P	**Pg**	**01 51 56.4**	**-0.1**
KEF4				S	**Sn**	**01 52 11.6**	**+1.1**
KEF1	**Kardakata, Kep**	**1.06**	**356**	P	**Pg**	**01 51 56.9**	**0.0**
ITM	**Ithomi**	**1.10**	**91**	P	**Pg**	**01 51 56.9**	**-0.6**
ITM				S	**Sb**	**01 52 11.9**	**+1.0**
	comp=E,1μm,0.7s						
ITM	**Ithomi**	**1.10**	**91**	P	**Pg**	**01 51 56.7**	**-0.7**
ITM				AML	AML	01 52 17.4	
	comp=E,2286μm,0.5s						
ITM				AML	AML	01 52 23.7	
	comp=N,2605μm,0.9s						
RLS	**Riolos of Patr**	**1.11**	**40**	P	**Pg**	**01 51 56.5**	**-1.2**
RLS				S	**Sb**	**01 52 11.5**	**+0.2**
	comp=N,3μm,0.8s						
RLS	**Riolos of Patr**	**1.11**	**40**	P	**Pg**	**01 51 56.6**	**-1.2**
RLS				S	**Sb**	**01 52 11.5**	**+0.2**
RLS				AML	AML	01 52 14.7	
	comp=N,4050μm,0.4s						
RLS				AML	AML	01 52 15.5	
	comp=E,6086μm,0.7s						
DRO	**Drossia**	**1.18**	**51**	P	**Pb**	**01 51 57.9**	**-0.3**
DRO				S	**Sn**	**01 52 14.0**	**+0.2**
	comp=E,5μm,0.6s						
DRO	**Drossia**	**1.18**	**51**	P	**Pb**	**01 51 57.9**	**-0.3**
DRO				S	**Sb**	**01 52 13.6**	**+0.4**
DRO				AML	AML	01 52 15.0	
	comp=N,9097μm,0.2s						
DRO				AML	AML	01 52 19.6	
	comp=E,12911μm,0.7s						
VSK1	**VASILIKIADES**	**1.19**	**0**	P	**Pb**	**01 51 59.1**	**+0.6**
VSK1				S	**Sn**	**01 52 16.8**	**+2.6**
FSK	**Fiskardo**	**1.24**	**0**	P	**Pb**	**01 51 59.7**	**+0.4**
FSK				S	**Sn**	**01 52 17.9**	**+2.5**
	comp=E,2μm,0.9s						
FSK	**Fiskardo**	**1.24**	**0**	P	**Pb**	**01 51 59.7**	**+0.4**
FSK				S	**Sn**	**01 52 17.9**	**+2.5**
AST1	**Astakos**	**1.39**	**18**	P	**Pn**	**01 52 02.0**	**+1.0**
TRIP	**Tripoli**	**1.40**	**77**	P	**Pn**	**01 52 02.0**	**+0.8**
TRIP	**Tripoli**	**1.40**	**77**	P	**Pn**	**01 52 02.0**	**+0.8**
TRIP				AML	AML	01 52 29.8	
	comp=E,2062μm,0.5s						
TRIP				AML	AML	01 52 31.0	
	comp=N,1549μm,0.8s						
EVGI	**Lefkada island**	**1.41**	**3**	P	**Pn**	**01 52 02.3**	**+1.1**
EVGI	**Lefkada island**	**1.41**	**3**	P	**Pn**	**01 52 02.3**	**+1.1**
VLX	**Vlachokerasia**	**1.46**	**83**	P	**Pn**	**01 52 03.5**	**+1.4**
VLX				S	**Sg**	**01 52 23.0**	**-0.5**
	comp=N,1μm,0.6s						
VLX	**Vlachokerasia**	**1.46**	**83**	P	**Pn**	**01 52 03.4**	**+1.4**
VLX				AML	AML	01 52 29.7	
	comp=N,2260μm,0.6s						
VLX				AML	AML	01 52 34.5	
	comp=E,2672μm,0.5s						
KLV	**Kalavryta, Ach**	**1.51**	**56**	P	**Pn**	**01 52 03.6**	**+0.9**
KLV				S	**Sg**	**01 52 24.1**	**-1.0**
KLV	**Kalavryta, Ach**	**1.51**	**56**	P	**Pn**	**01 52 03.3**	**+0.6**
KLV				S	**Sg**	**01 52 23.7**	**-1.4**
KLV				AML	AML	01 52 33.5	
	comp=E,1501μm,0.9s						
KLV				AML	AML	01 52 39.6	
	comp=N,1660μm,0.8s						
LAKA	**Lakka**	**1.52**	**47**	P	**Pn**	**01 52 04.2**	**+1.4**
LAKA				S	**Sg**	**01 52 25.2**	**-0.3**
LAKA	**Lakka**	**1.52**	**47**	P	**Pn**	**01 52 03.8**	**+1.0**
LAKA				AML	AML	01 52 30.5	
	comp=E,1950μm,0.9s						
LAKA				AML	AML	01 52 30.9	
	comp=N,2289μm,0.7s						
LKD2	**Lefkada island**	**1.58**	**3**	P	**Pn**	**01 52 05.2**	**+1.7**
LKD2				S	**Sg**	**01 52 27.4**	**+0.3**
	comp=N,1μm,0.5s						
LKD2	**Lefkada island**	**1.58**	**3**	P	**Pn**	**01 52 05.2**	**+1.7**
LKD2				AML	AML	01 52 39.2	
	comp=E,2662μm,0.5s						
LKD2				AML	AML	01 52 40.8	
	comp=N,2826μm,0.6s						
EFP	**Efpalio**	**1.62**	**41**	P	**Pn**	**01 52 05.2**	**+1.2**
EFP				AML	AML	01 52 33.6	
	comp=E,1906μm,0.6s						
EFP				AML	AML	01 52 40.1	
	comp=N,2436μm,0.5s						
TRIZ	**Trizonia**	**1.66**	**46**	P	**Pn**	**01 52 06.2**	**+1.5**
TRIZ	**Trizonia**	**1.66**	**46**	P	**Pn**	**01 52 05.9**	**+1.2**
SERG	**Sergoula**	**1.69**	**44**	P	**Pn**	**01 52 06.5**	**+1.4**
SERG	**Sergoula**	**1.69**	**44**	P	**Pn**	**01 52 06.3**	**+1.3**
SERG				AML	AML	01 52 36.3	
	comp=E,3832μm,0.3s						
SERG				AML	AML	01 52 36.8	
	comp=N,3374μm,0.4s						
KALE	**Kalithea**	**1.72**	**46**	P	**Pn**	**01 52 07.4**	**+1.8**
KALE	**Kalithea**	**1.72**	**46**	P	**Pn**	**01 52 07.3**	**+1.8**
KALE				AML	AML	01 52 36.1	
	comp=E,3414μm,0.3s						
KALE				AML	AML	01 52 37.0	
	comp=N,4187μm,0.3s						
ANX	**Ano Chora**	**1.75**	**38**	P	**Pn**	**01 52 07.8**	**+1.8**
ANX				S	**Sg**	**01 52 30.8**	**-1.9**
	comp=N,2μm,0.5s						
ANX	**Ano Chora**	**1.75**	**38**	P	**Pn**	**01 52 07.5**	**+1.5**
ANX				S	**Sb**	**01 52 29.7**	**-0.1**
ANX				AML	AML	01 52 36.4	
	comp=N,3875μm,0.5s						
ANX				AML	AML	01 52 40.5	
	comp=E,3540μm,0.6s						
EVR	**Evrytania**	**1.97**	**30**	P	**Pb**	**01 52 12.1**	**+0.4**
EVR	**Evrytania**	**1.97**	**30**	P	**Pb**	**01 52 11.6**	**-0.2**
EVR				AML	AML	01 52 40.8	
	comp=E,1847μm,0.7s						
EVR				AML	AML	01 52 41.5	
	comp=N,2171μm,0.7s						
VLI	**Veliai**	**1.97**	**104**	P	**Pn**	**01 52 11.5**	**+2.6**
VLI	**Veliai**	**1.97**	**104**	P	**Pn**	**01 52 11.2**	**+2.3**
VLI				AML	AML	01 52 59.6	
	comp=N,694μm,1.2s						
VLI				AML	AML	01 53 03.8	
	comp=E,648μm,0.8s						
LOUT	**Loutraki**	**2.07**	**67**	P	**Pn**	**01 52 12.6**	**+2.2**
LOUT				AML	AML	01 52 48.9	
	comp=N,184μm,0.9s						
LOUT				AML	AML	01 52 49.4	
	comp=E,213μm,0.5s						
KRND	**KRANIDI**	**2.08**	**85**	P	**Pn**	**01 52 11.9**	**+1.5**
PROD	**Prodromos**	**2.13**	**60**	P	**Pn**	**01 52 13.0**	**+1.8**
PROD	**Prodromos**	**2.13**	**60**	P	**Pn**	**01 52 12.9**	**+1.8**
DID	**Didima**	**2.16**	**81**	P	**Pn**	**01 52 12.7**	**+1.2**
DID	**Didima**	**2.16**	**81**	P	**Pn**	**01 52 12.5**	**+1.0**
DID				AML	AML	01 52 59.7	
	comp=N,1179μm,0.7s						
DID				AML	AML	01 53 06.9	
	comp=E,770μm,0.7s						
MAKR	**Makrakomi, Fth**	**2.19**	**34**	P	**Pb**	**01 52 15.2**	**-0.2**
MAKR	**Makrakomi, Fth**	**2.19**	**34**	P	**Pn**	**01 52 14.4**	**+2.5**
MAKR				AML	AML	01 52 51.3	
	comp=E,2824μm,0.4s						
MAKR				AML	AML	01 52 54.2	
	comp=N,1686μm,0.8s						
AXAR	**Agios Charalam**	**2.27**	**46**	P	**Pn**	**01 52 15.6**	**+2.5**
AXAR				AML	AML	01 52 51.1	
	comp=E,2764μm,0.4s						
AXAR				AML	AML	01 52 54.9	
	comp=N,2554μm,0.4s						
AGG	**Agios Georgios**	**2.29**	**37**	P	**Pn**	**01 52 15.9**	**+2.6**
AGG	**Agios Georgios**	**2.29**	**37**	P	**Pn**	**01 52 15.9**	**+2.6**
IGT	**Igoumenitsa**	**2.32**	**356**	P	**Pn**	**01 52 15.2**	**+1.4**
VIL2	**Platees**	**2.37**	**64**	P	**Pn**	**01 52 15.7**	**+1.3**
VIL2				AML	AML	01 53 02.9	
	comp=E,1162μm,0.6s						
VIL2				AML	AML	01 53 03.6	
	comp=N,809μm,0.6s						
LKR	**Lokris**	**2.41**	**53**	P	**Pn**	**01 52 17.6**	**+2.7**
LKR	**Lokris**	**2.41**	**53**	P	**Pn**	**01 52 17.2**	**+2.2**
LKR				AML	AML	01 52 50.9	
	comp=N,1205μm,0.4s						
LKR				AML	AML	01 52 51.8	
	comp=E,1087μm,0.2s						
KEK	**Kerkira**	**2.57**	**347**	P	**Pn**	**01 52 20.2**	**+3.1**
THL	**Klokotos Trika**	**2.61**	**26**	P	**Pn**	**01 52 20.6**	**+2.8**
VLY	**Voula,Athens**	**2.65**	**75**	P	**Pn**	**01 52 19.1**	**+0.8**
VLY	**Voula,Athens**	**2.65**	**75**	P	**Pn**	**01 52 19.1**	**+0.8**
ATHU	**Athens Univers**	**2.67**	**73**	P	**Pn**	**01 52 19.8**	**+1.2**
ATHU				AML	AML	01 53 05.8	
	comp=N,142μm,0.9s						
ATHU				AML	AML	01 53 13.9	
	comp=E,147μm,1.0s						
DION	**Dionisos Attik**	**2.82**	**71**	P	**Pn**	**01 52 21.9**	**+1.3**
MRKA	**Markates**	**2.82**	**57**	P	**Pn**	**01 52 22.1**	**+1.4**
MRKA	**Markates**	**2.82**	**57**	P	**Pn**	**01 52 21.9**	**+1.2**
MRKA				AML	AML	01 53 00.2	
	comp=E,654μm,0.3s						
MRKA				AML	AML	01 53 00.5	
	comp=N,909μm,0.3s						
NEO	**Neokhori**	**2.96**	**44**	P	**Pn**	**01 52 24.4**	**+1.8**
NEO	**Neokhori**	**2.96**	**44**	P	**Pn**	**01 52 23.9**	**+1.3**
NEO				AML	AML	01 53 02.8	
	comp=N,1032μm,0.4s						
NEO				AML	AML	01 53 07.1	
	comp=E,658μm,0.6s						
XOR	**Xorichti**	**2.99**	**43**	P	**Pn**	**01 52 24.5**	**+1.6**
XOR	**Xorichti**	**2.99**	**43**	P	**Pn**	**01 52 24.4**	**+1.4**
XOR				AML	AML	01 53 03.8	
	comp=N,826μm,0.8s						
XOR				AML	AML	01 53 04.2	
	comp=E,377μm,0.4s						
KYMI	**Kymi, Euboea I**	**3.14**	**62**	P	**Pn**	**01 52 26.7**	**+1.7**
LIT	**Litokhoron**	**3.26**	**27**	P	**Pn**	**01 52 28.5**	**+1.9**
FNA	**Florina**	**3.62**	**10**	P	**Pn**	**01 52 34.1**	**+2.4**
OHR	**Ohrid**	**3.90**	**3**	*i* Pn	**Pg**	**01 52 52.9**	**+2.0**
OHR	**Ohrid**	**3.90**	**3**	*i* Pn	**Pg**	**01 52 52.9**	**+2.0**
STIP	**Stip**	**4.65**	**15**	*i* Pn	**Pn**	**01 52 49.2**	**+3.5**
STIP	**Stip**	**4.65**	**15**	*i* Pn	**Pn**	**01 52 49.2**	**+3.5**
ULC	**Ulcinj**	**4.85**	**348**	⇓*i* Pn	**Pn**	**01 52 49.0**	**+0.4**
ULC				*i* Sn	**Sn**	**01 53 41.0**	**-3.4**
MMB	**Musomiste**	**5.01**	**28**	*eP*	**Pn**	**01 52 52.0**	**+1.2**
DRME	**Dracevica, Mon**	**5.08**	**348**	*ePn*	**Pn**	**01 52 53.0**	**+1.3**
DRME	**Dracevica, Mon**	**5.08**	**348**	⇑*iPn*	**Pn**	**01 52 52.0**	**+0.3**
DRME				*i* Sn	**Sn**	**01 53 46.4**	**-3.5**
BUM	**Brajici-Budva**	**5.24**	**346**	⇑*iPn*	**Pn**	**01 52 54.3**	**+0.4**
BUM				*i* Sn	**Sn**	**01 53 50.6**	**-3.4**
PDG	**Podgorica**	**5.31**	**350**	*ePn*	**Pn**	**01 52 55.8**	**+1.1**
TTG	**Podgorica**	**5.31**	**350**	⇑*iPn*	**Pn**	**01 52 55.2**	**+0.5**
TTG				*i* Sn	**Sn**	**01 53 52.2**	**-3.3**
PVY	**Plav**	**5.39**	**355**	⇑*iPn*	**Pn**	**01 52 56.5**	**+0.4**
PVY				*i* Sn	**Sn**	**01 53 54.3**	**-3.6**
HCY	**Herceg Novi**	**5.46**	**344**	*ePn*	**Pn**	**01 52 57.5**	**+0.6**
HCY	**Herceg Novi**	**5.46**	**344**	⇓*iPn*	**Pn**	**01 52 57.8**	**+0.9**
HCY				*i* Sn	**Sn**	**01 53 56.3**	**-3.1**
CEME	**Cevo**	**5.47**	**347**	⇓*iPn*	**Pn**	**01 52 57.8**	**+0.7**
CEME				*i* Sn	**Sn**	**01 53 56.2**	**-3.6**
RZN	**Rozhen**	**5.51**	**34**	*eP*	**Pn**	**01 52 59.4**	**+1.7**
IVA	**Berane**	**5.67**	**355**	⇓*iPn*	**Pn**	**01 53 00.4**	**+0.5**
IVA				*i* Sn	**Sn**	**01 54 01.0**	**-3.8**
NKME	**Niksic**	**5.68**	**348**	⇓*iPn*	**Pn**	**01 53 00.4**	**+0.4**
NKME				*i* Sn	**Sn**	**01 54 01.1**	**-3.8**
KOME	**Kolasin**	**5.69**	**352**	⇑*iPn*	**Pn**	**01 53 00.4**	**+0.3**
KOME				*i* Sn	**Sn**	**01 54 00.9**	**-4.2**
NKY	**Niksic**	**5.72**	**348**	⇑*iPn*	**Pn**	**01 53 00.9**	**+0.3**
NKY				*i* Sn	**Sn**	**01 54 02.0**	**-3.9**
TREB	**Trebinje**	**5.75**	**344**	*ePn*	**Pn**	**01 53 01.4**	**+0.5**
DBRK	**Dubrovnik**	**5.75**	**342**	*ePn*	**Pn**	**01 53 01.2**	**+0.3**
DBRK				Sn	**Sn**	**01 54 03.5**	**-3.1**
VTS	**Vitosha**	**5.78**	**20**	*eP*	**Pn**	**01 53 02.9**	**+1.5**
BRY	**Bratogost**	**5.89**	**345**	*ePn*	**Pn**	**01 53 02.7**	**-0.2**
BRY	**Bratogost**	**5.89**	**345**	⇓*iPn*	**Pn**	**01 53 03.1**	**+0.2**
BRY				*i* Sn	**Sn**	**01 54 05.6**	**-4.5**
STON	**Ston**	**6.06**	**340**	*ePn*	**Pn**	**01 53 05.1**	**0.0**
STON	**Ston**	**6.06**	**340**	*ePn*	**Pn**	**01 53 05.5**	**+0.4**
STON				Sn	**Sn**	**01 54 09.8**	**-4.2**
UPM	**Unac-Piva**	**6.12**	**349**	*ePn*	**Pn**	**01 53 07.9**	**+1.8**
UPM	**Unac-Piva**	**6.12**	**349**	⇑*iPn*	**Pn**	**01 53 06.5**	**+0.4**
UPM				*i* Sn	**Sn**	**01 54 11.7**	**-4.0**
PLE	**Pljevlja**	**6.17**	**352**	⇓*iPn*	**Pn**	**01 53 07.3**	**+0.5**
PLE				*i* Sn	**Sn**	**01 54 13.0**	**-4.1**
MAKA	**Makarska**	**6.64**	**337**	*i* Pn	**Pn**	**01 53 14.5**	**+1.5**
MAKA				Sn	**Sn**	**01 54 24.6**	**-3.8**
RICI	**Ricice**	**6.80**	**338**	*i* Pn	**Pn**	**01 53 15.9**	**+0.6**
RICI				Sn	**Sn**	**01 54 29.8**	**-2.5**
DIVS	**Divibare**	**6.89**	**357**	*ePn*	**Pn**	**01 53 16.8**	**+0.2**
HAPS	**Han Pijesak,BI**	**6.97**	**350**	*ePn*	**Pn**	**01 53 20.0**	**+2.2**
ZIRJ	**Zirje**	**7.44**	**331**	*ePn*	**Pn**	**01 53 25.0**	**+0.9**
KIJV	**Kijevo**	**7.48**	**336**	*ePn*	**Pn**	**01 53 26.3**	**+1.7**
KIJV				Sn	**Sn**	**01 54 44.2**	**-4.9**
MORI	**Morici**	**7.60**	**332**	*ePn*	**Pn**	**01 53 28.0**	**+1.7**
DUGI	**Dugi Otok**	**7.96**	**330**	*ePn*	**Pn**	**01 53 34.3**	**+3.2**
DUGI				Sn	**Sn**	**01 54 57.8**	**-3.0**
NVLJ	**Novalja**	**8.51**	**331**	*ePn*	**Pn**	**01 53 39.8**	**+1.1**
NVLJ				Sn	**Sn**	**01 55 10.6**	**-3.7**
OZLJ	**Ozalj**	**9.22**	**337**	*ePn*	**Pn**	**01 53 50.4**	**+2.0**
CRES	**Cresnjev**	**9.41**	**338**	*ePn*	**Pn**	**01 53 51.6**	**+0.5**
CEY	**Cerknica**	**9.68**	**334**	*ePn*	**Pn**	**01 53 56.4**	**+1.6**

*MDD **17** 01:54:38.7±1.7, 37˚.49N×13˚.75W, h0^{km}, mb4.1/3, Error ellipse: s-maj=15.2km s-min=12.4km az=64.0, PRX/IMO*
*IGIL **17** 01:54:38.9, 37˚.51N×13˚.75W, h0^{km}, ML2.3*
*INMG **17** 01:54:40.3±1.0, 37˚.34N×14˚.15W, h10^{km}, ML2.4, Error ellipse: s-maj=5.3km s-min=4.1km az=74.0*

ISC 17 01:54:36.8±3.5,**37˚52N**±0˚.09×**13˚8W**±0˚.2,**h10**^{km},**n59,**
σ1°88/103,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMAFR	**Mafra**	**3.82**	**67**	P	**Pn**	**01 55 37.3**	**+1.6**
	2.2nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**01 56 20.5**	**-0.2**
	6.2nm,0.2s,SNR=5.8						
PMAFR	**Mafra**	**3.82**	**67**	*ePn*	**Pn**	**01 55 37.8**	**+2.1**
PMAFR				*eSn*	**Sn**	**01 56 23.0**	**+2.3**
PMAFR				A	A	01 56 26.4	
	11nm,0.6s						
PFVI	**Vila Bisbo**	**3.97**	**94**	P	**Pn**	**01 55 38.7**	**+1.0**
	1.6nm,0.1s,SNR=9.0						
PFVI				S	**Sn**	**01 56 22.2**	**-2.0**
	5.1nm,0.1s,SNR=7.3						
PFVI	**Vila Bisbo**	**3.97**	**94**

	comp=N,2.5nm,0.6s							
PVAQ	**Vaqueiros**	**4.83**	**90**	P		**Pn**	**01 55 51.6**	**+2.1**
PVAQ				S		**Sn**	**01 56 44.1**	**-1.3**
	comp=N,4.3nm,0.2s							
PVAQ	**Vaqueiros**	**4.83**	**90**	*e*Pn		**Pn**	**01 55 51.6**	**+2.1**
PVAQ				*e*Sn		**Sn**	**01 56 44.1**	**-1.3**
PVAQ				A		A	01 56 49.7	
	comp=N,4.3nm,0.2s							
EGRO	**El Granado**	**5.00**	**88**	P		**Pn**	**01 55 53.4**	**+1.5**
	comp=N,0.5nm,0.1s,SNR=7.9							
EGRO				S		**Sn**	**01 56 48.2**	**-1.6**
	comp=N,2.5nm,0.1s,SNR=7.7							
PESTR	**Estremoz**	**5.06**	**73**	*e*Sn		**Sn**	**01 56 50.5**	**-0.7**
PMRV	**Marv??o**	**5.36**	**67**	P		**Pn**	**01 55 59.6**	**+2.7**
PMRV				S		**Sn**	**01 56 58.4**	**-0.3**
	comp=N,1.5nm,0.2s							
PMRV	**Marv??o**	**5.36**	**67**	*e*Pn		**Pn**	**01 55 59.6**	**+2.7**
PMRV				*e*Sn		**Sn**	**01 56 58.4**	**-0.3**
PMRV				A		A	01 57 01.4	
	comp=N,1.5nm,0.2s							
PCBR	**Castelo Branco**	**5.45**	**63**	S		**Sn**	**01 57 01.5**	**+0.7**
PCBR	**Castelo Branco**	**5.45**	**63**	*e*Sn		**Sn**	**01 57 01.5**	**+0.7**
EBAD	**Badajoz**	**5.47**	**75**	P		**Pn**	**01 56 00.2**	**+1.8**
	comp=N,0.3nm,0.1s,SNR=7.9							
EBAD				S		**Sn**	**01 56 59.9**	**-1.5**
	comp=N,0.9nm,0.1s,SNR=7.7							
EMIN	**Mina Concepcio**	**5.65**	**85**	P		**Pn**	**01 56 02.3**	**+1.5**
	comp=N,0.2nm,0.1s,SNR=7.9							
EMIN				S		**Sn**	**01 57 02.9**	**-2.8**
	comp=N,0.7nm,0.1s,SNR=7.7							
MTE	**Manteigas**	**5.65**	**57**	P		**Pn**	**01 56 03.3**	**+2.4**
MTE	**Manteigas**	**5.65**	**57**	*e*Pn		**Pn**	**01 56 03.3**	**+2.4**
PVRL	**Vila Real**	**6.01**	**49**	P		**Pn**	**01 56 07.6**	**+1.8**
PVRL				S		**Sn**	**01 57 13.3**	**-1.4**
	comp=N,1.1nm,0.2s							
PVRL	**Vila Real**	**6.01**	**49**	*e*Pn		**Pn**	**01 56 07.6**	**+1.8**
PVRL				*e*Sn		**Sn**	**01 57 13.3**	**-1.4**
PVRL				A		A	01 57 18.8	
	comp=N,2.1nm,0.2s							
EZAM	**Zamans**	**6.06**	**39**	S		**Sn**	**01 57 13.0**	**-2.8**
	comp=N,0.4nm,0.1s,SNR=4.0							
PCAB	**Cabril**	**6.10**	**45**	S		**Sn**	**01 57 15.4**	**-1.6**
PCAB	**Cabril**	**6.10**	**45**	*e*Sn		**Sn**	**01 57 15.4**	**-1.6**
PGAV	**Gavieira, Arco**	**6.14**	**42**	P		**Pn**	**01 56 09.3**	**+1.6**
PGAV				S		**Sn**	**01 57 16.8**	**-1.3**
	comp=N,4.2nm,0.8s							
PGAV	**Gavieira, Arco**	**6.14**	**42**	*e*Pn		**Pn**	**01 56 09.3**	**+1.6**
PGAV				*e*Sn		**Sn**	**01 57 16.8**	**-1.3**
PGAV				A		A	01 57 28.5	
	comp=N,4.2nm,0.8s							
ELOB	**Lobios**	**6.19**	**44**	P		**Pn**	**01 56 09.6**	**+1.3**
	comp=N,0.3nm,0.1s,SNR=7.9							
ELOB				S		**Sn**	**01 57 17.0**	**-2.2**
	comp=N,1.4nm,0.2s,SNR=7.9							
ESPR	**Espera**	**6.36**	**93**	P		**Pn**	**01 56 11.1**	**+0.6**
	comp=N,0.4nm,0.1s,SNR=4.0							
ESPR				S		**Sn**	**01 57 18.8**	**-4.4**
	comp=N,0.6nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**6.37**	**53**	P		**Pn**	**01 56 12.0**	**+1.2**
	comp=N,0.9nm,0.2s,SNR=7.9							
MVO				S		**Sn**	**01 57 22.0**	**-1.8**
	comp=N,0.2nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**6.37**	**53**	*e*Pn		**Pn**	**01 56 12.7**	**+1.9**
MVO				*e*Sn		**Sn**	**01 57 21.9**	**-1.8**
MVO				A		A	01 57 24.7	
	comp=N,2.2nm,0.7s							
EPLA	**Plasencia**	**6.53**	**65**	P		**Pn**	**01 56 14.4**	**+1.5**
	comp=N,0.2nm,0.1s,SNR=7.9							
EPLA				S		**Sn**	**01 57 25.3**	**-2.2**
	comp=N,0.1nm,0.0s,SNR=7.9							
EMAZ	**Mazaricos**	**6.55**	**33**	S		**Sn**	**01 57 24.0**	**-3.9**
	comp=N,1.2nm,0.1s,SNR=7.9							
ECAB	**El Cabril**	**6.64**	**83**	P		**Pn**	**01 56 16.5**	**+2.0**
	comp=N,0.3nm,0.1s,SNR=5.5							
ECAB				S		**Sn**	**01 57 27.9**	**-2.5**
	comp=N,0.1nm,0.1s,SNR=7.9							
EAGO	**Agolada(Pontev**	**6.84**	**38**	P		**Pn**	**01 56 18.5**	**+1.3**
	comp=N,0.8nm,0.2s,SNR=7.9							
EAGO				S		**Sn**	**01 57 31.1**	**-4.1**
	comp=N,0.7nm,0.1s,SNR=7.9							
PBRG	**Braganca**	**6.91**	**50**	P		**Pn**	**01 56 20.6**	**+2.4**
PBRG				S		**Sn**	**01 57 35.3**	**-1.6**
	comp=N,0.9nm,0.9s							
PBRG	**Braganca**	**6.91**	**50**	*e*Pn		**Pn**	**01 56 20.6**	**+2.4**
PBRG				*e*Sn		**Sn**	**01 57 35.3**	**-1.6**
PBRG				A		A	01 57 42.3	
	comp=N,1.8nm,0.9s							
ECAL	**Calabor**	**7.00**	**49**	P		**Pn**	**01 56 22.0**	**+2.6**
	comp=N,2.3nm,0.3s,SNR=7.9							
ECAL				S		**Sn**	**01 57 37.6**	**-1.5**
	comp=N,0.3nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**7.31**	**82**	P		**Pn**	**01 56 25.2**	**+1.5**
	comp=N,0.2nm,0.1s,SNR=7.9							
EADA				S		**Sn**	**01 57 44.7**	**-2.1**
	comp=N,1.1nm,0.1s,SNR=7.9							
PAB	**San Pablo**	**7.67**	**72**	P		**Pn**	**01 56 30.0**	**+1.4**
	comp=N,0.3nm,0.2s,SNR=7.9							
PAB				S		**Sn**	**01 57 52.2**	**-3.3**
	comp=N,0.0nm,0.1s,SNR=7.9							
EPON	**Pontenova**	**7.70**	**39**	S		**Sn**	**01 57 52.3**	**-3.8**
	comp=N,50nm,1.4s,SNR=7.9							
EQES	**Quesada**	**8.50**	**85**	S		**Sn**	**01 58 12.8**	**-3.3**
	comp=N,0.0nm,0.1s,SNR=7.9							

UCR ***17*** *02:25:26.0±1.6,9.°45N×83.°86W,h53km±3km,MD3.8*
UPA ***17*** *02:25:26.5±1.2,9.°59N×83.°81W,h63km±12km,MW4.5*
ISC 17 02:25:27.0±1.3,9.°50N±0.°05×83.°83W±0.°05,h50km±9km, n26,σ1≤09/39,1C-1D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDDO	**Dominical**	**0.24**	**187**	*e*P	**Pn**	**02 25 34.8**	**-0.9**
LCR2	**La Lucha 2**	**0.30**	**325**	*e*P	**Pn**	**02 25 35.4**	**-1.0**
LCR2				*e*S	**Sn**	**02 25 43.3**	**+0.3**
EDLM	**Las Mercedes**	**0.32**	**132**	*e*P	**Pn**	**02 25 36.1**	**-0.4**
SJS	**Escuela Geolog**	**0.49**	**334**	*e*P	**Pn**	**02 25 37.8**	**-0.5**
SJS				*e*S	**Sn**	**02 25 47.1**	**+0.7**
CVTR	**Volcan Turrial**	**0.52**	**8**	*e*P	**Pn**	**02 25 38.6**	**-0.4**
CVTR				*e*S	**Sn**	**02 25 48.7**	**+1.2**
HDC	**Heredia**	**0.57**	**331**	*e*P	**Pn**	**02 25 39.0**	**-0.3**
HDC				*e*S	**Sn**	**02 25 48.5**	**+0.4**
HDC	**Heredia**	**0.57**	**331**	*e*P	**Pn**	**02 25 38.8**	**-0.5**
DRK0	**Durika**	**0.62**	**112**	*e*P	**Pn**	**02 25 39.2**	**-0.8**
DRK0				*e*S	**Sn**	**02 25 49.9**	**+0.6**
EDBA	**Buenos Aires**	**0.64**	**121**	*e*P	**Pn**	**02 25 38.9**	**-1.2**
EDPN	**Palmar Norte**	**0.65**	**145**	*e*P	**Pn**	**02 25 39.0**	**-1.1**
SRA1	**San Ramn**	**0.86**	**313**	*e*P	**Pn**	**02 25 41.5**	**-1.5**
PTJ1	**Puerto Jimnez**	**1.09**	**151**	*e*P	**Pn**	**02 25 46.0**	**0.0**
PTJ1				*e*S	**Sn**	**02 26 02.2**	**+2.2**
PTJ1	**Puerto Jimnez**	**1.09**	**151**	*e*P	**Pn**	**02 25 45.4**	**-0.6**
FORC	**Fortuna**	**1.27**	**319**	*i* P	**Pn**	**02 25 48.0**	**-0.4**
FORC				*i* S	**Sn**	**02 26 05.6**	**+1.3**
ARE1	**Arenal 1**	**1.30**	**318**	*e*P	**Pn**	**02 25 48.4**	**-0.4**
ARE1				*e*S	**Sn**	**02 26 07.8**	**+2.7**
CEDE	**Laguna Cedeo**	**1.30**	**319**	*i* P	**Pn**	**02 25 48.5**	**-0.5**
CEDE				*i* S	**Sn**	**02 26 06.8**	**+1.5**
BRU2	**Volcan**	**1.33**	**122⇑**	*e*P	**Pn**	**02 25 48.1**	**-1.3**
BRU2				*e*S	**Sn**	**02 26 05.7**	**-0.2**
BRU2	**Volcan**	**1.33**	**122**	*e*P	**Pn**	**02 25 48.0**	**-1.3**
JTS	**Las Juntas de**	**1.36**	**306**	*e*P	**Pn**	**02 25 48.7**	**-1.0**
JTS				*e*S	**Sn**	**02 26 06.2**	**-0.3**
JTS	**Las Juntas de**	**1.36**	**306**	*e*P	**Pn**	**02 25 48.2**	**-1.4**
JTS				*e*S	**Sn**	**02 26 07.3**	**+0.8**
ACAL	**Aguas Claras**	**1.64**	**314⇓**	*i* P	**Pn**	**02 25 52.7**	**-0.8**
CHGR2	**Aguacate**	**1.76**	**108**	*e*P	**Pn**	**02 25 55.0**	**-0.1**
CHGR2				*e*S	**Sn**	**02 26 17.5**	**+1.2**
GUAI	**GUAI**	**1.82**	**295**	*i* P	**Pn**	**02 25 56.0**	**0.0**
BUEV	**Buena Vista**	**2.02**	**310**	*e*P	**Pn**	**02 25 57.2**	**-1.5**
ESPN	**Las Esperanzas**	**2.72**	**350**	*e*P	**Pn**	**02 26 07.2**	**-1.0**
ACON	**Acoyapa**	**2.79**	**332**	*e*P	**Pn**	**02 26 08.0**	**-1.2**

IDC ***17*** *02:26:59.3±5.0,7.°00S×74.°23W,h75km±52km,mb3.6/3, mb1 3.6/6,mb1mx3.3/32,mbtmp3.8/6,ML3.2/3,MS2.7/1, Ms1 2.7/1,ms1mx2.3/30,Error ellipse: s-maj=41.3km s-min=28.5km az=166.0*
ISC 17 02:26:56.0±1.2,6.°9S±0.°1×74.°2W±0.°1,h35km,n7,σ1≤35/8, mb4.0/3,Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**5.74**	**207**	P	**Pn**	**02 28 20.3**	**+1.5**
	0.7nm,0.3s,baz=58,slow=17,SNR=1.6						
NNA				S	**Sn**	**02 29 22.8**	**-0.7**
	3.9nm,0.3s,baz=302,slow=23,SNR=3.0						
LPAZ	**La Paz**	**11.10**	**148**	P	Pn	02 29 41.9	+9.0
	0.2nm,0.3s,baz=315,slow=5.7,SNR=3.2						
PTGA	**Pitinga**	**15.43**	**67**	P	**Pn**	**02 30 32.8**	**+1.6**
	0.3nm,0.3s,baz=253,slow=20,SNR=1.6						
PTGA				S	**Sn**	**02 33 22.1**	**+0.8**
	0.3nm,0.3s,baz=298,slow=22,SNR=1.2						
PTGA				LR	LR	02 37 41.2	
	comp=Z,30nm,19.2s,baz=325,slow=41						
SIV	**San Ignacio**	**15.73**	**126**	P	**P**	**02 30 37.6**	**-1.2**
	0.1nm,0.3s,baz=252,slow=20,SNR=2.0						
DBIC	**Dimbokro**	**70.46**	**80**	P	**P**	**02 38 07.3**	**-0.3**
	2.8nm,0.9s,baz=247,slow=7.7,SNR=2.3						
YKA	**Yellowknife Ar**	**75.75**	**342**	P	**P**	**02 38 37.6**	**-0.2**
	0.3nm,0.4s,baz=138,slow=6.1,SNR=8.1						
TORD	**Torodi Ar. Bea**	**77.93**	**75**	P	**P**	**02 38 49.9**	**-1.3**
	0.4nm,0.3s,baz=256,slow=4.5,SNR=22						

PDG ***17*** *02:31:04.7±0.5,36.°08N×22.°11E,h40km±3km,ML3.6/14, Error ellipse: s-maj=1.2km s-min=1.5km az=0.0*
ATH ***17*** *02:31:04.2,36.°14N×22.°45E,h14km±1km,ML3.5/34,Error ellipse: s-maj=2.5km s-min=1.1km az=38.0*
THE ***17*** *02:31:05.0,36.°17N×22.°40E,h0km±1km,ML3.6/10,Error ellipse: s-maj=2.0km s-min=0.6km az=218.0*
IDC ***17*** *02:31:08.1±1.6,36.°24N×22.°36E,h45km±18km,mb3.5/11, mb1 3.6/18,mb1mx3.5/46,mbtmp3.7/18,ML3.5/7,MS2.8/6, Ms1 2.7/6,ms1mx2.6/27,Error ellipse: s-maj=21.2km s-min=12.8km az=5.0*
ISC 17 02:31:06.3±1.1,36.°20N±0.°04×22.°40E±0.°03,h32km±8km, n153,σ1≤87/192,mb3.7/11,10C-4D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.67**	**40**	P	**Pb**	**02 31 18.2**	**-1.5**
VLI				S	**Sb**	**02 31 29.6**	**+0.8**
	4µm,0.6s						
VLI	**Veliai**	**0.67**	**40**	P	**Pb**	**02 31 18.2**	**-1.5**
VLI				S	**Sb**	**02 31 27.6**	**-1.2**
VLI				AML	AML	02 31 31.0	
	comp=N,9488µm,0.4s						
VLI				AML	AML	02 31 44.5	
	comp=E,5273µm,0.8s						
MNVA	**Monemvasia**	**0.71**	**47**	P	**Pb**	**02 31 18.7**	**-1.6**
MNVA				S	**Sb**	**02 31 28.5**	**-1.2**
ANKY	**Antikythira Is**	**0.80**	**114**	P	**Pb**	**02 31 19.6**	**-2.3**
PYL	**PYLOS**	**0.87**	**323**	P	**Pb**	**02 31 21.4**	**-1.6**
PYL				S	**Sn**	**02 31 35.1**	**+1.1**
	comp=E,4µm,0.8s						
PYL	**PYLOS**	**0.87**	**323**	P	**Pb**	**02 31 21.2**	**-1.8**
PYL				AML	AML	02 31 40.3	
	comp=N,7102µm,0.9s						
PYL				AML	AML	02 31 42.1	
	comp=E,10049µm,0.7s						
ITM	**Ithomi**	**1.05**	**339**	P	**Pn**	**02 31 25.1**	**+0.3**
ITM				S	**Sb**	**02 31 41.5**	**+2.1**
	comp=E,3µm,0.5s						
ITM	**Ithomi**	**1.05**	**339**	P	**Pn**	**02 31 25.0**	**+0.2**
ITM				S	**Sb**	**02 31 41.1**	**+1.7**
ITM				AML	AML	02 31 45.7	
	comp=N,5838µm,0.5s						
ITM				AML	AML	02 31 50.7	
	comp=E,4940µm,0.9s						
VLX	**Vlachokerasia**	**1.17**	**359**	P	**Pn**	**02 31 26.8**	**+0.3**
VLX				S	**Sb**	**02 31 45.7**	**+2.8**
	comp=E,4µm,0.7s						
VLX	**Vlachokerasia**	**1.17**	**359**	P	**Pn**	**02 31 26.9**	**+0.4**
VLX				S	**Sb**	**02 31 43.9**	**+1.0**
VLX				AML	AML	02 31 53.0	
	comp=E,7948µm,0.8s						
VLX				AML	AML	02 31 55.6	
	comp=N,5660µm,0.6s						
RODP	**Rodopos**	**1.28**	**120**	P	**Pn**	**02 31 28.2**	**+0.3**
KRND	**KRANIDI**	**1.32**	**27**	P	**Pn**	**02 31 30.0**	**+1.4**
KRND				S	**Sb**	**02 31 50.2**	**+3.0**
	comp=N,2µm,0.5s						
KRND	**KRANIDI**	**1.32**	**27**	P	**Pn**	**02 31 30.0**	**+1.4**
KRND				AML	AML	02 31 55.8	
	comp=E,3878µm,0.5s						
KRND				AML	AML	02 31 57.4	
	comp=N,2326µm,0.5s						
TRIP	**Tripoli**	**1.33**	**356**	P	**Pn**	**02 31 29.9**	**+1.2**
TRIP				S	**Sb**	**02 31 50.8**	**+3.4**
	comp=N,2µm,1.1s						
TRIP	**Tripoli**	**1.33**	**356**	P	**Pn**	**02 31 29.9**	**+1.2**
TRIP				S	**Sb**	**02 31 49.9**	**+2.5**
TRIP				AML	AML	02 31 58.6	
	comp=E,4106µm,0.5s						
TRIP				AML	AML	02 32 01.8	
	comp=N,4139µm,0.9s						
YDRA	**Hydra**	**1.43**	**36**	P	**Pb**	**02 31 32.2**	**-0.2**
AMT	**Artemida-Makis**	**1.44**	**338**	P	**Pb**	**02 31 32.5**	**-0.1**
AMT				S	**Sb**	**02 31 53.5**	**+2.9**
	comp=N,5µm,0.4s						
AMT	**Artemida-Makis**	**1.44**	**338**	P	**Pb**	**02 31 32.0**	**-0.5**
AMT				AML	AML	02 31 58.7	
	comp=N,10661µm,0.5s						
AMT				AML	AML	02 32 00.2	
	comp=E,9278µm,0.4s						
DID	**Didima**	**1.47**	**27**	P	**Pn**	**02 31 32.2**	**+1.6**
DID	**Didima**	**1.47**	**27**	P	**Pn**	**02 31 32.1**	**+1.6**
DID				AML	AML	02 32 04.4	
	comp=E,2597µm,0.7s						
DID				AML	AML	02 32 05.6	
	comp=N,2130µm,0.5s						
IMMV	**Iera Moni Meta**	**1.48**	**119**	P	**Pn**	**02 31 31.3**	**+0.6**
IMMV				S	**Sb**	**02 31 53.8**	**+2.0**
	comp=N,2µm,0.7s						
IMMV	**Iera Moni Meta**	**1.48**	**119**	P	**Pn**	**02 31 31.4**	**+0.6**
IMMV				AML	AML	02 32 00.1	
	comp=N,4024µm,0.7s						
IMMV				AML	AML	02 32 05.5	
	comp=E,4072µm,0.8s						
CHAN	**Chania**	**1.50**	**117**	P	**Pn**	**02 31 31.9**	**+1.0**
VAM	**Vamos**	**1.67**	**118**	P	**Pn**	**02 31 35.0**	**+1.7**
VAM	**Vamos**	**1.67**	**118**	P	**Pn**	**02 31 34.8**	**+1.6**
VAM				AML	AML	02 32 08.9	
	comp=E,4524µm,0.7s						
VAM				AML	AML	02 32 11.6	
	comp=N,4229µm,0.6s						
MHLO	**Agia Marina, M**	**1.69**	**73**	P	**Pn**	**02 31 34.7**	**+1.2**
MHLO				S	**Sb**	**02 31 57.8**	**+0.2**
	comp=N,5µm,0.6s						
MHLO	**Agia Marina, M**	**1.69**	**73**	P	**Pn**	**02 31 34.7**	**+1.2**
MHLA	**Plaka, Milos I**	**1.72**	**71**	P	**Pn**	**02 31 35.3**	**+1.3**
DRO	**Drossia**	**1.83**	**343**	P	**Pb**	**02 31 38.9**	**-0.4**
DRO	**Drossia**	**1.83**	**343**	P	**Pb**	**02 31 38.8**	**-0.4**
DRO				AML	AML	02 32 13.3	
	comp=N,2846µm,0.6s						
DRO				AML	AML	02 32 18.8	
	comp=E,4359µm,0.5s						
LOUT	**Loutraki**	**1.84**	**14**	P	**Pb**	**02 31 39.2**	**-0.2**
LOUT				AML	AML	02 32 11.7	
	comp=E,468µm,0.9s						
LOUT				AML	AML	02 32 13.8	
	comp=N,536µm,0.6s						
KLV	**Kalavryta, Ach**	**1.85**	**354**	P	**Pb**	**02 31 38.4**	**-1.2**
KLV	**Kalavryta, Ach**	**1.85**	**354**	P	**Pb**	**02 31 38.3**	**-1.2**
KLV				AML	AML	02 32 18.7	
	comp=N,1184µm,1.2s						
KLV				AML	AML	02 32 19.9	
	comp=E,1726µm,1.0s						
PRNS	**Prines Rethymn**	**1.90**	**115**	P	**Pn**	**02 31 38.6**	**+2.1**
SERI	**Serifos**	**1.93**	**60**	P	**Pn**	**02 31 37.7**	**+0.8**
SERI				S	**Sn**	**02 32 03.2**	**+3.1**
SERI	**Serifos**	**1.93**	**60**	P	**Pn**	**02 31 37.6**	**+0.6**
SERI				AML	AML	02 32 14.8	
	comp=N,577µm,0.4s						
SERI				AML	AML	02 32 18.3	
	comp=E,1004µm,0.6s						
GVD	**Gavdhos**	**1.94**	**134**	P	**Pb**	**02 31 39.4**	**-1.6**
GVD	**Gavdhos**	**1.94**	**134**	P	**Pn**	**02 31 38.5**	**+1.5**
GVD				AML	AML	02 32 21.0	
	comp=E,1774µm,0.6s						
GVD				AML	AML	02 32 27.4	
	comp=N,1719µm,0.7s						
VTN	**Vitineika**	**1.97**	**331**	P	**Pb**	**02 31 40.9**	**-0.6**
VLY	**Voula,Athens**	**1.99**	**34**	P	**Pn**	**02 31 40.2**	**+2.5**
VLY	**Voula,Athens**	**1.99**	**34**	P	**Pn**	**02 31 40.0**	**+2.3**
RLS	**Riolos of Patr**	**2.00**	**338**	P	**Pb**	**02 31 41.2**	**-0.8**
RLS	**Riolos of Patr**	**2.00**	**338**	P	**Pb**	**02 31 41.6**	**-0.4**
RLS				AML	AML	02 32 17.9	
	comp=E,1545µm,1.0s						
RLS				AML	AML	02 32 20.4	
	comp=N,1301µm,0.6s						
ATH	**Athens Observa**	**2.06**	**30**	P	**Pn**	**02 31 41.7**	**+3.1**
LAKA	**Lakka**	**2.06**	**351**	P	**Pb**	**02 31 42.7**	**-0.4**
LAKA	**Lakka**	**2.06**	**351**	P	**Pb**	**02 31 42.5**	**-0.6**
LAKA				AML	AML	02 32 19.2	
	comp=N,1190µm,0.8s						
LAKA				AML	AML	02 32 22.6	
	comp=E,1393µm,0.7s						
ATHU	**Athens Univers**	**2.08**	**32**	P	**Pn**	**02 31 41.3**	**+2.3**
ATHU	**Athens Univers**	**2.08**	**32**	P	**Pn**	**02 31 41.1**	**+2.1**
ATHU				AML	AML	02 32 21.1	
	comp=N,312µm,1.0s						
ATHU				AML	AML	02 32 23.6	
	comp=E,258µm,1.3s						
VILL	**Villia**	**2.09**	**20**	P	**Pb**	**02 31 42.2**	**-1.4**
PROD	**Prodromos**	**2.09**	**11**	P	**Pn**	**02 31 42.0**	**+2.9**
PROD				AML	AML	02 32 19.9	
	comp=N,1038µm,0.7s						
PROD				AML	AML	02 32 21.4	
	comp=E,1115µm,0.7s						
VIL2	**Platees**	**2.12**	**19**	P	**Pn**	**02 31 41.9**	**+2.3**
VIL2				AML	AML	02 32 20.7	
	comp=N,1082µm,0.7s						
VIL2				AML	AML	02 32 28.5	
	comp=E,1861µm,0.9s						
TRIZ	**Trizonia**	**2.18**	**353**	P	**Pb**	**02 31 45.0**	**-0.1**
PTL	**Penteli**	**2.19**	**32**	P	**Pn**	**02 31 43.0**	**+2.6**
PTL	**Penteli**	**2.19**	**32**	P	**Pn**	**02 31 42.7**	**+2.3**
PTL				AML	AML	02 32 20.2	
	comp=E,984µm,0.8s						
PTL				AML	AML	02 32 20.5	
	comp=N,729µm,0.7s						
KALE	**Kalithea**	**2.19**	**355**	P	**Pb**	**02 31 44.1**	**-1.3**
KALE	**Kalithea**	**2.19**	**355**	P	**Pb**	**02 31 43.9**	**-1.6**
KALE				AML	AML	02 32 29.9	
	comp=N,1484µm,0.7s						
KALE				AML	AML	02 32 30.8	
	comp=E,840µm,0.6s						
IDI	**Anoyia**	**2.22**	**113**	P	**Pn**	**02 31 42.8**	**+1.8**
IDI	**Anoyia**	**2.22**	**113**	P	**Pn**	**02 31 43.1**	**+2.1**
	comp=E,16nm,0.3s,baz=277,slow=9.8,SNR=22						
IDI				LR	LR	02 32 52.3	
	comp=E,78nm,18.4s,baz=340,slow=46						
IDI	**Anoyia**	**2.22**	**113**	P	**Pn**	**02 31 42.4**	**+1.4**
IDI				AML	AML	02 32 23.5	
	comp=N,897µm,0.6s						
IDI				AML	AML	02 32 37.5	
	comp=E,717µm,0.7s						
DION	**Dionisos Attik**	**2.24**	**33**	P	**Pn**	**02 31 43.7**	**+2.5**
DION				S	**Sb**	**02 32 12.4**	**-1.0**
DION	**Dionisos Attik**	**2.24**	**33**	P	**Pn**	**02 31 43.6**	**+2.4**
EFP	**Efpalio**	**2.26**	**350**	P	**Pb**	**02 31 45.7**	**-0.7**
EFP				AML	AML	02 32 29.9	
	comp=E,1084µm,1.0s						
EFP				AML	AML	02 32 31.9	
	comp=N,1508µm,0.9s						
IOSP	**Ios island**	**2.39**	**77**	P	**Pn**	**02 31 44.5**	**+1.3**
IOSP	**Ios island**	**2.39**	**77**	P	**Pn**	**02 31 44.4**	**+1.3**
IOSP				AML	AML	02 32 23.2	
	comp=N,1510µm,0.8s						
IOSP				AML	AML	02 32 25.9	
	comp=E,835µm,0.6s						
SAP3	**Santorini-Thir**	**2.39**	**84**	P	**Pn**	**02 31 44.7**	**+1.4**
ANX	**Ano Chora**	**2.42**	**351**	P	**Pb**	**02 31 47.7**	**-1.6**
ANX				AML	AML	02 32 34.4	
	comp=N,1405µm,0.7s						
ANX				AML	AML	02 32 37.8	
	comp=E,1377µm,0.8s						
CMBO	**Columbo, Santo**	**2.44**	**83**	P	**Pn**	**02 31 45.8**	**+1.9**
KARY	**Karystos**	**2.45**	**41**	P	**Pn**	**02 31 45.9**	**+1.9**
KARY	**Karystos**	**2.45**	**41**	P	**Pn**	**02 31 45.9**	**+1.9**
KARY				AML	AML	02 32 21.3	
	comp=N,517µm,0.8s						
KARY				AML	AML	02 32 21.7	
	comp=E,411µm,1.7s						
LKR	**Lokris**	**2.49**	**11**	P	**Pn**	**02 31 47.2**	**+2.6**
LKR				AML	AML	02 32 31.3	
	comp=N,535µm,0.8s						
LKR				AML	AML	02 32 34.6	
	comp=E,668µm,0.6s						
AXAR	**Agios Charalam**	**2.57**	**5**	P	**Pb**	**02 31 49.7**	**-2.1**
AXAR				AML	AML	02 32 47.1	
	comp=E,1663µm,0.9s						
AXAR				AML	AML	02 32 50.5	
	comp=N,2040µm,1.2s						
APE	**Apeiranthos**	**2.66**	**70**	P	**Pn**	**02 31 48.6**	**+1.5**
MRKA	**Markates**	**2.67**	**20**	P	**Pn**	**02 31 50.3**	**+3.2**
MRKA				S	**Sb**	**02 32 23.9**	**-2.0**
	comp=N,342nm,0.7s						
MRKA	**Markates**	**2.67**	**20**	P	**Pn**	**02 31 49.7**	**+2.6**
MRKA				AML	AML	02 32 29.1	
	comp=E,703µm,0.7s						
MRKA				AML	AML	02 32 32.2	
	comp=N,683µm,0.8s						
LAST	**Lasithi**	**2.71**	**112**	P	**Pn**	**02 31 49.5**	**+1.7**
LAST	**Lasithi**	**2.71**	**112**	P	**Pn**	**02 31 49.2**	**+1.4**
ANAF	**Anafi Island**	**2.73**	**86**	P	**P

UPM	Unac-Piva	7.49 340	*e*Pn	Pn	02 32 55.3	+1.8
UPM	Unac-Piva	7.49 340	*i*Pn	Pn	02 32 53.1	-0.4
UPM			*i* Sn	Sn	02 34 14.2	-3.2
STON	Ston	7.58 333	*e*Pn	Pn	02 32 53.6	-0.9
STON	Ston	7.58 333	*e*Pn	Pn	02 32 53.8	-0.8
STON			Sn	Sn	02 34 15.9	-3.4
DIVS	Divibare	8.10 348	*e*Pn	Pn	02 33 00.9	-0.8
MAKA	Makarska	8.20 331	*i* Pn	Pn	02 33 03.5	+0.6
MAKA			Sn	Sn	02 34 31.6	-2.9
HAPS	Han Pijesak,BI	8.30 343	*e*Pn	Pn	02 33 03.2	-1.4
RICI	Ricice	8.33 333	*e*Pn	Pn	02 33 05.0	+0.1
KIJV	Kijevo	9.04 331	*i* Pn	Pn	02 33 15.1	+0.5
ZIRJ	Zirje	9.07 327	*e*Pn	Pn	02 33 14.4	-0.5
ZIRJ			Sn	Sn	02 34 49.0	-6.8
MORI	Morici	9.21 328	*i* Pn	Pn	02 33 17.0	+0.1
BLY	Banja Luka	9.41 337	*e*Pn	Pn	02 33 18.2	-1.4
BRTR	Keskin Array B	9.55 65	P	Pn	02 33 23.8	+2.1
	comp=N,0.1nm,0.3s,baz=256,slow=12,SNR=2.2					
BRTR			LR	LR	02 37 56.3	
	comp=N,38nm,18.7s,baz=177,slow=43					
DUGI	Dugi Otok	9.60 326	*i* Pn	Pn	02 33 22.3	+0.1
NVLJ	Novalja	10.13 328	*e*Pn	Pn	02 33 30.3	+0.9
MORH	Mrgy, Hungar	10.39 345	*e*Pn	Pn	02 33 31.8	-1.2
OZLJ	Ozalj	10.76 333	*e*Pn	Pn	02 33 37.2	-0.9
CRES	Cresnjev	10.95 334	*e*Pn	Pn	02 33 39.6	-1.0
MMAI	Mount Meron Ar	11.18 103	P	Pn	02 33 44.7	+0.8
	comp=N,0.7nm,0.3s,baz=295,slow=12,SNR=5.9					
CEY	Cerknica	11.27 330	*e*Pn	Pn	02 33 44.5	-0.5
SOKA	Soboth	11.83 334	*e*Pn	Pn	02 33 51.9	-0.9
	comp=N,1.6nm,0.4s					
SOKA			*i* Sn	Sn	02 35 59.2	-4.4
	comp=N,0.6nm,0.4s					
OBKA	Obir	11.86 333	*e*Pn	Pn	02 33 54.8	+1.6
	comp=N,1.6nm,0.5s					
OBKA			*e*Sn	Sn	02 36 02.5	-1.8
	comp=N,2.2nm,0.5s					
EIL	Elat	12.39 118	P	Pn	02 33 58.0	-2.4
	comp=N,0.2nm,0.3s,baz=216,slow=7.6,SNR=1.5					
EIL			S	Sn	02 36 06.0	-11
	comp=N,0.2nm,0.3s,baz=238,slow=22,SNR=1.6					
ABTA	Abfaltersbach	12.87 328	*e*Pn	Pn	02 34 07.6	+0.6
	comp=N,1.5nm,0.5s					
ABTA			*e*Sn	Sn	02 36 22.6	-6.4
	comp=N,2.5nm,0.7s					
WATA	Walderalm	13.73 327	*e*Pn	Pn	02 34 20.5	+1.7
	comp=N,2.2nm,0.5s					
MOTA	Moosalm	13.95 326	*e*Pn	Pn	02 34 23.8	+2.1
	comp=N,3.1nm,0.8s					
MOTA			*e*Sn	Sn	02 36 52.4	-3.1
	comp=N,1.0nm,0.4s					
GERES	GERESS Array B	14.15 336	P	Pn	02 34 24.4	-0.1
	comp=N,0.2nm,0.3s,baz=153,slow=13,SNR=6.3					
GERES			LR	LR	02 40 57.0	
	comp=N,88nm,19.6s,baz=102,slow=42					
KHC	Kasperske Hory	14.44 336	*e*P	P	02 34 36.6	+1.8
CHVC	Chvalec	15.09 344	*e*P	P	02 34 44.2	+2.2
AKASG	Malin Array Be	15.31 17	P	Pn	02 34 39.5	-0.4
	comp=N,0.4nm,0.3s,baz=207,slow=12,SNR=2.3					
KBZ	Khabaz	17.39 58	P	P	02 35 08.9	+1.5
	comp=N,0.1nm,0.3s,baz=255,slow=11,SNR=9.7					
KBZ			LR	LR	02 43 09.4	
	comp=N,32nm,20.0s,baz=186,slow=41					
ESDC	Sonseca Array	21.05 287	P	P	02 35 48.4	+0.7
	comp=N,1.1nm,0.9s,baz=97,slow=10,SNR=6.1					
HFS	Hagfors	24.60 350	P	P	02 36 23.1	-0.2
	comp=N,0.6nm,0.5s,baz=156,slow=15,SNR=5.3					
FINES	FINESS Array B	25.37 4	P	P	02 36 30.5	+0.2
	comp=N,1.4nm,0.7s,baz=168,slow=9.8,SNR=8.5					
FINES			LR	LR	02 46 30.7	
	comp=N,22nm,21.1s,baz=211,slow=36					
NOA	NORSAR Array B	25.86 348	P	P	02 36 35.7	+1.0
	comp=N,0.2nm,0.5s,baz=153,slow=8.7,SNR=1.5					
NOA			LR	LR	02 49 00.6	
	comp=N,14nm,18.1s,baz=280,slow=42					
EKA	Eskdalemuir Ar	25.90 326	P	P	02 36 35.6	+0.4
	comp=N,3.2nm,0.9s,baz=126,slow=7.1,SNR=6.3					
TORD	Torodi Ar. Bea	29.55 224	P	P	02 37 08.7	+0.5
	comp=N,0.3nm,0.6s,baz=32,slow=9.2,SNR=6.2					
ARCES	ARCESS Array B	33.43 2	P	P	02 37 41.9	+0.1
	comp=N,1.7nm,0.8s,baz=190,slow=11,SNR=5.5					
MKAR	Makanchi Array	45.09 57	P	P	02 39 19.3	0.0
	comp=N,1.4nm,0.6s,baz=274,slow=7.1,SNR=13					
ZALV	Zalesovo Beam	45.92 47	P	P	02 39 24.9	-0.8
	comp=N,1.4nm,0.5s,baz=266,slow=9.0,SNR=5.8					
SONM	Songino Array	60.56 50	P	P	02 41 15.1	+1.5
	comp=N,0.3nm,0.3s,baz=317,slow=5.9,SNR=4.2					
YKA	Yellowknife Ar	75.75 341	P	P	02 42 46.9	-1.5
	comp=N,0.1nm,0.4s,baz=26,slow=6.2,SNR=2.8					

*UPP **17** 03:00:19.0±2.3,57.°56N×23.°38E,h0km,ML2.4,Suspected explosion*
*IDC **17** 03:00:24.7±2.5,57.°72N×22.°78E,h0km,mb1 3.1/4, mb1mx2.9/48,mbtmp3.0/4,ML2.3/4,Error ellipse: s-maj=25.7km s-min=9.7km az=159.0*
*EST **17** 03:00:26.1±0.1,57.°85N×22.°57E,h0km,ML1.9(HEL), Explosion*
*LVSN **17** 03:00:28.1±5.8,57.°82N±2.°49E,h0km±3.3km,ML2.3*

ISC 17 03:00:24.9±0.8,57.82N±0.02×22.55E±0.03,h0km,n57, σ1s1.59/92,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	Slitere, Latvi	0.23	217	*e*P	Pg	03 00 30.9	+1.5
SLIT				IAML		03 00 53.0	
	comp=Z,2μm,0.7s						
SLIT	Slitere, Latvi	0.23	217	*e*P	Pg	03 00 30.9	+1.5
SLIT				*e*S	Sb	03 00 36.9	+4.5
SLIT				AML	AML	03 00 52.3	
	comp=E,4μm,0.7s						
SLIT				AML	AML	03 00 52.3	
	comp=N,4μm,0.7s						
SLIT				AML	AML	03 00 52.7	
	comp=Z,3μm,0.7s						
SLIT	Slitere, Latvi	0.23	217	*i* P	Pg	03 00 30.9	+1.5
MTSE	Matsula	1.12	36	*e*P	Pg	03 00 46.0	-0.5
MTSE				*e*S	Sg	03 01 01.1	+0.2
MTSE	Matsula	1.12	36	*e*P	Pg	03 00 45.9	-0.5
GOTU	Gotland	2.14	268	P	Pn	03 01 02.3	+0.4
GOTU				S	Sb	03 01 33.3	+1.8
VSU	Vasula	2.31	72	*e*P	Pb	03 01 06.1	-1.3
VSU				IAML		03 01 38.7	
	comp=Z,79nm,0.2s						
VSU	Vasula	2.31	72	*e*P	Pb	03 01 06.0	-1.3
VSU				AML	AML	03 01 07.5	
	comp=Z,62nm,0.7s						
VSU				*e*S	Sb	03 01 36.6	+0.1
VSU				AML	AML	03 01 39.7	
	comp=N,106nm,0.5s						
VSU				AML	AML	03 01 40.3	
	comp=E,158nm,0.5s						
VSU	Vasula	2.31	72	*e*P	Pn	03 01 05.3	+1.1
VSU				*e*PB	Pb	03 01 06.2	-1.3
VSU				*e*SG	Sb	03 01 36.2	-0.2
ARBE	Arbavere	2.42	46	*e*PB	Pb	03 01 07.8	-1.5
ARBE				*e*SG	Sb	03 01 39.4	-0.3
PABE	Paberze	2.44	161	*e*P	Pb	03 01 08.4	-1.3
PABE				IAML		03 01 41.4	
	comp=Z,14nm,0.1s						
PABE	Paberze	2.44	161	*e*P	Pb	03 01 08.2	-1.5
PABE				*e*S	Sb	03 01 39.7	-0.6
MEF	Metsahovi	2.59	21	*e*P	Pb	03 01 10.6	-1.6
MEF				AML	AML	03 01 13.3	
	comp=N,7.9nm,0.4s						
MEF				*e*S	Sb	03 01 44.1	-0.4
MEF				AML	AML	03 01 46.4	
	comp=Z,9.5nm,0.4s						
MEF				AML	AML	03 01 47.2	
	comp=E,8.3nm,0.2s						
MEF	Metsahovi	2.59	21	*e*PB	Pb	03 01 10.5	-1.7
MEF				*e*SG	Sb	03 01 44.2	-0.4
MEF				MSG		03 01 46.2	
	comp=Z,7.0nm,0.1s						
NYNU	Nynaeshamn	2.67	298	P	Pn	03 01 09.9	+0.8
NYNU				S	Sb	03 01 48.1	+1.2
AAL	Aland	2.71	332	P	Pn	03 01 09.6	-0.1
AAL				S	Sb	03 01 49.3	+1.2
AAL	Aland	2.71	332	*e*PB	Pb	03 01 12.4	-1.9
AAL				*e*SG	Sb	03 01 49.3	+1.2
NRTU	Norrtaelje	2.77	314	P	Pn	03 01 11.3	+0.8
IZAR	Zarasai	2.90	134	*e*P	Pn	03 01 14.4	+2.1
ISAL	Salakas	2.99	137	*e*P	Pn	03 01 15.6	+2.1
VIKU	Vikbolandet	3.18	285	P	Pn	03 01 16.9	+0.8
IIGN	Ignalina	3.20	139	*e*P	Pn	03 01 17.6	+1.2
IIGN				IAML		03 02 05.1	
	comp=Z,1.8nm,0.3s						
PVF	Pernaja	3.22	30	*e*PG	Pb	03 01 22.7	-0.3
RAF	Rauma	3.24	353	*e*P	Pn	03 01 18.2	+1.2
RAF				*e*S	Sn	03 01 59.1	+2.9
RAF				AML	AML	03 02 12.2	
	comp=E,4.5nm,0.3s						
RAF				AML	AML	03 02 17.2	
	comp=N,2.9nm,0.2s						
RAF				AML	AML	03 02 17.3	
	comp=Z,3.4nm,0.4s						
RAF	Rauma	3.24	353	*e*P	Pn	03 01 17.9	+0.9
GRAU	Graesoe	3.27	322	P	Pn	03 01 17.4	+0.1
UPP	Uppsala	3.28	311	P	Pn	03 01 19.1	+1.7
FLYU	Flymyra	3.35	316	P	Pn	03 01 19.3	+0.9
BACU	Backbrunna	3.49	308	P	Pn	03 01 21.5	+1.1
ESKU	Eskilstuna	3.53	296	P	Pn	03 01 21.9	+1.0
VJF	Virojoki	3.75	41	*e*P	Pn	03 01 24.6	+0.6
VJF				*e*PG	Pb	03 01 32.2	+0.3
FIA0	FINESS Array S	4.05	25	*e*P	Pn	03 01 29.8	+1.6
FIA0				*e*PG	Pb	03 01 38.3	+1.2
FIA0				MSG		03 02 36.1	
	comp=Z,1.6nm,0.1s						
FINES	FINESS Array B	4.05	25	Pn	Pn	03 01 28.6	+0.5
	comp=Z,0.1nm,0.3s,baz=203,slow=12,SNR=8.8						
FINES				Pg	Pb	03 01 37.9	+0.8
	comp=Z,1.0nm,0.3s,baz=208,slow=15,SNR=35						
FINES				Sn	Sn	03 02 17.3	+1.0
	comp=Z,0.2nm,0.3s,baz=209,slow=22,SNR=2.4						
FINES				Lg	Lg	03 02 32.3	
	comp=Z,1.3nm,0.3s,baz=209,slow=25,SNR=11						
FIA1	FINESS Array S	4.06	25	*e*P	Pn	03 01 29.4	+1.2
FIA1				*e*PG	Pb	03 01 38.2	+1.1
KEF	Keuruu	4.52	14	*e*P	Pn	03 01 36.4	+1.9
KEF				*e*PG	Pb	03 01 45.8	+0.8
KEF				*e*SG	Sb	03 02 43.6	+3.6
KEF				MSG		03 02 49.8	
	comp=Z,1.5nm,0.1s						
KAF	Kangasniemi	4.71	22	*e*P	Pn	03 01 38.3	+1.3
KAF				*e*SG	Sb	03 02 49.7	+4.4
KAF				MSG		03 02 53.4	
	comp=Z,1.3nm,0.1s						
DEL	Delary	4.92	258	*i* P	Pn	03 01 39.3	-0.7
BSD	Bornholm Skovb	5.03	241	*e*P	Pn	03 01 40.6	-0.9
BSD	Bornholm Skovb	5.03	241	*i* P	Pn	03 01 40.7	-0.7
BSD				*i* S	Sn	03 02 37.9	-2.2
BSD	Bornholm Skovb	5.03	241	*e*	Pn	03 01 39.9	-1.6
	baz=52,slow=12						
BSD				*i* P	Pn	03 01 40.8	-0.7
BSD				*i* S	Sn	03 02 38.0	-2.2
HFS	Hagfors	5.14	301	Pn	Pn	03 01 43.7	+0.6
	comp=Z,0.5nm,0.3s,baz=126,slow=14,SNR=33						
HFS				Sn	Sn	03 02 41.7	-1.2
	comp=Z,0.2nm,0.3s,baz=110,slow=23,SNR=2.0						
HFS				Lg	Lg	03 03 04.7	
	comp=Z,0.4nm,0.3s,baz=113,slow=30,SNR=3.1						
SUF	Sumiainen	5.24	18	*e*P	Pn	03 01 45.2	+0.9
VAF	Ylistaro	5.25	1	*e*P	Pn	03 01 45.5	+1.0
BORU	Boraas	5.25	272	*i* P	Pn	03 01 45.1	+0.6
ONAU	Onsala	5.73	270	*i* P	Pn	03 01 51.7	+0.5
TJOU	Tjoern	5.83	277	*e*P	Pn	03 01 52.7	+0.2
STRU	Stroemstad	6.10	286	*e*P	Pn	03 01 56.7	+0.5
STRU				*e*S	Sn	03 03 04.8	-1.7
NC602	NORSAR Array S	6.36	302	*e*P	Pn	03 01 59.5	-0.2
NC602				*e*S	Sn	03 03 11.6	-1.3
NC602				IAML		03 03 46.3	
	comp=Z,1.6nm,0.8s						
NB201	NORSAR Array S	6.59	304	*e*P	Pn	03 02 03.0	0.0
NB201				IAML		03 03 14.7	
	comp=Z,1.5nm,0.7s						
NB201				*e*S	Sn	03 03 16.5	-2.3
NOA	NORSAR Array B	6.62	304	Pn	Pn	03 02 03.6	+0.1
	comp=Z,0.0nm,0.3s,baz=116,slow=13,SNR=8.3						
NOA				Sn	Sn	03 03 20.2	+0.6
	comp=Z,0.0nm,0.3s,baz=229,slow=13,SNR=1.2						
NOA				Lg	Lg	03 03 58.3	
	comp=Z,0.0nm,0.3s,baz=130,slow=14,SNR=3.8						
NC303	NORSAR Array S	6.63	306	*e*P	Pn	03 02 03.8	+0.3
NC303				*e*S	Sn	03 03 17.9	-1.9
NC303				IAML		03 03 45.8	
	comp=Z,1.2nm,0.6s						
NAO01	NORSAR Array S	6.70	302	*e*P	Pn	03 02 03.9	-0.5
NAO01				*e*S	Sn	03 03 18.6	-2.7
NAO01				IAML		03 03 33.5	
	comp=Z,1.5nm,0.7s						
JOF	Joensuu	6.71	37	*e*P	Pn	03 02 04.3	-0.3
NBO00	NORSAR Array S	6.82	303	*e*P	Pn	03 02 05.5	-0.6
NBO00				*e*S	Sn	03 03 21.4	-2.9
NBO00				IAML		03 03 25.0	
	comp=Z,6.5nm,1.2s						
NC204	NORSAR Array S	6.92	305	*e*P	Pn	03 02 07.1	-0.5
NC204				IAML		03 03 16.0	
	comp=Z,1.3nm,0.7s						
NC204				*e*S	Sn	03 03 23.6	-3.4
KONO	Kongsberg	6.99	291	*e*P	Pn	03 02 08.0	-0.4
KONO				*e*S	Sn	03 03 24.8	-3.8
KONO				IAML		03 03 29.5	
	comp=Z,1.8nm,0.7s						
ARCES	ARCESS Array B	11.84	5	Pn	Pn	03 03 11.0	-3.7
	comp=Z,0.1nm,0.3s,baz=185,slow=14,SNR=7.9						

*IDC **17** 03:08:40.4±0.7,9.°88N×143.°55E,h0km,mb4.4/21, mb1 4.5/22,mb1mx4.3/37,mbtmp4.4/22,MS3.2/6, Ms1 3.2/6,ms1mx2.9/29,Error ellipse: s-maj=21.9km s-min=15.5km az=88.0*
*NEIC **17** 03:08:43.4±1.2,9.°8N±0.°1×143.°4E±0.°1,h17km±4km, mb4.6/37,Error ellipse: s-maj=21.6km s-min=15.0km az=109.0*

ISC 17 03:08:45.6±0.7,9.°76N±0.°10×143.°5E±0.°1,h35km,n86, σ1s17/84,mb4.5/44,MS3.5/8,Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	4.04	20		Pn	03 09 46.3	+1.2
JAY	Jayapura	12.50	193	LR	LR	03 16 15.3	
	comp=Z,187nm,18.2s,baz=291,slow=36						
SIJI	Sorong	16.10	230	Pn	P	03 12 31.2	-1.2
	baz=278,slow=22,SNR=1.5						
JOW	Kunigami	22.24	322	P	P	03 13 39.3	-0.2
	2.1nm,0.5s,baz=131,slow=11,SNR=7.8						
JOW	Kunigami	22.24	322	IAmb	IAmb	03 13 41.0	
	comp=Z,23nm,1.1s						
TGY	Tagaytay City	22.46	283	P	P	03 13 43.0	+1.0
	comp=Z,117nm,0.3s,baz=137,slow=11,SNR=4.1						
SSLB	Suanglung	25.62	306	P	P	03 14 11.1	-1.0
SSLB				IAmb	IAmb	03 14 16.1	
	comp=Z,9.0nm,0.8s						
TPUB	Ta-pu	25.65	304	P	P	03 14 11.3	-1.0
TPUB				IAmb	IAmb	03 14 11.9	
	comp=Z,15nm,1.0s						
JNU	Nakatsue	25.99	335	P	P	03 14 14.7	-0.6
	comp=Z,9.0nm,0.7s,baz=77,slow=3.9,SNR=8.0						
JNU	Nakatsue	25.99	335	P	P	03 14 14.7	-0.6
MJAR	Matsushiro Arr	27.09	351	P	P	03 14 23.0	-2.1
	comp=Z,2.4nm,0.5s,baz=160,slow=9.8,SNR=9.0						
MJAR				LR	LR	03 25 15.5	
	comp=Z,15nm,19.1s,baz=105,slow=37						
MAJO	Matsushiro	27.09	351	P	P	03 14 23.2	-1.9
MAT	Matsushiro	27.09	351	P	P	03 14 20.9	-4.2
MJB9	Matsu-Tunnel	27.09	351	P	P	03 14 24.1	-1.1
WRA	Warramunga Arr	30.85	197	P	P	03 14 59.4	+0.7
	comp=Z,2.8nm,0.5s,baz=19,slow=9.8,SNR=15						
WRA				LR	LR	03 27 31.7	
	comp=Z,89nm,18.6s,baz=240,slow=36						
KSRS	Korea Array	30.94	335	P	P	03 14 58.0	-1.3
	comp=Z,0.9nm,0.6s,baz=155,slow=9.8,SNR=3.0						
NJ2	Nanjing	31.80	318	*e*P	P	03 15 07.8	+0.9
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ASAR	Alice Springs	34.51	196	P	P	03 15 31.6	+0.9
	comp=Z,0.8nm,0.5s,baz=19,slow=10.0,SNR=16						
USRK	Ussuriysk Ar.	35.73	346	P	P	03 15 41.0	0.0
	comp=Z,5.0nm,0.8s,baz=178,slow=10,SNR=11						
BJI	Beijing	38.70	326	P	P	03 16 05.8	-0.4
BJI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SLVN	Son La	39.70	292	P	P	03 16 14.7	-0.3
XAN	Xi'an	39.83	313	P	P	03 16 17.8	+2.0
XAN				pP	pP	03 16 25.9	+1.3
XAN				sP	pwP	03 16 30.4	-0.5
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PBKT	Sadao Pong	41.87 284	P	P	03 16 33.3	+0.5
PBKT			IAmb	IAmb	03 16 35.0	
	comp=Z,10nm,1.0s						
HHC	Hu-ho-hao-te	41.88 323	*e*P	P	03 16 34.3	+1.6
HHC			pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC			pmax	pmax		
	comp=Z,55nm,5.1s						
CMAR	Chiang Mai Arr	43.95 286	P	P	03 16 50.7	+1.1
	comp=Z,4.1nm,0.8s,baz=92,slow=6.1,SNR=16						
LZH	Lanzhou	44.46 312	*e*P	P	03 16 53.1	-0.6
LZH			pP	pP	03 16 57.8	-4.8
LZH			sP	sP	03 17 00.5	-5.7
LZH			*e*PP	PP	03 18 38.3	+0.5
LZH			pmax	pmax		
	comp=Z,20nm,1.2s						
LZH			pmax	pmax		
	comp=Z,72nm,5.6s						
LZH			LR	LR		
	comp=N,330nm,13.5s						
LZH			LR	LR		
	comp=E,340nm,13.3s						
LZH			LR	LR		
	comp=Z,470nm,16.5s						
PETK	Petropavlovsk-	44.73 12	LR	LR	03 32 05.5	
	comp=Z,27nm,21.8s,baz=242,slow=32						
GTA	Gaotai	48.78 315	*e*P	P	03 17 24.6	-2.9
GTA			pP	pP	03 17 28.8	-7.6
GTA			sP	sP	03 17 32.1	-7.9
GTA			pmax	pmax		
	comp=Z,6.0nm,0.6s						
ULN	Ulaanbaatar	48.81 328	P	P	03 17 27.3	-0.2
ULN			IAmb	IAmb	03 17 29.9	
	comp=Z,12nm,1.6s						
SONM	Songino Array	49.13 328	P	P	03 17 30.3	+0.3
	comp=Z,1.1nm,0.5s,baz=151,slow=9.9,SNR=9.8						
SHL	Shillong	51.29 295	P	P	03 17 46.0	-0.8
TLY	Talaya	52.91 330	LR	LR	03 42 09.9	
	comp=Z,20nm,18.0s,baz=119,slow=38						
TLY	Talaya	52.91 330	P	P	03 17 58.6	+0.4
TLY			IAmb	IAmb	03 17 59.8	
	comp=Z,5.4nm,0.9s						
RAMN	Ramite	56.17 296	*e*P	P	03 18 22.1	-0.5
	comp=Z,5.0nm,0.5s						
GUN	Gumba	56.91 297	*e*P	P	03 18 27.7	-0.3
	comp=Z,16nm,0.6s						
PKI	Pulchoki	57.29 296	*e*P	P	03 18 30.0	-0.6
	comp=Z,5.4nm,0.5s						
DMN	Daman	57.56 296	*e*P	P	03 18 31.9	-0.6
	comp=Z,15nm,0.7s						
DANN	Dangsing	58.82 297	*e*P	P	03 18 40.9	-0.4
	comp=Z,21nm,0.6s						
WMQ	Urumqi	58.84 316	*e*P	P	03 18 43.0	+2.1
WMQ			pmax	pmax		
	comp=Z,14nm,0.8s						
WMQ			pmax	pmax		
	comp=Z,72nm,4.9s						
WMQ			LR	LR		
	comp=N,240nm,29.1s						
WMQ			LR	LR		
	comp=E,410nm,29.3s						
WMQ			LR	LR		
	comp=Z,370nm,28.8s						
KOLN	Koldanda	58.90 296	*e*P	P	03 18 41.2	-0.6
	comp=Z,9.2nm,0.5s						
PYUN	Piuthan	59.47 297	*e*P	P	03 18 45.2	-0.5
	comp=Z,21nm,0.6s						
BILL	Bilibino	60.14 10	P	P	03 18 49.5	+0.2
TIXI	Tiksi	62.49 355	P	P	03 19 05.2	0.0
TIXI			IAmb	IAmb	03 19 06.1	
	comp=Z,5.1nm,1.2s						
MK31	Makanchi Array	63.33 318	P	P	03 19 11.2	-0.1
MK31			IAmb	IAmb	03 19 12.3	
	comp=Z,5.5nm,1.2s						
MKAR	Makanchi Array	63.33 318	P	P	03 19 11.2	0.0
	comp=Z,4.0nm,0.9s,baz=97,slow=8.7,SNR=25						
MAKZ	Makanchi	63.54 318	P	P	03 19 12.7	0.0
ZAA0	Zalesovo Array	63.96 326	P	P	03 19 14.9	-0.4
ZALV	Zalesovo Beam	63.96 326	P	P	03 19 14.6	-0.7
	comp=Z,3.7nm,0.5s,baz=110,slow=5.8,SNR=19						
KSH	Kashi	66.51 309	P	P	03 19 34.8	+2.5
KSH			sP	pP	03 19 42.8	+1.3
KSH			PP	PP	03 22 01.9	+3.0
KSH			S	S	03 28 24.8	+3.9
KSH			pmax	pmax		
	comp=Z,22nm,1.0s						
KSH			pmax	pmax		
	comp=Z,110nm,5.2s						
KSH			LR	LR		
	comp=N,190nm,11.1s						
KSH			LR	LR		
	comp=E,60nm,10.2s						
KSH			LR	LR		
	comp=Z,330nm,4.5s						
KURK	Kurchatov	66.65 321	P	P	03 19 32.5	-0.2
KURBB	Kurchatov Arra	66.69 321	P	P	03 19 32.6	-0.3
	comp=Z,14nm,0.7s,baz=107,slow=6.4,SNR=109						
BOOM	Boomskoye usch	66.92 312	P	P	03 19 33.4	-1.5
BOOM			IAmb	IAmb	03 19 35.6	
	comp=Z,7.7nm,1.4s						
AAK	Ala-Archa	68.00 312	P	P	03 19 41.0	-0.7
NIL	Nilore	68.22 302	P	P	03 19 42.8	-0.3
ARSB	Arslanbob	68.98 310	P	P	03 19 47.9	+0.1
NRIK	Noril'sk	69.30 342	P	P	03 19 48.1	-0.9
	comp=Z,1.3nm,0.3s,baz=107,slow=6.0,SNR=6.5						
RC01	Rabbit Creek A	70.37 28	P	P	03 19 55.9	+0.1
BTK	Batken	70.52 309	P	P	03 19 57.1	-0.2
KTH	Kantishna Hill	70.56 26	P	P	03 19 57.5	+0.6
BPAW	Bear Paw Mtn.	70.70 25	P	P	03 19 58.3	+0.6
BPAW			IAmb	IAmb	03 20 58.2	
	comp=Z,7.3nm,1.6s						
PMR	Palmer	70.79 28	P	P	03 19 58.6	+0.3
KK31	Karatay Array	70.96 312	P	P	03 19 59.1	-0.7
KKAR	Karatay Array	70.96 312	P	P	03 19 59.4	-0.4
MLY	Manley	71.09 24	P	P	03 20 00.6	+0.5
MLY			IAmb	IAmb	03 20 01.9	
	comp=Z,4.6nm,1.0s						
SML	Sawmill	71.21 28	P	P	03 20 01.2	+0.3
SML			IAmb	IAmb	03 20 02.2	
	comp=Z,5.1nm,0.8s						
BVAR	Borovoye Array	72.09 323	P	P	03 20 06.1	-0.2
	comp=Z,11nm,0

s-maj=64.1km s-min=30.0km az=39.0
ISC 17 03:50:28.6±1.6,**26°08′S**±0′.1×**179°39′W**±0′.3,**h450**km,**n9**,
σ0**82**/9,**mb3.6**/3,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**12.50**	**191**	P	**P**	**03 53 12.9**	**+0.2**
	1.3nm,0.3s,baz=235,slow=3.1,SNR=9.3						
URZ				S	**S**	**03 55 27.7**	**-0.4**
	0.3nm,0.3s,baz=132,slow=22,SNR=1.6						
RPZ	**Rata Peaks**	**19.16**	**200**	P	**P**	**03 54 23.2**	**+1.1**
	1.4nm,0.3s,baz=340,slow=1.6,SNR=6.7						
ASAR	**Alice Springs**	**41.81**	**263**	P	**P**	**03 57 37.7**	**+0.1**
	0.9nm,0.4s,baz=90,slow=7.6,SNR=25						
WRA	**Warramunga Arr**	**42.38**	**268**	P	**P**	**03 57 41.5**	**-0.7**
	1.1nm,0.4s,baz=104,slow=7.8,SNR=20						
KSRS	**Korea Array**	**79.88**	**320**	P	**P**	**04 01 50.3**	**+1.0**
	0.8nm,0.5s,baz=140,slow=5.9,SNR=2.3						
NB2	**NORSAR Subarra1**	**44.14**	**351**	PKP	**PKPab**	**04 09 10.7**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=17,slow=3.1						
NOA	**NORSAR Array B**	**144.14**	**351**	PKP	PKPbc	04 09 09.8	-1.1
	comp=Z,1.5nm,0.8s,baz=16,slow=3.4,SNR=5.7						
AKASG	**Malin Array Be**	**146.74**	**326**	PKPbc	**PKPbc**	**04 09 17.9**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=55,slow=4.5,SNR=2.2						
BRTR	**Keskin Array B**	**148.85**	**304**	PKPbc	**PKPbc**	**04 09 24.3**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=72,slow=4.7,SNR=2.3						

*IDC **17** 04:01:05.3±1.0, 16°.95N×60°.19W, h0km, mb3.6/5,*
mb1 3.7/5, mb1mx3.4/36, mbtmp3.6/5, Error ellipse:
s-maj=30.8km s-min=15.4km az=128.0
*TRN **17** 04:01:07.8, 17°.07N×60°.30W, h20km, MD3.7*
ISC 17 04:01:05.5±1.8,**17°.04N**±0°.04×**60°.23W**±0°.05,**h2**km±11km,
n41,σ1°**49**/66,**mb3.7**/5,**Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H05N1	**Guadeloupe/Mar**	**1.07**	**228**	Pn	**Pn**	**04 01 28.1**	**+0.4**
H05N1				Sn	**Sn**	**04 01 41.8**	**-1.4**
	SNR=1446						
DEG	**La Desirade**	**1.08**	**228**	*e*P	**Pn**	**04 01 28.6**	**+0.9**
DEG				*e*S	**Sn**	**04 01 43.3**	**-0.1**
ABD	**La Joyeuse, An**	**1.33**	**245**	*e*P	**Pg**	**04 01 32.4**	**+1.3**
ABD				*e*S	**Sg**	**04 01 49.0**	**+0.7**
MAGL	**Barre de l'ile**	**1.48**	**223**	*e*P	**Pg**	**04 01 34.4**	**+0.4**
MAGL				*e*S	**Sg**	**04 01 53.3**	**0.0**
ANWB	**Willy Bob**	**1.61**	**293**	*e*P	**Pn**	**04 01 35.0**	**-0.1**
ANWB				*e*S	**Sn**	**04 01 54.8**	**-1.7**
CBE	**Ff, Capester**	**1.64**	**234**	*e*P	**Pg**	**04 01 37.0**	**+0.1**
CBE				*e*S	**Sg**	**04 01 58.1**	**-0.1**
CBE				*e*S	**Sb**	**04 01 59.4**	**+1.7**
DWS	**Wesley**	**1.80**	**215**	*e*P	**Pb**	**04 01 39.1**	**-0.1**
DWS				*e*S	**Sb**	**04 02 00.8**	**-1.4**
DWS				*e*S	**Sg**	**04 02 03.6**	**+0.3**
TDBA	**Terre de Bas,**	**1.80**	**229**	*e*P	**Pg**	**04 01 39.9**	**-0.1**
TDBA				*e*S	**Sb**	**04 02 02.0**	**-0.2**
MDPV	**Dominica, Penn**	**1.81**	**219**	*e*P	**Pg**	**04 01 40.3**	**-0.1**
MDPV				*e*S	**Sb**	**04 02 02.4**	**-0.3**
MDVC	**Dominica, Viel**	**1.81**	**219**	*e*P	**Pb**	**04 01 39.5**	**-0.1**
MDVC				*e*S	**Sb**	**04 02 01.6**	**-1.1**
MLYT	**Lee's Yard**	**1.90**	**261**	*e*P	**Pb**	**04 01 40.8**	**-0.3**
MLYT				*e*S	**Sn**	**04 02 03.4**	**-0.4**
MLYT				*e*S	**Sb**	**04 02 05.0**	**-0.3**
MDN	**Morne-Daniel**	**2.05**	**213**	*e*P	**Pb**	**04 01 42.3**	**-1.2**
NVDO	**Nevis, Disaste**	**2.29**	**272**	*e*P	**Pn**	**04 01 45.8**	**+1.4**
SVN	**Savane Anatole**	**2.37**	**203**	*e*P	**Pb**	**04 01 47.6**	**-1.4**
BAMF	**Morne Balai**	**2.38**	**202**	*e*P	**Pb**	**04 01 47.6**	**-1.7**
CXM	**Morne La Croix**	**2.40**	**202**	*e*P	**Pb**	**04 01 48.2**	**-1.3**
GBMF	**Grand Be**	**2.41**	**202**	*e*P	**Pb**	**04 01 47.6**	**-2.1**
PCM	**Pelee Case Pet**	**2.41**	**203**	*e*P	**Pb**	**04 01 48.0**	**-1.7**
SKI	**Saint Kitts**	**2.42**	**277**	*e*P	**Pn**	**04 01 47.5**	**+1.3**
SKI				*e*S	**Sn**	**04 02 15.8**	**-0.6**
PML	**Morne Lenard**	**2.43**	**202**	*e*P	**Pb**	**04 01 48.4**	**-1.7**
FDF	**Fort de France**	**2.46**	**201**	*e*P	**Pb**	**04 01 49.4**	**-1.2**
FDF				*e*S	**Sb**	**04 02 18.9**	**-2.5**
LPMF	**Morne Lapointe**	**2.55**	**196**	*e*P	**Pn**	**04 01 49.7**	**+1.7**
ZAM	**Aeronautique**	**2.57**	**197**	*e*P	**Pn**	**04 01 49.7**	**+1.4**
BIM	**Bigot**	**2.64**	**198**	*e*P	**Pb**	**04 01 51.9**	**-1.7**
BIM				*e*S	**Sb**	**04 02 25.1**	**-1.4**
MPOM	**Morne Pois Mar**	**2.65**	**193**	*e*P	**Pn**	**04 01 51.2**	**+1.8**
MPOM				*e*S	**Sb**	**04 02 23.9**	**-3.1**
H05S1	**Guadeloupe/Mar**	**2.67**	**193**	Pn	**Pn**	**04 01 48.9**	**-0.7**
H05S1				Sn	**Sn**	**04 02 21.6**	**-0.9**
SABA	**Saba**	**2.93**	**282**	*e*P	**Pn**	**04 01 54.2**	**+0.9**
SABA				*e*S	**Sn**	**04 02 28.7**	**-0.5**
SLBI	**Saint Lucia, B**	**3.09**	**194**	*e*P	**Pn**	**04 01 57.2**	**+1.9**
SLBI				*e*S	**Sn**	**04 02 33.2**	**+0.3**
SLAC	**Saint Lucia, A**	**3.19**	**192**	*e*P	**Pn**	**04 01 58.7**	**+1.9**
SLAC				*e*S	**Sn**	**04 02 35.7**	**+0.1**
SLB	**Belfond**	**3.29**	**194**	*e*P	**Pn**	**04 01 59.2**	**+0.9**
SLB				*e*S	**Sn**	**04 02 39.8**	**+1.7**
SSV	**Crater Summit**	**3.81**	**194**	*e*P	**Pb**	**04 02 09.3**	**-4.3**
SVV	**Soufriere Volc**	**3.82**	**195**	*e*P	**Pn**	**04 02 08.0**	**+2.5**
SVCV	**St. Vincent, C**	**3.85**	**193**	*e*P	**Pn**	**04 02 08.3**	**+2.4**
SVCV				*e*S	**Sn**	**04 02 52.9**	**+1.1**
SVB	**Belmont**	**3.88**	**195**	*e*P	**Pn**	**04 02 09.6**	**+3.3**
SVB				*e*S	**Sn**	**04 02 54.6**	**+2.1**
AOPR	**Arecibo Observ**	**6.35**	**283**	*e*P	**Pn**	**04 02 41.0**	**+0.6**
AOPR	**Arecibo Observ**	**6.35**	**283**	*e*S	**Sn**	**04 03 50.9**	**-2.7**
SCHQ	**Schefferville**	**38.06**	**354**	P	**P**	**04 08 27.1**	**+1.7**
	1.0nm,0.6s,baz=190,slow=11,SNR=4.4						
YKA	**Yellowknife Ar**	**58.89**	**334**	P	**P**	**04 11 05.9**	**+0.1**
	0.1nm,0.5s,baz=116,slow=7.9,SNR=3.7						
TORD	**Torodi Ar. Bea**	**59.71**	**85**	P	**P**	**04 11 12.1**	**-0.2**
	0.2nm,0.5s,baz=288,slow=8.0,SNR=4.2						
FINES	**FINESS Array B**	**73.44**	**30**	P	**P**	**04 12 39.4**	**+0.1**
	1.1nm,0.8s,baz=259,slow=1.4,SNR=4.6						
BRTR	**Keskin Array B**	**82.20**	**51**	P	**P**	**04 13 28.4**	**-0.4**
	0.4nm,0.7s,baz=285,slow=5.7,SNR=3.6						

*GCG **17** 05:11:39.8±0.7, 11°.72N×88°.21W, h94km±114km, MD4.4*
*INET **17** 05:11:43.9, 12°.55N×87°.85W, h58km, ML5.0*
*IDC **17** 05:11:44.1±0.6, 12°.85N×87°.47W, h76km±5km, mb3.9/20,*
mb1 4.1/25, mb1mx4.0/41, mbtmp4.2/25, MS3.1/10,
Ms1 3.1/10, ms1mx2.9/33, Error ellipse: s-maj=18.8km
s-min=7.8km az=49.0
*SNET **17** 05:11:44.4±0.8, 12°.55N×87°.93W, h32km±38km, ML4.6*
*UCR **17** 05:11:44.0±1.7, 12°.62N×87°.81W, h64km±17km, ML4.5,*
MW4.9, mb4.5(NEIC)
*NEIC **17** 05:11:44±2.1, 12°.56N±0°.06×87°.80W±0°.05, h79km±4km,*
mb4.5/197, Error ellipse: s-maj=9.3km s-min=5.9km
az=211.0
ISC 17 05:11:43.6±0.6,**12°.62N**±0°.05×**87°.79W**±0°.04,**h75**km±4km,
n500,σ1°**22**/488,**mb4.5**/101,**6C-12D**,**Near coast of**
Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCND	**La Caada**	**0.69**	**351**	*i*P	**Pn**	**05 11 58.7**	**0.0**
LCND				*e*S	**Sn**	**05 12 10.4**	**+0.4**
LCND				IAML		05 12 12.0	
	comp=Z,60μm,0.3s						
LCND	**La Caada**	**0.69**	**351**	*i*P	**Pn**	**05 11 58.7**	**0.0**
LCND				*e*S	**Sn**	**05 12 10.4**	**+0.4**
LCND				IAML		05 12 12.0	
	comp=Z,60μm,0.3s						
CRIN	**San Cristobal**	**0.72**	**84**	*e*P	**Pn**	**05 11 59.5**	**+0.3**
CRIN	**San Cristobal**	**0.72**	**84**		**Pn**	**05 11 59.7**	**+0.5**
JUCU	**Jucuarn**	**0.77**	**324**	*e*P	**Pn**	**05 11 58.9**	**-0.9**
JUCU				*e*S	**Sn**	**05 12 10.8**	**-1.0**
JUCU				IAML		05 12 13.7	
	comp=Z,26μm,0.4s						
JUCU	**Jucuarn**	**0.77**	**324**	*e*P	**Pn**	**05 11 58.9**	**-0.9**
JUCU				*e*S	**Sn**	**05 12 10.8**	**-1.0**
JUCU				IAML		05 12 13.7	
	comp=Z,26μm,0.4s						
BLLM	**Bellamira**	**0.93**	**332**	*i* P	**Pn**	**05 12 01.4**	**-0.1**
BLLM	**Bellamira**	**0.93**	**332**	*i* P	**Pn**	**05 12 01.4**	**-0.1**
LCY	**Lacayo**	**0.94**	**328**	*e*P	**Pn**	**05 12 01.6**	**-0.1**
LCY	**Lacayo**	**0.94**	**328**	*e*P	**Pn**	**05 12 01.6**	**-0.1**
PACA	**Pacayal**	**0.99**	**328**	*i*P	**Pn**	**05 12 02.4**	**0.0**
PACA				*e*S	**Sn**	**05 12 16.6**	**+0.2**
PACA	**Pacayal**	**0.99**	**328**	*i*P	**Pn**	**05 12 02.4**	**0.0**
PACA				*e*S	**Sn**	**05 12 16.6**	**+0.2**
ALJI	**Alcalda de J**	**1.04**	**312**	*i*P	**Pn**	**05 12 02.2**	**-0.6**
ALJI				IAML		05 12 16.5	
	comp=Z,15μm,0.2s						
ALJI	**Alcalda de J**	**1.04**	**312**	*i*P	**Pn**	**05 12 02.2**	**-0.6**
ALJI				IAML		05 12 16.5	
	comp=Z,15μm,0.2s						
FAGO	**Alcalda de S**	**1.11**	**344**	*i*P	**Pn**	**05 12 04.0**	**+0.2**
FAGO	**Alcalda de S**	**1.11**	**344**	*i*P	**Pn**	**05 12 04.0**	**+0.2**
TECA	**Tecapa**	**1.11**	**321**	*e*P	**Pn**	**05 12 03.7**	**-0.2**
TECA	**Tecapa**	**1.11**	**321**	*e*P	**Pn**	**05 12 03.7**	**-0.2**
COEB	**Comit de Eme**	**1.13**	**320**	*e*P	**Pn**	**05 12 03.8**	**-0.3**
COEB				IAML		05 12 29.1	
	comp=Z,7μm,0.4s						
COEB	**Comit de Eme**	**1.13**	**320**	*e*P	**Pn**	**05 12 03.8**	**-0.3**
COEB				IAML		05 12 29.1	
	comp=Z,7μm,0.4s						
COEG	**Centro de Oper**	**1.46**	**313**	*e*P	**Pn**	**05 12 07.9**	**-0.4**
COEG				IAML		05 12 30.5	
	comp=Z,7μm,0.4s						
COEG	**Centro de Oper**	**1.46**	**313**	*e*P	**Pn**	**05 12 07.9**	**-0.4**
COEG				IAML		05 12 30.5	
	comp=Z,7μm,0.4s						
ESTN	**Estel**	**1.46**	**71**	*e*P	**Pn**	**05 12 08.8**	**+0.5**
ESTN	**Estel**	**1.46**	**71**	Pn	**Pn**	**05 12 09.1**	**+0.8**
ESTN				Sn	**Sn**	**05 12 28.1**	**+1.2**
TGUH	**Tegucigalpa,Un**	**1.51**	**19**	Pn	**Pn**	**05 12 10.1**	**+1.2**
TGUH				Sn	**Sn**	**05 12 29.9**	**+1.7**
LFRS	**El Faro**	**1.59**	**309**	*i* P	**Pn**	**05 12 09.8**	**-0.2**
LFRS	**El Faro**	**1.59**	**309**	*i* P	**Pn**	**05 12 09.8**	**-0.2**
LBRS	**Las Brisas**	**1.65**	**312**	*e*P	**Pn**	**05 12 11.3**	**+0.5**
LBRS	**Las Brisas**	**1.65**	**312**	*e*P	**Pn**	**05 12 11.3**	**+0.5**
AEIL	**Aeropuerto Ilo**	**1.68**	**310**	*e*P	**Pn**	**05 12 11.6**	**+0.5**
AEIL				IAML		05 12 41.8	
	comp=Z,10μm,0.4s						
AEIL	**Aeropuerto Ilo**	**1.68**	**310**	*e*P	**Pn**	**05 12 11.6**	**+0.5**
AEIL				IAML		05 12 41.8	
	comp=Z,10μm,0.4s						
MASN	**Masaya**	**1.72**	**111**	*e*P	**Pn**	**05 12 10.8**	**-0.8**
UDBS	**Universidad Do**	**1.72**	**309**	*e*P	**Pn**	**05 12 12.0**	**+0.3**
UDBS	**Universidad Do**	**1.72**	**309**	*e*P	**Pn**	**05 12 12.0**	**+0.3**
LALI	**Alcalda de L**	**1.73**	**300**	*i*P	**Pn**	**05 12 11.1**	**-0.6**
LALI	**Alcalda de L**	**1.73**	**300**	*i*P	**Pn**	**05 12 11.1**	**-0.6**
SNET	**Serv Nac Est T**	**1.76**	**307**	*i*P	**Pn**	**05 12 12.3**	**+0.1**
SNET				*e*S	**Sn**	**05 12 33.3**	**-0.7**
SNET				IAML		05 12 38.0	
	comp=Z,4μm,0.2s						
SNET	**Serv Nac Est T**	**1.76**	**307**		**Pn**	**05 12 12.1**	**-0.1**
SNET				Sn	**Sn**	**05 12 34.0**	**0.0**
SNET	**Serv Nac Est T**	**1.76**	**307**	*i*P	**Pn**	**05 12 12.3**	**+0.1**
SNET				*e*S	**Sn**	**05 12 33.3**	**-0.7**
SNET				IAML		05 12 38.0	
	comp=Z,4μm,0.2s						
UEES	**Universidad Ev**	**1.78**	**308**	*e*P	**Pn**	**05 12 12.9**	**+0.3**
UEES				IAML		05 12 37.1	
	comp=Z,4μm,0.2s						
UEES	**Universidad Ev**	**1.78**	**308**	*e*P	**Pn**	**05 12 12.9**	**+0.3**
UEES				IAML		05 12 37.1	
	comp=Z,4μm,0.2s						
BOQS	**Boqueron**	**1.83**	**307**	*e*P	**Pn**	**05 12 13.4**	**+0.2**
BOQS	**Boqueron**	**1.83**	**307**	*e*P	**Pn**	**05 12 13.4**	**+0.2**
MATN	**Matagalpa**	**1.84**	**80**	*e*P	**Pn**	**05 12 13.7**	**+0.4**
MATN	**Matagalpa**	**1.84**	**80**		**Pn**	**05 12 13.8**	**+0.5**
MATN				Sn	**Sn**	**05 12 36.8**	**+1.0**
CEVE	**Cerro Verde**	**2.15**	**304**	*e*P	**Pn**	**05 12 18.1**	**+0.4**
CEVE	**Cerro Verde**	**2.15**	**304**	*e*P	**Pn**	**05 12 18.1**	**+0.4**
RTR	**El Retiro**	**2.21**	**305**	*i*P	**Pn**	**05 12 19.0**	**+0.6**
RTR	**El Retiro**	**2.21**	**305**	*i*P	**Pn**	**05 12 19.0**	**+0.6**
MTO3	**Montecristo**	**2.34**	**319**	*e*P	**Pn**	**05 12 20.6**	**+0.6**
MTO3	**Montecristo**	**2.34**	**319**	*e*P	**Pn**	**05 12 20.6**	**+0.6**
ESQI	**Esquipulas**	**2.45**	**322**	*e*P	**Pn**	**05 12 22.5**	**+1.0**
ACON	**Acoyapa**	**2.63**	**104**	*e*P	**Pn**	**05 12 23.5**	**-0.4**
ACON	**Acoyapa**	**2.63**	**104**		**Pn**	**05 12 23.6**	**-0.3**
ACON				Sn	**Sn**	**05 12 54.6**	**-0.3**
GBS3	**Finca Las Img**	**2.93**	**128**	*e*P	**Pn**	**05 12 28.6**	**+0.7**
GB1A	**Boringuen Arri**	**2.95**	**127**	*e*P	**Pn**	**05 12 29.4**	**+1.1**
LAPC	**Finca la Perla**	**2.95**	**128**	*e*P	**Pn**	**05 12 28.9**	**+0.7**
BUEV	**Buena Vista**	**2.95**	**128**	*e*P	**Pn**	**05 12 29.4**	**+1.1**
BUAI	**Buenos Aires**	**2.96**	**126**	*e*P	**Pn**	**05 12 28.4**	**0.0**
IXG	**Ixpaco**	**3.01**	**301**	*e*P	**Pn**	**05 12 30.1**	**+1.0**
GPS3	**Bodega del ICE**	**3.01**	**128**	*e*P	**Pn**	**05 12 30.4**	**+1.3**
MRL	**Marmol**	**3.06**	**323**	*e*P	Pn	05 12 35.4	+5.5
MRL				*e*S	Sn	05 13 18.8	+13
NBG	**Las Nubes**	**3.16**	**308**	*e*P	**Pn**	**05 12 33.5**	**+2.2**
NBG				*e*S	**Sn**	**05 13 16.3**	**+8.2**
HORNC	**Hornillas**	**3.18**	**126**	*e*P	**Pn**	**05 12 32.3**	**+0.9**
CUI	**Cuipilapa**	**3.23**	**127**	*e*P	**Pn**	**05 12 33.0**	**+1.0**
GUAI	**GUAI**	**3.23**	**136**	*e*P	**Pn**	**05 12 32.6**	**+0.6**
PCG	**Pacaya**	**3.26**	**303**	*e*P	**Pn**	**05 12 34.6**	**+2.0**
PCG				*e*S	**Sn**	**05 13 16.4**	**+6.0**
PTEN	**Parque Tenorio**	**3.33**	**124**	*e*P	**Pn**	**05 12 34.0**	**+0.5**
ACAL	**Aguas Claras**	**3.34**	**126**	*e*P	**Pn**	**05 12 34.2**	**+0.6**
ESPN	**Las Esperanzas**	**3.43**	**97**		**Pn**	**05 12 35.3**	**+0.6**
FUG	**Fuego 3**	**3.48**	**302**	*e*P	**Pn**	**05 12 38.4**	**+2.8**
FUG				*e*S	**Sn**	**05 13 19.4**	**+3.7**
APG	**El Apazote**	**3.52**	**313**	P	**Pn**	**05 12 37.9**	**+1.8**
	comp=Z,3.7nm,0.3s,baz=72,slow=19,SNR=8.7						
JTS	**Las Juntas de**	**3.62**	**130**	P	**Pn**	**05 12 37.6**	**+0.3**
	comp=Z,5.5nm,0.3s,baz=64,slow=2.0,SNR=72						
JTS				S	**Sn**	**05 13 19.4**	**+0.5**
	comp=Z,21nm,0.3s,baz=352,slow=18,SNR=1.4						
JTS				LR	LR	05 14 02.7	
	comp=Z,105nm,21.9s,baz=0.0,slow=39						
JTS	**Las Juntas de**	**3.62**	**130**		**Pn**	**05 12 37.5**	**+0.2**
CEDE	**Laguna Cedeo**	**3.69**	**125**	*e*P	**Pn**	**05 12 41.0**	**+2.6**
ARE1	**Arenal 1**	**3.69**	**125**	*e*P	**Pn**	**05 12 40.3**	**+1.9**
STG3	**Santiaguito 3,**	**4.22**	**300**	*e*P	**Pn**	**05 12 47.6**	**+1.9**
STG3				*e*S	**Sn**	**05 13 37.7**	**+3.8**
HDC	**Heredia**	**4.45**	**126**	Pn	**Pn**	**05 12 49.8**	**+1.1**
EDLM	**Las Mercedes**	**5.29**	**128**	*e*P	**Pn**	**05 13 03.1**	**+2.8**
CCIG	**Comitan**	**5.57**	**311**		**Pn**	**05 13 06.4**	**+2.4**
EDPN	**Palmar Norte**	**5.60**	**130**	*e*P	**Pn**	**05 13 07.1**	**+2.8**
EDBA	**Buenos Aires**	**5.61**	**127**	*e*P	**Pn**	**05 13 06.0**	**+1.5**
BRU2	**Volcan**	**6.29**	**127**	*e*P	**Pn**	**05 13 15.5**	**+1.6**
TEIG	**Tepich**	**7.57**	**356**	*e*P	**Pn**	**05 13 33.9**	**+2.6**
TEIG	**Tepich**	**7.57**	**356**	Pn	**Pn**	**05 13 34.5**	**+3.3**
CMIG	**Matias Romero**	**8.17**	**304**	P	**Pn**	**05 13 40.8**	**+1.3**
	comp=Z,2.7nm,0.3s,baz=142,slow=7.4,SNR=17						
CMIG				S	**Sn**	**05 15 04.9**	**-5.4**
	comp=Z,1.3nm,0.3s,baz=130,slow=17,SNR=2.1						
BCIP	**Isla Barro Col**	**8.53**	**113**	*e*P	**Pn**	**05 13 47.1**	**+2.8**
BCIP	**Isla Barro Col**	**8.53**	**113**	Pn	**Pn**	**05 13 45.6**	**+1.3**
MTDJ	**Mount Denham**	**11.34**	**59**	Pn	**Pn**	**05 14 24.5**	**+1.6**
TLIG	**Tlapa**	**11.51**	**297**		**Pn**	**05 14 25.9**	**+0.8**
CBOC	**Ciudad Bolivar**	**13.42**	**119**	*e*P	**P**	**05 14 59.0**	**+1.2**
HELC	**Santa Helena**	**13.67**	**117**	*e*P	**P**	**05 14 59.0**	**-1.8**
SMLC	**San Martn de**	**14.00**	**104**	*e*P	**Pn**	**05 15 00.8**	**+2.2**
GTBY	**Guantanamo Bay**	**14.16**	**58**	P	**P**	**05 15 06.2**	**+0.3**
YOTC	**Yotoco, Valle**	**14.20**	**126**	*e*P	**Pn**	**05 15 00.1**	**-1.1**
GUY2C	**Guyana, Caldas**	**14.30**	**120**	*e*P	**P**	**05 15 06.2**	**-1.7**
PTBC	**PUERTO BERRIO,**	**14.46**	**113**	*e*P	**P**	**05 15 09.1**	**-0.2**
NORC	**Norcasia**	**14.55**	**118**	*e*P	**Pn**	**05 15 02.6**	**-3.2**
BBLB	**Balboa, Cauca**	**14.83**	**134**	*e*P	**P**	**05 15 16.1**	**+2.6**
OCAC	**Cacana**	**14.88**	**106**	*e*P	**P**	**05 15 14.0**	**0.0**
ORTC	**Ortega, Tolima**	**15.12**	**124**	*e*P	**Pn**	**05 15 13.4**	**+0.3**
SPBC	**San Pablo de B**	**15.20**	**116**	*e*P	**P**	**05 15 17.0**	**-0.5**
SOTA	**Rioblanco**	**15.20**	**132**	*e*P	**P**	**05 15 20.6**	**+2.6**
PCON	**Cinco Dias**	**15.22**	**131**	*e*P	**P**	**05 15 17.9**	**-0.4**
GCUF	**Volcan Galeras**	**15.34**	**137**	*e*P	**P**	**05 15 22.4**	**+2.9**
CRUC	**La Cruz**	**15.36**	**135**	*e*P	**P**	**05 15 21.3**	**+1.7**
ROSC	**El Rosal**	**15.38**	**119**	P	**Pn**	**05 15 16.5**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=74,slow=23,SNR=2.2						
ROSC				LR	LR	05 22 41.1	
	comp=Z,32nm,20.4s,baz=9.0,slow=43						
URIC	**Uribia, Colomb**	**15.47**	**92**	P	**P**	**05 15 20.8**	**+0.4**
PRAC	**Prado**	**15.53**	**124**	*e*P	**Pn**	**05 15 19.7**	**+1.4**
PAMC	**Pamplona, Colo**	**15.75**	**108**	*e*P	**Pn**	**05 15 22.4**	**+0.8**
RUSC	**La Rusia**	**15.97**	**113**	*e*P	**P**	**05 15 26.9**	**+0.4**
CHIC	**Chingaza**	**16.00**	**119**	*e*P	**P**	**05 15 26.9**	**+0.2**
DWPF	**Disney Wildern**	**16.51**	**20**	P	**P**	**05 15 33.7**	**+1.9**
	baz=202						
SDV	**Santo Domingo**	**17.25**	**101**	P	**Pn**	**05 15 37.6**	**-2.3**
	comp=Z,0.7nm,0.3s,baz=272,slow=5.6,SNR=13						
SDV				LR	LR	05 22 37.7	
	comp=Z,74nm,20.6s,baz=276,slow=38						
SDV	**Santo Domingo**	**17.25**	**101**	*e*P	**Pn**	**05 15 38.6**	**-1.3**
SDV	**Santo Domingo**	**17.25**	**101**	P	**Pn**	**05 15 39.5**	**-0.4**
344A	**Westbrook Farm**	**18.93**	**352**	P	**Pn**	**05 16 00.8**	**+0.9**
344A				IAmb	IAmb	05 16 03.0	
	comp=Z,25nm,0.9s						
352A	**Blakely**	**18.95**	**8**	P	**Pn**	**05 16 02.5**	**+2.5**
352A				IAmb	IAmb	05 16 04.2	
	comp=Z,27nm,0.9s						
833A	**Chaparral WMA,**	**19.01**	**327**	P	**Pn**	**05 16 01.3**	**+0.4**
	baz=143						
TIGA	**Tifton**	**19.12**	**11**	P	**Pn**	**05 16 02.9**	**+0.7**
	baz=193,SNR=6.1						
TIGA	**Tifton**	**19.12**	**11**	P	**Pn**	**05 16 04.2**	**+2.1**
255A	**Hazlehurst**	**19.82**	**13**	P	**P**	**05 16 09.5**	**+1.3**
255A				IAmb	IAmb	05 16 15.2	
	comp=Z,34nm,1.1s						
152A	**Waverly Hall**	**20.15**	**8**	P	Pn	05 16 15.2	+1.0
152A				IAmb	IAmb	05 16 17.5	
	comp=Z,18nm,0.6s						
LRAL	**Lakeview Retre**	**20.33**	**2**	P	Pn	05 16 16.3	-0.1
	baz=182,SNR=6.0						
154A	**Montrose**	**20.35**	**11**	P	Pn	05 16 16.6	0.0
Z50A	**Ashland**	**20.61**	**4**	P	Pn	05 16 19.7	+0.1
	baz=185						
Z51A	**Franklin**	**20.74**	**6**	P	**P**	**05 16 20.5**	**+2.4**
Z51A				IAmb	IAmb	05 16 23.2	
	comp=Z,14nm,0.8s						
157A	**Early Branch**	**20.91**	**16**	P	**P**	**05 16 22.3**	**+2.4**
	baz=199						
JCT	**Junction City**	**20.96**	**330**	P	**P**	**05 16 21.3**	**+0.7**
Z41A	**Richland Creek**	**21.05**	**348**	P	**P**	**05 16 23.3**	**+2.0**
	baz=166						
GOGA	**Godfrey**	**21.07**	**10**	P	**P**	**05 16 24.2**	**+2.6**
	baz=192,SNR=12						
OBIP	**Obispado Ponce**	**21.12**	**73**	P	**P**	**05 16 22.4**	**+0.1**
OBIP				IAmb	IAmb	05 16 33.6	
	comp=Z,30nm,1.4s						
Y49A	**Blount Mountai**	**21.18**	**3**	IAmb	IAmb	05 16 25.1	
	comp=Z,11nm,0.6s						
Y52A	**Lilburn**	**21.41**	**9**	P	**P**	**05 16 27.2**	**+1.9**
	baz=190,SNR=9.7						
Y52A	**Lilburn**	**21.41**	**9**	IAmb	IAmb	05 16 29.2	
	comp=Z,19nm,0.6s						
WLAR	**White Oak Lake**	**21.52**	**348**	IAmb	IAmb	05 16 30.7	
	comp=Z,26nm,1.1s						
SJG	**San Juan**	**21.55**	**73**	P	**P**	**05 16 22.2**	**-4.8**
	comp=Z,23nm,0.2s,baz=333,slow=18,SNR=12						
GCPR	**Guaynabo City**	**21.66**	**72**	P	**P**	**05 16 28.5**	**+0.4**
GCPR				IAmb	IAmb	05 16 42.3	
	comp=Z,15nm,1.0s						
OXF	**Oxford**	**21.84**	**356**	P	**P**	**05 16 31.8**	**+2.0**
	baz=176						
OXF	**Oxford**	**21.84**	**356**	P	**P**	**05 16 30.4**	**+0.5**
OXF				IAmb	IAmb	05 16 32.1	
	comp=Z,33nm,1.4s						
HUMP	**Col San Antoni**	**21.84**	**73**	P	**P**	**05 16 31.4**	**+1.4**
HUMP				IAmb	IAmb	05 16 32.5	
	comp=Z,17nm,1.0s						
**Y55A

WMOK	Wichita Mounta	24.17	337	P		P		05 16 53.4	+0.5
	baz=153								
HHAR	Hobbs	24.20	348	P		P		05 16 52.8	-0.2
V57A	Coltrane Farms	24.26	16	P		P		05 16 54.0	+0.4
	baz=199,SNR=5.0								
T47A	Sharon Grove	24.27	1	P		P		05 16 53.7	0.0
T47A				IAmb		IAmb		05 16 54.5	
	comp=Z,19nm,0.7s								
TUL1	Leonard	24.29	344	P		P		05 16 54.3	+0.4
	baz=161,SNR=7.1								
TUL1	Leonard	24.29	344	IAmb		IAmb		05 16 57.5	
	comp=Z,13nm,0.8s								
V58A	Windy Hill, Pi	24.36	17	P		P		05 16 55.5	+0.9
	baz=201,SNR=6.1								
U54A	Nelsons Funny	24.39	12	P		P		05 16 55.8	+0.9
	baz=194								
U54A	Nelsons Funny	24.39	12	P		P		05 16 55.7	+0.9
CLNB	Carlsbad	24.50	326	P		P		05 16 57.0	+1.0
U55A	TA2, Sparta	24.54	13	P		P		05 16 57.2	+1.0
	baz=196								
U56A	King	24.54	15	P		P		05 16 57.5	+1.3
	baz=198								
U56A	King	24.54	15	P		P		05 16 56.5	+0.3
U56A				IAmb		IAmb		05 17 00.5	
	comp=Z,17nm,1.1s								
V59A	Middlesex	24.60	19	P		P		05 16 57.8	+1.2
	baz=203								
T53A	Wise	24.71	10	P		P		05 16 58.5	+0.7
	baz=192								
U57A	Blanch	24.90	16	P		P		05 17 00.2	+0.8
	baz=200								
V60A	Jim Taylor Roa	24.92	21	P		P		05 16 59.7	+0.1
	baz=205								
MNTX	Cornudas Mount	24.95	322	P		P		05 16 59.8	-0.2
	baz=136,SNR=9.2								
MNTX	Cornudas Mount	24.95	322	P		P		05 17 00.4	+0.4
T54A	Tazewell	24.96	12	P		P		05 17 00.5	+0.4
	baz=194								
S44A	Carbondale	25.00	357	P		P		05 17 00.5	+0.2
SIUC	Southern Illin	25.02	357	P		P		05 17 00.2	-0.3
SIUC				IAmb		IAmb		05 17 01.3	
	comp=Z,14nm,0.8s								
U58A	Oxford	25.09	18	P		P		05 17 01.7	+0.6
	baz=202								
T55A	Pulaski	25.18	13	P		P		05 17 02.9	+0.8
	baz=196								
V61A	Roper	25.19	22	P		P		05 17 02.5	+0.4
	baz=206								
S51A	Beattyville	25.19	8	P		P		05 17 02.9	+0.8
S51A				IAmb		IAmb		05 17 05.6	
	comp=Z,6.6nm,0.6s								
MSTX	Muleshoe	25.25	330	P		P		05 17 03.4	+0.5
	baz=144								
MSTX	Muleshoe	25.25	330	IAmb		IAmb		05 17 04.0	
	comp=Z,21nm,0.8s								
T56A	Rocky Mt	25.28	15	P		P		05 17 03.8	+0.9
	baz=198								
U59A	Littleton	25.28	19	P		P		05 17 03.7	+0.8
	baz=203								
BLA	Blacksburg	25.36	14	P		P		05 17 04.8	+1.1
	baz=197								
S39A	Bolivar	25.45	350	P		P		05 17 04.6	+0.2
S39A				IAmb		IAmb		05 17 05.1	
	comp=Z,11nm,0.6s								
T57A	Hurt	25.45	16	P		P		05 17 05.3	+0.8
	baz=200								
T57A	Hurt	25.45	16	P		P		05 17 05.7	+1.3
T57A				IAmb		IAmb		05 17 06.4	
	comp=Z,11nm,0.9s								
CCM	Cathedral Cave	25.51	354	P		P		05 17 04.9	-0.1
	baz=172								
CCM	Cathedral Cave	25.51	354	P		P		05 17 05.3	+0.3
CCM				IAmb		IAmb		05 17 05.8	
	comp=Z,9.6nm,0.7s								
WCI	Wyandotte Cave	25.54	3	P		P		05 17 04.9	-0.3
	baz=183								
WCI	Wyandotte Cave	25.54	3	P		P		05 17 05.6	+0.4
WCI				IAmb		IAmb		05 17 07.4	
	comp=Z,16nm,0.8s								
U60A	Pendleton	25.60	20	P		P		05 17 05.6	-0.1
	baz=204								
T58A	Grand View Acr	25.60	17	P		P		05 17 06.0	+0.2
	baz=201								
R49A	Shelbyville	25.67	5	P		P		05 17 06.5	+0.1
R49A				IAmb		IAmb		05 17 08.1	
	comp=Z,23nm,1.4s								
U61A	Possum Corner	25.72	21	P		P		05 17 06.5	-0.4
	baz=206								
S54A	Dingess, Beckl	25.73	12	P		P		05 17 07.6	+0.6
	baz=195								
R40A	Maddies Statio	25.87	352	P		P		05 17 08.0	-0.3
R40A				IAmb		IAmb		05 17 08.5	
	comp=Z,7.7nm,0.6s								
S55A	Lewisburg	25.88	13	P		P		05 17 09.3	+0.9
	baz=196								
T59A	Double "B" Far	25.93	19	P		P		05 17 09.5	+0.8
	baz=203								
R53A	Hurricane	26.12	10	P		P		05 17 11.3	+0.7
	baz=193								
R53A	Hurricane	26.12	10	P		P		05 17 11.2	+0.7
R53A				IAmb		IAmb		05 17 29.6	
	comp=Z,11nm,1.0s								
Q44A	Meyer Farm, Va	26.20	358	IAmb		IAmb		05 17 11.6	
	comp=Z,11nm,0.7s								
R55A	Marlinton	26.45	14	P		P		05 17 14.1	+0.5
	baz=197								
R55A	Marlinton	26.45	14	P		P		05 17 15.1	+1.6
R55A				IAmb		IAmb		05 17 17.8	
	comp=Z,11nm,0.9s								
Q51A	Peebles	26.59	8	P		P		05 17 15.2	+0.4
	baz=190,SNR=7.1								
Q51A	Peebles	26.59	8	P		P		05 17 15.6	+0.8
Q51A				IAmb		IAmb		05 17 17.0	
	comp=Z,16nm,0.7s								
Q52A	Bidwell	26.69	10	P		P		05 17 16.0	+0.5
	baz=192								
Q53A	Leroy	26.71	11	P		P		05 17 16.7	+0.9
	baz=194								
S59A	Mechanicsville	26.73	19	P		P		05 17 16.8	+0.8
	baz=203								
R57A	Stanardsville	26.87	16	P		P		05 17 18.1	+0.9
	baz=200								
S60A	Water View	26.89	20	P		P		05 17 18.0	+0.7
	baz=204								
P49A	Miami Univ. Ec	26.94	5	P		P		05 17 17.1	-0.8
	baz=187								
Q54A	Coxs Mills	26.97	12	P		P		05 17 19.2	+1.1
	baz=195								
Q54A	Coxs Mills	26.97	12	IAmb		IAmb		05 17 19.4	
	comp=Z,14nm,0.6s								
R58A	Rapidan	27.01	17	P		P		05 17 19.9	+1.4
	baz=201								
P50A	Jamestown	27.11	7	P		P		05 17 20.5	+1.1
	baz=189								
CBN	Corbin Frederi	27.11	18	P		P		05 17 20.8	+1.4
	baz=203								
Q55A	Buckhannon	27.14	13	P		P		05 17 20.6	+0.9
	baz=197								
P53A	Whipple	27.35	11	P		P		05 17 22.5	+1.0
	baz=194								
P53A	Whipple	27.35	11	IAmb		IAmb		05 17 23.3	
	comp=Z,17nm,0.8s								
P52A	Corning	27.36	10	P		P		05 17 22.3	+0.7
	baz=192								
P38A	Dawn	27.37	350	IAmb		IAmb		05 17 22.8	
	comp=Z,11nm,0.7s								
Q56A	Snyder Ridge,	27.39	15	P		P		05 17 23.1	+1.2
	baz=198								
KSU1	Kansas State U	27.51	345	P		P		05 17 22.7	-0.2
	baz=161								
Q57A	Strasburg	27.59	16	P		P		05 17 25.2	+1.5
	baz=200								
P54A	Burton	27.64	12	P		P		05 17 24.7	+0.6
	baz=196								
SFIN	Lafayette	27.65	1	P		P		05 17 23.5	-0.7
	baz=182								
O50A	Cable	27.66	7	P		P		05 17 24.3	0.0
	baz=189,SNR=7.6								
O51A	Pataskala	27.79	9	P		P		05 17 25.8	+0.3
	baz=191								
ACSO	Alum Creek Sta	27.82	8	P		P		05 17 26.1	+0.4
	baz=190								
ACSO	Alum Creek Sta	27.82	8	IAmb		IAmb		05 17 26.9	
	comp=Z,14nm,1.0s								
MCWV	Mont Chateau	27.83	13	P		P		05 17 26.2	+0.4
	baz=197								
HDIL	Hopedale	27.86	358	P		P		05 17 26.3	+0.3
	baz=177								
O52A	Adamsville	27.88	10	P		P		05 17 26.8	+0.6
	baz=192								
P56A	Dayton Farm, R	27.92	15	P		P		05 17 27.5	+0.9
	baz=199								
ANMO	Albuquerque	27.93	326	P		P		05 17 29.0	+2.0
	comp=Z,1.3nm,0.6s,baz=148,slow=7.4,SNR=8.4								
ANMO	Albuquerque	27.93	326	P		P		05 17 28.9	+1.9
P57A	Homestead Farm	28.12	16	P		P		05 17 29.4	+1.1
	baz=200								
P57A	Homestead Farm	28.12	16	IAmb		IAmb		05 17 30.7	
	comp=Z,11nm,0.6s								
O53A	New Philadelph	28.12	11	P		P		05 17 29.0	+0.6
	baz=194								
CBKS	Cedar Bluff	28.16	340	P		P		05 17 28.7	-0.1
	baz=155								
O54A	Avella	28.22	12	P		P		05 17 29.3	+0.1
	baz=195								
N48A	Decatur	28.23	4	P		P		05 17 28.8	-0.5
	baz=186								
N50A	Nevada	28.33	7	P		P		05 17 30.3	0.0
	baz=190								
N52A	McGinn's Farm,	28.59	10	P		P		05 17 32.8	+0.2
	baz=192								
N53A	Lisbon	28.73	11	P		P		05 17 34.0	+0.2
	baz=194								
O57A	Amberson	28.90	16	P		P		05 17 36.1	+0.8
	baz=201								
N35A	Tabor	28.96	348	IAmb		IAmb		05 17 36.5	
	comp=Z,11nm,0.7s								
O58A	Lewisberry	29.02	17	P		P		05 17 37.4	+1.0
	baz=202								
N55A	Marion Center	29.09	14	P		P		05 17 37.5	+0.4
	baz=198								
L48A	N Adams	29.36	5	P		P		05 17 38.6	-0.8
	baz=187								
M53A	WI Miller and	29.37	11	P		P		05 17 40.1	+0.6
	baz=194								
N56A	West Decatur	29.39	15	P		P		05 17 40.2	+0.5
	baz=199								
KSCO	Kaye Shedlock'	29.39	336	P		P		05 17 39.8	-0.1
	baz=150								
O59A	Robesonia	29.41	18	P		P		05 17 40.4	+0.6
	baz=204								
N57A	Milroy	29.43	16	P		P		05 17 40.4	+0.4
	baz=201								
L40A	Anamosa	29.48	355	IAmb		IAmb		05 17 40.5	
	comp=Z,8.7nm,0.9s								
SDCO	Great Sand Dun	29.60	331	P		P		05 17 42.0	0.0
	baz=143,SNR=8.5								
M54A	Oil Creek Stat	29.64	12	P		P		05 17 41.9	+0.1
	baz=196,SNR=5.1								
M55A	Ridgway	29.80	14	P		P		05 17 43.6	+0.3
	baz=198								
L53A	Girard	29.95	11	P		P		05 17 44.8	+0.2
	baz=195								
M56A	Emporium	29.95	15	P		P		05 17 44.8	+0.2
	baz=199								
214A	Organ Pipe Nat	29.98	314	P		P		05 17 44.0	-1.0
	baz=124								
K46A	Dorr	30.00	3	P		P		05 17 43.7	-1.3
	baz=184								
K47A	Vermontville	30.03	4	P		P		05 17 44.5	-0.9
	baz=185								
BGNE	Belgrade	30.07	344	P		P		05 17 46.1	+0.3
	baz=160								
M57A	Sunshine Farm,	30.09	16	P		P		05 17 46.4	+0.6
	baz=201								
N59A	State Game Lan	30.09	18	P		P		05 17 47.0	+1.1
	baz=204								
ERPA	Erie	30.16	12	P		P		05 17 46.4	0.0
	baz=195								
L34A	Swendsen Farm,	30.18	347	IAmb		IAmb		05 17 46.8	
	comp=Z,17nm,1.0s								
K38A	Parkersburg	30.23	353	IAmb		IAmb		05 17 46.7	
	comp=Z,7.5nm,0.5s								
K48A	Perry	30.24	5	P		P		05 17 46.4	-0.7
	baz=187								
S22A	4UR Ranch, Cre	30.25	329	P		P		05 17 48.6	+0.9
	baz=141,SNR=11								
K49A	Clarkson	30.28	6	P		P		05 17 46.8	-0.8
	baz=188								
M58A	Price's Panora	30.30	17	P		P		05 17 48.1	+0.3
	baz=202								
L54A	Sinclairville	30.41	12	P		P		05 17 48.6	0.0
	baz=196								
L55A	Hinsdale	30.55	14	P		P		05 17 50.1	+0.1
	baz=198								
J47A	Sunmer	30.61	4	P		P		05 17 49.1	-1.3
	baz=186								
PTGA	Pitinga	30.63	114	P		P		05 17 50.8	-0.1
	comp=Z,0.9nm,0.3s,baz=76,slow=17,SNR=1.3								
PTGA	Pitinga	30.63	114	P		P		05 17 50.2	-0.7
MVCO	Mesa Verde	30.72	326	P		P		05 17 52.7	+1.0
	baz=138,SNR=5.9								
MVCO	Mesa Verde	30.72	326	IAmb		IAmb		05 17 54.6	
	comp=Z,4.7nm,0.7s								
J48A	Bridge Port	30.76	6	P		P		05 17 51.2	-0.5
	baz=188								
M59A	Waymart	30.77	18	P		P		05 17 52.4	+0.6
	baz=204								
L57A	Andrews Acres	30.78	16	P		P		05 17 52.1	+0.1
	baz=201								
J49A	Marlette	30.89	7	P		P		05 17 52.3	-0.5
	baz=189								
K54A	Basiliko Farm,	30.90	13	P		P		05 17 53.3	+0.3
	baz=197								
L58A	Harry Jones Me	31.10	17	P		P		05 17 55.5	+0.7
	baz=203								
I46A	Reed City	31.27	3	P		P		05 17 55.1	-1.1
	baz=184								
K56A	Middlesex	31.31	15	P		P		05 17 56.9	+0.2
	baz=200								
I45A	Fountain	31.33	2	P		P		05 17 55.1	-1.6
	baz=183								
I47A	Gladwin	31.41	5	P		P		05 17 55.7	-1.8
	baz=186								
SMCO	Snowmass	31.44	331	P		P		05 18 00.1	+1.9
SMCO				IAmb		IAmb		05 18 00.6	
	comp=Z,4.7nm,0.8s								
L59A	Walton	31.48	18	P		P		05 17 58.5	+0.4
	baz=204								
L59A	Walton	31.48	18	P		P		05 17 59.0	+0.9
L59A				IAmb		IAmb		05 17 59.8	
	comp=Z,11nm,0.8s								
J54A	Appleton	31.55	13	P		P		05 17 58.7	+0.1
	baz=197								
J54A	Appleton	31.55	13	P		P		05 17 59.0	+0.4
K57A	Scipio Center	31.55	16	P		P		05 17 58.7	0.0
	baz=201								
L60A	Shokan	31.55	20	P		P		05 17 58.0	-0.7
	baz=206								
KSCT	Kent School, K	31.57	21	P		P		05 17 59.9	+1.1
PV02	Paradox Valley	31.58	327	P		P		05 18 01.7	+2.3
PV02				IAmb		IAmb		05 18 03.7	
	comp=Z,5.8nm,0.7s								
PV13	Radium Mtn., P	31.59	327	IAmb		IAmb		05 18 01.8	
	comp=Z,7.1nm,1.1s								
PV03	Paradox Valley	31.67	327	IAmb		IAmb		05 18 02.3	
	comp=Z,9.5nm,0.6s								
PV05	Paradox Valley	31.68	327	IAmb		IAmb		05 18 02.1	
	comp=Z,7.1nm,0.7s								
PV20	West Nyswonger	31.80	327	P		P		05 18 02.7	+1.5
K58A	Earlville	31.82	17	P		P		05 18 01.7	+0.6
	baz=203								
PV14	Lion Creek, Pa	31.85	327	IAmb		IAmb		05 18 03.7	
	comp=Z,9.3nm,0.7s								
PV23	Carpenter Ridg	31.91	327	IAmb		IAmb		05 18 04.8	
	comp=Z,9.2nm,0.7s								
ECSD	EROS Data Cent	31.92	348	P		P		05 18 01.0	-1.0
	baz=164,SNR=8.6								
ECSD	EROS Data Cent	31.92	348	IAmb		IAmb		05 18 02.4	
	comp=Z,6.4nm,0.6s								
H45A	Beulah	31.92	2	P		P		05 18 00.6	-1.3
	baz=183								
J56A	Wolcott	31.97	15	P		P		05 18 02.1	-0.3
	baz=200,SNR=5.2								
I52A	Shelburne	32.01	10	P		P		05 18 02.6	-0.1
	baz=194								
H47A	Mio	32.01	5	P		P		05 18 01.6	-1.1
	baz=187								
H48A	Harrisville	32.19	6	P		P		05 18 04.0	-0.3
	baz=188								
J57A	Williamstown	32.32	16	P		P		05 18 05.1	-0.3
	baz=202								
G45A	Suttons Bay	32.36	3	P		P		05 18 05.1	-0.6
	baz=184								
J58A	Remsen	32.47	17	P		P		05 18 07.0	+0.2
	baz=203								
K61A	Williamstown	32.48	20	P		P		05 18 07.9	+1.1
	baz=207								
SAML	Samuel	32.51	130	P		P		05 18 06.5	-0.9
SAML				IAmb		IAmb		05 18 08.6	
	comp=Z,3.1nm,0.6s								
H52A	Wyevale	32.62	10	P		P		05 18 08.1	+0.1
	baz=194								
I55A	Frankford	32.66	14	P		P		05 18 08.7	+0.3
	baz=198								
SPMN	Marine on St.	32.77	353	P		P		05 18 08.1	-1.3
	baz=171,SNR=7.2								
O20A	White River Ci	32.80	330	P		P		05 18 11.5	+1.6
	baz=141,SNR=10								
H53A	Bobcaygeon	32.80	12	P		P		05 18 09.3	-0.4
	baz=197								
I58A	Old Forge	32.87	17	P		P		05 18 10.4	+0.2
	baz=203								
SADO	Sadowa	32.88	11	P		P		05 18 09.8	-0.5
	comp=Z,12nm,0.7s,baz=226,slow=9.2,SNR=14								
F45A	CMU Biological	33.01	3	P		P		05 18 11.5	+0.2
	baz=184								
SUSD	Miller	33.12	345	P		P		05 18 10.6	-1.9
	baz=160,SNR=7.6								
SUSD	Miller	33.12	345	P		P		05 18 12.5	0.0
G53A	Haliburton	33.32	12	P		P		05 18 14.0	-0.2
	baz=196								
H56A	Elgin	33.35	15	P		P		05 18 13.9	-0.5
	baz=201								
J62A	Henniker	33.47	21	P		P		05 18 16.1	+0.6
	baz=209								
F36A	Milaca	33.48	353	IAmb		IAmb		05 18 16.0	
	comp=Z,12nm,1.4s								
E43A	Lone Tree Farm	33.65	1	IAmb		IAmb		05 18 16.7	
	comp=Z,5.1nm,0.7s								
G54A	Lake Saint Pet	33.69	12	P		P		05 18 17.2	-0.2
	baz=197								
H58A	Gabriels	33.76	18	P		P		05 18 18.0	-0.1
	baz=204								
LONY	Lake Ozonia	33.83	17	P		P		05 18 18.7	+0.1
	baz=204								
F52A	Sundridge	33.83	11	P		P		05 18 18.0	-0.6
	baz=195								
G55A	Calabogie	33.86	14	P		P		05 18 18.5	-0.3
	baz=200								
E47A	Iron Bridge	33.94	6	P		P		05 18 18.3	-1.1
	baz=188								
E38A	The Farm, Brul	34.02	355	IAmb		IAmb		05 18 20.0	
	comp=Z,5.4nm,0.6s								
K22A	Casper	34.05	335	P		P		05 18 21.3	+0.6
	baz=146								
E50A	Wahnapitae	34.21	9	P		P		05 18 21.2	-0.7
	baz=192								
ALGO	Algonquin Park	34.23	12	P		P		05 18 21.4	-0.6
	baz=197								
ORIO	Orleans, Innes	34.35	15	P		P		05 18 22.6	-0.4
	baz=202								
RSSD	Black Hills	34.35	339	P		P		05 18 24.1	+0.7
	baz=151								
RSSD	Black Hills	34.35	339	P		P		05 18 24.7	+1.3
RSSD				IAmb		IAmb		05 18 25.7	
	comp=Z,4.5nm,0.7s								
E52A	Mattawa	34.43	11	P		P		05 18 23.8	+0.1
	baz=196								
E51A	G1948 Merrick	34.52	10	P		P		05 18 24.1	-0.4
	baz=194								
D47A	Chapleau	34.55	6	P		P		05 18 23.7	-1.1
	baz=188								
LPAZ	La Paz	34.68	145	P		P		05 18 28.2	+1.2
	comp=Z,1.2nm,0.4s,baz=318,slow=5.8,SNR=12								
LPAZ				PcP		PcP		05 20 60.0	+0.3
	comp=Z,0.8nm,0.6s,baz=351,slow=4.0,SNR=2.4								
LPAZ	La Paz	34.68	145	P		P		05 18 28.3	+1.4
D48A	Paudash Townsh	34.81	7	P		P		05 18 25.9	-1.1
	baz=190								
D49A	Beulah Townshi	34.96	8	P		P		05 18 27.7	-0.6
	baz=191								
D50A	G1974 Best Tow	35.08	9	P		P		05 18 29.3	-0.1
	baz=194								
FURC	Furnace Creek,	35.29	317	P		P		05 18 31.4	+0.1
	baz=125								
EYMN	Ely	35.35	356	P		P		05 18 30.4	-1.3
	baz=174								
H63A	New Sharon	35.36	22	P		P		05 18 32.3	+0.6
	baz=211								
D53A	Lac Vacive, Po	35.38	12	P		P		05 18 32.6	+0.7
	baz=197								
BW06	Boulder Array	35.47	332	P		P		05 18 34.0	+0.9
	baz=142								
PDAR	Pinedale Array	35.47	332	P		P		05 18 34.0	+0.9
	comp=Z,1.8nm,0.5s,baz=128,slow=10,SNR=18								
PDAR				pP		pP		05 18 53.0	+1.9
	comp=Z,1.1nm,0.8s,baz=134,slow=13,SNR=3.0								
PDAR				PcP		PcP		05 21 00.3	-0.9
	comp=Z,0.2nm,0.3s,baz=108,slow=4.5,SNR=4.0								
PDAR				LR		LR		05 34 34.1	
	comp=Z,44nm,19.1s,baz=114,slow=39								
MPMC	Manual Prospec	35.48	316	P		P		05 18 34.0	+0.8
	baz=124								
E56A	St. Veronique	35.48	15	P		P		05 18 33.8	+1.0
	baz=202								
PB16	IPOC Station P	35.66	149	P		P		05 18 37.4	+2.1
PB16				IAmb		IAmb		05 18 40.9	
	comp=Z,6.2nm,0.6s								
G62A	West of Eustis	35.66	21	P		P		05 18 35.4	+1.0
	baz=210								
D54A	Lac Fusel, La	35.67	13	P		P		05 18 34.3	-0.1
	baz=199								
E58A	La Victoria	35.81	17	P		P		05 18 35.4	-0.2
	baz=205								
D55A	Sainte-Anne-du	35.82	14	P		P		05 18 35.4	-0.2
	baz=201								
H65A	Eastbrook	36.07	24	P		P		05 18 38.8	+1.0
	baz=214								
PKME	Peaks-Kenny Pk	36.15	22	P		P		05 18 39.6	+1.1
	baz=212								
AGMN	Agassiz Nation	36.20	351	P		P		05 18 37.8	-1.1
	baz=167,SNR=8.9								
AGMN	Agassiz Nation	36.20	351	IAmb		IAmb		05 18 40.3	
	comp=Z,7.6nm,0.8s								
MDND	Maddock	36.48	347	P		P		05 18 41.2	-0.2
	baz=160,SNR=14								
D58A	Chemin du LacG	36.58	17	P		P		05 18 42.0	-0.2
	baz=205								
GO01	Chusmiza	36.94	150	P		P		05 18 48.6	+2.5
GO01				IAmb		IAmb		05 18 54.5	
	comp=Z,5.5nm,0.6s								
H17A	Grant Village	37.20	333	P		P		05 18 49.5	+1.7
	baz=141								
RLMT	Red Lodge	37.21	335	P		P		05 18 48.3	+0.4
	baz=144,SNR=5.8								
RLMT	Red Lodge	37.21	335	IAmb		IAmb		05 18 49.2	
	comp=Z,3.1nm,0.7s								
LAO	LASA Array	37.35	339	P		P		05 18 49.0	+0.3
	baz=150								
LAO	LASA Array	37.35	339	IAmb		IAmb		05 18 51.0	
	comp=Z,3.6nm,0.7s								
NVAR	Mina Array Bea	37.36	319	P		P		05 18 51.0	+1.8
	comp=Z,1.2nm,0.7s,baz=128,slow=7.3,SNR=13								
NVAR				pP		pP		05 19 09.8	+2.5
	comp=Z,0.7nm,0.7s,baz=139,slow=7.1,SNR=3.1								
NVAR				PcP		PcP		05 21

baz=201
DLMT Dillon 38.86 332 IAmb IAmb 05 19 03.9
comp=Z,7.9nm,0.8s
EGMT Eagleton 39.77 337 P **P** **05 19 09.9 +0.8**
baz=145
EGMT Eagleton 39.77 337 IAmb IAmb 05 19 10.2
comp=Z,4.4nm,0.8s
MSO Missoula 40.58 332 P **P** **05 19 16.4 +0.6**
baz=139
O03E Paynes Creek 40.65 319 P **P** **05 19 16.5 0.0**
baz=123
O02D Mt. Diablo Mer 41.22 318 P **P** **05 19 21.3 +0.1**
baz=122
M04C Macdoel 41.50 321 P **P** **05 19 23.7 +0.3**
baz=125
I07A Izee 41.50 325 P **P** **05 19 23.0 -0.5**
F10A Beach Ranch, E 41.54 329 IAmb IAmb 05 19 25.1
comp=Z,5.2nm,0.8s
L04D Klamath Falls 42.03 321 P **P** **05 19 27.0 -0.8**
baz=124
PINE Pine Mountain 42.14 324 P **P** **05 19 29.3 +0.5**
PINE IAmb IAmb 05 19 30.1
comp=Z,4.7nm,0.7s
I04A Tendick Farm, 42.99 323 P **P** **05 19 35.6 +0.1**
baz=126
NEW Newport 43.10 331 P **P** **05 19 36.0 -0.3**
baz=136
D08A Wollman Farm, 43.14 329 IAmb IAmb 05 19 37.6
comp=Z,7.8nm,0.7s
G05D Wamic, OR 43.23 325 P **P** **05 19 38.1 +0.7**
baz=128
C09A Chrisman Ranch 43.32 330 IAmb IAmb 05 19 39.8
comp=Z,7.1nm,0.6s
H04A Detroit Lake 43.39 324 IAmb IAmb 05 19 39.9
comp=Z,5.0nm,0.6s
FFC Flin Flon 43.46 348 P **P** **05 19 39.2 +0.2**
FFC IAmb IAmb 05 19 39.7
comp=Z,6.4nm,0.7s
I03D Drain, OR 43.49 322 P **P** **05 19 39.8 +0.4**
baz=125
J01E Myrtle Point 43.55 321 P **P** **05 19 40.1 +0.2**
baz=124
H04D Lebanon 43.61 324 P **P** **05 19 40.7 +0.3**
baz=126
F05D White Salmon 43.71 326 P **P** **05 19 42.0 +0.8**
baz=129
I02D Swisshome 44.02 322 P **P** **05 19 44.4 +0.7**
baz=124
LTY Liberty 44.16 328 IAmb IAmb 05 19 45.9
comp=Z,4.0nm,0.7s
G03D McMinnville, O 44.32 324 P **P** **05 19 46.8 +0.7**
baz=126
SCHQ Schefferville 45.21 17 P **P** **05 19 52.2 -0.8**
comp=Z,16nm,0.6s,baz=217,slow=6.0,SNR=17
SCHQ Schefferville 45.21 17 P **P** **05 19 52.4 -0.6**
B05A Bryant 45.55 328 P **P** **05 19 55.0 -0.7**
baz=130
D03D Eldon 45.61 327 P **P** **05 19 56.4 +0.1**
baz=128
A04D Lummi Island 46.15 328 P **P** **05 20 00.7 +0.2**
baz=129
FCC Fort Churchill 46.29 355 IAmb IAmb 05 20 01.3
comp=Z,6.4nm,0.7s
BDFB Brasilia 48.34 124 LR LR 05 41 34.9
comp=Z,56nm,18.0s,baz=250,slow=37
CPUP Villa Florida 48.75 143 P **P** **05 20 20.2 -0.7**
comp=Z,3.3nm,0.6s,baz=337,slow=8.4,SNR=16
CPUP PcP **PcP** **05 21 44.3 -0.6**
comp=Z,1.4nm,0.6s,baz=359,slow=3.2,SNR=3.9
CPUP Villa Florida 48.75 143 P **P** **05 20 20.4 -0.5**
CPUP IAmb IAmb 05 20 20.5
comp=Z,4.1nm,0.7s
YKA Yellowknife Ar 53.36 345 P **P** **05 20 54.0 -0.9**
comp=Z,2.2nm,0.8s,baz=148,slow=7.1,SNR=34
YKA pP **pP** **05 21 12.6 -1.4**
comp=Z,1.0nm,0.6s,baz=138,slow=8.0,SNR=5.6
YKA PcP **PcP** **05 22 00.6 -0.9**
comp=Z,0.3nm,0.4s,baz=145,slow=4.8,SNR=8.1
PLCA Paso Flores 55.44 164 P **P** **05 21 11.2 +0.8**
comp=Z,1.7nm,0.7s,baz=342,slow=8.4,SNR=3.1
PLCA Paso Flores 55.44 164 P **P** **05 21 11.4 +1.0**
DLBC Dease Lake 55.61 335 P **P** **05 21 12.5 +1.0**
DLBC IAmb IAmb 05 21 13.0
comp=Z,5.3nm,0.8s
RES Resolute Bay 62.18 358 P **P** **05 21 55.2 -1.3**
comp=Z,6.7nm,0.9s,baz=173,slow=8.5,SNR=12
RES pP **pP** **05 22 13.9 -2.2**
comp=Z,3.7nm,0.9s,baz=174,slow=10.0,SNR=1.7
EPYK Eagle Plains 62.79 340 P **P** **05 22 00.3 -0.6**
baz=124
INK Inuvik 62.94 343 P **P** **05 22 01.4 -0.3**
INK IAmb IAmb 05 22 03.0
comp=Z,4.5nm,1.3s
A36M Sachs Harbour 63.42 348 P **P** **05 22 03.6 -1.3**
baz=138
HDA Harding Lake 65.61 336 P **P** **05 22 17.9 -1.4**
baz=113
ILAR Eielson Array 65.73 336 P **P** **05 22 18.9 -1.2**
comp=Z,0.6nm,0.4s,baz=155,slow=5.5,SNR=14
ILAR pP **pP** **05 22 38.9 -0.9**
comp=Z,1.1nm,1.0s,baz=112,slow=4.9,SNR=4.1
RND Reindeer 66.02 334 P **P** **05 22 21.7 -0.3**
RND IAmb IAmb 05 22 22.4
comp=Z,6.1nm,0.8s
BPAW Bear Paw Mtn. 67.15 335 P **P** **05 22 28.3 -0.8**
MLY Manley 67.36 336 P **P** **05 22 29.5 -0.9**
TOLK Toolik Lake Re 68.22 340 P **P** **05 22 35.4 -0.4**
SVW2 Sparrevohn 68.34 331 P **P** **05 22 34.9 -1.8**
SVW2 IAmb IAmb 05 22 47.6
comp=Z,6.3nm,1.5s
ESDC Sonseca Array 77.34 52 P **P** **05 23 27.0 -3.4**
comp=Z,0.3nm,0.6s,baz=285,slow=7.1,SNR=1.8
ADK Adak 79.51 321 P **P** **05 23 42.2 +0.2**
SPITS Spitsbergen Ar 80.60 12 LR LR 06 01 43.6
comp=Z,20nm,18.3s,baz=45,slow=37
NOA NORSAR Array B 83.37 29 P **P** **05 24 01.2 -1.2**
comp=Z,0.4nm,0.8s,baz=292,slow=4.7,SNR=3.4
ARCES ARCESS Array B 86.13 19 P **P** **05 24 14.7 -1.3**
comp=Z,1.5nm,0.9s,baz=297,slow=4.0,SNR=1.2
TORD Torodi Ar. Bea 86.69 77 P **P** **05 24 17.1 -2.7**
comp=Z,0.1nm,0.4s,baz=300,slow=3.2,SNR=1.6
KSH Kashi 125.97 16 PKP **PKPdf** **05 30 34.1 -3.5**
KSH sPKP 05 31 10.6
LZH Lanzhou 130.32 348 *e*PKP **PKiKP** **05 30 47.1 +0.3**
LZH pPKP pPKPdf 05 31 07.3 -0.1
LZH sPKP 05 31 18.9
LZH LR LR
comp=N,46nm,18.0s
LZH LR LR
comp=E,50nm,17.9s
LZH LR LR
comp=Z,69nm,20.1s
STKA Stephens Creek 130.90 239 PKP **PKiKP** **05 30 48.2 +0.4**
comp=Z,0.7nm,0.4s,baz=117,slow=7.2,SNR=4.0
STKA Stephens Creek 130.90 239 PKPpre 05 30 36.6
STKA PKPdf **PKPdf** **05 30 46.9 -0.1**
WB0 Warramunga Arr 138.96 254 PKPdf **PKiKP** **05 31 05.0 +0.5**
WB2 Warramunga Arr 138.99 254 PKPdf **PKiKP** **05 31 03.8 -0.8**
WRA Warramunga Arr 139.00 254 PKhKP PKPpre 05 30 56.7
comp=Z,0.7nm,0.4s,baz=87,slow=2.7,SNR=4.7
WRA PKP **PKPdf** **05 31 03.5 +1.1**
comp=Z,1.3nm,0.4s,baz=88,slow=2.4,SNR=21
ASAR Alice Springs 139.03 248 PKhKP PKPpre 05 30 56.9
comp=Z,0.3nm,0.4s,baz=106,slow=3.7,SNR=5.9
ASAR PKP **PKPdf** **05 31 03.5 +1.1**
comp=Z,1.6nm,0.7s,baz=97,slow=1.9,SNR=14
ASAR pPKP pPKPdf 05 31 23.6 -0.1
comp=Z,0.7nm,0.6s,baz=104,slow=1.6,SNR=2.8
FITZ Fitzroy Crossi 147.34 256 PKPab **PKPab** **05 31 21.6 +0.1**
CMAR Chiang Mai Arr 148.41 348 PKPbc **PKPbc** **05 31 21.1 -1.2**
comp=Z,1.5nm,0.7s,baz=345,slow=3.7,SNR=7.8

TRN 17 05:18:16.3, 16.99N×60.42W, h8km, MD3.7, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEG	**La Desirade**	**0.92**	**222**	*e*P	Pn	05 18 37.1	+1.6
DEG				*e*S	Sn	05 18 51.8	+2.9
ABD	**La Joyeuse, An**	**1.15**	**243**	*e*P	Pn	05 18 40.5	+1.8
ABD				*e*S	Sn	05 18 58.4	+3.8
MAGL	**Barre de l'ile**	**1.33**	**219**	*e*P	Pg	05 18 43.0	+1.2
MAGL				*e*S	Sn	05 19 02.3	+3.3
CBE	**Ff, Capester**	**1.47**	**231**	*e*P	Pg	05 18 45.6	+1.2
CBE				*e*S	Sg	05 19 06.3	+2.9
ANWB	**Willy Bob**	**1.47**	**297**	*e*P	Pn	05 18 43.0	-0.1
ANWB				*e*S	Sn	05 19 01.5	-1.1
TDBA	**Terre de Bas,**	**1.63**	**226**	*e*P	Pg	05 18 48.4	+0.8
TDBA				*e*S	Sg	05 19 10.5	+1.7
DWS	**Wesley**	**1.66**	**211**	*e*P	Pg	05 18 47.8	-0.3
DWS				*e*S	Sg	05 19 09.9	+0.4
MDPV	**Dominica, Penn**	**1.67**	**216**	*e*P	Pg	05 18 49.0	+0.8
MDPV				*e*S	Sg	05 19 11.6	+1.7
MDVC	**Dominica, Viel**	**1.67**	**215**	*e*P	Pg	05 18 48.3	0.0
MDVC				*e*S	Sg	05 19 11.1	+1.2
MLYT	**Lee's Yard**	**1.72**	**261**	*e*P	Pg	05 18 49.6	+0.4
MLYT				*e*S	Sg	05 19 12.6	+1.0
MDN	**Morne-Daniel**	**1.91**	**210**	*e*P	Pg	05 18 52.4	-0.5
MDN				*e*S	Sg	05 19 17.5	-0.2
SKI	**Saint Kitts**	**2.25**	**279**	*e*P	Pn	05 18 55.3	+1.5
SKI				*e*S	Sb	05 19 24.9	-0.3
SVN	**Savane Anatole**	**2.26**	**199**	*e*P	Pb	05 18 56.5	-0.8
BAMF	**Morne Balai**	**2.28**	**198**	*e*P	Pb	05 18 56.3	-1.4
CXM	**Morne La Croix**	**2.29**	**199**	*e*P	Pb	05 18 56.5	-1.4
PCM	**Pelee Case Pet**	**2.30**	**200**	*e*P	Pn	05 18 56.2	+1.7
GBMF	**Grand Be**	**2.30**	**198**	*e*P	Pb	05 18 56.4	-1.7
PML	**Morne Lenard**	**2.32**	**199**	*e*P	Pb	05 18 56.7	-1.7
FDF	**Fort de France**	**2.35**	**198**	*e*P	Pn	05 18 57.0	+1.7
FDF				*e*S	Sn	05 19 25.5	+1.0
LPMF	**Morne Lapointe**	**2.46**	**192**	*e*P	Pn	05 18 58.1	+1.4
ZAM	**Aeronautique**	**2.48**	**194**	*e*P	Pn	05 18 58.6	+1.6
BIM	**Bigot**	**2.54**	**194**	*e*P	Pb	05 19 00.6	-1.6
BIM				*e*S	Sb	05 19 31.6	-2.1
MPOM	**Morne Pois Mar**	**2.57**	**190**	*e*P	Pn	05 18 60.0	+1.8
MPOM				*e*S	Sb	05 19 33.1	-1.3
SLBI	**Saint Lucia, B**	**3.00**	**190**	*e*P	Pn	05 19 06.5	+2.3
SLBI				*e*S	Sn	05 19 41.7	+1.3
SLB	**Belfond**	**3.20**	**191**	*e*P	Pb	05 19 10.4	-3.2
SLB				*e*S	Sn	05 19 48.8	+3.3
MCLT	**Moule a Chique**	**3.30**	**189**	*e*P	Pn	05 19 10.2	+1.9
MCLT				*e*S	Sn	05 19 49.4	+1.5
SVV	**Soufriere Volc**	**3.73**	**192**	*e*P	Pn	05 19 15.9	+1.7
SVV				*e*S	Sn	05 20 00.5	+1.9
SVCV	**St. Vincent, C**	**3.77**	**191**	*e*P	Pn	05 19 17.8	+3.1
SVCV				*e*S	Sn	05 20 02.4	+3.1
SVB	**Belmont**	**3.79**	**192**	*e*P	Pn	05 19 15.8	+0.8
SVB	**Belmont**	**3.79**	**192**	*e*S	Sn	05 20 01.6	+1.8
GCMP	**Grenada, Carri**	**4.59**	**192**	*e*P	Pn	05 19 29.7	+3.7
GCMP	**Grenada, Carri**	**4.59**	**192**	*e*S	Sn	05 20 16.7	-2.8
GRGR	**Grenville**	**4.98**	**194**	*e*P	Pn	05 19 34.8	+3.4
AOPR	**Arecibo Observ**	**6.19**	**284**	*e*P	Pn	05 19 49.9	+1.9
AOPR	**Arecibo Observ**	**6.19**	**284**	*e*S	Sn	05 20 54.3	-4.8

IDC 17 05:19:17.6±608.0, 46.20N×68.08W, h0km, Error ellipse: s-maj=265.8km s-min=212.5km az=42.0, Maine

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I51GB	**BERMUDA INFRAS**	**4.06**	**168**	*i*		06 47 20.0	
	baz=351,slow=323,SNR=1.1						
I10CA	**LAC DU BONNET**	**19.00**	**292**	*i*		07 15 10.0	
	baz=91,slow=327,SNR=2.8						
I56US	**NEWPORT INFRAS**	**32.92**	**292**	*i*		08 44 40.0	
	baz=76,slow=315,SNR=3.5						

IDC 17 05:38:39.7±1.4, 36.33N×69.40E, h0km, mb3.9/12, mb1 4.0/18, mb1mx3.8/51, mbtmp3.9/18, ML3.4/6, MS3.1/2, Ms1 3.1/2, ms1mx2.3/39, Error ellipse: s-maj=29.5km s-min=14.8km az=152.0
NEIC 17 05:38:45.7±3.0, 36.59N±0.05×69.22E±0.07, h28km±6km, mb4.2/17, Error ellipse: s-maj=7.6km s-min=7.1km az=109.0
NNC 17 05:38:45.7±3.1, 36.92N×68.83E, h0km, mb4.4, mpv4.2, Error ellipse: s-maj=25.3km s-min=17.2km az=174.0

ISC 17 05:38:46.9±0.6, 36.63N±0.06×69.14E±0.05, h43km, n69, σ1°93/75, mb4.0/19, 6C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGR	**Chuyangaron**	**2.02**	**0**		**Pn**	**05 39 20.1**	**+1.5**
KBL	**Kabul**	**2.09**	**182**		**Pn**	**05 39 18.9**	**-0.7**
GAR	**Garm**	**2.54**	**21**		**Pn**	**05 39 25.9**	**+0.2**
BTK	**Batken**	**3.67**	**21**		**Pn**	**05 39 43.4**	**+2.2**
THW	**Thamme Wali**	**4.39**	**150**	P	**Pn**	**05 39 50.4**	**-0.6**
NIL	**Nilore**	**4.49**	**130**		**Pn**	**05 39 52.6**	**+0.1**
ARSB	**Arslanbob**	**5.56**	**31**		**Pn**	**05 40 05.7**	**-1.5**
AML	**Almayashu**	**6.53**	**31**	P	**Pn**	**05 40 21.4**	**+0.7**
	SNR=39						
KK31	**Karatay Array**	**6.55**	**9**	⇑P	**Pn**	**05 40 21.8**	**+1.2**
	7.4nm,0.6s,baz=199,slow=18,SNR=72						
KK31				⇓S	**Sn**	**05 41 33.4**	**-0.6**
	7.0nm,0.7s,baz=263,slow=6.4,SNR=4.7						
KK31	**Karatay Array**	**6.55**	**9**		**Pn**	**05 40 21.7**	**+1.0**
KKAR	**Karatay Array**	**6.55**	**9**		**Pn**	**05 40 21.8**	**+1.1**
UCH	**Uchtor**	**6.96**	**35**	P	**Pn**	**05 40 27.3**	**+0.6**
	SNR=33						
KZA	**Kyzart**	**7.21**	**39**	P	**Pn**	**05 40 30.8**	**+0.8**
	SNR=11						
AAK	**Ala-Archa**	**7.28**	**33**	Pn	**Pn**	**05 40 31.7**	**+0.8**
	3.0nm,0.3s,baz=204,slow=9.9,SNR=56						
AAK				Sn	**Sn**	**05 41 55.0**	**+2.8**
	0.8nm,0.3s,baz=300,slow=20,SNR=1.6						
AAK	**Ala-Archa**	**7.28**	**33**	P	**Pn**	**05 40 31.7**	**+0.8**
	SNR=25						
AAK	**Ala-Archa**	**7.28**	**33**	⇑P	**Pn**	**05 40 31.3**	**+0.5**
	16nm,0.6s						
AAK				⇑S	**Sn**	**05 41 56.0**	**+3.8**
	16nm,0.9s						
AAK	**Ala-Archa**	**7.28**	**33**		**Pn**	**05 40 31.4**	**+0.6**
FRU1	**Bishkek**	**7.48**	**33**	Pn	**Pn**	**05 40 33.8**	**+0.3**
KBK	**Karagaybulak**	**7.50**	**35**	P	**Pn**	**05 40 35.2**	**+1.4**
	SNR=7.0						
CHMS	**Chumysh**	**7.68**	**32**	P	**Pn**	**05 40 37.2**	**+0.9**
	SNR=7.6						
ULHL	**Ulahol**	**7.85**	**42**	P	**Pn**	**05 40 35.5**	**-3.1**
	SNR=7.9						
BOOM	**Boomskoye usch**	**7.86**	**40**		**Pn**	**05 40 39.2**	**+0.4**
TKM2	**Tokmak 2**	**8.01**	**36**	P	**Pn**	**05 40 41.0**	**+0.2**
	SNR=6.7						
TKM2	**Tokmak 2**	**8.01**	**36**	⇑P	**Pn**	**05 40 40.8**	**-0.1**
	6.0nm,0.7s						
TKM2				⇓S	**Sn**	**05 42 14.8**	**+4.6**
	5.3nm,0.9s						
KDJ	**Kajisay**	**8.30**	**46**		**Pn**	**05 40 44.0**	**-0.8**
TARG	**Taragay, Kyrgy**	**8.43**	**50**		**Pn**	**05 40 47.7**	**+0.8**
SMLA	**Simla**	**8.64**	**127**	*e*P	Pn	05 40 40.7	-8.6
SMLA				*e*S	**Sn**	**05 42 24.9**	**-0.5**
GEYT	**Alibeck**	**8.88**	**282**	Pn	**Pn**	**05 40 53.2**	**+0.5**
	0.3nm,0.3s,baz=101,slow=12,SNR=1.3						
GEYT				Sn	**Sn**	**05 42 30.9**	**-0.6**
	0.6nm,0.3s,baz=61,slow=22,SNR=2.9						
MAKZ	**Makanchi**	**13.96**	**39**		**Pn**	**05 42 00.1**	**-1.8**
MK31	**Makanchi Array**	**14.11**	**40**		**Pn**	**05 42 02.0**	**-1.9**
MKAR	**Makanchi Array**	**14.11**	**40**	Pn	**Pn**	**05 42 01.0**	**-3.0**
	0.1nm,0.3s,baz=224,slow=15,SNR=7.0						
AB31	**Akbulak array**	**14.29**	**335**	⇑P	**Pn**	**05 42 04.0**	**-2.4**
	0.6nm,0.2s,baz=152,slow=13,SNR=37						
AB31				⇓S	**Sn**	**05 44 39.1**	**-4.2**
	1.2nm,0.2s,baz=155,slow=24,SNR=3.9						
KURBB	**Kurchatov Arra**	**15.53**	**23**	Pn	**Pn**	**05 42 18.9**	**-3.8**
	0.0nm,0.3s,baz=214,slow=12,SNR=6.2						
KURK	**Kurchatov**	**15.64**	**23**	P	**P**	**05 42 26.9**	**-0.8**
AKTO	**Aktyubinsk**	**15.96**	**333**	Pn	**Pn**	**05 42 27.1**	**-1.1**
	0.2nm,0.3s,baz=156,slow=15,SNR=8.5						
AKTO				Sn	**Sn**	**05 45 16.6**	**-7.3**
	0.1nm,0.3s,baz=190,slow=17,SNR=1.3						
AKTO	**Aktyubinsk**	**15.96**	**333**	⇓P	**Pn**	**05 42 28.0**	**-0.2**
	4.5nm,0.9s						
AKTO				⇑S	**Sn**	**05 45 20.2**	**-3.7**
	2.8nm,0.8s						
BVAR	**Borovoye Array**	**16.41**	**3**	Pn	**Pn**	**05 42 32.3**	**-1.7**
	0.5nm,0.3s,baz=156,slow=11,SNR=13						
BRVK	**Borovoye**	**16.44**	**2**	Pn	**Pn**	**05 42 33.5**	**-0.9**
LSA	**Lhasa**	**19.66**	**104**	P	**P**	**05 43 12.3**	**-0.3**
ZAAO	**Zalesovo Array**	**20.45**	**27**	P	**P**	**05 43 19.8**	**-0.7**
ZALV	**Zalesovo Beam**	**20.45**	**27**	P	**P**	**05 43 18.5**	**-2.0**
	2.1nm,0.4s,baz=217,slow=10,SNR=12						
ARU	**Arti**	**21.05**	**344**	P	**P**	**05 43 24.4**	**-2.6**
	0.7nm,0.3s,baz=66,slow=13,SNR=3.0						
ARU	**Arti**	**21.05**	**344**	P	**P**	**05 43 26.5**	**-0.5**
ARU				IAmb	IAmb	05 43 36.0	
	comp=Z,7.9nm,1.2s						
KVAR	**Kislovodsk Arr**	**21.40**	**298**	LR	LR	05 53 18.9	
	comp=Z,44nm,20.7s,baz=278,slow=40						
SHL	**Shillong**	**22.33**	**113**	P	**P**	**05 43 39.4**	**-1.7**
SHL				IAmb	IAmb	05 43 46.0	
	comp=Z,14nm,1.1s						
TLY	**Talaya**	**28.64**	**47**	LR	LR	05 56 38.0	
	comp=Z,44nm,18.3s,baz=11,slow=38						
SONM	**Songino Array**	**29.50**	**56**	P	**P**	**05 44 45.0**	**-2.1**
	comp=Z,0.5nm,0.7s,baz=251,slow=9.0,SNR=3.4						
AKASG	**Malin Array Be**	**31.70**	**309**	P	**P**	**05 45 09.0**	**+2.7**
	comp=Z,1.3nm,0.5s,baz=85,slow=7.3,SNR=3.4						
FIA1	**FINESS Array S**	**36.54**	**327**	P	**P**	**05 45 51.1**	**+3.0**
FIA1				IAmb	IAmb	05 45 55.3	
	comp=Z,9.2nm,1.4s						
FINES	**FINESS Array B**	**36.54**	**327**	P	**P**	**05 45 49.0**	**+0.9**
	comp=Z,2.5nm,0.9s,baz=115,slow=16,SNR=7.4						
ARCES	**ARCESS Array B**	**40.46**	**338**	P	**P**	**05 46 22.2**	**+1.4**
	comp=Z,2.3nm,0.8s,baz=122,slow=9.3,SNR=6.1						
HKPS	**Hong Kong Po S**	**41.34**	**97**	P	**P**	**05 46 28.3**	**-0.4**
NC303	**NORSAR Array S**	**43.32**	**323**	P	**P**	**05 46 45.7**	**+1.3**
NB2	**NORSAR Subarra**	**43.38**	**323**	P	**P**	**05 46 45.8**	**+1.0**
	comp=Z,1.3nm,0.6s,baz=97,slow=8.6						
NOA	**NORSAR Array B**	**43.38**	**323**	P	**P**	**05 46 46.2**	**+1.5**
	comp=Z,1.7nm,0.6s,baz=98,slow=8.1,SNR=9.4						
NC204	**NORSAR Array S**	**43.62**	**323**	P	**P**	**05 46 49.0**	**+2.3**
PRMA	**PARMA**	**44.48**	**300**	P	**P**	**05 46 55.1**	**+1.4**
TIXI	**Tiksi**	**46.22**	**22**	P	**P**	**05 47 08.3**	**+1.1**
TIXI				IAmb	IAmb	05 47 08.8	
	comp=Z,3.8nm,1.0s						
KLR	**Kul'dur**	**46.27**	**54**	P	**P**	**05 47 07.4**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=264,slow=13,SNR=4.8						
ESDC	**Sonseca Array**	**56.07**	**297**	P	**P**	**05 48 22.9**	**+1.3**
	comp=Z,0.6nm,0.9s,baz=43,slow=6.6,SNR=2.4						
TOA0	**Torodi Ar. Sit**	**64.23**	**267**	P	**P**	**05 49 18.8**	**+1.1**
TOA0				IAmb	IAmb	05 49 21.4	
	comp=Z,1.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**64.23**	**267**	P	**P**	**05 49 17.3**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=44,slow=5.6,SNR=7.9						
TOLK	**Toolik Lake Re**	**71.16**	**14**	P	**P**	**05 50 02.5**	**+1.8**
TOLK				IAmb	IAmb	05 50 04.0	
	comp=Z,3.3nm,0.8s						
C36M	**Paulatuk**	**73.88**	**5**	P	**P**	**05 50 17.5**	**+0.8**
C36M				IAmb	IAmb	05 50 21.1	
	comp=Z,3.7nm,0.8s						
INK	**Inuvik**	**74.01**	**9**	P	**P**	**05 50 19.1**	**+1.6**
	comp=Z,1.2nm,0.6s,baz=341,slow=6.3,SNR=10						
INK	**Inuvik**	**74.01**	**9**	P	**P**	**05 50 18.4**	**+1.0**
INK				IAmb	IAmb	05 50 19.9	
	comp=Z,1.4nm,0.8s						
ILAR	**Eielson Array**	**75.05**	**15**	P	**P**	**05 50 24.4**	**+0.8**
	comp=Z,0.4nm,0.9s,baz=314,slow=2.7,SNR=2.7						
DAWY	**Dawson**	**77.12**	**12**	P	**P**	**05 50 36.2**	**+0.6**
DAWY				IAmb	IAmb	05 50 40.1	
	comp=Z,1.2nm,0.9s						
YKA	**Yellowknife Ar**	**81.17**	**2**	P	**P**	**05 50 58.6**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=353,slow=5.1,SNR=12						

IDC 17 05:39:20.1±0.8, 49.45N×115.72W, h0km, mb4.2/6, mb1 4.3/6, mb1mx3.9/37, mbtmp4.2/6, MS3.8/14, Ms1 3.8/14, ms1mx3.7/19, Error ellipse: s-maj=36.7km s-min=23.4km az=137.0
NEIC 17 05:39:21.6±1.7, 49.35N±0.1×115.78W±0.2, h10km±1km, mb4.6/10, Error ellipse: s-maj=30.0km s-min=7.6km az=309.0
GCMT 17 05:39:26.5±0.3, 49.76NS±0.03×115.09W±0.03, h30km±1km, MW5.0/66, Moment Tensor Solution. s17,c18; s66,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.35±.23; $M_{\theta\theta}$2.36±.19; $M_{\phi\phi}$-2.01±.17; $M_{r\theta}$0.66±.23; $M_{\theta\phi}$2.62±.10; $M_{\phi r}$0.64±.21; Best double couple: $M_0$3.51900×10^{16} NP1:ϕs111.00000°, δ77.00000°, λ4.00000°. NP2: ϕs20.00000°, δ86.00000°, λ167.00000°. Principal axes: T 3.7700, Plg12.0000°, Azm334.0000°; N -0.5080, Plg77.0000°, Azm182.0000°; P -3.2680, Plg6.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 17 05:39:21.5±0.6, 49.4S±0.2×115.8W±0.1, h10km, n60, σ1°93/26, mb4.5/10, MS3.9/18, 2C, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**22.82**	**15**	LR	LR	05 51 10.7	
	comp=Z,124nm,21.3s,baz=188,slow=31						
H03S2	**Juan Fernandez**	**31.27**	**74**	T	T	06 18 13.1	
	baz=226,slow=74,SNR=167						
H03S1	**Juan Fernandez**	**31.27**	**74**	T	T	06 18 11.9	
	baz=226,slow=74,SNR=180						
H03S3	**Juan Fernandez**	**31.28**	**74**	T	T	06 18 08.9	
	baz=226,slow=74,SNR=192						
H03N3	**Juan Fernandez**	**31.52**	**73**	T	T	06 18 22.1	
	baz=229,slow=71,SNR=372						
H03N2	**Juan Fernandez**	**31.52**	**73**	T	T	06 18 28.7	
	baz=229,slow=71,SNR=371						
H03N1	**Juan Fernandez**	**31.53**	**73**	T	T	06 18 28.8	
	baz=229,slow=71,SNR=413						
PLCA	**Paso Flores**	**32.66**	**92**	LR	LR	05 55 40.2	
	comp=Z,106nm,21.2s,baz=231,slow=30						
BI02	**San Fabin de**	**34.42**	**85**	P	**P**	**05 46 09.6**	**+0.6**
BI02				IAmb	IAmb	05 46 14.4	
	comp=Z,7.2nm,1.3s						
BO02	**Sierra Bellavi**	**35.87**	**83**	P	**P**	**05 46 20.9**	**-0.5**
BO02				IAmb	IAmb	05 46 31.3	
	comp=Z,14nm,1.2s						
TBI	**Tubuai**	**37.10**	**302**	*e*LR	LR	05 56 26.2	
	comp=Z,302nm,27.5s,baz=153						
QSPA	**South Pole Qui**	**40.76**	**180**	P	**P**	**05 47 02.9**	**+0.6**
	comp=Z,3.6nm,0.9s,baz=112,slow=7.4,SNR=6.6						
QSPA	**South Pole Qui**	**40.76**	**180**	P	**P**	**05 47 03.2**	**+0.9**
QSPA				IAmb	IAmb	05 47 10.0	
	comp=Z,14nm,1.3s						
MEH	**Mehetia**	**40.84**	**309**	*e*T	T	06 30 33.0	
	comp=Z,22nm,0.3s						
TVO	**Taravao**	**41.53**	**308**	*e*T	T	06 31 23.1	
	comp=Z,1.8nm,0.3s						
PAE	**Paea**	**41.80**	**307**	*e*T	T	06 31 43.3	
	comp=Z,1.4nm,0.3s						
PPT2	**Papeete2**	**41.86**	**307**	*e*LQ	LQ	05 56 52.9	
	comp=Z,413nm,28.2s						
PPT2				*e*LR	LR	05 58 44.3	
	comp=Z,527nm,27.0s,baz=140						
PPT2	**Papeete2**	**41.86**	**307**	*e*T	T	06 31 47.0	
	comp=Z,1.8nm,0.3s						
PPT	**Papeete**	**41.88**	**307**	LR	LR	05 59 54.7	
	comp=Z,158nm,21.1s,baz=138,slow=30						
AC02	**Maricunga**	**42.21**	**75**	P	**P**	**05 47 14.7**	**-0.4**
TAOE	**Nuku

comp=Z,1.1nm,0.9s,baz=142,slow=4.2,SNR=7.4
H01W1 Cape Leeuwin H 85.08 219 T T 07 26 53.0
baz=150,slow=76,SNR=90
H01W2 Cape Leeuwin H 85.08 219 T T 07 26 53.2
baz=150,slow=76,SNR=112
H01W3 Cape Leeuwin H 85.09 219 T T 07 26 54.2
baz=150,slow=76,SNR=54
WRA Warramunga Arr 87.26 242 LR LR 06 26 40.6
comp=Z,15nm,19.0s,baz=145,slow=32
NVAR Mina Aray Bea 87.52 358 LR LR 06 22 55.5
comp=Z,123nm,21.1s,baz=198,slow=30
PDAR Pinedale Array 91.99 5 P **P** **05 52 31.1 +1.1**
comp=Z,0.3nm,0.6s,baz=187,slow=3.7,SNR=3.7
PDAR LR LR 06 28 15.8
comp=Z,11nm,18.8s,baz=192,slow=32
H11S2 WAKE ISLAND Hy 96.04 291 T T 07 40 00.2
baz=141,slow=75,SNR=153
H11S3 WAKE ISLAND Hy 96.05 291 T T 07 40 00.9
baz=141,slow=75,SNR=108
H11S1 WAKE ISLAND Hy 96.05 291 T T 07 39 59.1
baz=141,slow=75,SNR=102
H11N3 WAKE ISLAND Hy 96.85 292 T T 07 41 02.1
baz=142,slow=75,SNR=14
H11N1 WAKE ISLAND Hy 96.86 292 T T 07 41 02.5
baz=142,slow=75,SNR=5.3
H11N2 WAKE ISLAND Hy 96.87 292 T T 07 41 03.4
baz=142,slow=75,SNR=10
BWN Browne 116.31 344 PKPdf 05 58 03.5 -0.2
TIXI Tiksi 143.82 331 PKP **PKPdf** **05 58 54.6 -0.7**
comp=Z,2.1nm,0.9s,baz=118,slow=4.3,SNR=5.6
TIXI Tiksi 143.82 331 PKPdf 05 58 54.3 -1.0
GERES GERESS Array B 147.43 71 PKPbc **PKPbc** **05 59 05.1 +0.2**
comp=Z,0.3nm,0.4s,baz=222,slow=1.8,SNR=4.8
SONM Songino Array 152.36 283 PKPbc **PKiKP** **05 59 18.0 +0.7**
comp=Z,0.2nm,0.3s,baz=104,slow=4.6,SNR=1.5
BRTR Keskin Array B 156.28 105 PKPab **PKPab** **05 59 44.4 +0.3**
comp=Z,0.8nm,0.9s,baz=202,slow=6.1,SNR=4.6
MKAR Makanchi Array 167.65 264 PKPab **PKPab** **06 00 33.2 -0.4**
comp=Z,0.2nm,0.4s,baz=151,slow=3.3,SNR=3.7

TRN 17 05:40:10.3, 17°.18N×60°.22W, h93km, M4.0(FDF), Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEG	**La Desirade**	**1.18**	**223**	*eP*	Pn	05 40 36.5	+2.7
DEG	**La Desirade**	**1.18**	**223**	*e*	Sb	05 40 49.1	0.0
ABD	**La Joyeuse, An**	**1.41**	**240**	*eP*	Pg	05 40 39.3	+2.0
ABD	**La Joyeuse, An**	**1.41**	**240**	*e*	Sb	05 40 57.1	+1.6
ABD	**La Joyeuse, An**	**1.41**	**240**	*e*	Sb	05 40 58.9	+3.4
ANWB	**Willy Bob**	**1.58**	**288**	*eP*	Pg	05 40 41.5	+1.0
ANWB	**Willy Bob**	**1.58**	**288**	*e*	Sb	05 41 00.3	-0.2
MAGL	**Barre de l'ile**	**1.59**	**220**	*eP*	Pg	05 40 40.9	-0.1
MAGL	**Barre de l'ile**	**1.59**	**220**	*e*	Sb	05 40 58.9	-2.1
CBE	**Ff, Capester**	**1.73**	**231**	*eP*	Pg	05 40 43.4	-0.1
CBE	**Ff, Capester**	**1.73**	**231**	*e*	Sb	05 41 06.5	+1.6
TDBA	**Terre de Bas,**	**1.90**	**226**	*eP*	Pg	05 40 46.9	+0.1
TDBA	**Terre de Bas,**	**1.90**	**226**	*e*	Sb	05 41 10.4	+0.6
DWS	**Wesley**	**1.92**	**213**	*e*	Sb	05 41 10.0	-0.3
MDVC	**Dominica, Viel**	**1.93**	**216**	*e*	Sb	05 41 08.9	-1.8
MLYT	**Lee's Yard**	**1.94**	**257**	*e*	Sb	05 41 11.1	-0.1
ILAM	**Ilet Lapin Mar**	**2.47**	**195**	*e*	Pg	05 41 05.9	+8.2
SVN	**Savane Anatole**	**2.50**	**202**	*eP*	Pg	05 40 57.8	-0.4
BAMF	**Morne Balai**	**2.51**	**201**	*eP*	Pb	05 40 55.2	-1.0
CXM	**Morne La Croix**	**2.52**	**201**	*eP*	Pb	05 40 56.7	+0.2
PCM	**Pelee Case Pet**	**2.54**	**202**	*eP*	Pb	05 40 55.1	-1.4
GBMF	**Grand Be**	**2.54**	**201**	*eP*	Pb	05 40 55.8	-0.8
PML	**Morne Lenard**	**2.56**	**201**	*eP*	Pn	05 40 54.8	+2.0
FDF	**Fort de France**	**2.59**	**200**	*eP*	Pb	05 40 55.7	-1.8
FDF	**Fort de France**	**2.59**	**200**	*e*	Sn	05 41 24.2	-1.1
LPMF	**Morne Lapointe**	**2.69**	**196**	*eP*	Pn	05 40 56.4	+1.9
ZAM	**Aeronautique**	**2.71**	**197**	*eP*	Pb	05 40 57.6	-1.8
TRMF	**Trois Ilets**	**2.75**	**197**	*eP*	Pb	05 40 58.5	-1.6
BIM	**Bigot**	**2.77**	**197**	*eP*	Pb	05 40 58.6	-2.0
BIM	**Bigot**	**2.77**	**197**	*e*	Sn	05 41 30.5	+0.8
MPOM	**Morne Pois Mar**	**2.79**	**193**	*eP*	Pb	05 40 58.5	-2.3
MPOM	**Morne Pois Mar**	**2.79**	**193**	*e*	Sn	05 41 25.4	-4.6
SLBI	**Saint Lucia, B**	**3.22**	**193**	*eP*	Pn	05 41 04.4	+2.6
MCLT	**Moule a Chique**	**3.52**	**192**	*eP*	Pn	05 41 05.1	-0.9
SVB	**Belmont**	**4.01**	**195**	*e*	Pb	05 41 18.8	-2.9
GRGR	**Grenville**	**5.21**	**196**	*e*	Pn	05 41 33.3	+4.2

SOME 17 05:52:29.5, 43°.90N×84°.98E, h30km
NNC 17 05:52:30.4±1.6, 44°.30N×85°.24E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=41.2km s-min=13.3km az=50.0
ISC 17 05:52:24.6±3.6, 43°.7N±0°.2×85°.3E±0°.2, h10km, n7, σ1s21/11, 3C-6D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**3.59**	**267**	*eP*	**Pb**	**05 53 27.9**	**-0.4**
	1.1nm,0.1s						
KTMS				*eS*	**Sb**	**05 54 09.5**	**-2.5**
	5.1nm,0.2s						
MK31	**Makanchi Array**	**3.72**	**326**	⇓Pn	**Pn**	**05 53 23.5**	**+1.4**
	0.1nm,0.2s,baz=145,slow=14,SNR=76						
MK31				⇓Pg	**Pb**	**05 53 29.4**	**-0.9**
	1.3nm,0.3s,baz=139,slow=17,SNR=30						
MK31				⇓Lg	Lg	05 54 13.0	
	3.4nm,0.5s,baz=138,slow=30,SNR=3.9						
MAKZ	**Makanchi**	**3.86**	**324**	⇑Pn	**Pn**	**05 53 24.2**	**+0.2**
	0.5nm,0.3s						
MAKZ				⇑Pg	**Pb**	**05 53 32.1**	**-0.6**
	3.0nm,0.6s						
MAKZ				⇓Lg	Lg	05 54 19.0	
	5.2nm,0.6s						
DJR	**Jarkent**	**4.00**	**280**	*eP*	**Pb**	**05 53 36.2**	**+0.9**
	1.2nm,0.2s						
DJR				*eS*	**Sb**	**05 54 23.6**	**-0.2**
	4.2nm,0.2s						
KAPS	**Kapalarasan**	**4.51**	**292**	*eP*	**Pb**	**05 53 45.0**	**+1.1**
	0.5nm,0.2s						
KAPS				*eS*	**Sb**	**05 54 38.8**	**+0.4**
	2.5nm,0.7s						
KURBB	**Kurchatov Arra**	**8.28**	**329**	⇑Pn	**Pn**	**05 54 24.5**	**-0.1**
	1.5nm,0.8s						
KURBB				⇓Lg	Lg	05 56 38.5	
	6.3nm,0.7s						
KURK	**Kurchatov**	**8.32**	**329**	⇓Lg	Lg	05 56 41.1	
	4.7nm,0.9s						

IDC 17 06:00:12.7±9.3, 14°.35S×167°.97E, h217km±106km, mb3.0/3, mb1 3.3/4, mb1mx3.0/26, mbtmp3.7/4, Error ellipse: s-maj=113.1km s-min=36.7km az=144.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.82**	**190**	P	Pn	06 02 04.8	+1.1
	1.8nm,0.3s,baz=323,slow=20,SNR=12						
DZM				S	S	06 03 30.1	-2.2
	0.3nm,0.3s,baz=335,slow=18,SNR=2.5						
STKA	**Stephens Creek**	**29.75**	**230**	P	P	06 06 00.5	+1.4
	0.5nm,0.4s,baz=16,slow=20,SNR=3.6						
ASAR	**Alice Springs**	**33.44**	**249**	P	P	06 06 30.5	-1.0
	0.2nm,0.5s,baz=82,slow=9.2,SNR=4.9						
ILAR	**Eielson Array**	**85.96**	**18**	P	P	06 12 27.6	-0.4
	0.2nm,0.9s,baz=236,slow=6.4,SNR=2.0						

NEIC 17 06:34:14.4±2.9, 20°.94S±0°.04×68°.48W±0°.10, h130km±8km, Error ellipse: s-maj=13.1km s-min=5.1km az=97.0
IDC 17 06:34:15.6±0.8, 21°.01S×68°.21W, h124km±10km, mb3.8/3, mb1 3.7/7, mb1mx3.4/30, mbtmp4.1/7, Error ellipse: s-maj=24.0km s-min=9.9km az=107.0
VAO 17 06:34:15.2±0.4, 20°.91S×68°.50W, h134km±6km, mb4.1
GUC 17 06:34:16.1±0.7, 20°.93S×68°.58W, h130km±4km, ML4.0
ISC 17 06:34:14.7±0.6, 20°.93S±0°.03×68°.55W±0°.06, h132km±7km, n83, σ1s26/118, mb4.2/4, 10C-6D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.89**	**262**	⇑*iP*	**Pn**	**06 34 36.9**	**0.0**
PB01				*eS*	**Sn**	**06 34 53.2**	**-0.5**
PB01				IAML		06 34 54.5	
	comp=N,3μm,0.3s						
PB01	**IPOC Station P**	**0.89**	**262**		**Pn**	**06 34 37.0**	**+0.1**
PB01				Sn	**Sn**	**06 34 53.0**	**-0.7**
PB08	**IPOC Station P**	**0.97**	**324**	⇓*iP*	**Pn**	**06 34 38.8**	**+0.8**
PB08				*i* S	**Sn**	**06 34 55.8**	**+0.1**
PB08				IAML		06 34 57.1	
	comp=N,2μm,0.2s						
PB08	**IPOC Station P**	**0.97**	**324**		**Pn**	**06 34 38.8**	**+0.8**
PB08				Sn	**Sn**	**06 34 55.7**	**+0.1**
PB09	**IPOC Station P**	**1.08**	**217**	⇑*iP*	**Pn**	**06 34 39.6**	**+0.9**
PB09				*eS*	**Sn**	**06 34 58.4**	**+1.3**
PB09	**IPOC Station P**	**1.08**	**217**		**Pn**	**06 34 39.6**	**+0.9**
PB09				Sn	**Sn**	**06 34 58.0**	**+0.9**
PB02	**IPOC Station P**	**1.32**	**253**	⇑*iP*	**Pn**	**06 34 41.5**	**+0.4**
PB02				*i* S	**Sn**	**06 35 00.8**	**-0.4**
GO01	**Chusmiza**	**1.39**	**334**	⇓*iP*	**Pn**	**06 34 43.0**	**+0.6**
GO01				*i* S	**Sn**	**06 35 03.8**	**+0.5**
GO01				IAML		06 35 08.1	
	comp=E,5μm,0.1s						
GO01	**Chusmiza**	**1.39**	**334**		**Pn**	**06 34 42.9**	**+0.6**
GO01				Sn	**Sn**	**06 35 03.7**	**+0.4**
PB07	**IPOC Station P**	**1.48**	**237**	⇑*iP*	**Pn**	**06 34 43.2**	**+0.2**
PB07				*i* S	**Sn**	**06 35 04.4**	**0.0**
PB07				IAML		06 35 06.3	
	comp=N,1μm,0.2s						
PB07	**IPOC Station P**	**1.48**	**237**		**Pn**	**06 34 43.1**	**+0.2**
PB07				Sn	**Sn**	**06 35 04.0**	**-0.5**
PATCX	**Punta Patache**	**1.50**	**274**	⇑*iP*	**Pn**	**06 34 43.4**	**+0.3**
PATCX				*eS*	**Sn**	**06 35 04.3**	**-0.5**
PATCX				IAML		06 35 05.7	
	comp=E,3μm,0.2s						
PATCX	**Punta Patache**	**1.50**	**274**		**Pn**	**06 34 43.5**	**+0.4**
PATCX				Sn	**Sn**	**06 35 04.0**	**-0.8**
PB11	**IPOC Station P**	**1.56**	**318**	⇓*iP*	**Pn**	**06 34 44.1**	**+0.3**
PB11				*i* S	**Sn**	**06 35 05.6**	**-0.4**
PB11				IAML		06 35 07.5	
	comp=N,3μm,0.3s						
PB11	**IPOC Station P**	**1.56**	**318**		**Pn**	**06 34 44.1**	**+0.3**
PB11				Sn	**Sn**	**06 35 05.3**	**-0.7**
TA01	**Diego Aracena**	**1.57**	**283**		**Pn**	**06 34 43.8**	**0.0**
TA01				Sn	**Sn**	**06 35 04.7**	**-1.2**
PB03	**IPOC Station P**	**1.58**	**225**	⇑*iP*	**Pn**	**06 34 44.4**	**+0.4**
PB03				*i* S	**Sn**	**06 35 05.9**	**-0.6**
TA02	**Huaiquique**	**1.62**	**294**	⇑*iP*	**Pn**	**06 34 44.6**	**+0.3**
TA02				*eS*	**Sn**	**06 35 06.0**	**-1.0**
LVC	**Limon Verde**	**1.71**	**191**	P	**Pn**	**06 34 46.9**	**+1.1**
	comp=N,79nm,0.3s,baz=17,slow=11,SNR=645						
LVC				S	**Sn**	**06 35 09.7**	**+0.3**
	comp=N,114nm,0.3s,baz=108,slow=22,SNR=14						
LVC				LR	LR	06 35 14.9	
	comp=N,56nm,19.4s,baz=308,slow=34						
LVC	**Limon Verde**	**1.71**	**191**	⇓*iP*	**Pn**	**06 34 46.8**	**+1.0**
LVC				*i* S	**Sn**	**06 35 10.2**	**+0.8**
LVC	**Limon Verde**	**1.71**	**191**		**Pn**	**06 34 46.8**	**+1.1**
LVC				Sn	**Sn**	**06 35 10.1**	**+0.7**
LVC	**Limon Verde**	**1.71**	**191**	*eP*	**Pn**	**06 34 46.7**	**+1.0**
LVC				*eS*	**Sn**	**06 35 10.1**	**+0.7**
PSGC	**Pisagua**	**1.99**	**312**	⇓*iP*	**Pn**	**06 34 48.5**	**-0.3**
PSGC				*eS*	**Sn**	**06 35 13.3**	**-1.5**
PSGC				IAML		06 35 15.9	
	comp=E,684nm,0.2s						
PSGCX	**Pisagua**	**1.99**	**312**		**Pn**	**06 34 48.5**	**-0.3**
PSGCX				Sn	**Sn**	**06 35 13.2**	**-1.6**
PB06	**IPOC Station P**	**2.01**	**208**	⇑*iP*	**Pn**	**06 34 49.7**	**+0.6**
PB06				*i* S	**Sn**	**06 35 15.7**	**+0.2**
PB06				IAML		06 35 16.3	
	comp=E,1μm,0.2s						
PB06	**IPOC Station P**	**2.01**	**208**		**Pn**	**06 34 49.7**	**+0.6**
PB06				Sn	**Sn**	**06 35 15.0**	**-0.4**
MNMC	**Minye Minye**	**2.04**	**331**	⇓*iP*	**Pn**	**06 34 50.5**	**+0.9**
MNMC				*i* S	**Sn**	**06 35 17.0**	**+0.6**
MNMC				IAML		06 35 19.9	
	comp=E,2μm,0.4s						
MNMC	**Minye Minye**	**2.04**	**331**		**Pn**	**06 34 50.5**	**+0.9**
MNMC				Sn	**Sn**	**06 35 16.7**	**+0.3**
PB04	**IPOC Station P**	**2.04**	**227**	⇑*iP*	**Pn**	**06 34 49.6**	**+0.1**
PB04				*eS*	**Sn**	**06 35 15.4**	**-0.8**
PB04				IAML		06 35 21.2	
	comp=E,514nm,0.2s						
PB04	**IPOC Station P**	**2.04**	**227**		**Pn**	**06 34 49.6**	**+0.1**
PB15	**IPOC Station P**	**2.42**	**201**	⇑*iP*	**Pn**	**06 34 55.1**	**+0.8**
PB15				*eS*	**Sn**	**06 35 25.2**	**+0.6**
PB15	**IPOC Station P**	**2.42**	**201**		**Pn**	**06 34 55.1**	**+0.8**
PB15				Sn	**Sn**	**06 35 25.3**	**+0.6**
PB05	**IPOC Station P**	**2.46**	**218**	*eP*	**Pn**	**06 34 54.6**	**0.0**
PB05				*i* S	**Sn**	**06 35 24.0**	**-1.2**
PB16	**IPOC Station P**	**2.73**	**341**		**Pn**	**06 34 59.8**	**+1.2**
PB12	**IPOC Station P**	**2.85**	**324**		**Pn**	**06 34 58.8**	**-0.8**
PB12				Sn	**Sn**	**06 35 32.0**	**-2.1**
PB10	**IPOC Station P**	**3.17**	**215**		**Pn**	**06 34 58.8**	**+0.1**
PB14	**IPOC Station P**	**4.06**	**205**	*eP*	**Pn**	**06 35 15.2**	**-0.4**
PB14	**IPOC Station P**	**4.06**	**205**		**Pn**	**06 35 14.9**	**-0.7**
PB14				Sn	**Sn**	**06 35 59.1**	**-3.8**
GO02	**Mina Guanaco**	**4.32**	**193**	*eP*	**Pn**	**06 35 18.9**	**-0.2**
GO02	**Mina Guanaco**	**4.32**	**193**		**Pn**	**06 35 18.9**	**-0.2**
GO02				Sn	**Sn**	**06 36 07.3**	**-1.7**
LPAZ	**La Paz**	**4.63**	**5**	P	**Pn**	**06 35 25.8**	**+2.2**
	comp=E,1.6nm,0.3s,baz=182,slow=7.5,SNR=55						
LPAZ				S	**Sn**	**06 36 19.2**	**+2.2**
	comp=E,0.8nm,0.3s,baz=106,slow=19,SNR=1.7						
LPAZ	**La Paz**	**4.63**	**5**		**Pn**	**06 35 24.5**	**+0.9**
LPAZ	**La Paz**	**4.63**	**5**	*eP*	**Pn**	**06 35 25.5**	**+1.9**
AC02	**Maricunga**	**5.90**	**185**		**Pn**	**06 35 40.6**	**+0.2**
AC05	**El Transito**	**8.03**	**191**		**Pn**	**06 36 06.3**	**-2.3**
SIV	**San Ignacio**	**8.63**	**57**	P	**Pn**	**06 36 14.1**	**-2.6**
	comp=E,9.5nm,0.3s,baz=257,slow=10,SNR=220						
SIV				S	**Sn**	**06 37 47.5**	**-5.0**
	baz=328,slow=23,SNR=1.2						
CO01	**Juntas del Tor**	**9.12**	**188**	Pn	**Pn**	**06 36 21.4**	**-2.0**
GO04	**Tololo Observa**	**9.43**	**192**	Pn	**Pn**	**06 36 24.6**	**-3.0**
CO03	**El Pedregal**	**10.05**	**191**	Pn	**Pn**	**06 36 32.5**	**-3.3**
CO02	**Combarbal**	**10.47**	**192**	Pn	**Pn**	**06 36 37.4**	**-4.0**
PTLB	**Portes e Lacer**	**10.47**	**60**	*eP*	**Pn**	**06 36 39.3**	**-2.1**
CFA	**Coronel Fontan**	**10.64**	**179**	P	**Pn**	**06 36 41.5**	**-2.0**
	comp=E,0.4nm,0.3s,baz=319,slow=12,SNR=12						
VILB	**Vilhena**	**11.25**	**46**	*eP*	**Pn**	**06 36 50.5**	**-1.4**
VA03	**San Esteban**	**11.92**	**188**	Pn	Pn	06 36 54.5	-6.1
SAML	**Samuel**	**12.99**	**24**	Pn	**Pn**	**06 37 15.0**	**+0.6**
SAML	**Samuel**	**12.99**	**24**	*eP*	**Pn**	**06 37 15.0**	**+0.6**
SALV	**Santo Antonio**	**13.18**	**70**	*eP*	**Pn**	**06 37 16.3**	**-0.7**
BO02	**Sierra Bellavi**	**13.95**	**188**	Pn	**Pn**	**06 37 27.1**	**+0.4**
CLDB	**Colider**	**15.81**	**53**	*eP*	**Pn**	**06 37 50.4**	**+0.2**
ARAG	**Araguaiana, MT**	**16.71**	**75**	*eP*	**P**	**06 38 01.5**	**+0.2**
ITRB	**Iturama**	**17.11**	**89**	*eP*	**Pn**	**06 38 05.7**	**-0.3**
FRTB	**Fartura**	**17.75**	**101**	*eP*	**Pn**	**06 38 13.1**	**-0.6**
BB19B	**Bebedouro**	**18.70**	**94**	*eP*	**P**	**06 38 23.5**	**+0.5**
NPGB	**Novo Progresso**	**18.80**	**45**	*eP*	**P**	**06 38 23.4**	**-0.8**
MACA	**Manacapuru-AM**	**19.25**	**24**	*eP*	**P**	**06 38 27.7**	**-1.3**
IPMB	**Ipameri, GO**	**19.40**	**85**	*eP*	**P**	**06 38 30.9**	**+0.2**
VAO	**Valinhos**	**20.12**	**100**	*eP*	**P**	**06 38 38.0**	**-0.5**
BDFB	**Brasilia**	**20.19**	**78**	P	**P**	**06 38 38.3**	**-1.0**
	comp=E,0.6nm,0.3s,baz=255,slow=9.8,SNR=6.8						
BDFB	**Brasilia**	**20.19**	**78**	P	**P**	**06 38 39.2**	**-0.1**
BDFB				IAmb	IAmb	06 38 40.0	
	comp=Z,2.2nm,0.6s						
ITTB	**Itaituba**	**20.64**	**39**	*eP*	**P**	**06 38 42.6**	**-1.4**
PTGA	**Pitinga**	**21.75**	**24**	P	**P**	**06 38 54.4**	**-1.5**
PTGA				IAmb	IAmb	06 39 01.4	
	comp=Z,13nm,1.4s						
PTGA	**Pitinga**	**21.75**	**24**	*eP*	**P**	**06 38 54.3**	**-1.6**
BSCB	**Bom Sucesso**	**22.20**	**94**	*eP*	**P**	**06 39 00.2**	**-0.3**
SMTB	**Santa Maria do**	**23.50**	**92**	*eP*	**P**	**06 39 13.1**	**+0.1**
MC01	**Montes Claros**	**23.66**	**84**	*eP*	**P**	**06 39 13.8**	**-0.5**
JANB	**Januaria**	**23.77**	**80**	*eP*	**P**	**06 39 14.7**	**-0.6**
NAN01	**Guarapari, ES**	**26.97**	**88**	*eP*	**P**	**06 39 44.3**	**+0.1**
RUSC	**La Rusia**	**27.02**	**350**	P	**P**	**06 39 47.8**	**+2.6**
DBIC	**Dimbokro**	**68.25**	**73**	P	**P**	**06 45 01.4**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=253,slow=14,SNR=1.6						
DBIC	**Dimbokro**	**68.25**	**73**	IAmb	IAmb	06 45 08.1	
	comp=Z,18nm,1.4s						
TORD	**Torodi Ar. Bea**	**76.85**	**70**	P	**P**	**06 45 53.1**	**+0.5**
	comp=Z,2.3nm,0.5s,baz=253,slow=5.3,SNR=42						
YKA	**Yellowknife Ar**	**90.76**	**340**	P	**P**	**06 47 04.2**	**+1.9**
	comp=Z,0.2nm,0.4s,baz=133,slow=4.6,SNR=9.7						
MKAR	**Makanchi Array**	**144.97**	**36**	PKP	**PKPdf**	**06 53 38.1**	**+1.8**
	comp=Z,0.3nm,0.5s,baz=339,slow=2.2,SNR=1.7						

IDC 17 06:46:06.7±0.8, 44°.81S×36°.00E, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.9/31, mbtmp4.0/8, MS3.6/23, Ms1 3.7/23, ms1mx3.6/32, Error ellipse: s-maj=40.4km s-min=18.0km az=69.0
NEIC 17 06:46:08.0±2.7, 44°.8S±0°.1×36°.2E±0°.2, h10km±1km, mb4.3/7, Error ellipse: s-maj=31.7km s-min=17.3km az=226.0
ISC 17 06:46:08.1±0.7, 44°.8S±0°.1×36°.1E±0°.1, h10km, n42, σ0s87/20, mb4.0/9, MS3.8/24, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRZF	**Crozet Islands**	**11.14**	**104**	Pn	**Pn**	**06 48 46.8**	**-0.5**
SUR	**Sutherland**	**17.20**	**311**	LR	LR	06 55 36.9	
	comp=Z,187nm,19.1s,baz=144,slow=33						
BOSA	**Boshof**	**18.32**	**328**	LR	LR	06 55 58.8	
	comp=Z,269nm,20.5s,baz=232,slow=32						
LBTB	**Lobatse**	**21.50**	**333**	P	**P**	**06 50 55.9**	**-1.2**
	3.4nm,0.6s,baz=148,slow=8.7,SNR=6.5						
LBTB				LR	LR	06 58 04.4	
	comp=Z,303nm,19.2s,baz=160,slow=33						
LBTB	**Lobatse**	**21.50**	**333**	P	**P**	**06 50 56.0**	**-1.1**
LBTB				IAmb	IAmb	06 51 02.4	
	comp=Z,9.0nm,0.9s						
PAF	**Port-aux-Franc**	**23.53**	**113**	P	**P**	**06 51 17.0**	**-1.1**
MATP	**Matopo**	**25.11**	**343**	P	**P**	**06 51 32.5**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=161,slow=11,SNR=2.2						
MATP				LR	LR	06 59 59.5	
	comp=Z,300nm,20.9s,baz=156,slow=33						
MAW	**Mawson**	**26.85**	**158**	LR	LR	06 59 44.1	
	comp=Z,83nm,20.3s,baz=280,slow=30						
OPO	**Ambohidratompo**	**27.72**	**23**	LR	LR	07 01 11.6	
	comp=Z,204nm,21.4s,baz=352,slow=33						
TSUM	**Tsumeb**	**29.83**	**323**	LR	LR	07 03 05.2	
	comp=Z,184nm,20.1s,baz=156,slow=34						
LSZ	**Lusaka**	**30.18**	**345**	LR	LR	07 03 03.3	
	comp=Z,268nm,18.7s,baz=126,slow=34						
SNAA	**Sanae**	**32.74**	**202**	P	**P**	**06 52 39.6**	**-1.0**
	comp=Z,1.8nm,0.9s,baz=90,slow=11,SNR=2.1						
SNAA	**Sanae**	**32.74**	**202**	P	**P**	**06 52 40.6**	**0.0**
SNAA				IAmb	IAmb	06 52 42.8	
	comp=Z,7.4nm,1.4s						
QSPA	**South Pole Qui**	**45.43**	**180**	P	**P**	**06 54 26.5**	**-0.3**
	comp=Z,2.2nm,0.6s,baz=264,slow=0.3,SNR=26						
QSPA	**South Pole Qui**	**45.43**	**180**	P	**P**	**06 54 26.5**	**-0.3**
QSPA				IAmb	IAmb	06 54 34.6	
	comp=Z,6.0nm,1.2s						
VNDA	**Vanda**	**53.50**	**167**	P	**P**	**06 55 28.6**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=251,slow=7.2,SNR=6.2						
VNDA				LR	LR	07 16 02.9	
	comp=Z,163nm,21.8s,baz=224,slow=34						
DBIC	**Dimbokro**	**63.07**	**313**	LR	LR	07 18 54.5	
	comp=Z,16nm,21.7s,baz=120,slow=31						
TOA0	**Torodi Ar. Sit**	**65.58**	**323**		**P**	**06 56 53.3**	**+1.3**
TOA0				IAmb	IAmb	06 56 57.8	
	comp=Z,2.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**65.58**	**323**	P	**P**	**06 56 53.1**	**+1.0**
	comp=Z,1.5nm,0.9s,baz=157,slow=6.8,SNR=7.0						
TORD				LR	LR	07 24 09.9	
	comp=Z,36nm,21.2s,baz=140,slow=35						
PLCA	**Paso Flores**	**72.49**	**230**	LR	LR	07 22 46.1	
	comp=Z,64nm,21.6s,baz=151,slow=30						
PSI	**Prapat**	**73.07**	**68**	LR	LR	07 23 11.3	
	comp=Z,59nm,21.0s,baz=92,slow=30						
BBOO	**Buckleboo**	**74.02**	**120**	P	**P**	**06 57 45.0**	**+1.0**
CPUP	**Villa Florida**	**74.27**	**249**	LR	LR	07 23 52.2	
	comp=Z,45nm,21.8s,baz=148,slow=30						
BDFB	**Brasilia**	**75.05**	**263**	LR	LR	07 23 06.9	
	comp=Z,51nm,21.3s,baz=188,slow=30						
STKA	**Stephens Creek**	**78.03**	**123**	P	**P**	**06 58 07.4**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=225,slow=7.1,SNR=2.9						
STKA	**Stephens Creek**	**78.03**	**123**	P	**P**	**06 58 07.6**	**+0.8**
STKA				IAmb	IAmb	06 58 23.1	
	comp=Z,1.3nm,1.3s						
ASAR	**Alice Springs**	**78.93**	**112**	P	**P**	**06 58 12.8**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=224,slow=5.3,SNR=9.3						
BRTR	**Keskin Array B**	**84.16**	**358**	LR	LR	07 37 31.0	
	comp=Z,19nm,18.6s,baz=132,slow=37						
GEYT	**Ailbeck**	**84.70**	**17**	LR	LR	07 35 47.5	
	comp=Z,12nm,18.9s,baz=10.0,slow=35						
CMAR	**Chiang Mai Arr**	**84.95**	**58**	LR	LR	07 31 21.1	
	comp=Z,27nm,18.3s,baz=190,slow=32						
LPAZ	**La Paz**	**88.45**	**249**	LR	LR	07 34

MAKZ				⇓Pg	Pb	07 28 07.7	-0.1
	2.2nm,0.5s						
MAKZ				⇓Lg	Lg	07 28 59.8	
	7.9nm,0.5s						
MK31	**Makanchi Array**	**3.99**	**143**	⇑Pn	Pn	07 28 03.4	+2.1
	0.1nm,0.2s,baz=17,slow=3.8,SNR=26						
MK31				⇑Pg	Pb	07 28 10.9	+0.9
	2.6nm,0.5s,baz=325,slow=14,SNR=25						
MK31				⇑Lg	Lg	07 29 05.9	
	9.7nm,0.5s,baz=329,slow=32,SNR=16						
OTUK	**Ortayu**	**4.61**	**250**	⇑Pn	Pn	07 28 10.3	+0.5
	2.2nm,0.4s						
OTUK				⇓Pg	Pb	07 28 22.7	+2.1
	0.9nm,0.4s						
OTUK				⇓Lg	Lg	07 29 25.6	
	3.6nm,0.5s						
KAPS	**Kapalarasan**	**4.77**	**175**	Pg	Pb	07 28 24.7	+1.3
	1.7nm,0.3s						
KAPS				Lg	Lg	07 29 28.2	
	13nm,0.6s						
DJR	**Jarkent**	**5.74**	**173**	Pg	Pb	07 28 42.3	+2.3
	2.7nm,0.4s						
DJR				Lg	Lg	07 29 57.9	
	3.8nm,0.5s						
MNBS	**Baschi**	**5.96**	**183**	Pg	Pb	07 28 47.2	+3.5
	2.5nm,0.3s						
MNBS				Lg	Lg	07 30 06.0	
	21nm,0.6s						
BRVK	**Borovoye**	**6.12**	**303**	⇑Pn	Pn	07 28 29.0	-1.5
	1.6nm,0.6s						
BRVK				⇑Sn	Sn	07 29 44.3	+3.2
	1.6nm,0.5s						
BRVK				⇓Lg	Lg	07 30 16.9	
	1.7nm,0.6s						

LVSN ***17*** *07:47:24.8±3.0, 57.°44N×21.°52E, h0km±48km, ML1.3*
UPP ***17*** *07:47:25.2±1.6, 57.°59N×21.°35E, h0km, ML2.4, Suspected explosion*
HEL ***17*** *07:47:25.2±0.1, 57.°65N×21.°49E, h0km, ML1.7, ML2.4(UPP), Explosion*
IDC ***17*** *07:47:26.8±2.5, 57.°81N×21.°46E, h0km, mb1 2.9/4, mb1mx2.8/38, mbtmp2.8/4, ML2.2/4, Error ellipse: s-maj=2.8km s-min=9.9km az=168.0*

ISC 17 07:47:23.9±0.9, 57.°62N±0.°05×21.°45E±0.°03, h0km, n35, σ1§35/47, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.46**	**88**	*eP*	**Pg**	**07 47 32.2**	**-0.4**
SLIT				*eS*	**Sg**	**07 47 39.9**	**+1.4**
SLIT				IAML		07 47 40.1	
	comp=Z,113nm,0.2s						
SLIT	**Slitere, Latvi**	**0.46**	**88**	*eP*	**Pg**	**07 47 32.6**	**0.0**
SLIT	**Slitere, Latvi**	**0.46**	**88**	*eP*	**Pg**	**07 47 32.9**	**+0.3**
SLIT				*eS*	**Sg**	**07 47 38.6**	**+0.1**
GOTU	**Gotland**	**1.55**	**274**	P	**Pn**	**07 47 52.3**	**-0.4**
GOTU				S	**Sn**	**07 48 13.6**	**+0.1**
GOTU	**Gotland**	**1.55**	**274**	*eP*	**Pn**	**07 47 52.3**	**-0.4**
GOTU				*eS*	**Sn**	**07 48 13.6**	**+0.1**
MTSE	**Matsula**	**1.67**	**48**	*eP*	**Pn**	**07 47 54.2**	**-0.2**
MTSE				*eS*	**Sb**	**07 48 17.1**	**+0.1**
MTSE	**Matsula**	**1.67**	**48**	*eP*	**Pn**	**07 47 54.3**	**0.0**
MTSE				*eS*	**Sn**	**07 48 15.0**	**-1.5**
NYNU	**Nynaeshamn**	**2.29**	**309**	P	**Pn**	**07 48 04.0**	**+1.1**
NYNU	**Nynaeshamn**	**2.29**	**309**	*eP*	**Pn**	**07 48 04.0**	**+1.1**
NRTU	**Norrtaelje**	**2.54**	**326**	P	**Pn**	**07 48 08.7**	**+2.4**
NRTU				S	**Sb**	**07 48 42.4**	**+0.5**
NRTU	**Norrtaelje**	**2.54**	**326**	*eP*	**Pn**	**07 48 08.7**	**+2.4**
VSTU	**Vaestervik**	**2.64**	**273**	P	**Pn**	**07 48 09.8**	**+2.1**
VSTU	**Vaestervik**	**2.64**	**273**	*eP*	**Pn**	**07 48 09.8**	**+2.1**
VIKU	**Vikbolandet**	**2.67**	**291**	P	**Pn**	**07 48 09.1**	**+1.0**
VIKU	**Vikbolandet**	**2.67**	**291**	*eP*	**Pn**	**07 48 09.1**	**+1.0**
AAL	**Aland**	**2.68**	**344**	P	**Pn**	**07 48 07.9**	**-0.4**
AAL	**Aland**	**2.68**	**344**	*eP*	**Pn**	**07 48 09.2**	**+1.0**
AAL				*eS*	**Sn**	**07 48 41.6**	**+0.3**
VSU	**Vasula**	**2.94**	**71**	*eP*	**Pn**	**07 48 14.6**	**+2.8**
VSU				*eS*	Sn	07 48 35.6	-12
VSU				IAML		07 48 38.9	
	comp=Z,9.3nm,0.3s						
MEF	**Metsahovi**	**3.02**	**29**	*eP*	**Pn**	**07 48 15.6**	**+2.6**
MEF				*eS*	**Sn**	**07 48 49.8**	**-0.1**
MEF				AML	AML	07 48 57.8	
	comp=Z,1.9nm,0.4s						
MEF				AML	AML	07 49 07.0	
	comp=N,1.5nm,0.3s						
MEF				AML	AML	07 49 10.0	
	comp=E,2.5nm,0.3s						
MEF	**Metsahovi**	**3.02**	**29**	*eP*	**Pn**	**07 48 14.0**	**+1.0**
MEF				*eS*	**Sn**	**07 48 48.9**	**-0.9**
MEF				MSG		07 49 06.4	
	comp=Z,1.4nm,0.2s						
ESKU	**Eskilstuna**	**3.11**	**303**	P	**Pn**	**07 48 15.2**	**+1.0**
ESKU	**Eskilstuna**	**3.11**	**303**	*eP*	**Pn**	**07 48 15.2**	**+1.0**
GRAU	**Graesoe**	**3.11**	**332**	P	**Pn**	**07 48 16.4**	**+2.2**
GRAU	**Graesoe**	**3.11**	**332**	*eP*	**Pn**	**07 48 16.4**	**+2.2**
BACU	**Backbrunna**	**3.19**	**317**	P	**Pn**	**07 48 16.7**	**+1.5**
BACU	**Backbrunna**	**3.19**	**317**	*eP*	**Pn**	**07 48 16.7**	**+1.5**
IZAR	**Zarasai**	**3.24**	**123**	*eP*	**Pb**	**07 48 23.1**	**+0.9**
RAF	**Rauma**	**3.42**	**3**	*eP*	**Pn**	**07 48 19.2**	**+0.8**
RAF				AML	AML	07 49 15.2	
	comp=Z,3.1nm,0.8s						
RAF				AML	AML	07 49 20.2	
	comp=E,2.2nm,0.4s						
RAF				AML	AML	07 49 20.9	
	comp=N,1.6nm,0.6s						
RAF	**Rauma**	**3.42**	**3**	*eP*	**Pn**	**07 48 18.9**	**+0.5**
RAF				MSG		07 49 15.3	
	comp=Z,1.7nm,0.2s						
IIGN	**Ignalina**	**3.49**	**129**	*eP*	**Pb**	**07 48 25.0**	**-1.5**
FINES	**FINESS Array B**	**4.50**	**30**	Pn	**Pn**	**07 48 33.5**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=220,slow=11,SNR=8.5						
FINES				Sn	**Sn**	**07 49 25.8**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=216,slow=19,SNR=6.2						
FINES				Lg	Lg	07 49 43.4	
	comp=Z,0.6nm,0.3s,baz=217,slow=26,SNR=8.7						
FIA1	**FINESS Array S**	**4.51**	**30**	*eP*	**Pn**	**07 48 34.0**	**+0.7**
FIA1				MSG		07 49 48.3	
	comp=Z,1.1nm,0.2s						
HFS	**Hagfors**	**4.75**	**305**	Pn	**Pn**	**07 48 37.4**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=113,slow=15,SNR=6.0						
HFS				Sn	**Sn**	**07 49 31.9**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=120,slow=23,SNR=5.2						
HFS				Lg	Lg	07 49 50.3	
	comp=Z,0.5nm,0.3s,baz=112,slow=31,SNR=7.0						
NOA	**NORSAR Array B**	**6.26**	**308**	Pn	**Pn**	**07 48 57.2**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=121,slow=14,SNR=1.2						
NOA				Lg	Lg	07 50 38.7	
	comp=Z,0.0nm,0.3s,baz=124,slow=18,SNR=2.0						
ARCES	**ARCESS Array B**	**12.10**	**7**	Pn	**Pn**	**07 50 13.8**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=185,slow=12,SNR=4.7						

HLW 17 08:43:00.6, 33.°59N×22.°85E, h10km±28km, Md4.1, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLUM	**Salum**	**2.89**	**136**	P	Pn	08 43 46.7	+0.1
	baz=135						
SLUM				S	Sn	08 44 19.2	-2.2
	baz=135						
SWA2		**4.87**	**152**	P	Pn	08 44 13.7	-0.1
	baz=152						
SWA2				S	Sn	08 45 07.1	-3.2
	baz=152						
HFRF	**Wahat Farafira**	**7.96**	**142**	P	Pn	08 44 56.0	-0.3
	baz=142						

IDC ***17*** *08:43:31.0±1.0, 12.°73N×87.°21W, h0km, mb3.5/9, mb1 3.8/12, mb1mx3.7/39, mbtmp3.5/12, ML3.1/3, MS2.9/3, Ms1 2.9/3, ms1mx2.5/33, Error ellipse: s-maj=41.4km s-min=15.4km az=53.0*
SNET ***17*** *08:43:34.6±0.6, 12.°33N×87.°71W, h18km±4km, ML3.8*
UCR ***17*** *08:43:34.9±1.8, 12.°37N×87.°57W, h59km±35km, ML3.8, mb4.2(NEIC)*
INET ***17*** *08:43:35.6, 12.°37N×87.°56W, h18km, ML4.1*
NEIC ***17*** *08:43:36.7±1.9, 12.°37N±0.°04×87.°56W±0.°05, h47km±7km, mb4.2/18, Error ellipse: s-maj=6.8km s-min=5.6km az=82.0*

ISC 17 08:43:35.6±0.6, 12.°35N±0.°05×87.°58W±0.°05, h35km, n87, σ1§05/92, mb3.9/16, 4C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.62**	**56**	*eP*	**Pn**	**08 43 48.2**	**+0.1**
CRIN	**San Cristobal**	**0.62**	**56**		**Pn**	**08 43 48.4**	**+0.3**
CRIN				Sn	**Sn**	**08 43 58.2**	**+1.3**
LCND	**La Caada**	**1.00**	**342**	*eP*	**Pn**	**08 43 52.5**	**-0.7**
LCND				*eS*	**Sn**	**08 44 06.4**	**+0.3**
LCND				IAML		08 44 16.4	
	comp=Z,4μm,0.4s						
LCND	**La Caada**	**1.00**	**342**	⇑*eP*	**Pn**	**08 43 52.5**	**-0.7**
LCND				*eS*	**Sn**	**08 44 06.4**	**+0.3**
LCND				IAML		08 44 16.4	
	comp=Z,4μm,0.4s						
JUCU	**Jucuarn**	**1.11**	**324**	*eP*	**Pn**	**08 43 53.5**	**-1.3**
JUCU				IAML		08 44 13.3	
	comp=Z,2μm,0.3s						
JUCU	**Jucuarn**	**1.11**	**324**	*eP*	**Pn**	**08 43 53.5**	**-1.3**
JUCU				IAML		08 44 13.3	
	comp=Z,2μm,0.3s						
PACA	**Pacayal**	**1.33**	**327**	*eP*	**Pn**	**08 43 57.5**	**-0.3**
PACA				*eS*	**Sn**	**08 44 15.4**	**+1.0**
PACA	**Pacayal**	**1.33**	**327**	*eP*	**Pn**	**08 43 57.5**	**-0.3**
PACA				*eS*	**Sn**	**08 44 15.4**	**+1.0**
ALJI	**Alcalda de J**	**1.38**	**315**	*eP*	**Pn**	**08 43 57.6**	**-0.7**
ALJI				IAML		08 44 18.4	
	comp=Z,1μm,0.5s						
ALJI	**Alcalda de J**	**1.38**	**315**	*eP*	**Pn**	**08 43 57.6**	**-0.7**
ALJI				IAML		08 44 18.4	
	comp=Z,1μm,0.5s						
ESTN	**Estel**	**1.40**	**57**	*eP*	**Pn**	**08 43 58.8**	**+0.1**
ESTN	**Estel**	**1.40**	**57**	Pn	**Pn**	**08 43 59.1**	**+0.4**
FAGO	**Alcalda de S**	**1.44**	**339**	*eP*	**Pn**	**08 43 58.8**	**-0.3**
FAGO	**Alcalda de S**	**1.44**	**339**	*eP*	**Pn**	**08 43 58.8**	**-0.3**
MASN	**Masaya**	**1.44**	**104**	*eP*	**Pn**	**08 43 59.4**	**+0.1**
COEB	**Comit de Eme**	**1.48**	**321**	*eP*	**Pn**	**08 44 00.0**	**+0.3**
COEB				*eS*	**Sn**	**08 44 19.0**	**+1.1**
COEB				IAML		08 44 24.6	
	comp=Z,962nm,0.4s						
COEB	**Comit de Eme**	**1.48**	**321**	*eP*	**Pn**	**08 44 00.0**	**+0.3**
COEB				*eS*	**Sn**	**08 44 19.0**	**+1.1**
COEB				IAML		08 44 24.6	
	comp=Z,962nm,0.4s						
MATN	**Matagalpa**	**1.71**	**70**	*eP*	**Pn**	**08 44 03.0**	**-0.1**
MATN	**Matagalpa**	**1.71**	**70**		**Pn**	**08 44 03.2**	**+0.2**
TGUH	**Tegucigalpa,Un**	**1.73**	**10**	Pn	**Pn**	**08 44 03.8**	**+0.5**
COEG	**Centro de Oper**	**1.79**	**315**	*eP*	**Pn**	**08 44 03.5**	**-0.6**
COEG	**Centro de Oper**	**1.79**	**315**	*eP*	**Pn**	**08 44 03.5**	**-0.6**
SNET	**Serv Nac Est T**	**2.09**	**310**		**Pn**	**08 44 07.8**	**-0.5**
UEES	**Universidad Ev**	**2.12**	**310**	*eP*	**Pn**	**08 44 08.1**	**-0.5**
UEES	**Universidad Ev**	**2.12**	**310**	*eP*	**Pn**	**08 44 08.1**	**-0.5**
ACON	**Acoyapa**	**2.38**	**99**	*eP*	**Pn**	**08 44 11.2**	**-0.9**
ACON	**Acoyapa**	**2.38**	**99**		**Pn**	**08 44 11.5**	**-0.6**
GBS3	**Finca Las Img**	**2.60**	**127**	*eP*	**Pn**	**08 44 14.8**	**-0.3**
GB1A	**Finrinquen Arri**	**2.62**	**125**	*eP*	**Pn**	**08 44 15.4**	**-0.1**
LAPC	**Finca la Perla**	**2.62**	**126**	*eP*	**Pn**	**08 44 14.0**	**-1.5**
BUEV	**Buena Vista**	**2.62**	**126**	*eP*	**Pn**	**08 44 15.0**	**-0.5**
BUAI	**Buenos Aires**	**2.64**	**123**	*eP*	**Pn**	**08 44 15.2**	**-0.5**
LIM1	**Limonal**	**2.81**	**125**	*eP*	**Pn**	**08 44 17.6**	**-0.4**
HORNC	**Hornillas**	**2.86**	**124**	*eP*	**Pn**	**08 44 18.3**	**-0.5**
COLC	**Colonia**	**2.86**	**125**	⇑*iP*	**Pn**	**08 44 19.0**	**+0.2**
GUAI	**GUAI**	**2.89**	**135**	*eP*	**Pn**	**08 44 19.8**	**+0.7**
CUI	**Cuipilapa**	**2.90**	**125**	*eP*	**Pn**	**08 44 19.1**	**-0.2**
PLVR	**Palo Verde**	**2.95**	**132**	*eP*	**Pn**	**08 44 21.8**	**+1.7**
PTEN	**Parque Tenorio**	**3.01**	**122**	*eP*	**Pn**	**08 44 20.0**	**-0.9**
ACAL	**Aguas Claras**	**3.02**	**124**	⇑*eP*	**Pn**	**08 44 20.2**	**-0.8**
ESPN	**Las Esperanzas**	**3.21**	**92**	*eP*	Pn	**08 44 30.9**	**+7.4**
ESPN	**Las Esperanzas**	**3.21**	**92**		**Pn**	**08 44 23.8**	**+0.3**
JTS	**Las Juntas de**	**3.29**	**128**	Pn	**Pn**	**08 44 24.2**	**-0.4**
	comp=Z,4.6nm,0.3s,baz=11,slow=16,SNR=47						
JTS				Sn	**Sn**	**08 45 00.9**	**-1.6**
	comp=Z,11nm,0.3s,baz=35,slow=18,SNR=4.5						
JTS	**Las Juntas de**	**3.29**	**128**	*eP*	**Pn**	**08 44 24.2**	**-0.4**
CEDE	**Laguna Cedeo**	**3.37**	**123**	*eP*	**Pn**	**08 44 27.4**	**+1.6**
ARE1	**Arenal 1**	**3.37**	**123**	*eP*	**Pn**	**08 44 25.4**	**-0.3**
CASO	**Castillo**	**3.37**	**124**	*eP*	**Pn**	**08 44 26.0**	**+0.2**
FORC	**Fortuna**	**3.41**	**123**	*eP*	**Pn**	**08 44 25.9**	**-0.3**
APG	**El Apazote**	**3.85**	**314**	Pn	**Pn**	**08 44 32.5**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=139,slow=11,SNR=1.9						
HDC	**Heredia**	**4.12**	**124**	Pn	**Pn**	**08 44 38.2**	**+2.0**
LCR2	**La Lucha 2**	**4.36**	**126**	*eP*	**Pn**	**08 44 39.9**	**+0.3**
CCIG	**Comitan**	**5.90**	**312**	Pn	**Pn**	**08 45 03.0**	**+2.3**
BCIP	**Isla Barro Col**	**8.23**	**112**	Pn	**Pn**	**08 45 32.7**	**+0.1**
CMIG	**Matias Romero**	**8.50**	**305**	Pn	**Pn**	**08 45 37.4**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=128,slow=17,SNR=1.0						
CMIG				Sn	**Sn**	**08 47 11.7**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=51,slow=14,SNR=1.6						
SDV	**Santo Domingo**	**17.00**	**100**	LR	LR	08 54 34.2	
	comp=Z,48nm,22.0s,baz=268,slow=40						
656A	**Willston**	**17.58**	**15**		**Pn**	**08 47 37.5**	**-0.4**
656A				IAmb	IAmb	08 47 51.5	
	comp=Z,36nm,1.1s						
Y49A	**Blount Mountai**	**21.44**	**3**	P	**P**	**08 48 22.4**	**+1.6**
Y49A				IAmb	IAmb	08 48 36.6	
	comp=Z,7.5nm,1.2s						
TXAR	**Lajitas Array**	**22.58**	**321**	P	**P**	**08 48 32.8**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=140,slow=9.2,SNR=31						
TX31	**Lajitas Ar. Si**	**22.58**	**321**	P	**P**	**08 48 33.8**	**+0.6**
TX31				IAmb	IAmb	08 48 35.6	
	comp=Z,8.8nm,0.8s						
TX32	**Lajitas Array**	**22.58**	**321**	P	**P**	**08 48 33.6**	**+0.5**
MIAR	**Mount Ida**	**22.76**	**347**	P	**P**	**08 48 35.3**	**+0.4**
TKL	**Tuckaleechee C**	**23.46**	**8**	P	**P**	**08 48 38.3**	**-3.7**
	comp=Z,2.9nm,1.0s,baz=155,slow=14,SNR=1.8						
TKL	**Tuckaleechee C**	**23.46**	**8**	P	**P**	**08 48 39.4**	**-2.5**
LPIG	**La Paz**	**24.51**	**302**	LR	LR	08 58 40.5	
	comp=Z,22nm,21.4s,baz=170,slow=37						
T42A	**Van Buren**	**24.78**	**353**	P	**P**	**08 48 53.4**	**-0.8**
S39A	**Bolivar**	**25.76**	**349**	P	**P**	**08 49 02.5**	**-0.5**
S39A				IAmb	IAmb	08 49 08.6	
	comp=Z,6.3nm,1.5s						
WCI	**Wyandotte Cave**	**25.80**	**2**	P	**P**	**08 49 02.0**	**-1.4**
WCI				IAmb	IAmb	08 49 04.6	
	comp=Z,5.5nm,0.9s						
ANMO	**Albuquerque**	**28.27**	**326**	LR	LR	09 01 52.5	
	comp=Z,34nm,19.6s,baz=114,slow=39						
M54A	**Oil Creek Stat**	**29.87**	**12**	P	**P**	**08 49 39.8**	**0.0**
PV12	**Saucer Basin,**	**32.04**	**328**	P	**P**	**08 50 00.8**	**+1.6**
PV12				IAmb	IAmb	08 50 01.1	
	comp=Z,2.5nm,0.6s						
ECSD	**EROS Data Cent**	**32.23**	**348**	P	**P**	**08 50 00.2**	**-0.3**
ECSD				IAmb	IAmb	08 50 13.3	
	comp=Z,2.9nm,1.1s						
LPAZ	**La Paz**	**34.34**	**145**	P	**P**	**08 50 22.3**	**+2.4**
	comp=Z,0.4nm,0.6s,baz=323,slow=10,SNR=2.2						
PDAR	**Pinedale Array**	**35.81**	**332**	P	**P**	**08 50 31.8**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=155,slow=11,SNR=2.2						
SNCC	**San Nicolas Is**	**35.83**	**311**	P	**P**	**08 50 30.4**	**-1.5**
REDW	**Red Top Meadow**	**36.87**	**331**	P	**P**	**08 50 41.6**	**+0.7**
SNOW	**Snow King Moun**	**36.90**	**331**	P	**P**	**08 50 42.3**	**+1.0**
SNOW				IAmb	IAmb	08 50 42.8	
	comp=Z,8.4nm,1.5s						
PAGB	**Antelope Grade**	**37.56**	**314**	P	**P**	**08 50 46.9**	**+0.2**
NVAR	**Mina Array Bea**	**37.70**	**319**	P	**P**	**08 50 48.7**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=130,slow=8.4,SNR=2.3						
SIV	**San Ignacio**	**38.47**	**136**	P	**P**	**08 50 54.8**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=324,slow=8.7,SNR=8.0						
MCMT	**McKenzie Canyo**	**38.92**	**331**	P	**P**	**08 50 59.4**	**+1.2**
SCHQ	**Schefferville**	**45.41**	**17**	P	**P**	**08 51 48.0**	**-2.8**
	comp=Z,2.5nm,0.6s,baz=225,slow=5.7,SNR=2.5						
SCHQ	**Schefferville**	**45.41**	**17**	P	**P**	**08 51 51.0**	**+0.2**
SCHQ				IAmb	IAmb	08 51 51.8	
	comp=Z,3.0nm,0.8s						
YKA	**Yellowknife Ar**	**53.68**	**345**	P	**P**	**08 52 51.9**	**-1.7**
	comp=Z,0.2nm,0.5s,baz=144,slow=6.7,SNR=6.6						
PLCA	**Paso Flores**	**55.11**	**164**	P	**P**	**08 53 05.8**	**+1.4**
ILAR	**Eielson Array**	**66.07**	**336**	P	**P**	**08 54 16.7**	**-1.9**
	comp=Z,0.9nm,0.8s,baz=92,slow=8.1,SNR=2.4						
ASAR	**Alice Springs**	**139.11**	**248**	PKP	**PKPdf**	**09 02 59.5**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=83,slow=1.9,SNR=4.8						
WRA	**Warramunga Arr**	**139.12**	**254**	PKP	**PKPdf**	**09 02 59.4**	**-0.2**
	comp=Z,0.5nm,0.9s,baz=90,slow=2.4,SNR=5.5						

IDC ***17*** *09:11:04.7±0.3, 19.°82S×70.°61W, h0km, mb4.9/31, mb1 5.0/35, mb1mx5.0/43, mbtmp4.9/35, ML4.1/5, MS5.1/29, Ms1 5.0/29, ms1mx5.0/35, Error ellipse: s-maj=14.4km s-min=9.3km az=59.0*
NEIC ***17*** *09:11:05.4, 19.°99S×70.°90W, h16km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.02; Mθθ-0.09; Mϕϕ-0.93; Mrθ0.46; Mrϕ0.22; Mθϕ-1.35; Fault plane solution: M₀1.74000×10¹⁷ NP1:ϕs349.87000°, δ17.59000°, λ97.33000°. NP2:ϕs162.19000°, δ72.56000°, λ87.68000°. Principal axes: T 1.7626, Plg62.0000°, Azm69.0000°; N -0.0396, Plg2.0000°; Azm163.0000°; P -1.7230, Plg28.0000°, Azm254.0000°;*
NEIC ***17*** *09:11:05.4±2.1, 19.°99S±0.°04×70.°90W±0.°04, h6km±2km, mb5.5/458, Ms_20 5.1/609, Mwb5.5/55, Mwr5.4/52, Mww5.6, ML5.4(GUC), Mwc5.6(GCMT) Error ellipse: s-maj=5.5km s-min=4.8km az=215.0*
NEIC ***17*** *09:11:06.1, 20.°01S×70.°93W, h12km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.77; Mθθ-0.04; Mϕϕ-1.73; Mrθ0.08; Mϕθ0.58; Mϕr-1.29; Fault plane solution: M₀2.25000×10¹⁷ NP1:ϕs333.85000°, δ28.39000°, λ74.91000°. NP2:ϕs170.90000°, δ62.68000°, λ98.01000°. Principal axes: T 2.2022, Plg71.0000°, Azm99.0000°; N 0.1014, Plg7.0000°, Azm347.0000°; P -2.3036, Plg17.0000°, Azm255.0000°;*
VAO ***17*** *09:11:06.2±0.7, 19.°86S×70.°75W, h13km±4km, mb5.3*
GUC ***17*** *09:11:07.8±0.7, 20.°00S×70.°97W, h37km±2km, ML5.5, MW5.6*
BJI ***17*** *09:11:08.5±0.0, 20.°00S×70.°70W, h15km, mB5.5/42, Ms5.6/39, Ms7 5.4/40*
MOS ***17*** *09:11:08.3±1.0, 19.°57S×70.°68W, h23km, mb5.5/75, MS5.1/46, Error ellipse: s-maj=10.4km s-min=6.0km az=108.2*
GCMT ***17*** *09:11:11.4±0.1, 19.°98S±0.°01×71.°15W±0.°01, h18km, MW5.5/138, Moment Tensor Solution. s122,c209; s138,c282; Duration: 1§4 Moment tensor: Scale 10¹⁷ Nm; Mrr1.89±.03; Mθθ0.06±.02; Mϕϕ-1.95±.02; Mrθ0.30±.04; Mθϕ0.50±.01; Mθr-1.65±.06; Best double couple: M₀2.59400×10¹⁷ NP1:ϕs344.00000°, δ25.00000°, λ86.00000°. NP2:ϕs169.00000°, δ65.00000°, λ92.00000°. Principal axes: T 2.5060, Plg70.0000°, Azm83.0000°; N 0.1720, Plg2.0000°, Azm348.0000°; P -2.6830, Plg20.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***17*** *09:11:11, 20.°01S×71.°03W, h18km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.63; Mθθ0.05; Mϕϕ-1.68; Mrθ0.68; Mrϕ0.54; Mθr-2.26; Fault plane solution: M₀2.93000×10¹⁷ NP1:ϕs163.00000°, δ72.00000°, λ89.00000°. NP2:ϕs345.00000°, δ18.00000°, λ91.00000°. Principal axes: T 2.8236, Plg63.0000°, Azm73.0000°; N 0.2023, Plg0.0000°, Azm164.0000°; P -3.0259, Plg27.0000°, Azm254.0000°;*
NEIC ***17*** *09:11:12, 20.°00S×71.°18W, h19km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr2.10; Mθθ-0.00; Mϕϕ-2.10; Mrθ0.55; Mϕθ0.60; Mϕr-1.96; Fault plane solution: M₀2.98000×10¹⁷ NP1:ϕs165.00000°, δ67.00000°, λ90.00000°. NP2:ϕs346.00000°, δ23.00000°, λ91.00000°. Principal axes: T 2.9033, Plg68.0000°, Azm74.0000°; N 0.1559, Plg0.0000°, Azm165.0000°; P -3.0592, Plg22.0000°, Azm255.0000°:*

ISC 17 09:11:06.1±0.5, 19.°94S±0.°02×70.°83W±0.°03, h11km±2km, h11km:pP-P,n1583,σ1§47/1505,mb5.4/280,MS5.1/378, 61C-9D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.73**	**116**	⇓*iP*	**Pb**	**09 11 21.9**	**+1.0**
TA02				*eS*	**Sn**	**09 11 33.4**	**-0.2**
TA02				IAML		09 11 35.3	
	comp=E,411μm,0.6s						
PSGC	**Pisagua**	**0.75**	**63**	⇓*iP*	**Pn**	**09 11 22.8**	**0.0**
PSGC				*eS*	**Sn**	**09 11 34.5**	**+0.3**
PSGCX	**Pisagua**	**0.75**	**63**		**Pn**	**09 11 22.9**	**+0.1**
PSGCX				Sg	**Sn**	**09 11 34.5**	**+0.3**
TA01	**Diego Aracena**	**0.87**	**136**	⇑*iP*	**Pg**	**09 11 23.8**	**+0.9**
TA01				*i S*	**Sb**	**09 11 36.0**	**+1.1**
TA01	**Diego Aracena**	**0.87**	**136**		**Pb**	**09 11 23.9**	**+0.7**
TA01				Sg	**Sb**	**09 11 35.9**	**+1.0**
PATCX	**Punta Patache**	**1.08**	**144**	⇑*iP*	**Pb**	**09 11 26.8**	**-0.1**
PATCX				*i S*	**Sb**	**09 11 41.1**	**+0.1**
PATCX				IAML		09 11 48.6	
	comp=N,114μm,0.7s						
PATCX	**Punta Patache**	**1.08**	**144**		**Pb**	**09 11 26.8**	**-0.1**
PATCX				Sg	**Sb**	**09 11 40.9**	**-0.2**
PB11	**IPOC Station P**	**1.12**	**81**	⇓*iP*	**Pn**	**09 11 29.0**	**+1.1**
PB11				*i S*	**Sn**	**09 11 45.4**	**+1.9**
PB11				IAML		09 11 46.9	
	comp=N,82μm,0.2s						
PB11	**IPOC Station P**	**1.12**	**81**		**Pn**	**09 11 28.9**	**+0.9**
PB

PB15 **IPOC Station P** 3.49 159 Pn 09 11 59.5 -1.0
PB10 **IPOC Station P** 3.56 176 Pn 09 11 59.4 -2.0
I08BO **LAS PENAS INFR** 4.34 32 Pn Pb 09 12 20.0 -2.8
baz=215,slow=24,SNR=0.5
I08BO *i* 09 26 10.0
baz=201,slow=330,SNR=2.1
LPAZ **La Paz** 4.45 36 Pn Pn 09 12 18.4 +4.2
comp=N,4.6nm,0.3s,baz=209,slow=10,SNR=105
LPAZ Lg Lg 09 13 29.7
comp=N,17nm,0.3s,baz=254,slow=24,SNR=1.3
LPAZ **La Paz** 4.45 36 *eP* Pn 09 12 18.3 +4.1
PB14 **IPOC Station P** 4.68 175 Pn 09 12 13.9 -3.1
GO02 **Mina Guanaco** 5.32 168 Pn 09 12 24.9 -1.0
AC02 **Maricunga** 7.04 168 Pn 09 12 49.0 -0.6
GO03 **Copiap** 7.63 176 Pn 09 12 55.0 -2.5
AC05 **El Transito** 8.87 177 Pn 09 13 12.8 -1.7
NNA **Nana** 9.80 323 Pn Pn 09 13 27.0 -0.2
comp=N,2.6nm,0.3s,baz=175,slow=9.0,SNR=6.1
NNA Sn **Sn** 09 15 10.1 -7.2
comp=N,8.5nm,0.3s,baz=218,slow=14,SNR=4.8
NNA **Nana** 9.80 323 P Pn 09 13 27.2 +0.1
NNA **Nana** 9.80 323 Pn 09 13 27.2 +0.1
CO01 **Juntas del Tor** 10.01 176 Pn 09 13 29.0 -1.2
SIV **San Ignacio** 10.08 69 Pn Pn 09 13 29.7 -1.4
comp=N,10nm,0.3s,baz=276,slow=9.5,SNR=133
GO04 **Tololo Observa** 10.19 180 Pn 09 13 31.1 -1.5
CO03 **El Pedregal** 10.85 179 Pn 09 13 39.3 -2.2
CO02 **Combarbal** 11.21 181 Pn 09 13 44.3 -2.3
CFA **Coronel Fontan** 11.84 169 Pn Pn 09 13 52.3 -2.8
comp=N,1.1nm,0.3s,baz=344,slow=12,SNR=15
CFA Sn Sn 09 16 21.1 +14
comp=N,2.0nm,0.3s,baz=154,slow=9.6,SNR=1.7
CFA LR LR 09 18 38.9
comp=N,10µm,19.4s,baz=338,slow=38
PTLB **Pontes e Lacer** 12.00 70 *eP* Pn 09 13 56.3 -1.0
CO04 **Los Peladeros** 12.05 181 Pn 09 13 56.3 -1.9
VILB **Vilhena** 12.34 57 *eP* Pn 09 14 00.7 -1.2
VA03 **San Esteban** 12.77 179 Pn 09 14 06.4 -1.4
ROC1 **El Roble** 12.98 181 Pn 09 14 10.6 -0.2
PEL **Peldehue** 13.15 179 P Pn 09 14 12.8 -0.1
PEL **Peldehue** 13.15 179 Pn 09 14 12.8 -0.1
SAML **Samuel** 13.20 35 P Pn 09 14 11.5 -2.1
SAML **Samuel** 13.20 35 Pn 09 14 11.5 -2.1
SAML **Samuel** 13.20 35 *eP* Pn 09 14 11.0 -2.6
MT02 **Curacav** 13.27 181 Pn 09 14 10.5 -4.0
MT05 **Renca** 13.39 180 Pn 09 14 15.2 -1.1
MT01 **Popeta** 13.87 181 Pn 09 14 22.1 -0.7
CPUP **Villa Florida** 13.95 120 Pn Pn 09 14 20.1 -3.6
comp=N,0.0nm,0.3s,baz=51,slow=9.7,SNR=3.1
CPUP Sn **S** 09 17 16.0 -4.6
comp=N,0.1nm,0.3s,baz=352,slow=18,SNR=1.8
CPUP LR LR 09 20 48.4
comp=N,8µm,19.7s,baz=298,slow=42
CPUP **Villa Florida** 13.95 120 *eP* Pn 09 14 23.0 -0.8
AQDB **Aquidauana** 14.21 95 *eP* Pn 09 14 26.5 -1.0
ATAH **Atahualpa** 14.70 329 Pn Pn 09 14 34.2 -0.3
comp=N,0.3nm,0.3s,baz=148,slow=14,SNR=2.7
ATAH Sn **S** 09 17 27.8 -9.0
comp=N,0.3nm,0.3s,baz=288,slow=20,SNR=1.3
ATAH LR LR 09 20 43.9
comp=N,6µm,18.2s,baz=140,slow=39
BO02 **Sierra Bellavi** 14.79 180 P Pn 09 14 35.4 0.0
SALV **Santo Antonio** 14.95 77 *eP* Pn 09 14 35.5 -2.1
GO05 **Huala** 15.04 183 P Pn 09 14 38.6 -0.1
H03N1 **Juan Fernandez** 15.25 207 Pn Pn 09 14 37.7 -3.5
baz=108,slow=14,SNR=123
H03N1 T T 09 30 17.5
baz=33,slow=72,SNR=1234
H03N2 **Juan Fernandez** 15.26 207 Pn Pn 09 14 37.8 -3.5
baz=108,slow=14,SNR=45
H03N2 T T 09 30 25.1
baz=33,slow=72,SNR=720
H03N3 **Juan Fernandez** 15.27 207 Pn Pn 09 14 37.6 -3.9
baz=108,slow=14,SNR=98
H03N3 T T 09 30 24.1
baz=33,slow=72,SNR=716
H03S3 **Juan Fernandez** 15.58 206 Pn Pn 09 14 41.6 -3.9
baz=82,slow=75,SNR=47
H03S1 **Juan Fernandez** 15.60 206 Pn Pn 09 14 41.3 -4.4
baz=82,slow=75,SNR=43
H03S2 **Juan Fernandez** 15.60 206 Pn Pn 09 14 41.8 -4.0
baz=82,slow=75,SNR=56
ITQB **Itaqui** 16.11 130 *eP* P 09 14 56.0 0.0
BI02 **San Fabin de** 16.66 181 Pn 09 14 59.5 -0.3
BI03 **Tigo** 16.95 186 P Pn 09 15 02.2 -1.0
C2SB **Chapadao do Su** 17.02 89 *eP* Pn 09 15 04.0 -0.3
CLDB **Colider** 17.06 60 *eP* Pn 09 15 03.8 -1.1
TRCB **Terra Rica** 17.18 103 *eP* Pn 09 15 05.7 -0.7
PTGB **Pitanga** 17.99 109 *eP* Pn 09 15 15.1 -1.4
PCMB **Pacaembu** 18.37 99 *eP* Pn 09 15 19.2 -1.9
ARAG **Araguaiana, MT** 18.59 80 *eP* P 09 15 22.2 -1.2
ITAB **Concordia** 18.60 116 *eP* P 09 15 22.6 -0.9
LPA **La Plata** 18.77 145 *eP* P 09 15 10.9 -14
LPA PPP PPP 09 15 42.1
LPA S **Sn** 09 18 47.9 -7.8
LPA SSS SSS 09 19 30.8
LPA PCP **PcP** 09 19 50.0 -2.7
LPA SCS **ScS** 09 27 06.2 -3.6
LPA PKIKP **PKiKP** 09 27 46.1 +2.7
LPA SKIKS 09 34 51.9
CPSB **Cacapava Do Su** 18.85 127 *eP* P 09 15 24.5 -1.8
LC01 **Cunco** 18.91 183 P P 09 15 24.8 -2.1
ITRB **Iturama** 19.26 93 *eP* P 09 15 30.3 -0.6
MACA **Manacapuru-AM** 19.40 32 *eP* P 09 15 31.8 -0.6
PLTB **Pedras Altas** 19.43 131 *eP* P 09 15 32.5 -0.2
NPGB **Novo Progresso** 19.74 52 *eP* P 09 15 33.5 -2.6
FRTB **Fartura** 20.05 104 *eP* P 09 15 38.2 -1.4
FRTB *eS* S 09 19 24.5 -0.5
PTLC **Puerto Leguiza** 20.36 349 ⇑*iP* P 09 15 46.6 -4.4
CNLB **Canela** 20.39 121 *eP* P 09 15 42.2 -1.0
PLCA **Paso Flores** 20.72 179 P P 09 15 47.4 +0.6
comp=N,18nm,0.9s,baz=354,slow=12,SNR=21
PLCA LR LR 09 24 09.6
comp=N,3µm,18.7s,baz=359,slow=38
PLCA **Paso Flores** 20.72 179 P P 09 15 46.6 -0.1
PLCA pmax pmax
comp=Z,103nm,1.1s
PLCA **Paso Flores** 20.72 179 P P 09 15 46.6 -0.1
PLCA **Paso Flores** 20.72 179 *eP* P 09 15 47.5 +0.7
PLCA *eS* S 09 19 40.5 +2.4
TJU1 **Guaruva-PR** 20.83 109 *eP* P 09 15 47.6 -0.5
BB19B **Bebedouro** 20.92 97 *eP* P 09 15 46.9 -2.1
PUAC **Puerto Asis, P** 21.13 344 ⇑*iP* P 09 15 53.4 +2.2
ITTB **Itaituba** 21.36 45 *eP* P 09 15 52.3 -1.3
CUSE **Cuicocha Este** 21.45 339 ⇑*iP* P 09 15 57.5 +2.5
IPMB **Ipameri, GO** 21.48 89 *eP* P 09 15 53.0 -2.1
IPMB *eS* S 09 19 52.2 -1.1
PAC1 **Pacto, Paraso** 21.55 338 ⇑*iP* P 09 15 57.4 +1.6
PTGA **Pitinga** 21.86 30 P P 09 15 57.0 -2.0
comp=Z,88nm,0.8s,baz=212,slow=11,SNR=69
PTGA LR LR 09 25 02.7
comp=Z,9µm,18.1s,baz=208,slow=39
PTGA **Pitinga** 21.86 30 P P 09 15 56.8 -2.2
PTGA IAmb IAmb 09 16 01.9
comp=Z,124nm,1.0s
PTGA **Pitinga** 21.86 30 *eP* P 09 15 58.4 -0.6
CMBC **Cumbal** 21.86 341 *eP* P 09 16 07.9 +8.4
GCUF **Volcan Galeras** 21.99 342 ⇑*iP* P 09 16 03.5 +2.5
SPB **Sao Paulo** 22.02 104 P P 09 16 00.1 -0.7
SPB IAmb IAmb 09 16 13.8
comp=Z,218nm,1.3s
SPB IAMs_20 IAMs_20 09 25 54.1
comp=Z,9µm,19.0s
SPB **Sao Paulo** 22.02 104 *eP* P 09 16 00.1 -0.7
BDFB **Brasilia** 22.14 83 P P 09 16 00.1 -2.0
comp=Z,16nm,0.6s,baz=259,slow=9.1,SNR=20
BDFB LR LR 09 26 09.8
comp=Z,8µm,19.9s,baz=258,slow=41
BDFB **Brasilia** 22.14 83 P P 09 16 01.3 -0.9
BDFB pmax pmax
comp=Z,150nm,1.1s
BDFB MLR MLR
comp=Z,11µm,21.0s
BDFB **Brasilia** 22.14 83 P P 09 16 01.3 -0.9
BDFB IAmb IAmb 09 16 07.8
comp=Z,150nm,1.1s
MACC **Macarena, Meta** 22.15 352 ⇑*iP* P 09 15 59.8 -2.3
CRUC **La Cruz** 22.21 344 *iP* P 09 16 05.7 +2.6
PET01 **Itanhaem-SP** 22.24 106 *eP* P 09 16 02.4 -0.6
PET01 *eS* S 09 20 07.6 -0.2
LL01 **San Ignacio de** 22.41 183 P P 09 16 04.0 -0.7
VAO **Valinhos** 22.41 102 *eP* P 09 16 03.4 -1.6
VAO *eS* S 09 20 11.5 +0.2

GUVC **San Jose del G** 22.42 355 *eP* P 09 16 02.8 -2.2
GARC **Garzon, Huila** 22.46 348 ⇑*iP* P 09 16 06.7 +0.9
SOTA **Rioblanco** 22.66 345 *eP* P 09 16 09.2 +1.0
BBAC **Balboa, Cauca** 22.72 343 ⇑*iP* P 09 16 09.7 +1.2
PCON **Cinco Dias** 22.80 346 ⇑*iP* P 09 16 12.0 +2.3
BETC **Betania** 22.94 348 ⇑*iP* P 09 16 11.9 +1.3
TUMC **Tumaco** 22.98 339 *eP* P 09 16 07.7 -3.3
PARB **Paraibuna** 23.66 103 *eP* P 09 16 17.1 -0.8
PRAC **Prado** 23.84 350 ⇑*iP* P 09 16 19.5 -0.2
GR1C **Gorgona, Isla** 23.91 342 *eP* P 09 16 21.5 +1.2
PTGC **Puerto Gaitan,** 24.03 357 ⇑*iP* P 09 16 19.8 -1.5
VILC **Villavicencio,** 24.07 353 *eP* P 09 16 21.3 -0.6
ORTC **Ortega, Tolima** 24.10 349 *eP* P 09 16 22.5 +0.4
MALB **Monte Alegre** 24.20 44 *eP* P 09 16 21.9 -1.0
YOTC **Yotoco, Valle** 24.39 347 ⇑*iP* P 09 16 25.8 +1.0
BSCB **Bom Sucesso** 24.43 97 *eP* P 09 16 24.1 -1.0
CVER **Cruz Verde, Cu** 24.52 352 *iP* P 09 16 27.5 +1.1
PRPB **Parauapebas** 24.58 59 *eP* P 09 16 25.1 -1.4
CHIC **Chingaza** 24.59 353 *iP* P 09 16 26.8 -0.1
ANIL **Santa Ana** 24.70 349 *eP* P 09 16 29.5 +1.7
ESAR **Angra dos Reis** 24.73 102 *eP* P 09 16 26.4 -1.3
TOLC **Tolima** 24.77 349 *eP* P 09 16 30.7 +2.2
ROSC **El Rosal** 24.87 352 P P 09 16 27.4 -2.0
comp=Z,16nm,0.9s,baz=215,slow=20,SNR=2.7
ROSC LR LR 09 25 53.0
comp=Z,7µm,18.7s,baz=200,slow=36
ROSC **El Rosal** 24.87 352 ⇑*iP* P 09 16 30.4 +0.9
ROSC **El Rosal** 24.87 352 P P 09 16 29.0 -0.4
CTAB **Cerro Tablazo,** 25.02 352 *eP* P 09 16 33.2 +2.4
SMTB **Santa Maria do** 25.02 67 *eP* P 09 16 30.0 -0.5
RREF **El Recreo** 25.09 349 ⇑*iP* P 09 16 33.9 +2.2
MAN01 **Angra dos Reis** 25.17 101 *eP* P 09 16 31.1 -0.7
CTAU **Tausa, Cundina** 25.19 352 *eP* P 09 16 34.0 +1.6
GUY2C **Guyana, Caldas** 25.41 349 ⇑*iP* P 09 16 35.7 +1.3
PIZC **Pizarro, Choco** 25.57 345 *eP* P 09 16 39.4 +4.1
SPBC **San Pablo de B** 25.63 353 ⇑*iP* P 09 16 35.5 -0.5
VAS01 **Vassouras-RJ** 25.64 100 *eP* P 09 16 36.1 +0.1
NORC **Norcasia** 25.66 351 ⇑*iP* P 09 16 36.4 +0.2
MC01 **Montes Claros** 25.71 87 *eP* P 09 16 35.5 -1.3
JANB **Januaria** 25.74 83 *eP* P 09 16 36.0 -1.0
RUSC **La Rusia** 25.77 355 ⇑*iP* P 09 16 38.0 +0.3
RUSC **La Rusia** 25.77 355 P P 09 16 38.5 +0.8
CBOC **Ciudad Bolivar** 26.15 348 ⇑*iP* P 09 16 41.5 +0.7
TAMC **Tame, Arauca** 26.23 358 ⇑*iP* P 09 16 41.6 +0.2
HELC **Santa Helena** 26.38 349 ⇑*iP* P 09 16 43.3 +0.2
PTBC **PUERTO BERRIO,** 26.56 352 ⇑*iP* P 09 16 43.0 -1.3
PAYG **Puerto Ayora** 27.01 313 IAMs_20 IAMs_20 09 27 13.7
comp=Z,4µm,18.0s
BRRC **Barranca, Sant** 27.03 354 ⇑*iP* P 09 16 46.5 -2.0
PAMC **Pamplona, Colo** 27.17 356 *eP* P 09 16 49.4 -1.0
DBBC **Dabeiba** 27.31 348 ⇑*iP* P 09 16 52.4 +1.2
UREC **San Jos de Ur** 27.91 350 ⇑*iP* P 09 16 55.8 -0.6
SJMB **Sao Joao De Ma** 27.99 93 *eP* P 09 16 55.2 -2.0
OCAC **Ocana** 28.11 355 ⇑*iP* P 09 16 55.5 -2.9
BSFB **Barra de Sao F** 28.29 93 *eP* P 09 16 58.9 -1.0
SDV **Santo Domingo** 28.65 0 P P 09 17 01.7 -1.6
comp=Z,18nm,0.9s,baz=224,slow=2.1,SNR=10
SDV LR LR 09 27 51.4
comp=Z,4µm,19.8s,baz=212,slow=35
SDV **Santo Domingo** 28.65 0 ⇑*iP* P 09 17 02.5 -0.8
SDV **Santo Domingo** 28.65 0 P P 09 17 02.3 -0.9
SDV **Santo Domingo** 28.65 0 IAMs_20 IAMs_20 09 27 20.2
comp=Z,5µm,21.0s
SDV **Santo Domingo** 28.65 0 *eP* P 09 17 02.5 -0.8
RIB01 **Linhares ES** 28.66 94 *eP* P 09 17 02.3 -0.9
SMLC **San Martn de** 28.74 353 ⇑*iP* P 09 17 01.8 -2.1
NAN01 **Guarapari, ES** 29.11 91 *eP* P 09 17 06.0 -1.2
CAPC **Capurgana** 29.12 347 ⇑*iP* P 09 17 08.9 +1.7
ARGC **Ariguani, Magd** 29.80 353 *eP* P 09 17 09.3 -4.0
SJCC **San Jacinto, C** 29.96 351 ⇑*iP* P 09 17 14.3 -0.4
BCIP **Isla Barro Col** 30.26 342 IAMs_20 IAMs_20 09 29 43.0
comp=Z,3µm,21.0s
NBIT **Itapeh - BA** 30.34 86 *eP* P 09 17 17.4 -0.7
GDU01 **Guandu, BA** 30.52 83 *eP* P 09 17 17.8 -1.9
PLCV **Puerto La Cruz** 30.54 12 P P 09 17 16.4 -3.5
PCRV **Puerto La Cruz** 30.55 12 P P 09 17 16.4 -3.5
comp=Z,13nm,1.0s,baz=128,slow=8.3,SNR=1.9
PCRV LR LR 09 31 04.9
comp=Z,14µm,18.7s,slow=40
NBPN **Ponto Novo - B** 30.84 78 *eP* P 09 17 21.5 -1.1
ROSB **Rosrio** 31.09 60 *eP* P 09 17 23.8 -0.9
SMRC **Santa Marta, M** 31.09 354 *eP* P 09 17 20.5 -4.2
GO09 **Cerro Castillo** 31.29 182 IAMs_20 IAMs_20 09 31 17.3
comp=Z,3µm,18.0s
URIC **Uribia, Colomb** 31.47 358 *eP* P 09 17 24.9 -3.0
NBPS **Pedro II - PI** 32.52 65 *eP* P 09 17 36.7 -0.8
TOSP **Speyside** 32.66 19 IAMs_20 IAMs_20 09 32 32.1
comp=Z,5µm,21.0s
NBLA **Lagarto - SE** 33.01 79 *eP* P 09 17 39.6 -2.0
JTS **Las Juntas de** 33.11 334 P P 09 17 42.2 -0.2
comp=Z,6.6nm,1.1s,baz=57,slow=20,SNR=2.3
JTS LR LR 09 30 42.8
comp=Z,2µm,20.0s,baz=212,slow=36
JTS **Las Juntas de** 33.11 334 P P 09 17 43.8 +1.4
JTS pmax pmax
comp=Z,15nm,1.1s
JTS MLR MLR
comp=Z,2µm,18.0s
JTS **Las Juntas de** 33.11 334 P P 09 17 43.8 +1.4
GRGR **Grenville** 33.13 17 IAMs_20 IAMs_20 09 32 12.7
comp=Z,4µm,19.0s
EFI **East Falkland** 33.21 165 *ceP* P 09 17 43.4 +0.4
EFI pmax pmax
comp=Z,94nm,1.5s
EFI **East Falkland** 33.21 165 IAMs_20 IAMs_20 09 32 26.0
comp=Z,4µm,19.0s
NBTA **Tacaratu-PE** 33.42 76 *eP* P 09 17 44.3 -1.0
NBMA **Muriti-CE** 33.49 73 *eP* P 09 17 45.2 -0.7
NBPB **Pedra_Branca-C** 33.58 69 *eP* P 09 17 45.9 -0.7
NBMO **Morrinhos-CE** 34.28 65 *eP* P 09 17 51.6 -1.1
ESPN **Las Esperanzas** 34.58 336 IAMs_20 IAMs_20 09 33 54.3
comp=Z,3µm,18.0s
ACON **Acoyapa** 34.71 335 IAMs_20 IAMs_20 09 34 31.7
comp=Z,4µm,18.0s
MCLT **Moule a Chique** 34.83 17 P P 09 17 57.2 -0.1
NBAN **Anadia - AL** 34.86 78 *eP* P 09 17 56.2 -1.6
NBCL **Cascavel-CE** 35.34 68 *eP* P 09 18 01.0 -0.8
RCBR **Riachuelo** 36.72 72 P P 09 18 13.8 +0.1
RCBR pmax pmax
comp=Z,114nm,0.9s
RCBR MLR MLR
comp=Z,9µm,20.0s
RCBR **Riachuelo** 36.72 72 P P 09 18 13.8 +0.1
RCBR **Riachuelo** 36.72 72 *eP* P 09 18 13.7 -0.1
NBPV **Pedro Velho** 37.02 74 *eP* P 09 18 15.2 -1.1
ICMP **Isla Caja de M** 37.83 7 P P 09 18 22.0 -0.9
ICMP IAmb IAmb 09 18 24.9
comp=Z,108nm,0.9s
MLPR **Magueyes Islan** 37.86 6 P P 09 18 21.9 -1.2
SKI **Saint Kitts** 37.89 13 P P 09 18 21.2 -2.2
SKI pmax pmax
comp=Z,154nm,1.2s
SKI MLR MLR
comp=Z,12µm,18.0s
SKI **Saint Kitts** 37.89 13 P P 09 18 21.2 -2.2
SKI IAmb IAmb 09 18 22.8
comp=Z,154nm,1.2s
CRPR **Cabo Rojo, PR** 37.89 6 P P 09 18 22.2 -1.2
OBIP **Obispado Ponce** 37.98 7 P P 09 18 22.8 -1.4
OBIP IAmb IAmb 09 18 25.4
comp=Z,76nm,1.0s
SABA **Saba** 38.07 12 P P 09 18 23.2 -1.7
SABA IAmb IAmb 09 18 24.3
comp=Z,93nm,1.0s
MPR **Mayaguez** 38.09 6 P P 09 18 23.8 -1.4
MPR IAmb IAmb 09 18 39.8
comp=Z,85nm,1.0s
SJG **San Juan** 38.10 7 P P 09 18 22.7 -2.4
comp=Z,64nm,0.9s,baz=186,slow=1.9,SNR=18
SJG **San Juan** 38.10 7 ⇑*iP* P 09 18 23.6 -1.6
SJG **San Juan** 38.10 7 P P 09 18 23.5 -1.6
SJG pmax pmax
comp=Z,84nm,1.0s
SJG MLR MLR
comp=Z,2µm,18.0s
SJG **San Juan** 38.10 7 P P 09 18 23.5 -1.6
SJG IAmb IAmb 09 18 24.7
comp=Z,84nm,0.9s
SJG **San Juan** 38.10 7 IAMs_20 IAMs_20 09 36 35.3
comp=Z,2µm,18.0s
BANI **BANI** 38.10 1 P P 09 18 23.8 -1.6
MTP **Monte Pirata** 38.16 8 P P 09 18 23.9 -1.8
MTP IAmb IAmb 09 18 25.1

HUMP **Col San Antoni** 38.16 8 P P 09 18 24.4 -1.4
AOPR **Arecibo Observ** 38.26 6 P P 09 18 25.5 -1.1
AOPR IAmb IAmb 09 18 26.3
comp=Z,63nm,0.9s
CBYP **Canovanas** 38.29 8 P P 09 18 25.2 -1.7
CBYP IAmb IAmb 09 18 26.3
comp=Z,85nm,0.8s
GCPR **Guaynabo City** 38.30 7 P P 09 18 25.0 -1.9
CUPR **Culebra, Puert** 38.40 9 P P 09 18 26.0 -1.8
CUPR IAmb IAmb 09 18 40.5
comp=Z,61nm,0.9s
SMRT **St. Maarten** 38.52 12 P P 09 18 25.7 -3.0
SMRT IAmb IAmb 09 18 27.0
comp=Z,128nm,0.9s
DR12 **Loma Pena Alta** 38.52 2 P P 09 18 27.8 -1.0
SDDR **Presa de Saban** 38.69 359 P P 09 18 28.8 -1.4
SDDR IAMs_20 IAMs_20 09 37 14.2
comp=Z,3µm,18.0s
SC01 **Santiago de lo** 39.13 0 P P 09 18 33.5 -0.4
SC01 IAmb IAmb 09 18 49.9
comp=Z,106nm,1.1s
SC01 IAMs_20 IAMs_20 09 35 44.9
comp=Z,3µm,20.0s
APG **El Apazote** 39.74 329 P P 09 18 39.8 +0.6
comp=Z,15nm,0.9s,baz=133,slow=2.2,SNR=5.5
APG LR LR 09 34 42.0
comp=Z,2µm,18.8s,baz=144,slow=36
GTBY **Guantanamo Bay** 39.85 354 IAMs_20 IAMs_20 09 37 49.6
comp=Z,2µm,18.0s
GRTK **Grand Turk** 41.20 360 IAMs_20 IAMs_20 09 37 01.8
comp=Z,2µm,20.0s
CCIG **Comitan** 41.65 328 P P 09 18 54.4 -0.6
CCIG IAMs_20 IAMs_20 09 37 51.1
comp=Z,2µm,18.0s
HOPE **Hope Point** 43.10 151 P P 09 19 05.6 -0.6
HOPE pmax pmax
comp=Z,96nm,1.4s
HOPE **Hope Point** 43.10 151 P P 09 19 05.5 -0.6
HOPE IAmb IAmb 09 19 08.8
comp=Z,96nm,1.4s
TEIG **Tepich** 43.42 336 P P 09 19 08.9 -0.2
TEIG **Tepich** 43.42 336 IAMs_20 IAMs_20 09 39 41.6
comp=Z,2µm,18.0s
CMIG **Matias Romero** 43.73 326 P P 09 19 13.1 +1.4
comp=Z,9.1nm,1.0s,baz=140,slow=8.3,SNR=5.7
CMIG LR LR 09 35 59.7
comp=Z,411nm,18.3s,baz=152,slow=34
PMSA **Palmer Station** 45.03 176 *eP* P P 09 19 21.2 -0.3
TLIG **Tlapa** 46.16 322 P P 09 19 30.7 -0.5
DWPF **Disney Wildern** 48.86 348 P P 09 19 52.3 +0.5
baz=167
DWPF **Disney Wildern** 48.86 348 IAMs_20 IAMs_20 09 41 29.1
comp=Z,2µm,20.0s
656A **Willston** 50.31 347 P P 09 20 03.3 +0.4
656A IAmb IAmb 09 20 04.6
comp=Z,56nm,0.8s
553A **Crawfordville** 51.53 345 P P 09 20 13.2 +1.1
451A **Vernon** 52.28 344 P P 09 20 17.2 -0.5
451A IAmb IAmb 09 20 28.6
comp=Z,84nm,1.1s
451A IAMs_20 IAMs_20 09 42 15.4
comp=Z,2µm,22.0s
BBSR **BB Station** 52.35 7 P P 09 20 17.1 -1.0
BBSR IAmb IAmb 09 20 18.4
comp=Z,48nm,0.8s
TIGA **Tifton** 52.54 346 P P 09 20 19.7 +0.1
baz=165
TIGA **Tifton** 52.54 346 IAMs_20 IAMs_20 09 43 34.4
comp=Z,2µm,22.0s
257A **Skidaway Islan** 52.54 349 IAMs_20 IAMs_20 09 42 18.6
comp=Z,2µm,22.0s
ZAIG **Zacatecas** 52.56 322 P P 09 20 22.0 +1.8
ZAIG IAMs_20 IAMs_20 09 40 20.8
comp=Z,2µm,19.0s
255A **Hazlehurst** 52.77 348 P P 09 20 21.5 +0.2
255A IAMs_20 IAMs_20 09 46 21.1
comp=Z,1µm,18.0s
352A **Blakely** 52.89 345 P P 09 20 22.3 +0.1
352A IAMs_20 IAMs_20 09 43 24.7
comp=Z,1µm,21.0s
158A **Hollywood** 53.14 350 P P 09 20 25.0 +1.0
baz=169
157A **Early Branch** 53.22 349 P P 09 20 25.4 +0.8
baz=168
RGRS **Roger Stewart** 53.31 350 P P 09 20 24.6 -0.6
CSU **Charleston Sou** 53.37 350 P P 09 20 26.3 +0.6
Z59A **Georgetown, SC** 53.50 351 P P 09 20 27.3 +0.7
baz=170
NHSC **New Hope** 53.50 350 P P 09 20 27.6 +0.9
baz=169
NHSC **New Hope** 53.50 350 P P 09 20 25.6 -1.0
154A **Montrose** 53.56 347 P P 09 20 26.7 -0.4
154A IAMs_20 IAMs_20 09 47 21.7
comp=Z,1µm,18.0s
Z58A **St. Stephen** 53.67 351 P P 09 20 28.8 +0.9
baz=170
Z57A **Bowman** 53.77 350 P P 09 20 29.1 +0.5
baz=169,SNR=9.0
Z56A **Williston** 53.92 349 P P 09 20 30.0 +0.3
baz=168
Z56A **Williston** 53.92 349 P P 09 20 30.0 +0.3
Z56A IAmb IAmb 09 20 31.2
comp=Z,66nm,0.9s
Z56A IAMs_20 IAMs_20 09 43 00.1
comp=Z,2µm,22.0s
152A **Waverly Hall** 53.98 346 P P 09 20 29.3 -0.9
152A IAmb IAmb 09 20 40.9
comp=Z,35nm,1.1s
152A IAMs_20 IAMs_20 09 44 54.5
comp=Z,2µm,21.0s
346A **Big Creek Wild** 54.08 340 P P 09 20 30.3 -0.7
346A IAmb IAmb 09 20 42.8
comp=Z,40nm,0.9s
Y60A **Bolivia** 54.11 352 P P 09 20 31.7 +0.7
baz=172,SNR=7.6
Y60A **Bolivia** 54.11 352 P P 09 20 31.6 +0.6
Y60A IAMs_20 IAMs_20 09 44 52.3
comp=Z,2µm,20.0s
Y59A **Loris** 54.18 352 P P 09 20 32.1 +0.5
baz=171
Y59A **Loris** 54.18 352 IAMs_20 IAMs_20 09 44 22.1
comp=Z,2µm,21.0s
Y58A **Scranton** 54.21 351 P P 09 20 32.4 +0.6
baz=170
Y58A **Scranton** 54.21 351 IAMs_20 IAMs_20 09 44 22.9
comp=Z,2µm,22.0s
Y56A **Pelion** 54.36 349 P P 09 20 33.3 +0.4
baz=168
GOGA **Godfrey** 54.41 347 P P 09 20 32.9 -0.4
baz=166
GOGA **Godfrey** 54.41 347 IAMs_20 IAMs_20 09 44 02.1
comp=Z,1µm,20.0s
Y57A **Sumter** 54.43 350 P P 09 20 33.8 +0.4
baz=169,SNR=7.4
Y57A **Sumter** 54.43 350 P P 09 20 33.5 +0.1
344A **Westbrook Farm** 54.56 339 P P 09 20 34.3 -0.1
344A IAmb IAmb 09 20 35.6
comp=Z,33nm,1.0s
Y55A **Saluda** 54.60 349 P P 09 20 34.8 +0.1
baz=167,SNR=8.8
X60A **Albert Glenn T** 54.64 353 P P 09 20 35.2 +0.2
baz=172,SNR=7.1
Z51A **Franklin** 54.70 345 IAMs_20 IAMs_20 09 45 16.8
comp=Z,2µm,21.0s
X59A **McDuffie Farm,** 54.72 352 P P 09 20 35.9 +0.4
baz=171
X58A **Rowland** 54.80 351 P P 09 20 36.6 +0.5
baz=170
X58A **Rowland** 54.80 351 P P 09 20 36.0 -0.1
X58A IAmb IAmb 09 20 37.8
comp=Z,43nm,0.9s
X57A **Johnson Farm,** 54.82 351 P P 09 20 36.6 +0.4
baz=170
Z50A **Ashland** 54.83 345 P P 09 20 35.9 -0.5
baz=163,SNR=13
Z50A **Ashland** 54.83 345 P P 09 20 35.9 -0.5
Z50A IAmb IAmb 09 20 37.2
comp=Z,32nm,1.1s
LRAL **Lakeview Retre** 54.90 343 P P 09 20 36.3 -0.5
baz=162,SNR=7.6
LRAL **Lakeview Retre** 54.90 343 P P 09 20 36.4 -0.5
HODGE **Hodges** 54.96 348 P P 09 20 37.1 -0.2
HODGE IAMs_20 IAMs_20 09 43 32.8
comp=Z,2µm,22.0s
Y52A **Lilburn** 54.98 347 P P 09 20 37.0 -0.4

baz=165,SNR=5.8
Y52A Lilburn 54.98 347 P **P** **09 20 37.2 -0.2**
Y52A IAMs_20 IAMs_20 09 48 25.0
comp=Z,1μm,18.0s
X56A White Oak 55.00 350 P **P** **09 20 37.8 +0.2**
baz=168,SNR=9.7
342A Flagon Creek P 55.04 338 P **P** **09 20 39.0 +1.1**
BIRD Birdtown, Kers 55.05 350 P **P** **09 20 38.1 +0.1**
BIRD IAmb IAmb 09 20 39.6
comp=Z,66nm,1.0s
BIRD IAMs_20 IAMs_20 09 44 58.3
comp=Z,2μm,20.0s
X55A Gracelyn & Ava 55.08 349 P **P** **09 20 38.4 +0.3**
baz=168,SNR=13
W60A Pink Hill 55.08 353 P **P** **09 20 38.7 +0.6**
baz=172
146A Union 55.12 341 P **P** **09 20 37.9 -0.5**
146A IAmb IAmb 09 20 39.7
comp=Z,92nm,1.4s
W61A Ground Anchor 55.13 354 P **P** **09 20 39.1 +0.6**
baz=173
HKT Hockley 55.14 333 P **P** **09 20 39.0 +0.4**
HKT pmax pmax
comp=Z,50nm,1.4s
HKT Hockley 55.14 333 P **P** **09 20 39.0 +0.4**
HKT IAmb IAmb 09 20 46.0
comp=Z,50nm,1.4s
VBMS Vicksburg 55.19 340 P **P** **09 20 39.1 +0.1**
baz=158
W58A Raeford 55.24 352 P **P** **09 20 40.0 +0.7**
baz=170,SNR=16
W59A Clinton 55.28 352 P **P** **09 20 39.9 +0.3**
baz=171
CNNC Cliffs of the 55.29 353 P **P** **09 20 40.1 +0.5**
baz=172,SNR=7.1
X54A Belton 55.29 348 P **P** **09 20 39.8 +0.1**
baz=167,SNR=9.8
Z47A Carrollton 55.35 342 P **P** **09 20 40.0 -0.1**
Z47A IAMs_20 IAMs_20 09 46 47.8
comp=Z,1μm,19.0s
833A Chaparral WMA, 55.36 329 P **P** **09 20 40.9 +0.6**
baz=147,SNR=6.4
V62A Hyde County Ai 55.41 355 P **P** **09 20 41.2 +0.7**
baz=174
PAULI Pauline 55.45 349 P **P** **09 20 41.1 +0.2**
PAULI IAmb IAmb 09 20 42.4
comp=Z,43nm,1.1s
PAULI IAMs_20 IAMs_20 09 45 04.8
comp=Z,2μm,20.0s
W57A Gilead 55.48 351 P **P** **09 20 41.3 +0.3**
baz=170,SNR=7.2
W57A Gilead 55.48 351 P **P** **09 20 41.3 +0.3**
W57A IAmb IAmb 09 20 42.5
comp=Z,49nm,1.1s
W57A IAMs_20 IAMs_20 09 45 11.6
comp=Z,2μm,21.0s
Y49A Blount Mountai 55.52 344 P **P** **09 20 40.6 -0.8**
Y49A IAMs_20 IAMs_20 09 46 19.5
comp=Z,1μm,19.0s
W56A Indian Trail 55.55 350 P **P** **09 20 41.6 +0.1**
baz=169,SNR=8.7
KMSC Kings Mountain 55.68 350 P **P** **09 20 42.7 +0.2**
baz=168,SNR=7.2
V61A Roper 55.70 354 P **P** **09 20 43.0 +0.4**
baz=174
V60A Jim Taylor Roa 55.74 354 P **P** **09 20 43.4 +0.6**
baz=173
V60A Jim Taylor Roa 55.74 354 P **P** **09 20 42.2 -0.6**
V60A IAmb IAmb 09 20 44.5
comp=Z,45nm,1.0s
V60A IAMs_20 IAMs_20 09 45 39.5
comp=Z,1μm,21.0s
W54A Cherokee Point 55.78 349 P **P** **09 20 43.6 +0.4**
baz=167,SNR=9.7
X51A Calhoun 55.83 346 P **P** **09 20 43.4 -0.2**
X51A IAMs_20 IAMs_20 09 45 04.5
comp=Z,1μm,20.0s
BG3 Lake Jocassee 55.83 348 P **P** **09 20 44.1 +0.5**
V59A Middlesex 55.85 353 P **P** **09 20 44.3 +0.6**
baz=172,SNR=14
ASCN Ascension 55.86 86 P **P** **09 20 43.4 -0.8**
143A Socs Landing, 55.93 339 P **P** **09 20 44.3 0.0**
143A IAmb IAmb 09 20 50.9
comp=Z,40nm,1.3s
FPAL Fort Paine 55.98 345 P **P** **09 20 43.6 -1.1**
FPAL IAMs_20 IAMs_20 09 45 53.5
comp=Z,2μm,21.0s
V58A Windy Hill, Pi 55.99 352 P **P** **09 20 44.8 +0.2**
baz=171,SNR=9.6
V58A Windy Hill, Pi 55.99 352 P **P** **09 20 45.1 +0.4**
V58A IAmb IAmb 09 20 46.2
comp=Z,64nm,1.1s
V58A IAMs_20 IAMs_20 09 45 28.0
comp=Z,2μm,21.0s
W52A Murphy 56.13 347 P **P** **09 20 44.3 -1.5**
W52A IAmb IAmb 09 20 46.9
comp=Z,45nm,1.2s
W52A IAMs_20 IAMs_20 09 49 06.6
comp=Z,2μm,18.0s
V57A Coltrane Farms 56.17 351 P **P** **09 20 46.0 0.0**
baz=170,SNR=6.9
V56A Mocksville 56.20 351 P **P** **09 20 46.7 +0.5**
baz=169,SNR=17
U61A Possum Corner 56.22 355 P **P** **09 20 46.7 +0.4**
baz=174
U61A Possum Corner 56.22 355 P **P** **09 20 46.1 -0.2**
X48A Hartselle 56.25 344 P **P** **09 20 46.4 -0.2**
X48A IAmb IAmb 09 20 46.7
comp=Z,35nm,1.1s
X48A IAMs_20 IAMs_20 09 44 49.7
comp=Z,1μm,22.0s
NATX Nacogdoches 56.26 336 P **P** **09 20 47.7 +1.1**
baz=153
NATX Nacogdoches 56.26 336 P **P** **09 20 46.8 +0.1**
NATX IAmb IAmb 09 20 48.5
comp=Z,41nm,0.9s
V55A Taylorsville 56.36 350 P **P** **09 20 47.7 +0.4**
baz=168,SNR=8.6
V55A Taylorsville 56.36 350 P **P** **09 20 47.3 0.0**
V55A IAmb IAmb 09 20 49.1
comp=Z,39nm,1.0s
V55A IAMs_20 IAMs_20 09 45 26.7
comp=Z,2μm,21.0s
U59A Littleton 56.38 353 P **P** **09 20 47.9 +0.5**
baz=172,SNR=12
U59A Littleton 56.38 353 P **P** **09 20 48.0 +0.5**
V54A Nebo 56.41 349 P **P** **09 20 48.0 +0.2**
baz=168,SNR=11
U60A Pendleton 56.43 354 P **P** **09 20 48.0 +0.2**
baz=173,SNR=6.0
V53A Saluda 56.46 348 P **P** **09 20 48.1 -0.1**
V53A IAMs_20 IAMs_20 09 44 28.5
comp=Z,2μm,22.0s
U58A Oxford 56.51 353 P **P** **09 20 49.0 +0.6**
baz=171,SNR=10
W50A Signal Mountai 56.54 346 P **P** **09 20 48.3 -0.4**
W50A IAmb IAmb 09 20 49.6
comp=Z,59nm,1.4s
W50A IAMs_20 IAMs_20 09 45 38.4
comp=Z,2μm,20.0s
CPCT Cooper Cave 56.60 347 P **P** **09 20 48.3 -0.7**
CPCT IAmb IAmb 09 20 59.4
comp=Z,36nm,1.1s
CPCT IAMs_20 IAMs_20 09 46 43.1
comp=Z,1μm,20.0s
435B Jarrell 56.61 332 P **P** **09 20 49.5 +0.3**
baz=150
TKL Tuckaleechee C 56.64 347 P **P** **09 20 48.5 -0.9**
comp=Z,35nm,1.1s,baz=165,slow=8.8,SNR=16
TKL Tuckaleechee C 56.64 347 P **P** **09 20 48.9 -0.5**
TKL pmax pmax
comp=Z,44nm,1.1s
TKL MLR MLR
comp=Z,1μm,18.0s
TKL Tuckaleechee C 56.64 347 P **P** **09 20 48.9 -0.5**
TKL IAmb IAmb 09 20 59.5
comp=Z,44nm,1.1s
TKL IAMs_20 IAMs_20 09 49 30.2
comp=Z,1μm,18.0s
U57A Blanch 56.64 352 P **P** **09 20 49.6 +0.3**
baz=171,SNR=8.3
SWET Sewanee 56.70 345 P **P** **09 20 48.9 -0.9**
SWET IAmb IAmb 09 20 49.8
comp=Z,41nm,1.2s
SWET IAMs_20 IAMs_20 09 45 42.6
comp=Z,2μm,22.0s
U56A King 56.71 351 P **P** **09 20 50.5 +0.7**
baz=169,SNR=12
U56A King 56.71 351 P **P** **09 20 50.6 +0.8**
U56A IAmb IAmb 09 20 51.9
comp=Z,52nm,1.0s
U56A IAMs_20 IAMs_20 09 46 00.1
comp=Z,2μm,21.0s
V52A Sevierville 56.78 348 P **P** **09 20 49.9 -0.4**
V52A IAMs_20 IAMs_20 09 49 32.9
comp=Z,1μm,18.0s
V51A Loudon 56.90 347 P **P** **09 20 50.8 -0.4**
V51A IAmb IAmb 09 21 02.0
comp=Z,35nm,1.1s
V51A IAMs_20 IAMs_20 09 46 19.1
comp=Z,1μm,20.0s
Z41A Richland Creek 56.91 338 P **P** **09 20 51.9 +0.6**
baz=155,SNR=7.5
237A Washetta, Mont 56.93 335 P **P** **09 20 52.1 +0.7**
237A IAmb IAmb 09 21 10.8
comp=Z,65nm,1.1s
T59A Double "B" Far 56.96 354 P **P** **09 20 52.2 +0.6**
baz=173,SNR=15
T59A Double "B" Far 56.96 354 P **P** **09 20 52.1 +0.5**
T59A IAMs_20 IAMs_20 09 46 36.9
comp=Z,2μm,21.0s
U55A TA2, Sparta 56.97 350 P **P** **09 20 51.8 +0.1**
baz=169,SNR=6.9
OXF Oxford 56.97 342 P **P** **09 20 51.0 -0.7**
OXF pmax pmax
comp=Z,96nm,1.1s
OXF MLR MLR
comp=Z,1μm,19.0s
OXF Oxford 56.97 342 P **P** **09 20 50.5 -1.2**
baz=159,SNR=9.3
OXF Oxford 56.97 342 P **P** **09 20 51.0 -0.7**
PLAL Pickwick Lake 57.03 343 P **P** **09 20 50.5 -1.6**
PLAL IAmb IAmb 09 21 02.7
comp=Z,33nm,1.1s
PLAL IAMs_20 IAMs_20 09 45 01.2
comp=Z,1μm,22.0s
T58A Grand View Acr 57.05 353 P **P** **09 20 52.8 +0.6**
baz=172,SNR=17
T60A Surry 57.05 354 P **P** **09 20 52.9 +0.7**
baz=174
U54A Nelsons Funny 57.11 349 P **P** **09 20 52.7 -0.1**
baz=168,SNR=9.0
U54A Nelsons Funny 57.11 349 P **P** **09 20 53.2 +0.4**
U54A IAmb IAmb 09 20 54.0
comp=Z,57nm,1.0s
U54A IAMs_20 IAMs_20 09 46 23.7
comp=Z,2μm,20.0s
CCAR Cane Creek 57.16 339 P **P** **09 20 53.6 +0.6**
T57A Hurt 57.19 352 P **P** **09 20 53.9 +0.7**
baz=171,SNR=12
T57A Hurt 57.19 352 P **P** **09 20 53.4 +0.1**
T57A IAmb IAmb 09 20 55.0
comp=Z,66nm,1.1s
T57A IAMs_20 IAMs_20 09 46 13.9
comp=Z,2μm,21.0s
T56A Rocky Mt 57.33 351 P **P** **09 20 55.0 +0.8**
baz=170,SNR=12
JCT Junction City 57.36 330 P **P** **09 20 54.7 +0.1**
JCT pmax pmax
comp=Z,32nm,1.4s
JCT Junction City 57.36 330 P **P** **09 20 54.7 +0.1**
baz=148,SNR=8.1
JCT Junction City 57.36 330 P **P** **09 20 54.7 +0.1**
WLAR White Oak Lake 57.41 338 P **P** **09 20 56.1 +1.3**
V48A Smith Brothers 57.42 345 P **P** **09 20 54.4 -0.5**
V48A IAmb IAmb 09 20 55.6
comp=Z,92nm,1.4s
V48A IAMs_20 IAMs_20 09 45 17.6
comp=Z,2μm,22.0s
X43A Marvell 57.42 340 P **P** **09 20 54.9 0.0**
baz=158
W45A Hickory Valley 57.50 342 P **P** **09 20 54.5 -0.9**
W45A IAmb IAmb 09 21 06.6
comp=Z,60nm,1.0s
T55A Pulaski 57.52 351 P **P** **09 20 56.2 +0.6**
baz=169,SNR=14
HPIG 57.55 323 P **P** **09 20 56.8 +0.6**
HPIG IAMs_20 IAMs_20 09 46 17.1
comp=Z,1μm,19.0s
BLA Blacksburg 57.56 351 P **P** **09 20 56.5 +0.6**
BLA pmax pmax
comp=Z,32nm,1.0s
BLA MLR MLR
comp=Z,2μm,20.0s
BLA Blacksburg 57.56 351 P **P** **09 20 56.5 +0.6**
baz=170
BLA Blacksburg 57.56 351 P **P** **09 20 56.5 +0.6**
BLA IAmb IAmb 09 21 06.2
comp=Z,32nm,1.0s
BLA IAMs_20 IAMs_20 09 46 47.7
comp=Z,2μm,20.0s
T54A Tazewell 57.60 350 P **P** **09 20 56.1 -0.1**
baz=168,SNR=7.6
WHTX Lake Whitney, 57.60 333 P **P** **09 20 56.6 +0.4**
baz=150,SNR=9.4
WHTX Lake Whitney, 57.60 333 P **P** **09 20 56.4 +0.2**
WHTX IAmb IAmb 09 21 03.0
comp=Z,40nm,1.1s
S60A Water View 57.60 355 P **P** **09 20 56.7 +0.6**
baz=174
CLTN Cedars of Leba 57.63 345 P **P** **09 20 55.7 -0.6**
CLTN IAmb IAmb 09 20 57.1
comp=Z,48nm,1.2s
CLTN IAMs_20 IAMs_20 09 46 32.2
comp=Z,1μm,22.0s
S58A Poland Farm, P 57.65 353 P **P** **09 20 56.8 +0.4**
baz=172,SNR=8.5
S58A Poland Farm, P 57.65 353 P **P** **09 20 57.0 +0.6**
S58A IAmb IAmb 09 20 58.2
comp=Z,50nm,1.1s
T53A Wise 57.69 349 P **P** **09 20 56.6 -0.2**
baz=167,SNR=8.4
MET Memphis--Engin 57.69 341 P **P** **09 20 56.7 0.0**
MET IAMs_20 IAMs_20 09 48 04.7
comp=Z,1μm,19.0s
S59A Mechanicsville 57.72 354 P **P** **09 20 57.3 +0.5**
baz=173
S56A Natural Bridge 57.90 352 P **P** **09 20 58.7 +0.5**
baz=170,SNR=5.4
U49A Red Boiling Sp 57.90 346 P **P** **09 20 57.6 -0.7**
U49A IAmb IAmb 09 20 58.9
comp=Z,53nm,1.4s
U49A IAMs_20 IAMs_20 09 47 26.5
comp=Z,1μm,21.0s
S57A Dark Hollow, R 57.90 352 P **P** **09 20 58.8 +0.6**
baz=171,SNR=9.0
S57A Dark Hollow, R 57.90 352 P **P** **09 20 59.0 +0.7**
S57A IAmb IAmb 09 21 00.2
comp=Z,72nm,1.1s
S57A IAMs_20 IAMs_20 09 47 15.8
comp=Z,2μm,20.0s
R58B Mineral 57.98 353 P **P** **09 20 59.5 +0.8**
baz=172,SNR=10
R58B Mineral 57.98 353 P **P** **09 20 58.5 -0.2**
R58B IAmb IAmb 09 21 00.9
comp=Z,70nm,1.1s
R58B IAMs_20 IAMs_20 09 47 04.8
comp=Z,1μm,19.0s
X40A Basin Creek Fa 58.04 339 P **P** **09 20 59.1 -0.1**
baz=156
WVT Waverly 58.04 344 P **P** **09 20 58.0 -1.2**
WVT pmax pmax
comp=Z,27nm,0.8s
WVT MLR MLR
comp=Z,1μm,20.0s
WVT Waverly 58.04 344 P **P** **09 20 58.2 -1.1**
baz=161
WVT Waverly 58.04 344 P **P** **09 20 58.0 -1.2**
WVT IAmb IAmb 09 21 08.7
comp=Z,27nm,0.8s
WVT Waverly 58.04 344 IAMs_20 IAMs_20 09 47 44.1
comp=Z,1μm,20.0s
S55A Lewisburg 58.12 351 P **P** **09 21 00.3 +0.5**
baz=169,SNR=12
UALR University of 58.13 339 P **P** **09 21 00.2 +0.3**
UALR IAmb IAmb 09 21 01.1
comp=Z,73nm,1.5s
R59A King George, V 58.13 354 P **P** **09 21 00.4 +0.6**
baz=173
R60A Leonardtown, M 58.15 355 P **P** **09 21 00.7 +0.8**
baz=174
CBN Corbin Frederi 58.16 354 P **P** **09 21 00.5 +0.5**
baz=173
T50A Nancy 58.18 347 P **P** **09 20 59.5 -0.7**
T50A IAmb IAmb 09 21 00.2
comp=Z,37nm,1.1s
T50A IAMs_20 IAMs_20 09 46 20.9
comp=Z,1μm,20.0s
LPAR Lepanto 58.24 341 P **P** **09 21 00.7 +0.1**
LPAR IAMs_20 IAMs_20 09 48 21.4
comp=Z,1μm,19.0s
S54A Dingess, Beckl 58.28 350 P **P** **09 21 00.9 0.0**
baz=169,SNR=9.8
S54A Dingess, Beckl 58.28 350 P **P** **09 21 01.0 +0.1**
S54A IAmb IAmb 09 21 01.6
comp=Z,53nm,1.1s
S54A IAMs_20 IAMs_20 09 49 51.6
comp=Z,1μm,18.0s
S53A Williamson 58.30 349 P **P** **09 21 00.6 -0.4**
baz=168,SNR=11
R58A Rapidan 58.32 353 P **P** **09 21 01.9 +0.7**
baz=172,SNR=7.3
TX32 Lajitas Array 58.34 326 P **P** **09 21 01.9 +0.3**
TXAR Lajitas Array 58.34 326 P **P** **09 21 01.9 +0.3**
comp=Z,5.4nm,0.8s,baz=150,slow=8.2,SNR=42
TXAR LR LR 09 45 04.6
comp=Z,677nm,19.4s,baz=0.0,slow=35
TXAR PKP2bc 09 50 56.1
comp=Z,0.4nm,0.8s,baz=17,slow=0.9,SNR=3.4
TX31 Lajitas Ar. Si 58.34 326 P **P** **09 21 01.9 +0.3**
MIAR Mount Ida 58.35 338 P **P** **09 21 01.7 +0.3**
MIAR pmax pmax
comp=Z,34nm,0.8s
MIAR MLR MLR
comp=Z,600nm,21.0s
MIAR Mount Ida 58.35 338 P **P** **09 21 01.6 +0.2**
baz=155,SNR=27
MIAR Mount Ida 58.35 338 P **P** **09 21 01.6 +0.2**
MIAR IAmb IAmb 09 21 02.8
comp=Z,34nm,0.8s
R57A Stanardsville 58.38 353 P **P** **09 21 02.5 +1.0**
baz=172,SNR=13
W41B Gary Mavity, V 58.47 339 P **P** **09 21 02.0 -0.1**
baz=156,SNR=9.2
LNXT Lenox 58.47 342 P **P** **09 21 02.2 0.0**
GNAR Gosnell 58.50 342 P **P** **09 21 02.1 -0.3**
S51A Beattyville 58.52 348 P **P** **09 21 01.9 -0.7**
S51A IAMs_20 IAMs_20 09 45 54.0
comp=Z,2μm,22.0s
R55A Marlinton 58.57 351 P **P** **09 21 03.9 +0.9**
baz=170,SNR=6.7
R55A Marlinton 58.57 351 P **P** **09 21 03.7 +0.8**
R55A IAmb IAmb 09 21 04.6
comp=Z,40nm,1.1s
R55A IAMs_20 IAMs_20 09 46 57.4
comp=Z,2μm,21.0s
WHAR Wooly Hollow 58.59 339 P **P** **09 21 02.7 -0.4**
WHAR IAmb IAmb 09 21 14.5
comp=Z,30nm,1.0s
PEBM Pemiscott Bayo 58.59 342 P **P** **09 21 03.1 +0.1**
R54A Victor 58.60 351 P **P** **09 21 03.3 +0.2**
baz=169
T47A Sharon Grove 58.67 345 P **P** **09 21 02.8 -0.8**
T47A IAMs_20 IAMs_20 09 47 16.8
comp=Z,1μm,22.0s
Z35A Perchaven, San 58.68 334 P **P** **09 21 04.7 +0.9**
Q59A Harwood 58.75 355 P **P** **09 21 04.6 +0.5**
baz=174
HICK Hickman 58.81 343 P **P** **09 21 03.6 -1.0**
Q60A Greensboro 58.82 355 P **P** **09 21 05.3 +0.7**
baz=175
PVMO Portageville 58.82 342 P **P** **09 21 04.9 +0.2**
PVMO IAMs_20 IAMs_20 09 48 05.7
comp=Z,1μm,20.0s
PENMO Penman 58.84 342 P **P** **09 21 04.9 +0.1**
PENMO IAMs_20 IAMs_20 09 47 55.1
comp=Z,1μm,20.0s
R53A Hurricane 58.90 350 P **P** **09 21 05.0 -0.2**
baz=168
R53A Hurricane 58.90 350 P **P** **09 21 05.0 -0.2**
R53A IAmb IAmb 09 21 06.2
comp=Z,44nm,1.2s
R53A IAMs_20 IAMs_20 09 47 21.0
comp=Z,1μm,20.0s
Q58A Fox Den Farm, 58.92 354 P **P** **09 21 06.1 +0.8**
baz=173,SNR=5.5
LCAR Lake Charles 58.94 341 P **P** **09 21 05.0 -0.5**
W39A Magazine 59.01 338 P **P** **09 21 06.6 +0.7**
baz=155,SNR=24
W39A Magazine 59.01 338 P **P** **09 21 06.7 +0.7**
W39A IAmb IAmb 09 21 07.3
comp=Z,41nm,1.1s
X37A Clayton 59.04 336 P **P** **09 21 07.0 +0.7**
PARMO Parma 59.07 342 P **P** **09 21 06.6 +0.2**
PARMO IAMs_20 IAMs_20 09 48 02.3
comp=Z,1μm,20.0s
FCAR Ozark Folk Cen 59.08 340 P **P** **09 21 06.2 -0.2**
ABTX Abilene, Hawle 59.09 332 P **P** **09 21 07.0 +0.3**
baz=148,SNR=10.0
ABTX Abilene, Hawle 59.09 332 P **P** **09 21 07.4 +0.7**
ABTX IAmb IAmb 09 21 08.2
comp=Z,33nm,1.0s
Q57A Strasburg 59.10 353 P **P** **09 21 07.8 +1.2**
baz=172,SNR=22
T45A Paducah 59.10 343 P **P** **09 21 06.1 -0.5**
Q56A Snyder Ridge, 59.19 352 P **P** **09 21 08.4 +1.2**
baz=171,SNR=14
Q56A Snyder Ridge, 59.19 352 P **P** **09 21 08.4 +1.2**
Q55A Buckhannon 59.27 352 P **P** **09 21 08.7 +1.0**
baz=170,SNR=6.7
R50A Paris 59.29 348 P **P** **09 21 07.4 -0.5**
R50A IAmb IAmb 09 21 08.7
comp=Z,63nm,1.4s
R50A IAMs_20 IAMs_20 09 47 39.2
comp=Z,1μm,20.0s
SDMD Soldier's Deli 59.31 355 P **P** **09 21 08.9 +0.9**
Q53A Leroy 59.34 350 P **P** **09 21 08.2 0.0**
baz=168,SNR=8.5
Q54A Coxs Mills 59.36 351 P **P** **09 21 08.3 0.0**
baz=169,SNR=7.2
Q54A Coxs Mills 59.36 351 P **P** **09 21 08.2 -0.2**
Q54A IAmb IAmb 09 21 18.5
comp=Z,32nm,1.1s
Q54A IAMs_20 IAMs_20 09 47 21.3
comp=Z,2μm,22.0s
PBMO Poplar Bluff 59.38 342 P **P** **09 21 07.9 -0.6**
PBMO IAmb IAmb 09 21 08.5
comp=Z,27nm,1.0s
P61A Hammonton 59.42 356 IAMs_20 IAMs_20 09 47 47.1
comp=Z,1μm,19.0s
P58A Pank, Wackersv 59.43 354 P **P** **09 21 09.6 +0.8**
baz=173,SNR=7.6
R49A Shelbyville 59.47 347 P **P** **09 21 08.7 -0.5**
R49A IAmb IAmb 09 21 09.7
comp=Z,61nm,1.5s
R49A IAMs_20 IAMs_20 09 47 11.1
comp=Z,2μm,20.0s
P59A Jarrettsville 59.47 355 P **P** **09 21 09.9 +0.8**
baz=174,SNR=8.2
P57A Homestead Farm 59.50 354 P **P** **09 21 10.4 +1.2**
baz=172,SNR=8.8
P57A Homestead Farm 59.50 354 P **P** **09 21 10.3 +1.0**
P57A IAMs_20 IAMs_20 09 46 30.0
comp=Z,1μm,20.0s
Q52A Bidwell 59.57 350 P **P** **09 21 09.4 -0.4**
baz=168,SNR=5.7
P56A Dayton Farm, R 59.61 353 P **P** **09 21 11.2 +1.1**
baz=171,SNR=14
P56A S **S** **09 29 19.7 -0.5**
baz=171
P60A Greenville 59.61 356 P **P** **09 21 10.3 +0.3**
baz=175,SNR=5.3
P60A Greenville 59.61 356 P **P** **09 21 09.8 -0.2**
P60A IAmb IAmb 09 21 11.6
comp=Z,37nm,0.9s
P60A IAMs_20 IAMs_20 09 51 30.2
comp=Z,900nm,18.0s
WCI Wyandotte Cave 59.66 346 P **P** **09 21 09.5 -0.9**
WCI pmax pmax
comp=Z,71nm,1.4s
WCI MLR MLR
comp=Z,2μm,19.0s
WCI Wyandotte Cave 59.66 346 P **P** **09 21 09.5 -0.9**
baz=163
WCI Wyandotte Cave 59.66 346 P **P** **09 21 09.5 -0.9**
WCI IAmb IAmb 09 21 10.9
comp=Z,71nm,1.4s
WCI Wyandotte Cave 59.66 346 IAMs_20 IAMs_20 09 48 29.0
comp=Z,1μm,19.0s
PSUB Penn St. - Bra 59.72 356 P **P** **09 21 10.8 +0.1**

PSUB IAmb IAmb 09 21 11.7
comp=Z,37nm,1.1s
P55A Reedsville 59.74 352 P **P** **09 21 11.7 +0.8**
baz=170,SNR=6.3
USIN University of 59.74 345 P **P** **09 21 10.2 -0.8**
USIN IAmb IAmb 09 21 11.4
comp=Z,65nm,1.2s
USIN IAMs_20 IAMs_20 09 46 37.0
comp=Z,1µm,22.0s
U40A Yellville 59.74 339 P **P** **09 21 10.8 -0.3**
baz=156,SNR=22
U40A Yellville 59.74 339 P **P** **09 21 10.8 -0.3**
U40A IAmb IAmb 09 21 12.1
comp=Z,26nm,0.9s
T42A Van Buren 59.81 341 P **P** **09 21 10.5 -1.0**
Q51A Peebles 59.82 349 P **P** **09 21 10.9 -0.6**
baz=166,SNR=7.2
Q51A Peebles 59.82 349 P **P** **09 21 11.4 -0.1**
Q51A IAmb IAmb 09 21 12.2
comp=Z,30nm,1.1s
Q51A IAMs_20 IAMs_20 09 47 59.4
comp=Z,1µm,21.0s
O61A Allentown 59.83 357 P **P** **09 21 12.0 +0.5**
baz=176
MVL Millersville 59.85 355 P **P** **09 21 12.6 +0.9**
MVL IAmb IAmb 09 21 13.7
comp=Z,30nm,0.9s
MCWV Mont Chateau 59.89 352 P **P** **09 21 12.6 +0.6**
baz=170,SNR=6.4
MCWV Mont Chateau 59.89 352 P **P** **09 21 12.2 +0.3**
S44A Carbondale 59.90 343 P **P** **09 21 11.8 -0.3**
SIUC Southern Illin 59.91 343 P **P** **09 21 11.6 -0.5**
SIUC IAmb IAmb 09 21 22.4
comp=Z,48nm,0.9s
P54A Burton 59.92 351 P **P** **09 21 12.6 +0.4**
baz=170,SNR=14
P53A Whipple 59.94 351 P **P** **09 21 12.4 0.0**
baz=169,SNR=10
P53A Whipple 59.94 351 P **P** **09 21 12.3 0.0**
P53A IAmb IAmb 09 21 13.6
comp=Z,52nm,1.1s
P53A IAMs_20 IAMs_20 09 47 51.6
comp=Z,1µm,22.0s
O58A Lewisberry 60.02 355 P **P** **09 21 13.8 +0.9**
baz=174,SNR=6.0
HHAR Hobbs 60.04 339 P **P** **09 21 13.0 -0.1**
HHAR IAmb IAmb 09 21 14.4
comp=Z,77nm,1.4s
O60A Telford 60.10 356 P **P** **09 21 14.2 +0.8**
baz=175
W35A Tecumseh 60.12 335 P **P** **09 21 13.1 -0.6**
O59A Robesonia 60.15 355 P **P** **09 21 14.4 +0.6**
baz=174
O57A Amberson 60.18 354 P **P** **09 21 14.8 +0.9**
baz=173,SNR=11
P52A Corning 60.20 350 P **P** **09 21 13.5 -0.6**
baz=168,SNR=8.9
P51A Williamsport 60.21 349 P **P** **09 21 13.4 -0.8**
baz=167,SNR=5.6
P51A Williamsport 60.21 349 P **P** **09 21 13.6 -0.6**
P51A IAmb IAmb 09 21 14.7
comp=Z,27nm,0.8s
P51A IAMs_20 IAMs_20 09 47 59.7
comp=Z,1µm,20.0s
O56A Blue Knob Stat 60.33 353 P **P** **09 21 16.0 +0.9**
baz=172,SNR=18
O56A Blue Knob Stat 60.33 353 P **P** **09 21 15.9 +0.9**
U38A Gravette 60.34 338 P **P** **09 21 14.9 -0.2**
O55A Ligonier 60.36 353 P **P** **09 21 15.9 +0.7**
baz=171,SNR=12
TUL1 Leonard 60.37 337 P **P** **09 21 15.5 +0.1**
baz=153,SNR=23
TUL1 Leonard 60.37 337 P **P** **09 21 15.6 +0.1**
LUPA Lehigh Univers 60.38 356 P **P** **09 21 15.2 -0.1**
BRNJ Basking Ridge 60.41 357 IAMs_20 IAMs_20 09 47 27.4
comp=Z,1µm,21.0s
N61A South Mountain 60.47 357 P **P** **09 21 16.5 +0.6**
baz=176
P50A Jamestown 60.47 349 P **P** **09 21 15.3 -0.7**
baz=166,SNR=9.0
O54A Avella 60.47 352 P **P** **09 21 15.8 -0.2**
baz=170
O54A Avella 60.47 352 P **P** **09 21 15.6 -0.4**
WMOK Wichita Mounta 60.52 334 P **P** **09 21 16.1 -0.4**
WMOK pmax pmax
comp=Z,6.0nm,0.9s
WMOK MLR MLR
comp=Z,600nm,21.0s
WMOK Wichita Mounta 60.52 334 P **P** **09 21 15.9 -0.6**
baz=150,SNR=7.1
WMOK Wichita Mounta 60.52 334 P **P** **09 21 16.1 -0.4**
OLIL Olney 60.57 345 P **P** **09 21 15.7 -1.0**
OLIL IAMs_20 IAMs_20 09 47 12.7
comp=Z,1µm,22.0s
P49A Miami Univ. Ec 60.58 348 P **P** **09 21 15.6 -1.1**
baz=165,SNR=11
N62A Caumsett State 60.61 358 P **P** **09 21 17.2 +0.3**
baz=177
BLO Bloomington 60.61 346 P **P** **09 21 16.5 -0.4**
BLO pmax pmax
comp=Z,66nm,1.5s
BLO MLR MLR
comp=Z,2µm,21.0s
BLO Bloomington 60.61 346 P **P** **09 21 16.5 -0.4**
BLO IAmb IAmb 09 21 17.4
comp=Z,66nm,1.4s
BLO IAMs_20 IAMs_20 09 47 56.2
comp=Z,1µm,21.0s
O52A Adamsville 60.62 350 P **P** **09 21 16.6 -0.4**
baz=168,SNR=6.4
O52A Adamsville 60.62 350 P **P** **09 21 16.6 -0.4**
O52A IAmb IAmb 09 21 17.3
comp=Z,27nm,1.0s
O52A IAMs_20 IAMs_20 09 48 23.7
comp=Z,2µm,21.0s
SSPA Standing Stone 60.62 354 P **P** **09 21 17.7 +0.7**
baz=172
SSPA Standing Stone 60.62 354 P **P** **09 21 17.7 +0.7**
SSPA Standing Stone 60.62 354 IAMs_20 IAMs_20 09 48 25.9
comp=Z,1µm,22.0s
N60A Cedar Hill Far 60.63 356 P **P** **09 21 17.5 +0.4**
baz=176
P48A Milroy 60.65 347 P **P** **09 21 16.3 -0.9**
P48A IAMs_20 IAMs_20 09 46 51.3
comp=Z,1µm,22.0s
O53A New Philadelph 60.66 351 P **P** **09 21 17.1 -0.2**
baz=169,SNR=5.8
PAL Palisades 60.70 357 P **P** **09 21 17.7 +0.2**
baz=177
PAL Palisades 60.70 357 IAMs_20 IAMs_20 09 47 32.1
comp=Z,2µm,21.0s
N57A Milroy 60.71 354 P **P** **09 21 18.2 +0.6**
baz=173,SNR=14
N58A Sunbury 60.72 355 P **P** **09 21 18.3 +0.7**
baz=174,SNR=7.9
N58A Sunbury 60.72 355 P **P** **09 21 17.9 +0.3**
N58A IAmb IAmb 09 21 19.6
comp=Z,52nm,1.0s
N58A IAMs_20 IAMs_20 09 50 58.4
comp=Z,976nm,18.0s
N59A State Game Lan 60.72 356 P **P** **09 21 18.3 +0.6**
baz=175
N59A State Game Lan 60.72 356 P **P** **09 21 18.4 +0.6**
N59A IAmb IAmb 09 21 19.2
comp=Z,29nm,1.1s
O51A Pataskala 60.78 350 P **P** **09 21 17.5 -0.6**
baz=168,SNR=6.5
CCM Cathedral Cave 60.80 342 P **P** **09 21 17.7 -0.6**
CCM pmax pmax
comp=Z,49nm,1.3s
CCM MLR MLR
comp=Z,900nm,21.0s
CCM Cathedral Cave 60.80 342 P **P** **09 21 17.6 -0.6**
baz=158
CCM Cathedral Cave 60.80 342 P **P** **09 21 17.7 -0.6**
CCM IAmb IAmb 09 21 19.1
comp=Z,49nm,1.2s
ODNJ Ogdensburg 60.81 357 IAMs_20 IAMs_20 09 47 50.0
comp=Z,1µm,21.0s
WSPT Westport, CT 60.84 358 IAMs_20 IAMs_20 09 48 25.1
comp=Z,2µm,20.0s
N55A Marion Center 60.89 353 P **P** **09 21 19.7 +0.8**
baz=171,SNR=36
ACSO Alum Creek Sta 60.93 349 P **P** **09 21 18.5 -0.5**
baz=167,SNR=9.6
ACSO Alum Creek Sta 60.93 349 P **P** **09 21 18.7 -0.4**
ACSO IAMs_20 IAMs_20 09 51 24.7
comp=Z,1µm,18.0s
N56A West Decatur 60.94 354 P **P** **09 21 19.9 +0.7**
baz=172,SNR=12
O50A Cable 60.96 349 P **P** **09 21 18.6 -0.7**
baz=166,SNR=9.6
Q44A Meyer Farm, Va 60.97 344 P **P** **09 21 18.4 -1.0**
Q44A IAmb IAmb 09 21 19.5
comp=Z,47nm,1.1s
YLE Yale 60.98 358 IAMs_20 IAMs_20 09 45 49.6
comp=Z,1µm,22.0s
GDL2 Guadalupe Moun 60.99 328 P **P** **09 21 20.9 +1.1**
M63A Gales Ferry 61.04 359 P **P** **09 21 20.4 +0.6**
baz=179
M60A Port Jervis 61.06 357 P **P** **09 21 20.3 +0.4**
baz=176
M62A Hamden 61.10 358 P **P** **09 21 20.8 +0.7**
baz=178
MNTX Cornudas Mount 61.11 326 P **P** **09 21 20.4 -0.1**
baz=143,SNR=32
MNTX Cornudas Mount 61.11 326 P **P** **09 21 20.8 +0.2**
MNTX IAmb IAmb 09 21 28.3
comp=Z,40nm,1.2s
N53A Lisbon 61.15 351 P **P** **09 21 20.7 +0.1**
baz=169,SNR=6.4
N53A Lisbon 61.15 351 P **P** **09 21 21.1 +0.5**
N53A IAmb IAmb 09 21 21.3
comp=Z,37nm,1.1s
M64A Tiverton 61.18 360 P **P** **09 21 21.2 +0.5**
baz=180
N54A Moraine State 61.19 352 P **P** **09 21 21.4 +0.6**
baz=170,SNR=12
N54A Moraine State 61.19 352 P **P** **09 21 21.4 +0.6**
N54A IAMs_20 IAMs_20 09 48 28.7
comp=Z,2µm,21.0s
M65A Busby, Falmout 61.19 0 IAMs_20 IAMs_20 09 46 38.2
comp=Z,1µm,22.0s
P46A Rosedale 61.20 346 P **P** **09 21 20.3 -0.6**
P46A IAmb IAmb 09 21 20.9
comp=Z,38nm,1.1s
P46A IAMs_20 IAMs_20 09 52 27.7
comp=Z,1µm,18.0s
M58A Price's Panora 61.23 355 P **P** **09 21 22.1 +1.0**
baz=174,SNR=10
M57A Sunshine Farm, 61.25 355 P **P** **09 21 22.2 +0.9**
baz=173,SNR=12
M57A Sunshine Farm, 61.25 355 P **P** **09 21 22.1 +0.8**
M57A IAmb IAmb 09 21 22.8
comp=Z,50nm,1.1s
N52A McGinn's Farm, 61.28 351 P **P** **09 21 21.0 -0.5**
baz=168,SNR=5.7
M59A Waymart 61.32 356 P **P** **09 21 22.5 +0.7**
baz=175,SNR=8.8
R40A Maddies Statio 61.33 341 P **P** **09 21 21.0 -0.8**
R40A IAmb IAmb 09 21 23.4
comp=Z,29nm,0.9s
KSPA Keystone Colle 61.36 356 P **P** **09 21 23.1 +1.1**
KSPA IAmb IAmb 09 21 40.3
comp=Z,50nm,1.4s
O48A Farmland 61.36 348 P **P** **09 21 21.0 -1.0**
baz=165,SNR=10
KSCT Kent School, K 61.41 358 P **P** **09 21 22.5 +0.3**
KSCT IAmb IAmb 09 21 23.5
comp=Z,58nm,1.2s
KSCT IAMs_20 IAMs_20 09 48 00.7
comp=Z,1µm,20.0s
N50A Nevada 61.48 349 P **P** **09 21 22.0 -0.8**
baz=167,SNR=6.4
M56A Emporium 61.49 354 P **P** **09 21 23.5 +0.6**
baz=172,SNR=14
M56A Emporium 61.49 354 P **P** **09 21 23.5 +0.6**
M56A IAMs_20 IAMs_20 09 48 51.9
comp=Z,1µm,22.0s
N51A Ashland 61.49 350 P **P** **09 21 21.3 -1.6**
baz=168,SNR=5.3
N51A Ashland 61.49 350 P **P** **09 21 21.6 -1.4**
N51A IAmb IAmb 09 21 22.9
comp=Z,29nm,0.9s
N51A IAMs_20 IAMs_20 09 48 50.7
comp=Z,1µm,20.0s
L63A North Scituate 61.50 359 P **P** **09 21 23.4 +0.5**
baz=179
T35A Sooner Cattle 61.53 337 P **P** **09 21 23.4 +0.2**
M55A Ridgway 61.54 353 P **P** **09 21 23.8 +0.6**
baz=172,SNR=24
M55A Ridgway 61.54 353 P **P** **09 21 23.8 +0.6**
BRYW Bryant College 61.55 359 P **P** **09 21 23.5 +0.2**
BRYW IAMs_20 IAMs_20 09 50 07.6
comp=Z,924nm,19.0s
L64A Middleborough 61.56 360 P **P** **09 21 23.7 +0.4**
baz=180
MSTX Muleshoe 61.65 330 P **P** **09 21 24.1 -0.2**
baz=146
MSTX Muleshoe 61.65 330 P **P** **09 21 24.6 +0.3**
MSTX IAmb IAmb 09 21 30.4
comp=Z,56nm,1.2s
L62A Suffield 61.69 358 P **P** **09 21 24.5 +0.4**
baz=178
M54A Oil Creek Stat 61.69 352 P **P** **09 21 24.6 +0.4**
baz=171,SNR=15
M54A Oil Creek Stat 61.69 352 P **P** **09 21 24.4 +0.2**
L60A Shokan 61.70 357 P **P** **09 21 25.1 +0.8**
baz=176
M53A WI Miller and 61.75 352 P **P** **09 21 24.6 0.0**
baz=170
EPT El Paso 61.76 326 IAMs_20 IAMs_20 09 46 50.5
comp=Z,1µm,20.0s
P43A Skaggs, Pawnee 61.79 344 P **P** **09 21 24.0 -0.9**
P43A IAMs_20 IAMs_20 09 52 07.4
comp=Z,992nm,18.0s
L58A Harry Jones Me 61.85 356 P **P** **09 21 26.2 +0.9**
baz=175,SNR=13
M51A Elyria 61.87 350 P **P** **09 21 25.1 -0.3**
baz=168
L61A Hillsdale 1, H 61.87 358 P **P** **09 21 26.0 +0.6**
baz=177
L57A Andrews Acres 61.88 355 P **P** **09 21 26.3 +0.8**
baz=174,SNR=6.6
ALLY Alegheny Colle 61.88 352 P **P** **09 21 26.1 +0.6**
ALLY IAMs_20 IAMs_20 09 49 00.2
comp=Z,2µm,21.0s
SFIN Lafayette 61.90 346 P **P** **09 21 24.2 -1.5**
baz=163,SNR=6.6
SFIN Lafayette 61.90 346 P **P** **09 21 24.1 -1.5**
SFIN IAmb IAmb 09 21 25.4
comp=Z,40nm,1.1s
N48A Decatur 61.91 348 P **P** **09 21 24.8 -0.9**
baz=165,SNR=10
QUA2 Belchertown 61.92 359 IAMs_20 IAMs_20 09 52 07.5
comp=Z,1µm,18.0s
L59A Walton 61.94 356 P **P** **09 21 26.7 +0.7**
baz=176,SNR=16
L59A Walton 61.94 356 P **P** **09 21 26.9 +0.9**
L59A IAMs_20 IAMs_20 09 48 24.9
comp=Z,1µm,20.0s
M52A Chesterland 61.95 351 P **P** **09 21 25.7 -0.3**
baz=169,SNR=5.1
M52A Chesterland 61.95 351 P **P** **09 21 26.1 +0.2**
M52A IAmb IAmb 09 21 26.4
comp=Z,45nm,1.1s
O44A Mansfield 62.01 345 P **P** **09 21 25.4 -1.0**
O44A IAMs_20 IAMs_20 09 50 05.7
comp=Z,1µm,19.0s
BINY Binghamton 62.01 356 P **P** **09 21 27.2 +0.8**
baz=175,SNR=14
BINY Binghamton 62.01 356 P **P** **09 21 27.2 +0.8**
WES Weston 62.02 360 IAMs_20 IAMs_20 09 46 27.9
comp=Z,1µm,22.0s
U32A Winter Ranch, 62.03 334 P **P** **09 21 27.2 +0.5**
U32A IAmb IAmb 09 21 28.0
comp=Z,38nm,1.1s
L56A Greenwood 62.08 354 P **P** **09 21 27.4 +0.6**
baz=173,SNR=11
L56A Greenwood 62.08 354 P **P** **09 21 26.6 -0.3**
L61B Northampton 62.10 358 P **P** **09 21 27.4 +0.5**
baz=178
VNA3 Neumayer Olymp 62.12 161 P **P** **09 21 27.6 +0.7**
HRV Adam Dziewonsk 62.14 359 P **P** **09 21 28.1 +0.9**
HRV pmax pmax
comp=Z,64nm,0.9s
HRV Adam Dziewonsk 62.14 359 P **P** **09 21 27.9 +0.7**
baz=179
HRV Adam Dziewonsk 62.14 359 P **P** **09 21 28.1 +0.9**
HRV Adam Dziewonsk 62.14 359 IAMs_20 IAMs_20 09 47 31.2
comp=Z,1µm,20.0s
L53A Girard 62.20 352 P **P** **09 21 27.7 0.0**
baz=170,SNR=12
L55A Hinsdale 62.21 354 P **P** **09 21 28.4 +0.6**
baz=172,SNR=20
K62A Royalston 62.31 359 P **P** **09 21 29.1 +0.7**
baz=179
K62A Royalston 62.31 359 IAMs_20 IAMs_20 09 49 34.1
comp=Z,892nm,19.0s
K60A Five Rivers En 62.31 357 P **P** **09 21 27.8 -0.5**
baz=177
M49A Liberty Center 62.31 349 P **P** **09 21 27.7 -0.7**
baz=166,SNR=7.7
K63A Dunstable 62.32 359 P **P** **09 21 28.7 +0.3**
baz=179
ERPA Erie 62.33 352 P **P** **09 21 28.6 +0.1**
baz=170,SNR=13
ERPA Erie 62.33 352 P **P** **09 21 28.8 +0.3**
ERPA IAMs_20 IAMs_20 09 49 13.8
comp=Z,896nm,19.0s
K61A Williamstown 62.34 358 P **P** **09 21 29.3 +0.7**
baz=178
VNA1 Neumayer--Stat 62.34 160 P **P** **09 21 27.9 -0.3**
L54A Sinclairville 62.36 353 P **P** **09 21 29.2 +0.5**
baz=171,SNR=32
P40A Paris 62.40 342 P **P** **09 21 28.7 -0.4**
P40A IAmb IAmb 09 21 29.2
comp=Z,35nm,1.1s
TRY Troy 62.41 358 P **P** **09 21 30.0 +0.9**
TRY IAMs_20 IAMs_20 09 48 20.4
comp=Z,1µm,21.0s
WVNY West Valley, N 62.45 354 P **P** **09 21 30.2 +0.9**
WVNY IAMs_20 IAMs_20 09 49 21.2
comp=Z,1µm,21.0s
M48A Edgerton 62.46 348 P **P** **09 21 28.2 -1.1**
baz=165
M48A Edgerton 62.46 348 P **P** **09 21 28.8 -0.5**
M48A IAMs_20 IAMs_20 09 47 15.7
comp=Z,1µm,22.0s
K59A Cooperstown 62.51 357 P **P** **09 21 30.6 +0.8**
baz=176,SNR=16
M47A Cromwell 62.52 347 P **P** **09 21 28.9 -0.9**
baz=164,SNR=5.7
K58A Earlville 62.55 356 P **P** **09 21 30.6 +0.7**
baz=175,SNR=17
K58A Earlville 62.55 356 P **P** **09 21 30.7 +0.7**
K57A Scipio Center 62.58 355 P **P** **09 21 30.4 +0.2**
baz=174,SNR=9.3
HDIL Hopedale 62.59 344 P **P** **09 21 29.1 -1.2**
baz=161,SNR=13
HDIL Hopedale 62.59 344 P **P** **09 21 29.5 -0.8**
HDIL IAMs_20 IAMs_20 09 50 36.6
comp=Z,1µm,19.0s
K56A Middlesex 62.62 355 P **P** **09 21 30.7 +0.2**
baz=173,SNR=6.5
K54A Basiliko Farm, 62.66 353 P **P** **09 21 31.2 +0.4**
baz=172,SNR=16
L50A Kingsville 62.66 350 P **P** **09 21 29.8 -0.9**
baz=168
MMNY Mt. Morris Dam 62.70 354 P **P** **09 21 31.5 +0.5**
MMNY IAMs_20 IAMs_20 09 52 14.9
comp=Z,951nm,19.0s
VNA2 Neumayer--Watz 62.71 161 P **P** **09 21 31.2 +0.5**
baz=302,slow=6.7
K55A Perry 62.71 354 P **P** **09 21 31.5 +0.4**
baz=172,SNR=8.9
L48A N Adams 62.85 349 P **P** **09 21 31.1 -0.9**
baz=166,SNR=12
J62A Henniker 62.86 359 P **P** **09 21 32.6 +0.6**
baz=179
J63A Strafford 62.91 360 P **P** **09 21 32.9 +0.6**
baz=180
J60A Lant Hill Farm 62.92 358 P **P** **09 21 33.4 +1.0**
baz=177
P38A Dawn 62.94 340 P **P** **09 21 32.3 -0.4**
P38A IAmb IAmb 09 21 35.1
comp=Z,27nm,0.8s
J61A Chester 62.99 359 P **P** **09 21 34.1 +1.2**
baz=178
121A Cookes Peak, D 63.03 325 P **P** **09 21 35.1 +1.5**
baz=141,SNR=13
121A Cookes Peak, D 63.03 325 P **P** **09 21 35.5 +1.9**
121A IAmb IAmb 09 21 41.4
comp=Z,42nm,1.2s
121A IAMs_20 IAMs_20 09 48 42.1
comp=Z,1µm,18.0s
AAM Ann Arbor 63.06 349 P **P** **09 21 32.9 -0.4**
baz=167
AAM Ann Arbor 63.06 349 IAMs_20 IAMs_20 09 48 22.6
comp=Z,1µm,22.0s
ACCN Adirondack Com 63.07 358 P **P** **09 21 34.6 +1.2**
K52A Tillsonburg 63.07 352 P **P** **09 21 33.3 -0.1**
baz=170,SNR=9.3
M44A Midewin, Midew 63.08 346 P **P** **09 21 32.5 -1.0**
M44A IAMs_20 IAMs_20 09 50 05.0
comp=Z,1µm,22.0s
J58A Remsen 63.12 356 P **P** **09 21 34.2 +0.4**
baz=175
J58A Remsen 63.12 356 IAMs_20 IAMs_20 09 48 59.6
comp=Z,1µm,20.0s
K51A Iona Station 63.12 351 P **P** **09 21 33.3 -0.5**
baz=169,SNR=7.0
J56A Wolcott 63.15 355 P **P** **09 21 34.1 +0.2**
baz=174,SNR=10
J56A Wolcott 63.15 355 P **P** **09 21 34.5 +0.5**
N41A Harden Midland 63.15 343 P **P** **09 21 33.6 -0.4**
N41A IAMs_20 IAMs_20 09 53 10.9
comp=Z,946nm,18.0s
J59A Piesco 63.18 357 P **P** **09 21 35.0 +0.8**
baz=176,SNR=14
J59A Piesco 63.18 357 P **P** **09 21 34.8 +0.5**
J59A IAMs_20 IAMs_20 09 49 19.2
comp=Z,2µm,20.0s
MEDO Medina 63.19 354 IAMs_20 IAMs_20 09 49 41.2
comp=Z,981nm,21.0s
J57A Williamstown 63.22 356 P **P** **09 21 34.8 +0.4**
baz=175,SNR=11
J57A Williamstown 63.22 356 P **P** **09 21 33.6 -0.7**
J57A IAMs_20 IAMs_20 09 48 55.1
comp=Z,1µm,22.0s
J55A Hilton 63.22 354 P **P** **09 21 34.6 +0.3**
baz=173,SNR=8.0
J55A Hilton 63.22 354 P **P** **09 21 34.7 +0.3**
J55A IAMs_20 IAMs_20 09 52 19.2
comp=Z,1µm,19.0s
L46A Eue Claire 63.28 347 P **P** **09 21 33.7 -1.1**
baz=164
L46A Eue Claire 63.28 347 P **P** **09 21 33.9 -0.9**
L46A IAMs_20 IAMs_20 09 51 45.5
comp=Z,1µm,19.0s
J54A Appleton 63.31 354 P **P** **09 21 35.2 +0.2**
baz=172,SNR=7.0
J54A Appleton 63.31 354 P **P** **09 21 35.6 +0.7**
J54A IAMs_20 IAMs_20 09 49 45.5
comp=Z,1µm,21.0s
K50A Casco 63.34 350 P **P** **09 21 34.4 -0.8**
baz=168,SNR=5.4
K50A Casco 63.34 350 P **P** **09 21 34.4 -0.8**
HNH Hanover 63.35 359 P **P** **09 21 36.9 +1.7**
HNH IAmb IAmb 09 21 38.7
comp=Z,38nm,1.0s
I58A Old Forge 63.43 357 P **P** **09 21 36.3 +0.5**
baz=176,SNR=12
I59A Olmsteadville 63.49 358 P **P** **09 21 36.8 +0.6**
baz=177,SNR=14
K49A Clarkson 63.49 350 P **P** **09 21 35.4 -0.9**
baz=167
J52A Paris 63.49 352 P **P** **09 21 36.1 -0.1**
baz=170,SNR=19
KSU1 Kansas State U 63.50 338 P **P** **09 21 36.0 -0.4**
baz=153,SNR=6.3
KSU1 Kansas State U 63.50 338 P **P** **09 21 36.1 -0.2**
KSU1 IAmb IAmb 09 21 37.1
comp=Z,22nm,0.9s
I62A Tamworth 63.50 360 P **P** **09 21 37.2 +0.9**
baz=180
I60A Shoreham 63.51 358 P **P** **09 21 37.2 +0.9**
baz=178,SNR=9.9
I64A Boothbay 63.56 1 P **P** **09 21 37.6 +1.0**
baz=181
I61A Oroboro, Fairl 63.57 359 P **P** **09 21 38.0 +1.3**
baz=179,SNR=12
K48A Perry 63.62 349 P **P** **09 21 36.1 -1.0**
baz=166,SNR=8.8
K47A Vermontville 63.66 348 P **P** **09 21 36.2 -1.1**
baz=165,SNR=6.3
NCB Newcomb 63.67 357 P **P** **09 21 38.1 +0.6**
NCB IAmb IAmb 09 21 39.4
comp=Z,66nm,1.4s
NCB IAMs_20 IAMs_20 09 49 42.3
comp=Z,1µm,21.0s

I63A	**Otisfield**	**63.68**	**0**	P	**P**	**09 21 38.6**	**+1.2**
	baz=180								
I63A	**Otisfield**	**63.68**	**0**	P	**P**	**09 21 38.4**	**+1.0**
I63A				IAmb	IAmb	09 21 52.9			
	comp=Z,34nm,0.9s								
I63A				IAMs_20	IAMs_20	09 47 50.0			
	comp=Z,1µm,21.0s								
BNM	**Barren Site**	**63.68**	**327**	P	**P**	**09 21 39.1**	**+1.1**
R32A	**Long Quarter,**	**63.69**	**336**	P	**P**	**09 21 37.9**	**+0.2**
R32A				IAmb	IAmb	09 21 39.0			
	comp=Z,42nm,0.9s								
I57A	**Carthage**	**63.72**	**356**	P	**P**	**09 21 38.0**	**+0.3**
	baz=175,SNR=7.2								
L44A	**Lake County Fo**	**63.80**	**346**	P	**P**	**09 21 37.0**	**-1.2**
	baz=162,SNR=6.0								
L44A	**Lake County Fo**	**63.80**	**346**	P	**P**	**09 21 37.0**	**-1.2**
PECO	**Prince Edward**	**63.81**	**355**	P	**P**	**09 21 38.7**	**+0.4**
K46A	**Dorr**	**63.83**	**348**	P	**P**	**09 21 37.0**	**-1.4**
	baz=164,SNR=9.2								
LBNH	**Lisbon**	**63.88**	**359**	P	**P**	**09 21 39.9**	**+1.1**
LBNH				pmax	pmax				
	comp=Z,72nm,1.1s								
LBNH	**Lisbon**	**63.88**	**359**	P	**P**	**09 21 39.8**	**+1.1**
	baz=179,SNR=8.5								
LBNH	**Lisbon**	**63.88**	**359**	P	**P**	**09 21 39.9**	**+1.1**
LBNH				IAMs_20	IAMs_20	09 47 36.7			
	comp=Z,994nm,21.0s								
N38A	**Joes South For**	**63.92**	**341**	P	**P**	**09 21 38.7**	**-0.4**
N38A				IAmb	IAmb	09 21 39.9			
	comp=Z,36nm,0.9s								
N38A				IAMs_20	IAMs_20	09 51 03.1			
	comp=Z,972nm,20.0s								
I53A	**Kortright Cn E**	**63.96**	**353**	P	**P**	**09 21 39.1**	**-0.2**
	baz=171								
J49A	**Marlette**	**64.00**	**350**	P	**P**	**09 21 38.5**	**-1.0**
	baz=167,SNR=6.2								
J48A	**Bridge Port**	**64.05**	**350**	P	**P**	**09 21 39.1**	**-0.7**
	baz=167,SNR=9.6								
J48A	**Bridge Port**	**64.05**	**350**	P	**P**	**09 21 39.1**	**-0.7**
J48A				IAMs_20	IAMs_20	09 48 52.8			
	comp=Z,2µm,22.0s								
L42A	**Oliver, Polo**	**64.05**	**344**	P	**P**	**09 21 39.0**	**-0.9**
L42A				IAmb	IAmb	09 21 45.4			
	comp=Z,23nm,1.1s								
H58A	**Gabriels**	**64.12**	**357**	P	**P**	**09 21 40.9**	**+0.6**
	baz=177,SNR=12								
I51A	**Listowel**	**64.12**	**352**	P	**P**	**09 21 40.0**	**-0.3**
	baz=170,SNR=14								
I55A	**Frankford**	**64.15**	**355**	P	**P**	**09 21 40.7**	**+0.2**
	baz=173,SNR=13								
H61A	**Lyndonville**	**64.17**	**359**	P	**P**	**09 21 41.8**	**+1.1**
	baz=179,SNR=9.7								
J47A	**Sunmer**	**64.17**	**349**	P	**P**	**09 21 39.8**	**-0.8**
	baz=166,SNR=9.5								
J47A	**Sunmer**	**64.17**	**349**	P	**P**	**09 21 39.9**	**-0.8**
J47A				IAMs_20	IAMs_20	09 48 19.1			
	comp=Z,2µm,22.0s								
WVL	**Waterville**	**64.20**	**1**	P	**P**	**09 21 42.3**	**+1.5**
WVL				IAmb	IAmb	09 21 43.1			
	comp=Z,37nm,1.0s								
WVL				IAMs_20	IAMs_20	09 48 25.3			
	comp=Z,1µm,21.0s								
H62A	**Milan**	**64.20**	**360**	P	**P**	**09 21 41.9**	**+1.0**
	baz=180								
H62A	**Milan**	**64.20**	**360**	P	**P**	**09 21 42.3**	**+1.4**
H62A				IAmb	IAmb	09 21 42.6			
	comp=Z,51nm,1.2s								
H62A				IAMs_20	IAMs_20	09 47 21.3			
	comp=Z,1µm,22.0s								
H60A	**Morristown**	**64.21**	**359**	P	**P**	**09 21 41.7**	**+0.7**
	baz=178								
ANMO	**Albuquerque**	**64.23**	**328**	P	**P**	**09 21 41.3**	**-0.2**
	comp=Z,2.9nm,0.8s,baz=143,slow=9.0,SNR=16								
ANMO	**Albuquerque**	**64.23**	**328**	*ce*P	**P**	**09 21 42.4**	**+0.9**
ANMO				pmax	pmax				
	comp=Z,38nm,2.2s								
ANMO	**Albuquerque**	**64.23**	**328**	P	**P**	**09 21 42.2**	**+0.7**
	baz=143								
ANMO	**Albuquerque**	**64.23**	**328**	P	**P**	**09 21 42.5**	**+0.9**
I52A	**Shelburne**	**64.27**	**353**	P	**P**	**09 21 41.2**	**-0.1**
	baz=170,SNR=13								
H64A	**Troy**	**64.29**	**1**	P	**P**	**09 21 42.3**	**+0.9**
	baz=182,SNR=5.2								
H63A	**New Sharon**	**64.29**	**1**	P	**P**	**09 21 42.8**	**+1.4**
	baz=181,SNR=10								
H59A	**Cadyville**	**64.33**	**358**	P	**P**	**09 21 42.5**	**+0.8**
	baz=177,SNR=13								
SNAA	**Sanae**	**64.33**	**161**	P	**P**	**09 21 42.0**	**+0.4**
SNAA	**Sanae**	**64.33**	**161**	*c i*P	**P**	**09 21 41.6**	**0.0**
SNAA	**Sanae**	**64.33**	**161**	P	**P**	**09 21 41.8**	**+0.3**
SNAA				IAMs_20	IAMs_20	09 47 14.8			
	comp=Z,975nm,21.0s								
LONY	**Lake Ozonia**	**64.34**	**357**	P	**P**	**09 21 42.4**	**+0.6**
	baz=176,SNR=7.9								
LONY	**Lake Ozonia**	**64.34**	**357**	P	**P**	**09 21 42.4**	**+0.6**
LONY				IAmb	IAmb	09 21 43.1			
	comp=Z,41nm,1.1s								
LONY				IAMs_20	IAMs_20	09 49 52.8			
	comp=Z,2µm,21.0s								
H65A	**Eastbrook**	**64.37**	**2**	P	**P**	**09 21 42.6**	**+0.6**
	baz=183								
K43A	**Burlington**	**64.39**	**346**	P	**P**	**09 21 41.3**	**-0.9**
EMMW	**East Machias**	**64.41**	**3**	IAMs_20	IAMs_20	09 48 04.9			
	comp=Z,1µm,22.0s								
H56A	**Elgin**	**64.41**	**356**	P	**P**	**09 21 42.6**	**+0.4**
	baz=174,SNR=10								
CBKS	**Cedar Bluff**	**64.42**	**335**	P	**P**	**09 21 43.3**	**+0.8**
CBKS				pmax	pmax				
	comp=Z,43nm,1.0s								
CBKS	**Cedar Bluff**	**64.42**	**335**	P	**P**	**09 21 42.9**	**+0.4**
	baz=150,SNR=13								
CBKS	**Cedar Bluff**	**64.42**	**335**	P	**P**	**09 21 43.3**	**+0.8**
CBKS				IAmb	IAmb	09 21 45.9			
	comp=Z,43nm,0.9s								
H55A	**Tweed**	**64.44**	**355**	P	**P**	**09 21 42.6**	**+0.2**
	baz=174,SNR=9.3								
DELO	**Deloro Mine**	**64.45**	**355**	P	**P**	**09 21 43.0**	**+0.6**
H66A	**Whiting**	**64.49**	**3**	P	**P**	**09 21 43.5**	**+0.8**
	baz=184								
FRNY	**Flat Rock**	**64.51**	**358**	P	**P**	**09 21 43.3**	**+0.4**
L40A	**Anamosa**	**64.51**	**343**	P	**P**	**09 21 42.6**	**-0.4**
L40A				IAMs_20	IAMs_20	09 53 14.0			
	comp=Z,1µm,19.0s								
I49A	**Point Hope**	**64.51**	**350**	P	**P**	**09 21 42.1**	**-0.8**
	baz=168,SNR=5.5								
I49A	**Point Hope**	**64.51**	**350**	P	**P**	**09 21 42.5**	**-0.4**
TUC	**Tucson**	**64.52**	**323**	P	**P**	**09 21 44.9**	**+1.6**
TUC				pmax	pmax				
	comp=Z,11nm,1.2s								
TUC				MLR	MLR				
	comp=Z,900nm,20.0s								
TUC	**Tucson**	**64.52**	**323**	P	**P**	**09 21 44.3**	**+1.0**
	baz=138								
TUC	**Tucson**	**64.52**	**323**	P	**P**	**09 21 44.9**	**+1.6**
TUC	**Tucson**	**64.52**	**323**	IAMs_20	IAMs_20	09 50 19.4			
	comp=Z,938nm,20.0s								
H53A	**Bobcaygeon**	**64.59**	**354**	P	**P**	**09 21 43.5**	**+0.1**
	baz=172,SNR=16								
J45A	**Montague**	**64.67**	**348**	P	**P**	**09 21 42.7**	**-1.2**
	baz=164								
J45A	**Montague**	**64.67**	**348**	IAMs_20	IAMs_20	09 48 33.2			
	comp=Z,1µm,22.0s								
G60A	**Masonville**	**64.74**	**359**	P	**P**	**09 21 45.4**	**+1.0**
	baz=178,SNR=7.3								
N35A	**Tabor**	**64.74**	**339**	P	**P**	**09 21 44.1**	**-0.4**
G63A	**Kingsbury**	**64.75**	**1**	P	**P**	**09 21 45.3**	**+0.9**
	baz=181,SNR=5.6								
H52A	**Wyevale**	**64.80**	**353**	P	**P**	**09 21 44.7**	**-0.1**
	baz=171,SNR=9.9								
G57A	**Newington**	**64.84**	**357**	P	**P**	**09 21 45.5**	**+0.5**
	baz=176,SNR=14								
G58A	**Ormstown**	**64.84**	**357**	P	**P**	**09 21 45.4**	**+0.4**
	baz=177								
SADO	**Sadowa**	**64.84**	**353**	P	**P**	**09 21 44.9**	**-0.2**
	comp=Z,38nm,0.8s,baz=189,slow=5.0,SNR=30								
SADO	**Sadowa**	**64.84**	**353**	P	**P**	**09 21 44.9**	**-0.2**
G62A	**West of Eustis**	**64.85**	**0**	P	**P**	**09 21 46.4**	**+1.3**
	baz=180,SNR=20								
G62A	**West of Eustis**	**64.85**	**0**	P	**P**	**09 21 46.3**	**+1.3**
G62A				IAMs_20	IAMs_20	09 49 10.4			
	comp=Z,1µm,21.0s								
GGN	**Saint George**	**64.85**	**3**	P	**P**	**09 21 45.6**	**+0.6**
GGN				IAmb	IAmb	09 21 47.1			
	comp=Z,50nm,1.1s								
GGN				IAMs_20	IAMs_20	09 48 50.5			
	comp=Z,1µm,21.0s								
I47A	**Gladwin**	**64.87**	**349**	P	**P**	**09 21 44.4**	**-0.8**
	baz=166								
I47A	**Gladwin**	**64.87**	**349**	IAMs_20	IAMs_20	09 50 35.7			
	comp=Z,1µm,20.0s								
G65A	**Princeton**	**64.90**	**3**	P	**P**	**09 21 46.2**	**+0.8**
	baz=184,SNR=6.7								
G65A	**Princeton**	**64.90**	**3**	P	**P**	**09 21 46.2**	**+0.8**
G65A				IAmb	IAmb	09 21 47.4			
	comp=Z,45nm,1.0s								
G65A				IAMs_20	IAMs_20	09 54 12.8			
	comp=Z,1µm,18.0s								
I48A	**Sherman Twp**	**64.90**	**350**	P	**P**	**09 21 44.7**	**-0.7**
	baz=167,SNR=9.1								
G64A	**Maxfield**	**64.91**	**2**	P	**P**	**09 21 46.1**	**+0.7**
	baz=182,SNR=5.3								
PKME	**Peaks-Kenny Pk**	**64.91**	**1**	P	**P**	**09 21 46.2**	**+0.8**
	baz=182,SNR=6.0								
PKME	**Peaks-Kenny Pk**	**64.91**	**1**	P	**P**	**09 21 46.3**	**+0.8**
PKME				IAmb	IAmb	09 21 47.4			
	comp=Z,43nm,0.9s								
PKME				IAMs_20	IAMs_20	09 49 08.0			
	comp=Z,1µm,21.0s								
G61A	**St-Isidore-de-**	**64.91**	**359**	P	**P**	**09 21 46.9**	**+1.3**
	baz=179,SNR=11								
PLVO	**Plevna**	**64.92**	**355**	P	**P**	**09 21 45.8**	**+0.2**
PLVO				IAmb	IAmb	09 21 46.5			
	comp=Z,37nm,1.2s								
SCIA	**State Center**	**64.93**	**342**	P	**P**	**09 21 45.4**	**-0.3**
	baz=157,SNR=8.2								
SCIA	**State Center**	**64.93**	**342**	P	**P**	**09 21 45.5**	**-0.2**
SCIA				IAMs_20	IAMs_20	09 52 25.0			
	comp=Z,1µm,19.0s								
I46A	**Reed City**	**64.97**	**348**	P	**P**	**09 21 44.5**	**-1.4**
	baz=165,SNR=12								
T25A	**Trinidad**	**65.01**	**331**	P	**P**	**09 21 47.5**	**+0.9**
	baz=145,SNR=16								
JFWS	**Jewell Farm**	**65.05**	**344**	P	**P**	**09 21 46.0**	**-0.5**
JFWS				pmax	pmax				
	comp=Z,27nm,0.9s								
JFWS				MLR	MLR				
	comp=Z,1µm,22.0s								
JFWS	**Jewell Farm**	**65.05**	**344**	P	**P**	**09 21 46.0**	**-0.5**
	baz=160,SNR=16								
JFWS	**Jewell Farm**	**65.05**	**344**	P	**P**	**09 21 46.0**	**-0.5**
JFWS				IAmb	IAmb	09 21 48.1			
	comp=Z,27nm,0.9s								
JFWS	**Jewell Farm**	**65.05**	**344**	IAMs_20	IAMs_20	09 49 53.3			
	comp=Z,1µm,22.0s								
G55A	**Calabogie**	**65.10**	**355**	P	**P**	**09 21 46.9**	**+0.1**
	baz=174,SNR=9.9								
G53A	**Haliburton**	**65.14**	**354**	P	**P**	**09 21 47.1**	**+0.1**
	baz=172,SNR=27								
I45A	**Fountain**	**65.21**	**348**	IAMs_20	IAMs_20	09 51 48.6			
	comp=Z,1µm,21.0s								
ORIO	**Orleans, Innes**	**65.22**	**356**	P	**P**	**09 21 47.7**	**+0.3**
	baz=175,SNR=8.6								
ORIO	**Orleans, Innes**	**65.22**	**356**	P	**P**	**09 21 47.7**	**+0.3**
N33A	**J Bar K, Exete**	**65.25**	**338**	P	**P**	**09 21 47.9**	**0.0**
N33A				IAMs_20	IAMs_20	09 52 55.3			
	comp=Z,915nm,21.0s								
H48A	**Harrisville**	**65.33**	**350**	P	**P**	**09 21 47.2**	**-1.0**
	baz=167								
H48A	**Harrisville**	**65.33**	**350**	P	**P**	**09 21 47.9**	**-0.3**
H48A				IAmb	IAmb	09 21 48.6			
	comp=Z,40nm,0.9s								
F63A	**Nahmakanta, Br**	**65.35**	**1**	P	**P**	**09 21 49.1**	**+0.8**
	baz=182								
F63A	**Nahmakanta, Br**	**65.35**	**1**	P	**P**	**09 21 49.6**	**+1.2**
F63A				IAmb	IAmb	09 21 49.8			
	comp=Z,32nm,1.1s								
F63A				IAMs_20	IAMs_20	09 49 21.7			
	comp=Z,1µm,21.0s								
G54A	**Lake Saint Pet**	**65.36**	**354**	P	**P**	**09 21 48.5**	**+0.1**
	baz=173,SNR=9.6								
H47A	**Mio**	**65.38**	**350**	P	**P**	**09 21 47.6**	**-1.0**
	baz=166								
214A	**Organ Pipe Nat**	**65.43**	**321**	P	**P**	**09 21 50.9**	**+1.7**
	baz=136,SNR=19								
214A	**Organ Pipe Nat**	**65.43**	**321**	P	**P**	**09 21 51.4**	**+2.2**
214A				IAmb	IAmb	09 21 57.2			
	comp=Z,47nm,1.4s								
K38A	**Parkersburg**	**65.48**	**342**	P	**P**	**09 21 48.7**	**-0.6**
K38A				IAMs_20	IAMs_20	09 55 01.6			
	comp=Z,1µm,19.0s								
H46A	**Fife Lake**	**65.50**	**349**	P	**P**	**09 21 48.4**	**-0.9**
	baz=165								
F64A	**Sherman**	**65.53**	**2**	P	**P**	**09 21 50.2**	**+0.7**
	baz=183,SNR=7.9								
F64A	**Sherman**	**65.53**	**2**	P	**P**	**09 21 50.3**	**+0.8**
F64A				IAmb	IAmb	09 21 50.9			
	comp=Z,46nm,1.1s								
F64A				IAMs_20	IAMs_20	09 49 26.5			
	comp=Z,1µm,22.0s								
F57A	**Harrington**	**65.53**	**357**	P	**P**	**09 21 49.4**	**-0.1**
	baz=176								
F58A	**St-Lin Laurent**	**65.55**	**358**	P	**P**	**09 21 49.9**	**+0.3**
	baz=177								
GBN	**Guysborough**	**65.59**	**7**	P	**P**	**09 21 49.8**	**0.0**
GBN				IAmb	IAmb	09 21 51.2			
	comp=Z,41nm,1.1s								
GBN				IAMs_20	IAMs_20	09 48 49.2			
	comp=Z,1µm,22.0s								
F61A	**St Evariste**	**65.60**	**360**	P	**P**	**09 21 50.5**	**+0.5**
	baz=180,SNR=5.1								
F60A	**Warwick**	**65.61**	**359**	P	**P**	**09 21 50.3**	**+0.4**
	baz=179,SNR=10								
I42A	**Draeger Farm,**	**65.65**	**346**	P	**P**	**09 21 50.0**	**-0.4**
F55A	**Otter Lake**	**65.65**	**356**	P	**P**	**09 21 50.1**	**-0.1**
	baz=174								
GLMI	**Grayling**	**65.67**	**349**	P	**P**	**09 21 49.5**	**-1.0**
	baz=166								
GLMI	**Grayling**	**65.67**	**349**	P	**P**	**09 21 50.3**	**-0.1**
GLMI				IAMs_20	IAMs_20	09 52 27.8			
	comp=Z,1µm,19.0s								
LMN	**Caledonia Moun**	**65.71**	**5**	P	**P**	**09 21 50.8**	**+0.2**
LMN				IAmb	IAmb	09 21 52.0			
	comp=Z,38nm,1.0s								
LMN				IAMs_20	IAMs_20	09 49 45.3			
	comp=Z,1µm,20.0s								
H45A	**Beulah**	**65.74**	**348**	P	**P**	**09 21 49.8**	**-1.1**
	baz=164,SNR=6.4								
KSCO	**Kaye Shedlock'**	**65.77**	**333**	P	**P**	**09 21 52.0**	**+0.6**
	baz=147,SNR=5.9								
KSCO	**Kaye Shedlock'**	**65.77**	**333**	P	**P**	**09 21 52.7**	**+1.3**
F52A	**Sundridge**	**65.88**	**353**	P	**P**	**09 21 51.5**	**-0.2**
	baz=171,SNR=10								
G47A	**Hillman**	**65.88**	**350**	P	**P**	**09 21 51.1**	**-0.6**
	baz=167								
ALGO	**Algonquin Park**	**65.91**	**354**	P	**P**	**09 21 51.8**	**-0.2**
	baz=173,SNR=8.3								
TRQ	**Mont Tremblant**	**65.94**	**357**	P	**P**	**09 21 52.4**	**+0.2**
H43A	**Windswept, Lux**	**65.95**	**347**	P	**P**	**09 21 51.6**	**-0.6**
H43A				IAmb	IAmb	09 21 52.8			
	comp=Z,33nm,0.9s								
H43A				IAMs_20	IAMs_20	09 50 58.0			
	comp=Z,2µm,20.0s								
L34A	**Svendsen Farm,**	**65.98**	**339**	P	**P**	**09 21 52.1**	**-0.3**
E60A	**Ste Agathe de**	**66.00**	**360**	P	**P**	**09 21 52.9**	**+0.4**
	baz=180,SNR=5.2								
SDCO	**Great Sand Dun**	**66.01**	**330**	P	**P**	**09 21 54.2**	**+1.0**
	baz=144,SNR=36								
SDCO	**Great Sand Dun**	**66.01**	**330**	P	**P**	**09 21 54.1**	**+1.0**
SDCO				IAmb	IAmb	09 21 55.6			
	comp=Z,40nm,1.2s								
E58A	**La Victoria**	**66.04**	**358**	P	**P**	**09 21 53.2**	**+0.5**
	baz=178,SNR=10								
W18A	**Petrified Fore**	**66.05**	**326**	P	**P**	**09 21 54.8**	**+1.4**
	baz=140								
W18A	**Petrified Fore**	**66.05**	**326**	P	**P**	**09 21 55.2**	**+1.9**
W18A				IAMs_20	IAMs_20	09 49 23.1			
	comp=Z,1µm,18.0s								
E61A	**Lac Etchemin**	**66.06**	**0**	P	**P**	**09 21 53.9**	**+1.0**
	baz=180,SNR=9.5								
I40A	**Norwalk**	**66.06**	**344**	P	**P**	**09 21 53.0**	**0.0**
G45A	**Suttons Bay**	**66.07**	**349**	P	**P**	**09 21 51.9**	**-1.1**
	baz=165								
G45A	**Suttons Bay**	**66.07**	**349**	P	**P**	**09 21 52.5**	**-0.5**
G45A				IAmb	IAmb	09 22 03.2			
	comp=Z,18nm,0.8s								
G45A				IAMs_20	IAMs_20	09 54 53.3			
	comp=Z,928nm,18.0s								
F51A	**Arnstein**	**66.07**	**353**	P	**P**	**09 21 52.6**	**-0.4**
	baz=171,SNR=7.8								
E63A	**Oxbow**	**66.09**	**2**	P	**P**	**09 21 53.7**	**+0.6**
	baz=183,SNR=5.9								
E63A	**Oxbow**	**66.09**	**2**	P	**P**	**09 21 54.2**	**+1.2**
E63A				IAmb	IAmb	09 21 54.4			
	comp=Z,32nm,1.1s								
E63A				IAMs_20	IAMs_20	09 49 44.2			
	comp=Z,1µm,21.0s								
BGNE	**Belgrade**	**66.09**	**338**	P	**P**	**09 21 53.4**	**+0.1**
	baz=152,SNR=12								
BGNE	**Belgrade**	**66.09**	**338**	P	**P**	**09 21 53.5**	**+0.1**
E64A	**Bridgewater**	**66.10**	**2**	P	**P**	**09 21 53.8**	**+0.7**
	baz=183,SNR=6.7								
E57A	**Chemin Saint G**	**66.11**	**357**	P	**P**	**09 21 53.5**	**+0.3**
	baz=177,SNR=5.5								
E59A	**St. Maurice**	**66.13**	**359**	P	**P**	**09 21 53.8**	**+0.5**
	baz=178								
F49A	**Sandfield**	**66.18**	**351**	P	**P**	**09 21 52.8**	**-0.9**
	baz=169								
G46A	**Petoskey**	**66.19**	**349**	P	**P**	**09 21 53.0**	**-0.8**
	baz=166,SNR=6.8								
E55A	**Montcerf-Lytto**	**66.25**	**356**	P	**P**	**09 21 54.3**	**+0.2**
	baz=175								
E56A	**St. Veronique**	**66.28**	**357**	P	**P**	**09 21 54.4**	**+0.1**
	baz=176,SNR=13								
E52A	**Mattawa**	**66.29**	**354**	P	**P**	**09 21 54.0**	**-0.4**
	baz=172								
E53A	**Dumoine, Ponti**	**66.30**	**355**	P	**P**	**09 21 54.3**	**-0.1**
	baz=173								
E54A	**Lac Daplat, Po**	**66.31**	**355**	P	**P**	**09 21 54.5**	**0.0**
	baz=174								
F48A	**Evansville**	**66.33**	**351**	P	**P**	**09 21 53.8**	**-0.9**
	baz=168								
PQI	**Presque Isle**	**66.35**	**2**	P	**P**	**09 21 55.9**	**+1.1**
PQI				IAmb	IAmb	09 21 56.0			
	comp=Z,31nm,1.1s								
PQI				IAMs_20	IAMs_20	09 49 38.2			
	comp=Z,1µm,22.0s								
D60A	**Saint Jean D'O**	**66.54**	**360**	P	**P**	**09 21 56.7**	**+0.8**
	baz=180								
E51A	**G1948 Merrick**	**66.62**	**353**	P	**P**	**09 21 56.5**	**0.0**
	baz=171,SNR=8.4								
S22A	**4UR Rauch, Cre**	**66.63**	**329**	P	**P**	**09 21 58.1**	**+1.0**
	baz=143,SNR=11								
D59A	**Saint-Raymond**	**66.64**	**359**	P	**P**	**09 21 57.1**	**+0.6**
	baz=179								
E50A	**Wahnapitae**	**66.66**	**353**	P	**P**	**09 21 56.2**	**-0.5**
	baz=170								
F45A	**CMU Biological**	**66.66**	**349**	P	**P**	**09 21 55.9**	**-0.9**
	baz=165,SNR=7.2								
D57A	**Chemin Vers le**	**66.70**	**358**	P	**P**	**09 21 57.6**	**+0.6**
	baz=177,SNR=16								
D63A	**Stockholm**	**66.71**	**2**	P	**P**	**09 21 57.7**	**+0.7**
	baz=183,SNR=6.2								
D62A	**Allapoint, All**	**66.73**	**1**	P	**P**	**09 21 57.9**	**+0.8**
	baz=182,SNR=11								
D62A	**Allapoint, All**	**66.73**	**1**	P	**P**	**09 21 58.0**	**+0.8**
D62A				IAmb	IAmb	09 21 59.1			
	comp=Z,41nm,1.0s								
D62A				IAMs_20	IAMs_20	09 50 03.2			
	comp=Z,1µm,22.0s								
D58A	**Chemin du LacG**	**66.75**	**358**	P	**P**	**09 21 57.9**	**+0.5**
	baz=178,SNR=20								
D56A	**ZEC Mazanza, M**	**66.77**	**357**	P	**P**	**09 21 57.5**	**+0.1**
	baz=176,SNR=8.5								
D55A	**Sainte-Anne-du**	**66.78**	**357**	P	**P**	**09 21 57.6**	**+0.1**
	baz=175,SNR=10								
D61A	**St Aubert, Com**	**66.83**	**0**	P	**P**	**09 21 58.7**	**+0.9**
	baz=181								
Q24A	**Divide**	**66.84**	**331**	P	**P**	**09 21 59.4**	**+0.9**
	baz=145								
E48A	**Lockeyer**	**66.90**	**352**	P	**P**	**09 21 57.9**	**-0.4**
	baz=169,SNR=5.0								
I37A	**Lemond, Waseca**	**66.92**	**342**	P	**P**	**09 21 58.2**	**-0.3**
I37A				IAmb	IAmb	09 21 59.4			
	comp=Z,36nm,0.9s								
I37A				IAMs_20	IAMs_20	09 54 40.7			
	comp=Z,1µm,19.0s								
D54A	**Lac Fusel, La**	**66.99**	**356**	P	**P**	**09 21 58.5**	**-0.4**
	baz=174,SNR=8.7								
D53A	**Lac Vacive, Po**	**67.00**	**355**	P	**P**	**09 21 59.0**	**+0.1**
	baz=173								
D53A	**Lac Vacive, Po**	**67.00**	**355**	P	**P**	**09 21 59.0**	**+0.1**
D53A				IAmb	IAmb	09 22 15.5			
	comp=Z,29nm,0.9s								
D53A				IAMs_20	IAMs_20	09 51 34.2			
	comp=Z,1µm,20.0s								
MVCO	**Mesa Verde**	**67.03**	**328**	P	**P**	**09 22 00.6**	**+1.0**
	baz=142,SNR=13								
MVCO	**Mesa Verde**	**67.03**	**328**	P	**P**	**09 22 00.6**	**+1.0**
LATQ	**La Tuque**	**67.04**	**359**	P	**P**	**09 21 59.6**	**+0.5**
	baz=178,SNR=5.9								
LATQ	**La Tuque**	**67.04**	**359**	P	**P**	**09 22 00.1**	**+1.0**
E47A	**Iron Bridge**	**67.04**	**351**	P	**P**	**09 21 58.5**	**-0.6**
	baz=167								
BATG	**Bathurst New B**	**67.04**	**4**	P	**P**	**09 21 59.8**	**+0.7**
BATG				IAmb	IAmb	09 22 00.4			
	comp=Z,44nm,1.1s								
BATG				IAMs_20	IAMs_20	09 52 22.6			
	comp=Z,1µm,20.0s								
E46A	**Sault Ste Mari**	**67.11**	**350**	P	**P**	**09 21 58.7**	**-0.9**
E46A				IAmb	IAmb	09 21 60.0			
	comp=Z,24nm,0.9s								
OGNE	**Ogallala**	**67.16**	**335**	P	**P**	**09 22 00.7**	**+0.5**
	baz=148,SNR=10.0								
OGNE	**Ogallala**	**67.16**	**335**	P	**P**	**09 22 01.2**	**+1.0**
OGNE				IA

SMCO **Snowmass** **67.84 330** IAMs_20 IAMs_20 09 52 26.7
comp=Z,982nm,21.0s
SPMN **Marine on St.** **67.87 343** P **P** **09 22 03.8 -0.7**
baz=158,SNR=12
SPMN **Marine on St.** **67.87 343** P **P** **09 22 04.1 -0.4**
SPMN IAmb IAmb 09 22 05.2
comp=Z,32nm,1.0s
SPMN IAMs_20 IAMs_20 09 57 08.9
comp=Z,1µm,18.0s
IKP **In-Ko-Pah, Jac** **67.89 320** P **P** **09 22 06.9 +1.9**
baz=134,SNR=7.8
PV15 **Paradox Valley** **67.90 329** P **P** **09 22 07.2 +2.1**
SWSC **Sam W. Stewart** **67.91 320** P **P** **09 22 06.9 +1.9**
baz=134,SNR=7.5
PV02 **Paradox Valley** **67.92 329** P **P** **09 22 07.1 +1.9**
PV02 IAmb IAmb 09 22 13.0
comp=Z,58nm,1.5s
PV13 **Radium Mtn., P** **67.92 328** P **P** **09 22 06.6 +1.4**
PV13 IAmb IAmb 09 22 12.9
comp=Z,51nm,1.4s
PV05 **Paradox Valley** **68.00 328** P **P** **09 22 07.2 +1.5**
PV05 IAmb IAmb 09 22 13.1
comp=Z,32nm,1.3s
PV05 IAMs_20 IAMs_20 09 52 21.5
comp=Z,791nm,18.0s
VLDQ **Val d'Or** **68.00 355** P **P** **09 22 05.5 +0.3**
VLDQ IAmb IAmb 09 22 06.8
comp=Z,54nm,1.4s
VLDQ IAMs_20 IAMs_20 09 52 06.4
comp=Z,1µm,20.0s
PV03 **Paradox Valley** **68.01 328** P **P** **09 22 06.8 +1.1**
PV03 IAmb IAmb 09 22 13.4
comp=Z,35nm,1.4s
PV03 IAMs_20 IAMs_20 09 52 24.1
comp=Z,826nm,18.0s
PV18 **Skein Mesa, Pa** **68.03 328** P **P** **09 22 07.5 +1.6**
PV12 **Saucer Basin,** **68.04 329** P **P** **09 22 07.2 +1.2**
PV12 IAmb IAmb 09 22 13.8
comp=Z,46nm,1.5s
PV12 IAMs_20 IAMs_20 09 57 16.8
comp=Z,1µm,18.0s
PV07 **Paradox Valley** **68.06 329** P **P** **09 22 06.9 +0.8**
PV07 IAMs_20 IAMs_20 09 51 18.4
comp=Z,1µm,22.0s
PV11 **David Mesa, Pa** **68.06 328** P **P** **09 22 06.6 +0.5**
PV11 IAmb IAmb 09 22 13.8
comp=Z,38nm,1.3s
PV11 IAMs_20 IAMs_20 09 55 14.4
comp=Z,1µm,18.0s
PV16 **Nyswonger Mesa** **68.09 328** P **P** **09 22 07.1 +0.8**
PV16 IAmb IAmb 09 22 13.9
comp=Z,31nm,1.4s
PV16 IAMs_20 IAMs_20 09 56 42.2
comp=Z,922nm,18.0s
PV19 **Morning Glory** **68.12 328** IAMs_20 IAMs_20 09 51 05.0
comp=Z,1µm,19.0s
PV20 **West Nyswonger** **68.14 328** P **P** **09 22 07.1 +0.5**
PV20 IAmb IAmb 09 22 15.8
comp=Z,30nm,1.5s
PV20 IAMs_20 IAMs_20 09 51 05.5
comp=Z,916nm,18.0s
PV04 **Paradox Valley** **68.15 329** P **P** **09 22 07.5 +0.9**
PV04 IAMs_20 IAMs_20 09 55 15.7
comp=Z,1µm,18.0s
PV14 **Lion Creek, Pa** **68.19 328** IAMs_20 IAMs_20 09 51 24.9
comp=Z,1µm,20.0s
BC3 **Big Chuckawall** **68.19 321** P **P** **09 22 08.7 +1.8**
baz=135,SNR=18
PV22 **Blue Mesa, Par** **68.20 329** P **P** **09 22 08.6 +1.6**
PV22 IAmb IAmb 09 22 14.6
comp=Z,35nm,1.4s
PV22 IAMs_20 IAMs_20 09 51 24.2
comp=Z,938nm,20.0s
PV23 **Carpenter Ridg** **68.25 328** P **P** **09 22 09.0 +1.7**
MONP2 **Monument Peak** **68.25 320** P **P** **09 22 09.3 +1.9**
baz=134,SNR=9.3
BAR **Barrett** **68.25 319** P **P** **09 22 09.1 +1.9**
BAR IAmb IAmb 09 22 16.9
comp=Z,34nm,1.1s
IRM **Iron Mountain** **68.37 321** P **P** **09 22 09.8 +1.9**
baz=135,SNR=26
NEE2 **Needles Airpor** **68.49 322** P **P** **09 22 10.3 +1.7**
baz=136
D41A **Chassel** **68.58 347** P **P** **09 22 08.7 -0.2**
D41A IAMs_20 IAMs_20 09 52 39.8
comp=Z,1µm,21.0s
F36A **Milaca** **68.66 343** P **P** **09 22 08.8 -0.6**
F36A IAmb IAmb 09 22 10.1
comp=Z,30nm,1.1s
F36A IAMs_20 IAMs_20 09 56 45.6
comp=Z,1µm,18.0s
109C **Camp Elliot, M** **68.66 319** P **P** **09 22 11.3 +1.6**
baz=133
109C **Camp Elliot, M** **68.66 319** P **P** **09 22 12.0 +2.3**
109C IAmb IAmb 09 22 17.8
comp=Z,28nm,1.2s
BELC **Belle Mtn. Jos** **68.76 321** P **P** **09 22 12.3 +1.8**
baz=135,SNR=11
N23A **Red Feather La** **68.76 332** P **P** **09 22 11.5 +1.0**
baz=145,SNR=19
XPFO **Pion Flat** **68.76 320** P **P** **09 22 12.6 +2.1**
XPFO IAmb IAmb 09 22 18.8
comp=Z,44nm,1.4s
PFO **Pinyon Flats O** **68.77 320** P **P** **09 22 11.4 +0.9**
comp=Z,11nm,0.9s,baz=109,slow=4.2,SNR=14
PFO **Pinyon Flats O** **68.77 320** P **P** **09 22 12.5 +2.0**
PFO pmax pmax
comp=Z,48nm,1.5s
PFO **Pinyon Flats O** **68.77 320** P **P** **09 22 12.4 +2.0**
baz=134,SNR=13
PFO **Pinyon Flats O** **68.77 320** P **P** **09 22 12.5 +2.0**
PFO IAmb IAmb 09 22 18.8
comp=Z,48nm,1.4s
E38A **The Farm, Brul** **68.84 345** P **P** **09 22 10.2 -0.3**
E38A IAmb IAmb 09 22 11.3
comp=Z,38nm,1.4s
LSQQ **Lebel-sur-Quev** **68.91 356** P **P** **09 22 10.7 -0.1**
baz=174
NVL **N'lazarevskaya** **68.92 159** ⇓ *i*P **P** **09 22 07.7 -3.0**
NVL *e*S S **09 31 12.4 -2.3**
NVL *e*SS **SS** **09 35 40.9 +1.4**
NVL pmax pmax
comp=Z,39nm,1.0s
SUSD **Miller** **69.04 339** P **P** **09 22 11.5 -0.3**
baz=152
SUSD **Miller** **69.04 339** P **P** **09 22 12.2 +0.3**
SUSD IAMs_20 IAMs_20 09 58 12.7
comp=Z,856nm,19.0s
GMRC **Granite Mounta** **69.11 322** P **P** **09 22 14.6 +1.9**
baz=135,SNR=23
PKCU **Pink Cliffs** **69.17 326** P **P** **09 22 14.7 +1.5**
O20A **White River Ci** **69.20 330** P **P** **09 22 14.3 +1.2**
baz=142,SNR=11
O20A **White River Ci** **69.20 330** P **P** **09 22 14.1 +1.0**
O20A IAmb IAmb 09 22 20.8
comp=Z,35nm,1.3s
O20A IAMs_20 IAMs_20 09 53 21.5
comp=Z,1µm,19.0s
MURC **Murrieta** **69.20 320** P **P** **09 22 15.0 +1.8**
baz=134
LCMT **Little Creek M** **69.35 325** P **P** **09 22 16.0 +1.9**
F33A **5 Mile Ranch,** **69.43 341** P **P** **09 22 13.8 -0.4**
F33A IAmb IAmb 09 22 14.4
comp=Z,26nm,1.1s
F33A IAMs_20 IAMs_20 09 56 23.1
comp=Z,784nm,19.0s
BBRC **Big Bear Solar** **69.49 320** P **P** **09 22 17.0 +1.9**
baz=134
SRU **San Rafael Swe** **69.50 328** P **P** **09 22 16.3 +1.3**
SRU pmax pmax
comp=Z,35nm,1.2s
SRU **San Rafael Swe** **69.50 328** P **P** **09 22 16.3 +1.3**
HEC **Hector,Ludlow** **69.54 321** P **P** **09 22 17.5 +2.3**
baz=134,SNR=11
MTPU **Mount Pierson** **69.54 326** P **P** **09 22 17.4 +1.8**
CHGQ **Chibougamau** **69.61 358** P **P** **09 22 15.1 -0.1**
baz=177,SNR=9.6
SCI2 **San Clemente I** **69.62 318** P **P** **09 22 15.6 0.0**
baz=132
MATQ **Matagami** **69.65 355** P **P** **09 22 15.0 -0.5**
baz=173,SNR=13
Q16A **Castle Valley** **69.68 327** P **P** **09 22 17.8 +1.7**
SZCU **Shurtz Canyon** **69.69 325** P **P** **09 22 17.9 +1.7**
LIC **Lamto** **69.70 75** *e*P **P** **09 22 14.5 -2.1**
comp=Z,106nm,1.3s
TUQ **Turquoise Moun** **69.72 322** P **P** **09 22 16.1 -0.3**
baz=135
CCUT **Cedar City** **69.81 325** P **P** **09 22 19.4 +2.4**
CIS **Catalina Islan** **69.82 319** P **P** **09 22 14.1 -2.8**
baz=132
TIC **Toumodi** **69.88 75** *e*P **P** **09 22 16.1 -1.6**
P17A **Butcher Ranch,** **69.89 328** P **P** **09 22 18.7 +1.3**
MSU **Marysvale** **69.89 327** P **P** **09 22 19.3 +1.8**
MSU **Marysvale** **69.89 327** P **P** **09 22 19.3 +1.8**
DRLN **Deer Lake** **69.90 9** P **P** **09 22 16.8 -0.2**
DRLN IAMs_20 IAMs_20 09 58 35.5
comp=Z,964nm,18.0s
BFSC **Mount Baldy Ra** **69.92 320** P **P** **09 22 19.4 +1.7**
baz=133,SNR=9.3
FMP **Fort Macarthur** **69.95 319** P **P** **09 22 19.1 +1.5**
baz=133
RRX **Edison Barstow** **69.96 321** P **P** **09 22 19.4 +1.6**
baz=134
RWWY **Rawlins** **69.96 332** P **P** **09 22 17.5 -0.4**
RWWY IAmb IAmb 09 22 19.5
comp=Z,44nm,1.4s
TMUT **Trail Mountain** **69.99 328** P **P** **09 22 19.4 +1.2**
KIC **Kosan Boka** **70.02 75** *e*P **P** **09 22 16.7 -1.8**
comp=Z,184nm,1.4s
DBIC **Dimbokro** **70.04 75** P **P** **09 22 17.6 -1.1**
comp=Z,48nm,1.0s,baz=223,slow=6.3,SNR=28
DBIC LR LR 09 51 39.8
comp=Z,3µm,19.4s,baz=228,slow=35
DBIC **Dimbokro** **70.04 75** P **P** **09 22 17.5 -1.1**
DBIC pmax pmax
comp=Z,63nm,1.0s
DBIC **Dimbokro** **70.04 75** P **P** **09 22 17.5 -1.1**
SHPR **Sheep Range** **70.04 323** P **P** **09 22 20.4 +2.0**
SHPR IAmb IAmb 09 22 26.8
comp=Z,32nm,1.3s
EYMN **Ely** **70.08 345** P **P** **09 22 17.3 -0.8**
baz=160,SNR=14
EYMN **Ely** **70.08 345** P **P** **09 22 16.7 -1.4**
EYMN IAmb IAmb 09 22 23.9
comp=Z,38nm,1.4s
EYMN **Ely** **70.08 345** IAMs_20 IAMs_20 09 54 18.2
comp=Z,1µm,20.0s
GSC **Goldstone, Bar** **70.14 321** P **P** **09 22 20.4 +1.5**
GSC pmax pmax
comp=Z,48nm,1.4s
GSC **Goldstone, Bar** **70.14 321** P **P** **09 22 20.8 +1.9**
baz=134,SNR=10
GSC **Goldstone, Bar** **70.14 321** P **P** **09 22 20.4 +1.5**
GSC IAmb IAmb 09 22 27.3
comp=Z,48nm,1.4s
MWC **Mount Wilson** **70.15 320** P **P** **09 22 21.4 +2.3**
MWC pmax pmax
comp=Z,73nm,1.4s
MWC **Mount Wilson** **70.15 320** P **P** **09 22 21.4 +2.3**
MWC IAmb IAmb 09 22 27.3
comp=Z,73nm,1.4s
RDMU **Red Mountain** **70.17 330** P **P** **09 22 20.2 +1.1**
PASC **Pasadena Art C** **70.19 320** P **P** **09 22 21.6 +2.4**
PASC IAmb IAmb 09 22 22.4
comp=Z,44nm,1.2s
QSPA **South Pole Qui** **70.24 180** P **P** **09 22 20.2 +1.0**
QSPA IAmb IAmb 09 22 26.7
comp=Z,54nm,1.2s
SHOC **Shoshone, Teco** **70.25 322** P **P** **09 22 21.2 +1.7**
baz=135,SNR=14
DECC **Green Verdugo** **70.34 320** P **P** **09 22 21.9 +1.8**
baz=133,SNR=5.7
SNCC **San Nicolas Is** **70.41 318** P **P** **09 22 22.4 +1.9**
baz=132
K22A **Casper** **70.44 333** P **P** **09 22 21.6 +0.9**
baz=145,SNR=10
K22A **Casper** **70.44 333** P **P** **09 22 21.7 +0.9**
K22A IAMs_20 IAMs_20 09 54 49.6
comp=Z,759nm,19.0s
EDW2 **Edwards Air Fo** **70.56 320** P **P** **09 22 22.8 +1.3**
baz=133
RSSD **Black Hills** **70.63 335** P **P** **09 22 22.7 +0.8**
RSSD pmax pmax
comp=Z,17nm,0.9s
RSSD MLR MLR
comp=Z,800nm,20.0s
RSSD **Black Hills** **70.63 335** P **P** **09 22 22.4 +0.5**
baz=147
RSSD **Black Hills** **70.63 335** P **P** **09 22 22.7 +0.8**
RSSD **Black Hills** **70.63 335** IAMs_20 IAMs_20 09 56 23.6
comp=Z,777nm,20.0s
LRMC **Laurel Mtn Rad** **70.78 321** P **P** **09 22 24.4 +1.5**
baz=134,SNR=5.6
PSUT **Pine Spring** **70.79 325** P **P** **09 22 25.0 +2.1**
D32A **Dogwood Acres,** **70.82 341** P **P** **09 22 22.9 +0.3**
D32A IAmb IAmb 09 22 23.6
comp=Z,46nm,1.1s
D32A IAMs_20 IAMs_20 09 57 13.7
comp=Z,756nm,19.0s
OSI **Osito Audit: C** **70.82 320** P **P** **09 22 24.6 +1.5**
baz=133
NLU **North Lily Min** **70.92 328** P **P** **09 22 25.5 +1.7**
SCZ2 **Santa Cruz Isl** **70.97 319** P **P** **09 22 24.3 +0.4**
baz=132
TPNV **Topopah Spring** **70.97 323** P **P** **09 22 26.4 +2.3**
TPNV pmax pmax
comp=Z,56nm,1.3s
TPNV MLR MLR
comp=Z,400nm,19.0s
TPNV **Topopah Spring** **70.97 323** P **P** **09 22 26.3 +2.3**
baz=135,SNR=40
TPNV **Topopah Spring** **70.97 323** P **P** **09 22 26.4 +2.3**
TPNV IAmb IAmb 09 22 32.7
comp=Z,56nm,1.2s
FURC **Furnace Creek,** **70.98 322** P **P** **09 22 26.1 +2.2**
baz=134,SNR=40
B35A **Bob, Littlefor** **71.01 344** P **P** **09 22 23.6 -0.3**
B35A IAmb IAmb 09 22 24.5
comp=Z,27nm,1.1s
B35A IAMs_20 IAMs_20 09 55 25.0
comp=Z,1µm,20.0s
MPMC **Manual Prospec** **71.07 321** P **P** **09 22 26.2 +1.5**
baz=134,SNR=17
JLU **Jordanelle** **71.10 328** P **P** **09 22 26.4 +1.6**
ARVC **Arvin** **71.23 320** P **P** **09 22 27.2 +1.8**
baz=133
CTU **Camp Tracy** **71.32 328** P **P** **09 22 26.8 +0.7**
ISA **Isabella, Lake** **71.38 321** P **P** **09 22 28.5 +2.1**
ISA pmax pmax
comp=Z,53nm,1.3s
ISA **Isabella, Lake** **71.38 321** P **P** **09 22 28.3 +1.9**
baz=133,SNR=24
ISA **Isabella, Lake** **71.38 321** P **P** **09 22 28.5 +2.1**
ISA IAmb IAmb 09 22 34.7
comp=Z,53nm,1.3s
TCUT **Toone Canyon** **71.47 329** P **P** **09 22 28.9 +1.8**
DUG **Dugway, Tooele** **71.48 327** P **P** **09 22 28.7 +1.7**
DUG pmax pmax
comp=Z,40nm,1.1s
DUG MLR MLR
comp=Z,600nm,19.0s
DUG **Dugway, Tooele** **71.48 327** P **P** **09 22 28.7 +1.7**
baz=139,SNR=32
DUG **Dugway, Tooele** **71.48 327** P **P** **09 22 28.7 +1.7**
DUG IAmb IAmb 09 22 35.2
comp=Z,40nm,1.1s
E28A **Huff** **71.50 339** P **P** **09 22 27.6 +0.7**
E28A IAMs_20 IAMs_20 09 55 46.7
comp=Z,779nm,21.0s
AGMN **Agassiz Nation** **71.53 343** P **P** **09 22 26.6 -0.4**
baz=155,SNR=10
AGMN **Agassiz Nation** **71.53 343** P **P** **09 22 26.6 -0.4**
R11A **Troy Canyon, C** **71.59 324** P **P** **09 22 29.9 +2.1**
baz=136,SNR=32
R11A **Troy Canyon, C** **71.59 324** P **P** **09 22 29.9 +2.1**
R11A IAmb IAmb 09 22 36.4
comp=Z,31nm,1.2s
GRAC **Grapevine Rang** **71.64 322** P **P** **09 22 30.0 +2.0**
baz=134,SNR=7.7
PKM **Mcpherson Peak** **71.67 319** P **P** **09 22 30.0 +1.6**
baz=132,SNR=11
CWC **Cottonwood Cre** **71.67 321** P **P** **09 22 29.5 +1.2**
baz=134
VES **Vestal, Richgr** **71.86 320** P **P** **09 22 31.1 +1.9**
baz=133,SNR=15
BW06 **Boulder Array** **71.88 331** P **P** **09 22 30.0 +0.5**
baz=142,SNR=10
BW06 **Boulder Array** **71.88 331** P **P** **09 22 30.4 +0.9**
PD31 **Pinedale Array** **71.88 331** P **P** **09 22 30.4 +0.9**
PDAR **Pinedale Array** **71.88 331** P **P** **09 22 30.2 +0.8**
comp=Z,2.3nm,0.7s,baz=142,slow=7.5,SNR=24
PDAR LR LR 09 55 20.2
comp=Z,515nm,19.9s,baz=126,slow=37
HWUT **Hardware Ranch** **71.92 329** P **P** **09 22 30.7 +0.9**
SMMC **Simmler** **72.06 319** P **P** **09 22 32.8 +2.2**
baz=132,SNR=8.4
SPUT **South Promonto** **72.13 328** P **P** **09 22 32.6 +1.7**
BGU **Big Grassy Mou** **72.13 328** P **P** **09 22 32.2 +1.3**
TIN **Tinemaha, Big** **72.18 322** P **P** **09 22 33.1 +1.8**
baz=134
MDND **Maddock** **72.25 340** P **P** **09 22 31.8 +0.5**
baz=152,SNR=9.3
MDND **Maddock** **72.25 340** P **P** **09 22 31.1 -0.2**
TBI **Tubuai** **72.30 251** *e*S **S** **09 32 00.5 +4.8**
comp=Z,901nm,26.5s
TBI **Tubuai** **72.30 251** *e*LR LR 09 44 38.0
comp=Z,2µm,28.2s,baz=104
VOG **Valley Oaks Go** **72.37 321** P **P** **09 22 33.1 +0.9**
baz=132
MEH **Mehetia** **72.46 257** *e*T T 10 41 27.3
comp=Z,11nm,0.2s
PAGB **Antelope Grade** **72.50 320** IAmb IAmb 09 22 46.8
comp=Z,50nm,1.3s
AHID **Auburn Hatcher** **72.59 330** IAMs_20 IAMs_20 09 53 56.4
comp=Z,770nm,21.0s
HVU **Hansel Valley** **72.65 328** P **P** **09 22 35.6 +1.6**
HVU pmax pmax
comp=Z,48nm,1.4s
HVU **Hansel Valley** **72.65 328** P **P** **09 22 35.6 +1.6**
MLAC **Mammoth, Mammo** **72.93 322** P **P** **09 22 37.6 +1.7**
baz=133,SNR=9.6
REDW **Red Top Meadow** **72.94 331** P **P** **09 22 36.9 +1.1**
REDW IAmb IAmb 09 22 38.4
comp=Z,52nm,1.5s
REDW IAMs_20 IAMs_20 09 55 46.5
comp=Z,713nm,18.0s
SNOW **Snow King Moun** **72.97 331** P **P** **09 22 37.2 +1.2**
SNOW IAMs_20 IAMs_20 09 55 57.7
comp=Z,824nm,18.0s
OMMB **Old Mammoth Mi** **73.01 322** P **P** **09 22 37.7 +1.2**
OMMB IAmb IAmb 09 22 39.5
comp=Z,33nm,1.1s
MDPB **Devils Postpil** **73.07 322** P **P** **09 22 38.3 +1.6**
MDPB IAmb IAmb 09 22 44.8
comp=Z,29nm,1.1s
TPAW **Teton Pass** **73.08 331** P **P** **09 22 37.4 +0.7**
TPAW IAmb IAmb 09 22 44.3
comp=Z,33nm,1.3s
NV11 **Mina Array Sit** **73.09 323** P **P** **09 22 38.5 +1.7**
ELK **Elko** **73.13 326** P **P** **09 22 38.4 +1.3**
ELK pmax pmax
comp=Z,15nm,1.1s
ELK **Elko** **73.13 326** P **P** **09 22 38.4 +1.3**
ELK IAMs_20 IAMs_20 09 53 58.6
comp=Z,815nm,20.0s
PMPB **Monarch Peak** **73.15 320** IAmb IAmb 09 22 46.2
comp=Z,47nm,1.1s
NVAR **Mina Array Bea** **73.17 323** P **P** **09 22 38.8 +1.5**
comp=Z,9.6nm,0.9s,baz=143,slow=5.7,SNR=56
NVAR LR LR 09 52 02.9
comp=Z,408nm,19.0s,baz=156,slow=34
FXWY **Fox Creek** **73.23 331** P **P** **09 22 38.4 +0.9**
ULM **Lac du Bonnet** **73.31 344** P **P** **09 22 37.0 -0.6**
comp=Z,14nm,1.0s,baz=150,slow=6.1,SNR=13
ULM LR LR 09 56 56.7
comp=Z,1µm,21.2s,baz=142,slow=38
ULM **Lac du Bonnet** **73.31 344** *c i*P **P** **09 22 36.8 -0.7**
ULM **Lac du Bonnet** **73.31 344** P **P** **09 22 36.6 -0.9**
ULM IAMs_20 IAMs_20 09 56 45.8
comp=Z,1µm,21.0s
PMOZ **Porto Moniz, M** **73.33 45** *e*S **ScS** **09 32 49.1 +1.9**
PMOZ **Porto Moniz, M** **73.33 45** *e*LR LR 09 50 16.3
comp=Z,612nm,18.0s
IMW **Indian Meadow** **73.39 331** P **P** **09 22 39.8 +1.2**
IMW IAmb IAmb 09 22 41.2
comp=Z,53nm,1.5s
FLWY **Flagg Ranch** **73.42 331** P **P** **09 22 40.4 +1.7**
FLWY IAmb IAmb 09 22 46.7
comp=Z,48nm,1.1s
RYN **Ryan** **73.43 323** P **P** **09 22 40.6 +1.8**
KVN **Kaiserville** **73.48 323** P **P** **09 22 40.5 +1.4**
KVN pmax pmax
comp=Z,28nm,1.1s
KVN **Kaiserville** **73.48 323** P **P** **09 22 40.5 +1.4**
RLMT **Red Lodge** **73.61 333** P **P** **09 22 40.8 +1.2**
baz=143,SNR=28
RLMT **Red Lodge** **73.61 333** P **P** **09 22 40.9 +1.2**
RLMT IAmb IAmb 09 22 47.3
comp=Z,58nm,1.3s
RLMT IAMs_20 IAMs_20 09 55 26.3
comp=Z,711nm,19.0s
H17A **Grant Village** **73.61 331** P **P** **09 22 41.6 +1.8**
baz=141
H17A **Grant Village** **73.61 331** P **P** **09 22 42.0 +2.2**
YPP **Pitchstone Pla** **73.62 331** P **P** **09 22 42.0 +2.1**
LAO **LASA Array** **73.62 335** P **P** **09 22 40.4 +0.9**
baz=146,SNR=28
LAO **LASA Array** **73.62 335** P **P** **09 22 40.3 +0.7**
LAO IAmb IAmb 09 22 41.8
comp=Z,65nm,1.2s
LAO IAMs_20 IAMs_20 09 58 17.8
comp=Z,866nm,21.0s
LKWY **Lake** **73.67 332** P **P** **09 22 42.4 +2.3**
LKWY pmax pmax
comp=Z,28nm,1.1s
LKWY MLR MLR
comp=Z,2µm,20.0s
LKWY **Lake** **73.67 332** P **P** **09 22 42.4 +2.3**
YMP **Mirror Lake Pl** **73.69 332** P **P** **09 22 41.0 +0.6**
YNE **Yellowstone No** **73.84 332** P **P** **09 22 42.4 +1.2**
WAKR **Walker** **73.87 322** P **P** **09 22 43.3 +1.9**
WAKR IAmb IAmb 09 22 50.1
comp=Z,37nm,1.3s
PPT2 **Papeete2** **73.92 257** *e*S **S** **09 32 16.4 +1.9**
comp=Z,1µm,24.8s
PPT2 **Papeete2** **73.92 257** *e*LR LR 09 45 23.8
comp=Z,2µm,24.8s,baz=103
PPT **Papeete** **73.93 257** P **P** **09 22 43.7 +1.7**
comp=Z,31nm,0.8s,baz=230,slow=20,SNR=2.6
PPT LR LR 09 47 02.4
comp=Z,632nm,19.9s,baz=114,slow=29
YMR **Madison River** **74.00 331** P **P** **09 22 44.1 +2.0**
YHH **Holmes Hill** **74.04 332** P **P** **09 22 44.1 +1.7**
CMB **Columbia Colle** **74.11 321** P **P** **09 22 43.7 +1.1**
CMB pmax pmax
comp=Z,25nm,1.3s
CMB MLR MLR
comp=Z,300nm,21.0s
CMB **Columbia Colle** **74.11 321** P **P** **09 22 43.7 +1.1**
YHB **Horse Butte** **74.17 331** P **P** **09 22 45.0 +2.0**
YHL **Hebgen Lake** **74.24 331** P **P** **09 22 44.9 +1.3**
QLMT **Earthquake Lak** **74.33 331** P **P** **09 22 46.5 +2.5**
DGMT **Dagmar** **74.35 338** P **P** **09 22 44.8 +1.1**
baz=148,SNR=18
DGMT **Dagmar** **74.35 338** P **P** **09 22 44.9 +1.1**
DGMT IAmb IAmb 09 22 46.2
comp=Z,68nm,1.1s
PNTR **Pine Nut** **74.36 323** P **P** **09 22 45.8 +1.5**
PNTR IAmb IAmb 09 22 52.7
comp=Z,37nm,1.1s
VCNR **Virginia City** **74.53 323** P **P** **09 22 46.9 +1.7**
SCHQ **Schefferville** **74.55 2** P **P** **09 22 44.0 -0.7**
comp=Z,11nm,0.8s,baz=167,slow=4.7,SNR=13
SCHQ LR LR 09 57 44.6
comp=Z,596nm,19.2s,baz=194,slow=38
SCHQ **Schefferville** **74.55 2** P **P** **09 22 44.5 -0.2**
SCHQ IAMs_20 IAMs_20 09 55 05.1
comp=Z,778nm,21.0s
PAHR **Pah Rah Range** **74.66 323** P **P** **09 22 48.0 +2.1**
PAHR IAmb IAmb 09 22 54.3
comp=Z,69nm,1.2s
MCMT **McKenzie Canyo** **74.98 330** P **P** **09 22 49.4 +1.7**
AFDM **Forest Hills D** **75.06 322** P **P** **09 22 48.8 +0.7**
DLMT **Dillon** **75.27 331** P **P** **09 22 50.8 +1.5**
DLMT IAmb IAmb 09 22 57.2
comp=Z,45nm,1.4s
BEKR **Beckworth** **75.32 323** P **P** **09 22 51.5 +1.8**
MFID **Camas Ranch** **75.37 328** P **P** **09 22 51.5 +1.6**
MFID IAmb IAmb 09 22 58.0
comp=Z,61nm,1.4s
MFID IAMs_20 IAMs_20 09 55 43.9
comp=Z,826nm,18.0s
LRM **Limekiln Ridge** **75.56 331** P **P** **09 22 51.2 +0.2**
ORV **Oroville** **75.77 322** P **P** **09 22 54.0 +1.9**
ORV pmax pmax
comp=Z,59nm,1.2s
ORV **Oroville** **75.77 322** P **P** **09 22 54.0 +1.9**

ORV IAmb IAmb 09 23 00.4
comp=Z,59nm,1.1s
GDXM Geysers 76.04 321 P **P** **09 22 53.0 -0.8**
EGMT Eagleton 76.11 334 P **P** **09 22 54.7 +0.8**
baz=143,SNR=23
EGMT Eagleton 76.11 334 P **P** **09 22 54.8 +0.8**
EGMT IAmb IAmb 09 23 01.1
comp=Z,54nm,1.2s
EGMT IAMs_20 IAMs_20 09 58 20.7
comp=Z,698nm,20.0s
WVOR Wild Horse Val 76.12 326 P **P** **09 22 54.6 +0.4**
WVOR pmax pmax
comp=Z,15nm,1.2s
WVOR MLR MLR
comp=Z,700nm,19.0s
WVOR Wild Horse Val 76.12 326 P **P** **09 22 54.6 +0.4**
WVOR IAMs_20 IAMs_20 09 57 24.8
comp=Z,673nm,19.0s
O03E Paynes Creek 76.43 322 P **P** **09 22 56.3 +0.4**
baz=132,SNR=9.9
MOD Modoc Plateau 76.66 324 P **P** **09 22 58.7 +1.4**
MOD IAmb IAmb 09 23 05.3
comp=Z,29nm,1.1s
J08A Circle Bar Ran 76.68 326 P **P** **09 22 58.8 +1.4**
J08A IAMs_20 IAMs_20 09 59 24.6
comp=Z,685nm,19.0s
O02D Mt. Diablo Mer 76.92 322 P **P** **09 22 59.5 +0.8**
baz=131
MSO Missoula 77.00 331 P **P** **09 23 00.4 +1.4**
baz=139,SNR=13
MSO Missoula 77.00 331 P **P** **09 23 00.5 +1.4**
WDC Whiskeytown Da 77.04 322 P **P** **09 22 59.2 -0.1**
WDC pmax pmax
comp=Z,9.0nm,0.9s
WDC MLR MLR
comp=Z,300nm,18.0s
WDC Whiskeytown Da 77.04 322 P **P** **09 22 59.2 -0.1**
BMO Blue Mountains 77.15 328 P **P** **09 23 00.5 +0.6**
BMO pmax pmax
comp=Z,26nm,1.2s
BMO MLR MLR
comp=Z,600nm,18.0s
BMO Blue Mountains 77.15 328 P **P** **09 23 00.5 +0.6**
N02D Trinity Center 77.39 322 P **P** **09 23 01.7 +0.4**
baz=131,SNR=11
M04C Macdoel 77.43 323 P **P** **09 23 02.8 +1.2**
baz=132,SNR=15
KMRM Mail Ridge 77.49 321 IAMs_20 IAMs_20 09 57 37.9
comp=Z,585nm,18.0s
K05A Summer Lake 77.54 325 P **P** **09 23 03.2 +0.9**
K05A IAmb IAmb 09 23 10.7
comp=Z,51nm,1.2s
K05A IAMs_20 IAMs_20 10 01 34.2
comp=Z,590nm,18.0s
I07A Izee 77.72 326 P **P** **09 23 04.5 +1.4**
I07A IAMs_20 IAMs_20 10 00 17.1
comp=Z,884nm,20.0s
M02C Callahan 77.75 323 P **P** **09 23 04.1 +0.8**
baz=131,SNR=6.0
JTMT Jette 77.84 332 P **P** **09 23 03.6 -0.2**
JTMT IAMs_20 IAMs_20 10 01 29.2
comp=Z,741nm,21.0s
YBH Yreka Blue Hor 77.89 323 P **P** **09 23 04.2 0.0**
comp=Z,5.2nm,1.0s,baz=130,slow=3.1,SNR=8.6
YBH Yreka Blue Hor 77.89 323 P **P** **09 23 03.7 -0.5**
YBH pmax pmax
comp=Z,14nm,1.2s
YBH MLR MLR
comp=Z,500nm,19.0s
YBH Yreka Blue Hor 77.89 323 P **P** **09 23 03.6 -0.5**
F10A Beech Ranch, E 77.91 329 P **P** **09 23 04.6 +0.5**
K04D Chiloquin, OR 77.94 324 P **P** **09 23 05.6 +1.2**
baz=132
L04D Klamath Falls 77.98 324 P **P** **09 23 05.4 +0.8**
baz=131,SNR=8.5
JCC Jacoby Creek, 78.06 322 P **P** **09 23 06.0 +1.0**
JCC IAmb IAmb 09 23 13.1
comp=Z,47nm,1.2s
VNDA Vanda 78.06 190 P **P** **09 23 05.8 +1.3**
comp=Z,5.8nm,1.0s,baz=142,slow=5.0,SNR=17
VNDA Vanda 78.06 190 P **P** **09 23 06.4 +1.9**
VNDA pmax pmax
comp=Z,12nm,1.1s
VNDA Vanda 78.06 190 P **P** **09 23 06.4 +1.9**
J05D Fort Rock, OR 78.10 325 P **P** **09 23 06.9 +1.6**
baz=132,SNR=22
G08A Pilot Rock 78.28 328 P **P** **09 23 07.4 +1.1**
G08A IAMs_20 IAMs_20 09 57 17.0
comp=Z,1μm,19.0s
PINE Pine Mountain 78.28 325 P **P** **09 23 08.3 +1.9**
PINE IAmb IAmb 09 23 14.8
comp=Z,30nm,1.1s
KRMB Red Mountain 78.44 322 P **P** **09 23 09.9 +2.6**
KRMB IAmb IAmb 09 23 20.0
comp=Z,48nm,1.3s
J04D Umpqua Nationa 78.55 324 P **P** **09 23 09.0 +1.1**
baz=132,SNR=6.7
TOA0 Torodi Ar. Sit 78.55 71 P **P** **09 23 07.2 -1.0**
TORD Torodi Ar. Bea 78.55 71 P **P** **09 23 07.2 -1.0**
comp=Z,112nm,1.0s,baz=258,slow=5.4,SNR=262
TORD S **S** **09 33 05.2 0.0**
comp=Z,1.0nm,1.0s,baz=261,slow=11,SNR=3.7
TORD LR LR 09 56 16.2
comp=Z,3μm,20.6s,baz=235,slow=35
SYO Syowa Base 78.58 160 ‖ *i*P **P** **09 23 04.0 -3.4**
SYO Syowa Base 78.58 160 ‖ *i*pP **P** **09 23 06.4 -1.0**
SYO Syowa Base 78.58 160 ‖ *i*sP **P** **09 23 08.4 +1.0**
SYO Syowa Base 78.58 160 ‖ *i*PcP **PcP** **09 23 14.2 -2.3**
SYO Syowa Base 78.58 160 ‖ *e*PP PP 09 26 02.4 -2.3
WALA Waterton Lakes 78.66 333 P **P** **09 23 09.4 +1.1**
WALA IAmb IAmb 09 23 15.8
comp=Z,39nm,1.2s
I05D Terrebonne, OR 78.86 326 P **P** **09 23 11.0 +1.6**
baz=132,SNR=14
FFC Flin Flon 79.00 342 P **P** **09 23 09.3 -0.5**
FFC pmax pmax
comp=Z,28nm,1.5s
FFC Flin Flon 79.00 342 P **P** **09 23 09.3 -0.5**
K02D Willamette Mer 79.05 323 P **P** **09 23 12.1 +1.6**
baz=130,SNR=10
I04A Tendick Farm, 79.08 325 P **P** **09 23 11.4 +0.8**
baz=132
G06A Carlson Farm, 79.10 327 IAMs_20 IAMs_20 09 59 12.6
comp=Z,779nm,19.0s
F07A Phinny Hill Vi 79.19 327 IAMs_20 IAMs_20 09 57 55.0
comp=Z,977nm,18.0s
HAWA Hanford 79.34 328 P **P** **09 23 13.1 +1.2**
HAWA IAMs_20 IAMs_20 09 58 09.9
comp=Z,666nm,19.0s
G05D Wamic, OR 79.46 326 P **P** **09 23 14.5 +1.9**
baz=133
D08A Wollman Farm, 79.50 329 P **P** **09 23 13.0 +0.2**
D08A IAMs_20 IAMs_20 09 58 20.2
comp=Z,574nm,18.0s
J01E Myrtle Point 79.50 323 P **P** **09 23 14.4 +1.6**
baz=130
NEW Newport 79.51 331 P **P** **09 23 13.0 +0.2**
comp=Z,2.7nm,0.8s,baz=126,slow=6.8,SNR=7.3
NEW Newport 79.51 331 P **P** **09 23 13.1 +0.2**
NEW pmax pmax
comp=Z,13nm,1.3s
NEW MLR MLR
comp=Z,500nm,20.0s
NEW Newport 79.51 331 P **P** **09 23 13.5 +0.6**
baz=136
NEW Newport 79.51 331 P **P** **09 23 13.1 +0.2**
I03D Drain, OR 79.53 324 P **P** **09 23 13.7 +0.7**
baz=131,SNR=8.8
H04A Detroit Lake 79.55 325 P **P** **09 23 13.2 +0.1**
E07A Sunnyside 79.61 328 P **P** **09 23 15.1 +1.7**
E07A IAMs_20 IAMs_20 09 58 19.2
comp=Z,726nm,18.0s
C09A Chrisman Ranch 79.72 330 P **P** **09 23 15.4 +1.5**
H04D Lebanon 79.73 325 P **P** **09 23 14.6 +0.5**
baz=131
F05D White Salmon 79.97 327 P **P** **09 23 16.9 +1.6**
baz=133
I02D Swisshome 80.07 324 P **P** **09 23 17.7 +1.8**
baz=130
COR Corvallis 80.08 325 P **P** **09 23 15.8 -0.1**
COR pmax pmax
comp=Z,42nm,1.0s
COR MLR MLR
comp=Z,600nm,19.0s
COR Corvallis 80.08 325 P **P** **09 23 15.8 -0.1**
COR IAmb IAmb 09 23 24.3
comp=Z,42nm,1.0s
G03D McMinnville, O 80.47 325 P **P** **09 23 19.3 +1.3**
baz=131
F04A Amboy 80.50 326 P **P** **09 23 18.5 +0.3**
F04A IAmb IAmb 09 23 33.6
comp=Z,38nm,1.1s
F04A IAMs_20 IAMs_20 10 00 15.6
comp=Z,658nm,19.0s
LTY Liberty 80.50 328 P **P** **09 23 19.3 +1.1**
LTY IAMs_20 IAMs_20 09 58 39.6
comp=Z,615nm,19.0s
B08A Colville Reser 80.61 330 P **P** **09 23 18.8 0.0**
LON Longmire 80.73 327 P **P** **09 23 19.8 +0.3**
LON pmax pmax
comp=Z,16nm,1.3s
LON MLR MLR
comp=Z,900nm,19.0s
LON Longmire 80.73 327 P **P** **09 23 19.8 +0.3**
LON IAMs_20 IAMs_20 10 02 14.7
comp=Z,899nm,19.0s
FCC Fort Churchill 80.73 348 P **P** **09 23 19.1 0.0**
FCC pmax pmax
comp=Z,28nm,1.2s
FCC Fort Churchill 80.73 348 P **P** **09 23 19.1 0.0**
F04D Rainier, OR 80.91 326 P **P** **09 23 21.6 +1.2**
baz=131
SUR Sutherland 80.91 121 P **P** **09 23 22.1 +0.9**
SUR IAmb IAmb 09 23 24.7
comp=Z,65nm,1.4s
E04D Cinebar 80.99 327 P **P** **09 23 21.7 +0.9**
baz=132
C06D Leavenworth 81.07 329 P **P** **09 23 21.8 +0.6**
baz=133
D05A Enumclaw 81.12 327 P **P** **09 23 22.1 +0.7**
D05A IAmb IAmb 09 23 34.1
comp=Z,45nm,1.0s
D05A IAMs_20 IAMs_20 09 59 14.9
comp=Z,856nm,19.0s
PFVI Vila Bisbo 81.42 46 *e*S **S** **09 33 42.8 +8.1**
PFVI Vila Bisbo 81.42 46 IAMs_20 IAMs_20 09 54 48.5
comp=Z,909nm,20.0s
E03A Lebam 81.50 326 P **P** **09 23 25.1 +1.6**
E03A IAmb IAmb 09 23 39.3
comp=Z,36nm,1.0s
E03A IAMs_20 IAMs_20 09 58 43.3
comp=Z,736nm,21.0s
D04E Lakebay 81.51 327 P **P** **09 23 25.3 +1.8**
baz=132
MORF Marmelete 81.64 45 *e*P **P** **09 23 25.2 +0.7**
MORF AMS AMS 09 55 38.4
comp=Z,693nm,19.7s
MORF Marmelete 81.64 45 *e*P **P** **09 23 25.2 +0.7**
MORF Marmelete 81.64 45 *e*P **P** **09 23 25.9 +1.4**
comp=Z,91nm,2.1s
B06A Marblemount 81.76 329 P **P** **09 23 25.2 +0.4**
B06A IAmb IAmb 09 23 31.8
comp=Z,55nm,1.4s
B05A Bryant 81.89 328 P **P** **09 23 25.9 +0.4**
baz=132,SNR=11
D03D Eldon 81.91 327 P **P** **09 23 26.8 +1.2**
baz=132,SNR=6.4
LIS Lisbon 82.07 44 *e*P **P** **09 23 27.4 +0.7**
LIS AMS AMS 10 01 34.4
comp=Z,2μm,18.7s
LIS Lisbon 82.07 44 *e*P **P** **09 23 27.4 +0.7**
PBDV Barranco-do-Ve 82.09 46 *e*P **P** **09 23 27.6 +0.7**
comp=Z,98nm,1.7s
PBDV Barranco-do-Ve 82.09 46 *e*S **S** **09 33 49.0 +7.4**
PMAFR Mafra 82.12 44 *e*S **S** **09 33 47.5 +5.7**
PNCL Nicolau / Gran 82.15 45 *e*P **P** **09 23 28.3 +1.2**
PNCL Nicolau / Gran 82.15 45 *e*S **S** **09 33 49.7 +7.6**
MDT Midelt 82.15 51 LR LR 09 59 06.9
comp=Z,1μm,19.5s,baz=250,slow=35
MESJ Messejana 82.21 45 *e*P **P** **09 23 28.2 +0.8**
MESJ *e*S **S** **09 33 44.7 +2.0**
MESJ AMS AMS 10 01 56.4
comp=Z,742nm,17.2s
MESJ Messejana 82.21 45 *e*P **P** **09 23 28.2 +0.8**
MESJ *e*S **S** **09 33 44.7 +2.0**
MESJ Messejana 82.21 45 *e*P **P** **09 23 28.6 +1.2**
NLWA Neilton Lookou 82.21 327 P **P** **09 23 28.4 +1.2**
NLWA IAMs_20 IAMs_20 10 01 14.1
comp=Z,718nm,19.0s
TSUM Tsumeb 82.21 108 P **P** **09 23 28.6 +0.4**
TSUM IAmb IAmb 09 23 29.9
comp=Z,36nm,1.1s
PCVE Castro Verde 82.22 45 *e*P **P** **09 23 28.4 +0.9**
PVAQ Vaqueiros 82.32 46 *e*S **S** **09 33 48.4 +4.5**
PVAQ Vaqueiros 82.32 46 *e*LR LR 09 49 22.1
comp=Z,828nm,22.0s
PVAQ Vaqueiros 82.32 46 IAMs_20 IAMs_20 09 55 27.1
comp=Z,1μm,21.0s
A04D Lummi Island 82.50 328 P **P** **09 23 30.0 +1.3**
baz=132
PBEJ Beja 82.55 45 *e*P **P** **09 23 30.1 +0.9**
comp=Z,42nm,1.4s
EVO Evora 82.72 45 *e*P **P** **09 23 31.3 +1.2**
comp=Z,34nm,2.0s
PGC Sidney 82.82 328 P **P** **09 23 31.4 +1.0**
PGC IAmb IAmb 09 23 32.3
comp=Z,32nm,1.1s
PMTG Montargil 82.87 44 *e*P **P** **09 23 31.6 +0.7**
comp=Z,64nm,1.8s
PMTG Montargil 82.87 44 *e*S **S** **09 33 55.0 +5.6**
PESTR Estremoz 83.18 45 *e*S S 09 34 09.1 +16
PCAS Casmilo, Conde 83.22 43 *e*S **S** **09 33 54.9 +1.8**
LLLB Lillooet 83.37 330 P **P** **09 23 33.8 +0.6**
LLLB IAmb IAmb 09 23 35.1
comp=Z,44nm,1.4s
PMRV Marv??o 83.61 44 *e*S **S** **09 34 03.2 +6.2**
PMRV Marv??o 83.61 44 *e*LR LR 09 51 18.3
comp=Z,1μm,18.0s
PCBR Castelo Branco 83.77 44 *e*P **P** **09 23 36.3 +0.8**
comp=Z,31nm,1.5s
PVIS Viseu 83.97 43 *e*P **P** **09 23 37.5 +0.9**
MTE Manteigas 84.03 43 *e*P **P** **09 23 36.8 -0.1**
comp=Z,88nm,1.3s
MTE Manteigas 84.03 43 *e*S **S** **09 34 06.0 +4.7**
MTE Manteigas 84.03 43 *e*LR LR 09 51 12.8
comp=Z,2μm,18.0s
MTE Manteigas 84.03 43 P **P** **09 23 36.9 -0.1**
PVRL Vila Real 84.39 42 *e*P **P** **09 23 39.5 +0.8**
comp=Z,83nm,1.5s
PGAV Gavieira, Arco 84.41 42 *e*P **P** **09 23 39.8 +1.0**
comp=Z,68nm,1.5s
PGAV Gavieira, Arco 84.41 42 *e*S **S** **09 34 04.6 -0.5**
PGAV Gavieira, Arco 84.41 42 *e*LR LR 09 51 39.9
comp=Z,2μm,18.0s
MVO Moncorvo 84.76 43 *e*P **P** **09 23 40.9 +0.3**
comp=Z,79nm,1.4s
MVO Moncorvo 84.76 43 *e*S **S** **09 34 15.6 +7.0**
MVO Moncorvo 84.76 43 *e*LR LR 09 53 33.6
comp=Z,2μm,20.0s
PBRG Braganca 85.29 42 *e*P **P** **09 23 43.2 0.0**
comp=Z,84nm,1.6s
PAB San Pablo 85.69 45 P **P** **09 23 45.1 -0.2**
PAB pmax pmax
comp=Z,35nm,1.1s
PAB San Pablo 85.69 45 P **P** **09 23 45.1 -0.2**
PAB IAmb IAmb 09 23 46.8
comp=Z,35nm,1.1s
PAB San Pablo 85.69 45 IAMs_20 IAMs_20 09 57 16.2
comp=Z,848nm,22.0s
TAM Tamanrasset 85.74 64 P **P** **09 23 46.7 +0.7**
TAM pmax pmax
comp=Z,65nm,1.1s
TAM MLR MLR
comp=Z,3μm,20.0s
TAM Tamanrasset 85.74 64 P **P** **09 23 46.7 +0.7**
BOSA Boshof 85.76 119 P **P** **09 23 45.5 -0.6**
comp=Z,19nm,1.0s,baz=181,slow=1.8,SNR=10
BOSA LR LR 09 59 11.0
comp=Z,1μm,19.0s,baz=260,slow=34
BOSA Boshof 85.76 119 P **P** **09 23 45.8 -0.4**
BOSA pmax pmax
comp=Z,48nm,1.4s
BOSA Boshof 85.76 119 P **P** **09 23 45.8 -0.4**
BOSA IAmb IAmb 09 23 47.3
comp=Z,48nm,1.4s
ESDC Sonseca Array 86.01 45 P **P** **09 23 46.1 -0.7**
comp=Z,18nm,1.1s,baz=247,slow=5.3,SNR=44
ESDC LR LR 09 58 11.2
comp=Z,889nm,21.2s,baz=225,slow=33
MAW Mawson 86.32 164 P **P** **09 23 48.4 +0.5**
comp=Z,27nm,1.1s,baz=222,slow=6.1,SNR=26
MAW LR LR 10 04 48.5
comp=Z,691nm,18.2s,baz=240,slow=37
MAW Mawson 86.32 164 P **P** **09 23 48.5 +0.6**
MAW pmax pmax
comp=Z,9.0nm,1.2s
MAW MLR MLR
comp=Z,200nm,19.0s
MAW Mawson 86.32 164 P **P** **09 23 48.5 +0.6**
LBTB Lobatse 87.30 116 P **P** **09 23 53.9 +0.2**
LBTB pmax pmax
comp=Z,16nm,1.2s
LBTB Lobatse 87.30 116 P **P** **09 23 53.9 +0.2**
BBB Bella Bella 87.37 329 IAMs_20 IAMs_20 10 07 31.6
comp=Z,652nm,20.0s
YKA Yellowknife Ar 89.14 341 P **P** **09 24 01.1 -0.2**
comp=Z,13nm,0.9s,baz=132,slow=5.1,SNR=179
YKA PKKP **PKKPdf** **09 41 37.0 -0.3**
comp=Z,1.2nm,1.1s,baz=328,slow=2.2,SNR=5.0
MOBC Moresby Island 89.83 328 IAMs_20 IAMs_20 10 08 56.8
comp=Z,570nm,20.0s
ILULI Ilulissat 90.03 7 IAMs_20 IAMs_20 10 08 07.8
comp=Z,666nm,19.0s
DIB Dawson Inlet, 90.12 328 IAMs_20 IAMs_20 10 09 45.4
comp=Z,585nm,20.0s
DSB Dublin 91.56 33 P **P** **09 24 12.2 -0.5**
DSB IAmb IAmb 09 24 12.8
comp=Z,22nm,1.1s
DLBC Dease Lake 92.00 333 P **P** **09 24 14.3 -0.6**
comp=Z,12nm,1.0s,baz=121,slow=5.8,SNR=12
DLBC Dease Lake 92.00 333 P **P** **09 24 15.6 +0.7**
BORG Borgarnes 92.53 19 LR LR 10 04 12.4
comp=Z,403nm,19.1s,baz=232,slow=34
LSZ Lusaka 93.07 107 P **P** **09 24 23.3 +2.4**
LSZ pmax pmax
comp=Z,19nm,1.5s
LSZ MLR MLR
comp=Z,2μm,18.0s
LSZ Lusaka 93.07 107 P **P** **09 24 23.3 +2.4**
LSZ IAmb IAmb 09 24 29.4
comp=Z,19nm,1.5s
SIT Sitka 93.59 330 IAMs_20 IAMs_20 10 08 29.2
comp=Z,663nm,20.0s
JIS Juneau Island 93.81 332 IAMs_20 IAMs_20 10 09 08.1
comp=Z,791nm,20.0s
KEST Kesra 93.81 53 P **P** **09 24 22.2 -1.6**
comp=Z,6.1nm,0.9s,baz=245,slow=6.4,SNR=4.6
KEST LR LR 10 07 22.4
comp=Z,2μm,20.1s,baz=200,slow=36
KEST Kesra 93.81 53 P **P** **09 24 23.3 -0.5**
CLF Chambon-Foret 93.88 40 P **P** **09 24 23.4 -0.2**
CLF IAmb IAmb 09 24 24.4
comp=Z,35nm,1.2s
URZ Urewera 93.96 227 LR LR 09 58 17.6
comp=Z,1μm,19.2s,baz=184,slow=30
CASY Casey 94.04 181 P **P** **09 24 24.7 +0.6**
CASY IAmb IAmb 09 24 26.6
comp=Z,20nm,1.3s
CASY Casey 94.04 181 IAMs_20 IAMs_20 10 08 11.6
comp=Z,692nm,19.0s
SSB Saint Sauveur 94.15 43 P **P** **09 24 24.7 -0.3**
SSB pmax pmax
comp=Z,14nm,1.1s
SSB Saint Sauveur 94.15 43 P **P** **09 24 24.6 -0.3**
EKA Eskdalemuir Ar 94.25 32 LR LR 10 04 19.8
comp=Z,421nm,18.5s,baz=240,slow=34
SUMG Summit 94.82 9 P **P** **09 24 28.2 +0.3**
SUMG pmax pmax
comp=Z,15nm,1.1s
SUMG MLR MLR
comp=Z,1μm,21.0s
SUMG Summit 94.82 9 P **P** **09 24 28.1 +0.3**
SUMG IAmb IAmb 09 24 31.4
comp=Z,15nm,1.1s
SUMG Summit 94.82 9 *i* P **P** **09 24 28.0 +0.1**
comp=Z,36nm,1.1s
RPZ Rata Peaks 95.05 220 LR LR 09 57 21.0
comp=Z,794nm,21.3s,baz=106,slow=29
VSL Villasalto 95.22 50 IAMs_20 IAMs_20 10 09 41.8
comp=Z,789nm,19.0s
DHAK Deception Hill 95.95 331 IAMs_20 IAMs_20 10 10 24.6
comp=Z,785nm,20.0s
TULEG Thule 96.28 0 IAMs_20 IAMs_20 10 07 35.0
comp=Z,734nm,20.0s
SCO Scoresbysund 96.40 15 IAMs_20 IAMs_20 10 04 38.0
comp=Z,616nm,21.0s
WLF Walferdange 96.89 40 P **P** **09 24 37.4 +0.1**
WLF pmax pmax
comp=Z,30nm,1.1s
WLF Walferdange 96.89 40 P **P** **09 24 37.4 +0.1**
ECH Echery 96.96 41 P **P** **09 24 37.0 -0.7**
ECH pmax pmax
comp=Z,19nm,1.1s
ECH Echery 96.96 41 P **P** **09 24 37.0 -0.7**
ECH IAmb IAmb 09 24 38.2
comp=Z,19nm,1.1s
OSSC Osservatorio P 97.95 47 IAMs_20 IAMs_20 10 14 46.9
comp=Z,751nm,19.0s
YAH Yahtse 98.13 332 IAMs_20 IAMs_20 10 12 02.1
comp=Z,544nm,20.0s
CTGM Chitina Glacie 98.21 332 IAMs_20 IAMs_20 10 13 12.4
comp=Z,625nm,20.0s
DAVA Damuels 98.34 43 *i* Pdiff **P** **09 24 43.8 -0.4**
comp=Z,8.8nm,1.0s
FUORN Ofenpass-Fuorn 98.35 43 P **P** **09 24 43.6 -0.8**
A36M Sachs Harbour 98.74 345 P Pdif 09 24 46.1 +1.0
baz=129
FETA Feichten 98.79 43 *e*Pdiff **P** **09 24 45.3 -0.9**
comp=Z,9.1nm,1.3s
DAWY Dawson 98.82 336 IAMs_20 IAMs_20 10 14 06.5
comp=Z,707nm,18.0s
INK Inuvik 98.88 340 P **P** **09 24 45.0 -0.8**
comp=Z,4.0nm,1.0s,baz=93,slow=4.8,SNR=11
INK PKKPbc **PKKPbc** **09 41 13.9 -1.7**
comp=Z,1.9nm,1.1s,baz=282,slow=1.0,SNR=4.6
INK Inuvik 98.88 340 P **P** **09 24 44.8 -1.0**
INK pmax pmax
comp=Z,5.0nm,1.1s
INK MLR MLR
comp=Z,1μm,19.0s
INK Inuvik 98.88 340 P **P** **09 24 44.8 -1.0**
EPYK Eagle Plains 98.94 338 P Pdif 09 24 47.2 +1.0
baz=120
EPYK Eagle Plains 98.94 338 IAMs_20 IAMs_20 10 12 58.7
comp=Z,740nm,19.0s
RETA Reutte 98.97 43 *e*Pdiff **P** **09 24 46.8 -0.1**
comp=Z,7.3nm,0.9s
MCARA McCarthy VSAT 99.13 332 IAMs_20 IAMs_20 10 17 13.7
comp=Z,612nm,18.0s
MOTA Moosalm 99.14 43 *e*Pdiff **Pdif** **09 24 46.9 -0.8**
comp=Z,1.1nm,1.1s
SQTA Sankt Quirin 99.17 43 *e*Pdiff **Pdif** **09 24 47.4 -0.4**
comp=Z,17nm,1.1s
VRDI Verde Repeater 99.25 332 IAMs_20 IAMs_20 10 16 26.9
comp=Z,462nm,20.0s
WATA Walderalm 99.44 43 *e*Pdiff **Pdif** **09 24 48.6 -0.4**
comp=Z,12nm,1.3s
WTTA Wattenberg 99.45 43 *e*Pdiff **Pdif** **09 24 48.9 -0.3**
comp=Z,15nm,1.2s
PAOL Paolisi 99.47 50 IAMs_20 IAMs_20 10 08 25.4
comp=Z,563nm,22.0s
GLB Gilahina Butte 99.50 332 IAMs_20 IAMs_20 10 17 26.4
comp=Z,554nm,18.0s
CEL Celeste 99.60 53 IAMs_20 IAMs_20 10 15 56.8
comp=Z,768nm,19.0s
EGAK Eagle 99.83 336 IAMs_20 IAMs_20 10 11 58.1
comp=Z,620nm,20.0s
ABTA Abfaltersbach 99.86 44 *e*Pdiff **Pdif** **09 24 50.4 -0.5**
comp=Z,10nm,1.3s
GRA1 Grafenberg Arr 99.98 41 IAMs_20 IAMs_20 10 05 53.5
comp=Z,664nm,21.0s
GRF Grafenberg Arr 99.98 41 *e*Pdiff **Pdif** **09 24 50.4 -0.8**
GRF *e*L L 10 06 14.2
comp=Z,608nm,21.4s
MENT Mentasta 100.08 334 IAMs_20 IAMs_20 10 16 43.6
comp=Z,452nm,20.0s
HIN Hinchinbrook I 100.30 331 IAMs_20 IAMs_20 10 13 38.5
comp=Z,591nm,20.0s
KBA Koelnbreinsper 100.50 44 *e*Pdiff **Pdif** **09 24 53.0 -0.9**
comp=Z,4.2nm,1.0s
DOT Dot Lake 100.50 334 IAMs_20 IAMs_20 10 13 03.1
comp=Z,572nm,20.0s
MYKA Terra Mystica 100.56 44 *e*Pdiff **Pdif** **09 24 54.1 +0.1**
comp=Z,6.9nm,1.4s
SCRK Sand Creek 100.61 335 IAMs_20 IAMs_20 10 12 02.7
comp=Z,663nm,19.0s
GLI Glacier Island 100.75 331 IAMs_20 IAMs_20 10 19 32.4
comp=Z,646nm,19.0s
RIDG Independent Ri 100.86 334 IAMs_20 IAMs_20 10 13 13.4

comp=Z,714nm,20.0s
NKC Novy Kostel 100.91 41 *e*P **Pdif 09 24 52.4 -2.9**
NKC MLR MLR
comp=Z,900nm,19.2s
NKC Novy Kostel 100.91 41 *e*PDIFF **Pdif 09 24 52.4 -2.9**
NKC *e*PP PP 09 28 49.4 -14
NKC AMS AMS 10 08 40.0
comp=Z,900nm,19.2s
OBKA Obir 101.12 45 *e*Pdiff **Pdif 09 24 56.5 0.0**
comp=Z,7.2nm,1.1s
GERES GERESS Array B 101.26 42 P **Pdif 09 24 56.1 -1.0**
comp=Z,1.6nm,0.9s,baz=262,slow=3.8,SNR=13
KHC Kasperske Hory 101.27 42 *e*P **Pdif 09 24 56.5 -0.5**
KHC *e* 09 35 29.7
KHC MLR MLR
comp=Z,700nm,20.8s
KHC Kasperske Hory 101.27 42 *e*PDIFF **Pdif 09 24 56.5 -0.5**
KHC *e*PP PP 09 28 57.2 -9.3
KHC *e*SKS 09 35 29.7
KHC AMS AMS 10 07 50.0
comp=Z,700nm,20.8s
MOA Molln 101.33 43 *e*Pdiff **Pdif 09 24 56.3 -1.0**
comp=Z,6.0nm,1.5s
SOKA Soboth 101.49 44 *e*Pdiff **Pdif 09 24 57.8 -0.3**
comp=Z,4.1nm,1.3s
CLL Collm 101.57 40 *i* Pdif **Pdif 09 24 59.3 +1.1**
comp=Z,10.0nm,1.4s
CLL *e* 09 25 10.0
CLL *e*PP **PP 09 29 08.0 -0.6**
CLL *e*SKSac **SKSac 09 35 45.0 +7.5**
CLL *e*Sdif **Sdif 09 36 40.0 +1.2**
CLL *e*PS **PS 09 38 13.0 +0.6**
CLL *e*PPS PPS 09 39 06.0
CLL *e*SS SS 09 43 24.0 -17
CLL *e*SSS SSS 09 47 30.0
CLL *e*SSSS 09 50 36.0
CLL Lm MLR 10 07 00.0
comp=N,400nm,21.1s
CLL Lm MLR 10 07 00.0
comp=E,900nm,20.6s
CLL Lm MLR 10 07 00.0
comp=Z,1µm,20.8s
CLL Collm 101.57 40 *i* P **Pdif 09 24 59.3 +1.1**
CLL *e*S **Sdif 09 36 40.0 +1.2**
CLL pmax pmax
comp=Z,10.0nm,1.4s
CLL MLR MLR
comp=Z,1µm,20.8s
SML Sawmill 101.64 332 IAMs_20 IAMs_20 10 18 35.9
comp=Z,686nm,18.0s
DHY Denali Highway 101.67 333 IAMs_20 IAMs_20 10 19 07.8
comp=Z,507nm,18.0s
PBCC Pribram 101.69 41 *e*PDIFF **Pdif 09 24 59.1 +0.2**
PRP Porcupine Dome 101.81 336 IAMs_20 IAMs_20 10 12 55.0
comp=Z,528nm,20.0s
HDA Harding Lake 101.97 334 P **Pdif 09 24 60.0 +0.3**
baz=111
HDA Harding Lake 101.97 334 IAMs_20 IAMs_20 10 14 36.7
comp=Z,715nm,20.0s
ARSA Arzberg 101.97 44 *e*Pdiff **Pdif 09 24 60.0 -0.2**
comp=Z,2.7nm,0.8s
BRG Berggiesshubel 102.01 40 *e*P **Pdif 09 25 00.3 +0.1**
comp=Z,8.6nm,1.4s
BRG PP **PP 09 29 05.0 -6.9**
BRG SKS 09 35 41.0
BRG S **Sdif 09 36 36.0 -6.5**
comp=N,216nm,19.5s
comp=E,828nm,18.8s
comp=Z,1µm,19.3s
BRG Berggiesshubel 102.01 40 *e*P **Pdif 09 25 00.3 +0.1**
BRG 09 35 41.0
BRG S **Sdif 09 36 36.0 -6.5**
BRG pmax pmax
comp=Z,9.0nm,1.4s
BRG MLR MLR
comp=N,216nm,19.5s
BRG MLR MLR
comp=E,828nm,18.8s
BRG MLR MLR
comp=Z,1µm,19.3s
RC01 Rabbit Creek A 102.03 331 IAMs_20 IAMs_20 10 14 31.3
comp=Z,566nm,19.0s
ILAR Eielson Array 102.08 335 P **Pdif 09 24 59.5 -0.6**
comp=Z,0.8nm,1.1s,baz=130,slow=2.9,SNR=4.5
ILAR PP **PP 09 29 11.3 -0.7**
comp=Z,0.7nm,0.9s,baz=114,slow=5.3,SNR=4.8
ILAR PKKP **PKKPdf 09 41 11.8 -1.9**
comp=Z,0.4nm,0.9s,baz=284,slow=3.6,SNR=2.5
FYU Fort Yukon 102.10 337 IAMs_20 IAMs_20 10 13 44.2
comp=Z,487nm,21.0s
PRU Pruhonice 102.12 41 *e*PDIFF **Pdif 09 24 49.4 -11**
PRU *e*PP PP 09 29 02.8 -10
PRU *e*SKS 09 35 31.9
PRU AMS AMS 10 08 00.0
comp=Z,600nm,17.7s
BRLK Bradley Lake 102.14 329 IAMs_20 IAMs_20 10 14 55.3
comp=Z,500nm,20.0s
GOPC GO Pecny, Ondr 102.25 41 *e*PP PP 09 29 05.2 -8.6
GOPC *e*SKS 09 35 43.9
GOPC AMS AMS 10 08 10.0
comp=Z,600nm,17.2s
KDAK Kodiak Island 102.36 327 IAMs_20 IAMs_20 10 13 23.0
comp=Z,530nm,22.0s
CCB Clear Creek Bu 102.40 335 IAMs_20 IAMs_20 10 12 29.1
comp=Z,718nm,21.0s
RND Reindeer 102.41 333 IAMs_20 IAMs_20 10 20 58.5
comp=Z,626nm,18.0s
POKR Poker Plat Res 102.42 335 P **Pdif 09 25 01.2 -0.5**
baz=111
WRH Wood River Hil 102.46 334 IAMs_20 IAMs_20 10 14 49.6
comp=Z,694nm,20.0s
HOM Homer 102.47 329 IAMs_20 IAMs_20 10 15 17.0
comp=Z,402nm,19.0s
COLA College 102.50 335 IAMs_20 IAMs_20 10 16 27.8
comp=Z,626nm,19.0s
TCOL CIGO, UAF Yank 102.50 335 P **Pdif 09 25 01.5 -0.5**
baz=110
TREC Trest 102.52 42 AMS AMS 10 08 00.0
comp=Z,700nm,19.4s
OHAK Old Harbor 102.55 326 IAMs_20 IAMs_20 10 16 28.2
comp=Z,408nm,18.0s
MCK McKinley 102.56 334 IAMs_20 IAMs_20 10 18 52.2
comp=Z,595nm,18.0s
NEA Nenana 102.89 334 IAMs_20 IAMs_20 10 15 03.2
comp=Z,702nm,20.0s
BWN Browne 102.92 334 IAMs_20 IAMs_20 10 13 02.1
comp=Z,537nm,20.0s
TRF Thorofare Moun 103.04 333 IAMs_20 IAMs_20 10 20 23.9
comp=Z,757nm,21.0s
UPC Upice 103.17 41 *e*P **Pdif 09 25 12.6 +7.2**
UPC MLR MLR
comp=Z,600nm,17.9s
UPC Upice 103.17 41 *e*PDIFF **Pdif 09 25 12.6 +7.2**
UPC *e*PP PP 09 28 54.1 -27
UPC *e*SKS 09 35 50.0
UPC AMS AMS 10 10 00.0
comp=Z,600nm,17.9s
CHVC Chvalec 103.22 41 AMS AMS 10 10 00.0
comp=Z,700nm,22.2s
PDG Podgorica 103.24 50 IAMs_20 IAMs_20 10 15 14.0
comp=Z,656nm,20.0s
OSTC Ostas 103.31 41 *e*PDIFF **Pdif 09 25 06.9 +0.9**
OSTC *e*PP **PP 09 29 19.2 -2.5**
OSTC AMS AMS 10 10 10.0
comp=Z,600nm,17.5s
DPC Dobruska-Polom 103.32 41 *e*P **Pdif 09 25 06.5 +0.4**
DPC *e* 09 35 50.6
DPC MLR MLR
comp=Z,500nm,15.7s
DPC Dobruska-Polom 103.32 41 *e*PDIFF **Pdif 09 25 06.5 +0.4**
DPC *e*PP **PP 09 29 16.2 -5.7**
DPC *e*SKS 09 35 50.6
DPC AMS AMS 10 11 20.0
comp=Z,500nm,15.7s
KTH Kantishna Hill 103.34 333 IAMs_20 IAMs_20 10 13 23.9
comp=Z,609nm,21.0s
BPAW Bear Paw Mtn. 103.53 334 IAMs_20 IAMs_20 10 13 23.0
comp=Z,511nm,20.0s
PPLA Purkeypile 103.69 332 IAMs_20 IAMs_20 10 21 58.6
comp=Z,525nm,18.0s
MLY Manley 103.71 335 IAMs_20 IAMs_20 10 15 27.8
comp=Z,537nm,20.0s
OKC Ostrava-Krasne 104.33 42 AMS AMS 10 09 10.0
comp=Z,600nm,25.4s
FNA Florina 104.37 52 IAMs_20 IAMs_20 10 13 15.0
comp=Z,592nm,21.0s

TOLK Toolik Lake Re 104.37 338 P **Pdif 09 25 10.1 -0.3**
baz=108
VTS Vitosha 106.14 50 IAMs_20 IAMs_20 10 19 38.8
comp=Z,600nm,19.0s
SANT Santorini 106.46 57 IAMs_20 IAMs_20 10 18 21.5
comp=Z,609nm,18.0s
KARP Karpathos 107.63 58 IAMs_20 IAMs_20 10 19 30.6
comp=Z,592nm,19.0s
ALN Alexandroupoli 107.85 52 IAMs_20 IAMs_20 10 15 11.2
comp=Z,458nm,20.0s
ANM Nome 109.76 333 IAMs_20 IAMs_20 10 21 55.5
comp=Z,390nm,18.0s
DZM Mont Dzumac 110.19 236 *e*PS PS 09 39 46.0 +3.6
comp=Z,310nm,25.9s
DZM Mont Dzumac 110.19 236 *e*LR LR 10 02 11.8
comp=Z,1µm,22.8s
ISP Isparta 110.71 56 IAMs_20 IAMs_20 10 19 49.9
comp=Z,426nm,19.0s
ARCES ARCESS Array B 110.73 22 PKKPbc PKKPbc 09 40 37.4 -2.0
comp=Z,3.2nm,1.0s,baz=86,slow=5.5,SNR=3.7
CSS Mathiatis 112.48 60 IAMs_20 IAMs_20 10 25 41.1
comp=Z,478nm,19.0s
GAMB Gambell 112.50 332 IAMs_20 IAMs_20 10 17 31.0
comp=Z,411nm,22.0s
ANTO Ankara 112.77 54 IAMs_20 IAMs_20 10 21 01.9
comp=Z,500nm,19.0s
BRTR Keskin Array B 113.40 54 PKiKP **PKiKP 09 29 44.3 -0.3**
comp=Z,2.9nm,1.0s,baz=270,slow=1.4,SNR=9.2
ILGA Ilgaz 113.61 53 IAMs_20 IAMs_20 10 23 02.6
comp=Z,524nm,19.0s
GAZ Gaziantep 115.89 58 IAMs_20 IAMs_20 10 21 25.3
comp=Z,369nm,20.0s
OBN Obninsk 116.05 38 *i* PKIKP **PKPdf 09 29 47.5 -1.4**
OBN pmax pmax
comp=Z,14nm,1.1s
OBN MLR MLR
comp=Z,927nm,17.0s
KLMR Klimovskoe 117.12 31 *e*PKIKP **PKPdf 09 29 50.4 -0.5**
KLMR *e*SS SS 09 47 03.6 -6.0
KLMR pmax pmax
comp=Z,22nm,1.3s
KLMR Klimovskoe 117.12 31 *e*PKPdf **PKPdf 09 29 50.4 -0.5**
KLMR AMP 09 29 52.1
comp=Z,22nm,1.3s
KLMR *e*SS **SS 09 47 03.7 -5.9**
KLMR *e*SS **SS 09 47 03.7 -5.9**
LPSR Galich'ya Gora 117.56 40 *e*PKIKP **PKPdf 09 29 49.9 -2.1**
LPSR pmax pmax
comp=Z,20nm,1.2s
VSR Storozhevoye 117.77 42 *e*PKIKP **PKPdf 09 29 49.1 -3.3**
VSR pmax pmax
comp=Z,7.0nm,0.7s
SOC Sochi 118.22 51 *i* PKIKP **PKPdf 09 29 53.4 -0.1**
SOC *e* 09 31 09.9
SOC *e*PS **PS 09 40 57.2 +1.6**
SOC *e*SS SS 09 47 17.7 -7.3
SOC pmax pmax
comp=Z,31nm,1.1s
VRH Novokhopyorsk 119.38 42 *e*PKIKP **PKPdf 09 29 55.5 0.0**
VRH pmax pmax
comp=Z,10.0nm,1.0s
STKA Stephens Creek 119.83 212 PKP **PKPdf 09 29 57.1 0.0**
comp=Z,1.7nm,0.8s,baz=175,slow=5.8,SNR=3.3
STKA Stephens Creek 119.83 212 PKIKP **PKPdf 09 29 56.1 -1.0**
STKA Stephens Creek 119.83 212 **PKPdf 09 29 56.1 -1.0**
SHA1 Shidzhatmaz 120.36 50 *i* PKIKP **PKiKP 09 29 58.5 +0.4**
KIV Kislovodsk 120.37 50 *i* PKIKP **PKPdf 09 29 57.9 +0.1**
KIV *i* 09 30 04.5
KIV pmax pmax
comp=Z,14nm,1.3s
KIV MLR MLR
comp=Z,287nm,21.0s
NEY Neytrino 120.41 51 *i* PKIKP **PKiKP 09 29 58.6 +0.5**
BILL Bilibino 120.42 339 *i* PKIKP **PKPdf 09 29 56.7 -0.4**
BILL *i* 09 31 29.9
BILL pmax pmax
comp=Z,5.0nm,1.3s
KBZ Khabaz 120.53 50 PKP **PKiKP 09 29 58.2 +0.2**
comp=Z,12nm,1.0s,baz=242,slow=1.6,SNR=16
KBZ Khabaz 120.53 50*c* *i*PKIKP **PKiKP 09 29 58.7 +0.7**
RAYN Ar Rayn 121.17 74 PKIKP **PKPdf 09 30 00.1 +0.2**
RAYN MLR MLR
comp=Z,1µm,19.0s
RAYN Ar Rayn 121.17 74 **PKPdf 09 30 00.1 +0.2**
ZEI Tsey 121.28 51 *i* PKIKP **PKPdf 09 29 59.2 -0.5**
ZEI pmax pmax
comp=Z,13nm,1.1s
MAK Makhachkala 123.92 51 *e*P **Pdif 09 26 34.5 -3.3**
MAK *e* 09 31 46.2
MAK pmax pmax
comp=Z,27nm,0.3s
AKT Akhty 124.17 53 *e*PKIKP **PKiKP 09 30 06.2 +0.7**
AKT *e* 09 31 51.4
AKT pmax pmax
comp=Z,13nm,1.0s
H11S2 WAKE ISLAND Hyd 125.88 279 T T 11 49 31.4
baz=101,slow=74,SNR=730
H11S1 WAKE ISLAND Hyd 125.89 279 T T 11 49 32.0
baz=101,slow=74,SNR=710
H11S3 WAKE ISLAND Hyd 125.90 279 T T 11 49 32.6
baz=101,slow=74,SNR=671
H11N3 WAKE ISLAND Hyd 125.93 280 T T 11 49 33.7
baz=101,slow=74,SNR=176
H11N2 WAKE ISLAND Hyd 125.94 280 T T 11 49 31.5
baz=101,slow=74,SNR=192
H11N1 WAKE ISLAND Hyd 125.95 280 T T 11 49 35.1
baz=101,slow=74,SNR=161
TIXI Tiksi 127.03 352 PKP **PKPdf 09 30 09.2 -0.4**
comp=Z,5.9nm,0.9s,baz=7.1,slow=3.4,SNR=9.2
TIXI Tiksi 127.03 352*c* *i*PKIKP **PKPdf 09 30 09.5 -0.1**
TIXI pmax pmax
comp=Z,9.0nm,1.0s
TIXI MLR MLR
comp=Z,520nm,21.0s
TIXI Tiksi 127.03 352 **PKPdf 09 30 08.6 -1.1**
TIXI IAMs_20 IAMs_20 10 26 44.4
comp=Z,571nm,22.0s
ARU Arti 127.85 33 *i* PKIKP **PKPdf 09 30 11.5 -0.1**
ARU 09 32 13.1
ARU 09 37 22.5
ARU SS SS 09 49 20.7 -5.4
ARU MLR MLR
comp=Z,726nm,22.0s
ARU Arti 127.85 33 **PKiKP 09 30 12.1 0.0**
SEY Seymchan 127.97 337 PKP **PKPdf 09 30 12.1 +0.5**
comp=Z,17nm,1.0s,baz=104,slow=2.2,SNR=26
SEY Seymchan 127.97 337 *i* PKIKP **PKiKP 09 30 12.7 +0.5**
SVE Sverdlovsk 128.73 32 *i* PKIKP **PKiKP 09 30 14.1 +0.2**
SVE pmax pmax
comp=Z,19nm,1.4s
SVE MLR MLR
comp=Z,684nm,19.0s
NRIK Noril'sk 128.86 10 PKP **PKPdf 09 30 13.5 +0.3**
comp=Z,8.1nm,1.1s,baz=66,slow=1.3,SNR=8.3
AKTO Aktyubinsk 129.65 40 PKP **PKPdf 09 30 15.6 +0.3**
comp=Z,8.6nm,1.0s,baz=273,slow=2.2,SNR=16
PEA0B Petropavlovsk- 130.25 324*c* *i*PKIKP **PKiKP 09 30 18.5 +1.4**
PETK Petropavlovsk- 130.25 324 PKP **PKiKP 09 30 17.4 +0.2**
comp=Z,5.2nm,0.9s,baz=76,slow=21,SNR=18
ASAR Alice Springs 130.40 210 PKP **PKPdf 09 30 17.2 -0.4**
comp=Z,7.8nm,1.0s,baz=141,slow=2.1,SNR=30
AS31 Alice Springs 130.40 210 **PKPdf 09 30 17.1 -0.6**
MA2 Magadan 130.54 334*c* *i*PKIKP **PKiKP 09 30 18.0 +0.5**
MA2 pmax pmax
comp=Z,8.0nm,1.3s
MA2 Magadan 130.54 334 IAMs_20 IAMs_20 10 34 26.8
comp=Z,376nm,20.0s
UOSS Minazif 131.04 74 **PKPdf 09 30 18.0 -0.7**
RABL Rabaul 131.43 245 IAMs_20 IAMs_20 10 16 30.8
comp=Z,397nm,20.0s
GEYT Alibeck 132.47 56 PKP **PKPdf 09 30 21.5 +0.5**
comp=Z,4.2nm,1.0s,baz=236,slow=11,SNR=7.6
GYA0B ALIBECK ARRAY 132.47 56 IAMs_20 IAMs_20 10 31 48.0
comp=Z,509nm,21.0s
WRA Warramunga Arr 133.32 213 PKP **PKPdf 09 30 23.0 -0.2**
comp=Z,3.0nm,0.7s,baz=155,slow=1.8,SNR=16
WRA Warramunga Arr 133.32 213 PKIKP **PKPdf 09 30 23.0 -0.2**
WB0 Warramunga Arr 133.44 214 **PKPdf 09 30 22.9 -0.5**
BVAR Borovoye Array 135.50 33 PKP **PKPdf 09 30 25.9 -0.3**
comp=Z,3.0nm,0.8s,baz=340,slow=2.2,SNR=11
YAK Yakutsk 135.60 346 PKP **PKPdf 09 30 26.4 +0.3**
comp=Z,9.3nm,0.4s,baz=31,slow=0.4,SNR=2.0
YAK Yakutsk 135.60 346 **PKPdf 09 30 26.5 +0.5**
YAK IAMs_20 IAMs_20 10 33 28.5
comp=Z,410nm,21.0s
FITZ Fitzroy Crossi 138.88 204 PKhKP PKPpre 09 30 27.8

comp=Z,1.7nm,0.9s,baz=170,slow=3.5,SNR=1.7
KK31 Karatay Array 140.26 46 PKIKP **PKPdf 09 30 36.4 +1.1**
KK31 Karatay Array 140.26 46 **PKPdf 09 30 36.4 +1.1**
KKAR Karatay Array 140.26 46 PKIKP **PKPdf 09 30 36.4 +1.1**
KKAR Karatay Array 140.26 46 **PKPdf 09 30 36.4 +1.1**
KURK Kurchatov 140.97 31*c* *i*PKIKP **PKPdf 09 30 37.7 +1.4**
KURK pmax pmax
comp=Z,13nm,1.3s
KURK Kurchatov 140.97 31 **PKPdf 09 30 37.0 +0.7**
KURBB Kurchatov Arra 140.98 31 PKhKP PKPpre 09 30 29.9
comp=Z,1.0nm,0.8s,baz=300,slow=2.8,SNR=8.9
ZAA0 Zalesovo Array 141.27 23 PKPdf **PKPdf 09 30 37.5 +0.8**
ZAA0 IAMs_20 IAMs_20 10 35 54.1
comp=Z,369nm,20.0s
ZALV Zalesovo Beam 141.27 23 PKhKP PKPpre 09 30 30.9
comp=Z,5.4nm,0.9s,baz=270,slow=3.0,SNR=9.1
BTK Batken 141.59 50 PKIKP **PKPdf 09 30 38.2 +0.3**
BTK MLR MLR
comp=Z,600nm,20.0s
BTK Batken 141.59 50 **PKPdf 09 30 38.2 +0.3**
BOD Bodaibo 142.01 356 *e*PKHKP PKPpre 09 30 31.3
BOD pmax pmax
comp=Z,14nm,1.5s
GENI Genyem 142.22 237 PKP **PKPdf 09 30 38.7 -1.0**
AAK Ala-Archa 143.10 44 PKP **PKPdf 09 30 39.5 -1.1**
comp=Z,6.8nm,0.8s,baz=216,slow=2.7,SNR=12
AAK Ala-Archa 143.10 44 P **PKPdf 09 30 40.1 -0.6**
SNR=6.7
AAK Ala-Archa 143.10 44 PKIKP **PKPdf 09 30 40.0 -0.6**
AAK Ala-Archa 143.10 44 **PKPdf 09 30 40.0 -0.6**
UCH Uchtor 143.30 45 P **PKPdf 09 30 41.6 +0.3**
SNR=24
KBK Karagaybulak 143.39 44 P **PKPdf 09 30 40.8 -0.4**
SNR=5.4
ZEA Zeya 143.52 342 *e*PKIKP PKPbc 09 30 38.0 0.0
ZEA pmax pmax
comp=Z,73nm,2.0s
TKM2 Tokmak 2 143.69 43 P PKPbc 09 30 40.6 +1.4
SNR=11
KZA Kyzart 143.86 45 P PKPbc 09 30 41.2 +1.3
SNR=8.1
BOOM Boomskoye usch 144.12 44 PKIKP **PKPdf 09 30 41.9 -0.5**
BOOM MLR MLR
comp=Z,600nm,21.0s
BOOM Boomskoye usch 144.12 44 **PKPdf 09 30 41.9 -0.5**
ULHL Ulahol 144.43 44 P **PKPdf 09 30 43.4 +0.4**
SNR=26
KDJ Kajisay 145.10 44 PKIKP **PKPdf 09 30 44.9 +0.8**
KDJ MLR MLR
comp=Z,500nm,22.0s
KDJ Kajisay 145.10 44 **PKPdf 09 30 44.9 +0.8**
MAKZ Makanchi 145.21 33 PKIKP **PKPbc 09 30 43.4 -0.1**
MAKZ MLR MLR
comp=Z,700nm,20.0s
MAKZ Makanchi 145.21 33 **PKPbc 09 30 43.4 -0.1**
GUMO Guam 145.29 265 IAMs_20 IAMs_20 10 28 24.8
comp=Z,314nm,19.0s
NIL Nilore 145.34 59 PKIKP **PKPbc 09 30 44.2 -0.2**
NIL Nilore 145.34 59 **PKPbc 09 30 44.2 -0.2**
MK31 Makanchi Array 145.38 33 *i* PKIKP **PKPbc 09 30 43.6 -0.5**
MK31 Makanchi Array 145.38 33 **PKPdf 09 30 44.5 +0.3**
MKAR Makanchi Array 145.38 33 PKPbc **PKPbc 09 30 44.0 -0.1**
comp=Z,95nm,1.1s,baz=336,slow=2.7,SNR=316
MKAR Makanchi Array 145.38 33 PKIKP **PKPbc 09 30 44.0 -0.1**
KSH Kashi 145.47 48 PKPbc **PKPab 09 30 45.4 +0.4**
KSH PP **PP 09 34 11.9 +7.0**
KSH PKS 09 34 20.1
KSH SKS **SKSdf 09 37 53.3 -0.9**
KSH SKKS **SKKSac 09 40 58.0 +0.5**
KSH SS **SS 09 52 59.3 +2.0**
KSH AMB AMB
comp=Z,180nm,11.9s
KSH LR LR
comp=Z,350nm,11.0s
KSH LR LR
comp=Z,210nm,14.4s
KSH LR LR
comp=Z,470nm,15.6s
DGZ Jazzator, Alta 145.62 25 *i* PKIKP **PKPdf 09 30 45.0 +0.3**
KLR Kul'dur 145.64 334 PKPbc **PKPdf 09 30 44.8 +0.3**
comp=Z,55nm,1.1s,baz=31,slow=3.4,SNR=52
KLR Kul'dur 145.64 334 *i* PKIKP **PKPdf 09 30 44.9 +0.3**
KLR pmax pmax
comp=Z,66nm,1.2s
KLR MLR MLR
comp=Z,821nm,23.0s
PRZ Przheval'sk 145.70 42 PKIKP **PKiKP 09 30 47.8 -1.5**
PRZ Przheval'sk 145.70 42 **PKiKP 09 30 47.8 -1.5**
TARG Taragay, Kyrgy 145.70 44 **PKPab 09 30 47.0 +0.8**
PDGK Podgornoye 145.92 40 PKIKP **PKiKP 09 30 56.2 +6.6**
TEY Ternei 146.22 324⇧ *i*PKP2 **PKPbc 09 30 46.6 -0.1**
TEY pmax pmax
comp=E,20nm,1.2s
TEY pmax pmax
comp=N,10.0nm,1.8s
TEY pmax pmax
comp=Z,50nm,1.3s
POO Poona 146.66 86 *e*P PKiKP 09 31 02.5 +11
BATI Baumata 146.81 207 PKPbc **PKPbc 09 30 49.9 +0.5**
comp=Z,25nm,0.5s,baz=132,slow=11,SNR=4.9
BATI Baumata 146.81 207 PKP **PKiKP 09 30 52.2 +0.1**
BATI PKP **sPKPdf 09 30 52.8 +0.7**
SOEI Soe 146.96 208 PKP **PKPab 09 30 51.7 +0.4**
SOEI PKP **pPKPdf 09 30 52.7 +1.4**
IRK Irkutsk 147.54 6 *e*PKIKP **PKPdf 09 30 48.7 +1.0**
IRK pmax pmax
comp=Z,102nm,2.6s
MOY Mondy 147.70 10 *e*PKP2 **PKPdf 09 30 49.5 +1.4**
MOY pmax pmax
comp=Z,96nm,1.3s
CIT Chita 147.80 355 *e*PKIKP **PKPdf 09 30 49.4 +1.2**
CIT pmax pmax
comp=Z,111nm,1.5s
FAKI Fak Fak 147.91 227 PKP **PKPbc 09 30 52.1 -0.4**
FAKI PKP **pPKPdf 09 30 54.2 +1.8**
FAKI Fak Fak 147.91 227 **PKPdf 09 30 48.7 -0.8**
TLY Talaya 148.03 7*c* *i*PKIKP **PKPdf 09 30 49.5 +0.9**
TLY *e* 09 34 18.5
TLY *e*SS SS 09 53 22.8 -1.1
TLY pmax pmax
comp=Z,114nm,2.0s
TLY Talaya 148.03 7 **PKPdf 09 30 48.9 +0.3**
TLY IAMs_20 IAMs_20 10 45 49.4
comp=Z,300nm,19.0s
BHK Bhakra 148.46 62 *ex* **PKPdf 09 30 50.0 +0.1**
MMRI Maumere 148.82 206 PKP **PKiKP 09 30 56.2 0.0**
KLRI Killari 149.17 88 *e*PKPbc **PKPbc 09 30 55.5 -0.1**
URV Uravakonda 149.18 94 *e*PKPbc **PKPbc 09 30 55.5 -0.2**
USA0B Ussuriysk Arra 149.23 327 PKIKP **PKPdf 09 30 50.6 -0.1**
USA0B 09 30 56.2
USA0B Ussuriysk Arra 149.23 327 **PKPdf 09 30 50.6 -0.1**
USA0B PKPbc **sPKPdf 09 30 56.2 +1.1**
USRK Ussuriysk Ar. 149.23 327 PKPbc **PKPbc 09 30 55.4 +0.4**
comp=Z,43nm,1.0s,baz=42,slow=2.3,SNR=43
ZAK Zakamensk 149.27 7 *e*PKIKP **PKPdf 09 30 51.7 +1.0**
ZAK pmax pmax
comp=Z,34nm,1.3s
MJAR Matsushiro Arr 149.70 309 PKP **PKPdf 09 30 51.5 -0.2**
comp=Z,3.0nm,0.5s,baz=148,slow=11,SNR=16
MJAR PKPbc **PKPbc 09 30 56.7 +0.3**
comp=Z,33nm,1.0s,baz=45,slow=1.9,SNR=38
MAJO Matsushiro 149.70 309 PKP2 **PKPab 09 31 02.7 +1.0**
MAJO 10 30 51.2
MAJO 10 30 57.1
MAJO Matsushiro 149.70 309 **PKPdf 09 30 51.2 -0.6**
MAJO PKPbc **sPKPdf 09 30 57.0 +0.9**
MAJO PKPab **PKPab 09 31 02.7 +1.0**
MJB9 Matsu-Tunnel 149.70 309 **PKPdf 09 30 51.2 -0.6**
MJB9 PKPbc **sPKPdf 09 30 57.2 +1.1**
MJB9 PKPab **PKPab 09 31 02.5 +0.9**
MDJ Mudanjiang 150.11 330 PKPbc **PKPbc 09 30 57.3 +0.2**
MDJ AMB AMB
comp=Z,330nm,6.1s
MDJ Mudanjiang 150.11 330 PKPdf **PKPdf 09 30 51.8 -0.3**
MDJ **sPKPdf 09 30 57.7 +1.2**
PLAI Plampang 150.18 197 PKP **PKiKP 09 30 59.8 +0.8**
WMQ Urumqi 150.18 32 *e*PKPbc **PKPdf 09 30 52.3 0.0**
WMQ pPKP sPKPdf 09 30 58.1 +1.4
WMQ sPKP 09 31 04.0
WMQ LR LR
comp=Z,350nm,23.5s
WMQ LR LR
comp=Z,210nm,19.1s
WMQ LR LR

comp=Z,1µm,27.3s
MSHR Mys Shultsa 150.80 325 *c iPKIKP* **PKiKP 09 31 00.4 +1.0**
HYBB Hyderabad (bro 150.91 90 *ePKPbc* **PKPbc 09 30 59.7 -0.1**
HYB Hyderabad 150.91 90 *i PKP* **PKPdf 09 30 54.0 -0.2**
SRSP Sriramsagar 150.93 87 *ePKPbc* **PKPbc 09 30 59.6 -0.3**
SRLM Srisailam 150.97 93 *ePKPbc* **PKPbc 09 30 59.9 -0.1**
INU Inuyama 151.08 308 PKiKP 09 31 00.6 +0.3
SKHT Srikalahasti 151.16 98 *ePKPbc* **PKPbc 09 31 00.9 +0.4**
NJS Nagarjunasagar 151.46 92 *ePKPbc* **PKPbc 09 31 00.9 -0.2**
RPR Rampur 151.81 87 *ePKPbc* **PKPbc 09 31 01.6 -0.3**
ADKI Addanki 151.93 94 *ePKPbc* **PKiKP 09 31 02.7 +0.2**
SONM Songino Array 152.09 4 PKP **PKPdf 09 30 54.9 -0.3**
comp=Z,6.9nm,1.1s,baz=212,slow=0.4,SNR=30
SONM PKPbc **PKiKP 09 31 02.4 +0.3**
comp=Z,22nm,0.9s,baz=323,slow=1.3,SNR=54
ULN Ulaanbaatar 152.09 3 PKiKP **PKPdf 09 30 55.8 +0.6**
ULN 09 31 02.8
ULN Ulaanbaatar 152.09 3 PKPdf 09 30 55.8 +0.6
ULN **PKiKP 09 31 02.8 +0.6**
CN2 Changchun 152.59 334 PKPbc **PKPdf 09 30 56.9 +1.0**
CN2 PP **PP 09 34 50.3 +5.1**
CN2 LR LR
comp=Z,500nm,21.0s
CN2 LR LR
comp=Z,300nm,21.0s
CN2 LR LR
comp=Z,400nm,21.0s
SANI Sanana 152.61 219 PKP **PKPbc 09 31 03.0 -0.8**
SANI PKP **PKiKP 09 31 04.5 +0.4**
KAPI Kappang 153.10 204 PKPbc **PKPbc 09 31 05.0 +0.1**
comp=Z,7.8nm,0.4s,baz=236,slow=5.6,SNR=4.5
KAPI Kappang 153.10 204 PKiKP **PKiKP 09 31 05.8 +0.7**
KAPI 09 31 17.7
KAPI Kappang 153.10 204 PKPdf 09 30 56.0 -1.5
KAPI PKPbc **PKiKP 09 31 05.8 +0.7**
KAPI **PKPab 09 31 17.7 +1.5**
PVM Polavaram 153.76 91 *ePKPbc* **PKiKP 09 31 06.9 +0.6**
KSRS Korea Array 156.10 321 PKP **PKPdf 09 31 01.2 +0.3**
comp=Z,4.1nm,0.9s,baz=67,slow=0.9,SNR=21
KSRS PKPbc PKPbc 09 31 10.9
comp=Z,4.5nm,1.0s,baz=48,slow=1.8,SNR=6.6
GTA Gaotai 158.99 21 *ePKP* **PKPdf 09 31 05.8 +1.1**
GTA PP **PP 09 35 25.3 +4.4**
GTA AMB AMB
comp=Z,250nm,11.0s
GTA LR LR
comp=Z,320nm,20.3s
GTA LR LR
comp=Z,280nm,21.3s
GTA LR LR
comp=Z,570nm,19.6s
HHC Hu-ho-hao-te 159.06 355 *ePKP* **PKPdf 09 31 04.6 -0.2**
HHC PP **PP 09 35 24.9 +4.0**
HHC AMB AMB
comp=Z,170nm,11.0s
HHC LR LR
comp=Z,320nm,17.8s
BJI Beijing 159.09 345 PKP **PKPdf 09 31 05.8 +1.2**
BJI LR LR
comp=Z,270nm,19.6s
BJI LR LR
comp=Z,230nm,20.4s
BJI LR LR
comp=Z,460nm,21.6s
BTO Baotou 159.39 358 *ePKP* **PKPdf 09 31 05.9 +0.8**
RPSI Rantau Prapat 160.15 148 PKPdf **PKPdf 09 31 06.2 -0.4**
RPSI **PKPab 09 31 46.0 -0.5**
RPSI Rantau Prapat 160.15 148 PKPdf 09 31 06.5 -0.2
RPSI **PKPab 09 31 45.9 -0.6**
PSI Prapat 160.24 148 PKP **PKPdf 09 31 06.5 -0.5**
comp=Z,5.9nm,0.8s,baz=180,slow=10,SNR=4.4
PSI PKPab **PKPab 09 31 45.9 -1.1**
comp=Z,13nm,1.0s,baz=180,slow=5.4,SNR=5.0
PSI Prapat 160.24 148 PKP2 **PKPab 09 31 46.0 -1.0**
PSI 10 31 06.5
KSM Kuching 161.61 184 PKPdf **PKPdf 09 31 08.6 +0.3**
KSM **PKPab 09 31 53.1 +0.4**
TIA Tai'an 162.35 338 PKP **PKPdf 09 31 08.5 +0.2**
TIA AMB AMB
comp=Z,170nm,6.9s
TIA LR LR
comp=Z,290nm,22.6s
TIA LR LR
comp=Z,290nm,18.1s
TIA LR LR
comp=Z,440nm,22.5s
LZH Lanzhou 163.25 15 *ePKP* **PKPdf 09 31 08.3 -1.1**
LZH sPKP 09 31 12.0
LZH SKKS 09 42 34.5
LZH SS **SS 09 56 12.4 +3.6**
LZH AMB AMB
comp=Z,370nm,9.2s
LZH LR LR
comp=Z,550nm,18.4s
LZH LR LR
comp=Z,580nm,18.0s
LZH LR LR
comp=Z,590nm,20.1s
NJ2 Nanjing 165.14 326 *ePKP* **PKPdf 09 31 10.8 -0.2**
XAN Xi'an 165.96 1 PKP **PKPdf 09 31 11.8 +0.1**
XAN AMB AMB
comp=Z,350nm,7.1s
XAN LR LR
comp=Z,250nm,19.6s
XAN LR LR
comp=Z,330nm,19.6s
XAN LR LR
comp=Z,470nm,21.1s
CD2 Chengdu 168.04 23 PKP **PKPdf 09 31 12.8 -0.6**
CD2 SKKS 09 42 59.0
CD2 SS **SS 09 56 59.1 +1.4**
CD2 AMB AMB
comp=Z,680nm,12.9s
CD2 LR LR
comp=Z,550nm,20.1s
CD2 LR LR
comp=Z,480nm,20.1s
CD2 LR LR
comp=Z,560nm,25.9s
WHN Wuhan 168.46 337 PKP **PKPdf 09 31 12.6 -1.0**
WHN AMB AMB
comp=Z,530nm,14.7s
WHN LR LR
comp=Z,920nm,20.9s
QZH Quanzhou 169.97 301 *i PKP* **PKPdf 09 31 15.9 +1.2**
QZH PP **PP 09 36 23.8 +4.2**
QZH LR LR
comp=Z,300nm,21.2s
QZH LR LR
comp=Z,280nm,17.5s
QZH LR LR
comp=Z,410nm,18.8s
CMAR Chiang Mai Arr 170.22 97 PKP **PKPdf 09 31 14.9 -0.1**
comp=Z,2.1nm,0.9s,baz=263,slow=2.0,SNR=10
CMAR PKPab **PKPab 09 32 29.9 -1.1**
comp=Z,2.8nm,0.9s,baz=258,slow=4.8,SNR=9.0
CMAR PP **PP 09 36 22.8 +1.2**
comp=Z,0.4nm,0.3s,baz=276,slow=4.6,SNR=4.4
CMAR Chiang Mai Arr 170.22 97 PKP2 **PKPab 09 32 29.9 -1.1**
CMAR 10 31 15.0
KMI Kunming 172.13 48 PKP **PKPdf 09 31 16.8 +0.7**
KMI pPKP pPKPdf 09 31 18.4 -1.0
GYA Guiyang 173.12 19 *ePKP* **PKPdf 09 31 15.4 -0.9**
GYA PKPab **PKPab 09 32 44.3 +0.9**
GYA AMB AMB
comp=Z,290nm,15.1s
GYA LR LR
comp=Z,160nm,17.7s
GYA LR LR
comp=Z,160nm,15.1s
GYA LR LR
comp=Z,260nm,17.0s
QIZ Qiongzhong 178.89 215 PKP **PKPdf 09 31 16.1 -1.6**
QIZ PP **PP 09 37 01.5 -0.3**
QIZ AMB AMB
comp=Z,340nm,7.3s
QIZ LR LR
comp=Z,300nm,18.1s
QIZ LR LR
comp=Z,280nm,17.6s
QIZ LR LR
comp=Z,420nm,17.5s

IDC ***17*** *09:11:07.1±0.8, 3°.51N×126°.83E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.6/61, mbtmp3.8/9, ML3.9/1, MS3.2/3, Ms1 3.2/3, ms1mx2.7/40, Error ellipse: s-maj=52.4km s-min=15.5km az=71.0*
MAN ***17*** *09:11:11.8, 3°.45N×127°.03E, h29km, mb4.7, ML3.5, MS3.4*
NEIC ***17*** *09:11:12.5±1.0, 3°.5N±0°.1×126°.9E±0°.2, h37km±7km, mb4.2/11, Error ellipse: s-maj=33.2km s-min=12.6km az=71.0*

ISC 17 09:11:13.8±0.7, 3°.49N±0°.09×127°.1E±0°.2, h48km, n28, σ0§98/27, mb4.0/12, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**2.93**	**333**	*eP*	**Pn**	**09 11 57.0**	**-0.8**
DDMP				*eS*	**Sn**	**09 12 31.9**	**+0.1**
DAV	**Davao City (W)**	**3.85**	**338**	LR	LR	09 13 32.5	
	comp=Z,41nm,18.6s,baz=146,slow=39						
SKMP	**Bagumbayan, Su**	**3.92**	**320**	*eP*	**Pn**	**09 12 12.0**	**+0.5**
SKMP				*eS*	**Sn**	**09 12 57.3**	**+1.0**
KCP	**Kidapawan**	**4.01**	**331**	*i*§*iP*	Pn	09 12 24.9	+12
KCP				*i* S	Sn	09 13 08.8	+10
BUKP	**Musuan**	**4.79**	**336**	*eP*	**Pn**	**09 12 24.3**	**+0.7**
BUKP				*eS*	**Sn**	**09 13 20.6**	**+2.7**
SIJI	**Sorong**	**6.03**	**136**	Pn	**Pn**	**09 12 41.4**	**+0.8**
	2.7nm,0.3s,baz=4.6,slow=23,SNR=2.8						
TGY	**Tagaytay City**	**12.15**	**331**	LR	LR	09 19 05.3	
	comp=Z,153nm,19.3s,baz=186,slow=40						
MTN	**Manton Dam**	**16.72**	**166**	Pn	**Pn**	**09 15 04.0**	**-0.8**
MTN				IAmb	IAmb	09 15 09.6	
	comp=Z,14nm,0.9s						
KNRA	**Kununurra**	**19.12**	**175**	P	**Pn**	**09 15 34.4**	**+0.3**
KNRA				IAmb	IAmb	09 15 34.5	
	comp=Z,23nm,1.4s						
TPUB	**Ta-pu**	**20.66**	**343**	P	**P**	**09 15 48.2**	**-1.4**
TPUB				IAmb	IAmb	09 15 49.0	
	comp=Z,20nm,0.6s						
FITZ	**Fitzroy Crossi**	**21.50**	**184**	P	**P**	**09 15 57.8**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=10,slow=9.8,SNR=1.8						
FITZ	**Fitzroy Crossi**	**21.50**	**184**	P	**P**	**09 15 58.2**	**-0.5**
WB0	**Warramunga Arr**	**24.21**	**163**	P	**P**	**09 16 26.2**	**+0.1**
WB0				IAmb	IAmb	09 16 37.9	
	comp=Z,8.9nm,1.2s						
WRAB	**Tennant Creek**	**24.35**	**163**	P	**P**	**09 16 28.0**	**+0.5**
WRAB				IAmb	IAmb	09 16 46.4	
	comp=Z,4.2nm,0.6s						
WRA	**Warramunga Arr**	**24.36**	**163**	P	**P**	**09 16 27.5**	**0.0**
	comp=Z,0.8nm,0.4s,baz=342,slow=10,SNR=30						
WB2	**Warramunga Arr**	**24.36**	**163**	P	**P**	**09 16 27.9**	**+0.3**
WB2				IAmb	IAmb	09 16 46.5	
	comp=Z,5.5nm,0.6s						
WR0	**Warramunga Arr**	**24.43**	**163**	P	**P**	**09 16 28.9**	**+0.8**
WR0				IAmb	IAmb	09 16 30.3	
	comp=Z,4.1nm,0.8s						
ASAR	**Alice Springs**	**27.80**	**166**	P	**P**	**09 16 59.2**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=338,slow=7.5,SNR=11						
FORT	**Forrest**	**34.09**	**178**	P	**P**	**09 17 55.3**	**+1.4**
BBOO	**Buckleboo**	**37.09**	**167**	P	**P**	**09 18 20.7**	**+1.0**
STKA	**Stephens Creek**	**37.79**	**160**	P	**P**	**09 18 25.7**	**+0.1**
	comp=Z,1.8nm,0.4s,baz=336,slow=10,SNR=5.2						
STKA	**Stephens Creek**	**37.79**	**160**	P	**P**	**09 18 26.7**	**+1.1**
SONM	**Songino Array**	**47.63**	**341**	P	**P**	**09 19 44.5**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=147,slow=6.5,SNR=4.7						
PETK	**Petropavlovsk-**	**55.53**	**22**	P	**P**	**09 20 44.0**	**0.0**
	comp=Z,3.2nm,0.8s,baz=214,slow=10.0,SNR=2.1						
PETK	**Petropavlovsk-**	**55.53**	**22**	P	**P**	**09 20 44.0**	**0.0**
MKAR	**Makanchi Array**	**57.94**	**325**	P	**P**	**09 20 59.9**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=115,slow=8.3,SNR=7.3						
KURBB	**Kurchatov Arra**	**62.12**	**327**	P	**P**	**09 21 29.4**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=125,slow=6.5,SNR=10						
KIRV	**Kirov**	**80.60**	**329**	LR	LR	09 59 40.4	
	comp=Z,79nm,20.3s,baz=261,slow=36						

IDC ***17*** *09:11:55.0±2.0, 4°.94S×151°.01E, h59km±29km, mb3.6/4, mb1 3.9/5, mb1mx3.3/59, mbtmp3.9/5, ML1.6/1, Error ellipse: s-maj=95.5km s-min=10.7km az=136.0*

ISC 17 09:11:53.5±1.1, 4.7S±0°.2×150°.8E±0°.2, h35km, n7, σ1§44/9, mb3.8/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.27**	**74**	P	**Pn**	**09 12 14.6**	**-0.1**
	179nm,0.3s,baz=240,slow=2.9,SNR=89						
KRVT				S	**Sn**	**09 12 31.1**	**+0.6**
	95nm,0.3s,baz=315,slow=21,SNR=5.0						
KRVT				LR	LR	09 12 48.5	
	comp=Z,118nm,18.4s,baz=255,slow=45						
PMG	**Port Moresby**	**5.94**	**217**	P	**Pn**	**09 13 19.7**	**+0.7**
	1.1nm,0.3s,baz=22,slow=19,SNR=1.2						
PMG				S	**Sn**	**09 14 25.8**	**-0.1**
	5.3nm,0.3s,baz=234,slow=8.1,SNR=6.7						
WRA	**Warramunga Arr**	**22.09**	**225**	P	**P**	**09 16 45.8**	**0.0**
	2.4nm,0.5s,baz=51,slow=10,SNR=14						
ASAR	**Alice Springs**	**24.95**	**219**	P	**P**	**09 17 11.8**	**-2.0**
	1.0nm,0.4s,baz=57,slow=8.9,SNR=9.3						
FITZ	**Fitzroy Crossi**	**28.00**	**239**	P	**P**	**09 17 41.0**	**-0.2**
	2.2nm,0.5s,baz=58,slow=7.9,SNR=10						
ILAR	**Eielson Array**	**82.79**	**22**	P	**P**	**09 24 13.0**	**-0.7**
	0.4nm,0.7s,baz=233,slow=5.9,SNR=4.7						
TORD	**Torodi Ar. Bea**	**148.37**	**288**	PKPbc	**PKPdf**	**09 31 36.5**	**+2.6**
	0.2nm,0.2s,baz=66,slow=2.0,SNR=7.4						

IDC 17 09:12:49.9±2.0, 2°.30S×141°.25E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.2/52, mbtmp3.3/3, MS2.9/2, Ms1 2.9/2, ms1mx2.5/16, Error ellipse: s-maj=35.1km s-min=13.8km az=158.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**0.59**	**248**	Pg	Pg	09 13 01.6	+0.3
	41nm,0.3s,baz=351,slow=9.2,SNR=113						
JAY				Lg	Lg	09 13 09.3	
	162nm,0.3s,baz=183,slow=6.0,SNR=35						
PMG	**Port Moresby**	**9.19**	**140**	LR	LR	09 18 38.7	
	comp=Z,38nm,20.3s,baz=150,slow=38						
WRA	**Warramunga Arr**	**18.79**	**201**	P	P	09 17 10.1	-0.9
	baz=20,slow=12,SNR=1.4						
ASAR	**Alice Springs**	**22.40**	**198**	P	P	09 17 50.0	-0.3
	0.4nm,0.5s,baz=28,slow=11,SNR=4.9						
LEM	**Lembang**	**33.82**	**261**	LR	LR	09 33 57.9	
	comp=Z,32nm,19.0s,baz=190,slow=38						
MKAR	**Makanchi Array**	**71.03**	**322**	P	P	09 24 10.0	+0.1
	0.3nm,0.7s,baz=104,slow=5.2,SNR=2.7						

IDC ***17*** *09:23:12.9±0.7, 19°.85S×70°.77W, h0km, mb3.9/7, mb1 4.2/13, mb1mx4.0/38, mbtmp4.0/13, ML3.7/6, Error ellipse: s-maj=24.0km s-min=13.5km az=58.0*
SJA ***17*** *09:23:13.9±0.9, 19°.98S×70°.91W, h28km±4km, ML3.7, MW3.7*
NEIC ***17*** *09:23:14.2±1.3, 20°.00S±0°.02×70°.98W±0°.04, h13km±4km, mb4.8/17, Mwr4.3/14, ML4.3(GUC), Error ellipse: s-maj=5.6km s-min=2.6km az=93.0*
NEIC ***17*** *09:23:14.8, 20°.005S×71°.01W, h17km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr3.89; Mθθ-0.60; Mϕϕ-3.29; Mrθ-0.09; Mθϕ0.19; Mϕr-0.03; Fault plane solution: M₀3.63000×10¹⁵ NP1:ϕs177.08000°, δ45.18000°, λ91.57000°. NP2:ϕs354.85000°, δ44.84000°, λ88.42000°. Principal axes: T 3.8892, Plg89.0000°, Azm167.0000°; N -0.5907, Plg1.0000°, Azm356.0000°; P -3.2985, Plg0.0000°, Azm266.0000°;*
GUC ***17*** *09:23:16.6±0.6, 19°.955×70°.93W, h32km±2km, ML4.4*

ISC 17 09:23:13.6±1.1, 20°.01S±0°.03×70°.99W±0°.04, h11km±6km, n123, σ1§41/143, mb4.7/15, 15C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TA02	**Huaiquique**	**0.85**	**108**	*i*§*iP*	**Pg**	**09 23 30.5**	**+0.5**
TA02				*eS*	**Sg**	**09 23 41.2**	**+0.1**
TA02				IAML		09 23 43.9	
	comp=E,24µm,0.1s						
PSGC	**Pisagua**	**0.91**	**64**	*i*§*iP*	**Pg**	**09 23 30.7**	**-0.5**
PSGC				*i* S	**Sg**	**09 23 41.8**	**-1.4**
PSGCX	**Pisagua**	**0.91**	**64**	*i* P	**Pg**	**09 23 30.7**	**-0.6**
PSGCX	**Pisagua**	**0.91**	**64**	*i* P	**Pg**	**09 23 30.6**	**-0.6**
PSGCX				*eS*	**Sg**	**09 23 42.3**	**-0.9**
TA01	**Diego Aracena**	**0.94**	**126**	*i*§*eP*	**Pb**	**09 23 32.6**	**+0.6**
TA01				*i* S	**Sb**	**09 23 45.0**	**+0.5**
TA01				IAML		09 23 45.8	
	comp=E,16µm,0.2s						
TA01	**Diego Aracena**	**0.94**	**126**		**Pb**	**09 23 32.7**	**+0.6**
TA01				Sg	**Sb**	**09 23 45.0**	**+0.5**
PATCX	**Punta Patache**	**1.13**	**136**	*i*§*iP*	**Pn**	**09 23 35.7**	**+0.2**
PATCX				*i* S	**Sb**	**09 23 50.2**	**+0.2**
PATCX				IAML		09 23 52.6	
	comp=E,10µm,0.5s						
PATCX	**Punta Patache**	**1.13**	**136**		**Pn**	**09 23 35.7**	**+0.2**
PATCX					**Sg**	**09 23 50.8**	**+0.6**
PATCX	**Punta Patache**	**1.13**	**136**	*i* P	**Pn**	**09 23 35.6**	**+0.2**
PATCX				*eS*	**Sg**	**09 23 50.7**	**+0.6**
PB11	**IPOC Station P**	**1.28**	**79**	*i*§*iP*	**Pn**	**09 23 37.1**	**-0.4**
PB11				*i* S	**Sb**	**09 23 53.2**	**-1.2**
PB11				IAML		09 23 54.5	
	comp=N,23µm,0.1s						
PB11	**IPOC Station P**	**1.28**	**79**		**Pn**	**09 23 37.2**	**-0.4**
PB11				Sn	**Sb**	**09 23 53.4**	**-1.0**
PB11	**IPOC Station P**	**1.28**	**79**	*i* P	**Pn**	**09 23 37.2**	**-0.4**
PB11				*eS*	**Sb**	**09 23 53.9**	**-0.4**
PB12	**IPOC Station P**	**1.52**	**24**	*i*§*iP*	**Pn**	**09 23 40.8**	**0.0**
PB12				*eS*	**Sn**	**09 23 59.1**	**-1.6**
PB12				IAML		09 24 06.4	
	comp=E,5µm,0.5s						
PB12	**IPOC Station P**	**1.52**	**24**		**Pn**	**09 23 40.8**	**0.0**
MNMC	**Minye Minye**	**1.58**	**57**	*i*§*iP*	**Pn**	**09 23 41.9**	**+0.1**
MNMC				*i* S	**Sn**	**09 24 02.6**	**+0.2**
MNMC				IAML		09 24 08.9	
	comp=N,12µm,0.3s						
MNMC	**Minye Minye**	**1.58**	**57**		**Pn**	**09 23 42.2**	**+0.4**
PB02	**IPOC Station P**	**1.66**	**142**	*i*§*iP*	**Pn**	**09 23 43.5**	**+0.7**
PB02				*i* S	**Sn**	**09 24 03.2**	**-1.0**
PB02				IAML		09 24 09.9	
	comp=E,12µm,0.4s						
GO01	**Chusmiza**	**1.73**	**79**	*i*§*iP*	**Pn**	**09 23 44.2**	**+0.2**
GO01				*i* S	**Sn**	**09 24 06.3**	**0.0**
GO01				IAML		09 24 07.5	
	comp=N,16µm,0.2s						
GO01	**Chusmiza**	**1.73**	**79**		**Pn**	**09 23 44.6**	**+0.6**
GO01				Sn	**Sn**	**09 24 06.5**	**+0.2**
PB08	**IPOC Station P**	**1.73**	**95**	*i*§*iP*	**Pn**	**09 23 44.2**	**+0.2**
PB08				*i* S	**Sn**	**09 24 06.6**	**+0.3**
PB08				IAML		09 24 09.9	
	comp=N,6µm,0.5s						
PB08	**IPOC Station P**	**1.73**	**95**		**Pn**	**09 23 44.8**	**+0.8**
PB08				Sn	**Sn**	**09 24 06.6**	**+0.3**
AP01	**Chacalluta**	**1.74**	**21**	*eP*	**Pn**	**09 23 43.5**	**-0.3**
AP01				*i* S	**Sn**	**09 24 05.0**	**-0.9**
AP01	**Chacalluta**	**1.74**	**21**		**Pn**	**09 23 43.7**	**-0.1**
PB01	**IPOC Station P**	**1.75**	**126**	*i*§*iP*	**Pn**	**09 23 44.7**	**+0.7**
PB01				*i* S	**Sn**	**09 24 06.0**	**-0.3**
PB01				IAML		09 24 12.6	
	comp=N,6µm,0.5s						
PB01	**IPOC Station P**	**1.75**	**126**		**Pn**	**09 23 45.0**	**+1.0**
PB01				Sn	**Sn**	**09 24 06.3**	**0.0**
PB07	**IPOC Station P**	**2.00**	**149**	*i*§*iP*	**Pn**	**09 23 48.1**	**+0.6**
PB07				*eS*	**Sn**	**09 24 11.9**	**-0.8**
PB07				IAML		09 24 24.7	
	comp=E,4µm,0.6s						
PB07	**IPOC Station P**	**2.00**	**149**		**Pn**	**09 23 48.0**	**+0.4**
PB16	**IPOC Station P**	**2.17**	**40**	*i*§*iP*	**Pn**	**09 23 50.7**	**+0.4**
PB16				*eS*	**Sn**	**09 24 18.4**	**+0.9**
PB16				IAML		09 24 28.0	
	comp=E,2µm,0.4s						
PB16	**IPOC Station P**	**2.17**	**40**		**Pn**	**09 23 50.9**	**+0.7**
PB03	**IPOC Station P**	**2.34**	**151**	*i*§*eP*	**Pn**	**09 23 52.8**	**+0.6**
PB03				*i* S	**Sn**	**09 24 20.4**	**-0.6**
PB03				IAML		09 24 37.1	
	comp=E,2µm,0.6s						
PB09	**IPOC Station P**	**2.42**	**138**	*i*§*iP*	**Pn**	**09 23 55.1**	**+1.8**
PB09				*i* S	**Sn**	**09 24 24.7**	**+1.7**
PB09				IAML		09 24 38.6	
	comp=N,3µm,0.6s						
PB09	**IPOC Station P**	**2.42**	**138**		**Pn**	**09 23 55.1**	**+1.8**
PB09	**IPOC Station P**	**2.42**	**138**	*i* P	**Pn**	**09 23 54.3**	**+1.0**
PB04	**IPOC Station P**	**2.45**	**161**	*i*§*eP*	**Pn**	**09 23 54.1**	**+0.4**
PB04				*eS*	**Sn**	**09 24 21.6**	**-2.1**
PB04				IAML		09 24 39.7	
	comp=E,3µm,0.7s						
PB04	**IPOC Station P**	**2.45**	**161**		**Pn**	**09 23 54.0**	**+0.4**
PB04	**IPOC Station P**	**2.45**	**161**	*i* P	**Pn**	**09 23 54.3**	**+0.6**
PB05	**IPOC Station P**	**2.93**	**166**	*i*§*iP*	**Pn**	**09 24 00.3**	**+0.1**
PB06	**IPOC Station P**	**3.00**	**154**	*i*§*iP*	**Pn**	**09 24 01.5**	**+0.3**
PB06	**IPOC Station P**	**3.00**	**154**		**Pn**	**09 24 01.6**	**+0.3**
PB06	**IPOC Station P**	**3.00**	**154**	*i* P	**Pn**	**09 24 02.0**	**+0.8**
LVC	**Limon Verde**	**3.24**	**144**	Pn	**Pn**	**09 24 06.7**	**+2.0**
	comp=E,20nm,0.3s,baz=7.1,slow=8.8,SNR=136						
LVC				Sn	**Sn**	**09 24 45.0**	**+1.5**
	comp=E,69nm,0.3s,baz=290,slow=24,SNR=7.7						
LVC				Lg	Lg	09 24 55.9	
	comp=E,128nm,0.3s,baz=73,slow=20,SNR=4.9						
LVC	**Limon Verde**	**3.24**	**144**		**Pn**	**09 24 06.4**	**+1.7**
LVC					**Sn**	**09 24 44.0**	**+0.5**
LVC	**Limon Verde**	**3.24**	**144**	*i* P	**Pn**	**09 24 06.2**	**+1.5**
LVC				IAML		09 25 00.7	
	comp=Z,552nm,0.6s						
PB15	**IPOC Station P**	**3.49**	**156**	*i*§*iP*	**Pn**	**09 24 08.3**	**+0.3**
PB15	**IPOC Station P**	**3.49**	**156**		**Pn**	**09 24 08.3**	**+0.3**
PB15	**IPOC Station P**	**3.49**	**156**	*i* P	**Pn**	**09 24 09.0**	**+1.0**
PB10	**IPOC Station P**	**3.51**	**173**		**Pn**	**09 24 08.0**	**-0.2**
PB10	**IPOC Station P**	**3.51**	**173**	*i* P	**Pn**	**09 24 08.1**	**-0.1**
LPAZ	**La Paz**	**4.59**	**37**	Pn	**Pn**	**09 24 27.0**	**+3.4**
	comp=Z,2.6nm,0.3s,baz=240,slow=12,SNR=30						
LPAZ				Lg	Lg	09 25 38.7	
	baz=247,slow=7.5,SNR=1.2						
PB14	**IPOC Station P**	**4.63**	**173**	Pn	**Pn**	**09 24 23.3**	**-0.6**
PB14	**IPOC Station P**	**4.63**	**173**	*i* P	**Pn**	**09 24 23.3**	**-0.6**
GO02	**Mina Guanaco**	**5.29**	**166**		**Pn**	**09 24 33.3**	**+0.4**
YJA	**Yavi**	**5.55**	**114**	*i* P	**Pn**	**09 24 38.6**	**+2.0**
YJA				IAML		09 24 48.4	
	comp=Z,15nm,0.6s						
AC02	**Maricunga**	**7.01**	**166**		**Pn**	**09 24 57.1**	**+0.4**
GO03	**Copiap**	**7.58**	**175**	Pn	**Pn**	**09 25 03.5**	**-0.7**
GO03					**Sn**	**09 26 28.3**	**-1.9**
AC05	**El Transito**	**8.82**	**176**		**Pn**	**09 25 21.0**	**-0.1**
NNA	**Nana**	**9.76**	**324**	Pn	**Pn**	**09 25 34.9**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=276,slow=15,SNR=1.2						
NNA				Sn	Sn	09 27 14.0	-10
	comp=Z,0.7nm,0.3s,baz=260,slow=6.3,SNR=1.2						
SIV	**San Ignacio**	**10.25**	**69**	Pn	**Pn**	**09 25 38.3**	**-2.4**
	comp=Z,2.2nm,0.3s,baz=279,slow=9.7,SNR=28						
SIV				Sn	**Sn**	**09 27 35.7**	**0.0**
	baz=264,slow=15,SNR=1.8						
CFA	**Coronel Fontan**	**11.81**	**168**	Pn	**Pn**	**09 26 04.6**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=341,slow=11,SNR=1.7						
CFA				Sn	**Sn**	**09 28 05.8**	**-8.3**
	comp=Z,0.3nm,0.3s,baz=302,slow=9.1,SNR=1.1						
CPUP	**Villa Florida**	**14.05**	**119**	Pn	**Pn**	**09 26 32.3**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=233,slow=5.8,SNR=2.5						
ATAH	**Atahualpa**	**14.67**	**330**	Pn	**Pn**	**09 26 42.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=228,slow=19,SNR=1.6						
H03N1	**Juan Fernandez**	**15.13**	**206**	T	T	09 42 26.7	
	baz=32,slow=72,SNR=56						
H03N2	**Juan Fernandez**	**15.13**	**206**	T	T	09 42 26.5	
	baz=32,slow=72,SNR=37						
H03N3	**Juan Fernandez**	**15.14**	**206**	T	T	09 42 27.3	
	baz=32,slow=72,SNR=43						
H03S3	**Juan Fernandez**	**15.46**	**205**	Pn	**Pn**	**09 26 50.4**	**-1.0**
	baz=315						
H03S1	**Juan Fernandez**	**15.47**	**205**	Pn	**Pn**	**09 26 50.8**	**-0.8**
	baz=315						
H03S2	**Juan Fernandez**	**15.48**	**206**	Pn	**Pn**	**09 26 50.9**	**-0.8**
	baz=315						
PLCA	**Paso Flores**	**20.66**	**179**	P	Pn	09 27 55.9	+0.1
	comp=Z,2.6nm,0.8s,baz=1.5,slow=7.3,SNR=3.2						
PTGA	**Pitinga**	**21.99**	**31**	P	**P

CBYP	**Canovanas**	**38.37**	**8**	P		**P**	**09 30 34.1**	**-1.0**
CBYP				IAmb		IAmb	09 30 40.7	
	comp=Z,20nm,1.1s							
WLAR	**White Oak Lake**	**57.41**	**338**	P		**P**	**09 33 02.4**	**+0.2**
WLAR				IAmb		IAmb	09 33 05.2	
	comp=Z,12nm,0.7s							
TXAR	**Lajitas Array**	**58.30**	**326**	P		**P**	**09 33 09.3**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=154,slow=8.8,SNR=5.0							
T47A	**Sharon Grove**	**58.69**	**345**	P		**P**	**09 33 11.3**	**+0.1**
T47A				IAmb		IAmb	09 33 27.7	
	comp=Z,14nm,1.3s							
X37A	**Clayton**	**59.04**	**337**	P		**P**	**09 33 13.3**	**-0.3**
X37A				IAmb		IAmb	09 33 16.1	
	comp=Z,5.2nm,0.8s							
M52A	**Chesterland**	**61.98**	**351**	P		**P**	**09 33 32.3**	**-1.3**
K50A	**Casco**	**63.38**	**350**	P		**P**	**09 33 42.5**	**-0.4**
KSCO	**Kaye Shedlock'**	**65.76**	**333**	P		**P**	**09 33 57.5**	**-1.3**
KSCO				IAmb		IAmb	09 34 03.4	
	comp=Z,7.1nm,1.1s							
K31A	**O'Neill**	**67.37**	**338**	P		**P**	**09 34 08.9**	**0.0**
E43A	**Lone Tree Farm**	**67.64**	**348**	P		**P**	**09 34 10.1**	**-0.3**
E43A				IAmb		IAmb	09 34 10.8	
	comp=Z,1.9nm,0.8s							
SMCO	**Snowmass**	**67.82**	**330**	P		**P**	**09 34 11.7**	**-0.6**
SMCO				IAmb		IAmb	09 34 26.7	
	comp=Z,11nm,0.8s							
PV07	**Paradox Valley**	**68.03**	**329**	P		**P**	**09 34 11.4**	**-2.0**
PV07				IAmb		IAmb	09 34 11.8	
	comp=Z,2.3nm,1.0s							
NVAR	**Mina Array Bea**	**73.13**	**323**	P		**P**	**09 34 44.5**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=165,slow=4.7,SNR=4.4							
YNE	**Yellowstone No**	**73.82**	**332**	P		**P**	**09 34 51.1**	**+2.6**
TOA0	**Torodi Ar. Sit**	**78.71**	**72**	P		**P**	**09 35 15.7**	**-0.9**
TOA0				IAmb		IAmb	09 35 16.5	
	comp=Z,9.2nm,0.9s							
TORD	**Torodi Ar. Bea**	**78.71**	**72**	P		**P**	**09 35 15.6**	**-1.0**
	comp=Z,6.6nm,0.8s,baz=250,slow=5.1,SNR=27							
YKA	**Yellowknife Ar**	**89.15**	**341**	P		**P**	**09 36 09.8**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=136,slow=4.7,SNR=16							
H11S2	**WAKE ISLAND Hyl**	**25.74**	**279**	T		T	12 01 42.3	
	baz=101,slow=75,SNR=66							
H11S1	**WAKE ISLAND Hyl**	**25.75**	**279**	T		T	12 01 37.7	
	baz=101,slow=75,SNR=38							
H11S3	**WAKE ISLAND Hyl**	**25.76**	**279**	T		T	12 01 39.5	
	baz=101,slow=75,SNR=37							
H11N3	**WAKE ISLAND Hyl**	**25.79**	**280**	T		T	12 01 40.0	
	baz=101,slow=74,SNR=8.2							
H11N2	**WAKE ISLAND Hyl**	**25.81**	**280**	T		T	12 01 42.3	
	baz=101,slow=74,SNR=9.9							
H11N1	**WAKE ISLAND Hyl**	**25.81**	**280**	T		T	12 01 40.2	
	baz=101,slow=74,SNR=6.2							
SEY	**Seymchan**	**127.96**	**337**	PKP		**PKiKP**	**09 42 19.8**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=105,slow=23,SNR=1.7							
ASAR	**Alice Springs**	**130.27**	**210**	PKP		**PKiKP**	**09 42 25.9**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=119,slow=2.0,SNR=1.8							
WRA	**Warramunga Arr**	**133.18**	**214**	PKP		**PKiKP**	**09 42 31.3**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=140,slow=2.0,SNR=1.3							
ZALV	**Zalesovo Beam**	**141.39**	**23**	PKP		**PKPdf**	**09 42 45.3**	**+0.9**
	comp=Z,1.5nm,0.6s,baz=296,slow=2.9,SNR=5.8							
BTK	**Batken**	**141.75**	**50**			**PKPdf**	**09 42 44.9**	**-0.7**
ARSB	**Arslanbob**	**142.80**	**47**			**PKPdf**	**09 42 48.4**	**+0.8**
KDJ	**Kajisay**	**145.25**	**43**			**PKPdf**	**09 42 53.3**	**+1.5**
MAKZ	**Makanchi**	**145.34**	**33**			**PKPdf**	**09 42 52.3**	**+0.6**
MK31	**Makanchi Array**	**145.51**	**33**			**PKPab**	**09 42 52.9**	**+0.7**
MKAR	**Makanchi Array**	**145.51**	**33**	PKPbc		**PKPab**	**09 42 52.6**	**+0.4**
	comp=Z,4.7nm,0.8s,baz=320,slow=4.7,SNR=31							
KSH	**Kashi**	**145.62**	**48**	PKPbc		**PKPab**	**09 42 54.3**	**+1.3**
KSH				PP		**PP**	**09 46 16.5**	**+3.3**
KSH				PKS		**PKSdf**	**09 46 27.5**	**-0.5**
USRK	**Ussuriysk Ar.**	**149.20**	**327**	PKPbc		**PKiKP**	**09 43 03.7**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=36,slow=7.3,SNR=4.5							
MJAR	**Matsushiro Arr**	**149.62**	**309**	PKPbc		**PKPbc**	**09 43 04.2**	**+0.5**
	comp=Z,2.2nm,0.8s,baz=93,slow=2.8,SNR=3.4							
SONM	**Songino Array**	**152.16**	**4**	PKPbc		**PKiKP**	**09 43 10.6**	**+0.9**
	comp=Z,1.7nm,0.5s,baz=305,slow=1.4,SNR=9.6							
LZH	**Lanzhou**	**163.35**	**15**	*e*PKP		**PKPdf**	**09 43 16.5**	**-0.5**
LZH				pPKP		sPKPdf	09 43 20.8	+0.1
LZH				sPKP			09 43 22.3	
LZH				PKP		**pPKPab**	**09 44 09.8**	**-0.5**

*IDC **17** 09:25:23.0±1.6, 1°.41S×99°.36E, h0km, mb3.9/7, mb1 3.9/9, mb1mx3.7/35, mbtmp3.9/9, ML3.9/2, Error ellipse: s-maj=69.1km s-min=17.6km az=59.0*
*DJA **17** 09:25:26.7±0.3, 1°.S±3°×9°.9E±°, h10km, M4.1/13, mB4.9/1, mb4.1/2, MLv4.1/13, Mw(mB)4.2/1*
*NEIC **17** 09:25:28.1±1.0, 1°.28S±0°.06×99°.44E±0°.04, h30km±6km, mb4.3/7, Error ellipse: s-maj=9.6km s-min=5.4km az=159.0*

ISC 17 09:25:27.6±0.6, **1°.34S**±0°.05×**99°.35E**±0°.05, **h30**km, **n44**, σ1s**55**/38, **mb4.2**/11, **1D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.26**	**274**	P		**Pb**	**09 25 31.0**	**-3.6**
PDSI	**Padang**	**1.19**	**69**	P		**Pn**	**09 25 48.1**	**-0.2**
PDSI				S		**Sb**	**09 26 06.3**	**+1.6**
PPSI	**Pulau Pagai**	**1.56**	**155**	P		**Pb**	**09 25 54.5**	**-1.3**
SDSI	**Sungai Dareh**	**2.12**	**79**	P		**Pb**	**09 26 04.0**	**-1.3**
MNSI	**Mandailing Nat**	**2.14**	**6**	P		**Pb**	**09 26 03.3**	**-2.4**
KRJI	**Kerinci**	**2.23**	**109**	P		**Pb**	**09 26 04.6**	**-2.8**
BKNI	**Bangkinang**	**2.37**	**45**	P		**Pb**	**09 26 07.4**	**-2.2**
BKNI	**Bangkinang**	**2.37**	**45**			**Pn**	**09 26 03.5**	**-1.0**
SBSI	**Sibolga**	**2.91**	**351**	P		**Pn**	**09 26 10.9**	**-1.1**
GSI	**Gunungsitoli**	**3.17**	**326**	P		**Pn**	**09 26 17.9**	**+2.3**
GSI	**Gunungsitoli**	**3.17**	**326**			**Pn**	**09 26 15.8**	**+0.2**
RPSI	**Rantau Prapat**	**4.04**	**354**			**Pn**	**09 26 26.9**	**-0.6**
RPSI	**Rantau Prapat**	**4.04**	**354**			**Pn**	**09 26 27.2**	**-0.2**
PSI	**Prapat**	**4.14**	**354**	Pn		**Pn**	**09 26 27.2**	**-1.7**
	1.3nm,0.3s,baz=178,slow=7.2,SNR=5.8							
MNAI	**Manna**	**4.68**	**130**	P		**Pn**	**09 26 37.2**	**+0.8**
MNAI	**Manna**	**4.68**	**130**	Pn		**Pn**	**09 26 36.2**	**-0.1**
MNAI				Sn		**Sn**	**09 27 30.7**	**+1.0**
LHSI	**Lahat**	**4.84**	**121**	P		Pb	09 26 59.0	+7.2
KCSI	**Kotacane, Aceh**	**5.08**	**342**	P		**Pn**	**09 26 45.7**	**+3.8**
	0.1nm1μm18nm,0.7s							
CMAR	**Chiang Mai Arr**	**19.68**	**359**	P		**Pn**	**09 29 55.3**	**-0.8**
	0.6nm,0.3s,baz=189,slow=11,SNR=5.1							
KCP	**Kidapawan**	**26.99**	**72**	⇓*e*P		**P**	**09 31 06.6**	**-0.6**
H08S2	**Diego Garcia H**	**27.48**	**256**	T		T	09 59 04.8	
	baz=78,slow=75,SNR=237							
H08S3	**Diego Garcia H**	**27.49**	**256**	T		T	09 59 05.4	
	baz=78,slow=75,SNR=229							
H08S1	**Diego Carcia H**	**27.50**	**256**	T		T	09 59 09.8	
	baz=78,slow=75,SNR=96							
H01W3	**Cape Leeuwin H**	**36.10**	**159**	T		T	10 10 19.9	
	baz=335,slow=76,SNR=16							
H01W2	**Cape Leeuwin H**	**36.12**	**159**	T		T	10 10 20.7	
	baz=335,slow=76,SNR=20							
H01W1	**Cape Leeuwin H**	**36.12**	**159**	T		T	10 10 21.0	
	baz=335,slow=76,SNR=14							
WB0	**Warramunga Arr**	**38.86**	**120**	P		**P**	**09 32 50.1**	**-0.5**
WRA	**Warramunga Arr**	**38.88**	**121**	P		**P**	**09 32 49.8**	**-0.9**
	0.7nm,0.5s,baz=301,slow=9.6,SNR=6.8							
WRAB	**Tennant Creek**	**38.89**	**121**	P		**P**	**09 32 48.6**	**-2.2**
WRAB				IAmb		IAmb	09 32 54.1	
	comp=Z,11nm,1.4s							
WB2	**Warramunga Arr**	**38.89**	**121**	P		**P**	**09 32 51.1**	**+0.2**
WB2				IAmb		IAmb	09 33 05.2	
	comp=Z,11nm,1.2s							
WR0	**Warramunga Arr**	**39.06**	**121**	P		**P**	**09 32 51.1**	**-1.2**
AS31	**Alice Springs**	**40.16**	**126**	P		**P**	**09 33 01.0**	**-0.4**
ASAR	**Alice Springs**	**40.16**	**126**	P		**P**	**09 33 01.0**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=297,slow=7.6,SNR=7.6							
KSH	**Kashi**	**45.97**	**335**	P		**P**	**09 33 50.8**	**+2.5**
KSH				pP		pP	09 33 55.4	-1.4
KSH				sP		sP	09 33 59.3	-0.9
KSH				pmax		pmax		
	comp=Z,24nm,1.2s							
KSH				pmax		pmax		
	comp=Z,87nm,4.0s							
STKA	**Stephens Creek**	**50.07**	**132**	P		**P**	**09 34 19.7**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=340,slow=6.1,SNR=5.6							
STKA	**Stephens Creek**	**50.07**	**132**	P		**P**	**09 34 20.6**	**+0.6**
STKA				IAmb		IAmb	09 34 28.5	
	comp=Z,1.1nm,1.2s							
MK31	**Makanchi Array**	**50.23**	**345**	P		**P**	**09 34 21.2**	**+0.3**
MK31				IAmb		IAmb	09 34 23.3	
	comp=Z,4.0nm,1.4s							
MKAR	**Makanchi Array**	**50.23**	**345**	P		**P**	**09 34 21.3**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=158,slow=8.9,SNR=9.2							
USRK	**Ussuriysk Ar.**	**53.89**	**29**	P		**P**	**09 34 48.2**	**0.0**
	comp=Z,1.1nm,0.8s,baz=239,slow=10.0,SNR=2.1							
ZALV	**Zalesovo Beam**	**56.41**	**350**	P		**P**	**09 35 06.1**	**-0.1**
	comp=Z,2.5nm,0.5s,baz=170,slow=7.5,SNR=4.7							
FINES	**FINESS Array B**	**83.23**	**332**	P		**P**	**09 37 51.4**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=104,slow=8.0,SNR=5.9							
QSPA	**South Pole Qui**	**88.61**	**180**	P		**P**	**09 38 19.2**	**+1.5**
H09W1	**TRISTAN DA CUN**	**106.34**	**231**	T		T	11 38 25.9	
TXAR	**Lajitas Array**	**144.57**	**36**	PKP		**PKPdf**	**09 45 02.0**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=211,slow=0.5,SNR=14							

*SJA **17** 09:38:33.9±0.8, 26°.55S×72°.12W, h10km, ML4.4*
*GUC **17** 09:38:45.4±0.8, 27°.19S×70°.94W, h9km±8km, ML4.6*
*NEIC **17** 09:38:47.7±2.0, 27°.13S±0°.04×71°.06W±0°.06, h10km±1km, Error ellipse: s-maj=9.6km s-min=6.0km az=52.0*
*IDC **17** 09:38:54.6±1.0, 22°.79S×70°.55W, h0km, mb4.0/2, mb1 4.0/3, mb1mx3.6/26, mbtmp3.9/3, ML3.6/1, Error ellipse: s-maj=47.9km s-min=14.7km az=21.0*

ISC 17 09:38:45.5±2.2, **27°.21S**±0°.04×**71°.24W**±0°.06, **h3**km±14km, **n56**, σ1s**97**/62, **mb4.3**/5, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GO03	**Copiap**	**0.97**	**113**			**Pb**	**09 39 04.4**	**-0.7**
GO03						**Sg**	**09 39 15.1**	**-1.7**
AC05	**El Transito**	**1.83**	**152**	*e*P		**Pb**	**09 39 19.7**	**0.0**
AC05				*i* S		**Sn**	**09 39 42.1**	**+0.3**
AC05				IAML			09 39 50.1	
	comp=N,2μm,0.5s							
AC05	**El Transito**	**1.83**	**152**			**Pb**	**09 39 20.1**	**+0.3**
AC05				Sn		**Sb**	**09 39 44.0**	**+0.8**
AC02	**Maricunga**	**1.92**	**79**	*e*P		**Pn**	**09 39 20.1**	**+0.5**
AC02				*i* S		**Sn**	**09 39 41.4**	**-3.1**
AC02				IAML			09 39 45.8	
	comp=N,2μm,0.3s							
AC02	**Maricunga**	**1.92**	**79**			**Pn**	**09 39 20.2**	**+0.5**
GO02	**Mina Guanaco**	**2.52**	**36**	*e*P		**Pn**	**09 39 27.6**	**-0.1**
GO02				*i* S		**Sn**	**09 39 59.8**	**+0.6**
GO02				IAML			09 40 08.6	
	comp=N,5μm,1.0s							
GO02	**Mina Guanaco**	**2.52**	**36**			**Pn**	**09 39 27.6**	**-0.1**
PB14	**IPOC Station P**	**2.68**	**16**			**Pn**	**09 39 29.0**	**-1.0**
CO01	**Juntas del Tor**	**2.93**	**160**	*e*P		**Pn**	**09 39 35.6**	**+2.3**
CO01				*i* S		**Sn**	**09 40 10.4**	**+1.2**
CO01				*i* S		**Sb**	**09 40 12.9**	**-2.2**
CO01				IAML			09 40 22.3	
	comp=N,13μm,1.2s							
CO01	**Juntas del Tor**	**2.93**	**160**			**Pn**	**09 39 35.7**	**+2.4**
GO04	**Tololo Observa**	**2.97**	**173**	*e*P		**Pn**	**09 39 35.9**	**+2.0**
GO04				*e*S		**Sb**	**09 40 14.7**	**-1.6**
GO04				IAML			09 40 30.6	
	comp=E,8μm,0.9s							
GO04	**Tololo Observa**	**2.97**	**173**			**Pn**	**09 39 36.1**	**+2.2**
GO04	**Tololo Observa**	**2.97**	**173**	*i* P		**Pb**	**09 39 37.4**	**-2.0**
GO04				*e*S		**Sg**	**09 40 21.4**	**+0.3**
VCA	**Vinchina**	**3.08**	**120**	*i* P		**Pb**	**09 39 40.3**	**-0.8**
VCA				*e*S		**Sg**	**09 40 28.6**	**+4.0**
VCA				IAML			09 40 34.4	
	comp=Z,494nm,0.6s							
AROD	**Rodeo**	**3.33**	**153**	*i* P		**Pb**	**09 39 43.8**	**-1.6**
AROD				*e*S		**Sg**	**09 40 31.2**	**-1.3**
ACDV	**Cuesta del Vie**	**3.49**	**148**	*i* P		**Pb**	**09 39 45.6**	**-2.4**
ACDV				IAML			09 41 30.6	
	comp=Z,205nm,0.8s							
CO03	**El Pedregal**	**3.65**	**173**	*e*P		**Pn**	**09 39 44.7**	**+1.8**
CO03	**El Pedregal**	**3.65**	**173**			**Pn**	**09 39 45.0**	**+2.1**
PB10	**IPOC Station P**	**3.74**	**10**			**Pn**	**09 39 44.5**	**+0.3**
ACCO	**Cerro Coronel**	**3.87**	**151**	*i* P		**Pn**	**09 39 50.7**	**+4.5**
ACCO				IAML			09 41 44.6	
	comp=Z,319nm,0.7s							
CO02	**Combarbal**	**3.98**	**177**	*e*P		**Pn**	**09 39 48.8**	**+1.2**
CO02				*i* S		**Sn**	**09 40 32.3**	**-2.7**
CO02	**Combarbal**	**3.98**	**177**			**Pn**	**09 39 50.4**	**+2.7**
PB15	**IPOC Station P**	**4.30**	**22**			**Pn**	**09 39 53.1**	**+1.0**
PB06	**IPOC Station P**	**4.74**	**19**			**Pn**	**09 39 59.0**	**+0.9**
RTLL	**Cerro Villicun**	**4.76**	**150**	*i* P		**Pn**	**09 40 01.8**	**+3.5**
RTLL				IAML			09 42 11.4	
	comp=Z,204nm,0.5s							
CO04	**Los Peladeros**	**4.82**	**177**			**Pn**	**09 40 01.6**	**+2.3**
RTLS	**Leoncito**	**4.87**	**160**	*i* P		**Pn**	**09 39 57.6**	**-2.5**
RTLS				IAML			09 42 15.9	
	comp=Z,282nm,0.9s							
PB04	**IPOC Station P**	**4.96**	**12**			**Pn**	**09 39 59.2**	**-1.9**
CYA	**Choya**	**4.97**	**106**	*i* P		**Pn**	**09 40 03.6**	**+2.4**
CYA				IAML			09 41 59.0	
	comp=Z,141nm,0.8s							
LVC	**Limon Verde**	**5.05**	**25**			Pn	09 40 08.4	+5.9
CFA	**Coronel Fontan**	**5.10**	**150**	*i* P		**Pn**	**09 40 05.8**	**+2.9**
CFA				IAML			09 42 13.0	
	comp=Z,84nm,0.7s							
RTCV	**Cerro Valdivia**	**5.20**	**154**	*i* P		**Pn**	**09 40 06.6**	**+2.4**
RTCV				IAML			09 42 10.7	
	comp=Z,96nm,0.6s							
VA03	**San Esteban**	**5.56**	**174**			**Pn**	**09 40 12.4**	**+3.1**
ROC1	**El Roble**	**5.75**	**178**	*i* P		**Pn**	**09 40 11.2**	**-0.8**
MT02	**Curacav**	**6.03**	**179**			**Pn**	**09 40 10.1**	**+3.5**
PB01	**IPOC Station P**	**6.35**	**15**			**Pn**	**09 40 19.3**	**-0.8**
MT01	**Popeta**	**6.63**	**180**			**Pn**	**09 40 25.5**	**+1.6**
GO05	**Huala**	**7.79**	**184**	Pn		**Pn**	**09 40 38.7**	**-1.2**
MNMC	**Minye Minye**	**8.19**	**11**	Pn		**Pn**	**09 40 43.8**	**-1.7**
PB12	**IPOC Station P**	**8.60**	**6**	Pn		**Pn**	**09 40 49.1**	**-1.9**
PB16	**IPOC Station P**	**8.98**	**11**	Pn		**Pn**	**09 40 56.9**	**+0.2**
BI02	**San Fabin de**	**9.42**	**180**			**Pn**	**09 41 06.4**	**+4.1**
CPUP	**Villa Florida**	**12.46**	**89**	Pn		Pn	09 41 54.4	+11
	comp=Z,0.1nm,0.3s,baz=287,slow=19,SNR=4.4							
BDFB	**Brasilia**	**24.45**	**67**	P		P	09 43 53.9	-12
	comp=Z,0.9nm,0.3s,baz=236,slow=11,SNR=1.5							
SNAA	**Sanae**	**57.64**	**160**	P		**P**	**09 48 37.1**	**+0.3**
SNAA				IAmb		IAmb	09 48 48.3	
	comp=Z,3.1nm,1.1s							
PV22	**Blue Mesa, Par**	**74.24**	**330**	P		**P**	**09 50 25.2**	**+1.0**
PV22				IAmb		IAmb	09 50 28.6	
	comp=Z,6.4nm,1.0s							
ECSD	**EROS Data Cent**	**74.34**	**341**	P		**P**	**09 50 25.4**	**+1.0**
ECSD				IAmb		IAmb	09 50 28.1	
	comp=Z,10nm,1.4s							
TORD	**Torodi Ar. Bea**	**81.27**	**70**	P		**P**	**09 51 02.3**	**-1.3**
	comp=Z,2.3nm,0.8s,baz=256,slow=4.5,SNR=11							
TORD	**Torodi Ar. Bea**	**81.27**	**70**	P		**P**	**09 51 02.3**	**-1.3**
H11S2	**WAKE ISLAND Hyl**	**26.29**	**274**	T		T	12 17 19.0	
	baz=112							
H11S1	**WAKE ISLAND Hyl**	**26.30**	**274**	T		T	12 17 20.0	
	baz=112							
H11S3	**WAKE ISLAND Hyl**	**26.31**	**274**	T		T	12 17 20.5	
	baz=112							
ZALV	**Zalesovo Beam**	**148.00**	**27**	PKP		**PKPdf**	**09 58 29.8**	**+0.9**
	comp=Z,2.0nm,0.7s,baz=328,slow=3.2,SNR=8.0							
MK31	**Makanchi Array**	**151.43**	**40**			**PKiKP**	**09 58 40.9**	**-0.4**
MKAR	**Makanchi Array**	**151.43**	**40**	PKPbc		**PKPbc**	**09 58 40.4**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=325,slow=2.6,SNR=12							
MKAR	**Makanchi Array**	**151.43**	**40**			**PKPbc**	**09 58 40.4**	**-0.4**

*IDC **17** 09:39:47.0±5.3, 27°.09S×70°.62W, h76km±39km, mb3.6/2, mb1 3.7/3, mb1mx3.4/24, mbtmp3.8/3, ML3.8/1, Error ellipse: s-maj=48.3km s-min=23.8km az=5.0*

ISC 17 09:39:49.5±1.3, **27°.05**±0°.2×**70°.5W**±0°.3, **h100**km, **n13**, σ1s**21**/7, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
H03N1	**Juan Fernandez**	**9.72**	**226**	T		T	09 51 18.1	
	baz=52,slow=72,SNR=738							
H03N2	**Juan Fernandez**	**9.73**	**226**	T		T	09 51 18.7	
	baz=52,slow=72,SNR=592							
H03N3	**Juan Fernandez**	**9.73**	**226**	T		T	09 51 18.3	
	baz=52,slow=72,SNR=482							
LPAZ	**La Paz**	**10.85**	**12**	P		**Pn**	**09 42 22.0**	**-0.4**
	0.3nm,0.3s,baz=192,slow=9.3,SNR=2.3							
TXAR	**Lajitas Array**	**64.36**	**328**	P		**P**	**09 50 15.9**	**+0.9**
	0.3nm,0.8s,baz=149,slow=9.0,SNR=3.0							
TORD	**Torodi Ar. Bea**	**80.58**	**70**	P		**P**	**09 51 52.4**	**+1.0**
	3.1nm,0.8s,baz=256,slow=4.1,SNR=11							
ASAR	**Alice Springs**	**124.41**	**207**	PKP		**PKiKP**	**09 58 37.1**	**-0.8**
	0.3nm,0.8s,baz=152,slow=1.3,SNR=2.1							
H11S2	**WAKE ISLAND Hyl**	**26.92**	**274**	T		T	12 18 06.7	
	baz=112,slow=75,SNR=9.2							
H11S1	**WAKE ISLAND Hyl**	**26.93**	**274**	T		T	12 18 05.9	
	baz=112,slow=75,SNR=9.0							
H11S3	**WAKE ISLAND Hyl**	**26.94**	**274**	T		T	12 18 07.5	
	baz=112,slow=75,SNR=8.2							
WRA	**Warramunga Arr**	**127.52**	**210**	PKP		**PKiKP**	**09 58 43.7**	**-0.4**
	0.6nm,0.8s,baz=151,slow=1.7,SNR=2.4							
ZALV	**Zalesovo Beam**	**147.48**	**27**	PKPbc		**PKPbc**	**09 59 19.8**	**-1.7**
	2.3nm,0.7s,baz=330,slow=2.0,SNR=2.7							
MKAR	**Makanchi Array**	**150.82**	**40**	PKPbc		**PKiKP**	**09 59 31.0**	**+0.2**
	1.7nm,0.8s,baz=326,slow=1.8,SNR=7.8							

*INET **17** 09:42:00.9, 15°.15N×86°.82W, h30km, ML3.9*
*SNET **17** 09:42:02.6±1.1, 15°.09N×87°.00W, h35km±87km, ML3.4*

ISC 17 09:42:02.5±1.8, **15°.14N**±0°.06×**87°.0W**±0°.1, **h35**km, **n14**, σ0s**77**/20, **Honduras**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FAGO	**Alcalda de S**	**1.80**	**217**	*e*P		**Pn**	**09 42 29.9**	**-1.2**
FAGO				*e*S		**Sn**	**09 42 52.7**	**-0.1**
FAGO				IAML			09 42 53.8	
	comp=Z,239nm,0.3s							
LCND	**La Caada**	**2.02**	**206**	*e*P		**Pn**	**09 42 33.8**	**-0.3**
LCND				*e*S		**Sn**	**09 42 57.5**	**-0.7**
LCND				IAML			09 43 10.7	
	comp=Z,398nm,0.3s							
BLLM	**Bellamira**	**2.08**	**216**	*e*P		**Pn**	**09 42 35.2**	**+0.3**
PACA	**Pacayal**	**2.11**	**218**	*e*P		**Pn**	**09 42 34.9**	**-0.5**
PACA				*e*S		**Sn**	**09 42 59.9**	**-0.6**
LLGN	**La Laguna**	**2.13**	**243**	*e*P		**Pn**	**09 42 35.4**	**-0.3**
LLGN				*e*S		**Sn**	**09 43 00.9**	**-0.1**
COEB	**Comit de Eme**	**2.22**	**223**	*e*P		**Pn**	**09 42 36.6**	**-0.3**
COEB				IAML			09 43 07.0	
	comp=Z,256nm,0.5s							
JUCU	**Jucuarįn**	**2.24**	**213**	*e*P		**Pn**	**09 42 37.0**	**-0.1**
JUCU				*e*S		**Sn**	**09 43 04.3**	**+0.6**
ESQI	**Esquipulas**	**2.35**	**256**	*e*P		**Pn**	**09 42 38.9**	**+0.2**
COEG	**Centro de Oper**	**2.38**	**231**	*e*P		**Pn**	**09 42 39.1**	**0.0**
COEG				*e*S		**Sn**	**09 43 07.4**	**+0.3**
MTO3	**Montecristo**	**2.41**	**252**	*e*P		**Pn**	**09 42 39.9**	**+0.2**
LBRS	**Las Brisas**	**2.43**	**235**	*e*P		**Pn**	**09 42 40.1**	**+0.3**
UEES	**Universidad Ev**	**2.60**	**237**	IAML			09 43 29.1	
	comp=Z,169nm,0.5s							
TEIG	**Tepich**	**5.20**	**347**	*e*P		**Pn**	**09 43 18.9**	**+1.1**
TEIG				*e*S		**Sn**	**09 44 16.4**	**-0.3**
PRVC	**Isla de Provid**	**5.73**	**107**	*e*P		**Pn**	**09 43 27.3**	**+2.3**

*SOME **17** 09:50:16.1, 39°.23N×75°.20E, h0km*
*KRNET **17** 09:50:25.9±0.1, 39°.23N×75°.11E, mb3.6*
*NNC **17** 09:50:25.7±3.0, 39°.49N×75°.44E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=23.3km s-min=14.4km az=163.0*
*IDC **17** 09:50:29.9±5.8, 40°.86N×73°.68E, h0km, mb3.4/2, mb1 3.4/3, mb1mx3.1/50, mbtmp3.2/3, ML2.6/1, Error ellipse: s-maj=226.1km s-min=22.4km az=145.0*

ISC 17 09:50:24.8±1.4, **39°.13N**±0°.08×**75°.21E**±0°.04, **h10**km, **n57**, σ2s**81**/73, **18C-8D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**2.77**	**323**	⇑*i*P		**Pb**	**09 51 11.7**	**-2.9**
	baz=23							
ARSB				⇑*i*S		**Sb**	**09 51 45.5**	**-3.2**
	baz=23							
KZA	**Kyzart**	**2.94**	**1**	P		**Pn**	**09 51 12.4**	**+0.4**
	SNR=35	

	24nm,0.5s								
KOTS	**Kotyrbulak**	**4.34**	**19**	Pg	**Pn**	**09 51 35.2**	**+4.2**
	24nm,0.4s								
KOTS				Lg	Lg	09 52 33.8			
	54nm,0.6s								
KRBS	**Karabastau**	**4.57**	**4**	*e*P	**Pn**	**09 51 38.7**	**+4.6**
	1.3nm,0.2s								
KRBS				*e*S	**Sb**	**09 52 38.2**	**-2.1**
	8.2nm,0.5s								
SATY	**Saty**	**4.61**	**31**	*e*P	**Pb**	**09 51 41.6**	**-4.2**
	0.7nm,0.0s								
SATY				*e*S	**Sb**	**09 52 43.3**	**+1.9**
	14nm,0.5s								
SATY	**Saty**	**4.61**	**31**	Pg	Pn	09 51 40.5	+5.9
	16nm,0.6s								
SATY				Lg	Lg	09 52 42.8			
	14nm,0.7s								
KTBS	**Karatobe**	**4.71**	**13**	*e*P	Pb	09 51 42.4	-5.0
	2.9nm,0.5s								
KTBS				*e*S	**Sb**	**09 52 44.9**	**+0.7**
	24nm,0.7s								
KTBS	**Karatobe**	**4.71**	**13**	Pg	Pn	09 51 41.6	+5.6
	10nm,0.6s								
KTBS				Lg	Lg	09 52 44.6			
	50nm,0.6s								
KUU	**Kurty**	**4.83**	**10**	*e*P	Pb	09 51 44.3	-5.3
	1.3nm,0.1s								
KUU				*e*S	**Sb**	**09 52 47.8**	**+0.1**
	21nm,0.5s								
KUU	**Kurty**	**4.83**	**10**	Pg	Pb	09 51 43.6	-5.9
	6.4nm,0.6s								
KUU				Lg	Lg	09 52 48.2			
	26nm,1.0s								
KURS	**Kuram**	**4.89**	**26**	*e*P	Pn	09 51 44.1	+5.7
	2.1nm,0.2s								
KURS				*e*S	**Sb**	**09 52 47.5**	**-1.9**
	15nm,0.8s								
UZB	**Uzynbulak**	**4.94**	**34**	*e*P	**Pb**	**09 51 47.2**	**-4.2**
	1.2nm,0.3s								
UZB				*e*S	**Sb**	**09 52 52.8**	**+1.9**
	10nm,0.5s								
UZB	**Uzynbulak**	**4.94**	**34**	Pg	Pn	09 51 45.5	+6.4
	7.4nm,0.7s								
UZB				Lg	Lg	09 52 51.4			
	9.8nm,0.8s								
IUG	**Iuzhnay**	**4.96**	**309**	*e*P	Pb	09 51 46.3	-5.4
	9.8nm,0.2s								
IUG				*e*S	**Sb**	**09 52 51.3**	**-0.1**
	31nm,0.5s								
PDGK	**Podgornoye**	**5.29**	**36**	Pg	**Pb**	**09 51 53.5**	**-4.0**
	5.5nm,1.1s								
PDGK				Lg	Lg	09 53 05.1			
	14nm,0.8s								
KK31	**Karatay Array**	**5.32**	**320**	⇓Pn	**Pn**	**09 51 46.5**	**+2.1**
	0.5nm,0.3s,baz=126,slow=14,SNR=12								
KK31				⇓Pg	**Pb**	**09 51 59.7**	**+1.9**
	1.9nm,0.5s,baz=150,slow=14,SNR=13								
KK31				⇑Sn	**Sn**	**09 52 45.0**	**-0.6**
	3.1nm,0.5s								
KK31				⇓Lg	Lg	09 53 07.8			
	6.2nm,0.6s,baz=136,slow=29,SNR=6.5								
ARXS	**Arharly**	**5.44**	**20**	*e*P	**Pb**	**09 51 55.4**	**-4.6**
	2.1nm,0.2s								
ARXS				*e*S	**Sb**	**09 53 07.0**	**+1.7**
	9.9nm,0.6s								
ARXS	**Arharly**	**5.44**	**20**	Pg	**Pb**	**09 51 55.6**	**-4.3**
	15nm,0.8s								
ARXS				Lg	Lg	09 53 08.4			
	9.8nm,0.7s								
MNBS	**Baschi**	**5.49**	**25**	*e*P	**Pb**	**09 51 57.5**	**-3.4**
	0.6nm,0.3s								
MNBS				*e*S	**Sb**	**09 53 10.3**	**+3.5**
	8.9nm,0.3s								
MNBS	**Baschi**	**5.49**	**25**	Pg	**Pb**	**09 51 56.6**	**-4.3**
	9.8nm,0.7s								
MNBS				Lg	Lg	09 53 10.0			
	15nm,0.7s								
BRLS	**Borolday**	**5.62**	**316**	Pg	Pb	09 51 57.0	-6.0
	1.0nm,0.3s								
BRLS				Lg	Lg	09 53 11.9			
	0.7nm,0.5s								
KTMS	**Ketmen**	**5.79**	**40**	Pg	**Pb**	**09 52 02.5**	**-3.5**
	0.4nm,0.1s								
KTMS				Lg	Lg	09 53 20.2			
	8.4nm,0.5s								
DJR	**Jarkent**	**6.22**	**32**	Pg	**Pb**	**09 52 10.7**	**-2.6**
	3.8nm,0.5s								
DJR				Lg	Lg	09 53 35.8			
	2.7nm,0.5s								
MKAR	**Makanchi Array**	**9.25**	**32**	Pn	**Pn**	**09 52 36.4**	**-1.8**
	0.1nm,0.3s,baz=228,slow=10.0,SNR=1.9								
MKAR				Lg	Lg	09 55 02.9			
	0.1nm,0.3s,baz=240,slow=31,SNR=2.1								
TORD	**Torodi Ar. Bea**	**69.08**	**270**	P	**P**	**10 01 30.8**	**-0.4**
	0.2nm,0.4s,baz=48,slow=5.6,SNR=4.7								
YKA	**Yellowknife Ar**	**78.41**	**5**	P	**P**	**10 02 22.4**	**-2.8**
	0.3nm,0.8s,baz=349,slow=5.4,SNR=2.1								

***IDC* 17 09:55:35.7±6.9, 23°.76S×179°.74W, h492km±79km, mb3.4/3, mb1 3.6/4, mb1mx3.0/24, mbtmp4.2/4, Error ellipse: s-maj=48.6km s-min=29.3km az=19.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
URZ	**Urewera**	**14.70**	**190**	P		P	09 58 42.7	+0.1
	0.6nm,0.3s,baz=66,slow=3.2,SNR=6.6							
URZ				S		S	10 01 16.2	-0.7
	0.4nm,0.3s,baz=85,slow=19,SNR=5.5							
ASAR	**Alice Springs**	**42.30**	**260**	P		P	10 02 45.7	+0.1
	3.1nm,0.5s,baz=95,slow=7.7,SNR=52							
WRA	**Warramunga Arr**	**42.66**	**266**	P		P	10 02 48.2	-0.3
	2.1nm,0.3s,baz=96,slow=8.1,SNR=184							
TXAR	**Lajitas Array**	**90.15**	**58**	P		P	10 07 43.4	+0.1
	0.2nm,0.6s,baz=200,slow=4.7,SNR=4.3							
TORD	**Torodi Ar. Bea**	**169.36**	**188**	PKPab		PKPab	10 16 01.8	-0.8
	0.3nm,0.6s,baz=168,slow=2.8,SNR=1.4							

IDC ***17*** *10:11:49.8±2.3, 21°.11S×178°.64W, h573km±26km, mb3.4/13, mb1 3.6/14, mb1mx3.5/30, mbtmp4.3/14, Error ellipse: s-maj=19.6km s-min=11.5km az=153.0*

ISC 17 10:11:47.2±0.6, 21°.2S±0°.1×178°.5W±0°.1, h550km, n38, σ1°38/45, mb3.9/13, 2C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DZM	**Mont Dzumac**	**13.99**	**264**	P		**P**	**10 14 46.8**	**+0.3**
	0.5nm,0.3s,baz=265,slow=18,SNR=2.3							
WMGZ	**Waiomatatini S**	**16.74**	**188**	P		**P**	**10 15 14.4**	**+1.0**
HAZ	**Te Kaha**	**16.77**	**190**	P		**P**	**10 15 14.1**	**+0.4**
RUGZ	**Raukumara Rang**	**17.00**	**190**	P		**P**	**10 15 15.8**	**-0.1**
PUZ	**Puketiti**	**17.01**	**189**	P		**P**	**10 15 17.2**	**+1.3**
TGRZ	**Tauranga**	**17.05**	**194**	P		**P**	**10 15 18.5**	**+2.4**
TWGZ	**Tauwhareparae**	**17.15**	**189**	P		**P**	**10 15 19.3**	**+2.1**
KMRZ	**Kaimai**	**17.23**	**195**	P		**P**	**10 15 21.1**	**+3.2**
MWZ	**Matawai**	**17.38**	**190**	P		**P**	**10 15 19.0**	**-0.3**
URZ	**Urewera**	**17.38**	**192**	P		**P**	**10 15 16.9**	**-2.3**
	2.5nm,0.3s,baz=308,slow=4.3,SNR=25							
URZ				S		**S**	**10 18 08.1**	**-3.9**
	0.2nm,0.3s,baz=197,slow=19,SNR=1.5							
URZ	**Urewera**	**17.38**	**192**	P		**P**	**10 15 17.8**	**-1.4**
RAGZ	**Rawiri**	**17.56**	**191**	P		**P**	**10 15 21.5**	**+0.6**
PRRZ	**Plateau Road**	**17.75**	**193**	P		**P**	**10 15 23.3**	**+0.6**
RPZ	**Rata Peaks**	**24.04**	**199**	P		**P**	**10 16 21.4**	**+2.1**
	3.4nm,0.5s,baz=350,slow=17,SNR=1.7							
ASAR	**Alice Springs**	**43.86**	**258**	P		**P**	**10 19 05.9**	**+0.5**
	7.5nm,0.6s,baz=95,slow=8.0,SNR=135							
ASAR				PcP		**PcP**	**10 20 39.6**	**0.0**
	1.8nm,0.7s,baz=104,slow=3.7,SNR=9.2							
ASAR				S		**S**	**10 24 56.4**	**-0.7**
	1.6nm,0.9s,baz=88,slow=15,SNR=9.4							
WRA	**Warramunga Arr**	**44.00**	**263**	P		**P**	**10 19 06.6**	**+0.1**
	2.6nm,0.3s,baz=97,slow=7.5,SNR=258							
WRA				PcP		**PcP**	**10 20 40.9**	**+0.8**
	1.0nm,1.1s,baz=82,slow=3.1,SNR=3.7							
WRA				S		**S**	**10 24 57.8**	**-1.3**
	1.3nm,1.0s,baz=97,slow=11,SNR=4.3							
VNDA	**Vanda**	**57.14**	**185**	P		**P**	**10 20 43.1**	**+1.9**
	0.5nm,0.5s,baz=360,slow=6.9,SNR=6.6							
MJAR	**Matsushiro Arr**	**70.50**	**324**	P		**P**	**10 22 06.6**	**-0.3**
	1.8nm,0.6s,baz=141,slow=6.1,SNR=5.8							
PETK	**Petropavlovsk-**	**76.85**	**346**	P		**P**	**10 22 41.9**	**-0.6**
	3.2nm,0.7s,baz=126,slow=9.1,SNR=2.5							
KSRS	**Korea Array**	**77.10**	**319**	P		**P**	**10 22 44.6**	**+0.4**
	0.7nm,0.7s,baz=133,slow=6.0,SNR=4.6							

USRK	**Ussuriysk Ar.**	**79.28**	**326**	P		**P**	**10 22 56.8**	**+1.1**
	3.9nm,0.8s,baz=145,slow=5.3,SNR=6.2								
NVAR	**Mina Array Bea**	**81.90**	**44**	P		**P**	**10 23 10.7**	**+0.8**
	1.1nm,0.7s,baz=223,slow=8.9,SNR=10								
WHN	**Wuhan**	**82.47**	**307**	P		**P**	**10 23 14.5**	**+2.0**
TXAR	**Lajitas Array**	**87.88**	**58**	P		**P**	**10 23 39.3**	**+0.4**
	0.8nm,0.8s,baz=212,slow=4.4,SNR=9.8								
ILAR	**Eielson Array**	**89.14**	**13**	P		**P**	**10 23 43.2**	**-0.6**
	0.7nm,0.6s,baz=227,slow=5.5,SNR=8.1								
PDAR	**Pinedale Array**	**89.84**	**43**	P		**P**	**10 23 47.5**	**-0.4**
	1.0nm,0.7s,baz=194,slow=2.8,SNR=9.8								
CMAR	**Chiang Mai Arr**	**89.88**	**290**	P		**P**	**10 23 48.4**	**+0.1**
	3.0nm,0.9s,baz=128,slow=3.0,SNR=11								
MKAR	**Makanchi Array**	**111.33**	**313**	PKiKP		**PKiKP**	**10 29 16.8**	**-2.1**
	0.2nm,0.7s,baz=72,slow=4.7,SNR=5.2								
KURBB	**Kurchatov Arra**	**114.23**	**317**	PKP		PKPdf	10 29 23.0	-1.3
	0.5nm,0.7s,baz=91,slow=1.6,SNR=4.6								
BVAR	**Borovoye Array**	**119.31**	**320**	PKP		**PKiKP**	**10 29 33.3**	**-0.7**
	0.9nm,0.5s,baz=67,slow=3.7,SNR=5.5								
ARCES	**ARCESS Array B**	**129.54**	**349**	PKP		**PKiKP**	**10 29 52.8**	**-1.1**
	3.0nm,1.0s,baz=48,slow=1.8,SNR=4.1								
FINES	**FINESS Array B**	**136.32**	**343**	PKP		**PKiKP**	**10 30 06.1**	**-1.8**
	1.2nm,0.8s,baz=10,slow=1.6,SNR=3.4								
AKASG	**Malin Array Be**	**143.40**	**330**	PKP		PKPbc	10 30 16.8	-0.8
	4.9nm,0.6s,baz=44,slow=4.6,SNR=14								
BRTR	**Keskin Array B**	**146.94**	**311**	PKPbc		**PKiKP**	**10 30 28.6**	**-2.0**
	2.5nm,0.8s,baz=133,slow=4.3,SNR=12								
CLL	**Collm**	**148.65**	**346**	⇓*i*PKPbc		**PKiKP**	**10 30 33.6**	**+0.1**
	comp=Z,8.0nm,1.0s								
CLL				⇓*i*PKPab		**PKPab**	**10 30 38.8**	**+0.6**
	comp=Z,5.0nm,0.9s								
CLL				*e*PKPab		**pPKPab**	**10 32 41.0**	**+0.1**
CLL				*i* SKPdf		**SKPdf**	**10 33 09.1**	**-0.7**
DPC	**Dobruska-Polom**	**148.66**	**342**	⇑*e*PKP		**PKiKP**	**10 30 33.5**	**-0.1**
KHC	**Kasperske Hory**	**150.53**	**344**	⇑*e*PKP		**PKiKP**	**10 30 37.0**	**-0.5**
KHC				*e*PKPAB		**PKPab**	**10 30 46.3**	**+0.2**
GERES	**GERESS Array B**	**150.76**	**343**	PKPbc		**PKiKP**	**10 30 37.6**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=45,slow=2.1,SNR=16								

IDC ***17*** *10:17:57.8±0.6, 19°.87S×70°.72W, h0km, mb4.1/12, mb1 4.3/17, mb1mx4.2/34, mbtmp4.2/17, ML3.7/5, MS3.9/14, Ms1 3.9/14, ms1mx3.7/34, Error ellipse: s-maj=20.6km s-min=12.9km az=55.0*

NEIC ***17*** *10:17:59.6, 20°.03S×70°.94W, h19km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}8.08; $M_{\theta\theta}$-0.34; $M_{\phi\phi}$-7.73; $M_{r\theta}$1.66; $M_{r\phi}$3.34; $M_{\theta\phi}$-4.04; Fault plane solution: $M_0$9.63000×10^{15} NP1:ϕ_s339.70000°, δ31.48000°, λ91.20000°. NP2:ϕ_s158.29000°, δ58.53000°, λ89.27000°. Principal axes: T 9.1297, Plg76.0000°, Azm66.0000°; N 0.9397, Plg1.0000°, Azm159.0000°; P -10.0694, Plg14.0000°, Azm249.0000°;*

NEIC ***17*** *10:18:00.1±1.5, 20°.02S±0°.03×70°.88W±0°.02, h15km±3km, mb4.7/65, Mwr4.6/51, ML4.5(GUC) Error ellipse: s-maj=5.5km s-min=2.2km az=151.0*

GUC ***17*** *10:18:00.8±0.5, 19°.96S×70°.98W, h33km±1km, ML4.6*

VAO ***17*** *10:18:03.9±0.9, 19°.87S×70°.76W, h47km±5km, mb4.5*

ISC 17 10:17:59.7±1.2, 19°.97S±0°.02×70°.89W±0°.04, h14km±7km, n236, σ1°46/248, mb4.6/31, MS4.0/12, 7C-10D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TA02	**Huaiquique**	**0.78**	**113**	⇓*i*P		**Pb**	**10 18 15.2**	**+0.2**
TA02				*i* S		**Sn**	**10 18 26.6**	**-1.1**
TA02				IAML			10 18 28.3	
	comp=E,53μm,0.4s							
PSGC	**Pisagua**	**0.81**	**63**	⇓*i*P		**Pb**	**10 18 15.6**	**0.0**
PSGC				*i* S		**Sg**	**10 18 27.3**	**+1.2**
PSGCX	**Pisagua**	**0.81**	**63**			**Pb**	**10 18 15.8**	**+0.2**
PSGCX				Sg		**Sg**	**10 18 27.1**	**+0.9**
TA01	**Diego Aracena**	**0.90**	**132**	⇓*i*P		**Pb**	**10 18 17.2**	**+0.2**
TA01				*i* S		**Sg**	**10 18 29.8**	**+1.0**
TA01				IAML			10 18 31.1	
	comp=N,22μm,0.3s							
TA01	**Diego Aracena**	**0.90**	**132**			**Pb**	**10 18 17.2**	**+0.2**
TA01						**Sg**	**10 18 29.9**	**+1.2**
PATCX	**Punta Patache**	**1.10**	**141**	⇓*e*P		**Pb**	**10 18 20.2**	**-0.3**
PATCX				*i* S		**Sb**	**10 18 34.8**	**+0.1**
PATCX				IAML			10 18 41.0	
	comp=E,19μm,0.6s							
PATCX	**Punta Patache**	**1.10**	**141**			**Pb**	**10 18 20.7**	**+0.2**
PB11	**IPOC Station P**	**1.18**	**80**	⇓*i*P		**Pn**	**10 18 21.9**	**0.0**
PB11				*i* S		**Sg**	**10 18 38.2**	**+0.4**
PB11				IAML			10 18 39.9	
	comp=N,18μm,0.6s							
PB11	**IPOC Station P**	**1.18**	**80**			**Pn**	**10 18 22.0**	**+0.1**
PB11				Sn		**Sn**	**10 18 37.8**	**0.0**
PB12	**IPOC Station P**	**1.45**	**22**	⇑*i*P		**Pn**	**10 18 25.7**	**+0.2**
PB12				*e*S		**Sn**	**10 18 43.8**	**-0.5**
PB12				IAML			10 18 53.1	
	comp=N,7μm,0.3s							
PB12	**IPOC Station P**	**1.45**	**22**			**Pn**	**10 18 25.9**	**+0.4**
MNMC	**Minye Minye**	**1.48**	**56**	⇓*i*P		**Pb**	**10 18 26.8**	**-0.2**
MNMC				*i* S		**Sg**	**10 18 46.9**	**-0.5**
MNMC				IAML			10 18 55.9	
	comp=E,19μm,0.7s							
MNMC	**Minye Minye**	**1.48**	**56**			**Pb**	**10 18 26.7**	**-0.4**
GO01	**Chusmiza**	**1.62**	**80**	⇑*i*P		**Pn**	**10 18 29.1**	**+0.8**
GO01				*i* S		**Sg**	**10 18 51.5**	**-0.6**
GO01				IAML			10 18 54.8	
	comp=E,6μm,0.4s							
GO01	**Chusmiza**	**1.62**	**80**			**Pb**	**10 18 29.3**	**-0.4**
PB02	**IPOC Station P**	**1.64**	**146**	⇓*i*P		**Pn**	**10 18 28.1**	**-0.1**
PB02				*i* S		**Sn**	**10 18 48.7**	**-0.5**
PB08	**IPOC Station P**	**1.64**	**96**	⇑*i*P		**Pn**	**10 18 29.2**	**+0.7**
PB08				*i* S		**Sb**	**10 18 51.4**	**+0.7**
PB08				IAML			10 18 58.2	
	comp=N,7μm,0.5s							
PB08	**IPOC Station P**	**1.64**	**96**			**Pb**	**10 18 29.5**	**-0.5**
AP01	**Chacalluta**	**1.67**	**18**	⇑*i*P		**Pn**	**10 18 29.1**	**+0.6**
AP01				*i* S		**Sb**	**10 18 50.7**	**-0.4**
AP01				IAML			10 18 59.8	
	comp=E,19μm,0.6s							
AP01	**Chacalluta**	**1.67**	**18**			**Pn**	**10 18 29.1**	**+0.6**
PB01	**IPOC Station P**	**1.70**	**129**	⇑*i*P		**Pn**	**10 18 29.4**	**+0.4**
PB01				*e*S		**Sb**	**10 18 51.4**	**-0.6**
PB01				IAML			10 18 58.1	
	comp=N,12μm,0.7s							
PB01	**IPOC Station P**	**1.70**	**129**			**Pn**	**10 18 29.6**	**+0.6**
PB07	**IPOC Station P**	**1.99**	**152**	⇓*e*P		**Pn**	**10 18 32.6**	**-0.4**
PB07				*e*S		**Sn**	**10 18 58.4**	**+0.5**
PB07				IAML			10 19 08.1	
	comp=E,6μm,0.6s							
PB07	**IPOC Station P**	**1.99**	**152**	Pn		**Pn**	**10 18 32.6**	**-0.4**
PB16	**IPOC Station P**	**2.08**	**39**	⇑*i*P		**Pn**	**10 18 35.7**	**+1.0**
PB16				*e*S		**Sb**	**10 19 02.7**	**-0.9**
PB16				IAML			10 19 11.4	
	comp=E,3μm,0.4s							
PB16	**IPOC Station P**	**2.08**	**39**			**Pn**	**10 18 36.0**	**+1.3**
PB03	**IPOC Station P**	**2.33**	**153**	*e*P		**Pn**	**10 18 37.4**	**-0.3**
PB03				*i* S		**Sn**	**10 19 02.6**	**-3.7**
PB04	**IPOC Station P**	**2.46**	**164**	*e*P		**Pn**	**10 18 38.5**	**-1.0**
PB04				*e*S		**Sn**	**10 19 06.0**	**-3.4**
PB04				IAML			10 19 23.8	
	comp=E,4μm,0.5s							
PB04	**IPOC Station P**	**2.46**	**164**	Pn		**Pn**	**10 18 38.6**	**-1.0**
PB05	**IPOC Station P**	**2.94**	**168**	*e*P		**Pn**	**10 18 44.7**	**-1.4**
PB05				*i* S		**Sn**	**10 19 17.4**	**-4.0**
PB05				IAML			10 19 41.7	
	comp=E,3μm,0.8s							
PB06	**IPOC Station P**	**2.99**	**156**	⇓*e*P		**Pn**	**10 18 46.0**	**-0.8**
PB06				*i* S		**Sn**	**10 19 20.9**	**-1.7**
PB06				IAML			10 19 38.4	
	comp=E,3μm,0.8s							
PB06	**IPOC Station P**	**2.99**	**156**			**Pn**	**10 18 45.9**	**-1.0**
LVC	**Limon Verde**	**3.21**	**145**	Pn		**Pn**	**10 18 51.5**	**+1.4**
	comp=E,26nm,0.3s,baz=355,slow=7.8,SNR=94							
LVC				Sn		**Sn**	**10 19 29.4**	**+1.0**
	comp=E,93nm,0.3s,baz=82,slow=17,SNR=6.8							
LVC				Lg		Lg	10 19 39.0	
	comp=E,147nm,0.3s,baz=172,slow=0.7,SNR=16							
LVC	**Limon Verde**	**3.21**	**145**	⇑*i*P		**Pn**	**10 18 51.5**	**+1.4**
LVC				*i* S		**Sn**	**10 19 29.4**	**+1.0**
LVC	**Limon Verde**	**3.21**	**145**			**Pn**	**10 18 51.6**	**+1.4**
LVC						**Sn**	**10 19 27.8**	**-0.6**
LVC	**Limon Verde**	**3.21**	**145**	*e*P		**Pn**	**10 18 51.4**	**+1.3**
LVC				*e*S		**Sn**	**10 19 29.0**	**+0.6**
PB15	**IPOC Station P**	**3.49**	**158**			**Pn**	**10 18 53.5**	**-0.3**
PB10	**IPOC Station P**	**3.54**	**175**			**Pn**	**10 18 53.0**	**-1.3**
LPAZ	**La Paz**	**4.50**	**36**	Pn		Pn	10 19 12.2	+4.2
	comp=E,1.0nm,0.3s,baz=217,slow=3.2,SNR=24							
LPAZ				Lg		Lg	10 20 19.9	
	comp=E,2.0nm,0.3s,baz=73,slow=22,SNR=1.1							
LPAZ	**La Paz**	**4.50**	**36**			Pn	10 19 12.0	+4.0
LPAZ	**La Paz**	**4.50**	**36**	*e*P		Pn	10 19 12.3	+4.2
PB14	**IPOC Station P**	**4.66**	**175**			**Pn**	**10 19 08.2**	**-1.7**
GO02	**Mina Guanaco**	**5.31**	**167**			**Pn**	**10 19 17.9**	**-1.0**
AC02	**Maricunga**	**7.03**	**167**			**Pn**	**10 19 42.0**	**-0.6**
AC05	**El Transito**	**8.85**	**176**	Pn		**Pn**	**10 20 05.2**	**-2.1**
NNA	**Nana**	**9.78**	**323**	Pn		**Pn**	**10 20 19.5**	**-0.6**
	comp=E,0.3nm,0.3s,baz=300,slow=10,SNR=1.7							
NNA				Sn		Sn	10 22 00.7	-9.0
	comp=E,0.9nm,0.3s,baz=289,slow=10,SNR=1.4							
CO01	**Juntas del Tor**	**9.99**	**176**	Pn		**Pn**	**10 20 22.4**	**-0.7**
SIV	**San Ignacio**	**10.14**	**69**	Pn		**Pn**	**10 20 24.3**	**-0.7**
	comp=E,4.3nm,0.3s,baz=263,slow=12,SNR=34							
SIV				Sn		Sn	10 22 07.8	-11
	baz=52,slow=18,SNR=1.6							
CO03	**El Pedregal**	**10.83**	**179**	Pn		Pn	10 20 31.7	-2.7
CO02	**Combarbal**	**11.19**	**180**	Pn		**Pn**	**10 20 38.6**	**-0.8**
CFA	**Coronel Fontan**	**11.83**	**169**	Pn		**Pn**	**10 20 48.5**	**+0.4**
	comp=E,0.4nm,0.3s,baz=346,slow=11,SNR=2.1							
CFA				Sn		**Sn**	**10 23 08.2**	**+8.1**
	comp=E,0.4nm,0.3s,baz=250,slow=22,SNR=8.9							
CO04	**Los Peladeros**	**12.03**	**180**	Pn		**Pn**	**10 20 51.3**	**+0.3**
PTLB	**Pontes e Lacer**	**12.07**	**70**	*e*P		**Pn**	**10 20 50.6**	**-0.7**
VILB	**Vilhena**	**12.40**	**57**	*e*P		**Pn**	**10 20 55.0**	**-0.9**
SAML	**Samuel**	**13.25**	**35**			**Pn**	**10 21 07.8**	**+0.3**
SAML	**Samuel**	**13.25**	**35**	*e*P		**Pn**	**10 21 05.4**	**-2.1**
CPUP	**Villa Florida**	**13.99**	**119**	Pn		**Pn**	**10 21 17.8**	**+0.3**
	comp=E,0.0nm,0.3s,baz=297,slow=15,SNR=2.7							
CPUP				LR		LR	10 27 18.9	
	comp=E,493nm,19.6s,baz=300,slow=40							
CPUP	**Villa Florida**	**13.99**	**119**	*e*P		**Pn**	**10 21 19.0**	**+1.5**
AQDB	**Aquidauana**	**14.27**	**95**	*e*P		**Pn**	**10 21 21.3**	**-0.1**
ATAH	**Atahualpa**	**14.69**	**329**	LR		LR	10 26 37.2	
	comp=E,172nm,21.4s,baz=118,slow=35							
BO02	**Sierra Bellavi**	**14.77**	**180**	Pn		**Pn**	**10 21 28.8**	**+0.5**
SALV	**Santo Antonio**	**15.01**	**77**	*e*P		**Pn**	**10 21 30.8**	**-0.8**
H03N1	**Juan Fernandez**	**15.21**	**206**	Pn		**Pn**	**10 21 31.5**	**-2.3**
	baz=108,slow=14,SNR=32							
H03N1				T		T	10 37 08.7	
	baz=32,slow=72,SNR=105							
H03N2	**Juan Fernandez**	**15.21**	**206**	Pn		**Pn**	**10 21 31.2**	**-2.7**
	baz=108,slow=14,SNR=14							
H03N2				T		T	10 37 12.7	
	baz=32,slow=72,SNR=113							
H03N3	**Juan Fernandez**	**15.22**	**206**	Pn		**Pn**	**10 21 31.4**	**-2.6**
	baz=108,slow=14,SNR=26							
H03N3				T		T	10 37 11.6	
	baz=32,slow=72,SNR=121							
H03S3	**Juan Fernandez**	**15.54**	**206**	Pn		**Pn**	**10 21 35.4**	**-2.8**
	baz=351,slow=71,SNR=10.0							
H03S1	**Juan Fernandez**	**15.55**	**206**	Pn		**Pn**	**10 21 35.7**	**-2.6**
	baz=351,slow=71,SNR=18							
H03S2	**Juan Fernandez**	**15.55**	**206**	Pn		**Pn**	**10 21 35.7**	**-2.6**
	baz=351,slow=71,SNR=21							
PDRB	**Porto dos Gac**	**15.95**	**61**	*e*P		**Pn**	**10 21 43.0**	**-0.8**
ITQB	**Itaqui**	**16.14**	**130**	*e*P		**Pn**	**10 21 47.2**	**+0.9**
BI02	**San Fabin de**	**16.64**	**181**	P		**Pn**	**10 21 54.0**	**+1.4**
C2SB	**Chapadao do Su**	**17.08**	**89**	*e*P		**Pn**	**10 21 57.1**	**-1.1**
CLDB	**Colider**	**17.12**	**60**	*e*P		**Pn**	**10 21 57.1**	**-1.6**
PTGB	**Pitanga**	**18.04**	**109**	*e*P		**P**	**10 22 11.2**	**+0.6**
PCMB	**P

TX32	**Lajitas Array**	**58.32**	**326**	P	**P**	**10 27 55.0**	**+0.5**
TXAR	**Lajitas Array**	**58.32**	**326**	P	**P**	**10 27 55.0**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=145,slow=7.3,SNR=6.1						
MIAR	**Mount Ida**	**58.35**	**338**	P	**P**	**10 27 54.9**	**+0.4**
MIAR				IAmb	IAmb	10 27 57.5	
	comp=Z,6.2nm,0.9s						
T47A	**Sharon Grove**	**58.68**	**345**	P	**P**	**10 27 56.0**	**-0.6**
X37A	**Clayton**	**59.04**	**337**	P	**P**	**10 27 58.1**	**-1.1**
X37A				IAmb	IAmb	10 28 06.3	
	comp=Z,7.4nm,0.8s						
HENM	**Henderson Moun**	**59.05**	**343**		**P**	**10 27 58.5**	**-0.8**
U40A	**Yellville**	**59.74**	**340**	P	**P**	**10 28 04.2**	**+0.2**
U40A				IAmb	IAmb	10 28 20.5	
	comp=Z,4.7nm,0.9s						
S44A	**Carbondale**	**59.90**	**343**	P	**P**	**10 28 05.5**	**+0.3**
S44A				IAmb	IAmb	10 28 07.5	
	comp=Z,10nm,1.1s						
HHAR	**Hobbs**	**60.04**	**339**	P	**P**	**10 28 06.7**	**+0.6**
HHAR				IAmb	IAmb	10 28 17.1	
	comp=Z,7.5nm,1.3s						
TUL1	**Leonard**	**60.37**	**337**	P	**P**	**10 28 09.2**	**+0.8**
TUL1				IAmb	IAmb	10 28 09.9	
	comp=Z,5.8nm,0.8s						
P43A	**Skaggs, Pawnee**	**61.80**	**344**	P	**P**	**10 28 18.1**	**+0.1**
ERPA	**Erie**	**62.34**	**352**	P	**P**	**10 28 22.1**	**+0.5**
WVNY	**West Valley, N**	**62.47**	**354**	P	**P**	**10 28 23.5**	**+1.0**
VNA2	**Neumayer--Watz**	**62.71**	**161**	P	**P**	**10 28 24.5**	**+0.7**
	baz=284,slow=6.8						
SNAA	**Sanae**	**64.33**	**161**	P	**P**	**10 28 35.8**	**+1.3**
CBKS	**Cedar Bluff**	**64.42**	**335**	P	**P**	**10 28 36.6**	**+1.1**
CBKS				IAmb	IAmb	10 28 43.3	
	comp=Z,8.6nm,1.1s						
H43A	**Windswept, Lux**	**65.95**	**347**	P	**P**	**10 28 43.4**	**-1.9**
TRQ	**Mont Tremblant**	**65.96**	**357**	P	**P**	**10 28 45.6**	**+0.3**
L34A	**Svendsen Farm,**	**65.98**	**339**	P	**P**	**10 28 45.9**	**+0.3**
SDCO	**Great Sand Dun**	**66.00**	**330**	P	**P**	**10 28 46.4**	**+0.3**
SDCO				IAmb	IAmb	10 28 54.2	
	comp=Z,4.5nm,1.1s						
K31A	**O'Neill**	**67.37**	**338**	P	**P**	**10 28 55.5**	**+1.0**
ECSD	**EROS Data Cent**	**67.64**	**340**	P	**P**	**10 28 56.6**	**+0.5**
ECSD				IAmb	IAmb	10 28 57.5	
	comp=Z,8.9nm,1.4s						
SRU	**San Rafael Swe**	**69.49**	**328**	P	**P**	**10 29 10.1**	**+2.1**
CCUT	**Cedar City**	**69.79**	**325**	P	**P**	**10 29 12.2**	**+2.3**
P17A	**Butcher Ranch,**	**69.88**	**328**	P	**P**	**10 29 11.4**	**+1.0**
MSU	**Marysvale**	**69.88**	**327**	P	**P**	**10 29 12.3**	**+1.9**
DRLN	**Deer Lake**	**69.93**	**9**	P	**P**	**10 29 10.3**	**+0.1**
SHPR	**Sheep Range**	**70.02**	**323**	P	**P**	**10 29 11.7**	**+0.4**
DBIC	**Dimbokro**	**70.10**	**75**	P	**P**	**10 29 10.3**	**-1.8**
	comp=Z,5.3nm,0.9s,baz=226,slow=9.6,SNR=3.4						
DBIC				LR	LR	10 58 52.9	
	comp=Z,142nm,18.9s,baz=281,slow=35						
DBIC	**Dimbokro**	**70.10**	**75**	P	**P**	**10 29 11.2**	**-0.8**
DBIC				IAmb	IAmb	10 29 12.0	
	comp=Z,8.4nm,1.1s						
PSUT	**Pine Spring**	**70.78**	**326**	P	**P**	**10 29 18.1**	**+2.2**
B35A	**Bob, Littlefor**	**71.02**	**344**	P	**P**	**10 29 17.0**	**+0.1**
B35A				IAmb	IAmb	10 29 17.7	
	comp=Z,3.4nm,0.9s						
DUG	**Dugway, Tooele**	**71.47**	**327**	P	**P**	**10 29 20.2**	**+0.3**
AGMN	**Agassiz Nation**	**71.53**	**343**	P	**P**	**10 29 20.9**	**+0.9**
AGMN				IAmb	IAmb	10 29 21.1	
	comp=Z,6.1nm,1.1s						
R11A	**Troy Canyon, C**	**71.58**	**324**	P	**P**	**10 29 23.7**	**+3.0**
PDAR	**Pinedale Array**	**71.87**	**331**	P	**P**	**10 29 22.7**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=111,slow=8.3,SNR=3.9						
SPUT	**South Promonto**	**72.12**	**328**	P	**P**	**10 29 24.8**	**+0.9**
BGU	**Big Grassy Mou**	**72.12**	**328**	P	**P**	**10 29 24.3**	**+0.4**
MDND	**Maddock**	**72.25**	**340**	P	**P**	**10 29 24.8**	**+0.5**
REDW	**Red Top Meadow**	**72.93**	**331**	P	**P**	**10 29 29.8**	**+1.0**
REDW				IAmb	IAmb	10 29 40.6	
	comp=Z,4.7nm,1.1s						
NV11	**Mina Array Sit**	**73.07**	**323**	P	**P**	**10 29 29.9**	**+0.3**
ELK	**Elko**	**73.12**	**326**	P	**P**	**10 29 30.4**	**+0.4**
NVAR	**Mina Array Bea**	**73.15**	**323**	P	**P**	**10 29 31.0**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=158,slow=6.8,SNR=7.1						
FXWY	**Fox Creek**	**73.22**	**331**	P	**P**	**10 29 31.1**	**+0.6**
IMW	**Indian Meadow**	**73.38**	**331**	P	**P**	**10 29 33.0**	**+1.5**
IMW				IAmb	IAmb	10 29 40.5	
	comp=Z,5.9nm,1.3s						
FLWY	**Flagg Ranch**	**73.42**	**331**	P	**P**	**10 29 32.3**	**+0.6**
FLWY				IAmb	IAmb	10 29 40.1	
	comp=Z,11nm,1.2s						
KVN	**Kaiserville**	**73.47**	**323**	P	**P**	**10 29 33.5**	**+1.5**
RLMT	**Red Lodge**	**73.60**	**333**	P	**P**	**10 29 33.9**	**+1.2**
YNE	**Yellowstone No**	**73.83**	**332**	P	**P**	**10 29 35.0**	**+0.9**
YMR	**Madison River**	**73.99**	**331**	P	**P**	**10 29 36.7**	**+1.7**
YHH	**Holmes Hill**	**74.03**	**332**	P	**P**	**10 29 36.6**	**+1.2**
YHB	**Horse Butte**	**74.16**	**331**	P	**P**	**10 29 36.9**	**+0.9**
YHL	**Hebgen Lake**	**74.23**	**331**	P	**P**	**10 29 37.4**	**+1.0**
GCMT	**Greycliff**	**74.30**	**333**	P	**P**	**10 29 38.5**	**+1.9**
SCHQ	**Schefferville**	**74.57**	**2**	P	**P**	**10 29 38.2**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=220,slow=17,SNR=2.3						
SCHQ				LR	LR	11 02 05.2	
	comp=Z,58nm,20.8s,baz=206,slow=36						
SCHQ	**Schefferville**	**74.57**	**2**	P	**P**	**10 29 37.7**	**-0.1**
SCHQ				IAmb	IAmb	10 29 39.0	
	comp=Z,5.8nm,1.1s						
PAHR	**Pah Rah Range**	**74.64**	**323**	P	**P**	**10 29 40.4**	**+1.6**
PAHR				IAmb	IAmb	10 29 42.4	
	comp=Z,4.2nm,0.9s						
MCMT	**McKenzie Canyo**	**74.97**	**330**	P	**P**	**10 29 42.0**	**+1.3**
DLMT	**Dillon**	**75.26**	**331**	P	**P**	**10 29 42.0**	**-0.2**
MFID	**Camas Ranch**	**75.36**	**328**	P	**P**	**10 29 44.4**	**+1.5**
MFID				IAmb	IAmb	10 29 59.4	
	comp=Z,7.5nm,1.4s						
YBH	**Yreka Blue Hor**	**77.87**	**323**	LR	LR	11 03 05.2	
	comp=Z,54nm,19.9s,baz=36,slow=35						
TOA0	**Torodi Ar. Sit**	**78.61**	**71**	P	**P**	**10 30 00.7**	**-0.9**
TORD	**Torodi Ar. Bea**	**78.61**	**71**	P	**P**	**10 30 00.5**	**-1.1**
	comp=Z,12nm,0.9s,baz=256,slow=5.1,SNR=50						
TORD				LR	LR	11 03 08.5	
	comp=Z,149nm,20.1s,baz=230,slow=35						
RAR	**Rarotonga**	**82.00**	**250**	LR	LR	10 55 33.2	
	comp=Z,120nm,19.4s,baz=292,slow=27						
FRB	**Frobisher Bay**	**83.46**	**1**	LR	LR	11 07 07.4	
	comp=Z,76nm,20.6s,baz=221,slow=35						
TAM	**Tamanrasset**	**85.80**	**64**	P	**P**	**10 30 39.9**	**+0.6**
TAM				IAmb	IAmb	10 30 41.3	
	comp=Z,10nm,1.2s						
ESDC	**Sonseca Array**	**86.06**	**45**	P	**P**	**10 30 40.0**	**-0.1**
	comp=Z,3.4nm,1.2s,baz=241,slow=5.1,SNR=7.1						
YKA	**Yellowknife Ar**	**89.14**	**341**	P	**P**	**10 30 54.9**	**+0.6**
	comp=Z,1.4nm,0.9s,baz=135,slow=5.1,SNR=25						
H11S2	**WAKE ISLAND Hyl**	**25.83**	**279**	T	T	12 56 24.7	
	baz=101,slow=75,SNR=91						
H11S1	**WAKE ISLAND Hyl**	**25.84**	**279**	T	T	12 56 25.3	
	baz=101,slow=75,SNR=80						
H11S3	**WAKE ISLAND Hyl**	**25.85**	**279**	T	T	12 56 25.9	
	baz=101,slow=75,SNR=70						
H11N3	**WAKE ISLAND Hyl**	**25.88**	**280**	T	T	12 56 23.4	
	baz=101,slow=74,SNR=31						
H11N2	**WAKE ISLAND Hyl**	**25.89**	**280**	T	T	12 56 21.4	
	baz=101,slow=74,SNR=33						
H11N1	**WAKE ISLAND Hyl**	**25.89**	**280**	T	T	12 56 37.8	
	baz=101,slow=74,SNR=27						
ASAR	**Alice Springs**	**130.35**	**210**	PKP	**PKiKP**	**10 37 11.1**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=141,slow=1.8,SNR=3.3						
WRA	**Warramunga Arr**	**133.27**	**213**	PKP	**PKPdf**	**10 37 16.8**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=147,slow=1.7,SNR=4.6						
ZALV	**Zalesovo Beam**	**141.31**	**23**	PKP	**PKPdf**	**10 37 30.5**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=316,slow=4.0,SNR=5.0						
KDJ	**Kajisay**	**145.15**	**44**		**PKPdf**	**10 37 38.7**	**+1.5**
MAKZ	**Makanchi**	**145.25**	**33**		**PKPdf**	**10 37 37.7**	**+0.7**
NIL	**Nilore**	**145.40**	**59**		**PKPab**	**10 37 39.9**	**0.0**
MKAR	**Makanchi Array**	**145.43**	**33**	PKPbc	**PKPbc**	**10 37 36.2**	**-1.1**
	comp=Z,5.5nm,0.8s,baz=336,slow=2.7,SNR=12						
KSH	**Kashi**	**145.53**	**48**	PKPbc	**PKPab**	**10 37 39.4**	**+1.2**
KSH				PKS	**PKSdf**	**10 41 12.8**	**-0.6**
KSH				PP	PP	10 41 13.3	+15
USRK	**Ussuriysk Ar.**	**149.22**	**327**	PKPbc	**PKPbc**	**10 37 47.6**	**-0.3**
	comp=Z,3.7nm,0.9s,baz=20,slow=3.1,SNR=6.8						
MJAR	**Matsushiro Arr**	**149.67**	**309**	PKPbc	**PKPbc**	**10 37 49.4**	**0.0**
	comp=Z,2.6nm,0.9s,baz=114,slow=2.0,SNR=7.4						
SONM	**Songino Array**	**152.11**	**4**	PKP	**PKPdf**	**10 37 48.5**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=48,slow=2.1,SNR=3.6						
SONM				PKPbc	**PKPbc**	**10 37 54.7**	**-0.2**
	comp=Z,3.1nm,0.8s,baz=347,slow=1.5,SNR=17						
LZH	**Lanzhou**	**163.29**	**15**	*e*PKP	**PKPdf**	**10 38 03.1**	**+0.6**
LZH				pPKP	pPKPdf	10 38 08.5	+1.9
LZH				sPKP		10 38 10.3	
LZH				PKP	**pPKPab**	**10 38 56.3**	**-0.5**
LZH				LR	LR		
	comp=N,53nm,18.0s						
LZH				LR	LR		
	comp=E,65nm,18.2s						
LZH				LR	LR		
	comp=Z,74nm,19.9s						

*UPP **17** 10:23:45.1±2.8, 67.55N×30.99E, h0km, ML1.9, Suspected explosion*
*HEL **17** 10:23:47.9±0.2, 67.56N×30.44E, h0km, ML2.1, Explosion*
*KOLA **17** 10:23:48.1, 67.47N×30.50E, h0km*
ISC 17 10:23:47.1±0.9**, 67.57N**±0.05×**30.50E**±0.03**, h0km, n22,**
σ0s74/33, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRF	**Varrio**	**0.39**	**299**	PG	**Pg**	**10 23 54.3**	**-0.2**
VRF				SG	**Sg**	**10 23 59.4**	**-0.1**
APA0	**Apatity Array**	**0.95**	**86**	P	**Pg**	**10 24 05.4**	**0.0**
APA0				S	**Sg**	**10 24 18.0**	**+0.3**
APA	**Apatity**	**1.11**	**88**	P	**Pg**	**10 24 08.0**	**-0.4**
APA				S	**Sg**	**10 24 22.6**	**-0.2**
SGF	**Sodankyl**	**1.54**	**267**	PG	**Pn**	**10 24 15.1**	**-0.6**
SGF				SG	**Sn**	**10 24 34.9**	**-1.5**
KU6	**Riekki**	**1.56**	**189**	PG	**Pn**	**10 24 15.9**	**-0.2**
KU6				MSG		10 24 34.6	
	comp=Z,11nm,0.2s						
KU6				SG	**Sn**	**10 24 35.9**	**-1.2**
MSF	**Maaselka**	**1.76**	**200**	PG	**Pn**	**10 24 19.2**	**+0.4**
	baz=22						
MSF				SG	**Sn**	**10 24 42.0**	**+0.1**
RNF	**Rovaniemi**	**2.00**	**243**	PG	**Pn**	**10 24 22.7**	**+0.6**
RNF				SG	**Sn**	**10 24 48.8**	**+1.0**
ARE0	**ARCESS Array S**	**2.70**	**319**	PB	**Pn**	**10 24 32.9**	**+1.2**
HEF	**Hetta**	**2.71**	**291**	PN	**Pn**	**10 24 32.0**	**+0.1**
	baz=103						
HEF				MSG		10 25 07.2	
	comp=Z,9.3nm,0.2s						
HEF				SB	**Sb**	**10 25 09.2**	**-1.0**
TOF	**Tornio**	**2.86**	**241**	PN	**Pn**	**10 24 33.6**	**-0.3**
TOF				MSG		10 25 11.3	
	comp=Z,5.7nm,0.2s						
TOF				SG	**Sb**	**10 25 14.8**	**+0.3**
OUL	**Oulu**	**3.11**	**219**	PB	**Pn**	**10 24 39.2**	**+1.9**
LANU	**Lannavaara**	**3.27**	**282**	P	**Pn**	**10 24 39.5**	**-0.1**
LANU	**Lannavaara**	**3.27**	**282**	PN	**Pn**	**10 24 39.4**	**-0.1**
MASU	**Masugnsbyn**	**3.27**	**272**	P	**Pn**	**10 24 40.4**	**+0.8**
ERTU	**Ertsjaerv**	**3.41**	**257**	P	**Pn**	**10 24 41.9**	**+0.4**
ERTU				S	**Sn**	**10 25 24.2**	**+1.6**
ERTU	**Ertsjaerv**	**3.41**	**257**	PN	**Pn**	**10 24 41.9**	**+0.4**
KIF	**Kilpisjarvi**	**3.88**	**296**	PN	**Pn**	**10 24 48.5**	**+0.5**
KUA	**Kurravaara**	**3.88**	**280**	P	**Pn**	**10 24 48.1**	**+0.1**
OUF	**Merijarvi**	**3.98**	**219**	PN	**Pn**	**10 24 49.6**	**+0.2**
	baz=36						
HARU	**Harads**	**4.01**	**254**	P	**Pn**	**10 24 49.4**	**-0.3**
HARU				S	**Sn**	**10 25 37.9**	**+0.5**
SJUU	**Sjulsmark**	**4.11**	**244**	P	**Pn**	**10 24 50.7**	**-0.4**
NIKU	**Nikkaluokta**	**4.38**	**279**	P	**Pn**	**10 24 54.6**	**-0.1**

*IDC **17** 10:24:48.3±2.7, 20.20S×70.59W, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.5/22, mbtmp3.6/4, ML3.1/1, Error ellipse: s-maj=76.6km s-min=51.1km az=170.0*
*GUC **17** 10:24:51.7±0.5, 19.95S×70.87W, h33km±1km, ML3.4*
ISC 17 10:24:50.0±1.9**, 19.99S**±0.03×**70.85W**±0.07**, h13**km±10km**,**
n22,σ0s79/36, mb3.7/3, 5C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TA02	**Huaiquique**	**0.73**	**112**	⇓*i* P	**Pb**	**10 25 04.6**	**+0.1**
TA02				*i* S	**Sb**	**10 25 15.2**	**+0.7**
TA02				IAML		10 25 17.1	
	comp=E,4μm,0.4s						
PSGC	**Pisagua**	**0.79**	**60**	⇑*e* P	**Pg**	**10 25 05.2**	**-0.1**
PSGC				*i* S	**Sg**	**10 25 15.6**	**0.0**
TA01	**Diego Aracena**	**0.85**	**132**	⇓*i* P	**Pg**	**10 25 06.7**	**+0.3**
TA01				*i* S	**Sn**	**10 25 18.5**	**-1.5**
TA01				IAML		10 25 20.5	
	comp=N,1μm,0.4s						
PATCX	**Punta Patache**	**1.05**	**142**	⇓*i* P	**Pb**	**10 25 10.0**	**-0.1**
PATCX				*i* S	**Sn**	**10 25 24.4**	**-0.8**
PB11	**IPOC Station P**	**1.15**	**79**	*e* P	**Pb**	**10 25 11.2**	**-0.6**
PB11				*i* S	**Sb**	**10 25 26.4**	**-0.2**
PB11				IAML		10 25 28.1	
	comp=N,2μm,0.3s						
PB12	**IPOC Station P**	**1.46**	**20**	⇑*e* P	**Pn**	**10 25 15.5**	**-0.6**
PB12				*e* S	**Sn**	**10 25 33.6**	**-1.6**
PB12				IAML		10 25 38.1	
	comp=N,1μm,0.6s						
MNMC	**Minye Minye**	**1.46**	**54**	⇑*i* P	**Pn**	**10 25 16.6**	**+0.2**
MNMC				*i* S	**Sn**	**10 25 35.8**	**+0.3**
GO01	**Chusmiza**	**1.59**	**79**	⇑*e* P	**Pn**	**10 25 18.7**	**+0.4**
GO01				*e* S	**Sb**	**10 25 39.6**	**-0.1**
PB02	**IPOC Station P**	**1.59**	**146**	⇓*i* P	**Pn**	**10 25 17.8**	**-0.3**
PB02				*e* S	**Sb**	**10 25 38.4**	**-1.1**
PB02				IAML		10 25 44.5	
	comp=N,715nm,0.3s						
PB08	**IPOC Station P**	**1.60**	**96**	⇑*e* P	**Pn**	**10 25 19.0**	**+0.7**
PB08				*e* S	**Sb**	**10 25 40.1**	**+0.2**
PB08				IAML		10 25 41.7	
	comp=N,791nm,0.5s						
PB01	**IPOC Station P**	**1.65**	**130**	*e* P	**Pn**	**10 25 19.4**	**+0.6**
PB01				*i* S	**Sb**	**10 25 40.7**	**-0.4**
PB01				IAML		10 25 48.3	
	comp=N,327nm,0.3s						
AP01	**Chacalluta**	**1.68**	**17**	*e* P	**Pn**	**10 25 19.8**	**+0.6**
AP01				*e* S	**Sn**	**10 25 39.4**	**-1.3**
PB07	**IPOC Station P**	**1.95**	**153**	⇓*e* P	**Pn**	**10 25 22.9**	**0.0**
PB07				*e* S	**Sn**	**10 25 47.9**	**+0.5**
PB07				IAML		10 26 00.5	
	comp=E,249nm,0.5s						
PB16	**IPOC Station P**	**2.08**	**38**	*e* P	**Pn**	**10 25 25.6**	**+0.5**
PB16				*i* S	**Sn**	**10 25 51.9**	**+0.7**
PB16				IAML		10 25 57.0	
	comp=N,404nm,0.4s						
PB03	**IPOC Station P**	**2.29**	**154**	*e* P	**Pn**	**10 25 27.3**	**-0.3**
PB03				*e* S	**Sn**	**10 25 56.4**	**+0.6**
PB04	**IPOC Station P**	**2.42**	**164**	*e* P	**Pn**	**10 25 28.5**	**-1.0**
LPAZ	**La Paz**	**4.50**	**35**	Pn	Pn	10 26 03.8	+5.3
	comp=N,0.4nm,0.3s,baz=227,slow=10,SNR=2.7						
LPAZ				Lg	Lg	10 27 11.2	
	comp=N,0.1nm,0.3s,baz=61,slow=22,SNR=1.1						
SIV	**San Ignacio**	**10.12**	**68**	Pn	**Pn**	**10 27 14.8**	**-0.3**
	comp=N,0.2nm,0.3s,baz=253,slow=17,SNR=2.2						
PTGA	**Pitinga**	**21.91**	**30**	P	**P**	**10 29 43.2**	**0.0**
	comp=N,1.1nm,0.3s,baz=312,slow=22,SNR=1.3						
TORD	**Torodi Ar. Bea**	**78.58**	**71**	P	**P**	**10 36 50.5**	**-1.4**
	comp=N,0.8nm,1.0s,baz=235,slow=6.8,SNR=3.5						
YKA	**Yellowknife Ar**	**89.18**	**341**	P	**P**	**10 37 47.1**	**+2.1**
	comp=N,0.1nm,0.6s,baz=140,slow=6.1,SNR=1.1						
MKAR	**Makanchi Array**	**145.43**	**33**	PKPbc	**PKPab**	**10 44 28.3**	**+0.3**
	comp=N,0.3nm,0.7s,baz=330,slow=0.7,SNR=3.3						

*NEIC **17** 10:28:54.9±2.2, 5.67S×102.71E×0.1, h35km±2km, mb4.2/13, Error ellipse: s-maj=24.5km s-min=8.5km az=108.0*
*IDC **17** 10:28:57.9±2.5, 5.49S×151.87E, h60km±16km, mb3.5/7, mb1 3.7/8, mb1mx3.5/34, mbtmp3.8/8, Error ellipse: s-maj=51.0km s-min=10.4km az=120.0*
ISC 17 10:28:55.7±0.8**, 5.62S**±0.07×**152.1E**±0.1**, h45**km**, n26,**
σ1s19/30, mb3.8/11, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.31**	**356**	P	**Pn**	**10 29 17.6**	**0.0**
	358nm,0.3s,baz=160,slow=0.9,SNR=89						
KRVT				S	**Sn**	**10 29 33.8**	**-0.1**
	789nm,0.3s,baz=47,slow=20,SNR=15						
RABL	**Rabaul**	**1.42**	**2**		**Pn**	**10 29 19.9**	**+0.8**
RABL				Sn	**Sn**	**10 29 38.3**	**+1.6**
PMG	**Port Moresby**	**6.18**	**232**	P	**Pn**	**10 30 24.6**	**0.0**
	0.5nm,0.3s,baz=280,slow=23,SNR=1.9						
PMG				S	**Sn**	**10 31 34.4**	**+0.4**
	1.3nm,0.3s,baz=319,slow=19,SNR=1.4						
PMG	**Port Moresby**	**6.18**	**232**		**Pn**	**10 30 23.6**	**-1.0**
PMG					**Sn**	**10 31 37.2**	**+3.2**
EIDS	**Eidsvold**	**19.66**	**183**	P	**P**	**10 33 19.3**	**-1.7**
EIDS				IAmb	IAmb	10 33 32.3	
	comp=Z,9.2nm,1.1s						
MTN	**Manton Dam**	**21.90**	**249**	P	**P**	**10 33 45.3**	**0.0**
MTN				IAmb	IAmb	10 33 55.4	
	comp=Z,15nm,1.3s						

WB0	**Warramunga Arr**	**22.24**	**229**	P	**P**	**10 33 49.5**	**+0.5**
WB0				IAmb	IAmb	10 33 51.2	
	comp=Z,11nm,1.4s						
WR0	**Warramunga Arr**	**22.25**	**229**	P	**P**	**10 33 49.5**	**+0.5**
WB2	**Warramunga Arr**	**22.38**	**229**	P	**P**	**10 33 50.7**	**+0.3**
WRA	**Warramunga Arr**	**22.39**	**229**	P	**P**	**10 33 50.5**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=52,slow=10.0,SNR=21						
KNRA	**Kununurra**	**25.00**	**245**	P	**P**	**10 34 15.3**	**-0.3**
KNRA				IAmb	IAmb	10 34 20.1	
	comp=Z,10nm,1.1s						
AS31	**Alice Springs**	**25.08**	**223**	P	**P**	**10 34 18.9**	**+2.6**
ASAR	**Alice Springs**	**25.08**	**223**	P	**P**	**10 34 17.1**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=56,slow=8.8,SNR=24						
FITZ	**Fitzroy Crossi**	**28.66**	**242**	P	**P**	**10 34 47.7**	**-0.9**
	comp=Z,1.5nm,0.4s,baz=59,slow=10,SNR=12						
FITZ	**Fitzroy Crossi**	**28.66**	**242**	P	**P**	**10 34 48.0**	**-0.6**
FITZ				IAmb	IAmb	10 34 59.4	
	comp=Z,7.3nm,1.2s						
FORT	**Forrest**	**33.72**	**219**	P	**P**	**10 35 33.0**	**0.0**
PSAD2	**Pilbara Seismi**	**34.94**	**240**	P	**P**	**10 35 42.9**	**-0.8**
PSAC1	**Pilbara Seismi**	**35.04**	**240**	P	**P**	**10 35 44.2**	**-0.3**
SONM	**Songino Array**	**66.65**	**328**	P	**P**	**10 39 40.7**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=145,slow=5.3,SNR=1.9						
MKAR	**Makanchi Array**	**80.49**	**319**	P	**P**	**10 41 02.2**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=93,slow=5.8,SNR=2.1						
ILAR	**Eielson Array**	**83.17**	**22**	P	**P**	**10 41 16.8**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=247,slow=4.6,SNR=2.6						
QSPA	**South Pole Qui**	**84.34**	**180**	P	**P**	**10 41 25.4**	**+2.3**
QSPA				IAmb	IAmb	10 41 38.8	
	comp=Z,1.6nm,1.1s						
MAW	**Mawson**	**84.55**	**203**	P	**P**	**10 41 22.6**	**-1.2**
NVAR	**Mina Array Bea**	**93.13**	**52**	P	**P**	**10 42 06.6**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=263,slow=7.8,SNR=2.9						
GERES	**GERESS Array B**	**124.39**	**328**	PKP	**PKPdf**	**10 47 50.2**	**0.0**
	comp=Z,0.3nm,0.4s,baz=43,slow=2.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**149.89**	**287**	PKPbc	**PKPbc**	**10 48 41.1**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=80,slow=2.1,SNR=8.9						

*IDC **17** 10:31:27.9±2.3, 43.54N×82.66E, h0km, mb3.5/1, mb1 3.4/4, mb1mx3.2/39, mbtmp3.4/4, ML3.0/2, Error ellipse: s-maj=28.2km s-min=16.5km az=112.0*
*BJI **17** 10:31:29.1±0.0, 43.61N×82.88E, h11km, ML3.5/9*
*SOME **17** 10:31:30.2, 43.82N×82.65E, h5km*
*NNC **17** 10:31:32.4±1.2, 43.62N×82.65E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=10.9km s-min=4.4km az=140.0*
ISC 17 10:31:29.7±0.9**, 43.64N**±0.05×**82.72E**±0.04**, h10**km**, n52,**
σ2s24/77, 12C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.73**	**264**	*e* P	**Pg**	**10 32 02.7**	**-0.3**
	16nm,0.1s						
KTMS				*e* S	**Sg**	**10 32 26.6**	**+1.1**
	240nm,0.2s						
DJR	**Jarkent**	**2.23**	**289**	*e* P	**Pg**	**10 32 11.1**	**-1.3**
	60nm,0.2s						
DJR				*e* S	**Sg**	**10 32 40.9**	**-0.4**
	227nm,0.3s						
DJR	**Jarkent**	**2.23**	**289**	Pg	**Pg**	**10 32 12.3**	**-0.1**
	75nm,0.4s						
DJR				Lg	Lg	10 32 40.8	
	331nm,0.4s						
PDGK	**Podgornoye**	**2.37**	**264**	Pg	**Pg**	**10 32 15.3**	**+0.1**
	41nm,0.3s						
PDGK				Lg	Lg	10 32 45.5	
	89nm,0.3s						
UZB	**Uzynbulak**	**2.74**	**261**	*e* P	**Pg**	**10 32 20.6**	**-1.7**
	26nm,0.1s						
UZB				*e* S	**Sg**	**10 32 56.7**	**-1.0**
	93nm,0.1s						
UZB	**Uzynbulak**	**2.74**	**261**	Pg	**Pg**	**10 32 20.3**	**-1.9**
	36nm,0.3s						
UZB

MDOK ⇓Lg Lg 10 33 46.3
26nm,0.6s
MDOK Medeo 4.16 265 Pg **Pg 10 32 49.3 -0.1**
13nm,0.4s
MDOK Lg Lg 10 33 43.9
32nm,0.4s
TNSS Tian-Shan 4.26 264 *eP* **Pg 10 32 47.8 -3.4**
5.5nm,0.1s
TNSS *eS* **Sg 10 33 43.5 -2.8**
19nm,0.2s
TNSS Tian-Shan 4.26 264 Pg **Pg 10 32 47.8 -3.4**
12nm,0.4s
TNSS Lg Lg 10 33 41.7
20nm,0.5s
KTBS Karatobe 4.38 273 *eP* **Pg 10 32 50.0 -3.6**
1.8nm,0.2s
KTBS *eS* **Sg 10 33 47.4 -3.0**
47nm,0.4s
KTBS Karatobe 4.38 273 Pg **Pg 10 32 51.4 -2.2**
8.7nm,0.6s
KTBS Lg Lg 10 33 47.6
50nm,0.5s
IZV Izvestkoviy 4.50 264 *eP* **Pg 10 32 54.1 -1.7**
6.0nm,0.1s
IZV *eS* **Sg 10 33 54.3 +0.2**
34nm,0.3s
IZV Izvestkoviy 4.50 264 Pg **Pg 10 32 53.5 -2.3**
14nm,0.4s
IZV Lg Lg 10 33 51.6
44nm,0.5s
MTBS Maitube 4.62 266 *eP* **Pg 10 32 56.2 -1.9**
4.2nm,0.1s
MTBS *eS* **Sg 10 33 57.9 +0.1**
26nm,0.3s
MTBS Maitube 4.62 266 Pg **Pg 10 32 57.3 -0.8**
13nm,0.3s
MTBS Lg Lg 10 33 57.6
35nm,0.3s
KUU Kurty 4.63 275 *eP* **Pg 10 32 55.6 -2.8**
1.5nm,0.0s
KUU *eS* **Sg 10 33 56.8 -1.5**
21nm,0.2s
KUU Kurty 4.63 275 Pg **Pg 10 32 57.2 -1.1**
4.1nm,0.2s
KUU Lg Lg 10 33 57.6
39nm,0.3s
KST Kastek 4.97 265 *eP* **Pg 10 33 01.0 -3.8**
6.6nm,0.2s
KST *eS* **Sg 10 34 06.2 -2.9**
18nm,0.5s
KST Kastek 4.97 265 Pg **Pg 10 33 02.5 -2.2**
13nm,0.6s
KST Lg Lg 10 34 07.7
15nm,0.5s
DGS Degeres 5.08 268 *eP* **Pg 10 33 02.3 -4.6**
1.9nm,0.1s
DGS *eS* **Sg 10 34 08.6 -4.1**
38nm,0.3s
DGS Degeres 5.08 268 Pg **Pg 10 33 04.4 -2.5**
7.1nm,0.3s
DGS Lg Lg 10 34 10.4
38nm,0.5s
TKM2 Tokmak 2 5.25 265 ⇑Pn **Pn 10 32 52.2 +3.8**
1.8nm,0.6s
TKM2 ⇓Pg **Pg 10 33 06.1 -4.2**
5.4nm,0.6s
TKM2 ⇑Lg Lg 10 34 20.9
18nm,0.5s
AAK Ala-Archa 6.10 263 Pg **Pb 10 33 18.6 +2.5**
0.6nm,0.3s,baz=84,slow=9.2,SNR=3.0
AAK Lg Lg 10 34 39.3
0.7nm,0.3s,baz=273,slow=23,SNR=1.4
AAK Ala-Archa 6.10 263 ⇓Pg **Pg 10 33 24.6 -1.9**
4.4nm,0.7s
AAK ⇑Lg Lg 10 34 46.8
15nm,0.8s
KURBB Kurchatov Arra 7.55 339 Pn **Pn 10 33 21.6 +1.9**
0.3nm,0.3s,baz=164,slow=12,SNR=17
KURBB Sn **Sn 10 34 46.9 +1.7**
0.2nm,0.3s,baz=154,slow=28,SNR=1.6
KURBB Lg Lg 10 35 28.6
0.2nm,0.3s,baz=135,slow=49,SNR=5.0
KURBB Kurchatov Arra 7.55 339 ⇑Pn **Pn 10 33 22.8 +3.1**
4.4nm,0.6s
KURBB ⇑Sn **Sn 10 34 50.7 +5.4**
6.3nm,0.5s
KURBB ⇓Lg Lg 10 35 34.8
21nm,0.6s
KURK Kurchatov 7.61 340 ⇑Lg Lg 10 35 35.5
18nm,0.8s
KK31 Karatay Array 8.91 271 ⇓Lg Lg 10 36 18.6
2.2nm,0.6s,baz=79,slow=28,SNR=3.8
ZALV Zalesovo Beam 10.41 7 Pn **Pn 10 33 58.6 -0.3**
baz=188,slow=9.7,SNR=2.1
ZALV Sn **Sn 10 35 53.7 -1.8**
0.6nm,0.3s,baz=116,slow=27,SNR=4.0
ZALV Lg Lg 10 36 56.6
baz=185,slow=26,SNR=3.1
TORD Torodi Ar. Bea 74.59 274 P **P 10 43 08.1 -1.0**
0.2nm,0.4s,baz=38,slow=5.5,SNR=4.3

*IDC **17** 10:36:50.3±0.3,7°.06N×73°.34W, h141km±14km, mb2.9/2, mb1 3.3/4, mb1mx3.0/38, mbtmp3.4/4, Error ellipse: s-maj=32.4km s-min=1.4km az=132.0*
*RSNC **17** 10:36:51.1±1.1,6°.84N×73°.19W, h147km±5km, ML3.2, Mw3.6*
ISC 17 10:36:49.9±0.9,6°.88N±0°.03×73°.14W±0°.04, h153km±6km, n31, σ1^{s}30/57, 3C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BRRC	**Barranca, Sant**	**0.61**	**292**	⇑*iP*		**Pn**	**Pn**	**10 37 12.9**	**+0.7**
BRRC				*eS*		**Sn**	**Sn**	**10 37 29.4**	**+0.2**
BRRC				*i*				10 37 33.3	
	comp=Z,328nm,0.1s								
PAMC	**Pamplona, Colo**	**0.63**	**44**	⇓*iP*		**Pn**	**Pn**	**10 37 13.8**	**+0.9**
PAMC				*eS*		**Sn**	**Sn**	**10 37 30.6**	**+0.2**
PAMC				*i*				10 37 32.9	
	comp=Z,742nm,0.5s								
RUSC	**La Rusia**	**0.98**	**177**	⇓*iP*		**Pn**	**Pn**	**10 37 15.2**	**-0.2**
RUSC				*eS*		**Sn**	**Sn**	**10 37 33.5**	**-1.4**
RUSC				*i*				10 37 35.2	
	comp=Z,91nm,0.2s								
PTBC	**PUERTO BERRIO,**	**1.35**	**256**	⇑*iP*		**Pn**	**Pn**	**10 37 17.7**	**-0.5**
PTBC				*eS*		**Sn**	**Sn**	**10 37 38.5**	**-1.4**
PTBC				*i*				10 37 44.4	
	comp=Z,299nm,0.2s								
OCAC	**Ocana**	**1.36**	**352**	⇑*iP*		**Pn**	**Pn**	**10 37 18.9**	**+0.4**
OCAC				*eS*		**Sn**	**Sn**	**10 37 40.9**	**+0.5**
OCAC				*i*				10 37 43.8	
	comp=Z,310nm,0.2s								
TAMC	**Tame, Arauca**	**1.41**	**108**	⇓*iP*		**Pn**	**Pn**	**10 37 19.7**	**+0.8**
SPBC	**San Pablo de B**	**1.53**	**217**	*eP*		**Pn**	**Pn**	**10 37 20.3**	**+0.1**
SPBC				*eS*		**Sn**	**Sn**	**10 37 42.5**	**-0.8**
SPBC				*i*				10 37 47.4	
	comp=Z,117nm,0.2s								
SMLC	**San Martn de**	**2.12**	**334**	*eP*		**Pn**	**Pn**	**10 37 26.8**	**+0.2**
SMLC				*eS*		**Sn**	**Sn**	**10 37 55.2**	**+0.3**
SMLC				*i*				10 37 57.6	
	comp=Z,152nm,0.2s								
NORC	**Norcasia**	**2.16**	**233**	*eP*		**Pn**	**Pn**	**10 37 27.3**	**+0.1**
NORC				*eS*		**Sn**	**Sn**	**10 37 54.0**	**-1.9**
NORC				*i*				10 38 05.2	
	comp=Z,97nm,0.2s								
CHIC	**Chingaza**	**2.31**	**195**	*eP*		**Pn**	**Pn**	**10 37 29.7**	**+0.3**
CHIC				*eS*		**Sn**	**Sn**	**10 37 59.3**	**-0.4**
CHIC				*i*				10 38 05.5	
	comp=Z,73nm,0.3s								
ROSC	**El Rosal**	**2.34**	**210**	P		**Pn**	**Pn**	**10 37 31.2**	**+1.5**
	comp=Z,11nm,0.3s,baz=43,slow=19,SNR=38								
ROSC				S			**Sn**	**10 38 00.4**	**0.0**
	comp=Z,56nm,0.3s,baz=41,slow=21,SNR=16								
ROSC	**El Rosal**	**2.34**	**210**	*eP*		**Pn**	**Pn**	**10 37 31.0**	**+1.3**
ROSC				*eS*		**Sn**	**Sn**	**10 38 00.4**	**0.0**
ROSC				*i*				10 38 07.0	
	comp=Z,146nm,0.4s								
HELC	**Santa Helena**	**2.47**	**254**	*eP*		**Pn**	**Pn**	**10 37 33.0**	**+1.8**
HELC				*eS*		**Sn**	**Sn**	**10 38 01.3**	**-1.7**
HELC				*i*				10 38 10.2	
	comp=Z,92nm,0.4s								
CVER	**Cruz Verde, Cu**	**2.52**	**202**	*eP*		**Pn**	**Pn**	**10 37 33.3**	**+1.3**
CVER				*eS*		**Sn**	**Sn**	**10 38 03.8**	**-0.6**
UREC	**San Jos de Ur**	**2.53**	**290**	*eP*		**Pn**	**Pn**	**10 37 31.3**	**-0.3**
UREC				*eS*		**Sn**	**Sn**	**10 38 02.3**	**-1.4**
GUY2C	**Guyana, Caldas**	**2.76**	**233**	*eP*		**Pn**	**Pn**	**10 37 36.1**	**+1.3**
GUY2C				*eS*		**Sn**	**Sn**	**10 38 08.1**	**-1.4**
GUY2C				*i*				10 38 17.7	
	comp=Z,66nm,0.5s								
VILC	**Villavicencio,**	**2.81**	**191**	*eP*		**Pn**	**Pn**	**10 37 34.9**	**-0.3**
VILC				*eS*		**Sn**	**Sn**	**10 38 09.6**	**-0.5**
VILC				*i*				10 38 14.1	
	comp=Z,113nm,0.4s								
PTGC	**Puerto Gaitan,**	**2.85**	**159**	*eP*		**Pn**	**Pn**	**10 37 34.7**	**-0.8**
PTGC				*eS*		**Sn**	**Sn**	**10 38 07.9**	**-2.9**
PTGC				*i*				10 38 10.9	
	comp=Z,84nm,0.5s								
RREF	**El Recreo**	**2.95**	**228**	*eP*		**Pn**	**Pn**	**10 37 39.0**	**+1.6**
RREF				*eS*		**Sn**	**Sn**	**10 38 16.7**	**+2.7**
RREF				*i*				10 38 28.1	
	comp=Z,58nm,0.5s								
CBOC	**Ciudad Bolivar**	**3.03**	**251**	*eP*		**Pn**	**Pn**	**10 37 38.9**	**+0.9**
CBOC				*eS*		**Sn**	**Sn**	**10 38 12.0**	**-3.1**
CBOC				*i*				10 38 27.0	
	comp=Z,24nm,0.5s								
DBBC	**Dabeiba**	**3.05**	**273**	*eP*		**Pn**	**Pn**	**10 37 38.7**	**+0.6**
DBBC				*eS*		**Sn**	**Sn**	**10 38 14.3**	**-1.2**
SDV	**Santo Domingo**	**3.18**	**51**	P		**Pn**	**Pn**	**10 37 40.3**	**+0.4**
	comp=Z,8.8nm,0.3s,baz=225,slow=5.9,SNR=26								
SDV	**Santo Domingo**	**3.18**	**51**	*eP*		**Pn**	**Pn**	**10 37 40.5**	**+0.5**
SDV				*eS*		**Sn**	**Sn**	**10 38 16.9**	**-1.7**
SDV				*i*				10 38 22.0	
	comp=Z,28nm,0.6s								
ANIL	**Santa Ana**	**3.27**	**224**	*eP*		**Pn**	**Pn**	**10 37 42.9**	**+1.7**
ANIL				*eS*		**Sn**	**Sn**	**10 38 22.2**	**+1.3**
ANIL				*i*				10 38 29.8	
	comp=Z,109nm,0.3s								
PRAC	**Prado**	**3.60**	**209**	*eP*		**Pn**	**Pn**	**10 37 45.1**	**0.0**
PRAC				*eS*		**Sn**	**Sn**	**10 38 26.4**	**-1.5**
PRAC				*i*				10 38 35.0	
	comp=Z,92nm,0.4s								
SJCC	**San Jacinto, C**	**3.61**	**326**	*eP*		**Pn**	**Pn**	**10 37 45.2**	**-0.1**
SJCC				*eS*		**Sn**	**Sn**	**10 38 25.7**	**-2.6**
SJCC				*i*				10 38 30.2	
	comp=Z,78nm,0.6s								
ORTC	**Ortega, Tolima**	**3.62**	**216**	*eP*		**Pn**	**Pn**	**10 37 45.9**	**+0.4**
ORTC				*eS*		**Sn**	**Sn**	**10 38 27.2**	**-1.3**
ORTC				*i*				10 38 35.2	
	comp=Z,53nm,0.5s								
PLMC	**San Jos del P**	**3.69**	**238**	*eP*		**Pn**	**Pn**	**10 37 46.9**	**+0.6**
PLMC				*eS*		**Sn**	**Sn**	**10 38 27.7**	**-2.5**
TXAR	**Lajitas Array**	**36.41**	**312**	P		**P**	**P**	**10 43 39.6**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=129,slow=8.2,SNR=2.5								
YKA	**Yellowknife Ar**	**63.20**	**340**	P		**P**	**P**	**10 47 01.6**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=131,slow=7.0,SNR=14								
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc		**PKiKP**	**PKiKP**	**10 56 26.7**	**+1.9**
	comp=Z,0.3nm,0.5s,baz=111,slow=2.9,SNR=1.8								

*IDC **17** 10:42:20.6±2.3, 17°.20N×60°.91W, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.4/45, mbtmp3.6/4, Error ellipse: s-maj=136.5km s-min=14.0km az=90.0*
*TRN **17** 10:42:21.0, 17°.12N×60°.25W, h27km, MD3.7*
ISC 17 10:42:20.2±2.7, 17°.10N±0°.05×60°.25W±0°.07, h11km±16km, n32, σ0^{s}92/50, mb3.7/4, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H05N1	**Guadeloupe/Mar**	**1.10**	**225**			Pn	**Pb**	**10 42 41.1**	**-0.2**
	SNR=917								
H05N1						Sn	**Sb**	**10 42 54.5**	**-1.2**
DEG	**La Desirade**	**1.10**	**225**	*eP*		**Pb**	**Pb**	**10 42 41.7**	**+0.3**
ABD	**La Joyeuse, An**	**1.34**	**243**	*eP*		**Pn**	**Pn**	**10 42 45.3**	**+0.4**
ABD				*eS*		**Sg**	**Sg**	**10 43 03.5**	**+0.1**
MAGL	**Barre de l'ile**	**1.51**	**221**	*eP*		**Pn**	**Pn**	**10 42 47.8**	**+0.4**
MAGL				*eS*		**Sn**	**Sn**	**10 43 06.8**	**-0.3**
ANWB	**Willy Bob**	**1.57**	**291**	*eP*		**Pn**	**Pn**	**10 42 47.7**	**-0.5**
ANWB				*eS*		**Sn**	**Sn**	**10 43 06.9**	**-1.6**
CBE	**Ff, Capester**	**1.66**	**232**	*eP*		**Pn**	**Pn**	**10 42 50.2**	**+0.9**
CBE				*eS*		**Sb**	**Sb**	**10 43 11.4**	**-0.4**
TDBA	**Terre de Bas,**	**1.82**	**227**	*eP*		**Pb**	**Pb**	**10 42 52.9**	**-0.7**
TDBA				*eS*		**Sn**	**Sn**	**10 43 13.6**	**-1.1**
DWS	**Wesley**	**1.83**	**214**	*eP*		**Pn**	**Pn**	**10 42 52.1**	**+0.4**
DWS				*eS*		**Sb**	**Sb**	**10 43 16.9**	**+0.1**
MDPV	**Dominica, Penn**	**1.85**	**218**	*eP*		**Pb**	**Pb**	**10 42 53.8**	**-0.3**
MDPV				*eS*		**Sn**	**Sn**	**10 43 15.4**	**+0.1**
MDVC	**Dominica, Viel**	**1.85**	**217**	*eP*		**Pb**	**Pb**	**10 42 53.8**	**-0.3**
MDVC				*eS*		**Sn**	**Sn**	**10 43 16.2**	**+0.9**
MLYT	**Lee's Yard**	**1.90**	**259**	*eP*		**Pn**	**Pn**	**10 42 53.8**	**+1.1**
MLYT				*eS*		**Sn**	**Sn**	**10 43 17.6**	**+1.1**
MDN	**Morne-Daniel**	**2.08**	**212**	*eP*		**Pn**	**Pn**	**10 42 55.6**	**+0.4**
MDN				*eS*		**Sn**	**Sn**	**10 43 21.6**	**+0.4**
ILAM	**Ilet Lapin Mar**	**2.39**	**195**	*eP*		**Pn**	**Pn**	**10 43 00.0**	**+0.7**
ILAM				*eS*		**Sn**	**Sn**	**10 43 27.7**	**-1.0**
SKI	**Saint Kitts**	**2.39**	**276**	*eP*		**Pn**	**Pn**	**10 43 00.5**	**+1.1**
SKI				*eS*		**Sn**	**Sn**	**10 43 29.4**	**+0.6**
SVN	**Savane Anatole**	**2.41**	**202**	*eP*		**Pb**	**Pb**	**10 43 02.1**	**-1.6**
BAMF	**Morne Balai**	**2.43**	**201**	*eP*		**Pn**	**Pn**	**10 43 00.6**	**+0.6**
CXM	**Morne La Croix**	**2.44**	**201**	*eP*		**Pn**	**Pn**	**10 43 00.7**	**+0.4**
PCM	**Pelee Case Pet**	**2.45**	**202**	*eP*		**Pn**	**Pn**	**10 43 01.0**	**+0.7**
GBMF	**Grand Be**	**2.45**	**201**	*eP*		**Pn**	**Pn**	**10 43 01.0**	**+0.7**
PML	**Morne Lenard**	**2.48**	**201**	*eP*		**Pn**	**Pn**	**10 43 01.8**	**+1.2**
FDF	**Fort de France**	**2.51**	**200**	*eP*		**Pn**	**Pn**	**10 43 03.0**	**+2.0**
FDF				*eS*		**Sn**	**Sn**	**10 43 31.6**	**-0.1**
LPMF	**Morne Lapointe**	**2.60**	**195**	*eP*		**Pn**	**Pn**	**10 43 02.9**	**+0.6**
ZAM	**Aeronautique**	**2.62**	**197**	*eP*		**Pn**	**Pn**	**10 43 03.2**	**+0.6**
BIM	**Bigot**	**2.69**	**197**	*eP*		**Pn**	**Pn**	**10 43 04.9**	**+1.4**
BIM				*eS*		**Sn**	**Sn**	**10 43 36.5**	**+0.4**
MPOM	**Morne Pois Mar**	**2.71**	**193**	*eP*		**Pn**	**Pn**	**10 43 04.9**	**+1.2**
H05S1	**Guadeloupe/Mar**	**2.72**	**192**	Pn		**Pn**	**Pn**	**10 43 05.3**	**+1.4**
	SNR=90								
H05S1						Sn	**Sn**	**10 43 35.0**	**-1.8**
SLBI	**Saint Lucia, B**	**3.14**	**193**	*eP*		**Pn**	**Pn**	**10 43 10.9**	**+1.3**
SLBI				*eS*		**Sn**	**Sn**	**10 43 46.5**	**-0.7**
SLAC	**Saint Lucia, A**	**3.25**	**191**	*eP*		**Pn**	**Pn**	**10 43 12.4**	**+1.2**
SLAC				*eS*		**Sn**	**Sn**	**10 43 49.2**	**-0.6**
SCHQ	**Schefferville**	**38.00**	**354**	P		**P**	**P**	**10 49 39.3**	**+1.1**
	1.5nm,0.6s,baz=184,slow=14,SNR=4.8								
YKA	**Yellowknife Ar**	**58.83**	**334**	P		**P**	**P**	**10 52 18.2**	**-0.3**
	0.4nm,0.6s,baz=106,slow=7.6,SNR=12								
INK	**Inuvik**	**68.06**	**337**	P		**P**	**P**	**10 53 18.7**	**-0.8**
	0.3nm,0.5s,baz=127,slow=4.6,SNR=4.2								
ILAR	**Eielson Array**	**73.26**	**333**	P		**P**	**P**	**10 53 51.4**	**+0.1**
	0.3nm,0.8s,baz=98,slow=5.2,SNR=4.5								

*TUL **17** 10:47:05.3±0.6, 36°.28N±0°.02×97°.26W±0°.04, h5km±2km, ML3.1, Error ellipse: s-maj=5.2km s-min=3.1km az=266.0*
*NEIC **17** 10:47:05.4±0.8, 36°.29N±0°.02×97°.27W±0°.04, h6km±7km, Error ellipse: s-maj=5.0km s-min=2.6km az=78.0*
*ANF **17** 10:47:06.4±0.7, 36°.19N×97°.20W, h0km, ML3.7/6, Error ellipse: s-maj=11.6km s-min=2.8km az=173.0*
ISC 17 10:47:05.1±0.9, 36°.30N±0°.05×97°.29W±0°.04, h10km, n35, σ1^{s}19/37, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.65**	**186**				**Pg**	**10 47 17.8**	**+0.1**
OKCFA	**Oklahoma City**	**0.89**	**189**				**Pg**	**10 47 22.1**	**-0.1**
W35A	**Tecumseh**	**1.19**	**164**				**Pb**	**10 47 26.9**	**-0.8**
TUL1	**Leonard**	**1.27**	**107**	P			**Pn**	**10 47 28.3**	**-0.6**
	baz=288								
TUL1				S			**Sb**	**10 47 45.1**	**-0.4**
	baz=288								
TUL1	**Leonard**	**1.27**	**107**				**Pn**	**10 47 28.6**	**-0.3**
U32A	**Winter Ranch,**	**1.39**	**274**				**Pg**	**10 47 31.6**	**-0.1**
WMOK	**Wichita Mounta**	**1.98**	**219**	P			**Pb**	**10 47 40.8**	**-0.4**
	baz=38								
WMOK				S			**Sb**	**10 48 06.9**	**+1.0**
	baz=38								
WMOK	**Wichita Mounta**	**1.98**	**219**				**Pn**	**10 47 39.2**	**+0.6**
X37A	**Clayton**	**2.31**	**137**				**Pn**	**10 47 44.2**	**+1.0**
U38A	**Gravette**	**2.34**	**86**				**Pn**	**10 47 45.1**	**+1.4**
R32A	**Long Quarter,**	**2.41**	**332**				**Pn**	**10 47 45.9**	**+1.3**
HHAR	**Hobbs**	**2.70**	**89**				**Pn**	**10 47 50.6**	**+2.0**
W39A	**Magazine**	**3.05**	**110**	P			**Pn**	**10 47 55.0**	**+1.5**
	baz=292								
MIAR	**Mount Ida**	**3.50**	**119**	P			**Pn**	**10 48 01.4**	**+1.9**
	baz=301								
Z38A	**Mt. Pleasant**	**3.57**	**147**	Pn			**Pn**	**10 48 01.6**	**+1.0**
AMTX	**Amarillo**	**3.85**	**250**	P			**Pn**	**10 48 06.8**	**+2.3**
	baz=67								
AMTX	**Amarillo**	**3.85**	**250**				**Pn**	**10 48 04.8**	**+0.3**
X40A	**Basin Creek Fa**	**4.06**	**115**				**Pn**	**10 48 08.4**	**+1.2**
WHAR	**Wooly Hollow**	**4.18**	**102**	Pn			**Pn**	**10 48 09.3**	**+0.4**
FCAR	**Ozark Folk Cen**	**4.20**	**94**	Pn			**Pn**	**10 48 10.3**	**+1.1**
WHTX	**Lake Whitney,**	**4.30**	**182**	Pn			**Pn**	**10 48 09.9**	**-0.7**
WLAR	**White Oak Lake**	**4.30**	**126**	Pn			**Pn**	**10 48 11.1**	**+0.5**
N33A	**J Bar K, Exete**	**4.44**	**358**	Pn			**Pn**	**10 48 12.6**	**+0.1**
P38A	**Dawn**	**4.45**	**41**				**Pn**	**10 48 14.4**	**+1.7**
237A	**Washetta, Mont**	**4.46**	**164**	Pn			**Pn**	**10 48 13.6**	**+0.9**
N35A	**Tabor**	**4.74**	**15**				**Pn**	**10 48 17.8**	**+1.2**
Z41A	**Richland Creek**	**4.77**	**128**	S			**Sn**	**10 49 12.3**	**-0.1**
	baz=311								
LCAR	**Lake Charles**	**4.96**	**91**	Pn			**Pn**	**10 48 20.8**	**+1.0**
BGNE	**Belgrade**	**5.15**	**353**				**Pn**	**10 48 21.9**	**-0.3**
SIUC	**Southern Illin**	**6.61**	**75**	Pn			**Pn**	**10 48 43.0**	**+0.7**
OXF	**Oxford**	**6.67**	**103**	Pn			**Pn**	**10 48 43.0**	**-0.2**
SDCO	**Great Sand Dun**	**6.73**	**285**				**Pn**	**10 48 46.1**	**+1.9**
WVT	**Waverly**	**7.64**	**88**	Pn			**Pn**	**10 48 57.4**	**+0.8**
O44A	**Mansfield**	**7.94**	**58**	Pn			**Pn**	**10 49 01.0**	**+0.5**
PHWY	**Pilot Hill**	**8.10**	**311**	Pn			**Pn**	**10 48 59.9**	**-3.2**

*NEIC **17** 10:47:31.2±1.7, 20°.4S±0°.1×178°.2W±0°.1, h536km±5km, mb4.1/30, Error ellipse: s-maj=18.0km s-min=15.7km az=128.0*
*IDC **17** 10:47:36.8±3.2, 20°.78S×178°.30W, h612km±40km, mb3.1/16, mb1 3.3/17, mb1mx3.3/44, mbtmp4.1/17, Error ellipse: s-maj=20.8km s-min=17.9km az=171.0*
ISC 17 10:47:30.6±0.5, 20°.47S±0°.09×178°.17W±0°.08, h534km, n75, σ1^{s}18/80, mb4.0/32, 4C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.50**	**307**	P		**P**	**P**	**10 48 57.7**	**+2.3**
NIUE	**Niue**	**7.88**	**81**	P		**P**	**P**	**10 49 26.5**	**-0.3**
NIUE							**S**	**10 51 03.0**	**+1.0**
AFI	**Afiamalu**	**8.94**	**44**	P		**P**	**P**	**10 49 35.6**	**-2.1**
AFI				S		**S**	**S**	**10 51 18.6**	**-3.1**
URZ	**Urewera**	**18.19**	**192**	P		**P**	**P**	**10 51 08.6**	**-2.2**
	2.5nm,0.3s,baz=287,slow=3.7,SNR=26								
RPZ	**Rata Peaks**	**24.86**	**199**	P		**P**	**P**	**10 52 10.4**	**-0.5**
	2.5nm,0.5s,baz=264,slow=21,SNR=1.5								
TBI	**Tubuai**	**26.77**	**101**	*e*LR		LR	LR	10 51 45.0	
	comp=Z,98nm,22.8s								
PPT2	**Papeete2**	**27.17**	**89**	*e*LR		LR	LR	10 52 28.7	
	comp=Z,120nm,24.2s								
ARMA	**Armidale**	**28.94**	**244**	P		**P**	**P**	**10 52 48.3**	**+1.3**
ARMA						IAmb	IAmb	10 52 53.9	
	comp=Z,5.1nm,1.1s								
STKA	**Stephens Creek**	**37.66**	**244**	P		**P**	**P**	**10 54 00.0**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=97,slow=12,SNR=4.1								
STKA	**Stephens Creek**	**37.66**	**244**	P		**P**	**P**	**10 54 01.1**	**+0.7**
BBOO	**Buckleboo**	**42.42**	**243**	P		**P**	**P**	**10 54 38.6**	**+0.1**
BBOO						IAmb	IAmb	10 54 46.9	
	comp=Z,9.7nm,1.4s								
WR0	**Warramunga Arr**	**44.26**	**262**	P		**P**	**P**	**10 54 52.5**	**-0.5**
WR0						IAmb	IAmb	10 55 03.1	
	comp=Z,6.5nm,1.3s								
AS31	**Alice Springs**	**44.37**	**257**	P		**P**	**P**	**10 54 54.5**	**+0.6**
ASAR	**Alice Springs**	**44.37**	**257**	P		**P**	**P**	**10 54 53.5**	**-0.4**
	comp=Z,3.2nm,0.9s,baz=95,slow=7.9,SNR=28								
ASAR						PcP	**PcP**	**10 56 23.7**	**-2.6**
	comp=Z,0.5nm,1.0s,baz=99,slow=5.7,SNR=4.1								
ASAR						S	**S**	**11 00 48.5**	**-1.2**
	comp=Z,0.5nm,0.9s,baz=80,slow=16,SNR=4.6								
WB0	**Warramunga Arr**	**44.42**	**262**	P		**P**	**P**	**10 54 54.5**	**+0.2**
WB0						IAmb	IAmb	10 55 05.8	
	comp=Z,8.0nm,1.1s								
WB2	**Warramunga Arr**	**44.44**	**262**	P		**P**	**P**	**10 54 54.3**	**-0.1**
WB2						IAmb	IAmb	10 54 56.5	
	comp=Z,14nm,1.5s								
WRAB	**Tennant Creek**	**44.44**	**262**	P		**P**	**P**	**10 54 54.7**	**+0.3**
WRAB						IAmb	IAmb	10 54 55.3	
	comp=Z,11nm,1.1s								
WRA	**Warramunga Arr**	**44.45**	**262**	P		**P**	**P**	**10 54 54.2**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=97,slow=7.5,SNR=54								
KNRA	**Kununurra**	**50.50**	**266**	P		**P**	**P**	**10 55 40.2**	**+0.2**
FITZ	**Fitzroy Crossi**	**52.87**	**262**	P		**P**	**P**	**10 55 56.2**	**-0.8**
VNDA	**Vanda**	**57.92**	**185**	P		**P**	**P**	**10 56 30.6**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=232,slow=12,SNR=2.3								
VNDA	**Vanda**	**57.92**	**185**	P		**P**	**P**	**10 56 33.3**	**+2.1**
QSPA	**South Pole Qui**	**69.59**	**180**	P		**P**	**P**	**10 57 47.1**	**+1.1**
QSPA						IAmb	IAmb	10 58 05.4	
	comp=Z,8.8nm,1.4s								
MJAR	**Matsushiro Arr**	**70.09**	**324**	P		**P**	**P**	**10 57 49.4**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=142,slow=6.2,SNR=2.5								
ADK	**Adak**	**72.06**	**1**	P		**P**	**P**	**10 58 00.4**	**+0.1**
UNV	**Unalaska Valle**	**74.69**	**7**	P		**P**	**P**	**10 58 15.9**	**+0.6**
PETK	**Petropavlovsk-**	**76.20**	**345**	P		**P**	**P**	**10 58 24.5**	**+0.7**
	comp=Z,2.5nm,0.6s,baz=174,slow=4.5,SNR=5.8								
KSRS	**Korea Array**	**76.76**	**319**	P		**P**	**P**	**10 58 27.5**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=119,slow=6.7,SNR=2.8								

CONA	**Conrad Observa**	**150.35**	**341**	*e*PKiKP	**PKiKP**	**11**	**06**	**23.1 +0.9**
	comp=Z,2.8nm,0.6s							
MOA	**Molln**	**150.89**	**343**	*e*PKiKP	**PKiKP**	**11**	**06**	**23.8 +0.5**
	comp=Z,1.7nm,0.5s							
SOKA	**Soboth**	**151.72**	**341**	*e*PKiKP	**PKiKP**	**11**	**06**	**25.3 +0.2**
	comp=Z,1.7nm,0.7s							
KBA	**Koelnbreinsper**	**151.85**	**343**	*e*PKiKP	**PKPbc**	**11**	**06**	**25.5 +0.3**
	comp=Z,2.2nm,0.6s							
OBKA	**Obir**	**152.02**	**341**	*e*PKiKP	**PKiKP**	**11**	**06**	**27.3 +1.6**
	comp=Z,2.9nm,0.7s							
WTTA	**Wattenberg**	**152.11**	**346**	*i* PKiKP	**PKiKP**	**11**	**06**	**26.8 +0.7**
	comp=Z,2.2nm,0.4s							
ABTA	**Abfaltersbach**	**152.38**	**344**	*e*PKiKP	**PKiKP**	**11**	**06**	**26.7 +0.2**
	comp=Z,2.2nm,0.5s							
FETA	**Feichten**	**152.54**	**347**	*i* PKiKP	**PKPbc**	**11**	**06**	**26.8 0.0**
	comp=Z,3.2nm,1.0s							
TORD	**Torodi Ar. Bea**	**172.71**	**179**	PKP	**PKPdf**	**11**	**06**	**37.7 -1.5**
	comp=Z,0.5nm,0.8s,baz=204,slow=2.5,SNR=2.9							

IDC ***17*** *10:48:35.4±0.8, 17°.08N×60°.11W, h0km, mb3.5/9, mb1 3.9/12, mb1mx3.7/53, mbtmp3.6/12, ML3.5/1, Error ellipse: s-maj=21.7km s-min=15.6km az=103.0*
TRN ***17*** *10:48:37.0, 17°.19N×60°.17W, h29km*
NEIC ***17*** *10:48:37.8±2.4, 17°.11N±0°.04×60°.32W±0°.07, h10km±1km, mb4.2/1, Error ellipse: s-maj=10.6km s-min=7.4km az=92.0*

ISC 17 10:48:37.1±1.8,**17°.14N**±0°.04×**60°.30W**±0°.06,**h9**km±11km, **n72**,σ1**°50**/81,**mb3.6**/9,**Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
H05N1	**Guadeloupe/Mar**	**1.09**	**222**	Pn	**Pn**	**Pn**	**10 48 58.5**	**-0.2**
H05N1				Sn		**Sg**	**10 49 10.0**	**-2.3**
DEG	**La Desirade**	**1.10**	**222**	*e*P	**Pn**	**Pn**	**10 48 59.0**	**+0.2**
DEG				*e*S		**Sn**	**10 49 14.4**	**+0.3**
ABD	**La Joyeuse, An**	**1.32**	**240**	*e*P	**Pg**	**Pg**	**10 49 03.2**	**+0.8**
ANWB	**Willy Bob**	**1.51**	**290**	*e*P	**Pn**	**Pn**	**10 49 04.7**	**+0.4**
ANWB				*e*S		**Sn**	**10 49 17.3**	**-6.9**
ANWB	**Willy Bob**	**1.51**	**290**			**Pn**	**10 49 04.8**	**+0.4**
ANWB						Pg	10 49 16.7	+11
MAGL	**Barre de l'île**	**1.51**	**219**	*e*P		**Pn**	**10 49 04.8**	**+0.4**
MAGL				*e*S		**Sn**	**10 49 23.9**	**-0.4**
CBE	**Ff, Capester**	**1.65**	**230**	*e*P		**Pb**	**10 49 07.1**	**-0.5**
TDBA	**Terre de Bas,**	**1.81**	**225**	*e*P		**Pb**	**10 49 10.0**	**-0.5**
TDBA	**Terre de Bas,**	**1.81**	**225**	*e*		Pg	10 49 22.8	+11
TDBA				*e*S		**Sg**	**10 49 34.3**	**-1.2**
DWS	**Wesley**	**1.84**	**212**	*e*P		**Pn**	**10 49 09.3**	**+0.4**
DWS	**Wesley**	**1.84**	**212**	*e*		Pg	10 49 22.6	+10
DWS				*e*S		**Sb**	**10 49 33.1**	**-1.0**
MDPV	**Dominica, Penn**	**1.85**	**216**	*e*P		**Pn**	**10 49 09.8**	**+0.7**
MDPV	**Dominica, Penn**	**1.85**	**216**	*e*		Pg	10 49 24.0	+11
MDPV	**Dominica, Penn**	**1.85**	**216**	*e*		**Sn**	**10 49 33.9**	**+1.3**
MDVC	**Dominica, Viel**	**1.85**	**215**	*e*P		**Pn**	**10 49 09.7**	**+0.6**
MDVC	**Dominica, Viel**	**1.85**	**215**	*e*		Pg	10 49 21.9	+9.3
MDVC				*e*S		**Sb**	**10 49 33.9**	**-0.5**
MLYT	**Lee's Yard**	**1.86**	**257**	*e*		Pg	10 49 24.2	+12
MLYT	**Lee's Yard**	**1.86**	**257**	*e*		**Sn**	**10 49 35.4**	**+2.6**
MDN	**Morne-Daniel**	**2.10**	**210**	*e*P		**Pn**	**10 49 12.8**	**+0.4**
DPMT	**Pointe Michel**	**2.14**	**209**	*e*P		**Pb**	**10 49 14.8**	**-1.2**
SKI	**Saint Kitts**	**2.34**	**275**	*e*P		**Pn**	**10 49 17.5**	**+1.7**
SKI	**Saint Kitts**	**2.34**	**275**	*e*		Pg	10 49 30.4	+8.5
SKI				*e*S		**Sn**	**10 49 45.1**	**+0.5**
SKI	**Saint Kitts**	**2.34**	**275**	Pn		**Pn**	**10 49 17.7**	**+2.0**
ILAM	**Ilet Lapin Mar**	**2.42**	**193**	*e*P		**Pn**	**10 49 17.9**	**+1.1**
ILAM	**Ilet Lapin Mar**	**2.42**	**193**	*e*		Pg	10 49 30.0	+6.6
ILAM				*e*S		**Sn**	**10 49 45.7**	**-0.9**
SVN	**Savane Anatole**	**2.44**	**200**	*e*P		**Pn**	**10 49 18.8**	**+1.6**
BAMF	**Morne Balai**	**2.45**	**200**	*e*P		**Pn**	**10 49 18.2**	**+0.9**
CXM	**Morne La Croix**	**2.46**	**200**	*e*P		**Pn**	**10 49 18.2**	**+0.5**
PCM	**Pelee Case Pet**	**2.47**	**201**	*e*P		**Pn**	**10 49 18.2**	**+0.6**
GBMF	**Grand Be**	**2.48**	**200**	*e*P		**Pn**	**10 49 18.1**	**+0.4**
PML	**Morne Lenard**	**2.50**	**200**	*e*P		**Pn**	**10 49 18.8**	**+0.8**
FDF	**Fort de France**	**2.53**	**199**	*e*P		**Pn**	**10 49 18.9**	**+0.4**
FDF	**Fort de France**	**2.53**	**199**	*e*		Pg	10 49 33.4	+7.8
FDF				*e*S		**Sn**	**10 49 49.6**	**+0.1**
FDF	**Fort de France**	**2.53**	**199**			**Pn**	**10 49 19.3**	**+0.8**
LPMF	**Morne Lapointe**	**2.63**	**194**	*e*P		**Pn**	**10 49 19.9**	**+0.1**
ZAM	**Aeronautique**	**2.65**	**195**	*e*P		**Pn**	**10 49 20.3**	**+0.3**
BIM	**Bigot**	**2.71**	**196**	*e*P		**Pn**	**10 49 22.1**	**+1.2**
BIM				*e*S		**Sn**	**10 49 52.8**	**-1.2**
MPOM	**Morne Pois Mar**	**2.73**	**191**	*e*P		**Pn**	**10 49 22.2**	**+1.0**
MPOM	**Morne Pois Mar**	**2.73**	**191**	*e*		Pg	10 49 34.6	+5.0
MPOM				*e*S		**Sn**	**10 49 53.8**	**-0.6**
H05S1	**Guadeloupe/Mar**	**2.75**	**191**	Pn		**Pn**	**10 49 21.2**	**-0.2**
H05S1				Sn		**Sn**	**10 49 53.8**	**-1.1**
SLBI	**Saint Lucia, B**	**3.17**	**192**	*e*P		**Pn**	**10 49 27.8**	**+0.6**
SLBI	**Saint Lucia, B**	**3.17**	**192**	*e*		**Pg**	**10 49 40.3**	**+2.5**
SLBI				*e*S		**Sn**	**10 50 06.0**	**+0.9**
SLAC	**Saint Lucia, A**	**3.28**	**190**	*e*P		**Pn**	**10 49 29.5**	**+0.8**
SLAC	**Saint Lucia, A**	**3.28**	**190**	*e*		**Pg**	**10 49 42.1**	**+2.2**
SLAC				*e*S		**Sn**	**10 50 03.7**	**-4.1**
MCLT	**Moule a Chique**	**3.47**	**190**	*e*P		**Pn**	**10 49 31.8**	**+0.5**
MCLT	**Moule a Chique**	**3.47**	**190**	*e*		**Pg**	**10 49 42.5**	**-1.1**
MCLT				*e*S		**Sn**	**10 50 12.1**	**-0.5**
SVV	**Soufriere Volc**	**3.90**	**193**	*e*		**Pn**	**10 49 39.5**	**+2.2**
SVCV	**St. Vincent, C**	**3.93**	**192**	*e*		**Pn**	**10 49 39.2**	**+1.5**
SVB	**Belmont**	**3.96**	**194**	*e*P		**Pn**	**10 49 39.8**	**+1.8**
SVB	**Belmont**	**3.96**	**194**			**Pn**	**10 49 40.4**	**+2.4**
STVI	**Saint Thomas**	**4.59**	**286**	Pn		**Pn**	**10 49 47.4**	**+0.6**
STVI				Sn		**Sn**	**10 50 39.5**	**-0.9**
CUPR	**Culebra, Puert**	**4.89**	**284**	Pn		**Pn**	**10 49 51.8**	**+1.0**
CUPR				Sn		**Sn**	**10 50 46.5**	**-1.0**
MTP	**Monte Pirata**	**5.10**	**282**	Pn		**Pn**	**10 49 54.7**	**+1.0**
HUMP	**Col San Antoni**	**5.38**	**281**	Pn		**Pn**	**10 49 57.8**	**+0.1**
CBYP	**Canovanas**	**5.41**	**283**	Pn		**Pn**	**10 49 59.6**	**+1.5**
SJG	**San Juan**	**5.66**	**281**	Pn		**Pn**	**10 50 04.3**	**+2.8**
	baz=332,slow=22,SNR=1.0							
MLPR	**Magueyes Islan**	**6.49**	**278**	Pn		**Pn**	**10 50 15.1**	**+2.3**
CRPR	**Cabo Rojo, PR**	**6.55**	**279**	Pn		**Pn**	**10 50 15.7**	**+2.0**
PLCV	**Puerto La Cruz**	**8.09**	**212**			**Pn**	**10 50 35.7**	**+0.8**
PCRV	**Puerto La Cruz**	**8.11**	**212**			**Pn**	**10 50 35.7**	**+0.6**
	0.6nm,0.3s,baz=320,slow=2.8,SNR=1.7							
SDDR	**Presa de Saban**	**10.61**	**282**	Pn		**Pn**	**10 51 09.4**	**0.0**
PTGA	**Pitinga**	**17.76**	**179**	P		**Pn**	**10 52 43.5**	**-1.3**
	baz=302,slow=19							
SIV	**San Ignacio**	**32.93**	**181**	P		**P**	**10 55 11.2**	**-1.0**
	0.4nm,0.5s,baz=349,slow=17,SNR=2.3							
TXAR	**Lajitas Array**	**41.43**	**295**	P		**P**	**10 56 26.2**	**+1.7**
	0.2nm,0.7s,baz=120,slow=8.6,SNR=2.4							
PDAR	**Pinedale Array**	**48.87**	**312**	P		**P**	**10 57 24.3**	**+0.8**
	0.5nm,0.8s,baz=102,slow=8.4,SNR=2.0							
NVAR	**Mina Array Bea**	**54.60**	**305**	P		**P**	**10 58 08.3**	**+1.9**
	0.3nm,0.8s,baz=83,slow=9.2,SNR=1.5							
YKA	**Yellowknife Ar**	**58.77**	**334**	P		**P**	**10 58 35.2**	**-0.1**
	0.5nm,0.7s,baz=107,slow=7.8,SNR=9.7							
TORD	**Torodi Ar. Bea**	**59.77**	**85**	P		**P**	**10 58 41.5**	**-1.5**
	0.8nm,0.8s,baz=305,slow=6.8,SNR=4.5							
GERES	**GERESS Array B**	**66.80**	**44**	P		**P**	**10 59 28.8**	**-0.4**
	0.5nm,0.8s,baz=250,slow=5.0,SNR=4.3							
INK	**Inuvik**	**68.00**	**337**	P		**P**	**10 59 36.6**	**+0.3**
	0.4nm,0.6s,baz=76,slow=6.1,SNR=4.0							
INK	**Inuvik**	**68.00**	**337**	P		**P**	**10 59 37.0**	**+0.7**
INK					IAmb	IAmb	10 59 54.0	
	comp=Z,1.8nm,1.1s							
ILAR	**Eielson Array**	**73.20**	**333**	P		**P**	**11 00 09.0**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=107,slow=4.5,SNR=4.6							

IDC ***17*** *10:49:41.3±0.7, 17°.12N×60°.23W, h0km, mb3.9/13, mb1 4.1/16, mb1mx3.8/53, mbtmp3.9/16, ML3.4/3, MS3.5/4, Ms1 3.5/4, ms1mx3.1/34, Error ellipse: s-maj=18.7km s-min=13.7km az=98.0*
NEIC ***17*** *10:49:43.0±1.6, 17°.12N±0°.04×60°.30W±0°.05, h10km±1km, mb4.1/2, Error ellipse: s-maj=9.3km s-min=6.7km az=67.0*
TRN ***17*** *10:49:43.1, 17°.13N×60°.24W, h21km, MD4.1*

ISC 17 10:49:44.4±1.2,**17°.15N**±0°.05×**60°.26W**±0°.07,**h20**km±10km, **n73**,σ1**°32**/90,**mb4.0**/14,**MS3.2**/3,**Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
H05N1	**Guadeloupe/Mar**	**1.12**	**223**	Pn	**Pn**	**Pn**	**10 50 04.0**	**-1.1**
	SNR=1986							
H05N1				Sn		**Sb**	**10 50 17.0**	**-2.4**
ABD	**La Joyeuse, An**	**1.35**	**241**	*e*P		**Pb**	**10 50 09.2**	**+0.2**
ABD				*e*S		**Sb**	**10 50 26.9**	**+1.0**
MAGL	**Barre de l'île**	**1.54**	**220**	*e*P		**Pn**	**10 50 10.8**	**+0.1**
MAGL				*e*S		**Sn**	**10 50 29.9**	**-0.4**
ANWB	**Willy Bob**	**1.55**	**290**	*e*P		**Pn**	**10 50 10.4**	**-0.5**
ANWB				*e*S		**Sn**	**10 50 30.2**	**-0.1**
ANWB	**Willy Bob**	**1.55**	**290**	Pn		**Pn**	**10 50 10.3**	**-0.5**
CBE	**Ff, Capester**	**1.68**	**231**	*e*P		**Pn**	**10 50 13.3**	**+0.7**
CBE				*e*S		**Sb**	**10 50 37.5**	**+2.1**
TDBA	**Terre de Bas,**	**1.85**	**226**	*e*P		**Pn**	**10 50 16.1**	**+1.1**
TDBA	**Terre de Bas,**	**1.85**	**226**	*e*		Pb	10 50 29.3	+12
TDBA				*e*S		**Sb**	**10 50 40.0**	**-0.2**
DWS	**Wesley**	**1.87**	**213**	*e*P		**Pn**	**10 50 15.1**	**-0.1**
DWS				*e*S		**Sb**	**10 50 39.7**	**-1.1**
MDPV	**Dominica, Penn**	**1.88**	**217**	*e*P		**Pn**	**10 50 16.1**	**+0.7**
MDPV	**Dominica, Penn**	**1.88**	**217**	*e*		Pb	10 50 30.2	+12
MDPV				*e*S		**Sn**	**10 50 39.4**	**+0.9**
MDVC	**Dominica, Viel**	**1.88**	**216**	*e*P		**Pn**	**10 50 15.7**	**+0.2**
MDVC	**Dominica, Viel**	**1.88**	**216**	*e*		Pb	10 50 30.2	+12
MDVC				*e*S		**Sn**	**10 50 38.3**	**-0.3**
MLYT	**Lee's Yard**	**1.90**	**257**	*e*P		**Pn**	**10 50 17.1**	**+1.4**
MLYT				*e*S		**Sb**	**10 50 41.9**	**+0.3**
MDN	**Morne-Daniel**	**2.12**	**211**	*e*P		**Pn**	**10 50 18.6**	**-0.1**
MDN	**Morne-Daniel**	**2.12**	**211**	*e*		Pb	10 50 30.0	+7.8
MDN				*e*S		**Sn**	**10 50 45.5**	**+1.0**
DPMT	**Pointe Michel**	**2.16**	**210**	*e*P		**Pn**	**10 50 18.9**	**-0.4**
DPMT				*e*S		**Sn**	**10 50 37.0**	**-8.5**
SKI	**Saint Kitts**	**2.38**	**275**	*e*P		**Pn**	**10 50 23.3**	**+1.0**
SKI				*e*S		**Sn**	**10 50 51.5**	**+0.6**
SKI	**Saint Kitts**	**2.38**	**275**	Pn		**Pn**	**10 50 24.5**	**+2.2**
ILAM	**Ilet Lapin Mar**	**2.43**	**194**	*e*P		**Pn**	**10 50 23.1**	**+0.1**
ILAM				*e*S		**Sn**	**10 50 52.6**	**+0.4**
SVN	**Savane Anatole**	**2.45**	**201**	*e*P		**Pn**	**10 50 25.1**	**+1.7**
BAMF	**Morne Balai**	**2.47**	**200**	*e*P		**Pn**	**10 50 24.6**	**+1.0**
CXM	**Morne La Croix**	**2.48**	**201**	*e*P		**Pn**	**10 50 24.6**	**+0.7**
PCM	**Pelee Case Pet**	**2.49**	**202**	*e*P		**Pn**	**10 50 23.7**	**-0.2**
GBMF	**Grand Be**	**2.49**	**201**	*e*P		**Pn**	**10 50 24.2**	**+0.2**
PML	**Morne Lenard**	**2.52**	**201**	*e*P		**Pn**	**10 50 24.3**	**+0.1**
FDF	**Fort de France**	**2.55**	**200**	*e*P		**Pn**	**10 50 25.1**	**+0.4**
FDF	**Fort de France**	**2.55**	**200**	*e*		Pb	10 50 37.7	+8.2
FDF				*e*S		**Sn**	**10 50 55.7**	**+0.6**
FDF	**Fort de France**	**2.55**	**200**	Pn		**Pn**	**10 50 24.6**	**0.0**
LPMF	**Morne Lapointe**	**2.65**	**195**	*e*P		**Pn**	**10 50 25.8**	**-0.2**
ZAM	**Aeronautique**	**2.67**	**196**	*e*P		**Pn**	**10 50 26.4**	**+0.1**
BIM	**Bigot**	**2.73**	**197**	*e*P		**Pn**	**10 50 28.5**	**+1.4**
BIM				*e*S		**Sn**	**10 51 00.1**	**+0.5**
MPOM	**Morne Pois Mar**	**2.75**	**192**	*e*P		**Pn**	**10 50 28.4**	**+1.0**
MPOM	**Morne Pois Mar**	**2.75**	**192**	*e*		Pb	10 50 40.5	+7.6
MPOM				*e*S		**Sn**	**10 50 58.6**	**-1.4**
H05S1	**Guadeloupe/Mar**	**2.76**	**192**	Pn		**Pn**	**10 50 27.3**	**-0.3**
	SNR=137							
H05S1				Sn		**Sn**	**10 51 00.1**	**-0.2**
SMRT	**St. Maarten**	**2.83**	**289**	Pn		**Pn**	**10 50 28.5**	**0.0**
SMRT				Sn		**Sn**	**10 51 00.6**	**-1.5**
SABA	**Saba**	**2.89**	**280**	*e*P		**Pn**	**10 50 30.9**	**+1.5**
SABA				*e*S		**Sn**	**10 51 04.1**	**+0.7**
SLBI	**Saint Lucia, B**	**3.18**	**193**	*e*P		**Pn**	**10 50 34.0**	**+0.7**
SLBI				*e*S		**Sn**	**10 51 09.5**	**-1.2**
SLAC	**Saint Lucia, A**	**3.29**	**191**	*e*P		**Pn**	**10 50 35.0**	**+0.1**
SLAC	**Saint Lucia, A**	**3.29**	**191**	*e*		Pb	10 50 48.6	+6.5
SLAC				*e*S		**Sn**	**10 51 12.8**	**-0.6**
SLPA	**Patience**	**3.34**	**191**	*e*P		**Pn**	**10 50 34.4**	**-1.1**
SLDE	**Delcer**	**3.41**	**193**	*e*P		**Pn**	**10 50 34.7**	**-1.9**
MCLT	**Moule a Chique**	**3.48**	**191**	*e*P		**Pn**	**10 50 38.3**	**+0.8**
MCLT	**Moule a Chique**	**3.48**	**191**	*e*		Pb	10 50 51.2	+5.8
MCLT				*e*S		**Sn**	**10 51 19.2**	**+1.0**
SVV	**Soufriere Volc**	**3.92**	**194**	*e*S		**Sn**	**10 51 28.9**	**0.0**
SVCV	**St. Vincent, C**	**3.95**	**193**	*e*P		**Pn**	**10 50 44.9**	**+1.0**
SVCV				*e*S		**Sn**	**10 51 29.6**	**-0.1**
SVB	**Belmont**	**3.97**	**194**	*e*P		**Pn**	**10 50 45.4**	**+1.2**
SVB	**Belmont**	**3.97**	**194**	*e*S		**Sn**	**10 51 32.2**	**+1.9**
STVI	**Saint Thomas**	**4.63**	**286**			**Sn**	**10 51 44.5**	**-2.0**
CBYP	**Canovanas**	**5.45**	**283**	Pn		**Sn**	**10 51 06.9**	**-0.7**
CBYP				Sn		**Sn**	**10 52 05.2**	**-1.7**
SJG	**San Juan**	**5.70**	**281**	Pn		**Pn**	**10 51 07.4**	**-0.6**
	2.2nm,0.3s,baz=103,slow=16,SNR=3.0							
SJG				Sn		**Sn**	**10 52 11.4**	**-1.4**
	5.4nm,0.3s,baz=229,slow=12,SNR=5.3							
DR12	**Loma Pena Alta**	**8.83**	**282**	Pn		**Pn**	**10 51 52.6**	**+1.5**
DR12				Sn		**Sn**	**10 53 28.7**	**-1.4**
SDDR	**Presa de Saban**	**10.65**	**282**	Pn		**Pn**	**10 52 15.1**	**-0.8**
SDV	**Santo Domingo**	**13.02**	**232**	Pn		**Pn**	**10 52 48.0**	**-0.5**
	0.5nm,0.3s,baz=67,slow=9.1,SNR=4.2							
SDV				LR		LR	10 58 29.1	
	comp=Z,266nm,19.8s,baz=71,slow=40							
PTGA	**Pitinga**	**17.77**	**179**	P		**Pn**	**10 53 49.6**	**-1.1**
	0.3nm,0.3s,baz=350,slow=14,SNR=1.8							
JTS	**Las Juntas de**	**24.92**	**257**	LR		LR	11 04 55.9	
	comp=Z,72nm,19.0s,baz=146,slow=37							
TKL	**Tuckaleechee C**	**27.87**	**316**	LR		LR	11 05 19.0	
	comp=Z,71nm,20.9s,baz=74,slow=34							
SIV	**San Ignacio**	**32.94**	**181**	P		**P**	**10 56 18.2**	**+0.4**
	0.8nm,0.5s,baz=351,slow=5.7,SNR=3.7							
RCBR	**Riachuelo**	**33.17**	**131**	P		**P**	**10 56 19.4**	**-0.6**
	14nm,1.1s,baz=318,slow=4.8,SNR=2.8							
SCHQ	**Schefferville**	**37.95**	**354**	P		**P**	**10 57 00.9**	**+0.3**
	2.1nm,0.6s,baz=178,slow=8.9,SNR=3.6							
TXAR	**Lajitas Array**	**41.47**	**295**	P		**P**	**10 57 30.9**	**+0.6**
	0.1nm,0.6s,baz=108,slow=12,SNR=2.6							
TXAR				LR		LR	11 18 47.0	
	comp=Z,77nm,21.3s,baz=0.0,slow=42							
LENM	**Lemitar**	**44.98**	**301**	P		**P**	**10 57 58.7**	**0.0**
FRB	**Frobisher Bay**	**46.90**	**355**	P		**P**	**10 58 13.2**	**+0.1**
	6.0nm,0.9s,baz=158,slow=8.5,SNR=4.8							
PDAR	**Pinedale Array**	**48.90**	**312**	P		**P**	**10 58 30.2**	**+0.9**
	0.3nm,0.6s,baz=92,slow=7.4,SNR=3.8							
NV11	**Mina Array Sit**	**54.52**	**305**	P		**P**	**10 59 10.1**	**-1.2**
NV11					IAmb	IAmb	10 59 19.2	
	comp=Z,1.6nm,1.3s							
NEW	**Newport**	**55.44**	**317**	P		**P**	**10 59 17.4**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=96,slow=17,SNR=2.0							
YKA	**Yellowknife Ar**	**58.78**	**334**	P		**P**	**10 59 41.2**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=106,slow=7.7,SNR=11							
TORD	**Torodi Ar. Bea**	**59.73**	**85**	P		**P**	**10 59 48.0**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=300,slow=7.2,SNR=1.9							
GERES	**GERESS Array B**	**66.77**	**44**	P		**P**	**11 00 34.6**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=262,slow=5.8,SNR=4.7							
INK	**Inuvik**	**68.02**	**337**	P		**P**	**11 00 42.1**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=84,slow=6.1,SNR=4.6							
INK	**Inuvik**	**68.02**	**337**	P		**P**	**11 00 42.7**	**+0.8**
INK					IAmb	IAmb	11 00 57.6	
	comp=Z,2.5nm,1.1s							
ILAR	**Eielson Array**	**73.21**	**333**	P		**P**	**11 01 13.8**	**0.0**
	comp=Z,0.7nm,0.8s,baz=100,slow=5.5,SNR=6.4							
FINES	**FINESS Array B**	**73.36**	**30**	P		**P**	**11 01 15.1**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=217,slow=4.8,SNR=3.7							

IDC ***17*** *10:56:29.8±1.6, 19°.77S×70°.38W, h0km, mb3.6/3, mb1 3.6/5, mb1mx3.5/26, mbtmp3.5/5, ML3.1/2, Error ellipse: s-maj=42.7km s-min=17.3km az=70.0*
GUC ***17*** *10:56:32.0±0.7, 19°.96S×70°.94W, h33km±2km, ML3.6*

ISC 17 10:56:29.4±1.1,**20°.02S**±0°.03×**70°.98W**±0°.07,**h21**km±3km, **n34**,σ1**°60**/40,**mb3.8**/3,**6C-4D**,**Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.84**	**107**	*i*P		**Pn**	**10 56 45.8**	**-0.1**
TA02				*i* S		**Sn**	**10 56 57.5**	**-0.1**
TA02					IAML		10 56 58.7	
	comp=E,7μm,0.3s							
PSGC	**Pisagua**	**0.91**	**62**	↓*i*P		**Pb**	**10 56 46.3**	**-0.3**
PSGC				*i* S		**Sb**	**10 56 57.3**	**-1.0**
TA01	**Diego Aracena**	**0.93**	**126**	↓*i*P		**Pn**	**10 56 47.9**	**+0.8**
TA01				*e*S		**Sn**	**10 57 00.1**	**+0.3**
TA01					IAML		10 57 01.6	
	comp=E,2μm,0.4s							
PATCX	**Punta Patache**	**1.11**	**136**	↑*i*P		**Pb**	**10 56 51.0**	**+1.1**
PATCX				*e*S		**Sn**	**10 57 06.1**	**+1.6**
PATCX					IAML		10 57 10.9	
	comp=E,1μm,0.4s							
PB11	**IPOC Station P**	**1.27**	**78**	↓*i*P		**Pb**	**10 56 52.7**	**-0.1**
PB11				*i* S		**Sn**	**10 57 08.3**	**-0.4**
PB11					IAML		10 57 10.6	
	comp=E,4μm,0.4s							
PB12	**IPOC Station P**	**1.53**	**24**	↑*i*P		**Pb**	**10 56 56.4**	**-0.7**
PB12				*e*S		**Sn**	**10 57 15.1**	**+0.1**
PB12					IAML		10 57 20.4	
	comp=E,1μm,0.3s							
MNMC	**Minye Minye**	**1.58**	**56**	↑*i*P		**Pb**	**10 56 57.6**	**-0.4**
MNMC				*i* S		**Sb**	**10 57 17.5**	**-0.2**
MNMC					IAML		10 57 25.1	
	comp=N,3μm,0.5s							
PB02	**IPOC Station P**	**1.64**	**142**	*e*P		**Pb**	**10 56 58.8**	**-0.2**
PB02				*i* S		**Sb**	**10 57 20.6**	**+1.2**
PB02					IAML		10 57 30.3	
	comp=E,2μm,0.4s							
GO01	**Chusmiza**	**1.72**	**78**	↑*i*P		**Pb**	**10 56 59.8**	**-0.8**
GO01				*i* S		**Sb**	**10 57 21.9**	**0.0**
PB08	**IPOC Station P**	**1.72**	**94**	↑*e*P		**Pb**	**10 56 59.8**	**-0.7**
PB08				*i* S		**Sb**	**10 57 22.2**	**+0.3**
PB08					IAML		10 57 23.6	
	comp=N,1μm,0.7s							
PB01	**IPOC Station P**	**1.73**	**126**	*e*P		**Pb**	**10 57 00.0**	**-0.5**
PB01				*i* S		**Sb**	**10 57 21.8**	**0.0**
PB01					IAML		10 57 29.8	
	comp=N,1μm,0.5s							
AP01	**Chacalluta**	**1.75**	**20**	*e*P		**Pb**	**10 57 00.6**	**-0.2**
AP01				*i* S		**Sb**	**10 57 24.0**	**+1.6**
PB07	**IPOC Station P**	**1.98**	**149**	*e*P		**Pb**	**10 57 00.3**	**-1.3**
PB07				*i* S		**Sb**	**10 57 32.0**	**+2.9**
PB07					IAML		10 57 38.5	
	comp=E,535nm,0.4s							
PB16	**IPOC Station P**	**2.18**	**40**	↑*i*P		**Pn**	**10 57 06.3**	**+1.4**
PB16				*i* S		**Sn**	**10 57 33.5**	**+1.9**
PB16					IAML		10 57 38.6	
	comp=N,432nm,0.3s							
PB03	**IPOC Station P**	**2.32**	**151**	*e*P		**Pb**	**10 57 08.7**	**-1.9**
PB03				*i* S		**Sb**	**10 57 42.9**	**+4.0**
PB03					IAML		10 57 50.5	
	comp=E,299nm,0.6s							
PB04	**IPOC Station P**	**2.43**	**161**	*e*P		**Pn**	**10 57 09.3**	**+1.4**
PB04					IAML		10 57 55.7	
	comp=E,392nm,0.7s							
PB05	**IPOC Station P**	**2.91**	**166**	*e*P		**Pn**	**10 57 15.6**	**+1.0**
PB05				*i* S		**Sb**	**10 57 53.8**	**-2.0**
PB05					IAML		10 58 12.1	
	comp=E,178nm,0.6s							
PB06	**IPOC Station P**	**2.98**	**154**	*e*P		**Pn**	**10 57 17.1**	**+1.6**
PB06				*i* S		**Sb**	**10 57 55.7**	**-2.0**

PETK Petropavlovsk- 16.90 287 Pn **Pn** **11 20 29.0 -2.6**
comp=Z,0.2nm,0.3s,baz=83,slow=13,SNR=1.6
PPLA Purkeypile 16.91 37 **P** **11 20 34.2 +0.7**
PPLA IAmb IAmb 11 20 39.7
comp=Z,3.6nm,0.9s
KTH Kantishna Hill 17.75 37 P **P** **11 20 43.4 +0.6**
RDOG Red Dog Mine 17.91 15 P **Pn** **11 20 44.7 +0.7**
TRF Thorofare Moun 17.93 37 P **P** **11 20 45.7 +0.8**
SML Sawmill 17.96 44 P **Pn** **11 20 44.8 -0.1**
SML IAmb IAmb 11 20 54.7
comp=Z,3.2nm,0.5s
BPAW Bear Paw Mtn. 18.03 35 P **P** **11 20 47.5 +1.7**
BPAW IAmb IAmb 11 21 07.1
comp=Z,4.5nm,1.3s
RND Reindeer 18.47 39 P **P** **11 20 50.5 -0.2**
RND IAmb IAmb 11 20 59.9
comp=Z,5.2nm,1.2s
DHY Denali Highway 18.90 40 P **P** **11 20 55.8 +0.2**
CCB Clear Creek Bu 19.49 36 P **P** **11 21 02.1 +0.4**
HDA Harding Lake 19.69 37 P **P** **11 21 04.3 +0.2**
HDA IAmb IAmb 11 21 06.0
comp=Z,3.8nm,0.6s
IL31 19.90 36 P **P** **11 21 06.2 0.0**
ILAR Eielson Array 19.90 36 P **P** **11 21 03.7 -2.5**
comp=Z,0.3nm,0.3s,baz=230,slow=10,SNR=26
RIDG Independent Ri 20.22 40 P **P** **11 21 09.4 -0.4**
RIDG IAmb IAmb 11 21 20.1
comp=Z,3.2nm,1.0s
DOT Dot Lake 20.50 41 P **P** **11 21 13.0 +0.2**
DOT IAmb IAmb 11 21 18.2
comp=Z,2.8nm,0.6s
SCRK Sand Creek 20.66 40 P **P** **11 21 14.5 -0.2**
TOLK Toolik Lake Re 21.32 26 P **P** **11 21 22.6 +0.9**
EGAK Eagle 22.11 39 P **P** **11 21 30.0 0.0**
DAWY Dawson 22.59 42 P **P** **11 21 35.4 +0.2**
DAWY IAmb IAmb 11 21 38.6
comp=Z,1.4nm,0.7s
INK Inuvik 26.22 34 P **P** **11 22 07.3 -1.9**
comp=Z,0.6nm,0.4s,baz=238,slow=6.3,SNR=10
INK Inuvik 26.22 34 P **P** **11 22 08.6 -0.6**
INK IAmb IAmb 11 22 11.0
comp=Z,0.9nm,0.7s
YKA Yellowknife Ar 33.57 47 P **P** **11 23 13.1 -1.3**
comp=Z,0.1nm,0.3s,baz=276,slow=8.7,SNR=5.0
PDAR Pinedale Array 44.01 74 P **P** **11 24 43.9 +1.7**
comp=Z,0.2nm,0.5s,baz=294,slow=2.9,SNR=2.4
TXAR Lajitas Array 56.24 84 P **P** **11 26 18.7 +3.8**
comp=Z,0.1nm,0.5s,baz=324,slow=4.5,SNR=2.5
MKAR Makanchi Array 62.05 311 P **P** **11 26 53.5 -1.3**
comp=Z,0.5nm,0.4s,baz=47,slow=6.1,SNR=7.6
NOA NORSAR Array B 68.02 357 P **P** **11 27 31.2 -2.1**
comp=Z,0.6nm,0.7s,baz=7.0,slow=3.7,SNR=1.7

IDC ***17*** *12:08:11.4±9.5, 14°.91S×167°.77E, h123km±67km, mb3.8/4, mb1 3.9/5, mb1mx3.4/40, mbtmp4.2/5, Error ellipse: s-maj=122.8km s-min=56.4km az=76.0*

NEIC ***17*** *12:08:13.6±1.4, 15°.03S±0°.10×167°.4E±0°.2, h120km±7km, mb4.5/11, Error ellipse: s-maj=25.1km s-min=13.7km az=99.0*

ISC 17 12:08:15.2±1.4**, 15°.1S**±0°.1×**167°.5E**±0°.2**, h129**km**, n19,** σ1§**17**/21**, mb4.4/8, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.01**	**188**	P	**Pn**	**12 09 55.3**	**-0.1**
	2.6nm,0.3s,baz=77,slow=13,SNR=22						
DZM				S	**Sn**	**12 11 14.3**	**+0.4**
	3.3nm,0.3s,baz=127,slow=23,SNR=12						
DZM	**Mont Dzumac**	**7.01**	**188**		**Pn**	**12 09 55.1**	**-0.3**
DZM					**Sn**	**12 11 12.6**	**-1.2**
EIDS	**Eidsvold**	**18.45**	**234**	P	**P**	**12 12 20.2**	**-0.7**
EIDS				IAmb	IAmb	12 12 32.4	
	comp=Z,34nm,1.4s						
CTA	**Charters Tower**	**20.82**	**253**	P	**P**	**12 12 48.7**	**+2.1**
	comp=Z,3.0nm,0.8s,baz=45,slow=16,SNR=1.4						
CTAO	**Charters Tower**	**20.82**	**253**	P	**P**	**12 12 48.7**	**+2.1**
CTAO				IAmb	IAmb	12 13 04.6	
	comp=Z,36nm,1.4s						
PATS	**Pohnpei**	**23.60**	**337**	P	**P**	**12 13 13.8**	**-0.7**
BKZ	**Black Stump Fm**	**25.26**	**163**	P	**P**	**12 13 28.9**	**-0.5**
BKZ				IAmb	IAmb	12 13 47.5	
	comp=Z,28nm,1.5s						
STKA	**Stephens Creek**	**28.91**	**230**	P	**P**	**12 14 03.0**	**+0.9**
	comp=Z,3.7nm,0.5s,baz=53,slow=9.2,SNR=11						
STKA	**Stephens Creek**	**28.91**	**230**	P	**P**	**12 14 02.9**	**+0.9**
WB0	**Warramunga Arr**	**31.86**	**257**	P	**P**	**12 14 26.8**	**-1.5**
WB0				IAmb	IAmb	12 14 27.5	
	comp=Z,11nm,1.3s						
WRA	**Warramunga Arr**	**31.92**	**256**	P	**P**	**12 14 27.6**	**-1.2**
	comp=Z,1.2nm,0.7s,baz=84,slow=8.5,SNR=11						
AS31	**Alice Springs**	**32.72**	**250**	P	**P**	**12 14 34.5**	**-1.3**
ASAR	**Alice Springs**	**32.72**	**250**	P	**P**	**12 14 34.7**	**-1.1**
	comp=Z,3.2nm,0.6s,baz=82,slow=9.1,SNR=54						
BBOO	**Buckleboo**	**33.51**	**233**	P	**P**	**12 14 43.0**	**+0.5**
BBOO				IAmb	IAmb	12 14 43.7	
	comp=Z,5.6nm,0.8s						
KNRA	**Kununurra**	**37.29**	**264**	P	**P**	**12 15 14.2**	**-0.8**
FORT	**Forrest**	**39.28**	**240**	P	**P**	**12 15 30.6**	**-0.9**
FORT				IAmb	IAmb	12 15 32.6	
	comp=Z,11nm,0.8s						
FITZ	**Fitzroy Crossi**	**40.13**	**260**	P	**P**	**12 15 38.1**	**-0.6**
FITZ				IAmb	IAmb	12 15 49.3	
	comp=Z,9.1nm,1.4s						
VNDA	**Vanda**	**62.51**	**181**	P	**P**	**12 18 26.2**	**+1.7**
QSPA	**South Pole Qui**	**74.94**	**180**	P	**P**	**12 19 41.8**	**-0.1**

IDC ***17*** *12:12:24.1±5.2, 52°.16N×167°.96W, h0km, mb3.7/6, mb1 3.7/8, mb1mx3.4/61, mbtmp3.7/8, ML3.1/2, MS4.2/1, Ms1 4.2/1, ms1mx2.7/55, Error ellipse: s-maj=131.5km s-min=20.6km az=156.0*

AEIC ***17*** *12:12:28±2.1, 52°.17N±0°.04×168°.22W±0°.06, h33km±4km, mb3.8/3(NEIC), Error ellipse: s-maj=6.0km s-min=5.5km az=210.0*

NEIC ***17*** *12:12:29.9±1.9, 52°.21N±0°.08×168°.2W±0°.1, h43km±19km, Error ellipse: s-maj=12.2km s-min=7.9km az=152.0*

ISC 17 12:12:28.3±1.1**, 52°.20N**±0°.08×**168°.15W**±0°.06**, h25**km**, n27,** σ1§**09**/30**, mb3.7**/5**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.89**	**331**		**Pb**	**12 12 44.9**	**-0.2**
NIKH	**Nikolski High**	**0.89**	**331**		**Sb**	**12 12 56.4**	**-0.1**
NIKH	**Nikolski High**	**0.89**	**331**		**Sb**	**12 12 56.7**	**+0.2**
OKSP	**Okmok Steeple**	**1.06**	**355**		**Pn**	**12 12 47.5**	**-0.1**
OKFG	**Magazine Ridge**	**1.22**	**7**		**Pb**	**12 12 50.6**	**-0.2**
OKCE	**Okmok Cone E**	**1.23**	**360**		**Pb**	**12 12 50.5**	**-0.4**
OKCE					**Sb**	**12 13 07.9**	**+1.5**
MNAT	**Makushin Natee**	**1.91**	**27**		**Pn**	**12 13 00.2**	**+1.1**
MSW	**Makushin Switc**	**1.91**	**25**		**Pn**	**12 13 00.3**	**+1.1**
MSW					**Sb**	**12 13 24.4**	**-1.4**
UNV	**Unalaska Valle**	**1.93**	**30**		**Pn**	**12 13 00.2**	**+0.8**
KOFP	**Korovin Flat P**	**3.66**	**274**		**Pn**	**12 13 24.6**	**+1.3**
ATKA	**Atka Island**	**3.72**	**272**		**Pn**	**12 13 24.9**	**+0.9**
ATKA				Sn	**Sn**	**12 14 05.9**	**-1.2**
GSTR	**Great Sitkin T**	**4.87**	**272**	Pn	**Pn**	**12 13 40.6**	**+0.7**
GSTR				Sn	**Sn**	**12 14 33.6**	**-1.9**
SPIA	**Saint Paul Isl**	**5.14**	**347**	Pn	**Pn**	**12 13 45.7**	**+2.2**
ADK	**Adak**	**5.28**	**270**		**Pn**	**12 13 46.2**	**+0.7**
KDAK	**Kodiak Island**	**10.54**	**52**	Pn	**Pn**	**12 14 58.4**	**+1.0**
	0.3nm,0.3s,baz=238,slow=9.5,SNR=9.1						
KDAK	**Kodiak Island**	**10.54**	**52**		**Pn**	**12 14 57.2**	**-0.2**
MLY	**Manley**	**15.66**	**28**		**Pn**	**12 16 05.6**	**-1.4**
MLY				IAmb	IAmb	12 16 12.4	
	comp=Z,3.4nm,0.8s						
ILAR	**Eielson Array**	**16.68**	**33**	Pn	**Pn**	**12 16 18.0**	**-2.0**
	comp=Z,0.0nm,0.3s,baz=234,slow=12,SNR=4.3						
PEA0B	**Petropavlovsk-**	**20.63**	**286**	P	**P**	**12 17 04.9**	**-0.7**
PEA0B				IAmb	IAmb	12 17 21.0	
	comp=Z,61nm,1.3s						
PETK	**Petropavlovsk-**	**20.63**	**286**	P	**P**	**12 17 05.5**	**0.0**
	comp=Z,3.9nm,0.6s,baz=94,slow=13,SNR=11						
INK	**Inuvik**	**23.08**	**33**	P	**P**	**12 17 32.0**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=226,slow=11,SNR=10						
INK	**Inuvik**	**23.08**	**33**	P	**P**	**12 17 30.7**	**-0.9**
INK				IAmb	IAmb	12 17 36.3	
	comp=Z,3.3nm,1.5s						
KSRS	**Korea Array**	**46.17**	**278**	P	**P**	**12 20 52.2**	**+1.6**
	comp=Z,1.0nm,1.1s,baz=57,slow=6.3,SNR=5.5						
LPIG	**La Paz**	**51.72**	**100**	LR	LR	12 38 21.2	
	comp=Z,248nm,19.7s,baz=319,slow=30						
MKAR	**Makanchi Array**	**64.47**	**314**	P	**P**	**12 23 02.1**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=36,slow=7.5,SNR=3.8						
FINES	**FINESS Array B**	**66.14**	**353**	P	**P**	**12 23 13.3**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=18,slow=6.6,SNR=4.8						
AKASG	**Malin Array Be**	**76.43**	**349**	P	**P**	**12 24 15.1**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=16,slow=5.9,SNR=4.2						

IDC ***17*** *12:13:27.1±0.3, 54°.23S×146°.66W, h0km, mb5.3/28, mb1 5.3/28, mb1mx5.3/38, mbtmp5.3/28, MS5.2/20, Ms1 5.2/20, ms1mx5.2/22, Error ellipse: s-maj=14.5km s-min=9.3km az=6.0*

NEIC ***17*** *12:13:27.7±1.3, 54°.25S±0°.09×146°.7W±0°.1, h5km±1km, mb5.8/163, Ms_20 5.3/610, Mwb5.7/34, Mww5.7, Mwc5.8(GCMT), Error ellipse: s-maj=16.3km s-min=14.3km az=29.0*

NEIC ***17*** *12:13:28.9, 54°.32S×146°.66W, h4km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr3.89; Mθθ-1.92; Mϕϕ-1.97; Mrθ-0.67; Mrϕ-1.77; Mθϕ-0.37; Fault plane solution: M₀3.88000×10¹⁷ NP1:ϕ₁41.62000°, δ39.60000°, λ85.40000°. NP2:ϕ₂227.58000°, δ50.55000°, λ93.80000°. Principal axes: T 3.9757, Plg84.0000°, Azm163.0000°; N -0.1904, Plg3.0000°, Azm45.0000°; P -3.7853, Plg5.0000°, Azm315.0000°;*

MOS ***17*** *12:13:28.1±1.0, 54°.31S×146°.77W, h12km, mb5.9/35, MS5.3/18 Error ellipse: s-maj=14.5km s-min=10.9km az=96.4*

GCMT ***17*** *12:13:32.7±0.1, 54°.43S±0°.01×146°.88W±0°.01, h12km, MW5.7/158, Moment Tensor Solution. s157,c304; s158,c327; Duration: 1§8 Moment tensor: Scale 10¹⁷ Nm; Mrr5.27±.04; Mθθ-3.06±.04; Mϕϕ-2.21±.04; Mrθ-0.80±.10; Mrϕ-2.13±.03; Mθr-0.68±.10; Best double couple: M₀5.14700×10¹⁷ NP1:ϕ₁51.00000°, δ39.00000°, λ90.00000°. NP2:ϕ₂230.00000°, δ51.00000°, λ90.00000°. Principal axes: T 5.3790, Plg84.0000°, Azm139.0000°; N -0.4630, Plg0.0000°, Azm231.0000°; P -4.9160, Plg6.0000°, Azm321.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***17*** *12:13:33, 54°.45S×146°.83W, h12km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr5.66; Mθθ-3.55; Mϕϕ-2.11; Mrθ-1.36; Mrϕ-2.20; Mθr0.01; Fault plane solution: M₀5.59000×10¹⁷ NP1:ϕ₁241.00000°, δ51.00000°, λ99.00000°. NP2:ϕ₂47.00000°, δ40.00000°, λ79.00000°. Principal axes: T 5.8703, Plg81.0000°, Azm196.0000°; N -0.6136, Plg7.0000°, Azm256.0000°; P -5.2567, Plg6.0000°, Azm325.0000°;*

NEIC ***17*** *12:13:35, 54°.22S×146°.92W, h16km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr4.83; Mθθ-2.11; Mϕϕ-2.72; Mrθ0.18; Mrϕ-2.19; Mθr2.29; Fault plane solution: M₀5.26000×10¹⁷ NP1:ϕ₁27.00000°, δ57.00000°, λ75.00000°. NP2:ϕ₂233.00000°, δ36.00000°, λ112.00000°. Principal axes: T 5.4960, Plg73.0000°, Azm258.0000°; N -0.5073, Plg12.0000°, Azm35.0000°; P -4.9887, Plg11.0000°, Azm128.0000°;*

ISC 17 12:13:28.4±0.4**, 54°.39S**±0°.05×**146°.64W**±0°.04**, h9**km±2km**, h9km:pP-P, n1360,** σ1§**20**/1248**, mb5.8**/136**, MS5.3**/346**, 48C-19D, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLWZ	**Palliser**	**28.17**	**281**	P	**P**	**12 19 19.4**	**-1.6**
BFZ	**Birch Farm**	**28.19**	**284**	P	**P**	**12 19 20.4**	**-0.7**
BFZ				IAmb	IAmb	12 19 26.0	
	comp=Z,217nm,1.7s						
BFZ				IAMs_20	IAMs_20	12 27 31.2	
	comp=Z,9μm,20.0s						
MSWZ	**Moikau Station**	**28.28**	**282**	P	**P**	**12 19 21.3**	**-0.6**
MQZ	**McQueen's Vall**	**28.35**	**275**	P	**P**	**12 19 22.3**	**-0.2**
MQZ				IAmb	IAmb	12 19 27.2	
	comp=Z,250nm,1.8s						
MQZ				IAMs_20	IAMs_20	12 27 23.5	
	comp=Z,8μm,18.0s						
BHW	**Baring Head**	**28.50**	**281**	P	**P**	**12 19 23.7**	**-0.1**
KHZ	**Kahutara**	**28.63**	**278**	P	**P**	**12 19 24.8**	**-0.1**
KHZ				IAmb	IAmb	12 19 29.6	
	comp=Z,189nm,1.6s						
KHZ				IAMs_20	IAMs_20	12 27 40.4	
	comp=Z,9μm,20.0s						
CMWZ	**Cape Campbell**	**28.66**	**280**	P	**P**	**12 19 25.4**	**+0.1**
SNZO	**South Karori**	**28.66**	**281**	P	**P**	**12 19 25.5**	**+0.3**
SNZO				IAmb	IAmb	12 19 30.1	
	comp=Z,201nm,1.5s						
SNZO	**South Karori**	**28.66**	**281**	IAMs_20	IAMs_20	12 27 43.7	
	comp=Z,9μm,20.0s						
BSWZ	**Blackbirch Sta**	**28.87**	**280**	P	**P**	**12 19 26.9**	**-0.3**
OXZ	**Oxford**	**28.94**	**275**	P	**P**	**12 19 27.8**	**0.0**
OXZ				IAMs_20	IAMs_20	12 28 20.4	
	comp=Z,7μm,18.0s						
TUWZ	**Tuamarina**	**29.02**	**280**	P	**P**	**12 19 28.4**	**0.0**
BKZ	**Black Stump Fm**	**29.08**	**286**	P	**P**	**12 19 29.4**	**+0.4**
BKZ				IAMs_20	IAMs_20	12 28 02.6	
	comp=Z,11μm,22.0s						
LTZ	**Lake Taylor**	**29.14**	**276**	P	**P**	**12 19 29.9**	**+0.4**
LTZ				IAMs_20	IAMs_20	12 27 35.6	
	comp=Z,9μm,21.0s						
MXZ	**Matakaoa Point**	**29.21**	**291**	P	**P**	**12 19 29.7**	**-0.4**
MXZ				IAmb	IAmb	12 19 36.8	
	comp=Z,320nm,1.6s						
MXZ				IAMs_20	IAMs_20	12 27 50.8	
	comp=Z,8μm,21.0s						
RPZ	**Rata Peaks**	**29.28**	**274**	P	**P**	**12 19 31.7**	**+0.9**
	comp=Z,16nm,0.8s,baz=173,slow=7.7,SNR=8.1						
RPZ				LR	LR	12 28 16.1	
	comp=Z,10μm,21.2s,baz=114,slow=30						
RPZ	**Rata Peaks**	**29.28**	**274**	P	**P**	**12 19 31.4**	**+0.6**
RPZ				IAMs_20	IAMs_20	12 27 54.5	
	comp=Z,12μm,20.0s						
URZ	**Urewera**	**29.37**	**288**	P	**P**	**12 19 32.6**	**+1.1**
	comp=Z,9.0nm,1.0s,baz=32,slow=5.8,SNR=5.8						
URZ				PcP	**PcP**	**12 22 37.1**	**-0.4**
	comp=Z,18nm,1.0s,baz=130,slow=2.7,SNR=4.3						
URZ				LR	LR	12 28 19.1	
	comp=Z,10μm,21.2s,baz=180,slow=30						
URZ	**Urewera**	**29.37**	**288**	P	**P**	**12 19 32.8**	**+1.2**
URZ				IAMs_20	IAMs_20	12 28 07.2	
	comp=Z,10μm,20.0s						
THZ	**Tophouse**	**29.40**	**279**	P	**P**	**12 19 32.8**	**+0.8**
THZ				IAMs_20	IAMs_20	12 28 25.6	
	comp=Z,9μm,20.0s						
VNDA	**Vanda**	**29.43**	**200**	P	**P**	**12 19 34.8**	**+3.0**
	comp=Z,8.3nm,0.9s,baz=71,slow=8.7,SNR=39						
VNDA				PcP	**PcP**	**12 22 38.0**	**+1.0**
	comp=Z,4.9nm,0.7s,baz=93,slow=2.7,SNR=9.6						
VNDA				LR	LR	12 28 24.4	
	comp=Z,5μm,21.6s,baz=88,slow=30						
VNDA	**Vanda**	**29.43**	**200**	P	**P**	**12 19 33.0**	**+1.2**
NNZ	**Nelson**	**29.48**	**280**	P	**P**	**12 19 31.5**	**-1.1**
NNZ				IAMs_20	IAMs_20	12 28 09.5	
	comp=Z,9μm,22.0s						
WKZ	**Wanaka**	**29.82**	**270**	P	**P**	**12 19 36.3**	**+0.7**
WKZ				IAMs_20	IAMs_20	12 28 12.9	
	comp=Z,12μm,22.0s						
MLZ	**Mavora Lakes**	**30.05**	**269**	IAMs_20	IAMs_20	12 28 09.3	
	comp=Z,10μm,20.0s						
QRZ	**Quartz Range**	**30.22**	**280**	IAMs_20	IAMs_20	12 28 54.2	
	comp=Z,7μm,20.0s						
PYZ	**Puysegur Point**	**30.45**	**266**	IAMs_20	IAMs_20	12 28 29.0	
	comp=Z,6μm,18.0s						
HIZ	**Hauiti**	**30.45**	**285**	IAMs_20	IAMs_20	12 28 56.0	
	comp=Z,7μm,22.0s						
TBI	**Tubuai**	**31.07**	**355**	*e*S	**S**	**12 24 51.9**	**0.0**
	comp=Z,2μm,24.8s						
TBI				*e*LQ	LQ	12 26 30.7	
	comp=Z,2μm,24.5s						
TBI				*e*LR	LR	12 27 33.6	
	comp=Z,20μm,29.2s,baz=178						
TBI	**Tubuai**	**31.07**	**355**	*e*T	T	12 51 58.5	
	comp=Z,87nm,0.3s						
PTCN	**Pitcairn Islan**	**31.76**	**29**	IAMs_20	IAMs_20	12 28 45.0	
	comp=Z,5μm,18.0s						
RKT	**Rikitea**	**32.44**	**20**	*e*S	**S**	**12 25 14.0**	**+0.7**
	comp=Z,924nm,26.7s						
RKT				*e*LQ	LQ	12 27 02.8	
	comp=Z,2μm,31.4s						
RKT				*e*LR	LR	12 28 27.6	
	comp=Z,14μm,27.5s						
RKT	**Rikitea**	**32.44**	**20**	*e*T	T	12 53 39.5	
	comp=Z,19nm,0.3s						
OUZ	**Omahuta**	**33.51**	**288**	IAMs_20	IAMs_20	12 30 17.9	
	comp=Z,8μm,22.0s						
RAO	**Raoul Island**	**33.78**	**305**	IAMs_20	IAMs_20	12 29 39.8	
	comp=Z,6μm,22.0s						
RAR	**Rarotonga**	**34.59**	**338**	P	**P**	**12 20 17.1**	**-0.4**
	comp=Z,26nm,1.0s,baz=187,slow=9.7,SNR=4.3						
RAR				LR	LR	12 30 03.7	
	comp=Z,7μm,20.5s,baz=148,slow=29						
RAR	**Rarotonga**	**34.59**	**338**	P	**P**	**12 20 15.5**	**-2.0**
RAR	**Rarotonga**	**34.59**	**338**	IAMs_20	IAMs_20	12 30 02.8	
	comp=Z,8μm,22.0s						
QSPA	**South Pole Qui**	**35.77**	**180**	P	**P**	**12 20 28.8**	**+1.4**
QSPA	**South Pole Qui**	**35.77**	**180**	IAMs_20	IAMs_20	12 32 07.9	
	comp=Z,7μm,21.0s						
MEH	**Mehetia**	**36.46**	**358**	*e*P	**P**	**12 20 35.8**	**+2.2**
	comp=Z,24nm,0.9s						
MEH	**Mehetia**	**36.46**	**358**	*e*T	T	12 58 47.6	
	comp=Z,47nm,0.2s						
TVO	**Taravao**	**36.59**	**356**	*e*T	T	12 58 52.4	
	comp=Z,7.1nm,0.3s						
PAE	**Paea**	**36.73**	**355**	*e*P	**P**	**12 20 37.5**	**+1.7**
	comp=Z,10nm,1.0s						
PAE	**Paea**	**36.73**	**355**	*e*T	T	12 58 58.7	
	comp=Z,3.9nm,0.3s						
PPT2	**Papeete2**	**36.80**	**355**	*e*P	**P**	**12 20 38.5**	**+1.9**
	comp=Z,86nm,1.3s						
PPT2				*e*S	**S**	**12 26 21.9**	**+1.2**
PPT2	comp=Z,2μm,25.5s			*e*LQ	LQ	12 28 54.3	
	comp=Z,5μm,25.5s						
PPT2				*e*LR	LR	12 30 09.8	
	comp=Z,21μm,28.2s,baz=180						
PPT2	**Papeete2**	**36.80**	**355**	*e*T	T	12 59 01.2	
	comp=Z,7.6nm,0.3s						
PPTF	**Pamatai, Papee**	**36.80**	**355**	P	**P**	**12 20 34.3**	**-2.2**
PPTF				IAmb	IAmb	12 20 40.2	
	comp=Z,260nm,1.6s						
PPTF				IAMs_20	IAMs_20	12 32 31.5	
	comp=Z,5μm,20.0s						
TIAR	**Tiarei**	**36.82**	**356**	*e*P	**P**	**12 20 38.5**	**+1.8**
	comp=Z,31nm,1.1s						
TIAR	**Tiarei**	**36.82**	**356**	*e*T	T	12 58 57.8	
	comp=Z,5.5nm,0.2s						
PPT	**Papeete**	**36.82**	**355**	LR	LR	12 31 37.7	
	comp=Z,4μm,21.4s,baz=192,slow=30						
RPN	**Rapa Nui**	**38.51**	**60**	LR	LR	12 32 36.4	
	comp=Z,1μm,20.2s,baz=224,slow=30						
VAH	**Vaihoa**	**39.08**	**358**	*e*P	**P**	**12 20 57.6**	**+1.9**
	comp=Z,122nm,1.2s						
VAH	**Vaihoa**	**39.08**	**358**	*e*T	T	13 01 57.5	
	comp=Z,94nm,0.3s						
PMOR	**Pomariorio Ree**	**39.31**	**358**	*e*P	**P**	**12 20 59.2**	**+1.5**
	comp=Z,221nm,1.2s						
PMOR	**Pomariorio Ree**	**39.31**	**358**	*e*T	T	13 02 12.5	
	comp=Z,5.6nm,0.3s						
NIUE	**Niue**	**39.50**	**324**	IAMs_20	IAMs_20	12 32 28.0	
	comp=Z,7μm,20.0s						
PMSA	**Palmer Station**	**40.08**	**139**	P	**P**	**12 21 06.1**	**+2.6**
	comp=Z,54nm,1.0s,baz=243,slow=6.5,SNR=5.1						
PMSA				LR	LR	12 33 11.0	
	comp=Z,4μm,19.4s,baz=247,slow=29						
PMSA	**Palmer Station**	**40.08**	**139**	P	**P**	**12 21 05.1**	**+1.5**
PMSA	**Palmer Station**	**40.08**	**139**	IAMs_20	IAMs_20	12 32 49.9	
	comp=Z,5μm,20.0s						
PMSA	**Palmer Station**	**40.08**	**139**	*e*P	**P**	**12 21 04.5**	**+1.0**
GO10	**Punta Arenas**	**42.68**	**121**	P	**P**	**12 21 26.2**	**+1.1**
GO10				IAmb	IAmb	12 21 30.8	
	comp=Z,289nm,1.1s						
GO09	**Cerro Castillo**	**43.07**	**118**	P	**P**	**12 21 28.9**	**+0.6**
GO09				IAmb	IAmb	12 21 32.7	
	comp=Z,287nm,1.7s						
MG01	**Puerto William**	**43.38**	**124**	P	**P**	**12 21 31.4**	**+0.6**
MG01				IAmb	IAmb	12 21 36.7	
	comp=Z,204nm,0.9s						
MG01				IAMs_20	IAMs_20	12 34 28.0	
	comp=Z,6μm,21.0s						
LHI	**Lord Howe Isla**	**44.48**	**278**	P	**P**	**12 21 39.8**	**0.0**
LHI				IAmb	IAmb	12 21 43.9	
	comp=Z,333nm,1.7s						
AFI	**Afiamalu**	**44.94**	**324**	P	**P**	**12 21 42.9**	**-0.8**
AFI				pmax	pmax		
	comp=Z,231nm,1.6s						
AFI	**Afiamalu**	**44.94**	**324**	P	**P**	**12 21 42.9**	**-0.8**
AFI				IAmb	IAmb	12 21 49.4	
	comp=Z,231nm,1.6s						
AFI	**Afiamalu**	**44.94**	**324**	IAMs_20	IAMs_20	12 34 46.9	
	comp=Z,6μm,21.0s						
MSVF	**Nonsavu**	**45.54**	**309**	*i* P	**P**	**12 21 50.1**	**+1.6**
MSVF				pmax	pmax		
	comp=Z,244nm,2.3s						
MSVF	**Nonsavu**	**45.54**	**309**	P	**P**	**12 21 48.0**	**-0.4**
MSVF				IAmb	IAmb	12 22 57.5	
	comp=Z,238nm,1.8s						
TAOE	**Nuku Hiva Isla**	**45.71**	**9**	*e*S	**S**	**12 28 33.3**	**+0.2**
	comp=Z,2μm,25.2s						
TAOE				*e*LQ	LQ	12 32 31.2	
	comp=Z,5μm,28.9s						
TAOE				*e*LR	LR	12 34 25.7	
	comp=Z,11μm,28.2s,baz=201						
TAOE	**Nuku Hiva Isla**	**45.71**	**9**	IAMs_20	IAMs_20	12 36 04.2	
	comp=Z,4μm,20.0s						
CASY	**Casey**	**46.42**	**213**	P	**P**	**12 21 56.3**	**+1.5**
CAN	**Canberra**	**47.64**	**266**	P	**P**	**12 22 04.4**	**-0.4**
CAN				pmax	pmax		
	comp=Z,163nm,1.5s						
CAN	**Canberra**	**47.64**	**266**	P	**P**	**12 22 04.4**	**-0.4**
CAN				IAmb	IAmb	12 22 08.7	
	comp=Z,163nm,1.5s						
CAN				IAMs_20	IAMs_20	12 38 57.5	
	comp=Z,3μm,19.0s						
DZM	**Mont Dzumac**	**47.65**	**294**	*e*P	**P**	**12 22 06.7**	**+1.7**
	comp=Z,200nm,1.8s						
DZM				*e*S	**S**	**12 29 00.3**	**-0.6**
	comp=Z,5μm,26.9s						
DZM				*e*LQ	LQ	12 33 30.2	
	comp=Z,3μm,26.9s						
DZM				*e*LR	LR	12 35 32.4	
	comp=Z,19μm,25.2s,baz=145					

BI03 Tigo 51.93 102 P **P** **12 22 37.1 -0.2**
BI03 IAmb IAmb 12 22 42.0
comp=Z,115nm,1.2s
BI02 San Fabin de 53.06 103 P **P** **12 22 46.0 +0.1**
BI02 IAmb IAmb 12 22 55.5
comp=Z,146nm,1.6s
EIDS Eidsvold 53.72 277 P **P** **12 22 50.4 -0.3**
EIDS IAMs_20 IAMs_20 12 41 24.7
comp=Z,3μm,20.0s
GO05 Huala 53.85 101 P **P** **12 22 51.8 +0.2**
GO05 IAMs_20 IAMs_20 12 39 53.6
comp=Z,3μm,20.0s
NVL N'lazarevskaya 54.20 171 *e*P **P** **12 22 50.8 -2.7**
NVL *e*S **S** **12 30 26.0 -4.2**
NVL pmax pmax
comp=Z,74nm,1.0s
STKA Stephens Creek 54.41 264 P **P** **12 22 56.1 +0.4**
comp=Z,39nm,0.8s,baz=125,slow=8.0,SNR=78
STKA LR LR 12 43 03.7
comp=Z,2μm,19.0s,baz=135,slow=33
STKA Stephens Creek 54.41 264 *e*P **P** **12 22 56.5 +0.8**
STKA Stephens Creek 54.41 264 P **P** **12 22 56.1 +0.4**
BO02 Sierra Bellavi 54.67 102 P **P** **12 22 57.8 +0.2**
BO02 IAMs_20 IAMs_20 12 40 20.2
comp=Z,4μm,21.0s
MT01 Popeta 55.07 101 P **P** **12 23 00.5 +0.1**
MT02 Curacav 55.57 100 IAmb IAmb 12 23 08.2
comp=Z,258nm,1.8s
MT02 IAMs_20 IAMs_20 12 40 42.0
comp=Z,3μm,21.0s
MT05 Renca 55.70 101 IAMs_20 IAMs_20 12 40 29.6
comp=Z,3μm,18.0s
PEL Peldehue 55.91 101 P **P** **12 23 06.9 +0.3**
PEL pmax pmax
comp=Z,731nm,2.0s
PEL Peldehue 55.91 101 P **P** **12 23 06.9 +0.3**
PEL IAMs_20 IAMs_20 12 40 54.3
comp=Z,3μm,21.0s
VA03 San Esteban 56.27 100 IAmb IAmb 12 23 30.4
comp=Z,91nm,1.0s
MAW Mawson 56.34 193 P **P** **12 23 11.0 +2.0**
comp=Z,51nm,0.8s,baz=162,slow=8.8,SNR=79
MAW LR LR 12 44 35.4
comp=Z,3μm,20.6s,baz=155,slow=33
MAW Mawson 56.34 193 P **P** **12 23 10.2 +1.1**
CO04 Los Peladeros 56.55 100 P **P** **12 23 11.6 +0.2**
CO04 IAMs_20 IAMs_20 12 40 40.0
comp=Z,4μm,22.0s
SYO Syowa Base 56.83 183‖ *e*P **P** **12 23 09.5 -3.0**
SYO Syowa Base 56.83 183‖ *i* pP **P** **12 23 11.0 -1.5**
BBOO Buckleboo 56.93 259 P **P** **12 23 13.7 0.0**
BBOO IAmb IAmb 12 23 16.8
comp=Z,180nm,1.4s
CO02 Combarbal 57.15 99 IAmb IAmb 12 23 19.6
comp=Z,120nm,0.9s
CO02 IAMs_20 IAMs_20 12 40 54.9
comp=Z,4μm,21.0s
HOPE Hope Point 57.39 139 P **P** **12 23 17.5 +0.8**
HOPE pmax pmax
comp=Z,134nm,1.1s
HOPE Hope Point 57.39 139 P **P** **12 23 17.5 +0.8**
HOPE IAmb IAmb 12 23 21.8
comp=Z,134nm,1.1s
CO03 El Pedregal 57.60 99 IAmb IAmb 12 23 22.3
comp=Z,122nm,1.4s
GO04 Tololo Observa 58.03 98 IAmb IAmb 12 23 25.1
comp=Z,112nm,1.3s
GO04 IAMs_20 IAMs_20 12 41 20.2
comp=Z,4μm,22.0s
CFA Coronel Fontan 58.45 101 LR LR 12 42 41.6
comp=Z,3μm,18.7s,baz=218,slow=30
AC05 El Transito 59.33 98 IAmb IAmb 12 23 34.4
comp=Z,177nm,1.6s
GO03 Copiap 60.28 97 IAmb IAmb 12 23 40.9
comp=Z,72nm,1.2s
CTA Charters Tower 60.60 276 P **P** **12 23 40.1 +0.6**
comp=Z,30nm,0.8s,baz=133,slow=8.3,SNR=20
CTAO Charters Tower 60.60 276 P **P** **12 23 39.4 -0.1**
CTAO pmax pmax
comp=Z,213nm,1.6s
CTAO Charters Tower 60.60 276 P **P** **12 23 39.4 -0.1**
CTAO Charters Tower 60.60 276 IAMs_20 IAMs_20 12 46 35.2
comp=Z,2μm,20.0s
AC02 Maricunga 61.50 97 P **P** **12 23 46.1 +0.1**
AC02 IAmb IAmb 12 23 50.5
comp=Z,114nm,1.3s
HNR Honiara 61.58 296 P **P** **12 23 45.8 -0.2**
comp=Z,54nm,0.8s,baz=227,slow=9.6,SNR=4.8
HNR Honiara 61.58 296 P **P** **12 23 45.6 -0.4**
LPA La Plata 61.78 111 *e*P **P** **12 23 44.4 -2.8**
LPA S **S** **12 32 04.1 -6.1**
LPA sS **sS** **12 32 13.5 +0.7**
LPA SCS **ScS** **12 33 40.3 +1.3**
LPA SKIKP 12 34 15.1
PB14 IPOC Station P 62.44 94 P **P** **12 23 51.3 -0.9**
PB14 IAmb IAmb 12 23 55.6
comp=Z,102nm,1.4s
GO02 Mina Guanaco 62.50 95 IAmb IAmb 12 23 56.1
comp=Z,63nm,1.2s
GO02 IAMs_20 IAMs_20 12 43 32.5
comp=Z,2μm,19.0s
FORT Forrest 62.98 254 P **P** **12 23 55.1 -0.3**
FORT IAMs_20 IAMs_20 12 45 06.6
comp=Z,2μm,20.0s
PB10 IPOC Station P 63.20 93 IAMs_20 IAMs_20 12 43 49.2
comp=Z,2μm,19.0s
PB15 IPOC Station P 64.07 94 IAmb IAmb 12 24 06.1
comp=Z,56nm,1.1s
PB15 IAMs_20 IAMs_20 12 44 16.2
comp=Z,2μm,22.0s
PB04 IPOC Station P 64.35 93 IAMs_20 IAMs_20 12 44 23.6
comp=Z,3μm,22.0s
PB06 IPOC Station P 64.40 94 IAmb IAmb 12 24 08.6
comp=Z,71nm,1.2s
TARA Tarawa 64.79 314 P **P** **12 24 07.3 0.0**
TARA Tarawa 64.79 314 IAMs_20 IAMs_20 12 45 11.3
comp=Z,3μm,21.0s
LVC Limon Verde 64.86 94 P **P** **12 24 08.6 +0.4**
comp=Z,46nm,1.1s,baz=200,slow=5.6,SNR=17
LVC Limon Verde 64.86 94 P **P** **12 24 08.4 +0.2**
LVC IAmb IAmb 12 24 12.6
comp=Z,91nm,1.3s
LVC Limon Verde 64.86 94 IAMs_20 IAMs_20 12 45 38.0
comp=Z,2μm,21.0s
LVC Limon Verde 64.86 94 *e*P **P** **12 24 08.8 +0.6**
PB07 IPOC Station P 64.97 93 IAmb IAmb 12 24 12.8
comp=Z,104nm,1.4s
PB07 IAMs_20 IAMs_20 12 44 58.1
comp=Z,2μm,21.0s
AS31 Alice Springs 65.04 264 P **P** **12 24 07.9 -1.2**
ASAR Alice Springs 65.04 264 P **P** **12 24 07.9 -1.2**
comp=Z,76nm,0.7s,baz=137,slow=6.4,SNR=670
ASAR PKIKP **PKiKP** **12 30 46.4 -0.4**
comp=Z,0.6nm,0.8s,baz=150,slow=2.0,SNR=2.0
ASAR LR LR 12 50 45.1
comp=Z,2μm,18.7s,baz=142,slow=34
ASAR PKPPKP **P'P'df** **12 52 51.6 -3.4**
comp=Z,0.8nm,0.9s,baz=320,slow=1.7,SNR=4.0
PB09 IPOC Station P 65.29 93 IAmb IAmb 12 24 17.4
comp=Z,87nm,1.4s
PB09 IAMs_20 IAMs_20 12 45 07.6
comp=Z,2μm,19.0s
PATCX Punta Patache 65.52 92 P **P** **12 24 13.0 +0.8**
PATCX IAMs_20 IAMs_20 12 44 57.6
comp=Z,2μm,22.0s
TA01 Diego Aracena 65.70 92 IAmb IAmb 12 24 17.3
comp=Z,132nm,1.6s
PB01 IPOC Station P 65.73 93 IAmb IAmb 12 24 17.8
comp=Z,96nm,1.4s
PB01 IAMs_20 IAMs_20 12 45 21.3
comp=Z,2μm,21.0s
ITQB Itaqui 66.46 108 *e*P **P** **12 24 19.2 +1.1**
PSGCX Pisagua 66.49 91 IAmb IAmb 12 24 21.5
comp=Z,122nm,1.6s
PSGCX IAMs_20 IAMs_20 12 45 26.3
comp=Z,2μm,19.0s
PLTB Pedras Altas 66.51 112 *e*P **P** **12 24 18.6 +0.2**
PB08 IPOC Station P 66.63 92 IAMs_20 IAMs_20 12 45 50.1
comp=Z,2μm,19.0s
PB11 IPOC Station P 66.63 92 IAmb IAmb 12 24 23.3
comp=Z,122nm,1.5s
PB11 IAMs_20 IAMs_20 12 45 32.1
comp=Z,2μm,22.0s
GO01 Chusmiza 66.97 92 IAmb IAmb 12 24 25.3
comp=Z,94nm,1.8s
GO01 IAMs_20 IAMs_20 12 45 57.9
comp=Z,1μm,20.0s
PB12 IPOC Station P 67.13 90 IAMs_20 IAMs_20 12 46 55.5
comp=Z,1μm,19.0s
MNMC Minye Minye 67.16 91 P **P** **12 24 22.9 0.0**
MNMC IAmb IAmb 12 24 26.3
comp=Z,110nm,1.1s
COEN Coen 67.24 278 P **P** **12 24 22.8 -0.4**
NWAO Narrogin (SRO) 67.27 245 P **P** **12 24 23.0 -0.2**
NWAO pmax pmax
comp=Z,131nm,1.9s
NWAO Narrogin (SRO) 67.27 245 P **P** **12 24 23.0 -0.2**
NWAO IAmb IAmb 12 24 24.7
comp=Z,131nm,1.9s
H01W1 Cape Leeuwin H 67.36 242 T T 13 38 09.5
baz=140,slow=75,SNR=192
H01W2 Cape Leeuwin H 67.36 242 T T 13 38 10.2
baz=140,slow=75,SNR=204
H01W3 Cape Leeuwin H 67.37 242 T T 13 38 10.8
baz=140,slow=75,SNR=181
WR0 Warramunga Arr 67.55 267 P **P** **12 24 24.5 -0.6**
WR0 IAMs_20 IAMs_20 12 50 52.8
comp=Z,2μm,20.0s
WR8 Warramunga Arr 67.57 267 IAMs_20 IAMs_20 12 50 52.5
comp=Z,2μm,20.0s
WR7 Warramunga Arr 67.59 267 IAMs_20 IAMs_20 12 50 08.9
comp=Z,2μm,21.0s
WR6 Warramunga Arr 67.60 267 IAMs_20 IAMs_20 12 50 53.3
comp=Z,2μm,20.0s
WR4 Warramunga Arr 67.63 267 IAMs_20 IAMs_20 12 51 06.1
comp=Z,3μm,20.0s
WR3 Warramunga Arr 67.64 267 IAMs_20 IAMs_20 12 51 14.4
comp=Z,3μm,20.0s
WC3 Warramunga Arr 67.64 267 IAMs_20 IAMs_20 12 50 33.5
comp=Z,3μm,21.0s
CPSB Cacapava Do Su 67.65 111 *e*P **P** **12 24 26.4 +0.7**
WR2 Warramunga Arr 67.66 267 IAMs_20 IAMs_20 12 51 04.8
comp=Z,2μm,20.0s
WC4 Warramunga Arr 67.66 267 IAMs_20 IAMs_20 12 50 34.9
comp=Z,3μm,21.0s
WB2 Warramunga Arr 67.67 267 IAMs_20 IAMs_20 12 50 35.1
comp=Z,3μm,20.0s
WR1 Warramunga Arr 67.68 267 IAMs_20 IAMs_20 12 50 55.3
comp=Z,2μm,20.0s
WRA Warramunga Arr 67.68 267 P **P** **12 24 24.9 -1.0**
comp=Z,40nm,0.8s,baz=147,slow=5.6,SNR=197
WRA PKIKP **PKiKP** **12 30 48.6 -1.7**
comp=Z,1.3nm,1.0s,baz=125,slow=1.2,SNR=1.4
WRA LR LR 12 50 56.3
comp=Z,2μm,20.9s,baz=145,slow=33
WRA PKPPKP **P'P'df** **12 52 49.0 -1.0**
comp=Z,3.7nm,1.2s,baz=320,slow=3.2,SNR=8.6
WRA Warramunga Arr 67.68 267 P **P** **12 24 25.0 -1.0**
WRAB Tennant Creek 67.68 267 *c i* P **P** **12 24 25.2 -0.8**
WRAB pmax pmax
comp=Z,157nm,1.7s
WRAB Tennant Creek 67.68 267 P **P** **12 24 25.2 -0.8**
WRAB Tennant Creek 67.68 267 IAMs_20 IAMs_20 12 50 34.2
comp=Z,3μm,20.0s
WB3 Warramunga Arr 67.68 267 IAMs_20 IAMs_20 12 50 24.4
comp=Z,2μm,20.0s
WC1 Warramunga Arr 67.69 267 IAMs_20 IAMs_20 12 50 55.7
comp=Z,3μm,20.0s
WB4 Warramunga Arr 67.69 267 IAMs_20 IAMs_20 12 51 03.8
comp=Z,3μm,21.0s
WB5 Warramunga Arr 67.71 267 IAMs_20 IAMs_20 12 51 06.2
comp=Z,3μm,20.0s
WB6 Warramunga Arr 67.73 267 IAMs_20 IAMs_20 12 50 57.7
comp=Z,3μm,20.0s
WB7 Warramunga Arr 67.73 267 IAMs_20 IAMs_20 12 51 05.9
comp=Z,2μm,21.0s
WB0 Warramunga Arr 67.78 267 IAmb IAmb 12 24 28.4
comp=Z,141nm,1.4s
WB0 IAMs_20 IAMs_20 12 50 59.1
comp=Z,3μm,20.0s
PB16 IPOC Station P 67.83 91 IAMs_20 IAMs_20 12 47 27.0
comp=Z,1μm,21.0s
NNA Nana 68.59 81 P **P** **12 24 31.7 -0.1**
comp=Z,46nm,1.1s,baz=225,slow=7.9,SNR=6.2
NNA Nana 68.59 81 P **P** **12 24 31.6 -0.1**
NNA IAmb IAmb 12 24 35.3
comp=Z,82nm,1.2s
NNA Nana 68.59 81 IAMs_20 IAMs_20 12 46 30.6
comp=Z,2μm,20.0s
PMG Port Moresby 68.62 284 P **P** **12 24 32.0 +0.1**
comp=Z,23nm,0.8s,baz=98,slow=2.3,SNR=4.4
PMG Port Moresby 68.62 284 *c i* P **P** **12 24 32.3 +0.5**
PMG pmax pmax
comp=Z,745nm,2.5s
PMG Port Moresby 68.62 284 P **P** **12 24 31.5 -0.4**
PMG IAmb IAmb 12 24 58.7
comp=Z,75nm,1.1s
PMG Port Moresby 68.62 284 IAMs_20 IAMs_20 12 48 51.8
comp=Z,3μm,21.0s
CPUP Villa Florida 68.64 106 P **P** **12 24 31.8 -0.1**
comp=Z,64nm,1.1s,baz=233,slow=6.3,SNR=44
CPUP LR LR 12 50 10.0
comp=Z,3μm,18.1s,baz=226,slow=32
CPUP Villa Florida 68.64 106 P **P** **12 24 31.8 -0.1**
CPUP pmax pmax
comp=Z,100nm,1.2s
CPUP Villa Florida 68.64 106 P **P** **12 24 31.8 -0.1**
CPUP IAmb IAmb 12 24 35.6
comp=Z,100nm,1.1s
CPUP Villa Florida 68.64 106 *e*P **P** **12 24 32.0 +0.1**
CNLB Canela 69.90 112 *e*P **P** **12 24 40.1 +0.3**
RABL Rabaul 70.13 292 P **P** **12 24 40.6 -0.6**
RABL IAmb IAmb 12 25 09.0
comp=Z,119nm,1.3s
LPAZ La Paz 70.25 90 P **P** **12 24 43.2 +0.5**
comp=Z,30nm,0.9s,baz=220,slow=3.3,SNR=49
LPAZ La Paz 70.25 90 P **P** **12 24 42.9 +0.2**
LPAZ IAmb IAmb 12 24 47.3
comp=Z,87nm,1.1s
LPAZ La Paz 70.25 90 *e*P **P** **12 24 42.5 -0.2**
ITAB Concordia 70.83 110 *e*P **P** **12 24 45.4 0.0**
MORW Morawa 70.92 247 P **P** **12 24 46.3 +0.4**
ATAH Atahualpa 71.63 76 P **P** **12 24 50.5 -0.3**
comp=Z,20nm,0.9s,baz=180,slow=5.8,SNR=13
PTGB Pitanga 72.85 108 *e*P **P** **12 24 57.6 0.0**
KHU Kahuku 73.74 351 IAMs_20 IAMs_20 12 49 24.1
comp=Z,2μm,22.0s
AIN Ainahou 73.85 351 P **P** **12 25 03.4 0.0**
MLH Mauna Loa 73.96 351 P **P** **12 25 03.2 -1.0**
TRCB Terra Rica 74.05 107 *e*P **P** **12 25 04.5 -0.2**
HMH Humu'ula Sheep 74.08 351 P **P** **12 25 05.0 0.0**
HMH IAmb IAmb 12 25 08.2
comp=Z,133nm,1.0s
KHLU Kahalu`u 74.11 351 IAMs_20 IAMs_20 12 53 09.8
comp=Z,2μm,19.0s
AQDB Aquidauana 74.15 103 *e*P **P** **12 25 05.7 +0.4**
FITZ Fitzroy Crossi 74.18 261 P **P** **12 25 05.3 -0.1**
FITZ IAmb IAmb 12 25 06.6
comp=Z,62nm,0.8s
FITZ IAMs_20 IAMs_20 12 52 43.6
comp=Z,2μm,22.0s
POHA Pohakuloa 74.24 351 P **P** **12 25 05.4 -0.4**
POHA IAmb IAmb 12 25 09.3
comp=Z,128nm,1.1s
POHA Pohakuloa 74.24 351 IAMs_20 IAMs_20 12 48 50.3
comp=Z,2μm,20.0s
KNRA Kununurra 74.28 265 P **P** **12 25 05.7 -0.3**
KNRA IAMs_20 IAMs_20 12 58 14.4
comp=Z,2μm,18.0s
HPAH Hawaii Prepara 74.52 351 IAMs_20 IAMs_20 12 53 04.9
comp=Z,2μm,19.0s
SIV San Ignacio 74.60 96 P **P** **12 25 07.7 -0.3**
comp=Z,14nm,0.9s,baz=226,slow=5.1,SNR=50
PSAC2 Pilbara Seismi 74.72 254 IAMs_20 IAMs_20 12 55 19.5
comp=Z,2μm,20.0s
PSAB3 Pilbara Seismi 74.72 254 IAMs_20 IAMs_20 12 50 29.5
comp=Z,2μm,22.0s
PSAD3 Pilbara Seismi 74.72 254 IAMs_20 IAMs_20 12 55 09.6
comp=Z,1μm,20.0s
PSAA3 Pilbara Seismi 74.73 254 IAMs_20 IAMs_20 12 50 29.9
comp=Z,2μm,22.0s
PSA00 Pilbara Seismi 74.74 254 P **P** **12 25 08.3 -0.4**
PSAB1 Pilbara Seismi 74.76 254 IAMs_20 IAMs_20 12 54 58.5
comp=Z,2μm,19.0s
PSAC1 Pilbara Seismi 74.79 254 IAMs_20 IAMs_20 12 55 11.5
comp=Z,2μm,21.0s
PSAD1 Pilbara Seismi 74.84 254 IAMs_20 IAMs_20 12 55 32.8
comp=Z,2μm,18.0s
MBWA Marble Bar 75.13 255 P **P** **12 25 10.9 -0.1**
MBWA Marble Bar 75.13 255 IAMs_20 IAMs_20 12 55 30.5
comp=Z,1μm,19.0s
MTN Manton Dam 75.15 269 P **P** **12 25 10.6 -0.5**
FRTB Fartura 75.32 109 *e*P **P** **12 25 12.2 +0.2**
PCMB Pacaembu 75.76 107 *e*P **P** **12 25 14.3 -0.3**
PET01 Itanhaem-SP 75.82 112 *e*P **P** **12 25 16.4 +1.6**
KIP Kipapa 76.13 349 *i* P **P** **12 25 16.7 +0.3**
KIP pmax pmax
comp=Z,36nm,1.0s
KIP MLR MLR
comp=Z,1μm,9.0s
PTLB Pontes e Lacer 76.16 97 *e*P **P** **12 25 17.3 +0.5**
SPB Sao Paulo 76.29 111 *e*P **P** **12 25 17.9 +0.4**
PATS Pohnpei 76.30 303 IAMs_20 IAMs_20 12 52 41.3
comp=Z,2μm,20.0s
GIRL Giralia 77.01 249 P **P** **12 25 22.9 +1.3**
VAO Valinhos 77.02 111 *e*P **P** **12 25 21.8 0.0**
C2SB Chapadao do Su 77.14 104 *e*P **P** **12 25 23.0 +0.6**
RCLB Rio Claro- Sao 77.18 110 *e*P **P** **12 25 23.9 +1.2**
PARB Paraibuna 77.48 112 *e*P **P** **12 25 25.1 +0.7**
PAC1 Pacto, Paraso 77.48 72 *e*P **P** **12 25 24.8 +0.3**
VILB Vilhena 77.52 95 *e*P **P** **12 25 25.1 +0.4**
BB19B Bebedouro 77.72 109 *e*P **P** **12 25 26.8 +1.2**
ITRB Iturama 77.79 107 *e*P **P** **12 25 25.9 -0.1**
SALV Santo Antonio 77.79 100 *e*P **P** **12 25 26.2 +0.2**
JAY Jayapura 77.90 283 P **P** **12 25 25.2 -1.5**
comp=Z,44nm,1.0s,baz=203,slow=2.2,SNR=22
JAY Jayapura 77.90 283 P **P** **12 25 26.9 +0.2**
comp=Z,2μmcomp=Z,66nm,2.6s
GENI Genyem 78.15 282 P **P** **12 25 28.6 +0.6**
comp=Z,6μmcomp=Z,195nm,2.4s
ESAR Angra dos Reis 78.37 113 *e*P **P** **12 25 28.9 -0.3**
MAN01 Angra dos Reis 78.75 113 *e*P **P** **12 25 32.2 +0.8**
SAML Samuel 78.98 90 P **P** **12 25 32.0 -0.6**
SAML pmax pmax
comp=Z,92nm,1.3s
SAML Samuel 78.98 90 P **P** **12 25 32.0 -0.6**
SAML IAmb IAmb 12 25 36.2
comp=Z,92nm,1.3s
SAML Samuel 78.98 90 *e*P **P** **12 25 32.8 +0.2**
SMPI Sarmi 79.47 281 P **P** **12 25 36.1 +0.8**
comp=Z,1μmcomp=Z,2μmcomp=Z,57nm,2.3s
VAS01 Vassouras-RJ 79.51 113 *e*P **P** **12 25 34.9 -0.6**
CRUC La Cruz 79.58 72 *e*P **P** **12 25 37.5 +1.2**
PTLC Puerto Leguiza 79.64 75 *e*P **P** **12 25 34.4 -1.9**
BBAC Balboa, Cauca 79.79 72 *e*P **P** **12 25 36.6 -0.7**
BSCB Bom Sucesso 79.83 112 *e*P **P** **12 25 38.1 +0.8**
ARAG Araguaiana, MT 80.17 103 *e*P **P** **12 25 39.6 +0.6**
SOTA Rioblanco 80.24 72 *e*P **P** **12 25 40.5 +0.4**
IPMB Ipameri, GO 80.37 107 *e*P **P** **12 25 39.9 -0.3**
PCON Cinco Dias 80.52 72 *e*P **P** **12 25 42.5 +0.9**
POPC Popayan, Colom 80.53 72 *e*P **P** **12 25 40.9 -0.4**
CAM01 Campos-RJ 80.83 115 *e*P **P** **12 25 43.5 +0.9**
GARC Garzon, Huila 80.91 73 *e*P **P** **12 25 43.3 0.0**
BETC Betania 81.34 73 *e*P **P** **12 25 46.5 +1.1**
BATI Baumata 81.61 264 P **P** **12 25 48.4 +1.6**
comp=Z,2μmcomp=Z,76nm,1.2s
SOEI Soe 81.62 265 P **P** **12 25 48.6 +1.6**
comp=Z,5μmcomp=Z,141nm,0.9s
SOEI Soe 81.62 265 P **P** **12 25 47.9 +0.9**
SOEI IAmb IAmb 12 26 01.6
comp=Z,119nm,0.9s
CLDB Colider 81.75 97 *e*P **P** **12 25 45.9 -1.7**
MACC Macarena, Meta 81.80 75 *e*P **P** **12 25 47.7 0.0**
YOTC Yotoco, Valle 81.91 72 *e*P **P** **12 25 48.1 -0.4**
PIZC Pizarro, Choco 82.16 70 *e*P **P** **12 25 50.4 +0.7**
BDFB Brasilia 82.37 106 P **P** **12 25 50.3 -0.6**
BDFB pmax pmax
comp=Z,145nm,1.9s
BDFB Brasilia 82.37 106 P **P** **12 25 50.3 -0.6**
BDFB IAmb IAmb 12 25 53.4
comp=Z,145nm,1.9s
FAKI Fak Fak 82.45 276 P **P** **12 25 51.3 +0.1**
comp=Z,2μmcomp=Z,48nm,2.5s
FAKI Fak Fak 82.45 276 P **P** **12 25 50.4 -0.8**
FAKI IAmb IAmb 12 25 53.4
comp=Z,97nm,1.5s
FAKI IAMs_20 IAMs_20 12 03 54.3
comp=Z,995nm,19.0s
ORTC Ortega, Tolima 82.46 73 *e*P **P** **12 25 51.2 -0.1**
PRAC Prado 82.50 73 *e*P **P** **12 25 50.5 -1.0**
TLIG Tlapa 82.56 46 P **P** **12 25 51.6 -0.1**
JTS Las Juntas de 82.59 61 *i* P **P** **12 25 52.8 +1.0**
JTS pmax pmax
comp=Z,41nm,1.1s
JTS Las Juntas de 82.59 61 IAMs_20 IAMs_20 12 53 23.3
comp=Z,1μm,20.0s
PLMC San Jos del P 82.71 71 *e*P **P** **12 25 52.0 -0.6**
ANIL Santa Ana 82.85 72 *e*P **P** **12 25 52.9 -0.7**
RREF El Recreo 83.22 72 *e*P **P** **12 25 56.3 +0.4**
MOIG Morelia 83.39 43 P **P** **12 25 55.7 -0.4**
BASI Baing, Sumba 83.39 262 P **P** **12 25 57.0 +0.9**
GUY2C Guyana, Caldas 83.48 72 *e*P **P** **12 25 57.0 -0.1**
RIB01 Linhares ES 83.56 114 *e*P **P** **12 25 56.9 0.0**
SJMB Sao Joao De Ma 83.64 113 *e*P **P** **12 25 56.9 -0.4**
CBOC Ciudad Bolivar 83.65 71 *e*P **P** **12 25 57.4 -0.2**
MMRI Maumere 83.70 264 P **P** **12 25 57.9 +0.2**
comp=Z,3μmcomp=Z,7μmcomp=Z,242nm,1.5s
MMRI Maumere 83.70 264 P **P** **12 25 57.3 -0.4**
MMRI IAMs_20 IAMs_20 12 02 21.0
comp=Z,1μm,20.0s
BSFB Barra de Sao F 83.72 114 *e*P **P** **12 25 58.1 +0.4**
ROSC El Rosal 83.74 73 P **P** **12 25 58.7 +0.4**
comp=Z,79nm,0.9s,baz=159,slow=5.5,SNR=24
ROSC LR LR 12 55 47.7
comp=Z,792nm,21.8s,baz=212,slow=30
ROSC El Rosal 83.74 73 *e*P **P** **12 25 58.9 +0.5**
ROSC El Rosal 83.74 73 P **P** **12 25 58.8 +0.5**
ROSC IAMs_20 IAMs_20 12 55 14.9
comp=Z,1μm,22.0s
MC01 Montes Claros 83.77 110 *e*P **P** **12 25 58.1 0.0**
UNM Universidad Na 83.89 44 P **P** **12 25 58.5 -0.2**
UNM pmax pmax
comp=Z,169nm,0.5s
UNM Universidad Na 83.89 44 P **P** **12 25 58.5 -0.2**
CHIC Chingaza 83.90 73 *e*P **P** **12 25 59.0 -0.2**
EDFI Ende, Flores 83.93 264 P **P** **12 25 58.2 -0.8**
comp=Z,3μmcomp=Z,112nm,1.6s
NORC Norcasia 84.03 72 *e*P **P** **12 25 59.0 -0.4**
MSAI Masohi 84.05 273 P **P** **12 25 58.6 -0.8**
comp=Z,399nmcomp=Z,20nm,0.8s
HELC Santa Helena 84.19 71 *e*P **P** **12 25 59.8 -0.7**
AAI Ambon 84.20 272 P **P** **12 25 59.9 -0.3**
comp=Z,3μmcomp=Z,90nm,1.7s
BCIP Isla Barro Col 84.31 66 *e*P **P** **12 26 00.9 +0.2**
MATN Matagalpa 84.34 59 P **P** **12 26 00.7 -0.2**
MATN IAmb IAmb 12 26 05.2
comp=Z,73nm,1.0s
DBBC Dabeiba 84.49 70 *e*P **P** **12 26 01.9 +0.1**
ESPN Las Esperanzas 84.54 60 P **P** **12 26 02.4 +0.6**
WBSI Waikabubak, Su 84.54 261 P **P** **12 26 04.1 +2.1**
comp=Z,3μmcomp=Z,74nm,1.4s
SPBC San Pablo de B 84.55 73 *e*P **P** **12 26 00.3 -1.8**
JANB Januaria 84.91 109 *e*P **P** **12 26 03.8 -0.1**
NAN01 Guarapari, ES 84.91 114 *e*P **P** **12 26 03.8 -0.1**
PTBC PUERTO BERRIO, 85.07 72 *e*P **P** **12 26 03.6 -0.9**
NPGB Novo Progresso 85.08 95 *e*P **P** **12 26 04.1 -0.6**
MACA Manacapuru-AM 85.09 89 *e*P **P** **12 26 04.4 -0.4**
NLAI Namlea 85.20 271 P **P** **12 26 05.8 +0.5**
comp=Z,4μmcomp=Z,116nm,2.0s
CAPC Capurgana 85.21 68 *e*P **P** **12 26 05.4 +0.2**
RUSC La Rusia 85.30 73 *e*P **P** **12 26 04.0 -2.3**
RUSC La Rusia 85.30 73 P **P** **12 26 05.3 -1.0**
UREC San Jos de Ur 85.47 70 *e*P **P** **12 26 06.4 -0.2**
ZAIG Zacatecas 85.66 40 P **P** **12 26 08.5 +0.9**
ZAIG IAmb IAmb 12 26 12.3
comp=Z,78nm,1.5s
BRRC Barranca, Sant 85.95 72 *e*P **P** **12 26 07.0 -1.9**
BBSI Bau Bau 86.04 266 P **P** **12 26 09.6 +0.1**
comp=Z,1μmcomp=Z,19nm,1.2s
PLAI Plampang 86.13 260 P **P** **12 26 10.1 +0.2**
comp=Z,2μmcomp=Z,57nm,0.9s
SRIG Santa Rosalia 86.62 30 P **P** **12 26 11.6 -0.2**
SRIG IAmb IAmb 12 29 17.2
comp=Z,46nm,0.5s
PAMC Pamplona, Colo 86.70 73 *e*P **P** **12 26 11.9 -1.4**
SANI Sanana 86.81 271 P **P** **12 26 13.5 +0.3**
comp=Z,5μmcomp=Z,166nm,2.0s
ITTB Itaituba 87.01 93 *e*P **P** **12 26 13.6 -0.6**
LBMI Labuha 87.06 273 P **P** **12 26 14.3 -0.2**
comp=Z,3μmcomp=Z,68nm,1.2s
OCAC Ocana 87.10 72 *e*P **P** **12 26 13.7 -1.0**
SMLC San Martn de 87.14 71 *e*P **P** **12 26 12.0 -2.8**
SJCC San Jacinto, C 87.44 69 *e*P **P** **12 26 16.1 -0.2**
PTGA Pitinga 87.47 88 P **P** **12 26 16.2 -0.2**
comp=Z,24nm,1.0s,baz=240,slow=5.1,SNR=17
PTGA Pitinga 87.47 88 P **P** **12 26 16.0 -0.4**

PTGA IAmb IAmb 12 26 20.1
comp=Z,57nm,1.2s
PTGA IAMs_20 IAMs_20 13 00 12.4
comp=Z,1µm,21.0s
PTGA Pitinga 87.47 88 *eP* **P 12 26 16.9 +0.4**
BKSI Bulukumba 87.60 264 P **P 12 26 17.2 +0.1**
NBIT Itapeh - BA 87.68 112 *eP* **P 12 26 17.8 +0.3**
KAPI Kappang 88.06 264 LR LR 13 02 21.9
comp=Z,1µm,21.4s,baz=142,slow=33
KAPI Kappang 88.06 264 P **P 12 26 19.2 -0.1**
KAPI pmax pmax
comp=Z,382nm,1.7s
KAPI Kappang 88.06 264 P **P 12 26 19.2 -0.1**
KAPI Kappang 88.06 264 IAMs_20 IAMs_20 13 01 59.6
comp=Z,1µm,22.0s
SMTB Santa Maria do 88.10 102 *eP* **P 12 26 19.3 -0.2**
SRBI Singaraja 88.21 259 P **P 12 26 20.1 +0.1**
comp=Z,4µmcomp=Z,110nm,1.3s
TNTI Ternate 88.28 274 P **P 12 26 20.6 +0.3**
comp=Z,2µmcomp=Z,42nm,2.2s
TNTI Ternate 88.28 274 P **P 12 26 19.8 -0.5**
TNTI IAmb IAmb 12 26 28.4
comp=Z,94nm,1.5s
BNSI Bone 88.35 265 P **P 12 26 21.2 +0.6**
comp=Z,3µmcomp=Z,91nm,2.4s
HPIG 88.36 36 IAmb IAmb 12 26 24.9
comp=Z,68nm,1.2s
JAGI Jajag, Banyuwa 88.50 258 P **P 12 26 20.7 -0.7**
HSIG 88.59 31 P **P 12 26 21.3 0.0**
HSIG IAmb IAmb 12 26 24.7
comp=Z,76nm,1.6s
GDU01 Guandu, BA 88.60 112 *eP* **P 12 26 21.4 -0.5**
SPSI Sidrap Palu 88.90 265 P **P 12 26 23.1 -0.1**
comp=Z,2µmcomp=Z,4µmcomp=Z,114nm,2.2s
PRPB Paraupepas 89.00 99 *eP* **P 12 26 24.0 +0.3**
SDV Santo Domingo 89.13 74 P **P 12 26 22.9 -1.5**
comp=Z,21nm,1.0s,baz=190,slow=3.3,SNR=13
SDV Santo Domingo 89.13 74 *eP* **P 12 26 21.9 -2.5**
SDV Santo Domingo 89.13 74 P **P 12 26 22.6 -1.9**
SDV Santo Domingo 89.13 74 *eP* **P 12 26 23.4 -1.0**
TEIG Tepich 89.47 53 P **P 12 26 25.8 +0.2**
LUWI Luwuk 89.50 269 P **P 12 26 27.8 +1.8**
comp=Z,5µmcomp=Z,189nm,2.4s
LUWI Luwuk 89.50 269 P **P 12 26 26.0 0.0**
LUWI IAMs_20 IAMs_20 13 04 33.7
comp=Z,1µm,20.0s
TTSI Tana Toraja 89.61 265 P **P 12 26 27.7 +1.1**
MALB Monte Alegre 89.90 93 *eP* **P 12 26 29.1 +1.2**
APSI Ampana 90.27 268 P **P 12 26 30.2 +0.6**
comp=Z,3µmcomp=Z,83nm,1.6s
SCI2 San Clemente I 90.33 23 P **P 12 26 29.5 +0.2**
baz=196
SNCC San Nicolas Is 90.37 22 P **P 12 26 29.9 +0.4**
baz=195
SNCC San Nicolas Is 90.37 22 IAMs_20 IAMs_20 12 56 22.1
comp=Z,2µm,20.0s
BAR Barrett 90.49 25 P **P 12 26 29.7 -0.5**
BAR IAMs_20 IAMs_20 12 58 03.1
comp=Z,1µm,20.0s
109C Camp Elliot, M 90.59 25 P **P 12 26 30.4 -0.2**
baz=197
109C Camp Elliot, M 90.59 25 IAMs_20 IAMs_20 12 59 18.6
comp=Z,1µm,19.0s
IKP In-Ko-Pah, Jac 90.61 25 P **P 12 26 30.2 -0.5**
baz=197,SNR=5.4
NBPN Ponto Novo - B 90.63 110 *eP* **P 12 26 31.5 +0.1**
GRJI Gresik 90.72 257 P **P 12 26 33.0 +1.3**
comp=Z,75nm,0.8s
MONP2 Monument Peak 90.76 25 P **P 12 26 32.4 +0.8**
baz=197,SNR=8.8
CIS Catalina Islan 90.77 23 P **P 12 26 31.4 0.0**
baz=196
214A Organ Pipe Nat 90.82 28 P **P 12 26 32.1 +0.4**
baz=199,SNR=24
214A Organ Pipe Nat 90.82 28 P **P 12 26 31.7 0.0**
214A IAmb IAmb 12 26 35.6
comp=Z,100nm,1.5s
214A IAMs_20 IAMs_20 12 56 44.5
comp=Z,1µm,21.0s
WOJI Wonogiri, Jawa 90.85 255 P **P 12 26 33.2 +0.8**
comp=Z,3µmcomp=Z,91nm,1.2s
SWSC Sam W. Stewart 90.96 26 P **P 12 26 32.7 +0.4**
baz=197
SCZ2 Santa Cruz Isl 91.06 22 P **P 12 26 33.1 +0.3**
baz=195
FMP Fort Macarthur 91.09 23 P **P 12 26 33.3 +0.4**
baz=196
MURC Murrieta 91.25 24 P **P 12 26 34.0 +0.4**
baz=197,SNR=5.4
GLA Glamis 91.31 26 P **P 12 26 34.0 0.0**
GLA pmax pmax
comp=Z,138nm,1.9s
GLA Glamis 91.31 26 P **P 12 26 35.1 +1.1**
baz=198
GLA Glamis 91.31 26 P **P 12 26 34.0 0.0**
GLA IAmb IAmb 12 26 37.7
comp=Z,138nm,1.9s
GLA IAMs_20 IAMs_20 12 58 04.6
comp=Z,1µm,20.0s
PFO Pinyon Flats O 91.44 25 P **P 12 26 34.5 -0.1**
comp=Z,8.5nm,1.1s,baz=206,slow=5.5,SNR=14
PFO Pinyon Flats O 91.44 25*c i*P **P 12 26 34.9 +0.3**
PFO pmax pmax
comp=Z,127nm,3.1s
PFO Pinyon Flats O 91.44 25 P **P 12 26 35.0 +0.3**
baz=197,SNR=5.4
PFO Pinyon Flats O 91.44 25 P **P 12 26 34.2 -0.4**
PFO IAmb IAmb 12 26 38.3
comp=Z,85nm,1.9s
PFO Pinyon Flats O 91.44 25 IAMs_20 IAMs_20 12 58 59.0
comp=Z,1µm,18.0s
XPFO Pion Flat 91.44 25 P **P 12 26 34.5 -0.1**
XPFO IAmb IAmb 12 26 38.2
comp=Z,85nm,1.9s
XPFO Pion Flat 91.44 25 IAMs_20 IAMs_20 12 58 59.0
comp=Z,1µm,18.0s
SBC Santa Barbara 91.47 22 P **P 12 26 34.6 0.0**
baz=195
PASC Pasadena Art C 91.56 23 IAmb IAmb 12 26 38.5
comp=Z,101nm,1.7s
PASC Pasadena Art C 91.56 23 IAMs_20 IAMs_20 12 56 59.6
comp=Z,2µm,21.0s
DECC Green Verdugo 91.60 23 P **P 12 26 35.3 0.0**
baz=196
TUC Tucson 91.72 30 P **P 12 26 35.9 -0.1**
TUC pmax pmax
comp=Z,96nm,1.8s
TUC Tucson 91.72 30 P **P 12 26 36.6 +0.6**
baz=200
TUC Tucson 91.72 30 P **P 12 26 35.9 -0.1**
TUC IAmb IAmb 12 26 39.8
comp=Z,96nm,1.8s
BC3 Big Chuckawall 91.73 26 P **P 12 26 36.7 +0.7**
baz=198,SNR=5.8
BFSC Mount Baldy Ra 91.75 24 P **P 12 26 36.4 +0.4**
baz=196,SNR=9.1
NBLA Lagarto - SE 91.83 112 *eP* **P 12 26 36.8 -0.1**
OSI Osito Audit: C 91.86 23 P **P 12 26 37.0 +0.5**
baz=196
OSI Osito Audit: C 91.86 23 IAMs_20 IAMs_20 12 57 20.6
comp=Z,2µm,22.0s
PKM Mcpherson Peak 91.88 22 P **P 12 26 37.0 +0.2**
baz=195,SNR=6.5
833A Chaparral WMA, 91.88 40 P **P 12 26 37.6 +0.9**
baz=205
BELC Belle Mtn. Jos 91.92 25 P **P 12 26 37.6 +0.7**
baz=197,SNR=13
BBRC Big Bear Solar 91.94 24 P **P 12 26 37.6 +0.5**
baz=197
Y12C Blythe 92.06 26 P **P 12 26 38.3 +1.0**
baz=198
Y12C Blythe 92.06 26 P **P 12 26 37.4 0.0**
Y12C IAmb IAmb 12 26 41.0
comp=Z,79nm,1.9s
Y12C IAMs_20 IAMs_20 12 58 37.2
comp=Z,1µm,21.0s
SMMC Simmler 92.25 22 P **P 12 26 39.5 +1.2**
baz=195
EDW2 Edwards Air Fo 92.28 23 P **P 12 26 38.7 +0.2**
baz=196,SNR=13
IRM Iron Mountain 92.28 26 P **P 12 26 38.8 +0.3**
baz=198,SNR=20
MPSI Mapaga 92.29 267 P **P 12 26 39.2 +0.2**
comp=Z,1µmcomp=Z,22nm,1.3s
ARVC Arvin 92.33 23 P **P 12 26 38.6 0.0**
baz=196
RRX Edison Barstow 92.51 24 P **P 12 26 39.6 +0.2**
baz=197
EPT El Paso 92.53 33 IAMs_20 IAMs_20 12 59 51.2
comp=Z,1µm,19.0s
PAGB Antelope Grade 92.60 21 P **P 12 26 39.6 -0.3**
PAGB IAmb IAmb 12 26 44.6
comp=Z,83nm,1.3s
PAGB IAMs_20 IAMs_20 12 57 59.1
comp=Z,1µm,21.0s
HEC Hector,Ludlow 92.63 25 P **P 12 26 40.6 +0.5**
baz=197
PDMCI Parker Dam,Lak 92.68 26 P **P 12 26 40.6 +0.4**
baz=198
GMRC Granite Mounta 92.75 25 P **P 12 26 41.3 +0.6**
baz=198
CISI Cisompet, Garu 92.83 253 P **P 12 26 42.4 +0.8**
comp=Z,3µmcomp=Z,79nm,1.0s
CISI Cisompet, Garu 92.83 253 P **P 12 26 41.1 -0.5**
CISI IAMs_20 IAMs_20 13 03 38.4
comp=Z,964nm,21.0s
MNTX Cornudas Mount 92.83 34 P **P 12 26 41.3 +0.3**
baz=203
MNTX Cornudas Mount 92.83 34 P **P 12 26 40.4 -0.7**
121A Cookes Peak, D 92.83 32 P **P 12 26 41.7 +0.5**
baz=202
121A Cookes Peak, D 92.83 32 IAMs_20 IAMs_20 12 58 19.1
comp=Z,936nm,22.0s
SUR Sutherland 92.91 169 P **P 12 26 41.7 -0.2**
ISA Isabella, Lake 92.92 23 P **P 12 26 41.1 -0.3**
ISA pmax pmax
comp=Z,65nm,1.6s
ISA Isabella, Lake 92.92 23 P **P 12 26 42.1 +0.7**
baz=196,SNR=6.5
ISA Isabella, Lake 92.92 23 P **P 12 26 41.1 -0.3**
ISA IAmb IAmb 12 26 45.1
comp=Z,65nm,1.6s
ISA IAMs_20 IAMs_20 12 58 04.7
comp=Z,2µm,20.0s
LRMC Laurel Mtn Rad 92.93 23 P **P 12 26 41.9 +0.4**
baz=196
PMPB Monarch Peak 92.95 21 IAMs_20 IAMs_20 12 58 50.4
comp=Z,2µm,19.0s
VES Vestal, Richgr 92.96 22 P **P 12 26 41.9 +0.5**
baz=196,SNR=15
GSC Goldstone, Bar 92.96 24 P **P 12 26 41.4 -0.2**
GSC pmax pmax
comp=Z,59nm,1.7s
GSC Goldstone, Bar 92.96 24 P **P 12 26 41.8 +0.2**
baz=197,SNR=14
GSC Goldstone, Bar 92.96 24 P **P 12 26 41.4 -0.2**
GSC IAmb IAmb 12 26 45.1
comp=Z,59nm,1.7s
GSC IAMs_20 IAMs_20 12 58 18.8
comp=Z,1µm,20.0s
NEE2 Needles Airpor 93.00 26 P **P 12 26 42.0 +0.4**
baz=198
NBTA Tacaratu-PE 93.22 110 *eP* **P 12 26 44.0 +0.6**
TUQ Turquoise Moun 93.30 25 P **P 12 26 43.3 0.0**
baz=197
SAO San Andreas Ge 93.35 20 P **P 12 26 43.7 +0.4**
SAO pmax pmax
comp=Z,52nm,1.4s
SAO San Andreas Ge 93.35 20 P **P 12 26 43.7 +0.4**
SAO IAmb IAmb 12 26 47.0
comp=Z,52nm,1.4s
SAO IAMs_20 IAMs_20 13 00 49.9
comp=Z,2µm,18.0s
VOG Valley Oaks Go 93.35 22 P **P 12 26 43.1 -0.2**
baz=196
MPMC Manual Prospec 93.53 23 P **P 12 26 44.9 +0.5**
baz=196,SNR=20
LEM Lembang 93.54 253 LR LR 13 00 44.9
comp=Z,786nm,21.7s,baz=153,slow=30
LEM Lembang 93.54 253 P **P 12 26 45.7 +0.7**
comp=Z,2µmcomp=Z,57nm,1.4s
PCRV Puerto La Cruz 93.57 78 P **P 12 26 45.1 +0.2**
comp=Z,19nm,1.0s,baz=278,slow=0.5,SNR=5.1
SHOC Shoshone, Teco 93.66 24 P **P 12 26 45.4 +0.6**
baz=197
JCT Junction City 93.67 39 P **P 12 26 45.0 0.0**
JCT pmax pmax
comp=Z,36nm,1.4s
JCT Junction City 93.67 39 P **P 12 26 45.2 +0.2**
baz=205
JCT Junction City 93.67 39 P **P 12 26 45.0 0.0**
NBAN Anadia - AL 93.75 112 *eP* **P 12 26 46.1 +0.3**
CWC Cottonwood Cre 93.76 23 P **P 12 26 46.0 +0.7**
baz=196
FURC Furnace Creek, 94.06 24 P **P 12 26 46.9 +0.4**
baz=197
DBJI Dramaga 94.25 253 P **P 12 26 50.4 +2.3**
NBMA Muriti-CE 94.29 109 *eP* **P 12 26 48.5 +0.2**
TIN Tinemaha, Big 94.31 22 P **P 12 26 48.5 +0.7**
baz=196
DAV Davao City (W) 94.40 276 LR LR 13 06 29.8
comp=Z,528nm,21.7s,baz=166,slow=34
MCCM Marconi Confer 94.41 19 IAMs_20 IAMs_20 12 58 54.0
comp=Z,1µm,20.0s
GRAC Grapevine Rang 94.45 23 P **P 12 26 48.8 +0.4**
baz=197
SHPR Sheep Range 94.51 25 P **P 12 26 48.7 -0.1**
SHPR IAMs_20 IAMs_20 12 58 36.4
comp=Z,1µm,22.0s
Y22D IRIS PASSCAL I 94.53 32 P **P 12 26 49.0 +0.1**
baz=202
Y22D IRIS PASSCAL I 94.53 32 IAMs_20 IAMs_20 13 15 42.0
comp=Z,743nm,19.0s
WUAZ Wupatki 94.57 28 P **P 12 26 49.7 +0.6**
baz=200
WUAZ Wupatki 94.57 28 IAMs_20 IAMs_20 12 59 11.8
comp=Z,1µm,22.0s
KCP Kidapawan 94.63 275 *ij i*P **P 12 26 50.5 +0.6**
W18A Petrified Fore 94.66 30 P **P 12 26 49.8 +0.3**
baz=201
TPNV Topopah Spring 94.67 24 P **P 12 26 49.7 +0.2**
baz=197
TPNV Topopah Spring 94.67 24 IAMs_20 IAMs_20 12 59 01.9
comp=Z,1µm,21.0s
OMMB Old Mammoth Mi 94.68 22 IAMs_20 IAMs_20 13 00 45.1
comp=Z,1µm,19.0s
MDPB Devils Postpil 94.68 22 IAMs_20 IAMs_20 12 58 54.2
comp=Z,1µm,20.0s
BNM Barren Site 94.69 32 P **P 12 26 49.4 -0.4**
MLAC Mammoth, Mammo 94.73 22 P **P 12 26 50.7 +0.8**
baz=196
435B Jarrell 94.78 41 P **P 12 26 50.3 +0.4**
baz=206
CMB Columbia Colle 94.79 21 P **P 12 26 49.6 -0.3**
CMB pmax pmax
comp=Z,31nm,1.6s
CMB Columbia Colle 94.79 21 P **P 12 26 49.6 -0.3**
CMB IAMs_20 IAMs_20 12 59 02.1
comp=Z,1µm,20.0s
ROSB Rosrio 94.93 102 *eP* **P 12 26 51.4 +0.3**
HOPS Hopland Field 95.20 18 IAMs_20 IAMs_20 12 58 14.8
comp=Z,2µm,22.0s
NBPS Pedro II - PI 95.23 105 *eP* **P 12 26 52.6 0.0**
NBPB Pedra_Branca-C 95.33 107 *eP* **P 12 26 53.2 +0.2**
WAKR Walker 95.44 21 P **P 12 26 53.0 -0.1**
WAKR IAMs_20 IAMs_20 12 59 37.3
comp=Z,2µm,21.0s
ANMO Albuquerque 95.48 32 P **P 12 26 53.5 +0.2**
comp=Z,1.8nm,0.8s,baz=184,slow=5.3,SNR=11
ANMO Albuquerque 95.48 32*ce*P **P 12 26 53.5 +0.2**
ANMO pmax pmax
comp=Z,17nm,1.8s
ANMO Albuquerque 95.48 32 P **P 12 26 53.8 +0.4**
baz=202
ANMO Albuquerque 95.48 32 P **P 12 26 53.0 -0.3**
AFDM Forest Hills D 95.56 20 P **P 12 26 53.3 -0.1**
AFDM IAMs_20 IAMs_20 12 59 21.3
comp=Z,1µm,22.0s
NVAR Mina Array Bea 95.61 22 P **P 12 26 54.5 +0.6**
comp=Z,8.1nm,1.1s,baz=202,slow=6.8,SNR=19
NVAR PP **PP 12 30 47.8 +2.1**
comp=Z,0.6nm,0.8s,baz=200,slow=7.5,SNR=3.9
NVAR PKiKP **PKiKP 12 31 32.1 -1.6**
comp=Z,0.2nm,0.4s,baz=191,slow=4.2,SNR=1.6
NVAR PKKPbo **PKKPdf 12 43 46.0 +0.7**
comp=Z,0.2nm,0.4s,baz=336,slow=2.0,SNR=4.7
NVAR PKPPKP **P'P'df 12 51 57.8 +5.8**
comp=Z,0.4nm,0.7s,baz=6.8,slow=2.3,SNR=3.8
NVAR LR LR 12 59 52.6
comp=Z,1µm,21.8s,baz=190,slow=29
NV11 Mina Array Sit 95.65 22 IAMs_20 IAMs_20 12 59 49.9
comp=Z,1µm,21.0s
ABTX Abilene, Hawle 95.66 38 P **P 12 26 54.4 +0.4**
baz=205
ABTX Abilene, Hawle 95.66 38 P **P 12 26 53.9 -0.1**
ABTX IAmb IAmb 12 26 58.2
comp=Z,42nm,1.3s
RYN Ryan 95.76 22 IAmb IAmb 12 26 58.2
comp=Z,35nm,1.4s
RYN IAMs_20 IAMs_20 13 00 02.7
comp=Z,1µm,21.0s
MSTX Muleshoe 95.78 35 P **P 12 26 55.0 +0.4**
baz=204
MSTX Muleshoe 95.78 35 IAMs_20 IAMs_20 13 00 52.4
comp=Z,1µm,20.0s
RUBR Rubicon Trail 95.82 20 IAMs_20 IAMs_20 13 00 17.3
comp=Z,1µm,21.0s
WHTX Lake Whitney, 95.90 40 P **P 12 26 55.6 +0.5**
baz=206
YERR Yerington 95.94 21 IAMs_20 IAMs_20 12 59 53.7
comp=Z,2µm,21.0s
ORV Oroville 96.04 19 IAMs_20 IAMs_20 12 59 34.1
comp=Z,1µm,21.0s
R11A Troy Canyon, C 96.16 24 P **P 12 26 56.9 +0.6**
baz=198
R11A Troy Canyon, C 96.16 24 IAMs_20 IAMs_20 12 59 50.4
comp=Z,792nm,20.0s
VCNR Virginia City 96.16 21 IAMs_20 IAMs_20 12 59 46.3
comp=Z,1µm,20.0s
KVN Kaiserville 96.25 22 IAMs_20 IAMs_20 13 01 28.8
comp=Z,1µm,19.0s
O02D Mt. Diablo Mer 96.40 18 P **P 12 26 58.3 +1.1**
baz=194
BEKR Beckworth 96.56 20 P **P 12 26 57.8 -0.3**
BEKR IAMs_20 IAMs_20 13 01 27.0
comp=Z,1µm,20.0s
PAHR Pah Rah Range 96.61 21 P **P 12 26 58.4 +0.2**
PAHR IAmb IAmb 12 27 01.7
comp=Z,43nm,1.9s
PAHR IAMs_20 IAMs_20 12 59 52.0
comp=Z,1µm,21.0s
O03E Paynes Creek 96.70 19 P **P 12 26 59.2 +0.6**
baz=194
NATX Nacogdoches 96.78 43 P **P 12 26 59.8 +0.8**
baz=208
JCC Jacoby Creek, 96.80 17 IAMs_20 IAMs_20 13 03 21.2
comp=Z,1µm,18.0s
TOSP Speyside 96.83 80 IAMs_20 IAMs_20 13 05 38.7
comp=Z,2µm,21.0s
KHMM Horse Mountain 96.91 17 IAMs_20 IAMs_20 12 59 57.0
comp=Z,2µm,21.0s
NBMO Morrinhos-CE 96.91 105 *eP* **P 12 27 00.4 +0.2**
MVCO Mesa Verde 96.96 30 P **P 12 27 00.5 +0.4**
baz=201
MVCO Mesa Verde 96.96 30 IAmb IAmb 12 27 02.8
comp=Z,45nm,1.9s
AMTX Amarillo 96.98 36 P **P 12 27 00.7 +0.7**
baz=204
AMTX Amarillo 96.98 36 IAMs_20 IAMs_20 13 02 14.3
comp=Z,1µm,20.0s
NBCL Cascavel-CE 97.14 107 *eP* Pdif 12 27 02.8 +1.4
MSU Marysvale 97.17 27 P Pdif 12 27 01.7 +0.7
MSU Marysvale 97.17 27 P Pdif 12 27 01.7 +0.7
N02D Trinity Center 97.19 18 P Pdif 12 27 01.5 +0.7
baz=194
SDD Santo Domingo 97.34 69 IAMs_20 IAMs_20 13 12 21.4
comp=Z,686nm,18.0s
M02C Callahan 97.57 18 P Pdif 12 27 03.5 +1.0
baz=194
PV05 Paradox Valley 97.60 29 IAMs_20 IAMs_20 13 02 53.8
comp=Z,920nm,21.0s
PV13 Radium Mtn., P 97.75 29 IAMs_20 IAMs_20 13 03 06.2
comp=Z,951nm,21.0s
PV18 Skein Mesa, Pa 97.81 29 IAMs_20 IAMs_20 13 00 17.7
comp=Z,909nm,22.0s
PV16 Nyswonger Mesa 97.87 29 IAMs_20 IAMs_20 13 01 21.2
comp=Z,846nm,22.0s
WMOK Wichita Mounta 97.87 38 P Pdif 12 27 04.7 +0.7
baz=206
PV14 Lion Creek, Pa 97.89 29 IAMs_20 IAMs_20 13 01 27.9
comp=Z,1µm,21.0s
PV12 Saucer Basin, 97.91 29 IAMs_20 IAMs_20 13 03 44.2
comp=Z,966nm,21.0s
YBH Yreka Blue Hor 97.92 18 LR LR 13 00 47.5
comp=Z,2µm,21.7s,baz=169,slow=29
YBH Yreka Blue Hor 97.92 18 IAMs_20 IAMs_20 13 02 34.9
comp=Z,1µm,20.0s
PV04 Paradox Valley 97.95 29 IAMs_20 IAMs_20 13 17 20.3
comp=Z,1µm,20.0s
S22A 4UR Ranch, Cre 97.95 31 P Pdif 12 27 04.9 +0.3
baz=202
PV23 Carpenter Ridg 97.97 29 IAMs_20 IAMs_20 13 00 20.0
comp=Z,2µm,21.0s
Z38A Mt. Pleasant 97.98 42 IAMs_20 IAMs_20 13 20 22.6
comp=Z,770nm,20.0s
PV15 Paradox Valley 98.02 29 IAMs_20 IAMs_20 13 16 09.3
comp=Z,712nm,19.0s
PV07 Paradox Valley 98.06 29 IAMs_20 IAMs_20 13 05 19.5
comp=Z,829nm,20.0s
PV21 Cone Mtn., Par 98.08 29 IAMs_20 IAMs_20 13 02 05.9
comp=Z,861nm,20.0s
PV22 Blue Mesa, Par 98.11 29 IAMs_20 IAMs_20 13 03 34.7
comp=Z,1µm,21.0s
M04C Macdoel 98.13 18 Pdiff Pdif 12 27 05.5 +0.4
baz=194
T25A Trinidad 98.14 33 Pdiff Pdif 12 27 05.5 +0.1
baz=203
SRU San Rafael Swe 98.17 28 P Pdif 12 27 05.6 +0.2
SRU pmax pmax
comp=Z,6.0nm,1.3s
SRU San Rafael Swe 98.17 28 P Pdif 12 27 05.6 +0.2
SDCO Great Sand Dun 98.36 32 Pdiff Pdif 12 27 07.1 +0.7
baz=203
SDCO Great Sand Dun 98.36 32 IAMs_20 IAMs_20 13 02 52.3
comp=Z,982nm,20.0s
L04D Klamath Falls 98.47 18 Pdiff Pdif 12 27 07.9 +1.3
baz=194
ELK Elko 98.52 24 IAMs_20 IAMs_20 13 01 25.9
comp=Z,2µm,22.0s
MOD Modoc Plateau 98.54 20 IAMs_20 IAMs_20 13 01 20.2
comp=Z,1µm,20.0s
DUG Dugway, Tooele 98.59 26 Pdiff Pdif 12 27 08.0 +0.8
baz=199
DUG Dugway, Tooele 98.59 26 IAMs_20 IAMs_20 13 01 30.1
comp=Z,1µm,22.0s
K02D Willamette Mer 98.69 17 Pdiff Pdif 12 27 08.4 +0.9
baz=193
KSM Kuching 98.78 260 IAMs_20 IAMs_20 13 06 48.7
comp=Z,857nm,22.0s
Z41A Richland Creek 98.84 43 Pdiff Pdif 12 27 09.6 +1.3
baz=208
VBMS Vicksburg 98.86 45 Pdiff Pdif 12 27 09.4 +1.0
baz=209
K04D Chiloquin, OR 98.96 18 Pdiff Pdif 12 27 10.1 +1.3
baz=194
KKM Kota Kinabalu 99.04 268 IAMs_20 IAMs_20 13 09 38.5
comp=Z,853nm,21.0s
J01E Myrtle Point 99.10 17 Pdiff **Pdif 12 27 10.8 +1.7**
baz=193
K05A Summer Lake 99.22 19 P **Pdif 12 27 11.0 +1.0**
K05A IAMs_20 IAMs_20 13 15 09.2
comp=Z,1µm,18.0s
SMCO Snowmass 99.23 30 IAMs_20 IAMs_20 13 02 10.6
comp=Z,926nm,21.0s
WVOR Wild Horse Val 99.38 21 IAMs_20 IAMs_20 13 15 46.7
comp=Z,1µm,18.0s
J04D Umpqua Nationa 99.49 18 Pdiff **Pdif 12 27 12.2 +1.0**
baz=194
Q24A Divide 99.58 32 Pdiff **Pdif 12 27 12.8 +0.9**
baz=203
MIAR Mount Ida 99.66 42 Pdiff **Pdif 12 27 12.9 +1.0**
baz=208
J05D Fort Rock, OR 99.69 19 Pdiff **Pdif 12 27 13.8 +1.7**
baz=195
I03D Drain, OR 99.72 17 Pdiff **Pdif 12 27 13.7 +1.8**
baz=194
O20A White River Ci 99.75 29 Pdiff **Pdif 12 27 13.7 +1.3**
baz=202
O20A White River Ci 99.75 29 IAMs_20 IAMs_20 13 02 40.2
comp=Z,1µm,21.0s
X40A Basin Creek Fa 99.90 43 Pdiff **Pdif 12 27 14.8 +1.8**
baz=208
I04A Tendick Farm, 99.97 18 Pdiff **Pdif 12 27 14.5 +1.3**
baz=194
TUL1 Leonard 100.02 40 Pdiff **Pdif 12 27 15.1 +1.6**
baz=207
I02D Swisshome 100.03 16 Pdiff **Pdif 12 27 14.9 +1.6**
baz=193
W39A Magazine 100.15 42 Pdiff **Pdif 12 27 16.0 +1.9**
baz=208
ISCO Idaho Springs 100.21 31 Pdiff **Pdif 12 27 15.5 +0.9**
baz=203

ISCO	**Idaho Springs**	**100.21**	**31**	IAMs_20	IAMs_20	13 03 21.3		
	comp=Z,1µm,20.0s							
HWUT	**Hardware Ranch**	**100.23**	**26**	IAMs_20	IAMs_20	13 03 06.7		
	comp=Z,1µm,21.0s							
PINE	**Pine Mountain**	**100.24**	**19**	IAMs_20	IAMs_20	13 04 23.2		
	comp=Z,1µm,19.0s							
J08A	**Circle Bar Ran**	**100.30**	**20**	IAMs_20	IAMs_20	13 16 48.0		
	comp=Z,1µm,18.0s							
KSCO	**Kaye Shedlock'**	**100.42**	**33**	Pdiff	**Pdif**	**12 27 15.9**	**+0.6**	
	baz=204							
COR	**Corvallis**	**100.59**	**17**	IAMs_20	IAMs_20	13 02 32.4		
	comp=Z,1µm,20.0s							
H04D	**Lebanon**	**100.62**	**17**	Pdiff	**Pdif**	**12 27 17.3**	**+1.3**	
	baz=194							
I05D	**Terrebonne, OR**	**100.69**	**18**	Pdiff	**Pdif**	**12 27 18.2**	**+1.9**	
	baz=195							
X43A	**Marvell**	**100.71**	**44**	Pdiff	**Pdif**	**12 27 18.0**	**+1.4**	
	baz=209							
W41B	**Gary Mavity, V**	**100.73**	**43**	Pdiff	**Pdif**	**12 27 18.0**	**+1.3**	
	baz=209							
I07A	**Izee**	**100.79**	**20**	IAMs_20	IAMs_20	13 15 45.9		
	comp=Z,905nm,18.0s							
H04A	**Detroit Lake**	**100.88**	**18**	IAMs_20	IAMs_20	13 02 14.1		
	comp=Z,1µm,22.0s							
MFID	**Camas Ranch**	**100.92**	**22**	IAMs_20	IAMs_20	13 02 50.5		
	comp=Z,1µm,22.0s							
LRAL	**Lakeview Retre**	**101.06**	**48**	Pdiff	**Pdif**	**12 27 19.0**	**+0.9**	
	baz=211							
N23A	**Red Feather La**	**101.12**	**30**	Pdiff	**Pdif**	**12 27 19.8**	**+1.2**	
	baz=203							
CBKS	**Cedar Bluff**	**101.20**	**36**	Pdiff	**Pdif**	**12 27 19.9**	**+1.2**	
	baz=206							
CBKS	**Cedar Bluff**	**101.20**	**36**	IAMs_20	IAMs_20	13 04 16.8		
	comp=Z,1µm,21.0s							
R32A	**Long Quarter,**	**101.20**	**36**	IAMs_20	IAMs_20	13 04 48.9		
	comp=Z,1µm,20.0s							
G03D	**McMinnville, O**	**101.20**	**17**	Pdiff	**Pdif**	**12 27 20.1**	**+1.6**	
	baz=194							
TIGA	**Tifton**	**101.21**	**51**	Pdiff	**Pdif**	**12 27 19.6**	**+0.7**	
	baz=212							
OXF	**Oxford**	**101.31**	**45**	Pdiff	**Pdif**	**12 27 20.5**	**+1.3**	
	baz=210							
AHID	**Auburn Hatcher**	**101.44**	**26**	IAMs_20	IAMs_20	13 03 10.6		
	comp=Z,1µm,21.0s							
RWWY	**Rawlins**	**101.49**	**29**	IAMs_20	IAMs_20	13 03 46.0		
	comp=Z,923nm,20.0s							
U40A	**Yellville**	**101.53**	**42**	Pdiff	**Pdif**	**12 27 21.8**	**+1.6**	
	baz=209							
G05D	**Wamic, OR**	**101.57**	**18**	Pdiff	**Pdif**	**12 27 22.0**	**+1.8**	
	baz=195							
G06A	**Carlson Farm,**	**101.69**	**18**	IAMs_20	IAMs_20	13 02 58.6		
	comp=Z,2µm,22.0s							
Z50A	**Ashland**	**101.71**	**48**	Pdiff	**Pdif**	**12 27 22.3**	**+1.2**	
	baz=211							
BW06	**Boulder Array**	**101.84**	**27**	Pdiff	**Pdif**	**12 27 23.7**	**+2.0**	
	baz=201							
BW06	**Boulder Array**	**101.84**	**27**	IAMs_20	IAMs_20	13 04 15.3		
	comp=Z,1µm,20.0s							
PDAR	**Pinedale Array**	**101.84**	**27**	PKiKP	**PKiKP**	**12 31 46.3**	**+1.7**	
	comp=Z,1.3nm,1.0s,baz=95,slow=1.9,SNR=5.0							
PDAR				PKKPbc	**PKKPbc**	**12 43 27.2**	**+0.7**	
	comp=Z,0.9nm,1.0s,baz=27,slow=2.2,SNR=4.1							
F03A	**Seaside**	**101.85**	**16**	IAMs_20	IAMs_20	13 02 26.9		
	comp=Z,736nm,20.0s							
BMO	**Blue Mountains**	**101.98**	**21**	IAMs_20	IAMs_20	13 03 14.3		
	comp=Z,1µm,22.0s							
F04A	**Amboy**	**102.05**	**17**	IAMs_20	IAMs_20	13 02 58.0		
	comp=Z,1µm,21.0s							
REDW	**Red Top Meadow**	**102.06**	**26**	IAMs_20	IAMs_20	13 04 15.1		
	comp=Z,725nm,20.0s							
F04D	**Rainier, OR**	**102.09**	**17**	Pdiff	**Pdif**	**12 27 24.5**	**+2.0**	
	baz=194							
TPAW	**Teton Pass**	**102.16**	**26**	IAMs_20	IAMs_20	13 21 25.6		
	comp=Z,769nm,18.0s							
F05D	**White Salmon**	**102.17**	**18**	Pdiff	**Pdif**	**12 27 24.8**	**+2.0**	
	baz=195							
SNOW	**Snow King Moun**	**102.18**	**26**	IAMs_20	IAMs_20	13 21 10.2		
	comp=Z,739nm,19.0s							
FXWY	**Fox Creek**	**102.28**	**26**	IAMs_20	IAMs_20	13 21 34.8		
	comp=Z,763nm,19.0s							
OGNE	**Ogallala**	**102.36**	**33**	Pdiff	**Pdif**	**12 27 25.4**	**+1.5**	
	baz=205							
OGNE	**Ogallala**	**102.36**	**33**	IAMs_20	IAMs_20	13 05 05.5		
	comp=Z,1µm,21.0s							
E03A	**Lebam**	**102.45**	**16**	IAMs_20	IAMs_20	13 05 11.7		
	comp=Z,885nm,19.0s							
F07A	**Phinny Hill Vi**	**102.46**	**19**	IAMs_20	IAMs_20	13 03 55.9		
	comp=Z,1µm,20.0s							
KSU1	**Kansas State U**	**102.55**	**38**	Pdiff	**Pdif**	**12 27 26.1**	**+1.5**	
	baz=207							
K22A	**Casper**	**102.57**	**29**	Pdiff	**Pdif**	**12 27 26.1**	**+1.2**	
	baz=203							
K22A	**Casper**	**102.57**	**29**	IAMs_20	IAMs_20	13 04 23.7		
	comp=Z,897nm,21.0s							
E04D	**Cinebar**	**102.63**	**17**	Pdiff	**Pdif**	**12 27 26.6**	**+1.8**	
	baz=194							
MYKOM	**Kota Tinggi**	**102.73**	**255**	IAMs_20	IAMs_20	13 09 56.0		
	comp=Z,688nm,20.0s							
GOGA	**Godfrey**	**102.93**	**50**	Pdiff	**Pdif**	**12 27 27.8**	**+1.3**	
	baz=212							
LON	**Longmire**	**102.94**	**17**	IAMs_20	IAMs_20	13 03 27.8		
	comp=Z,956nm,21.0s							
HAWA	**Hanford**	**103.01**	**19**	IAMs_20	IAMs_20	13 04 32.6		
	comp=Z,1µm,20.0s							
Y52A	**Lilburn**	**103.05**	**49**	Pdiff	**Pdif**	**12 27 28.2**	**+1.2**	
	baz=212							
F10A	**Beach Ranch, E**	**103.06**	**21**	IAMs_20	IAMs_20	13 04 07.1		
	comp=Z,1µm,21.0s							
H17A	**Grant Village**	**103.10**	**26**	Pdiff	**Pdif**	**12 27 29.6**	**+2.3**	
	baz=201							
H17A	**Grant Village**	**103.10**	**26**	IAMs_20	IAMs_20	13 04 37.5		
	comp=Z,840nm,21.0s							
BKNI	**Bangkinang**	**103.10**	**252**	IAMs_20	IAMs_20	13 13 30.6		
	comp=Z,780nm,22.0s							
E07A	**Sunnyside**	**103.11**	**19**	IAMs_20	IAMs_20	13 04 16.2		
	comp=Z,1µm,21.0s							
D04E	**Lakebay**	**103.20**	**16**	Pdiff	**Pdif**	**12 27 30.0**	**+2.8**	
	baz=194							
E08A	**Dider Farm, El**	**103.20**	**19**	IAMs_20	IAMs_20	13 05 58.5		
	comp=Z,1µm,19.0s							
LKWY	**Lake**	**103.30**	**26**	IAMs_20	IAMs_20	13 06 24.9		
	comp=Z,1µm,19.0s							
D05A	**Enumclaw**	**103.34**	**17**	IAMs_20	IAMs_20	13 03 39.1		
	comp=Z,1µm,21.0s							
WVT	**Waverly**	**103.36**	**45**	Pdiff	**Pdif**	**12 27 30.3**	**+2.0**	
	baz=211							
E09A	**Wood Farm, Sta**	**103.40**	**20**	IAMs_20	IAMs_20	13 05 19.5		
	comp=Z,729nm,20.0s							
157A	**Early Branch**	**103.44**	**52**	Pdiff	**Pdif**	**12 27 30.8**	**+2.0**	
	baz=213							
D03D	**Eldon**	**103.49**	**16**	Pdiff	**Pdif**	**12 27 30.0**	**+1.4**	
	baz=194							
DLMT	**Dillon**	**103.51**	**24**	IAMs_20	IAMs_20	13 04 50.0		
	comp=Z,1µm,21.0s							
LTY	**Liberty**	**103.64**	**18**	IAMs_20	IAMs_20	13 04 15.0		
	comp=Z,857nm,21.0s							
N33A	**J Bar K, Exete**	**103.70**	**36**	IAMs_20	IAMs_20	13 06 05.1		
	comp=Z,1µm,20.0s							
D08A	**Wollman Farm,**	**103.77**	**19**	IAMs_20	IAMs_20	13 04 05.6		
	comp=Z,1µm,22.0s							
Z56A	**Williston**	**103.81**	**52**	Pdiff	**Pdif**	**12 27 31.9**	**+1.5**	
	baz=213							
BGNE	**Belgrade**	**104.06**	**36**	IAMs_20	IAMs_20	13 06 25.6		
	comp=Z,1µm,20.0s							
Y55A	**Saluda**	**104.10**	**51**	Pdiff	**Pdif**	**12 27 33.2**	**+1.5**	
	baz=213							
RLMT	**Red Lodge**	**104.11**	**26**	Pdiff	**Pdif**	**12 27 33.4**	**+1.7**	
	baz=201							
RLMT	**Red Lodge**	**104.11**	**26**	IAMs_20	IAMs_20	13 22 58.4		
	comp=Z,601nm,18.0s							
Y56A	**Pelion**	**104.23**	**51**	Pdiff	**Pdif**	**12 27 33.9**	**+1.6**	
	baz=213							
B05A	**Bryant**	**104.36**	**17**	Pdiff	**Pdif**	**12 27 34.7**	**+2.3**	
	baz=194							
X54A	**Belton**	**104.38**	**50**	Pdiff	**Pdif**	**12 27 34.7**	**+1.7**	
	baz=213							
N35A	**Tabor**	**104.45**	**37**	IAMs_20	IAMs_20	13 06 50.9		
	comp=Z,934nm,20.0s							
MSO	**Missoula**	**104.58**	**23**	Pdiff	**Pdif**	**12 27 35.1**	**+1.5**	
	baz=199							
MSO	**Missoula**	**104.58**	**23**	IAMs_20	IAMs_20	13 18 47.4		
	comp=Z,961nm,19.0s							
C09A	**Chrisman Ranch**	**104.60**	**19**	IAMs_20	IAMs_20	13 07 26.8		
	comp=Z,1µm,19.0s							
RSSD	**Black Hills**	**104.64**	**30**	Pdiff	**Pdif**	**12 27 35.2**	**+1.1**	
	baz=204							
RSSD	**Black Hills**	**104.64**	**30**	IAMs_20	IAMs_20	13 20 49.5		
	comp=Z,697nm,19.0s							

X55A	**Gracelyn & Ava**	**104.65**	**51**	Pdiff	**Pdif**	**12 27 35.2**	**+1.1**	
	baz=213							
A04D	**Lummi Island**	**104.70**	**16**	Pdiff	**Pdif**	**12 27 35.4**	**+1.4**	
	baz=194							
B06A	**Marblemount**	**104.71**	**17**	IAMs_20	IAMs_20	13 06 11.5		
	comp=Z,666nm,19.0s							
B08A	**Colville Reser**	**104.94**	**18**	IAMs_20	IAMs_20	13 04 57.6		
	comp=Z,1µm,21.0s							
K31A	**O'Neill**	**104.94**	**35**	IAMs_20	IAMs_20	13 22 55.9		
	comp=Z,757nm,19.0s							
H10S3	**ASCENSION HYDR**	**105.13**	**130**	T	T	14 25 48.4		
	baz=207,slow=74,SNR=9.2							
H10S2	**ASCENSION HYDR**	**105.14**	**130**	T	T	14 26 04.2		
	baz=13,slow=74,SNR=4.4							
L34A	**Svendsen Farm,**	**105.17**	**36**	IAMs_20	IAMs_20	13 07 41.9		
	comp=Z,1µm,20.0s							
NEW	**Newport**	**105.27**	**20**	IAMs_20	IAMs_20	13 05 25.5		
	comp=Z,1µm,21.0s							
JTMT	**Jette**	**105.38**	**22**	IAMs_20	IAMs_20	13 07 41.3		
	comp=Z,890nm,20.0s							
TSUM	**Tsumeb**	**105.47**	**165**		**Pdif**	**12 27 38.4**	**-0.1**	
H10N3	**ASCENSION HYDR**	**106.19**	**130**	T	T	14 27 19.9		
	baz=206,slow=75,SNR=21							
H10N1	**ASCENSION HYDR**	**106.20**	**130**	T	T	14 27 21.6		
	baz=206,slow=75,SNR=16							
H10N2	**ASCENSION HYDR**	**106.21**	**130**	T	T	14 27 22.4		
	baz=206,slow=75,SNR=23							
SCIA	**State Center**	**106.24**	**39**	IAMs_20	IAMs_20	13 12 01.4		
	comp=Z,658nm,19.0s							
LAO	**LASA Array**	**106.37**	**28**	IAMs_20	IAMs_20	13 07 51.2		
	comp=Z,1µm,20.0s							
SUSD	**Miller**	**106.50**	**34**	IAMs_20	IAMs_20	13 07 59.9		
	comp=Z,678nm,20.0s							
IPM	**Ipoh**	**106.53**	**254**	IAMs_20	IAMs_20	13 13 51.5		
	comp=Z,632nm,19.0s							
ECSD	**EROS Data Cent**	**106.64**	**35**	IAMs_20	IAMs_20	13 07 24.0		
	comp=Z,873nm,22.0s							
LLLB	**Lillooet**	**106.67**	**16**	IAMs_20	IAMs_20	13 05 05.2		
	comp=Z,990nm,22.0s							
EGMT	**Eagleton**	**106.69**	**25**	IAMs_20	IAMs_20	13 21 10.8		
	comp=Z,1µm,19.0s							
WALA	**Waterton Lakes**	**106.70**	**22**	IAMs_20	IAMs_20	13 10 02.6		
	comp=Z,1µm,18.0s							
L40A	**Anamosa**	**107.11**	**40**	IAMs_20	IAMs_20	13 25 56.6		
	comp=Z,608nm,19.0s							
L42A	**Olin, Polo**	**107.65**	**41**	IAMs_20	IAMs_20	13 25 07.9		
	comp=Z,631nm,20.0s							
MOBC	**Moresby Island**	**107.86**	**9**	IAMs_20	IAMs_20	13 05 46.6		
	comp=Z,1µm,21.0s							
E28A	**Huff**	**107.86**	**31**	IAMs_20	IAMs_20	13 07 54.8		
	comp=Z,1µm,22.0s							
I37A	**Lemond, Waseca**	**108.01**	**37**	IAMs_20	IAMs_20	13 09 22.2		
	comp=Z,1µm,21.0s							
L44A	**Lake County Fo**	**108.48**	**42**	IAMs_20	IAMs_20	13 27 23.9		
	comp=Z,750nm,19.0s							
DGMT	**Dagmar**	**108.56**	**28**	IAMs_20	IAMs_20	13 08 22.0		
	comp=Z,1µm,21.0s							
F33A	**5 Mile Ranch,**	**108.61**	**35**	IAMs_20	IAMs_20	13 08 33.0		
	comp=Z,749nm,21.0s							
K43A	**Burlington**	**108.76**	**41**	IAMs_20	IAMs_20	13 25 53.3		
	comp=Z,609nm,19.0s							
MDND	**Maddock**	**109.33**	**31**	IAMs_20	IAMs_20	13 08 58.8		
	comp=Z,1µm,22.0s							
D32A	**Dowood Acres,**	**109.52**	**33**	IAMs_20	IAMs_20	13 11 33.7		
	comp=Z,753nm,18.0s							
I42A	**Draeger Farm,**	**109.55**	**40**	IAMs_20	IAMs_20	13 24 49.1		
	comp=Z,620nm,19.0s							
F36A	**Milaca**	**109.57**	**36**	IAMs_20	IAMs_20	13 26 26.4		
	comp=Z,787nm,20.0s							
YOJ	**Yonaguni jima**	**109.71**	**285**	IAMs_20	IAMs_20	13 10 06.9		
	comp=Z,856nm,22.0s							
J45A	**Montague**	**110.14**	**42**	IAMs_20	IAMs_20	13 28 22.8		
	comp=Z,687nm,19.0s							
J47A	**Sumner**	**110.60**	**43**	IAMs_20	IAMs_20	13 27 31.0		
	comp=Z,686nm,20.0s							
INU	**Inuyama**	**110.75**	**302**	IAMs_20	IAMs_20	13 09 01.8		
	comp=Z,1µm,22.0s							
YHNB	**Yeheng**	**110.80**	**283**	IAMs_20	IAMs_20	13 13 47.7		
	comp=Z,779nm,22.0s							
AGMN	**Agassiz Nation**	**110.91**	**34**	IAMs_20	IAMs_20	13 13 00.6		
	comp=Z,724nm,20.0s							
TATO	**Taipei**	**110.97**	**284**	IAMs_20	IAMs_20	13 13 42.1		
	comp=Z,699nm,21.0s							
WRAK	**Wrangell Islan**	**111.07**	**8**	IAMs_20	IAMs_20	13 09 09.4		
	comp=Z,994nm,20.0s							
J48A	**Bridge Port**	**111.07**	**44**	IAMs_20	IAMs_20	13 28 01.5		
	comp=Z,722nm,18.0s							
MJAR	**Matsushiro Arr**	**111.11**	**303**	PKKPbc	PKKPbc	12 42 59.2	+2.1	
	comp=Z,1.2nm,0.8s,baz=301,slow=2.6,SNR=3.2							
MAJO	**Matsushiro**	**111.11**	**303**	IAMs_20	IAMs_20	13 09 32.5		
	comp=Z,757nm,22.0s							
I47A	**Gladwin**	**111.38**	**43**	IAMs_20	IAMs_20	13 29 07.6		
	comp=Z,679nm,19.0s							
B35A	**Bob, Littlefor**	**111.67**	**35**	IAMs_20	IAMs_20	13 10 48.8		
	comp=Z,805nm,22.0s							
I49A	**Point Hope**	**111.99**	**44**	IAMs_20	IAMs_20	13 29 40.9		
	comp=Z,774nm,20.0s							
EYMN	**Ely**	**112.07**	**37**	IAMs_20	IAMs_20	13 10 19.6		
	comp=Z,946nm,22.0s							
JNU	**Nakatsue**	**112.14**	**296**	IAMs_20	IAMs_20	13 11 17.9		
	comp=Z,836nm,22.0s							
D41A	**Chassel**	**112.37**	**39**	IAMs_20	IAMs_20	13 12 18.6		
	comp=Z,798nm,21.0s							
H48A	**Harrisville**	**112.42**	**44**	IAMs_20	IAMs_20	13 29 00.1		
	comp=Z,663nm,19.0s							
ULM	**Lac du Bonnet**	**112.61**	**33**	PKiKP	**PKiKP**	**12 32 03.1**	**-1.0**	
	comp=Z,4.1nm,0.7s,baz=217,slow=1.7,SNR=3.6							
ULM	**Lac du Bonnet**	**112.61**	**33**	IAMs_20	IAMs_20	13 11 30.5		
	comp=Z,1µm,20.0s							
E44A	**Grand Marais A**	**112.99**	**41**	IAMs_20	IAMs_20	13 27 44.1		
	comp=Z,554nm,19.0s							
QIZ	**Qiongzhong**	**113.09**	**271**	Pdif	**Pdif**	**12 28 13.0**	**+1.0**	
QIZ				PP	**PP**	**12 32 56.1**	**+0.6**	
QIZ				SS	SS	12 48 43.3	+3.3	
QIZ				AMB	AMB			
	comp=Z,350nm,4.6s							
QIZ				LR	LR			
	comp=Z,290nm,22.0s							
QIZ				LR	LR			
	comp=Z,240nm,24.1s							
QIZ				LR	LR			
	comp=Z,530nm,27.4s							
J54A	**Appleton**	**113.21**	**47**	IAMs_20	IAMs_20	13 29 15.2		
	comp=Z,651nm,21.0s							
DLBC	**Dease Lake**	**113.27**	**9**	PKiKP	**PKiKP**	**12 32 05.2**	**0.0**	
	comp=Z,8.7nm,1.0s,baz=185,slow=1.4,SNR=7.9							
E46A	**Sault Ste Mari**	**113.40**	**42**	IAMs_20	IAMs_20	13 28 55.1		
	comp=Z,580nm,19.0s							
YUK	**Yuzh-Kuril'sk**	**113.60**	**313**	*i* PKiKP	**PKiKP**	**12 32 06.0**	**-0.2**	
YUK				*e*		12 32 59.1		
YUK				*e*PPP	PPP	12 35 22.6		
YUK				*e*		12 39 18.0		
YUK				*e*SS	SS	12 48 47.9	+1.4	
YUK				*e*SSS	SSS	12 53 00.5		
YUK				MLR	MLR			
	comp=Z,501nm,18.0s							
YUK				MLR	MLR			
	comp=E,4µm,20.0s							
YUK				MLR	MLR			
	comp=N,3µm,17.0s							
D46A	**Sault St. Mari**	**113.94**	**42**	PKiKP	**PKiKP**	**12 32 08.1**	**+1.4**	
	baz=215							
SADO	**Sadowa**	**114.20**	**46**	IAMs_20	IAMs_20	13 31 22.4		
	comp=Z,650nm,19.0s							
H53A	**Bobcaygeon**	**114.28**	**47**	PKiKP	**PKiKP**	**12 32 08.9**	**+1.4**	
	baz=216							
E48A	**Lockeyer**	**114.34**	**43**	PKiKP	**PKiKP**	**12 32 09.2**	**+1.6**	
	baz=215							
I55A	**Frankford**	**114.38**	**47**	PKiKP	**PKiKP**	**12 32 09.1**	**+1.4**	
	baz=217							
D47A	**Chapleau**	**114.44**	**42**	PKiKP	**PKiKP**	**12 32 09.1**	**+1.4**	
	baz=215							
K59A	**Cooperstown**	**114.48**	**50**	PKiKP	**PKiKP**	**12 32 09.0**	**+1.0**	
	baz=218							
FFC	**Flin Flon**	**114.80**	**27**	IAMs_20	IAMs_20	13 13 08.1		
	comp=Z,1µm,20.0s							
F51A	**Arnstein**	**114.81**	**45**	PKiKP	**PKiKP**	**12 32 09.5**	**+1.1**	
	baz=216							
H55A	**Tweed**	**114.86**	**48**	PKiKP	**PKiKP**	**12 32 09.6**	**+1.0**	
	baz=217							
E50A	**Wahnapitae**	**114.87**	**44**	PKiKP	**PKiKP**	**12 32 10.1**	**+1.5**	
	baz=216							
I57A	**Carthage**	**115.04**	**49**	PKiKP	**PKiKP**	**12 32 10.2**	**+1.2**	
	baz=218							
H56A	**Elgin**	**115.29**	**48**	PKiKP	**PKiKP**	**12 32 10.5**	**+1.1**	
	baz=218							
D49A	**Beulah Townshi**	**115.31**	**43**	PKiKP	**PKiKP**	**12 32 10.5**	**+1.1**	
	baz=216							

MCARA	**McCarthy VSAT**	**115.47**	**2**		**PKiKP**	**12 32 09.4**	**+0.2**	
KNK	**Knik Glacier**	**115.47**	**359**		**PKiKP**	**12 32 09.3**	**0.0**	
ALGO	**Algonquin Park**	**115.61**	**46**	PKiKP	**PKiKP**	**12 32 11.6**	**+1.6**	
	baz=217							
I59A	**Olmsteadville**	**115.72**	**50**	PKiKP	**PKiKP**	**12 32 11.8**	**+1.5**	
	baz=218							
D50A	**G1974 Best Tow**	**115.84**	**44**	PKiKP	**PKiKP**	**12 32 12.0**	**+1.7**	
	baz=217							
SSE	**Sheshan**	**115.84**	**288**	IAMs_20	IAMs_20	13 16 35.6		
	comp=Z,717nm,20.0s							
PBKT	**Sadao Pong**	**116.33**	**262**		**PKPdf**	**12 32 12.0**	**-0.2**	
PBKT				IAMs_20	IAMs_20	13 19 10.8		
	comp=Z,895nm,22.0s							
TJN	**Taejon**	**116.49**	**296**	*c i* PKiKP	**PKPdf**	**12 32 11.6**	**-0.4**	
PETK	**Petropavlovsk-**	**116.63**	**326**	PKP	**PKPdf**	**12 32 10.9**	**-0.8**	
	comp=Z,12nm,1.0s,baz=130,slow=3.6,SNR=7.0							
D53A	**Lac Vacive, Po**	**116.65**	**46**	IAMs_20	IAMs_20	13 32 20.2		
	comp=Z,599nm,20.0s							
I62A	**Tamworth**	**116.93**	**52**	PKiKP	**PKiKP**	**12 32 13.8**	**+1.2**	
	baz=219							
KSRS	**Korea Array**	**117.01**	**297**	PKP	**PKPdf**	**12 32 11.9**	**-1.0**	
	comp=Z,0.8nm,0.6s,baz=167,slow=2.1,SNR=4.6							
KSRS				PKKPbc	**PKKPbc**	**12 42 36.6**	**-0.2**	
	comp=Z,1.6nm,0.9s,baz=308,slow=3.4,SNR=5.7							
MENT	**Mentasta**	**117.01**	**2**		**PKPdf**	**12 32 12.1**	**-0.1**	
PPLA	**Purkeypile**	**117.03**	**357**		**PKPdf**	**12 32 11.7**	**-0.7**	
PBA	**Port Blair**	**117.04**	**251**	IAMs_20	IAMs_20	13 12 35.9		
	comp=Z,835nm,19.0s							
D55A	**Sainte-Anne-du**	**117.54**	**47**	PKiKP	**PKPdf**	**12 32 13.5**	**-0.1**	
	baz=219							
VLDQ	**Val d'Or**	**117.57**	**45**	IAMs_20	IAMs_20	13 18 20.8		
	comp=Z,590nm,20.0s							
E57A	**Chemin Saint G**	**117.64**	**48**	PKiKP	**PKPdf**	**12 32 13.3**	**-0.6**	
	baz=219							
INCN	**Inchon**	**117.71**	**296**	IAMs_20	IAMs_20	13 15 51.3		
	comp=Z,743nm,22.0s							
DOT	**Dot Lake**	**117.72**	**1**		**PKPdf**	**12 32 13.4**	**-0.1**	
NJ2	**Nanjing**	**117.86**	**287**	*e*PKP	**PKiKP**	**12 32 17.1**	**+2.3**	
D56A	**ZEC Mazanza, M**	**117.87**	**47**	PKiKP	**PKPdf**	**12 32 14.2**	**-0.2**	
	baz=219							
E58A	**La Victoria**	**117.99**	**49**	PKiKP	**PKPdf**	**12 32 14.5**	**0.0**	
	baz=219							
D57A	**Chemin Vers le**	**118.22**	**48**	PKiKP	**PKiKP**	**12 32 15.3**	**+0.2**	
	baz=219							
DAWY	**Dawson**	**118.26**	**4**		**PKPdf**	**12 32 14.1**	**-0.5**	
G62A	**West of Eustis**	**118.33**	**51**	PKiKP	**PKPdf**	**12 32 14.7**	**-0.5**	
	baz=220							
SLVN	**Son La**	**118.36**	**267**		**PKPdf**	**12 32 16.1**	**0.0**	
HDA	**Harding Lake**	**118.47**	**360**	PKiKP	**PKPdf**	**12 32 14.7**	**-0.2**	
	baz=180							
LSQQ	**Lebel-sur-Quev**	**118.51**	**45**	PKiKP	**PKPdf**	**12 32 14.8**	**-0.7**	
	baz=219							
F61A	**St Evariste**	**118.70**	**50**	PKiKP	**PKPdf**	**12 32 15.3**	**-0.6**	
	baz=220							
D58A	**Chemin du LacG**	**118.72**	**48**	PKiKP	**PKPdf**	**12 32 15.5**	**-0.5**	
	baz=220							
MATQ	**Matagami**	**118.79**	**44**	PKiKP	**PKPdf**	**12 32 15.3**	**-0.6**	
	baz=218							
E60A	**Ste Agathe de**	**118.80**	**50**	PKiKP	**PKPdf**	**12 32 15.6**	**-0.5**	
	baz=220							
IL31		**118.83**	**360**		**PKPdf**	**12 32 15.2**	**-0.3**	
ILAR	**Eielson Array**	**118.83**	**360**	PKP	**PKPdf**	**12 32 15.1**	**-0.5**	
	comp=Z,93nm,1.1s,baz=235,slow=1.5,SNR=219							
ILAR				PKKPbc	**PKKPbc**	**12 42 30.8**	**-0.2**	
	comp=Z,1.7nm,0.8s,baz=332,slow=3.3,SNR=7.5							
EGAK	**Eagle**	**118.91**	**3**		**PKPdf**	**12 32 15.1**	**-0.7**	
PKME	**Peaks-Kenny Pk**	**118.94**	**52**	PKiKP	**PKPdf**	**12 32 15.3**	**-1.1**	
	baz=221							
TCOL	**CIGO, UAF Yank**	**118.94**	**359**	PKiKP	**PKPdf**	**12 32 15.3**	**-0.5**	
	baz=179							
COLA	**College**	**118.94**	**359**	*i* PKiKP	**PKPdf**	**12 32 15.1**	**-0.6**	
COLA	**College**	**118.94**	**359**		**PKPdf**	**12 32 15.1**	**-0.6**	
H65A	**Eastbrook**	**118.99**	**53**	PKiKP	**PKPdf**	**12 32 16.3**	**-0.2**	
	baz=221							
CM31	**Chiang Mai Arr**	**118.99**	**261**		**P

comp=Z,540nm,17.5s
BATG Bathurst New B 121.93 52 PKPdf 12 32 21.9 -0.2
BATG IAMs_20 IAMs_20 13 33 49.3
comp=Z,623nm,21.0s
KMI Kunming 121.95 269 PKP PKiKP 12 32 23.4 +0.1
KMI PP PP 12 33 59.8 +2.3
KMI AMB AMB
comp=Z,730nm,5.2s
KMI LR LR
comp=Z,260nm,23.9s
KMI LR LR
comp=Z,170nm,19.8s
KMI LR LR
comp=Z,470nm,21.5s
SNY Shenyang 122.50 298 ⇓PKP PKPdf 12 32 22.6 -0.7
SNY PP PP 12 34 02.0 +1.2
SNY AMB AMB
comp=Z,230nm,13.7s
SNY LR LR
comp=Z,470nm,23.1s
SNY LR LR
comp=Z,400nm,40.2s
SNY LR LR
comp=Z,790nm,26.1s
GBN Guysborough 122.73 57 PKPdf 12 32 23.2 -0.5
TOLK Toolik Lake Re 122.74 359 PKiKP PKiKP 12 32 23.4 +0.1
baz=178
INK Inuvik 122.77 6 PKP PKPdf 12 32 22.3 -0.7
comp=Z,104nm,1.2s,baz=143,slow=2.0,SNR=131
INK PKKPbc PKKPbc 12 42 16.6 +0.4
comp=Z,4.0nm,1.1s,baz=16,slow=4.1,SNR=4.0
INK Inuvik 122.77 6 PKPdf 12 32 22.3 -0.7
LIC Lamto 122.90 133 *e*PKIKP **PKPdf 12 32 24.3 -0.8**
comp=Z,111nm,0.6s
CN2 Changchun 122.96 300 PKP PKPdf 12 32 23.0 -1.2
CN2 PP PP 12 34 04.3 +0.4
CN2 LR LR
comp=Z,400nm,20.0s
CN2 LR LR
comp=Z,500nm,20.0s
CN2 LR LR
comp=Z,600nm,22.0s
KIC Kosan Boka 123.14 133 *e*PKIKP **PKPdf 12 32 24.6 -0.9**
comp=Z,20nm,1.0s
TIC Toumodi 123.28 132 *e*PKIKP **PKPdf 12 32 25.0 -0.8**
DBIC Dimbokro 123.37 133 PKP PKPdf 12 32 25.4 -0.6
comp=Z,8.2nm,0.7s,baz=186,slow=3.3,SNR=10
KLR Kul'dur 123.82 309 PKP PKPdf 12 32 25.1 -0.5
comp=Z,6.3nm,0.6s,baz=108,slow=1.0,SNR=20
KLR PKKPbc **PKKPbc 12 42 12.2 +0.6**
comp=Z,2.5nm,0.8s,baz=245,slow=4.7,SNR=4.2
KLR Kul'dur 123.82 309*c i*PKIKP **PKPdf 12 32 25.4 -0.3**
KLR pmax pmax
comp=Z,55nm,1.8s
MA2 Magadan 124.14 327*c i*PKIKP **PKiKP 12 32 26.2 0.0**
MA2 pmax pmax
comp=Z,24nm,1.7s
MA2 MLR MLR
comp=Z,643nm,19.0s
MA2 Magadan 124.14 327 PKPdf 12 32 25.4 -0.6
C36M Paulatuk 124.53 10 PKPdf 12 32 25.1 -1.3
XAN Xi'an 124.96 281 PKP PKPdf 12 32 28.0 -0.5
XAN pPKP pPKP 12 33 17.9
XAN PP **PP 12 34 21.3 +3.7**
XAN SKKS 12 41 11.6
XAN AMB AMB
comp=Z,300nm,9.3s
XAN LR LR
comp=Z,350nm,27.9s
XAN LR LR
comp=Z,340nm,24.0s
XAN LR LR
comp=Z,840nm,30.4s
XAN Xi'an 124.96 281 PKIKP **PKPdf 12 32 27.9 -0.5**
XAN MLR MLR
comp=Z,400nm,20.0s
XAN Xi'an 124.96 281 PKPdf 12 32 27.9 -0.5
MBAR Mbarara 125.15 177 PKIKP **PKPdf 12 32 29.8 +0.1**
MBAR MLR MLR
comp=Z,3μm,19.0s
MBAR Mbarara 125.15 177 PKPdf 12 32 29.8 +0.1
BJT Baijiatuau 125.15 291 IAMs_20 IAMs_20 13 20 55.4
comp=Z,684nm,21.0s
BJI Beijing 125.16 291 PKP PKPdf 12 32 28.3 -0.2
BJI AMB AMB
comp=Z,400nm,4.2s
BJI LR LR
comp=Z,430nm,20.8s
BJI LR LR
comp=Z,380nm,18.4s
BJI LR LR
comp=Z,600nm,22.7s
TIY Taiyuan 125.59 287 *e*PKP **PKiKP 12 32 30.6 +0.7**
TIY PP **PP 12 34 23.0 +1.2**
TIY AMB AMB
comp=Z,170nm,4.1s
TIY LR LR
comp=Z,210nm,12.2s
TIY LR LR
comp=Z,790nm,20.6s
TIY LR LR
comp=Z,850nm,23.3s
CD2 Chengdu 125.68 275 PKP PKPdf 12 32 29.9 0.0
CD2 SS SS 12 51 24.0 +1.5
CD2 AMB AMB
comp=Z,560nm,8.6s
CD2 LR LR
comp=Z,520nm,21.6s
CD2 LR LR
comp=Z,570nm,25.9s
CD2 LR LR
comp=Z,900nm,24.4s
SKHT Srikalahasti 125.71 240 *e*PKiKP **PKiKP 12 32 30.8 0.0**
SEY Seymchan 126.26 330 PKP PKPdf 12 32 29.1 -0.8
comp=Z,12nm,1.1s,baz=145,slow=3.5,SNR=14
SEY Seymchan 126.26 330 *i*PKIKP **PKiKP 12 32 30.4 +0.1**
SCHQ Schefferville 126.99 45 PKP PKPdf 12 32 30.4 -1.2
comp=Z,29nm,1.0s,baz=245,slow=1.6,SNR=19
SCHQ Schefferville 126.99 45 PKPdf 12 32 31.1 -0.5
BILL Bilibino 127.00 340 *i*PKIKP **PKPdf 12 32 31.0 -0.2**
BILL *i* 12 32 38.0
BILL *i* 12 39 35.0
BILL *i* SS SS 12 51 35.3 -2.6
BILL pmax pmax
comp=Z,48nm,2.5s
BILL MLR MLR
comp=Z,616nm,19.0s
BILL Bilibino 127.00 340 PKPdf 12 32 31.1 -0.1
ADKI Addanki 127.36 242 *e*PKiKP **PKiKP 12 32 34.0 0.0**
DRLN Deer Lake 127.38 56 PKPdf 12 32 32.1 -0.3
DRLN IAMs_20 IAMs_20 13 32 32.6
comp=Z,487nm,20.0s
KOHI KOHIMA 127.44 262 *e*P **PKPdf 12 32 32.5 -1.1**
KOHI *i* x x 12 34 32.5
PVM Polavaram 127.67 244 *e*PKiKP **PKiKP 12 32 34.5 0.0**
URV Uravakonda 127.97 238 *e*PKPdf **PKPdf 12 32 34.6 -0.1**
SRLM Srisailam 128.12 241 *e*PKPdf **PKPdf 12 32 34.9 -0.1**
HHC Hu-ho-hao-te 128.26 289 *e*PKP **PKPdf 12 32 34.3 -0.3**
HHC AMB AMB
comp=Z,98nm,8.0s
HHC LR LR
comp=Z,190nm,20.8s
HHC LR LR
comp=Z,370nm,19.9s
HHC LR LR
comp=Z,460nm,21.2s
NJS Nagarjunasagar 128.29 241 *e*PKPdf **PKPdf 12 32 35.1 -0.1**
SHL Shillong 128.60 260 *e*P **PKPdf 12 32 34.8 -1.0**
SHL *i* PP **PP 12 34 41.4 -0.4**
SHL Shillong 128.60 260 PKIKP **PKPdf 12 32 34.8 -1.0**
SHL Shillong 128.60 260 PKPdf 12 32 34.8 -1.0
BTO Baotou 128.95 288 *e*PKP **PKPdf 12 32 35.3 -0.6**
ZEA Zeya 128.97 310 *e*PKIKP **PKPdf 12 32 35.1 -0.3**
ZEA *e* 12 34 45.0
ZEA *e*PS PS 12 44 54.0 +2.4
ZEA *e* 12 46 29.0
ZEA pmax pmax
comp=Z,94nm,2.0s
LZH Lanzhou 129.34 279 ⇓PKP **PKiKP 12 32 37.9 +0.3**
LZH SS SS 12 52 11.8 +3.6
LZH AMB AMB
comp=Z,580nm,9.2s
LZH LR LR
comp=Z,470nm,18.4s
LZH LR LR
comp=Z,540nm,18.0s
LZH LR LR
comp=Z,720nm,20.1s
HYBB Hyderabad (bro 129.41 241 *e*PKPdf **PKPdf 12 32 37.4 0.0**
HIA Hailar 129.57 302 IAMs_20 IAMs_20 13 20 14.8
comp=Z,1μm,22.0s
GOA Goa 130.11 235 *e*P **PKiKP 12 32 39.5 0.0**
GOA *i* PP **PP 12 34 49.8 -1.3**
RPR Rampur 130.22 243 *e*PKPdf **PKPdf 12 32 38.9 +0.1**
BOK Bokaro 130.64 253 *e*P **PKPdf 12 32 37.4 -2.1**
BOK IAmb IAmb 12 32 42.8
comp=Z,20nm,1.2s
BOK *i* PP **PP 12 34 54.3 -0.4**
SRSP Sriramsagar 130.78 242 *e*PKPdf **PKPdf 12 32 39.9 -0.1**
KLRI Killari 130.95 240 *e*PKPdf **PKPdf 12 32 40.0 -0.3**
TOA0 Torodi Ar. Sit 131.93 137 PKPdf 12 32 41.7 -0.5
TORD Torodi Ar. Bea 131.93 137 PKhKP PKPpre 12 32 30.2
comp=Z,1.6nm,0.8s,baz=198,slow=3.0,SNR=4.6
TORD PKP **PKPdf 12 32 41.5 -0.7**
comp=Z,12nm,1.1s,baz=207,slow=1.1,SNR=14
TORD SKPbc **SKPbc 12 36 08.6 +0.4**
comp=Z,3.6nm,1.0s,baz=207,slow=2.8,SNR=4.2
LSA Lhasa 132.15 263 *i* P **PKPdf 12 32 43.2 +0.4**
SNR=20
LSA Lhasa 132.15 263 PKIKP **PKPdf 12 32 42.9 +0.1**
LSA MLR MLR
comp=Z,300nm,22.0s
LSA Lhasa 132.15 263 PKPdf 12 32 42.9 +0.1
ODAN Odare 132.17 257 *e*P **PKPdf 12 32 42.3 -0.3**
comp=Z,115nm,0.9s
RAMN Ramite 132.69 257 *e*P **PKPdf 12 32 43.2 -0.4**
comp=Z,79nm,0.8s
YAK Yakutsk 133.23 320 PKP **PKPdf 12 32 43.0 -0.1**
comp=Z,3.1nm,0.4s,baz=72,slow=1.6,SNR=4.9
YAK Yakutsk 133.23 320 *e*PKIKP **PKPdf 12 32 43.1 -0.1**
YAK pmax pmax
comp=Z,16nm,0.9s
YAK pmax pmax
comp=N,5.0nm,0.9s
YAK pmax pmax
comp=E,5.0nm,1.3s
YAK Yakutsk 133.23 320 PKPdf 12 32 42.8 -0.3
YAK IAMs_20 IAMs_20 13 21 25.2
comp=Z,991nm,22.0s
RES Resolute Bay 133.29 17 PKhKP PKPpre 12 32 28.1
comp=Z,2.7nm,0.8s,baz=271,slow=6.6,SNR=1.1
RES PKP **PKPdf 12 32 43.4 +0.5**
comp=Z,18nm,0.9s,baz=221,slow=4.6,SNR=5.5
RES Resolute Bay 133.29 17 PKPdf 12 32 43.1 +0.2
RES IAMs_20 IAMs_20 13 24 52.9
comp=Z,906nm,20.0s
JIRN Jiri 133.47 257 *e*P **PKPdf 12 32 44.4 -0.8**
comp=Z,37nm,0.7s
GUN Gumba 133.84 257 *e*P **PKPdf 12 32 45.1 -0.8**
comp=Z,82nm,0.9s
PKI Pulchoki 133.85 256 *e*P **PKPdf 12 32 44.8 -1.1**
comp=Z,59nm,0.9s
PKIN Phulchoki 133.86 256 *e*P **PKPdf 12 32 46.0 +0.2**
comp=Z,100nm,1.2s
GTA Gaotai 133.94 279 *e*PKP **PKPdf 12 32 45.0 -0.4**
GTA PP **PP 12 35 17.8 +1.6**
GTA PKS 12 36 16.3
GTA AMB AMB
comp=Z,470nm,8.6s
GTA LR LR
comp=Z,260nm,20.6s
GTA LR LR
comp=Z,400nm,22.0s
GTA LR LR
comp=Z,810nm,23.0s
DMN Daman 134.05 256 *e*P **PKPdf 12 32 44.7 -1.5**
comp=Z,72nm,0.9s
KKN Kakani 134.09 256 *e*P **PKPdf 12 32 45.3 -0.9**
comp=Z,33nm,0.7s
BHPL Bhopal 134.81 244 *e*P **PKPdf 12 32 46.7 -0.7**
BHPL IAmb IAmb 12 32 51.2
comp=Z,10nm,0.9s
KOLN Koldanda 135.02 255 *e*P **PKPdf 12 32 46.7 -1.2**
comp=Z,24nm,0.6s
ULN Ulaanbaatar 135.26 293*c i*PKIKP **PKPdf 12 32 47.6 -0.1**
ULN pmax pmax
comp=Z,51nm,2.5s
ULN Ulaanbaatar 135.26 293 PKPdf 12 32 46.9 -0.7
ULN Ulaanbaatar 135.26 293 IAMs_20 IAMs_20 13 28 22.7
comp=Z,458nm,21.0s
SONM Songino Array 135.59 293 PKhKP PKPpre 12 32 34.2
comp=Z,1.0nm,0.7s,baz=130,slow=3.1,SNR=5.0
SONM PKP **PKPdf 12 32 47.2 -1.0**
comp=Z,2.1nm,0.8s,baz=139,slow=1.9,SNR=6.5
SONM PP **PP 12 35 28.7 +2.1**
comp=Z,3.2nm,1.1s,baz=111,slow=3.7,SNR=4.6
PYUN Piuthan 135.62 254 *e*P **PKPdf 12 32 48.4 -0.7**
comp=Z,45nm,0.2s
ATD Arta Tunnel 136.59 194 IAMs_20 IAMs_20 13 29 50.3
comp=Z,952nm,21.0s
BOD Bodaibo 137.40 309 *e*PKHKP PKPpre 12 32 39.5
BOD pmax pmax
comp=Z,18nm,1.6s
PMOZ Porto Moniz, M 138.63 100 *e*LR LR 13 19 50.4
comp=Z,589nm,20.0s
TIXI Tiksi 138.73 331 PKhKP PKPpre 12 32 43.6
comp=Z,5.3nm,0.7s,baz=139,slow=4.2,SNR=15
TIXI Tiksi 138.73 331 PKIKP **PKPdf 12 32 53.2 +0.1**
TIXI Tiksi 138.73 331 PKPdf 12 32 53.2 +0.1
ZAK Zakamensk 138.73 294 *e*PKHKP PKPpre 12 32 43.0
ZAK pmax pmax
comp=Z,16nm,1.6s
IRK Irkutsk 139.22 297 *e*PKHKP PKPpre 12 32 47.3
IRK pmax pmax
comp=Z,88nm,2.5s
TLY Talaya 139.25 296 PKhKP PKPpre 12 32 45.4
comp=Z,1.9nm,0.5s,baz=220,slow=5.1,SNR=3.4
TLY Talaya 139.25 296 *e*PKHKP PKPpre 12 32 46.5
TLY *i* 12 32 52.7
TLY *e* 12 35 46.9
TLY pmax pmax
comp=Z,21nm,1.5s
TLY Talaya 139.25 296 PKPdf 12 32 54.9 +0.2
TLY IAMs_20 IAMs_20 13 37 46.2
comp=Z,624nm,19.0s
DDI Dehra Dun 140.08 251 *e*P **PKPdf 12 32 56.3 -0.7**
DDI IAmb IAmb 12 33 00.1
comp=Z,41nm,0.4s
DDI *i* x x 12 35 50.6
MOY Mondy 140.64 295 *e*PKHKP PKPpre 12 32 50.9
MOY pmax pmax
comp=Z,112nm,3.6s
SMLA Simla 141.19 251 *ex* **PKPdf 12 32 51.9 -7.0**
SMLA *i* PP **PP 12 35 59.6 -1.5**
KULLO Kullorsuaq 141.26 25 *e*PKHKP **PKPdf 12 32 52.2 -5.5**
KULLO Kullorsuaq 141.26 25 *i* P **PKPdf 12 32 52.2 -5.5**
WSAR Wadi Sarin 143.58 221 PKhKP PKPpre 12 32 59.9
baz=201,slow=4.0
WMQ Urumqi 143.75 276 *e*PKP **PKPdf 12 33 02.3 -0.8**
WMQ pPKP PKiKP 12 33 11.0 +4.4
WMQ sPKP 12 33 13.8
WMQ LR LR
comp=Z,220nm,21.9s
WMQ LR LR
comp=Z,220nm,15.9s
WMQ LR LR
comp=Z,300nm,29.2s
NIL Nilore 145.25 250 PKIKP **PKPbc 12 33 04.9 -0.8**
NIL MLR MLR
comp=Z,500nm,21.0s
NIL Nilore 145.25 250 PKPbc 12 33 04.9 -0.8
NIL Nilore 145.25 250 IAMs_20 IAMs_20 13 39 21.2
comp=Z,469nm,21.0s
ALNE Al Ain 145.40 218 *i* P **PKPbc 12 33 06.0 -0.5**
SNR=36
MDT Midelt 145.67 113 PKPbc **PKPab 12 33 08.1 +0.5**
comp=Z,74nm,1.0s,baz=213,slow=5.2,SNR=54
ASHO Ashiyiah 145.86 219 *i* P **PKPdf 12 33 07.0 -0.3**
SNR=37
SUMG Summit 145.94 31⇑ *i*PKP2 **PKPbc 12 33 07.2 0.0**
SUMG pmax pmax
comp=Z,1μm,1.1s
SUMG Summit 145.94 31 PKPdf 12 33 06.3 -0.1
SUMG Summit 145.94 31⇑ *i*P **PKPbc 12 33 07.2 0.0**
comp=Z,1μm,1.1s
HATD Hatta, Dubai 145.96 219 *i* P **PKPdf 12 33 07.3 -0.1**
SNR=52
UOSS Minazif 146.04 219 *i* P **PKPdf 12 33 07.0 -0.6**
SNR=16
UOSS Minazif 146.04 219 PKPdf 12 33 07.3 -0.3
UOSS Minazif 146.04 219 IAMs_20 IAMs_20 13 44 14.9
comp=Z,605nm,19.0s
FAQ Al Faqa, Dubai 146.09 218 *i* P **PKPbc 12 33 08.4 -0.2**
SNR=19
AJN Ajban 146.13 217 *i* P **PKPbc 12 33 08.3 -0.4**
SNR=21
NAZ Nazwa, Dubai 146.28 218 *i* P **PKPdf 12 33 08.1 +0.1**
SNR=18
MDH Madha 146.33 220 *i* P **PKPdf 12 33 08.2 +0.1**
SNR=19
MSFE Esma-Masafi 146.44 219 *i* P **PKPbc 12 33 09.1 -0.6**
SNR=40
PFVI Vila Bisbo 146.50 103 *e*PKPbc **PKPab 12 33 10.2 -0.2**
PFVI Vila Bisbo 146.50 103 IAMs_20 IAMs_20 13 24 51.3
comp=Z,726nm,20.0s
MORF Marmelete 146.72 103 *e*PKPdf **PKPab 12 33 10.9 -0.5**
MORF AMS AMS 13 29 21.8
comp=Z,560nm,21.6s
MORF Marmelete 146.72 103 *e*PKP2 **PKPab 12 33 10.9 -0.5**
MORF Marmelete 146.72 103 *e*PKPbc **PKPbc 12 33 10.7 +0.5**
UMQ Umm Al-Quwin 146.77 219 *i* P **PKPbc 12 33 10.9 +0.4**
SNR=5.6
PTEO Sao Teotonio 146.85 103 *e*PKPbc **PKPab 12 33 11.2 -0.6**
BANOM Banah 146.90 220 *i* P **PKPdf 12 33 08.0 -1.1**
SNR=21
SHME Shamm 147.07 220 *i* P **PKPbc 12 33 10.7 -0.7**
SNR=16
PBDV Barranco-do-Ve 147.09 104 *e*PKPbc **PKPab 12 33 12.0 -0.8**
DGZ Jazzator, Alta 147.11 284 *i* PKP2 **PKPdf 12 33 09.4 +0.6**
PCVE Castro Verde 147.30 104 *e*PKPbc **PKPbc 12 33 12.2 +0.5**
PVAQ Vaqueiros 147.32 104 *e*PKPbc **PKPbc 12 33 12.2 +0.4**
PVAQ Vaqueiros 147.32 104 *e*LR LR 13 22 31.9
comp=Z,471nm,24.0s
PVAQ Vaqueiros 147.32 104 IAMs_20 IAMs_20 13 47 47.0
comp=Z,578nm,20.0s
MESJ Messejana 147.34 103 *e*PKPdf **PKPbc 12 33 12.1 +0.2**
MESJ AMS AMS 13 30 41.1
comp=Z,623nm,27.9s
MESJ Messejana 147.34 103 *e*PKP2 **PKPbc 12 33 12.0 +0.2**
MESJ Messejana 147.34 103 *e*PKPbc **PKPbc 12 33 12.3 +0.5**
PNCL Nicolau / Gran 147.35 103 *e*PKPbc **PKPbc 12 33 12.5 +0.7**
LIS Lisbon 147.41 101 *e*PKPdf **PKPbc 12 33 12.2 +0.2**
LIS AMS AMS 13 31 07.2
comp=Z,1μm,24.7s
LIS Lisbon 147.41 101 *e*PKP2 **PKPbc 12 33 12.1 +0.2**
LIS Lisbon 147.41 101 *e*PKPbc **PKPbc 12 33 12.5 +0.6**
PMAFR Mafra 147.50 101 *e*PKPbc **PKPbc 12 33 12.8 +0.6**
PBEJ Beja 147.67 103 *e*PKPbc **PKPbc 12 33 13.4 +0.7**
RAYN Ar Rayn 147.85 201 *i* P **PKPbc 12 33 12.5 -1.2**
SNR=67
RAYN Ar Rayn 147.85 201 PKIKP **PKPdf 12 33 10.8 +0.1**
RAYN Ar Rayn 147.85 201 PKPdf 12 33 10.8 +0.1
KSH Kashi 147.89 260 PKPbc **PKPbc 12 33 14.0 +0.6**
KSH PP **PP 12 36 41.0 -0.4**
KSH SS SS 12 55 48.1 +1.2
KSH LR LR
comp=Z,710nm,15.0s
KSH LR LR
comp=Z,360nm,6.4s
KSH LR LR
comp=Z,480nm,10.0s
EVO Evora 147.94 102 *e*PKPbc **PKPbc 12 33 13.9 +0.5**
PMTG Montargil 148.18 102 *e*PKPbc **PKPbc 12 33 14.6 +0.6**
KBL Kabul 148.21 246 PKIKP **PKPdf 12 33 11.1 -0.1**
KBL Kabul 148.21 246 PKPdf 12 33 11.1 -0.1
PDGK Podgornoye 148.25 269 PKHKP **PKPdf 12 33 09.1 -1.8**
TARG Taragay, Kyrgy 148.25 265 IAMs_20 IAMs_20 13 45 41.1
comp=Z,500nm,21.0s
PRZ Przheval'sk 148.38 267 IAMs_20 IAMs_20 13 45 14.1
comp=Z,545nm,21.0s
PESTR Estremoz 148.41 102 *e*PKPbc **PKPbc 12 33 15.1 +0.5**
MK31 Makanchi Array 148.58 276 *i* PKHKP **PKPdf 12 33 09.2 -2.0**
MK31 Makanchi Array 148.58 276 PKPdf 12 33 09.7 -1.5
MKAR Makanchi Array 148.58 276 PKPbc **PKPbc 12 33 13.8 -1.0**
comp=Z,64nm,0.8s,baz=98,slow=4.5,SNR=149
PCAS Casmilo, Conde 148.68 100 *e*PKPbc **PKiKP 12 33 16.1 -0.6**
MAKZ Makanchi 148.77 276 PKHKP **PKPdf 12 33 09.7 -1.8**
MAKZ Makanchi 148.77 276 PKPdf 12 33 09.7 -1.8
MAKZ IAMs_20 IAMs_20 13 35 23.7
comp=Z,561nm,22.0s
COI Coimbra 148.83 100 *e*PKPbc **PKPbc 12 33 16.0 +0.4**
KDJ Kajisay 148.87 265 IAMs_20 IAMs_20 13 38 22.2
comp=Z,735nm,22.0s
PMRV Marv??o 148.90 102 *e*PKPbc **PKPbc 12 33 16.0 +0.1**
PMRV Marv??o 148.90 102 *e*LR LR 13 23 51.3
comp=Z,999nm,22.0s
NOR Nord 149.04 13 *i* PKIKP **PKPdf 12 33 10.1 -0.8**
NOR *i* 12 33 16.7
NOR Nord 149.04 13 *i* P **PKPdf 12 33 10.1 -0.8**
NOR *i* 12 33 16.7
PCBR Castelo Branco 149.12 101 *e*PKPbc **PKPbc 12 33 16.9 +0.5**
MTE Manteigas 149.46 100 *e*PKPbc **PKPbc 12 33 17.4 +0.1**
MTE Manteigas 149.46 100 *e*LQ LQ 13 18 21.8
MTE *e*LR LR 13 24 07.6
comp=Z,975nm,22.0s
PVIS Viseu 149.46 99 *e*PKPbc **PKPbc 12 33 17.5 +0.2**
ULHL Ulahol 149.49 264 P **PKPdf 12 33 13.1 +0.1**
SNR=25
AAA Alma-Ata 149.68 267 *e*PKIKP **PKPdf 12 33 08.1 -5.0**
PVRL Vila Real 149.93 99 *e*PKPbc **PKiKP 12 33 19.0 -0.3**
KZA Kyzart 149.96 263 P **PKPdf 12 33 14.4 +0.3**
SNR=22
PCAB Cabril 150.02 98 *e*PKPbc **PKPbc 12 33 18.6 0.0**
PGAV Gavieira, Arco 150.04 97 *e*PKPbc **PKPbc 12 33 18.7 0.0**
PGAV Gavieira, Arco 150.04 97 *e*LR LR 13 23 41.2
comp=Z,640nm,20.0s
MVO Moncorvo 150.25 100 *e*PKPbc **PKPbc 12 33 19.3 +0.1**
MVO Moncorvo 150.25 100 *e*LQ LQ 13 17 58.0
MVO *e*LR LR 13 24 31.7
comp=Z,865nm,24.0s
TKM2 Tokmak 2 150.28 265 P **PKPdf 12 33 13.1 -1.2**
SNR=13
TKM2 Tokmak 2 150.28 265 PKIKP **PKPdf 12 33 12.1 -2.2**
ZAA0 Zalesovo Array 150.42 291 PKPdf 12 33 12.0 -1.8
ZAA0 IAMs_20 IAMs_20 13 34 12.9
comp=Z,790nm,22.0s
ZALV Zalesovo Beam 150.42 291 PKPbc **PKPbc 12 33 18.0 -1.1**
comp=Z,25nm,0.8s,baz=123,slow=3.1,SNR=47
UCH Uchtor 150.48 263 P **PKPdf 12 33 14.7 -0.2**
SNR=35
KBK Karagaybulak 150.50 264 P **PKiKP 12 33 20.4 -0.2**
SNR=11
DAG Danmarks Havn 150.72 22 *i* PKIKP **PKPdf 12 33 12.3 -1.3**
DAG pmax pmax
comp=Z,65nm,0.8s
DAG Danmarks Havn 150.72 22 *i* P **PKPdf 12 33 12.3 -1.3**
comp=Z,65nm,0.8s
AAK Ala-Archa 150.75 263 P **PKPbc 12 33 20.6 +0.1**
SNR=12
AAK Ala-Archa 150.75 263 PKIKP **PKPdf 12 33 14.3 -0.6**
AAK Ala-Archa 150.75 263 PKPdf 12 33 14.3 -0.6
AAK Ala-Archa 150.75 263 IAMs_20 IAMs_20 13 43 58.1
comp=Z,550nm,22.0s
GAR Garm 150.76 254 PKPdf 12 33 14.9 -0.1
FRU1 Bishkek 150.77 264 PKIKP **PKPdf 12 33 14.8 -0.1**
FRU1 Bishkek 150.77 264 PKPdf 12 33 14.8 -0.1
FRU1 IAMs_20 IAMs_20 13 55 33.8
comp=Z,619nm,21.0s
CHMS Chumysh 150.82 264 P **PKPbc 12 33 19.9 -0.6**
SNR=15
PBRG Braganca 150.83 99 *e*PKPbc **PKPbc 12 33 20.8 +0.2**
AML Almayashu 150.90 262 P **PKPdf 12 33 14.9 -0.6**
SNR=19
ESDC Sonseca Array 151.01 105 PKPbc **PKiKP 12 33 21.7 0.0**
comp=Z,54nm,0.9s,baz=236,slow=1.5,SNR=34
USP Ospenovka 151.13 264 P **PKPbc 12 33 21.4 +0.2**
SNR=17
SCO Scoresbysund 151.14 35 *e*PKIKP **PKPdf 12 33 15.3 +0.9**
SCO *i* 12 33 20.8
SCO Scoresbysund 151.14 35 *i* P **PKPdf 12 33 15.3 +0.9**
SCO *i* 12 33 20.8
CHGR Chuyangaron 151.16 252 PKPdf 12 33 15.6 0.0
EKS2 Erkin-Say 151.18 263 P **PKPdf 12 33 15.1 -0.5**
SNR=7.9
CART Cartagena 151.19 112 IAMs_20 IAMs_20 13 37 54.4
comp=Z,600nm,20.0s
BTK Batken 151.20 256 IAMs_20 IAMs_20 13 43 24.2
comp=Z,711nm,20.0s
HRA Herat 151.58 237 PKPdf 12 33 16.3 -0.3
HRA IAMs_20 IAMs_20 13 37 05.1
comp=Z,542nm,20.0s
NRIK Noril'sk 151.61 323 PKPbc **PKPbc 12 33 21.2 -0.3**
comp=Z,77nm,1.1s,baz=95,slow=2.3,SNR=34
KURK Kurchatov 152.60 281 PKIKP **PKPdf 12 33 15.5 -1.7**
KURK Kurchatov 152.60 281 PKPdf 12 33 15.5 -1.7
KURK Kurchatov 152.60 281 IAMs_20 IAMs_20 13 55 01.9

KURBB **Kurchatov Arra** 152.61 281 PKIKP **PKPdf** 12 33 15.2 -2.0
KK31 **Karatay Array** 153.34 260 *i* PKIKP **PKPdf** 12 33 17.4 -1.2
KK31 **Karatay Array** 153.34 260 **PKPdf** 12 33 17.7 -0.9
KBS **Kingsbay** 154.30 9*c i* PKIKP **PKiKP** 12 33 28.4 +1.2
KBS pmax pmax
comp=Z,162nm,1.0s
KBS Kingsbay 154.30 9 **PKPdf** 12 33 20.0 +1.1
KBS **PKiKP** 12 33 27.5 +0.3
KEST Kesra 154.99 128 PKP **PKPdf** 12 33 22.1 +0.9
comp=Z,16nm,1.0s,baz=163,slow=3.1,SNR=13
KEST PKPab **PKPab** 12 33 45.1 -0.5
comp=Z,31nm,1.0s,baz=272,slow=4.2,SNR=12
KEST Kesra 154.99 128 **PKPdf** 12 33 21.7 +0.4
KEST PKPab **pPKPab** 12 33 46.4 -0.8
EIL Elat 155.27 183 PKP **PKPdf** 12 33 22.8 +1.1
comp=Z,5.8nm,1.0s,baz=95,slow=4.1,SNR=5.5
EIL PKPab **PKPab** 12 33 46.7 -0.1
comp=Z,30nm,1.0s,baz=22,slow=2.9,SNR=8.0
SPA0 Spitsbergen Ar 155.37 8 **PKPdf** 12 33 19.7 -0.8
SPA0 pPKPbc 12 33 30.0 -1.3
GEYT Alibeck 156.42 236 PKP **PKPdf** 12 33 22.8 -0.3
comp=Z,2.6nm,0.9s,baz=211,slow=2.6,SNR=7.1
GEYT PKPab **PKPab** 12 33 51.5 -0.1
comp=Z,16nm,1.0s,baz=191,slow=4.5,SNR=15
GYA0B **ALIBECK ARRAY** 156.42 236 PKPdf **PKPdf** 12 33 22.7 -0.3
GYA0B **PKPab** 12 33 51.8 +0.3
DSB Dublin 156.72 76 PKPdf **PKPdf** 12 33 23.7 +0.8
DSB **PKPab** 12 33 52.6 +0.1
ASF Jabal al Asfar 157.65 188 PKP **PKPdf** 12 33 25.8 +0.9
comp=Z,1.2nm,0.4s,baz=135,slow=2.9,SNR=10
ASF PKPab **PKPab** 12 33 56.1 -0.9
comp=Z,11nm,1.1s,baz=196,slow=5.5,SNR=9.1
VSL Villasalto 158.02 123 **PKPdf** 12 33 25.6 +0.7
VSL PKPab **pPKPab** 12 34 00.0 -0.1
VSL IAMs_20 IAMs_20 13 41 58.2
comp=Z,747nm,21.0s
BRVK Borovoye 158.27 282 PKIKP **PKPdf** 12 33 23.3 -1.5
BRVK 12 33 57.6
BRVK Borovoye 158.27 282 **PKPdf** 12 33 23.3 -1.5
BRVK **PKPab** 12 33 57.6 -1.5
BRVK Borovoye 158.27 282 IAMs_20 IAMs_20 14 00 56.7
comp=Z,716nm,21.0s
MMAI Mount Meron Ar 158.58 185 PKPab **PKPab** 12 34 01.4 +0.4
comp=Z,12nm,1.0s,baz=151,slow=3.3,SNR=7.0
ESK Eskdalemuir 159.08 72 PKP2 **PKPab** 12 34 03.1 +0.5
ESK Eskdalemuir 159.08 72 **PKPab** 12 34 03.1 +0.5
GVD Gavdhos 159.40 158 P **PKPdf** 12 33 27.9 +1.2
SSB Saint Sauveur 159.43 104 PKIKP **PKPdf** 12 33 26.9 +0.4
SSB 12 34 05.3
SSB Saint Sauveur 159.43 104 **PKPdf** 12 33 26.9 +0.4
SSB **pPKPab** 12 34 05.3 -0.8
CLF Chambon-Foret 159.62 95 **PKPdf** 12 33 27.2 +0.7
CLF **pPKPab** 12 34 06.0 -0.8
VAM Vamos 159.97 158 P **PKPdf** 12 33 26.1 -1.3
IMMV Iera Moni Meta 159.97 157 P **PKPdf** 12 33 27.3 -0.1
LAST Lasithi 160.00 161 P **PKPdf** 12 33 22.7 -4.8
IDI Anoyia 160.00 159 P **PKPdf** 12 33 29.4 +1.9
IDI Anoyia 160.00 159 PKP **PKPdf** 12 33 29.3 +1.8
comp=Z,30nm,1.1s,baz=215,slow=2.8,SNR=6.6
IDI PKPab **PKPab** 12 34 07.8 +0.7
comp=Z,26nm,1.0s,baz=170,slow=6.1,SNR=4.7
IDI Anoyia 160.00 159 ⇓P **PKPdf** 12 33 31.5 +4.0
IDI Anoyia 160.00 159 **PKPdf** 12 33 28.4 +0.9
ZKR Zakros 160.09 163 P **PKPdf** 12 33 28.4 +0.9
NPS Neapolis 160.12 161 P **PKPdf** 12 33 28.4 +0.8
ANKY Antikythira Is 160.20 155 P **PKPdf** 12 33 30.1 +2.5
BNI Bardonecchia 160.49 108 PKIKP **PKPdf** 12 33 28.7 +0.9
BNI Bardonecchia 160.49 108 **PKPdf** 12 33 28.7 +0.9
KARP Karpathos 160.67 165 P **PKPdf** 12 33 27.9 -0.3
KARP Karpathos 160.67 165 PKPdf **PKPdf** 12 33 27.8 -0.3
KARP **pPKPab** 12 34 10.8 -0.8
PYL PYLOS 160.76 151 P **PKPdf** 12 33 27.3 -0.9
VLI Veliai 160.92 154 P **PKPdf** 12 33 29.5 +1.1
ITM Ithomi 161.07 151 P **PKPdf** 12 33 28.3 -0.3
ITM Ithomi 161.07 151 **PKPdf** 12 33 30.0 +1.4
ITM **PKPab** 12 34 11.9 +0.2
TIP Timpagrande 161.08 137 ⇑P **PKPdf** 12 33 29.1 +0.4
TIP Timpagrande 161.08 137 **PKPdf** 12 33 29.0 +0.4
AMT Artemida-Makis 161.34 150 P **PKPdf** 12 33 30.9 +2.1
VLX Vlachokerasia 161.38 152 P **PKPdf** 12 33 31.2 +2.2
ARG Arkhangelos 161.47 167 P **PKPdf** 12 33 30.3 +1.3
LATE Laterza 161.57 121 **PKPdf** 12 33 28.6 -0.3
VLS Valsamata 161.59 147 P **PKPdf** 12 33 28.8 -0.3
KFL Anninata 161.59 147 P **PKPdf** 12 33 29.1 +0.1
KRND KRANIDI 161.60 153 P **PKPdf** 12 33 28.1 -1.0
PAOL Paolisi 161.68 129 **PKPdf** 12 33 30.0 +0.9
SERI Serifos 161.72 157 P **PKPdf** 12 33 28.0 -1.2
DID Didima 161.74 154 P **PKPdf** 12 33 29.0 -0.3
FSK Fiskardo 161.84 146 P **PKPdf** 12 33 28.8 -0.5
APE Apeiranthos 161.86 160 P **PKPdf** 12 33 28.3 -1.1
DAT Datca 161.89 165 P **PKPdf** 12 33 29.1 -0.4
KLV Kalavryta, Ach 161.94 150 P **PKPdf** 12 33 29.1 -0.4
OSSC Osservatorio P 161.94 118 **PKPdf** 12 33 28.9 -0.3
OSSC **pPKPab** 12 34 17.0 -0.1
FETY Fethiye 162.00 169 P **PKPdf** 12 33 30.0 +0.5
LAKA Lakka 162.07 150 P **PKPdf** 12 33 29.1 -0.5
INTR Introdacqua 162.15 126 **PKPdf** 12 33 29.7 +0.1
LKD2 Lefkada island 162.17 146 P **PKPdf** 12 33 29.7 +0.1
ELL Elmali 162.19 171 PKIKP **PKPdf** 12 33 29.6 -0.3
ELL 12 34 17.9
ELL Elmali 162.19 171 **PKPdf** 12 33 29.6 -0.3
ELL **pPKPab** 12 34 17.9 -0.5
VLY Voula,Athens 162.21 155 P **PKPdf** 12 33 30.5 +0.8
TRIZ Trizonia 162.22 150 P **PKPdf** 12 33 29.0 -0.6
EFP Efpalio 162.23 149 P **PKPdf** 12 33 29.3 -0.4
SERG Sergoula 162.26 150 P **PKPdf** 12 33 30.1 +0.3
KALE Kalithea 162.26 150 P **PKPdf** 12 33 29.5 -0.3
ATH Athens Observa 162.30 154 P **PKPdf** 12 33 30.3 +0.6
ATHU Athens Univers 162.31 154 P **PKPdf** 12 33 30.7 +0.9
VILL Villia 162.38 153 P **PKPdf** 12 33 29.6 -0.3
ANX Ano Chora 162.38 149 P **PKPdf** 12 33 32.0 +2.0
YER Yerkesik 162.39 166 P **PKPdf** 12 33 29.4 -0.6
DION Dionisos Attik 162.46 155 P **PKPdf** 12 33 30.1 +0.1
GAZ Gaziantep 162.57 190 PKPdf **PKPdf** 12 33 30.4 +0.2
GAZ **PKPab** 12 34 18.8 +0.5
EVR Evrytania 162.65 148 P **PKPdf** 12 33 30.6 +0.4
WLF Walferdange 162.66 95 *e*PKPdf **PKPdf** 12 33 30.1 +0.4
baz=252,slow=0.5
WLF *e*PKPab **pPKPab** 12 34 19.8 -0.3
baz=246,slow=4.4
WLF *e*PP **PP** 12 38 04.3 +0.6
baz=248,slow=5.3
WLF Walferdange 162.66 95 PKIKP **PKPdf** 12 33 30.2 +0.4
WLF 12 34 19.2
WLF Walferdange 162.66 95 **PKPdf** 12 33 30.2 +0.4
WLF **PKPab** 12 34 19.2 +0.8
KEK Kerkira 162.70 143 P **PKPdf** 12 33 29.8 -0.3
IGT Igoumenitsa 162.73 144 P **PKPdf** 12 33 29.7 -0.5
SMG Samos 162.73 162 P **PKPdf** 12 33 30.1 -0.1
LKR Lokris 162.75 152 P **PKPdf** 12 33 29.1 -1.1
AGG Agios Georgios 162.90 150 P **PKPdf** 12 33 29.9 -0.5
SRN Sarande 162.92 143 P **PKPdf** 12 33 31.1 +0.8
MRKA Markates 162.96 153 P **PKPdf** 12 33 30.2 -0.2
JAN Janina 163.01 145 P **PKPdf** 12 33 30.5 0.0
KYMI Kymi, Euboea I 163.02 154 P **PKPdf** 12 33 29.8 -0.7
CHOS Chios island 163.23 160 P **PKPdf** 12 33 29.9 -0.9
BFO Black Forest 163.28 101 *e*PKPdf **PKPdf** 12 33 30.1 -0.3
baz=252,slow=0.5
BFO *e*PKPab **PKPab** 12 34 21.6 +0.4
baz=246,slow=4.4
BFO *e*PP **PP** 12 38 08.3 +1.3
baz=248,slow=5.3
BFO Black Forest 163.28 101 PKIKP **PKPdf** 12 33 30.7 +0.3
BFO Black Forest 163.28 101 **PKPdf** 12 33 30.7 +0.3
TPE Tepelena 163.29 142 P **PKPdf** 12 33 30.2 -0.5
THL Klokotos Trika 163.31 148 P **PKPdf** 12 33 28.7 -2.0
DAVOX Davos/Dischmat 163.31 108 PKP **PKPdf** 12 33 31.3 +0.6
comp=Z,29nm,1.0s,baz=151,slow=2.0
DAVOX PKPab **PKPab** 12 34 21.8 +0.2
comp=Z,15nm,0.8s,baz=267,slow=1.7,SNR=2.8
SKIA Skiathos 163.36 152 P **PKPdf** 12 33 29.5 -1.3
BLCB Balcova 163.42 162 P **PKPdf** 12 33 26.6 -4.2
FUORN Ofenpass-Fuorn 163.43 109 **PKPdf** 12 33 30.7 -0.3
KPRO Kipourio 163.45 146 P **PKPdf** 12 33 30.8 -0.1
XOR Xorichti 163.47 151 P **PKPdf** 12 33 30.2 -0.7
AOS Alonnisos 163.47 153 P **PKPdf** 12 33 30.2 -0.7
AHRW Bad Neuenahr-A 163.57 93 *e*PKPdf **PKPdf** 12 33 30.5 0.0
baz=252,slow=0.5
AHRW *e*PKPab **pPKPab** 12 34 23.8 -0.2
baz=246,slow=4.4
AHRW *e*PP **PP** 12 38 09.6 +1.2
baz=248,slow=5.3
PENT Pentalofos 163.59 145 P **PKPdf** 12 33 33.2 +2.1
DAVA Damuels 163.61 106 *e*PKPdf **PKPdf** 12 33 31.7 +0.7
comp=Z,59nm,1.2s,SNR=20
DAVA *e*PKPab **pPKPab** 12 34 23.9 -0.6
comp=Z,45nm,1.1s
DAVA PP **PP** 12 38 10.2 +1.4
comp=Z,8.9nm,1.1s
MANT Manisa 163.76 166 **PKPdf** 12 33 30.9 -0.6
MANT **pPKPab** 12 34 24.6 -0.7
KULA Kula-Manisa 163.80 167 P **PKPdf** 12 33 31.0 -0.3
KZN Kozani 163.90 146 P **PKPdf** 12 33 30.3 -1.0
FETA Feichten 163.93 108 *e*PKPdf **PKPdf** 12 33 31.4 +0.2
comp=Z,55nm,1.3s,SNR=30
FETA *e*PKPab **PKPab** 12 34 24.3 0.0
comp=Z,41nm,1.2s
FETA *e*PP **PP** 12 38 11.8 +1.3
comp=Z,8.0nm,1.1s
AKT Akhty 163.93 222 *e*PKIKP **PKPdf** 12 33 30.3 -1.1
AKT *e* 12 34 25.0
AKT *e* 12 38 10.2
AKT pmax pmax
comp=Z,34nm,1.5s
LIT Litokhoron 163.94 148 P **PKPdf** 12 33 28.2 -3.1
LIT Litokhoron 163.94 148 PKP2 **PKPab** 12 34 24.3 +0.1
LIT 13 33 31.9
LIT Litokhoron 163.94 148 **PKPdf** 12 33 31.9 +0.6
LIT **PKPab** 12 34 24.3 +0.1
UBR Ueberruh 163.95 105 *e*PKPdf **PKPdf** 12 33 30.8 -0.4
baz=252,slow=0.5
UBR *e*PKPab **pPKPab** 12 34 25.1 -0.9
baz=246,slow=4.4
UBR *e*PP **PP** 12 38 10.6 0.0
baz=248,slow=5.3
SIGR SIGRI 163.99 158 P **PKPdf** 12 33 30.5 -0.8
BUG Bochum--Univer 164.02 90 *e*PKPdf **PKPdf** 12 33 30.6 -0.3
baz=252,slow=0.5
BUG *e*PKPab **pPKPab** 12 34 25.7 -0.3
baz=246,slow=4.4
BUG *e*PP **PP** 12 38 10.4 -0.4
baz=248,slow=5.3
PAIG Paliouri 164.13 152 P **PKPdf** 12 33 31.5 +0.1
TIR Tirane 164.16 140 P **PKPdf** 12 33 31.7 +0.3
TIR Tirane 164.16 140 PKIKP **PKPdf** 12 33 31.7 +0.3
TIR 12 34 25.9
TIR Tirane 164.16 140 **PKPdf** 12 33 31.7 +0.3
TIR **pPKPab** 12 34 25.9 -0.8
FNA Florina 164.20 145 P **PKPdf** 12 33 30.8 -0.8
FNA Florina 164.20 145 PKIKP **PKPdf** 12 33 30.7 -0.8
FNA 12 34 25.7
FNA Florina 164.20 145 **PKPdf** 12 33 30.7 -0.8
FNA **PKPab** 12 34 25.6 +0.3
RETA Reutte 164.21 107 *e*PKPdf **PKPdf** 12 33 31.8 +0.5
comp=Z,54nm,1.5s,SNR=21
RETA *e*PKPab **PKPab** 12 34 26.1 +0.7
comp=Z,44nm,1.5s
RETA *e*PP **PP** 12 38 13.1 +1.2
comp=Z,9.5nm,1.3s
TNS Taunus Mts 164.24 95 *e*PKPdf **PKPdf** 12 33 31.3 0.0
baz=252,slow=0.5
TNS *e*PKPab **pPKPab** 12 34 26.6 -0.5
baz=246,slow=4.4
TNS *e*PP **PP** 12 38 11.4 -0.7
baz=248,slow=5.3
SQTA Sankt Quirin 164.31 108 *e*PKPdf **PKPdf** 12 33 31.3 -0.2
comp=Z,63nm,1.5s,SNR=20
SQTA *e*PKPab **PKPab** 12 34 26.4 +0.6
comp=Z,46nm,1.2s
SQTA *e*PP **PP** 12 38 13.9 +1.5
comp=Z,3.9nm,0.6s
MOTA Moosalm 164.32 108 *e*PKPdf **PKPdf** 12 33 31.4 -0.2
comp=Z,74nm,1.8s,SNR=25
MOTA *e*PKPab **PKPab** 12 34 26.4 +0.5
comp=Z,29nm,1.0s
MOTA *e*PP **PP** 12 38 13.5 +0.9
comp=Z,13nm,1.6s
ARCES ARCESS Array B 164.38 10 PKP **PKPdf** 12 33 28.5 -2.3
comp=Z,7.4nm,0.9s,baz=270,slow=0.9,SNR=11
ARCES PKPab **PKPab** 12 34 23.4 -1.9
comp=Z,16nm,1.1s,baz=354,slow=7.4,SNR=5.7
AKTO Aktyubinsk 164.47 265 PKIKP **PKPdf** 12 33 26.8 -4.6
PLG Polygyros 164.48 151 P **PKPdf** 12 33 29.7 -2.1
WTTA Wattenberg 164.57 109 *e*PKPdf **PKPdf** 12 33 32.2 +0.4
comp=Z,88nm,1.7s,SNR=31
WTTA *e*PKPab **PKPab** 12 34 27.8 +0.7
comp=Z,68nm,1.8s
WTTA *e*PP **PP** 12 38 15.1 +1.2
comp=Z,25nm,1.7s
THE Thessaloniki 164.57 149 P **PKPdf** 12 33 30.5 -1.3
WATA Walderalm 164.58 108 *e*PKPdf **PKPdf** 12 33 31.4 -0.4
comp=Z,61nm,1.6s,SNR=14
WATA *e*PKPab **PKPab** 12 34 27.6 +0.5
comp=Z,52nm,1.3s,SNR=5.2
WATA *e*PP **PP** 12 38 14.7 +0.8
comp=Z,11nm,1.2s
HORT Hortiatis 164.58 149 P **PKPdf** 12 33 30.6 -1.3
OUR Ouranopolis 164.59 152 P **PKPdf** 12 33 30.5 -1.3
IBBN Ibbenburen 164.60 87 *e*PKPdf **PKPdf** 12 33 30.9 -0.5
baz=252,slow=0.5
IBBN *e*PKPab **sPKPab** 12 34 28.8 -0.3
baz=246,slow=4.4
IBBN *e*PP **PP** 12 38 13.6 -0.2
baz=248,slow=5.3
PHP Peshkopia 164.66 141 P **PKPdf** 12 33 31.2 -0.7
EZN Ezine 164.68 159 P **PKPdf** 12 33 31.5 -0.4
ABTA Abfaltersbach 164.75 112 *e*PKPdf **PKPdf** 12 33 31.2 -0.7
comp=Z,29nm,1.2s,SNR=17
ABTA *e*PKPab **pPKPab** 12 34 28.7 -0.8
comp=Z,77nm,1.5s,SNR=7.6
ABTA *e*PP **PP** 12 38 15.6 +0.9
comp=Z,12nm,1.1s
PDG Podgorica 164.84 136 ⇑P **PKPdf** 12 33 32.7 +0.8
PDG Podgorica 164.84 136 **PKPdf** 12 33 32.8 +0.8
FUR Furstenfeldbru 164.88 105 *e*PKPdf **PKPdf** 12 33 31.1 -0.8
baz=252,slow=0.5
FUR *e*PKPab **sPKPab** 12 34 30.4 -0.1
baz=246,slow=4.4
FUR *e*PP **PP** 12 38 16.7 +1.4
baz=248,slow=5.3
GADA Gvkgeada 164.93 158 P **PKPdf** 12 33 31.3 -0.8
KNT Kendrikon 165.04 148 P **PKPdf** 12 33 31.5 -0.7
THAS Thassos island 165.04 154 P **PKPdf** 12 33 30.5 -1.7
SMTH Samothraki Isl 165.12 156 P **PKPdf** 12 33 30.8 -1.5
HLG Helgoland 165.15 80 *e*PKPdf **PKPdf** 12 33 30.8 -1.0
baz=252,slow=0.5
HLG *e*PKPab **sPKPab** 12 34 31.3 -0.1
baz=246,slow=4.4
SRS Serrai 165.21 150 P **PKPdf** 12 33 30.1 -2.3
MAK Makhachkala 165.26 225 *e*PKIKP **PKPdf** 12 33 30.4 -1.9
MAK pmax pmax
comp=Z,162nm,1.1s
MYKA Terra Mystica 165.28 114 *e*PKPdf **PKPdf** 12 33 32.0 -0.4
comp=Z,42nm,1.7s,SNR=10
MYKA *e*PKPab **pPKPab** 12 34 31.1 -0.7
comp=Z,67nm,1.5s,SNR=6.8
MYKA *e*PP **PP** 12 38 19.4 +2.0
comp=Z,25nm,1.6s
BRTR Keskin Array B 165.33 181 PKP **PKPdf** 12 33 32.4 -0.3
comp=Z,3.5nm,1.0s,baz=204,slow=2.7,SNR=10.0
BRTR PKPab **PKPab** 12 34 29.7 -0.7
comp=Z,9.3nm,0.8s,baz=177,slow=7.6,SNR=16
BR131 Keskin Array S 165.33 181 PKIKP **PKPdf** 12 33 32.0 -0.7
BR131 12 34 29.6
BR131 Keskin Array S 165.33 181 PKPdf **PKPdf** 12 33 32.0 -0.7
BR131 **PKPab** 12 34 29.6 -0.8
KAVA Kavala 165.35 153 P **PKPdf** 12 33 30.9 -1.6
AKH Akhalkalaki 165.36 212 ⇑P **PKPdf** 12 33 33.4 +0.7
LJU Ljubljana 165.37 117 *i* PKPdf **PKPdf** 12 33 32.5 +0.1
LJU *i* PKPab **sPKPab** 12 34 32.5 -0.2
BOJS Bojanci 165.38 120 *e*PKPdf **PKPdf** 12 33 32.2 -0.1
BOJS *e*PKPab **pPKPab** 12 34 32.3 +0.2
BOJS *i* PP **PP** 12 38 15.9 -1.8
UBBA Unterbreizbach 165.39 95 *e*PKPdf **PKPdf** 12 33 31.5 -0.5
baz=252,slow=0.5
UBBA *e*PP **PP** 12 38 18.3 +0.5
baz=248,slow=5.3
KBA Koelnbreinsper 165.40 112 *e*PKPdf **PKPdf** 12 33 32.0 -0.5
comp=Z,26nm,1.1s,SNR=12
KBA *e*PKPab **PKPab** 12 34 31.0 +0.3
comp=Z,17nm,1.1s
RJOB Jochberg 165.49 109 *e*PKPdf **PKPdf** 12 33 31.5 -0.9
baz=252,slow=0.5
RJOB *e*PKPab **pPKPab** 12 34 32.6 -0.1
baz=246,slow=4.4
RJOB *e*PP **PP** 12 38 19.1 +0.6
baz=248,slow=5.3
NVR Nevrokopi 165.50 150 P **PKPdf** 12 33 31.2 -1.4
ARU Arti 165.56 288 *i* PKIKP **PKPdf** 12 33 29.7 -2.4
ARU Arti 165.56 288 **PKPdf** 12 33 30.4 -1.7
ARU **PKPab** 12 34 30.3 -0.6
GRF Grafenberg Arr 165.61 100 *e*PKPdf **PKPdf** 12 33 31.9 -0.6
baz=252,slow=0.5
GRF *e*PP **PP** 12 38 20.2 +1.0
baz=248,slow=5.3
GRF *e*L L 13 39 18.0
comp=Z,377nm,22.0s
GTTG Gottingen 165.64 92 *e*PKPdf **PKPdf** 12 33 31.5 -0.8
baz=252,slow=0.5
GTTG *e*PKPab **pPKPab** 12 34 33.2 +0.1
baz=246,slow=4.4
GTTG *e*PP **PP** 12 38 18.6 -0.7
baz=248,slow=5.3
ALN Alexandroupoli 165.64 157 P **PKPdf** 12 33 30.8 -1.9
ALN Alexandroupoli 165.64 157 PKIKP **PKPdf** 12 33 32.3 -0.4
ALN Alexandroupoli 165.64 157 **PKPdf** 12 33 32.3 -0.4
ALN **pPKPab** 12 34 33.3 0.0
RETH Rethem/Aller, 165.66 87 *e*PKPdf **PKPdf** 12 33 31.7 -0.6
baz=252,slow=0.5
RETH *e*PKPab **sPKPab** 12 34 34.5 +0.7
baz=246,slow=4.4
RETH *e*PP **PP** 12 38 20.5 +1.1
baz=248,slow=5.3
MMB Musomiste 165.68 150 *e*P **PKPdf** 12 33 33.1 +0.3
OBKA Obir 165.69 116 *e*PKPdf **PKPdf** 12 33 32.7 +0.1
comp=Z,29nm,1.0s,SNR=14
OBKA PKPab **PKPab** 12 34 32.7 +0.8
comp=Z,46nm,1.4s,SNR=6.0
OBKA *e*PP **PP** 12 38 21.7 +2.2
comp=Z,9.7nm,1.3s
KKB Krupnik 165.74 147 *e*P **PKPdf** 12 33 32.3 -0.5
RDO Rodhopi 165.76 155 P **PKPdf** 12 33 31.2 -1.6
BCA Borcka 165.93 206 ⇑P **PKPdf** 12 33 34.5 +1.5
CLZ Clausthal 165.98 91 *e*PKPdf **PKPdf** 12 33 32.0 -0.7
baz=252,slow=0.5
CLZ *e*PKPab **sPKPab** 12 34 35.1 -0.2
baz=246,slow=4.4
CLZ *e*PP **PP** 12 38 21.0 -0.1
baz=248,slow=5.3
MDUB Mudurnu 166.00 173 PKPdf **PKPdf** 12 33 33.4 +0.3
MDUB **PKPab** 12 34 33.7 +0.4
NRDL Niedersach Rie 166.03 88 *e*PKPdf **PKPdf** 12 33 31.8 -0.8
baz=252,slow=0.5
NRDL *e*PKPab **pPKPab** 12 34 34.8 0.0
baz=246,slow=4.4
NRDL *e*PP **PP** 12 38 22.2 +1.0
baz=248,slow=5.3
SOKA Soboth 166.05 116 *e*PKPdf **PKPdf** 12 33 32.6 -0.4
comp=Z,48nm,1.5s,SNR=22
SOKA *e*PKPab **PKPab** 12 34 34.3 +0.8
comp=Z,50nm,1.4s,SNR=6.7
SOKA PP **PP** 12 38 22.7 +1.3
comp=Z,15nm,1.8s
PERS Pernice 166.07 116 *i* PKPdf **PKPdf** 12 33 32.5 -0.4
PERS *i* PKPab **pPKPab** 12 34 35.0 -0.3
SKMB Sankelmark Bun 166.13 79 *e*PKPdf **PKPdf** 12 33 31.9 -0.7
baz=252,slow=0.5
SKMB *e*PP **PP** 12 38 22.6 +0.8
baz=248,slow=5.3
GROC Groznyy 166.15 221 *e*PKIKP **PKPdf** 12 33 33.6 +0.6
GROC *e* 12 34 33.7
GROC *e* 12 38 24.1
GROC pmax pmax
comp=Z,86nm,1.6s
KDZ Kurdzhali 166.20 154 *e*P **PKPdf** 12 33 33.8 +0.6
ROTZ Rotzenmuhle 166.21 101 *e*PKPdf **PKPdf** 12 33 31.9 -1.0
baz=252,slow=0.5
ROTZ *e*PKPab **pPKPab** 12 34 35.1 -0.7
baz=246,slow=4.4
ROTZ *e*PP **PP** 12 38 23.8 +1.5
baz=248,slow=5.3
ASSE Asse, Remlinge 166.25 90 *e*PKPdf **PKPdf** 12 33 31.9 -0.8
baz=252,slow=0.5
ASSE *e*PKPab **sPKPab** 12 34 36.0 -0.3
baz=246,slow=4.4
ASSE *e*PP **PP** 12 38 23.8 +1.4
baz=248,slow=5.3
MOX Moxa 166.26 97 *e*PKPdf **PKPdf** 12 33 31.9 -1.0
baz=252,slow=0.5
MOX *e*PKPab **sPKPab** 12 34 36.3 -0.2
baz=246,slow=4.4
MOX *e*PP **PP** 12 38 23.1 +0.6
baz=248,slow=5.3
MANZ Manzenberg 166.26 100 *e*PKPdf **PKPdf** 12 33 31.9 -1.1
baz=252,slow=0.5
MANZ *e*PKPab **pPKPab** 12 34 36.0 0.0
baz=246,slow=4.4
MANZ *e*PP **PP** 12 38 23.7 +1.1
baz=248,slow=5.3
ORH Orhaniye 166.28 169 P **PKPdf** 12 33 33.1 -0.1
WET Wettzell 166.29 104 *e*PKPdf **PKPdf** 12 33 32.0 -1.0
baz=252,slow=0.5
WET *e*PKPab **pPKPab** 12 34 35.7 -0.5
baz=246,slow=4.4
WET *e*PP **PP** 12 38 23.8 +1.1
baz=248,slow=5.3
ISK Istanbul-Kandi 166.36 166 P **PKPdf** 12 33 30.3 -3.0
MOA Molln 166.36 111 *e*PKPdf **PKPdf** 12 33 32.3 -0.8
comp=Z,17nm,1.4s
MOA *e*pPKPab **sPKPab** 12 34 36.7 -0.3
comp=Z,35nm,1.7s,SNR=6.4
MOA *e*PP **PP** 12 38 22.4 -0.6
comp=Z,12nm,1.8s
VTS Vitosha 166.46 146 ⇑P **PKPdf** 12 33 33.8 +0.3
VTS Vitosha 166.46 146 *e*P **PKPdf** 12 33 33.6 +0.1
VTS Vitosha 166.46 146 ⇑PKIKP **PKPdf** 12 33 33.8 +0.3
VTS Vitosha 166.46 146 **PKPdf** 12 33 32.8 -0.7
VTS **pPKPab** 12 34 36.5 -0.5
NB2 NORSAR Subarra 166.47 52 PKPdf **PKPdf** 12 33 30.0 -2.8
comp=Z,469nm,5.0s,baz=291
NB2 NORSAR Subarra 166.47 52 PKPdf **PKPdf** 12 33 30.0 -2.8
baz=291
NOA NORSAR Array B 166.47 52 PKP **PKPdf** 12 33 32.0 -0.8
comp=Z,1.7nm,0.8s,baz=312,slow=0.7,SNR=5.0
NOA PKPab **PKPab** 12 34 34.7 -0.2
comp=Z,4.5nm,0.9s,baz=296,slow=4.3,SNR=8.0
ZEI Tsey 166.47 215 *e*PKIKP **PKPdf** 12 33 38.8 +5.2
ZEI pmax pmax
comp=Z,15nm,1.1s
BSEG Bad Segeberg 166.50 83 *e*PKPdf **PKPdf** 12 33 32.0 -0.9
baz=252,slow=0.5
BSEG *e*PKPab **pPKPab** 12 34 36.6 -0.2
baz=246,slow=4.4
PLN Plauen 166.50 98 *e*PKPdf **PKPdf** 12 33 32.0 -1.1
baz=252,slow=0.5
PLN *e*PP **PP** 12 38 24.5 +0.7
baz=248,slow=5.3
WERN Wernitzgruen 166.54 99 *e*PKPdf **PKPdf** 12 33 32.2 -1.0
baz=252,slow=0.5
WERN *e*PKPab **pPKPab** 12 34 36.6 -0.6
baz=246,slow=4.4
GUNZ Gunzen 166.55 99 *e*PKPdf **PKPdf** 12 33 32.2 -1.0
baz=252,slow=0.5
GUNZ *e*PKPab **pPKPab** 12 34 37.3 0.0
baz=246,slow=4.4
NKC Novy Kostel 166.56 99 *e*PKIKP **PKPdf** 12 33 33.0 -0.2
NKC *e* 12 38 21.6
NKC MLR MLR
comp=Z,1μm,26.1s
NKC Novy Kostel 166.56 99 *e*PKPDF **PKPdf** 12 33 33.0 -0.2
NKC *e*PKPAB **sPKPab** 12 34 38.5 +0.6
NKC *e*PP **PP** 12 38 21.6 -2.5
NKC AMS AMS 13 47 30.0
comp=Z,1μm,26.1s
NEUB Neuenburg 166.57 95 *e*PKPdf **PKPdf** 12 33 32.0 -1.1
baz=252,slow=0.5
GEC2 GERESS Array S 166.60 106 *e*PKPdf **PKPdf** 12 33 32.0 -1.3
baz=252,slow=0.5
GEC2 *e*PKPab **pPKPab** 12 34 37.3 -0.3
baz=246,slow=4.4
GEC2 *e*PP **PP** 12 38 25.0 +0.6
baz=248,slow=5.3
GERES GERESS Array B 166.60 106 PKP **PKPdf** 12 33 32.4 -0.9
comp=Z,3.5nm,1.0s,baz=126,slow=1.8,SNR=12
GERES PKPab **PKPab** 12 34 36.4 +0.5
comp=Z,4.1nm,0.9s,baz=220,slow=3.5,SNR=8.4
GERES PP **PP** 12 38 23.7 -0.6
comp=Z,2.3nm,1.1s,baz=212,slow=4.7,SNR=5.3
TANN Tannenbergstha 166.65 99 *e*PKPdf **PKPdf** 12 33 32.2 -1.1
baz=252,slow=0.5
TANN *e*PKPab **pPKPab** 12 34 37.6 -0.2
baz=246,slow=4.4
TANN *e*PP **PP** 12 38 24.7 +0.1
baz=248,slow=5.3

ILGA	**Ilgaz**	**166.65**	**181**			**PKPdf**	**12 33 34.5**	**+0.7**
ILGA						**PKPab**	**12 34 36.4**	**0.0**
ARSA	**Arzberg**	**166.68**	**115**	*e*	PKPdf	**PKPdf**	**12 33 33.1**	**-0.3**
	comp=Z,19nm,1.5s,SNR=7.1							
ARSA				*e*	PKPab	**PKPab**	**12 34 36.9**	**+0.7**
	comp=Z,39nm,1.5s,SNR=6.9							
ARSA					PP	**PP**	**12 38 23.5**	**-1.0**
	comp=Z,14nm,1.6s							
KHC	**Kasperske Hory**	**166.68**	**105**	*e*	PKIKP	**PKPdf**	**12 33 33.1**	**-0.2**
KHC				*e*			12 34 36.0	
KHC				*e*			12 38 22.1	
KHC					MLR	MLR		
	comp=Z,2µm,23.0s							
KHC	**Kasperske Hory**	**166.68**	**105**	*e*	PKPDF	**PKPdf**	**12 33 33.1**	**-0.2**
KHC				*e*	PKPAB	**PKPab**	**12 34 36.0**	**-0.2**
KHC				*e*	PP	**PP**	**12 38 22.1**	**-2.6**
KHC					AMS	AMS	13 56 00.0	
	comp=Z,2µm,23.0s							
PBCC	**Pribram**	**167.20**	**104**	*e*	PKPDF	**PKPdf**	**12 33 33.2**	**-0.4**
CONA	**Conrad Observa**	**167.27**	**113**	*e*	PKPdf	**PKPdf**	**12 33 33.1**	**-0.7**
	comp=Z,16nm,1.5s,SNR=10							
CONA				*e*	pPKPab	**pPKPab**	**12 34 40.5**	**-0.1**
	comp=Z,39nm,1.5s,SNR=8.9							
CONA					PP	**PP**	**12 38 27.2**	**-0.5**
	comp=Z,15nm,1.7s							
CLL	**Collm**	**167.32**	**96**	*i*	PKPdf	**PKPdf**	**12 33 34.3**	**+0.7**
	comp=Z,120nm,2.0s							
CLL				*i*	PKPab	**pPKPab**	**12 34 40.7**	**+0.1**
	comp=Z,61nm,1.5s							
CLL				*e*	PP	**PP**	**12 38 29.0**	**+1.0**
	comp=Z,121nm,2.1s							
CLL				*e*			12 38 40.0	
CLL				*e*	SKSdf	**SKSdf**	**12 40 36.0**	**-1.2**
CLL				*e*	PPP	PPP	12 42 23.0	
CLL				*e*			12 43 19.0	
CLL				*e*	SKKSac	**SKKSac**	**12 45 24.0**	**+10**
CLL				*e*	PSKS		12 48 54.0	
CLL				*e*	PPS	PPS	12 52 06.0	
CLL				*e*			12 54 18.0	
CLL				*e*			12 58 06.0	
CLL				*e*	SS	**SS**	**12 59 13.0**	**-1.2**
CLL				*e*	PSS	PSS	13 00 18.0	
CLL				*e*	PSPS		13 00 48.0	
CLL				*e*	SSS	SSS	13 05 48.0	
CLL				*e*			13 07 06.0	
CLL				*e*	SSSS		13 10 06.0	
CLL				*e*			13 13 54.0	
CLL	**Collm**	**167.32**	**96**	*e*	PKPdf	**PKPdf**	**12 33 33.3**	**-0.3**
	baz=252,slow=0.5							
CLL				*e*	PKPab	**pPKPab**	**12 34 39.8**	**-0.8**
	baz=246,slow=4.4							
CLL				*e*	PP	**PP**	**12 38 29.2**	**+1.2**
	baz=248,slow=5.3							
CLL	**Collm**	**167.32**	**96**	*i*	PKIKP	**PKPdf**	**12 33 34.3**	**+0.7**
CLL					pmax	pmax		
	comp=Z,120nm,2.0s							
CLL					pmax	pmax		
	comp=Z,61nm,1.5s							
FBE	**Freiberg**	**167.38**	**98**	*e*	PKPdf	**PKPdf**	**12 33 32.7**	**-1.0**
	baz=252,slow=0.5							
FBE				*e*	PKPab	**PKPab**	**12 34 39.5**	**+0.3**
	baz=246,slow=4.4							
FBE				*e*	PP	**PP**	**12 38 30.0**	**+1.7**
	baz=248,slow=5.3							
ELND	**Elena**	**167.52**	**154**	⇑	P	**PKPdf**	**12 33 33.7**	**-0.4**
PLVB	**Pleven**	**167.59**	**149**	⇑	P	**PKPdf**	**12 33 36.7**	**+2.6**
KBZ	**Khabaz**	**167.65**	**214**		PKP	**PKPdf**	**12 33 33.5**	**-0.6**
	comp=Z,2.4nm,0.9s,baz=85,slow=1.5,SNR=13							
KBZ					PKPab	**PKPab**	**12 34 40.8**	**+0.4**
	comp=Z,8.8nm,0.9s,baz=166,slow=5.1,SNR=9.0							
PRU	**Pruhonice**	**167.65**	**103**	*e*	PKIKP	**PKPdf**	**12 33 35.4**	**+1.5**
PRU				*e*			12 34 41.0	
PRU					MLR	MLR		
	comp=Z,1µm,19.0s							
PRU	**Pruhonice**	**167.65**	**103**	*e*	PKPDF	**PKPdf**	**12 33 35.4**	**+1.5**
PRU				*e*	PKPAB	**PKPab**	**12 34 41.0**	**+0.6**
PRU				*e*	PP	**PP**	**12 38 22.8**	**-6.8**
PRU					AMS	AMS	13 48 10.0	
	comp=Z,1µm,19.0s							
BRG	**Berggiesshubel**	**167.70**	**99**	*e*	PKP	**PKPdf**	**12 33 33.0**	**-0.9**
	comp=Z,14nm,1.3s							
BRG	**Berggiesshubel**	**167.70**	**99**	*e*	PKP	**PKPab**	**12 34 39.6**	**-1.0**
	comp=Z,152nm,2.6s							
BRG					PP	**PP**	**12 38 24.0**	**-5.9**
BRG					SS	SS	12 59 17.0	-1.0
	comp=N,794nm,17.3s							
	comp=E,343nm,26.7s							
	comp=Z,730nm,21.5s							
BRG	**Berggiesshubel**	**167.70**	**99**	*e*	PKPdf	**PKPdf**	**12 33 32.7**	**-1.3**
	baz=252,slow=0.5							
BRG				*e*	PKPab	**pPKPab**	**12 34 41.7**	**-0.6**
	baz=246,slow=4.4							
BRG				*e*	PP	**PP**	**12 38 31.4**	**+1.5**
	baz=248,slow=5.3							
BRG	**Berggiesshubel**	**167.70**	**99**	*e*	PKIKP	**PKPdf**	**12 33 33.0**	**-0.9**
BRG				*e*			12 34 39.6	
BRG					SS	SS	12 59 17.0	-1.0
BRG					pmax	pmax		
	comp=Z,14nm,1.3s							
BRG					pmax	pmax		
	comp=Z,152nm,2.6s							
BRG					MLR	MLR		
	comp=N,794nm,17.3s							
BRG					MLR	MLR		
	comp=E,343nm,26.7s							
BRG					MLR	MLR		
	comp=Z,730nm,21.5s							
GOPC	**GO Pecny, Ondr**	**167.76**	**104**	*e*	PKIKP	**PKPdf**	**12 33 32.9**	**-1.2**
GOPC				*e*			12 38 28.9	
GOPC					MLR	MLR		
	comp=Z,1µm,24.1s							
GOPC	**GO Pecny, Ondr**	**167.76**	**104**	*e*	PKPDF	**PKPdf**	**12 33 32.9**	**-1.2**
GOPC				*e*	PKPAB	**sPKPab**	**12 34 43.9**	**+0.7**
GOPC				*e*	PP	**PP**	**12 38 28.9**	**-1.3**
GOPC					AMS	AMS	13 55 00.0	
	comp=Z,1µm,24.1s							
MDVR	**Moldovita**	**167.79**	**137**	⇑	P	**PKPdf**	**12 33 34.7**	**+0.4**
PUNG	**Punghina**	**167.82**	**142**	⇑	P	**PKPdf**	**12 33 34.9**	**+0.7**
TREC	**Trest**	**167.84**	**107**	*e*	PKIKP	**PKPdf**	**12 33 32.9**	**-1.2**
TREC				*e*			12 38 26.5	
TREC					MLR	MLR		
	comp=Z,900nm,19.2s							
TREC	**Trest**	**167.84**	**107**	*e*	PKPDF	**PKPdf**	**12 33 32.9**	**-1.2**
TREC				*e*	PP	**PP**	**12 38 26.5**	**-4.1**
TREC					AMS	AMS	13 50 20.0	
	comp=Z,900nm,19.2s							
SZH	**Strazhica**	**167.85**	**153**	*e*	P	**PKPdf**	**12 33 33.9**	**-0.4**
KIV	**Kislovodsk**	**167.92**	**214**	⇑	P	**PKPdf**	**12 33 36.5**	**+2.0**
KIV	**Kislovodsk**	**167.92**	**214**	*i*	P	**PKPdf**	**12 33 34.9**	**+0.4**
	SNR=7.3							
KIV	**Kislovodsk**	**167.92**	**214**	*i*	PKIKP	**PKPdf**	**12 33 32.4**	**-2.1**
KIV				*i*			12 34 40.5	
KIV				*i*			12 38 29.7	
KIV					pmax	pmax		
	comp=Z,18nm,1.1s							
KIV	**Kislovodsk**	**167.92**	**214**			**PKPdf**	**12 33 33.7**	**-0.7**
KIV						**PKPab**	**12 34 41.6**	**-0.2**
BANR	**Banloc**	**168.04**	**134**	⇑	P	**PKPdf**	**12 33 36.1**	**+1.8**
ZST	**Bratislava**	**168.10**	**115**	*e*	PKIKP	**PKPdf**	**12 33 35.2**	**+0.9**
ZST	**Bratislava**	**168.10**	**115**	*e*	PKP	**PKPdf**	**12 33 35.2**	**+0.9**
PRD	**Provadia**	**168.14**	**158**	*e*	P	**PKPdf**	**12 33 34.9**	**+0.4**
HERR	**Herculane**	**168.15**	**139**	⇓	P	**PKPdf**	**12 33 34.5**	**+0.1**
RUE	**Ruedersdorf**	**168.17**	**91**	*e*	P	**PKPdf**	**12 33 34.4**	**+0.2**
RUE	**Ruedersdorf**	**168.17**	**91**	*e*	PKPdf	**PKPdf**	**12 33 32.7**	**-1.5**
	baz=252,slow=0.5							
RUE				*e*	PP	**PP**	**12 38 33.4**	**+1.2**
	baz=248,slow=5.3							
KRUC	**Moravsky**	**168.22**	**110**	*e*	PKP	**PKPdf**	**12 33 33.7**	**-0.7**
KRUC				*e*			12 34 42.9	
KRUC				*e*	PP	**PP**	**12 38 31.0**	**-1.5**
MODS	**Modra-Piesok**	**168.30**	**114**	*e*	PKIKP	**PKPdf**	**12 33 33.7**	**-0.8**
MODS	**Modra-Piesok**	**168.30**	**114**	*e*	PKP	**PKPdf**	**12 33 33.7**	**-0.8**
RGN	**Rugen**	**168.34**	**81**	*e*	P	**PKPdf**	**12 33 34.6**	**+0.3**
RGN	**Rugen**	**168.34**	**81**	*e*	PKPdf	**PKPdf**	**12 33 33.0**	**-1.2**
	baz=252,slow=0.5							
SOC	**Sochi**	**168.41**	**204**	*e*	PKIKP	**PKPdf**	**12 33 31.2**	**-3.5**
SOC				*e*			12 38 29.4	
SOC					pmax	pmax		
	comp=Z,13nm,0.5s							
BZS	**Buzias**	**168.43**	**135**	⇓	P	**PKPdf**	**12 33 34.5**	**-0.1**
BZS	**Buzias**	**168.43**	**135**	⇓	PKIKP	**PKPdf**	**12 33 34.5**	**-0.1**
VRAC	**Vranov**	**168.46**	**109**		PKP	**PKPdf**	**12 33 34.5**	**0.0**
	comp=Z,11nm,1.1s,baz=80,slow=1.9							
VRAC					PKPab	**PKPab**	**12 34 44.3**	**+0.3**
	comp=Z,7.4nm,1.0s,baz=254,slow=6.0,SNR=9.2							
VRAC	**Vranov**	**168.46**	**109**	*e*	PKP	**PKPdf**	**12 33 34.1**	**-0.4**
VRAC				*e*			12 34 44.3	
VRAC				*e*	PP	**PP**	**12 38 33.8**	**+0.1**
VRAC	**Vranov**	**168.46**	**109**	⇑	P	**PKPdf**	**12 33 34.7**	**+0.2**
VRAC	**Vranov**	**168.46**	**109**	⇑	PKIKP	**PKPdf**	**12 33 34.7**	**+0.2**
GZR	**Gura Zlata**	**168.71**	**139**	⇑	P	**PKPdf**	**12 33 35.2**	**+0.3**
GZR	**Gura Zlata**	**168.71**	**139**	⇑	PKIKP	**PKPdf**	**12 33 35.2**	**+0.3**
UPC	**Upice**	**168.73**	**103**	*e*	PKIKP	**PKPdf**	**12 33 30.4**	**-4.3**
UPC				*e*			12 38 34.5	
UPC					MLR	MLR		
	comp=Z,1µm,19.2s							
UPC	**Upice**	**168.73**	**103**	*e*	PKPAB	**PKPab**	**12 34 46.4**	**+1.2**
UPC				*e*	PP	**PP**	**12 38 34.5**	**-0.6**
UPC					AMS	AMS	13 59 10.0	
	comp=Z,1µm,19.2s							
GOF	**Gofitskoye**	**168.76**	**218**	⇑	*e* PKP2	**PKPab**	**12 34 46.7**	**+1.4**
GOF					pmax	pmax		
	comp=Z,52nm,0.9s							
CHVC	**Chvalec**	**168.79**	**103**	*e*	PKPDF	**PKPdf**	**12 33 33.1**	**-1.6**
CHVC				*e*	PKPAB	**PKPab**	**12 34 46.1**	**+0.6**
CHVC				*e*	PP	**PP**	**12 38 35.0**	**-0.5**
CHVC					AMS	AMS	13 59 00.0	
	comp=Z,1µm,21.0s							
JAVC	**Velka Javorina**	**168.80**	**113**	*e*	PKP	**PKPdf**	**12 33 35.5**	**+0.7**
JAVC				*e*			12 34 46.5	
JAVC				*e*	PP	**PP**	**12 38 34.1**	**-1.4**
DPC	**Dobruska-Polom**	**168.83**	**104**	*e*	PKIKP	**PKPdf**	**12 33 33.5**	**-1.3**
DPC				*e*			12 34 46.7	
DPC				*e*			12 38 32.6	
DPC					MLR	MLR		
	comp=Z,1µm,19.7s							
DPC	**Dobruska-Polom**	**168.83**	**104**	*e*	PKPDF	**PKPdf**	**12 33 33.5**	**-1.3**
DPC				*e*	PKPAB	**pPKPab**	**12 34 46.7**	**-0.7**
DPC				*e*	PP	**PP**	**12 38 32.6**	**-3.1**
DPC					AMS	AMS	13 51 50.0	
	comp=Z,1µm,19.7s							
OSTC	**Ostas**	**168.87**	**103**	*e*	PKPDF	**PKPdf**	**12 33 33.6**	**-1.2**
OSTC				*e*	PKPAB	**PKPab**	**12 34 46.4**	**+0.6**
OSTC				*e*	PP	**PP**	**12 38 32.5**	**-3.4**
OSTC					AMS	AMS	13 59 20.0	
	comp=Z,1µm,20.7s							
KSP	**Ksiaz**	**169.04**	**102**	*e*	PP	PP	12 38 37.3	+0.6
VYHS	**Vyhne**	**169.19**	**117**	*e*	PKIKP	**PKPdf**	**12 33 34.4**	**-0.6**
VYHS	**Vyhne**	**169.19**	**117**	*e*	PKP	**PKPdf**	**12 33 34.4**	**-0.6**
VYHS				*e*			12 34 49.1	
MORC	**Moravsky Berou**	**169.23**	**109**	*e*	PKP	**PKPdf**	**12 33 34.7**	**-0.4**
MORC				*e*			12 34 48.0	
MORC				*e*	PP	**PP**	**12 38 34.6**	**-3.1**
MORC	**Moravsky Berou**	**169.23**	**109**	⇓	P	**PKPdf**	**12 33 35.0**	**-0.1**
MORC	**Moravsky Berou**	**169.23**	**109**	⇓	PKIKP	**PKPdf**	**12 33 35.0**	**-0.1**
BSD	**Bornholm Skovb**	**169.31**	**79**	*i*	PKIKP	**PKPdf**	**12 33 32.9**	**-1.9**
BSD					pmax	pmax		
	comp=Z,37nm,1.2s							
BSD	**Bornholm Skovb**	**169.31**	**79**	*i*	P	**PKPdf**	**12 33 32.9**	**-1.9**
	comp=Z,37nm,1.2s							
SECR		**169.52**	**150**	⇑	P	**PKPdf**	**12 33 37.9**	**+2.6**
TIRR	**Tirgusor**	**169.55**	**160**	⇑	P	**PKPdf**	**12 33 33.7**	**-1.7**
TIRR	**Tirgusor**	**169.55**	**160**	⇑	PKIKP	**PKPdf**	**12 33 33.7**	**-1.7**
TIRR	**Tirgusor**	**169.55**	**160**			**PKPdf**	**12 33 35.6**	**+0.3**
TIRR					PKPab	**PKPab**	**12 34 49.1**	**+0.3**
VOIR		**169.57**	**146**	⇑	P	**PKPdf**	**12 33 37.7**	**+2.2**
VOIR		**169.57**	**146**	⇑	PKIKP	**PKPdf**	**12 33 37.7**	**+2.2**
OKC	**Ostrava-Krasne**	**169.60**	**110**	*e*	PKIKP	**PKPdf**	**12 33 28.0**	**-7.2**
OKC				*e*			12 38 37.7	
OKC					MLR	MLR		
	comp=Z,1µm,18.6s							
OKC	**Ostrava-Krasne**	**169.60**	**110**	*e*	PKPAB	**PKPab**	**12 34 52.7**	**+3.7**
OKC				*e*	PP	**PP**	**12 38 37.7**	**-1.8**
OKC					AMS	AMS	13 56 00.0	
	comp=Z,1µm,18.6s							
MLR	**Muntele Rosu**	**169.90**	**149**		PKP	**PKPdf**	**12 33 36.6**	**+0.9**
	comp=Z,36nm,1.1s,baz=292,slow=2.8,SNR=9.8							
MLR					PKPab	**PKPab**	**12 34 49.8**	**-0.7**
	comp=Z,72nm,1.2s,baz=186,slow=4.5,SNR=11							
MLR	**Muntele Rosu**	**169.90**	**149**	⇓	P	**PKPdf**	**12 33 34.9**	**-0.8**
MLR	**Muntele Rosu**	**169.90**	**149**	⇓	PKIKP	**PKPdf**	**12 33 34.9**	**-0.8**
MLR	**Muntele Rosu**	**169.90**	**149**			**PKPdf**	**12 33 34.4**	**-1.3**
MLR					PKPab	**PKPab**	**12 34 49.6**	**-0.9**
TMCR	**Tamitsa**	**169.91**	**348**	*e*	PKIKP	**PKPdf**	**12 33 35.0**	**+0.1**
TMCR					pmax	pmax		
	comp=Z,19nm,0.6s							
ANN	**Anapa**	**170.04**	**197**	*e*	PKIKP	**PKPdf**	**12 33 34.3**	**-1.3**
ANN				*e*			12 38 39.4	
ANN					pmax	pmax		
	comp=Z,60nm,1.1s							
CFR	**Carcaliu**	**170.18**	**158**	⇑	P	**PKPdf**	**12 33 35.5**	**-0.2**
CFR	**Carcaliu**	**170.18**	**158**	⇑	PKIKP	**PKPdf**	**12 33 35.5**	**-0.2**
PLOR	**Plostina**	**170.43**	**151**	⇑	P	**PKPdf**	**12 33 34.8**	**-1.1**
PLOR	**Plostina**	**170.43**	**151**	⇑	PKIKP	**PKPdf**	**12 33 34.8**	**-1.1**
VRI	**Vrincioaia**	**170.47**	**151**	⇑	P	**PKPdf**	**12 33 35.3**	**-0.6**
VRI	**Vrincioaia**	**170.47**	**151**	⇑	PKIKP	**PKPdf**	**12 33 35.3**	**-0.6**
NIE	**Niedzica**	**170.52**	**116**	*e*	PKP	**PKPdf**	**12 33 35.8**	**0.0**
NIE				*e*	PP	**PP**	**12 38 46.6**	**+2.5**
SIM	**Simferopol'**	**170.54**	**183**	*i*	PKIKP	**PKPdf**	**12 33 34.3**	**-1.6**
SIM				*e*			12 34 52.5	
SIM				*e*			12 38 39.0	
SIM					pmax	pmax		
	comp=Z,210nm,10.5s							
OJC	**Ojcow**	**170.71**	**111**	*e*	PKP	**PKPdf**	**12 33 36.1**	**+0.3**
OJC				*e*	PP	**PP**	**12 38 45.1**	**+0.1**
ARCR	**ARCALIA**	**170.73**	**138**	⇑	P	**PKPdf**	**12 33 35.9**	**-0.1**
TRPA	**Tarpa**	**170.77**	**128**	⇓	P	**PKPdf**	**12 33 35.0**	**-0.9**
UZH	**Uzhgorod**	**171.01**	**125**	⇓	*i* PKIKP	**PKPdf**	**12 33 34.7**	**-1.3**
UZH					*i*		12 34 55.8	
UZH					*e*		12 38 42.0	
UZH					ePPP	PPP	12 43 01.0	
TESR	**Tescani**	**171.03**	**149**	⇑	P	**PKPdf**	**12 33 34.4**	**-1.7**
KOLS	**Kolonicke sedl**	**171.21**	**124**	*e*	PKP2	**PKPab**	**12 34 56.7**	**+0.5**
KOLS	**Kolonicke sedl**	**171.21**	**124**	*e*	PKP	**PKPab**	**12 34 56.7**	**+0.5**
BIZ	**Bicaz**	**171.24**	**145**	⇓	P	**PKPdf**	**12 33 36.0**	**-0.2**
BURAR	**Bucovina Array**	**171.50**	**140**	⇓	P	**PKPdf**	**12 33 36.1**	**-0.4**
BURAR	**Bucovina Array**	**171.50**	**140**	⇓	PKIKP	**PKPdf**	**12 33 36.1**	**-0.4**
BUR08	**Bucovina Ar. S**	**171.51**	**139**			**PKPdf**	**12 33 35.9**	**-0.6**
BUR08						**PKPab**	**12 34 58.2**	**+0.6**
FIA1	**FINESS Array S**	**171.94**	**26**			**PKPdf**	**12 33 34.4**	**-1.6**
FINES	**FINESS Array B**	**171.94**	**26**		PKP	**PKPdf**	**12 33 35.1**	**-0.9**
	comp=Z,5.6nm,1.0s,baz=0.0,slow=2.1,SNR=9.8							
FINES					PKPab	**PKPab**	**12 34 57.8**	**-1.2**
	comp=Z,4.5nm,0.8s,baz=5.7,slow=3.8,SNR=5.9							
KIS	**Kishinev**	**172.06**	**157**	*e*	PKP	**PKPdf**	**12 33 38.0**	**+1.4**
KIS	**Kishinev**	**172.06**	**157**	*e*	PP	PP	12 38 52.0	+1.0
KIS				*e*	SKKS		12 45 00.0	
KIS	**Kishinev**	**172.06**	**157**	*e*	PKIKP	**PKPdf**	**12 33 38.0**	**+1.4**
KIS				*e*			12 38 52.0	
LVV	**L'vov**	**172.66**	**125**	*e*	PKIKP	**PKPdf**	**12 33 37.0**	**+0.2**
KLMR	**Klimovskoe**	**172.73**	**335**	*e*	PKP2	**PKPab**	**12 35 00.9**	**-1.5**
KLMR				*e*			12 38 50.8	
KLMR	**Klimovskoe**	**172.73**	**335**	*e*	PKPdf	**PKPdf**	**12 33 33.9**	**-2.5**
KLMR					AMP		12 33 36.3	
	comp=Z,71nm,1.4s							
KLMR				*e*	PKPab	**PKPab**	**12 35 01.0**	**-1.5**
KLMR				*e*	PP	**PP**	**12 38 50.8**	**-3.5**
KLMR					LQ	LQ	13 40 46.8	
KLMR					LQ	LQ	13 40 46.8	
SORM	**Soroca**	**172.99**	**151**	⇑	P	**PKPdf**	**12 33 35.8**	**-1.1**
SORM	**Soroca**	**172.99**	**151**	⇑	PKIKP	**PKPdf**	**12 33 35.8**	**-1.1**
SLIT	**Slitere, Latvi**	**173.00**	**58**	*e*	P	**PKPdf**	**12 33 35.1**	**-1.5**
PBUR	**Paburge**	**173.26**	**71**	*e*	P	**PKPdf**	**12 33 35.7**	**-1.1**
VRH	**Novokhopyorsk**	**174.01**	**241**	*e*	PKIKP	**PKPdf**	**12 33 34.3**	**-2.9**
VRH				*e*			12 35 07.3	
VRH					pmax	pmax		
	comp=Z,40nm,1.6s							
VRH					pmax	pmax		
	comp=Z,40nm,0.8s							
PABE	**Paberze**	**174.47**	**75**	*e*	P	**PKPdf**	**12 33 35.9**	**-1.3**
VSU	**Vasula**	**174.51**	**39**	*e*	P	**PKPdf**	**12 33 34.6**	**-2.6**
VORD	**Divnogorie**	**175.02**	**229**	*e*	PKIKP	**PKPdf**	**12 33 36.3**	**-1.2**
VORD				*e*			12 35 11.6	
VORD					pmax	pmax		
	comp=Z,50nm,1.6s							
VSR	**Storozhevoye**	**175.25**	**230**	*e*	PKIKP	**PKPdf**	**12 33 34.9**	**-2.7**
VSR				*e*			12 35 10.9	
VSR					pmax	pmax		
	comp=Z,10.0nm,1.2s							
VSR					pmax	pmax		
	comp=Z,10.0nm,0.9s							
AKASG	**Malin Array Be**	**175.53**	**144**		PKP	**PKPdf**	**12 33 36.9**	**-0.8**
	comp=Z,25nm,1.1s,baz=303,slow=0.6,SNR=22							
AKASG					PKPab	**PKPab**	**12 35 14.5**	**-0.6**
	comp=Z,18nm,1.0s,baz=222,slow=3.8,SNR=12							
AKBB	**Malin Array Si**	**175.53**	**144**		PKIKP	**PKPdf**	**12 33 36.0**	**-1.7**
AKBB							12 35 14.6	
AKBB	**Malin Array Si**	**175.53**	**144**			**PKPdf**	**12 33 36.0**	**-1.7**
AKBB						**PKPab**	**12 35 14.6**	**-0.6**
ISAL	**Salakas**	**175.67**	**71**	*e*	P	**PKPdf**	**12 33 37.8**	**+0.3**
IZAR	**Zarasai**	**175.69**	**69**	*e*	P	**PKPdf**	**12 33 37.6**	**0.0**
IIGN	**Ignalina**	**175.77**	**74**	*e*	P	**PKPdf**	**12 33 37.7**	**+0.1**
LPSR	**Galich'ya Gora**	**176.22**	**244**	*e*	PKIKP	**PKPdf**	**12 33 36.1**	**-1.7**
LPSR				*e*			12 35 16.6	
LPSR					pmax	pmax		
	comp=Z,10.0nm,0.9s							
LPSR					pmax	pmax		
	comp=Z,40nm,1.1s							
MICGM	**Minsk**	**176.80**	**86**	⇑	*e* PKP1	**PKPdf**	**12 33 38.0**	**+0.1**
MICGM					PKP1M		12 33 39.0	
	comp=Z,0.2nm,1.0s							
MICGM				*e*	PKP2	**sPKPab**	**12 35 23.0**	**-0.2**
MICGM				*e*	PKS	PKSdf	12 37 18.0	+8.3
MICGM				*e*	PP	**PP**	**12 39 17.0**	**+2.2**
MICGM				*e*	SKS	SKSdf	12 40 20.0	-20
MICGM				*e*	PPP	PPP	12 42 32.0	
MICGM				*e*	SKKS	SKKSac	12 45 20.0	-40
MICGM				*e*	SKSP		12 47 44.0	
MICGM				*e*	SSS	SSS	13 07 04.0	
MICGM				*e*	LR	LR	13 43 14.0	
MICGM					LRM	MLR	13 59 12.0	
	comp=Z,2.6nm,12.0s							
MNK	**Minsk**	**176.80**	**86**	⇑	*e* PKIKP	**PKPdf**	**12 33 38.0**	**+0.1**
MNK				*e*			12 39 17.0	
MNK					pmax	pmax		
	comp=Z,220nm,1.0s							
MOS	**Moscow**	**177.20**	**301**	*e*	PKIKP	**PKPdf**	**12 33 33.5**	**-4.4**
MOS				*e*			12 39 10.5	
MOS					pmax	pmax		
	comp=Z,155nm,2.2s							
MOS					pmax	pmax		
	comp=Z,1µm,4.8s							
OBN	**Obninsk**	**178.00**	**293**	*d*	PKIKP	**PKPdf**	**12 33 37.3**	**-0.7**
OBN					pmax	pmax		
	comp=Z,39nm,1.3s							

GCG ***17*** *12:21:59.1±1.0, 12°.62N×89°.76W, h68km±182km, MD4.2*
SNET ***17*** *12:22:10.3±0.6, 13°.33N×90°.18W, h31km±3km, ML4.1*
INET ***17*** *12:22:10.6, 13°.33N×90°.15W, h16km, ML4.3*
UCR ***17*** *12:22:10.4±0.7, 13°.33N×90°.18W, h32km±4km, ML4.1*

ISC 17 12:22:07.4±3.0, 13°.1N±0°.1×90°.18W±0°.08, h1km±14km, n47, σ1§06/45, 28C-4D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEVE	**Cerro Verde**	**0.91**	**36**	⇑ *iP*	**Pg**	**12 22 25.1**	**+0.3**
CEVE	**Cerro Verde**	**0.91**	**36**	⇑ *iP*	**Pg**	**12 22 25.1**	**+0.3**
SBLS	**San Blas**	**0.92**	**36**	⇑ *iP*	**Pg**	**12 22 25.2**	**+0.1**
SBLS	**San Blas**	**0.92**	**36**	⇑ *iP*	**Pg**	**12 22 25.2**	**+0.1**
LALI	**Alcalda de L**	**0.92**	**64**	⇑ *eP*	**Pg**	**12 22 25.9**	**+0.7**
LALI				*eS*	**Sg**	**12 22 38.2**	**+1.2**
LALI	**Alcalda de L**	**0.92**	**64**	⇑ *eP*	**Pg**	**12 22 25.9**	**+0.7**
LALI				*eS*	**Sg**	**12 22 38.2**	**+1.2**
SNJE	**San Jose**	**0.95**	**35**	⇑ *iP*	**Pg**	**12 22 25.6**	**-0.1**
SNJE	**San Jose**	**0.95**	**35**	⇑ *iP*	**Pg**	**12 22 25.6**	**-0.1**
BOQS	**Boqueron**	**1.08**	**53**	⇑ *eP*	**Pg**	**12 22 28.1**	**-0.1**
BOQS	**Boqueron**	**1.08**	**53**	⇑ *eP*	**Pg**	**12 22 28.1**	**-0.1**
SNET	**Serv Nac Est T**	**1.09**	**57**	⇑ *eP*	**Pg**	**12 22 28.1**	**-0.3**
SNET				*eS*	**Sg**	**12 22 42.0**	**-0.6**
SNET				IAML		12 22 46.1	

TCOL	**CIGO, UAF Yank**	**3.46**	**222**	P	**Pn**	**12 34 29.3**	**-0.1**
	baz=38						
TCOL	**CIGO, UAF Yank**	**3.46**	**222**		**Pn**	**12 34 29.2**	**-0.1**
MDM	**Murphy Dome**	**3.49**	**225**		**Pn**	**12 34 29.5**	**-0.3**
PS08	**TAPS Pump Stn8**	**3.50**	**213**		**Pn**	**12 34 29.5**	**-0.4**
SCRK	**Sand Creek**	**3.63**	**191**	Pn	**Pn**	**12 34 32.3**	**+0.5**
CCB	**Clear Creek Bu**	**3.63**	**220**	Pn	**Pn**	**12 34 31.2**	**-0.5**
HDA	**Harding Lake**	**3.64**	**213**	P	**Pn**	**12 34 31.6**	**-0.3**
	baz=29						
HDA				S	**Sb**	**12 35 25.8**	**+1.7**
	baz=29						
HDA				S	**Sb**	**12 35 25.8**	**+1.7**
	baz=29						
HDA	**Harding Lake**	**3.64**	**213**	Pn	**Pn**	**12 34 31.6**	**-0.3**
DAWY	**Dawson**	**3.70**	**159**	Pn	**Pn**	**12 34 33.2**	**+0.5**
WRH	**Wood River Hil**	**3.85**	**220**	Pn	**Pn**	**12 34 34.1**	**-0.6**
RIDG	**Independent Ri**	**3.94**	**196**	Pn	**Pn**	**12 34 35.7**	**-0.3**
DOT	**Dot Lake**	**3.96**	**191**	Pn	**Pn**	**12 34 36.9**	**+0.6**
NEA	**Nenana**	**4.02**	**225**		**Pn**	**12 34 35.9**	**-1.1**
MLY	**Manley**	**4.19**	**237**	Pn	**Pn**	**12 34 38.5**	**-1.0**
BC03		**4.49**	**176**		**Pn**	**12 34 44.3**	**+0.8**
MENT	**Mentasta**	**4.65**	**187**	Pn	**Pn**	**12 34 46.2**	**+0.5**
MCK	**McKinley**	**4.67**	**218**	Pn	**Pn**	**12 34 45.8**	**-0.2**
IM03		**4.75**	**256**		**Pn**	**12 34 46.2**	**-0.7**
PAX	**Paxson**	**4.76**	**197**	Pn	**Pn**	**12 34 47.8**	**+0.5**
BPAW	**Bear Paw Mtn.**	**4.92**	**230**	Pn	**Pn**	**12 34 48.5**	**-1.0**
RND	**Reindeer**	**4.93**	**216**	Pn	**Pn**	**12 34 49.7**	**+0.1**
DHY	**Denali Highway**	**4.93**	**207**	Pn	**Pn**	**12 34 50.5**	**+0.8**
TRF	**Thorofare Moun**	**5.24**	**222**	Pn	**Pn**	**12 34 53.9**	**-0.2**
KTH	**Kantishna Hill**	**5.33**	**225**	Pn	**Pn**	**12 34 54.4**	**-0.7**
SCM	**Sheep Creek Mo**	**6.09**	**202**	Pn	**Pn**	**12 35 06.8**	**+1.2**
GLB	**Gilahina Butte**	**6.14**	**186**	Pn	**Pn**	**12 35 08.3**	**+2.0**
PPLA	**Purkeypile**	**6.20**	**226**	Pn	**Pn**	**12 35 06.4**	**-0.7**
CTGM	**Chitina Glacie**	**6.61**	**175**	Pn	**Pn**	**12 35 13.9**	**+1.1**
PMR	**Palmer**	**6.62**	**209**	Pn	**Pn**	**12 35 13.9**	**+1.2**
C36M	**Paulatuk**	**7.00**	**67**	P	**Pn**	**12 35 17.1**	**-0.7**
	baz=263						
HYT	**Haines Junctio**	**7.07**	**160**	Pn	**Pn**	**12 35 20.9**	**+1.8**
YAH	**Yahtse**	**7.21**	**177**	Pn	**Pn**	**12 35 22.3**	**+1.3**
TTA	**Tatalina**	**7.33**	**237**	Pn	**Pn**	**12 35 20.8**	**-1.7**
A36M	**Sachs Harbour**	**7.43**	**45**	P	**Pn**	**12 35 24.3**	**+0.5**
	baz=241						
RDOG	**Red Dog Mine**	**7.77**	**283**	Pn	**Pn**	**12 35 28.6**	**+0.1**
SVW2	**Sparrevohn**	**8.60**	**228**	Pn	**Pn**	**12 35 39.5**	**-0.4**

THR ***17*** *12:53:28.6±0.3,29°.26N×59°.61E,h14km±8km,ML3.8*
TEH ***17*** *12:53:30.5,29°.27N×59°.77E,h14km,ML3.9*

ISC 17 12:53:31.2±1.2,29°.28N±0°.06×59°.78E±0°.06,h10km,n18,
σ1§06/19,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZHSF	**Zahedan**	**0.93**	**69**	*eP*	**Pg**	**12 53 48.7**	**-0.4**
ZHSF	**Zahedan**	**0.93**	**69**	*e*Pn	**Pg**	**12 53 48.7**	**-0.4**
SZD1	**Zahaedan-tmp**	**0.97**	**78**	*e*Pg	**Pg**	**12 53 49.6**	**-0.3**
SZD1				*e*Sg	**Sb**	**12 54 02.9**	**-0.2**
CHMN	**Cheshme madani**	**2.03**	**287**	*e*Pn	**Pn**	**12 54 05.6**	**-0.2**
NHDN	**Nehbandan**	**2.12**	**6**	*e*		12 54 45.6	
NHDN				*e*Pn	**Pn**	**12 54 07.8**	**+1.0**
KHNJ	**Kahnooj**	**2.25**	**234**	*e*Pn	**Pn**	**12 54 08.7**	**+0.1**
NGRK	**Negar Kerman**	**2.68**	**278**	*e*Pn	**Pn**	**12 54 15.6**	**+0.9**
NGRK				*e*		12 54 56.8	
KRBR	**Kerman**	**2.72**	**286**	*e*Pn	**Pn**	**12 54 12.2**	**-3.0**
KRBR				IAML		12 54 51.3	
	comp=N,329nm,0.4s						
TVBK	**TV Kerman**	**2.72**	**286**	*e*Pn	**Pn**	**12 54 16.0**	**+0.8**
BSRN	**Basiran**	**2.73**	**348**	*e*Pn	**Pn**	**12 54 14.1**	**-1.1**
BSRN				*e*Sg	**Sb**	**12 54 53.9**	**+0.1**
BSRN				IAML		12 55 00.3	
	comp=E,209nm,0.3s						
BSRN	**Basiran**	**2.73**	**348**	*e*Pn	**Pn**	**12 54 14.1**	**-1.1**
IKOO	**Kooshah**	**3.20**	**348**	*e*Pn	**Pn**	**12 54 22.3**	**+0.5**
IKOO				*e*		12 55 22.4	
GENO	**Geno**	**3.69**	**240**	*e*Pn	**Pn**	**12 54 29.3**	**+0.9**
GENO				*e*		12 55 33.3	
ITEG	**Tejag**	**3.71**	**346**	*e*Pn	**Pn**	**12 54 29.6**	**+0.9**
IMON	**Monand**	**3.90**	**359**	*e*Pn	**Pn**	**12 54 31.6**	**+0.2**
TPRV	**Parvadeh(Tabas**	**4.58**	**325**	*e*Pn	**Pn**	**12 54 41.5**	**+0.9**
TKDS	**Koohdasht(Taba**	**4.88**	**333**	*e*Pn	**Pn**	**12 54 45.8**	**+1.1**
TABS	**Tabas**	**4.91**	**333**	IAML		12 56 18.2	
	comp=N,58nm,0.6s						

UCR 17 12:54:13.1±1.4,10°.12N×84°.63W,h58km±3km,MD3.6,
Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRA1	**San Ramn**	**0.15**	**104**	*e*P	Pn	12 54 21.9	-0.3
CASO	**Castillo**	**0.33**	**341**	*i* P	Pn	12 54 23.4	+0.1
FORC	**Fortuna**	**0.35**	**353**	*i* P	Pn	12 54 23.5	0.0
ARE1	**Arenal 1**	**0.35**	**345**	*e*P	Pn	12 54 23.7	+0.2
JTS	**Las Juntas de**	**0.36**	**298**	*e*P	Pn	12 54 23.3	-0.3
JTS				*e*S	Sn	12 54 32.3	+1.1
CEDE	**Laguna Cedeo**	**0.37**	**348**	*e*P	Pn	12 54 23.9	+0.1
CEDE				*i* S	Sn	12 54 32.7	+1.3
HDC	**Heredia**	**0.52**	**103**	*e*P	Pn	12 54 24.8	-0.4
HDC				*e*S	Sn	12 54 34.8	+0.8
SJS	**Escuela Geolog**	**0.59**	**108**	*e*P	Pn	12 54 25.8	-0.3
SJS				*e*S	Sn	12 54 36.5	+1.0
ACAL	**Aguas Claras**	**0.65**	**322**	*i* P	Pn	12 54 26.8	0.0
ACAL				*i* S	Sn	12 54 37.6	+1.0
PTEN	**Parque Tenorio**	**0.69**	**329**	*i* P	Pn	12 54 27.2	0.0
PTEN				*i* S	Sn	12 54 38.8	+1.3
LCR2	**La Lucha 2**	**0.72**	**122**	*e*P	Pn	12 54 27.1	-0.6
LCR2				*e*S	Sn	12 54 38.4	+0.1
PLVR	**Palo Verde**	**0.75**	**288**	*e*P	Pn	12 54 28.0	-0.1
CUI	**Cuipilapa**	**0.75**	**315**	*i* P	Pn	12 54 28.0	0.0
CUI				*i* S	Sn	12 54 39.4	+0.5
HORNC	**Hornillas**	**0.80**	**317**	*i* P	Pn	12 54 28.4	-0.2
CVTR	**Volcan Turrial**	**0.86**	**97**	*e*P	Pn	12 54 29.3	-0.3
GUAI	**GUAI**	**0.88**	**280**	*i* P	Pn	12 54 29.9	+0.4
GPS2	**Hotel Rincn d**	**0.95**	**311**	*i* P	Pn	12 54 30.6	+0.1
GPS2				*i* S	Sn	12 54 43.9	+0.5
BUEV	**Buena Vista**	**1.02**	**311**	*e*P	Pn	12 54 31.3	-0.1
GB1A	**Borinquen Arri**	**1.03**	**312**	*e*P	Pn	12 54 31.5	-0.1
EDDO	**Dominical**	**1.14**	**139**	*e*P	Pn	12 54 33.4	+0.4
EDDO				*e*S	Sn	12 54 49.0	+1.3
EDLM	**Las Mercedes**	**1.32**	**129**	*e*P	Pn	12 54 36.4	+0.9
EDLM				*e*S	Sn	12 54 53.5	+1.4
DRK0	**Durika**	**1.61**	**122**	*e*P	Pn	12 54 39.5	+0.1
DRK0				*e*S	Sn	12 55 00.4	+1.2
EDPN	**Palmar Norte**	**1.63**	**135**	*e*P	Pn	12 54 41.7	+2.2
EDPN				*e*S	Sn	12 55 01.2	+1.8
EDBA	**Buenos Aires**	**1.64**	**125**	*e*P	Pn	12 54 35.6	-4.0
EDBA				*e*S	Sn	12 55 00.2	+0.5
ACON	**Acoyapa**	**1.91**	**344**	*e*P	Pn	12 54 43.2	-0.2
ESPN	**Las Esperanzas**	**2.09**	**9**	*e*P	Pn	12 54 45.5	-0.2
BRU2	**Volcan**	**2.32**	**124**	*e*P	Pn	12 54 49.6	+0.5
BRU2				*e*S	Sn	12 55 17.9	+1.4

IDC ***17*** *12:59:29.9±2.7,38°.94S×177°.14E,h56km±13km,mb3.4/3,*
mb1 3.6/4,mb1mx3.3/28,mbtmp3.6/4,Error ellipse:
s-maj=63.8km s-min=17.6km az=121.0
WEL ***17*** *12:59:33.9,38°.5±1°.1×17°.7E±°,h59km±2km,M3.7/20,*
ML4.1/20,MLv3.7/20,Error ellipse: s-maj=0.0km
s-min=0.0km az=15.8
NEIC ***17*** *12:59:33.1±3.0,38°.61S±0°.06×176°.81E±0°.06,h80km±7km,*
Error ellipse: s-maj=9.2km s-min=5.7km az=216.0

ISC 17 12:59:33.6±0.8,38°.54S±0°.03×176°.79E±0°.03,h67km±5km,
n161,σ1§32/169,mb3.9/7,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MUGZ	**Murupara**	**0.07**	**349**	P	**Pn**	**12 59 42.9**	**-0.6**
MUGZ				S	**Sn**	**12 59 49.6**	**-1.0**
RTZ	**Ruatahuna**	**0.17**	**115**	P	**Pn**	**12 59 43.6**	**-0.2**
RTZ				S	**Sn**	**12 59 51.1**	**-0.3**
RRRZ	**Republican Roa**	**0.30**	**314**	P	**Pn**	**12 59 44.0**	**-0.5**
MTHZ	**Maungataniwha**	**0.31**	**172**	P	**Pn**	**12 59 44.9**	**+0.3**
PRRZ	**Plateau Road**	**0.31**	**278**	P	**Pn**	**12 59 44.2**	**-0.3**
PRRZ				S	**Sn**	**12 59 52.0**	**-0.5**
ALRZ	**Allen Road**	**0.35**	**267**	P	**Pn**	**12 59 44.7**	**-0.1**
TARZ	**Mount Tarawera**	**0.38**	**324**	P	**Pn**	**12 59 44.8**	**-0.3**
URZ	**Urewera**	**0.38**	**42**	P	**Pn**	**12 59 44.2**	**-0.8**
	670nm,0.3s,baz=244,slow=6.8,SNR=5468						
URZ				S	**Sn**	**12 59 51.9**	**-1.5**
	2µm,0.3s,baz=126,slow=21,SNR=42						
URZ	**Urewera**	**0.38**	**42**	P	**Pn**	**12 59 44.2**	**-0.8**
URZ				S	**Sn**	**12 59 52.1**	**-1.3**
MRHZ	**Matea Rd**	**0.41**	**225**	P	**Pn**	**12 59 45.4**	**0.0**
MRHZ				S	**Sn**	**12 59 54.6**	**+0.6**
HRRZ	**Handcock Road**	**0.42**	**291**	P	**Pn**	**12 59 45.1**	**-0.3**
EDRZ	**Edgecumbe**	**0.44**	**355**	P	**Pn**	**12 59 44.7**	**-1.0**
RAHZ	**Arahi**	**0.44**	**148**	P	**Pn**	**12 59 46.4**	**+0.8**
HLRZ	**Highlands Stat**	**0.45**	**310**	P	**Pn**	**12 59 45.9**	**+0.2**
MKRZ	**Makatiti**	**0.48**	**328**	P	**Pn**	**12 59 46.3**	**+0.3**
HSRZ	**Hossack Road**	**0.48**	**299**	P	**Pn**	**12 59 45.9**	**-0.1**
WPRZ	**Whakapapataran**	**0.49**	**273**	P	**Pn**	**12 59 46.2**	**+0.1**
SNGZ	**Shannon Statio**	**0.49**	**119**	P	**Pn**	**12 59 46.8**	**+0.7**
RAGZ	**Rawiri**	**0.50**	**85**	P	**Pn**	**12 59 46.0**	**-0.2**
OMRZ	**Omania**	**0.55**	**323**	P	**Pn**	**12 59 46.0**	**-0.6**
NMHZ	**Naumai**	**0.55**	**178**	P	**Pn**	**12 59 48.0**	**+1.2**
MARZ	**Manawahe**	**0.56**	**351**	P	**Pn**	**12 59 45.9**	**-1.0**
GRRZ	**Galatos Road**	**0.57**	**290**	P	**Pn**	**12 59 47.4**	**+0.6**
UTU	**Utuhina**	**0.59**	**308**	P	**Pn**	**12 59 47.5**	**+0.4**
MWZ	**Matawai**	**0.62**	**70**	P	**Pn**	**12 59 47.0**	**-0.4**
LIRZ	**Lichensteins R**	**0.63**	**330**	P	**Pn**	**12 59 47.0**	**-0.5**
WHHZ	**Waihua**	**0.64**	**147**	P	**Pn**	**12 59 48.9**	**+1.3**
HATZ	**Hinemaiaia**	**0.64**	**237**	P	**Pn**	**12 59 47.9**	**+0.2**
NGRZ	**Ngongotaha**	**0.65**	**313**	P	**Pn**	**12 59 48.0**	**+0.3**
BKZ	**Black Stump Fm**	**0.66**	**200**	P	**Pn**	**12 59 48.4**	**+0.5**
BKZ	**Black Stump Fm**	**0.66**	**200**		**Pn**	**12 59 48.4**	**+0.5**
BKZ					Sn	**12 59 59.2**	**+0.8**
WHTZ	**Whakaora**	**0.66**	**259**	P	**Pn**	**12 59 48.6**	**+0.7**
KARZ	**Kaharoa**	**0.68**	**321**	P	**Pn**	**12 59 47.3**	**-0.7**
WHRZ	**Whale Island**	**0.70**	**12**	P	**Pn**	**12 59 47.5**	**-0.9**
ARHZ	**Aropaoanui**	**0.74**	**167**	P	**Pn**	**12 59 50.4**	**+1.7**
KUTZ	**Kaahu Road**	**0.76**	**274**	P	**Pn**	**12 59 49.1**	**+0.1**
RIGZ	**Rimuhau**	**0.78**	**102**	P	**Pn**	**12 59 49.8**	**+0.5**
WAIZ	**Wairara**	**0.84**	**259**	P	**Pn**	**12 59 49.2**	**+0.2**
KNZ	**Kokohiu**	**0.84**	**125**	P	**Pn**	**12 59 50.2**	**+0.3**
RITZ	**Rihia Road**	**0.84**	**239**	P	**Pn**	**12 59 50.8**	**+0.8**
RATZ	**Rangitukua**	**0.86**	**248**	P	**Pn**	**12 59 50.6**	**+0.4**
MCHZ	**McNeill Hill**	**0.90**	**184**	P	**Pn**	**12 59 52.4**	**+1.7**
RUGZ	**Raukumara Rang**	**0.91**	**51**	P	**Pn**	**12 59 49.9**	**-1.0**
TGRZ	**Tauranga**	**0.91**	**333**	P	**Pn**	**12 59 49.9**	**-0.9**
KWHZ	**Kaweka Forest**	**0.92**	**198**	P	**Pn**	**12 59 52.3**	**+1.2**
PRGZ	**Paritu Road**	**0.94**	**114**	P	**Pn**	**12 59 51.4**	**+0.2**
KATZ	**Kakaramea**	**0.96**	**243**	P	**Pn**	**12 59 51.9**	**+0.4**
KMRZ	**Kaimai**	**0.96**	**316**	P	**Pn**	**12 59 50.9**	**-0.6**
TLZ	**Tolley Road**	**1.00**	**282**	P	**Pn**	**12 59 51.9**	**-0.1**
TWGZ	**Tauwhareparae**	**1.01**	**69**	P	**Pn**	**12 59 52.7**	**+0.6**
KRVZ	**Karewarewa**	**1.05**	**238**	P	**Pn**	**12 59 53.4**	**+0.7**
MHGZ	**Mahia Peninsul**	**1.06**	**125**	P	**Pn**	**12 59 53.2**	**+0.5**
WIZ	**White Island**	**1.06**	**18**	P	**Pn**	**12 59 51.4**	**-1.3**
WTVZ	**West Tongariro**	**1.09**	**238**	P	**Pn**	**12 59 54.0**	**+0.8**
BHHZ	**Black Hill Sta**	**1.10**	**211**	P	**Pn**	**12 59 53.9**	**+0.7**
HAZ	**Te Kaha**	**1.11**	**45**	P	**Pn**	**12 59 54.2**	**+1.1**
CNGZ	**Carnagh Statio**	**1.12**	**87**	P	**Pn**	**12 59 54.3**	**+0.9**
NGZ	**Ngauruhoe**	**1.12**	**235**	P	**Pn**	**12 59 54.3**	**+0.7**
CKHZ	**Cape Kidnapper**	**1.14**	**169**	P	**Pn**	**12 59 54.5**	**+0.9**
TUVZ	**Tukino**	**1.14**	**230**	P	**Pn**	**12 59 54.6**	**+0.7**
KRHZ	**Kereru**	**1.14**	**196**	P	**Pn**	**12 59 54.7**	**+0.9**
TWVZ	**Taurewa**	**1.18**	**243**	P	**Pn**	**12 59 54.7**	**+0.4**
MOVZ	**Moawhango**	**1.18**	**223**	P	**Pn**	**12 59 54.8**	**+0.5**
WHVZ	**Whangaehu Hut**	**1.19**	**231**	P	**Pn**	**12 59 55.2**	**+0.6**
FWVZ	**Far West T-bar**	**1.20**	**233**	P	**Pn**	**12 59 55.3**	**+0.6**
DRZ	**Dome Shelter**	**1.20**	**232**	P	**Pn**	**12 59 55.5**	**+0.7**
PKGZ	**Pakihiroa**	**1.21**	**58**	P	**Pn**	**12 59 54.8**	**+0.2**
TRVZ	**Turoa**	**1.23**	**232**	P	**Pn**	**12 59 55.6**	**+0.6**
KAHZ	**Kahuranaki**	**1.25**	**177**	P	**Pn**	**12 59 56.0**	**+0.8**
PUZ	**Puketiti**	**1.25**	**68**	P	**Pn**	**12 59 55.2**	**0.0**
TOZ	**Tahuroa Road**	**1.30**	**308**	P	**Pn**	**12 59 55.5**	**-0.2**
MTVZ	**Mangateitei**	**1.32**	**230**	P	**Pn**	**12 59 56.9**	**+0.7**
PKWZ	**Pokaka**	**1.35**	**236**	P	**Pn**	**12 59 57.3**	**+0.8**
PNHZ	**Pukeui**	**1.44**	**198**	P	**Pn**	**12 59 58.0**	**+0.3**
WMGZ	**Waiomatatini S**	**1.47**	**61**	P	**Pn**	**12 59 58.3**	**+0.2**
PXZ	**Pawanui**	**1.48**	**178**	P	**Pn**	**12 59 58.3**	**+0.1**
HIZ	**Hauiti**	**1.52**	**271**	P	**Pn**	**12 59 59.3**	**+0.7**
HIZ	**Hauiti**	**1.52**	**271**		**Pn**	**12 59 59.5**	**+0.8**
WPHZ	**Waipukurau**	**1.54**	**190**	P	Pn	13 00 03.4	+4.4
MXZ	**Matakaoa Point**	**1.55**	**51**	P	**Pn**	**12 59 59.7**	**+0.6**
MXZ	**Matakaoa Point**	**1.55**	**51**		**Pn**	**12 59 59.7**	**+0.6**
TSZ	**Takapari Road**	**1.64**	**203**	P	**Pn**	**13 00 00.4**	**+0.1**
VRZ	**Vera Road**	**1.69**	**249**	P	**Pn**	**13 00 02.0**	**+1.1**
PRHZ	**Porangahau**	**1.72**	**184**	P	**Pn**	**13 00 01.1**	**-0.3**
DVHZ	**Dannevirke**	**1.82**	**195**	P	**Pn**	**13 00 02.1**	**-0.6**
WAZ	**Wanganui**	**1.85**	**229**	P	**Pn**	**13 00 04.7**	**+1.6**
ANWZ	**Angora Road**	**1.93**	**187**	P	**Pn**	**13 00 03.6**	**-0.6**
MKAZ	**Moumakai**	**1.93**	**318**	P	**Pn**	**13 00 04.0**	**-0.2**
KUZ	**Kuaotunu**	**1.98**	**334**	P	**Pn**	**13 00 04.1**	**-0.8**
MHEZ	**Mangahewa**	**2.00**	**254**	P	**Pn**	**13 00 07.4**	**+2.3**
POWZ	**Post Office Ro**	**2.01**	**223**	P	**Pn**	**13 00 07.1**	**+2.5**
OHWZ	**Ohakea**	**2.01**	**214**	P	**Pn**	**13 00 06.4**	**+1.1**
LREZ	**Lake Rotokare**	**2.07**	**243**	P	**Pn**	**13 00 08.1**	**+2.0**
KBAZ	**Karaka Road Bo**	**2.09**	**313**	P	**Pn**	**13 00 06.6**	**+0.4**
PRWZ	**Pori Road**	**2.10**	**197**	P	**Pn**	**13 00 06.2**	**-0.4**
DREZ	**Durham Road**	**2.12**	**252**	P	**Pn**	**13 00 08.8**	**+2.0**
ETAZ	**East Tamaki Re**	**2.17**	**317**	P	**Pn**	**13 00 07.6**	**+0.3**
BFZ	**Birch Farm**	**2.17**	**191**	P	**Pn**	**13 00 06.3**	**-1.2**
BFZ	**Birch Farm**	**2.17**	**191**		**Pn**	**13 00 06.2**	**-1.3**
BFZ					Sn	**13 00 32.9**	**-0.6**
WIAZ	**Waiheke Island**	**2.19**	**323**	P	**Pn**	**13 00 07.6**	**0.0**
PREZ	**Palmer Road**	**2.20**	**248**	P	**Pn**	**13 00 10.2**	**+2.4**
AWAZ	**Awhitu Peninsu**	**2.25**	**310**	P	**Pn**	**13 00 08.7**	**+0.2**
PKE	**Pukeiti**	**2.28**	**253**	P	**Pn**	**13 00 10.6**	**+1.7**
KHEZ	**Kahui Hut**	**2.29**	**250**	P	**Pn**	**13 00 11.0**	**+1.9**
MRZ	**Mangatainoka R**	**2.31**	**203**	P	**Pn**	**13 00 08.3**	**-1.1**
MBAZ	**Motutapu North**	**2.32**	**319**	P	**Pn**	**13 00 09.7**	**+0.2**
EPAZ	**Eden Park BICE**	**2.32**	**315**	P	**Pn**	**13 00 09.2**	**+0.7**
TIWZ	**Tintock**	**2.33**	**191**	P	**Pn**	**13 00 08.6**	**-1.1**
HBAZ	**Herne Bay Bore**	**2.35**	**315**	P	**Pn**	**13 00 10.2**	**+0.3**
WTAZ	**Waiatarua**	**2.38**	**312**	P	**Pn**	**13 00 10.7**	**+0.4**
NBEZ	**Newall Road No**	**2.39**	**251**	P	**Pn**	**13 00 12.2**	**+1.9**
CPWZ	**Castlepoint**	**2.41**	**191**	P	**Pn**	**13 00 10.9**	**+0.3**
NMEZ	**Namu Road**	**2.43**	**248**	P	**Pn**	**13 00 13.1**	**+2.2**
ABAZ	**Army Bay**	**2.48**	**321**	P	**Pn**	**13 00 12.1**	**+0.4**
GRZ	**Great Barrier**	**2.52**	**335**	P	**Pn**	**13 00 12.0**	**-0.3**
HOWZ	**Holdsworth Sta**	**2.55**	**202**	P	**Pn**	**13 00 10.9**	**-1.6**
OGWZ	**Otaki Gorge**	**2.59**	**208**	P	**Pn**	**13 00 12.2**	**-0.9**
TMWZ	**Te Maipa**	**2.65**	**195**	P	**Pn**	**13 00 12.4**	**-1.6**
KIW	**Kapiti Island**	**2.73**	**211**	P	**Pn**	**13 00 13.9**	**-1.1**
MTW	**Mount Morrison**	**2.79**	**200**	P	**Pn**	**13 00 14.0**	**-1.9**
CAW	**Cannon Point**	**2.88**	**207**	P	**Pn**	**13 00 15.5**	**-1.6**
TRWZ	**Traveller**	**2.97**	**196**	P	**Pn**	**13 00 16.5**	**-1.9**
PAWZ	**Paruwai Farm**	**3.02**	**200**	P	**Pn**	**13 00 16.7**	**-2.4**
MSWZ	**Moikau Station**	**3.10**	**202**	P	**Pn**	**13 00 18.3**	**-1.8**
MSWZ	**Moikau Station**	**3.10**	**202**		**Pn**	**13 00 18.2**	**-1.9**
WEL	**Wellington**	**3.15**	**209**	P	**Pn**	**13 00 18.8**	**-1.9**
DUWZ	**D'Urville Isla**	**3.16**	**224**	P	**Pn**	**13 00 19.6**	**-1.2**
SNZO	**South Karori**	**3.19**	**209**		**Pn**	**13 00 19.3**	**-2.0**
BHW	**Baring Head**	**3.22**	**207**	P	**Pn**	**13 00 19.5**	**-2.1**
BHW	**Baring Head**	**3.22**	**207**		**Pn**	**13 00 19.7**	**-1.9**
PLWZ	**Palliser**	**3.24**	**201**	P	**Pn**	**13 00 19.4**	**-2.7**
PLWZ	**Palliser**	**3.24**	**201**		**Pn**	**13 00 19.4**	**-2.7**
WCZ	**Waipu Caves**	**3.25**	**322**	P	**Pn**	**13 00 22.4**	**+0.2**
TCW	**Tory Channel**	**3.29**	**215**	P	**Pn**	**13 00 20.7**	**-1.9**
TUWZ	**Tuamarina**	**3.62**	**216**	P	**Pn**	**13 00 25.0**	**-2.1**
TUWZ	**Tuamarina**	**3.62**	**216**		**Pn**	**13 00 24.8**	**-2.3**
NNZ	**Nelson**	**3.74**	**223**	P	**Pn**	**13 00 26.7**	**-2.1**
NNZ	**Nelson**	**3.74**	**223**		**Pn**	**13 00 27.4**	**-1.4**
BSWZ	**Blackbirch Sta**	**3.87**	**214**	P	**Pn**	**13 00 28.3**	**-2.3**
BSWZ	**Blackbirch Sta**	**3.87**	**214**		**Pn**	**13 00 29.3**	**-1.3**
QRZ	**Quartz Range**	**4.00**	**234**	P	**Pn**	**13 00 30.7**	**-1.6**
QRZ	**Quartz Range**	**4.00**	**234**		**Pn**	**13 00 30.7**	**-1.6**
OUZ	**Omahuta**	**4.19**	**321**	P	**Pn**	**13 00 35.6**	**+0.7**
OUZ	**Omahuta**	**4.19**	**321**	Pn	**Pn**	**13 00 35.7**	**+0.7**
THZ	**Tophouse**	**4.38**	**222**	P	**Pn**	**13 00 35.2**	**-2.4**
THZ	**Tophouse**	**4.38**	**222**		**Pn**	**13 00 35.5**	**-2.0**
KHZ	**Kahutara**	**4.59**	**212**		**Pn**	**13 00 37.8**	**-2.6**
RPZ	**Rata Peaks**	**6.74**	**218**	P	**Pn**	**13 01 06.0**	**-3.8**
	0.5nm,0.3s,baz=327,slow=15,SNR=1.9						
RPZ				S	**Sn**	**13 02 18.1**	**-7.0**
	3.5nm,0.3s,baz=206,slow=2.0,SNR=9.1						
CTZ	**Chatham Island**	**7.19**	**138**	P	**Pn**	**13 01 14.9**	**-0.9**
FOZ	**Fox Glacier**	**7.25**	**224**	P	**Pn**	**13 01 14.9**	**-1.9**
FOZ	**Fox Glacier**	**7.25**	**224**	Pn	**Pn**	**13 01 15.5**	**-1.3**
AS31	**Alice Springs**	**39.24**	**279**	P	**P**	**13 06 55.5**	**0.0**
ASAR	**Alice Springs**	**39.24**	**279**	P	**P**	**13 06 56.5**	**+1.0**
	0.8nm,0.6s,baz=118,slow=6.6,SNR=16						
WB2	**Warramunga Arr**	**40.99**	**285**	P	**P**	**13 07 10.3**	**+0.3**
WB2				IAmb	IAmb	13 07 14.5	
	comp=Z,3.8nm,1.1s						
WRA	**Warramunga Arr**	**41.00**	**285**	P	**P**	**13 07 09.0**	**-1.1**
	comp=Z,0.5nm,1.0s,baz=123,slow=7.8,SNR=6.0						
WB0	**Warramunga Arr**	**41.06**	**285**	P	**P**	**13 07 10.6**	**0.0**
WB0				IAmb	IAmb	13 07 15.7	
	comp=Z,7.4nm,1.2s						
MTN	**Manton Dam**	**47.80**	**290**	P	**P**	**13 08 04.8**	**+0.4**
FITZ	**Fitzroy Crossi**	**48.74**	**280**	P	**P**	**13 08 11.3**	**-0.3**
FITZ				IAmb	IAmb	13 08 14.6	
	comp=Z,1.3nm,0.9s						
QSPA	**South Pole Qui**	**51.58**	**180**	P	**P**	**13 08 32.6**	**0.0**
QSPA				IAmb	IAmb	13 08 41.2	
	comp=Z,2.8nm,1.2s						
KSRS	**Korea Array**	**88.01**	**323**	P	**P**	**13 12 17.8**	**+1.9**
	comp=Z,0.4nm,0.6s,baz=149,slow=6.1,SNR=2.8						
FINES	**FINESS Array B**	**150.79**	**331**	PKPbc	**PKPdf**	**13 19 14.5**	**+2.9**
	comp=Z,1.1nm,0.8s,baz=58,slow=3.4,SNR=3.9						

TRN 17 13:00:48.5,17°.15N×60°.25W,h51km,MD3.6,Leeward
Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABD	**La Joyeuse, An**	**1.36**	**241**	*e*P	Pn	13 01 12.8	+1.7
ABD				*e*S	Sn	13 01 29.9	+1.8
MAGL	**Barre de l'ile**	**1.55**	**220**	*e*P	Pn	13 01

DPC				*e*SG	**Sb**	**13 22 48.8**	**-0.5**
	comp=Z,41nm,0.5s							
BRG	**Berggiesshubel**	**1.54**	**247**	PN	**Pn**	**13 22 40.8**	**+0.7**
BRG				PG	**Pg**	**13 22 42.9**	**+2.0**
BRG				SG	**Sg**	**13 23 00.6**	**-0.3**
	42nm,0.6s							
GOPC	**GO Pecny, Ondr**	**1.81**	**210**	*e*PG	**Pb**	**13 22 45.2**	**-0.1**
GOPC				*e*SG	**Sg**	**13 23 08.7**	**-0.7**
	comp=Z,17nm,0.6s							
PRU	**Pruhonice**	**1.83**	**216**	*e*PG	**Pb**	**13 22 45.4**	**-0.3**
PRU				*e*SG	**Sg**	**13 23 09.1**	**-1.0**
	comp=Z,25nm,0.6s							
MORC	**Moravsky Berou**	**1.92**	**153**	*e*PN	**Pn**	**13 22 46.2**	**+0.9**
MORC				*e*SG	**Sg**	**13 23 13.2**	**+0.4**
CLL	**Collm**	**2.00**	**266**	*e*Pg	**Pb**	**13 22 49.0**	**+0.4**
CLL				*e*Sg	**Sb**	**13 23 15.0**	**+0.9**
	comp=Z,19nm,0.6s							
OKC	**Ostrava-Krasne**	**2.07**	**142**	*e*PG	**Pb**	**13 22 51.0**	**+1.3**
OKC				*e*SG	**Sg**	**13 23 18.8**	**+1.1**
	comp=Z,17nm,0.4s							
VRAC	**Vranov**	**2.20**	**173**	*e*PN	**Pn**	**13 22 50.0**	**+0.9**
VRAC				*e*SG	**Sg**	**13 23 21.0**	**-0.8**
PBCC	**Pribram**	**2.28**	**219**	*e*PG	**Pb**	**13 22 53.8**	**+0.4**
PBCC				*e*SG	**Sg**	**13 23 23.5**	**-1.1**
KRUC	**Moravsky**	**2.43**	**177**	*e*PN	**Pn**	**13 22 53.2**	**+0.9**
KRUC				*e*SG	**Sg**	**13 23 28.2**	**-1.2**
NKC	**Novy Kostel**	**2.68**	**244**	*e*PG	**Pb**	**13 23 01.1**	**+0.9**
NKC				*e*SG	**Sg**	**13 23 37.1**	**-0.4**
	comp=Z,26nm,0.3s							
JAVC	**Velka Javorina**	**2.80**	**160**	*e*PN	**Pn**	**13 22 58.9**	**+1.5**
KHC	**Kasperske Hory**	**2.89**	**216**	*e*PN	**Pn**	**13 22 59.3**	**+0.6**
KHC				*e*PG	**Pb**	**13 23 04.5**	**+0.7**
KHC				*e*SN	**Sn**	**13 23 33.9**	**-0.3**
KHC				*e*SG	**Sg**	**13 23 42.5**	**-1.7**
	comp=Z,8.2nm,0.3s							
VYHS	**Vyhne**	**3.45**	**149**	*e*SG	**Sg**	**13 24 00.3**	**-1.7**
CONA	**Conrad Observa**	**3.57**	**184**	*e*Pn	**Pn**	**13 23 09.8**	**+1.8**
	comp=Z,0.4nm,0.2s							
CONA				*e*Pg	**Pg**	**13 23 19.4**	**-0.3**
	comp=Z,1.4nm,0.3s							
CONA				Sg	**Sg**	**13 24 05.6**	**-0.3**
	comp=Z,10.0nm,0.5s							
BSD	**Bornholm Skovb**	**3.71**	**349**	*i* P	**Pn**	**13 23 10.0**	**+0.1**
BSD				*i* S	**Sn**	**13 23 51.0**	**-3.3**
MOA	**Molln**	**3.85**	**200**	*e*Pn	**Pn**	**13 23 11.6**	**-0.2**
	comp=Z,0.3nm,0.1s							
MOA				Sg	**Sg**	**13 24 14.0**	**-0.9**
	comp=Z,5.0nm,0.3s							

MAN 17 13:24:53.8, 9.90N×124.05E, h3km, mb4.4, ML3.2, MS3.0, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBP	**Tagbilaran**	**0.28**	**221**	*e*P	Pg	13 25 00.2	+1.0
TBP				*i* S	Sg	13 25 03.4	+0.6
LLP	**Lapu-Lapu**	**0.42**	**349**	⇓*i*P	Pg	13 25 02.5	+0.6
LLP				*i* S	Sg	13 25 08.9	+1.5
MSLP	**Maasin**	**0.83**	**74**	*e*P	Pg	13 25 09.7	0.0
MSLP				*e*S	Sb	13 25 21.8	-0.7
OCLP	**Ormoc**	**1.27**	**26**	*e*P	Pn	13 25 19.9	+1.5
OCLP				*e*S	Sn	13 25 36.9	+0.9
CNOP	**Candoni, Negro**	**1.39**	**267**	*e*P	Pn	13 25 19.7	-0.4
CNOP				*e*S	Sn	13 25 38.9	-0.1
GUIM	**Jordan**	**1.61**	**297**	*e*P	Pn	13 25 22.9	-0.2
GUIM				*e*S	Sn	13 25 44.4	0.0

JMA 17 13:43:01.8, 36.97N×140.74E, h11km±1km, M3.5, 4C-1D
Broadband fault plane solution: P waves. NP1: ϕ_s196.00000°, δ45.00000°, λ-70.00000°. **NP2:** ϕ_s349.00000°, δ49.00000°, λ-109.00000°. **Principal axes:** T Plg2.0000°, Azm92.0000°; N Plg14.0000°, Azm2.0000°; P Plg76.0000°, Azm190.0000°; **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.14**	**20**	⇓P	Pg	13 43 05.2	+0.1
ONAJ				S	Sg	13 43 07.6	+0.1
JFFD	**Fukushimafurud**	**0.19**	**310**	⇑P	Pg	13 43 06.0	+0.1
JFFD				*e*S	Sg	13 43 08.8	+0.1
JHO	**Hitachi**	**0.38**	**201**	⇑P	Pg	13 43 09.3	-0.1
JHO				S	Sg	13 43 14.4	-0.1
JFK	**Kawauchi**	**0.41**	**15**	P	Pg	13 43 09.8	-0.1
JFK				*e*S	Sg	13 43 15.7	+0.3
JFT	**Otama**	**0.64**	**330**	⇑P	Pg	13 43 14.2	+0.1
JFT				S	Sg	13 43 23.1	+0.6
JSB	**Shiboa**	**0.66**	**270**	⇑P	Pb	13 43 15.2	-0.1
JYT	**Yasato**	**0.86**	**211**	P	Pg	13 43 17.7	-0.7
JYT				S	Sg	13 43 29.5	-0.1
MAT	**Matsushiro**	**2.08**	**259**	P	Pn	13 43 37.8	+1.2
MAT				S	Sb	13 44 05.2	-0.2

*NEIC **17** 13:50:24.2±1.3, 39.50S±0.07×72.3W±0.1, h72km±14km*
Error ellipse: s-maj=15.1km s-min=10.0km az=84.0
*GUC **17** 13:50:25.4±0.7, 39.59S×72.65W, h62km±13km, ML3.7*
*IDC **17** 13:50:27.0±4.2, 39.42S×71.98W, h81km±34km, mb3.6/3, mb1 3.7/6, mb1mx3.5/24, mbtmp4.0/6, MS4.1/2, Ms1 4.1/2, ms1mx3.3/25, Error ellipse: s-maj=65.1km s-min=18.6km az=81.0*
ISC 17 13:50:24.1±1.0, 39.55S±0.05×72.53W±0.07, h86km±11km, n44, σ1§61/48, mb3.8/4, 2C-5D, Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LC01	**Cuncо**	**0.83**	**38**	⇓*i*P	**Pn**	**13 50 42.1**	**+0.4**
LC01				*i* S	**Sn**	**13 50 55.2**	**+0.4**
LC01				IAML		13 50 56.8	
	comp=E,4μm,0.3s						
LC01	**Cuncо**	**0.83**	**38**		**Pn**	**13 50 42.2**	**+0.4**
BI04	**Isla Mocha**	**1.55**	**317**	⇑*i*P	**Pn**	**13 50 50.6**	**+0.2**
BI04				*i* S	**Sn**	**13 51 08.6**	**-1.5**
BI04				IAML		13 51 10.7	
	comp=E,8μm,0.2s						
PLCA	**Paso Flores**	**1.92**	**128**	P	**Pn**	**13 50 56.2**	**+0.9**
	comp=E,22nm,0.3s,baz=304,slow=11,SNR=452						
PLCA				S	**Sn**	**13 51 16.6**	**-2.4**
	comp=E,9.7nm,0.3s,baz=281,slow=16,SNR=8.0						
PLCA	**Paso Flores**	**1.92**	**128**	⇑*i*P	**Pn**	**13 50 56.2**	**+0.9**
PLCA				*i* S	**Sn**	**13 51 17.9**	**-1.1**
PLCA	**Paso Flores**	**1.92**	**128**		**Pn**	**13 50 56.1**	**+0.9**
LAJA	**Laja**	**2.27**	**356**	*e*P	**Pn**	**13 51 01.2**	**+1.4**
LAJA				*i* S	**Sn**	**13 51 26.2**	**-0.8**
LAJA				IAML		13 51 29.1	
	comp=E,202nm,0.5s						
BI03	**Tigo**	**2.73**	**352**	*e*P	**Pn**	**13 51 06.1**	**+0.1**
BI03				*i* S	**Sn**	**13 51 35.7**	**-2.4**
BI03	**Tigo**	**2.73**	**352**		**Pn**	**13 51 06.0**	**+0.1**
CCSP	**San Pedro de C**	**2.74**	**350**	*e*S	**Sn**	**13 51 35.5**	**-2.8**
LL01	**San Ignacio de**	**2.83**	**178**	⇓*e*P	**Pn**	**13 51 07.8**	**+0.6**
LL01				*e*S	**Sn**	**13 51 39.9**	**-0.4**
LL01				IAML		13 51 42.6	
	comp=N,104nm,0.4s						
LL01	**San Ignacio de**	**2.83**	**178**		**Pn**	**13 51 08.1**	**+0.9**
BI02	**San Fabin de**	**3.05**	**19**	⇓*i*P	**Pn**	**13 51 12.1**	**+1.7**
BI02				*i* S	**Sn**	**13 51 48.1**	**+2.2**
BI02	**San Fabin de**	**3.05**	**19**		**Pn**	**13 51 11.9**	**+1.6**
GO05	**Huala**	**4.56**	**6**	*e*P	**Pn**	**13 51 30.2**	**-0.5**
GO05	**Huala**	**4.56**	**6**		**Pn**	**13 51 29.9**	**-0.9**
BO02	**Sierra Bellavi**	**4.95**	**17**	⇓*e*P	**Pn**	**13 51 36.9**	**+0.8**
BO02	**Sierra Bellavi**	**4.95**	**17**		**Pn**	**13 51 36.4**	**+0.2**
MT01	**Popeta**	**5.77**	**11**		**Pn**	**13 51 46.2**	**-1.0**
MT05	**Renca**	**6.32**	**14**		**Pn**	**13 51 53.6**	**-1.1**
MT02	**Curacav**	**6.38**	**11**		**Pn**	**13 51 54.0**	**-1.6**
FCH	**Farellones**	**6.47**	**17**	⇓*e*P	**Pn**	**13 51 56.9**	**-0.2**
PEL	**Peldehue**	**6.57**	**14**		**Pn**	**13 51 56.8**	**-1.3**
ROC1	**El Roble**	**6.68**	**11**		**Pn**	**13 51 58.4**	**-1.4**
VA03	**San Esteban**	**6.96**	**14**		**Pn**	**13 52 02.0**	**-1.5**
CO04	**Los Peladeros**	**7.60**	**10**		**Pn**	**13 52 10.4**	**-2.0**
CO02	**Combarbal**	**8.42**	**9**		**Pn**	**13 52 22.3**	**-1.2**
CFA	**Coronel Fontan**	**8.67**	**25**	P	**Pn**	**13 52 25.4**	**-1.4**
	comp=N,4.4nm,0.3s,baz=213,slow=13,SNR=23						
CFA				S	**Sn**	**13 53 58.9**	**-3.9**
	comp=N,0.7nm,0.3s,baz=79,slow=16,SNR=2.3						
CO03	**El Pedregal**	**8.82**	**10**		**Pn**	**13 52 27.3**	**-1.6**
GO04	**Tololo Observa**	**9.46**	**9**		**Pn**	**13 52 36.0**	**-1.8**
AC05	**El Transito**	**10.85**	**11**		**Pn**	**13 52 53.9**	**-2.7**
LVC	**Limon Verde**	**17.17**	**11**	P	**Pn**	**13 54 18.6**	**-0.3**
	comp=N,0.3nm,0.3s,baz=209,slow=10,SNR=2.3						
LVC	**Limon Verde**	**17.17**	**11**	IAmb	IAmb	13 54 23.7	
	comp=Z,3.5nm,0.7s						
CPUP	**Villa Florida**	**18.31**	**49**	P	**P**	**13 54 31.1**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=211,slow=12,SNR=1.5						
CPUP	**Villa Florida**	**18.31**	**49**	IAmb	IAmb	13 54 40.1	
	comp=Z,2.9nm,1.1s						
GO01	**Chusmiza**	**20.02**	**9**		**P**	**13 54 52.8**	**+2.1**
GO01				IAmb	IAmb	13 54 53.7	
	comp=Z,4.9nm,0.6s						
MNMC	**Minye Minye**	**20.51**	**8**	P	**P**	**13 54 58.2**	**+2.6**
MNMC				IAmb	IAmb	13 54 58.7	
	comp=Z,6.3nm,0.8s						
PB16	**IPOC Station P**	**21.30**	**8**	P	**P**	**13 55 07.7**	**+3.2**
PB16				IAmb	IAmb	13 55 14.1	
	comp=Z,5.9nm,0.9s						
LPAZ	**La Paz**	**23.50**	**11**	P	**P**	**13 55 28.8**	**+1.7**
	comp=Z,1.2nm,0.5s,baz=194,slow=6.5,SNR=6.5						
SIV	**San Ignacio**	**25.52**	**26**	P	**P**	**13 55 45.4**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=225,slow=10,SNR=9.7						
PTGA	**Pitinga**	**40.31**	**20**	P	**P**	**13 57 53.6**	**+0.6**
	comp=Z,1.2nm,0.5s,baz=212,slow=15,SNR=5.7						
PTGA	**Pitinga**	**40.31**	**20**	IAmb	IAmb	13 57 54.2	
	comp=Z,2.4nm,0.6s						
APG	**El Apazote**	**56.79**	**339**	LR	LR	14 18 00.5	
	comp=Z,146nm,19.2s,baz=38,slow=29						
RAR	**Rarotonga**	**74.76**	**255**	LR	LR	14 26 39.2	
	comp=Z,135nm,19.0s,baz=281,slow=29						

*NEIC **17** 13:54:46.7±2.8, 10.7S±0.1×161.7E±0.1, h10km±2km, mb4.1/6, Error ellipse: s-maj=25.0km s-min=18.5km az=75.0*
*IDC **17** 13:54:55.3±5.7, 10.66S×161.47E, h76km±43km, mb3.3/7, mb1 3.6/8, mb1mx3.4/27, mbtmp3.7/8, ML3.9/1, MS3.4/3, Ms1 3.4/3, ms1mx3.1/14, Error ellipse: s-maj=64.8km s-min=24.1km az=129.0*
ISC 17 13:54:46.3±0.9, 10.7S±0.1×161.7E±0.1, h10km, n18, σ1§43/17, mb3.7/9, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.19**	**306**	P	**Pb**	**13 55 26.0**	**-0.2**
	112nm,0.3s,baz=178,slow=8.1,SNR=30						
HNR				S	**Sg**	**13 55 57.9**	**+1.0**
	384nm,0.3s,baz=327,slow=22,SNR=16						
HNR	**Honiara**	**2.19**	**306**		**Pb**	**13 55 25.8**	**-0.4**
KRVT	**Keravat (AS076**	**11.55**	**303**	LR	LR	14 01 31.7	
	comp=Z,104nm,19.0s,baz=100,slow=35						
PMG	**Port Moresby**	**14.42**	**274**	LR	LR	14 03 42.9	
	comp=Z,178nm,18.1s,baz=76,slow=37						
CTA	**Charters Tower**	**17.57**	**236**	P	**P**	**13 58 53.8**	**+1.2**
	0.3nm,0.3s,baz=63,slow=14,SNR=2.0						
CTAO	**Charters Tower**	**17.57**	**236**	P	**P**	**13 58 54.4**	**+1.8**
CTAO				IAmb	IAmb	13 59 02.8	
	comp=Z,12nm,1.1s						
EIDS	**Eidsvold**	**17.71**	**213**	P	**P**	**13 58 56.4**	**+2.3**
EIDS				IAmb	IAmb	13 59 06.0	
	comp=Z,13nm,1.0s						
WB0	**Warramunga Arr**	**27.83**	**248**	P	**P**	**14 00 35.7**	**-0.5**
WB0				IAmb	IAmb	14 00 42.0	
	comp=Z,3.9nm,1.0s						
WB2	**Warramunga Arr**	**27.91**	**248**	P	**P**	**14 00 36.1**	**-0.8**
WB2				IAmb	IAmb	14 00 44.5	
	comp=Z,4.3nm,1.0s						
WRA	**Warramunga Arr**	**27.93**	**248**	P	**P**	**14 00 37.2**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=76,slow=9.3,SNR=10						
AS31	**Alice Springs**	**29.46**	**241**	P	**P**	**14 00 47.7**	**-3.0**
ASAR	**Alice Springs**	**29.46**	**241**	P	**P**	**14 00 49.6**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=65,slow=10,SNR=1.2						
ASAR				LR	LR	14 12 05.3	
	comp=Z,80nm,21.1s,baz=36,slow=35						
TOO	**Toolangi**	**30.45**	**206**	P	**P**	**14 00 59.0**	**-0.3**
SONM	**Songino Array**	**76.13**	**325**	P	**P**	**14 06 34.6**	**0.0**
	comp=Z,0.3nm,0.5s,baz=132,slow=7.3,SNR=1.6						
ILAR	**Eielson Array**	**84.51**	**20**	P	**P**	**14 07 19.8**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=234,slow=5.4,SNR=2.3						
NVAR	**Mina Array Bea**	**88.86**	**51**	P	**P**	**14 07 43.1**	**+1.7**
	comp=Z,0.3nm,0.7s,baz=214,slow=5.0,SNR=4.0						
MKAR	**Makanchi Array**	**90.63**	**318**	P	**P**	**14 07 47.8**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=94,slow=3.8,SNR=2.8						
YKA	**Yellowknife Ar**	**96.52**	**28**	P	**P**	**14 08 14.8**	**-1.0**
	comp=Z,0.1nm,0.5s,baz=256,slow=4.1,SNR=2.1						

*NEIC **17** 14:11:21.1±1.7, 7.21N±0.08×82.37W±0.04, h8km±5km, mb4.1/3, Error ellipse: s-maj=12.5km s-min=2.4km az=206.0*
*IDC **17** 14:11:21.4±1.3, 7.39N×82.20W, h0km, mb3.7/7, mb1 4.0/8, mb1mx3.8/34, mbtmp3.8/8, ML4.5/1, MS2.3/1, Ms1 2.3/1, ms1mx2.2/35, Error ellipse: s-maj=62.3km s-min=19.8km az=45.0*
*UCR **17** 14:11:22.6±2.0, 7.31N×82.32W, h14km±9km, mb4.1(NEIC)*
*UPA **17** 14:11:22.7±2.1, 7.25N×82.34W, h22km±27km, MW4.8*
ISC 17 14:11:21.1±0.7, 7.24N±0.05×82.32W±0.03, h10km, n72, σ1§31/95, mb3.8/9, 4C-2D, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVID3	**Puerto Vidal,**	**1.07**	**41**	*e*P	**Pg**	**14 11 41.1**	**-0.6**
REME3	**Remedios, Chir**	**1.09**	**26**	*e*P	**Pb**	**14 11 41.8**	**-0.3**
PEDE3	**Pedregal, Chir**	**1.14**	**355**	*e*S	**Sg**	**14 11 56.5**	**-1.4**
CHIR3	**Chiriqui UPA,**	**1.15**	**360**	⇑*i*P	**Pb**	**14 11 42.4**	**-0.7**
DVD	**David**	**1.20**	**354**	*e*S	**Sb**	**14 11 58.3**	**-1.1**
GMAL	**Guarumal, Vera**	**1.20**	**64**	⇓*i*P	**Pb**	**14 11 42.9**	**-1.0**
GMAL				*e*S	**Sb**	**14 11 58.0**	**-1.4**
GMAL	**Guarumal, Vera**	**1.20**	**64**	*e*P	**Pb**	**14 11 42.9**	**-1.0**
MARI3	**Mariato, Verag**	**1.38**	**73**	*e*P	**Pn**	**14 11 46.2**	**-0.2**
MARI3				*e*S	**Sb**	**14 12 04.0**	**-0.7**
PSOM3	**Paja de Sombre**	**1.44**	**360**	*e*P	**Pn**	**14 11 46.7**	**-0.5**
CACAO	**El Cacao, Vera**	**1.45**	**86**	⇑*i*P	**Pn**	**14 11 46.1**	**-1.3**
CACAO				*e*S	**Sn**	**14 12 03.8**	**-2.7**
PONU3	**Ponuga, Veragu**	**1.48**	**64**	*e*S	**Sn**	**14 12 06.3**	**-0.9**
BCO2	**Palmira**	**1.48**	**352**	*e*P	**Pn**	**14 11 47.5**	**-0.5**
BCO2				*e*S	**Sn**	**14 12 04.9**	**-2.6**
STIA3	**Santiago, Vera**	**1.59**	**57**	⇓*i*P	**Pn**	**14 11 49.6**	**+0.3**
STIA3				*e*S	**Sn**	**14 12 07.7**	**-2.2**
BRU2	**Volcan**	**1.59**	**347**	*e*P	**Pn**	**14 11 48.7**	**-0.7**
BRU2				*e*S	**Sn**	**14 12 07.9**	**-2.2**
BRU2	**Volcan**	**1.59**	**347**	*e*P	**Pn**	**14 11 49.5**	**0.0**
BRU2				*e*S	**Sn**	**14 12 09.3**	**-0.8**
PTJ1	**Puerto Jimnez**	**1.61**	**323**	⇑*i*P	**Pn**	**14 11 48.5**	**-1.1**
PTJ1				*e*S	**Sn**	**14 12 07.6**	**-2.9**
PTJ1	**Puerto Jimnez**	**1.61**	**323**	*e*P	**Pn**	**14 11 48.3**	**-1.3**
PTJ1				*e*S	**Sn**	**14 12 09.0**	**-0.6**
SFRA3	**San Francisco,**	**1.67**	**53**	*e*P	**Pn**	**14 11 50.6**	**+0.2**
SFRA3				*e*S	**Sn**	**14 12 11.7**	**-0.2**
CHGR2	**Aguacate**	**1.70**	**6**	⇑*i*P	**Pn**	**14 11 50.8**	**0.0**
CHGR2				*e*S	**Sb**	**14 12 12.7**	**-1.1**
EDSV	**San Vito**	**1.70**	**338**	*e*P	**Pn**	**14 11 50.9**	**-0.1**
PESE3	**Pese, Herrera**	**1.82**	**68**	*e*P	**Pn**	**14 11 52.5**	**0.0**
PESE3				*e*S	**Sn**	**14 12 12.9**	**-2.7**
EDPN	**Palmar Norte**	**2.05**	**327**	*e*P	**Pn**	**14 11 54.9**	**-0.7**
EDPN				*e*S	**Sn**	**14 12 20.4**	**-0.8**
AZU	**Azuero**	**2.10**	**75**	*e*P	**Pn**	**14 11 56.5**	**+0.2**
AZU				*e*S	**Sn**	**14 12 21.1**	**-1.4**
AZU	**Azuero**	**2.10**	**75**	*e*P	**Pb**	**14 11 57.8**	**-1.5**
AZU				*e*S	**Sn**	**14 12 22.7**	**+0.1**
EDBA	**Buenos Aires**	**2.13**	**334**	*e*P	**Pn**	**14 11 57.5**	**+0.7**
EDBA				*e*S	**Sn**	**14 12 23.2**	**-0.2**
DRK0	**Durika**	**2.21**	**336**	*e*P	**Pn**	**14 11 58.3**	**+0.3**
DRK0				*e*S	**Sn**	**14 12 24.2**	**-1.3**
PCRI3	**Pocri, Los San**	**2.22**	**79**	*e*P	**Pn**	**14 11 58.6**	**+0.6**
PNME	**Penonome**	**2.33**	**58**	*e*P	**Pn**	**14 12 01.1**	**+1.6**
PNME				*e*S	**Sn**	**14 12 28.8**	**+0.6**
EDLM	**Las Mercedes**	**2.38**	**328**	*e*P	**Pn**	**14 12 00.5**	**+0.2**
EDLM				*e*S	**Sn**	**14 12 31.0**	**+1.3**
EDDO	**Dominical**	**2.52**	**323**	*e*P	**Pn**	**14 12 01.7**	**-0.4**
EDDO				*e*S	**Sn**	**14 12 32.6**	**-0.2**
ZANG	**Zanguenga, Cho**	**2.97**	**55**	*e*P	**Pn**	**14 12 09.7**	**+1.4**
LCR2	**La Lucha 2**	**2.99**	**326**	*e*P	**Pn**	**14 12 08.7**	**-0.1**
CVTR	**Volcan Turrial**	**3.11**	**333**	*e*P	**Pn**	**14 12 11.6**	**+1.0**
BCIP	**Isla Barro Col**	**3.12**	**52**	*e*P	**Pn**	**14 12 11.4**	**+1.1**
BCIP	**Isla Barro Col**	**3.12**	**52**	*e*P	**Pb**	**14 12 13.8**	**-2.8**
BCIP	**Isla Barro Col**	**3.12**	**52**		**Pn**	**14 12 11.4**	**+1.1**
BCIP				Sn	**Sn**	**14 12 49.0**	**+1.3**
HDC	**Heredia**	**3.27**	**327**	*e*P	**Pn**	**14 12 12.8**	**+0.3**
HDC				*e*S	**Sn**	**14 12 51.7**	**+0.1**
HDC	**Heredia**	**3.27**	**327**	*e*P	**Pn**	**14 12 12.8**	**+0.3**
HDC	**Heredia**	**3.27**	**327**		**Pn**	**14 12 12.8**	**+0.3**
HDC				Sn	**Sn**	**14 12 51.7**	**+0.1**
ARE1	**Arenal 1**	**3.98**	**324**	*e*P	**Pn**	**14 12 22.9**	**+0.7**
CEDE	**Laguna Cedeo**	**3.99**	**324**	*e*P	**Pn**	**14 12 22.5**	**0.0**
JTS	**Las Juntas de**	**3.99**	**320**	Pn	**Pn**	**14 12 21.9**	**-0.6**
	32nm,0.3s,baz=245,slow=4.9,SNR=54						
JTS				Sn	**Sn**	**14 13 07.2**	**-2.2**
	1.8nm,0.3s,baz=44,slow=22,SNR=1.1						
JTS				LR	LR	14 13 25.1	
	comp=Z,43nm,21.3s,baz=154,slow=31						
JTS	**Las Juntas de**	**3.99**	**320**	*e*P	**Pn**	**14 12 23.5**	**+1.1**
JTS	**Las Juntas de**	**3.99**	**320**		**Pn**	**14 12 21.8**	**-0.7**
PLVR	**Palo Verde**	**4.30**	**316**	*e*P	**Pn**	**14 12 26.7**	**-0.1**
ESPN	**Las Esperanzas**	**5.30**	**339**	Pn	**Pn**	**14 12 40.5**	**+0.2**
ACON	**Acoyapa**	**5.48**	**329**	*e*P	**Pn**	**14 12 44.7**	**+1.9**
ACON	**Acoyapa**	**5.48**	**329**		**Pn**	**14 12 44.5**	**+1.7**
CBOC	**Ciudad Bolivar**	**6.42**	**102**	*e*P	**Pn**	**14 12 55.5**	**-0.4**
MATN	**Matagalpa**	**6.67**	**328**	Pn	**Pn**	**14 12 58.7**	**-0.6**
GUY2C	**Guyana, Caldas**	**7.20**	**106**	*e*P	**Pn**	**14 13 07.8**	**+0.9**
BBAC	**Balboa, Cauca**	**7.24**	**135**	*e*P	**Pn**	**14 13 07.2**	**-0.1**
RREF	**El Recreo**	**7.31**	**108**	*e*P	**Pn**	**14 13 11.0**	**+2.4**
NORC	**Norcasia**	**7.59**	**102**	*e*P	**Pn**	**14 13 13.8**	**+1.9**
SOTA	**Rioblanco**	**7.62**	**131**	*e*P	**Pn**	**14 13 12.5**	**-0.3**
PCON	**Cinco Dias**	**7.66**	**129**	*e*P	**Pn**	**14 13 14.4**	**+1.1**
ORTC	**Ortega, Tolima**	**7.78**	**115**	*e*P	**Pn**	**14 13 16.3**	**+1.8**
RUSC	**La Rusia**	**9.28**	**98**		**Pn**	**14 13 35.7**	**+0.3**
URIC	**Uribia, Colomb**	**11.11**	**66**	Pn	**Pn**	**14 14 02.1**	**+1.9**
PAYG	**Puerto Ayora**	**11.18**	**226**	Pn	**Pn**	**14 13 57.8**	**-3.3**
PTGA	**Pitinga**	**23.66**	**109**	P	**P**	**14 16 34.9**	**+1.9**
	1.3nm,0.3s,baz=310,slow=8.9,SNR=5.5						
PTGA	**Pitinga**	**23.66**	**109**	IAmb	IAmb	14 16 35.7	
	comp=Z,4.7nm,0.9s						
LPAZ	**La Paz**	**27.27**	**149**	P	**P**	**14 17 08.6**	**+2.1**
	comp=Z,0.6nm,0.6s,baz=304,slow=11,SNR=2.2						
PB16	**IPOC Station P**	**28.39**	**154**	P	**P**	**14 17 17.2**	**+0.8**
PB16				IAmb	IAmb	14 17 19.8	
	comp=Z,3.8nm,0.9s						
BW06	**Boulder Array**	**42.75**	**330**	P	**P**	**14 19 17.3**	**-1.7**
BW06				IAmb	IAmb	14 19 17.4	
	comp=Z,2.9nm,1.0s						
NVAR	**Mina Array Bea**	**44.92**	**319**	P	**P**	**14 19 39.8**	**+3.3**
	comp=Z,0.6nm,0.5s,baz=127,slow=7.0,SNR=7.2						
YKA	**Yellowknife Ar**	**59.98**	**343**	P	**P**	**14 21 27.7**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=136,slow=7.2,SNR=9.6						
INK	**Inuvik**	**69.68**	**342**	P	**P**	**14 22 32.1**	**+1.5**
	comp=Z,0.8nm,0.9s,baz=115,slow=7.1,SNR=3.7						
ILAR	**Eielson Array**	**72.80**	**336**	P	**P**	**14 22 51.3**	**+1.6**
	comp=Z,0.4nm,0.5s,baz=100,slow=4.9,SNR=2.8						
TORD	**Torodi Ar. Bea**	**82.58**	**78**	P	**P**	**14 23 46.1**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=289,slow=4.4,SNR=3.1						
ASAR	**Alice Springs**	**141.61**	**241**	PKhKP	PKPpre	14 30 48.8	
	comp=Z,0.3nm,0.8s,baz=116,slow=3.8,SNR=6.5						
ASAR				PKP	**PKPdf**	**14 30 54.4**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=92,slow=2.4,SNR=7.8						
WRA	**Warramunga Arr**	**142.30**	**247**	PKP	**PKPdf**	**14 30 55.4**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=92,slow=3.0,SNR=4.6						

*NEIC **17** 14:13:12.8±2.7, 15.83N±0.05×98.77W±0.03, h1km±7km, Error ellipse: s-maj=8.1km s-min=3.6km az=200.0*
*MEX **17** 14:13:17.2±0.6, 16.00N×98.81W, h15km±6km, MD

σ1ᵍ77/8, **mb3.6**/3, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**4.61**	**120**	Pn	**Pn**	**14 17 34.6**	**+0.9**
	0.4nm,0.3s,baz=293,slow=13,SNR=2.1						
JAY				Sn	**Sn**	**14 18 23.3**	**-2.9**
	0.5nm,0.3s,baz=117,slow=18,SNR=1.4						
SIJI	**Sorong**	**5.51**	**263**	Pn	**Pn**	**14 17 46.1**	**0.0**
	1.1nm,0.3s,baz=75,slow=20,SNR=8.1						
SIJI				Sn	**Sn**	**14 18 46.5**	**-1.8**
	0.4nm,0.3s,baz=131,slow=19,SNR=1.2						
WRA	**Warramunga Arr**	**19.80**	**187**	P	**Pn**	**14 20 56.4**	**+0.7**
	0.3nm,0.3s,baz=8.6,slow=11,SNR=14						
ASAR	**Alice Springs**	**23.52**	**186**	P	**P**	**14 21 35.3**	**+1.6**
	0.9nm,0.4s,baz=13,slow=11,SNR=27						
MKAR	**Makanchi Array**	**66.58**	**322**	P	**P**	**14 27 13.0**	**-0.3**
	0.2nm,0.4s,baz=115,slow=6.1,SNR=2.5						
ILAR	**Eielson Array**	**84.36**	**25**	P	**P**	**14 28 55.2**	**+0.3**
	0.2nm,0.5s,baz=263,slow=5.4,SNR=4.6						

IDC 17 14:22:19.9±3.8, **7°.11S**×**154°.14E**, **h0**km, **mb3.4**/3, **mb1 3.6**/4, **mb1mx3.3**/45, **mbtmp3.4**/4, **ML3.1**/1, **Error ellipse: s-maj=78.0km s-min=29.0km az=89.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.49**	**323**	Pn	Pn	14 23 15.4	0.0
	1.8nm,0.3s,baz=170,slow=3.0,SNR=8.4						
KRVT				Sn	Sn	14 23 58.5	+1.1
	5.1nm,0.3s,baz=218,slow=23,SNR=2.4						
WRA	**Warramunga Arr**	**23.05**	**234**	P	P	14 27 28.3	+1.2
	0.8nm,0.7s,baz=56,slow=9.9,SNR=5.0						
ASAR	**Alice Springs**	**25.46**	**228**	P	P	14 27 48.6	-1.2
	0.5nm,0.8s,baz=60,slow=9.3,SNR=7.8						
MKAR	**Makanchi Array**	**82.93**	**319**	P	P	14 34 47.2	+0.5
	0.2nm,0.7s,baz=103,slow=5.3,SNR=2.6						

*JMA **17** 14:28:24.1*±*0.4,43°.81N*×*148°.29E, h0km, M4.1*
*SKHL **17** 14:28:26.7*±*0.4,44°.36N*×*148°.36E, h77km*±*5km, mb4.4/5*
*IDC **17** 14:28:31.8*±*3.1,44°.92N*×*148°.17E, h66km*±*27km, mb3.5/11, mb1 3.6/13,mb1mx3.4/46, mbtmp3.7/13, ML3.0/2, Error ellipse: s-maj=31.9km s-min=18.9km az=150.0*

ISC 17 14:28:25.6±1.5, **44°.26N**±0°.08×**148°.46E**±0°.09, **h45**km±13km, **n39**, σ1ᵍ27/42, **mb3.8**/11, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.06**	**337**	*i* P	**Pn**	**14 28 44.2**	**+0.2**
KUR				AMB	AMB	14 28 45.0	
	200nm,0.3s						
KUR				*i* S	**Sn**	**14 28 57.6**	**+0.1**
KUR				A	A	14 28 59.0	
	480nm,0.3s						
KUR				A	A	14 28 59.0	
	440nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.88**	**264**	*e*P	**Pn**	**14 28 56.3**	**+1.1**
YUK				AMB	AMB	14 28 59.0	
	100nm,0.3s						
YUK				*e*S	**Sn**	**14 29 18.1**	**+0.3**
YUK				A	A	14 29 20.1	
	410nm,0.3s						
YUK				A	A	14 29 20.1	
	200nm,0.3s						
LAGR	**Lagunnoye**	**1.93**	**265**	*e*P	**Pn**	**14 28 55.3**	**-0.7**
LAGR				AMB	AMB	14 28 57.0	
	110nm,0.3s						
LAGR				*e*S	**Sn**	**14 29 17.6**	**-1.4**
LAGR				A	A	14 29 20.0	
	500nm,0.3s						
LAGR				A	A	14 29 20.0	
	440nm,0.3s						
GRPR	**Tuman**	**1.95**	**263**	*e*P	**Pn**	**14 28 55.7**	**-0.5**
GRPR				AMB	AMB	14 29 00.0	
	100nm,0.2s						
GRPR				*e*S	**Sn**	**14 29 19.7**	**+0.2**
GRPR				A	A	14 29 21.0	
	500nm,0.4s						
GRPR				A	A	14 29 21.0	
	290nm,0.4s						
NEM2	**Nemuro 2**	**2.16**	**246**	P	**Pn**	**14 28 58.5**	**-0.6**
NEM2				*e*S	**Sn**	**14 29 23.8**	**-0.8**
NMR	**Nemuro--Hokkai**	**2.17**	**247**	*e*P	**Pn**	**14 28 58.7**	**-0.5**
NMR				*e*S	**Sn**	**14 29 22.9**	**-1.9**
JRA	**Rausu**	**2.42**	**263**	P	**Pn**	**14 29 03.9**	**+1.2**
JRA				*e*S	**Sn**	**14 29 33.0**	**+1.9**
JNSB	**Nemuroshibetsu**	**2.54**	**260**	P	**Pn**	**14 29 05.8**	**+1.6**
JNK	**Nakash**	**2.79**	**257**	P	**Pn**	**14 29 08.3**	**+0.7**
JNK				*e*S	**Sn**	**14 29 40.4**	**+0.4**
JAK	**Akkeshi**	**3.01**	**246**	P	**Pn**	**14 29 10.4**	**-0.3**
JTKR	**Abashiri--Toko**	**3.29**	**266**	P	**Pn**	**14 29 17.2**	**+2.6**
JAR	**Ashorobuto**	**3.53**	**256**	P	**Pn**	**14 29 19.2**	**+1.3**
JAR				*e*S	**Sn**	**14 30 00.3**	**+2.0**
JCH	**Churui**	**4.06**	**248**	P	**Pn**	**14 29 26.4**	**+1.3**
ASAJ	**Asahikawa**	**4.22**	**270**	P	**Pn**	**14 29 30.9**	**+3.5**
	0.9nm,0.3s,baz=94,slow=13,SNR=5.8						
ASAJ				S	Sn	14 30 28.5	+13
	0.3nm,0.3s,baz=103,slow=24,SNR=1.7						
YSS	**Yuzh-Sakhalins**	**4.82**	**306**	*e*P	**Pn**	**14 29 36.3**	**+0.7**
YSS				AMB	AMB	14 29 37.8	
	10.0nm,0.2s						
YSS				*e*S	**Sn**	**14 30 28.3**	**-1.8**
YSS				A	A	14 30 32.3	
	20nm,0.3s						
YSS				A	A	14 30 32.3	
	10.0nm,0.3s						
SKR	**Severo-Kuril's**	**8.25**	**36**	*e*P	**Pn**	**14 30 23.9**	**+1.3**
PETK	**Petropavlovsk-**	**10.74**	**31**	P	**Pn**	**14 30 57.5**	**+0.7**
	0.6nm,0.3s,baz=207,slow=16,SNR=14						
EKMR	**Ekimchan**	**13.49**	**316**	*e*P	**Pn**	**14 31 31.5**	**-2.7**
SEY	**Seymchan**	**18.84**	**6**	*e*P	**P**	**14 32 40.3**	**-1.1**
H11N2	**WAKE ISLAND Hy**	**28.90**	**142**	T	T	15 05 02.8	
	baz=332,slow=76,SNR=73						
H11N1	**WAKE ISLAND Hy**	**28.91**	**142**	T	T	15 05 18.7	
	baz=332,slow=76,SNR=57						
H11N3	**WAKE ISLAND Hy**	**28.91**	**142**	T	T	15 05 07.6	
	baz=332,slow=76,SNR=57						
TIXI	**Tiksi**	**29.06**	**347**	*e*P	**P**	**14 34 20.4**	**-0.7**
H11S1	**WAKE ISLAND Hy**	**29.89**	**143**	T	T	15 06 20.2	
	baz=333,slow=76,SNR=78						
H11S3	**WAKE ISLAND Hy**	**29.90**	**143**	T	T	15 06 17.1	
	baz=333,slow=76,SNR=54						
H11S2	**WAKE ISLAND Hy**	**29.91**	**143**	T	T	15 06 22.3	
	baz=333,slow=76,SNR=57						
ILAR	**Eielson Array**	**40.52**	**37**	P	**P**	**14 36 00.0**	**+0.3**
	0.2nm,0.5s,baz=270,slow=8.1,SNR=4.6						
ZALV	**Zalesovo Beam**	**41.44**	**307**	P	**P**	**14 36 07.3**	**-0.3**
	0.6nm,0.3s,baz=84,slow=9.2,SNR=2.0						
MKAR	**Makanchi Array**	**45.18**	**298**	P	**P**	**14 36 38.0**	**+0.2**
	0.6nm,0.7s,baz=79,slow=8.5,SNR=6.4						
MKAR	**Makanchi Array**	**45.18**	**298**	*e*P	**P**	**14 36 37.8**	**0.0**
INK	**Inuvik**	**45.48**	**31**	P	**P**	**14 36 40.8**	**+0.9**
	0.9nm,0.5s,baz=315,slow=5.5,SNR=6.6						
YKA	**Yellowknife Ar**	**54.85**	**34**	P	**P**	**14 37 50.9**	**+0.1**
	0.3nm,0.6s,baz=301,slow=6.5,SNR=4.7						
FINES	**FINESS Array B**	**64.84**	**333**	P	**P**	**14 38 58.5**	**-0.9**
	1.0nm,0.6s,baz=41,slow=6.1,SNR=5.9						
GEYT	**Alibeck**	**65.02**	**299**	P	**P**	**14 39 01.4**	**+0.4**
	0.9nm,0.4s,baz=60,slow=3.5,SNR=2.6						
WRA	**Warramunga Arr**	**65.19**	**195**	P	P	14 39 10.0	+8.0
	0.5nm,0.7s,baz=6.3,slow=6.8,SNR=3.2						
NB2	**NORSAR Subarra**	**69.46**	**339**	P	**P**	**14 39 28.1**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=32,slow=6.9						
NOA	**NORSAR Array B**	**69.46**	**339**	P	**P**	**14 39 28.4**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=30,slow=6.6,SNR=4.1						
AKASG	**Malin Array Be**	**71.72**	**324**	P	**P**	**14 39 43.0**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=29,slow=7.4,SNR=2.3						
GERES	**GERESS Array B**	**79.17**	**331**	P	**P**	**14 40 25.9**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=57,slow=4.9,SNR=4.2						

*AEIC **17** 14:43:15.1*±*1.1,60°.02N*±*0°.06×153°.35W*±*0°.08, h158km*±*5km, ML2.9, Error ellipse: s-maj=8.3km s-min=5.8km az=186.0*
*NEIC **17** 14:43:15.1*±*1.0,60°.06N*±*0°.06×153°.5W*±*0°.1, h157km*±*6km, Error ellipse: s-maj=10.5km s-min=8.1km az=95.0*
*IDC **17** 14:43:16.1*±*2.9,60°.05N*×*152°.70W, h121km*±*22km, mb3.0/1, mb1 3.1/4, mb1mx2.9/45, mbtmp3.2/4, Error ellipse: s-maj=61.3km s-min=11.5km az=100.0*

ISC 17 14:43:14.3±1.1, **60°.03N**±0°.04×**153°.41W**±0°.05, **h163**km±6km, **n71**, σ0ᵍ93/82, **Southern Alaska**

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

ILW	**Iliamna West**	**0.14**	**78**		**Pn**	**14 43 36.4**	**+0.1**
ILS	**Iliamna Low So**	**0.19**	**113**		**Pn**	**14 43 36.3**	**0.0**
IVE	**Iliamna Volcan**	**0.20**	**94**		**Pn**	**14 43 36.5**	**+0.2**
IVE					**Sn**	**14 43 52.7**	**-0.4**
RED	**Redoubt Volcan**	**0.50**	**39**		**Pn**	**14 43 37.4**	**+0.1**
RED					**Sn**	**14 43 54.1**	**-0.7**
RDWB	**Redoubt West**	**0.54**	**31**		**Pn**	**14 43 37.6**	**+0.1**
RDWB					**Sn**	**14 43 54.3**	**-1.0**
RSO	**Redoubt South**	**0.54**	**37**		**Pn**	**14 43 37.9**	**+0.3**
RDJH	**Redoubt Jeurge**	**0.64**	**28**		**Pn**	**14 43 38.2**	**+0.2**
RDJH					**Sn**	**14 43 55.5**	**-0.7**
AU22	**Augustine Moun**	**0.66**	**178**		**Pn**	**14 43 38.2**	**+0.2**
AUW	**Augustine West**	**0.66**	**183**		**Pn**	**14 43 38.5**	**+0.4**
DFR	**Drift River**	**0.67**	**32**		**Pn**	**14 43 38.2**	**+0.1**
DFR					**Sn**	**14 43 55.7**	**-0.8**
AUP	**Augustine Pinn**	**0.67**	**181**		**Pn**	**14 43 38.6**	**+0.4**
HOM	**Homer**	**0.97**	**112**		**Pn**	**14 43 40.7**	**+0.7**
CNPM	**China Poot**	**1.21**	**114**		**Pn**	**14 43 42.5**	**+0.4**
CNPM					**Sn**	**14 44 02.1**	**-1.4**
BRLK	**Bradley Lake**	**1.30**	**101**		**Pn**	**14 43 43.5**	**+0.5**
SPCR	**Spurr Chakacha**	**1.31**	**26**		**Pn**	**14 43 43.5**	**+0.4**
SPWE	**Spurr West**	**1.32**	**18**		**Pn**	**14 43 44.0**	**+0.8**
SPBG	**Spurr Blockage**	**1.33**	**22**		**Pn**	**14 43 43.8**	**+0.5**
CAPN	**Captain Cook N**	**1.34**	**56**		**Pn**	**14 43 45.1**	**+1.8**
BRSE	**Bradley Lake S**	**1.38**	**101**		**Pn**	**14 43 44.2**	**+0.5**
BRSE					**Sn**	**14 44 04.9**	**-1.3**
SPCG	**Spurr Capps Gl**	**1.44**	**28**		**Pn**	**14 43 44.7**	**+0.4**
SVW2	**Sparrevohn**	**1.52**	**316**		**Pn**	**14 43 45.0**	**0.0**
SLKM	**Skilak Lake**	**1.66**	**72**		**Pn**	**14 43 46.5**	**0.0**
STLK	**Strandline Lak**	**1.66**	**27**		**Pn**	**14 43 46.9**	**+0.4**
SEW	**Seward**	**1.98**	**86**		**Pn**	**14 43 50.4**	**+0.4**
KABU	**Katmai Buttres**	**2.01**	**209**		**Pn**	**14 43 50.7**	**+0.2**
KABU					**Sn**	**14 44 17.6**	**-0.8**
RC01	**Rabbit Creek A**	**2.10**	**58**		**Pn**	**14 43 51.0**	**-0.4**
RC01					**Sn**	**14 44 18.4**	**-1.6**
KDAK	**Kodiak Island**	**2.29**	**169**	P	**Pn**	**14 43 52.2**	**-1.4**
	0.8nm,0.3s,baz=7.1,slow=8.1,SNR=21						
KDAK				S	**Sn**	**14 44 21.9**	**-2.1**
	12nm,0.3s,baz=287,slow=19,SNR=58						
PMR	**Palmer**	**2.62**	**51**		**Pn**	**14 43 56.2**	**-1.1**
PWL	**Port Wells**	**2.65**	**70**		**Pn**	**14 43 57.2**	**-0.7**
KNK	**Knik Glacier**	**2.80**	**58**		**Pn**	**14 43 58.9**	**-0.8**
GHO	**Glory Hole Cre**	**2.80**	**49**		**Pn**	**14 43 58.9**	**-0.8**
OHAK	**Old Harbor**	**2.82**	**179**		**Pn**	**14 43 58.6**	**-1.3**
PPLA	**Purkeypile**	**2.93**	**11**		**Pn**	**14 44 02.7**	**+1.2**
SML	**Sawmill**	**3.05**	**52**		**Pn**	**14 44 02.0**	**-0.8**
TT01	**Tatalina**	**3.15**	**338**		**Pn**	**14 44 04.2**	**+0.2**
TTA	**Tatalina**	**3.17**	**338**		**Pn**	**14 44 04.1**	**-0.2**
GLI	**Glacier Island**	**3.24**	**72**		**Pn**	**14 44 04.0**	**-1.2**
HIN	**Hinchinbrook I**	**3.47**	**81**		**Pn**	**14 44 08.3**	**+0.2**
SCM	**Sheep Creek Mo**	**3.47**	**56**		**Pn**	**14 44 07.7**	**-0.5**
FID	**Port Fidalgo**	**3.51**	**75**		**Pn**	**14 44 07.4**	**-1.2**
KTH	**Kantishna Hill**	**3.73**	**17**		**Pn**	**14 44 12.0**	**+0.6**
TRF	**Thorofare Moun**	**3.74**	**22**		**Pn**	**14 44 12.2**	**+0.6**
WAT2	**Susitna Watana**	**3.74**	**36**		**Pn**	**14 44 10.0**	**-1.6**
EYAK	**Cordova Ski Ar**	**3.85**	**79**		**Pn**	**14 44 13.2**	**+0.4**
RND	**Reindeer**	**4.02**	**31**		**Pn**	**14 44 14.9**	**-0.2**
DHY	**Denali Highway**	**4.20**	**41**		**Pn**	**14 44 17.3**	**-0.2**
BPAW	**Bear Paw Mtn.**	**4.24**	**15**		**Pn**	**14 44 17.3**	**-0.6**
MCK	**McKinley**	**4.28**	**28**		**Pn**	**14 44 18.2**	**-0.2**
PAX	**Paxson**	**4.81**	**49**		**Pn**	**14 44 25.6**	**+0.2**
GLB	**Gilahina Butte**	**4.92**	**69**		**Pn**	**14 44 27.1**	**+0.3**
NEA	**Nenana**	**4.99**	**22**		**Pn**	**14 44 27.3**	**-0.3**
VRDI	**Verde Repeater**	**5.05**	**272**		**Pn**	**14 44 28.8**	**+0.1**
WRH	**Wood River Hil**	**5.10**	**27**		**Pn**	**14 44 28.7**	**-0.5**
MCARA	**McCarthy VSAT**	**5.28**	**71**		**Pn**	**14 44 32.6**	**+1.1**
CCB	**Clear Creek Bu**	**5.32**	**27**		**Pn**	**14 44 31.5**	**-0.4**
HDA	**Harding Lake**	**5.33**	**32**		**Pn**	**14 44 32.1**	**-0.1**
MENT	**Mentasta**	**5.48**	**54**		**Pn**	**14 44 34.7**	**+0.5**
MDM	**Murphy Dome**	**5.50**	**24**		**Pn**	**14 44 34.4**	**+0.1**
RIDG	**Independent Ri**	**5.50**	**44**		**Pn**	**14 44 34.6**	**+0.2**
TCOL	**CIGÖ, UAF Yank**	**5.50**	**26**		**Pn**	**14 44 34.4**	**+0.1**
PTPK	**Patty Peak**	**5.51**	**73**		**Pn**	**14 44 35.9**	**+1.1**
KIAG	**Kiagna River**	**5.54**	**76**		**Pn**	**14 44 36.0**	**+0.9**
BALM	**Baldy**	**5.55**	**75**		**Pn**	**14 44 35.9**	**+0.7**
IL31		**5.64**	**30**		**Pn**	**14 44 35.9**	**-0.3**
ILAR	**Eielson Array**	**5.64**	**30**	P	**Pn**	**14 44 35.9**	**-0.4**
	0.7nm,0.3s,baz=219,slow=13,SNR=55						
ILAR				S	**Sn**	**14 45 36.5**	**-3.9**
	0.7nm,0.3s,baz=203,slow=24,SNR=8.4						
DOT	**Dot Lake**	**5.72**	**47**		**Pn**	**14 44 37.3**	**0.0**
BARN	**Barnard Glacie**	**5.89**	**75**		**Pn**	**14 44 41.2**	**+1.4**
SCRK	**Sand Creek**	**5.94**	**44**		**Pn**	**14 44 40.0**	**-0.3**
CTGM	**Chitina Glacie**	**6.04**	**76**		**Pn**	**14 44 43.1**	**+1.4**
YKA	**Yellowknife Ar**	**18.62**	**66**	P	**Pn**	**14 47 20.9**	**-0.4**
	0.0nm,0.3s,baz=278,slow=9.8,SNR=6.6						
PDAR	**Pinedale Array**	**31.60**	**103**	P	**P**	**14 49 24.1**	**+2.4**
	0.2nm,0.4s,baz=335,slow=7.9,SNR=4.6						

*IDC **17** 14:47:33.1*±*0.5, 17°.07N*×*60°.22W, h0km, mb4.1/21, mb1 4.3/26, mb1mx4.2/38, mbtmp4.2/26, ML3.6/5, MS3.9/8, Ms1 3.9/8, ms1mx3.5/35, Error ellipse: s-maj=14.8km s-min=12.7km az=110.0*
*NEIC **17** 14:47:35.0*±*1.8, 17°.12N*±*0°.05×60°.30W*±*0°.08, h10km*±*1km, mb4.6/21, Error ellipse: s-maj=13.9km s-min=7.4km az=76.0*
*TRN **17** 14:47:35.3, 17°.15N×60°.21W, h28km, MD5.2*

ISC 17 14:47:34.9±1.8, **17°.15N**±0°.03×**60°.30W**±0°.04, **h11**km±11km, **n161**, σ1ᵍ16/175, **mb4.4**/31, **MS3.9**/8, **Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABD	**La Joyeuse, An**	**1.32**	**240**	*e*P	**Pg**	**14 48 00.5**	**+0.1**
ABD				*e*S	**Sg**	**14 48 18.4**	**+0.8**
ANWB	**Willy Bob**	**1.51**	**290**	*e*P	**Pn**	**14 48 01.8**	**-0.1**
ANWB	**Willy Bob**	**1.51**	**290**	*e*	Pg	14 48 14.1	+10
ANWB				*e*S	**Sn**	**14 48 21.1**	**-0.5**
ANWB	**Willy Bob**	**1.51**	**290**		**Pn**	**14 48 01.8**	**-0.1**
MAGL	**Barre de l'ile**	**1.52**	**219**	*e*P	**Pn**	**14 48 02.2**	**+0.2**
MAGL				*e*S	**Sb**	**14 48 22.5**	**+0.1**
CBE	**Ff, Capester**	**1.65**	**230**	*e*P	**Pb**	**14 48 04.7**	**-0.7**
CBE				*e*S	**Sg**	**14 48 28.7**	**+0.6**
TDBA	**Terre de Bas,**	**1.82**	**225**	*e*P	**Pb**	**14 48 07.7**	**-0.6**
TDBA				*e*S	**Sb**	**14 48 30.5**	**+0.6**
MLYT	**Lee's Yard**	**1.86**	**257**	*e*P	**Pb**	**14 48 08.7**	**-0.2**
MLYT				*e*S	**Sb**	**14 48 32.2**	**0.0**
DLPL	**La Plaine**	**2.02**	**207**	*e*P	**Pb**	**14 48 10.6**	**-1.1**
DLPL				*e*S	**Sn**	**14 48 33.9**	**-0.4**
DLPL	**La Plaine**	**2.02**	**207**		**Pn**	**14 48 09.1**	**+0.1**
MDN	**Morne-Daniel**	**2.10**	**210**	*e*P	**Pb**	**14 48 12.3**	**-0.7**
MDN				*e*S	**Sb**	**14 48 38.4**	**-0.8**
NVDO	**Nevis, Disaste**	**2.22**	**270**	*e*S	**Sb**	**14 48 41.6**	**-1.0**
SKI	**Saint Kitts**	**2.34**	**275**	*e*P	**Pn**	**14 48 14.9**	**+1.6**
SKI				*e*S	**Sb**	**14 48 45.0**	**-1.0**
SKI	**Saint Kitts**	**2.34**	**275**		**Pn**	**14 48 14.5**	**+1.1**
ILAM	**Ilet Lapin Mar**	**2.42**	**193**	*e*P	**Pn**	**14 48 15.1**	**+0.7**
ILAM	**Ilet Lapin Mar**	**2.42**	**193**	*e*	Pg	14 48 28.4	+6.9
ILAM				*e*S	**Sn**	**14 48 43.5**	**-0.7**
SVN	**Savane Anatole**	**2.44**	**200**	*e*P	**Pn**	**14 48 15.1**	**+0.3**
BAMF	**Morne Balai**	**2.46**	**200**	*e*P	**Pn**	**14 48 15.5**	**+0.5**
CXM	**Morne La Croix**	**2.47**	**200**	*e*P	**Pn**	**14 48 15.5**	**+0.3**
PCM	**Pelee Case Pet**	**2.48**	**201**	*e*P	**Pn**	**14 48 15.5**	**+0.2**
GBMF	**Grand Be**	**2.48**	**200**	*e*P	**Pn**	**14 48 15.4**	**+0.1**
PML	**Morne Lenard**	**2.50**	**200**	*e*P	**Pn**	**14 48 16.0**	**+0.4**
FDF	**Fort de France**	**2.54**	**199**	*e*P	**Pn**	**14 48 16.2**	**+0.2**
FDF				*e*S	**Sn**	**14 48 47.3**	**+0.3**
FDF	**Fort de France**	**2.54**	**199**		**Pn**	**14 48 16.1**	**0.0**
LPMF	**Morne Lapointe**	**2.64**	**194**	*e*P	**Pn**	**14 48 17.3**	**-0.2**
ZAM	**Aeronautique**	**2.66**	**195**	*e*P	**Pn**	**14 48 18.0**	**+0.4**
BIM	**Bigot**	**2.72**	**196**	*e*P	**Pn**	**14 48 19.9**	**+1.3**
BIM				*e*S	**Sn**	**14 48 51.8**	**+0.3**
MPOM	**Morne Pois Mar**	**2.74**	**191**	*e*P	**Pn**	**14 48 19.4**	**+0.5**
MPOM				*e*S	**Sn**	**14 48 51.1**	**-0.9**
SMRT	**St. Maarten**	**2.80**	**289**	*e*P	**Pn**	**14 48 20.1**	**+0.5**
SMRT				*e*S	**Sn**	**14 48 54.8**	**+1.5**
SMRT	**St. Maarten**	**2.80**	**289**		**Pn**	**14 48 20.1**	**+0.5**
SABA	**Saba**	**2.85**	**280**	*e*P	**Pn**	**14 48 22.0**	**+1.6**
SABA	**Saba**	**2.85**	**280**	Pn	**Pn**	**14 48 21.3**	**+1.0**
SLBI	**Saint Lucia, B**	**3.17**	**192**	*e*P	**Pn**	**14 48 25.8**	**+1.0**
SLBI				*e*S	**Sn**	**14 49 03.5**	**+0.9**
SLAC	**Saint Lucia, A**	**3.28**	**190**	*e*P	**Pn**	**14 48 27.0**	**+0.7**
SLAC				*e*S	**Sn**	**14 49 04.0**	**-1.4**
SLPA	**Patience**	**3.33**	**190**	*e*P	**Pn**	**14 48 27.7**	**+0.8**
SLPA				*e*S	**Sn**	**14 49 05.5**	**-1.0**
SLB	**Belfond**	**3.38**	**192**	*e*P	**Pn**	**14 48 30.1**	**+2.4**
SLB				*e*S	**Sn**	**14 49 08.0**	**+0.2**
SLDE	**Delcer**	**3.41**	**193**	*e*P	**Pn**	**14 48 28.4**	**+0.4**
SLDE				*e*S	**Sn**	**14 49 09.8**	**+1.4**

MCLT	**Moule a Chique**	**3.48**	**190**	*e*P	**Pn**	**14 48 30.4**	**+1.5**
MCLT				*e*S	**Sn**	**14 49 09.2**	**-0.9**
MCLT	**Moule a Chique**	**3.48**	**190**		**Pn**	**14 48 30.1**	**+1.1**
SFAN	**Fancy Village**	**3.84**	**193**	*e*P	**Pn**	**14 48 35.6**	**+1.7**
SFAN				*e*S	**Sn**	**14 49 18.1**	**-0.9**
SVV	**Soufriere Volc**	**3.91**	**193**	*e*P	**Pn**	**14 48 37.0**	**+2.1**
SVV	**Soufriere Volc**	**3.91**	**193**	*e*S	**Sn**	**14 49 22.7**	**+1.8**
SVCV	**St. Vincent, C**	**3.94**	**192**	*e*P	**Pn**	**14 48 36.9**	**+1.6**
SVCV	**St. Vincent, C**	**3.94**	**192**	*e*P	**Pn**	**14 48 37.2**	**+1.8**
SVCV				*e*S	**Sn**	**14 49 21.9**	**+0.4**
SVB	**Belmont**	**3.96**	**194**	*e*P	**Pn**	**14 48 37.1**	**+1.4**
SVB				*e*S	**Sn**	**14 49 21.6**	**-0.6**
SVB	**Belmont**	**3.96**	**194**		**Pn**	**14 48 36.7**	**+1.0**
BCHC	**Barbados, Cave**	**4.04**	**171**	*e*S	**Sn**	**14 49 25.7**	**+1.7**
BBGH	**Gun Hill**	**4.04**	**170**	*e*P	**Pn**	**14 48 37.8**	**+1.0**
BBSP	**Saint Philip**	**4.10**	**168**	*e*P	**Pn**	**14 48 37.9**	**+0.4**
STVI	**Saint Thomas**	**4.59**	**286**		**Pn**	**14 48 44.1**	**-0.2**
GCMP	**Grenada, Carri**	**4.76**	**193**	*e*P	**Pn**	**14 48 48.2**	**+1.6**
GCMP	**Grenada, Carri**	**4.76**	**193**	*e*S	**Sn**	**14 49 42.7**	**+0.8**
CUPR	**Culebra, Puert**	**4.89**	**284**		**Pn**	**14 48 48.0**	**-0.4**
GRSS	**Sisters**	**4.99**	**195**	*e*P	**Pn**	**14 48 52.1**	**+2.4**
GRSS	**Sisters**	**4.99**	**195**	*e*	**Sn**	**14 49 48.5**	**+1.1**
GRHS	**Sauteurs**	**5.07**	**195**	*e*P	**Pn**	**14 48 52.3**	**+1.5**
MTP	**Monte Pirata**	**5.10**	**281**		**Pn**	**14 48 51.6**	**+0.3**
GRGR	**Grenville**	**5.16**	**195**	*e*P	**Pn**	**14 48 54.3**	**+2.3**
GRGR	**Grenville**	**5.16**	**195**	*e*	**Sn**	**14 49 55.8**	**+4.2**
GRGR	**Grenville**	**5.16**	**195**		**Pn**	**14 48 53.8**	**+1.7**
HUMP	**Col San Antoni**	**5.38**	**281**		**Pn**	**14 48 55.8**	**+0.6**
CBYP	**Canovanas**	**5.42**	**283**		**Pn**	**14 48 56.6**	**+0.9**
GCPR	**Guaynabo City**	**5.63**	**283**		**Pn**	**14 48 59.9**	**+1.2**
SJG	**San Juan**	**5.66**	**281**	Pn	**Pn**	**14 49 00.2**	**+1.2**
	7.6nm,0.3s,baz=105,slow=17,SNR=16						
SJG				Sn	**Sn**	**14 50 03.1**	**-1.0**
	12nm,0.3s,baz=180,slow=18,SNR=3.9						
SJG	**San Juan**	**5.66**	**281**	*e*P	**Pn**	**14 49 00.3**	**+1.3**
SJG	**San Juan**	**5.66**	**281**		**Pn**	**14 48 59.6**	**+0.6**
TOSP	**Speyside**	**5.82**	**182**	*e*P	**Pn**	**14 49 02.7**	**+1.5**
TOSP	**Speyside**	**5.82**	**182**	*e*	**Sb**	**14 50 25.3**	**-0.9**
OBIP	**Obispado Ponce**	**6.08**	**279**		**Pn**	**14 49 06.3**	**+1.5**
AOPR	**Arecibo Observ**	**6.27**	**282**	*e*	Pn	14 48 56.5	-11
AOPR	**Arecibo Observ**	**6.27**	**282**	*e*S	**Sn**	**14 50 19.1**	**+0.1**
MLPR	**Magueyes Islan**	**6.49**	**278**	Pn	**Pn**	**14 49 11.1**	**+0.8

GERES	**GERESS Array B**	**66.79**	**44**	P	**P**	**14 58 26.9**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=256,slow=5.4,SNR=6.7						
OBKA	**Obir**	**67.39**	**46**	P	**P**	**14 58 30.9**	**+0.5**
	comp=Z,4.3nm,0.7s						
INK	**Inuvik**	**68.00**	**337**	P	**P**	**14 58 33.5**	**-0.3**
INK				IAmb	IAmb	14 58 34.8	
	comp=Z,2.2nm,0.6s						
DAWY	**Dawson**	**69.96**	**333**	P	**P**	**14 58 47.3**	**+1.2**
VYHS	**Vyhne**	**70.20**	**44**	*eP*	**P**	**14 58 49.0**	**+1.1**
EGAK	**Eagle**	**70.74**	**333**	P	**P**	**14 58 51.3**	**+0.5**
MENT	**Mentasta**	**71.90**	**331**	P	**P**	**14 58 59.0**	**+1.0**
ARCES	**ARCESS Array B**	**72.61**	**22**	P	**P**	**14 59 00.8**	**-1.2**
	comp=Z,2.6nm,0.7s,baz=248,slow=5.1,SNR=5.8						
ILAR	**Eielson Array**	**73.19**	**333**	P	**P**	**14 59 05.9**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=94,slow=5.3,SNR=19						
FINES	**FINESS Array B**	**73.38**	**30**	P	**P**	**14 59 07.6**	**+0.9**
	comp=Z,2.0nm,0.5s,baz=246,slow=4.1,SNR=24						
TRF	**Thorofare Moun**	**74.82**	**332**	P	**P**	**14 59 16.1**	**+0.8**
TRF				IAmb	IAmb	14 59 31.4	
	comp=Z,4.4nm,0.7s						
MLR	**Muntele Rosu**	**75.38**	**46**	P	**P**	**14 59 18.4**	**-0.5**
MLR				IAmb	IAmb	14 59 21.4	
	comp=Z,4.5nm,0.9s						
BRTR	**Keskin Array B**	**82.19**	**51**	P	**P**	**14 59 56.0**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=260,slow=4.9,SNR=5.7						
KBZ	**Khabaz**	**87.50**	**45**	P	**P**	**15 00 22.9**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=330,slow=8.6,SNR=3.3						
MJAR	**Matsushiro Arr**	**123.81**	**342**	PKP	**PKPdf**	**15 06 33.4**	**0.0**
	comp=Z,0.7nm,0.6s,baz=164,slow=0.9,SNR=5.2						
LZH	**Lanzhou**	**124.97**	**16**	*ePKP*	**PKPdf**	**15 06 34.8**	**-1.1**
LZH				pPKP	pPKPdf	15 06 37.8	-0.3
LZH				sPKP		15 06 39.3	
LZH				LR	LR		
	comp=N,51nm,17.8s						
LZH				LR	LR		
	comp=E,57nm,18.0s						
LZH				LR	LR		
	comp=Z,75nm,20.1s						
KSRS	**Korea Array**	**125.14**	**352**	PKP	**PKiKP**	**15 06 36.2**	**0.0**
	comp=Z,0.4nm,0.7s,baz=135,slow=57,SNR=2.3						
ASAR	**Alice Springs**	**165.20**	**240**	PKP	**PKPdf**	**15 07 39.5**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=149,slow=2.3,SNR=1.9						
WRA	**Warramunga Arr**	**165.84**	**256**	PKP	**PKPdf**	**15 07 39.5**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=106,slow=0.1,SNR=6.1						

NEIC ***17*** *15:07:44.6±1.1, 16.0°S±0.3°×173.2°W±0.1°, h10km±2km, mb4.4/10, Error ellipse: s-maj=45.0km s-min=9.2km az=163.0*

IDC ***17*** *15:07:58.8±33.0, 16.5°S×175.2°W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.6/33, mbtmp4.1/3, ML6.0/1, Error ellipse: s-maj=628.2km s-min=62.6km az=67.0*

ISC 17 15:08:00.6±16.0, **16.7°S**±0.9×**177.5°W**±°, **h10km, n18, σ1s12/17, mb4.5/9, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**12.79**	**191**	Pn	**Pn**	**15 11 02.9**	**+0.4**
	85nm,0.3s,baz=31,slow=19,SNR=2.1						
RAO	**Raoul Island**	**12.79**	**191**		**Pn**	**15 11 02.9**	**+0.4**
EIDS	**Eidsvold**	**32.56**	**249**	P	**P**	**15 14 31.3**	**-0.9**
EIDS				IAmb	IAmb	15 14 34.0	
	comp=Z,7.6nm,1.0s						
COEN	**Coen**	**40.17**	**268**	P	**P**	**15 15 39.5**	**+2.1**
STKA	**Stephens Creek**	**41.90**	**241**	P	**P**	**15 15 52.2**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=45,slow=5.7,SNR=3.5						
STKA	**Stephens Creek**	**41.90**	**241**	P	**P**	**15 15 52.2**	**+0.7**
STKA	**Stephens Creek**	**41.90**	**241**	IAmb	IAmb	15 15 52.9	
	comp=Z,0.3nm,0.7s						
BBOO	**Buckleboo**	**46.68**	**240**	P	**P**	**15 16 29.2**	**-0.5**
BBOO				IAmb	IAmb	15 16 31.1	
	comp=Z,3.5nm,1.1s						
WR0	**Warramunga Arr**	**47.68**	**258**	P	**P**	**15 16 37.5**	**-0.2**
WR0				IAmb	IAmb	15 16 39.0	
	comp=Z,5.1nm,1.1s						
WB0	**Warramunga Arr**	**47.83**	**258**	P	**P**	**15 16 38.4**	**-0.5**
WB0				IAmb	IAmb	15 16 44.5	
	comp=Z,3.6nm,1.1s						
WB2	**Warramunga Arr**	**47.85**	**258**	P	**P**	**15 16 38.2**	**-0.9**
WB2				IAmb	IAmb	15 16 52.3	
	comp=Z,5.2nm,1.1s						
WRAB	**Tennant Creek**	**47.86**	**258**	P	**P**	**15 16 37.9**	**-1.2**
WRAB				IAmb	IAmb	15 16 44.1	
	comp=Z,6.3nm,1.1s						
WRA	**Warramunga Arr**	**47.87**	**258**	P	**P**	**15 16 38.4**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=95,slow=7.5,SNR=33						
WRA	**Warramunga Arr**	**47.87**	**258**	P	**P**	**15 16 38.4**	**-0.8**
AS31	**Alice Springs**	**48.07**	**253**	P	**P**	**15 16 40.0**	**-0.7**
ASAR	**Alice Springs**	**48.07**	**253**	P	**P**	**15 16 40.0**	**-0.8**
	comp=Z,3.3nm,0.5s,baz=89,slow=8.3,SNR=85						
ASAR	**Alice Springs**	**48.07**	**253**	P	**P**	**15 16 40.0**	**-0.8**
FORT	**Forrest**	**53.30**	**244**	P	**P**	**15 17 17.8**	**-2.3**

NNC 17 15:15:49.3±1.5, **40.48N×79.48E, h0km, mb3.0, mpv2.7, 1C-3D, Error ellipse: s-maj=9.7km s-min=8.2km az=162.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	**Uzynbulak**	**2.69**	**353**	Pg	Pb	15 16 37.5	-0.8
	0.6nm,0.4s						
UZB				Lg	Lg	15 17 14.0	
	1.5nm,0.2s						
SATY	**Saty**	**2.70**	**343**	Pg	Pb	15 16 38.3	-0.3
	0.6nm,0.2s						
SATY				Lg	Lg	15 17 15.2	
	5.4nm,0.2s						
PDGK	**Podgornoye**	**2.84**	**0**	Pg	Pb	15 16 42.0	+1.0
	0.2nm,0.7s						
PDGK				Lg	Lg	15 17 21.1	
	1.3nm,0.6s						
KTMS	**Ketmen**	**3.03**	**12**	Pg	Pb	15 16 44.7	+0.5
KTMS				Lg	Lg	15 17 26.0	
	2.8nm,0.4s						
TNSS	**Tian-Shan**	**3.18**	**324**	Pg	Pb	15 16 47.5	+0.5
	0.6nm,0.1s						
TNSS				Lg	Lg	15 17 30.9	
	3.8nm,0.3s						
MDOK	**Medeo**	**3.24**	**327**	⇓Pg	Pb	15 16 47.7	-0.1
	0.7nm,0.4s						
MDOK				⇓Lg	Lg	15 17 31.3	
	3.4nm,0.5s						
MDOK	**Medeo**	**3.24**	**327**	Pg	Pb	15 16 48.1	+0.4
	0.7nm,0.3s						
IZV	**Izvestkoviy**	**3.33**	**321**	Pg	Pg	15 16 51.5	-1.7
	0.8nm,0.2s						
IZV				Lg	Lg	15 17 37.4	
	4.4nm,0.2s						
MTBS	**Maitube**	**3.50**	**320**	Pg	Pb	15 16 53.3	+1.3
	4.6nm,0.2s						
MTBS				Lg	Lg	15 17 40.7	
	10.0nm,0.1s						
KST	**Kastek**	**3.67**	**315**	Pg	Pg	15 16 58.2	-1.5
	0.6nm,0.3s						
MNBS	**Baschi**	**3.68**	**348**	Pg	Pb	15 16 55.6	+0.3
	0.5nm,0.4s						
TKM2	**Tokmak 2**	**3.80**	**311**	⇓Pg	Pb	15 16 57.2	-0.1
	1.7nm,1.4s						
TKM2				⇑Lg	Lg	15 17 49.3	
	1.2nm,0.6s						
CHKK	**Chushkaly**	**3.85**	**332**	Pg	Pb	15 16 59.4	+1.4
	1.3nm,0.4s						
DGS	**Degeres**	**3.91**	**316**	Pg	Pb	15 17 00.6	+1.4
	0.7nm,0.4s						
DGS				Lg	Lg	15 17 52.8	
	3.0nm,0.5s						
ARXS	**Arharly**	**3.92**	**342**	Pg	Pb	15 16 59.8	+0.4
	1.5nm,0.3s						
ARXS				Lg	Lg	15 17 51.4	
	2.4nm,0.6s						
KUU	**Kurty**	**4.13**	**327**	Pg	Pb	15 17 03.8	+0.8
	0.4nm,0.3s						
KUU				Lg	Lg	15 17 58.4	
	3.0nm,0.4s						

SOME ***17*** *15:16:21.4, 41.57N×79.00E, h0km*

KRNET 17 15:16:19.8±0.1, **41.30N×79.01E, h11km, mb1.9, 4C-4D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.00**	**296**	⇓*i*P	Pg	15 16 39.0	-0.2
	baz=96						
TARG				⇓*i*S	Sb	15 16 53.3	+0.4
KDJ	**Kajisay**	**1.60**	**302**	⇑*i*P	Pb	15 16 49.8	+0.2
	baz=2.0						
KDJ				⇑*i*S	Sg	15 17 11.7	+0.3
	baz=2.0						
ANVS	**Anan'yevo**	**1.79**	**326**	⇓*i*P	Pg	15 16 53.7	-0.5
	baz=26						
ANVS				⇓*i*S	Sg	15 17 17.5	+0.1
	baz=26						
SATY	**Saty**	**1.82**	**346**	*e*P	Pn	15 16 52.1	+0.9
	1.2nm,0.1s						
SATY				*e*S	Sn	15 17 14.2	-0.1
	3.0nm,0.1s						
ULHL	**Ulahol**	**2.28**	**295**	⇑*i*P	Pb	15 17 00.7	-0.4
	baz=95						
ULHL				⇑*i*S	Sb	15 17 30.0	+0.6
	baz=95						
TNSS	**Tian-Shan**	**2.32**	**319**	*e*P	Pb	15 17 02.2	+0.3
	1.3nm,0.1s						
TNSS				*e*S	Sb	15 17 31.8	+1.1
	2.9nm,0.1s						
KTMS	**Ketmen**	**2.36**	**24**	*e*P	Pb	15 17 02.7	+0.2
	0.1nm,0.1s						
KTMS				*e*S	Sb	15 17 32.4	+0.7
	0.9nm,0.0s						
MDOK	**Medeo**	**2.37**	**323**	*e*P	Pb	15 17 02.6	0.0
	1.2nm,0.1s						
MDOK				*e*S	Sb	15 17 32.2	+0.4
	4.0nm,0.3s						
KOTS	**Kotyrbulak**	**2.39**	**325**	*e*P	Pb	15 17 03.2	+0.2
	2.1nm,0.1s						
KOTS				*e*S	Sb	15 17 33.4	+0.8
	8.5nm,0.3s						
IZV	**Izvestkoviy**	**2.49**	**315**	*e*P	Pg	15 17 06.2	-1.4
	0.3nm,0.0s						
IZV				*e*S	Sg	15 17 38.5	-1.4
	3.2nm,0.1s						
MTBS	**Maitube**	**2.65**	**314**	*e*P	Pb	15 17 08.6	+1.2
	0.9nm,0.0s						
MTBS				*e*S	Sb	15 17 42.4	+2.5
	4.9nm,0.1s						
MNBS	**Baschi**	**2.81**	**351**	*e*P	Pb	15 17 10.0	-0.2
	0.6nm,0.1s						
MNBS				*e*S	Sb	15 17 44.9	+0.2
	5.6nm,0.2s						
KST	**Kastek**	**2.86**	**309**	*e*P	Pb	15 17 12.3	+1.3
	0.6nm,0.1s						
KST				*e*S	Sg	15 17 48.9	-2.8
	3.2nm,0.3s						
CHKK	**Chushkaly**	**2.96**	**330**	*e*P	Pb	15 17 13.1	+0.5
	0.6nm,0.0s						
CHKK				*e*S	Sb	15 17 50.3	+1.5
	6.2nm,0.1s						
KTBS	**Karatobe**	**2.96**	**325**	*e*P	Pb	15 17 13.2	+0.5
	0.2nm,0.1s						
KTBS				*e*S	Sb	15 17 50.3	+1.4
	5.3nm,0.2s						
ARXS	**Arharly**	**3.04**	**344**	*e*P	Pb	15 17 13.2	-0.8
	0.4nm,0.1s						
ARXS				*e*S	Sb	15 17 50.5	-0.7
	2.3nm,0.2s						
KUU	**Kurty**	**3.26**	**324**	*e*P	Pb	15 17 18.3	+0.7
	0.2nm,0.1s						
KUU				*e*S	Sb	15 17 59.2	+1.9
	1.3nm,0.1s						

IDC ***17*** *15:55:11.9±1.6, 7.52S×128.56E, h152km±20km, mb3.3/1, mb1 3.5/6, mb1mx3.2/28, mbtmp4.0/6, Error ellipse: s-maj=24.8km s-min=14.1km az=119.0*

ISC 17 15:55:11.1±0.9, **7.68S**±0.06×**128.75E**±0.09, **h151km, n6, σ2s72/11, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.61**	**243**	P	**Pn**	**15 56 33.9**	**+1.1**
	34nm,0.3s,baz=99,slow=3.1,SNR=58						
BATI				S	**Sn**	**15 57 34.8**	**-1.8**
	8.4nm,0.3s,baz=49,slow=24,SNR=3.1						
SIJI	**Sorong**	**7.22**	**20**	P	**Pn**	**15 56 54.1**	**-0.1**
	1.3nm,0.3s,baz=285,slow=23,SNR=22						
SIJI				S	**Sn**	**15 58 14.1**	**-1.0**
	0.5nm,0.3s,baz=209,slow=23,SNR=1.6						
FITZ	**Fitzroy Crossi**	**10.79**	**196**	P	**Pn**	**15 57 42.8**	**+1.2**
	1.1nm,0.3s,baz=27,slow=9.0,SNR=36						
FITZ				S	**Sn**	**15 59 38.4**	**-2.5**
	0.7nm,0.3s,baz=281,slow=22,SNR=2.8						
WRA	**Warramunga Arr**	**13.34**	**157**	P	**Pn**	**15 58 17.1**	**+2.5**
	0.3nm,0.3s,baz=343,slow=13,SNR=15						
WRA				S	**Sn**	**16 00 38.0**	**-4.4**
	0.4nm,0.3s,baz=336,slow=21,SNR=2.5						
ASAR	**Alice Springs**	**16.64**	**163**	P	**Pn**	**15 59 00.2**	**+4.4**
	0.3nm,0.3s,baz=335,slow=9.9,SNR=40						
ASAR				S	**S**	**16 02 00.9**	**+0.1**
	0.2nm,0.3s,baz=317,slow=18,SNR=5.0						
MKAR	**Makanchi Array**	**68.12**	**328**	P	**P**	**16 05 54.0**	**-0.9**
	0.5nm,0.6s,baz=128,slow=8.1,SNR=8.3						

IDC ***17*** *16:11:28.1±1.0, 14.67N×147.08E, h0km, mb3.8/14, mb1 4.0/14, mb1mx3.8/36, mbtmp3.9/14, MS3.2/5, Ms1 3.2/5, ms1mx2.8/50, Error ellipse: s-maj=30.8km s-min=16.8km az=97.0*

NEIC ***17*** *16:11:32.6±2.1, 14.6°N±0.1°×147.1°E±0.1°, h34km±6km, mb4.5/8, Error ellipse: s-maj=18.1km s-min=13.9km az=152.0*

ISC 17 16:11:32.2±0.7, **14.57N±0.10°×147.2E±0.1°, h33km, n30, σ1s27/24, mb4.1/17, MS3.1/4, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.44**	**247**		**Pn**	**16 12 08.9**	**-0.8**
PATS	**Pohnpei**	**13.37**	**124**	Pn	**Pn**	**16 14 38.5**	**-1.3**
KRVT	**Keravat (AS076**	**19.36**	**165**	LR	LR	16 23 37.2	
	comp=Z,105nm,18.4s,baz=318,slow=37						
H11N1	**WAKE ISLAND Hy**	**19.52**	**72**	T	T	16 36 23.5	
	baz=256						
H11N2	**WAKE ISLAND Hy**	**19.53**	**72**	T	T	16 36 19.1	
	baz=256						
H11N3	**WAKE ISLAND Hy**	**19.54**	**72**	T	T	16 36 17.6	
	baz=256						
SIJI	**Sorong**	**21.98**	**227**	P	**P**	**16 16 23.4**	**-0.2**
	15nm,1.1s,baz=37,slow=12,SNR=5.4						
FAKI	**Fak Fak**	**22.82**	**222**	P	**P**	**16 16 31.8**	**-0.7**
FAKI				IAmb	IAmb	16 16 36.5	
	comp=Z,36nm,1.3s						
MJAR	**Matsushiro Arr**	**23.30**	**342**	P	**P**	**16 16 34.6**	**-2.7**
	comp=Z,0.9nm,0.6s,baz=141,slow=8.4,SNR=8.6						
MAJO	**Matsushiro**	**23.30**	**342**	P	**P**	**16 16 37.0**	**-0.3**
MJB9	**Matsu-Tunnel**	**23.31**	**342**	P	**P**	**16 16 34.3**	**-3.0**
JNU	**Nakatsue**	**23.67**	**324**	P	**P**	**16 16 40.4**	**-0.5**
	comp=Z,3.7nm,0.8s,baz=180,slow=7.1,SNR=2.6						
JNU	**Nakatsue**	**23.67**	**324**	P	**P**	**16 16 38.7**	**-2.2**
JNU				IAmb	IAmb	16 16 52.9	
	comp=Z,16nm,1.2s						
HNR	**Honiara**	**27.00**	**151**	LR	LR	16 27 43.8	
	comp=Z,35nm,19.3s,baz=271,slow=36						
KSRS	**Korea Array**	**28.50**	**327**	P	**P**	**16 17 24.0**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=150,slow=10.0,SNR=4.5						
WRA	**Warramunga Arr**	**36.55**	**201**	P	**P**	**16 18 36.2**	**+1.2**
	comp=Z,0.9nm,0.9s,baz=20,slow=8.5,SNR=7.9						
PETK	**Petropavlovsk-**	**39.34**	**10**	LR	LR	16 34 41.3	
	comp=Z,39nm,21.2s,baz=244,slow=36						
ASAR	**Alice Springs**	**40.16**	**199**	P	**P**	**16 19 06.4**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=14,slow=6.2,SNR=7.9						
CMAR	**Chiang Mai Arr**	**46.30**	**282**	P	**P**	**16 19 55.5**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=68,slow=6.1,SNR=7.2						
CMAR				LR	LR	16 38 59.1	
	comp=Z,18nm,20.2s,baz=65,slow=36						
SONM	**Songino Array**	**47.26**	**323**	P	**P**	**16 20 03.0**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=135,slow=4.8,SNR=3.5						
SONM				LR	LR	16 39 01.8	
	comp=Z,27nm,21.0s,baz=90,slow=35						
ZALV	**Zalesovo Beam**	**62.15**	**324**	P	**P**	**16 21 49.5**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=101,slow=7.5,SNR=1.9						
MK31	**Makanchi Array**	**62.35**	**315**	P	**P**	**16 21 52.3**	**+0.7**
MK31				IAmb	IAmb	16 21 53.5	
	comp=Z,5.6nm,1.5s						
MKAR	**Makanchi Array**	**62.35**	**315**	P	**P**	**16 21 52.4**	**+0.8**
	comp=Z,1.5nm,0.5s,baz=90,slow=8.5,SNR=16						
MAKZ	**Makanchi**	**62.57**	**315**	P	**P**	**16 21 54.1**	**+1.1**
MAKZ				IAmb	IAmb	16 21 54.5	
	comp=Z,2.7nm,0.6s						
KURK	**Kurchatov**	**65.29**	**319**	P	**P**	**16 22 11.0**	**+0.2**
NRIK	**Noril'sk**	**65.95**	**340**	P	**P**	**16 22 14.6**	**-0.2**
	comp=Z,1.1nm,0.4s,baz=96,slow=8.5,SNR=4.1						
ILAR	**Eielson Array**	**66.73**	**25**	P	**P**	**16 22 21.1**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=266,slow=4.9,SNR=5.1						
YKA	**Yellowknife Ar**	**80.96**	**28**	P	**P**	**16 23 44.4**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=284,slow=5.0,SNR=8.2						
FINES	**FINESS Array B**	**91.21**	**336**	P	**P**	**16 24 33.0**	**-0.8**
	comp=Z,1.6nm,0.8s,baz=66,slow=6.7,SNR=1.8						
DBIC	**Dimbokro**	**145.14**	**305**	PKPbc	**PKPdf**	**16 31 07.5**	**+0.1**
	comp=Z,2.3nm,0.5s,baz=331,slow=5.1,SNR=4.2						

JMA 17 16:16:39.0±0.1, **24.36N×122.98E, h47km**±2km, **M1.5, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.10**	**341**	P	Pn	16 16 46.4	-0.1
JYNG				S	Sn	16 16 51.6	-0.1
YOJ	**Yonaguni jima**	**0.10**	**16**	P	Pn	16 16 46.5	0.0
YOJ				S	Sn	16 16 51.9	+0.1
YOJ	**Yonaguni jima**	**0.10**	**16**	P	Pn	16 16 46.8	+0.2
IRIF	**Iriomote-Funau**	**0.69**	**92**	P	Pn	16 16 52.3	-0.1
IRIF				*e*S	Sn	16 17 02.3	+0.2
HATJ	**Hateruma jima**	**0.81**	**112**	P	Pn	16 16 54.2	+0.1
JIJ	**Ishigaki jima**	**1.06**	**90**	P	Pn	16 16 57.4	-0.1
JIJ				*e*S	Sn	16 17 11.4	+0.3

TAP 17 16:23:27.5, **24.38N×121.75E, h18km**±1km, **ML1.3, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.05**	**352**	*e*P	Pg	16 23 31.5	+0.7
	baz=359						
ENA				S	Sg	16 23 33.7	+0.8
	baz=359						
NACB	**Ninganchiao**	**0.24**	**215**	P	Pb	16 23 33.7	+0.2
	baz=215						
NACB				S	Sb	16 23 37.8	+0.4
	baz=215						
TWC	**Suao**	**0.25**	**21**	*e*S	Sg	16 23 37.0	-0.1
	baz=23						
ETLH	**Xiulin Townshi**	**0.30**	**236**	P	Pb	16 23 34.8	+0.4
	baz=235						
ETLH				*e*S	Sb	16 23 39.8	+0.8
	baz=235						
ENTT	**Nioudou**	**0.31**	**328**	*e*P	Pb	16 23 35.6	+0.9
	baz=328						
ENTT				*e*S	Sb	16 23 40.3	+0.9
	baz=328						
NDT	**Datong Townshi**	**0.31**	**317**	P	Pb	16 23 35.4	+0.7
	baz=316						
NDT				*e*S	Sb	16 23 40.4	+0.9
	baz=316						
NNSB	**Datong**	**0.34**	**279**	S	Sb	16 23 40.8	+0.5
	baz=278						
NNSH	**Datong**	**0.34**	**279**	P	Pb	16 23 36.1	+0.9
	baz=278						
NNSH				S	Sb	16 23 40.8	+0.5
	baz=278						
NNS	**Nan Shan**	**0.35**	**281**	*e*P	Pb	16 23 35.5	+0.2
	baz=280						
NNS				S	Sb	16 23 41.4	+0.7
	baz=280						
NWLT	**Wulai**	**0.46**	**331**	*e*S	Sb	16 23 44.3	+0.6
	baz=330						
NSK	**Sanguang**	**0.47**	**310**	*e*S	Sb	16 23 44.2	+0.3
	baz=310						
WHF	**Hehuan Shan**	**0.50**	**243**	*e*S	Sb	16 23 45.7	+0.5
	baz=242						
TIPB	**Shuangxi**	**0.60**	**7**	eP	Pb	16 23 40.0	+0.4
	baz=6.0						
TIPB				S	Sb	16 23 47.8	+0.1
	baz=6.0						

JMA 17 16:23:39.0±0.3, **25.00N×123.36E, h31km, M1.1, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.62**	**211**	P	Pb	16 23 51.0	-0.5
YOJ				S	Sb	16 23 59.2	-0.8
JYNG	**Yonagunijimaku**	**0.66**	**215**	P	Pb	16 23 51.7	-0.5
JYNG				*e*S	Sn	16 24 01.4	-0.2
IRIF	**Iriomote-Funau**	**0.74**	**153**	P	Pn	16 23 53.1	-0.3
JIJ	**Ishigaki jima**	**0.95**	**132**	P	Pn	16 23 56.5	+0.2
JIJ				*e*S	Sn	16 24 07.8	-1.0
JISG	**Ishigakijimahi**	**0.96**	**115**	*e*S	Sn	16 24 08.0	-0.9
JKRS	**Kuro-shima**	**0.96**	**142**	P	Pn	16 23 56.1	-0.3
JKRS				*e*S	Sn	16 24 08.6	-0.4
HATJ	**Hateruma jima**	**1.02**	**157**	*e*S	Sb	16 24 10.9	-0.4

IDC 17 16:34:02.5±1.6, **28.12N×101.84E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.1/50, mbtmp3.2/3, Error ellipse: s-maj=80.7km s-min=29.0km az=60.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**9.98**	**196**	Pg	Pn	16 37 05.0	+38
	0.1nm,0.3s,baz=4.0,slow=18,SNR=6.7						
CMAR				Lg	Lg	16 39 16.1	
	0.0nm,0.3s,baz=5.5,slow=29,SNR=1.3						
MKAR	**Makanchi Array**	**24.14**	**326**	P	P	16 39 20.4	+0.2
	0.4nm,0.6s,baz=131,slow=10,SNR=4.5						
WRA	**Warramunga Arr**	**57.19**	**143**	P	P	16 43 50.5	-1.0
	0.4nm,0.8s,baz=331,slow=8.0,SNR=2.0						
ASAR	**Alice Springs**	**60.06**	**146**	P	P	16 44 12.2	+0.6
	0.1nm,0.6s,baz=330,slow=6.9,SNR=1.4						

MOS ***17*** *16:46:24.3±1.1, 49.82N×8.61E, h12km, mb4.1/3, Error ellipse: s-maj=5.8km s-min=4.6km az=67.9*

PRU ***17*** *16:46:24.1±0.0, 49.77N×8.47E, h0km, M3.6*

BGS ***17*** *16:46:25.4±1.4, 49.71N×8.92E, h11km±999km, ML4.2, ML4.2*

NEIC ***17*** *16:46:25.9, 49.92N×8.58E, h7km, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr=-0.11; Mθθ-1.62; Mθφ 1.72; Mrθ 1.20; Mrφ-1.24; Mφφ 1.80; Fault plane solution: Mo 3.00000×10^14 NP1:φ=206.86000°, δ87.86000°, λ-45.78000°. NP2:φ=299.05000°, δ44.26000°, λ-176.94000°. Principal axes: T 2.8789, Plg29.0000°, Azm263.0000°; N 0.2341, Plg44.0000°, Azm25.0000°; P -3.1131, Plg32.0000°, Azm152.0000°;*

IDC ***17*** *16:46:26.2±1.1, 49.78N×8.43E, h0km, mb3.5/3, mb1 3.7/9, mb1mx3.5/40, mbtmp3.6/9, ML3.6/5, MS2.7/4, Ms1 2.7/4, ms1mx2.4/41 Error ellipse: s-maj=15.1km s-min=9.4km az=62.0*

LDG ***17*** *16:46:27.4±0.1, 49.80N×8.69E, h5km, Md4.0/5, Ml4.1/58, Error ellipse: s-maj=1.2km s-min=1.0km az=80.0*

BUG ***17*** *16:46:27.5±0.5, 49.79N×8.65E, h10km±2km, MD4.1/12, ML4.6/12*

BNS ***17*** *16:46:27.9±0.5, 49.77N×8.64E, h10km±4km, ML3.9*

NEIC ***17*** *16:46:27±2.8

GWBC PmP 16 46 40.8
GWBC Sg Sb **16 46 48.0 +1.3**
KTD Kalmit 0.62 216 Pg Pb **16 46 39.3 +0.9**
KTD PmP 16 46 41.5
KTD Sg Sb **16 46 48.5 +1.7**
KTD SmS 16 46 51.0
KTD Kalmit 0.62 216 Pg Pb **16 46 39.5 +1.0**
FACH Fachingen 0.67 322 ⇓Pg Pn **16 46 40.7 0.0**
FACH PmP 16 46 42.2
FACH Sg Sn **16 46 50.4 -0.5**
ABH Alteburg 0.71 275 Pg Pb **16 46 40.8 +0.9**
ABH SmS 16 46 54.7
ABH Alteburg 0.71 275 Sg Sn **16 46 52.7 +0.9**
ABH Alteburg 0.71 275 Pg Pb **16 46 40.8 +0.9**
SIND Sindeldorf 0.79 127 ⇑Pg Pg **16 46 41.7 +0.3**
SIND Sg Sg **16 46 51.9 +0.1**
BRET Bretten 0.81 178 ⇓Pg Pb **16 46 42.5 +0.8**
BRET PmP 16 46 43.9
KOE Koeppel 0.83 316 ⇓*e*Pg Pn **16 46 44.0 +0.9**
BGG Burgeitz 0.92 295 ⇑*e*Pg Pn **16 46 45.2 +1.1**
BGG *e*Sg Sn **16 46 58.3 +1.3**
3µm,0.6s
GWBF Romrod 0.97 21 Pg Pn **16 46 45.7 +0.8**
PEB Petersbachel 0.97 219 ⇑Pg Pb **16 46 45.4 +1.0**
PEB Sg Sn **16 46 59.5 +1.3**
LANF Langenberg 1.01 213 Pn Pg **16 46 45.7 +0.2**
LANF Sg Sn **16 47 00.8 +1.6**
LANF Langenberg 1.01 213 Pg Pb **16 46 45.9 +0.9**
LANF Langenberg 1.01 213 Sg Sb **16 46 60.0 +2.0**
BIW Bindweide 1.04 331 ⇓Pn Pn **16 46 47.1 +1.3**
BIW ⇑Pg Pb **16 46 47.4 +1.8**
BIW PmP 16 46 47.9
SUBF Surbourg 1.05 210 Pg Pg **16 46 44.0 -2.3**
SUBF Surbourg 1.05 210 Sg Sg **16 46 58.8 -1.1**
BHE Schloss Buerre 1.08 300 *e*Pg Pn **16 46 48.9 +2.6**
BHE *e*Sg Sn **16 47 03.7 +2.8**
4µm,0.2s
LAGB Langenfeld Gru 1.12 299 Pn Pn **16 46 48.1 +1.1**
LAGB Pg Pg **16 46 49.0 +1.3**
LAGB Sg Sn **16 47 04.8 +2.8**
LBG Lerchenberg 1.17 175 Pn Pb **16 46 48.3 +0.5**
LBG Pg Pg **16 46 49.1 +0.6**
LBG PmP 16 46 50.0
LBG Sg Sn **16 47 05.1 +1.9**
HROE Hohe Rhon--Fla 1.21 53 Pg Pb **16 46 48.7 +0.2**
HROE *e*Sg Sn **16 47 05.4 +1.2**
RIVT Riveris 1.22 265 ⇑Pg Pg **16 46 49.9 +0.4**
RIVT Pg Pb **16 46 51.2 +2.6**
RIVT Sg Sn **16 47 08.3 +4.0**
AHRW Bad Neuenahr-A 1.23 306 Pn Pg **16 46 49.8 0.0**
AHRW Pg Pb **16 46 51.0 +2.2**
AHRW Sg Sn **16 47 07.8 +3.1**
DUP Duppenweiler 1.27 252 Pn Pg **16 46 50.5 0.0**
DUP Pg Pb **16 46 51.7 +2.2**
DUP Sg Sn **16 47 09.4 +3.7**
WBS Wahnbachtalspe 1.31 319 *e*Pg Pg **16 46 52.0 +0.8**
WBS *e*Sg Sg **16 47 09.7 +1.4**
2µm,0.3s
TDN Todenfeld 1.32 305 *e*Pg Pg **16 46 52.8 +1.3**
TDN *e*Sg Sg **16 47 10.5 +1.8**
3µm,0.3s
UBBA Unterbreizbach 1.32 41 Pg Pn **16 46 50.5 +0.9**
UBBA *e*Sg Sg **16 47 08.2 -0.5**
TUBL Tuebingen-Lenn 1.34 167 Pn Pn **16 46 50.9 +1.0**
TUBL Pg Pb **16 46 51.6 +0.9**
TUBL Sg Sg **16 47 09.6 +0.4**
HILG Hillesheim 1.34 291 *e*Pg Pg **16 46 51.9 0.0**
OPP Oppenau 1.36 193 ⇑Pn Pn **16 46 50.6 +0.3**
OPP Oppenau 1.36 193 Pn Pn **16 46 50.8 +0.6**
OPP Sn Sb **16 47 08.1 -0.1**
OPP Sg Sn **16 47 10.0 +2.0**
STR Strasbourg 1.37 205 Pg Pg **16 46 53.6 +1.3**
STB Steinbach 1.39 304 ⇓*e*Pg Pg **16 46 52.2 -0.5**
LOH Wallersheim-Lo 1.40 286 *e*Pg Pg **16 46 54.1 +1.1**
LOH *e*Sg Sg **16 47 12.3 +1.0**
2µm,0.3s
VITZ Vitzeroda 1.41 41 Pg Pb **16 46 52.1 +0.2**
HOBG Hohbusch 1.43 325 ⇓*e*Pg Pg **16 46 53.0 -0.5**
BUCH Bad Urach 1.46 161 Pn Pn **16 46 52.5 +0.9**
BUCH Pg Pg **16 46 54.4 +0.4**
BUCH Sg Sg **16 47 13.6 +0.6**
BNS Bensberg 1.47 321 ⇓*e*Pg Pb **16 46 53.6 +0.7**
BFO Black Forest 1.51 188 Pn Pn **16 46 52.9 +0.6**
BFO Pg Pg **16 46 55.5 +0.4**
BFO Sg Sg **16 47 15.1 +0.3**
BFO Black Forest 1.51 188 Pn **16 46 52.6 +0.2**
BFO Sn Sg **16 47 14.8 +0.1**
BLI Bleialf 1.57 286 Pn Pb **16 46 55.0 +0.4**
BLI Pg Pg **16 46 56.9 +0.8**
BLI Sg Sg **16 47 17.3 +0.8**
OLFT Oleftalsperre 1.57 296 *e*Pg Pg **16 46 56.1 -0.1**
OLFT *e*Sg Sg **16 47 16.5 -0.2**
LVIA Vianden 1.58 275 ⇑Pn Pn **16 46 54.7 +1.5**
LVIA Sn Sn **16 47 14.3 +1.0**
LVIA Sg Sg **16 47 17.9 +1.0**
comp=E,737nm,0.4s
SORT Sorpetalsperre 1.58 345 *e*Pg Pg **16 46 56.3 -0.1**
SORT *e*Sg Sg **16 47 16.0 -1.0**
comp=E,911nm,0.3s
CRUX Bergwerk Schwa 1.59 60 Pn Pn **16 46 53.6 +0.2**
HDH Heidenheim-Cha 1.61 140 Pn Pn **16 46 54.5 +0.7**
HDH Pg Pb **16 46 56.7 +1.3**
HDH Sg Sb **16 47 17.2 +1.8**
ENTS Ennepetalsperr 1.62 332 *e*Pg Pg **16 46 56.3 -0.8**
ENTS *e*Sg Sg **16 47 16.9 -1.2**
WLF Walferdange 1.62 265 ⇓Pn Pb **16 46 55.5 +0.1**
WLF Sn Sn **16 47 16.0 +1.7**
WLF Sg Sg **16 47 20.1 +1.9**
comp=N,744nm,0.5s
WLF Walferdange 1.62 265 Pn Pb **16 46 55.6 +0.2**
WLF Sn Sn **16 47 16.0 +1.7**
WLF Sg Sg **16 47 20.7 +2.5**
WLF Walferdange 1.62 265 P Pb **16 46 55.5 +0.1**
WLF 16 47 15.4
WLF Walferdange 1.62 265 Pb **16 46 55.5 +0.1**
WLF Sn Sn **16 47 15.4 +1.1**
WLS Welschbruch 1.65 211 Pn Pn **16 46 54.0 -0.2**
WLS Pg Pg **16 46 58.3 +0.7**
WLS Welschbruch 1.65 211 Pn Pn **16 46 54.4 +0.2**
WLS Sn Sn **16 47 15.6 +0.6**
WLS Sg Sg **16 47 19.5 +0.4**
LKLB Kalborn 1.66 280 ⇓Pn Pb **16 46 56.0 0.0**
LKLB Pg Pg **16 46 59.7 +1.9**
LKLB Sn Sg **16 47 18.5 -0.8**
LKLB Sg Sb **16 47 23.0 +6.4**
comp=N,834nm,0.4s
PLH Pulheim 1.66 316 *e*Pg Pb **16 46 56.9 +0.8**
PLH *e*Sg Sb **16 47 17.7 +1.2**
CDF Champ du Feu 1.67 213 *e*Pn Pn **16 46 54.5 -0.1**
CDF Champ du Feu 1.67 213 *e*Pg Pg **16 46 58.6 +0.4**
CDF *e*Sn Sn **16 47 15.7 -0.1**
CDF *e*Sg Sg **16 47 19.9 0.0**
comp=N,1µm,0.2s
CDF Champ du Feu 1.67 213 Pn **16 46 54.5 -0.1**
CDF Pg **16 46 58.6 +0.4**
CDF Sn **16 47 15.7 -0.1**
CDF Sg **16 47 19.9 0.0**
GRA1 Grafenberg Arr 1.68 94 Pn **16 46 54.8 +0.1**
GRF Grafenberg Arr 1.68 94 Pn Pn **16 46 55.4 +0.7**
GRF Pg Pb **16 46 57.3 +0.8**
GRF Sg Sb **16 47 19.0 +1.6**
GRF Grafenberg Arr 1.68 94 P Pn **16 46 54.8 +0.1**
KLL Kalltalsperre 1.70 300 *e*Pg Pn **16 46 56.5 +1.5**
GSH Grosshau 1.71 303 *e*Pg Pg **16 46 58.1 -0.8**
GSH *e*Sg Sb **16 47 19.7 +1.5**
comp=N,1µm,0.5s
DREG Dreilaegerbach 1.75 299 *e*Pg Pb **16 46 57.4 -0.4**
BHOU Houvegnez 1.77 288 Pn Pb **16 46 57.8 -0.3**
GUT Gutenstein 1.79 170 Pn Pn **16 46 57.0 +0.8**
GUT Sg Sg **16 47 23.6 +0.1**
BKLB Ruhr-Universit 1.83 332 Pn Pb **16 46 58.9 -0.2**
BUG Bochum--Univer 1.83 332 Pn Pb **16 46 59.1 0.0**
BTEZ Ruhr-Universit 1.84 333 Pn Pb **16 46 59.1 -0.1**
BULI Ruhr-Universit 1.85 332 Pn Pb **16 46 59.1 -0.3**
BULI Sn Sg **16 47 25.7 +0.2**
MEM Membach 1.86 296 Pn Pb **16 46 59.2 -0.3**
MEM Pg Pg **16 47 05.0 +3.2**
MEM Sn Sn **16 47 21.4 +1.1**
MEM Sg Sg **16 47 26.0 +0.1**
comp=N,1µm,0.5s
MEM Membach 1.86 296 Pn Pn **16 46 59.0 +1.8**
MEM Sg Sg **16 47 27.5 +1.6**
ECH Echery 1.88 212 ⇑Pn Pn **16 46 57.1 -0.4**
ECH Pg Pg **16 47 02.6 +0.4**
ECH Echery 1.88 212 P Pn **16 46 57.0 -0.4**
ECH Echery 1.88 212 Pn **16 46 57.0 -0.4**
ECH Echery 1.88 212 Pn Pn **16 46 57.2 -0.2**
ECH Sn Sn **16 47 22.0 +1.1**
ECH Echery 1.88 212 Pn Pn **16 46 57.4 -0.1**
ECH Sn Sn **16 47 21.9 +1.1**
FBB Freiburg im Br 1.90 196 Pg Pg **16 47 02.9 +0.5**
GTTG Gottingen 1.92 26 Pn Pn **16 46 59.3 +1.4**
HMES Hamm, Michael- 1.92 343 Pn Pb **16 47 00.8 +0.2**
HMES Sn Sb **16 47 26.0 +1.7**
KIZ Kirchzarten 1.93 194 ⇑Pn Pn **16 46 58.0 -0.1**
KIZ Sn Sn **16 47 21.7 -0.3**
KIZ Sg Sg **16 47 28.1 0.0**
KIZ Kirchzarten 1.93 194 Sn Sn **16 47 21.5 -0.5**
KIZ Sg Sg **16 47 27.8 -0.3**
KIZ Kirchzarten 1.93 194 Pn Pn **16 46 58.1 0.0**
GRB4 Grafenberg Arr 1.94 100 Pn Pb **16 47 01.7 +0.9**
EMING Emmingen-Lipti 1.94 176 Pn Pn **16 46 58.9 +0.6**
HGN Heimansgroeve 1.97 299 Pn Pb **16 47 00.8 -0.6**
HGN Pg Pg **16 47 04.5 +0.7**
HGN Sn Sb **16 47 27.1 +1.4**
BERGE Lenzkirch (DE) 1.98 189 Pn Pn **16 46 58.9 +0.1**
GRC2 Grafenberg Arr 2.03 117 Pn Pn **16 47 00.7 +1.2**
RWB Wassenberg 2.04 310 *e*Sg Sb **16 47 27.1 -0.5**
comp=N,1µm,0.4s
GRB2 Grafenberg Arr 2.05 105 Pn Pn **16 47 00.4 +0.6**
GRC1 Grafenberg Arr 2.06 113 Pn Pn **16 47 00.6 +0.7**
GRC1 Pg Pb **16 47 03.9 +0.9**
SLE Schleitheim 2.07 183 Pn Pn **16 47 00.2 +0.2**
SLE Schleitheim 2.07 183 P Pn **16 47 00.2 +0.2**
POSS Possen 2.07 42 Pn Pn **16 47 00.6 +0.6**
MOX Moxa 2.08 66 Pn Pn **16 47 00.5 +0.4**
MOX Moxa 2.08 66 P Pn **16 47 00.6 +0.4**
HKB Herkenbosch 2.08 312 Pn Pb **16 47 03.4 +0.1**
WALHA Wallhausen, DE 2.10 171 Pn Pn **16 47 01.3 +0.9**
WALHA Pg Pg **16 47 07.0 +0.7**
GRB5 Grafenberg Arr 2.11 109 Pn Pb **16 47 04.9 +1.1**
BSTI Sart Tilman 2.11 292 Pn Pb **16 47 03.1 -0.7**
BZER Hlnxe 2.12 329 Pn Pb **16 47 03.2 -0.7**
BZER Pg Pg **16 47 06.8 +0.2**
METMA Mettma DE 2.13 187 Pn Pn **16 47 00.9 +0.1**
METMA Sg Sg **16 47 34.2 -0.3**
BAVN Auguste-Victor 2.14 334 Pn Pb **16 47 04.6 +0.3**
SISB Singen-Schiene 2.15 174 Pn Pn **16 47 02.0 +0.9**
SISB Pg Pg **16 47 08.6 +1.3**
ENDD Endenburg 2.19 196 Pn Pn **16 47 01.4 -0.4**
ENDD Pg Pg **16 47 08.3 +0.3**
MOF Molkenrain 2.21 207 Pn Pn **16 47 01.6 -0.5**
MOF Pg Pg **16 47 08.9 +0.5**
MOF Molkenrain 2.21 207 Pn Pn **16 47 01.5 -0.5**
MOF Molkenrain 2.21 207 Sn Sn **16 47 30.1 +1.0**
RCHB Rochefort 2.22 280 ⇑Pn Pn **16 47 03.9 +1.8**
RCHB Sn Sn **16 47 30.9 +1.8**
RCHB Sg Sg **16 47 36.2 -1.3**
comp=N,412nm,0.3s
BCLA Clavier 2.23 287 ⇑Pn Pn **16 47 04.4 +2.3**
BCLA Pg Pg **16 47 09.8 +1.1**
BCLA Sn Sn **16 47 32.0 +2.8**
BCLA Sg Sg **16 47 37.7 +0.1**
comp=N,388nm,0.3s
CHRS Christianenhau 2.26 37 Pn Pn **16 47 03.1 +0.5**
PAGF Fort de Pagny 2.29 237 *e*Pn Pn **16 47 03.9 +0.8**
comp=N,681nm,0.5s,baz=58
PAGF Fort de Pagny 2.29 237 *e*Pg Pg **16 47 10.6 +0.6**
baz=58
PAGF *e*Sn Sn **16 47 30.8 -0.1**
PAGF *e*Sg Sg **16 47 40.1 +0.4**
comp=N,695nm,0.5s,baz=50
PAGF Fort de Pagny 2.29 237 Pn **16 47 03.9 +0.8**
PAGF Pg **16 47 10.6 +0.6**
PAGF Sn **16 47 30.8 -0.1**
PAGF Sg **16 47 40.1 +0.4**
CLZ Clausthal 2.30 28 Pn Pn **16 47 04.0 +0.8**
CLZ Pg Pg **16 47 10.4 +0.3**
BOPT Opiter 2.31 305 Pn Pn **16 47 05.1 +1.9**
BOPT Pg Pg **16 47 13.2 +3.0**
BOPT Sn Sg **16 47 40.0 -0.2**
ROTZ Rotzenmuhle 2.31 90 *e*Pn Pn **16 47 04.3 +0.9**
HINF Hinteralfeld 2.33 211 *e*Pn Pn **16 47 03.0 -0.6**
HINF Hinteralfeld 2.33 211 *e*Pg Pg **16 47 10.6 -0.1**
HINF *e*Sg Sg **16 47 40.7 -0.2**
comp=N,482nm,0.2s
HINF Hinteralfeld 2.33 211 P Pn **16 47 03.0 -0.6**
HINF Hinteralfeld 2.33 211 Pn **16 47 03.0 -0.6**
HINF Pg **16 47 10.6 -0.1**
HINF Sg **16 47 40.7 -0.2**
BGES Gesves 2.35 285 Pn Pn **16 47 05.9 +2.0**
BGES Sn Sn **16 47 33.8 +1.5**
BGES Sg Sg **16 47 40.9 -0.7**
comp=N,386nm,0.5s
UBR Ueberruh 2.36 155 Pn Pn **16 47 05.6 +1.6**
UBR Sg Sg **16 47 42.3 +0.5**
HAU Haudompre 2.37 220 *e*Pn Pn **16 47 03.6 -0.5**
HAU Haudompre 2.37 220 *e*Pg Pg **16 47 11.5 +0.1**
HAU *e*Sg Sg **16 47 41.7 -0.3**
comp=N,783nm,0.3s
HAU Haudompre 2.37 220 Pn **16 47 03.6 -0.5**
HAU Pg **16 47 11.5 +0.1**
HAU Sg **16 47 41.7 -0.3**
THEF They Montfort 2.37 228 Pn Pn **16 47 04.2 +0.1**
THEF They Montfort 2.37 228 Pn Pn **16 47 04.4 +0.3**
THEF They Montfort 2.37 228 Sn Sn **16 47 34.2 +1.4**
THEF Sg Sg **16 47 40.7 -1.4**
FUR Furstenfeldbru 2.41 133 Pn Pb **16 47 08.2 -0.6**
NEUB Neuenburg 2.44 54 *e*Pn Pn **16 47 05.9 +0.9**
GIVF Givet 2.48 278 *e*Pn Pn **16 47 07.6 +2.0**
GIVF Givet 2.48 278 *e*Pg Pg **16 47 14.1 +0.6**
GIVF *e*Sn Sn **16 47 36.1 +0.7**
comp=N,220nm,0.2s
GIVF *e*Sg Sg **16 47 45.7 +0.1**
comp=N,696nm,0.4s
GIVF Givet 2.48 278 P Pn **16 47 07.6 +2.0**
GIVF 16 47 36.1
GIVF Givet 2.48 278 Pn **16 47 07.6 +2.0**
GIVF Pg Pg **16 47 14.1 +0.6**
GIVF Sn Sn **16 47 36.1 +0.7**
GIVF LR 16 47 45.7
NKC Novy Kostel 2.49 79 *e*P Pn **16 47 06.5 +0.7**
NKC *e* 16 47 44.3
NKC Novy Kostel 2.49 79 *e*PN Pn **16 47 06.5 +0.7**
NKC *e*PG Pg **16 47 12.7 -1.0**
NKC *e*SN Sg **16 47 44.3 -1.7**
WIMM Wimmelburg 2.49 46 Pn Pn **16 47 06.6 +0.8**
IBBS Ibbenbueren So 2.52 348 Pn Pb **16 47 09.6 -1.2**
IBBS Pg Pg **16 47 14.5 +0.1**
TANN Tannenbergstha 2.53 75 Pn Pn **16 47 07.1 +0.7**
IBBE Ibbenbueren Ea 2.53 348 Pn Pb **16 47 09.4 -1.6**
IBBE Pg Pg **16 47 14.4 -0.1**
BMRD Maredsous 2.54 282 Pn Pn **16 47 08.5 +2.1**
BMRD Pg Pg **16 47 17.0 +2.4**
BMRD Sn Sn **16 47 39.8 +2.9**
BMRD Sg Sg **16 47 46.1 -1.4**
comp=N,419nm,0.6s
IBBN Ibbenburen 2.54 348 Pn Pb **16 47 09.6 -1.6**
IBBN Pg Pg **16 47 14.8 0.0**
BALST Balsthal 2.57 194 Pn Pn **16 47 06.8 -0.2**
BALST Pg Pg **16 47 14.6 -0.6**
LIENZ Kamor/St.Gall 2.60 167 Pn Pn **16 47 08.8 +1.4**
BOURR Bourrignon 2.61 201 Pn Pn **16 47 07.6 +0.2**
DOU Dourbes 2.62 277 Pn Pn **16 47 09.4 +1.9**
DOU Pg Pg **16 47 18.4 +2.2**
DOU Sn Sn **16 47 41.5 +2.5**
DOU Sg Sg **16 47 51.2 +0.9**
comp=E,303nm,0.4s
ASSE Asse, Remlinge 2.64 28 Pn Pn **16 47 09.3 +1.5**
BMOL Mol 2.66 303 Pn Pb **16 47 12.6 -0.5**
DAVA Damuels 2.67 162 Pn Pn **16 47 09.9 +1.5**
DAVA Damuels 2.67 162 *e*Pn Pn **16 47 10.1 +1.6**
comp=E,52nm,0.3s,SNR=51
DAVA *e*Pg Pg **16 47 18.8 +1.6**
comp=E,87nm,0.2s
DAVA Sg Sg **16 47 53.5 +1.6**
comp=E,518nm,0.3s
DAVA Damuels 2.67 162 Pn **16 47 10.1 +1.6**
DAVA Pg **16 47 18.8 +1.6**
DAVA Lg 16 47 53.5
MEZF Maizieres J'vi 2.70 242 *e*Pn Pn **16 47 09.4 +0.8**
baz=62
MEZF Maizieres J'vi 2.70 242 *e*Pg Pg **16 47 17.6 -0.1**
MEZF *e*Sg Sg **16 47 53.8 +1.1**
comp=E,178nm,0.3s
MEZF Maizieres J'vi 2.70 242 Pn **16 47 09.4 +0.8**
MEZF Pg **16 47 17.6 -0.1**
MEZF Sg **16 47 53.8 +1.1**
RETA Reutte 2.73 148 *e*Pn Pn **16 47 10.7 +1.5**
comp=E,24nm,0.1s,SNR=43
RETA *e*Sn Sn **16 47 40.4 -1.4**
comp=E,70nm,0.2s
RETA *e*Sg Sg **16 47 53.8 0.0**
comp=E,305nm,0.3s
RETA Reutte 2.73 148 Pn **16 47 10.7 +1.5**
RETA Sn **16 47 40.4 -1.4**
RETA Sg **16 47 53.8 0.0**
LOMF Lomont 2.75 207 Pn Pn **16 47 09.8 +0.3**
LOMF Sg Sg **16 47 55.1 +0.7**
LOMF Lomont 2.75 207 Pn Pn **16 47 09.3 -0.2**
NRDL Niedersach Rie 2.83 19 Pn Pn **16 47 12.9 +2.6**
WET Wettzell 2.85 102 Pn Pn **16 47 12.7 +2.0**
BAIF Baives 2.87 276 *e*Pn Pn **16 47 13.3 +2.3**
BAIF *e*Sn Sn **16 47 46.0 +0.9**
comp=E,126nm,0.3s
BAIF *e*Sg Sg **16 47 58.2 +0.1**
comp=E,517nm,0.4s
BAIF Baives 2.87 276 Pn **16 47 13.3 +2.3**
BAIF Sn **16 47 46.0 +0.9**
BAIF LR 16 47 58.2
SFTF Sexfontaines 2.87 237 *e*Pn Pn **16 47 11.2 +0.2**
SFTF Sexfontaines 2.87 237 *e*Pg Pg **16 47 20.9 -0.1**
SFTF *e*Sg Sg **16 47 57.7 -0.5**
comp=E,158nm,0.2s
SFTF Sexfontaines 2.87 237 Pn **16 47 11.2 +0.2**
SFTF Pg **16 47 20.9 -0.1**
SFTF Sg **16 47 57.7 -0.5**
SNF Seneffe 2.88 285 Pn Pn **16 47 13.6 +2.5**
BRQR Ronquire 2.94 287 Pn Pn **16 47 14.3 +2.4**
BRQR Pg Pb **16 47 20.1 +2.2**
RETH Rethem/Aller, 2.95 9 Pn Pn **16 47 14.3 +2.2**
MOTA Moosalm 2.98 146 *e*Pn Pn **16 47 14.0 +1.4**
comp=E,26nm,0.2s,SNR=28
MOTA Sg Sg **16 48 00.5 -1.1**
comp=E,411nm,0.3s
MOTA Moosalm 2.98 146 Pn **16 47 14.0 +1.4**
MOTA LR 16 48 00.5
BSKQ Steenkerk 3.04 287 Pn Pn **16 47 15.0 +1.7**
BSKQ Pg Pg **16 47 22.3 -1.8**
BSKQ Sn Sg **16 48 00.5 -3.0**
BSKQ Sg Sb 16 48 07.7 +11
comp=N,236nm,0.6s
SQTA Sankt Quirin 3.12 146 *i* Pn Pn **16 47 16.2 +1.7**
comp=N,34nm,0.2s,SNR=43
SQTA *e*Sn Sn **16 47 50.1 -1.3**
comp=N,107nm,0.3s
SQTA Sg Sg **16 48 06.5 +0.3**
comp=N,295nm,0.3s
SQTA Sankt Quirin 3.12 146 Pn **16 47 16.2 +1.7**
SQTA Sn **16 47 50.1 -1.3**
SQTA Sg **16 48 06.5 +0.3**
FETA Feichten 3.13 153 *i* Pn Pn **16 47 16.7 +1.9**
comp=N,40nm,0.3s,SNR=56
FETA *e*Sn Sn **16 47 51.9 0.0**
comp=N,20nm,0.2s
FETA *e*Sg Sg **16 48 06.4 -0.3**
comp=N,161nm,0.3s
FETA Feichten 3.13 153 Pn **16 47 16.7 +1.9**
FETA Sn **16 47 51.9 0.0**
FETA Sg **16 48 06.4 -0.3**
CLL Collm 3.15 60 Pn Pn **16 47 16.2 +1.3**
CLL Collm 3.15 60 *e*Pn Pn **16 47 16.0 +1.1**
CLL *e*Pg Pg **16 47 26.0 -0.4**
CLL *i* 16 47 29.9
CLL *e*Sg Sg **16 48 06.0 -1.3**
comp=Z,635nm,0.8s
CLL Collm 3.15 60 *e*P Pn **16 47 16.0 +1.1**
CLL Collm 3.15 60 Pn **16 47 15.9 +1.1**
DAVOX Davos/Dischmat 3.16 164 Pn Pn **16 47 17.6 +2.4**
comp=Z,16nm,0.3s,baz=351,slow=13,SNR=132
DAVOX Pg Pb **16 47 23.7 +1.9**
comp=Z,17nm,0.3s,baz=345,slow=19,SNR=19
DAVOX LR LR 16 47 58.2
comp=Z,44nm,19.9s,baz=81,slow=29
DAVOX Lg Lg 16 48 06.9
comp=Z,108nm,0.3s,baz=156,slow=18,SNR=13
WATA Walderalm 3.17 141 *e*Pn Pn **16 47 16.9 +1.7**
comp=Z,93nm,0.2s,SNR=58
WATA Sg Sg **16 48 07.6 0.0**
comp=Z,206nm,0.2s
WATA Walderalm 3.17 141 P Pn **16 47 16.9 +1.7**
WATA Walderalm 3.17 141 Pn **16 47 16.9 +1.7**
WATA Sg **16 48 07.6 0.0**
WTTA Wattenberg 3.25 141 *e*Pn Pn **16 47 18.8 +2.4**
comp=Z,78nm,0.1s,SNR=48
WTTA *e*Sn Sn **16 47 57.7 +3.0**
comp=Z,57nm,0.3s
WTTA Sg Sg **16 48 11.4 +1.1**
comp=Z,516nm,0.5s
WTTA Wattenberg 3.25 141 Pn **16 47 18.8 +2.4**
WTTA Sn **16 47 57.7 +3.0**
WTTA Sg **16 48 11.4 +1.1**
KHC Kasperske Hory 3.30 100 *e*P Pn **16 47 18.9 +2.0**
KHC MLR MLR
comp=Z,900nm,5.2s
KHC Kasperske Hory 3.30 100 *e*PN Pn **16 47 18.9 +2.0**
KHC *e*PG Pg **16 47 28.2 -0.9**
KHC *e*SN Sb **16 48 07.4 +3.5**
KHC AMS AMS 16 48 30.0
comp=Z,900nm,5.2s
KHC Kasperske Hory 3.30 100 Pn **16 47 17.3 +0.4**
FUORN Ofenpass-Fuorn 3.39 161 Pn **16 47 21.0 +2.6**
TUE Stuetta 3.39 172 Pn **16 47 20.6 +2.3**
GEC2 GERESS Array S 3.46 105 Pn Pn **16 47 21.2 +2.1**
GEC2 GERESS Array S 3.46 105 Pn **16 47 20.9 +1.8**
GERES GERESS Array B 3.46 105 Pn Pn **16 47 21.2 +2.1**
comp=Z,39nm,0.3s,baz=288,slow=14,SNR=1213
GERES Pg Pg **16 47 30.6 -1.5**
comp=Z,51nm,0.3s,baz=292,slow=18,SNR=20
GERES Sn Sn **16 47 59.1 -0.7**
comp=Z,37nm,0.3s,baz=286,slow=24,SNR=9.0
GERES Lg LR 16 48 13.6
comp=Z,90nm,0.3s,baz=290,slow=28,SNR=15
GERES LR LR 16 48 32.4
comp=Z,51nm,18.1s,baz=308,slow=35
PBCC Pribram 3.48 90 *e*PN Pn **16 47 21.1 +1.7**
BRG Berggiesshubel 3.56 71 PN Pn **16 47 21.7 +1.3**
BRG PG Pg **16 47 33.1 -1.0**
BRG SG Sg **16 48 17.0 -3.2**
comp=Z,261nm,1.0s
BRG Berggiesshubel 3.56 71 Pn Pn **16 47 21.8 +1.4**
BRG Berggiesshubel 3.56 71 P Pn **16 47 21.7 +1.3**
SENIN Lac Senin/Sane 3.58 195 Pn **16 47 20.8 -0.1**
CABF La Chapelle 3.64 209 *e*Pn Pn **16 47 21.0 -0.7**
CABF La Chapelle 3.64 209 *e*Pg Pg **16 47 35.1 -0.6**
CABF *e*Sn Sn **16 48 02.7 -1.6**
CABF *e*Sg Sg **16 48 22.2 -0.7**
comp=Z,113nm,0.3s
CABF La Chapelle 3.64 209 Pn **16 47 21.0 -0.7**
CABF Pg **16 47 35.1 -0.6**
CABF Sn **16 48 02.7 -1.6**
CABF Sg **16 48 22.2 -0.7**
PRU Pruhonice 3.82 85 *e*P Pn **16 47 25.4 +1.4**
PRU MLR MLR
comp=Z,500nm,6.2s
PRU Pruhonice 3.82 85 *e*PN Pn **16 47 25.4 +1.4**
PRU *e*PG Pg **16 47 37.1 -2.0**
PRU *ex* x 16 48 23.7
PRU AMS AMS 16 48 40.0
comp=Z,500nm,6.2s
GOPC GO Pecny, Ondr 3.98 86 *e*P Pn **16 47 27.6 +1.3**
GOPC GO Pecny, Ondr 3.98 86 *e*PN Pn **16 47 27.6 +1.3**
GOPC *e*PG Pg **16 47 40.5 -1.7**
ABTA Abfaltersbach 4.02 139 *i* Pn Pn **16 47 30.1 +3.1**
comp=Z,50nm,0.3s,SNR=70
ABTA Sg Sg **16 48 33.7 -1.4**
comp=Z,69nm,0.3s
ABTA Abfaltersbach 4.02 139 Pn **16 47 30.1 +3.1**
ABTA LR 16 48 33.7
LOR Lormes 4.08 233 *e*Pn Pn **16 47 27.3 -0.3**
baz=56
LOR Lormes 4.08 233 *e*Pg Pg **16 47 43.7 -0.3**
LOR *e*Sn Sn **16 48 13.8 -1.1**
LOR *e*Sg Sg **16 48 36.2 -0.6**
comp=Z,223nm,0.4s,baz=54

LOR	**Lormes**	**4.08**	**233**			**Pn**	**16 47 27.3**	**-0.3**
LOR						**Pg**	**16 47 43.7**	**-0.3**
LOR						**Sn**	**16 48 13.8**	**-1.1**
LOR						**Sg**	**16 48 36.2**	**-0.6**
KBA	**Koelnbreinsper**	**4.17**	**129**	*e*Pn		**Pn**	**16 47 31.5**	**+2.5**
	comp=Z,62nm,0.2s,SNR=95							
KBA					Sn	**Sn**	**16 48 18.3**	**+0.9**
	comp=Z,40nm,0.3s							
KBA					Sg	**Sg**	**16 48 38.0**	**-1.8**
	comp=Z,168nm,0.5s							
KBA	**Koelnbreinsper**	**4.17**	**129**			**Pn**	**16 47 31.5**	**+2.5**
KBA						**Sn**	**16 48 18.3**	**+0.9**
KBA						LR	16 48 38.0	
MOA	**Molln**	**4.21**	**116**	*i* Pn		**Pn**	**16 47 31.7**	**+2.3**
	comp=Z,36nm,0.3s,SNR=51							
MOA					*e*Sn	**Sn**	**16 48 18.0**	**-0.3**
	comp=Z,54nm,0.2s							
MOA					Sg	**Sg**	**16 48 40.1**	**-1.0**
	comp=Z,73nm,0.3s							
MOA	**Molln**	**4.21**	**116**			**Pn**	**16 47 31.7**	**+2.3**
MOA						**Sn**	**16 48 18.0**	**-0.3**
MOA						LR	16 48 40.1	
BSEG	**Bad Segeberg**	**4.25**	**14**	Pn		**Pn**	**16 47 31.8**	**+2.0**
CTI	**Castel Tesino**	**4.29**	**151**	P		**Pn**	**16 47 32.9**	**+2.3**
CTI	**Castel Tesino**	**4.29**	**151**			**Pn**	**16 47 32.9**	**+2.3**
SSF	**Saint Saulge**	**4.39**	**233**	*e*Pn		**Pn**	**16 47 31.4**	**-0.5**
SSF	**Saint Saulge**	**4.39**	**233**	*e*Pg		**Pg**	**16 47 48.9**	**-1.2**
SSF					*e*Sn	**Sn**	**16 48 21.2**	**-1.5**
SSF					*e*Sg	**Sg**	**16 48 44.0**	**-3.0**
	comp=Z,116nm,0.4s							
SSF	**Saint Saulge**	**4.39**	**233**			**Pn**	**16 47 31.4**	**-0.5**
SSF						**Pg**	**16 47 48.9**	**-1.2**
SSF						**Sn**	**16 48 21.2**	**-1.5**
SSF						**Sg**	**16 48 44.0**	**-3.0**
SALO	**Salr**	**4.40**	**162**			**Pn**	**16 47 34.3**	**+2.3**
TREC	**Trest**	**4.49**	**94**	*e*P		**Pn**	**16 47 35.0**	**+1.7**
TREC	**Trest**	**4.49**	**94**	*e*PN		**Pn**	**16 47 35.0**	**+1.7**
STAL	**STALIGIAL**	**4.50**	**141**			**Pn**	**16 47 36.5**	**+3.2**
LPL	**La Plagne**	**4.50**	**197**	*e*Pn		**Pn**	**16 47 34.2**	**+0.6**
LPL	**La Plagne**	**4.50**	**197**	*e*Pg		**Pg**	**16 47 51.1**	**-1.1**
LPL					*e*Sn	**Sn**	**16 48 23.4**	**-2.2**
LPL					*e*Sg	**Sg**	**16 48 48.6**	**-1.8**
	comp=Z,42nm,0.3s							
LPL	**La Plagne**	**4.50**	**197**			**Pn**	**16 47 34.2**	**+0.6**
LPL						**Pg**	**16 47 51.1**	**-1.1**
LPL						**Sn**	**16 48 23.4**	**-2.2**
LPL						LR	16 48 48.6	
LPG	**La Plagne**	**4.51**	**197**	*e*Pn		**Pn**	**16 47 35.1**	**+1.2**
LPG	**La Plagne**	**4.51**	**197**	*e*Pg		**Pg**	**16 47 51.6**	**-0.8**
LPG					*e*Sn	**Sn**	**16 48 23.7**	**-2.4**
LPG					*e*Sg	**Sg**	**16 48 48.6**	**-2.3**
	comp=Z,105nm,0.6s							
LPG	**La Plagne**	**4.51**	**197**			**Pn**	**16 47 35.1**	**+1.2**
LPG						**Pg**	**16 47 51.6**	**-0.8**
LPG						**Sn**	**16 48 23.7**	**-2.4**
LPG						LR	16 48 48.6	
SMF	**Signal de Mont**	**4.52**	**227**	*e*Pn		**Pn**	**16 47 32.8**	**-0.8**
SMF	**Signal de Mont**	**4.52**	**227**	*e*Pg		**Pg**	**16 47 51.2**	**-1.2**
SMF					*e*Sg	**Sg**	**16 48 47.6**	**-3.3**
	comp=Z,251nm,0.4s							
SMF	**Signal de Mont**	**4.52**	**227**	P		**Pn**	**16 47 32.8**	**-0.8**
SMF	**Signal de Mont**	**4.52**	**227**			**Pn**	**16 47 32.8**	**-0.8**
SMF						**Pg**	**16 47 51.2**	**-1.2**
SMF						**Sg**	**16 48 47.6**	**-3.3**
CLF	**Chambon-Foret**	**4.57**	**249**			**Pn**	**16 47 36.3**	**+1.9**
MYKA	**Terra Mystica**	**4.63**	**132**	*i* Pn		**Pn**	**16 47 37.9**	**+2.7**
	comp=Z,8.4nm,0.2s,SNR=11							
MYKA				*i* Sn		**Sn**	**16 48 31.2**	**+2.6**
	comp=Z,19nm,0.3s							
MYKA				Sg		**Sg**	**16 48 51.4**	**-3.1**
	comp=Z,97nm,0.4s							
MYKA	**Terra Mystica**	**4.63**	**132**			**Pn**	**16 47 37.9**	**+2.7**
MYKA						**Sn**	**16 48 31.2**	**+2.6**
MYKA						**Sg**	**16 48 51.4**	**-3.1**
AVF	**Avril sur Loir**	**4.65**	**231**	*e*Pn		**Pn**	**16 47 35.6**	**+0.1**
AVF	**Avril sur Loir**	**4.65**	**231**	*e*Pg		**Pg**	**16 47 53.7**	**-1.4**
AVF					*e*Sn	**Sn**	**16 48 26.5**	**-2.6**
AVF					*e*Sg	**Sg**	**16 48 53.1**	**-2.2**
	comp=Z,131nm,0.5s							
AVF	**Avril sur Loir**	**4.65**	**231**	P		**Pn**	**16 47 35.6**	**+0.1**
AVF	**Avril sur Loir**	**4.65**	**231**			**Pn**	**16 47 35.6**	**+0.1**
AVF						**Pg**	**16 47 53.7**	**-1.4**
AVF						**Sn**	**16 48 26.5**	**-2.6**
AVF						LR	16 48 53.1	
HYF	**Humbligny**	**4.73**	**240**	*e*Pn		**Pn**	**16 47 37.3**	**+0.7**
HYF	**Humbligny**	**4.73**	**240**	*e*Pg		**Pg**	**16 47 55.6**	**-1.0**
HYF					*e*Sn	**Sn**	**16 48 31.6**	**+0.5**
HYF					*e*Sg	**Sg**	**16 48 55.1**	**-2.8**
HYF	**Humbligny**	**4.73**	**240**			**Pn**	**16 47 37.3**	**+0.7**
HYF						**Pg**	**16 47 55.6**	**-1.0**
HYF						**Sn**	**16 48 31.6**	**+0.5**
HYF						**Sg**	**16 48 55.1**	**-2.8**
UPC	**Upice**	**4.79**	**79**	*e*P		**Pn**	**16 47 38.4**	**+1.0**
UPC	**Upice**	**4.79**	**79**	*e*PN		**Pn**	**16 47 38.4**	**+1.0**
UPC				ex		x	16 48 54.2	
CHVC	**Chvalec**	**4.83**	**78**	*e*PN		**Pn**	**16 47 38.9**	**+1.0**
OSTC	**Ostas**	**4.92**	**79**	*e*PN		**Pn**	**16 47 40.4**	**+1.2**
OSTC				ex		x	16 47 47.8	
BNI	**Bardonecchia**	**4.96**	**196**	P		**Pn**	**16 47 42.0**	**+2.2**
BNI	**Bardonecchia**	**4.96**	**196**			**Pn**	**16 47 42.0**	**+2.2**
CADS	**Cadrg**	**4.97**	**135**	*i* Pn		**Pn**	**16 47 42.6**	**+2.8**
CADS				*e*Pg		**Pg**	**16 48 03.9**	**+2.8**
CADS				*i* Sn		**Sn**	**16 48 43.6**	**+6.7**
CADS				*i* Sg		**Sg**	**16 49 04.4**	**-0.9**
ELSH	**Elham, Standar**	**4.97**	**288**	*e*P		**Pn**	**16 47 43.4**	**+3.7**
ELSH				IAML			16 49 11.6	
	comp=N,107nm,0.4s							
ELSH				IAML			16 49 24.1	
	comp=E,121nm,0.7s							
DPC	**Dobruska-Polom**	**4.98**	**81**	*e*P		**Pn**	**16 47 40.8**	**+0.8**
DPC	**Dobruska-Polom**	**4.98**	**81**	*e*PN		**Pn**	**16 47 40.8**	**+0.8**
DPC				ex		x	16 49 00.8	
KSP	**Ksiaz**	**5.01**	**75**	*e*Pg		**Pg**	**16 48 00.5**	**-1.4**
KSP				*e*Sg		**Sg**	**16 49 02.2**	**-4.5**
BGF	**Bois d'Agland**	**5.07**	**232**	*e*Pn		**Pn**	**16 47 41.3**	**+0.1**
BGF	**Bois d'Agland**	**5.07**	**232**	*e*Pg		**Pg**	**16 48 01.7**	**-1.3**
BGF				*e*Sn		**Sn**	**16 48 37.2**	**-2.1**
BGF				*e*Sg		**Sg**	**16 49 06.4**	**-2.2**
	comp=E,409nm,0.5s							
BGF	**Bois d'Agland**	**5.07**	**232**			**Pn**	**16 47 41.3**	**+0.1**
BGF						**Pg**	**16 48 01.7**	**-1.3**
BGF						**Sn**	**16 48 37.2**	**-2.1**
BGF						LR	16 49 06.4	
KRUC	**Moravsky**	**5.12**	**96**	*e*PN		**Pn**	**16 47 42.9**	**+1.0**
KRUC				*e*PG		**Pg**	**16 48 04.1**	**+0.1**
KRUC				*e*SG		**Sg**	**16 49 09.3**	**-0.9**
CONA	**Conrad Observa**	**5.13**	**109**	*e*Pn		**Pn**	**16 47 44.1**	**+1.9**
	comp=E,13nm,0.3s,SNR=18							
CONA					*e*Sn	**Sb**	**16 49 02.6**	**+5.8**
	comp=E,52nm,0.3s							
CONA	**Conrad Observa**	**5.13**	**109**			**Pn**	**16 47 44.1**	**+1.9**
CONA						**Sb**	**16 49 02.6**	**+5.8**
OBKA	**Obir**	**5.16**	**128**	*e*Pn		**Pn**	**16 47 45.0**	**+2.4**
	comp=E,15nm,0.4s,SNR=16							
OBKA					*e*Sn	**Sn**	**16 48 43.0**	**+1.2**
	comp=E,64nm,0.5s							
OBKA				Sg		**Sg**	**16 49 09.7**	**-2.0**
	comp=E,248nm,0.7s							
OBKA	**Obir**	**5.16**	**128**			**Pn**	**16 47 45.0**	**+2.4**
OBKA						**Sn**	**16 48 43.0**	**+1.2**
OBKA						LR	16 49 09.7	
PRMA	**PARMA**	**5.19**	**167**	Pn		**Pn**	**16 47 46.7**	**+3.8**
VRAC	**Vranov**	**5.21**	**93**	Pn		**Pn**	**16 47 44.4**	**+1.3**
	comp=E,3.2nm,0.3s,baz=278,slow=14,SNR=15							
VRAC				Pg		**Pb**	**16 48 00.7**	**+4.1**
	comp=E,2.1nm,0.3s,baz=233,slow=18,SNR=4.8							
VRAC				Lg		Lg	16 49 09.6	
	comp=E,23nm,0.3s,baz=180,slow=20,SNR=6.2							
VRAC	**Vranov**	**5.21**	**93**	*e*PN		**Pn**	**16 47 44.3**	**+1.3**
VRAC				*e*PG		**Pg**	**16 48 04.7**	**-0.9**
VRAC				*e*SG		**Sg**	**16 49 10.5**	**-2.4**
VRAC	**Vranov**	**5.21**	**93**	⇑P		**Pn**	**16 47 44.1**	**+1.1**
ARSA	**Arzberg**	**5.25**	**117**	*e*Pn		**Pn**	**16 47 45.8**	**+2.1**
	comp=E,21nm,0.3s,SNR=19							
ARSA				Sg		**Sg**	**16 49 15.1**	**+0.7**
	comp=E,96nm,0.5s							
ARSA	**Arzberg**	**5.25**	**117**			**Pn**	**16 47 45.8**	**+2.1**
ARSA						**Sg**	**16 49 15.1**	**+0.7**
ORIF	**Oris-en-Rattie**	**5.25**	**202**	*e*Pn		**Pn**	**16 47 44.0**	**+0.2**
ORIF	**Oris-en-Rattie**	**5.25**	**202**	*e*Pg		**Pg**	**16 48 05.4**	**-1.2**
ORIF					*e*Sg	**Sg**	**16 49 10.3**	**-4.3**
	comp=E,53nm,0.5s							
ORIF	**Oris-en-Rattie**	**5.25**	**202**	P		**Pn**	**16 47 44.0**	**+0.2**
ORIF	**Oris-en-Rattie**	**5.25**	**202**			**Pn**	**16 47 44.0**	**+0.2**
ORIF						**Pg**	**16 48 05.4**	**-1.2**
ORIF						**Sg**	**16 49 10.3**	**-4.3**
MBDF	**Montbardon**	**5.26**	**195**	*e*P		**Pn**	**16 47 46.4**	**+2.5**
MBDF	**Montbardon**	**5.26**	**195**	*e*Pg		**Pg**	**16 48 06.5**	**-0.1**
MBDF					*e*Sn	**Sn**	**16 48 41.2**	**-3.0**
MBDF					*e*Sg	**Sg**	**16 49 12.6**	**-2.1**
	comp=E,66nm,0.5s							
MBDF	**Montbardon**	**5.26**	**195**	P		**Pn**	**16 47 46.4**	**+2.5**
MBDF	**Montbardon**	**5.26**	**195**			**Pn**	**16 47 46.4**	**+2.5**
MBDF						**Pg**	**16 48 06.5**	**-0.1**
MBDF						**Sn**	**16 48 41.2**	**-3.0**
MBDF						LR	16 49 12.6	
AGO	**Saint Agoulin**	**5.29**	**226**	Pn		**Pn**	**16 47 43.0**	**-1.2**
SOKA	**Soboth**	**5.31**	**124**	*e*Pn		**Pn**	**16 47 46.3**	**+1.7**
	comp=E,12nm,0.3s,SNR=23							
SOKA					Sg	**Sg**	**16 49 13.7**	**-2.6**
	comp=E,66nm,0.6s							
SOKA	**Soboth**	**5.31**	**124**			**Pn**	**16 47 46.3**	**+1.7**
SOKA						LR	16 49 13.7	
TRI	**Trieste**	**5.38**	**138**	P		**Pn**	**16 47 46.9**	**+1.5**
TRI	**Trieste**	**5.38**	**138**	Pn		**Pn**	**16 47 46.9**	**+1.5**
HMNX	**Herstmonceux**	**5.42**	**284**	*e*P		**Pn**	**16 47 48.2**	**+2.3**
LJU	**Ljubljana**	**5.48**	**131**	*e*Pn		Pn	16 47 53.8	+7.0
TCF	**Toulx Ste Croi**	**5.58**	**233**	*e*Pn		**Pn**	**16 47 48.5**	**+0.3**
TCF	**Toulx Ste Croi**	**5.58**	**233**	*e*Pg		**Pg**	**16 48 14.1**	**+1.4**
TCF					*e*Sn	**Sn**	**16 48 49.8**	**-2.1**
TCF					*e*Sg	**Sg**	**16 49 23.0**	**-1.8**
	comp=E,101nm,0.6s							
TCF	**Toulx Ste Croi**	**5.58**	**233**	P		**Pn**	**16 47 48.5**	**+0.3**
TCF	**Toulx Ste Croi**	**5.58**	**233**			**Pn**	**16 47 48.5**	**+0.3**
TCF						**Pg**	**16 48 14.1**	**+1.4**
TCF						**Sn**	**16 48 49.8**	**-2.1**
TCF						LR	16 49 23.0	
CEY	**Cerknica**	**5.65**	**134**	*e*Pn		**Pn**	**16 47 51.7**	**+2.5**
VIVF	**Saint-Julien-l**	**5.65**	**210**	*e*Pn		**Pn**	**16 47 49.7**	**+0.4**
VIVF	**Saint-Julien-l**	**5.65**	**210**	*e*Pg		**Pg**	**16 48 12.1**	**-2.1**
VIVF					*e*Sn	**Sn**	**16 48 50.1**	**-3.7**
VIVF					*e*Sg	**Sg**	**16 49 24.5**	**-2.9**
	comp=E,49nm,0.3s							
VIVF	**Saint-Julien-l**	**5.65**	**210**			**Pn**	**16 47 49.7**	**+0.4**
VIVF						**Pg**	**16 48 12.1**	**-2.1**
VIVF						**Sn**	**16 48 50.1**	**-3.7**
VIVF						LR	16 49 24.5	
ZCCA	**Zocca**	**5.71**	**163**			**Pn**	**16 47 53.1**	**+3.1**
MORC	**Moravsky Berou**	**5.77**	**87**	*e*PN		**Pn**	**16 47 51.8**	**+1.0**
MORC				*e*PG		**Pg**	**16 48 13.5**	**-2.9**
MORC				*e*SG		**Sg**	**16 49 31.6**	**+0.6**
MORC	**Moravsky Berou**	**5.77**	**87**	⇑P		**Pn**	**16 47 52.1**	**+1.3**
MORC	**Moravsky Berou**	**5.77**	**87**	P		**Pn**	**16 47 50.9**	**+0.1**
MORC	**Moravsky Berou**	**5.77**	**87**			**Pn**	**16 47 50.9**	**+0.1**
VLC	**Villacollemand**	**5.79**	**167**	Pn		**Pn**	**16 47 54.2**	**+3.0**
WACR	**West Acre**	**5.80**	**303**	*e*P		**Pn**	**16 47 54.0**	**+2.8**
WACR				IAML			16 49 38.3	
	comp=E,64nm,0.7s							
WACR				IAML			16 49 45.8	
	comp=N,79nm,0.5s							
ZST	**Bratislava**	**5.80**	**103**	*e*P		**Pn**	**16 47 53.0**	**+1.7**
ZST	**Bratislava**	**5.80**	**103**	*e*PN		**Pn**	**16 47 53.0**	**+1.7**
ZST				*e*SG		**Sg**	**16 49 29.9**	**-2.3**
ZST				*e*LG		Lg	16 49 43.8	
MODS	**Modra-Piesok**	**5.86**	**101**	*e*P		**Pn**	**16 47 52.6**	**+0.5**
MODS	**Modra-Piesok**	**5.86**	**101**	*e*PN		**Pn**	**16 47 52.6**	**+0.5**
MODS				*e*SG		**Sg**	**16 49 34.0**	**+0.1**
MODS				*e*LG		Lg	16 49 37.9	
LDF	**La Druitiere**	**5.87**	**261**	*e*Pn		**Pn**	**16 47 53.2**	**+1.0**
LDF	**La Druitiere**	**5.87**	**261**	*e*Pg		**Pg**	**16 48 17.1**	**-1.2**
LDF					*e*Sn	**Sn**	**16 48 55.9**	**-3.2**
LDF					*e*Sg	**Sg**	**16 49 31.6**	**-2.7**
	comp=N,135nm,0.7s							
LDF	**La Druitiere**	**5.87**	**261**			**Pn**	**16 47 53.2**	**+1.0**
LDF						**Pg**	**16 48 17.1**	**-1.2**
LDF						**Sn**	**16 48 55.9**	**-3.2**
LDF						LR	16 49 31.6	
SMOL	**Smolenice**	**5.92**	**99**	*e*P		**Pn**	**16 47 54.9**	**+2.1**
SMOL	**Smolenice**	**5.92**	**99**	*e*PN		**Pn**	**16 47 54.8**	**+2.0**
SMOL				*e*SG		**Sg**	**16 49 35.0**	**-0.7**
SMOL				*e*LG		Lg	16 49 44.7	
JAVC	**Velka Javorina**	**5.98**	**96**	*e*PN		**Pn**	**16 47 55.9**	**+2.1**
JAVC				*e*PG		**Pg**	**16 48 19.8**	**-0.7**
SBF	**Sospel**	**6.02**	**188**	*e*Pn		**Pn**	**16 47 56.0**	**+1.6**
SBF					*e*Sn	**Sn**	**16 48 59.3**	**-3.6**
	comp=N,40nm,0.5s							
SBF	**Sospel**	**6.02**	**188**	P		**Pn**	**16 47 56.0**	**+1.6**
SBF						**Sn**	**16 48 59.3**	**-3.6**
SBF	**Sospel**	**6.02**	**188**			**Pn**	**16 47 56.0**	**+1.6**
SBF						**Sn**	**16 48 59.3**	**-3.6**
FLN	**La Foliniere**	**6.06**	**263**	*e*Pn		**Pn**	**16 47 56.0**	**+1.2**
	baz=81							
FLN	**La Foliniere**	**6.06**	**263**	*e*Pg		**Pg**	**16 48 19.8**	**-2.1**
FLN					*e*Sn	**Sn**	**16 49 00.4**	**-3.3**
FLN					*e*Sg	**Sg**	**16 49 37.2**	**-3.1**
	comp=N,102nm,0.5s							
FLN	**La Foliniere**	**6.06**	**263**			**Pn**	**16 47 56.0**	**+1.2**
FLN						**Pg**	**16 48 19.8**	**-2.1**
FLN						**Sn**	**16 49 00.4**	**-3.3**
FLN						LR	16 49 37.2	
CRES	**Cresnjev**	**6.09**	**128**	*e*Pn		**Pn**	**16 47 56.9**	**+1.7**
SMRF	**Simiane la Rot**	**6.22**	**201**	*e*Pn		**Pn**	**16 47 57.2**	**+0.2**
SMRF					*e*Sn	**Sn**	**16 49 04.2**	**-3.5**
	comp=N,14nm,0.4s							
SMRF					*e*Sg	**Sg**	**16 49 41.6**	**-3.8**
	comp=N,17nm,0.6s							
SMRF	**Simiane la Rot**	**6.22**	**201**			**Pn**	**16 47 57.2**	**+0.2**
SMRF						**Sn**	**16 49 04.2**	**-3.5**
SMRF						LR	16 49 41.6	
OZLJ	**Ozalj**	**6.24**	**130**	*i* Pn		**Pn**	**16 47 59.2**	**+1.9**
OZLJ				Sn		**Sn**	**16 49 02.9**	**-5.3**
PTJ	**Puntijarka**	**6.30**	**126**	*i* Pn		**Pn**	**16 48 01.7**	**+3.5**
PTJ				Sn		**Sn**	**16 49 05.4**	**-4.4**
GRR	**Gorron**	**6.40**	**261**	*e*Pn		**Pn**	**16 48 00.9**	**+1.5**
GRR	**Gorron**	**6.40**	**261**	*e*Pg		**Pg**	**16 48 26.2**	**-2.2**
GRR					*e*Sn	**Sn**	**16 49 07.8**	**-4.2**
	comp=N,78nm,0.2s							
GRR					*e*Sg	**Sg**	**16 49 47.8**	**-3.4**
	comp=N,35nm,0.4s							
GRR	**Gorron**	**6.40**	**261**			**Pn**	**16 48 00.9**	**+1.5**
GRR						**Pg**	**16 48 26.2**	**-2.2**
GRR						**Sn**	**16 49 07.8**	**-4.2**
GRR						LR	16 49 47.8	
FRF	**La Foret Royal**	**6.42**	**193**	*e*Pn		**Pn**	**16 48 01.2**	**+1.5**
FRF	**La Foret Royal**	**6.42**	**193**	*e*Pg		**Pg**	**16 48 26.0**	**-2.7**
FRF					*e*Sn	**Sn**	**16 49 08.6**	**-3.9**
	comp=N,7.2nm,0.3s							
FRF					*e*Sg	**Sg**	**16 49 47.2**	**-4.5**
	comp=N,3.3nm,0.3s							
FRF	**La Foret Royal**	**6.42**	**193**			**Pn**	**16 48 01.2**	**+1.5**
FRF						**Pg**	**16 48 26.0**	**-2.7**
FRF						**Sn**	**16 49 08.6**	**-3.9**
FRF						**Sg**	**16 49 47.2**	**-4.5**
KALN	**Kalnik**	**6.42**	**122**	*i* Pn		**Pn**	**16 48 01.0**	**+1.2**
KALN				Sn		**Sn**	**16 49 07.6**	**-5.0**
WOL	**Wolverton**	**6.46**	**287**	*e*P		**Pn**	**16 48 03.2**	**+3.0**
WOL				IAML			16 50 00.0	
	comp=E,88nm,0.9s							
WOL				IAML			16 50 11.1	
	comp=N,63nm,0.6s							
BSD	**Bornholm Skovb**	**6.54**	**34**	*e*P		**Pn**	**16 48 01.6**	**+0.3**
BSD				*i* S		**Sn**	**16 49 12.4**	**-3.0**
BSD	**Bornholm Skovb**	**6.54**	**34**	*i* P		**Pn**	**16 48 01.6**	**+0.3**
BSD				*i* S		**Sn**	**16 49 12.4**	**-3.0**
OSSC	**Osservatorio P**	**6.55**	**163**			**Pn**	**16 48 04.3**	**+2.7**
RJF	**Les Rejaudoux**	**6.61**	**229**	*e*Pn		**Pn**	**16 48 02.9**	**+0.6**
RJF	**Les Rejaudoux**	**6.61**	**229**	*e*Pg		**Pg**	**16 48 30.3**	**-2.1**
RJF					*e*Sn	**Sn**	**16 49 14.6**	**-2.6**
RJF					*e*Sg	**Sg**	**16 49 53.2**	**-4.7**
	comp=N,40nm,0.4s							
RJF	**Les Rejaudoux**	**6.61**	**229**	P		**Pn**	**16 48 02.9**	**+0.6**
RJF	**Les Rejaudoux**	**6.61**	**229**			**Pn**	**16 48 02.9**	**+0.6**
RJF						**Pg**	**16 48 30.3**	**-2.1**
RJF						**Sn**	**16 49 14.6**	**-2.6**
RJF						**Sg**	**16 49 53.2**	**-4.7**
LASF	**Ste Croix**	**6.62**	**211**	*e*Pn		**Pn**	**16 48 02.5**	**0.0**
LASF	**Ste Croix**	**6.62**	**211**	*e*Pg		**Pg**	**16 48 29.5**	**-3.1**
LASF					*e*Sn	**Sn**	**16 49 13.7**	**-3.8**
LASF					*e*Sg	**Sg**	**16 49 55.9**	**-2.3**
	comp=N,31nm,0.4s							
LASF	**Ste Croix**	**6.62**	**211**			**Pn**	**16 48 02.5**	**0.0**
LASF						**Pg**	**16 48 29.5**	**-3.1**
LASF						**Sn**	**16 49 13.7**	**-3.8**
LASF						LR	16 49 55.9	
CAF	**Calviac**	**6.63**	**225**	*e*Pn		**Pn**	**16 48 02.7**	**+0.1**
CAF	**Calviac**	**6.63**	**225**	*e*Pg		**Pg**	**16 48 30.1**	**-2.7**
CAF					*e*Sn	**Sn**	**16 49 14.6**	**-3.2**
CAF					*e*Sg	**Sg**	**16 49 54.5**	**-4.0**
	comp=N,38nm,0.4s							
CAF	**Calviac**	**6.63**	**225**	P		**Pn**	**16 48 02.7**	**+0.1**
CAF						16 49 14.6		
CAF	**Calviac**	**6.63**	**225**			**Pn**	**16 48 02.7**	**+0.1**
CAF						**Pg**	**16 48 30.1**	**-2.7**
CAF						**Sn**	**16 49 14.6**	**-3.2**
CAF						LR	16 49 54.5	
LMR	**La Mourre**	**6.66**	**194**	*e*Pn		**Pn**	**16 48 03.0**	**0.0**
LMR	**La Mourre**	**6.66**	**194**	*e*Pg		**Pg**	**16 48 30.5**	**-2.9**
LMR					*e*Sn	**Sn**	**16 49 14.5**	**-4.0**
	comp=N,8.8nm,0.4s							
LMR					*e*Sg	**Sg**	**16 49 55.8**	**-3.7**
	comp=N,5.4nm,0.4s							
LMR	**La Mourre**	**6.66**	**194**	P		**Pn**	**16 48 03.0**	**0.0**
LMR						16 49 14.5		
LMR	**La Mourre**	**6.66**	**194**			**Pn**	**16 48 03.0**	**0.0**
LMR						**Pg**	**16 48 30.5**	**-2.9**
LMR						**Sn**	**16 49 14.5**	**-4.0**
LMR						LR	16 49 55.8	
MFF	**Saint Martin d**	**6.70**	**245**	*e*Pn		**Pn**	**16 48 03.6**	**+0.1**
MFF	**Saint Martin d**	**6.70**	**245**	*e*Pg		**Pg**	**16 48 31.8**	**-2.3**
MFF					*e*Sn	**Sn**	**16 49 15.5**	**-3.9**
MFF					*e*Sg	**Sg**	**16 49 56.9**	**-3.8**
	comp=N,59nm,0.6s							
MFF	**Saint Martin d**	**6.70**	**245**			**Pn**	**16 48 03.6**	**+0.1**
MFF						**Pg**	**16 48 31.8**	**-2.3**
MFF						**Sn**	**16 49 15.5**	**-3.9**
MFF						LR	16 49 56.9	
MFF	**Saint Martin d**	**6.70**	**245**	Pn		**Pn**	**16 48 03.3**	**-0.2**
NVLJ	**Novalja**	**6.76**	**139**	*e*Pn		**Pn**	**16 48 05.4**	**+1.0**
VYHS	**Vyhne**	**6.82**	**97**	*e*P		**Pn**	**16 48 06.2**	**+0.9**
VYHS	**Vyhne**	**6.82**	**97**	*e*PN		**Pn**	**16 48 06.2**	**+0.9**
SWN1	**Swindon**	**6.85**	**288**	*e*P		**Pn**	**16 48 07.7**	**+2.1**
SWN1				IAML			16 50 21.8	
	comp=E,86nm,0.6s							
SWN1				IAML			16 50 34.1	
	comp=N,85nm,0.7s							
CWF	**Charnwood Fore**	**6.88**	**299**	*e*P		**Pn**	**16 48 08.7**	**+2.6**
CWF				IAML			16 50 13.7	
	comp=E,12nm,0.5s							
CWF				IAML			16 50 20.8	
	comp=N,19nm,0.5s							
MOSL	**Moslavina**	**6.91**	**125**	*e*Pn		**Pn**	**16 48 06.2**	**-0.3**
MOSL				Sn		**Sn**	**16 49 18.6**	**-6.0**
LANS	**Liptovska Anna**	**7.09**	**91**	*e*P		**Pn**	**16 48 11.0**	**+2.0**
LANS				MLR		MLR		
	comp=Z,100nm,0.9s							
LANS	**Liptovska Anna**	**7.09**	**91**	*e*PN		**Pn**	**16 48 11.0**	**+2.0**
LANS				*e*LG		Lg	16 50 20.3	
MURB	**Monte Urbino**	**7.09**	**156**	Pn		**Pn**	**16 48 10.2**	**+1.2**
STRD	**Stroud**	**7.12**	**290**	*e*P		**Pn**	**16 48 12.3**	**+3.0**
STRD				IAML			16 50 31.2	
	comp=E,85nm,0.6s							
ST

RSBS	**Rosebush, Pemb**	**8.72**	**289**	*e*P	**Pn**	**16 48 33.7**	**+2.4**
EPF	**Esparros**	**8.88**	**223**	*e*Sg		16 51 05.5	
	comp=E,12nm,0.5s						
EPF	**Esparros**	**8.88**	**223**		LR	16 51 05.5	
FRGS	**Fruska Gora**	**8.89**	**117**	*e*Pn	**Pn**	**16 48 34.3**	**+0.7**
KOLS	**Kolonicke sedl**	**8.95**	**91**	*e*P	**Pn**	**16 48 35.9**	**+1.5**
KOLS	**Kolonicke sedl**	**8.95**	**91**	*e*PN	**Pn**	**16 48 35.9**	**+1.5**
EKA	**Eskdalemuir Ar**	**9.05**	**312**	Pn	**Pn**	**16 48 38.2**	**+2.5**
	baz=128,slow=14,SNR=26						
EKA				Sn	**Sn**	**16 50 14.2**	**-2.9**
	baz=114,slow=25,SNR=1.9						
ESK	**Eskdalemuir**	**9.06**	**312**	*e*P	**Pn**	**16 48 38.2**	**+2.3**
ESK				IAML		16 50 30.1	
	comp=E,6.0nm,0.5s						
ESK				IAML		16 50 34.5	
	comp=N,7.2nm,0.4s						
ESK	**Eskdalemuir**	**9.06**	**312**	P	**Pn**	**16 48 38.6**	**+2.7**
ESK	**Eskdalemuir**	**9.06**	**312**		**Pn**	**16 48 38.5**	**+2.7**
HAPS	**Han Pijesak,BI**	**9.09**	**125**	*e*Pn	**Pn**	**16 48 38.1**	**+1.6**
ESY	**Stoneypath**	**9.13**	**316**	*e*P	**Pn**	**16 48 39.9**	**+3.0**
TRPA	**Tarpa**	**9.30**	**95**	⇑P	**Pn**	**16 48 39.8**	**+0.6**
STON	**Ston**	**9.36**	**135**	*e*Pn	**Pn**	**16 48 41.7**	**+1.7**
STON	**Ston**	**9.36**	**135**	*i* Pn	**Pn**	**16 48 41.9**	**+1.9**
ETSF	**Etsaut**	**9.40**	**226**	*e*Pn	**Pn**	**16 48 41.8**	**+1.1**
ETSF				*e*Sn	**Sn**	**16 50 19.2**	**-6.7**
ETSF				*e*Sg		16 51 21.5	
	comp=N,22nm,0.8s						
ETSF	**Etsaut**	**9.40**	**226**		**Pn**	**16 48 41.8**	**+1.1**
ETSF					**Sn**	**16 50 19.2**	**-6.7**
ETSF					LR	16 51 21.5	
NEWG	**New Galloway**	**9.47**	**309**	*e*P	**Pn**	**16 48 44.1**	**+2.7**
SJPF	**Ste Jean**	**9.55**	**229**	*e*Pn	**Pn**	**16 48 42.4**	**-0.3**
SJPF				*e*Sn	**Sn**	**16 50 24.5**	**-5.2**
SJPF				*e*Sg		16 51 25.7	
	comp=N,29nm,0.8s						
SJPF	**Ste Jean**	**9.55**	**229**		**Pn**	**16 48 42.4**	**-0.3**
SJPF					**Sn**	**16 50 24.5**	**-5.2**
SJPF					LR	16 51 25.7	
DIVS	**Divibare**	**9.64**	**122**	*e*Pn	**Pn**	**16 48 45.2**	**+1.2**
BZS	**Buzias**	**9.71**	**111**	⇑P	**Pn**	**16 48 45.7**	**+0.9**
BZS	**Buzias**	**9.71**	**111**	P	**Pn**	**16 48 45.9**	**+1.1**
BZS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MDVR	**Moldovita**	**10.21**	**115**	⇑P	**Pn**	**16 48 52.6**	**+0.8**
GZR	**Gura Zlata**	**10.53**	**110**	⇓P	**Pn**	**16 48 57.5**	**+1.4**
HERR	**Herculane**	**10.57**	**113**	⇑P	**Pn**	**16 48 58.1**	**+1.5**
HFS	**Hagfors**	**10.73**	**14**	Pn	**Pn**	**16 48 59.9**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=199,slow=10,SNR=7.3						
HFS				Sn	**Sn**	**16 50 51.5**	**-6.8**
	comp=Z,0.3nm,0.3s,baz=194,slow=23,SNR=2.9						
BURAR	**Bucovina Array**	**11.18**	**95**	⇑P	**Pn**	**16 49 04.9**	**-0.1**
NOA	**NORSAR Array B**	**11.33**	**6**	Pn	**Pn**	**16 49 07.0**	**0.0**
	comp=Z,0.0nm,0.3s,baz=187,slow=12,SNR=2.9						
NOA				Sn	**Sn**	**16 51 07.5**	**-5.7**
	comp=Z,0.1nm,0.3s,baz=32,slow=19,SNR=3.3						
NC405	**NORSAR Array S**	**11.45**	**8**	Pn	**Pn**	**16 49 07.8**	**-0.7**
NC303	**NORSAR Array S**	**11.53**	**7**	Pn	**Pn**	**16 49 08.0**	**-1.7**
MLR	**Muntele Rosu**	**12.45**	**104**	LR	LR	16 55 06.5	
	comp=Z,32nm,19.1s,baz=298,slow=41						
FINES	**FINESS Array B**	**15.18**	**33**	Pn	**Pn**	**16 49 59.9**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=229,slow=11,SNR=1.9						
FINES				Sn	**Sn**	**16 52 38.2**	**-8.7**
	comp=Z,0.2nm,0.3s,baz=222,slow=19,SNR=2.3						
PESTR	**Estremoz**	**15.92**	**233**	Pn	**Pn**	**16 50 10.0**	**+0.8**
PESTR				IAmb	IAmb	16 50 12.2	
	comp=Z,38nm,1.4s						
PVAQ	**Vaqueiros**	**17.11**	**230**	Pn	**Pn**	**16 50 24.9**	**+0.6**
PVAQ				IAmb	IAmb	16 50 41.8	
	comp=Z,4.9nm,1.0s						
OBN	**Obninsk**	**17.75**	**62**	*i* P	**Pn**	**16 50 32.3**	**+0.2**
OBN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ARCES	**ARCESS Array B**	**21.37**	**16**	P	**P**	**16 51 14.4**	**+2.2**
	comp=Z,1.5nm,0.5s,baz=205,slow=11,SNR=18						
ARE0	**ARCESS Array S**	**21.37**	**16**	P	**P**	**16 51 09.5**	**-2.8**
ARE0				IAmb	IAmb	16 51 24.9	
	comp=Z,0.9nm,1.4s						
KBZ	**Khabaz**	**24.09**	**91**	*i* P	**P**	**16 51 40.1**	**-0.4**
ARU	**Arti**	**30.10**	**58**	*e*P	**P**	**16 52 35.2**	**+0.9**
ARU				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**37.02**	**191**	P	**P**	**16 53 36.8**	**+2.1**
	comp=Z,1.3nm,0.9s,baz=1.2,slow=9.8,SNR=5.3						
BRVK	**Borovoye**	**37.52**	**61**	*i* P	**P**	**16 53 39.4**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**43.19**	**61**	*i* P	**P**	**16 54 24.0**	**-1.7**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YKA	**Yellowknife Ar**	**59.34**	**333**	P	**P**	**16 56 28.6**	**+2.0**
	comp=Z,0.1nm,0.5s,baz=43,slow=7.5,SNR=2.1						
TKL	**Tuckaleechee C**	**65.16**	**296**	LR	LR	17 22 36.1	
	comp=Z,20nm,18.7s,baz=262,slow=33						

MAN 17 16:55:42.7, 15°32.N × 118°90.E, h83 km, mb3.9, ML2.7, MS2.2, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**2.05**	**140**	*e*P	Pn	16 56 23.0	+7.6
LUBP				*e*S	Sn	16 56 36.1	-4.2
BALP	**Baler**	**2.61**	**80**	*e*P	Pn	16 56 38.0	+15
PGP	**Puerto Galera**	**2.69**	**132**	⇑*e*P	Pn	16 56 24.9	+0.9
PGP				*e*S	Sn	16 56 40.7	-15
POLP	**Polillo Island**	**3.00**	**101**	*e*P	Pn	16 56 33.2	+5.1
APYP	**Conner**	**3.38**	**41**	*e*P	Pn	16 56 14.9	-18
BUSP	**Coron**	**3.53**	**159**	*e*P	Pn	16 56 40.8	+5.3
BUSP				*e*S	Sn	16 57 05.4	-11
ENPP	**El Nido**	**4.12**	**173**	*e*P	Pn	16 56 52.6	+9.1
ENPP				*e*S	Sn	16 57 28.4	-2.1
PVCP	**Virac**	**5.37**	**108**	*e*P	Pn	16 57 00.9	+0.5

*TIR **17** 17:05:39.3, 41°.11N × 20°.07E, h5 km, Md2.7/6*
*BEO **17** 17:05:40.6±0.4, 41°.44N × 20°.24E, h0 km, ML1.8/7*
ISC 17 17:05:36.8±1.2, **41°.21N**±0°.04×**20°.33E**±0°.03, **h11** km±9 km, **n20, σ2°21/33, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.37**	**291**	*e*Pg	**Pg**	**17 05 44.7**	**+0.5**
TIR				*e*Sg	**Sg**	**17 05 49.7**	**+0.5**
TIR	**Tirane**	**0.37**	**291**	*i* PG	**Pg**	**17 05 44.9**	**+0.7**
TIR				*i* SG	**Sg**	**17 05 49.9**	**+0.7**
PHP	**Peshkopia**	**0.48**	**10**	*i* PG	**Pn**	**17 05 51.7**	**+2.0**
PHP				*i* SG	Sb	17 06 03.4	+9.0
PUK	**Puka**	**0.89**	**339**	*i* PG	**Pn**	**17 05 57.0**	**+1.6**
PUK				*i* SG	**Sn**	**17 06 13.4**	**+5.0**
TPE	**Tepelena**	**0.95**	**195**	*i* PG	**Pb**	**17 05 55.2**	**0.0**
TPE				*i* SG	**Sn**	**17 06 09.9**	**+0.4**
SKO	**Skopje**	**1.13**	**47**	*e*Pg	**Pn**	**17 05 58.9**	**+0.3**
BCI	**Bajram Curri**	**1.17**	**351**	*i* PN	Pg	17 06 03.9	+4.7
BCI				*i* SN	**Sn**	**17 06 23.5**	**+8.4**
PDG	**Podgorica**	**1.46**	**327**	*e*Pg	**Pb**	**17 06 04.0**	**+0.1**
PDG				*e*Sg	**Sn**	**17 06 19.4**	**-2.8**
BOSS	**Bosilegrad**	**2.06**	**51**	*e*Pg	**Pg**	**17 06 17.4**	**+1.2**
BOSS				*e*Sg	**Sg**	**17 06 43.8**	**+0.9**
SJES	**Sjenica**	**2.06**	**353**	*e*Pg	**Pb**	**17 06 13.6**	**-0.8**
SJES				*e*Sg	**Sb**	**17 06 38.7**	**-1.4**
SELS	**Selova**	**2.09**	**16**	*e*Pg	**Pg**	**17 06 15.0**	**-1.8**
TREB	**Trebinje**	**2.11**	**316**	*e*Pn	**Pb**	**17 06 15.3**	**+0.3**
TREB				*e*Sg	**Sb**	**17 06 42.2**	**+1.0**
DBRK	**Dubrovnik**	**2.18**	**313**	*e*Pn	**Pn**	**17 06 12.9**	**-0.2**
IVAS	**Ivanjica**	**2.37**	**357**	*e*Pg	**Pb**	**17 06 17.9**	**-1.6**
IVAS				*e*Sg	**Sb**	**17 06 47.8**	**-0.9**
STON	**Ston**	**2.56**	**311**	*i* Pn	**Pn**	**17 06 18.0**	**-0.2**
STON				Sn	**Sn**	**17 06 47.4**	**-2.1**
ZAPS	**Zavoj**	**2.68**	**39**	*e*Pg	**Pg**	**17 06 26.4**	**-1.7**
ZAPS				*e*Sg	**Sg**	**17 07 00.9**	**-1.9**
MAKA	**Makarska**	**3.21**	**311**	*e*Pn	**Pn**	**17 06 26.6**	**-0.6**
MAKA				Sn	**Sn**	**17 07 04.0**	**-1.4**
RICI	**Ricice**	**3.29**	**315**	*i* Pn	**Pn**	**17 06 28.5**	**+0.2**
RICI				Sn	**Sn**	**17 07 06.4**	**-1.0**
ZIRJ	**Zirje**	**4.24**	**307**	*i* Pn	**Pn**	**17 06 39.4**	**-1.9**
DUGI	**Dugi Otok**	**4.78**	**307**	*e*Pn	**Pn**	**17 06 48.1**	**-0.6**

*THE **17** 17:07:55.6, 40°.18N × 19°.78E, h0 km±2 km, ML2.5/6, Error ellipse: s-maj=2.8km s-min=0.7km az=290.0*
*TIR **17** 17:07:56.4, 40°.14N × 19°.95E, h5 km, Md2.5/3*
ISC 17 17:07:55.6±1.0, **40°.19N**±0°.03×**19°.80E**±0°.04, **h10** km±8 km, **n18, σ1°31/34, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.19**	**57**	P	**Pb**	**17 07 59.7**	**-1.5**
TPE				S	**Sg**	**17 08 03.0**	**+0.6**
	4μm,0.3s						
TPE	**Tepelena**	**0.19**	**57**	*i* PG	**Pb**	**17 07 59.8**	**-1.5**
TPE				*i* SG	**Sg**	**17 08 03.1**	**+0.6**
SRN	**Sarande**	**0.34**	**154**	P	**Pg**	**17 08 01.9**	**-0.6**
SRN				S	**Sg**	**17 08 07.4**	**+0.3**
	1μm,0.3s						
SRN	**Sarande**	**0.34**	**154**	*i* PG	**Pg**	**17 08 02.0**	**-0.4**
SRN				*i* SG	**Sg**	**17 08 07.3**	**+0.3**
VLO	**Vlora**	**0.36**	**320**	*i* PG	**Pn**	**17 08 05.9**	**-1.0**
VLO				*i* SG	**Sb**	**17 08 14.3**	**+4.4**
KEK	**Kerkira**	**0.48**	**180**	P	**Pg**	**17 08 04.2**	**-0.7**
KEK				S	**Sg**	**17 08 12.2**	**+1.0**
	452nm,0.2s						
IGT	**Igoumenitsa**	**0.77**	**148**	P	**Pg**	**17 08 09.9**	**-0.6**
IGT				S	**Sg**	**17 08 21.6**	**+1.0**
JAN	**Janina**	**0.97**	**123**	P	**Pn**	**17 08 14.9**	**-0.4**
JAN				S	**Sb**	**17 08 27.7**	**+0.4**
	190nm,0.3s						
FNA	**Florina**	**1.34**	**63**	P	**Pg**	**17 08 20.8**	**-0.5**
FNA				S	**Sg**	**17 08 41.4**	**+2.7**
	170nm,0.5s						
LKD2	**Lefkada island**	**1.55**	**154**	P	**Pn**	**17 08 23.5**	**+0.2**
LKD2				S	**Sg**	**17 08 46.1**	**+0.7**
	112nm,0.4s						
THL	**Klokotos Trika**	**1.81**	**109**	P	**Pb**	**17 08 28.2**	**-0.7**
FSK	**Fiskardo**	**1.83**	**161**	P	**Pn**	**17 08 28.1**	**+1.1**
FSK				S	**Sb**	**17 08 52.7**	**+0.7**
ANX	**Ano Chora**	**2.29**	**133**	P	**Pn**	**17 08 34.9**	**+1.4**
STON	**Ston**	**3.11**	**330**	*e*Pn	**Pn**	**17 08 44.1**	**-0.5**
STON				Sn	**Sn**	**17 09 20.3**	**-1.5**
KIJV	**Kijevo**	**4.57**	**328**	*e*Pn	**Pn**	**17 09 05.8**	**+0.9**
KIJV				Sn	**Sn**	**17 09 58.6**	**+0.6**
ZIRJ	**Zirje**	**4.65**	**319**	*e*Pn	**Pn**	**17 09 05.2**	**-0.6**
ZIRJ				Sn	**Sn**	**17 09 58.1**	**-1.7**
MORI	**Morici**	**4.77**	**322**	*e*Pn	**Pn**	**17 09 08.1**	**+1.0**
MORI				Sn	**Sn**	**17 10 02.6**	**-0.3**
DUGI	**Dugi Otok**	**5.18**	**319**	*e*Pn	**Pn**	**17 09 13.4**	**+0.2**
DUGI				Sn	**Sn**	**17 10 11.8**	**-1.3**

*IDC **17** 17:16:27.1±2.3, 2°.08N × 126°.93E, h0 km, mb3.2/3, mb1 3.4/3, mb1mx3.2/31, mbtmp3.2/3, MS2.9/1, Ms1 2.9/1, ms1mx2.2/13, Error ellipse: s-maj=189.3km s-min=27.2km az=66.0*
*DJA **17** 17:16:33.7±0.7, 2°.N±9°.× 12°.6E±°, h10 km, M3.1/6, MLv3.1/6*
ISC 17 17:16:34.2±1.5, **2°.0N**±0°.2×**126°.48E**±0°.09, **h47** km, **n6, σ1°21/7, mb3.3/3, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.47**	**143**	P	**Pn**	**17 16 58.2**	**-0.1**
LBMI	**Labuha**	**2.77**	**158**	P	**Pn**	**17 17 17.5**	**+1.4**
KMSI	**Cibinong**	**2.85**	**241**	P	**Pn**	**17 17 17.5**	**+0.3**
KMSI				S	**Sn**	**17 17 50.3**	**-0.1**
WRA	**Warramunga Arr**	**23.08**	**161**	P	**P**	**17 21 34.1**	**-1.9**
	0.5nm,0.5s,baz=341,slow=11,SNR=18						
ASAR	**Alice Springs**	**26.47**	**165**	P	**P**	**17 22 06.9**	**-0.3**
	0.2nm,0.6s,baz=350,slow=13,SNR=2.6						
ASAR				LR	LR	17 34 02.6	
	comp=Z,22nm,18.4s,baz=8.5,slow=40						
MKAR	**Makanchi Array**	**58.88**	**326**	P	**P**	**17 26 28.7**	**+0.3**
	0.1nm,0.4s,baz=128,slow=6.9,SNR=4.0						

*IDC **17** 17:18:48.4±0.8, 16°.92N × 60°.21W, h0 km, mb3.9/9, mb1 4.1/14, mb1mx3.9/36, mbtmp3.9/14, ML3.4/5, MS3.4/1, Ms1 3.5/1, ms1mx2.6/28, Error ellipse: s-maj=21.6km s-min=13.5km az=137.0*
*TRN **17** 17:18:49.6, 17°.01N × 60°.39W, h3 km, MD3.8*
*NEIC **17** 17:18:52.2±2.7, 17°.02N±0°.06 × 60°.30W±0°.04, h26 km±6 km, ML3.8/19, Error ellipse: s-maj=9.7km s-min=4.3km az=203.0*
ISC 17 17:18:49.6±0.6, **17°.05N**±0°.03×**60°.29W**±0°.04, **h10** km, **n89, σ1°84/108, mb4.0/9, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H05N1	**Guadeloupe/Mar**	**1.03**	**226**	Pn	**Pn**	**17 19 10.7**	**+0.5**
H05N1				Sn	**Sn**	**17 19 25.1**	**+0.4**
ABD	**La Joyeuse, An**	**1.28**	**244**	*e*P	**Pg**	**17 19 16.0**	**+1.8**
ABD				*e*S	**Sg**	**17 19 34.1**	**+3.2**
MAGL	**Barre de l'ile**	**1.45**	**221**	*e*P	**Pg**	**17 19 18.0**	**+0.6**
MAGL				*e*S	**Sg**	**17 19 36.5**	**+0.3**
ANWB	**Willy Bob**	**1.56**	**294**	*e*P	**Pg**	**17 19 18.1**	**-1.4**
ANWB				*e*S	**Sn**	**17 19 36.6**	**-1.1**
ANWB	**Willy Bob**	**1.56**	**294**		**Pn**	**17 19 17.6**	**-1.0**
CBE	**Ff, Capester**	**1.59**	**233**	*e*P	**Pg**	**17 19 20.4**	**+0.2**
CBE				*e*S	**Sg**	**17 19 42.8**	**+1.9**
TDBA	**Terre de Bas,**	**1.76**	**228**	*e*P	**Pg**	**17 19 23.3**	**0.0**
TDBA				*e*S	**Sg**	**17 19 46.3**	**+0.2**
MLYT	**Lee's Yard**	**1.85**	**260**	*e*P	**Pg**	**17 19 24.5**	**-0.6**
MLYT				*e*S	**Sg**	**17 19 47.7**	**-1.4**
DLPL	**La Plaine**	**1.94**	**209**	*e*P	**Pg**	**17 19 25.4**	**-1.3**
DLPL				*e*S	**Sb**	**17 19 47.9**	**-1.3**
DLPL	**La Plaine**	**1.94**	**209**	Pn	**Pb**	**17 19 23.9**	**-1.1**
MDN	**Morne-Daniel**	**2.02**	**212**	*e*P	**Pg**	**17 19 27.9**	**-0.4**
MDN				*e*S	**Sb**	**17 19 52.1**	**+0.5**
DPMT	**Pointe Michel**	**2.06**	**211**	*e*P	**Pg**	**17 19 28.0**	**-1.1**
NVDO	**Nevis, Disaste**	**2.23**	**272**	*e*P	**Pb**	**17 19 28.6**	**-1.4**
NVDO				*e*S	**Sb**	**17 19 56.7**	**-1.0**
ILAM	**Ilet Lapin Mar**	**2.33**	**194**	*e*P	**Pb**	**17 19 30.6**	**-1.0**
ILAM				*e*S	**Sn**	**17 19 57.7**	**+1.1**
SVN	**Savane Anatole**	**2.35**	**201**	*e*P	**Pb**	**17 19 31.5**	**-0.5**
SKI	**Saint Kitts**	**2.36**	**277**	*e*P	**Pb**	**17 19 30.9**	**-1.3**
SKI				*e*S	**Sb**	**17 19 59.0**	**-2.5**
SKI	**Saint Kitts**	**2.36**	**277**		**Pb**	**17 19 30.6**	**-1.7**
BAMF	**Morne Balai**	**2.37**	**201**	*e*P	**Pb**	**17 19 31.0**	**-1.3**
CXM	**Morne La Croix**	**2.38**	**201**	*e*P	**Pb**	**17 19 31.2**	**-1.4**
GBMF	**Grand Be**	**2.39**	**201**	*e*P	**Pb**	**17 19 31.1**	**-1.7**
PCM	**Pelee Case Pet**	**2.39**	**202**	*e*P	**Pb**	**17 19 31.3**	**-1.4**
PML	**Morne Lenard**	**2.41**	**201**	*e*P	**Pb**	**17 19 31.3**	**-1.8**
FDF	**Fort de France**	**2.44**	**200**	*e*P	**Pb**	**17 19 31.9**	**-1.8**
FDF				*e*S	**Sb**	**17 20 01.8**	**-2.1**
FDF	**Fort de France**	**2.44**	**200**		**Pb**	**17 19 31.4**	**-2.3**
LPMF	**Morne Lapointe**	**2.54**	**195**	*e*P	**Pb**	**17 19 32.9**	**-2.4**
ZAM	**Aeronautique**	**2.56**	**196**	*e*P	**Pb**	**17 19 33.1**	**-2.5**
TRMF	**Trois Ilets**	**2.60**	**197**	*e*P	**Pb**	**17 19 34.2**	**-2.1**
BIM	**Bigot**	**2.62**	**197**	*e*P	**Pb**	**17 19 35.2**	**-1.6**
BIM	**Bigot**	**2.62**	**197**	*e*	Pg	17 19 48.3	+8.4
BIM				*e*S	**Sb**	**17 20 07.5**	**-1.6**
H05S1	**Guadeloupe/Mar**	**2.66**	**192**	Pn	**Pb**	**17 19 34.8**	**-2.5**
H05S1				Sn	**Sn**	**17 20 08.7**	**+1.0**
SMRT	**St. Maarten**	**2.84**	**291**		**Pn**	**17 19 34.6**	**-0.4**
SMRT				IAML		17 20 17.0	
	comp=N,373nm,0.3s						
SMRT				IAML		17 20 17.7	
	comp=E,361nm,0.2s						
SABA	**Saba**	**2.88**	**282**	Pn	**Pb**	**17 19 37.8**	**-3.3**
SABA				IAML		17 20 18.0	
	comp=N,279nm,0.5s						
SABA				IAML		17 20 35.6	
	comp=E,411nm,0.7s						
SLBI	**Saint Lucia, B**	**3.08**	**193**	*e*P	**Pb**	**17 19 40.9**	**-3.5**
SLBI				*e*S	**Sn**	**17 20 16.6**	**+1.5**
SLAC	**Saint Lucia, A**	**3.18**	**191**	*e*P	**Pn**	**17 19 41.8**	**+2.0**
SLAC				*e*S	**Sn**	**17 20 18.2**	**+0.4**
SLPA	**Patience**	**3.23**	**191**	*e*S	**Sn**	**17 20 20.9**	**+2.0**
SLB	**Belfond**	**3.28**	**193**	*e*P	**Pb**	**17 19 44.4**	**-3.6**
SLB				*e*S	**Sn**	**17 20 23.4**	**+3.2**
SLDE	**Delcer**	**3.31**	**193**	*e*S	**Sn**	**17 20 21.9**	**+1.1**
MCLT	**Moule a Chique**	**3.38**	**191**	*e*P	**Pn**	**17 19 44.8**	**+2.4**
MCLT				*e*S	**Sn**	**17 20 23.8**	**+1.3**
MCLT	**Moule a Chique**	**3.38**	**191**	Pn	**Pn**	**17 19 43.6**	**+1.2**
SFAN	**Fancy Village**	**3.74**	**193**	*e*S	**Sn**	**17 20 35.0**	**+3.5**
SSV	**Crater Summit**	**3.80**	**193**	*e*P	**Pb**	**17 19 53.2**	**-3.6**
SSV				*e*S	**Sn**	**17 20 37.0**	**+3.9**
SVV	**Soufriere Volc**	**3.81**	**194**	*e*P	**Pb**	**17 19 54.1**	**-2.9**
SVV				*e*S	**Sn**	**17 20 35.3**	**+2.0**
SVCV	**St. Vincent, C**	**3.84**	**193**	*e*P	**Pn**	**17 19 51.5**	**+2.6**
SVCV				*e*S	**Sn**	**17 20 35.5**	**+1.5**
SVB	**Belmont**	**3.87**	**194**	*e*P	**Pn**	**17 19 52.3**	**+3.2**
SVB				*e*S	**Sn**	**17 20 36.6**	**+2.0**
SVB	**Belmont**	**3.87**	**194**		**Pn**	**17 19 52.5**	**+3.3**
BCHC	**Barbados, Cave**	**3.94**	**171**	*e*P	**Pn**	**17 19 52.8**	**+2.6**
BBGH	**Gun Hill**	**3.94**	**170**	Pn	**Pn**	**17 19 45.6**	**-4.6**
BBGH				IAML		17 21 20.8	
	comp=E,201nm,2.0s						
BBSP	**Saint Philip**	**4.00**	**168**	*e*P	**Pn**	**17 19 53.4**	**+2.5**
CDVI	**St. Croix**	**4.33**	**280**	Pn	**Pn**	**17 19 54.8**	**-0.8**
CDVI				IAML		17 21 00.3	
	comp=E,145nm,0.8s						
CDVI				IAML		17 21 06.9	
	comp=N,143nm,0.4s						
STVI	**Saint Thomas**	**4.63**	**287**	Pn	**Pn**	**17 20 00.5**	**+0.9**
STVI				IAML		17 20 56.8	
	comp=N,60nm,0.4s						
GCMP	**Grenada, Carri**	**4.66**	**194**	*e*P	**Pn**	**17 20 02.5**	**+2.4**
GCMP	**Grenada, Carri**	**4.66**	**194**	*e*S	**Sn**	**17 20 55.9**	**+1.5**
CUPR	**Culebra, Puert**	**4.92**	**286**		**Pn**	**17 20 04.2**	**+0.5**
CUPR				IAML		17 21 02.4	
	comp=N,50nm,0.9s						
GRGR	**Grenville**	**5.06**	**195**	*e*P	Pn	17 20 10.1	+4.6
GRGR	**Grenville**	**5.06**	**195**	Pn	**Pn**	**17 20 06.1**	**+0.5**
GRGR				IAML		17 21 23.7	
	comp=N,117nm,1.6s						
MTP	**Monte Pirata**	**5.13**	**283**	Pn	**Pn**	**17 20 07.4**	**+0.9**
MTP				IAML		17 21 09.5	
	comp=E,36nm,0.4s						
HUMP	**Col San Antoni**	**5.42**	**282**	Pn	**Pn**	**17 20 10.9**	**+0.4**
CBYP	**Canovanas**	**5.45**	**284**	Pn	**Pn**	**17 20 11.0**	**0.0**
GCPR	**Guaynabo City**	**5.67**	**284**	Pn	**Pn**	**17 20 13.9**	**+0.1**
SJG	**San Juan**	**5.69**	**282**	Pn	**Pn**	**17 20 15.5**	**+1.3**
	comp=E,1.7nm,0.3s,baz=272,slow=22,SNR=2.0						
SJG				Sn	**Sn**	**17 21 18.9**	**-0.8**
	comp=E,2.8nm,0.3s,baz=3.1,slow=19,SNR=1.7						
SJG	**San Juan**	**5.69**	**282**	Pn	**Pn**	**17 20 14.9**	**+0.6**
TOSP	**Speyside**	**5.72**	**182**	*e*P	Pn	17 20 18.4	+3.9
TOSP	**Speyside**	**5.72**	**182**	Pn	**Pn**	**17 20 17.2**	**+2.6**
ICMP	**Isla Caja de M**	**6.01**	**279**	Pn	**Pn**	**17 20 18.3**	**-0.4**
OBIP	**Obispado Ponce**	**6.11**	**280**	Pn	**Pn**	**17 20 20.1**	**+0.1**
AOPR	**Arecibo Observ**	**6.30**	**283**	Pn	**Pn**	**17 20 22.5**	**-0.1**
MLPR	**Magueyes Islan**	**6.51**	**279**	Pn	**Pn**	**17 20 27.6**	**+2.0**
CRPR	**Cabo Rojo, PR**	**6.58**	**279**	Pn	**Pn**	**17 20 28.2**	**+1.8**
PLCV	**Puerto La Cruz**	**8.02**	**212**		**Pn**	**17 20 44.7**	**-1.5**
PLCV					**Sn**	**17 22 17.8**	**+0.8**
PCRV	**Puerto La Cruz**	**8.03**	**212**	Pn	**Pn**	**17 20 44.7**	**-1.7**
	comp=E,0.4nm,0.3s,baz=53,slow=5.1,SNR=1.0						
PCRV				Sn	**Sn**	**17 22 17.8**	**+0.5**
	comp=E,0.5nm,0.3s,baz=297,slow=11,SNR=1.5						
DR12	**Loma Pena Alta**	**8.83**	**283**	Pn	**Pn**	**17 20 59.8**	**+2.4**
SDDR	**Presa de Saban**	**10.64**	**282**		**Pn**	**17 21 22.2**	**0.0**
SDV	**Santo Domingo**	**12.93**	**282**	Pn	**Pn**	**17 21 53.6**	**-0.2**
	comp=E,0.2nm,0.3s,baz=53,slow=20,SNR=1.4						
MDP	**Montagnes des**	**14.04**	**147**	Pn	**Pn**	**17 22 05.0**	**-3.7**
	comp=E,0.3nm,0.3s,baz=338,slow=16,SNR=1.4						
MDP				Sn	Sn	17 24 28.7	-16
	comp=E,0.3nm,0.3s,baz=301,slow=5.2,SNR=1.7						
PTGA	**Pitinga**	**17.67**	**179**	P	**Pn**	**17 22 54.5**	**-1.4**
	comp=E,0.3nm,0.3s,baz=35,slow=8.5,SNR=2.2						
PTGA				S	Sn	17 25 59.5	-13
	comp=E,0.4nm,0.3s,baz=280,slow=21,SNR=5.6						
PTGA	**Pitinga**	**17.67**	**179**	P	**Pn**	**17 22 54.7**	**-1.3**
LPAZ	**La Paz**	**34.01**	**194

	baz=128								
YHNB					S		Sg	17 35 57.9	+0.6
	baz=128								
NWLT	**Wulai**	**0.18**	**70**		*e*P		Pg	17 35 57.2	+0.5
	baz=70								
NWLT					*e*S		Sg	17 36 00.2	+0.5
	baz=70								
NWLT	**Wulai**	**0.18**	**70**		*e*S		Pg	17 35 57.1	+0.3
	baz=71								
NDT	**Datong Townshi**	**0.21**	**122**		*e*P		Pb	17 35 58.1	-0.3
	baz=121								
NDT					*e*S		Sb	17 36 02.2	-0.1
	baz=121								
NDT	**Datong Townshi**	**0.21**	**122**		*e*S		Pg	17 35 58.2	+0.9
	baz=120								
ENTT	**Nioudou**	**0.24**	**108**		*e*P		Pb	17 35 58.8	-0.1
	baz=107								
ENTT					*e*S		Sb	17 36 03.0	-0.1
	baz=107								
NNS	**Nan Shan**	**0.28**	**169**		*e*P		Pb	17 35 60.0	+0.4
	baz=167								
NNS					*e*S		Sb	17 36 04.0	-0.3
	baz=167								
NNS	**Nan Shan**	**0.28**	**169**		*e*S		Pb	17 35 59.9	+0.3
	baz=165								
NNSB	**Datong**	**0.29**	**167**		*e*P		Pb	17 35 59.6	-0.2
	baz=167								
NNSB					*e*S		Sb	17 36 04.2	-0.5
	baz=167								
NNSB	**Datong**	**0.29**	**167**		*e*S		Pb	17 35 59.9	+0.1
	baz=165								
NNSH	**Datong**	**0.29**	**167**		*e*P		Pb	17 35 59.4	-0.4
	baz=167								
NNSH					*e*S		Sb	17 36 04.2	-0.5
	baz=167								
NSTT	**Nanjuang**	**0.30**	**254**		*e*P		Pb	17 35 60.0	+0.2
	baz=252								
NSTT					*e*S		Sg	17 36 03.0	+0.2
	baz=252								

IDC **17** *17:55:46.4±3.1,31.°84S×71.°42W,h56km±23km,mb3.9/5, mb1 3.8/9,mb1mx3.6/30,mbtmp4.0/9,ML3.8/4,Error ellipse: s-maj=23.0km s-min=19.1km az=90.0*
SJA **17** *17:55:47.8±1.3,32.°00S×71.°23W,h54km±33km,ML3.6, MW3.6*
NEIC **17** *17:55:48.2±1.6,32.°02S±0.°02×71.°2W±0.°1,h70km±6km, Error ellipse: s-maj=13.8km s-min=2.8km az=89.0*
GUC **17** *17:55:48.2±0.5,32.°04S×71.°05W,h52km±5km,ML3.9*

ISC 17 17:55:47.3±0.7,31.°97S±0.°03×71.°24W±0.06,h66km±6km, n72,σ1%81/94,mb4.2/5,4C-5D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO04	**Los Peladeros**	**0.24**	**109**		**Pn**	**17 55 59.4**	**+1.3**
CO04					**Sn**	**17 56 07.2**	**+1.3**
CO02	**Combarbal**	**0.79**	**15**	⇑*i*P	**Pn**	**17 56 05.1**	**+2.0**
CO02				*e*S	**Sn**	**17 56 17.2**	**+2.5**
CO02	**Combarbal**	**0.79**	**15**		**Pn**	**17 56 05.1**	**+2.0**
CO02				Sn	**Sn**	**17 56 17.2**	**+2.5**
VA03	**San Esteban**	**0.99**	**144**	⇓*i*P	**Pn**	**17 56 05.8**	**+0.3**
VA03				*e*S	**Sn**	**17 56 18.7**	**-0.4**
VA03				IAML		17 56 20.5	
	comp=E,10μm,0.1s						
VA03	**San Esteban**	**0.99**	**144**		**Pn**	**17 56 05.7**	**+0.1**
VA03				Sn	**Sn**	**17 56 19.3**	**+0.2**
ROCH	**El Roble**	**1.02**	**169**	⇓*i*P	**Pn**	**17 56 06.8**	**+0.7**
ROCH				*e*S	**Sn**	**17 56 21.0**	**+0.9**
ROCH				IAML		17 56 23.1	
	comp=N,6μm,0.5s						
ROC1	**El Roble**	**1.02**	**169**		**Pn**	**17 56 06.0**	**-0.2**
ROC1	**El Roble**	**1.02**	**169**	*i* P	**Pn**	**17 56 06.8**	**+0.6**
ROC1				*e*S	**Sn**	**17 56 21.6**	**+1.5**
CO03	**El Pedregal**	**1.22**	**23**	⇑*i*P	**Pn**	**17 56 10.6**	**+2.1**
CO03				*e*S	**Sn**	**17 56 26.9**	**+2.5**
CO03				IAML		17 56 29.6	
	comp=E,6μm,0.4s						
CO03	**El Pedregal**	**1.22**	**23**		**Pn**	**17 56 10.6**	**+2.1**
PEL	**Peldehue**	**1.26**	**158**	*e*P	**Pn**	**17 56 09.0**	**-0.1**
PEL				*i* S	**Sn**	**17 56 25.5**	**+0.1**
PEL	**Peldehue**	**1.26**	**158**		**Pn**	**17 56 09.5**	**+0.4**
PEL				Sn	**Sn**	**17 56 25.2**	**-0.2**
PEL	**Peldehue**	**1.26**	**158**	*i* P	**Pn**	**17 56 09.5**	**+0.4**
PEL				*e*S	**Sn**	**17 56 25.6**	**+0.3**
MT02	**Curacav**	**1.29**	**176**	Pn	**Pn**	**17 56 10.3**	**+0.9**
MT02				Sn	**Sn**	**17 56 26.4**	**+0.5**
MT05	**Renca**	**1.48**	**163**		**Pn**	**17 56 12.7**	**+0.7**
CLCH	**Cerro Calan**	**1.54**	**158**	⇓*e*P	**Pn**	**17 56 13.6**	**+0.8**
CLCH				*e*S	**Sn**	**17 56 32.3**	**+0.3**
CLCH				IAML		17 56 35.7	
	comp=E,2μm,0.4s						
RCDM	**Rinconada Maip**	**1.56**	**167**	*e*P	**Pn**	**17 56 13.7**	**+0.7**
RCDM				*e*S	**Sn**	**17 56 33.6**	**+1.2**
FCH	**Farellones**	**1.58**	**150**	⇓*e*P	**Pn**	**17 56 14.2**	**+0.7**
FCH				*e*S	**Sn**	**17 56 34.0**	**+0.9**
FCH				IAML		17 56 35.2	
	comp=E,2μm,0.4s						
FSR	**Penalolen**	**1.62**	**158**	*e*P	**Pn**	**17 56 15.7**	**+1.8**
FSR				*e*S	**Sn**	**17 56 35.9**	**+2.0**
MT03	**Universidad Ad**	**1.64**	**158**	⇓*i*P	**Pn**	**17 56 15.1**	**+0.9**
MT03				*e*S	**Sn**	**17 56 35.4**	**+1.0**
MT03				IAML		17 56 38.6	
	comp=E,3μm,0.3s						
RTLS	**Leoncito**	**1.66**	**85**	*i* P	**Pn**	**17 56 16.3**	**+1.7**
RTLS				IAML		17 56 46.0	
	comp=Z,361nm,1.1s						
GO04	**Tololo Observa**	**1.83**	**12**	⇑*i*P	**Pn**	**17 56 18.8**	**+2.1**
GO04				*e*S	**Sn**	**17 56 40.6**	**+1.5**
GO04	**Tololo Observa**	**1.83**	**12**		**Pn**	**17 56 18.9**	**+2.1**
MT01	**Popeta**	**1.89**	**180**	⇑*i*P	**Pn**	**17 56 18.6**	**+1.2**
MT01				*e*S	**Sn**	**17 56 41.6**	**+1.3**
MT01				IAML		17 56 46.6	
	comp=E,1μm,0.1s						
MT01	**Popeta**	**1.89**	**180**		**Pn**	**17 56 18.4**	**+1.0**
LMEL	**Las Melosas**	**2.07**	**155**	*e*P	**Pn**	**17 56 20.9**	**+1.0**
LMEL				*e*S	**Sn**	**17 56 46.3**	**+1.5**
LMEL				IAML		17 56 48.9	
	comp=N,1μm,0.1s						
ASAL	**Salagasta**	**2.13**	**108**	*i* P	**Pn**	**17 56 23.2**	**+2.5**
ASAL				IAML		17 56 55.9	
	comp=Z,221nm,0.3s						
ARCO	**CERRO ARCO**	**2.14**	**115**	*i* P	**Pn**	**17 56 23.4**	**+2.5**
ARCO				IAML		17 56 56.6	
	comp=Z,293nm,0.5s						
CO01	**Juntas del Tor**	**2.21**	**27**		**Pn**	**17 56 24.7**	**+2.7**
ACCO	**Cerro Coronel**	**2.32**	**54**	*i* P	**Pn**	**17 56 26.4**	**+3.0**
ACCO				IAML		17 57 03.1	
	comp=Z,499nm,1.0s						
AAGR	**Agrelo**	**2.32**	**119**	*i* P	**Pn**	**17 56 25.9**	**+2.6**
AAGR				IAML		17 57 03.0	
	comp=Z,183nm,0.8s						
AROD	**Rodeo**	**2.35**	**41**	*i* P	**Pn**	**17 56 27.5**	**+3.6**
ACDV	**Cuesta del Vie**	**2.55**	**46**	*i* P	**Pn**	**17 56 29.9**	**+3.3**
ACDV				IAML		17 57 12.4	
	comp=Z,185nm,0.4s						
AMOG	**MOGNA**	**2.56**	**67**	*i* P	**Pn**	**17 56 28.5**	**+1.9**
AMOG				IAML		17 57 11.7	
	comp=Z,348nm,0.3s						
CFA	**Coronel Fontan**	**2.58**	**83**	P	**Pn**	**17 56 28.2**	**+1.4**
	comp=Z,68nm,0.3s,baz=216,slow=6.7,SNR=216						
CFA				S	**Sn**	**17 57 00.5**	**+3.3**
	comp=Z,114nm,0.3s,baz=9.7,slow=20,SNR=13						
CFA	**Coronel Fontan**	**2.58**	**83**	*i* P	**Pn**	**17 56 28.2**	**+1.4**
CFA				IAML		17 57 29.2	
	comp=Z,131nm,0.6s						
BO02	**Sierra Bellavi**	**2.84**	**172**		**Pn**	**17 56 31.4**	**+1.0**
GO05	**Huala**	**3.09**	**191**	*e*P	**Pn**	**17 56 33.7**	**0.0**
GO05				*i* S	**Sn**	**17 57 16.6**	**+7.1**
GO05	**Huala**	**3.09**	**191**		**Pn**	**17 56 33.9**	**+0.2**
AC05	**El Transito**	**3.23**	**15**		**Pn**	**17 56 38.0**	**+2.2**
AGUA	**GUANDACOL**	**3.42**	**44**	*i* P	**Pn**	**17 56 41.5**	**+3.1**
AGUA				IAML		17 57 38.8	
	comp=Z,166nm,1.0s						
VCA	**Vinchina**	**4.15**	**40**	*i* P	**Pn**	**17 56 51.6**	**+3.3**
VCA				IAML		17 58 02.9	
	comp=Z,173nm,0.5s						
GO03	**Copiap**	**4.45**	**12**		**Pn**	**17 56 53.7**	**+1.4**
BI02	**San Fabin de**	**4.69**	**180**		**Pn**	**17 56 56.3**	**+0.8**
AC02	**Maricunga**	**5.43**	**20**		**Pn**	**17 57 07.5**	**+1.3**
GO02	**Mina Guanaco**	**6.93**	**12**		**Pn**	**17 57 25.7**	**-0.9**
LC01	**Cunco**	**6.93**	**184**		**Pn**	**17 57 25.3**	**-0.9**
PB14	**IPOC Station P**	**7.35**	**6**		**Pn**	**17 57 30.4**	**-1.9**
PB10	**IPOC Station P**	**8.44**	**4**	Pn	**Pn**	**17 57 46.0**	**-1.0**
PLCA	**Paso Flores**	**8.77**	**177**	P	**Pn**	**17 57 51.9**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=354,slow=12,SNR=6.3						
PLCA	**Paso Flores**	**8.77**	**177**	Pn	**Pn**	**17 57 51.6**	**+0.3**
PB15	**IPOC Station P**	**8.87**	**11**	Pn	**Pn**	**17 57 51.9**	**-1.0**
LVC	**Limon Verde**	**9.55**	**13**	P	**Pn**	**17 57 59.7**	**-2.7**
	comp=Z,0.7nm,0.3s,baz=190,slow=8.8,SNR=2.7						
LVC				S	**Sn**	**17 59 46.2**	**-2.1**
	comp=Z,2.8nm,0.3s,baz=53,slow=22,SNR=4.8						
CPUP	**Villa Florida**	**13.39**	**69**	P	**Pn**	**17 58 50.9**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=246,slow=17,SNR=1.7						
CPUP	**Villa Florida**	**13.39**	**69**	Pn	**Pn**	**17 58 51.2**	**-3.1**
LPAZ	**La Paz**	**15.86**	**11**	P	**P**	**17 59 29.1**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=209,slow=7.1,SNR=6.3						
LPAZ	**La Paz**	**15.86**	**11**	P	**P**	**17 59 28.5**	**-1.2**
SIV	**San Ignacio**	**18.40**	**33**	P	**Pn**	**17 59 57.2**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=218,slow=12,SNR=8.8						
BDFB	**Brasilia**	**26.66**	**58**	P	**P**	**18 01 19.4**	**-0.8**
	comp=Z,1.9nm,0.6s,baz=236,slow=11,SNR=2.2						
BDFB	**Brasilia**	**26.66**	**58**	IAmb	IAmb	18 01 21.6	
	comp=Z,8.7nm,1.4s						
PTGA	**Pitinga**	**32.84**	**21**	P	**P**	**18 02 13.7**	**-1.0**
	comp=Z,1.6nm,0.8s,baz=297,slow=23,SNR=2.0						
PTGA	**Pitinga**	**32.84**	**21**	IAmb	IAmb	18 02 40.3	
	comp=Z,17nm,1.8s						
RUSC	**La Rusia**	**37.69**	**357**	P	**P**	**18 02 59.3**	**+2.3**
SNAA	**Sanae**	**53.22**	**158**	P	**P**	**18 04 59.4**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=280,slow=9.7,SNR=2.5						
SNAA	**Sanae**	**53.22**	**158**	IAmb	IAmb	18 06 07.6	
	comp=Z,11nm,1.6s						
DBIC	**Dimbokro**	**73.89**	**71**	P	**P**	**18 07 15.4**	**-0.1**
	comp=Z,3.4nm,0.8s,baz=188,slow=22,SNR=3.3						
TORD	**Torodi Ar. Bea**	**82.89**	**70**	P	**P**	**18 08 05.2**	**+0.2**
	comp=Z,2.6nm,0.9s,baz=264,slow=4.7,SNR=11						
AAK	**Ala-Archa**	**150.92**	**59**	PKPbc	**PKiKP**	**18 15 33.7**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=204,slow=5.3,SNR=9.2						
KURBB	**Kurchatov Arra**	**150.92**	**41**	PKPbc	**PKiKP**	**18 15 32.6**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=302,slow=2.8,SNR=19						
KURBB				pPKPbc	**pPKPbc**	**18 15 52.6**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=292,slow=3.3,SNR=3.5						
KURK	**Kurchatov**	**150.93**	**41**		**PKiKP**	**18 15 32.6**	**+0.1**
KURK					**pPKPbc**	**18 15 52.6**	**+1.3**
ZALV	**Zalesovo Beam**	**152.15**	**31**	PKPbc	**PKiKP**	**18 15 35.5**	**+0.5**
	comp=Z,3.7nm,0.5s,baz=284,slow=3.5,SNR=18						
MKAR	**Makanchi Array**	**154.90**	**46**	PKPab	**PKPab**	**18 15 57.0**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=285,slow=4.3,SNR=9.8						

IDC 17 17:56:21.3±999.0,16.°55S×70.°54W,h0km,Error ellipse: s-maj=419.8km s-min=44.9km az=81.0,Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I08BO	**LAS PENAS INFR**	**2.03**	**81**	*i*		18 09 05.0	
	baz=260,slow=322,SNR=0.9						
I41PY	**VILLA FLORIDA**	**15.69**	**131**	*i*		19 36 10.0	
	baz=306,slow=317,SNR=1.8						
I09BR	**BRASILIA INFRA**	**21.66**	**91**	*i*		20 08 20.0	
	baz=263,slow=317,SNR=2.7						

JMA **17** *18:02:15.0±0.2,23.°70N×122.°13E,h21km±5km,M2.0*
TAP **17** *18:02:16.3,23.°72N×122.°11E,h35km±1km,ML2.7,D*

ISC 17 18:02:14.5±1.1,23.°67N±0.°02×122.°14E±0.°02,h15km±9km, n90,σ0%64/117,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.58**	**302**	*e*P	**Pb**	**18 02 26.7**	**+0.4**
	baz=294						
TWD	**Chiawan**	**0.64**	**309**	P	**Pg**	**18 02 27.3**	**+0.2**
	baz=308						
EGFH	**Guangfu**	**0.66**	**270**	P	**Pb**	**18 02 28.1**	**+0.4**
	baz=266						
EGFH				S	**Sb**	**18 02 37.1**	**+0.5**
	baz=266						
ESL	**Shilin**	**0.67**	**282**	*i* P	**Pg**	**18 02 27.4**	**-0.1**
	baz=272						
ESL				S	**Sg**	**18 02 36.6**	**+0.3**
	baz=272						
HGSD	**Ruisui**	**0.68**	**255**	P	**Pg**	**18 02 28.1**	**+0.3**
	baz=250						
HGSD				*e*S	**Sg**	**18 02 37.1**	**+0.2**
	baz=250						
NACB	**Ninganchiao**	**0.71**	**315**	P	**Pg**	**18 02 28.1**	**-0.2**
	baz=307						
NACB				*e*S	**Sg**	**18 02 37.3**	**-0.3**
	baz=307						
EHY	**Hungye**	**0.77**	**258**	P	**Pb**	**18 02 29.8**	**+0.2**
	baz=269						
EHY				S	**Sb**	**18 02 40.4**	**+0.5**
	baz=269						
ETLH	**Xiulin Townshi**	**0.81**	**312**	P	**Pg**	**18 02 29.8**	**-0.4**
	baz=311						
ETLH				S	**Sg**	**18 02 40.5**	**-0.3**
	baz=311						
YULB	**Yu-li**	**0.82**	**250**	P	**Pb**	**18 02 30.8**	**+0.3**
	baz=262						
YULB				*e*S	**Sb**	**18 02 41.8**	**+0.4**
	baz=262						
ENA	**Nanau**	**0.84**	**334**	P	**Pb**	**18 02 30.7**	**-0.1**
	baz=325						
TWF1	**Yuli**	**0.84**	**248**	P	**Pb**	**18 02 30.9**	**+0.1**
	baz=236						
TWF1				S	**Sb**	**18 02 42.5**	**+0.7**
	baz=236						
EOS1	**EOS1**	**0.87**	**359**	*e*P	**Pg**	**18 02 31.6**	**+0.2**
	baz=1.0						
FULB	**Fuli**	**0.91**	**239**	*e*P	**Pb**	**18 02 31.3**	**-0.7**
	baz=225						
CHKT	**Chengkung**	**0.91**	**232**	*e*P	**Pb**	**18 02 31.2**	**-0.8**
	baz=220						
CHKT				*e*S	**Sb**	**18 02 42.0**	**-2.0**
	baz=220						
VWDT	**VWDT**	**0.92**	**275**	P	**Pb**	**18 02 32.1**	**0.0**
	baz=273						
VWDT				*e*S	**Sb**	**18 02 43.6**	**-0.6**
	baz=273						
OWD	**Renai**	**0.93**	**288**	P	**Pb**	**18 02 32.0**	**-0.3**
	baz=294						
OWD				S	**Sb**	**18 02 43.8**	**-0.8**
	baz=294						
WHF	**Hehuan Shan**	**0.93**	**301**	P	**Pb**	**18 02 32.0**	**-0.6**
	baz=299						
CHGB	**Renai**	**0.97**	**294**	P	**Pb**	**18 02 32.7**	**-0.4**
	baz=292						
CHGB				*e*S	**Sb**	**18 02 45.7**	**-0.1**
	baz=292						
TWC	**Suao**	**0.97**	**344**	P	**Pb**	**18 02 33.1**	**+0.1**
	baz=356						
TWC				*e*S	**Sb**	**18 02 44.8**	**-0.8**
	baz=356						
NNSB	**Datong**	**1.02**	**318**	P	**Pb**	**18 02 33.6**	**-0.4**
	baz=317						
NNSB				*e*S	**Sb**	**18 02 46.5**	**-0.8**
	baz=317						
NNSH	**Datong**	**1.02**	**318**	P	**Pb**	**18 02 33.6**	**-0.4**
	baz=309						
NNSH				*e*S	**Sb**	**18 02 46.4**	**-1.0**
	baz=309						
NNS	**Nan Shan**	**1.04**	**318**	P	**Pb**	**18 02 33.9**	**-0.4**
	baz=317						
NNS				*e*S	**Sb**	**18 02 47.1**	**-0.7**
	baz=317						
TWT	**Tachien**	**1.06**	**303**	P	**Pb**	**18 02 34.5**	**-0.1**
	baz=302						
JYNG	**Yonagunijimaku**	**1.07**	**43**	P	**Pb**	**18 02 34.7**	**0.0**
TDCB	**Techi**	**1.07**	**303**	*e*P	**Pb**	**18 02 34.3**	**-0.5**
	baz=302						
NDT	**Datong Townshi**	**1.09**	**328**	P	**Pb**	**18 02 34.7**	**-0.4**
	baz=329						
SSLB	**Suanglung**	**1.09**	**276**	*e*P	**Pb**	**18 02 34.5**	**-0.7**
	baz=274						
ENTT	**Nioudou**	**1.10**	**331**	P	**Pb**	**18 02 34.8**	**-0.4**
	baz=332						
YOJ	**Yonaguni jima**	**1.12**	**45**	*e*P	**Pb**	**18 02 35.3**	**-0.2**
	baz=58						
YOJ				*e*S	**Sb**	**18 02 50.0**	**+0.1**
	baz=58						
YOJ	**Yonaguni jima**	**1.12**	**45**	P	**Pb**	**18 02 35.4**	**-0.2**
YOJ				S	**Sb**	**18 02 50.0**	**+0.1**
TWE	**Neicheng**	**1.13**	**338**	*e*P	**Pb**	**18 02 35.5**	**-0.2**
	baz=339						
TWH	**Lutao**	**1.14**	**213**	*e*P	**Pn**	**18 02 34.6**	**-1.2**
	baz=209						
ELDTW	**Lidau**	**1.14**	**245**	*e*P	**Pb**	**18 02 35.0**	**-0.9**
	baz=243						
ILA	**Ilan**	**1.15**	**342**	*e*P	**Pb**	**18 02 35.7**	**-0.3**
	baz=333						
SMLT	**Sun Moon Lake**	**1.16**	**281**	P	**Pn**	**18 02 36.0**	**-0.3**
	baz=287						
SMLT				*e*S	**Sb**	**18 02 51.0**	**-0.1**
	baz=287						
DPDB	**Guoxing**	**1.17**	**288**	P	**Pn**	**18 02 36.1**	**-0.3**
	baz=287						
WHYT	**Xinyi Township**	**1.18**	**271**	*e*P	**Pg**	**18 02 37.3**	**0.0**
	baz=264						
NTC	**Toucheng**	**1.21**	**346**	*e*S	**Sb**	**18 02 51.4**	**-1.2**
	baz=358						
YHNB	**Yeheng**	**1.22**	**325**	*e*P	**Pn**	**18 02 36.6**	**-0.5**
	baz=325						
NSK	**Sanguang**	**1.23**	**325**	P	**Pn**	**18 02 36.8**	**-0.5**
	baz=325						
ALS	**Alishan**	**1.24**	**263**	P	**Pn**	**18 02 37.7**	**+0.2**
	baz=253						
NWLT	**Wulai**	**1.25**	**332**	*e*P	**Pn**	**18 02 37.1**	**-0.3**
	baz=320						
NWLT				*e*S	**Sb**	**18 02 52.5**	**-1.1**
	baz=320						
WHP	**Taichung City**	**1.25**	**299**	P	**Pb**	**18 02 38.2**	**+0.4**
	baz=298						
TWGBT	**Beinan**	**1.29**	**229**	*e*P	**Pn**	**18 02 36.4**	**-1.7**
	baz=236						
TWG	**Pinlang**	**1.30**	**229**	*e*S	**Sb**	**18 02 53.6**	**-1.4**
	baz=240						
WJS	**Zhushan**	**1.30**	**277**	*e*P	**Pb**	**18 02 39.3**	**+0.6**
	baz=283						
TIPB	**Shuangxi**	**1.33**	**348**	P	**Pb**	**18 02 39.0**	**-0.1**
	baz=356						
TIPB				*e*S	**Sb**	**18 02 55.1**	**-0.8**
	baz=356						
TWB1	**Santiao Chiao**	**1.34**	**354**	*e*P	**Pg**	**18 02 41.5**	**+1.2**
	baz=355						
CHN5	**Tsauling**	**1.34**	**267**	P	**Pb**	**18 02 39.8**	**+0.3**
	baz=265						
WNT	**Mingjian**	**1.35**	**279**	*e*P	**Pb**	**18 02 40.0**	**+0.5**
	baz=278						
STYT	**Tauyuan**	**1.37**	**249**	*e*P	**Pn**	**18 02 39.6**	**+0.5**
	baz=238						
NSTT	**Nanjuang**	**1.41**	**313**	*e*P	**Pb**	**18 02 40.7**	**+0.1**
	baz=320						
TWQ1	**Liyutan**	**1.42**	**299**	P	**Pb**	**18 02 41.0**	**+0.3**
	baz=298						
TCU	**Taichung**	**1.42**	**290**	*e*P	**Pg**	**18 02 41.6**	**-0.2**
	baz=289						
TPUB	**Ta-pu**	**1.44**	**255**	*e*P	**Pb**	**18 02 41.5**	**+0.5**
	baz=244						
WGK	**Gukeng**	**1.45**	**271**	*e*P	**Pb**	**18 02 41.3**	**+0.2**
	baz=269						
WGK				*e*S	**Sb**	**18 02 59.9**	**+0.5**
	baz=269						
WTP	**Ta-pu**	**1.47**	**253**	*e*P	**Pb**	**18 02 41.4**	**0.0**
	baz=242						
WDLH	**Douliu**	**1.47**	**271**	*e*P	**Pb**	**18 02 41.8**	**+0.2**
	baz=269						
WDLH				*e*S	**Sb**	**18 03 00.0**	**0.0**
	baz=269						
WCHH	**Zhanghua**	**1.50**	**286**	*e*P	**Pb**	**18 02 42.8**	**+0.7**
	baz=285						
SLGT	**Liugui**	**1.53**	**244**	*e*P	**Pb**	**18 02 42.4**	**-0.1**
	baz=242						
SGST	**Jiashian**	**1.55**	**248**	*e*S	**Sb**	**18 03 02.5**	**+0.2**
	baz=238						
YM01	**YM01**	**1.56**	**341**	*e*P	**Pn**	**18 02 42.3**	**+0.6**
	baz=341						
CHN1	**Nanshi**	**1.56**	**252**	*e*P	**Pb**	**18 02 42.7**	**-0.4**
	baz=251						
YM10	**YM10**	**1.57**	**340**	*e*P	**Pn**	**18 02 42.1**	**+0.2**
	baz=341						
HATJ	**Hateruma jima**	**1.57**	**76**	P	**Pn**	**18 02 41.5**	**-0.3**
HATJ				*e*S	**Sn**	**18 03 00.7**	**-1.2**
TWK	**Hsinying**	**1.57**	**255**	*e*P	**Pb**	**18 02 43.1**	**-0.1**
	baz=254						
SNST	**Tainan City**	**1.58**	**254**	*e*S	**Sb**	**18 03 03.7**	**+0.6**
	baz=252						
CHY	**Chiayi**	**1.58**	**264**	*e*P	**Pb**	**18 02 43.9**	**+0.4**
	baz=263						
IRIF	**Iriomote-Funau**	**1.59**	**65**	P	**Pn**	**18 02 42.2**	**0.0**
IRIF				*e*S	**Sn**	**18 03 02.5**	**0.0**
RLNB	**Erlin**	**1.65**	**278**	*e*P	**Pn**	**18 02 43.5**	**+0.6**
	baz=277						
SSD	**Sandimen**	**1.67**	**237**	*e*S	**Sn**	**18 03 05.2**	**+0.9**
	baz=232						
MASBT	**Mashibuluo**	**1.74**	**233**	*e*P	**Pn**	**18 02 44.5**	**+0.3**
	baz=225						
EAST	**Anshuo**	**1.75**	**223**	*e*P	**Pn**	**18 02 43.6**	**-0.7**
	baz=221						
WSF	**Szhu**	**1.76**	**269**	*e*S	**Sb**	**18 03 08.5**	**+0.1**
	baz=268						
JKRS	**Kuro-shima**	**1.80**	**71**	P	**Pn**	**18 02 45.6**	**+0.6**
JKRS				*e*S	**Sn**	**18 03 07.3**	**-0.2**
CHN8	**Yiju**	**1.80**	**260**	*e*S	**Sb**	**18 03 09.2**	**-0.4**
	baz=259						
SCZT	**Fangliau**	**1.91**	**228**	*e*P	**Pb**	**18 02 48.2**	**-0.7**
	baz=226						
JIJ	**Ishigaki jima**	**1.96**	**69**	P	**Pn**	**18 02 46.8**	**-0.3**
JIJ				*e*S	**Sn**	**18 03 11.5**	**+0.1**
JISG	**Ishigakijimahi**	**2.18**	**65**	P	**Pn**	**18 02 49.6**	**-0.6**
JISG				*e*S	**Sn**	**18 03 15.2**	**-1.8**
WDGT	**Dungji**	**2.31**	**260**	*e*P	**Pn**	**18 02 53.2**	**+1.1**
	baz=259						
PHUB	**P'eng-hu**	**2.36**	**267**	*e*S	**Sn**	**18 03 20.6**	**-0.8**
	baz=255						
PNG	**Penghu**	**2.38**	**268**	*e*P	**Pn**	**18 02 52.5**	**-0.4**
	baz=256						
JTJ	**Tarama**	**2.53**	**67**	P	**Pn**	**18 02 55.1**	**+0.1**
VCHM	**Qimei**	**2.53**	**260**	*e*S	**Sn**	**18 03 24.2**	**-1.4**
	baz=259						
VWUC	**VWUC**	**2.79**	**299**	*e*P	**Pn**	**18 02 57.2**	**-1.4**
	baz=298						
PTTC	**Pingtan**	**2.82**	**311**	*e

0.3nm,0.3s,baz=154,slow=22,SNR=1.5
FAKI Fak Fak 6.45 122 Pn **Pn** 18 51 02.5 +2.0
SPSI Sidrap Palu 8.28 238 P **Pn** 18 51 28.3 +2.6
WRA Warramunga Arr 21.63 160 P **P** 18 54 14.6 -0.8
3.3nm,0.4s,baz=336,slow=10,SNR=41
WB2 Warramunga Arr 21.64 160 P **P** 18 54 14.8 -0.6
WB2 IAmb IAmb 18 54 40.3
comp=Z,6.6nm,0.9s
COEN Coen 21.69 132 P **P** 18 54 18.5 +2.4
COEN IAmb IAmb 18 54 45.6
comp=Z,43nm,1.4s
WR0 Warramunga Arr 21.72 160 P **P** 18 54 15.4 -0.9
TPUB Ta-pu 23.43 346 P **P** 18 54 33.3 -0.9
TPUB IAmb IAmb 18 54 53.7
comp=Z,22nm,1.6s
AS31 Alice Springs 25.00 164 P **P** 18 54 48.2 -0.6
AS31 IAmb IAmb 18 54 50.2
comp=Z,1.9nm,0.3s
ASAR Alice Springs 25.01 164 P **P** 18 54 48.0 -0.8
comp=Z,1.5nm,0.3s,baz=342,slow=10,SNR=75
MORW Morawa 31.14 198 P **P** 18 55 42.0 -1.6
ENH Enshi 33.86 333 P **P** 18 56 05.9 -1.6
ENH IAmb IAmb 18 56 09.5
comp=Z,3.3nm,0.4s
BBOO Buckleboo 34.28 166 P **P** 18 56 10.3 -0.7
STKA Stephens Creek 35.13 158 P **P** 18 56 17.6 -0.7
comp=Z,1.1nm,0.5s,baz=329,slow=10,SNR=6.1
STKA Stephens Creek 35.13 158 P **P** 18 56 17.7 -0.7
BKZ Black Stump Fm 60.20 137 P **P** 18 59 31.1 -1.7
MK31 Makanchi Array 60.23 326 P **P** 18 59 32.0 -0.7
MKAR Makanchi Array 60.23 326 P **P** 18 59 32.9 +0.1
comp=Z,0.8nm,0.5s,baz=119,slow=8.1,SNR=18
MAKZ Makanchi 60.41 326 P **P** 18 59 34.1 +0.1
MAKZ IAmb IAmb 18 59 34.9
comp=Z,1.0nm,0.5s
CASY Casey 67.64 187 P **P** 19 00 21.7 +0.6
CASY IAmb IAmb 19 00 24.8
comp=Z,6.0nm,1.4s

*NEIC **17** 18:50:16.0±2.0,23°.95S±0°.06×66°.70W±0°.09,h198km±3km, mb4.4/16, Error ellipse: s-maj=11.9km s-min=9.1km az=88.0*
*VAO **17** 18:50:15.5±0.3,24°.07S×67°.00W,h233km±4km, mb4.2*
*SJA **17** 18:50:15.9±1.1,23°.98S×66°.79W,h214km±15km, ML3.8, MW4.0*
*IDC **17** 18:50:16.2±0.9,23°.93S×66°.67W,h196km±9km, mb3.7/5, mb1 3.8/12,mb1mx3.6/27, mbtmp4.2/12, Error ellipse: s-maj=14.4km s-min=13.8km az=44.0*
*GUC **17** 18:50:18.3±0.5,23°.73S×67°.33W,h248km±6km, ML4.5*
ISC 17 18:50:15.9±0.6,23°.99S±0°.04×66°.79W±0°.05,h204km±6km, n145,σ1§22/173,mb4.3/11,16C,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AZAP	**Zapla**	**1.59**	**99**	*i* P		**Pn**		**18 50 52.5**	**+1.4**
AZAP				IAML				18 51 22.6	
comp=Z,313nm,0.9s									
ASTB	**Santa Barbara**	**2.13**	**89**	*i* P		**Pn**		**18 50 57.6**	**+1.3**
ASTB				IAML				18 51 31.1	
comp=Z,85nm,0.6s									
YJA	**Yavi**	**2.15**	**33**	*i* P		**Pn**		**18 50 58.4**	**+1.5**
YJA				*e*S		**S**		**18 51 30.0**	**+1.8**
YJA				IAML				18 51 37.9	
comp=Z,29nm,1.1s									
LVC	**Limon Verde**	**2.39**	**305**	P		**Pn**		**18 51 00.8**	**+1.4**
comp=Z,90nm,0.3s,baz=125,slow=7.5,SNR=253									
LVC				S		**S**		**18 51 33.4**	**+0.9**
comp=Z,64nm,0.3s,baz=307,slow=20,SNR=11									
LVC	**Limon Verde**	**2.39**	**305**	*e*P		**Pn**		**18 51 00.6**	**+1.3**
LVC				*i* S		**S**		**18 51 33.7**	**+1.3**
LVC	**Limon Verde**	**2.39**	**305**			**Pn**		**18 51 00.6**	**+1.3**
LVC	**Limon Verde**	**2.39**	**305**	*e*P		**Pn**		**18 51 00.7**	**+1.4**
LVC				*e*S		**S**		**18 51 33.7**	**+1.3**
PB15	**IPOC Station P**	**2.58**	**287**	⇑*i* P		**Pn**		**18 51 02.7**	**+1.4**
PB15				*i* S		**S**		**18 51 36.6**	**+0.7**
PB15	**IPOC Station P**	**2.58**	**287**			**Pn**		**18 51 02.6**	**+1.4**
PB15				Sn		**S**		**18 51 36.8**	**+0.7**
PB15	**IPOC Station P**	**2.58**	**287**	*i* P		**Pn**		**18 51 02.6**	**+1.4**
PB15				*e*S		**S**		**18 51 36.7**	**+0.7**
PB15				IAML				18 51 38.2	
comp=Z,3μm,0.2s									
GO02	**Mina Guanaco**	**2.81**	**245**	⇑*i* P		**Pn**		**18 51 05.3**	**+1.4**
GO02				*e*S		**S**		**18 51 41.8**	**+1.2**
GO02				IAML				18 51 43.2	
comp=E,3μm,0.3s									
GO02	**Mina Guanaco**	**2.81**	**245**			**Pn**		**18 51 05.2**	**+1.4**
GO02				Sn		**S**		**18 51 41.9**	**+1.2**
PB06	**IPOC Station P**	**2.86**	**296**	⇑*i* P		**Pn**		**18 51 05.6**	**+1.2**
PB06				*e*S		**S**		**18 51 41.1**	**-0.5**
PB06				IAML				18 51 42.8	
comp=N,924nm,0.4s									
PB06	**IPOC Station P**	**2.86**	**296**			**Pn**		**18 51 05.6**	**+1.2**
PB06				Sn		**S**		**18 51 41.8**	**+0.2**
PB06	**IPOC Station P**	**2.86**	**296**	*i* P		**Pn**		**18 51 05.4**	**+1.0**
PB06				*e*S		**S**		**18 51 41.8**	**+0.2**
PB06				IAML				18 51 44.1	
comp=Z,431nm,0.1s									
PB09	**IPOC Station P**	**3.15**	**314**	⇑*i* P		**Pn**		**18 51 09.2**	**+1.4**
PB09				*e*S		**S**		**18 51 47.1**	**-0.6**
PB09				IAML				18 51 51.6	
comp=E,305nm,0.5s									
PB09	**IPOC Station P**	**3.15**	**314**			**Pn**		**18 51 09.1**	**+1.4**
PB09				Sn		**S**		**18 51 48.3**	**+0.6**
PB09	**IPOC Station P**	**3.15**	**314**	*i* P		**Pn**		**18 51 08.9**	**+1.2**
PB09				*e*S		**S**		**18 51 48.7**	**+1.0**
PB09				IAML				18 51 50.5	
comp=Z,382nm,0.7s									
PB05	**IPOC Station P**	**3.34**	**289**	⇑*i* P		**Pn**		**18 51 10.5**	**+0.6**
PB05				*e*S		**S**		**18 51 50.1**	**-1.5**
PB05				IAML				18 51 54.7	
comp=E,309nm,0.4s									
PB05	**IPOC Station P**	**3.34**	**289**	*i* P		**Pn**		**18 51 10.8**	**+0.9**
PB05				IAML				18 51 57.9	
comp=Z,150nm,0.4s									
PB03	**IPOC Station P**	**3.35**	**305**	⇑*i* P		**Pn**		**18 51 10.8**	**+0.7**
PB03				*e*S		**S**		**18 51 50.7**	**-1.3**
PB03				IAML				18 51 51.8	
comp=E,612nm,0.2s									
PB14	**IPOC Station P**	**3.36**	**258**	⇑*i* P		**Pn**		**18 51 11.2**	**+0.8**
PB14				*e*S		**S**		**18 51 51.3**	**-1.1**
PB14	**IPOC Station P**	**3.36**	**258**			**Pn**		**18 51 11.2**	**+0.8**
PB14	**IPOC Station P**	**3.36**	**258**	*i* P		**Pn**		**18 51 11.2**	**+0.8**
PB14				IAML				18 51 55.1	
comp=Z,322nm,0.3s									
PB10	**IPOC Station P**	**3.49**	**277**	⇑*i* P		**Pn**		**18 51 12.5**	**+0.9**
PB10				*e*S		**S**		**18 51 53.4**	**-1.2**
PB10	**IPOC Station P**	**3.49**	**277**			**Pn**		**18 51 12.5**	**+0.9**
PB10	**IPOC Station P**	**3.49**	**277**	*i* P		**Pn**		**18 51 12.6**	**+0.9**
PB10				IAML				18 51 57.8	
comp=Z,159nm,0.2s									
PB04	**IPOC Station P**	**3.51**	**297**	⇑*i* P		**Pn**		**18 51 12.7**	**+0.6**
PB04				*i* S		**S**		**18 51 54.3**	**-1.1**
PB04	**IPOC Station P**	**3.51**	**297**			**Pn**		**18 51 12.6**	**+0.6**
PB04	**IPOC Station P**	**3.51**	**297**	*i* P		**Pn**		**18 51 12.8**	**+0.7**
PB04				*e*S		**S**		**18 51 54.9**	**-0.5**
PB04				IAML				18 51 57.8	
comp=Z,471nm,0.4s									
AC02	**Maricunga**	**3.54**	**216**	Pn		**Pn**		**18 51 14.4**	**+1.7**
PB07	**IPOC Station P**	**3.64**	**308**	⇑*i* P		**Pn**		**18 51 14.2**	**+0.5**
PB07				*e*S		**S**		**18 51 56.3**	**-2.1**
PB07	**IPOC Station P**	**3.64**	**308**			**Pn**		**18 51 13.8**	**+0.1**
PB01	**IPOC Station P**	**3.85**	**319**	⇑*i* P		**Pn**		**18 51 16.4**	**+0.1**
PB01				*e*S		**S**		**18 52 01.6**	**-1.4**
PB01	**IPOC Station P**	**3.85**	**319**			**Pn**		**18 51 16.3**	**+0.1**
PB02	**IPOC Station P**	**3.92**	**312**	⇑*i* P		**Pn**		**18 51 17.1**	**+0.1**
PB02				*e*S		**S**		**18 52 01.9**	**-2.5**
PB08	**IPOC Station P**	**4.42**	**330**	⇑*i* P		**Pn**		**18 51 24.4**	**+0.9**
PB08				*e*S		**S**		**18 52 15.5**	**-0.6**
PB08	**IPOC Station P**	**4.42**	**330**			**Pn**		**18 51 24.3**	**+0.7**
PATCX	**Punta Patache**	**4.44**	**315**	⇑*e*P		**Pn**		**18 51 22.8**	**-0.7**
PATCX	**Punta Patache**	**4.44**	**315**			**Pn**		**18 51 22.7**	**-0.7**
CYA	**Choya**	**4.52**	**169**	*i* P		**Pn**		**18 51 26.7**	**+2.4**
CYA				IAML				18 52 25.4	
comp=Z,10.0nm,2.2s									
TA01	**Diego Aracena**	**4.64**	**317**	*e*P		**Pn**		**18 51 24.7**	**-1.2**
TA01	**Diego Aracena**	**4.64**	**317**			**Pn**		**18 51 24.7**	**-1.2**
GO03	**Copiap**	**4.75**	**220**	⇑*e*P		**Pn**		**18 51 27.2**	**0.0**
GO03	**Copiap**	**4.75**	**220**			**Pn**		**18 51 27.2**	**0.0**
GO03	**Copiap**	**4.75**	**220**	*i* P		**Pn**		**18 51 27.5**	**+0.3**
GO01	**Chusmiza**	**4.85**	**332**	*e*P		**Pn**		**18 51 29.0**	**-0.1**
GO01	**Chusmiza**	**4.85**	**332**			**Pn**		**18 51 29.0**	**-0.1**
PB11	**IPOC Station P**	**4.99**	**327**	⇑*e*P		**Pn**		**18 51 29.7**	**-0.8**
PB11	**IPOC Station P**	**4.99**	**327**			**Pn**		**18 51 29.5**	**-1.0**
PSGCX	**Pisagua**	**5.36**	**324**			**Pn**		**18 51 33.3**	**-2.0**
MNMC	**Minye Minye**	**5.50**	**331**	*e*P		**Pn**		**18 51 36.9**	**-0.3**
MNMC	**Minye Minye**	**5.50**	**331**			**Pn**		**18 51 36.8**	**-0.3**
AC05	**El Transito**	**5.75**	**212**			**Pn**		**18 51 39.9**	**-0.2**
PB16	**IPOC Station P**	**6.18**	**335**			**Pn**		**18 51 46.0**	**-0.1**
PB12	**IPOC Station P**	**6.29**	**328**			**Pn**		**18 51 45.5**	**-1.7**
AROD	**Rodeo**	**6.60**	**201**	*i* P		**Pn**		**18 51 53.4**	**+2.1**
CO01	**Juntas del Tor**	**6.65**	**206**	Pn		**Pn**		**18 51 52.5**	**+0.7**
ACCO	**Cerro Coronel**	**6.87**	**197**	*i* P		**Pn**		**18 51 56.1**	**+1.2**
ACCO				IAML				18 53 15.3	
comp=Z,18nm,3.2s									
GO04	**Tololo Observa**	**7.12**	**209**	Pn		**Pn**		**18 51 56.6**	**-1.3**
TCA	**Tanti**	**7.57**	**166**	*i* P		**Pn**		**18 52 04.0**	**+0.3**
TCA				IAML				18 53 29.8	
comp=Z,12nm,1.6s									
CO03	**El Pedregal**	**7.65**	**206**	Pn		**Pn**		**18 52 03.8**	**-0.9**
CFA	**Coronel Fontan**	**7.69**	**189**	P		**Pn**		**18 52 05.2**	**0.0**
comp=Z,1.8nm,0.3s,baz=20,slow=14,SNR=34									
CFA				S		**S**		**18 53 27.3**	**-4.8**
comp=Z,4.9nm,0.3s,baz=204,slow=19,SNR=11									
CFA	**Coronel Fontan**	**7.69**	**189**	*i* P		**Pn**		**18 52 05.0**	**-0.2**
CFA				IAML				18 53 32.8	
comp=Z,9.5nm,0.2s									
LPAZ	**La Paz**	**7.77**	**350**	P		**Pn**		**18 52 07.5**	**+0.7**
comp=Z,1.3nm,0.3s,baz=172,slow=7.1,SNR=42									
LPAZ				S		**S**		**18 53 33.1**	**-1.9**
comp=Z,0.5nm,0.3s,baz=266,slow=14,SNR=5.6									
LPAZ	**La Paz**	**7.77**	**350**			**Pn**		**18 52 07.3**	**+0.5**
CO02	**Combarbal**	**8.10**	**207**	Pn		**Pn**		**18 52 09.2**	**-1.3**
CO04	**Los Peladeros**	**8.83**	**204**			**Pn**		**18 52 21.2**	**+1.0**
CPUP	**Villa Florida**	**8.88**	**107**	P		**Pn**		**18 52 20.1**	**-0.5**
comp=Z,0.8nm,0.3s,baz=288,slow=11,SNR=26									
CPUP	**Villa Florida**	**8.88**	**107**			**Pn**		**18 52 18.8**	**-1.8**
CPUP	**Villa Florida**	**8.88**	**107**	*e*P		**Pn**		**18 52 19.0**	**-1.6**
SIV	**San Ignacio**	**9.60**	**35**	P		**Pn**		**18 52 29.1**	**-1.0**
comp=Z,1.0nm,0.3s,baz=226,slow=14,SNR=9.6									
SALV	**Santo Antonio**	**13.17**	**54**	*e*P		**P**		**18 53 17.9**	**-0.5**
PTGB	**Pitanga**	**13.44**	**96**	*e*P		**P**		**18 53 21.4**	**0.0**
CPSB	**Cacapava Do Su**	**13.48**	**121**	*e*P		**Pn**		**18 53 18.9**	**-0.3**
ITAB	**Concordia**	**13.61**	**107**	*e*P		**Pn**		**18 53 21.3**	**+0.4**
PLTB	**Pedras Altas**	**13.98**	**127**	*e*P		**Pn**		**18 53 25.1**	**-0.4**
C2SB	**Chapadao do Su**	**13.99**	**71**	*e*P		**P**		**18 53 27.1**	**-0.4**
PCMB	**Pacaembu**	**14.51**	**84**	*e*P		**P**		**18 53 34.0**	**+0.7**
CNLB	**Canela**	**15.20**	**114**	*e*P		**P**		**18 53 40.7**	**-0.1**
SAML	**Samuel**	**15.35**	**14**	*e*P		**Pn**		**18 53 42.0**	**-0.4**
LC01	**Cunco**	**15.47**	**195**			**Pn**		**18 53 41.9**	**-1.8**
FRTB	**Fartura**	**15.79**	**91**	*e*P		**Pn**		**18 53 48.4**	**+0.6**
ITRB	**Iturama**	**15.84**	**78**	*e*P		**P**		**18 53 47.8**	**-0.1**
ARAG	**Araguaiana, MT**	**16.31**	**62**	*e*P		**Pn**		**18 53 54.3**	**+0.3**
CLDB	**Colider**	**16.72**	**41**	*e*P		**P**		**18 53 56.7**	**-1.0**
PLCA	**Paso Flores**	**16.99**	**190**	P		**Pn**		**18 54 01.8**	**-0.1**
comp=Z,0.3nm,0.3s,baz=10,slow=11,SNR=11									
PLCA	**Paso Flores**	**16.99**	**190**	P		**Pn**		**18 54 01.9**	**+0.1**
PLCA				IAmb		IAmb		18 54 07.6	
comp=Z,19nm,1.6s									
PLCA	**Paso Flores**	**16.99**	**190**	*e*P		**P**		**18 53 57.3**	**-3.2**
BB19B	**Bebedouro**	**17.12**	**84**	*e*P		**Pn**		**18 54 03.1**	**-0.4**
SPB	**Sao Paulo**	**17.72**	**93**	*e*P		**P**		**18 54 08.9**	**+0.4**
PET01	**Itanhaem-SP**	**17.81**	**95**	*e*P		**P**		**18 54 08.7**	**-0.8**
VAO	**Valinhos**	**18.21**	**91**	*e*P		**P**		**18 54 13.9**	**0.0**
IPMB	**Ipameri, GO**	**18.34**	**74**	*e*P		**P**		**18 54 15.6**	**+0.2**
LL01	**San Ignacio de**	**18.92**	**193**	P		**Pn**		**18 54 23.0**	**-1.4**
LL01				IAmb		IAmb		18 54 27.1	
comp=Z,12nm,0.9s									
PARB	**Paraibuna**	**19.40**	**92**	*e*P		**P**		**18 54 26.0**	**-0.8**
BDFB	**Brasilia**	**19.50**	**68**	P		**P**		**18 54 28.0**	**+0.1**
comp=Z,2.0nm,0.3s,baz=241,slow=11,SNR=42									
BDFB	**Brasilia**	**19.50**	**68**	P		**P**		**18 54 28.3**	**+0.4**
NPGB	**Novo Progresso**	**20.11**	**35**	*e*P		**P**		**18 54 32.1**	**-2.3**
ESAR	**Angra dos Reis**	**20.51**	**92**	*e*P		**P**		**18 54 38.2**	**-0.4**
MAN01	**Angra dos Reis**	**20.97**	**92**	*e*P		**P**		**18 54 43.1**	**-0.4**
MC01	**Montes Claros**	**22.59**	**76**	*e*P		**P**		**18 54 58.5**	**-1.0**
JANB	**Januaria**	**22.95**	**71**	*e*P		**P**		**18 55 01.8**	**-0.9**
SMTB	**Santa Maria do**	**23.73**	**54**	*e*P		**P**		**18 55 09.1**	**-0.6**
PTGA	**Pitinga**	**24.05**	**17**	*e*P		**P**		**18 55 10.8**	**-1.9**
PRPB	**Parauapebas**	**24.08**	**45**	*e*P		**P**		**18 55 11.9**	**-1.1**
SJMB	**Sao Joao De Ma**	**24.40**	**82**	*e*P		**P**		**18 55 14.9**	**-0.9**
BSFB	**Barra de Sao F**	**24.67**	**83**	*e*P		**P**		**18 55 17.7**	**-0.6**
RIB01	**Linhares ES**	**24.95**	**84**	*e*P		**P**		**18 55 19.6**	**-1.1**
NAN01	**Guarapari, ES**	**25.62**	**81**	*e*P		**P**		**18 55 26.0**	**-0.8**
NBIT	**Itapeh - BA**	**27.28**	**76**	*e*P		**P**		**18 55 40.6**	**-1.1**
GDU01	**Guandu, BA**	**27.65**	**73**	*e*P		**P**		**18 55 43.8**	**-1.3**
NBPN	**Ponto Novo - B**	**28.47**	**67**	*e*P		**P**		**18 55 51.1**	**-1.2**
ROSB	**Rosrio**	**30.32**	**50**	*e*P		**P**		**18 56 06.9**	**-1.7**
NBLA	**Lagarto - SE**	**30.45**	**70**	*e*P		**P**		**18 56 08.3**	**-1.4**
NBTA	**Tacaratu-PE**	**31.16**	**67**	*e*P		**P**		**18 56 11.6**	**-4.4**
NBPS	**Pedro II - PI**	**31.24**	**55**	*e*P		**P**		**18 56 15.0**	**-1.8**
NBMA	**Muriti-CE**	**31.54**	**63**	*e*P		**P**		**18 56 18.3**	**-1.0**
NBPB	**Pedra_Branca-C**	**31.95**	**59**	*e*P		**P**		**18 56 21.8**	**-1.1**
NBAN	**Anadia - AL**	**32.39**	**69**	*e*P		**P**		**18 56 25.1**	**-1.7**
NBMO	**Morrinhos-CE**	**33.01**	**56**	*e*P		**P**		**18 56 30.6**	**-1.5**
RCBR	**Riachuelo**	**34.74**	**64**	P		**P**		**18 56 47.5**	**+0.4**
RCBR				IAmb		IAmb		18 57 02.1	
comp=Z,10nm,1.2s									
NBPV	**Pedro Velho**	**34.92**	**65**	*e*P		**P**		**18 56 48.1**	**-0.4**
BCIP	**Isla Barro Col**	**35.34**	**337**	P		**P**		**18 56 53.0**	**+0.9**
SNAA	**Sanae**	**59.29**	**161**	P		**P**		**18 59 57.5**	**+1.6**
SNAA				IAmb		IAmb		19 00 06.4	
comp=Z,8.7nm,1.5s									
SNAA						**pP**		**19 00 43.2**	**-0.4**
Z50A	**Ashland**	**59.78**	**341**	P		**P**		**18 59 59.5**	**-0.1**
Z50A				IAmb		IAmb		19 00 01.5	
comp=Z,8.2nm,1.2s									
WVT	**Waverly**	**63.02**	**341**	P		**P**		**19 00 20.4**	**-0.8**
WVT				IAmb		IAmb		19 00 21.8	
comp=Z,5.0nm,0.8s									
CCM	**Cathedral Cave**	**65.86**	**339**	P		**P**		**19 00 40.0**	**+0.4**
CCM				IAmb		IAmb		19 00 40.7	
comp=Z,4.7nm,0.7s									
QSPA	**South Pole Qui**	**66.21**	**180**	P		**P**		**19 00 43.8**	**+2.1**
QSPA				IAmb		IAmb		19 00 44.4	
comp=Z,4.3nm,0.6s									
DBIC	**Dimbokro**	**67.61**	**71**	P		**P**		**19 00 50.6**	**-0.5**
comp=Z,1.4nm,0.4s,baz=236,slow=4.6,SNR=4.9									
DBIC	**Dimbokro**	**67.61**	**71**	P		**P**		**19 00 49.8**	**-1.4**
DBIC				IAmb		IAmb		19 00 58.8	
comp=Z,18nm,1.4s									
F64A	**Sherman**	**69.54**	**359**	P		**P**		**19 01 02.9**	**+0.6**
TOA0	**Torodi Ar. Sit**	**76.38**	**69**	P		**P**		**19 01 43.1**	**-0.1**
TORD	**Torodi Ar. Bea**	**76.38**	**69**	P		**P**		**19 01 43.2**	**0.0**
comp=Z,2.3nm,0.5s,baz=259,slow=5.9,SNR=25									
PDAR	**Pinedale Array**	**77.24**	**329**	P		**P**		**19 01 49.1**	**+1.4**
comp=Z,0.3nm,0.5s,baz=134,slow=5.2,SNR=3.4									
YHH	**Holmes Hill**	**79.39**	**330**	P		**P**		**19 02 02.2**	**+2.7**
MAW	**Mawson**	**81.38**	**163**	P		**P**		**19 02 11.5**	**+2.1**
comp=Z,1.6nm,0.7s,baz=239,slow=5.9,SNR=3.2									
MAW	**Mawson**	**81.38**	**163**	P		**P**		**19 02 11.5**	**+2.1**
YKA	**Yellowknife Ar**	**94.19**	**340**	P		**P**		**19 03 12.0**	**+1.0**
comp=Z,0.7nm,0.6s,baz=132,slow=4.5,SNR=20									
ASAR	**Alice Springs**	**128.54**	**204**	PKP		**PKiKP**		**19 09 00.1**	**+0.1**
comp=Z,1.1nm,0.7s,baz=132,slow=1.9,SNR=15									
WRA	**Warramunga Arr**	**131.72**	**207**	PKP		**PKiKP**		**19 09 06.5**	**+0.1**
comp=Z,0.5nm,0.3s,baz=158,slow=1.8,SNR=13									
ZALV	**Zalesovo Beam**	**143.30**	**28**	PKP		**PKPdf**		**19 09 24.8**	**-0.6**
comp=Z,0.6nm,0.3s,baz=90,slow=0.6,SNR=3.8									
MKAR	**Makanchi Array**	**146.40**	**40**	PKPbc		**PKPbc**		**19 09 32.9**	**+0.1**
comp=Z,1.5nm,0.6s,baz=312,slow=2.7,SNR=18									
SIJI	**Sorong**	**149.70**	**218**	PKPbc		**PKiKP**		**19 09 43.9**	**+0.5**
comp=Z,6.0nm,0.7s,baz=196,slow=4.0,SNR=6.0									
CMAR	**Chiang Mai Arr**	**165.60**	**110**	PKPab		**PKPab**		**19 10 58.0**	**+1.3**
comp=Z,0.3nm,0.7s,baz=237,slow=5.9,SNR=4.8									

*IDC **17** 18:51:32.0±1.8,6°.99S×129°.88E,h99km±26km, mb3.1/1, mb1 3.6/6,mb1mx3.2/39,mbtmp3.9/6, Error ellipse: s-maj=28.9km s-min=14.0km az=113.0*
ISC 17 18:51:31.5±0.9,7°.16S±0°.06×130°.0E±0°.1,h104km,n6, σ3§34/11,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.37**	**11**	P		**Pn**		**18 53 03.2**	**+0.2**
1.1nm,0.3s,baz=194,slow=17,SNR=32									
SIJI				S		**Sn**		**18 54 10.8**	**-3.7**
3.2nm,0.3s,baz=166,slow=22,SNR=7.8									
BATI	**Baumata**	**6.97**	**244**	P		**Pn**		**18 53 12.8**	**+1.7**
2.9nm,0.3s,baz=76,slow=8.3,SNR=7.0									
BATI				S		**Sn**		**18 54 27.9**	**-0.9**
2.4nm,0.3s,baz=233,slow=20,SNR=2.1									
FITZ	**Fitzroy Crossi**	**11.68**	**201**	P		**Pn**		**18 54 15.6**	**+0.7**
0.4nm,0.3s,baz=27,slow=14,SNR=32									
FITZ				S		**Sn**		**18 56 17.7**	**-5.6**
0.6nm,0.3s,baz=94,slow=20,SNR=8.9									
WRA	**Warramunga Arr**	**13.38**	**162**	P		**Pn**		**18 54 39.5**	**+2.1**
1.4nm,0.3s,baz=342,slow=9.7,SNR=18									
WRA				S		**Sn**		**18 57 02.2**	**-2.5**
0.6nm,0.3s,baz=341,slow=22,SNR=6.3									
ASAR	**Alice Springs**	**16.83**	**168**	P		**P**		**18 55 25.4**	**+4.0**
0.6nm,0.3s,baz=343,slow=10.0,SNR=14									
ASAR				S		**Sn**		**18 58 24.5**	**-3.6**
0.2nm,0.3s,baz=347,slow=25,SNR=4.7									
MKAR	**Makanchi Array**	**68.37**	**327**	P		**P**		**19 02 21.6**	**-0.3**
0.2nm,0.4s,baz=122,slow=7.5,SNR=3.0									

*JMA **17** 18:55:14.4±0.3,43°.90N×148°.14E,h0km,M3.7*
*SKHL **17** 18:55:17.0±0.3,44°.49N×148°.13E,h68km±5km,mb4.2/3*
ISC 17 18:55:12.2±3.6,44°.30N±0°.07×148°.3E±0°.1,h15km±23km, n18,σ1§54/27,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.99**	**341**	*i* P		**Pn**		**18 55 31.9**	**+0.3**
KUR				AMB		AMB		18 55 33.0	
110nm,0.4s									
KUR				*e*S		**Sb**		**18 55 42.8**	**-1.1**
KUR				A		A		18 55 45.0	
530nm,0.4s									
KUR				A		A		18 55 45.0	
560nm,0.4s									
YUK	**Yuzh-Kuril'sk**	**1.79**	**262**	*i* P		**Pn**		**18 55 44.2**	**+1.6**
YUK				AMB		AMB		18 55 47.0	
140nm,0.4s									
YUK				*i* S		**Sn**		**18 56 04.8**	**-0.3**
YUK				A		A		18 56 08.0	
100nm,0.3s									
YUK				A		A		18 56 08.0	
260nm,0.3s									
LAGR	**Lagunnoye**	**1.84**	**263**	*e*S		**Sn**		**18 56 05.5**	**-0.9**
GRPR	**Tuman**	**1.86**	**261**	*e*P		**Pb**		**18 55 45.4**	**-0.6**
GRPR				AMB		AMB		18 55 50.0	
110nm,0.4s									
GRPR				*e*S		**Sn**		**18 56 06.7**	**-0.2**
GRPR				A		A		18 56 12.0	
460nm,0.3s									
GRPR				A		A		18 56 12.0	
110nm,0.3s									
NEM2	**Nemuro 2**	**2.09**	**244**	P		**Pn**		**18 55 47.5**	**+0.8**
NEM2				*e*S		**Sn**		**18 56 11.6**	**-0.9**
NMR	**Nemuro--Hokkai**	**2.10**	**245**	*e*P		**Pn**		**18 55 46.7**	**-0.1**
NMR				*e*S		**Sn**		**18 56 10.4**	**-2.2**
JRA	**Rausu**	**2.33**	**262**	P		**Pb**		**18 55 52.8**	**-1.2**
JAK	**Akkeshi**	**2.94**	**245**	P		**Pn**		**18 55 59.8**	**+1.4**
JAK				*e*S		**Sn**		**18 56 31.9**	**-1.5**
JAR	**Ash

comp=Z,2.5nm,0.4s,baz=54,slow=9.8,SNR=41
SOEI Soe 27.38 260 P **P** **19 02 37.6 -1.5**
SOEI IAmb IAmb 19 03 25.0
comp=Z,30nm,1.1s
STKA Stephens Creek 27.73 199 P **P** **19 02 43.0 +1.1**
comp=Z,1.6nm,0.9s,baz=355,slow=11,SNR=5.1
STKA Stephens Creek 27.73 199 P **P** **19 02 42.2 +0.4**
BATI Baumata 28.02 259 P **P** **19 02 46.7 +1.9**
comp=Z,32nm,1.1s,baz=63,slow=4.5,SNR=2.2
BATI LR LR 19 15 30.1
comp=Z,60nm,18.4s,baz=96,slow=40
FITZ Fitzroy Crossi 28.20 242 P **P** **19 02 45.9 -0.3**
comp=Z,4.9nm,0.4s,baz=60,slow=9.1,SNR=32
FITZ Fitzroy Crossi 28.20 242 P **P** **19 02 45.8 -0.5**
FITZ IAmb IAmb 19 02 56.9
comp=Z,7.5nm,0.7s
PSAC2 Pilbara Seismi 34.52 240 P **P** **19 03 43.5 +1.7**
PSAD1 Pilbara Seismi 34.53 240 P **P** **19 03 45.2 +3.2**
PSAB3 Pilbara Seismi 34.57 240 P **P** **19 03 46.0 +3.8**
MORW Morawa 40.88 231 P **P** **19 04 34.7 -0.8**
MORW IAmb IAmb 19 04 39.6
comp=Z,22nm,1.4s
CMAR Chiang Mai Arr 57.16 296 P **P** **19 06 40.6 +0.4**
comp=Z,0.2nm,0.5s,baz=117,slow=5.5,SNR=1.6
KLR Kul'dur 57.32 345 LR LR 19 28 18.1
comp=Z,16nm,19.7s,baz=121,slow=33
SONM Songino Array 66.40 329 P **P** **19 07 42.6 +0.6**
comp=Z,0.2nm,0.4s,baz=146,slow=4.7,SNR=2.2
VNDA Vanda 72.04 178 P **P** **19 08 15.8 -0.4**
comp=Z,0.7nm,0.8s,baz=330,slow=6.9,SNR=3.9
MKAR Makanchi Array 80.17 319 P **P** **19 09 03.4 +0.4**
comp=Z,0.1nm,0.5s,baz=89,slow=7.0,SNR=2.5
ZALV Zalesovo Beam 81.19 327 P **P** **19 09 07.1 -1.2**
comp=Z,0.7nm,0.5s,baz=106,slow=4.6,SNR=2.5
ILAR Eielson Array 83.39 22 P **P** **19 09 18.0 -1.5**
comp=Z,0.7nm,0.8s,baz=253,slow=5.6,SNR=8.7
NVAR Mina Array Bea 93.55 52 P **P** **19 10 09.8 +0.7**
comp=Z,0.2nm,0.4s,baz=258,slow=6.4,SNR=1.4
YKA Yellowknife Ar 96.73 28 P **P** **19 10 23.4 +0.7**
comp=Z,0.3nm,0.8s,baz=266,slow=5.4,SNR=3.1
GERES GERESS Array B 124.13 328 PKP **PKPdf** **19 15 51.0 -0.1**
comp=Z,0.2nm,0.6s,baz=72,slow=3.2,SNR=2.3
TORD Torodi Ar. Bea 149.41 286 PKPbc **PKPbc** **19 16 42.3 -0.2**
comp=Z,0.8nm,0.3s,baz=82,slow=2.4,SNR=16

TAP 17 18:59:50.5,24.04N×121.60E,h10km,ML1.2,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.04**	**355**	*i* P	Pg	18 59 53.3	+0.8
	baz=5.0						
TWD				S	Sg	18 59 54.7	+0.8
	baz=5.0						
HWA	**Hwalien**	**0.06**	**176**	P	Pg	18 59 53.0	+0.4
	baz=168						
HWA				S	Sg	18 59 54.9	+0.7
	baz=168						
NACB	**Ninganchiao**	**0.14**	**358**	P	Pb	18 59 54.6	-0.6
	baz=357						
NACB				S	Sg	18 59 57.0	+1.1
	baz=357						
ETLH	**Xiulin Townshi**	**0.20**	**328**	P	Pb	18 59 56.0	-0.4
	baz=327						
ETLH				S	Sg	18 59 59.3	+1.5
	baz=327						
WHF	**Hehuan Shan**	**0.33**	**290**	*e*P	Pb	18 59 58.3	-0.3
	baz=289						
WHF				*e*S	Sb	19 00 03.1	-1.0
	baz=289						
CHGB	**Renai**	**0.39**	**274**	*e*P	Pb	18 59 59.6	0.0
	baz=273						
CHGB				*e*S	Sb	19 00 05.5	-0.3
	baz=273						
OWD	**Renai**	**0.40**	**258**	*e*S	Sb	19 00 05.6	-0.3
	baz=258						
ENA	**Nanau**	**0.41**	**18**	*e*P	Pb	18 59 59.4	-0.4
	baz=19						
NNSB	**Datong**	**0.44**	**333**	*e*P	Pb	18 59 60.0	-0.4
	baz=333						
NNSB				*e*S	Sb	19 00 06.8	-0.3
	baz=333						
NNSH	**Datong**	**0.44**	**333**	*e*P	Pb	19 00 00.4	-0.1
	baz=333						
NDT	**Datong Townshi**	**0.57**	**352**	*e*P	Pb	19 00 02.9	+0.3
	baz=351						
NDT				*e*S	Sg	19 00 09.8	+0.6
	baz=351						
ENTT	**Nioudou**	**0.60**	**357**	*e*P	Pb	19 00 03.7	+0.6
	baz=357						
ENTT				*e*S	Sg	19 00 10.6	+0.4
	baz=357						

TAP 17 18:59:58.0,24.04N×121.68E,h8km,ML0.8,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.09**	**299**	*i* P	Pg	19 00 00.2	0.0
	baz=301						
TWD				S	Sg	19 00 01.6	-0.2
	baz=301						
NACB	**Ninganchiao**	**0.16**	**330**	P	Pg	19 00 01.5	+0.1
	baz=329						
NACB				S	Sg	19 00 03.7	+0.2
	baz=329						
ETLH	**Xiulin Townshi**	**0.25**	**313**	P	Pg	19 00 02.7	-0.3
	baz=312						
ETLH				*e*S	Sg	19 00 06.5	+0.1
	baz=312						
ENA	**Nanau**	**0.39**	**8**	*e*P	Pg	19 00 05.5	-0.2
	baz=9.0						
ENA	**Nanau**	**0.39**	**8**	*e*S	Pg	19 00 05.5	-0.3
	baz=19						
NNSB	**Datong**	**0.47**	**325**	*e*P	Pg	19 00 07.4	+0.1
	baz=325						
NNSB				*e*S	Sg	19 00 13.9	+0.4
	baz=325						
NNSH	**Datong**	**0.47**	**325**	*e*P	Pg	19 00 07.1	-0.2
	baz=325						
NNSH				*e*S	Sg	19 00 14.1	+0.6
	baz=325						
NNSH	**Datong**	**0.47**	**325**	*e*S	Pg	19 00 06.7	-0.6
	baz=333						

*IDC **17** 19:20:16.1±6.0,22.95S×179.29W,h508km±68km,mb3.7/6, mb1 3.7/7,mb1mx3.1/45,mbtmp4.6/7,Error ellipse: s-maj=75.8km s-min=33.6km az=77.0*
*NEIC **17** 19:20:20.2±1.4,23.2S±0.1×179.6W±0.2,h537km±20km, mb4.3/16,Error ellipse: s-maj=29.9km s-min=10.4km az=54.0*

ISC 17 19:20:19.1±1.3,23.2S±0.1×179.6W±0.2,h526km,n26, σ1906/26,mb4.2/12,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.90**	**337**	P	P	19 21 58.7	+2.9
FUNA	**Funafuti**	**14.65**	**355**	P	**P**	**19 23 25.6**	**+0.1**
URZ	**Urewera**	**15.27**	**190**	P	**P**	**19 23 31.8**	**+0.3**
	0.3nm,0.3s,baz=11,slow=5.2,SNR=1.7						
URZ				S	**S**	**19 26 07.0**	**-3.0**
	0.2nm,0.3s,baz=233,slow=20,SNR=1.1						
BFZ	**Birch Farm**	**17.78**	**191**	P	**P**	**19 23 55.5**	**-0.4**
QRZ	**Quartz Range**	**18.79**	**199**	P	**P**	**19 24 06.4**	**+1.3**
NNZ	**Nelson**	**18.91**	**197**	P	**P**	**19 24 06.4**	**+0.2**
THZ	**Tophouse**	**19.55**	**197**	P	**P**	**19 24 12.7**	**+0.6**
THZ				IAmb	IAmb	19 24 15.1	
	comp=Z,5.2nm,0.7s						
HNR	**Honiara**	**23.93**	**302**	P	**P**	**19 24 50.5**	**-1.3**
	comp=Z,30nm,0.3s,baz=117,slow=11,SNR=6.5						
ARMA	**Armidale**	**26.66**	**248**	P	**P**	**19 25 16.5**	**+0.7**
ARMA				IAmb	IAmb	19 25 17.4	
	comp=Z,19nm,1.5s						
EIDS	**Eidsvold**	**26.84**	**259**	P	**P**	**19 25 18.1**	**+0.8**
CAN	**Canberra**	**29.85**	**239**	P	**P**	**19 25 44.3**	**+0.7**
CAN				IAmb	IAmb	19 26 02.2	
	comp=Z,19nm,1.5s						
CTA	**Charters Tower**	**31.89**	**269**	P	**P**	**19 26 02.1**	**+0.8**
	comp=Z,7.2nm,0.4s,baz=98,slow=12,SNR=24						
CTAO	**Charters Tower**	**31.89**	**269**	P	**P**	**19 26 01.8**	**+0.5**
CTAO				IAmb	IAmb	19 26 04.1	
	comp=Z,26nm,1.4s						
TOO	**Toolangi**	**33.17**	**236**	P	**P**	**19 26 12.3**	**+0.4**
TOO				IAmb	IAmb	19 26 13.2	
	comp=Z,16nm,1.5s						
STKA	**Stephens Creek**	**35.37**	**247**	P	**P**	**19 26 30.8**	**+0.4**
	comp=Z,2.9nm,0.6s,baz=88,slow=10,SNR=11						
STKA	**Stephens Creek**	**35.37**	**247**	P	**P**	**19 26 30.6**	**+0.1**
BBOO	**Buckleboo**	**40.10**	**246**	P	**P**	**19 27 08.6**	**-0.5**
BBOO				IAmb	IAmb	19 27 11.2	
	comp=Z,4.3nm,1.2s						
AS31	**Alice Springs**	**42.56**	**260**	P	**P**	**19 27 28.4**	**-0.3**
ASAR	**Alice Springs**	**42.56**	**260**	P	**P**	**19 27 28.8**	**0.0**
	comp=Z,2.8nm,0.6s,baz=100,slow=6.9,SNR=38						
WR0	**Warramunga Arr**	**42.68**	**265**	P	**P**	**19 27 29.1**	**-0.6**
WR0				IAmb	IAmb	19 27 46.5	
	comp=Z,14nm,1.5s						
WB2	**Warramunga Arr**	**42.86**	**265**	P	**P**	**19 27 30.7**	**-0.5**
WB2				IAmb	IAmb	19 27 31.1	
	comp=Z,4.1nm,0.6s						
WRA	**Warramunga Arr**	**42.87**	**265**	P	**P**	**19 27 30.8**	**-0.5**
	comp=Z,2.6nm,0.4s,baz=92,slow=8.3,SNR=240						
FITZ	**Fitzroy Crossi**	**51.30**	**265**	P	**P**	**19 28 35.4**	**+0.7**
	comp=Z,2.0nm,0.6s,baz=93,slow=5.4,SNR=16						
FITZ	**Fitzroy Crossi**	**51.30**	**265**	P	**P**	**19 28 35.2**	**+0.5**
QSPA	**South Pole Qui**	**66.87**	**180**	P	**P**	**19 30 20.3**	**+1.8**
HFS	**Hagfors**	**141.95**	**349**	PKP	**PKPdf**	**19 38 48.2**	**-2.2**
	comp=Z,0.5nm,0.3s,baz=46,slow=4.2,SNR=5.0						

*IDC **17** 19:25:42.3±0.6,3.53S×135.17E,h0km,mb4.1/18, mb1 4.3/24,mb1mx4.2/45,mbtmp4.2/24,ML4.2/6,MS3.9/21, Ms1 3.9/21,ms1mx3.7/36,Error ellipse: s-maj=18.9km s-min=12.8km az=66.0*
*NEIC **17** 19:25:43.1±1.5,3.59S±0.06×135.28E±0.06,h10km±1km, mb4.6/43,Error ellipse: s-maj=12.0km s-min=8.7km az=45.0*
*DJA **17** 19:25:44.8±0.2,3.3S±2.3×135.5E±.,h10km,M4.8/29, mb4.8/29,mB5.3/16,MLv4.9/13,Mw(mB)4.7/16*
*GCMT **17** 19:25:44.1±0.3,3.37S±0.01×135.51E±0.02,h17km±1km, MW4.8/80,Moment Tensor Solution. s22,c26; s80,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.45±.10; $M_{\theta\theta}$-1.05±.08; $M_{\phi\phi}$0.59±.08; $M_{r\theta}$-0.88±.22; $M_{\theta\phi}$-1.76±.06; $M_{\phi r}$0.32±.19; Best double couple: M_o2.18200×10^{16} NP1:ϕs14.00000°,δ63.00000°,λ10.00000°. NP2: ϕs280.00000°,δ81.00000°,λ153.00000°. Principal axes: T 2.0710, Plg26.0000°, Azm234.0000°; N 0.2200, Plg61.0000°, Azm83.0000°; P -2.2930, Plg12.0000°, Azm330.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 19:25:45.2±0.4,3.64S±0.05×135.35E±0.04,h22km,n119, σ1886/118,mb4.5/38,MS3.9/19,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRPI	**Serui, Papua**	**1.97**	**27**	P	Pn	19 26 11.6	-5.7
RKPI	**Ransiki, Papua**	**2.41**	**331**	P	**Pn**	**19 26 21.9**	**-1.5**
RKPI				S	**Sn**	**19 26 50.5**	**-1.8**
FAKI	**Fak Fak**	**3.18**	**283**	P	**Pn**	**19 26 34.2**	**+0.3**
FAKI				S	**Sn**	**19 27 13.5**	**+2.3**
FAKI	**Fak Fak**	**3.18**	**283**		**Pn**	**19 26 33.2**	**-0.7**
FAKI				Sn	**Sn**	**19 27 10.8**	**-0.4**
SMPI	**Sarmi**	**3.73**	**64**	P	**Pn**	**19 26 39.6**	**-2.0**
SMPI				S	**Sn**	**19 27 22.9**	**-2.0**
SIJI	**Sorong**	**4.92**	**304**	Pn	**Pn**	**19 26 56.5**	**-1.4**
	26nm,0.3s,baz=239,slow=23,SNR=138						
SIJI				Sn	**Sn**	**19 27 52.1**	**-2.1**
	35nm,0.3s,baz=139,slow=23,SNR=7.6						
SIJI				LR	LR	19 29 17.1	
	comp=Z,5μm,18.1s,baz=100,slow=46						
GENI	**Genyem**	**4.92**	**78**	P	**Pn**	**19 26 59.0**	**+1.1**
GENI				S	**Sn**	**19 27 53.6**	**-0.7**
JAY	**Jayapura**	**5.46**	**78**	Pn	**Pn**	**19 27 07.2**	**+1.8**
	1.5nm,0.3s,baz=225,slow=12,SNR=12						
JAY				Sn	**Sn**	**19 28 13.3**	**+5.7**
	1.8nm,0.3s,baz=112,slow=7.3,SNR=3.8						
JAY	**Jayapura**	**5.46**	**78**	P	**Pn**	**19 27 06.6**	**+1.2**
	0.2nm329nm23nm,0.9s						
BNDI	**Bandanaira**	**5.50**	**261**	P	**Pn**	**19 27 09.0**	**+3.1**
	4.5nm6μm451nm,1.5s						
BNDI				S	**Sn**	**19 28 14.3**	**+5.7**
	4.5nm6μm451nm,1.5s						
MSAI	**Masohi**	**6.42**	**272**	P	**Pn**	**19 27 20.2**	**+1.7**
	0.2nm393nm29nm,0.6s						
AAI	**Ambon**	**7.14**	**269**	P	**Pn**	**19 27 29.9**	**+1.4**
	0.3nm1μm68nm,0.8s						
NLAI	**Namlea**	**8.24**	**272**	P	**Pn**	**19 27 46.6**	**+3.0**
	58nm,0.9s						
LBMI	**Labuha**	**8.39**	**291**	P	**Pn**	**19 27 46.0**	**+0.4**
	0.7nm2μm235nm,1.1s						
TNTI	**Ternate**	**9.10**	**299**	Pn	**Pn**	**19 27 54.7**	**-0.7**
MTN	**Manton Dam**	**10.05**	**204**		**Pn**	**19 28 08.6**	**+0.2**
MTN				Sn	**Sn**	**19 29 59.0**	**-1.6**
KMSI	**Cibinong**	**12.11**	**290**	P	**Pn**	**19 28 38.5**	**+1.9**
	775nm91nm,1.0s						
SOEI	**Soe**	**12.57**	**241**	P	**Pn**	**19 28 45.3**	**+2.3**
	2μm162nm,1.1s						
SOEI	**Soe**	**12.57**	**241**		**Pn**	**19 28 44.0**	**+1.0**
LUWI	**Luwuk**	**12.83**	**281**	P	**Pn**	**19 28 47.0**	**+0.6**
	917nm79nm,1.4s						
LUWI	**Luwuk**	**12.83**	**281**		**Pn**	**19 28 45.1**	**-1.3**
COEN	**Coen**	**12.84**	**143**		**Pn**	**19 28 45.8**	**-0.8**
BBSI	**Bau Bau**	**12.87**	**261**	P	**Pn**	**19 28 51.0**	**+4.0**
	296nm12nm,1.5s						
PMG	**Port Moresby**	**13.05**	**117**	Pn	**Pn**	**19 28 52.8**	**+3.3**
	0.9nm,0.3s,baz=310,slow=13,SNR=5.8						
PMG				LR	LR	19 35 11.7	
	comp=Z,1μm,18.7s,baz=318,slow=43						
PMG	**Port Moresby**	**13.05**	**117**		**Pn**	**19 28 50.4**	**+0.9**
BATI	**Baumata**	**13.31**	**240**	Pn	**Pn**	**19 28 52.9**	**-0.1**
	3.2nm,0.3s,baz=78,slow=3.0,SNR=7.7						
BATI	**Baumata**	**13.31**	**240**	P	**Pn**	**19 28 55.1**	**+2.1**
	39nm,1.1s						
KNRA	**Kununurra**	**13.61**	**208**		**Pn**	**19 28 56.9**	**-0.2**
MMRI	**Maumere**	**13.95**	**249**	P	P	19 29 17.9	+8.3
MMRI	**Maumere**	**13.95**	**249**	Pn	**Pn**	**19 29 00.0**	**-1.7**
APSI	**Ampana**	**13.95**	**281**	P	**Pn**	**19 29 03.6**	**+1.8**
	1μm34nm,1.2s						
MRSI	**Marisa**	**14.01**	**287**	P	**P**	**19 29 10.6**	**+0.3**
EDFI	**Ende, Flores**	**14.49**	**249**	P	**P**	**19 29 17.7**	**+1.9**
BNSI	**Bone**	**15.22**	**267**	P	P	19 29 32.9	+9.1
TTSI	**Tana Toraja**	**15.52**	**272**	P	**P**	**19 29 31.0**	**+3.9**
SPSI	**Sidrap Palu**	**15.55**	**268**	P	**P**	**19 29 30.0**	**+2.6**
	1μm63nm,0.9s						
KAPI	**Kappang**	**15.61**	**264**	Pn	**Pn**	**19 29 22.4**	**-1.7**
MPSI	**Mapaga**	**15.94**	**284**	P	**P**	**19 29 31.3**	**-0.5**
	18nm,1.4s						
WRAB	**Tennant Creek**	**16.23**	**183**		**Pn**	**19 29 32.6**	**+0.5**
WRAB				IAmb	IAmb	19 29 42.4	
	comp=Z,83nm,1.2s						
WB2	**Warramunga Arr**	**16.24**	**183**		**Pn**	**19 29 32.6**	**+0.5**
WB2				IAmb	IAmb	19 29 44.2	
	comp=Z,72nm,1.1s						
WRA	**Warramunga Arr**	**16.24**	**183**	Pn	**Pn**	**19 29 29.3**	**-2.8**
	comp=Z,0.5nm,0.3s,baz=357,slow=13,SNR=17						
WRA				Sn	**Sn**	**19 32 23.9**	**-7.9**
	comp=Z,1.0nm,0.3s,baz=6.6,slow=22,SNR=5.9						
WRA				Lg	Lg	19 34 23.0	
	baz=350,slow=31,SNR=2.1						
KRVT	**Keravat (AS076**	**16.65**	**93**	Pn	**P**	**19 29 40.8**	**+1.1**
	comp=Z,1.0nm,0.3s,baz=208,slow=5.7,SNR=9.9						
KRVT				LR	LR	19 36 51.0	
	comp=Z,435nm,18.1s,baz=277,slow=40						
RABL	**Rabaul**	**16.78**	**92**	P	**P**	**19 29 40.7**	**-0.5**
RABL				IAmb	IAmb	19 29 47.3	
	comp=Z,61nm,1.0s						
FITZ	**Fitzroy Crossi**	**17.23**	**213**	P	**P**	**19 29 45.4**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=38,slow=9.1,SNR=19						
FITZ				S	**Sn**	**19 32 49.7**	**-6.2**
	comp=Z,0.9nm,0.3s,baz=186,slow=16,SNR=2.8						
FITZ				LR	LR	19 36 52.2	
	comp=Z,118nm,19.1s,baz=36,slow=39						
FITZ	**Fitzroy Crossi**	**17.23**	**213**	P	**Pn**	**19 29 44.8**	**+0.1**
BKB	**Balikpapan**	**18.59**	**277**		**Pn**	**19 30 00.7**	**-0.7**
CTA	**Charters Tower**	**19.51**	**148**	P	**Pn**	**19 30 14.3**	**+1.9**
	comp=Z,0.6nm,0.3s,baz=329,slow=14,SNR=6.3						
CTA				Lg	Lg	19 36 03.1	
	comp=Z,0.1nm,0.3s,baz=72,slow=18,SNR=3.6						
AS31	**Alice Springs**	**19.96**	**184**	P	**Pn**	**19 30 17.5**	**-0.4**
AS31				IAmb	IAmb	19 30 24.1	
	comp=Z,23nm,0.6s						
ASAR	**Alice Springs**	**19.96**	**184**	P	**Pn**	**19 30 18.0**	**+0.1**
	comp=Z,34nm,0.6s,baz=7.2,slow=10,SNR=106						
ASAR				S	**S**	**19 33 57.1**	**-2.7**
	comp=Z,5.9nm,1.0s,baz=7.5,slow=23,SNR=3.9						
ASAR				Lg	Lg	19 36 20.0	
	comp=Z,5.5nm,1.0s,baz=3.9,slow=32,SNR=2.0						
ASAR				LR	LR	19 37 44.3	
	comp=Z,239nm,21.0s,baz=3.5,slow=36						
KKM	**Kota Kinabalu**	**21.39**	**297**	P	**P**	**19 30 31.1**	**-0.7**
KKM				IAmb	IAmb	19 30 45.5	
	comp=Z,30nm,1.0s						
PSA00	**Pilbara Seismi**	**23.34**	**219**	P	**P**	**19 30 51.8**	**-0.4**
PSA00				IAmb	IAmb	19 31 10.3	
	comp=Z,35nm,1.2s						
SBUM	**Sibu**	**23.89**	**284**	P	**P**	**19 30 57.3**	**-0.4**
SBUM				IAmb	IAmb	19 31 10.3	
	comp=Z,23nm,1.4s						
HNR	**Honiara**	**25.10**	**104**	LR	LR	19 40 54.0	
	comp=Z,260nm,21.3s,baz=282,slow=36						
KSM	**Kuching**	**25.54**	**281**	P	**P**	**19 31 11.2**	**-1.5**
LEM	**Lembang**	**27.79**	**262**	LR	LR	19 44 10.4	
	comp=Z,251nm,20.7s,baz=84,slow=40						
STKA	**Stephens Creek**	**28.70**	**169**	P	**P**	**19 31 41.5**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=350,slow=8.3,SNR=6.2						
STKA				LR	LR	19 45 49.5	
	comp=Z,299nm,18.9s,baz=346,slow=42						
STKA	**Stephens Creek**	**28.70**	**169**	P	**P**	**19 31 41.5**	**+0.6**
BBOO	**Buckleboo**	**29.03**	**179**	P	**P**	**19 31 43.7**	**-0.1**
BBOO				IAmb	IAmb	19 31 53.3	
	comp=Z,8.4nm,1.0s						
RGRI	**Rengat**	**33.15**	**275**	P	**P**	**19 32 23.8**	**+3.4**
NWAO	**Narrogin (SRO)**	**33.71**	**208**	LR	LR	19 46 40.8	
	comp=Z,305nm,19.4s,baz=30,slow=37						
DZM	**Mont Dzumac**	**35.29**	**124**	*e*P	P	19 32 31.8	-7.1
	comp=Z,12nm,0.3s						
DZM				*e*LR	LR	19 42 13.0	
	comp=Z,652nm,24.1s						
KULM	**Kulim**	**35.78**	**284**	P	**P**	**19 32 41.3**	**-1.8**
KULM				IAmb	IAmb	19 32 58.4	
	comp=Z,8.8nm,1.1s						
JNU	**Nakatsue**	**36.80**	**354**	P	**P**	**19 32 51.7**	**+0.1**
	comp=Z,8.9nm,0.9s,baz=47,slow=5.4,SNR=5.5						
JNU	**Nakatsue**	**36.80**	**354**	P	**P**	**19 32 50.9**	**-0.8**
JNU				IAmb	IAmb	19 33 06.8	
	comp=Z,21nm,1.3s						
MJAR	**Matsushiro Arr**	**40.06**	**4**	P	**P**	**19 33 18.6**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=169,slow=7.3,SNR=5.3						
KSRS	**Korea Array**	**41.46**	**351**	P	**P**	**19 33 30.5**	**+0.1**
	comp=Z,2.0nm,0.9s,baz=176,slow=7.8,SNR=7.0						
KSRS				LR	LR	19 50 06.0	
	comp=Z,74nm,20.7s,baz=173,slow=35						
CMAR	**Chiang Mai Arr**	**42.05**	**303**	P	**P**	**19 33 34.9**	**-0.7**
	comp=Z,0.6nm,0.9s,baz=125,slow=7.8,SNR=2.8						
XAN	**Xi'an**	**45.01**	**328**	P	**P**	**19 34 01.6**	**+2.3**
XAN				pP	sP	19 34 13.1	+4.2
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XAN				LR	LR		
	comp=Z,120nm,15.2s						
XAN				LR	LR		
	comp=Z,120nm,17.4s						
XAN				LR	LR		
	comp=Z,140nm,17.4s						
XAN	**Xi'an**	**45.01**	**328**	P	**P**	**19 33 58.5**	**-0.8**
XAN				IAmb	IAmb	19 34 02.4	
	comp=Z,11nm,1.1s						
BJT	**Baijiatuau**	**46.88**	**340**	P	**P**	**19 34 12.8**	**-1.1**
USRK	**Ussuriysk Ar.**	**47.72**	**357**	P	**P**	**19 34 19.8**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=99,slow=6.0,SNR=5.4						
CN2	**Changchun**	**48.05**	**350**	*e*P	**P**	**19 34 24.1**	**+1.1**
SHL	**Shillong**	**51.16**	**307**	P	**P**	**19 34 46.2**	**-1.0**
SHL				IAmb	IAmb	19 34 53.3	
	comp=Z,8.2nm,1.3s						
LSA	**Lhasa**	**53.74**	**311**	P	**P**	**19 35 06.4**	**-0.2**
GTA	**Gaotai**	**53.89**	**326**	*e*P	**P**	**19 35 09.8**	**+2.6**
GTA				pP	pP	19 35 13.9	-0.2
GTA				sP	sP	19 35 17.8	+1.0
GTA				pmax	pmax		
	comp=Z,6.0nm,1.6s						
ULN	**Ulaanbaatar**	**56.97**	**338**	P	**P**	**19 35 28.3**	**-0.9**
ULN				IAmb	IAmb	19 35 39.5	
	comp=Z,7.8nm,1.5s						
SONM	**Songino Array**	**57.19**	**337**	P	**P**	**19 35 30.6**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=156,slow=6.1,SNR=6.3						
SONM				LR	LR	19 59 57.2	
	comp=Z,144nm,20.6s,baz=120,slow=36						
PETK	**Petropavlovsk-**	**59.59**	**15**	LR	LR	19 58 36.4	
	comp=Z,47nm,21.4s,baz=237,slow=33						
TLY	**Talaya**	**61.36**	**338**	LR	LR	20 02 33.9	
	comp=Z,92nm,20.1s,baz=136,slow=36						
WMQ	**Urumqi**	**63.70**	**323**	*e*P	**P**	**19 36 15.9**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,51nm,4.5s						
WMQ	**Urumqi**	**63.70**	**323**	P	**P**	**19 36 14.7**	**-0.5**
YAK	**Yakutsk**	**65.63**	**357**	LR	LR	20 02 55.0	
	comp=Z,83nm,18.7s,baz=181,slow=34						
YAK	**Yakutsk**	**65.63**	**357**	P	**P**	**19 36 26.9**	**-0.4**
MK31	**Makanchi Array**	**68.51**	**324**	P	**P**	**19 36 45.4**	**-0.7**
MKAR	**Makanchi Array**	**68.51**	**324**	P	**P**	**19 36 44.7**	**-1.3**
	comp=Z,2.6nm,0.8s,baz=113,slow=7.9,SNR=20						
MKAR				LR	LR	20 07 09.1	
	comp=Z,51nm,21.8s,baz=116,slow=36						
MAKZ	**Makanchi**	**68.70**	**324**	P	**P**	**19 36 46.1**	**-1.1**
MAKZ				IAmb	IAmb	19 37 01.6	
	comp=Z,4.5nm,0.8s						
PRZ	**Przheval'sk**	**68.89**	**318**	P	**P**	**19 36 47.8**	**-0.9**
PRZ				IAmb	IAmb	19 36 56.7	
	comp=Z,5.7nm,0.9s						
NIL	**Nilore**	**69.22**	**308**	P	**P**	**19 36 49.9**	**-0.8**
KDJ	**Kajisay**	**69.55**	**318**	P	**P**	**19 36 52.2**	**-0.6**
KDJ				IAmb	IAmb	19 37 07.6	
	comp=Z,3.6nm,0.9s						
ZAA0	**Zalesovo Array**	**71.08**	**331**	P	**P**	**19 37 01.2**	**-0.5**
ZAA0				IAmb	IAmb	19 37 10.7	
	comp=Z,5.5nm,1.1s						
ZALV	**Zalesovo Beam**	**71.08**	**331**	P	**P**	**19 36 59.5**	**-2.2**
	comp=Z,2.3nm,0.7s,baz=102,slow=5.8,SNR=7.7	

GLB					IAmb	IAmb	19 38 41.9		
	comp=Z,5.7nm,1.2s								
TORD	**Torodi Ar. Bea**	**133.26**	**285**	PKP	**PKPdf**		**19 44 58.9**	**-1.6**	
	comp=Z,0.5nm,0.9s,baz=104,slow=3.4,SNR=2.6								
CPUP	**Villa Florida**	**147.78**	**158**	PKPbc	**PKPbc**		**19 45 29.1**	**-0.1**	
	comp=Z,3.0nm,0.7s,baz=185,slow=4.7,SNR=3.8								
LPAZ	**La Paz**	**149.49**	**131**	PKPbc	**PKiKP**		**19 45 35.2**	**-0.5**	
	comp=Z,1.9nm,0.8s,baz=33,slow=1.1,SNR=4.2								

HEL ***17*** *19:32:55.6,57.65N×21.35E, h0km, ML1.8, Explosion*
UPP ***17*** *19:32:57.9±1.1,57.77N×21.37E, h0km, ML2.5, Suspected explosion*
IDC ***17*** *19:32:59.8±2.3,57.94N×21.53E, h0km, mb1 3.1/4, mb1mx2.9/37, mbtmp3.1/4, ML2.1/4, Error ellipse: s-maj=23.7km s-min=8.6km az=168.0*
ISC 17 19:32:56.3±0.9, 57.73N±0.04×21.50E±0.03, h0km, n40, σ1s19/52, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.44**	**103**	*eP*		**Pg**	**19 33 04.8**	**+0.1**
SLIT				*eS*		**Sg**	**19 33 12.7**	**+2.3**
SLIT				IAML			19 33 36.2	
	comp=Z,216nm,0.5s							
SLIT	**Slitere, Latvi**	**0.44**	**103**	*eP*		**Pg**	**19 33 04.8**	**+0.1**
SLIT				*eS*		**Sg**	**19 33 10.8**	**+0.4**
GOTU	**Gotland**	**1.57**	**270**	P		**Pn**	**19 33 25.1**	**-0.3**
GOTU				S		**Sn**	**19 33 47.5**	**+1.1**
GOTU	**Gotland**	**1.57**	**270**	*eP*		**Pn**	**19 33 25.1**	**-0.3**
GOTU				*eS*		**Sn**	**19 33 47.5**	**+1.1**
MTSE	**Matsula**	**1.57**	**50**	*eP*		**Pn**	**19 33 24.6**	**-0.9**
MTSE				*eS*		**Sg**	**19 33 47.1**	**+0.2**
PBUR	**Paburge**	**1.73**	**172**	*eP*		**Pn**	**19 33 26.9**	**-0.6**
PBUR				IAML			19 33 57.7	
	comp=Z,14nm,0.1s							
NRTU	**Norrtaelje**	**2.46**	**324**	P		**Pn**	**19 33 38.2**	**+0.6**
NRTU	**Norrtaelje**	**2.46**	**324**	*eP*		**Pn**	**19 33 38.2**	**+0.6**
BYXU	**Byxelkrok**	**2.46**	**262**	P		**Pn**	**19 33 38.9**	**+1.3**
BYXU	**Byxelkrok**	**2.46**	**262**	*eP*		**Pn**	**19 33 38.9**	**+1.3**
AAL	**Aland**	**2.58**	**343**	P		**Pn**	**19 33 39.0**	**-0.2**
AAL	**Aland**	**2.58**	**343**	*eP*		**Pn**	**19 33 39.0**	**-0.2**
AAL				*eS*		**Sn**	**19 34 11.0**	**-0.3**
PABE	**Paberze**	**2.61**	**147**	*eP*		**Pn**	**19 33 38.4**	**-1.3**
ASPU	**Aespoe**	**2.66**	**265**	P		**Pn**	**19 33 41.6**	**+1.3**
ASPU	**Aespoe**	**2.66**	**265**	*eP*		**Pn**	**19 33 41.6**	**+1.3**
VIKU	**Vikbolandet**	**2.66**	**289**	P		**Pn**	**19 33 41.4**	**+1.0**
VIKU	**Vikbolandet**	**2.66**	**289**	*eP*		**Pn**	**19 33 41.4**	**+1.0**
VSTU	**Vaestervik**	**2.66**	**271**	P		**Pn**	**19 33 41.6**	**+1.2**
VSTU	**Vaestervik**	**2.66**	**271**	*eP*		**Pn**	**19 33 41.6**	**+1.2**
VSU	**Vasula**	**2.88**	**73**	*eP*		**Pn**	**19 33 43.8**	**+0.4**
VSU				*eS*		**Sn**	**19 34 19.9**	**+1.3**
VSU				IAML			19 34 28.0	
	comp=Z,21nm,0.3s							
VSU	**Vasula**	**2.88**	**73**	*eP*		**Pn**	**19 33 44.0**	**+0.6**
MEF	**Metsahovi**	**2.91**	**30**	*eP*		**Pn**	**19 33 44.9**	**+1.1**
MEF				*eS*		**Sn**	**19 34 21.1**	**+1.6**
MEF				MSG			19 34 29.6	
	comp=Z,2.4nm,0.1s							
OSKU	**Oskarshamn**	**2.96**	**262**	P		**Pn**	**19 33 45.5**	**+0.9**
OSKU	**Oskarshamn**	**2.96**	**262**	*eP*		**Pn**	**19 33 45.5**	**+0.9**
GRAU	**Graesoe**	**3.03**	**331**	P		**Pn**	**19 33 46.6**	**+1.2**
GRAU	**Graesoe**	**3.03**	**331**	*eP*		**Pn**	**19 33 46.6**	**+1.2**
FLYU	**Flymyra**	**3.05**	**324**	P		**Pn**	**19 33 47.0**	**+1.3**
FLYU	**Flymyra**	**3.05**	**324**	*eP*		**Pn**	**19 33 47.0**	**+1.3**
ESKU	**Eskilstuna**	**3.07**	**302**	P		**Pn**	**19 33 47.3**	**+1.2**
ESKU	**Eskilstuna**	**3.07**	**302**	*eP*		**Pn**	**19 33 47.3**	**+1.2**
BACU	**Backbrunna**	**3.12**	**315**	P		**Pn**	**19 33 48.0**	**+1.2**
BACU	**Backbrunna**	**3.12**	**315**	*eP*		**Pn**	**19 33 48.0**	**+1.2**
RAF	**Rauma**	**3.31**	**2**	*eP*		**Pn**	**19 33 49.5**	**+0.3**
RAF				MSG			19 34 45.0	
	comp=Z,1.6nm,0.2s							
IIGN	**Ignalina**	**3.54**	**130**	*eP*		**Pn**	**19 33 53.8**	**+1.4**
PVF	**Pernaja**	**3.61**	**37**	*eP*		**Pn**	**19 33 54.7**	**+1.3**
PVF				MSG			19 34 54.4	
	comp=Z,1.7nm,0.2s							
FIA0	**FINESS Array S**	**4.39**	**30**	*eP*		**Pn**	**19 34 04.9**	**+0.7**
FINES	**FINESS Array B**	**4.39**	**30**	Pn		**Pn**	**19 34 05.3**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=213,slow=9.9,SNR=6.1							
FINES				Pg		**Pb**	**19 34 13.8**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=212,slow=14,SNR=8.9							
FINES				Sn		**Sn**	**19 34 54.4**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=217,slow=23,SNR=1.4							
FINES				Lg		Lg	19 35 11.0	
	comp=Z,0.7nm,0.3s,baz=218,slow=27,SNR=17							
HFS	**Hagfors**	**4.71**	**304**	Pn		**Pn**	**19 34 09.0**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=113,slow=15,SNR=22							
HFS				Sn		**Sn**	**19 35 02.4**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=116,slow=32,SNR=1.8							
HFS				Lg		Lg	19 35 22.4	
	comp=Z,0.8nm,0.3s,baz=117,slow=31,SNR=15							
NOA	**NORSAR Array B**	**6.21**	**307**	Pn		**Pn**	**19 34 29.2**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=130,slow=12,SNR=1.4							
NOA				Sn		**Sn**	**19 35 38.7**	**-2.2**
	comp=Z,0.0nm,0.3s,baz=44,slow=22,SNR=1.5							
NOA				Lg		Lg	19 36 13.0	
	comp=Z,0.0nm,0.3s,baz=136,slow=20,SNR=4.3							
ARCES	**ARCESS Array B**	**11.98**	**7**	Pn		**Pn**	**19 35 44.9**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=188,slow=12,SNR=6.0							

IDC ***17*** *19:33:14.5±1.4,3.41S×135.31E, h0km, mb3.8/2, mb1 4.2/6, mb1mx3.6/32, mbtmp4.0/6, ML3.6/4, Error ellipse: s-maj=28.3km s-min=23.4km az=46.0*
NEIC ***17*** *19:33:15.6±2.3,3.51S±0.06×135.29E±0.06, h10km±1km, mb4.0/6, Error ellipse: s-maj=10.9km s-min=9.1km az=55.0*
ISC 17 19:33:17.5±0.8, 3.48S±0.10×135.29E±0.06, h22km, n17, σ0s91/19, mb3.9/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FAKI	**Fak Fak**	**3.08**	**280**			**Pn**	**19 34 06.1**	**+1.2**
FAKI				Sn		**Sn**	**19 34 39.9**	**-1.2**
SIJI	**Sorong**	**4.78**	**303**	Pn		**Pn**	**19 34 28.9**	**+0.6**
	2.4nm,0.3s,baz=198,slow=20,SNR=20							
SIJI				Sn		**Sn**	**19 35 23.8**	**+0.8**
	5.8nm,0.3s,baz=288,slow=23,SNR=10.0							
JAY	**Jayapura**	**5.50**	**80**	Pn		**Pn**	**19 34 38.9**	**+0.7**
	0.3nm,0.3s,baz=257,slow=18,SNR=2.5							
JAY				Sn		**Sn**	**19 35 40.3**	**-0.5**
	0.5nm,0.3s,baz=171,slow=19,SNR=1.6							
MTN	**Manton Dam**	**10.16**	**204**	Pn		**Pn**	**19 35 42.5**	**+0.3**
SOEI	**Soe**	**12.59**	**240**	Pn		**Pn**	**19 36 15.0**	**-0.5**
LUWI	**Luwuk**	**12.74**	**281**	Pn		**Pn**	**19 36 15.8**	**-1.6**
KNRA	**Kununurra**	**13.71**	**207**	Pn		Pn	19 36 29.0	-1.7
WB2	**Warramunga Arr**	**16.38**	**183**	Pn		**Pn**	**19 37 06.6**	**+0.3**
WRA	**Warramunga Arr**	**16.39**	**183**	Pn		**Pn**	**19 37 05.1**	**-1.1**
	0.4nm,0.3s,baz=6.8,slow=12,SNR=2.9							
WRA				Sn		Sn	19 39 55.2	-12
	0.2nm,0.3s,baz=7.7,slow=18,SNR=4.9							
WR0	**Warramunga Arr**	**16.39**	**182**	Pn		**Pn**	**19 37 05.8**	**-0.5**
WR0				IAmb		IAmb	19 37 05.9	
	comp=Z,22nm,1.4s							
FITZ	**Fitzroy Crossi**	**17.33**	**212**	P		**Pn**	**19 37 19.4**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=30,slow=11,SNR=1.8							
FITZ				S		Sn	19 40 21.9	-8.5
	comp=Z,0.2nm,0.3s,baz=197,slow=15,SNR=2.6							
FITZ	**Fitzroy Crossi**	**17.33**	**212**	P		**Pn**	**19 37 17.9**	**-0.2**
FITZ				IAmb		IAmb	19 37 20.8	
	comp=Z,12nm,0.9s							
AS31	**Alice Springs**	**20.11**	**184**	P		**P**	**19 37 49.9**	**-0.1**
ASAR	**Alice Springs**	**20.11**	**184**	P		**P**	**19 37 51.3**	**+1.4**
	comp=Z,9.5nm,0.8s,baz=7.0,slow=11,SNR=10							
ASAR				S		S	19 41 25.5	-10
	comp=Z,0.6nm,0.7s,baz=7.1,slow=26,SNR=2.4							
MK31	**Makanchi Array**	**68.35**	**324**	P		**P**	**19 44 16.8**	**-0.5**
MK31				IAmb		IAmb	19 44 18.2	
	comp=Z,1.0nm,1.1s							
MKAR	**Makanchi Array**	**68.35**	**324**	P		**P**	**19 44 17.1**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=114,slow=7.9,SNR=7.8							
MAKZ	**Makanchi**	**68.54**	**324**	P		**P**	**19 44 18.2**	**-0.2**
MAKZ				IAmb		IAmb	19 44 25.0	
	comp=Z,1.7nm,1.1s							

SKHL ***17*** *19:50:03.4±0.4,42.94N×145.49E, h28km±3km, mb3.5/1*
JMA ***17*** *19:50:04.4±0.1,42.99N×145.59E, h51km±1km, M3.2*
ISC 17 19:50:04.7±2.2, 43.0N±0.1×145.62E±0.08, h44km±12km, n14, σ0s72/26, Hokkaido region

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

JKHN	**Kushirohamanak**	**0.34**	**284**	P		**Pn**	**19 50 14.1**	**+0.4**	
JKHN				*eS*		**Sn**	**19 50 20.9**	**+0.8**	
NEM2	**Nemuro 2**	**0.38**	**14**	P		**Pn**	**19 50 14.5**	**+0.4**	
NEM2				*eS*		**Sn**	**19 50 21.5**	**+0.8**	
NMR	**Nemuro--Hokkai**	**0.38**	**13**	*eP*		**Pn**	**19 50 12.7**	**-1.4**	
NMR				*eS*		**Sn**	**19 50 19.9**	**-0.9**	
JAK	**Akkeshi**	**0.67**	**270**	P		**Pn**	**19 50 17.6**	**-0.3**	
JAK				*eS*		**Sn**	**19 50 27.5**	**+0.1**	
JNK	**Nakash**	**0.88**	**312**	P		**Pn**	**19 50 20.3**	**-0.4**	
JNK				*eS*		**Sn**	**19 50 31.8**	**-0.5**	
JNSB	**Nemuroshibetsu**	**0.89**	**330**	P		**Pn**	**19 50 20.9**	**0.0**	
JNSB				*eS*		**Sn**	**19 50 33.1**	**+0.4**	
GRPR	**Tuman**	**1.00**	**6**	*eP*		**Pn**	**19 50 22.1**	**-0.2**	
GRPR				AMB		AMB	19 50 23.0		
	10.0nm,0.2s								
GRPR				*eS*		**Sn**	**19 50 34.3**	**-0.9**	
GRPR				A		A	19 50 35.0		
	140nm,0.3s								
GRPR				A		A	19 50 35.0		
	530nm,0.3s								
JRA	**Rausu**	**1.00**	**339**	P		**Pn**	**19 50 22.6**	**+0.2**	
JRA				*eS*		**Sn**	**19 50 35.6**	**+0.3**	
YUK	**Yuzh-Kuril'sk**	**1.05**	**10**	*eP*		**Pn**	**19 50 22.7**	**-0.3**	
YUK				*eS*		**Sn**	**19 50 36.8**	**+0.4**	
YUK				A		A	19 50 38.0		
	890nm,0.4s								
YUK				A		A	19 50 38.0		
	840nm,0.4s								
LAGR	**Lagunnoye**	**1.06**	**7**	*eP*		**Pn**	**19 50 22.4**	**-0.8**	
LAGR				*eS*		**Sn**	**19 50 36.5**	**-0.3**	
LAGR				A		A	19 50 37.0		
	170nm,0.3s								
LAGR				A		A	19 50 37.0		
	170nm,0.3s								
JOB	**Onbets**	**1.31**	**266**	P		**Pn**	**19 50 26.2**	**-0.4**	
JOB				*eS*		**Sn**	**19 50 42.2**	**-0.7**	
JAR	**Ashorobuto**	**1.38**	**283**	P		**Pn**	**19 50 27.6**	**0.0**	
JAR				*eS*		**Sn**	**19 50 44.6**	**-0.1**	
JTKR	**Abashiri--Toko**	**1.58**	**309**	P		**Pn**	**19 50 30.7**	**+0.5**	
KUR	**Kuril'sk**	**2.76**	**35**	*eS*		**Sn**	**19 51 20.4**	**+1.9**	
KUR				A		A	19 51 27.7		
	70nm,0.7s								
KUR				A		A	19 51 27.7		
	50nm,0.7s								

DSN ***17*** *19:50:48.4±1.5,27.21N×54.41E, h10km, ML3.9/6, Error ellipse: s-maj=23.1km s-min=8.8km az=20.0*
TEH ***17*** *19:50:49.1,27.12N×54.51E, h15km, ML3.8*
IDC ***17*** *19:50:51.9±2.9,27.02N×54.42E, h42km±30km, mb3.4/19, mb1 3.6/20, mb1mx3.4/55, mbtmp3.7/20, ML3.8/1, MS2.6/1, Ms1 2.6/1, ms1mx2.2/35, Error ellipse: s-maj=17.6km s-min=15.3km az=26.0*
THR ***17*** *19:50:53.3±0.3,27.91N×54.68E, h14km±3km, ML3.5*
OMAN ***17*** *19:50:55.8±1.9,26.92N×55.07E, h4km, 29km, ml3.3/14, Error ellipse: s-maj=45.9km s-min=7.2km az=92.0*
ISC 17 19:50:49.4±0.5, 27.16N±0.04×54.44E±0.04, h18km, n91, σ1s53/93, mb3.6/23, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LAR1	**LAR**	**0.51**	**353**	*ePg*		**Pg**	**19 50 59.0**	**-0.7**
LAR1				*e*			19 51 11.9	
LMD1	**Lamerd**	**1.15**	**279**	*ePg*		**Pn**	**19 51 13.3**	**+2.6**
LMD1				*e*			19 51 36.5	
JHRM	**Jahrom**	**1.54**	**330**	*ePg*		**Pn**	**19 51 19.3**	**+3.2**
BNDS	**Bandar-Abbas**	**1.56**	**81**	*ePg*		**Pb**	**19 51 19.6**	**+1.8**
BNDS				*eSg*		**Sn**	**19 51 38.6**	**+2.5**
BNDS				IAML			19 51 42.8	
	comp=N,694nm,0.4s							
GENO	**Geno**	**1.56**	**81**	*ePn*		**Pn**	**19 51 16.6**	**+0.2**
GENO				*e*			19 51 45.7	
SHME	**Shamm**	**1.88**	**126**	*eP*		**Pn**	**19 51 20.5**	**-0.2**
	SNR=19							
SHME	**Shamm**	**1.88**	**126**	*ePg*		**Pn**	**19 51 20.7**	**0.0**
IBND	**Bandar-abas**	**1.89**	**81**	*ePn*		**Pn**	**19 51 21.7**	**+1.0**
IBND				*e*			19 51 58.2	
UMQ	**Umm Al-Quwin**	**1.96**	**146**	*ePn*		**Pn**	**19 51 22.7**	**+1.0**
BANOM	**Banah**	**2.07**	**126**	*eP*		**Pn**	**19 51 23.5**	**+0.2**
	SNR=112							
BANOM	**Banah**	**2.07**	**126**	P		**Pn**	**19 51 23.5**	**+0.2**
	SNR=112							
BANOM	**Banah**	**2.07**	**126**	*ePn*		**Pn**	**19 51 23.8**	**+0.5**
MSFE	**Esma-Masafi**	**2.36**	**139**	P		**Pn**	**19 51 28.1**	**+0.7**
MSFE				S		**Sn**	**19 51 58.2**	**+2.3**
MSFE	**Esma-Masafi**	**2.36**	**139**	*ePn*		**Pn**	**19 51 28.7**	**+1.4**
NAZ	**Nazwa, Dubai**	**2.42**	**153**	*eP*		**Pn**	**19 51 30.6**	**+2.4**
	SNR=12							
NAZ	**Nazwa, Dubai**	**2.42**	**153**	P		**Pn**	**19 51 30.5**	**+2.4**
NAZ	**Nazwa, Dubai**	**2.42**	**153**	*ePn*		**Pn**	**19 51 29.5**	**+1.4**
MDH	**Madha**	**2.49**	**138**	P		**Pn**	**19 51 29.9**	**+0.8**
MDH	**Madha**	**2.49**	**138**	P		**Pn**	**19 51 30.0**	**+0.9**
MDH	**Madha**	**2.49**	**138**	*ePn*		**Pn**	**19 51 30.2**	**+1.1**
FAQ	**Al Faqa, Dubai**	**2.62**	**156**	*ePn*		**Pn**	**19 51 30.9**	**+0.1**
AJN	**Ajban**	**2.63**	**169**	*ePn*		**Pn**	**19 51 33.4**	**+2.4**
JRN	**Qarnain Island**	**2.63**	**213**	*ePn*		**Pn**	**19 51 31.8**	**+0.8**
UOSS	**Minazif**	**2.71**	**144**	P		**Pn**	**19 51 33.1**	**+1.0**
UOSS	**Minazif**	**2.71**	**144**	*ePn*		**Pn**	**19 51 33.0**	**+0.9**
HATD	**Hatta, Dubai**	**2.78**	**146**	P		**Pn**	**19 51 34.6**	**+1.6**
HATD	**Hatta, Dubai**	**2.78**	**146**	*ePn*		**Pn**	**19 51 34.2**	**+1.2**
ASHO	**Ashiyiah**	**2.86**	**149**	*eP*		**Pn**	**19 51 35.0**	**+0.8**
	SNR=16							
ASHO	**Ashiyiah**	**2.86**	**149**	P		**Pn**	**19 51 35.4**	**+1.2**
	SNR=16							
ASHO	**Ashiyiah**	**2.86**	**149**	*ePn*		**Pn**	**19 51 35.5**	**+1.3**
KHNJ	**Kahnooj**	**3.00**	**74**	*ePn*		**Pn**	**19 51 37.1**	**+1.0**
NGRK	**Negar Kerman**	**3.19**	**39**	*ePn*		**Pn**	**19 51 40.3**	**+1.3**
NGRK				*e*			19 52 24.8	
ALNE	**Al Ain**	**3.31**	**159**	P		**Pn**	**19 51 42.3**	**+2.0**
ALNE	**Al Ain**	**3.31**	**159**	*ePn*		**Pn**	**19 51 42.0**	**+1.7**
MZWR	**Madinat Zayed**	**3.42**	**189**	*ePn*		**Pn**	**19 51 43.0**	**+1.1**
KRBR	**Kerman**	**3.47**	**35**	*ePn*		Pn	19 51 39.3	-3.5
KRBR				*eSg*		**Sn**	**19 52 19.8**	**-3.9**
TVBK	**TV Kerman**	**3.48**	**35**	*ePn*		**Pn**	**19 51 45.3**	**+2.4**
TVBK				*e*			19 51 58.6	
GHWR	**Ruwais**	**3.48**	**204**	*ePn*		**Pn**	**19 51 44.7**	**+2.0**
SOHO	**SOHO**	**3.55**	**147**	P		**Pn**	**19 51 44.6**	**+0.9**
KHGB	**Koh Gabri**	**3.67**	**29**	*ePn*		**Pn**	**19 51 47.4**	**+1.9**
KHGB				*e*			19 52 34.9	
CHMN	**Cheshme madani**	**3.83**	**45**	*ePn*		**Pn**	**19 51 50.0**	**+2.2**
CHMN				*e*			19 51 54.3	
SLWR	**Sila**	**3.96**	**220**	*ePn*		**Pn**	**19 51 50.0**	**+0.8**
IMEH	**Mehriz**	**4.22**	**2**	*ePn*		**Pn**	**19 51 55.7**	**+2.7**
ARQ	**Araqi**	**4.25**	**153**	P		**Pn**	**19 51 54.6**	**+1.4**
HOQ	**Hoqain**	**4.41**	**143**	P		**Pn**	**19 51 56.4**	**+1.0**
UMZA	**Um Al Zommool**	**4.47**	**171**	*ePn*		**Pn**	**19 51 57.3**	**+1.0**
IBAF	**Bafgh**	**4.52**	**12**	*ePn*		**Pn**	**19 51 59.6**	**+2.5**
KLNJ	**Kolanjah**	**4.58**	**328**	*ePn*		**Pn**	**19 51 59.5**	**+1.5**
ISAD	**Sadrabad**	**4.78**	**352**	*ePn*		**Pn**	**19 52 04.0**	**+3.2**
BIDO	**Bidbid**	**4.92**	**137**	*ePn*		**Pn**	**19 52 01.8**	**-0.7**
IRAM	**Rameshеh**	**4.97**	**339**	*ePn*		**Pn**	**19 52 05.2**	**+1.9**
BSY	**Bisya**	**5.06**	**150**	P		**Pn**	**19 52 05.6**	**+1.3**
SMDO	**Samad**	**5.23**	**141**	P		**Pn**	**19 52 07.8**	**+1.0**
WSAR	**Wadi Sarin**	**5.44**	**135**	P		**Pn**	**19 52 09.6**	**-0.1**
	comp=N,3.2nm,0.3s,baz=329,slow=8.5,SNR=42							
WSAR				S		**Sn**	**19 53 09.6**	**-2.3**
	comp=N,1.6nm,0.3s,baz=90,slow=17,SNR=2.0							
WSAR	**Wadi Sarin**	**5.44**	**135**	P		**Pn**	**19 52 10.0**	**+0.3**
IGAR	**Gharneh**	**5.63**	**339**	*ePn*		**Pn**	**19 52 15.0**	**+2.6**
JMDO	**Jabal Madar**	**5.81**	**144**	P		**Pn**	**19 52 16.4**	**+1.6**
ANAR	**Anarak**	**6.04**	**354**	*ePn*		**Pn**	**19 52 19.8**	**+1.8**
ZHSF	**Zahedan**	**6.09**	**65**	*ePn*		**Pn**	**19 52 18.9**	**+0.2**
TPRV	**Parvadeh(Tabas**	**6.16**	**18**	*ePn*		**Pn**	**19 52 21.9**	**+2.3**
BSRN	**Basiran**	**6.29**	**39**	*ePn*		Pn	19 52 18.3	-3.1
IPIR	**Pirpir**	**6.31**	**332**	*ePn*		**Pn**	**19 52 22.9**	**+1.1**
IKOO	**Kooshah**	**6.57**	**36**	*ePn*		**Pn**	**19 52 27.0**	**+1.6**
TKDS	**Koohdasht(Taba**	**6.83**	**19**	*ePn*		**Pn**	**19 52 30.5**	**+1.6**
AFRZ	**Afriz**	**7.39**	**31**	*ePn*		**Pn**	**19 52 37.1**	**+0.6**
ASAQ	**Ashtian**	**8.29**	**334**	*ePn*		**Pn**	**19 52 48.1**	**-0.8**
RAYN	**Ar Rayn**	**8.86**	**248**	*iP*		**Pn**	**19 52 56.0**	**-0.7**
	SNR=16							
SHAO	**Shalim**	**9.16**	**173**	*i* P		**Pn**	**19 52 59.7**	**-1.0**
	SNR=16							
BRTR	**Keskin Array B**	**21.35**	**311**	P		**P**	**19 55 36.7**	**+0.9**
	comp=N,1.6nm,0.9s,baz=132,slow=12,SNR=7.9							
BRTR				LR		LR	20 07 29.6	
	comp=N,17nm,20.4s,baz=73,slow=47							
AAK	**Ala-Archa**	**22.47**	**41**	P		**P**	**19 55 50.1**	**+2.2**
	comp=N,1.0nm,0.3s,baz=212,slow=12,SNR=1.9							
AKTO	**Aktyubinsk**	**23.40**	**6**	P		**P**	**19 55 59.2**	**+2.1**
	comp=N,1.1nm,0.5s,baz=178,slow=11,SNR=4.5							

BVAR	**Borovoye Array**	**28.44**	**20**	P		**P**	**19 56 43.5**	**+0.5**	
	comp=N,1.0nm,0.8s,baz=213,slow=6.7,SNR=7.0								
MKAR	**Makanchi Array**	**29.40**	**41**	P		**P**	**19 56 53.0**	**+1.3**	
	comp=N,0.2nm,0.4s,baz=234,slow=9.9,SNR=3.2								
KURBB	**Kurchatov Arra**	**29.76**	**32**	P		**P**	**19 56 56.4**	**+1.7**	
	comp=N,0.1nm,0.2s,baz=230,slow=8.5,SNR=2.6								
ZALV	**Zalesovo Beam**	**34.85**	**32**	P		**P**	**19 57 40.1**	**+0.7**	
	comp=N,1.1nm,0.6s,baz=237,slow=9.2,SNR=5.3								
FINES	**FINESS Array B**	**39.20**	**339**	P		**P**	**19 58 15.7**	**-0.4**	
	comp=N,0.7nm,0.6s,baz=135,slow=9.6,SNR=8.1								
SQTA	**Sankt Quirin**	**39.22**	**312**	*i* P		**P**	**19 58 16.8**	**0.0**	
	comp=N,1.1nm,0.4s								
MOTA	**Moosalm**	**39.33**	**313**	*eP*		**P**	**19 58 17.5**	**-0.1**	
	comp=N,1.6nm,0.9s								
FETA	**Feichten**	**39.49**	**312**	*eP*		**P**	**19 58 19.2**	**+0.2**	
	comp=N,2.1nm,0.9s								
DAVA	**Damuels**	**40.12**	**312**	*eP*		**P**	**19 58 24.1**	**-0.1**	
	comp=N,3.3nm,0.5s								
CMAR	**Chiang Mai Arr**	**41.75**	**92**	P		**P**	**19 58 36.0**	**-1.7**	
	comp=N,0.3nm,0.6s,baz=292,slow=9.6,SNR=2.7								
HFS	**Hagfors**	**43.04**	**331**	P		**P**	**19 58 46.1**	**-1.6**	
	comp=N,0.3nm,0.4s,baz=128,slow=8.2,SNR=1.0								
SONM	**Songino Array**	**45.13**	**48**	P		**P**	**19 59 05.3**	**+0.4**	
	comp=N,0.3nm,0.5s,baz=258,slow=7.1,SNR=1.9								
ARCES	**ARCESS Array B**	**45.63**	**346**	P		**P**	**19 59 08.5**	**+0.2**	
	comp=N,2.6nm,0.9s,baz=137,slow=8.1,SNR=1.9								
ESDC	**Sonseca Array**	**49.54**	**300**	P		**P**	**19 59 38.7**	**-0.5**	
	comp=N,0.3nm,0.4s,baz=76,slow=6.6,SNR=5.3								
TORD	**Torodi Ar. Bea**	**51.10**	**265**	P		**P**	**19 59 51.0**	**-0.3**	
	comp=N,0.7nm,0.4s,baz=66,slow=8.3,SNR=22								
DBIC	**Dimbokro**	**59.72**	**262**	P		**P**	**20 00 52.5**	**-0.9**	
	comp=N,2.8nm,0.8s,baz=34,slow=7.0,SNR=2.1								
ILAR	**Eielson Array**	**86.87**	**9**	P		**P**	**20 03 30.9**	**-1.8**	
	comp=N,0.2nm,0.6s,baz=324,slow=4.5,SNR=2.8								
YKA	**Yellowknife Ar**	**90.23**	**355**	P		**P**	**20 03 48.1**	**-0.5**	
	comp=N,0.1nm,0.4s,baz=4.6,slow=4.4,SNR=2.5								
WRA	**Warramunga Arr**	**90.39**	**112**	P		**P**	**20 03 49.5**	**-0.6**	
	comp=N,0.4nm,1.0s,baz=313,slow=4.1,SNR=1.5								
ASAR	**Alice Springs**	**91.82**	**116**	P		**P**	**20 03 56.5**	**-0.2**	
	comp=N,0.3nm,0.7s,baz=312,slow=4.7,SNR=3.0								

**JMA 17 19:55:50.4±0.1, 24.01N×123.26E, h26km±2km, M1.7, Southwestern

JWT Wachi 3.22 159 P **P** 20 01 10.9 -0.7
JHS Saijyo 3.39 193 P **P** 20 01 11.7 -1.3
MJB9 Matsu-Tunnel 3.77 117 P **P** 20 01 15.2 -0.8
MAJO Matsushiro 3.77 117 P **P** 20 01 15.1 -1.0
MAJO S **S** 20 02 15.8 +0.3
MAJO Matsushiro 3.77 117 P **P** 20 01 15.1 -1.0
MAJO S **S** 20 02 15.8 +0.3
MAT Matsushiro 3.77 117 P **P** 20 01 15.1 -1.0
MAT S **S** 20 02 14.5 -1.0
MJAR Matsushiro Arr 3.77 117 P **P** 20 01 15.6 -0.5
2.1nm,0.3s,baz=298,slow=9.6,SNR=514
MJAR S **S** 20 02 14.2 -1.2
0.2nm,0.3s,baz=252,slow=24,SNR=5.8
INU Inuyama 3.81 140 P **P** 20 01 14.6 -1.8
JIE Ise 4.47 150 P **P** 20 01 21.8 -0.6
JIE *eS* **S** 20 02 24.6 -2.3
JRY Ryogami san 4.52 119 P **P** 20 01 21.9 -0.9
JTNC Tanabenakahech 4.67 163 P **P** 20 01 23.1 -1.1
JTNC *eS* **S** 20 02 26.1 -4.1
MSHR Mys Shultsa 4.79 334 *ce* **P** **P** 20 01 24.7 -0.3
KSRS Korea Array 4.90 262 P **P** 20 01 25.9 -0.3
2.4nm,0.3s,baz=81,slow=10.0,SNR=92
KSRS S **S** 20 02 31.0 -3.1
baz=78,slow=16,SNR=8.3
KS19 Wonju Array Si 4.93 262 P **P** 20 01 25.3 -1.3
KS19 S **S** 20 02 32.1 -2.6
VLA Vladivostok 5.07 342 *i* P **P** 20 01 27.7 0.0
VLA pmax pmax
comp=Z,282nm,1.0s
JOD2 Odawara 2 5.08 125 P **P** 20 01 27.0 -1.1
JOD2 *eS* **S** 20 02 34.1 -3.3
JTU Tsushima 5.31 226 P **P** 20 01 28.6 -1.7
JTO Tosashimizu 5.53 191 P **P** 20 01 31.9 -0.7
JOSM Okushiri--Mats 5.62 46 P **P** 20 01 33.0 -0.2
JOSM *eS* **S** 20 02 44.0 -3.0
TJN Taejon 5.64 252 *di* P **P** 20 01 32.8 -0.8
JMK Ichinoseki 5.67 81 P **P** 20 01 32.6 -1.2
JMK *eS* **S** 20 02 44.4 -3.6
JNU Nakatsue 5.78 207 P **P** 20 01 34.2 -0.9
comp=Z,3.0nm,0.3s,baz=40,slow=2.3,SNR=50
JNU S **S** 20 02 46.7 -3.5
baz=164,slow=23,SNR=1.2
INCN Inchon 5.90 264 P **P** 20 01 35.0 -1.3
INCN Inchon 5.90 264 P **P** 20 01 35.0 -1.3
USA0B Ussuriysk Arra 6.08 346 *c i* P **P** 20 01 38.0 +0.2
USA0B Ussuriysk Arra 6.08 346 P **P** 20 01 38.1 +0.2
USRK Ussuriysk Ar. 6.08 346 P **P** 20 01 38.2 +0.3
baz=163,slow=9.7,SNR=573
USRK S **S** 20 02 55.4 -0.1
baz=146,slow=20,SNR=0.8
JOT Ohata 6.21 58 P **P** 20 01 40.1 +0.8
JKB Kayabe 6.45 54 P **P** 20 01 41.3 -0.5
BSO1 Boso 1 6.69 121 P **P** 20 01 42.4 -1.5
BSO1 *eS* **S** 20 03 01.8 -4.6
JHJ Hachijo jima 2 6.99 136 P **P** 20 01 48.0 +0.3
comp=Z,19nm,0.3s,baz=46,slow=18,SNR=8.3
JHJ S **S** 20 03 11.6 -1.6
comp=Z,7.0nm,0.3s,baz=69,slow=20,SNR=1.9
TEY Ternei 6.99 15 *ij i* P **P** 20 01 47.3 -0.1
TEY *eS* **S** 20 03 11.2 -1.7
TEY pmax pmax
comp=Z,20nm,0.8s
TEY pmax pmax
comp=N,30nm,0.9s
TEY smax smax
comp=N,20nm,1.3s
MDJ Mudanjiang 7.12 334 P **P** 20 01 48.9 +0.1
JSJ Shimokoshiki 7.50 209 P **P** 20 01 52.7 -0.5
ERM Erimo 7.91 59 P **P** 20 01 57.2 -0.1
ERM Erimo 7.91 59 P **P** 20 01 57.2 -0.1
JCH Churui 8.31 56 P **P** 20 02 00.6 -1.1
JCH *eS* **S** 20 03 32.9 -6.2
CN2 Changchun 8.48 313 *eP* **P** 20 02 02.9 -0.6
CN2 *eS* **S** 20 03 38.9 -3.5
ASAJ Asahikawa 8.68 45 P **P** 20 02 04.8 -0.8
comp=N,15nm,0.3s,baz=239,slow=9.4,SNR=61
ASAJ S **S** 20 03 42.0 -4.3
comp=N,5.0nm,0.3s,baz=30,slow=29,SNR=10
JKA Kamikawa-asahi 8.68 45 P **P** 20 02 04.8 -0.8
JTKR Abashiri--Toko 9.35 50 P **P** 20 02 12.3 -0.6
JTKR S **S** 20 03 55.3 -4.6
NMR Nemuro--Hokkai 10.20 57 *eP* **S** 20 02 20.0 -2.2
NMR *eS* **S** 20 04 09.3 -7.6
NEM2 Nemuro 2 10.21 57 P **S** 20 02 22.4 +0.1
NEM2 S **S** 20 04 11.7 -5.4
GRPR Tuman 10.52 54 *eP* **P** 20 02 26.5 +0.9
GRPR *eS* **S** 20 04 21.3 -1.9
KLR Kul'dur 11.03 352 P **P** 20 02 31.2 0.0
comp=N,1.5nm,0.3s,baz=174,slow=8.7,SNR=34
KLR Kul'dur 11.03 352 *de* **P** **P** 20 02 31.0 -0.2
KLR pmax pmax
comp=Z,7.0nm,0.8s
JCJ Chichijima 13.12 146 S **S** 20 05 08.6 -6.9
comp=Z,6.7nm,0.3s,baz=287,slow=22,SNR=1.9
TIA Tai'an 13.62 266 P **P** 20 02 59.1 -0.4
TIA pmax pmax
comp=Z,33nm,0.7s
BJI Beijing 13.95 283 P **P** 20 03 03.4 +0.5
BJT Baijiatuau 13.96 283 P **P** 20 03 02.0 -1.0
BJT Baijiatuau 13.96 283 P **P** 20 03 02.0 -1.0
HIA Hailar 15.01 321 P **P** 20 03 13.4 -0.8
HIA Hailar 15.01 321 P **P** 20 03 13.4 -0.8
ZEA Zeya 16.11 345 *eP* **P** 20 03 25.3 -0.5
ZEA pmax pmax
comp=Z,13nm,0.8s
YOJ Yonaguni jima 16.68 217 P **P** 20 03 28.8 -3.4
YOJ pmax pmax
comp=Z,20nm,1.1s
YOJ Yonaguni jima 16.68 217 P **P** 20 03 28.8 -3.4
WHN Wuhan 17.96 250 ⇑P **P** 20 03 44.1 -1.4
SSLB Suanglung 18.27 221 P **P** 20 03 46.1 -2.6
SSLB IAmb IAmb 20 03 46.9
comp=Z,5.5nm,0.8s
TPUB Ta-pu 18.84 221 P **P** 20 03 51.4 -2.8
TPUB IAmb IAmb 20 03 54.3
comp=Z,15nm,1.2s
TWG Pinlang 19.01 219 P **P** 20 03 54.7 -1.0
XAN Xi'an 20.68 266 P **P** 20 04 09.8 -1.1
XAN pmax pmax
comp=Z,56nm,0.5s
XAN Xi'an 20.68 266 P **P** 20 04 09.9 -1.0
XAN pmax pmax
comp=Z,52nm,0.4s
XAN Xi'an 20.68 266 P **P** 20 04 09.9 -1.0
ENH Enshi 21.75 256 P **P** 20 04 19.2 -1.4
ULN Ulaanbaatar 21.79 305 *ce* **P** **P** 20 04 22.7 +1.8
ULN pmax pmax
comp=Z,10.0nm,0.6s
ULN Ulaanbaatar 21.79 305 P **P** 20 04 20.4 -0.5
PETK Petropavlovsk- 22.04 40 P **P** 20 04 21.9 -1.0
comp=Z,3.7nm,1.0s,baz=243,slow=9.5,SNR=1.6
SONM Songino Array 22.21 304 P **P** 20 04 24.5 -0.1
comp=Z,8.4nm,0.5s,baz=112,slow=9.3,SNR=39
SONM ScP **ScP** 20 10 58.4 0.0
comp=Z,0.5nm,0.6s,baz=108,slow=4.8,SNR=3.7
ZAK Zakamensk 24.89 309 *eP* **P** 20 04 47.0 -1.5
ZAK pmax pmax
comp=Z,3.0nm,1.0s
TLY Talaya 25.09 312 P **P** 20 04 50.8 +0.6
comp=Z,3.4nm,0.6s,baz=101,slow=20,SNR=3.8
TLY Talaya 25.09 312 *ce* **P** **P** 20 04 51.0 +0.8
TLY pmax pmax
comp=Z,3.0nm,0.8s
TLY Talaya 25.09 312 P **P** 20 04 50.1 -0.1
GTA Gaotai 26.57 283 *eP* **P** 20 05 03.3 -0.3
GTA pmax pmax
comp=Z,7.0nm,0.8s
SEY Seymchan 27.06 18 *i* P **P** 20 05 07.9 +0.5
SLVN Son La 30.94 245 P **P** 20 05 41.5 -0.5
TIXI Tiksi 33.51 357 *i* P **P** 20 06 03.7 +0.5
TIXI pmax pmax
comp=Z,2.0nm,0.6s
TIXI Tiksi 33.51 357 P **P** 20 06 03.9 +0.6
BILL Bilibino 34.68 21 *i* P **P** 20 06 15.2 +2.0
BILL *i* *PP **pP** 20 07 33.9 +1.2
BILL *i* 20 07 47.5
BILL *i* 20 08 36.1
BILL pmax pmax
comp=Z,4.0nm,1.5s
CHTO Chiang Mai 36.13 247 P **P** 20 06 25.9 -0.1
CHTO pmax pmax
comp=Z,11nm,0.8s
CHTO Chiang Mai 36.13 247 P **P** 20 06 25.9 -0.1
CHTO IAmb IAmb 20 06 28.2
comp=Z,11nm,0.8s
PBKT Sadao Pong 36.17 242 P **P** 20 06 26.3 +0.1
PBKT IAmb IAmb 20 06 28.9
comp=Z,10.0nm,1.3s
LSA Lhasa 36.30 269 P **P** 20 06 28.0 +0.2
LSA pmax pmax
comp=Z,3.0nm,0.6s
LSA Lhasa 36.30 269 P **P** 20 06 27.9 +0.2
CM31 Chiang Mai Arr 36.35 247 P **P** 20 06 28.1 +0.2
CM31 IAmb IAmb 20 06 30.2
comp=Z,4.9nm,0.7s
CMAR Chiang Mai Arr 36.35 247 P **P** 20 06 28.2 +0.4
comp=Z,3.0nm,0.6s,baz=46,slow=7.6,SNR=13
ZAA0 Zalesovo Array 36.70 312 P **P** 20 06 29.8 -0.4
ZALV Zalesovo Beam 36.70 312 P **P** 20 06 29.6 -0.6
comp=Z,4.2nm,0.3s,baz=103,slow=6.9,SNR=25
ZALV ScP **ScP** 20 11 46.0 +1.1
comp=Z,0.9nm,0.5s,baz=143,slow=3.2,SNR=5.3
SHL Shillong 37.64 263 P **P** 20 06 37.7 -0.9
SHL pmax pmax
comp=Z,13nm,0.9s
SHL Shillong 37.64 263 P **P** 20 06 37.7 -0.9
SHL IAmb IAmb 20 06 39.0
comp=Z,13nm,0.9s
MK31 Makanchi Array 38.43 300 P **P** 20 06 44.5 -0.2
MK31 pmax pmax
comp=Z,3.0nm,0.8s
MK31 Makanchi Array 38.43 300 P **P** 20 06 44.5 -0.2
MKAR Makanchi Array 38.43 300 P **P** 20 06 44.4 -0.3
comp=Z,3.2nm,0.5s,baz=88,slow=10,SNR=55
MKAR ScP **ScP** 20 11 52.5 +0.9
comp=Z,0.6nm,0.6s,baz=82,slow=5.5,SNR=6.8
MAKZ Makanchi 38.64 300 P **P** 20 06 46.3 -0.1
MAKZ pmax pmax
comp=Z,4.0nm,0.9s
MAKZ Makanchi 38.64 300 P **P** 20 06 46.3 -0.1
LBMI Labuha 39.22 190 P **P** 20 06 53.1 +1.7
comp=Z,659nmcomp=Z,7.8nm,1.5s
NRIK Noril'sk 39.69 336 P **P** 20 06 53.6 -0.9
comp=Z,1.8nm,0.3s,baz=146,slow=8.0,SNR=4.3
TAPN Taplejung 40.05 268 *eP* **P** 20 06 57.7 -0.7
comp=Z,12nm,0.4s
KURK Kurchatov 40.49 306 *de* **P** **P** 20 07 00.7 -0.5
KURK pmax pmax
comp=Z,18nm,0.7s
KURK Kurchatov 40.49 306 P **P** 20 07 00.8 -0.5
LUWI Luwuk 40.51 197 P **P** 20 07 00.6 -1.3
LUWI IAmb IAmb 20 07 00.8
comp=Z,8.8nm,0.6s
ODAN Odare 40.53 268 *eP* **P** 20 07 01.8 -0.4
comp=Z,12nm,0.3s
KURBB Kurchatov Arra 40.55 306 P **P** 20 07 01.3 -0.4
comp=Z,1.1nm,0.7s,baz=87,slow=8.2,SNR=78
FAKI Fak Fak 41.06 183 P **P** 20 07 07.1 +0.9
comp=Z,485nmcomp=Z,54nm,0.7s
FAKI Fak Fak 41.06 183 P **P** 20 07 06.8 +0.6
JIRN Jiri 41.10 270 *eP* **P** 20 07 07.0 0.0
comp=Z,34nm,0.3s
RAMN Ramite 41.11 268 *eP* **P** 20 07 06.6 -0.3
comp=Z,18nm,0.5s
GUN Gumba 41.23 270 *eP* **P** 20 07 07.9 -0.1
comp=Z,43nm,0.3s
PKI Pulchoki 41.76 270 *eP* **P** 20 07 11.5 -0.6
comp=Z,9.0nm,0.4s
KKN Kakani 41.76 270 *eP* **P** 20 07 11.8 -0.2
comp=Z,23nm,0.3s
PKIN Phulchoki 41.77 270 *eP* **P** 20 07 11.5 -0.6
comp=Z,4.4nm,0.2s
PRZ Przheval'sk 41.92 294 P **P** 20 07 13.1 0.0
PRZ pmax pmax
comp=Z,15nm,1.1s
PRZ Przheval'sk 41.92 294 P **P** 20 07 13.1 0.0
PRZ IAmb IAmb 20 07 14.9
comp=Z,15nm,1.1s
DMN Daman 41.98 270 *eP* **P** 20 07 13.5 -0.3
comp=Z,8.0nm,0.3s
GKN Gorkha 42.17 271 *eP* **P** 20 07 14.8 -0.4
comp=Z,24nm,0.2s
TARG Taragay, Kyrgy 42.54 293 P **P** 20 07 18.6 +0.4
TARG IAmb IAmb 20 07 19.9
comp=Z,6.6nm,0.7s
DANN Dangsing 42.70 272 *eP* **P** 20 07 19.6 +0.1
comp=Z,49nm,0.3s
KDJ Kajisay 42.89 294 P **P** 20 07 20.9 +0.2
KDJ pmax pmax
comp=Z,4.0nm,0.6s
KDJ Kajisay 42.89 294 P **P** 20 07 20.9 +0.2
KDJ IAmb IAmb 20 07 21.5
comp=Z,4.4nm,0.6s
KOLN Koldanda 43.09 271 *eP* **P** 20 07 22.4 -0.1
comp=Z,20nm,0.3s
PYUN Piuthan 43.42 272 *eP* **P** 20 07 25.2 +0.1
comp=Z,69nm,0.4s
TKM2 Tokmak 2 43.82 295 P **P** 20 07 29.0 +0.9
SNR=15
KZA Kyzart 44.29 294 P **P** 20 07 33.2 +1.3
SNR=14
KBK Karagaybulak 44.35 295 P **P** 20 07 32.7 +0.6
SNR=10
CHMS Chumysh 44.40 296 P **P** 20 07 32.6 +0.3
SNR=5.4
KSH Kashi 44.49 291 P **P** 20 07 35.4 +2.2
KSH pmax pmax
comp=Z,8.0nm,1.0s
KSH pmax pmax
comp=Z,140nm,4.3s
AAK Ala-Archa 44.68 295 P **P** 20 07 35.0 +0.3
comp=Z,2.3nm,0.4s,baz=93,slow=5.2,SNR=14
AAK Ala-Archa 44.68 295 P **P** 20 07 35.1 +0.5
SNR=5.3
AAK Ala-Archa 44.68 295 *ce* **P** **P** 20 07 35.0 +0.3
AAK pmax pmax
comp=Z,3.0nm,0.6s
AAK Ala-Archa 44.68 295 P **P** 20 07 34.5 -0.2
KULM Kulim 44.70 231 P **P** 20 07 35.5 +0.5
KULM IAmb IAmb 20 07 47.7
comp=Z,8.4nm,1.2s
KAPI Kappang 45.10 200 P **P** 20 07 37.8 -0.2
KAPI pmax pmax
comp=Z,7.0nm,0.5s
KAPI Kappang 45.10 200 P **P** 20 07 37.8 -0.2
KAPI IAmb IAmb 20 07 38.8
comp=Z,7.2nm,0.5s
BVAR Borovoye Array 45.33 310 P **P** 20 07 39.1 -0.2
comp=Z,4.4nm,0.5s,baz=95,slow=6.6,SNR=32
BRVK Borovoye 45.38 310 *ce* **P** **P** 20 07 39.7 0.0
BRVK pmax pmax
comp=Z,3.0nm,0.5s
BRVK Borovoye 45.38 310 P **P** 20 07 39.5 -0.2
BRVK IAmb IAmb 20 07 40.5
comp=Z,5.1nm,0.5s
AML Almayashu 45.39 295 P **P** 20 07 41.5 +1.1
SNR=17
RABL Rabaul 45.51 154 P **P** 20 07 43.5 +2.3
KK31 Karatay Array 47.36 297 P **P** 20 07 55.1 0.0
KK31 pmax pmax
comp=Z,6.0nm,0.9s
KK31 Karatay Array 47.36 297 P **P** 20 07 55.1 0.0
KK31 IAmb IAmb 20 07 56.2
comp=Z,5.6nm,0.8s
BTK Batken 48.09 293 P **P** 20 08 00.6 -0.1
BTK pmax pmax
comp=Z,5.0nm,0.5s
BTK Batken 48.09 293 P **P** 20 08 00.6 -0.1
BTK IAmb IAmb 20 08 03.1
comp=Z,4.9nm,0.5s
NIL Nilore 48.63 284 P **P** 20 08 05.1 +0.4
NIL pmax pmax
comp=Z,15nm,0.9s
NIL Nilore 48.63 284 P **P** 20 08 05.1 +0.4
NIL IAmb IAmb 20 08 06.1
comp=Z,15nm,0.8s
GAR Garm 48.81 292 P **P** 20 08 06.0 -0.1
CHGR Chuyangaron 49.78 292 P **P** 20 08 13.4 +0.1
MTN Manton Dam 50.96 184 P **P** 20 08 22.2 +0.2
MDM Murphy Dome 50.97 32 P **P** 20 08 22.6 +1.1
KBL Kabul 51.45 287 P **P** 20 08 25.3 -0.5
KBL pmax pmax
comp=Z,9.0nm,1.2s
KBL Kabul 51.45 287 P **P** 20 08 25.2 -0.5
ARU Arti 51.46 317 P **P** 20 08 25.2 0.0
comp=Z,5.3nm,0.4s,baz=86,slow=4.4,SNR=39
ARU Arti 51.46 317 *c i* P **P** 20 08 24.9 -0.2
ARU 20 09 30.2
ARU *PP **pP** 20 09 48.2 -4.4
ARU S **S** 20 15 12.9 +2.5
ARU SS **SS** 20 18 51.7 -1.3
ARU pmax pmax
comp=Z,10.0nm,0.5s
ARU Arti 51.46 317 P **P** 20 08 25.0 -0.2
ILAR Eielson Array 51.57 32 P **P** 20 08 27.2 +1.3
comp=Z,0.4nm,0.7s,baz=286,slow=10,SNR=4.1
COEN Coen 52.70 169 P **P** 20 08 36.4 +1.7
COEN IAmb IAmb 20 08 36.9
comp=Z,11nm,0.8s
AKTO Aktyubinsk 53.39 309 P **P** 20 08 38.7 -0.5
comp=Z,5.4nm,0.8s,baz=84,slow=8.2,SNR=21
KNRA Kununurra 53.93 186 P **P** 20 08 44.1 +0.7
KIRV Kirov 55.62 321 P **P** 20 08 55.0 +0.2
comp=Z,15nm,0.6s,baz=133,slow=3.5,SNR=6.1
HRA Herat 56.59 290 P **P** 20 09 02.6 +0.3
HRA IAmb IAmb 20 09 03.9
comp=Z,6.4nm,0.9s
FITZ Fitzroy Crossi 56.66 190 P **P** 20 09 03.1 +0.6
WB0 Warramunga Arr 57.77 180 P **P** 20 09 10.5 +0.3
WB0 IAmb IAmb 20 09 11.2
comp=Z,7.4nm,0.7s
WRAB Tennant Creek 57.94 180 *i* P **P** 20 09 10.6 -0.7
WRAB pmax pmax
comp=Z,7.0nm,0.7s
WB2 Warramunga Arr 57.95 180 P **P** 20 09 11.6 +0.2
WB2 IAmb IAmb 20 09 12.5
comp=Z,10.0nm,0.7s
WRA Warramunga Arr 57.95 180 P **P** 20 09 11.7 +0.3
comp=Z,6.7nm,0.5s,baz=355,slow=7.6,SNR=76
WR0 Warramunga Arr 57.97 179 P **P** 20 09 11.9 +0.4
WR0 IAmb IAmb 20 09 12.7
comp=Z,11nm,0.6s
GEYT Alibeck 58.03 295 P **P** 20 09 12.2 +0.3
comp=Z,3.5nm,0.5s,baz=39,slow=2.8,SNR=12
GYA0B ALIBECK ARRAY 58.03 295 P **P** 20 09 12.2 +0.3
GYA0B IAmb IAmb 20 09 20.2
comp=Z,4.7nm,0.8s
CTAO Charters Tower 59.22 167 P **P** 20 09 21.0 +1.0
CTAO pmax pmax
comp=Z,12nm,1.0s
CTAO Charters Tower 59.22 167 P **P** 20 09 21.0 +1.0
CTAO IAmb IAmb 20 09 30.0
comp=Z,12nm,0.9s
ARCES ARCESS Array B 60.65 338 P **P** 20 09 29.6 +0.6
comp=Z,2.6nm,0.8s,baz=61,slow=7.2,SNR=7.6
AS31 Alice Springs 61.65 180 P **P** 20 09 36.8 +0.7
AS31 IAmb IAmb 20 09 39.2
comp=Z,3.6nm,0.5s
ASAR Alice Springs 61.65 180 P **P** 20 09 37.0 +0.8
comp=Z,6.7nm,0.7s,baz=13,slow=13,SNR=108
VRH Novokhopyorsk 62.61 315 *eP* **P** 20 09 41.1 -1.0
VRH pmax pmax
comp=Z,8.0nm,0.6s
OBN Obninsk 63.47 320 *i* P **P** 20 09 45.1 -2.4
OBN pmax pmax
comp=Z,4.0nm,0.8s
LPSR Galich'ya Gora 63.47 317 *eP* **P** 20 09 46.9 -0.7
LPSR pmax pmax
comp=Z,10.0nm,0.8s
AKT Akhty 63.53 303 *eP* **P** 20 09 48.7 +0.3
AKT *e* 20 10 20.0
AKT *e* *PP **pP** 20 11 20.0 -0.9
AKT pmax pmax
comp=Z,11nm,0.6s
VSR Storozhevoye 64.01 316 *eP* **P** 20 09 49.7 -1.5
VSR pmax pmax
comp=Z,8.0nm,0.5s
VORD Divnogorie 64.07 316 *eP* **P** 20 09 50.3 -1.2
VORD pmax pmax
comp=Z,6.0nm,0.6s
FIA1 FINESS Array S 64.85 330 P **P** 20 09 56.8 +0.5
FIA1 IAmb IAmb 20 10 10.1
comp=Z,17nm,1.5s
FINES FINESS Array B 64.85 330 P **P** 20 09 56.9 +0.6
comp=Z,6.8nm,0.7s,baz=85,slow=5.4,SNR=40
FINES PcP **PcP** 20 10 25.6 +0.3
comp=Z,0.8nm,0.4s,baz=48,slow=4.5,SNR=5.7
KBZ Khabaz 65.54 307 P **P** 20 10 01.2 +0.2
comp=Z,2.3nm,0.8s,baz=70,slow=1.9,SNR=5.5
KBZ Khabaz 65.54 307 *ce* **P** **P** 20 10 01.7 +0.8
KBZ pmax pmax
comp=Z,5.0nm,1.0s
KIV Kislovodsk 65.56 308 *i* P **P** 20 10 01.1 -0.1
KIV *i* *PP **pP** 20 11 31.7 -2.6
KIV pmax pmax
comp=Z,5.0nm,0.9s
KIV Kislovodsk 65.56 308 P **P** 20 10 01.7 +0.5
KIV IAmb IAmb 20 10 03.4
comp=Z,5.3nm,0.8s
YKA Yellowknife Ar 65.56 28 P **P** 20 10 01.1 +0.3
comp=Z,0.4nm,0.7s,baz=290,slow=11,SNR=5.8
UOSS Minazif 65.82 283 P **P** 20 10 03.3 +0.3
UOSS IAmb IAmb 20 10 15.5
comp=Z,5.4nm,1.1s
FORT Forrest 68.96 185 P **P** 20 10 23.0 +0.9
MORW Morawa 69.11 197 P **P** 20 10 23.3 +0.2
MORW IAmb IAmb 20 10 24.6
comp=Z,10nm,1.1s
SUMG Summit 69.28 358 P **P** 20 10 24.9 +0.8
SUMG pmax pmax
comp=Z,8.0nm,1.3s
SUMG Summit 69.28 358 P **P** 20 10 24.9 +0.8
SUMG IAmb IAmb 20 10 36.9
comp=Z,7.5nm,1.3s
AKASG Malin Array Be 69.59 319 P **P** 20 10 25.9 +0.1
comp=Z,2.0nm,0.4s,baz=53,slow=6.3,SNR=13
AKBB Malin Array Si 69.59 319 *ce* **P** **P** 20 10 26.5 +0.7
AKBB Malin Array Si 69.59 319 P **P** 20 10 25.9 +0.1
AKBB IAmb IAmb 20 10 26.8
comp=Z,3.6nm,0.7s
STKA Stephens Creek 70.19 173 P **P** 20 10 30.9 +1.4
comp=Z,1.0nm,0.4s,baz=9.0,slow=6.1,SNR=6.6
STKA Stephens Creek 70.19 173 P **P** 20 10 30.8 +1.3
HFS Hagfors 70.38 333 P **P** 20 10 31.0 +0.6
comp=Z,4.5nm,0.5s,baz=75,slow=6.3,SNR=47
HFS Hagfors 70.38 333 P **P** 20 10 31.0 +0.6
NC405 NORSAR Array S 70.39 334 P **P** 20 10 31.2 +0.8
NB2 NORSAR Subarra 70.61 334 P **P** 20 10 32.3 +0.5
comp=Z,2.1nm,0.7s,baz=44,slow=6.2
NOA NORSAR Array B 70.61 334 P **P** 20 10 32.5 +0.7
comp=Z,1.4nm,0.6s,baz=43,slow=5.9,SNR=12
BBOO Buckleboo 70.79 178 P **P** 20 10 34.3 +1.2
BBOO IAmb IAmb 20 10 52.2
comp=Z,13nm,1.4s
NWAO Narrogin (SRO) 72.58 195 P **P** 20 10 44.4 +0.9
NWAO pmax pmax
comp=Z,38nm,1.4s
NWAO Narrogin (SRO) 72.58 195 P **P** 20 10 44.4 +0.9
BRTR Keskin Array B 73.52 308 P **P** 20 10 49.8 +0.5
comp=Z,1.9nm,0.9s,baz=110,slow=4.2,SNR=7.2
OJC Ojcow 74.58 323 P **P** 20 10 55.1 +0.2
OJC pmax pmax
comp=Z,7.0nm,1.0s
OJC Ojcow 74.58 323 P **P** 20 10 55.1 +0.2
OJC IAmb IAmb 20 10 57.1
comp=Z,6.8nm,1.0s
RAYN Ar Rayn 74.71 288 P **P** 20 10 56.3 +0.1
RAYN pmax pmax
comp=Z,2.0nm,0.6s
RAYN Ar Rayn 74.71 288 P **P** 20 10 56.3 +0.1
TOO Toolangi 76.25 171 P **P** 20 11 06.5 +2.2
TOO pmax pmax
comp=Z,21nm,1.5s
TOO Toolangi 76.25 171 P **P** 20 11 06.5 +2.2
CLL Collm 76.93 326 *i* P **P** 20 11 09.9 +1.9
comp=Z,5.0nm,0.6s
CLL Collm 76.93 326 *i* P **P** 20 11 09.9 +1.9
CLL pmax pmax
comp=Z,5.0nm,0.6s
GERES GERESS Array B 78.39 324 P **P** 20 11 16.9 +0.8
comp=Z,0.5nm,0.7s,baz=35,slow=4.9,SNR=4.5
NVAR Mina Array Bea 78.78 50 P **P** 20 11 21.1 +2.5
comp=Z,0.6nm,0.7s,baz=283,slow=3.3,SNR=4.4
SOKA Soboth 79.32 322 *eP* **P** 20 11 22.5 +1.3
comp=Z,2.8nm,0.5s
EKA Eskdalemuir Ar 79.81 337 P **P** 20 11 23.8 +0.3
comp=Z,0.7nm,0.6s,baz=37,slow=5.7,SNR=4.1
LIT Litokhoron 79.94 314 P **P** 20 11 25.1 +0.6
LIT pmax pmax
comp=Z,4.0nm,0.9s
LIT Litokhoron 79.94 314 P **P** 20 11 25.1 +0.6
LIT IAmb IAmb 20 11 26.0
comp=Z,3.6nm,0.9s
DAVA Damuels 81.28 325 *eP* **P** 20 11 32.2 +0.7
comp=Z,3.9nm,1.0s

FUORN	**Ofenpass-Fuorn**	**81.60**	**325**	P	**P**	**20 11 34.4**	**+1.0**
FUORN				IAmb	IAmb	20 11 35.4	
	comp=Z,3.4nm,0.8s						
DAVOX	**Davos/Dischmat**	**81.66**	**325**	P	**P**	**20 11 34.6**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=163,slow=4.0,SNR=3.1						
QRZ	**Quartz Range**	**86.27**	**152**	P	**P**	**20 11 57.9**	**+1.9**

IDC ***17*** *20:08:36.3±3.5,20°.55S×70°.77W,h0km,mb3.9/2, mb1 4.0/3,mb1mx3.6/26,mbtmp3.9/3,ML3.7/1,MS2.3/3, Ms1 2.3/3,ms1mx2.2/25,Error ellipse: s-maj=141.8km s-min=48.1km az=3.0*

GUC ***17*** *20:08:41.9±0.7,20°.15S×70°.86W,h33km±2km,ML3.7*

ISC 17 20:08:36.8±1.6,20°.27S±0°.03×70°.94W±0°.06,h6km±10km, n31,σ1°33/43,9C-3D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.76**	**91** ⇓	*i* P	**Pn**	**20 08 54.0**	**-0.1**
TA02				*i* S	**Sb**	**20 09 03.3**	**+0.2**
TA02				IAML		20 09 04.2	
	comp=E,12μm,0.2s						
TA01	**Diego Aracena**	**0.78**	**113** ⇑	*i* P	**Pn**	**20 08 55.1**	**+0.8**
TA01				*e*S	**Sn**	**20 09 04.9**	**-1.4**
TA01				IAML		20 09 07.0	
	comp=N,4μm,0.3s						
PATCX	**Punta Patache**	**0.92**	**127**	*e*P	**Pn**	**20 08 58.1**	**+1.7**
PATCX				*e*S	**Sn**	**20 09 10.4**	**+0.3**
PATCX				IAML		20 09 15.2	
	comp=N,5μm,0.3s						
PSGC	**Pisagua**	**1.02**	**49** ⇓	*i* P	**Pg**	**20 08 57.0**	**+0.7**
PSGC				*i* S	**Sg**	**20 09 09.2**	**-0.3**
PB11	**IPOC Station P**	**1.31**	**68** ⇓	*i* P	**Pb**	**20 09 02.1**	**+0.1**
PB11				*e*S	**Sb**	**20 09 17.7**	**-1.4**
PB02	**IPOC Station P**	**1.44**	**137** ⇑	*i* P	**Pg**	**20 09 06.3**	**+2.0**
PB02				*i* S	**Sg**	**20 09 24.5**	**+1.6**
PB01	**IPOC Station P**	**1.57**	**120** ⇑	*i* P	**Pg**	**20 09 07.8**	**+1.0**
PB01				*e*S	**Sg**	**20 09 26.0**	**-1.2**
PB01				IAML		20 09 32.7	
	comp=N,2μm,0.5s						
PB08	**IPOC Station P**	**1.69**	**86** ⇑	*i* P	**Pb**	**20 09 08.8**	**+0.3**
PB08				*i* S	**Sb**	**20 09 29.3**	**-0.8**
MNMC	**Minye Minye**	**1.70**	**49** ⇑	*i* P	**Pn**	**20 09 08.1**	**+0.9**
MNMC				*e*S	**Sn**	**20 09 28.8**	**-0.7**
PB12	**IPOC Station P**	**1.74**	**20** ⇑	*e*P	**Pn**	**20 09 08.2**	**+0.5**
PB12				*e*S	**Sn**	**20 09 28.3**	**-2.0**
GO01	**Chusmiza**	**1.75**	**70** ⇑	*i* P	**Pb**	**20 09 09.3**	**-0.3**
GO01				*i* S	**Sb**	**20 09 31.3**	**-0.7**
GO01				IAML		20 09 32.2	
	comp=N,3μm,0.2s						
PB07	**IPOC Station P**	**1.76**	**146** ⇑	*e*P	**Pg**	**20 09 11.0**	**+0.5**
PB07				*e*S	**Sg**	**20 09 34.1**	**+0.7**
PB07				IAML		20 09 47.8	
	comp=E,746nm,0.6s						
AP01	**Chacalluta**	**1.97**	**17**	*e*P	**Pb**	**20 09 12.8**	**-0.3**
AP01				*e*S	**Sn**	**20 09 37.2**	**+1.5**
PB03	**IPOC Station P**	**2.09**	**148**	*e*P	**Pb**	**20 09 15.8**	**+0.5**
PB03				*e*S	**Sg**	**20 09 43.7**	**-0.3**
PB03				IAML		20 09 58.4	
	comp=E,418nm,0.5s						
PB04	**IPOC Station P**	**2.19**	**160**	*e*P	**Pb**	**20 09 17.1**	**+0.2**
PB04				*e*S	**Sb**	**20 09 42.5**	**-1.8**
PB04				IAML		20 09 58.3	
	comp=N,548nm,0.4s						
PB09	**IPOC Station P**	**2.20**	**134** ⇑	*e*P	**Pg**	**20 09 18.1**	**-0.9**
PB09				*e*S	**Sg**	**20 09 46.0**	**-1.5**
PB09				IAML		20 09 57.1	
	comp=N,933nm,0.5s						
PB16	**IPOC Station P**	**2.35**	**35**	*e*P	**Pn**	**20 09 17.7**	**+1.2**
PB16				*e*S	**Sn**	**20 09 46.9**	**+0.9**
PB16				IAML		20 09 53.5	
	comp=N,409nm,0.4s						
PB05	**IPOC Station P**	**2.67**	**165**	*e*P	**Pb**	**20 09 23.2**	**-1.9**
PB05				*e*S	**Sn**	**20 09 53.3**	**+0.1**
PB05				IAML		20 10 13.4	
	comp=N,255nm,0.6s						
PB06	**IPOC Station P**	**2.74**	**153**	*e*P	**Pb**	**20 09 24.6**	**-1.8**
PB06				*e*S	**Sb**	**20 09 57.2**	**-3.2**
PB06				IAML		20 10 15.6	
	comp=N,274nm,0.5s						
LVC	**Limon Verde**	**3.00**	**141**	LR	LR	20 09 59.4	
	comp=N,23nm,20.2s,baz=321,slow=31						
LPAZ	**La Paz**	**4.77**	**34**	Pn	**Pb**	**20 09 57.8**	**-3.5**
	comp=N,0.6nm,0.3s,baz=189,slow=6.0,SNR=14						
LPAZ				LR	LR	20 11 15.6	
	comp=N,35nm,20.7s,baz=236,slow=32						
SIV	**San Ignacio**	**10.30**	**67**	Pn	**Pn**	**20 11 05.5**	**+0.2**
	comp=N,0.7nm,0.3s,baz=267,slow=10,SNR=24						
SIV				LR	LR	20 15 54.8	
	comp=N,33nm,21.9s,baz=280,slow=43						
H03N1	**Juan Fernandez**	**14.92**	**207**	T	T	20 27 39.2	
	baz=33,slow=72,SNR=42						
H03N2	**Juan Fernandez**	**14.92**	**207**	T	T	20 27 37.6	
	baz=33,slow=72,SNR=19						
H03N3	**Juan Fernandez**	**14.93**	**207**	T	T	20 27 34.5	
	baz=33,slow=72,SNR=26						
TORD	**Torodi Ar. Bea**	**78.75**	**71**	P	**P**	**20 20 40.1**	**-0.7**
	comp=N,1.2nm,0.7s,baz=251,slow=5.3,SNR=6.5						
YKA	**Yellowknife Ar**	**89.41**	**341**	P	**P**	**20 21 35.2**	**+1.2**
	comp=N,0.3nm,0.6s,baz=132,slow=4.9,SNR=6.1						
H11S2	**WAKE ISLAND Hyl**	**25.83**	**279**	T	T	22 47 08.4	
	baz=102,slow=74,SNR=3.2						
H11S1	**WAKE ISLAND Hyl**	**25.83**	**279**	T	T	22 47 12.1	
	baz=102,slow=74,SNR=3.2						
H11S3	**WAKE ISLAND Hyl**	**25.84**	**279**	T	T	22 47 13.2	
	baz=102,slow=74,SNR=4.5						
MKAR	**Makanchi Array**	**145.70**	**33**	PKPbc	**PKPab**	**20 28 18.2**	**+1.3**
	comp=N,0.9nm,0.7s,baz=334,slow=2.8,SNR=9.8						

IDC 17 20:23:55.1±5.7,55°.33S×146°.25W,h0km,mb3.7/2, mb1 3.9/2,mb1mx3.6/14,mbtmp3.7/2,Error ellipse: s-maj=513.5km s-min=63.8km az=161.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**65.17**	**264**	P	P	20 34 37.6	-0.4
	0.4nm,0.6s,baz=136,slow=6.2,SNR=7.3						
H01W1	**Cape Leeuwin H**	**67.11**	**242**	T	T	21 48 43.9	
	baz=134,slow=74,SNR=3.9						
H01W2	**Cape Leeuwin H**	**67.11**	**242**	T	T	21 48 43.6	
H01W3	**Cape Leeuwin H**	**67.12**	**242**	T	T	21 48 45.2	
	baz=113,slow=74,SNR=3.6						
WRA	**Warramunga Arr**	**67.85**	**267**	P	P	20 34 55.4	+0.2
	0.9nm,1.0s,baz=156,slow=11,SNR=1.6						
ILAR	**Eielson Array**	**119.78**	**360**	PKP	PKPdf	20 42 44.8	-0.8
	0.4nm,0.8s,baz=200,slow=2.1,SNR=3.5						
MKAR	**Makanchi Array**	**148.90**	**275**	PKPbc	PKPbc	20 43 44.0	+0.2
	0.8nm,0.8s,baz=149,slow=3.0,SNR=7.0						

TAP 17 20:42:56.7,24°.01N×121°.58E,h7km±1km,ML2.1,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.04**	**146**	P	Pg	20 42 58.8	+0.7
	baz=138						
HWA				*e*S	Sg	20 42 59.0	-0.1
	baz=138						
TWD	**Chiawan**	**0.07**	**8**	*i* P	Pg	20 42 59.0	+0.4
	baz=14						
TWD				*i* S	Sg	20 43 00.5	+0.6
	baz=14						
NACB	**Ninganchiao**	**0.17**	**3**	*i* P	Pg	20 43 00.4	+0.2
	baz=3.0						
NACB				*i* S	Sg	20 43 02.9	+0.4
	baz=3.0						
ETLH	**Xiulin Townshi**	**0.22**	**335**	*e*P	Pg	20 43 01.8	+0.7
	baz=334						
ETLH				*e*S	Sg	20 43 05.2	+1.1
	baz=334						
ESL	**Shilin**	**0.24**	**216**	*e*P	Pg	20 43 01.9	+0.6
	baz=213						
ESL				S	Sg	20 43 05.4	+0.8
	baz=213						
WHF	**Hehuan Shan**	**0.32**	**295**	*e*P	Pg	20 43 04.0	+0.8
	baz=295						
WHF				*e*S	Sg	20 43 08.8	+1.3
	baz=295						
EGFH	**Guangfu**	**0.36**	**203**	*e*P	Pg	20 43 04.5	+0.7
	baz=203						
CHGB	**Renai**	**0.38**	**278**	*e*P	Pb	20 43 05.4	-0.4
	baz=278						

TAP 17 20:43:03.9,24°.02N×121°.60E,h9km,ML2.2,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.05**	**178**	P	Pg	20 43 06.3	+0.6
	baz=169						
HWA				*e*S	Sg	20 43 08.0	+0.9
	baz=169						
TWD	**Chiawan**	**0.06**	**353**	*i* P	Pg	20 43 06.6	+0.8
	baz=1.0						
TWD				*i* S	Sg	20 43 08.1	+0.8
	baz=1.0						
NACB	**Ninganchiao**	**0.15**	**357**	*i* P	Pg	20 43 07.9	+0.7
	baz=356						
NACB				S	Sg	20 43 10.5	+1.0
	baz=356						
ETLH	**Xiulin Townshi**	**0.21**	**329**	P	Pg	20 43 09.3	+1.0
	baz=328						
ETLH				S	Sg	20 43 12.9	+1.5
	baz=328						
ESL	**Shilin**	**0.26**	**217**	*e*P	Pg	20 43 09.4	+0.3
	baz=215						
ESL				*e*S	Sg	20 43 14.0	+1.3
	baz=215						
WHF	**Hehuan Shan**	**0.33**	**291**	*i* P	Pb	20 43 11.6	-0.7
	baz=291						
WHF				S	Sg	20 43 16.4	+1.3
	baz=291						
EGFH	**Guangfu**	**0.39**	**204**	*e*P	Pg	20 43 12.1	+0.5
	baz=204						
EGFH				*e*S	Sb	20 43 18.1	-0.9
	baz=204						
CHGB	**Renai**	**0.39**	**275**	*e*P	Pb	20 43 12.7	-0.4
	baz=275						
CHGB				S	Sb	20 43 19.3	-0.1
	baz=275						
OWD	**Renai**	**0.40**	**260**	*e*P	Pg	20 43 12.3	+0.6
	baz=259						
OWD				*e*S	Sb	20 43 18.9	-0.4
	baz=259						
ENA	**Nanau**	**0.42**	**17**	*e*S	Pb	20 43 12.8	-0.7
	baz=19						
ENA	**Nanau**	**0.42**	**17**	P	Pb	20 43 12.8	-0.7
	baz=18						
ENA				*e*S	Sb	20 43 19.2	-0.7
	baz=18						
NNSB	**Datong**	**0.45**	**334**	*e*P	Pb	20 43 13.6	-0.4
	baz=333						
NNSB				*e*S	Sb	20 43 20.3	-0.6
	baz=333						
NNSH	**Datong**	**0.45**	**334**	*e*P	Pb	20 43 13.9	-0.2
	baz=333						
NNSH				S	Sb	20 43 20.2	-0.7
	baz=333						
TWT	**Tachien**	**0.45**	**300**	*e*S	Sb	20 43 21.4	+0.4
	baz=299						
NNS	**Nan Shan**	**0.46**	**333**	P	Pb	20 43 14.1	-0.2
	baz=333						
NNS				S	Sb	20 43 21.2	-0.1
	baz=333						
TDCB	**Techi**	**0.47**	**299**	*e*P	Pb	20 43 13.9	-0.4
	baz=299						
TDCB				S	Sb	20 43 21.4	0.0
	baz=299						
VWDT	**VWDT**	**0.50**	**238**	*e*P	Pb	20 43 14.6	-0.2
	baz=237						
VWDT				*e*S	Sb	20 43 22.6	+0.3
	baz=237						
HGSD	**Ruisui**	**0.55**	**197**	*e*P	Pb	20 43 15.8	+0.1
	baz=197						
HGSD				*e*S	Sb	20 43 24.2	+0.4
	baz=197						
NDT	**Datong Townshi**	**0.58**	**352**	*e*P	Pb	20 43 16.2	-0.1
	baz=351						
NDT				*e*S	Sb	20 43 24.9	+0.3
	baz=351						
ENTT	**Nioudou**	**0.61**	**357**	P	Pb	20 43 16.9	+0.1
	baz=357						
ENTT				*e*S	Sb	20 43 26.0	+0.5
	baz=357						
DPDB	**Guoxing**	**0.62**	**271**	*e*P	Pb	20 43 16.8	-0.1
	baz=270						
DPDB				*e*S	Sb	20 43 26.9	+1.2
	baz=270						
TWC	**Suao**	**0.62**	**21**	*e*P	Pg	20 43 16.4	+0.4
	baz=21						
TWC				*e*S	Sb	20 43 25.8	0.0
	baz=21						
SSLB	**Suanglung**	**0.64**	**249**	*e*P	Pb	20 43 17.2	0.0
	baz=248						
SSLB				*e*S	Sb	20 43 27.2	+1.0
	baz=248						
WHP	**Taichung City**	**0.65**	**293**	*e*P	Pb	20 43 18.0	+0.6
	baz=292						
WHP				*e*S	Sb	20 43 27.9	+1.2
	baz=292						
SMLT	**Sun Moon Lake**	**0.66**	**258**	*e*P	Pb	20 43 17.8	+0.2
	baz=257						
SMLT				S	Sb	20 43 26.9	+0.1
	baz=257						
YHNB	**Yeheng**	**0.68**	**342**	P	Pb	20 43 18.1	+0.2
	baz=342						
YHNB				*e*S	Sb	20 43 27.7	+0.3
	baz=342						
NSK	**Sanguang**	**0.69**	**341**	*e*P	Pb	20 43 18.4	+0.3
	baz=341						
NSK				*e*S	Sb	20 43 28.0	+0.3
	baz=341						
YULB	**Yu-li**	**0.69**	**204**	*e*P	Pg	20 43 17.6	+0.4
	baz=204						
YULB				*e*S	Sb	20 43 28.4	+0.8
	baz=204						
TYC	**Yuchr**	**0.69**	**260**	*e*P	Pg	20 43 17.5	+0.2
	baz=259						
TYC				*e*S	Sb	20 43 27.6	-0.1
	baz=259						
TWE	**Neicheng**	**0.70**	**5**	P	Pb	20 43 18.4	+0.2
	baz=5.0						
TWE				*e*S	Sb	20 43 28.4	+0.6
	baz=5.0						
EOS1	**EOS1**	**0.71**	**42**	*e*P	Pb	20 43 18.4	+0.1
	baz=42						
EOS1				*e*S	Sn	20 43 29.7	-1.3
	baz=42						
TWF1	**Yuli**	**0.72**	**203**	*e*P	Pg	20 43 18.0	+0.1
	baz=202						
TWF1				*e*S	Sb	20 43 29.8	+1.1
	baz=202						
ILA	**Ilan**	**0.75**	**10**	*e*P	Pb	20 43 19.3	+0.2
	baz=10.0						
NWLT	**Wulai**	**0.76**	**353**	*e*P	Pb	20 43 19.6	+0.4
	baz=353						
NWLT				*e*S	Sb	20 43 29.7	+0.1
	baz=353						
WHYT	**Xinyi Township**	**0.76**	**245**	*e*P	Pb	20 43 19.3	0.0
	baz=244						
WHYT				*e*S	Sb	20 43 30.5	+0.8
	baz=244						
NSTT	**Nanjuang**	**0.82**	**318**	*e*P	Pb	20 43 20.3	+0.1
	baz=318						
NSTT				*e*S	Sb	20 43 31.9	+0.6
	baz=318						
WJS	**Zhushan**	**0.83**	**256**	*e*S	Sb	20 43 32.5	+1.0
	baz=255						
TCU	**Taichung**	**0.86**	**278**	*e*S	Sb	20 43 33.2	+0.7
	baz=278						
FULB	**Fuli**	**0.87**	**199**	*e*P	Pg	20 43 20.7	+0.1
	baz=199						
FULB				*e*S	Sn	20 43 34.0	-1.1
	baz=199						
ALS	**Alishan**	**0.89**	**235**	*e*P	Pg	20 43 21.3	+0.2
	baz=234						
ALS				*e*S	Sb	20 43 34.0	+0.2
	baz=234						
NMLH	**Miaoli**	**0.90**	**305**	*e*S	Sn	20 43 35.0	-0.8
	baz=304						
CHN5	**Tsauling**	**0.95**	**244**	*e*P	Pb	20 43 22.9	+0.4
	baz=243						
CHN5				*e*S	Sn	20 43 36.8	-0.3
	baz=243						
TIPB	**Shuangxi**	**0.96**	**12**	*e*P	Pb	20 43 22.7	0.0
	baz=12						
TIPB				*e*S	Sn	20 43 36.6	-0.8
	baz=12						
YM01	**YM01**	**1.12**	**358**	*e*P	Pb	20 43 25.4	0.0
	baz=358						
TPUB	**Ta-pu**	**1.15**	**231**	*e*P	Pb	20 43 25.6	-0.3
	baz=231						
TPUB				*e*S	Sn	20 43 41.9	0.0
	baz=231						
WTP	**Ta-pu**	**1.19**	**230**	*e*P	Pb	20 43 26.2	-0.4
	baz=229						
WTP				*e*S	Sn	20 43 43.0	-0.1
	baz=229						
TWK	**Hsinying**	**1.27**	**234**	*e*P	Pn	20 43 27.6	-0.2
	baz=233						
TWK				*e*S	Sn	20 43 45.8	+0.8
	baz=233						
CHN1	**Nanshi**	**1.29**	**230**	*e*P	Pn	20 43 28.2	+0.1
	baz=229						
CHN1				*e*S	Sn	20 43 46.0	+0.5
	baz=229						
SGST	**Jiashian**	**1.32**	**225**	*e*S	Sg	20 43 46.4	-0.1
	baz=224						

IDC 17 20:46:28.6±8.0,55°.12S×146°.69W,h0km,mb3.7/1, mb1 3.8/1,mb1mx3.4/17,mbtmp3.7/1,Error ellipse: s-maj=718.2km s-min=74.4km az=159.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**64.94**	**264**	P	P	20 57 09.7	-0.2
	0.4nm,0.5s,baz=150,slow=7.5,SNR=4.7						
ILAR	**Eielson Array**	**119.56**	**360**	PKP	PKPdf	21 05 17.7	-0.9
	0.5nm,0.9s,baz=221,slow=0.8,SNR=2.4						
MKAR	**Makanchi Array**	**148.63**	**275**	PKPbc	PKPbc	21 06 16.8	+0.2
	0.4nm,0.6s,baz=126,slow=3.3,SNR=4.6						

JMA ***17*** *20:52:31.1±0.1,23°.74N×121°.72E,h37km±3km,M2.1*

TAP ***17*** *20:52:31.6,23°.78N×121°.72E,h37km,ML2.6,B*

ISC 17 20:52:32.2±1.0,23°.78N±0°.02×121°.72E±0°.02,h34km±1km, n81,σ0°47/156,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.22**	**333**	*e*P	**Pn**	**20 52 39.1**	**+0.9**
	baz=333						
HWA				*e*S	**Sb**	**20 52 44.7**	**+0.9**
	baz=333						
ESL	**Shilin**	**0.26**	**277**	*e*P	**Pn**	**20 52 39.5**	**+0.2**
	baz=276						
ESL				*e*S	**Sb**	**20 52 45.2**	**+0.6**
	baz=276						
EGFH	**Guangfu**	**0.29**	**247**	*e*P	**Pn**	**20 52 40.1**	**+0.2**
	baz=246						
EGFH				*e*S	**Sb**	**20 52 46.0**	**+0.9**
	baz=246						
TWD	**Chiawan**	**0.32**	**340**	P	**Pb**	**20 52 40.4**	**+0.1**
	baz=340						
TWD				S	**Sb**	**20 52 46.8**	**+1.0**
	baz=340						
HGSD	**Ruisui**	**0.39**	**223**	P	**Pb**	**20 52 40.9**	**-0.4**
	baz=222						
HGSD				S	**Sn**	**20 52 48.5**	**+0.8**
	baz=222						
NACB	**Ninganchiao**	**0.41**	**344**	P	**Pb**	**20 52 41.2**	**-0.3**
	baz=343						
NACB				S	**Sn**	**20 52 48.5**	**+0.5**
	baz=343						
EHY	**Hungye**	**0.45**	**233**	*e*P	**Pb**	**20 52 41.4**	**-0.7**
	baz=231						
EHY				*e*S	**Sn**	**20 52 49.6**	**+0.3**
	baz=231						
ETLH	**Xiulin Townshi**	**0.47**	**333**	*e*P	**Pb**	**20 52 42.3**	**-0.3**
	baz=332						
ETLH				S	**Sb**	**20 52 49.5**	**-0.2**
	baz=332						
OWD	**Renai**	**0.52**	**289**	*e*P	**Pn**	**20 52 43.1**	**-0.3**
	baz=288						
OWD				*e*S	**Sb**	**20 52 51.2**	**+0.2**
	baz=288						
VWDT	**VWDT**	**0.53**	**267**	P	**Pn**	**20 52 43.1**	**-0.2**
	baz=266						
VWDT				S	**Sn**	**20 52 50.8**	**-0.2**
	baz=266						
YULB	**Yu-li**	**0.54**	**225**	*e*P	**Pn**	**20 52 43.0**	**-0.6**
	baz=224						
YULB				*e*S	**Sn**	**20 52 51.5**	**-0.1**
	baz=224						
WHF	**Hehuan Shan**	**0.55**	**311**	*e*P	**Pn**	**20 52 43.2**	**-0.8**
	baz=311						
WHF				S	**Sb**	**20 52 51.7**	**-0.4**
	baz=311						
CHGB	**Renai**	**0.57**	**299**	*i* P	**Pn**	**20 52 43.8**	**-0.3**
	baz=298						
CHGB				*i* S	**Sn**	**20 52 52.5**	**+0.1**
	baz=298						
TWF1	**Yuli**	**0.57**	**222**	*e*P	**Pn**	**20 52 43.5**	**-0.4**
	baz=221						
TWF1				*e*S	**Sn**	**20 52 52.6**	**+0.4**
	baz=221						
ENA	**Nanau**	**0.64**	**2**	*e*P	**Pn**	**20 52 44.7**	**-0.3**
	baz=2.0						
ENA				*e*S	**Sn**	**20 52 54.0**	**0.0**
	baz=2.0						
TWT	**Tachien**	**0.68**	**314**	*e*P	**Pn**	**20 52 45.9**	**+0.3**
	baz=312						
TWT				*e*S	**Sb**	**20 52 55.5**	**+0.3**
	baz=312						
TDCB	**Techi**	**0.69**	**313**	*e*P	**Pn**	**20 52 45.1**	**-0.6**
	baz=312						
TDCB				*e*S	**Sn**	**20 52 55.2**	**-0.2**
	baz=312						
FULB	**Fuli**	**0.70**	**214**	P	**Pn**	**20 52 45.2**	**-0.5**
	baz=213						
FULB				*i* S	**Sb**	**20 52 56.0**	**+0.5**
	baz=213						
SSLB	**Suanglung**	**0.70**	**271**	*e*P	**Pn**	**20 52 45.0**	**-0.7**
	baz=270						
SSLB				*e*S	**Sn**	**20 52 55.0**	**-0.3**
	baz=270						
NNSB	**Datong**	**0.71**	**335**	*e*P	**Pn**	**20 52 45.6**	**-0.5**
	baz=334						
NNSB				*e*S	**Sn**	**20 52 55.4**	**-0.5**
	baz=334						
NNSH	**Datong**	**0.71**	**335**	*e*P	**Pn**	**20 52 45.7**	**-0.3**
	baz=334						
NNSH				S	**Sn**	**20 52 55.6**	**-0.3**
	baz=334						
NNS	**Nan Shan**	**0.73**	**335**	*e*P	**Pn**	**20 52 46.0**	**-0.3**
	baz=334						
NNS				*e*S	**Sn**	**20 52 56.4**	**+0.1**
	baz=334						
CHKT	**Chengkung**	**0.75**	**205**	*e*P	**Pn**	**20 52 46.0**	**-0.4**
	baz=204						
CHKT				*e*S	**Sn**	**20 52 56.8**	**+0.1**
	baz=204						
SMLT	**Sun Moon Lake**	**0.75**	**278**	P	**Pn**	**20 52 46.4**	**-0.2**
	baz=277						
SMLT				S	**Sb**	**20 52 57.8**	**+0.6**
	baz=277						
DPDB	**Guoxing**	**0.76**	**289**	*e*P	**Pn**	**20 52 46.2**	**-0.5**
	baz=288						
DPDB				*e*S	**Sb**	**20 52 58.0**	**+0.5**
	baz=288						
WHYT	**Xinyi Township**	**0.79**	**264**	*e*P	**Pn**	**20 52 47.0**	**-0.1**
	baz=263						
WHYT				*e*S	**Sn**	**20 52 57.7**	**-0.1**
	baz=263						
TYC	**Yuchr**	**0.80**	**279**	*e*P	**Pn**	**20 52 46.8**	**-0.3**
	baz=278						
TYC				*e*S	**Sb**	**20 52 58.5**	**+0.3**
	baz=278						
TWC	**Suao**	**0.83**	**8**	*e*P	**Pn**	**20 52 47.7**	**+0.1**
	baz=8.0						
TWC				S	**Sb**	**20 52 59.4**	**+0.1**
	baz=8.0						
NDT	**Datong Townshi**	**0.84**	**347**	*e*P	**Pn**	**20 52 47.2**	**-0.5**
	baz=347						
NDT				*e*S	**Sb**	**20 52 59.7**	**+0.2**
	baz=347						
EOS1	**EOS1**	**0.85**	**26**	*e*S	**Sn**	**20 52 59.5**	**+0.4**
	baz=26						
WHP	**Taichung City**	**0.86**	**305**	P	**Pn**	**20 52 48.6**	**+0.6**
	baz=304						
WHP				S	**Sb**	**20 53 00.1**	**0.0**
	baz=304						
ENTT	**Nioudou**	**0.87**	**351**	*e*P	**Pn**	**20 52 48.0**	**0.0**
	baz=351						
ENTT				*e*S	**Sn**	**20 53 00.0**	**+0.5**
	baz=351						
ELDTW	**Lidau**	**0.87**	**228**	*e*P	**Pn**	**20 52 47.8**	**-0.4**
	baz=226						

ELDTW				eS		Sn	20 52 59.2	-0.5
	baz=226							
ALS	**Alishan**	**0.88**	**252**	eP		Pn	20 52 48.2	-0.2
	baz=251							
ALS				S		Sn	20 53 00.2	0.0
	baz=251							
WJS	**Zhushan**	**0.91**	**273**	eP		Pn	20 52 48.7	+0.1
	baz=272							
WJS				eS		Sn	20 53 01.1	+0.7
	baz=272							
TWE	**Neicheng**	**0.94**	**357**	eP		Pn	20 52 48.9	-0.1
	baz=358							
TWE				eS		Sn	20 53 01.4	+0.1
	baz=358							
YHNB	**Yeheng**	**0.94**	**341**	eP		Pn	20 52 49.0	-0.1
	baz=340							
YHNB				eS		Sn	20 53 01.6	+0.2
	baz=340							
NSK	**Sanguang**	**0.95**	**340**	eP		Pn	20 52 49.2	-0.1
	baz=340							
NSK				eS		Sn	20 53 01.3	-0.3
	baz=340							
WNT	**Mingjian**	**0.95**	**276**	eP		Pn	20 52 49.1	-0.1
	baz=275							
WNT				eS		Sn	20 53 01.9	+0.4
	baz=275							
CHN5	**Tsauling**	**0.97**	**259**	P		Pn	20 52 50.0	+0.5
	baz=258							
CHN5				S		Sb	20 53 03.4	+0.2
	baz=258							
NWLT	**Wulai**	**1.01**	**349**	eP		Pn	20 52 50.0	-0.1
	baz=348							
NWLT				eS		Sn	20 53 03.6	+0.5
	baz=348							
TCU	**Taichung**	**1.02**	**291**	eP		Pn	20 52 50.4	+0.3
	baz=290							
TCU				eS		Sb	20 53 04.3	-0.2
	baz=290							
TWQ1	**Liyutan**	**1.03**	**303**	eP		Pn	20 52 50.6	+0.3
	baz=302							
TWQ1				eS		Sn	20 53 04.3	+0.8
	baz=302							
WGK	**Gukeng**	**1.06**	**265**	eP		Pn	20 52 50.7	0.0
	baz=264							
WGK				eS		Sn	20 53 04.9	+0.6
	baz=264							
NSTT	**Nanjuang**	**1.07**	**323**	eP		Pn	20 52 51.3	+0.5
	baz=322							
NSTT				eS		Sn	20 53 05.1	+0.6
	baz=322							
STYT	**Tauyuan**	**1.07**	**235**	eP		Pn	20 52 50.6	-0.3
	baz=234							
STYT				eS		Sn	20 53 04.5	-0.3
	baz=234							
NSY	**Sanyi**	**1.08**	**306**	eP		Pn	20 52 50.9	0.0
	baz=305							
NSY				eS		Sn	20 53 05.3	+0.6
	baz=305							
WDLH	**Douliu**	**1.08**	**265**	eP		Pn	20 52 51.3	+0.3
	baz=264							
WDLH				eS		Sn	20 53 05.6	+0.8
	baz=264							
TWH	**Lutao**	**1.09**	**192**	eP		Pn	20 52 51.6	+0.6
	baz=191							
TWH				eS		Sb	20 53 06.2	-0.3
	baz=191							
WCHH	**Zhanghua**	**1.10**	**286**	eP		Pn	20 52 51.4	+0.2
	baz=285							
WCHH				eS		Sn	20 53 05.9	+0.6
	baz=285							
TPUB	**Ta-pu**	**1.10**	**245**	P		Pn	20 52 51.6	+0.3
	baz=244							
TPUB				S		Sn	20 53 06.4	+0.9
	baz=244							
TWGBT	**Beinan**	**1.12**	**211**	eS		Sn	20 53 06.2	+0.3
	baz=211							
TWG	**Pinlang**	**1.12**	**212**	eS		Sn	20 53 06.3	+0.4
	baz=211							
WTP	**Ta-pu**	**1.14**	**242**	eP		Pn	20 52 52.0	+0.1
	baz=241							
WTP				eS		Sn	20 53 06.9	+0.5
	baz=241							
CHN2	**Minshiung**	**1.16**	**258**	eS		Sn	20 53 07.4	+0.6
	baz=257							
TIPB	**Shuangxi**	**1.19**	**5**	eP		Pn	20 52 52.8	+0.3
	baz=4.0							
TIPB				eS		Sn	20 53 08.0	+0.5
	baz=4.0							
CHY	**Chiayi**	**1.22**	**257**	eS		Sn	20 53 08.7	+0.6
	baz=256							
TWK	**Hsinying**	**1.24**	**246**	eP		Pn	20 52 53.3	+0.1
	baz=245							
TWK				eS		Sn	20 53 09.2	+0.4
	baz=245							
CHN1	**Nanshi**	**1.24**	**242**	eP		Pn	20 52 53.6	+0.4
	baz=241							
CHN1				eS		Sn	20 53 09.7	+0.9
	baz=241							
RLNB	**Erlin**	**1.25**	**275**	eP		Pn	20 52 53.4	+0.2
	baz=274							
RLNB				eS		Sn	20 53 09.7	+0.9
	baz=274							
SGST	**Jiashian**	**1.25**	**236**	eP		Pn	20 52 52.7	-0.7
	baz=235							
SGST				eS		Sn	20 53 10.1	+1.1
	baz=235							
SLGT	**Liugui**	**1.26**	**232**	eP		Pn	20 52 53.8	+0.3
	baz=231							
SLGT				eS		Sn	20 53 09.8	+0.7
	baz=231							
JYNG	**Yonaguni jima**	**1.31**	**59**	P		Pn	20 52 54.3	+0.2
JYNG				eS		Sn	20 53 11.0	+0.6
WTCT	**Ta-ch'eng**	**1.32**	**274**	eP		Pn	20 52 54.8	+0.6
	baz=273							
WTCT				eS		Sn	20 53 11.6	+1.0
	baz=273							
YOJ	**Yonaguni jima**	**1.36**	**60**	eP		Pn	20 52 55.0	+0.1
	baz=59							
YOJ				eS		Sn	20 53 12.4	+0.6
	baz=59							
YOJ	**Yonaguni jima**	**1.36**	**60**	P		Pn	20 52 55.1	+0.2
YOJ				S		Sn	20 53 12.1	+0.3
ECL	**Taimali**	**1.37**	**211**	eP		Pn	20 52 55.2	+0.2
	baz=210							
ECL				eS		Sn	20 53 12.2	+0.2
	baz=210							
WSF	**Szhu**	**1.38**	**264**	eS		Sn	20 53 12.7	+0.6
	baz=263							
CHN3	**Shinhua**	**1.43**	**241**	eP		Pn	20 52 56.3	+0.6
	baz=240							
CHN3				eS		Sn	20 53 13.5	+0.2
	baz=240							
SSD	**Sandimen**	**1.43**	**224**	eP		Pn	20 52 55.9	0.0
	baz=223							
SSD				eS		Sn	20 53 13.8	+0.3
	baz=223							
CHN8	**Yiju**	**1.45**	**253**	eP		Pn	20 52 56.0	0.0
	baz=252							
CHN8				eS		Sn	20 53 14.1	+0.3
	baz=252							
MASBT	**Mashibuluo**	**1.53**	**221**	eP		Pn	20 52 57.5	+0.3
	baz=220							
MASBT				eS		Sn	20 53 16.4	+0.5
	baz=220							
EAST	**Anshuo**	**1.60**	**210**	eP		Pn	20 52 58.6	+0.4
	baz=209							
EAST				eS		Sn	20 53 18.2	+0.4
	baz=209							
IRIF	**Iriomote-Funau**	**1.92**	**73**	P		Pn	20 53 03.4	+0.8
IRIF				S		Sn	20 53 26.3	+0.7
HATJ	**Hateruma jima**	**1.93**	**81**	P		Pn	20 53 02.8	+0.1
HATJ				eS		Sn	20 53 25.8	0.0
PHUB	**P'eng-hu**	**1.98**	**263**	eP		Pn	20 53 03.3	-0.1
	baz=262							
PHUB				eS		Sn	20 53 26.6	-0.4
	baz=262							
JKRS	**Kuro-shima**	**2.15**	**77**	P		Pn	20 53 06.5	+0.9
JKRS				eS		Sn	20 53 31.8	+0.7
JIJ	**Ishigaki jima**	**2.29**	**75**	P		Pn	20 53 07.5	-0.2
JIJ				S		Sn	20 53 33.8	-1.0
VWUC	**VWUC**	**2.39**	**301**	eP		Pn	20 53 09.7	+0.7
	baz=300							
VWUC				eS		Sn	20 53 36.7	-0.5
	baz=300							
JISG	**Ishigakijimahi**	**2.50**	**71**	P		Pn	20 53 10.3	-0.2
JISG				S		Sn	20 53 38.8	-1.1
JTJ	**Tarama**	**2.86**	**72**	P		Pn	20 53 15.4	0.0
JTJ				S		Sn	20 53 48.8	+0.1

ANF ***17*** *20:54:31.6±0.2,36°.09N×97°.05W,h0ᵏᵐ,ML3.8/10,Error ellipse: s-maj=3.1km s-min=1.8km az=175.0*
TUL ***17*** *20:54:31.4±1.0,36°.10N±0°.03×97°.07W±0°.04,h3ᵏᵐ±8ᵏᵐ, ML3.2,Error ellipse: s-maj=6.0km s-min=2.2km az=129.0*
NEIC ***17*** *20:54:31.7±0.9,36°.119N±0°.009×97°.07W±0°.03,h3ᵏᵐ±8ᵏᵐ, Error ellipse: s-maj=3.4km s-min=1.2km az=95.0*

ISC 17 20:54:32.5±0.9,36°.09N±0°.04×97°.07W±0°.03,h4ᵏᵐ,n32, σ1§19/37,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK005	**Luther M Schoo**	**0.44**	**193**	Pg	**Pg**	**20 54 40.5**	**-0.6**
OK005				Sg	**Sg**	**20 54 46.9**	**+0.1**
ADOK	**Arcadia Dam**	**0.50**	**209**		**Pg**	**20 54 41.6**	**-0.5**
OKCFA	**Oklahoma City**	**0.74**	**205**		**Pg**	**20 54 45.9**	**-0.8**
T35A	**Sooner Cattle**	**0.94**	**28**		**Pg**	**20 54 49.4**	**-1.2**
TUL1	**Leonard**	**1.05**	**99**	P	**Pg**	**20 54 51.0**	**-1.7**
	baz=282						
TUL1				S	**Sg**	**20 55 05.2**	**-1.2**
	baz=282						
TUL1	**Leonard**	**1.05**	**99**		**Pg**	**20 54 51.0**	**-1.7**
U32A	**Winter Ranch,**	**1.59**	**281**		**Pn**	**20 55 00.6**	**-0.9**
WMOK	**Wichita Mounta**	**1.94**	**227**	P	**Pn**	**20 55 06.0**	**-0.4**
	baz=44						
WMOK				S	**Sb**	**20 55 32.5**	**-0.5**
	baz=44						
WMOK	**Wichita Mounta**	**1.94**	**227**		**Pn**	**20 55 05.9**	**-0.4**
X37A	**Clayton**	**2.04**	**137**		**Pn**	**20 55 07.7**	**0.0**
U38A	**Gravette**	**2.20**	**80**		**Pn**	**20 55 09.8**	**0.0**
HHAR	**Hobbs**	**2.54**	**85**	Pn	**Pn**	**20 55 14.6**	**0.0**
Z35A	**Perchaven, San**	**2.75**	**183**		**Pn**	**20 55 17.2**	**-0.3**
W39A	**Magazine**	**2.82**	**107**	P	**Pn**	**20 55 18.2**	**-0.2**
	baz=290						
W39A				S	**Sn**	**20 55 53.6**	**+0.7**
	baz=290						
W39A	**Magazine**	**2.82**	**107**		**Pn**	**20 55 18.2**	**-0.2**
KSU1	**Kansas State U**	**3.03**	**7**	S	**Sn**	**20 55 58.9**	**+0.9**
	baz=187						
KSU1	**Kansas State U**	**3.03**	**7**		**Pn**	**20 55 20.9**	**-0.3**
MIAR	**Mount Ida**	**3.25**	**117**	P	**Pn**	**20 55 24.1**	**-0.2**
	baz=300						
MIAR	**Mount Ida**	**3.25**	**117**		**Pn**	**20 55 24.3**	**0.0**
U40A	**Yellville**	**3.42**	**84**	Sb	**Sb**	**20 56 17.9**	**+2.2**
	baz=267						
U40A	**Yellville**	**3.42**	**84**		**Pn**	**20 55 26.8**	**+0.1**
CBKS	**Cedar Bluff**	**3.45**	**323**		**Pn**	**20 55 27.2**	**+0.1**
X40A	**Basin Creek Fa**	**3.82**	**114**	P	**Pn**	**20 55 32.0**	**-0.1**
	baz=296						
X40A	**Basin Creek Fa**	**3.82**	**114**		**Pn**	**20 55 31.7**	**-0.4**
AMTX	**Amarillo**	**3.95**	**254**	Sb	**Sb**	**20 56 33.8**	**+2.9**
	baz=70						
WHAR	**Wooly Hollow**	**3.97**	**100**		**Pn**	**20 55 34.3**	**0.0**
W41B	**Gary Mavity, V**	**4.03**	**102**	P	**Pn**	**20 55 34.6**	**-0.5**
	baz=285						
W41B				S	**Sn**	**20 56 22.1**	**-0.6**
	baz=285						
WHTX	**Lake Whitney,**	**4.10**	**185**		**Pn**	**20 55 35.8**	**-0.2**
T42A	**Van Buren**	**4.91**	**77**		**Pn**	**20 55 47.5**	**+0.4**
CCM	**Cathedral Cave**	**5.06**	**65**	Sb	**Sb**	**20 57 06.8**	**+4.0**
	baz=249						
T25A	**Trinidad**	**6.00**	**282**	P	**Pn**	**20 56 01.8**	**-0.4**
	baz=98						
ECSD	**EROS Data Cent**	**7.64**	**2**		**Pn**	**20 56 22.6**	**-2.1**

IDC 17 21:01:00.1±8.2,9°.88N×91°.91E,h0ᵏᵐ,mb3.5/3,mb1 3.7/3, mb1mx3.3/35,mbtmp3.5/3,Error ellipse: s-maj=414.4km s-min=28.6km az=60.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S3	**Diego Garcia H**	**26.01**	**229**	T	T	21 34 38.6	
	baz=47,slow=76,SNR=64						
H08S2	**Diego Garcia H**	**26.02**	**229**	T	T	21 34 39.1	
	baz=47,slow=76,SNR=81						
H08S1	**Diego Garcia H**	**26.03**	**229**	T	T	21 34 40.0	
	baz=47,slow=76,SNR=73						
MKAR	**Makanchi Array**	**37.69**	**349**	P	P	21 08 17.2	-0.1
	0.4km,0.7s,baz=167,slow=8.1,SNR=5.5						
WRA	**Warramunga Arr**	**51.21**	**125**	P	P	21 10 06.0	+0.3
	0.3nm,0.4s,baz=306,slow=8.7,SNR=15						
ASAR	**Alice Springs**	**52.88**	**130**	P	P	21 10 17.6	-0.6
	0.4nm,0.5s,baz=306,slow=7.3,SNR=5.9						

IDC ***17*** *21:07:41.9±1.7,43°.70N×105°.39W,h0ᵏᵐ,mb3.8/6, mb1 3.8/11,mb1mx3.6/39,mbtmp3.7/11,ML3.1/4,Error ellipse: s-maj=46.4km s-min=7.7km az=149.0*
NEIC ***17*** *21:07:43.6±2.0,43°.80N±0°.04×105°.26W±0°.07,h0ᵏᵐ±1ᵏᵐ, ML3.6/68,Error ellipse: s-maj=9.1km s-min=5.6km az=105.0*
ANF ***17*** *21:07:43.1±0.3,43°.81N×105°.36W,h0ᵏᵐ,ML3.8/14,Error ellipse: s-maj=3.9km s-min=3.3km az=136.0*

ISC 17 21:07:43.0±0.5,43.78N±0°.03×105.33W±0°.03,h0ᵏᵐ,n115, σ1§48/134,mb4.0/6,Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.99**	**69**	P	**Pg**	**21 08 02.0**	**0.0**
	baz=252						
RSSD				S	**Sb**	**21 08 17.4**	**+0.4**
	baz=252						
RSSD	**Black Hills**	**0.99**	**69**	Pg	**Pg**	**21 08 02.0**	**0.0**
K22A	**Casper**	**1.43**	**218**	P	**Pn**	**21 08 09.7**	**-0.6**
	baz=36,SNR=111						
K22A				S	**Sg**	**21 08 29.5**	**+0.7**
	baz=36						
K22A	**Casper**	**1.43**	**218**		**Pn**	**21 08 09.7**	**-0.6**
K22A				IAML		21 08 33.1	
	comp=N,575nm,0.7s						
K22A				IAML		21 08 38.2	
	comp=E,607nm,0.3s						
PHWY	**Pilot Hill**	**2.48**	**182**		**Pn**	**21 08 25.7**	**+0.9**
RWWY	**Rawlins**	**2.51**	**214**		**Pn**	**21 08 26.5**	**+1.2**
RWWY				IAML		21 09 02.7	
	comp=E,378nm,0.6s						
N23A	**Red Feather La**	**2.92**	**189**	P	**Pn**	**21 08 32.1**	**+1.2**
	baz=8.2,SNR=34						
LAO	**LASA Array**	**2.98**	**348**	P	**Pn**	**21 08 30.7**	**-0.8**
	baz=168						
LAO				Sb	**Sb**	**21 09 14.8**	**+0.9**
	baz=168						
LAO	**LASA Array**	**2.98**	**348**		**Pn**	**21 08 32.1**	**+0.5**
RLMT	**Red Lodge**	**3.12**	**297**	P	**Pn**	**21 08 34.6**	**+0.9**
	baz=114,SNR=53						
RLMT	**Red Lodge**	**3.12**	**297**		**Pn**	**21 08 35.1**	**+1.4**
RLMT				IAML		21 09 22.4	
	comp=E,107nm,0.5s						
PD31	**Pinedale Array**	**3.25**	**253**		**Pn**	**21 08 36.9**	**+1.4**
PDAR	**Pinedale Array**	**3.25**	**253**	Pn	**Pn**	**21 08 36.6**	**+1.1**
	comp=E,8.8nm,0.3s,baz=67,slow=16,SNR=56						
PDAR				Pg	**Pb**	**21 08 42.3**	**+0.6**
	comp=E,33nm,0.3s,baz=68,slow=18,SNR=36						
PDAR				Lg	Lg	21 09 21.9	
	comp=E,27nm,0.3s,baz=281,slow=39,SNR=3.9						
BW06	**Boulder Array**	**3.25**	**253**	P	**Pn**	**21 08 36.7**	**+1.3**
	baz=70,SNR=49						
BW06				Sb	**Sb**	**21 09 22.0**	**+0.1**
	baz=70						
BW06	**Boulder Array**	**3.25**	**253**		**Pn**	**21 08 37.1**	**+1.6**
YNE	**Yellowstone No**	**3.57**	**292**		**Pn**	**21 08 41.2**	**+1.3**
YMP	**Mirror Lake Pl**	**3.60**	**287**		**Pn**	**21 08 42.1**	**+1.8**
GCMT	**Greyciff**	**3.69**	**305**		**Pn**	**21 08 42.8**	**+1.4**
LKWY	**Lake**	**3.73**	**284**		**Pn**	**21 08 44.5**	**+2.4**
LKWY				IAML		21 09 09.6	
	comp=E,109nm,0.5s						
OGNE	**Ogallala**	**3.74**	**138**	P	**Pn**	**21 08 42.7**	**+0.7**
	baz=320,SNR=6.3						
OGNE				Sb	**Sg**	**21 09 39.9**	**-3.1**
	baz=320						
OGNE	**Ogallala**	**3.74**	**138**		**Pn**	**21 08 43.2**	**+1.2**
OGNE				IAML		21 09 48.0	
	comp=E,156nm,1.1s						
OGNE				IAML		21 09 50.1	
	comp=E,199nm,0.6s						
H17A	**Grant Village**	**3.83**	**281**	P	**Pn**	**21 08 45.3**	**+1.9**
	baz=97,SNR=11						
H17A				Sb	**Sb**	**21 09 40.2**	**+1.5**
	baz=97						
H17A	**Grant Village**	**3.83**	**281**		**Pn**	**21 08 46.0**	**+2.5**
H17A				IAML		21 09 48.9	
	comp=N,52nm,0.6s						

FLWY	**Flagg Ranch**	**3.89**	**276**			Pn	**21 08 45.8**	**+1.5**
FLWY				IAML			21 09 57.7	
	comp=N,66nm,1.0s							
FLWY				IAML			21 10 01.9	
	comp=N,57nm,1.1s							
SNOW	**Snow King Moun**	**3.95**	**267**			Pn	**21 08 47.1**	**+1.9**
SNOW				IAML			21 09 55.0	
	comp=N,71nm,0.8s							
SNOW				IAML			21 10 00.5	
	comp=N,82nm,0.8s							
YNR	**Norris Junctio**	**3.96**	**286**	Pn		Pn	**21 08 46.2**	**+1.0**
YNR						Pb	**21 08 54.5**	**+0.7**
YNR				Pg		Pg	**21 08 57.1**	**-1.7**
ISCO	**Idaho Springs**	**3.98**	**183**	P		Pn	**21 08 46.9**	**+1.3**
	baz=2.6,SNR=8.7							
ISCO				Sb		Sb	**21 09 47.0**	**+4.0**
	baz=2.6							
ISCO	**Idaho Springs**	**3.98**	**183**			Pn	**21 08 47.1**	**+1.5**
REDW	**Red Top Meadow**	**4.04**	**266**			Pn	**21 08 47.9**	**+1.7**
REDW				IAML			21 09 56.8	
	comp=N,88nm,0.9s							
REDW				IAML			21 10 04.5	
	comp=N,84nm,0.8s							
IMW	**Indian Meadow**	**4.06**	**274**	IAML			21 10 01.6	
	comp=N,61nm,0.8s							
IMW				IAML			21 10 02.1	
	comp=N,52nm,0.7s							
TPAW	**Teton Pass**	**4.09**	**268**	IAML			21 10 05.8	
	comp=N,52nm,0.9s							
TPAW				IAML			21 10 10.2	
	comp=N,74nm,0.8s							
YMR	**Madison River**	**4.15**	**284**			Pn	**21 08 48.0**	**+0.2**
O20A	**White River Ci**	**4.24**	**212**	P		Pn	**21 08 50.4**	**+1.4**
	baz=29,SNR=9.2							
O20A				S		Sn	**21 09 39.6**	**+0.3**
	baz=29							
O20A	**White River Ci**	**4.24**	**212**	Pg		Pg	**21 09 02.8**	**-1.5**
O20A				IAML			21 10 01.6	
	comp=E,68nm,0.8s							
O20A				IAML			21 10 07.8	
	comp=N,64nm,0.8s							
E28A	**Huff**	**4.31**	**48**	Pn		Pn	**21 08 50.0**	**+0.2**
E28A						Pb	**21 09 02.2**	**+2.7**
YHB	**Horse Butte**	**4.33**	**285**			Pn	**21 08 51.0**	**+0.8**
YHB				Pg		Pg	**21 09 05.8**	**-0.1**
AHID	**Auburn Hatcher**	**4.34**	**258**			Pn	**21 08 50.7**	**+0.4**
AHID				Pg		Pg	**21 09 04.8**	**-1.2**
AHID				IAML			21 10 06.8	
	comp=N,78nm,0.8s							
AHID				IAML			21 10 17.6	
	comp=E,55nm,0.9s							
YHL	**Hebgen Lake**	**4.34**	**286**	Pn		Pn	**21 08 50.7**	**+0.3**
RDMU	**Red Mountain**	**4.50**	**226**			Pn	**21 08 55.1**	**+2.5**
QLMT	**Earthquake Lak**	**4.50**	**286**	Pn		Pn	**21 08 52.7**	**0.0**
SUSD	**Miller**	**4.64**	**80**	Pn		Pn	**21 08 54.2**	**0.0**
DGMT	**Dagmar**	**4.76**	**9**	P		Pn	**21 08 57.2**	**+1.3**
	baz=190							
DGMT				Sb		Sb	**21 10 08.5**	**+3.4**
	baz=190							
DGMT	**Dagmar**	**4.76**	**9**			Pn	**21 08 56.1**	**+0.2**
SMCO	**Snowmass**	**4.76**	**196**			Pn	**21 08 57.4**	**+1.1**
SMCO				IAML			21 10 22.4	
	comp=E,43nm,0.8s							
SMCO				IAML			21 10 26.6	
	comp=E,35nm,0.8s							
Q24A	**Divide**	**4.81**	**178**	Sb		Sb	**21 10 12.1**	**+5.2**
	baz=358							
HWUT	**Hardware Ranch**	**5.08**	**247**	IAML			21 10 30.5	
	comp=E,48nm,1.0s							
HWUT				IAML			21 10 38.0	
	comp=E,43nm,0.9s							
KSCO	**Kaye Shedlock'**	**5.18**	**156**	P		Pn	**21 09 02.0**	**+0.2**
	baz=338,SNR=6.5							
EGMT	**Eagleton**	**5.25**	**326**	P		Pn	**21 09 02.7**	**-0.1**
	baz=142,SNR=9.8							
EGMT	**Eagleton**	**5.25**	**326**			Pn	**21 09 03.5**	**+0.7**
DLMT	**Dillon**	**5.43**	**289**			Pn	**21 09 06.0**	**+0.7**
MCMT	**McKenzie Canyo**	**5.50**	**284**			Pn	**21 09 07.7**	**+1.4**
JLU	**Jordanelle**	**5.55**	**237**			Pn	**21 09 08.1**	**+1.1**
CTU	**Camp Tracy**	**5.68**	**239**			Pn	**21 09 11.1**	**+2.3**
MDND	**Maddock**	**5.71**	**43**	S		Sn	**21 10 16.0**	**+0.9**
	baz=227							
MDND	**Maddock**	**5.71**	**43**	Pn		Pn	**21 09 08.8**	**-0.1**
SPUT	**South Promonto**	**5.81**	**247**			Pn	**21 09 12.3**	**+1.7**
PV07	**Paradox Valley**	**5.89**	**206**			Pn	**21 09 12.9**	**+1.1**
PV15	**Paradox Valley**	**5.93**	**205**	Pn		Pn	**21 09 14.3**	**+2.0**
PV23	**Carpenter Ridg**	**6.00**	**209**	Pn		Pn	**21 09 14.4**	**+1.1**
PV23						Pg	**21 09 37.2**	**-0.8**
PV04	**Paradox Valley**	**6.02**	**208**			Pn	**21 09 14.5**	**+1.0**
SDCO	**Great Sand Dun**	**6.03**	**181**			Pg	**21 09 36.9**	**-1.6**
PV12	**Saucer Basin,**	**6.05**	**207**	Pn		Pn	**21 09 15.1**	**+1.2**
PV12						Pg	**21 09 36.3**	**-2.7**
PV14	**Lion Creek, Pa**	**6.08**	**209**	Pg		Pg	**21 09 38.9**	**-0.5**
PV10	**Paradox Valley**	**6.08**	**209**	Pn		Pn	**21 09 16.2**	**+1.8**
PV10				Pg		Pg	**21 09 39.2**	**-0.4**
PV19	**Morning Glory**	**6.12**	**208**	Pn		Pn	**21 09 16.6**	**+1.7**
PV03	**Paradox Valley**	**6.13**	**207**	Pn		Pn	**21 09 16.3**	**+1.3**
PV02	**Paradox Valley**	**6.13**	**206**	Pn		Pn	**21 09 17.3**	**+2.2**
PV17	**East Wray Mesa**	**6.14**	**208**	Pn		Pn	**21 09 17.0**	**+1.9**
PV17				Pg		Pg	**21 09 41.4**	**+0.7**
PV01	**Paradox Valley**	**6.15**	**205**	Pn		Pn	**21 09 15.5**	**+0.2**
PV18	**Skein Mesa, Pa**	**6.16**	**207**			Pn	**21 09 16.8**	**+1.4**
PV18				Pg		Pg	**21 09 40.7**	**-0.2**
ECSD	**EROS Data Cent**	**6.31**	**87**	P		Pn	**21 09 17.1**	**-0.2**
	baz=274							
ECSD	**EROS Data Cent**	**6.31**	**87**			Pn	**21 09 17.7**	**+0.4**
NLU	**North Lily Min**	**6.32**	**235**	Pn		Pn	**21 09 19.0**	**+1.3**
PV05	**Paradox Valley**	**6.37**	**208**			Pn	**21 09 18.7**	**+0.4**
CBKS	**Cedar Bluff**	**6.50**	**138**	Pn		Pn	**21 09 20.5**	**+0.6**
CBKS						Pg	**21 09 44.5**	**-3.1**
N33A	**J Bar K, Exete**	**6.58**	**115**	Pn		Pn	**21 09 21.5**	**+0.4**
DUG	**Dugway, Tooele**	**6.63**	**240**	P		Pn	**21 09 21.6**	**-0.1**
	baz=54							
T25A	**Trinidad**	**6.67**	**174**	P		Pn	**21 09 23.3**	**+0.9**
	baz=354							
F33A	**5 Mile Ranch,**	**6.75**	**69**	Pn		Pn	**21 09 24.1**	**+0.8**
MSO	**Missoula**	**6.80**	**300**	P		Pn	**21 09 23.5**	**-0.5**
	baz=114							
L34A	**Svendsen Farm,**	**6.82**	**102**	Pn		Pn	**21 09 25.3**	**+1.0**
MVCO	**Mesa Verde**	**6.99**	**201**	Pn		Pn	**21 09 28.3**	**+1.5**
R32A	**Long Quarter,**	**7.32**	**135**	Pn		Pn	**21 09 31.4**	**+0.3**
R32A						Pg	**21 09 59.5**	**-3.7**
JTMT	**Jette**	**7.41**	**305**			Pn	**21 09 34.2**	**+1.7**
TCRU	**Three Creeks R**	**7.45**	**229**	Pn		Pn	**21 09 35.1**	**+2.0**
MFID	**Camas Ranch**	**7.63**	**

MKAR Makanchi Array 89.56 355 P **P** **21 20 41.6 -0.5**
comp=E,0.6nm,0.6s,baz=16,slow=4.2,SNR=7.3

NEIC ***17*** *21:28:16.8±1.4, 56°25S±0°08′×27°5W±0°1, h90km±1km, mb5.4/136, Mwb5.5/20, Mwc5.6(GCMT), Error ellipse: s-maj=15.0km s-min=12.5km az=212.0*
MOS ***17*** *21:28:18.3±0.9, 56°27S×27°71W, h110km, mb5.3/19, Error ellipse: s-maj=18.2km s-min=9.9km az=104.8*
NEIC ***17*** *21:28:18.8, 56°25S×27°57W, h87km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=1.34; Mθθ=0.73; Mϕϕ=2.07; Mrθ=-1.29; Mrϕ=-0.14; Mθϕ=-0.24; Fault plane solution: M₀2.25000×10¹⁷ NP1:φs331.56000°, δ51.03000°, λ38.19000°. NP2:φs215.23000°, δ61.27000°, λ134.17000°. Principal axes: T 2.3645, Plg52.0000°, Azm178.0000°; N -0.2580, Plg38.0000°, Azm10.0000°; P -2.1066, Plg6.0000°, Azm276.0000°;*
GCMT ***17*** *21:28:19.8±0.1, 56°32S±0°01×27°12W±0°01, h96km, MW5.5/162, Moment Tensor Solution. s146,c258; s162,c322; Duration: 1s4 Moment tensor: Scale 10¹⁷ Nm; Mrr=1.10±.02; Mθθ=1.03±.03; Mϕϕ=-2.13±.02; Mrθ=-1.27±.02; Mrϕ=0.13±.02; Mθr=-0.22±.02; Best double couple: M₀2.24800×10¹⁷ NP1:φs323.00000°, δ57.00000°, λ34.00000°. NP2:φs213.00000°, δ62.00000°, λ142.00000°. Principal axes: T 2.3490, Plg46.0000°, Azm175.0000°; N -0.2030, Plg44.0000°, Azm3.0000°; P -2.1460, Plg4.0000°, Azm269.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***17*** *21:28:20, 56°32S×27°18W, h97km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=1.17; Mθθ=1.20; Mϕϕ=-2.37; Mrθ=-1.35; Mθϕ=0.05; Mrϕ=-0.17; Fault plane solution: M₀2.46000×10¹⁷ NP1:φs215.00000°, δ62.00000°, λ143.00000°. NP2:φs324.00000°, δ58.00000°, λ33.00000°. Principal axes: T 2.5401, Plg45.0000°, Azm177.0000°; N -0.1617, Plg45.0000°, Azm3.0000°; P -2.3784, Plg3.0000°, Azm270.0000°;*
IDC ***17*** *21:28:20.7±0.8, 56°28S×27°57W, h121km±6km, mb4.8/26, mb1 4.8/26, mb1mx4.8/29, mbtmp5.2/26, MS4.5/19, Ms1 4.5/19, ms1mx4.4/21 Error ellipse: s-maj=12.2km s-min=6.8km az=48.0*

ISC 17 21:28:19.3±0.2, 56°27S±0°05×27°55W±0°05, h112km, n545, σ1°21/563, mb5.3/91, 11C-2D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.48**	**288**	P		**Pn**	**21 29 38.2**	**-0.3**
HOPE	**Hope Point**	**5.48**	**288**			**Pn**	**21 29 38.2**	**-0.3**
VNA1	**Neumayer--Stat**	**16.67**	**157**	P		**Pn**	**21 32 05.4**	**-0.3**
VNA3	**Neumayer Olymp**	**16.86**	**160**	P		**P**	**21 32 07.9**	**-0.3**
VNA2	**Neumayer--Watz**	**17.07**	**157**	P		**P**	**21 32 09.9**	**-0.7**
	baz=317,slow=11							
EFI	**East Falkland**	**18.44**	**272**	*ce*P		**Pn**	**21 32 26.8**	**-0.4**
EFI				pmax		pmax		
	comp=Z,207nm,0.8s							
EFI	**East Falkland**	**18.44**	**272**	P		**P**	**21 32 26.1**	**+0.4**
EFI				IAmb		IAmb	21 32 28.9	
	comp=Z,193nm,0.8s							
SNAA	**Sanae**	**18.63**	**156**	P		**Pn**	**21 32 28.4**	**-1.0**
SNAA	**Sanae**	**18.63**	**156**	P		**P**	**21 32 27.9**	**+0.1**
	comp=Z,71nm,0.3s,baz=310,slow=8.2,SNR=4108							
SNAA				S		**S**	**21 35 51.3**	**-2.6**
	comp=Z,2.6nm,0.3s,baz=262,slow=16,SNR=2.3							
SNAA	**Sanae**	**18.63**	**156**	P		**P**	**21 32 27.8**	**+0.1**
PMSA	**Palmer Station**	**19.61**	**229**	P		**Pn**	**21 32 41.3**	**+0.6**
	comp=Z,18nm,0.3s,baz=72,slow=7.5,SNR=26							
PMSA	**Palmer Station**	**19.61**	**229**	P		**Pn**	**21 32 39.5**	**-1.2**
PMSA				IAmb		IAmb	21 32 45.8	
	comp=Z,372nm,1.2s							
TRIS	**Tristan da Cun**	**21.77**	**35**	P		**P**	**21 32 59.8**	**-2.0**
TRIS				IAmb		IAmb	21 33 04.7	
	comp=Z,293nm,1.4s							
NVL	**N'lazarevskaya**	**22.20**	**146**	*e*P		**P**	**21 33 00.6**	**-5.3**
NVL				*e*S		**S**	**21 36 55.6**	**-6.8**
NVL				pmax		pmax		
	comp=Z,127nm,0.8s							
MG01	**Puerto William**	**22.47**	**257**	P		**P**	**21 33 10.0**	**+1.2**
MG01				IAmb		IAmb	21 33 29.4	
	comp=Z,215nm,1.1s							
USHA	**Ushuaia**	**22.94**	**256**	P		**P**	**21 33 14.3**	**+0.9**
	comp=Z,16nm,0.3s,baz=262,slow=0.8,SNR=6.6							
GO10	**Punta Arenas**	**25.01**	**259**	P		**P**	**21 33 33.8**	**+1.4**
GO10				IAmb		IAmb	21 33 42.7	
	comp=Z,124nm,1.2s							
GO09	**Cerro Castillo**	**26.56**	**262**	P		**P**	**21 33 46.3**	**-0.1**
PLTB	**Pedras Altas**	**30.49**	**312**	*e*P		**P**	**21 34 21.8**	**+0.4**
SYO	**Syowa Base**	**31.54**	**141**	∥*i*P		**P**	**21 34 28.0**	**-2.3**
CNLB	**Canela**	**31.60**	**319**	*e*P		**P**	**21 34 32.5**	**+1.3**
CPSB	**Cacapava Do Su**	**31.62**	**314**	*e*P		**P**	**21 34 32.0**	**+0.7**
PLCA	**Paso Flores**	**31.84**	**281**	P		**P**	**21 34 32.5**	**-0.8**
	comp=Z,4.7nm,0.9s,baz=139,slow=3.5,SNR=6.2							
PLCA				PcP		**PcP**	**21 37 21.8**	**+0.5**
	comp=Z,3.3nm,0.7s,baz=346,slow=23,SNR=4.2							
PLCA				ScP		**ScP**	**21 40 51.8**	**-2.4**
	comp=Z,8.4nm,0.9s,baz=138,slow=5.3,SNR=9.9							
PLCA				LR		LR	21 47 04.8	
	comp=Z,1μm,20.6s,baz=126,slow=35							
PLCA	**Paso Flores**	**31.84**	**281**	P		**P**	**21 34 32.6**	**-0.8**
PLCA	**Paso Flores**	**31.84**	**281**			**ScP**	**21 40 52.6**	**-1.5**
PLCA	**Paso Flores**	**31.84**	**281**	*e*P		**P**	**21 34 32.8**	**-0.6**
ITQB	**Itaqui**	**33.58**	**310**	*e*P		**P**	**21 34 49.1**	**+0.7**
LC01	**Cunco**	**33.86**	**282**	P		**P**	**21 34 46.9**	**-3.9**
ITAB	**Concordia**	**33.95**	**318**	*e*P		**P**	**21 34 52.8**	**+1.1**
QSPA	**South Pole Qui**	**33.98**	**180**	P		**P**	**21 34 53.2**	**+1.4**
	comp=Z,148nm,0.6s,baz=189,slow=1.5,SNR=1421							
QSPA				ScP		**ScP**	**21 41 00.1**	**-1.1**
	comp=Z,11nm,1.1s,baz=314,slow=0.8,SNR=5.8							
QSPA	**South Pole Qui**	**33.98**	**180**	P		**P**	**21 34 53.2**	**+1.4**
PET01	**Itanhaem-SP**	**35.04**	**328**	*e*P		**P**	**21 35 01.2**	**+0.1**
BI02	**San Fabin de**	**35.15**	**285**	P		**P**	**21 35 02.3**	**+0.2**
ESAR	**Angra dos Reis**	**35.46**	**333**	*e*P		**P**	**21 35 05.6**	**+0.9**
PARB	**Paraibuna**	**35.47**	**331**	*e*P		**P**	**21 35 05.7**	**+0.8**
MAN01	**Angra dos Reis**	**35.49**	**333**	*e*P		**P**	**21 35 05.2**	**+0.2**
SPB	**Sao Paulo**	**35.75**	**328**	P		**P**	**21 35 07.5**	**+0.3**
SPB	**Sao Paulo**	**35.75**	**328**	*e*P		**P**	**21 35 08.4**	**+1.3**
VAS01	**Vassouras-RJ**	**35.92**	**334**	*e*P		**P**	**21 35 09.1**	**+0.5**
CAM01	**Campos-RJ**	**35.95**	**337**	*e*P		**P**	**21 35 09.3**	**+0.5**
BI03	**Tigo**	**35.97**	**283**	P		**P**	**21 35 09.4**	**+0.5**
VAO	**Valinhos**	**36.17**	**329**	*e*P		**P**	**21 35 12.3**	**+1.5**
PTGB	**Pitanga**	**36.22**	**320**	*e*P		**P**	**21 35 11.8**	**+0.5**
BO02	**Sierra Bellavi**	**36.30**	**288**	P		**P**	**21 35 12.2**	**+0.3**
FRTB	**Fartura**	**36.64**	**325**	*e*P		**P**	**21 35 16.1**	**+1.3**
GO05	**Huala**	**36.74**	**286**	P		**P**	**21 35 14.5**	**-1.1**
CPUP	**Villa Florida**	**36.80**	**312**	P		**P**	**21 35 15.9**	**-0.2**
	comp=Z,22nm,0.7s,baz=151,slow=7.5,SNR=65							
CPUP				PcP		**PcP**	**21 37 36.0**	**+0.3**
	comp=Z,7.3nm,0.5s,baz=147,slow=2.6,SNR=6.3							
CPUP				ScP		**ScP**	**21 41 09.6**	**-2.2**
	comp=Z,24nm,1.1s,baz=130,slow=2.8,SNR=11							
CPUP				LR		LR	21 52 35.5	
	comp=Z,315nm,18.1s,baz=152,slow=40							
CPUP	**Villa Florida**	**36.80**	**312**	P		**P**	**21 35 15.9**	**-0.2**
CPUP				IAmb		IAmb	21 35 16.8	
	comp=Z,25nm,0.7s							
CPUP	**Villa Florida**	**36.80**	**312**			**ScP**	**21 41 10.8**	**-1.0**
CPUP	**Villa Florida**	**36.80**	**312**	*e*P		**P**	**21 35 15.8**	**-0.3**
MT01	**Popeta**	**37.26**	**288**	P		**P**	**21 35 18.7**	**-1.2**
MT05	**Renca**	**37.35**	**289**	P		**P**	**21 35 20.5**	**-0.3**
MT05				IAmb		IAmb	21 35 23.4	
	comp=Z,86nm,1.5s							
CFA	**Coronel Fontan**	**37.46**	**294**	P		**P**	**21 35 20.5**	**-1.2**
	comp=Z,11nm,0.5s,baz=139,slow=8.9,SNR=4.9							
CFA				S		**S**	**21 40 56.1**	**-5.8**
	comp=Z,6.4nm,0.9s,baz=273,slow=21,SNR=8.3							
CFA				ScP		**ScP**	**21 41 11.2**	**-3.2**
	comp=Z,5.5nm,0.7s,baz=137,slow=8.5,SNR=4.8							
CFA				LR		LR	21 50 43.4	
	comp=Z,814nm,20.1s,baz=145,slow=36							
BSCB	**Bom Sucesso**	**37.48**	**333**	*e*P		**P**	**21 35 22.6**	**+0.6**
PEL	**Peldehue**	**37.52**	**290**	IAmb		IAmb	21 35 24.1	
	comp=Z,22nm,0.8s							
MT02	**Curacav**	**37.66**	**289**	IAmb		IAmb	21 35 23.2	
	comp=Z,53nm,1.4s							
VA03	**San Esteban**	**37.74**	**290**	P		**P**	**21 35 24.1**	**0.0**
VA03				IAmb		IAmb	21 35 28.4	
	comp=Z,20nm,0.6s							
ROC1	**El Roble**	**37.82**	**289**	P		**P**	**21 35 24.6**	**-0.4**
RIB01	**Linhares ES**	**38.13**	**340**	*e*P		**P**	**21 35 28.8**	**+1.5**
TRCB	**Terra Rica**	**38.19**	**321**	*e*P		**P**	**21 35 28.7**	**+0.8**
BB19B	**Bebedouro**	**38.45**	**327**	*e*P		**P**	**21 35 30.6**	**+0.5**
CO04	**Los Peladeros**	**38.53**	**290**	P		**P**	**21 35 30.4**	**-0.5**
BSFB	**Barra de Sao F**	**38.69**	**340**	*e*P		**P**	**21 35 31.9**	**-0.1**
PCMB	**Pacaembu**	**38.81**	**323**	*e*P		**P**	**21 35 33.8**	**+0.7**
SJMB	**Sao Joao De Ma**	**38.88**	**339**	*e*P		**P**	**21 35 34.5**	**+0.9**
CO02	**Combarbal**	**39.20**	**291**	P		**P**	**21 35 36.3**	**-0.1**
CO02				IAmb		IAmb	21 35 38.9	
	comp=Z,46nm,1.2s							
NAN01	**Guarapari, ES**	**39.52**	**341**	*e*P		**P**	**21 35 39.2**	**+0.3**
MAW	**Mawson**	**40.10**	**143**	P		**P**	**21 35 43.9**	**+0.8**
	comp=Z,135nm,0.9s,baz=230,slow=7.5,SNR=282							
MAW				ScP		**ScP**	**21 41 24.0**	**+0.2**
	comp=Z,37nm,0.8s,baz=239,slow=3.2,SNR=30							
MAW				LR		LR	21 49 50.5	
	comp=Z,418nm,20.8s,baz=253,slow=32							
MAW	**Mawson**	**40.10**	**143**	P		**P**	**21 35 43.2**	**0.0**
MAW				IAmb		IAmb	21 35 45.3	
	comp=Z,48nm,1.1s							
MAW						**ScP**	**21 41 24.5**	**+0.7**
ITRB	**Iturama**	**40.30**	**326**	*e*P		**P**	**21 35 46.4**	**+1.0**
AC05	**El Transito**	**40.73**	**294**	IAmb		IAmb	21 35 50.6	
	comp=Z,30nm,0.8s							
SUR	**Sutherland**	**40.89**	**75**	ScP		**ScP**	**21 41 27.3**	**-0.4**
	comp=Z,9.9nm,0.9s,baz=188,slow=3.6,SNR=3.9							
SUR				LR		LR	21 49 38.8	
	comp=Z,1μm,18.4s,baz=210,slow=31							
SUR	**Sutherland**	**40.89**	**75**	P		**P**	**21 35 49.9**	**-0.5**
IPMB	**Ipameri, GO**	**41.28**	**329**	*e*P		**P**	**21 35 54.3**	**+0.8**
AQDB	**Aquidauana**	**41.42**	**318**	*e*P		**P**	**21 35 54.1**	**-0.4**
AC02	**Maricunga**	**41.79**	**297**	IAmb		IAmb	21 35 59.9	
	comp=Z,51nm,0.9s							
C2SB	**Chapadao do Su**	**41.98**	**323**	*e*P		**P**	**21 36 00.1**	**+0.9**
NBIT	**Itapeh - BA**	**42.25**	**343**	*e*P		**P**	**21 36 02.1**	**+0.8**
JANB	**Januaria**	**43.08**	**336**	*e*P		**P**	**21 36 08.5**	**+0.4**
BDFB	**Brasilia**	**43.45**	**331**	P		**P**	**21 36 11.6**	**+0.5**
	comp=Z,9.7nm,0.8s,baz=140,slow=5.5,SNR=14							
BDFB				LR		LR	21 53 24.7	
	comp=Z,608nm,18.5s,baz=146,slow=35							
BDFB	**Brasilia**	**43.45**	**331**	P		**P**	**21 36 10.2**	**-0.9**
GDU01	**Guandu, BA**	**43.46**	**343**	*e*P		**P**	**21 36 10.4**	**-0.6**
SHEL	**Horse Pasture**	**43.53**	**31**	P		**P**	**21 36 11.5**	**-0.2**
SHEL				pmax		pmax		
	comp=Z,158nm,1.1s							
SHEL	**Horse Pasture**	**43.53**	**31**	P		**P**	**21 36 11.5**	**-0.2**
ARAG	**Araguaiana, MT**	**44.51**	**326**	*e*P		**P**	**21 36 20.3**	**+0.8**
PB15	**IPOC Station P**	**45.00**	**300**	IAmb		IAmb	21 36 28.8	
	comp=Z,51nm,0.7s							
LVC	**Limon Verde**	**45.23**	**301**	P		**P**	**21 36 25.4**	**-0.2**
	comp=Z,43nm,0.5s,baz=109,slow=9.3,SNR=26							
LVC				S		**S**	**21 42 55.7**	**-1.8**
	comp=Z,3.5nm,0.9s,baz=9.4,slow=18,SNR=2.1							
LVC	**Limon Verde**	**45.23**	**301**	P		**P**	**21 36 26.5**	**+0.9**
LVC	**Limon Verde**	**45.23**	**301**	*e*P		**P**	**21 36 26.3**	**+0.7**
PB10	**IPOC Station P**	**45.27**	**298**	IAmb		IAmb	21 36 26.4	
	comp=Z,44nm,1.2s							
PB06	**IPOC Station P**	**45.47**	**300**	IAmb		IAmb	21 36 34.8	
	comp=Z,28nm,0.6s							
SALV	**Santo Antonio**	**45.63**	**321**	*e*P		**P**	**21 36 28.8**	**+0.5**
NBLA	**Lagarto - SE**	**45.87**	**346**	*e*P		**P**	**21 36 30.1**	**-0.1**
PB04	**IPOC Station P**	**46.07**	**300**	IAmb		IAmb	21 36 32.9	
	comp=Z,37nm,0.7s							
PB09	**IPOC Station P**	**46.09**	**301**	IAmb		IAmb	21 36 34.2	
	comp=Z,51nm,0.6s							
BOSA	**Boshof**	**46.22**	**76**	P		**P**	**21 36 32.8**	**-0.2**
	comp=Z,4.9nm,0.6s,baz=207,slow=7.2,SNR=11							
BOSA				ScP		**ScP**	**21 41 48.6**	**-0.8**
	comp=Z,11nm,1.0s,baz=212,slow=7.0,SNR=6.1							
BOSA				LR		LR	21 52 54.5	
	comp=Z,1μm,18.8s,baz=209,slow=32							
BOSA	**Boshof**	**46.22**	**76**	P		**P**	**21 36 33.2**	**+0.2**
BOSA				pmax		pmax		
	comp=Z,13nm,1.1s							
BOSA	**Boshof**	**46.22**	**76**	P		**P**	**21 36 33.2**	**+0.2**
VNDA	**Vanda**	**46.35**	**183**	P		**P**	**21 36 35.0**	**+1.7**
	comp=Z,50nm,0.8s,baz=188,slow=6.4,SNR=252							
VNDA				ScP		**ScP**	**21 41 47.5**	**-1.6**
	comp=Z,8.9nm,0.8s,baz=218,slow=3.8,SNR=6.6							
VNDA				LR		LR	21 54 32.9	
	comp=Z,212nm,19.9s,baz=164,slow=34							
VNDA	**Vanda**	**46.35**	**183**	P		**P**	**21 36 35.0**	**+1.7**
VNDA				pmax		pmax		
	comp=Z,201nm,1.3s							
VNDA	**Vanda**	**46.35**	**183**	P		**P**	**21 36 35.0**	**+1.7**
NBPN	**Ponto Novo - B**	**46.37**	**343**	*e*P		**P**	**21 36 34.0**	**-0.2**
PB07	**IPOC Station P**	**46.46**	**300**	IAmb		IAmb	21 36 36.3	
	comp=Z,69nm,0.7s							
NBAN	**Anadia - AL**	**46.98**	**348**	*e*P		**P**	**21 36 39.4**	**+0.5**
PTLB	**Pontes e Lacer**	**47.31**	**317**	*e*P		**P**	**21 36 41.3**	**-0.1**
PATCX	**Punta Patache**	**47.36**	**301**	IAmb		IAmb	21 36 43.2	
	comp=Z,59nm,0.7s							
SIV	**San Ignacio**	**47.58**	**314**	P		**P**	**21 36 43.2**	**-0.4**
	comp=Z,8.9nm,0.6s,baz=164,slow=7.8,SNR=62							
SIV				PcP		**PcP**	**21 38 13.0**	**+1.4**
	comp=Z,4.4nm,0.5s,baz=238,slow=7.1,SNR=1.8							
SIV				ScP		**ScP**	**21 41 53.1**	**-2.0**
	comp=Z,18nm,1.0s,baz=178,slow=3.5,SNR=12							
TA01	**Diego Aracena**	**47.59**	**301**	IAmb		IAmb	21 36 46.4	
	comp=Z,26nm,0.8s							
NBTA	**Tacaratu-PE**	**47.75**	**346**	*e*P		**P**	**21 36 45.0**	**+0.1**
PB11	**IPOC Station P**	**48.03**	**302**	IAmb		IAmb	21 36 55.4	
	comp=Z,59nm,0.7s							
H10S2	**ASCENSION HYDR**	**48.27**	**17**	T		T	22 27 13.5	
	SNR=5.7							
PSGCX	**Pisagua**		**48.39**	**301**	IAmb	IAmb	21 36 50.9	
	comp=Z,43nm,0.7s							
PB16	**IPOC Station P**		**49.19**	**303**	P	**P**	**21 36 56.6**	**+0.1**
PB16					IAmb	IAmb	21 36 59.9	
	comp=Z,28nm,0.6s							
LBTB	**Lobatse**		**49.26**	**73**	IAmb	IAmb	21 36 57.5	
	comp=Z,21nm,0.8s							
PB12	**IPOC Station P**		**49.33**	**302**	IAmb	IAmb	21 37 02.6	
	comp=Z,23nm,0.5s							
AP01	**Chacalluta**		**49.55**	**302**	P	**P**	**21 36 57.6**	**-0.9**
NBMA	**Muriti-CE**		**49.57**	**345**	*e*P	**P**	**21 36 59.2**	**+0.4**
SMTB	**Santa Maria do**		**49.84**	**334**	*e*P	**P**	**21 37 01.8**	**+1.0**
TSUM	**Tsumeb**		**49.96**	**61**	P	**P**	**21 37 02.0**	**+0.1**
PDRB	**Porto dos Gac**		**49.97**	**321**	*e*P	**P**	**21 37 00.7**	**-1.1**
VILB	**Vilhena**		**50.00**	**317**	*e*P	**P**	**21 37 01.9**	**-0.2**
NBPV	**Pedro Velho**		**50.09**	**350**	*e*P	**P**	**21 37 03.3**	**+0.6**
CLDB	**Colider**		**50.33**	**323**	*e*P	**P**	**21 37 03.4**	**-1.2**
LPAZ	**La Paz**		**50.34**	**306**	P	**P**	**21 37 06.1**	**+0.8**
	comp=Z,63nm,0.7s,baz=144,slow=5.1,SNR=345							
LPAZ					S	**S**	**21 44 09.8**	**-0.2**
	comp=Z,7.6nm,0.9s,baz=223,slow=24,SNR=12							
LPAZ					LR	LR	21 59 11.9	
	comp=Z,253nm,20.6s,baz=148,slow=37							
LPAZ	**La Paz**		**50.34**	**306**	P	**P**	**21 37 05.6**	**+0.3**
LPAZ	**La Paz**		**50.34**	**306**	*e*P	**P**	**21 37 06.3**	**+1.0**
RCBR	**Riachuelo**		**50.74**	**349**	P	**P**	**21 37 07.3**	**-0.3**
	comp=Z,5.9nm,0.9s,baz=183,slow=12,SNR=5.9							
RCBR					PcP	**PcP**	**21 38 23.7**	**+0.5**
	comp=Z,7.3nm,0.9s,baz=23,slow=3.6,SNR=4.2							
RCBR					LR	LR	21 55 48.8	
	comp=Z,357nm,18.5s,baz=178,slow=32							
RCBR	**Riachuelo**		**50.74**	**349**	P	**P**	**21 37 07.3**	**-0.3**
RCBR							21 38 23.7	
RCBR					pmax	pmax		
	comp=Z,32nm,1.5s							
RCBR	**Riachuelo**		**50.74**	**349**	IAmb	IAmb	21 37 20.2	
	comp=Z,32nm,1.4s							
NBPB	**Pedra_Branca-C**		**51.48**	**345**	*e*P	**P**	**21 37 13.8**	**+0.6**
NBCL	**Cascavel-CE**		**52.60**	**346**	*e*P	**P**	**21 37 21.8**	**+0.5**
NBPS	**Pedro II - PI**		**52.90**	**343**	*e*P	**P**	**21 37 24.2**	**+0.5**
PRPB	**Parauapebas**		**52.99**	**332**	*e*P	**P**	**21 37 25.2**	**+0.9**
NBMO	**Morrinhos-CE**		**53.74**	**344**	*e*P	**P**	**21 37 29.6**	**-0.1**
CASY	**Casey**		**53.77**	**160**	P	**P**	**21 37 30.6**	**+1.2**
NPGB	**Novo Progresso**		**53.78**	**325**	*e*P	**P**	**21 37 29.9**	**-0.2**
SAML	**Samuel**		**54.81**	**315**	*e*P	**P**	**21 37 38.2**	**+0.6**
ROSB	**Rosrio**		**54.85**	**340**	*e*P	**P**	**21 37 38.6**	**+0.8**
NNA	**Nana**		**58.18**	**299**	P	**P**	**21 38 01.4**	**0.0**
	comp=Z,16nm,0.8s,baz=172,slow=8.4,SNR=6.0							
NNA	**Nana**		**58.18**	**299**	*ce*P	**P**	**21 38 02.0**	**+0.5**
NNA					pmax	pmax		
	comp=Z,52nm,1.2s							
NNA	**Nana**		**58.18**	**299**	IAmb	IAmb	21 38 03.1	
	comp=Z,22nm,0.9s							
NNA						pwP	21 38 26.6	-1.5
MALB	**Monte Alegre**		**58.35**	**328**	*e*P	**P**	**21 38 03.4**	**+0.8**
LSZ	**Lusaka**		**58.64**	**69**	P	**P**	**21 38 03.9**	**-0.9**
LSZ					pmax	pmax		
	comp=Z,33nm,0.9s							
LSZ	**Lusaka**		**58.64**	**69**	P	**P**	**21 38 03.9**	**-0.9**
LSZ					IAmb	IAmb	21 38 06.0	
	comp=Z,33nm,0.8s							
PTGA	**Pitinga**		**61.22**	**322**	P	**P**	**21 38 22.0**	**-0.3**
	comp=Z,12nm,0.8s,baz=159,slow=8.9,SNR=20							
PTGA	**Pitinga**		**61.22**	**322**	P	**P**	**21 38 21.9**	**-0.3**
PTGA	**Pitinga**		**61.22**	**322**	*e*P	**P**	**21 38 22.1**	**-0.1**
ATAH	**Atahualpa**		**63.13**	**300**	P	**P**	**21 38 36.5**	**+1.0**
	comp=Z,17nm,0.7s,baz=181,slow=3.8,SNR=11							
MDP	**Montagnes des**		**64.53**	**332**	P	**P**	**21 38 44.4**	**+0.3**
	comp=Z,20nm,0.8s,baz=162,slow=6.9,SNR=7.3							
LIC	**Lamto**		**64.98**	**25**	*e*P	**P**	**21 38 46.3**	**-0.7**
	comp=Z,72nm,0.7s							
KIC	**Kosan Boka**		**65.18**	**25**	*e*P	**P**	**21 38 47.8**	**-0.5**
	comp=Z,49nm,0.9s							
TIC	**Toumodi**		**65.38**	**25**	*e*P	**P**	**21 38 48.9**	**-0.7**
DBIC	**Dimbokro**		**65.45**	**25**	P	**P**	**21 38 50.5**	**+0.4**
	comp=Z,21nm,0.9s,baz=172,slow=8.1,SNR=20							
DBIC					LR	LR	22 01 34.3	
	comp=Z,381nm,19.4s,baz=176,slow=30							
DBIC	**Dimbokro**		**65.45**	**25**	P	**P**	**21 38 50.4**	**+0.4**
DBIC					IAmb	IAmb	21 38 51.1	
	comp=Z,22nm,0.8s							
ABPO	**Ambohimpanom**		**65.96**	**88**	P	**P**	**21 38 54.4**	**+0.8**
ABPO					pmax	pmax		
	comp=Z,22nm,1.2s							
ABPO	**Ambohimpanom**		**65.96**	**88**	P	**P**	**21 38 54.4**	**+0.8**
RER	**Riviere de l'E**		**68.99**	**97**	P	**P**	**21 39 13.2**	**+0.6**
PAC1	**Pacto, Paraso**		**69.79**	**304**	*e*P	**P**	**21 39 18.8**	**+1.2**
GARC	**Garzon, Huila**		**70.00**	**308**	*e*P	**P**	**21 39 17.7**	**-1.3**
SOTA	**Rioblanco**		**70.45**	**307**	*e*P	**P**	**21 39 23.4**	**+1.4**
PCON	**Cinco Dias**		**70.53**	**307**	*e*P	**P**	**21 39 24.5**	**+1.9**
BBAC	**Balboa, Cauca**		**70.64**	**306**	*e*P	**P**	**21 39 23.6**	**+0.8**
POPC	**Popayan, Colom**		**70.84**	**307**	*e*P	**P**	**21 39 25.4**	**+1.3**
PRAC	**Prado**		**71.10**	**309**	*e*P	**P**	**21 39 24.6**	**-0.8**
CHIC	**Chingaza**		**71.43**	**311**	*e*P	**P**	**21 39 28.2**	**+0.5**
ORTC	**Ortega, Tolima**		**71.43**	**309**	*e*P	**P**	**21 39 27.3**	**0.0**
ROSC	**El Rosal**		**71.87**	**310**	P	**P**	**21 39 31.4**	**+1.0**
	comp=Z,27nm,0.8s,baz=127,slow=3.5,SNR=11							
ROSC					LR	LR	22 12 01.8	
	comp=Z,180nm,21.0s,baz=178,slow=36							
ROSC	**El Rosal**		**71.87**	**310**	P	**P**	**21 39 30.4**	**0.0**
ROSC					IAmb	IAmb	21 39 33.5	
	comp=Z,28nm,0.8s							
YOTC	**Yotoco, Valle**		**71.98**	**308**	*e*P	**P**	**21 39 29.0**	**-1.7**
RUSC	**La Rusia**		**72.29**	**312**	*e*P	**P**	**21 39 32.1**	**-0.9**
RUSC	**La Rusia**		**72.29**	**312**	P	**P**	**21 39 31.9**	**-1.1**
RREF	**El Recreo**		**72.36**	**309**	*e*P	**P**	**21 39 33.3**	**-0.3**
MBAR	**Mbarara**		**72.43**	**63**	*i*P	**P**	**21 39 35.8**	**+2.3**
MBAR					pmax	pmax		
	comp=Z,22nm,1.4s							
MBAR	**Mbarara**		**72.43**	**63**	P	**P**	**21 39 35.2**	**+1.7**
MBAR						**pP**	**21 40 01.1**	**+0.3**
SPBC	**San Pablo de B**		**72.49**	**311**	*e*P	**P**	**21 39 30.4**	**-3.3**
GUY2C	**Guyana, Caldas**		**72.66**	**309**	*e*P	**P**	**21 39 34.4**	**-0.8**
NORC	**Norcasia**		**72.75**	**310**	*e*P	**P**	**21

TAU pmax pmax
comp=Z,142nm,0.8s
TAU Tasmania Unive 81.10 176 P **P** **21 40 21.2 -0.4**
TCW Tory Channel 81.15 196 P **P** **21 40 21.4 -0.5**
HOWZ Holdsworth Sta 81.25 197 P **P** **21 40 23.4 +0.9**
NNZ Nelson 81.28 196 P **P** **21 40 22.9 +0.3**
NNZ Nelson 81.28 196 P **P** **21 40 23.0 +0.3**
NNZ IAmb IAmb 21 40 29.9
comp=Z,97nm,1.4s
BFZ Birch Farm 81.33 198 P **P** **21 40 24.0 +1.0**
BFZ Birch Farm 81.33 198 P **P** **21 40 22.9 0.0**
BFZ IAmb IAmb 21 40 24.9
comp=Z,105nm,1.2s
JTS Las Juntas de 81.46 303 P **P** **21 40 25.2 +1.3**
comp=Z,14nm,0.7s,baz=76,slow=3.3,SNR=9.6
JTS Las Juntas de 81.46 303 P **P** **21 40 23.8 0.0**
JTS IAmb IAmb 21 40 26.3
comp=Z,71nm,1.5s
MRZ Mangatainoka R 81.47 198 P **P** **21 40 24.2 +0.6**
DUWZ D'Urville Isla 81.60 196 P **P** **21 40 25.1 +0.7**
QRZ Quartz Range 81.79 195 P **P** **21 40 24.0 -1.3**
QRZ IAmb IAmb 21 40 25.8
comp=Z,93nm,1.4s
WAZ Wanganui 82.45 197 P P 21 40 33.7 +4.9
BHHZ Black Hill Sta 82.53 198 P **P** **21 40 33.5 +4.2**
BANI BANI 82.62 319 P **P** **21 40 29.9 0.0**
BKZ Black Stump Fm 82.77 199 P **P** **21 40 31.9 +1.4**
BKZ Black Stump Fm 82.77 199 P **P** **21 40 29.8 -0.7**
BKZ IAmb IAmb 21 40 32.8
comp=Z,98nm,1.5s
ESPN Las Esperanzas 82.82 305 P **P** **21 40 30.2 -0.7**
ESPN IAmb IAmb 21 40 32.1
comp=Z,47nm,0.7s
FWVZ Far West T-bar 82.84 198 P **P** **21 40 32.9 +1.7**
NGZ Ngauruhoe 82.91 198 P **P** **21 40 32.4 +1.0**
WTVZ West Tongariro 82.97 198 P **P** **21 40 33.5 +1.8**
ACON Acoyapa 83.03 304 P **P** **21 40 31.8 -0.2**
ACON **P** **21 40 32.0 0.0**
TWVZ Taurewa 83.04 198 P **P** **21 40 32.3 +0.2**
MWZ Matawai 83.39 200 P **P** **21 40 34.6 +0.9**
SDDR Presa de Saban 83.50 319 P **P** **21 40 34.8 +0.4**
SDDR **P** **21 40 34.9 +0.5**
SDDR IAmb IAmb 21 40 36.9
comp=Z,17nm,0.6s
URZ Urewera 83.53 199 P **P** **21 40 34.6 +0.2**
URZ IAmb IAmb 21 40 36.1
comp=Z,80nm,1.2s
TAM Tamanrasset 83.58 30 P **P** **21 40 36.2 +1.4**
TAM pmax pmax
comp=Z,22nm,1.2s
TAM Tamanrasset 83.58 30 P **P** **21 40 36.2 +1.4**
TAM **P** **21 40 37.3 +2.5**
HIZ Hauiti 83.69 198 P **P** **21 40 35.5 +0.3**
SC01 Santiago de lo 83.71 319 P **P** **21 40 35.3 -0.1**
SC01 IAmb IAmb 21 40 36.8
comp=Z,51nm,0.9s
MATN Matagalpa 84.22 303 P **P** **21 40 38.0 -0.1**
MATN IAmb IAmb 21 40 40.1
comp=Z,48nm,0.9s
MACI Morro de la Ar 84.70 10 P **P** **21 40 41.3 +0.9**
CSGN Cosiguina Volc 85.03 302 P **P** **21 40 42.6 +0.4**
NWAO Narrogin (SRO) 86.24 151 P **P** **21 40 48.1 0.0**
comp=Z,15nm,0.7s,baz=201,slow=9.8,SNR=4.7
NWAO Narrogin (SRO) 86.24 151 P **P** **21 40 48.6 +0.5**
NWAO pmax pmax
comp=Z,23nm,0.8s
NWAO Narrogin (SRO) 86.24 151 P **P** **21 40 48.6 +0.5**
NWAO IAmb IAmb 21 40 48.7
comp=Z,23nm,0.8s
NWAO Narrogin (SRO) 86.24 151 P **P** **21 40 47.8 -0.3**
NWAO IAmb IAmb 21 40 48.7
comp=Z,18nm,0.8s
TOO Toolangi 86.34 174 P **P** **21 40 48.5 0.0**
TOO pmax pmax
comp=Z,27nm,0.9s
TOO Toolangi 86.34 174 P **P** **21 40 48.5 0.0**
TOO IAmb IAmb 21 40 50.7
comp=Z,27nm,0.8s
TBI Tubuai 86.79 231 *e*S **S** **21 51 25.4 +6.2**
comp=Z,186nm,26.0s
TBI Tubuai 86.79 231 *e*LQ LQ 22 04 49.3
comp=Z,654nm,29.8s
TBI *e*LR LR 22 08 32.2
comp=Z,862nm,28.8s,baz=158
OUZ Omahuta 87.11 197 P **P** **21 40 51.4 -0.8**
CBCY The Bluff, Cay 87.51 312 P **P** **21 40 54.2 0.0**
CAN Canberra 88.73 177 P **P** **21 41 00.4 +0.4**
CAN pmax pmax
comp=Z,38nm,1.1s
CAN Canberra 88.73 177 P **P** **21 41 00.4 +0.4**
CAN IAmb IAmb 21 41 01.4
comp=Z,38nm,1.1s
MORW Morawa 89.54 149 P **P** **21 41 03.9 +0.1**
MORW IAmb IAmb 21 41 04.7
comp=Z,31nm,1.0s
CCIG Comitan 90.07 300 P **P** **21 41 05.8 -0.7**
CCIG IAmb IAmb 21 41 08.0
comp=Z,29nm,1.4s
FORT Forrest 90.84 159 P **P** **21 41 10.7 +0.8**
MDT Midelt 90.86 19 P **P** **21 41 12.4 +2.7**
comp=Z,18nm,0.8s,baz=192,slow=3.7,SNR=34
RAO Raoul Island 91.17 206 P **P** **21 41 11.3 -0.1**
RAO Raoul Island 91.17 206 P **P** **21 41 11.3 -0.1**
TEIG Tepich 91.66 305 P **P** **21 41 14.2 +0.7**
STKA Stephens Creek 91.72 171 P **P** **21 41 14.3 +0.4**
comp=Z,19nm,0.9s,baz=152,slow=5.8,SNR=9.7
STKA LR LR 22 23 09.9
comp=Z,210nm,18.2s,baz=195,slow=36
STKA Stephens Creek 91.72 171 P **P** **21 41 14.0 +0.1**
STKA pmax pmax
comp=Z,4.0nm,0.8s
STKA Stephens Creek 91.72 171 P **P** **21 41 13.9 +0.1**
PPT2 Papeete2 91.89 234 *e*S **S** **21 52 12.0 +5.1**
comp=Z,275nm,32.2s
PPT2 Papeete2 91.89 234 *e*LR LR 22 10 53.3
comp=Z,1um,30.0s,baz=154
PPT Papeete 91.91 234 LR LR 22 13 09.3
comp=Z,202nm,20.7s,baz=163,slow=29
DAMY Dhamar 92.30 67 P **P** **21 41 16.9 -0.1**
DAMY IAmb IAmb 21 41 22.1
comp=Z,11nm,0.8s
TLIG Tlapa 94.34 295 P **P** **21 41 26.6 +0.4**
TLIG IAmb IAmb 21 41 28.4
comp=Z,9.2nm,0.8s
TLIG **pP** **21 41 52.8 -1.6**
KEST Kesra 96.86 29 LR LR 22 22 33.7
comp=Z,191nm,19.0s,baz=205,slow=34
ESDC Sonseca Array 97.65 18 P Pdif 21 41 41.9 +1.3
comp=Z,1.2nm,0.7s,baz=187,slow=4.8,SNR=11
ESDC LR LR 22 21 21.8
comp=Z,140nm,19.9s,baz=175,slow=33
ASAR Alice Springs 98.84 163 P Pdif 21 41 46.5 0.0
comp=Z,28nm,0.9s,baz=185,slow=4.2,SNR=170
ASAR PP **PP** **21 45 45.6 -2.7**
comp=Z,9.2nm,0.7s,baz=184,slow=6.9,SNR=17
ASAR PKKPbc **PKKPdf** **21 58 12.7 +0.1**
comp=Z,0.9nm,0.6s,baz=27,slow=2.0,SNR=10
ASAR LR LR 22 24 53.4
comp=Z,266nm,19.0s,baz=186,slow=34
AS31 Alice Springs 98.84 163 IAmb IAmb 21 41 47.9
comp=Z,8.9nm,0.9s
DZM Mont Dzumac 101.08 193 *e*LR LR 22 15 08.8
comp=Z,426nm,26.4s
V57A Coltrane Farms 101.94 319 P **Pdif** **21 42 01.4 +1.7**
baz=153
T59A Double "B" Far 102.11 321 P **Pdif** **21 42 02.2 +1.8**
baz=154
W54A Cherokee Point 102.13 317 P **Pdif** **21 42 02.2 +1.6**
baz=152
FITZ Fitzroy Crossi 102.56 154 P **Pdif** **21 42 03.5 +0.4**
comp=Z,3.2nm,0.7s,baz=199,slow=6.8,SNR=8.8
WRA Warramunga Arr 102.56 163 P **Pdif** **21 42 03.0 0.0**
comp=Z,6.0nm,0.7s,baz=198,slow=4.5,SNR=49
WRA PKKPbc **PKKPbc** **21 58 02.1 +2.2**
comp=Z,0.9nm,0.3s,baz=358,slow=2.9,SNR=39
WRAB Tennant Creek 102.57 163 *i* P **Pdif** **21 42 03.2 +0.1**
WRAB pmax pmax
comp=Z,9.0nm,0.8s
WR0 Warramunga Arr 102.58 163 **Pdif** **21 42 03.4 +0.2**
J61A Chester 106.25 327 P **PKiKP** **21 46 31.2 +1.7**
baz=156
H65A Eastbrook 106.26 331 P **PKiKP** **21 46 30.7 +1.3**
baz=158
G65A Princeton 106.55 332 P **PKiKP** **21 46 31.2 +1.3**
baz=158

MSTX Muleshoe 110.08 301 P **PKiKP** **21 46 37.5 +0.4**
baz=145
I49A Point Hope 110.14 321 P **PKiKP** **21 46 37.7 +0.9**
baz=151
GERES GERESS Array B 110.24 28 PKiKP **PKiKP** **21 46 36.1 -0.8**
comp=Z,0.9nm,0.8s,baz=149,slow=3.1,SNR=5.9
KHC Kasperske Hory 110.47 27 *e*PKKP **PKKPab** **21 57 47.5 +2.8**
121A Cookes Peak, D 111.36 297 P **PKiKP** **21 46 40.1 +0.4**
baz=144
CLL Collm 112.33 26 *e*PS PS 21 57 06.0 +3.5
CLL *e*SS SS 22 03 00.0 +0.5
TUC Tucson 112.69 294 P **PKiKP** **21 46 42.9 +0.8**
baz=143
T25A Trinidad 113.42 302 P **PKiKP** **21 46 44.0 +0.5**
baz=144
SDCO Great Sand Dun 114.43 302 P **PKiKP** **21 46 46.0 +0.5**
baz=143
S22A 4UR Ranch, Cre 115.06 301 P **PKiKP** **21 46 47.4 +0.7**
baz=143
ECSD EROS Data Cent 115.29 312 P **PKiKP** **21 46 46.5 -0.1**
baz=145
GLA Glamis 115.36 292 P **PKiKP** **21 46 47.2 +0.1**
baz=142
WUAZ Wupatki 115.53 296 P **PKiKP** **21 46 48.0 +0.5**
baz=142
Y12C Blythe 115.75 293 P **PKiKP** **21 46 48.3 +0.5**
baz=142
Y12C Blythe 115.75 293 **PKiKP** **21 46 47.9 +0.1**
SWSC Sam W. Stewart 115.78 291 P **PKiKP** **21 46 48.2 +0.4**
baz=142
KIV Kislovodsk 115.96 49 *i* PKiKP **PKPdf** **21 46 45.4 -2.6**
KIV *i* 21 47 26.4
KIV pmax pmax
comp=Z,6.0nm,0.9s
KIV Kislovodsk 115.96 49 **PKiKP** **21 46 48.2 +0.2**
PDMCI Parker Dam,Lak 115.98 293 P **PKiKP** **21 46 49.1 +0.9**
baz=142
MONP2 Monument Peak 116.06 291 P **PKiKP** **21 46 49.1 +0.4**
ISCO Idaho Springs 116.12 303 P **PKiKP** **21 46 49.6 +0.8**
baz=143
BC3 Big Chuckawall 116.15 292 P **PKiKP** **21 46 49.0 +0.2**
baz=142
AKT Akhty 116.17 54 *i* PKiKP **PKiKP** **21 46 49.6 +1.1**
AKT *e* 21 47 17.7
AKT *e* 21 48 00.6
AKT pmax pmax
comp=Z,10.0nm,0.8s
IRM Iron Mountain 116.39 292 P **PKiKP** **21 46 49.6 +0.6**
baz=142
AKASG Malin Array Be 116.49 36 PKP **PKPdf** **21 46 47.9 -0.7**
comp=Z,3.0nm,0.7s,baz=235,slow=1.4,SNR=8.9
AKBB Malin Array Si 116.49 36 *c* PKiKP **PKiKP** **21 46 48.5 -0.1**
TPFO Pinon Flats 116.63 291 P **PKiKP** **21 46 50.5 +0.8**
baz=142
BELC Belle Mtn. Jos 116.70 292 P **PKiKP** **21 46 50.5 +0.7**
baz=142
N23A Red Feather La 117.14 303 P **PKiKP** **21 46 50.5 -0.1**
baz=142
GMRC Granite Mounta 117.14 292 P **PKiKP** **21 46 51.5 +0.9**
baz=141,SNR=6.5
O20A White River Ci 117.62 301 P **PKiKP** **21 46 51.8 +0.4**
baz=142
GSC Goldstone, Bar 118.13 292 P **PKiKP** **21 46 52.8 +0.3**
baz=141
SHOC Shoshone, Teco 118.32 293 P **PKiKP** **21 46 53.5 +0.7**
baz=141
GEYT Alibeck 118.34 64 PKP **PKiKP** **21 46 52.9 +0.1**
comp=Z,1.6nm,0.8s,baz=298,slow=10.0,SNR=4.0
EDW2 Edwards Air Fo 118.42 291 P **PKiKP** **21 46 53.5 +0.5**
baz=141,SNR=5.7
SCZ2 Santa Cruz Isl 118.60 289 P **PKiKP** **21 46 53.5 +0.2**
baz=141
AGMN Agassiz Nation 118.69 315 P **PKPdf** **21 46 52.2 -0.7**
baz=144
K22A Casper 118.78 304 P **PKPdf** **21 46 53.2 -0.3**
baz=141
RSSD Black Hills 118.81 307 PKiKP **PKiKP** **21 46 53.5 -0.2**
RSSD Black Hills 118.81 307 P **PKiKP** **21 46 53.7 0.0**
baz=142
RSSD Black Hills 118.81 307 **PKiKP** **21 46 53.5 -0.2**
FURC Furnace Creek, 119.06 293 P **PKiKP** **21 46 54.7 +0.6**
baz=140
MPMC Manual Prospec 119.07 292 P **PKiKP** **21 46 55.1 +0.7**
baz=140
TPNV Topopah Spring 119.11 294 P **PKiKP** **21 46 55.3 +0.9**
baz=140
ISA Isabella, Lake 119.28 291 P **PKiKP** **21 46 55.7 +1.0**
baz=140,SNR=5.1
PKM Mcpherson Peak 119.38 289 P **PKiKP** **21 46 55.9 +0.9**
baz=140
CWC Cottonwood Cre 119.67 292 P **PKiKP** **21 46 56.7 +1.2**
baz=140
R11A Troy Canyon, C 119.85 295 P **PKiKP** **21 46 56.5 +0.6**
baz=140
DUG Dugway, Tooele 119.88 298 P **PKiKP** **21 46 56.3 +0.5**
baz=140
ULM Lac du Bonnet 120.27 316 PKP **PKPdf** **21 46 55.0 -0.9**
comp=Z,7.4nm,0.6s,baz=218,slow=1.0,SNR=6.3
VORD Divnogorie 120.28 42 *e*PKiKP **PKPdf** **21 46 55.0 -0.9**
VORD pmax pmax
comp=Z,7.0nm,0.7s
BW06 Boulder Array 120.29 302 P **PKPdf** **21 46 55.7 -0.9**
baz=140
PDAR Pinedale Array 120.29 302 PKP **PKPdf** **21 46 55.9 -0.7**
comp=Z,1.6nm,0.6s,baz=129,slow=4.0,SNR=15
PDAR SKP 21 50 19.8
comp=Z,0.9nm,0.8s,baz=132,slow=4.4,SNR=4.9
PDAR PKKPbc **PKKPab** **21 57 04.0 +0.7**
comp=Z,0.3nm,0.3s,baz=315,slow=0.8,SNR=5.1
VSR Storozhevoye 120.43 42 *e*PKiKP **PKPdf** **21 46 54.7 -1.5**
VSR pmax pmax
comp=Z,10.0nm,0.9s
SIJI Sorong 120.51 155 PKP **PKiKP** **21 46 57.5 -0.2**
comp=Z,17nm,0.8s,baz=336,slow=5.2,SNR=7.7
JAY Jayapura 120.63 166 PKP **PKiKP** **21 46 58.3 +0.2**
comp=Z,18nm,1.0s,baz=278,slow=9.0,SNR=5.8
NB2 NORSAR Subarra 120.88 21 PKPdf **PKiKP** **21 46 56.9 0.0**
comp=Z,5.3nm,1.1s,baz=202,slow=1.9
NOA NORSAR Array B 120.88 21 PKP **PKiKP** **21 46 57.1 +0.2**
comp=Z,3.7nm,0.8s,baz=205,slow=1.9,SNR=12
NOA PKKPbc **PKKPbc** **21 57 01.1 +0.4**
comp=Z,2.1nm,0.9s,baz=27,slow=3.1,SNR=4.9
NVAR Mina Array Bea 121.30 293 PKP **PKiKP** **21 47 00.0 +1.3**
comp=Z,6.2nm,0.8s,baz=154,slow=2.9,SNR=22
NVAR SKP 21 50 23.6
comp=Z,0.9nm,0.7s,baz=153,slow=4.3,SNR=3.9
NVAR PKKPbc **PKKPab** **21 57 01.7 +2.2**
comp=Z,1.2nm,0.8s,baz=308,slow=3.2,SNR=6.7
VRH Novokhopyorsk 121.39 44 *e*PKiKP **PKPdf** **21 46 57.2 -0.8**
VRH pmax pmax
comp=Z,20nm,0.7s
LPSR Galich'ya Gora 121.46 41 *e*PKiKP **PKPdf** **21 46 57.6 -0.5**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
LAO LASA Array 121.77 307 P **PKiKP** **21 46 59.2 +0.1**
baz=140,SNR=10
RLMT Red Lodge 121.95 304 P **PKiKP** **21 46 59.8 -0.1**
baz=140
DGMT Dagmar 122.25 310 P **PKPdf** **21 46 59.7 -0.1**
baz=140
OBN Obninsk 122.64 38 *c* PKiKP **PKPdf** **21 46 59.8 -0.5**
OBN *i* 21 47 30.9
OBN pmax pmax
comp=Z,42nm,2.5s
OBN Obninsk 122.64 38 **PKiKP** **21 47 00.6 +0.1**
NIL Nilore 123.02 78 PKiKP **PKiKP** **21 47 02.3 +0.2**
NIL Nilore 123.02 78 **PKiKP** **21 47 02.3 +0.2**
SFJD Kangerlussuaq 124.15 349 *i* PKiKP **PKiKP** **21 47 03.0 -0.1**
SFJD Kangerlussuaq 124.15 349 *i* P **PKiKP** **21 47 03.0 -0.1**
PYUN Piuthan 124.18 90 *e*P **PKPdf** **21 47 04.1 -0.4**
comp=Z,73nm,1.0s
KOLN Koldanda 124.27 90 *e*P **PKPdf** **21 47 04.3 -0.3**
comp=Z,29nm,0.6s
EGMT Eagleton 124.35 306 P **PKiKP** **21 47 04.3 +0.1**
baz=138,SNR=12
O03E Paynes Creek 124.49 292 P **PKiKP** **21 47 04.8 0.0**
baz=138,SNR=39
FINES FINESS Array B 124.67 28 PKP **PKiKP** **21 47 04.0 -0.3**
comp=Z,14nm,0.6s,baz=193,slow=0.7,SNR=82
FINES SKP 21 50 27.3
comp=Z,5.5nm,0.9s,baz=162,slow=1.8,SNR=6.1
DANN Dangsing 124.80 90 *e*P **PKPdf** **21 47 05.4 -0.3**
comp=Z,39nm,0.7s
O02D Mt. Diablo Mer 124.91 291 P **PKiKP** **21 47 06.1 +0.4**
baz=137,SNR=8.0
DMN Daman 124.98 92 *e*P **PKPdf** **21 47 05.7 -0.4**
comp=Z,37nm,1.0s
GKN Gorkha 125.02 91 *e*P **PKPdf** **21 47 05.4 -0.6**
comp=Z,32nm,0.8s
PKIN Phulchoki 125.12 92 *e*P **PKPdf** **21 47 05.2 -1.1**
comp=Z,43nm,1.1s
PKI Pulchoki 125.12 92 *e*P **PKPdf** **21 47 05.3 -1.1**
comp=Z,55nm,1.2s
CMAR Chiang Mai Arr 125.18 111 PKP **PKiKP** **21 47 06.7 -0.1**
comp=Z,12nm,0.8s,baz=233,slow=3.8,SNR=73
CMAR SKP 21 50 30.3
comp=Z,1.5nm,0.8s,baz=146,slow=6.7,SNR=7.4
KKN Kakani 125.22 92 *e*P **PKPdf** **21 47 05.5 -1.0**
comp=Z,19nm,0.7s
RAMN Ramite 125.30 94 *e*P **PKPdf** **21 47 06.4 -0.3**
comp=Z,83nm,1.1s
MSO Missoula 125.40 303 P **PKiKP** **21 47 06.7 +0.3**
baz=137
N02D Trinity Center 125.45 292 P **PKiKP** **21 47 06.9 +0.2**
baz=137,SNR=19
CHTO Chiang Mai 125.47 111 PKiKP **PKiKP** **21 47 07.0 -0.3**
CHTO Chiang Mai 125.47 111 **PKiKP** **21 47 07.0 -0.3**
M04C Macdoel 125.60 293 P **PKiKP** **21 47 07.5 +0.5**
baz=137,SNR=13
JIRN Jiri 125.62 93 *e*P **PKPdf** **21 47 06.8 -0.6**
comp=Z,58nm,0.6s
GUN Gumba 125.64 92 *e*P **PKPdf** **21 47 06.9 -0.5**
comp=Z,66nm,1.2s
ODAN Odare 125.67 94 *e*P **PKPdf** **21 47 07.2 -0.2**
comp=Z,77nm,1.2s
M02C Callahan 125.83 292 P **PKiKP** **21 47 07.9 +0.5**
baz=137,SNR=22
FFC Flin Flon 126.09 316 PKiKP **PKiKP** **21 47 07.2 -0.2**
FFC Flin Flon 126.09 316 **PKiKP** **21 47 07.2 -0.2**
L04D Klamath Falls 126.15 294 P **PKiKP** **21 47 08.2 +0.1**
baz=137,SNR=11
K04D Chiloquin, OR 126.17 294 P **PKiKP** **21 47 08.1 0.0**
baz=136
TAPN Taplejung 126.23 94 *e*P **PKPdf** **21 47 08.1 -0.4**
comp=Z,26nm,1.0s
KCP Kidapawan 126.33 146 ‖ *i* P **PKiKP** **21 47 09.0 -0.3**
FCC Fort Churchill 126.34 324 PKiKP **PKPdf** **21 47 06.9 -0.4**
FCC Fort Churchill 126.34 324 **PKPdf** **21 47 06.8 -0.4**
J05D Fort Rock, OR 126.38 295 P **PKiKP** **21 47 09.1 +0.5**
baz=136,SNR=13
SCO Scoresbysund 126.51 2 *i* PKiKP **PKiKP** **21 47 08.9 +1.2**
SCO pmax pmax
comp=Z,7.0nm,1.1s
SCO Scoresbysund 126.51 2 *i* P **PKiKP** **21 47 08.9 +1.2**
comp=Z,7.1nm,1.1s
J04D Umpqua Nationa 126.79 295 P **PKiKP** **21 47 09.4 -0.1**
baz=136
I05D Terrebonne, OR 127.19 296 P **PKiKP** **21 47 10.0 0.0**
baz=136,SNR=8.9
K02D Willamette Mer 127.19 293 P **PKiKP** **21 47 10.5 +0.4**
baz=136,SNR=14
I04A Tendick Farm, 127.34 295 P **PKiKP** **21 47 09.9 -0.4**
baz=136,SNR=8.1
J01E Myrtle Point 127.66 293 P **PKiKP** **21 47 11.0 +0.2**
baz=136,SNR=6.4
I03D Drain, OR 127.75 294 P **PKiKP** **21 47 11.1 +0.1**
baz=136,SNR=5.5
G05D Wamic, OR 127.82 297 P **PKiKP** **21 47 11.6 +0.4**
baz=135
NEW Newport 127.93 302 PKP **PKPdf** **21 47 10.6 -0.1**
comp=Z,2.5nm,0.8s,baz=182,slow=3.3,SNR=8.3
NEW Newport 127.93 302 P **PKiKP** **21 47 11.3 0.0**
baz=135
H04D Lebanon 128.03 295 P **PKiKP** **21 47 11.8 +0.2**
baz=135,SNR=8.3
KLMR Klimovskoe 128.12 35 *e*PKiKP **PKPdf** **21 47 09.6 -1.0**
KLMR *e* 21 47 40.3
KLMR pmax pmax
comp=Z,36nm,1.3s
KLMR Klimovskoe 128.12 35 *e*PKPdf **PKPdf** **21 47 09.7 -0.9**
KLMR AMP 21 47 11.8
comp=Z,36nm,1.3s
KLMR *e*pPKPdf **pPKPdf** **21 47 40.4 -0.2**
I02D Swisshome 128.29 294 P **PKiKP** **21 47 12.4 +0.3**
baz=135
F05D White Salmon 128.35 297 P **PKiKP** **21 47 12.1 -0.1**
baz=135
G03D McMinnville, O 128.78 296 P **PKiKP** **21 47 13.2 +0.2**
baz=135
SUMG Summit 128.78 356 *i* PKiKP **PKiKP** **21 47 12.7 -0.1**
SUMG pmax pmax
comp=Z,38nm,1.1s
SUMG Summit 128.78 356 *i* P **PKiKP** **21 47 12.7 -0.1**
comp=Z,38nm,1.1s
KSH Kashi 128.82 75 PKP **PKiKP** **21 47 13.3 -0.2**
KSH sPKP 21 47 50.3
KSH PP **PP** **21 49 24.8 +3.2**
KSH PKS 21 50 51.3
KSH SKKS 21 56 06.3
KSH AMB AMB
comp=Z,250nm,5.1s
KSH LR LR
comp=Z,150nm,5.8s
KSH LR LR
comp=Z,190nm,14.9s
KSH LR LR
comp=Z,400nm,5.5s
F04D Rainier, OR 129.26 297 P **PKiKP** **21 47 14.5 +0.5**
baz=134
E04D Cinebar 129.37 297 P **PKiKP** **21 47 14.3 +0.1**
baz=134
AML Almayashu 129.46 71 P **PKiKP** **21 47 15.2 +0.1**
SNR=18
EKS2 Erkin-Say 129.88 70 P **PKiKP** **21 47 15.2 -0.3**
SNR=22
LSA Lhasa 129.96 95 P **PKPdf** **21 47 15.8 0.0**
LSA pmax pmax
comp=Z,55nm,1.1s
LSA Lhasa 129.96 95 PKP **PKPdf** **21 47 15.6 -0.2**
UCH Uchtor 129.96 71 P **PKiKP** **21 47 16.2 0.0**
SNR=19
TMCR Tamitsa 130.16 31 *e*PKiKP **PKPdf** **21 47 14.5 +0.1**
TMCR pmax pmax
comp=Z,71nm,1.3s
AAK Ala-Archa 130.24 71 PKP **PKiKP** **21 47 16.4 +0.1**
comp=Z,12nm,0.7s,baz=173,slow=2.9,SNR=55
AAK SKPbc **SKPab** **21 50 27.3 -0.7**
comp=Z,13nm,0.9s,baz=200,slow=4.1,SNR=15
AAK Ala-Archa 130.24 71 P **PKiKP** **21 47 16.4 +0.1**
SNR=18
AAK Ala-Archa 130.24 71 *c* *i* PKiKP **PKiKP** **21 47 16.1 -0.2**
AAK pmax pmax
comp=Z,28nm,1.3s
KZA Kyzart 130.25 72 P **PKiKP** **21 47 16.9 +0.2**
SNR=18
D03D Eldon 130.30 298 P **PKiKP** **21 47 16.5 +0.4**
baz=133,SNR=5.4
B05A Bryant 130.31 299 P **PKiKP** **21 47 15.8 -0.2**
baz=133,SNR=17
KBK Karagaybulak 130.49 71 P **PKiKP** **21 47 16.9 0.0**
SNR=16
USP Ospenovka 130.68 70 P **PKPdf** **21 47 16.4 +0.3**
SNR=11
ULHL Ulahol 130.89 73 P **PKiKP** **21 47 17.6 -0.2**
SNR=15
A04D Lummi Island 130.92 299 P **PKiKP** **21 47 17.0 -0.2**
baz=133
ARCES ARCESS Array B 131.22 22 PKP **PKPdf** **21 47 16.3 0.0**
comp=Z,10.0nm,0.7s,baz=210,slow=1.5,SNR=17
ARCES SKPbc **SKPbc** **21 50 28.9 -1.7**
comp=Z,2.9nm,0.7s,baz=204,slow=2.7,SNR=4.6
ARU Arti 131.99 48 *i* PKiKP **PKPdf** **21 47 18.2 +0.1**
ARU 21 49 42.6
ARU Arti 131.99 48 **PKiKP** **21 47 18.7 -0.4**
KMI Kunming 132.65 110 PKP **PKPdf** **21 47 20.5 -0.2**
DAG Danmarks Havn 132.89 3 ⇑ *i* PKiKP **PKPdf** **21 47 19.2 -0.1**
DAG Danmarks Havn 132.89 3 ⇑ *i* P **PKPdf** **21 47 19.2 -0.1**
SVE Sverdlovsk 133.12 49 *e*PKiKP **PKiKP** **21 47 21.4 0.0**
SVE pmax pmax
comp=Z,31nm,1.0s
BRVK Borovoye 135.04 58 *c* *i* PKiKP **PKiKP** **21 47 24.8 -0.6**
BRVK pmax pmax
comp=Z,18nm,1.3s
BRVK Borovoye 135.04 58 **PKiKP** **21 47 24.6 -0.8**
GYA Guiyang 135.77 113 PKP **PKiKP** **21 47 27.8 -0.2**
GYA PP **PP** **21 50 11.5 +5.6**
GYA PKS 21 51 03.8
GYA SS SS 22 07 55.3 +0.2
GYA AMB AMB
comp=Z,80nm,9.0s
GYA LR LR
comp=Z,70nm,4.3s

GYA LR LR
comp=Z,100nm,4.5s
GYA LR LR
comp=Z,50nm,6.0s
YKA Yellowknife Ar 136.20 318 PKhKP PKPpre 21 47 08.1
YKA PKP **PKPdf 21 47 26.2 +0.4**
comp=Z,10.0nm,0.6s,baz=124,slow=2.5,SNR=57
YKA SKPbc **SKPbc 21 50 45.4 -1.9**
comp=Z,17nm,1.0s,baz=114,slow=2.6,SNR=19
MAKZ Makanchi 136.99 72 PKHKP PKPpre 21 47 17.4
MAKZ Makanchi 136.99 72 PKPpre 21 47 17.4
MKAR Makanchi Array 137.15 72 PKhKP PKPpre 21 47 18.9
comp=Z,1.0nm,0.5s,baz=232,slow=3.6,SNR=11
MKAR PKP **PKPdf 21 47 27.2 -0.9**
comp=Z,5.4nm,0.7s,baz=216,slow=2.1,SNR=20
MKAR SKPbc **SKPbc 21 50 47.9 -2.9**
comp=Z,4.3nm,0.9s,baz=259,slow=1.7,SNR=8.6
KURK Kurchatov 137.68 65 *i* PKIKP **PKPdf 21 47 29.3 +0.4**
KURK Kurchatov 137.68 65 PKPpre 21 47 20.5
NOR Nord 137.76 2 *i* PKIKP **PKPdf 21 47 29.1 +0.8**
NOR Nord 137.76 2 *i* P **PKPdf 21 47 29.1 +0.8**
CD2 Chengdu 137.79 106 PKP **PKPdf 21 47 29.4 -0.5**
RES Resolute Bay 137.98 339 PKP **PKPdf 21 47 27.7 -1.1**
comp=Z,19nm,1.0s,baz=188,slow=1.4,SNR=13
RES SKPbc **SKPbc 21 50 51.2 -1.0**
comp=Z,11nm,1.0s,baz=133,slow=3.4,SNR=6.3
WMQ Urumqi 138.15 79 *e*PKP **PKiKP 21 47 31.6 -0.6**
WMQ LR LR
comp=Z,260nm,29.0s
WMQ LR LR
comp=Z,480nm,29.0s
WMQ LR LR
comp=Z,130nm,28.8s
TPUB Ta-pu 139.66 132 PKiKP 21 47 35.9 0.0
DLBC Dease Lake 140.28 307 PKhKP PKPpre 21 47 29.3
comp=Z,5.3nm,1.0s,baz=181,slow=1.2,SNR=4.7
DLBC SKPbc **SKPbc 21 50 58.7 -0.4**
comp=Z,24nm,1.1s,baz=126,slow=3.2,SNR=15
DGZ Jazzator, Alta 141.64 72 *i* PKIKP **PKPdf 21 47 35.2 -1.2**
LZH Lanzhou 141.77 101 ⇑PKP **PKPdf 21 47 31.5 -5.6**
LZH SS SS 22 09 05.0 -1.0
GTA Gaotai 141.91 93 *e*PKP **PKPdf 21 47 32.4 -4.8**
ZALV Zalesovo Beam 142.65 64 PKhKP PKPpre 21 47 33.5
comp=Z,8.3nm,0.7s,baz=231,slow=4.5,SNR=26
ZALV SKPbc **SKPbc 21 51 03.5 -1.7**
comp=Z,3.8nm,0.8s,baz=204,slow=3.3,SNR=5.4
XAN Xi'an 142.97 108 PKP **PKPdf 21 47 35.9 -3.2**
XAN AMB AMB
comp=Z,140nm,3.5s
WHN Wuhan 142.98 118 PKP **PKPdf 21 47 35.0 -4.2**
A36M Sachs Harbour 144.29 328 P **PKPdf 21 47 39.6 -0.6**
baz=109
JOW Kunigami 145.83 139 PKPbc **PKPab 21 47 46.0 +0.4**
comp=Z,5.2nm,0.7s,baz=158,slow=16,SNR=12
INK Inuvik 145.84 320 PKPbc **PKPbc 21 47 43.9 +0.1**
comp=Z,88nm,0.7s,baz=75,slow=3.3,SNR=188
INK SKPbc **SKPbc 21 51 11.4 -0.8**
comp=Z,20nm,0.9s,baz=105,slow=4.0,SNR=5.9
INK Inuvik 145.84 320 PKPdf 21 47 41.9 -1.1
NJ2 Nanjing 146.40 122 *i* PKPbc **PKPbc 21 47 46.9 +0.4**
EPYK Eagle Plains 146.44 316 P **PKPbc 21 47 46.0 +0.3**
baz=108
TIY Taiyuan 147.61 108 *e*PKPbc **PKPbc 21 47 49.3 -0.6**
TIY SS SS 22 10 18.0 +5.6
TIY AMB AMB
comp=Z,85nm,4.3s
TIY LR LR
comp=Z,89nm,4.0s
TIY LR LR
comp=Z,78nm,6.7s
TIY LR LR
comp=Z,66nm,15.3s
BTO Baotou 148.38 102 *e*PKPbc **PKPdf 21 47 47.9 -0.3**
TIA Tai'an 148.90 115 PKPbc **PKPbc 21 47 53.3 +0.1**
NRIK Noril'sk 149.30 39 PKPbc **PKiKP 21 47 53.8 -0.5**
comp=Z,27nm,0.8s,baz=324,slow=0.2,SNR=49
HHC Hu-ho-hao-te 149.40 103 *e*PKPbc **PKPbc 21 47 54.5 +0.1**
JCJ Chichijima 149.93 162 PKPbc **PKPbc 21 47 55.5 -0.5**
comp=Z,168nm,0.6s,baz=280,slow=23,SNR=12
MOY Mondy 149.97 77 *e*PKIKP **PKPdf 21 47 50.3 -0.1**
MOY pmax pmax
comp=Z,123nm,2.6s
HDA Harding Lake 150.05 311 P **PKPbc 21 47 55.1 0.0**
baz=103
ILAR Eielson Array 150.11 311 PKP **PKPdf 21 47 47.4 -2.7**
comp=Z,4.5nm,0.9s,baz=318,slow=1.2,SNR=46
ILAR PKPbc **PKiKP 21 47 55.6 -0.4**
comp=Z,104nm,0.9s,baz=132,slow=2.4,SNR=232
ILAR SKPbc 21 51 21.2
comp=Z,8.6nm,1.2s,baz=103,slow=1.3,SNR=3.6
PMR Palmer 150.29 305 PKIKP **PKiKP 21 47 56.8 +0.3**
PMR Palmer 150.29 305 PKPbc **PKiKP 21 47 56.8 +0.3**
POKR Poker Plat Res 150.41 312 P **PKPbc 21 47 56.0 +0.1**
baz=102
CCB Clear Creek Bu 150.47 311 PKPbc **PKPbc 21 47 56.1 0.0**
COLA College 150.53 311 PKIKP **PKiKP 21 47 56.5 -0.3**
COLA College 150.53 311 PKiKP 21 47 56.5 -0.3
TCOL CIGO, UAF Yank 150.54 311 P **PKPbc 21 47 56.2 0.0**
baz=102
WRH Wood River Hil 150.55 311 PKPbc **PKiKP 21 47 56.7 -0.2**
BRLK Bradley Lake 150.57 301 PKiKP 21 47 57.3 +0.2
ZAK Zakamensk 150.58 80 *e*PKIKP **PKPdf 21 47 50.9 -0.5**
ZAK pmax pmax
comp=Z,69nm,1.1s
MDM Murphy Dome 150.71 312 PKPbc **PKPbc 21 47 56.7 0.0**
KDAK Kodiak Island 150.73 296 PKPbc **PKiKP 21 47 57.5 0.0**
comp=Z,92nm,0.7s,baz=135,slow=1.5,SNR=65
KDAK Kodiak Island 150.73 296 PKiKP 21 47 57.4 -0.1
MCK McKinley 150.75 309 PKIKP **PKiKP 21 47 57.9 +0.5**
MCK McKinley 150.75 309 PKPbc **PKiKP 21 47 57.9 +0.5**
OHAK Old Harbor 150.88 295 PKiKP 21 47 58.1 +0.4
SONM Songino Array 150.94 87 PKP **PKPdf 21 47 52.0 -0.1**
comp=Z,4.3nm,1.0s,baz=212,slow=2.4,SNR=21
SONM PKPbc **PKiKP 21 47 58.3 -0.1**
comp=Z,61nm,0.7s,baz=222,slow=3.3,SNR=208
SONM Songino Array 150.94 87 PKIKP **PKPdf 21 47 52.0 -0.1**
BJI Beijing 151.29 109 PKPbc **PKPdf 21 47 52.5 -0.2**
BJI pPKP **pPKPdf 21 48 23.9 +1.0**
BJI PP **PP 21 51 42.5 +3.6**
BJI AMB AMB
comp=Z,140nm,5.5s
ULN Ulaanbaatar 151.32 88 PKIKP **PKPdf 21 47 52.7 0.0**
ULN Ulaanbaatar 151.32 88 PKPdf 21 47 52.7 0.0
TLY Talaya 151.43 78*c i*PKIKP **PKiKP 21 47 59.5 +0.3**
TLY pmax pmax
comp=Z,81nm,1.3s
TLY Talaya 151.43 78 PKiKP 21 47 59.4 +0.3
TOLK Toolik Lake Re 151.71 319 P **PKiKP 21 47 59.7 +0.4**
baz=94
TOLK Toolik Lake Re 151.71 319 PKPbc **PKiKP 21 48 00.1 +0.8**
BPAW Bear Paw Mtn. 151.71 309 PKPbc **PKiKP 21 47 59.5 +0.1**
COLD Coldfoot 151.84 316 PKPbc **PKiKP 21 48 00.3 +0.8**
PPLA Purkeypile 152.00 307 PKPbc **PKiKP 21 48 01.0 +0.8**
IRK Irkutsk 152.03 78 *e*PKIKP **PKPbc 21 47 59.6 -0.5**
IRK pmax pmax
comp=Z,82nm,1.9s
JNU Nakatsue 152.47 138 PKPbc **PKiKP 21 48 01.7 -0.3**
comp=Z,29nm,0.7s,baz=290,slow=0.5,SNR=30
CNBA Chernabura Isl 153.25 287 PKPdf **PKPdf 21 47 55.1 +0.1**
TTA Tatalina 153.73 306 PKPbc **PKiKP 21 48 04.5 +0.8**
KSRS Korea Array 155.02 129 PKP **PKPdf 21 47 58.0 -0.1**
comp=Z,1.8nm,0.7s,baz=224,slow=1.2,SNR=10
KSRS PKPbc PKPbc 21 48 07.2
comp=Z,4.4nm,1.0s,baz=218,slow=1.7,SNR=10
KSRS PKPab **PKPab 21 48 23.6 +0.6**
comp=Z,6.7nm,0.8s,baz=222,slow=4.5,SNR=16
MAJO Matsushiro 158.05 148 PKP2 **PKPab 21 48 36.7 +0.5**
MAJO 22 48 02.2
MAJO Matsushiro 158.05 148 PKPdf 21 48 02.2 +0.1
MAJO **PKPab 21 48 36.7 +0.5**
MAT Matsushiro 158.05 148 PKP **PKPdf 21 48 01.6 -0.5**
MJAR Matsushiro Arr 158.05 148 PKP **PKPdf 21 48 01.9 -0.3**
comp=Z,4.3nm,1.1s,baz=191,slow=2.2,SNR=13
MJAR PKPab **PKPab 21 48 36.2 +0.1**
comp=Z,2.4nm,0.6s,baz=282,slow=21,SNR=11
MJB9 Matsu-Tunnel 158.05 148 PKPdf **PKPdf 21 48 02.1 0.0**
CN2 Changchun 158.80 115 PKP **PKPdf 21 48 02.1 -0.7**
CN2 PP **PP 21 52 21.3 +0.6**
BOD Bodaibo 159.21 70 *e*PKIKP **PKPdf 21 48 00.3 -2.5**
BOD pmax pmax
comp=Z,11nm,1.2s
TIXI Tiksi 161.65 24 PKPab **PKPab 21 48 51.8 +0.9**
comp=Z,7.8nm,0.7s,baz=336,slow=3.3,SNR=21
TIXI Tiksi 161.65 24 PKP2 **PKPab 21 48 51.0 +0.1**
TIXI Tiksi 161.65 24 PKPab **PKPab 21 48 51.0 +0.1**
USA0B Ussuriysk Arra 162.28 124 PKIKP **PKPdf 21 48 04.1 -2.4**
USA0B Ussuriysk Arra 162.28 124 PKPdf **PKPdf 21 48 04.1 -2.4**
USRK Ussuriysk Ar. 162.28 124 PKP **PKPdf 21 48 04.9 -1.7**
comp=Z,1.4nm,0.8s,baz=132,slow=2.8,SNR=5.4
USRK PKPab **PKPab 21 48 52.8 -1.6**
comp=Z,14nm,1.0s,baz=233,slow=4.5,SNR=15
USRK PP **PP 21 52 44.7 +5.4**
comp=Z,2.4nm,0.9s,baz=197,slow=6.0,SNR=4.0
ZEA Zeya 165.35 89 *e*PKIKP **PKPdf 21 48 08.0 -1.0**
ZEA pmax pmax
comp=Z,42nm,1.6s
KLR Kul'dur 165.66 111 PKP **PKPdf 21 48 07.9 -1.6**
comp=Z,3.0nm,0.9s,baz=293,slow=5.1,SNR=5.3
KLR PKPab **PKPab 21 49 08.7 -0.6**
comp=Z,12nm,0.7s,baz=258,slow=4.3,SNR=21
BILL Bilibino 166.59 337 *i* PKIKP **PKPdf 21 48 04.7 -4.9**
BILL *i* 21 48 37.0
BILL pmax pmax
comp=Z,5.0nm,1.3s
SEY Seymchan 173.31 0 PKP **PKPdf 21 48 11.2 -2.4**
comp=Z,3.8nm,0.9s,baz=29,slow=2.2,SNR=4.4
PETK Petropavlovsk- 175.61 226 PKP **PKPdf 21 48 12.9 -1.8**
comp=Z,14nm,1.0s,baz=132,slow=2.2,SNR=7.5
PETK PKPab **PKPab 21 49 53.5 +0.3**
comp=Z,8.0nm,0.8s,baz=134,slow=13,SNR=4.6

IDC ***17*** *21:43:17.3±2.0, 6.°43S×129.°68E, h141km±16km, mb3.6/4, mb1 3.9/7, mb1mx3.4/42, mbtmp4.2/7, Error ellipse: s-maj=34.2km s-min=13.8km az=120.0*
NEIC ***17*** *21:43:17.7±1.8, 6.°59S±0.°04×129.°87E±0.°08, h171km±8km, mb4.2/18, Error ellipse: s-maj=12.2km s-min=6.5km az=88.0*
DJA ***17*** *21:43:17.6±0.3, 7.°5S±3.°×13.°0E±.°, h210km±9km, M4.4/12, mB5.1/5, mb4.3/8, MLv4.5/12, MLv4.3/9, Mw(mB)4.4/5*
ISC 17 21:43:16.1±0.6, 6.°60S±0.°05×129.°83E±0.°06, h146km, n46, σ18°75/52, mb3.9/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.00**	**133**	P	Pn	21 43 57.3	+6.3
SAUI	**Saumlaki**	**2.00**	**133**	Pn	**Pn**	**21 43 54.0**	**+3.0**
SAUI				Sn	**Sn**	**21 44 20.3**	**+2.5**
BNDI	**Bandanaira**	**2.06**	**2**	P	**Pn**	**21 43 56.5**	**+4.8**
MSAI	**Masohi**	**3.35**	**344**	P	**Pn**	**21 44 12.2**	**+4.4**
FAKI	**Fak Fak**	**4.38**	**34**	P	**Pn**	**21 44 22.9**	**+1.7**
FAKI	**Fak Fak**	**4.38**	**34**		**Pn**	**21 44 22.9**	**+1.7**
FAKI				Sn	**Sn**	**21 45 12.2**	**+0.4**
SIJI	**Sorong**	**5.87**	**14**	P	**Pn**	**21 44 42.2**	**+1.1**
	10nm,0.3s,baz=15,slow=2.8,SNR=65						
SIJI				S	**Sn**	**21 45 44.8**	**-2.6**
	5.0nm,0.3s,baz=253,slow=23,SNR=6.8						
MTN	**Manton Dam**	**6.34**	**168**	Pn	**Pn**	**21 44 49.9**	**+2.6**
MTN				Sn	**Sn**	**21 45 58.4**	**-0.3**
SOEI	**Soe**	**6.34**	**240**	P	**Pn**	**21 44 49.9**	**+2.5**
	0.2nm0.2nm27nm,1.0s						
SOEI	**Soe**	**6.34**	**240**		**Pn**	**21 44 49.9**	**+2.5**
SOEI				Sn	**Sn**	**21 45 58.3**	**-0.6**
LBMI	**Labuha**	**6.36**	**338**	P	**Pn**	**21 44 50.5**	**+2.9**
	0.2nm0.2nm53nm,0.8s						
RKPI	**Ransiki, Papua**	**6.66**	**41**	P	**Pn**	**21 44 53.2**	**+1.6**
	1.7nm10μm254nm,0.8s						
BATI	**Baumata**	**7.08**	**239**	P	**Pn**	**21 44 59.0**	**+1.8**
	12nm,0.3s,baz=111,slow=2.9,SNR=15						
BATI				S	**Sn**	**21 46 15.7**	**-0.8**
	14nm,0.3s,baz=56,slow=17,SNR=9.3						
BATI	**Baumata**	**7.08**	**239**	P	**Pn**	**21 44 59.3**	**+2.1**
	0.2nm0.2nm30nm,0.5s						
KNRA	**Kununurra**	**9.09**	**187**		**Pn**	**21 45 25.4**	**+1.4**
FITZ	**Fitzroy Crossi**	**12.14**	**199**	P	**Pn**	**21 46 03.8**	**-0.5**
	1.7nm,0.3s,baz=14,slow=9.8,SNR=76						
FITZ	**Fitzroy Crossi**	**12.14**	**199**	P	**Pn**	**21 46 04.1**	**-0.2**
WB0	**Warramunga Arr**	**13.82**	**162**	Pn	**Pn**	**21 46 25.9**	**0.0**
WRAB	**Tennant Creek**	**13.96**	**162**	Pn	**Pn**	**21 46 27.9**	**+0.1**
WRA	**Warramunga Arr**	**13.97**	**162**	P	**Pn**	**21 46 26.0**	**-1.8**
	0.3nm,0.3s,baz=360,slow=9.4,SNR=6.4						
WB2	**Warramunga Arr**	**13.97**	**162**	Pn	**Pn**	**21 46 28.1**	**+0.2**
WR0	**Warramunga Arr**	**14.05**	**161**	Pn	**Pn**	**21 46 29.8**	**+1.0**
COEN	**Coen**	**15.02**	**120**		**P**	**21 46 42.9**	**0.0**
AS31	**Alice Springs**	**17.42**	**167**	P	**Pn**	**21 47 11.8**	**+1.5**
ASAR	**Alice Springs**	**17.42**	**167**	P	**Pn**	**21 47 13.1**	**+2.8**
	1.3nm,0.3s,baz=345,slow=10,SNR=54						
ASAR				S	**S**	**21 50 22.4**	**-0.9**
	0.7nm,0.3s,baz=341,slow=22,SNR=6.9						
PSAD1	**Pilbara Seismi**	**17.66**	**212**	P	**P**	**21 47 12.5**	**+0.5**
PSAC2	**Pilbara Seismi**	**17.71**	**212**	P	**P**	**21 47 12.6**	**+0.1**
PSAC2				IAmb	IAmb	21 47 30.9	
	comp=Z,12nm,1.1s						
PSAD2	**Pilbara Seismi**	**17.72**	**212**	P	**P**	**21 47 12.7**	**+0.1**
PSAD2				IAmb	IAmb	21 47 32.2	
	comp=Z,9.6nm,1.0s						
PSAB2	**Pilbara Seismi**	**17.72**	**212**	P	**P**	**21 47 13.1**	**+0.4**
PSAC1	**Pilbara Seismi**	**17.73**	**212**	P	**P**	**21 47 13.3**	**+0.5**
PSAC1				IAmb	IAmb	21 47 29.0	
	comp=Z,14nm,1.1s						
PSAA2	**Pilbara Seismi**	**17.74**	**212**	P	**P**	**21 47 12.4**	**-0.4**
PSAA2				IAmb	IAmb	21 47 15.5	
	comp=Z,11nm,0.8s						
PSA00	**Pilbara Seismi**	**17.75**	**212**		**P**	**21 47 12.9**	**0.0**
PSAA3	**Pilbara Seismi**	**17.75**	**212**	P	**P**	**21 47 13.2**	**+0.2**
PSAA3				IAmb	IAmb	21 47 17.9	
	comp=Z,7.6nm,0.7s						
PSAA1	**Pilbara Seismi**	**17.75**	**212**	P	**Pn**	**21 47 13.7**	**-0.6**
PSAA1				IAmb	IAmb	21 47 15.5	
	comp=Z,6.7nm,0.6s						
PSAB1	**Pilbara Seismi**	**17.75**	**212**	P	**P**	**21 47 12.8**	**-0.2**
PSAB1				IAmb	IAmb	21 47 17.6	
	comp=Z,11nm,1.1s						
PSAB3	**Pilbara Seismi**	**17.76**	**212**	P	**Pn**	**21 47 13.9**	**-0.4**
PSAB3				IAmb	IAmb	21 47 28.2	
	comp=Z,14nm,1.1s						
PSAC3	**Pilbara Seismi**	**17.80**	**212**	P	**Pn**	**21 47 14.3**	**-0.5**
PSAC3				IAmb	IAmb	21 47 16.7	
	comp=Z,14nm,1.1s						
PSAD3	**Pilbara Seismi**	**17.84**	**212**	P	**P**	**21 47 14.5**	**+0.5**
DZM	**Mont Dzumac**	**38.52**	**117**	P	**P**	**21 50 21.5**	**-3.2**
SONM	**Songino Array**	**58.01**	**342**	P	**P**	**21 52 54.8**	**+1.1**
	comp=Z,0.5nm,0.4s,baz=163,slow=6.5,SNR=4.9						
MKAR	**Makanchi Array**	**67.80**	**327**	P	**P**	**21 53 59.0**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=115,slow=7.5,SNR=24						
ZALV	**Zalesovo Beam**	**71.15**	**334**	P	**P**	**21 54 18.5**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=132,slow=6.8,SNR=3.9						
KURK	**Kurchatov**	**72.09**	**329**	P	**P**	**21 54 24.2**	**-0.1**
KURK				IAmb	IAmb	21 54 25.7	
	comp=Z,4.6nm,1.1s						
QSPA	**South Pole Qui**	**83.38**	**180**	P	**P**	**21 55 23.8**	**-3.0**
RAYN	**Ar Rayn**	**87.43**	**294**	P	**P**	**21 55 46.8**	**-0.8**
ILAR	**Eielson Array**	**93.06**	**25**	P	**P**	**21 56 13.3**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=258,slow=2.5,SNR=2.2						

TAP 17 21:54:55.2, 24.°84N×121.°93E, h11km±1km, ML1.9, 2C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NTC	**Toucheng**	**0.09**	**279**	⇑P	Pg	21 54 58.5	+0.8
	baz=279						
NTC				S	Sg	21 55 00.5	+1.0
	baz=279						
TIPB	**Shuangxi**	**0.16**	**326**	⇑*i*P	Pb	21 54 59.7	-0.6
	baz=325						
TIPB				*i* S	Sg	21 55 02.5	+1.1
	baz=325						
TWB1	**Santiao Chiao**	**0.18**	**19**	P	Pg	21 54 59.5	+0.4
	baz=21						
TWB1				S	Sg	21 55 02.0	+0.3
	baz=21						
TWC	**Suao**	**0.24**	**197**	P	Pb	21 55 00.9	-0.7
	baz=194						
TWC				*e*S	Sg	21 55 04.0	+0.5
	baz=194						
TWE	**Neicheng**	**0.26**	**243**	*e*P	Pb	21 55 01.6	-0.4
	baz=241						
TWE				*e*S	Sb	21 55 05.6	-0.9
	baz=241						
NWF	**Wu-fen Shan**	**0.27**	**330**	*e*P	Pb	21 55 01.9	-0.3
	baz=330						
NWF				*e*S	Sb	21 55 06.7	-0.1
	baz=330						
WFSB	**Wu-fen Shan**	**0.27**	**330**	*e*P	Pb	21 55 02.0	0.0
	baz=330						
WFSB				*e*S	Sb	21 55 06.3	-0.3
	baz=330						
TWA	**Mucha**	**0.34**	**294**	*e*P	Pb	21 55 03.1	-0.3
	baz=294						
TWA				*e*S	Sb	21 55 08.6	-0.2
	baz=294						
EOS1	**EOS1**	**0.34**	**147**	P	Pb	21 55 03.0	-0.3
	baz=147						
EOS1				*e*S	Sb	21 55 10.0	+1.2
	baz=147						
ENTT	**Nioudou**	**0.38**	**239**	*e*P	Pb	21 55 03.9	-0.2
	baz=237						
ENTT				*e*S	Sb	21 55 09.0	-1.0
	baz=237						
NWLT	**Wulai**	**0.39**	**261**	*e*P	Pb	21 55 04.3	+0.1
	baz=260						
NWLT				*e*S	Sb	21 55 09.2	-1.1
	baz=260						
ENA	**Nanau**	**0.44**	**202**	*e*P	Pb	21 55 06.0	+1.0
	baz=201						
ENA				*e*S	Sb	21 55 11.2	-0.5
	baz=201						
NDT	**Datong Townshi**	**0.44**	**238**	*e*P	Pb	21 55 05.0	-0.1
	baz=237						
YM01	**YM01**	**0.44**	**314**	*e*P	Pb	21 55 05.6	+0.5
	baz=313						
YM01				*e*S	Sb	21 55 11.8	0.0
	baz=313						
YM11	**YM11**	**0.45**	**316**	*e*P	Pb	21 55 05.9	+0.6
	baz=315						
YM10	**YM10**	**0.46**	**314**	*e*P	Pb	21 55 05.8	+0.4
	baz=313						
YM08	**YM08**	**0.46**	**319**	*e*P	Pb	21 55 05.6	+0.1
	baz=318						
YHNB	**Yeheng**	**0.53**	**251**	*e*P	Pg	21 55 05.8	+0.2
	baz=251						
YHNB				*e*S	Sg	21 55 13.0	+0.4
	baz=251						
NNSB	**Datong**	**0.64**	**230**	*e*P	Pb	21 55 08.4	-0.2
	baz=230						
NNSH	**Datong**	**0.64**	**230**	*e*P	Pb	21 55 08.2	-0.4
	baz=230						
NACB	**Ninganchiao**	**0.73**	**204**	*e*P	Pg	21 55 09.3	0.0
	baz=204						
NACB				*e*S	Sb	21 55 19.7	-0.3
	baz=204						
ETLH	**Xiulin Townshi**	**0.75**	**213**	*e*P	Pb	21 55 10.8	+0.5
	baz=212						

JMA 17 21:54:56.1±0.1, 24.°39N×123.°77E, h12km±1km, M0.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.07**	**214**	P	Pg	21 54 58.5	0.0
IRIF				S	Sg	21 55 00.4	+0.1
JKRS	**Kuro-shima**	**0.27**	**125**	P	Pg	21 55 01.7	+0.1
JKRS				S	Sg	21 55 06.0	+0.7
HATJ	**Hateruma jima**	**0.33**	**174**	P	Pg	21 55 02.7	-0.1
HATJ				S	Sg	21 55 07.4	+0.1
JIJ	**Ishigaki jima**	**0.34**	**94**	P	Pg	21 55 03.0	0.0
JIJ				S	Sg	21 55 07.7	+0.1
JISG	**Ishigakijimahi**	**0.53**	**68**	P	Pg	21 55 06.5	0.0
JISG				*e*S	Sb	21 55 14.7	-0.3
YOJ	**Yonaguni jima**	**0.70**	**276**	P	Pg	21 55 09.7	+0.1
YOJ				*e*S	Sg	21 55 19.1	+0.3
JTJ	**Tarama**	**0.89**	**73**	S	Sb	21 55 25.7	+0.5

SKHL ***17*** *21:59:59.0±0.2, 44.°19N×148.°43E, h46km±4km, mb4.3/4*
JMA ***17*** *22:00:01.6±0.4, 44.°24N×147.°89E, h112km, M3.7*
ISC 17 21:59:55.6±3.1, 44.°3N±0.°1×148.°4E±0.°2, h114km±24km, n18, σ28°07/28, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.00**	**340**	*e*P	**Pn**	**22 00 17.5**	**+0.5**
KUR				AMB	AMB	22 00 18.0	
	50nm,0.2s						
KUR				AMB	AMB	22 00 18.0	
	100nm,0.2s						
KUR				*e*S	**Sn**	**22 00 31.4**	**-1.8**
KUR				A	A	22 00 31.9	
	100nm,0.2s						
KUR				A	A	22 00 31.9	
	380nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.82**	**262**	*e*P	**Pn**	**22 00 28.4**	**+2.0**
YUK				AMB	AMB	22 00 28.6	
	70nm,0.2s						
YUK				*e*S	**Sn**	**22 00 49.1**	**-0.8**
YUK				A	A	22 00 49.8	
	400nm,0.5s						
YUK				A	A	22 00 49.8	
	510nm,0.5s						
LAGR	**Lagunnoye**	**1.87**	**263**	*e*P	**Pn**	**22 00 27.9**	**+0.9**
LAGR				AMB	AMB	22 00 28.0	
	40nm,0.2s						
LAGR				*e*S	**Sn**	**22 00 49.7**	**-1.3**
LAGR				A	A	22 00 51.0	
	910nm,0.4s						
LAGR				A	A	22 00 51.0	
	780nm,0.4s						
GRPR	**Tuman**	**1.89**	**262**	*e*P	**Pn**	**22 00 29.1**	**+1.8**
GRPR				AMB	AMB	22 00 30.0	
	90nm,0.3s						
GRPR				*e*S	**Sn**	**22 00 50.9**	**-0.6**
GRPR				A	A	22 00 52.0	
	610nm,0.4s						
GRPR				A	A	22 00 52.0	
	450nm,0.4s						
NEM2	**Nemuro 2**	**2.11**	**245**	P	**Pn**	**22 00 32.2**	**+2.1**
NEM2				*e*S	**Sn**	**22 00 55.8**	**-0.7**
NMR	**Nemuro--Hokkai**	**2.12**	**245**	*e*P	**Pn**	**22 00 30.9**	**+0.7**
NMR				*e*S	**Sn**	**22 00 54.7**	**-2.0**
GLVR	**Golovnino**	**2.12**	**256**	*e*S	**Sn**	**22 00 56.1**	**-0.7**
JRA	**Rausu**	**2.36**	**262**	P	**Pn**	**22 00 35.1**	**+1.8**
JNSB	**Nemuroshibetsu**	**2.48**	**259**	P	**Pn**	**22 00 37.0**	**+2.2**
JKHN	**Kushirohamanak**	**2.62**	**243**	P	**Pn**	**22 00 38.8**	**+2.1**
JKHN				*e*S	**Sn**	**22 01 07.5**	**-0.7**
JNK	**Nakash**	**2.73**	**256**	P	**Pn**	**22 00 40.1**	**+2.1**
JAK	**Akkeshi**	**2.96**	**245**	P	**Pn**	**22 00 43.0**	**+1.9**
JAK				*e*S	**Sn**	**22 01 15.1**	**-1.1**
JTKR	**Abashiri--Toko**	**3.22**	**266**	P	**Pn**	**22 00 46.0**	**+1.4**
JAR	**Ashorobuto**	**3.47**	**255**	P	**Pn**	**22 00 50.4**	**+2.5**
JCH	**Churui**	**4.01**	**247**	P	**Pn**	**22 00 56.8**	**+1.7**
JCH				*e*S	**Sn**	**22 01 39.7**	**-1.5**
JKK2	**Kamakawa 2**	**4.07**	**266**	P	**Pn**	**22 00 57.8**	**+2.0**
JKB	**Kayabe**	**5.88**	**248**	P	**Pn**	**22 01 21.6**	**+1.3**
JKB				*e*S	**Sn**	**22 02 22.4**	**-3.9**
JANG	**Nango**	**6.41**	**235**	*e*S	**Sn**	**22 02 34.6**	**-4.7**

IDC 17 22:27:57.4±62.0, 20.°08S×178.°41E, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.6/30, mbtmp3.9/3, MS3.3/1, Ms1 3.3/1, ms1mx2.8/31, Error ellipse: s-maj=1097.0km s-min=152.9km az=81.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**18.15**	**183**	LR	LR	22 36 54.0	
	comp=Z,94nm,18.5s,baz=226,slow=30						
STKA	**Stephens Creek**	**34.96**	**243**	P	P	22 34 51.8	+0.4
	0.3nm,0.3s,baz=74,slow=6.7,SNR=3.6						
WRA	**Warramunga Arr**	**41.32**	**262**	P	P	22 35 45.0	-0.

1.0nm,0.6s,baz=351,slow=15,SNR=10
MKAR Makanchi Array 60.31 327 P P 23 35 40.0 -0.1
0.2nm,0.4s,baz=126,slow=7.3,SNR=4.1

*IDC **17** 23:39:45.7±4.0,6.08S×68.00E,h0km,mb3.8/3,mb1 3.8/3, mb1mx3.3/50,mbtmp3.8/3,MS2.9/3,Ms1 3.0/3, ms1mx2.7/38,Error ellipse: s-maj=723.4km s-min=87.2km az=103.0*

ISC 17 23:39:44.1±3.3,6.8S±0.5×69.3E±0.3,h10km,n11,σ0s24/8, mb4.0/3,MS2.9/3,Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**3.29**	**106**	Pn		**Pg**	**23 40 47.2**	**0.0**
	baz=301,slow=17,SNR=33							
H08S1				T		T	23 45 18.5	
	baz=308,slow=80,SNR=8.4							
H08S3	**Diego Garcia H**	**3.29**	**105**	Pn		**Pg**	**23 40 47.2**	**0.0**
	baz=301,slow=17,SNR=20							
H08S3				T		T	23 45 20.0	
	baz=308,slow=80,SNR=5.6							
H08S2	**Diego Garcia H**	**3.31**	**106**	Pn		**Pg**	**23 40 47.5**	**0.0**
	baz=301,slow=17,SNR=37							
H08S2				T		T	23 45 21.3	
	baz=308,slow=80,SNR=7.9							
KMBO	**Kilima Mbogo**	**32.43**	**279**	LR		LR	23 56 58.0	
	comp=Z,27nm,20.1s,baz=100,slow=33							
CMAR	**Chiang Mai Arr**	**38.52**	**49**	LR		LR	00 01 12.0	
	comp=Z,18nm,18.2s,baz=130,slow=33							
MKAR	**Makanchi Array**	**54.55**	**11**	P		**P**	**23 49 12.6**	**+0.1**
	0.9nm,0.6s,baz=198,slow=8.2,SNR=7.3							
KURBB	**Kurchatov Arra**	**57.70**	**7**	P		**P**	**23 49 35.1**	**+0.2**
	0.7nm,0.6s,baz=207,slow=7.5,SNR=5.6							
ZALV	**Zalesovo Beam**	**61.88**	**10**	P		**P**	**23 50 03.3**	**-0.2**
	0.6nm,0.4s,baz=205,slow=6.6,SNR=4.5							
ESDC	**Sonseca Array**	**81.57**	**312**	LR		LR	00 26 25.8	
	comp=Z,5.8nm,19.1s,baz=20,slow=35							
PDAR	**Pinedale Array**	**144.12**	**359**	PKP		**PKPdf**	**23 59 21.1**	**+0.2**
	0.3nm,0.6s,baz=12,slow=5.9,SNR=2.0							
NVAR	**Mina Array Bea**	**147.73**	**11**	PKPbc		**PKPab**	**23 59 31.8**	**-0.3**
	0.5nm,0.7s,baz=349,slow=0.9,SNR=3.8							

*IDC **17** 23:43:49.6±0.6,7.07S×154.95E,h0km,mb4.4/22, mb1 4.6/24,mb1mx4.4/46,mbtmp4.4/24,ML3.9/2,MS3.9/19, Ms1 3.9/19,ms1mx3.8/28,Error ellipse: s-maj=20.4km s-min=13.9km az=98.0*

*GCMT **17** 23:43:56.1±0.2,7.31S±0.02×154.83E±0.02,h17km, MW5.0/104,Moment Tensor Solution. s48,c52; s104,c140; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr3.16±.14; Mθθ-1.58±.09; Mϕϕ-1.58±.09; Mrθ1.77±.24; Mθϕ1.38±.07; Mϕr-1.91±.24; Best double couple: M=4.01800×10^16^ NP1:ϕs314.00000°,δ25.00000°, λ88.00000°. NP2:ϕs136.00000°,δ65.00000°,λ91.00000°. Principal axes: T 4.1190, Plg70.0000°, Azm49.0000°; N -0.2020, Plg1.0000°, Azm316.0000°; P -3.9170, Plg20.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **17** 23:43:56.1±1.4,7.13S±0.08×154.70E±0.08,h43km±5km, mb4.8/127 Error ellipse: s-maj=12.1km s-min=10.0km az=216.0*

*DJA **17** 23:44:06.2±0.6,7.5±4.1×15.5E±.1,h123km±6km,M4.6/19, mb4.7/19,mB5.0/9,MLv4.9/2,Mw(mB)4.4/9,Mwp5.2/1*

ISC 17 23:43:56.3±0.3,7.20S±0.05×154.78E±0.05,h41km,n200, σ1s73/189,mb4.8/96,MS4.1/25,1C-1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.96**	**319**			**Pn**	**23 44 53.2**	**-1.4**
KRVT	**Keravat (AS076**	**3.96**	**316**	Pn		**Pn**	**23 44 53.6**	**-1.0**
	8.0nm,0.3s,baz=5.7,slow=4.2,SNR=9.4							
KRVT				Sn		**Sn**	**23 45 38.5**	**-1.5**
	22nm,0.3s,baz=198,slow=18,SNR=4.6							
KRVT				Lg		Lg	23 46 03.4	
	27nm,0.3s,baz=95,slow=3.5,SNR=5.1							
HNR	**Honiara**	**5.58**	**114**	Pn		**Pn**	**23 45 18.0**	**+1.1**
	4.1nm,0.3s,baz=207,slow=17,SNR=1.0							
HNR				Sn		**Sn**	**23 46 21.5**	**+1.7**
	12nm,0.3s,baz=169,slow=12,SNR=3.7							
HNR				LR		LR	23 47 18.9	
	comp=Z,2μm,19.5s,baz=282,slow=38							
HNR	**Honiara**	**5.58**	**114**			**Pn**	**23 45 18.9**	**+2.0**
PMG	**Port Moresby**	**7.85**	**253**	Pn		**Pn**	**23 45 51.0**	**+3.0**
	1.7nm,0.3s,baz=22,slow=6.0,SNR=3.6							
PMG				Sn		**Sn**	**23 47 09.3**	**-6.4**
	baz=25,slow=22,SNR=0.8							
PMG				LR		LR	23 48 36.1	
	comp=Z,1μm,22.0s,baz=52,slow=36							
PMG	**Port Moresby**	**7.85**	**253**	Pn		**Pn**	**23 45 48.3**	**+0.2**
COEN	**Coen**	**13.23**	**239**	Pn		**Pn**	**23 47 02.0**	**+0.3**
PATS	**Pohnpei**	**14.38**	**14**	Pn		**Pn**	**23 47 18.9**	**+1.6**
JAY	**Jayapura**	**14.77**	**288**	LR		LR	23 54 05.1	
	comp=Z,1μm,18.2s,baz=91,slow=41							
MTSU	**Mount Surprise**	**14.90**	**222**	P		**P**	**23 47 28.1**	**-1.3**
	baz=15,SNR=4.8							
CTA	**Charters Tower**	**15.25**	**212**	Pn		**Pn**	**23 47 31.0**	**+2.1**
	0.3nm,0.3s,baz=55,slow=18,SNR=5.7							
CTAO	**Charters Tower**	**15.25**	**212**	P		**Pn**	**23 47 29.6**	**+0.7**
SMPI	**Sarmi**	**16.82**	**287**	P		P	23 47 58.4	+7.7
	2μm2μm25nm,1.2s							
EIDS	**Eidsvold**	**18.41**	**191**	P		**P**	**23 48 08.0**	**-0.2**
DZM	**Mont Dzumac**	**18.59**	**144**	eLR		LR	23 52 33.8	
	comp=Z,349nm,20.9s							
QIS	**Mount Isa**	**19.81**	**226**	P		**Pn**	**23 48 24.6**	**-0.8**
	baz=20,SNR=8.2							
RMQ	**Roma**	**20.02**	**196**	P		Pn	23 48 27.7	-0.1
	baz=20,SNR=18							
QLP	**Quilpie**	**21.73**	**206**	P		**P**	**23 48 45.3**	**+1.1**
	baz=22,SNR=6.3							
KDU	**Kakadu**	**22.63**	**254**	P		**P**	**23 48 55.6**	**+1.6**
	baz=23,SNR=4.5							
FAKI	**Fak Fak**	**22.83**	**280**	P		**P**	**23 49 02.7**	**+6.5**
	912nm34nm,1.2s							
FAKI	**Fak Fak**	**22.83**	**280**	P		**P**	**23 48 54.8**	**-1.4**
ARMA	**Armidale**	**23.29**	**187**	P		**P**	**23 49 01.1**	**+0.4**
WR0	**Warramunga Arr**	**23.37**	**235**	P		**P**	**23 49 01.1**	**-0.3**
WR0				IAmb		IAmb	23 49 03.3	
	comp=Z,42nm,1.1s							
WB0	**Warramunga Arr**	**23.39**	**236**	P		**P**	**23 49 00.6**	**-1.2**
WRAB	**Tennant Creek**	**23.51**	**235**	P		**P**	**23 49 02.4**	**-0.5**
WRAB				IAmb		IAmb	23 49 04.5	
	comp=Z,33nm,1.1s							
WB2	**Warramunga Arr**	**23.51**	**235**	P		**P**	**23 49 02.7**	**-0.2**
	baz=24							
WB2	**Warramunga Arr**	**23.51**	**235**	P		**P**	**23 49 03.0**	**+0.1**
WB2				IAmb		IAmb	23 49 04.6	
	comp=Z,38nm,1.1s							
WRA	**Warramunga Arr**	**23.52**	**235**	P		**P**	**23 49 02.5**	**-0.5**
	comp=Z,22nm,1.0s,baz=60,slow=9.4,SNR=26							
WRA				ScP		**ScP**	**23 56 28.6**	**+5.6**
	comp=Z,2.3nm,1.0s,baz=55,slow=3.4,SNR=5.0							
WRA				LR		LR	23 57 54.8	
	comp=Z,456nm,21.6s,baz=70,slow=36							
MTN	**Manton Dam**	**23.94**	**255**	P		**P**	**23 49 06.0**	**-0.9**
SIJI	**Sorong**	**24.27**	**284**	P		**P**	**23 49 09.7**	**-0.3**
	comp=Z,7.4nm,0.7s,baz=86,slow=6.9,SNR=11							
LHI	**Lord Howe Isla**	**24.53**	**171**	P		**P**	**23 49 11.5**	**-0.6**
LHI				IAmb		IAmb	23 49 23.4	
	comp=Z,35nm,0.9s							
CMSA	**Cobar Meteorol**	**25.66**	**198**	P		**P**	**23 49 23.6**	**+1.2**
	baz=26,SNR=24							
AS31	**Alice Springs**	**25.88**	**228**	P		**P**	**23 49 23.8**	**-0.8**
ASAR	**Alice Springs**	**25.88**	**228**	P		**P**	**23 49 24.6**	**+0.1**
	comp=Z,4.0nm,0.8s,baz=60,slow=9.2,SNR=23							
ASAR				ScP		**ScP**	**23 56 33.9**	**+4.3**
	comp=Z,2.5nm,1.1s,baz=52,slow=4.2,SNR=8.2							
ASAR				LR		LR	23 59 14.1	
	comp=Z,255nm,20.6s,baz=56,slow=35							
KNRA	**Kununurra**	**26.83**	**249**	P		**P**	**23 49 33.6**	**+0.5**
	baz=27,SNR=4.3							
KNRA	**Kununurra**	**26.83**	**249**	P		**P**	**23 49 31.7**	**-1.4**
KNRA				IAmb		IAmb	23 49 41.5	
	comp=Z,41nm,1.1s							
STKA	**Stephens Creek**	**27.46**	**205**	P		**P**	**23 49 38.4**	**-0.2**
	baz=28,SNR=21							
STKA	**Stephens Creek**	**27.46**	**205**	P		**P**	**23 49 38.5**	**-0.2**
	comp=Z,20nm,1.0s,baz=19,slow=12,SNR=28							
STKA				LR		LR	00 00 07.3	
	comp=Z,532nm,21.5s,baz=25,slow=35							
LBMI	**Labuha**	**27.96**	**282**	P		**P**	**23 49 47.6**	**+4.2**
	comp=Z,43nm,1.1s							
FITZ	**Fitzroy Crossi**	**30.37**	**246**	P		**P**	**23 50 04.6**	**-0.1**
	baz=31,SNR=3.7							
FITZ	**Fitzroy Crossi**	**30.37**	**246**	P		**P**	**23 50 03.9**	**-0.8**
BBOO	**Buckleboo**	**30.85**	**212**	P		**P**	**23 50 07.8**	**-1.0**
WRKA	**Warakurna**	**30.91**	**232**	P		**P**	**23 50 08.9**	**-0.4**
	baz=31,SNR=4.7							
FORT	**Forrest**	**34.29**	**223**	P		**P**	**23 50 37.6**	**-1.3**
FORT				IAmb		IAmb	23 50 39.4	
	comp=Z,15nm,0.9s							
PSA00	**Pilbara Seismi**	**36.61**	**243**	P		**P**	**23 50 58.5**	**-0.4**
PSA00				IAmb		IAmb	23 51 13.2	
	comp=Z,24nm,1.1s							
URZ	**Urewera**	**36.94**	**150**	P		**P**	**23 51 01.4**	**-0.1**
URZ				IAmb		IAmb	23 51 13.5	
	comp=Z,14nm,1.1s							
BKZ	**Black Stump Fm**	**37.36**	**152**	P		**P**	**23 51 04.9**	**-0.2**
NNZ	**Nelson**	**37.71**	**157**	P		**P**	**23 51 08.7**	**+0.7**
NNZ				IAmb		IAmb	23 51 09.7	
	comp=Z,14nm,1.1s							
YOJ	**Yonaguni jima**	**44.15**	**316**	P		**P**	**23 52 00.5**	**-0.8**
YULB	**Yu-li**	**44.66**	**314**	P		**P**	**23 52 02.4**	**-3.0**
YULB				IAmb		IAmb	23 52 07.4	
	comp=Z,16nm,1.0s							
NACB	**Ninganchiao**	**44.94**	**315**	P		**P**	**23 52 05.7**	**-1.9**
TPUB	**Ta-pu**	**45.08**	**313**	P		**P**	**23 52 06.5**	**-2.2**
TPUB				IAmb		IAmb	23 52 09.4	
	comp=Z,25nm,1.1s							
SSLB	**Suanglung**	**45.15**	**314**	P		**P**	**23 52 06.7**	**-2.6**
SSLB				IAmb		IAmb	23 52 10.3	
	comp=Z,17nm,1.0s							
YHNB	**Yeheng**	**45.41**	**315**	P		**P**	**23 52 10.4**	**-1.0**
RAR	**Rarotonga**	**46.03**	**113**	LR		LR	00 08 04.1	
	comp=Z,194nm,18.8s,baz=276,slow=32							
MJAR	**Matsushiro Arr**	**46.20**	**341**	P		**P**	**23 52 15.4**	**-1.9**
	comp=Z,1.3nm,1.0s,baz=124,slow=11,SNR=2.7							
MAJO	**Matsushiro**	**46.20**	**341**	P		**P**	**23 52 16.1**	**-1.3**
MJB9	**Matsu-Tunnel**	**46.20**	**341**	P		**P**	**23 52 16.4**	**-1.0**
KSRS	**Korea Array**	**51.01**	**332**	P		**P**	**23 52 53.1**	**-1.2**
	comp=Z,2.9nm,0.9s,baz=154,slow=8.8,SNR=10							
KSRS				LR		LR	00 13 47.7	
	comp=Z,70nm,18.6s,baz=140,slow=35							
NJ2	**Nanjing**	**51.93**	**321**	eP		**P**	**23 53 00.3**	**-1.0**
NJ2				pmax		pmax		
	comp=Z,6.0nm,0.5s							
WHN	**Wuhan**	**53.93**	**316**	||P		**P**	**23 53 17.3**	**+1.2**
WHN				S		**S**	**00 00 54.6**	**+5.7**
WHN				pmax		pmax		
	comp=Z,52nm,0.9s							
WHN				pmax		pmax		
	comp=Z,370nm,3.2s							
WHN				LR		LR		
	comp=Z,410nm,23.3s							
PPT	**Papeete**	**55.15**	**106**	LR		LR	00 12 38.3	
	comp=Z,77nm,20.2s,baz=14,slow=31							
PPT2	**Papeete2**	**55.15**	**106**	eLQ		LQ	00 07 15.7	
	comp=Z,4μm,33.0s							
PPT2				eLR		LR	00 09 31.0	
	comp=Z,258nm,31.2s							
TBI	**Tubuai**	**55.80**	**113**	eLQ		LQ	00 07 31.8	
	comp=Z,551nm,31.2s							
TBI				eLR		LR	00 09 54.2	
	comp=Z,212nm,36.2s							
ENH	**Enshi**	**57.21**	**313**	P		**P**	**23 53 38.6**	**-1.2**
ENH				IAmb		IAmb	23 53 41.6	
	comp=Z,14nm,0.9s							
CN2	**Changchun**	**57.28**	**335**	eP		**P**	**23 53 39.0**	**-0.9**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
GYA	**Guiyang**	**57.40**	**308**	eP		**P**	**23 53 43.4**	**+2.2**
GYA				sP		pwP	23 53 59.4	-0.7
GYA				S		**S**	**00 01 40.4**	**+4.8**
GYA				ScS		**ScS**	**00 03 29.8**	**+1.9**
GYA				SS		**SS**	**00 05 26.4**	**+0.5**
GYA				pmax		pmax		
	comp=Z,10.0nm,0.5s							
GYA				pmax		pmax		
	comp=Z,110nm,5.5s							
GYA				LR		LR		
	comp=Z,130nm,9.5s							
GYA				LR		LR		
	comp=Z,170nm,17.5s							
GYA				LR		LR		
	comp=Z,180nm,18.6s							
XAN	**Xi'an**	**59.70**	**316**	P		**P**	**23 53 56.8**	**-0.2**
XAN				pP		pwP	23 54 13.9	-2.7
XAN				S		**S**	**00 02 06.8**	**+1.7**
XAN				pmax		pmax		
	comp=Z,12nm,1.1s							
XAN				pmax		pmax		
	comp=Z,160nm,3.3s							
XAN				LR		LR		
	comp=Z,140nm,18.4s							
XAN				LR		LR		
	comp=Z,160nm,21.7s							
KMI	**Kunming**	**59.95**	**304**	P		**P**	**23 54 01.8**	**+2.7**
KMI				pmax		pmax		
	comp=Z,16nm,1.4s							
PETK	**Petropavlovsk-**	**60.12**	**2**	P		**P**	**23 53 58.2**	**-1.2**
	comp=Z,7.6nm,1.0s,baz=156,slow=8.1,SNR=2.9							
PETK				LR		LR	00 22 18.4	
	comp=Z,47nm,18.0s,baz=235,slow=38							
CM31	**Chiang Mai Arr**	**60.67**	**296**	P		**P**	**23 54 03.0**	**-1.0**
CMAR	**Chiang Mai Arr**	**60.67**	**296**	P		**P**	**23 54 05.5**	**+1.6**
	comp=Z,5.7nm,0.9s,baz=119,slow=5.0,SNR=26							
CMAR				LR		LR	00 21 08.2	
	comp=Z,36nm,19.1s,baz=158,slow=37							
CHTO	**Chiang Mai**	**60.79**	**296**	P		**P**	**23 54 03.8**	**-0.9**
CHTO				IAmb		IAmb	23 54 20.1	
	comp=Z,12nm,1.1s							
HHC	**Hu-ho-hao-te**	**62.13**	**324**	eP		**P**	**23 54 13.3**	**-0.2**
HHC				pmax		pmax		
	comp=Z,8.0nm,0.9s							
HHC				pmax		pmax		
	comp=Z,98nm,5.0s							
HHC				LR		LR		
	comp=Z,130nm,17.3s							
HHC				LR		LR		
	comp=Z,110nm,17.7s							
HHC				LR		LR		
	comp=Z,65nm,14.7s							
ADK	**Adak**	**63.73**	**19**	P		**P**	**23 54 22.3**	**-1.4**
LZH	**Lanzhou**	**64.31**	**316**	eP		**P**	**23 54 29.0**	**+0.9**
LZH				pP		sP	23 54 43.8	+2.0
LZH				ePP		**PP**	**23 56 53.1**	**+3.1**
LZH				pmax		pmax		
	comp=Z,23nm,1.3s							
LZH				pmax		pmax		
	comp=Z,85nm,8.2s							
LZH				LR		LR		
	comp=Z,320nm,15.5s							
LZH				LR		LR		
	comp=Z,340nm,15.3s							
LZH				LR		LR		
	comp=Z,470nm,18.2s							
GTA	**Gaotai**	**68.74**	**317**	eP		**P**	**23 54 56.9**	**+0.6**
GTA				pP		pwP	23 55 13.3	-2.1
GTA				pmax		pmax		
	comp=Z,12nm,1.1s							
GTA				pmax		pmax		
	comp=Z,130nm,7.6s							
GTA				LR		LR		
	comp=Z,42nm,11.7s							
GTA				LR		LR		
	comp=Z,79nm,14.8s							
GTA				LR		LR		
	comp=Z,100nm,15.8s							
ULN	**Ulaanbaatar**	**69.06**	**328**	P		**P**	**23 54 56.6**	**-1.5**
SHL	**Shillong**	**69.21**	**301**	P		**P**	**23 54 59.8**	**+0.2**
SONM	**Songino Array**	**69.39**	**327**	P		**P**	**23 54 59.7**	**-0.4**
	comp=Z,3.8nm,0.9s,baz=132,slow=6.3,SNR=16							
SONM				LR		LR	00 27 10.4	
	comp=Z,120nm,18.1s,baz=126,slow=38							
VNDA	**Vanda**	**70.39**	**178**	P		**P**	**23 55 06.5**	**+0.8**
	comp=Z,1.1nm,0.9s,baz=300,slow=5.3,SNR=5.1							
VNDA	**Vanda**	**70.39**	**178**	P		**P**	**23 55 06.8**	**+1.2**
LSA	**Lhasa**	**71.20**	**305**	P		**P**	**23 55 14.0**	**+1.9**
LSA				pmax		pmax		
	comp=Z,18nm,1.4s							
LSA	**Lhasa**	**71.20**	**305**	P		**P**	**23 55 10.8**	**-1.2**
LSA				IAmb		IAmb	23 55 25.6	
	comp=Z,9.8nm,1.1s							
TAPN	**Taplejung**	**73.32**	**301**	eP		**P**	**23 55 24.0**	**-0.5**
	comp=Z,41nm,1.1s							
ODAN	**Odare**	**73.44**	**301**	eP		**P**	**23 55 26.2**	**+1.0**
	comp=Z,40nm,0.9s							
RAMN	**Ramite**	**74.15**	**301**	eP		**P**	**23 55 30.3**	**+1.0**
JIRN	**Jiri**	**74.70**	**301**	eP		**P**	**23 55 32.9**	**+0.2**
GUN	**Gumba**	**75.03**	**301**	eP		**P**	**23 55 35.0**	**+0.4**
	comp=Z,24nm,0.8s							
PKI	**Pulchoki**	**75.34**	**301**	eP		**P**	**23 55 36.9**	**+0.6**
BILL	**Bilibino**	**75.50**	**4**	P		**P**	**23 55 34.7**	**-1.3**
BILL				IAmb		IAmb	23 55 52.9	
	comp=Z,15nm,1.1s							
GKN	**Gorkha**	**76.11**	**301**	eP		**P**	**23 55 41.3**	**+0.7**
	comp=Z,35nm,1.0s							
DANN	**Dangsing**	**76.95**	**301**	eP		**P**	**23 55 45.8**	**+0.3**
	comp=Z,11nm,0.8s							
PYUN	**Piuthan**	**77.54**	**301**	eP		**P**	**23 55 49.4**	**+0.7**
	comp=Z,12nm,0.8s							
SVW2	**Sparrevohn**	**78.27**	**22**	P		**P**	**23 55 50.9**	**-0.8**
WMQ	**Urumqi**	**78.82**	**317**	eP		**P**	**23 55 55.6**	**+0.4**
WMQ				pmax		pmax		
	comp=Z,16nm,1.3s							
WMQ				pmax		pmax		
	comp=Z,100nm,3.7s							
WMQ				LR		LR		
	comp=Z,270nm,28.9s							
WMQ				LR		LR		
	comp=Z,170nm,29.0s							
WMQ				LR		LR		
	comp=Z,220nm,28.9s							
SEW	**Seward**	**80.10**	**25**	P		**P**	**23 56 00.5**	**-1.2**
RC01	**Rabbit Creek A**	**80.54**	**24**	IAmb		IAmb	23 56 03.5	
	comp=Z,9.1nm,0.7s							
PPLA	**Purkeypile**	**80.64**	**22**	P		**P**	**23 56 02.9**	**-1.9**
RDOG	**Red Dog Mine**	**80.77**	**15**	P		**P**	**23 56 05.2**	**+0.1**
RDOG				IAmb		IAmb	23 56 21.6	
	comp=Z,16nm,1.2s							
PMR	**Palmer**	**81.06**	**24**	IAmb		IAmb	23 56 24.2	
	comp=Z,16nm,1.2s							
KNK	**Knik Glacier**	**81.23**	**24**	IAmb		IAmb	23 56 24.4	
	comp=Z,19nm,1.1s							
GHO	**Glory Hole Cre**	**81.24**	**24**	IAmb		IAmb	23 56 21.1	
	comp=Z,11nm,0.9s							
KTH	**Kantishna Hill**	**81.49**	**22**	P		**P**	**23 56 07.5**	**-1.6**
KTH				IAmb		IAmb	23 56 26.4	
	comp=Z,11nm,1.1s							
FID	**Port Fidalgo**	**81.69**	**25**	IAmb		IAmb	23 56 09.8	
	comp=Z,14nm,1.0s							
BPAW	**Bear Paw Mtn.**	**81.78**	**21**	P		**P**	**23 56 08.5**	**-2.2**
EYAK	**Cordova Ski Ar**	**81.90**	**25**	P		**P**	**23 56 10.6**	**-0.7**
EYAK				IAmb		IAmb	23 56 28.6	
	comp=Z,11nm,1.1s							
RND	**Reindeer**	**82.17**	**22**	IAmb		IAmb	23 56 29.8	
	comp=Z,18nm,1.2s							
RAGM	**Ragged Mountai**	**82.28**	**26**	P		**P**	**23 56 12.7**	**-0.7**
DHY	**Denali Highway**	**82.55**	**23**	IAmb		IAmb	23 56 30.5	
	comp=Z,11nm,1.0s							
QSPA	**South Pole Qui**	**82.78**	**180**	P		**P**	**23 56 17.0**	**+1.0**
	comp=Z,8.5nm,1.2s,baz=1.8,slow=1.0,SNR=11							
QSPA	**South Pole Qui**	**82.78**	**180**	P		**P**	**23 56 17.1**	**+1.0**
WRH	**Wood River Hil**	**83.04**	**22**	IAmb		IAmb	23 56 32.6	
	comp=Z,14nm,1.1s							
GLB	**Gilahina Butte**	**83.17**	**25**	P		**P**	**23 56 17.3**	**-0.6**
CCB	**Clear Creek Bu**	**83.24**	**21**	IAmb		IAmb	23 56 32.8	
	comp=Z,9.9nm,1.1s							
MDM	**Murphy Dome**	**83.26**	**21**	P		**P**	**23 56 16.6**	**-1.7**
MDM				IAmb		IAmb	23 56 33.7	
	comp=Z,10nm,1.0s							
COLA	**College**	**83.34**	**21**	P		**P**	**23 56 17.0**	**-1.6**
MK31	**Makanchi Array**	**83.41**	**319**	P		**P**	**23 56 18.8**	**-0.7**
MKAR	**Makanchi Array**	**83.41**	**319**	P		**P**	**23 56 19.7**	**+0.2**
	comp=Z,5.6nm,0.9s,baz=103,slow=5.5,SNR=33							
HDA	**Harding Lake**	**83.42**	**22**	IAmb		IAmb	23 56 34.8	
	comp=Z,10nm,1.0s							
YAH	**Yahtse**	**83.56**	**27**	P		**P**	**23 56 19.7**	**-0.5**
YAH				IAmb		IAmb	23 56 38.4	
	comp=Z,12nm,1.0s							
BALM	**Baldy**	**83.60**	**26**	IAmb		IAmb	23 56 20.9	
	comp=Z,10nm,0.9s							
MAKZ	**Makanchi**	**83.62**	**319**	P		**P**	**23 56 20.3**	**-0.3**
MAKZ				IAmb		IAmb	23 56 21.7	
	comp=Z,13nm,1.1s							
IL31		**83.64**	**22**	IAmb		IAmb	23 56 34.7	
	comp=Z,8.3nm,1.0s							
ILAR	**Eielson Array**	**83.64**	**22**	P		**P**	**23 56 17.2**	**-3.1**
	comp=Z,2.1nm,0.9s,baz=261,slow=5.1,SNR=17							
ILAR				LR		LR	00 32 26.7	
	comp=Z,160nm,19.0s,baz=250,slow=35							
COLD	**Coldfoot**	**83.87**	**19**	P		**P**	**23 56 21.7**	**+0.4**
MENT	**Mentasta**	**83.92**	**24**	P		**P**	**23 56 20.2**	**-1.5**
MENT				IAmb		IAmb	23 56 37.3	
	comp=Z,6.4nm,1.0s							
CTGM	**Chitina Glacie**	**84.01**	**26**	P		**P**	**23 56 21.8**	**-0.6**
PCA	**Pinnacle**	**84.11**	**27**	P		**P**	**23 56 22.0**	**-0.8**
MAW	**Mawson**	**84.13**	**203**	P		**P**	**23 56 23.3**	**+0.5**
	comp=Z,3.7nm,1.0s,baz=117,slow=9.9,SNR=4.6							
MAW				LR		LR	00 32 27.5	
	comp=Z,28nm,18.3s,baz=62,slow=35							
MAW	**Mawson**	**84.13**	**203**	P		**P**	**23 56 23.2**	**+0.5**
ZAA0	**Zalesovo Array**	**84.22**	**326**	P		**P**	**23 56 21.6**	**-1.9**
ZALV	**Zalesovo Beam**	**84.22**	**326**	P		**P**	**23 56 22.3**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=102,slow=6.8,SNR=8.2							
ZALV				LR		LR	00 35 19.7	
	comp=Z,38nm,19.1s,baz=96,slow=37							
SCRK	**Sand Creek**	**84.32**	**23**	IAmb		IAmb	23 56 23.7	
	comp=Z,8.8nm,1.1s							
TOLK	**Toolik Lake Re**	**84.88**	**18**	IAmb		IAmb	23 56 42.6	
	comp=Z,8.4nm,1.0s							
PRZ	**Przheval'sk**	**84.88**	**314**	P		**P**	**23 56 25.8**	**-1.5**
TARG	**Taragay, Kyrgy**	**85.13**	**313**	P		**P**	**23 56 28.2**	**-0.7**
TARG				IAmb		IAmb	23 56

	comp=Z,8.0nm,1.0s							
CMB	**Columbia Colle**	**90.34**	**52**	P		**P**	**23 56 53.4**	**-0.1**
KK31	**Karatay Array**	**90.69**	**313**	P		**P**	**23 56 52.6**	**-2.4**
KKAR	**Karatay Array**	**90.69**	**313**	P		**P**	**23 56 53.1**	**-1.9**
KKAR				IAmb	IAmb		23 56 58.3	
	comp=Z,3.7nm,1.1s							
WAKR	**Walker**	**91.14**	**52**	P		**P**	**23 56 55.2**	**-2.2**
WAKR				IAmb	IAmb		23 57 07.8	
	comp=Z,3.5nm,1.1s							
OMMB	**Old Mammoth Mi**	**91.36**	**52**	P		**P**	**23 56 57.8**	**-0.8**
ISA	**Isabella, Lake**	**91.52**	**54**	P		**P**	**23 56 57.5**	**-1.6**
ISA				IAmb	IAmb		23 57 00.3	
	comp=Z,6.1nm,1.1s							
LTY	**Liberty**	**91.55**	**43**	P		**P**	**23 56 57.1**	**-1.9**
RYN	**Ryan**	**91.87**	**51**	P		**P**	**23 56 59.9**	**-0.9**
RYN				IAmb	IAmb		23 57 17.1	
	comp=Z,6.3nm,1.1s							
I07A	**Izee**	**91.89**	**46**	P		**P**	**23 56 59.4**	**-1.3**
NVAR	**Mina Array Bea**	**92.02**	**52**	P		**P**	**23 57 00.9**	**-0.6**
	comp=Z,3.9nm,1.1s,baz=260,slow=6.0,SNR=13							
NVAR				LR		LR	00 30 14.2	
	comp=Z,70nm,21.5s,baz=270,slow=30							
SYO	**Syowa Base**	**92.07**	**199**	⇑*eP*		**P**	**23 57 01.0**	**+0.2**
NV11	**Mina Array Sit**	**92.13**	**52**	P		**P**	**23 57 01.7**	**-0.3**
NV11				IAmb	IAmb		23 57 21.1	
	comp=Z,6.6nm,1.1s							
KVN	**Kaiserville**	**92.25**	**51**	P		**P**	**23 57 01.8**	**-0.8**
KVN				IAmb	IAmb		23 57 20.1	
	comp=Z,6.9nm,1.2s							
WVOR	**Wild Horse Val**	**92.29**	**48**	P		**P**	**23 56 58.6**	**-4.0**
BVAR	**Borovoye Array**	**92.32**	**323**	P		**P**	**23 57 00.1**	**-2.2**
	comp=Z,1.6nm,1.0s,baz=274,slow=40,SNR=3.3							
J08A	**Circle Bar Ran**	**92.53**	**47**	P		**P**	**23 57 03.1**	**-0.5**
B08A	**Colville Reser**	**92.60**	**42**	P		**P**	**23 57 02.7**	**-1.0**
B08A				IAmb	IAmb		23 57 04.8	
	comp=Z,3.9nm,1.1s							
D08A	**Wollman Farm,**	**92.70**	**43**	P		**P**	**23 57 03.8**	**-0.3**
D08A				IAmb	IAmb		23 57 13.3	
	comp=Z,4.3nm,1.0s							
GSC	**Goldstone, Bar**	**92.82**	**55**	P		**P**	**23 57 03.4**	**-1.8**
GSC				IAmb	IAmb		23 57 06.4	
	comp=Z,6.1nm,1.1s							
PFO	**Pinyon Flats O**	**92.91**	**57**	P		**P**	**23 57 02.5**	**-3.1**
PFO				IAmb	IAmb		23 57 09.9	
	comp=Z,4.2nm,1.1s							
TPNV	**Topopah Spring**	**93.45**	**53**	P		**P**	**23 57 07.5**	**-0.6**
TPNV				IAmb	IAmb		23 57 24.4	
	comp=Z,6.1nm,1.1s							
BMO	**Blue Mountains**	**93.55**	**45**	P		**P**	**23 57 06.2**	**-2.0**
R11A	**Troy Canyon, C**	**94.13**	**52**	P		**P**	**23 57 10.3**	**-0.9**
R11A				IAmb	IAmb		23 57 27.4	
	comp=Z,3.3nm,1.1s							
SHPR	**Sheep Range**	**94.28**	**54**	P		**P**	**23 57 11.5**	**-0.5**
SHPR				IAmb	IAmb		23 57 13.6	
	comp=Z,5.9nm,1.1s							
ELK	**Elko**	**94.63**	**50**	P		**P**	**23 57 13.0**	**-0.5**
LCMT	**Little Creek M**	**95.86**	**54**	P		**P**	**23 57 19.1**	**+0.1**
KNB	**Kanab**	**96.19**	**54**	P		**P**	**23 57 20.2**	**-0.5**
YKA	**Yellowknife Ar**	**96.61**	**28**	P		**P**	**23 57 20.6**	**-1.1**
	comp=Z,5.3nm,0.9s,baz=265,slow=4.3,SNR=56							
YKA				LR		LR	00 35 37.2	
	comp=Z,38nm,20.9s,baz=0.0,slow=32							
PDAR	**Pinedale Array**	**98.99**	**48**	LR		LR	00 40 53.2	
	comp=Z,104nm,18.1s,baz=296,slow=35							
KHC	**Kasperske Hory**	**126.99**	**329**	*e*PKP		**PKiKP**	**00 02 56.6**	**0.0**
GERES	**GERESS Array B**	**127.11**	**329**	PKP		**PKPdf**	**00 02 55.7**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=85,slow=3.2,SNR=4.2							
LPAZ	**La Paz**	**131.55**	**119**	PKP		**PKPdf**	**00 03 06.3**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=1.8,slow=4.0,SNR=3.8							
ESDC	**Sonseca Array**	**142.45**	**333**	PKP		**PKPdf**	**00 03 25.7**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=18,slow=37,SNR=2.6							
PTGA	**Pitinga**	**144.46**	**101**			**PKPab**	**00 03 27.5**	**-0.3**
PVAQ	**Vaqueiros**	**145.98**	**335**			**PKPab**	**00 03 32.5**	**-0.1**
TAM	**Tamanrasset**	**146.60**	**301**			**PKPbc**	**00 03 34.1**	**-0.4**
BDFB	**Brasilia**	**147.99**	**135**	PKPbc		**PKPdf**	**00 03 36.4**	**+0.9**
	comp=Z,1.8nm,0.4s,baz=202,slow=3.2,SNR=4.5							
BDFB	**Brasilia**	**147.99**	**135**			**PKiKP**	**00 03 39.6**	**-0.8**
TOA0	**Torodi Ar. Sit**	**152.87**	**285**			**PKiKP**	**00 03 50.2**	**-0.2**
TORD	**Torodi Ar. Bea**	**152.87**	**285**	PKP		**PKPdf**	**00 03 43.2**	**+0.3**
	comp=Z,1.1nm,1.1s,baz=6.3,slow=1.3,SNR=4.0							
TORD				PKPbc		**PKPbc**	**00 03 49.8**	**-0.4**
	comp=Z,3.3nm,1.0s,baz=81,slow=1.3,SNR=11							

*IDC **18** 00:03:07.5±0.9, 7.°07S×154.°86E, h0km, mb4.0/10, mb1 4.2/11, mb1mx4.0/30, mbtmp4.0/11, ML3.8/1, Error ellipse: s-maj=28.9km s-min=19.1km az=105.0*

ISC 18 00:03:13.7±0.8, 7.°1S±0.°1×154.°8E±0.°1, h41km, n13, σ0.95/14, mb3.8/10, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.90**	**315**	Pn	**Pn**	**00 04 09.4**	**-1.6**
	6.8nm,0.3s,baz=183,slow=19,SNR=2.3						
KRVT				Sn	**Sn**	**00 04 56.8**	**+1.2**
	10nm,0.3s,baz=232,slow=8.4,SNR=4.3						
WRA	**Warramunga Arr**	**23.60**	**235**	P	**P**	**00 08 20.0**	**-1.1**
	3.2nm,0.9s,baz=60,slow=9.7,SNR=7.5						
ASAR	**Alice Springs**	**25.96**	**228**	P	**P**	**00 08 42.0**	**-0.6**
	1.0nm,0.6s,baz=62,slow=8.8,SNR=13						
STKA	**Stephens Creek**	**27.57**	**205**	P	**P**	**00 08 57.4**	**+0.4**
	2.6nm,0.8s,baz=22,slow=14,SNR=7.6						
CMAR	**Chiang Mai Arr**	**60.64**	**296**	P	**P**	**00 13 21.4**	**+0.4**
	1.1nm,0.4s,baz=96,slow=5.6,SNR=2.2						
SONM	**Songino Array**	**69.30**	**327**	P	**P**	**00 14 18.3**	**+1.3**
	0.3nm,0.3s,baz=134,slow=6.2,SNR=2.6						
VNDA	**Vanda**	**70.50**	**178**	P	**P**	**00 14 24.1**	**+0.4**
	0.7nm,0.9s,baz=323,slow=4.3,SNR=4.2						
KDAK	**Kodiak Island**	**77.33**	**26**	P	**P**	**00 15 02.8**	**-1.1**
	16nm,1.1s,baz=330,slow=8.1,SNR=4.0						
MKAR	**Makanchi Array**	**83.34**	**319**	P	**P**	**00 15 37.0**	**+0.5**
	0.6nm,0.8s,baz=96,slow=5.5,SNR=6.0						
ILAR	**Eielson Array**	**83.53**	**22**	P	**P**	**00 15 36.2**	**-0.8**
	0.2nm,0.5s,baz=246,slow=5.2,SNR=2.8						
YKA	**Yellowknife Ar**	**96.51**	**28**	P	**P**	**00 16 38.8**	**+0.2**
	0.4nm,0.9s,baz=265,slow=4.0,SNR=4.1						
NOA	**NORSAR Array B**	**119.71**	**341**	PKP	**PKPdf**	**00 21 59.3**	**+0.2**
	0.3nm,0.7s,baz=13,slow=6.0,SNR=3.3						
TORD	**Torodi Ar. Bea**	**152.85**	**285**	PKPbc	**PKPbc**	**00 23 07.5**	**0.0**
	0.9nm,0.7s,baz=63,slow=2.2,SNR=6.3						

*IDC **18** 00:06:31.8±1.8, 11.°33S×162.°79E, h0km, mb3.9/8, mb1 4.2/8, mb1mx3.9/29, mbtmp3.9/8, MS3.4/4, Ms1 3.4/4, ms1mx3.0/25, Error ellipse: s-maj=81.0km s-min=22.4km az=143.0*

ISC 18 00:06:38.1±1.0, 11.°1S±0.°2×162.°7E±0.°1, h35km, n18, σ1.9/54/11, mb3.8/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.23**	**301**	Pn	**Pn**	**00 07 28.0**	**+1.7**
	95nm,0.3s,baz=187,slow=7.6,SNR=24						
HNR				Sn	**Sn**	**00 08 02.0**	**-1.6**
	276nm,0.3s,baz=148,slow=22,SNR=12						
HNR				LR	LR	00 09 06.1	
	comp=Z,246nm,18.1s,baz=124,slow=46						
PMG	**Port Moresby**	**15.43**	**275**	LR	LR	00 15 36.7	
	comp=Z,222nm,18.7s,baz=108,slow=35						
CTA	**Charters Tower**	**18.19**	**239**	P	**P**	**00 10 50.3**	**+2.4**
	0.2nm,0.3s,baz=67,slow=16,SNR=3.2						
STKA	**Stephens Creek**	**28.40**	**220**	LR	LR	00 22 13.1	
	comp=Z,86nm,19.8s,baz=27,slow=33						
WRA	**Warramunga Arr**	**28.69**	**249**	P	**P**	**00 12 30.6**	**-1.4**
	0.9nm,0.6s,baz=76,slow=9.2,SNR=7.4						
H11S2	**WAKE ISLAND Hy**	**29.70**	**8**	T	T	00 43 44.9	
	baz=188,slow=76,SNR=110						
H11S3	**WAKE ISLAND Hy**	**29.71**	**8**	T	T	00 43 45.0	
	baz=188,slow=76,SNR=94						
H11S1	**WAKE ISLAND Hy**	**29.72**	**8**	T	T	00 43 39.4	
	baz=188,slow=76,SNR=98						
ASAR	**Alice Springs**	**30.13**	**242**	P	**P**	**00 12 43.5**	**-1.4**
	1.0nm,0.6s,baz=67,slow=9.8,SNR=11						
ASAR				LR	LR	00 23 55.3	
	comp=Z,87nm,19.3s,baz=86,slow=35						
H11N1	**WAKE ISLAND Hy**	**30.93**	**8**	T	T	00 45 17.0	
	baz=188,slow=76,SNR=76						
H11N3	**WAKE ISLAND Hy**	**30.94**	**8**	T	T	00 45 10.8	
	baz=188,slow=76,SNR=54						
H11N2	**WAKE ISLAND Hy**	**30.95**	**8**	T	T	00 45 18.4	
	baz=188,slow=76,SNR=57						
FITZ	**Fitzroy Crossi**	**36.51**	**255**	P	**P**	**00 13 38.8**	**-1.7**
	1.8nm,0.5s,baz=61,slow=10,SNR=12						
SONM	**Songino Array**	**77.02**	**325**	P	**P**	**00 18 28.3**	**+0.8**
	0.8nm,0.9s,baz=131,slow=4.5,SNR=3.7						
ILAR	**Eielson Array**	**84.56**	**19**	P	**P**	**00 19 07.0**	**-0.3**
	0.4nm,0.5s,baz=241,slow=4.8,SNR=5.9						
NVAR	**Mina Array Bea**	**88.35**	**50**	P	**P**	**00 19 27.0**	**+0.3**
	0.6nm,0.7s,baz=235,slow=7.6,SNR=2.5						
MKAR	**Makanchi Array**	**91.58**	**317**	P	**P**	**00 19 41.5**	**+0.1**
	0.2nm,0.6s,baz=91,slow=5.6,SNR=3.4						
YKA	**Yellowknife Ar**	**96.42**	**28**	P	**P**	**00 20 02.5**	**-0.7**
	0.5nm,0.8s,baz=256,slow=4.3,SNR=6.1						

TRN 18 00:15:03.4, 17.°15N×60.°26W, h3km, M3.5(FDF), Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABD	**La Joyeuse, An**	**1.35**	**240**	*e*P	Pb	00 15 31.7	+2.3
ANWB	**Willy Bob**	**1.54**	**290**	*e*P	Pg	00 15 34.2	+1.3
MAGL	**Barre de l'ile**	**1.54**	**219**	*e*P	Pg	00 15 34.1	+1.1
CBE	**Ff, Capester**	**1.68**	**230**	*e*P	Pg	00 15 36.4	+0.8
TDBA	**Terre de Bas,**	**1.85**	**226**	*e*P	Pg	00 15 38.6	-0.3
BAMF	**Morne Balai**	**2.48**	**200**	*e*P	Pb	00 15 47.7	-0.9
CXM	**Morne La Croix**	**2.49**	**201**	*e*P	Pb	00 15 47.4	-1.5
PCM	**Pelee Case Pet**	**2.50**	**202**	*e*P	Pb	00 15 48.1	-0.8
LPMF	**Morne Lapointe**	**2.65**	**195**	*e*P	Pn	00 15 49.0	+1.9
MPOM	**Morne Pois Mar**	**2.75**	**192**	*e*P	Pb	00 15 51.0	-2.3

IDC 18 00:20:54.9±999.0, 16.°39S×70.°82W, h0km, Error ellipse: s-maj=474.8km s-min=51.8km az=87.0, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I08BO	**LAS PENAS INFR**	**2.28**	**86**	*i*		00 35 25.0	
	baz=266,slow=321,SNR=15						
I41PY	**VILLA FLORIDA**	**16.00**	**130**	*i*		01 58 40.0	
	baz=307,slow=319,SNR=8.6						
I09BR	**BRASILIA INFRA**	**21.93**	**91**	*i*		02 35 30.0	
	baz=263,slow=319,SNR=3.9						

*SOME **18** 00:33:54.5, 40.°05N×71.°57E, h10km*
*KRNET **18** 00:33:56.2±0.1, 40.°12N×71.°51E, h13km, mb3.3*
*ISU **18** 00:33:57.0, 40.°20N×71.°50E, h15km*
*NNC **18** 00:33:59.0±1.2, 40.°30N×71.°57E, h2km±5km, mb3.8, mpv3.5, Error ellipse: s-maj=9.4km s-min=4.2km az=5.0*

ISC 18 00:33:54.8±0.8, 40.°13N±0.°03×71.°65E±0.°02, h10km, n65, σ2.9/107/103, 21C-12D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FRG	**Fergana**	**0.61**	**10**	*i* P	**Pg**	**00 34 03.1**	**-3.6**
FRG				*i* S	**Sg**	**00 34 07.8**	**-6.9**
BTK	**Batken**	**0.64**	**264**	⇑*i* P	**Pg**	**00 34 06.4**	**-0.8**
	baz=63						
BTK				⇑*i* S	**Sg**	**00 34 13.9**	**-1.8**
	baz=63						
BTK	**Batken**	**0.64**	**264**	*i* P	**Pg**	**00 34 06.1**	**-1.1**
BTK				*i* S	**Sg**	**00 34 13.7**	**-2.0**
ANR	**Andizhan**	**0.83**	**41**	*e*P	**Pn**	**00 34 14.4**	**+1.8**
ANR				*e*S	**Sn**	**00 34 27.9**	**+3.1**
GAR	**Garm**	**1.53**	**223**	⇑*i* P	**Pb**	**00 34 23.2**	**-0.1**
	baz=20						
GAR				⇑*i* S	**Sb**	**00 34 43.1**	**+0.3**
	baz=20						
ARSB	**Arslanbob**	**1.56**	**40**	⇑*i* P	**Pg**	**00 34 26.9**	**+2.1**
	baz=43						
ARSB				⇑*i* S	**Sg**	**00 34 48.6**	**+3.5**
	baz=43						
ARSB	**Arslanbob**	**1.56**	**40**	*e*P	**Pg**	**00 34 26.2**	**+1.4**
ARSB				*e*S	**Sg**	**00 34 48.4**	**+3.3**
ARK	**Arkit**	**1.68**	**8**	⇓*i* P	**Pg**	**00 34 27.9**	**+0.8**
	baz=12						
ARK				⇓*i* S	**Sg**	**00 34 50.5**	**+1.6**
	baz=12						
ARK	**Arkit**	**1.68**	**8**	*e*P	**Pg**	**00 34 27.7**	**+0.6**
ARK				*e*S	**Sg**	**00 34 50.7**	**+1.8**
IUG	**Iuzhnay**	**2.35**	**329**	*e*P	**Pg**	**00 34 38.8**	**-1.1**
	47nm,0.2s						
IUG				*e*S	**Sg**	**00 35 09.7**	**-0.8**
	139nm,0.6s						
IUG	**Iuzhnay**	**2.35**	**329**	Pg	**Pg**	**00 34 38.8**	**-1.1**
	46nm,0.3s						
IUG				Lg	Lg	00 35 09.7	
	64nm,0.3s						
CHGR	**Chuyangaron**	**2.43**	**233**	⇑*i* P	**Pb**	**00 34 37.5**	**-1.1**
	baz=32						
CHGR				⇑*i* S	**Sb**	**00 35 07.0**	**-1.6**
	baz=32						
AML	**Almayashu**	**2.53**	**37**	⇑*i* P	**Pb**	**00 34 41.1**	**+0.6**
	baz=39						
AML				⇑*i* S	**Sg**	**00 35 13.9**	**-2.1**
	baz=39						
AML	**Almayashu**	**2.53**	**37**	P	**Pb**	**00 34 41.2**	**+0.7**
	SNR=9.4						
CHM	**Chimkent**	**2.67**	**325**	*e*P	**Pb**	**00 34 44.4**	**+1.6**
	63nm,0.1s						
CHM				*e*S	**Sg**	**00 35 19.5**	**-1.2**
	85nm,0.3s						
DZA	**Taraz**	**2.77**	**355**	*e*P	**Pg**	**00 34 46.8**	**-1.1**
	24nm,0.1s						
DZA				*e*S	**Sg**	**00 35 23.2**	**-0.5**
	60nm,0.2s						
DZA	**Taraz**	**2.77**	**355**	Pg	**Pg**	**00 34 47.6**	**-0.3**
	24nm,0.1s						
DZA				Lg	Lg	00 35 23.5	
	51nm,0.2s						
MRKS	**Merke**	**2.87**	**24**	*e*P	**Pg**	**00 34 49.2**	**-0.6**
	6.5nm,0.4s						
MRKS				*e*S	**Sg**	**00 35 27.4**	**+0.5**
	21nm,0.4s						
MRKS	**Merke**	**2.87**	**24**	Pg	**Pg**	**00 34 48.6**	**-1.2**
	6.5nm,0.4s						
MRKS				Lg	Lg	00 35 26.1	
	21nm,0.4s						
EKS2	**Erkin-Say**	**2.99**	**32**	⇑*e*P	**Pb**	**00 34 47.2**	**-1.1**
	baz=33						
EKS2				⇑*i* S	**Sb**	**00 35 24.8**	**-0.1**
	baz=33						
UCH	**Uchtor**	**3.01**	**45**	⇓*i* P	**Pb**	**00 34 47.7**	**-1.1**
	baz=46						
UCH				⇓*i* S	**Sb**	**00 35 25.8**	**0.0**
	baz=46						
UCH	**Uchtor**	**3.01**	**45**	P	**Pb**	**00 34 47.7**	**-1.1**
	SNR=7.7						
KK31	**Karatay Array**	**3.09**	**344**	⇑Pg	**Pb**	**00 34 50.8**	**+0.9**
	4.0nm,0.5s,baz=168,slow=15,SNR=65						
KK31				⇑Lg	Lg	00 35 31.9	
	3.9nm,0.3s,baz=164,slow=29,SNR=6.5						
BRLS	**Boroldoy**	**3.20**	**335**	*e*P	**Pb**	**00 34 51.0**	**-0.7**
	2.3nm,0.3s						
BRLS				*e*S	**Sb**	**00 35 30.2**	**-0.5**
	9.6nm,0.3s						
BRLS	**Boroldoy**	**3.20**	**335**	Pg	**Pb**	**00 34 51.0**	**-0.7**
	2.3nm,0.3s						
BRLS				Lg	Lg	00 35 30.2	
	2.2nm,0.2s						
AAK	**Ala-Archa**	**3.29**	**40**	⇑*e*P	**Pb**	**00 34 51.6**	**-1.8**
	baz=41						
AAK				⇑*i* S	**Sb**	**00 35 32.5**	**-1.2**
	baz=41						
AAK	**Ala-Archa**	**3.29**	**40**	⇓Pg	**Pg**	**00 34 59.7**	**+1.8**
	3.4nm,0.3s						
AAK				⇑Lg	Lg	00 35 41.5	
	16nm,0.5s						
KZA	**Kyzart**	**3.34**	**53**	⇓*i* P	**Pb**	**00 34 52.4**	**-2.0**
	baz=54						
KZA				⇓*i* S	**Sb**	**00 35 34.2**	**-1.1**
	baz=54						
KZA	**Kyzart**	**3.34**	**53**	P	**Pb**	**00 34 52.6**	**-1.8**
	SNR=5.8						
KBK	**Karagaybulak**	**3.54**	**43**	⇑*e*P	**Pb**	**00 34 55.3**	**-2.3**
	baz=45						
KBK				⇑*i* S	**Sb**	**00 35 38.1**	**-2.6**
	baz=45						
KBK	**Karagaybulak**	**3.54**	**43**	P	**Pb**	**00 34 55.8**	**-1.8**
	SNR=14						
CHMS	**Chumysh**	**3.69**	**38**	⇓*e*P	**Pb**	**00 34 57.2**	**-2.9**
	baz=39						
CHMS				⇓*i* S	**Sb**	**00 35 41.4**	**-3.5**
	baz=39						
TKM2	**Tokmak 2**	**4.07**	**45**	⇑*i* P	**Pb**	**00 35 02.3**	**-4.4**
	baz=46						
TKM2				⇑*i* S	**Sb**	**00 35 50.7**	**-5.3**
	baz=46						
TKM2	**Tokmak 2**	**4.07**	**45**	P	**Pb**	**00 35 02.6**	**-4.1**
	SNR=5.1						
TKM2	**Tokmak 2**	**4.07**	**45**	⇓Pn	**Pn**	**00 35 01.5**	**+4.2**
	5.4nm,0.4s						
TKM2				⇓Sn	**Sn**	**00 35 49.9**	**+4.8**
	3.6nm,0.3s						
TKM2				⇓Lg	Lg	00 36 04.3	
	7.9nm,0.6s						
KST	**Kastek**	**4.35**	**47**	*e*P	**Pg**	**00 35 17.2**	**-0.9**
	3.2nm,0.3s						
KST				*e*S	**Sg**	**00 36 14.6**	**+0.1**
	13nm,0.6s						
KST	**Kastek**	**4.35**	**47**	Pg	**Pg**	**00 35 17.2**	**-0.9**
	3.2nm,0.3s						
KST				Lg	Lg	00 36 14.6	
	13nm,0.6s						
DGS	**Degeres**	**4.38**	**43**	*e*P	**Pg**	**00 35 17.4**	**-1.3**
	2.3nm,0.5s						
DGS				*e*S	**Sg**	**00 36 15.1**	**-0.4**
	14nm,0.6s						
DGS	**Degeres**	**4.38**	**43**	Pg	**Pg**	**00 35 17.4**	**-1.3**
	2.3nm,0.5s						
DGS				Lg	Lg	00 36 15.1	
	14nm,0.6s						
KRBS	**Karabastau**	**4.66**	**39**	*e*P	**Pg**	**00 35 22.0**	**-2.0**
	3.4nm,0.3s						
KRBS				*e*S	**Sg**	**00 36 22.8**	**-1.6**
	2.1nm,0.4s						
KRBS	**Karabastau**	**4.66**	**39**	Pg	**Pg**	**00 35 22.0**	**-2.0**
	3.4nm,0.3s						
KRBS				Lg	Lg	00 36 22.7	
	2.1nm,0.4s						
MTBS	**Maitube**	**4.67**	**49**	*e*P	**Pg**	**00 35 22.0**	**-2.3**
	3.6nm,0.2s						
MTBS				*e*S	**Sg**	**00 36 23.3**	**-1.5**
	7.0nm,0.3s						
MTBS	**Maitube**	**4.67**	**49**	Pg	**Pg**	**00 35 22.0**	**-2.3**
	3.6nm,0.2s						
MTBS				Lg	Lg	00 36 23.3	
	7.0nm,0.3s						
IZV	**Izvestkoviy**	**4.72**	**50**	*e*P	**Pg**	**00 35 24.1**	**-1.1**
	2.2nm,0.4s						
IZV				*e*S	**Sg**	**00 36 26.3**	**0.0**
	6.7nm,0.4s						
IZV	**Izvestkoviy**	**4.72**	**50**	Pg	**Pg**	**00 35 24.1**	**-1.1**
	2.2nm,0.4s						
IZV				Lg	Lg	00 36 26.3	
	6.7nm,0.4s						
TNSS	**Tian-Shan**	**4.92**	**52**	*e*P	**Pg**	**00 35 26.6**	**-2.5**
	2.5nm,0.3s						
TNSS				*e*S	**Sg**	**00 36 30.4**	**-2.4**
	6.1nm,0.5s						
TNSS	**Tian-Shan**	**4.92**	**52**	Pg	**Pg**	**00 35 26.6**	**-2.5**
	2.5nm,0.3s						
TNSS				Lg	Lg	00 36 30.4	
	6.1nm,0.5s						
MDOK	**Medeo**	**5.05**	**51**	*e*P	**Pg**	**00 35 29.4**	**-2.2**
	2.8nm,0.6s						
MDOK				*e*S	**Sg**	**00 36 35.3**	**-1.7**
	7.0nm,0.8s						
MDOK	**Medeo**	**5.05**	**51**	Pg	**Pg**	**00 35 29.7**	**-1.8**
	3.3nm,0.6s						
MDOK				Lg	Lg	00 36 39.0	
	9.3nm,0.6s						
MDOK	**Medeo**	**5.05**	**51**	Pg	**Pg**	**00 35 29.8**	**-1.8**
	2.6nm,0.7s						
MDOK				Lg	Lg	00 36 37.2	
	7.0nm,0.8s						
KUU	**Kurty**	**5.13**	**41**	*e*P	**Pg**	**00 35 30.7**	**-2.4**
	1.3nm,0.3s						
KUU				*e*S	**Sg**	**00 36 37.5**	**-2.1**
	9.1nm,0.6s						
KUU	**Kurty**	**5.13**	**41**	Pg	**Pg**	**00 35 30.7**	**-2.4**
	1.3nm,0.3s						
KUU				Lg	Lg	00 36 37.5	
	9.1nm,0.6s						
KOTS	**Kotyrbulak**	**5.13**	**51**	*e*P	**Pg**	**00 35 31.5**	**-1.6**
	4.3nm,0.3s						
KOTS				*e*S	**Sg**	**00 36 39.1**	**-0.5**
	33nm,0.8s						
KOTS	**Kotyrbulak**	**5.13**	**51**	Pg	**Pg**	**00 35 31.5**	**-1.6**
	4.3nm,0.3s						
KOTS				Lg	Lg	00 36 39.1	
	33nm,0.8s						
KTBS	**Karatobe**	**5.19**	**45**	*e*P	**Pg**	**00 35 31.6**	**-2.5**
	2.1nm,0.5s						
KTBS				*e*S	**Sg**	**00 36 39.1**	**-2.2**
	17nm,0.6s						
KTBS	**Karatobe**	**5.19**	**45**	Pg	**Pg**	**00 35 31.6**	**-2.5**
	2.1nm,0.5s						
KTBS				Lg	Lg	00 36 39.1	
	17nm,0.6s						
BTLS	**Baital**	**5.22**	**19**	*e*P	**Pg**	**00 35 33.7**	**-0.9**
	1.4nm,0.3s						
BTLS				*e*S	**Sg**	**00 36 42.6**	**+0.4**
	3.5nm,0.4s						
BTLS	**Baital**	**5.22**	**19**	Pg	**Pg**	**00 35 33.7**	**-0.9**
	1.4nm,0.3s						
BTLS				Lg	Lg	00 36 42.6	
	3.5nm,0.4s						
CHKK	**Chushkaly**	**5.45**	**45**	*e*P	**Pg**	**00 35 37.0**	**-2.1**
	0.6nm,0.1s						
CHKK				*e*S	**Sg**	**00 36 48.8**	**-0.8**
	7.1nm,0.5s						
CHKK	**Chushkaly**	**5.45**	**45**	Pg	**Pg**	**00 35 37.0**	**-2.1**
	0.6nm,0.1s						
CHKK				Lg	Lg	00 36 48.8	
	7.1nm,0.5s						
SATY	**Saty**	**5.85**	**58**	*e*P	**Pg**	**

NACB	**Ninganchiao**	**0.32**	**144**	*e*P		Pb	00 36 00.8	+0.1
	baz=144							
NACB				S		Sb	00 36 05.1	-0.9
	baz=144							
ENA	**Nanau**	**0.32**	**91**	*e*P		Pb	00 36 00.1	-0.6
	baz=91							
ENA				*e*S		Sb	00 36 05.0	-1.0
	baz=91							
NWLT	**Wulai**	**0.36**	**16**	*e*P		Pb	00 36 00.9	-0.6
	baz=16							
NWLT				*e*S		Sb	00 36 06.2	-1.0
	baz=16							
TWE	**Neicheng**	**0.38**	**41**	*e*P		Pb	00 36 01.5	-0.3
	baz=43							
NSTT	**Nanjuang**	**0.41**	**299**	*e*S		Sb	00 36 08.8	+0.2
	baz=299							
CHGB	**Renai**	**0.42**	**208**	*e*P		Pb	00 36 02.6	-0.1
	baz=208							
CHGB				S		Sb	00 36 09.0	-0.2
	baz=208							
WHP	**Taichung City**	**0.43**	**249**	*e*P		Pb	00 36 02.7	-0.1
	baz=249							
WHP				S		Sb	00 36 09.3	-0.1
	baz=249							
TWC	**Suao**	**0.45**	**67**	*e*P		Pg	00 36 02.3	+0.6
	baz=67							
TWC				*e*S		Sb	00 36 10.1	+0.2
	baz=67							
OWD	**Renai**	**0.52**	**203**	*e*P		Pb	00 36 04.0	-0.2
	baz=202							
OWD				S		Sb	00 36 11.1	-0.7
	baz=202							
TIPB	**Shuangxi**	**0.67**	**36**	*e*P		Pb	00 36 06.8	+0.1
	baz=36							
TIPB				*e*S		Sb	00 36 15.5	-0.6
	baz=36							
EOS1	**EOS1**	**0.68**	**80**	*e*P		Pb	00 36 07.1	+0.2
	baz=80							
EOS1				*e*S		Sb	00 36 16.9	+0.5
	baz=80							
VWDT	**VWDT**	**0.71**	**199**	*e*P		Pb	00 36 07.7	+0.3
	baz=198							
VWDT				*e*S		Sb	00 36 18.5	+1.1
	baz=198							
YM03	**YM03**	**0.76**	**10**	*e*S		Sb	00 36 19.0	+0.3
	baz=10.0							

JMA 18 00:36:27.2±0.1, 24°37N×123°21E, h50km±2km, M1.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.20**	**297**	P		Pn	00 36 35.5	-0.1
YOJ				*e*S		Sn	00 36 41.2	-0.3
JYNG	**Yonagunijimaku**	**0.26**	**289**	P		Pn	00 36 35.7	-0.2
JYNG				*e*S		Sn	00 36 41.6	-0.5
IRIF	**Iriomote-Funau**	**0.48**	**94**	P		Pn	00 36 38.0	-0.2
IRIF				S		Sn	00 36 46.6	+0.6
HATJ	**Hateruma jima**	**0.63**	**120**	P		Pn	00 36 39.9	-0.1
HATJ				S		Sn	00 36 49.6	+0.4
JKRS	**Kuro-shima**	**0.74**	**100**	P		Pn	00 36 41.8	+0.3
JKRS				S		Sn	00 36 52.7	+0.9
JIJ	**Ishigaki jima**	**0.85**	**90**	P		Pn	00 36 42.8	-0.1
JIJ				S		Sn	00 36 54.4	0.0
JISG	**Ishigakijimahi**	**1.03**	**78**	P		Pn	00 36 45.4	+0.1
JISG				*e*S		Sn	00 36 59.2	+0.6

IDC 18 00:45:26.9±23.0, 4°93S×155°00E, h554km±275km, mb3.0/7, mb1 3.1/7, mb1mx2.9/31, mbtmp3.9/7, Error ellipse: s-maj=133.4km s-min=62.2km az=55.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.04**	**232**	P		P	00 50 08.1	+0.1
	1.6nm,0.4s,baz=57,slow=9.1,SNR=27							
ASAR	**Alice Springs**	**27.57**	**225**	P		P	00 50 29.9	-0.4
	1.7nm,0.5s,baz=56,slow=8.8,SNR=27							
STKA	**Stephens Creek**	**29.61**	**204**	P		P	00 50 47.7	-0.1
	0.6nm,0.4s,baz=17,slow=14,SNR=3.5							
CMAR	**Chiang Mai Arr**	**59.92**	**294**	P		P	00 54 40.0	-0.3
	0.5nm,0.3s,baz=121,slow=6.6,SNR=1.0							
SONM	**Songino Array**	**67.61**	**327**	P		P	00 55 29.1	+0.2
	0.4nm,0.4s,baz=131,slow=4.4,SNR=3.1							
MKAR	**Makanchi Array**	**81.87**	**318**	P		P	00 56 49.6	+0.9
	0.7nm,0.8s,baz=89,slow=5.4,SNR=5.1							
ZALV	**Zalesovo Beam**	**82.48**	**326**	P		P	00 56 50.3	-1.3
	0.5nm,0.5s,baz=144,slow=5.4,SNR=2.7							

*BJI **18** 00:58:24.0±0.0, 14°.80S×175°.50W, h5km, mB5.6/12, mb5.3/21, Ms5.5/7, Ms7 5.3/7*

*IDC **18** 00:58:25.6±0.7, 14°.82S×175°.73W, h0km, mb4.6/19, mb1 4.8/19, mb1mx4.6/34, mbtmp4.6/19, MS5.2/8, Ms1 5.2/8, ms1mx4.7/39, Error ellipse: s-maj=22.5km s-min=15.5km az=125.0*

*NEIC **18** 00:58:27.7±2.7, 14°.67S±0°.07×175°.53W±0°.06, h10km±1km, mb5.3/228, Mwc5.7(GCMT), Error ellipse: s-maj=12.4km s-min=9.7km az=147.0*

*MOS **18** 00:58:28.2±1.0, 14°.75S×175°.78W, h23km, mb5.5/27, Error ellipse: s-maj=11.1km s-min=9.3km az=144.9*

*GCMT **18** 00:58:31.7±0.1, 14°.65S±0°.01×175°.63W±0°.01, h12km, MW5.6/159, Moment Tensor Solution. s100,c147; s159,c311; Duration: 1s5 Moment tensor: Scale 10^{17} Nm; M_{rr}=0.84±.04; $M_{\theta\theta}$2.57±.04; $M_{\phi\phi}$-1.73±.04; $M_{r\theta}$0.71±.11; $M_{\theta\phi}$2.06±.03; $M_{r\phi}$0.03±.12; Best double couple: M_o3.04600×10^{17} NP1:ϕ_s23.00000°, δ78.00000°, λ179.00000°. NP2:ϕ_s113.00000°, δ89.00000°, λ12.00000°. Principal axes: T 3.5020, Plg9.0000°, Azm338.0000°; N -0.9070, Plg78.0000°, Azm115.0000°; P -2.5910, Plg8.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **18** 00:58:32, 14°.64S×175°.61W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.06; $M_{\theta\theta}$3.07; $M_{\phi\phi}$-2.02; $M_{r\theta}$0.81; $M_{\theta\phi}$2.21; $M_{r\phi}$0.37; Fault plane solution: M_o3.60000×10^{17} NP1:ϕ_s24.00000°, δ85.00000°, λ172.00000°. NP2:ϕ_s115.00000°, δ82.00000°, λ5.00000°. Principal axes: T 4.0515, Plg10.0000°, Azm339.0000°; N -1.2069, Plg80.0000°, Azm272.0000°; P -2.8446, Plg2.0000°, Azm70.0000°;*

ISC 18 00:58:29.6±0.3, 14°.77S±0°.06×175°.44W±0°.05, h26km, n392, σ1°86/294, mb5.2/147, MS5.3/14, 6C-2D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**3.65**	**77**	P		**Pn**	**00 59 21.6**	**-3.0**
AFI	**Afiamalu**	**3.65**	**77**			**Pn**	**00 59 21.6**	**-3.0**
NIUE	**Niue**	**6.79**	**130**			**Pn**	**01 00 08.4**	**+0.8**
MSVF	**Nonsavu**	**6.91**	**244**	*i* P		**Pn**	**01 00 07.6**	**-1.7**
MSVF	**Nonsavu**	**6.91**	**244**			**Pn**	**01 00 07.5**	**-1.8**
FUNA	**Funafuti**	**8.13**	**319**	Pn		**Pn**	**01 00 21.4**	**-4.7**
KNTN	**Kanton**	**12.48**	**17**			**Pn**	**01 01 21.3**	**-4.2**
RAO	**Raoul Island**	**14.59**	**189**	LR		LR	01 06 32.6	
	comp=Z,24μm,19.8s,baz=12,slow=34							
RAR	**Rarotonga**	**16.21**	**116**	Pn		**Pn**	**01 02 11.5**	**-4.3**
	1.4nm,0.3s,baz=135,slow=13,SNR=2.3							
RAR				LR		LR	01 07 16.0	
	comp=Z,2μm,19.1s,baz=286,slow=32							
DZM	**Mont Dzumac**	**18.64**	**244**	*e*Pn		**P**	**01 02 44.5**	**-1.2**
	1μm,1.6s							
DZM				*e*S		**Sn**	**01 06 08.0**	**-6.0**
	2μm,31.4s							
DZM				*e*LR		LR	01 07 07.2	
	comp=Z,16μm,25.1s							
DZM	**Mont Dzumac**	**18.64**	**244**	P		**Pn**	**01 02 46.1**	**0.0**
	0.7nm,0.3s,baz=90,slow=9.9,SNR=14							
DZM				LR		LR	01 08 39.9	
	comp=Z,11μm,19.0s,baz=74,slow=33							
DZM	**Mont Dzumac**	**18.64**	**244**	P		**P**	**01 02 45.4**	**-0.3**
URZ	**Urewera**	**24.30**	**194**	P		**P**	**01 03 44.0**	**-1.0**
	8.5nm,0.9s,baz=344,slow=6.5,SNR=6.9							
URZ				LR		LR	01 11 51.4	
	comp=Z,12μm,21.4s,baz=33,slow=33							
HNR	**Honiara**	**24.63**	**280**	P		**P**	**01 03 46.8**	**-1.5**
	49nm,0.6s,baz=207,slow=4.3,SNR=5.0							
HNR				LR		LR	01 12 00.8	
	comp=Z,3μm,19.1s,baz=118,slow=34							
HNR	**Honiara**	**24.63**	**280**	P		**P**	**01 03 46.8**	**-1.5**
HNR					pmax	pmax		
	comp=Z,358nm,1.5s							
PAE	**Paea**	**24.99**	**100**	*e*T		T	01 29 39.7	
	comp=Z,9.9nm,0.2s							
PPT	**Papeete**	**24.99**	**100**	LR		LR	01 11 37.0	
	comp=Z,2μm,19.1s,baz=266,slow=31							
PPT2	**Papeete2**	**24.99**	**100**	*e*S		**S**	**01 08 10.7**	**-3.5**
	comp=Z,1μm,28.0s							
PPT2				*e*LQ		LQ	01 08 58.8	
	comp=Z,14μm,24.4s							
PPT2				*e*LR		LR	01 10 02.2	
	comp=Z,9μm,26.2s,baz=262							
PPT2	**Papeete2**	**24.99**	**100**	*e*T		T	01 29 40.7	
	comp=Z,24nm,0.4s							
PPTF	**Pamatai, Papee**	**25.00**	**100**	P		**P**	**01 03 52.2**	**+0.5**
PPTF				IAmb		IAmb	01 04 14.4	
	comp=Z,85nm,1.1s							
TIAR	**Tiarei**	**25.21**	**100**	*e*T		T	01 29 56.0	
	comp=Z,9.6nm,0.3s							
TVO	**Taravao**	**25.31**	**100**	*e*T		T	01 30 03.5	
	comp=Z,9.5nm,0.4s							
TBI	**Tubuai**	**25.96**	**113**	*e*S		**S**	**01 08 27.0**	**-2.3**
	comp=Z,422nm,23.2s							
TBI				*e*LQ		LQ	01 09 23.6	
	comp=Z,14μm,28.2s							
TBI				*e*LR		LR	01 10 34.0	
	comp=Z,7μm,27.2s,baz=287							
TBI	**Tubuai**	**25.96**	**113**	*e*T		T	01 30 51.2	
	comp=Z,22nm,0.3s							
MEH	**Mehetia**	**26.44**	**100**	*e*T		T	01 31 28.5	
	comp=Z,18nm,0.3s							
PMOR	**Pomariorio Ree**	**26.62**	**94**	*e*T		T	01 31 42.0	
	comp=Z,11nm,0.3s							
VAH	**Vaihoa**	**26.86**	**95**	*e*T		T	01 32 00.4	
	comp=Z,18nm,0.3s							
MLZ	**Mavora Lakes**	**33.51**	**201**	P		**P**	**01 05 04.8**	**-2.2**
TAOE	**Nuku Hiva Isla**	**35.01**	**84**	*e*LR		LR	01 14 36.6	
	comp=Z,11μm,26.7s,baz=260							
CTAO	**Charters Tower**	**36.87**	**256**	P		**P**	**01 05 33.4**	**-2.8**
CTAO					pmax	pmax		
	comp=Z,92nm,1.0s							
CTAO	**Charters Tower**	**36.87**	**256**	P		**P**		
PMG	**Port Moresby**	**36.92**	**274**	*i* P		**P**	**01 05 33.4**	**-2.8**
PMG					pmax	pmax	**01 05 36.2**	**-0.5**
	comp=Z,297nm,1.1s							
PMG	**Port Moresby**	**36.92**	**274**	P		**P**	**01 05 35.2**	**-1.5**
H11S2	**WAKE ISLAND Hy**	**37.44**	**331**	T		T	01 45 24.5	
	baz=149,slow=77,SNR=33							
H11S3	**WAKE ISLAND Hy**	**37.46**	**331**	T		T	01 45 09.7	
	baz=149,slow=77,SNR=41							
H11S1	**WAKE ISLAND Hy**	**37.46**	**331**	T		T	01 45 12.7	
	baz=149,slow=77,SNR=23							
CAN	**Canberra**	**37.87**	**231**	P		**P**	**01 05 43.3**	**-1.3**
CAN					pmax	pmax		
	comp=Z,27nm,1.2s							
CAN	**Canberra**	**37.87**	**231**	P		**P**	**01 05 43.3**	**-1.3**
H11N3	**WAKE ISLAND Hy**	**38.42**	**333**	T		T	01 46 26.7	
	baz=152,slow=76,SNR=140							
H11N1	**WAKE ISLAND Hy**	**38.43**	**333**	T		T	01 46 24.7	
	baz=152,slow=76,SNR=719							
H11N2	**WAKE ISLAND Hy**	**38.44**	**333**	T		T	01 46 29.6	
	baz=152,slow=76,SNR=129							
RKT	**Rikitea**	**39.06**	**109**	*e*LQ		LQ	01 15 00.6	
	comp=Z,1μm,24.2s							
RKT				*e*LR		LR	01 16 42.5	
	comp=Z,5μm,25.2s							
RKT	**Rikitea**	**39.06**	**109**	*e*T		T	01 47 15.1	
	comp=Z,11nm,0.3s							
COEN	**Coen**	**40.06**	**266**	P		**P**	**01 06 03.7**	**+0.6**
TOO	**Toolangi**	**41.35**	**229**	P		**P**	**01 06 12.7**	**-0.9**
TOO					pmax	pmax		
	comp=Z,77nm,1.2s							
TOO	**Toolangi**	**41.35**	**229**	P		**P**	**01 06 12.7**	**-0.9**
TOO					IAmb	IAmb	01 06 17.7	
	comp=Z,77nm,1.1s							
STKA	**Stephens Creek**	**42.66**	**239**	P		**P**	**01 06 21.6**	**-2.6**
	comp=Z,12nm,0.9s,baz=58,slow=7.1,SNR=23							
STKA	**Stephens Creek**	**42.66**	**239**	P		**P**	**01 06 22.3**	**-1.9**
STKA					pmax	pmax		
	comp=Z,11nm,1.2s							
STKA	**Stephens Creek**	**42.66**	**239**	P		**P**	**01 06 22.3**	**-1.9**
SMPI	**Sarmi**	**46.99**	**281**	P		**P**	**01 07 01.1**	**+2.1**
	comp=Z,710nmcomp=Z,32nm,1.5s							
BBOO	**Buckleboo**	**47.43**	**239**	P		**P**	**01 06 59.8**	**-2.4**
WR0	**Warramunga Arr**	**47.88**	**256**	P		**P**	**01 07 03.6**	**-2.3**
WRAB	**Tennant Creek**	**48.06**	**256**	*i* P		**P**	**01 07 06.9**	**-0.4**
WRAB					pmax	pmax		
	comp=Z,157nm,1.7s							
WRAB	**Tennant Creek**	**48.06**	**256**	P		**P**		
WRA	**Warramunga Arr**	**48.07**	**256**	P		**P**	**01 07 04.8**	**-2.5**
	comp=Z,42nm,1.3s,baz=90,slow=6.1,SNR=21						**01 07 03.7**	**-3.7**
ASAR	**Alice Springs**	**48.43**	**251**	P		**P**	**01 07 07.5**	**-2.7**
	comp=Z,16nm,0.9s,baz=84,slow=6.9,SNR=53							
KNRA	**Kununurra**	**53.71**	**261**	IAmb		IAmb	01 07 52.4	
	comp=Z,44nm,0.9s							
FORT	**Forrest**	**53.95**	**243**	P		**P**	**01 07 48.8**	**-2.5**
LBMI	**Labuha**	**58.07**	**279**	P		**P**	**01 08 25.4**	**+4.2**
	comp=Z,2μmcomp=Z,52nm,1.5s							
SOEI	**Soe**	**58.99**	**267**	P		**P**	**01 08 30.1**	**+2.4**
	comp=Z,5μmcomp=Z,2μmcomp=Z,97nm,1.2s							
SANI	**Sanana**	**59.13**	**277**	P		**P**	**01 08 31.3**	**+2.8**
	comp=Z,2μmcomp=Z,30nm,1.5s							
MMRI	**Maumere**	**61.17**	**268**	P		**P**	**01 08 44.9**	**+2.3**
	comp=Z,7μmcomp=Z,2μmcomp=Z,91nm,1.1s							
MMRI	**Maumere**	**61.17**	**268**	P		**P**	**01 08 45.1**	**+2.5**
EDFI	**Ende, Flores**	**61.68**	**268**	P		**P**	**01 08 47.6**	**+1.5**
	comp=Z,4μmcomp=Z,650nmcomp=Z,44nm,1.3s							
DAV	**Davao City (W)**	**62.37**	**286**	*i* P		**P**	**01 08 50.5**	**-0.1**
BASI	**Baing, Sumba**	**62.46**	**266**	P		**P**	**01 08 53.1**	**+1.9**
	comp=Z,4μmcomp=Z,2μmcomp=Z,153nm,1.2s							
KCP	**Kidapawan**	**62.80**	**286**	*i* P		**P**	**01 08 52.5**	**-1.1**
VNDA	**Vanda**	**63.80**	**185**	P		**P**	**01 08 59.4**	**+0.4**
	comp=Z,5.4nm,1.0s,baz=15,slow=5.3,SNR=8.0							
VNDA	**Vanda**	**63.80**	**185**	P		**P**	**01 08 59.8**	**+0.7**
VNDA					pmax	pmax		
	comp=Z,27nm,1.4s							
VNDA	**Vanda**	**63.80**	**185**	P		**P**	**01 08 59.8**	**+0.7**
VNDA					IAmb	IAmb	01 09 30.4	
	comp=Z,26nm,1.4s							
MORW	**Morawa**	**64.37**	**245**	P		**P**	**01 09 05.6**	**+2.0**
PLAI	**Plampang**	**65.45**	**267**	P		P	01 09 17.8	+6.9
MJA0	**Matsu Arr-Jizo**	**67.18**	**321**	*e*P		**P**	**01 09 20.4**	**-1.1**
MJA0					pmax	pmax		
	comp=Z,6.0nm,0.9s							
MJAR	**Matsushiro Arr**	**67.20**	**321**	P		**P**	**01 09 20.4**	**-1.2**
	comp=Z,6.1nm,0.9s,baz=152,slow=6.0,SNR=17							
MAJO	**Matsushiro**	**67.20**	**321**	P		**P**	**01 09 20.6**	**-1.0**
MAJO					pmax	pmax		
	comp=Z,153nm,1.5s							
MAJO	**Matsushiro**	**67.20**	**321**	P		**P**	**01 09 20.6**	**-1.0**
MAT	**Matsushiro**	**67.20**	**321**	P		**P**	**01 09 20.3**	**-1.4**
JNU	**Natatsue**	**69.94**	**314**	P		**P**	**01 09 37.1**	**-1.7**
	comp=Z,72nm,0.9s,baz=70,slow=3.6,SNR=5.8							
JNU	**Nakatsue**	**69.94**	**314**	P		**P**	**01 09 38.0**	**-0.8**
CASY	**Casey**	**70.16**	**204**	P		**P**	**01 09 43.5**	**+3.9**
CASY					IAmb	IAmb	01 09 58.2	
	comp=Z,23nm,1.4s							
PET	**Petropavlovsk**	**71.11**	**344**	*e*P		**P**	**01 09 45.6**	**+0.1**
PET				*e*S		**S**	**01 18 59.3**	**-1.0**
PETK	**Petropavlovsk-**	**71.45**	**343**	P		**P**	**01 09 47.7**	**+0.1**
	comp=Z,18nm,0.8s,baz=125,slow=9.3,SNR=13							
PETK				LR		LR	01 34 53.2	
	comp=Z,2μm,22.0s,baz=211,slow=31							
SNCC	**San Nicolas Is**	**71.58**	**47**	P		**P**	**01 09 50.4**	**+1.6**
	baz=238							
H06S1	**SOCORRO T**	**71.70**	**64**	T		T	02 28 36.4	
	SNR=40							
YSS	**Yuzh-Sakhalins**	**71.98**	**331**	*e*P		**P**	**01 09 51.1**	**+0.3**
YSS				*e*			01 09 55.3	
YSS					pmax	pmax		
	comp=Z,40nm,1.2s							
SBC	**Santa Barbara**	**72.09**	**46**	P		**P**	**01 09 53.9**	**+2.1**
	baz=237							
SCI2	**San Clemente I**	**72.13**	**48**	P		**P**	**01 09 53.5**	**+1.4**
	baz=238							
PKM	**Mcpherson Peak**	**72.26**	**45**	P		**P**	**01 09 54.3**	**+1.2**
	baz=237							
SMMC	**Simmler**	**72.37**	**45**	P		**P**	**01 09 54.4**	**+0.8**
	baz=237							
CIS	**Catalina Islan**	**72.45**	**47**	P		**P**	**01 09 55.7**	**+1.7**
	baz=238							
OSI	**Osito Audit: C**	**72.87**	**46**	P		**P**	**01 09 58.1**	**+1.6**
	baz=238							
DECC	**Green Verdugo**	**72.95**	**47**	P		**P**	**01 09 58.4**	**+1.4**
	baz=238							
ARVC	**Arvin**	**73.07**	**46**	P		**P**	**01 09 59.4**	**+1.8**
	baz=238							
109C	**Camp Elliot, M**	**73.12**	**48**	P		**P**	**01 09 59.4**	**+1.4**
	baz=239							
VES	**Vestal, Richgr**	**73.28**	**45**	P		**P**	**01 10 00.2**	**+1.4**
	baz=237							
O02D	**Mt. Diablo Mer**	**73.33**	**39**	P		**P**	**01 10 01.4**	**+2.2**
	baz=233							
VOG	**Valley Oaks Go**	**73.34**	**44**	P		**P**	**01 10 00.5**	**+1.3**
	baz=237							
BFSC	**Mount Baldy Ra**	**73.42**	**47**	P		**P**	**01 10 01.2**	**+1.2**
	baz=239							
MURC	**Murrieta**	**73.42**	**48**	P		**P**	**01 10 01.6**	**+1.8**
	baz=239							
KRMB	**Red Mountain**	**73.47**	**38**	IAmb		IAmb	01 10 17.8	
	comp=Z,68nm,1.8s							
EDW2	**Edwards Air Fo**	**73.52**	**46**	P		**P**	**01 10 01.5**	**+1.1**
	baz=238							
ISA	**Isabella, Lake**	**73.60**	**45**	P		**P**	**01 10 02.5**	**+1.6**
	baz=238							
ISA	**Isabella, Lake**	**73.60**	**45**	IAmb		IAmb	01 10 17.4	
	comp=Z,40nm,1.4s							
CMB	**Columbia Colle**	**73.62**	**42**	IAmb		IAmb	01 10 16.9	
	comp=Z,38nm,1.6s							
MONP2	**Monument Peak**	**73.62**	**49**	P		**P**	**01 10 03.0**	**+1.8**
	baz=240							
IKP	**In-Ko-Pah, Jac**	**73.73**	**49**	P		**P**	**01 10 03.6**	**+1.9**
	baz=240							
ORV	**Oroville**	**73.77**	**41**	IAmb		IAmb	01 10 18.7	
	comp=Z,46nm,1.8s							
N02D	**Trinity Center**	**73.86**	**39**	P		**P**	**01 10 04.3**	**+2.0**
	baz=233							
PFO	**Pinyon Flats O**	**73.96**	**48**	P		**P**	**01 10 07.1**	**+4.0**
PFO					pmax	pmax		
	comp=Z,53nm,1.9s							
PFO	**Pinyon Flats O**	**73.96**	**48**	P		**P**	**01 10 04.8**	**+1.8**
	baz=240							
PFO	**Pinyon Flats O**	**73.96**	**48**	P		**P**	**01 10 07.1**	**+4.0**
PFO					IAmb	IAmb	01 10 15.1	
	comp=Z,53nm,1.9s							
BBRC	**Big Bear Solar**	**73.96**	**47**	P		**P**	**01 10 02.4**	**-0.8**
	baz=239							
XPFO	**Pion Flat**	**73.96**	**48**	P		**P**	**01 10 07.2**	**+4.1**
XPFO					IAmb	IAmb	01 10 15.1	
	comp=Z,49nm,1.9s							
O03E	**Paynes Creek**	**74.01**	**40**	P		**P**	**01 10 04.9**	**+1.7**
	baz=234							
M02C	**Callahan**	**74.02**	**38**	P		**P**	**01 10 05.6**	**+2.4**
	baz=233							
LRMC	**Laurel Mtn Rad**	**74.05**	**46**	P		**P**	**01 10 05.3**	**+1.7**
	baz=238							
SWSC	**Sam W. Stewart**	**74.10**	**49**	P		**P**	**01 10 05.9**	**+2.1**
	baz=240							
SRIG	**Santa Rosalia**	**74.19**	**56**	IAmb		IAmb	01 10 16.3	
	comp=Z,59nm,1.6s							
RRX	**Edison Barstow**	**74.22**	**47**	P		**P**	**01 10 06.2**	**+1.7**
	baz=239							
CWC	**Cottonwood Cre**	**74.28**	**45**	P		**P**	**01 10 06.5**	**+1.5**
	baz=238							
OMMB	**Old Mammoth Mi**	**74.30**	**43**	IAmb		IAmb	01 10 21.3	
	comp=Z,41nm,1.7s							
YBH	**Yreka Blue Hor**	**74.31**	**38**	IAmb		IAmb	01 10 16.9	
	comp=Z,28nm,1.2s							
K02D	**Willamette Mer**	**74.33**	**37**	P		**P**	**01 10 06.4**	**+1.4**
	baz=232,SNR=6.1							
KSRS	**Korea Array**	**74.34**	**316**	P		**P**	**01 10 05.3**	**+0.3**
	comp=Z,4.1nm,0.9s,baz=124,slow=6.2,SNR=19							
MLAC	**Mammoth, Mammo**	**74.42**	**43**	P		**P**	**01 10 07.6**	**+1.8**
	baz=237							
J01E	**Myrtle Point**	**74.47**	**36**	P		**P**	**01 10 07.3**	**+1.6**
	baz=232							
BELC	**Belle Mtn. Jos**	**74.48**	**48**	P		**P**	**01 10 08.0**	**+1.8**
	baz=240							
MPMC	**Manual Prospec**	**74.49**	**45**	P		**P**	**01 10 07.7**	**+1.5**
	baz=238							
WAKR	**Walker**	**74.50**	**42**	IAmb		IAmb	01 10 22.6	
	comp=Z,64nm,1.6s							
TIN	**Tinemaha, Big**	**74.51**	**44**	P		**P**	**01 10 06.9**	**+0.7**
	baz=238							
GSC	**Goldstone, Bar**	**74.57**	**46**	P		**P**	**01 10 08.2**	**+1.6**
	baz=239							
HEC	**Hector,Ludlow**	**74.66**	**47**	P		**P**	**01 10 08.5**	**+1.4**
	baz=239							
BC3	**Big Chuckawall**	**74.70**	**48**	P		**P**	**01 10 08.0**	**+0.6**
	baz=240							
PNTR	**Pine Nut**	**74.72**	**42**	IAmb		IAmb	01 10 23.7	
	comp=Z,47nm,1.3s							
L04D	**Klamath Falls**	**74.84**	**38**	P		**P**	**01 10 09.7**	**+1.6**
	baz=233,SNR=6.6							
GLA	**Glamis**	**74.86**	**49**	P		**P**	**01 10 08.9**	**+0.6**
	baz=241							
M04C	**Macdoel**	**74.86**	**39**	P		**P**	**01 10 09.1**	**+0.9**
	baz=234							
GRAC	**Grapevine Rang**	**75.07**	**45**	P		**P**	**01 10 10.1**	**+0.8**
	baz=238							
GMRC	**Granite Mounta**	**75.12**	**47**	P		**P**	**01 10 07.3**	**-2.5**
	baz=240							
I03D	**Drain, OR**	**75.13**	**36**	P		**P**	**01 10 11.2**	**+1.7**
	baz=232,SNR=6.2							
FURC	**Furnace Creek,**	**75.13**	**45**	P		**P**	**01 10 09.3**	**-0.4**
	baz=239							
RYN	**Ryan**	**75.17**	**43**	IAmb		IAmb	01 10 26.2	
	comp=Z,72nm,1.8s							
IRM	**Iron Mountain**	**75.17**	**48**	P		**P**	**01 10 10.7**	**+0.7**
	baz=240							
PAHR	**Pah Rah Range**	**75.20**	**41**	IAmb		IAmb	01 10 27.6	
	comp=Z,62nm,1.9s							
NVAR	**Mina Array Bea**

baz=239
R11A Troy Canyon, C 76.97 44 IAmb IAmb 01 10 36.4
comp=Z,39nm,1.8s
H02S1 DAWSON INLET T 77.09 25 T T 02 35 08.8
SNR=99
NLWA Neilton Lookou 77.14 33 IAmb IAmb 01 10 37.1
comp=Z,29nm,1.5s
WVOR Wild Horse Val 77.19 39 IAmb IAmb 01 11 24.6
comp=Z,14nm,0.8s
G05D Wamic, OR 77.22 36 P **P** **01 10 23.1 +1.7**
baz=234
E04D Cinebar 77.32 34 P **P** **01 10 22.4 +0.5**
baz=232
NKL Nikolayevsk 77.43 335 P P 01 10 27.4 +5.1
NKL *eS* S 01 21 06.2 +55
NKL pmax pmax
comp=Z,31nm,1.5s
NKL pmax pmax
comp=N,7,0nm,1.0s
F05D White Salmon 77.53 35 P **P** **01 10 23.5 +0.5**
baz=233
TUC Tucson 77.54 52 P **P** **01 10 26.1 +2.6**
TUC pmax pmax
comp=Z,63nm,1.9s
TUC Tucson 77.54 52 P **P** **01 10 22.8 -0.7**
baz=244
TUC Tucson 77.54 52 P **P** **01 10 26.1 +2.6**
TUC IAmb IAmb 01 10 36.2
comp=Z,63nm,1.9s
G06A Carlson Farm, 77.61 36 IAmb IAmb 01 10 40.2
comp=Z,54nm,1.7s
D03D Eldon 77.64 33 P **P** **01 10 25.4 +1.8**
baz=232
J08A Circle Bar Ran 77.80 39 IAmb IAmb 01 10 38.4
comp=Z,29nm,1.3s
NJ2 Nanjing 78.22 308 *eP* **P** **01 10 27.8 +0.6**
NJ2 pmax pmax
comp=Z,16nm,0.5s
WUAZ Wupatki 78.55 48 P **P** **01 10 28.4 -0.8**
baz=243
A04D Lummi Island 78.58 33 P **P** **01 10 28.8 0.0**
baz=232
B05A Bryant 78.62 33 P **P** **01 10 28.4 -0.7**
baz=232
FID Port Fidalgo 78.76 14 IAmb IAmb 01 10 32.6
comp=Z,44nm,1.8s
LTY Liberty 78.78 35 IAmb IAmb 01 10 46.6
comp=Z,33nm,1.6s
KNK Knik Glacier 78.90 13 IAmb IAmb 01 10 47.3
comp=Z,54nm,1.8s
TTA Tatalina 78.93 9 IAmb IAmb 01 10 34.8
comp=Z,38nm,1.4s
KLR Kul'dur 78.93 328 P **P** **01 10 30.9 +0.1**
comp=Z,2.5nm,0.9s,baz=90,slow=6.1,SNR=6.6
KLR Kul'dur 78.93 328 *i* P **P** **01 10 29.0 -1.8**
KLR pmax pmax
comp=Z,4.0nm,1.1s
MA2 Magadan 78.99 343 *i* P **P** **01 10 31.7 +0.9**
MA2 pmax pmax
comp=Z,70nm,5.9s
C06D Leavenworth 79.06 34 P **P** **01 10 29.5 -2.0**
baz=233
BMO Blue Mountains 79.33 38 IAmb IAmb 01 10 49.8
comp=Z,54nm,1.9s
SNY Shenyang 79.49 318 ⇑P **P** **01 10 33.9 -0.1**
SNY pmax pmax
comp=Z,20nm,0.9s
SNY pmax pmax
comp=Z,340nm,5.9s
SNY LR LR
comp=Z,4μm,18.6s
SNY LR LR
comp=Z,4μm,17.2s
SNY LR LR
comp=Z,5μm,16.9s
SCM Sheep Creek Mo 79.53 13 IAmb IAmb 01 10 43.5
comp=Z,35nm,1.3s
W18A Petrified Fore 79.56 49 P **P** **01 10 33.3 -1.5**
baz=244
YAH Yahtse 79.62 16 IAmb IAmb 01 10 48.1
comp=Z,35nm,1.3s
D08A Wollman Farm, 79.64 35 IAmb IAmb 01 10 48.1
comp=Z,33nm,1.3s
121A Cookes Peak, D 79.92 53 P **P** **01 10 38.9 +2.2**
baz=245
121A Cookes Peak, D 79.92 53 IAmb IAmb 01 10 56.0
comp=Z,38nm,1.4s
TRF Thorofare Moun 80.38 11 IAmb IAmb 01 10 50.9
comp=Z,36nm,1.4s
ZAIG Zacatecas 80.48 63 IAmb IAmb 01 10 46.6
comp=Z,42nm,1.7s
RND Reindeer 80.62 12 IAmb IAmb 01 10 49.5
comp=Z,27nm,1.2s
SKAG Skagway 80.80 19 IAmb IAmb 01 11 03.3
comp=Z,40nm,1.4s
MCK McKinley 80.89 12 IAmb IAmb 01 10 58.1
comp=Z,28nm,1.2s
Y22D IRIS PASSCAL I 81.22 51 P **P** **01 10 42.8 -0.9**
baz=246
MVCO Mesa Verde 81.38 48 P **P** **01 10 44.9 +0.3**
baz=244
SEY Seymchan 81.42 346 P **P** **01 10 43.8 0.0**
comp=Z,12nm,1.0s,baz=150,slow=4.7,SNR=8.3
SEY Seymchan 81.42 346 *i* P **P** **01 10 43.9 +0.1**
MNTX Cornudas Mount 81.45 54 P **P** **01 10 43.4 -1.4**
baz=247
MNTX Cornudas Mount 81.45 54 IAmb IAmb 01 10 51.1
comp=Z,30nm,1.5s
PV09 Paradox Valley 81.50 47 P **P** **01 10 46.0 +0.8**
PV10 Paradox Valley 81.51 47 P **P** **01 10 46.2 +1.0**
PV10 IAmb IAmb 01 11 02.3
comp=Z,28nm,1.2s
PV17 East Wray Mesa 81.52 47 IAmb IAmb 01 11 02.5
comp=Z,58nm,1.8s
PV16 Nyswonger Mesa 81.56 47 IAmb IAmb 01 10 57.3
comp=Z,43nm,1.9s
PV13 Radium Mtn., P 81.57 47 IAmb IAmb 01 11 01.8
comp=Z,44nm,1.7s
PV03 Paradox Valley 81.59 47 IAmb IAmb 01 11 02.8
comp=Z,59nm,1.9s
PV11 David Mesa, Pa 81.59 47 IAmb IAmb 01 10 57.5
comp=Z,77nm,2.0s
PV04 Paradox Valley 81.61 47 IAmb IAmb 01 10 56.6
comp=Z,48nm,1.9s
PV21 Cone Mtn., Par 81.63 47 P **P** **01 10 46.5 +0.6**
PV21 IAmb IAmb 01 11 10.6
comp=Z,28nm,1.4s
PV02 Paradox Valley 81.65 47 P **P** **01 10 46.2 +0.3**
PV12 Saucer Basin, 81.65 47 P **P** **01 10 47.0 +1.0**
WRH Wood River Hil 81.72 12 IAmb IAmb 01 10 55.1
comp=Z,42nm,1.3s
PV01 Paradox Valley 81.73 47 IAmb IAmb 01 11 03.6
comp=Z,46nm,1.8s
PV07 Paradox Valley 81.81 47 P **P** **01 10 47.9 +1.1**
DOT Dot Lake 81.85 14 IAmb IAmb 01 10 56.0
comp=Z,25nm,1.2s
PV15 Paradox Valley 81.89 47 P **P** **01 10 48.6 +1.3**
PV15 IAmb IAmb 01 11 04.3
comp=Z,36nm,1.7s
HDA Harding Lake 81.90 12 P **P** **01 10 45.3 -1.1**
baz=208
HDA Harding Lake 81.90 12 IAmb IAmb 01 10 57.3
comp=Z,26nm,1.2s
ANMO Albuquerque 81.92 51 P **P** **01 10 49.5 +2.0**
ANMO pmax pmax
comp=Z,34nm,1.3s
ANMO Albuquerque 81.92 51 P **P** **01 10 45.3 -2.2**
baz=246
ANMO Albuquerque 81.92 51 P **P** **01 10 49.5 +2.0**
ANMO IAmb IAmb 01 11 04.1
comp=Z,34nm,1.3s
CCB Clear Creek Bu 81.94 12 IAmb IAmb 01 10 55.9
comp=Z,22nm,1.2s
RDMU Red Mountain 82.12 45 P **P** **01 10 49.9 +1.5**
AHID Auburn Hatcher 82.12 42 P **P** **01 10 50.2 +1.9**
TCOL CIGO, UAF Yank 82.13 12 P **P** **01 10 47.1 -0.4**
baz=207
COLA College 82.13 12 P **P** **01 10 48.6 +1.1**
COLA pmax pmax
comp=Z,22nm,0.9s
COLA College 82.13 12 P **P** **01 10 48.6 +1.1**
COLA IAmb IAmb 01 11 09.9
comp=Z,22nm,0.9s
ILAR Eielson Array 82.23 12 P **P** **01 10 48.5 +0.4**
comp=Z,5.6nm,1.1s,baz=219,slow=5.6,SNR=29
TLIG Tlapa 82.33 70 P **P** **01 10 50.1 +0.3**
TLIG IAmb IAmb 01 10 56.6
comp=Z,29nm,1.5s
MSO Missoula 82.38 38 IAmb IAmb 01 11 05.4
comp=Z,40nm,1.6s
POKR Poker Plat Res 82.43 12 P **P** **01 10 48.1 -1.1**
baz=207
DLMT Dillon 82.44 39 IAmb IAmb 01 11 01.2
comp=Z,46nm,1.5s
FXWY Fox Creek 82.59 41 IAmb IAmb 01 11 07.6
comp=Z,40nm,1.4s
IMW Indian Meadow 82.77 41 IAmb IAmb 01 11 03.3
comp=Z,33nm,1.1s
S22A 4UR Ranch, Cre 82.81 48 P **P** **01 10 51.8 -0.4**
baz=245
O20A White River Ci 82.84 45 P **P** **01 10 54.4 +2.3**
baz=244
RDOG Red Dog Mine 83.10 5 P **P** **01 10 54.0 +1.4**
YMR Madison River 83.11 40 P **P** **01 10 55.2 +1.7**
BW06 Boulder Array 83.13 43 P **P** **01 10 54.7 +1.1**
baz=243
BW06 Boulder Array 83.13 43 IAmb IAmb 01 11 06.7
comp=Z,25nm,1.3s
PD31 Pinedale Array 83.13 43 IAmb IAmb 01 11 06.8
comp=Z,22nm,1.2s
PDAR Pinedale Array 83.13 43 P **P** **01 10 54.9 +1.3**
comp=Z,7.8nm,1.2s,baz=222,slow=2.0,SNR=20
H17A Grant Village 83.23 41 P **P** **01 10 55.2 +1.1**
baz=242
H17A Grant Village 83.23 41 IAmb IAmb 01 11 23.1
comp=Z,23nm,1.2s
SMCO Snowmass 83.31 47 IAmb IAmb 01 11 14.6
comp=Z,30nm,1.4s
DAWY Dawson 83.32 15 IAmb IAmb 01 11 04.2
comp=Z,17nm,1.1s
LKWY Lake 83.42 41 P **P** **01 10 58.1 +3.0**
LKWY pmax pmax
comp=Z,44nm,1.3s
LKWY Lake 83.42 41 P **P** **01 10 58.1 +3.0**
EGAK Eagle 83.48 14 IAmb IAmb 01 11 04.8
comp=Z,20nm,1.1s
WALA Waterton Lakes 83.54 36 IAmb IAmb 01 11 17.6
comp=Z,52nm,1.9s
BILL Bilibino 83.64 353 *c i* P **P** **01 10 54.9 -0.5**
BILL *e* 01 10 59.5
BILL *e* 01 11 03.9
BILL S **S** **01 21 22.0 +6.2**
BILL pmax pmax
comp=Z,12nm,1.1s
BILL MLR MLR
comp=Z,3μm,22.0s
BILL Bilibino 83.64 353 P **P** **01 10 55.6 +0.2**
YMP Mirror Lake Pl 83.66 41 P **P** **01 10 56.0 -0.4**
SDCO Great Sand Dun 83.77 49 P **P** **01 10 57.9 +0.8**
baz=246
SDCO Great Sand Dun 83.77 49 P **P** **01 10 56.8 -0.3**
COLD Coldfoot 83.84 10 IAmb IAmb 01 11 22.5
comp=Z,20nm,1.2s
YNE Yellowstone No 83.88 40 P **P** **01 10 58.5 +1.1**
ZEA Zeya 83.88 330 *eP* **P** **01 10 56.2 -0.7**
ZEA pmax pmax
comp=Z,21nm,1.2s
T25A Trinidad 84.32 49 P **P** **01 11 00.1 +0.3**
baz=247
MSTX Muleshoe 84.34 53 P **P** **01 11 00.8 +0.9**
baz=248
RLMT Red Lodge 84.39 41 P **P** **01 10 58.7 -1.3**
baz=243
RLMT Red Lodge 84.39 41 IAmb IAmb 01 11 16.2
comp=Z,33nm,1.4s
GCMT Greycliff 84.45 40 P **P** **01 11 02.0 +1.9**
Q24A Divide 84.51 48 P **P** **01 10 59.8 -1.1**
baz=246
N23A Red Feather La 84.75 45 P **P** **01 11 01.0 -0.9**
baz=246
833A Chaparral WMA, 85.06 59 P **P** **01 11 00.0 -3.5**
baz=250
K22A Casper 85.09 44 P **P** **01 11 02.1 -1.4**
baz=245
K22A Casper 85.09 44 IAmb IAmb 01 11 18.3
comp=Z,37nm,1.6s
PHWY Pilot Hill 85.25 45 P **P** **01 11 05.0 +0.5**
EGMT Eagleton 85.44 38 P **P** **01 11 03.9 -1.1**
baz=242
EGMT Eagleton 85.44 38 P **P** **01 11 06.0 +1.0**
JCT Junction City 85.46 57 P **P** **01 11 06.0 +0.5**
JCT pmax pmax
comp=Z,55nm,2.0s
JCT Junction City 85.46 57 P **P** **01 11 03.2 -2.2**
baz=250
JCT Junction City 85.46 57 P **P** **01 11 06.0 +0.5**
JCT IAmb IAmb 01 11 12.5
comp=Z,54nm,1.9s
AMTX Amarillo 85.52 52 P **P** **01 11 03.6 -2.2**
baz=249
AMTX Amarillo 85.52 52 P **P** **01 11 06.4 +0.7**
AMTX IAmb IAmb 01 11 28.3
comp=Z,34nm,1.8s
EPYK Eagle Plains 85.85 15 P **P** **01 11 04.7 -1.9**
baz=217
EPYK Eagle Plains 85.85 15 IAmb IAmb 01 11 44.9
comp=Z,51nm,1.8s
GYA Guiyang 86.01 299 ⇑*i* P **P** **01 11 11.0 +2.6**
GYA PP **PP** **01 14 33.3 +4.4**
GYA S **S** **01 21 45.8 +4.5**
GYA pmax pmax
comp=Z,40nm,1.3s
GYA pmax pmax
comp=Z,170nm,3.6s
GYA LR LR
comp=Z,680nm,15.6s
GYA LR LR
comp=Z,420nm,16.3s
GYA LR LR
comp=Z,840nm,17.5s
ABTX Abilene, Hawle 86.31 55 P **P** **01 11 06.8 -2.8**
baz=250
ABTX Abilene, Hawle 86.31 55 IAmb IAmb 01 11 17.7
comp=Z,36nm,1.3s
LAO LASA Array 86.99 40 P **P** **01 11 12.1 -0.6**
baz=245
LAO LASA Array 86.99 40 P **P** **01 11 13.2 +0.6**
HHC Hu-ho-hao-te 87.16 313 *eP* **P** **01 11 13.5 -0.2**
HHC sP pP 01 11 19.4 -1.8
HHC SKS **SKSac** **01 21 34.3 -5.3**
HHC S **S** **01 21 52.3 +0.4**
HHC pmax pmax
comp=Z,28nm,0.8s
HHC pmax pmax
comp=Z,330nm,5.6s
H03S2 Juan Fernandez 87.19 124 T T 02 47 52.1
baz=252,slow=75,SNR=25
H03S1 Juan Fernandez 87.20 124 T T 02 47 52.4
baz=252,slow=75,SNR=18
H03S3 Juan Fernandez 87.20 124 T T 02 47 52.2
baz=252,slow=75,SNR=20
H03N2 Juan Fernandez 87.29 124 T T 02 47 53.6
baz=257,slow=73,SNR=6.8
H03N3 Juan Fernandez 87.29 124 T T 02 47 54.2
baz=257,slow=73,SNR=6.3
H03N1 Juan Fernandez 87.31 124 T T 02 47 52.7
baz=257,slow=73,SNR=5.2
RSSD Black Hills 87.34 43 P **P** **01 11 15.0 +0.3**
RSSD pmax pmax
comp=Z,21nm,1.5s
RSSD Black Hills 87.34 43 P **P** **01 11 11.3 -3.4**
baz=247
RSSD Black Hills 87.34 43 P **P** **01 11 15.0 +0.3**
RSSD IAmb IAmb 01 11 29.7
comp=Z,21nm,1.4s
435B Jarrell 87.36 57 P **P** **01 11 10.6 -4.1**
baz=251
OGNE Ogallala 87.49 47 P **P** **01 11 15.1 -0.2**
baz=248
WMOK Wichita Mounta 87.70 53 P **P** **01 11 16.0 -0.3**
baz=250
MAW Mawson 87.75 199 P P 01 11 21.4 +5.5
comp=Z,9.9nm,1.1s,baz=118,slow=8.1,SNR=10
YAK Yakutsk 87.77 337 *i* P **P** **01 11 13.8 -2.1**
YAK pmax pmax
comp=Z,8.0nm,0.9s
WHTX Lake Whitney, 87.85 56 P **P** **01 11 16.7 -0.4**
baz=251
WHTX Lake Whitney, 87.85 56 P **P** **01 11 19.1 +2.0**
U32A Winter Ranch, 88.09 52 P **P** **01 11 17.8 -0.3**
U32A IAmb IAmb 01 14 32.4
comp=Z,10nm,0.5s
INK Inuvik 88.14 14 P **P** **01 11 18.7 +1.1**
INK pmax pmax
comp=Z,25nm,1.9s
INK Inuvik 88.14 14 P **P** **01 11 18.7 +1.1**
INK IAmb IAmb 01 11 27.4
comp=Z,25nm,1.9s
HKT Hockley 88.53 59 P **P** **01 11 21.9 +1.7**
HKT pmax pmax
comp=Z,71nm,2.0s
HKT Hockley 88.53 59 P **P** **01 11 21.9 +1.7**
DGMT Dagmar 88.98 39 P **P** **01 11 20.9 -1.2**
baz=246
KMI Kunming 88.98 296 P **P** **01 11 24.0 +1.1**
KMI pP pP 01 11 28.3 -2.0
KMI sP pwP 01 11 32.1 -2.3
KMI pmax pmax
comp=Z,38nm,1.0s
KMI pmax pmax
comp=Z,280nm,3.2s
LL01 San Ignacio de 89.51 134 P **P** **01 11 27.2 +2.5**
NATX Nacogdoches 90.04 57 P **P** **01 11 25.7 -1.7**
baz=253
NATX Nacogdoches 90.04 57 P **P** **01 11 27.2 -0.1**
NATX IAmb IAmb 01 11 37.1
comp=Z,40nm,1.5s
T35A Sooner Cattle 90.15 52 P **P** **01 11 28.2 +0.3**
T35A IAmb IAmb 01 11 45.9
comp=Z,22nm,1.6s
YKA Yellowknife Ar 90.32 24 P **P** **01 11 28.6 +0.7**
comp=Z,0.6nm,0.7s,baz=240,slow=4.4,SNR=13
SUSD Miller 90.85 44 P **P** **01 11 29.6 -1.4**
baz=250
LC01 Cunco 91.06 131 P **P** **01 11 34.7 +2.6**
LC01 IAmb IAmb 01 11 39.5
comp=Z,23nm,1.4s
LZH Lanzhou 91.27 307 *eP* **P** **01 11 32.5 -0.7**
LZH pP PcP 01 11 35.8 +1.6
LZH sP pP 01 11 37.3 -3.4
LZH *ePP* **PP** **01 15 12.8 +2.0**
LZH pmax pmax
comp=Z,25nm,1.4s
LZH pmax pmax
comp=Z,180nm,8.9s
LZH LR LR
comp=Z,380nm,16.9s
LZH LR LR
comp=Z,400nm,17.1s
LZH LR LR
comp=Z,590nm,19.6s
C36M Paulatuk 91.30 16 IAmb IAmb 01 11 41.9
comp=Z,14nm,1.2s
PLCA Paso Flores 91.39 133 P **P** **01 11 37.9 +4.2**
comp=Z,2.1nm,0.9s,baz=252,slow=5.1,SNR=3.8
MIAR Mount Ida 91.72 55 P **P** **01 11 37.2 +2.1**
baz=253
342A Flagon Creek P 91.84 58 P **P** **01 11 36.7 +1.0**
WLAR White Oak Lake 91.85 56 P **P** **01 11 36.4 +0.7**
Z41A Richland Creek 91.97 56 P **P** **01 11 40.2 +3.9**
baz=254
ECSD EROS Data Cent 92.22 45 IAmb IAmb 01 11 52.8
comp=Z,23nm,1.6s
BI02 San Fabin de 92.28 129 P **P** **01 11 39.5 +1.6**
X40A Basin Creek Fa 92.29 55 P **P** **01 11 38.0 +0.2**
baz=254
X40A Basin Creek Fa 92.29 55 P **P** **01 11 39.1 +1.3**
X40A IAmb IAmb 01 11 46.7
comp=Z,26nm,1.9s
FFC Flin Flon 92.68 34 P **P** **01 11 42.1 +3.1**
FFC pmax pmax
comp=Z,24nm,1.9s
FFC Flin Flon 92.68 34 P **P** **01 11 42.1 +3.1**
FFC IAmb IAmb 01 12 04.4
comp=Z,24nm,1.9s
MATN Matagalpa 92.77 77 P **P** **01 11 41.8 +1.3**
SYO Syowa Base 92.81 192 ⇑*ep* P pP 01 11 44.0 -3.3
WHAR Wooly Hollow 92.95 54 P **P** **01 11 40.0 -0.7**
143A Socs Landing, 92.95 57 P **P** **01 11 42.3 +1.5**
JTS Las Juntas de 93.04 80 P **P** **01 11 42.8 +1.1**
JTS pmax pmax
comp=Z,39nm,1.2s
JTS Las Juntas de 93.04 80 P **P** **01 11 42.8 +1.1**
344A Westbrook Farm 93.17 58 P **P** **01 11 43.2 +1.3**
P38A Dawn 93.20 50 P **P** **01 11 43.4 +1.5**
P38A IAmb IAmb 01 11 52.1
comp=Z,32nm,1.9s
SNAA Sanae 93.62 178 P P 01 11 52.1 +8.8
SNAA Sanae 93.62 178 P **P** **01 11 44.9 +1.5**
SNAA pmax pmax
comp=Z,15nm,1.3s
SNAA Sanae 93.62 178 P **P** **01 11 44.9 +1.5**
SNAA IAmb IAmb 01 11 58.8
comp=Z,15nm,1.3s
R40A Maddies Statio 93.78 52 IAmb IAmb 01 11 51.8
comp=Z,25nm,1.4s
TIXI Tiksi 93.88 345 P **P** **01 11 43.5 -0.7**
comp=Z,1.3nm,0.5s,baz=117,slow=4.2,SNR=7.7
TIXI Tiksi 93.88 345 *i* P **P** **01 11 43.8 -0.4**
TIXI pmax pmax
comp=Z,3.0nm,0.9s
TIXI Tiksi 93.88 345 P **P** **01 11 43.7 -0.5**
AGMN Agassiz Nation 94.12 41 IAmb IAmb 01 12 00.2
comp=Z,31nm,1.6s
VNA2 Neumayer--Watz 94.12 176 P **P** **01 11 47.8 +2.3**
P40A Paris 94.28 50 P **P** **01 11 47.2 +0.4**
P40A IAmb IAmb 01 11 53.8
comp=Z,11nm,1.1s
CCM Cathedral Cave 94.49 52 P **P** **01 11 47.6 -0.2**
CCM pmax pmax
comp=Z,9.0nm,1.1s
CCM Cathedral Cave 94.49 52 P **P** **01 11 47.6 -0.2**
ULM Lac du Bonnet 94.69 39 P **P** **01 11 48.9 +0.5**
comp=Z,1.1nm,0.3s,baz=291,slow=4.4,SNR=1.4
ULM Lac du Bonnet 94.69 39 P **P** **01 11 48.9 +0.5**
ULM pmax pmax
comp=Z,19nm,1.5s
ULM Lac du Bonnet 94.69 39 IAmb IAmb 01 12 01.6
comp=Z,19nm,1.4s
TLY Talaya 95.92 322 *i* P **P** **01 11 54.2 +0.1**
TLY pmax pmax
comp=Z,55nm,1.2s
L44A Lake County Fo 97.96 49 P Pdif 01 12 04.3 +0.8
baz=257
J45A Montague 99.32 48 P **Pdif** **01 12 08.4 -1.1**
baz=259
M47A Cromwell 99.47 50 P **Pdif** **01 12 12.2 +1.9**
baz=259
S53A Williamson 101.46 54 P **Pdif** **01 12 19.8 +0.5**
baz=260
O51A Pataskala 101.50 51 P **Pdif** **01 12 17.5 -1.9**
baz=260
R54A Victor 102.42 54 P **Pdif** **01 12 20.3 -3.2**
baz=261
KSH Kashi 113.52 307 PKP **PKiKP** **01 17 07.8 +1.9**
KSH PP PP 01 18 06.3 +8.5
KSH SKS **SKSdf** **01 24 19.3 +2.7**
KSH SS **SS** **01 33 50.3 +6.6**
KSH LR LR
comp=Z,160nm,10.0s
KSH LR LR
comp=Z,300nm,10.6s
KSH LR LR
comp=Z,840nm,15.4s
OBN Obninsk 132.74 336 ⇑*e* PKIKP **PKPdf** **01 17 40.2 -1.8**
OBN *e* 01 17 48.5
OBN pmax pmax
comp=Z,37nm,1.3s
KMBO Kilima Mbogo 144.00 247 PKP **PKPdf** **01 18 03.1 -1.1**
comp=Z,4.6nm,0.9s,baz=101,slow=6.8,SNR=5.0
KMBO Kilima Mbogo 144.00 247 *e* PKIKP **PKiKP** **01 18 06.2 -1.5**
KMBO pmax pmax
comp=Z,5.0nm,0.9s
KMBO Kilima Mbogo 144.00 247 **PKPdf** **01 18 04.7 +0.5**
BR131 Keskin Array S 144.42 320 PKIKP PKPbc 01 18 02.7 +0.2
BR131 Keskin Array S 144.42 320 PKPbc 01 18 02.7 +0.1
BRTR Keskin Array B 144.42 320 PKP **PKPab** **01 18 02.3 0.0**
comp=Z,5.3nm,0.8s,baz=108,slow=2.4,SNR=5.1
DOU Dourbes 144.77 360 PKPdf **PKPdf** **01 18 04.6 +0.5**
DOU pPKiKP **pPKPdf** **01 18 10.8 -1.5**
WLF Walferdange 145.18 358 PKPdf **PKPdf** **01 18 05.4 +0.6**
WLF PKiKP **PKiKP** **01 18 08.1 -0.6**
WLF pPKiKP pPKPbc 01 18 12.2 +0.1
GERES GERESS Array B 145.20 349 PKPbc **PKPdf** **01 18 05.1 0.0**
comp=Z,4.5nm,0.9s,baz=44,slow=3.0,SNR=2.5
BFO Black Forest 146.40 355 PKP2 **PKPab** **01 18 09.0 -0.1**
BFO Black Forest 146.40 355 **PKPab** **01 18 09.0 -0.1**
MBAR Mbarara 149.93 242 PKP2 **PKPab** **01 18 24.0 -0.5**
MBAR Mbarara 149.93 242 **PKPab** **01 18 24.0 -0.5**

FNA	**Florina**	**150.23**	**334**		**PKPab**	**01**	**18**	**26.3 +1.6**
TORD	**Torodi Ar. Bea**	**176.78**	**120**	PP	PP	01	24	11.8 -2.4
	comp=Z,0.9nm,0.9s,baz=259,slow=4.7,SNR=4.0							

BJI ***18*** *01:02:22.6±0.0, 3˚.72N×92˚.76E, h5km, mB5.6/63, mb5.7/89, Ms5.8/99, Ms7 5.6/90*

IDC ***18*** *01:02:27.1±0.3, 4˚.24N×92˚.72E, h0km, mb5.6/45, mb1 5.6/48, mb1mx5.6/49, mbtmp5.6/48, ML5.2/3, MS5.5/37, Ms1 5.6/37, ms1mx5.4/49, Error ellipse: s-maj=11.2km s-min=8.7km az=46.0*

KLM ***18*** *01:02:28.0, 4˚.23N×92˚.48E, h10km, mb5.9*

MOS ***18*** *01:02:30.6±1.0, 4˚.31N×92˚.75E, h33km, mb6.0/98, MS5.6/64, Error ellipse: s-maj=5.8km s-min=3.6km az=107.1*

DJA ***18*** *01:02:30.7±0.7, 4˚N±2˚×9˚3E±˚, h14km±4km, M5.9/108, mB6.2/91, mb5.9/108, MLv6.5/12, Mw6.0/95, Mw(mB)5.9/91, Mwp5.9/73*

NEIC ***18*** *01:02:32.6±1.4, 4˚.25N±0˚.06×92˚.76E±0˚.04, h35km±1km, mb5.9/269, Ms_20 5.9/610, Mwb5.9/61, Mww6.0, Mwc6.1(GCMT), Error ellipse: s-maj=11.3km s-min=5.9km az=164.0*

NEIC ***18*** *01:02:32, 4˚.25N×92˚.74E, h34km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}9.40; $M_{\theta\theta}$-6.15; $M_{\phi\phi}$-3.25; $M_{r\theta}$-0.70; $M_{\theta\phi}$-5.02; $M_{\phi r}$1.48; Fault plane solution: $M_0$9.81000×10^{17} NP1:ϕ_s242.89000°, δ44.88000°, λ104.17000°. NP2:ϕ_s43.28000°, δ46.83000°, λ76.30000°. Principal axes: T 9.6910, Plg80.0000°, Azm239.0000°; N 0.2397, Plg10.0000°, Azm53.0000°; P -9.9307, Plg1.0000°, Azm143.0000°;*

GCMT ***18*** *01:02:33.6±0.1, 4˚.33N×92˚.69E, h46km, MW6.0/170, Moment Tensor Solution. s170,c385; s164,c568; Duration: 2ŧ6 Moment tensor: Scale 10^{18}Nm; M_{rr}1.40±.01; $M_{\theta\theta}$-0.80±.01; $M_{\phi\phi}$-0.59±.01; $M_{r\theta}$-0.04±.01; $M_{\theta\phi}$-0.87±.01; $M_{\phi r}$0.05±.01; Best double couple: $M_0$1.48700×10^{18} NP1:ϕ_s45.00000°, δ45.00000°, λ86.00000°. NP2:ϕ_s231.00000°, δ45.00000°, λ94.00000°. Principal axes: T 1.4030, Plg87.0000°, Azm228.0000°; N 0.1730, Plg3.0000°, Azm48.0000°; P -1.5710, Plg0.0000°, Azm318.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***18*** *01:02:35, 4˚.16N×92˚.85E, h46km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.19; $M_{\theta\theta}$-0.47; $M_{\phi\phi}$-0.72; $M_{r\theta}$0.07; $M_{\theta\phi}$-0.72; $M_{\phi r}$-0.01; Fault plane solution: $M_0$1.27000×10^{18} NP1:ϕ_s43.00000°, δ46.00000°, λ94.00000°. NP2:ϕ_s217.00000°, δ44.00000°, λ85.00000°. Principal axes: T 1.1958, Plg87.0000°, Azm26.0000°; N 0.1349, Plg3.0000°, Azm220.0000°; P -1.3307, Plg1.0000°, Azm130.0000°;*

NEIC ***18*** *01:02:35, 4˚.28N×92˚.68E, h46km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}1.39; $M_{\theta\theta}$-0.81; $M_{\phi\phi}$-0.57; $M_{r\theta}$-0.05; $M_{\theta\phi}$-0.91; $M_{\phi r}$0.04; Fault plane solution: $M_0$1.52000×10^{18} NP1:ϕ_s232.00000°, δ45.00000°, λ94.00000°. NP2:ϕ_s46.00000°, δ45.00000°, λ85.00000°. Principal axes: T 1.3933, Plg87.0000°, Azm226.0000°; N 0.2214, Plg3.0000°, Azm49.0000°; P -1.6148, Plg0.0000°, Azm319.0000°;*

BGR ***18*** *01:02:37.2±0.0, 4.73N×92.77E, h58km±3km, mb6.1*

ISC 18 01:02:31.9±0.4, 4˚.24N±0˚.03×92˚.74E±0˚.03, h33km±2km, h33km:pP-P, n2185, σ1164/2190, mb5.9/385, MS5.8/442, 207C-44D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLSI	**Meulaboh, Aceh**	**3.66**	**89**	P	**Pn**	**01 03 27.0**	**+0.8**
MLSI				S	**Sn**	**01 04 05.9**	**-2.3**
SNSI	**Sinabang, Aceh**	**4.02**	**117**	P	**Pn**	**01 03 30.6**	**-0.5**
SNSI				S	**Sn**	**01 04 13.5**	**-3.6**
LHMI	**Lhok Sumawe**	**4.31**	**77**	P	**Pn**	**01 03 37.2**	**+2.1**
LHMI				S	**Sn**	**01 04 27.3**	**+3.0**
LHMI	**Lhok Sumawe**	**4.31**	**77**		**Pn**	**01 03 37.7**	**+2.5**
KCSI	**Kotacane, Aceh**	**5.07**	**98**	P	**Pn**	**01 03 47.8**	**+2.1**
	42nm128µm142µm11µm,0.9s						
KCSI				S	**Sn**	**01 04 43.9**	**+0.7**
	42nm128µm142µm11µm,0.9s						
GSI	**Gunungsitoli**	**5.64**	**121**	P	**Pn**	**01 03 53.5**	**0.0**
	86nm762µm272µm21µm,0.8s						
GSI	**Gunungsitoli**	**5.64**	**121**		**Pn**	**01 03 53.2**	**-0.3**
PSI	**Prapat**	**6.34**	**103**	Pn	**Pn**	**01 04 04.7**	**+1.6**
	242nm,0.3s,baz=357,slow=2.0,SNR=438						
PSI				Sn	**Sn**	**01 05 12.7**	**-1.9**
	94nm,0.3s,baz=180,slow=16,SNR=1.9						
PSI				LR	LR	01 05 46.6	
	comp=Z,19µm,19.7s,baz=270,slow=31						
RPSI	**Rantau Prapat**	**6.36**	**104**		**Pn**	**01 04 04.5**	**+1.1**
RPSI	**Rantau Prapat**	**6.36**	**104**		**Pn**	**01 04 04.7**	**+1.3**
RPSI					**Sn**	**01 05 12.7**	**-2.3**
MNSI	**Mandailing Nat**	**7.64**	**116**	P	**Pn**	**01 04 20.7**	**-0.3**
	20nm115µm86µm3µm,0.6s						
KULM	**Kulim**	**7.95**	**82**		**Pn**	**01 04 26.3**	**+1.0**
KULM	**Kulim**	**7.95**	**82**	P	**Pn**	**01 04 27.0**	**+1.7**
IPM	**Ipoh**	**8.27**	**88**		**Pn**	**01 04 30.1**	**+0.5**
IPM	**Ipoh**	**8.27**	**88**	P	**Pn**	**01 04 32.0**	**+2.4**
SISI	**Saibi**	**8.42**	**131**	P	**Pn**	**01 04 31.6**	**0.0**
	8.8nm67µm29µm2µm,0.7s						
DGPR	**DIGLIPUR**	**8.88**	**1**	*e*P	**Pn**	**01 04 37.7**	**-0.3**
BKNI	**Bangkinang**	**9.16**	**115**	P	**Pn**	**01 04 41.2**	**-0.6**
	79µm23µm3µm,1.0s						
BKNI	**Bangkinang**	**9.16**	**115**		**Pn**	**01 04 41.6**	**-0.3**
PDSI	**Padang**	**9.26**	**123**	P	**Pn**	**01 04 42.4**	**-0.8**
	53µm12µm670nm,0.6s						
PPSI	**Pulau Pagai**	**10.06**	**134**	P	**Pn**	**01 04 53.6**	**-0.6**
	76µm38µm4µm,0.8s						
SDSI	**Sungai Dareh**	**10.09**	**120**	P	**Pn**	**01 04 53.9**	**-0.7**
	10µm384nm,0.7s						
KRJI	**Kerinci**	**10.75**	**126**	P	**Pn**	**01 05 04.3**	**+0.6**
	81µm79µm7µm,1.2s						
MYKOM	**Kota Tinggi**	**11.36**	**102**		**Pn**	**01 05 12.6**	**+0.6**
MYKOM	**Kota Tinggi**	**11.36**	**102**	P	**Pn**	**01 05 13.0**	**+1.0**
MASI	**Maura Aman, Be**	**12.00**	**128**	P	**Pn**	**01 05 20.6**	**-0.1**
	70µm28µm4µm,0.8s						
TPRI	**Tanjung Pinang**	**12.23**	**105**	P	**Pn**	**01 05 24.5**	**+0.6**
	15µm495nm,1.1s						
MNAI	**Manna**	**13.31**	**130**	P	**Pn**	**01 05 39.0**	**+0.3**
	52µm49µm5µm,0.9s						
MNAI	**Manna**	**13.31**	**130**		**Pn**	**01 05 38.7**	**0.0**
LHSI	**Lahat**	**13.43**	**126**	P	**Pn**	**01 05 39.8**	**-0.5**
	58µm15µm1µm,1.0s						
PMBI	**Palembang**	**13.97**	**120**	P	**Pn**	**01 05 50.9**	**+3.2**
PMBI	**Palembang**	**13.97**	**120**		**Pn**	**01 05 46.0**	**-1.7**
LWLI	**Liwa**	**14.58**	**129**	P	**Pn**	**01 05 56.6**	**+0.6**
	119µm36µm4µm,0.8s						
PBKT	**Sadao Pong**	**14.68**	**33**		**Pn**	**01 05 57.9**	**+0.6**
PBKT				P	**P**	**01 05 58.5**	**-4.6**
KASI	**Kota Agung**	**15.23**	**129**	P	**Pn**	**01 06 04.2**	**-0.5**
	46µm13µm1µm,0.7s						
CM31	**Chiang Mai Arr**	**15.38**	**23**	P	**Pn**	**01 06 07.8**	**+1.2**
	SNR=191						
CM31				P	**Pn**	**01 06 07.8**	**+1.2**
	SNR=191						
CM31	**Chiang Mai Arr**	**15.38**	**23**		**Pn**	**01 06 07.9**	**+1.2**
CMAR	**Chiang Mai Arr**	**15.38**	**23**	Pn	**Pn**	**01 06 07.8**	**+1.3**
	1.3nm,0.3s,baz=217,slow=14,SNR=196						
CMAR				Sn	**Sn**	**01 09 08.1**	**-3.4**
	0.3nm,0.3s,baz=242,slow=18,SNR=1.2						
CMAR				LR	LR	01 13 08.1	
	comp=Z,23µm,18.8s,baz=246,slow=42						
CMAR				PKiKP	**PKiKP**	**01 19 04.0**	**-0.9**
	0.3nm,0.3s,baz=269,slow=1.9,SNR=4.9						
CMAR				P3KPbc		01 41 42.0	
	0.6nm,0.3s,baz=358,slow=5.3,SNR=24						
CHTO	**Chiang Mai**	**15.70**	**22**	P	**Pn**	**01 06 11.4**	**+0.6**
CHTO				P	**Pn**	**01 06 11.4**	**+0.6**
CHTO	**Chiang Mai**	**15.70**	**22**	P	**Pn**	**01 06 10.9**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,399nm,1.1s						
CHTO	**Chiang Mai**	**15.70**	**22**		**Pn**	**01 06 10.9**	**+0.1**
BLSI	**Bandar Lampung**	**15.72**	**127**	P	**Pn**	**01 06 12.7**	**+1.6**
	comp=Z,41µmcomp=Z,15µmcomp=Z,1µm,0.9s						
SKHT	**Srikalahasti**	**15.95**	**307**	*e*P	**Pn**	**01 06 12.5**	**-1.5**
SKHT				IVmB_BB		01 06 21.0	
	comp=Z,6µm,1.2s						
SKHT				*e*		01 08 54.6	
SKHT				*e*S	**Sn**	**01 09 08.8**	**-1.0**
SKHT				IVMs_BB	IVMs_BB	01 11 00.9	
	comp=Z,8µm,20.9s						
TRD	**Trivandrum**	**16.24**	**286**	⇓*i*P	**P**	**01 06 19.5**	**-1.0**
TPI	**Tanjungpandan**	**16.45**	**115**	P	**Pn**	**01 06 21.0**	**+0.7**
	comp=Z,38µmcomp=Z,12µmcomp=Z,709nm,1.6s						
COCO	**West Island**	**16.82**	**166**	P	**Pn**	**01 06 25.3**	**+0.2**
COCO				pmax	pmax		
	comp=Z,3µm,1.8s						
COCO	**West Island**	**16.82**	**166**	Pn	**Pn**	**01 06 25.2**	**+0.2**
COCO				lAmb	lAmb	01 06 45.0	
	comp=Z,3µm,1.8s						
SBJI	**Serang**	**16.87**	**127**	P	**Pn**	**01 06 26.4**	**+0.7**
	comp=Z,17µmcomp=Z,1µm,1.2s						
PVM	**Polavaram**	**16.91**	**321**	*e*P	**Pn**	**01 06 23.4**	**-2.7**
PVM				IVmB_BB		01 06 28.5	
	comp=Z,7µm,2.7s						
PVM				*e*		01 09 22.9	
PVM				*e*S	**Sn**	**01 09 33.5**	**+0.4**
PVM				IVMs_BB	IVMs_BB	01 11 18.5	
	comp=Z,5µm,24.8s						
ADKI	**Addanki**	**17.05**	**313**	*e*P	**Pn**	**01 06 26.5**	**-1.4**
ADKI				IVmB_BB		01 06 33.8	
	comp=Z,9µm,2.0s						
ADKI				*e*		01 09 22.0	
ADKI				IVMs_BB	IVMs_BB	01 12 05.6	
	comp=Z,8µm,19.6s						
BWNR	**Bhubaneshwar**	**17.33**	**338**	*e*P	**P**	**01 06 32.4**	**-0.1**
BWNR				IAMs_20	IAMs_20	01 12 17.9	
	comp=Z,32µm,20.0s						
DLV	**T Lat**	**17.36**	**63**		**P**	**01 06 33.7**	**+0.6**
DLV				lAmb	lAmb	01 06 55.3	
	comp=Z,1µm,1.5s						
DBJI	**Dramaga**	**17.62**	**127**	P	**Pn**	**01 06 35.2**	**+0.1**
	comp=Z,29µmcomp=Z,22µmcomp=Z,1µm,1.3s						
KSM	**Kuching**	**17.76**	**98**		**P**	**01 06 37.2**	**-0.2**
KSM				lAmb	lAmb	01 06 46.0	
	comp=Z,654nm,1.0s						
NJS	**Nagarjunasagar**	**17.99**	**314**	*e*P	**Pn**	**01 06 38.7**	**-0.9**
NJS				IVmB_BB		01 06 44.0	
	comp=Z,7µm,6.0s						
NJS				*e*		01 09 45.1	
NJS				*e*S	**Sn**	**01 09 59.4**	**0.0**
NJS				IVMs_BB	IVMs_BB	01 12 33.6	
	comp=Z,7µm,20.6s						
SRLM	**Srisailam**	**18.00**	**312**	*e*P	**Pn**	**01 06 39.0**	**-0.7**
SRLM				IVmBBB		01 06 44.2	
	comp=Z,7µm,1.5s						
SRLM				*e*		01 09 46.0	
SRLM				*e*S	**Sn**	**01 09 59.3**	**-0.4**
SRLM				IVMs_BB	IVMs_BB	01 13 19.9	
	comp=Z,6µm,16.4s						
BRDH	**Bariadhala**	**18.36**	**357**	P	**Pn**	**01 06 45.7**	**+1.7**
	comp=Z,30nm,0.3s,baz=191,slow=5.2,SNR=22						
BRDH				S	**Sn**	**01 09 59.5**	**-8.7**
	comp=Z,28nm,0.3s,baz=198,slow=20,SNR=1.9						
CNJI	**Cibinong**	**18.38**	**129**	P	**P**	**01 06 43.5**	**-0.7**
	comp=Z,11µmcomp=Z,869nm,1.6s						
LEM	**Lembang**	**18.48**	**126**	P	**Pn**	**01 06 46.3**	**+0.6**
	comp=Z,4.5nm,0.3s,baz=349,slow=5.3,SNR=48						
LEM				LR	LR	01 14 51.3	
	comp=Z,26µm,19.2s,baz=303,slow=40						
LEM	**Lembang**	**18.48**	**126**	P	**Pn**	**01 06 46.1**	**+0.4**
	comp=Z,24µmcomp=Z,8µmcomp=Z,453nm,1.1s						
URV	**Uravakonda**	**18.59**	**306**	*e*P	**Pn**	**01 06 47.8**	**+0.9**
URV				IVmBBB		01 06 49.1	
	comp=Z,16µm,1.8s						
URV				*e*		01 10 03.9	
URV				*e*S	**Sn**	**01 10 14.5**	**+0.6**
URV				IVMs_BB	IVMs_BB	01 12 39.8	
	comp=Z,13µm,23.3s						
CISI	**Cisompet, Garu**	**19.07**	**128**	P	**P**	**01 06 51.3**	**-0.5**
	comp=Z,31µmcomp=Z,11µmcomp=Z,500nm,0.8s						
CISI	**Cisompet, Garu**	**19.07**	**128**	P	**P**	**01 06 51.1**	**-0.7**
CISI				lAmb	lAmb	01 07 22.6	
	comp=Z,478nm,0.8s						
HYB	**Hyderabad**	**19.10**	**314**	*i* P	**Pn**	**01 06 53.0**	**-0.1**
HYB				*e*S	**S**	**01 10 28.0**	**+1.0**
HYB				*e*LR	LR		
	comp=Z,23nm,20.0s						
HYB	**Hyderabad**	**19.10**	**314**	⇓*i*P	**Pn**	**01 06 54.0**	**+1.0**
HYB				IAMs_20	IAMs_20	01 13 10.9	
	comp=Z,37µm,19.2s						
HYBB	**Hyderabad (bro**	**19.10**	**314**	*e*P	**Pn**	**01 06 53.9**	**+0.8**
HYBB				IVmB_BB		01 06 55.2	
	comp=Z,12µm,2.4s						
HYBB				*e*S	**S**	**01 10 26.7**	**-0.4**
HYBB				IVMs_BB	IVMs_BB	01 13 27.0	
	comp=Z,7µm,18.5s						
XMIS	**Christmas Isla**	**19.47**	**139**	P	**P**	**01 06 56.3**	**+0.2**
SBUM	**Sibu**	**19.53**	**95**	P	**Pn**	**01 06 58.0**	**-0.3**
SBUM	**Sibu**	**19.53**	**95**	P	**Pn**	**01 06 59.0**	**+0.8**
RPR	**Rampur**	**19.59**	**319**	*e*P	**Pn**	**01 06 59.2**	**+0.3**
RPR				IVmB_BB		01 07 01.4	
	comp=Z,9µm,2.0s						
RPR				*e*		01 10 18.2	
RPR				*e*S	**Sn**	**01 10 37.8**	**-0.1**
RPR				IVMs_BB	IVMs_BB	01 13 16.1	
	comp=Z,5µm,20.9s						
PBKI	**Pangkalan Bun**	**20.14**	**110**	P	Pn	01 07 05.6	+0.2
	comp=Z,38µmcomp=Z,24µmcomp=Z,2µm,1.2s						
SLVN	**Son La**	**20.16**	**32**	P	**P**	**01 07 04.5**	**+0.9**
SLVN				lAmb	lAmb	01 07 24.3	
	comp=Z,717nm,1.2s						
SRSP	**Sriramsagar**	**20.27**	**317**	*e*P	Pn	01 07 06.5	-0.4
SRSP				IVmB_BB		01 07 09.3	
	comp=Z,8µm,2.2s						
SRSP				*e*		01 10 46.0	
SRSP				*e*S	**S**	**01 10 51.4**	**+0.8**
SRSP				IVMs_BB	IVMs_BB	01 13 34.2	
	comp=Z,4µm,21.0s						
BOK	**Bokaro**	**20.54**	**342**	⇓*i*P	Pn	01 07 10.0	0.0
BOK				lAmb	lAmb	01 07 14.3	
	comp=Z,569nm,0.9s						
BOK				*ex*	x	01 10 59.0	
SMRI	**Semarang**	**20.93**	**122**	P	**P**	**01 07 13.0**	**+1.0**
	comp=Z,31µmcomp=Z,13µmcomp=Z,1µm,0.9s						
KLRI	**Killari**	**20.94**	**312**	*e*P	Pn	01 07 13.8	-0.9
KLRI				IVmB_BB		01 07 18.4	
	comp=Z,5µm,1.1s						
KLRI				*e*		01 10 56.1	
KLRI				*e*S	**S**	**01 11 04.2**	**+0.3**
KLRI				IVMs_BB	IVMs_BB	01 14 20.4	
	comp=Z,8µm,19.8s						
YOGI	**Yogyakarta**	**21.22**	**124**	P	**P**	**01 07 17.8**	**+2.7**
	comp=Z,12µmcomp=Z,7µmcomp=Z,301nm,1.8s						
SHL	**Shillong**	**21.22**	**358**	*e*P	**P**	**01 07 15.2**	**0.0**
SHL	**Shillong**	**21.22**	**358**	P	**P**	**01 07 15.7**	**+0.4**
	SNR=630						
NGP	**Nagpur**	**21.43**	**323**	*i* P	**P**	**01 07 19.4**	**+2.0**
UGM	**Wanagama**	**21.46**	**124**	P	**P**	**01 07 18.9**	**+1.2**
	comp=Z,25µmcomp=Z,9µmcomp=Z,520nm,1.7s						
UGM	**Wanagama**	**21.46**	**124**	lAmb	lAmb	01 07 38.0	
	comp=Z,568nm,1.1s						
GOA	**Goa**	**21.70**	**302**	⇓*i*P	**P**	**01 07 22.6**	**+2.3**
GOA				*ex*	x	01 13 27.3	
GOA				IAMs_20	IAMs_20	01 15 08.8	
	comp=Z,25µm,18.2s						
WOJI	**Wonogiri, Jawa**	**21.75**	**123**	P	**P**	**01 07 26.0**	**+5.2**
	comp=Z,15µmcomp=Z,154nm,1.3s						
QIZ	**Qiongzhong**	**22.25**	**47**	P	**P**	**01 07 26.3**	**+0.1**
QIZ				S	**S**	**01 11 31.3**	**+2.0**
QIZ				pmax	pmax		
	comp=Z,100nm,2.0s						
QIZ				pmax	pmax		
	comp=Z,1µm,5.1s						
QIZ				LR	LR		
	comp=Z,15µm,15.9s						
QIZ				LR	LR		
	comp=Z,10µm,17.2s						
QIZ				LR	LR		
	comp=Z,13µm,19.6s						
JBP	**Jabalpur**	**22.50**	**328**	*e*P	**P**	**01 07 30.5**	**+1.8**
JBP				*ex*	x	01 11 33.6	
GRJI	**Gresik**	**22.61**	**119**	P	P	01 07 38.5	+8.5
KMI	**Kunming**	**22.88**	**24**	P	**P**	**01 07 35.0**	**+2.0**
KMI				pP	pP	01 07 36.4	-4.2
KMI				sP	sP	01 07 39.9	-4.3
KMI				PP	pwP	01 08 04.3	+18
KMI				S	**S**	**01 11 40.4**	**-0.5**
KMI				sS	pS	01 11 48.0	-1.7
KMI				SS	**SnSn**	**01 12 25.3**	**+12**
KMI				pmax	pmax		
	comp=Z,350nm,1.2s						
KMI				pmax	pmax		
	comp=Z,2µm,4.0s						
KMI				LR	LR		
	comp=Z,8µm,19.6s						
KMI				LR	LR		
	comp=Z,16µm,20.3s						
KMI				LR	LR		
	comp=Z,10µm,20.0s						
KMI	**Kunming**	**22.88**	**24**	lAmb	lAmb	01 07 56.2	
	comp=Z,650nm,1.2s						
ODAN	**Odare**	**23.07**	**348**	*e*P	**P**	**01 07 35.6**	**+0.7**
	comp=Z,2µm,1.4s						
GTK	**Tadong**	**23.29**	**351**	*e*P	**P**	**01 07 38.0**	**+1.0**
POO	**Poona**	**23.30**	**309**	*i* P	**P**	**01 07 37.0**	**-0.1**
	comp=Z,350nm,1.2s						
POO				*e*P	**pP**	**01 07 37.6**	**-7.2**
POO				*e*PP	**PnPn**	**01 08 09.0**	**+5.4**
POO				*ex*	x	01 08 19.0	
POO				*i* x	x	01 11 48.0	
POO				*e*SS	Sn	01 12 35.0	+28
POO				*ex*	x	01 12 50.5	
POO				lAMs_20	lAMs_20	01 15 36.3	
	comp=Z,41µm,19.5s						
DGAR	**Diego Garcia**	**23.32**	**240**	P	**P**	**01 07 39.4**	**+2.1**
DGAR				P	**P**	**01 07 39.4**	**+2.1**
DGAR	**Diego Garcia**	**23.32**	**240**	P	**P**	**01 07 38.6**	**+1.3**
DGAR				pmax	pmax		
	comp=Z,2µm,1.8s						
DGAR	**Diego Garcia**	**23.32**	**240**	P	**P**	**01 07 38.6**	**+1.3**
RAMN	**Ramite**	**23.33**	**346**	*e*P	**P**	**01 07 39.2**	**+1.6**
	comp=Z,990nm,1.2s						
H08S3	**Diego Garcia H**	**23.40**	**240**	P	**P**	**01 07 37.7**	**-0.1**
H08S3				T	T	01 33 00.8	
	baz=60,slow=76,SNR=121						
H08S2	**Diego Garcia H**	**23.40**	**240**	P	**P**	**01 07 37.7**	**-0.1**
H08S2				T	T	01 33 12.2	
	baz=60,slow=76,SNR=126						
H08S1	**Diego Carcia H**	**23.41**	**240**	P	**P**	**01 07 37.9**	**-0.1**
H08S1				T	T	01 33 02.0	
	baz=60,slow=76,SNR=102						
KKM	**Kota Kinabalu**	**23.45**	**85**	P	**P**	**01 07 39.5**	**+0.7**
KKM				lAmb	lAmb	01 08 01.1	
	comp=Z,289nm,0.9s						
TAPN	**Taplejung**	**23.48**	**349**	*e*P	**P**	**01 07 39.9**	**+0.8**
	comp=Z,1µm,1.2s						
KMMI	**Kalianget**	**23.97**	**118**	P	**P**	**01 07 48.5**	**+4.9**
	comp=Z,6µmcomp=Z,346nm,1.1s						
BHPL	**Bhopal**	**24.00**	**323**	⇓*i*P	**P**	**01 07 46.1**	**+2.3**
BHPL				lAmb	lAmb	01 08 02.2	
	comp=Z,661nm,1.4s						
BHPL				*i* x	x	01 12 07.5	
BHPL				*ex*	x	01 14 18.1	
BHPL				lAMs_20	lAMs_20	01 15 44.0	
	comp=Z,25µm,23.0s						
JIRN	**Jiri**	**24.11**	**346**	*e*P	**P**	**01 07 46.5**	**+1.3**
	comp=Z,1µm,1.1s						
PKI	**Pulchoki**	**24.23**	**344**	*e*P	**P**	**01 07 47.0**	**+0.8**
	comp=Z,2µm,1.3s						
PKIN	**Phulchoki**	**24.24**	**344**	*e*P	**P**	**01 07 47.1**	**+0.9**
	comp=Z,3µm,1.7s						
DMN	**Daman**	**24.35**	**343**	*e*P	**P**	**01 07 48.9**	**+1.7**
	comp=Z,319nm,0.9s						
GUN	**Gumba**	**24.43**	**345**	*e*P	**P**	**01 07 49.3**	**+1.3**
	comp=Z,1µm,1.1s						
KKN	**Kakani**	**24.48**	**344**	*e*P	**P**	**01 07 49.4**	**+1.1**
	comp=Z,1µm,1.3s						
BKB	**Balikpapan**	**24.75**	**102**	P	**P**	**01 07 54.7**	**+4.0**
	comp=Z,22µmcomp=Z,11µmcomp=Z,563nm,0.7s						
JAGI	**Jajag, Banyuwa**	**24.81**	**121**	P	P	01 08 06.0	+15
JAGI	**Jajag, Banyuwa**	**24.81**	**121**	P	**P**	**01 07 50.4**	**-0.8**
JAGI				lAmb	lAmb	01 08 22.2	
	comp=Z,509nm,1.5s						
GKN	**Gorkha**	**24.86**	**343**	*e*P	**P**	**01 07 53.0**	**+1.3**
	comp=Z,2µm,1.1s						
KOLN	**Koldanda**	**24.97**	**341**	*e*P	**P**	**01 07 54.2**	**+1.4**
	comp=Z,1µm,1.0s						
BATP	**Bataraza**	**25.30**	**78**	*e*P	**P**	**01 07 55.7**	**0.0**
LSA	**Lhasa**	**25.37**	**357**	P	**P**	**01 07 59.1**	**+2.4**
LSA				pmax	pmax		
	comp=Z,400nm,1.8s						
LSA				LR	LR		
	comp=Z,47µm,24.2s						
LSA				LR	LR		
	comp=Z,19µm,21.4s						
LSA				LR	LR		
	comp=Z,67µm,22.8s						
LSA	**Lhasa**	**25.37**	**357**	*i* P	**P**	**01 07 59.0**	**+2.4**
	SNR=20						
LSA	**Lhasa**	**25.37**	**357**	*i* P	**P**	**01 07 59.0**	**+2.4**
	SNR=20						
LSA	**Lhasa**	**25.37**	**357**	P	**P**	**01 07 59.2**	**+2.4**
LSA				P	**P**	**01 07 59.2**	**+2.4**
LSA	**Lhasa**	**25.37**	**357**	P	**P**	**01 07 58.5**	**+1.9**
LSA				pmax	pmax		
	comp=Z,659nm,0.7s						
LSA	**Lhasa**	**25.37**	**357**	P	**P**	**01 07 58.5**	**+1.9**
DANN	**Dangsing**	**25.45**	**341**	*e*P	**P**	**01 07 58.5**	**+1.2**
	comp=Z,886nm,0.8s						
PYUN	**Piuthan**	**25.48**	**340**	*e*P	**P**	**01 07 58.7**	**+1.3**
	comp=Z,2µm,1.3s						
GYA	**Guiyang**	**25.80**	**30**	⇑*i*P	**P**	**01 08 01.1**	**+0.8**
GYA				S	**S**	**01 12 25.1**	**-2.7**
GYA				pmax	pmax		
	comp=Z,80nm,1.3s						
GYA				pmax	pmax		
	comp=Z,1µm,8.3s						
GYA				LR	LR		
	comp=Z,8µm,20.3s						
GYA				LR	LR		
	comp=Z,8µm,18.9s						
GYA				LR	LR		
	comp=Z,11µm,21.0s						
ENPP	**El Nido**	**27.32**	**74**	*e*P	**P**	**01 08 13.4**	**-0.6**
GZH	**Guangzhou**	**27.35**	**45**	P	**P**	**01 08 20.0**	**+5.9**
GZH				S	S	01 13 03.0	+11
GZH				pmax	pmax		
	comp=Z,1µm,7.7s	

BKSI Bulukumba 28.95 109 P **P** **01 08 29.7 +1.2**
comp=Z,11μmcomp=Z,3μmcomp=Z,308nm,0.9s
BKSI Bulukumba 28.95 109 P **P** **01 08 29.8 +1.2**
PGP Puerto Galera 29.32 70⇑*e*P **P** **01 08 31.2 -0.7**
MRSI Marisa 29.41 97 P **P** **01 08 33.3 +0.7**
comp=Z,7μmcomp=Z,2μmcomp=Z,207nm,1.4s
TGY Tagaytay City 29.48 69 P **P** **01 08 33.9 +0.7**
comp=Z,195nm,0.4s,baz=257,slow=3.2,SNR=30
SMPP San Manuel, Pa 29.89 65 *e*P **P** **01 08 35.3 -1.5**
WBSI Waikabubak, Su 29.93 118 P **P** **01 08 37.7 +0.5**
comp=Z,2μmcomp=Z,152nm,1.0s
LQP Lukban 30.04 69 *e*P **P** **01 08 38.3 0.0**
OTRP Odiongan 30.05 73 *e*P **P** **01 08 38.3 0.0**
BOAC Boac 30.15 70 *e*P **P** **01 08 38.9 -0.2**
CNOP Candoni, Negro 30.18 78 *e*P **P** **01 08 39.0 -0.4**
SZP Santa 30.20 62 IAmb IAmb 01 09 21.4
comp=Z,194nm,1.0s
GUIM Jordan 30.25 76 *e*P **P** **01 08 40.3 +0.2**
ENH Enshi 30.34 30 P **P** **01 08 39.7 -1.0**
ENH IAmb IAmb 01 09 03.9
comp=Z,229nm,1.1s
ABRA Dolores 30.46 62 *e*P **P** **01 08 41.8 -0.1**
LUWI Luwuk 30.47 99 P **P** **01 08 42.9 +1.0**
comp=Z,7μmcomp=Z,6μmcomp=Z,531nm,1.1s
LUWI Luwuk 30.47 99 P **P** **01 08 43.0 +1.0**
comp=Z,7μmcomp=Z,6μmcomp=Z,531nm,1.1s
SMLA Simla 30.50 333 *e*P **P** **01 08 43.9 +1.8**
SMLA IAMs_20 IAMs_20 01 20 13.2
comp=Z,31μm,21.0s
BALP Baler 30.56 66 *e*P **P** **01 08 42.9 +0.1**
POLP Polillo Island 30.59 68 *e*P **P** **01 08 43.1 +0.2**
PAGZ Pagadian 30.68 82 *e*P **P** **01 08 44.8 +0.9**
APYP Conner 31.01 62 *e*P **P** **01 08 48.6 +1.9**
CAUP Cauayan 31.19 64 *e*P **P** **01 08 48.3 0.0**
BBSI Bau Bau 31.32 108 P **P** **01 08 51.5 +2.0**
comp=Z,802nmcomp=Z,88nm,1.1s
BBSI Bau Bau 31.32 108 P **P** **01 08 47.6 -1.9**
comp=Z,792nmcomp=Z,88nm,1.1s
SKMP Bagumbayan, Su 31.74 84 *e*P **P** **01 08 53.0 -0.2**
DHRM DHARAMSHALA 31.84 333 *e*P **P** **01 08 55.3 +1.2**
DHRM IAmb IAmb 01 09 10.6
comp=Z,98nm,0.9s
DHRM IAMs_20 IAMs_20 01 20 56.4
comp=Z,29μm,21.0s
KNMB Chin-men Tao 31.84 48 P **P** **01 08 53.9 0.0**
KNMB IAmb IAmb 01 08 56.5
comp=Z,173nm,1.4s
QZH Quanzhou 32.27 48⇑*i*P **P** **01 08 57.9 +0.2**
QZH S **S** **01 14 11.6 +2.4**
QZH pmax pmax
comp=Z,81nm,1.1s
QZH pmax pmax
comp=Z,840nm,8.3s
QZH LR LR
comp=Z,15μm,16.9s
QZH LR LR
comp=Z,6μm,15.8s
QZH LR LR
comp=Z,11μm,20.5s
OCLP Ormoc 32.28 76 *e*P **P** **01 08 58.2 +0.3**
PVCP Virac 32.36 71 *e*P **P** **01 08 57.6 -1.0**
MSLP Maasin 32.38 78 *e*P **P** **01 08 58.7 -0.1**
CNP Catarman 32.60 73 *e*P **P** **01 09 01.4 +0.7**
BBP Basco 32.68 58 *e*P **P** **01 09 00.4 -0.9**
DAV Davao City (W) 32.80 84 P **P** **01 09 02.0 -0.5**
comp=Z,145nm,0.4s,baz=249,slow=11,SNR=2.0
DAV LR LR 01 24 02.1
comp=Z,10μm,21.9s,baz=251,slow=40
DAV Davao City (W) 32.80 84⇑*i*P **P** **01 09 03.1 +0.7**
DDMP Don Marcelino, 32.89 85 *e*P **P** **01 09 00.0 -3.2**
TWG Pinlang 33.05 53 IAmb IAmb 01 09 32.3
comp=Z,135nm,0.8s
WHN Wuhan 33.17 36⇑P **P** **01 09 06.5 +1.0**
WHN S **S** **01 14 21.5 -1.6**
WHN pmax pmax
comp=Z,430nm,1.1s
WHN LR LR
comp=Z,7μm,15.0s
WHN LR LR
comp=Z,24μm,19.7s
WHN LR LR
comp=Z,23μm,21.6s
XAN Xi'an 33.25 25 P **P** **01 09 05.9 -0.4**
XAN PP **PP** **01 10 22.3 +0.4**
XAN S **S** **01 14 19.6 -4.8**
XAN pmax pmax
comp=Z,300nm,1.0s
XAN pmax pmax
comp=Z,900nm,3.6s
XAN LR LR
comp=Z,13μm,18.6s
XAN LR LR
comp=Z,12μm,17.2s
XAN Xi'an 33.25 25 P **P** **01 09 05.7 -0.6**
XAN pmax pmax
comp=Z,529nm,1.0s
XAN MLR MLR
comp=Z,11μm,18.0s
XAN Xi'an 33.25 25 P **P** **01 09 05.7 -0.6**
LZH Lanzhou 33.30 17⇑P **P** **01 09 07.4 +0.6**
LZH sP pP 01 09 16.3 +1.3
LZH S **S** **01 14 24.9 -0.5**
LZH sS sS 01 14 37.3 -1.6
LZH pmax pmax
comp=Z,150nm,1.3s
LZH pmax pmax
comp=Z,1μm,4.9s
LZH LR LR
comp=Z,15μm,13.4s
LZH LR LR
comp=Z,16μm,13.6s
LZH LR LR
comp=Z,16μm,16.3s
SSLB Suanglung 33.44 52 P **P** **01 09 08.5 +0.5**
SANI Sanana 33.81 100 P **P** **01 09 11.1 -0.2**
comp=Z,2μmcomp=Z,177nm,1.2s
BATI Baumata 33.98 115 PcP **PcP** **01 11 52.4 +1.7**
comp=Z,71nm,0.9s,baz=304,slow=3.6,SNR=4.0
BATI Baumata 33.98 115 P **P** **01 09 14.1 +1.3**
comp=Z,3μmcomp=Z,84nm,1.5s
GIRL Giralia 33.99 143 P **P** **01 09 14.9 +2.2**
baz=34,SNR=5.8
GIRL Giralia 33.99 143 IAMs_20 IAMs_20 01 20 49.7
comp=Z,16μm,21.0s
NACB Ninganchiao 34.14 52 IAmb IAmb 01 09 34.2
comp=Z,230nm,1.8s
YHNB Yeheng 34.23 51 IAmb IAmb 01 09 20.4
comp=Z,270nm,1.3s
SOEI Soe 34.35 114 P **P** **01 09 17.4 +1.2**
comp=Z,6μmcomp=Z,216nm,0.9s
SOEI Soe 34.35 114 P **P** **01 09 15.9 -0.3**
SOEI IAmb IAmb 01 09 26.5
comp=Z,167nm,0.9s
NIL Nilore 34.44 331 P **P** **01 09 17.9 +1.4**
NIL P **P** **01 09 17.9 +1.4**
NIL Nilore 34.44 331 P **P** **01 09 16.8 +0.3**
NIL pmax pmax
comp=Z,337nm,1.0s
NIL MLR MLR
comp=Z,15μm,20.0s
NIL Nilore 34.44 331 P **P** **01 09 16.8 +0.3**
NIL Nilore 34.44 331 IAMs_20 IAMs_20 01 22 57.4
comp=Z,15μm,20.0s
TATO Taipei 34.48 50 P **P** **01 09 18.2 +1.3**
LBMI Labuha 35.07 97 P **P** **01 09 26.1 +3.8**
comp=Z,5μmcomp=Z,244nm,1.5s
NLAI Namlea 35.13 102 P **P** **01 09 23.8 +1.1**
comp=Z,5μmcomp=Z,546nm,0.8s
YOJ Yonaguni jima 35.40 52 P **P** **01 09 24.6 -0.3**
YOJ pmax pmax
comp=Z,89nm,1.2s
YOJ MLR MLR
comp=Z,5μm,18.0s
YOJ Yonaguni jima 35.40 52 P **P** **01 09 24.6 -0.3**
GTA Gaotai 35.59 9 P **P** **01 09 27.8 +1.3**
GTA pP pP 01 09 32.1 -2.7
GTA sP sP 01 09 35.6 -2.6
GTA pmax pmax
comp=Z,210nm,0.9s
GTA pmax pmax
comp=Z,950nm,6.2s
GTA LR LR
comp=Z,8μm,21.6s
GTA LR LR
comp=Z,5μm,23.7s
GTA LR LR
comp=Z,10μm,22.0s
AAI Ambon 36.29 102 P **P** **01 09 33.1 +0.4**
comp=Z,8μmcomp=Z,953nm,0.9s
MBWA Marble Bar 36.57 135 P **P** **01 09 35.6 +0.7**
MBWA **PcP** **01 11 58.7 +0.6**
PSA00 Pilbara Seismi 36.92 135 **PcP** **01 11 59.5 +0.4**
MSAI Masohi 36.94 101 P **P** **01 09 38.2 -0.1**
comp=Z,1μmcomp=Z,74nm,0.7s
NJ2 Nanjing 36.95 38⇑*i*P **P** **01 09 39.0 +1.0**
NJ2 PP **PnPn** **01 11 06.8 +3.9**
NJ2 S **S** **01 15 21.4 +0.2**
NJ2 pmax pmax
comp=Z,150nm,1.1s
NJ2 pmax pmax
comp=Z,1μm,3.5s
NJ2 LR LR
comp=Z,7μm,17.1s
NJ2 LR LR
comp=Z,11μm,17.1s
NJ2 LR LR
comp=Z,10μm,16.6s
PSAD2 Pilbara Seismi 37.03 135 IAMs_20 IAMs_20 01 26 26.3
comp=Z,13μm,20.0s
KBL Kabul 37.31 327 P **P** **01 09 42.3 +0.9**
KBL pmax pmax
comp=Z,130nm,1.2s
KBL MLR MLR
comp=Z,14μm,20.0s
KBL Kabul 37.31 327 P **P** **01 09 42.3 +0.9**
KBL IAMs_20 IAMs_20 01 24 52.8
comp=Z,14μm,20.0s
WBK Wadi Bani Khal 37.42 302 P **P** **01 09 46.4 +4.1**
WBK P **P** **01 09 46.4 +4.1**
MHTO MHTO 37.66 299 P **P** **01 09 46.5 +2.3**
SNR=13
MHTO P **P** **01 09 46.5 +2.3**
SNR=13
SSE Sheshan 37.82 42 P **P** **01 09 46.5 +1.1**
SSE PP **PnPn** **01 11 13.3 -0.2**
SSE S **S** **01 15 31.3 -3.1**
SSE pmax pmax
comp=Z,57nm,1.4s
SSE pmax pmax
comp=Z,450nm,3.5s
SSE LR LR
comp=Z,2μm,19.3s
SSE Sheshan 37.82 42 P **P** **01 09 45.8 +0.4**
SSE IAmb IAmb 01 09 47.9
comp=Z,237nm,1.4s
TIY Taiyuan 37.87 26 *e*P **P** **01 09 45.8 -0.1**
TIY PP **PP** **01 11 12.6 -0.2**
TIY pmax pmax
comp=Z,20nm,0.5s
TIY pmax pmax
comp=Z,670nm,4.4s
TIY LR LR
comp=Z,4μm,13.0s
TIY LR LR
comp=Z,2μm,11.4s
TIY LR LR
comp=Z,6μm,14.9s
WSAR Wadi Sarin 37.97 303 P **P** **01 09 50.8 +3.9**
JMDO Jabal Madar 38.06 301 P **P** **01 09 50.3 +2.6**
JMDO P **P** **01 09 50.3 +2.6**
JMDO P **P** **01 09 50.3 +2.6**
KSH Kashi 38.26 339 P **P** **01 09 49.3 +0.1**
KSH pP pP 01 09 55.8 -1.7
KSH sP sP 01 09 57.8 -3.2
KSH pmax pmax
comp=Z,69nm,1.1s
KSH pmax pmax
comp=Z,320nm,3.7s
KSH LR LR
comp=Z,9μm,17.5s
KSH LR LR
comp=Z,12μm,15.2s
KSH LR LR
comp=Z,7μm,17.6s
SMDO Samad 38.38 302 P **P** **01 09 53.2 +2.8**
SMDO P **P** **01 09 53.2 +2.8**
SMDO P **P** **01 09 53.2 +2.8**
BIDO Bidbid 38.51 303 P **P** **01 09 54.6 +3.2**
SNR=11
BIDO P **P** **01 09 54.6 +3.2**
SNR=11
BIDO P **P** **01 09 54.6 +3.2**
SNR=11
SHAO Shalim 38.80 294 *i* P **P** **01 09 56.6 +2.7**
SNR=10
SHAO Shalim 38.80 294 *i* P **P** **01 09 56.6 +2.7**
SNR=10
SIJI Sorong 38.83 97 LR LR 01 27 21.3
comp=Z,4μm,21.9s,baz=251,slow=38
TIA Tai'an 38.94 32 P **P** **01 09 55.1 +0.2**
TIA PP **PnPn** **01 11 32.3 +5.3**
TIA S **S** **01 15 51.1 -0.2**
TIA SS **SnSn** **01 18 40.8 -3.0**
TIA pmax pmax
comp=Z,56nm,1.3s
TIA pmax pmax
comp=Z,880nm,12.6s
TIA LR LR
comp=Z,5μm,19.6s
TIA LR LR
comp=Z,3μm,18.6s
TIA LR LR
comp=Z,7μm,20.1s
BSY Bisya 38.98 301 P **P** **01 09 58.3 +3.0**
SNR=13
BSY P **P** **01 09 58.3 +3.0**
SNR=13
SOCY Socotra 39.12 284 P **P** **01 09 57.7 +1.0**
SOCY IAmb IAmb 01 10 16.4
comp=Z,172nm,1.1s
HOQ Hoqain 39.21 303 P **P** **01 10 00.3 +3.0**
HOQ P **P** **01 10 00.3 +3.0**
HOQ P **P** **01 10 00.3 +3.0**
FITZ Fitzroy Crossi 39.31 125 P **P** **01 09 57.9 -0.2**
baz=39,SNR=20
FITZ Fitzroy Crossi 39.31 125 PcP **PcP** **01 12 07.4 +0.8**
comp=Z,69nm,1.2s,baz=335,slow=7.4,SNR=3.9
FITZ PKPPKP **P'P'df** **01 42 22.6 -7.1**
baz=174,slow=5.5
FITZ Fitzroy Crossi 39.31 125 P **P** **01 09 57.6 -0.5**
BTO Baotou 39.41 21 *e*P **P** **01 09 59.4 +0.6**
MEEK Meekatharra 39.61 142 P **P** **01 10 01.8 +1.2**
baz=40,SNR=12
TARG Taragay, Kyrgy 39.65 342 P **P** **01 10 01.9 +0.8**
WMQ Urumqi 39.67 354 P **P** **01 10 02.3 +1.4**
WMQ sP pP 01 10 09.4 +0.2
WMQ PP **PnPn** **01 11 35.8 +0.2**
WMQ S **S** **01 16 02.6 +0.4**
WMQ ScS **ScS** **01 20 10.8 +4.4**
WMQ pmax pmax
comp=Z,38nm,1.7s
WMQ pmax pmax
comp=Z,500nm,4.5s
WMQ LR LR
comp=Z,4μm,22.9s
WMQ LR LR
comp=Z,3μm,22.9s
WMQ LR LR
comp=Z,12μm,24.7s
WMQ Urumqi 39.67 354 P **P** **01 10 01.6 +0.7**
WMQ pmax pmax
comp=Z,80nm,0.8s
WMQ Urumqi 39.67 354 P **P** **01 10 01.6 +0.7**
WMQ **pP** **01 10 03.9 -5.4**
ARQ Araqi 39.78 302 P **P** **01 10 05.0 +2.9**
ARQ P **P** **01 10 05.0 +2.9**
ARQ P **P** **01 10 05.0 +2.9**
RBK Rabkut 39.97 292 P **P** **01 10 06.0 +2.3**
RBK P **P** **01 10 06.0 +2.3**
RBK P **P** **01 10 06.0 +2.3**
MORW Morawa 39.97 147 P **P** **01 10 03.5 0.0**
MORW IAMs_20 IAMs_20 01 23 15.2
comp=Z,13μm,21.0s
SOHO SOHO 40.09 303 P **P** **01 10 06.6 +2.1**
SNR=17
SOHO P **P** **01 10 06.6 +2.1**
SNR=17
FAKI Fak Fak 40.12 100 P **P** **01 10 04.7 -0.3**
comp=Z,5μmcomp=Z,1μmcomp=Z,94nm,0.9s
FAKI Fak Fak 40.12 100 P **P** **01 10 04.0 -0.9**
GAR Garm 40.15 333 P **P** **01 10 05.2 +0.2**
GAR IAmb IAmb 01 10 22.4
comp=Z,220nm,0.9s
HHC Hu-ho-hao-te 40.19 22 *e*P **P** **01 10 06.6 +1.3**
HHC sP sP 01 10 17.1 0.0
HHC PP **PP** **01 11 43.3 +5.2**
HHC S **S** **01 16 09.8 -0.3**
HHC sS sS 01 16 24.0 +0.2
HHC pmax pmax
comp=Z,350nm,5.1s
HHC LR LR
comp=Z,3μm,16.3s
HHC LR LR
comp=Z,5μm,15.8s
HHC LR LR
comp=Z,4μm,16.6s
CHGR Chuyangaron 40.42 331 P **P** **01 10 07.7 +0.5**
WHFO Wadi Hawf 40.47 293 P **P** **01 10 09.7 +1.8**
SNR=17
WHFO P **P** **01 10 09.7 +1.8**
SNR=17
SHLS Shalkode 40.51 345⇑*i*P **P** **01 10 08.4 +0.5**
comp=Z,153nm,2.0s
SHLS *e*PP **PnPn** **01 11 44.4 -1.2**
SHLS *i* S **S** **01 16 15.1 +0.2**
SHLS Shalkode 40.51 345*c i*P **P** **01 10 08.4 +0.5**
SHLS *e* 01 11 44.4
SHLS *i* S **S** **01 16 15.0 +0.2**
SHLS pmax pmax
comp=Z,153nm,2.0s
ULHL Ulahol 40.60 341 P **P** **01 10 10.0 +1.1**
SNR=52
UZB Uzynbulak 40.61 345⇑*i*P **P** **01 10 09.8 +0.9**
comp=Z,59nm,1.3s
UZB *e*PP **PnPn** **01 11 45.0 -1.9**
UZB *i* S **S** **01 16 15.7 -0.8**
UZB *e*SS **SnSn** **01 19 23.6 -0.5**
UZB Uzynbulak 40.61 345*c i*P **P** **01 10 09.7 +0.9**
UZB *e* 01 11 44.9
UZB *i* S **S** **01 16 15.6 -0.8**
UZB pmax pmax
comp=Z,59nm,1.3s
PDGK Podgornoye 40.66 345 P **P** **01 10 09.9 +0.7**
UOSS Minazif 40.69 304 *i* P **P** **01 10 11.5 +1.9**
SNR=7.6
UOSS Minazif 40.69 304 *i* P **P** **01 10 11.5 +1.9**
SNR=7.6
UOSS Minazif 40.69 304 P **P** **01 10 10.8 +1.2**
SATY Saty 40.70 344⇑*i*P **P** **01 10 10.2 +0.6**
comp=Z,63nm,1.3s
SATY *e*PP **PP** **01 11 44.0 +0.3**
SATY *i* S **S** **01 16 17.9 +0.1**
SATY *e*SS **SS** **01 19 24.3 +5.2**
SATY Saty 40.70 344*c i*P **P** **01 10 10.1 +0.6**
SATY *e* 01 11 44.0
SATY *i* S **S** **01 16 17.8 +0.1**
SATY pmax pmax
comp=Z,63nm,1.3s
HATD Hatta, Dubai 40.70 304 *i* P **P** **01 10 12.2 +2.6**
SNR=11
HATD Hatta, Dubai 40.70 304 *i* P **P** **01 10 12.2 +2.6**
SNR=11
HATD Hatta, Dubai 40.70 304 P **P** **01 10 12.0 +2.4**
SNR=16
HATD P **P** **01 10 12.0 +2.4**
SNR=16
HATD P **P** **01 10 12.0 +2.4**
SNR=16
JOW Kunigami 40.70 53 P **P** **01 10 10.9 +1.3**
comp=Z,11nm,1.1s,baz=203,slow=20,SNR=8.6
JOW Kunigami 40.70 53 P **P** **01 10 10.3 +0.7**
ASHO Ashiyiah 40.70 304 *i* P **P** **01 10 12.4 +2.7**
SNR=15
ASHO Ashiyiah 40.70 304 *i* P **P** **01 10 12.4 +2.7**
SNR=15
ASHO Ashiyiah 40.70 304 P **P** **01 10 12.4 +2.7**
SNR=20
ASHO P **P** **01 10 12.4 +2.7**
SNR=20
ALNE Al Ain 40.71 303 *i* P **P** **01 10 12.3 +2.5**
SNR=16
ALNE Al Ain 40.71 303 *i* P **P** **01 10 12.3 +2.5**
SNR=16
MDH Madha 40.76 305 P **P** **01 10 11.7 +1.6**
SNR=8.0
MDH P **P** **01 10 11.7 +1.6**
SNR=8.0
MDH P **P** **01 10 11.7 +1.6**
SNR=8.0
ABTO Aybut 40.77 292 P **P** **01 10 12.3 +1.9**
SNR=9.6
ABTO P **P** **01 10 12.3 +1.9**
SNR=9.6
ABTO P **P** **01 10 12.3 +1.9**
SNR=9.6
KNRA Kununurra 40.78 120 P **P** **01 10 10.2 -0.1**
baz=41,SNR=6.7
KNRA Kununurra 40.78 120 P **P** **01 10 10.5 +0.1**
BTK Batken 40.78 334 IAmb IAmb 01 10 34.3
comp=Z,440nm,1.1s
KZA Kyzart 40.78 340 P **P** **01 10 11.9 +1.4**
SNR=32
MSFE Esma-Masafi 40.90 305 *i* P **P** **01 10 13.7 +2.3**
SNR=7.6
MSFE Esma-Masafi 40.90 305 *i* P **P** **01 10 13.7 +2.3**
SNR=7.6
ARSB Arslanbob 40.95 337 IAmb IAmb 01 10 39.1
comp=Z,751nm,1.9s
KPKS Kokpek 41.00 344⇑*i*P **P** **01 10 12.5 +0.5**
comp=Z,81nm,1.4s
KPKS *e*PP **PP** **01 11 47.9 +1.0**
KPKS *i* S **S** **01 16 21.9 -0.3**
KPKS *e*SS **SS** **01 19 27.4 +2.4**
KPKS Kokpek 41.00 344*c i*P **P** **01 10 12.4 +0.5**
KPKS *e* 01 11 47.9
KPKS *i* S **S** **01 16 21.8 -0.3**
KPKS pmax pmax
comp=Z,81nm,1.4s
BANOM Banah 41.02 305 P **P** **01 10 14.8 +2.5**
BANOM Banah 41.02 305 P **P** **01 10 14.8 +2.5**
TNSS Tian-Shan 41.10 342⇑*i*P **P** **01 10 14.0 +0.8**
TNSS Tian-Shan 41.10 342⇑*i*P **P** **01 10 13.9 +0.8**
NAZ Nazwa, Dubai 41.16 304 P **P** **01 10 15.3 +1.8**
NAZ Nazwa, Dubai 41.16 304 P **P** **01 10 15.3 +1.8**
NAZ Nazwa, Dubai 41.16 304 P **P** **01 10 15.2 +1.8**
SNR=8.5
NAZ P **P** **01 10 15.2 +1.8**
SNR=8.5
NAZ P **P** **01 10 15.2 +1.8**
SNR=8.5
UCH Uchtor 41.17 339 P **P** **01 10 15.1 +1.3**
SNR=65
MDOK Medeo 41.18 343 *i* P **P** **01 10 14.7 +1.1**
comp=Z,2μm,1.4s
MDOK *e*PP **PP** **01 11 51.0 +2.0**
MDOK *i* S **S** **01 16 25.4 +0.4**
MDOK *e*SS **SS** **01 19 30.6 +1.8**
MDOK *e*LR LR 01 26 07.1
MDOK Medeo 41.18 343 *i* P **P** **01 10 14.6 +1.1**
MDOK *e* 01 11 50.9
MDOK *i* S **S** **01 16 25.4 +0.4**
MDOK pmax pmax
comp=Z,2μm,1.4s
HRA Herat 41.24 320 P **P** **01 10 15.1 +0.9**
HRA **pP** **01 10 15.6 -6.9**
AAA Alma-Ata 41.27 342 *e*P **P** **01 10 14.4 +0.3**
AAA *e*PP **PP** **01 11 50.5 +0.7**
AAA *i* S **S** **01 16 26.5 +0.4**
AAA *e*SS **SS** **01 19 34.0 +3.8**
AAA *e*LR LR 01 26 16.6
AAA Alma-Ata 41.27 342 *e*P **P** **01 10 14.4 +0.3**
AAA *e* 01 11 50.4
AAA *i* S **S** **01 16 26.4 +0.4**
AML Almayashu 41.38 338 P **P** **01 10 17.0 +1.5**
SNR=54
KBK Karagaybulak 41.40 340 P **P** **01 10 17.0 +1.7**
SNR=60
TKM2 Tokmak 2 41.42 341 P **P** **01 10 16.7 +1.2**
SNR=52
TKM2 Tokmak 2 41.42 341 *i* P **P** **01 10 16.0 +0.5**
TKM2 pmax pmax
comp=Z,105nm,1.2s
BJT Baijiatuau 41.43 27 P **P** **01 10 16.7 +1.3**
BJT pmax pmax
comp=Z,302nm,1.0s

BJT MLR MLR
comp=Z,4μm,22.0s
BJT Baijiatuau 41.43 27 P P 01 10 16.6 +1.3
BJT IAmb IAmb 01 10 37.6
comp=Z,302nm,1.0s
BJI Beijing 41.45 27 P P 01 10 17.1 +1.6
BJI PP **PnPn 01 12 01.1 +4.6**
BJI PcP **PcP 01 12 14.0 +1.0**
BJI S **S 01 16 31.1 +2.4**
BJI pmax pmax
comp=Z,190nm,1.2s
BJI LR LR
comp=Z,5μm,21.6s
BJI LR LR
comp=Z,8μm,21.7s
BJI LR LR
comp=Z,7μm,21.6s
AAK Ala-Archa 41.54 340 P P 01 10 18.0 +1.6
comp=Z,14nm,0.8s,baz=150,slow=6.6,SNR=54
AAK PP **PP 01 11 53.1 +0.3**
comp=Z,54nm,1.1s,baz=208,slow=8.0,SNR=2.0
AAK Ala-Archa 41.54 340 P P 01 10 18.7 +2.2
SNR=22
AAK Ala-Archa 41.54 340 P P 01 10 18.1 +1.6
AAK 01 11 53.1
AAK pmax pmax
comp=Z,113nm,1.2s
AAK MLR MLR
comp=Z,15μm,20.0s
AAK Ala-Archa 41.54 340 P P 01 10 18.1 +1.6
AAK **pP 01 10 18.2 -6.6**
AAK Ala-Archa 41.54 340 IAMs_20 IAMs_20 01 27 48.5
comp=Z,15μm,20.0s
BLDU Ballidu 41.55 148 P P 01 10 17.8 +1.3
baz=42,SNR=6.3
FRU1 Bishkek 41.65 340 IAMs_20 IAMs_20 01 27 44.6
comp=Z,18μm,22.0s
MTN Manton Dam 41.75 115 P P 01 10 17.6 -0.7
baz=42,SNR=10
MTN Manton Dam 41.75 115 P 01 10 18.7 +0.3
CHMS Chumysh 41.77 340 P P 01 10 19.7 +1.5
SNR=13
RKPI Ransiki, Papua 41.80 97 P P 01 10 34.9 +16
EKS2 Erkin-Say 41.81 339 P P 01 10 20.4 +1.7
SNR=14
KUU Kurty 42.06 342⇑ *i* P **P 01 10 20.6 +0.1**
comp=Z,286nm,2.2s
KUU *e* PP **PP 01 11 59.2 +0.8**
KUU *i* S **S 01 16 36.6 -1.1**
KUU *e* SS **SS 01 19 49.9 +4.0**
KUU *e* LR LR 01 26 54.5
KUU Kurty 42.06 342 *c i* P **P 01 10 20.6 +0.1**
KUU *e* 01 11 59.1
KUU *i* S **S 01 16 36.6 -1.1**
KUU pmax pmax
comp=Z,286nm,2.2s
USP Ospenovka 42.09 340 P P 01 10 22.0 +1.2
SNR=45
SGDS Sogindy 42.21 340⇑ *i* P **P 01 10 22.5 +0.6**
comp=Z,84nm,2.3s
SGDS *e* PP **PP 01 12 03.2 +3.2**
SGDS *i* S **S 01 16 39.3 -0.8**
SGDS *e* SS **SS 01 19 52.7 +3.7**
SGDS *e* LR LR 01 27 41.8
MUN Mundaring 42.38 150 P P 01 10 24.6 +1.4
baz=43,SNR=9.0
TAS Tashkent 42.48 334 P P 01 10 24.7 +0.7
TAS pmax pmax
comp=Z,382nm,1.0s
TAS Tashkent 42.48 334 P P 01 10 24.7 +0.7
TAS IAmb IAmb 01 10 50.9
comp=Z,382nm,1.0s
TDK Taldyqorghan 42.50 345 *e* P **P 01 10 23.7 -0.5**
comp=Z,109nm,1.3s
TDK *e* PP **PP 01 12 07.0 +4.0**
TDK *i* S **S 01 16 43.4 -0.8**
TDK *e* SS **SS 01 19 55.7 +1.2**
TDK Taldyqorghan 42.50 345 *e* P **P 01 10 23.6 -0.5**
TDK *e* 01 12 07.0
TDK *i* S **S 01 16 43.3 -0.8**
TDK pmax pmax
comp=Z,109nm,1.3s
IUG Iuzhnay 42.84 335 *i* S **S 01 16 48.9 -0.5**
IUG *e* SS **SnSn 01 20 09.6 -8.0**
JBG Jabagly 42.85 336 *c i* P **P 01 10 28.1 +0.9**
JBG *e* 01 12 14.8
JBG *i* S **S 01 16 49.9 +0.2**
JBG pmax pmax
comp=Z,60nm,1.4s
KLBR Kellerberrin 42.87 148 P P 01 10 28.8 +1.6
baz=43,SNR=8.7
KDU Kakadu 42.91 114 P P 01 10 27.4 -0.4
baz=43,SNR=8.2
DZA Taraz 42.93 337 *e* P **P 01 10 27.2 -0.5**
DZA Taraz 42.93 337 *e* P **P 01 10 27.2 -0.5**
DL2 Dalian 43.35 33 P P 01 10 31.8 +0.8
DL2 PP **PcP 01 12 18.5 -0.9**
DL2 S **S 01 16 56.9 +0.3**
DL2 pmax pmax
comp=Z,180nm,1.0s
DL2 pmax pmax
comp=Z,1μm,4.2s
DL2 LR LR
comp=Z,4μm,16.8s
DL2 LR LR
comp=Z,3μm,18.6s
DL2 LR LR
comp=Z,5μm,20.7s
MK31 Makanchi Array 43.35 350 *e* P **P 01 10 31.4 +0.5**
MKAR Makanchi Array 43.35 350 P P **01 10 31.6 +0.7**
comp=Z,38nm,0.6s,baz=169,slow=8.8,SNR=256
MKAR PP **PcP 01 12 16.1 -3.1**
comp=Z,35nm,0.8s,baz=167,slow=11,SNR=3.7
MKAR LR LR 01 31 58.4
comp=Z,6μm,19.4s,baz=167,slow=41
MKAR PKPPKP **P'P'df 01 42 19.7 -4.5**
comp=Z,4.0nm,1.1s,baz=304,slow=2.8,SNR=5.2
MAKZ Makanchi 43.42 349 P **P 01 10 31.4 -0.1**
MAKZ pmax pmax
comp=Z,39nm,1.0s
MAKZ Makanchi 43.42 349 P **P 01 10 31.4 -0.1**
KK31 Karatay Array 43.43 336 *i* P **P 01 10 31.9 +0.2**
ZSN Zaisan 43.58 352⇑ *i* P **P 01 10 34.0 +1.1**
comp=Z,176nm,2.4s
ZSN *e* PP **PP 01 12 15.4 +0.9**
ZSN *i* S **S 01 17 00.8 +0.8**
ZSN *e* SS **SS 01 20 18.8 +3.3**
ZSN Zaisan 43.58 352 *c i* P **P 01 10 33.9 +1.1**
ZSN *e* 01 12 15.4
ZSN *i* S **S 01 17 00.7 +0.8**
ZSN pmax pmax
comp=Z,176nm,2.4s
NWAO Narrogin (SRO) 43.65 150 P P 01 10 34.4 +0.9
baz=44,SNR=15
NWAO Narrogin (SRO) 43.65 150 LR LR 01 27 10.4
comp=Z,13μm,19.6s,baz=336,slow=34
NWAO Narrogin (SRO) 43.65 150 P P 01 10 34.5 +0.9
NWAO pmax pmax
comp=Z,41nm,0.8s
NWAO Narrogin (SRO) 43.65 150 P P 01 10 34.5 +1.0
NWAO Narrogin (SRO) 43.65 150 IAMs_20 IAMs_20 01 26 48.6
comp=Z,11μm,20.0s
BTLS Baital 43.82 341⇑ *i* P **P 01 10 34.6 -0.2**
comp=Z,58nm,2.6s
BTLS *e* PP **PP 01 12 14.3 -2.8**
BTLS *i* S **S 01 17 00.3 -3.1**
BTLS *e* SS **SS 01 20 22.1 +1.8**
BTLS *e* LR LR 01 28 16.5
BTLS Baital 43.82 341 *c i* P **P 01 10 34.5 -0.2**
BTLS *e* 01 12 14.3
BTLS *i* S **S 01 17 00.3 -3.1**
BTLS *e* SS **SS 01 20 22.0 +1.8**
BTLS pmax pmax
comp=Z,58nm,2.6s
H01W3 Cape Leeuwin H 43.82 154 T T 01 57 01.6
baz=330,slow=76,SNR=237
H01W2 Cape Leeuwin H 43.83 154 T T 01 57 02.7
baz=330,slow=76,SNR=208
H01W1 Cape Leeuwin H 43.83 154 T T 01 56 43.5
baz=330,slow=76,SNR=222
RER Riviere de l'E 44.18 234 P P 01 10 40.0 +2.0
SNR=10
RER Riviere de l'E 44.18 234 P P 01 10 39.6 +1.6
SONM Songino Array 44.99 13 P P 01 10 45.2 +0.9
comp=Z,100nm,0.9s,baz=196,slow=8.8,SNR=357

SONM PP **PcP 01 12 25.8 +0.8**
comp=Z,22nm,0.6s,baz=198,slow=6.0,SNR=6.3
SONM LR LR 01 31 22.6
comp=Z,10μm,20.7s,baz=196,slow=39
KMBL Kambalda 45.01 144 P P 01 10 45.6 +1.2
baz=45,SNR=12
TJN Taejon 45.12 40 *ce* P **P 01 10 45.0 -0.2**
WRKA Warakurna 45.17 132 P P 01 10 46.6 +0.8
baz=45,SNR=12
ULN Ulaanbaatar 45.17 14 *ce* P **P 01 10 46.2 +0.5**
ULN pmax pmax
comp=Z,86nm,1.0s
ULN Ulaanbaatar 45.17 14 P P 01 10 46.0 +0.3
ULN Ulaanbaatar 45.17 14 IAMs_20 IAMs_20 01 31 15.0
comp=Z,11μm,20.0s
INCN Inchon 45.33 39 P P 01 10 47.3 +0.3
INCN pmax pmax
comp=Z,218nm,1.2s
INCN MLR MLR
comp=Z,9μm,20.0s
INCN Inchon 45.33 39 P P 01 10 47.3 +0.3
INCN IAmb IAmb 01 10 48.1
comp=Z,218nm,1.2s
DGZ Jazzator, Alta 45.52 355 *c i* P **P 01 10 49.7 +1.3**
DGZ pmax pmax
comp=Z,147nm,1.9s
DGZ MLR MLR
comp=Z,5μm,22.0s
JNU Nakatsue 45.72 46 P P 01 10 50.5 +0.3
comp=Z,102nm,1.0s,baz=241,slow=1.0,SNR=26
JNU Nakatsue 45.72 46 P P 01 10 50.0 -0.1
JNU IAmb IAmb 01 10 52.0
comp=Z,141nm,1.1s
JNU IAMs_20 IAMs_20 01 31 33.0
comp=Z,10μm,20.0s
ASHT Ashkhabad 45.90 322 P P 01 10 52.8 +1.4
ASHT pmax pmax
comp=Z,190nm,0.8s
ASHT Ashkhabad 45.90 322 P P 01 10 52.8 +1.4
ASHT IAmb IAmb 01 11 14.4
comp=Z,190nm,0.8s
SBV Sambava 45.99 247 P P 01 10 54.6 +2.2
SNR=6.7
GEYT Alibeck 46.06 321 P P 01 10 54.2 +1.5
comp=Z,68nm,0.7s,baz=148,slow=8.7,SNR=148
GEYT PcP **PcP 01 12 30.1 +1.3**
comp=Z,25nm,0.8s,baz=146,slow=3.1,SNR=1.2
GEYT LR LR 01 31 12.4
comp=Z,13μm,21.4s,baz=105,slow=38
KS19 Wonju Array Si 46.12 39 IAmb IAmb 01 10 54.8
comp=Z,205nm,1.4s
KSRS Korea Array 46.12 40 P P 01 10 53.0 -0.1
comp=Z,96nm,1.2s,baz=230,slow=8.6,SNR=100
KSRS PcP **PcP 01 12 28.9 -0.1**
comp=Z,14nm,0.9s,baz=247,slow=5.4,SNR=4.9
KSRS LR LR 01 32 57.7
comp=Z,6μm,18.6s,baz=229,slow=40
KSRS PKPPKP P'P'df 01 42 13.4 -8.5
comp=Z,0.7nm,0.7s,baz=58,slow=3.1,SNR=5.0
SMPI Sarmi 46.35 97 P P 01 10 55.5 +0.1
comp=Z,3μmcomp=Z,2μmcomp=Z,119nm,1.2s
ZAK Zakamensk 46.83 9 *e* P **P 01 10 59.4 +0.7**
ZAK pmax pmax
comp=Z,129nm,1.4s
WB0 Warramunga Arr 47.38 122 P P 01 11 03.6 +0.2
WB0 IAmb IAmb 01 11 07.4
comp=Z,89nm,0.8s
WRA Warramunga Arr 47.41 122 P P 01 11 03.7 +0.1
comp=Z,91nm,0.9s,baz=300,slow=8.9,SNR=64
WRA PcP **PcP 01 12 33.9 -0.1**
comp=Z,40nm,1.0s,baz=315,slow=3.1,SNR=5.9
WRA PP **PP 01 12 53.5 -1.7**
comp=Z,14nm,0.7s,baz=309,slow=3.3,SNR=4.7
WRA S **S 01 17 51.5 -4.5**
comp=Z,11nm,1.2s,baz=289,slow=16,SNR=6.8
WRA LR LR 01 30 32.7
comp=Z,4μm,21.9s,baz=285,slow=36
WRAB Tennant Creek 47.42 122 *ce* P **P 01 11 03.8 +0.2**
WRAB pmax pmax
comp=Z,172nm,1.3s
WRAB Tennant Creek 47.42 122 P P 01 11 03.8 +0.2
WRAB IAmb IAmb 01 11 07.8
comp=Z,119nm,1.0s
WB2 Warramunga Arr 47.42 122 P P 01 11 03.5 -0.2
WB2 IAmb IAmb 01 11 07.8
comp=Z,128nm,1.1s
WR0 Warramunga Arr 47.59 122 IAmb IAmb 01 11 09.8
comp=Z,130nm,0.9s
KURBB Kurchatov Arra 47.74 348 P P 01 11 06.4 +0.8
comp=Z,24nm,0.6s,baz=169,slow=7.1,SNR=411
KURBB PcP **PcP 01 12 35.2 +0.8**
comp=Z,45nm,0.8s,baz=150,slow=2.7,SNR=9.6
KURBB S **S 01 17 55.6 -4.1**
comp=Z,4.2nm,1.1s,baz=159,slow=11,SNR=2.3
KURBB Kurchatov Arra 47.74 348 P P 01 11 06.2 +0.6
MOY Mondy 47.77 7 *e* P **P 01 11 07.0 +1.1**
MOY pmax pmax
comp=Z,212nm,2.5s
KURK Kurchatov 47.81 348 P P 01 11 07.3 +1.1
KURK P **P 01 11 07.3 +1.1**
KURK P **P 01 11 07.3 +1.1**
KURK Kurchatov 47.81 348 *ce* P **P 01 11 07.0 +0.9**
KURK pmax pmax
comp=Z,195nm,1.7s
KURK MLR MLR
comp=Z,9μm,21.0s
KURK Kurchatov 47.81 348 P P 01 11 07.1 +0.9
KURK IAmb IAmb 01 11 27.1
comp=Z,98nm,0.9s
KURK Kurchatov 47.81 348 PcP 01 12 35.2 +0.6
KURK **S 01 17 55.6 -5.1**
GENI Genyem 47.88 97 P P 01 11 07.4 +0.1
comp=Z,4μmcomp=Z,152nm,1.0s
TLY Talaya 48.15 9 P P 01 11 10.8 +1.9
comp=Z,44nm,0.7s,baz=206,slow=7.5,SNR=124
TLY Talaya 48.15 9 P P 01 11 10.7 +1.9
TLY P **P 01 11 10.7 +1.9**
TLY P **P 01 11 10.7 +1.9**
TLY Talaya 48.15 9 *c i* P **P 01 11 10.5 +1.7**
TLY *e* S **S 01 18 01.6 -3.9**
TLY pmax pmax
comp=Z,263nm,1.0s
TLY MLR MLR
comp=Z,12μm,19.0s
TLY Talaya 48.15 9 P P 01 11 10.6 +1.8
JAY Jayapura 48.40 97 P P 01 11 11.4 0.0
comp=Z,46nm,1.5s
FORT Forrest 48.48 138 P P 01 11 13.0 +1.4
baz=49,SNR=30
FORT Forrest 48.48 138 P P 01 11 12.3 +0.7
BRZS Berezniki 48.63 343⇑ *i* P **P 01 11 12.8 +0.2**
comp=Z,130nm,1.5s
BRZS *e* S **S 01 18 12.3 -0.2**
BRZS *e* LR LR 01 31 32.2
BRZS Berezniki 48.63 343 *c i* P **P 01 11 12.7 +0.2**
BRZS *e* S **S 01 18 12.2 -0.2**
BRZS pmax pmax
comp=Z,130nm,1.5s
DAMY Dhamar 48.69 286 P P 01 11 16.4 +2.6
SNR=32
DAMY Dhamar 48.69 286 P P 01 11 15.5 +1.6
DAMY IAmb IAmb 01 11 19.1
comp=Z,229nm,1.3s
ASAR Alice Springs 48.77 127 P P 01 11 14.2 +0.1
comp=Z,49nm,1.0s,baz=300,slow=7.2,SNR=72
ASAR PcP **PcP 01 12 39.0 +0.2**
comp=Z,64nm,0.9s,baz=301,slow=3.6,SNR=17
ASAR S **S 01 18 10.8 -4.4**
comp=Z,0.9nm,0.9s,baz=320,slow=4.8,SNR=2.0
ASAR LR LR 01 33 59.5
comp=Z,4μm,20.8s,baz=322,slow=39
ASAR PKPPKP **P'P'df 01 42 17.1 -1.0**
comp=Z,4.1nm,1.1s,baz=88,slow=3.2,SNR=2.2
ASAR P4KPbc 01 48 53.8
comp=Z,2.2nm,0.9s,baz=301,slow=3.9,SNR=9.2
IRK Irkutsk 48.80 9 *e* P **P 01 11 14.9 +1.2**
IRK *e* 01 18 16.0
IRK pmax pmax
comp=Z,455nm,2.7s
CN2 Changchun 48.83 31 *e* P **P 01 11 14.3 +0.1**
CN2 PcP **PcP 01 12 37.6 -0.9**
CN2 pmax pmax
comp=Z,100nm,1.2s
RAYN Ar Rayn 49.41 297 *i* P **P 01 11 20.2 +1.2**
SNR=17
RAYN Ar Rayn 49.41 297 *i* P **P 01 11 20.2 +1.2**

RAYN pmax pmax
comp=Z,104nm,0.9s
RAYN Ar Rayn 49.41 297 P P 01 11 20.1 +1.1
RAYN IAmb IAmb 01 11 38.2
comp=Z,104nm,0.9s
ATD Arta Tunnel 49.89 281 P P 01 11 25.0 +2.2
SNR=21
ATD Arta Tunnel 49.89 281 IAmb IAmb 01 11 26.6
comp=Z,283nm,1.5s
ZAA0 Zalesovo Array 49.98 354 P P 01 11 23.5 +0.8
ZAA0 IAMs_20 IAMs_20 01 34 42.5
comp=Z,8μm,20.0s
ZALV Zalesovo Beam 49.98 354 P P 01 11 23.6 +0.9
comp=Z,96nm,0.5s,baz=182,slow=8.2,SNR=372
ZALV S **S 01 18 31.4 +0.3**
comp=Z,7.2nm,1.1s,baz=193,slow=17,SNR=4.0
ZALV LR LR 01 35 04.5
comp=Z,8μm,20.3s,baz=184,slow=39
ZALV PKPPKP 01 42 13.6
comp=Z,5.2nm,1.0s,baz=327,slow=2.5,SNR=6.6
HIA Hailar 50.39 23 P P 01 11 26.4 +0.4
HIA pmax pmax
comp=Z,205nm,1.0s
HIA MLR MLR
comp=Z,6μm,19.0s
HIA Hailar 50.39 23 P P 01 11 26.4 +0.4
HIA IAmb IAmb 01 11 48.3
comp=Z,205nm,1.0s
ABPO Ambohimpanom 50.40 241 P P 01 11 27.9 +1.2
ABPO pmax pmax
comp=Z,215nm,1.1s
ABPO Ambohimpanom 50.40 241 P P 01 11 27.9 +1.2
ABPO IAmb IAmb 01 11 31.1
comp=Z,215nm,1.1s
CIT Chita 50.67 16 *e* P **P 01 11 28.8 +0.7**
CIT *e* 01 11 45.9
CIT *e* 01 12 45.9
CIT *e* 01 13 19.8
CIT pmax pmax
comp=Z,550nm,2.5s
MSHR Mys Shultsa 51.20 36 *ce* P **P 01 11 32.4 +0.3**
MSHR pmax pmax
comp=Z,88nm,1.0s
MSHR MLR MLR
comp=Z,3μm,20.0s
INU Inuyama 51.24 47 IAmb IAmb 01 11 34.7
comp=Z,201nm,1.0s
INU IAMs_20 IAMs_20 01 34 58.0
comp=Z,8μm,20.0s
MDJ Mudanjiang 51.59 33 P P 01 11 36.1 +1.1
MDJ PP **PP 01 13 34.1 +1.4**
MDJ S **S 01 18 54.3 +0.6**
MDJ SS **SS 01 22 34.0 +3.7**
MDJ pmax pmax
comp=Z,290nm,1.6s
MDJ LR LR
comp=Z,2μm,20.7s
MDJ LR LR
comp=Z,5μm,18.8s
MDJ LR LR
comp=Z,7μm,22.9s
MDJ Mudanjiang 51.59 33 P P 01 11 36.2 +1.1
VOI Vohitsoka 51.92 238 P P 01 11 39.1 +1.1
SNR=12
VLA Vladivostok 51.95 36 *c i* P **P 01 11 38.2 +0.5**
VLA pmax pmax
comp=Z,300nm,1.3s
VLA MLR MLR
comp=Z,8μm,21.0s
BVAR Borovoye Array 52.00 343 P P 01 11 38.0 +0.1
comp=Z,22nm,0.8s,baz=142,slow=7.5,SNR=150
BVAR Borovoye Array 52.00 343 P P 01 11 38.0 +0.1
BRVK Borovoye 52.06 343 P P 01 11 38.3 -0.1
BRVK P **P 01 11 38.3 -0.1**
BRVK P **P 01 11 38.3 -0.1**
BRVK Borovoye 52.06 343 *ce* P **P 01 11 38.3 -0.1**
BRVK pmax pmax
comp=Z,112nm,1.7s
BRVK Borovoye 52.06 343 P P 01 11 38.4 +0.1
BRVK Borovoye 52.06 343 IAMs_20 IAMs_20 01 34 30.7
comp=Z,10μm,20.0s
QIS Mount Isa 52.17 120 P P 01 11 40.4 +0.7
baz=52,SNR=25
JCJ Chichijima 52.32 59 P P 01 11 41.5 +0.8
comp=Z,80nm,0.7s,baz=271,slow=20,SNR=5.4
MJB9 Matsu-Tunnel 52.64 46 PcP **PcP 01 12 53.1 +0.3**
MJB9 IAmb IAmb 01 12 54.7
comp=Z,87nm,0.9s
MAJO Matsushiro 52.64 46 P P 01 11 42.6 -0.5
MAJO 01 12 52.9
MAJO pmax pmax
comp=Z,142nm,1.0s
MAJO MLR MLR
comp=Z,8μm,20.0s
MAJO Matsushiro 52.64 46 P P 01 11 42.6 -0.5
MAJO PcP **PcP 01 12 52.9 +0.1**
MAJO IAmb IAmb 01 12 54.4
comp=Z,142nm,1.0s
MAJO IAMs_20 IAMs_20 01 35 51.7
comp=Z,8μm,20.0s
MAT Matsushiro 52.64 46 P P 01 11 42.8 -0.3
MAT S **S 01 19 05.4 -3.1**
MJAR Matsushiro Arr 52.64 46 P P 01 11 43.4 +0.4
comp=Z,36nm,0.8s,baz=234,slow=6.8,SNR=63
MJAR PcP **PcP 01 12 53.2 +0.4**
comp=Z,106nm,0.9s,baz=249,slow=3.9,SNR=18
MJAR P3KP 01 41 00.1
comp=Z,0.7nm,0.4s,baz=352,slow=3.5,SNR=4.0
MJAR PKP2bc **P'P'bc 01 42 23.4 -5.8**
comp=Z,3.5nm,1.1s,baz=58,slow=0.9,SNR=4.6
USA0B Ussuriysk Arra 52.66 35 *c i* P **P 01 11 43.1 +0.1**
USA0B Ussuriysk Arra 52.66 35 P P 01 11 44.0 +1.0
USA0B IAmb IAmb 01 11 47.5
comp=Z,122nm,1.0s
USA0B IAMs_20 IAMs_20 01 35 44.0
comp=Z,8μm,21.0s
USRK Ussuriysk Ar. 52.66 35 P P 01 11 43.5 +0.4
comp=Z,87nm,0.9s,baz=240,slow=5.8,SNR=73
DESE Dese 53.01 281 *e* P **P 01 11 44.9 -1.5**
DESE *e* S S 01 19 24.7 +10
FOMA Nahampoana Res 53.08 234 P P 01 11 47.5 +1.1
SNR=8.8
COEN Coen 53.20 111 P P 01 11 46.5 -0.9
baz=53,SNR=5.2
COEN Coen 53.20 111 P P 01 11 47.1 -0.3
COEN PcP **PcP 01 12 56.4 +1.2**
FURI Furi 53.87 278 P P 01 11 54.3 +1.5
AKTO Aktyubinsk 54.50 333 P P 01 11 56.1 -0.3
comp=Z,27nm,1.0s,baz=134,slow=7.5,SNR=75
AKTO PcP **PcP 01 12 58.4 -1.1**
comp=Z,44nm,1.0s,baz=130,slow=5.0,SNR=4.8
AKTO S **S 01 19 31.4 -1.8**
comp=Z,12nm,1.3s,baz=324,slow=19,SNR=7.6
AKT Akhty 54.67 319 *e* P **P 01 11 58.3 +0.4**
AKT *e* 01 13 00.0
AKT *e* 01 14 00.3
AKT pmax pmax
comp=Z,83nm,1.2s
KIBK Kibwezi 55.04 264 P P 01 12 02.5 +1.4
SNR=16
BBOO Buckleboo 55.15 135 P P 01 12 01.6 +0.2
baz=55,SNR=43
BBOO Buckleboo 55.15 135 P P 01 12 01.0 -0.4
BBOO IAmb IAmb 01 12 05.5
comp=Z,118nm,1.2s
BBOO PcP **PcP 01 13 02.1 -0.3**
BBOO IAMs_20 IAMs_20 01 33 03.2
comp=Z,9μm,21.0s
MTSU Mount Surprise 55.48 115 P P 01 12 04.7 +0.7
baz=56,SNR=29
MAK Makhachkala 55.57 321 *e* P P 01 11 59.1 -5.1
MAK *e* S **S 01 19 40.8 -6.9**
MAK *e* SS **SS 01 23 27.8 -5.3**
MAK *e* SSS SSS 01 25 40.2
MAK pmax pmax
comp=Z,214nm,1.2s
MAK MLR MLR
comp=Z,4μm,16.0s
KMBO Kilima Mbogo 55.70 266 P P 01 12 09.2 +3.2
comp=Z,54nm,1.0s,baz=65,slow=8.9,SNR=66
KMBO PcP **PcP 01 13 06.5 +1.3**
comp=Z,21nm,0.9s,baz=29,slow=4.0,SNR=4.2
KMBO LR LR 01 32 30.6
comp=Z,3μm,21.1s,baz=81,slow=32

KMBO Kilima Mbogo 55.70 266 *i* P **P 01 12 07.8 +1.8**
SNR=73
KMBO Kilima Mbogo 55.70 266 *i* P **P 01 12 07.8 +1.8**
SNR=73
KMBO Kilima Mbogo 55.70 266 P **P 01 12 07.8 +1.8**
KMBO P **P 01 12 07.8 +1.8**
KMBO P **P 01 12 07.8 +1.8**
KMBO Kilima Mbogo 55.70 266 P **P 01 12 07.1 +1.1**
KMBO IAmb IAmb 01 12 10.5
comp=Z,103nm,1.1s
KMBO Kilima Mbogo 55.70 266 IAMs_20 IAMs_20 01 30 59.1
comp=Z,9μm,22.0s
KLR Kul'dur 55.71 30 P **P 01 12 06.4 +1.3**
comp=Z,105nm,1.0s,baz=250,slow=8.0,SNR=78
KLR LR LR 01 40 29.8
comp=Z,5μm,18.5s,baz=223,slow=41
KLR Kul'dur 55.71 30*ce*P **P 01 12 05.9 +0.8**
KLR pmax pmax
comp=Z,248nm,1.2s
KLR MLR MLR
comp=Z,3μm,20.0s
TEY Ternei 55.83 36⇑*i*P **P 01 12 05.4 -0.7**
TEY *e* 01 12 22.1
TEY *e* 01 13 03.8
TEY *e* 01 19 51.7
TEY pmax pmax
comp=E,30nm,1.1s
TEY pmax pmax
comp=N,40nm,1.2s
TEY pmax pmax
comp=Z,110nm,1.1s
TEY MLR MLR
comp=E,200nm,16.0s
TEY MLR MLR
comp=N,200nm,18.0s
TEY MLR MLR
comp=Z,200nm,18.0s
PMG Port Moresby 55.90 104 LR LR 01 40 06.2
comp=Z,2μm,18.7s,baz=238,slow=40
PMG Port Moresby 55.90 104 P **P 01 12 07.9 +0.8**
PMG pmax pmax
comp=Z,83nm,0.9s
PMG Port Moresby 55.90 104 P **P 01 12 07.9 +0.8**
PMG IAmb IAmb 01 12 35.9
comp=Z,82nm,0.9s
PMG **PcP 01 13 06.8 +1.2**
BOD Bodaibo 55.98 14 *e*P **P 01 12 07.1 +0.2**
BOD pmax pmax
comp=Z,434nm,1.4s
TBLG Delisi 56.76 318 IAmb IAmb 01 12 34.6
comp=Z,100nm,0.8s
GROC Groznyy 56.77 320⇑*i*P **P 01 12 13.2 +0.4**
GROC *e* 01 13 07.9
GROC *e*S **S 01 20 01.3 -2.4**
GROC pmax pmax
comp=Z,140nm,1.3s
ZEA Zeya 56.82 24*ce*P **P 01 12 13.6 +0.6**
ZEA *e* 01 14 19.0
ZEA *e*S **S 01 20 03.0 -1.0**
ZEA *e*SS **SS 01 23 52.0 -0.5**
ZEA pmax pmax
comp=N,94nm,1.0s
ZEA pmax pmax
comp=E,71nm,1.0s
ZEA pmax pmax
comp=Z,190nm,1.0s
ZEA pmax pmax
comp=Z,1μm,10.0s
ZEA pmax pmax
comp=Z,600nm,9.0s
ZEA pmax pmax
comp=N,200nm,6.0s
ZEA smax smax
comp=Z,800nm,14.0s
ZEA smax smax
comp=E,1μm,12.0s
ZEA smax smax
comp=N,1μm,13.0s
ZEA MLR MLR
comp=Z,6μm,16.0s
ZEA MLR MLR
comp=E,1μm,15.0s
ZEA MLR MLR
comp=N,4μm,16.0s
LODK Lodwar 57.24 271 *i* P **P 01 12 18.5 +1.7**
LODK *e* 01 12 19.0
baz=26,slow=22
LODK Lodwar 57.24 271 P **P 01 12 19.1 +2.3**
SNR=34
AKH Akhalkalaki 57.44 317⇑P **P 01 12 18.6 +0.8**
AKH Akhalkalaki 57.44 317 P **P 01 12 17.7 -0.1**
AKH pmax pmax
comp=Z,49nm,1.0s
AKH Akhalkalaki 57.44 317 P **P 01 12 17.7 -0.1**
HTT Hallett 57.51 134 P **P 01 12 18.6 +0.4**
baz=58,SNR=92
ZEI Tsey 57.80 319 *e*P **P 01 12 19.3 -1.0**
ZEI *e*S **S 01 20 16.3 -1.4**
ZEI pmax pmax
comp=Z,45nm,0.8s
CTA Charters Tower 57.84 117 LR LR 01 41 22.4
comp=Z,3μm,18.5s,baz=282,slow=40
CTA PKP2bc **P'P'bc 01 42 17.6 +0.1**
comp=Z,17nm,1.1s,baz=180,slow=5.1,SNR=3.4
CTAO Charters Tower 57.84 117 P **P 01 12 21.4 +0.6**
CTAO pmax pmax
comp=Z,261nm,1.3s
CTAO MLR MLR
comp=Z,4μm,20.0s
CTAO Charters Tower 57.84 117 P **P 01 12 21.4 +0.6**
CTAO IAmb IAmb 01 12 25.8
comp=Z,261nm,1.2s
SVE Sverdlovsk 58.28 340*d*P **P 01 12 23.3 +0.1**
SVE *i*S **S 01 20 21.3 -1.7**
SVE *e*SS **SS 01 24 13.0 -2.3**
SVE pmax pmax
comp=Z,272nm,1.5s
SVE MLR MLR
comp=Z,7μm,20.0s
QLP Quilpie 58.45 125 P **P 01 12 26.1 +1.2**
baz=58,SNR=33
ERM Erimo 58.50 42*ce*P **P 01 12 25.2 +0.2**
ERM pmax pmax
comp=Z,62nm,0.8s
ERM Erimo 58.50 42 P **P 01 12 25.9 +0.9**
STKA Stephens Creek 58.69 131 P **P 01 12 27.2 +0.7**
baz=59,SNR=66
STKA Stephens Creek 58.69 131 P **P 01 12 27.1 +0.5**
comp=Z,96nm,0.7s,baz=300,slow=7.1,SNR=80
STKA PcP **PcP 01 13 16.9 +0.6**
comp=Z,49nm,1.0s,baz=293,slow=8.5,SNR=4.3
STKA LR LR 01 37 24.8
comp=Z,4μm,21.4s,baz=295,slow=36
STKA PKP2bc **P'P'bc 01 42 12.6 -1.7**
comp=Z,5.2nm,0.9s,baz=165,slow=7.1,SNR=4.8
ARU Arti 58.71 339 P **P 01 12 25.7 -0.5**
comp=Z,17nm,0.8s,baz=148,slow=4.4,SNR=75
ARU PcP **PcP 01 13 16.6 +0.8**
comp=Z,12nm,0.6s,baz=134,slow=1.4,SNR=8.1
ARU Arti 58.71 339*ce*P **P 01 12 25.6 -0.5**
ARU pmax pmax
comp=Z,240nm,1.8s
ARU MLR MLR
comp=Z,11μm,21.0s
ARU Arti 58.71 339 P **P 01 12 24.9 -1.3**
ARU Arti 58.71 339 IAMs_20 IAMs_20 01 38 22.0
comp=Z,11μm,21.0s
BCA Borcka 58.73 317⇑P **P 01 12 27.8 +1.1**
BATM Batumi 58.75 317⇓P **P 01 12 27.5 +0.7**
KBZ Khabaz 58.88 320 P **P 01 12 27.8 +0.2**
comp=Z,21nm,0.9s,baz=96,slow=7.8,SNR=49
KBZ PcP **PcP 01 13 18.2 +1.4**
comp=Z,34nm,0.8s,baz=93,slow=4.2,SNR=5.4
KBZ LR LR 01 41 16.2
comp=Z,3μm,19.7s,baz=133,slow=40
KBZ PKPPKP **P'P'df 01 41 60.0 -3.9**
comp=Z,3.1nm,0.9s,baz=155,slow=2.1,SNR=3.7
KBZ PKP2bc **P'P'bc 01 42 13.4 -1.2**
comp=Z,7.6nm,1.0s,baz=3.0,slow=1.9,SNR=8.2
KBZ Khabaz 58.88 320*ce*P **P 01 12 27.9 +0.3**
KBZ pmax pmax
comp=Z,72nm,1.3s
KBZ MLR MLR
comp=Z,4μm,22.0s
GRNR Gornyy 59.02 31⇓*i*P **P 01 12 27.1 -1.4**
GRNR pmax pmax
comp=Z,110nm,1.2s
GRNR MLR MLR
comp=Z,6μm,16.0s
SHA1 Shidzhatmaz 59.04 320*c i*P **P 01 12 28.8 -0.2**
ASAJ Asahikawa 59.07 40 P **P 01 12 29.8 +0.8**
comp=Z,80nm,0.7s,baz=258,slow=4.9,SNR=25
KIV Kislovodsk 59.12 320 P **P 01 12 29.6 +0.2**
KIV Kislovodsk 59.12 320 P **P 01 12 29.6 +0.2**
KIV Kislovodsk 59.12 320*c i*P **P 01 12 29.4 0.0**
KIV *e* 01 12 45.5
KIV *e* 01 13 17.8
KIV *e* 01 14 48.2
KIV *e*PPP PPP 01 16 06.9
KIV *i*S **S 01 20 30.5 -4.1**
KIV *i*PS **PnS 01 20 52.9 +3.2**
KIV pmax pmax
comp=Z,123nm,1.4s
KIV MLR MLR
comp=Z,3μm,20.0s
KIV Kislovodsk 59.12 320 P **P 01 12 29.7 +0.2**
KIV IAmb IAmb 01 13 00.6
comp=Z,127nm,1.0s
GOF Gofitskoye 59.40 321⇑*e*P **P 01 12 30.8 -0.4**
GOF pmax pmax
comp=Z,59nm,1.0s
KTUT Trabzon 59.82 316⇓P **P 01 12 32.9 -1.3**
KRVT Keravat (AS076 59.84 97 LR LR 01 39 50.2
comp=Z,1μm,21.9s,baz=266,slow=38
RABL Rabaul 59.96 97 P **P 01 12 35.4 -0.2**
RABL IAmb IAmb 01 13 00.7
comp=Z,81nm,0.9s
GAZ Gaziantep 60.32 311 IAmb IAmb 01 12 59.6
comp=Z,101nm,0.8s
SHBL Chebaa 60.34 306 *e*P **P 01 12 39.7 +1.6**
QRWL Qaraoun 60.44 306 *e*P **P 01 12 40.5 +1.8**
YSS Yuzh-Sakhalins 60.50 37⇑*i*P **P 01 12 38.8 +0.1**
YSS *e* 01 12 56.0
YSS *e* 01 13 24.9
YSS *e* 01 14 55.4
YSS *e*S **S 01 20 52.6 +0.6**
YSS *e*PPS PPS 01 21 09.5
YSS *e* 01 22 23.6
YSS *e*SS **SS 01 24 52.0 +1.5**
YSS pmax pmax
comp=Z,240nm,1.2s
YSS pmax pmax
comp=N,60nm,1.4s
YSS pmax pmax
comp=E,50nm,1.1s
YSS pmax pmax
comp=Z,800nm,4.6s
YSS MLR MLR
comp=Z,2μm,14.0s
YSS MLR MLR
comp=N,3μm,15.0s
YSS MLR MLR
comp=E,2μm,19.0s
YSS Yuzh-Sakhalins 60.50 37 P **P 01 12 39.5 +0.9**
BHL Bhannes 60.56 307 *e*P **P 01 12 41.3 +1.7**
DQRL Deir Qamar 60.57 306 *e*P **P 01 12 41.8 +2.2**
SOC Sochi 60.90 318*c i*P **P 01 12 39.7 -1.8**
SOC *e* 01 13 20.5
SOC *e* 01 15 00.5
SOC *e*PPP PPP 01 16 30.5
SOC *e*S S 01 20 46.3 -11
SOC pmax pmax
comp=Z,102nm,1.5s
SOC MLR MLR
comp=Z,2μm,19.0s
YUK Yuzh-Kuril'sk 61.15 41 *e*P **P 01 12 43.3 +0.1**
YUK *e* 01 13 27.0
YUK *e* 01 14 57.2
YUK *e*PPP PPP 01 16 22.2
YUK *e*S **S 01 21 01.4 +0.9**
YUK *e*SS **SS 01 25 04.1 +3.3**
YUK pmax pmax
comp=Z,758nm,1.1s
YUK pmax pmax
comp=E,402nm,1.2s
YUK pmax pmax
comp=N,311nm,1.1s
YUK pmax pmax
comp=Z,774nm,2.2s
ARPS Mount Arapiles 61.28 136 P **P 01 12 45.4 +1.2**
baz=61,SNR=20
CMSA Cobar Meteorol 61.65 129 P **P 01 12 48.0 +1.1**
baz=62,SNR=55
MBAR Mbarara 62.13 267*ce*P **P 01 12 48.5 -2.1**
MBAR pmax pmax
comp=Z,137nm,1.3s
MBAR Mbarara 62.13 267 P **P 01 12 48.7 -1.9**
MBAR IAmb IAmb 01 12 55.5
comp=Z,169nm,1.1s
RMQ Roma 62.16 123 P **P 01 12 52.6 +2.2**
baz=62,SNR=17
TYV Tymovskoe 62.37 33 *e*P **P 01 12 49.4 -1.9**
TYV *e*S **S 01 21 16.1 +0.4**
TYV pmax pmax
comp=Z,600nm,2.4s
TYV pmax pmax
comp=Z,95nm,1.3s
TYV smax smax
comp=E,2μm,5.3s
TYV MLR MLR
comp=Z,6μm,17.0s
CSS Mathiatis 62.69 307 P **P 01 12 54.0 +0.2**
CSS IAmb IAmb 01 13 31.1
comp=Z,86nm,1.0s
CSS IAMs_20 IAMs_20 01 40 38.6
comp=Z,8μm,21.0s
ANN Anapa 62.89 319 *e*P **P 01 12 53.4 -1.4**
ANN *e* 01 13 31.3
ANN *e* 01 15 21.6
ANN *e*PPP PPP 01 16 53.9
ANN *e*S **S 01 21 22.8 +0.4**
ANN pmax pmax
comp=Z,68nm,1.1s
ANN MLR MLR
comp=N,3μm,16.0s
ANN MLR MLR
comp=E,674nm,19.0s
KUR Kuril'sk 62.94 41 *e*P **P 01 12 55.9 +0.7**
KUR S **S 01 21 29.6 +6.5**
KUR pmax pmax
comp=Z,740nm,1.3s
KUR MLR MLR
comp=Z,2μm,14.0s
VRH Novokhopyorsk 63.14 327 *e*P **P 01 12 55.3 -1.1**
VRH pmax pmax
comp=Z,210nm,1.9s
VRH MLR MLR
comp=Z,6μm,22.0s
EIDS Eidsvold 63.76 121 P **P 01 13 01.6 +0.7**
baz=64,SNR=23
EIDS Eidsvold 63.76 121 P **P 01 13 01.7 +0.7**
EIDS IAmb IAmb 01 13 05.5
comp=Z,154nm,1.1s
EIDS IAMs_20 IAMs_20 01 44 15.2
comp=Z,6μm,19.0s
BR131 Keskin Array S 63.78 312 P **P 01 13 01.0 -0.1**
SNR=54
BR131 P **P 01 13 01.0 -0.1**
SNR=54
BR131 P **P 01 13 01.0 -0.1**
SNR=54
BR131 Keskin Array S 63.78 312 IAmb IAmb 01 13 22.0
comp=Z,76nm,0.7s
BRTR Keskin Array B 63.78 312 P **P 01 13 00.9 -0.1**
comp=Z,36nm,0.7s,baz=127,slow=5.4,SNR=96
BRTR PKPPKP **P'P'df 01 41 49.1 -7.5**
comp=Z,2.2nm,1.1s,baz=198,slow=3.6,SNR=5.3
BRTR PKP2bc **P'P'bc 01 42 00.1 -3.0**
comp=Z,3.6nm,1.1s,baz=324,slow=1.7,SNR=6.9
BRTR LR LR 01 44 44.8
comp=Z,3μm,18.1s,baz=90,slow=40
BRTR Keskin Array B 63.78 312 *i* P **P 01 13 01.0 -0.1**
BRTR pmax pmax
comp=Z,36nm,0.7s
YAK Yakutsk 63.86 18*c i*P **P 01 13 00.9 -0.1**
YAK *e**PP **pP 01 13 10.8 +1.2**
YAK *e* 01 15 24.0
YAK *e*S **S 01 21 32.0 -1.9**
YAK *e**SS **sS 01 21 51.4 +3.1**
YAK *e* 01 22 44.1
YAK pmax pmax
comp=Z,443nm,1.0s
YAK pmax pmax
comp=N,167nm,1.0s
YAK pmax pmax
comp=E,108nm,1.0s
YAK pmax pmax
comp=Z,126nm,1.6s
YAK pmax pmax
comp=N,84nm,1.4s
YAK pmax pmax
comp=E,82nm,1.4s
YAK smax smax
comp=E,608nm,2.3s
YAK smax smax
comp=N,198nm,3.2s
YAK MLR MLR
comp=Z,3μm,20.0s
YAK MLR MLR
comp=N,2μm,18.0s
YAK MLR MLR
comp=E,3μm,19.0s
YAK Yakutsk 63.86 18 P **P 01 13 00.8 -0.1**
ILGA Ilgaz 64.13 314 P **P 01 13 03.7 +0.2**
ILGA IAmb IAmb 01 13 22.9
comp=Z,130nm,1.0s
TOO Toolangi 64.21 135 P **P 01 13 05.6 +1.8**
baz=64,SNR=20
TOO Toolangi 64.21 135 P **P 01 13 04.6 +0.8**
TOO pmax pmax
comp=Z,73nm,1.0s
TOO Toolangi 64.21 135 P **P 01 13 04.6 +0.8**
TOO IAmb IAmb 01 13 09.4
comp=Z,73nm,1.0s
TOO IAMs_20 IAMs_20 01 37 41.1
comp=Z,7μm,21.0s
VORD Divnogorie 64.37 326 *e*P **P 01 13 02.9 -1.6**
VORD pmax pmax
comp=Z,70nm,1.1s
ANTO Ankara 64.45 312⇑P **P 01 13 05.7 +0.3**
ANTO Ankara 64.45 312 P **P 01 13 05.6 +0.3**
ANTO P **P 01 13 05.6 +0.3**
ANTO Ankara 64.45 312 P **P 01 13 05.7 +0.3**
ANTO pmax pmax
comp=Z,74nm,0.8s
ANTO Ankara 64.45 312 P **P 01 13 05.7 +0.3**
ANTO IAmb IAmb 01 13 26.6
comp=Z,74nm,0.8s
BR231 Keskin MP Arra 64.45 312 IAmb IAmb 01 13 26.7
comp=Z,64nm,0.8s
VSR Storozhevoye 64.56 326 *e*P **P 01 13 03.6 -2.1**
VSR *e*S **S 01 21 36.4 -6.6**
VSR pmax pmax
comp=Z,60nm,0.9s
VSR smax smax
comp=N,280nm,12.9s
VORR Voronezh 64.75 326 P **P 01 13 07.0 +0.1**
VORR pmax pmax
comp=Z,250nm,2.0s
YNG Young 64.88 131 P **P 01 13 09.2 +1.1**
baz=65,SNR=16
NRIK Noril'sk 65.09 358 P **P 01 13 09.1 +0.2**
comp=Z,75nm,0.8s,baz=165,slow=5.6,SNR=132
NRIK S **S 01 21 45.8 -3.2**
comp=Z,1.1nm,0.5s,baz=54,slow=22,SNR=7.5
NRIK PKP2bc **P'P'bc 01 41 55.9 -1.6**
comp=Z,2.0nm,0.7s,baz=359,slow=4.4,SNR=6.3
NRIK LR LR 01 45 30.8
comp=Z,5μm,19.0s,baz=184,slow=40
SIM Simferopol' 65.14 318*c i*P **P 01 13 10.1 +0.5**
SIM *i*S **S 01 21 47.0 -3.3**
SIM pmax pmax
comp=Z,102nm,1.3s
PATS Pohnpei 65.28 84 P **P 01 13 09.8 -1.3**
baz=65,SNR=9.8
PATS Pohnpei 65.28 84 P **P 01 13 12.0 +0.9**
LPSR Galich'ya Gora 65.33 327 *e*P **P 01 13 09.3 -1.4**
LPSR *e*S S 01 21 43.1 -9.3
LPSR pmax pmax
comp=Z,110nm,0.8s
LPSR smax smax
comp=E,1μm,9.0s
LPSR MLR MLR
comp=Z,6μm,25.0s
ISP Isparta 65.61 310 P **P 01 13 13.2 +0.2**
ISP pmax pmax
comp=Z,76nm,0.9s
ISP Isparta 65.61 310 P **P 01 13 13.2 +0.2**
ISP IAmb IAmb 01 13 35.1
comp=Z,76nm,0.9s
CAN Canberra 65.75 132 P **P 01 13 14.9 +1.0**
CAN pmax pmax
comp=Z,94nm,0.9s
CAN MLR MLR
comp=Z,7μm,20.0s
CAN Canberra 65.75 132 P **P 01 13 14.9 +1.0**
CAN IAmb IAmb 01 13 18.3
comp=Z,94nm,0.9s
CAN IAMs_20 IAMs_20 01 41 42.9
comp=Z,7μm,20.0s
KDZE Karadeniz Ereo 65.85 314⇓P **P 01 13 14.6 +0.3**
ARMA Armidale 65.91 126 P **P 01 13 17.0 +1.9**
baz=66,SNR=36
ARMA Armidale 65.91 126 P **P 01 13 16.4 +1.4**
ARMA IAmb IAmb 01 13 21.1
comp=Z,152nm,1.0s
CNB Canberra Magne 66.02 132 P **P 01 13 16.5 +0.9**
baz=66,SNR=23
FETY Fethiye 66.44 308 P **P 01 13 18.1 -0.2**
MGCD Mangrove Creek 66.52 129 P **P 01 13 20.6 +1.8**
baz=67,SNR=5.1
MILA Mila 66.59 133 P **P 01 13 20.7 +1.5**
baz=67,SNR=7.9
LSZ Lusaka 66.77 252 P **P 01 13 21.5 +0.7**
LSZ pmax pmax
comp=Z,245nm,1.4s
LSZ Lusaka 66.77 252 P **P 01 13 21.5 +0.7**
LSZ IAmb IAmb 01 13 25.1
comp=Z,245nm,1.4s
ARG Arkhangelos 67.11 308 P **P 01 13 22.6 +0.1**
YER Yerkesik 67.18 309 P **P 01 13 22.7 -0.3**
KULA Kula-Manisa 67.20 310 P **P 01 13 23.3 +0.2**
MOS Moscow 67.47 330 *e*P P 01 13 19.0 -5.3
MOS *e*S **S 01 22 10.9 -7.3**
MOS *e* 01 23 13.9
MOS *e*SS **SS 01 26 41.2 +2.3**
MOS pmax pmax
comp=Z,320nm,1.5s
MOS pmax pmax
comp=Z,800nm,2.1s
MOS MLR MLR
comp=N,5μm,20.0s
MOS MLR MLR
comp=E,6μm,20.0s
MOS MLR MLR
comp=Z,9μm,20.0s
ISK Istanbul-Kandi 67.52 313 P **P 01 13 24.8 -0.2**
DAT Datca 67.65 308 P **P 01 13 25.6 -0.4**
MOO Moorlands 67.68 139 P **P 01 13 27.7 +1.8**
baz=68,SNR=5.3
OBN Obninsk 67.72 329⇑P **P 01 13 25.2 -0.7**
OBN Obninsk 67.72 329*ce*P **P 01 13 25.2 -0.7**
OBN *e* 01 13 31.6
OBN *i* 01 13 38.2
OBN *e* 01 13 51.9
OBN *e* 01 15 54.8
OBN *i*S **S 01 22 13.1 -8.1**
OBN *i* 01 23 15.3
OBN *e*SS **SS 01 26 42.0 -0.8**
OBN *e*SSS SSS 01 29 48.0
OBN pmax pmax
comp=Z,296nm,1.7s
OBN MLR MLR
comp=Z,7μm,21.0s
OBN Obninsk 67.72 329 P **P 01 13 24.7 -1.2**
OBN IAMs_20 IAMs_20 01 45 37.8
comp=Z,7μm,20.0s
KARP Karpathos 67.74 307 P **P 01 13 27.2 +0.6**
BODT Bodrum 67.92 308 P **P 01 13 27.4 -0.3**
TAU Tasmania Unive 67.99 140 P **P 01 13 28.7 +0.9**
TAU pmax pmax
comp=Z,77nm,0.9s
TAU Tasmania Unive 67.99 140 P **P 01 13 28.7 +0.9**
TAU IAmb IAmb 01 13 32.6
comp=Z,77nm,0.8s
HNR Honiara 68.33 102 P **P 01 13 31.3 +0.7**
comp=Z,344nm,0.9s,baz=157,slow=8.7,SNR=17

HNR LR LR 01 45 17.1
comp=Z,2µm,21.4s,baz=268,slow=38
HNR Honiara 68.33 102 P **P 01 13 31.3 +0.7**
HNR pmax pmax
comp=Z,537nm,1.0s
HNR Honiara 68.33 102 P **P 01 13 31.3 +0.7**
BLCB Balcova 68.41 310 P **P 01 13 31.0 +0.4**
ZKR Zakros 68.42 306 P **P 01 13 31.3 +0.5**
SMG Samos 68.43 309 P **P 01 13 31.1 +0.3**
STIA Sitia Lasithi 68.54 306 P **P 01 13 33.2 +1.7**
MANR Mangalia 68.56 316 ⇓P **P 01 13 32.2 +0.8**
EFOR EFORIE 68.60 316 ⇓P **P 01 13 32.7 +1.0**
JURR Jurilovca 68.62 317 ⇓P **P 01 13 32.1 +0.3**
TLCR 68.78 317 ⇓P **P 01 13 33.1 +0.3**
FRMA Ierapetra Chan 68.79 306 P **P 01 13 33.1 0.0**
PSN Preselentsi 68.81 315 *i*P **P 01 13 33.7 +0.7**
TIRR Tirgusor 68.86 316 ⇓P **P 01 13 33.3 0.0**
TIRR Tirgusor 68.86 316 ⇓P **P 01 13 33.3 0.0**
TIRR Tirgusor 68.86 316 *i*P **P 01 13 33.5 +0.2**
NPS Neapolis 68.93 306 P **P 01 13 35.1 +1.1**
AMGA Amorgos Island 68.99 308 P **P 01 13 34.4 +0.1**
ANAF Anafi Island 69.00 307 P **P 01 13 34.4 0.0**
LAST Lasithi 69.02 306 P **P 01 13 35.4 +0.7**
KLMR Klimovskoe 69.12 335*c* *i*P **P 01 13 33.5 -1.1**
KLMR *e*S **S 01 22 37.2 -0.5**
KLMR pmax pmax
comp=Z,156nm,1.5s
KLMR MLR MLR
comp=Z,4µm,17.0s
KLMR Klimovskoe 69.12 335⇑ *i*P **P 01 13 33.5 -1.1**
KLMR *i*P **P 01 13 33.5 -1.1**
KLMR *i*P **P 01 13 33.5 -1.1**
KLMR AMP 01 13 35.3
comp=Z,156nm,1.5s
KLMR *e*S **S 01 22 37.3 -0.5**
KLMR *e*S **S 01 22 37.3 -0.5**
KLMR LQ LQ 01 39 27.6
KLMR LQ LQ 01 39 27.6
KLMR LR LR 01 43 47.0
KLMR AMP 01 44 54.9
comp=Z,4µm,17.3s
TLBR Topalu 69.13 316 ⇑P **P 01 13 35.5 +0.5**
CHOS Chios island 69.17 309 P **P 01 13 35.5 0.0**
PRK Paraskevi 69.18 310 P **P 01 13 36.5 +1.1**
ICOR Ion Corvin 69.19 316 ⇑P **P 01 13 36.1 +0.7**
CFR Carcaliu 69.24 317 ⇑P **P 01 13 35.8 +0.2**
PRD Provadia 69.24 315 *i*P **P 01 13 36.5 +0.8**
HARR Harsova 69.25 316 ⇓P **P 01 13 35.9 +0.1**
SANT Santorini 69.25 307 P **P 01 13 35.7 -0.3**
SANT Santorini 69.25 307 ⇓P **P 01 13 36.3 +0.3**
EZN Ezine 69.26 311 P **P 01 13 35.9 0.0**
MILM Milestii Mici 69.27 319 ⇓P **P 01 13 35.4 -0.4**
SAP2K Karterados 69.27 307 P **P 01 13 36.2 +0.2**
KIS Kishinev 69.29 319⇑ *i*P **P 01 13 37.0 +1.1**
comp=Z,600nm,2.0s
KIS Kishinev 69.29 319 *i* PcP **PcP 01 13 55.0 -4.4**
KIS Kishinev 69.29 319 *e*PP PP 01 16 20.0 +11
KIS *e*ScP 01 17 59.0
KIS Kishinev 69.29 319 *e*PsP 01 18 40.0
KIS *e*S **S 01 22 38.0 -2.2**
KIS Kishinev 69.29 319 *e*PS 01 22 50.0
KIS *e*SS SS 01 27 00.0 -7.4
KIS *e*SSS SSS 01 31 00.0
KIS *e*L L 01 37 20.0
KIS LRM MLR 01 45 00.0
comp=Z,3µm,22.0s
KIS Kishinev 69.29 319 ⇓P **P 01 13 36.2 +0.2**
KIS Kishinev 69.29 319⇑ *i*P **P 01 13 37.0 +1.1**
KIS *i* 01 13 55.0
KIS *e*S **S 01 22 38.0 -2.2**
KIS *e* 01 23 30.0
KIS *e*SS **SS 01 27 00.0 -7.4**
KIS pmax pmax
comp=Z,600nm,2.0s
KIS MLR MLR
comp=Z,4µm,20.0s
KIS MLR MLR
comp=N,3µm,22.0s
SAP1 Santorini-Akro 69.30 307 P **P 01 13 35.7 -0.5**
CMBO Columbo, Santo 69.31 307 P **P 01 13 36.0 -0.3**
APE Apeiranthos 69.32 308 P **P 01 13 34.8 -1.6**
APE Apeiranthos 69.32 308 ⇑P **P 01 13 32.7 -3.7**
HRKL Herakleio 69.35 306 P **P 01 13 37.7 +1.1**
EDRB Edirne 69.39 313 P **P 01 13 36.5 -0.2**
IOSP Ios island 69.45 308 P **P 01 13 36.8 -0.4**
SIGR SIGRI 69.49 310 P **P 01 13 37.3 0.0**
LEOM Leova 69.52 318 ⇑P **P 01 13 37.8 +0.4**
IDI Anoyia 69.52 306 P **P 01 13 37.8 +0.1**
IDI Anoyia 69.52 306 IAmb IAmb 01 13 59.8
comp=Z,93nm,0.7s
SCHL Schela 69.53 317 ⇓P **P 01 13 38.3 +0.9**
SIVA Sivas 69.54 306 P **P 01 13 38.1 +0.4**
ENEZ Enez 69.58 312 P **P 01 13 37.9 0.0**
VARL Varlezi 69.63 318 ⇓P **P 01 13 39.0 +0.9**
AMRR Amara 69.64 316 ⇑P **P 01 13 39.1 +1.0**
JMB Yambol 69.65 314 *i*P **P 01 13 38.0 -0.3**
GADA Gvkgeada 69.65 311 P **P 01 13 38.1 -0.2**
TUDR 69.67 317 ⇑P **P 01 13 38.6 +1.4**
RASA Rasa 69.67 316 ⇑P **P 01 13 39.2 +0.9**
ALN Alexandroupoli 69.69 312 P **P 01 13 38.7 +0.1**
ALN Alexandroupoli 69.69 312 IAmb IAmb 01 13 40.4
comp=Z,120nm,1.4s
VASR Vaslui 69.87 318 ⇑P **P 01 13 39.9 +0.4**
BIR Birlad 69.88 318 ⇓P **P 01 13 40.2 +0.6**
SORM Soroca 69.92 320 ⇑P **P 01 13 39.5 -0.3**
PGOR Pogoanele 69.96 316 ⇓P **P 01 13 41.9 +1.9**
RAZG Razgrad 69.96 315 ⇑P **P 01 13 40.7 +0.5**
LEHL Lehliu 69.96 316 ⇓P **P 01 13 41.4 +1.2**
SMTH Samothraki Isl 69.99 312 P **P 01 13 39.9 -0.5**
PETR Petresti 70.00 317 ⇑P **P 01 13 41.5 +1.2**
SKR Severo-Kuril's 70.06 37 *e*P **P 01 13 39.7 -0.9**
SKR *e*S **S 01 22 51.0 +1.8**
SKR pmax pmax
comp=Z,2µm,6.0s
SKR pmax pmax
comp=Z,357nm,0.9s
SKR pmax pmax
comp=Z,600nm,5.3s
SKR MLR MLR
comp=Z,2µm,19.0s
SKR MLR MLR
comp=Z,2µm,16.0s
GRER 70.08 317 ⇑P **P 01 13 43.0 +2.1**
VAM Vamos 70.10 306 P **P 01 13 42.1 +0.9**
GVD Gavdhos 70.10 305 P **P 01 13 41.2 0.0**
RDO Rodhopi 70.12 312 P **P 01 13 41.0 -0.2**
ODBI Odobesti 70.13 317 ⇑P **P 01 13 42.8 +1.7**
LIA Limnos Island 70.13 311 P **P 01 13 41.2 -0.1**
MHLO Agia Marina, M 70.15 307 P **P 01 13 41.1 -0.3**
AKASG Malin Array Be 70.15 323 P **P 01 13 40.1 -1.0**
comp=Z,39nm,0.7s,baz=94,slow=5.6,SNR=96
AKASG PKPPKP **P'P'df 01 41 44.6 -0.6**
comp=Z,0.3nm,0.3s,baz=290,slow=2.6,SNR=7.1
AKASG LR LR 01 48 41.5
comp=Z,4µm,19.5s,baz=100,slow=40
AKBB Malin Array Si 70.15 323*ce*P **P 01 13 40.2 -1.0**
SERI Serifos 70.16 308 P **P 01 13 40.6 -1.0**
IAS Iasi 70.17 319 ⇓P **P 01 13 41.6 +0.3**
CHAN Chania 70.24 306 P **P 01 13 42.5 +0.5**
ELND Elena 70.27 314 ⇑P **P 01 13 42.1 0.0**
IMMV Iera Moni Meta 70.28 306 P **P 01 13 43.3 +1.0**
SZH Strazhica 70.30 315 *i*P **P 01 13 42.5 +0.2**
BISRR Bisoca 70.31 317 ⇑P **P 01 13 43.4 +1.0**
ISR Istrita 70.31 317 ⇑P **P 01 13 42.5 +0.1**
DIM Dimitrovgrad 70.32 313 *i*P **P 01 13 42.0 -0.4**
KARY Karystos 70.35 309 P **P 01 13 42.7 0.0**
VRI Vrincioaia 70.38 317 ⇑P **P 01 13 43.5 +0.9**
SULR 70.41 316 ⇑P **P 01 13 44.1 +1.3**
PLOR Plostina 70.42 317 ⇑P **P 01 13 44.1 +1.1**
BUC1 Bucharest 70.48 316 ⇑P **P 01 13 44.7 +1.3**
SGRR Singureni 70.49 316 ⇓P **P 01 13 44.2 +0.8**
TESR Tescani 70.59 318 ⇑P **P 01 13 43.9 0.0**
MA2 Magadan 70.61 27*ce*P **P 01 13 44.1 +0.3**
MA2 pmax pmax
comp=Z,184nm,1.0s
MA2 MLR MLR
comp=Z,3µm,17.0s
MA2 Magadan 70.61 27 P **P 01 13 44.1 +0.3**
MA2 IAmb IAmb 01 13 45.5
comp=Z,188nm,1.0s
SECR 70.62 316 ⇑P **P 01 13 45.5 +1.4**
THAS Thassos island 70.62 312 P **P 01 13 43.3 -0.9**

KYMI Kymi, Euboea I 70.72 309 P **P 01 13 44.8 -0.1**
DION Dionisos Attik 70.75 309 P **P 01 13 44.7 -0.5**
ZIMR 70.79 315 ⇓P **P 01 13 46.2 +1.0**
PTL Penteli 70.80 309 P **P 01 13 44.9 -0.6**
MLR Muntele Rosu 70.81 317 ⇑P **P 01 13 46.4 +0.9**
VLY Voula,Athens 70.82 309 P **P 01 13 44.6 -0.9**
RZN Rozhen 70.84 313 *i*P **P 01 13 45.6 -0.2**
ATHU Athens Univers 70.85 309 P **P 01 13 44.1 -1.6**
KAVA Kavala 70.85 312 P **P 01 13 45.6 0.0**
ANKY Antikythira Is 70.89 306 P **P 01 13 46.1 +0.1**
ATH Athens Observa 70.90 309 P **P 01 13 45.6 -0.4**
PLD Plovdiv 70.93 313 *i*P **P 01 13 45.9 -0.2**
AOS Alonnisos 70.98 310 P **P 01 13 45.6 -0.9**
COPA Copaceanca 71.00 315 ⇑P **P 01 13 46.9 +0.4**
TIXI Tiksi 71.05 11 P **P 01 13 45.9 -0.3**
comp=Z,191nm,0.7s,baz=210,slow=3.5,SNR=344
TIXI Tiksi 71.05 11*ce*P **P 01 13 45.6 -0.6**
TIXI pmax pmax
comp=Z,415nm,1.0s
TIXI MLR MLR
comp=Z,3µm,22.0s
TIXI Tiksi 71.05 11 P **P 01 13 45.6 -0.6**
BIZ Bicaz 71.06 318 ⇑P **P 01 13 47.4 +0.5**
OZUR 71.07 317 ⇑P **P 01 13 47.0 +0.1**
PRAR RASCA 71.09 319 ⇓P **P 01 13 47.2 +0.2**
OUR Ouranopolis 71.12 311 P **P 01 13 46.9 -0.4**
MRKA Markates 71.13 309 P **P 01 13 44.9 -2.6**
DID Didima 71.20 308 P **P 01 13 46.5 -1.4**
KRND KRANIDI 71.25 308 P **P 01 13 47.2 -0.9**
VILL Villia 71.25 309 P **P 01 13 47.0 -1.2**
HUMR Humele 71.26 316 ⇑P **P 01 13 48.6 +0.5**
PLVB Pleven 71.26 314 ⇑P **P 01 13 48.4 +0.3**
PAIG Paliouri 71.27 311 P **P 01 13 47.8 -0.4**
LBTB Lobatse 71.30 242 P **P 01 13 49.2 +0.4**
LBTB pmax pmax
comp=Z,375nm,1.0s
LBTB Lobatse 71.30 242 P **P 01 13 49.2 +0.4**
SKIA Skiathos 71.30 310 P **P 01 13 47.8 -0.6**
DOPR Dopca 71.31 317 ⇑P **P 01 13 48.3 -0.1**
VLI Veliai 71.31 307 P **P 01 13 47.2 -1.3**
MTUR Matau 71.36 316 ⇓P **P 01 13 49.1 +0.3**
NVR Nevrokopi 71.40 312 P **P 01 13 48.8 -0.2**
PGB Panagyurishte 71.41 313 *i*P **P 01 13 48.7 -0.4**
TMCR Tamitsa 71.43 338 *e*P **P 01 13 46.8 -1.8**
TMCR *e*S **S 01 23 05.4 +0.9**
TMCR pmax pmax
comp=Z,80nm,0.6s
LOUT Loutraki 71.48 309 P **P 01 13 47.5 -2.1**
NEO Neokhori 71.51 310 P **P 01 13 48.3 -1.4**
CASY Casey 71.52 173 P **P 01 13 50.2 +1.1**
CASY IAmb IAmb 01 13 54.2
comp=Z,213nm,1.1s
CASY Casey 71.52 173 IAMs_20 IAMs_20 01 37 22.7
comp=Z,7µm,21.0s
PLG Polygyros 71.53 311 P **P 01 13 49.3 -0.5**
VLAD Vladila 71.55 315 ⇓P **P 01 13 50.1 +0.3**
XOR Xorichti 71.55 310 P **P 01 13 48.4 -1.5**
MMB Musomiste 71.55 312 *i*P **P 01 13 49.0 -0.9**
SRS Serrai 71.56 312 P **P 01 13 49.3 -0.7**
LKR Lokris 71.57 309 P **P 01 13 48.2 -1.9**
PROD Prodromos 71.58 309 P **P 01 13 48.5 -1.7**
SOH Sokhos 71.68 312 P **P 01 13 49.9 -0.8**
ARR Arges 71.68 316 ⇓P **P 01 13 50.4 -0.3**
PEA0B Petropavlovsk- 71.76 35*ce*P **P 01 13 52.5 +1.6**
PEA0B Petropavlovsk- 71.76 35 P **P 01 13 51.9 +1.0**
PEA0B IAmb IAmb 01 14 09.1
comp=Z,202nm,1.6s
PETK Petropavlovsk- 71.76 35 P **P 01 13 50.3 -0.6**
comp=Z,7.3nm,0.6s,baz=244,slow=3.1,SNR=11
PETK PKPPKP **P'P'df 01 41 41.9 -0.4**
comp=Z,5.6nm,1.1s,baz=134,slow=8.5,SNR=3.7
HORT Hortiatis 71.83 311 P **P 01 13 50.3 -1.4**
BUR08 Bucovina Ar. S 71.83 319 IAmb IAmb 01 14 18.0
comp=Z,89nm,1.0s
VLX Vlachokerasia 71.85 308 P **P 01 13 50.8 -1.1**
THE Thessaloniki 71.94 311 P **P 01 13 51.0 -1.2**
TRIP Tripoli 71.96 308 P **P 01 13 51.9 -0.6**
KKB Krupnik 72.07 313 *i*P **P 01 13 52.2 -0.8**
KNT Kendrikon 72.08 312 P **P 01 13 52.4 -0.7**
VTS Vitosha 72.10 313 *i*P **P 01 13 53.6 +0.2**
MICGM Minsk 72.13 326⇓ *e*P **P 01 13 52.0 -1.1**
MICGM PM 01 13 53.0
comp=Z,0.8nm,1.0s
MICGM PM 01 13 54.0
comp=E,0.8nm,1.0s
MICGM *e*PcP **pwP 01 14 09.0 +1.2**
MICGM *e*PP **PP 01 16 32.0 -1.6**
MICGM *e*PPP PPP 01 18 26.0
MICGM *e*S **S 01 23 06.0 -7.0**
MICGM *e*PS **PnS 01 23 52.0 +6.0**
MICGM *e*SS **SS 01 28 00.0 +9.3**
MICGM *e*SSS SSS 01 32 12.0
MICGM *e*LQ LQ 01 42 00.0
MICGM *e*LR LR 01 45 16.0
MICGM LRM MLR 01 47 28.0
comp=N,5.6nm,18.0s
MICGM LRM MLR 01 47 50.0
comp=E,3.8nm,16.0s
MICGM LRM MLR 01 48 16.0
comp=E,6.8nm,16.0s
MICGM LRM MLR 01 48 20.0
comp=E,6.4nm,16.0s
MNK Minsk 72.13 326⇓ *e*P **P 01 13 52.0 -1.1**
MNK *e* 01 14 09.0
MNK *e* 01 16 32.0
MNK *e*S **S 01 23 06.0 -7.0**
MNK *e*PS **PnS 01 23 52.0 +6.0**
MNK pmax pmax
comp=E,790nm,1.0s
MNK pmax pmax
comp=Z,770nm,1.0s
MNK MLR MLR
comp=Z,7µm,16.0s
MNK MLR MLR
comp=N,6µm,18.0s
MNK MLR MLR
comp=E,4µm,16.0s
KLV Kalavryta, Ach 72.13 309 P **P 01 13 52.4 -1.1**
AGG Agios Georgios 72.15 310 P **P 01 13 51.5 -2.1**
ITM Ithomi 72.18 308 P **P 01 13 53.4 -0.4**
KALE Kalithea 72.20 309 P **P 01 13 52.8 -1.1**
LIT Litokhoron 72.20 311 P **P 01 13 52.4 -1.5**
LIT Litokhoron 72.20 311 IAmb IAmb 01 13 54.5
comp=Z,159nm,1.3s
TRIZ Trizonia 72.24 309 P **P 01 13 52.7 -1.4**
ARCR ARCALIA 72.26 318 ⇑P **P 01 13 54.8 +0.8**
SERG Sergoula 72.26 309 P **P 01 13 52.9 -1.4**
PET Petropavlovsk 72.28 35*c* *i*P **P 01 13 53.0 -1.0**
PET *e*S **S 01 23 13.8 -0.9**
PET pmax pmax
comp=Z,141nm,1.0s
PET pmax pmax
comp=Z,1µm,15.4s
PET MLR MLR
comp=Z,4µm,19.0s
PET MLR MLR
comp=Z,3µm,17.0s
PET Petropavlovsk 72.28 35 P **P 01 13 52.9 -1.0**
PET IAmb IAmb 01 13 57.0
comp=Z,122nm,1.0s
PYL PYLOS 72.29 307 P **P 01 13 53.2 -1.2**
BAIL Bailesti 72.30 315 ⇑P **P 01 13 55.1 +0.8**
LAKA Lakka 72.30 309 P **P 01 13 53.7 -0.8**
MAKR Makrakomi, Fth 72.30 310 P **P 01 13 53.0 -1.5**
LHI Lord Howe Isla 72.31 125 P **P 01 13 56.0 +1.4**
baz=72,SNR=3.8
LHI Lord Howe Isla 72.31 125 P **P 01 13 54.3 -0.3**
LHI IAmb IAmb 01 14 15.3
comp=Z,91nm,0.9s
EFP Efpalio 72.38 309 P **P 01 13 53.3 -1.6**
ANX Ano Chora 72.40 309 P **P 01 13 54.3 -0.8**
AMT Artemida-Makis 72.40 308 P **P 01 13 55.1 0.0**
DRO Drossia 72.46 308 P **P 01 13 55.3 -0.2**
THL Klokotos Trika 72.48 310 P **P 01 13 53.4 -2.1**
BOSA Boshof 72.49 238 P **P 01 13 56.6 +0.7**
comp=Z,128nm,0.8s,baz=79,slow=6.0,SNR=113
BOSA LR LR 01 40 04.2
comp=Z,3µm,21.5s,baz=68,slow=31
BOSA Boshof 72.49 238 P **P 01 13 56.6 +0.7**
BOSA pmax pmax
comp=Z,729nm,1.6s
BOSA Boshof 72.49 238 P **P 01 13 56.5 +0.7**
SRE Strehaia 72.52 315 ⇑P **P 01 13 56.4 +0.8**

EVR Evrytania 72.53 309 P **P 01 13 54.9 -1.1**
PUNG Punghina 72.64 315 ⇑P **P 01 13 57.1 +0.8**
RLS Riolos of Patr 72.67 308 P **P 01 13 56.1 -0.5**
CJR Cluj-Napoca 72.68 318 ⇑P **P 01 13 57.5 +0.8**
PUL Pulkovo 72.72 332 *e*P **P 01 13 56.7 +0.3**
PUL Pulkovo 72.72 332*ce*P **P 01 13 57.0 +0.5**
PUL pmax pmax
comp=Z,128nm,0.7s
PUL MLR MLR
comp=Z,7µm,19.0s
KZN Kozani 72.78 311 P **P 01 13 55.7 -1.7**
SEY Seymchan 72.79 24 P **P 01 13 57.0 +0.1**
comp=Z,84nm,1.0s,baz=248,slow=7.2,SNR=45
SEY Seymchan 72.79 24*c* *i*P **P 01 13 57.1 +0.3**
NACGM Naroch 72.86 327 *e*P **P 01 13 55.0 -2.4**
NACGM *e*PPP PPP 01 18 23.0
NACGM LRM MLR 01 21 10.0
NACGM *e*S **S 01 23 14.0 -7.4**
NACGM *e*SS **SS 01 28 10.0 +8.1**
NACGM *e*SSS SSS 01 31 20.0
NACGM *e*LQ LQ 01 39 32.0
NACGM *e*LR LR 01 42 46.0
BMR Baia Mare 72.96 319 ⇓P **P 01 13 59.3 +1.1**
GZR Gura Zlata 72.97 316 ⇑P **P 01 13 58.5 +0.1**
PDO Prodromos 72.97 309 P **P 01 13 58.5 +0.1**
DEV Deva 72.98 317 ⇑P **P 01 13 59.3 +1.0**
KPRO Kipourio 73.03 310 P **P 01 13 57.4 -1.5**
LVV L'vov 73.11 321 *e*P **P 01 13 57.2 -1.8**
LVV *e* 01 14 11.8
LVV *e*S **S 01 23 20.9 -3.5**
LVV *e*SS **SS 01 28 04.8 -1.1**
LVV MLR MLR
comp=Z,3µm,19.0s
HERR Herculane 73.12 316 ⇑P **P 01 13 59.4 +0.2**
FNA Florina 73.15 311 P **P 01 13 57.8 -1.7**
KFL Anninata 73.21 308 P **P 01 13 59.5 -0.3**
IIGN Ignalina 73.31 327 *e*P **P 01 14 00.6 +0.6**
NEST Nestorio 73.34 311 P **P 01 13 59.4 -1.3**
VLS Valsamata 73.37 308 P **P 01 14 00.1 -0.7**
JAN Janina 73.38 310 P **P 01 14 00.1 -0.8**
EVGI Lefkada island 73.38 309 P **P 01 14 00.2 -0.7**
LKD2 Lefkada island 73.40 309 P **P 01 14 00.6 -0.4**
IZAR Zarasai 73.41 327 *e*P **P 01 14 01.2 +0.5**
ISAL Salakas 73.42 327 *e*P **P 01 14 01.2 +0.5**
FSK Fiskardo 73.43 309 P **P 01 14 00.2 -0.9**
WAKE Wake Island 73.44 71 P **P 01 14 02.3 +0.8**
H11S3 WAKE ISLAND Hy 73.45 72 P **P 01 14 02.8 +1.4**
H11S1 WAKE ISLAND Hy 73.46 72 P **P 01 14 02.9 +1.4**
H11S2 WAKE ISLAND Hy 73.47 72 P **P 01 14 02.9 +1.4**
MDVR Moldovita 73.59 315 ⇑P **P 01 14 02.0 -0.1**
H11N1 WAKE ISLAND Hy 73.67 71 P **P 01 14 03.7 +1.0**
H11N2 WAKE ISLAND Hy 73.67 71 P **P 01 14 03.7 +1.0**
H11N3 WAKE ISLAND Hy 73.69 71 P **P 01 14 03.8 +1.0**
IGT Igoumenitsa 73.76 310 P **P 01 14 02.0 -1.1**
BZS Buzias 73.81 316 ⇑P **P 01 14 03.3 +0.1**
SIRR Siria 73.90 317 ⇑P **P 01 14 04.3 +0.5**
UZH Uzhgorod 73.95 319 *e*P **P 01 14 02.8 -1.2**
UZH *e* 01 14 22.9
UZH *e* 01 16 46.4
UZH *e*S **SKiKP 01 23 31.4 +1.0**
UZH *e*PS **PnS 01 24 08.3 -1.8**
UZH *e*SSS SSS 01 31 28.1
PHP Peshkopia 73.99 312 P **P 01 14 02.8 -1.6**
VSU Vasula 74.00 330 *e*P **P 01 14 03.8 -0.2**
VSU Vasula 74.00 330*c* *i*P **P 01 14 03.2 -0.8**
VSU pmax pmax
comp=Z,639nm,2.0s
KOLS Kolonicke sedl 74.03 320 *e*P **P 01 14 05.6 +1.1**
KOLS pmax pmax
comp=Z,157nm,1.3s
KOLS Kolonicke sedl 74.03 320 *e*P **P 01 14 05.6 +1.1**
KOLS *e*PP PP 01 16 58.4 +8.5
KOLS *e*S **S 01 23 34.5 -0.4**
SRN Sarande 74.06 310 P **P 01 14 03.5 -1.3**
BANR Banloc 74.10 316 ⇑P **P 01 14 05.7 +0.8**
TPE Tepelena 74.11 311 P **P 01 14 03.9 -1.2**
KEK Kerkira 74.19 310 P **P 01 14 04.8 -0.8**
TIR Tirane 74.37 312 P **P 01 14 05.5 -1.1**
TIR Tirane 74.37 312 P **P 01 14 05.5 -1.1**
TIR pmax pmax
comp=Z,41nm,0.8s
TIR MLR MLR
comp=Z,5µm,21.0s
TIR Tirane 74.37 312 P **P 01 14 05.5 -1.1**
TIR IAMs_20 IAMs_20 01 49 01.7
comp=Z,5µm,21.0s
PVY Plav 74.48 313 ⇓*i*P **P 01 14 05.8 -1.6**
LVZ Lovozero 74.48 341*ce*P **P 01 14 06.6 -0.2**
LVZ pmax pmax
comp=Z,209nm,1.7s
LVZ MLR MLR
comp=Z,5µm,16.0s
LVZ Lovozero 74.48 341 P **P 01 14 06.1 -0.7**
LVZ IAmb IAmb 01 14 09.4
comp=Z,80nm,0.7s
VLO Vlora 74.52 311 P **P 01 14 07.0 -0.5**
IVA Berane 74.57 313⇑ *i*P **P 01 14 06.7 -1.1**
PABE Piberze 74.58 327 *e*P **P 01 14 07.5 0.0**
DIVS Divibare 74.69 314⇑ *i*P **P 01 14 08.4 -0.1**
MAW Mawson 74.72 191 P **P 01 14 10.0 +2.1**
baz=75,SNR=70
MAW Mawson 74.72 191 P **P 01 14 09.7 +1.8**
comp=Z,95nm,0.9s,baz=21,slow=6.7,SNR=101
MAW PKPPKP **P'P'df 01 41 38.3 +4.0**
comp=Z,6.2nm,1.2s,baz=251,slow=7.5,SNR=4.6
MAW LR LR 01 42 26.8
comp=Z,4µm,18.3s,baz=40,slow=32
MAW Mawson 74.72 191 P **P 01 14 09.1 +1.1**
MAW IAmb IAmb 01 14 11.1
comp=Z,27nm,1.0s
MAW IAMs_20 IAMs_20 01 41 48.3
comp=Z,820nm,19.0s
APA Apatity 74.75 340 ⇓*i*P **P 01 14 06.8 -1.4**
APA *i*S **S 01 23 39.0 -3.2**
APA *i* 01 24 03.0
APA *i*PS 01 24 37.0
APA MLR MLR
comp=Z,6µm,20.0s
KOME Kolasin 74.84 313⇑ *i*P **P 01 14 07.7 -1.7**
ULC Ulcinj 74.92 312 ⇓*i*P **P 01 14 08.6 -1.2**
PDG Podgorica 74.97 313⇑ *i*P **P 01 14 09.2 -0.8**
PDG Podgorica 74.97 313 IAmb IAmb 01 14 11.8
comp=Z,195nm,1.5s
TTG Podgorica 74.97 313⇑ *i*P **P 01 14 09.4 -0.6**
FRGS Fruska Gora 74.99 316⇑ *i*P **P 01 14 09.7 -0.4**
DRME Dracevica, Mon 74.99 312⇑ *i*P **P 01 14 09.5 -0.7**
DRME Dracevica, Mon 74.99 312⇑ *i*P **P 01 14 09.0 -1.2**
PLE Pljevlja 75.00 314⇑ *i*P **P 01 14 08.6 -1.8**
RUDO Rudo 75.06 314 *e*P **P 01 14 10.4 -0.2**
BBLS Lazići 75.07 314⇑ *i*P **P 01 14 10.9 +0.2**
KECS Kecovo 75.10 319 *e*P **P 01 14 11.3 +0.6**
KECS pmax pmax
comp=Z,45nm,1.1s
KECS Kecovo 75.10 319 *e*P **P 01 14 11.3 +0.6**
NKY Niksic 75.22 313 ⇓*i*P **P 01 14 10.0 -1.6**
BUM Brajici-Budva 75.22 313⇑ *i*P **P 01 14 10.9 -0.7**
CEME Cevo 75.23 313⇑ *i*P **P 01 14 10.0 -1.7**
NKME Niksic 75.24 313⇑ *i*P **P 01 14 10.1 -1.6**
SCTE Santa Cesarea 75.25 310 IAmb IAmb 01 14 34.4
comp=Z,122nm,0.9s
FIA1 FINESS Array S 75.27 333 IAmb IAmb 01 14 12.1
comp=Z,82nm,0.9s
FINES FINESS Array B 75.27 333 P **P 01 14 10.8 -0.5**
comp=Z,48nm,0.8s,baz=104,slow=8.0,SNR=153
FINES PP **PP 01 16 59.7 -0.3**
comp=Z,8.2nm,1.0s,baz=144,slow=10.0,SNR=1.5
FINES LR LR 01 50 05.3
comp=Z,8µm,20.8s,baz=108,slow=38
UPM Unac-Piva 75.34 313 *e*P **P 01 14 11.7 -0.7**
UPM Unac-Piva 75.34 313 ⇓*i*P **P 01 14 10.3 -2.1**
PSZ Piszkesteto 75.39 318 ⇑P **P 01 14 12.3 -0.1**
PSZ Piszkesteto 75.39 318 IAmb IAmb 01 14 20.1
comp=Z,352nm,2.0s
NIE Niedzica 75.40 320 *e*P **P 01 14 13.3 +0.9**
NIE *e*S **S 01 23 46.8 -3.4**
NIE LMZ LR 01 48 35.0
comp=Z,2.3nm,23.5s
HAPS Han Pijesak,Bl 75.43 314⇑ *i*P **P 01 14 11.9 -0.9**
HCY Herceg Novi 75.53 313 *e*P **P 01 14 12.1 -1.2**
HCY Herceg Novi 75.53 313⇑ *i*P **P 01 14 11.9 -1.4**
BRY Bratogost 75.56 313⇑ *i*P **P 01 14 12.7 -0.9**
BRY Bratogost 75.56 313⇑ *i*P **P 01 14 11.8 -1.8**

BEL Belsk 75.56 322 *e*P **P 01 14 13.6 +0.4**
BEL *e*S **S 01 23 46.1 -5.6**
BEL LMZ LR 01 45 13.1
comp=Z,3.8nm,30.9s
TREB Trebinje 75.67 313 *e*P **P 01 14 13.2 -0.9**
DBRK Dubrovnik 75.82 313 *i* P **P 01 14 13.2 -1.8**
OJC Ojcow 75.86 321 *e*P **P 01 14 15.3 +0.3**
OJC *e*S **S 01 23 50.3 -4.9**
OJC LMZ LR 01 42 54.0
comp=Z,2.5nm,30.7s
OJC Ojcow 75.86 321 IAmb IAmb 01 14 16.3
comp=Z,126nm,1.0s
LANS Liptovska Anna 75.88 320 *e*P **P 01 14 16.1 +0.9**
LANS pmax pmax
comp=Z,21nm,1.1s
LANS Liptovska Anna 75.88 320 *e*P **P 01 14 16.1 +0.9**
MORH Mrgy, Hungar 75.96 316⇑*i*P **P 01 14 15.4 -0.2**
SLIT Slitere, Latvi 76.03 329 *e*P **P 01 14 15.1 -0.6**
STON Ston 76.17 313⇑*i*P **P 01 14 15.8 -1.1**
STON Ston 76.17 313 *i* P **P 01 14 15.8 -1.1**
VYHS Vyhne 76.19 319 *e*P **P 01 14 17.4 +0.5**
VYHS pmax pmax
comp=Z,367nm,1.8s
VYHS Vyhne 76.19 319 *e*P **P 01 14 17.4 +0.5**
VYHS *e*S **S 01 23 56.6 -2.3**
TAR1 Taranto 76.20 311 *e*P **P 01 14 16.9 -0.2**
SRO2 Moca 76.36 318 *e*P **P 01 14 17.5 -0.4**
SRO2 pmax pmax
comp=Z,107nm,1.5s
SRO2 Moca 76.36 318 *e*P **P 01 14 17.5 -0.4**
TIP Timpagrande 76.47 309⇑P **P 01 14 19.2 +0.4**
TIP Timpagrande 76.47 309 IAmb IAmb 01 14 21.0
comp=Z,168nm,1.6s
KLNR Kaliningrad 76.47 325*c* *i*P **P 01 14 18.1 -0.2**
KLNR pmax pmax
comp=Z,384nm,0.7s
KLNR MLR MLR
comp=Z,5μm,25.0s
BAI Bari 76.57 311 *e*P **P 01 14 18.9 -0.3**
DZM Mont Dzumac 76.58 114 *e*P **P 01 14 18.9 -0.8**
comp=Z,164nm,1.3s
DZM *e*S **S 01 24 05.2 +1.0**
comp=Z,3μm,29.9s
DZM *e*SS **SS 01 28 56.6 -3.5**
comp=Z,4μm,33.5s
DZM *e*LR LR 01 38 12.4
comp=Z,7μm,23.6s
DZM Mont Dzumac 76.58 114 P **P 01 14 19.0 -0.8**
comp=Z,32nm,1.1s,baz=279,slow=12,SNR=4.5
DZM Mont Dzumac 76.58 114 IAmb IAmb 01 14 24.7
comp=Z,83nm,1.2s
DZM IAMs_20 IAMs_20 01 52 20.0
comp=Z,4μm,20.0s
RICI Ricice 76.66 314 P **P 01 14 18.5 -1.2**
SG1 Sgolgore (BA) 76.69 311 *e*P **P 01 14 19.5 -0.5**
MAKA Makarska 76.71 313 *i* P **P 01 14 18.7 -1.3**
BLY Banja Luka 76.77 315⇑*i*P **P 01 14 20.2 -0.1**
MGRS Mrkonjic Grad 76.80 315 *e*P **P 01 14 20.1 -0.4**
OKC Ostrava-Krasne 76.85 320 *e*P **P 01 14 21.2 +0.6**
OKC *e*S **S 01 24 00.4 -5.6**
OKC MLR MLR
comp=Z,2μm,17.5s
OKC Ostrava-Krasne 76.85 320 *e*P **P 01 14 21.2 +0.6**
OKC *e*S **S 01 24 00.4 -5.6**
OKC AMS AMS 01 52 30.0
comp=Z,2μm,17.5s
JAVC Velka Javorina 77.00 319⇑*i*P **P 01 14 22.9 +1.3**
JAVC *e*S **S 01 24 06.1 -1.8**
CEL Celeste 77.06 308 IAmb IAmb 01 14 46.9
comp=Z,89nm,0.9s
SMOL Smolenice 77.11 319 *e*P **P 01 14 22.8 +0.7**
SMOL pmax pmax
comp=Z,107nm,1.8s
SMOL Smolenice 77.11 319 *e*P **P 01 14 22.8 +0.7**
SUR Sutherland 77.14 236 P **P 01 14 23.6 +0.8**
SUR IAmb IAmb 01 14 27.6
comp=Z,224nm,1.1s
SUR Sutherland 77.14 236 IAMs_20 IAMs_20 01 47 34.6
comp=Z,5μm,18.0s
MOSL Moslavina 77.18 316 *i* P **P 01 14 22.4 -0.2**
MODS Modra-Piesok 77.19 319 *e*P **P 01 14 22.4 -0.2**
MODS pmax pmax
comp=Z,491nm,1.6s
MODS Modra-Piesok 77.19 319 *e*P **P 01 14 22.4 -0.2**
MODS *e*PP **PP 01 17 23.1 +6.4**
MODS *e*S **S 01 24 08.4 -1.5**
MORC Moravsky Berou 77.22 320⇑*i*P **P 01 14 23.4 +0.6**
MORC *e*S **S 01 24 07.0 -3.2**
MORC Moravsky Berou 77.22 320⇑P **P 01 14 23.4 +0.6**
MORC Moravsky Berou 77.22 320 P **P 01 14 23.2 +0.4**
MORC pmax pmax
comp=Z,419nm,1.8s
MORC Moravsky Berou 77.22 320 P **P 01 14 23.2 +0.4**
KIJV Kijevo 77.24 314 *i* P **P 01 14 21.7 -1.2**
ZST Bratislava 77.28 318 *e*P **P 01 14 22.7 -0.4**
ZST pmax pmax
comp=Z,1μm,2.2s
ZST Bratislava 77.28 318 *e*P **P 01 14 22.7 -0.4**
ZST *e*S **S 01 24 08.3 -2.5**
TSUM Tsumeb 77.44 249 P **P 01 14 25.3 +0.6**
TSUM Tsumeb 77.44 249 IAMs_20 IAMs_20 01 47 26.2
comp=Z,4μm,18.0s
KALN Kalnik 77.45 316 *i* P **P 01 14 23.8 -0.3**
SGRT San Giovanni R 77.49 312 IAmb IAmb 01 14 25.6
comp=Z,223nm,2.0s
KOGS Kog 77.63 317 *i* P **P 01 14 25.1 0.0**
KOGS *e* 01 24 10.3
MORI Morici 77.72 314 *i* P **P 01 14 24.5 -1.1**
ZAG Zagreb 77.74 316⇑*i*P **P 01 14 26.1 +0.4**
ZAG Zagreb 77.74 316 P **P 01 14 26.1 +0.4**
ZIRJ Zirje 77.75 314 *i* P **P 01 14 24.8 -1.0**
PTJ Puntijarka 77.76 316 P **P 01 14 25.8 -0.2**
VRAC Vranov 77.77 319⇑*i*P **P 01 14 26.1 +0.3**
VRAC *e*S **S 01 24 10.8 -5.3**
VRAC Vranov 77.77 319⇓P **P 01 14 26.1 +0.3**
KEV Kevo 77.79 341 P **P 01 14 25.5 0.0**
KEV pmax pmax
comp=Z,93nm,1.3s
KEV MLR MLR
comp=Z,7μm,20.0s
KEV Kevo 77.79 341 P **P 01 14 25.5 0.0**
KRUC Moravsky 77.86 319⇑*i*P **P 01 14 26.7 +0.4**
KRUC *e*S **S 01 24 13.7 -3.4**
GKP Gorka Klasztor 77.95 324 *e*P **P 01 14 26.6 -0.1**
GKP *e*S **S 01 24 12.4 -5.4**
GKP LMZ LR 01 46 39.5
comp=Z,4.2nm,30.7s
WDD Wied Dalam 77.97 306 P **P 01 14 26.7 -0.5**
WDD IAmb IAmb 01 14 48.5
comp=Z,84nm,0.9s
CONA Conrad Observa 78.07 318 *i* P **P 01 14 27.6 0.0**
comp=Z,18nm,0.8s,SNR=36
OZLJ Ozalj 78.08 316 *i* P **P 01 14 27.6 +0.1**
DPC Dobruska-Polom 78.08 320 *e*P **P 01 14 28.8 +1.2**
DPC *e*S **S 01 24 14.5 -5.0**
DPC MLR MLR
comp=Z,3μm,18.1s
DPC Dobruska-Polom 78.08 320 *e*P **P 01 14 28.8 +1.2**
DPC *e*S **S 01 24 14.5 -5.0**
DPC AMS AMS 01 53 30.0
comp=Z,3μm,18.1s
CRES Cresnjev 78.11 316 *i* P **P 01 14 27.8 0.0**
CRES *e* 01 24 14.9
CRES Cresnjev 78.11 316⇑*i*P **P 01 14 27.8 0.0**
KSP Ksiaz 78.17 321 *e*P **P 01 14 28.7 +0.8**
KSP *e*S **S 01 24 16.9 -3.5**
KSP LMZ LR 01 43 58.0
comp=Z,2.6nm,31.4s
OSTC Ostas 78.18 321 *e*P **P 01 14 29.1 +1.0**
OSTC AMS AMS 01 53 50.0
comp=Z,2μm,17.3s
ARCES ARCESS Array B 78.20 341 P **P 01 14 27.7 -0.1**
comp=Z,52nm,0.8s,baz=103,slow=5.5,SNR=61
ARCES LR LR 01 51 29.6
comp=Z,5μm,20.1s,baz=113,slow=38
ARE0 ARCESS Array S 78.20 341 *e*P **P 01 14 28.0 +0.2**
ARE0 IVmB_BB 01 14 28.3
comp=Z,3μm,2.4s
ARE0 *e*S **S 01 24 17.1 -2.9**
ARE0 IVMs_BB IVMs_BB 01 51 17.1
comp=Z,2μm,16.9s
DUGI Dugi Otok 78.20 314 *i* P **P 01 14 27.2 -1.2**
ARSA Arzberg 78.22 317 *e*P **P 01 14 28.9 +0.6**
comp=Z,47nm,0.9s,SNR=126

CHVC Chvalec 78.29 321 *e*P **P 01 14 29.6 +0.9**
CHVC *e*S **S 01 24 16.7 -4.9**
CHVC AMS AMS 01 55 00.0
comp=Z,2μm,18.1s
UPC Upice 78.30 321 *e*P **P 01 14 29.7 +1.0**
UPC *e*S **S 01 24 17.9 -3.9**
UPC MLR MLR
comp=Z,3μm,17.8s
UPC Upice 78.30 321 *e*P **P 01 14 29.7 +1.0**
UPC *e*S **S 01 24 17.9 -3.9**
UPC AMS AMS 01 53 50.0
comp=Z,3μm,17.8s
NVLJ Novalja 78.39 314 *i* P **P 01 14 28.3 -1.0**
PERS Pernice 78.43 317 *e*P **P 01 14 29.9 +0.3**
PERS *e* 01 24 19.4
PERS *e* 01 30 08.0
TREC Trest 78.49 319 *e*P **P 01 14 30.2 +0.4**
TREC *e*S **S 01 24 20.7 -3.1**
TREC MLR MLR
comp=Z,3μm,18.7s
TREC Trest 78.49 319 *e*P **P 01 14 30.2 +0.4**
TREC *e*S **S 01 24 20.7 -3.1**
TREC AMS AMS 01 54 00.0
comp=Z,3μm,18.7s
SOKA Soboth 78.49 317 *i* P **P 01 14 30.4 +0.4**
comp=Z,137nm,1.1s,SNR=124
SOKA *e*PKKPbc **PKKPbc 01 33 26.4 -1.7**
comp=Z,4.1nm,1.3s
RIY Rijeka 78.74 315⇑*i*P **P 01 14 30.6 -0.6**
LJU Ljubljana 78.78 316 *i* P **P 01 14 32.0 +0.5**
LJU *i* PcP **PcP 01 14 39.7 -0.5**
LJU *i* 01 14 48.6
LJU *e* 01 24 22.4
LJU *i* 01 24 42.1
LJU Ljubljana 78.78 316⇑*i*P **P 01 14 31.8 +0.4**
KTK1 Kautokeino 78.79 340 *e*P **P 01 14 31.1 0.0**
KTK1 *e*S **S 01 24 23.5 -2.9**
OBKA Obir 78.81 316 *e*P **P 01 14 32.2 +0.5**
comp=Z,36nm,0.8s,SNR=48
CEY Cerknica 78.82 316⇑*i*P **P 01 14 31.5 -0.2**
GOPC GO Pecny, Ondr 79.01 320 *e*P **P 01 14 33.4 +0.7**
GOPC *e*S **S 01 24 27.0 -2.4**
GOPC MLR MLR
comp=Z,2μm,17.9s
GOPC GO Pecny, Ondr 79.01 320 *e*P **P 01 14 33.4 +0.7**
GOPC *e*S **S 01 24 27.0 -2.4**
GOPC AMS AMS 01 55 00.0
comp=Z,2μm,17.9s
CORL Corleone 79.07 308 IAmb IAmb 01 14 35.5
comp=Z,428nm,1.8s
MOA Molln 79.13 318 *e*P **P 01 14 33.5 +0.1**
comp=Z,22nm,1.1s,SNR=58
HAMF Hammerfest 79.16 342 IVmBBB 01 14 33.6
comp=Z,1μm,1.8s
HAMF *e*P **P 01 14 33.6 +0.6**
HAMF *e*S **S 01 24 27.7 -2.4**
HAMF IVMs_BB IVMs_BB 01 53 03.5
comp=Z,2μm,19.6s
PRU Pruhonice 79.18 320 *e*P **P 01 14 34.1 +0.6**
PRU *e*S **S 01 24 26.2 -4.9**
PRU MLR MLR
comp=Z,2μm,17.2s
PRU Pruhonice 79.18 320 *e*P **P 01 14 34.1 +0.6**
PRU *e*S **S 01 24 26.2 -4.9**
PRU AMS AMS 01 55 00.0
comp=Z,2μm,17.2s
AQU L'Aquila 79.28 312⇑*i*P **P 01 14 34.3 0.0**
AQU L'Aquila 79.28 312 IAmb IAmb 01 14 36.1
comp=Z,456nm,1.9s
TRI Trieste 79.28 316 IAmb IAmb 01 14 35.4
comp=Z,346nm,2.0s
MYKA Terra Mystica 79.44 316 *i* P **P 01 14 35.4 +0.3**
comp=Z,92nm,1.0s,SNR=78
PBCC Pribram 79.50 320 *e*P **P 01 14 35.9 +0.6**
NRCA Norcia 79.52 313 IAmb IAmb 01 14 37.3
comp=Z,147nm,1.5s
BSD Bornholm Skovb 79.57 325⇑*i*P **P 01 14 35.1 -0.4**
BSD pmax pmax
comp=Z,140nm,0.9s
BSD Bornholm Skovb 79.57 325⇑*i*P **P 01 14 35.1 -0.4**
comp=Z,144nm,1.0s
GEC2 GERESS Array S 79.61 319 *e*P **P 01 14 36.8 +0.8**
comp=Z,1μm,1.9s,baz=94,slow=5.2
GEC2 *e*S **S 01 24 32.9 -3.1**
baz=94,slow=10
GERES GERESS Array B 79.61 319 P **P 01 14 36.6 +0.6**
comp=Z,93nm,0.8s,baz=94,slow=5.6,SNR=621
GERES PKKPbc **PKKPbc 01 33 27.5 +1.8**
comp=Z,0.5nm,0.8s,baz=254,slow=7.0,SNR=3.8
GERES PKPPKP P'P'df 01 41 20.5 -8.3
comp=Z,0.2nm,0.6s,baz=250,slow=2.7,SNR=3.5
GERES LR LR 01 53 54.2
comp=Z,1μm,20.4s,baz=82,slow=39
BRG Berggiesshubel 79.65 321⇑*i*P **P 01 14 36.7 +0.6**
comp=Z,144nm,1.0s
BRG *i* 01 14 48.4
comp=Z,212nm,1.6s
BRG S **S 01 24 36.0 -0.1**
BRG SS **SS 01 29 51.0 +6.2**
BRG *e*PKPPKP 01 41 33.6
comp=Z,4.4nm,1.1s
comp=N,3μm,20.5s
comp=E,2μm,23.5s
comp=Z,2μm,23.4s
BRG Berggiesshubel 79.65 321 *e*P **P 01 14 36.8 +0.7**
comp=Z,632nm,2.1s,baz=94,slow=5.2
BRG *e*S **S 01 24 33.2 -2.9**
baz=94,slow=10
BRG Berggiesshubel 79.65 321⇑*i*P **P 01 14 36.7 +0.6**
BRG *i* 01 14 48.4
BRG S **S 01 24 36.0 -0.1**
BRG SS **SS 01 29 51.0 +6.2**
BRG pmax pmax
comp=Z,144nm,1.0s
BRG pmax pmax
comp=Z,212nm,1.6s
BRG pmax pmax
comp=Z,4.0nm,1.2s
BRG MLR MLR
comp=N,3μm,20.5s
BRG MLR MLR
comp=E,2μm,23.5s
BRG MLR MLR
comp=Z,2μm,23.4s
KBA Koelnbreinsper 79.68 317 *e*P **P 01 14 36.3 -0.3**
comp=Z,19nm,0.7s,SNR=41
KBA *e*PKKPbc **PKKPbc 01 33 24.0 -1.6**
comp=Z,5.8nm,1.0s
KHC Kasperske Hory 79.71 319 *e*P **P 01 14 36.9 +0.4**
KHC *e* 01 14 53.5
KHC *e*S **S 01 24 34.7 -2.2**
KHC MLR MLR
comp=Z,2μm,17.0s
KHC Kasperske Hory 79.71 319 *e*P **P 01 14 36.9 +0.4**
KHC *es*P **pwP 01 14 53.5 +2.1**
KHC *ex* x 01 18 04.0
KHC *e*S **S 01 24 34.7 -2.2**
KHC AMS AMS 01 54 20.0
comp=Z,2μm,17.0s
RUE Ruedersdorf 79.92 322 *e*P **P 01 14 37.6 +0.1**
RUE Ruedersdorf 79.92 322 *e*P **P 01 14 37.9 +0.4**
comp=Z,288nm,1.0s,baz=94,slow=5.2
RUE *e*S **S 01 24 34.9 -4.0**
baz=94,slow=10
BILL Bilibino 79.96 21*c* *i*P **P 01 14 37.0 -0.4**
BILL *e* 01 14 44.7
BILL *i* 01 14 54.3
BILL *e* 01 17 38.4
BILL *i* S **S 01 24 33.6 -5.1**
BILL *i* 01 24 47.0
BILL *e*SS **SS 01 29 48.0 -0.6**
BILL pmax pmax
comp=Z,143nm,1.3s
BILL MLR MLR
comp=Z,7μm,19.0s
BILL Bilibino 79.96 21 P **P 01 14 37.0 -0.4**
BILL IAmb IAmb 01 14 55.8
comp=Z,99nm,0.8s
FBE Freiberg 80.03 321 *e*P **P 01 14 39.0 +0.9**
comp=Z,223nm,1.0s,baz=94,slow=5.2
RJOB Jochberg 80.11 318 *e*P **P 01 14 38.7 -0.1**
comp=Z,125nm,1.1s,baz=94,slow=5.2
RJOB *e*S **S 01 24 34.7 -6.6**
baz=94,slow=10
WET Wettzell 80.17 319 *e*P **P 01 14 39.8 +0.8**
comp=Z,172nm,1.2s,baz=94,slow=5.2
WET *e*S **S 01 24 39.0 -2.7**
baz=94,slow=10
ABTA Abfaltersbach 80.23 317 *e*P **P 01 14 39.0 -0.4**
comp=Z,76nm,1.2s,SNR=44
ABTA *e*PKKPbc **PKKPbc 01 33 22.9 -1.3**
comp=Z,8.1nm,1.1s,SNR=4.4
ABTA *i* P'P'df P'P'df 01 41 22.3 -5.5
comp=Z,8.7nm,1.5s
CLL Collm 80.29 321⇑*i*P **P 01 14 40.6 +1.1**
comp=Z,109nm,1.1s
CLL *i* sP **pwP 01 14 57.8 +3.5**
CLL *e*PP **PP 01 17 42.0 -0.4**
CLL *es*PP 01 18 00.0
CLL *e*PPP PPP 01 19 30.0
CLL *es*PPP 01 19 48.0
CLL *ep*PPPP 01 21 00.0
CLL *i* S **S 01 24 39.7 -3.1**
CLL *es*S **ScS 01 25 04.0 +1.2**
CLL *es*SP **SPn 01 25 26.0 -0.3**
CLL *e*PPS PPS 01 25 45.0
CLL *es*S **SS 01 29 54.0 -0.2**
CLL *es*SS SSS 01 33 24.0
CLL *e* 01 34 48.0
CLL *es*SSS 01 36 18.0
CLL *e*PKPPKPdf **P'P'df 01 41 31.0 +3.7**
CLL LmV 01 53 00.0
comp=Z,4μm,20.8s
CLL Collm 80.29 321 *e*P **P 01 14 40.7 +1.1**
comp=Z,109nm,1.1s,baz=94,slow=5.2
CLL *e*S **S 01 24 39.0 -3.7**
baz=94,slow=10
CLL Collm 80.29 321⇑*i*P **P 01 14 40.6 +1.1**
CLL *i* S **S 01 24 39.7 -3.1**
CLL pmax pmax
comp=Z,109nm,1.1s
CLL MLR MLR
comp=Z,4μm,20.8s
RGN Rugen 80.42 324 *e*P **P 01 14 40.7 +0.5**
RGN Rugen 80.42 324 *e*P **P 01 14 40.6 +0.5**
comp=Z,143nm,1.0s,baz=94,slow=5.2
RGN *e*S **S 01 24 39.9 -4.0**
baz=94,slow=10
RGN Rugen 80.42 324 IAmb IAmb 01 14 41.4
comp=Z,121nm,1.0s
TRO Tromso 80.44 340 *e*P **P 01 14 39.5 -0.5**
TRO *e*S **S 01 24 42.4 -1.2**
TRO IVMs_BB IVMs_BB 01 52 58.6
comp=Z,1μm,5.1s
LATE Laterza 80.47 312 IAmb IAmb 01 14 41.9
comp=Z,180nm,1.1s
NKC Novy Kostel 80.54 320 *e*P **P 01 14 41.6 +0.6**
NKC *e*S **S 01 24 43.3 -2.3**
NKC MLR MLR
comp=Z,3μm,17.9s
NKC Novy Kostel 80.54 320 *e*P **P 01 14 41.6 +0.6**
NKC *e*S **S 01 24 43.3 -2.3**
NKC AMS AMS 01 55 40.0
comp=Z,3μm,17.9s
TANN Tannenbergstha 80.55 320 *e*P **P 01 14 41.5 +0.5**
comp=Z,199nm,1.2s,baz=94,slow=5.2
TANN *ep*P **pwP 01 14 57.5 +1.6**
TANN *e*S **S 01 24 43.4 -2.3**
baz=94,slow=10
WERN Wernitzgruen 80.59 320 *e*P **P 01 14 41.9 +0.7**
comp=Z,88nm,1.1s,baz=94,slow=5.2
GUNZ Gunzen 80.63 320 *e*P **P 01 14 42.1 +0.7**
comp=Z,111nm,1.1s,baz=94,slow=5.2
ROTZ Rotzenmuhle 80.66 320 *e*P **P 01 14 42.6 +1.0**
comp=Z,148nm,1.1s,baz=94,slow=5.2
ROTZ *e*S **S 01 24 46.0 -0.8**
baz=94,slow=10
MANZ Manzenberg 80.74 320 *e*P **P 01 14 43.1 +1.0**
comp=Z,220nm,1.1s,baz=94,slow=5.2
MANZ *e*S **S 01 24 46.3 -1.4**
baz=94,slow=10
PLN Plauen 80.75 320 *e*P **P 01 14 42.5 +0.5**
comp=Z,411nm,2.2s,baz=94,slow=5.2
CTI Castel Tesino 80.78 316 IAmb IAmb 01 14 43.7
comp=Z,155nm,1.0s
HOPEN Hopen 80.79 347 *e*P **P 01 14 42.6 +0.9**
HOPEN IVmBBB 01 14 42.8
comp=Z,1μm,2.1s
HOPEN *e*S **S 01 24 47.8 +0.7**
HOPEN IVMs_BB IVMs_BB 01 51 41.6
comp=Z,3μm,22.0s
WTTA Wattenberg 80.86 317 *i* P **P 01 14 42.5 -0.4**
comp=Z,159nm,0.9s,SNR=103
WTTA *e*PKKPbc **PKKPbc 01 33 22.1 -0.9**
comp=Z,12nm,1.0s,SNR=9.4
WATA Walderalm 80.91 317 *e*P **P 01 14 42.5 -0.6**
comp=Z,121nm,1.0s,SNR=78
WATA *e*PKKPbc **PKKPbc 01 33 21.6 -1.2**
comp=Z,9.1nm,1.0s,SNR=8.8
WATA *i* P'P'df **P'P'df 01 41 20.1 -6.5**
comp=Z,6.8nm,1.2s
NEUB Neuenburg 81.05 321 *e*P **P 01 14 43.8 +0.2**
comp=Z,154nm,1.0s,baz=94,slow=5.2
NEUB *ep*P **pwP 01 15 00.4 +1.9**
NEUB *e*S **S 01 24 47.2 -3.5**
baz=94,slow=10
MOX Moxa 81.11 320 *e*P **P 01 14 44.5 +0.5**
comp=Z,97nm,1.1s,baz=94,slow=5.2
MOX *e*S **S 01 24 48.9 -2.5**
baz=94,slow=10
SQTA Sankt Quirin 81.15 317 *e*P **P 01 14 44.0 -0.4**
comp=Z,121nm,0.8s,SNR=95
SQTA *e*PKKPbc **PKKPbc 01 33 21.2 -1.0**
comp=Z,15nm,1.0s,SNR=7.5
SQTA *i* P'P'df **P'P'df 01 41 20.6 -5.6**
comp=Z,10.0nm,1.3s
FUR Furstenfeldbru 81.16 318 *e*P **P 01 14 44.4 +0.1**
comp=Z,178nm,1.2s,baz=94,slow=5.2
FUR *e*S **S 01 24 47.8 -4.3**
baz=94,slow=10
MOTA Moosalm 81.23 317 *i* P **P 01 14 44.4 -0.5**
comp=Z,144nm,0.9s,SNR=109
MOTA *e*PKKPbc **PKKPbc 01 33 20.9 -1.2**
comp=Z,10nm,0.9s,SNR=11
MOTA *i* P'P'df P'P'df 01 41 20.2 -5.9
comp=Z,5.2nm,1.2s
GRA1 Grafenberg Arr 81.29 319 IAmb IAmb 01 14 46.7
comp=Z,143nm,1.0s
GRF Grafenberg Arr 81.29 319 *e*P **P 01 14 45.9 +0.9**
comp=Z,206nm,1.1s,baz=94,slow=5.2
GRF *e*S **S 01 24 52.3 -1.1**
baz=94,slow=10
GRF *e*PKPPKP **P'P'df 01 41 20.2 -5.4**
baz=253,slow=2.3
STEI Steigen 81.40 338 *e*P **P 01 14 44.7 -0.3**
STEI IVMs_BB IVMs_BB 01 51 56.3
comp=Z,3μm,25.6s
MOR8 Moi Rana 81.41 336 *e*P **P 01 14 44.5 -0.8**
MOR8 *e*S **S 01 24 51.5 -2.5**
FETA Feichten 81.46 317 *e*P **P 01 14 46.1 0.0**
comp=Z,107nm,1.0s,SNR=68
FETA *e*PKKPbc **PKKPbc 01 33 20.6 -0.9**
comp=Z,8.1nm,1.2s
FETA *e*P'P'df P'P'df 01 41 19.3 -6.3
comp=Z,10nm,1.4s
RETA Reutte 81.47 317 *i* P **P 01 14 46.0 -0.1**
comp=Z,134nm,0.8s,SNR=148
RETA *e*PKKPbc **PKKPbc 01 33 20.6 -0.8**
comp=Z,3.8nm,1.0s
SYO Syowa Base 81.55 197⇑*i*X **P 01 14 44.7 -1.1**
SYO Syowa Base 81.55 197⇓*i*X **P 01 14 49.6 +3.8**
SYO Syowa Base 81.55 197⇓*i*sP sP 01 15 07.2 +9.2
VLC Villacollemand 81.57 314 IAmb IAmb 01 15 31.5
comp=Z,140nm,1.5s
BJO1 Bjornoya 81.61 345 *e*P **P 01 14 46.8 +0.7**
BJO1 *e*S **S 01 24 52.8 -3.0**
BJO1 IVMs_BB IVMs_BB 01 52 45.2
comp=Z,2μm,3.1s
PRMA PARMA 81.65 314 IAMs_20 IAMs_20 01 56 59.6
comp=Z,4μm,19.0s
ASSE Asse, Remlinge 81.80 322 *e*P **P 01 14 47.6 +0.2**
comp=Z,114nm,1.1s,baz=94,slow=5.2
ASSE *e*S **S 01 24 54.7 -3.6**
baz=94,slow=10
UBR Ueberruh 81.92 317 *e*P **P 01 14 48.4 0.0**
comp=Z,99nm,0.9s,baz=94,slow=5.2
UBR *e*S **S 01 24 55.0 -5.0**
baz=94,slow=10
CLZ Clausthal 81.96 322 *e*P **P 01 14 48.8 +0.3**
comp=Z,137nm,1.0s,baz=94,slow=5.2
CLZ *e*S **S 01 24 57.2 -3.1**

baz=94,slow=10
NC405 NORSAR Array S 81.97 331 IAmb IAmb 01 14 48.5
comp=Z,118nm,1.0s
KONS Konsvik 81.99 337 *e*P **P** **01 14 48.5 +0.3**
STOK Stokkvaagen 82.01 336 *e*P **P** **01 14 49.0 +0.7**
STOK *e*S **S** **01 24 58.9 -1.1**
DAVA Damuels 82.06 317 *i* P **P** **01 14 49.4 +0.2**
comp=Z,219nm,1.1s,SNR=114
DAVA *e*PKKPbc **PKKPbc** **01 33 19.2 -0.9**
comp=Z,5.6nm,1.1s
LOF Lofoten 82.06 338 *e*P **P** **01 14 48.0 -0.6**
LOF *e*S **S** **01 25 00.5 0.0**
BSEG Bad Segeberg 82.12 324 *e*P **P** **01 14 49.6 +0.4**
comp=Z,151nm,1.0s,baz=94,slow=5.2
BSEG *e*pP **pwP** **01 15 06.2 +2.1**
BSEG *e*S **S** **01 24 57.4 -4.3**
baz=94,slow=10
UBBA Unterbreizbach 82.14 321 *e*P **P** **01 14 49.8 +0.6**
comp=Z,178nm,1.9s,baz=94,slow=5.2
UBBA *e*S **S** **01 24 57.2 -4.6**
baz=94,slow=10
NC303 NORSAR Array S 82.14 331 IAmb IAmb 01 14 49.4
comp=Z,110nm,1.1s
NB201 NORSAR Array S 82.16 331 IAmb IAmb 01 14 49.5
comp=Z,99nm,1.1s
NB201 NORSAR Array S 82.16 331 *e*P **P** **01 14 48.7 -0.6**
NRDL Niedersach Rie 82.16 322 *e*P **P** **01 14 50.2 +0.8**
comp=Z,368nm,1.8s,baz=94,slow=5.2
NRDL *e*pP **pwP** **01 15 05.8 +1.5**
NRDL *e*S **S** **01 24 59.2 -2.9**
baz=94,slow=10
KEST Kesra 82.18 305 P **P** **01 14 51.2 +1.2**
comp=Z,76nm,1.1s,baz=79,slow=1.7,SNR=45
KEST LR LR 01 55 34.0
comp=Z,2μm,18.4s,baz=42,slow=39
KEST Kesra 82.18 305 IAMs_20 IAMs_20 01 52 41.0
comp=Z,5μm,20.0s
VSL Villasalto 82.20 309 IAmb IAmb 01 14 51.6
comp=Z,198nm,1.3s
GTTG Gottingen 82.20 321 *e*P **P** **01 14 50.0 +0.3**
comp=Z,130nm,1.0s,baz=94,slow=5.2
GTTG *e*pP **pwP** **01 15 06.7 +2.1**
GTTG *e*S **S** **01 24 59.6 -3.1**
baz=94,slow=10
NB2 NORSAR Subarra 82.20 331 P **P** **01 14 48.6 -0.9**
comp=Z,63nm,0.9s,baz=94,slow=5.9
NB2 NORSAR Subarra 82.20 331 P **P** **01 14 48.6 -0.9**
baz=94,slow=5.9
NOA NORSAR Array B 82.20 331 P **P** **01 14 48.7 -0.8**
comp=Z,25nm,0.8s,baz=94,slow=5.4,SNR=70
NOA LR LR 01 54 55.3
comp=Z,6μm,20.0s,baz=110,slow=38
MSSA Maissana 82.20 314 IAmb IAmb 01 14 50.8
comp=Z,228nm,1.3s
NSS Namsos 82.22 334 *e*P **P** **01 14 49.0 -0.4**
NSS *e*S **S** **01 25 05.2 +2.9**
NAO01 NORSAR Array S 82.34 331 IAmb IAmb 01 14 50.4
comp=Z,154nm,1.1s
NAO01 NORSAR Array S 82.34 331 *e*P **P** **01 14 49.6 -0.6**
OSL Oslo 82.34 330 *e*P **P** **01 14 48.1 -2.1**
OSL IVmBBB 01 14 50.7
comp=Z,2μm,1.1s
OSL *e*S **S** **01 24 59.8 -3.9**
OSL IVMs_BB IVMs_BB 01 53 28.2
comp=Z,1μm,5.6s
TUE Stuetta 82.39 316 IAmb IAmb 01 14 55.6
comp=Z,118nm,1.0s
NBO00 NORSAR Array S 82.41 331 IAmb IAmb 01 14 51.0
comp=Z,178nm,1.2s
NC204 NORSAR Array S 82.44 331 IAmb IAmb 01 14 51.1
comp=Z,166nm,1.2s
RETH Rethem/Aller, 82.63 322 *e*P **P** **01 14 52.2 +0.3**
comp=Z,113nm,1.2s,baz=94,slow=5.2
SKMB Sankelmark Bun 82.68 324 *e*P **P** **01 14 53.0 +0.9**
comp=Z,242nm,1.0s,baz=94,slow=5.2
SKMB *e*pP **pwP** **01 15 09.7 +2.7**
TBLU Trondheim 82.84 333 *e*P **P** **01 14 52.2 -0.5**
TBLU *e*S **S** **01 25 08.3 -0.5**
TBLU IVMs_BB IVMs_BB 01 54 10.4
comp=Z,4μm,22.5s
KONO Kongsberg 82.89 329 *ce*P **P** **01 14 52.6 -0.5**
KONO pmax pmax
comp=Z,151nm,1.3s
KONO MLR MLR
comp=Z,5μm,20.0s
KONO Kongsberg 82.89 329 P **P** **01 14 52.9 -0.2**
KONO IAmb IAmb 01 14 54.3
comp=Z,192nm,1.4s
KONO Kongsberg 82.89 329 IAMs_20 IAMs_20 01 56 30.4
comp=Z,4μm,19.0s
KONO Kongsberg 82.89 329 *e*P **P** **01 14 53.1 0.0**
KONO IVmBBB 01 14 53.4
comp=Z,2μm,2.8s
KONO *e*S **S** **01 25 05.8 -3.5**
KONO IVMs_BB IVMs_BB 01 54 03.9
comp=Z,2μm,28.6s
MUD Monsted U'grnd 82.93 326⇑ *i*P **P** **01 14 53.9 +0.6**
MUD pmax pmax
comp=Z,120nm,1.0s
MUD Monsted U'grnd 82.93 326⇑ *i*P **P** **01 14 53.9 +0.6**
comp=Z,115nm,1.0s
GOET G??ttrup 82.93 327⇑ *i*P **P** **01 14 53.9 +0.6**
comp=Z,234nm,1.0s
HSPB Hornsund (broa 83.02 347 *e*P **P** **01 14 53.4 -0.1**
HSPB *e*S **S** **01 25 05.5 -4.6**
HSPB LMZ LR 01 55 23.9
comp=Z,7.2nm,22.3s
HSPB Hornsund (broa 83.02 347 *e*P **P** **01 14 53.8 +0.3**
HSPB IVmBBB 01 14 54.2
comp=Z,1μm,1.5s
HSPB *e*S **S** **01 25 07.1 -3.0**
HSPB IVMs_BB IVMs_BB 01 55 15.4
comp=Z,2μm,23.0s
SPA0 Spitsbergen Ar 83.09 348 *e*P **P** **01 14 54.0 +0.2**
SPA0 IVmB_BB 01 14 54.2
comp=Z,2μm,1.4s
SPA0 *e*S **S** **01 25 06.3 -4.5**
TNS Taunus Mts 83.11 320 *e*P **P** **01 14 54.9 +0.4**
comp=Z,150nm,1.0s,baz=94,slow=5.2
TNS *e*S **S** **01 25 08.3 -3.8**
baz=94,slow=10
BFO Black Forest 83.13 318 *e*P **P** **01 14 54.6 -0.1**
comp=Z,77nm,1.0s,baz=94,slow=5.2
BFO *e*S **S** **01 25 08.8 -3.6**
baz=94,slow=10
BFO Black Forest 83.13 318 P **P** **01 14 54.5 -0.1**
BFO pmax pmax
comp=Z,63nm,1.0s
BFO Black Forest 83.13 318 P **P** **01 14 54.5 -0.2**
DOMB Dombas 83.31 332 *e*P **P** **01 14 55.2 -0.1**
DOMB IVmBBB 01 14 55.5
comp=Z,938nm,1.9s
DOMB *e*S **S** **01 25 10.2 -3.4**
DOMB IVMs_BB IVMs_BB 01 54 57.5
comp=Z,4μm,25.2s
HOMB Homborsund 83.38 328 *e*P **P** **01 14 55.4 -0.2**
HOMB IVmBBB 01 14 56.3
comp=Z,1μm,2.5s
HOMB *e*S **S** **01 25 13.2 -1.1**
HOMB IVMs_BB IVMs_BB 01 53 33.8
comp=Z,2μm,26.0s
HLG Helgoland 83.57 324 *e*P **P** **01 14 57.2 +0.5**
comp=Z,102nm,1.0s,baz=94,slow=5.2
HLG *e*S **S** **01 25 13.3 -3.0**
baz=94,slow=10
SKAR Skarslia 83.59 330 *e*P **P** **01 14 57.3 +0.5**
SKAR IVmB_BB 01 14 57.7
comp=Z,1μm,2.4s
SKAR *e*SKSac **SKSac** **01 25 20.7 +3.7**
SKAR IVMs_BB IVMs_BB 01 54 50.5
comp=Z,2μm,28.0s
IBBN Ibbenburen 83.60 322 *e*P **P** **01 14 57.3 +0.5**
comp=Z,167nm,1.1s,baz=94,slow=5.2
IBBN *e*pP **pwP** **01 15 13.5 +1.8**
IBBN *e*S **S** **01 25 13.3 -3.4**
baz=94,slow=10
CMAH Djebel Manchou 83.74 306 P **P** **01 14 59.2 +1.1**
BUG Bochum--Univer 83.88 321 *e*P **P** **01 14 58.7 +0.3**
comp=Z,173nm,1.1s,baz=94,slow=5.2
BUG *e*S **S** **01 25 15.5 -4.1**
baz=94,slow=10
ECH Echery 83.92 318 P **P** **01 14 58.3 -0.4**
ECH pmax pmax
comp=Z,54nm,1.0s
ECH Echery 83.92 318 P **P** **01 14 58.3 -0.4**
AHRW Bad Neuenahr-A 83.99 320 *e*P **P** **01 14 59.7 +0.7**
comp=Z,143nm,1.1s,baz=94,slow=5.2
AHRW *e*S **S** **01 25 18.6 -2.2**
baz=94,slow=10
LBZ Lake Benmore 84.02 135 P **P** **01 14 59.4 +0.1**
LBZ IAmb IAmb 01 14 59.7
comp=Z,109nm,1.3s
MOL Molde 84.04 332 *e*P **P** **01 14 59.2 +0.3**
MOL IVmB_BB 01 14 59.6
comp=Z,2μm,2.5s
MOL *e*SKSac **S** **01 25 22.7 +1.8**
MOL IVMs_BB IVMs_BB 01 56 08.9
comp=Z,3μm,15.7s
SNART Snartemo 84.06 328 *e*P **P** **01 14 59.6 +0.5**
SNART *e*SKSac **SKSac** **01 25 19.8 -0.1**
KBS Kingsbay 84.09 349 *ce*P **P** **01 14 58.0 -1.0**
KBS pmax pmax
comp=Z,155nm,1.7s
KBS Kingsbay 84.09 349 P **P** **01 14 57.9 -1.0**
KBS IAmb IAmb 01 14 59.7
comp=Z,87nm,1.0s
KBS Kingsbay 84.09 349 *e*P **P** **01 14 57.8 -1.2**
KBS IVmB_BB 01 14 59.0
comp=Z,825nm,0.7s
KBS *e*SKSac **SKSac** **01 25 19.9 +0.4**
KBS IVMs_BB IVMs_BB 01 56 21.5
comp=Z,3μm,22.1s
CAEH 'Ain El Ouahch 84.19 306 P **P** **01 15 01.4 +1.1**
BNI Bardonecchia 84.24 315 IAmb IAmb 01 15 23.1
comp=Z,114nm,1.3s
AKN Aaknes 84.28 332 *e*P **P** **01 15 00.5 +0.2**
AKN IVmB_BB 01 15 01.1
comp=Z,2μm,2.6s
AKN *e*SKSac **SKSac** **01 25 21.0 -0.3**
AKN IVMs_BB IVMs_BB 01 55 39.0
comp=Z,3μm,17.5s
CKFL Kef-Lekhel 84.30 306 P **P** **01 15 02.6 +1.6**
ODD1 Odda 84.40 330 *e*P **P** **01 15 02.3 +1.4**
ODD1 *e*SKSac **S** **01 25 25.1 +0.4**
BLS5 Blasjo 84.48 329 *e*P **P** **01 15 02.0 +0.7**
BLS5 IVmB_BB 01 15 02.3
comp=Z,1μm,1.1s
BLS5 *e*SKSac **S** **01 25 27.1 +1.6**
BLS5 IVMs_BB IVMs_BB 01 53 30.8
comp=Z,2μm,26.6s
CASM Ain Smara 84.49 306 P **P** **01 15 03.1 +1.2**
RPZ Rata Peaks 84.50 134 IAmb IAmb 01 15 03.1
comp=Z,167nm,1.2s
CTEI Djebel Teioual 84.56 306 P **P** **01 15 04.1 +1.7**
WLF Walferdange 84.58 319⇑ P **P** **01 15 02.4 +0.4**
comp=Z,108nm,1.7s
WLF Walferdange 84.58 319 *e*P **P** **01 15 02.6 +0.7**
comp=Z,154nm,1.2s,baz=94,slow=5.2
WLF *e*S **S** **01 25 23.7 -3.1**
baz=94,slow=10
WLF Walferdange 84.58 319 IAmb IAmb 01 15 04.1
comp=Z,188nm,1.3s
HYA Hoyanger 84.64 331 *e*P **P** **01 15 02.5 +0.5**
HYA *e*SKSac **SKSac** **01 25 22.2 -1.3**
MEM Membach 84.67 320⇑ P **P** **01 15 02.3 -0.1**
comp=Z,59nm,1.0s
BHOU Houvegnez 84.67 320 P **P** **01 15 02.6 +0.1**
comp=Z,54nm,0.0s
BEBN Eben Emael 84.88 320 P **P** **01 15 03.5 0.0**
BSTI Sart Tilman 84.95 320⇑ P **P** **01 15 03.8 0.0**
comp=Z,14nm,0.0s
OUZ Omahuta 84.98 126 IAmb IAmb 01 15 07.3
comp=Z,75nm,1.2s
OUZ IAMs_20 IAMs_20 01 51 07.1
comp=Z,4μm,21.0s
DFRA Djebel Bou Aff 84.98 306 P **P** **01 15 06.5 +2.1**
QRZ Quartz Range 85.05 131 IAMs_20 IAMs_20 01 48 17.7
comp=Z,5μm,20.0s
BER Bergen 85.06 330 *e*P **P** **01 15 04.6 +0.5**
BER IVmBBB 01 15 05.1
comp=Z,1μm,1.6s
BER *e*SKSac **SKSac** **01 25 26.0 -0.2**
BER IVMs_BB IVMs_BB 01 55 42.5
comp=Z,2μm,29.0s
KMY Karmoy 85.10 329 *e*P **P** **01 15 04.8 +0.5**
KMY *e*SKSac **SKSac** **01 25 28.8 +2.3**
BCLA Clavier 85.12 320 P **P** **01 15 04.7 0.0**
comp=Z,49nm,1.4s
BCLA PcP **PcP** **01 15 07.8 0.0**
ASK Askoy 85.12 330 *e*P **P** **01 15 05.0 +0.6**
FOO Floro 85.20 331 *e*P **P** **01 15 03.8 -1.0**
FOO *e*SKSac **SKSac** **01 25 28.0 +1.0**
FOO IVMs_BB IVMs_BB 01 56 53.0
comp=Z,2μm,5.2s
LTZ Lake Taylor 85.20 133 IAmb IAmb 01 15 06.2
comp=Z,120nm,1.2s
BGES Gesves 85.26 320 P **P** **01 15 05.2 -0.2**
BGES PcP **PcP** **01 15 07.9 -0.6**
SUE Sulen 85.34 331 *e*P **P** **01 15 06.2 +0.7**
SUE *e*SKSac **SKSac** **01 25 28.6 +0.7**
SUE IVMs_BB IVMs_BB 01 55 26.5
comp=Z,2μm,9.0s
SET Setif 85.37 306 P **P** **01 15 07.0 +0.6**
BMRD Maredsous 85.47 320⇑ P **P** **01 15 06.2 -0.2**
comp=Z,52nm,1.5s
THZ Tophouse 85.49 132 IAMs_20 IAMs_20 01 50 40.3
comp=Z,4μm,20.0s
DOU Dourbes 85.58 320 P **P** **01 15 07.1 +0.1**
comp=Z,43nm,0.0s
DOU PcP **PcP** **01 15 09.8 -0.1**
SSB Saint Sauveur 85.75 315 IAmb IAmb 01 15 09.7
comp=Z,84nm,0.9s
SNF Seneffe 85.77 320⇑ P **P** **01 15 08.0 +0.1**
comp=Z,77nm,0.9s
SNZO South Karori 86.75 132 P **P** **01 15 12.9 +0.1**
SNZO IAmb IAmb 01 15 15.5
comp=Z,108nm,0.9s
MSVF Nonsavu 86.82 108 P **P** **01 15 14.9 +1.0**
MSVF pmax pmax
comp=Z,126nm,1.2s
MSVF Nonsavu 86.82 108 P **P** **01 15 14.9 +1.0**
MSVF **PcP** **01 15 16.2 +0.1**
MSVF IAmb IAmb 01 15 18.5
comp=Z,126nm,1.2s
ADK Adak 87.05 38 P **P** **01 15 13.7 -0.5**
ADK pmax pmax
comp=Z,214nm,1.1s
ADK Adak 87.05 38 P **P** **01 15 13.7 -0.5**
ELSH Elham, Standar 87.74 321⇑ *e*P **P** **01 15 17.7 +0.2**
ELSH IAmb IAmb 01 15 18.8
comp=Z,230nm,0.8s
ELSH IAMs_20 IAMs_20 01 55 42.0
comp=Z,2μm,22.2s
BKZ Black Stump Fm 87.81 129 IAMs_20 IAMs_20 01 52 59.0
comp=Z,5μm,20.0s
MIDW Midway 87.93 62 P **P** **01 15 19.4 +0.5**
MIDW IAmb IAmb 01 15 20.9
comp=Z,87nm,0.8s
WACR West Acre 87.94 323⇑ *e*P **P** **01 15 18.6 +0.2**
WACR IAmb IAmb 01 15 19.6
comp=Z,313nm,0.8s
WACR IAMs_20 IAMs_20 01 57 00.4
comp=Z,3μm,23.3s
URZ Urewera 88.18 128 P **P** **01 15 18.7 -1.2**
comp=Z,222nm,1.0s,baz=346,slow=2.1,SNR=60
HMNX Herstmonceux 88.26 321⇑ *e*P **P** **01 15 20.3 +0.3**
HMNX IAmb IAmb 01 15 22.9
comp=Z,114nm,1.1s
LMK Market Rasen 88.45 323⇑ *e*P **P** **01 15 21.4 +0.5**
LMK IAmb IAmb 01 15 22.5
comp=Z,445nm,1.0s
EBNR Beni Rached 88.49 306 P **P** **01 15 23.3 +1.8**
NOR Nord 88.63 352⇑ *i*P **P** **01 15 20.6 -0.6**
NOR pmax pmax
comp=Z,100nm,0.9s
NOR Nord 88.63 352⇑ *i*P **P** **01 15 20.6 -0.6**
comp=Z,100nm,0.9s
ECHA Ech Chlef 88.64 306 P **P** **01 15 24.0 +1.9**
GDLE Glaisdale, N Y 88.66 324⇑ *e*P **P** **01 15 21.5 -0.2**
EANR 'Ain N'Sour 88.86 306 P **P** **01 15 25.0 +1.7**
MXZ Matakaoa Point 89.05 128 IAMs_20 IAMs_20 01 54 36.7
comp=Z,5μm,20.0s
CWF Charnwood Fore 89.11 323⇑ *e*P **P** **01 15 23.9 0.0**
CWF IAmb IAmb 01 15 24.6
comp=Z,107nm,1.1s
CWF IAMs_20 IAMs_20 01 56 55.8
comp=Z,3μm,24.9s
HPK Haverah Park 89.17 324⇑ *e*P **P** **01 15 24.6 +0.4**
HPK IAmb IAmb 01 15 25.7
comp=Z,157nm,0.8s
HPK IAMs_20 IAMs_20 01 52 35.0
comp=Z,3μm,31.5s
WOL Wolverton 89.20 321⇑ *e*P **P** **01 15 24.9 +0.5**
WOL IAmb IAmb 01 15 26.1
comp=Z,258nm,0.9s
EDMD Edmundbyers 89.28 325⇑ *e*P **P** **01 15 24.9 +0.2**
EDMD IAmb IAmb 01 15 25.5
comp=Z,108nm,1.0s
EDMD IAMs_20 IAMs_20 02 02 08.6
comp=Z,3μm,19.0s
LBWR Ladybower, Pea 89.29 323⇑ *e*P **P** **01 15 24.9 +0.1**
LBWR IAmb IAmb 01 15 26.1
comp=Z,180nm,0.8s
LBWR IAMs_20 IAMs_20 01 54 50.6
comp=Z,4μm,30.7s
DRUM Mains of Drumt 89.33 327 *e*P **P** **01 15 24.8 -0.1**
DRUM IAMs_20 IAMs_20 01 57 28.8
comp=Z,5μm,20.1s
ESY Stoneypath 89.52 326⇑ *e*P **P** **01 15 25.9 +0.1**
SWN1 Swindon 89.54 321⇑ *e*P **P** **01 15 25.9 0.0**
SWN1 IAmb IAmb 01 15 27.6
comp=Z,267nm,0.9s
SWN1 IAMs_20 IAMs_20 02 00 26.6
comp=Z,3μm,19.6s
VNDA Vanda 89.68 168 P **P** **01 15 26.9 +0.9**
comp=Z,28nm,1.1s,baz=293,slow=5.0,SNR=60
VNDA LR LR 01 49 43.5
comp=Z,6μm,20.6s,baz=305,slow=32
VNDA Vanda 89.68 168 P **P** **01 15 27.0 +0.9**
VNDA Vanda 89.68 168 IAmb IAmb 01 15 31.6
comp=Z,78nm,1.4s
STRD Stroud 89.74 322⇑ *e*P **P** **01 15 27.1 +0.3**
STRD IAmb IAmb 01 15 30.8
comp=Z,218nm,1.0s
STRD IAMs_20 IAMs_20 01 57 31.6
comp=Z,3μm,24.0s
EBL Broad Law 89.78 326⇑ *e*P **P** **01 15 27.1 +0.1**
EDI Edinburgh 89.84 326 *e*P **P** **01 15 27.3 0.0**
EDI IAMs_20 IAMs_20 01 58 09.8
comp=Z,6μm,22.4s
BATH Bath 89.88 321 *e*P **P** **01 15 27.6 +0.1**
BATH IAMs_20 IAMs_20 01 58 01.0
comp=Z,3μm,23.8s
ESK Eskdalemuir 89.93 325⇑ *e*P **P** **01 15 27.3 -0.4**
ESK Eskdalemuir 89.93 325 P **P** **01 15 28.2 +0.5**
ESK pmax pmax
comp=Z,406nm,2.0s
ESK Eskdalemuir 89.93 325 P **P** **01 15 28.2 +0.5**
JLP Les Platons 89.98 319 *e*P **P** **01 15 27.9 -0.2**
OLDB Oldbury-Upon-S 89.99 322⇑ *e*P **P** **01 15 28.2 +0.2**
OLDB IAmb IAmb 01 15 29.3
comp=Z,164nm,0.8s
OLDB IAMs_20 IAMs_20 01 58 14.4
comp=Z,3μm,25.7s
TOC2 Torodi Ar. Sit 90.04 283 IAMs_20 IAMs_20 01 53 44.6
comp=Z,4μm,21.0s
TOC3 Torodi Ar. Sit 90.04 283 IAMs_20 IAMs_20 01 54 33.7
comp=Z,4μm,20.0s
JVM Valle D.L. Mar 90.05 319 *e*P **P** **01 15 28.2 -0.2**
TOC1 Torodi Ar. Sit 90.05 283 IAMs_20 IAMs_20 01 53 45.1
comp=Z,5μm,21.0s
TOB3 Torodi Ar. Sit 90.05 283 IAMs_20 IAMs_20 01 54 25.1
comp=Z,4μm,20.0s
TOA2 Torodi Ar. Sit 90.06 283 IAMs_20 IAMs_20 01 54 35.2
comp=Z,4μm,20.0s
TOC4 Torodi Ar. Sit 90.06 283 IAMs_20 IAMs_20 01 54 24.3
comp=Z,4μm,20.0s
TOA0 Torodi Ar. Sit 90.06 283 P **P** **01 15 30.0 +0.8**
TOA0 IAmb IAmb 01 15 32.8
comp=Z,156nm,1.6s
TOA0 IAMs_20 IAMs_20 01 54 34.3
comp=Z,4μm,20.0s
TOB1 Torodi Ar. Sit 90.06 283 IAMs_20 IAMs_20 01 54 34.3
comp=Z,4μm,20.0s
TORD Torodi Ar. Bea 90.06 283 P **P** **01 15 29.9 +0.7**
comp=Z,8.0nm,0.6s,baz=94,slow=3.6,SNR=71
TORD PKiKP **PKiKP** **01 20 26.9 +1.6**
comp=Z,4.7nm,1.1s,baz=238,slow=5.8,SNR=3.9
TORD PKKPbc **PKKPbc** **01 33 01.0 +1.3**
comp=Z,2.4nm,1.0s,baz=333,slow=1.5,SNR=12
TORD PKPPKP **P'P'df** **01 41 09.8 -1.0**
comp=Z,1.1nm,1.0s,baz=267,slow=4.3,SNR=3.6
TORD LR LR 01 54 26.5
comp=Z,4μm,19.8s,baz=75,slow=35
TOA3 Torodi Ar. Sit 90.06 283 IAMs_20 IAMs_20 01 54 34.4
comp=Z,4μm,20.0s
TOB4 Torodi Ar. Sit 90.07 283 IAMs_20 IAMs_20 01 54 34.6
comp=Z,4μm,20.0s
TOB5 Torodi Ar. Sit 90.08 283 IAMs_20 IAMs_20 01 54 25.7
comp=Z,4μm,20.0s
TOC7 Torodi Ar. Sit 90.08 283 IAMs_20 IAMs_20 01 54 34.7
comp=Z,4μm,19.0s
TOC5 Torodi Ar. Sit 90.08 283 IAMs_20 IAMs_20 01 53 34.9
comp=Z,5μm,21.0s
HLM1 Long Mynd 90.09 323⇑ *e*P **P** **01 15 29.0 +0.4**
HLM1 IAmb IAmb 01 15 29.6
comp=Z,86nm,1.1s
HLM1 IAMs_20 IAMs_20 01 59 12.5
comp=Z,4μm,23.6s
MONM Monmouth 90.12 322⇑ *e*P **P** **01 15 28.2 -0.5**
MONM IAmb IAmb 01 15 29.4
comp=Z,112nm,1.1s
MONM IAMs_20 IAMs_20 01 57 43.9
comp=Z,3μm,25.1s
MCH1 Michaelchurch 90.22 322⇑ *e*P **P** **01 15 29.0 -0.1**
MCH1 IAmb IAmb 01 15 29.8
comp=Z,66nm,1.1s
MCH1 IAMs_20 IAMs_20 01 57 44.9
comp=Z,4μm,23.3s
FOEL Foel Wylfa 90.23 323 *e*P **P** **01 15 29.6 +0.4**
FOEL IAMs_20 IAMs_20 01 56 52.6
comp=Z,4μm,26.0s
INVG Invergeldie, C 90.25 327 *e*P **P** **01 15 29.2 0.0**
INVG IAMs_20 IAMs_20 01 57 56.6
comp=Z,5μm,21.5s
CART Cartagena 90.40 308 P **P** **01 15 30.8 +0.5**
CART IAMs_20 IAMs_20 01 57 45.1
comp=Z,3μm,21.0s
EAB Aberfoyle 90.45 326 *e*P **P** **01 15 30.4 +0.3**
LLW Llanuwychllyn 90.52 323⇑ *e*P **P** **01 15 31.0 +0.4**
LLW IAmb IAmb 01 15 31.5
comp=Z,20nm,0.9s
LLW IAMs_20 IAMs_20 01 57 49.9
comp=Z,2μm,24.0s
NEWG New Galloway 90.54 325 *e*P **P** **01 15 30.9 +0.3**
PGBU Glenifferbraes 90.58 326 *e*P **P** **01 15 30.8 +0.1**
DAG Danmarks Havn 90.70 348⇑ *i*P **P** **01 15 30.2 -0.7**
DAG Danmarks Havn 90.70 348⇑ *i*P **P** **01 15 30.2 -0.7**
KAC Achnashellach 90.77 328 *e*P **P** **01 15 31.6 0.0**
YLL Llanberis 90.78 323⇑ *e*P **P** **01 15 32.2 +0.5**
WME Myndd Eilian 90.83 324⇑ *e*P **P** **01 15 32.5 +0.6**
IOMK Kirk Michael 90.85 324 *e*P **P** **01 15 32.5 +0.5**
IOMK IAmb IAmb 01 15 33.1
comp=Z,183nm,1.1s
WLF1 Llynfaes 90.89 323⇑ *e*P **P** **01 15 32.8 +0.6**
NVL N'lazarevskaya 90.98 199⇓ *i*P **P** **01 15 31.9 -0.3**
NVL *e*S **SKSac** **01 26 06.5 +5.1**
NVL *e*SSS SSS 01 36 04.3
NVL pmax pmax
comp=Z,100nm,1.0s
YRC Rhoscolyn 91.01 323⇑ *e*P **P** **01 15 32.7 -0.1**
LAWE Loch Awe, Argy 91.02 326⇑ *e*P **P** **01 15 33.1 +0.3**
LAWE IAMs_20 IAMs_20 01 58 17.9
comp=Z,5μm,21.3s
HTL Hartland 91.28 321⇑ *e*P **P** **01 15 34.7 +0.6**
HTL IAmb IAmb 01 15 38.0
comp=Z,89nm,1.0s
HTL IAMs_20 IAMs_20 01 58 57.3
comp=Z,3μm,22.8s
ANM Nome 91.29 25 IAmb IAmb 01 15 53.1
comp=Z,117nm,1.2s
RSBS Rosebush, Pemb 91.30 322⇑ *e*P **P** **01 15 34.4 +0.2**
RSBS IAmb IAmb 01 15 35.2
comp=Z,72nm,0.9s
RDOG Red Dog Mine 91.43 21 IAmb IAmb 01 15 53.4
comp=Z,85nm,1.0s
DSB Dublin 92.08 324 IAmb IAmb 01 16 55.5
comp=Z,55nm,1.3s
ESDC Sonseca Array 92.47 310 P **P** **01 15 40.7 +0.7**
comp=Z,22nm,0.9s,baz=58,slow=4.3,SNR=132
ESDC PKKPbc **PKKPbc** **01 32 54.4 -0.1**
comp=Z,3.3nm,1.0s,baz=286,slow=2.4,SNR=13
ESDC LR LR 02 00 37.1
comp=Z,3μm,20.2s,baz=130,slow=38
PAB San Pablo 92.78 310 P **P** **01 15 42.4 +0.9**
PAB pmax pmax
comp=Z,40nm,1.1s

PAB MLR MLR
comp=Z,3µm,20.0s
PAB San Pablo 92.78 310 P **P** **01 15 42.4 +0.9**
PAB IAmb IAmb 01 15 43.1
comp=Z,40nm,1.1s
PAB San Pablo 92.78 310 IAMs_20 IAMs_20 02 00 00.9
comp=Z,3µm,20.0s
UNV Unalaska Valle 92.93 36 IAmb IAmb 01 15 45.4
comp=Z,37nm,1.0s
SCO Scoresbysund 94.06 342⇑*iP* **P** **01 15 47.5 +1.0**
SCO pmax pmax
comp=Z,31nm,1.2s
SCO Scoresbysund 94.06 342⇑*iP* **P** **01 15 47.5 +1.0**
comp=Z,30nm,1.2s
QSPA South Pole Qui 94.17 180 PKKP 01 32 48.7
comp=Z,6.3nm,1.0s,baz=157,slow=1.1,SNR=9.3
QSPA South Pole Qui 94.17 180 P **P** **01 15 48.3 +1.1**
QSPA IAmb IAmb 01 15 52.3
comp=Z,78nm,1.4s
PBRG Braganca 94.25 312 *e*P **P** **01 15 48.9 +0.8**
comp=Z,64nm,1.7s
MVO Moncorvo 94.56 312 *e*P **P** **01 15 50.7 +1.1**
comp=Z,66nm,1.8s
MVO Moncorvo 94.56 312 *e*SKSac **SKSac** **01 26 21.7 -1.2**
MVO *e*SS **SS** **01 33 32.3 +8.9**
MVO Moncorvo 94.56 312 *e*LR LR 01 50 09.1
comp=Z,2µm,20.0s
PVRL Vila Real 95.06 312 *e*P **P** **01 15 52.7 +0.9**
comp=Z,61nm,1.7s
MTE Manteigas 95.08 311 *e*P **P** **01 15 53.3 +1.3**
comp=Z,53nm,1.8s
MTE Manteigas 95.08 311 *e*SS SS 01 33 36.7 +6.0
MTE Manteigas 95.08 311 *e*LR LR 01 50 49.4
comp=Z,2µm,20.0s
PCBR Castelo Branco 95.12 310 *e*P **P** **01 15 53.1 +1.0**
comp=Z,49nm,1.5s
PMRV Marv??o 95.13 310 *e*P **P** **01 15 52.9 +0.7**
comp=Z,43nm,1.8s
PMRV Marv??o 95.13 310 *e*SKSac **SKSac** **01 26 25.1 -0.7**
PMRV *e*SS **SS** **01 33 36.1 +4.7**
PCAB Cabril 95.21 312 *e*P **P** **01 15 53.5 +1.0**
comp=Z,82nm,1.8s
PVIS Viseu 95.29 311 *e*P **P** **01 15 53.5 +0.6**
comp=Z,60nm,1.7s
PGAV Gavieira, Arco 95.34 313 *e*P **P** **01 15 53.7 +0.5**
comp=Z,63nm,1.8s
PGAV Gavieira, Arco 95.34 313 *e*SS SS 01 33 40.7 +6.3
PGAV Gavieira, Arco 95.34 313 *e*LR LR 01 51 17.3
comp=Z,2µm,22.0s
PESTR Estremoz 95.38 310 *e*SKSac **SKSac** **01 26 26.2 -1.0**
PESTR *e*SS **SS** **01 33 37.4 +2.5**
PVAQ Vaqueiros 95.72 308 *e*SKSac **SKSac** **01 26 27.8 -1.2**
PVAQ *e*SS **SS** **01 33 44.5 +4.6**
PVAQ Vaqueiros 95.72 308 IAMs_20 IAMs_20 02 02 19.2
comp=Z,3µm,21.0s
PBEJ Beja 95.73 309 *e*P **P** **01 15 55.8 +0.9**
SNAA Sanae 95.76 198 P **P** **01 15 55.7 +1.4**
SNAA Sanae 95.76 198 IAmb IAmb 01 15 59.1
comp=Z,80nm,1.4s
SNAA IAMs_20 IAMs_20 01 55 26.5
comp=Z,2µm,18.0s
EVO Evora 95.76 309 *e*P **P** **01 15 55.7 +0.7**
comp=Z,29nm,1.4s
COI Coimbra 95.77 311 *e*P **P** **01 15 55.7 +0.7**
COI Coimbra 95.77 311 *e*SKSac **SKSac** **01 26 26.9 -2.2**
COI *e*SS **SS** **01 33 46.1 +5.8**
TOLK Toolik Lake Re 95.82 19 P **P** **01 15 55.2 +0.5**
baz=297
TOLK Toolik Lake Re 95.82 19 IAmb IAmb 01 16 13.6
comp=Z,63nm,0.8s
PMTG Montargil 95.83 310 *e*P **P** **01 15 56.0 +0.7**
comp=Z,30nm,1.8s
PMTG Montargil 95.83 310 *e*SKSac **SKSac** **01 26 28.6 -0.9**
PMTG *e*SS **SS** **01 33 45.3 +4.0**
PCAS Casmilo, Conde 95.86 311 *e*P **P** **01 15 56.9 +1.4**
PCAS Casmilo, Conde 95.86 311 *e*SKSac **SKSac** **01 26 28.1 -1.6**
PCAS *e*SS **SS** **01 33 47.3 +5.6**
PBDV Barranco-do-Ve 95.92 308 *e*SKSac **SKSac** **01 26 30.8 +0.7**
PBDV *e*SS **SS** **01 33 47.2 +4.5**
PCVE Castro Verde 95.94 308 *e*P **P** **01 15 56.6 +0.8**
comp=Z,60nm,1.8s
PCVE Castro Verde 95.94 308 *e*SS SS 01 33 50.5 +7.6
MESJ Messejana 96.04 309 *e*P **P** **01 15 56.7 +0.3**
MESJ *e*SS SS 01 33 47.7 +3.4
MESJ AMS AMS 02 02 13.5
comp=Z,3µm,20.0s
MESJ Messejana 96.04 309 *e*P **P** **01 15 56.6 +0.3**
MESJ *e*SS SS 01 33 47.7 +3.4
MESJ Messejana 96.04 309 *e*P **P** **01 15 57.7 +1.4**
comp=Z,56nm,1.9s
PNCL Nicolau / Gran 96.23 309 *e*P **P** **01 15 58.2 +1.0**
PNCL Nicolau / Gran 96.23 309 *e*SKSac **SKSac** **01 26 30.7 -0.9**
PNCL *e*SS **SS** **01 33 55.9 +8.9**
MORF Marmelete 96.47 308 *e*P **P** **01 15 58.6 +0.3**
MORF *e*SKSac **SKSac** **01 26 35.0 +2.0**
MORF *e*SS **SS** **01 33 53.8 +3.2**
MORF AMS AMS 02 03 16.3
comp=Z,3µm,14.1s
MORF Marmelete 96.47 308 *e*P **P** **01 15 58.6 +0.3**
MORF *e* 01 26 35.0
MORF *e*SS SS 01 33 53.8 +3.2
MORF Marmelete 96.47 308 *e*P **P** **01 15 59.2 +0.8**
comp=Z,95nm,1.8s
MORF Marmelete 96.47 308 *e*SS SS 01 33 54.1 +3.5
PTEO Sao Teotonio 96.49 308 *e*P **P** **01 15 59.7 +1.4**
comp=Z,88nm,1.6s
SVW2 Sparrevohn 96.59 27 IAmb IAmb 01 16 17.6
comp=Z,66nm,1.2s
LIS Lisbon 96.60 310 *e*P **P** **01 15 59.2 +0.4**
LIS AMS AMS 02 03 00.3
comp=Z,2µm,21.2s
LIS Lisbon 96.60 310 *e*P **P** **01 15 59.2 +0.4**
LIS Lisbon 96.60 310 *e*P **P** **01 15 59.6 +0.8**
comp=Z,112nm,1.7s
CNBA Chernabura Isl 96.62 34 IAmb IAmb 01 16 16.1
comp=Z,52nm,0.8s
PFVI Vila Bisbo 96.64 308 *e*SS SS 01 33 58.2 +5.3
PMAFR Mafra 96.66 310 *e*SKSac **SKSac** **01 26 34.8 +0.9**
PMAFR *e*SS **SS** **01 34 01.8 +8.7**
KIC Kosan Boka 96.95 277 *e*PKP2 **P** **01 16 02.7 +1.8**
comp=Z,45nm,1.0s
DBIC Dimbokro 97.03 277 P Pdif 01 16 01.4 0.0
comp=Z,6.6nm,0.7s,baz=55,slow=5.6,SNR=10
DBIC LR LR 01 56 34.5
comp=Z,4µm,21.3s,baz=70,slow=34
DBIC Dimbokro 97.03 277 P Pdif 01 16 01.9 +0.5
DBIC pmax pmax
comp=Z,130nm,1.8s
DBIC Dimbokro 97.03 277 P Pdif 01 16 01.9 +0.5
TIC Toumodi 97.20 277 *e*PKP2 Pdif 01 16 03.7 +1.5
LIC Lamto 97.24 277 *e*PKP2 Pdif 01 16 03.8 +1.5
comp=Z,8.4nm,0.5s
VNA2 Neumayer--Watz 97.30 199 P Pdif 01 16 02.5 +1.2
baz=79,slow=5.4
SUMG Summit 97.34 347⇑*iP* Pdif 01 16 02.2 +0.2
SUMG pmax pmax
comp=Z,140nm,1.2s
SUMG Summit 97.34 347 IAmb IAmb 01 16 20.6
comp=Z,62nm,1.3s
SUMG Summit 97.34 347⇑*iP* Pdif 01 16 02.2 +0.2
comp=Z,136nm,1.2s
BPAW Bear Paw Mtn. 97.35 23 IAmb IAmb 01 16 05.5
comp=Z,47nm,1.2s
BPAW IAMs_20 IAMs_20 02 04 04.0
comp=Z,3µm,20.0s
PPLA Purkeypile 97.37 25 IAmb IAmb 01 16 30.3
comp=Z,100nm,1.8s
VNA1 Neumayer--Stat 97.62 199 P Pdif 01 16 04.6 +1.8
BWN Browne 97.92 23 IAmb IAmb 01 16 31.1
comp=Z,33nm,1.0s
VNA3 Neumayer Olymp 97.98 199 P Pdif 01 16 05.5 +1.2
TCOL CIGO, UAF Yank 98.20 22 P Pdif 01 16 05.4 -0.1
baz=299
POKR Poker Plat Res 98.24 22 P **P** **01 16 05.1 -0.6**
baz=299
FYU Fort Yukon 98.29 20 IAMs_20 IAMs_20 02 05 50.7
comp=Z,4µm,20.0s
MCK McKinley 98.33 23 IAMs_20 IAMs_20 02 04 53.8
comp=Z,3µm,20.0s
RND Reindeer 98.51 24 IAmb IAmb 01 16 24.9
comp=Z,78nm,2.0s
RND IAMs_20 IAMs_20 02 04 49.6
comp=Z,3µm,20.0s
ILAR Eielson Array 98.61 22 P **P** **01 16 05.8 -1.5**
comp=Z,3.6nm,0.8s,baz=297,slow=4.2,SNR=29
ILAR PP **PP** **01 20 08.4 +0.6**
comp=Z,4.8nm,0.9s,baz=298,slow=7.3,SNR=5.2
ILAR PKKPbc **PKKPbc** **01 32 36.4 -2.5**
comp=Z,3.4nm,0.8s,baz=159,slow=2.6,SNR=19
ILAR PKPPKP **P'P'df** **01 40 55.5 +3.0**
comp=Z,0.4nm,0.9s,baz=156,slow=0.9,SNR=4.1
ILAR LR LR 02 06 05.3
comp=Z,2µm,20.0s,baz=312,slow=39
TULEG Thule 98.64 356 IAMs_20 IAMs_20 02 09 54.5
comp=Z,3µm,20.0s
PRP Porcupine Dome 98.73 21 IAMs_20 IAMs_20 02 06 48.5
comp=Z,3µm,21.0s
HDA Harding Lake 98.77 22 P **P** **01 16 06.5 -1.5**
baz=299
RC01 Rabbit Creek A 99.19 26 IAmb IAmb 01 16 33.5
comp=Z,26nm,1.0s
CNPM China Poot 99.20 28 IAmb IAmb 01 16 27.9
comp=Z,29nm,1.1s
KULLO Kullorsuaq 99.22 352⇑*iP* **Pdif** **01 16 09.8 0.0**
KULLO pmax pmax
comp=Z,46nm,1.1s
KULLO Kullorsuaq 99.22 352⇑*iP* **Pdif** **01 16 09.8 0.0**
comp=Z,46nm,1.1s
DHY Denali Highway 99.25 24 IAMs_20 IAMs_20 02 05 24.4
comp=Z,3µm,20.0s
BRLK Bradley Lake 99.26 27 IAmb IAmb 01 16 30.9
comp=Z,29nm,0.8s
SML Sawmill 99.47 25 IAmb IAmb 01 16 32.8
comp=Z,24nm,0.8s
SML IAMs_20 IAMs_20 02 06 01.1
comp=Z,3µm,20.0s
KNK Knik Glacier 99.60 25 IAMs_20 IAMs_20 02 06 20.6
comp=Z,3µm,19.0s
SCM Sheep Creek Mo 99.88 25 IAMs_20 IAMs_20 02 06 21.5
comp=Z,3µm,20.0s
A36M Sachs Harbour 100.06 11 P **Pdif** **01 16 13.9 +0.3**
baz=321,SNR=59
SCRK Sand Creek 100.11 22 IAMs_20 IAMs_20 02 05 54.8
comp=Z,3µm,22.0s
GLI Glacier Island 100.43 25 IAMs_20 IAMs_20 02 06 53.7
comp=Z,3µm,21.0s
EGAK Eagle 100.69 21 IAMs_20 IAMs_20 02 07 04.1
comp=Z,4µm,22.0s
FID Port Fidalgo 100.76 25 IAMs_20 IAMs_20 02 07 03.4
comp=Z,3µm,20.0s
INK Inuvik 100.85 16 PKKPbc PKKPbc 01 32 29.7 -2.9
comp=Z,5.3nm,1.0s,baz=135,slow=3.2,SNR=12
INK Inuvik 100.85 16 IAMs_20 IAMs_20 02 08 40.1
comp=Z,4µm,20.0s
HIN Hinchinbrook I 100.92 26 IAMs_20 IAMs_20 02 07 10.7
comp=Z,3µm,20.0s
EPYK Eagle Plains 101.19 18 P **Pdif** **01 16 18.1 -0.7**
baz=309
RAGM Ragged Mountai 101.71 25 IAMs_20 IAMs_20 02 07 53.6
comp=Z,4µm,19.0s
DAWY Dawson 101.73 21 IAMs_20 IAMs_20 02 07 46.1
comp=Z,5µm,22.0s
C36M Paulatuk 102.39 13 P **Pdif** **01 16 23.8 -0.3**
baz=322,SNR=20
ILULI Ilulissat 102.64 348 IAMs_20 IAMs_20 02 07 02.5
comp=Z,3µm,22.0s
YAH Yahtse 102.96 25 IAMs_20 IAMs_20 02 08 19.9
comp=Z,3µm,22.0s
SKAG Skagway 106.09 23 IAMs_20 IAMs_20 02 10 38.7
comp=Z,5µm,22.0s
NRS Narsarsuaq 107.22 340 IAMs_20 IAMs_20 02 07 29.2
comp=Z,2µm,21.0s
ASCN Ascension 107.49 263 IAMs_20 IAMs_20 02 00 25.7
comp=Z,3µm,20.0s
SIT Sitka 107.62 25 IAMs_20 IAMs_20 02 12 45.1
comp=Z,2µm,20.0s
IVI Ivigtut 108.09 341 IAMs_20 IAMs_20 02 13 28.4
comp=Z,3µm,19.0s
DLBC Denise Lake 108.82 22 IAMs_20 IAMs_20 02 12 22.8
comp=Z,3µm,20.0s
WRAK Wrangell Islan 109.28 25 IAMs_20 IAMs_20 02 12 35.1
comp=Z,3µm,20.0s
YKA Yellowknife Ar 110.26 13 Pdiff **Pdif** **01 16 59.2 +0.1**
comp=Z,1.2nm,0.8s,baz=329,slow=3.9,SNR=15
YKA PKiKP **PKiKP** **01 20 59.4 -0.8**
comp=Z,5.2nm,1.0s,baz=334,slow=1.9,SNR=14
YKA PP **PP** **01 21 30.9 -3.2**
comp=Z,6.8nm,0.9s,baz=334,slow=7.1,SNR=5.7
YKA PKKPbc **PKKPbc** **01 32 01.2 -2.5**
comp=Z,3.2nm,0.8s,baz=144,slow=3.1,SNR=24
YKA PKKPab **PKKPab** **01 32 12.2 -1.5**
comp=Z,23nm,1.1s,baz=143,slow=4.4,SNR=32
YKA SKKPbc SKKPbc 01 35 55.6 +10
comp=Z,1.5nm,1.1s,baz=165,slow=4.0,SNR=4.5
YKA PKPPKP **P'P'df** **01 40 26.6 -3.4**
comp=Z,0.2nm,0.7s,baz=133,slow=3.5,SNR=3.9
FCC Fort Churchill 116.96 4 IAMs_20 IAMs_20 02 18 57.3
comp=Z,3µm,20.0s
TBI Tubuai 117.16 114 *e*PP PP 01 22 24.0 -0.9
comp=Z,463nm,27.5s
TBI *e*SP SP 01 32 01.6 -3.6
comp=Z,949nm,33.0s
TBI *e*SS **SS** **01 38 28.5 -4.0**
comp=Z,2µm,41.8s
TBI Tubuai 117.16 114 *e*LR LR 01 56 53.3
comp=Z,4µm,22.8s
PMSA Palmer Station 117.33 191 IAMs_20 IAMs_20 02 07 47.6
comp=Z,3µm,21.0s
PPT2 Papeete2 117.65 108 *e*PP PP 01 22 24.3 -4.3
comp=Z,396nm,26.5s
PPT2 *e*SP SP 01 32 05.9 -4.1
comp=Z,2µm,35.5s
PPT2 *e*SS **SS** **01 38 34.4 -5.0**
comp=Z,5µm,33.0s
PPT2 Papeete2 117.65 108 *e*LR LR 01 57 16.4
comp=Z,3µm,24.0s
PPT Papeete 117.65 108 PKP **PKiKP** **01 21 16.8 +1.1**
comp=Z,60nm,1.1s,baz=256,slow=12,SNR=2.4
LLLB Lillooet 117.80 24 IAMs_20 IAMs_20 02 16 49.4
comp=Z,3µm,21.0s
SCHQ Schefferville 118.74 347 PKP **PKPdf** **01 21 16.6 -0.1**
comp=Z,11nm,0.8s,baz=58,slow=2.5,SNR=15
SCHQ PKKPbc **PKKPbc** **01 31 32.3 -2.2**
comp=Z,9.7nm,0.7s,baz=215,slow=3.5,SNR=9.4
SCHQ Schefferville 118.74 347 **PKPdf** **01 21 16.7 -0.1**
SCHQ IAMs_20 IAMs_20 02 17 46.6
comp=Z,2µm,22.0s
A04D Lummi Island 118.88 26 P **PKPdf** **01 21 16.9 -0.2**
baz=319
NLWA Neilton Lookou 119.34 28 **PKiKP** **01 21 18.8 +0.6**
B05A Bryant 119.49 26 P **PKiKP** **01 21 18.4 +0.1**
baz=319,SNR=23
D03D Eldon 119.60 27 P **PKiKP** **01 21 19.4 +0.8**
baz=318,SNR=6.8
FFC Flin Flon 119.98 10 PKIKP **PKPdf** **01 21 18.4 -0.7**
FFC Flin Flon 119.98 10 **PKPdf** **01 21 18.4 -0.7**
FFC Flin Flon 119.98 10 IAMs_20 IAMs_20 02 22 40.3
comp=Z,2µm,19.0s
C06D Leavenworth 120.28 26 P **PKPdf** **01 21 19.6 -0.3**
baz=320
E04D Cinebar 120.56 28 P **PKiKP** **01 21 20.8 +0.3**
baz=318,SNR=9.0
B08A Colville Reser 120.59 24 IAMs_20 IAMs_20 02 18 34.4
comp=Z,3µm,21.0s
F04D Rainier, OR 120.71 28 P **PKiKP** **01 21 21.2 +0.4**
baz=317
DRLN Deer Lake 120.78 338 **PKPdf** **01 21 20.1 -0.6**
G03D McMinnville, O 121.22 29 P **PKiKP** **01 21 22.4 +0.6**
baz=317,SNR=6.4
C09A Chrisman Ranch 121.47 24 IAMs_20 IAMs_20 02 19 21.5
comp=Z,3µm,20.0s
NEW Newport 121.55 23 P **PKPdf** **01 21 22.0 -0.4**
baz=324
NEW Newport 121.55 23 IAMs_20 IAMs_20 02 20 23.7
comp=Z,2µm,21.0s
F05D White Salmon 121.58 27 P **PKiKP** **01 21 22.5 -0.1**
baz=319
COR Corvallis 121.66 30 PKIKP **PKiKP** **01 21 23.3 +0.6**
COR MLR MLR
comp=Z,2µm,22.0s
COR Corvallis 121.66 30 **PKiKP** **01 21 23.3 +0.6**
I02D Swisshome 121.73 30 P **PKiKP** **01 21 23.4 +0.5**
baz=316
H04D Lebanon 121.98 29 P **PKiKP** **01 21 23.6 +0.3**
baz=317,SNR=27
WALA Waterton Lakes 122.07 20 IAMs_20 IAMs_20 02 15 57.3
comp=Z,2µm,22.0s
G05D Wamic, OR 122.12 28 P **PKiKP** **01 21 23.9 +0.2**
baz=319
I03D Drain, OR 122.28 30 P **PKiKP** **01 21 24.3 +0.4**
baz=316,SNR=25
J01E Myrtle Point 122.36 31 P **PKiKP** **01 21 24.2 0.0**
baz=315,SNR=15
E09A Wood Farm, Sta 122.55 25 IAMs_20 IAMs_20 02 19 56.1
comp=Z,2µm,21.0s
I04A Tendick Farm, 122.67 30 P **PKPdf** **01 21 24.5 -0.1**
baz=317,SNR=22
I05D Terrebonne, OR 122.79 29 P **PKiKP** **01 21 25.3 +0.2**
baz=318,SNR=16
K02D Willamette Mer 122.83 31 P **PKiKP** **01 21 25.5 +0.3**
baz=315,SNR=13
JTMT Jette 123.05 21 IAMs_20 IAMs_20 02 22 03.2
comp=Z,2µm,20.0s
J04D Umpqua Nationa 123.23 30 P **PKiKP** **01 21 26.1 0.0**
baz=317,SNR=14
F10A Beach Ranch, E 123.36 25 **PKPdf** **01 21 25.9 -0.1**
F10A IAMs_20 IAMs_20 02 21 13.7
comp=Z,2µm,21.0s
J05D Fort Rock, OR 123.63 29 P **PKiKP** **01 21 27.2 +0.3**
baz=318,SNR=32
K04D Chiloquin, OR 123.86 30 P **PKiKP** **01 21 27.2 -0.1**
baz=317
L04D Klamath Falls 123.87 31 P **PKPdf** **01 21 27.1 0.0**
baz=316,SNR=16
MSO Missoula 123.95 22 P **PKPdf** **01 21 26.6 -0.5**
baz=327
MSO Missoula 123.95 22 IAMs_20 IAMs_20 02 26 52.0
comp=Z,2µm,20.0s
M02C Callahan 124.18 32 P **PKiKP** **01 21 28.3 +0.4**
baz=316,SNR=31
BMO Blue Mountains 124.22 26 IAMs_20 IAMs_20 02 20 37.6
comp=Z,2µm,22.0s
EGMT Eagleton 124.34 18 P **PKPdf** **01 21 27.9 +0.1**
baz=332
EGMT Eagleton 124.34 18 IAMs_20 IAMs_20 02 18 25.1
comp=Z,3µm,22.0s
M04C Macdoel 124.43 31 P **PKiKP** **01 21 28.5 0.0**
baz=317,SNR=11
N02D Trinity Center 124.56 32 P **PKiKP** **01 21 28.9 +0.2**
baz=316,SNR=16
CHGQ Chibougamau 124.92 350 P **PKPdf** **01 21 28.2 -0.6**
baz=16,SNR=26
O02D Mt. Diablo Mer 125.08 33 P **PKiKP** **01 21 30.0 +0.2**
baz=315,SNR=14
ULM Lac du Bonnet 125.22 7 PKP **PKPdf** **01 21 28.6 -0.7**
comp=Z,38nm,0.9s,baz=3.4,slow=1.2,SNR=24
ULM PP **PP** **01 23 16.1 -1.9**
comp=Z,26nm,1.1s,baz=344,slow=6.7,SNR=8.3
ULM SKKPbc SKKPbc 01 35 01.7 +3.6
comp=Z,8.2nm,0.9s,baz=187,slow=4.6,SNR=4.4
ULM PKPPKP **P'P'df** **01 40 01.5 +0.2**
comp=Z,2.5nm,0.6s,baz=153,slow=3.6,SNR=2.9
BATG Bathurst New B 125.40 342 IAMs_20 IAMs_20 02 18 50.2
comp=Z,3µm,21.0s
DGMT Dagmar 125.46 14 P **PKiKP** **01 21 30.1 -0.1**
baz=339,SNR=8.4
GBN Guysborough 125.50 338 IAMs_20 IAMs_20 02 22 32.1
comp=Z,2µm,20.0s
WVOR Wild Horse Val 125.52 28 PKIKP **PKiKP** **01 21 30.9 +0.2**
WVOR Wild Horse Val 125.52 28 PKPdf **PKiKP** **01 21 30.9 +0.2**
O03E Paynes Creek 125.52 32 P **PKPdf** **01 21 29.8 -0.4**
baz=316,SNR=20
MATQ Matagami 125.58 352 P **PKPdf** **01 21 29.4 -0.6**
baz=12
DLMT Dillon 125.69 22 IAMs_20 IAMs_20 02 23 10.0
comp=Z,2µm,19.0s
MFID Camas Ranch 126.01 26 IAMs_20 IAMs_20 02 22 05.5
comp=Z,2µm,22.0s
LSQQ Lebel-sur-Quev 126.17 352 P **PKPdf** **01 21 30.6 -0.5**
baz=13
D63A Stockholm 126.21 344 P **PKPdf** **01 21 30.2 -1.1**
baz=24
D62A Allapoint, All 126.43 345 P **PKPdf** **01 21 31.1 -0.5**
baz=23
D62A Allapoint, All 126.43 345 IAMs_20 IAMs_20 02 22 54.2
comp=Z,3µm,20.0s
PQI Presque Isle 126.52 344 IAMs_20 IAMs_20 02 22 52.8
comp=Z,2µm,21.0s
LAO LASA Array 126.58 16 P **PKiKP** **01 21 32.9 +0.4**
baz=336,SNR=54
LAO LASA Array 126.58 16 IAMs_20 IAMs_20 02 25 41.3
comp=Z,2µm,20.0s
D61A St Aubert, Com 126.61 346 P **PKPdf** **01 21 31.5 -0.5**
baz=21,SNR=9.1
E64A Bridgewater 126.70 343 P **PKPdf** **01 21 31.5 -0.7**
baz=24,SNR=6.2
EFI East Falkland 126.84 202 PKIKP **PKiKP** **01 21 33.1 +0.3**
EFI MLR MLR
comp=Z,2µm,21.0s
EFI East Falkland 126.84 202 **PKiKP** **01 21 33.1 +0.3**
EFI East Falkland 126.84 202 IAMs_20 IAMs_20 02 15 04.5
comp=Z,2µm,21.0s
E63A Oxbow 126.86 344 P **PKPdf** **01 21 31.9 -0.7**
baz=24,SNR=6.7
MDND Maddock 127.01 10 P **PKPdf** **01 21 32.0 -0.8**
baz=344
MG01 Puerto William 127.02 194 IAMs_20 IAMs_20 02 12 40.7
comp=Z,3µm,20.0s
LATQ La Tuque 127.03 348 P **PKPdf** **01 21 32.2 -0.6**
baz=18,SNR=14
D60A Saint Jean D'O 127.06 346 P **PKPdf** **01 21 32.3 -0.5**
baz=20
RLMT Red Lodge 127.07 19 P **PKPdf** **01 21 33.4 +0.1**
baz=332
RLMT Red Lodge 127.07 19 IAMs_20 IAMs_20 02 27 35.3
comp=Z,2µm,18.0s
AGMN Agassiz Nation 127.14 7 P **PKPdf** **01 21 32.4 -0.7**
baz=349,SNR=15
VLDQ Val d'Or 127.16 352 IAMs_20 IAMs_20 02 21 47.3
comp=Z,3µm,22.0s
D59A Saint-Raymond 127.18 347 P **PKPdf** **01 21 32.5 -0.7**
baz=19
H17A Grant Village 127.25 21 P **PKiKP** **01 21 35.3 +1.1**
baz=330
D58A Chemin du LacG 127.33 348 P **PKPdf** **01 21 32.6 -0.8**
baz=18,SNR=12
F64A Sherman 127.35 343 P **PKPdf** **01 21 33.2 -0.2**
baz=24,SNR=6.5
F64A Sherman 127.35 343 IAMs_20 IAMs_20 02 23 26.8
comp=Z,2µm,21.0s
E61A Lac Etchemin 127.40 345 P **PKPdf** **01 21 33.6 0.0**
baz=21,SNR=15
IMW Indian Meadow 127.56 21 IAMs_20 IAMs_20 02 29 28.1
comp=Z,3µm,19.0s
GGN Saint George 127.58 342 IAMs_20 IAMs_20 02 17 56.7
comp=Z,3µm,22.0s
D57A Chemin Vers le 127.61 348 P **PKPdf** **01 21 33.5 -0.5**
baz=17,SNR=14
E60A Ste Agathe de 127.69 346 P **PKPdf** **01 21 33.5 -0.6**
baz=20
F63A Nahmakanta, Br 127.71 344 P **PKPdf** **01 21 33.8 -0.4**
baz=23,SNR=5.7
F63A Nahmakanta, Br 127.71 344 IAMs_20 IAMs_20 02 23 26.2
comp=Z,3µm,21.0s
G65A Princeton 127.73 342 P **PKPdf** **01 21 33.4 -0.8**
baz=25
G65A Princeton 127.73 342 IAMs_20 IAMs_20 02 20 08.7
comp=Z,3µm,21.0s
FXWY Fox Creek 127.75 22 IAMs_20 IAMs_20 02 29 35.4
comp=Z,3µm,19.0s
D56A ZEC Mazanza, M 127.75 349 P **PKPdf** **01 21 33.9 -0.4**
baz=16,SNR=16
E59A St. Maurice 127.83 347 P **PKPdf** **01 21 33.3 -1.0**
baz=19
EYMN Ely 127.90 4 P **PKPdf** **01 21 34.4 -0.1**
baz=355,SNR=23
EYMN Ely 127.90 4 IAMs_20 IAMs_20 02 25 25.6
comp=Z,2µm,20.0s
D55A Sainte-Anne-du 127.91 350 P **PKPdf** **01 21 33.8 -0.7**
baz=15,SNR=23
F61A St Evariste 127.95 346 P **PKPdf** **01 21 34.6 0.0**
baz=21,SNR=9.1
D54A Lac Fusel, La 127.98 351 P **PKPdf** **01 21 33.8 -0.8**
baz=13,SNR=9.2
H66A Whiting 128.03 342 P **PKPdf** **01 21 34.4 -0.4**
baz=26
G64A Maxfield 128.03 343 P **PKPdf** **01 21 34.4 -0.4**
baz=24
REDW Red Top Meadow 128.05 22 **PKPdf** **01 21 35.2 0.0**
E58A La Victoria 128.10 348 P **PKPdf** **01 21 34.6 -0.2**
baz=18,SNR=12
EMMW East Machias 128.14 342 IAMs_20 IAMs_20 02 20 20.7
comp=Z,2µm,21.0s
F60A Warwick 128.19 346 P **PKPdf** **01 21 34.2 -0.8**
baz=20,SNR=9.7
D53A Lac Vacive, Po 128.21 352 P **PKPdf** **01 21 34.7 -0.4**
baz=12,SNR=16
D53A Lac Vacive, Po 128.21 352 IAMs_20 IAMs_20 02 27 56.9
comp=Z,2µm,19.0s
E57A Chemin Saint G 128.24 348 P **PKPdf** **01 21 34.3 -0.9**
baz=17,SNR=20

E56A	St. Veronique baz=16,SNR=21	128.29	349	P		PKPdf	01 21 34.5	-0.7
H65A	Eastbrook baz=24	128.39	343	P		PKPdf	01 21 35.0	-0.5
D50A	G1974 Best Tow baz=9.4,SNR=10	128.40	354	P		PKPdf	01 21 34.4	-1.1
G63A	Kingsbury baz=23	128.40	344	P		PKPdf	01 21 35.1	-0.4
D51A	Lot 18 Range I baz=10.0	128.42	353	P		PKPdf	01 21 34.3	-1.2
D49A	Beulah Townshi baz=7.5,SNR=5.2	128.44	355	P		PKPdf	01 21 34.7	-0.8
AHID	Auburn Hatcher comp=Z,3µm,20.0s	128.47	22	IAMs_20	IAMs_20		02 30 13.6	
F59A	Saint Guilaume baz=18	128.49	347	P		PKPdf	01 21 35.2	-0.5
G62A	West of Eustis baz=21	128.54	345	P		PKPdf	01 21 35.6	-0.2
E55A	Montcerf-Lytto baz=14	128.56	350	P		PKPdf	01 21 34.9	-0.8
D48A	Paudash Townsh baz=6.9,SNR=20	128.58	355	P		PKPdf	01 21 34.6	-1.2
F58A	St-Lin Laurent baz=17	128.70	348	P		PKPdf	01 21 35.3	-0.7
H64A	Troy baz=23	128.72	344	P		PKPdf	01 21 35.6	-0.5
NVAR	Mina Array Bea comp=Z,30nm,1.0s,baz=294,slow=1.5,SNR=66	128.73	31	PKP		PKPdf	01 21 35.9	-0.7
NVAR	comp=Z,1.6nm,1.0s,baz=146,slow=5.5,SNR=5.3			SKKPbc	SKKPbc		01 34 36.3	-10
G61A	St-Isidore-de- baz=20	128.73	346	P		PKPdf	01 21 35.4	-0.8
E54A	Lac Daplat, Po baz=13,SNR=7.0	128.76	351	P		PKPdf	01 21 35.3	-0.8
D47A	Chapleau baz=5.3,SNR=14	128.79	356	P		PKPdf	01 21 35.2	-1.0
RCBR	Riachuelo	128.83	266	PKIKP		PKPdf	01 21 37.3	+0.1
RCBR	Riachuelo	128.83	266			PKPdf	01 21 37.3	+0.1
RCBR	Riachuelo comp=Z,2µm,21.0s	128.83	266	IAMs_20	IAMs_20		02 09 59.2	
RCBR	Riachuelo	128.83	266	*e*P		PKiKP	01 21 38.2	+0.3
E53A	Dumoine, Ponti baz=12,SNR=8.2	128.89	351	P		PKPdf	01 21 35.6	-0.9
WVL	Waterville comp=Z,2µm,20.0s	128.91	344	IAMs_20	IAMs_20		02 24 21.0	
F57A	Harrington baz=16	128.93	349	P		PKPdf	01 21 35.6	-0.8
H63A	New Sharon baz=22	128.93	344	P		PKPdf	01 21 35.9	-0.6
E51A	G1948 Merrick baz=9.9,SNR=12	128.98	353	P		PKPdf	01 21 35.8	-0.7
D46A	Sault St. Mari baz=4.1,SNR=9.9	129.01	357	P		PKPdf	01 21 35.9	-0.7
BW06	Boulder Array baz=331	129.04	21	P		PKPdf	01 21 37.0	-0.1
BW06	Boulder Array comp=Z,2µm,20.0s	129.04	21	IAMs_20	IAMs_20		02 30 20.5	
PDAR	Pinedale Array comp=Z,1.3nm,0.8s,baz=49,slow=2.9,SNR=4.1	129.04	21	PKhKP	PKPpre		01 21 27.6	
PDAR	comp=Z,20nm,0.9s,baz=27,slow=0.7,SNR=69			PKP		PKPdf	01 21 36.7	-0.4
PDAR	comp=Z,3.7nm,1.0s,baz=19,slow=3.8,SNR=2.7			PP		PP	01 23 43.8	+0.1
PDAR	comp=Z,3.4nm,1.1s,baz=162,slow=6.2,SNR=4.4			SKKPbc	SKKPbc		01 34 41.5	-3.5
MLAC	Mammoth, Mammt baz=318	129.04	32	P		PKiKP	01 21 37.8	-0.2
G60A	Masonville baz=19	129.10	346	P		PKPdf	01 21 36.2	-0.7
E52A	Mattawa baz=11	129.12	352	P		PKPdf	01 21 36.0	-0.8
F55A	Otter Lake baz=14	129.21	350	P		PKPdf	01 21 36.0	-1.0
E50A	Wahnapitae baz=8.4,SNR=12	129.23	354	P		PKPdf	01 21 36.5	-0.5
E38A	The Farm, Brul comp=Z,2µm,20.0s	129.23	4	IAMs_20	IAMs_20		02 25 01.9	
HWUT	Hardware Ranch comp=Z,2µm,19.0s	129.28	23	IAMs_20	IAMs_20		02 31 02.0	
E48A	Lockeyer baz=6.5,SNR=11	129.30	355	P		PKPdf	01 21 36.5	-0.6
G59A	Clarenceville baz=18	129.31	347	P		PKPdf	01 21 36.6	-0.6
E44A	Grand Marais A baz=1.7,SNR=7.2	129.35	359	P		PKPdf	01 21 37.2	-0.1
E44A	Grand Marais A comp=Z,2µm,20.0s	129.35	359	IAMs_20	IAMs_20		02 28 16.9	
ALGO	Algonquin Park baz=12,SNR=7.9	129.36	352	P		PKPdf	01 21 36.4	-0.9
E47A	Iron Bridge baz=5.1,SNR=8.3	129.40	356	P		PKPdf	01 21 36.9	-0.5
ORIO	Orleans, Innes baz=15,SNR=6.4	129.43	349	P		PKPdf	01 21 36.6	-0.8
GO10	Punta Arenas	129.45	193			PKiKP	01 21 38.2	+0.2
I64A	Boothbay baz=23	129.50	344	P		PKPdf	01 21 37.1	-0.5
H61A	Lyndonville baz=20,SNR=6.1	129.53	346	P		PKPdf	01 21 37.1	-0.6
RSSD	Black Hills baz=338	129.55	16	P		PKPdf	01 21 37.8	-0.2
F51A	Arnstein baz=9.5,SNR=7.7	129.63	353	P		PKPdf	01 21 36.7	-1.1
FRNY	Flat Rock comp=Z,2µm,21.0s	129.63	347	IAMs_20	IAMs_20		02 23 01.8	
I63A	Otisfield baz=22	129.64	344	P		PKPdf	01 21 37.0	-0.9
G57A	Newington baz=16,SNR=7.6	129.66	349	P		PKPdf	01 21 37.1	-0.7
F52A	Sundridge baz=10,SNR=14	129.69	353	P		PKPdf	01 21 37.9	-0.1
H60A	Morristown baz=19	129.69	346	P		PKPdf	01 21 37.5	-0.5
VOG	Valley Oaks Go baz=316	129.71	34	P		PKPdf	01 21 38.2	0.0
TIN	Tinemaha, Big baz=318	129.80	32	P		PKPdf	01 21 38.7	+0.2
F36A	Milaca	129.81	6	PKPdf		PKPdf	01 21 38.1	-0.1
LBNH	Lisbon baz=20	129.81	346	P		PKPdf	01 21 38.4	+0.2
G55A	Calabogie baz=14,SNR=6.8	129.83	350	P		PKPdf	01 21 37.6	-0.7
H59A	Cadyville baz=18,SNR=8.6	129.84	347	P		PKPdf	01 21 38.1	-0.1
COWI	Conover comp=Z,2µm,19.0s	129.85	2	IAMs_20	IAMs_20		02 28 46.3	
G54A	Lake Saint Pet baz=12,SNR=11	129.91	352	P		PKPdf	01 21 37.8	-0.6
VT1	Waterbury comp=Z,3µm,21.0s	129.92	346	IAMs_20	IAMs_20		02 23 14.2	
DUG	Dugway, Tooele baz=326,SNR=31	129.94	26	P		PKiKP	01 21 39.3	-0.3
F48A	Evansville baz=6.0,SNR=5.9	129.98	356	P		PKPdf	01 21 38.1	-0.4
F49A	Sandfield baz=6.8,SNR=8.3	130.00	355	P		PKPdf	01 21 37.8	-0.8
I62A	Tamworth baz=21	130.00	345	P		PKPdf	01 21 38.5	-0.1
I62A	Tamworth comp=Z,3µm,21.0s	130.00	345	IAMs_20	IAMs_20		02 21 43.8	
NBPA	Parau_RN	130.03	266	*e*P		PKiKP	01 21 40.8	+0.6
LONY	Lake Ozonia baz=16,SNR=8.9	130.05	348	P		PKPdf	01 21 38.7	0.0
LONY	Lake Ozonia comp=Z,2µm,21.0s	130.05	348	IAMs_20	IAMs_20		02 25 27.8	
SMMC	Simmler baz=315	130.08	35	P		PKPdf	01 21 38.7	-0.4
H58A	Gabriels baz=17	130.16	348	P		PKPdf	01 21 38.4	-0.5
R11A	Troy Canyon, C baz=322,SNR=49	130.16	29	P		PKiKP	01 21 40.0	-0.2
K22A	Casper baz=335,SNR=16	130.17	19	P		PKPdf	01 21 38.9	-0.3
K22A	Casper comp=Z,3µm,20.0s	130.17	19	IAMs_20	IAMs_20		02 28 16.2	
I61A	Oroboro, Fairl baz=20	130.17	346	P		PKPdf	01 21 39.0	+0.1
VES	Vestal, Richgr baz=317	130.22	34	P		PKPdf	01 21 38.7	-0.5
G53A	Haliburton baz=11,SNR=7.4	130.25	352	P		PKPdf	01 21 38.9	-0.1
F45A	CMU Biological baz=2.2,SNR=9.7	130.27	358	P		PKPdf	01 21 38.8	-0.2
RKT	Rikitea comp=Z,1µm,44.5s	130.28	117	*e*SS		SS	01 41 19.9	+1.5
RKT	Rikitea comp=Z,2µm,36.0s	130.28	117	*e*LR		LR	02 03 07.2	
GRAC	Grapevine Rang baz=319,SNR=6.8	130.30	32	P		PKiKP	01 21 40.0	-0.3
CWC	Cottonwood Cre baz=318	130.33	33	P		PKPdf	01 21 39.9	+0.2
H56A	Elgin baz=14,SNR=10	130.40	350	P		PKPdf	01 21 38.9	-0.4
HNH	Hanover comp=Z,3µm,22.0s	130.40	346	IAMs_20	IAMs_20		02 22 55.2	
SUSD	Miller baz=345	130.41	11	P		PKPdf	01 21 39.2	-0.2
SUSD	Miller comp=Z,2µm,21.0s	130.41	11	IAMs_20	IAMs_20		02 25 07.3	
PKM	Mcpherson Peak baz=315	130.48	36	P		PKiKP	01 21 41.0	+0.1
J63A	Strafford baz=21	130.49	344	P		PKPdf	01 21 39.6	+0.1
SPMN	Marine on St. baz=353	130.51	5	P		PKPdf	01 21 39.1	-0.5
SPMN	Marine on St. comp=Z,3µm,20.0s	130.51	5	IAMs_20	IAMs_20		02 27 24.6	
I60A	Shoreham baz=18,SNR=8.0	130.51	347	P		PKPdf	01 21 39.5	0.0
H55A	Tweed baz=13,SNR=11	130.59	351	P		PKPdf	01 21 39.3	-0.3
NCB	Newcomb comp=Z,2µm,21.0s	130.59	348	IAMs_20	IAMs_20		02 25 24.2	
G46A	Petoskey baz=3.1,SNR=6.4	130.62	358	P		PKPdf	01 21 39.6	-0.1
G40A	Rib Lake comp=Z,2µm,21.0s	130.64	3	IAMs_20	IAMs_20		02 25 26.2	
I59A	Olmsteadville baz=18,SNR=7.0	130.69	347	P		PKPdf	01 21 39.6	-0.3
ISA	Isabella, Lake baz=317	130.69	34	P		PKPdf	01 21 40.4	+0.2
G47A	Hillman baz=4.4,SNR=12	130.71	357	P		PKPdf	01 21 39.8	-0.1
J62A	Henniker baz=20	130.73	345	P		PKPdf	01 21 40.2	+0.2
H53A	Bobcaygeon baz=11,SNR=7.0	130.79	352	P		PKPdf	01 21 39.9	-0.1
J61A	Chester baz=19	130.80	346	P		PKPdf	01 21 40.4	+0.3
ARVC	Arvin baz=316	130.88	35	P		PKiKP	01 21 41.2	-0.2
H52A	Wyevale baz=9.7	130.89	353	P		PKPdf	01 21 39.6	-0.7
TPNV	Topopah Spring baz=320	130.91	31	P		PKPdf	01 21 41.2	+0.4
I57A	Carthage baz=15,SNR=6.0	130.92	349	P		PKPdf	01 21 40.0	-0.4
G45A	Suttons Bay baz=2.1	130.92	358	P		PKPdf	01 21 39.8	-0.5
G45A	Suttons Bay comp=Z,3µm,21.0s	130.92	358	IAMs_20	IAMs_20		02 26 19.5	
MPMC	Manual Prospec baz=348,SNR=11	130.94	33	P		PKiKP	01 21 41.8	0.0
RDMU	Red Mountain	130.94	23	PKPdf		PKPdf	01 21 40.1	-0.7
FURC	Furnace Creek, baz=319,SNR=5.4	130.96	32	P		PKiKP	01 21 41.4	-0.1
I55A	Frankford baz=13,SNR=6.9	131.00	351	P		PKPdf	01 21 40.1	-0.4
I58A	Old Forge baz=16	131.02	348	P		PKPdf	01 21 40.3	-0.3
ACCN	Adirondack Com comp=Z,2µm,21.0s	131.03	347	IAMs_20	IAMs_20		02 23 58.8	
GLMI	Grayling baz=3.5	131.10	358	P		PKPdf	01 21 40.4	-0.3
J60A	Lant Hill Farm baz=18,SNR=5.1	131.11	347	P		PKPdf	01 21 40.9	+0.2
J59A	Piesco baz=17,SNR=7.0	131.14	348	P		PKPdf	01 21 40.6	-0.2
J59A	Piesco comp=Z,3µm,21.0s	131.14	348	IAMs_20	IAMs_20		02 25 49.6	
H48A	Harrisville baz=5.2	131.15	356	P		PKPdf	01 21 40.4	-0.4
H48A	Harrisville comp=Z,2µm,21.0s	131.15	356	IAMs_20	IAMs_20		02 25 09.7	
K63A	Dunstable baz=21	131.16	345	P		PKPdf	01 21 40.4	-0.4
PECO	Prince Edward comp=Z,2µm,20.0s	131.16	350	IAMs_20	IAMs_20		02 24 18.2	
LRMC	Laurel Mtn Rad baz=318	131.26	33	P		PKiKP	01 21 42.1	-0.3
H47A	Mio baz=4.0	131.30	357	P		PKPdf	01 21 41.0	-0.1
OSI	Osito Audit: C baz=316	131.31	35	P		PKiKP	01 21 42.2	-0.2
HRV	Adam Dziewonsk baz=21	131.34	345	P		PKPdf	01 21 41.1	-0.1
HRV	Adam Dziewonsk comp=Z,2µm,21.0s	131.34	345	IAMs_20	IAMs_20		02 22 11.1	
H45A	Beulah baz=1.6	131.34	359	P		PKPdf	01 21 40.9	-0.3
K62A	Royalston baz=20	131.37	345	P		PKPdf	01 21 41.5	+0.3
K62A	Royalston comp=Z,3µm,21.0s	131.37	345	IAMs_20	IAMs_20		02 24 12.4	
J58A	Remsen baz=16,SNR=9.1	131.40	348	P		PKPdf	01 21 41.4	+0.1
J58A	Remsen comp=Z,2µm,21.0s	131.40	348	IAMs_20	IAMs_20		02 25 46.5	
H46A	Fife Lake baz=2.7	131.41	358	P		PKPdf	01 21 41.1	-0.2
J57A	Williamstown baz=15,SNR=8.6	131.49	349	P		PKPdf	01 21 41.1	-0.3
J57A	Williamstown comp=Z,2µm,20.0s	131.49	349	IAMs_20	IAMs_20		02 25 38.9	
I52A	Shelburne baz=9.4	131.49	353	P		PKPdf	01 21 41.2	-0.2
GO09	Cerro Castillo	131.49	192			PKiKP	01 21 41.7	-0.5
ECSD	EROS Data Cent baz=348	131.51	9	P		PKPdf	01 21 41.4	-0.1
EDW2	Edwards Air Fo baz=317	131.53	34	P		PKPdf	01 21 42.2	+0.4
K61A	Williamstown baz=19	131.62	346	P		PKPdf	01 21 41.6	-0.1
TRY	Troy comp=Z,3µm,20.0s	131.65	347	IAMs_20	IAMs_20		02 24 05.2	
I53A	Kortright Cn E baz=10	131.66	353	P		PKPdf	01 21 41.3	-0.4
L64A	Middleborough baz=22	131.67	344	P		PKPdf	01 21 41.5	-0.3
L61B	Northampton baz=20	131.68	346	P		PKPdf	01 21 41.5	-0.3
I48A	Sherman Twp baz=4.7	131.69	357	P		PKPdf	01 21 41.6	-0.2
SHOC	Shoshone, Teco baz=320	131.70	32	P		PKiKP	01 21 43.3	+0.2
PHWY	Pilot Hill comp=Z,2µm,20.0s	131.72	18	IAMs_20	IAMs_20		02 31 53.1	
J56A	Wolcott baz=14,SNR=7.2	131.78	350	P		PKPdf	01 21 41.8	-0.2
DECC	Green Verdugo baz=316	131.79	35	P		PKPdf	01 21 42.6	+0.3
K60A	Five Rivers En baz=18	131.81	347	P		PKPdf	01 21 42.1	+0.1
O20A	White River Ci baz=331,SNR=29	131.82	22	P		PKPdf	01 21 42.2	-0.2
I51A	Listowel baz=8.3	131.85	354	P		PKPdf	01 21 41.9	-0.2
GSC	Goldstone, Bar baz=319,SNR=7.0	131.87	33	P		PKiKP	01 21 43.6	+0.1
K59A	Cooperstown baz=17	131.87	348	P		PKPdf	01 21 41.7	-0.5
I49A	Point Hope baz=5.9	131.87	356	P		PKPdf	01 21 41.8	-0.3
I49A	Point Hope comp=Z,2µm,20.0s	131.87	356	IAMs_20	IAMs_20		02 30 40.5	
I47A	Gladwin baz=3.6	131.90	357	P		PKPdf	01 21 41.7	-0.5
I45A	Fountain baz=1.4	131.94	359	P		PKPdf	01 21 41.8	-0.4
N23A	Red Feather La baz=335,SNR=5.3	131.94	19	P		PKPdf	01 21 42.7	0.0
J55A	Hilton baz=13,SNR=5.0	131.95	351	P		PKPdf	01 21 41.8	-0.5
L63A	North Scituate baz=21	131.95	344	P		PKPdf	01 21 41.9	-0.4
M65A	Busby, Falmout baz=22	131.96	343	P		PKPdf	01 21 42.3	-0.1
I46A	Reed City baz=2.4	132.01	358	P		PKPdf	01 21 41.9	-0.5
K58A	Earlville baz=16,SNR=6.9	132.04	348	P		PKPdf	01 21 42.2	-0.4
K58A	Earlville comp=Z,2µm,20.0s	132.04	348	IAMs_20	IAMs_20		02 26 38.6	
GDU01	Guandu, BA	132.05	255	*e*P		PKiKP	01 21 43.8	-0.5
I42A	Draeger Farm, comp=Z,3µm,22.0s	132.07	2	IAMs_20	IAMs_20		02 25 59.8	
L62A	Suffield	132.07	345	P		PKPdf	01 21 42.6	+0.1
J54A	Appleton baz=12	132.07	352	P		PKPdf	01 21 42.1	-0.4
RRX	Edison Barstow baz=318	132.08	33	P		PKiKP	01 21 43.8	-0.1
M66A	Nantucket baz=23	132.09	343	P		PKiKP	01 21 43.1	-0.5
M64A	Tiverton baz=22	132.13	344	P		PKPdf	01 21 42.9	+0.3
L61A	Hillsdale 1, H baz=18	132.13	346	P		PKPdf	01 21 42.7	0.0
MEDO	Medina comp=Z,2µm,21.0s	132.15	351	IAMs_20	IAMs_20		02 22 45.2	
BFSC	Mount Baldy Ra baz=317	132.18	34	P		PKPdf	01 21 43.3	+0.1
FMP	Fort Macarthur baz=316	132.20	35	P		PKPdf	01 21 43.4	+0.3
TUQ	Turquoise Moun baz=320	132.24	32	P		PKPdf	01 21 43.4	+0.1
K57A	Scipio Center baz=14,SNR=7.1	132.24	349	P		PKPdf	01 21 42.6	-0.3
J52A	Paris baz=9.1	132.34	353	P		PKPdf	01 21 42.4	-0.7
CIS	Catalina Islan baz=316	132.35	36	P		PKPdf	01 21 43.6	+0.1
K56A	Middlesex baz=13,SNR=8.2	132.42	350	P		PKPdf	01 21 42.8	-0.5
BSFB	Barra de Sao F	132.44	248	*e*P		PKPdf	01 21 44.2	+0.4
L59A	Walton baz=16	132.47	348	P		PKPdf	01 21 43.2	-0.2
J49A	Marlette baz=5.5	132.47	356	P		PKPdf	01 21 42.5	-0.8
HEC	Hector,Ludlow baz=319	132.48	33	P		PKPdf	01 21 42.9	-0.8
L60A	Shokan baz=18	132.48	347	P		PKPdf	01 21 43.7	+0.3
CAM01	Campos-RJ	132.49	244	*e*P		PKiKP	01 21 44.6	-0.4
M63A	Gales Ferry baz=21	132.50	344	P		PKPdf	01 21 43.3	-0.1
K55A	Perry baz=12	132.51	351	P		PKPdf	01 21 42.7	-0.7
J45A	Montague baz=1.1	132.54	359	P		PKPdf	01 21 42.9	-0.5
J48A	Bridge Port baz=4.7,SNR=12	132.58	357	P		PKPdf	01 21 43.2	-0.3
J48A	Bridge Port comp=Z,2µm,20.0s	132.58	357	IAMs_20	IAMs_20		02 30 06.4	
BBRC	Big Bear Solar baz=318	132.58	34	P		PKPdf	01 21 43.7	-0.3
BINY	Binghamton baz=15,SNR=13	132.66	349	P		PKPdf	01 21 43.1	-0.6
BINY	Binghamton comp=Z,3µm,20.0s	132.66	349	IAMs_20	IAMs_20		02 26 44.7	
M62A	Hamden baz=20	132.68	345	P		PKPdf	01 21 43.8	+0.1
J47A	Sunmer baz=3.3,SNR=6.1	132.69	358	P		PKPdf	01 21 43.5	-0.2
K54A	Basiliko Farm, baz=12,SNR=6.0	132.72	351	P		PKPdf	01 21 43.0	-0.8
SJMB	Sao Joao De Ma	132.78	248	*e*P		PKPdf	01 21 45.0	+0.5
L58A	Harry Jones Me baz=16,SNR=10	132.78	348	P		PKPdf	01 21 44.1	+0.2
K52A	Tillsonburg baz=8.9	132.82	353	P		PKPdf	01 21 43.2	-0.8
GMRC	Granite Mounta baz=320,SNR=12	132.87	32	P		PKiKP	01 21 45.6	0.0
WVNY	West Valley, N comp=Z,2µm,20.0s	132.91	351	IAMs_20	IAMs_20		02 23 15.4	
MURC	Murrieta baz=317	132.91	35	P		PKPdf	01 21 44.8	+0.4
K51A	Iona Station baz=7.8	132.97	354	P		PKPdf	01 21 43.8	-0.5
JFWS	Jewell Farm baz=356,SNR=6.9	132.99	3	P		PKPdf	01 21 43.5	-0.8
JFWS	Jewell Farm comp=Z,3µm,22.0s	132.99	3	IAMs_20	IAMs_20		02 25 40.2	
L56A	Greenwood baz=13,SNR=8.8	133.01	350	P		PKPdf	01 21 44.3	-0.1
L56A	Greenwood comp=Z,2µm,21.0s	133.01	350	IAMs_20	IAMs_20		02 24 01.9	
N63A	Mattituck baz=20	133.01	345	P		PKPdf	01 21 44.0	-0.3
L57A	Andrews Acres baz=14,SNR=9.9	133.01	349	P		PKPdf	01 21 44.2	-0.2
K50A	Casco baz=6.3	133.02	355	P		PKPdf	01 21 43.6	-0.7
K50A	Casco comp=Z,2µm,22.0s	133.02	355	IAMs_20	IAMs_20		02 23 46.0	
M61A	Granite Spring baz=18	133.02	346	P		PKPdf	01 21 43.8	-0.6
ISCO	Idaho Springs baz=335,SNR=5.7	133.03	19	P		PKPdf	01 21 44.6	-0.3
ISCO	Idaho Springs comp=Z,2µm,21.0s	133.03	19	IAMs_20	IAMs_20		02 28 26.2	
OGNE	Ogallala baz=340	133.04	15	P		PKPdf	01 21 44.1	-0.5
OGNE	Ogallala comp=Z,3µm,20.0s	133.04	15	IAMs_20	IAMs_20		02 27 15.2	
WSPT	Westport, CT comp=Z,2µm,20.0s	133.05	346	IAMs_20	IAMs_20		02 27 12.7	
K49A	Clarkson baz=5.2	133.07	356	P		PKPdf	01 21 43.6	-0.8
K48A	Perry baz=4.2,SNR=6.4	133.09	357	P		PKPdf	01 21 43.8	-0.7
PV20	West Nyswonger comp=Z,2µm,20.0s	133.10	23	IAMs_20	IAMs_20		02 31 49.2	
L55A	Hinsdale baz=12,SNR=11	133.10	351	P		PKPdf	01 21 44.4	-0.2
PV19	Morning Glory comp=Z,2µm,21.0s	133.12	24	IAMs_20	IAMs_20		02 31 48.8	
SMCO	Snowmass comp=Z,3µm,21.0s	133.12	21	IAMs_20	IAMs_20		02 29 49.3	
PV07	Paradox Valley comp=Z,2µm,20.0s	133.14	23	IAMs_20	IAMs_20		02 31 52.3	
PV16	Nyswonger Mesa comp=Z,2µm,20.0s	133.15	23	IAMs_20	IAMs_20		02 32 08.5	
M59A	Waymart baz=16,SNR=10	133.18	348	P		PKPdf	01 21 44.6	-0.1
L54A	Sinclairville baz=11,SNR=12	133.18	352	P		PKPdf	01 21 44.3	-0.4
PV18	Skein Mesa, Pa comp=Z,3µm,22.0s	133.20	23	IAMs_20	IAMs_20		02 27 51.0	
M60A	Port Jervis baz=17	133.21	347	P		PKPdf	01 21 44.5	-0.3
PV03	Paradox Valley comp=Z,2µm,20.0s	133.22	23	IAMs_20	IAMs_20		02 32 10.5	
K47A	Vermontville baz=3.1,SNR=7.3	133.26	358	P		PKPdf	01 21 44.0	-0.8
K46A	Dorr baz=2.0	133.27	359	P		PKPdf	01 21 43.8	-1.0
BELC	Belle Mtn. Jos baz=319	133.28	33	P		PKiKP	01 21 46.1	-0.4
PV15	Paradox Valley comp=Z,2µm,21.0s	133.29	23	IAMs_20	IAMs_20		02 33 08.3	
PV02	Paradox Valley comp=Z,3µm,21.0s	133.31	23	IAMs_20	IAMs_20		02 27 26.7	
N62A	Caumsett State baz=19	133.31	346	P		PKPdf	01 21 44.4	-0.5
PV13	Radium Mtn., P comp=Z,3µm,22.0s	133.31	23	IAMs_20	IAMs_20		02 27 06.0	
PFO	Pinyon Flats O baz=318	133.32	34	P		PKiKP	01 21 46.0	-0.5
PFO	Pinyon Flats O comp=Z,2µm,22.0s	133.32	34	IAMs_20	IAMs_20		02 14 49.3	
XPFO	Pion Flat comp=Z,2µm,22.0s	133.32	34	IAMs_20	IAMs_20		02 14 49.3	
PAL	Palisades baz=18	133.34	346	P		PKPdf	01 21 44.6	-0.3
ERPA	Erie baz=9.9	133.39	353	P		PKPdf	01 21 44.2	-0.8
ERPA	Erie comp=Z,3µm,22.0s	133.39	353	IAMs_20	IAMs_20		02 22 52.0	
NEE2	Needles Airpor baz=321	133.43	31	P		PKPdf	01 21 45.4	+0.1
PV01	Paradox Valley comp=Z,2µm,21.0s	133.43	23	IAMs_20	IAMs_20		02 26 41.1	
109C	Camp Elliot, M baz=317	133.48	35	P		PKPdf	01 21 45.9	+0.4
BGNE	Belgrade baz=345,SNR=6.9	133.49	11	P		PKPdf	01 21 45.0	-0.3
BGNE	Belgrade comp=Z,2µm,21.0s	133.49	11	IAMs_20	IAMs_20		02 28 10.9	
M58A	Price's Panora baz=15,SNR=9.1	133.55	349	P		PKPdf	01 21 45.7	+0.3
AAM	Ann Arbor baz=4.9	133.56	356	P		PKPdf	01 21 44.9	-0.5
AAM	Ann Arbor comp=Z,2µm,20.0s	133.56	356	IAMs_20	IAMs_20		02 31 00.5

L53A	**Girard** baz=9.6,SNR=6.8	133.59	353	P		PKPdf	01 21 45.6	+0.2
IRM	**Iron Mountain** baz=320,SNR=8.7	133.63	32	P		PKiKP	01 21 47.3	+0.2
N61A	**South Mountain** baz=18	133.68	346	P		PKPdf	01 21 45.2	-0.4
M57A	**Sunshine Farm,** baz=14,SNR=8.7	133.71	349	P		PKPdf	01 21 45.5	-0.2
M56A	**Emporium** baz=12,SNR=8.5	133.75	351	P		PKPdf	01 21 45.8	0.0
N60A	**Cedar Hill Far** baz=17	133.75	347	P		PKPdf	01 21 45.3	-0.5
SCIA	**State Center** baz=352	133.75	6	P		PKPdf	01 21 45.2	-0.5
SCIA	**State Center** comp=Z,3μm,20.0s	133.75	6	IAMs_20	IAMs_20		02 29 28.2	
L50A	**Kingsville** baz=6.1	133.76	355	P		PKPdf	01 21 45.0	-0.7
L40A	**Anamosa** comp=Z,2μm,20.0s	133.78	4	IAMs_20	IAMs_20		02 26 53.1	
L44A	**Lake County Fo** baz=359	133.80	1	P		PKPdf	01 21 45.2	-0.6
L44A	**Lake County Fo** comp=Z,2μm,20.0s	133.80	1	IAMs_20	IAMs_20		02 28 00.3	
BC3	**Big Chuckawall** baz=319	133.84	33	P		PKPdf	01 21 46.8	+0.5
N59A	**State Game Lan** baz=16,SNR=7.8	133.85	348	P		PKPdf	01 21 46.1	+0.1
M55A	**Ridgway** baz=12,SNR=8.0	133.85	351	P		PKPdf	01 21 45.9	-0.1
MONP2	**Monument Peak** baz=318	133.87	35	P		PKiKP	01 21 47.2	-0.6
L42A	**Oliver, Polo**	133.92	2	PKPdf		PKPdf	01 21 45.2	-0.8
L42A	comp=Z,2μm,22.0s			IAMs_20	IAMs_20		02 24 33.0	
Q24A	**Divide** baz=335	133.94	19	P		PKPdf	01 21 45.7	-0.9
M54A	**Oil Creek Stat** baz=10,SNR=10	133.95	352	P		PKPdf	01 21 46.1	-0.1
L46A	**Eue Claire** baz=1.3	133.96	359	P		PKPdf	01 21 45.3	-0.8
L46A	**Eue Claire** comp=Z,2μm,20.0s	133.96	359	IAMs_20	IAMs_20		02 26 28.6	
VAS01	**Vassouras-RJ**	133.96	243	eP		PKiKP	01 21 47.8	-0.2
L48A	**N Adams** baz=3.9,SNR=9.9	133.96	357	P		PKPdf	01 21 45.5	-0.6
PDMCI	**Parker Dam,Lak** baz=321,SNR=12	134.04	31	P		PKiKP	01 21 47.2	-0.6
N58A	**Sunbury** baz=15,SNR=12	134.11	349	P		PKPdf	01 21 46.5	+0.1
N58A	**Sunbury** comp=Z,2μm,22.0s	134.11	349	IAMs_20	IAMs_20		02 27 19.9	
M52A	**Chesterland** baz=8.2,SNR=7.7	134.12	354	P		PKPdf	01 21 46.0	-0.4
M53A	**Wl Miller and** baz=9.1,SNR=8.1	134.14	353	P		PKPdf	01 21 46.2	-0.3
SWSC	**Sam W. Stewart** baz=318	134.18	34	P		PKiKP	01 21 47.6	-0.5
IKP	**In-Ko-Pah, Jac** baz=318	134.23	35	P		PKiKP	01 21 48.0	-0.4
MAN01	**Angra dos Reis**	134.25	242	eP		PKiKP	01 21 49.0	+0.4
MVCO	**Mesa Verde** baz=330,SNR=12	134.26	24	P		PKPdf	01 21 47.5	+0.3
Y12C	**Blythe** baz=320,SNR=10	134.27	32	P		PKiKP	01 21 47.9	-0.4
N33A	**J Bar K, Exete** comp=Z,2μm,22.0s	134.28	11	IAMs_20	IAMs_20		02 26 29.3	
N56A	**West Decatur** baz=12,SNR=6.1	134.32	350	P		PKPdf	01 21 47.0	+0.1
O60A	**Telford** baz=17	134.34	347	P		PKPdf	01 21 46.5	-0.4
N57A	**Milroy** baz=14,SNR=6.6	134.35	350	P		PKPdf	01 21 46.7	-0.2
O61A	**Allentown** baz=18	134.36	346	P		PKPdf	01 21 46.6	-0.3
M49A	**Liberty Center** baz=4.5	134.41	357	P		PKPdf	01 21 46.3	-0.6
M51A	**Elyria** baz=7.0	134.41	355	P		PKPdf	01 21 46.2	-0.7
M50A	**Fremont** comp=Z,3μm,20.0s	134.41	356	IAMs_20	IAMs_20		02 31 06.0	
M48A	**Edgerton** baz=3.5	134.44	357	P		PKPdf	01 21 46.3	-0.8
M48A	**Edgerton** comp=Z,3μm,21.0s	134.44	357	IAMs_20	IAMs_20		02 25 06.2	
WUAZ	**Wupatki** baz=325	134.44	28	P		PKPdf	01 21 48.0	+0.5
S22A	**4UR Ranch, Cre** baz=332	134.44	22	P		PKPdf	01 21 46.1	-1.5
N35A	**Tabor** comp=Z,2μm,20.0s	134.47	9	IAMs_20	IAMs_20		02 27 06.2	
O59A	**Robesonia** baz=16,SNR=10	134.51	348	P		PKPdf	01 21 46.8	-0.4
SSPA	**Standing Stone** baz=13	134.52	350	P		PKPdf	01 21 47.1	-0.1
SSPA	**Standing Stone**	134.52	350			PKPdf	01 21 47.4	+0.2
SSPA	**Standing Stone** comp=Z,2μm,21.0s	134.52	350	IAMs_20	IAMs_20		02 26 07.8	
N54A	**Moraine State** baz=10	134.53	352	P		PKPdf	01 21 46.9	-0.3
N55A	**Marion Center** baz=12,SNR=6.1	134.56	351	P		PKPdf	01 21 46.9	-0.5
M44A	**Midewin, Midew** comp=Z,2μm,22.0s	134.59	1	IAMs_20	IAMs_20		02 25 01.2	
M47A	**Cromwell** baz=2.3,SNR=7.7	134.59	358	P		PKPdf	01 21 46.8	-0.5
GLA	**Glamis** baz=320	134.64	33	P		PKPdf	01 21 48.3	+0.5
KSCO	**Kaye Shedlock'** baz=338	134.68	17	P		PKPdf	01 21 47.3	-0.4
N53A	**Lisbon** baz=9.0,SNR=16	134.79	353	P		PKPdf	01 21 47.6	-0.1
P61A	**Hammonton** baz=18	134.82	346	P		PKPdf	01 21 47.1	-0.6
N51A	**Ashland** baz=6.8	134.84	355	P		PKPdf	01 21 46.7	-1.1
O58A	**Lewisberry** baz=14,SNR=8.5	134.84	349	P		PKPdf	01 21 47.9	0.0
N52A	**McGinn's Farm,** baz=7.8	134.88	354	P		PKPdf	01 21 47.1	-0.8
P60A	**Greenville** baz=16	134.88	347	P		PKPdf	01 21 47.6	-0.3
O57A	**Amberson** baz=14,SNR=6.7	134.89	350	P		PKPdf	01 21 47.6	-0.3
SDCO	**Great Sand Dun** baz=334,SNR=6.6	134.92	21	P		PKPdf	01 21 48.0	-0.4
O56A	**Blue Knob Stat** baz=12,SNR=8.8	134.99	351	P		PKPdf	01 21 47.9	-0.3
O56A	**Blue Knob Stat** comp=Z,2μm,22.0s	134.99	351	IAMs_20	IAMs_20		02 22 51.2	
N50A	**Nevada** baz=5.8,SNR=7.8	135.05	356	P		PKPdf	01 21 47.8	-0.4
N48A	**Decatur** baz=3.1,SNR=12	135.07	358	P		PKPdf	01 21 47.4	-0.9
N47A	**Urbana** comp=Z,2μm,20.0s	135.07	358	IAMs_20	IAMs_20		02 30 27.2	
N41A	**Harden Midland** comp=Z,3μm,22.0s	135.15	4	IAMs_20	IAMs_20		02 28 04.1	
O55A	**Ligonier** baz=11	135.17	351	P		PKPdf	01 21 48.1	-0.4
P59A	**Jarrettsville** baz=15,SNR=10	135.24	348	P		PKPdf	01 21 48.6	0.0
O54A	**Avella** baz=9.7,SNR=12	135.34	352	P		PKPdf	01 21 48.6	-0.2
O53A	**New Philadelph** baz=8.5,SNR=9.1	135.38	353	P		PKPdf	01 21 48.6	-0.2
HDIL	**Hopedale** baz=357,SNR=5.7	135.38	2	P		PKPdf	01 21 48.3	-0.6
HDIL	**Hopedale** comp=Z,2μm,22.0s	135.38	2	IAMs_20	IAMs_20		02 27 49.3	
BSCB	**Bom Sucesso**	135.51	244	eP		PKPdf	01 21 49.9	+0.2
W18A	**Petrified Fore** baz=327	135.51	27	P		PKPdf	01 21 50.2	+0.7
W18A	**Petrified Fore** comp=Z,2μm,22.0s	135.51	27	IAMs_20	IAMs_20		02 28 12.2	
P58A	**Pank, Wackersv** baz=14,SNR=7.9	135.53	349	P		PKPdf	01 21 49.0	-0.1
PARB	**Paraibuna**	135.56	241	eP		PKiKP	01 21 50.7	-0.6
ACSO	**Alum Creek Sta** baz=6.0,SNR=8.3	135.57	355	P		PKPdf	01 21 48.7	-0.5
O52A	**Adamsville** baz=7.7,SNR=7.3	135.58	354	P		PKPdf	01 21 48.8	-0.5
SFIN	**Lafayette** baz=0.2,SNR=10	135.60	360	P		PKPdf	01 21 48.8	-0.4
O51A	**Pataskala** baz=6.6,SNR=10	135.62	355	P		PKPdf	01 21 49.0	-0.4
CBKS	**Cedar Bluff** baz=342	135.63	14	P		PKPdf	01 21 49.0	-0.5
CBKS	**Cedar Bluff** comp=Z,2μm,22.0s	135.63	14	IAMs_20	IAMs_20		02 25 48.3	
P57A	**Homestead Farm** baz=13,SNR=9.0	135.66	350	P		PKPdf	01 21 49.3	-0.1
P57A	**Homestead Farm** comp=Z,2μm,21.0s	135.66	350	IAMs_20	IAMs_20		02 27 33.0	
O48A	**Farmland** baz=36,SNR=15	135.68	358	P		PKPdf	01 21 48.5	-0.9
Q60A	**Greensboro** baz=16	135.70	347	P		PKPdf	01 21 49.3	-0.1
Q61A	**Milford** baz=17	135.70	347	P		PKPdf	01 21 49.8	+0.4
O50A	**Cable** baz=5.2,SNR=11	135.70	356	P		PKPdf	01 21 49.0	-0.5
MC01	**Montes Claros**	135.75	250	eP		PKiKP	01 21 51.4	-0.4
P56A	**Dayton Farm, R** baz=12,SNR=8.5	135.78	351	P		PKPdf	01 21 49.7	+0.1
MCWV	**Mont Chateau** baz=11	135.79	352	P		PKPdf	01 21 49.1	-0.5
T25A	**Trinidad** baz=335,SNR=7.7	135.84	20	P		PKPdf	01 21 50.4	+0.3
P54A	**Burton** baz=9.7	135.93	352	P		PKPdf	01 21 49.7	-0.2
P55A	**Reedsville** baz=11,SNR=7.7	135.93	352	P		PKPdf	01 21 49.6	-0.3
Q59A	**Harwood** baz=15	136.00	348	P		PKPdf	01 21 50.0	0.0
KSU1	**Kansas State U** baz=346	136.02	10	P		PKPdf	01 21 49.3	-0.7
KSU1	**Kansas State U** comp=Z,2μm,20.0s	136.02	10	IAMs_20	IAMs_20		02 29 05.3	
P52A	**Corning** baz=7.3	136.09	354	P		PKPdf	01 21 49.1	-1.1
Q58A	**Fox Den Farm,** baz=14,SNR=9.3	136.13	349	P		PKPdf	01 21 50.5	+0.2
P53A	**Whipple** baz=8.4,SNR=9.6	136.15	353	P		PKPdf	01 21 50.4	+0.1
Q57A	**Strasburg** baz=13,SNR=6.5	136.17	350	P		PKPdf	01 21 50.5	+0.2
P40A	**Paris** comp=Z,2μm,20.0s	136.22	5	IAMs_20	IAMs_20		02 31 49.6	
R61A	**Willards** baz=17	136.22	346	P		PKPdf	01 21 50.8	+0.3
P50A	**Jamestown** baz=5.0,SNR=8.3	136.25	356	P		PKPdf	01 21 49.6	-0.9
P43A	**Skaggs, Pawnee** comp=Z,2μm,20.0s	136.29	3	IAMs_20	IAMs_20		02 32 44.2	
Q56A	**Snyder Ridge,** baz=12,SNR=10	136.29	351	P		PKPdf	01 21 50.8	+0.2
Q56A	**Snyder Ridge,** comp=Z,2μm,21.0s	136.29	351	IAMs_20	IAMs_20		02 25 31.6	
P51A	**Williamsport** baz=6.0	136.32	355	P		PKPdf	01 21 49.3	-1.3
P51A	**Williamsport** comp=Z,2μm,21.0s	136.32	355	IAMs_20	IAMs_20		02 32 02.2	
P49A	**Miami Univ. Ec** baz=3.6,SNR=5.9	136.38	357	P		PKPdf	01 21 50.0	-0.7
Q55A	**Buckhannon** baz=10,SNR=16	136.47	352	P		PKPdf	01 21 50.7	-0.2
R60A	**Leonardtown, M** baz=16	136.56	348	P		PKiKP	01 21 51.9	-0.9
214A	**Organ Pipe Nat** baz=321	136.57	32	P		PKPdf	01 21 52.0	+0.7
214A	**Organ Pipe Nat** comp=Z,2μm,20.0s	136.57	32	IAMs_20	IAMs_20		02 35 19.7	
Q54A	**Coxs Mills** baz=9.3	136.58	353	P		PKPdf	01 21 51.0	-0.2
Q54A	**Coxs Mills** comp=Z,2μm,20.0s	136.58	353	IAMs_20	IAMs_20		02 26 00.2	
PET01	**Itanhaem-SP**	136.66	239	eP		PKiKP	01 21 52.7	-0.7
R59A	**King George, V** baz=15	136.74	348	P		PKPdf	01 21 51.2	-0.1
Q52A	**Bidwell** baz=7.2	136.77	354	P		PKPdf	01 21 50.9	-0.5
CBN	**Corbin Frederi** baz=14	136.78	349	P		PKPdf	01 21 51.1	-0.4
CBN	**Corbin Frederi** comp=Z,3μm,22.0s	136.78	349	IAMs_20	IAMs_20		02 25 45.7	
Q53A	**Leroy** baz=8.3,SNR=6.7	136.79	353	P		PKPdf	01 21 51.3	-0.2
Q51A	**Peebles** baz=5.7	136.80	356	P		PKPdf	01 21 50.9	-0.7
Q51A	**Peebles** comp=Z,2μm,21.0s	136.80	356	IAMs_20	IAMs_20		02 26 31.8	
R58A	**Rapidan** baz=14,SNR=10	136.81	349	P		PKPdf	01 21 51.5	-0.1
VAO	**Valinhos**	136.84	241	eP		PKiKP	01 21 53.0	-0.9
R57A	**Stanardsville** baz=13,SNR=7.2	136.91	350	P		PKPdf	01 21 51.8	0.0
SPB	**Sao Paulo** comp=Z,2μm,18.0s	137.04	240	IAMs_20	IAMs_20		02 18 22.2	
SPB	**Sao Paulo**	137.04	240	eP		PKPdf	01 21 52.0	-0.3
ANMO	**Albuquerque**	137.04	23	PKiKP		PKPdf	01 21 53.1	+0.7
ANMO	**Albuquerque** baz=331	137.04	23	P		PKPdf	01 21 53.2	+0.8
ANMO	**Albuquerque**	137.04	23	PKPdf		PKPdf	01 21 53.1	+0.7
ANMO	**Albuquerque** comp=Z,3μm,22.0s	137.04	23	IAMs_20	IAMs_20		02 29 24.3	
Q44A	**Meyer Farm, Va** comp=Z,3μm,22.0s	137.04	2	IAMs_20	IAMs_20		02 25 18.7	
R58B	**Mineral** baz=14	137.12	349	P		PKPdf	01 21 52.3	+0.2
S60A	**Water View** baz=16	137.12	348	P		PKPdf	01 21 52.3	+0.2
R55A	**Marlinton** baz=10	137.18	352	P		PKPdf	01 21 51.9	-0.4
R55A	**Marlinton** comp=Z,2μm,22.0s	137.18	352	IAMs_20	IAMs_20		02 31 54.9	
S59A	**Mechanicsville** baz=15	137.20	348	P		PKPdf	01 21 52.0	-0.3
SLM	**Saint Louis** comp=Z,2μm,21.0s	137.25	3	IAMs_20	IAMs_20		02 30 51.8	
TUC	**Tucson**	137.33	30	PKiKP		PKPdf	01 21 52.3	-0.5
TUC	**Tucson** baz=324	137.33	30	P		PKiKP	01 21 53.9	-0.8
TUC	**Tucson**	137.33	30			PKPdf	01 21 52.3	-0.5
TUC	**Tucson** comp=Z,2μm,20.0s	137.33	30	IAMs_20	IAMs_20		02 31 03.6	
R53A	**Hurricane** baz=7.8	137.36	354	P		PKPdf	01 21 52.1	-0.4
R54A	**Victor** baz=9.2	137.39	353	P		PKPdf	01 21 52.1	-0.6
R40A	**Maddies Statio** comp=Z,2μm,21.0s	137.43	6	IAMs_20	IAMs_20		02 26 02.5	
CNLB	**Canela**	137.45	230	eP		PKPdf	01 21 53.0	-0.1
S58A	**Poland Farm, P** baz=14,SNR=9.0	137.49	349	P		PKPdf	01 21 52.9	0.0
S58A	**Poland Farm, P** comp=Z,2μm,22.0s	137.49	349	IAMs_20	IAMs_20		02 26 53.3	
S57A	**Dark Hollow, R** baz=12,SNR=9.1	137.50	350	P		PKPdf	01 21 52.8	-0.1
S57A	**Dark Hollow, R** comp=Z,2μm,21.0s	137.50	350	IAMs_20	IAMs_20		02 26 58.7	
RCLB	**Rio Claro- Sao**	137.52	241	eP		PKiKP	01 21 54.7	-0.6
R50A	**Paris** comp=Z,2μm,20.0s	137.61	357	IAMs_20	IAMs_20		02 30 49.5	
Y22D	**IRIS PASSCAL I** baz=330	137.61	24	P		PKPdf	01 21 54.3	+0.9
Y22D	**IRIS PASSCAL I** comp=Z,3μm,22.0s	137.61	24	IAMs_20	IAMs_20		02 31 22.6	
T60A	**Surry** baz=16	137.68	347	P		PKPdf	01 21 52.9	-0.3
T60A	**Surry** comp=Z,2μm,21.0s	137.68	347	IAMs_20	IAMs_20		02 30 01.4	
S56A	**Natural Bridge** baz=11	137.69	351	P		PKPdf	01 21 52.6	-0.6
S55A	**Lewisburg** baz=10.0	137.73	352	P		PKPdf	01 21 52.5	-0.9
WCI	**Wyandotte Cave** baz=1.4	137.74	359	P		PKPdf	01 21 52.7	-0.6
BBSR	**BB Station**	137.75	331			PKPdf	01 21 54.3	+0.8
CCM	**Cathedral Cave** baz=354	137.76	5	P		PKPdf	01 21 52.9	-0.4
S54A	**Dingess, Beckl** baz=8.8	137.81	353	P		PKPdf	01 21 52.9	-0.6
S39A	**Bolivar** comp=Z,2μm,21.0s	137.90	7	IAMs_20	IAMs_20		02 28 23.1	
USIN	**University of** comp=Z,2μm,21.0s	138.01	0	IAMs_20	IAMs_20		02 29 17.8	
T59A	**Double "B" Far** baz=14	138.01	348	P		PKPdf	01 21 53.7	-0.1
T59A	**Double "B" Far** comp=Z,2μm,20.0s	138.01	348	IAMs_20	IAMs_20		02 29 07.2	
S53A	**Williamson** baz=7.6	138.02	354	P		PKPdf	01 21 53.8	-0.1
U32A	**Winter Ranch,** comp=Z,2μm,20.0s	138.13	14	IAMs_20	IAMs_20		02 33 31.3	
S51A	**Beattyville**	138.19	356	IAMs_20	IAMs_20		02 27 47.8	
	comp=Z,2μm,21.0s							
PLTB	**Pedras Altas**	138.21	225	eP		PKPdf	01 21 52.4	-1.9
T58A	**Grand View Acr** baz=13	138.22	349	P		PKPdf	01 21 54.2	0.0
S44A	**Carbondale** comp=Z,2μm,21.0s	138.24	2	IAMs_20	IAMs_20		02 27 06.9	
BLA	**Blacksburg** baz=10	138.27	352	P		PKPdf	01 21 54.0	-0.3
BLA	**Blacksburg** comp=Z,2μm,21.0s	138.27	352	IAMs_20	IAMs_20		02 29 03.9	
T57A	**Hurt** baz=12	138.30	350	P		PKPdf	01 21 54.4	+0.1
U61A	**Possum Corner** baz=16	138.39	347	P		PKPdf	01 21 54.8	+0.4
T56A	**Rocky Mt** baz=11	138.39	351	P		PKPdf	01 21 54.5	0.0
U60A	**Pendleton** baz=15	138.41	348	P		PKPdf	01 21 54.4	-0.1
T55A	**Pulaski** baz=9.7,SNR=9.1	138.41	352	P		PKPdf	01 21 54.5	-0.1
121A	**Cookes Peak, D** baz=328	138.56	27	P		PKPdf	01 21 55.5	+0.3
T54A	**Tazewell** baz=8.5	138.57	353	P		PKPdf	01 21 54.4	-0.6
U59A	**Littleton** baz=14	138.66	348	P		PKPdf	01 21 55.3	+0.3
U59A	**Littleton** comp=Z,2μm,22.0s	138.66	348	IAMs_20	IAMs_20		02 29 35.3	
T53A	**Wise** baz=7.1	138.75	354	P		PKPdf	01 21 54.7	-0.6
U58A	**Oxford** baz=13	138.76	349	P		PKPdf	01 21 55.1	-0.1
AMTX	**Amarillo** baz=338	138.79	18	P		PKPdf	01 21 55.2	-0.2
AMTX	**Amarillo** comp=Z,2μm,22.0s	138.79	18	IAMs_20	IAMs_20		02 28 04.1	
BB19B	**Bebedouro**	138.84	243	eP		PKPdf	01 21 55.5	-0.3
U57A	**Blanch** baz=12	138.87	350	P		PKPdf	01 21 54.9	-0.5
T45A	**Paducah** comp=Z,2μm,20.0s	138.93	2	IAMs_20	IAMs_20		02 33 05.4	
V61A	**Roper** baz=16	138.94	347	P		PKPdf	01 21 56.0	+0.4
FRTB	**Fartura**	138.96	239	eP		PKPdf	01 21 56.4	+0.5
T47A	**Sharon Grove** comp=Z,2μm,20.0s	138.99	360	IAMs_20	IAMs_20		02 31 34.6	
U55A	**TA2, Sparta** baz=9.4	139.06	352	P		PKPdf	01 21 55.1	-0.7
PBMO	**Poplar Bluff** comp=Z,2μm,22.0s	139.09	4	IAMs_20	IAMs_20		02 27 52.4	
U56A	**King** baz=10	139.11	352	P		PKPdf	01 21 55.5	-0.4
U56A	**King** comp=Z,3μm,22.0s	139.11	352	IAMs_20	IAMs_20		02 27 54.2	
V60A	**Jim Taylor Roa** baz=15	139.12	348	P		PKPdf	01 21 55.9	+0.1
U54A	**Nelsons Funny** baz=8.2	139.13	353	P		PKPdf	01 21 55.5	-0.5
HHAR	**Hobbs** comp=Z,2μm,21.0s	139.21	8	IAMs_20	IAMs_20		02 31 07.7	
TUL1	**Leonard** baz=347	139.27	11	P		PKPdf	01 21 55.7	-0.4
MSTX	**Muleshoe** baz=336	139.27	20	P		PKPdf	01 21 56.5	+0.1
MSTX	**Muleshoe** comp=Z,2μm,20.0s	139.27	20	IAMs_20	IAMs_20		02 32 17.0	
U40A	**Yellville** baz=351	139.28	7	P		PKPdf	01 21 55.4	-0.8
U40A	**Yellville** comp=Z,2μm,22.0s	139.28	7	IAMs_20	IAMs_20		02 29 05.5	
V59A	**Middlesex** baz=14	139.31	349	P		PKPdf	01 21 56.4	+0.2
V58A	**Windy Hill, Pi** baz=12	139.45	350	P		PKPdf	01 21 56.5	+0.1
V58A	**Windy Hill, Pi** comp=Z,2μm,20.0s	139.45	350	IAMs_20	IAMs_20		02 35 47.2	
V57A	**Coltrane Farms** baz=11,SNR=5.3	139.47	351	P		PKPdf	01 21 56.2	-0.3
PVMO	**Portageville** comp=Z,2μm,19.0s	139.49	3	IAMs_20	IAMs_20		02 34 52.1	
W61A	**Ground Anchor** baz=16	139.62	347	P		PKPdf	01 21 56.9	+0.1
GLAT	**Glass** comp=Z,3μm,22.0s	139.66	3	IAMs_20	IAMs_20		02 27 33.5	
V56A	**Mocksville** baz=10	139.66	351	P		PKPdf	01 21 56.5	-0.4
V55A	**Taylorsville** baz=9.3	139.72	352	P		PKPdf	01 21 56.1	-0.9
WMOK	**Wichita Mounta** baz=342	139.74	15	P		PKPdf	01 21 56.6	-0.5
WMOK	**Wichita Mounta** comp=Z,2μm,20.0s	139.74	15	IAMs_20	IAMs_20		02 33 20.1	
CNNC	**Cliffs of the** baz=14	139.75	348	P		PKPdf	01 21 57.0	-0.1
CNNC	**Cliffs of the** comp=Z,2μm,21.0s	139.75	348	IAMs_20	IAMs_20		02 30 53.3	
EPT	**El Paso** comp=Z,2μm,22.0s	139.77	26	IAMs_20	IAMs_20		02 33 54.2	
LL01	**San Ignacio de** comp=Z,2μm,18.0s	139.78	197	IAMs_20	IAMs_20		02 21 41.3	
PEBM	**Pemiscott Bayo** comp=Z,2μm,19.0s	139.78	3	IAMs_20	IAMs_20		02 34 52.8	
BDFB	**Brasilia** comp=Z,13nm,1.0s,baz=104,slow=5.7,SNR=12	139.80	251	PKhKP	PKPpre		01 21 49.7	
BDFB	comp=Z,14nm,0.9s,baz=136,slow=6.2,SNR=5.3			PP	PP		01 24 54.4	+0.6
BDFB	**Brasilia**	139.80	251	PKiKP	PKPdf		01 21 57.3	-0.4
BDFB	**Brasilia**	139.80	251		PKPpre		01 21 47.6	
BDFB					PKPdf		PKPdf 01 21 57.3	-0.4
WVT	**Waverly** baz=359	139.84	1	P		PKPdf	01 21 56.9	-0.3
WVT	**Waverly** comp=Z,3μm,22.0s	139.84	1	IAMs_20	IAMs_20		02 27 40.2	
HSIG		139.86	33			PKPdf	01 21 57.8	+0.3
CLTN	**Cedars of Leba** comp=Z,2μm,22.0s	139.87	359	IAMs_20	IAMs_20		02 28 40.1	
V54A	**Nebo** baz=8.2	139.88	353	P		PKPdf	01 21 57.0	-0.4
W60A	**Pink Hill** baz=15	139.90	348	P		PKPdf	01 21 57.2	-0.1
GNAR	**Gosnell** comp=Z,2μm,20.0s	139.92	3	IAMs_20	IAMs_20		02 35 06.5	
W59A	**Clinton** baz=14	139.93	349	P		PKPdf	01 21 57.3	-0.1
V51A	**Loudon** comp=Z,2μm,21.0s	140.07	356	IAMs_20	IAMs_20		02 28 01.5	
W57A	**Gilead** baz=11	140.22	351	P		PKPdf	01 21 57.6	-0.3
W58A	**Raeford** baz=12	140.22	350	P		PKPdf	01 21 57.6	-0.3
V48A	**Smith Brothers** comp=Z,2μm,21.0s	140.23	359	IAMs_20	IAMs_20		02 30 03.9	
LPAR	**Lepanto** comp=Z,2μm,19.0s	140.27	4	IAMs_20	IAMs_20		02 35 19.6	
HBAR	**Harrisburg** comp=Z,2μm,20.0s	140.29	4	IAMs_20	IAMs_20		02 28 29.1	
W39A	**Magazine** baz=350	140.30	8	P		PKPdf	01 21 57.8	-0.2
MNTX	**Cornudas Mount** baz=331	140.31	25	P		PKPdf	01 21 58.2	0.0
MNTX	**Cornudas Mount** comp=Z,2μm,18.0s	140.31	25	IAMs_20	IAMs_20		02 36 46.0	
W56A	**Indian Trail** baz=10	140.33	351	P		PKPdf	01 21 57.7	-0.4
X60A	**Albert Glenn T** baz=14	140.41	348	P		PKPdf	01 21 58.2	-0.1
KMSC	**Kings Mountain** baz=9.2,SNR=6.4	140.43	352	P		PKPdf	01 21 57.8	-0.5
KMSC	**Kings Mountain** comp=Z,2μm,21.0s	140.43	352	IAMs_20	IAMs_20		02 29 36.1	
CPCT	**Cooper Cave** comp=Z,3μm,22.0s	140.44	356	IAMs_20	IAMs_20		02 28 22.1	
W41B	**Gary Mavity, V** baz=352	140.52	6	P		PKPdf	01 21 58.1	-0.3
X59A	**McDuffie Farm,** baz=14	140.54	349	P		PKPdf	01 21 58.5	0.0
W54A	**Cherokee Point** baz=7.9	140.59	353	P		PKPdf	01 21 58.4	-0.2
PLCA	**Paso Flores** comp=Z,27nm,1.1s,baz=166,slow=4.2,SNR=15	140.68	200	PKhKP	PKPpre		01 21 49.9	
X58A	**Rowland** baz=12	140.70	350	P		PKPdf	01 21 58.4	-0.3
X58A	**Rowland** comp=Z,2μm,22.0s	140.70	350	IAMs_20	IAMs_20		02 28 15.2	
W50A	**Signal Mountai** comp=Z,3μm,22.0s	140.73	357	IAMs_20	IAMs_20		02 27 31.1	

BG3	Lake Jocassee	140.76	354		IAMs_20	IAMs_20	02 29 10.8		
	comp=Z,2μm,22.0s								
MET	Memphis--Engin	140.77	3		IAMs_20	IAMs_20	02 32 03.8		
	comp=Z,2μm,21.0s								
W45A	Hickory Valley	140.77	2		IAMs_20	IAMs_20	02 30 47.3		
	comp=Z,2μm,20.0s								
X57A	Johnson Farm,	140.91	351		P	PKPdf	01 21 59.1	-0.1	
	baz=11								
MIAR	Mount Ida	140.97	8		P	PKPdf	01 21 59.6	+0.3	
	baz=350								
PLAL	Pickwick Lake	140.98	1		IAMs_20	IAMs_20	02 28 39.4		
	comp=Z,2μm,22.0s								
Y60A	Bolivia	141.01	348		P	PKPdf	01 21 59.5	+0.1	
	baz=14								
Y60A	Bolivia	141.01	348		IAMs_20	IAMs_20	02 27 59.1		
	comp=Z,3μm,22.0s								
X56A	White Oak	141.03	352		P	PKPdf	01 21 59.1	-0.2	
	baz=9.8								
X40A	Basin Creek Fa	141.12	7		P	PKPdf	01 21 59.2	-0.4	
	baz=351								
X40A	Basin Creek Fa	141.12	7		IAMs_20	IAMs_20	02 32 26.7		
	comp=Z,2μm,21.0s								
X55A	Gracelyn & Ava	141.13	353		P	PKPdf	01 21 59.6	0.0	
	baz=8.9								
X54A	Belton	141.15	354		P	PKPdf	01 21 59.6	0.0	
	baz=7.7								
Y59A	Loris	141.16	349		P	PKPdf	01 21 59.7	+0.1	
	baz=13								
Y59A	Loris	141.16	349		IAMs_20	IAMs_20	02 28 41.9		
	comp=Z,2μm,22.0s								
X43A	Marvell	141.30	5		P	PKPdf	01 22 00.1	+0.2	
	baz=354								
X51A	Calhoun	141.34	357		IAMs_20	IAMs_20	02 31 31.3		
	comp=Z,2μm,20.0s								
Y58A	Scranton	141.39	350		P	PKPdf	01 21 59.8	-0.2	
	baz=12								
FPAL	Fort Paine	141.40	358		IAMs_20	IAMs_20	02 30 25.9		
	comp=Z,2μm,21.0s								
Y57A	Sumter	141.40	351		P	PKPdf	01 22 00.0	0.0	
	baz=11								
Y57A	Sumter	141.40	351		IAMs_20	IAMs_20	02 34 23.2		
	comp=Z,2μm,21.0s								
OXF	Oxford	141.40	3		P	PKPdf	01 21 59.2	-0.8	
	baz=357								
OXF	Oxford	141.40	3		IAMs_20	IAMs_20	02 31 27.0		
	comp=Z,2μm,21.0s								
Z35A	Perchaven, San	141.45	13		IAMs_20	IAMs_20	02 32 41.8		
	comp=Z,2μm,20.0s								
ABTX	Abilene, Hawle	141.50	17		P	PKPdf	01 22 00.3	0.0	
	baz=340,SNR=12								
Y55A	Saluda	141.69	353		P	PKPdf	01 22 00.7	+0.1	
	baz=8.6								
Y56A	Pelion	141.76	352		P	PKPdf	01 22 00.9	+0.2	
	baz=9.6,SNR=5.7								
Z59A	Georgetown, SC	141.96	349		P	PKPdf	01 22 01.2	+0.1	
	baz=13								
Z58A	St. Stephen	141.97	350		P	PKPdf	01 22 01.1	0.0	
	baz=12								
Y52A	Lilburn	141.98	356		P	PKPdf	01 22 01.1	-0.1	
	baz=5.1								
Y49A	Blount Mountai	142.10	359		IAMs_20	IAMs_20	02 33 17.5		
	comp=Z,2μm,19.0s								
Z57A	Bowman	142.15	351		P	PKPdf	01 22 01.1	-0.3	
	baz=11								
Z56A	Williston	142.22	352		P	PKPdf	01 22 01.4	-0.2	
	baz=9.6								
NHSC	New Hope	142.25	350		P	PKPdf	01 22 01.1	-0.5	
	baz=12								
Z41A	Richland Creek	142.34	8		P	PKPdf	01 22 02.1	+0.4	
	baz=351								
GOGA	Godfrey	142.38	355		P	PKPdf	01 22 02.3	+0.5	
	baz=6.2								
158A	Hollywood	142.62	350		P	PKPdf	01 22 02.4	+0.2	
	baz=12								
WHTX	Lake Whitney,	142.69	14		P	PKPdf	01 22 02.5	+0.1	
	baz=343,SNR=15								
WHTX	Lake Whitney,	142.69	14		IAMs_20	IAMs_20	02 32 00.4		
	comp=Z,3μm,22.0s								
Z50A	Ashland	142.69	358		P	PKPdf	01 22 02.1	-0.3	
	baz=2.2,SNR=22								
Z47A	Carrollton	142.76	1		IAMs_20	IAMs_20	02 32 13.9		
	comp=Z,2μm,20.0s								
157A	Early Branch	142.81	351		P	PKPdf	01 22 02.4	-0.2	
	baz=10								
LRAL	Lakeview Retre	142.93	360		P	PKPdf	01 22 02.3	-0.5	
	baz=0.4,SNR=5.2								
237A	Washetta, Mont	143.05	12		IAMs_20	IAMs_20	02 32 31.0		
	comp=Z,2μm,22.0s								
154A	Montrose	143.14	354		IAMs_20	IAMs_20	02 35 14.0		
	comp=Z,2μm,19.0s								
146A	Union	143.29	3		IAMs_20	IAMs_20	02 35 48.9		
	comp=Z,2μm,20.0s								
C2SB	Chapadao do Su	143.41	244	eP		PKPdf	01 22 03.5	-0.5	
JCT	Junction City	143.45	18		P	PKPdf	01 22 03.6	-0.3	
	baz=339								
JCT	Junction City	143.45	18		IAMs_20	IAMs_20	02 37 40.0		
	comp=Z,2μm,20.0s								
257A	Skidaway Islan	143.50	351		IAMs_20	IAMs_20	02 30 21.8		
	comp=Z,2μm,22.0s								
NATX	Nacogdoches	143.51	11		P	PKPbc	01 22 00.7	-0.4	
	baz=348,SNR=26								
VBMS	Vicksburg	143.61	5		P	PKPbc	01 22 01.3	0.0	
	baz=354								
255A	Hazlehurst	143.75	353		IAMs_20	IAMs_20	02 38 02.9		
	comp=Z,2μm,20.0s								
435B	Jarrell	143.80	15		P	PKPab	01 22 01.0	-0.4	
	baz=342								
CPUP	Villa Florida	143.90	229		PKP	PKPbc	01 22 02.5	+0.1	
	comp=Z,122nm,0.9s,baz=108,slow=3.4,SNR=194								
HPIG		144.26	29		IAMs_20	IAMs_20	02 40 14.4		
	comp=Z,2μm,21.0s								
TIGA	Tifton	144.35	355		P	PKPab	01 22 03.3	-0.1	
	baz=6.2								
TIGA	Tifton	144.35	355		IAMs_20	IAMs_20	02 34 46.1		
	comp=Z,2μm,20.0s								
352A	Blakely	144.41	357		IAMs_20	IAMs_20	02 32 42.7		
	comp=Z,2μm,20.0s								
346A	Big Creek Wild	144.51	3		IAMs_20	IAMs_20	02 36 20.3		
	comp=Z,2μm,19.0s								
441A	DeRidder	144.75	9		IAMs_20	IAMs_20	02 37 18.8		
	comp=Z,2μm,19.0s								
456A	Hilliard	144.87	352		IAMs_20	IAMs_20	02 31 43.1		
	comp=Z,2μm,21.0s								
BI03	Tigo	145.02	200		IAMs_20	IAMs_20	02 22 21.3		
	comp=Z,2μm,20.0s								
HKT	Hockley	145.03	13		PKIKP	PKPbc	01 22 06.0	+0.2	
HKT	Hockley	145.03	13			PKPbc	01 22 06.0	+0.2	
AQDB	Aquidauana	145.31	240	eP		PKPdf	01 22 08.0	+0.7	
735A	Kenedy	145.57	16		IAMs_20	IAMs_20	02 35 26.9		
	comp=Z,2μm,20.0s								
833A	Chaparral WMA,	145.58	19		P	PKPbc	01 22 07.7	0.0	
	baz=338,SNR=19								
TCA	Tanti	145.63	216⇑	iP		PKPab	01 22 08.4	+0.1	
BO02	Sierra Bellavi	145.97	205⇑	eP		PKPbc	01 22 08.5	-0.4	
GO05	Huala	146.25	203		IAMs_20	IAMs_20	02 25 06.2		
	comp=Z,2μm,20.0s								
ANWB	Willy Bob	146.74	312	eP		PKPbc	01 22 10.6	-0.9	
SALV	Santo Antonio	146.89	247	eP		PKPdf	01 22 10.5	+0.4	
MALB	Monte Alegre	146.97	273	eP		PKPdf	01 22 10.7	+0.4	
MT03	Universidad Ad	146.97	206⇑	eP		PKPbc	01 22 11.9	0.0	
MT01	Popeta	146.97	205⇑	eP		PKPbc	01 22 11.5	-0.2	
H05N1	Guadeloupe/Mar	147.00	309		PKPbc	PKPdf	01 22 11.0	+0.8	
FCH	Farellones	147.01	207	iP		PKPab	01 22 13.1	-0.6	
CLCH	Cerro Calan	147.06	206	eP		PKPbc	01 22 12.4	+0.3	
MT05	Renca	147.15	206		IAMs_20	IAMs_20	02 23 47.5		
	comp=Z,2μm,21.0s								
ABD	La Joyeuse, An	147.24	310	eP		PKPdf	01 22 11.5	+0.9	
H06N1	SOCORRO T-PHAS	147.25	45		PKPbc	PKPbc	01 22 13.6	+0.7	
PEL	Peldehue	147.34	206	eP		PKPbc	01 22 12.4	-0.4	
H06E1	SOCORRO T-PHAS	147.34	45		PKPbc	PKPbc	01 22 13.8	+0.6	
DWPF	Disney Wildern	147.35	350		P	PKPbc	01 22 12.9	0.0	
	baz=11								
DWPF	Disney Wildern	147.35	350			PKPbc	01 22 13.4	+0.5	
DWPF	Disney Wildern	147.35	350		IAMs_20	IAMs_20	02 32 45.8		
	comp=Z,2μm,22.0s								
H06S1	SOCORRO T	147.35	45		PKPbc	PKPab	01 22 14.5	-0.5	
MAGL	Barre de l'ile	147.39	309	eP		PKPdf	01 22 10.3	-0.6	
MT02	Curacav	147.44	206	eP		PKPdf	01 22 11.6	+1.0	
MT02	Curacav	147.44	206		IAMs_20	IAMs_20	02 18 03.0		
	comp=Z,2μm,22.0s								
SMRT	St. Maarten	147.45	314	eP		PKPdf	01 22 12.0	+1.1	
BBGH	Gun Hill	147.52	303	eP		PKPab	01 22 15.3	-0.5	
CBE	Ff, Capester	147.57	309	eP		PKPbc	01 22 12.8	-1.1	
VA03	San Esteban	147.60	207	iP		PKPdf	01 22 11.3	+0.3	
MLYT	Lee's Yard	147.63	311	eP		PKPdf	01 22 11.4	+0.1	
ROCH	El Roble	147.63	206	eP		PKPdf	01 22 10.9	-0.3	
SKI	Saint Kitts	147.66	312	eP		PKPbc	01 22 12.7	-1.4	
TDBA	Terre de Bas,	147.73	309	eP		PKPbc	01 22 13.0	-1.3	
ILAM	Ilet Lapin Mar	147.74	306	eP		PKPdf	01 22 12.8	+1.3	
SABA	Saba	147.85	313	eP		PKPdf	01 22 11.3	-0.3	
H05S1	Guadeloupe/Mar	147.90	306		PKPbc	PKPbc	01 22 14.2	-0.5	
MPOM	Morne Pois Mar	147.91	306	eP		PKPdf	01 22 10.2	-1.5	
FDF	Fort de France	147.98	307	eP		PKPdf	01 22 12.4	+0.4	
FDF	Fort de France	147.98	307		IAMs_20	IAMs_20	02 31 58.2		
	comp=Z,2μm,20.0s								
BIM	Bigot	148.04	306	eP		PKPdf	01 22 11.0	-1.0	
NPGB	Novo Progresso	148.13	264	eP		PKPdf	01 22 12.2	-0.1	
CLDB	Colider	148.14	256	eP		PKPdf	01 22 11.6	-0.6	
060A	Indiantown	148.20	348		IAMs_20	IAMs_20	02 37 58.4		
	comp=Z,2μm,19.0s								
SLBI	Saint Lucia, B	148.23	305	eP		PKPdf	01 22 09.7	-2.6	
SLAC	Saint Lucia, A	148.23	305	eP		PKPdf	01 22 13.2	+0.8	
SLPA	Patience	148.28	305	eP		PKPbc	01 22 14.0	-1.7	
MCLT	Moule a Chique	148.37	305	eP		PKPdf	01 22 11.7	-0.8	
SLB	Belfond	148.39	305	eP		PKiKP	01 22 17.0	-0.8	
CO04	Los Peladeros	148.40	207	eP		PKPdf	01 22 12.0	-0.6	
CYA	Choya	148.45	218	iP		PKPdf	01 22 12.6	+0.2	
ITTB	Itaituba	148.56	269	eP		PKPdf	01 22 14.2	+1.3	
SVCV	St. Vincent, C	148.77	304	eP		PKPbc	01 22 16.4	-0.7	
SVV	Soufriere Volc	148.81	304	eP		PKiKP	01 22 18.3	-0.2	
CDVI	St. Croix	148.85	315	eP		PKPdf	01 22 13.1	-0.2	
SVB	Belmont	148.86	304	eP		PKPbc	01 22 16.8	-0.5	
RPN	Rapa Nui	148.98	139		PKPbc	PKiKP	01 22 18.0	-0.6	
	comp=Z,286nm,1.0s,baz=262,slow=1.6,SNR=10								
RPN	Rapa Nui	148.98	139			PKiKP	01 22 18.5	-0.1	
CO02	Cambarbal	149.12	208		IAMs_20	IAMs_20	02 24 23.7		
	comp=Z,2μm,21.0s								
TOSP	Speyside	149.25	300	eP		PKPdf	01 22 15.7	+1.7	
ZAIG	Zacatecas	149.27	28		IAMs_20	IAMs_20	02 35 30.1		
	comp=Z,2μm,21.0s								
CO03	El Pedregal	149.28	209	eP		PKPbc	01 22 18.2	+0.1	
CO03	El Pedregal	149.28	209		IAMs_20	IAMs_20	02 21 59.9		
	comp=Z,2μm,20.0s								
GCMP	Grenada, Carri	149.41	303	eP		PKPdf	01 22 12.5	-1.7	
H03S1	Juan Fernandez	149.53	194		PKPbc	PKPbc	01 22 18.5	+0.4	
H03S2	Juan Fernandez	149.55	194		PKPbc	PKPbc	01 22 18.4	+0.3	
H03S3	Juan Fernandez	149.55	194		PKPbc	PKPbc	01 22 18.5	+0.3	
SJG	San Juan	149.56	317	eP		PKPdf	01 22 13.6	-0.7	
SJG	San Juan	149.56	317		PKHKP	PKPpre	01 22 13.4		
SJG					MLR	MLR			
	comp=Z,3μm,22.0s								
SJG	San Juan	149.56	317			PKPdf	01 22 13.4	-0.9	
SJG					PKPbc	PKPbc	01 22 19.2	+0.3	
CO01	Juntas del Tor	149.69	210⇑	eP		PKPdf	01 22 15.5	+0.9	
GRGR	Grenville	149.79	303	eP		PKPdf	01 22 13.0	-1.8	
GO04	Tololo Observa	149.88	209	eP		PKPbc	01 22 19.6	-0.1	
GO04	Tololo Observa	149.88	209		IAMs_20	IAMs_20	02 26 11.4		
	comp=Z,2μm,21.0s								
H03N3	Juan Fernandez	149.91	194		PKPbc	PKiKP	01 22 21.0	+0.9	
H03N1	Juan Fernandez	149.92	194		PKPbc	PKiKP	01 22 21.0	+1.0	
H03N2	Juan Fernandez	149.93	194		PKPbc	PKiKP	01 22 20.9	+1.0	
PTLB	Pontes e Lacer	150.18	246	eP		PKPdf	01 22 15.6	+0.2	
TRN	Trinidad (W)	150.31	300	eP		PKPbc	01 22 18.3	-2.5	
TPP	Pointe-a-Pierr	150.51	300	eP		PKiKP	01 22 23.9	+1.8	
GUIV	Guiria	151.01	301	eP		PKPdf	01 22 17.4	+0.7	
SC01	Santiago de lo	151.40	326		IAMs_20	IAMs_20	02 34 57.4		
	comp=Z,2μm,20.0s								
AC02	Maricunga	151.62	216		IAMs_20	IAMs_20	02 17 49.9		
	comp=Z,2μm,22.0s								
GO03	Copiap	151.66	213		IAMs_20	IAMs_20	02 24 28.9		
	comp=Z,2μm,20.0s								
SIV	San Ignacio	151.74	244		PP	PP	01 26 03.5	-0.9	
	comp=Z,6.6nm,1.0s,baz=133,slow=19,SNR=1.7								
VILB	Vilhena	151.90	250	eP		PKPdf	01 22 18.8	+0.6	
PTGA	Pitinga	152.51	277			PKPdf	01 22 19.4	+0.3	
PTGA	Pitinga	152.51	277	eP		PKPdf	01 22 19.6	+0.5	
ORIV	Oritupano	152.79	299	eP		PKPdf	01 22 18.4	-1.0	
GO02	Mina Guanaco	153.15	218		IAMs_20	IAMs_20	02 38 25.7		
	comp=Z,2μm,21.0s								
MACA	Manacapuru-AM	153.46	271	eP		PKPdf	01 22 20.9	+0.5	
PB14	IPOC Station P	154.04	217		IAMs_20	IAMs_20	02 19 04.6		
	comp=Z,2μm,20.0s								
LVC	Limon Verde	154.52	223		PP	PP	01 26 18.6	-1.0	
	comp=Z,12nm,1.1s,baz=131,slow=8.2,SNR=2.3								
LVC	Limon Verde	154.52	223	eP		PKPdf	01 22 19.5	-2.7	
PB10	IPOC Station P	154.95	219		IAMs_20	IAMs_20	02 28 54.0		
	comp=Z,2μm,21.0s								
PB04	IPOC Station P	155.54	221		PKPdf	PKPdf	01 22 23.4	0.0	
PB04						PKPab	01 22 50.8	+1.7	
TLIG	Tlapa	155.63	27		IAMs_20	IAMs_20	02 45 49.4		
	comp=Z,2μm,21.0s								
SAML	Samuel	155.63	258		PKIKP	PKPdf	01 22 23.6	+0.1	
SAML	Samuel	155.63	258			PKPdf	01 22 23.6	+0.1	
SAML	Samuel	155.63	258	eP		PKPdf	01 22 23.7	+0.3	
TEIG	Tepich	155.67	2		PKPdf	PKPdf	01 22 23.5	+0.2	
TEIG						PKPab	01 22 49.8	+0.5	
TEIG	Tepich	155.67	2		IAMs_20	IAMs_20	02 40 39.8		
	comp=Z,2μm,20.0s								
MTDJ	Mount Denham	155.70	337		IAMs_20	IAMs_20	02 33 27.0		
	comp=Z,2μm,21.0s								
PB01	IPOC Station P	155.97	224		IAMs_20	IAMs_20	02 24 45.8		
	comp=Z,2μm,21.0s								
PB08	IPOC Station P	156.32	227		IAMs_20	IAMs_20	02 25 33.3		
	comp=Z,2μm,22.0s								
TA01	Diego Aracena	156.77	224		IAMs_20	IAMs_20	02 37 03.0		
	comp=Z,2μm,20.0s								
BAUV	El Baul	156.79	304	eP		PKPdf	01 22 22.3	-2.7	
PSGCX	Pisagua	157.36	226		IAMs_20	IAMs_20	02 26 60.0		
	comp=Z,2μm,22.0s								
LPAZ	La Paz	157.72	236		PKP	PKPdf	01 22 27.2	+0.4	
	comp=Z,33nm,1.0s,baz=51,slow=3.4,SNR=81								
LPAZ					PKPab	PKPab	01 22 59.9	+0.7	
	comp=Z,73nm,0.9s,baz=88,slow=7.4,SNR=16								
LPAZ	La Paz	157.72	236		PKIKP	PKPdf	01 22 27.4	+0.5	
LPAZ	La Paz	157.72	236			PKPdf	01 22 27.4	+0.5	
LPAZ	La Paz	157.72	236	eP		PKPdf	01 22 25.4	-1.5	
URIC	Uribia, Colomb	158.06	316	eP		PKPdf	01 22 26.4	-0.1	
SDV	Santo Domingo	158.91	308	eP		PKPdf	01 22 27.2	-0.6	
SDV	Santo Domingo	158.91	308	eP		PKPab	01 23 00.7	-3.2	
SDV	Santo Domingo	158.91	308			PKPdf	01 22 27.4	-0.4	
SDV					PKPab	PKPab	01 23 03.9	+0.1	
SDV	Santo Domingo	158.91	308		IAMs_20	IAMs_20	02 32 02.8		
	comp=Z,2μm,22.0s								
SDV	Santo Domingo	158.91	308	eP		PKPdf	01 22 27.3	-0.6	
ARGC	Ariguani, Magd	160.91	317	eP		PKPdf	01 22 30.8	+0.9	
OCAC	Ocana	161.37	312	eP		PKPdf	01 22 30.0	-0.5	
SJCC	San Jacinto, C	161.50	319	eP		PKPdf	01 22 31.1	+0.6	
SJCC	San Jacinto, C	161.50	319	eP		PKPab	01 23 14.7	-0.2	
SMLC	San Martn de	161.54	315	eP		PKPdf	01 22 29.7	-0.8	
SMLC	San Martn de	161.54	315	eP		PKPab	01 23 14.2	-0.9	
BRRC	Barranca, Sant	162.39	310	eP		PKPdf	01 22 31.4	0.0	
RUSC	La Rusia	162.63	305	eP		PKPdf	01 22 31.1	-1.1	
RUSC	La Rusia	162.63	305	eP		PKPab	01 23 19.3	-1.2	
PTGC	Puerto Gaitan,	162.72	299	eP		PKPdf	01 22 30.2	-1.6	
ZARC	Zaragoza, Cauc	163.00	313	eP		PKPdf	01 22 31.5	-0.5	
UREC	San Jos de Ur	163.30	315	eP		PKPdf	01 22 31.9	-0.4	
UREC	San Jos de Ur	163.30	315	eP		PKPab	01 23 22.2	-0.6	
PTBC	PUERTO BERRIO	163.32	310	eP		PKPdf	01 22 31.2	-1.1	
PTBC	PUERTO BERRIO	163.32	310	eP		PKPab	01 23 22.4	-0.5	
ESPN	Las Esperanzas	163.41	350		PKPdf	PKPdf	01 22 32.1	-0.3	
ESPN						PKPab	01 23 23.0	+0.1	
SPBC	San Pablo de B	163.57	307	eP		PKPdf	01 22 31.9	-0.8	
SPBC	San Pablo de B	163.57	307	eP		PKPab	01 23 23.2	-0.9	
CAPC	Capurgana	163.84	322	eP		PKPdf	01 22 32.5	-0.2	
CHIC	Chingaza	163.87	303	eP		PKPdf	01 22 32.2	-1.1	
CHIC	Chingaza	163.87	303	eP		PKPab	01 23 25.2	-0.7	
VILC	Villavicencio,	164.11	301	eP		PKPdf	01 22 31.8	-1.5	
VILC	Villavicencio,	164.11	301	eP		PKPab	01 23 26.4	-0.2	
ROSC	El Rosal	164.24	305		PKP	PKPdf	01 22 33.9	+0.3	
	comp=Z,90nm,1.0s,baz=96,slow=1.4,SNR=50								
ROSC					PKPab	PKPab	01 23 28.1	+0.6	
	comp=Z,42nm,0.9s,baz=144,slow=19,SNR=2.2								
ROSC	El Rosal	164.24	305	eP		PKPdf	01 22 33.3	-0.4	
ROSC	El Rosal	164.24	305	eP		PKPab	01 23 27.7	+0.2	
NORC	Norcasia	164.25	308	eP		PKPdf	01 22 32.5	-0.8	
NORC	Norcasia	164.25	308	eP		PKPab	01 23 25.6	-1.5	
DBBC	Dabeiba	164.29	315	eP		PKPdf	01 22 33.2	-0.1	
HELC	Santa Helena	164.36	311	eP		PKPdf	01 22 33.1	-0.7	
HELC	Santa Helena	164.36	311	eP		PKPab	01 23 27.7	-0.2	
BCIP	Isla Barro Col	164.76	331	eP		PKPdf	01 22 32.6	-1.0	
GUY2C	Guyana, Caldas	164.85	308	eP		PKPdf	01 22 33.2	-1.1	
GUY2C	Guyana, Caldas	164.85	308	eP		PKPab	01 23 29.6	-0.6	
CBOC	Ciudad Bolivar	164.94	312	eP		PKPdf	01 22 33.1	-0.9	
CBOC	Ciudad Bolivar	164.94	312	eP		PKPab	01 23 30.7	+0.5	
RREF	El Recreo	165.03	307	eP		PKPdf	01 22 34.3	-0.4	
RREF	El Recreo	165.03	307	eP		PKPab	01 23 32.2	+1.0	
MACC	Macarena, Meta	165.17	295	eP		PKPdf	01 22 32.9	-1.2	
MACC	Macarena, Meta	165.17	295	eP		PKPab	01 23 30.8	-0.4	
TOLC	Tolima	165.19	306	eP		PKPab	01 23 32.5	+0.8	
ANIL	Santa Ana	165.32	306	eP		PKPdf	01 22 33.5	-0.9	
ANIL	Santa Ana	165.32	306	eP		PKPab	01 23 32.8	+0.7	
PRAC	Prado	165.32	302	eP		PKPdf	01 22 33.2	-1.0	
PRAC	Prado	165.32	302	eP		PKPab	01 23 30.8	-1.1	
ORTC	Ortega, Tolima	165.52	304	eP		PKPdf	01 22 33.1	-1.3	
ORTC	Ortega, Tolima	165.52	304	eP		PKPab	01 23 32.4	-0.3	
PLMC	San Jos del P	165.76	310	eP		PKPab	01 23 30.4	-3.4	
YOTC	Yotoco, Valle	166.37	307	eP		PKPdf	01 22 34.0	-1.1	
YOTC	Yotoco, Valle	166.37	307	eP		PKPab	01 23 35.6	-0.9	
PIZC	Pizarro, Choco	166.53	313	eP		PKPdf	01 22 36.3	+1.3	
PIZC	Pizarro, Choco	166.53	313	eP		PKPab	01 23 38.7	+1.7	
GARC	Garzon, Huila	166.62	298	eP		PKPdf	01 22 35.1	-0.4	
GARC	Garzon, Huila	166.62	298	eP		PKPab	01 23 35.7	-2.2	
PTLC	Puerto Leguiza	166.80	289	eP		PKPdf	01 22 33.5	-1.8	
PTLC	Puerto Leguiza	166.80	289	eP		PKPab	01 23 38.3	-0.1	
PCON	Cinco Dias	167.33	301	eP		PKPdf	01 22 36.9	+0.5	
PCON	Cinco Dias	167.33	301	eP		PKPab	01 23 41.3	0.0	
POPC	Popayan, Colom	167.46	302	eP		PKPdf	01 22 35.1	-1.0	
POPC	Popayan, Colom	167.46	302	eP		PKPab	01 23 34.6	-6.9	
SOTA	Rioblanco	167.61	301	eP		PKPdf	01 22 36.6	+0.1	
SOTA	Rioblanco	167.61	301	eP		PKPab	01 23 40.5	-2.0	
BBAC	Balboa, Cauca	168.22	302	eP		PKPdf	01 22 35.8	-0.8	
BBAC	Balboa, Cauca	168.22	302	eP		PKPab	01 23 44.8	0.0	
PUAC	Puerto Asis, P	168.31	294	eP		PKPdf	01 22 35.1	-1.3	
GCUF	Volcan Galeras	168.70	299	eP		PKPdf	01 22 37.6	+0.4	
GCUF	Volcan Galeras	168.70	299	eP		PKPab	01 23 48.5	+1.1	
CUSE	Cuicocha Este	170.06	297	eP		PKPdf	01 22 37.3	-0.7	
CUSE	Cuicocha Este	170.06	297	eP		PKPab	01 23 52.7	-0.6	
PAC1	Pacto, Paraso	170.43	298	eP		PKPab	01 23 53.2	-1.4	
ATAH	Atahualpa	170.72	252		PKPab	PKPab	01 23 57.5	+1.2	
	comp=Z,29nm,1.0s,baz=110,slow=4.4,SNR=4.1								
ATAH					PP	PP	01 27 46.0	-0.8	
	comp=Z,3.3nm,0.7s,baz=98,slow=9.9,SNR=3.8								

JMA ***18*** *01:10:26.3±0.3,23°

TWG	**Pinlang**	**1.53**	**236**	*e*S		**Sn**	**01 11 11.1**	**0.0**
	baz=231							
JKRS	**Kuro-shima**	**1.53**	**68**	P		**Pb**	**01 10 54.3**	**-0.1**
JKRS				S		**Sb**	**01 11 14.1**	**+0.8**
WJS	**Zhushan**	**1.58**	**275**	*e*P		**Pb**	**01 10 54.5**	**-0.8**
	baz=275							
WJS				*e*S		**Sb**	**01 11 16.5**	**+1.6**
	baz=275							
CHN5	**Tsauling**	**1.63**	**267**	*e*P		**Pn**	**01 10 54.4**	**+0.9**
	baz=276							
CHN5				*e*S		**Sb**	**01 11 16.0**	**-0.3**
	baz=276							
WNT	**Mingjian**	**1.63**	**277**	*e*S		**Sb**	**01 11 16.6**	**+0.4**
	baz=277							
STYT	**Tauyuan**	**1.64**	**252**	*e*P		**Pn**	**01 10 54.5**	**+0.9**
	baz=247							
STYT				*e*S		**Sn**	**01 11 13.9**	**0.0**
	baz=247							
TWQ1	**Liyutan**	**1.67**	**294**	*e*S		**Sb**	**01 11 17.3**	**-0.1**
	baz=284							
JIJ	**Ishigaki jima**	**1.69**	**66**	P		**Pb**	**01 10 56.8**	**-0.3**
TPUB	**Ta-pu**	**1.71**	**258**	*e*P		**Pn**	**01 10 56.3**	**+1.6**
	baz=259							
TPUB				*e*S		**Sb**	**01 11 18.0**	**-0.7**
	baz=259							
WTP	**Ta-pu**	**1.74**	**256**	*e*P		**Pb**	**01 10 56.9**	**-1.1**
	baz=257							
WTP				*e*S		**Sb**	**01 11 19.0**	**-0.5**
	baz=257							
WDLH	**Douliu**	**1.75**	**271**	*e*P		**Pb**	**01 10 57.5**	**-0.7**
	baz=271							
WDLH				*e*S		**Sb**	**01 11 19.5**	**-0.3**
	baz=271							
SLGT	**Liugui**	**1.79**	**248**	*e*S		**Sb**	**01 11 20.0**	**-1.0**
	baz=245							
CHN1	**Nanshi**	**1.83**	**255**	*e*P		**Pb**	**01 10 58.3**	**-1.2**
	baz=256							
CHN1				*e*S		**Sb**	**01 11 21.9**	**-0.2**
	baz=256							
TWK	**Hsinying**	**1.85**	**258**	*e*P		**Pb**	**01 10 59.0**	**-0.8**
	baz=258							
TWK				*e*S		**Sb**	**01 11 22.3**	**-0.2**
	baz=258							
JISG	**Ishigakijimahi**	**1.92**	**62**	P		**Pb**	**01 11 00.0**	**-1.1**
MASBT	**Mashibuluo**	**1.98**	**238**	*e*P		**Pn**	**01 10 59.2**	**+0.9**
	baz=236							
MASBT				*e*S		**Sn**	**01 11 23.2**	**+0.9**
	baz=236							
WDGT	**Dungji**	**2.60**	**261**	*e*P		**Pn**	**01 11 08.2**	**+1.5**
	baz=262							
WDGT				*e*S		**Sn**	**01 11 39.6**	**+2.2**
	baz=262							
PHUB	**P'eng-hu**	**2.65**	**267**	*e*S		**Sn**	**01 11 40.4**	**+1.8**
	baz=267							
VWUC	**VWUC**	**3.03**	**296**	*e*P		**Pn**	**01 11 13.8**	**+1.0**
	baz=284							
VWUC				*e*S		**Sn**	**01 11 48.7**	**+0.5**
	baz=284							
PTMZ	**Houxiangcun**	**3.33**	**295**	*e*P		**Pn**	**01 11 17.8**	**+1.0**
	baz=283							
PTMZ				*e*S		**Sn**	**01 11 56.0**	**+0.6**
	baz=283							

*TIR **18** 01:10:49.6, 40.61N×19.76E, h17km, Md3.1/7*
*ATH **18** 01:10:49.8, 40.64N×19.66E, h36km±3km, ML2.5/8, Error ellipse: s-maj=3.4km s-min=1.2km az=287.0*
*PDG **18** 01:10:49.7±0.2, 40.70N×19.69E, h14km, ML2.6/13, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*
*THE **18** 01:10:50.0, 40.63N×19.78E, h0km±2km, ML2.4/9, Error ellipse: s-maj=2.4km s-min=0.7km az=309.0*
*BEO **18** 01:10:50.3±1.5, 40.65N×19.58E, h9km±6km, ML2.5/6*

ISC 18 01:10:49.9±0.9, 40.63N±0.01×19.70E±0.02, h14km±8km, n83, σ1s04/132, 13C-7D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLO	**Vlora**	**0.22**	**224**	P	**Pg**	**01 10 55.0**	**+0.2**
VLO				S	**Sb**	**01 11 00.2**	**+0.6**
	7μm,0.4s						
VLO	**Vlora**	**0.22**	**224**	*i* PG	**Pb**	**01 10 55.2**	**-0.5**
VLO				*i* SG	**Sb**	**01 11 00.3**	**+0.7**
TPE	**Tepelena**	**0.41**	**144**	P	**Pg**	**01 10 56.9**	**-1.2**
TPE				S	**Sg**	**01 11 03.3**	**-0.3**
	1μm,0.6s						
TPE	**Tepelena**	**0.41**	**144**	*i* PG	**Pg**	**01 10 55.2**	**-2.9**
TPE				*i* SG	**Sg**	**01 11 03.6**	**0.0**
TIR	**Tirane**	**0.73**	**10**	*e*Pg	**Pb**	**01 11 04.3**	**-0.1**
TIR				*e*Sg	**Sn**	**01 11 15.2**	**-1.6**
TIR	**Tirane**	**0.73**	**10**	P	**Pb**	**01 11 04.1**	**-0.3**
TIR				S	**Sb**	**01 11 15.0**	**+0.7**
	208nm,0.4s						
TIR	**Tirane**	**0.73**	**10**	*i* PG	**Pb**	**01 11 04.4**	**-0.1**
TIR				*i* SG	**Sn**	**01 11 16.0**	**-0.7**
TIR	**Tirane**	**0.73**	**10**	P	**Pb**	**01 11 04.1**	**-0.3**
TIR				S	**Sn**	**01 11 15.7**	**-1.0**
TIR				AML	AML	01 11 22.4	
	comp=E,1062μm,0.2s						
TIR				AML	AML	01 11 22.6	
	comp=N,1082μm,0.5s						
TIR	**Tirane**	**0.73**	**10**	⇑P	**Pg**	**01 11 03.8**	**-0.3**
TIR				⇑S	**Sn**	**01 11 20.4**	**+3.6**
SRN	**Sarande**	**0.78**	**163**	P	**Pg**	**01 11 04.0**	**-1.1**
SRN				S	**Sb**	**01 11 16.6**	**+0.9**
	comp=N,238nm,0.5s						
SRN	**Sarande**	**0.78**	**163**	*i* PG	**Pg**	**01 11 04.9**	**-0.2**
SRN				*i* SG	**Sb**	**01 11 16.7**	**+1.0**
KASA	**Kassiopi**	**0.90**	**168**	P	**Pn**	**01 11 08.2**	**+0.1**
KASA				S	**Sn**	**01 11 20.5**	**-0.4**
KASA				AML	AML	01 11 23.0	
	comp=N,842μm,0.2s						
KASA				AML	AML	01 11 23.0	
	comp=E,1339μm,0.3s						
KEK	**Kerkira**	**0.92**	**175**	P	**Pb**	**01 11 07.2**	**-0.4**
KEK				S	**Sn**	**01 11 21.5**	**+0.1**
	comp=E,250nm,0.5s						
KEK	**Kerkira**	**0.92**	**175**	P	**Pb**	**01 11 07.4**	**-0.2**
KEK				S	**Sn**	**01 11 21.4**	**0.0**
KEK				AML	AML	01 11 26.9	
	comp=E,532μm,0.4s						
KEK				AML	AML	01 11 28.6	
	comp=N,436μm,0.3s						
OHR	**Ohrid**	**0.96**	**60**	*i* Pn	**Pb**	**01 11 07.8**	**-0.6**
OHR	**Ohrid**	**0.96**	**60**	*i* Pn	**Pb**	**01 11 07.8**	**-0.6**
NEST	**Nestorio**	**1.05**	**101**	P	**Pb**	**01 11 08.9**	**-1.0**
NEST	**Nestorio**	**1.05**	**101**	P	**Pb**	**01 11 08.9**	**-1.0**
NEST				S	**Sn**	**01 11 25.2**	**+0.3**
NEST				AML	AML	01 11 31.2	
	comp=E,213μm,0.4s						
NEST				AML	AML	01 11 31.7	
	comp=N,215μm,0.6s						
SCTE	**Santa Cesarea**	**1.09**	**240**	P	**Pn**	**01 11 10.5**	**-0.3**
SCTE				S	**Sb**	**01 11 24.1**	**-0.6**
SCTE				AML	AML	01 11 29.1	
	comp=N,199μm,0.3s						
SCTE				AML	AML	01 11 30.1	
	comp=E,335μm,0.2s						
PENT	**Pentalofos**	**1.18**	**111**	P	**Pn**	**01 11 12.0**	**-0.1**
PHP	**Peshkopia**	**1.20**	**28**	P	**Pn**	**01 11 11.3**	**-1.0**
PHP	**Peshkopia**	**1.20**	**28**	*i* PN	**Pn**	**01 11 11.6**	**-0.6**
PHP				*i* SN	**Sg**	**01 11 30.7**	**+2.2**
IGT	**Igoumenitsa**	**1.20**	**156**	P	**Pn**	**01 11 12.0**	**-0.2**
IGT				S	**Sg**	**01 11 29.8**	**+1.3**
	comp=E,190nm,0.6s						
IGT	**Igoumenitsa**	**1.20**	**156**	P	**Pn**	**01 11 12.0**	**-0.2**
IGT				S	**Sn**	**01 11 28.4**	**+0.1**
IGT				AML	AML	01 11 32.8	
	comp=N,305μm,0.6s						
IGT				AML	AML	01 11 33.5	
	comp=E,445μm,0.6s						
FNA	**Florina**	**1.28**	**83**	P	**Pn**	**01 11 12.5**	**-1.0**
FNA				S	**Sn**	**01 11 30.7**	**+0.2**
	comp=E,228nm,0.6s						
FNA	**Florina**	**1.28**	**83**	P	**Pn**	**01 11 12.5**	**-1.0**
FNA				S	**Sn**	**01 11 30.9**	**+0.4**
FNA				AML	AML	01 11 33.6	
	comp=N,377μm,0.4s						
FNA				AML	AML	01 11 35.2	
	comp=E,481μm,0.3s						
JAN	**Janina**	**1.31**	**137**	P	**Pb**	**01 11 14.4**	**+0.1**
JAN				S	**Sg**	**01 11 33.1**	**+0.9**
	comp=E,205nm,0.7s						
JAN	**Janina**	**1.31**	**137**	P	**Pb**	**01 11 14.2**	**-0.2**
ULC	**Ulcinj**	**1.38**	**346**	⇑*i* Pg	**Pn**	**01 11 14.2**	**-0.6**
ULC				*i* Sg	**Sg**	**01 11 34.9**	**+0.6**
PUK	**Puka**	**1.42**	**6**	*i* PN	**Pg**	**01 11 16.6**	**-0.6**
PUK				*i* SN	**Sg**	**01 11 37.6**	**+1.9**
KPRO	**Kipourio**	**1.44**	**117**	P	**Pb**	**01 11 16.4**	**-0.1**
KPRO				S	**Sg**	**01 11 36.3**	**0.0**
	comp=E,120nm,0.6s						
KPRO	**Kipourio**	**1.44**	**117**	P	**Pb**	**01 11 16.5**	**-0.1**
KPRO				S	**Sb**	**01 11 35.5**	**+0.8**
KPRO				AML	AML	01 11 42.5	
	comp=N,178μm,0.6s						
KPRO				AML	AML	01 11 46.0	
	comp=E,299μm,0.5s						
MEV	**Metsovon**	**1.44**	**125**	P	**Pn**	**01 11 15.5**	**-0.3**
DRME	**Dracevica, Mon**	**1.60**	**346**	⇓*i* Pg	**Pn**	**01 11 17.6**	**-0.2**
DRME				*i* Sg	**Sb**	**01 11 39.9**	**+0.4**
KZN	**Kozani**	**1.61**	**101**	P	**Pn**	**01 11 18.7**	**+0.7**
BCI	**Bajram Curri**	**1.76**	**9**	*i* PN	**Pb**	**01 11 21.8**	**-0.2**
BCI				*i* SN	**Sg**	**01 11 47.9**	**+1.4**
BUM	**Brajici-Budva**	**1.78**	**340**	⇑*i* Pn	**Pn**	**01 11 20.0**	**-0.3**
BUM				*i* Sn	**Sb**	**01 11 44.5**	**0.0**
PDG	**Podgorica**	**1.83**	**350**	*e*Pn	**Pb**	**01 11 21.7**	**-1.5**
PDG				*e*Sg	**Sb**	**01 11 46.3**	**+0.4**
TTG	**Podgorica**	**1.83**	**350**	⇓*i* Pn	**Pn**	**01 11 20.7**	**-0.2**
TTG				*i* Sn	**Sb**	**01 11 45.3**	**-0.6**
SKO	**Skopje**	**1.88**	**44**	*e*Pn	**Pb**	**01 11 23.6**	**-0.4**
SKO				*e*Sg	**Sg**	**01 11 50.8**	**+0.5**
PVY	**Plav**	**1.97**	**6**	⇑*i* Pn	**Pn**	**01 11 22.7**	**-0.3**
PVY				*i* Sn	**Sb**	**01 11 48.6**	**-1.6**
LKD2	**Lefkada island**	**1.98**	**158**	P	**Pn**	**01 11 23.4**	**+0.4**
LKD2	**Lefkada island**	**1.98**	**158**	P	**Pn**	**01 11 23.6**	**+0.5**
CEME	**Cevo**	**2.00**	**343**	⇑*i* Pn	**Pn**	**01 11 23.0**	**-0.4**
CEME				*i* Sn	**Sb**	**01 11 49.4**	**-1.6**
NOCI	**Noci**	**2.01**	**275**	P	**Pn**	**01 11 22.6**	**-0.8**
HCY	**Herceg Novi**	**2.03**	**334**	⇓*i* Pn	**Pn**	**01 11 23.3**	**-0.4**
HCY				*i* Sn	**Sb**	**01 11 50.5**	**-1.2**
EVGI	**Lefkada island**	**2.14**	**159**	P	**Pn**	**01 11 25.4**	**+0.3**
EVGI	**Lefkada island**	**2.14**	**159**	P	**Pn**	**01 11 25.5**	**+0.4**
STIP	**Stip**	**2.16**	**60**	*i* Pn	**Pb**	**01 11 29.4**	**+0.7**
STIP	**Stip**	**2.16**	**60**	*i* Pn	**Pb**	**01 11 29.4**	**+0.7**
NKME	**Niksic**	**2.21**	**346**	⇓*i* Pn	**Pn**	**01 11 26.2**	**0.0**
NKME				*i* Sn	**Sn**	**01 11 54.5**	**+1.2**
KOME	**Kolasin**	**2.23**	**357**	⇓*i* Pn	**Pn**	**01 11 26.4**	**-0.1**
KOME				*i* Sn	**Sn**	**01 11 55.0**	**+1.2**
IVA	**Berane**	**2.25**	**4**	⇑*i* Pn	**Pn**	**01 11 26.6**	**-0.2**
IVA				*i* Sn	**Sn**	**01 11 55.6**	**+1.3**
NKY	**Niksic**	**2.25**	**347**	⇑*i* Pn	**Pn**	**01 11 26.4**	**-0.4**
NKY				*i* Sn	**Sn**	**01 11 54.7**	**+0.4**
FSK	**Fiskardo**	**2.27**	**163**	P	**Pn**	**01 11 26.8**	**-0.1**
FSK	**Fiskardo**	**2.27**	**163**	P	**Pn**	**01 11 26.7**	**-0.1**
MATE	**Matera**	**2.28**	**272**	⇓P	**Pg**	**01 11 34.8**	**+1.2**
MATE				⇑S	**Sg**	**01 12 05.7**	**+2.5**
SG1	**Sgolgore (BA)**	**2.31**	**276**	*e*Pn	**Pn**	**01 11 28.3**	**+0.8**
TREB	**Trebinje**	**2.32**	**335**	*e*Pn	**Pn**	**01 11 28.2**	**+0.5**
DBRK	**Dubrovnik**	**2.35**	**331**	*i* Pn	**Pn**	**01 11 27.3**	**-0.8**
DBRK				Sn	**Sn**	**01 11 55.6**	**-1.1**
BRY	**Bratogost**	**2.43**	**339**	⇑*i* Pn	**Pn**	**01 11 28.8**	**-0.5**
BRY				*i* Sn	**Sn**	**01 11 59.3**	**+0.3**
KNT	**Kendrikon**	**2.48**	**77**	P	**Pn**	**01 11 30.5**	**+0.6**
SJES	**Sjenica**	**2.64**	**4**	*e*Pn	**Pn**	**01 11 34.1**	**+1.9**
UPM	**Unac-Piva**	**2.64**	**347**	⇑*i* Pn	**Pn**	**01 11 31.9**	**-0.4**
UPM				*i* Sn	**Sn**	**01 12 05.1**	**+0.9**
ANX	**Ano Chora**	**2.66**	**139**	P	**Pn**	**01 11 34.1**	**+1.7**
STON	**Ston**	**2.69**	**327**	*e*Pn	**Pn**	**01 11 32.7**	**-0.1**
STON	**Ston**	**2.69**	**327**	*e*Pn	**Pn**	**01 11 31.5**	**-1.3**
STON				Sn	**Sn**	**01 12 03.4**	**-1.8**
BARS	**Barje**	**2.70**	**35**	*e*Pn	**Pn**	**01 11 34.5**	**+1.6**
BARS	**Barje**	**2.70**	**35**	*e*Pn	Pg	01 11 48.6	+7.0
PLE	**Pljevlja**	**2.71**	**355**	⇓*i* Pn	**Pn**	**01 11 33.0**	**-0.1**
PLE				*i* Sn	**Sn**	**01 12 06.8**	**+1.0**
SELS	**Selova**	**2.80**	**22**	*e*Pn	**Pn**	**01 11 34.6**	**+0.3**
IVAS	**Ivanjica**	**2.96**	**6**	*e*Pn	**Pn**	**01 11 38.8**	**+2.2**
VTS	**Vitosha**	**3.31**	**52**	*e*Pn	**Pn**	**01 11 42.7**	**+1.2**
VTS	**Vitosha**	**3.31**	**52**	⇑P	**Pn**	**01 11 41.8**	**+0.4**
VTS				⇑S	**Sn**	**01 12 17.4**	**-3.3**
ZAPS	**Zavoj**	**3.43**	**39**	*e*Pn	**Pn**	**01 11 45.0**	**+2.0**
RICI	**Ricice**	**3.44**	**327**	*e*Pn	**Pn**	**01 11 42.1**	**-1.0**
RICI				Sn	**Sn**	**01 12 22.3**	**-1.5**
DIVS	**Divibare**	**3.48**	**3**	*e*Pn	**Pn**	**01 11 44.2**	**+0.6**
TRUS	**Trudelj**	**3.63**	**8**	*e*Pn	**Pn**	**01 11 46.9**	**+1.2**
KUJV	**Kijevo**	**4.17**	**325**	*e*Pn	**Pn**	**01 11 52.8**	**-0.3**
KIJV				Sn	**Sn**	**01 12 40.1**	**-1.5**
ZIRJ	**Zirje**	**4.27**	**316**	*e*Pn	**Pn**	**01 11 53.4**	**-1.1**
ZIRJ				Sn	**Sn**	**01 12 41.4**	**-2.7**
MORI	**Morici**	**4.39**	**319**	*i* Pn	**Pn**	**01 11 55.6**	**-0.5**
MORI				Sn	**Sn**	**01 12 45.5**	**-1.5**
DUGI	**Dugi Otok**	**4.81**	**316**	*i* Pn	**Pn**	**01 12 01.7**	**-0.2**
NVLJ	**Novalja**	**5.31**	**319**	*e*Pn	**Pn**	**01 12 08.4**	**-0.3**

IDC 18 01:28:56.2±2.7, 6.19S×130.57E, h122km±35km, mb3.4/1, mb1 3.2/5, mb1mx3.0/33, mbtmp3.6/5, Error ellipse: s-maj=72.6km s-min=21.2km az=88.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.33**	**7**	P	Pn	01 30 14.0	+0.3
	1.7nm,0.3s,baz=162,slow=20,SNR=18						
SIJI				S	Sn	01 31 08.6	-5.6
	6.1nm,0.3s,baz=205,slow=22,SNR=22						
FITZ	**Fitzroy Crossi**	**12.78**	**202**	P	Pn	01 31 52.7	-0.9
	0.2nm,0.3s,baz=31,slow=12,SNR=22						
FITZ				S	Sn	01 34 05.9	-8.4
	0.5nm,0.3s,baz=191,slow=14,SNR=7.3						
WRA	**Warramunga Arr**	**14.15**	**165**	P	Pn	01 32 10.6	-0.7
	0.2nm,0.3s,baz=350,slow=13,SNR=12						
WRA				S	Sn	01 34 38.1	-10
	0.5nm,0.3s,baz=333,slow=22,SNR=9.6						
ASAR	**Alice Springs**	**17.67**	**170**	P	Pn	01 32 55.5	+0.6
	0.1nm,0.3s,baz=360,slow=9.6,SNR=4.7						
ASAR				S		01 36 01.4	-10
	0.1nm,0.3s,baz=354,slow=25,SNR=3.2						
MKAR	**Makanchi Array**	**67.87**	**326**	P	P	01 39 41.5	-0.1
	0.4nm,0.4s,baz=120,slow=9.6,SNR=6.3						

*IDC **18** 01:34:24.6±2.2, 18.1S×178.29W, h616km±27km, mb3.2/13, mb1 3.5/14, mb1mx3.3/33, mbtmp4.2/14, Error ellipse: s-maj=21.5km s-min=13.8km az=145.0*
*NEIC **18** 01:34:24.7±1.4, 18.1S±0.2×178.3W±0.2, h619km±5km, mb4.0/2, Error ellipse: s-maj=26.9km s-min=19.4km az=145.0*

ISC 18 01:34:22.6±0.7, 18.1S±0.2×178.2W±0.1, h600km, n46, σ1s16/49, mb3.9/13, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.64**	**276**	P	**P**	**01 35 47.8**	**+2.0**
DZM	**Mont Dzumac**	**14.99**	**252**	P	**P**	**01 37 31.3**	**+0.5**
	0.5nm,0.3s,baz=98,slow=19,SNR=1.4						
URZ	**Urewera**	**20.47**	**191**	P	**P**	**01 38 20.0**	**-0.3**
	5.0nm,0.8s,baz=20,slow=0.8,SNR=5.8						
CTA	**Charters Tower**	**33.65**	**261**	P	**P**	**01 40 15.4**	**0.0**
	3.7nm,0.6s,baz=96,slow=11,SNR=6.5						
STKA	**Stephens Creek**	**38.73**	**241**	P	**P**	**01 40 58.1**	**+1.2**
	3.9nm,0.6s,baz=73,slow=8.8,SNR=9.5						
STKA	**Stephens Creek**	**38.73**	**241**	lAmb	lAmb	01 42 13.2	
	comp=Z,7.7nm,1.2s						
WRA	**Warramunga Arr**	**44.83**	**260**	P	**P**	**01 41 44.8**	**-0.1**
	comp=Z,3.8nm,0.4s,baz=94,slow=7.2,SNR=79						
WRA				PcP	**PcP**	**01 43 14.2**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=95,slow=3.4,SNR=1.5						
AS31	**Alice Springs**	**44.96**	**254**	P	**P**	**01 41 45.7**	**-0.2**
AS31				lAmb	lAmb	01 41 47.2	
	comp=Z,5.3nm,0.5s						
ASAR	**Alice Springs**	**44.97**	**254**	P	**P**	**01 41 46.2**	**+0.2**
	comp=Z,16nm,0.6s,baz=87,slow=8.6,SNR=188						
ASAR				PcP	**PcP**	**01 43 14.3**	**+0.3**
	comp=Z,1.7nm,0.4s,baz=104,slow=4.0,SNR=9.9						
ASAR				S	**S**	**01 47 39.0**	**-2.9**
	comp=Z,1.9nm,1.0s,baz=88,slow=15,SNR=9.0						
MJAR	**Matsushiro Arr**	**68.24**	**323**	P	**P**	**01 44 24.1**	**-0.5**
	comp=Z,2.8nm,0.6s,baz=138,slow=6.0,SNR=11						
MAT	**Matsushiro**	**68.24**	**323**	P	**P**	**01 44 24.3**	**-0.4**
PETK	**Petropavlovsk-**	**73.97**	**345**	P	**P**	**01 44 57.6**	**0.0**
	comp=Z,1.8nm,0.6s,baz=139,slow=8.3,SNR=6.4						
KSRS	**Korea Array**	**75.04**	**318**	P	**P**	**01 45 04.5**	**+0.5**
	comp=Z,2.7nm,0.6s,baz=129,slow=6.0,SNR=4.5						
NVAR	**Mina Array Bea**	**79.42**	**44**	P	**P**	**01 45 29.7**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=224,slow=6.3,SNR=2.1						
ILAR	**Eielson Array**	**86.06**	**13**	P	**P**	**01 45 59.9**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=219,slow=4.9,SNR=11						
PDAR	**Pinedale Array**	**87.35**	**43**	P	**P**	**01 46 08.6**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=213,slow=6.5,SNR=2.1						
CMAR	**Chiang Mai Arr**	**89.19**	**290**	P	**P**	**01 46 17.4**	**+1.4**
	comp=Z,0.9nm,0.4s,baz=95,slow=2.9,SNR=5.2						
YKA	**Yellowknife Ar**	**94.44**	**25**	P	**P**	**01 46 39.7**	**+0.6**
	comp=Z,0.1nm,0.5s,baz=240,slow=4.4,SNR=2.2						
MKAR	**Makanchi Array**	**109.47**	**314**	PKiKP	**PKiKP**	**01 51 45.1**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=217,slow=0.6,SNR=5.7						
ARCES	**ARCESS Array B**	**126.59**	**350**	PKiKP	**PKiKP**	**01 52 17.9**	**-0.5**
	comp=Z,5.6nm,1.0s,baz=278,slow=3.6,SNR=4.8						
FINES	**FINESS Array B**	**133.48**	**344**	PKiKP	**PKiKP**	**01 52 30.3**	**-2.2**
	comp=Z,1.4nm,0.9s,baz=82,slow=4.0,SNR=4.4						
BUR08	**Bucovina Ar. S**	**144.92**	**332**	PKPdf	**PKiKP**	**01 52 54.9**	**-1.6**
BRTR	**Keskin Array B**	**145.12**	**315**	PKPbc	**PKPab**	**01 52 54.1**	**-1.2**
	comp=Z,1.8nm,0.6s,baz=122,slow=4.7,SNR=10						
BRTR				PKKP	**PKKPdf**	**02 01 58.0**	**-1.8**
	comp=Z,0.2nm,0.7s,baz=306,slow=4.8,SNR=3.6						
OSTC	**Ostas**	**145.68**	**344**	*e*PKP	**PKiKP**	**01 52 55.9**	**-2.0**
OSTC				*ex*	x	01 52 58.0	
CLL	**Collm**	**145.74**	**348**	⇓*i*PKPbc	**PKiKP**	**01 52 56.5**	**-1.4**
	comp=Z,7.0nm,0.7s						
CLL				LmV		02 20 00.0	
	comp=Z,1μm,21.6s						
UPC	**Upice**	**145.78**	**344**	*e*PKP	**PKPab**	**01 52 56.0**	**-1.4**
DPC	**Dobruska-Polom**	**145.84**	**343**	*e*PKP	**PKiKP**	**01 52 56.5**	**-1.7**
PRU	**Pruhonice**	**146.63**	**345**	*e*PKP	**PKiKP**	**01 52 58.2**	**-1.6**
GOPC	**GO Pecny, Ondr**	**146.64**	**345**	*e*PKP	**PKiKP**	**01 52 58.5**	**-1.4**
KHC	**Kasperske Hory**	**147.66**	**346**	*e*PKP	**PKiKP**	**01 53 01.2**	**-0.8**
GERES	**GERESS Array B**	**147.90**	**345**	PKPbc	**PKiKP**	**01 53 01.5**	**-1.1**
	comp=Z,1.9nm,0.6s,baz=22,slow=3.3,SNR=18						
CONA	**Conrad Observa**	**148.16**	**342**	*e*PKiKP	**PKiKP**	**01 53 02.2**	**-0.9**
	comp=Z,2.4nm,0.9s						
MOA	**Molln**	**148.68**	**344**	*e*PKiKP	**PKiKP**	**01 53 03.5**	**-0.6**
	comp=Z,2.4nm,0.8s						
SOKA	**Soboth**	**149.53**	**342**	*i* PKiKP	**PKiKP**	**01 53 05.3**	**-0.7**
	comp=Z,2.2nm,1.1s						
VTS	**Vitosha**	**149.58**	**328**		**PKiKP**	**01 53 04.7**	**-1.7**
KBA	**Koelnbreinsper**	**149.63**	**344**	*e*PKPbc	**PKiKP**	**01 53 05.5**	**-0.9**
	comp=Z,0.9nm,0.5s						
WATA	**Walderalm**	**149.81**	**347**	*i* PKiKP	**PKiKP**	**01 53 06.2**	**-0.5**
	comp=Z,2.3nm,0.6s						
WTTA	**Wattenberg**	**149.86**	**347**	*e*PKiKP	**PKiKP**	**01 53 06.6**	**-0.2**
	comp=Z,4.4nm,0.5s,SNR=8.9						
MOTA	**Moosalm**	**149.90**	**347**	*e*PKiKP	**PKiKP**	**01 53 06.4**	**-0.4**
	comp=Z,2.7nm,0.9s						
MYKA	**Terra Mystica**	**149.97**	**344**	*e*PKPbc	**PKiKP**	**01 53 05.9**	**-1.0**
	comp=Z,3.4nm,0.9s						
SQTA	**Sankt Quirin**	**149.99**	**347**	*e*PKiKP	**PKiKP**	**01 53 06.7**	**-0.3**
	comp=Z,2.6nm,0.5s,SNR=4.4						
ABTA	**Abfaltersbach**	**150.15**	**345**	*e*PKPbc	**PKiKP**	**01 53 06.4**	**-0.9**
	comp=Z,4.4nm,0.6s						
FETA	**Feichten**	**150.28**	**348**	*e*PKiKP	**PKiKP**	**01 53 07.6**	**0.0**
	comp=Z,2.9nm,0.8s,SNR=5.3						
FUORN	**Ofenpass-Fuorn**	**150.76**	**348**		**PKiKP**	**01 53 08.7**	**-0.1**
FNA	**Florina**	**151.87**	**327**		**PKiKP**	**01 53 10.6**	**-0.4**
TORD	**Torodi Ar. Bea**	**175.03**	**178**	PKPab	**PKPab**	**01 55 05.4**	**+0.6**
	comp=Z,0.1nm,0.6s,baz=150,slow=2.7,SNR=1.0						

*IDC **18** 01:46:38.3±0.8, 27.94N×143.12E, h0km, mb3.7/11, mb1 3.9/14, mb1mx3.8/34, mbtmp3.7/14, ML3.0/3, Error ellipse: s-maj=24.3km s-min=15.7km az=101.0*
*NEIC **18** 01:46:42.4±1.2, 27.97N±0.05×143.0E±0.1, h27km±5km, mb4.2/4, Error ellipse: s-maj=18.0km s-min=6.0km az=105.0*

ISC 18 01:46:41.6±0.8, 27.96N±0.08×143.1E±0.1, h22km, n22, σ0s73/24, mb3.8/12, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.16**	**223**	Pn	**Pn**	**01 47 02.3**	**-0.2**
	38nm,0.3s,baz=102,slow=

STKA	**Stephens Creek**	**27.55**	**205**	P	**P**	**02 08 12.0**	**+3.8**
	comp=Z,1.0nm,0.5s,baz=29,slow=12,SNR=5.1						
STKA	**Stephens Creek**	**27.55**	**205**	P	**P**	**02 08 05.3**	**-3.0**
STKA				IAmb	IAmb	02 08 12.4	
	comp=Z,1.1nm,1.1s						
FITZ	**Fitzroy Crossi**	**30.54**	**246**	P	**P**	**02 08 33.9**	**-1.1**
FITZ				IAmb	IAmb	02 08 47.8	
	comp=Z,8.8nm,1.4s						
CMAR	**Chiang Mai Arr**	**60.83**	**296**	P	**P**	**02 12 35.3**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=127,slow=6.9,SNR=2.1						
SONM	**Songino Array**	**69.47**	**327**	P	**P**	**02 13 30.2**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=46,slow=4.2,SNR=2.3						
MKAR	**Makanchi Array**	**83.52**	**319**	P	**P**	**02 14 49.9**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=109,slow=6.6,SNR=3.8						
ILAR	**Eielson Array**	**83.57**	**21**	P	**P**	**02 14 47.7**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=247,slow=5.2,SNR=6.5						
NVAR	**Mina Array Bea**	**91.87**	**52**	P	**P**	**02 15 29.8**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=243,slow=6.0,SNR=3.7						
YKA	**Yellowknife Ar**	**96.53**	**28**	P	**P**	**02 15 49.9**	**-0.3**
	comp=Z,0.9nm,1.1s,baz=261,slow=4.6,SNR=5.8						
TORD	**Torodi Ar. Bea**	**153.03**	**285**	PKPbc	**PKiKP**	**02 22 19.6**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=18,slow=2.3,SNR=3.9						

NNC 18 02:13:23.0±4.7, 37.01N×71.12E, h258km±61km, mb2.7, mpv3.5, 4C-3D, Error ellipse: s-maj=45.1km s-min=33.6km az=28.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.10**	**356**	⇓P	Pn	02 14 52.5	0.0
	3.0nm,0.3s,baz=184,slow=15,SNR=62						
KK31				⇑S	S	02 16 04.8	+0.6
	1.0nm,0.4s,baz=185,slow=24,SNR=4.3						
AAK	**Ala-Archa**	**6.19**	**24**	⇑P	Pn	02 14 53.2	-0.5
	3.4nm,0.9s						
AAK				S	S	02 16 07.0	+0.7
	2.4nm,0.7s						
TKM2	**Tokmak 2**	**6.83**	**29**	⇑P	Pn	02 15 00.8	-0.9
	3.5nm,1.1s						
TKM2				⇓S	S	02 16 21.7	+0.7
	1.1nm,0.7s						
AB31	**Akbulak array**	**14.69**	**330**	⇓P	Pn	02 16 42.2	+3.2
	12nm,0.3s,baz=142,slow=13,SNR=20						
AB31				⇑S	S	02 19 18.2	-2.7
	0.3nm,0.6s						

IDC ***18*** *02:26:50.4±1.6, 8.31S×156.35E, h0km, mb3.4/4, mb1 3.8/5, mb1mx3.5/20, mbtmp3.5/5, ML3.4/1, Error ellipse: s-maj=56.9km s-min=29.3km az=133.0*

ISC 18 02:26:55.2±1.2, 8.0S±0.1×156.2E±0.2, h21km, n7, σ2.2s38/8, mb3.6/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**5.56**	**312**	Pn	**Pn**	**02 28 19.3**	**+2.5**
	1.1nm,0.3s,baz=282,slow=9.3,SNR=2.0						
KRVT				Sn	**Sn**	**02 29 18.2**	**-1.9**
	baz=139,slow=20,SNR=1.7						
WRA	**Warramunga Arr**	**24.25**	**239**	P	**P**	**02 32 10.3**	**-0.7**
	0.5nm,0.9s,baz=62,slow=9.6,SNR=1.4						
ASAR	**Alice Springs**	**26.41**	**231**	P	**P**	**02 32 28.1**	**-2.6**
	0.5nm,0.9s,baz=61,slow=7.8,SNR=4.1						
STKA	**Stephens Creek**	**27.34**	**208**	P	**P**	**02 32 41.2**	**+2.3**
	0.4nm,0.3s,baz=20,slow=16,SNR=2.2						
ILAR	**Eielson Array**	**83.91**	**21**	P	**P**	**02 39 21.9**	**-1.4**
	0.2nm,0.4s,baz=250,slow=5.2,SNR=4.2						
YKA	**Yellowknife Ar**	**96.70**	**28**	P	**P**	**02 40 24.8**	**+1.0**
	0.2nm,0.7s,baz=260,slow=3.7,SNR=2.3						
TORD	**Torodi Ar. Bea**	**154.43**	**284**	PKPbc	**PKPbc**	**02 46 53.7**	**-1.6**
	0.4nm,1.0s,baz=90,slow=1.9,SNR=1.9						

IDC ***18*** *02:46:04.0±0.9, 14.95S×175.87W, h0km, mb3.9/12, mb1 4.1/12, mb1mx4.0/29, mbtmp3.9/12, MS4.4/17, Ms1 4.4/17, ms1mx4.1/41, Error ellipse: s-maj=33.8km s-min=20.3km az=134.0*

NEIC ***18*** *02:46:07.2±2.1, 14.7S±0.2×176.1W±0.2, h10km±1km, mb4.7/55, Error ellipse: s-maj=30.6km s-min=23.2km az=125.0*

GCMT ***18*** *02:46:07.2±0.3, 14.71S±0.02×175.67W±0.02, h13km±2km, MW5.0/106, Moment Tensor Solution. s11,c12; s106,c133; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.50±.17; Mθθ4.17±.20; Mϕϕ-3.68±.18; Mrθ0.86±.47; Mθϕ1.50±.16; Mϕr-1.24±.47; Best double couple: Mo4.48500×10^16 NP1:ϕs=36.00000°, δ71.00000°, λ-171.00000°. NP2:ϕs=303.00000°, δ82.00000°, λ-19.00000°. Principal axes: T 4.5280, Plg7.0000°, Azm351.0000°; N -0.0920, Plg69.0000°, Azm101.0000°; P -4.4420, Plg19.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 02:46:05.4±0.7, 15.0S±0.2×175.9W±0.2, h10km, n119, σ1.926/81, mb4.6/30, MS4.5/18, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.16**	**75**		Pn	02 46 59.7	-9.4
RAO	**Raoul Island**	**14.31**	**187**	LR	LR	02 54 08.9	
	comp=Z,3μm,19.8s,baz=104,slow=34						
RAR	**Rarotonga**	**16.55**	**114**	LR	LR	02 54 53.3	
	comp=Z,1μm,18.9s,baz=284,slow=32						
DZM	**Mont Dzumac**	**18.13**	**245**	eLQ	LQ	02 53 57.7	
	2μm,23.6s						
DZM				eLR	LR	02 54 46.4	
	comp=Z,2μm,24.5s						
DZM	**Mont Dzumac**	**18.13**	**245**	LR	LR	02 56 16.8	
	comp=Z,2μm,19.0s,baz=63,slow=34						
URZ	**Urewera**	**23.98**	**194**	LR	LR	02 59 27.2	
	comp=Z,2μm,20.4s,baz=15,slow=33						
PAE	**Paea**	**25.41**	**100**	eT	T	03 16 39.8	
	5.9nm,0.3s						
PPT	**Papeete**	**25.41**	**99**	LR	LR	02 59 05.0	
	comp=Z,504nm,20.9s,baz=310,slow=31						
PPT2	**Papeete2**	**25.41**	**99**	eLQ	LQ	02 56 20.7	
	1μm,26.5s						
PPT2				eLR	LR	02 57 24.0	
	comp=Z,2μm,26.5s,baz=264						
PPT2	**Papeete2**	**25.41**	**99**	eT	T	03 16 40.8	
	6.4nm,0.3s						
TIAR	**Tiarei**	**25.63**	**99**	eT	T	03 16 56.2	
	3.2nm,0.3s						
TVO	**Taravao**	**25.73**	**100**	eT	T	03 17 03.7	
	4.6nm,0.3s						
TBI	**Tubuai**	**26.30**	**112**	eLQ	LQ	02 56 46.5	
	1μm,31.5s						
TBI				eLR	LR	02 57 51.3	
	comp=Z,2μm,26.5s,baz=292						
TBI	**Tubuai**	**26.30**	**112**	eT	T	03 17 52.5	
	9.1nm,0.3s						
MEH	**Mehetia**	**26.86**	**100**	eT	T	03 18 28.6	
	11nm,0.3s						
PMOR	**Pomariorio Ree**	**27.07**	**94**	eT	T	03 18 42.3	
	5.5nm,0.2s						
TAOE	**Nuku Hiva Isla**	**35.50**	**84**	eLR	LR	03 02 05.1	
	comp=Z,1μm,27.2s						
H11S2	**WAKE ISLAND Hy**	**37.42**	**332**	T	T	03 32 55.3	
	baz=153,slow=76,SNR=16						
H11S3	**WAKE ISLAND Hy**	**37.43**	**332**	T	T	03 32 50.1	
	baz=153,slow=76,SNR=24						
H11S1	**WAKE ISLAND Hy**	**37.44**	**332**	T	T	03 32 48.6	
	baz=153,slow=76,SNR=18						
H11N3	**WAKE ISLAND Hy**	**38.41**	**333**	T	T	03 34 03.3	
	baz=161,slow=80,SNR=46						
H11N1	**WAKE ISLAND Hy**	**38.41**	**333**	T	T	03 34 01.7	
	baz=161,slow=80,SNR=64						
H11N2	**WAKE ISLAND Hy**	**38.42**	**333**	T	T	03 34 03.0	
	baz=161,slow=80,SNR=44						
RKT	**Rikitea**	**39.44**	**108**	eLR	LR	03 03 52.8	
	comp=Z,1μm,27.5s						
RKT	**Rikitea**	**39.44**	**108**	eT	T	03 34 14.7	
	5.1nm,0.3s						
STKA	**Stephens Creek**	**42.14**	**239**	P	**P**	**02 53 58.0**	**-0.3**
	0.6nm,0.5s,baz=291,slow=18,SNR=1.9						
STKA				LR	LR	03 10 46.0	
	comp=Z,342nm,18.2s,baz=59,slow=35						
JAY	**Jayapura**	**44.52**	**282**	LR	LR	03 11 11.9	
	comp=Z,170nm,21.3s,baz=325,slow=34						
WRA	**Warramunga Arr**	**47.57**	**257**	P	**P**	**02 54 42.3**	**+0.6**
	2.7nm,1.1s,baz=97,slow=7.1,SNR=4.9						
WRA				LR	LR	03 13 26.7	
	comp=Z,380nm,18.9s,baz=100,slow=34						
ASAR	**Alice Springs**	**47.92**	**252**	P	**P**	**02 54 45.0**	**+0.5**
	1.9nm,0.7s,baz=85,slow=8.4,SNR=11						
ASAR				LR	LR	03 14 44.0	
	comp=Z,364nm,18.2s,baz=92,slow=36						
FITZ	**Fitzroy Crossi**	**55.91**	**258**	LR	LR	03 18 02.1	
	comp=Z,327nm,20.0s,baz=102,slow=34						
VNDA	**Vanda**	**63.54**	**185**	P	**P**	**02 56 36.5**	**+0.8**
	0.6nm,0.5s,baz=284,slow=4.2,SNR=5.1						
MJAR	**Matsushiro Arr**	**67.08**	**321**	P	**P**	**02 56 58.4**	**-0.8**
	1.0nm,0.9s,baz=104,slow=5.1,SNR=2.7						
MJAR				LR	LR	03 21 17.3	
	comp=Z,106nm,21.5s,baz=65,slow=32						
PETK	**Petropavlovsk-**	**71.53**	**344**	P	**P**	**02 57 27.3**	**+0.9**
	4.3nm,1.0s,baz=148,slow=8.5,SNR=1.8						
PETK				LR	LR	03 23 12.2	
	comp=Z,306nm,21.8s,baz=74,slow=31						
CMB	**Columbia Colle**	**74.09**	**43**	P	**P**	**02 57 43.6**	**+1.6**
CMB				IAmb	IAmb	02 57 57.1	
	comp=Z,13nm,1.6s						
KSRS	**Korea Array**	**74.18**	**317**	P	**P**	**02 57 43.9**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=128,slow=8.1,SNR=5.8						
KSRS				LR	LR	03 27 35.5	
	comp=Z,104nm,19.2s,baz=74,slow=34						
YBH	**Yreka Blue Hor**	**74.77**	**38**	P	**P**	**02 57 47.0**	**+1.0**
YBH				IAmb	IAmb	02 58 00.7	
	comp=Z,8.4nm,1.2s						
QSPA	**South Pole Qui**	**75.04**	**180**	P	P	02 57 51.9	+4.7
BEKR	**Beckworth**	**75.14**	**41**	P	**P**	**02 57 49.6**	**+1.4**
LEM	**Lembang**	**75.22**	**267**	LR	LR	03 29 46.2	
	comp=Z,103nm,21.8s,baz=240,slow=35						
USRK	**Ussuriysk Ar.**	**75.61**	**324**	LR	LR	03 24 40.0	
	comp=Z,443nm,21.9s,baz=99,slow=31						
NVAR	**Mina Array Bea**	**75.68**	**43**	P	**P**	**02 57 52.2**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=227,slow=10,SNR=8.5						
NV11	**Mina Array Sit**	**75.78**	**43**	P	**P**	**02 57 53.6**	**+1.7**
KVN	**Kaiserville**	**76.15**	**43**	P	**P**	**02 57 56.3**	**+2.2**
MOD	**Modoc Plateau**	**76.33**	**39**	P	**P**	**02 57 55.9**	**+0.9**
MOD				IAmb	IAmb	02 58 06.2	
	comp=Z,9.5nm,1.4s						
214A	**Organ Pipe Nat**	**76.34**	**51**	P	**P**	**02 57 55.7**	**+0.6**
SHPR	**Sheep Range**	**76.82**	**46**	P	**P**	**02 57 59.4**	**+1.5**
SHPR				IAmb	IAmb	02 58 08.8	
	comp=Z,11nm,1.7s						
PINE	**Pine Mountain**	**77.04**	**37**	P	**P**	**02 58 00.1**	**+1.1**
TUC	**Tucson**	**78.04**	**52**	P	**P**	**02 58 05.0**	**+0.3**
I07A	**Izee**	**78.06**	**38**	P	**P**	**02 58 05.9**	**+1.3**
J08A	**Circle Bar Ran**	**78.27**	**39**	P	**P**	**02 58 06.8**	**+1.0**
J08A				IAmb	IAmb	02 58 20.0	
	comp=Z,7.0nm,1.2s						
X16A	**Lo Mia Camp, P**	**78.49**	**50**	P	**P**	**02 58 09.3**	**+2.0**
X16A				IAmb	IAmb	02 58 22.4	
	comp=Z,9.7nm,1.4s						
RC01	**Rabbit Creek A**	**78.66**	**13**	P	**P**	**02 58 06.8**	**-0.5**
U15A	**North Rim**	**78.81**	**47**	P	**P**	**02 58 09.8**	**+0.7**
ELK	**Elko**	**78.91**	**42**	P	**P**	**02 58 10.8**	**+1.3**
PMR	**Palmer**	**79.24**	**13**	P	**P**	**02 58 10.4**	**-0.1**
MTPU	**Mount Pierson**	**79.64**	**46**	P	**P**	**02 58 14.8**	**+1.1**
BMO	**Blue Mountains**	**79.79**	**38**	P	**P**	**02 58 15.5**	**+1.4**
SCM	**Sheep Creek Mo**	**79.85**	**13**	P	**P**	**02 58 14.4**	**+0.4**
SCM				IAmb	IAmb	02 58 27.3	
	comp=Z,7.5nm,0.9s						
MSU	**Marysvale**	**79.87**	**46**	P	**P**	**02 58 14.4**	**-0.4**
VRDI	**Verde Repeater**	**80.25**	**15**	P	**P**	**02 58 15.6**	**-0.6**
VRDI				IAmb	IAmb	02 58 29.7	
	comp=Z,9.8nm,1.2s						
BALM	**Baldy**	**80.37**	**16**	P	**P**	**02 58 17.3**	**+0.5**
F10A	**Beach Ranch, E**	**80.45**	**37**	P	**P**	**02 58 17.5**	**-0.1**
F10A				IAmb	IAmb	02 58 27.8	
	comp=Z,15nm,1.6s						
BARN	**Barnard Glacie**	**80.57**	**16**	P	**P**	**02 58 18.0**	**-0.1**
BARN				IAmb	IAmb	02 58 31.8	
	comp=Z,9.3nm,1.1s						
CTGM	**Chitina Glacie**	**80.58**	**16**	P	**P**	**02 58 14.9**	**-3.1**
CTGM				IAmb	IAmb	02 58 31.7	
	comp=Z,12nm,1.3s						
B08A	**Colville Reser**	**80.60**	**34**	P	**P**	**02 58 18.1**	**-0.1**
TRF	**Thorofare Moun**	**80.69**	**11**	P	**P**	**02 58 19.8**	**+1.2**
TMUT	**Trail Mountain**	**80.90**	**45**	P	**P**	**02 58 24.8**	**+4.3**
RND	**Reindeer**	**80.93**	**12**	P	**P**	**02 58 20.3**	**+0.6**
SPUT	**South Promonto**	**81.02**	**43**	P	**P**	**02 58 19.6**	**-1.2**
MNTX	**Cornudas Mount**	**81.95**	**54**	P	**P**	**02 58 27.6**	**+1.8**
WRH	**Wood River Hil**	**82.03**	**12**	P	**P**	**02 58 25.9**	**+0.4**
DOT	**Dot Lake**	**82.17**	**14**	P	**P**	**02 58 26.2**	**0.0**
CCB	**Clear Creek Bu**	**82.25**	**12**	P	**P**	**02 58 27.2**	**+0.7**
CCB				IAmb	IAmb	02 58 40.3	
	comp=Z,10nm,1.4s						
ANMO	**Albuquerque**	**82.42**	**51**	P	**P**	**02 58 28.8**	**+0.4**
ANMO				IAmb	IAmb	02 58 43.4	
	comp=Z,10nm,1.6s						
COLA	**College**	**82.44**	**12**	P	**P**	**02 58 29.8**	**+2.2**
SCRK	**Sand Creek**	**82.47**	**14**	P	**P**	**02 58 27.3**	**-0.6**
MCMT	**McKenzie Canyo**	**82.49**	**40**	P	**P**	**02 58 30.0**	**+1.4**
ILAR	**Eielson Array**	**82.54**	**12**	P	**P**	**02 58 26.4**	**-1.7**
	comp=Z,0.5nm,0.9s,baz=219,slow=7.0,SNR=6.8						
ILAR				LR	LR	03 28 11.1	
	comp=Z,248nm,20.9s,baz=141,slow=31						
GDL2	**Guadalupe Moun**	**82.95**	**54**	P	**P**	**02 58 31.8**	**+0.7**
TPAW	**Teton Pass**	**83.04**	**42**	P	**P**	**02 58 32.5**	**+0.9**
REDW	**Red Top Meadow**	**83.04**	**42**	P	**P**	**02 58 32.9**	**+1.3**
FXWY	**Fox Creek**	**83.06**	**41**	P	**P**	**02 58 32.5**	**+0.9**
FXWY				IAmb	IAmb	02 58 43.9	
	comp=Z,6.1nm,1.2s						
IMW	**Indian Meadow**	**83.24**	**41**	P	**P**	**02 58 34.1**	**+1.5**
BJI	**Beijing**	**83.44**	**314**	P	P	02 58 41.4	+8.1
BJI				pmax	pmax		
	comp=Z,22nm,0.7s						
YHB	**Horse Butte**	**83.48**	**40**	P	**P**	**02 58 36.5**	**+2.8**
YHL	**Hebgen Lake**	**83.53**	**40**	P	**P**	**02 58 35.7**	**+1.6**
BW06	**Boulder Array**	**83.61**	**43**	P	P	02 58 38.1	+3.7
PD31	**Pinedale Array**	**83.61**	**43**	P	P	02 58 38.0	+3.6
PD31				IAmb	IAmb	02 58 48.4	
	comp=Z,6.7nm,1.3s						
PDAR	**Pinedale Array**	**83.61**	**43**	P	**P**	**02 58 34.6**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=214,slow=4.5,SNR=5.1						
YHH	**Holmes Hill**	**83.71**	**41**	P	**P**	**02 58 37.1**	**+2.0**
SMCO	**Snowmass**	**83.80**	**47**	P	**P**	**02 58 37.3**	**+1.6**
SMCO				IAmb	IAmb	02 58 42.0	
	comp=Z,4.9nm,1.1s						
BILL	**Bilibino**	**83.81**	**353**	P	**P**	**02 58 35.9**	**+1.3**
BILL				IAmb	IAmb	02 58 43.3	
	comp=Z,7.3nm,1.3s						
LKWY	**Lake**	**83.89**	**41**	P	**P**	**02 58 36.0**	**+0.1**
YNE	**Yellowstone No**	**84.34**	**41**	P	**P**	**02 58 40.6**	**+2.5**
ABTX	**Abilene, Hawle**	**86.82**	**55**	P	**P**	**02 58 50.0**	**-0.5**
HHC	**Hu-ho-hao-te**	**86.98**	**314**	eP	P	02 58 59.4	+8.2
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,54nm,6.4s						
H03S2	**Juan Fernandez**	**87.45**	**124**	T	T	04 35 27.3	
	baz=252,slow=75,SNR=5.9						
H03S1	**Juan Fernandez**	**87.46**	**124**	T	T	04 35 28.4	
	baz=252,slow=75,SNR=5.1						
H03S3	**Juan Fernandez**	**87.46**	**124**	T	T	04 35 27.0	
	baz=252,slow=75,SNR=3.5						
YKA	**Yellowknife Ar**	**90.71**	**24**	P	**P**	**02 59 07.1**	**-1.1**
	comp=Z,0.1nm,0.5s,baz=224,slow=3.5,SNR=2.3						
YKA				LR	LR	03 33 09.8	
	comp=Z,220nm,20.0s,baz=0.0,slow=31						
SONM	**Songino Array**	**92.93**	**319**	P	**P**	**02 59 19.8**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=141,slow=9.3,SNR=2.3						
BRTR	**Keskin Array B**	**144.29**	**319**	PKP	**PKPdf**	**03 05 40.2**	**-2.1**
	comp=Z,0.5nm,0.8s,baz=57,slow=3.2,SNR=5.1						
GRF	**Grafenberg Arr**	**144.91**	**352**	ePKP	**PKPdf**	**03 05 41.0**	**-1.9**
	baz=10,slow=3.0						
KHC	**Kasperske Hory**	**145.08**	**349**	ePKP	**PKPdf**	**03 05 43.5**	**+0.3**
GERES	**GERESS Array B**	**145.33**	**349**	PKPbc	**PKPdf**	**03 05 42.6**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=33,slow=11,SNR=4.7						
WLF	**Walferdange**	**145.38**	**358**	PKPbc	**PKiKP**	**03 05 46.7**	**-1.0**
CONA	**Conrad Observa**	**145.74**	**346**	epPKPbc	**PKiKP**	**03 05 47.4**	**-1.2**
	comp=Z,7.0nm,1.5s						
MOA	**Molln**	**146.17**	**348**	ePKPab	**PKPab**	**03 05 46.3**	**-0.4**
	comp=Z,7.1nm,1.7s						
BFO	**Black Forest**	**146.57**	**355**	PKPdf	**PKiKP**	**03 05 49.4**	**-0.8**
KBA	**Koelnbreinsper**	**147.09**	**348**	ePKPab	**PKPab**	**03 05 49.1**	**-1.4**
	comp=Z,1.6nm,0.8s						
SOKA	**Soboth**	**147.11**	**346**	PKPbc	**PKPbc**	**03 05 47.7**	**-1.2**
	comp=Z,4.3nm,1.1s						
RETA	**Reutte**	**147.13**	**352**	ePKPbc	**PKPbc**	**03 05 47.9**	**-1.0**
	comp=Z,3.4nm,1.1s						
WATA	**Walderalm**	**147.16**	**351**	PKPbc	**PKPab**	**03 05 48.8**	**-1.9**
	comp=Z,5.0nm,1.2s						
WTTA	**Wattenberg**	**147.22**	**350**	PKPbc	**PKPbc**	**03 05 48.1**	**-1.3**
	comp=Z,5.2nm,1.2s						
MOTA	**Moosalm**	**147.22**	**351**	ePKPbc	**PKPbc**	**03 05 48.4**	**-0.9**
	comp=Z,2.6nm,1.0s						
DAVA	**Damuels**	**147.44**	**353**	PKPbc	**PKPbc**	**03 05 48.9**	**-1.1**
	comp=Z,7.7nm,1.1s						
ABTA	**Abfaltersbach**	**147.57**	**349**	ePKPbc	**PKPbc**	**03 05 49.3**	**-0.9**
	comp=Z,3.9nm,1.3s						
FETA	**Feichten**	**147.59**	**351**	ePKPbc	**PKPbc**	**03 05 49.4**	**-1.0**
	comp=Z,2.6nm,1.1s						
FUORN	**Ofenpass-Fuorn**	**148.05**	**352**		**PKPab**	**03 05 53.6**	**-0.8**

KRNET ***18*** *02:51:07.4±0.1, 41.21N×76.35E, h30km, mb1.9*

SOME 18 02:51:07.7, 42.93N×77.17E, h5km, 6C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNSS	**Tian-Shan**	**0.19**	**303**	eP	Pg	02 51 12.1	+0.5
	1.4nm,0.1s						
TNSS				eS	Sg	02 51 15.2	+1.0
	6.7nm,0.2s						
MDOK	**Medeo**	**0.25**	**339**	eP	Pg	02 51 12.7	+0.2
	0.6nm,0.1s						
MDOK				eS	Sg	02 51 16.4	+0.6
	2.3nm,0.2s						
KOTS	**Kotyrbulak**	**0.30**	**352**	eP	Pg	02 51 13.6	-0.1
	0.8nm,0.1s						
KOTS				eS	Sg	02 51 17.8	+0.1
	1.1nm,0.1s						
IZV	**Izvestkoviy**	**0.42**	**284**	eP	Pg	02 51 15.7	-0.1
	0.3nm,0.1s						
IZV				eS	Sg	02 51 21.4	0.0
	3.6nm,0.1s						
KDJ	**Kajisay**	**0.80**	**179**	⇑iP	Pn	02 51 27.7	+1.8
	baz=34						
KDJ				⇑iS	Sn	02 51 42.8	+4.5
	baz=34						
ULHL	**Ulahol**	**0.97**	**225**	⇑iP	Pg	02 51 26.6	+0.3
	baz=56						
ULHL				⇑iS	Sb	02 51 40.5	+0.2
	baz=56						
BOOM	**Boomskoye usch**	**1.01**	**244**	⇑eP	Pn	02 51 31.4	+2.7
	baz=47						
BOOM				⇑iS	Sn	02 51 49.5	+6.2
	baz=47						
TARG	**Taragay, Kyrgy**	**1.29**	**158**	⇓iP	Pg	02 51 29.6	-2.9
	baz=64						
TARG				⇓iS	Sg	02 51 46.2	-3.1
	baz=64						

MAN ***18*** *03:02:49.8, 6.45N×126.17E, h22km, mb4.5, ML3.4, MS3.2*

IDC ***18*** *03:02:51.2±1.0, 6.37N×125.75E, h72km±24km, mb3.3/4, mb1 3.5/4, mb1mx3.1/42, mbtmp3.5/4, Error ellipse: s-maj=157.2km s-min=24.6km az=68.0*

ISC 18 03:02:49.0±1.2, 6.38N±0.06×126.27E±0.09, h48km±12km, n12, σ1.958/18, mb3.4/4, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.57**	**359**	eP	**Pn**	**03 02 59.8**	**-1.2**
MATI				eS	**Sn**	**03 03 09.2**	**-0.4**
DDMP	**Don Marcelino,**	**0.61**	**244**	eP	**Pn**	**03 03 01.9**	**+0.3**
DDMP				eS	**Sn**	**03 03 11.8**	**+1.2**
DAV	**Davao City (W)**	**0.97**	**315**	P	**Pn**	**03 03 07.0**	**+0.8**
	85nm,0.3s,baz=240,slow=1.4,SNR=5.8						
DAV				S	**Sn**	**03 03 19.2**	**+0.2**
	109nm,0.3s,baz=98,slow=21,SNR=22						
DAV				LR	LR	03 03 25.3	
	comp=Z,58nm,19.3s,baz=186,slow=48						
DMPH	**Davao City--Mi**	**1.03**	**313**	⇑iP	**Pn**	**03 03 06.9**	**-0.2**
SKMP	**Bagumbayan, Su**	**1.72**	**275**	eP	**Pn**	**03 03 17.3**	**+0.9**
SKMP				eS	**Sn**	**03 03 34.8**	**-2.5**
CTBH	**Cotabato--PC H**	**2.17**	**293**	⇓iP	**Pn**	**03 03 23.6**	**+0.9**
CGP	**Cagayan de Oro**	**2.59**	**323**	⇓eP	**Pn**	**03 03 30.2**	**+1.8**
CGP				eS	**Sn**	**03 03 59.0**	**+0.4**
BUTP	**Butuan**	**2.66**	**346**	eP	**Pn**	**03 03 31.1**	**+1.8**
BUTP				eS	**Sn**	**03 04 02.0**	**+1.7**
FITZ	**Fitzroy Crossi**	**24.33**	**181**	P	**P**	**03 08 02.5**	**+0.2**
	2.6nm,1.0s,baz=354,slow=11,SNR=1.7						
WRA	**Warramunga Arr**	**27.33**	**163**	P	**P**	**03 08 32.2**	**+2.7**
	0.8nm,1.0s,baz=342,slow=10,SNR=1.9						
ASAR	**Alice Springs**	**30.78**	**166**	P	**P**	**03 09 00.0**	**-0.1**
	0.4nm,0.6s,baz=342,slow=7.2,SNR=9.1						
MKAR	**Makanchi Array**	**55.14**	**324**	P	**P**	**03 12 14.0**	**-2.5**
	0.2nm,0.5s,baz=115,slow=7.5,SNR=2.4						

IDC ***18*** *03:08:41.2±0.9, 56.02S×145.80W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/23, mbtmp3.9/3, Error ellipse: s-maj=42.6km s-min=32.4km az=152.0*

ISC 18 03:08:42.4±0.9, 56.05S±0.3×145.8W±0.3, h10km, n20, σ0.881/13, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res

VRAC				*e*Sg		**Sg**	03 18 55.4	**+0.1**
	20nm,0.2s,baz=68							
SMOL	**Smolenice**	**1.45**	**211**	*e*PN		**Pg**	03 18 39.5	**-0.2**
SMOL				*e*SN		**Sn**	03 18 59.4	**+0.3**
SMOL				*e*LG		Lg	03 19 02.2	
DPC	**Dobruska-Polom**	**1.55**	**293**	*e*PG		**Pn**	03 18 40.3	**-0.6**
DPC				*e*SG		**Sn**	03 19 00.6	**-1.1**
	comp=Z,21nm,0.6s							
KRUC	**Moravsky**	**1.57**	**244**	*e*PG		**Pn**	03 18 41.2	**+0.1**
KRUC				*e*SG		**Sb**	03 19 02.5	**+0.2**
KRUC	**Moravsky**	**1.57**	**244**	*e*Pg		**Pn**	03 18 41.2	**+0.1**
	baz=61							
KRUC				*e*Sg		**Sb**	03 19 02.4	**+0.2**
	21nm,0.2s,baz=61							
MODS	**Modra-Piesok**	**1.62**	**212**	*e*PG		**Pn**	03 18 41.7	**-0.1**
MODS				*e*SG		**Sn**	03 19 02.9	**-0.5**
MODS				*e*LG		Lg	03 19 06.7	
OSTC	**Ostas**	**1.70**	**299**	*e*PG		**Pn**	03 18 42.8	**-0.1**
OSTC				*e*SG		**Sn**	03 19 04.8	**-0.5**
	comp=Z,10nm,0.4s							
UPC	**Upice**	**1.80**	**296**	*e*PG		**Pn**	03 18 44.5	**+0.3**
UPC				*e*SG		**Sb**	03 19 08.1	**-0.7**
	comp=Z,15nm,0.5s							
KECS	**Kecovo**	**1.80**	**134**	*e*PN		**Pn**	03 18 44.3	**0.0**
KECS				*e*LG		Lg	03 19 13.1	
CHVC	**Chvalec**	**1.81**	**298**	*e*PG		**Pb**	03 18 45.0	**-0.9**
CHVC				*e*SG		**Sn**	03 19 07.8	**-0.2**
	comp=Z,11nm,0.6s							
TREC	**Trest**	**2.05**	**258**	*e*SG		**Sb**	03 19 16.3	**+0.3**
GOPC	**GO Pecny, Ondr**	**2.44**	**275**	*e*SG		**Sb**	03 19 28.2	**+0.9**
CONA	**Conrad Observa**	**2.55**	**225**	Pn		**Pn**	03 18 54.3	**-0.3**
	0.7nm,0.2s							
CONA				Sn		**Sn**	03 19 25.6	**-0.8**
	3.0nm,0.4s							
PRU	**Pruhonice**	**2.60**	**277**	*e*PG		**Pb**	03 19 00.1	**+0.7**
PRU				*e*SG		**Sb**	03 19 32.7	**+0.8**
	comp=Z,3.6nm,0.4s							
BRG	**Berggiesshubel**	**3.16**	**292**	PG		**Pb**	03 19 09.5	**+0.6**
BRG				SG		**Sb**	03 19 50.2	**+2.3**
	4.2nm,0.4s							
KHC	**Kasperske Hory**	**3.30**	**261**	*e*PG		**Pb**	03 19 11.5	**+0.1**
KHC				*e*SG		**Sg**	03 19 56.3	**-1.8**
	comp=Z,6.2nm,0.3s							
MOA	**Molln**	**3.42**	**238**	Sg		**Sg**	03 20 01.1	**-0.6**
	12nm,0.7s							
CLL	**Collm**	**3.86**	**296**	*e*Pg		**Pg**	03 19 25.0	**-0.9**
CLL				*e*Sg		**Sg**	03 20 16.0	**0.0**
	comp=Z,4.0nm,0.7s							
CLL				LmV			04 09 00.0	
	comp=Z,100nm,20.0s							

*JMA **18** 03:22:52.4±0.1, 24°.91N×122°.95E, h119^{km}±2^{km}, M2.5*
*TAP **18** 03:22:53.1, 24°.89N×122°.95E, h113^{km}±1^{km}, ML2.9, D*
ISC 18 03:22:53.4±1.7**, 24°.86N**±0°.07×**122°.95E**±0°.03**, h115^{km}±11^{km}, n38,** σ**0°.78/59, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.40**	**171**	P	**Pn**	**03 23 10.1**	**-0.1**
YOJ				*e*S	**Sn**	**03 23 23.6**	**+0.8**
JYNG	**Yonagunijimaku**	**0.40**	**180**	P	**Pn**	**03 23 10.2**	**0.0**
JYNG				S	**Sn**	**03 23 23.4**	**+0.6**
EOS1	**EOS1**	**0.80**	**248**	*e*P	**Pn**	**03 23 12.8**	**-0.2**
	baz=246						
IRIF	**Iriomote-Funau**	**0.88**	**126**	P	**Pn**	**03 23 13.5**	**-0.3**
IRIF				*e*S	**Sn**	**03 23 30.0**	**+0.8**
TIPB	**Shuangxi**	**1.02**	**277**	*e*P	**Pn**	**03 23 15.0**	**-0.2**
	baz=267						
TIPB				S	**Sn**	**03 23 31.6**	**-0.1**
	baz=267						
TWC	**Suao**	**1.03**	**256**	*e*P	**Pn**	**03 23 14.9**	**-0.3**
	baz=253						
TWC				*e*S	**Sn**	**03 23 31.2**	**-0.5**
	baz=253						
PCYT	**Pengchaiyu**	**1.10**	**314**	*e*P	**Pn**	**03 23 15.7**	**-0.3**
	baz=313						
HATJ	**Hateruma jima**	**1.12**	**135**	P	**Pn**	**03 23 16.3**	**+0.1**
HATJ				S	**Sn**	**03 23 34.8**	**+1.4**
JKRS	**Kuro-shima**	**1.15**	**122**	P	**Pn**	**03 23 16.7**	**+0.2**
JKRS				*e*S	**Sn**	**03 23 34.2**	**+0.2**
JIJ	**Ishigaki jima**	**1.19**	**114**	P	**Pn**	**03 23 16.6**	**-0.4**
JIJ				S	**Sn**	**03 23 34.1**	**-0.8**
JISG	**Ishigakijimahi**	**1.27**	**102**	P	**Pn**	**03 23 17.3**	**-0.5**
JISG				S	**Sn**	**03 23 35.6**	**-0.7**
ENTT	**Nioudou**	**1.27**	**261**	*e*P	**Pn**	**03 23 18.7**	**+0.8**
	baz=255						
YM01	**YM01**	**1.28**	**283**	*e*P	**Pn**	**03 23 17.8**	**-0.2**
	baz=282						
YM01				*e*S	**Sn**	**03 23 36.7**	**0.0**
	baz=282						
NWLT	**Wulai**	**1.31**	**267**	*e*P	**Pn**	**03 23 19.3**	**+1.0**
	baz=265						
NWLT				*e*S	**Sn**	**03 23 36.7**	**-0.6**
	baz=265						
NDT	**Datong Townshi**	**1.33**	**259**	*e*P	**Pn**	**03 23 19.7**	**+1.2**
	baz=259						
NDT				*e*S	**Sn**	**03 23 37.6**	**0.0**
	baz=259						
NDT	**Datong Townshi**	**1.33**	**259**	*e*P	**Pn**	**03 23 20.2**	**+1.7**
	baz=83						
NACB	**Ninganchiao**	**1.41**	**241**	*e*P	**Pn**	**03 23 18.7**	**-0.6**
	baz=240						
ETLH	**Xiulin Townshi**	**1.48**	**244**	*e*P	**Pn**	**03 23 20.4**	**+0.1**
	baz=243						
NNSB	**Datong**	**1.48**	**254**	*e*P	**Pn**	**03 23 21.0**	**+0.6**
	baz=245						
NNSB				*e*S	**Sn**	**03 23 40.1**	**-0.8**
	baz=245						
NNSB	**Datong**	**1.48**	**254**	*e*P	**Pn**	**03 23 21.3**	**+0.9**
	baz=165						
NNSH	**Datong**	**1.48**	**254**	*e*P	**Pn**	**03 23 21.0**	**+0.6**
	baz=246						
NNSH				S	**Sn**	**03 23 40.6**	**-0.4**
	baz=246						
NNSH	**Datong**	**1.48**	**254**	*e*P	**Pn**	**03 23 21.1**	**+0.7**
	baz=165						
JTJ	**Tarama**	**1.61**	**97**	P	**Pn**	**03 23 21.6**	**-0.2**
JTJ				*e*S	**Sn**	**03 23 43.5**	**+0.1**
WHF	**Hehuan Shan**	**1.69**	**246**	*e*P	**Pn**	**03 23 24.3**	**+1.1**
	baz=238						
WHF				*e*S	**Sn**	**03 23 44.4**	**-1.4**
	baz=238						
TDCB	**Techi**	**1.73**	**250**	*e*P	**Pn**	**03 23 23.8**	**+0.3**
	baz=244						
CHGB	**Renai**	**1.80**	**244**	*e*P	**Pn**	**03 23 25.0**	**+0.7**
	baz=237						
OWD	**Renai**	**1.85**	**241**	*e*P	**Pn**	**03 23 25.5**	**+0.7**
	baz=235						
WHP	**Taichung City**	**1.91**	**253**	*e*P	**Pn**	**03 23 26.4**	**+0.8**
	baz=248						
WHP				*e*S	**Sn**	**03 23 50.3**	**+0.2**
	baz=248						
HGSD	**Ruisui**	**1.94**	**226**	*e*P	**Pn**	**03 23 26.0**	**+0.1**
	baz=222						
VWDT	**VWDT**	**1.98**	**237**	*e*P	**Pn**	**03 23 26.6**	**+0.3**
	baz=231						
VWDT				*e*S	**Sn**	**03 23 50.2**	**-1.2**
	baz=231						
JIRB	**Irabujima**	**2.02**	**90**	P	**Pn**	**03 23 26.6**	**-0.2**
YULB	**Yu-li**	**2.10**	**226**	*e*P	**Pn**	**03 23 27.1**	**-0.7**
	baz=232						
YULB				*e*S	**Sn**	**03 23 51.7**	**-2.5**
	baz=232						
SMLT	**Sun Moon Lake**	**2.10**	**243**	*e*P	**Pn**	**03 23 29.5**	**+1.5**
	baz=235						
SMLT				*e*S	**Sn**	**03 23 55.6**	**+1.2**
	baz=235						
TWF1	**Yuli**	**2.12**	**226**	*e*P	**Pn**	**03 23 28.2**	**+0.1**
	baz=231						
TWF1				*e*S	**Sn**	**03 23 54.1**	**-0.7**
	baz=231						
JMJ2	**Miyako jima3**	**2.17**	**93**	P	**Pn**	**03 23 29.0**	**+0.3**
FULB	**Fuli**	**2.24**	**223**	*e*P	**Pn**	**03 23 30.2**	**+0.5**
	baz=217						
JOGS	**Gusukube**	**2.24**	**92**	P	**Pn**	**03 23 30.0**	**+0.4**
TWH	**Lutao**	**2.52**	**213**	*e*P	**Pn**	**03 23 33.5**	**+0.2**
	baz=211						

TAP 18 03:23:17.9, 24°.58N×121°.34E, h4^{km}±1^{km}, ML1.1, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YHNB	**Yeheng**	**0.09**	**22**	P	Pg	03 23 19.8	-0.1
	baz=22						
YHNB				S	Sg	03 23 21.2	0.0
	baz=22						
NSK	**Sanguang**	**0.09**	**12**	P	Pg	03 23 19.8	-0.1
	baz=16						
NSK				S	Sg	03 23 21.3	0.0
	baz=16						
NNSB	**Datong**	**0.16**	**165**	*e*S	Sg	03 23 23.4	+0.2
	baz=165						
NNSH	**Datong**	**0.16**	**165**	S	Sg	03 23 23.3	+0.1
	baz=165						
NDT	**Datong Townshi**	**0.16**	**83**	*e*S	Sg	03 23 23.4	+0.2
	baz=83						

*JMA **18** 03:26:57.3±0.2, 36°.70N×141°.36E, h47^{km}±2^{km}, M3.5*
*IDC **18** 03:26:58.9±2.9, 36°.54N×141°.56E, h48^{km}±28^{km}, mb3.3/6, mb1 3.5/10, mb1mx3.3/43, mbtmp3.6/10, ML2.8/4, Error ellipse: s-maj=27.9km s-min=12.8km az=70.0*
ISC 18 03:26:54.2±1.8**, 36°.68N**±0°.04×**141°.57E**±0°.07**, h10**^{km}±10^{km}**, n31,** σ**1°57/33, mb3.5/6, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.75**	**304**	P	**Pg**	**03 27 09.5**	**+0.8**
ONAJ				S	**Sg**	**03 27 18.7**	**+0.2**
JHO	**Hitachi**	**0.81**	**265**	P	**Pg**	**03 27 10.1**	**+0.3**
JHO				S	**Sg**	**03 27 19.0**	**-1.4**
JHYU	**Hitachinakayam**	**0.86**	**247**	P	**Pg**	**03 27 11.3**	**+0.5**
JHYU				S	**Sg**	**03 27 20.3**	**-1.8**
JFK	**Kawauchi**	**0.88**	**321**	P	**Pg**	**03 27 11.5**	**+0.2**
JFK				S	**Sg**	**03 27 22.5**	**-0.3**
JFFD	**Fukushimafurud**	**0.91**	**297**	P	**Pg**	**03 27 11.5**	**-0.2**
JFFD				S	**Sg**	**03 27 22.5**	**-1.0**
JFT	**Otama**	**1.29**	**311**	P	**Pn**	**03 27 18.2**	**-0.2**
JFT				S	**Sb**	**03 27 33.7**	**-1.7**
JMM	**Marumori**	**1.34**	**333**	P	**Pn**	**03 27 18.0**	**-1.0**
JMM				S	**Sb**	**03 27 33.9**	**-2.7**
JFY	**Yanaizu**	**1.66**	**296**	P	**Pn**	**03 27 23.8**	**+0.3**
JFY				S	**Sn**	**03 27 43.5**	**-1.4**
JAG	**Ashikaga**	**1.72**	**262**	P	**Pn**	**03 27 23.6**	**-0.7**
JKT	**Katashina**	**1.87**	**273**	P	**Pn**	**03 27 26.4**	**0.0**
MJAR	**Matsushiro Arr**	**2.71**	**268**	P	**Pn**	**03 27 38.4**	**+0.5**
	2.0nm,0.3s,baz=122,slow=9.6,SNR=95						
MJAR				S	**Sn**	**03 28 10.9**	**+0.1**
	1.7nm,0.3s,baz=84,slow=36,SNR=3.8						
MAT	**Matsushiro**	**2.71**	**268**	P	**Pn**	**03 27 38.8**	**+0.9**
MAT				S	**Sn**	**03 28 12.8**	**+2.0**
JHJ	**Hachijo jima 2**	**3.84**	**203**	P	**Pn**	**03 27 54.7**	**+1.2**
	11nm,0.3s,baz=150,slow=23,SNR=13						
JHJ				S	**Sn**	**03 28 37.0**	**-1.8**
	38nm,0.3s,baz=235,slow=22,SNR=9.7						
USRK	**Ussuriysk Ar.**	**10.47**	**319**	P	**Pn**	**03 29 28.3**	**+3.9**
	baz=133,slow=12,SNR=7.9						
KSRS	**Korea Array**	**10.93**	**278**	P	**Pn**	**03 29 33.5**	**+2.8**
	0.0nm,0.3s,baz=88,slow=15,SNR=8.3						
H11N2	**WAKE ISLAND Hy**	**27.86**	**120**	T	T	04 01 56.4	
	baz=313,slow=75,SNR=19						
H11N1	**WAKE ISLAND Hy**	**27.87**	**120**	T	T	04 02 02.7	
	baz=313,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**27.88**	**120**	T	T	04 02 00.7	
	baz=313,slow=75,SNR=16						
SONM	**Songino Array**	**28.09**	**304**	P	**P**	**03 32 47.4**	**+1.2**
	1.0nm,0.7s,baz=110,slow=8.8,SNR=4.1						
H11S1	**WAKE ISLAND Hy**	**28.56**	**123**	T	T	04 03 04.4	
	baz=314,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**28.56**	**123**	T	T	04 03 00.9	
	baz=314,slow=76,SNR=13						
H11S2	**WAKE ISLAND Hy**	**28.58**	**123**	T	T	04 02 55.1	
	baz=314,slow=76,SNR=9.5						
ZALV	**Zalesovo Beam**	**42.25**	**313**	P	**P**	**03 34 47.2**	**-0.3**
	0.3nm,0.3s,baz=79,slow=7.5,SNR=1.5						
MKAR	**Makanchi Array**	**44.41**	**302**	P	**P**	**03 35 06.9**	**+1.8**
	0.5nm,0.7s,baz=88,slow=11,SNR=2.5						
ILAR	**Eielson Array**	**49.73**	**32**	P	**P**	**03 35 46.0**	**-0.3**
	0.3nm,0.8s,baz=260,slow=5.0,SNR=2.7						
WRA	**Warramunga Arr**	**56.73**	**188**	P	**P**	**03 36 36.6**	**-1.7**
	0.5nm,0.8s,baz=9.2,slow=5.1,SNR=1.3						
ASAR	**Alice Springs**	**60.46**	**188**	P	**P**	**03 37 01.3**	**-3.0**
	0.2nm,0.8s,baz=21,slow=8.1,SNR=1.6						
LPAZ	**La Paz**	**146.76**	**60**	PKPbc	**PKPdf**	**03 46 36.9**	**+0.9**
	0.7nm,0.6s,baz=235,slow=2.7,SNR=5.1						
H03N2	**Juan Fernandez**	**146.86**	**97**	T	T	06 31 04.0	
	baz=297						
H03N3	**Juan Fernandez**	**146.87**	**97**	T	T	06 30 55.9	
	baz=297						
H03N1	**Juan Fernandez**	**146.88**	**97**	T	T	06 30 52.2	
	baz=297						

*AEIC **18** 03:27:30.3±3.8, 50°.6N±0°.2×178°.5E±0°.1, h5^{km}±6^{km}, Error ellipse: s-maj=35.0km s-min=6.2km az=164.0*
*IDC **18** 03:27:31.2±0.7, 51°.31N×178°.72E, h0^{km}, mb4.2/27, mb1 4.3/29, mb1mx4.2/42, mbtmp4.2/29, ML3.9/2, MS3.6/3, Ms1 3.6/3, ms1mx3.1/53, Error ellipse: s-maj=21.3km s-min=11.7km az=159.0*
*NEIC **18** 03:27:33.2±2.6, 51°.21N±0°.09×178°.61E±0°.07, h10^{km}±1^{km}, mb4.4/83, ML4.1(AEIC), Error ellipse: s-maj=15.7km s-min=6.8km az=166.0*
*MOS **18** 03:27:35.1±1.2, 51°.27N×178°.67E, h38^{km}, mb4.6/32, Error ellipse: s-maj=10.9km s-min=7.5km az=104.5*
ISC 18 03:27:37.4±0.5**, 51°.22N**±0°.08×**178°.61E**±0°.04**, h40**^{km}**, n200,** σ**1°52/176, mb4.4/86, MS3.8/3, 15C, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALAA	**Gareloi Lava P**	**1.72**	**71**		**Pn**	**03 28 05.1**	**+0.3**
TASE	**Tanaga Southea**	**2.18**	**72**		**Pn**	**03 28 11.1**	**-0.1**
TAFP	**Tanaga Falls P**	**2.23**	**71**		**Pn**	**03 28 12.1**	**+0.3**
TAFP					LR	03 28 44.0	
TAPA	**Tanaga Point A**	**2.31**	**74**		**Pn**	**03 28 13.1**	**+0.2**
KIMD	**Kanaga Island**	**2.65**	**77**		**Pn**	**03 28 17.4**	**-0.2**
KIMD					**Sn**	**03 28 54.2**	**+5.7**
KICM	**Kanaga Island**	**2.71**	**73**		**Pn**	**03 28 19.1**	**+0.8**
KIKV	**Kanaga Island**	**2.71**	**74**		**Pn**	**03 28 18.5**	**0.0**
ADK	**Adak**	**3.01**	**75**	P	**Pn**	**03 28 21.4**	**-1.1**
ADK	**Adak**	**3.01**	**75**		**Pn**	**03 28 21.4**	**-1.1**
SMY	**Shemya**	**3.18**	**300**		**Sn**	**03 29 08.0**	**+6.6**
SMY	**Shemya**	**3.18**	**300**		**Pn**	**03 28 25.0**	**+0.2**
GSTD	**Great Sitkin T**	**3.37**	**74**		**Pn**	**03 28 27.3**	**-0.3**
GSTD					**Sn**	**03 29 13.7**	**+7.4**
GSMY	**Great Sitkin M**	**3.42**	**74**		**Pn**	**03 28 28.1**	**-0.1**
GSTR	**Great Sitkin T**	**3.43**	**73**		**Pn**	**03 28 27.3**	**-1.0**
ATKA	**Atka Island**	**4.58**	**75**		**Pn**	**03 28 44.2**	**+0.2**
KOKL	**Mount Kliuchef**	**4.60**	**73**		**Pn**	**03 28 45.2**	**+0.8**
KOFP	**Korovin Flat P**	**4.65**	**74**		**Pn**	**03 28 44.9**	**-0.2**
NIKH	**Nikolski High**	**7.92**	**72**	Pn	**Pn**	**03 29 29.5**	**-0.3**
SPIA	**Saint Paul Isl**	**8.84**	**43**		**Pn**	**03 29 43.1**	**+0.7**
MSW	**Makushin Switc**	**9.29**	**67**		**Pn**	**03 29 50.7**	**+2.0**
MREP	**Makushin Rep't**	**9.30**	**68**		**Pn**	**03 29 49.9**	**+1.1**
MTBL	**Makushin Table**	**9.37**	**67**		**Pn**	**03 29 52.0**	**+2.3**
UNV	**Unalaska Valle**	**9.44**	**68**	Pn	**Pn**	**03 29 49.1**	**-1.5**
PET	**Petropavlovsk**	**12.40**	**286**	*i* P	**Pn**	**03 30 35.0**	**+3.9**
PET				pmax	pmax		
	comp=Z,3.0nm,0.1s						
PETK	**Petropavlovsk-**	**12.97**	**287**	Pn	**Pn**	**03 30 39.9**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=107,slow=16,SNR=13						
PETK				Sn	**Sn**	**03 32 58.8**	**-3.1**
	comp=Z,0.3nm,0.3s,baz=92,slow=39,SNR=1.8						
SKR	**Severo-Kuril's**	**14.19**	**277**	*i* P	**Pn**	**03 30 58.5**	**+3.1**
SVW2	**Sparrevohn**	**17.32**	**45**		**P**	**03 31 37.1**	**+0.1**
OHAK	**Old Harbor**	**17.41**	**59**	Pn	**Pn**	**03 31 34.4**	**-2.5**
MA2	**Magadan**	**17.77**	**309**	LR	LR	03 38 15.5	
	comp=Z,200nm,18.2s,baz=92,slow=36						
KDAK	**Kodiak Island**	**17.87**	**57**	P	**Pn**	**03 31 39.0**	**-3.6**
	comp=Z,1.2nm,0.3s,baz=265,slow=8.1,SNR=11						
KDAK	**Kodiak Island**	**17.87**	**57**	P	**Pn**	**03 31 40.2**	**-2.4**
KDAK				pmax	pmax		
	comp=Z,69nm,1.8s						
KDAK	**Kodiak Island**	**17.87**	**57**	Pn	**Pn**	**03 31 40.2**	**-2.4**
KDAK				IAmb	IAmb	03 32 18.6	
	comp=Z,69nm,1.8s						
BILL	**Bilibino**	**17.92**	**345**	*e*P	**P**	**03 31 44.2**	**+0.8**
BILL				pmax	pmax		
	comp=Z,21nm,1.0s						
BILL				MLR	MLR		
	comp=Z,335nm,17.0s						
BILL	**Bilibino**	**17.92**	**345**	P	**P**	**03 31 43.7**	**+0.3**
TTA	**Tatalina**	**17.95**	**39**	P	**P**	**03 31 45.6**	**+1.7**
TTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TTA	**Tatalina**	**17.95**	**39**	P	**P**	**03 31 45.6**	**+1.7**

SEY	**Seymchan**	**18.30**	**320**	P		**P**	**03 31 46.6**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=197,slow=19,SNR=1.9							
SEY	**Seymchan**	**18.30**	**320**	*i* P		**P**	**03 31 46.7**	**-0.9**
RSO	**Redoubt South**	**18.41**	**49**	P		**Pn**	**03 31 48.9**	**-0.4**
CNPM	**China Poot**	**18.90**	**52**	P		**Pn**	**03 31 54.9**	**-0.2**
RDOG	**Red Dog Mine**	**19.15**	**21**	P		**Pn**	**03 31 57.7**	**-0.3**
RDOG				IAmb		IAmb	03 32 03.9	
	comp=Z,12nm,0.7s							
PPLA	**Purkeypile**	**19.51**	**42**	P		**Pn**	**03 32 02.1**	**-0.4**
PPLA				IAmb		IAmb	03 32 09.9	
	comp=Z,13nm,0.8s							
KTH	**Kantishna Hill**	**20.30**	**41**	P		**P**	**03 32 10.1**	**+0.6**
BPAW	**Bear Paw Mtn.**	**20.49**	**39**	P		**P**	**03 32 11.9**	**+0.3**
TRF	**Thorofare Moun**	**20.52**	**41**	IAmb		IAmb	03 32 17.8	
	comp=Z,12nm,0.8s							
KNK	**Knik Glacier**	**20.68**	**48**	P		**P**	**03 32 13.1**	**-0.6**
SML	**Sawmill**	**20.84**	**47**	P		**P**	**03 32 15.6**	**+0.2**
SML				IAmb		IAmb	03 32 20.6	
	comp=Z,12nm,0.8s							
RND	**Reindeer**	**21.11**	**42**	IAmb		IAmb	03 32 23.6	
	comp=Z,14nm,0.7s							
MCK	**McKinley**	**21.19**	**41**	P		**P**	**03 32 19.6**	**+0.6**
MCK				pmax		pmax		
	comp=Z,11nm,0.8s							
MCK	**McKinley**	**21.19**	**41**	P		**P**	**03 32 19.6**	**+0.6**
MCK				IAmb		IAmb	03 32 24.4	
	comp=Z,11nm,0.8s							
HIN	**Hinchinbrook I**	**21.41**	**51**	P		**P**	**03 32 19.4**	**-2.0**
HIN				IAmb		IAmb	03 33 02.2	
	comp=Z,12nm,1.0s							
DHY	**Denali Highway**	**21.63**	**44**	IAmb		IAmb	03 32 28.4	
	comp=Z,15nm,0.8s							
EYAK	**Cordova Ski Ar**	**21.80**	**51**	P		**P**	**03 32 26.0**	**+0.4**
MDM	**Murphy Dome**	**21.93**	**39**	IAmb		IAmb	03 32 31.7	
	comp=Z,13nm,0.8s							
COLA	**College**	**22.05**	**39**	P		**P**	**03 32 27.5**	**-0.7**
COLA				pmax		pmax		
	comp=Z,11nm,1.0s							
COLA	**College**	**22.05**	**39**	P		**P**	**03 32 27.5**	**-0.7**
ILAR	**Eielson Array**	**22.39**	**40**	P		**P**	**03 32 28.8**	**-3.2**
	comp=Z,1.5nm,0.7s,baz=238,slow=7.7,SNR=31							
GLB	**Gilahina Butte**	**22.88**	**49**	IAmb		IAmb	03 32 40.9	
	comp=Z,5.6nm,0.6s							
RIDG	**Independent Ri**	**22.91**	**43**	IAmb		IAmb	03 32 41.8	
	comp=Z,6.0nm,0.7s							
VRDI	**Verde Repeater**	**23.01**	**50**	IAmb		IAmb	03 32 41.9	
	comp=Z,6.2nm,0.7s							
MIDW	**Midway**	**23.17**	**171**	P		**P**	**03 32 40.0**	**-0.2**
TOLK	**Toolik Lake Re**	**23.19**	**29**	IAmb		IAmb	03 32 42.0	
	comp=Z,7.7nm,0.5s							
MENT	**Mentasta**	**23.21**	**45**	IAmb		IAmb	03 32 45.3	
	comp=Z,5.2nm,0.6s							
DOT	**Dot Lake**	**23.23**	**43**	P		**P**	**03 32 38.9**	**-1.8**
DOT				IAmb		IAmb	03 32 44.0	
	comp=Z,8.0nm,0.6s							
MCARA	**McCarthy VSAT**	**23.24**	**49**	IAmb		IAmb	03 32 53.5	
	comp=Z,7.0nm,0.7s							
SCRK	**Sand Creek**	**23.34**	**43**	IAmb		IAmb	03 32 44.9	
	comp=Z,12nm,0.7s							
BARN	**Barnard Glacie**	**23.85**	**50**	IAmb		IAmb	03 32 50.5	
	comp=Z,6.3nm,0.8s							
CTGM	**Chitina Glacie**	**24.00**	**51**	P		**P**	**03 32 46.0**	**-2.1**
CTGM				IAmb		IAmb	03 32 51.4	
	comp=Z,5.5nm,0.7s							
ASAJ	**Asahikawa**	**25.08**	**268**	P		**P**	**03 32 59.5**	**+1.6**
	comp=Z,18nm,0.8s,baz=74,slow=7.6,SNR=6.9							
HYT	**Haines Junctio**	**25.86**	**51**	IAmb		IAmb	03 33 11.6	
	comp=Z,5.2nm,0.9s							
EPYK	**Eagle Plains**	**26.90**	**39**	P		**P**	**03 33 12.6**	**-1.6**
EPYK				IAmb		IAmb	03 33 16.7	
	comp=Z,7.4nm,0.8s							
YAK	**Yakutsk**	**28.30**	**311**	*e*P		**P**	**03 33 25.6**	**-1.1**
YAK				pmax		pmax		
	comp=Z,21nm,0.9s							
INK	**Inuvik**	**28.52**	**35**	P		**P**	**03 33 26.9**	**-1.6**
	comp=Z,3.0nm,0.8s,baz=242,slow=10.0,SNR=11							
INK	**Inuvik**	**28.52**	**35**	P		**P**	**03 33 28.1**	**-0.5**
INK				pmax		pmax		
	comp=Z,5.0nm,0.8s							
INK	**Inuvik**	**28.52**	**35**	P		**P**	**03 33 28.1**	**-0.5**
INK				IAmb		IAmb	03 33 33.6	
	comp=Z,4.8nm,0.8s							
KLR	**Kul'dur**	**29.66**	**285**	*e*P		**P**	**03 33 38.8**	**-0.1**
	comp=Z,7.7nm,0.6s,baz=70,slow=7.4,SNR=33							
KLR	**Kul'dur**	**29.66**	**285**	*e*P		**P**	**03 33 38.6**	**-0.3**
KLR				pmax		pmax		
	comp=Z,16nm,1.3s							
TIXI	**Tiksi**	**29.98**	**331**	P		**P**	**03 33 38.6**	**-2.9**
	comp=Z,0.9nm,0.3s,baz=310,slow=2.0,SNR=4.5							
TIXI	**Tiksi**	**29.98**	**331**	*i* P		**P**	**03 33

comp=Z,77nm,6.1s
RLMT Red Lodge 46.70 68 IAmb IAmb 03 36 06.8
comp=Z,3.1nm,0.7s
R11A Troy Canyon, C 46.91 79 IAmb IAmb 03 36 09.5
comp=Z,3.3nm,0.8s
TPNV Topopah Spring 47.38 81 P **P** **03 36 07.9 +0.3**
TPNV pmax pmax
comp=Z,5.0nm,0.8s
TPNV Topopah Spring 47.38 81 P **P** **03 36 07.9 +0.3**
DUG Dugway, Tooele 47.48 75 P **P** **03 36 07.9 -0.4**
DUG pmax pmax
comp=Z,11nm,1.5s
DUG Dugway, Tooele 47.48 75 P **P** **03 36 07.8 -0.4**
BW06 Boulder Array 47.90 71 IAmb IAmb 03 36 15.4
comp=Z,2.2nm,0.7s
PD31 Pinedale Array 47.90 71 IAmb IAmb 03 36 15.4
comp=Z,2.1nm,0.7s
PDAR Pinedale Array 47.90 71 P **P** **03 36 10.7 -0.9**
comp=Z,2.2nm,0.5s,baz=307,slow=2.4,SNR=17
PDAR ScP **ScP** **03 41 31.8 +1.3**
comp=Z,0.1nm,0.3s,baz=0.0,slow=4.5,SNR=2.2
U15A North Rim 50.16 79 IAmb IAmb 03 36 34.6
comp=Z,4.2nm,0.8s
SPITS Spitsbergen Ar 50.41 355 P **P** **03 36 28.5 -1.6**
comp=Z,5.5nm,0.5s,baz=55,slow=7.2,SNR=20
ULM Lac du Bonnet 51.12 55 PcP **PcP** **03 37 50.3 -0.5**
comp=Z,1.5nm,0.4s,baz=304,slow=3.6,SNR=3.1
ULM LR LR 03 58 21.4
comp=Z,80nm,19.2s,baz=234,slow=36
DAG Danmarks Havn 51.81 5 *i* P **P** **03 36 39.0 -1.5**
DAG pmax pmax
comp=Z,2.0nm,0.8s
DAG Danmarks Havn 51.81 5 *i* P **P** **03 36 39.0 -1.5**
comp=Z,1.5nm,0.8s
XAN Xi'an 52.09 279 P **P** **03 36 42.8 -0.5**
XAN pmax pmax
comp=Z,5.0nm,0.8s
ZALV Zalesovo Beam 52.95 312 P **P** **03 36 47.9 -1.4**
comp=Z,1.2nm,0.6s,baz=35,slow=5.4,SNR=3.8
ZALV PcP **PcP** **03 37 58.0 +0.3**
comp=Z,0.4nm,0.3s,baz=64,slow=3.4,SNR=1.4
ZALV Zalesovo Beam 52.95 312 *i* P **P** **03 36 51.4 +2.1**
ZALV pmax pmax
comp=Z,1.0nm,0.6s
SDCO Great Sand Dun 53.45 73 IAmb IAmb 03 38 19.6
comp=Z,7.5nm,1.9s
SUMG Summit 53.83 13 P **P** **03 36 54.8 -1.2**
SUMG pmax pmax
comp=Z,6.0nm,0.9s
SUMG Summit 53.83 13 P **P** **03 36 54.8 -1.2**
SUMG Summit 53.83 13 *i* P **P** **03 36 54.5 -1.5**
comp=Z,15nm,0.8s
LZH Lanzhou 53.86 285 *e*P **P** **03 36 57.0 +0.6**
LZH pP sP 03 37 14.5 +2.5
LZH sP pwP 03 37 22.3 +15
LZH *e*PP **PP** **03 39 00.3 +2.7**
LZH pmax pmax
comp=Z,16nm,1.3s
LZH pmax pmax
comp=Z,54nm,7.2s
GTA Gaotai 54.11 290 *e*P **P** **03 36 58.1 -0.1**
GTA pP pP 03 37 03.3 -5.9
GTA sP pwP 03 37 06.9 -4.5
GTA pmax pmax
comp=Z,6.0nm,1.0s
ANMO Albuquerque 54.71 76 *ce*P P 03 37 07.4 +4.7
ANMO pmax pmax
comp=Z,2.0nm,1.7s
SZP Santa 56.66 256 P **P** **03 37 16.7 +0.2**
KURK Kurchatov 57.94 312 *ce*P **P** **03 37 25.0 -0.2**
KURK pmax pmax
comp=Z,12nm,1.0s
KURK Kurchatov 57.94 312 P **P** **03 37 24.8 -0.4**
ARCES ARCESS Array B 57.96 349 P **P** **03 37 23.2 -1.8**
comp=Z,5.4nm,1.0s,baz=30,slow=9.3,SNR=2.1
WMQ Urumqi 58.05 301 *e*P **P** **03 37 28.8 +2.6**
MK31 Makanchi Array 58.85 307 P **P** **03 37 30.3 -1.3**
MK31 pmax pmax
comp=Z,4.0nm,1.4s
MK31 Makanchi Array 58.85 307 P **P** **03 37 30.3 -1.3**
MK31 IAmb IAmb 03 37 38.1
comp=Z,4.0nm,1.4s
MKAR Makanchi Array 58.85 307 P **P** **03 37 30.8 -0.9**
comp=Z,2.2nm,0.6s,baz=49,slow=6.7,SNR=17
MAKZ Makanchi 58.99 307 P **P** **03 37 31.6 -1.1**
MAKZ pmax pmax
comp=Z,3.0nm,0.6s
MAKZ Makanchi 58.99 307 P **P** **03 37 31.6 -1.1**
MAKZ IAmb IAmb 03 37 32.4
comp=Z,2.7nm,0.6s
BRVK Borovoye 59.97 319 *ce*P **P** **03 37 39.0 -0.2**
BRVK pmax pmax
comp=Z,8.0nm,0.6s
BRVK Borovoye 59.97 319 P **P** **03 37 38.7 -0.5**
ARU Arti 61.87 327 *c i*P **P** **03 37 52.0 -0.1**
ARU 03 40 04.0
ARU S **S** **03 46 12.0 -0.4**
ARU SS **SS** **03 50 14.2 +0.2**
ARU pmax pmax
comp=Z,19nm,1.2s
ARU Arti 61.87 327 P **P** **03 37 52.2 +0.1**
KMI Kunming 62.13 276 P **P** **03 37 57.8 +3.2**
KMI pP pP 03 37 59.8 -5.6
KMI sP sP 03 38 02.6 -7.1
KMI pmax pmax
comp=Z,10.0nm,0.5s
KMI pmax pmax
comp=Z,110nm,5.9s
FCAR Ozark Folk Cen 62.59 66 P **P** **03 37 56.1 -1.1**
KLMR Klimovskoe 63.56 339 *e*P **P** **03 38 01.8 -1.4**
KLMR pmax pmax
comp=Z,13nm,1.3s
KLMR Klimovskoe 63.56 339 *e*P **P** **03 38 01.9 -1.3**
KLMR AMP 03 38 12.8
comp=Z,13nm,1.3s
KDJ Kajisay 64.73 306 P **P** **03 38 11.3 -0.2**
KDJ pmax pmax
comp=Z,4.0nm,0.7s
KDJ Kajisay 64.73 306 P **P** **03 38 11.3 -0.2**
FINES FINESS Array B 65.56 346 P **P** **03 38 15.7 -0.6**
comp=Z,0.7nm,0.6s,baz=23,slow=7.5,SNR=7.3
AAK Ala-Archa 65.70 308 *ce*P **P** **03 38 18.0 +0.3**
AAK pmax pmax
comp=Z,4.0nm,1.3s
AAK Ala-Archa 65.70 308 P **P** **03 38 17.7 -0.1**
KSH Kashi 67.28 305 P **P** **03 38 31.5 +3.7**
KSH sP PcP 03 38 56.4 +1.0
KSH PP PP 03 41 04.3 +8.4
KSH S **S** **03 47 19.9 0.0**
KSH Kashi 67.28 305 SS SS 03 51 40.9 +1.8
KSH pmax pmax
comp=Z,17nm,1.0s
KSH pmax pmax
comp=Z,94nm,5.3s
KSH LR LR
comp=N,110nm,10.6s
KSH LR LR
comp=E,63nm,12.5s
KSH LR LR
comp=Z,310nm,8.2s
NOA NORSAR Array B 67.64 353 P **P** **03 38 28.3 -1.3**
comp=Z,0.2nm,0.4s,baz=3.1,slow=4.9,SNR=2.6
CMAR Chiang Mai Arr 69.41 274 P **P** **03 38 40.7 -0.5**
comp=Z,1.7nm,0.5s,baz=32,slow=7.3,SNR=7.6
CMAR Chiang Mai Arr 69.41 274 *ce*P **P** **03 38 41.2 0.0**
CMAR pmax pmax
comp=Z,2.0nm,0.5s
OBN Obninsk 69.42 338 *e*P **P** **03 38 42.3 +1.6**
OBN pmax pmax
comp=Z,4.0nm,0.9s
TAPN Taplejung 69.73 289 *e*P **P** **03 38 43.6 +0.1**
comp=Z,40nm,1.0s
GUN Gumba 70.40 290 *e*P **P** **03 38 47.9 +0.2**
comp=Z,41nm,0.8s
JIRN Jiri 70.40 290 *e*P **P** **03 38 48.1 +0.4**
comp=Z,48nm,0.8s
RAMN Ramite 70.69 289 *e*P **P** **03 38 49.4 +0.1**
comp=Z,29nm,0.5s
KKN Kakani 70.84 291 *e*P **P** **03 38 50.5 +0.3**
comp=Z,21nm,0.6s
PKI Pulchoki 70.93 290 *e*P **P** **03 38 50.9 0.0**
comp=Z,38nm,1.1s
PKIN Phulchoki 70.93 290 *e*P **P** **03 38 50.9 +0.1**
DMN Daman 71.08 291 *e*P **P** **03 38 52.0 +0.3**
comp=Z,25nm,0.9s
DANN Dangsing 71.31 292 *e*P **P** **03 38 53.4 +0.3**
comp=Z,31nm,0.7s
KOLN Koldanda 71.84 292 *e*P **P** **03 38 56.2 0.0**
comp=Z,13nm,0.7s
PYUN Piuthan 71.95 292 *e*P **P** **03 38 57.0 +0.1**
comp=Z,41nm,0.9s
NIL Nilore 73.15 303 P **P** **03 39 04.3 +0.6**
NIL pmax pmax
comp=Z,27nm,1.6s
NIL Nilore 73.15 303 P **P** **03 39 04.3 +0.6**
KBL Kabul 74.64 306 P **P** **03 39 11.6 -1.0**
KBL pmax pmax
comp=Z,5.0nm,0.7s
KBL Kabul 74.64 306 P **P** **03 39 11.6 -1.0**
AKASG Malin Array Be 75.18 340 P **P** **03 39 14.3 -0.9**
comp=Z,1.1nm,0.4s,baz=21,slow=6.2,SNR=4.7
AKASG Malin Array Be 75.18 340 *ce*P **P** **03 39 14.1 -1.1**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
GEYT Alibeck 77.08 316 P **P** **03 39 27.2 +0.9**
comp=Z,0.5nm,0.3s,baz=9.6,slow=9.5,SNR=2.1
KIV Kislovodsk 77.79 329⇑ *e*P **P** **03 39 27.7 -2.5**
KIV *e* 03 39 35.9
KIV pmax pmax
comp=Z,4.0nm,0.9s
KBZ Khabaz 77.93 329 P **P** **03 39 31.8 +1.0**
comp=Z,2.5nm,0.7s,baz=272,slow=2.4,SNR=5.0
KBZ Khabaz 77.93 329 *ce*P **P** **03 39 31.4 +0.6**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
KOLS Kolonicke sedl 78.19 344 *e*P **P** **03 39 33.3 +1.0**
KOLS Kolonicke sedl 78.19 344 *e*P **P** **03 39 33.3 +1.0**
AKT Akhty 78.25 325 *e*P **P** **03 39 33.5 +0.7**
AKT *e* 03 39 41.6
AKT pmax pmax
comp=Z,8.0nm,0.8s
ZEI Tsey 78.43 328 *e*P **P** **03 39 33.4 -0.5**
ZEI pmax pmax
comp=Z,14nm,1.2s
BUR08 Bucovina Ar. S 78.90 342 P **P** **03 39 36.0 -0.4**
BUR08 IAmb IAmb 03 40 30.8
comp=Z,4.4nm,1.1s
GERES GERESS Array B 79.48 350 P **P** **03 39 38.9 -0.6**
comp=Z,0.3nm,0.5s,baz=351,slow=6.8,SNR=3.6
WRA Warramunga Arr 80.79 222 P **P** **03 39 45.3 -1.3**
comp=Z,1.4nm,0.8s,baz=32,slow=5.9,SNR=2.4
ASAR Alice Springs 84.29 220 P **P** **03 40 04.3 -0.4**
comp=Z,1.1nm,0.9s,baz=21,slow=5.9,SNR=8.9
BRTR Keskin Array B 84.39 334 P **P** **03 40 05.8 +0.3**
comp=Z,1.5nm,0.7s,baz=46,slow=2.6,SNR=8.2
SJG San Juan 90.85 59 LR LR 04 21 32.0
comp=Z,21nm,20.4s,baz=286,slow=36
TORD Torodi Ar. Bea 115.85 357 PKP **PKiKP** **03 46 14.2 -1.6**
comp=Z,0.3nm,0.7s,baz=336,slow=3.2,SNR=1.7
DBIC Dimbokro 122.27 4 PKP **PKiKP** **03 46 30.2 +2.0**
comp=Z,3.6nm,1.0s,baz=45,slow=5.7,SNR=2.6
H03N2 Juan Fernandez 122.67 104 T T 06 01 06.7
baz=301,slow=78,SNR=5.6
H03N1 Juan Fernandez 122.69 104 T T 06 01 08.0
baz=301,slow=78,SNR=8.4
H03N3 Juan Fernandez 122.69 104 T T 06 01 11.3
baz=301,slow=78,SNR=8.0
BOSA Boshof 149.84 308 PKPbc **PKPbc** **03 47 23.2 +0.2**
comp=Z,1.8nm,0.7s,baz=20,slow=15,SNR=1.7

IDC ***18*** *03:53:38.8±7.5, 10.°10N×93.°55E, h152km±68km, mb3.5/12, mb1 3.7/13, mb1mx3.4/56, mbtmp4.0/13, Error ellipse: s-maj=62.9km s-min=12.9km az=48.0*

ISC 18 03:53:38.6±0.8, 10.°0N±0.°1×93.°6E±0.°1, h150km, n23, σ2s 04/20, mb3.8/12, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**9.85**	**31**	P	**Pn**	**03 55 56.1**	**-0.6**
	0.4nm,0.3s,baz=224,slow=15,SNR=17						
ODAN	**Odare**	**17.75**	**341**	*e*P	**Pn**	**03 57 36.8**	**+0.1**
RAMN	**Ramite**	**18.09**	**339**	*e*P	**Pn**	**03 57 41.7**	**+0.9**
	34nm,0.3s						
TAPN	**Taplejung**	**18.11**	**343**	*e*P	**Pn**	**03 57 42.3**	**+1.2**
PKI	**Pulchoki**	**19.09**	**337**	*e*P	**Pn**	**03 57 55.2**	**+2.6**
	12nm,0.3s						
DMN	**Daman**	**19.24**	**337**	*e*P	**Pn**	**03 57 57.6**	**+3.3**
GKN	**Gorkha**	**19.78**	**336**	*e*P	**Pn**	**03 58 04.8**	**+4.3**
KOLN	**Koldanda**	**20.01**	**333**	*e*P	**Pn**	**03 58 07.9**	**+4.6**
	20nm,0.4s						
H08S3	**Diego Garcia H**	**27.38**	**231**	T	T	04 25 42.1	
	baz=52,slow=76,SNR=39						
H08S2	**Diego Garcia H**	**27.39**	**231**	T	T	04 25 42.3	
	baz=52,slow=76,SNR=30						
H08S1	**Diego Garcia H**	**27.40**	**231**	T	T	04 25 42.5	
	baz=52,slow=76,SNR=6.8						
GEYT	**Alibeck**	**42.27**	**317**	P	**P**	**04 01 18.0**	**+0.6**
	3.2nm,0.7s,baz=160,slow=9.3,SNR=7.4						
ZALV	**Zalesovo Beam**	**44.37**	**353**	P	**P**	**04 01 33.8**	**0.0**
	0.4nm,0.4s,baz=128,slow=2.4,SNR=1.2						
WRA	**Warramunga Arr**	**49.94**	**127**	P	**P**	**04 02 18.0**	**+0.5**
	1.6nm,0.5s,baz=313,slow=7.6,SNR=26						
ASAR	**Alice Springs**	**51.70**	**131**	P	**P**	**04 02 31.8**	**+1.1**
	1.1nm,0.5s,baz=302,slow=6.9,SNR=13						
BRTR	**Keskin Array B**	**60.65**	**310**	P	**P**	**04 03 32.1**	**-2.0**
	0.7nm,0.6s,baz=130,slow=7.3,SNR=4.2						
STKA	**Stephens Creek**	**61.97**	**134**	P	**P**	**04 03 43.3**	**+0.4**
	0.8nm,0.3s,baz=6.2,slow=4.2,SNR=4.5						
AKASG	**Malin Array Be**	**66.16**	**321**	P	**P**	**04 04 08.0**	**-1.9**
	0.3nm,0.4s,baz=90,slow=6.5,SNR=2.6						
FINES	**FINESS Array B**	**70.58**	**332**	P	**P**	**04 04 36.4**	**-0.9**
	1.1nm,0.8s,baz=116,slow=4.4,SNR=4.5						
ARCES	**ARCESS Array B**	**73.08**	**340**	P	**P**	**04 04 51.6**	**-0.5**
	2.4nm,0.9s,baz=97,slow=7.1,SNR=1.4						
GERES	**GERESS Array B**	**75.89**	**318**	P	**P**	**04 05 08.4**	**-0.4**
	0.5nm,0.5s,baz=98,slow=5.5,SNR=6.9						
DAVOX	**Davos/Dischmat**	**78.49**	**316**	P	**P**	**04 05 23.2**	**-0.3**
	0.6nm,0.4s,baz=142,slow=17,SNR=2.2						
TORD	**Torodi Ar. Bea**	**89.60**	**283**	P	**P**	**04 06 20.3**	**+0.3**
	0.4nm,1.0s,baz=98,slow=3.8,SNR=1.6						

BJI ***18*** *03:56:34.0±0.0, 24.°50N×141.°70E, h113km, mB4.8/33, mb4.8/51*

IDC ***18*** *03:56:36.5±0.5, 24.°45N×141.°37E, h129km±4km, mb4.1/31, mb1 4.3/34, mb1mx4.2/48, mbtmp4.5/34, MS3.3/5, Ms1 3.3/5, ms1mx2.9/54, Error ellipse: s-maj=13.6km s-min=6.8km az=95.0*

JMA ***18*** *03:56:37.1, 24.°45N×141.°48E, h147km±1km, M5.2*

JMA Felt I J1.

NEIC ***18*** *03:56:37.7±1.9, 24.°45N±0.°08×141.°58E±0.°10, h139km±1km, mb4.6/132, Error ellipse: s-maj=13.1km s-min=10.5km az=112.0*

ISC 18 03:56:37.3±0.6, 24.°46N±0.°05×141.°62E±0.°05, h135km±4km, n283, σ1s 62/283, mb4.6/88, 3C-1D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**2.22**	**13**	P	**Pn**	**03 57 15.6**	**+1.4**
JHH2				S	**Sn**	**03 57 45.2**	**+2.6**
CBIJ	**Chichi jima**	**2.67**	**11**	P	**Pn**	**03 57 20.9**	**+1.0**
CBIJ				S	**Sn**	**03 57 54.5**	**+1.8**
JCJ	**Chichijima**	**2.67**	**11**	P	**Pn**	**03 57 21.0**	**+1.1**
	699nm,0.3s,baz=72,slow=3.2,SNR=700						
JCJ				LR	LR	03 57 45.8	
	comp=Z,96nm,21.9s,baz=344,slow=25						
JCJ				S	**Sn**	**03 57 53.6**	**+0.9**
	775nm,0.3s,baz=127,slow=23,SNR=21						
JAOM	**Aogashimamukai**	**8.14**	**349**	P	**Pn**	**03 58 33.8**	**+1.3**
JHCJ	**Hachijojimakas**	**8.73**	**350**	P	**Pn**	**03 58 40.3**	**-0.1**
JHJ2	**Mitsune**	**8.76**	**350**	P	**Pn**	**03 58 41.0**	**+0.1**
JHJ2				S	**Sn**	**04 00 15.3**	**-2.7**
JHJ2	**Mitsune**	**8.76**	**350**			**03 58 39.1**	**-1.8**
JHJ	**Hachijo jima 2**	**8.77**	**350**	P	**Pn**	**03 58 40.8**	**-0.3**
	70nm,0.3s,baz=74,slow=24,SNR=22						
JHJ				S	**Sn**	**04 00 13.2**	**-5.1**
	10nm,0.3s,baz=49,slow=20,SNR=1.2						
JHJ				LR	LR	04 01 37.2	
	comp=Z,120nm,20.1s,baz=292,slow=34						
JMKN	**Mikurajimanish**	**9.56**	**350**	P	**Pn**	**03 58 51.6**	**0.0**
JMKN				S	**Sn**	**04 00 35.5**	**-1.8**
BSO3	**Boso 3**	**10.35**	**355**	P	**Pn**	**03 59 00.0**	**-1.9**
JIM2	**Oshima 3**	**10.39**	**350**	P	**Pn**	**03 59 01.0**	**-1.8**
HMMJ	**Hamamatsu 2**	**10.90**	**343**	P	**Pn**	**03 59 10.2**	**+0.8**
JSGW	**Sagamiharawaka**	**11.30**	**350**	P	**Pn**	**03 59 12.3**	**-2.4**
JNY	**Yasuok**	**11.34**	**344**	P	**Pn**	**03 59 15.0**	**-0.3**
JHU	**Hanno**	**11.53**	**350**	P	**Pn**	**03 59 14.9**	**-2.9**
JHU				S	**Sn**	**04 01 16.3**	**-8.6**
INU	**Inuyama**	**11.56**	**341**		**Pn**	**03 59 17.2**	**-0.9**
JRY	**Ryogami san**	**11.75**	**349**	P	**Pn**	**03 59 18.4**	**-2.3**
JAG	**Ashikaga**	**12.07**	**352**	P	**Pn**	**03 59 20.9**	**-3.9**
JHO	**Hitachi**	**12.14**	**356**	P	**Pn**	**03 59 22.7**	**-3.1**
JHO				S	Sn	04 01 28.0	-12
JNG	**Nsakai**	**12.28**	**347**	P	**Pn**	**03 59 25.8**	**-1.9**
JGN	**Niukaw**	**12.29**	**343**	P	**Pn**	**03 59 27.5**	**-0.3**
MJAR	**Matsushiro Arr**	**12.39**	**347**	P	**Pn**	**03 59 26.2**	**-2.8**
	0.7nm,0.3s,baz=151,slow=11,SNR=49						
MJAR				S	**Sn**	**04 01 41.9**	**-3.8**
	0.2nm,0.3s,baz=144,slow=19,SNR=2.1						
MAJO	**Matsushiro**	**12.39**	**347**		**Pn**	**03 59 26.7**	**-2.3**
MAT	**Matsushiro**	**12.39**	**347**	P	**Pn**	**03 59 26.3**	**-2.8**
MAT				S	**Sn**	**04 01 41.9**	**-3.9**
MAT	**Matsushiro**	**12.39**	**347**	P	**Pn**	**03 59 27.5**	**-1.6**
MJB9	**Matsu-Tunnel**	**12.40**	**347**		**Pn**	**03 59 26.9**	**-2.2**
JNU	**Nakatsue**	**12.76**	**315**	P	**P**	**03 59 38.2**	**-1.4**
	0.3nm,0.3s,baz=81,slow=7.6,SNR=6.0						
JNU	**Nakatsue**	**12.76**	**315**	P	**P**	**03 59 37.2**	**-2.4**
YOJ	**Yonaguni jima**	**16.94**	**274**	P	**Pn**	**04 00 27.0**	**+0.7**
KSRS	**Korea Array**	**17.45**	**321**	P	**Pn**	**04 00 33.0**	**+0.7**
	1.1nm,0.3s,baz=137,slow=12,SNR=38						
KS19	**Wonju Array Si**	**17.52**	**321**	P	**Pn**	**04 00 33.4**	**+0.2**
NACB	**Ninganchiao**	**18.25**	**273**		**Pn**	**04 00 41.8**	**-0.1**
NACB				IAmb	IAmb	04 00 43.5	
	comp=Z,42nm,0.9s						
YHNB	**Yeheng**	**18.41**	**275**	P	**Pn**	**04 00 43.8**	**-0.1**
YHNB				IAmb	IAmb	04 00 49.6	
	comp=Z,35nm,0.8s						
YULB	**Yu-li**	**18.61**	**271**	P	**Pn**	**04 00 45.4**	**-0.8**
TWG	**Pinlang**	**18.89**	**269**	P	**P**	**04 00 47.2**	**-0.2**
TPUB	**Ta-pu**	**19.23**	**271**	P	**P**	**04 00 51.5**	**+0.5**
JKA	**Kamikawa-asahi**	**19.62**	**2**	P	**Pn**	**04 00 57.7**	**-0.1**
ASAJ	**Asahikawa**	**19.62**	**2**	P	**Pn**	**04 00 57.7**	**-0.2**
	comp=Z,3.0nm,0.3s,baz=226,slow=12,SNR=13						
SZP	**Santa**	**20.90**	**255**	P	**P**	**04 01 09.6**	**+0.5**
QZH	**Quanzhou**	**20.92**	**276**⇑	P	**P**	**04 01 09.3**	**+0.1**
QZH				*e*S	**S**	**04 04 54.8**	**-0.2**
KNMB	**Chin-men Tao**	**21.14**	**275**	P	**P**	**04 01 11.5**	**-0.1**
USA0B	**Ussuriysk Arra**	**21.20**	**341**	P	**P**	**04 01 10.9**	**-1.2**
USRK	**Ussuriysk Ar.**	**21.20**	**341**	P	**P**	**04 01 10.5**	**-1.5**
	comp=Z,6.8nm,0.7s,baz=166,slow=10,SNR=14						
USRK				LR	LR	04 08 42.4	
	comp=Z,98nm,19.7s,baz=49,slow=34						
NJ2	**Nanjing**	**21.40**	**296**	*e*P	**P**	**04 01 15.8**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
TGY	**Tagaytay City**	**22.04**	**246**	P	**P**	**04 01 22.5**	**+1.2**
	comp=Z,108nm,0.3s,baz=184,slow=0.9,SNR=7.2						
H11N1	**WAKE ISLAND Hy**	**23.88**	**96**	T	T	04 26 18.4	
	baz=283,slow=73,SNR=11						
H11N2	**WAKE ISLAND Hy**	**23.88**	**96**	T	T	04 26 21.1	
	baz=283,slow=73,SNR=12						
H11N3	**WAKE ISLAND Hy**	**23.89**	**96**	T	T	04 26 19.6	
	baz=283,slow=73,SNR=10						
H11S3	**WAKE ISLAND Hy**	**24.06**	**99**	T	T	04 27 16.4	
	baz=289,slow=75,SNR=7.5						
H11S1	**WAKE ISLAND Hy**	**24.06**	**99**	T	T	04 27 17.0	
	baz=289,slow=75,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**24.07**	**99**	T	T	04 27 17.5	
	baz=289,slow=75,SNR=3.6						
WHN	**Wuhan**	**24.90**	**290**⇑	P	**P**	**04 01 51.0**	**+3.4**
KLR	**Kul'dur**	**25.91**	**345**	P	**P**	**04 01 55.5**	**-1.0**
	comp=Z,2.4nm,0.4s,baz=157,slow=7.4,SNR=8.9						
SIJI	**Sorong**	**27.11**	**203**	P	**P**	**04 02 06.2**	**-1.5**
	comp=Z,3.4nm,0.5s,baz=72,slow=20,SNR=2.0						
ENH	**Enshi**	**29.05**	**289**	P	**P**	**04 02 25.9**	**+1.0**
ENH				IAmb	IAmb	04 02 26.7	
	comp=Z,12nm,1.0s						
HHC	**Hu-ho-hao-te**	**29.93**	**310**	*e*P	**P**	**04 02 34.3**	**+1.7**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,31nm,5.4s						
XAN	**Xi'an**	**29.97**	**296**	P	**P**	**04 02 33.4**	**+0.4**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,110nm,4.7s						
XAN	**Xi'an**	**29.97**	**296**	P	**P**	**04 02 33.1**	**+0.2**
XAN				IAmb	IAmb	04 02 35.2	
	comp=Z,8.5nm,0.5s						
MRSI	**Marisa**	**30.52**	**222**	P	**P**	**04 02 37.5**	**-0.4**
	comp=Z,31nm,0.9s						
PETK	**Petropavlovsk-**	**31.08**	**19**	P	**P**	**04 02 43.7**	**+1.2**
	comp=Z,2.4nm,0.8s,baz=209,slow=7.0,SNR=1.3						
PETK				PcP	**PcP**	**04 05 34.6**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=206,slow=3.2,SNR=4.0						
GYA	**Guiyang**	**31.56**	**281**⇑	*i*P	**P**	**04 02 48.0**	**+0.8**
GYA				pP	pP	04 03 15.0	-0.5
GYA				PP	**PnPn**	**04 03 58.5**	**+2.2**
GYA				PcP	**PcP**	**04 05 33.3**	**-3.3**
GYA				S	**S**	**04 07 47.9**	**+1.8**
GYA				sS	sS	04 08 28.9	-7.1
GYA				SS	SS	04 09 45.6	-21
GYA				pmax	pmax		
	comp=Z,20nm,0.7s						
GYA				pmax	pmax		
	comp=Z,130nm,4.6s						
GYA				LR	LR		
	comp=Z,60nm,4.0s						
GYA				LR	LR		
	comp=Z,70nm,3.8s						
GYA				LR	LR		
	comp=Z,80nm,6.8s						
CD2	**Chengdu**	**34.02**	**289**	*e*P	**P**	**04 03 08.0**	**-0.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	**Lanzhou**	**34.42**	**299**	⇓P	**P**	**04 03 13.1**	**+1.2**
LZH				pP	pP	04 03 38.8	-1.7
LZH				PP	**PP**	**04 04 33.5**	**+1.0**
LZH				pmax	pmax		
	comp=Z,24nm,1.0s						
LZH				pmax	pmax		
	comp=Z,72nm,5.2s						
SLVN	**Son La**	**34.81**	**273**	P	**P**	**04 03 16.0**	**+0.7**
SLVN				IAmb	IAmb	04 03 17.4	
	comp=Z,13nm,0.9s						
KMI	**Kunming**	**35.22**	**279**	P	**P**	**04 03 20.8**	**+1.8**
KMI				pP	pP	04 03 45.8	-1.9
KMI				pmax	pmax		
	comp=Z,32nm,0.9s						
KMI				pmax	pmax		
	comp=Z,120nm,4.0s						
KMI	**Kunming**	**35.22**	**279**	P	**P**	**04 03 19.8**	**+0.8**
SPSI	**Sidrap Palu**	**35.36**	**220**	P	**P**	**04 03 18.3**	**-1.7**
	comp=Z,24nm,0.9s						
ULN	**Ulaanbaatar**	**35.93**	**319**	P	**P**	**04 03 24.2**	**-0.5**
KAPI	**Kappang**	**36.22**	**219**	P	**P**	**04 03 27.2**	**0.0**
	comp=Z,7.8nm,1.0s,baz=39,slow=5.1,SNR=5.0						
KAPI	**Kappang**	**36.22**	**219**	P	**P**	**04 03 27.1**	**-0.2**
KAPI				IAmb	IAmb	04 03 27.8	
	comp=Z,13nm,1.1s						
SONM	**Songino Array**	**36.30**	**319**	P	**P**	**04 03 26.5**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=133,slow=7.0,SNR=4.0						
SONM				PcP	**PcP**	**04 05 49.9**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=139,slow=3.0,SNR=6.5						
SONM				ScP	**ScP**	**04 09 22.3**	**-1.5**
	comp=Z,1.2nm,0.6s,baz=123,slow=4.3,SNR=7.1						
GTA	**Gaotai**	**38.12**	**303**	*e*P	**P**	**04 03 43.5**	**+0.1**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
EDFI	**Ende, Flores**	**38.31**	**213**	P	**P**	**04 03 42.5**	**-2.6**
	comp=Z,13nm,0.8s						
PBKT	**Sadao Pong**	**38.76**	**266**	P	**P**	**04 03 49.5**	**+0.8**
TLY	**Talaya**	**39.69**	**323**	LR	LR	04 18 31.1	
	comp=Z,49nm,21.6s,baz=90,slow=33						
CHTO	**Chiang Mai**	**39.94**	**270**	P	**P**	**04 03 58.6**	**0.0**
CHTO				IAmb	IAmb	04 04 00.3	
	comp=Z,15nm,0.8s						
CM31	**Chiang Mai Arr**	**40.04**	**270**	P	**P**	**04 03 59.4**	**-0.1**
CM31				IAmb	IAmb	04 04 01.1	
	comp=Z,11nm,0.7s						
CMAR	**Chiang Mai Arr**	**40.04**	**270**	P	**P**	**04 04 00.2**	**+0.8**
	comp=Z,8.2nm,0.7s,baz=63,slow=7.5,SNR=41						
CMAR				ScP	**ScP**	**04 09 38.1**	**-0.2**
	comp=Z,0.5

comp=Z,2.1nm,1.1s,baz=7.7,slow=4.5,SNR=4.4
SHL Shillong 44.87 282 P **P** **04 04 38.8 +0.3**
LSA Lhasa 44.95 288 P **P** **04 04 40.7 +1.2**
LSA IAmb IAmb 04 05 32.5
comp=Z,7.1nm,0.5s
FITZ Fitzroy Crossi 45.08 202 P **P** **04 04 39.0 -1.0**
comp=Z,13nm,0.8s,baz=30,slow=9.3,SNR=26
FITZ Fitzroy Crossi 45.08 202 P **P** **04 04 39.3 -0.7**
FITZ IAmb IAmb 04 04 40.2
comp=Z,16nm,0.9s
LEM Lembang 45.44 231 P **P** **04 04 42.5 -0.6**
comp=Z,47nm,0.5s,baz=36,slow=7.5,SNR=3.6
BKNI Bangkinang 46.01 245 P **P** **04 04 47.5 0.0**
BILL Bilibino 46.13 13 P **P** **04 04 49.1 +1.5**
BILL IAmb IAmb 04 04 51.0
comp=Z,8.6nm,0.7s
PSI Prapat 46.45 249 LR LR 04 22 45.4
comp=Z,192nm,21.2s,baz=352,slow=34
RPSI Rantau Prapat 46.50 249 P **P** **04 04 51.1 -0.2**
MNSI Mandailing Nat 46.96 246 P **P** **04 04 55.2 +0.3**
WMQ Urumqi 47.73 308 *e*P **P** **04 05 01.8 +1.2**
WMQ pmax pmax
comp=Z,15nm,0.7s
WMQ pmax pmax
comp=Z,54nm,4.9s
WMQ LR LR
comp=Z,130nm,20.5s
WMQ LR LR
comp=Z,66nm,24.3s
WMQ LR LR
comp=Z,110nm,22.3s
TAPN Taplejung 48.26 286 *e*P **P** **04 05 06.1 +0.9**
comp=Z,20nm,0.5s
GSI Gunungsitoli 48.38 248 P **P** **04 05 05.8 0.0**
comp=Z,323nm,1.1s
AS31 Alice Springs 48.42 189 P **P** **04 05 04.6 -1.3**
ASAR Alice Springs 48.42 189 P **P** **04 05 04.6 -1.3**
comp=Z,2.9nm,0.5s,baz=14,slow=14,SNR=41
ASAR PcP **PcP** **04 06 30.5 +0.3**
comp=Z,1.5nm,0.6s,baz=4.3,slow=2.8,SNR=7.1
ASAR ScP **ScP** **04 10 11.2 -1.2**
comp=Z,0.3nm,0.5s,baz=4.1,slow=4.8,SNR=2.1
ODAN Odare 48.63 285 *e*P **P** **04 05 08.9 +1.0**
comp=Z,34nm,0.4s
RAMN Ramite 49.30 285 *e*P **P** **04 05 13.8 +0.7**
comp=Z,28nm,0.5s
JIRN Jiri 49.55 286 *e*P **P** **04 05 16.2 +1.2**
comp=Z,62nm,0.7s
GUN Gumba 49.77 287 *e*P **P** **04 05 17.9 +1.2**
comp=Z,33nm,0.4s
PKI Pulchoki 50.24 286 *e*P **P** **04 05 20.6 +0.4**
comp=Z,11nm,0.4s
PKIN Phulchoki 50.25 286 *e*P **P** **04 05 20.6 +0.4**
comp=Z,16nm,0.5s
KKN Kakani 50.32 287 *e*P **P** **04 05 21.7 +1.0**
DMN Daman 50.50 286 *e*P **P** **04 05 22.8 +0.7**
ZALV Zalesovo Beam 51.16 321 P **P** **04 05 24.8 -1.5**
comp=Z,1.1nm,0.3s,baz=106,slow=11,SNR=5.3
ZALV PcP **PcP** **04 06 39.0 -0.9**
comp=Z,2.9nm,0.5s,baz=133,slow=3.1,SNR=5.8
ZALV ScP **ScP** **04 10 22.7 -1.0**
comp=Z,0.9nm,0.6s,baz=123,slow=5.3,SNR=2.3
DANN Dangsing 51.55 288 *e*P **P** **04 05 31.1 +1.1**
comp=Z,200nm,0.6s
MK31 Makanchi Array 51.78 311 P **P** **04 05 30.4 -0.7**
MK31 IAmb IAmb 04 05 31.8
comp=Z,4.6nm,0.5s
MKAR Makanchi Array 51.78 311 P **P** **04 05 31.4 +0.3**
comp=Z,5.2nm,0.4s,baz=87,slow=9.7,SNR=64
MKAR ScP **ScP** **04 10 25.4 -1.3**
comp=Z,0.5nm,0.6s,baz=103,slow=4.2,SNR=4.6
KOLN Koldanda 51.79 287 *e*P **P** **04 05 32.5 +0.9**
comp=Z,37nm,0.8s
MAKZ Makanchi 52.00 311 P **P** **04 05 33.1 +0.4**
MAKZ IAmb IAmb 04 05 33.5
comp=Z,13nm,1.3s
PYUN Piuthan 52.26 287 *e*P **P** **04 05 36.2 +1.1**
comp=Z,73nm,0.5s
KURK Kurchatov 54.48 316 P **P** **04 05 50.1 -0.7**
KURK IAmb IAmb 04 05 50.9
comp=Z,7.6nm,0.6s
NRIK Noril'sk 54.91 339 P **P** **04 05 52.5 -1.1**
comp=Z,6.8nm,0.5s,baz=112,slow=8.5,SNR=20
TARG Taragay, Kyrgy 54.96 305 P **P** **04 05 54.9 0.0**
TARG IAmb IAmb 04 05 56.8
comp=Z,6.8nm,0.9s
KDJ Kajisay 55.41 305 P **P** **04 05 58.2 +0.4**
TTA Tatalina 55.98 29 P **P** **04 06 01.3 -0.1**
STKA Stephens Creek 56.02 180 P **P** **04 06 00.2 -1.7**
comp=Z,4.3nm,0.6s,baz=356,slow=7.0,SNR=16
STKA Stephens Creek 56.02 180 P **P** **04 06 00.9 -1.0**
ULHL Ulahol 56.10 306 P **P** **04 06 03.4 +0.6**
SNR=14
FORT Forrest 56.44 194 P **P** **04 06 04.2 -0.6**
KSH Kashi 56.52 302 P **P** **04 06 09.6 +4.0**
KSH sP sP 04 06 49.0 -2.6
KSH PP **PP** **04 08 19.8 +7.1**
KSH S **S** **04 13 50.9 +4.2**
KSH SS **SS** **04 17 39.1 +3.2**
KSH pmax pmax
comp=Z,18nm,0.5s
KSH pmax pmax
comp=Z,51nm,4.4s
KSH LR LR
comp=Z,180nm,5.3s
KSH LR LR
comp=Z,140nm,13.6s
KSH LR LR
comp=Z,200nm,10.6s
TKM2 Tokmak 2 56.53 306 P **P** **04 06 06.4 +0.6**
SNR=6.1
KDAK Kodiak Island 56.78 36 P **P** **04 06 07.3 +0.3**
comp=Z,6.0nm,0.5s,baz=247,slow=4.8,SNR=11
KZA Kyzart 56.84 305 P **P** **04 06 09.7 +1.4**
SNR=11
KBK Karagaybulak 57.02 306 P **P** **04 06 09.9 +0.7**
SNR=6.5
BBOO Buckleboo 57.20 186 P **P** **04 06 09.5 -0.7**
AAK Ala-Archa 57.36 306 P **P** **04 06 11.7 +0.1**
AAK IAmb IAmb 04 06 12.6
comp=Z,3.7nm,0.6s
UCH Uchtor 57.38 306 P **P** **04 06 13.3 +1.2**
SNR=17
AML Almayashu 57.99 306 P **P** **04 06 17.4 +1.1**
SNR=8.3
OBL Observatory Le 58.32 82 P **P** **04 06 17.0 -1.6**
UWB Uwekahuna B 58.32 82 P **P** **04 06 15.6 -3.0**
HATHI Halema'uma'u T 58.34 82 P **P** **04 06 15.1 -3.6**
TRF Thorofare Moun 58.62 29 P **P** **04 06 19.8 -0.2**
MCK McKinley 59.26 29 P **P** **04 06 23.9 -0.3**
NIL Nilore 59.51 296 P **P** **04 06 26.9 +0.4**
BRVK Borovoye 59.71 319 P **P** **04 06 26.8 -0.6**
TOLK Toolik Lake Re 59.75 23 P **P** **04 06 30.5 +3.0**
baz=260
TCOL CIGO, UAF Yank 59.86 28 P **P** **04 06 31.4 +3.2**
baz=263
POKR Poker Plat Res 60.07 27 P **P** **04 06 32.8 +3.1**
baz=264
HDA Harding Lake 60.20 28 P **P** **04 06 32.6 +1.9**
baz=265
KK31 Karatay Array 60.23 307 P **P** **04 06 31.1 -0.2**
KKAR Karatay Array 60.23 307 P **P** **04 06 31.3 +0.1**
IL31 60.27 28 IAmb IAmb 04 07 06.9
comp=Z,8.6nm,0.9s
ILAR Eielson Array 60.27 28 P **P** **04 06 32.1 +1.1**
comp=Z,4.1nm,0.7s,baz=257,slow=5.5,SNR=13
ILAR pP **pP** **04 07 01.4 -1.0**
comp=Z,4.5nm,0.9s,baz=272,slow=4.6,SNR=2.4
GAR Garm 60.94 302 P **P** **04 06 36.5 +0.3**
RIDG Independent Ri 61.08 29 P **P** **04 06 37.4 +0.8**
KBL Kabul 62.76 298 P **P** **04 06 48.7 +0.1**
EPYK Eagle Plains 64.53 26 P **P** **04 07 01.4 +1.9**
baz=273
INK Inuvik 65.63 24 P **P** **04 07 07.6 +1.2**
comp=Z,3.7nm,0.5s,baz=288,slow=7.6,SNR=27
INK pP **PcP** **04 07 37.5 +0.6**
comp=Z,3.4nm,0.7s,baz=250,slow=12,SNR=3.2
INK Inuvik 65.63 24 P **P** **04 07 06.7 +0.3**
INK IAmb IAmb 04 07 09.3
comp=Z,4.5nm,0.6s
ARU Arti 66.19 323 P **P** **04 07 09.4 -0.9**
ARU IAmb IAmb 04 07 09.8
comp=Z,6.5nm,0.7s
A36M Sachs Harbour 67.92 20 P **P** **04 07 22.5 +1.6**
baz=281
H02S1 DAWSON INLET T 68.40 40 T T 05 22 31.7
SNR=80
C36M Paulatuk 68.86 22 P **P** **04 07 27.9 +1.1**
baz=283
GEYT Alibeck 70.51 304 P **P** **04 07 37.9 +0.4**
comp=Z,2.0nm,0.7s,baz=162,slow=6.2,SNR=4.9
URZ Urewera 70.72 151 P **P** **04 07 39.0 +0.5**
comp=Z,4.6nm,0.8s,baz=309,slow=4.1,SNR=2.9
RPZ Rata Peaks 73.03 158 P **P** **04 07 54.2 +2.0**
comp=Z,9.3nm,0.8s,baz=333,slow=11,SNR=2.4
YKA Yellowknife Ar 74.70 28 P **P** **04 08 02.5 +0.8**
comp=Z,2.7nm,0.4s,baz=296,slow=5.4,SNR=54
YKA pP **pP** **04 08 34.1 -0.2**
comp=Z,3.1nm,0.5s,baz=293,slow=5.5,SNR=12
RES Resolute Bay 74.73 13 P **P** **04 08 03.0 +1.3**
NLWA Neilton Lookou 75.32 44 IAmb IAmb 04 08 44.7
comp=Z,16nm,1.1s
LLLB Lillooet 75.43 41 IAmb IAmb 04 08 44.2
comp=Z,12nm,1.1s
D03D Eldon 75.77 44 P **P** **04 08 10.7 +2.5**
baz=291
ARCES ARCESS Array B 75.85 341 P **P** **04 08 07.7 -0.5**
comp=Z,3.1nm,0.6s,baz=72,slow=8.0,SNR=15
B05A Bryant 76.13 43 P **P** **04 08 12.4 +2.1**
baz=291
F04D Rainier, OR 76.33 45 P **P** **04 08 13.6 +2.2**
baz=291
E04D Cinebar 76.45 45 P **P** **04 08 14.3 +2.2**
baz=291
G03D McMinnville, O 76.48 46 P **P** **04 08 14.5 +2.2**
baz=291
I02D Swisshome 76.49 48 P **P** **04 08 14.6 +2.3**
baz=291
J01E Myrtle Point 76.77 49 P **P** **04 08 15.6 +1.7**
baz=291
I03D Drain, OR 76.97 48 P **P** **04 08 17.4 +2.3**
baz=291
H04D Lebanon 77.08 47 P **P** **04 08 17.7 +2.1**
baz=292
K02D Willamette Mer 77.12 49 P **P** **04 08 17.8 +1.8**
baz=291
H04A Detroit Lake 77.39 47 P **P** **04 08 18.3 +0.9**
H04A IAmb IAmb 04 08 55.9
comp=Z,13nm,1.1s
I04A Tendick Farm, 77.57 48 P **P** **04 08 20.0 +1.5**
baz=292
B08A Colville Reser 77.81 42 IAmb IAmb 04 08 57.9
comp=Z,12nm,1.1s
J04D Umpqua Nationa 77.98 48 P **P** **04 08 22.7 +1.8**
baz=292
I05D Terrebonne, OR 78.08 47 P **P** **04 08 23.2 +1.9**
baz=292
M02C Callahan 78.16 50 P **P** **04 08 23.4 +1.6**
baz=292,SNR=8.1
G06A Carlson Farm, 78.20 46 IAmb IAmb 04 08 20.4
comp=Z,7.4nm,0.5s
L04D Klamath Falls 78.23 49 P **P** **04 08 23.8 +1.5**
baz=292,SNR=6.1
N02D Trinity Center 78.42 50 P **P** **04 08 25.2 +1.9**
baz=292,SNR=6.0
J05D Fort Rock, OR 78.55 48 P **P** **04 08 26.0 +2.0**
baz=293,SNR=15
O02D Mt. Diablo Mer 78.67 51 P **P** **04 08 26.7 +2.1**
baz=292,SNR=8.5
M04C Madoel 78.72 49 P **P** **04 08 26.9 +1.9**
baz=293
NEW Newport 79.20 42 P **P** **04 08 29.0 +1.6**
baz=295
NEW Newport 79.20 42 IAmb IAmb 04 08 29.8
comp=Z,8.6nm,0.9s
G08A Pilot Rock 79.26 45 P **P** **04 08 27.9 +0.1**
O03E Paynes Creek 79.32 51 P **P** **04 08 29.3 +1.2**
baz=293
KBZ Khabaz 79.42 313 P **P** **04 08 28.4 -0.1**
comp=Z,15nm,0.8s,baz=94,slow=4.4,SNR=31
MOD Modoc Plateau 79.73 49 P **P** **04 08 30.9 +0.4**
ORV Oroville 79.82 51 P **P** **04 08 31.2 +0.4**
FINES FINESS Array B 80.08 334 P **P** **04 08 30.2 -1.4**
comp=Z,3.1nm,0.4s,baz=71,slow=4.8,SNR=72
J08A Circle Bar Ran 80.37 47 P **P** **04 08 35.1 +1.2**
J08A IAmb IAmb 04 08 36.5
comp=Z,9.2nm,0.8s
BMO Blue Mountains 80.51 45 IAmb IAmb 04 09 12.3
comp=Z,7.3nm,0.8s
WALA Wharton Lakes 80.77 40 IAmb IAmb 04 09 14.1
comp=Z,20nm,1.4s
JTMT Jette 81.14 41 IAmb IAmb 04 09 15.7
comp=Z,7.9nm,0.7s
CMB Columbia Colle 81.23 52 IAmb IAmb 04 08 40.8
comp=Z,7.7nm,0.8s
PNTR Pine Nut 81.36 51 IAmb IAmb 04 09 17.2
comp=Z,9.9nm,0.8s
MFID Camas Ranch 82.09 46 P **P** **04 08 43.4 +0.5**
MFID IAmb IAmb 04 09 20.9
comp=Z,7.8nm,0.8s
NVAR Mina Array Bea 82.55 51 P **P** **04 08 47.1 +1.5**
comp=Z,5.3nm,0.8s,baz=279,slow=5.4,SNR=30
NVAR pP **pP** **04 09 20.1 +1.4**
comp=Z,4.1nm,0.8s,baz=275,slow=6.0,SNR=7.1
VES Vestal, Richgr 83.09 54 P **P** **04 08 48.9 +0.8**
baz=295
TIN Tinemaha, Big 83.19 52 P **P** **04 08 50.3 +1.6**
baz=296
CWC Cottonwood Cre 83.56 53 P **P** **04 08 51.6 +0.9**
baz=296
EGMT Eagleton 83.70 40 P **P** **04 08 52.3 +1.3**
baz=300
EGMT Eagleton 83.70 40 IAmb IAmb 04 08 53.4
comp=Z,17nm,1.4s
GRAC Grapevine Rang 83.84 52 P **P** **04 08 53.5 +1.5**
baz=296
MPMC Manual Prospec 84.16 53 P **P** **04 08 55.0 +1.2**
baz=296
FFC Flin Flon 84.24 31 P **P** **04 08 54.3 +0.7**
FFC IAmb IAmb 04 08 55.0
comp=Z,6.2nm,0.8s
EDW2 Edwards Air Fo 84.30 54 P **P** **04 08 55.7 +1.4**
baz=296
AKASG Malin Array Be 84.43 324 P **P** **04 08 53.1 -1.4**
comp=Z,1.5nm,0.3s,baz=54,slow=5.6,SNR=12
AKBB Malin Array Si 84.43 324 P **P** **04 08 53.3 -1.3**
FURC Furnace Creek, 84.44 53 P **P** **04 08 56.3 +1.5**
baz=296
R11A Troy Canyon, C 84.51 50 P **P** **04 08 57.0 +1.5**
baz=297
TPNV Topopah Spring 84.67 52 P **P** **04 08 57.8 +1.5**
baz=297
TPNV Topopah Spring 84.67 52 IAmb IAmb 04 08 58.5
comp=Z,11nm,0.8s
H17A Grant Village 84.99 43 P **P** **04 09 01.2 +3.3**
baz=300
GSC Gatestone, Bar 84.99 54 P **P** **04 08 59.4 +1.5**
baz=296
GSC Goldstone, Bar 84.99 54 IAmb IAmb 04 09 00.1
comp=Z,8.6nm,0.8s
IMW Indian Meadow 85.01 44 IAmb IAmb 04 09 36.6
comp=Z,6.6nm,0.8s
TPAW Teton Pass 85.20 44 P **P** **04 09 00.1 +1.1**
TPAW IAmb IAmb 04 09 37.4
comp=Z,6.5nm,0.8s
RLMT Red Lodge 85.44 42 P **P** **04 09 02.0 +2.0**
baz=300
RLMT Red Lodge 85.44 42 IAmb IAmb 04 09 03.9
comp=Z,11nm,0.8s
HEC Hector,Ludlow 85.55 54 P **P** **04 09 02.0 +1.3**
baz=297
DUG Dugway, Tooele 85.56 48 P **P** **04 09 02.1 +1.4**
baz=298
DUG Dugway, Tooele 85.56 48 IAmb IAmb 04 09 38.6
comp=Z,7.5nm,0.8s
TUQ Turquoise Moun 85.58 53 P **P** **04 09 02.2 +1.4**
baz=297
SHPR Sheep Range 85.64 52 IAmb IAmb 04 09 03.8
comp=Z,7.6nm,0.9s
HWUT Hardware Ranch 85.72 46 IAmb IAmb 04 09 39.4
comp=Z,8.5nm,0.8s
RAYN Ar Rayn 85.73 294 P **P** **04 09 01.6 -0.1**
NB2 NORSAR Subarra 85.86 338 P **P** **04 08 59.4 -2.1**
comp=Z,1.1nm,0.5s,baz=42,slow=5.1
NOA NORSAR Array B 85.86 338 P **P** **04 08 59.6 -1.9**
comp=Z,0.8nm,0.5s,baz=46,slow=4.5,SNR=7.6
PFO Pinyon Flats O 86.00 55 P **P** **04 09 03.9 +1.0**
baz=297
GMRC Granite Mounta 86.06 54 P **P** **04 09 04.4 +1.1**
baz=297
BELC Belle Mtn. Jos 86.17 54 P **P** **04 09 04.9 +1.2**
baz=297
MONP2 Monument Peak 86.35 56 P **P** **04 09 05.9 +1.2**
baz=297
LAO LASA Array 86.44 40 P **P** **04 09 06.2 +1.4**
baz=302
LAO LASA Array 86.44 40 IAmb IAmb 04 09 07.3
comp=Z,11nm,1.2s
PDAR Pinedale Array 86.44 44 P **P** **04 09 05.8 +0.7**
comp=Z,0.6nm,0.5s,baz=323,slow=0.9,SNR=9.6
PDAR pP **pP** **04 09 38.5 0.0**
comp=Z,2.2nm,0.8s,baz=267,slow=3.5,SNR=5.6
DGMT Dagmar 86.63 37 P **P** **04 09 07.4 +1.8**
baz=304
IKP In-Ko-Pah, Jac 86.69 56 P **P** **04 09 07.5 +1.2**
baz=297
IRM Iron Mountain 86.73 54 P **P** **04 09 07.5 +1.1**
baz=297
BC3 Big Chuckawall 86.73 55 P **P** **04 09 07.8 +1.3**
baz=297
Q16A Castle Valley 87.29 48 P **P** **04 09 09.7 +0.5**
Y12C Blythe 87.37 54 P **P** **04 09 10.7 +1.2**
baz=298
PDMCI Parker Dam,Lak 87.40 53 P **P** **04 09 11.2 +1.7**
baz=298
BR131 Keskin Array S 87.41 313 P **P** **04 09 08.3 -1.4**
BR131 IAmb IAmb 04 11 21.3
comp=Z,9.9nm,1.7s
BRTR Keskin Array B 87.41 313 P **P** **04 09 08.1 -1.6**
comp=Z,1.7nm,0.7s,baz=85,slow=3.8,SNR=9.4
GLA Glamis 87.47 55 P **P** **04 09 11.5 +1.5**
baz=298
U15A North Rim 87.72 51 IAmb IAmb 04 09 50.0
comp=Z,6.1nm,0.8s
O20A White River Ci 88.64 46 P **P** **04 09 16.7 +1.1**
baz=301
WUAZ Wupatki 88.82 51 P **P** **04 09 17.8 +1.4**
baz=300
PV14 Lion Creek, Pa 89.02 48 IAmb IAmb 04 09 55.9
comp=Z,5.7nm,0.9s
214A Organ Pipe Nat 89.49 55 P **P** **04 09 20.9 +1.5**
baz=299
N23A Red Feather La 89.72 44 P **P** **04 09 22.0 +1.2**
baz=303
ISCO Idaho Springs 90.53 45 P **P** **04 09 25.7 +1.2**
baz=303
TUC Tucson 90.82 54 P **P** **04 09 27.0 +1.2**
baz=300
S22A 4UR Ranch, Cre 90.83 48 P **P** **04 09 26.9 +0.9**
baz=302
AGMN Agassiz Nation 91.18 34 P **P** **04 09 28.1 +1.1**
baz=310
AGMN Agassiz Nation 91.18 34 IAmb IAmb 04 09 28.3
comp=Z,7.0nm,1.1s
VYHS Vyhne 91.19 326 *e*P **P** **04 09 26.3 -0.7**
SDCO Great Sand Dun 91.71 47 P **P** **04 09 31.0 +0.9**
baz=303
CLL Collm 92.09 331 *e*P **P** **04 09 30.0 -1.1**
B35A Bob, Littlefor 92.22 33 IAmb IAmb 04 09 33.3
comp=Z,6.7nm,1.1s
ANMO Albuquerque 92.56 50 P **P** **04 09 34.5 +0.6**
T25A Trinidad 92.77 47 P **P** **04 09 35.7 +0.9**
baz=304
GERES GERESS Array B 93.48 329 P **P** **04 09 35.8 -1.9**
comp=Z,0.2nm,0.3s,baz=51,slow=7.0,SNR=4.2
SCHQ Schefferville 97.34 16 P Pdif 04 09 55.5 +0.4
comp=Z,0.6nm,0.5s,baz=259,slow=16,SNR=1.5
LSZ Lusaka 117.22 265 PKP **PKiKP** **04 15 07.5 +0.1**
baz=7.0,slow=1.9
MATP Matopo 118.58 259 PKP **PKPdf** **04 15 09.2 -0.7**
comp=Z,0.8nm,0.4s,baz=137,slow=3.9,SNR=4.3
LBTB Lobatse 122.40 255 PKP **PKPdf** **04 15 16.9 -0.3**
comp=Z,2.1nm,0.9s,baz=34,slow=1.9,SNR=4.1
BOSA Boshof 123.50 251 PKP **PKPdf** **04 15 19.0 -0.2**
comp=Z,3.5nm,1.1s,baz=308,slow=2.0,SNR=5.8
TORD Torodi Ar. Bea 125.88 309 PKP **PKPdf** **04 15 23.5 -0.5**
comp=Z,2.9nm,0.6s,baz=29,slow=1.4,SNR=73
SNAA Sanae 128.70 194 PKPdf **PKPdf** **04 15 27.5 -0.2**
VNA2 Neumayer--Watz 130.22 193 PKPdf **PKPdf** **04 15 30.3 -0.2**
VNA3 Neumayer Olymp 130.41 192 PKPdf **PKPdf** **04 15 30.4 -0.5**
DBIC Dimbokro 135.00 309 PKP **PKPdf** **04 15 41.1 -0.2**
comp=Z,3.3nm,0.7s,baz=54,slow=2.6,SNR=6.8
KIC Kosan Boka 135.13 309 *e*PKIKP **PKPdf** **04 15 41.3 -0.2**
comp=Z,21nm,1.0s
TIC Toumodi 135.13 309 *e*PKIKP **PKPdf** **04 15 41.0 -0.6**
LIC Lamto 135.43 309 *e*PKIKP **PKPdf** **04 15 41.7 -0.4**
comp=Z,10.0nm,0.7s
MDP Montagnes des 147.50 27 PKPbc **PKPbc** **04 16 06.5 +0.2**
comp=Z,17nm,0.8s,baz=93,slow=1.7,SNR=3.2
PLCA Paso Flores 148.64 129 PKPbc **PKPbc** **04 16 09.2 +0.5**
comp=Z,7.0nm,0.7s,baz=238,slow=2.7,SNR=19
LPAZ La Paz 151.00 79 PKPbc **PKiKP** **04 16 16.4 +0.2**
comp=Z,4.5nm,0.7s,baz=281,slow=3.1,SNR=19
LPAZ pPKPbc **pPKPbc** **04 16 50.9 0.0**
comp=Z,3.5nm,0.6s,baz=303,slow=4.7,SNR=4.0
LPAZ La Paz 151.00 79 **PKiKP** **04 16 16.6 +0.3**

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*NEIC **18** 04:03:41.4±1.8, 60.71N±0.02×139.74W±0.03, h2km±8km, Error ellipse: s-maj=2.8km s-min=1.9km az=186.0*
*PGC **18** 04:03:41.8, 60.67N×139.75W, h1km, ML2.9/11, 121km west of Haines Jct., Yt Southeastern Alaska*
ISC 18 04:03:40.6±1.1, 60.69N±0.02×139.76W±0.02, h2km±11km, n63,σ1s08/95, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
YUK6	**Outpost Mounta**	**0.73**	**69**	P		**Pg**	**04 03 55.0**	**+0.4**
YUK6				S		**Sg**	**04 04 04.9**	**+0.9**
YUK6	**Outpost Mounta**	**0.73**	**69**			**Pg**	**04 03 54.9**	**+0.4**
YUK6						**Sg**	**04 04 04.9**	**+0.9**
YUK7	**Dusty Glacier**	**0.81**	**101**	P		**Pg**	**04 03 56.4**	**+0.2**
YUK7				S		**Sg**	**04 04 07.2**	**+0.5**
YUK7	**Dusty Glacier**	**0.81**	**101**			**Pg**	**04 03 56.3**	**+0.2**
YUK7						**Sg**	**04 04 07.2**	**+0.5**
CTGM	**Chitina Glacie**	**0.82**	**290**	P		**Pg**	**04 03 56.6**	**+0.2**
CTGM				S		**Sg**	**04 04 08.2**	**+1.3**
CTGM	**Chitina Glacie**	**0.82**	**290**			**Pg**	**04 03 56.5**	**+0.2**
CTGM						**Sg**	**04 04 08.2**	**+1.3**
CHX	**Chaix Hills**	**0.92**	**228**			**Pg**	**04 03 59.2**	**+0.9**
BARN	**Barnard Glacie**	**1.00**	**293**			**Pg**	**04 03 59.5**	**-0.3**
YUK5	**Granite Creek**	**1.03**	**64**	P		**Pg**	**04 04 00.3**	**0.0**
YUK5				S		**Sg**	**04 04 13.4**	**-0.2**
YUK5	**Granite Creek**	**1.03**	**64**			**Pg**	**04 04 00.2**	**-0.1**
YUK5						**Sg**	**04 04 13.8**	**+0.3**
YAH	**Yahtse**	**1.04**	**253**			**Pg**	**04 04 00.2**	**-0.2**
PNL	**Peninsula**	**1.04**	**170**	P		**Pg**	**04 04 00.8**	**+0.4**
PNL	**Peninsula**	**1.04**	**170**			**Pg**	**04 04 00.8**	**+0.4**
HYT	**Haines Junctio**	**1.11**	**82**	P		**Pg**	**04 04 01.2**	**-0.7**
HYT				S		**Sg**	**04 04 15.9**	**-0.5**
HYT	**Haines Junctio**	**1.11**	**82**			**Pg**	**04 04 01.1**	**-0.7**
HYT						**Sg**	**04 04 17.0**	**+0.7**
YUK3	**Moose Creek**	**1.14**	**343**	P		**Pg**	**04 04 02.5**	**-0.1**
YUK3				S		**Sg**	**04 04 17.9**	**+0.6**
YUK3	**Moose Creek**	**1.14**	**343**			**Pg**	**04 04 02.4**	**-0.1**
YUK3						**Sg**	**04 04 18.1**	**+0.8**
YKU2	**Yakutat**	**1.18**	**178**			**Pg**	**04 04 04.0**	**+0.8**
YUK2	**White River**	**1.22**	**335**	P		**Pn**	**04 04 03.8**	**-1.0**
YUK2				S		**Sg**	**04 04 20.7**	**+0.9**
YUK2	**White River**	**1.22**	**335**			**Pn**	**04 04 03.8**	**-1.0**
YUK2						**Sg**	**04 04 20.6**	**+0.9**
KIAG	**Kiagna River**	**1.30**	**282**	P		**Pn**	**04 04 04.4**	**-1.5**
KIAG				S		**Sb**	**04 04 22.0**	**-1.0**
KIAG	**Kiagna River**	**1.30**	**282**			**Pn**	**04 04 04.7**	**-1.3**
BALM	**Baldy**	**1.31**	**287**	P		**Pn**	**04 04 05.0**	**-1.1**
BALM				S		**Sb**	**04 04 22.8**	**-0.6**
BALM	**Baldy**	**1.31**	**287**			**Pn**	**04 04 04.9**	**-1.2**
BALM						**Sb**	**04 04 22.9**	**-0.5**
PTPK	**Patty Peak**	**1.42**	**292**	Pn		**Pn**	**04 04 06.9**	**-0.6**
PTPK				Sg		**Sn**	**04 04 26.1**	**-0.8**
PTPK	**Patty Peak**	**1.42**	**292**			**Pn**	**04 04 06.7**	**-0.8**
PTPK						**Sn**	**04 04 26.3**	**-0.6**
YUK1	**Sand Pete Hill**	**1.52**	**346**	Pn		**Pn**	**04 04 09.1**	**+0.1**
YUK1				Sg		**Sg**	**04 04 29.6**	**+0.3**
YUK1	**Sand Pete Hill**	**1.52**	**346**			**Pn**	**04 04 08.9**	**0.0**
MCARA	**McCarthy VSAT**	**1.74**	**295**			**Pn**	**04 04 12.2**	**+0.4**
DHAK	**Deception Hill**	**1.78**	**153**			**Pb**	**04 04 13.1**	**-0.9**
DHAK						**Sb**	**04 04 37.4**	**+0.7**
BVCY	**Beaver Creek**	**1.81**	**343**	Pn		**Pb**	**04 04 14.6**	**+0.1**
BVCY				Sg		**Sg**	**04 04 39.2**	**+0.5**
BVCY	**Beaver Creek**	**1.81**	**343**			**Pb**	**04 04 14.2**	**-0.3**
BVCY						**Sb**	**04 04 37.7**	**+0.1**
VRDI	**Verde Repeater**	**1.88**	**288**			**Pn**	**04 04 14.3**	**+0.4**
VRDI						**Sb**	**04 04 39.6**	**-0.2**
PLBC	**Pleasant Camp**	**2.10**	**125**	Pn		**Pn**	**04 04 17.3**	**+0.5**
PLBC				Sg		**Sb**	**04 04 46.8**	**+0.9**
PLBC	**Pleasant Camp**	**2.10**	**125**			**Pb**	**04 04 18.1**	**-1.3**
GLB	**Gilahina Butte**	**2.11**	**293**			**Pb**	**04 04 18.1**	**-1.5**

GLB					Sb	04 04 45.5	-0.7	
WHY	**Whitehorse**	**2.40**	**89**	Pn	**Pn**	**04 04 21.1**	**+0.1**	
WHY				Sn	**Sn**	**04 04 51.8**	**+0.8**	
WHY				Sg	**Sb**	**04 04 56.2**	**+1.6**	
WHY	**Whitehorse**	**2.40**	**89**		**Pn**	**04 04 21.1**	**+0.1**	
RAGM	**Ragged Mountai**	**2.45**	**265**		**Pn**	**04 04 22.9**	**+1.3**	
SKAG	**Skagway**	**2.54**	**117**		**Pb**	**04 04 24.7**	**-2.1**	
BC03		**2.57**	**339**		**Pn**	**04 04 23.5**	**+0.3**	
MENT	**Mentasta**	**2.94**	**322**		**Pn**	**04 04 29.5**	**+1.2**	
EYAK	**Cordova Ski Ar**	**2.96**	**270**		**Pn**	**04 04 29.6**	**+1.1**	
BESE	**Bessie Mountai**	**3.27**	**128**	Pn	**Pn**	**04 04 32.7**	**-0.1**	
BESE				Sg	**Sg**	**04 05 22.8**	**-2.6**	
BESE	**Bessie Mountai**	**3.27**	**128**		**Pn**	**04 04 32.8**	**-0.1**	
HIN	**Hinchinbrook I**	**3.35**	**268**	Pn	**Pn**	**04 04 36.5**	**+2.6**	
HIN					**Sb**	**04 05 22.5**	**+0.7**	
DAWY	**Dawson**	**3.40**	**3**	Pn	**Pn**	**04 04 35.6**	**+1.0**	
DAWY				Sg	**Sg**	**04 05 27.1**	**-2.4**	
DAWY	**Dawson**	**3.40**	**3**		**Pn**	**04 04 35.1**	**+0.5**	
DOT	**Dot Lake**	**3.59**	**328**	Pn	**Pn**	**04 04 39.2**	**+1.8**	
DOT				Sg	**Sg**	**04 05 33.8**	**-2.1**	
DOT	**Dot Lake**	**3.59**	**328**		**Pn**	**04 04 39.1**	**+1.8**	
JIS	**Juneau Island**	**3.66**	**129**		**Pn**	**04 04 38.7**	**+0.6**	
SCM	**Sheep Creek Mo**	**3.83**	**291**	Pn	**Pn**	**04 04 40.5**	**-0.2**	
SCRK	**Sand Creek**	**3.84**	**331**		**Pn**	**04 04 42.3**	**+1.4**	
RIDG	**Independent Ri**	**3.88**	**324**	Pn	**Pn**	**04 04 42.7**	**+1.5**	
EGAK	**Eagle**	**4.16**	**352**		**Pn**	**04 04 47.1**	**+2.1**	
KNK	**Knik Glacier**	**4.29**	**284**	Pn	**Pn**	**04 04 48.0**	**+1.1**	
DHY	**Denali Highway**	**4.33**	**307**		**Pn**	**04 04 49.4**	**+1.9**	
GHO	**Glory Hole Cre**	**4.56**	**288**	Pn	**Pn**	**04 04 52.3**	**+1.6**	
PMR	**Palmer**	**4.63**	**285**		**Pn**	**04 04 53.2**	**+1.7**	
RC01	**Rabbit Creek A**	**4.89**	**279**		**Pn**	**04 04 55.8**	**+0.6**	
HDA	**Harding Lake**	**5.00**	**321**	Pn	**Pn**	**04 04 58.1**	**+1.5**	
RND	**Reindeer**	**5.08**	**306**		**Pn**	**04 04 59.1**	**+1.5**	
IL31		**5.25**	**324**	Pn	**Pn**	**04 05 02.3**	**+2.4**	

*IDC **18** 04:04:55.2±2.2, 18°.79S×177°.63W, h421km±23km, mb3.9/18, mb1 4.0/21, mb1mx3.8/43, mbtmp4.6/21, Error ellipse: s-maj=14.9km s-min=11.2km az=144.0*

*NEIC **18** 04:04:56.7±1.5, 18°.72S±0°.08×177°.7W±0°.1, h434km±6km, mb4.4/113, Error ellipse: s-maj=15.9km s-min=11.0km az=80.0*

ISC 18 04:04:57.4±0.4, 18°.75S±0°.07×177°.60W±0°.06, h450km, n182, σ1°$10/153, mb4.5/85, 7C-4D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**4.25**	**283**		**P**	**P**	**04 06 14.8**	**-0.1**
NIUE	**Niue**	**7.27**	**94**	P	**P**	**P**	**04 06 43.7**	**-1.3**
	baz=7.2,SNR=16							
NIUE	**Niue**	**7.27**	**94**	P	**P**	**P**	**04 06 43.2**	**-1.8**
AFI	**Afiamalu**	**7.38**	**50**	P	**P**	**P**	**04 06 42.9**	**-3.4**
DZM	**Mont Dzumac**	**15.31**	**255**	P	**P**	**P**	**04 08 10.7**	**-1.3**
	1.6nm,0.3s,baz=103,slow=21,SNR=10							
DZM	**Mont Dzumac**	**15.31**	**255**	IAmb		IAmb	04 08 11.4	
	comp=Z,162nm,1.7s							
RAR	**Rarotonga**	**16.94**	**101**	P	**P**	**P**	**04 08 29.1**	**0.0**
	comp=Z,1.6nm,0.3s,baz=249,slow=9.9,SNR=5.8							
RAR	**Rarotonga**	**16.94**	**101**	P	**P**	**P**	**04 08 29.9**	**+0.9**
OUZ	**Omahuta**	**18.16**	**204**	P	**P**	**P**	**04 08 42.5**	**+0.9**
URZ	**Urewera**	**19.97**	**192**	P	**P**	**P**	**04 08 55.8**	**-2.6**
	comp=Z,4.6nm,0.3s,baz=266,slow=2.9,SNR=34							
URZ				S		**S**	**04 12 13.0**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=288,slow=19,SNR=6.2							
URZ	**Urewera**	**19.97**	**192**	P	**P**	**P**	**04 08 56.8**	**-1.6**
MSWZ	**Moikau Station**	**23.40**	**194**	P	**P**	**P**	**04 09 28.5**	**-0.9**
BHW	**Baring Head**	**23.48**	**194**	P	**P**	**P**	**04 09 28.2**	**-1.8**
EIDS	**Eidsvold**	**29.71**	**252**	P	**P**	**P**	**04 10 25.3**	**-0.1**
	baz=30,SNR=5.6							
EIDS	**Eidsvold**	**29.71**	**252**	P	**P**	**P**	**04 10 25.3**	**-0.1**
EIDS				IAmb		IAmb	04 10 26.0	
	comp=Z,21nm,0.8s							
ARMA	**Armidale**	**30.20**	**241**	P	**P**	**P**	**04 10 30.6**	**+0.9**
	baz=30,SNR=82							
ARMA	**Armidale**	**30.20**	**241**	P	**P**	**P**	**04 10 30.1**	**+0.4**
MGCD	**Mangrove Creek**	**31.45**	**237**	P	**P**	**P**	**04 10 41.4**	**+1.0**
	baz=32,SNR=9.1							
RMQ	**Roma**	**31.92**	**250**	P	**P**	**P**	**04 10 44.5**	**-0.1**
	baz=32,SNR=8.4							
CNB	**Canberra Magne**	**33.53**	**234**	P	**P**	**P**	**04 10 59.0**	**+0.7**
	baz=34,SNR=18							
CAN	**Canberra**	**33.81**	**234**	P	**P**	**P**	**04 11 01.0**	**+0.3**
CAN				IAmb		IAmb	04 11 01.9	
	comp=Z,13nm,0.8s							
YNG	**Young**	**33.94**	**236**	P	**P**	**P**	**04 11 01.6**	**-0.1**
	baz=34,SNR=5.6							
CTAO	**Charters Tower**	**34.07**	**262**	P	**P**	**P**	**04 11 02.5**	**-0.4**
CMSA	**Cobar Meteorol**	**35.41**	**242**	P	**P**	**P**	**04 11 14.4**	**+0.4**
	baz=36,SNR=113							
QLP	**Quilpie**	**35.96**	**250**	P	**P**	**P**	**04 11 18.5**	**-0.2**
	baz=36,SNR=20							
MTSU	**Mount Surprise**	**36.09**	**265**	P	**P**	**P**	**04 11 19.6**	**-0.3**
	baz=36,SNR=6.5							
TOO	**Toolangi**	**37.24**	**232**	P	**P**	**P**	**04 11 29.6**	**+0.4**
	baz=37,SNR=23							
TOO	**Toolangi**	**37.24**	**232**	P	**P**	**P**	**04 11 29.2**	**-0.1**
TOO				IAmb		IAmb	04 11 30.4	
	comp=Z,18nm,0.7s							
COEN	**Coen**	**37.88**	**271**	P	**P**	**P**	**04 11 34.6**	**-0.1**
	baz=38,SNR=17							
COEN	**Coen**	**37.88**	**271**	P	**P**	**P**	**04 11 33.8**	**-1.0**
COEN				IAmb		IAmb	04 11 35.0	
	comp=Z,14nm,0.6s							
STKA	**Stephens Creek**	**38.91**	**242**	P	**P**	**P**	**04 11 43.5**	**+0.6**
	baz=39,SNR=120							
STKA	**Stephens Creek**	**38.91**	**242**	P	**P**	**P**	**04 11 43.5**	**+0.6**
	comp=Z,35nm,0.3s,baz=90,slow=10,SNR=238							
STKA	**Stephens Creek**	**38.91**	**242**	P	**P**	**P**	**04 11 43.5**	**+0.6**
STKA				IAmb		IAmb	04 11 44.3	
	comp=Z,18nm,1.1s							
ARPS	**Mount Arapiles**	**39.78**	**235**	P	**P**	**P**	**04 11 50.2**	**+0.2**
	baz=40,SNR=8.5							
QIS	**Mount Isa**	**40.26**	**260**	P	**P**	**P**	**04 11 53.2**	**-0.8**
	baz=40,SNR=4.7							
HTT	**Hallett**	**41.39**	**240**	P	**P**	**P**	**04 12 03.4**	**+0.4**
	baz=41,SNR=52							
BBOO	**Buckleboo**	**43.68**	**242**	P	**P**	**P**	**04 12 21.2**	**+0.2**
	baz=44,SNR=153							
BBOO	**Buckleboo**	**43.68**	**242**	P	**P**	**P**	**04 12 21.2**	**+0.2**
JAY	**Jayapura**	**43.88**	**287**	P	**P**	**P**	**04 12 23.7**	**+0.8**
	comp=Z,471nmcomp=Z,44nm,0.9s							
GENI	**Genyem**	**44.34**	**286**	P	**P**	**P**	**04 12 27.2**	**+0.8**
	comp=Z,2μmcomp=Z,126nm,1.1s							
WRAB	**Tennant Creek**	**45.23**	**260**	P	**P**	**P**	**04 12 31.9**	**-1.4**
WRA	**Warramunga Arr**	**45.24**	**260**	P	**P**	**P**	**04 12 32.1**	**-1.3**
	comp=Z,18nm,0.5s,baz=98,slow=6.4,SNR=152							
ASAR	**Alice Springs**	**45.31**	**255**	P	**P**	**P**	**04 12 33.7**	**-0.2**
	comp=Z,107nm,0.5s,baz=90,slow=8.5,SNR=1476							
ASAR				ScP		**ScP**	**04 17 17.8**	**+3.9**
	comp=Z,0.5nm,0.7s,baz=111,slow=3.7,SNR=4.9							
ASAR				S		**S**	**04 18 38.9**	**-1.9**
	comp=Z,1.9nm,0.9s,baz=87,slow=17,SNR=7.8							
SMPI	**Sarmi**	**45.91**	**286**	P	**P**	**P**	**04 12 39.0**	**+0.5**
	comp=Z,2μmcomp=Z,40nm,0.8s							
KDU	**Kakadu**	**48.31**	**270**	P	**P**	**P**	**04 12 56.3**	**-0.5**
	baz=48,SNR=20							
MTN	**Manton Dam**	**49.55**	**269**	P	**P**	**P**	**04 13 05.4**	**-0.6**
	baz=50,SNR=10.0							
WRKA	**Warakurna**	**50.32**	**253**	P	**P**	**P**	**04 13 11.6**	**0.0**
	baz=50,SNR=415							
FORT	**Forrest**	**50.34**	**245**	P	**P**	**P**	**04 13 11.4**	**-0.3**
	baz=50,SNR=18							
FORT	**Forrest**	**50.34**	**245**	P	**P**	**P**	**04 13 11.4**	**-0.3**
KNRA	**Kununurra**	**51.17**	**265**	P	**P**	**P**	**04 13 17.8**	**-0.1**
	baz=51,SNR=18							
KNRA	**Kununurra**	**51.17**	**265**	P	**P**	**P**	**04 13 17.8**	**-0.1**
FAKI	**Fak Fak**	**51.49**	**282**	P	**P**	**P**	**04 13 19.9**	**-0.5**
	comp=Z,18nm,0.9s							
FAKI	**Fak Fak**	**51.49**	**282**	P	**P**	**P**	**04 13 19.6**	**-0.7**
FITZ	**Fitzroy Crossi**	**53.65**	**261**	P	**P**	**P**	**04 13 35.9**	**+0.1**
	baz=54,SNR=19							
FITZ	**Fitzroy Crossi**	**53.65**	**261**	P	**P**	**P**	**04 13 34.6**	**-1.2**
FITZ				IAmb		IAmb	04 13 36.5	
	comp=Z,18nm,0.7s							
KMBL	**Kambalda**	**55.63**	**244**	P	**P**	**P**	**04 13 49.3**	**-0.4**
	baz=56,SNR=7.6							
NLAI	**Namlea**	**56.18**	**279**	P	**P**	**P**	**04 13 53.8**	**+0.1**
	comp=Z,33nm,0.8s							
SOEI	**Soe**	**56.84**	**270**	P	**P**	**P**	**04 13 59.1**	**+0.7**
	comp=Z,2μmcomp=Z,138nm,0.7s							
SOEI	**Soe**	**56.84**	**270**	P	**P**	**P**	**04 13 59.2**	**+0.8**
BATI	**Baumata**	**57.29**	**270**	P	**P**	**P**	**04 14 02.0**	**+0.6**
	comp=Z,30nm,0.8s							
TNTI	**Ternate**	**57.40**	**283**	P	**P**	**P**	**04 14 02.8**	**+0.7**
	comp=Z,26nm,0.5s							
TNTI	**Ternate**	**57.40**	**283**	P	**P**	**P**	**04 14 02.1**	**0.0**
SANI	**Sanana**	**57.64**	**280**	P	**P**	**P**	**04 14 03.3**	**-0.5**
	comp=Z,2μmcomp=Z,54nm,0.8s							
MEEK	**Meekatharra**	**58.86**	**250**	P	**P**	**P**	**04 14 11.4**	**-0.6**
	baz=59,SNR=19							
KLBR	**Kellerberrin**	**59.14**	**244**	P	**P**	**P**	**04 14 13.6**	**-0.2**
	baz=59,SNR=28							
NWAO	**Narrogin (SRO)**	**59.49**	**242**	P	**P**	**P**	**04 14 16.2**	**+0.1**
	baz=60,SNR=4.8							
EDFI	**Ende, Flores**	**59.56**	**271**	P	**P**	**P**	**04 14 15.5**	**-1.5**
	comp=Z,28nm,0.8s							
VNDA	**Vanda**	**59.67**	**185**	P	**P**	**P**	**04 14 17.4**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=2.7,slow=8.8,SNR=15							
VNDA	**Vanda**	**59.67**	**185**	P	**P**	**P**	**04 14 17.9**	**+1.4**
BLDU	**Ballidu**	**60.12**	**245**	P	**P**	**P**	**04 14 20.0**	**-0.3**
	baz=60,SNR=32							
MUN	**Mundaring**	**60.43**	**243**	P	**P**	**P**	**04 14 22.6**	**+0.2**
	baz=60,SNR=6.0							
MORW	**Morawa**	**60.85**	**247**	P	**P**	**P**	**04 14 24.9**	**-0.3**
	baz=61,SNR=7.9							
MORW	**Morawa**	**60.85**	**247**	IAmb		IAmb	04 14 25.7	
	comp=Z,24nm,1.1s							
LUWI	**Luwuk**	**61.00**	**280**	P	**P**	**P**	**04 14 26.0**	**-0.4**
	comp=Z,54nm,0.9s							
LUWI	**Luwuk**	**61.00**	**280**	P	**P**	**P**	**04 14 26.1**	**-0.3**
BKSI	**Bulukumba**	**62.07**	**274**	P	**P**	**P**	**04 14 32.1**	**-1.3**
	comp=Z,9.0nm,0.6s							
MRSI	**Marisa**	**62.32**	**281**	P	**P**	**P**	**04 14 34.8**	**-0.3**
	comp=Z,892nmcomp=Z,25nm,0.8s							
BNSI	**Bone**	**62.38**	**275**	P	**P**	**P**	**04 14 35.4**	**0.0**
	comp=Z,18nm,1.2s							
KAPI	**Kappang**	**62.52**	**274**	P	**P**	**P**	**04 14 36.2**	**-0.1**
	comp=Z,3.1nm,0.4s,baz=169,slow=10							
KAPI	**Kappang**	**62.52**	**274**	P	**P**	**P**	**04 14 36.0**	**-0.4**
KAPI				IAmb		IAmb	04 14 36.9	
	comp=Z,7.1nm,0.8s							
SPSI	**Sidrap Palu**	**62.84**	**275**	P	**P**	**P**	**04 14 37.1**	**-1.3**
	comp=Z,12nm,0.8s							
PLAI	**Plampang**	**63.25**	**269**	P	**P**	**P**	**04 14 40.6**	**-0.5**
	comp=Z,64nm,0.9s							
GIRL	**Giralia**	**63.39**	**254**	P	**P**	**P**	**04 14 43.2**	**+1.3**
	baz=63,SNR=21							
MPSI	**Mapaga**	**64.17**	**280**	P	**P**	**P**	**04 14 46.9**	**-0.1**
	comp=Z,32nm,0.7s							
CASY	**Casey**	**65.69**	**205**	P	**P**	**P**	**04 14 56.1**	**+0.3**
CASY				IAmb		IAmb	04 14 57.4	
	comp=Z,9.9nm,0.8s							
JAGI	**Jajag, Banyuwa**	**66.79**	**269**	P	**P**	**P**	**04 15 02.3**	**-1.2**
	comp=Z,67nm,0.9s							
MJAR	**Matsushiro Arr**	**69.04**	**323**	P	**P**	**P**	**04 15 17.4**	**+0.5**
	comp=Z,5.6nm,0.6s,baz=148,slow=6.2,SNR=26							
MAT	**Matsushiro**	**69.04**	**323**	P	**P**		**04 15 17.2**	**+0.3**
MJB9	**Matsu-Tunnel**	**69.05**	**323**	P	**P**		**04 15 16.9**	**-0.1**
MJB9				IAmb		IAmb	04 15 18.0	
	comp=Z,6.9nm,0.6s							
QSPA	**South Pole Qui**	**71.31**	**180**	P	**P**	**P**	**04 15 31.4**	**+1.3**
QSPA				IAmb		IAmb	04 15 32.6	
	comp=Z,12nm,0.8s							
SBUM	**Sibu**	**72.09**	**279**	P	**P**	**P**	**04 15 36.4**	**+0.9**
CISI	**Cisompet, Garu**	**73.05**	**268**	P	**P**	**P**	**04 15 39.9**	**-1.3**
	comp=Z,6μmcomp=Z,29nm,0.6s							
TPUB	**Ta-pu**	**73.36**	**302**	P	**P**	**P**	**04 15 42.2**	**-0.5**
LEM	**Lembang**	**73.46**	**268**	P	**P**	**P**	**04 15 44.4**	**+0.8**
	comp=Z,57nm,1.0s							
KSM	**Kuching**	**73.55**	**277**	P	**P**	**P**	**04 15 44.6**	**+0.7**
CNJI	**Cibinong**	**73.78**	**268**	P	**P**	**P**	**04 15 43.9**	**-1.3**
	comp=Z,75nm,1.0s							
DBJI	**Dramaga**	**74.36**	**268**	P	**P**	**P**	**04 15 48.4**	**-0.2**
KSRS	**Korea Array**	**75.84**	**318**	P	**P**	**P**	**04 15 57.4**	**+1.0**
	comp=Z,1.4nm,0.6s,baz=131,slow=6.3,SNR=9.2							
LWLI	**Liwa**	**77.38**	**269**	P	**P**	**P**	**04 16 05.4**	**-0.1**
USRK	**Ussuriysk Ar.**	**77.74**	**325**	P	**P**	**P**	**04 16 08.2**	**+1.6**
	comp=Z,2.3nm,0.7s,baz=100,slow=4.7,SNR=8.0							
ISA	**Isabella, Lake**	**77.85**	**46**	IAmb		IAmb	04 16 10.2	
	comp=Z,10nm,0.8s							
CMB	**Columbia Colle**	**77.93**	**43**	IAmb		IAmb	04 16 10.2	
	comp=Z,6.4nm,0.8s							
PFO	**Pinon Flats O**	**78.14**	**48**	P	**P**	**P**	**04 16 10.5**	**+1.3**
	comp=Z,4.4nm,0.9s,baz=288,slow=4.6,SNR=5.3							
PFO	**Pinyon Flats O**	**78.14**	**48**	P	**P**	**P**	**04 16 10.9**	**+1.7**
PFO				IAmb		IAmb	04 16 11.9	
	comp=Z,7.6nm,1.1s							
MDPB	**Devils Postpil**	**78.55**	**44**	P	**P**	**P**	**04 16 12.5**	**+0.9**
MDPB				IAmb		IAmb	04 16 14.0	
	comp=Z,12nm,1.0s							
YBH	**Yreka Blue Hor**	**78.70**	**39**	P	**P**	**P**	**04 16 13.8**	**+1.8**
	comp=Z,6.6nm,0.6s,baz=157,slow=2.1,SNR=19							
YBH	**Yreka Blue Hor**	**78.70**	**39**	P	**P**	**P**	**04 16 13.1**	**+1.0**
WAKR	**Walker**	**78.81**	**43**	IAmb		IAmb	04 16 15.6	
	comp=Z,8.5nm,0.9s							
BEKR	**Beckworth**	**79.01**	**41**	IAmb		IAmb	04 16 15.7	
	comp=Z,4.6nm,0.6s							
NVAR	**Mina Array Bea**	**79.50**	**43**	P	**P**	**P**	**04 16 18.1**	**+1.5**
	comp=Z,5.0nm,0.7s,baz=224,slow=8.4,SNR=28							
PAHR	**Pah Rah Range**	**79.53**	**42**	IAmb		IAmb	04 16 19.1	
	comp=Z,7.4nm,1.1s							
NV11	**Mina Array Sit**	**79.60**	**43**	IAmb		IAmb	04 16 19.5	
	comp=Z,12nm,1.3s							
113A	**Mohawk Valley,**	**79.64**	**50**	IAmb		IAmb	04 16 19.9	
	comp=Z,6.1nm,0.8s							
214A	**Organ Pipe Nat**	**79.94**	**51**	IAmb		IAmb	04 16 21.4	
	comp=Z,9.3nm,1.2s							
KVN	**Kaiserville**	**79.98**	**43**	IAmb		IAmb	04 16 20.9	
	comp=Z,5.1nm,0.7s							
MOD	**Modoc Plateau**	**80.24**	**40**	IAmb		IAmb	04 16 22.6	
	comp=Z,7.4nm,0.7s							
H04A	**Detroit Lake**	**80.81**	**37**	P	**P**	**P**	**04 16 24.1**	**+1.1**
H04A				IAmb		IAmb	04 16 25.0	
	comp=Z,15nm,1.4s							
PINE	**Pine Mountain**	**80.98**	**38**	IAmb		IAmb	04 16 27.0	
	comp=Z,12nm,0.9s							
TUC	**Tucson**	**81.61**	**52**	P	**P**	**P**	**04 16 30.0**	**+2.4**
TUC				IAmb		IAmb	04 16 31.0	
	comp=Z,9.6nm,0.8s							
I07A	**Izee**	**81.99**	**38**	IAmb		IAmb	04 16 31.8	
	comp=Z,6.8nm,0.9s							
X16A	**Lo Mia Camp, P**	**82.14**	**50**	IAmb		IAmb	04 16 34.1	
	comp=Z,7.0nm,0.9s							
J08A	**Circle Bar Ran**	**82.18**	**39**	IAmb		IAmb	04 16 32.6	
	comp=Z,9.2nm,1.1s							
U15A	**North Rim**	**82.52**	**48**	IAmb		IAmb	04 16 35.4	
	comp=Z,11nm,0.8s							
G08A	**Pilot Rock**	**83.01**	**37**	IAmb		IAmb	04 16 36.7	
	comp=Z,6.5nm,1.0s							
HPIG		**83.21**	**59**	P	**P**	**P**	**04 16 37.4**	**+1.5**
IPM	**Ipoh**	**83.29**	**277**	P	**P**	**P**	**04 16 37.0**	**+0.7**
MAW	**Mawson**	**83.33**	**200**	P	**P**	**P**	**04 16 36.1**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=130,slow=8.5,SNR=8.1							
MAW	**Mawson**	**83.33**	**200**	IAmb		IAmb	04 16 41.6	
	comp=Z,2.4nm,1.4s							
GHO	**Glory Hole Cre**	**83.45**	**13**	IAmb		IAmb	04 16 36.9	
	comp=Z,7.9nm,0.8s							
SCM	**Sheep Creek Mo**	**83.86**	**14**	IAmb		IAmb	04 16 39.0	
	comp=Z,7.3nm,0.6s							
GLB	**Gilahina Burna**	**84.37**	**16**	IAmb		IAmb	04 16 41.6	
	comp=Z,5.3nm,0.6s							
F10A	**Beach Ranch, E**	**84.40**	**38**	P	**P**	**P**	**04 16 42.1**	**+0.9**
F10A				IAmb		IAmb	04 16 43.0	
	comp=Z,7.2nm,0.8s							
B08A	**Colville Reser**	**84.59**	**35**	IAmb		IAmb	04 16 43.5	
	comp=Z,5.5nm,1.0s							
TRF	**Thorofare Moun**	**84.67**	**12**	IAmb		IAmb	04 16 42.5	
	comp=Z,7.2nm,0.8s							
RPSI	**Rantau Prapat**	**84.68**	**275**	P	**P**	**P**	**04 16 43.4**	**+0.1**
PSI	**Prapat**	**84.72**	**275**	P	**P**	**P**	**04 16 43.5**	**-0.1**
	comp=Z,11nm,0.7s,baz=177,slow=0.7,SNR=7.6							
SEY	**Seymchan**	**84.77**	**347**	P	**P**	**P**	**04 16 41.3**	**-1.2**
	comp=Z,0.9nm,0.4s,baz=163,slow=19,SNR=2.7							
RND	**Reindeer**	**84.92**	**13**	IAmb		IAmb	04 16 44.2	
	comp=Z,7.0nm,0.7s							
MCK	**McKinley**	**85.20**	**12**	IAmb		IAmb	04 16 45.3	
	comp=Z,9.8nm,1.2s							
ENH	**Enshi**	**85.38**	**304**	P	**P**	**P**	**04 16 47.4**	**+1.0**
ANMO	**Albuquerque**	**86.02**	**51**	P	**P**	**P**	**04 16 51.0**	**+1.3**
HDA	**Harding Lake**	**86.21**	**13**	IAmb		IAmb	04 16 50.8	
	comp=Z,4.0nm,0.7s							
CCB	**Clear Creek Bu**	**86.24**	**12**	IAmb		IAmb	04 16 50.0	
	comp=Z,7.5nm,1.2s							
ILAR	**Eielson Array**	**86.54**	**13**	P	**P**	**P**	**04 16 50.5**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=218,slow=5.0,SNR=21							
ILAR				pP		**pP**	**04 18 29.6**	**-2.1**
	comp=Z,1.1nm,1.0s,baz=224,slow=5.0,SNR=6.4							
FXWY	**Fox Creek**	**86.92**	**42**	IAmb		IAmb	04 16 56.3	
	comp=Z,9.1nm,1.8s							
XAN	**Xi'an**	**87.38**	**307**	P	**P**	**P**	**04 16 57.6**	**+1.7**
XAN				pP		PcP	04 17 22.3	+25
XAN				pmax		pmax		
	comp=Z,8.0nm,1.0s							
PD31	**Pinedale Array**	**87.44**	**43**	IAmb		IAmb	04 16 58.3	
	comp=Z,10nm,2.0s							
PDAR	**Pinedale Array**	**87.44**	**43**	P	**P**	**P**	**04 16 56.2**	**0.0**
	comp=Z,1.5nm,0.8s,baz=212,slow=2.6,SNR=11							
YMR	**Madison River**	**87.47**	**41**	P	**P**	**P**	**04 16 57.7**	**+1.4**
SMCO	**Snowmass**	**87.52**	**47**	IAmb		IAmb	04 17 32.3	
	comp=Z,12nm,1.9s							
LKWY	**Lake**	**87.77**	**41**	IAmb		IAmb	04 17 01.4	
	comp=Z,5.1nm,0.9s							
HHC	**Hu-ho-hao-te**	**88.41**	**314**	*e*P	**P**	**P**	**04 17 02.9**	**+2.3**
HHC				pmax		pmax		
	comp=Z,11nm,0.8s							
HHC				pmax		pmax		
	comp=Z,47nm,6.0s							
KMI	**Kunming**	**88.90**	**297**	P	**P**	**P**	**04 17 02.3**	**-1.1**
KMI				pP		pP	04 18 21.0	-24
KMI				sP		sP	04 18 40.3	-51
KMI				pmax		pmax		
	comp=Z,8.0nm,0.5s							
KMI				pmax		pmax		
	comp=Z,110nm,4.8s							
SNAA	**Sanae**	**89.73**	**178**	P	**P**	**P**	**04 17 06.0**	**-0.3**
VNA3	**Neumayer Olymp**	**89.85**	**176**	P	**P**	**P**	**04 17 06.8**	**+0.1**
CMAR	**Chiang Mai Arr**	**89.89**	**289**	P	**P**	**P**	**04 17 09.1**	**+1.2**
	comp=Z,5.2nm,0.8s,baz=115,slow=2.6,SNR=16							
VNA2	**Neumayer--Watz**	**90.30**	**177**	P	**P**	**P**	**04 17 09.3**	**+0.6**
	baz=191,slow=3.8							
VNA1	**Neumayer--Stat**	**90.52**	**176**	P	**P**	**P**	**04 17 10.3**	**+0.5**
LZH	**Lanzhou**	**92.01**	**307**	⇑P	**P**	**P**	**04 17 19.5**	**+2.0**
LZH				pP		pP	04 18 57.8	-1.6
LZH				sP		sP	04 19 40.6	-4.9
LZH				PP		**PP**	**04 21 08.8**	**+3.8**
LZH				pmax		pmax		
	comp=Z,19nm,1.4s							
LZH				pmax		pmax		
	comp=Z,65nm,9.2s							
INK	**Inuvik**	**92.50**	**15**	P	**P**	**P**	**04 17 18.0**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=209,slow=3.6							
INK	**Inuvik**	**92.50**	**15**	IAmb		IAmb	04 17 19.3	
	comp=Z,2.2nm,0.9s							
YKA	**Yellowknife Ar**	**94.78**	**25**	P	**P**	**P**	**04 17 29.1**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=241,slow=4.1,SNR=18							
ARCES	**ARCESS Array B**	**127.28**	**350**	PKP		**PKPdf**	**04 23 07.9**	**-1.3**
	comp=Z,3.6nm,0.8s,baz=1.8,slow=3.8,SNR=4.5							
FINES	**FINESS Array B**	**134.21**	**344**	PKP		**PKPdf**	**04 23 21.6**	**-0.8**
	comp=Z,1.0nm,0.8s,baz=72,slow=2.4,SNR=4.7							
AKASG	**Malin Array Be**	**141.66**	**332**	PKhKP		PKPpre	04 23 31.7	
	comp=Z,2.2nm,0.7s,baz=54,slow=4,8,SNR=6.6							
BURAR	**B

h72km**:pP-P,n695,**σ1**§19/688,mb5.4**/151**,49C-24D,**
Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
DZM	**Mont Dzumac**	**3.20**	**257**	*e*Pn	**Pn**	**04 20 06.0**	**-0.7**
	6μm,1.3s						
DZM				*e*Sn	**Sn**	**04 20 40.7**	**-3.0**
	10μm,0.7s						
DZM				*e*LR	LR	04 20 45.0	
	comp=Z,6μm,25.4s						
DZM	**Mont Dzumac**	**3.20**	**257**	P	**Pn**	**04 20 06.0**	**-0.7**
	399nm,0.3s,baz=122,slow=11,SNR=5556						
DZM				S	**Sn**	**04 20 41.5**	**-2.3**
	219nm,0.3s,baz=86,slow=22,SNR=4.6						
DZM	**Mont Dzumac**	**3.20**	**257**		**Pn**	**04 20 06.2**	**-0.4**
NFK	**Norfolk Island**	**7.83**	**192**	P	**Pn**	**04 21 09.4**	**-0.5**
	baz=7.8,SNR=32						
MSVF	**Nonsavu**	**8.58**	**67**	*d iP*	**Pn**	**04 21 22.5**	**+2.3**
MSVF	**Nonsavu**	**8.58**	**67**		**Pn**	**04 21 24.2**	**+4.0**
RAO	**Raoul Island**	**13.60**	**128**	LR	LR	04 26 36.5	
	comp=Z,6μm,20.5s,baz=327,slow=32						
LHI	**Lord Howe Isla**	**13.95**	**221**	P	**Pn**	**04 22 33.0**	**+0.1**
	baz=14,SNR=6.7						
LHI	**Lord Howe Isla**	**13.95**	**221**		**Pn**	**04 22 33.3**	**+0.4**
OUZ	**Omahuta**	**14.21**	**167**		**Pn**	**04 22 37.9**	**+1.6**
HNR	**Honiara**	**15.18**	**320**	P	**Pn**	**04 22 48.6**	**-0.5**
	19nm,0.3s,baz=214,slow=1.7,SNR=13						
HNR				LR	LR	04 27 54.2	
	comp=Z,4μm,19.9s,baz=130,slow=34						
HNR	**Honiara**	**15.18**	**320**	P	**Pn**	**04 22 50.2**	**+1.1**
FUNA	**Funafuti**	**15.65**	**37**	P	**P**	**04 22 58.9**	**+1.1**
FUNA				IAmb	IAmb	04 23 03.0	
	comp=Z,444nm,1.4s						
EIDS	**Eidsvold**	**17.64**	**253**	P	**P**	**04 23 21.2**	**+1.5**
	baz=18,SNR=24						
EIDS	**Eidsvold**	**17.64**	**253**		**P**	**04 23 21.5**	**+1.8**
EIDS				IAmb	IAmb	04 23 23.5	
	comp=Z,736nm,2.0s						
HIZ	**Hauiti**	**17.64**	**167**	Pn	**P**	**04 23 21.7**	**+2.1**
MXZ	**Matakaoa Point**	**17.75**	**157**	Pn	**Pn**	**04 23 22.9**	**+2.0**
MXZ				IAmb	IAmb	04 24 01.5	
	comp=Z,431nm,1.9s						
URZ	**Urewera**	**17.98**	**161**	P	**P**	**04 23 23.4**	**0.0**
	comp=Z,1.6nm,0.3s,baz=358,slow=7.8,SNR=34						
URZ				LR	LR	04 28 59.9	
	comp=Z,5μm,20.7s,baz=342,slow=32						
URZ	**Urewera**	**17.98**	**161**	Pn	**Pn**	**04 23 25.2**	**+1.5**
URZ				IAmb	IAmb	04 23 27.2	
	comp=Z,463nm,1.6s						
ARMA	**Armidale**	**18.65**	**237**	P	**Pn**	**04 23 33.1**	**+1.1**
	baz=19,SNR=52						
ARMA	**Armidale**	**18.65**	**237**	P	**Pn**	**04 23 33.6**	**+1.6**
ARMA				IAmb	IAmb	04 23 37.5	
	comp=Z,414nm,1.4s						
BKZ	**Black Stump Fm**	**18.65**	**164**	P	**Pn**	**04 23 32.7**	**+0.8**
BKZ				IAmb	IAmb	04 23 57.7	
	comp=Z,590nm,1.7s						
AFI	**Afiamalu**	**19.05**	**70**	P	**P**	**04 23 36.1**	**+0.8**
AFI				pmax	pmax		
	comp=Z,149nm,0.9s						
AFI	**Afiamalu**	**19.05**	**70**		**P**	**04 23 36.1**	**+0.8**
AFI				IAmb	IAmb	04 23 39.6	
	comp=Z,149nm,0.8s						
NIUE	**Niue**	**19.16**	**87**	P	**P**	**04 23 34.1**	**-2.3**
RMQ	**Roma**	**19.89**	**251**	P	**Pn**	**04 23 46.9**	**+0.3**
	baz=20,SNR=125						
NNZ	**Nelson**	**20.03**	**172**		Pn	04 23 48.3	+0.3
TUWZ	**Tuamarina**	**20.31**	**171**	P	Pn	04 23 50.4	-1.0
SNZO	**South Karori**	**20.32**	**169**		Pn	04 23 51.6	+0.2
MGCD	**Mangrove Creek**	**20.34**	**231**	P	Pn	04 23 52.5	+0.7
	baz=20,SNR=8.8						
BHW	**Baring Head**	**20.44**	**169**	P	**P**	**04 23 51.0**	**+0.8**
THZ	**Tophouse**	**20.51**	**173**	P	Pn	04 23 52.7	-1.1
THZ				IAmb	IAmb	04 23 58.6	
	comp=Z,132nm,0.8s						
MSWZ	**Moikau Station**	**20.52**	**168**	P	**P**	**04 23 51.0**	**0.0**
PLWZ	**Palliser**	**20.67**	**168**	P	**P**	**04 23 53.5**	**+0.9**
OXZ	**Oxford**	**21.98**	**176**	P	**P**	**04 24 07.3**	**+0.6**
OXZ				IAmb	IAmb	04 24 09.9	
	comp=Z,312nm,1.4s						
CTA	**Charters Tower**	**22.05**	**269**	P	**P**	**04 24 08.2**	**+0.5**
	comp=Z,33nm,1.0s,baz=98,slow=13,SNR=12						
CTAO	**Charters Tower**	**22.05**	**269**	P	**P**	**04 24 08.8**	**+1.1**
CTAO				pmax	pmax		
	comp=Z,156nm,1.5s						
CTAO	**Charters Tower**	**22.05**	**269**	P	**P**	**04 24 08.8**	**+1.1**
CTAO				IAmb	IAmb	04 24 30.6	
	comp=Z,156nm,1.5s						
FOZ	**Fox Glacier**	**22.11**	**180**	P	**P**	**04 24 08.9**	**+0.9**
FOZ				IAmb	IAmb	04 24 10.6	
	comp=Z,138nm,1.0s						
RPZ	**Rata Peaks**	**22.32**	**178**	P	**P**	**04 24 09.9**	**-0.4**
	comp=Z,94nm,1.1s,baz=45,slow=4.2,SNR=10						
RPZ				LR	LR	04 31 33.3	
	comp=Z,4μm,21.2s,baz=347,slow=33						
RPZ	**Rata Peaks**	**22.32**	**178**	IAmb	IAmb	04 24 13.7	
	comp=Z,309nm,1.4s						
CNB	**Canberra Magne**	**22.67**	**228**	P	**P**	**04 24 16.2**	**+2.0**
	baz=23,SNR=68						
YNG	**Young**	**22.84**	**231**	P	**P**	**04 24 17.9**	**+1.9**
	baz=23,SNR=16						
CAN	**Canberra**	**22.93**	**228**	P	**P**	**04 24 18.4**	**+1.6**
CAN				pmax	pmax		
	comp=Z,595nm,1.5s						
CAN	**Canberra**	**22.93**	**228**	P	**P**	**04 24 18.4**	**+1.6**
MILA	**Mila**	**23.78**	**224**	P	**P**	**04 24 25.9**	**+1.1**
	baz=24,SNR=19						
CMSA	**Cobar Meteorol**	**23.80**	**240**	P	**P**	**04 24 26.1**	**+1.2**
	baz=24,SNR=135						
QLP	**Quilpie**	**23.91**	**252**	P	**P**	**04 24 26.8**	**+0.8**
	baz=24,SNR=77						
DCZ	**Deep Cove**	**24.14**	**185**	IAmb	IAmb	04 24 30.4	
	comp=Z,191nm,1.0s						
RABL	**Rabaul**	**24.18**	**312**	P	**P**	**04 24 28.0**	**-0.5**
RABL				IAmb	IAmb	04 24 33.1	
	comp=Z,155nm,1.1s						
MTSU	**Mount Surprise**	**24.19**	**273**	P	**P**	**04 24 30.0**	**+1.4**
	baz=24,SNR=41						
KRVT	**Keravat (AS076**	**24.19**	**312**	P	**P**	**04 24 28.6**	**0.0**
	comp=Z,238nm,0.9s,baz=302,slow=4.7,SNR=18						
PMG	**Port Moresby**	**24.81**	**295**	P	**P**	**04 24 34.7**	**+0.4**
	comp=Z,193nm,0.7s,baz=94,slow=4.4,SNR=37						
PMG				LR	LR	04 33 22.1	
	comp=Z,3μm,18.7s,baz=113,slow=34						
PMG	**Port Moresby**	**24.81**	**295**	*ce*P	**P**	**04 24 35.5**	**+1.2**
PMG				pmax	pmax		
	comp=Z,935nm,1.1s						
PMG	**Port Moresby**	**24.81**	**295**	P	**P**	**04 24 35.3**	**+1.0**
COEN	**Coen**	**26.39**	**282**	P	**P**	**04 24 50.7**	**+2.1**
	baz=26,SNR=7.2						
COEN	**Coen**	**26.39**	**282**	P	**P**	**04 24 49.8**	**+1.3**
TOO	**Toolangi**	**26.51**	**227**	P	**P**	**04 24 51.0**	**+1.4**
	baz=26,SNR=12						
TOO	**Toolangi**	**26.51**	**227**	P	**P**	**04 24 50.9**	**+1.4**
TOO				pmax	pmax		
	comp=Z,237nm,1.7s						
TOO	**Toolangi**	**26.51**	**227**	P	**P**	**04 24 50.9**	**+1.4**
TOO				IAmb	IAmb	04 24 52.6	
	comp=Z,237nm,1.6s						
STKA	**Stephens Creek**	**27.23**	**241**	P	**P**	**04 24 57.1**	**+1.1**
	baz=27,SNR=43						
STKA	**Stephens Creek**	**27.23**	**241**	P	**P**	**04 24 57.1**	**+1.1**
	comp=Z,22nm,0.7s,baz=88,slow=11,SNR=58						
STKA				LR	LR	04 35 36.9	
	comp=Z,1μm,18.3s,baz=65,slow=36						
STKA	**Stephens Creek**	**27.23**	**241**	P	**P**	**04 24 57.1**	**+1.1**
QIS	**Mount Isa**	**28.19**	**266**	P	**P**	**04 25 05.4**	**+0.7**
	baz=28,SNR=7.1						
MOO	**Moorlands**	**28.30**	**217**	P	**P**	**04 25 07.1**	**+1.6**
	baz=28,SNR=10						
TAU	**Tasmania Unive**	**28.54**	**216**	P	**P**	**04 25 08.9**	**+1.4**
TAU				pmax	pmax		
	comp=Z,131nm,1.5s						
TAU	**Tasmania Unive**	**28.54**	**216**	P	**P**	**04 25 08.9**	**+1.4**
TAU				IAmb	IAmb	04 25 48.1	
	comp=Z,131nm,1.5s						
ARPS	**Mount Arapiles**	**28.72**	**232**	P	**P**	**04 25 10.7**	**+1.5**
	baz=29,SNR=8.7						
HTT	**Hallett**	**29.82**	**240**	P	**P**	**04 25 19.9**	**+0.8**
	baz=30,SNR=30						
BBOO	**Buckleboo**	**32.00**	**242**	P	**P**	**04 25 38.8**	**+0.6**
	baz=32,SNR=34						
WRAB	**Tennant Creek**	**33.16**	**266**	*ce*P	**P**	**04 25 47.8**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,78nm,1.2s						
WRAB	**Tennant Creek**	**33.16**	**266**	P	**P**	**04 25 47.5**	**-1.1**
WRAB				IAmb	IAmb	04 25 49.2	
	comp=Z,93nm,1.3s						
WRA	**Warramunga Arr**	**33.17**	**266**	P	**P**	**04 25 47.9**	**-0.7**
	comp=Z,47nm,1.0s,baz=98,slow=8.6,SNR=85						
WRA				LR	LR	04 38 09.5	
	comp=Z,1μm,19.9s,baz=100,slow=34						
AS31	**Alice Springs**	**33.18**	**259**	P	**P**	**04 25 48.6**	**-0.1**
ASAR	**Alice Springs**	**33.19**	**259**	P	**P**	**04 25 48.6**	**-0.2**
	comp=Z,53nm,0.8s,baz=83,slow=9.0,SNR=214						
ASAR				ScP	**ScP**	**04 32 12.3**	**+4.0**
	comp=Z,0.8nm,0.8s,baz=103,slow=2.6,SNR=6.3						
ASAR				LR	LR	04 38 16.4	
	comp=Z,2μm,21.2s,baz=96,slow=34						
JAY	**Jayapura**	**33.95**	**300**	P	**P**	**04 25 54.7**	**-0.7**
	comp=Z,121nm,0.8s,baz=125,slow=4.9,SNR=45						
JAY				LR	LR	04 39 45.4	
	comp=Z,603nm,19.9s,baz=106,slow=36						
JAY	**Jayapura**	**33.95**	**300**	P	**P**	**04 25 56.3**	**+0.9**
	comp=Z,1μmcomp=Z,104nm,0.8s						
GENI	**Genyem**	**34.34**	**299**	P	**P**	**04 25 59.9**	**+1.1**
	comp=Z,5μmcomp=Z,349nm,1.4s						
SMPI	**Sarmi**	**35.88**	**298**	P	**P**	**04 26 12.7**	**+0.7**
	comp=Z,2μmcomp=Z,53nm,1.8s						
KDU	**Kakadu**	**36.64**	**277**	P	**P**	**04 26 18.7**	**+0.2**
	baz=37,SNR=5.5						
TBI	**Tubuai**	**37.65**	**101**	*e*S	**S**	**04 32 14.8**	**+3.0**
TBI				eLQ	LQ	04 35 00.6	
	comp=Z,4μm,32.0s						
TBI				*e*LR	LR	04 36 54.1	
	comp=Z,3μm,28.5s						
MTN	**Manton Dam**	**37.83**	**277**	P	**P**	**04 26 28.5**	**-0.1**
	baz=38,SNR=24						
MTN	**Manton Dam**	**37.83**	**277**	P	**P**	**04 26 28.8**	**+0.2**
WRKA	**Warakurna**	**38.22**	**256**	P	**P**	**04 26 31.8**	**0.0**
	baz=38,SNR=25						
PPT2	**Papeete2**	**38.41**	**92**	*e*S	**S**	**04 32 27.7**	**+4.0**
	comp=Z,995nm,24.5s						
PPT2				eLQ	LQ	04 35 19.7	
	comp=Z,6μm,33.0s						
PPT2				*e*LR	LR	04 37 14.3	
	comp=Z,3μm,27.2s						
PPT	**Papeete**	**38.42**	**92**	LR	LR	04 42 25.3	
	comp=Z,187nm,18.1s,baz=266,slow=36						
FORT	**Forrest**	**38.46**	**247**	P	**P**	**04 26 34.0**	**+0.2**
	baz=38,SNR=8.3						
FORT	**Forrest**	**38.46**	**247**	P	**P**	**04 26 34.2**	**+0.5**
KNRA	**Kununurra**	**39.24**	**271**	P	**P**	**04 26 40.3**	**-0.1**
	baz=39,SNR=20						
KNRA	**Kununurra**	**39.24**	**271**	P	**P**	**04 26 40.1**	**-0.3**
FAKI	**Fak Fak**	**40.85**	**291**	P	**P**	**04 26 54.0**	**+0.2**
	comp=Z,2μmcomp=Z,208nm,1.0s						
FAKI	**Fak Fak**	**40.85**	**291**	P	**P**	**04 26 53.7**	**-0.1**
FITZ	**Fitzroy Crossi**	**41.59**	**266**	P	**P**	**04 27 00.5**	**+0.7**
	baz=42,SNR=55						
GUMO	**Guam**	**42.49**	**323**	P	**P**	**04 27 07.1**	**0.0**
GUMO				pmax	pmax		
	comp=Z,993nm,2.0s						
GUMO	**Guam**	**42.49**	**323**	P	**P**	**04 27 07.1**	**0.0**
SIJI	**Sorong**	**42.73**	**293**	P	**P**	**04 27 08.6**	**-0.5**
	comp=Z,38nm,0.6s,baz=102,slow=7.5,SNR=51						
KMBL	**Kambalda**	**43.78**	**247**	P	**P**	**04 27 17.3**	**-0.1**
	baz=44,SNR=13						
SOEI	**Soe**	**45.20**	**278**	P	**P**	**04 27 29.8**	**+0.7**
	comp=Z,102nm,0.9s						
SOEI	**Soe**	**45.20**	**278**	P	**P**	**04 27 29.4**	**+0.4**
NLAI	**Namlea**	**45.23**	**287**	P	**P**	**04 27 29.8**	**+0.7**
	comp=Z,116nm,0.9s						
BATI	**Baumata**	**45.60**	**277**	P	**P**	**04 27 33.2**	**+1.0**
	comp=Z,72nm,1.1s						
PSA00	**Pilbara Seismi**	**46.32**	**260**	IAmb	IAmb	04 27 39.3	
	comp=Z,63nm,1.0s						
MBWA	**Marble Bar**	**46.49**	**261**	P	**P**	**04 27 40.0**	**+1.0**
SANI	**Sanana**	**46.76**	**288**	P	**P**	**04 27 42.2**	**+1.0**
	comp=Z,2μmcomp=Z,260nm,1.0s						
MEEK	**Meekatharra**	**46.81**	**253**	P	**P**	**04 27 41.1**	**-0.3**
	baz=47,SNR=102						
TNTI	**Ternate**	**46.91**	**293**	P	**P**	**04 27 42.8**	**+0.4**
TNTI				IAmb	IAmb	04 27 50.1	
	comp=Z,115nm,1.8s						
KLBR	**Kellerberrin**	**47.31**	**246**	P	**P**	**04 27 45.3**	**0.0**
	baz=47,SNR=41						
MMRI	**Maumere**	**47.47**	**278**	P	**P**	**04 27 46.4**	**-0.3**
	comp=Z,116nm,0.8s						
MMRI	**Maumere**	**47.47**	**278**	P	**P**	**04 27 46.8**	**+0.1**
NWAO	**Narrogin (SRO)**	**47.74**	**244**	P	**P**	**04 27 48.9**	**+0.3**
	baz=48,SNR=31						
NWAO	**Narrogin (SRO)**	**47.74**	**244**	P	**P**	**04 27 48.9**	**+0.3**
NWAO				pmax	pmax		
	comp=Z,42nm,0.9s						
NWAO	**Narrogin (SRO)**	**47.74**	**244**	P	**P**	**04 27 48.9**	**+0.3**
NWAO				IAmb	IAmb	04 27 49.2	
	comp=Z,42nm,0.8s						
EDFI	**Ende, Flores**	**47.93**	**278**	P	**P**	**04 27 50.4**	**0.0**
	comp=Z,15nm,1.4s						
BLDU	**Ballidu**	**48.23**	**248**	P	**P**	**04 27 52.4**	**-0.1**
	baz=48,SNR=20						
BBSI	**Bau Bau**	**48.35**	**282**	P	**P**	**04 27 54.8**	**+1.2**
	comp=Z,12nm,1.2s						
MUN	**Mundaring**	**48.62**	**246**	P	**P**	**04 27 55.6**	**+0.2**
	baz=49,SNR=4.7						
MORW	**Morawa**	**48.89**	**250**	P	**P**	**04 27 57.6**	**0.0**
	baz=49,SNR=18						
MORW	**Morawa**	**48.89**	**250**	P	**P**	**04 27 57.8**	**+0.3**
TAOE	**Nuku Hiva Isla**	**49.70**	**83**	*e*LR	LR	04 42 29.0	
	comp=Z,1μmcomp=Z,204nm,0.9s						
WBSI	**Waikabubak, Su**	**49.76**	**275**	P	**P**	**04 28 05.3**	**+1.0**
	comp=Z,1μmcomp=Z,204nm,0.9s						
KMSI	**Cibinong**	**49.76**	**290**	P	**P**	**04 28 04.9**	**+0.6**
	comp=Z,117nm,0.9s						
LUWI	**Luwuk**	**50.07**	**287**	P	**P**	**04 28 07.9**	**+1.2**
	comp=Z,5μmcomp=Z,183nm,1.2s						
LUWI	**Luwuk**	**50.07**	**287**	P	**P**	**04 28 07.5**	**+0.9**
BKSI	**Bulukumba**	**50.65**	**281**	P	**P**	**04 28 11.3**	**+0.2**
	comp=Z,811nmcomp=Z,80nm,0.9s						
RKT	**Rikitea**	**50.89**	**103**	*e*LQ	LQ	04 40 32.0	
	comp=Z,2μm,40.8s						
RKT				*e*LR	LR	04 42 57.9	
	comp=Z,2μm,27.8s						
BNSI	**Bone**	**51.03**	**282**	P	**P**	**04 28 14.8**	**+0.9**
	comp=Z,624nmcomp=Z,68nm,1.1s						
KAPI	**Kappang**	**51.11**	**281**	P	**P**	**04 28 15.2**	**+0.7**
KAPI				pmax	pmax		
	comp=Z,72nm,1.0s						
KAPI	**Kappang**	**51.11**	**281**	P	**P**	**04 28 15.2**	**+0.7**
GIRL	**Giralia**	**51.27**	**258**	P	**P**	**04 28 17.6**	**+2.0**
	baz=51,SNR=4.6						
MRSI	**Marisa**	**51.51**	**289**	P	**P**	**04 28 17.3**	**-0.1**
	comp=Z,34nm,1.0s						
SPSI	**Sidrap Palu**	**51.52**	**282**	P	**P**	**04 28 17.3**	**-0.2**
	comp=Z,38nm,0.9s						
PLAI	**Plampang**	**51.53**	**276**	P	**P**	**04 28 18.1**	**+0.5**
	comp=Z,820nmcomp=Z,51nm,1.1s						
DAV	**Davao City (W)**	**51.77**	**298**	P	**P**	**04 28 19.1**	**-0.4**
	comp=Z,93nm,0.4s,baz=95,slow=4.7,SNR=3.6						
DAV	**Davao City (W)**	**51.77**	**298**	P	**P**	**04 28 19.6**	**+0.1**
TTSI	**Tana Toraja**	**51.85**	**283**	P	**P**	**04 28 20.8**	**+0.8**
	comp=Z,30nm,1.1s						
MPSI	**Mapaga**	**53.25**	**287**	P	**P**	**04 28 31.0**	**+0.6**
	comp=Z,1μmcomp=Z,91nm,1.0s						
JAGI	**Jajag, Banyuwa**	**55.02**	**275**	P	**P**	**04 28 43.1**	**-0.2**
	comp=Z,80nm,1.1s						
JAGI	**Jajag, Banyuwa**	**55.02**	**275**	P	**P**	**04 28 42.9**	**-0.4**
KBKI	**Kotabaru**	**55.07**	**281**	P	**P**	**04 28 44.2**	**+0.6**
JCJ	**Chichijima**	**55.09**	**330**	P	**P**	**04 28 43.0**	**-0.4**
	comp=Z,80nm,0.9s,baz=304,slow=23,SNR=6.8						
VNDA	**Vanda**	**56.34**	**182**	P	**P**	**04 28 52.0**	**+0.2**
	comp=Z,11nm,0.8s,baz=359,slow=7.0,SNR=38						
VNDA				LR	LR	04 49 00.8	
	comp=Z,1μm,21.9s,baz=17,slow=32						
VNDA	**Vanda**	**56.34**	**182**	P	**P**	**04 28 52.1**	**+0.3**
VNDA				pmax	pmax		
	comp=Z,157nm,2.0s						
VNDA	**Vanda**	**56.34**	**182**	P	**P**	**04 28 52.1**	**+0.3**
WOJI	**Wonogiri, Jawa**	**58.23**	**274**	P	**P**	**04 29 07.1**	**+1.0**
	comp=Z,71nm,0.9s						
CASY	**Casey**	**58.41**	**204**	P	**P**	**04 29 06.6**	**+0.2**
KKM	**Kota Kinabalu**	**59.17**	**291**	P	**P**	**04 29 13.7**	**+1.0**
TGY	**Tagaytay City**	**59.51**	**302**	LR	LR	04 52 04.0	
	comp=Z,194nm,21.1s,baz=136,slow=33						
SBUM	**Sibu**	**61.06**	**285**	P	**P**	**04 29 26.5**	**+1.0**
SBUM	**Sibu**	**61.06**	**285**	P	**P**	**04 29 27.0**	**+1.5**
LEM	**Lembang**	**61.66**	**274**	LR	LR	04 56 20.4	
	comp=Z,548nm,20.9s,baz=23,slow=36						
SZP	**Santa**	**61.91**	**305**	P	**P**	**04 29 31.1**	**+0.1**
KSM	**Kuching**	**62.36**	**284**	IAmb	IAmb	04 29 36.0	
	comp=Z,35nm,0.8s						
KSM	**Kuching**	**62.36**	**284**	P	**P**	**04 29 36.0**	**+1.7**
DBJI	**Dramaga**	**62.56**	**274**	P	**P**	**04 29 36.3**	**+0.7**
	comp=Z,154nm,1.0s						
INU	**Inuyama**	**64.40**	**331**	IAmb	IAmb	04 29 48.6	
	comp=Z,72nm,1.2s						
MJAR	**Matsushiro Arr**	**64.86**	**332**	P	**P**	**04 29 49.6**	**-0.7**
	comp=Z,32nm,0.9s,baz=164,slow=6.7,SNR=61						
MJAR				LR	LR	04 56 27.0	
	comp=Z,267nm,20.5s,baz=155,slow=34						
MAJO	**Matsushiro**	**64.87**	**332**	P	**P**	**04 29 49.8**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,72nm,1.2s						
MAJO	**Matsushiro**	**64.87**	**332**	P	**P**	**04 29 49.8**	**-0.5**
MAJO				IAmb	IAmb	04 29 51.1	
	comp=Z,72nm,1.2s						
MAT	**Matsushiro**	**64.87**	**332**	P	**P**	**04 29 49.5**	**-0.8**
MJB9	**Matsu-Tunnel**	**64.87**	**332**	P	**P**	**04 29 50.1**	**-0.2**
MJB9				IAmb	IAmb	04 29 51.4	
	comp=Z,42nm,1.1s						
YULB	**Yu-li**	**64.88**	**311**	P	**P**	**04 29 49.9**	**-0.7**
KASI	**Kota Agung**	**65.02**	**274**	P	**P**	**04 29 51.3**	**-0.5**
	comp=Z,56nm,1.1s						
TPUB	**Ta-pu**	**65.30**	**310**	P	**P**	**04 29 53.1**	**-0.2**
SSLB	**Suanglung**	**65.37**	**311**	IAmb	IAmb	04 29 54.5	
	comp=Z,45nm,1.1s						
JNU	**Nakatsue**	**65.69**	**325**	P	**P**	**04 29 55.5**	**-0.1**
	comp=Z,36nm,0.7s,baz=340,slow=0.5,SNR=21						
JNU				LR	LR	04 55 40.0	
	comp=Z,351nm,22.0s,baz=126,slow=33						
JNU	**Nakatsue**	**65.69**	**325**	P	**P**	**04 29 55.6**	**-0.1**
TATO	**Taipei**	**65.76**	**312**	P	**P**	**04 29 56.5**	**+0.3**
QZH	**Quanzhou**	**67.77**	**310**	⇑*iP*	**P**	**04 30 09.8**	**+0.7**
QZH				S	**S**	**04 38 59.8**	**-1.8**
QZH				LR	LR		
	comp=Z,270nm,19.9s						
QZH				LR	LR		
	comp=Z,170nm,18.0s						
QZH				LR	LR		
	comp=Z,610nm,28.4s						
YUK	**Yuzh-Kuril'sk**	**68.68**	**342**	*e*P	**P**	**04 30 15.5**	**+1.2**
YUK				*e*		04 30 38.4	
YUK				*e*		04 32 46.0	
YUK				*e*PPP	PPP	04 34 26.7	
YUK				*e*S	**S**	**04 39 10.9**	**-0.7**
YUK				*e*		04 40 06.5	
YUK				*e*SS	**SS**	**04 43 36.8**	**-1.2**
YUK				pmax	pmax		
	comp=Z,313nm,1.1s						
YUK				pmax	pmax		
	comp=Z,526nm,2.6s						
QSPA	**South Pole Qui**	**68.70**	**180**	P	**P**	**04 30 14.6**	**+0.1**
ASAJ	**Asahikawa**	**69.76**	**339**	LR	LR	04 58 41.6	
	comp=Z,330nm,19.4s,baz=177,slow=34						
TJN	**Taejon**	**70.04**	**325**	*ce*P	**P**	**04 30 22.9**	**0.0**
BKNI	**Bangkinang**	**70.39**	**278**	P	**P**	**04 30 26.2**	**+0.6**
KSRS	**Korea Array**	**70.55**	**326**	P	**P**	**04 30 26.2**	**+0.3**
	comp=Z,12nm,1.0s,baz=144,slow=6.4,SNR=46						
KSRS				LR	LR	04 58 46.7	
	comp=Z,328nm,21.4s,baz=130,slow=34						
KS19	**Wonju Array Si**	**70.61**	**326**	P	**P**	**04 30 26.6**	**+0.2**
QIZ	**Qiongzhong**	**71.09**	**300**	P	**P**	**04 30 29.6**	**-0.1**
QIZ				S	**S**	**04 39 39.6**	**-1.3**
QIZ				LR	LR		
	comp=Z,350nm,22.4s						
QIZ				LR	LR		
	comp=Z,140nm,20.4s						
QIZ				LR	LR		
	comp=Z,250nm,24.5s						
INCN	**Inchon**	**71.25**	**325**	P	**P**	**04 30 30.9**	**+0.6**
INCN				pmax	pmax		
	comp=Z,113nm,1.3s						
INCN	**Inchon**	**71.25**	**325**	P	**P**	**04 30 30.9**	**+0.6**
MNSI	**Mandailing Nat**	**71.91**	**278**	P	**P**	**04 30 34.2**	**-0.6**
IPM	**Ipoh**	**72.04**	**282**	P	**P**	**04 30 35.9**	**+0.4**
IPM				IAmb	IAmb	04 30 37.3	
	comp=Z,30nm,0.7s						
IPM	**Ipoh**	**72.04**	**282**	P	**P**	**04 30 37.0**	**+1.4**
NJ2	**Nanjing**	**72.09**	**316**	*e*P	**P**	**04 30 36.4**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,26nm,0.8s						
YSS	**Yuzh-Sakhalins**	**72.25**	**341**	⇑*e*P	P	04 30 41.6	+5.6
YSS				*e*		04 30 52.4	
YSS				*e*		04 31 05.2	
YSS				*e*S	**S**	**04 39 57.1**	**+4.0**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				MLR	MLR		
	comp=N,600nm,15.0s						
YSS				MLR	MLR		
	comp=Z,900nm,15.0s						
YSS				MLR	MLR		
	comp=E,500nm,14.0s						
KULM	**Kulim**	**72.71**	**283**	P	**P**	**04 30 38.9**	**-0.7**
KULM	**Kulim**	**72.71**	**283**	P	**P**	**04 30 39.0**	**-0.5**
SKR	**Severo-Kuril's**	**72.74**	**351**	*e*P	**P**	**04 30 42.2**	**+3.4**
SKR				*e*S	**SKiKP**

CN2 **Changchun** **76.53 329** *e*P **P** **04 31 00.8 -0.2**
CN2 *e*S **S** **04 40 39.9 -1.3**
CN2 pmax pmax
comp=Z,70nm,1.3s
MAW **Mawson** **76.67 202** P **P** **04 31 02.5 +1.0**
baz=76,SNR=14
MAW **Mawson** **76.67 202** P **P** **04 31 02.5 +1.0**
comp=Z,20nm,0.9s,baz=112,slow=7.6,SNR=34
MAW LR LR 05 00 41.6
comp=Z,646nm,21.0s,baz=96,slow=32
MAW **Mawson** **76.67 202** P **P** **04 31 02.1 +0.6**
PBKT **Sadao Pong** **77.28 294** P **P** **04 31 06.7 +1.0**
ENH **Enshi** **77.42 310** IAmb IAmb 04 31 08.0
comp=Z,76nm,1.2s
GYA **Guiyang** **77.46 305**⇓ *i*P **P** **04 31 07.9 +1.2**
GYA sP sP 04 31 42.8 +10
GYA PP **PP** **04 34 06.1 +3.6**
GYA S **S** **04 40 50.9 -1.4**
GYA SS **SS** **04 45 49.1 -3.9**
GYA pmax pmax
comp=Z,20nm,1.3s
GYA pmax pmax
comp=Z,90nm,3.8s
GYA LR LR
comp=Z,60nm,4.0s
GYA LR LR
comp=Z,80nm,4.2s
GYA LR LR
comp=Z,40nm,4.4s
KLR **Kul'dur** **78.01 336** LR LR 05 04 09.1
comp=Z,395nm,19.4s,baz=160,slow=34
KLR **Kul'dur** **78.01 336***c**e*P **P** **04 31 09.7 +0.6**
KLR pmax pmax
comp=Z,72nn,1.3s
BJI **Beijing** **78.91 321** P **P** **04 31 14.6 +0.4**
BJI S **S** **04 41 08.6 +1.6**
BJI pmax pmax
comp=Z,24nm,1.2s
BJI LR LR
comp=Z,260nm,20.2s
BJI LR LR
comp=Z,200nm,21.2s
TIY **Taiyuan** **79.74 317** *e*P **P** **04 31 19.3 +0.3**
TIY PP **PP** **04 34 21.8 +0.5**
TIY S **S** **04 41 18.0 +1.9**
TIY pmax pmax
comp=Z,190nm,4.1s
TIY LR LR
comp=Z,320nm,17.3s
TIY LR LR
comp=Z,370nm,26.0s
KMI **Kunming** **79.83 302** P **P** **04 31 22.5 +2.5**
KMI S **S** **04 41 20.3 +2.4**
KMI SS **SS** **04 46 30.8 +1.8**
KMI pmax pmax
comp=Z,56nm,1.0s
KMI pmax pmax
comp=Z,260nm,3.8s
KMI LR LR
comp=Z,230nm,20.9s
KMI LR LR
comp=Z,210nm,24.6s
KMI LR LR
comp=Z,440nm,29.9s
KMI **Kunming** **79.83 302** IAmb IAmb 04 31 23.1
comp=Z,96nm,1.3s
CM31 **Chiang Mai Arr** **79.85 294** P **P** **04 31 21.2 +1.3**
CM31 IAmb IAmb 04 31 23.3
comp=Z,45nm,1.1s
CMAR **Chiang Mai Arr** **79.85 294** P **P** **04 31 21.9 +2.0**
comp=Z,15nn,0.9s,baz=133,slow=4.1,SNR=64
CMAR LR LR 05 09 44.6
comp=Z,64nm,18.1s,baz=180,slow=38
CMAR **Chiang Mai Arr** **79.85 294** *i* P **P** **04 31 21.8 +1.9**
CMAR pmax pmax
comp=Z,17nm,0.9s
XAN **Xi'an** **79.92 313** P **P** **04 31 20.4 +0.4**
XAN S **S** **04 41 15.6 -2.6**
XAN SS **SS** **04 46 28.9 -0.8**
XAN pmax pmax
comp=Z,41nm,1.4s
XAN pmax pmax
comp=Z,230nm,4.1s
XAN LR LR
comp=Z,220nm,22.8s
XAN LR LR
comp=Z,250nm,24.9s
XAN **Xi'an** **79.92 313** IAmb IAmb 04 31 22.1
comp=Z,48nn,1.1s
CHTO **Chiang Mai** **80.01 295** P **P** **04 31 21.7 +0.9**
CHTO pmax pmax
comp=Z,32nm,0.9s
CHTO **Chiang Mai** **80.01 295** P **P** **04 31 21.6 +0.9**
CHTO IAmb IAmb 04 31 23.8
comp=Z,32nn,0.9s
CD2 **Chengdu** **81.94 308** P **P** **04 31 32.1 +1.3**
CD2 pP pwP 04 31 54.6 +1.8
CD2 S **S** **04 41 41.4 +2.2**
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,200nm,4.1s
CD2 LR LR
comp=Z,440nm,26.5s
CD2 LR LR
comp=Z,500nm,30.4s
CD2 LR LR
comp=Z,560nm,31.4s
MA2 **Magadan** **82.14 350** *i* P **P** **04 31 31.4 +0.3**
HHC **Hu-ho-hao-te** **82.17 319** *e*P **P** **04 31 32.3 +0.4**
HHC sP sP 04 32 06.4 +8.3
HHC PP **PP** **04 34 43.8 +2.5**
HHC S **S** **04 41 45.0 +3.7**
HHC sS sS 04 42 24.0 +11
HHC pmax pmax
comp=Z,27nm,1.0s
HHC pmax pmax
comp=Z,100nm,6.8s
HHC LR LR
comp=Z,190nm,19.9s
HHC LR LR
comp=Z,190nm,15.1s
HHC LR LR
comp=Z,180nm,14.7s
BTO **Baotou** **82.97 318** *e*P **P** **04 31 37.3 +1.3**
SYO **Syowa Base** **83.05 196**⇓ *i*P **P** **04 31 34.4 -1.5**
SYO **Syowa Base** **83.05 196**⇓ *i*PcP **PcP** **04 31 39.0 -1.4**
SYO **Syowa Base** **83.05 196**⇑ *i*pP pP 04 31 52.2 -2.1
ZEA **Zeya** **83.30 336** *e*P **P** **04 31 37.6 +0.3**
ZEA pmax pmax
comp=N,59nm,1.0s
ZEA pmax pmax
comp=Z,110nm,1.2s
OHAK **Old Harbor** **84.17 19** IAmb IAmb 04 31 46.9
comp=Z,34nm,0.8s
LZH **Lanzhou** **84.53 312**⇑ P **P** **04 31 45.8 +1.6**
LZH pP pwP 04 32 06.8 +0.6
LZH PP **PP** **04 35 01.4 +0.6**
LZH SKS **SKSac** **04 41 57.6 -4.5**
LZH S **S** **04 42 03.0 -2.5**
LZH sS sS 04 42 41.6 +4.1
LZH pmax pmax
comp=Z,55nm,1.5s
LZH pmax pmax
comp=Z,300nm,8.1s
LZH LR LR
comp=Z,340nm,17.0s
LZH LR LR
comp=Z,470nm,16.8s
LZH LR LR
comp=Z,590nm,18.4s
KDAK **Kodiak Island** **84.85 19** P **P** **04 31 45.5 +0.5**
comp=Z,19nm,1.1s,baz=244,slow=6.4,SNR=5.1
KDAK LR LR 05 03 35.2
comp=Z,568nm,20.5s,baz=194,slow=31
KDAK **Kodiak Island** **84.85 19** P **P** **04 31 45.5 +0.5**
KDAK pmax pmax
comp=Z,60nm,1.2s
KDAK **Kodiak Island** **84.85 19** IAmb IAmb 04 32 06.3
comp=Z,60nm,1.2s
SEY **Seymchan** **85.13 352** P **P** **04 31 46.3 0.0**
comp=Z,5.6nm,0.9s,baz=155,slow=7.0,SNR=5.8
GAMB **Gambell** **86.08 8** IAmb IAmb 04 31 56.6
comp=Z,20nm,0.8s
CNPM **China Poot** **86.69 19** IAmb IAmb 04 32 17.0
comp=Z,49nm,1.6s

NVL **N'lazarevskaya** **86.83 187** *e*P **P** **04 31 51.0 -3.8**
NVL *e*S **SKSac** **04 42 13.5 -1.7**
NVL pmax pmax
comp=Z,13nm,0.8s
SNAA **Sanae** **87.07 182** P **P** **04 31 55.1 -1.1**
SNAA **Sanae** **87.07 182** P **P** **04 31 55.2 -0.9**
SNAA pmax pmax
comp=Z,116nm,1.8s
SNAA **Sanae** **87.07 182** P **P** **04 31 55.2 -0.9**
O02D **Mt. Diablo Mer** **87.62 45** P **P** **04 31 59.9 +0.7**
baz=239
VNA3 **Neumayer Olymp** **87.64 180** P **P** **04 31 57.8 -1.0**
SEW **Seward** **87.69 19** P **P** **04 31 59.4 +0.5**
VNA2 **Neumayer--Watz** **87.94 181** P **P** **04 31 59.6 -0.7**
baz=176,slow=4.8
CIT **Chita** **87.97 329** *e*P **P** **04 31 59.8 -0.8**
CIT *e* 04 32 15.2
WDC **Whiskeytown Da** **87.98 45** P **P** **04 32 01.5 +0.7**
WDC pmax pmax
comp=Z,25nm,1.2s
WDC **Whiskeytown Da** **87.98 45** P **P** **04 32 01.5 +0.7**
WDC IAmb IAmb 04 32 24.2
comp=Z,25nn,1.1s
N02D **Trinity Center** **88.08 44** P **P** **04 32 02.3 +1.0**
baz=239
ORV **Oroville** **88.16 46** P **P** **04 32 01.6 -0.1**
ORV pmax pmax
comp=Z,16nm,1.1s
ORV **Oroville** **88.16 46** P **P** **04 32 01.6 -0.1**
M02C **Callahan** **88.19 44** P **P** **04 32 02.3 +0.4**
baz=239
VNA1 **Neumayer--Stat** **88.23 181** P **P** **04 32 01.0 -0.6**
O03E **Paynes Creek** **88.33 45** P **P** **04 32 03.2 +0.6**
baz=240
YBH **Yreka Blue Hor** **88.46 44** P **P** **04 32 02.6 -0.5**
comp=Z,3.0nm,0.8s,baz=194,slow=6.0,SNR=11
YBH **Yreka Blue Hor** **88.46 44** P **P** **04 32 03.6 +0.5**
YBH pmax pmax
comp=Z,23nm,1.3s
YBH **Yreka Blue Hor** **88.46 44** P **P** **04 32 03.6 +0.5**
YBH IAmb IAmb 04 32 27.4
comp=Z,23nm,1.3s
SHL **Shillong** **88.81 298** P **P** **04 32 05.7 +0.4**
SHL pmax pmax
comp=Z,41nn,1.2s
SHL **Shillong** **88.81 298** P **P** **04 32 05.7 +0.4**
ULN **Ulaanbaatar** **88.87 323***c**e*P **P** **04 32 05.3 +0.3**
ULN pmax pmax
comp=Z,47nm,1.1s
ULN **Ulaanbaatar** **88.87 323** P **P** **04 32 05.5 +0.4**
OMMB **Old Mammoth Mi** **88.94 49** P **P** **04 32 07.0 +1.1**
OMMB IAmb IAmb 04 32 29.0
comp=Z,26nm,1.4s
GTA **Gaotai** **88.96 313** *e*P **P** **04 32 06.6 +1.0**
GTA pP pP 04 32 25.5 +0.9
GTA sP sP 04 32 34.5 +2.5
GTA pmax pmax
comp=Z,17nm,1.2s
GTA pmax pmax
comp=Z,83nm,8.9s
GTA LR LR
comp=Z,210nm,21.0s
GTA LR LR
comp=Z,750nm,21.8s
GTA LR LR
comp=Z,490nm,21.1s
L04D **Klamath Falls** **88.96 44** P **P** **04 32 06.1 +0.5**
baz=240
YAK **Yakutsk** **89.04 342** LR LR 05 07 44.9
comp=Z,235nm,21.9s,baz=166,slow=33
YAK **Yakutsk** **89.04 342** *e*P **P** **04 32 04.3 -0.9**
YAK *e**PP **pP** **04 32 23.8 -0.4**
YAK *e* 04 35 42.5
YAK *e*PPP PPP 04 37 31.4
YAK *e*S **SKSac** **04 42 23.9 -4.3**
YAK *e* 04 42 47.6
YAK *e*SS **SS** **04 48 40.2 -2.7**
YAK *e*SSS SSS 04 52 13.2
YAK pmax pmax
comp=Z,24nm,1.0s
YAK pmax pmax
comp=N,10.0nm,0.9s
YAK pmax pmax
comp=E,5.0nm,1.0s
YAK pmax pmax
comp=Z,56nm,3.0s
YAK pmax pmax
comp=N,47nm,3.0s
YAK pmax pmax
comp=E,30nm,2.6s
YAK smax smax
comp=N,160nm,2.2s
YAK smax smax
comp=E,29nm,1.9s
YAK **Yakutsk** **89.04 342** P **P** **04 32 04.3 -0.9**
M04C **Macdoel** **89.05 44** P **P** **04 32 06.6 +0.6**
baz=240
CWC **Cottonwood Cre** **89.05 50** P **P** **04 32 06.5 +0.3**
baz=242
WAKR **Walker** **89.06 48** P **P** **04 32 06.3 0.0**
WAKR IAmb IAmb 04 32 31.1
comp=Z,25nn,1.2s
BEKR **Beckworth** **89.08 46** IAmb IAmb 04 32 30.0
comp=Z,35nn,1.5s
BILL **Bilibino** **89.17 359***c* *i*P **P** **04 32 05.0 -0.8**
BILL *i**PP **pP** **04 32 23.6 -1.1**
BILL *e**SP **sP** **04 32 36.2 +4.0**
BILL pmax pmax
comp=Z,25nn,1.4s
BILL MLR MLR
comp=Z,135nn,19.0s
BILL **Bilibino** **89.17 359** P **P** **04 32 04.9 -0.8**
BILL IAmb IAmb 04 32 06.4
comp=Z,21nn,1.2s
SONM **Songino Array** **89.22 323** P **P** **04 32 06.8 +0.1**
comp=Z,31nn,1.1s,baz=141,slow=4.5,SNR=93
SONM LR LR 05 09 23.0
comp=Z,185nn,21.9s,baz=114,slow=34
PNTR **Pine Nut** **89.23 47** P **P** **04 32 07.0 0.0**
PNTR IAmb IAmb 04 32 32.8
comp=Z,19nn,1.1s
DIB **Dawson Inlet,** **89.42 31** P **P** **04 32 07.6 +0.4**
DIB IAmb IAmb 04 32 33.7
comp=Z,32nn,1.2s
YERR **Yerington** **89.42 47** IAmb IAmb 04 32 32.4
comp=Z,23nn,1.3s
GSC **Goldstone, Bar** **89.45 52** P **P** **04 32 07.7 -0.3**
GSC pmax pmax
comp=Z,41nn,1.8s
GSC **Goldstone, Bar** **89.45 52** P **P** **04 32 07.7 -0.3**
GSC IAmb IAmb 04 32 31.9
comp=Z,41nn,1.8s
BELC **Belle Mtn. Jos** **89.47 53** P **P** **04 32 08.7 +0.5**
baz=244
G009 **Cerro Castillo** **89.54 146** P **P** **04 32 09.0 +0.9**
SRIG **Santa Rosalia** **89.56 60** P **P** **04 32 07.0 -1.6**
PAHR **Pah Rah Range** **89.67 47** IAmb IAmb 04 32 32.7
comp=Z,40nn,1.6s
I04A **Tendick Farm,** **89.69 42** P **P** **04 32 09.0 +0.1**
baz=240
SCM **Sheep Creek Mo** **89.69 19** IAmb IAmb 04 32 14.4
comp=Z,11nn,0.7s
RYN **Ryan** **89.75 48** P **P** **04 32 08.7 -0.7**
RYN IAmb IAmb 04 32 33.2
comp=Z,23nn,1.4s
NVAR **Mina Array Bea** **89.81 48** P **P** **04 32 09.3 -0.5**
comp=Z,4.1nn,0.9s,baz=227,slow=7.1,SNR=20
NVAR LR LR 05 03 52.2
comp=Z,474nn,21.7s,baz=242,slow=30
H04D **Lebanon** **89.86 41** P **P** **04 32 09.8 +0.3**
baz=239
NV11 **Mina Array Sit** **89.92 48** IAmb IAmb 04 32 33.8
comp=Z,30nn,1.4s
FURC **Furnace Creek,** **89.94 51** P **P** **04 32 10.4 +0.4**
baz=243
KTH **Kantishna Hill** **90.04 16** P **P** **04 32 11.5 +1.5**
F03A **Seaside** **90.08 40** IAmb IAmb 04 32 48.2
comp=Z,38nn,1.3s
MOD **Modoc Plateau** **90.10 45** IAmb IAmb 04 32 35.3
comp=Z,23nn,1.2s
J05D **Fort Rock, OR** **90.18 43** P **P** **04 32 11.3 0.0**
baz=240
KVN **Kaiserville** **90.24 48** IAmb IAmb 04 32 35.3
comp=Z,27nn,1.4s
E03A **Lebam** **90.40 39** IAmb IAmb 04 32 17.4
comp=Z,21nn,0.9s

Y12C **Blythe** **90.47 54** P **P** **04 32 13.2 +0.5**
Y12C IAmb IAmb 04 32 36.8
comp=Z,21nn,1.1s
TPNV **Topopah Spring** **90.59 50** P **P** **04 32 13.2 -0.2**
baz=244
TPNV **Topopah Spring** **90.59 50** IAmb IAmb 04 32 37.2
comp=Z,48nn,1.7s
PINE **Pine Mountain** **90.61 43** IAmb IAmb 04 32 18.8
comp=Z,17nn,0.8s
113A **Mohawk Valley,** **90.62 55** **sP** **04 32 35.6 -4.2**
113A IAmb IAmb 04 32 37.5
comp=Z,33nn,1.6s
I05D **Terrebonne, OR** **90.63 42** P **P** **04 32 13.1 -0.2**
baz=240
NLWA **Neilton Lookou** **90.66 38** IAmb IAmb 04 32 37.3
comp=Z,33nn,1.4s
MCARA **McCarthy VSAT** **90.71 21** IAmb IAmb 04 32 34.3
comp=Z,19nn,1.1s
F04A **Amboy** **90.77 40** IAmb IAmb 04 32 18.7
comp=Z,16nn,0.8s
BARN **Barnard Glacie** **90.93 21** IAmb IAmb 04 32 18.9
comp=Z,13nn,0.8s
CTGM **Chitina Glacie** **90.97 22** IAmb IAmb 04 32 18.9
comp=Z,14nn,0.8s
E04D **Cinebar** **90.99 40** P **P** **04 32 15.2 +0.4**
baz=240
214A **Organ Pipe Nat** **91.02 56** P **P** **04 32 16.1 +0.8**
214A IAmb IAmb 04 32 39.5
comp=Z,30nn,1.5s
SHPR **Sheep Range** **91.18 51** IAmb IAmb 04 32 40.3
comp=Z,28nn,1.5s
D03D **Eldon** **91.19 39** P **P** **04 32 16.4 +0.7**
baz=239
HSIG **91.29 59** P **P** **04 32 16.4 -0.2**
HSIG IAmb IAmb 04 32 41.1
comp=Z,24nm,1.3s
BOD **Bodaibo** **91.46 334** *e*P **P** **04 32 15.4 -1.2**
BOD pmax pmax
comp=Z,20nn,1.5s
I07A **Izee** **91.66 43** IAmb IAmb 04 32 48.6
comp=Z,14nn,1.3s
HDA **Harding Lake** **91.80 17** P **P** **04 32 16.8 -1.2**
baz=220
HDA **Harding Lake** **91.80 17** IAmb IAmb 04 32 38.4
comp=Z,17nn,1.4s
J08A **Circle Bar Ran** **91.98 44** IAmb IAmb 04 32 24.5
comp=Z,8.4nm,0.8s
ILAR **Eielson Array** **92.09 17** P **P** **04 32 17.3 -2.1**
comp=Z,2.5nm,0.5s,baz=234,slow=4.9,SNR=22
ILAR LR LR 05 08 46.9
comp=Z,477nm,20.3s,baz=232,slow=32
B05A **Bryant** **92.13 38** P **P** **04 32 20.6 +0.6**
baz=240
HYT **Haines Junctio** **92.23 23** IAmb IAmb 04 32 43.3
comp=Z,11nn,1.0s
ZAK **Zakamensk** **92.31 324** *e*P **P** **04 32 20.3 -0.6**
ZAK pmax pmax
comp=Z,28nn,1.2s
SCRK **Sand Creek** **92.32 19** IAmb IAmb 04 32 21.7
comp=Z,24nn,1.7s
TLY **Talaya** **92.79 325***c* *i*P **P** **04 32 22.9 -0.1**
TLY pmax pmax
comp=Z,20nn,1.1s
TLY **Talaya** **92.79 325** P **P** **04 32 22.5 -0.6**
TLY IAmb IAmb 04 32 24.1
comp=Z,18nn,1.1s
X16A **Lo Mia Camp, P** **93.07 54** **sP** **04 32 47.0 -4.5**
X16A IAmb IAmb 04 32 49.2
comp=Z,24nn,1.4s
DLBC **Dease Lake** **93.68 27** P **P** **04 32 25.2 -1.8**
comp=Z,4.8nm,1.0s,baz=165,slow=15,SNR=4.9
DLBC **Dease Lake** **93.68 27** IAmb IAmb 04 32 50.2
comp=Z,20nn,1.1s
EGAK **Eagle** **93.75 19** IAmb IAmb 04 32 31.4
comp=Z,14nn,0.7s
MOY **Mondy** **94.21 324** *e*P **P** **04 32 29.5 -0.2**
MOY pmax pmax
comp=Z,35nn,2.9s
TOLK **Toolik Lake Re** **94.46 14** P **P** **04 32 29.6 -0.7**
baz=218
TOLK **Toolik Lake Re** **94.46 14** IAmb IAmb 04 32 31.1
comp=Z,19nn,1.6s
PLCA **Paso Flores** **96.61 138** LR LR 05 06 39.9
comp=Z,200nn,20.9s,baz=228,slow=29
LC01 **Cunco** **96.81 136** IAmb IAmb 04 32 42.9
comp=Z,9.3nn,0.9s
TIXI **Tiksi** **96.92 348** P **P** **04 32 39.8 -1.6**
comp=Z,1.5nn,0.8s,baz=89,slow=4.1,SNR=3.7
TIXI **Tiksi** **96.92 348***c**e*P **P** **04 32 39.5 -1.9**
TIXI pmax pmax
comp=Z,3.0nm,1.1s
TXAR **Lajitas Array** **97.31 61** P Pdif 04 32 45.2 +0.8
comp=Z,0.3nn,0.7s,baz=251,slow=2.8,SNR=2.4
TXAR LR LR 05 07 54.3
comp=Z,539nn,21.3s,baz=0.0,slow=30
PDAR **Pinedale Array** **97.67 47** P **P** **04 32 45.3 -0.5**
comp=Z,0.3nn,0.8s,baz=243,slow=2.9,SNR=2.4
INK **Inuvik** **98.38 18** P **P** **04 32 46.4 -1.7**
comp=Z,2.9nn,0.8s,baz=212,slow=7.0,SNR=7.8
INK **Inuvik** **98.38 18** IAmb IAmb 04 33 10.1
comp=Z,19nn,1.4s
WMQ **Urumqi** **99.04 313** *e*P **Pdif** **04 32 52.8 +1.1**
WMQ pmax pmax
comp=Z,14nn,0.7s
WMQ pmax pmax
comp=Z,12nn,4.9s
WMQ LR LR
comp=Z,120nn,19.9s
WMQ LR LR
comp=Z,170nn,19.9s
WMQ LR LR
comp=Z,440nn,25.1s
C36M **Paulatuk** **101.82 19** P **Pdif** **04 33 02.4 -0.9**
baz=241
YKA **Yellowknife Ar** **102.30 27** P **Pdif** **04 33 05.0 -0.6**
comp=Z,1.2nn,0.8s,baz=258,slow=4.4,SNR=8.1
YKA PKiKP **PKiKP** **04 37 26.3 -0.8**
comp=Z,0.4nn,0.8s,baz=234,slow=1.1,SNR=3.8
YKA PKKPbc **PKKPbc** **04 49 07.4 -2.5**
comp=Z,0.1nn,0.6s,baz=66,slow=3.1,SNR=5.4
A36M **Sachs Harbour** **102.79 17** P **Pdif** **04 33 07.9 +0.3**
baz=240
MKAR **Makanchi Array** **103.61 315** Pdiff **Pdif** **04 33 12.8 +1.0**
comp=Z,1.0nn,0.6s,baz=108,slow=4.0,SNR=12
MKAR PKiKP **PKiKP** **04 37 28.1 -1.9**
comp=Z,5.0nn,1.1s,baz=125,slow=2.4,SNR=10
MKAR PKKPbc **PKKPbc** **04 49 03.7 -1.8**
comp=Z,0.4nn,0.5s,baz=263,slow=1.6,SNR=4.4
ZALV **Zalesovo Beam** **104.11 323** Pdiff **Pdif** **04 33 14.1 +0.2**
comp=Z,0.7nn,0.6s,baz=92,slow=8.2,SNR=4.5
ZALV PKiKP **PKiKP** **04 37 30.2 -0.4**
comp=Z,0.9nn,0.6s,baz=48,slow=2.2,SNR=5.1
BRVK **Borovoye** **112.44 320***c* *i*PKiKP **PKiKP** **04 37 46.5 +0.3**
BRVK pmax pmax
comp=Z,8.0nm,2.5s
SVE **Sverdlovsk** **118.08 324** *e*PKiKP **PKiKP** **04 37 57.2 +0.2**
ARU **Arti** **119.25 324** *i* PKiKP **PKiKP** **04 37 59.4 +0.1**
ARU 04 39 21.5
ARU 04 45 02.9
ARU **Arti** **119.25 324** **PKPdf** **04 37 58.3 -0.9**
GEYT **Alibeck** **119.60 302** PKP **PKiKP** **04 38 01.4 +0.8**
comp=Z,2.3nn,0.8s,baz=213,slow=5.1,SNR=6.3
SDV **Santo Domingo** **120.67 92** **PKPdf** **04 38 02.3 -1.2**
D56A **ZEC Mazanza, M** **122.55 47** P **PKPdf** **04 38 03.6 -2.3**
baz=273
CHGQ **Chibougamau** **122.60 44** P **PKPdf** **04 38 03.0 -2.8**
baz=275
MATP **Matopo** **123.82 225** PKP **PKPdf** **04 38 08.7 -0.6**
comp=Z,4.0nn,1.0s,baz=7.3,slow=0.9,SNR=4.7
D58A **Chemin du LacG** **123.83 47** P **PKPdf** **04 38 06.0 -2.4**
baz=275
DAG **Danmarks Havn** **124.38 2** *i* PKiKP **PKPdf** **04 38 06.4 -2.1**
DAG pmax pmax
comp=Z,6.0nm,0.7s
DAG **Danmarks Havn** **124.38 2** *i* P **PKPdf** **04 38 06.4 -2.1**
comp=Z,5.7nm,0.7s
SUMG **Summit** **126.35 10** PKiKP **PKPdf** **04 38 12.8 -0.1**
SUMG **Summit** **126.35 10** **PKPdf** **04 38 12.8 -0.1**
SUMG **Summit** **126.35 10** *i* P **PKPdf** **04 38 12.4 -0.5**
comp=Z,30nn,1.2s
PTGA **Pitinga** **126.69 108** **PKPdf** **04 38 13.7 -1.1**
ARCES **ARCESS Array B** **127.24 345** PKP **PKPdf** **04 38 13.2 -1.0**
comp=Z,4.7nn,0.5s,baz=73,slow=1.7,SNR=44
SJG **San Juan** **127.47 83** PKiKP **PKPdf** **04 38 14.9 -1.2**
SJG **San Juan** **127.47 83** **PKPdf** **04 38 14.9 -1.2**
LSZ **Lusaka** **127.61 229** PKP **PKPdf** **04 38 15.5 -1.1**
comp=Z,1.8nn,0.7s,baz=285,slow=3.2,SNR=3.5

KLMR	**Klimovskoe**	**127.65**	**332**	*e*PKIKP	**PKPdf**	**04 38 13.5**	**-1.7**
KLMR				pmax	pmax		
	comp=Z,22nm,0.9s						
KLMR	**Klimovskoe**	**127.65**	**332**	*e*PKPdf	**PKPdf**	**04 38 13.5**	**-1.7**
KLMR				AMP		04 38 15.9	
	comp=Z,22nm,0.9s						
AKT	**Akhty**	**127.65**	**306**	*e*PKIKP	**PKiKP**	**04 38 16.6**	**+0.1**
AKT				*e*		04 38 39.8	
AKT				*e*		04 40 18.2	
AKT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BDFB	**Brasilia**	**127.77**	**132**	PKP	**PKPdf**	**04 38 16.0**	**-0.9**
	comp=Z,3.2nm,0.7s,baz=243,slow=4.1,SNR=4.4						
KMBO	**Kilima Mbogo**	**128.54**	**250**	PKP	**PKiKP**	**04 38 20.6**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=40,slow=7.7,SNR=4.5						
RAYN	**Ar Rayn**	**128.74**	**284**	PKIKP	**PKiKP**	**04 38 19.4**	**+0.2**
RAYN	**Ar Rayn**	**128.74**	**284**		**PKiKP**	**04 38 19.4**	**+0.2**
VRH	**Novokhopyorsk**	**130.03**	**320**	*e*PKIKP	**PKPdf**	**04 38 18.8**	**-1.2**
VRH				pmax	pmax		
	comp=Z,20nm,1.4s						
KBZ	**Khabaz**	**130.93**	**310**	PKP	**PKiKP**	**04 38 23.6**	**+0.8**
	comp=Z,1.9nm,0.9s,baz=209,slow=5.1,SNR=3.6						
KBZ				SKPbc	**SKPab**	**04 41 41.1**	**+0.8**
	comp=Z,2.6nm,0.9s,baz=80,slow=6.5,SNR=9.1						
LPSR	**Galich'ya Gora**	**131.22**	**322**	*e*PKIKP	**PKPdf**	**04 38 22.2**	**0.0**
LPSR				pmax	pmax		
	comp=Z,20nm,1.6s						
OBN	**Obninsk**	**131.54**	**326**	⇓*i*PKIKP	**PKiKP**	**04 38 24.1**	**+0.4**
OBN						04 45 27.0	
OBN				PS	**SP**	**04 50 42.0**	**-6.4**
OBN				*e*		04 52 40.5	
OBN				pmax	pmax		
	comp=Z,9.0nm,0.5s						
VSR	**Storozhevoye**	**131.55**	**320**	*e*PKIKP	**PKPdf**	**04 38 21.0**	**-1.9**
VSR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VORD	**Divnogorie**	**131.56**	**320**	*e*PKIKP	**PKPdf**	**04 38 21.4**	**-1.5**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BCA	**Borcka**	**132.21**	**307**	⇑P	**PKiKP**	**04 38 26.3**	**+0.7**
FINES	**FINESS Array B**	**132.74**	**337**	PKhKP	PKPpre	04 38 13.8	
	comp=Z,0.7nm,0.6s,baz=60,slow=4.6,SNR=5.5						
FINES				PKP	**PKPdf**	**04 38 24.1**	**-0.7**
	comp=Z,3.2nm,0.5s,baz=33,slow=3.4,SNR=21						
FINES				SKPbc	**SKPbc**	**04 41 45.7**	**-0.2**
	comp=Z,21nm,1.0s,baz=69,slow=4.2,SNR=26						
VSU	**Vasula**	**134.40**	**334**	*e*P	**PKiKP**	**04 38 28.6**	**+0.5**
ISAL	**Salakas**	**136.43**	**331**	*e*P	**PKiKP**	**04 38 34.2**	**+0.6**
IIGN	**Ignalina**	**136.52**	**330**	*e*P	**PKiKP**	**04 38 34.5**	**+0.7**
PABE	**Paberze**	**137.44**	**332**	*e*P	**PKPdf**	**04 38 33.7**	**0.0**
AKASG	**Malin Array Be**	**137.50**	**323**	PKP	**PKPdf**	**04 38 33.9**	**-0.2**
	comp=Z,3.7nm,0.7s,baz=70,slow=2.6,SNR=14						
AKASG				SKPbc	**SKPbc**	**04 42 00.5**	**-0.8**
	comp=Z,4.6nm,0.8s,baz=61,slow=3.2,SNR=20						
NB2	**NORSAR Subarra**	**137.62**	**345**	PKPdf	**PKPdf**	**04 38 32.1**	**-1.9**
	comp=Z,2.2nm,0.7s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**137.62**	**345**	PKP	**PKPdf**	**04 38 34.2**	**+0.1**
	comp=Z,4.2nm,0.9s,baz=36,slow=1.9,SNR=8.7						
NOA				SKPbc	**SKPbc**	**04 42 00.7**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=333,slow=3.0,SNR=3.6						
BR131	**Keskin Array S**	**138.50**	**306**	PKIKP	**PKPdf**	**04 38 36.0**	**-0.5**
BR131	**Keskin Array S**	**138.50**	**306**		**PKPdf**	**04 38 36.0**	**-0.5**
BRTR	**Keskin Array B**	**138.50**	**306**	PKP	**PKPdf**	**04 38 36.9**	**+0.4**
	comp=Z,2.8nm,1.0s,baz=139,slow=2.9,SNR=9.9						
BRTR				PP	**PP**	**04 41 32.6**	**+5.1**
	comp=Z,0.9nm,1.0s,baz=82,slow=2.6,SNR=3.6						
BRTR				SKPbc	**SKPbc**	**04 42 06.3**	**+1.5**
	comp=Z,1.7nm,0.9s,baz=104,slow=4.2,SNR=6.9						
SORM	**Soroca**	**139.22**	**320**	⇑P	**PKPdf**	**04 38 37.1**	**-0.2**
SORM	**Soroca**	**139.22**	**320**	⇑PKIKP	**PKPdf**	**04 38 37.1**	**-0.2**
TOPG	**Topolog**	**140.60**	**316**	⇓P	**PKPdf**	**04 38 37.7**	**-2.2**
CFR	**Carcaliu**	**140.63**	**316**	⇑P	**PKiKP**	**04 38 43.0**	**+0.4**
CFR	**Carcaliu**	**140.63**	**316**	⇑PKIKP	**PKiKP**	**04 38 43.0**	**+0.4**
ORH	**Orhaniye**	**140.84**	**309**	P	**PKiKP**	**04 38 44.3**	**+1.1**
BIZ	**Bicaz**	**141.12**	**320**	⇓P	**PKPdf**	**04 38 35.8**	**-5.0**
VRI	**Vrincioaia**	**141.23**	**318**	⇓P	**PKiKP**	**04 38 42.8**	**-1.0**
VRI	**Vrincioaia**	**141.23**	**318**	⇓PKIKP	**PKiKP**	**04 38 42.8**	**-1.0**
BEL	**Belsk**	**141.24**	**329**	*e*PKP	**PKiKP**	**04 38 43.7**	**+0.1**
BEL				LMZ	LR	05 36 59.3	
	comp=Z,0.5nm,26.7s						
BURAR	**Bucovina Array**	**141.32**	**321**	⇑P	**PKPdf**	**04 38 37.6**	**-3.7**
BURAR	**Bucovina Array**	**141.32**	**321**	⇑PKIKP	**PKPdf**	**04 38 37.6**	**-3.7**
MLR	**Muntele Rosu**	**141.89**	**318**	⇑P	**PKPdf**	**04 38 39.3**	**-3.1**
MLR	**Muntele Rosu**	**141.89**	**318**	⇑PKIKP	**PKPdf**	**04 38 39.3**	**-3.1**
KOLS	**Kolonicke sedl**	**142.26**	**325**	*e*PKIKP	**PKPdf**	**04 38 43.9**	**+1.1**
KOLS	**Kolonicke sedl**	**142.26**	**325**	*e*PKP	**PKPdf**	**04 38 43.9**	**+1.1**
UZH	**Uzhgorod**	**142.42**	**324**	*e*PKHKP	PKPpre	04 38 38.0	
UZH				*e*		04 38 41.5	
UZH				*i*		04 38 59.4	
TRPA	**Tarpa**	**142.57**	**323**	⇑P	**PKPdf**	**04 38 41.1**	**-2.2**
CJR	**Cluj-Napoca**	**142.73**	**321**	⇓P	**PKPdf**	**04 38 40.9**	**-2.8**
CJR	**Cluj-Napoca**	**142.73**	**321**	⇓PKIKP	**PKPdf**	**04 38 40.9**	**-2.8**
OJC	**Ojcow**	**142.76**	**328**	*e*PKP	**PKPdf**	**04 38 43.6**	**0.0**
OJC				LMZ	LR	05 38 13.9	
	comp=Z,0.4nm,25.7s						
ARR	**Arges**	**142.77**	**318**	⇑P	**PKPdf**	**04 38 40.9**	**-3.0**
NIE	**Niedzica**	**143.01**	**327**	*e*PKP	**PKPdf**	**04 38 44.4**	**+0.2**
NIE				LMZ	LR	05 43 20.7	
	comp=Z,0.3nm,21.9s						
ELND	**Elena**	**143.04**	**314**	⇑P	PKPbc	04 38 42.0	+0.7
PLVB	**Pleven**	**143.68**	**315**	⇑P	PKPbc	04 38 44.0	+0.8
ALN	**Alexandroupoli**	**143.71**	**311**	P	PKPab	04 38 42.0	-0.5
OKC	**Ostrava-Krasne**	**143.82**	**329**	*e*PKIKP	**PKPdf**	**04 38 45.5**	**0.0**
OKC				MLR	MLR		
	comp=Z,500nm,22.1s						
OKC	**Ostrava-Krasne**	**143.82**	**329**	*e*PKP	**PKPdf**	**04 38 45.5**	**0.0**
OKC				AMS	AMS	05 38 40.0	
	comp=Z,500nm,22.1s						
DAT	**Datca**	**143.85**	**303**	P	PKPab	04 38 43.4	+0.1
KDZ	**Kurdzhali**	**143.86**	**312**	*i* P	PKPab	04 38 43.2	+0.1
GZR	**Gura Zlata**	**143.89**	**319**	⇑P	PKPbc	04 38 43.5	-0.3
BSEG	**Bad Segeberg**	**143.92**	**339**	*e*PKP	PKPbc	04 38 43.1	-0.3
	baz=39,slow=2.8						
RDO	**Rodhopi**	**143.97**	**311**	P	PKPab	04 38 43.2	-0.3
BODT	**Bodrum**	**143.97**	**304**	P	PKPbc	04 38 44.0	-0.2
SIRR	**Siria**	**144.10**	**321**	⇑P	PKPbc	04 38 44.7	+0.4
PSZ	**Piszkesteto**	**144.14**	**325**	⇓P	PKPbc	04 38 45.0	+0.6
PSZ	**Piszkesteto**	**144.14**	**325**	⇓PKIKP	PKPbc	04 38 45.0	+0.5
PSZ	**Piszkesteto**	**144.14**	**325**		PKPbc	04 38 44.7	+0.3
MORC	**Moravsky Berou**	**144.15**	**329**	*e*PKP	**PKPab**	**04 38 43.7**	**-0.2**
MORC	**Moravsky Berou**	**144.15**	**329**	⇑P	**PKPab**	**04 38 44.1**	**+0.1**
MORC	**Moravsky Berou**	**144.15**	**329**	⇑PKIKP	**PKPab**	**04 38 44.1**	**+0.1**
SMG	**Samos**	**144.16**	**305**	P	**PKPab**	**04 38 43.9**	**-0.4**
SMTH	**Samothraki Isl**	**144.23**	**310**	P	**PKPab**	**04 38 43.6**	**-0.9**
OSTC	**Ostas**	**144.23**	**331**	*e*PKP	PKPbc	04 38 44.7	+0.1
OSTC				*ex*	x	04 39 05.1	
CHVC	**Chvalec**	**144.28**	**331**	*e*PKP	**PKPab**	**04 38 44.1**	**-0.3**
CHVC				AMS	AMS	05 40 20.0	
	comp=Z,700nm,25.4s						
DPC	**Dobruska-Polom**	**144.33**	**331**	*e*PKIKP	**PKPab**	**04 38 44.6**	**0.0**
DPC				*e*		04 39 06.3	
DPC				MLR	MLR		
	comp=Z,500nm,24.6s						
DPC	**Dobruska-Polom**	**144.33**	**331**	*e*PKP	**PKPab**	**04 38 44.6**	**0.0**
DPC				*ep*PKP	**pPKPdf**	**04 39 06.3**	**+0.2**
DPC				AMS	AMS	05 39 30.0	
	comp=Z,500nm,24.6s						
RZN	**Rozhen**	**144.33**	**313**	*i* P	**PKPab**	**04 38 45.0**	**-0.1**
VYHS	**Vyhne**	**144.34**	**326**	*e*PKIKP	**PKPdf**	**04 38 46.0**	**-0.5**
VYHS	**Vyhne**	**144.34**	**326**	*e*PKP	**PKPdf**	**04 38 46.0**	**-0.5**
PGB	**Panagyurishte**	**144.34**	**314**	*i* P	PKPbc	04 38 45.3	0.0
PUNG	**Punghina**	**144.35**	**318**	⇑P	**PKPdf**	**04 38 46.1**	**-0.4**
UPC	**Upice**	**144.36**	**331**	*e*PKIKP	PKPbc	04 38 44.8	-0.2
UPC				MLR	MLR		
	comp=Z,700nm,24.2s						
UPC	**Upice**	**144.36**	**331**	*e*PKP	PKPbc	04 38 44.8	-0.2
UPC				AMS	AMS	05 39 20.0	
	comp=Z,700nm,24.2s						
HERR	**Herculane**	**144.37**	**319**	⇑P	PKPbc	04 38 45.1	-0.1
SIGR	**SIGRI**	**144.43**	**308**	P	**PKPab**	**04 38 45.1**	**-0.2**
BZS	**Buzias**	**144.47**	**320**	⇑P	**PKPab**	**04 38 45.2**	**0.0**
BZS	**Buzias**	**144.47**	**320**	⇑PKIKP	**PKPab**	**04 38 45.2**	**0.0**
CHOS	**Chios island**	**144.55**	**307**	P	PKPbc	04 38 46.2	+0.1
LIA	**Limnos Island**	**144.68**	**310**	P	**PKPab**	**04 38 45.7**	**-0.5**
JAVC	**Velka Javorina**	**144.70**	**328**	*e*PKP	**PKPdf**	**04 38 47.4**	**+0.3**
KAVA	**Kavala**	**144.75**	**312**	P	**PKPab**	**04 38 46.0**	**-0.4**
MDVR	**Moldovita**	**144.85**	**319**	⇓P	**PKPdf**	**04 38 47.3**	**-0.3**
VRAC	**Vranov**	**144.92**	**329**	*e*PKP	**PKPab**	**04 38 46.5**	**-0.3**
VRAC	**Vranov**	**144.92**	**329**	⇑P	**PKPab**	**04 38 46.5**	**-0.3**
VRAC	**Vranov**	**144.92**	**329**	⇑PKIKP	**PKPab**	**04 38 46.5**	**-0.3**
VTS	**Vitosha**	**144.93**	**315**	⇓P	**PKPdf**	**04 38 48.2**	**+0.3**
VTS	**Vitosha**	**144.93**	**315**	*i* P	**PKPab**	**04 38 46.9**	**-0.3**
VTS	**Vitosha**	**144.93**	**315**	⇓PKIKP	**PKPdf**	**04 38 48.2**	**+0.3**
VTS	**Vitosha**	**144.93**	**315**		**PKPab**	**04 38 47.1**	**-0.1**
LAWE	**Loch Awe, Argy**	**144.97**	**355**	*e*P	PKPbc	04 38 45.5	-1.2
LAWE				IAmb	IAmb	04 38 46.6	
	comp=Z,91nm,1.2s						
BRG	**Berggiesshubel**	**144.99**	**333**	*e*PKP	PKPbc	04 38 46.5	-0.4
	comp=Z,96nm,1.1s						
BRG				*i* pPKP	pPKPdf	04 39 06.2	-1.0
	comp=Z,68nm,1.3s						
BRG				*i* PKS	**PKSdf**	**04 42 21.1**	**-1.7**
	comp=Z,38nm,1.7s						
	comp=N,168nm,19.0s						
	comp=E,117nm,13.9s						
	comp=Z,374nm,24.9s						
BRG	**Berggiesshubel**	**144.99**	**333**	*e*PKP	PKPbc	04 38 46.6	-0.3
	baz=39,slow=2.8						
BRG	**Berggiesshubel**	**144.99**	**333**	*e*PKIKP	PKPbc	04 38 46.5	-0.4
BRG				*i*		04 39 06.2	
BRG				pmax	pmax		
	comp=Z,97nm,1.2s						
BRG				pmax	pmax		
	comp=Z,68nm,1.3s						
BRG				pmax	pmax		
	comp=Z,38nm,1.7s						
BRG				MLR	MLR		
	comp=N,168nm,19.0s						
BRG				MLR	MLR		
	comp=E,117nm,13.9s						
BRG				MLR	MLR		
	comp=Z,374nm,24.9s						
ESY	**Stoneypath**	**145.03**	**353**	*e*P	**PKPbc**	**04 38 45.7**	**-1.2**
SMOL	**Smolenice**	**145.04**	**327**	*e*PKIKP	**PKPdf**	**04 38 48.7**	**+1.0**
SMOL	**Smolenice**	**145.04**	**327**	*e*PKP	**PKPdf**	**04 38 48.7**	**+1.0**
MMB	**Musomiste**	**145.05**	**313**	*i* P	**PKPbc**	**04 38 47.3**	**-0.2**
CLL	**Collm**	**145.05**	**334**	*i* PKPbc	**PKPdf**	**04 38 47.4**	**-0.2**
	comp=Z,88nm,1.2s						
CLL				*ep*PKPdf	pPKPab	04 39 06.0	-0.3
CLL				*i* pPKiKP	**pPKiKP**	**04 39 09.9**	**-1.2**
CLL				*e*PP	**PP**	**04 42 07.0**	**+0.9**
CLL				*i* PKSdf	**PKSdf**	**04 42 20.9**	**-2.0**
	comp=Z,24nm,1.8s						
CLL				*es*PPP		04 45 42.0	
CLL				*e*SKKSac	SKKSac	04 48 48.0	-4.2
CLL				*e*PSKS		04 52 20.0	
CLL				*e*PPS	PPS	04 54 42.0	
CLL				*e*SS	**SS**	**05 00 54.0**	**+4.0**
CLL				*e*SSS	SSS	05 06 06.0	
CLL				*e*		05 11 06.0	
CLL				*e*		05 15 12.0	
CLL	**Collm**	**145.05**	**334**	*e*PKP	**PKPdf**	**04 38 47.5**	**-0.1**
	baz=39,slow=2.8						
CLL	**Collm**	**145.05**	**334**	*i* PKIKP	**PKPdf**	**04 38 47.4**	**-0.2**
CLL				*i*		04 39 09.9	
CLL				pmax	pmax		
	comp=Z,88nm,1.2s						
CLL				pmax	pmax		
	comp=Z,24nm,1.8s						
NVR	**Nevrokopi**	**145.05**	**313**	P	**PKPbc**	**04 38 47.0**	**-0.5**
AMGA	**Amorgos Island**	**145.13**	**304**	P	**PKPbc**	**04 38 46.5**	**-1.4**
KRUC	**Moravsky**	**145.18**	**329**	*e*PKP	**PKPbc**	**04 38 47.2**	**-0.4**
NRDL	**Niedersach Rie**	**145.19**	**338**	*e*PKP	**PKPbc**	**04 38 47.2**	**-0.2**
	baz=39,slow=2.8						
FBE	**Freiberg**	**145.20**	**334**	*e*PKP	**PKPbc**	**04 38 47.6**	**0.0**
	baz=39,slow=2.8						
MODS	**Modra-Piesok**	**145.21**	**327**	*e*PKIKP	**PKPdf**	**04 38 48.2**	**+0.2**
MODS	**Modra-Piesok**	**145.21**	**327**	*e*PKP	**PKPdf**	**04 38 48.2**	**+0.2**
RETH	**Rethem/Aller,**	**145.24**	**339**	*e*PKP	**PKPbc**	**04 38 47.3**	**-0.4**
	baz=39,slow=2.8						
ASSE	**Asse, Remlinge**	**145.29**	**337**	*e*PKP	**PKPbc**	**04 38 47.6**	**-0.2**
	baz=39,slow=2.8						
ASSE				*ep*PKP	pPKPab	04 39 06.2	-0.8
GOPC	**GO Pecny, Ondr**	**145.33**	**331**	*e*PKIKP	**PKPbc**	**04 38 47.9**	**-0.2**
GOPC				MLR	MLR		
	comp=Z,700nm,21.5s						
GOPC	**GO Pecny, Ondr**	**145.33**	**331**	*e*PKP	**PKPbc**	**04 38 47.9**	**-0.2**
GOPC				AMS	AMS	05 40 20.0	
	comp=Z,700nm,21.5s						
SRS	**Serrai**	**145.34**	**312**	P	**PKPbc**	**04 38 47.1**	**-1.3**
APE	**Apeiranthos**	**145.34**	**305**	P	**PKPbc**	**04 38 48.1**	**-0.5**
APE	**Apeiranthos**	**145.34**	**305**	⇑P	**PKPbc**	**04 38 48.2**	**-0.4**
APE	**Apeiranthos**	**145.34**	**305**	⇑PKIKP	**PKPbc**	**04 38 48.2**	**-0.4**
ANAF	**Anafi Island**	**145.35**	**303**	P	**PKPbc**	**04 38 48.0**	**-0.6**
KKB	**Krupnik**	**145.37**	**314**	*i* P	**PKPdf**	**04 38 48.5**	**0.0**
OUR	**Ouranopolis**	**145.38**	**311**	P	**PKPdf**	**04 38 47.8**	**-0.7**
PRU	**Pruhonice**	**145.39**	**332**	*e*PKIKP	**PKPdf**	**04 38 47.4**	**-0.8**
PRU				MLR	MLR		
	comp=Z,700nm,25.3s						
PRU	**Pruhonice**	**145.39**	**332**	*e*PKP	**PKPdf**	**04 38 47.4**	**-0.8**
PRU				AMS	AMS	05 38 40.0	
	comp=Z,700nm,25.3s						
ZST	**Bratislava**	**145.42**	**327**	*e*PKIKP	**PKPab**	**04 38 48.7**	**+0.1**
ZST	**Bratislava**	**145.42**	**327**	*e*PKP	**PKPab**	**04 38 48.7**	**+0.1**
TREC	**Trest**	**145.45**	**330**	*e*PKIKP	**PKPdf**	**04 38 48.2**	**-0.2**
TREC	**Trest**	**145.45**	**330**	*e*PKP	**PKPdf**	**04 38 48.2**	**-0.2**
SANT	**Santorini**	**145.59**	**304**	⇓P	**PKPdf**	**04 38 48.8**	**-0.2**
NEUB	**Neuenburg**	**145.61**	**335**	*e*PKP	**PKPdf**	**04 38 48.7**	**+0.1**
	baz=39,slow=2.8						
NEUB				*ep*PKP	**pPKPdf**	**04 39 07.9**	**-0.4**
SOH	**Sokhos**	**145.62**	**312**	P	**PKPdf**	**04 38 48.6**	**-0.4**
IOSP	**Ios island**	**145.63**	**304**	P	**PKPdf**	**04 38 48.1**	**-0.9**
CLZ	**Clausthal**	**145.63**	**337**	*e*PKP	**PKPbc**	**04 38 49.0**	**0.0**
	baz=39,slow=2.8						
ESK	**Eskdalemuir**	**145.69**	**353**	*e*P	**PKPdf**	**04 38 47.6**	**-0.9**
ESK				IAmb	IAmb	04 38 48.8	
	comp=Z,32nm,0.9s						
ESK	**Eskdalemuir**	**145.69**	**353**	PKP2	**PKPdf**	**04 38 47.9**	**-0.6**
ESK	**Eskdalemuir**	**145.69**	**353**		**PKPdf**	**04 38 47.9**	**-0.6**
PLG	**Polygyros**	**145.74**	**311**	P	**PKPdf**	**04 38 48.3**	**-0.9**
NPS	**Neapolis**	**145.76**	**302**	P	**PKPbc**	**04 38 50.1**	**+0.2**
FRGS	**Fruska Gora**	**145.79**	**321**	⇓*i*P	**PKPdf**	**04 38 48.7**	**-0.4**
KNT	**Kendrikon**	**145.79**	**313**	P	**PKPdf**	**04 38 48.7**	**-0.5**
MORH	**Mrgy, Hungar**	**145.84**	**323**	⇓*i*P	**PKPdf**	**04 38 48.6**	**-0.5**
PBCC	**Pribram**	**145.85**	**332**	*e*PKP	**PKPdf**	**04 38 48.9**	**-0.1**
PBCC				*ex*	x	04 39 07.8	
AOS	**Alonnisos**	**145.89**	**309**	P	**PKPdf**	**04 38 46.5**	**-2.9**
LAST	**Lasithi**	**145.89**	**302**	P	**PKPab**	**04 38 51.1**	**+0.1**
VAY	**Valandovo**	**145.95**	**313**	*i* P	**PKPbc**	**04 38 50.3**	**+0.1**
VAY	**Valandovo**	**145.95**	**313**	*i* P	**PKPbc**	**04 38 50.3**	**+0.1**
TANN	**Tannenbergstha**	**145.96**	**334**	*e*PKP	**PKPbc**	**04 38 50.0**	**-0.1**
	baz=39,slow=2.8						
TANN				*ep*PKP	**pPKPdf**	**04 39 08.8**	**-0.1**
NEWG	**New Galloway**	**146.00**	**354**	*e*P	**PKPdf**	**04 38 48.6**	**-0.5**
NEWG				IAmb	IAmb	04 38 49.9	
	comp=Z,65nm,1.2s						
EDMD	**Edmundbyers**	**146.01**	**351**	*e*P	**PKPdf**	**04 38 48.8**	**-0.3**
EDMD				IAmb	IAmb	04 38 50.0	
	comp=Z,48nm,0.9s						
GTTG	**Gottingen**	**146.02**	**337**	*e*PKP	**PKPbc**	**04 38 50.0**	**-0.2**
	baz=39,slow=2.8						
PLN	**Plauen**	**146.03**	**334**	*e*PKP	**PKPbc**	**04 38 50.2**	**0.0**
	baz=39,slow=2.8						
PLN				*ep*PKP	**pPKPdf**	**04 39 09.1**	**+0.1**
STIP	**Stip**	**146.04**	**314**	*i* P	**PKPbc**	**04 38 50.4**	**-0.2**
STIP	**Stip**	**146.04**	**314**	*i* P	**PKPbc**	**04 38 50.4**	**-0.2**
GUNZ	**Gunzen**	**146.05**	**334**	*e*PKP	**PKPbc**	**04 38 50.3**	**0.0**
	baz=39,slow=2.8						
GUNZ				*ep*PKP	pPKPbc	04 39 10.0	+0.2
WERN	**Wernitzgruen**	**146.09**	**334**	*e*PKP	**PKPbc**	**04 38 50.5**	**+0.1**
	baz=39,slow=2.8						
NKC	**Novy Kostel**	**146.10**	**334**	*e*PKP2	**PKPbc**	**04 38 50.3**	**-0.2**
NKC				MLR	MLR		
	comp=Z,400nm,20.3s						
NKC	**Novy Kostel**	**146.10**	**334**	*e*PKP	**PKPbc**	**04 38 50.3**	**-0.2**
NKC				AMS	AMS	05 45 40.0	
	comp=Z,400nm,20.3s						
MOX	**Moxa**	**146.12**	**335**	*e*PKP	**PKPbc**	**04 38 50.2**	**-0.3**
	baz=39,slow=2.8						
IBBN	**Ibbenburen**	**146.13**	**340**	*e*PKP	**PKPbc**	**04 38 50.0**	**-0.4**
	baz=39,slow=2.8						
CONA	**Conrad Observa**	**146.22**	**328**	*e*PKPbc	**PKPdf**	**04 38 50.1**	**+0.3**
	comp=Z,56nm,1.0s,SNR=33						
DION	**Dionisos Attik**	**146.23**	**307**	P	**PKPdf**	**04 38 49.6**	**-0.5**
GDLE	**Glaisdale, N Y**	**146.23**	**350**	*e*P	**PKPdf**	**04 38 48.5**	**-1.0**
GDLE				IAmb	IAmb	04 38 50.9	
	comp=Z,115nm,1.2s						
DIVS	**Divibare**	**146.26**	**319**	*e*P	**PKPdf**	**04 38 45.4**	**-4.6**
PTL	**Penteli**	**146.29**	**307**	P	**PKPdf**	**04 38 50.2**	**0.0**
XOR	**Xorichti**	**146.31**	**310**	P	**PKPdf**	**04 38 49.9**	**-0.3**
IDI	**Anoyia**	**146.32**	**302**	P	**PKPdf**	**04 38 50.9**	**+0.5**
IDI	**Anoyia**	**146.32**	**302**	⇑P	**PKPbc**	**04 38 51.1**	**-0.6**
ATHU	**Athens Univers**	**146.38**	**307**	P	**PKPdf**	**04 38 50.3**	**0.0**
VLY	**Voula,Athens**	**146.41**	**307**	P	**PKPdf**	**04 38 50.3**	**0.0**
SKO	**Skopje**	**146.41**	**315**	*i* P	**PKPab**	**04 38 52.3**	**-0.3**
SKO	**Skopje**	**146.41**	**315**	*i* P	**PKPab**	**04 38 52.3**	**-0.3**
ATH	**Athens Observa**	**146.43**	**307**	P	**PKPbc**	**04 38 51.4**	**-0.4**
MANZ	**Manzenberg**	**146.43**	**334**	*e*PKP	**PKPbc**	**04 38 51.3**	**-0.2**
	baz=39,slow=2.8						
KHC	**Kasperske Hory**	**146.44**	**331**	PKP2	**PKPbc**	**04 38 51.3**	**-0.3**
KHC	**Kasperske Hory**	**146.44**	**331**	*e*PKP	**PKPdf**	**04 38 49.7**	**-0.4**
KHC				*ep*PKP	**pPKPdf**	**04 39 10.5**	**+0.7**
KHC				AMS	AMS	05 40 10.0	
	comp=Z,600nm,22.8s						
KHC	**Kasperske Hory**	**146.44**	**331**	PKPbc	**PKPbc**	**04 38 51.3**	**-0.3**
LIT	**Litokhoron**	**146.52**	**311**	P	**PKPdf**	**04 38 50.6**	**+0.1**
ROTZ	**Rotzenmuhle**	**146.56**	**333**	*e*PKP	**PKPbc**	**04 38 51.7**	**-0.1**
	baz=39,slow=2.8						
GEC2	**GERESS Array S**	**146.60**	**331**	*e*PKP	**PKPbc**	**04 38 51.7**	**-0.4**
	baz=39,slow=2.8						
GEC2	**GERESS Array S**	**146.60**	**331**	PKPbc	**PKPbc**	**04 38 51.5**	**-0.5**
GERES	**GERESS Array B**	**146.60**	**331**	PKPbc	**PKPbc**	**04 38 51.4**	**-0.7**
	comp=Z,36nm,0.8s,baz=38,slow=3.0,SNR=123						
GERES				SKPbc	**SKiKP**	**04 42 25.7**	**+0.9**
	comp=Z,1.1nm,0.9s,baz=58,slow=2.4,SNR=3.5						
UBBA	**Unterbreizbach**	**146.60**	**337**	*e*PKP	**PKPbc**	**04 38 51.6**	**-0.2**
	baz=39,slow=2.8						
KTI	**Kastanea**	**146.66**	**312**	P	**PKPdf**	**04 38 51.2**	**+0.3**
LKR	**Lokris**	**146.72**	**309**	P	**PKPdf**	**04 38 51.3**	**+0.5**
WET	**Wettzell**	**146.74**	**332**	*e*PKP	**PKPbc**	**04 38 52.2**	**-0.2**
	baz=39,slow=2.8						
BBLS	**Lazići**	**146.74**	**319**	⇓*i*P	**PKPbc**	**04 38 51.9**	**-0.7**
HPK	**Haverah Park**	**146.81**	**351**	*e*P	**PKPbc**	**04 38 51.5**	**-0.8**
HPK				IAmb	IAmb	04 38 53.4	
	comp=Z,60nm,1.4s						
VAM	**Vamos**	**146.84**	**302**	P	**PKPab**	**04 38 53.9**	**-0.6**
ARSA	**Arzberg**	**146.84**	**327**	*e*PKPbc	**PKPbc**	**04 38 52.3**	**-0.5**
	comp=Z,16nm,1.1s,SNR=9.6						
HAPS	**Han Pijesak,Bl**	**146.90**	**320**	*e*P	**PKPbc**	**04 38 52.4**	**-0.7**
RUDO	**Rudo**	**146.90**	**319**	⇑*i*P	**PKPbc**	**04 38 52.1**	**-0.9**
DID	**Didima

baz=39,slow=2.8
WLF Walferdange 148.92 339 PKP2 **PKPbc 04 38 58.2 0.0**
WLF Walferdange 148.92 339 **PKPbc 04 38 58.2 0.0**
RETA Reutte 148.92 332 *e*PKPdf **PKPdf 04 38 55.1 +0.8**
comp=Z,28nm,1.1s,SNR=19
SQTA Sankt Quirin 148.92 331 *e*PKPdf **PKPdf 04 38 54.5 +0.2**
comp=Z,27nm,0.6s,SNR=24
MORI Morici 148.93 322 *i* P **PKPbc 04 38 57.1 -1.3**
NVLJ Novalja 148.95 324 *i* P **PKPbc 04 38 57.3 -1.1**
DOU Dourbes 149.03 341 PKPbc **PKPbc 04 38 57.8 -0.6**
DOU PKPab **PKPab 04 39 02.9 +0.2**
DOU pPKP **pPKPbc 04 39 17.4 -0.6**
MONM Monmouth 149.04 351 *e*P **PKPbc 04 38 57.1 -1.2**
MONM IAmb IAmb 04 39 02.2
comp=Z,101nm,1.3s
UBR Ueberruh 149.05 333 *e*PKP **PKPbc 04 38 58.0 -0.7**
baz=39,slow=2.8
ZIRJ Zirje 149.09 322 *i* P **PKPbc 04 38 57.6 -1.1**
SWN1 Swindon 149.20 350 *e*P **PKPbc 04 38 57.9 -0.8**
SWN1 IAmb IAmb 04 39 03.8
comp=Z,112nm,0.8s
DUGI Dugi Otok 149.21 323 *i* P **PKPbc 04 38 58.4 -0.6**
BFO Black Forest 149.26 335 *e*PKP **PKPbc 04 38 58.4 -0.7**
baz=39,slow=2.8
BFO Black Forest 149.26 335 PKP2 **PKPbc 04 38 58.3 -0.8**
BFO Black Forest 149.26 335 **PKPbc 04 38 58.3 -0.8**
FETA Feichten 149.29 331 *e*PKPdf **PKPdf 04 38 54.1 -0.9**
comp=Z,54nm,0.9s,SNR=23
WOL Wolverton 149.29 349 *e*P **PKPbc 04 38 57.9 -1.1**
WOL IAmb IAmb 04 39 03.7
comp=Z,57nm,0.8s
DAVA Damuels 149.46 333 *e*PKPdf **PKPdf 04 38 55.1 -0.2**
comp=Z,23nm,0.8s,SNR=22
ECH Echery 149.80 337 PKHKP **PKPbc 04 38 59.3 -1.1**
ECH Echery 149.80 337 **PKPbc 04 38 59.3 -1.1**
HTL Hartland 150.09 353 *e*P **PKPbc 04 38 59.8 -1.1**
HTL IAmb IAmb 04 39 01.3
comp=Z,90nm,1.2s
MATE Matera 150.16 316 ⇓P **PKiKP 04 39 02.0 -0.2**
TIP Timpagrande 150.88 314 ⇑P **PKiKP 04 39 04.5 +0.5**
TIP Timpagrande 150.88 314 **PKPdf 04 38 57.0 -0.6**
TIP PKPbc **PKPbc 04 39 03.5 +0.1**
NRCA Norcia 151.04 323 **PKPdf 04 38 57.5 -0.3**
NRCA PKPbc **PKPbc 04 39 03.1 -0.5**
INTR Introdacqua 151.11 321 **PKPbc 04 39 03.4 -0.4**
PRMA PARMA 151.17 329 **PKPbc 04 39 03.9 +0.2**
AQU L'Aquila 151.19 322 *e*P **PKPbc 04 39 03.3 -0.6**
PAOL Paolisi 151.30 319 **PKPbc 04 39 03.6 -0.7**
MSSA Maissana 151.88 329 **PKPbc 04 39 04.1 -1.4**
SSB Saint Sauveur 153.24 336 PKIKP **PKPbc 04 39 07.8 -0.7**
SSB Saint Sauveur 153.24 336 **PKPbc 04 39 07.8 -0.7**
KEST Kesra 157.70 314 PKPab **PKPab 04 39 40.8 +0.8**
comp=Z,15nm,1.2s,baz=300,slow=6.5,SNR=4.8
ESDC Sonseca Array 160.98 345 PKPab **PKPab 04 39 53.2 -0.7**
comp=Z,1.9nm,1.0s,baz=12,slow=3.7,SNR=9.4
LIC Lamto 164.14 199 *e*PKP2 **PKPab 04 40 08.4 +0.2**
comp=Z,156nm,1.6s
KIC Kosan Boka 164.18 200 *e*PKP2 **PKPab 04 40 08.4 0.0**
comp=Z,143nm,1.7s
DBIC Dimbokro 164.51 200 PKPab **PKPab 04 40 09.3 -0.6**
comp=Z,7.2nm,0.7s,baz=145,slow=6.0,SNR=8.1
DBIC Dimbokro 164.51 200 PKIKP **PKPdf 04 39 13.5 -1.5**
DBIC 04 40 10.7
DBIC Dimbokro 164.51 200 PKPdf **PKPdf 04 39 13.5 -1.5**
DBIC **PKPab 04 40 10.7 +0.9**
TIC Toumodi 164.53 200 *e*PKP2 **PKPab 04 40 10.1 +0.1**
TAM Tamanrasset 165.35 278 PKP2 **PKPab 04 40 14.7 +0.7**
TAM Tamanrasset 165.35 278 **PKPab 04 40 14.7 +0.7**
TORD Torodi Ar. Bea 166.01 236 PKP **PKPdf 04 39 15.9 -0.4**
comp=Z,1.5nm,1.0s,baz=80,slow=1.2,SNR=6.1
TORD PKPab **PKPab 04 40 16.6 -0.1**
comp=Z,1.5nm,0.8s,baz=117,slow=3.0,SNR=7.9

ROM 18 04:23:08.0±0.2, 43°39'9"N×0°0'3"×12°48'7"E±0°0'5", h6km±1km, Md1.0/4, ML0.7/1, Error ellipse: s-maj=0.4km s-min=0.2km az=62.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATVO	**AVT- Monte Val**	**0.06**	**254**	P	Pg	04 23 09.7	+0.1
ATVO				S	Sg	04 23 10.9	+0.3
ATVO				AML	AML		
	comp=N,95μm,0.2s						
ATVO				AML	AML		
	comp=E,58μm,0.1s						
ATVO				END			
ATFO	**Monte Foce - G**	**0.07**	**118**	P	Pg	04 23 09.7	0.0
ATFO				S	Sg	04 23 11.2	+0.3
ATFO				AML	AML		
	comp=N,83μm,1.2s						
ATFO				AML	AML		
	comp=E,77μm,0.3s						
ATFO				END			
ATPI	**Pietralunga -**	**0.08**	**310**	P	Pg	04 23 10.0	+0.2
ATPI				S	Sg	04 23 11.7	+0.5
ATPI				END			
MURB	**Monte Urbino**	**0.14**	**169**	P	Pg	04 23 11.2	+0.4
MURB				S	Sg	04 23 13.8	+1.1
MURB				AML	AML		
	comp=E,38μm,1.4s						
MURB				AML	AML		
	comp=N,34μm,0.7s						
PIEI	**Pieia**	**0.14**	**14**	P	Pg	04 23 11.2	+0.3
PIEI				S	Sg	04 23 13.9	+1.1
PIEI				AML	AML		
	comp=N,34μm,0.3s						
PIEI				AML	AML		
	comp=E,36μm,0.2s						
PIEI				END			
APEC	**Apecchio**	**0.17**	**343**	AML	AML		
	comp=E,42μm,0.0s						
APEC				AML	AML		
	comp=N,26μm,0.1s						

*BEO **18** 04:23:27.4±1.5, 42°.55N×20°.62E, h0km, ML1.3/3*
RHSSO 18 04:23:24.8±0.3, 44°.71N×18°.01E, h4km±3km, ML1.6/6, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLY	**Banja Luka**	**0.59**	**274**	*e*Pg	Pg	04 23 36.2	+0.1
BLY				*e*Sg	Sg	04 23 43.7	-0.1
BLY	**Banja Luka**	**0.59**	**274**	P	Pg	04 23 36.5	+0.4
BLY				AML	AML		
	comp=E,46μm,1.5s						
BLY				AML	AML		
	comp=N,37μm,1.5s						
BLY				AML	AML		
	comp=N,37μm,1.5s						
BLY				AML	AML		
	comp=E,46μm,1.5s						
MGRS	**Mrkonjic Grad**	**0.72**	**246**	*e*Pg	Pg	04 23 37.5	-1.2
MGRS				*e*Sg	Sg	04 23 48.4	+0.3
HAPS	**Han Pijesak,BI**	**0.92**	**132**	*e*Pg	Pg	04 23 41.6	-0.8
HAPS				*e*Sg	Sg	04 23 54.0	-0.3
MOSL	**Moslavina**	**1.27**	**316**	*e*Pg	Pg	04 23 48.4	-0.7
MOSL				Sg	Sg	04 24 04.2	-1.3
KIJV	**Kijevo**	**1.35**	**239**	*e*Pg	Pn	04 23 49.8	-0.5
KIJV				Sg	Sb	04 24 08.4	+0.2
FRGS	**Fruska Gora**	**1.35**	**70**	*e*Pg	Pn	04 23 49.4	-1.1
FRGS				*e*Sg	Sg	04 24 07.9	-0.4
RICI	**Ricice**	**1.37**	**208**	*e*Pn	Pb	04 23 50.9	-0.1
RICI				Sn	Sn	04 24 10.4	+1.1
DIVS	**Divibare**	**1.55**	**113**	*e*Pg	Pg	04 23 55.1	+0.7
DIVS				*e*Sg	Sg	04 24 18.7	+4.2
DIVS	**Divibare**	**1.55**	**113**	*e*Pn	Pn	04 23 52.7	-0.5
DIVS				*e*Sn	Sn	04 24 13.5	-0.2
MORH	**Mrgy, Hungar**	**1.57**	**16**	*e*Pn	Pn	04 23 53.1	-0.3
MORH				*e*Sn	Sn	04 24 13.8	-0.3
MAKA	**Makarska**	**1.59**	**207**	*e*Pn	Pb	04 23 54.4	-0.3
MAKA				Sn	Sb	04 24 15.5	+0.3
TRUS	**Trudelj**	**1.78**	**105**	*e*Pg	Pb	04 23 58.0	0.0
TRUS				*e*Sg	Sb	04 24 21.1	+0.4
KALN	**Kalnik**	**1.79**	**323**	*e*Pn	Pb	04 23 57.4	-0.8
KALN				Sn	Sg	04 24 21.9	-0.5
STON	**Ston**	**1.85**	**187**	*e*Pn	Pb	04 23 58.5	-0.6
MORI	**Morici**	**1.86**	**244**	*e*Pn	Pb	04 23 58.8	-0.4
MORI				Sn	Sb	04 24 23.2	+0.4
ZIRJ	**Zirje**	**2.00**	**239**	*e*Pn	Pn	04 24 00.3	+1.0
ZIRJ				Sn	Sn	04 24 25.8	+1.1
CRES	**Cresnjev**	**2.12**	**303**	*e*Pn	Pn	04 24 00.3	-0.7
CRES				*e*Sn	Sn	04 24 28.3	+0.6
DUGI	**Dugi Otok**	**2.24**	**252**	*e*Pn	Pn	04 24 03.3	+0.8
DUGI				Sn	Sn	04 24 31.5	+1.0

*ISK **18** 04:28:08.3, 41°.86N×41°.75E, h16km, ML2.6/4*
*DDA **18** 04:28:11.4, 41°.64N×41°.87E, h7km±3km, ML2.2*
ISC 18 04:28:10.0±1.3, 41°.71N±0°.07×41°.86E±0°.04, h19km±3km, n12, σ0°80/23, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATM	**Batumi**	**0.16**	**231**	PG	**Pg**	**04 28 14.8**	**+0.3**
BATM				SG	**Sg**	**04 28 18.6**	**+1.1**
BATM	**Batumi**	**0.16**	**231**	*i* P	**Pg**	**04 28 14.7**	**+0.3**
BATM				*i* S	**Sg**	**04 28 17.4**	**0.0**
BCA	**Borcka**	**0.32**	**215**	PG	**Pb**	**04 28 17.2**	**+0.1**
BCA				SG	**Sb**	**04 28 23.6**	**+1.8**
DBOC	**Borcka**	**0.39**	**202**	*i* P	**Pb**	**04 28 18.9**	**+0.5**
DBOC				*i* S	**Sg**	**04 28 23.1**	**-0.5**
DAGI	**Agillar**	**0.63**	**176**	*i* P	**Pn**	**04 28 23.6**	**-0.5**
DAGI				*i* S	**Sg**	**04 28 31.2**	**+0.2**
EPOS	**Posof**	**0.68**	**107**	*i* P	**Pb**	**04 28 23.5**	**+0.2**
EPOS				*i* S	**Sb**	**04 28 31.3**	**-1.1**
DBAD	**Bademkaya**	**0.70**	**190**	*i* P	**Pg**	**04 28 24.2**	**+0.5**
DBAD				*i* S	**Sb**	**04 28 32.2**	**-0.7**
DBAD				IAML		04 28 38.0	
	comp=N,74nm,0.5s						
DDEM	**Demirkent**	**0.82**	**186**	*i* P	**Pn**	**04 28 26.6**	**0.0**
DDEM				*i* S	**Sb**	**04 28 35.3**	**-1.1**
DDEM				IAML		04 28 45.0	
	comp=E,120nm,0.4s						
DDEM				IAML		04 28 45.0	
	comp=N,113nm,0.3s						
CHOM	**Cayeli-Rize**	**1.03**	**234**	PG	**Pb**	**04 28 28.8**	**-0.4**
CHOM				SG	**Sg**	**04 28 44.5**	**+1.1**
AKH	**Akhalkalaki**	**1.26**	**103**	PN	**Pb**	**04 28 33.6**	**+0.4**
AKH				SN	**Sg**	**04 28 51.9**	**+1.1**
KRIK	**Erzurum-spir**	**1.54**	**208**	*i* P	**Pg**	**04 28 39.1**	**-0.5**
KRIK				*i* S	**Sb**	**04 28 57.0**	**-0.2**
ESPY	**Espiye-Giresun**	**2.49**	**253**	PN	**Pn**	**04 28 48.7**	**-0.8**

*IDC **18** 04:34:44.0±1.2, 13°.60S×165°.74E, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.7/35, mbtmp3.8/6, ML4.2/1, Error ellipse: s-maj=41.5km s-min=27.1km az=117.0*
ISC 18 04:34:49.0±1.1, 13°.7S±0°.1×165°.8E±0°.2, h35km, n6, σ1°22/7, mb3.6/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.31**	**176**	Pn	**Pn**	**04 36 46.8**	**-0.3**
	3.1nm,0.3s,baz=315,slow=6.2,SNR=23						
DZM				Sn	**Sn**	**04 38 19.0**	**-0.8**
	0.4nm,0.3s,baz=105,slow=20,SNR=1.4						
WRA	**Warramunga Arr**	**30.71**	**254**	P	**P**	**04 41 00.7**	**-0.2**
	0.8nm,1.0s,baz=87,slow=9.5,SNR=1.7						
ASAR	**Alice Springs**	**31.72**	**247**	P	**P**	**04 41 09.5**	**-0.3**
	0.3nm,0.7s,baz=77,slow=9.6,SNR=1.8						
VNDA	**Vanda**	**63.81**	**181**	P	**P**	**04 45 19.3**	**+2.0**
	0.3nm,0.6s,baz=5.9,slow=8.7,SNR=3.6						
ILAR	**Eielson Array**	**86.03**	**18**	P	**P**	**04 47 25.8**	**+0.2**
	1.1nm,0.5s,baz=228,slow=5.8,SNR=25						
YKA	**Yellowknife Ar**	**97.33**	**27**	P	**P**	**04 48 17.2**	**-1.0**
	0.5nm,1.0s,baz=261,slow=4.4,SNR=4.2						

*KRSC **18** 04:54:57.8±0.6, 54°.70N×161°.25E, h75km±20km, ML4.4, FELT [IV] at GMS Kronoki.*
*IDC **18** 04:54:58.9±0.7, 54°.96N×160°.65E, h86km±7km, mb3.5/13, mb1 3.7/15, mb1mx3.5/37, mbtmp3.8/15, MS4.1/3, Ms1 4.1/3, ms1mx3.4/27, Error ellipse: s-maj=20.5km s-min=12.0km az=142.0*
*MOS **18** 04:54:58.0±0.7, 54°.71N×161°.32E, h76km, mb4.2/1, Error ellipse: s-maj=11.1km s-min=4.4km az=79.9*
*NEIC **18** 04:54:58.9±1.8, 54°.89N±0°.10×160°.8E±0°.2, h86km±3km, mb4.1/3, Error ellipse: s-maj=16.7km s-min=12.0km az=129.0*
ISC 18 04:54:58.7±0.6, 54°.74N±0°.03×161°.12E±0°.04, h86km±5km, n106, σ1°40/151, mb3.8/14, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZV	**Kizimen**	**0.61**	**308**	*e*P	**Pn**	**04 55 13.8**	**-0.3**
KZV				*e*S	**Sn**	**04 55 25.0**	**-0.6**
KZV	**Kizimen**	**0.61**	**308**	PN	**Pn**	**04 55 13.8**	**-0.3**
KZV				S	**Sn**	**04 55 25.0**	**-0.6**
TUMD	**Tumrok D**	**0.62**	**318**	*e*P	**Pn**	**04 55 13.5**	**-0.6**
TUMR	**Tumrok**	**0.78**	**314**	*e*P	**Pn**	**04 55 16.0**	**+0.2**
TUMR				*e*S	**Sn**	**04 55 29.7**	**+1.1**
TUMR	**Tumrok**	**0.78**	**314**	PN	**Pn**	**04 55 16.0**	**+0.2**
TUMR				S	**Sn**	**04 55 29.7**	**+1.1**
KMNR	**Kamenistaya**	**1.14**	**334**	*e*P	**Pn**	**04 55 20.4**	**+0.6**
KMNR				*e*S	**Sn**	**04 55 38.0**	**+2.3**
KMNR	**Kamenistaya**	**1.14**	**334**	PN	**Pn**	**04 55 20.4**	**+0.6**
KMNR				S	**Sn**	**04 55 38.0**	**+2.3**
KII	**Karymskiy**	**1.21**	**235**	*e*P	**Pn**	**04 55 21.1**	**+0.5**
KII				*e*S	**Sn**	**04 55 38.0**	**+0.9**
KII	**Karymskiy**	**1.21**	**235**	PN	**Pn**	**04 55 21.1**	**+0.5**
KII				S	**Sn**	**04 55 38.0**	**+0.9**
BZGR	**Bezymyannyi-Gr**	**1.23**	**349**	*e*P	**Pn**	**04 55 21.4**	**+0.5**
BZGR				*e*S	**Sn**	**04 55 39.4**	**+1.8**
BZGR	**Bezymyannyi-Gr**	**1.23**	**349**	PN	**Pn**	**04 55 21.4**	**+0.5**
BZGR				S	**Sn**	**04 55 39.4**	**+1.8**
BZMR	**Bezymyannaya**	**1.25**	**343**	*e*P	**Pn**	**04 55 22.0**	**+0.8**
BZMR				*e*S	**Sn**	**04 55 39.9**	**+1.7**
BZMR	**Bezymyannaya**	**1.25**	**343**	PN	**Pn**	**04 55 22.0**	**+0.8**
BZMR				S	**Sn**	**04 55 39.9**	**+1.7**
KIRR	**Kirishev**	**1.29**	**340**	*e*P	**Pn**	**04 55 22.2**	**+0.4**
KIRR				*e*S	**Sn**	**04 55 40.2**	**+1.0**
KIRR	**Kirishev**	**1.29**	**340**	PN	**Pn**	**04 55 22.2**	**+0.4**
KIRR				S	**Sn**	**04 55 40.2**	**+1.0**
KPT	**Kopyto**	**1.33**	**338**	*e*P	**Pn**	**04 55 22.6**	**+0.4**
KPT				*e*S	**Sn**	**04 55 40.7**	**+0.8**
KPT	**Kopyto**	**1.33**	**338**	PN	**Pn**	**04 55 22.6**	**+0.4**
KPT				S	**Sn**	**04 55 40.7**	**+0.8**
LGNR	**Loginova**	**1.37**	**350**	*e*P	**Pn**	**04 55 24.0**	**+1.2**
LGNR				*e*S	**Sn**	**04 55 43.0**	**+2.0**
LGNR	**Loginova**	**1.37**	**350**	PN	**Pn**	**04 55 24.0**	**+1.2**
LGNR				S	**Sn**	**04 55 43.0**	**+2.0**
CIRR	**Tsirk**	**1.40**	**351**	*e*P	**Pn**	**04 55 24.0**	**+1.0**
CIRR				*e*S	**Sn**	**04 55 43.3**	**+1.9**
CIRR	**Tsirk**	**1.40**	**351**	PN	**Pn**	**04 55 24.0**	**+1.0**
CIRR				S	**Sn**	**04 55 43.3**	**+1.9**
KOZ	**Kozyrevsk**	**1.50**	**332**	*e*P	**Pn**	**04 55 24.8**	**+0.6**
KOZ				*e*S	**Sn**	**04 55 45.1**	**+1.5**
KOZ	**Kozyrevsk**	**1.50**	**332**	PN	**Pn**	**04 55 24.8**	**+0.6**
KOZ				S	**Sn**	**04 55 45.1**	**+1.5**
KRSR	**Krestovskiy**	**1.51**	**348**	*e*P	**Pn**	**04 55 24.8**	**+0.3**
KRSR				*e*S	**Sn**	**04 55 44.9**	**+0.9**
KRSR	**Krestovskiy**	**1.51**	**348**	PN	**Pn**	**04 55 24.8**	**+0.3**
KRSR				S	**Sn**	**04 55 44.9**	**+0.9**
KLY	**Klyuchi**	**1.60**	**351**	*e*P	**Pn**	**04 55 26.0**	**+0.5**
KLY				*e*S	**Sn**	**04 55 46.5**	**+0.7**
KLY	**Klyuchi**	**1.60**	**351**	PN	**Pn**	**04 55 26.0**	**+0.5**
KLY				S	**Sn**	**04 55 46.5**	**+0.7**
KBTR	**Krutoberegovo**	**1.76**	**33**	*e*P	**Pn**	**04 55 28.2**	**+0.7**
KBTR				*e*S	**Sn**	**04 55 51.3**	**+1.8**
KBTR	**Krutoberegovo**	**1.76**	**33**	PN	**Pn**	**04 55 28.2**	**+0.7**
KBTR				S	**Sn**	**04 55 51.3**	**+1.8**
KBG	**Krutoberegovo**	**1.77**	**30**	*e*P	**Pn**	**04 55 28.2**	**+0.6**
KBG				*e*S	**Sn**	**04 55 51.6**	**+2.0**
KBG	**Krutoberegovo**	**1.77**	**30**	PN	**Pn**	**04 55 28.2**	**+0.6**
KBG				S	**Sn**	**04 55 51.6**	**+2.0**
SPN	**Mys Shipunski**	**1.77**	**202**	*e*P	**Pn**	**04 55 27.5**	**-0.2**
SPN				*e*S	**Sn**	**04 55 49.1**	**-0.6**
SPN	**Mys Shipunski**	**1.77**	**202**	PN	**Pn**	**04 55 27.5**	**-0.2**
SPN				S	**Sn**	**04 55 49.1**	**-0.6**
SRDR	**Sredinnyy**	**1.77**	**334**	*e*P	**Pn**	**04 55 27.9**	**+0.1**
SRDR				*e*S	**Sn**	**04 55 49.5**	**-0.4**
SRDR	**Sredinnyy**	**1.77**	**334**	PN	**Pn**	**04 55 27.9**	**+0.1**
SRDR				S	**Sn**	**04 55 49.5**	**-0.4**
BDR	**Baidarnaya**	**1.83**	**1**	*e*P	**Pn**	**04 55 29.6**	**+1.0**
BDR				*e*S	**Sn**	**04 55 54.1**	**+2.8**
BDR	**Baidarnaya**	**1.83**	**1**	PN	**Pn**	**04 55 29.6**	**+1.0**
BDR				S	**Sn**	**04 55 54.1**	**+2.8**
SMKR	**Semkarok**	**1.86**	**6**	*e*P	**Pn**	**04 55 29.9**	**+1.0**
SMKR				*e*S	**Sn**	**04 55 53.8**	**+1.9**
SMKR	**Semkarok**	**1.86**	**6**	PN	**Pn**	**04 55 29.9**	**+1.0**
SMKR				S	**Sn**	**04 55 53.8**	**+1.9**
SRKR	**Sorokina**	**1.92**	**1**	*e*P	**Pn**	**04 55 30.6**	**+0.9**
SRKR				*e*S	**Sn**	**04 55 56.7**	**+3.4**
SRKR	**Sorokina**	**1.92**	**1**	PN	**Pn**	**04 55 30.6**	**+0.9**
SRKR				S	**Sn**	**04 55 56.7**	**+3.4**
SDLR	**Sedlovina**	**1.97**	**223**	*e*P	**Pn**	**04 55 31.3**	**+0.8**
SDLR	**Sedlovina**	**1.97**	**223**	PN	**Pn**	**04 55 31.3**	**+0.8**
KRER	**Koryakskii**	**2.01**	**225**	*e*P	**Pn**	**04 55 32.0**	**+1.0**
KRER	**Koryakskii**	**2.01**	**225**	PN	**Pn**	**04 55 32.0**	**+1.0**
KRX	**Arik**	**2.01**	**228**	*e*P	**Pn**	**04 55 31.5**	**+0.5**
KRX	**Arik**	**2.01**	**228**	PN	**Pn**	**04 55 31.5**	**+0.5**
SMAR	**Somma**	**2.02**	**224**	*e*P	**Pn**	**04 55 32.1**	**+1.0**
SMAR	**Somma**	**2.02**	**224**	PN	**Pn**	**04 55 32.1**	**+1.0**
AVH	**Avacha**	**2.04**	**225**	*e*P	**Pn**	**04 55 32.6**	**+1.3**
AVH	**Avacha**	**2.04**	**225**	PN	**Pn**	**04 55 32.6**	**+1.3**
KOK	**Koryaka**	**2.06**	**226**	*e*P	**Pn**	**04 55 32.6**	**+1.0**
KOK	**Koryaka**	**2.06**	**226**	PN	**Pn**	**04 55 32.6**	**+1.0**
DALK	**Dalny**	**2.21**	**220**	*e*P	**Pn**	**04 55 34.3**	**+0.8**
DALK				*e*S	**Sn**	**04 56 00.5**	**+0.4**
DALK	**Dalny**	**2.21**	**220**	PN	**Pn**	**04 55 34.3**	**+0.8**
DALK				S	**Sn**	**04 56 00.5**	**+0.4**
PET	**Petropavlovsk**	**2.26**	**221**	PN	**Pn**	**04 55 35.1**	**+1.0**
PET				S	**Sn**	**04 56 03.5**	**+2.3**
PET	**Petropavlovsk**	**2.26**	**221**		**Pn**	**04 55 33.6**	**-0.5**
PEA0B	**Petropavlovsk-**	**2.60**	**232**	PN	**Pn**	**04 55 39.2**	**+0.4**
PEA0B	**Petropavlovsk-**	**2.60**	**232**		**Pn**	**04 55 39.2**	**+0.4**
PETK	**Petropavlovsk-**	**2.60**	**232**	P	**Pn**	**04 55 39.9**	**+1.2**
	4.5nm,0.3s,baz=61,slow=17,SNR=105						
PETK				S	**Sn**	**04 56 11.5**	**+2.0**
	8.5nm,0.3s,baz=64,slow=17,SNR=6.6						
KRMR	**Karymshinskiy**	**2.61**	**224**	*e*P	**Pn**	**04 55 41.1**	**+2.3**
KRMR	**Karymshinskiy**	**2.61**	**224**	PN	**Pn**	**04 55 41.1**	**+2.3**
RUS	**Russkaya**	**2.79**	**215**	*e*P	**Pn**	**04 55 41.4**	**+0.2**
RUS				*e*S	**Sn**	**04 56 14.1**	**+0.2**
RUS	**Russkaya**	**2.79**	**215**	PN	**Pn**	**04 55 41.4**	**+0.2**
RUS				S	**Sn**	**04 56 14.1**	**+0.2**
BKI	**Bering**	**2.83**	**79**	*e*P	**Pn**	**04 55 42.0**	**+0.2**
BKI				*e*S	**Sn**	**04 56 13.5**	**-1.5**
BKI	**Bering**	**2.83**	**79**	PN	**Pn**	**04 55 42.0**	**+0.2**
BKI				S	**Sn**	**04 56 13.5**	**-1.5**
GRL	**Gorelyy**	**2.85**	**221**	*e*P	**Pn**	**04 55 44.1**	**+2.0**
GRL	**Gorelyy**	**2.85**	**221**	PN	**Pn**	**04 55 44.1**	**+2.0**
MTVR	**Mutnovka**	**2.86**	**219**	*e*P	**Pn**	**04 55 43.9**	**+1.6**
MTVR				*e*S	**Sn**	**04 56 18.6**	**+2.7**
MTVR	**Mutnovka**	**2.86**	**219**	PN	**Pn**	**04 55 43.9**	**+1.6**
MTVR				S	**Sn**	**04 56 18.6**	**+2.7**
ASAK	**Asacha**	**3.04**	**220**	*e*P	**Pn**	**04 55 46.4**	**+1.6**
ASAK				*e*S	**Sn**	**04 56 24.0**	**+3.8**
ASAK	**Asacha**	**3.04**	**220**	PN	**Pn**	**04 55 46.4**	**+1.6**
ASAK				S	**Sn**	**04 56 24.0**	**+3.8**
SKR	**Severo-Kuril's**	**5.08**	**219**	*e*PN	Pn	04 56 26.5	+14
SKR				*e*S	**Sn**	**04 57 13.1**	**+3.7**
SKR				smax	smax		
	comp=N,104nm,1.3s						
SKR				smax	smax		
	comp=E,97nm,1.2s						
MA2	**Magadan**	**7.42**	**315**	P	**Pn**	**04 56 43.9**	**-0.3**
	comp=E,1.0nm,0.3s,baz=118,slow=11,SNR=8.0						
KLR	**Kul'dur**	**18.83**	**265**	P	**P**	**04 59 10.2**	**-1.1**
	comp=E,0.1nm,0.3s,baz=63,slow=9.6,SNR=8.0						
TIXI	**Tiksi**	**21.86**	**333**	P	**P**	**04 59 41.8**	**-2.0**
	comp=E,0.8nm,0.3s,baz=122,slow=14,SNR=2.1						
TIXI	**Tiksi**	**21.86**	**333**	P	**P**	**04 59 41.8**	**-2.0**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
TIXI	**Tiksi**	**21.86**	**333**	IAmb	IAmb	05 00 05.5	
	comp=Z,9.1nm,1.3s						
MJAR	**Matsushiro Arr**	**24.06**	**230**	P	**P**	**05 00 05.8**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=18,slow=8.9,SNR=7.0						
ILAR	**Eielson Array**	**27.24**	**48**	P	**P**	**05 00 33.8**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=265,slow=8.1,SNR=9.7						
INK	**Inuvik**	**32.20**	**39**	P	**P**	**05 01 18.2**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=287,slow=7.3,SNR=6.9						
INK	**Inuvik**	**32.20**	**39**	IAmb	IAmb	05 02 21.0	
	comp=Z,5.8nm,1.6s						
H11N2	**WAKE ISLAND Hy**	**35.23**	**171**	T	T	05 39 08.9	
	baz=354,slow=76,SNR=368						
H11N3	**WAKE ISLAND Hy**	**35.24**	**171**	T	T	05 39 05.4	
	baz=354,slow=76,SNR=231						
H11N1	**WAKE ISLAND Hy**	**35.24**	**171**	T	T	05 39 01.4	
	baz=354,slow=76,SNR=240						
H11S1	**WAKE ISLAND Hy**	**36.42**	**171**	T	T	05 40 34.8	
	baz=352,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**36.43**	**171**	T	T	05 40 30.3	
	baz=352,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**36.44**	**171**	T	T	05 40 34.1	
	baz=352,slow=76,SNR=14						
YKA	**Yellowknife Ar**	**41.55**	**44**	P	**P**	**05 02 37.9**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=301,slow=7.6,SNR=24						
YKA				pP	**pP**	**05 02 58.7**	**+1.1**
	comp=Z,0.6nm,0.9s,baz=298,slow=8.0,SNR=4.3						
MK31	**Makanchi Array**	**48.00**	**295**	P	**P**	**05 03 26.5**	**-2.1**
MK31	**Makanchi Array**	**48.00**	**295**	P	**P**	**05 03 26.5**	**-2.1**
M

H11N2 **WAKE ISLAND Hy 29.75 153** T T 06 05 41.3
baz=340,slow=76,SNR=110
H11N1 **WAKE ISLAND Hy 29.76 153** T T 06 05 44.5
baz=340,slow=76,SNR=123
H11N3 **WAKE ISLAND Hy 29.76 153** T T 06 05 48.7
baz=340,slow=76,SNR=75
H11S1 **WAKE ISLAND Hy 30.84 154** T T 06 07 07.2
baz=341,slow=76,SNR=84
H11S3 **WAKE ISLAND Hy 30.84 154** T T 06 07 06.5
baz=341,slow=76,SNR=105
H11S2 **WAKE ISLAND Hy 30.86 154** T T 06 07 10.0
baz=341,slow=76,SNR=94
ILAR **Eielson Array 36.28 39** P **P** **05 35 22.5 +0.1**
0.2nm,0.6s,baz=277,slow=7.1,SNR=2.3
INK **Inuvik 41.33 33** P **P** **05 36 05.8 +1.2**
0.8nm,0.7s,baz=285,slow=7.8,SNR=6.5
MKAR **Makanchi Array 46.55 297** P **P** **05 36 45.9 -0.8**
0.2nm,0.5s,baz=70,slow=6.3,SNR=2.2
YKA **Yellowknife Ar 50.64 37** P **P** **05 37 18.3 +0.4**
0.5nm,0.8s,baz=298,slow=6.9,SNR=7.5
FINES **FINESS Array B 63.51 335** P **P** **05 38 48.3 -0.4**
1.3nm,0.6s,baz=42,slow=7.6,SNR=15
NB2 **NORSAR Subarra 67.70 341** P **P** **05 39 15.9 +0.1**
comp=Z,0.6nm,0.5s,baz=28,slow=6.5
NOA **NORSAR Array B 67.70 341** P **P** **05 39 15.2 -0.6**
comp=Z,0.8nm,0.5s,baz=27,slow=6.4,SNR=5.5
AKASG **Malin Array Be 71.03 326** P **P** **05 39 35.6 -0.8**
comp=Z,1.5nm,0.4s,baz=36,slow=6.2,SNR=8.9
TXAR **Lajitas Array 77.41 60** P **P** **05 40 13.2 -1.0**
comp=Z,0.4nm,0.6s,baz=283,slow=4.6,SNR=5.6

VIE ***18*** *05:32:46.2±0.5, 46°.63N×9°.28E, h4km, ml0.8/1, Error ellipse: s-maj=4.2km s-min=2.0km az=81.0 23 km W of Tiefencastel*

ZUR 18 05:32:45.6, 46°.61N×9°.23E, h5km±3km, MLh1.1/9, 2C-2D, Error ellipse: s-maj=6.7km s-min=1.3km az=97.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUE	**Stuetta**	**0.16**	**149**	Sg	Sg	05 32 51.8	+0.8
VDL	**Val di Lei**	**0.20**	**129**	⇓Pg	Pg	05 32 50.2	+0.6
	0.1nm,SNR=3.1						
VDL				⇓Pg	Pg	05 32 50.2	+0.6
VDL				Sg	Sg	05 32 52.9	+0.7
PANIX	**Pigniu (Panix)**	**0.23**	**340**	⇑Pg	Pg	05 32 50.4	+0.2
	SNR=1.6						
PANIX				⇑Pg	Pg	05 32 50.4	+0.2
FUSIO	**Fusio**	**0.42**	**249**	Pg	Pg	05 32 54.2	+0.4
FUSIO				Pg	Pg	05 32 54.2	+0.4
	SNR=1.7						
DAVOX	**Davos/Dischmat**	**0.48**	**69**	Pg	Pg	05 32 55.0	+0.1
DAVOX				Pg	Pg	05 32 55.0	+0.1
	SNR=1.6						
FETA	**Feichten**	**1.11**	**68**	Pg	Pg	05 33 06.9	-0.1
	0.2nm,0.3s						
FETA				Sg	Sb	05 33 22.0	-0.3
	0.2nm,0.1s						

GEN ***18*** *05:33:46.3, 45°.53N×6°.66E, h16km±1km, Ml0.8*

LDG 18 05:33:47.0±0.1, 45°.51N×6°.73E, h3km, Md1.7/5, Ml1.6/1, Error ellipse: s-maj=2.0km s-min=1.3km az=144.0, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPL	**La Plagne**	**0.00**	**333**	*e*Pg	Pg	05 33 48.1	+0.2
LPL				*e*Sg	Sg	05 33 49.1	+0.6
	68nm,0.2s						
LPG	**La Plagne**	**0.02**	**143**	*e*Pg	Pg	05 33 48.5	+0.5
LPG				*e*Sg	Sg	05 33 49.5	+0.8
	33nm,0.2s						
LSD	**Lago del Serru**	**0.29**	**101**	P	Pg	05 33 53.4	+0.8
LSD				S	Sg	05 33 58.2	+1.8
REMY	**Saint-Rhmy-en**	**0.44**	**42**	P	Pg	05 33 55.4	-0.1
REMY				S	Sg	05 34 01.9	+0.7
RSP	**Reno Superiore**	**0.52**	**134**	P	Pg	05 33 57.2	+0.1
RSP				S	Sg	05 34 04.6	+0.7
CIRO	**Champorcher**	**0.59**	**81**	P	Pg	05 33 58.2	-0.2
CIRO				S	Sg	05 34 07.0	+1.0
RRL	**Rocca Remolon**	**0.59**	**176**	P	Pg	05 33 58.1	-0.3
RRL				S	Sg	05 34 06.2	+0.1
BHB	**Bricherasio**	**0.77**	**151**	P	Pg	05 34 00.6	-1.1
BHB				S	Sg	05 34 11.6	-0.1
MBDF	**Montbardon**	**0.79**	**178**	*e*Pg	Pg	05 34 02.2	+0.1
MBDF				*e*Sg	Sg	05 34 12.2	-0.1
	4.7nm,0.5s						
ORIF	**Oris-en-Rattie**	**0.85**	**226**	*e*Pg	Pg	05 34 03.1	-0.1
ORIF				*e*Sg	Sg	05 34 13.4	-0.8
	2.3nm,0.3s						
VIVF	**Saint-Julien-l**	**1.60**	**246**	*e*Pn	Pn	05 34 14.9	-1.3
VIVF	**Saint-Julien-l**	**1.60**	**246**	*e*Pg	Pb	05 34 17.1	-0.1
VIVF				*e*Sn	Sn	05 34 34.3	-3.1
VIVF				*e*Sg	Sb	05 34 36.9	-0.9
	0.9nm,0.3s						

IDC ***18*** *05:46:32.7±1.0, 6°.47S×154°.58E, h0km, mb3.9/11, mb1 4.1/13, mb1mx4.0/29, mbtmp4.0/13, ML2.4/1, MS3.4/6, Ms1 3.4/6, ms1mx3.0/27, Error ellipse: s-maj=31.1km s-min=19.2km az=121.0*

NEIC ***18*** *05:46:38.0±1.5, 6°.53S±0°.09×154°.59E±0°.05, h35km±2km, mb4.5/8, Error ellipse: s-maj=16.6km s-min=6.5km az=203.0*

ISC 18 05:46:40.3±0.7, 6°.36S±0°.07×154°.41E±0°.09, h48km, n29, σ1§43/28, mb4.0/14, MS3.3/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.10**	**314**	Pn	**Pn**	**05 47 27.8**	**+1.0**
KRVT	**Keravat (AS076**	**3.12**	**311**	Pn	**Pn**	**05 47 26.9**	**-0.2**
	18nm,0.3s,baz=160,slow=4.0,SNR=17						
KRVT				Sn	**Sn**	**05 48 02.5**	**-0.7**
	33nm,0.3s,baz=57,slow=21,SNR=4.1						
HNR	**Honiara**	**6.28**	**119**	LR	LR	05 50 36.5	
	comp=Z,300nm,18.6s,baz=266,slow=40						
PMG	**Port Moresby**	**7.79**	**247**	Pn	**Pn**	**05 48 30.4**	**-0.8**
	2.7nm,0.3s,baz=69,slow=6.6,SNR=7.2						
PMG				Sn	**Sn**	**05 49 58.9**	**+0.8**
	0.9nm,0.3s,baz=2.6,slow=18,SNR=2.9						
PMG				LR	LR	05 51 54.0	
	comp=Z,284nm,18.4s,baz=69,slow=41						
PMG	**Port Moresby**	**7.79**	**247**		**Pn**	**05 48 29.8**	**-1.4**
PMG					**Sn**	**05 50 01.7**	**+3.6**
COEN	**Coen**	**13.38**	**235**	Pn	**Pn**	**05 49 46.4**	**-1.3**
WRAB	**Tennant Creek**	**23.70**	**233**	P	**P**	**05 51 47.9**	**-0.1**
WRAB				IAmb	IAmb	05 52 02.6	
	comp=Z,7.2nm,0.9s						
WRA	**Warramunga Arr**	**23.71**	**233**	P	**P**	**05 51 47.0**	**-1.1**
	comp=Z,3.8nm,0.8s,baz=55,slow=9.6,SNR=12						
WRA				LR	LR	06 01 20.1	
	comp=Z,87nm,18.9s,baz=95,slow=37						
ASAR	**Alice Springs**	**26.17**	**227**	P	**P**	**05 52 08.7**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=57,slow=8.5,SNR=7.7						
ASAR				LR	LR	06 02 21.1	
	comp=Z,77nm,18.4s,baz=103,slow=36						
KNRA	**Kununurra**	**26.79**	**248**	P	**P**	**05 52 15.6**	**-0.6**
KNRA				IAmb	IAmb	05 52 27.8	
	comp=Z,17nm,1.1s						
H11S3	**WAKE ISLAND Hy 27.51**	**26**		T	T	06 20 34.8	
	baz=207,slow=74,SNR=5.8						
H11S2	**WAKE ISLAND Hy 27.51**	**26**		T	T	06 20 22.6	
	baz=207,slow=74,SNR=7.5						
H11S1	**WAKE ISLAND Hy 27.52**	**26**		T	T	06 20 19.9	
	baz=207,slow=74,SNR=5.0						
TNTI	**Ternate**	**27.90**	**284**	P	**P**	**05 52 27.0**	**+0.9**
TNTI				IAmb	IAmb	05 52 28.4	
	comp=Z,12nm,0.7s						
STKA	**Stephens Creek**	**28.07**	**204**	P	**P**	**05 52 26.0**	**-1.4**
	comp=Z,1.1nm,0.7s,baz=22,slow=12,SNR=2.8						
STKA				LR	LR	06 03 42.7	
	comp=Z,78nm,19.2s,baz=39,slow=37						
STKA	**Stephens Creek**	**28.07**	**204**	P	**P**	**05 52 24.5**	**-2.9**
BKZ	**Black Stump Fm**	**38.26**	**152**	P	**P**	**05 53 58.6**	**+2.5**
MJAR	**Matsushiro Arr**	**45.30**	**342**	P	**P**	**05 54 52.5**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=179,slow=11,SNR=2.7						
CMAR	**Chiang Mai Arr**	**59.98**	**295**	P	**P**	**05 56 43.9**	**+1.5**
	comp=Z,0.6nm,0.4s,baz=106,slow=6.7,SNR=1.1						
SONM	**Songino Array**	**68.49**	**327**	P	**P**	**05 57 37.6**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=114,slow=6.6,SNR=4.8						
RND	**Reindeer**	**81.54**	**22**	P	**P**	**05 58 52.1**	**-0.5**

NEA Nenana 82.10 21 P P 05 58 55.3 -0.2
MKAR Makanchi Array 82.54 319 P P 05 58 59.2 +1.0
comp=Z,0.9nm,0.7s,baz=104,slow=5.1,SNR=10
MKAR LR LR 06 33 19.9
comp=Z,19nm,20.2s,baz=308,slow=34
ILAR Eielson Array 83.00 22 P P 05 58 58.1 -2.0
comp=Z,0.6nm,0.8s,baz=267,slow=4.4,SNR=5.9
ZALV Zalesovo Beam 83.33 326 P P 05 59 01.9 -0.1
comp=Z,0.7nm,0.5s,baz=136,slow=4.2,SNR=2.8
QSPA South Pole Qui 83.61 180 P P 05 59 04.0 +0.5
QSPA IAmb IAmb 05 59 12.7
comp=Z,5.8nm,1.2s
NVAR Mina Array Bea 91.79 52 P P 05 59 44.2 +0.6
comp=Z,1.3nm,0.8s,baz=249,slow=5.9,SNR=8.4
YKA Yellowknife Ar 96.05 28 P P 06 00 02.4 0.0
comp=Z,0.0nm,0.3s,baz=268,slow=4.3,SNR=4.3
TORD Torodi Ar. Bea 152.29 286 PKPbc **PKiKP 06 06 32.1 -0.2**
comp=Z,3.8nm,0.7s,baz=56,slow=2.3,SNR=19

MOS ***18*** *06:01:59.5±0.0, 42°.40N×45°.17E, h15km, MPVA3.5*
NORS ***18*** *06:02:00.1±0.0, 42°.34N×45°.16E, h3km, MPVA3.6*
TIF ***18*** *06:02:00.3, 42°.43N×45°.17E, h13km±1km*
DRS ***18*** *06:02:01.0±0.0, 42°.50N×45°.20E, h12km*

ISC 18 06:02:01.0±1.1, 42°.42N±0°.02×45°.19E±0°.02, h8km±9km, n35, σ0§85/64, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUDG	**Gudauri**	**0.53**	**276**	P	**Pg**	**06 02 11.0**	**-0.2**
GUDG				S	**Sg**	**06 02 18.1**	**-0.1**
GUDG	**Gudauri**	**0.53**	**276**	*i* Pg	**Pg**	**06 02 11.0**	**-0.2**
GUDG				*e*Sg	**Sg**	**06 02 18.1**	**-0.1**
KMGR	**Komgaron**	**0.68**	**340**	*e*Pg	**Pn**	**06 02 14.5**	**-0.7**
KMGR				*e*Sg	**Sb**	**06 02 25.6**	**+0.8**
LACR	**Lac**	**0.77**	**302**	*e*Pg	**Pg**	**06 02 15.3**	**-0.6**
BTNK	**Botanikuri**	**0.79**	**202**	P	**Pg**	**06 02 16.1**	**0.0**
BTNK				S	**Sb**	**06 02 27.8**	**+0.2**
BTNK	**Botanikuri**	**0.79**	**202**	*e*Pg	**Pg**	**06 02 16.1**	**0.0**
BTNK				*e*Sg	**Sb**	**06 02 27.8**	**+0.2**
BTLR	**Botlikh**	**0.81**	**72**	*e*Pg	**Pb**	**06 02 16.5**	**-0.7**
GROC	**Groznyy**	**0.91**	**30**	*e*Pg	**Pn**	**06 02 19.6**	**-0.4**
GROC				*e*Sg	**Sn**	**06 02 32.4**	**-0.8**
DGRG	**David-gareji**	**0.97**	**172**	P	**Pn**	**06 02 20.6**	**-0.4**
DGRG				S	**Sn**	**06 02 35.0**	**+0.1**
LGD	**Lagodekhi**	**0.98**	**126**	P	**Pg**	**06 02 19.3**	**-0.4**
LGD				S	**Sn**	**06 02 34.1**	**-0.8**
LGD	**Lagodekhi**	**0.98**	**126**	*e*Pg	**Pg**	**06 02 19.3**	**-0.4**
LGD				*e*Sg	**Sn**	**06 02 33.4**	**-1.5**
ARNR	**Ardon**	**1.01**	**319**	*e*Pg	**Pb**	**06 02 20.6**	**-0.2**
ARNR				*e*Sg	**Sn**	**06 02 36.4**	**+0.5**
ZEI	**Tsey**	**1.02**	**292**	*e*Pg	**Pg**	**06 02 20.3**	**-0.2**
ZEI				*e*Sg	**Sb**	**06 02 34.3**	**-0.2**
KORR	**Kora**	**1.06**	**310**	*e*Pg	**Pn**	**06 02 22.0**	**-0.2**
KORR				*e*Sg	**Sn**	**06 02 36.8**	**-0.3**
XNZR	**Khunzakh**	**1.13**	**83**	*e*Pg	**Pn**	**06 02 22.3**	**-0.9**
XNZR				*e*Sg	**Sn**	**06 02 38.3**	**-0.7**
KZRT	**Kazreti**	**1.18**	**210**	P	**Pb**	**06 02 22.4**	**-1.2**
KZRT				S	**Sb**	**06 02 38.6**	**-0.5**
DDFL	**Dedoflistskaro**	**1.19**	**144**	P	**Pn**	**06 02 25.5**	**+1.6**
STDR	**Stavd-Durt**	**1.26**	**320**	*e*Pg	**Pg**	**06 02 25.5**	**+0.3**
STDR				*e*Sg	**Sn**	**06 02 44.3**	**+2.3**
DIGR	**Digorskoe uzhe**	**1.28**	**293**	*e*Pg	**Pn**	**06 02 24.6**	**-0.7**
DIGR				*e*Sg	**Sb**	**06 02 41.7**	**-0.3**
ONI	**Oni**	**1.29**	**278**	P	**Pn**	**06 02 24.9**	**-0.4**
ONI	**Oni**	**1.29**	**278**	*e*Pg	**Pg**	**06 02 25.6**	**-0.1**
ONI				*e*Sg	**Sn**	**06 02 44.6**	**+1.7**
GNBR	**Gunib**	**1.32**	**91**	*e*Pg	**Pg**	**06 02 26.6**	**+0.3**
GNBR				*e*Sg	**Sn**	**06 02 44.9**	**+1.4**
LSNR	**Lesken**	**1.32**	**311**	*e*Pg	**Pg**	**06 02 26.0**	**-0.3**
LSNR				*e*Sg	**Sg**	**06 02 44.7**	**+1.2**
ARKR	**Arakani**	**1.35**	**81**	*e*Pg	**Pg**	**06 02 27.0**	**+0.1**
ARKR				*e*Sg	**Sg**	**06 02 45.5**	**+1.1**
DBC	**Dubki**	**1.35**	**63**	*e*Pg	**Pg**	**06 02 26.7**	**-0.3**
DBC				*e*Sg	**Sg**	**06 02 45.2**	**+0.7**
BKRG	**Bakuriani**	**1.40**	**243**	P	**Pb**	**06 02 27.1**	**-0.3**
BKRG				S	**Sn**	**06 02 46.1**	**+0.5**
KMKR	**Kumukh**	**1.45**	**101**	*e*Pg	**Pg**	**06 02 29.0**	**+0.2**
KMKR				*e*Sg	**Sg**	**06 02 49.5**	**+1.9**
AKH	**Akhalkalaki**	**1.61**	**232**	P	**Pb**	**06 02 30.4**	**-0.6**
AKH				S	**Sb**	**06 02 52.0**	**+0.4**
AKH	**Akhalkalaki**	**1.61**	**232**	*e*Pg	**Pn**	**06 02 30.1**	**+0.3**
AKH				*e*Sg	**Sb**	**06 02 51.5**	**-0.1**
TKB	**Tkibuli**	**1.62**	**268**	P	**Pb**	**06 02 30.6**	**-0.5**
TKB				S	**Sb**	**06 02 52.4**	**+0.6**
TKB	**Tkibuli**	**1.62**	**268**	*e*Pg	**Pb**	**06 02 30.6**	**-0.5**
TKB				*e*Sg	**Sb**	**06 02 52.4**	**+0.6**
NEY	**Neytrino**	**1.99**	**296**	*e*Pg	**Pb**	**06 02 37.5**	**-0.1**
NEY				*e*Sg	**Sb**	**06 03 03.7**	**+1.1**
KBZ	**Khabaz**	**2.13**	**309**	*e*Pg	**Pb**	**06 02 38.6**	**-1.1**
KBZ				*e*Sg	**Sb**	**06 03 07.5**	**+1.2**
SHA1	**Shidzhatmaz**	**2.28**	**306**	*e*Pn	**Pb**	**06 02 41.1**	**-1.3**
KIV0	**Kislovodsk Arr**	**2.38**	**311**	*e*Sn	**Sb**	**06 03 11.5**	**-2.2**

IDC 18 06:15:00.3±3.2, 30°.37S×138°.40E, h0km, mb1 2.9/3, mb1mx2.9/21, mbtmp2.7/3, ML2.4/3, Error ellipse: s-maj=75.4km s-min=16.1km az=42.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.13**	**120**	Pn	Pn	06 15 50.3	-0.6
	0.1nm,0.3s,baz=298,slow=16,SNR=6.6						
STKA				Pg	Pg	06 15 58.8	-1.4
	0.5nm,0.3s,baz=296,slow=16,SNR=12						
STKA				Sn	Sn	06 16 28.4	-0.4
	1.2nm,0.3s,baz=14,slow=6.7,SNR=6.3						
STKA				Lg	Lg	06 16 39.0	
	1.0nm,0.3s,baz=239,slow=12,SNR=5.6						
ASAR	**Alice Springs**	**7.78**	**328**	Pn	Pn	06 16 55.4	+0.5
	0.1nm,0.3s,baz=146,slow=12,SNR=7.8						
ASAR				Sn	Sn	06 18 24.1	+0.3
	0.1nm,0.3s,baz=154,slow=22,SNR=4.1						
WRA	**Warramunga Arr**	**11.01**	**340**	Pn	Pn	06 17 38.6	-0.5
	0.1nm,0.3s,baz=155,slow=13,SNR=1.6						

IDC ***18*** *06:30:16.1±0.7, 18°.31N×146°.99E, h0km, mb3.8/14, mb1 4.0/15, mb1mx3.9/44, mbtmp3.8/15, ML2.8/1, Error ellipse: s-maj=27.5km s-min=16.2km az=96.0*

NEIC ***18*** *06:30:20.7±1.1, 18°.40N±0°.08×147°.2E±0°.2, h35km±1km, mb4.4/5, Error ellipse: s-maj=26.5km s-min=10.4km az=292.0*

ISC 18 06:30:22.9±0.6, 18°.32N±0°.08×147°.1E±0°.1, h52km, n28, σ1§13/23, mb3.9/16, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.18**	**205**	Pn	**Pn**	**06 31 36.8**	**-1.1**
GUMO				Sn	**Sn**	**06 32 37.8**	**+1.4**
H11S3	**WAKE ISLAND Hy 18.58**	**86**		T	T	06 53 40.3	
	baz=273,slow=74,SNR=39						
H11S1	**WAKE ISLAND Hy 18.59**	**86**		T	T	06 53 46.0	
	baz=273,slow=74,SNR=22						
H11S2	**WAKE ISLAND Hy 18.60**	**86**		T	T	06 53 45.7	
	baz=273,slow=74,SNR=25						
H11N1	**WAKE ISLAND Hy 18.76**	**83**		T	T	06 53 58.7	
	baz=266,slow=74,SNR=12						
H11N2	**WAKE ISLAND Hy 18.76**	**83**		T	T	06 54 01.1	
	baz=266,slow=74,SNR=5.5						
H11N3	**WAKE ISLAND Hy 18.78**	**83**		T	T	06 53 58.7	
	baz=266,slow=74,SNR=7.1						
MJAR	**Matsushiro Arr**	**19.77**	**338**	P	**P**	**06 34 48.1**	**-0.7**
	0.0nm,0.3s,baz=163,slow=11,SNR=3.0						
KSRS	**Korea Array**	**25.42**	**322**	P	**P**	**06 35 45.2**	**-0.5**
	0.3nm,0.3s,baz=150,slow=9.7,SNR=2.2						
WB0	**Warramunga Arr**	**39.86**	**199**	P	**P**	**06 37 51.8**	**+0.1**
WB0				IAmb	IAmb	06 38 06.7	
	comp=Z,9.6nm,1.4s						
WRA	**Warramunga Arr**	**40.04**	**199**	P	**P**	**06 37 52.0**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=26,slow=8.1,SNR=18						
ASAR	**Alice Springs**	**43.68**	**198**	P	**P**	**06 38 22.9**	**0.0**
	comp=Z,1.2nm,0.6s,baz=17,slow=7.4,SNR=22						
SONM	**Songino Array**	**44.27**	**321**	P	**P**	**06 38 28.5**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=146,slow=8.7,SNR=2.9						
STKA	**Stephens Creek**	**50.19**	**186**	P	**P**	**06 39 13.9**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=334,slow=5.7,SNR=3.6						
STKA	**Stephens Creek**	**50.19**	**186**	P	**P**	**06 39 13.6**	**+0.1**
BBOO	**Buckleboo**	**51.93**	**192**	P	**P**	**06 39 27.1**	**+0.5**
BBOO				IAmb	IAmb	06 39 27.6	
	comp=Z,7.4nm,0.8s						
KKH	**Kailua Kona**	**53.58**	**79**	P	**P**	**06 39 38.1**	**-1.0**
ZALV	**Zalesovo Beam**	**59.12**	**322**	P	**P**	**06 40 16.6**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=90,slow=3.4,SNR=4.1						
MKAR	**Makanchi Array**	**59.68**	**314**	P	**P**	**06 40 21.4**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=97,slow=7.8,SNR=6.0						
ILAR	**Eielson Array**	**63.39**	**26**	P	**P**	**06 40 46.5**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=279,slow=5.1,SNR=5.0						
INK	**Inuvik**	**69.19**	**23**	P	**P**	**06 41 24.3**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=264,slow=3.6,SNR=4.8						
INK	**Inuvik**	**69.19**	**23**	P	**P**	**06 41 22.1**	**-1.7**
INK				IAmb	IAmb	06 41 39.8	
	comp=Z,1.7nm,1.2s						
YKA	**Yellowknife Ar**	**77.69**	**28**	P	**P**	**06 42 15.3**	**+1.5**
	comp=Z,1.3nm,0.8s,baz=285,slow=5.1,SNR=20						
MDPB	**Devils Postpil**	**81.96**	**53**	P	**P**	**06 42 36.9**	**-0.9**
NVAR	**Mina Array Bea**	**82.31**	**52**	P	**P**	**06 42 41.7**	**+2.1**
	comp=Z,1.0nm,0.8s,baz=275,slow=5.2,SNR=5.9						
ARCES	**ARCESS Array B**	**83.25**	**342**	P	**P**	**06 42 45.6**	**+2.0**
	comp=Z,2.5nm,0.9s,baz=43,slow=5.5,SNR=4.5						
PDAR	**Pinedale Array**	**87.13**	**46**	P	**P**	**06 43 03.9**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=281,slow=5.4,SNR=2.0						
FINES	**FINESS Array B**	**87.78**	**336**	P	**P**	**06 43 05.8**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=73,slow=6.4,SNR=7.5						

IDC ***18*** *06:33:53.5±2.2, 31°.98S×179°.16W, h80km±18km, mb4.2/16, mb1 4.4/19, mb1mx4.2/38, mbtmp4.6/19, Error ellipse: s-maj=15.2km s-min=14.2km az=83.0*

NEIC ***18*** *06:33:54.9±1.7, 32°.04S±0°.07×179°.3W±0°.1, h90km±4km, mb4.9/43, Error ellipse: s-maj=14.7km s-min=7.5km az=118.0*

ISC 18 06:33:53.3±0.9, 32°.14S±0°.05×179°.07W±0°.07, h81km±8km, n264, σ1§85/279, mb4.8/35, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.03**	**19**	P	**Pn**	**06 34 39.1**	**0.0**
GLKZ				S	**Sn**	**06 35 13.5**	**-0.9**
RAO	**Raoul Island**	**3.04**	**19**	P	**Pn**	**06 34 37.2**	**-2.1**
	72nm,0.3s,baz=74,slow=20,SNR=2.7						
RAO				S	**Sn**	**06 35 14.4**	**-0.3**
	186nm,0.3s,baz=295,slow=21,SNR=3.5						
RAO	**Raoul Island**	**3.04**	**19**	Pn	**Pn**	**06 34 38.5**	**-0.8**
RAO				Sn	**Sn**	**06 35 18.1**	**+3.4**
RIZ	**Raoul Island**	**3.05**	**19**	P	**Pn**	**06 34 40.0**	**+0.7**
RIZ				S	**Sn**	**06 35 16.9**	**+2.1**
MXZ	**Matakaoa Point**	**5.82**	**201**	P	**Pn**	**06 35 20.2**	**+3.1**
MXZ				S	**Sn**	**06 36 24.0**	**+1.6**
MXZ	**Matakaoa Point**	**5.82**	**201**	Sn	**Sn**	**06 36 26.5**	**+4.0**
WMGZ	**Waiomatatini S**	**6.03**	**199**	P	**Pn**	**06 35 20.3**	**+0.5**
WMGZ				S	**Sn**	**06 36 27.3**	**-0.2**
HAZ	**Te Kaha**	**6.17**	**204**	P	**Pn**	**06 35 22.3**	**+0.5**
WIZ	**White Island**	**6.19**	**209**	P	**Pn**	**06 35 24.7**	**+2.6**
WIZ				S	**Sn**	**06 36 33.5**	**+2.1**
PKGZ	**Pakihiroa**	**6.20**	**201**	P	**Pn**	**06 35 22.1**	**-0.1**
PKGZ				S	**Sn**	**06 36 28.8**	**-2.7**
PUZ	**Puketiti**	**6.31**	**200**	S	**Sn**	**06 36 35.4**	**+1.1**
RUGZ	**Raukumara Rang**	**6.39**	**204**	P	**Pn**	**06 35 24.6**	**-0.4**
RUGZ				S	**Sn**	**06 36 38.3**	**+1.8**
TWGZ	**Tauwhareparae**	**6.49**	**201**	P	**Pn**	**06 35 25.7**	**-0.5**
WHRZ	**Whale Island**	**6.56**	**209**	P	**Pn**	**06 35 31.4**	**+4.2**
WHRZ				S	**Sn**	**06 36 43.3**	**+2.8**
CNGZ	**Carnagh Statio**	**6.71**	**199**	P	**Pn**	**06 35 29.1**	**0.0**
TGRZ	**Tauranga**	**6.77**	**213**	P	**Pn**	**06 35 30.3**	**+0.3**
TKGZ	**Te Karaka**	**6.77**	**201**	P	Sn	06 36 56.8	+11
MWZ	**Matawai**	**6.78**	**203**	P	**Pn**	**06 35 28.7**	**-1.4**
MWZ				S	**Sn**	**06 36 45.0**	**-0.9**
MAWZ	**Manawahe**	**6.80**	**210**	P	**Pn**	**06 35 33.0**	**+2.6**
OUZ	**Omahuta**	**6.84**	**241**		Pn	06 35 36.2	+5.2
URZ	**Urewera**	**6.86**	**206**	P	**Pn**	**06 35 32.5**	**+1.4**
	38nm,0.3s,baz=300,slow=1.9,SNR=191						
URZ				S	**Sn**	**06 36 46.4**	**-1.3**
	98nm,0.3s,baz=106,slow=24,SNR=16						
URZ	**Urewera**	**6.86**	**206**	P	**Pn**	**06 35 30.5**	**-0.6**
URZ				S	**Sn**	**06 36 49.3**	**+1.6**
URZ	**Urewera**	**6.86**	**206**		**Pn**	**06 35 32.2**	**+1.0**
URZ						06 35 33.3	
URZ				Sn	**Sn**	**06 36 50.5**	**+2.7**
EDRZ	**Edgecumbe**	**6.87**	**209**	P	**Pn**	**06 35 34.4**	**+3.0**
RAGZ	**Rawiri**	**6.96**	**203**	P	**Pn**	**06 35 32.9**	**+0.2**
RAGZ				S	**Sn**	**06 36 51.6**	**+1.2**
KARZ	**Kaharoa**	**7.01**	**212**	P	**Pn**	**06 35 37.3**	**+4.0**
MKRZ	**Makatiti**	**7.01**	**210**	P	**Pn**	**06 35 37.9**	**+4.5**
OMRZ	**Omania**	**7.03**	**211**	P	**Pn**	**06 35 37.4**	**+3.8**
RIGZ	**Rimuhau**	**7.04**	**201**	P	**Pn**	**06 35 34.0**	**+0.3**
RIGZ				S	**Sn**	**06 36 51.6**	**-0.7**
RIGZ	**Rimuhau**	**7.04**	**201**	P	**Sn**	**06 36 52.0**	**-0.3**
TARZ	**Mount Tarawera**	**7.

ANWZ	Angora Road	9.05	202	P		Pn	06 35 59.3	-1.7	
PREZ	Palmer Road	9.05	216	P		Pn	06 36 04.1	+2.9	
KHEZ	Kahui Hut	9.09	216	P		Pn	06 36 04.7	+3.1	
NBEZ	Newall Road No	9.14	217	P		Pn	06 36 05.7	+3.5	
POWZ	Post Office Ro	9.23	205	P		Pn	06 36 03.2	-0.3	
PRWZ	Pori Road	9.30	204	P		Pn	06 36 03.9	-0.6	
BFZ	Birch Farm	9.32	203	P		Pn	06 36 01.6	-3.2	
TIWZ	Tintock	9.53	204	P		Pn	06 36 05.9	-1.7	
OGWZ	Otaki Gorge	9.82	207	P		Pn	06 36 08.6	-3.0	
TRWZ	Traveller	10.15	203	P		Pn	06 36 12.5	-3.6	
MSWZ	Moikau Station	10.32	205	P		Pn	06 36 14.7	-3.7	
SNZO	South Karori	10.42	207	Pn		Pn	06 36 16.3	-3.5	
RPZ	Rata Peaks	13.93	211	P		Pn	06 37 01.5	-5.4	
	4.9nm,0.3s,baz=79,slow=2.3,SNR=23								
RPZ				S		Sn	06 39 27.7	-12	
	5.3nm,0.3s,baz=26,slow=18,SNR=9.3								
DZM	Mont Dzumac	16.32	304	P		Pn	06 37 35.2	-2.5	
	0.2nm,0.3s,baz=137,slow=11,SNR=2.0								
DZM	Mont Dzumac	16.32	304	P		Pn	06 37 35.9	-1.8	
DZM				IAmb	IAmb		06 37 45.0		
	comp=Z,44nm,1.0s								
RAR	Rarotonga	20.36	62	P		P	06 38 22.9	-0.4	
	comp=Z,17nm,0.8s,baz=180,slow=5.1,SNR=3.0								
ARMA	Armidale	25.07	266	P		P	06 39 05.7	-4.7	
CAN	Canberra	26.69	254	P		P	06 39 21.5	-3.3	
EIDS	Eidsvold	26.97	277	P		P	06 39 23.4	-4.0	
TAU	Tasmania Unive	28.57	238	P		P	06 39 41.4	-0.1	
TAU				IAmb	IAmb		06 39 44.2		
	comp=Z,62nm,1.3s								
TOO	Toolangi	29.47	249	P		P	06 39 49.0	-0.6	
HNR	Honiara	29.81	315	P		P	06 39 51.3	-1.4	
KNTN	Kanton	30.02	15	P		P	06 39 54.0	-0.5	
PPTF	Pamatai, Papee	30.31	69	P		P	06 39 58.2	+1.0	
CTA	Charters Tower	33.23	283	P		P	06 40 23.5	+0.7	
	comp=Z,12nm,0.5s,baz=111,slow=9.9,SNR=24								
CTAO	Charters Tower	33.23	283	P		P	06 40 22.1	-0.7	
CTAO				IAmb	IAmb		06 40 29.1		
	comp=Z,16nm,0.6s								
STKA	Stephens Creek	33.23	260	P		P	06 40 23.4	+0.7	
	comp=Z,4.2nm,0.7s,baz=99,slow=8.8,SNR=11								
STKA				PcP		PcP	06 43 01.7	-1.8	
	comp=Z,2.4nm,0.6s,baz=77,slow=6.1,SNR=5.1								
STKA	Stephens Creek	33.23	260	P		P	06 40 23.0	+0.3	
TARA	Tarawa	34.17	346	P		P	06 40 29.4	-1.5	
BBOO	Buckleboo	37.65	257	P		P	06 40 59.8	-0.8	
BBOO				IAmb	IAmb		06 41 09.2		
	comp=Z,14nm,1.4s								
KRVT	Keravat (AS076	38.73	310	P		P	06 41 09.0	-0.8	
	comp=Z,297nm,0.9s,baz=54,slow=0.2,SNR=15								
COEN	Coen	38.92	289	P		P	06 41 12.1	+0.7	
COEN				IAmb	IAmb		06 41 14.8		
	comp=Z,12nm,0.9s								
AS31	Alice Springs	42.14	269	P		P	06 41 37.6	-0.3	
ASAR	Alice Springs	42.14	269	P		P	06 41 37.1	-0.8	
	comp=Z,6.6nm,0.5s,baz=107,slow=7.4,SNR=106								
ASAR				PcP		PcP	06 43 30.4	-0.6	
	comp=Z,2.6nm,0.6s,baz=123,slow=4.0,SNR=6.9								
WRAB	Tennant Creek	43.28	275	P		P	06 41 46.6	-0.5	
WRAB				IAmb	IAmb		06 41 50.7		
	comp=Z,20nm,0.6s								
WRA	Warramunga Arr	43.29	275	P		P	06 41 46.5	-0.6	
	comp=Z,20nm,0.5s,baz=114,slow=7.5,SNR=124								
FORT	Forrest	44.74	257	P		P	06 41 59.1	+0.5	
VNDA	Vanda	46.28	186	P		P	06 42 12.3	+2.2	
	comp=Z,2.0nm,0.6s,baz=0.3,slow=7.6,SNR=25								
VNDA				PcP		PcP	06 43 45.4	+1.2	
	comp=Z,2.5nm,1.0s,baz=304,slow=2.4,SNR=4.9								
VNDA	Vanda	46.28	186	P		P	06 42 13.4	+3.3	
JAY	Jayapura	47.92	300	P		P	06 42 23.0	-0.8	
	comp=Z,18nm,0.8s,baz=242,slow=1.9,SNR=7.3								
MTN	Manton Dam	49.38	281	P		P	06 42 34.5	-0.5	
MTN				IAmb	IAmb		06 42 35.6		
	comp=Z,17nm,0.9s								
KNRA	Kununurra	49.96	276	P		P	06 42 39.9	+0.6	
KNRA				IAmb	IAmb		06 42 42.2		
	comp=Z,16nm,0.8s								
FITZ	Fitzroy Crossi	51.47	272	P		P	06 42 50.6	-0.1	
FITZ				IAmb	IAmb		06 42 53.0		
	comp=Z,8.9nm,0.8s								
NWAO	Narrogin (SRO)	52.95	251	P		P	06 43 01.2	-0.3	
NWAO	Narrogin (SRO)	52.95	251	P		P	06 43 01.1	-0.4	
NWAO				IAmb	IAmb		06 43 11.0		
	comp=Z,38nm,1.4s								
CASY	Casey	53.18	208	P		P	06 43 02.3	-0.3	
CASY				IAmb	IAmb		06 43 02.5		
	comp=Z,5.9nm,0.6s								
FAKI	Fak Fak	54.12	292	P		P	06 43 09.3	-0.9	
PSAC3	Pilbara Seismi	54.87	265	P		P	06 43 16.1	+0.4	
PSAC3				IAmb	IAmb		06 43 16.3		
	comp=Z,21nm,1.4s								
PSA00	Pilbara Seismi	54.88	265	P		P	06 43 16.2	+0.5	
PSA00				IAmb	IAmb		06 43 21.2		
	comp=Z,14nm,1.2s								
PSAA2	Pilbara Seismi	54.88	265	P		P	06 43 16.4	+0.7	
PSAA2				IAmb	IAmb		06 43 21.1		
	comp=Z,22nm,1.3s								
PSAA2				PcP		PcP	06 44 15.9	-1.1	
PSAA1	Pilbara Seismi	54.89	265	P		P	06 43 16.4	+0.7	
PSAA1				IAmb	IAmb		06 43 19.5		
	comp=Z,7.8nm,1.1s								
PSAB1	Pilbara Seismi	54.90	265	PcP		PcP	06 44 15.7	-1.3	
PSAD3	Pilbara Seismi	54.91	265	P		P	06 43 16.4	+0.5	
PSAD3				IAmb	IAmb		06 43 23.7		
	comp=Z,13nm,1.2s								
PSAD1	Pilbara Seismi	54.94	265	P		P	06 43 16.3	+0.1	
PSAD1				IAmb	IAmb		06 43 32.9		
	comp=Z,13nm,1.1s								
PSAD1				PcP		PcP	06 44 15.6	-1.6	
MORW	Morawa	55.18	255	P		P	06 43 17.2	-0.5	
MORW				IAmb	IAmb		06 43 18.3		
	comp=Z,22nm,1.0s								
QSPA	South Pole Qui	57.97	180	P		P	06 43 40.2	+3.1	
GIRL	Giralia	59.16	261	P		P	06 43 46.9	+1.0	
MAW	Mawson	70.36	201	P		P	06 44 58.0	+0.1	
	comp=Z,3.9nm,0.8s,baz=118,slow=6.9,SNR=6.7								
MAW	Mawson	70.36	201	P		P	06 44 58.1	+0.1	
SNAA	Sanae	76.44	179	P		P	06 45 34.9	+1.3	
SNAA	Sanae	76.44	179	P		P	06 45 35.0	+1.3	
VNA3	Neumayer Olymp	76.63	176	P		P	06 45 36.0	+1.3	
VNA2	Neumayer--Watz	77.05	177	P		P	06 45 38.6	+1.5	
	baz=187,slow=5.7								
MJAR	Matsushiro Arr	79.16	326	P		P	06 45 47.6	-1.5	
	comp=Z,3.3nm,0.9s,baz=156,slow=5.7,SNR=8.5								
H03S2	Juan Fernandez	80.26	124	T		T	08 14 36.8		
	baz=236,slow=74,SNR=26								
H03S1	Juan Fernandez	80.27	124	T		T	08 14 38.2		
	baz=236,slow=74,SNR=23								
H03S3	Juan Fernandez	80.28	124	T		T	08 14 39.1		
	baz=236,slow=74,SNR=37								
H03N3	Juan Fernandez	80.47	123	T		T	08 14 51.3		
	baz=241,slow=72,SNR=38								
H03N2	Juan Fernandez	80.47	123	T		T	08 14 44.2		
	baz=241,slow=72,SNR=30								
H03N1	Juan Fernandez	80.48	123	T		T	08 14 46.8		
	baz=241,slow=72,SNR=89								
PLCA	Paso Flores	81.99	133	P		P	06 46 06.4	+1.9	
	comp=Z,1.6nm,0.7s,baz=242,slow=5.6,SNR=5.5								
PLCA	Paso Flores	81.99	133	P		P	06 46 07.3	+2.8	
LC01	Cunco	82.22	131	P		P	06 46 08.3	+2.6	
LC01				IAmb	IAmb		06 46 16.7		
	comp=Z,19nm,1.5s								
ADK	Adak	83.69	1	P		P	06 46 12.6	0.0	
ADK				IAmb	IAmb		06 46 14.2		
	comp=Z,8.4nm,0.8s								
IPM	Ipoh	83.85	279	P		P	06 46 14.0	-0.4	
IPM				IAmb	IAmb		06 46 14.4		
	comp=Z,6.8nm,0.7s								
KULM	Kulim	84.60	280	P		P	06 46 17.7	-0.5	
KULM				IAmb	IAmb		06 46 30.6		
	comp=Z,16nm,1.3s								
RPSI	Rantau Prapat	84.66	277	P		P	06 46 17.5	-1.0	
RPSI				IAmb	IAmb		06 46 18.0		
	comp=Z,8.3nm,1.0s								
RPSI	Rantau Prapat	84.66	277	P		P	06 46 16.8	-1.7	
PSI	Prapat	84.72	277	P		P	06 46 16.8	-2.2	
	comp=Z,2.6nm,0.4s,baz=360,slow=14,SNR=4.3								
GSI	Gunungsitoli	85.06	275	P		P	06 46 21.1	+0.6	
KSRS	Korea Array	85.09	320	P		P	06 46 19.9	-0.1	
	comp=Z,1.5nm,0.7s,baz=131,slow=5.5,SNR=2.7								
PETK	Petropavlovsk-	87.27	346	P		P	06 46 29.8	-0.6	
	comp=Z,2.8nm,0.6s,baz=120,slow=6.7,SNR=11								
USRK	Ussuriysk Ar.	88.11	327	P		P	06 46 35.2	+0.6	
	comp=Z,5.0nm,1.0s,baz=204,slow=3.3,SNR=7.0								
NVAR	Mina Array Bea	90.13	43	P		P	06 46 44.3	-0.2	
	comp=Z,0.2nm,0.5s,baz=238,slow=8.2,SNR=1.2								

ILAR	Eielson Array	99.82	13	P		Pdif	06 47 28.4	+0.6	
	comp=Z,0.2nm,0.6s,baz=221,slow=5.4,SNR=4.5								
BOSA	Boshof	115.31	204	PKP		PKPdf	06 52 26.4	+0.4	
	comp=Z,4.9nm,1.0s,baz=175,slow=8.5,SNR=4.6								
BOSA	Boshof	115.31	204			PKPdf	06 52 27.1	+1.0	
MK31	Makanchi Array	118.18	310			PKPdf	06 52 30.7	0.0	
MKAR	Makanchi Array	118.18	310	PKP		PKPdf	06 52 30.2	-0.4	
	comp=Z,2.7nm,0.7s,baz=198,slow=1.3,SNR=27								
MAKZ	Makanchi	118.39	310			PKPdf	06 52 30.9	-0.2	
ZALV	Zalvo Beam	118.72	318	PKP		PKPdf	06 52 30.9	-0.6	
	comp=Z,2.3nm,0.4s,baz=165,slow=3.0,SNR=11								
KDJ	Kajisay	120.26	303			PKiKP	06 52 35.3	+0.1	
NRIK	Noril'sk	120.84	336	PKP		PKPdf	06 52 34.2	-0.8	
	comp=Z,4.0nm,0.5s,baz=86,slow=4.2,SNR=12								
KURK	Kurchatov	121.58	313			PKPdf	06 52 37.1	+0.1	
KURBB	Kurchatov Arra	121.61	313	PKP		PKPdf	06 52 36.9	-0.2	
	comp=Z,4.9nm,0.5s,baz=111,slow=1.9,SNR=38								
AAK	Ala-Archa	122.31	303	PKP		PKPdf	06 52 38.4	-0.5	
	comp=Z,1.6nm,0.4s,baz=125,slow=4.7,SNR=7.0								
AAK	Ala-Archa	122.31	303			PKiKP	06 52 39.6	+0.5	
GAR	Garm	124.37	298	PKPdf		PKiKP	06 52 43.7	+0.5	
KK31	Karatay Array	125.26	303			PKiKP	06 52 44.9	+0.1	
KKAR	Karatay Array	125.26	303			PKPdf	06 52 44.6	+0.2	
KBS	Kingsbay	132.88	357	*e*PKPdf		PKPdf	06 52 58.1	+0.2	
ABKAR	Akbulak array	133.33	309			PKPdf	06 52 59.9	+0.4	
SPA0	Spitsbergen Ar	133.37	356	*e*PKPdf		PKPdf	06 52 59.1	+0.2	
GEYT	Alibeck	133.44	294	PKP		PKPdf	06 53 00.7	+0.5	
	comp=Z,1.8nm,0.5s,baz=0.0,slow=1.5,SNR=5.0								
ARU	Arti	133.83	319			PKiKP	06 53 01.0	-0.5	
SUMG	Summit	134.62	16			PKiKP	06 53 03.6	+0.4	
ARCES	ARCESS Array B	140.08	347	PKhKP		PKPpre	06 53 07.2		
	comp=Z,2.3nm,0.6s,baz=46,slow=3.5,SNR=10								
ARCES				PKP		PKPdf	06 53 12.2	+0.8	
	comp=Z,3.8nm,0.5s,baz=25,slow=1.7,SNR=17								
ARE0	ARCESS Array S	140.08	347	*e*PKPdf		PKPdf	06 53 09.7	-1.7	
TRO	Tromso	141.12	350	*ep*PKPdf		PKPdf	06 53 12.9	-0.3	
STEI	Steigen	143.21	351	*e*PKPdf		PKPdf	06 53 16.7	-0.3	
MOR8	Moi Rana	144.97	350	*e*PKPdf		PKPbc	06 53 19.6	0.0	
KBZ	Khabaz	145.28	302	PKPbc		PKPbc	06 53 20.9	-0.4	
	comp=Z,9.9nm,0.9s,baz=108,slow=4.0,SNR=18								
FIA1	FINESS Array S	146.44	338			PKPdf	06 53 23.3	+0.5	
FINES	FINESS Array B	146.44	338	PKPbc		PKPdf	06 53 23.0	+0.3	
	comp=Z,17nm,0.5s,baz=66,slow=2.6,SNR=156								
NSS	Namsos	146.87	351	*ep*PKPdf		PKPab	06 53 26.3	-0.5	
MOL	Molde	149.26	354	*ep*PKPbc		PKiKP	06 53 33.8	+0.9	
AKN	Aknes	149.69	354	*ep*PKPbc		PKiKP	06 53 34.7	+0.8	
NC303	NORSAR Array S	150.11	350			PKiKP	06 53 33.9	0.0	
NC405	NORSAR Array S	150.17	349			PKiKP	06 53 34.6	-0.3	
NB201	NORSAR Array S	150.29	350			PKPbc	06 53 34.1	-0.3	
NB2	NORSAR Subarra	150.31	350	PKP		PKPbc	06 53 33.5	-0.9	
	comp=Z,51nm,1.4s,baz=17,slow=2.6								
NB2	NORSAR Subarra	150.31	350	PKPab		PKPbc	06 53 33.5	-0.9	
	baz=17,slow=2.6								
NOA	NORSAR Array B	150.31	350	PKPbc		PKPbc	06 53 33.6	-0.9	
	comp=Z,7.9nm,0.7s,baz=16,slow=4.2,SNR=37								
NB00	NORSAR Array S	150.39	350			PKPbc	06 53 34.8	+0.2	
NA001	NORSAR Array S	150.55	350			PKPbc	06 53 35.3	+0.3	
NC602	NORSAR Array S	150.56	349			PKPbc	06 53 34.8	-0.2	
NC602	NORSAR Array S	150.56	349	*e*PKPbc		PKPbc	06 53 34.3	-0.7	
HYA	Hoyanger	150.76	355	*e*PKPdf		PKPdf	06 53 29.2	-0.6	
HYA				*e*PKPbc		PKPbc	06 53 34.9	-0.5	
SKAR	Skarslia	151.04	353	*ep*PKPbc		PKiKP	06 53 38.0	+1.2	
ASK	Askoy	151.51	356	*e*PKPbc		PKPbc	06 53 37.1	0.0	
BER	Bergen	151.60	355	*e*PKPbc		PKPbc	06 53 37.4	0.0	
KONO	Kongsberg	151.88	351			PKiKP	06 53 38.3	-0.1	
KONO	Kongsberg	151.88	351	*e*PKPbc		PKiKP	06 53 38.8	+0.4	
ODD1	Odda	151.96	354	*ep*PKPbc		PKiKP	06 53 40.8	+2.2	
AKASG	Malin Array Be	152.08	320	PKPbc		PKiKP	06 53 39.1	0.0	
	comp=Z,13nm,0.7s,baz=60,slow=2.3,SNR=32								
AKBB	Malin Array Si	152.08	320	PKPdf		PKPdf	06 53 32.2	+0.1	
AKBB						PKiKP	06 53 39.3	+0.2	
BLS5	Blasjo	152.46	354	*e*PKPbc		PKPbc	06 53 39.3	-0.2	
BR131	Keskin Array S	152.57	295			PKPbc	06 53 40.3	-0.1	
BR131				PKPab		PKPab	06 53 51.1	-0.1	
BRTR	Keskin Array B	152.57	295	PKPbc		PKPbc	06 53 40.0	-0.4	
	comp=Z,5.3nm,0.5s,baz=138,slow=3.7,SNR=25								
KMY	Karmoy	152.77	355	*ep*PKPbc		PKiKP	06 53 41.5	+1.2	
SUW	Suwalki	152.97	331			PKiKP	06 53 41.7	+0.9	
SUW				PKPab		PKPab	06 53 51.7	-0.5	
HOMB	Homborsund	153.37	351	*ep*PKPbc		PKiKP	06 53 42.8	+1.4	
SNART	Snartemo	153.46	353	*e*PKPdf		PKPdf	06 53 33.3	-0.6	
SNART				*ep*PKPbc		PKiKP	06 53 43.1	+1.4	
DBIC	Dimbokro	154.09	167	PKP		PKPdf	06 53 36.3	+0.1	
	comp=Z,7.0nm,1.1s,baz=156,slow=1.7,SNR=3.7								
DBIC				PKPbc		PKiKP	06 53 45.9	+1.5	
	comp=Z,2.4nm,0.5s,baz=148,slow=3.5,SNR=8.5								
DBIC	Dimbokro	154.09	167			PKPdf	06 53 36.9	+0.7	
OKC	Ostrava-Krasne	158.15	329	AMS		AMS	07 59 30.0		
	comp=Z,1μm,21.0s								
OSTC	Ostas	158.39	333	AMS		AMS	08 00 10.0		
	comp=Z,1μm,23.2s								
CHVC	Chvalec	158.43	333	*e*PKPAB		PKPab	06 54 15.8	0.0	
CHVC				AMS		AMS	08 00 10.0		
	comp=Z,1μm,21.6s								
UPC	Upice	158.51	333	AMS		AMS	08 00 10.0		
	comp=Z,1μm,23.7s								
DPC	Dobruska-Polom	158.52	332	*e*PKPAB		PKPab	06 54 16.6	+0.4	
DPC				AMS		AMS	08 00 20.0		
	comp=Z,2μm,24.0s								
VYHS	Vyhne	158.80	326	*e*PKP		PKPab	06 54 18.4	+0.9	
CLL	Collm	158.89	339			PKPab	06 54 18.8	+1.1	
BRG	Berggiesshubel	158.96	337	*e*PKP		PKPbc	06 54 17.7	-0.3	
	comp=Z,7.6nm,1.4s								
GOPC	GO Pecny, Ondr	159.46	334	AMS		AMS	08 02 00.0		
	comp=Z,1μm,18.8s								
PRU	Pruhonice	159.49	334	AMS		AMS	08 01 50.0		
	comp=Z,1μm,19.3s								
TREC	Trest	159.68	332	AMS		AMS	08 01 10.0		
	comp=Z,2μm,22.5s								
NKC	Novy Kostel	160.00	338	AMS		AMS	07 57 50.0		
	comp=Z,700nm,20.0s								
KHC	Kasperske Hory	160.55	334	*e*PKPAB		PKPab	06 54 25.1	0.0	
KHC				*ex*		x	06 55 58.5		
KHC				AMS		AMS	08 03 20.0		
	comp=Z,1μm,19.4s								
GERES	GERESS Array B	160.74	334	PKPab		PKPab	06 54 25.2	-0.7	
	comp=Z,1.1nm,0.9s,baz=35,slow=3.3,SNR=6.6								
TORD	Torodi Ar. Bea	161.08	182	PKP		PKPdf	06 53 45.0	+0.2	
	comp=Z,1.9nm,1.0s,baz=291,slow=1.6,SNR=6.4								
TORD				PKPab		PKPab	06 54 28.3	+0.2	
	comp=Z,3.7nm,0.8s,baz=172,slow=3.5,SNR=12								
SENIN	Lac Senin/Sane	164.97	343			PKPab	06 54 45.2	+0.5	
ESDC	Sonseca Array	171.50	26	PKPab		PKPab	06 55 14.7	+1.1	
	comp=Z,0.6nm,0.9s,baz=335,slow=3.1,SNR=6.1								

IDC ***18*** *06:36:25.8±0.8, 14°.39S×176°.07W, h0km, mb4.0/14, mb1 4.3/14, mb1mx4.1/43, mbtmp4.0/14, MS4.7/6, Ms1 4.8/6, ms1mx4.3/26, Error ellipse: s-maj=31.3km s-min=18.5km az=143.0*

ISC 18 06:36:31.2±0.8, 14°.4S±0°.2×176°.1W±0°.2, h35km, n23, σ0s55/15, mb4.0/14, MS4.7/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	36.26	274	LR	LR	06 55 02.9	
	comp=Z,722nm,21.6s,baz=322,slow=31						
STKA	Stephens Creek	42.31	238	P	P	06 44 22.1	+0.2
	1.9nm,0.9s,baz=172,slow=6.0,SNR=2.7						
WRA	Warramunga Arr	47.54	256	P	P	06 45 02.8	-0.9
	0.9nm,0.8s,baz=90,slow=8.0,SNR=2.6						
ASAR	Alice Springs	47.95	251	P	P	06 45 06.8	0.0
	1.6nm,0.6s,baz=82,slow=8.5,SNR=6.9						
VNDA	Vanda	64.13	185	P	P	06 47 01.7	+0.1
	1.7nm,1.1s,baz=60,slow=5.1,SNR=4.5						
MJAR	Matsushiro Arr	66.50	321	P	P	06 47 17.8	+0.3
	1.7nm,1.0s,baz=176,slow=6.2,SNR=4.7						
PETK	Petropavlovsk-	70.90	344	P	P	06 47 44.6	+0.1
	5.6nm,0.9s,baz=120,slow=8.5,SNR=3.3						
KSRS	Korea Array	73.62	317	P	P	06 48 02.4	+1.2
	0.4nm,0.3s,baz=143,slow=6.2,SNR=5.6						
YBH	Yreka Blue Hor	74.41	39	P	P	06 48 06.0	+0.2
	1.7nm,0.9s,baz=174,slow=6.5,SNR=4.1						
NVAR	Mina Array Bea	75.36	43	P	P	06 48 12.2	+0.6
	1.3nm,0.9s,baz=233,slow=9.0,SNR=4.9						
QSPA	South Pole Qui	75.65	180	LR	LR	07 14 10.1	
	comp=Z,210nm,20.6s,baz=50,slow=30						
MA2	Magadan	78.43	344	LR	LR	07 19 52.5	
	comp=Z,2μm,20.9s,baz=128,slow=33						
ILAR	Eielson Array	81.98	12	P	P	06 48 46.4	-0.7
	1.9nm,1.1s,baz=224,slow=6.2,SNR=10						
ILAR				LR	LR	07 20 37.5	
	comp=Z,871nm,21.7s,baz=220,slow=32						
ANMO	Albuquerque	82.17	51	P	P	06 48 49.1	0.0
	2.0nm,1.0s,baz=230,slow=4.9,SNR=4.8						
TXAR	Lajitas Array	82.24	57	P	P	06 48 49.6	+0.2
	2.6nm,1.1s,baz=224,slow=5.2,SNR=11						
PDAR	Pinedale Array	83.28	43	P	P	06 48 54.7	0.0
	1.9nm,1.0s,baz=221,slow=5.9,SNR=7.7						
PDAR				LR	LR	07 21 41.5	
	comp=Z,450nm,19.0s,baz=246,slow=33						
YAK	Yakutsk	87.17	337	LR	LR	07 22 15.4	
	comp=Z,256nm,20.5s,baz=161,slow=32						
H03S2	Juan Fernandez	87.93	124	T	T	08 26 39.2	
	baz=252,slow=75,SNR=5.5						
H03S1	Juan Fernandez	87.95	124	T	T	08 26 41.0	
	baz=252,slow=75,SNR=6.2						
H03S3	Juan Fernandez	87.95	124	T	T	08 26 31.2	
	baz=252,slow=75,SNR=4.3						
YKA	Yellowknife Ar	90.22	24	P	P	06 49 27.4	-0.4
	0.7nm,1.1s,baz=244,slow=3.9,SNR=5.5						
BRTR	Keskin Array B	143.71	320	PKP	PKPbc	06 56 00.9	+0.3
	1.0nm,0.8s,baz=132,slow=5.2,SNR=4.1						
GERES	GERESS Array B	144.70	349	PKP	PKPdf	06 56 04.0	-0.4
	0.8nm,0.7s,baz=51,slow=4.3,SNR=6.1						

MAN 18 06:37:43.7, 5°.51N×125°.94E, h13km, MS3.6, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.64	339	*eP*	Pg	06 37 56.2	+0.1
DDMP				*eS*	Sn	06 38 09.2	+0.7
MATI	Mati	1.47	12	*eP*	Pn	06 38 09.5	-0.3
MATI				*eS*	Sn	06 38 29.1	+0.2
SKMP	Bagumbayan, Su	1.72	306	*eP*	Pn	06 38 13.0	-0.3
SKMP				*eS*	Sg	06 38 37.9	-1.1
BUKP	Musuan	2.51	340	*eP*	Pn	06 38 24.3	-0.1
BUKP				*eS*	Sn	06 38 56.1	+1.2

IDC ***18*** *06:38:38.0±0.5, 15°.15S×175°.61W, h0km, mb4.5/23, mb1 4.6/24, mb1mx4.5/46, mbtmp4.5/24, ML3.7/1, MS5.2/11, Ms1 5.2/11, ms1mx5.0/19, Error ellipse: s-maj=22.8km s-min=12.6km az=142.0*

NEIC ***18*** *06:38:40.1±1.8, 14°.81S±0°.08×175°.90W±0°.07, h10km±1km, mb5.0/183, Mwc5.6(GCMT), Error ellipse: s-maj=14.1km s-min=11.6km az=165.0*

MOS ***18*** *06:38:40.0±1.1, 14°.96S×175°.90W, h20km, mb5.1/42, Error ellipse: s-maj=11.2km s-min=7.7km az=52.1*

NEIC ***18*** *06:38:44.1, 14°.71S×175°.65W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr-0.47; Mθθ3.06; Mϕϕ-2.58; Mrθ0.02; Mrϕ0.82; Mθϕ-0.20; Fault plane solution: M=2.97000×10^17 NP1:ϕs37.00000°, δ87.00000°, λ-176.00000°. NP2:ϕs307.00000°, δ86.00000°, λ-4.00000°. Principal axes: T 3.1737,

baz=37,SNR=5.2
H11S2 WAKE ISLAND Hy 37.50 332 T T 07 25 27.8
baz=151,slow=77,SNR=4.5
H11S3 WAKE ISLAND Hy 37.51 332 T T 07 25 24.3
baz=151,slow=77,SNR=5.6
H11S1 WAKE ISLAND Hy 37.52 332 T T 07 25 26.9
baz=151,slow=77,SNR=39
CAN Canberra 37.62 231 P **P** **06 45 54.2 -0.4**
CAN pmax pmax
comp=Z,15nm,1.0s
CAN Canberra 37.62 231 P **P** **06 45 54.2 -0.4**
MTSU Mount Surprise 38.47 260 P **P** **06 46 02.0 +0.1**
baz=38,SNR=9.4
H11N3 WAKE ISLAND Hy 38.48 333 T T 07 26 37.6
baz=152,slow=76,SNR=118
H11N1 WAKE ISLAND Hy 38.48 333 T T 07 26 38.0
baz=152,slow=76,SNR=53
H11N2 WAKE ISLAND Hy 38.50 333 T T 07 26 40.0
baz=152,slow=76,SNR=27
CMSA Cobar Meteorol 38.94 238 P **P** **06 46 06.4 +0.7**
baz=39,SNR=9.1
RKT Rikitea 39.19 108 *e*S **S** **06 51 58.4 -8.4**
RKT comp=Z,496nm,31.0s
comp=Z,9µm,25.0s
RKT Rikitea 39.19 108 *e*T T 07 27 43.0
comp=Z,12nm,0.3s
AIN Ainahou 39.46 31 P **P** **06 46 11.3 +1.1**
KKO Keanakako`i 39.58 31 P **P** **06 46 11.9 +0.7**
COEN Coen 39.85 266 P **P** **06 46 09.3 -4.2**
COEN IAmb IAmb 06 46 20.3
comp=Z,47nm,1.3s
TOO Toolangi 41.10 229 P **P** **06 46 24.7 +1.1**
baz=41,SNR=12
TOO Toolangi 41.10 229 P **P** **06 46 22.7 -0.9**
TOO pmax pmax
comp=Z,62nm,1.1s
TOO Toolangi 41.10 229 P **P** **06 46 22.7 -0.9**
TAU Tasmania Unive 42.21 221 P **P** **06 46 31.2 -1.3**
TAU pmax pmax
comp=Z,35nm,1.3s
TAU Tasmania Unive 42.21 221 P **P** **06 46 31.2 -1.3**
TAU IAmb IAmb 06 46 39.4
comp=Z,35nm,1.2s
STKA Stephens Creek 42.41 239 P **P** **06 46 34.8 +0.4**
baz=42,SNR=10.0
STKA Stephens Creek 42.41 239 P **P** **06 46 33.8 -0.5**
comp=Z,7.9nm,0.8s,baz=67,slow=7.4,SNR=15
STKA Stephens Creek 42.41 239 P **P** **06 46 33.6 -0.7**
STKA pmax pmax
comp=Z,3.0nm,1.0s
STKA Stephens Creek 42.41 239 P **P** **06 46 33.6 -0.7**
MCQ Macquarie Isla 44.16 201 P **P** **06 46 48.9 +0.8**
MCQ pmax pmax
comp=Z,158nm,1.4s
MCQ Macquarie Isla 44.16 201 P **P** **06 46 48.9 +0.8**
HTT Hallett 44.95 237 P **P** **06 46 55.1 +0.2**
baz=45,SNR=4.1
BBOO Buckleboo 47.18 239 P **P** **06 47 12.1 -0.3**
baz=47,SNR=6.1
BBOO Buckleboo 47.18 239 P **P** **06 47 11.4 -1.0**
BBOO IAmb IAmb 06 47 24.4
comp=Z,16nm,0.9s
WB2 Warramunga Arr 47.83 257 P **P** **06 47 15.5 -2.2**
WRAB Tennant Creek 47.84 257‖ *e*P **P** **06 47 16.2 -1.4**
WRAB pmax pmax
comp=Z,14nm,1.0s
WRAB Tennant Creek 47.84 257 P **P** **06 47 15.5 -2.1**
WRA Warramunga Arr 47.84 257 P **P** **06 47 16.3 -1.4**
comp=Z,10nm,0.9s,baz=91,slow=7.3,SNR=20
WRA LR LR 07 06 12.3
comp=Z,4µm,18.9s,baz=90,slow=35
AS31 Alice Springs 48.20 252 P **P** **06 47 18.9 -1.5**
ASAR Alice Springs 48.20 252 P **P** **06 47 19.9 -0.6**
comp=Z,13nm,0.8s,baz=84,slow=8.4,SNR=20
ASAR LR LR 07 07 19.5
comp=Z,2µm,18.2s,baz=91,slow=36
MTN Manton Dam 51.61 265 P **P** **06 47 43.8 -2.7**
MTN IAmb IAmb 06 47 46.3
comp=Z,15nm,0.9s
WRKA Warakurna 53.32 250 P **P** **06 47 58.5 -0.6**
baz=53,SNR=16
KNRA Kununurra 53.50 261 P **P** **06 47 58.6 -1.7**
KNRA IAmb IAmb 06 48 00.5
comp=Z,15nm,0.9s
FORT Forrest 53.70 243 P **P** **06 48 00.8 -0.9**
baz=54,SNR=7.3
FORT Forrest 53.70 243 P **P** **06 48 00.7 -1.0**
FITZ Fitzroy Crossi 56.19 258 P **P** **06 48 18.3 -1.5**
baz=56,SNR=3.1
FITZ Fitzroy Crossi 56.19 258 P **P** **06 48 19.3 -0.6**
SOEI Soe 58.79 268 P **P** **06 48 37.7 -0.7**
PSAD2 Pilbara Seismi 61.15 253 P **P** **06 48 53.9 -0.5**
PSAD2 IAmb IAmb 06 49 00.2
comp=Z,15nm,1.1s
PSA00 Pilbara Seismi 61.26 253 P **P** **06 48 53.7 -1.5**
PSA00 IAmb IAmb 06 49 03.7
comp=Z,18nm,1.1s
PSAA2 Pilbara Seismi 61.26 253 P **P** **06 48 53.4 -1.7**
PSAA2 IAmb IAmb 06 49 03.7
comp=Z,16nm,0.9s
PSAA1 Pilbara Seismi 61.27 253 P **P** **06 48 53.9 -1.3**
PSAC3 Pilbara Seismi 61.27 253 P **P** **06 48 55.0 -0.3**
PSAC3 IAmb IAmb 06 49 04.2
comp=Z,18nm,0.9s
KLBR Kellerberrin 62.54 242 P **P** **06 49 02.7 -0.9**
baz=62,SNR=5.0
KCP Kidapawan 62.66 286‖ *e*P **P** **06 49 06.7 +2.0**
VNDA Vanda 63.62 185 P **P** **06 49 09.8 -0.1**
comp=Z,7.3nm,1.3s,baz=7.1,slow=7.7,SNR=8.6
VNDA Vanda 63.62 185 P **P** **06 49 09.2 -0.8**
VNDA pmax pmax
comp=Z,24nm,1.4s
VNDA Vanda 63.62 185 P **P** **06 49 09.2 -0.8**
VNDA IAmb IAmb 06 49 20.8
comp=Z,24nm,1.4s
ATKA Atka Island 66.87 1 P **P** **06 49 31.6 +0.4**
MAJO Matsushiro 67.21 321 P **P** **06 49 32.6 -1.2**
MAJO pmax pmax
comp=Z,10.0nm,1.2s
MAJO Matsushiro 67.21 321 P **P** **06 49 32.6 -1.2**
MAJO IAmb IAmb 06 49 38.3
comp=Z,10.0nm,1.1s
MAT Matsushiro 67.21 321 P **P** **06 49 32.2 -1.6**
MAT *e*S **S** **06 58 22.8 -4.2**
MJB9 Matsu-Tunnel 67.21 321 P **P** **06 49 33.4 -0.4**
YUK Yuzh-Kuril'sk 68.40 331 P **P** **06 49 38.1 -2.9**
YUK *e* 06 50 02.5
YUK *e* 06 52 10.2
YUK *e*PPP PPP 06 53 47.8
YUK *e*S S 06 58 32.1 -8.8
YUK *e* 06 59 29.8
YUK *e*SS **SS** **07 02 57.3 -7.9**
YUK *e*SSS SSS 07 06 12.5
YUK pmax pmax
comp=Z,370nm,1.3s
YUK pmax pmax
comp=Z,509nm,1.6s
JNU Nakatsue 69.92 314 P **P** **06 49 48.6 -2.3**
CASY Casey 69.93 204 P **P** **06 49 51.0 +0.7**
YSS Yuzh-Sakhalins 72.03 331‖ *e*P **P** **06 50 02.6 -0.7**
YSS *e* 06 50 17.3
YSS pmax pmax
comp=Z,30nm,1.3s
ARVC Arvin 73.32 46 P **P** **06 50 14.6 +3.4**
baz=238
109C Camp Elliot, M 73.38 49 P **P** **06 50 14.7 +3.1**
baz=240
VES Vestal, Richgr 73.53 45 P **P** **06 50 15.3 +2.9**
baz=238
O02D Mt. Diablo Mer 73.58 40 P **P** **06 50 14.9 +2.1**
baz=234
BFSC Mount Baldy Ra 73.67 47 P **P** **06 50 16.0 +2.5**
baz=239
MURC Murrieta 73.67 48 P **P** **06 50 15.1 +1.7**
baz=240
KRMB Red Mountain 73.72 38 P **P** **06 50 15.8 +2.2**
KRMB IAmb IAmb 06 50 21.8
comp=Z,15nm,1.3s
EDW2 Edwards Air Fo 73.77 46 P **P** **06 50 16.8 +2.8**
baz=239
ISA Isabella, Lake 73.85 45 P **P** **06 50 16.7 +2.2**
ISA pmax pmax
comp=Z,17nm,1.5s
ISA Isabella, Lake 73.85 45 P **P** **06 50 17.2 +2.7**
baz=238
ISA Isabella, Lake 73.85 45 P **P** **06 50 16.7 +2.2**
ISA IAmb IAmb 06 50 27.2
comp=Z,17nm,1.4s
CMB Columbia Colle 73.87 42 P **P** **06 50 16.0 +1.5**
CMB pmax pmax
comp=Z,16nm,1.4s
CMB Columbia Colle 73.87 42 P **P** **06 50 16.0 +1.5**
CMB IAmb IAmb 06 50 23.7
comp=Z,16nm,1.4s
MONP2 Monument Peak 73.87 49 P **P** **06 50 17.4 +2.6**
baz=240
IKP In-Ko-Pah, Jac 73.98 49 P **P** **06 50 18.5 +3.2**
baz=240
AFDM Forest Hills D 74.01 41 P **P** **06 50 16.3 +1.1**
N02D Trinity Center 74.11 39 P **P** **06 50 18.6 +2.8**
baz=234
PFO Pinyon Flats O 74.21 48‖ *e*P **P** **06 50 19.6 +2.9**
PFO pmax pmax
comp=Z,13nm,1.5s
TPFO Pinon Flats 74.21 48 P **P** **06 50 18.9 +2.2**
baz=240
O03E Paynes Creek 74.26 40 P **P** **06 50 19.1 +2.3**
baz=235
M02C Callahan 74.27 38 P **P** **06 50 18.7 +1.9**
baz=234,SNR=5.1
KSRS Korea Array 74.33 316 P **P** **06 50 19.6 +2.6**
comp=Z,2.4nm,0.9s,baz=126,slow=5.7,SNR=10
SWSC Sam W. Stewart 74.35 49 P **P** **06 50 20.1 +2.8**
baz=241
SRIG Santa Rosalia 74.45 56 P **P** **06 50 20.7 +2.7**
SRIG IAmb IAmb 06 50 31.7
comp=Z,13nm,1.1s
MDPB Devils Postpil 74.51 43 P **P** **06 50 19.4 +1.0**
CWC Cottonwood Cre 74.54 45 P **P** **06 50 21.1 +2.5**
baz=238
OMMB Old Mammoth Mi 74.55 43 P **P** **06 50 20.4 +1.6**
YBH Yreka Blue Hor 74.56 38 P **P** **06 50 19.7 +1.3**
comp=Z,4.7nm,0.8s,baz=194,slow=3.2,SNR=13
YBH Yreka Blue Hor 74.56 38 P **P** **06 50 20.3 +1.8**
YBH pmax pmax
comp=Z,28nm,1.3s
YBH Yreka Blue Hor 74.56 38 P **P** **06 50 20.3 +1.8**
YBH IAmb IAmb 06 50 27.2
comp=Z,28nm,1.3s
K02D Willamette Mer 74.58 37 P **P** **06 50 21.4 +2.8**
baz=233
RUBR Rubicon Trail 74.59 42 P **P** **06 50 20.4 +1.5**
J01E Myrtle Point 74.71 37 P **P** **06 50 21.6 +2.4**
baz=232
BELC Belle Mtn. Jos 74.73 48 P **P** **06 50 21.8 +2.0**
baz=240
MPMC Manual Prospec 74.74 46 P **P** **06 50 21.5 +1.7**
baz=239
WAKR Walker 74.75 43 P **P** **06 50 22.2 +2.4**
TIN Tinemaha, Big 74.76 44 P **P** **06 50 21.7 +2.0**
baz=238
GSC Goldstone, Bar 74.82 46 P **P** **06 50 22.1 +2.0**
baz=239
HEC Hector,Ludlow 74.91 47 P **P** **06 50 23.0 +2.4**
baz=240
BEKR Beckworth 74.92 41 P **P** **06 50 21.6 +0.8**
BEKR IAmb IAmb 06 50 28.3
comp=Z,20nm,1.3s
KDAK Kodiak Island 74.92 13 P **P** **06 50 21.4 +1.4**
comp=Z,3.9nm,0.7s,baz=124,slow=17,SNR=4.0
KDAK LR LR 07 16 16.7
comp=Z,2µm,21.5s,baz=225,slow=30
KDAK Kodiak Island 74.92 13 P **P** **06 50 21.4 +1.4**
KDAK pmax pmax
comp=Z,19nm,1.2s
KDAK Kodiak Island 74.92 13 IAmb IAmb 06 50 30.2
comp=Z,19nm,1.1s
BC3 Big Chuckawall 74.96 49 P **P** **06 50 23.0 +2.0**
baz=241
PNTR Pine Nut 74.97 42 P **P** **06 50 22.7 +1.7**
PNTR IAmb IAmb 06 50 29.6
comp=Z,34nm,1.4s
KSM Kuching 74.99 276 P **P** **06 50 20.7 -0.7**
KSM IAmb IAmb 06 50 26.4
comp=Z,17nm,1.3s
L04D Klamath Falls 75.09 38 P **P** **06 50 23.3 +1.7**
baz=234
QSPA South Pole Qui 75.10 180 P **P** **06 50 22.5 +1.2**
M04C Macdoel 75.11 39 P **P** **06 50 23.7 +2.0**
baz=234,SNR=5.6
GLA Glamis 75.12 49 P **P** **06 50 23.8 +2.0**
GLA pmax pmax
comp=Z,48nm,1.5s
GLA Glamis 75.12 49 P **P** **06 50 24.8 +3.0**
baz=241
GLA Glamis 75.12 49 P **P** **06 50 23.8 +2.0**
YERR Yerington 75.14 42 P **P** **06 50 23.4 +1.4**
YERR IAmb IAmb 06 50 29.7
comp=Z,23nm,1.3s
GRAC Grapevine Rang 75.32 45 P **P** **06 50 26.1 +3.2**
baz=239
I02D Swisshome 75.34 36 P **P** **06 50 25.4 +2.6**
baz=232
QZH Quanzhou 75.36 301 P **P** **06 50 26.6 +3.3**
QZH LR LR
comp=Z,580nm,15.6s
QZH LR LR
comp=Z,310nm,17.5s
QZH LR LR
comp=Z,590nm,20.8s
GMRC Granite Mounta 75.37 47 P **P** **06 50 26.1 +2.7**
baz=240
I03D Drain, OR 75.38 36 P **P** **06 50 25.4 +2.4**
baz=233
FURC Furnace Creek, 75.39 45 P **P** **06 50 26.2 +3.1**
baz=239
IRM Iron Mountain 75.43 48 P **P** **06 50 26.0 +2.4**
baz=241
PAHR Pah Rah Range 75.45 42 P **P** **06 50 25.8 +2.0**
NVAR Mina Array Bea 75.45 43 P **P** **06 50 26.1 +2.3**
comp=Z,2.9nm,0.7s,baz=228,slow=9.4,SNR=15
NV11 Mina Array Sit 75.55 43 P **P** **06 50 26.2 +1.8**
Y12C Blythe 75.68 49 P **P** **06 50 27.7 +2.7**
baz=241
USA0B Ussuriysk Arra 75.73 324‖ *e*P **P** **06 50 27.2 +2.2**
USRK Ussuriysk Ar. 75.73 324 P **P** **06 50 27.1 +2.1**
comp=Z,1.6nm,0.8s,baz=83,slow=6.0,SNR=6.9
113A Mohawk Valley, 75.76 50 P P 06 50 30.0 +4.6
113A IAmb IAmb 06 50 33.6
comp=Z,34nm,1.5s
J04D Umpqua Nationa 75.82 37 P **P** **06 50 28.5 +2.6**
baz=234
KVN Kaiserville 75.92 43 P **P** **06 50 28.6 +2.1**
KVN pmax pmax
comp=Z,9.0nm,1.3s
KVN Kaiserville 75.92 43 P **P** **06 50 28.6 +2.1**
I04A Tendick Farm, 75.97 37 P **P** **06 50 28.9 +2.4**
baz=233
TPNV Topopah Spring 76.06 45 P **P** **06 50 29.3 +2.0**
TPNV pmax pmax
comp=Z,14nm,1.2s
TPNV Topopah Spring 76.06 45 P **P** **06 50 29.5 +2.2**
baz=239
TPNV Topopah Spring 76.06 45 P **P** **06 50 29.3 +2.0**
TPNV IAmb IAmb 06 50 37.1
comp=Z,14nm,1.2s
214A Organ Pipe Nat 76.10 51 P **P** **06 50 30.1 +2.6**
baz=243
214A Organ Pipe Nat 76.10 51 P P 06 50 32.1 +4.7
214A IAmb IAmb 06 50 38.5
comp=Z,30nm,1.5s
MOD Modoc Plateau 76.12 39 P **P** **06 50 29.7 +2.2**
HSIG 76.21 55 P **P** **06 50 30.3 +2.2**
HSIG IAmb IAmb 06 50 37.6
comp=Z,16nm,1.4s
PDMCI Parker Dam,Lak 76.22 49 P **P** **06 50 30.3 +2.2**
baz=241
H04D Lebanon 76.23 36 P **P** **06 50 30.5 +2.6**
baz=233
G03D McMinnville, O 76.35 35 P **P** **06 50 30.0 +1.5**
baz=232
J05D Fort Rock, OR 76.36 38 P **P** **06 50 30.5 +1.7**
baz=234,SNR=15
SHPR Sheep Range 76.58 46 P **P** **06 50 33.9 +3.6**
H04A Detroit Lake 76.64 36 P **P** **06 50 31.8 +1.6**
CNPM China Poot 76.81 12 P **P** **06 50 31.8 +1.0**
CNPM IAmb IAmb 06 50 44.3
comp=Z,18nm,1.1s
PINE Pine Mountain 76.83 37 P **P** **06 50 33.9 +2.3**
I05D Terrebonne, OR 76.92 37 P **P** **06 50 33.0 +1.2**
baz=234,SNR=6.3
E03A Lebam 77.02 34 P **P** **06 50 33.9 +1.7**
E03A IAmb IAmb 06 50 46.9
comp=Z,20nm,1.0s
BRLK Bradley Lake 77.10 13 P **P** **06 50 33.2 +0.8**
R11A Troy Canyon, C 77.23 44 P **P** **06 50 36.0 +2.1**
baz=240
R11A Troy Canyon, C 77.23 44 P **P** **06 50 36.0 +2.1**
F04A Amboy 77.26 35 P **P** **06 50 35.2 +1.6**
F04A IAmb IAmb 06 50 43.5
comp=Z,16nm,1.1s
H02S1 DAWSON INLET T 77.32 25 T T 08 15 18.6
SNR=29
G05D Wamic, OR 77.47 36 P **P** **06 50 37.4 +2.5**
baz=234
E04D Cinebar 77.56 34 P **P** **06 50 37.4 +2.1**
baz=233,SNR=5.3
TUC Tucson 77.79 52 P **P** **06 50 40.1 +3.1**
TUC pmax pmax
comp=Z,17nm,1.3s
TUC Tucson 77.79 52 P **P** **06 50 40.1 +3.1**
baz=244
TUC Tucson 77.79 52 P **P** **06 50 40.1 +3.1**
TUC IAmb IAmb 06 50 51.5
comp=Z,17nm,1.3s
I07A Izee 77.84 38 P **P** **06 50 38.2 +1.1**
I07A IAmb IAmb 06 50 44.7
comp=Z,20nm,1.3s
G06A Carlson Farm, 77.85 36 P **P** **06 50 38.9 +1.8**
D03D Eldon 77.88 33 P **P** **06 50 39.6 +2.5**
baz=232
J08A Circle Bar Ran 78.05 39 P **P** **06 50 40.0 +1.7**
J08A IAmb IAmb 06 50 53.0
comp=Z,16nm,1.1s
NJ2 Nanjing 78.17 308 *e*P **P** **06 50 38.1 -0.9**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 LR LR
comp=Z,430nm,20.4s
NJ2 LR LR
comp=Z,640nm,20.4s
NJ2 LR LR
comp=Z,1µm,20.4s
X16A Lo Mia Camp, P 78.25 49 P **P** **06 50 42.8 +3.1**
X16A IAmb IAmb 06 50 48.1
comp=Z,30nm,1.5s
CCUT Cedar City 78.35 46 P **P** **06 50 43.4 +3.1**
PSUT Pine Spring 78.49 45 P **P** **06 50 43.6 +2.6**
319A Douglas 78.53 53 P **P** **06 50 45.3 +4.0**
RC01 Rabbit Creek A 78.54 13 P **P** **06 50 41.0 +0.5**
RC01 IAmb IAmb 06 50 49.0
comp=Z,15nm,1.1s
U15A North Rim 78.57 47 P **P** **06 50 44.5 +2.9**
U15A IAmb IAmb 06 50 49.8
comp=Z,24nm,1.4s
HIN Hinchinbrook I 78.65 14 P **P** **06 50 41.9 +0.8**
HIN IAmb IAmb 06 50 54.7
comp=Z,15nm,1.0s
ELK Elko 78.69 42 P **P** **06 50 43.9 +1.9**
ELK pmax pmax
comp=Z,22nm,1.5s
ELK Elko 78.69 42 P **P** **06 50 43.9 +1.9**
ELK IAmb IAmb 06 50 50.2
comp=Z,22nm,1.4s
WUAZ Wupatki 78.80 49 P **P** **06 50 45.2 +2.5**
baz=243
A04D Lummi Island 78.82 33 P **P** **06 50 44.4 +2.2**
baz=232
G08A Pilot Rock 78.85 37 P **P** **06 50 44.7 +2.0**
G08A IAmb IAmb 06 50 50.8
comp=Z,32nm,1.4s
B05A Bryant 78.86 33 P **P** **06 50 44.7 +2.3**
baz=233
GLI Glacier Island 78.94 14 P **P** **06 50 43.0 +0.4**
GLI IAmb IAmb 06 50 56.7
comp=Z,21nm,1.0s
FID Port Fidalgo 78.96 14 P **P** **06 50 42.4 -0.4**
KLR Kul'dur 78.97 328‖ *e*P **P** **06 50 42.8 -0.3**
KLR pmax pmax
comp=Z,10.0nm,2.8s
MA2 Magadan 79.09 343‖ *e*P **P** **06 50 41.7 -1.8**
MA2 pmax pmax
comp=Z,11nm,1.3s
KNK Knik Glacier 79.11 13 P **P** **06 50 43.6 0.0**
KNK IAmb IAmb 06 50 45.1
comp=Z,32nm,1.5s
TTA Tatalina 79.12 9 P **P** **06 50 45.1 +1.4**
TTA pmax pmax
comp=Z,25nm,1.3s
TTA Tatalina 79.12 9 P **P** **06 50 45.1 +1.4**
TTA IAmb IAmb 06 50 53.0
comp=Z,25nm,1.3s
PMR Palmer 79.12 13 P **P** **06 50 44.0 +0.4**
PMR pmax pmax
comp=Z,22nm,1.3s
PMR Palmer 79.12 13 P **P** **06 50 44.0 +0.4**
PMR IAmb IAmb 06 50 45.1
comp=Z,22nm,1.3s
X18A Snowflake 79.40 50 P **P** **06 50 49.4 +3.4**
BMO Blue Mountains 79.58 38 P **P** **06 50 48.3 +1.6**
BMO pmax pmax
comp=Z,12nm,1.2s
BMO Blue Mountains 79.58 38 P **P** **06 50 48.3 +1.6**
MSU Marysvale 79.63 46 P **P** **06 50 50.6 +3.4**
MSU Marysvale 79.63 46 P **P** **06 50 50.6 +3.4**
MFID Camas Ranch 79.70 40 P **P** **06 50 48.6 +1.3**
SCM Sheep Creek Mo 79.73 13 P **P** **06 50 48.0 +1.0**
SCM pmax pmax
comp=Z,26nm,1.3s
SCM Sheep Creek Mo 79.73 13 P **P** **06 50 48.0 +1.0**
SCM IAmb IAmb 06 50 59.7
comp=Z,26nm,1.3s
D08A Wollman Farm, 79.88 35 P **P** **06 50 49.9 +1.8**
D08A IAmb IAmb 06 50 55.5
comp=Z,19nm,1.3s
DUG Dugway, Tooele 80.01 44 P **P** **06 50 51.2 +2.0**
DUG pmax pmax
comp=Z,22nm,1.5s
DUG Dugway, Tooele 80.01 44 P **P** **06 50 51.5 +2.3**
baz=241
DUG Dugway, Tooele 80.01 44 P **P** **06 50 51.2 +2.0**
DUG IAmb IAmb 06 50 57.3
comp=Z,22nm,1.4s
VRDI Verde Repeater 80.12 15 P **P** **06 50 49.1 -0.2**
VRDI IAmb IAmb 06 50 56.4
comp=Z,19nm,1.4s
121A Cookes Peak, D 80.17 53 P **P** **06 50 52.9 +2.7**
baz=246
GLB Gilahina Butte 80.21 15 P **P** **06 50 49.4 -0.3**
GLB IAmb IAmb 06 50 58.2
comp=Z,16nm,1.2s
F10A Beach Ranch, E 80.24 37 P **P** **06 50 51.5 +1.4**
F10A IAmb IAmb 06 50 57.0
comp=Z,25nm,1.4s
BALM Baldy 80.24 16 P **P** **06 50 49.0 -0.9**
MCARA McCarthy VSAT 80.36 15 P **P** **06 50 51.5 +1.2**
B08A Colville Reser 80.40 34 P **P** **06 50 52.1 +1.2**
B08A IAmb IAmb 06 50 59.2
comp=Z,25nm,1.4s
LLLB Lillooet 80.41 31 P **P** **06 50 52.5 +1.6**
LLLB IAmb IAmb 06 50 59.6
comp=Z,20nm,1.4s
BARN Barnard Glacie 80.44 16 P **P** **06 50 51.3 +0.3**
BARN IAmb IAmb 06 50 58.4
comp=Z,37nm,1.4s
CTGM Chitina Glacie 80.45 16 P **P** **06 50 52.1 +1.0**
CTGM IAmb IAmb 06 50 58.4
comp=Z,15nm,1.1s
KTH Kantishna Hill 80.55 11 P **P** **06 50 51.1 -0.3**
KTH IAmb IAmb 06 50 58.5
comp=Z,24nm,1.3s
TRF Thorofare Moun 80.58 11 P **P** **06 50 51.9 +0.3**
TRF IAmb IAmb 06 51 02.4
comp=Z,27nm,1.3s
TMUT Trail Mountain 80.67 45 P **P** **06 50 56.2 +3.2**
QIZ Qiongzhong 80.73 293 P **P** **06 50 50.8 -2.5**
QIZ S S 07 00 49.5 -10
QIZ SS SS 07 06 02.8 -11
QIZ LR LR
comp=Z,760nm,23.6s
QIZ LR LR
comp=Z,270nm,21.8s
QIZ LR LR
comp=Z,500nm,26.3s
SPUT South Promonto 80.79 43 P **P** **06 50 55.5 +2.1**
RND Reindeer 80.82 12 P **P** **06 50 52.8 0.0**

RND pmax pmax
comp=Z,26nm,1.2s
RND Reindeer 80.82 12 P **P** **06 50 52.8 0.0**
RND lAmb lAmb 06 51 03.0
comp=Z,26nm,1.2s
DHY Denali Highway 80.82 13 P **P** **06 50 53.6 +0.7**
MCK McKinley 81.09 12 P **P** **06 50 54.3 0.0**
MCK pmax pmax
comp=Z,14nm,0.9s
MCK McKinley 81.09 12 P **P** **06 50 54.3 0.0**
MCK lAmb lAmb 06 51 04.1
comp=Z,14nm,0.9s
JLU Jordanelle 81.12 44 P **P** **06 50 56.5 +1.3**
PAX Paxson 81.14 13 P **P** **06 50 54.9 +0.3**
PAX pmax pmax
comp=Z,5.0nm,1.0s
PAX Paxson 81.14 13 P **P** **06 50 54.9 +0.3**
BWN Browne 81.39 11 P **P** **06 50 56.3 +0.5**
TCUT Toone Canyon 81.39 43 P **P** **06 50 59.0 +2.4**
HYT Haines Junctio 81.42 18 P **P** **06 50 57.0 +0.9**
HWUT Hardware Ranch 81.52 43 P **P** **06 50 57.9 +0.7**
HWUT lAmb lAmb 06 51 04.5
comp=Z,19nm,1.4s
SEY Seymchan 81.53 346‖ *e*P **P** **06 50 57.0 +0.5**
NEW Newport 81.56 35 P **P** **06 50 58.1 +1.0**
comp=Z,1.1nm,0.6s,baz=217,slow=10,SNR=1.6
NEW Newport 81.56 35 P **P** **06 50 58.1 +1.0**
NEW pmax pmax
comp=Z,5.0nm,1.2s
NEW Newport 81.56 35 P **P** **06 50 59.1 +2.0**
baz=237
MVCO Mesa Verde 81.63 48 P **P** **06 51 00.4 +2.4**
baz=245
MNTX Cornudas Mount 81.70 54 P **P** **06 51 00.7 +2.5**
baz=247
MNTX Cornudas Mount 81.70 54 P **P** **06 51 01.5 +3.3**
MNTX lAmb lAmb 06 51 09.3
comp=Z,31nm,1.5s
BNM Barren Site 81.72 51 P **P** **06 51 01.6 +3.1**
PV10 Paradox Valley 81.76 47 P **P** **06 50 59.3 +0.6**
PV10 lAmb lAmb 06 51 06.1
comp=Z,18nm,1.3s
WRH Wood River Hil 81.92 12 P **P** **06 50 58.4 -0.2**
WRH lAmb lAmb 06 51 07.0
comp=Z,20nm,1.2s
RIDG Independent Ri 81.95 13 P **P** **06 50 58.8 -0.1**
RIDG lAmb lAmb 06 51 01.9
comp=Z,13nm,0.7s
WHY Whitehorse 82.09 19 P **P** **06 51 00.2 +0.5**
HDA Harding Lake 82.10 12 P **P** **06 51 00.5 +1.0**
baz=208
HDA Harding Lake 82.10 12 P **P** **06 51 00.1 +0.6**
HDA lAmb lAmb 06 51 09.1
comp=Z,11nm,0.9s
CCB Clear Creek Bu 82.14 12 P **P** **06 50 59.4 -0.3**
TX31 Lajitas Ar. Si 82.16 57 P **P** **06 51 03.5 +2.8**
TX32 Lajitas Array 82.16 57 P **P** **06 51 04.1 +3.3**
TXAR Lajitas Array 82.16 57 P **P** **06 51 02.1 +1.4**
comp=Z,5.5nm,1.0s,baz=225,slow=5.1,SNR=18
ANMO Albuquerque 82.18 51 P **P** **06 51 02.5 +1.7**
comp=Z,6.6nm,1.2s,baz=210,slow=5.9,SNR=8.2
ANMO Albuquerque 82.18 51‖ *e*P **P** **06 51 02.6 +1.7**
ANMO pmax pmax
comp=Z,11nm,1.4s
ANMO Albuquerque 82.18 51 P **P** **06 51 02.6 +1.7**
baz=246
ANMO Albuquerque 82.18 51 P **P** **06 51 03.0 +2.1**
MCMT McKenzie Canyo 82.27 40 P **P** **06 51 02.4 +1.2**
COLA College 82.33 12 *ce*P **P** **06 51 00.5 -0.2**
COLA pmax pmax
comp=Z,8.0nm,1.0s
COLA College 82.33 12 P **P** **06 51 01.1 +0.4**
COLA lAmb lAmb 06 51 10.5
comp=Z,14nm,0.8s
MDM Murphy Dome 82.33 11 P **P** **06 51 01.2 +0.5**
SCRK Sand Creek 82.35 14 P **P** **06 51 01.5 +0.5**
AHID Auburn Hatcher 82.37 42 P **P** **06 51 02.3 +0.6**
AHID lAmb lAmb 06 51 09.3
comp=Z,19nm,1.2s
RDMU Red Mountain 82.37 45 P **P** **06 51 03.0 +1.2**
IL31 82.43 12 P **P** **06 51 01.5 +0.3**
IL31 lAmb lAmb 06 51 08.1
comp=Z,26nm,1.4s
ILAR Eielson Array 82.43 12 P **P** **06 51 01.5 +0.3**
comp=Z,1.9nm,0.9s,baz=224,slow=6.4,SNR=9.4
MSO Missoula 82.62 38 P **P** **06 51 04.1 +1.3**
baz=240
MSO Missoula 82.62 38 P **P** **06 51 04.0 +1.1**
POKR Poker Plat Res 82.63 12 P **P** **06 51 02.4 +0.1**
baz=208
GDL2 Guadalupe Moun 82.69 54 P **P** **06 51 05.8 +2.2**
TPAW Teton Pass 82.81 42 P **P** **06 51 05.8 +1.7**
REDW Red Top Meadow 82.82 42 P **P** **06 51 06.0 +1.9**
FXWY Fox Creek 82.83 41 P **P** **06 51 06.3 +2.1**
SNOW Snow King Moun 82.93 42 P **P** **06 51 05.7 +1.1**
LRM Limekiln Ridge 83.00 39 P **P** **06 51 06.0 +1.0**
IMW Indian Meadow 83.01 41 P **P** **06 51 06.7 +1.5**
S22A 4UR Ranch, Cre 83.06 48 P **P** **06 51 08.1 +2.5**
baz=246
O20A White River Ci 83.09 45 P **P** **06 51 08.2 +2.6**
baz=244
O20A White River Ci 83.09 45 P **P** **06 51 07.7 +2.2**
QLMT Earthquake Lak 83.15 40 P **P** **06 51 07.1 +1.4**
FLWY Flagg Ranch 83.25 41 P **P** **06 51 06.0 -0.3**
YHB Horse Butte 83.26 40 P **P** **06 51 07.2 +0.9**
YHL Hebgen Lake 83.31 40 P **P** **06 51 09.6 +2.9**
YMR Madison River 83.36 40 P **P** **06 51 09.3 +2.4**
BW06 Boulder Array 83.38 43 P **P** **06 51 08.9 +1.9**
baz=243
BW06 Boulder Array 83.38 43 P **P** **06 51 07.6 +0.6**
PD31 Pinedale Array 83.38 43 P **P** **06 51 07.6 +0.6**
PD31 lAmb lAmb 06 51 15.9
comp=Z,26nm,1.5s
PDAR Pinedale Array 83.38 43 P **P** **06 51 08.3 +1.4**
comp=Z,3.3nm,0.9s,baz=209,slow=3.0,SNR=12
H17A Grant Village 83.48 41 P **P** **06 51 09.7 +2.2**
baz=242
H17A Grant Village 83.48 41 P **P** **06 51 10.8 +3.3**
H17A lAmb lAmb 06 51 17.1
comp=Z,19nm,1.3s
YHH Holmes Hill 83.49 40 P **P** **06 51 09.5 +1.9**
DAWY Dawson 83.53 15 P **P** **06 51 07.5 +0.5**
DAWY lAmb lAmb 06 51 16.2
comp=Z,9.4nm,1.1s
BJI Beijing 83.59 314 P **P** **06 51 08.8 +1.0**
BJI S **S** **07 01 21.0 -7.4**
BJI pmax pmax
comp=Z,13nm,1.6s
BJI LR LR
comp=Z,630nm,15.3s
BJI LR LR
comp=Z,440nm,22.2s
BJI LR LR
comp=Z,680nm,21.8s
LKWY Lake 83.67 41 P **P** **06 51 10.5 +2.0**
LKWY pmax pmax
comp=Z,23nm,1.2s
LKWY Lake 83.67 41 P **P** **06 51 10.5 +2.0**
EGAK Eagle 83.69 14 P **P** **06 51 08.3 +0.6**
BILL Bilibino 83.78 353‖ *i*P **P** **06 51 08.4 +0.2**
BILL *e* 06 51 13.4
BILL *e* 06 51 18.6
BILL *e*S **S** **07 01 32.6 +3.3**
BILL *e* 07 02 31.2
BILL pmax pmax
comp=Z,5.0nm,1.0s
BILL MLR MLR
comp=Z,536nm,18.0s
BILL Bilibino 83.78 353 P **P** **06 51 08.2 0.0**
BILL lAmb lAmb 06 51 19.9
comp=Z,16nm,1.3s
WALA Waterton Lakes 83.79 36 P **P** **06 51 09.8 +1.1**
WALA lAmb lAmb 06 51 15.8
comp=Z,22nm,1.5s
ZEA Zeya 83.93 330 *e*P **P** **06 51 09.0 -0.2**
ZEA pmax pmax
comp=Z,36nm,1.6s
ZEA pmax pmax
comp=Z,200nm,8.0s
SDCO Great Sand Dun 84.02 49 P **P** **06 51 13.0 +2.5**
baz=246
SDCO Great Sand Dun 84.02 49 P **P** **06 51 13.0 +2.5**
SDCO lAmb lAmb 06 51 18.8
comp=Z,17nm,1.4s
YNE Yellowstone No 84.12 41 P **P** **06 51 12.8 +2.0**

T25A Trinidad 84.57 49 P **P** **06 51 14.7 +1.5**
baz=247
MSTX Muleshoe 84.60 53 P **P** **06 51 15.5 +2.2**
baz=248
MSTX Muleshoe 84.60 53 P **P** **06 51 14.4 +1.2**
RLMT Red Lodge 84.64 41 P **P** **06 51 15.3 +1.9**
baz=243
RLMT Red Lodge 84.64 41 P **P** **06 51 15.7 +2.3**
GCMT Greycliff 84.70 40 P **P** **06 51 15.9 +2.4**
Q24A Divide 84.77 48 P **P** **06 51 16.4 +2.1**
baz=247
ISCO Idaho Springs 84.78 47 P **P** **06 51 16.0 +1.7**
baz=246
N23A Red Feather La 85.00 46 P **P** **06 51 16.7 +1.4**
baz=246
833A Chaparral WMA, 85.31 59 P **P** **06 51 18.9 +2.1**
baz=251
K22A Casper 85.34 44 P **P** **06 51 18.8 +1.9**
baz=245
TOLK Toolik Lake Re 85.43 9 P **P** **06 51 18.3 +1.8**
baz=206
TOLK Toolik Lake Re 85.43 9 P **P** **06 51 17.0 +0.5**
TOLK lAmb lAmb 06 51 26.8
comp=Z,20nm,1.3s
EGMT Eagleton 85.68 38 P **P** **06 51 20.4 +2.1**
baz=243
EGMT Eagleton 85.68 38 P **P** **06 51 19.9 +1.6**
EGMT lAmb lAmb 06 51 29.4
comp=Z,15nm,1.4s
JCT Junction City 85.70 57 P **P** **06 51 21.2 +2.4**
JCT pmax pmax
comp=Z,18nm,1.3s
JCT Junction City 85.70 57 P **P** **06 51 21.5 +2.8**
baz=250
JCT Junction City 85.70 57 P **P** **06 51 21.2 +2.4**
JCT lAmb lAmb 06 51 28.1
comp=Z,18nm,1.2s
AMTX Amarillo 85.77 52 P **P** **06 51 21.8 +2.7**
baz=249
GYA Guiyang 85.92 299 *e*P **P** **06 51 16.0 -4.0**
GYA sP sP 06 51 47.5 +17
GYA PP **PP** **06 54 44.0 +3.8**
GYA Guiyang 85.92 299 S **S** **07 01 57.4 +4.9**
GYA Guiyang 85.92 299 sS sS 07 02 14.3 +8.8
GYA Guiyang 85.92 299 SS SS 07 07 39.1 +8.4
GYA pmax pmax
comp=Z,10.0nm,0.5s
GYA pmax pmax
comp=Z,90nm,4.1s
GYA LR LR
comp=N,330nm,15.5s
GYA LR LR
comp=E,240nm,15.0s
GYA LR LR
comp=Z,310nm,17.4s
EPYK Eagle Plains 86.06 15 P **P** **06 51 21.9 +2.2**
baz=218
EPYK Eagle Plains 86.06 15 P **P** **06 51 21.1 +1.4**
ABTX Abilene, Hawle 86.56 55 P **P** **06 51 24.8 +1.9**
baz=250
ABTX Abilene, Hawle 86.56 55 P **P** **06 51 25.4 +2.4**
XAN Xi'an 86.61 306 P **P** **06 51 26.1 +2.9**
XAN SS SS 07 07 36.8 -3.7
XAN pmax pmax
comp=Z,10.0nm,1.7s
XAN pmax pmax
comp=Z,160nm,6.7s
XAN LR LR
comp=Z,470nm,19.5s
XAN LR LR
comp=Z,410nm,19.5s
XAN LR LR
comp=Z,550nm,21.7s
HHC Hu-ho-hao-te 87.14 313 *e*P **P** **06 51 24.3 -1.4**
HHC pP sP 06 51 44.0 +7.7
HHC PP **PP** **06 54 48.9 -0.8**
HHC SKS **SKSac** **07 01 40.9 -11**
HHC S **SKKSac** **07 01 57.3 -3.1**
HHC sS sS 07 02 33.3 +17
HHC pmax pmax
comp=Z,7.0nm,0.9s
HHC pmax pmax
comp=Z,120nm,5.4s
HHC LR LR
comp=Z,300nm,14.2s
HHC LR LR
comp=Z,240nm,14.3s
HHC LR LR
comp=Z,470nm,20.4s
LAO LASA Array 87.24 40 P **P** **06 51 28.2 +2.3**
baz=245
H03S2 Juan Fernandez 87.25 124 T T 08 28 05.0
baz=252,slow=75,SNR=5.3
H03S1 Juan Fernandez 87.27 124 T T 08 28 04.3
baz=252,slow=75,SNR=11
H03S3 Juan Fernandez 87.27 124 T T 08 28 03.6
baz=252,slow=75,SNR=8.9
H03N2 Juan Fernandez 87.36 124 T T 08 28 07.4
baz=257,slow=73,SNR=4.9
H03N3 Juan Fernandez 87.36 124 T T 08 28 08.3
baz=257,slow=73,SNR=4.2
H03N1 Juan Fernandez 87.37 124 T T 08 28 07.6
baz=257,slow=73,SNR=6.8
MAW Mawson 87.53 199 P **P** **06 51 28.2 +1.3**
baz=88,SNR=6.1
MAW Mawson 87.53 199 P **P** **06 51 25.7 -1.3**
comp=Z,3.1nm,1.1s,baz=80,slow=6.1,SNR=2.9
MAW Mawson 87.53 199 P **P** **06 51 25.7 -1.3**
MAW pmax pmax
comp=Z,5.0nm,1.2s
RSSD Black Hills 87.59 43 P **P** **06 51 29.0 +1.1**
RSSD pmax pmax
comp=Z,4.0nm,1.0s
RSSD Black Hills 87.59 43 P **P** **06 51 30.5 +2.6**
baz=247
RSSD Black Hills 87.59 43 P **P** **06 51 29.0 +1.1**
435B Jarrell 87.61 57 P **P** **06 51 30.3 +2.3**
baz=252
YAK Yakutsk 87.85 337‖ *e*P **P** **06 51 30.6 +2.2**
YAK pmax pmax
comp=Z,5.0nm,1.0s
BTO Baotou 88.13 313 *e*P **P** **06 51 34.8 +4.4**
INK Inuvik 88.35 14 P **P** **06 51 31.1 +0.5**
comp=Z,1.0nm,0.9s,baz=262,slow=4.1
INK Inuvik 88.35 14 P **P** **06 51 31.1 +0.5**
INK pmax pmax
comp=Z,5.0nm,1.5s
INK Inuvik 88.35 14 IAmb IAmb 06 51 32.3
comp=Z,5.0nm,1.5s
KMI Kunming 88.88 296 P P 06 51 41.9 +7.4
KMI pP sP 06 51 51.8 +6.6
KMI sP pP 06 51 54.8 +12
KMI PP **PP** **06 55 09.1 +4.9**
KMI 88.88 296 S **S** **07 02 20.5 -0.7**
KMI Kunming 88.88 296 sS sS 07 02 35.0 +0.7
KMI Kunming 88.88 296 SS SS 07 08 24.6 +10
KMI pmax pmax
comp=Z,12nm,0.6s
KMI pmax pmax
comp=Z,91nm,3.9s
KMI LR LR
comp=N,350nm,19.1s
KMI LR LR
comp=E,550nm,20.1s
KMI LR LR
comp=Z,760nm,25.9s
DGMT Dagmar 89.23 39 P **P** **06 51 37.2 +1.9**
baz=247
APG El Apazote 89.28 74 P **P** **06 51 36.8 +0.3**
comp=Z,4.3nm,1.0s,baz=342,slow=6.4,SNR=2.2
CMAR Chiang Mai Arr 90.42 289 P **P** **06 51 43.1 +1.6**
comp=Z,0.7nm,0.3s,baz=102,slow=2.2,SNR=1.8
CMAR LR LR 07 30 04.0
comp=Z,196nm,19.1s,baz=142,slow=34
YKA Yellowknife Ar 90.55 24 P **P** **06 51 41.8 +0.7**
comp=Z,0.7nm,0.7s,baz=239,slow=4.3,SNR=12
TUL1 Leonard 90.65 53 P **P** **06 51 44.5 +2.3**
baz=252
LZH Lanzhou 91.22 307 *e*P **P** **06 51 44.9 -0.2**
LZH pP sP 06 52 06.5 +11
LZH sP pP 06 52 15.4 +22
LZH *e*PP **PP** **06 55 23.6 +1.1**
LZH pmax pmax
comp=Z,20nm,1.4s
LZH pmax pmax
comp=Z,92nm,9.3s

LZH LR LR
comp=Z,200nm,17.0s
LZH LR LR
comp=Z,220nm,17.2s
LZH LR LR
comp=Z,330nm,19.6s
PLCA Paso Flores 91.42 133 LR LR 07 24 03.8
comp=Z,883nm,21.5s,baz=250,slow=30
C36M Paulatuk 91.51 16 P **P** **06 51 47.0 +1.6**
baz=230
C36M Paulatuk 91.51 16 P **P** **06 51 44.9 -0.5**
MIAR Mount Ida 91.97 55 P **P** **06 51 50.2 +1.8**
baz=254
W39A Magazine 92.00 54 P **P** **06 51 50.5 +2.0**
baz=254
ECSD EROS Data Cent 92.47 45 P **P** **06 51 52.4 +1.9**
baz=252
ECSD EROS Data Cent 92.47 45 P **P** **06 51 50.3 -0.2**
ECSD lAmb lAmb 06 51 56.9
comp=Z,11nm,1.4s
SYO Syowa Base 92.61 192‖ *e*P P 06 51 41.0 -10
SYO Syowa Base 92.61 192‖ *e*P **P** **06 51 50.2 -0.5**
ULN Ulaanbaatar 92.66 319‖ *e*P **P** **06 51 50.9 -0.6**
ULN pmax pmax
comp=Z,1.0nm,0.9s
FFC Flin Flon 92.92 34 P **P** **06 51 52.1 -0.2**
FFC pmax pmax
comp=Z,4.0nm,1.4s
FFC Flin Flon 92.92 34 P **P** **06 51 52.0 -0.2**
A36M Sachs Harbour 92.97 14 P **P** **06 51 52.9 +0.8**
baz=229
U40A Yellville 93.05 53 P **P** **06 51 55.3 +2.0**
baz=254
SONM Songino Array 93.07 319 P **P** **06 51 53.6 +0.3**
comp=Z,0.4nm,0.6s,baz=124,slow=7.8,SNR=2.5
W41B Gary Mavity, V 93.20 55 P **P** **06 51 56.4 +2.4**
baz=254
SNAA Sanae 93.46 178‖ *e*P **P** **06 51 55.1 +0.4**
SNAA Sanae 93.46 178 P **P** **06 51 56.1 +1.3**
FCAR Ozark Folk Cen 93.49 54 P **P** **06 51 56.9 +1.5**
FCAR lAmb lAmb 06 52 08.4
comp=Z,14nm,1.4s
VNA2 Neumayer--Watz 93.97 176 P **P** **06 51 58.9 +1.9**
TIXI Tiksi 93.99 345‖ *e*P **P** **06 51 56.5 -0.3**
TIXI pmax pmax
comp=Z,2.0nm,1.3s
R40A Maddies Statio 94.03 52 P **P** **06 51 59.4 +1.6**
LCAR Lake Charles 94.30 54 P **P** **06 52 00.2 +1.1**
NVL N'lazarevskaya 94.35 182 *e*P **P** **06 51 57.1 -1.6**
NVL *e*S **SKSac** **07 02 25.6 -6.3**
NVL pmax pmax
comp=Z,6.0nm,0.6s
AGMN Agassiz Nation 94.37 41 P **P** **06 52 01.5 +2.4**
baz=253
AGMN Agassiz Nation 94.37 41 P **P** **06 51 59.7 +0.6**
P40A Paris 94.53 50 P **P** **06 52 00.2 +0.1**
T42A Van Buren 94.59 53 P **P** **06 52 01.2 +0.8**
T42A lAmb lAmb 06 52 07.7
comp=Z,6.7nm,1.4s
CCM Cathedral Cave 94.75 52 P **P** **06 52 02.3 +1.2**
CCM pmax pmax
comp=Z,9.0nm,1.2s
CCM Cathedral Cave 94.75 52 P **P** **06 52 03.8 +2.7**
baz=255
CCM Cathedral Cave 94.75 52 P **P** **06 52 02.3 +1.2**
CCM lAmb lAmb 06 52 08.0
comp=Z,9.0nm,1.2s
F36A Milaca 95.20 44 P **P** **06 52 03.7 +0.8**
F36A lAmb lAmb 06 52 10.5
comp=Z,12nm,1.4s
OXF Oxford 95.28 56 P **P** **06 52 06.3 +2.7**
baz=256
SPMN Marine on St. 95.51 45 P **P** **06 52 07.3 +2.9**
baz=255
PLAL Pickwick Lake 96.46 56 P **P** **06 52 11.0 +2.1**
JFWS Jewell Farm 96.70 48 P **P** **06 52 12.3 +2.4**
baz=256
WVT Waverly 96.92 55 P **P** **06 52 12.6 +1.6**
baz=257
EYMN Ely 97.08 42 P Pdif 06 52 13.5 +1.8
baz=256
U55A TA2, Sparta 102.36 55 P **Pdif** **06 52 37.2 +1.8**
baz=261
158A Hollywood 102.43 59 P **Pdif** **06 52 37.1 +1.4**
baz=261
WMQ Urumqi 104.95 312 *e*P **Pdif** **06 52 46.1 -0.7**
WMQ pmax pmax
comp=Z,12nm,0.7s
WMQ pmax pmax
comp=Z,64nm,4.9s
WMQ LR LR
comp=N,310nm,16.3s
WMQ LR LR
comp=E,380nm,20.3s
WMQ LR LR
comp=Z,570nm,24.1s
G62A West of Eustis 111.06 47 P **PKiKP** **06 57 13.5 +0.5**
baz=270
G64A Maxfield 112.31 47 P **PKiKP** **06 57 15.6 +0.2**
baz=272
E63A Oxbow 112.52 46 P **PKiKP** **06 57 16.1 +0.5**
baz=272
F64A Sherman 112.58 46 P **PKiKP** **06 57 17.4 +1.6**
baz=272
SVB Belmont 116.55 82 *e*P **Pdif** **06 53 33.0 -5.9**
SVV Soufriere Volc 116.60 82 *e*P **Pdif** **06 53 33.6 -5.5**
SSV Crater Summit 116.62 82 *e*P **Pdif** **06 53 30.8 -8.6**
ANN Anapa 139.16 324 *i* PKiKP **PKPdf** **06 58 06.5 +0.1**
ANN pmax pmax
comp=Z,54nm,1.0s
ANN MLR MLR
comp=N,1μm,21.0s
ANN MLR MLR
comp=Z,838nm,19.0s
CLL Collm 143.06 351 *e*PKPdf **PKPdf** **06 58 14.0 +0.8**
CLL *e*PKiKP **PKiKP** **06 58 17.0 +0.6**
CLL *ep*PKiKP **pPKPdf** **06 58 22.0 +0.5**
CLL *i* 06 58 25.0
comp=Z,19nm,1.8s
CLL *e*(PP) 07 01 12.0
CLL *e*PPP PPP 07 04 35.0
CLL *e*PSKS 07 11 42.0
CLL *e*PPS PPS 07 14 12.0
CLL *e*SS SS 07 20 06.0 +7.1
CLL *e* 07 22 36.0
CLL *e* 07 24 36.0
CLL *e*SSS SSS 07 25 30.0
CLL *e*SSSS 07 29 30.0
CLL LH 08 00 00.0
comp=N,400nm,21.2s
CLL LH 08 00 00.0
comp=E,500nm,20.4s
CLL LV 08 01 00.0
comp=Z,700nm,20.5s
CLL Collm 143.06 351 *e*PKiKP **PKiKP** **06 58 17.0 +0.6**
CLL *e* 06 58 22.0
CLL *i* 06 58 25.0
CLL MLR MLR
comp=Z,700nm,20.5s
UZH Uzhgorod 143.30 340 *e*PKHKP PKPpre 06 58 09.1
MORC Moravsky Berou 143.63 346 *e*PKP **PKiKP** **06 58 16.5 -1.2**
KMBO Kilima Mbogo 143.76 247 PKP **PKPdf** **06 58 16.1 +0.2**
comp=Z,2.0nm,0.8s,baz=100,slow=6.1,SNR=5.9
KMBO Kilima Mbogo 143.76 247 PKiKP PKPbc 06 58 14.3 +0.8
KMBO Kilima Mbogo 143.76 247 PKPdf PKPbc 06 58 14.2 +0.8
VRAC Vranov 144.29 346 *e*PKP **PKPdf** **06 58 15.8 +0.3**
MEM Membach 144.40 358 PKiKP **PKiKP** **06 58 17.7 -1.5**
BR131 Keskin Array S 144.42 320 PKiKP PKPbc 06 58 15.0 +0.4
BR131 Keskin Array S 144.42 320 PKPdf PKPbc 06 58 15.0 +0.3
BRTR Keskin Array B 144.42 320 PKP PKPbc 06 58 14.6 0.0
comp=Z,2.5nm,0.7s,baz=130,slow=2.0,SNR=7.9
JAVC Velka Javorina 144.45 345 *e*PKP **PKPdf** **06 58 16.4 +0.6**
VYHS Vyhne 144.47 343 *e*PKiKP **PKiKP** **06 58 17.4 +1.6**
VYHS Vyhne 144.47 343 *e*PKP **PKPdf** **06 58 17.4 +1.6**
MLR Muntele Rosu 144.52 334 PKiKP PKPbc 06 58 15.2 +0.5
MLR Muntele Rosu 144.52 334 PKPbc 06 58 15.2 +0.4
KRUC Moravsky 144.57 346 *e*PKP **PKPdf** **06 58 15.8 -0.1**
PSZ Piszkesteto 144.69 342 PKiKP **PKPdf** **06 58 16.2 -0.1**
PSZ Piszkesteto 144.69 342 **PKPdf** **06 58 16.2 -0.1**
BMRD Maredsous 144.73 360 PKiKP **PKiKP** **06 58 18.4 -1.4**
GRF Grafenberg Arr 144.89 352 *e*PKP PKPbc 06 58 15.9 +0.2
baz=12,slow=2.9
MODS Modra-Piesok 145.00 345 *e*PKiKP **PKiKP** **06 58 18.8 -1.7**
MODS Modra-Piesok 145.00 345 *e*PKP **PKiKP** **06 58 18.8 -1.7**
KHC Kasperske Hory 145.07 349‖ *e*PKiKP **PKPdf** **06 58 17.4 +0.5**

KHC	**Kasperske Hory**	**145.07**	**349**	*e*PKP	**PKPdf**	**06 58 17.2 +0.3**
KHC				*ex*	x	06 58 21.8
KHC				*ex*	x	06 58 31.0
KHC	**Kasperske Hory**	**145.07**	**349**		**PKPdf**	**06 58 17.2 +0.3**
GEC2	**GERESS Array S**	**145.33**	**349**		**PKPbc**	**06 58 17.0 -0.1**
GERES	**GERESS Array B**	**145.33**	**349**	PKPbc	**PKPab**	**06 58 17.9 +0.5**
	comp=Z,1.6nm,0.7s,baz=20,slow=4.3,SNR=11					
WLF	**Walferdange**	**145.34**	**358**	PKiKP	**PKPab**	**06 58 18.2 +1.0**
WLF	**Walferdange**	**145.34**	**358**	PKiKP	**PKPdf**	**06 58 17.0 -0.2**
WLF	**Walferdange**	**145.34**	**358**		**PKPdf**	**06 58 17.0 -0.2**
CONA	**Conrad Observa**	**145.75**	**346**	*e*PKPbc	**PKPab**	**06 58 20.4 +1.5**
	comp=Z,43nm,1.4s					
MOA	**Molln**	**146.17**	**348**	*e*pPKPdf	**PKiKP**	**06 58 21.9 -1.1**
	comp=Z,40nm,1.7s					
ARSA	**Arzberg**	**146.47**	**346**	*e*pPKPdf	**PKiKP**	**06 58 22.5 -1.1**
	comp=Z,23nm,1.9s					
BFO	**Black Forest**	**146.54**	**355**	PKiKP	**PKPdf**	**06 58 19.0 -0.4**
BFO	**Black Forest**	**146.54**	**355**		**PKPdf**	**06 58 19.0 -0.4**
ECH	**Echery**	**146.74**	**357**	PKP2	**PKPdf**	**06 58 20.2 +0.5**
ECH	**Echery**	**146.74**	**357**		**PKPdf**	**06 58 20.1 +0.5**
CLF	**Chambon-Foret**	**146.96**	**3**		**PKPdf**	**06 58 20.2 +0.2**
KBA	**Koelnbreinsper**	**147.09**	**349**	PKPab	**PKPbc**	**06 58 22.6 0.0**
	comp=Z,6.8nm,0.8s					
RETA	**Reutte**	**147.11**	**352**	*e*sPKPdf	**PKiKP**	**06 58 24.8 -0.2**
	comp=Z,17nm,1.5s					
SOKA	**Soboth**	**147.12**	**346**	*e*sPKPdf	**PKiKP**	**06 58 24.7 -0.4**
	comp=Z,12nm,1.1s					
WATA	**Walderalm**	**147.15**	**351**	*e*sPKPdf	**PKPab**	**06 58 24.3 0.0**
	comp=Z,12nm,1.2s					
MOTA	**Moosalm**	**147.21**	**352**	sPKPbc	**PKiKP**	**06 58 26.2 +0.9**
	comp=Z,26nm,1.3s					
WTTA	**Wattenberg**	**147.21**	**351**	*e*PKiKP	**PKiKP**	**06 58 25.3 0.0**
	comp=Z,4.7nm,0.6s					
SQTA	**Sankt Quirin**	**147.31**	**351**	*e*sPKPbc	**PKiKP**	**06 58 26.3 +0.9**
	comp=Z,15nm,1.4s					
DAVA	**Damuels**	**147.42**	**353**	*e*sPKPdf	**PKPab**	**06 58 25.3 -0.1**
	comp=Z,15nm,1.1s					
MYKA	**Terra Mystica**	**147.46**	**348**	sPKPdf	**PKPab**	**06 58 25.4 -0.1**
	comp=Z,10nm,0.8s					
ABTA	**Abfaltersbach**	**147.56**	**350**	*e*pPKPdf	**PKPbc**	**06 58 24.0 +0.2**
	comp=Z,7.6nm,0.9s					
FETA	**Feichten**	**147.57**	**352**	*e*pPKPbc	**PKPab**	**06 58 26.8 +0.8**
	comp=Z,18nm,1.3s					
PGB	**Panagyurishte**	**147.63**	**332**	*e*P	**PKPab**	**06 58 28.4 +2.1**
VTS	**Vitosha**	**147.99**	**333**	*e*P	**PKPab**	**06 58 29.6 +1.7**
RZN	**Rozhen**	**148.05**	**331**	*e*P	**PKPab**	**06 58 31.3 +3.1**
CTI	**Castel Tesino**	**148.39**	**350**	PKiKP	**PKPdf**	**06 58 22.8 +0.2**
CTI	**Castel Tesino**	**148.39**	**350**		**PKPdf**	**06 58 22.8 +0.2**
MMB	**Musomiste**	**148.59**	**331**	*e*P	**PKPab**	**06 58 30.3 +0.2**
SSB	**Saint Sauveur**	**149.76**	**360**	PKP2	**PKPab**	**06 58 34.8 +0.1**
SSB	**Saint Sauveur**	**149.76**	**360**		**PKPdf**	**06 58 25.8 +1.1**
SSB					**PKPab**	**06 58 34.8 +0.1**
BNI	**Bardonecchia**	**149.92**	**357**	PKP2	**PKPab**	**06 58 36.4 +0.9**
BNI	**Bardonecchia**	**149.92**	**357**		**PKPdf**	**06 58 25.2 +0.1**
BNI					**PKPab**	**06 58 36.4 +0.9**
FNA	**Florina**	**150.29**	**333**	PKiKP	**PKPdf**	**06 58 26.3 +0.5**
FNA	**Florina**	**150.29**	**333**		**PKPdf**	**06 58 26.3 +0.5**
PGAV	**Gavieira, Arco**	**150.94**	**20**	eLR	LR	07 49 10.7
	comp=Z,675nm,20.0s					
PCAB	**Cabril**	**151.25**	**20**	*e*PKPab	**PKPab**	**06 58 41.9 +0.9**
PBRG	**Braganca**	**151.56**	**18**	*e*PKPab	**PKPab**	**06 58 45.3 +3.0**
MVO	**Moncorvo**	**152.06**	**19**	*e*PKPbc	**PKiKP**	**06 58 39.4 +4.0**
MVO	**Moncorvo**	**152.06**	**19**	eLR	LR	07 49 48.8
	comp=Z,618nm,22.0s					
MTE	**Manteigas**	**152.59**	**20**	*e*PKPbc	**PKiKP**	**06 58 38.3 +1.8**
MTE	**Manteigas**	**152.59**	**20**	eLR	LR	07 50 14.6
	comp=Z,772nm,20.0s					
TIP	**Timpagrande**	**153.50**	**338**		**PKPdf**	**06 58 30.6 0.0**
PMRV	**Marv??o**	**153.51**	**21**	eLR	LR	07 50 42.6
	comp=Z,833nm,18.0s					
PMOZ	**Porto Moniz, M**	**153.53**	**44**	eLR	LR	07 53 58.2
	comp=Z,296nm,20.0s					
EVO	**Evora**	**154.08**	**23**	*e*PKPdf	**PKPdf**	**06 58 33.9 +2.5**
ESDC	**Sonseca Array**	**154.30**	**15**	PKPbc	**PKiKP**	**06 58 41.0 +1.0**
	comp=Z,0.1nm,0.4s,baz=328,slow=2.9,SNR=2.1					
ESDC				PKPab	**PKPab**	**06 58 53.5 -0.4**
	comp=Z,1.0nm,0.9s,baz=330,slow=3.9,SNR=5.4					
PVAQ	**Vaqueiros**	**155.19**	**23**	eLR	LR	07 51 21.9
	comp=Z,736nm,20.0s					
KEST	**Kesra**	**158.82**	**349**	PKPab	**PKPab**	**06 59 16.0 +2.6**
	comp=Z,5.1nm,0.9s,baz=230,slow=7.9,SNR=3.0					
TORD	**Torodi Ar. Bea**	**176.86**	**124**	PKP	**PKPdf**	**06 58 50.3 -0.4**
	comp=Z,0.6nm,1.1s,baz=264,slow=1.3,SNR=1.8					
TORD				PKPab	**PKPab**	**07 00 34.5 +0.8**
	comp=Z,0.8nm,0.8s,baz=253,slow=2.8,SNR=3.3					

*LDG **18** 06:41:51.7±0.0,48°.20N×8°.96E,h5km,Md3.5/2,Ml3.1/40, Error ellipse: s-maj=0.8km s-min=0.7km az=87.0*
*BNS **18** 06:41:51.9±0.3,48°.23N×9°.17E,h5km,ML2.4*
*BGR **18** 06:41:52.0±0.2,48°.20N×8°.95E,h10km,ML2.9/10,Error ellipse: s-maj=3.3km s-min=2.2km az=51.0*
*PRU **18** 06:41:53.8±0.0,48°.46N×9°.10E,h10km*
*STR **18** 06:41:54.5±0.5,48°.N±2°×±°,h24km±2km,MLv3.0/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/haslach_taup-2.11 preliminary*

ISC 18 06:41:50.2±0.9,48°.20N±0°.01×8°.94E±0°.01,h18km±4km, n165,σ1°63/310,16C-11D,Germany

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUT	**Gutenstein**	**0.17**	**138**	⇓	*i*Pg	**Pg**	**06 41 54.7**	**-0.1**
GUT					Sg	**Sb**	**06 41 57.1**	**+0.4**
EMING	**Emmingen-Lipti**	**0.31**	**193**	⇓	Pg	**Pb**	**06 41 57.8**	**+0.6**
EMING					Sg	**Sb**	**06 42 02.4**	**+0.5**
TUBL	**Tuebingen-Lenn**	**0.34**	**16**	⇓	*i*Pg	**Pb**	**06 41 57.7**	**-0.1**
TUBL					Sg	**Sg**	**06 42 02.2**	**-0.2**
BUCH	**Bad Urach**	**0.37**	**47**	⇑	*i*Pg	**Pb**	**06 41 58.4**	**0.0**
BUCH					Sg	**Sg**	**06 42 03.4**	**+0.1**
BFO	**Black Forest**	**0.43**	**288**	⇑	*i*Pg	**Pb**	**06 42 00.2**	**+0.9**
BFO					Sg	**Sb**	**06 42 06.3**	**+0.8**
BFO					SmS		06 42 11.1	
WALHA	**Wallhausen, DE**	**0.46**	**165**	⇓	Pg	**Pb**	**06 42 00.4**	**+0.6**
WALHA					Sg	**Sb**	**06 42 07.1**	**+0.8**
LBG	**Lerchenberg**	**0.48**	**348**	⇓	*i*Pg	**Pb**	**06 42 00.7**	**+0.6**
LBG					PmP		06 42 03.1	
LBG					Sg	**Sb**	**06 42 07.3**	**+0.4**
LBG					SmS		06 42 11.9	
SISB	**Singen-Schiene**	**0.51**	**178**	⇓	*i*Pg	**Pb**	**06 42 01.6**	**+0.9**
SISB					Sg	**Sb**	**06 42 08.8**	**+1.1**
SLE	**Schleitheim**	**0.53**	**215**	⇑	Pg	**Pb**	**06 42 01.9**	**+1.0**
SLE					PmP		06 42 04.3	
SLE					Sg	**Sb**	**06 42 09.3**	**+1.1**
OPP	**Oppenau**	**0.59**	**301**	⇑	Pg	**Pn**	**06 42 03.0**	**-0.7**
OPP					PmP		06 42 05.0	
OPP					Sg	**Sg**	**06 42 10.8**	**+1.0**
OPP					SmS		06 42 14.3	
OPP	**Oppenau**	**0.59**	**301**		P	**Pn**	**06 42 03.0**	**-0.7**
OPP					Pg	**Pg**	**06 42 04.0**	**+2.1**
OPP					S	**Sg**	**06 42 10.8**	**+1.0**
OPP					Sg	**Sn**	**06 42 11.7**	**-1.1**
BERGE	**Lenzkirch (DE)**	**0.61**	**238**	⇑	Pg	**Pn**	**06 42 03.5**	**-0.5**
BERGE					PmP		06 42 05.5	
BERGE					Sg	**Sn**	**06 42 12.3**	**-1.1**
BERGE					SmS		06 42 15.6	
METMA	**Mettma DE**	**0.67**	**224**	⇑	Pg	**Pn**	**06 42 04.5**	**-0.3**
METMA					PmP		06 42 06.3	
METMA					SmS		06 42 16.9	
KIZ	**Kirchzarten**	**0.73**	**251**	⇑	Pg	**Pn**	**06 42 05.7**	**+0.1**
KIZ					PmP		06 42 07.0	
KIZ					SmS		06 42 18.5	
KIZ	**Kirchzarten**	**0.73**	**251**		P	**Pn**	**06 42 05.7**	**+0.1**
KIZ					Pg	**Pg**	**06 42 06.7**	**+2.2**
KIZ	**Kirchzarten**	**0.73**	**251**		Sg	**Sn**	**06 42 16.9**	**+0.6**
FBB	**Freiburg im Br**	**0.76**	**255**	⇑	Pg	**Pn**	**06 42 06.2**	**+0.3**
FBB					PmP		06 42 07.7	
FBB					SmS		06 42 19.4	
WILA	**Wila**	**0.78**	**182**	⇓	Pg	**Pn**	**06 42 06.8**	**+0.3**
WILA					PmP		06 42 08.6	
WILA					Sg	**Sn**	**06 42 17.6**	**-0.1**
BRET	**Bretten**	**0.83**	**348**	⇓	Pg	**Pn**	**06 42 07.5**	**+0.4**
BRET					PmP		06 42 08.7	
SULZ	**Cheisacher**	**0.87**	**220**	⇑	Pg	**Pn**	**06 42 08.4**	**+0.8**
SULZ					PmP		06 42 09.4	
SULZ					Sg	**Sn**	**06 42 20.8**	**+0.9**
HDH	**Heidenheim-Cha**	**0.93**	**65**	⇑	Pg	**Pn**	**06 42 08.3**	**-0.1**
HDH					PmP		06 42 10.4	
HDH					Sg	**Sg**	**06 42 20.5**	**+0.1**
HDH					SmS		06 42 22.9	
UBR	**Ueberruh**	**0.94**	**123**	⇑	Pg	**Pn**	**06 42 09.2**	**+0.7**
UBR					Sg	**Sn**	**06 42 22.0**	**+0.5**
ENDD	**Endenburg**	**0.94**	**240**	⇑	Pg	**Pg**	**06 42 09.7**	**+1.1**
ENDD					PmP		06 42 10.3	
ENDD					Sg	**Sn**	**06 42 22.6**	**+1.0**
LIENZ	**Kamor/St.Gall**	**0.97**	**158**	⇓	Pg	**Pg**	**06 42 10.3**	**+1.1**
LIENZ					SmS		06 42 25.9	
WLS	**Welschbruch**	**1.08**	**282**		Pn	**Pg**	**06 42 11.7**	**+0.4**
WLS					Pg	**Pn**	**06 42 12.7**	**+2.1**
WLS					Sg	**Sg**	**06 42 27.7**	**+2.2**
WLS	**Welschbruch**	**1.08**	**282**		Pn	**Pg**	**06 42 11.8**	**+0.5**
WLS					Pg	**Pn**	**06 42 12.8**	**+2.3**
WLS					Sn	**Sg**	**06 42 25.9**	**+0.4**
WLS					Sg	**Sn**	**06 42 27.5**	**+2.4**
LANF	**Langenberg**	**1.09**	**316**		Pn	**Pg**	**06 42 12.1**	**+0.7**
LANF					Pg	**Pn**	**06 42 12.9**	**+2.3**
LANF					Sg	**Sg**	**06 42 27.9**	**+2.3**
LANF	**Langenberg**	**1.09**	**316**		Sg	**Sg**	**06 42 27.0**	**+1.3**
LANF	**Langenberg**	**1.09**	**316**		Pg	**Pg**	**06 42 12.8**	**+1.5**
DAVA	**Damuels**	**1.11**	**145**		Pg	**Pg**	**06 42 12.6**	**+0.9**
DAVA					Sg	**Sg**	**06 42 29.1**	**+2.9**
DAVA	**Damuels**	**1.11**	**145**	*e*	Pg	**Pg**	**06 42 12.7**	**+0.9**
	5.7nm,0.2s,SNR=79							
DAVA				*e*	Sg	**Sg**	**06 42 27.9**	**+1.7**
	95nm,0.3s							
CDF	**Champ du Feu**	**1.14**	**282**	*e*	Pn	**Pg**	**06 42 12.3**	**+0.1**
CDF	**Champ du Feu**	**1.14**	**282**	*e*	Pg	**Pg**	**06 42 13.2**	**+1.0**
CDF				*e*	Sg	**Sg**	**06 42 27.7**	**+0.6**
	299nm,0.2s							
PEB	**Petersbachel**	**1.19**	**317**		PmP		06 42 14.7	
PEB					SmS		06 42 31.0	
ECH	**Echery**	**1.20**	**272**	⇑	Pn	**Pg**	**06 42 13.2**	**-0.1**
ECH					Pg	**Pb**	**06 42 14.5**	**+2.2**
ECH					Sn	**Sg**	**06 42 28.4**	**-0.6**
ECH					Sg	**Sn**	**06 42 30.8**	**+2.9**
ECH	**Echery**	**1.20**	**272**		Pn	**Pg**	**06 42 13.2**	**-0.1**
ECH					Pg	**Pb**	**06 42 14.6**	**+2.2**
ECH					Sn	**Sg**	**06 42 28.4**	**-0.6**
ECH					Sg	**Sn**	**06 42 30.7**	**+2.9**
BALST	**Balsthal**	**1.21**	**225**	⇑	Pn	**Pg**	**06 42 13.2**	**-0.3**
BALST					Pg	**Pb**	**06 42 15.0**	**+2.5**
BALST					Sg	**Sg**	**06 42 31.2**	**+1.9**
OBER	**Oberstdorf**	**1.21**	**130**		Pg	**Pg**	**06 42 14.3**	**+0.8**
OBER					*e*Pn	**Pg**	**06 42 14.4**	**+0.8**
OBER					SmS		06 42 31.6	
SIND	**Sindeldorf**	**1.23**	**21**	⇓	Pn	**Pb**	**06 42 12.9**	**-0.1**
SIND					Pg	**Pg**	**06 42 14.4**	**+0.4**
SIND					PmP		06 42 14.7	
SIND					Sg	**Sg**	**06 42 30.7**	**+0.5**
NORI	**Noerdlinger Ri**	**1.23**	**64**	*e*	Pn	**Pg**	**06 42 13.6**	**-0.5**
KTD	**Kalmit**	**1.26**	**333**		Pg	**Pg**	**06 42 15.7**	**+1.1**
KTD					*e*Sg	**Sg**	**06 42 32.7**	**+1.6**
MOF	**Molkenrain**	**1.26**	**255**		Pn	**Pg**	**06 42 14.3**	**-0.3**
MOF	**Molkenrain**	**1.26**	**255**		Sg	**Sg**	**06 42 32.4**	**+1.2**
MOF	**Molkenrain**	**1.26**	**255**		Pn	**Pg**	**06 42 14.3**	**-0.3**
SWS	**Schriesheim-Wi**	**1.30**	**353**		Pn	**Pb**	**06 42 14.5**	**+0.4**
SWS					Pg	**Pg**	**06 42 15.8**	**+0.5**
BOURR	**Bourrignon**	**1.41**	**236**	⇑	Pn	**Pb**	**06 42 16.0**	**0.0**
BOURR					Pg	**Pg**	**06 42 18.5**	**+1.1**
BOURR					Sg	**Sg**	**06 42 37.8**	**+2.1**
TOD	**Tromm**	**1.41**	**356**	⇓	Pn	**Pb**	**06 42 16.0**	**-0.1**
TOD					Pg	**Pg**	**06 42 17.5**	**0.0**
RETA	**Reutte**	**1.42**	**119**		Pn	**Pb**	**06 42 16.7**	**+0.7**
RETA					Pg	**Pg**	**06 42 18.2**	**+0.7**
RETA					Sg	**Sg**	**06 42 36.8**	**+0.8**
RETA	**Reutte**	**1.42**	**119**		Pn	**Pb**	**06 42 16.8**	**+0.7**
	1.0nm,0.3s,SNR=5.4							
RETA					Sg	**Sg**	**06 42 36.0**	**+0.1**
	105nm,0.3s							
HINF	**Hinteralfeld**	**1.46**	**256**	*e*	Pn	**Pb**	**06 42 16.7**	**-0.1**
HINF	**Hinteralfeld**	**1.46**	**256**	*e*	Pg	**Pg**	**06 42 19.1**	**+0.8**
HINF				*e*	Sn	**Sb**	**06 42 35.5**	**+0.6**
HINF				*e*	Sg	**Sg**	**06 42 37.8**	**+0.6**
	119nm,0.3s							
IMS	**Imsbach**	**1.56**	**334**		Pn	**Pb**	**06 42 18.3**	**-0.2**
IMS					Pg	**Pg**	**06 42 20.8**	**+0.5**
IMS					Sg	**Sg**	**06 42 41.6**	**+1.1**
FUR	**Furstenfeldbru**	**1.56**	**90**	*e*	Sg	**Sg**	**06 42 41.2**	**+0.6**
WBB	**Darmstadt**	**1.66**	**354**		Pn	**Pb**	**06 42 19.6**	**-0.6**
WBB					Pg	**Pg**	**06 42 22.7**	**+0.6**
WBB					Sg	**Sg**	**06 42 44.1**	**+0.4**
LOMF	**Lomont**	**1.66**	**240**		Pn	**Pb**	**06 42 19.4**	**-0.8**
LOMF					Pg	**Pg**	**06 42 23.1**	**+1.0**
LOMF	**Lomont**	**1.66**	**240**		Pn	**Pb**	**06 42 19.5**	**-0.8**
LOMF					Pg	**Pg**	**06 42 23.1**	**+1.0**
LOMF	**Lomont**	**1.66**	**240**		Sn	**Sb**	**06 42 41.5**	**+0.6**
FETA	**Feichten**	**1.69**	**134**	*e*	Pn	**Pb**	**06 42 21.2**	**+0.5**
	1.5nm,0.2s,SNR=9.7							
FETA					Sn	**Sb**	**06 42 42.8**	**+1.2**
	1.1nm,0.1s							
MOTA	**Moosalm**	**1.69**	**120**		Pn	**Pb**	**06 42 21.1**	**+0.3**
	1.0nm,0.1s,SNR=23							
MOTA					Sn	**Sg**	**06 42 44.7**	**0.0**
	126nm,0.2s							
HAU	**Haudompre**	**1.75**	**265**	*e*	Pn	**Pb**	**06 42 20.9**	**-0.9**
HAU	**Haudompre**	**1.75**	**265**	*e*	Pg	**Pg**	**06 42 24.5**	**+0.6**
HAU				*e*	Sn	**Sb**	**06 42 42.7**	**-0.7**
HAU				*e*	Sg	**Sg**	**06 42 47.3**	**+0.7**
	154nm,0.3s							
SQTA	**Sankt Quirin**	**1.81**	**122**		Pn	**Pb**	**06 42 23.2**	**+0.2**
	4.4nm,0.1s,SNR=12							
SQTA					Sg	**Sg**	**06 42 48.5**	**-0.2**
	126nm,0.3s							
DUP	**Duppenweiler**	**1.88**	**311**		Pg	**Pg**	**06 42 27.5**	**+1.3**
DUP					Sg	**Sg**	**06 42 51.6**	**+1.0**
GRC1	**Grafenberg Arr**	**1.89**	**64**		Pn	**Pn**	**06 42 22.2**	**+0.6**
GRC1					Pg	**Pg**	**06 42 25.8**	**-0.7**
ABH	**Alteburg**	**1.92**	**332**	⇑	Pn	**Pb**	**06 42 23.9**	**-0.8**
ABH					Pg	**Pg**	**06 42 27.9**	**+0.7**
ABH					*e*Sg	**Sg**	**06 42 52.3**	**+0.2**
WATA	**Walderalm**	**1.97**	**115**	*e*	Pn	**Pb**	**06 42 25.7**	**+0.1**
	0.4nm,0.1s,SNR=9.8							
WATA					Sn	**Sb**	**06 42 50.5**	**+0.5**
	5.9nm,0.2s							
THEF	**They Montfort**	**1.98**	**272**		Pn	**Pb**	**06 42 24.4**	**-1.3**
THEF	**They Montfort**	**1.98**	**272**		Sn	**Sn**	**06 42 47.7**	**+0.6**
THEF					Sg	**Sg**	**06 42 54.3**	**+0.4**
WBG	**Bieber**	**2.00**	**7**		Pn	**Pn**	**06 42 23.8**	**+0.8**
WTTA	**Wattenberg**	**2.04**	**116**	*e*	Pn	**Pb**	**06 42 27.7**	**+0.8**
	0.7nm,0.1s							
WTTA					Sg	**Sg**	**06 42 54.7**	**-1.3**
	11nm,0.2s							
TNS	**Taunus Mts**	**2.05**	**351**		Pn	**Pn**	**06 42 25.2**	**+1.3**
RIVT	**Riveris**	**2.09**	**317**		Pn	**Pb**	**06 42 26.6**	**-0.9**
RIVT					Pg	**Pg**	**06 42 31.0**	**+0.8**
GRB2	**Grafenberg Arr**	**2.10**	**58**		Pn	**Pn**	**06 42 25.1**	**+0.6**
GRF	**Grafenberg Arr**	**2.12**	**44**		Pn	**Pn**	**06 42 24.9**	**+0.2**
GRF					Pg	**Pg**	**06 42 30.8**	**-0.1**
PAGF	**Fort de Pagny**	**2.18**	**281**	*e*	Pn	**Pn**	**06 42 26.9**	**+1.4**
PAGF	**Fort de Pagny**	**2.18**	**281**	*e*	Pg	**Pg**	**06 42 32.5**	**+0.5**
	baz=100							
PAGF				*e*	Sn	**Sn**	**06 42 53.4**	**+1.4**
PAGF				*e*	Sg	**Sg**	**06 43 00.5**	**+0.3**
	33nm,0.2s,baz=101							
FACH	**Fachingen**	**2.25**	**344**		Pn	**Pb**	**06 42 28.2**	**-2.1**
BGG	**Burgeitz**	**2.27**	**333**	*e*	Pn	**Pb**	**06 42 29.1**	**-1.5**
BGG				*e*	Sn	**Sb**	**06 42 57.4**	**-0.9**
	16nm,0.3s							
WLF	**Walferdange**	**2.35**	**310**		Pg	**Pg**	**06 42 36.1**	**+0.7**
KOE	**Koeppel**	**2.37**	**341**	*e*	Pn	**Pb**	**06 42 31.1**	**-1.2**
SATI	**Passo dei Sala**	**2.44**	**198**		P	**Pb**	**06 42 32.1**	**-1.6**
LAGB	**Langenfeld Gru**	**2.48**	**332**		Pn	**Pn**	**06 42 31.7**	**+2.0**
CABF	**La Chapelle**	**2.51**	**232**	*e*	Pn	**Pn**	**06 42 30.8**	**+0.7**
CABF	**La Chapelle**	**2.51**	**232**	*e*	Pg	**Pg**	**06 42 38.6**	**+0.3**
CABF				*e*	Sn	**Sn**	**06 43 01.1**	**+0.9**
CABF				*e*	Sg	**Sg**	**06 43 09.0**	**-0.9**
	13nm,0.2s							
HILG	**Hillesheim**	**2.57**	**326**	*e*	Pn	**Pb**	**06 42 33.6**	**-2.1**
SFTF	**Sexfontaines**	**2.61**	**272**	*e*	Pn	**Pn**	**06 42 32.8**	**+1.3**
	baz=94							
SFTF	**Sexfontaines**	**2.61**	**272**	*e*	Pg	**Pg**	**06 42 40.3**	**0.0**
	baz=93							
SFTF				*e*	Sn	**Sn**	**06 43 02.7**	**0.0**
SFTF				*e*	Sg	**Sg**	**06 43 14.4**	**+0.2**
	26nm,0.2s							
MEZF	**Maizieres J'vi**	**2.61**	**278**	*e*	Pn	**Pn**	**06 42 32.9**	**+1.4**
	baz=98							
MEZF	**Maizieres J'vi**	**2.61**	**278**	*e*	Pg	**Pg**	**06 42 40.3**	**0.0**
	baz=100							
MEZF				*e*	Sn	**Sn**	**06 43 03.0**	**+0.2**
MEZF				*e*	Sg	**Sg**	**06 43 13.8**	**-0.4**
	24nm,0.3s,baz=98							
BIW	**Bindweide**	**2.64**	**345**		Pn	**Pn**	**06 42 33.5**	**+1.7**
AHRW	**Bad Neuenahr-A**	**2.65**	**333**		Pn	**Pn**	**06 42 34.1**	**+2.2**
REMY	**Saint-Rhmy-en**	**2.66**	**208**		P	**Pn**	**06 42 34.2**	**+1.8**
BLI	**Bleialf**	**2.68**	**320**		Pn	**Pb**	**06 42 35.8**	**-1.8**
CIRO	**Champorcher**	**2.76**	**200**		P	**Pb**	**06 42 36.6**	**-2.6**
STB	**Steinbach**	**2.77**	**331**	*e*	Pn	**Pb**	**06 42 35.9**	**+2.3**
TRAV	**Traversella**	**2.81**	**197**		P	**Pb**	**06 42 37.3**	**-2.5**
ABTA	**Abfaltersbach**	**2.82**	**120**	*e*	Pn	**Pb**	**06 42 38.7**	**-1.4**
	0.4nm,0.2s							
ABTA					Sg	**Sg**	**06 43 19.9**	**-0.9**
	6.6nm,0.2s							
RSL	**Roselend**	**2.97**	**213**		Pn	**Pn**	**06 42 38.0**	**+1.4**
RSL					Sg	**Sg**	**06 43 27.0**	**+1.4**
HOBG	**Hohbusch**	**2.98**	**340**	*e*	Pn	**Pn**	**06 42 38.7**	**+2.2**
KLL	**Kalltalsperre**	**3.00**	**326**	*e*	Pn	**Pn**	**06 42 39.3**	**+2.5**
LSD	**Lago del Serru**	**3.01**	**205**		P	**Pn**	**06 42 39.7**	**+2.5**
LPL	**La Plagne**	**3.08**	**210**	*e*	Pn	**Pn**	**06 42 39.9**	**+1.8**
LPL	**La Plagne**	**3.08**	**210**	*e*	Pg	**Pg**	**06 42 49.2**	**-0.1**
LPL				*e*	Sg	**Sg**	**06 43 28.9**	**-0.3**
	13nm,0.4s							
MEM	**Membach**	**3.08**	**323**		Pn	**Pn**	**06 42 40.7**	**+2.7**
LPG	**La Plagne**	**3.09**	**210**	*e*	Pn	**Pn**	**06 42 39.4**	**+1.1**
LPG	**La Plagne**	**3.09**	**210**	*e*	Pg	**Pg**	**06 42 48.9**	**-0.6**
LPG				*e*	Sg	**Sg**	**06 43 29.2**	**-0.3**
	12nm,0.4s							
KBA	**Koelnbreinsper**	**3.18**	**109**	*e*	Pn	**Pn**	**06 42 42.6**	**+3.2**
	1.1nm,0.1s							
KBA					Pg	**Pg**	**06 42 52.1**	**+1.0**
	6.2nm,0.3s							
KBA					Sg	**Sg**	**06 43 30.5**	**-1.8**
	13nm,0.4s							
KHC	**Kasperske Hory**	**3.21**	**71**	*e*	PN	**Pn**	**06 42 41.1**	**+1.4**
KHC				*e*	PG	**Pg**	**06 42 50.1**	**-1.6**
KHC				*e*	SN	**Sn**	**06 43 16.3**	**-1.2**
KHC				*e*	SG	**Sg**	**06 43 31.4**	**-1.9**
	comp=Z,23nm,0.4s							
GIVF	**Givet**	**3.31**	**307**	*e*	Pn	**Pn**	**06 42 43.0**	**+1.9**
GIVF	**Givet**	**3.31**	**307**	*e*	Pg	**Pg**	**06 42 53.3**	**-0.3**
GIVF				*e*	Sn	**Sn**	**06 43 20.3**	**+0.4**
GIVF				*e*	Sg	**Sg**	**06 43 35.7**	**-0.8**
	14nm,0.2s							
OGMO	**Fort Saint-Gob**	**3.37**	**208**		Pn	**Pn**	**06 42 44.2**	**+2.2**
MYKA	**Terra Mystica**	**3.55**	**114**	*i*	Pn	**Pn**	**06 42 48.2**	**+3.7**
	1.6nm,0.3s							
MYKA					Sg	**Sg**	**06 43 43.9**	**-0.4**
	5.1nm,0.4s							
LOR	**Lormes**	**3.56**	**257**	*e*	Pn	**Pn**	**06 42 46.1**	**+1.6**
	baz=79							
LOR	**Lormes**	**3.56**	**257**	*e*	Pg	**Pg**	**06 42 57.8**	**-0.5**
	baz=78							
LOR				*e*	Sg	**Sg**	**06 43 42.4**	**-2.0**
	16nm,0.2s,baz=78							
MOA	**

MODS	Modra-Piesok	5.57	85	*e*SG	Sg	06 44 47.1	-1.6
PGF	Pioggiola	5.65	180	*e*Pn	Pn	06 43 14.2	+0.9
PGF				*e*Sn	Sn	06 44 16.2	-1.5
	comp=Z,0.3nm,0.3s						
CAF	Calviac	5.76	238	*e*Pn	Pn	06 43 15.3	+0.5
CAF				*e*Sn	Sn	06 44 19.5	-0.9
CAF				*e*Sg	Sg	06 44 52.3	-2.7
	comp=Z,2.3nm,0.4s						
RJF	Les Rejaudoux	5.87	243	*e*Sg	Sg	06 44 55.6	-2.8
	comp=Z,3.6nm,0.4s						
LDF	La Druitiere	6.05	277	*e*Pn	Pn	06 43 20.3	+1.6
LDF	La Druitiere	6.05	277	*e*Pg	Pg	06 43 44.0	-2.0
LDF				*e*Sg	Sg	06 45 00.9	-3.4
	comp=Z,6.7nm,0.5s						
FLN	La Foliniere	6.29	279	*e*Pn	Pn	06 43 23.9	+1.9
	baz=99						
FLN				*e*Sn	Sn	06 44 30.5	-2.9
FLN				*e*Sg	Sg	06 45 08.4	-3.6
	comp=Z,5.0nm,0.4s,baz=102						
MFF	Saint Martin d	6.37	259	*e*Pn	Pn	06 43 23.9	+0.8
MFF	Saint Martin d	6.37	259	*e*Pg	Pg	06 43 49.8	-2.4
MFF				*e*Sn	Sn	06 44 32.2	-3.2
MFF				*e*Sg	Sg	06 45 10.9	-3.7
	comp=Z,5.9nm,0.6s						
GRR	Gorron	6.54	275	*e*Pn	Pn	06 43 26.0	+0.5
GRR				*e*Sn	Sn	06 44 35.1	-4.5
GRR				*e*Sg	Sg	06 45 16.3	-3.8
	comp=Z,2.6nm,0.3s						
MTLF	Montolieu	6.76	227	*e*Sg	Sg	06 45 22.9	-4.1
	comp=Z,1.5nm,0.4s						
SGMF	Saint Gilles	7.68	275	*e*Pn	Pn	06 43 41.9	+0.8
SGMF	Saint Gilles	7.68	275	*e*Pg	Pb	06 44 13.4	+11
SGMF				*e*Sg	Sb	06 45 51.1	+17
	comp=Z,1.2nm,0.4s						
ROSF	Rostrenen	8.16	276	*e*Pn	Pn	06 43 48.6	+1.0
ROSF				*e*Sn	Sn	06 45 15.8	-3.4
	comp=Z,1.6nm,0.5s						

IDC ***18*** *06:47:46.1±1.4, 10°.49N×84°.84W, h160km±16km, mb3.2/2, mb1 3.4/3, mb1mx2.9/44, mbtmp3.7/3, Error ellipse: s-maj=62.8km s-min=48.1km az=41.0*
UCR ***18*** *06:47:48.9±1.2, 10°.61N×84°.84W, h146km±2km, MD4.0, MW4.1*
UPA ***18*** *06:47:50.7±4.7, 11°.12N×84°.02W, h0km±845km, MW4.2*
ISC 18 06:47:47.1±0.9,**10°.64N**±0°.07×**84°.88W**±0°.07,**h160**km±6km, **n46**,σ1°**03**/65,**3C**,**Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTEN	Parque Tenorio	0.13	306	*i* P	Pn	06 48 09.3	+0.6
PTEN				*i* S	Sn	06 48 25.1	0.0
ACAL	Aguas Claras	0.15	268	⇑*i* P	Pn	06 48 09.2	+0.5
CEDE	Laguna Cedeo	0.23	131	*i* P	Pn	06 48 09.4	+0.6
CEDE				*i* S	Sn	06 48 24.8	-0.5
ARE1	Arenal 1	0.24	138	*e*P	Pn	06 48 09.5	+0.7
CASO	Castillo	0.25	145	*i* P	Pn	06 48 09.3	+0.4
FORC	Fortuna	0.27	129	*i* P	Pn	06 48 09.4	+0.5
CUI	Cuipilapa	0.28	274	*i* P	Pn	06 48 09.1	+0.2
CUI				*i* S	Sn	06 48 25.1	-0.3
HORNC	Hornillas	0.30	284	*i* P	Pn	06 48 09.3	+0.3
COLC	Colonia	0.32	275	*i* P	Pn	06 48 09.1	+0.1
GUAB	Guayabo de Bag	0.35	281	*i* P	Pn	06 48 09.6	+0.4
GUAB				*i* S	Sn	06 48 25.9	0.0
JTS	Las Juntas de	0.35	191	P	Pn	06 48 09.1	0.0
	234nm,0.3s,baz=78,slow=5.2,SNR=1482						
JTS				S	Sn	06 48 25.2	-0.8
	256nm,0.3s,baz=218,slow=24,SNR=27						
JTS	Las Juntas de	0.35	191	*e*P	Pn	06 48 09.2	0.0
JTS				*e*S	Sn	06 48 25.2	-0.8
LIM1	Limonal	0.37	279	*i* P	Pn	06 48 09.4	+0.2
LIM1				*i* S	Sn	06 48 26.1	+0.1
GPS2	Hotel Rincn d	0.48	284	*i* P	Pn	06 48 09.9	+0.3
GPS2				*i* S	Sn	06 48 26.5	-0.3
GPS1	Guardaparques	0.48	286	*i* P	Pn	06 48 09.9	+0.2
GPS3	Bodega del ICE	0.49	284	*i* P	Pn	06 48 10.0	+0.3
GPS3				*i* S	Sn	06 48 26.7	-0.2
BUAI	Buenos Aires	0.50	298	⇑*i* P	Pn	06 48 10.1	+0.4
GB1A	Borinquen Arri	0.54	289	*i* P	Pn	06 48 10.5	+0.6
BUEV	Buena Vista	0.54	287	⇑*i* P	Pn	06 48 10.3	+0.4
BUEV				*e*S	Sn	06 48 27.4	0.0
PLVR	Palo Verde	0.55	238	*e*P	Pn	06 48 10.3	+0.2
LAPC	Finca la Perla	0.56	283	*i* P	Pn	06 48 10.1	+0.1
LAPC				*i* S	Sn	06 48 26.4	-1.0
GBS3	Finca Las Img	0.58	284	*i* P	Pn	06 48 10.2	+0.1
SRA1	San Ramn	0.68	144	*e*P	Pn	06 48 10.7	-0.1
GUAI	GUAI	0.72	239	*i* P	Pn	06 48 11.2	+0.3
GUAI				*i* S	Sn	06 48 29.1	+0.1
SJS	Escuela Geolog	1.07	130	*e*P	Pn	06 48 13.9	+0.3
LCR2	La Lucha 2	1.24	136	*e*P	Pn	06 48 15.5	+0.2
CVTR	Volcan Turrial	1.26	119	*e*P	Pn	06 48 15.7	+0.1
ACON	Acoyapa	1.35	348	*e*P	Pn	06 48 16.8	+0.7
ESPN	Las Esperanzas	1.65	20	*e*P	Pn	06 48 19.3	+0.2
EDDO	Dominical	1.70	144	*e*P	Pn	06 48 20.8	+1.2
EDDO				*e*S	Sn	06 48 44.2	-0.5
EDLM	Las Mercedes	1.86	137	*e*P	Pn	06 48 23.0	+1.7
EDLM				*e*S	Sn	06 48 47.0	-0.8
DRK0	Durika	2.11	130	*e*P	Pn	06 48 25.0	+0.6
EDBA	Buenos Aires	2.16	133	*e*P	Pn	06 48 26.0	+1.2
EDBA				*e*S	Sn	06 48 52.0	-1.8
EDPN	Palmar Norte	2.18	140	*e*P	Pn	06 48 26.1	+1.1
EDPN				*e*S	Sn	06 48 54.8	+0.6
EDSV	San Vito	2.61	134	*e*P	Pn	06 48 32.0	+1.7
EDSV				*e*S	Sn	06 49 04.6	+1.0
BRU2	Volcan	2.83	130	*e*P	Pn	06 48 34.6	+1.6
BRU2				*e*S	Sn	06 49 06.9	-1.6
BRU2	Volcan	2.83	130	*e*P	Pn	06 48 34.5	+1.5
BCO2	Palmira	3.00	129	*e*P	Pn	06 48 36.8	+1.7
BCO2				*e*S	Sn	06 49 10.7	-1.7
SBAR3	San Bartolo, C	3.03	139	*e*S	Sn	06 49 21.4	+8.6
CHGR2	Aguacate	3.18	122	*e*P	Pn	06 48 38.9	+1.6
CHGR2				*e*S	Sn	06 49 14.3	-1.8
DVD	David	3.25	132	*e*P	Pn	06 48 39.4	+1.4
DVD				*e*S	Sn	06 49 17.1	-0.5
CMIG	Matias Romero	11.64	305	P	Pn	06 50 30.5	+2.0
	0.3nm,0.3s,baz=121,slow=11,SNR=4.3						
SADO	Sadowa	34.37	7	P	P	06 54 19.1	+0.4
	1.9nm,0.6s,baz=206,slow=4.4,SNR=4.0						
YKA	Yellowknife Ar	56.03	344	P	P	06 57 07.5	-1.4
	0.1nm,0.7s,baz=138,slow=7.4,SNR=2.9						
ASAR	Alice Springs	140.88	246	PKP	PKPdf	07 06 56.2	-2.7
	0.2nm,0.4s,baz=104,slow=3.5,SNR=5.3						
WRA	Warramunga Arr	141.14	251	PKP	PKPdf	07 06 56.3	-3.2
	0.7nm,0.9s,baz=110,slow=3.4,SNR=1.5						

HEL ***18*** *07:00:48.4±0.3, 57°.70N×21°.41E, h0km, ML1.7, Explosion*
EST ***18*** *07:00:48.6±0.1, 57°.71N×21°.41E, h0km, ML1.8(HEL), Explosion*
UPP ***18*** *07:00:50.1±1.1, 57°.77N×21°.42E, h0km, ML2.3, Suspected explosion*
LVSN ***18*** *07:00:51.2±5.5, 57°.73N×21°.33E, h0km±28km, ML2.0*
IDC ***18*** *07:00:52.8±3.1, 58°.04N×21°.50E, h0km, mb1 3.0/3, mb1mx2.9/36, mbtmp2.9/3, ML2.3/3, Error ellipse: s-maj=33.1km s-min=13.4km az=161.0*
ISC 18 07:00:48.5±0.8,**57°.77N**±0°.03×**21°.46E**±0°.03,**h0**km,**n41**, σ1°**33**/57,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	Slitere, Latvi	0.47	108	*e*P	Pg	07 00 57.9	+0.4
SLIT				*e*S	Sb	07 01 08.2	+1.2
SLIT				AML	AML	07 01 27.7	
	comp=Z,1μm,0.6s						
SLIT				AML	AML	07 01 28.2	
	comp=E,2μm,0.7s						
SLIT				AML	AML	07 01 28.6	
	comp=N,1μm,0.6s						
SLIT	Slitere, Latvi	0.47	108	*i* P	Pg	07 00 57.2	-0.2
GOTU	Gotland	1.55	268	P	Pn	07 01 17.5	+0.2
GOTU				S	Sg	07 01 40.0	+1.6
MTSE	Matsula	1.56	52	*e*S	Sn	07 01 38.1	-0.3
MTSE	Matsula	1.56	52	*e*S	Sn	07 01 38.0	-0.3
NRTU	Norrtaelje	2.42	323	P	Pn	07 01 30.5	+1.3
AAL	Aland	2.53	343	P	Pn	07 01 31.4	+0.6
AAL	Aland	2.53	343	*e*P	Pn	07 01 31.1	+0.3
AAL				*e*S	Sn	07 02 03.6	+1.3
VIKU	Vikbolandet	2.63	288	P	Pn	07 01 34.0	+1.8
VSTU	Vaestervik	2.65	270	P	Pn	07 01 34.1	+1.7
PABE	Paberze	2.66	148	*e*P	Pn	07 01 34.3	+1.7
PABE				*e*S	Sn	07 02 06.7	+1.2
VSU	Vasula	2.88	74	*e*P	Pb	07 01 39.0	-1.7
VSU				AML	AML	07 01 39.2	
	comp=Z,34nm,0.2s						
VSU				*e*S	Sb	07 02 16.0	-0.5
VSU				AML	AML	07 02 22.1	
	comp=E,42nm,0.4s						
VSU				AML	AML	07 02 30.6	
	comp=N,52nm,0.4s						
VSU	Vasula	2.88	74	*e*P	Pn	07 01 36.2	+0.6
VSU				*e*S	Sn	07 02 11.6	+0.6
MEF	Metsahovi	2.88	31	*e*P	Pb	07 01 39.1	-1.6
MEF				*e*S	Sb	07 02 14.6	-2.0
MEF				AML	AML	07 02 20.0	
	comp=E,5.9nm,0.4s						
MEF				AML	AML	07 02 24.1	
	comp=N,4.5nm,0.2s						
MEF				AML	AML	07 02 26.6	
	comp=E,5.5nm,0.4s						
MEF	Metsahovi	2.88	31	*e*P	Pn	07 01 36.9	+1.3
MEF				*e*S	Sn	07 02 11.8	+0.8
MEF				MSG		07 02 20.2	
	comp=Z,2.2nm,0.1s						
ARBE	Arbavere	2.90	53	*e*SB	Sb	07 02 17.0	+0.1
OSKU	Oskarshamn	2.95	261	P	Pn	07 01 38.0	+1.4
GRAU	Graesoe	2.98	331	P	Pn	07 01 38.4	+1.4
FLYU	Flymyra	3.00	323	P	Pn	07 01 38.8	+1.5
ESKU	Eskilstuna	3.04	301	P	Pn	07 01 39.8	+2.0
BACU	Backbrunna	3.08	315	P	Pn	07 01 40.1	+1.8
LNKU	Linkoeping	3.20	281	P	Pn	07 01 42.0	+1.9
RAF	Rauma	3.27	3	*e*P	Pn	07 01 42.2	+1.3
RAF				AML	AML	07 02 35.1	
	comp=E,7.6nm,0.3s						
RAF				AML	AML	07 02 40.7	
	comp=Z,3.5nm,0.7s						
RAF				AML	AML	07 02 41.3	
	comp=N,4.4nm,0.4s						
RAF	Rauma	3.27	3	*e*P	Pn	07 01 42.0	+1.1
RAF				*e*S	Sn	07 02 21.7	+1.3
RAF				MSG		07 02 36.3	
	comp=Z,1.6nm,0.1s						
EKSU	Eksjoe	3.31	269	P	Pn	07 01 42.9	+1.3
OSTU	Oestervaala	3.33	320	P	Pn	07 01 43.7	+1.9
BLEU	Blekinge	3.42	247	P	Pn	07 01 44.1	+1.1
PVF	Pernaja	3.59	37	*e*P	Pn	07 01 46.4	+1.1
PVF				*e*S	Sn	07 02 28.9	+0.6
PVF				MSG		07 02 40.8	
	comp=Z,2.1nm,0.1s						
VXJU	Vaexsjoe	3.64	259	P	Pn	07 01 47.1	+1.1
ASKU	Askersund	3.67	291	P	Pn	07 01 48.3	+1.8
IGGU	Iggoen	3.77	327	P	Pn	07 01 49.4	+1.6
VJF	Virojoki	4.19	46	*e*P	Pn	07 01 54.3	+0.8
VJF				*e*S	Sn	07 02 43.0	-0.1
FIA0	FINESS Array S	4.37	31	*e*P	Pn	07 01 57.3	+1.3
FIA0				*e*S	Sn	07 02 47.1	-0.4
FINES	FINESS Array B	4.37	31	Pn	Pn	07 01 57.1	+1.2
	comp=Z,0.1nm,0.3s,baz=216,slow=12,SNR=9.0						
FINES				Sn	Sn	07 02 47.7	+0.2
	comp=Z,0.2nm,0.3s,baz=220,slow=17,SNR=2.4						
FINES				Lg	Lg	07 03 02.0	
	comp=Z,1.0nm,0.3s,baz=215,slow=24,SNR=16						
FIA1	FINESS Array S	4.37	31	*e*P	Pn	07 01 57.3	+1.3
FIA1				*e*S	Sn	07 02 47.1	-0.4
BSD	Bornholm Skovb	4.50	237	*e*P	Pn	07 01 57.8	-0.1
BSD				AML	AML	07 02 08.9	
	comp=Z,1.4nm,0.7s						
BSD				AML	AML	07 02 09.0	
	comp=N,0.9nm,0.8s						
BSD				AML	AML	07 02 09.1	
	comp=E,1.2nm,0.7s						
BSD				*e*S	Sn	07 02 49.1	-1.8
BSD	Bornholm Skovb	4.50	237	*i* P	Pn	07 01 57.5	-0.4
BSD				*i* S	Sn	07 02 49.0	-2.0
KEF	Keuruu	4.73	20	*e*P	Pn	07 02 03.1	+2.1
KAF	Kangasniemi	4.99	27	*e*P	Pn	07 02 05.8	+1.2
NOA	NORSAR Array B	6.17	306	Pn	Pn	07 02 20.8	-0.1
	comp=E,0.0nm,0.3s,baz=124,slow=13,SNR=4.0						
NOA				Lg	Lg	07 04 02.5	
	comp=E,0.1nm,0.3s,baz=109,slow=17,SNR=5.4						
ARCES	ARCESS Array B	11.94	7	Pn	Pn	07 03 37.1	-2.7
	comp=E,0.2nm,0.3s,baz=187,slow=13,SNR=10.0						

IDC ***18*** *07:14:17.0±4.8, 24°.14S×179°.95E, h478km±54km, mb3.5/5, mb1 3.7/7, mb1mx3.2/40, mbtmp4.4/7, Error ellipse: s-maj=40.8km s-min=26.6km az=8.0*
NEIC ***18*** *07:14:17.8±1.1, 24°.29S±0°.06×179°.6W±0°.2, h520km±11km, mb4.3/14, Error ellipse: s-maj=28.4km s-min=8.6km az=91.0*
ISC 18 07:14:17.7±0.9,**24°.28S**±0°.09×**179°.9W**±0°.1,**h500**km,**n26**, σ1°**37**/27,**mb4.2**/12,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.79	343	P	P	07 16 03.3	+1.3
DZM	Mont Dzumac	12.75	277	P	P	07 17 01.6	-2.8
	0.2nm,0.3s,baz=298,slow=7.2,SNR=3.4						
URZ	Urewera	14.16	190	P	P	07 17 18.9	0.0
	1.2nm,0.3s,baz=337,slow=3.9,SNR=7.5						
URZ				S	S	07 19 49.5	+1.1
	0.4nm,0.3s,baz=183,slow=22,SNR=6.2						
BKZ	Black Stump Fm	15.15	191	P	P	07 17 29.6	+0.3
BKZ				IAmb	IAmb	07 17 42.1	
	comp=Z,20nm,1.4s						
EIDS	Eidsvold	26.34	262	P	P	07 19 14.5	+1.4
EIDS				IAmb	IAmb	07 19 27.0	
	comp=Z,12nm,1.1s						
CTAO	Charters Tower	31.57	271	P	P	07 20 00.0	+1.3
TOO	Toolangi	32.32	238	P	P	07 20 06.7	+1.8
TOO				IAmb	IAmb	07 20 17.6	
	comp=Z,13nm,1.4s						
STKA	Stephens Creek	34.67	249	P	P	07 20 24.8	-0.1
	comp=Z,1.1nm,0.4s,baz=90,slow=10.0,SNR=10						
STKA	Stephens Creek	34.67	249	P	P	07 20 25.9	+1.1
COEN	Coen	36.27	280	P	P	07 20 39.7	+1.3
BBOO	Buckleboo	39.38	247	P	P	07 21 03.7	+0.1
BBOO				IAmb	IAmb	07 21 12.2	
	comp=Z,11nm,1.4s						
AS31	Alice Springs	42.06	261	P	P	07 21 25.9	+0.7
ASAR	Alice Springs	42.06	261	P	P	07 21 25.6	+0.4
	comp=Z,1.0nm,0.6s,baz=94,slow=7.2,SNR=46						
WRAB	Tennant Creek	42.47	267	P	P	07 21 28.5	+0.1
WRAB				IAmb	IAmb	07 21 28.5	
	comp=Z,5.7nm,0.5s						
WRA	Warramunga Arr	42.47	267	P	P	07 21 28.3	-0.2
	comp=Z,3.3nm,0.3s,baz=97,slow=8.4,SNR=104						
FORT	Forrest	46.27	250	P	P	07 21 57.6	0.0
MTN	Manton Dam	47.58	275	P	P	07 22 07.8	0.0
MTN				IAmb	IAmb	07 22 14.9	
	comp=Z,26nm,1.4s						
FITZ	Fitzroy Crossi	50.89	266	P	P	07 22 33.2	+0.9
FITZ				IAmb	IAmb	07 22 33.4	
	comp=Z,7.6nm,1.1s						
SIJI	Sorong	52.64	289	P	P	07 22 44.2	-0.8
	comp=Z,9.5nm,0.7s,baz=80,slow=5.6,SNR=5.9						
MORW	Morawa	56.83	250	P	P	07 23 14.3	+0.1
MORW				IAmb	IAmb	07 23 22.0	
	comp=Z,12nm,1.4s						
QSPA	South Pole Qui	65.80	180	P	P	07 24 11.1	-1.6
TXAR	Lajitas Array	90.56	58	P	P	07 26 28.6	+2.3
	comp=Z,0.6nm,0.8s,baz=217,slow=6.5,SNR=8.9						
PTGA	Pitinga	116.75	104		PKPdf	07 32 02.3	-3.4
FINES	FINESS Array B	138.84	341	SKPbc	SKPbc	07 35 33.7	0.0
	comp=Z,1.1nm,0.7s,baz=29,slow=3.2,SNR=5.2						
AKASG	Malin Array Be	145.34	327	PKPbc	PKPbc	07 32 57.6	-1.3
	comp=Z,0.4nm,0.4s,baz=59,slow=3.6,SNR=2.2						
BRTR	Keskin Array B	147.88	307	PKPbc	PKiKP	07 33 06.6	-1.3
	comp=Z,0.8nm,0.7s,baz=68,slow=0.8,SNR=2.8						

IDC ***18*** *07:21:46.0±7.1, 13°.30S×166°.92E, h151km±68km, mb3.3/5, mb1 3.5/6, mb1mx3.2/28, mbtmp3.7/6, Error ellipse: s-maj=69.1km s-min=31.0km az=151.0*
ISC 18 07:21:45.9±1.2,**13°.3S**±0°.1×**166°.9E**±0°.3,**h150**km,**n7**, σ0°**72**/8,**mb3.4**/5,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.75	183	P	Pn	07 23 49.5	+0.1
	0.2nm,0.3s,baz=119,slow=23,SNR=1.1						
STKA	Stephens Creek	29.69	227	P	P	07 27 38.0	+0.2
	0.6nm,0.3s,baz=87,slow=13,SNR=4.1						
WRA	Warramunga Arr	31.87	254	P	P	07 27 56.4	-0.7
	0.5nm,0.8s,baz=85,slow=9.3,SNR=1.5						
ASAR	Alice Springs	32.89	247	P	P	07 28 05.9	-0.1
	0.4nm,0.5s,baz=74,slow=9.6,SNR=11						
ASAR				PcP	PcP	07 30 46.8	-0.4
	0.4nm,0.5s,baz=67,slow=2.5,SNR=6.6						
ILAR	Eielson Array	85.27	18	P	P	07 34 05.0	-0.4
	0.2nm,0.5s,baz=235,slow=5.1,SNR=4.1						
MKAR	Makanchi Array	95.93	317	P	P	07 34 56.9	+1.2
	0.3nm,0.4s,baz=89,slow=7.5,SNR=2.7						
ARCES	ARCESS Array B	118.78	346	PKP	PKPdf	07 40 15.3	-0.5
	1.8nm,0.7s,baz=56,slow=3.2,SNR=8.1						

IDC ***18*** *07:25:52.4±0.5, 5°.45N×73°.83W, h135km±5km, mb3.3/8, mb1 3.6/10, mb1mx3.4/28, mbtmp3.7/10, Error ellipse: s-maj=17.7km s-min=11.9km az=131.0*
RSNC ***18*** *07:25:53.6±1.1, 5°.51N×73°.98W, h126km±4km, ML3.7*
ISC 18 07:25:52.5±0.6,**5°.52N**±0°.03×**73°.97W**±0°.03,**h136**km±5km, **n53**,σ1°**22**/82,**mb3.4**/9,**4C-11D**,**Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPBC	San Pablo de B	0.17	323	⇓*i* P	Pn	07 26 10.8	-0.4
SPBC				*e*S	Sn	07 26 23.8	-1.5
ROSC	El Rosal	0.76	207	P	Pn	07 26 15.3	+0.9
ROSC				S	Sn	07 26 31.9	+0.8
	922nm,0.3s,baz=43,slow=21,SNR=29						
ROSC	El Rosal	0.76	207	⇓*i* P	Pn	07 26 15.1	+0.6
ROSC				*e*S	Sn	07 26 31.8	+0.8
ROSC				*i*		07 26 34.5	
	comp=Z,2μm,0.6s						
NORC	Norcasia	0.90	273	⇑*i* P	Pn	07 26 14.6	-0.5
NORC				*e*S	Sn	07 26 31.0	-1.3
NORC				*i*		07 26 32.4	
	comp=Z,1μm,0.4s						
CHIC	Chingaza	0.91	165	⇓*i* P	Pn	07 26 15.5	-0.3
CHIC				*e*S	Sn	07 26 32.0	-1.3
CHIC				*i*		07 26 42.0	
	comp=Z,472nm,0.4s						
RUSC	La Rusia	0.96	67	⇓*i* P	Pn	07 26 16.5	+0.3
RUSC				*e*S	Sn	07 26 33.8	-0.3
RUSC				*i*		07 26 39.8	
	comp=Z,327nm,0.6s						
PTBC	PUERTO BERRIO,	1.12	335	⇑*i* P	Pn	07 26 16.4	-0.8
PTBC				*e*S	Sn	07 26 34.6	-1.4
PTBC				*i*		07 26 35.7	
	comp=Z,780nm,0.4s						
GUY2C	Guyana, Caldas	1.42	258	⇓*i* P	Pn	07 26 20.9	+0.2
GUY2C				*e*S	Sn	07 26 41.2	-0.9
GUY2C				*i*		07 26 52.9	
	comp=Z,349nm,0.3s						
VILC	Villavicencio,	1.42	169	⇓*i* P	Pn	07 26 20.4	0.0
VILC				*e*S	Sn	07 26 42.8	+1.2
VILC				*i*		07 26 45.7	
	comp=Z,681nm,0.4s						
BRRC	Barranca, Sant	1.60	9	*e*P	Pn	07 26 22.6	+0.4
BRRC				*e*S	Sn	07 26 45.3	+0.4
BRRC				*i*		07 26 49.8	
	comp=Z,515nm,0.3s						
TOLC	Tolima	1.63	236	*e*P	Pn	07 26 23.2	+0.3
TOLC				*e*S	Sn	07 26 45.5	-0.5
TOLC				*i*		07 26 47.4	
	comp=Z,230nm,0.2s						
HELC	Santa Helena	1.69	293	*e*P	Pn	07 26 23.6	+0.1
HELC				*e*S	Sn	07 26 46.5	-0.7
HELC				*i*		07 26 54.0	
	comp=Z,404nm,0.4s						
ANIL	Santa Ana	1.75	235	*e*P	Pn	07 26 24.6	+0.4
ANIL				*e*S	Sn	07 26 48.4	-0.1
ANIL				*i*		07 26 50.5	
	comp=Z,934nm,0.5s						
PRAC	Prado	2.01	207	⇓*i* P	Pn	07 26 26.8	-0.2
PRAC				*e*S	Sn	07 26 53.6	+0.1
PRAC				*i*		07 26 55.7	
	comp=Z,667nm,0.4s						
ORTC	Ortega, Tolima	2.04	219	⇓*i* P	Pn	07 26 27.4	0.0
ORTC				*e*S	Sn	07 26 53.6	-0.5
ORTC				*i*		07 26 57.9	
	comp=Z,381nm,0.3s						
CBOC	Ciudad Bolivar	2.06	280	⇓*e*P	Pn	07 26 28.1	+0.3
CBOC				*e*S	Sn	07 26 54.4	-0.4
CBOC				*i*		07 26 57.0	
	comp=Z,286nm,0.5s						
ZARC	Zaragoza, Cauc	2.15	336	⇑*i* P	Pn	07 26 27.5	-1.2
ZARC				*e*S	Sn	07 26 55.3	-1.2
ZARC				*i*		07 27 03.7	
	comp=Z,701nm,0.3s						
PAMC	Pamplona, Colo	2.21	35	*e*P	Pn	07 26 30.6	+0.7
PTGC	Puerto Gaitan,	2.25	126	⇓*i* P	Pn	07 26 29.6	-0.3
PTGC				*e*S	Sn	07 26 57.1	-1.5
PTGC				*i*		07 27 01.0	
	comp=Z,485nm,0.7s						
TAMC	Tame, Arauca	2.35	67	⇓*i* P	Pn	07 26 31.8	+0.6
TAMC				*e*S	Sn	07 27 00.9	0.0
TAMC				*i*		07 27 14.8	
	comp=Z,177nm,0.5s						
PLMC	San Jos del P	2.38	255	*e*P	Pn	07 26 32.9	+1.3
DBBC	Dabeiba	2.68	304	*e*P	Pn	07 26 35.8	+0.4
DBBC				*e*S	Sn	07 27 05.3	-3.1
UREC	San Jos de Ur	2.71	325	⇑*i* P	Pn	07 26 34.1	-1.6
UREC				*e*S	Sn	07 27 06.3	-2.6
UREC				*i*		07 27 09.7	
	comp=Z,328nm,0.2s						
OCAC	Ocana	2.78	13	*e*P	Pn	07

comp=Z,0.4nm,0.5s,baz=108,slow=2.9,SNR=9.6

UPA ***18*** *07:46:34.5±2.0,8.67N×83.11W, h3km±9km, MW4.3*
UCR ***18*** *07:46:35.5±2.2,8.67N×83.19W, h6km±6km*
ISC 18 07:46:35.3±1.0,8.64N±0.03×83.16W±0.02, h18km±3km, n40,σ1§45/62, 3C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTJ1	**Puerto Jimnez**	**0.17**	**234**	*i*P	**Pg**	**07 46 39.0**	**-0.8**
PTJ1				*e*S	**Sg**	**07 46 43.2**	**+0.2**
PTJ1	**Puerto Jimnez**	**0.17**	**234**	*e*P	**Pg**	**07 46 39.0**	**-0.8**
PTJ1				*e*S	**Sg**	**07 46 43.3**	**+0.3**
EDSV	**San Vito**	**0.26**	**46**	*e*P	**Pg**	**07 46 42.0**	**+0.7**
EDSV				*e*S	**Sg**	**07 46 48.1**	**+2.7**
LESP3	**La Esperanza,**	**0.43**	**122**	*i*P	**Pg**	**07 46 43.7**	**-0.5**
LESP3				*e*S	**Sg**	**07 46 50.6**	**+0.4**
EDPN	**Palmar Norte**	**0.43**	**318**	*e*P	**Pg**	**07 46 43.4**	**-0.8**
EDPN				*e*S	**Sb**	**07 46 50.2**	**-0.5**
BRU2	**Volcan**	**0.49**	**71**	*i*P	**Pb**	**07 46 45.4**	**-0.1**
BRU2				*e*S	**Sb**	**07 46 53.4**	**+0.9**
BRU2	**Volcan**	**0.49**	**71**	*e*P	**Pb**	**07 46 45.4**	**-0.1**
BRU2				*e*S	**Sb**	**07 46 53.6**	**+1.1**
EDBA	**Buenos Aires**	**0.54**	**348**	*e*P	**Pb**	**07 46 45.8**	**-0.4**
EDBA				*e*S	**Sb**	**07 46 54.6**	**+1.2**
DRK0	**Durika**	**0.63**	**353**	*i*P	**Pg**	**07 46 47.0**	**-0.9**
DRK0				*e*S	**Sb**	**07 46 55.8**	**-0.4**
DRK0	**Durika**	**0.63**	**353**	*e*P	**Pg**	**07 46 47.0**	**-0.9**
DRK0				*e*S	**Sb**	**07 46 56.5**	**+0.3**
BCO2	**Palmira**	**0.63**	**83**	*i*P	**Pg**	**07 46 47.6**	**-0.3**
BCO2				*e*S	**Sg**	**07 46 56.1**	**-0.3**
DVD	**David**	**0.73**	**106**	*i*P	**Pg**	**07 46 48.6**	**-1.0**
DVD				*e*S	**Sg**	**07 46 59.1**	**-0.3**
EDLM	**Las Mercedes**	**0.77**	**327**	*e*P	**Pg**	**07 46 49.0**	**-1.3**
EDLM				*e*S	**Sb**	**07 47 00.4**	**+0.2**
LOCO3	**Loma Colorada,**	**0.77**	**107**	*e*P	**Pg**	**07 46 49.3**	**-1.1**
LOCO3				*e*S	**Sb**	**07 47 01.2**	**+0.9**
PEDE3	**Pedregal, Chir**	**0.77**	**109**	*e*P	**Pg**	**07 46 49.2**	**-1.3**
PEDE3				*e*S	**Sg**	**07 47 00.8**	**0.0**
CHIR3	**Chiriqui UPA,**	**0.86**	**106**	*e*P	**Pg**	**07 46 50.5**	**-1.6**
CHIR3				*e*S	**Sg**	**07 47 02.6**	**-0.8**
EDDO	**Dominical**	**0.93**	**312**	*e*P	**Pg**	**07 46 52.0**	**-1.4**
EDDO				*e*S	**Sg**	**07 47 03.9**	**-1.6**
CHGR2	**Aguacate**	**1.05**	**73**	*e*P	**Pg**	**07 46 53.7**	**-2.0**
CHGR2				*e*S	**Sg**	**07 47 05.9**	**-3.7**
RGM0	**Gandoca**	**1.09**	**30**	*e*P	**Pn**	**07 46 56.5**	**+0.8**
LCR2	**La Lucha 2**	**1.38**	**323**	*e*P	**Pn**	**07 46 58.3**	**-1.5**
CVTR	**Volcan Turrial**	**1.50**	**337**	*e*P	**Pn**	**07 47 01.6**	**0.0**
HDC	**Heredia**	**1.65**	**325**	*i*P	**Pb**	**07 47 05.2**	**0.0**
HDC				*e*S	**Sg**	**07 47 27.4**	**-1.2**
SRA1	**San Ramn**	**1.94**	**318**	*e*P	**Pn**	**07 47 08.1**	**+0.6**
GMAL	**Guarumal, Vera**	**2.10**	**114**	*e*P	**Pn**	**07 47 09.4**	**-0.1**
FORC	**Fortuna**	**2.35**	**321**	*e*P	**Pn**	**07 47 14.8**	**+1.8**
CASO	**Castillo**	**2.37**	**319**	*e*P	**Pn**	**07 47 15.4**	**+2.1**
CASO				*e*S	**Sb**	**07 47 48.7**	**+2.4**
ARE1	**Arenal 1**	**2.38**	**320**	*e*P	**Pn**	**07 47 16.2**	**+2.8**
CEDE	**Laguna Cedeo**	**2.38**	**321**	*e*P	**Pn**	**07 47 15.2**	**+1.6**
CEDE				*e*P	**Pb**	**07 47 16.6**	**-1.2**
JTS	**Las Juntas de**	**2.41**	**313**	*e*P	**Pn**	**07 47 15.0**	**+1.1**
ACAL	**Aguas Claras**	**2.71**	**317**	*e*P	**Pn**	**07 47 20.2**	**+2.1**
PTEN	**Parque Tenorio**	**2.74**	**319**	*e*P	**Pn**	**07 47 20.4**	**+2.0**
PLVR	**Palo Verde**	**2.75**	**308**	*e*P	**Pn**	**07 47 20.1**	**+1.4**
CUI	**Cuipilapa**	**2.82**	**316**	*e*P	**Pn**	**07 47 20.5**	**+1.1**
GUAI	**GUAI**	**2.83**	**305**	*e*P	**Pn**	**07 47 20.5**	**+1.0**
COLC	**Colonia**	**2.85**	**315**	*e*P	**Pn**	**07 47 22.8**	**+2.9**
AZU	**Azuero**	**2.98**	**106**	*e*P	**Pn**	**07 47 24.0**	**+2.4**
AZU				*e*S	**Sb**	**07 48 02.7**	**-1.2**
LAPC	**Finca la Perla**	**3.08**	**314**	*e*P	**Pn**	**07 47 24.8**	**+1.8**
GBS3	**Finca Las Img**	**3.11**	**314**	*e*P	**Pn**	**07 47 25.9**	**+2.5**
BCIP	**Isla Barro Col**	**3.33**	**81**	*e*P	**Pn**	**07 47 27.2**	**+0.8**
ACON	**Acoyapa**	**3.86**	**329**	*e*P	**Pn**	**07 47 35.8**	**+2.1**

GCG ***18*** *08:07:54.8±1.0, 15.86N×93.30W, h28km±999km, MD4.2*
MEX 18 08:08:01.5±0.5, 14.99N×93.10W, h76km±11km, MD3.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.72**	**351**	*e*P	Pn	08 08 15.7	-1.4
PCIG				*i* S	Sn	08 08 26.6	-2.0
THIG		**0.81**	**96**	*e*P	Pn	08 08 16.7	-1.4
THIG				*i* S	Sn	08 08 28.8	-1.6
STG3	**Santiaguito 3,**	**1.50**	**101**	*e*P	Pn	08 08 27.0	0.0
STG3				*e*S	Sn	08 08 53.8	+7.6
FUG	**Fuego 3**	**2.25**	**104**	*e*P	Pn	08 08 38.3	+1.5
FUG				*e*S	Sn	08 09 10.9	+7.1
IXG	**Ixpaco**	**2.70**	**107**	*e*P	Pn	08 08 44.7	+1.8
IXG				*e*S	Sn	08 09 23.5	+8.8
CMIG	**Matias Romero**	**2.70**	**321**	*e*P	Pn	08 08 41.0	-1.8
CMIG				*i* S	Sn	08 09 13.7	-0.8
HUIG	**Huatulco**	**3.00**	**285**	*e*P	Pn	08 08 46.6	-0.2
HUIG				*i* S	Sn	08 09 20.5	-1.3

TUL ***18*** *08:29:25.8±0.9, 35.81N±0.01×96.94W±0.02, h5km±2km, ML3.2, Error ellipse: s-maj=3.1km s-min=2.5km az=158.0*
ANF ***18*** *08:29:26.2±0.8, 35.79N×96.91W, h1km±5km, ML3.9/9, Error ellipse: s-maj=6.5km s-min=3.6km az=169.0*
NEIC ***18*** *08:29:26.3±0.7, 35.83N±0.02×96.93W±0.02, h7km±4km, Error ellipse: s-maj=3.9km s-min=1.9km az=143.0*
ISC 18 08:29:25.9±1.2, 35.85N±0.03×96.94W±0.03, h3km±11km, n43,σ0§73/50, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.40**	**240**		**Pg**	**08 29 33.8**	**+0.2**
OKCFA	**Oklahoma City**	**0.60**	**224**		**Pg**	**08 29 37.0**	**-0.5**
OKCFA				Sg	**Sg**	**08 29 45.4**	**+0.2**
TUL1	**Leonard** baz=266	**0.94**	**86**	P	**Pg**	**08 29 43.5**	**-0.4**
TUL1				S	**Sg**	**08 29 56.2**	**+0.1**
	baz=266						
TUL1	**Leonard**	**0.94**	**86**		**Pg**	**08 29 43.4**	**-0.4**
TUL1				Sg	**Sg**	**08 29 56.1**	**+0.1**
T35A	**Sooner Cattle**	**1.12**	**18**		**Pg**	**08 29 47.6**	**+0.3**
T35A				Sg	**Sg**	**08 30 03.1**	**+1.2**
U32A	**Winter Ranch,**	**1.75**	**288**		**Pn**	**08 29 57.9**	**+0.7**
X37A	**Clayton**	**1.80**	**134**		**Pn**	**08 29 57.9**	**+0.1**
WMOK	**Wichita Mounta** baz=53	**1.87**	**234**	P	**Pn**	**08 29 58.6**	**-0.2**
WMOK				S	**Sb**	**08 30 24.0**	**-0.5**
	baz=53						
WMOK	**Wichita Mounta**	**1.87**	**234**		**Pn**	**08 29 58.6**	**-0.2**
U38A	**Gravette**	**2.15**	**73**		**Pn**	**08 30 02.9**	**+0.2**
HHAR	**Hobbs**	**2.47**	**79**		**Pn**	**08 30 07.9**	**+0.8**
Z35A	**Perchaven, San**	**2.53**	**186**		**Pn**	**08 30 07.3**	**-0.5**
W39A	**Magazine** baz=285	**2.66**	**103**	P	**Pn**	**08 30 10.3**	**+0.7**
W39A				S	**Sn**	**08 30 43.3**	**+1.0**
	baz=285						
W39A	**Magazine**	**2.66**	**103**		**Pn**	**08 30 10.3**	**+0.7**
R32A	**Long Quarter,**	**2.93**	**332**		**Pn**	**08 30 13.3**	**-0.1**
MIAR	**Mount Ida** baz=296	**3.05**	**114**	P	**Pn**	**08 30 15.8**	**+0.8**
KSU1	**Kansas State U** baz=185	**3.25**	**5**	Sb	**Sg**	**08 31 09.3**	**-1.2**
U40A	**Yellville**	**3.35**	**80**		**Pn**	**08 30 19.4**	**+0.2**
X40A	**Basin Creek Fa** baz=293	**3.63**	**111**	P	**Pn**	**08 30 23.8**	**+0.8**
X40A	**Basin Creek Fa**	**3.63**	**111**		**Pn**	**08 30 23.4**	**+0.4**
CBKS	**Cedar Bluff**	**3.70**	**324**		**Pn**	**08 30 23.4**	**-0.6**
WLAR	**White Oak Lake**	**3.82**	**123**		**Pn**	**08 30 24.7**	**-1.0**
WHAR	**Wooly Hollow**	**3.83**	**97**		**Pn**	**08 30 25.9**	**+0.1**
WHTX	**Lake Whitney,** baz=6.3	**3.87**	**186**	Sb	**Sb**	**08 31 23.8**	**+1.6**
WHTX	**Lake Whitney,**	**3.87**	**186**	Pn	**Pn**	**08 30 27.0**	**+0.6**
W41B	**Gary Mavity, V** baz=281	**3.89**	**99**	P	**Pn**	**08 30 26.8**	**+0.2**
W41B				S	**Sn**	**08 31 12.5**	**-0.2**
	baz=281						
UALR	**University of**	**3.91**	**105**	Pn	**Pn**	**08 30 26.4**	**-0.5**
FCAR	**Ozark Folk Cen**	**3.91**	**88**		**Pn**	**08 30 27.7**	**+0.8**
ABTX	**Abilene, Hawle**	**3.92**	**216**	Pn	**Pn**	**08 30 26.4**	**-0.7**
237A	**Washetta, Mont**	**3.95**	**166**	Pn	**Pn**	**08 30 27.5**	**+0.1**
AMTX	**Amarillo**	**3.99**	**257**		**Pn**	**08 30 28.8**	**+0.7**
Z41A	**Richland Creek** baz=308	**4.28**	**126**	S	**Sn**	**08 31 21.3**	**-1.2**
R40A	**Maddies Statio**	**4.46**	**56**		**Pn**	**08 30 34.7**	**+0.3**
LCAR	**Lake Charles**	**4.70**	**86**		**Pn**	**08 30 36.6**	**-1.1**
T42A	**Van Buren**	**4.86**	**74**		**Pn**	**08 30 40.2**	**+0.3**
N33A	**J Bar K, Exete**	**4.90**	**355**		**Pn**	**08 30 38.9**	**-1.5**
N35A	**Tabor**	**5.11**	**11**	Pn	**Pn**	**08 30 43.9**	**+0.6**
HBAR	**Harrisburg**	**5.12**	**91**	Pn	**Pn**	**08 30 42.3**	**-1.2**
OXF	**Oxford**	**6.31**	**100**	Pn	**Pn**	**08 30 59.7**	**-0.2**
SDCO	**Great Sand Dun**	**7.12**	**288**	Pn	**Pn**	**08 31 12.1**	**+0.9**
ECSD	**EROS Data Cent**	**7.88**	**2**	Pn	**Pn**	**08 31 20.6**	**-0.8**
ISCO	**Idaho Springs**	**7.91**	**302**	Pn	**Pn**	**08 31 22.8**	**+0.7**
MNTX	**Cornudas Mount**	**8.15**	**242**	Pn	**Pn**	**08 31 24.4**	**-0.8**

NEIC ***18*** *09:00:14.9±1.8, 23.45S±0.1×179.7W±0.2, h552km±5km, mb4.3/22, Error ellipse: s-maj=22.9km s-min=15.3km az=104.0*
IDC ***18*** *09:00:17.1±3.1, 23.58S×179.86W, h560km±32km, mb3.3/5, mb1 3.4/6, mb1mx3.1/24, mbtmp4.4/6, Error ellipse: s-maj=32.7km s-min=16.8km az=30.0*
ISC 18 09:00:14.7±0.7, 23.44S±0.08×179.7W±0.1, h550km, n40, σ1§20/44, mb4.2/14, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.07**	**339**	P	**P**	**09 01 55.1**	**+0.9**
AFI	**Afiamalu**	**12.07**	**40**	P	**P**	**09 02 54.0**	**-0.2**
OUZ	**Omahuta**	**13.12**	**205**	P	**P**	**09 03 05.0**	**+0.4**
URZ	**Urewera** 1.5nm,0.3s,baz=256,slow=3.3,SNR=16	**15.02**	**190**	P	**P**	**09 03 22.7**	**-1.4**
URZ				S	**S**	**09 05 55.6**	**-4.5**
	0.5nm,0.3s,baz=214,slow=24,SNR=5.6						
QRZ	**Quartz Range**	**18.53**	**199**	P	**P**	**09 03 57.2**	**0.0**
THZ	**Tophouse**	**19.29**	**197**	P	**P**	**09 04 04.0**	**-0.2**
THZ				IAmb	IAmb	09 04 13.3	
	comp=Z,31nm,1.5s						
LTZ	**Lake Taylor**	**20.41**	**197**	P	**P**	**09 04 14.9**	**+0.5**
MLZ	**Mavora Lakes**	**24.02**	**201**	P	**P**	**09 04 48.0**	**+1.4**
WHZ	**Wether Hill Ro**	**24.54**	**201**	P	**P**	**09 04 52.1**	**+1.0**
EIDS	**Eidsvold**	**26.68**	**260**	P	**P**	**09 05 11.2**	**+0.9**
EIDS				IAmb	IAmb	09 05 14.8	
	comp=Z,30nm,1.4s						
CAN	**Canberra**	**29.63**	**239**	P	**P**	**09 05 36.7**	**+0.8**
CAN				IAmb	IAmb	09 05 44.9	
	comp=Z,9.5nm,1.2s						
CTA	**Charters Tower**	**31.78**	**269**	P	**P**	**09 05 55.2**	**+0.7**
	comp=Z,6.9nm,0.3s,baz=94,slow=11,SNR=20						
CTAO	**Charters Tower**	**31.78**	**269**	P	**P**	**09 05 55.2**	**+0.7**
CTAO				IAmb	IAmb	09 06 07.6	
	comp=Z,12nm,1.1s						
TOO	**Toolangi**	**32.95**	**237**	P	**P**	**09 06 04.5**	**+0.3**
TOO				IAmb	IAmb	09 06 16.9	
	comp=Z,4.1nm,1.0s						
STKA	**Stephens Creek**	**35.17**	**248**	P	**P**	**09 06 23.1**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=98,slow=10,SNR=9.8						
STKA	**Stephens Creek**	**35.17**	**248**	P	**P**	**09 06 23.1**	**+0.2**
STKA				PcP	**PcP**	**09 08 40.1**	**+1.5**
BBOO	**Buckleboo**	**39.90**	**246**	P	**P**	**09 07 00.8**	**-0.8**
BBOO				IAmb	IAmb	09 07 06.6	
	comp=Z,10nm,1.5s						
AS31	**Alice Springs**	**42.41**	**260**	P	**P**	**09 07 21.1**	**-0.4**
ASAR	**Alice Springs**	**42.41**	**260**	P	**P**	**09 07 21.4**	**-0.2**
	comp=Z,2.1nm,0.4s,baz=96,slow=7.4,SNR=66						
ASAR				S	**S**	**09 13 02.4**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=102,slow=14,SNR=5.5						
WRAB	**Tennant Creek**	**42.73**	**266**	P	**P**	**09 07 23.5**	**-0.6**
WRAB				IAmb	IAmb	09 07 29.5	
	comp=Z,14nm,1.4s						
FORT	**Forrest**	**46.75**	**249**	P	**P**	**09 07 54.1**	**-0.7**
FORT				IAmb	IAmb	09 07 54.8	
	comp=Z,11nm,0.7s						
KNRA	**Kununurra**	**48.99**	**269**	P	**P**	**09 08 11.7**	**0.0**
KNRA				IAmb	IAmb	09 08 12.2	
	comp=Z,6.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**51.16**	**265**	P	**P**	**09 08 28.0**	**+0.4**
VNDA	**Vanda**	**54.86**	**185**	P	**P**	**09 08 53.6**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=14,slow=7.7,SNR=8.6						
VNDA	**Vanda**	**54.86**	**185**	P	**P**	**09 08 54.8**	**+1.9**
PSA00	**Pilbara Seismi**	**55.54**	**259**	P	**P**	**09 08 58.3**	**-0.3**
PSA00				IAmb	IAmb	09 09 10.6	
	comp=Z,17nm,1.5s						
MORW	**Morawa**	**57.31**	**250**	P	**P**	**09 09 10.5**	**-0.2**
MORW				IAmb	IAmb	09 09 21.7	
	comp=Z,12nm,1.4s						
GIRL	**Giralia**	**60.31**	**256**	P	**P**	**09 09 32.0**	**+1.1**
GIRL				PcP	**PcP**	**09 10 09.1**	**-0.2**
CASY	**Casey**	**60.65**	**206**	P	**P**	**09 09 32.1**	**-0.2**
QSPA	**South Pole Qui**	**66.64**	**180**	P	**P**	**09 10 11.7**	**+1.0**
	comp=Z,3.0nm,0.7s,baz=314,slow=1.9,SNR=25						
QSPA	**South Pole Qui**	**66.64**	**180**	P	**P**	**09 10 12.1**	**+1.4**
QSPA				IAmb	IAmb	09 10 13.5	
	comp=Z,10nm,1.4s						
QSPA				PcP	**PcP**	**09 10 35.9**	**+1.1**
SYO	**Syowa Base**	**83.52**	**193**	*e*P	P	09 11 33.8	-11
KONO	**Kongsberg**	**143.23**	**352**	PKPdf	**PKPdf**	**09 18 44.5**	**-1.4**
AKASG	**Malin Array Be**	**144.75**	**328**	PKP	**PKPab**	**09 18 49.2**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=47,slow=4.5,SNR=5.9						
AKBB	**Malin Array Si**	**144.75**	**328**	PKPdf	**PKPab**	**09 18 49.8**	**-0.2**
BRTR	**Keskin Array B**	**147.54**	**308**	PKPbc	**PKiKP**	**09 18 57.7**	**-1.5**
	comp=Z,0.6nm,0.8s,baz=54,slow=2.5,SNR=2.6						
CLL	**Collm**	**150.50**	**344**	*e*PKPbc	**PKiKP**	**09 19 05.0**	**+0.3**
GEC2	**GERESS Array S**	**152.53**	**341**	PKPbc	**PKPbc**	**09 19 07.5**	**-1.4**
VTS	**Vitosha**	**153.04**	**321**	PKPbc	**PKiKP**	**09 19 10.2**	**-0.2**
MURB	**Monte Urbino**	**157.81**	**336**	PKPab	**PKPab**	**09 19 42.3**	**-2.6**

TRN 18 09:29:13.3, 17.14N×60.18W, h50km, MD3.6, 1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABD	**La Joyeuse, An**	**1.42**	**242**	*e*P	Pn	09 29 38.5	+1.9
ABD				*e*S	Sn	09 29 57.2	+3.0
MAGL	**Barre de l'ile**	**1.59**	**222**	*e*P	Pn	09 29 40.2	+1.2
MAGL				*e*S	Sn	09 29 58.3	-0.1
ANWB	**Willy Bob**	**1.62**	**289**	*e*P	Pn	09 29 40.7	+1.3
ANWB				*e*S	Sn	09 30 00.7	+1.5
CBE	**Ff, Capester**	**1.74**	**232**	*e*P	Pn	09 29 42.5	+1.5
CBE				*e*S	Sn	09 30 04.7	+2.6
TDBA	**Terre de Bas,**	**1.90**	**228**	*e*P	Pn	09 29 45.3	+2.1
TDBA				*e*S	Sn	09 30 08.6	+2.5
MLYT	**Lee's Yard**	**1.97**	**258**	*e*P	Pn	09 29 46.9	+2.6
MDN	**Morne-Daniel**	**2.16**	**213**	*e*P	Pn	09 29 49.1	+2.3
SKI	**Saint Kitts**	**2.46**	**275**	*e*P	Pn	09 29 52.9	+2.1
SKI				*e*S	Sn	09 30 20.5	+0.8
SVN	**Savane Anatole**	**2.48**	**203**	*e*P	Pn	09 29 49.1	-2.2
BAMF	**Morne Balai**	**2.49**	**202**	*e*P	Pn	09 29 52.9	+1.4
CXM	**Morne La Croix**	**2.51**	**202**	*e*P	Pn	09 29 53.3	+1.6
GBMF	**Grand Be**	**2.52**	**202**	*e*P	Pn	09 29 52.8	+1.0
PCM	**Pelee Case Pet**	**2.52**	**203**	*e*P	Pn	09 29 52.9	+1.1
PML	**Morne Lenard**	**2.54**	**203**	*e*P	Pn	09 29 53.8	+1.7
FDF	**Fort de France**	**2.57**	**201**	*e*P	Pn	09 29 54.1	+1.6
FDF				*e*S	Sn	09 30 23.6	+0.9
LPMF	**Morne Lapointe**	**2.66**	**197**	*e*P	Pn	09 29 55.0	+1.3
BIM	**Bigot**	**2.75**	**198**	*e*P	Pn	09 29 57.2	+2.3
BIM				*e*S	Sn	09 30 28.4	+1.5
MPOM	**Morne Pois Mar**	**2.76**	**194**	*e*P	Pn	09 29 57.0	+1.9
MPOM				*e*S	Sn	09 30 28.5	+1.3
SLBI	**Saint Lucia, B**	**3.19**	**194**	*e*P	Pn	09 30 03.0	+2.0

DDA ***18*** *09:32:45.3, 37.35N×42.62E, h7km±4km, ML2.4*
ISK ***18*** *09:32:45.6, 37.31N×42.55E, h6km, ML2.5/7*
ISC 18 09:32:45.8±1.2, 37.35N±0.06×42.64E±0.03, h19km±2km, n15,σ1§18/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.22**	**314**	PG	**Pg**	**09 32 49.8**	**-1.4**
SIRT				SG	**Sb**	**09 32 54.3**	**+0.1**
CUKT	**Cukurca**	**0.78**	**97**	PG	**Pn**	**09 33 02.2**	**+0.3**
CUKT				SG	**Sn**	**09 33 14.6**	**+1.4**
SRTM	**Siirt_Merkez**	**0.86**	**319**	*i* P	**Pb**	**09 33 02.1**	**0.0**
SRTM				*i* S	**Sb**	**09 33 13.2**	**-0.1**
HAKT	**HAKKARI**	**0.88**	**76**	*i* P	**Pg**	**09 33 02.1**	**-0.9**
AKDM	**Akdamar-Van**	**1.02**	**15**	PG	**Pn**	**09 33 06.8**	**+1.6**
BLIS	**Bitlis-Merkez**	**1.14**	**339**	*i* P	**Pn**	**09 33 07.9**	**+0.9**
BLIS				*i* S	**Sb**	**09 33 19.8**	**-1.8**
BLIS				IAML		09 33 24.0	
	comp=E,32nm,0.9s						
BTMN	**Batman**	**1.21**	**297**	*i* P	**Pb**	**09 33 08.1**	**-0.1**
BTMN				*i* S	**Sb**	**09 33 23.0**	**-0.5**
BTMN				IAML		09 33 30.0	
	comp=E,108nm,0.3s						
BTMN				IAML		09 33 54.0	
	comp=N,146nm,1.3s						
GURO	**Guroymak-BITLI**	**1.29**	**338**	PN	**Pg**	**09 33 10.9**	**+0.1**
GURO				SN	**Sg**	**09 33 29.5**	**+1.7**
SVAN	**Silvan-Diyarba**	**1.40**	**306**	PN	**Pg**	**09 33 11.6**	**-1.1**
SVAN				SN	**Sg**	**09 33 32.9**	**+1.9**
SVAN	**Silvan-Diyarba**	**1.40**	**306**	*i* P	**Pg**	**09 33 11.8**	**-1.0**
SVAN				IAML		09 33 37.0	
	comp=N,22nm,0.3s						
MARD	**Mardin**	**1.48**	**269**	*i* P	**Pb**	**09 33 13.0**	**+0.2**
MARD				*i* S	**Sn**	**09 33 29.7**	**-0.8**
MARD				IAML		09 33 36.0	
	comp=E,128nm,0.3s						
MARD				IAML		09 33 39.0	
	comp=N,230nm,0.4s						
MUSM	**Mu-Merkez**	**1.64**	**327**	*i* P	**Pg**	**09 33 15.7**	**-1.7**
MUSM				*i* S	**Sn**	**09 33 33.6**	**-0.8**
MAZI	**Mazidag**	**1.75**	**274**	PN	**Pb**	**09 33 16.7**	**-0.6**
AGRB	**Hanur-Agry**	**2.24**	**7**	PN	**Pb**	**09 33 24.4**	**-1.4**
SVRC	**Sivrice-ELAZID**	**2.83**	**292**	PN	**Pn**	**09 33 31.1**	**+0.9**

ROM ***18*** *09:41:31.6±0.1, 44.681N±0.006×6.641E±0.009, h14km±2km, ML2.0/9, Error ellipse: s-maj=0.7km s-min=0.6km az=47.0*
GEN ***18*** *09:41:31.7, 44.67N×6.64E, h1km±1km, Ml2.0*
LDG ***18*** *09:41:32.4±0.1, 44.70N×6.69E, h2km, Md2.6/3, Ml2.5/20, Error ellipse: s-maj=1.3km s-min=0.9km az=66.0*
STR ***18*** *09:41:32.3±0.2, 45°N±1°×±°, h5km±2km, MLv2.0/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
ISC 18 09:41:32.0±0.9, 44.68N±0.01×6.64E±0.02, h9km±6km, n81, σ1§37/150, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBDF	**Montbardon**	**0.10**	**64**	*e*Pg	**Pg**	**09 41 34.1**	**-0.5**
MBDF				*e*Sg	**Sg**	**09 41 35.3**	**-1.2**
	228nm,0.2s						
SURF	**Saint Ours**	**0.24**	**148**	Pg	**Pg**	**09 41 36.4**	**-0.4**
SURF				Sg	**Sg**	**09 41 40.5**	**+0.4**
OGAG	**Argentiere**	**0.24**	**197**	Pg	**Pg**	**09 41 34.7**	**-2.1**
OGAG				Sg	**Sg**	**09 41 37.3**	**-2.8**
RRL	**Rocca Remolon**	**0.26**	**24**	P	**Pg**	**09 41 37.4**	**0.0**
RRL				S	**Sg**	**09 41 41.3**	**+0.3**
RRL	**Rocca Remolon**	**0.26**	**24**	P	**Pg**	**09 41 37.4**	**0.0**
RRL				S	**Sg**	**09 41 41.5**	**+0.6**
RRL				AML	AML		
	comp=E,761μm,0.3s						
RRL				AML	AML		
	comp=E,760μm,0.3s						
RRL				AML	AML		
	comp=N,640μm,0.3s						
BNI	**Bardonecchia**	**0.37**	**4**	P	**Pg**	**09 41 39.4**	**0.0**
BNI				S	**Sg**	**09 41 44.8**	**+0.5**
BNI				AML	AML		
	comp=N,61μm,1.5s						
BNI				AML	AML		
	comp=E,108μm,0.7s						
BNI				AML	AML		
	comp=N,61μm,1.5s						
PZZ	**Stroppo**	**0.38**	**117**	P	**Pg**	**09 41 39.2**	**-0.3**
PZZ				S	**Sg**	**09 41 44.4**	**-0.1**
PZZ	**Stroppo**	**0.38**	**117**	P	**Pg**	**09 41 39.2**	**-0.3**
PZZ				S	**Sg**	**09 41 44.5**	**-0.1**
PZZ				AML	AML		
	comp=E,1230μm,0.9s						
PZZ				AML	AML		
	comp=N,949μm,0.2s						
PZZ				AML	AML		
	comp=N,950μm,0.2s						
DOI	**San Damiano**	**0.47**	**112**	P	**Pg**	**09 41 41.0**	**-0.1**
DOI				S	**Sg**	**09 41 48.6**	**+1.3**
BHB	**Bricherasio**	**0.47**	**70**	P	**Pg**	**09 41 41.0**	**-0.2**
BHB				S	**Sg**	**09 41 47.2**	**-0.2**
BHB	**Bricherasio**	**0.47**	**70**	P	**Pg**	**09 41 41.0**	**-0.2**
BHB				S	**Sg**	**09 41 47.5**	**+0.1**
BHB				AML	AML		
	comp=N,156μm,0.2s						
BHB				AML	AML		
	comp=E,118μm,0.8s						
OGMO	**Fort Saint-Gob**	**0.53**	**3**	Pg	**Pg**	**09 41 42.4**	**+0.1**
OGMO				Sg	**Sg**	**09 41 50.0**	**+0.8**
ISO	**Isola**	**0.58**	**149**	Pg	**Pg**	**09 41 42.7**	**-0.5**
IS

BSTF	**la Bastide-des**	**1.07**	**222**	Pn		**Pn**	**09 41 54.9**	**+1.6**
BSTF				Sn		**Sn**	**09 42 10.6**	**+2.2**
RUSF	**Rustrel**	**1.11**	**229**	Pn		**Pn**	**09 41 54.5**	**+0.7**
RUSF				Sn		**Sn**	**09 42 10.9**	**+1.6**
FRF	**La Foret Royal**	**1.12**	**180**	*e*Pn		**Pg**	**09 41 53.1**	**-0.4**
FRF	**La Foret Royal**	**1.12**	**180**	*e*Pg		**Pn**	**09 41 54.4**	**+0.5**
FRF				*e*Sg		**Sb**	**09 42 08.7**	**+0.4**
CIRO	**Champorcher**	**1.13**	**35**	P		**Pg**	**09 41 52.9**	**-0.8**
CIRO				S		**Sg**	**09 42 07.7**	**-0.7**
NEGI	**Seborga**	**1.13**	**137**	AML		AML		
	comp=E,126μm,0.4s							
NEGI				AML		AML		
	comp=N,178μm,0.6s							
OGSM	**Saint Maurice**	**1.14**	**325**	Pg		**Pg**	**09 41 53.8**	**-0.2**
OGSM				Sg		**Sb**	**09 42 09.8**	**+0.8**
ARTF	**Artigues**	**1.25**	**209**	Pg		**Pb**	**09 41 56.4**	**+0.6**
LMR	**La Mourre**	**1.35**	**184**	*e*Pg		**Pn**	**09 41 57.7**	**+0.6**
LMR				*e*Sn		**Sg**	**09 42 15.8**	**+0.4**
	comp=N,22nm,0.2s							
PCP	**Piancastagn**	**1.37**	**95**	P		**Pn**	**09 41 57.0**	**-0.3**
VIVF	**Saint-Julien-l**	**1.41**	**278**	*e*Pg		**Pb**	**09 41 59.0**	**+0.4**
VIVF				*e*Sg		**Sg**	**09 42 18.0**	**+0.6**
OG35	**Corcelles**	**1.56**	**331**	Pg		**Pb**	**09 42 01.6**	**+0.5**
OG35				Sg		**Sg**	**09 42 22.7**	**+0.6**
CABF	**La Chapelle**	**1.97**	**349**	*e*P		**Pn**	**09 42 07.5**	**+1.8**
CABF				*e*Sg		**Sb**	**09 42 34.1**	**+1.3**
	comp=N,7.6nm,0.4s							
LASF	**Ste Croix**	**2.09**	**254**	*e*Pn		**Pn**	**09 42 07.4**	**+0.2**
LASF	**Ste Croix**	**2.09**	**254**	*e*Pg		**Pg**	**09 42 12.4**	**+0.4**
LASF				*e*Sn		**Sn**	**09 42 32.1**	**-1.3**
PGF	**Pioggiola**	**2.73**	**140**	*e*Pn		**Pn**	**09 42 16.2**	**0.0**
PGF				*e*Sn		**Sn**	**09 42 47.8**	**-1.7**
	comp=N,5.6nm,0.3s							
SMF	**Signal de Mont**	**2.78**	**316**	*e*P		**Pn**	**09 42 18.6**	**+1.9**
SMF	**Signal de Mont**	**2.78**	**316**	*e*Pg		**Pb**	**09 42 23.6**	**+1.8**
SMF				*e*Sn		**Sn**	**09 42 48.3**	**-2.1**
SMF				*e*Sg		**Sg**	**09 42 59.6**	**-1.6**
	comp=N,4.4nm,0.3s							
AVF	**Avril sur Loir**	**3.12**	**314**	*e*P		**Pn**	**09 42 23.8**	**+2.4**
AVF	**Avril sur Loir**	**3.12**	**314**	*e*Pg		**Pg**	**09 42 31.0**	**-0.8**
AVF				*e*Sn		**Sn**	**09 42 56.3**	**-2.6**
AVF				*e*Sg		**Sg**	**09 43 10.3**	**-2.0**
	comp=N,4.7nm,0.5s							
HINF	**Hinteralfeld**	**3.14**	**3**	*e*P		**Pn**	**09 42 23.9**	**+2.2**
HINF	**Hinteralfeld**	**3.14**	**3**	*e*Pg		**Pb**	**09 42 29.8**	**+1.8**
HINF				*e*Sn		**Sn**	**09 42 57.0**	**-2.4**
HINF				*e*Sg		**Sg**	**09 43 10.3**	**-2.5**
	comp=N,1.7nm,0.3s							
LOR	**Lormes**	**3.23**	**324**	*e*P		**Pn**	**09 42 25.1**	**+2.1**
	baz=141							
LOR	**Lormes**	**3.23**	**324**	*e*Pg		**Pg**	**09 42 32.8**	**-1.1**
	baz=147							
LOR				*e*Sn		**Sn**	**09 42 59.4**	**-2.3**
LOR				*e*Sg		**Sg**	**09 43 13.9**	**-1.9**
	comp=N,1.6nm,0.3s,baz=143							
SSF	**Saint Saulge**	**3.23**	**318**	*e*P		**Pn**	**09 42 25.6**	**+2.6**
SSF	**Saint Saulge**	**3.23**	**318**	*e*Pg		**Pg**	**09 42 33.2**	**-0.8**
SSF				*e*Sn		**Sn**	**09 42 59.4**	**-2.2**
SSF				*e*Sg		**Sg**	**09 43 14.0**	**-1.8**
	comp=N,3.6nm,0.4s							
BGF	**Bois d'Agland**	**3.26**	**307**	*e*P		**Pn**	**09 42 25.1**	**+1.8**
BGF	**Bois d'Agland**	**3.26**	**307**	*e*Pg		**Pg**	**09 42 33.5**	**-0.9**
BGF				*e*Sn		**Sn**	**09 43 00.0**	**-2.2**
BGF				*e*Sg		**Sg**	**09 43 15.1**	**-1.5**
	comp=N,16nm,0.5s							
CAF	**Calviac**	**3.27**	**276**	*e*P		**Pn**	**09 42 25.5**	**+2.0**
CAF				*e*Sn		**Sn**	**09 43 01.4**	**-1.1**
	comp=N,2.3nm,0.4s							
HAU	**Haudompre**	**3.33**	**357**	*e*P		**Pn**	**09 42 25.9**	**+1.6**
HAU	**Haudompre**	**3.33**	**357**	*e*Pg		**Pb**	**09 42 33.9**	**+2.6**
HAU				*e*Sn		**Sn**	**09 43 01.2**	**-2.9**
	comp=N,6.2nm,0.3s							
MTLF	**Montolieu**	**3.46**	**249**	*e*Pn		**Pn**	**09 42 26.6**	**+0.5**
MTLF				*e*Sn		**Sn**	**09 43 06.0**	**-1.2**
	comp=N,2.6nm,0.5s							
TCF	**Toulx Ste Croi**	**3.51**	**299**	*e*Pn		**Pn**	**09 42 26.3**	**-0.5**
TCF	**Toulx Ste Croi**	**3.51**	**299**	*e*P		**Pn**	**09 42 29.6**	**+2.8**
TCF				*e*Sn		**Sn**	**09 43 05.8**	**-2.6**
TCF				*e*Sg		**Sg**	**09 43 22.6**	**-2.0**
	comp=N,1.1nm,0.3s							
ECH	**Echery**	**3.55**	**6**	Pn		**Pn**	**09 42 28.2**	**+0.8**
ECH				Sn		**Sn**	**09 43 08.1**	**-1.5**
SFTF	**Sexfontaines**	**3.69**	**343**	*e*P		**Pn**	**09 42 31.1**	**+1.8**
SFTF				*e*Sn		**Sn**	**09 43 09.3**	**-3.7**
SFTF				*e*Sg		**Sg**	**09 43 27.6**	**-3.0**
	comp=N,3.1nm,0.4s							
CDF	**Champ du Feu**	**3.76**	**6**	*e*Pn		**Pn**	**09 42 29.2**	**-1.1**
CDF	**Champ du Feu**	**3.76**	**6**	*e*P		**Pn**	**09 42 32.1**	**+1.8**
CDF				*e*Sn		**Sn**	**09 43 11.4**	**-3.3**
	comp=N,1.2nm,0.4s							
PAGF	**Fort de Pagny**	**3.93**	**351**	*e*P		**Pn**	**09 42 34.7**	**+2.2**
PAGF				*e*Sn		**Sn**	**09 43 15.2**	**-3.5**
	comp=N,3.8nm,0.5s							
MEZF	**Maizieres J'vi**	**3.98**	**345**	*e*P		**Pn**	**09 42 35.8**	**+2.6**
MEZF				*e*Sg		**Sg**	**09 43 36.0**	**-3.6**
	comp=N,2.7nm,0.3s							
GIVF	**Givet**	**5.56**	**348**	*e*P		**Pn**	**09 42 57.8**	**+2.9**

NIED ***18*** *10:20:00,24.°50N×121.°70E,h74km,Mw3.7 Best double couple: M₀4.70000×10¹⁴ NP1:φ₀28.00000°,δ67.00000°, λ127.00000°. NP2:φ₀145.00000°,δ43.00000°,λ35.00000°.*
TAP ***18*** *10:20:40.7,24.°53N×121.°74E,h71km,ML4.0,A*
JMA ***18*** *10:20:40.0±0.1,24.°46N×121.°73E,h71km±2km,M3.6*
ISC 18 10:20:40.3±1.2,24.°54N±0.°02×121.°75E±0.°02,h76km±4km, n128,σ0°99/235,4C-52D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.11**	**183**	⇑*i*P		**Pn**	**10 20 51.0**	**-0.4**
	baz=172							
ENA				*i* S		**Sn**	**10 20 59.5**	**+0.1**
	baz=172							
TWC	**Suao**	**0.12**	**53**	⇑*i*P		**Pn**	**10 20 51.3**	**-0.1**
	baz=54							
TWC				S		**Sn**	**10 20 59.2**	**-0.3**
	baz=54							
ENTT	**Nioudou**	**0.19**	**301**	⇓*i*P		**Pn**	**10 20 51.8**	**+0.1**
	baz=306							
ENTT				S		**Sn**	**10 20 59.7**	**-0.2**
	baz=306							
TWE	**Neicheng**	**0.19**	**338**	⇓*i*P		**Pn**	**10 20 52.0**	**+0.3**
	baz=345							
TWE				*i* S		**Sn**	**10 21 00.0**	**+0.1**
	baz=345							
NDT	**Datong Townshi**	**0.22**	**286**	⇓*i*P		**Pn**	**10 20 51.9**	**+0.2**
	baz=290							
NDT				*i* S		**Sn**	**10 20 59.8**	**-0.4**
	baz=290							
ILA	**Ilan**	**0.22**	**0**	⇑*i*P		**Pn**	**10 20 52.5**	**+0.7**
	baz=4.0							
ILA				*i* S		**Sn**	**10 21 01.1**	**+0.9**
	baz=4.0							
NTC	**Toucheng**	**0.32**	**13**	P		**Pn**	**10 20 53.4**	**+1.1**
	baz=14							
NTC				*e*S		**Sn**	**10 21 02.3**	**+1.2**
	baz=14							
NWLT	**Wulai**	**0.32**	**317**	⇓*i*P		**Pn**	**10 20 52.5**	**+0.1**
	baz=319							
NWLT				*e*S		**Sn**	**10 21 00.7**	**-0.6**
	baz=319							
EOS1	**EOS1**	**0.35**	**88**	*e*P		**Pn**	**10 20 53.3**	**+0.9**
	baz=86							
EOS1				*e*S		**Sn**	**10 21 03.1**	**+1.8**
	baz=86							
NNSB	**Datong**	**0.35**	**252**	⇓*e*P		**Pn**	**10 20 52.6**	**0.0**
	baz=252							
NNSB				*e*S		**Sn**	**10 21 01.0**	**-0.7**
	baz=252							
NNSH	**Datong**	**0.35**	**252**	*i* P		**Pn**	**10 20 52.7**	**+0.1**
	baz=252							
NNSH				*i* S		**Sn**	**10 21 01.1**	**-0.7**
	baz=252							
NNS	**Nan Shan**	**0.36**	**254**	⇓*i*P		**Pn**	**10 20 52.8**	**+0.1**
	baz=254							
NNS				*i* S		**Sn**	**10 21 01.3**	**-0.5**
	baz=254							
YHNB	**Yeheng**	**0.36**	**291**	⇓*e*P		**Pn**	**10 20 52.7**	**0.0**
	baz=293							
YHNB				*e*S		**Sn**	**10 21 00.9**	**-0.9**
	baz=293							
NSK	**Sanguang**	**0.38**	**291**	⇓*i*P		**Pn**	**10 20 52.8**	**0.0**
	baz=293							
NSK				*i* S		**Sn**	**10 21 01.1**	**-0.9**
	baz=293							
NACB	**Ninganchiao**	**0.39**	**201**	⇓*e*P		**Pn**	**10 20 51.7**	**-1.1**
	baz=200							
NACB				*e*S		**Sn**	**10 20 59.4**	**-2.6**
	baz=200							
ETLH	**Xiulin Townshi**	**0.41**	**216**	*e*P		**Pn**	**10 20 52.5**	**-0.6**
	baz=215							
ETLH				*e*S		**Sn**	**10 21 01.4**	**-1.1**
	baz=215							
TIPB	**Shuangxi**	**0.43**	**9**	⇓*i*P		**Pn**	**10 20 53.9**	**+0.7**
	baz=10.0							
TIPB				*i* S		**Sn**	**10 21 03.0**	**+0.3**
	baz=10.0							
TWA	**Mucha**	**0.46**	**341**	⇓*i*P		**Pn**	**10 20 53.7**	**+0.3**
	baz=343							
TWA				*i* S		**Sn**	**10 21 03.1**	**0.0**
	baz=343							
NHDH	**Xindian Distri**	**0.47**	**334**	*i* P		**Pn**	**10 20 53.7**	**+0.2**
	baz=336							
NHDH				*i* S		**Sn**	**10 21 03.1**	**0.0**
	baz=336							
TWD	**Chiawan**	**0.48**	**197**	⇓*i*P		**Pn**	**10 20 52.5**	**-1.1**
	baz=194							
TWD				*e*S		**Sn**	**10 21 01.0**	**-2.2**
	baz=194							
TATO	**Taipei**	**0.49**	**331**	⇓*e*P		**Pn**	**10 20 53.7**	**0.0**
	baz=334							
TATO				*e*S		**Sn**	**10 21 03.0**	**-0.4**
	baz=334							
TWB1	**Santiao Chiao**	**0.52**	**25**	⇑*i*P		**Pn**	**10 20 54.3**	**+0.5**
	baz=26							
TWB1				*i* S		**Sn**	**10 21 04.6**	**+0.8**
	baz=26							
NWF	**Wu-fen Shan**	**0.53**	**3**	⇓*i*P		**Pn**	**10 20 54.8**	**+0.7**
	baz=4.0							
NWF				S		**Sn**	**10 21 04.9**	**+0.7**
	baz=4.0							
WFSB	**Wu-fen Shan**	**0.53**	**3**	⇓*e*P		**Pn**	**10 20 54.8**	**+0.7**
	baz=4.0							
WFSB				*e*S		**Sn**	**10 21 04.8**	**+0.8**
	baz=4.0							
TAP1	**Taipei**	**0.54**	**338**	⇓*i*P		**Pn**	**10 20 54.3**	**+0.3**
	baz=338							
TAP1				*i* S		**Sn**	**10 21 04.4**	**+0.3**
	baz=338							
TAP	**Taipei**	**0.54**	**336**	P		**Pn**	**10 20 54.5**	**+0.4**
	baz=338							
TAP				*i* S		**Sn**	**10 21 04.5**	**+0.2**
	baz=338							
HWA	**Hwalien**	**0.58**	**193**	*i* P		**Pn**	**10 20 53.9**	**-0.6**
	baz=191							
HWA				*i* S		**Sn**	**10 21 03.8**	**-1.0**
	baz=191							
WHF	**Hehuan Shan**	**0.59**	**228**	⇓*i*P		**Pn**	**10 20 54.9**	**-0.2**
	baz=227							
WHF				*i* S		**Sn**	**10 21 05.1**	**-0.8**
	baz=227							
TWT	**Tachien**	**0.59**	**241**	⇓*i*P		**Pn**	**10 20 55.4**	**+0.6**
	baz=242							
TWT				*i* S		**Sn**	**10 21 05.4**	**-0.1**
	baz=242							
TDCB	**Techi**	**0.61**	**242**	⇓*e*P		**Pn**	**10 20 55.4**	**+0.4**
	baz=242							
TDCB				*e*S		**Sn**	**10 21 05.2**	**-0.5**
	baz=242							
YM01	**YM01**	**0.62**	**345**	⇓*i*P		**Pn**	**10 20 55.3**	**+0.3**
	baz=346							
YM01				*i* S		**Sn**	**10 21 05.8**	**0.0**
	baz=346							
TWS1	**Kuangyinshan**	**0.63**	**332**	⇓*i*P		**Pn**	**10 20 55.6**	**+0.6**
	baz=333							
TWS1				*i* S		**Sn**	**10 21 06.8**	**+0.9**
	baz=333							
YM10	**YM10**	**0.64**	**345**	⇓*i*P		**Pn**	**10 20 55.4**	**+0.3**
	baz=345							
YM10				S		**Sn**	**10 21 06.0**	**0.0**
	baz=345							
YM04	**YM04**	**0.64**	**343**	⇓*e*P		**Pn**	**10 20 55.4**	**+0.3**
	baz=343							
YM04				*e*S		**Sn**	**10 21 05.8**	**-0.2**
	baz=343							
YM11	**YM11**	**0.64**	**346**	⇓*e*P		**Pn**	**10 20 55.5**	**+0.3**
	baz=347							
YM11				*e*S		**Sn**	**10 21 06.3**	**+0.1**
	baz=347							
YM08	**YM08**	**0.66**	**347**	*e*P		**Pn**	**10 20 55.4**	**+0.1**
	baz=348							
YM03	**YM03**	**0.66**	**344**	⇓*e*P		**Pn**	**10 20 55.6**	**+0.2**
	baz=344							
YM03				*e*S		**Sn**	**10 21 06.6**	**+0.1**
	baz=344							
NCU	**National Centr**	**0.67**	**310**	⇓*i*P		**Pn**	**10 20 55.9**	**+0.5**
	baz=311							
NCU				*i* S		**Sn**	**10 21 07.2**	**+0.8**
	baz=311							
NCUH	**Zhongli**	**0.67**	**310**	⇓*e*P		**Pn**	**10 20 55.8**	**+0.5**
	baz=311							
NCUH				*e*S		**Sn**	**10 21 06.4**	**-0.1**
	baz=311							
ANP	**Anpu**	**0.68**	**342**	⇓*i*P		**Pn**	**10 20 55.7**	**+0.1**
	baz=344							
NTST	**Danshui**	**0.68**	**336**	*i* P		**Pn**	**10 20 56.0**	**+0.5**
	baz=337							
NTST				S		**Sn**	**10 21 07.1**	**+0.5**
	baz=337							
NSTT	**Nanjuang**	**0.69**	**278**	⇓*i*P		**Pn**	**10 20 55.9**	**+0.3**
	baz=278							
NSTT				*i* S		**Sn**	**10 21 06.9**	**0.0**
	baz=278							
CHGB	**Renai**	**0.71**	**228**	*e*P		**Pn**	**10 20 56.2**	**+0.2**
	baz=227							
CHGB				*e*S		**Sn**	**10 21 07.1**	**-0.6**
	baz=227							
SBCB	**Hsinchu**	**0.74**	**290**	⇓*e*P		**Pn**	**10 20 56.7**	**+0.6**
	baz=291							
SBCB				*e*S		**Sn**	**10 21 08.3**	**+0.5**
	baz=291							
TWY	**Chenhua**	**0.74**	**350**	⇓*i*P		**Pn**	**10 20 56.9**	**+0.7**
	baz=351							
TWY				*e*S		**Sn**	**10 21 08.9**	**+1.0**
	baz=351							
HSN	**Hsinchu**	**0.75**	**290**	⇓*i*P		**Pn**	**10 20 56.6**	**+0.3**
	baz=294							
HSN				*i* S		**Sn**	**10 21 08.2**	**+0.1**
	baz=294							
WHP	**Taichung City**	**0.78**	**250**	*i* P		**Pn**	**10 20 57.5**	**+0.8**
	baz=250							
ESL	**Shilin**	**0.78**	**202**	⇓*e*P		**Pn**	**10 20 55.1**	**-1.5**
	baz=200							
ESL				*e*S		**Sn**	**10 21 06.2**	**-2.4**
	baz=200							
OWD	**Renai**	**0.78**	**222**	⇓*i*P		**Pn**	**10 20 56.6**	**-0.1**
	baz=221							
OWD				*i* S		**Sn**	**10 21 07.4**	**-1.6**
	baz=221							
NHW	**Xinwu Township**	**0.79**	**306**	*i* P		**Pn**	**10 20 57.3**	**+0.6**
	baz=307							
NHW				*e*S		**Sn**	**10 21 09.6**	**+0.8**
	baz=307							
NMLH	**Miaoli**	**0.87**	**270**	⇓*i*P		**Pn**	**10 20 58.3**	**+0.7**
	baz=270							
NMLH				S		**Sn**	**10 21 11.3**	**+0.8**
	baz=270							
DPDB	**Guoxing**	**0.90**	**236**	⇓*i*P		**Pn**	**10 20 58.8**	**+0.7**
	baz=236							
DPDB				S		**Sn**	**10 21 13.0**	**+1.8**
	baz=236							
NSY	**Sanyi**	**0.91**	**262**	⇓*i*P		**Pn**	**10 20 58.7**	**+0.6**
	baz=262							
NSY				*i* S		**Sn**	**10 21 12.3**	**+1.0**
	baz=262							
TWQ1	**Liyutan**	**0.91**	**258**	⇓*i*P		**Pn**	**10 20 58.5**	**+0.4**
	baz=258							
TWQ1				S		**Sn**	**10 21 11.8**	**+0.5**
	baz=258							
PTSB	**Yuanli**	**0.95**	**265**	⇓*i*P		**Pn**	**10 20 59.2**	**+0.6**
	baz=265							
PTSB				S		**Sn**	**10 21 12.8**	**+0.5**
	baz=265							
VWDT	**VWDT**	**0.96**	**215**	⇓*e*P		**Pn**	**10 20 58.9**	**+0.2**
	baz=215							
VWDT				*e*S		**Sn**	**10 21 12.1**	**-0.2**
	baz=215							
SMLT	**Sun Moon Lake**	**1.01**	**230**	⇓*i*P		**Pn**	**10 21 00.3**	**+0.8**
	baz=229							
SMLT				*e*S		**Sn**	**10 21 15.8**	**+2.2**
	baz=229							
WDJ	**Dajia District**	**1.03**	**259**	⇓*i*P		**Pn**	**10 21 00.1**	**+0.6**
	baz=259							
WDJ				S		**Sn**	**10 21 14.7**	**+0.9**
	baz=259							
TYC	**Yuchr**	**1.03**	**232**	⇓*i*P		**Pn**	**10 21 00.2**	**+0.7**
	baz=231							
TYC				*i* S		**Sn**	**10 21 14.8**	**+1.0**
	baz=231							
SSLB	**Suanglung**	**1.04**	**224**	*e*P		**Pn**	**10 21 00.0**	**+0.3**
	baz=224							
SSLB				*e*S		**Sn**	**10 21 15.4**	**+1.2**
	baz=224							
TCU	**Taichung**	**1.05**	**248**	P		**Pn**	**10 21 00.3**	**+0.6**
	baz=248							
HGSD	**Ruisui**	**1.08**	**196**	*e*P		**Pn**	**10 20 59.3**	**-1.0**
	baz=195							
JYNG	**Yonagunijimaku**	**1.09**	**94**	P		**Pn**	**10 21 00.2**	**-0.1**
JYNG				S		**Sn**	**10 21 14.2**	**-1.1**
PCYT	**Pengchaiyu**	**1.12**	**15**	*e*P		**Pn**	**10 20 59.9**	**-0.8**
	baz=15							
YOJ	**Yonaguni jima**	**1.15**	**94**	*e*P		**Pn**	**10 21 01.0**	**-0.1**
	baz=92							
YOJ				*e*S		**Sn**	**10 21 15.4**	**-1.2**
	baz=92							
YOJ	**Yonaguni jima**	**1.15**	**94**	P		**Pn**	**10 21 00.9**	**-0.1**
YOJ				S		**Sn**	**10 21 15.8**	**-0.8**
WHYT	**Xinyi Township**	**1.17**	**224**	*i* P		**Pn**	**10 21 02.8**	**+1.4**
	baz=224							
WHYT				S		**Sn**	**10 21 18.8**	**+1.7**
	baz=224							
WJS	**Zhushan**	**1.17**	**233**	P		**Pn**	**10 21 01.9**	**+0.6**
	baz=232							
WJS				*i* S		**Sn**	**10 21 18.2**	**+1.1**
	baz=232							
WNT	**Mingjian**	**1.17**	**236**	P		**Pn**	**10 21 02.0**	**+0.7**
	baz=235							
WNT				S		**Sn**	**10 21 18.1**	**+1.1**
	baz=235							
WCHH	**Zhanghua**	**1.18**	**247**	P		**Pn**	**10 21 01.7**	**+0.3**
	baz=247							
WCHH				S		**Sn**	**10 21 17.7**	**+0.6**
	baz=247							
YULB	**Yu-li**	**1.22**	**200**	*e*P		**Pn**	**10 21 00.1**	**-1.8**
	baz=199							
YULB				*e*S		**Sn**	**10 21 16.3**	**-1.7**
	baz=199							
TWF1	**Yuli**	**1.25**	**199**	*e*P		**Pn**	**10 21 00.7**	**-1.7**
	baz=198							
ALS	**Alishan**	**1.34**	**220**	*e*P		**Pn**	**10 21 04.8**	**+1.0**
	baz=219							
ALS				*e*S		**Sn**	**10 21 23.7**	**+2.4**
	baz=219							
CHN5	**Tsauling**	**1.36**	**226**	*e*P		**Pn**	**10 21 04.3**	**+0.6**
	baz=226							
CHN5				*e*S		**Sn**	**10 21 22.5**	**+1.2**
	baz=226							
WGK	**Gukeng**	**1.38**	**232**	P		**Pn**	**10 21 04.9**	**+1.0**
	baz=231							
WGK				S		**Sn**	**10 21 23.1**	**+1.4**
	baz=231							
WDLH	**Douliu**	**1.39**	**233**	*e*P		**Pn**	**10 21 04.7**	**+0.6**
	baz=232							
WDLH				*e*S		**Sn**	**10 21 22.6**	**+0.6**
	baz=232							
FULB	**Fuli**	**1.40**	**197**	⇓*i*P		**Pn**	**10 21 03.7**	**-0.5**
	baz=196							
FULB				*i* S		**Sn**	**10 21 22.3**	**+0.1**
	baz=196							
RLNB	**Erlin**	**1.42**	**243**	⇓*e*P		**Pn**	**10 21 04.8**	**+0.3**
	baz=243							
RLNB				*e*S		**Sn**	**10 21 22.7**	**0.0**
	baz=243							
CHKT	**Chengkung**	**1.48**	**194**	*e*S		**Sn**	**10 21 24.0**	**+0.1**
	baz=193							
WTCT	**Ta-ch'eng**	**1.50**	**244**	*e*P		**Pn**	**10 21 05.7**	**+0.2**
	baz=243							
WTCT				S		**Sn**	**10 21 24.7**	**+0.3**
	baz=243							
ELDTW	**Lidau**	**1.50**	**207**	*e*P		**Pn**	**10 21 04.7**	**-0.9**
	baz=205							
ELDTW				*e*S		**Sn**	**10 21 25.7**	**+0.9**
	baz=205							
CHN2	**Minshiung**	**1.54**	**229**	*i* S		**Sn**	**10 21 27.2**	**+1.8**
	baz=229							
CHY	**Chiayi**	**1.59**	**230**	⇓*i*P		**Pn**	**10 21 07.3**	**+0.6**
	baz=229							
CHY				S		**Sn**	**10 21 27.1**	**+0.4**
	baz=229							
TPUB	**Ta-pu**	**1.60**	**220**	*e*P		**Pn**	**10 21 07.5**	**+0.6**
	baz=219							
TPUB				*e*S		**Sn**	**10 21 28.0**	**+1.0**
	baz=219							
STYT	**Tauyuan**	**1.64**	**214**	⇓P		**Pn**	**10 21 08.5**	**+1.0**
	baz=213							
STYT				S		**Sn**	**10 21 30.0**	**+2.0**
	baz=213							
WTP	**Ta-pu**	**1.65**	**219**	*i* P		**Pn**	**10 21 08.3**	**+0.7**
	baz=218							
WTP				*e*S		**Sn**	**10 21 30.7**	**+2.5**
	baz=218							
WSF	**Szhu**	**1.66**	**238**	*i* S		**Sn**	**10 21 28.6**	**+0.4**
	baz=237							
TWK	**Hsinying**	**1.71**	**223**	*i* P		**Pn**	**10 21 09.0**	**+0.6**
	baz=221							
TWK				*e*S		**Sn**	**10 21 32.4**	**+2.8**
	baz=221							
SNST	**Tainan City**	**1.74**	**221**	*e*S		**Sn**	**10 21 31.5**	**+1.3**
	baz=219							
CHN1	**Nanshi**	**1.75**	**220**	*e*P		**Pn**	**10 21 09.7**	**+0.8**
	baz=219							
CHN1				*e*S		**Sn**	**10 21 31.7**	**+1.2**
	baz=219							
SGST	**Jiashian**	**1.80**	**217**	*i* P		**Pn**	**10 21 09.5**	**-0.1**
	baz=216							
SGST				*i* S		**Sn**	**10 21 31.7**	**0.0**
	baz=216							
IRIF	**Iriomote-Funau**	**1.82**	**96**	P		**Pn**	**10 21 09.5**	**-0.2**
IRIF				S		**Sn**	**10 21 30.8**	**-1.2**
TWG	**Pinlang**	**1.82**	**200**	*e*P		**Pn**	**10 21 09.9**	**+0.1**
	baz=199							
TWGBT	**Beinan**	**1.82**	**200**	*e*P		**Pn**	**10 21 09.9**	**+0.1**
	baz=199							
TWH	**Lutao**	**1.84**	**188**	*e*P		**Pn**	**10 21 09.6**	**-0.4**
	baz=187							
CHN8	**Yiju**	**1.84**	**230**	*e*S		**Sn**	**10 21 33.0**	**+0.5**
	baz=229							
SLGT	**Liugui**	**1.

JISG	**Ishigakijimahi**	**2.33**	**88**	P		**Pn**	**10 21 16.7**	**+0.1**
JISG				S		**Sn**	**10 21 43.1**	**-1.3**
SCZT	**Fangliau**	**2.39**	**206**	*i* P		**Pn**	**10 21 18.7**	**+1.2**
	baz=205							
SCZT				*e*S		**Sn**	**10 21 48.5**	**+2.6**
	baz=205							
PTMZ	**Houxiangcun**	**2.44**	**282**	⇓ *e*P		**Pn**	**10 21 17.9**	**-0.1**
	baz=282							
PTMZ				*e*S		**Sn**	**10 21 44.8**	**-2.1**
	baz=282							
VCHM	**Qimei**	**2.50**	**238**	*e*P		**Pn**	**10 21 18.4**	**-0.5**
	baz=238							
VCHM				*e*S		**Sn**	**10 21 46.7**	**-1.7**
	baz=238							
LYJJ	**Jianjiangzhen**	**2.69**	**319**	*e*P		**Pn**	**10 21 21.4**	**0.0**
	baz=318							
LYJJ				*e*S		**Sn**	**10 21 52.5**	**-0.4**
	baz=318							
JTJ	**Tarama**	**2.69**	**87**	P		**Pn**	**10 21 22.2**	**+0.8**
JTJ				*e*S		**Sn**	**10 21 53.9**	**+0.9**
XPSS	**Dashiqiu**	**2.76**	**330**	*e*P		**Pn**	**10 21 22.5**	**+0.1**
	baz=329							
QZH	**Quanzhou**	**2.90**	**279**	⇓ *i* Pn		**Pn**	**10 21 24.0**	**-0.2**
QZH				Sn		**Sn**	**10 21 55.3**	**-2.7**
QZH				smax		smax		
	comp=N,150nm,0.5s							
QZH				smax		smax		
	comp=E,63nm,0.2s							
MHZQ	**Yeshan**	**2.91**	**303**	*e*P		**Pn**	**10 21 24.2**	**-0.2**
	baz=302							
MHZQ				*e*S		**Sn**	**10 21 56.8**	**-1.5**
	baz=302							
KNM	**Kinmen**	**3.02**	**268**	*e*P		**Pn**	**10 21 27.3**	**+1.4**
	baz=267							
KNMB	**Chin-men Tao**	**3.06**	**269**	*e*P		**Pn**	**10 21 25.9**	**-0.5**
	baz=268							
JIRB	**Irabujima**	**3.13**	**84**	P		**Pn**	**10 21 28.1**	**+0.7**
JIRB				*e*S		**Sn**	**10 22 03.6**	**-0.1**
JIKM	**Ikemajima**	**3.21**	**82**	P		**Pn**	**10 21 29.8**	**+1.4**
JIKM				*e*S		**Sn**	**10 22 06.1**	**+0.6**
JMJ	**Miyako jima 2**	**3.24**	**84**	*e*P		**Pn**	**10 21 30.5**	**+1.6**
	baz=84							
JMJ				*e*S		**Sn**	**10 22 06.2**	**-0.1**
	baz=84							
JMJ2	**Miyako jima3**	**3.26**	**86**	P		**Pn**	**10 21 29.9**	**+0.7**
JMJ2				*e*S		**Sn**	**10 22 05.9**	**-1.0**
JOGS	**Gusukube**	**3.34**	**85**	P		**Pn**	**10 21 30.8**	**+0.6**
JOGS				S		**Sn**	**10 22 08.7**	**0.0**
AXDP	**Jialang**	**3.45**	**277**	*e*P		**Pn**	**10 21 32.1**	**+0.3**
	baz=276							
AXDP				*e*S		**Sn**	**10 22 09.1**	**-2.5**
	baz=276							
ZPLA	**Ao Xicun**	**3.70**	**261**	*e*P		**Pn**	**10 21 34.9**	**-0.2**
	baz=260							
ZPLA				*e*S		**Sn**	**10 22 14.8**	**-2.8**
	baz=260							

TRN ***18*** *10:46:31.2, 17.19N×60.20W, h42km, MD3.9*
ISC 18 10:46:33.3±1.3, 17.13N±0.05×60.23W±0.08, 42km, n31, σ1§41/47, mb3.6/5, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABD	**La Joyeuse, An**	**1.37**	**242**	*e*P	**Pn**	**10 46 56.2**	**-0.9**
ABD				*e*S	**Sb**	**10 47 15.0**	**-0.3**
MAGL	**Barre de l'ile**	**1.55**	**221**	*e*P	**Pn**	**10 46 58.4**	**-1.2**
MAGL				*e*S	**Sn**	**10 47 17.2**	**-1.9**
ANWB	**Willy Bob**	**1.57**	**290**	*e*P	**Pn**	**10 46 57.9**	**-2.0**
ANWB				*e*S	**Sn**	**10 47 16.4**	**-3.3**
CBE	**Ff, Capester**	**1.69**	**231**	*e*P	**Pn**	**10 47 00.8**	**-0.7**
CBE				*e*S	**Sn**	**10 47 23.3**	**+0.7**
TDBA	**Terre de Bas,**	**1.85**	**227**	*e*P	**Pn**	**10 47 03.9**	**+0.1**
TDBA				*e*S	**Sb**	**10 47 27.7**	**-1.6**
MLYT	**Lee's Yard**	**1.92**	**258**	*e*P	**Pn**	**10 47 04.4**	**-0.3**
MLYT				*e*S	**Sn**	**10 47 27.3**	**-0.9**
MDN	**Morne-Daniel**	**2.12**	**212**	*e*P	**Pn**	**10 47 06.2**	**-1.3**
MDN				*e*S	**Sn**	**10 47 32.7**	**-0.5**
SKI	**Saint Kitts**	**2.40**	**275**	*e*P	**Pn**	**10 47 10.4**	**-1.0**
SKI				*e*S	**Sn**	**10 47 39.3**	**-0.9**
BAMF	**Morne Balai**	**2.47**	**201**	*e*P	**Pn**	**10 47 11.4**	**-0.9**
CXM	**Morne La Croix**	**2.48**	**201**	*e*P	**Pn**	**10 47 12.0**	**-0.5**
PCM	**Pelee Case Pet**	**2.49**	**202**	*e*P	**Pn**	**10 47 11.8**	**-0.8**
GBMF	**Grand Be**	**2.49**	**201**	*e*P	**Pn**	**10 47 12.0**	**-0.6**
PML	**Morne Lenard**	**2.51**	**201**	*e*P	**Pn**	**10 47 12.1**	**-0.7**
FDF	**Fort de France**	**2.54**	**200**	*e*P	**Pn**	**10 47 12.7**	**-0.7**
FDF				*e*S	**Sn**	**10 47 42.1**	**-1.6**
LPMF	**Morne Lapointe**	**2.64**	**196**	*e*P	**Pn**	**10 47 13.7**	**-0.9**
ZAM	**Aeronautique**	**2.66**	**197**	*e*P	**Pn**	**10 47 14.2**	**-0.7**
BIM	**Bigot**	**2.72**	**197**	*e*P	**Pn**	**10 47 16.1**	**+0.3**
BIM				*e*S	**Sn**	**10 47 47.0**	**-1.1**
MPOM	**Morne Pois Mar**	**2.74**	**193**	*e*P	**Pn**	**10 47 15.5**	**-0.5**
MPOM				*e*S	**Sn**	**10 47 46.6**	**-1.8**
SABA	**Saba**	**2.92**	**280**	*e*P	**Pb**	**10 47 28.5**	**+3.9**
SABA				*e*S	**Sn**	**10 47 53.3**	**+0.5**
SLBI	**Saint Lucia, B**	**3.17**	**193**	*e*P	**Pn**	**10 47 21.8**	**-0.2**
SLBI				*e*S	**Sn**	**10 47 57.1**	**-2.0**
SLAC	**Saint Lucia, A**	**3.28**	**191**	*e*P	**Pn**	**10 47 21.9**	**-1.6**
SLAC				*e*S	**Sn**	**10 48 00.1**	**-1.8**
MCLT	**Moule a Chique**	**3.47**	**191**	*e*P	**Pn**	**10 47 27.4**	**+1.3**
MCLT				*e*S	**Sn**	**10 48 04.3**	**-2.3**
SSV	**Crater Summit**	**3.90**	**194**	*e*P	**Pn**	**10 47 34.4**	**+2.4**
SSV				*e*S	**Sn**	**10 48 17.9**	**+0.8**
SVV	**Soufriere Volc**	**3.91**	**194**	*e*P	**Pn**	**10 47 33.7**	**+1.6**
SVV				*e*S	**Sn**	**10 48 16.7**	**-0.7**
SVCV	**St. Vincent, C**	**3.94**	**193**	*e*P	**Pn**	**10 47 32.5**	**-0.1**
SVCV				*e*S	**Sn**	**10 48 16.6**	**-1.5**
SVB	**Belmont**	**3.96**	**195**	*e*P	**Pn**	**10 47 33.1**	**+0.3**
SVB				*e*S	**Sn**	**10 48 17.4**	**-1.3**
TXAR	**Lajitas Array**	**41.50**	**295**	P	P	10 54 32.5	+13
	0.3nm,0.7s,baz=113,slow=9.1,SNR=1.6						
PDAR	**Pinedale Array**	**48.93**	**312**	P	**P**	**10 55 19.0**	**+0.8**
	0.3nm,0.7s,baz=108,slow=12,SNR=2.1						
YKA	**Yellowknife Ar**	**58.81**	**334**	P	**P**	**10 56 28.5**	**-1.2**
	0.4nm,0.6s,baz=107,slow=7.7,SNR=12						
INK	**Inuvik**	**68.04**	**337**	P	P	10 57 40.5	+10
	1.0nm,0.9s,baz=88,slow=5.3,SNR=4.6						
ILAR	**Eielson Array**	**73.23**	**333**	P	P	10 58 15.3	+13
	0.6nm,0.9s,baz=78,slow=5.7,SNR=5.7						

SJA 18 10:50:08.8±0.8, 27.84S×67.21W, h5km±15km, ML3.6, MW3.6, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCA	**Vinchina**	**1.25**	**224**	*i* P	Pn	10 50 34.7	+1.6
VCA				*e*S	Sn	10 50 51.4	+1.0
VCA				IAML		10 50 57.1	
	comp=Z,2μm,0.3s						
CYA	**Choya**	**1.38**	**116**	*i* P	Pg	10 50 37.1	+1.9
CYA				*e*S	Sn	10 50 55.1	+1.7
CYA				IAML		10 50 56.8	
	comp=Z,1μm,0.3s						
AGUA	**GUANDACOL**	**1.99**	**214**	*i* P	Pg	10 50 46.9	-0.1
AGUA				*e*S	Sg	10 51 12.5	-0.2
AGUA				IAML		10 51 17.5	
	comp=Z,269nm,0.6s						
ACDV	**Cuesta del Vie**	**2.86**	**215**	*i* P	Pb	10 50 58.7	-1.7
ACDV				*e*S	Sb	10 51 36.0	+0.2
ACDV				IAML		10 51 42.6	
	comp=Z,157nm,0.6s						
ACCO	**Cerro Coronel**	**3.18**	**210**	*i* P	Pb	10 51 03.1	-2.9
ACCO				IAML		10 51 51.1	
	comp=Z,143nm,0.6s						
RTLL	**Cerro Villicun**	**3.65**	**197**	*i* P	Pn	10 51 08.9	+3.0
RTLL				IAML		10 52 01.7	
	comp=Z,98nm,0.5s						
TCA	**Tanti**	**4.16**	**147**	*i* P	Pn	10 51 13.8	+0.7
TCA				IAML		10 52 26.4	
	comp=Z,132nm,0.5s						
RTLS	**Leoncito**	**4.34**	**204**	*i* P	Pn	10 51 18.9	+3.2
RTLS				IAML		10 52 26.7	
	comp=Z,19nm,0.6s						
MRA	**San Martin**	**4.74**	**165**	*i* P	Pn	10 51 21.8	+0.8
MRA				IAML		10 52 47.1	
	comp=Z,45nm,0.4s						
ASAL	**Salagasta**	**4.94**	**196**	*i* P	Pn	10 51 26.2	+2.5
ASAL				IAML		10 53 04.8	
	comp=Z,28nm,1.0s						
ARCO	**CERRO ARCO**	**5.20**	**196**	*i* P	Pn	10 51 30.2	+2.8
ARCO				IAML		10 53 04.7	
	comp=Z,40nm,1.0s						
AAGR	**Agrelo**	**5.41**	**195**	*i* P	Pn	10 51 32.7	+2.5
AAGR				IAML		10 53 20.9	
	comp=Z,28nm,0.6s						

SOME ***18*** *10:59:20.0±0.0, 3.09N×93.83E, h10km, mb5.1/6, Ms5.2/2*
NEIC ***18*** *10:59:21.5±2.6, 3.15N±0.05×93.86E±0.05, h5km±3km, mb5.1/95, Ms_20 5.6/679, Mwb5.5/50, Mwc5.6(GCMT), Error ellipse: s-maj=11.1km s-min=1.4km az=225.0*
NEIC ***18*** *10:59:21.5, 3.15N×93.86E, h7km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr2.40; Mθθ-0.67; Mϕϕ-1.74; Mrθ0.61; Mθϕ0.72; Mϕr-0.27; Fault plane solution: M₀2.36000×10¹⁷ NP1:ϕs341.02000°, δ39.10000°, λ103.02000°. NP2:ϕs144.43000°, δ52.09000°, λ79.63000°. Principal axes: T 2.5211, Plg79.0000°, Azm10.0000°; N -0.3628, Plg8.0000°, Azm151.0000°; P -2.1583, Plg7.0000°, Azm242.0000°;*
IDC ***18*** *10:59:21.2±0.4, 3.16N×93.85E, h0km, mb4.5/38, mb1 4.6/41, mb1mx4.5/46, mbtmp4.5/41, ML4.5/3, MS5.2/24, Ms1 5.2/24, ms1mx5.1/29 Error ellipse: s-maj=13.0km s-min=11.1km az=66.0*
BGR ***18*** *10:59:22.1±0.0, 4.08N×94.87E, h33km, mb5.0*
DJA ***18*** *10:59:23.3±0.2, 3.N±2°×9°4E±°, h10km, MS.2/61, mb5.1/61, mB5.6/37, MLv5.4/14, Mw(mB)5.2/37, Mwp5.5/29*
NEIC ***18*** *10:59:24.2.94N×93.80E, h12km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr2.59; Mθθ-1.25; Mϕϕ-1.34; Mrθ0.11; Mθϕ1.28; Mϕr0.13; Fault plane solution: M₀2.59000×10¹⁷ NP1:ϕs320.00000°, δ45.00000°, λ95.00000°. NP2:ϕs132.00000°, δ45.00000°, λ85.00000°. Principal axes: T 2.6008, Plg86.0000°, Azm313.0000°; N -0.0249, Plg4.0000°, Azm136.0000°; P -2.5758, Plg0.0000°, Azm46.0000°;*
GCMT ***18*** *10:59:24.5±0.1, 2.99N±0.01×93.85E±0.01, h12km, MW5.5/155, Moment Tensor Solution. s113,c179; s155,c296; Duration: 1§4 Moment tensor: Scale 10¹⁷ Nm; Mrr2.37±.02; Mθθ-1.11±.02; Mϕϕ-1.26±.03; Mrθ-0.47±.07; Mθϕ1.24±.02; Mϕr0.38±.07; Best double couple: M₀2.47300×10¹⁷ NP1:ϕs139.00000°, δ38.00000°, λ93.00000°. NP2:ϕs315.00000°, δ52.00000°, λ88.00000°. Principal axes: T 2.4460, Plg83.0000°, Azm211.0000°; N 0.0540, Plg2.0000°, Azm316.0000°; P -2.5010, Plg7.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MOS ***18*** *10:59:24.7±1.1, 3.19N×93.89E, h39km, mb5.2/49, MS5.2/28 Error ellipse: s-maj=7.8km s-min=4.5km az=108.8*
BJI ***18*** *10:59:25.0±0.0, 3.30N×94.00E, h12km, mB5.5/60, mb4.9/58, Ms5.9/74, Ms7 5.8/66*
KLM ***18*** *10:59:34.0, 3.11N×94.70E, h10km, mb4.9*
ISC 18 10:59:23.8±0.3, 3.17N±0.04×93.85E±0.04, h18km, n795, σ2§06/498, mb5.0/155, MS5.6/416, 45C-13D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**2.59**	**107**	P	**Pn**	**11 00 02.0**	**-2.8**
MLSI	**Meulaboh, Aceh**	**2.78**	**67**	P	**Pn**	**11 00 06.3**	**-1.1**
TPTI		**3.33**	**88**	P	**Pn**	**11 00 13.8**	**-1.2**
LHMI	**Lhok Sumawe**	**3.71**	**56**	P	**Pn**	**11 00 22.9**	**+2.7**
LHMI	**Lhok Sumawe**	**3.71**	**56**		**Pn**	**11 00 21.8**	**+1.5**
KCSI	**Kotacane, Aceh**	**3.94**	**85**	P	**Pn**	**11 00 23.7**	**+0.3**
GSI	**Gunungsitoli**	**4.16**	**116**	P	**Pn**	**11 00 24.2**	**-2.3**
GSI	**Gunungsitoli**	**4.16**	**116**		**Pn**	**11 00 23.8**	**-2.7**
PSI	**Prapat**	**5.08**	**94**	Pn	**Pn**	**11 00 37.3**	**-2.0**
	6.2nm,0.3s,baz=189,slow=0.5,SNR=23						
PSI				Sn	**Sn**	**11 01 34.3**	**-3.3**
	3.5nm,0.3s,baz=359,slow=7.4,SNR=1.3						
PSI	**Prapat**	**5.08**	**94**	P	**Pn**	**11 00 38.0**	**-1.3**
PSI						11 01 34.3	
RPSI	**Rantau Prapat**	**5.09**	**95**		**Pn**	**11 00 38.0**	**-1.3**
RPSI	**Rantau Prapat**	**5.09**	**95**		**Pn**	**11 00 37.3**	**-2.0**
RPSI					**Sn**	**11 01 34.3**	**-3.4**
PBSI	**Pulau Batu**	**5.47**	**126**	P	**Pn**	**11 00 42.1**	**-2.3**
	4.9nm17μm15μm1μm,0.6s						
MNSI	**Mandailing Nat**	**6.20**	**112**	P	**Pn**	**11 00 52.1**	**-2.3**
	1.8nm6μm447nm,0.8s						
SISI	**Saibi**	**6.89**	**130**	P	**Pn**	**11 01 01.2**	**-2.7**
	1.0nm7μm3μm155nm,0.8s						
KULM	**Kulim**	**7.11**	**73**		**Pn**	**11 01 06.3**	**-0.6**
KULM	**Kulim**	**7.11**	**73**	P	**Pn**	**11 01 06.0**	**-0.9**
IPM	**Ipoh**	**7.28**	**79**		**Pn**	**11 01 08.0**	**-1.4**
IPM	**Ipoh**	**7.28**	**79**	P	**Pn**	**11 01 09.0**	**-0.4**
BKNI	**Bangkinang**	**7.72**	**111**	P	Pn	11 01 08.1	-7.4
	1.4nm8μm331nm,0.9s						
BKNI	**Bangkinang**	**7.72**	**111**		**Pn**	**11 01 13.0**	**-2.5**
PDSI	**Padang**	**7.76**	**121**	P	**Pn**	**11 01 14.8**	**-1.1**
	0.6nm3μm86nm,0.8s						
PPSI	**Pulau Pagai**	**8.53**	**134**	P	**Pn**	**11 01 24.7**	**-1.7**
	3μm211nm,0.8s						
SDSI	**Sungai Dareh**	**8.61**	**118**	P	**Pn**	**11 01 23.3**	**-4.2**
	13μm50nm,0.7s						
KRJI	**Kerinci**	**9.23**	**124**	P	**Pn**	**11 01 36.2**	**-0.1**
	6μm28μm845nm,1.0s						
MYKOM	**Kota Tinggi**	**10.09**	**98**		**Pn**	**11 01 49.5**	**+1.6**
MNAI	**Manna**	**11.78**	**129**	P	**Pn**	**11 02 09.0**	**-2.1**
	4μm316nm,0.6s						
MNAI	**Manna**	**11.78**	**129**		**Pn**	**11 02 10.8**	**-0.4**
LHSI	**Lahat**	**11.91**	**126**	P	**Pn**	**11 02 11.4**	**-1.4**
	2μm98nm,1.0s						
LWLI	**Liwa**	**13.05**	**129**	P	**Pn**	**11 02 27.5**	**-1.0**
	176nm,0.8s						
KASI	**Kota Agung**	**13.70**	**129**	P	**Pn**	**11 02 34.3**	**-3.0**
	1μm95nm,1.1s						
PBKT	**Sadao Pong**	**15.05**	**27**		**Pn**	**11 02 54.9**	**-0.7**
PBKT				IAmb	IAmb	11 03 18.9	
	comp=Z,42nm,0.7s						
CM31	**Chiang Mai Arr**	**15.99**	**18**		**Pn**	**11 03 07.4**	**-0.6**
CMAR	**Chiang Mai Arr**	**15.99**	**18**	Pn	**Pn**	**11 03 08.4**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=214,slow=12,SNR=37						
CMAR				LR	LR	11 09 04.5	
	comp=Z,7μm,21.2s,baz=245,slow=36						
CMAR	**Chiang Mai Arr**	**15.99**	**18**	*i* P	**P**	**11 03 11.3**	**-0.1**
CMAR				pmax	pmax		
	comp=Z,24nm,0.8s						
DBJI	**Dramaga**	**16.10**	**127**	P	**P**	**11 03 11.1**	**-1.6**
	comp=Z,75nm,1.3s						
CHTO	**Chiang Mai**	**16.33**	**17**	P	**Pn**	**11 03 10.3**	**-2.0**
CHTO				pmax	pmax		
	comp=Z,48nm,0.8s						
CHTO	**Chiang Mai**	**16.33**	**17**		**Pn**	**11 03 10.3**	**-2.0**
KSM	**Kuching**	**16.54**	**95**		**Pn**	**11 03 13.9**	**-1.1**
KSM				IAmb	IAmb	11 03 22.1	
	comp=Z,128nm,0.9s						
DLV	**T Lat**	**16.92**	**58**	P	**Pn**	**11 03 20.4**	**+0.3**
DLV				IAmb	IAmb	11 03 27.0	
	comp=Z,133nm,1.2s						
LEM	**Lembang**	**16.96**	**126**	Pn	**P**	**11 03 21.9**	**-0.4**
	comp=Z,4.5nm,0.3s,baz=315,slow=23,SNR=2.4						
TRD	**Trivandrum**	**17.61**	**288**	*e*P	**Pn**	**11 03 28.7**	**+0.2**
SBUM	**Sibu**	**18.37**	**92**		**P**	**11 03 35.4**	**-2.4**
SBUM	**Sibu**	**18.37**	**92**	P	**Pn**	**11 03 40.0**	**+2.2**
SMRI	**Semarang**	**19.43**	**122**	P	**Pn**	**11 03 52.1**	**+1.5**
	comp=Z,208nm,1.0s						
SMRI	**Semarang**	**19.43**	**122**	P	**P**	**11 03 49.3**	**-0.1**
BRDH	**Bariadhala**	**19.51**	**354**	P	**Pn**	**11 03 51.7**	**+0.2**
	comp=Z,183nm,0.3s,baz=280,slow=0.0,SNR=17						
SLVN	**Son La**	**20.54**	**28**	P	**P**	**11 04 00.9**	**-0.6**
SLVN				IAMs_20	IAMs_20	11 12 42.4	
	comp=Z,20μm,19.0s						
HYB	**Hyderabad**	**20.63**	**314**	*i* P	Pn	11 04 04.0	-0.8
HYB				*e*S	Sn	11 08 00.0	+2.7
HYB	**Hyderabad**	**20.63**	**314**	*e*P	Pn	11 04 03.9	-1.0
HYB				IAmb	IAmb	11 04 10.2	
	comp=Z,22nm,0.9s						
HYB				IAMs_20	IAMs_20	11 21 18.2	
	comp=Z,10μm,11.1s						
AGT	**Agartala**	**20.75**	**353**	*e*P	**P**	**11 04 03.8**	**+0.2**
BOK	**Bokaro**	**21.90**	**340**	*e*P	**P**	**11 04 15.4**	**-0.7**
BOK				IAmb	IAmb	11 04 22.5	
	comp=Z,148nm,0.9s						
BOK				IAMs_20	IAMs_20	11 20 44.9	
	comp=Z,9μm,15.2s						
QIZ	**Qiongzhong**	**22.21**	**44**	P	**P**	**11 04 16.0**	**-3.5**
QIZ				S	**S**	**11 08 25.3**	**+1.8**
QIZ				pmax	pmax		
	comp=Z,16nm,2.9s						
QIZ				pmax	pmax		
	comp=Z,1μm,14.0s						
QIZ				LR	LR		
	comp=N,19μm,15.5s						
QIZ				LR	LR		
	comp=E,6μm,16.9s						
QIZ				LR	LR		
	comp=Z,14μm,13.3s						
QIZ	**Qiongzhong**	**22.21**	**44**	P	**P**	**11 04 24.2**	**+4.7**
QIZ				IAmb	IAmb	11 04 31.9	
	comp=Z,145nm,1.5s						
SHL	**Shillong**	**22.35**	**355**	*e*P	**P**	**11 04 19.9**	**-1.2**
SHL				IAmb	IAmb	11 04 28.1	
	comp=Z,45nm,0.6s						
SHL				IAMs_20	IAMs_20	11 22 58.2	
	comp=Z,7μm,18.2s						
SHL	**Shillong**	**22.35**	**355**	P	**P**	**11 04 19.5**	**-1.6**
SHL				pmax	pmax		
	comp=Z,83nm,0.8s						
SHL				MLR	MLR		
	comp=Z,6μm,21.0s						
SHL	**Shillong**	**22.35**	**355**	P	**P**	**11 04 19.5**	**-1.6**
SHL				IAmb	IAmb	11 04 36.2	
	comp=Z,83nm,0.8s						
KOHI	**KOHIMA**	**22.42**	**1**	IAMs_20	IAMs_20	11 21 25.3	
	comp=Z,11μm,13.1s						
KKM	**Kota Kinabalu**	**22.48**	**82**	P	**P**	**11 04 23.3**	**+0.8**
KKM				IAmb	IAmb	11 04 38.3	
	comp=Z,83nm,1.0s						
NGP	**Nagpur**	**22.95**	**322**	*e*P	**P**	**11 04 28.2**	**+0.9**
NGP				*ex*	x	11 04 32.6	
NGP				IAmb	IAmb	11 04 40.9	
	comp=Z,31nm,0.9s						
NGP				IAMs_20	IAMs_20	11 18 22.4	
	comp=Z,8μm,13.7s						
GUWA	**GUWAHATI**	**22.99**	**355**	*e*P	**P**	**11 04 26.4**	**-1.2**
GUWA				IAmb	IAmb	11 04 33.5	
	comp=Z,88nm,0.5s						
GOA	**Goa**	**23.21**	**303**	*e*P	**P**	**11 04 28.3**	**-1.7**
GOA				IAmb	IAmb	11 04 36.3	
	comp=Z,60nm,1.5s						
KMI	**Kunming**	**23.45**	**21**	P	**P**	**11 04 34.5**	**+1.9**
KMI				S	**S**	**11 08 36.3**	**-9.2**
KMI				sS	sS	11 08 57.3	+5.1
KMI				pmax	pmax		
	comp=Z,24nm,0.9s						
KMI				pmax	pmax		
	comp=Z,2μm,6.9s						
KMI				LR	LR		
	comp=Z,17μm,11.8s						
KMI				LR	LR		
	comp=Z,14μm,10.8s						
KMI				LR	LR		
	comp=Z,17μm,11.7s						
SMKI	**Samarinda**	**23.63**	**98**	P	**P**	**11 04 36.6**	**+2.4**
H08S2	**Diego Garcia H**	**23.86**	**243**	T	T	11 29 35.9	
	baz=63,slow=76,SNR=5686						
H08S3	**Diego Garcia H**	**23.86**	**243**	T	T	11 29 33.2	
	baz=63,slow=76,SNR=5682						
H08S1	**Diego Garcia H**	**23.88**	**243**	T	T	11 29 42.1	
	baz=63,slow=76,SNR=1442						
SRBI	**Singaraja**	**24.07**	**118**	P	**P**	**11 04 40.1**	**+1.7**
	comp=Z,3μmcomp=Z,2μmcomp=Z,57nm,1.0s						
ZIRO	**ZIRO**	**24.22**	**0**	*e*P	**P**	**11 04 37.6**	**-2.3**
ZIRO				IAmb	IAmb	11 04 45.4	
	comp=Z,76nm,0.7s						
ODAN	**Odare**	**24.36**	**346**	*e*P	**P**	**11 04 41.6**	**+0.4**
	comp=Z,123nm,1.2s						
BATP	**Bataraza**	**24.46**	**76**	*e*P	**P**	**11 04 40.5**	**-1.6**
GTK	**Tadong**	**24.53**	**349**	IAMs_20	IAMs_20	11 23 15.4	
	comp=Z,7μm,14.1s						
RAMN	**Ramite**	**24.64**	**344**	*e*P	**P**	**11 04 45.0**	**+1.2**
TAPN	**Taplejung**	**24.75**	**347**	*e*P	**P**	**11 04 46.4**	**+1.6**
POO	**Poona**	**24.82**	**309**	*e*P	**P**	**11 04 44.5**	**-0.8**
POO				IAmb	IAmb	11 04 57.5	
	comp=Z,10nm,0.8s						
JIRN	**Jiri**	**25.43**	**344**	*e*P	**P**	**11 04 51.7**	**+0.7**
	comp=Z,111nm,0.7s						
BHPL	**Bhopal**	**25.51**	**323**	*e*P	**P**	**11 04 52.2**	**+0.7**
BHPL				*ex*	x	11 09 20.3	
BHPL				IAMs_20	IAMs_20	11 20 19.1	
	comp=Z,11μm,13.1s						
PKI	**Pulchoki**	**25.57**	**342**	*e*P	**P**	**11 04 53.0**	**+0.7**
	comp=Z,98nm,1.2s						
PKIN	**Phulchoki**	**25.58**	**342**	*e*P	**P**	**11 04 53.9**	**+1.6**
	comp=Z,73nm,1.2s						
DMN	**Daman**	**25.70**	**342**	*e*P	**P**	**11 04 54.1**	**+0.8**
GUN	**Gumba**	**25.75**	**344**	*e*P	**P**	**11 04 54.5**	**+0.6**
MPSI	**Mapaga**	**26.19**	**96**	P	**P**	**11 04 57.8**	**+0.1**
	comp=Z,4μmcomp=Z,2μmcomp=Z,36nm,0.7s						
GKN	**Gorkha**	**26.21**	**341**	*e*P	**P**	**11 04 58.4**	**+0.5**
	comp=Z,68nm,0.8s						
GYA	**Guiyang**	**26.22**	**27**	⇓ *i* P	**P**	**11 04 59.4**	**+1.5**
GYA				S	**S**	**11 09 29.1**	**-0.4**
GYA				SS	**SnSn**	**11 10 31.4**	**+2.2**
GYA				pmax	pmax		
	comp=Z,2μm,12.0s						
GYA				LR	LR		
	comp=Z,15μm,15.0s						
GYA				LR	LR		
	comp=Z,10μm,12.8s						
GYA				LR	LR		
	comp=Z,20μm,11.7s						
KOLN	**Kolḍanda**	**26.35**	**339**	*e*P	**P**	**11 04 59.9**	**+0.7**
	comp=Z,34nm,0.7s						
LSA	**Lhasa**	**26.51**	**355**	P	**P**	**11 05 02.4**	**+1.5**
LSA				pmax	pmax		
	comp=Z,95nm,0.8s						
LSA				MLR	MLR		
	comp=Z,3μm,20.0s						
LSA	**Lhasa**	**26.51**	**355**	P	**P**	**11 05 02.4**	**+1.5**
ENPP	**El Nido**	**26.58**	**71**	*e*P	**P**	**11

DDMP Don Marcelino, 31.89 84 *e*P **P 11 05 48.8 +0.4**
SMLA Simla 31.95 332 *e*P **P 11 05 46.6 -2.1**
SMLA IAmb IAmb 11 05 57.6
comp=Z,15nm,0.6s
SMLA IAMs_20 IAMs_20 11 22 54.7
comp=Z,6µm,12.1s
QZH Quanzhou 32.20 45⇑ *i*P **P 11 05 51.4 +0.4**
QZH PP **PnPn 11 06 54.6 -2.6**
QZH pmax pmax
comp=Z,970nm,9.1s
QZH LR LR
comp=Z,7µm,14.2s
QZH LR LR
comp=Z,15µm,12.3s
QZH LR LR
comp=Z,16µm,11.4s
GIRL Giralia 32.48 143 P **P 11 05 54.2 +0.8**
baz=32
TPUB Ta-pu 32.74 50 IAMs_20 IAMs_20 11 20 10.6
comp=Z,12µm,20.0s
TWG Pinlang 32.82 51 P **P 11 06 00.7 +4.2**
SSLB Suanglung 33.26 50 P **P 11 06 04.2 +3.8**
YULB Yu-li 33.30 50 P **P 11 06 03.6 +2.9**
YULB IAmb IAmb 11 06 14.4
comp=Z,42nm,1.3s
YULB IAMs_20 IAMs_20 11 20 21.5
comp=Z,10µm,20.0s
WHN Wuhan 33.42 33 ⇓P **P 11 06 03.5 +1.9**
WHN S S 11 11 41.8 +20
WHN LR LR
comp=N,35µm,12.3s
WHN LR LR
comp=E,28µm,11.9s
WHN LR LR
comp=Z,56µm,12.7s
XAN Xi'an 33.78 23 P **P 11 06 02.8 -2.0**
XAN pP pwP 11 06 17.1 +3.6
XAN S **S 11 11 35.0 +7.2**
XAN pmax pmax
comp=Z,37nm,0.9s
XAN pmax pmax
comp=Z,850nm,7.5s
XAN LR LR
comp=Z,14µm,13.7s
XAN LR LR
comp=Z,9µm,14.7s
XAN LR LR
comp=Z,16µm,15.2s
XAN Xi'an 33.78 23 P **P 11 06 02.7 -2.0**
XAN pmax pmax
comp=Z,32nm,0.8s
XAN MLR MLR
comp=Z,10µm,20.0s
XAN Xi'an 33.78 23 P **P 11 06 02.7 -2.0**
XAN Xi'an 33.78 23 IAMs_20 IAMs_20 11 20 56.5
comp=Z,10µm,20.0s
LBMI Labuha 33.85 96 P **P 11 06 06.0 +0.4**
comp=Z,2µmcomp=Z,86nm,1.6s
LZH Lanzhou 34.03 15 ⇑P **P 11 06 06.3 -0.8**
LZH PP **PP 11 07 25.8 +1.5**
LZH S **S 11 11 32.0 +0.1**
LZH sS sS 11 11 44.4 +5.5
LZH pmax pmax
comp=Z,35nm,1.0s
LZH pmax pmax
comp=Z,700nm,5.0s
LZH LR LR
comp=Z,6µm,13.6s
LZH LR LR
comp=Z,10µm,13.0s
LZH LR LR
comp=Z,8µm,15.7s
TATO Taipei 34.33 48 IAMs_20 IAMs_20 11 21 47.8
comp=Z,12µm,18.0s
YOJ Yonaguni jima 35.20 50 IAMs_20 IAMs_20 11 21 10.8
comp=Z,13µm,19.0s
PSA00 Pilbara Seismi 35.39 135 P **P 11 06 16.7 -2.1**
PSA00 IAmb IAmb 11 06 21.2
comp=Z,21nm,1.1s
NIL Nilore 35.91 330 P **P 11 06 22.0 -1.2**
NIL pmax pmax
comp=Z,33nm,0.6s
NIL MLR MLR
comp=Z,2µm,20.0s
NIL Nilore 35.91 330 P **P 11 06 22.0 -1.2**
GTA Gaotai 36.48 8 *e*P **P 11 06 25.3 -2.8**
GTA pP pP 11 06 29.3 -3.7
GTA sP sP 11 06 32.5 -1.8
GTA pmax pmax
comp=Z,4.0nm,0.7s
GTA smax smax
comp=N,11nm,1.0s
GTA smax smax
comp=E,12nm,0.9s
NJ2 Nanjing 37.12 37 *e*P **P 11 06 34.1 +0.7**
NJ2 S **S 11 12 23.1 +4.1**
NJ2 pmax pmax
comp=E,16nm,0.5s
NJ2 pmax pmax
comp=E,1µm,9.1s
NJ2 LR LR
comp=E,18µm,11.4s
NJ2 LR LR
comp=E,23µm,11.4s
NJ2 LR LR
comp=E,29µm,10.4s
FITZ Fitzroy Crossi 37.79 125 P **P 11 06 39.3 0.0**
baz=38,SNR=6.9
FITZ Fitzroy Crossi 37.79 125 P **P 11 06 38.1 -1.3**
FITZ IAmb IAmb 11 06 42.4
comp=Z,47nm,1.8s
SSE Sheshan 37.90 40 P **P 11 06 40.1 0.0**
SSE pmax pmax
comp=Z,23nm,0.7s
SSE pmax pmax
comp=Z,440nm,7.5s
SSE LR LR
comp=Z,5µm,11.7s
SSE Sheshan 37.90 40 IAMs_20 IAMs_20 11 23 46.4
comp=Z,9µm,19.0s
MEEK Meekatharra 38.09 143 P **P 11 06 41.0 -0.8**
baz=38,SNR=13
TIY Taiyuan 38.37 24 *e*P **P 11 06 45.8 +1.7**
TIY PP **PnPn 11 08 16.0 +2.2**
TIY S **S 11 12 35.0 -3.1**
TIY pmax pmax
comp=Z,9.0nm,0.5s
TIY pmax pmax
comp=Z,250nm,6.1s
TIY LR LR
comp=Z,17µm,13.0s
TIY LR LR
comp=Z,13µm,13.0s
TIY LR LR
comp=Z,20µm,15.9s
FAKI Fak Fak 38.86 99 P **P 11 06 46.5 -1.9**
comp=Z,906nmcomp=Z,45nm,1.2s
FAKI Fak Fak 38.86 99 IAmb IAmb 11 06 50.5
comp=Z,36nm,0.9s
TIA Tai'an 39.28 30 P **P 11 06 51.3 -0.3**
TIA PP **PnPn 11 08 25.3 +0.7**
TIA pmax pmax
comp=Z,970nm,14.2s
TIA LR LR
comp=Z,9µm,18.1s
TIA LR LR
comp=Z,8µm,18.6s
TIA LR LR
comp=Z,15µm,18.1s
KNRA Kununurra 39.29 119 P **P 11 06 52.6 +0.6**
baz=39,SNR=5.9
KNRA Kununurra 39.29 119 P **P 11 06 51.5 -0.4**
KSH Kashi 39.66 338 P **P 11 06 54.8 -0.1**
KSH sP pwP 11 07 04.1 -0.4
KSH S **S 11 12 57.1 -0.4**
KSH SS **SS 11 15 42.0 -11**
KSH pmax pmax
comp=Z,43nm,1.4s
KSH pmax pmax
comp=Z,490nm,4.4s
KSH LR LR
comp=Z,440nm,6.1s
KSH LR LR
comp=Z,510nm,9.8s
BTO Baotou 40.03 19 *e*P **P 11 06 58.9 +1.0**
BLDU Ballidu 40.06 149 P **P 11 06 57.8 -0.4**
baz=40
HHC Hu-ho-hao-te 40.77 21 *e*P **P 11 07 04.6 +0.5**
HHC PP **PnPn 11 08 48.5 +6.1**
HHC S **S 11 13 17.3 +3.2**
HHC ScS **ScS 11 17 06.8 -2.1**
HHC pmax pmax
comp=Z,13nm,0.9s
HHC pmax pmax
comp=Z,200nm,6.8s
HHC LR LR
comp=Z,3µm,16.7s
HHC LR LR
comp=Z,11µm,15.2s
HHC LR LR
comp=Z,5µm,14.3s
WMQ Urumqi 40.85 353 P **P 11 07 05.8 +1.2**
WMQ pP pP 11 07 10.0 +0.7
WMQ sP pwP 11 07 12.6 -0.6
WMQ PP **PnPn 11 08 44.0 +0.8**
WMQ S **S 11 13 17.1 +2.0**
WMQ SS **SS 11 16 11.5 -5.2**
WMQ pmax pmax
comp=Z,23nm,0.9s
WMQ pmax pmax
comp=Z,600nm,7.3s
WMQ LR LR
comp=Z,2µm,17.9s
WMQ LR LR
comp=Z,2µm,19.1s
WMQ LR LR
comp=Z,2µm,25.1s
MUN Mundaring 40.91 150 P **P 11 07 05.8 +0.6**
baz=41,SNR=5.0
TARG Taragay, Kyrgy 41.00 342 IAmb IAmb 11 07 25.6
comp=Z,49nm,1.3s
KDJ Kajisay 41.56 341 IAmb IAmb 11 07 29.2
comp=Z,27nm,0.9s
GAR Garm 41.60 332 IAmb IAmb 11 07 31.1
comp=Z,58nm,1.1s
BJT Baijiatuau 41.88 26 IAmb IAmb 11 07 25.0
comp=Z,21nm,0.8s
BJT Baijiatuau 41.88 26 IAMs_20 IAMs_20 11 25 35.8
comp=Z,6µm,19.0s
CHGR Chuyangaron 41.89 331 IAmb IAmb 11 07 34.7
comp=Z,37nm,0.8s
BJI Beijing 41.90 26 P **P 11 07 14.0 +0.8**
BJI S **S 11 13 35.4 +4.7**
BJI pmax pmax
comp=Z,26nm,1.0s
BJI LR LR
comp=Z,6µm,15.7s
BJI LR LR
comp=Z,4µm,18.8s
UZB Uzynbulak 41.94 344 *e*P **P 11 07 14.8 +1.1**
comp=Z,6.7nm,0.7s
UZB Uzynbulak 41.94 344 *e*P **P 11 07 14.7 +1.1**
UZB pmax pmax
comp=Z,7.0nm,0.7s
KZA Kyzart 42.17 339 P **P 11 07 16.9 +1.0**
SNR=8.8
NWAO Narrogin (SRO) 42.18 150 P **P 11 07 15.2 -0.4**
comp=Z,7.9nm,0.6s,baz=322,slow=8.5,SNR=7.2
NWAO Narrogin (SRO) 42.18 150 IAmb IAmb 11 07 42.7
comp=Z,83nm,1.9s
BOOM Boomskoye usch 42.29 340 IAmb IAmb 11 07 39.1
comp=Z,28nm,0.8s
KPKS Kokpek 42.33 344 *e*P **P 11 07 16.0 -0.8**
comp=Z,124nm,4.3s
KPKS Kokpek 42.33 344 *e*P **P 11 07 15.9 -0.8**
KPKS pmax pmax
comp=Z,124nm,4.3s
H01W3 Cape Leeuwin H 42.38 155 T T 11 52 18.8
baz=331,slow=76,SNR=2841
H01W2 Cape Leeuwin H 42.39 155 T T 11 52 26.6
baz=331,slow=76,SNR=3972
H01W1 Cape Leeuwin H 42.40 155 T T 11 52 47.7
baz=331,slow=76,SNR=2602
TNSS Tian-Shan 42.45 342 *e*P **P 11 07 18.4 +0.2**
TNSS Tian-Shan 42.45 342 *e*P **P 11 07 18.4 +0.2**
MDOK Medeo 42.53 342 *e*P **P 11 07 19.2 +0.6**
MDOK *e*PP **PcP 11 09 05.5 -5.5**
MDOK *e*S **S 11 13 38.7 -1.6**
MDOK *e*LR LR 11 28 37.3
comp=Z,2µm,13.8s
MDOK Medeo 42.53 342 *e*P **P 11 07 19.2 +0.6**
MDOK *e* 11 09 05.4
MDOK *e*S **S 11 13 38.7 -1.6**
UCH Uchtor 42.56 339 P **P 11 07 19.8 +0.7**
SNR=20
AAA Alma-Ata 42.62 342 *e*P **P 11 07 18.9 -0.2**
AAA *e*S **S 11 13 40.6 -0.7**
AAA *e*LR LR 11 28 42.4
comp=Z,2µm,14.4s
AAA Alma-Ata 42.62 342 *e*P **P 11 07 21.5 +2.4**
AAA *e*S **S 11 13 48.0 +6.6**
AAA pmax pmax
comp=Z,200nm,7.8s
AAA smax smax
comp=N,500nm,7.8s
AML Almayashu 42.78 338 P **P 11 07 21.9 +1.1**
SNR=25
KBK Karagaybulak 42.78 339 P **P 11 07 22.1 +1.5**
SNR=16
TKM2 Tokmak 2 42.79 340 P **P 11 07 21.2 +0.4**
SNR=15
TKM2 Tokmak 2 42.79 340 P **P 11 07 20.5 -0.2**
AAK Ala-Archa 42.92 339*c**e*P **P 11 07 21.9 +0.2**
AAK pmax pmax
comp=Z,11nm,1.4s
AAK Ala-Archa 42.92 339 P **P 11 07 23.2 +1.4**
AAK IAmb IAmb 11 07 42.8
comp=Z,52nm,1.4s
EKS2 Erkin-Say 43.21 338 P **P 11 07 25.6 +1.6**
SNR=9.3
KUU Kurty 43.42 342 *e*P **P 11 07 25.5 0.0**
comp=Z,28nm,1.0s
KUU Kurty 43.42 342 *e*P **P 11 07 25.5 0.0**
KUU pmax pmax
comp=Z,28nm,1.0s
USP Ospenovka 43.47 339 P **P 11 07 26.8 +0.7**
SNR=15
KMBL Kambalda 43.50 144 P **P 11 07 27.4 +1.1**
baz=44,SNR=7.5
SGDS Sogindy 43.59 340 *e*P **P 11 07 26.4 -0.6**
comp=Z,117nm,5.1s
WRKA Warakurna 43.63 132 P **P 11 07 26.2 -1.4**
baz=44,SNR=36
DL2 Dalian 43.65 32 P **P 11 07 27.3 -0.1**
DL2 S **S 11 13 57.1 +0.7**
DL2 pmax pmax
comp=Z,23nm,1.3s
DL2 pmax pmax
comp=Z,1µm,8.2s
DL2 LR LR
comp=Z,10µm,16.3s
DL2 LR LR
comp=Z,4µm,13.0s
DL2 LR LR
comp=Z,9µm,17.0s
IUG Iuzhnay 44.27 335 *e*P **P 11 07 32.5 -0.1**
IUG Iuzhnay 44.27 335 *e*P **P 11 07 32.4 -0.1**
MK31 Makanchi Array 44.60 349 *i*P **P 11 07 35.0 0.0**
MK31 Makanchi Array 44.60 349 IAmb IAmb 11 07 54.3
comp=Z,40nm,1.3s
MKAR Makanchi Array 44.60 349 P **P 11 07 35.5 +0.5**
comp=Z,16nm,0.7s,baz=165,slow=8.1,SNR=77
MKAR LR LR 11 28 55.1
comp=Z,3µm,21.8s,baz=166,slow=40
MAKZ Makanchi 44.67 348 P **P 11 07 35.7 +0.1**
MAKZ pmax pmax
comp=Z,18nm,0.9s
MAKZ MLR MLR
comp=Z,3µm,21.0s
MAKZ Makanchi 44.67 348 P **P 11 07 35.7 +0.1**
MAKZ IAmb IAmb 11 07 54.9
comp=Z,18nm,0.9s
ZSN Zaisan 44.79 351 *e*P **P 11 07 37.5 +1.0**
comp=Z,84nm,3.3s
ZSN Zaisan 44.79 351 *e*P **P 11 07 37.5 +1.0**
ZSN pmax pmax
comp=Z,84nm,3.3s
KK31 Karatay Array 44.86 336 P **P 11 07 37.3 +0.2**
KK31 pmax pmax
comp=Z,23nm,1.1s
KK31 Karatay Array 44.86 336 P **P 11 07 37.3 +0.2**
KK31 IAmb IAmb 11 07 57.1
comp=Z,23nm,1.1s
KKAR Karatay Array 44.86 336 IAmb IAmb 11 07 57.1
comp=Z,23nm,1.1s
SMPI Sarmi 45.14 96 P **P 11 07 38.2 -1.6**
comp=Z,2µmcomp=Z,1µmcomp=Z,20nm,1.3s
BTLS Baital 45.19 340 *e*P **P 11 07 39.5 -0.2**
comp=Z,10nm,1.9s
BTLS Baital 45.19 340 *e*P **P 11 07 39.5 -0.2**
BTLS pmax pmax
comp=Z,11nm,1.9s
TJN Taejon 45.23 39⇓‖ *e*P **P 11 07 38.9 -1.2**
INCN Inchon 45.49 37 IAMs_20 IAMs_20 11 28 19.1
comp=Z,7µm,20.0s
JNU Nakatsue 45.67 45 P **P 11 07 43.2 -0.5**
comp=Z,9.9nm,0.9s,baz=108,slow=21,SNR=3.8
JNU Nakatsue 45.67 45 P **P 11 07 42.8 -1.0**
JNU IAmb IAmb 11 07 48.4
comp=Z,29nm,1.2s
SONM Songino Array 45.79 12 P **P 11 07 44.6 0.0**
comp=Z,5.5nm,1.0s,baz=192,slow=8.1,SNR=24
SONM PcP **PcP 11 09 23.8 +1.8**
comp=Z,2.9nm,0.9s,baz=182,slow=5.3,SNR=1.5
SONM LR LR 11 30 06.5
comp=Z,3µm,18.7s,baz=190,slow=40
WRAB Tennant Creek 45.92 122⇑ *i*P **P 11 07 43.6 -2.3**
WRAB pmax pmax
comp=Z,21nm,0.6s
WRAB Tennant Creek 45.92 122 P **P 11 07 43.5 -2.3**
ULN Ulaanbaatar 45.96 12⇑ *e*P **P 11 07 45.6 -0.3**
ULN pmax pmax
comp=Z,10.0nm,1.7s
ULN Ulaanbaatar 45.96 12 P **P 11 07 44.9 -1.0**
ULN Ulaanbaatar 45.96 12 IAMs_20 IAMs_20 11 29 36.9
comp=Z,4µm,18.0s
KSRS Korea Array 46.26 38 P **P 11 07 48.4 +0.1**
comp=Z,2.0nm,0.7s,baz=222,slow=8.9,SNR=12
KSRS LR LR 11 29 38.6
comp=Z,4µm,18.8s,baz=227,slow=39
DGZ Jazzator, Alta 46.68 354⇑ *e*P **P 11 07 52.3 +0.7**
DGZ pmax pmax
comp=Z,3.0nm,1.2s
SNY Shenyang 46.80 31 P **P 11 07 55.1 +2.7**
SNY S **S 11 14 40.0 -2.0**
SNY pmax pmax
comp=Z,940nm,11.3s
SNY LR LR
comp=Z,9µm,16.4s
SNY LR LR
comp=Z,5µm,17.6s
SNY LR LR
comp=Z,12µm,17.6s
FORT Forrest 46.95 139 P **P 11 07 53.1 -0.6**
baz=47,SNR=6.8
FORT Forrest 46.95 139 P **P 11 07 52.6 -1.1**
ASAR Alice Springs 47.25 127 P **P 11 07 54.4 -1.9**
comp=Z,14nm,0.7s,baz=293,slow=7.5,SNR=50
ASAR PcP **PcP 11 09 27.9 +0.4**
comp=Z,2.6nm,0.7s,baz=291,slow=2.8,SNR=1.8
GEYT Alibeck 47.58 321 P **P 11 07 58.7 +0.1**
comp=Z,13nm,0.7s,baz=148,slow=8.7,SNR=14
GEYT LR LR 11 31 12.6
comp=Z,1µm,18.2s,baz=170,slow=40
GYA0 ALIBECK ARRAY 47.58 321 P **P 11 07 59.1 +0.5**
ZAK Zakamensk 47.72 8 *e*P **P 11 07 59.4 -0.2**
ZAK *e* 11 09 33.1
ZAK pmax pmax
comp=Z,8.0nm,1.5s
ZAK pmax pmax
comp=Z,5.0nm,1.6s
OTUK Ortayu 48.56 341 P P 11 08 16.5 +10
KURBB Kurchatov Arra 49.02 347 P **P 11 08 10.0 +0.5**
comp=Z,8.3nm,0.7s,baz=170,slow=7.0,SNR=49
KURBB Kurchatov Arra 49.02 347 P **P 11 08 09.3 -0.2**
TLY Talaya 49.04 8 P **P 11 08 09.9 +0.3**
comp=Z,1.0nm,0.3s,baz=196,slow=5.8,SNR=4.4
TLY Talaya 49.04 8⇑ *e*P **P 11 08 11.2 +1.6**
TLY pmax pmax
comp=Z,8.0nm,1.4s
TLY Talaya 49.04 8 P **P 11 08 10.3 +0.7**
TLY IAMs_20 IAMs_20 11 32 12.3
comp=Z,4µm,19.0s
KURK Kurchatov 49.09 347*c i*P **P 11 08 10.6 +0.6**
KURK pmax pmax
comp=Z,22nm,1.3s
KURK Kurchatov 49.09 347 P **P 11 08 10.1 +0.1**
IRK Irkutsk 49.67 8 *e*P **P 11 08 09.8 -4.7**
IRK pmax pmax
comp=Z,49nm,3.3s
OPO Ambohidratompo 50.75 243 P **P 11 08 24.7 +1.3**
comp=Z,2.0nm,0.8s,baz=120,slow=12,SNR=1.9
RAYN Ar Rayn 50.88 298 P **P 11 08 23.8 -0.4**
RAYN pmax pmax
comp=Z,9.0nm,0.9s
RAYN Ar Rayn 50.88 298 P **P 11 08 23.8 -0.4**
RAYN IAMs_20 IAMs_20 11 28 05.6
comp=Z,5µm,20.0s
HIA Hailar 50.96 22 IAmb IAmb 11 08 35.3
comp=Z,28nm,0.9s
ZAA0 Zalesovo Array 51.16 353 IAmb IAmb 11 08 37.8
comp=Z,23nm,1.0s
ZALV Zalesovo Beam 51.16 353 P **P 11 08 26.1 +0.5**
comp=Z,8.4nm,0.5s,baz=189,slow=7.4,SNR=21
ZALV LR LR 11 34 39.4
comp=Z,2µm,18.5s,baz=177,slow=41
ZALV Zalesovo Beam 51.16 353 *i*P **P 11 08 26.1 +0.5**
ZALV pmax pmax
comp=Z,9.0nm,0.5s
INU Inuyama 51.18 46 P **P 11 08 24.1 -2.0**
INU IAmb IAmb 11 08 30.2
comp=Z,26nm,0.9s
MDJ Mudanjiang 51.89 32 P **P 11 08 31.3 0.0**
MDJ pP pwP 11 08 41.0 +0.9
MDJ sP sP 11 08 45.4 +7.9
MDJ pmax pmax
comp=Z,5.0nm,0.7s
MDJ pmax pmax
comp=Z,400nm,5.3s
MDJ LR LR
comp=Z,5µm,16.6s
MDJ LR LR
comp=Z,7µm,17.5s
MDJ LR LR
comp=Z,11µm,15.5s
MDJ Mudanjiang 51.89 32 IAMs_20 IAMs_20 11 31 53.7
comp=Z,7µm,19.0s
VLA Vladivostok 52.18 35⇑ *e*P **P 11 08 33.9 +0.5**
VLA pmax pmax
comp=Z,15nm,1.0s
MJB9 Matsu-Tunnel 52.59 45 P **P 11 08 37.8 +1.1**
MAJO Matsushiro 52.59 45 P **P 11 08 37.4 +0.7**
MAJO pmax pmax
comp=Z,12nm,1.1s
MAJO MLR MLR
comp=Z,7µm,19.0s
MAJO Matsushiro 52.59 45 P **P 11 08 37.4 +0.7**
MAJO IAMs_20 IAMs_20 11 32 56.4
comp=Z,7µm,19.0s
MJAR Matsushiro Arr 52.60 45 P **P 11 08 38.8 +2.1**
comp=Z,3.0nm,0.7s,baz=244,slow=8.2,SNR=12
MJAR LR LR 11 33 18.1
comp=Z,7µm,18.6s,baz=250,slow=39
USA0B Ussuriysk Arra 52.92 34⇑ *e*P **P 11 08 39.4 +0.5**
USA0B Ussuriysk Arra 52.92 34 P **P 11 08 39.6 +0.7**
USA0B IAmb IAmb 11 10 00.0
comp=Z,42nm,1.9s
USRK Ussuriysk Ar. 52.92 34 P **P 11 08 39.7 +0.7**
comp=Z,7.3nm,0.9s,baz=239,slow=7.8,SNR=10
USRK LR LR 11 34 10.1
comp=Z,7µm,18.3s,baz=209,slow=40
BRVK Borovoye 53.40 343*c**e*P **P 11 08 41.7 -0.6**
BRVK pmax pmax
comp=Z,14nm,1.3s
BRVK Borovoye 53.40 343 P **P 11 08 41.9 -0.4**
BRVK IAmb IAmb 11 09 01.1
comp=Z,16nm,0.9s
BBOO Buckleboo 53.62 135 P **P 11 08 45.4 +1.1**
BBOO IAmb IAmb 11 08 47.0
comp=Z,23nm,1.4s
AKTO Aktyubinsk 55.95 333 P **P 11 08 59.8 -1.1**
HTT Hallett 55.98 134 P **P 11 09 03.0 +1.6**
baz=56,SNR=3.8
TEY Ternei 56.05 35 *e*P P 11 09 12.0 +10
TEY MLR MLR
comp=E,300nm,12.0s
TEY MLR MLR
comp=N,400nm,14.0s

TEY MLR MLR
comp=Z,500nm,14.0s
KLR Kul'dur 56.09 29 P **P 11 09 02.6 +0.8**
comp=Z,13nm,1.0s,baz=251,slow=6.7,SNR=12
KLR Kul'dur 56.09 29*c e*P **P 11 09 02.1 +0.2**
KLR pmax pmax
comp=Z,39nm,1.3s
AKT Akhty 56.20 319 *e*P **P 11 09 02.6 -0.4**
AKT *e* 11 10 00.4
AKT pmax pmax
comp=Z,17nm,1.0s
KMBO Kilima Mbogo 56.73 267 P **P 11 09 07.6 +0.2**
comp=Z,2.3nm,1.0s,baz=352,slow=17,SNR=3.4
KMBO LR LR 11 30 29.9
comp=Z,3μm,19.2s,baz=84,slow=33
KMBO Kilima Mbogo 56.73 267 P **P 11 09 07.6 +0.2**
KMBO pmax pmax
comp=Z,15nm,1.6s
KMBO Kilima Mbogo 56.73 267 IAMs_20 IAMs_20 11 29 57.0
comp=Z,4μm,20.0s
BOD Bodaibo 56.77 13 *e*P **P 11 09 06.0 -0.6**
BOD pmax pmax
comp=Z,22nm,1.6s
MAK Makhachkala 57.09 321 *e*P P 11 09 03.5 -5.6
MAK *e*S **S 11 16 57.0 -6.3**
MAK *e*SSS SSS 11 23 12.7
MAK pmax pmax
comp=Z,122nm,0.9s
STKA Stephens Creek 57.16 131 P **P 11 09 10.1 +0.2**
baz=57,SNR=15
STKA Stephens Creek 57.16 131 P **P 11 09 08.2 -1.6**
comp=Z,9.9nm,0.7s,baz=312,slow=7.3,SNR=23
STKA LR LR 11 36 00.6
comp=Z,1μm,19.5s,baz=299,slow=38
ZEA Zeya 57.36 23 *e*P **P 11 09 10.6 -0.2**
ZEA *e*S S 11 17 18.0 +11
ZEA pmax pmax
comp=Z,28nm,1.2s
ZEA pmax pmax
comp=Z,900nm,11.0s
ZEA pmax pmax
comp=Z,800nm,9.0s
ZEA smax smax
comp=E,300nm,9.0s
ZEA smax smax
comp=N,400nm,8.0s
ZEA MLR MLR
comp=Z,10μm,15.0s
ZEA MLR MLR
comp=E,4μm,14.0s
ZEA MLR MLR
comp=N,7μm,15.0s
ERM Erimo 58.55 41 IAMs_20 IAMs_20 11 36 00.1
comp=Z,4μm,19.0s
AKH Akhalkalaki 58.98 317 ⇑P **P 11 09 21.9 -0.7**
ASAJ Asahikawa 59.19 39 P **P 11 09 24.2 +0.4**
comp=Z,7.0nm,0.7s,baz=141,slow=26,SNR=2.7
JKA Kamikawa-asahi 59.19 39 P **P 11 09 24.2 +0.4**
ZEI Tsey 59.32 319 *e*P **P 11 09 22.9 -2.2**
ZEI pmax pmax
comp=Z,5.0nm,0.6s
SVE Sverdlovsk 59.66 340⇑*e*P **P 11 09 27.0 +0.2**
SVE *e*S **S 11 17 37.1 +0.7**
SVE pmax pmax
comp=Z,49nm,1.4s
SVE MLR MLR
comp=Z,2μm,17.0s
ARU Arti 60.10 338*c i*P **P 11 09 28.9 -1.0**
ARU 11 10 16.0
ARU S **S 11 17 43.8 +1.7**
ARU 11 19 17.7
ARU SS **SS 11 21 35.3 -3.9**
ARU pmax pmax
comp=Z,10.0nm,1.0s
ARU MLR MLR
comp=Z,1μm,16.0s
ARU Arti 60.10 338 P **P 11 09 28.4 -1.5**
CMSA Cobar Meteorol 60.12 129 P **P 11 09 29.7 -0.8**
baz=60,SNR=19
BCA Borcka 60.26 317 ⇑P **P 11 09 35.6 +4.3**
KBZ Khabaz 60.40 320 P **P 11 09 32.2 +0.1**
comp=Z,4.2nm,0.8s,baz=181,slow=6.2,SNR=5.4
KBZ Khabaz 60.40 320⇑*e*P **P 11 09 31.5 -0.7**
KIV Kislovodsk 60.64 320⇑*e*P **P 11 09 33.8 -0.2**
KIV *e* 11 09 44.2
KIV 11 10 16.0
KIV PPP PPP 11 13 12.0
KIV *i* S **S 11 17 54.6 +4.9**
KIV *e* 11 19 25.5
KIV pmax pmax
comp=Z,10.0nm,0.8s
RMQ Roma 60.66 123 P **P 11 09 35.1 +0.9**
baz=61,SNR=4.5
YSS Yuzh-Sakhalins 60.69 36 *e*P **P 11 09 37.2 +3.2**
YSS *e**PP **pwP 11 09 50.2 +7.4**
YSS *e**SP sP 11 09 56.3 +16
YSS *e* 11 11 53.4
YSS *e*PPP PPP 11 13 19.6
YSS *e*S **S 11 17 52.0 +2.1**
YSS *e*PPS PPS 11 18 17.5
YSS *e* 11 19 15.9
YSS *e*SS **SS 11 21 40.3 -8.4**
YSS pmax pmax
comp=Z,1μm,5.0s
YSS MLR MLR
comp=Z,2μm,17.0s
YSS MLR MLR
comp=N,2μm,19.0s
YSS MLR MLR
comp=E,1μm,16.0s
YSS Yuzh-Sakhalins 60.69 36 IAMs_20 IAMs_20 11 39 47.7
comp=Z,3μm,19.0s
YUK Yuzh-Kuril'sk 61.23 40 *e*P **P 11 09 36.9 -0.9**
YUK *e* 11 10 18.1
YUK *e* 11 11 51.8
YUK *e*PPP PPP 11 13 16.5
YUK *e*S **S 11 17 57.5 +0.5**
YUK *e* 11 19 27.9
YUK *e*SS **SS 11 21 59.6 +2.2**
YUK pmax pmax
comp=Z,363nm,1.5s
YUK pmax pmax
comp=E,131nm,1.6s
YUK pmax pmax
comp=N,261nm,1.4s
YUK pmax pmax
comp=Z,565nm,2.2s
YUK MLR MLR
comp=Z,2μm,14.0s
YUK MLR MLR
comp=N,2μm,16.0s
YUK MLR MLR
comp=E,2μm,13.0s
SOC Sochi 62.43 318 *e*P P 11 09 40.3 -5.6
SOC *e*S **S 11 18 07.2 -4.9**
SOC *e*SS **SS 11 22 14.5 -1.6**
TYV Tymovskoe 62.66 32 *e*P P 11 09 56.9 +10
TYV pmax pmax
comp=Z,800nm,4.8s
TYV MLR MLR
comp=E,7μm,18.0s
TYV MLR MLR
comp=Z,8μm,18.0s
TOO Toolangi 62.68 135 P **P 11 09 48.1 +0.4**
TOO pmax pmax
comp=Z,23nm,1.2s
TOO MLR MLR
comp=Z,1μm,18.0s
TOO Toolangi 62.68 135 P **P 11 09 48.1 +0.4**
TOO IAmb IAmb 11 09 55.6
comp=Z,23nm,1.2s
NKL Nikolayevsk 62.92 30 *e*P **P 11 09 51.1 +2.2**
NKL *e* 11 12 06.2
NKL *e*S **S 11 18 19.3 +1.4**
NKL pmax pmax
comp=N,5.0nm,1.0s
NKL pmax pmax
comp=Z,17nm,1.0s
NKL pmax pmax
comp=E,2.0nm,0.8s
NKL pmax pmax
comp=Z,106nm,7.2s
KUR Kuril'sk 63.04 40 *e*P P 11 10 04.7 +15
KUR MLR MLR
comp=Z,3μm,14.0s
KUR MLR MLR
comp=N,2μm,15.0s
KUR MLR MLR
comp=E,2μm,12.0s
CAN Canberra 64.22 132 P **P 11 09 58.0 0.0**
CAN pmax pmax
comp=Z,33nm,1.7s
CAN MLR MLR
comp=Z,2μm,19.0s
CAN Canberra 64.22 132 P **P 11 09 58.0 0.0**
CAN IAmb IAmb 11 10 47.7
comp=Z,33nm,1.7s
ARMA Armidale 64.40 126 P **P 11 09 59.6 +0.3**
baz=64,SNR=4.5
ARMA Armidale 64.40 126 P **P 11 09 58.2 -1.1**
ARMA IAmb IAmb 11 10 03.5
comp=Z,16nm,1.1s
ANN Anapa 64.42 319 *e*P **P 11 10 01.7 +2.7**
ANN *e*S **S 11 18 45.2 +8.3**
ANN pmax pmax
comp=Z,34nm,1.0s
YAK Yakutsk 64.53 18 P **P 11 09 59.1 -0.2**
comp=Z,4.7nm,0.4s,baz=284,slow=5.8,SNR=5.6
YAK Yakutsk 64.53 18 *e*P **P 11 09 58.4 -1.0**
YAK *e**PP **pwP 11 10 09.0 +0.9**
YAK *e* 11 10 30.4
YAK *e* 11 12 19.5
YAK *e*S **S 11 18 33.4 -4.2**
YAK *e**SS sS 11 19 01.1 +16
YAK *e* 11 19 47.4
YAK pmax pmax
comp=Z,19nm,1.1s
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK pmax pmax
comp=E,9.0nm,1.1s
YAK pmax pmax
comp=Z,60nm,2.4s
YAK pmax pmax
comp=N,79nm,2.7s
YAK pmax pmax
comp=E,34nm,2.5s
YAK smax smax
comp=N,47nm,4.1s
YAK smax smax
comp=E,121nm,4.5s
YAK MLR MLR
comp=Z,3μm,19.0s
YAK MLR MLR
comp=N,2μm,18.0s
YAK MLR MLR
comp=E,2μm,16.0s
YAK Yakutsk 64.53 18 P **P 11 09 58.5 -0.8**
YAK IAMs_20 IAMs_20 11 40 30.2
comp=Z,3μm,18.0s
BRTR Keskin Array B 65.32 313 P **P 11 10 05.0 -0.2**
comp=Z,3.6nm,0.8s,baz=128,slow=6.5,SNR=12
BRTR LR LR 11 41 13.0
comp=Z,552nm,18.2s,baz=92,slow=38
BRTR Keskin Array B 65.32 313 *i*P **P 11 10 05.0 -0.2**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
BR131 Keskin Array S 65.32 313*c e*P **P 11 10 04.3 -0.9**
BR131 Keskin Array S 65.32 313 IAmb IAmb 11 10 30.7
comp=Z,8.9nm,1.1s
BZK Bozkurt 65.75 315 ⇑P **P 11 10 07.2 -0.5**
ANTO Ankara 65.98 312 ⇑P **P 11 10 09.3 -0.1**
NRIK Noril'sk 66.20 358 P **P 11 10 09.9 -0.2**
comp=Z,5.7nm,0.7s,baz=149,slow=5.4,SNR=11
NRIK LR LR 11 41 43.2
comp=Z,2μm,21.2s,baz=172,slow=38
SIM Simferopol' 66.67 318 *e*P **P 11 10 14.0 +0.4**
SIM *e*S **S 11 19 08.0 +3.5**
SIM pmax pmax
comp=Z,15nm,0.9s
ELL Elmali 67.35 309 IAMs_20 IAMs_20 11 43 16.5
comp=Z,3μm,18.0s
LSZ Lusaka 67.49 252 IAMs_20 IAMs_20 11 35 53.0
comp=Z,4μm,18.0s
PRGR Permogore 68.53 338 *e*P **P 11 10 22.5 -2.5**
PRGR pmax pmax
comp=Z,9.0nm,0.8s
MANT Manisa 68.80 310 IAMs_20 IAMs_20 11 44 10.8
comp=Z,4μm,18.0s
MOS Moscow 68.94 330 *e*P **P 11 10 25.4 -2.3**
OBN Obninsk 69.20 329⇓*e*P **P 11 10 28.9 -0.4**
OBN *e* 11 10 36.2
OBN *e* 11 13 02.3
OBN *e*PPP PPP 11 14 41.5
OBN *i* S **S 11 19 32.7 -1.7**
OBN pmax pmax
comp=Z,14nm,1.4s
SKR Severo-Kuril's 70.25 37 *e*P **P 11 10 36.1 +0.3**
SKR pmax pmax
comp=Z,53nm,1.0s
SKR pmax pmax
comp=Z,400nm,9.1s
SKR pmax pmax
comp=Z,400nm,10.8s
SKR MLR MLR
comp=Z,1μm,19.0s
SKR MLR MLR
comp=Z,2μm,17.0s
CASY Casey 70.33 173 P **P 11 10 38.3 +2.3**
CASY IAmb IAmb 11 10 47.6
comp=Z,18nm,1.3s
CASY Casey 70.33 173 IAMs_20 IAMs_20 11 35 24.1
comp=Z,2μm,18.0s
TIRR Tirgusor 70.39 316 ⇓P **P 11 10 37.0 +0.2**
TIRR Tirgusor 70.39 316 P **P 11 10 36.0 -0.8**
TIRR pmax pmax
comp=Z,29nm,1.0s
TIRR Tirgusor 70.39 316 P **P 11 10 36.0 -0.8**
TOPG Topolog 70.53 317 ⇓P **P 11 10 37.8 +0.1**
KLMR Klimovskoe 70.55 335 *e*P **P 11 10 35.5 -2.0**
KLMR *e* 11 13 09.9
KLMR *e*S **S 11 19 48.6 -1.4**
KLMR pmax pmax
comp=Z,23nm,1.4s
KLMR Klimovskoe 70.55 335 *e*P **P 11 10 35.5 -2.0**
KLMR AMP 11 10 48.5
comp=Z,23nm,1.4s
KLMR *e*PP **PP 11 13 09.9 -3.9**
KLMR *e*S **S 11 19 48.6 -1.4**
KLMR *e*S **S 11 19 48.6 -1.4**
KLMR LQ LQ 11 35 44.1
KLMR LQ LQ 11 35 44.1
KLMR LR LR 11 41 01.3
CFR Carcaliu 70.77 317 ⇓P **P 11 10 38.7 -0.5**
HARR Harsova 70.78 316 ⇓P **P 11 10 39.4 +0.1**
KIS Kishinev 70.82 319 *e*P **P 11 10 40.0 +0.6**
comp=Z,300nm,14.0s
KIS Kishinev 70.82 319 *e*PPP PPP 11 15 10.0
KIS *e*S **S 11 19 50.0 -3.7**
KIS Kishinev 70.82 319 *e*P **P 11 10 40.0 +0.6**
KIS *e* 11 10 48.0
KIS *e* 11 11 03.0
KIS *e*S **S 11 19 50.0 -3.7**
KIS *e*PS **PnS 11 20 15.0 -7.4**
KIS *e*SS **SS 11 24 32.0 +5.8**
KIS *e*SSS SSS 11 27 30.0
KIS pmax pmax
comp=Z,300nm,14.0s
KIS MLR MLR
comp=Z,700nm,20.0s
IDI Anoyia 71.04 306 ⇓P **P 11 10 41.9 +0.8**
MA2 Magadan 71.06 27 P **P 11 10 41.9 +1.3**
comp=Z,12nm,0.7s,baz=243,slow=4.5,SNR=4.2
MA2 Magadan 71.06 27 P **P 11 10 41.4 +0.8**
MA2 pmax pmax
comp=Z,30nm,1.0s
MA2 MLR MLR
comp=Z,3μm,18.0s
MA2 Magadan 71.06 27 P **P 11 10 41.4 +0.8**
MA2 IAMs_20 IAMs_20 11 46 05.6
comp=Z,3μm,18.0s
ALN Alexandroupoli 71.23 312 P **P 11 10 40.5 -1.5**
ALN pmax pmax
comp=Z,17nm,1.3s
ALN Alexandroupoli 71.23 312 P **P 11 10 40.5 -1.5**
ALN IAmb IAmb 11 10 54.5
comp=Z,17nm,1.3s
SORM Soroca 71.44 320 ⇓P **P 11 10 42.7 -0.5**
RAZG Razgrad 71.50 315 ⇓P **P 11 10 43.5 -0.1**
AKASG Malin Array Be 71.67 323 P **P 11 10 43.3 -1.2**
comp=Z,1.3nm,0.6s,baz=90,slow=5.0,SNR=8.1
AKASG LR LR 11 46 15.8
comp=Z,623nm,19.2s,baz=70,slow=39
AKBB Malin Array Si 71.67 323⇑*e*P **P 11 10 42.9 -1.6**
AKBB Malin Array Si 71.67 323 P **P 11 10 43.4 -1.1**
ELND Elena 71.80 314 ⇑P **P 11 10 45.1 -0.4**
TIXI Tiksi 71.87 11 P **P 11 10 44.5 -0.9**
comp=Z,8.6nm,0.6s,baz=200,slow=3.5,SNR=19
TIXI Tiksi 71.87 11*c i*P **P 11 10 44.4 -0.9**
TIXI pmax pmax
comp=Z,44nm,1.7s
TIXI Tiksi 71.87 11 P **P 11 10 44.3 -1.0**
TIXI IAMs_20 IAMs_20 11 47 10.7
comp=Z,4μm,20.0s
VRI Vrincioaia 71.91 317 ⇑P **P 11 10 46.3 +0.2**
PLOR Plostina 71.95 317 ⇑P **P 11 10 47.1 +0.7**
PEA0B Petropavlovsk- 72.00 35 IAMs_20 IAMs_20 11 42 45.6
comp=Z,4μm,21.0s
PETK Petropavlovsk- 72.00 35 P **P 11 10 46.4 0.0**
comp=Z,6.9nm,1.1s,baz=134,slow=17,SNR=2.5
PETK LR LR 11 46 52.6
comp=Z,3μm,18.1s,baz=236,slow=40
TESR Tescani 72.12 318 ⇑P **P 11 10 46.6 -0.8**
MLR Muntele Rosu 72.34 317 ⇑P **P 11 10 49.4 +0.5**
MLR Muntele Rosu 72.34 317 P **P 11 10 49.3 +0.5**
MLR pmax pmax
comp=Z,35nm,1.3s
MLR Muntele Rosu 72.34 317 P **P 11 10 49.3 +0.5**
RZN Rozhen 72.37 313 *e*P **P 11 10 52.5 +3.3**
PET Petropavlovsk 72.51 35 *e*P **P 11 10 54.2 +4.7**
PET *e*S **S 11 20 15.5 +2.6**
PET pmax pmax
comp=Z,800nm,13.7s
PET MLR MLR
comp=Z,3μm,22.0s
PET Petropavlovsk 72.51 35 IAMs_20 IAMs_20 11 47 15.2
comp=Z,3μm,18.0s
BIZ Bicaz 72.59 318 ⇓P **P 11 10 50.6 +0.4**
PLVB Pleven 72.80 314 ⇑P **P 11 10 51.6 +0.2**
BOSA Boshof 72.88 239 P **P 11 10 54.0 +1.6**
comp=Z,2.1nm,0.8s,baz=78,slow=7.1,SNR=3.9
BOSA LR LR 11 40 51.1
comp=Z,3μm,18.5s,baz=66,slow=34
BOSA Boshof 72.88 239 P **P 11 10 53.2 +0.9**
BOSA pmax pmax
comp=Z,28nm,1.5s
BOSA Boshof 72.88 239 P **P 11 10 53.2 +0.9**
BOSA IAmb IAmb 11 11 08.4
comp=Z,28nm,1.4s
VOIR 72.94 317 ⇑P **P 11 10 52.8 +0.4**
MMB Musomiste 73.08 312 *e*P P 11 10 44.4 -8.8
ARR Arges 73.22 316 ⇑P **P 11 10 53.9 -0.1**
SEY Seymchan 73.31 24 P **P 11 10 55.5 +1.5**
comp=Z,5.6nm,0.9s,baz=235,slow=5.6,SNR=6.4
BURAR Bucovina Array 73.34 319 ⇑P **P 11 10 55.2 +0.5**
KKB Krupnik 73.61 313 *e*P **P 11 10 55.3 -0.9**
VTS Vitosha 73.64 313 ⇑P **P 11 10 56.7 +0.1**
VTS Vitosha 73.64 313 *e*P **P 11 10 56.2 -0.4**
VTS Vitosha 73.64 313 IAmb IAmb 11 11 11.6
comp=Z,16nm,1.3s
ITM Ithomi 73.71 308 IAmb IAmb 11 11 18.6
comp=Z,27nm,1.2s
MAW Mawson 73.90 192 P **P 11 10 59.3 +2.0**
comp=Z,1.2nm,0.7s,baz=327,slow=8.1,SNR=3.7
MAW LR LR 11 39 37.7
comp=Z,1μm,18.4s,baz=22,slow=33
MAW Mawson 73.90 192 P **P 11 10 58.7 +1.4**
MAW pmax pmax
comp=Z,4.0nm,1.5s
MAW Mawson 73.90 192 P **P 11 10 58.7 +1.4**
NACGM Naroch 74.36 326 *e*P P 11 11 09.0 +8.7
NACGM *e*PPP PPP 11 15 36.0
NACGM *e*S S 11 20 50.0 +16
NACGM *e*PS 11 21 14.0
NACGM *e*SS **SS 11 25 12.0 -8.0**
NACGM *e*SSS SSS 11 28 14.0
NACGM *e*LQ LQ 11 40 10.0
NACGM *e*LR LR 11 45 26.0
DEV Deva 74.51 317 ⇑P **P 11 11 02.5 +1.0**
LVV L'vov 74.63 321 *e*P **P 11 11 02.5 +0.5**
LVV *e* 11 13 51.0
LVV *e*S **S 11 20 36.1 -1.0**
LVV *e*SS **SS 11 25 30.3 +5.9**
LVV MLR MLR
comp=Z,400nm,19.0s
MDVR Moldovita 75.12 315 ⇑P **P 11 11 04.6 -0.4**
DZM Mont Dzumac 75.14 114 *e*LR LR 11 34 13.1
comp=Z,1μm,21.9s
TRPA Tarpa 75.22 319 ⇓P **P 11 11 06.0 +0.6**
BZS Buzias 75.34 316 ⇓P **P 11 11 06.2 -0.1**
KOLS Kolonicke sedl 75.56 320 *e*P **P 11 11 08.0 +0.6**
KOLS Kolonicke sedl 75.56 320 *e*P **P 11 11 08.0 +0.6**
LVZ Lovozero 75.86 340 IAMs_20 IAMs_20 11 48 09.3
comp=Z,2μm,19.0s
PDG Podgorica 76.50 313 ⇑P **P 11 11 12.9 0.0**
FINES FINESS Array B 76.72 333 P **P 11 11 13.4 -0.4**
comp=Z,3.8nm,0.8s,baz=112,slow=5.7,SNR=11
NIE Niedzica 76.92 320 *e*P **P 11 11 15.9 +0.7**
OJC Ojcow 77.39 321 *e*P **P 11 11 17.7 -0.1**
VYHS Vyhne 77.71 319 *e*P **P 11 11 19.8 +0.2**
VYHS Vyhne 77.71 319 *e*P **P 11 11 19.8 +0.2**
TSUM Tsumeb 78.10 250 IAMs_20 IAMs_20 11 42 34.1
comp=Z,3μm,20.0s
OKC Ostrava-Krasne 78.37 320 *e*P **P 11 11 23.9 +0.7**
OKC *e*S **S 11 21 23.7 +5.6**
OKC MLR MLR
comp=Z,700nm,16.2s
OKC Ostrava-Krasne 78.37 320 *e*P **P 11 11 23.9 +0.7**
OKC *e*S **S 11 21 23.7 +5.6**
OKC AMS AMS 11 54 40.0
comp=Z,700nm,16.2s
JAVC Velka Javorina 78.53 319 *e*P **P 11 11 25.1 +0.9**
MODS Modra-Piesok 78.72 319 *e*P **P 11 11 24.5 -0.7**
MODS Modra-Piesok 78.72 319 *e*P **P 11 11 24.5 -0.7**
MORC Moravsky Berou 78.75 320 *e*P **P 11 11 25.8 +0.4**
MORC Moravsky Berou 78.75 320 ⇑P **P 11 11 26.4 +1.0**
MORC Moravsky Berou 78.75 320 P **P 11 11 25.2 -0.2**
MORC pmax pmax
comp=Z,13nm,1.2s
MORC Moravsky Berou 78.75 320 P **P 11 11 25.2 -0.2**
KEV Kevo 79.15 341 IAMs_20 IAMs_20 11 50 11.5
comp=Z,2μm,19.0s
VRAC Vranov 79.30 319 *e*P **P 11 11 28.4 0.0**
KRUC Moravsky 79.39 319 *e*P **P 11 11 27.7 -1.2**
ARCES ARCESS Array B 79.57 341 P **P 11 11 29.5 0.0**
comp=Z,4.1nm,0.8s,baz=79,slow=6.3,SNR=8.9
ARCES LR LR 11 50 25.0
comp=Z,2μm,20.0s,baz=107,slow=38
CONA Conrad Observa 79.60 318 P **P 11 11 28.6 -1.6**
comp=Z,8.0nm,1.8s
DPC Dobruska-Polom 79.61 321 *e*P **P 11 11 30.8 +0.7**
DPC *e*S **S 11 21 30.1 -1.3**
DPC MLR MLR
comp=Z,600nm,17.5s
DPC Dobruska-Polom 79.61 321 *e*P **P 11 11 30.8 +0.7**
DPC *e*S **S 11 21 30.1 -1.3**
DPC AMS AMS 12 00 20.0
comp=Z,600nm,17.5s
GROS Grobnik 79.68 317 *e*P **P 11 11 31.9 +1.3**
KSP Ksiaz 79.69 321 *e*P **P 11 11 30.7 +0.2**
OSTC Ostas 79.70 321 *e*P **P 11 11 31.1 +0.5**
OSTC *e*S **S 11 21 32.0 -0.3**
OSTC AMS AMS 11 52 50.0
comp=Z,800nm,16.9s
ARSA Arzberg 79.75 317 *e*P **P 11 11 31.5 +0.6**
comp=Z,12nm,1.1s
CHVC Chvalec 79.81 321 *e*P **P 11 11 31.9 +0.8**
CHVC *ex* x 11 11 35.4
CHVC AMS AMS 12 00 20.0
comp=Z,700nm,15.2s
UPC Upice 79.83 321 *e*P **P 11 11 32.3 +1.1**
UPC MLR MLR
comp=Z,800nm,16.3s
UPC Upice 79.83 321 *e*P **P 11 11 32.3 +1.1**
UPC AMS AMS 11 53 00.0
comp=Z,800nm,16.3s
TREC Trest 80.01 319 *e*P **P 11 11 36.6 +4.3**
TREC MLR MLR
comp=Z,600nm,14.5s
TREC Trest 80.01 319 *e*P **P 11 11 36.6 +4.3**
TREC AMS AMS 12 00 20.0
comp=Z,600nm,14.5s
SOKA Soboth 80.03 317 *e*P **P 11 11 32.6 +0.1**
comp=Z,16nm,1.1s

LJU Ljubljana 80.31 316 *e*P **P** **11 11 35.3 +1.4**
OBKA Obir 80.34 316 *e*P **P** **11 11 32.0 -2.2**
comp=Z,23nm,1.3s
GOPC GO Pecny, Ondr 80.54 320 *e*P **P** **11 11 36.9 +1.8**
GOPC *e* 11 11 46.5
GOPC *e*S **S** **11 21 42.4 +1.3**
GOPC MLR MLR
comp=Z,700nm,15.4s
GOPC GO Pecny, Ondr 80.54 320 *e*P **P** **11 11 36.9 +1.8**
GOPC *ex* x 11 11 46.5
GOPC *e*S **S** **11 21 42.4 +1.3**
GOPC AMS AMS 11 59 10.0
comp=Z,700nm,15.4s
BILL Bilibino 80.54 21 *ce*P **P** **11 11 35.1 +0.4**
BILL *e* 11 14 46.6
BILL S **S** **11 21 36.0 -4.5**
BILL *e* 11 22 48.9
BILL pmax pmax
comp=Z,6.0nm,1.4s
BILL MLR MLR
comp=Z,8µm,18.0s
BILL Bilibino 80.54 21 P **P** **11 11 34.1 -0.6**
PRU Pruhonice 80.70 320 *e*P **P** **11 11 35.4 -0.5**
PRU *e*S **S** **11 21 44.2 +1.4**
PRU MLR MLR
comp=Z,700nm,15.7s
PRU Pruhonice 80.70 320 *e*P **P** **11 11 35.4 -0.5**
PRU *e*S **S** **11 21 44.2 +1.4**
PRU AMS AMS 11 59 20.0
comp=Z,700nm,15.7s
AQU L'Aquila 80.81 312 IAmb IAmb 11 12 01.1
comp=Z,28nm,1.0s
SYO Syowa Base 80.85 197⇧ *e*P **P** **11 11 38.6 +2.3**
SYO Syowa Base 80.85 197⇧ *ep*P pP 11 11 40.0 -0.8
SYO Syowa Base 80.85 197⇧ *e*PcP **PcP** **11 11 45.8 +3.0**
NRCA Norcia 81.05 313 IAmb IAmb 11 11 50.6
comp=Z,14nm,1.0s
GEC2 GERESS Array S 81.13 319 IAmb IAmb 11 11 51.2
comp=Z,19nm,1.1s
GERES GERESS Array B 81.13 319 P **P** **11 11 38.9 +0.5**
comp=Z,2.6nm,0.7s,baz=102,slow=5.6,SNR=24
BRG Berggiesshubel 81.17 321 *e*P **P** **11 11 38.6 +0.2**
comp=Z,6.1nm,1.1s
BRG Berggiesshubel 81.17 321 *e*P **P** **11 11 38.7 +0.2**
BRG pmax pmax
comp=Z,6.0nm,1.1s
KHC Kasperske Hory 81.24 319 *e*P **P** **11 11 38.8 -0.1**
KHC *e*S **S** **11 21 46.0 -2.5**
KHC MLR MLR
comp=Z,800nm,15.8s
KHC Kasperske Hory 81.24 319 *e*P **P** **11 11 38.8 -0.1**
KHC *ex* x 11 11 44.3
KHC *e*S **S** **11 21 46.0 -2.5**
KHC AMS AMS 11 56 50.0
comp=Z,800nm,15.8s
ABTA Abfaltersbach 81.76 317 *e*P **P** **11 11 39.4 -2.3**
comp=Z,2.7nm,1.0s
CLL Collm 81.81 321 *i* P **P** **11 11 42.9 +1.1**
comp=Z,8.0nm,1.4s
CLL *i* 11 11 51.9
CLL *e*PP **PP** **11 14 54.0 +5.1**
CLL *e*S **S** **11 21 54.0 -0.2**
CLL *e* 11 22 20.0
CLL *e*PS **PnS** **11 22 46.0 +2.6**
CLL *e*SS **SS** **11 27 12.0 -0.2**
CLL *e*SSS SSS 11 30 36.0
CLL *e* 11 32 30.0
CLL LmH 11 53 00.0
comp=N,700nm,20.5s
CLL LmH 11 53 00.0
comp=E,700nm,21.3s
CLL LmV 11 56 00.0
comp=Z,800nm,18.7s
CLL Collm 81.81 321 *i* P **P** **11 11 42.9 +1.1**
CLL *i* 11 11 51.9
CLL *e*S **S** **11 21 54.0 -0.2**
CLL pmax pmax
comp=Z,8.0nm,1.4s
CLL MLR MLR
comp=Z,800nm,18.7s
NKC Novy Kostel 82.07 320 *e*P **P** **11 11 43.2 0.0**
NKC MLR MLR
comp=Z,1µm,15.4s
NKC Novy Kostel 82.07 320 *e*P **P** **11 11 43.2 0.0**
NKC AMS AMS 12 02 30.0
comp=Z,1µm,15.4s
CTI Castel Tesino 82.31 316 IAmb IAmb 11 11 56.8
comp=Z,20nm,1.1s
WTTA Wattenberg 82.39 317 *e*P **P** **11 11 42.8 -2.3**
comp=Z,11nm,1.0s
WATA Walderalm 82.44 317 *e*P **P** **11 11 44.1 -1.3**
comp=Z,2.2nm,0.5s
SQTA Sankt Quirin 82.68 317 *e*P **P** **11 11 45.8 -0.8**
comp=Z,5.0nm,0.7s
MOTA Moosalm 82.76 317 *e*P **P** **11 11 46.1 -0.9**
comp=Z,7.8nm,1.1s
GRF Grafenberg Arr 82.82 320 *e*P **P** **11 11 47.3 +0.2**
comp=Z,14nm,1.2s,baz=107,slow=4.5
FETA Feichten 83.00 317 *e*P **P** **11 11 46.1 -2.2**
comp=Z,9.8nm,1.1s
RETA Reutte 83.00 317 *e*P **P** **11 11 46.9 -1.3**
comp=Z,9.8nm,0.9s
FUORN Ofenpass-Fuorn 83.30 316 IAmb IAmb 11 12 02.8
comp=Z,17nm,0.9s
OUZ Omahuta 83.46 126 IAMs_20 IAMs_20 11 54 31.3
comp=Z,2µm,18.0s
DAVA Damuels 83.59 317 *e*P **P** **11 11 51.6 +0.3**
comp=Z,6.1nm,0.7s
NB2 NORSAR Subarra 83.67 331 P **P** **11 11 50.1 -1.2**
comp=Z,18nm,1.7s,baz=94,slow=5.9
NOA NORSAR Array B 83.67 331 P **P** **11 11 50.6 -0.7**
comp=Z,2.0nm,0.8s,baz=95,slow=5.4,SNR=6.3
NOA LR LR 11 52 56.5
comp=Z,534nm,20.4s,baz=100,slow=38
KEST Kesra 83.70 305 P **P** **11 11 53.3 +1.3**
comp=Z,5.8nm,0.9s,baz=6.4,slow=8.2,SNR=5.0
KEST LR LR 11 49 25.5
comp=Z,406nm,21.9s,baz=45,slow=36
KEST Kesra 83.70 305 IAmb IAmb 11 11 59.7
comp=Z,15nm,1.1s
BFO Black Forest 84.66 318 P **P** **11 11 56.4 -0.2**
BFO pmax pmax
comp=Z,29nm,2.0s
BFO Black Forest 84.66 318 P **P** **11 11 56.4 -0.2**
BFO IAmb IAmb 11 12 02.6
comp=Z,29nm,2.0s
VNDA Vanda 88.41 168 P **P** **11 12 14.3 0.0**
comp=Z,3.4nm,1.2s,baz=299,slow=6.7,SNR=7.1
VNDA LR LR 11 47 59.0
comp=Z,943nm,18.5s,baz=290,slow=33
VNDA Vanda 88.41 168 P **P** **11 12 13.2 -1.1**
VNDA IAmb IAmb 11 12 18.8
comp=Z,26nm,1.7s
GAMB Gambell 89.15 26 IAMs_20 IAMs_20 11 56 21.9
comp=Z,3µm,19.0s
NOR Nord 89.84 352 *i* P **P** **11 12 20.7 -0.3**
NOR pmax pmax
comp=Z,10.0nm,0.8s
NOR Nord 89.84 352 *i* P **P** **11 12 20.7 -0.3**
comp=Z,9.8nm,0.8s
NVL N'lazarevskaya 90.33 199 *e*P P 11 12 31.4 +8.0
NVL *e* 11 23 20.4
NVL pmax pmax
comp=Z,8.0nm,0.9s
TORD Torodi Ar. Bea 91.38 283 P **P** **11 12 30.9 +1.4**
comp=Z,1.1nm,0.9s,baz=48,slow=3.4,SNR=5.7
TORD LR LR 11 53 39.2
comp=Z,586nm,18.2s,baz=35,slow=36
ANM Nome 91.78 25 IAMs_20 IAMs_20 11 59 41.8
comp=Z,2µm,18.0s
QSPA South Pole Qui 93.10 180 P **P** **11 12 37.8 +1.3**
ESDC Sonseca Array 94.00 310 P **P** **11 12 41.2 0.0**
comp=Z,1.2nm,0.8s,baz=58,slow=4.5,SNR=7.9
ESDC LR LR 11 57 22.0
comp=Z,338nm,21.3s,baz=65,slow=37
TOLK Toolik Lake Re 96.46 19 P **P** **11 12 53.8 +2.0**
TOLK IAmb IAmb 11 12 56.7
comp=Z,3.8nm,0.8s
CNBA Chernabura Isl 96.89 34 IAMs_20 IAMs_20 12 00 06.8
comp=Z,2µm,20.0s
PESTR Estremoz 96.91 310 IAMs_20 IAMs_20 12 02 19.7
comp=Z,3µm,21.0s
SVW2 Sparrevohn 97.03 27 IAMs_20 IAMs_20 12 03 40.7
comp=Z,2µm,18.0s
RTC Rabat Centre 97.09 305 IAMs_20 IAMs_20 12 01 30.2
comp=Z,2µm,19.0s

MESJ Messejana 97.57 309 *e*P **P** **11 12 56.4 -1.1**
MESJ AMS AMS 11 59 02.4
comp=E,474nm,17.2s
MESJ Messejana 97.57 309 *e*P **P** **11 12 56.3 -1.1**
BPAW Bear Paw Mtn. 97.88 24 IAMs_20 IAMs_20 12 03 51.0
comp=Z,2µm,19.0s
MORF Marmelete 98.00 308 *e*P **P** **11 12 58.4 -1.0**
MORF AMS AMS 11 53 20.8
comp=N,497nm,22.8s
MORF Marmelete 98.00 308 *e*P **P** **11 12 58.4 -1.0**
DBIC Dimbokro 98.26 277 LR LR 11 56 08.9
comp=N,856nm,19.8s,baz=66,slow=35
NEA Nenana 98.43 23 IAMs_20 IAMs_20 12 06 27.3
comp=Z,2µm,18.0s
BWN Browne 98.46 23 IAMs_20 IAMs_20 12 00 22.9
comp=Z,2µm,20.0s
COLA College 98.77 22 IAMs_20 IAMs_20 12 03 08.2
comp=Z,1µm,18.0s
MCK McKinley 98.86 24 IAMs_20 IAMs_20 12 04 32.8
comp=Z,2µm,19.0s
WRH Wood River Hil 98.86 23 IAMs_20 IAMs_20 12 01 59.8
comp=Z,1µm,21.0s
CCB Clear Creek Bu 98.89 23 IAMs_20 IAMs_20 12 00 27.6
comp=Z,1µm,20.0s
ILAR Eielson Array 99.18 22 P **Pdif** **11 13 04.6 +0.6**
comp=Z,0.2nm,0.6s,baz=320,slow=32,SNR=2.6
ILAR PP **PP** **11 17 02.8 -3.4**
comp=Z,0.7nm,0.9s,baz=287,slow=7.4,SNR=4.1
ILAR LR LR 12 00 58.0
comp=Z,1µm,20.5s,baz=304,slow=37
HDA Harding Lake 99.33 23 IAMs_20 IAMs_20 12 00 41.2
comp=Z,2µm,22.0s
HOM Homer 99.38 28 IAMs_20 IAMs_20 12 02 41.3
comp=Z,2µm,19.0s
OHAK Old Harbor 99.50 31 IAMs_20 IAMs_20 12 01 41.6
comp=Z,2µm,20.0s
CNPM China Poot 99.62 28 IAMs_20 IAMs_20 12 02 47.8
comp=Z,2µm,20.0s
KDAK Kodiak Island 99.64 30 IAMs_20 IAMs_20 12 03 38.5
comp=Z,2µm,20.0s
RC01 Rabbit Creek A 99.66 26 IAMs_20 IAMs_20 12 03 13.7
comp=Z,2µm,18.0s
BRLK Bradley Lake 99.69 28 IAMs_20 IAMs_20 12 03 00.5
comp=Z,2µm,19.0s
GHO Glory Hole Cre 99.72 25 IAMs_20 IAMs_20 12 05 17.7
comp=Z,2µm,20.0s
TULEG Thule 99.78 356 IAMs_20 IAMs_20 12 04 30.5
comp=Z,2µm,21.0s
DHY Denali Highway 99.78 24 IAMs_20 IAMs_20 12 03 19.2
comp=Z,2µm,18.0s
SML Sawmill 99.96 25 IAMs_20 IAMs_20 12 05 25.0
comp=Z,2µm,18.0s
SEW Seward 100.21 27 IAMs_20 IAMs_20 12 05 06.2
comp=Z,2µm,19.0s
RIDG Independent Ri 100.46 23 IAMs_20 IAMs_20 12 01 35.2
comp=Z,2µm,19.0s
PAX Paxson 100.60 24 IAMs_20 IAMs_20 12 05 13.8
comp=Z,2µm,19.0s
SCRK Sand Creek 100.67 22 IAMs_20 IAMs_20 12 04 58.6
comp=Z,2µm,18.0s
DOT Dot Lake 100.81 23 IAMs_20 IAMs_20 12 01 46.3
comp=Z,2µm,21.0s
GLI Glacier Island 100.91 26 IAMs_20 IAMs_20 12 05 38.7
comp=Z,2µm,19.0s
FID Fort Fidalgo 101.24 26 IAMs_20 IAMs_20 12 06 04.3
comp=Z,2µm,19.0s
EGAK Eagle 101.29 21 IAMs_20 IAMs_20 12 03 40.8
comp=Z,2µm,19.0s
HIN Hinchinbrook I 101.40 26 IAMs_20 IAMs_20 12 04 07.5
comp=Z,2µm,20.0s
INK Inuvik 101.56 16 P **Pdif** **11 13 15.2 +0.7**
comp=Z,0.8nm,1.0s,baz=273,slow=5.4,SNR=3.1
MID Middleton Isla 101.92 27 IAMs_20 IAMs_20 12 00 46.5
comp=Z,1µm,18.0s
GLB Gilahina Butte 102.04 25 IAMs_20 IAMs_20 12 04 32.8
comp=Z,2µm,19.0s
BALM Baldy 102.85 25 IAMs_20 IAMs_20 12 05 16.4
comp=Z,2µm,20.0s
ILULI Ilulissat 103.92 348 IAMs_20 IAMs_20 12 08 19.1
comp=Z,1µm,19.0s
YKU2 Yakutat 104.80 25 IAMs_20 IAMs_20 12 06 31.9
comp=Z,2µm,19.0s
DHAK Deception Hill 105.66 25 IAMs_20 IAMs_20 12 08 24.5
comp=Z,2µm,18.0s
WHY Whitehorse 106.06 23 IAMs_20 IAMs_20 12 11 09.0
comp=Z,2µm,19.0s
SKAG Skagway 106.63 24 IAMs_20 IAMs_20 12 09 25.1
comp=Z,2µm,19.0s
BESE Bessie Mountai 107.36 24 IAMs_20 IAMs_20 12 09 39.6
comp=Z,2µm,18.0s
JIS Juneau Island 107.75 24 IAMs_20 IAMs_20 12 09 50.8
comp=Z,2µm,19.0s
SIT Sitka 108.10 26 IAMs_20 IAMs_20 12 09 39.8
comp=Z,2µm,18.0s
NRS Narsarsuaq 108.59 340 IAMs_20 IAMs_20 12 08 33.4
comp=Z,1µm,22.0s
IVI Ivigtut 109.45 342 IAMs_20 IAMs_20 12 10 09.1
comp=Z,1µm,19.0s
WRAK Wrangell Islan 109.78 25 IAMs_20 IAMs_20 12 13 36.6
comp=Z,2µm,19.0s
YKA Yellowknife Ar 111.04 14 PKKPab PKKPab 11 29 03.3 -1.0
comp=Z,0.2nm,0.9s,baz=114,slow=3.0,SNR=3.1
YKA PKKP **PKKPdf** **11 29 10.1 -2.6**
comp=Z,0.5nm,1.0s,baz=140,slow=4.8,SNR=5.0
BBB Bella Bella 114.45 27 IAMs_20 IAMs_20 12 12 53.7
comp=Z,1µm,18.0s
HOPE Hope Point 115.05 210 IAMs_20 IAMs_20 11 54 49.8
comp=Z,2µm,22.0s
TBI Tubuai 115.72 114 *e*LR LR 11 52 57.5
comp=Z,566nm,22.2s
PPT2 Papeete2 116.27 108 *e*LR LR 11 53 12.7
comp=Z,542nm,22.8s
LLLB Lillooet 118.30 25 IAMs_20 IAMs_20 12 17 12.0
comp=Z,1µm,18.0s
NLWA Neilton Lookou 119.76 29 IAMs_20 IAMs_20 12 17 26.4
comp=Z,985nm,19.0s
SCHQ Schefferville 120.02 347 IAMs_20 IAMs_20 12 19 36.9
comp=Z,1µm,20.0s
B06A Marblemount 120.04 26 IAMs_20 IAMs_20 12 18 52.6
comp=Z,1µm,18.0s
D05A Enumclaw 120.79 28 IAMs_20 IAMs_20 12 19 43.7
comp=Z,976nm,19.0s
FFC Flin Flon 120.83 11 IAMs_20 IAMs_20 12 12 13.8
comp=Z,2µm,21.0s
B08A Colville Reser 121.09 25 IAMs_20 IAMs_20 12 12 31.9
comp=Z,1µm,19.0s
LON Longmire 121.20 28 IAMs_20 IAMs_20 12 20 39.4
comp=Z,1µm,19.0s
LTY Liberty 121.34 27 IAMs_20 IAMs_20 12 19 27.3
comp=Z,1µm,18.0s
F04A Amboy 121.50 29 IAMs_20 IAMs_20 12 18 32.5
comp=Z,1µm,20.0s
C09A Chrisman Ranch 121.98 25 IAMs_20 IAMs_20 12 17 42.2
comp=Z,1µm,20.0s
COR Corvallis 122.02 31 IAMs_20 IAMs_20 12 12 57.4
comp=Z,1µm,21.0s
NEW Newport 122.09 24 IAMs_20 IAMs_20 12 15 03.0
comp=Z,2µm,21.0s
E07A Sunnyside 122.24 27 IAMs_20 IAMs_20 12 19 54.8
comp=Z,1µm,19.0s
D08A Wollman Farm, 122.28 26 IAMs_20 IAMs_20 12 13 22.7
comp=Z,1µm,21.0s
HAWA Hanford 122.51 27 IAMs_20 IAMs_20 12 20 02.0
comp=Z,1µm,19.0s
E08A Dider Farm, El 122.65 26 IAMs_20 IAMs_20 12 14 27.6
comp=Z,1µm,22.0s
F07A Phinny Hill Vi 122.71 27 IAMs_20 IAMs_20 12 21 46.3
comp=Z,1µm,18.0s
E09A Wood Farm, Sta 123.03 26 IAMs_20 IAMs_20 12 17 21.7
comp=Z,970nm,20.0s
JTMT Jette 123.62 22 IAMs_20 IAMs_20 12 15 50.2
comp=Z,2µm,21.0s
PINE Pine Mountain 123.78 30 IAMs_20 IAMs_20 12 22 24.8
comp=Z,938nm,20.0s
F10A Beach Ranch, E 123.85 26 IAMs_20 IAMs_20 12 17 57.4
comp=Z,1µm,20.0s
JCC Jacoby Creek, 124.22 34 IAMs_20 IAMs_20 12 23 18.0
comp=Z,872nm,19.0s
I07A Izee 124.27 29 IAMs_20 IAMs_20 12 13 13.6
comp=Z,893nm,21.0s
YBH Yreka Blue Hor 124.33 33 IAMs_20 IAMs_20 12 23 24.6
comp=Z,1µm,20.0s
KHMM Horse Mountain 124.35 34 IAMs_20 IAMs_20 12 15 38.4
comp=Z,889nm,19.0s
BMO Blue Mountains 124.69 27 IAMs_20 IAMs_20 12 15 50.8
comp=Z,1µm,20.0s
KMRM Mail Ridge 124.80 35 IAMs_20 IAMs_20 12 23 38.8
comp=Z,1µm,19.0s

MOD Modoc Plateau 125.47 31 IAMs_20 IAMs_20 12 21 44.8
comp=Z,1µm,20.0s
WVOR Wild Horse Val 125.92 29 IAMs_20 IAMs_20 12 22 37.4
comp=Z,820nm,19.0s
TAOE Nuku Hiva Isla 126.05 99 *e*LR LR 11 57 56.9
comp=Z,660nm,27.2s
DGMT Dagmar 126.22 15 IAMs_20 IAMs_20 12 19 59.7
comp=Z,2µm,19.0s
DLMT Dillon 126.25 23 IAMs_20 IAMs_20 12 20 22.1
comp=Z,1µm,20.0s
GDXM Geysers 126.28 35 IAMs_20 IAMs_20 12 14 37.5
comp=Z,973nm,20.0s
BATG Bathurst New B 126.75 343 IAMs_20 IAMs_20 12 25 30.5
comp=Z,1µm,19.0s
GBN Guysborough 126.89 338 IAMs_20 IAMs_20 12 19 44.6
comp=Z,785nm,18.0s
BEKR Beckworth 126.91 33 IAMs_20 IAMs_20 12 25 32.9
comp=Z,810nm,19.0s
PAHR Pah Rah Range 127.54 32 IAMs_20 IAMs_20 12 24 54.6
comp=Z,985nm,18.0s
RUBR Rubicon Trail 127.60 33 IAMs_20 IAMs_20 12 23 04.2
comp=Z,810nm,20.0s
LMN Caledonia Moun 127.64 341 IAMs_20 IAMs_20 12 24 25.2
comp=Z,1µm,20.0s
D62A Allapoint, All 127.74 345 IAMs_20 IAMs_20 12 19 30.2
comp=Z,954nm,20.0s
PQI Presque Isle 127.85 344 IAMs_20 IAMs_20 12 26 30.4
comp=Z,1µm,19.0s
PNTR Pine Nut 127.87 33 IAMs_20 IAMs_20 12 25 15.4
comp=Z,746nm,18.0s
FLWY Flagg Ranch 128.06 22 IAMs_20 IAMs_20 12 21 47.9
comp=Z,1µm,18.0s
IMW Indian Meadow 128.12 23 IAMs_20 IAMs_20 12 21 49.7
comp=Z,1µm,18.0s
B35A Bob, Littlefor 128.26 6 IAMs_20 IAMs_20 12 23 08.1
comp=Z,1µm,19.0s
FXWY Fox Creek 128.31 23 IAMs_20 IAMs_20 12 21 53.6
comp=Z,1µm,19.0s
VLDQ Val d'Or 128.37 353 IAMs_20 IAMs_20 12 23 42.1
comp=Z,1µm,20.0s
WAKR Walker 128.38 33 IAMs_20 IAMs_20 12 25 34.9
comp=Z,984nm,19.0s
TPAW Teton Pass 128.47 23 IAMs_20 IAMs_20 12 21 50.7
comp=Z,1µm,19.0s
SNOW Snow King Moun 128.56 23 **PKPdf** **11 18 29.0 -1.5**
SNOW IAMs_20 IAMs_20 12 22 03.3
comp=Z,2µm,19.0s
F64A Sherman 128.68 344 IAMs_20 IAMs_20 12 27 22.2
comp=Z,979nm,19.0s
RYN Ryan 128.79 33 IAMs_20 IAMs_20 12 23 26.6
comp=Z,835nm,20.0s
RKT Rikitea 128.81 117 *e*LR LR 11 59 03.8
comp=Z,485nm,24.2s
E28A Huff 128.83 13 IAMs_20 IAMs_20 12 24 01.3
comp=Z,1µm,19.0s
D32A Dogwood Acres, 129.00 10 IAMs_20 IAMs_20 12 22 10.8
comp=Z,2µm,20.0s
F63A Nahmakanta, Br 129.03 345 IAMs_20 IAMs_20 12 25 58.4
comp=Z,1µm,21.0s
NVAR Mina Array Bea 129.05 33 PKP **PKiKP** **11 18 33.3 +1.2**
comp=Z,0.3nm,0.6s,baz=286,slow=1.2,SNR=5.4
G65A Princeton 129.07 343 IAMs_20 IAMs_20 12 25 24.4
comp=Z,1µm,19.0s
NV11 Mina Array Sit 129.13 32 IAMs_20 IAMs_20 12 23 45.6
comp=Z,827nm,20.0s
MDPB Devils Postpil 129.20 34 IAMs_20 IAMs_20 12 26 24.6
comp=Z,1µm,19.0s
OMMB Old Mammoth Mi 129.26 34 IAMs_20 IAMs_20 12 26 16.2
comp=Z,1µm,19.0s
D53A Lac Vacive, Po 129.41 353 IAMs_20 IAMs_20 12 24 33.0
comp=Z,1µm,19.0s
EMMW East Machias 129.49 343 IAMs_20 IAMs_20 12 25 48.5
comp=Z,1µm,20.0s
PDAR Pinedale Array 129.62 22 PKP **PKiKP** **11 18 33.4 +0.2**
comp=Z,0.7nm,0.8s,baz=357,slow=3.0,SNR=6.1
HWUT Hardware Ranch 129.79 25 IAMs_20 IAMs_20 12 24 10.0
comp=Z,1µm,18.0s
RCBR Riachuelo 129.84 265 IAMs_20 IAMs_20 12 07 06.8
comp=Z,1µm,21.0s
G62A West of Eustis 129.85 346 IAMs_20 IAMs_20 12 27 17.0
comp=Z,1µm,20.0s
D41A Chassel 129.94 2 IAMs_20 IAMs_20 12 23 57.5
comp=Z,2µm,20.0s
DUG Dugway, Tooele 130.41 27 IAMs_20 IAMs_20 12 23 50.0
comp=Z,852nm,20.0s
E44A Grand Marais A 130.42 360 IAMs_20 IAMs_20 12 25 14.4
comp=Z,1µm,20.0s
R11A Troy Canyon, C 130.53 31 **PKiKP** **11 18 34.9 -0.2**
R11A IAMs_20 IAMs_20 12 18 51.6
comp=Z,901nm,21.0s
H62A Milan 130.61 346 IAMs_20 IAMs_20 12 27 01.0
comp=Z,1µm,18.0s
E46A Sault Ste Mari 130.65 358 IAMs_20 IAMs_20 12 22 57.4
comp=Z,1µm,21.0s
F36A Milaca 130.75 7 IAMs_20 IAMs_20 12 21 40.9
comp=Z,1µm,21.0s
COWI Conover 130.87 3 IAMs_20 IAMs_20 12 23 12.3
comp=Z,2µm,21.0s
FRNY Flat Rock 130.91 348 IAMs_20 IAMs_20 12 24 54.8
comp=Z,1µm,20.0s
I63A Otisfield 130.96 345 IAMs_20 IAMs_20 12 28 00.3
comp=Z,1µm,20.0s
LBNH Lisbon 131.11 346 IAMs_20 IAMs_20 12 26 24.2
comp=Z,1µm,21.0s
VT1 Waterbury 131.21 347 IAMs_20 IAMs_20 12 27 60.0
comp=Z,1µm,19.0s
LONY Lake Ozonia 131.31 349 IAMs_20 IAMs_20 12 25 05.4
comp=Z,868nm,19.0s
I62A Tamworth 131.31 346 IAMs_20 IAMs_20 12 26 27.6
comp=Z,1µm,19.0s
PLVO Plevna 131.32 351 IAMs_20 IAMs_20 12 27 35.5
comp=Z,958nm,20.0s
RWWY Rawlins 131.42 21 IAMs_20 IAMs_20 12 26 24.6
comp=Z,1µm,18.0s
G40A Rib Lake 131.64 4 IAMs_20 IAMs_20 12 25 29.6
comp=Z,1µm,18.0s
HNH Hanover 131.70 347 IAMs_20 IAMs_20 12 26 57.8
comp=Z,1µm,20.0s
SADO Sadowa 131.86 353 IAMs_20 IAMs_20 12 27 30.7
comp=Z,787nm,20.0s
DELO Deloro Mine 131.91 352 IAMs_20 IAMs_20 12 24 03.3
comp=Z,993nm,21.0s
G45A Suttons Bay 132.00 360 IAMs_20 IAMs_20 12 26 41.2
comp=Z,1µm,20.0s
MWC Mount Wilson 132.19 36 IAMs_20 IAMs_20 12 21 27.2
comp=Z,817nm,20.0s
GLMI Grayling 132.20 359 IAMs_20 IAMs_20 12 20 52.4
comp=Z,1µm,21.0s
ACCN Adirondack Com 132.31 348 IAMs_20 IAMs_20 12 26 17.0
comp=Z,2µm,21.0s
PHWY Pilot Hill 132.37 20 IAMs_20 IAMs_20 12 19 06.7
comp=Z,1µm,22.0s
O20A White River Ci 132.38 23 IAMs_20 IAMs_20 12 27 15.3
comp=Z,1µm,19.0s
J59A Piesco 132.41 349 IAMs_20 IAMs_20 12 23 28.4
comp=Z,868nm,22.0s
HRV Adam Dziewonsk 132.65 345 IAMs_20 IAMs_20 12 28 52.1
comp=Z,1µm,18.0s
J58A Remsen 132.66 349 IAMs_20 IAMs_20 12 22 31.0
comp=Z,895nm,19.0s
K62A Royalston 132.67 346 IAMs_20 IAMs_20 12 25 53.6
comp=Z,1µm,19.0s
WES Weston 132.71 345 IAMs_20 IAMs_20 12 28 55.6
comp=Z,1µm,18.0s
BCX Boston College 132.71 345 IAMs_20 IAMs_20 12 28 49.8
comp=Z,1µm,19.0s
J57A Williamstown 132.74 350 IAMs_20 IAMs_20 12 25 07.1
comp=Z,1µm,20.0s
TRY Troy 132.94 347 IAMs_20 IAMs_20 12 26 14.5
comp=Z,1µm,21.0s
I40A Norwalk 132.98 4 IAMs_20 IAMs_20 12 20 57.0
comp=Z,1µm,22.0s
I47A Gladwin 133.00 358 IAMs_20 IAMs_20 12 21 14.7
comp=Z,1µm,20.0s
I45A Fountain 133.01 0 IAMs_20 IAMs_20 12 25 40.8
comp=Z,1µm,20.0s
I49A Point Hope 133.01 357 IAMs_20 IAMs_20 12 27 18.9
comp=Z,1µm,19.0s
J56A Wolcott 133.01 351 IAMs_20 IAMs_20 12 27 35.4
comp=Z,964nm,20.0s
K31A O'Neill 133.01 13 IAMs_20 IAMs_20 12 28 05.1
comp=Z,1µm,18.0s
QUA2 Belchertown 133.06 346 IAMs_20 IAMs_20 12 29 28.0
comp=Z,1µm,18.0s
J55A Hilton 133.17 352 IAMs_20 IAMs_20 12 29 40.5
comp=Z,1µm,18.0s
BRYW Bryant College 133.20 345 IAMs_20 IAMs_20 12 28 12.7
comp=Z,952nm,19.0s

J54A	**Appleton**	**133.28**	**352**	IAMs_20	IAMs_20	12 28 18.3		
	comp=Z,1µm,20.0s							
M65A	**Busby, Falmout**	**133.29**	**344**	IAMs_20	IAMs_20	12 29 25.2		
	comp=Z,1µm,19.0s							
K58A	**Earlville**	**133.30**	**349**	IAMs_20	IAMs_20	12 25 27.1		
	comp=Z,964nm,20.0s							
PV22	**Blue Mesa, Par**	**133.53**	**25**	IAMs_20	IAMs_20	12 26 08.8		
	comp=Z,1µm,20.0s							
PFO	**Pinyon Flats O**	**133.56**	**36**	IAMs_20	IAMs_20	12 15 11.4		
	comp=Z,879nm,21.0s							
XPFO	**Pion Flat**	**133.56**	**36**	IAMs_20	IAMs_20	12 15 11.4		
	comp=Z,884nm,21.0s							
PV16	**Nyswonger Mesa**	**133.66**	**25**	IAMs_20	IAMs_20	12 29 11.4		
	comp=Z,1µm,19.0s							
U15A	**North Rim**	**133.67**	**29**	IAMs_20	IAMs_20	12 26 11.5		
	comp=Z,826nm,19.0s							
J48A	**Bridge Port**	**133.70**	**358**	IAMs_20	IAMs_20	12 26 20.0		
	comp=Z,1µm,20.0s							
MMNY	**Mt. Morris Dam**	**133.71**	**352**	IAMs_20	IAMs_20	12 28 19.5		
	comp=Z,1µm,20.0s							
PV18	**Skein Mesa, Pa**	**133.72**	**25**	IAMs_20	IAMs_20	12 29 19.9		
	comp=Z,1µm,19.0s							
L59A	**Walton**	**133.74**	**349**	IAMs_20	IAMs_20	12 28 13.7		
	comp=Z,1µm,20.0s							
PV03	**Paradox Valley**	**133.74**	**25**	IAMs_20	IAMs_20	12 29 20.4		
	comp=Z,1µm,20.0s							
PV15	**Paradox Valley**	**133.82**	**24**	IAMs_20	IAMs_20	12 26 09.5		
	comp=Z,1µm,20.0s							
KSCT	**Kent School, K**	**133.85**	**347**	IAMs_20	IAMs_20	12 27 15.8		
	comp=Z,1µm,20.0s							
W13A	**Hualapai Mount**	**133.89**	**32**	IAMs_20	IAMs_20	12 21 14.6		
	comp=Z,844nm,22.0s							
BINY	**Binghamton**	**133.91**	**350**	IAMs_20	IAMs_20	12 25 43.2		
	comp=Z,1µm,19.0s							
JFWS	**Jewell Farm**	**133.98**	**4**	IAMs_20	IAMs_20	12 25 52.5		
	comp=Z,1µm,20.0s							
WVNY	**West Valley, N**	**134.12**	**352**	IAMs_20	IAMs_20	12 29 44.7		
	comp=Z,1µm,20.0s							
L34A	**Svendsen Farm,**	**134.12**	**11**	IAMs_20	IAMs_20	12 25 45.4		
	comp=Z,2µm,20.0s							
L56A	**Greenwood**	**134.24**	**351**	IAMs_20	IAMs_20	12 30 11.7		
	comp=Z,1µm,20.0s							
BGNE	**Belgrade**	**134.31**	**13**	IAMs_20	IAMs_20	12 25 01.3		
	comp=Z,2µm,20.0s							
WSPT	**Westport, CT**	**134.34**	**346**	IAMs_20	IAMs_20	12 27 21.7		
	comp=Z,1µm,20.0s							
KSPA	**Keystone Colle**	**134.49**	**349**	IAMs_20	IAMs_20	12 26 13.6		
	comp=Z,952nm,21.0s							
Y12C	**Blythe**	**134.56**	**34**	IAMs_20	IAMs_20	12 29 45.6		
	comp=Z,762nm,19.0s							
ERPA	**Erie**	**134.58**	**354**	IAMs_20	IAMs_20	12 28 53.6		
	comp=Z,1µm,20.0s							
PAL	**Palisades**	**134.63**	**347**	IAMs_20	IAMs_20	12 31 26.8		
	comp=Z,1µm,18.0s							
SCIA	**State Center**	**134.68**	**7**	IAMs_20	IAMs_20	12 28 27.0		
	comp=Z,1µm,18.0s							
AAM	**Ann Arbor**	**134.69**	**357**	IAMs_20	IAMs_20	12 27 09.2		
	comp=Z,1µm,19.0s							
ODNJ	**Ogdensburg**	**134.71**	**348**	IAMs_20	IAMs_20	12 28 46.6		
	comp=Z,1µm,20.0s							
MVCO	**Mesa Verde**	**134.77**	**25**	IAMs_20	IAMs_20	12 28 08.7		
	comp=Z,1µm,19.0s							
WUAZ	**Wupatki**	**134.84**	**29**	IAMs_20	IAMs_20	12 27 44.6		
	comp=Z,740nm,18.0s							
L42A	**Oliver, Polo**	**134.93**	**4**	IAMs_20	IAMs_20	12 26 41.5		
	comp=Z,1µm,20.0s							
M57A	**Sunshine Farm,**	**134.95**	**350**	IAMs_20	IAMs_20	12 26 02.6		
	comp=Z,932nm,20.0s							
L46A	**Eue Claire**	**135.03**	**0**	IAMs_20	IAMs_20	12 28 20.3		
	comp=Z,1µm,19.0s							
ALLY	**Alegheny Colle**	**135.06**	**354**	IAMs_20	IAMs_20	12 26 40.3		
	comp=Z,1µm,20.0s							
BRNJ	**Basking Ridge**	**135.09**	**348**	IAMs_20	IAMs_20	12 26 34.5		
	comp=Z,1µm,21.0s							
N59A	**State Game Lan**	**135.11**	**349**	IAMs_20	IAMs_20	12 27 24.0		
	comp=Z,876nm,20.0s							
M54A	**Oil Creek Stat**	**135.14**	**353**	IAMs_20	IAMs_20	12 25 28.5		
	comp=Z,2µm,21.0s							
M52A	**Chesterland**	**135.29**	**355**	IAMs_20	IAMs_20	12 25 23.3		
	comp=Z,1µm,21.0s							
N58A	**Sunbury**	**135.36**	**350**	IAMs_20	IAMs_20	12 31 08.5		
	comp=Z,1µm,18.0s							
SDCO	**Great Sand Dun**	**135.51**	**22**	IAMs_20	IAMs_20	12 27 45.0		
	comp=Z,1µm,18.0s							
M50A	**Fremont**	**135.55**	**357**	IAMs_20	IAMs_20	12 27 37.1		
	comp=Z,1µm,19.0s							
N54A	**Moraine State**	**135.72**	**353**	IAMs_20	IAMs_20	12 25 54.8		
	comp=Z,1µm,21.0s							
SSPA	**Standing Stone**	**135.75**	**351**	IAMs_20	IAMs_20	12 29 41.9		
	comp=Z,1µm,20.0s							
W18A	**Petrified Fore**	**135.95**	**28**	IAMs_20	IAMs_20	12 28 55.9		
	comp=Z,1µm,19.0s							
PAGS	**Pennsylvania G**	**135.96**	**350**	IAMs_20	IAMs_20	12 29 21.3		
	comp=Z,1µm,20.0s							
N53A	**Lisbon**	**135.97**	**354**	IAMs_20	IAMs_20	12 22 35.2		
	comp=Z,1µm,22.0s							
N51A	**Ashland**	**135.99**	**356**	IAMs_20	IAMs_20	12 29 56.8		
	comp=Z,1µm,19.0s							
PSUB	**Penn St. - Bra**	**136.00**	**348**	IAMs_20	IAMs_20	12 31 57.6		
	comp=Z,1µm,18.0s							
P61A	**Hammonton**	**136.10**	**347**	IAMs_20	IAMs_20	12 32 02.4		
	comp=Z,1µm,18.0s							
MVL	**Millersville**	**136.11**	**349**	IAMs_20	IAMs_20	12 31 37.4		
	comp=Z,1µm,18.0s							
P60A	**Greenville**	**136.15**	**348**	IAMs_20	IAMs_20	12 32 08.5		
	comp=Z,1µm,18.0s							
N47A	**Urbana**	**136.16**	**359**	IAMs_20	IAMs_20	12 27 45.2		
	comp=Z,1µm,19.0s							
X18A	**Snowflake**	**136.33**	**29**	IAMs_20	IAMs_20	12 29 10.9		
	comp=Z,990nm,19.0s							
HDIL	**Hopedale**	**136.39**	**3**	IAMs_20	IAMs_20	12 27 26.3		
	comp=Z,2µm,20.0s							
O54A	**Avella**	**136.53**	**354**	IAMs_20	IAMs_20	12 27 44.3		
	comp=Z,1µm,20.0s							
SFIN	**Lafayette**	**136.65**	**1**	IAMs_20	IAMs_20	12 24 12.3		
	comp=Z,2µm,22.0s							
ACSO	**Alum Creek Sta**	**136.71**	**356**	IAMs_20	IAMs_20	12 28 31.9		
	comp=Z,1µm,20.0s							
O52A	**Adamsville**	**136.74**	**355**	IAMs_20	IAMs_20	12 30 51.8		
	comp=Z,1µm,18.0s							
O44A	**Mansfield**	**136.84**	**3**	IAMs_20	IAMs_20	12 28 31.1		
	comp=Z,1µm,19.0s							
KSU1	**Kansas State U**	**136.85**	**12**	IAMs_20	IAMs_20	12 24 20.5		
	comp=Z,1µm,20.0s							
Q60A	**Greensboro**	**136.97**	**348**	IAMs_20	IAMs_20	12 32 57.3		
	comp=Z,1µm,19.0s							
P53A	**Whipple**	**137.33**	**355**	IAMs_20	IAMs_20	12 31 04.3		
	comp=Z,1µm,19.0s							
SPB	**Sao Paulo**	**137.44**	**238**	IAMs_20	IAMs_20	12 11 50.7		
	comp=Z,1µm,20.0s							
P51A	**Williamsport**	**137.46**	**356**	IAMs_20	IAMs_20	12 30 09.8		
	comp=Z,1µm,18.0s							
Q56A	**Snyder Ridge,**	**137.51**	**352**	IAMs_20	IAMs_20	12 27 06.3		
	comp=Z,1µm,21.0s							
ANMO	**Albuquerque**	**137.56**	**25**	IAMs_20	IAMs_20	12 24 48.6		
	comp=Z,1µm,20.0s							
P48A	**Milroy**	**137.57**	**359**	IAMs_20	IAMs_20	12 27 20.7		
	comp=Z,1µm,20.0s							
TUC	**Tucson**	**137.68**	**32**	IAMs_20	IAMs_20	12 23 00.9		
	comp=Z,922nm,22.0s							
Q54A	**Coxs Mills**	**137.77**	**354**	IAMs_20	IAMs_20	12 28 25.0		
	comp=Z,1µm,19.0s							
Q51A	**Peebles**	**137.93**	**357**	IAMs_20	IAMs_20	12 28 26.2		
	comp=Z,1µm,20.0s							
Y22D	**IRIS PASSCAL I**	**138.10**	**26**	IAMs_20	IAMs_20	12 30 37.6		
	comp=Z,1µm,18.0s							
S61A	**Accomac**	**138.21**	**347**	IAMs_20	IAMs_20	12 33 37.1		
	comp=Z,1µm,19.0s							
OLIL	**Olney**	**138.27**	**2**	IAMs_20	IAMs_20	12 28 20.2		
	comp=Z,1µm,20.0s							
R40A	**Maddies Statio**	**138.36**	**7**	IAMs_20	IAMs_20	12 26 19.5		
	comp=Z,1µm,20.0s							
R58B	**Mineral**	**138.36**	**350**	IAMs_20	IAMs_20	12 31 31.0		
	comp=Z,1µm,20.0s							
R55A	**Marlinton**	**138.38**	**353**	IAMs_20	IAMs_20	12 24 54.1		
	comp=Z,997nm,20.0s							
R53A	**Hurricane**	**138.53**	**355**	IAMs_20	IAMs_20	12 30 42.9		
	comp=Z,823nm,20.0s							
S58A	**Poland Farm, P**	**138.73**	**350**	IAMs_20	IAMs_20	12 32 08.8		
	comp=Z,1µm,18.0s							
R49A	**Shelbyville**	**138.74**	**359**	IAMs_20	IAMs_20	12 28 05.4		
	comp=Z,1µm,20.0s							
S54A	**Dingess, Beckl**	**138.99**	**354**	IAMs_20	IAMs_20	12 31 46.3		
	comp=Z,1µm,18.0s							
121A	**Cookes Peak, D**	**139.00**	**28**	IAMs_20	IAMs_20	12 33 04.5		
	comp=Z,1µm,18.0s							
319A	**Douglas**	**139.20**	**31**	IAMs_20	IAMs_20	12 31 34.0		
	comp=Z,1µm,18.0s							
T59A	**Double "B" Far**	**139.27**	**349**	IAMs_20	IAMs_20	12 32 41.0		
	comp=Z,1µm,19.0s							
BLA	**Blacksburg**	**139.47**	**353**	IAMs_20	IAMs_20	12 31 42.1		
	comp=Z,1µm,20.0s							
T57A	**Hurt**	**139.52**	**351**	IAMs_20	IAMs_20	12 28 47.7		
	comp=Z,1µm,20.0s							
U38A	**Gravette**	**139.85**	**10**	IAMs_20	IAMs_20	12 28 33.0		
	comp=Z,1µm,20.0s							
U59A	**Littleton**	**139.91**	**349**	IAMs_20	IAMs_20	12 32 47.9		
	comp=Z,1µm,18.0s							
T50A	**Nancy**	**140.00**	**358**	IAMs_20	IAMs_20	12 28 35.8		
	comp=Z,1µm,21.0s							
PBMO	**Poplar Bluff**	**140.06**	**5**	IAMs_20	IAMs_20	12 30 47.4		
	comp=Z,1µm,19.0s							
OKCFA	**Oklahoma City**	**140.18**	**14**	IAMs_20	IAMs_20	12 26 14.9		
	comp=Z,1µm,21.0s							
V61A	**Roper**	**140.22**	**348**	IAMs_20	IAMs_20	12 33 42.3		
	comp=Z,1µm,18.0s							
EPT	**El Paso**	**140.23**	**28**	IAMs_20	IAMs_20	12 28 34.0		
	comp=Z,791nm,20.0s							
U56A	**King**	**140.32**	**353**	IAMs_20	IAMs_20	12 32 46.5		
	comp=Z,1µm,19.0s							
V60A	**Jim Taylor Roa**	**140.38**	**349**	IAMs_20	IAMs_20	12 33 17.4		
	comp=Z,954nm,18.0s							
WMOK	**Wichita Mounta**	**140.47**	**16**	IAMs_20	IAMs_20	12 26 06.9		
	comp=Z,1µm,19.0s							
BDFB	**Brasilia**	**140.47**	**249**	IAMs_20	IAMs_20	12 11 57.5		
	comp=Z,2µm,22.0s							
V58A	**Windy Hill, Pi**	**140.68**	**351**	IAMs_20	IAMs_20	12 33 24.4		
	comp=Z,1µm,18.0s							
FCAR	**Ozark Folk Cen**	**140.75**	**8**	IAMs_20	IAMs_20	12 31 28.6		
	comp=Z,1µm,18.0s							
PEBM	**Pemiscott Bayo**	**140.77**	**5**	IAMs_20	IAMs_20	12 29 41.2		
	comp=Z,1µm,19.0s							
GNAR	**Gosnell**	**140.90**	**5**	IAMs_20	IAMs_20	12 29 44.7		
	comp=Z,1µm,19.0s							
V55A	**Taylorsville**	**140.91**	**354**	IAMs_20	IAMs_20	12 35 39.1		
	comp=Z,1µm,19.0s							
CLTN	**Cedars of Leba**	**140.94**	**0**	IAMs_20	IAMs_20	12 31 23.8		
	comp=Z,1µm,19.0s							
HALT	**Halls**	**141.01**	**4**	IAMs_20	IAMs_20	12 27 41.5		
	comp=Z,1µm,20.0s							
CNNC	**Cliffs of the**	**141.01**	**349**	IAMs_20	IAMs_20	12 29 34.1		
	comp=Z,1µm,20.0s							
V52A	**Sevierville**	**141.12**	**357**	IAMs_20	IAMs_20	12 30 32.5		
	comp=Z,1µm,19.0s							
V51A	**Loudon**	**141.19**	**358**	IAMs_20	IAMs_20	12 29 12.5		
	comp=Z,1µm,20.0s							
LPAR	**Lepanto**	**141.24**	**5**	IAMs_20	IAMs_20	12 30 35.6		
	comp=Z,1µm,19.0s							
V48A	**Smith Brothers**	**141.29**	**1**	IAMs_20	IAMs_20	12 28 18.0		
	comp=Z,1µm,20.0s							
W57A	**Gilead**	**141.44**	**352**	IAMs_20	IAMs_20	12 28 03.5		
	comp=Z,1µm,20.0s							
KMSC	**Kings Mountain**	**141.62**	**354**	IAMs_20	IAMs_20	12 30 24.0		
	comp=Z,1µm,21.0s							
W45A	**Hickory Valley**	**141.77**	**4**	IAMs_20	IAMs_20	12 34 13.7		
	comp=Z,757nm,19.0s							
W52A	**Murphy**	**141.88**	**357**	IAMs_20	IAMs_20	12 31 39.7		
	comp=Z,1µm,19.0s							
BG3	**Lake Jocassee**	**141.92**	**356**	IAMs_20	IAMs_20	12 31 00.7		
	comp=Z,1µm,19.0s							
X58A	**Rowland**	**141.93**	**351**	IAMs_20	IAMs_20	12 32 49.5		
	comp=Z,1µm,19.0s							
PAULI	**Pauline**	**141.99**	**354**	IAMs_20	IAMs_20	12 25 12.7		
	comp=Z,1µm,22.0s							
BIRD	**Birdtown, Kers**	**142.01**	**352**	IAMs_20	IAMs_20	12 28 47.4		
	comp=Z,1µm,20.0s							
OXF	**Oxford**	**142.39**	**4**	IAMs_20	IAMs_20	12 33 03.2		
	comp=Z,1µm,18.0s							
X51A	**Calhoun**	**142.44**	**358**	IAMs_20	IAMs_20	12 30 00.6		
	comp=Z,1µm,20.0s							
Y57A	**Sumter**	**142.62**	**352**	IAMs_20	IAMs_20	12 29 06.5		
	comp=Z,942nm,21.0s							
HODGE	**Hodges**	**142.62**	**355**	IAMs_20	IAMs_20	12 25 42.3		
	comp=Z,1µm,20.0s							
Y58A	**Scranton**	**142.62**	**351**	IAMs_20	IAMs_20	12 28 51.7		
	comp=Z,1µm,20.0s							
Y45A	**Yeager Farm, C**	**143.03**	**5**	IAMs_20	IAMs_20	12 28 43.9		
	comp=Z,1µm,20.0s							
WHTX	**Lake Whitney,**	**143.42**	**16**	IAMs_20	IAMs_20	12 28 41.1		
	comp=Z,1µm,20.0s							
Z56A	**Williston**	**143.42**	**353**	IAMs_20	IAMs_20	12 34 49.6		
	comp=Z,853nm,20.0s							
NHSC	**New Hope**	**143.48**	**352**	IAMs_20	IAMs_20	12 36 50.4		
	comp=Z,1µm,19.0s							
TX32	**Lajitas Array**	**143.58**	**26**		PKPab	11 18 54.9	0.0	
TXAR	**Lajitas Array**	**143.58**	**26**	PKP	PKPbc	11 18 56.3	+0.6	
	comp=Z,1.1nm,0.7s,baz=180,slow=1.9,SNR=12							
Z47A	**Carrollton**	**143.78**	**3**	IAMs_20	IAMs_20	12 31 31.0		
	comp=Z,1µm,20.0s							
BI02	**San Fabian de**	**143.96**	**201**	IAMs_20	IAMs_20	12 12 49.6		
	comp=Z,1µm,21.0s							
CPUP	**Villa Florida**	**144.03**	**227**	PKP	PKPbc	11 18 57.5	+0.5	
	comp=Z,6.9nm,0.7s,baz=113,slow=3.7,SNR=12							
CPUP	**Villa Florida**	**144.03**	**227**		**PKPab**	**11 18 56.3**	**-0.2**	
JCT	**Junction City**	**144.09**	**20**	IAMs_20	IAMs_20	12 30 31.1		
	comp=Z,976nm,20.0s							
146A	**Union**	**144.28**	**4**		**PKPdf**	**11 18 59.5**	**+0.1**	
146A				IAMs_20	IAMs_20	12 27 31.5		
	comp=Z,1µm,22.0s							
257A	**Skidaway Islan**	**144.71**	**352**	IAMs_20	IAMs_20	12 28 09.0		
	comp=Z,1µm,21.0s							
346A	**Big Creek Wild**	**145.49**	**5**	IAMs_20	IAMs_20	12 33 36.5		
	comp=Z,1µm,19.0s							
352A	**Blakely**	**145.52**	**358**		**PKPdf**	**11 19 00.8**	**-0.8**	
441A	**DeRidder**	**145.61**	**11**	IAMs_20	IAMs_20	12 31 02.4		
	comp=Z,1µm,21.0s							
GO05	**Huala**	**145.68**	**201**	IAMs_20	IAMs_20	12 14 52.1		
	comp=Z,1µm,21.0s							
HKT	**Hokley**	**145.79**	**15**	PKP2	**PKPab**	**11 19 03.1**	**+0.3**	
HKT	**Hockley**	**145.79**	**15**		**PKPab**	**11 19 03.1**	**+0.3**	
MT05	**Renca**	**146.66**	**204**	IAMs_20	IAMs_20	12 18 04.4		
	comp=Z,1µm,20.0s							
VA03	**San Esteban**	**147.12**	**205**		**PKPbc**	**11 19 06.9**	**+0.4**	
CO04	**Los Peladeros**	**147.93**	**205**	IAMs_20	IAMs_20	12 18 20.2		
	comp=Z,1µm,20.0s							
SKI	**Saint Kitts**	**149.19**	**312**	IAMs_20	IAMs_20	12 32 00.0		
	comp=Z,849nm,20.0s							
CO01	**Juntas del Tor**	**149.30**	**208**		**PKPbc**	**11 19 10.8**	**-1.8**	
SJG	**San Juan**	**151.09**	**318**	IAMs_20	IAMs_20	12 32 07.5		
	comp=Z,783nm,22.0s							
SC01	**Santiago de lo**	**152.90**	**327**	IAMs_20	IAMs_20	12 38 19.9		
	comp=Z,1µm,21.0s							
SDDR	**Presa de Saban**	**153.57**	**327**	IAMs_20	IAMs_20	12 29 13.9		
	comp=Z,1µm,22.0s							
PTGA	**Pitinga**	**153.72**	**275**	IAMs_20	IAMs_20	12 37 07.6		
	comp=Z,852nm,18.0s							
GTBY	**Guantanamo Bay**	**154.61**	**335**	IAMs_20	IAMs_20	12 41 57.5		
	comp=Z,751nm,20.0s							
PB09	**IPC Station P**	**155.24**	**220**	IAMs_20	IAMs_20	12 43 18.1		
	comp=Z,619nm,19.0s							
SAML	**Samuel**	**156.46**	**255**	PKP2	**PKPab**	**11 19 46.7**	**-0.6**	
SAML	**Samuel**	**156.46**	**255**		**PKPab**	**11 19 46.7**	**-0.6**	
TEIG	**Tepich**	**156.66**	**5**	IAMs_20	IAMs_20	12 39 52.2		
	comp=Z,1µm,20.0s							
TA01	**Diego Aracena**	**156.73**	**221**	IAMs_20	IAMs_20	12 20 45.6		
	comp=Z,1µm,21.0s							
LPAZ	**La Paz**	**158.00**	**232**	PKP	**PKPdf**	**11 19 23.2**	**+1.8**	
	comp=Z,1.7nm,0.8s,baz=350,slow=2.3,SNR=5.2							
LPAZ				PKPab	**PKPab**	**11 19 54.4**	**-0.2**	
	comp=Z,1.8nm,0.7s,baz=160,slow=5.4,SNR=6.6							
CCIG	**Comitan**	**159.79**	**17**	IAMs_20	IAMs_20	12 40 24.4		
	comp=Z,1µm,21.0s							

*IDC **18** 11:57:46.4±0.5,56˚.99S×24˚.96W,h0km,mb4.4/17, mb1 4.5/18,mb1mx4.3/36,mbtmp4.4/18,ML3.9/1,Error ellipse: s-maj=22.8km s-min=12.9km az=51.0*
*NEIC **18** 11:57:52.1±1.9,57˚.0S±0˚.1×24˚.8W±0˚.2,h42km±5km, mb4.7/46,Error ellipse: s-maj=19.1km s-min=12.8km az=209.0*

ISC 18 11:57:49.9±0.4,**57˚.06S**±0˚.09×**24˚.90W**±0˚.09,**h22**km,**n127,** σ1s**19**/126,**mb4.6**/33,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.12**	**288**		**Pn**	**11 59 34.6**	**+2.0**
VNA1	**Neumayer--Stat**	**15.39**	**159**	P	**Pn**	**12 01 24.7**	**-0.6**
VNA3	**Neumayer Olymp**	**15.62**	**162**	P	**Pn**	**12 01 26.9**	**-1.5**
VNA2	**Neumayer--Watz**	**15.79**	**159**	P	**Pn**	**12 01 29.2**	**-1.3**
	baz=326,slow=15						
SNAA	**Sanae**	**17.31**	**156**	P	**Pn**	**12 01 49.4**	**-0.4**
SNAA	**Sanae**	**17.31**	**156**	P	**Pn**	**12 01 49.6**	**-0.3**
	0.4nm,0.3s,baz=319,slow=16,SNR=31						
SNAA	**Sanae**	**17.31**	**156**	P	**Pn**	**12 01 49.3**	**-0.5**
EFI	**East Falkland**	**19.92**	**272**	P	**P**	**12 02 19.9**	**+0.1**
EFI				IAmb	IAmb	12 02 20.6	
	comp=Z,31nm,0.8s						
PMSA	**Palmer Station**	**20.23**	**231**	P	Pn	12 02 25.5	+0.4
MG01	**Puerto William**	**23.71**	**257**		**P**	**12 02 57.4**	**-2.4**
GO10	**Punta Arenas**	**26.29**	**259**	P	**P**	**12 03 25.4**	**+1.9**
GO09	**Cerro Castillo**	**27.89**	**261**	P	**P**	**12 03 37.0**	**-0.9**
GO09				IAmb	IAmb	12 03 38.4	
	comp=Z,14nm,0.9s						
PLTB	**Pedras Altas**	**32.12**	**310**	*eP*	**P**	**12 04 15.6**	**+0.2**
QSPA	**South Pole Qui**	**33.19**	**180**	P	**P**	**12 04 25.2**	**+0.5**
	comp=Z,2.2nm,0.6s,baz=153,slow=0.2,SNR=22						
QSPA	**South Pole Qui**	**33.19**	**180**	P	**P**	**12 04 24.8**	**+0.1**
QSPA				IAmb	IAmb	12 04 38.8	
	comp=Z,14nm,1.4s						
PLCA	**Paso Flores**	**33.42**	**279**	P	**P**	**12 04 25.4**	**-1.4**
	comp=Z,5.1nm,1.1s,baz=162,slow=9.2,SNR=4.1						
PLCA	**Paso Flores**	**33.42**	**279**	P	**P**	**12 04 24.9**	**-1.9**
ITQB	**Itaqui**	**35.22**	**307**	*eP*	**P**	**12 04 43.9**	**+1.5**
VAO	**Valinhos**	**37.63**	**325**	*eP*	**P**	**12 05 04.4**	**+1.4**
PTGB	**Pitanga**	**37.78**	**317**	*eP*	**P**	**12 05 05.0**	**+0.7**
GO05	**Huala**	**38.37**	**285**	P	**P**	**12 05 06.9**	**-2.3**
GO05				IAmb	IAmb	12 05 14.0	
	comp=Z,9.1nm,1.3s						
CPUP	**Villa Florida**	**38.43**	**309**	P	**P**	**12 05 07.8**	**-1.9**
	comp=Z,6.3nm,0.9s,baz=140,slow=8.0,SNR=11						
CPUP	**Villa Florida**	**38.43**	**309**	P	**P**	**12 05 09.7**	**0.0**
CPUP	**Villa Florida**	**38.43**	**309**	*eP*	**P**	**12 05 09.9**	**+0.2**
MAW	**Mawson**	**38.58**	**142**	P	**P**	**12 05 11.2**	**+0.7**
	comp=Z,5.7nm,1.1s,baz=258,slow=2.7,SNR=6.6						
MAW	**Mawson**	**38.58**	**142**	P	**P**	**12 05 11.2**	**+0.7**
CFA	**Coronel Fontan**	**39.12**	**292**	P	**P**	**12 05 12.9**	**-2.6**
	comp=Z,2.5nm,0.4s,baz=146,slow=8.3,SNR=12						
MT02	**Curacav**	**39.30**	**287**	P	**P**	**12 05 15.1**	**-1.8**
VA03	**San Esteban**	**39.38**	**288**	P	**P**	**12 05 17.2**	**-0.6**
VA03				IAmb	IAmb	12 05 36.0	
	comp=Z,11nm,1.4s						
RIB01	**Linhares ES**	**39.41**	**337**	*eP*	**P**	**12 05 19.4**	**+1.4**
ROC1	**El Roble**	**39.46**	**288**	P	**P**	**12 05 17.2**	**-1.4**
CO02	**Combarbal**	**40.85**	**289**	P	**P**	**12 05 28.8**	**-1.2**
CO02				IAmb	IAmb	12 05 28.9	
	comp=Z,18nm,1.3s						
CO03	**El Pedregal**	**40.98**	**290**	P	**P**	**12 05 29.7**	**-1.3**
CO01	**Juntas del Tor**	**41.37**	**291**	P	**P**	**12 05 32.9**	**-1.5**
GO04	**Tololo Observa**	**41.57**	**290**	P	**P**	**12 05 35.1**	**-0.9**
GO04				IAmb	IAmb	12 05 43.5	
	comp=Z,22nm,1.2s						
ITRB	**Iturama**	**41.80**	**323**	*eP*	**P**	**12 05 38.5**	**+0.8**
AC05	**El Transito**	**42.38**	**292**	P	**P**	**12 05 41.7**	**-0.9**
AC05				IAmb	IAmb	12 05 41.9	
	comp=Z,7.5nm,0.7s						
IPMB	**Ipameri, GO**	**42.73**	**326**	*eP*	**P**	**12 05 47.0**	**+1.6**
AODB	**Aquidauana**	**43.01**	**315**	*eP*	**P**	**12 05 48.0**	**+0.5**
AC02	**Maricunga**	**43.45**	**295**	P	**P**	**12 05 51.2**	**-0.5**
AC02				IAmb	IAmb	12 05 52.1	
	comp=Z,8.5nm,0

SDV	**Santo Domingo**	**75.62**	**313**	P	**P**		**12 09 33.3**	**+0.1**
SDV				IAmb	IAmb		12 09 34.4	
	comp=Z,6.0nm,0.9s							
SDV	**Santo Domingo**	**75.62**	**313**	*e*P	**P**		**12 09 33.8**	**+0.6**
STKA	**Stephens Creek**	**90.68**	**169**	P	**P**		**12 10 50.8**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=161,slow=9.6,SNR=3.7							
STKA	**Stephens Creek**	**90.68**	**169**	P	**P**		**12 10 51.1**	**+0.4**
ASAR	**Alice Springs**	**97.63**	**160**	P	Pdif		12 11 22.6	-0.2
	comp=Z,0.4nm,0.8s,baz=189,slow=4.1,SNR=5.5							
PDAR	**Pinedale Array**	**121.95**	**300**	PKP	**PKPdf**		**12 16 40.9**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=140,slow=3.5,SNR=2.1							
MDPB	**Devils Postpil**	**122.74**	**290**		**PKPdf**		**12 16 41.0**	**-2.5**
NVAR	**Mina Array Bea**	**122.95**	**291**	PKP	**PKiKP**		**12 16 44.9**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=86,slow=2.6,SNR=4.1							
FXWY	**Fox Creek**	**123.31**	**300**		**PKiKP**		**12 16 44.6**	**0.0**
CMAR	**Chiang Mai Arr**	**123.53**	**109**	PKP	**PKiKP**		**12 16 45.1**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=240,slow=4.2,SNR=6.4							
FINES	**FINESS Array B**	**124.70**	**27**	PKP	**PKPdf**		**12 16 45.4**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=114,slow=2.3,SNR=2.3							
KSH	**Kashi**	**127.63**	**74**	PKP	**PKiKP**		**12 17 00.3**	**+7.1**
ARCES	**ARCESS Array B**	**131.42**	**21**	PKP	**PKiKP**		**12 16 59.1**	**-0.6**
	comp=Z,2.6nm,0.9s,baz=340,slow=21,SNR=1.2							
YKA	**Yellowknife Ar**	**137.77**	**316**	PKP	**PKPdf**		**12 17 10.8**	**0.0**
	comp=Z,2.9nm,1.1s,baz=125,slow=2.5,SNR=15							
LZH	**Lanzhou**	**140.19**	**99**	*e*PKP	**PKPdf**		**12 17 17.0**	**+0.7**
LZH				pPKP	sPKPdf		12 17 32.1	+8.0
LZH				sPKP			12 17 37.5	
LZH				LR	LR			
	comp=N,81nm,18.2s							
LZH				LR	LR			
	comp=E,87nm,18.1s							
LZH				LR	LR			
	comp=Z,110nm,20.3s							
SKAG	**Skagway**	**144.83**	**304**		**PKPdf**		**12 17 23.8**	**+0.3**
INK	**Inuvik**	**147.39**	**319**	PKPbc	**PKPbc**		**12 17 29.9**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=139,slow=3.4,SNR=13							
INK	**Inuvik**	**147.39**	**319**		**PKPbc**		**12 17 29.7**	**-0.4**
EPYK	**Eagle Plains**	**148.03**	**315**		**PKPbc**		**12 17 31.2**	**-0.8**
DAWY	**Dawson**	**148.41**	**310**		**PKPbc**		**12 17 32.9**	**-0.2**
VRDI	**Verde Repeater**	**149.24**	**304**		**PKPbc**		**12 17 35.4**	**-0.1**
SONM	**Songino Array**	**149.53**	**86**	PKPbc	**PKPbc**		**12 17 36.2**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=216,slow=3.1,SNR=6.2							
MENT	**Mentasta**	**149.91**	**307**		**PKiKP**		**12 17 37.2**	**-0.6**
SCRK	**Sand Creek**	**150.32**	**309**		**PKiKP**		**12 17 38.1**	**-0.6**
RIDG	**Independent Ri**	**150.62**	**308**		**PKPbc**		**12 17 37.0**	**-1.5**
DHY	**Denali Highway**	**151.55**	**306**		**PKiKP**		**12 17 41.0**	**-0.3**
SML	**Sawmill**	**151.64**	**303**		**PKPbc**		**12 17 40.3**	**-0.7**
HDA	**Harding Lake**	**151.68**	**309**		**PKiKP**		**12 17 41.0**	**-0.3**
HDA					**PKPab**		**12 17 51.0**	**+1.1**
IL31		**151.73**	**310**		**PKiKP**		**12 17 40.9**	**-0.5**
ILAR	**Eielson Array**	**151.73**	**310**	PKPbc	**PKiKP**		**12 17 40.9**	**-0.5**
	comp=Z,7.7nm,1.0s,baz=125,slow=1.5,SNR=35							
CCB	**Clear Creek Bu**	**152.09**	**309**		**PKPbc**		**12 17 39.9**	**-2.0**
WRH	**Wood River Hil**	**152.18**	**309**		**PKiKP**		**12 17 41.7**	**-0.7**
RND	**Reindeer**	**152.28**	**307**		**PKiKP**		**12 17 42.4**	**-0.3**
MCK	**McKinley**	**152.39**	**307**		**PKiKP**		**12 17 42.8**	**0.0**
NEA	**Nenana**	**152.62**	**309**		**PKPbc**		**12 17 41.2**	**-1.9**
TRF	**Thorofare Moun**	**152.92**	**306**		**PKiKP**		**12 17 43.6**	**-0.6**
TOLK	**Toolik Lake Re**	**153.28**	**318**		**PKiKP**		**12 17 44.4**	**-0.2**
BPAW	**Bear Paw Mtn.**	**153.35**	**308**		**PKPbc**		**12 17 44.1**	**-0.6**
KSRS	**Korea Array**	**153.38**	**126**	PKPbc	**PKPbc**		**12 17 44.9**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=194,slow=3.9,SNR=3.2							

GCG ***18*** *12:00:21.8±0.7, 13.56N×92.65W, h30km±674km, MD4.2*
NEIC ***18*** *12:00:28.4±3.0, 13.62N±0.07×92.08W±0.07, h31km±7km, mb4.2/44, Error ellipse: s-maj=11.5km s-min=8.4km az=222.0*
IDC ***18*** *12:00:42.2±2.5, 14.80N×91.24W, h109km±14km, mb3.4/5, mb1 3.7/7, mb1mx3.3/53, mbtmp3.8/7, Error ellipse: s-maj=72.5km s-min=22.4km az=39.0*

ISC 18 12:00:29.4±0.8**, 13.70N**±0.09×**92.18W**±0.07**, h35km, n73, σ1§95/77, mb4.2/23, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
STG3	**Santiaguito 3,**	**1.17**	**31**	*e*P	**Pn**	**12 00 48.0**	**-1.5**
FUG	**Fuego 3**	**1.50**	**60**	*e*P	**Pn**	**12 00 52.7**	**-1.3**
PCG	**Pacaya**	**1.68**	**66**	*e*P	**Pn**	**12 00 56.5**	**0.0**
IXG	**Ixpaco**	**1.76**	**74**	*e*P	**Pn**	**12 00 55.4**	**-2.2**
NBG	**Las Nubes**	**1.99**	**63**	*e*P	**Pn**	**12 01 01.1**	**+0.3**
APG	**El Apazote**	**2.11**	**52**	P	**Pn**	**12 01 01.9**	**-0.6**
	15nm,0.3s,baz=232,slow=11,SNR=200						
APG				S	**Sn**	**12 01 28.8**	**+1.1**
	56nm,0.3s,baz=263,slow=7.7,SNR=24						
CCIG	**Comitan**	**2.57**	**1**		**Pn**	**12 01 10.3**	**+1.5**
CCIG				Sn	**Sn**	**12 01 42.5**	**+3.7**
MRL	**Marmol**	**2.79**	**60**	*e*P	**Pn**	**12 01 11.8**	**0.0**
MRL				*e*S	**Sn**	**12 01 50.7**	**+6.4**
SNET	**Serv Nac Est T**	**2.87**	**90**		**Pn**	**12 01 13.0**	**+0.2**
CMIG	**Matias Romero**	**4.26**	**323**	P	**Pn**	**12 01 31.9**	**0.0**
	0.8nm,0.3s,baz=160,slow=13,SNR=11						
CMIG				S	Sn	12 02 33.7	+13
	5.9nm,0.3s,baz=292,slow=6.2,SNR=3.4						
CMIG	**Matias Romero**	**4.26**	**323**		**Pn**	**12 01 29.6**	**-2.3**
TGUH	**Tegucigalpa,Un**	**4.78**	**85**	Pn	**Pn**	**12 01 35.7**	**-3.4**
ESTN	**Estel**	**5.69**	**95**		**Pn**	**12 01 49.2**	**-2.4**
MATN	**Matagalpa**	**6.14**	**96**		**Pn**	**12 01 55.9**	**-1.9**
ACON	**Acoyapa**	**7.05**	**103**	Pn	**Pn**	**12 02 13.1**	**+2.9**
TLIG	**Tlapa**	**7.25**	**303**		**Pn**	**12 02 14.5**	**+1.4**
TEIG	**Tepich**	**7.49**	**29**		**Pn**	**12 02 16.9**	**+0.7**
JTS	**Las Juntas de**	**7.84**	**115**	P	**Pn**	**12 02 22.9**	**+1.8**
	0.8nm,0.3s,baz=4.8,slow=21,SNR=5.4						
JTS	**Las Juntas de**	**7.84**	**115**	Pn	**Pn**	**12 02 23.2**	**+2.1**
TXAR	**Lajitas Array**	**18.85**	**327**	P	**Pn**	**12 04 49.1**	**+1.8**
	0.1nm,0.3s,baz=160,slow=13,SNR=23						
TX31	**Lajitas Ar. Si**	**18.85**	**327**	P	**Pn**	**12 04 48.3**	**+0.9**
TX32	**Lajitas Array**	**18.85**	**327**	P	**Pn**	**12 04 48.0**	**+0.6**
Z38A	**Mt. Pleasant**	**19.64**	**353**	P	**P**	**12 04 55.4**	**+0.2**
Z38A				IAmb	IAmb	12 04 58.2	
	comp=Z,7.8nm,0.7s						
ROSC	**El Rosal**	**19.69**	**115**	P	**Pn**	**12 04 58.8**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=2.8,slow=14,SNR=1.2						
ROSC	**El Rosal**	**19.69**	**115**	P	**P**	**12 04 57.2**	**+0.9**
ROSC				IAmb	IAmb	12 05 05.0	
	comp=Z,19nm,1.4s						
Z47A	**Carrollton**	**19.77**	**10**	P	**P**	**12 04 56.3**	**-0.3**
Z47A				IAmb	IAmb	12 04 57.5	
	comp=Z,7.0nm,0.7s						
Z50A	**Ashland**	**20.29**	**15**		Pn	12 05 03.2	-1.2
RUSC	**La Rusia**	**20.34**	**111**	P	**P**	**12 05 03.0**	**-0.5**
PLAL	**Pickwick Lake**	**21.51**	**9**	P	**P**	**12 05 15.4**	**0.0**
GDL2	**Guadalupe Moun**	**21.53**	**331**	P	**P**	**12 05 16.1**	**+0.4**
FPAL	**Fort Paine**	**21.59**	**15**	P	**P**	**12 05 16.3**	**0.0**
MNTX	**Cornudas Mount**	**21.62**	**328**	P	**P**	**12 05 17.3**	**+0.6**
WMOK	**Wichita Mounta**	**21.78**	**345**	P	**P**	**12 05 17.9**	**-0.4**
WMOK				IAmb	IAmb	12 05 24.0	
	comp=Z,12nm,1.5s						
SWET	**Sewanee**	**22.16**	**14**	P	**P**	**12 05 20.8**	**-1.5**
MSTX	**Muleshoe**	**22.35**	**336**	P	**P**	**12 05 24.3**	**-0.3**
U38A	**Gravette**	**22.73**	**355**	P	**P**	**12 05 28.7**	**+0.3**
CPCT	**Cooper Cave**	**22.73**	**16**	P	**P**	**12 05 27.0**	**-1.4**
AMTX	**Amarillo**	**22.77**	**339**	P	**P**	**12 05 28.5**	**-0.5**
AMTX				IAmb	IAmb	12 05 30.1	
	comp=Z,9.0nm,0.6s						
TKL	**Tuckaleechee C**	**23.14**	**18**	P	**P**	**12 05 31.6**	**-1.1**
TKL				IAmb	IAmb	12 05 38.7	
	comp=Z,10nm,1.4s						
T47A	**Sharon Grove**	**23.63**	**10**	P	**P**	**12 05 35.0**	**-2.5**
T47A				IAmb	IAmb	12 05 37.3	
	comp=Z,6.0nm,0.8s						
S44A	**Carbondale**	**24.04**	**6**	P	**P**	**12 05 39.0**	**-2.2**
S44A				IAmb	IAmb	12 05 40.2	
	comp=Z,11nm,0.9s						
SIUC	**Southern Illin**	**24.06**	**6**	P	**P**	**12 05 39.0**	**-2.5**
SIUC				IAmb	IAmb	12 05 40.3	
	comp=Z,12nm,0.9s						
BNM	**Barren Site**	**24.21**	**330**	P	**P**	**12 05 45.0**	**+1.8**
ANMO	**Albuquerque**	**24.77**	**331**	P	**P**	**12 05 48.9**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=154,slow=12,SNR=9.2						
ANMO	**Albuquerque**	**24.77**	**331**	P	**P**	**12 05 48.2**	**-0.1**
WCI	**Wyandotte Cave**	**24.98**	**11**	P	**P**	**12 05 47.6**	**-2.3**
WCI				IAmb	IAmb	12 05 50.1	
	comp=Z,5.4nm,0.8s						
OLIL	**Olney**	**25.20**	**8**	P	**P**	**12 05 50.1**	**-1.7**
OLIL				IAmb	IAmb	12 05 51.0	
	comp=Z,6.8nm,0.8s						
MVCO	**Mesa Verde**	**27.57**	**331**	P	**P**	**12 06 15.3**	**+1.7**
MVCO				IAmb	IAmb	12 06 16.3	
	comp=Z,4.5nm,1.0s						
PV13	**Radium Mtn., P**	**28.49**	**332**	P	**P**	**12 06 23.2**	**+1.5**
PV13				IAmb	IAmb	12 06 24.5	
	comp=Z,3.9nm,0.9s						
PV03	**Paradox Valley**	**28.58**	**332**	P	**P**	**12 06 23.3**	**+0.8**
PV03				IAmb	IAmb	12 06 25.2	
	comp=Z,3.7nm,1.0s						
J56A	**Wolcott**	**32.29**	**21**	P	**P**	**12 06 52.6**	**-2.3**
K58A	**Earlville**	**32.29**	**23**	P	**P**	**12 06 53.2**	**-1.8**
K58A				IAmb	IAmb	12 06 56.9	
	comp=Z,4.1nm,0.9s						
J57A	**Williamstown**	**32.72**	**22**	P	**P**	**12 06 56.2**	**-2.4**
PECO	**Prince Edward**	**32.82**	**20**	P	**P**	**12 06 57.0**	**-2.5**
PECO				IAmb	IAmb	12 07 05.1	
	comp=Z,7.0nm,1.3s						
DELO	**Deloro Mine**	**33.14**	**19**	P	**P**	**12 06 60.0**	**-2.4**
SNOW	**Snow King Moun**	**33.68**	**335**	P	**P**	**12 07 08.9**	**+1.5**
TPAW	**Teton Pass**	**33.78**	**335**	P	**P**	**12 07 09.0**	**+0.7**
TPAW				IAmb	IAmb	12 07 14.2	
	comp=Z,3.1nm,1.1s						
NVAR	**Mina Array Bea**	**33.79**	**322**	P	**P**	**12 07 11.1**	**+2.6**
	comp=Z,0.9nm,0.7s,baz=140,slow=9.0,SNR=9.2						
NVAR				PcP	**PcP**	**12 09 51.3**	**+4.1**
	comp=Z,0.3nm,0.6s,baz=134,slow=2.6,SNR=2.9						
MCMT	**McKenzie Canyo**	**35.66**	**334**	P	**P**	**12 07 26.3**	**+1.8**
J08A	**Circle Bar Ran**	**37.20**	**328**	P	**P**	**12 07 39.2**	**+1.8**
J08A				IAmb	IAmb	12 07 42.0	
	comp=Z,4.7nm,0.8s						
F63A	**Nahmakanta, Br**	**37.40**	**27**	P	**P**	**12 07 36.7**	**-2.3**
G65A	**Princeton**	**37.71**	**29**	P	**P**	**12 07 39.1**	**-2.5**
E63A	**Oxbow**	**38.25**	**27**	P	**P**	**12 07 43.7**	**-2.5**
F10A	**Beach Ranch, E**	**38.49**	**332**	P	**P**	**12 07 48.7**	**+0.3**
F10A				IAmb	IAmb	12 07 54.4	
	comp=Z,4.1nm,0.9s						
D62A	**Allapoint, All**	**38.50**	**26**	P	**P**	**12 07 45.4**	**-2.9**
DRLN	**Deer Lake**	**45.46**	**32**	P	**P**	**12 08 41.3**	**-3.7**
YKA	**Yellowknife Ar**	**51.28**	**347**	P	**P**	**12 09 28.7**	**-1.0**
	comp=Z,0.9nm,0.7s,baz=146,slow=7.7,SNR=14						
YKA				PcP	**PcP**	**12 10 45.3**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=148,slow=3.7,SNR=8.9						
INK	**Inuvik**	**60.68**	**344**	P	**P**	**12 10 36.9**	**+0.1**
INK				IAmb	IAmb	12 10 37.7	
	comp=Z,2.0nm,0.8s						
ILAR	**Eielson Array**	**63.04**	**337**	P	**P**	**12 10 54.2**	**+1.3**
	comp=Z,0.5nm,0.8s,baz=121,slow=5.3,SNR=7.7						
RND	**Reindeer**	**63.22**	**335**	P	**P**	**12 10 55.0**	**+0.8**
RND				IAmb	IAmb	12 11 10.4	
	comp=Z,2.8nm,1.1s						
EKA	**Eskdalemuir Ar**	**78.31**	**36**	P	**P**	**12 12 21.7**	**-4.2**
	comp=Z,0.9nm,0.6s,baz=278,slow=4.9,SNR=2.3						
LZH	**Lanzhou**	**128.22**	**343**	*e*PKP	**PKPdf**	**12 19 32.6**	**-0.3**
LZH				pPKP	pPKPdf	12 19 43.8	+0.4
LZH				sPKP		12 19 48.0	
CMAR	**Chiang Mai Arr**	**146.22**	**341**	PKPbc	**PKPbc**	**12 20 07.3**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=342,slow=3.6,SNR=9.9						

NIC ***18*** *12:08:05.1±0.0, 34.90N×26.04E, h20km, Ml4.2/4*
ISK ***18*** *12:08:05.9, 34.89N×26.17E, h2km, ML4.1/17*
ATH ***18*** *12:08:05.7, 34.88N×26.17E, h21km±1km, ML4.2/15, Error ellipse: s-maj=3.6km s-min=1.4km az=343.0*
MOS ***18*** *12:08:06.3±1.0, 34.82N×26.07E, h24km, mb4.4/17, Error ellipse: s-maj=7.3km s-min=4.4km az=91.1*
IDC ***18*** *12:08:07.3±3.9, 34.98N×26.12E, h16km±25km, mb4.1/22, mb1 4.2/32, mb1mx4.1/49, mbtmp4.2/32, ML3.9/10, Error ellipse: s-maj=15.5km s-min=8.5km az=3.0*
THE ***18*** *12:08:07.1, 34.92N×26.11E, h0km, ML4.3/14, Error ellipse: s-maj=1.9km s-min=0.7km az=155.0*
NEIC ***18*** *12:08:08.6±2.0, 34.84N±0.08×26.08E±0.07, h26km±3km, mb4.3/41, ML4.3(THE), ML4.2(ATH), Error ellipse: s-maj=12.1km s-min=8.4km az=192.0*
DDA ***18*** *12:08:08.0, 34.74N×26.11E, h39km±196km, MW4.3*
GII ***18*** *12:08:11.2±0.0, 34.72N×26.66E, h8km, mb4.2/4, MD4.0/4, Mm4.0/7*

ISC 18 12:08:07.6±0.5**, 34.92N**±0.03×**26.14E**±0.02**, h19**km±2km**, n379, σ1§84/441, mb4.3**/57**, 20C-12D, Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
ZKR	**Zakros**	**0.20**	**18**	P	**Pb**	**12 08 11.7**	**-0.6**
ZKR				S	**Sb**	**12 08 15.6**	**+0.3**
	160μm,0.4s						
ZKR	**Zakros**	**0.20**	**18**	P	**Pb**	**12 08 11.7**	**-0.6**
ZKR				S	**Sb**	**12 08 15.4**	**+0.1**
ZKR				AML	AML	12 08 15.8	
ZKR				AML	AML	12 08 16.4	
ZKR	**Zakros**	**0.20**	**18**	PG	**Pb**	**12 08 11.5**	**-0.8**
ZKR				SG	**Sb**	**12 08 15.6**	**+0.3**
ZKR	**Zakros**	**0.20**	**18**	P	**Pb**	**12 08 11.6**	**-0.8**
ZKR				S	**Sb**	**12 08 15.7**	**+0.3**
ZKR				AML	AML	12 08 15.8	
	118nm,0.4s						
ZKR				AML	AML	12 08 15.8	
	118nm,0.4s						
STIA	**Sitia Lasithi**	**0.28**	**352**	P	**Pg**	**12 08 13.2**	**-0.8**
STIA				S	**Sb**	**12 08 18.0**	**-0.4**
FRMA	**Ierapetra Chan**	**0.35**	**286**	P	**Pg**	**12 08 12.2**	**-2.9**
FRMA				S	**Sg**	**12 08 16.9**	**-3.2**
	139μm,0.1s						
NPS	**Neapolis**	**0.55**	**309**	P	**Pb**	**12 08 17.5**	**-1.1**
NPS				S	**Sg**	**12 08 26.6**	**+0.4**
	44μm,0.3s						
NPS	**Neapolis**	**0.55**	**309**	P	**Pb**	**12 08 17.5**	**-1.1**
NPS				S	**Sg**	**12 08 26.5**	**+0.3**
NPS				AML	AML	12 08 27.7	
NPS				AML	AML	12 08 28.7	
	comp=N,56805μm,0.3s						
LAST	**Lasithi**	**0.59**	**294**	P	**Pb**	**12 08 17.9**	**-1.5**
LAST				S	**Sb**	**12 08 27.2**	**-0.1**
	comp=N,32μm,0.4s						
LAST	**Lasithi**	**0.59**	**294**	P	**Pb**	**12 08 17.9**	**-1.5**
LAST				S	**Sg**	**12 08 27.8**	**+0.3**
LAST				AML	AML	12 08 30.0	
	comp=N,76880μm,0.4s						
LAST				AML	AML	12 08 30.0	
	comp=E,48707μm,0.4s						
HRKL	**Herakleio**	**0.94**	**295**	P	**Pb**	**12 08 24.7**	**-0.5**
HRKL				S	**Sn**	**12 08 39.2**	**+0.6**
	comp=E,22μm,0.5s						
HRKL	**Herakleio**	**0.94**	**295**	PG	**Pb**	**12 08 24.6**	**-0.6**
HRKL				SG	**Sn**	**12 08 40.3**	**+1.7**
KSTL	**Kastelli Herak**	**0.96**	**294**	P	Pb	12 08 20.4	-5.1
KSTL				S	**Sb**	**12 08 31.9**	**-5.9**
IACM	**Heraklion**	**0.96**	**294**	P	**Pb**	**12 08 24.9**	**-0.7**
IACM				S	**Sn**	**12 08 39.0**	**-0.1**
	comp=E,58μm,0.5s						
IACM	**Heraklion**	**0.96**	**294**	P	**Pb**	**12 08 24.8**	**-0.7**
KARP	**Karpathos**	**1.04**	**53**	P	**Pb**	**12 08 26.0**	**-1.1**
KARP				S	**Sg**	**12 08 43.8**	**+2.1**
	comp=E,15μm,0.7s						
KARP	**Karpathos**	**1.04**	**53**	P	**Pb**	**12 08 25.9**	**-1.2**
KARP				AML	AML	12 08 48.4	
	comp=N,37716μm,0.7s						
KARP				AML	AML	12 08 52.2	
	comp=E,21979μm,0.7s						
KARP	**Karpathos**	**1.04**	**53**	PG	**Pb**	**12 08 26.2**	**-0.9**
KARP				SG	**Sg**	**12 08 41.9**	**+0.2**
KARP	**Karpathos**	**1.04**	**53**	P	**Pb**	**12 08 26.1**	**-1.1**
KARP				S	**Sn**	**12 08 41.4**	**+0.1**
KARP				AML	AML	12 08 47.7	
	comp=E,38nm,0.7s						
KARP				AML	AML	12 08 47.7	
	comp=E,38nm,0.7s						
KARP				AML	AML	12 08 51.8	
	comp=E,22nm,0.7s						
KARP				AML	AML	12 08 51.8	
	comp=E,22nm,0.7s						
KARP	**Karpathos**	**1.04**	**53**		**Pb**	**12 08 25.9**	**-1.1**
IDI	**Anoyia**	**1.09**	**290**	P	**Pb**	**12 08 26.4**	**-1.5**
IDI				S	**Sg**	**12 08 42.9**	**-0.2**
	comp=E,7μm,0.5s						
IDI	**Anoyia**	**1.09**	**290**	Pg	**Pb**	**12 08 26.7**	**-1.2**
	comp=E,119nm,0.3s,baz=129,slow=15,SNR=289						
IDI				Lg	Lg	12 08 42.6	
	comp=E,859nm,0.3s,baz=349,slow=18,SNR=14						
IDI	**Anoyia**	**1.09**	**290**	P	**Pb**	**12 08 25.8**	**-2.0**
IDI				AML	AML	12 08 45.8	
	comp=N,17045μm,0.5s						
IDI				AML	AML	12 08 46.7	
	comp=E,12305μm,0.5s						
IDI	**Anoyia**	**1.09**	**290**	↓P	**Pb**	**12 08 26.4**	**-1.5**
IDI				↑S	**Sb**	**12 08 41.0**	**-0.6**
IDI	**Anoyia**	**1.09**	**290**	PN	**Pb**	**12 08 27.2**	**-0.6**
IDI				SN	**Sg**	**12 08 44.2**	**+1.1**
IDI	**Anoyia**	**1.09**	**290**		**Pb**	**12 08 26.3**	**-1.5**
SIVA	**Sivas**	**1.10**	**276**	P	**Pn**	**12 08 26.6**	**-1.3**
SIVA				S	**Sg**	**12 08 44.2**	**+0.9**
	comp=E,24μm,0.7s						
SIVA	**Sivas**	**1.10**	**276**	P	**Pn**	**12 08 26.4**	**-1.5**
SIVA				S	**Sg**	**12 08 43.1**	**-0.2**
SIVA				AML	AML	12 08 46.3	
	comp=E,57332μm,0.7s						
SIVA				AML	AML	12 08 56.5	
	comp=N,37406μm,0.7s						
TMBK	**Timbaki Herakl**	**1.14**	**278**	P	**Pn**	**12 08 27.8**	**-0.7**
TMBK				S	**Sg**	**12 08 44.9**	**+0.3**
PRNS	**Prines Rethymn**	**1.41**	**289**	P	**Pb**	**12 08 33.7**	**+0.4**
PRNS				S	**Sg**	**12 08 54.0**	**+0.6**
ANAF	**Anafi Island**	**1.47**	**348**	P	**Pn**	**12 08 33.4**	**+0.4**
ANAF				S	**Sb**	**12 08 53.8**	**+1.3**
	comp=N,28μm,0.5s						
ANAF	**Anafi Island**	**1.47**	**348**	P	**Pn**	**12 08 33.3**	**+0.4**
ANAF				AML	AML	12 08 58.5	
	comp=N,60582μm,0.4s						
ANAF				AML	AML	12 08 59.2	
	comp=E,50671μm,0.5s						
SANT	**Santorini**	**1.55**	**339**	P	**Pn**	**12 08 34.6**	**+0.4**
SANT	**Santorini**	**1.55**	**339**	P	**Pn**	**12 08 34.5**	**+0.2**
SANT				AML	AML	12 09 00.3	
	comp=N,4244μm,0.4s						
SANT				AML	AML	12 09 01.3	
	comp=E,12189μm,0.4s						
SANT	**Santorini**	**1.55**	**339**	↑P	**Pn**	**12 08 34.4**	**+0.2**
SANT				↑S	**Sb**	**12 08 55.4**	**+0.4**
SANT	**Santorini**	**1.55**	**339**	PN	**Pb**	**12 08 36.1**	**+0.4**
SANT				SN	**Sg**	**12 08 57.9**	**+0.1**
SANT	**Santorini**	**1.55**	**339**	*i* P	**Pn**	**12 08 34.6**	**+0.4**
SANT				*i* S	**Sn**	**12 08 48.2**	**-5.6**
SANT	**Santorini**	**1.55**	**339**		**Pn**	**12 08 34.3**	**+0.1**
SAP1	**Santorini-Akro**	**1.56**	**337**	P	**Pn**	**12 08 35.0**	**+0.7**
SAP1	**Santorini-Akro**	**1.56**	**337**	P	**Pn**	**12 08 35.2**	**-0.6**
SAP2K	**Karterados**	**1.59**	**339**	P	**Pn**	**12 08 35.6**	**+0.8**
THT2	**Imerovigli**	**1.62**	**339**	PN	**Pb**	**12 08 36.9**	**0.0**
THR5	**Thira Island,**	**1.63**	**337**	P	**Pn**	**12 08 35.7**	**+0.5**
SAP3	**Santorini-Thir**	**1.65**	**337**	P	**Pn**	**12 08 36.1**	**+0.6**
SAP3	**Santorini-Thir**	**1.65**	**337**	P	**Pn**	**12 08 35.4**	**-0.1**
CMBO	**Columbo, Santo**	**1.66**	**339**	P	**Pn**	**12 08 36.2**	**+0.6**
VAM	**Vamos**	**1.66**	**288**	P	**Pn**	**12 08 36.4**	**+0.7**
VAM				S	**Sb**	**12 08 59.0**	**+0.9**
	comp=E,5μm,0.4s						
VAM	**Vamos**	**1.66**	**288**	P	**Pn**	**12 08 36.3**	**+0.7**
VAM				AML	AML	12 09 08.3	
	comp=E,10332μm,0.5s						
VAM				AML	AML	12 09 16.3	
	comp=N,11908μm,0.6s						
GVD	**Gavdhos**	**1.69**	**268**	P	**Pb**	**12 08 37.2**	**-0.8**
GVD				S	**Sb**	**12 08 59.5**	**+0.6**
	comp=N,5μm,0.7s						
GVD	**Gavdhos**	**1.69**	**268**	P	**Pb**	**12 08 37.4**	**-0.6**
GVD	**Gavdhos**	**1.69**	**268**	PN	**Pb**	**12 08 37.9**	**-0.1**
IMMV	**Iera Moni Meta**	**1.85**	**288**	P	**Pn**	**12 08 39.4**	**+1.1**
IMMV				S	**Sb**	**12 09 02.9**	**-0.6**
	comp=N,5μm,0.7s						
IMMV	**Iera Moni Meta**	**1.85**	**288**	P	**Pb**	**12 08 40.2**	**-0.5**
IMMV	**Iera Moni Meta**	**1.85**	**288**	PN	**Pb**	**12 08 40.4**	**-0.4**
NISR	**Nisiros**	**1.87**	**25**	P	**Pn**	**12 08 39.5**	**+1.0**
NISR	**Nisiros**	**1.87**	**25**	P	**Pn**	**12 08 39.3**	**+0.7**
NISR				AML	AML	12 09 13.9	
	comp=N,7544μm,0.5s						
NISR				AML	AML	12 09 17.6	
	comp=E,9855μm,0.5s						
IOSP	**Ios island**	**1.93**	**339**	P	**Pn**	**12 08 39.6**	**+0.3**
IOSP	**Ios island**	**1.93**	**339**	P	**Pn**	**12 08 39.7**	**+0.3**
IOSP				AML	AML	12 09 10.3	
	comp=N,8311μm,0.8s						
IOSP				AML	AML	12 09 10.7

KORT	Korkueli	4.00	57	*i* P		Pn		12 09 11.2	+3.2
KYMI	Kymi, Euboea I	4.05	337	P		Pn		12 09 10.3	+1.8
MANT	Manisa	4.06	28	*i* P		Pn		12 09 10.4	+1.6
MANT	Manisa	4.06	28			Pn		12 09 11.2	+2.4
ITM	Ithomi	4.09	305	P		Pn		12 09 10.8	+1.7
ITM	Ithomi	4.09	305	PN		Pn		12 09 12.2	+3.1
ITM	Ithomi	4.09	305			Pn		12 09 11.1	+2.0
ZEDA	zmir-Bergama	4.11	10	*i* P		Pn		12 09 10.8	+1.5
ZEDA				*i* S		Sn		12 09 48.1	-8.7
KULA	Kula-Manisa	4.12	29	PN		Pn		12 09 12.2	+2.6
AKHS	Akhisar	4.17	18	*i* P		Pn		12 09 12.2	+2.0
BRDR	BURDUR-Merkez	4.21	48	*i* P		Pn		12 09 12.6	+1.9
KHAL	Karahalli	4.37	37	*i* P		Pn		12 09 14.4	+1.4
USAK	Uak-Merkez	4.44	31	*i* P		Pn		12 09 15.9	+2.0
KLV	Kalavryta, Ach	4.48	315	P		Pn		12 09 16.2	+1.7
OSC1	CSNet OBS 1	4.49	107	P		Pn		12 09 15.0	+0.5
OSC1				S		Sn		12 10 07.6	+1.5
LKR	Lokris	4.50	327	P		Pn		12 09 16.6	+2.0
ISP	Isparta	4.57	49	P		Pn		12 09 17.1	+1.3
ISP	Isparta	4.57	49			Pn		12 09 17.1	+1.3
STEP	BALIKESIR_Sava	4.62	15	*i* P		Pn		12 09 18.9	+2.5
KZIL	AFYON_Kizioren	4.63	43	*i* P		Pn		12 09 18.6	+1.9
DRO	Drossia	4.68	312	P		Pn		12 09 18.9	+1.7
BAYC	CANAKKALE_Bayr	4.82	4	*i* P		Pn		12 09 20.1	+1.0
KEPZ	Antalya-Kepez	4.86	64	*i* P		Pn		12 09 21.0	+1.3
GDZ	Gediz	4.95	32	*i* P		Pn		12 09 22.7	+1.7
DURS	Dursunbey	5.03	21	*i* P		Pn		12 09 25.2	+3.2
AKMS	Akamas	5.09	87	P		Pn		12 09 22.1	-0.7
AKMS					AML	AML		12 10 34.0	
	comp=N,1.1nm,0.5s								
AGG	Agios Georgios	5.11	324	P		Pn		12 09 25.1	+2.0
AGG	Agios Georgios	5.11	324	*i* P		Pn		12 09 24.9	+1.8
AGG	Agios Georgios	5.11	324	P		Pn		12 09 25.6	+2.6
AGG	Agios Georgios	5.11	324	Pn		Pn		12 09 25.6	+2.6
GAZI	Gazipasa	5.20	74	*i* P		Pn		12 09 23.6	-0.8
GAZI				*i* S		Sn		12 10 14.4	-9.4
NATA	Nata	5.29	90	P		Pn		12 09 24.7	-0.8
ALFC	Alefka	5.30	86	P		Pn		12 09 25.0	-0.8
BOLV	Bolvadin	5.41	44	*i* P		Pn		12 09 29.3	+2.0
OSC2	CSNet OBS 4	5.41	108	P		Pn		12 09 26.5	-0.7
SZAC	Souni	5.55	90	P		Pn		12 09 28.7	-0.5
ASGA	Asgata	5.85	89	P		Pn		12 09 33.9	+0.7
CSS	Mathiatis	5.91	88	*i* P		Pn		12 09 32.9	-1.1
CSS				*i* S		Sn		12 10 28.0	-13
CSS	Mathiatis	5.91	88	Pn		Pn		12 09 33.3	-0.7
CSS	Mathiatis	5.91	88	P		Pn		12 09 33.5	-0.6
CSS	Mathiatis	5.91	88			Pn		12 09 33.4	-0.7
KESN	Edirne-Kesan	5.91	4	*i* P		Pn		12 09 35.8	+1.4
LIT	Litokhoron	5.93	332	*i* P		Pn		12 09 37.3	+2.9
LIT	Litokhoron	5.93	332	P		Pn		12 09 36.7	+2.3
LIT	Litokhoron	5.93	332			Pn		12 09 36.7	+2.3
ALN	Alexandroupoli	5.97	359	*i* P		Pn		12 09 35.4	+0.5
ALN	Alexandroupoli	5.97	359	P		Pn		12 09 35.7	+0.8
ALN	Alexandroupoli	5.97	359			Pn		12 09 35.6	+0.8
KDHN	Kadinhani	6.00	51	*i* P		Pn		12 09 36.0	+0.6
MVOU	Mavrovouni	6.15	87	P		Pn		12 09 37.7	+0.3
ORH	Orhaniye	6.70	26	P		Pg		12 10 12.2	-3.5
KDZ	Kurdzhali	6.74	355	*e*P		Pn		12 09 47.1	+1.6
MDUB	Mudurnu	6.84	34			Pn		12 09 50.4	+3.5
RZN	Rozhen	6.85	351	*e*P		Pn		12 09 49.0	+1.9
MMB	Musomiste	6.92	345	*e*P		Pn		12 09 50.7	+2.7
FNA	Florina	6.96	329	P		Pn		12 09 52.4	+3.8
FNA	Florina	6.96	329			Pn		12 09 52.4	+3.8
ANTO	Ankara	7.24	45	⇑P		Pn		12 09 54.2	+1.7
ANTO	Ankara	7.24	45	P		Pn		12 09 54.5	+2.2
ANTO	Ankara	7.24	45			Pn		12 09 54.6	+2.2
BR131	Keskin Array S	7.66	49	*ce*P		Pn		12 10 00.6	+2.3
BR131	Keskin Array S	7.66	49			Pn		12 09 59.7	+1.4
BRTR	Keskin Array B	7.66	49	Pn		Pn		12 10 00.6	+2.3
	comp=N,0.4nm,0.3s,baz=235,slow=15,SNR=16								
BRTR				Sn		Sn		12 11 27.9	+3.4
	comp=N,0.2nm,0.3s,baz=222,slow=26,SNR=1.2								
PGB	Panagyurishte	7.77	349	*e*P		Pn		12 10 03.7	+4.0
MMAI	Mount Meron Ar	7.93	101	Pn		Pn		12 10 01.9	+0.1
	comp=N,6.2nm,0.3s,baz=285,slow=9.4,SNR=12								
MMAI				Sn		Sn		12 11 30.3	-0.7
	comp=N,5.0nm,0.3s,baz=288,slow=16,SNR=2.5								
SCTE	Santa Cesarea	7.98	312	Pn		Pn		12 10 01.4	-1.0
KZIT	Kziot	8.01	118	Pn		Pn		12 10 02.1	-0.9
VTS	Vitosha	8.02	344	⇓P		Pn		12 10 04.7	+1.7
VTS	Vitosha	8.02	344	*e*P		Pn		12 10 06.0	+3.0
VTS	Vitosha	8.02	344	P		Pn		12 10 06.1	+3.0
VTS	Vitosha	8.02	344			Pn		12 10 06.1	+3.0
GEM	Giv'at Ha'Em	8.08	99	Pn		Pn		12 10 02.2	-1.7
GEM				Sn		Sn		12 11 29.8	-5.0
KSDI	Kefar Szold	8.09	100	Pn		Pn		12 10 03.3	-0.6
HMDT	Nahal Hemdat	8.27	106	Pn		Pn		12 10 05.5	-1.0
HMDT				Sn		Sn		12 11 34.8	-4.6
YTIR	Yattir	8.32	113	Pn		Pn		12 10 06.0	-1.3
YTIR				Sn		Sn		12 11 34.9	-5.8
PRD	Provadia	8.33	6	*e*P		Pn		12 10 08.8	+1.6
NEF	NEVSHA	8.38	6	*e*P		Pn		12 10 11.6	+3.6
DSI	Dead Sea	8.43	111	Pn		Pn		12 10 11.9	-1.8
PLVB	Pleven	8.54	353	⇓P		Pn		12 10 11.9	+1.8
TIP	Timpagrande	8.62	302	⇓P		Pn		12 10 11.6	+0.3
TIP	Timpagrande	8.62	302			Pn		12 10 11.0	-0.3
KRMI	Paran Flat	8.69	121	Pn		Pn		12 10 11.5	-0.7
GHAJ	Ghor Haditha	8.69	112	Pn		Pn		12 10 11.3	-0.9
PRNI	Paran	8.75	119	Pn		Pn		12 10 12.1	-1.0
PRNI				Sn		Sn		12 11 45.4	-5.9
HRFI	Mount Harif	8.95	120	Pn		Pn		12 10 15.4	-0.5
HRFI				Sn		Sn		12 11 51.3	-4.9
EIL	Elat	9.11	123	Pn		Pn		12 10 17.7	-0.3
	comp=N,1.5nm,0.3s,baz=328,slow=10,SNR=11								
EIL				Sn		Sn		12 11 55.9	-4.1
	comp=N,2.3nm,0.3s,baz=325,slow=14,SNR=3.0								
EIL	Elat	9.11	123	Pn		Pn		12 10 15.7	-2.3
EIL				Sn		Sn		12 11 54.2	-5.8
PDG	Podgorica	9.23	326	Pn		Pn		12 10 19.7	+0.1
ASF	Jabal al Asfar	9.39	104	Pn		Pn		12 10 21.4	-0.5
	comp=N,0.9nm,0.3s,baz=291,slow=3.2,SNR=6.1								
ASF				Sn		Sn		12 12 09.2	+2.2
	comp=N,0.3nm,0.3s,baz=29,slow=21,SNR=2.0								
TIRR	Tirgusor	9.69	10	⇓P		Pn		12 10 27.2	+1.4
TIRR	Tirgusor	9.69	10	P		Pn		12 10 29.2	+3.4
TIRR	Tirgusor	9.69	10			Pn		12 10 29.2	+3.4
VAE	Valguarnera	9.82	288	Pn		Pn		12 10 29.4	+1.7
	comp=N,3.7nm,0.3s,baz=359,slow=1.1,SNR=8.2								
VAE				Sn		Sn		12 12 18.7	+1.2
	comp=N,2.8nm,0.3s,baz=224,slow=4.2,SNR=3.7								
HARR	Harsova	9.86	7	⇑P		Pn		12 10 29.6	+1.5
STON	Ston	10.30	323	*e*Pn		Pn		12 10 32.1	-2.2
MDVR	Moldovita	10.42	342	⇑P		Pn		12 10 37.0	+1.0
VOIR		10.54	356	⇑P		Pn		12 10 39.1	+1.5
MLR	Muntele Rosu	10.56	359	Pn		Pn		12 10 41.2	+3.3
	comp=N,0.2nm,0.3s,baz=156,slow=10,SNR=5.8								
MLR	Muntele Rosu	10.56	359	⇓P		Pn		12 10 39.4	+1.5
SGRT	San Giovanni R	10.64	313			Pn		12 10 36.6	-2.4
CORL	Corleone	10.76	290			Pn		12 10 42.5	+1.9
CLTB	Caltabellotta	10.77	288	Pn		Pn		12 10 42.0	+1.2
GZR	Gura Zlata	10.77	347	⇑P		Pn		12 10 42.1	+1.3
VRI	Vrincioaia	10.95	2	⇑P		Pn		12 10 45.1	+2.0
MAKA	Makarska	10.95	322	*e*Pn		Pn		12 10 40.3	-2.8
PAOL	Paolisi	10.98	307	Pn		Pn		12 10 44.1	+0.4
RICI	Ricice	11.04	324	*i* Pn		Pn		12 10 42.0	-2.5
RICI				Sn		Sn		12 12 41.8	-5.6
BZS	Buzias	11.23	343	⇓P		Pn		12 10 48.3	+1.4
SIM	Simferopol'	11.73	29	P		Pn		12 10 58.5	+4.6
SIM				pmax		pmax			
	comp=Z,11nm,0.8s								
INTR	Introdacqua	11.91	310	Pn		Pn		12 10 56.1	-0.3
ZIRJ	Zirje	11.92	320	*e*Pn		Pn		12 10 54.2	-2.1
BIZ	Bicaz	12.01	360	⇑P		Pn		12 10 59.7	+2.0
MORI	Morici	12.03	321	*e*Pn		Pn		12 10 55.1	-2.8
NRCA	Norcia	12.85	312			Pn		12 11 08.7	-0.5
KEST	Kesra	13.74	278	Pn		Pn		12 11 23.2	+1.8
	comp=Z,0.2nm,0.3s,baz=203,slow=20,SNR=1.5								
OSSC	Osservatorio P	14.38	311	P		P		12 11 36.7	-0.2
SOKA	Soboth	14.43	328	*e*P		P		12 11 38.1	+0.6
	comp=Z,4.4nm,1.0s								
STAL	STALIGIAL	15.22	322	P		P		12 11 47.5	+1.3
NEY	Neytrino	15.31	52	⇓*e*P		P		12 11 45.4	-2.0
KBA	Koelnbreinsper	15.49	325	*e*P		P		12 11 51.0	+1.6
	comp=Z,3.9nm,0.6s								
KIV	Kislovodsk	15.62	50	⇓*e*P		P		12 11 53.0	+2.2
KIV				S		S		12 14 48.0	-6.4
KIV				pmax		pmax			
	comp=Z,9.0nm,0.8s								
KIV				MLR		MLR			
	comp=Z,191nm,16.0s								
KVAR	Kislovodsk Arr	15.63	50	Pn		P		12 11 52.3	+1.4
	baz=258,slow=20,SNR=1.9								
KBZ	Khabaz	15.65	51	Pn		P		12 11 53.1	+2.2
	comp=Z,0.2nm,0.3s,baz=234,slow=9.6,SNR=7.4								
KBZ	Khabaz	15.65	51⇑	*e*P		P		12 11 52.0	+1.1
ABTA	Abfaltersbach	15.66	323	*e*P		P		12 11 51.9	+0.8
	comp=Z,3.2nm,0.7s								
KRUC	Moravsky	15.86	336	*e*PN		P		12 11 51.9	-1.4
ZEI	Tsey	15.89	55	*e*P		Pn		12 11 52.1	+1.8
ZEI				pmax		pmax			
	comp=Z,6.0nm,0.4s								
AKBB	Malin Array Si	15.93	7	P		P		12 11 55.8	+1.7
AKBB				pmax		pmax			
	comp=Z,5.0nm,0.8s								
AKBB	Malin Array Si	15.93	7	P		P		12 11 55.8	+1.7
AKASG	Malin Array Be	15.93	7	Pn		Pn		12 11 51.8	+1.3
	comp=Z,2.1nm,0.3s,baz=198,slow=10,SNR=8.0								
AKASG	Malin Array Be	15.93	7	*i* P		P		12 11 55.5	+1.4
AKASG				pmax		pmax			
	comp=Z,1.0nm,0.4s								
NCK	Nalchik	15.99	52⇑	*e*P		P		12 11 56.2	+1.4
VRAC	Vranov	16.01	337	Pn		Pn		12 11 52.9	+1.3
	comp=Z,0.7nm,0.3s,baz=129,slow=10,SNR=5.8								
VRAC	Vranov	16.01	337	*e*PN		P		12 11 53.6	-1.3
MORC	Moravsky Berou	16.13	340	*e*PN		Pn		12 11 54.1	+0.9
MORC	Moravsky Berou	16.13	340	P		Pn		12 11 54.3	+1.1
MORC				pmax		pmax			
	comp=Z,3.0nm,0.9s								
MORC	Moravsky Berou	16.13	340	P		Pn		12 11 54.3	+1.1
WTTA	Wattenberg	16.45	323	*e*P		P		12 12 00.9	+0.8
	comp=Z,8.6nm,1.2s								
WATA	Walderalm	16.52	323	*e*Pn		P		12 12 00.5	-0.3
	comp=Z,5.8nm,1.0s								
SQTA	Sankt Quirin	16.63	322	*e*Pn		P		12 12 02.1	+0.1
	comp=Z,3.3nm,0.8s								
GEC2	GERESS Array S	16.68	330	P		P		12 12 01.5	-1.0
GERES	GERESS Array B	16.68	330	Pn		P		12 12 01.6	-1.0
	comp=Z,0.3nm,0.3s,baz=144,slow=12,SNR=14								
FUORN	Ofenpass-Fuorn	16.73	319	P		P		12 12 03.8	+0.5
FETA	Feichten	16.74	321	*e*Pn		Pn		12 12 01.6	+0.5
	comp=Z,5.6nm,1.3s								
MOTA	Moosalm	16.77	322	Pn		Pn		12 12 01.6	+0.3
	comp=Z,3.8nm,1.0s								
KHC	Kasperske Hory	16.96	331	*e*P		Pn		12 12 03.6	-0.1
KHC	Kasperske Hory	16.96	331	*e*P		Pn		12 12 03.6	-0.1
KHC				*e*pP		sP		12 12 12.5	-0.4
DPC	Dobruska-Polom	17.00	338	*e*P		Pn		12 12 04.8	+0.6
DPC	Dobruska-Polom	17.00	338	*e*P		Pn		12 12 04.8	+0.6
DAVOX	Davos/Dischmat	17.04	319	Pn		Pn		12 12 05.7	+0.8
	comp=Z,0.1nm,0.3s,baz=34,slow=5.3,SNR=3.2								
GOPC	GO Pecny, Ondr	17.14	334	*e*P		Pn		12 12 06.0	+0.1
GOPC	GO Pecny, Ondr	17.14	334	*e*P		Pn		12 12 06.0	+0.1
TUE	Stuetta	17.14	317	P		P		12 12 07.6	-0.2
OSTC	Ostas	17.22	338	*e*P		P		12 12 07.9	-0.5
UPC	Upice	17.24	338	*e*P		P		12 12 08.3	-0.3
UPC	Upice	17.24	338	*e*P		P		12 12 08.3	-0.3
PRU	Pruhonice	17.29	334	*e*P		Pn		12 12 06.4	-1.3
PRU	Pruhonice	17.29	334	*e*P		Pn		12 12 06.4	-1.3
DAVA	Damuels	17.36	320	*e*P		P		12 12 12.2	+2.1
	comp=Z,2.0nm,0.5s								
BRG	Berggiesshubel	18.24	335	*e*P		P		12 12 19.8	+0.2
	comp=Z,3.2nm,1.0s								
BRG	Berggiesshubel	18.24	335	*e*P		P		12 12 19.8	+0.2
BRG				pmax		pmax			
	comp=Z,3.0nm,1.0s								
SENIN	Lac Senin/Sane	18.26	314	P		Pn		12 12 19.2	-0.7
GRA1	Grafenberg Arr	18.38	328	P		Pn		12 12 21.9	+0.7
GRF	Grafenberg Arr	18.38	328	P		Pn		12 12 21.9	+0.7
GRF				pmax		pmax			
	comp=Z,6.0nm,0.6s								
CLL	Collm	18.93	334	*i* P		Pn		12 12 27.7	-0.2
	comp=Z,5.0nm,0.7s								
CLL				*es*P		sP		12 12 35.0	+0.4
CLL				*e*PPP		PPP		12 12 47.0	
CLL	Collm	18.93	334	*i* P		Pn		12 12 27.7	-0.2
CLL				pmax		pmax			
	comp=Z,5.0nm,0.7s								
CLL	Collm	18.93	334	P		Pn		12 12 27.6	-0.2
MOX	Moxa	18.93	331	P		P		12 12 25.1	-2.1
MOX				pmax		pmax			
	comp=Z,3.0nm,1.1s								
ECH	Echery	19.38	319	P		Pn		12 12 32.7	-0.6
ECH				pmax		pmax			
	comp=Z,4.0nm,0.9s								
ECH	Echery	19.38	319	P		Pn		12 12 32.7	-0.6
WLF	Walferdange	20.78	321	P		P		12 12 47.0	-0.4
WLF	Walferdange	20.78	321	P		P		12 12 45.9	-1.5
WLF				pmax		pmax			
	comp=Z,7.0nm,0.7s								
WLF	Walferdange	20.78	321	P		P		12 12 45.9	-1.5
WLF				IAmb		IAmb		12 12 48.5	
	comp=Z,6.9nm,0.7s								
MEM	Membach	21.44	323	P		P		12 12 54.1	-0.4
DOU	Dourbes	21.85	321	P		P		12 12 57.6	-1.2
DOU				PnPn		PnPn		12 13 17.8	-2.4
CLF	Chambon-Foret	22.06	314	P		P		12 13 01.2	0.0
ESDC	Sonseca Array	24.35	290	P		P		12 13 24.4	+0.1
	comp=Z,2.3nm,0.5s,baz=80,slow=9.0,SNR=43								
PAB	San Pablo	24.65	290	P		P		12 13 26.8	-0.3
PAB				pmax		pmax			
	comp=Z,5.0nm,1.0s								
PAB	San Pablo	24.65	290	P		P		12 13 26.8	-0.3
PAB				IAmb		IAmb		12 13 37.2	
	comp=Z,5.2nm,1.0s								
MDT	Midelt	25.57	274	P		P		12 13 35.9	+0.4
	comp=Z,4.3nm,0.6s,baz=94,slow=12,SNR=13								
GEYT	Alibeck	25.84	74	P		P		12 13 38.6	+0.8
	comp=Z,9.8nm,0.6s,baz=280,slow=8.7,SNR=23								
GYA0B	ALIBECK ARRAY	25.84	74	P		P		12 13 39.5	+1.7
HFS	Hagfors	26.50	346	P		P		12 13 42.2	-1.2
	comp=Z,1.6nm,0.8s,baz=95,slow=11,SNR=4.3								
FINES	FINESS Array B	26.54	360	P		P		12 13 41.6	-2.2
	comp=Z,3.0nm,1.1s,baz=165,slow=10,SNR=8.0								
FINES				PcP		PcP		12 17 08.2	+0.3
	comp=Z,1.3nm,0.7s,baz=162,slow=0.6,SNR=2.2								
PBRG	Braganca	26.57	295	*e*P		P		12 13 44.0	-0.4
	comp=Z,17nm,1.6s								
MVO	Moncorvo	26.75	293	*e*P		P		12 13 46.2	+0.2
	comp=Z,22nm,2.0s								
PMRV	Marv??o	27.00	290	*e*P		P		12 13 49.8	+1.5
	comp=Z,16nm,1.6s								
PCBR	Castelo Branco	27.06	290	*e*P		P		12 13 50.2	+1.4
	comp=Z,15nm,1.6s								
MTE	Manteigas	27.12	292	*e*P		P		12 13 50.7	+1.4
	comp=Z,18nm,1.8s								
PVRL	Vila Real	27.27	294	*e*P		P		12 13 53.1	+2.4
	comp=Z,19nm,1.6s								
PVAQ	Vaqueiros	27.36	285	*e*P		P		12 13 51.0	-0.5
	comp=Z,35nm,1.9s								
PVAQ	Vaqueiros	27.36	285	P		P		12 13 50.8	-0.8
PVAQ				IAmb		IAmb		12 13 55.6	
	comp=Z,14nm,1.2s								
PVIS	Viseu	27.39	292	*e*P		P		12 13 53.9	+2.1
	comp=Z,9.6nm,1.6s								
PBDV	Barranco-do-Ve	27.55	285	*e*P		P		12 13 52.9	-0.3
AKTO	Aktyubinsk	27.83	46	P		P		12 13 55.8	+0.3
	comp=Z,4.6nm,0.5s,baz=255,slow=8.3,SNR=12								
EKA	Eskdalemuir Ar	28.70	324	P		P		12 14 02.7	-0.6
	comp=Z,0.4nm,0.3s,baz=123,slow=10,SNR=3.4								
TOA0	Torodi Ar. Sit	30.96	232	P		P		12 14 23.7	+0.1
TORD	Torodi Ar. Bea	30.96	232	P		P		12 14 23.8	+0.2
	comp=Z,12nm,0.7s,baz=36,slow=9.4,SNR=63								
ARCES	ARCESS Array B	34.67	360	P		P		12 14 53.7	-1.8
	comp=Z,4.0nm,1.0s,baz=177,slow=6.8,SNR=9.8								
KK31	Karatay Array	35.09	63	P		P		12 15 00.1	+0.6
KK31				pmax		pmax			
	comp=Z,4.0nm,1.1s								
KK31	Karatay Array	35.09	63	P		P		12 15 00.1	+0.6
KK31				IAmb		IAmb		12 15 16.9	
	comp=Z,4.3nm,1.1s								
KKAR	Karatay Array	35.09	63	P		P		12 15 00.5	+1.0
KKAR				pmax		pmax			
	comp=Z,4.0nm,1.1s								
KKAR	Karatay Array	35.09	63	P		P		12 15 00.5	+1.0
KKAR				IAmb		IAmb		12 15 16.9	
	comp=Z,4.3nm,1.1s								
BRVK	Borovoye	35.88	46⇑	*e*P		P		12 15 08.1	+2.0
BRVK				pmax		pmax			
	comp=Z,2.0nm,0.9s								
AAK	Ala-Archa	38.04	63⇓	*e*P		P		12 15 25.9	+1.0
AAK				pmax		pmax			
	comp=Z,8.0nm,2.5s								
AAK	Ala-Archa	38.04	63	P		P		12 15 25.9	+1.0
AAK				IAmb		IAmb		12 15 45.4	
	comp=Z,4.6nm,1.0s								
DBIC	Dimbokro	40.05	233	P		P		12 15 41.6	0.0
	comp=Z,6.9nm,0.6s,baz=21,slow=9.1,SNR=12								
DBIC	Dimbokro	40.05	233	P		P		12 15 41.7	0.0
DBIC				pmax		pmax			
	comp=Z,6.0nm,0.7s								
DBIC	Dimbokro	40.05	233	P		P		12 15 41.7	0.0
DBIC				IAmb		IAmb		12 15 42.1	
	comp=Z,6.4nm,0.7s								
TIC	Toumodi	40.18	233	*e*P		P		12 15 42.4	-0.4
KIC	Kosan Boka	40.21	232	*e*P		P		12 15 42.7	-0.3
	comp=Z,28nm,0.7s								
LIC	Lamto	40.50	232	*e*P		P		12 15 44.9	-0.5
	comp=Z,24nm,0.6s								
KURK	Kurchatov	40.71	51	*ce*P		P		12 15 47.5	+0.8
KURK				pmax		pmax			
	comp=Z,6.0nm,1.3s								
KURK	Kurchatov	40.71	51	P		P		12 15 47.5	+0.8
KURK				IAmb		IAmb		12 15 48.1	
	comp=Z,3.7nm,0.7s								
MAKZ	Makanchi	43.02	56	P		P		12 16 06.5	+0.7
MAKZ				pmax		pmax			
	comp=Z,2.0nm,0.6s								
MAKZ	Makanchi	43.02	56	P		P		12 16 06.5	+0.7
MAKZ				IAmb		IAmb		12 16 07.3	
	comp=Z,2.3nm,0.6s								
MK31	Makanchi Array	43.24	56	P		P		12 16 08.0	+0.5
MK31				pmax		pmax			
	comp=Z,4.0nm,0.6s								
MK31	Makanchi Array	43.24	56	P		P		12 16 08.0	+0.5
MK31				IAmb		IAmb		12 16 09.0	
	comp=Z,4.4nm,0.6s								
MKAR	Makanchi Array	43.24	56	P		P		12 16 08.2	+0.7
	comp=Z,5.1nm,0.6s,baz=279,slow=6.7,SNR=62								
SPA0	Spitsbergen Ar	43.57	357	P		P		12 16 09.0	-0.8
SPITS	Spitsbergen Ar	43.57	357	P		P		12 16 09.0	-0.8
	comp=Z,2.6nm,0.7s,baz=150,slow=10,SNR=6.2								
SPITS	Spitsbergen Ar	43.57	357	P		P		12 16 09.0	-0.8
KBS	Kingsbay	44.51	356	P		P		12 16 16.6	-0.7
KBS				pmax		pmax			
	comp=Z,26nm,1.4s								
KBS	Kingsbay	44.51	356	P		P		12 16 16.6	-0.7
ZALV	Zalesovo Beam	44.59	46	P		P		12 16 18.3	0.0
	comp=Z,3.3nm,0.4s,baz=268,slow=10,SNR=10								
ZALV	Zalesovo Beam	44.59	46	*i* P		P		12 16 20.7	+2.5
ZALV				pmax		pmax			
	comp=Z,3.0nm,0.4s								
DGZ	Jazzator, Alta	46.40	52⇑	*e*P		P		12 16 33.8	+1.0
WMQ	Urumqi	47.43	60	*e*P		P		12 16 44.1	+3.2
ILULI	Ilulissat	53.34	334	P		P		12 17 27.8	+2.7
ILULI				pmax		pmax			
	comp=Z,21nm,1.3s								
ILULI	Ilulissat	53.34	334	P		P		12 17 27.

ISC 18 12:31:48.3±2.0, 44°2N±0°1×146°7E±0°1, h123km±13km, n15, σ0ᵗ59/25, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.66**	**252**	*i* P	**Pn**	**12 32 07.3**	**-0.3**
YUK				AMB	AMB	12 32 08.0	
	30nm,0.4s						
YUK				AMB	AMB	12 32 08.0	
	50nm,0.4s						
YUK				AMB	AMB	12 32 08.0	
	60nm,0.4s						
YUK				*i* S	**Sn**	**12 32 23.0**	**+0.7**
YUK				A	A	12 32 23.0	
	260nm,0.5s						
YUK				A	A	12 32 23.0	
	320nm,0.5s						
LAGR	**Lagunnoye**	**0.71**	**255**	*e*P	**Pn**	**12 32 07.1**	**-0.9**
LAGR				*i* S	**Sn**	**12 32 23.5**	**+0.6**
LAGR				A	A	12 32 24.0	
	250nm,0.6s						
LAGR				A	A	12 32 24.0	
	360nm,0.6s						
GRPR	**Tuman**	**0.74**	**250**	*i* P	**Pn**	**12 32 08.2**	**0.0**
GRPR				AMB	AMB	12 32 08.3	
	40nm,0.3s						
GRPR				*i* S	**Sn**	**12 32 23.5**	**+0.2**
GRPR				A	A	12 32 24.0	
	310nm,0.6s						
GRPR				A	A	12 32 24.0	
	320nm,0.6s						
NEM2	**Nemuro 2**	**1.14**	**220**	P	**Pn**	**12 32 11.8**	**-0.1**
NEM2				*e*S	**Sn**	**12 32 29.0**	**-0.8**
JRA	**Rausu**	**1.20**	**256**	P	**Pn**	**12 32 12.2**	**-0.4**
KUR	**Kuril'sk**	**1.28**	**39**	*e*P	**Pn**	**12 32 13.2**	**-0.2**
KUR				*e*S	**Sn**	**12 32 32.8**	**+0.3**
JNSB	**Nemuroshibetsu**	**1.33**	**250**	P	**Pn**	**12 32 14.2**	**+0.2**
JNK	**Nakash**	**1.60**	**246**	P	**Pn**	**12 32 17.3**	**+0.2**
JKHN	**Kushirohamanak**	**1.63**	**225**	P	**Pn**	**12 32 17.5**	**+0.1**
JKHN				*e*S	**Sn**	**12 32 40.1**	**+0.5**
JAK	**Akkeshi**	**1.94**	**231**	P	**Pn**	**12 32 21.1**	**0.0**
JAK				*e*S	**Sn**	**12 32 46.1**	**0.0**
JTKR	**Abashiri--Toko**	**2.06**	**263**	P	**Pn**	**12 32 22.0**	**-0.5**
JAR	**Ashorobuto**	**2.35**	**247**	P	**Pn**	**12 32 27.1**	**+0.9**
JOB	**Onbets**	**2.50**	**239**	P	**Pn**	**12 32 28.8**	**+0.7**
JOB				*e*S	**Sn**	**12 32 59.3**	**+0.6**
JCH	**Churui**	**2.95**	**238**	P	**Pn**	**12 32 34.4**	**+0.4**
JCH				*e*S	**Sn**	**12 33 09.1**	**-0.1**
JNBK	**Urakawa-nobuka**	**3.51**	**237**	P	**Pn**	**12 32 40.9**	**-0.5**
JNBK				*e*S	**Sn**	**12 33 21.0**	**-1.4**

WEL 18 12:35:26.9±0.5, 33°S±5°×18°0W±1°2, h261km±9km, M4.3/19, mB4.9/12, ML4.9/6, MLv4.7/19, Mw(mB)4.2/12, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.10**	**24**	S	S	12 37 23.5	-1.0
MXZ	**Matakaoa Point**	**4.77**	**198**	P	Pn	12 36 40.9	+0.8
MXZ				S	S	12 37 41.9	+3.2
HAZ	**Te Kaha**	**5.10**	**202**	P	Pn	12 36 43.2	-0.9
HAZ				S	S	12 37 48.3	+2.3
KUZ	**Kuaotunu**	**5.21**	**223**	P	Pn	12 36 44.9	-0.6
PUZ	**Puketiti**	**5.26**	**197**	P	Pn	12 36 46.1	-0.1
PUZ				S	S	12 37 52.2	+2.6
RUGZ	**Raukumara Rang**	**5.33**	**202**	P	Pn	12 36 47.0	-0.1
RUGZ				S	S	12 37 52.4	+1.3
TWGZ	**Tauwharearoa**	**5.43**	**199**	P	Pn	12 36 48.5	+0.2
WHRZ	**Whale Island**	**5.48**	**208**	P	Pn	12 36 51.7	+3.0
MARZ	**Manawahe**	**5.71**	**209**	P	Pn	12 36 53.5	+1.9
TKGZ	**Te Karaka**	**5.72**	**199**	P	Pn	12 37 02.3	+11
TKGZ				S	S	12 38 11.6	+12
MKAZ	**Moumakai**	**5.78**	**224**	P	Pn	12 36 53.5	+1.0
RRRZ	**Republican Roa**	**6.08**	**208**	P	Pn	12 36 57.3	+1.1
MUGZ	**Murupara**	**6.10**	**206**	P	Pn	12 36 54.9	-1.5
MUGZ				S	S	12 38 05.4	-2.8
RTZ	**Ruatahuna**	**6.14**	**204**	P	Pn	12 36 56.5	-0.6
PRGZ	**Paritu Road**	**6.16**	**197**	P	Pn	12 36 58.4	+1.2
SNGZ	**Shannon Statio**	**6.18**	**201**	P	Pn	12 36 56.0	-1.4
SNGZ				S	S	12 38 10.4	+0.3
PRRZ	**Plateau Road**	**6.26**	**208**	P	Pn	12 36 59.1	+0.7
KNZ	**Kokohu**	**6.31**	**198**	P	Pn	12 36 59.1	+0.1
KNZ				S	S	12 38 11.1	-1.8
ALRZ	**Allen Road**	**6.34**	**208**	P	Pn	12 36 58.9	-0.4
MHGZ	**Mahia Peninsul**	**6.38**	**196**	P	Pn	12 37 00.5	+0.7
MHGZ				S	S	12 38 13.8	-0.6
MTHZ	**Maungataniwha**	**6.41**	**204**	P	Pn	12 36 58.2	-2.1
MTHZ				S	S	12 38 10.8	-4.3
WHHZ	**Waihua**	**6.48**	**201**	P	Pn	12 37 01.5	+0.4
WHHZ				S	S	12 38 15.9	-1.0
KUTZ	**Kaahu Road**	**6.49**	**212**	P	Pn	12 37 02.2	+0.9
TLZ	**Tolley Road**	**6.50**	**214**	P	Pn	12 37 02.8	+1.5
MRHZ	**Matea Rd**	**6.54**	**207**	P	Pn	12 37 00.8	-1.1
NMHZ	**Naumai**	**6.64**	**203**	P	Pn	12 37 01.0	-2.2
WATZ	**Wairara**	**6.71**	**211**	P	Pn	12 37 04.1	0.0
ARHZ	**Aropaoanui**	**6.73**	**202**	P	Pn	12 37 03.2	-1.0
ARHZ				S	S	12 38 19.7	-2.7
BKZ	**Black Stump Fm**	**6.81**	**205**	P	Pn	12 37 02.2	-3.0
RATZ	**Rangitukua**	**6.83**	**210**	P	Pn	12 37 04.9	-0.6
HIZ	**Hauiti**	**6.97**	**217**	P	Pn	12 37 06.0	-1.2
MCHZ	**McNeill Hill**	**6.99**	**203**	P	Pn	12 37 06.7	-0.8
KWHZ	**Kaweka Forest**	**7.06**	**204**	P	Pn	12 37 07.4	-1.0
CKHZ	**Cape Kidnapper**	**7.07**	**200**	P	Pn	12 37 07.6	-0.8
KRVZ	**Karewarewa**	**7.08**	**210**	P	Pn	12 37 07.5	-1.2
WTVZ	**West Tongariro**	**7.12**	**210**	P	Pn	12 37 07.7	-1.4
TWVZ	**Taurewa**	**7.14**	**211**	P	Pn	12 37 08.3	-1.2
TUVZ	**Tukino**	**7.22**	**209**	P	Pn	12 37 08.7	-1.7
FWVZ	**Far West T-bar**	**7.25**	**210**	P	Pn	12 37 08.8	-2.1
BHHZ	**Black Hill Sta**	**7.25**	**206**	P	Pn	12 37 08.3	-2.5
KRHZ	**Kereru**	**7.28**	**204**	P	Pn	12 37 07.7	-3.4
MOVZ	**Moawhango**	**7.30**	**208**	P	Pn	12 37 08.7	-2.7
PNHZ	**Pukenui**	**7.58**	**204**	P	Pn	12 37 11.9	-2.9
WPHZ	**Waipukurau**	**7.63**	**202**	P	Pn	12 37 13.8	-1.7
TSZ	**Takapari Road**	**7.79**	**205**	P	Pn	12 37 14.5	-3.0

*IDC **18** 12:51:10.0±0.8, 7°.09S×154°.96E, h0km, mb4.0/12, mb1 4.2/14, mb1mx4.0/30, mbtmp4.0/14, ML2.1/1, MS3.6/4, Ms1 3.5/4, ms1mx3.1/25, Error ellipse: s-maj=25.2km s-min=19.2km az=130.0*

*NEIC **18** 12:51:16.4±2.2, 7°.1S±0°.1×154°.9E±0°.1, h39km±7km, mb4.4/15, Error ellipse: s-maj=17.6km s-min=13.6km az=127.0*

ISC 18 12:51:16.4±0.7, 7°03S±0°07×154°90E±0°09, h41km, n38, σ1ᵗ10/36, mb4.3/20, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.92**	**316**		**Pn**	**12 52 13.5**	**-0.6**
KRVT	**Keravat (AS076**	**3.93**	**313**	Pn	**Pn**	**12 52 13.7**	**-0.6**
	18nm,0.3s,baz=124,slow=3.6,SNR=35						
KRVT				Sn	**Sn**	**12 52 58.1**	**-1.1**
	29nm,0.3s,baz=73,slow=8.7,SNR=4.2						
HNR	**Honiara**	**5.54**	**116**	LR	LR	12 54 57.0	
	comp=Z,264nm,18.2s,baz=292,slow=42						
PMG	**Port Moresby**	**8.02**	**252**	Pn	**Pn**	**12 53 09.6**	**-0.8**
	1.3nm,0.3s,baz=72,slow=9.6,SNR=1.5						
PMG				Sn	**Sn**	**12 54 42.0**	**+2.1**
	3.3nm,0.3s,baz=53,slow=14,SNR=3.2						
PMG				LR	LR	12 56 33.6	
	comp=Z,165nm,19.1s,baz=48,slow=40						
PMG	**Port Moresby**	**8.02**	**252**		**Pn**	**12 53 11.0**	**+0.6**
PATS	**Pohnpei**	**14.19**	**14**	Pn	**Pn**	**12 54 34.2**	**-0.6**
CTAO	**Charters Tower**	**15.46**	**212**	P	**P**	**12 54 56.5**	**+0.8**
CTAO				IAmb	IAmb	12 55 08.3	
	comp=Z,12nm,1.1s						
SIJI	**Sorong**	**24.35**	**284**	P	**P**	**12 56 31.4**	**+0.6**
	comp=Z,10nm,0.7s,baz=71,slow=22,SNR=2.5						
AS31	**Alice Springs**	**26.08**	**228**	P	**P**	**12 56 46.8**	**+0.4**
ASAR	**Alice Springs**	**26.08**	**228**	P	**P**	**12 56 45.5**	**-0.9**
	comp=Z,1.6nm,0.7s,baz=58,slow=9.4,SNR=20						
KNRA	**Kununurra**	**27.00**	**249**	P	**P**	**12 56 53.9**	**-0.8**
KNRA				IAmb	IAmb	12 56 60.0	
	comp=Z,15nm,1.1s						
STKA	**Stephens Creek**	**27.67**	**205**	P	**P**	**12 56 58.9**	**-1.7**
	comp=Z,1.8nm,0.7s,baz=32,slow=16,SNR=4.2						
STKA				LR	LR	13 06 53.4	
	comp=Z,87nm,21.3s,baz=22,slow=34						
H11S3	**WAKE ISLAND Hy**	**27.90**	**24**	T	T	13 25 30.5	
	baz=203,slow=75,SNR=14						
H11S2	**WAKE ISLAND Hy**	**27.90**	**25**	T	T	13 25 35.3	
	baz=203,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hy**	**27.91**	**24**	T	T	13 25 40.2	
	baz=203,slow=75,SNR=8.2						
FITZ	**Fitzroy Crossi**	**30.55**	**246**	P	**P**	**12 57 25.2**	**-1.1**
FITZ				IAmb	IAmb	12 57 41.2	
	comp=Z,5.8nm,0.9s						
RAO	**Raoul Island**	**33.83**	**134**	LR	LR	13 08 00.3	
	comp=Z,598nm,21.8s,baz=144,slow=30						
FORT	**Forrest**	**34.50**	**223**	P	**P**	**12 57 58.0**	**-2.8**
FORT				IAmb	IAmb	12 57 58.4	
	comp=Z,9.7nm,0.9s						
NACB	**Ninganchiao**	**44.91**	**315**	P	**P**	**12 59 28.5**	**+1.1**
TPUB	**Ta-pu**	**45.06**	**313**	P	**P**	**12 59 30.5**	**+1.9**
KSRS	**Korea Array**	**50.92**	**332**	P	**P**	**13 00 13.2**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=156,slow=9.3,SNR=2.4						
PETK	**Petropavlovsk-**	**59.95**	**2**	P	**P**	**13 01 18.5**	**+0.2**
	comp=Z,1.6nm,1.1s,baz=178,slow=8.7,SNR=1.1						
CMAR	**Chiang Mai Arr**	**60.71**	**296**	P	**P**	**13 01 25.3**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=118,slow=5.3,SNR=8.0						
SONM	**Songino Array**	**69.31**	**327**	P	**P**	**13 02 20.4**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=138,slow=3.7,SNR=4.1						
CNPM	**China Poot**	**78.83**	**25**	P	**P**	**13 03 15.8**	**+1.0**
TTA	**Tatalina**	**79.08**	**21**	P	**P**	**13 03 17.6**	**+1.3**
TTA				IAmb	IAmb	13 03 34.5	
	comp=Z,4.6nm,1.3s						
PMR	**Palmer**	**80.85**	**24**	P	**P**	**13 03 26.3**	**+0.6**
PMR				IAmb	IAmb	13 03 45.8	
	comp=Z,3.5nm,0.9s						
SML	**Sawmill**	**81.29**	**24**	P	**P**	**13 03 28.6**	**+0.4**
SML				IAmb	IAmb	13 03 29.6	
	comp=Z,4.4nm,0.8s						
CCB	**Clear Creek Bu**	**83.04**	**21**	P	**P**	**13 03 36.8**	**-0.3**
CCB				IAmb	IAmb	13 03 54.4	
	comp=Z,4.2nm,1.4s						
MKAR	**Makanchi Array**	**83.37**	**319**	P	**P**	**13 03 39.6**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=113,slow=5.5,SNR=7.2						
IL31		**83.44**	**22**	P	**P**	**13 03 38.3**	**-0.9**
ILAR	**Eielson Array**	**83.44**	**22**	P	**P**	**13 03 38.4**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=239,slow=5.5,SNR=8.6						
BARN	**Barnard Glacie**	**83.70**	**26**	P	**P**	**13 03 42.5**	**+1.6**
BARN				IAmb	IAmb	13 03 53.0	
	comp=Z,3.3nm,0.9s						
ZALV	**Zalesovo Beam**	**84.15**	**326**	P	**P**	**13 03 42.6**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=96,slow=5.1,SNR=1.6						
NVAR	**Mina Array Bea**	**91.81**	**52**	P	**P**	**13 04 21.1**	**+0.5**
	comp=Z,0.1nm,0.5s,baz=240,slow=7.2,SNR=2.4						
YKA	**Yellowknife Ar**	**96.41**	**28**	P	**P**	**13 04 41.4**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=263,slow=4.2,SNR=18						
BDFB	**Brasilia**	**148.02**	**135**	PKPbc	**PKPbc**	**13 10 59.2**	**+0.5**
TORD	**Torodi Ar. Bea**	**152.94**	**285**	PKPbc	**PKPbc**	**13 11 10.0**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=20,slow=2.5,SNR=5.1						
TORD				PKPab	**PKPab**	**13 11 20.0**	**-1.6**
	comp=Z,1.7nm,0.7s,baz=66,slow=2.2,SNR=8.0						

WEL 18 13:24:02.0, 45°S±3°×16°E±°, h84km±4km, M3.4/6, ML3.6/7, MLv3.4/6, Error ellipse: s-maj=0.0km s-min=0.0km az=63.2, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.28**	**203**	P	Pn	13 24 14.9	+0.4
DCZ				S	Sn	13 24 24.6	+0.8
MLZ	**Mavora Lakes**	**0.59**	**106**	P	Pn	13 24 17.6	+0.7
MLZ				S	Sn	13 24 29.5	+1.4
MSZ	**Milford Sound**	**0.69**	**40**	P	Pn	13 24 18.1	+0.3
MSZ				S	Sn	13 24 30.1	+0.5
WHZ	**Wether Hill Ro**	**0.82**	**147**	P	Pn	13 24 20.0	+0.8
WHZ				S	Sn	13 24 33.1	+1.1
PYZ	**Puysegur Point**	**1.05**	**204**	P	Pn	13 24 22.7	+0.8
PYZ				S	Sn	13 24 37.8	+1.1
WKZ	**Wanaka**	**1.27**	**73**	P	Pn	13 24 25.2	+0.6
WKZ				S	Sn	13 24 42.5	+1.0
EAZ	**Earnscleugh**	**1.41**	**92**	P	Pn	13 24 27.1	+0.8
EAZ				S	Sn	13 24 44.8	+0.1
JCZ	**Jackson Bay**	**1.55**	**43**	P	Pn	13 24 27.5	-0.6
JCZ				S	Sn	13 24 46.1	-1.8
APZ	**The Paps**	**1.69**	**164**	P	Pn	13 24 30.5	+0.6
APZ				S	Sn	13 24 52.1	+1.0
TUZ	**Tuapeka**	**1.79**	**115**	P	Pn	13 24 31.9	+0.7
TUZ				S	Sn	13 24 52.5	-0.9
SYZ	**Scrubby Hill**	**1.84**	**137**	P	Pn	13 24 32.6	+0.7
SYZ				S	Sn	13 24 54.7	+0.1
LBZ	**Lake Benmore**	**2.21**	**69**	P	Pn	13 24 35.6	-1.1
LBZ				S	Sn	13 25 00.7	-2.6
ODZ	**Otahua Downs**	**2.37**	**87**	P	Pn	13 24 38.2	-0.6
HHSZ	**Highcliff Hill**	**2.41**	**107**	P	Pn	13 24 39.6	+0.2
HHSZ				S	Sn	13 25 05.9	-2.2
FOZ	**Fox Glacier**	**2.46**	**48**	P	Pn	13 24 38.8	-1.2
RPZ	**Rata Peaks**	**3.07**	**62**	P	Pn	13 24 46.3	-2.0
INZ	**Inchbonnie**	**3.88**	**52**	P	Pn	13 24 57.2	-2.1
INZ				S	Sn	13 25 39.6	-4.2
OXZ	**Oxford**	**3.88**	**63**	P	Pn	13 24 56.2	-3.1
OXZ				S	Sn	13 25 38.2	-5.6
MQZ	**McQueen's Vall**	**4.11**	**70**	P	Pn	13 25 00.0	-2.3
MQZ				S	Sn	13 25 42.8	-6.4
LTZ	**Lake Taylor**	**4.32**	**58**	P	Pn	13 25 02.3	-3.0
OKCZ	**Okains Bay**	**4.38**	**72**	P	Pn	13 25 04.2	-1.8
DSZ	**Denniston Nort**	**4.76**	**45**	P	Pn	13 25 08.8	-2.6
THZ	**Tophouse**	**5.33**	**52**	P	Pn	13 25 16.1	-3.0
QRZ	**Quartz Range**	**5.81**	**43**	P	Pn	13 25 24.1	-1.5

IDC 18 13:38:45.1±39.0, 23°46S×176°00W, h550km±249km, mb3.1/2, mb1 3.4/2, mb1mx2.7/18, mbtmp3.9/2, Error ellipse: s-maj=924.6km s-min=74.5km az=142.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.72**	**259**	P	P	13 46 17.4	-0.1
	2.2nm,0.8s,baz=98,slow=7.6,SNR=17						
ILAR	**Eielson Array**	**90.79**	**12**	P	P	13 50 49.2	-0.1
	0.3nm,0.5s,baz=219,slow=5.7,SNR=4.5						
AKASG	**Malin Array Be**	**146.49**	**331**	PKPbc	PKPbc	13 57 23.9	-0.8
	1.3nm,0.4s,baz=44,slow=4.4,SNR=7.1						

*IDC **18** 14:19:37.5±1.4, 52°.75N×132°.23W, h0km, mb3.5/3, mb1 3.5/9, mb1mx3.3/46, mbtmp3.3/9, ML3.4/5, MS3.0/2, Ms1 3.0/2, ms1mx2.4/33, Error ellipse: s-maj=19.8km s-min=10.0km az=42.0*

*PGC **18** 14:19:38.4±0.4, 52°.78N×132°.34W, h21km, ML3.8/17, 63km southwest of Sandspit, Bc Haida Gwaii Region*

ISC 18 14:19:39.0±1.1, 52°78N±0°04×132°32W±0°05, h16km±6km, n48, σ2ᵗ40/64, mb3.8/3, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HG1B	**Mitchell Dam**	**0.20**	**36**	P	**Pg**	**14 19 43.4**	**-0.2**
HG1B				S	**Sg**	**14 19 46.7**	**0.0**
BNB	**Barry Inlet**	**0.40**	**120**	P	**Pg**	**14 19 46.8**	**-0.3**
BNB				S	**Sg**	**14 19 51.9**	**-0.8**
MOBC	**Moresby Island**	**0.43**	**30**	P	**Pg**	**14 19 47.2**	**-0.4**
MOBC				S	**Sg**	**14 19 53.4**	**-0.1**
DIB	**Dawson Inlet,**	**0.44**	**348**	P	**Pg**	**14 19 47.1**	**-0.7**
DIB				S	**Sg**	**14 19 52.9**	**-0.8**
VIB	**Van Inlet**	**0.49**	**345**	P	**Pg**	**14 19 48.2**	**-0.7**
VIB				S	**Sg**	**14 19 54.9**	**-0.7**
HG3B	**Hotspring**	**0.57**	**110**	P	**Pb**	**14 19 49.4**	**-1.1**
HG3B				S	**Sb**	**14 19 57.5**	**-0.9**
NDB	**Naden**	**1.24**	**343**	P	**Pn**	**14 20 00.0**	**-1.7**
NDB				S	**Sb**	**14 20 16.5**	**-1.2**
MASB	**Masset**	**1.25**	**8**	P	**Pn**	**14 20 01.2**	**-0.6**
MASB				S	**Sn**	**14 20 17.2**	**-1.2**
RUBB	**Prince Rupert**	**1.98**	**38**	P	**Pn**	**14 20 10.6**	**-1.3**
RUBB				Sg	**Sn**	**14 20 39.2**	**+2.9**
BBB	**Bella Bella**	**2.64**	**101**	Pn	**Pn**	**14 20 19.3**	**-1.6**
	3.7nm,0.3s,baz=290,slow=14,SNR=46						
BBB				Lg	Lg	14 20 58.6	
	66nm,0.3s,baz=13,slow=24,SNR=31						
BBB	**Bella Bella**	**2.64**	**101**	Pn	**Pn**	**14 20 19.2**	**-1.6**
BBB				Sn	**Sn**	**14 20 50.8**	**-1.8**
BBB				Sg	**Sb**	**14 20 58.6**	**+0.6**
HOLB	**Holberg**	**3.37**	**128**	Pn	**Pn**	**14 20 28.8**	**-2.2**
HOLB				Sn	**Sn**	**14 21 07.5**	**-3.1**
BCBC	**Bella Coola**	**3.42**	**95**	Sn	**Sn**	**14 21 09.7**	**-2.1**
PHC	**Port Hardy**	**3.68**	**122**	Pn	**Pn**	**14 20 33.1**	**-2.1**
PHC				Sn	**Sn**	**14 21 14.3**	**-3.8**
PACB	**Port Alice, BC**	**3.81**	**126**	Pn	**Pn**	**14 20 36.1**	**-0.9**
PACB				Sn	**Sn**	**14 21 19.4**	**-2.0**
BPBC	**Brooks Peninsu**	**3.87**	**131**	Pn	**Pn**	**14 20 36.9**	**-1.0**
MAYB	**Maynard**	**4.00**	**124**	Pn	**Pn**	**14 20 37.5**	**-2.1**
TLCB	**Telegraph Cove**	**4.08**	**121**	Pn	**Pn**	**14 20 39.1**	**-1.6**
TLCB				Sn	**Sn**	**14 21 25.7**	**-2.3**
EDB	**Eliza Dome**	**4.37**	**130**	Pn	**Pn**	**14 20 44.2**	**-0.5**
UBRB	**Upper Baezaeko**	**5.00**	**85**	Pn	**Pn**	**14 20 53.8**	**+0.4**
UBRB				Sg	**Sb**	**14 22 12.1**	**+6.2**
CBB	**Campbell River**	**5.15**	**119**	Pn	**Pn**	**14 20 54.7**	**-0.7**
DLBC	**Dease Lake**	**5.82**	**12**	Pn	**Pn**	**14 21 05.8**	**+1.2**
	0.9nm,0.3s,baz=190,slow=19,SNR=9.1						
DLBC				Sn	**Sn**	**14 22 11.1**	**+0.1**
	1.3nm,0.3s,baz=175,slow=13,SNR=1.9						
DLBC				Lg	Lg	14 22 36.9	
	3.6nm,0.3s,baz=331,slow=6.3,SNR=10						
DLBC	**Dease Lake**	**5.82**	**12**	Pn	**Pn**	**14 21 06.3**	**+1.6**
DLBC				Sn	**Sn**	**14 22 07.4**	**-3.6**
DLBC				Sg	**Sg**	**14 22 38.8**	**-6.8**
TXB	**Texada**	**5.83**	**119**	Pn	**Pn**	**14 21 04.4**	**-0.4**
BESE	**Bessie Mountai**	**5.99**	**347**	Sn	**Sn**	**14 22 13.6**	**-1.6**
MGB	**Mount Grey**	**6.13**	**125**	Pn	**Pn**	**14 21 11.6**	**+2.6**
SHB	**Sechelt**	**6.19**	**118**	Pn	**Pn**	**14 21 12.2**	**+2.5**
SHB				Sg	**Sb**	**14 22 46.9**	**+6.6**
BMBC	**Bull Mountain**	**6.79**	**57**	Pn	**Pn**	**14 21 19.4**	**+1.5**
BMBC				Sg	**Sg**	**14 23 11.3**	**-5.3**
LLLB	**Lillooet**	**6.84**	**104**	Sg	**Sg**	**14 23 13.3**	**-5.1**
NBC5	**NorthernBC 5**	**7.29**	**45**	Pn	**Pn**	**14 21 25.5**	**+0.7**
NBC5				Sg	Sb	14 23 24.1	+12
NBC4	**NorthernBC 4**	**7.43**	**62**	Sg	Sb	14 23 28.8	+13
WHY	**Whitehorse**	**8.03**	**351**	Pn	**Pn**	**14 21 35.4**	**+0.5**
WHY				Sn	**Sn**	**14 23 02.3**	**-3.0**
BLBC	**Blue River**	**8.04**	**90**	Pn	**Pn**	**14 21 36.7**	**+1.5**
FNBB	**Fort Nelson**	**8.06**	**37**	Pn	**Pn**	**14 21 35.7**	**+0.4**
YUK7	**Dusty Glacier**	**8.40**	**340**	Sg	Sb	14 23 58.9	+15
MNB	**Mounoet Dainar**	**8.53**	**88**	Pn	**Pn**	**14 21 42.9**	**+0.9**
HYT	**Haines Junctio**	**8.55**	**343**	Pn	**Pn**	**14 21 42.8**	**+0.7**
YKA	**Yellowknife Ar**	**13.54**	**37**	Pn	**Pn**	**14 22 49.2**	**-0.9**
	0.1nm,0.3s,baz=226,slow=12,SNR=12						
ILAR	**Eielson Array**	**14.15**	**334**	Pn	**Pn**	**14 23 01.6**	**+3.1**
	0.0nm,0.3s,baz=155,slow=11,SNR=1.7						
ILAR				LR	LR	14 28 30.0	
	comp=Z,47nm,18.6s,baz=198,slow=38						
INK	**Inuvik**	**15.59**	**358**	Pn	**Pn**	**14 23 19.2**	**+1.4**
	0.1nm,0.3s,baz=154,slow=6.5,SNR=3.6						
PDAR	**Pinedale Array**	**18.21**	**114**	Pn	**P**	**14 23 54.3**	**+3.0**
	0.1nm,0.3s,baz=314,slow=8.5,SNR=1.2						
TXAR	**Lajitas Array**	**31.50**	**127**	P	**P**	**14 26 02.2**	**+2.1**
	0.2nm,0.7s,baz=317,slow=7.4,SNR=3.6						
H11N2	**WAKE ISLAND Hy**	**56.91**	**259**	T	T	15 31 09.4	
	baz=39,slow=76,SNR=622						
H11N3	**WAKE ISLAND Hy**	**56.91**	**259**	T	T	15 31 08.5	
	baz=39,slow=76,SNR=575						
H11N1	**WAKE ISLAND Hy**	**56.93**	**259**	T	T	15 31 12.6	
	baz=39,slow=76,SNR=616						
ZALV	**Zalesovo Beam**	**69.24**	**338**	P	**P**	**14 30 44.9**	**+0.3**
	0.3nm,0.4s,baz=34,slow=5.6,SNR=2.1						
MKAR	**Makanchi Array**	**76.49**	**336**	P	**P**	**14 31 28.2**	**+0.4**
	0.6nm,0.7s,baz=38,slow=6.1,SNR=5.7						
KBZ	**Khabaz**	**83.78**	**3**	LR	LR	15 11 43.2	
	comp=Z,10nm,21.4s,baz=291,slow=37						

*IDC **18** 14:46:56.7±1.4, 77°.64N×85°.17W, h0km, mb3.5/5, mb1 3.9/6, mb1mx3.4/32, mbtmp3.5/6, ML3.7/1, MS2.8/1, Ms1 2.9/1, ms1mx2.4/31, Error ellipse: s-maj=48.6km s-min=24.3km az=140.0*

*NEIC **18** 14:46:59.3±2.3, 77°.59N±0°.03×85°.6W±0°.3, h16km±5km, mb4.1/24, ML4.1(OTT), Error ellipse: s-maj=9.3km s-min=3.2km az=76.0*

*OTT **18** 14:46:59.9±0.4, 77°.62N×86°.17W, h18km, ML4.1/5, 158km northwest from Grise Fiord, Nu Sverdrup Seismic Zone.*

ISC 18 14:46:57.3±0.5, 77°52N±0°05×85°34W±0°05, h10km, n61, σ1ᵗ99/67, mb4.0/15, Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EUNU	**Eureka**	**2.56**	**356**	PN	**Pn**	**14 47 39.1**	**+0.3**
EUNU				SN	**Sn**	**14 48 09.1**	**-0.9**
EUNU

DHY				IAmb	IAmb	14 52 50.7	
	comp=Z,5.9nm,1.4s						
SCHQ	**Schefferville**	**23.73**	**153**	P	**P**	**14 52 11.2**	**+2.0**
SCHQ				IAmb	IAmb	14 53 09.6	
	comp=Z,18nm,1.8s						
NOA	**NORSAR Array B**	**32.80**	**63**	LR	LR	15 06 55.5	
	comp=Z,16nm,18.1s,baz=255,slow=37						
ECSD	**EROS Data Cent**	**34.20**	**195**	P	**P**	**14 53 44.6**	**+2.0**
RSSD	**Black Hills**	**34.35**	**204**	P	**P**	**14 53 46.6**	**+2.6**
RSSD				IAmb	IAmb	14 54 45.1	
	comp=Z,2.2nm,0.7s						
FINES	**FINESS Array B**	**35.13**	**51**	P	**P**	**14 53 50.3**	**-0.1**
	comp=Z,1.6nm,0.9s,baz=353,slow=9.8,SNR=5.7						
PDAR	**Pinedale Array**	**36.25**	**211**	P	**P**	**14 54 01.9**	**+1.5**
	comp=Z,0.2nm,0.4s,baz=28,slow=8.6,SNR=2.6						
RWWY	**Rawlins**	**37.07**	**208**	P	**P**	**14 54 07.4**	**0.0**
ELK	**Elko**	**38.93**	**217**	P	**P**	**14 54 25.6**	**+2.5**
ELK				IAmb	IAmb	14 54 27.1	
	comp=Z,2.2nm,0.8s						
PAHR	**Pah Rah Range**	**40.52**	**222**	P	**P**	**14 54 38.3**	**+2.0**
PV13	**Radium Mtn., P**	**40.73**	**209**	P	**P**	**14 54 39.8**	**+1.8**
PV13				IAmb	IAmb	14 55 03.9	
	comp=Z,5.3nm,1.3s						
PSUT	**Pine Spring**	**40.93**	**215**	P	**P**	**14 54 42.1**	**+2.4**
KVN	**Kaiserville**	**40.98**	**220**	P	**P**	**14 54 42.2**	**+2.1**
KVN				IAmb	IAmb	14 54 43.1	
	comp=Z,1.8nm,0.6s						
NVAR	**Mina Array Bea**	**41.62**	**220**	P	**P**	**14 54 47.6**	**+2.1**
	comp=Z,0.5nm,0.6s,baz=21,slow=6.2,SNR=5.6						
LCMT	**Little Creek M**	**42.36**	**214**	P	**P**	**14 54 53.5**	**+2.2**
TPNV	**Topopah Spring**	**42.80**	**217**	P	**P**	**14 54 56.4**	**+1.4**
TPNV				IAmb	IAmb	14 56 07.5	
	comp=Z,12nm,1.9s						
NATX	**Nacogdoches**	**46.04**	**191**	P	**P**	**14 55 22.8**	**+2.0**
TXAR	**Lajitas Array**	**49.00**	**201**	P	**P**	**14 55 45.6**	**+1.7**
	comp=Z,0.2nm,0.5s,baz=27,slow=5.5,SNR=5.4						

JMA 18 14:48:11.3±0.1, 37.94N×144.55E, h41km, M3.8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.46**	**280**	P	Pn	14 48 50.2	+1.3
JIKH				S	Sn	14 49 19.0	+1.3
OFUJ	**Ofunato**	**2.53**	**298**	P	Pn	14 48 51.3	+1.4
JKMT	**Kesennumamotoy**	**2.57**	**291**	P	Pn	14 48 51.8	+1.4
JKMT				S	Sn	14 49 21.8	+1.4
JIO	**Ouri**	**2.57**	**282**	P	Pn	14 48 52.0	+1.6
JIO				S	Sn	14 49 22.1	+1.6
JMK	**Ichinoseki**	**2.80**	**292**	P	Pn	14 48 55.3	+1.7
JMK				S	Sn	14 49 28.2	+2.0
JOM	**Ohasama**	**2.97**	**302**	P	Pn	14 48 57.9	+2.0
JOM				S	Sn	14 49 32.4	+2.0
JFT	**Otama**	**3.37**	**264**	P	Pn	14 49 03.7	+2.3
JFT				*eS*	Sn	14 49 42.2	+2.1
JANG	**Nango**	**3.39**	**317**	P	Pn	14 49 03.2	+1.6
JYK	**Kaneyama**	**3.43**	**288**	P	Pn	14 49 04.8	+2.5
JYK				*eS*	Sn	14 49 44.8	+3.1
JCH	**Churui**	**4.76**	**349**	P	Pn	14 49 20.4	0.0
JRY	**Ryogami san**	**4.91**	**249**	P	Pn	14 49 23.5	+0.9
JRY				S	Sn	14 50 16.6	-1.6
NEM2	**Nemuro 2**	**5.50**	**9**	P	Pn	14 49 28.0	-2.5
NEM2				S	Sn	14 50 26.6	-5.8
JTKR	**Abashiri--Toko**	**6.04**	**356**	P	Pn	14 49 37.8	-0.3
JTKR				S	Sn	14 50 42.5	-3.4

*CNRM **18** 15:03:26.9±1.0, 36.59N×7.56W, h54km±43km, Error ellipse: s-maj=11.3km s-min=7.9km az=76.0*
*LDG **18** 15:03:28.7, 36.82N×7.37W, h65km*
*INMG **18** 15:03:29.9±1.4, 36.71N×7.47W, h23km±3km, ML2.6, Error ellipse: s-maj=2.4km s-min=2.2km az=43.0*
*MDD **18** 15:03:30.0±0.6, 36.72N×7.43W, h35km±15km, mbLg2.8/47, Error ellipse: s-maj=7.3km s-min=3.3km az=28.0, PRXIMO*
*SFS **18** 15:03:30.0, 36.74N×7.41W, h28km, ML2.8, GOLFO DE CADIZ*
*IGIL **18** 15:03:30.2, 36.71N×7.49W, h25km, ML2.8*

ISC 18 15:03:28.2±1.0, 36.72N±0.03×7.40W±0.03, h49km±16km, n105, σ1s82/197, 2C-13D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.68**	**321**	P	**Pn**	**15 03 42.1**	**+0.4**
PBDV				S	**Sn**	**15 03 50.8**	**-0.6**
	84nm,0.2s						
PBDV	**Barranco-do-Ve**	**0.68**	**321**	⇓*i*Pg	**Pn**	**15 03 42.1**	**+0.4**
PBDV				*e*Sg	**Sn**	**15 03 50.8**	**-0.6**
PBDV				A	A	15 03 53.0	
	84nm,0.2s						
PVAQ	**Vaqueiros**	**0.73**	**340**	P	**Pn**	**15 03 43.1**	**+0.8**
PVAQ				S	**Sn**	**15 03 52.4**	**-0.3**
	116nm,0.2s						
PVAQ	**Vaqueiros** SNR=577	**0.73**	**340**	P	**Pn**	**15 03 42.7**	**+0.4**
PVAQ				S	**Sn**	**15 03 52.3**	**-0.3**
PVAQ	**Vaqueiros**	**0.73**	**340**	⇓*i*Pg	**Pn**	**15 03 43.1**	**+0.8**
PVAQ				*e*Sg	**Sn**	**15 03 52.4**	**-0.3**
PVAQ				A	A	15 03 53.3	
	116nm,0.2s						
EGRO	**El Granado**	**0.82**	**355**	⇓P	**Pn**	**15 03 44.6**	**+1.2**
	16nm,0.1s,SNR=18						
EGRO				S	**Sn**	**15 03 55.3**	**+0.7**
	231nm,0.1s,SNR=7.9						
PCVE	**Castro Verde**	**1.05**	**331**	P	**Pn**	**15 03 47.5**	**+0.9**
PCVE				S	**Sn**	**15 04 00.8**	**+0.7**
	53nm,0.2s						
PCVE	**Castro Verde**	**1.05**	**331**	⇓*e*P	**Pn**	**15 03 47.5**	**+0.9**
PCVE				*e*S	**Sn**	**15 04 00.8**	**+0.7**
PCVE				A	A	15 04 01.1	
	53nm,0.2s						
MORF	**Marmelete**	**1.17**	**301**	*e*P	**Pn**	**15 03 48.5**	**+0.3**
MORF				*e*S	**Sn**	**15 04 02.0**	**-0.9**
MORF				AML	AML	15 04 03.8	
	comp=N,309nm,0.1s						
MORF	**Marmelete**	**1.17**	**301**	P	**Pn**	**15 03 48.5**	**+0.3**
MORF				S	**Sn**	**15 04 02.3**	**-0.7**
	comp=N,184nm,0.1s						
MORF	**Marmelete**	**1.17**	**301**	*e*P	**Pn**	**15 03 48.5**	**+0.3**
MORF				*e*S	**Sn**	**15 04 02.3**	**-0.7**
MORF				A	A	15 04 03.4	
	comp=N,184nm,0.1s						
EMIN	**Mina Concepcio**	**1.20**	**29**	P	**Pn**	**15 03 49.6**	**+1.1**
	comp=N,0.1nm,0.0s,SNR=40						
EMIN				S	**Sn**	**15 04 03.9**	**+0.1**
	comp=N,48nm,0.1s,SNR=19						
PFVI	**Vila Bisbo**	**1.22**	**290**	P	**Pn**	**15 03 49.4**	**+0.6**
	comp=N,2.1nm,0.1s,SNR=20						
PFVI				S	**Sn**	**15 04 03.6**	**-0.7**
	comp=N,39nm,0.1s,SNR=13						
PFVI	**Vila Bisbo** SNR=10.0	**1.22**	**290**	P	**Pn**	**15 03 49.2**	**+0.3**
PFVI				S	**Sn**	**15 04 03.0**	**-1.2**
PFVI	**Vila Bisbo**	**1.22**	**290**	*e*P	**Pn**	**15 03 49.3**	**+0.5**
PFVI				*e*S	**Sn**	**15 04 03.5**	**-0.7**
PFVI				A	A	15 04 17.4	
	comp=N,55nm,0.6s						
ESPR	**Espera**	**1.25**	**82**	⇑P	**Pn**	**15 03 50.8**	**+1.6**
	comp=N,13nm,0.1s,SNR=18						
ESPR				S	**Sn**	**15 04 06.4**	**+1.6**
	comp=N,328nm,0.2s						
MESJ	**Messejana**	**1.30**	**330**	*e*P	**Pn**	**15 03 51.0**	**+1.1**
MESJ				*e*S	**Sn**	**15 04 06.1**	**-0.2**
MESJ				AML	AML	15 04 09.6	
	comp=E,55nm,0.3s						
MESJ	**Messejana**	**1.30**	**330**	P	**Pn**	**15 03 51.0**	**+1.1**
MESJ				S	**Sn**	**15 04 06.4**	**+0.2**
	comp=E,44nm,0.2s						
MESJ	**Messejana**	**1.30**	**330**	⇓*i*P	**Pn**	**15 03 51.0**	**+1.1**
MESJ				*e*S	**Sn**	**15 04 06.4**	**+0.2**
MESJ				A	A	15 04 08.7	
	comp=E,44nm,0.2s						
PTEO	**Sao Teotonio**	**1.35**	**308**	P	**Pn**	**15 03 51.5**	**+0.9**
PTEO				S	**Sn**	**15 04 07.0**	**-0.3**
	comp=E,24nm,0.2s						
PTEO	**Sao Teotonio**	**1.35**	**308**	⇓*i*P	**Pn**	**15 03 51.5**	**+0.9**
PTEO				*e*S	**Sn**	**15 04 07.0**	**-0.3**
PTEO				A	A	15 04 08.3	
	comp=E,48nm,0.2s						
PBEJ	**Beja**	**1.36**	**344**	P	**Pn**	**15 03 51.9**	**+1.1**
PBEJ	**Beja**	**1.36**	**344**	*e*P	**Pn**	**15 03 51.9**	**+1.1**
PBEJ				A	A	15 04 13.0	
	comp=E,23nm,0.3s						
PBAR	**Barrancos**	**1.48**	**11**	P	**Pn**	**15 03 53.9**	**+1.4**
PBAR				S	**Sn**	**15 04 12.1**	**+1.4**
	comp=E,54nm,0.2s						
PBAR	**Barrancos**	**1.48**	**11**	*e*P	**Pn**	**15 03 53.9**	**+1.4**
PBAR				*e*S	**Sn**	**15 04 12.1**	**+1.4**
PBAR				A	A	15 04 16.7	
	comp=E,54nm,0.2s						
PNCL	**Nicolau / Gran**	**1.66**	**327**	P	**Pn**	**15 03 55.9**	**+1.1**
PNCL				S	**Sn**	**15 04 15.4**	**+0.4**
	comp=E,29nm,0.5s						
PNCL	**Nicolau / Gran**	**1.66**	**327**	⇓*e*Pn	**Pn**	**15 03 55.9**	**+1.1**
PNCL				*e*Sn	**Sn**	**15 04 15.4**	**+0.4**
PNCL				A	A	15 04 26.1	
	comp=E,29nm,0.5s						
EVO	**Evora**	**1.88**	**345**	P	**Pn**	**15 03 59.2**	**+1.3**
EVO				S	**Sn**	**15 04 21.5**	**+1.1**
EVO	**Evora**	**1.88**	**345**	*e*P	**Pn**	**15 03 59.1**	**+1.3**
EVO				*e*S	**Sn**	**15 04 27.1**	**+6.8**
EVO	**Evora**	**1.88**	**345**	⇓*e*Pn	**Pn**	**15 03 59.2**	**+1.3**
EVO				*e*Sn	**Sn**	**15 04 21.5**	**+1.1**
HORN	**Hornachuelos** SNR=33	**2.04**	**56**	P	**Pn**	**15 04 01.2**	**+1.0**
EBAD	**Badajoz**	**2.06**	**8**	⇓P	**Pn**	**15 04 01.4**	**+1.1**
	comp=E,2.6nm,0.1s,SNR=18						
EBAD				S	**Sn**	**15 04 24.6**	**-0.2**
	comp=E,21nm,0.2s,SNR=6.9						
ECAB	**El Cabril**	**2.08**	**49**	P	**Pn**	**15 04 01.8**	**+1.2**
	comp=E,0.7nm,0.1s,SNR=33						
ECAB				S	**Sn**	**15 04 24.4**	**-0.9**
	comp=E,3.5nm,0.0s,SNR=6.9						
EMIJ	**Mijas**	**2.12**	**93**	P	**Pn**	**15 04 03.3**	**+2.2**
	comp=E,0.6nm,0.1s,SNR=8.6						
EMIJ				S	**Sn**	**15 04 26.7**	**+0.5**
	comp=E,16nm,0.2s						
PESTR	**Estremoz**	**2.15**	**356**	P	**Pn**	**15 04 02.5**	**+0.9**
PESTR				S	**Sn**	**15 04 27.3**	**+0.2**
PESTR	**Estremoz**	**2.15**	**356**	*e*Pn	**Pn**	**15 04 02.9**	**+1.3**
PESTR				*e*Sn	**Sn**	**15 04 27.6**	**+0.5**
PESTR				A	A	15 04 40.8	
	comp=E,20nm,0.5s						
CHEFC	**Chefchaouen**	**2.31**	**133**	P	**Pn**	**15 04 04.5**	**+0.6**
CHEFC				S	**Sn**	**15 04 34.1**	**+2.9**
EMAL	**Malaga-Limoner**	**2.38**	**88**	*e*P	**Pn**	**15 04 07.0**	**+2.2**
EMAL				*e*S	**Sn**	**15 04 33.4**	**+0.7**
PMTG	**Montargil**	**2.44**	**345**	P	**Pn**	**15 04 06.8**	**+1.3**
PMTG				S	**Sn**	**15 04 34.2**	**+0.1**
	comp=E,18nm,0.4s						
PMTG	**Montargil**	**2.44**	**345**	⇓*e*Pn	**Pn**	**15 04 06.8**	**+1.3**
PMTG				*e*Sn	**Sn**	**15 04 34.2**	**+0.1**
PMTG				A	A	15 04 47.9	
	comp=E,18nm,0.4s						
EGOR	**Sierra Gorda,**	**2.66**	**81**	P	**Pn**	**15 04 10.9**	**+2.2**
	comp=E,0.5nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**15 04 39.8**	**-0.1**
	comp=E,12nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**2.67**	**56**	P	**Pn**	**15 04 10.4**	**+1.7**
	comp=E,1.2nm,0.1s,SNR=12						
EADA				S	**Sn**	**15 04 39.5**	**-0.4**
	comp=E,9.8nm,0.1s,SNR=4.7						
PMAFR	**Mafra**	**2.69**	**327**	P	**Pn**	**15 04 10.5**	**+1.5**
	comp=E,4.1nm,0.1s,SNR=11						
PMAFR				S	**Sn**	**15 04 40.7**	**+0.4**
	comp=E,51nm,0.1s,SNR=12						
PMAFR	**Mafra**	**2.69**	**327**	⇓*e*Pn	**Pn**	**15 04 10.4**	**+1.5**
PMAFR				*e*Sn	**Sn**	**15 04 39.6**	**-0.7**
PMAFR				A	A	15 04 42.3	
	comp=E,38nm,0.2s						
PMRV	**Marv??o**	**2.71**	**0**	P	**Pn**	**15 04 10.5**	**+1.3**
PMRV				S	**Sn**	**15 04 40.9**	**+0.1**
	comp=E,18nm,0.9s						
PMRV	**Marv??o**	**2.71**	**0**	⇓*e*Pn	**Pn**	**15 04 10.5**	**+1.3**
PMRV				*e*Sn	**Sn**	**15 04 40.9**	**+0.1**
PMRV				A	A	15 05 01.5	
	comp=E,18nm,0.9s						
ELGU	**Los Guajares,**	**3.03**	**86**	P	**Pn**	**15 04 16.1**	**+2.4**
	comp=E,0.5nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**15 04 47.0**	**-1.8**
	comp=E,20nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	**3.12**	**359**	P	**Pn**	**15 04 16.2**	**+1.3**
PCBR				S	**Sn**	**15 04 50.9**	**0.0**
	comp=E,6.6nm,0.2s						
PCBR	**Castelo Branco**	**3.12**	**359**	*e*Pn	**Pn**	**15 04 16.2**	**+1.3**
PCBR				*e*Sn	**Sn**	**15 04 50.9**	**0.0**
PCBR				A	A	15 04 52.2	
	comp=E,13nm,0.2s						
EQUE	**Quentar**	**3.21**	**80**	P	**Pn**	**15 04 18.4**	**+2.3**
	comp=E,0.3nm,0.1s,SNR=5.4						
EQUE				S	**Sn**	**15 04 53.4**	**+0.2**
	comp=E,7.4nm,0.3s,SNR=6.3						
ZHG	**ZHG**	**3.32**	**169**	P	**Pn**	**15 04 18.0**	**+0.3**
ZHG				S	**Sn**	**15 04 54.8**	**-1.1**
PCAS	**Casmilo, Conde**	**3.44**	**346**	P	**Pn**	**15 04 21.1**	**+1.8**
PCAS				S	**Sn**	**15 04 59.2**	**+0.4**
	comp=E,8.4nm,0.6s						
PCAS	**Casmilo, Conde**	**3.44**	**346**	*e*Pn	**Pn**	**15 04 21.1**	**+1.8**
PCAS				*e*Sn	**Sn**	**15 04 59.2**	**+0.4**
PCAS				A	A	15 05 24.6	
	comp=E,8.4nm,0.6s						
EPLA	**Plasencia**	**3.50**	**17**	P	**Pn**	**15 04 21.4**	**+1.3**
	comp=E,5.3nm,0.1s,SNR=41						
EPLA				S	**Sn**	**15 04 59.6**	**-0.7**
	comp=E,4.4nm,0.1s,SNR=10.0						
EQES	**Quesada**	**3.62**	**71**	P	**Pn**	**15 04 23.2**	**+1.4**
	comp=E,1.1nm,0.1s,SNR=16						
EQES				S	**Sn**	**15 05 02.9**	**-0.4**
	comp=E,7.8nm,0.1s,SNR=9.2						
EBER	**Berja**	**3.62**	**86**	P	**Pn**	**15 04 24.2**	**+2.3**
	comp=E,0.2nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**15 05 02.9**	**-0.6**
	comp=E,5.7nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**3.68**	**358**	P	**Pn**	**15 04 23.8**	**+1.2**
MTE				S	**Sn**	**15 05 04.2**	**-0.6**
	comp=E,6.3nm,0.5s						
MTE	**Manteigas**	**3.68**	**358**	⇓*e*Pn	**Pn**	**15 04 23.8**	**+1.2**
MTE				*e*Sn	**Sn**	**15 05 04.2**	**-0.6**
MTE				A	A	15 05 30.7	
	comp=E,13nm,0.5s						
IFR	**Ifrane**	**3.69**	**149**	*e*P	**Pn**	**15 04 22.9**	**0.0**
IFR				*e*S	**Sn**	**15 05 00.7**	**-4.5**
PAB	**San Pablo**	**3.71**	**39**	P	**Pn**	**15 04 24.8**	**+1.8**
	comp=E,1.7nm,0.3s,SNR=7.9						
PAB				S	**Sn**	**15 05 03.0**	**-2.5**
	comp=E,13nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**4.00**	**41**	P	**Pn**	**15 04 28.7**	**+1.6**
	comp=E,2.8nm,0.1s,baz=226,slow=13,SNR=28						
ESDC				S	**Sn**	**15 05 11.9**	**-0.8**
	comp=E,6.2nm,0.2s,baz=225,slow=24,SNR=55						
PVIS	**Viseu**	**4.01**	**355**	P	**Pn**	**15 04 28.4**	**+1.2**
PVIS				S	**Sn**	**15 05 12.0**	**-0.9**
	comp=E,6.6nm,0.2s						
PVIS	**Viseu**	**4.01**	**355**	*e*Pn	**Pn**	**15 04 28.4**	**+1.2**
PVIS				*e*Sn	**Sn**	**15 05 12.0**	**-0.9**
PVIS				A	A	15 05 13.6	
	comp=E,13nm,0.2s						
SESP	**Santiago Espad** SNR=9.4	**4.11**	**69**	P	**Pn**	**15 04 30.1**	**+1.5**
	comp=E,2.0nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**15 05 15.5**	**+0.1**
	comp=E,15nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**4.11**	**69**	P	**Pn**	**15 04 29.6**	**+1.1**
	SNR=9.4						
ENIJ	**Nijar**	**4.17**	**85**	P	**Pn**	**15 04 31.5**	**+2.2**
	comp=E,0.9nm,0.2s,SNR=7.9						
ENIJ				S	**Sn**	**15 05 15.3**	**-1.4**
	comp=E,7.0nm,0.3s,SNR=7.9						
SRHM	**Skhour des Reh**	**4.25**	**186**	P	**Pn**	**15 04 30.7**	**+0.2**
MD31	**MD31**	**4.41**	**150**	P	**Pn**	**15 04 32.9**	**+0.3**
MD31				S	**Sn**	**15 05 19.2**	**-3.5**
MVO	**Moncorvo** SNR=18	**4.45**	**4**	⇑P	**Pn**	**15 04 34.3**	**+1.1**
	comp=E,4.5nm,0.1s,SNR=18						
MVO				S	**Sn**	**15 05 21.6**	**-2.2**
	comp=E,16nm,0.1s,SNR=12						
MVO	**Moncorvo**	**4.45**	**4**	*e*Pn	**Pn**	**15 04 34.3**	**+1.1**
MVO				*e*Sn	**Sn**	**15 05 22.1**	**-1.6**
MVO				A	A	15 05 24.1	
	comp=E,13nm,0.2s						
MDT	**Midelt** SNR=140	**4.52**	**149**	P	**Pn**	**15 04 34.5**	**+0.4**
MDT				S	**Sn**	**15 05 21.9**	**-3.6**
PVRL	**Vila Real**	**4.56**	**357**	P	**Pn**	**15 04 35.8**	**+1.1**
PVRL				S	**Sn**	**15 05 25.0**	**-1.4**
	comp=E,4.0nm,0.1s						
PVRL	**Vila Real**	**4.56**	**357**	*e*Pn	**Pn**	**15 04 35.8**	**+1.1**
PVRL				*e*Sn	**Sn**	**15 05 25.0**	**-1.4**
PVRL				A	A	15 05 27.9	
	comp=E,7.9nm,0.1s						
GUD	**Guadarrama**	**4.67**	**32**	P	**Pn**	**15 04 37.8**	**+1.6**
	comp=E,0.4nm,0.2s,SNR=7.9						
GUD				S	**Sn**	**15 05 26.9**	**-2.3**
	comp=E,0.8nm,0.1s,SNR=7.9						
UCM	**Universidad Co**	**4.84**	**41**	*i* P	**Pn**	**15 04 40.7**	**+2.2**
UCM				*e*S	**Sn**	**15 05 31.4**	**-1.9**
PCAB	**Cabril**	**5.01**	**355**	P	**Pn**	**15 04 41.5**	**+0.7**
PCAB				S	**Sn**	**15 05 35.2**	**-2.3**
PCAB	**Cabril**	**5.01**	**355**	*e*Pn	**Pn**	**15 04 41.5**	**+0.7**
PCAB				*e*Sn	**Sn**	**15 05 35.2**	**-2.3**
ETOB	**Tobarra**	**5.02**	**66**	P	**Pn**	**15 04 42.0**	**+0.9**
	comp=E,1.4nm,0.1s,SNR=44						
ETOB				S	**Sn**	**15 05 35.8**	**-2.0**
	comp=E,5.4nm,0.1s						
EMUR	**La Murta**	**5.04**	**75**	P	**Pn**	**15 04 42.3**	**+1.1**
	comp=E,0.4nm,0.2s,SNR=7.9						
EMUR				S	**Sn**	**15 05 35.2**	**-2.8**
	comp=E,4.3nm,0.3s,SNR=7.9						
PBRG	**Braganca**	**5.11**	**6**	P	**Pn**	**15 04 43.5**	**+1.3**
PBRG				S	**Sn**	**15 05 38.1**	**-1.7**
	comp=E,3.5nm,0.2s						
PBRG	**Braganca**	**5.11**	**6**	*e*Pn	**Pn**	**15 04 43.5**	**+1.3**
PBRG				*e*Sn	**Sn**	**15 05 38.1**	**-1.7**
PBRG				A	A	15 05 39.9	
	comp=E,6.9nm,0.2s						
ELOB	**Lobios**	**5.17**	**354**	P	**Pn**	**15 04 44.1**	**+1.1**
	comp=E,0.8nm,0.1s,SNR=15						
ELOB				S	**Sn**	**15 05 38.5**	**-2.9**
	comp=E,4.0nm,0.3s						
ECAL	**Calabor**	**5.24**	**5**	P	**Pn**	**15 04 45.3**	**+1.2**
	comp=E,1.0nm,0.1s,SNR=8.1						
ECAL				S	**Sn**	**15 05 40.9**	**-2.3**
	comp=E,5.6nm,0.2s						
PGAV	**Gavieira, Arco**	**5.29**	**353**	P	**Pn**	**15 04 45.9**	**+1.2**
PGAV				S	**Sn**	**15 05 41.9**	**-2.4**
	comp=E,5.4nm,0.5s						
PGAV	**Gavieira, Arco**	**5.29**	**353**	*e*Pn	**Pn**	**15 04 45.9**	**+1.2**
PGAV				*e*Sn	**Sn**	**15 05 41.9**	**-2.4**
PGAV				A	A	15 05 45.0	
	comp=E,5.4nm,0.5s						
OUK	**Oukaimeden**	**5.51**	**184**	S	**Sn**	**15 05 46.2**	**-3.9**
EZAM	**Zamans**	**5.52**	**350**	P	**Pn**	**15 04 49.1**	**+1.3**
	comp=E,1.2nm,0.1s,SNR=7.9						
EZAM				S	**Sn**	**15 05 46.9**	**-3.0**
	comp=E,1.5nm,0.2s,SNR=7.9						
AFON	**Font Roja**	**5.77**	**68**	P	**Pn**	**15 04 52.3**	**+0.9**
	comp=E,0.7nm,0.2s,SNR=7.9						
OUZM	**OUZ**	**5.81**	**175**	P	**Pn**	**15 04 52.7**	**+0.7**
OUZM				S	**Sn**	**15 05 54.0**	**-3.5**
ETOR	**Torete**	**5.85**	**44**	P	**Pn**	**15 04 54.3**	**+2.0**
	comp=E,3.5nm,0.2s,SNR=16						
ETOR				S	**Sn**	**15 05 54.3**	**-3.8**
	comp=E,12nm,0.3s						
EBEN2	**Beniarda presa**	**6.04**	**69**	P	**Pn**	**15 04 55.9**	**+0.9**
	comp=E,1.6nm,0.1s,SNR=7.9						
EBEN2				S	**Sn**	**15 06 00.3**	**-2.5**
	comp=E,3.3nm,0.2s,SNR=4.0						
EAGO	**Agolada(Pontev**	**6.10**	**355**	P	**Pn**	**15 04 56.7**	**+0.9**
	comp=E,0.5nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**15 06 02.3**	**-2.0**
	comp=E,2.0nm,0.1s,SNR=7.9						
TTIG	**Tnine Tigouga,**	**6.21**	**188**	P	**Pn**	**15 04 54.8**	**-2.6**
EMAZ	**Mazaricos**	**6.34**	**349**	P	**Pn**	**15 05 00.4**	**+1.4**
	comp=E,1.1nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**15 06 07.9**	**-2.2**
	comp=E,1.0nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**6.54**	**54**	P	**Pn**	**15 05 04.3**	**+2.5**
	comp=E,0.3nm,0.1s,SNR=9.2						
EMOS				S	**Sn**	**15 06 11.4**	**-3.7**
	comp=E,1.6nm,0.4s,SNR=7.9						
EARI	**Arriondas**	**6.79**	**14**	P	**Pn**	**15 05 06.3**	**+1.1**
	comp=E,0.1nm,0.2s,SNR=7.9						
EARI				S	**Sn**	**15 06 17.8**	**-3.3**
	comp=E,0.3nm,0.1s,SNR=7.9						
SJPF	**Ste Jean**	**7.96**	**35**	*e*P	**Pn**	**15 05 23.5**	**+2.4**
SJPF				*e*Sn	**Sn**	**15 06 42.7**	**-7.0**
	comp=E,3.5nm,0.4s						
ETSF	**Etsaut**	**8.11**	**38**	*e*P	**Pn**	**15 05 25.6**	**+2.3**
ETSF				*e*Sn	**Sn**	**15 06 46.4**	**-7.2**
	comp=E,1.1nm,0.3s						
ETSF				*e*S	**Sn**	**15 06 54.1**	**+0.5**
EPF	**Esparros**	**8.67**	**41**	*e*P	**Pn**	**15 05 33.1**	**+2.2**
EPF				*e*Sn	**Sn**	**15 07 00.1**	**-7.1**
	comp=E,1.9nm,0.4s						
LFF	**La Frestale**	**10.27**	**34**	*e*P	**Pn**	**15 05 53.9**	**+1.2**
MFF	**Saint Martin d**	**11.26**	**26**	*e*P	**Pn**	**15 06 08.1**	**+1.8**
QUIF	**Quistinic**	**11.62**	**14**	*e*P	**Pn**	**15 06 12.3**	**+1.1**
SGMF	**Saint Gilles**	**12.07**	**16**	*e*P	**Pn**	**15 06 18.4**	**+1.1**
GRR	**Gorron**	**12.62**	**20**	*e*P	**Pn**	**15 06 25.6**	**+0.8**
LDF	**La Druitiere**	**13.01**	**22**	*e*P	**Pn**	**15 06 30.9**	**+0.7**

*NIED **18** 15:04:00, 28.20N×142.70E, h8km, Mw4

	comp=Z,34nm,18.9s,baz=77,slow=38							
KMI	**Kunming**	**35.93**	**275**	P		**P**	**15 11 26.2**	**-0.4**
CHTO	**Chiang Mai**	**41.20**	**267**	P		**P**	**15 12 10.8**	**+0.2**
CM31	**Chiang Mai Arr**	**41.33**	**266**	P		**P**	**15 12 12.1**	**+0.4**
CMAR	**Chiang Mai Arr**	**41.33**	**266**	P		**P**	**15 12 11.8**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=77,slow=5.9,SNR=2.7							
CMAR				LR		LR	15 29 34.3	
	comp=Z,9.9nm,19.1s,baz=225,slow=36							
MTN	**Manton Dam**	**42.28**	**197**	P		**P**	**15 12 19.3**	**-0.1**
TIXI	**Tiksi**	**44.27**	**354**	P		**P**	**15 12 35.3**	**+0.4**
TIXI				IAmb		IAmb	15 12 46.3	
	comp=Z,10nm,1.8s							
FITZ	**Fitzroy Crossi**	**48.89**	**202**	P		**P**	**15 13 11.5**	**-0.1**
ZAA0	**Zalesovo Array**	**49.15**	**318**	P		**P**	**15 13 14.0**	**+0.7**
ZAA0				IAmb		IAmb	15 15 02.4	
	comp=Z,12nm,2.0s							
ZALV	**Zalesovo Beam**	**49.15**	**318**	P		**P**	**15 13 14.4**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=88,slow=9.4,SNR=4.0							
ZALV				PcP		**PcP**	**15 14 37.4**	**+1.0**
	comp=Z,0.9nm,0.5s,baz=91,slow=3.7,SNR=4.9							
MK31	**Makanchi Array**	**50.33**	**309**	P		**P**	**15 13 22.9**	**+0.4**
MKAR	**Makanchi Array**	**50.33**	**309**	P		**P**	**15 13 23.0**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=88,slow=9.9,SNR=7.9							
ASAR	**Alice Springs**	**52.21**	**190**	P		**P**	**15 13 35.9**	**-0.8**
	comp=Z,0.7nm,1.0s,baz=2.7,slow=4.6,SNR=8.8							
TRF	**Thorofare Moun**	**54.89**	**30**	P		**P**	**15 13 56.1**	**0.0**
TRF				IAmb		IAmb	15 14 00.1	
	comp=Z,16nm,1.8s							
PMR	**Palmer**	**55.23**	**33**	P		**P**	**15 13 58.3**	**-0.1**
PMR				IAmb		IAmb	15 14 10.2	
	comp=Z,4.3nm,0.8s							
GHO	**Glory Hole Cre**	**55.35**	**32**	P		**P**	**15 13 58.9**	**-0.5**
RND	**Reindeer**	**55.53**	**30**	P		**P**	**15 14 00.3**	**-0.4**
RND				IAmb		IAmb	15 14 30.6	
	comp=Z,12nm,1.7s							
SML	**Sawmill**	**55.63**	**32**	P		**P**	**15 14 01.0**	**-0.4**
DHY	**Denali Highway**	**56.17**	**31**	P		**P**	**15 14 05.0**	**-0.4**
DHY				IAmb		IAmb	15 15 14.2	
	comp=Z,8.7nm,1.6s							
IL31		**56.51**	**29**	P		**P**	**15 14 07.7**	**+0.2**
IL31				IAmb		IAmb	15 14 31.2	
	comp=Z,8.7nm,1.9s							
ILAR	**Eielson Array**	**56.51**	**29**	P		**P**	**15 14 07.2**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=257,slow=6.4,SNR=12							
DOT	**Dot Lake**	**57.69**	**30**	P		**P**	**15 14 15.0**	**-0.9**
EGAK	**Eagle**	**58.97**	**29**	P		**P**	**15 14 25.4**	**+0.6**
EGAK				IAmb		IAmb	15 14 29.7	
	comp=Z,13nm,2.0s							
KK31	**Karatay Array**	**59.02**	**305**	P		**P**	**15 14 25.9**	**+0.3**
KKAR	**Karatay Array**	**59.02**	**305**	P		**P**	**15 14 26.0**	**+0.4**
DAWY	**Dawson**	**59.75**	**30**	P		**P**	**15 14 29.5**	**-0.8**
DAWY				IAmb		IAmb	15 14 56.2	
	comp=Z,7.2nm,1.7s							
INK	**Inuvik**	**61.84**	**25**	P		**P**	**15 14 44.3**	**0.0**
	comp=Z,0.5nm,0.5s,baz=300,slow=6.6,SNR=4.7							
INK	**Inuvik**	**61.84**	**25**	P		**P**	**15 14 43.2**	**-1.1**
INK				IAmb		IAmb	15 16 26.9	
	comp=Z,6.0nm,1.6s							
YKA	**Yellowknife Ar**	**70.94**	**29**	P		**P**	**15 15 42.4**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=294,slow=6.1,SNR=6.9							
FINES	**FINESS Array B**	**77.32**	**334**	P		**P**	**15 16 20.1**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=74,slow=4.8,SNR=5.0							
NVAR	**Mina Array Bea**	**79.39**	**52**	P		**P**	**15 16 32.1**	**0.0**
	comp=Z,0.3nm,0.6s,baz=316,slow=6.2,SNR=3.9							
AKASG	**Malin Array Be**	**82.18**	**324**	P		**P**	**15 16 45.7**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=51,slow=4.8,SNR=1.6							
RAYN	**Ar Rayn**	**85.33**	**294**	P		**P**	**15 17 04.2**	**+1.0**
RAYN				IAmb		IAmb	15 17 17.4	
	comp=Z,3.8nm,0.9s							
BRTR	**Keskin Array B**	**85.78**	**313**	P		**P**	**15 17 07.5**	**+2.1**
	comp=Z,0.5nm,0.6s,baz=126,slow=1.7,SNR=4.4							
TXAR	**Lajitas Array**	**94.48**	**53**	P		**P**	**15 17 47.1**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=321,slow=4.1,SNR=4.3							
LPAZ	**La Paz**	**149.03**	**74**	PKPbc		**PKPbc**	**15 24 16.0**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=277,slow=1.3,SNR=4.6							
LPAZ	**La Paz**	**149.03**	**74**	PKPdf		**PKPdf**	**15 24 09.6**	**-1.5**

*KRNET **18** 15:05:22.5±0.1, 40.˙66N×78.˙69E, h20km, mb3.1*
*SOME **18** 15:05:24.9, 40.˙57N×78.˙35E, h10km*
*NNC **18** 15:05:32.0±2.1, 40.˙89N×78.˙39E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=14.7km s-min=11.1km az=163.0*

ISC 18 15:05:29.9±1.7, 40°82.N±0.˙08×78°36E±0.˙04, h10km, n62, σ1§62/95, 23C-13D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.00**	**336**	⇓*i*P	**Pg**	**15 05 46.4**	**-2.9**
	baz=28						
TARG				⇓*i*S	**Sb**	**15 06 04.0**	**+0.9**
	baz=28						
KDJ	**Kajisay**	**1.58**	**326**	⇓*i*P	**Pn**	**15 05 56.6**	**-1.6**
	baz=23						
KDJ				⇓*i*S	**Sg**	**15 06 21.8**	**+0.9**
	baz=23						
PRZ	**Przheval'sk**	**1.67**	**1**	⇑*i*P	**Pn**	**15 05 56.4**	**-3.0**
	baz=54						
PRZ				⇑*i*S	**Sb**	**15 06 21.4**	**-0.5**
	baz=54						
ANVS	**Anan'yevo**	**2.03**	**345**	⇑*e*P	**Pn**	**15 06 03.0**	**-1.4**
	baz=41						
ANVS				⇑*i*S	**Sb**	**15 06 32.5**	**0.0**
	baz=41						
ULHL	**Ulahol**	**2.14**	**313**	⇑*i*P	**Pn**	**15 06 05.3**	**-0.6**
	baz=12						
ULHL				⇑*i*S	**Sb**	**15 06 36.3**	**+0.8**
	baz=12						
ULHL	**Ulahol**	**2.14**	**313**	P	**Pb**	**15 06 08.3**	**-0.6**
	SNR=10						
UZB	**Uzynbulak**	**2.38**	**12**	*e*P	**Pb**	**15 06 13.2**	**+0.2**
	5.7nm,0.4s						
UZB				*e*S	**Sg**	**15 06 47.9**	**+1.4**
	32nm,0.5s						
UZB	**Uzynbulak**	**2.38**	**12**	Pg	**Pb**	**15 06 13.2**	**+0.2**
	5.7nm,0.4s						
UZB				Lg	Lg	15 06 47.9	
	32nm,0.5s						
TNSS	**Tian-Shan**	**2.46**	**335**	*e*P	**Pb**	**15 06 15.1**	**+0.7**
	13nm,0.5s						
TNSS				*e*S	**Sg**	**15 06 51.2**	**+2.4**
	23nm,0.5s						
TNSS	**Tian-Shan**	**2.46**	**335**	Pg	**Pb**	**15 06 15.1**	**+0.7**
	13nm,0.5s						
TNSS				Lg	Lg	15 06 51.3	
	23nm,0.5s						
BOOM	**Boomskoye usch**	**2.47**	**313**	⇑*e*P	**Pn**	**15 06 09.6**	**-0.8**
	baz=13						
BOOM				⇑*e*S	**Sb**	**15 06 44.1**	**-0.9**
	baz=13						
SHLS	**Shalkode**	**2.48**	**19**	*e*P	**Pg**	**15 06 16.9**	**-0.5**
	12nm,0.2s						
SHLS				*e*S	**Sg**	**15 06 54.6**	**+5.0**
	37nm,0.6s						
SHLS	**Shalkode**	**2.48**	**19**	Pg	**Pg**	**15 06 16.9**	**-0.5**
	12nm,0.2s						
SHLS				Lg	Lg	15 06 54.6	
	37nm,0.6s						
MDOK	**Medeo**	**2.54**	**338**	*e*P	**Pb**	**15 06 16.1**	**+0.3**
	11nm,0.5s						
MDOK				*e*S	**Sg**	**15 06 52.8**	**+1.3**
	26nm,0.7s						
MDOK	**Medeo**	**2.54**	**338**	Pn	**Pb**	**15 06 15.0**	**-0.7**
	6.7nm,0.5s						
MDOK				Lg	Lg	15 06 46.0	
	34nm,0.8s						
MDOK	**Medeo**	**2.54**	**338**	Pg	**Pb**	**15 06 16.0**	**+0.3**
	11nm,0.5s						
MDOK				Lg	Lg	15 06 52.8	
	26nm,0.7s						
IZV	**Izvestkoviy**	**2.57**	**330**	*e*P	**Pb**	**15 06 16.7**	**+0.5**
	12nm,0.4s						
IZV				*e*S	**Sg**	**15 06 54.0**	**+1.4**
	40nm,0.7s						
IZV	**Izvestkoviy**	**2.57**	**330**	Pg	**Pb**	**15 06 16.7**	**+0.5**
	12nm,0.4s						
IZV				Lg	Lg	15 06 54.0	
	40nm,0.7s						
KOTS	**Kotyrbulak**	**2.59**	**339**	*e*P	**Pg**	**15 06 17.5**	**-2.1**
	24nm,0.3s						
KOTS				*e*S	**Sg**	**15 06 55.3**	**+2.2**
	62nm,0.6s						
KOTS	**Kotyrbulak**	**2.59**	**339**	Pg	**Pg**	**15 06 17.5**	**-2.1**
	24nm,0.3s						
KOTS				Lg	Lg	15 06 55.3	
	62nm,0.6s						
PDGK	**Podgornoye**	**2.65**	**18**	Pg	**Pg**	**15 06 18.3**	**-2.4**
	3.4nm,0.3s						
PDGK				Lg	Lg	15 06 56.7	
	18nm,0.8s						
KZA	**Kyzart**	**2.66**	**299**	⇓*e*P	**Pn**	**15 06 12.5**	**-0.7**
	baz=0.0						
KZA				⇓*i*S	**Sb**	**15 06 49.3**	**-1.3**
	baz=0.0						
KZA	**Kyzart**	**2.66**	**299**	P	**Pb**	**15 06 17.2**	**-0.6**
	SNR=11						
KURS	**Kuram**	**2.67**	**357**	*e*P	**Pb**	**15 06 18.7**	**+0.8**
	8.8nm,0.5s						
KURS				*e*S	**Sg**	**15 06 56.9**	**+1.1**
	19nm,0.6s						
KURS	**Kuram**	**2.67**	**357**	Pg	**Pb**	**15 06 18.7**	**+0.8**
	8.8nm,0.5s						
KURS				Lg	Lg	15 06 56.9	
	19nm,0.6s						
MTBS	**Maitube**	**2.72**	**329**	*e*P	**Pb**	**15 06 19.0**	**+0.2**
	8.1nm,0.2s						
MTBS				*e*S	**Sg**	**15 06 58.1**	**+0.7**
	25nm,0.6s						
MTBS	**Maitube**	**2.72**	**329**	Pg	**Pb**	**15 06 19.0**	**+0.2**
	8.1nm,0.2s						
MTBS				Lg	Lg	15 06 58.1	
	25nm,0.6s						
KST	**Kastek**	**2.85**	**322**	*e*P	**Pb**	**15 06 21.1**	**+0.1**
	10.0nm,0.5s						
KST				*e*S	**Sg**	**15 07 01.6**	**0.0**
	14nm,0.4s						
KST	**Kastek**	**2.85**	**322**	Pg	**Pb**	**15 06 21.1**	**+0.1**
	10.0nm,0.5s						
KST				Lg	Lg	15 07 01.6	
	14nm,0.4s						
TKM2	**Tokmak 2**	**2.95**	**316**	⇑*e*P	**Pn**	**15 06 16.5**	**-0.5**
	baz=15						
TKM2				⇑*i*S	**Sb**	**15 06 55.7**	**-3.1**
	baz=15						
TKM2	**Tokmak 2**	**2.95**	**316**	P	**Pb**	**15 06 23.5**	**+0.9**
	SNR=11						
TKM2	**Tokmak 2**	**2.95**	**316**	⇓Pn	**Pb**	**15 06 21.8**	**-0.9**
	4.1nm,0.5s						
TKM2				⇑Lg	Lg	15 07 02.8	
	9.0nm,0.7s						
KTMS	**Ketmen**	**3.02**	**29**	*e*P	**Pb**	**15 06 24.4**	**+0.6**
	0.2nm,0.1s						
KTMS				*e*S	**Sg**	**15 07 07.1**	**+0.3**
	16nm,0.5s						
KTMS	**Ketmen**	**3.02**	**29**	Pg	**Pb**	**15 06 24.4**	**+0.6**
	0.2nm,0.1s						
KTMS				Lg	Lg	15 07 07.1	
	16nm,0.5s						
DGS	**Degeres**	**3.10**	**322**	*e*P	**Pb**	**15 06 25.4**	**+0.2**
	5.1nm,0.4s						
DGS				*e*S	**Sg**	**15 07 09.1**	**-0.3**
	18nm,0.7s						
DGS	**Degeres**	**3.10**	**322**	Pg	**Pb**	**15 06 25.4**	**+0.2**
	5.1nm,0.4s						
DGS				Lg	Lg	15 07 09.1	
	18nm,0.7s						
KBK	**Karagaybulak**	**3.15**	**307**	⇑*i*P	**Pn**	**15 06 19.4**	**-0.3**
	baz=7.0						
KBK				⇑*i*S	**Sn**	**15 07 00.4**	**+3.0**
	baz=7.0						
KBK	**Karagaybulak**	**3.15**	**307**	P	**Pb**	**15 06 26.5**	**+0.4**
	SNR=6.3						
KTBS	**Karatobe**	**3.15**	**337**	*e*P	**Pb**	**15 06 26.9**	**+0.8**
	5.4nm,0.4s						
KTBS				*e*S	**Sg**	**15 07 11.1**	**0.0**
	24nm,0.3s						
KTBS	**Karatobe**	**3.15**	**337**	Pg	**Pb**	**15 06 26.9**	**+0.8**
	5.4nm,0.4s						
KTBS				Lg	Lg	15 07 11.1	
	24nm,0.3s						
CHKK	**Chushkaly**	**3.20**	**342**	*e*P	**Pb**	**15 06 28.0**	**+1.1**
	4.4nm,0.3s						
CHKK				*e*S	**Sg**	**15 07 13.3**	**+0.6**
	18nm,0.5s						
CHKK	**Chushkaly**	**3.20**	**342**	Pg	**Pb**	**15 06 28.0**	**+1.1**
	4.4nm,0.3s						
CHKK				Lg	Lg	15 07 13.4	
	18nm,0.5s						
UCH	**Uchtor**	**3.21**	**297**	⇑*i*P	**Pn**	**15 06 20.4**	**-0.5**
	baz=98						
UCH				⇑*i*S	**Sn**	**15 07 02.5**	**+3.0**
	baz=98						
MNBS	**Baschi**	**3.26**	**1**	*e*P	**Pg**	**15 06 29.6**	**-2.8**
MNBS				*e*S	**Sg**	**15 07 16.2**	**+1.5**
MNBS	**Baschi**	**3.26**	**1**	Pg	**Pg**	**15 06 29.6**	**-2.8**
	0.1nm,0.3s						
MNBS				Lg	Lg	15 07 16.2	
	0.5nm,0.3s						
AAK	**Ala-Archa**	**3.42**	**303**	⇓*e*P	**Pn**	**15 06 22.9**	**-0.5**
	baz=4.0						
AAK				⇓*e*S	**Sn**	**15 07 07.2**	**+3.1**
	baz=4.0						
AAK	**Ala-Archa**	**3.42**	**303**	P	**Pb**	**15 06 30.9**	**+0.2**
	SNR=5.6						
AAK	**Ala-Archa**	**3.42**	**303**	⇓Pn	**Pb**	**15 06 29.5**	**-1.2**
	2.7nm,0.4s						
AAK				⇑Lg	Lg	15 07 16.9	
	24nm,1.1s						
ARXS	**Arharly**	**3.42**	**354**	*e*P	**Pg**	**15 06 32.5**	**-2.9**
	8.4nm,0.4s						
ARXS				*e*S	**Sg**	**15 07 20.8**	**+1.1**
	11nm,0.6s						
ARXS	**Arharly**	**3.42**	**354**	Pg	**Pg**	**15 06 32.5**	**-2.9**
	8.4nm,0.4s						
ARXS				Lg	Lg	15 07 20.8	
	11nm,0.6s						
KUU	**Kurty**	**3.42**	**335**	*e*P	**Pb**	**15 06 31.7**	**+1.1**
	3.2nm,0.3s						
KUU				*e*S	**Sg**	**15 07 19.5**	**-0.3**
	11nm,0.5s						
KUU	**Kurty**	**3.42**	**335**	Pg	**Pb**	**15 06 31.7**	**+1.1**
	3.2nm,0.3s						
KUU				Lg	Lg	15 07 19.5	
	11nm,0.5s						
FRU1	**Bishkek**	**3.43**	**307**	⇑*i*P	**Pn**	**15 06 22.9**	**-0.6**
	baz=7.0						
FRU1				⇑*i*S	**Sn**	**15 07 07.4**	**+3.2**
	baz=7.0						
CHMS	**Chumysh**	**3.46**	**310**	⇑*i*P	**Pn**	**15 06 23.5**	**-0.5**
	baz=10.0						
CHMS				⇑*e*S	**Sn**	**15 07 08.0**	**+2.9**
	baz=10.0						
KRBS	**Karabastau**	**3.50**	**326**	*e*P	**Pb**	**15 06 32.6**	**+0.6**
	3.4nm,0.3s						
KRBS				*e*S	**Sg**	**15 07 21.5**	**-0.8**
	8.9nm,0.6s						
KRBS	**Karabastau**	**3.50**	**326**	Pg	**Pb**	**15 06 32.6**	**+0.6**
	3.4nm,0.3s						
KRBS				Lg	Lg	15 07 21.5	
	8.9nm,0.6s						
DJR	**Jarkent**	**3.67**	**16**	*e*P	**Pg**	**15 06 36.9**	**-3.4**
	1.8nm,0.3s						
DJR				*e*S	**Sg**	**15 07 28.8**	**+1.1**
	7.3nm,0.5s						
DJR	**Jarkent**	**3.67**	**16**	Pg	**Pg**	**15 06 36.9**	**-3.4**
	1.8nm,0.3s						
DJR				Lg	Lg	15 07 28.8	
	7.3nm,0.5s						
AML	**Almayashu**	**3.74**	**292**	⇓*i*P	**Pn**	**15 06 27.9**	**-0.2**
	baz=93						
AML				⇓*i*S	**Sn**	**15 07 15.3**	**+2.9**
	baz=93						
USP	**Ospenovka**	**3.78**	**312**	P	**Sg**	**15 07 28.9**	**-2.2**
	SNR=6.6						
EKS2	**Erkin-Say**	**3.89**	**300**	⇑*i*P	**Pn**	**15 06 29.5**	**-0.4**
	baz=0.0						
EKS2				⇑*i*S	**Sn**	**15 07 18.4**	**+2.7**
	baz=0.0						
KK31	**Karatay Array**	**6.28**	**294**	⇓Pg	**Pg**	**15 07 30.8**	**+0.6**
	0.3nm,0.3s,baz=105,slow=16						
KK31				⇑Lg	Lg	15 08 50.8	
	0.4nm,0.5s,baz=100,slow=32						

*BJI **18** 15:22:11.5±0.0, 18.˙17S×178.˙25W, h627km, mB4.8/27, mb4.7/33*
*IDC **18** 15:22:12.4±0.9, 18.˙23S×178.˙25W, h618km±9km, mb4.3/27, mb1 4.3/29, mb1mx4.3/37, mbtmp5.2/29, Error ellipse: s-maj=10.2km s-min=8.9km az=76.0*
*NEIC **18** 15:22:12.5±1.5, 18.˙28S±0.˙08×178.˙22W±0.˙09, h627km±4km, mb4.9/256, Error ellipse: s-maj=12.3km s-min=11.2km az=67.0*
*BGR **18** 15:22:14.3±0.0, 18.˙69S×179.˙52W, h635km±5km*
*GCMT **18** 15:22:16.5±0.3, 18.˙21S±0.˙02×178.˙31W±0.˙03, h639km±2km, MW5.3/93, Moment Tensor Solution. s93,c123; Duration: 1§1 Moment tensor: Scale 10^17^Nm; Mrr=0.64±.03; Mθθ=0.63±.04; Mφφ=0.00±.04; Mrθ=0.80±.04; Mrφ=0.56±.04; Mθφ=0.12±.04; Best double couple: M=1.16700×10^17^ NP1=φ30.00000°, δ34.00000°, λ-143.00000°. NP2=φ268.00000°, δ70.00000°, λ-62.00000°. Principal axes: T 1.1940, Plg20.0000°, Azm337.0000°; N -0.0540, Plg26.0000°, Azm78.0000°; P -1.1400, Plg56.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 18 15:22:13.2±0.4, 18°24S±0.˙04×178°28W±0.˙04, h633km±4km, h634km: pP-P, n717, σ1§02/805, mb5.0/164, 29C-26D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.53**	**278**	P	**P**	**15 23 39.2**	**+0.9**
AFI	**Afiamalu**	**7.59**	**56**	P	**P**	**15 24 07.8**	**-2.4**
NIUE	**Niue**	**7.96**	**97**	P	**P**	**15 24 13.5**	**+0.1**
	baz=7.8,SNR=5.7						
NIUE				S	**S**	**15 25 59.9**	**+8.1**
	baz=7.8						
NIUE	**Niue**	**7.96**	**97**	P	**P**	**15 24 12.2**	**-1.2**
FUNA	**Funafuti**	**9.96**	**345**	P	**P**	**15 24 30.9**	**-1.5**
RAO	**Raoul Island**	**10.97**	**178**	P	**P**	**15 24 39.2**	**-2.8**
DZM	**Mont Dzumac**	**14.84**	**253**	P	**P**	**15 25 19.8**	**+1.1**
	2.5nm,0.3s,baz=112,slow=14,SNR=22						
DZM				S	**S**	**15 27 50.8**	**+1.0**
	0.2nm,0.3s,baz=68,slow=15,SNR=1.9						
DZM	**Mont Dzumac**	**14.84**	**253**	P	**P**	**15 25 17.5**	**-1.2**
KNTN	**Kanton**	**16.66**	**23**	P	**P**	**15 25 34.3**	**-1.1**
RAR	**Rarotonga**	**17.67**	**103**	P	**P**	**15 25 43.4**	**-1.1**
	1.8nm,0.3s,baz=256,slow=9.4,SNR=4.1						
RAR	**Rarotonga**	**17.67**	**103**	IAmb	IAmb	15 25 50.4	
	comp=Z,179nm,1.7s						
OUZ	**Omahuta**	**18.39**	**202**	P	**P**	**15 25 52.7**	**+2.0**
OUZ				IAmb	IAmb	15 25 54.8	
	comp=Z,75nm,0.9s						
MXZ	**Matakaoa Point**	**19.48**	**188**	P	**P**	**15 25 58.7**	**-1.8**
MXZ				IAmb	IAmb	15 26 03.3	
	comp=Z,27nm,0.7s						
URZ	**Urewera**	**20.35**	**190**	P	**P**	**15 26 07.4**	**-1.0**
	comp=Z,77nm,0.9s,baz=27,slow=5.4,SNR=25						
URZ				S	**S**	**15 29 14.8**	**-3.0**
	comp=Z,12nm,0.6s,baz=192,slow=18,SNR=4.1						
URZ	**Urewera**	**20.35**	**190**	P	**P**	**15 26 05.9**	**-2.4**
URZ				IAmb	IAmb	15 26 08.7	
	comp=Z,58nm,0.8s						
TARA	**Tarawa**	**21.31**	**335**	P	**P**	**15 26 15.8**	**-1.5**
BKZ	**Black Stump Fm**	**21.34**	**191**	P	**P**	**15 26 15.0**	**-2.3**
BFZ	**Birch Farm**	**22.86**	**191**	P	**P**	**15 26 28.5**	**-2.2**
BFZ				IAmb	IAmb	15 26 35.6	
	comp=Z,46nm,0.7s						
HNR	**Honiara**	**22.86**	**290**	P	**P**	**15 26 31.6**	**+0.5**
	comp=Z,62nm,0.8s,baz=265,slow=21,SNR=2.2						
HNR	**Honiara**	**22.86**	**290**	P	**P**	**15 26 30.5**	**-0.6**
MSWZ	**Moikau Station**	**23.75**	**192**	P	**P**	**15 26 37.3**	**-1.3**
SNZO	**South Karori**	**23.77**	**193**	P	**P**	**15 26 36.2**	**-2.5**
BHW	**Baring Head**	**23.82**	**193**	P	**P**	**15 26 37.5**	**-1.7**
QRZ	**Quartz Range**	**23.86**	**197**	P	**P**	**15 26 39.2**	**-0.3**
PLWZ	**Palliser**	**23.90**	**192**	P	**P**	**15 26 38.2**	**-1.8**
NNZ	**Nelson**	**23.99**	**196**	P	**P**	**15 26 39.5**	**-1.1**
NNZ				IAmb	IAmb	15 26 43.0	
	comp=Z,56nm,0.8s						
TUWZ	**Tuamarina**	**24.05**	**194**	P	**P**	**15 26 39.8**	**-1.4**
BSWZ	**Blackbirch Sta**	**24.34**	**194**	P	**P**	**15 26 43.1**	**-0.7**
THZ	**Tophouse**	**24.63**	**196**	P	**P**	**15 26 44.9**	**-1.5**
KHZ	**Kahutara**	**25.08**	**194**	P	**P**	**15 26 48.7**	**-1.6**
LTZ	**Lake Taylor**	**25.75**	**196**	P	**P**	**15 26 54.8**	**-1.4**
OXZ	**Oxford**	**26.31**	**196**	P	**P**	**15 26 59.8**	**-1.4**
OXZ					**PcP**	**15 30 04.2**	**-0.6**
MQZ	**McQueen's Vall**	**26.52**	**195**	P	**P**	**15 27 02.0**	**-0.8**
RPZ	**Rata Peaks**	**26.94**	**197**	P	**P**	**15 27 05.5**	**-1.1**
	comp=Z,48nm,0.6s,baz=335,slow=3.2,SNR=21						
RPZ	**Rata Peaks**	**26.94**	**197**	P	**P**	**15 27 05.6**	**-1.1**
FOZ	**Fox Glacier**	**27.14**	**199**	P	**P**	**15 27 07.4**	**-0.9**
LBZ	**Lake Benmore**	**27.81**	**198**	P	**P**	**15 27 12.2**	**-1.9**
ODZ	**Otahua Downs**	**28.28**	**197**	P	**P**	**15 27 17.5**	**-0.7**
ODZ				IAmb	IAmb	15 27 20.6	
	comp=Z,34nm,0.9s						
WKZ	**Wanaka**	**28.56**	**199**	P	**P**	**15 27 19.6**	**-1.0**
XMAS	**Kiritimati**	**28.76**	**48**	P	**P**	**15 27 21.0**	**-1.7**
EIDS	**Eidsvold**	**29.27**	**251**	P	**P**	**15 27 27.2**	**+0.2**
	baz=30,SNR=14						
EIDS	**Eidsvold**	**29.27**	**251**	P	**P**	**15 27 26.4**	**-0.6**
EIDS				IAmb	IAmb	15 27 28.3	
	comp=Z,53nm,0.8s						
MLZ	**Mavora Lakes**	**29.33**	**200**	P	**P**	**15 27 27.8**	**+0.5**
DCZ	**Deep Cove**	**29.73**	**201**	P	**P**	**15 27 30.8**	**+0.2**
ARMA	**Armidale**	**29.88**	**240**	P	**P**	**15 27 33.8**	**+1.5**
	baz=30,SNR=44						
ARMA	**Armidale**	**29.88**	**240**	P	**P**	**15 27 32.6**	**+0.3**
MGCD	**Mangrove Creek**	**31.20**	**235**	P	**P**	**15 27 45.1**	**+1.7**
	baz=31,SNR=31						
RMQ	**Roma**	**31.50**	**249**	P	**P**	**15 27 47.1**	**+1.1**
	baz=32,SNR=61						
RABL	**Rabaul**	**32.10**	**292**	P	**P**	**15 27 50.4**	**-0.9**
KRVT	**Keravat (AS076**	**32.17**	**292**	P	**P**	**15 27 51.5**	**-0.4**
	comp=Z,69nm,0.7s,baz=189,slow=3.1,SNR=7.4						
CNB	**Canberra Magne**	**33.32**	**233**	P	**P**	**15 28 02.7**	**+1.4**
	baz=34,SNR=109						
CTA	**Charters Tower**	**33.51**	**261**	P	**P**	**15 28 03.5**	**+0.5**
	comp=Z,14nm,0.4s,baz=82,slow=9.7,SNR=58						
CTAO	**Charters Tower**	**33.51**	**261**	P	**P**	**15 28 03.3**	**+0.3**
CTAO				IAmb	IAmb	15 28 04.6	
	comp=Z,46nm,0.9s						
CAN	**Canberra**	**33.60**	**233**	P

comp=Z,71nm,0.7s
HMH Humu'ula Sheep 43.76 32 P **P** **15 29 25.7 +0.2**
POHA Pohakuloa 43.87 32 P **P** **15 29 25.4 -0.8**
KEKH Kekaha 43.91 25 P **P** **15 29 25.9 -0.3**
HPAH Hawaii Prepara 44.02 31 P **P** **15 29 27.0 -0.1**
HON Honolulu 44.05 28 P **P** **15 29 27.5 +0.2**
KIP Kipapa 44.13 28 P **P** **15 29 28.2 +0.2**
OPA Opana 44.37 27 P **P** **15 29 30.2 +0.5**
HLK Haleakala 44.37 30 P **P** **15 29 30.1 +0.1**
KHLH Kahului Airpor 44.40 30 P **P** **15 29 30.4 +0.4**
WRAB Tennant Creek 44.68 260 P **P** **15 29 31.6 -0.7**
WRAB IAmb IAmb 15 29 33.1
comp=Z,55nm,0.9s
AS31 Alice Springs 44.82 255 P **P** **15 29 33.2 0.0**
AS31 IAmb IAmb 15 29 35.0
comp=Z,40nm,0.8s
ASAR Alice Springs 44.82 255 P **P** **15 29 33.5 +0.3**
comp=Z,187nm,0.9s,baz=94,slow=7.4,SNR=1332
ASAR PcP **PcP** **15 31 01.6 +0.5**
comp=Z,24nm,0.4s,baz=102,slow=4.0,SNR=21
ASAR S **S** **15 35 25.0 -1.6**
comp=Z,21nm,0.7s,baz=91,slow=16,SNR=15
SMPI Sarmi 45.15 286 P **P** **15 29 36.6 +0.8**
comp=Z,33nm,1.0s
MIDW Midway 46.19 1 P **P** **15 29 43.5 +0.1**
MIDW IAmb IAmb 15 31 27.4
comp=Z,58nm,0.6s
GUMO Guam 48.17 309 P **P** **15 29 58.5 +0.1**
FORT Forrest 49.98 245 P **P** **15 30 11.0 -0.4**
KNRA Kununurra 50.58 264 P **P** **15 30 15.3 -0.7**
KNRA IAmb IAmb 15 30 17.1
comp=Z,58nm,0.9s
FAKI Fak Fak 50.76 281 P **P** **15 30 17.2 -0.3**
FITZ Fitzroy Crossi 53.09 261 P **P** **15 30 34.1 +0.1**
FITZ IAmb IAmb 15 30 35.7
comp=Z,75nm,1.7s
SOEI Soe 56.19 270 P **P** **15 30 56.9 +1.2**
comp=Z,122nm,0.9s
SOEI Soe 56.19 270 P **P** **15 30 57.0 +1.2**
SOEI IAmb IAmb 15 30 58.5
comp=Z,91nm,0.8s
TNTI Ternate 56.66 283 P **P** **15 30 57.8 -1.0**
PSAD2 Pilbara Seismi 57.83 256 P **P** **15 31 06.4 -0.2**
PSAD2 IAmb IAmb 15 31 07.5
comp=Z,59nm,0.8s
PSAC2 Pilbara Seismi 57.89 256 P **P** **15 31 06.8 -0.3**
PSAC2 IAmb IAmb 15 31 07.9
comp=Z,72nm,0.8s
PSAB2 Pilbara Seismi 57.93 256 P **P** **15 31 07.0 -0.3**
PSAB2 IAmb IAmb 15 31 08.2
comp=Z,77nm,0.8s
PSAB3 Pilbara Seismi 57.93 256 P **P** **15 31 06.9 -0.4**
PSAB3 IAmb IAmb 15 31 08.2
comp=Z,89nm,0.9s
PSAA3 Pilbara Seismi 57.93 256 P **P** **15 31 06.7 -0.6**
PSAA3 IAmb IAmb 15 31 08.3
comp=Z,81nm,0.9s
PSA00 Pilbara Seismi 57.94 256 P **P** **15 31 06.7 -0.7**
PSA00 IAmb IAmb 15 31 08.3
comp=Z,80nm,0.9s
PSAA2 Pilbara Seismi 57.94 256 P **P** **15 31 06.6 -0.7**
PSAA2 IAmb IAmb 15 31 08.3
comp=Z,80nm,0.9s
PSAA1 Pilbara Seismi 57.95 256 P **P** **15 31 06.8 -0.6**
PSAA1 IAmb IAmb 15 31 08.4
comp=Z,86nm,0.9s
PSAC3 Pilbara Seismi 57.95 256 P **P** **15 31 07.0 -0.4**
PSAC3 IAmb IAmb 15 31 08.4
comp=Z,92nm,0.9s
PSAB1 Pilbara Seismi 57.97 256 P **P** **15 31 07.1 -0.4**
PSAB1 IAmb IAmb 15 31 08.5
comp=Z,86nm,0.9s
PSAD1 Pilbara Seismi 57.98 256 P **P** **15 31 07.2 -0.3**
PSAD1 IAmb IAmb 15 31 08.5
comp=Z,74nm,0.8s
PSAC1 Pilbara Seismi 57.98 256 P **P** **15 31 07.3 -0.3**
PSAC1 IAmb IAmb 15 31 08.6
comp=Z,78nm,0.9s
PSAD3 Pilbara Seismi 57.99 255 P **P** **15 31 07.4 -0.3**
PSAD3 IAmb IAmb 15 31 08.7
comp=Z,99nm,0.9s
MMRI Maumere 58.42 271 P **P** **15 31 11.1 +0.4**
comp=Z,65nm,0.8s
MMRI Maumere 58.42 271 P **P** **15 31 10.4 -0.3**
MMRI IAmb IAmb 15 31 11.5
comp=Z,44nm,0.8s
EDFI Ende, Flores 58.91 271 P **P** **15 31 14.1 0.0**
comp=Z,296nmcomp=Z,30nm,1.2s
NWAO Narrogin (SRO) 59.16 242 P **P** **15 31 15.5 +0.1**
NWAO IAmb IAmb 15 31 16.6
comp=Z,43nm,0.9s
VNDA Vanda 60.13 185 P **P** **15 31 22.5 +1.7**
comp=Z,20nm,0.8s,baz=0.3,slow=7.1,SNR=114
VNDA Vanda 60.13 185 P **P** **15 31 22.6 +1.7**
VNDA IAmb IAmb 15 31 23.9
comp=Z,121nm,1.6s
LUWI Luwuk 60.28 279 P **P** **15 31 24.9 +1.9**
comp=Z,20nm,1.1s
LUWI Luwuk 60.28 279 P **P** **15 31 23.2 +0.3**
LUWI IAmb IAmb 15 33 03.1
comp=Z,50nm,0.4s
MORW Morawa 60.46 246 P **P** **15 31 23.6 -0.3**
MORW IAmb IAmb 15 31 24.9
comp=Z,32nm,0.8s
KCP Kidapawan 61.23 289 ||| *i*P **P** **15 31 30.2 +1.0**
BNSI Bone 61.69 275 P **P** **15 31 32.6 +0.4**
comp=Z,23nm,1.0s
KAPI Kappang 61.84 274 P **P** **15 31 33.0 -0.1**
PLAI Plampang 62.61 269 P **P** **15 31 38.5 +0.4**
comp=Z,760nmcomp=Z,91nm,1.0s
GIRL Giralia 62.91 253 P **P** **15 31 41.0 +1.1**
JHJ2 Mitsune 64.88 322 P **P** **15 31 52.1 +0.1**
JHJ Hachijo jima 2 64.90 322 P **P** **15 31 52.5 +0.4**
comp=Z,157nm,0.4s,baz=185,slow=6.0,SNR=12
BKB Balikpapan 65.73 277 P **P** **15 31 57.9 +0.1**
CASY Casey 65.89 205 P **P** **15 31 57.9 +0.1**
JAGI Jajag, Banyuwa 66.15 269 P **P** **15 31 59.5 -0.9**
comp=Z,88nm,0.8s
JAGI Jajag, Banyuwa 66.15 269 P **P** **15 31 59.4 -0.9**
JAGI IAmb IAmb 15 32 00.3
comp=Z,61nm,0.7s
INU Inuyama 68.10 322 P **P** **15 32 11.2 -0.5**
MJAR Matsushiro Arr 68.24 323 P **P** **15 32 12.5 -0.2**
comp=Z,35nm,0.6s,baz=142,slow=6.3,SNR=252
MAJO Matsushiro 68.25 323 P **P** **15 32 12.3 -0.3**
MAJO IAmb IAmb 15 32 13.7
comp=Z,50nm,0.7s
MAT Matsushiro 68.25 323 P **P** **15 32 12.5 -0.1**
MJB9 Matsu-Tunnel 68.25 323 P **P** **15 32 12.3 -0.4**
MJB9 IAmb IAmb 15 32 13.5
comp=Z,40nm,0.6s
PWJI Pagerwojo 68.51 268 P **P** **15 32 14.8 +0.1**
comp=Z,66nm,0.8s
JOW Kunigami 68.52 310 P **P** **15 32 15.3 +0.8**
comp=Z,2.5nm,0.8s,baz=127,slow=12,SNR=5.4
JOW Kunigami 68.52 310 IAmb IAmb 15 33 25.4
comp=Z,39nm,1.3s
KKM Kota Kinabalu 68.94 284 P **P** **15 32 16.5 -0.9**
WOJI Wonogiri, Jawa 69.40 268 P **P** **15 32 20.4 +0.4**
comp=Z,76nm,0.8s
UGM Wanagama 69.76 268 P **P** **15 32 22.4 +0.2**
KIWB Kanaga Island 69.80 1 P **P** **15 32 22.6 +1.1**
ADK Adak 69.84 1 P **P** **15 32 21.0 -0.7**
GSTR Great Sitkin T 70.06 1 P **P** **15 32 22.7 -0.4**
ATKA Atka Island 70.23 3 P **P** **15 32 23.1 -0.9**
JNU Nakatsue 70.46 316 P **P** **15 32 26.1 +0.2**
comp=Z,11nm,0.5s,baz=23,slow=0.9,SNR=25
JNU Nakatsue 70.46 316 P **P** **15 32 26.0 +0.1**
JNU IAmb IAmb 15 32 27.3
comp=Z,18nm,0.8s
SMY Shemya 70.98 355 P **P** **15 32 28.0 -0.4**
YOJ Yonaguni jima 71.23 305 P **P** **15 32 30.5 0.0**
YOJ IAmb IAmb 15 34 52.0
comp=Z,86nm,1.1s
SBUM Sibu 71.38 279 P **P** **15 32 32.1 +0.4**
SBUM Sibu 71.38 279 P **P** **15 32 33.0 +1.4**
NIKH Nikolski High 71.38 6 P **P** **15 32 30.2 -0.6**
QSPA South Pole Qui 71.82 180 P **P** **15 32 33.5 +0.1**
TWG Pinlang 71.95 302 P **P** **15 32 33.5 -1.2**
YULB Yu-li 72.05 303 P **P** **15 32 34.1 -1.2**
YULB IAmb IAmb 15 32 35.5
comp=Z,12nm,0.5s
NACB Ninganchiao 72.20 304 P **P** **15 32 35.5 -0.6**
NACB IAmb IAmb 15 32 36.9
comp=Z,25nm,0.9s

CISI Cisompet, Garu 72.43 268 P **P** **15 32 36.9 -0.9**
comp=Z,87nm,1.1s
CISI Cisompet, Garu 72.43 268 P **P** **15 32 37.1 -0.7**
CISI IAmb IAmb 15 32 38.1
comp=Z,56nm,0.8s
UNV Unalaska Valle 72.50 7 P **P** **15 32 36.0 -1.2**
UNV IAmb IAmb 15 32 37.2
comp=Z,50nm,0.7s
SSLB Suanglung 72.52 303 P **P** **15 32 37.3 -0.7**
SSLB IAmb IAmb 15 32 38.2
comp=Z,31nm,0.4s
TPUB Ta-pu 72.54 302 P **P** **15 32 37.0 -1.1**
TPUB IAmb IAmb 15 32 38.1
comp=Z,49nm,0.6s
YHNB Yeheng 72.62 304 P **P** **15 32 38.3 -0.4**
YHNB IAmb IAmb 15 35 14.7
comp=Z,116nm,1.7s
LEM Lembang 72.83 268 P **P** **15 32 40.6 +0.4**
comp=Z,101nm,0.8s,baz=58,slow=4.8,SNR=22
KSM Kuching 72.85 277 P **P** **15 32 40.5 +0.4**
KSM IAmb IAmb 15 32 42.2
comp=Z,43nm,0.8s
KSM Kuching 72.85 277 P **P** **15 32 41.0 +0.9**
KSM Kuching 72.85 277 P **P** **15 32 41.0 +0.9**
AKUT Akutan 72.88 8 P **P** **15 32 38.3 -0.9**
AKUT IAmb IAmb 15 32 40.1
comp=Z,77nm,1.0s
PET Petropavlovsk 73.72 346 P **P** **15 32 43.6 -0.6**
DBJI Dramaga 73.73 268 P **P** **15 32 45.7 +0.6**
comp=Z,2µmcomp=Z,93nm,1.0s
FALS False Pass 73.90 9 P **P** **15 32 44.3 -0.8**
PEA0B Petropavlovsk- 74.03 345 P **P** **15 32 45.8 -0.1**
PETK Petropavlovsk- 74.03 345 P **P** **15 32 46.0 +0.1**
comp=Z,44nm,0.6s,baz=132,slow=7.5,SNR=207
CNBA Chernabura Isl 74.50 11 P **P** **15 32 47.8 -0.7**
CNBA IAmb IAmb 15 34 01.3
comp=Z,59nm,1.3s
SDPT Sand Point 74.84 10 P **P** **15 32 49.3 -1.0**
KSRS Korea Array 75.03 318 P **P** **15 32 53.0 +1.3**
comp=Z,7.0nm,0.7s,baz=131,slow=6.4,SNR=45
KSRS PP **PP** **15 35 52.2 0.0**
comp=Z,3.7nm,1.1s,baz=130,slow=8.4,SNR=5.1
SPIA Saint Paul Isl 75.43 5 P **P** **15 32 52.9 -0.6**
SPIA IAmb IAmb 15 32 54.5
comp=Z,70nm,1.0s
CHGN Chignik 76.12 11 P **P** **15 32 56.9 -0.4**
CHGN IAmb IAmb 15 32 57.9
comp=Z,60nm,0.8s
KASI Kota Agung 76.17 269 P **P** **15 32 57.8 -0.9**
comp=Z,100nm,1.0s
SCZ2 Santa Cruz Isl 76.25 47 P **P** **15 33 00.2 +1.6**
baz=236
SBC Santa Barbara 76.44 47 P **P** **15 33 00.8 +1.2**
baz=236
PKM Mcpherson Peak 76.62 46 P **P** **15 33 01.9 +1.0**
baz=236
SMMC Simmler 76.73 46 P **P** **15 33 03.3 +2.0**
baz=236
LWLI Liwa 76.74 269 P **P** **15 33 02.4 +0.5**
comp=Z,4µmcomp=Z,68nm,0.6s
USA0B Ussuriysk Arra 76.95 326 P **P** **15 33 02.6 +0.4**
USA0B IAmb IAmb 15 33 04.8
comp=Z,28nm,1.1s
USRK Ussuriysk Ar. 76.95 326 P **P** **15 33 03.5 +1.3**
comp=Z,7.5nm,0.6s,baz=151,slow=2.8,SNR=35
KMRM Mail Ridge 77.19 40 P **P** **15 33 05.1 +1.4**
KMRM IAmb IAmb 15 33 06.7
comp=Z,37nm,0.9s
KHMM Horse Mountain 77.58 39 P **P** **15 33 06.6 +0.7**
VES Vestal, Richgr 77.64 46 P **P** **15 33 07.3 +1.2**
baz=236
VOG Valley Oaks Go 77.70 45 P **P** **15 33 07.3 +0.9**
baz=236
O02D Mt. Diablo Mer 77.73 40 P **P** **15 33 08.1 +1.5**
baz=233,SNR=9.4
MURC Murrieta 77.75 48 P **P** **15 33 07.8 +1.0**
baz=238
MURC Murrieta 77.75 48 S **P** **15 33 07.6 +0.7**
baz=357
KRMB Red Mountain 77.86 39 P **P** **15 33 07.2 -0.2**
BACC Bachelor Mtn. 77.87 48 P **P** **15 33 07.8 +0.3**
EDW2 Edwards Air Fo 77.87 47 P **P** **15 33 08.8 +1.4**
baz=237
MONP2 Monument Peak 77.94 49 P **P** **15 33 09.1 +1.1**
baz=239
ISA Isabella, Lake 77.96 46 P **P** **15 33 09.5 +1.6**
baz=237
CMB Columbia Colle 78.00 43 P **P** **15 33 08.7 +0.6**
OHAK Old Harbor 78.03 14 P **P** **15 33 07.6 0.0**
OHAK IAmb IAmb 15 33 08.9
comp=Z,46nm,0.8s
IKP In-o-Pah, Jac 78.04 50 P **P** **15 33 09.8 +1.3**
baz=239
WDC Whiskeytown Da 78.12 40 P **P** **15 33 09.4 +0.9**
AFDM Forest Hills D 78.14 42 P **P** **15 33 09.0 +0.2**
ORV Oroville 78.16 41 P **P** **15 33 09.2 +0.4**
NJ2 Nanjing 78.24 309 *e*P **P** **15 33 11.1 +1.7**
NJ2 pmax pmax
comp=Z,18nm,0.5s
N02D Trinity Center 78.25 40 P **P** **15 33 11.1 +1.7**
baz=233,SNR=7.5
PFO Pinyon Flats O 78.28 49 P **P** **15 33 11.0 +1.2**
baz=239
O03E Paynes Creek 78.40 41 P **P** **15 33 11.3 +1.0**
baz=234
M02C Callahan 78.42 39 P **P** **15 33 11.9 +1.7**
baz=233,SNR=12
MDJ Mudanjiang 78.53 325 P **P** **15 33 12.1 +1.5**
MDJ pmax pmax
comp=Z,52nm,0.8s
MDJ pmax pmax
comp=Z,280nm,4.1s
MDJ Mudanjiang 78.53 325 P **P** **15 33 11.4 +0.8**
MDJ IAmb IAmb 15 33 13.1
comp=Z,53nm,0.8s
CWC Cottonwood Cre 78.65 46 P **P** **15 33 13.0 +1.3**
baz=237
OMMB Old Mammoth Mi 78.67 44 P **P** **15 33 12.8 +0.8**
KDAK Kodiak Island 78.69 14 P **P** **15 33 11.5 +0.4**
KDAK IAmb IAmb 15 33 13.4
comp=Z,33nm,0.9s
YBH Yreka Blue Hor 78.70 39 P **P** **15 33 13.0 +1.2**
K02D Willamette Mer 78.73 38 P **P** **15 33 13.1 +1.3**
baz=232
MLAC Mammoth, Mammo 78.79 44 P **P** **15 33 14.0 +1.5**
baz=236
MPMC Manual Prospec 78.84 46 P **P** **15 33 14.0 +1.2**
baz=238
J01E Myrtle Point 78.86 37 P **P** **15 33 13.5 +1.1**
baz=232
TIN Tinemaha, Big 78.88 45 P **P** **15 33 14.4 +1.6**
baz=237
WAKR Walker 78.88 43 P **P** **15 33 13.8 +0.8**
MYKOM Kota Tinggi 79.05 276 P **P** **15 33 13.8 -0.3**
MYKOM Kota Tinggi 79.05 276 P **P** **15 33 15.0 +0.9**
BEKR Beckworth 79.06 42 P **P** **15 33 14.2 +0.3**
PNTR Pine Nut 79.10 43 P **P** **15 33 14.7 +0.5**
PNTR IAmb IAmb 15 33 16.6
comp=Z,30nm,1.0s
GLA Glamis 79.17 50 P **P** **15 33 16.0 +1.6**
baz=240
GLA Glamis 79.17 50 P **P** **15 33 14.7 +0.3**
GLA IAmb IAmb 15 35 16.9
comp=Z,14nm,0.5s
VCNR Virginia City 79.19 42 P **P** **15 33 14.5 -0.1**
L04D Klamath Falls 79.24 39 P **P** **15 33 15.8 +1.2**
baz=233,SNR=11
M04C Macdoel 79.26 39 P **P** **15 33 15.7 +1.0**
baz=234,SNR=7.6
YERR Yerington 79.28 43 P **P** **15 33 15.1 +0.1**
GRAC Grapevine Rang 79.43 45 P **P** **15 33 17.2 +1.5**
baz=238
IRM Iron Mountain 79.50 49 P **P** **15 33 17.5 +1.4**
baz=239
I03D Drain, OR 79.52 37 P **P** **15 33 17.3 +1.4**
baz=232
RYN Ryan 79.54 43 P **P** **15 33 16.6 +0.2**
NVAR Mina Array Bea 79.58 44 P **P** **15 33 17.8 +1.2**
comp=Z,6.3nm,0.8s,baz=224,slow=8.9,SNR=36
NVAR PKKPbc **PKKPbc** **15 52 01.0 +1.0**
comp=Z,0.4nm,0.5s,baz=62,slow=5.0,SNR=6.4
PAHR Pah Rah Range 79.59 42 P **P** **15 33 17.3 +0.8**
NV11 Mina Array Sit 79.68 44 P **P** **15 33 17.7 +0.6**
J04D Umpqua Nationa 79.97 38 P **P** **15 33 19.8 +1.3**
baz=233,SNR=13
KVN Kaiserville 80.05 43 P **P** **15 33 19.0 -0.1**

I04A Tendick Farm, 80.12 37 P **P** **15 33 19.8 +0.7**
baz=233,SNR=5.2
TPNV Topopah Spring 80.16 46 P **P** **15 33 20.8 +1.2**
baz=238
MOD Modoc Plateau 80.26 40 P **P** **15 33 20.3 +0.3**
CN2 Changchun 80.36 322 *e*P **P** **15 33 20.9 +0.7**
CN2 pmax pmax
comp=Z,30nm,1.2s
H04D Lebanon 80.37 37 P **P** **15 33 21.6 +1.3**
baz=232
KLR Kul'dur 80.46 329 P **P** **15 33 21.7 +1.1**
comp=Z,5.9nm,0.8s,baz=102,slow=4.9,SNR=17
SDSI Sungai Dareh 80.48 272 P P 15 33 30.2 +8.6
G03D McMinnville, O 80.50 36 P **P** **15 33 22.1 +1.2**
baz=232
J05D Fort Rock, OR 80.50 38 P **P** **15 33 22.6 +1.3**
baz=234,SNR=7.7
CNPM China Poot 80.58 14 P **P** **15 33 20.8 -0.2**
CNPM IAmb IAmb 15 33 22.1
comp=Z,30nm,0.8s
SHPR Sheep Range 80.68 47 P **P** **15 33 22.2 -0.1**
H04A Detroit Lake 80.78 37 P **P** **15 33 22.8 +0.4**
H04A IAmb IAmb 15 33 24.3
comp=Z,71nm,1.6s
BRLK Bradley Lake 80.87 14 P **P** **15 33 22.3 -0.3**
BRLK IAmb IAmb 15 33 23.5
comp=Z,39nm,0.8s
PINE Pine Mountain 80.98 38 P **P** **15 33 24.6 +0.9**
PINE IAmb IAmb 15 33 26.4
comp=Z,39nm,0.9s
I05D Terrebonne, OR 81.07 38 P **P** **15 33 25.2 +1.3**
baz=234
RSO Redoubt South 81.10 12 P **P** **15 33 23.1 -0.8**
SVW2 Sparrevohn 81.14 11 P **P** **15 33 23.4 -0.4**
E03A Lebam 81.16 35 P **P** **15 33 24.9 +0.6**
E03A IAmb IAmb 15 33 26.6
comp=Z,35nm,0.9s
F04D Rainier, OR 81.17 35 P **P** **15 33 25.9 +1.5**
baz=232
R11A Troy Canyon, C 81.34 45 P **P** **15 33 26.6 +0.9**
baz=238
R11A Troy Canyon, C 81.34 45 P **P** **15 33 25.0 -0.7**
DIB Dawson Inlet, 81.37 26 P **P** **15 33 25.4 +0.2**
F04A Amboy 81.41 36 P **P** **15 33 25.6 +0.1**
F04A IAmb IAmb 15 33 27.6
comp=Z,29nm,1.1s
PDSI Padang 81.41 272 P **P** **15 33 26.3 -0.1**
SEW Seward 81.50 14 P **P** **15 33 25.3 -0.4**
SEW IAmb IAmb 15 33 26.4
comp=Z,28nm,0.9s
NLWA Neilton Lookou 81.52 34 P **P** **15 33 27.0 +0.9**
NLWA IAmb IAmb 15 33 28.6
comp=Z,19nm,0.9s
WVOR Wild Horse Val 81.58 40 P **P** **15 33 27.4 +0.7**
WVOR IAmb IAmb 15 33 29.2
comp=Z,21nm,1.1s
G05D Wamic, OR 81.61 37 P **P** **15 33 27.6 +1.0**
baz=234
E04D Cinebar 81.70 35 P **P** **15 33 28.4 +1.4**
baz=232,SNR=6.9
TUC Tucson 81.81 52 P **P** **15 33 29.9 +1.8**
baz=242
TUC Tucson 81.81 52 P **P** **15 33 28.5 +0.5**
GAMB Gambell 81.91 3 P **P** **15 33 28.4 +0.7**
GAMB IAmb IAmb 15 33 29.6
comp=Z,38nm,1.0s
F05D White Salmon 81.92 36 P **P** **15 33 29.4 +1.2**
baz=233
D04E Lakebay 81.97 35 P **P** **15 33 29.8 +1.5**
baz=232
I07A Izee 81.99 38 P **P** **15 33 29.1 +0.4**
I07A IAmb IAmb 15 33 31.2
comp=Z,19nm,0.9s
G06A Carlson Farm, 82.00 37 P **P** **15 33 28.9 +0.3**
D03D Eldon 82.02 34 P **P** **15 33 29.9 +1.3**
baz=232,SNR=9.4
J08A Circle Bar Ran 82.20 40 P **P** **15 33 30.5 +0.7**
J08A IAmb IAmb 15 33 32.2
comp=Z,26nm,1.2s
LON Longmire 82.24 35 P **P** **15 33 29.5 -0.3**
D05A Enumclaw 82.40 35 P **P** **15 33 30.8 +0.2**
D05A IAmb IAmb 15 33 33.3
comp=Z,37nm,1.0s
PGC Sidney 82.52 33 P **P** **15 33 31.8 +0.7**
IPM Ipoh 82.58 277 P **P** **15 33 32.0 -0.3**
PSUT Pine Spring 82.61 46 P **P** **15 33 32.2 +0.2**
GLI Glacier Island 82.74 15 P **P** **15 33 31.5 -0.4**
TTA Tatalina 82.78 10 P **P** **15 33 32.4 +0.2**
MNSI Mandailing Nat 82.78 273 P **P** **15 33 33.2 0.0**
comp=Z,16nm,1.1s
FID Port Fidalgo 82.78 15 P **P** **15 33 31.3 -0.8**
FID IAmb IAmb 15 33 32.9
comp=Z,39nm,1.2s
EYAK Cordova Ski Ar 82.79 16 P **P** **15 33 32.0 -0.2**
EYAK IAmb IAmb 15 33 33.2
comp=Z,22nm,1.0s
ELK Elko 82.82 43 P **P** **15 33 33.3 +0.2**
WUAZ Wupatki 82.87 49 P **P** **15 33 33.6 +0.2**
baz=242
KNK Knik Glacier 82.89 14 P **P** **15 33 32.4 -0.3**
KNK IAmb IAmb 15 33 33.6
comp=Z,33nm,0.8s
PMR Palmer 82.89 14 P **P** **15 33 32.3 -0.3**
PMR IAmb IAmb 15 33 33.5
comp=Z,75nm,1.4s
A04D Lummi Island 82.95 33 P **P** **15 33 34.6 +1.4**
baz=232,SNR=8.4
B05A Bryant 83.00 34 P **P** **15 33 34.6 +1.1**
baz=233,SNR=12
G08A Pilot Rock 83.00 38 P **P** **15 33 34.1 +0.3**
GHO Glory Hole Cre 83.10 14 P **P** **15 33 33.5 -0.3**
SML Sawmill 83.27 14 P **P** **15 33 34.1 -0.5**
SML IAmb IAmb 15 33 44.8
comp=Z,16nm,0.9s
HAWA Hanford 83.30 37 P **P** **15 33 35.1 0.0**
HAWA IAmb IAmb 15 33 37.3
comp=Z,20nm,1.1s
PPLA Purkeypile 83.43 12 P **P** **15 33 34.2 -1.3**
SCM Sheep Creek Mo 83.52 14 P **P** **15 33 35.8 -0.1**
MAW Mawson 83.59 200 P **P** **15 33 37.1 +0.9**
comp=Z,43nm,0.8s,baz=131,slow=5.8,SNR=88
MAW Mawson 83.59 200 P **P** **15 33 36.5 +0.3**
E08A Dider Farm, El 83.62 37 P **P** **15 33 37.0 +0.4**
YAH Yahtse 83.71 17 P **P** **15 33 37.4 +0.4**
YAH IAmb IAmb 15 33 38.7
comp=Z,43nm,0.8s
BMO Blue Mountains 83.72 39 P **P** **15 33 37.7 +0.4**
DHAK Deception Hill 83.74 20 P **P** **15 33 37.7 +0.7**
DHAK IAmb IAmb 15 33 38.8
comp=Z,43nm,0.7s
WRAK Wrangell Islan 83.76 24 P **P** **15 33 37.8 +0.7**
WRAK IAmb IAmb 15 33 39.1
comp=Z,18nm,0.8s
MFID Camas Ranch 83.85 41 P **P** **15 33 38.6 +0.6**
VRDI Verde Repeater 83.96 16 P **P** **15 33 38.3 0.0**
VRDI IAmb IAmb 15 33 39.4
comp=Z,29nm,1.0s
RPSI Rantau Prapat 84.00 275 P **P** **15 33 39.1 -0.2**
RPSI IAmb IAmb 15 33 40.3
comp=Z,31nm,0.8s
RPSI Rantau Prapat 84.00 275 P **P** **15 33 39.4 +0.2**
D08A Wollman Farm, 84.02 36 P **P** **15 33 38.5 -0.1**
D08A IAmb IAmb 15 33 40.8
comp=Z,15nm,1.0s
PSI Prapat 84.03 275 P **P** **15 33 39.4 -0.2**
comp=Z,32nm,0.9s,baz=180,slow=2.6,SNR=32
GLB Gilahina Butte 84.05 16 P **P** **15 33 38.2 -0.2**
GLB IAmb IAmb 15 33 39.6
comp=Z,30nm,0.7s
BALM Baldy 84.10 17 P **P** **15 33 38.7 -0.1**
BALM IAmb IAmb 15 33 40.0
comp=Z,32nm,0.9s
BJI Beijing 84.10 315 P **P** **15 33 40.6 +1.5**
BJI pmax pmax
comp=Z,11nm,0.9s
MCARA McCarthy VSAT 84.21 16 P **P** **15 33 39.4 +0.2**
MCARA IAmb IAmb 15 33 40.6
comp=Z,34nm,1.1s
TRF Thorofare Moun 84.31 12 P **P** **15 33 39.0 -0.8**
BARN Barnard Glacie 84.31 17 P **P** **15 33 39.9 0.0**
BARN IAmb IAmb 15 33 41.4
comp=Z,37nm,0.9s
CTGM Chitina Glacie 84.32 17 P **P** **15 33 39.9 0.0**
CTGM IAmb IAmb 15 33 41.3
comp=Z,28nm,0.9s

F10A	**Beach Ranch, E**	**84.39**	**38**	P	**P**		**15 33 40.8**	**+0.3**	
F10A				lAmb	lAmb		15 33 42.3		
	comp=Z,17nm,0.9s								
JIS	**Juneau Island**	**84.39**	**22**	P	**P**		**15 33 40.5**	**+0.4**	
LLLB	**Lillooet**	**84.53**	**32**	P	**P**		**15 33 41.2**	**+0.1**	
B08A	**Colville Reser**	**84.54**	**35**	P	**P**		**15 33 40.7**	**-0.5**	
B08A				lAmb	lAmb		15 33 42.5		
	comp=Z,14nm,0.8s								
RND	**Reindeer**	**84.56**	**13**	P	**P**		**15 33 40.2**	**-0.8**	
DHY	**Denali Highway**	**84.59**	**14**	P	**P**		**15 33 40.7**	**-0.6**	
DHY				lAmb	lAmb		15 33 42.0		
	comp=Z,89nm,1.8s								
BPAW	**Bear Paw Mtn.**	**84.75**	**12**	P	**P**		**15 33 40.6**	**-1.2**	
TMUT	**Trail Mountain**	**84.78**	**46**	P	**P**		**15 33 42.9**	**0.0**	
C09A	**Chrisman Ranch**	**84.81**	**36**	P	**P**		**15 33 42.4**	**0.0**	
MCK	**McKinley**	**84.84**	**13**	P	**P**		**15 33 41.5**	**-0.7**	
MCK				lAmb	lAmb		15 33 43.5		
	comp=Z,39nm,0.9s								
GSI	**Gunungsitoli**	**84.84**	**273**	P	**P**		**15 33 44.7**	**+1.3**	
	comp=Z,264nm,1.1s								
SKAG	**Skagway**	**84.97**	**20**	P	**P**		**15 33 43.9**	**+1.0**	
SKAG				lAmb	lAmb		15 33 45.4		
	comp=Z,30nm,1.2s								
BWN	**Browne**	**85.12**	**12**	P	**P**		**15 33 43.0**	**-0.5**	
BWN				lAmb	lAmb		15 33 44.8		
	comp=Z,59nm,1.0s								
SRU	**San Rafael Swe**	**85.16**	**46**	P	**P**		**15 33 43.5**	**-1.0**	
HYT	**Haines Junctio**	**85.33**	**19**	P	**P**		**15 33 45.1**	**+0.3**	
MENT	**Mentasta**	**85.34**	**15**	P	**P**		**15 33 44.5**	**-0.2**	
MENT				lAmb	lAmb		15 33 46.1		
	comp=Z,40nm,1.5s								
WRH	**Wood River Hil**	**85.67**	**13**	P	**P**		**15 33 45.4**	**-0.7**	
WRH				lAmb	lAmb		15 33 47.5		
	comp=Z,69nm,1.4s								
MNTX	**Cornudas Mount**	**85.67**	**55**	P	**P**		**15 33 47.3**	**+0.3**	
	baz=246								
MNTX	**Cornudas Mount**	**85.67**	**55**	P	**P**		**15 33 46.9**	**-0.1**	
NEW	**Newport**	**85.71**	**36**	P	**P**		**15 33 47.5**	**+0.7**	
	baz=236								
RIDG	**Independent Ri**	**85.75**	**14**	P	**P**		**15 33 46.2**	**-0.4**	
RIDG				lAmb	lAmb		15 33 47.7		
	comp=Z,21nm,1.0s								
TPTI		**85.83**	**275**	P	**P**		**15 33 49.2**	**+1.1**	
HDA	**Harding Lake**	**85.85**	**13**	P	**P**		**15 33 47.0**	**0.0**	
	baz=210								
HDA	**Harding Lake**	**85.85**	**13**	P	**P**		**15 33 46.2**	**-0.8**	
HDA				lAmb	lAmb		15 33 47.6		
	comp=Z,21nm,0.6s								
DOT	**Dot Lake**	**85.85**	**15**	P	**P**		**15 33 46.6**	**-0.5**	
DOT				lAmb	lAmb		15 33 48.2		
	comp=Z,18nm,1.0s								
CCB	**Clear Creek Bu**	**85.88**	**13**	P	**P**		**15 33 46.2**	**-0.9**	
CCB				lAmb	lAmb		15 33 47.4		
	comp=Z,68nm,1.3s								
WHY	**Whitehorse**	**86.03**	**20**	P	**P**		**15 33 47.3**	**-0.7**	
WHY				lAmb	lAmb		15 33 50.0		
	comp=Z,19nm,1.1s								
TCOL	**CIGO, UAF Yank**	**86.07**	**13**	P	**P**		**15 33 47.5**	**-0.4**	
	baz=209								
COLA	**College**	**86.07**	**13**	P	**P**		**15 33 47.1**	**-0.8**	
COLA				lAmb	lAmb		15 33 48.4		
	comp=Z,37nm,0.7s								
TX31	**Lajitas Ar. Si**	**86.07**	**58**	P	**P**		**15 33 48.6**	**-0.4**	
TX31				lAmb	lAmb		15 33 52.4		
	comp=Z,18nm,0.9s								
TX32	**Lajitas Array**	**86.07**	**58**	P	**P**		**15 33 48.5**	**-0.5**	
TXAR	**Lajitas Array**	**86.07**	**58**	P	**P**		**15 33 51.1**	**+2.1**	
	comp=Z,4.6nm,0.7s,baz=218,slow=6.3,SNR=60								
TXAR				PKKPbc	**PKKPbc**		**15 51 44.1**	**-0.4**	
	comp=Z,0.3nm,0.5s,baz=155,slow=2.3,SNR=6.4								
DLBC	**Dease Lake**	**86.09**	**23**	P	**P**		**15 33 48.3**	**0.0**	
DLBC				lAmb	lAmb		15 33 50.5		
	comp=Z,30nm,1.7s								
SCRK	**Sand Creek**	**86.15**	**14**	P	**P**		**15 33 48.5**	**-0.1**	
IL31		**86.18**	**13**	P	**P**		**15 33 47.5**	**-0.9**	
IL31				lAmb	lAmb		15 33 49.1		
	comp=Z,24nm,1.0s								
ILAR	**Eielson Array**	**86.18**	**13**	P	**P**		**15 33 47.9**	**-0.7**	
	comp=Z,9.9nm,0.5s,baz=221,slow=5.1,SNR=146								
ILAR				PP	**PP**		**15 37 25.2**	**+3.3**	
	comp=Z,3.7nm,0.8s,baz=222,slow=7.1,SNR=7.1								
ILAR				PKKPbc	**PKKPbc**		**15 51 42.2**	**-3.4**	
	comp=Z,0.5nm,0.4s,baz=336,slow=2.5,SNR=9.1								
ANMO	**Albuquerque**	**86.21**	**51**	P	**P**		**15 33 49.9**	**+0.2**	
	baz=245								
POKR	**Poker Flat Res**	**86.37**	**13**	P	**P**		**15 33 48.7**	**-0.7**	
	baz=209								
MCMT	**McKenzie Canyo**	**86.41**	**40**	P	**P**		**15 33 50.4**	**-0.1**	
XAN	**Xi'an**	**86.56**	**307**	P	**P**		**15 33 52.3**	**+1.2**	
XAN				pmax	pmax				
	comp=Z,12nm,1.1s								
MSO	**Missoula**	**86.77**	**38**	P	**P**		**15 33 52.1**	**+0.2**	
	baz=239								
MSO	**Missoula**	**86.77**	**38**	P	**P**		**15 33 51.3**	**-0.6**	
BILL	**Bilibino**	**86.77**	**354**	P	**P**		**15 33 51.0**	**-0.2**	
BILL				lAmb	lAmb		15 33 52.9		
	comp=Z,13nm,0.6s								
RDOG	**Red Dog Mine**	**86.78**	**6**	P	**P**		**15 33 51.3**	**0.0**	
RDOG				lAmb	lAmb		15 36 08.1		
	comp=Z,23nm,1.5s								
DLMT	**Dillon**	**86.83**	**40**	P	**P**		**15 33 51.9**	**-0.4**	
MLSI	**Meulaboh, Aceh**	**86.88**	**275**	P	**P**		**15 33 54.6**	**+1.6**	
	comp=Z,92nm,1.2s								
TPAW	**Teton Pass**	**86.95**	**42**	P	**P**		**15 33 52.5**	**-0.5**	
FXWY	**Fox Creek**	**86.97**	**42**	P	**P**		**15 33 52.4**	**-0.7**	
SNOW	**Snow King Moun**	**87.06**	**42**	P	**P**		**15 33 53.5**	**0.0**	
PRP	**Porcupine Dome**	**87.12**	**13**	P	**P**		**15 33 52.0**	**-1.1**	
S22A	**4UR Ranch, Cre**	**87.14**	**49**	P	**P**		**15 33 55.0**	**+0.9**	
	baz=244								
LRM	**Limekiln Ridge**	**87.15**	**40**	P	**P**		**15 33 53.7**	**-0.2**	
IMW	**Indian Meadow**	**87.15**	**42**	P	**P**		**15 33 53.7**	**-0.2**	
O20A	**White River Ci**	**87.19**	**46**	P	**P**		**15 33 54.8**	**+0.7**	
	baz=243								
DAWY	**Dawson**	**87.37**	**16**	P	**P**		**15 33 54.2**	**-0.1**	
DAWY				lAmb	lAmb		15 33 55.7		
	comp=Z,19nm,1.1s								
FLWY	**Flagg Ranch**	**87.39**	**42**	P	**P**		**15 33 54.7**	**-0.3**	
YHB	**Horse Butte**	**87.40**	**41**	P	**P**		**15 33 53.5**	**-1.6**	
EGAK	**Eagle**	**87.50**	**15**	P	**P**		**15 33 54.4**	**-0.3**	
EGAK				lAmb	lAmb		15 33 56.0		
	comp=Z,22nm,0.8s								
BW06	**Boulder Array**	**87.51**	**43**	P	**P**		**15 33 56.6**	**+1.0**	
	baz=242								
BW06	**Boulder Array**	**87.51**	**43**	P	**P**		**15 33 54.3**	**-1.3**	
PD31	**Pinedale Array**	**87.51**	**43**	P	**P**		**15 33 55.3**	**-0.3**	
PDAR	**Pinedale Array**	**87.51**	**43**	P	**P**		**15 33 56.5**	**+0.9**	
	comp=Z,3.6nm,0.7s,baz=214,slow=3.1,SNR=30								
PDAR				PP	**PP**		**15 37 31.6**	**-1.7**	
	comp=Z,2.8nm,1.2s,baz=224,slow=6.2,SNR=6.2								
PDAR				PKKPbc	**PKKPbc**		**15 51 39.3**	**-2.5**	
	comp=Z,0.5nm,0.5s,baz=105,slow=5.3,SNR=5.2								
HHC	**Hu-ho-hao-te**	**87.59**	**314**	*e*P	**P**		**15 33 58.1**	**+2.2**	
HHC				sP	sP		15 37 09.9	-3.8	
HHC				S	**S**		**15 43 51.8**	**+6.0**	
HHC				pmax	pmax				
	comp=Z,12nm,0.8s								
HHC				pmax	pmax				
	comp=Z,48nm,5.2s								
H17A	**Grant Village**	**87.62**	**42**	P	**P**		**15 33 58.6**	**+2.5**	
	baz=242								
YHH	**Holmes Hill**	**87.63**	**41**	P	**P**		**15 33 55.9**	**-0.3**	
COLD	**Coldfoot**	**87.72**	**11**	P	**P**		**15 33 55.5**	**-0.1**	
COLD				lAmb	lAmb		15 33 57.9		
	comp=Z,14nm,1.2s								
KMI	**Kunming**	**88.09**	**297**	P	**P**		**15 34 01.4**	**+2.7**	
KMI				pP	pP		15 36 09.5	-4.1	
KMI				sP	sP		15 37 12.8	-3.3	
KMI				pmax	pmax				
	comp=Z,9.0nm,0.5s								
KMI				pmax	pmax				
	comp=Z,62nm,4.3s								
YNE	**Yellowstone No**	**88.27**	**41**	P	**P**		**15 33 58.3**	**-0.8**	
RLMT	**Red Lodge**	**88.78**	**41**	P	**P**		**15 34 02.6**	**+1.2**	
	baz=242								
RLMT	**Red Lodge**	**88.78**	**41**	P	**P**		**15 34 01.2**	**-0.2**	
SYO	**Syowa Base**	**88.86**	**193**	⇑*i*P	**P**		**15 33 59.9**	**-1.2**	
LL01	**San Ignacio de**	**89.06**	**135**	P	**P**		**15 34 02.1**	**-0.5**	
LL01				lAmb	lAmb		15 34 05.2		
	comp=Z,23nm,1.1s								
TOLK	**Toolik Lake Re**	**89.09**	**10**	P	**P**		**15 34 02.3**	**+0.2**	
	baz=207								
TOLK	**Toolik Lake Re**	**89.09**	**10**	P	**P**		**15 34 02.1**	**0.0**	
TOLK				lAmb	lAmb		15 34 03.4		
	comp=Z,8.8nm,0.8s								
N23A	**Red Feather La**	**89.10**	**46**	P	**P**		**15 34 04.3**	**+1.2**	
	baz=245								
CM31	**Chiang Mai Arr**	**89.11**	**290**	P	**P**		**15 34 02.3**	**-1.0**	
CMAR	**Chiang Mai Arr**	**89.11**	**290**	P	**P**		**15 34 04.7**	**+1.4**	
	comp=Z,3.5nm,0.9s,baz=115,slow=2.8,SNR=20								
CMAR				PKKPbc	**PKKPbc**		**15 51 38.0**	**+1.4**	
	comp=Z,1.6nm,0.6s,baz=275,slow=4.5,SNR=12								
CHTO	**Chiang Mai**	**89.23**	**290**	P	**P**		**15 34 02.6**	**-1.2**	
CD2	**Chengdu**	**89.35**	**303**	P	**P**		**15 34 03.3**	**-0.9**	
K22A	**Casper**	**89.46**	**44**	P	**P**		**15 34 05.7**	**+1.1**	
	baz=244								
JCT	**Junction City**	**89.61**	**58**	P	**P**		**15 34 05.7**	**+0.3**	
	baz=248								
EPYK	**Eagle Plains**	**89.89**	**16**	P	**P**		**15 34 06.0**	**+0.1**	
	baz=219								
EPYK	**Eagle Plains**	**89.89**	**16**	P	**P**		**15 34 05.4**	**-0.4**	
EPYK				lAmb	lAmb		15 34 07.0		
	comp=Z,21nm,0.8s								
YAK	**Yakutsk**	**89.93**	**338**	P	**P**		**15 34 04.4**	**-1.6**	
YAK				lAmb	lAmb		15 34 06.5		
	comp=Z,13nm,0.9s								
SNAA	**Sanae**	**90.26**	**179**	P	**P**		**15 34 08.0**	**+0.3**	
SNAA	**Sanae**	**90.26**	**179**	P	**P**		**15 34 06.3**	**-1.4**	
VNA3	**Neumayer Olymp**	**90.40**	**176**	P	**P**		**15 34 09.1**	**+0.8**	
ABTX	**Abilene, Hawle**	**90.51**	**56**	P	**P**		**15 34 09.4**	**-0.1**	
	baz=249								
VNA2	**Neumayer--Watz**	**90.84**	**177**	P	**P**		**15 34 10.9**	**+0.6**	
	baz=187,slow=4.8								
LC01	**Cunco**	**90.85**	**132**	P	**P**		**15 34 12.2**	**+1.2**	
LC01				lAmb	lAmb		15 34 13.2		
	comp=Z,28nm,1.0s								
PLCA	**Paso Flores**	**91.02**	**134**	P	**P**		**15 34 13.8**	**+2.0**	
	comp=Z,10nm,0.9s,baz=244,slow=4.6,SNR=24								
VNA1	**Neumayer--Stat**	**91.07**	**177**	P	**P**		**15 34 12.1**	**+0.8**	
LZH	**Lanzhou**	**91.19**	**308**	⇑P	**P**		**15 34 11.4**	**-1.3**	
LZH				pP	pP		15 36 27.5	-1.0	
LZH				sP	sP		15 37 29.0	-2.0	
LZH				PP	**PP**		**15 38 03.3**	**+1.4**	
LZH				pmax	pmax				
	comp=Z,25nm,1.4s								
LZH				pmax	pmax				
	comp=Z,97nm,5.3s								
LAO	**LASA Array**	**91.38**	**41**	P	**P**		**15 34 14.8**	**+1.5**	
	baz=245								
LAO	**LASA Array**	**91.38**	**41**	P	**P**		**15 34 13.1**	**-0.1**	
LAO				lAmb	lAmb		15 34 16.1		
	comp=Z,7.1nm,0.8s								
RSSD	**Black Hills**	**91.72**	**44**	P	**P**		**15 34 16.1**	**+1.1**	
	baz=246								
WMOK	**Wichita Mounta**	**91.94**	**54**	P	**P**		**15 34 17.2**	**+1.2**	
	baz=249								
WHTX	**Lake Whitney,**	**92.02**	**57**	P	**P**		**15 34 17.3**	**+0.9**	
	baz=250								
INK	**Inuvik**	**92.17**	**15**	PKKPbc	PKKPbc		15 51 28.4	-2.4	
	comp=Z,1.0nm,0.6s,baz=298,slow=3.2,SNR=6.1								
INK	**Inuvik**	**92.17**	**15**	P	**P**		**15 34 15.5**	**-0.7**	
INK				lAmb	lAmb		15 34 16.9		
	comp=Z,16nm,1.0s								
DGMT	**Dagmar**	**93.37**	**40**	P	**P**		**15 34 23.9**	**+1.7**	
	baz=246								
ULN	**Ulaanbaatar**	**93.48**	**319**	P	**P**		**15 34 21.2**	**-1.7**	
SONM	**Songino Array**	**93.88**	**319**	P	**P**		**15 34 25.4**	**+0.7**	
	comp=Z,1.2nm,0.6s,baz=124,slow=4.1,SNR=7.3								
SONM				PKKPbc	**PKKPdf**		**15 51 24.1**	**-0.5**	
	comp=Z,0.5nm,0.5s,baz=279,slow=2.9,SNR=4.8								
YKA	**Yellowknife Ar**	**94.58**	**25**	P	**P**		**15 34 27.2**	**-0.1**	
	comp=Z,1.8nm,0.7s,baz=239,slow=4.1,SNR=39								
YKA				PP	**PP**		**15 38 22.9**	**-4.2**	
	comp=Z,1.7nm,0.9s,baz=242,slow=7.3,SNR=6.9								
YKA				PKKPbc	**PKKPdf**		**15 51 21.1**	**-2.4**	
	comp=Z,0.9nm,0.6s,baz=48,slow=2.3,SNR=5.0								
C36M	**Paulatuk**	**95.38**	**17**	P	**P**		**15 34 30.9**	**+0.2**	
	baz=231								
C36M	**Paulatuk**	**95.38**	**17**	P	**P**		**15 34 30.8**	**0.0**	
C36M				lAmb	lAmb		15 34 31.9		
	comp=Z,4.9nm,0.7s								
TIXI	**Tiksi**	**96.51**	**345**	P	**P**		**15 34 34.9**	**-0.9**	
TIXI				lAmb	lAmb		15 34 36.0		
	comp=Z,3.4nm,0.8s								
A36M	**Sachs Harbour**	**96.77**	**14**	P	**P**		**15 34 37.9**	**+0.9**	
	baz=230								
N53A	**Lisbon**	**107.22**	**52**	P	**PKiKP**		**15 39 28.6**	**-0.5**	
	baz=260								
R55A	**Marlinton**	**107.35**	**55**	P	**PKiKP**		**15 39 28.8**	**-0.7**	
	baz=260								
I51A	**Listowel**	**107.55**	**49**	P	**PKiKP**		**15 39 29.8**	**+0.2**	
	baz=261								
L53A	**Girard**	**107.83**	**51**	P	**PKiKP**		**15 39 29.7**	**-0.4**	
	baz=261								
N54A	**Moraine State**	**107.88**	**52**	P	**PKiKP**		**15 39 29.9**	**-0.4**	
	baz=261								
ZALV	**Zalesovo Beam**	**108.57**	**322**	PKiKP	**PKiKP**		**15 39 30.3**	**-0.8**	
	comp=Z,1.4nm,0.5s,baz=119,slow=0.3,SNR=8.5								
ZALV				PKKPbc	**PKKPbc**		**15 50 42.2**	**-1.7**	
	comp=Z,0.8nm,0.4s,baz=270,slow=4.3,SNR=5.5								
N55A	**Marion Center**	**108.60**	**52**	P	**PKiKP**		**15 39 30.9**	**-0.8**	
	baz=262								
MKAR	**Makanchi Array**	**109.45**	**314**	PKiKP	**PKiKP**		**15 39 32.4**	**-0.8**	
	comp=Z,2.2nm,0.5s,baz=145,slow=0.7,SNR=37								
MKAR				SKP	**SKiKP**		**15 42 09.8**	**+0.3**	
	comp=Z,0.8nm,0.8s,baz=97,slow=2.1,SNR=4.0								
MKAR				PKKPbc	**PKKPbc**		**15 50 40.1**	**-0.9**	
	comp=Z,1.8nm,0.7s,baz=280,slow=3.1,SNR=15								
H55A	**Tweed**	**110.39**	**48**	P	**PKiKP**		**15 39 34.4**	**-0.4**	
	baz=264								
J56A	**Wolcott**	**110.49**	**50**	P	**PKiKP**		**15 39 34.6**	**-0.5**	
	baz=264								
D54A	**Lac Fusel, La**	**110.98**	**46**	P	**PKiKP**		**15 39 34.9**	**-1.1**	
	baz=266								
L58A	**Harry Jones Me**	**111.10**	**51**	P	**PKiKP**		**15 39 36.1**	**-0.2**	
	baz=264								
J57A	**Williamstown**	**111.12**	**50**	P	**PKiKP**		**15 39 36.2**	**-0.2**	
	baz=264								
I57A	**Carthage**	**111.42**	**49**	P	**PKiKP**		**15 39 36.0**	**-0.8**	
	baz=265								
L59A	**Walton**	**111.71**	**51**	P	**PKiKP**		**15 39 36.7**	**-0.9**	
	baz=265								
D55A	**Sainte-Anne-du**	**111.78**	**46**	P	**PKiKP**		**15 39 37.0**	**-0.5**	
	baz=266								
KURK	**Kurchatov**	**112.15**	**318**		**PKiKP**		**15 39 37.6**	**-0.5**	
KURK	**Kurchatov**	**112.15**	**318**		PP		15 40 38.5	+2.8	
KURK					**SKiKP**		**15 42 15.4**	**+0.8**	
KURK					**PKKPbc**		**15 50 31.4**	**-0.9**	
KURBB	**Kurchatov Arra**	**112.21**	**318**	PKiKP	**PKiKP**		**15 39 37.4**	**-0.8**	
	comp=Z,2.8nm,0.7s,baz=95,slow=1.7,SNR=28								
KURBB				PP	**PP**		**15 40 38.5**	**+2.4**	
	comp=Z,0.8nm,0.6s,baz=93,slow=6.5,SNR=5.0								
KURBB				SKP	**SKPdf**		**15 42 15.4**	**+0.7**	
	comp=Z,0.7nm,0.8s,baz=104,slow=1.8,SNR=4.7								
KURBB				PKKPbc	**PKKPbc**		**15 50 31.4**	**-0.7**	
	comp=Z,2.2nm,0.7s,baz=270,slow=3.9,SNR=17								
H58A	**Gabriels**	**112.52**	**49**	P	**PKiKP**		**15 39 38.6**	**-0.4**	
	baz=266								
CHGQ	**Chibougamau**	**112.64**	**43**	P	**PKiKP**		**15 39 38.9**	**-0.2**	
	baz=268								
E57A	**Chemin Saint G**	**112.66**	**47**	P	**PKiKP**		**15 39 39.0**	**-0.2**	
	baz=267								
L61A	**Hillsdale 1, H**	**112.81**	**51**	P	**PKiKP**		**15 39 39.7**	**+0.1**	
	baz=266								
D58A	**Chemin du LacG**	**113.55**	**46**	P	**PKiKP**		**15 39 40.2**	**-0.6**	
	baz=268								
E60A	**Ste Agathe de**	**114.52**	**47**	P	**PKPdf**		**15 39 42.2**	**-0.5**	
	baz=269								
AAK	**Ala-Archa**	**114.68**	**309**	PKiKP	PKPdf		15 39 43.1	-0.3	
	comp=Z,2.6nm,0.7s,baz=181,slow=1.9,SNR=7.9								
AAK	**Ala-Archa**	**114.68**	**309**		PKPdf		15 39 42.8	-0.6	
D60A	**Saint Jean D'O**	**114.89**	**46**	P	PKPdf		15 39 43.2	-0.1	
	baz=270								
G62A	**West of Eustis**	**115.14**	**48**	P	**PKPdf**		**15 39 43.6**	**-0.4**	
	baz=269								
E61A	**Lac Etchemin**	**115.19**	**47**	P	**PKiKP**		**15 39 44.1**	**+0.1**	
	baz=270								
E62A	**Clayton Lake**	**115.85**	**46**	P	**PKPdf**		**15 39 45.2**	**-0.1**	
	baz=270								
D62A	**Allapoint, All**	**116.17**	**46**	P	**PKPdf**		**15 39 45.8**	**-0.1**	
	baz=271								
PTGA	**Pitinga**	**116.54**	**100**	PKP	**PKPdf**		**15 39 47.4**	**-0.2**	
	comp=Z,4.9nm,0.6s,baz=276,slow=4.3,SNR=10								
PTGA	**Pitinga**	**116.54**	**100**		**PKPdf**		**15 39 47.1**	**-0.5**	
D63A	**Stockholm**	**116.82**	**46**	P	**PKPdf**		**15 39 46.2**	**-0.9**	
	baz=272								
BVAR	**Borovoye Array**	**117.18**	**321**	PKP	**PKPdf**		**15 39 47.3**	**-0.4**	
	comp=Z,3.6nm,0.3s,baz=114,slow=2.3,SNR=33								
BVAR				PP	**PP**		**15 41 05.4**	**-4.9**	
	comp=Z,1.6nm,0.8s,baz=79,slow=7.7,SNR=4.0								
BVAR				SKP	**SKPdf**		**15 42 25.8**	**+1.6**	
	comp=Z,2.6nm,0.9s,baz=96,slow=3.0,SNR=5.4								
BRVK	**Borovoye**	**117.24**	**321**		**PKPdf**		**15 39 47.4**	**-0.3**	
KK31	**Karatay Array**	**117.62**	**310**		**PKPdf**		**15 39 48.3**	**-0.6**	
KKAR	**Karatay Array**	**117.62**	**310**		**PKPdf**		**15 39 48.2**	**-0.7**	
GAR	**Garm**	**117.72**	**305**		**PKPdf**		**15 39 48.6**	**-0.7**	
KBL	**Kabul**	**118.56**	**300**		**PKPdf**		**15 39 50.7**	**-0.5**	
CHGR	**Chuyangaron**	**118.62**	**305**		**PKPdf**		**15 39 50.8**	**-0.2**	
SPITS	**Spitsbergen Ar**	**119.61**	**357**	PKKPbc	PKKPbc		15 50 06.0	-1.4	
	comp=Z,4.2nm,0.7s,baz=171,slow=5.9,SNR=8.3								
BDFB	**Brasilia**	**120.56**	**121**	PKP	**PKPdf**		**15 39 55.2**	**-0.3**	
	comp=Z,4.7nm,0.8s,baz=103,slow=3.2,SNR=5.5								
SUMG	**Summit**	**121.03**	**13**		**PKPdf**		**15 39 55.0**	**-0.1**	
OPO	**Ambohidratompo**	**122.26**	**233**	PKP	**PKiKP**		**15 39 59.5**	**+0.5**	
	comp=Z,11nm,0.7s,baz=101,slow=2.5,SNR=15								
ARU	**Arti**	**123.19**	**326**	PKP	**PKiKP**		**15 39 59.2**	**-0.1**	
	comp=Z,4.2nm,0.7s,baz=340,slow=1.6,SNR=16								
ARU				PKKPbc	**PKKPab**		**15 49 53.3**	**+0.4**	
	comp=Z,1.1nm,0.5s,baz=188,slow=5.6,SNR=4.7								
ARU	**Arti**	**123.19**	**326**		**PKPdf**		**15 39 58.9**	**-0.2**	
AKTO	**Aktyubinsk**	**125.20**	**319**	PKP	**PKPdf**		**15 40 03.3**	**+0.2**	
	comp=Z,3.4nm,0.7s,baz=50,slow=2.8,SNR=14								
SUR	**Sutherland**	**126.45**	**200**		**PKPdf**		**15 40 05.7**	**-0.7**	
ARCES	**ARCESS Array B**	**126.56**	**350**	PKP	**PKPdf**		**15 40 04.5**	**-0.9**	
	comp=Z,6.8nm,0.6s,baz=21,slow=1.5,SNR=44								
GEYT	**Alibeck**	**127.32**	**304**	PKP	**PKiKP**		**15 40 08.2**	**-0.1**	
	comp=Z,5.7nm,0.6s,baz=280,slow=0.9,SNR=8.0								
KLMR	**Klimovskoe**	**129.71**	**337**	*e*PKPdf	**PKPdf**		**15 40 07.8**	**-3.6**	
KLMR				AMP			15 40 12.3		
	comp=Z,11nm,0.9s								
KLMR				*e*PP	**PP**		**15 42 26.6**	**-5.8**	
FINES	**FINESS Array B**	**133.54**	**344**	PKhKP	PKPpre		15 40 14.1		
	comp=Z,2.2nm,0.6s,baz=49,slow=1.9,SNR=11								
FINES				PKP	**PKPdf**		**15 40 18.7**	**+0.1**	
	comp=Z,3.6nm,0.5s,baz=82,slow=2.7,SNR=5.1								
FINES				SKPbc	**SKPab**		**15 42 50.9**	**-1.5**	
	comp=Z,27nm,1.1s,baz=51,slow=6.1,SNR=16								
OBN	**Obninsk**	**134.65**	**333**	SKPbc	**SKPbc**		**15 42 54.2**	**+1.4**	
	comp=Z,7.8nm,0.8s,baz=158,slow=23,SNR=9.3								
OBN	**Obninsk**	**134.65**	**333**		**SKPbc**		**15 42 54.6**	**+1.8**	
NB2	**NORSAR Subarra**	**136.72**	**353**	PKP	PKPdf		15 40 16.4	-8.2	
	comp=Z,0.9nm,0.5s,baz=17,slow=2.6								
NOA	**NORSAR Array B**	**136.72**	**353**	PKhKP	PKPpre		15 40 16.7		
	comp=Z,1.4nm,0.7s,baz=15,slow=2.6,SNR=8.1								
NOA				PKP	**PKPdf**		**15 40 24.7**	**+0.1**	
	comp=Z,1.4nm,0.5s,baz=14,slow=4.0,SNR=8.2								
NOA				SKPbc	**SKPbc**		**15 43 00.6**	**+1.6**	
	comp=Z,3.6nm,0.8s,baz=6.3,slow=4.0,SNR=19								
HFS	**Hagfors**	**137.28**	**351**	SKPbc	**SKPbc**		**15 43 02.1**	**+1.6**	
	comp=Z,13nm,0.8s,baz=45,slow=0.8,SNR=20								
LSZ	**Lusaka**	**137.70**	**220**	PKPdf	**PKPdf**		**15 40 26.7**	**-1.2**	
RAYN	**Ar Rayn**	**138.87**	**285**	PKPdf	**PKPdf**		**15 40 29.8**	**+0.1**	
KMBO	**Kilima Mbogo**	**140.10**	**245**

GTTG	**Gottingen**	**146.13**	**351**	*e*PKPab	**PKPab**	15 40 46.5	+0.3
	baz=13,slow=4.0						
GTTG				*e*X		15 43 25.2	
	baz=14,slow=2.3						
ISR	**Istrita**	**146.14**	**328**	⇑P	**PKPbc**	15 40 45.1	+1.0
NEUB	**Neuenburg**	**146.15**	**349**	*e*PKPbc	**PKPbc**	15 40 44.7	+0.9
	baz=17,slow=2.6						
NEUB				*e*PKPab	**PKPab**	15 40 46.7	+0.3
	baz=13,slow=4.0						
NEUB				*e*X		15 43 25.2	
	baz=14,slow=2.3						
MLR	**Muntele Rosu**	**146.18**	**329**	PKPbc	**PKPbc**	15 40 44.7	+0.4
	comp=Z,4.3nm,0.4s,baz=335,slow=6.8,SNR=24						
MLR	**Muntele Rosu**	**146.18**	**329**	⇑P	**PKPdf**	15 40 42.9	+0.9
MLR	**Muntele Rosu**	**146.18**	**329**	PKPbc	**PKPbc**	15 40 44.5	+0.1
MDUB	**Mudurnu**	**146.34**	**317**		**PKPbc**	15 40 45.0	+0.2
CJR	**Cluj-Napoca**	**146.37**	**332**	⇓P	**PKiKP**	15 40 45.8	-1.0
MMAI	**Mount Meron Ar**	**146.42**	**303**	PKPbc	**PKiKP**	15 40 46.4	-1.0
	comp=Z,17nm,0.5s,baz=69,slow=5.4,SNR=32						
SECR		**146.44**	**328**	⇑P	**PKPbc**	15 40 45.5	+0.6
BUG	**Bochum--Univer**	**146.58**	**354**	*e*PKPab	**PKPab**	15 40 47.9	-0.2
	baz=13,slow=4.0						
VOIR		**146.65**	**330**	⇑P	**PKPbc**	15 40 44.2	-1.3
PRU	**Pruhonice**	**146.69**	**345**	⇑*e*PKP	**PKPbc**	15 40 46.1	+0.7
MOX	**Moxa**	**146.72**	**348**	*e*PKPdf	**PKPdf**	15 40 42.9	+0.3
MOX				*e*PKPab	**PKPab**	15 40 48.3	-0.4
	baz=13,slow=4.0						
MOX				*e*X		15 43 26.5	
	baz=14,slow=2.3						
VRAC	**Vranov**	**146.76**	**342**	PKPbc	**PKiKP**	15 40 46.9	-0.6
	comp=Z,12nm,0.7s,baz=44,slow=3.5,SNR=17						
VRAC	**Vranov**	**146.76**	**342**	*e*PKP	**PKPdf**	15 40 43.1	+0.4
VRAC				*e*		15 40 49.8	
VRAC				*e*		15 43 09.9	
VRAC	**Vranov**	**146.76**	**342**	⇑P	**PKiKP**	15 40 47.4	-0.1
PLN	**Plauen**	**146.76**	**348**	*e*PKPdf	**PKPdf**	15 40 43.0	+0.3
PLN				*e*PKPbc	**PKPbc**	15 40 46.2	+0.6
	baz=17,slow=2.6						
PLN				*e*PKPab	**PKPab**	15 40 48.6	-0.3
	baz=13,slow=4.0						
PLN				*e*X		15 43 26.6	
	baz=14,slow=2.3						
TANN	**Tannenbergstha**	**146.77**	**347**	*e*PKPdf	**PKPdf**	15 40 43.0	+0.3
TANN				*e*PKPbc	**PKPbc**	15 40 46.3	+0.6
	baz=17,slow=2.6						
TANN				*e*PKPab	**PKPab**	15 40 48.7	-0.3
	baz=13,slow=4.0						
VYHS	**Vyhne**	**146.77**	**339**	*e*PKP	**PKiKP**	15 40 47.2	-0.3
UBBA	**Unterbreizbach**	**146.83**	**350**	*e*PKPdf	**PKPdf**	15 40 43.2	+0.6
UBBA				*e*X		15 43 27.0	
	baz=14,slow=2.3						
JAVC	**Velka Javorina**	**146.83**	**341**	*e*	**PKiKP**	15 40 47.8	+0.1
JAVC				*e*		15 40 51.1	
GUNZ	**Gunzen**	**146.84**	**348**	*e*PKPdf	**PKPdf**	15 40 43.1	+0.3
GUNZ				*e*PKPbc	**PKPbc**	15 40 46.7	+0.8
	baz=17,slow=2.6						
GUNZ				*e*PKPab	**PKPab**	15 40 49.7	+0.5
	baz=13,slow=4.0						
GUNZ				*ep*PKPbc	pPKPbc	15 43 10.2	+1.8
GUNZ				*e*X		15 43 26.9	
	baz=14,slow=2.3						
PSZ	**Piszkesteto**	**146.89**	**337**	⇓P	**PKPbc**	15 40 46.5	+0.4
PSZ	**Piszkesteto**	**146.89**	**337**		**PKPbc**	15 40 45.9	-0.2
ARR	**Arges**	**146.90**	**330**	⇓P	**PKPdf**	15 40 44.5	+1.3
WERN	**Wernitzgruen**	**146.91**	**347**	*e*PKPab	**PKPab**	15 40 50.0	+0.5
	baz=13,slow=4.0						
KRUC	**Moravsky**	**147.04**	**342**	*e*PKP	**PKPdf**	15 40 43.4	+0.3
KRUC				*e*		15 40 47.1	
KRUC				*e*		15 40 50.6	
KRUC				*e*		15 43 10.3	
PBCC	**Pribram**	**147.11**	**345**	⇑*e*PKP	**PKPbc**	15 40 47.1	+0.6
PBCC				*e*PKPAB	**PKPab**	15 40 50.8	+0.5
PBCC				*ep*PKP	**pPKPab**	15 43 11.2	+1.9
MANZ	**Manzenberg**	**147.25**	**348**	*e*PKPdf	**PKPdf**	15 40 43.9	+0.4
MANZ				*e*PKPbc	**PKiKP**	15 40 47.7	-0.8
	baz=17,slow=2.6						
MANZ				*e*X		15 43 28.0	
	baz=14,slow=2.3						
HUMR	**Humele**	**147.34**	**328**	⇓P	**PKPbc**	15 40 47.2	-0.1
CSS	**Mathiatis**	**147.38**	**307**		**PKPbc**	15 40 46.8	-0.8
MODS	**Modra-Piesok**	**147.38**	**341**	*e*PKP	**PKPbc**	15 40 47.8	+0.5
MODS				*e*		15 40 52.3	
ROTZ	**Rotzenmuhle**	**147.44**	**347**	*e*PKPbc	**PKiKP**	15 40 48.2	-0.7
	baz=17,slow=2.6						
ROTZ				*ep*PKPbc	**pPKPab**	15 43 11.4	+1.3
AHRW	**Bad Neuenahr-A**	**147.49**	**354**	*ep*PKPbc	pPKPbc	15 43 11.7	+1.8
MEM	**Membach**	**147.52**	**355**	PKPab	**PKPab**	15 40 51.7	-0.2
SIRR	**Siria**	**147.55**	**334**	⇑P	**PKPdf**	15 40 44.6	+0.5
BSTI	**Sart Tilman**	**147.59**	**355**	PKiKP	**PKPbc**	15 40 48.3	+0.7
TNS	**Taunus Mts**	**147.64**	**352**	*e*PKPbc	**PKiKP**	15 40 48.7	-0.6
	baz=17,slow=2.6						
EIL	**Elat**	**147.68**	**297**	PKPbc	**PKPbc**	15 40 49.0	+0.4
	comp=Z,14nm,0.9s,baz=323,slow=4.4,SNR=8.1						
GRA1	**Grafenberg Arr**	**147.70**	**348**	PKPbc	**PKPbc**	15 40 48.6	+0.6
GRA1					**PKPab**	15 40 52.8	0.0
GRF	**Grafenberg Arr**	**147.70**	**348**	*e*PKPab	**PKPab**	15 40 52.9	+0.2
	baz=13,slow=4.0						
GRF				*ep*PKPbc	**pPKPab**	15 43 11.8	+0.5
KHC	**Kasperske Hory**	**147.73**	**345**	*e*PKPDF	**PKPdf**	15 40 44.9	+0.6
KHC				⇑*e*PKP	**PKiKP**	15 40 49.0	-0.5
KHC				*e*PKPAB	**PKPab**	15 40 53.8	+0.9
KHC				*ep*PKP	**pPKPab**	15 43 12.8	+1.4
KHC	**Kasperske Hory**	**147.73**	**345**		**PKPdf**	15 40 44.3	0.0
KHC				PKPbc	**PKPbc**	15 40 48.6	+0.4
KHC				PKPab	**PKPab**	15 40 53.5	+0.6
SNF	**Seneffe**	**147.74**	**357**	PKPbc	**PKiKP**	15 40 48.0	0.0
SNF				PKPab	**PKPab**	15 40 52.5	-0.3
GZR	**Gura Zlata**	**147.75**	**332**	⇑P	**PKPbc**	15 40 48.3	-0.1
BCLA	**Clavier**	**147.77**	**356**	PKPab	**PKPab**	15 40 52.7	-0.3
BGES	**Gesves**	**147.82**	**356**	PKiKP	**PKPbc**	15 40 48.2	-0.1
BGES				PKPab	**PKPab**	15 40 52.8	-0.3
WET	**Wettzell**	**147.88**	**346**	*ep*PKPbc	pPKPbc	15 43 12.7	+1.2
BMRD	**Maredsous**	**147.92**	**356**	PKiKP	**PKPbc**	15 40 48.8	+0.2
BMRD				PKPab	**PKPab**	15 40 53.2	-0.3
GEC2	**GERESS Array S**	**147.96**	**345**	*e*PKPab	**PKPab**	15 40 54.4	+0.4
	baz=13,slow=4.0						
GEC2	**GERESS Array S**	**147.96**	**345**		**PKPdf**	15 40 44.2	-0.6
GEC2				PKPbc	**PKPbc**	15 40 49.1	+0.3
GERES	**GERESS Array B**	**147.96**	**345**	PKPbc	**PKPbc**	15 40 49.0	+0.3
	comp=Z,3.6nm,0.5s,baz=39,slow=2.6,SNR=40						
GERES				SKPbc	**SKiKP**	15 43 29.3	+2.0
	comp=Z,1.4nm,0.8s,baz=22,slow=1.4,SNR=4.1						
BZS	**Buzias**	**148.08**	**333**	⇑P	**PKPdf**	15 40 43.4	-1.5
DOU	**Dourbes**	**148.14**	**356**	PKiKP	**PKiKP**	15 40 49.8	-0.5
ISP	**Isparta**	**148.15**	**314**		**PKPbc**	15 40 49.1	-0.6
CONA	**Conrad Observa**	**148.22**	**342**	*e*PKiKP	**PKiKP**	15 40 50.3	-0.3
	comp=Z,16nm,0.8s,SNR=12						
CONA				*ep*PKiKP	**pPKPab**	15 43 14.3	+0.7
	comp=Z,15nm,1.7s						
HERR	**Herculane**	**148.30**	**331**	⇓P	**PKPbc**	15 40 49.9	+0.2
PLVB	**Pleven**	**148.34**	**327**	⇓P	**PKPbc**	15 40 49.6	-0.2
WLF	**Walferdange**	**148.45**	**354**	PKiKP	**PKiKP**	15 40 51.0	+0.1
WLF	**Walferdange**	**148.45**	**354**	*e*PKPbc	**PKiKP**	15 40 51.3	+0.3
	baz=17,slow=2.6						
WLF				*ep*PKPbc	**pPKPab**	15 43 14.1	+0.5
WLF	**Walferdange**	**148.45**	**354**	PKPbc	**PKiKP**	15 40 50.7	-0.2
MDVR	**Moldovita**	**148.70**	**332**	⇓P	**PKPbc**	15 40 50.2	-0.5
MOA	**Molln**	**148.74**	**344**	*e*PKiKP	**PKiKP**	15 40 51.3	-0.3
	comp=Z,5.6nm,0.9s						
MOA				*ep*PKiKP	**pPKPab**	15 43 15.1	-0.1
	comp=Z,7.2nm,1.1s						
MORH	**Mrgy, Hungar**	**148.78**	**337**	⇓*i*P	**PKPbc**	15 40 50.8	0.0
ARSA	**Arzberg**	**148.92**	**342**	*e*PKiKP	**PKPbc**	15 40 51.4	+0.2
	comp=Z,7.3nm,1.4s						
ARSA				*ep*PKPab	**pPKPbc**	15 43 14.6	-0.1
	comp=Z,5.7nm,1.2s						
ELL	**Elmali**	**149.11**	**312**		**PKPbc**	15 40 52.2	+0.1
MANT	**Manisa**	**149.12**	**316**		**PKPbc**	15 40 52.0	-0.1
FUR	**Furstenfeldbru**	**149.15**	**347**	*e*PKPbc	**PKiKP**	15 40 52.5	0.0
	baz=17,slow=2.6						
FRGS	**Fruska Gora**	**149.21**	**335**	⇓*i*P	**PKPbc**	15 40 52.2	+0.3
RJOB	**Jochberg**	**149.22**	**345**	*e*PKPab	**PKPab**	15 40 59.4	+0.3
	baz=13,slow=4.0						
ALN	**Alexandroupoli**	**149.25**	**322**	P	**PKPbc**	15 40 51.6	-0.5
ALN	**Alexandroupoli**	**149.25**	**322**		**PKPbc**	15 40 51.3	-0.8
RDO	**Rodhopi**	**149.38**	**323**	P	**PKPbc**	15 40 52.2	-0.2
BFO	**Black Forest**	**149.51**	**351**	*e*PKPbc	**PKiKP**	15 40 53.3	0.0
	baz=17,slow=2.6						
BFO				*ep*PKPbc	**pPKPab**	15 43 17.8	-0.1
BFO	**Black Forest**	**149.51**	**351**		**PKPbc**	15 40 52.7	+0.2
SOKA	**Soboth**	**149.59**	**342**	*e*PKPbc	**PKPbc**	15 40 52.7	-0.2
	comp=Z,11nm,0.8s,SNR=7.7						
SOKA				*ep*PKiKP	**pPKPbc**	15 43 15.8	-0.8
	comp=Z,7.0nm,1.0s						
VTS	**Vitosha**	**149.60**	**328**	⇑P	**PKPbc**	15 40 52.4	-0.7
VTS	**Vitosha**	**149.60**	**328**		**PKPbc**	15 40 53.0	-0.1
KALN	**Kalnik**	**149.62**	**340**	*i* P	**PKPbc**	15 40 52.7	-0.1
KBA	**Koelnbreinsper**	**149.69**	**344**	*e*PKiKP	**PKPbc**	15 40 52.9	-0.3
	comp=Z,11nm,0.6s,SNR=8.2						
KBA				*ep*PKPab	**pPKPbc**	15 43 17.5	+0.7
	comp=Z,5.4nm,0.9s						
EZN	**Ezine**	**149.75**	**320**	P	**PKPbc**	15 40 53.5	+0.2
ECH	**Echery**	**149.77**	**353**		**PKPbc**	15 40 52.9	-0.2
SMTH	**Samothraki Isl**	**149.82**	**322**	P	**PKPbc**	15 40 52.8	-0.7
TEKS	**Tekeris**	**149.82**	**334**	⇓*i*P	**PKPbc**	15 40 52.8	-0.5
UBR	**Ueberruh**	**149.84**	**349**	*e*PKPbc	**PKiKP**	15 40 53.9	0.0
	baz=17,slow=2.6						
WATA	**Walderalm**	**149.87**	**347**	*e*PKiKP	**PKiKP**	15 40 54.0	-0.1
	comp=Z,10nm,0.5s,SNR=5.5						
WATA				*ep*PKPbc	**pPKPdf**	15 43 15.3	+2.1
	comp=Z,11nm,1.2s						
RETA	**Reutte**	**149.90**	**348**	*e*PKiKP	**PKPbc**	15 40 53.7	+0.2
	comp=Z,7.5nm,0.6s,SNR=5.3						
RETA				*ep*PKPbc	**pPKPdf**	15 43 15.2	+2.0
	comp=Z,9.1nm,1.2s						
WTTA	**Wattenberg**	**149.93**	**346**	*i* PKiKP	**PKiKP**	15 40 54.2	-0.2
	comp=Z,21nm,0.5s,SNR=11						
WTTA				*ep*PKPab	**pPKPbc**	15 43 18.1	+0.5
	comp=Z,10nm,1.0s						
MOTA	**Moosalm**	**149.97**	**347**	*i* PKPdf	**PKPdf**	15 40 48.1	0.0
	comp=Z,4.1nm,1.0s						
MOTA				*e*PKiKP	**PKPbc**	15 40 53.6	-0.1
	comp=Z,14nm,0.8s,SNR=7.1						
MOTA				*ep*PKPbc	**pPKPdf**	15 43 15.5	+2.2
	comp=Z,7.7nm,0.9s						
MOSL	**Moslavina**	**149.98**	**339**	*i* P	**PKiKP**	15 40 54.0	-0.2
DIVS	**Divibare**	**149.99**	**333**	⇓*i*P	**PKiKP**	15 40 54.2	-0.2
MYKA	**Terra Mystica**	**150.03**	**343**	*e*PKPbc	**PKPbc**	15 40 53.3	-0.5
	comp=Z,12nm,0.5s,SNR=5.5						
KAVA	**Kavala**	**150.05**	**324**	P	**PKPbc**	15 40 53.9	-0.1
SQTA	**Sankt Quirin**	**150.06**	**347**	*e*PKPdf	**PKPdf**	15 40 48.4	+0.2
	comp=Z,4.1nm,0.8s						
SQTA				*e*PKiKP	**PKiKP**	15 40 54.4	-0.1
	comp=Z,16nm,0.6s,SNR=7.4						
SQTA				*ep*PKPbc	**pPKPdf**	15 43 15.7	+2.3
	comp=Z,6.4nm,0.9s						
NVR	**Nevrokopi**	**150.17**	**325**	P	**PKPbc**	15 40 54.0	-0.3
ABTA	**Abfaltersbach**	**150.21**	**345**	*e*PKPdf	**PKPdf**	15 40 48.1	-0.3
	comp=Z,9.5nm,1.2s						
ABTA				*e*PKPbc	**PKPbc**	15 40 53.8	-0.5
	comp=Z,22nm,0.6s,SNR=7.9						
ABTA				*ep*PKPbc	**pPKPbc**	15 43 16.8	-1.3
	comp=Z,4.9nm,0.7s						
CRES	**Cresnjev**	**150.22**	**340**	⇓*i*P	**PKPbc**	15 40 54.4	+0.2
DAVA	**Damuels**	**150.26**	**349**	*e*PKPdf	**PKPdf**	15 40 48.1	-0.4
	comp=Z,5.9nm,1.1s						
DAVA				*e*PKiKP	**PKiKP**	15 40 55.1	+0.1
	comp=Z,9.2nm,0.6s,SNR=6.4						
DAVA				*ep*PKPbc	**pPKPbc**	15 43 16.4	-1.8
	comp=Z,6.9nm,1.0s						
CLF	**Chambon-Foret**	**150.29**	**359**		**PKPbc**	15 40 54.1	-0.2
CLF					**PKPab**	15 41 03.6	+0.1
LJU	**Ljubljana**	**150.31**	**342**	⇓*i*P	**PKiKP**	15 40 54.7	-0.2
FETA	**Feichten**	**150.35**	**347**	*e*PKPdf	**PKPdf**	15 40 49.2	+0.5
	comp=Z,4.6nm,0.7s						
FETA				*e*PKiKP	**PKiKP**	15 40 55.1	-0.1
	comp=Z,13nm,0.7s,SNR=5.7						
FETA				*ep*PKPab	**pPKPbc**	15 43 19.3	+0.9
	comp=Z,10nm,1.2s						
LIA	**Limnos Island**	**150.39**	**322**	P	**PKPbc**	15 40 54.6	-0.2
OZLJ	**Ozalj**	**150.40**	**340**	*i* P	**PKiKP**	15 40 55.4	+0.4
BBLS	**Lazići**	**150.43**	**334**	⇓*i*P	**PKiKP**	15 40 55.2	-0.1
HAPS	**Han Pijesak,BI**	**150.44**	**334**	⇓*i*P	**PKPbc**	15 40 54.7	-0.2
BLY	**Banja Luka**	**150.57**	**337**	*e*P	**PKiKP**	15 40 55.4	-0.1
CEY	**Cerknica**	**150.62**	**342**	⇓*i*P	**PKPbc**	15 40 55.3	+0.1
RUDO	**Rudo**	**150.64**	**333**	*e*P	**PKPbc**	15 40 55.0	-0.3
DAT	**Datca**	**150.73**	**314**	P	**PKPbc**	15 40 55.1	-0.7
BODT	**Bodrum**	**150.73**	**315**	P	**PKPbc**	15 40 55.4	-0.3
CHOS	**Chios Island**	**150.79**	**318**	P	**PKPbc**	15 40 55.4	-0.5
KNT	**Kendrikon**	**150.82**	**326**	P	**PKPbc**	15 40 55.2	-0.6
FUORN	**Ofenpass-Fuorn**	**150.83**	**348**	PKPbc	**PKiKP**	15 40 56.3	0.0
MGRS	**Mrkonjic Grad**	**150.89**	**337**	*e*P	**PKPab**	15 41 06.3	+0.1
CTI	**Castel Tesino**	**151.07**	**346**		**PKPdf**	15 40 48.9	-0.9
CTI				PKPbc	**PKPbc**	15 40 56.2	-0.1
CTI				PKPab	**PKPab**	15 41 06.5	-0.5
TUE	**Stuetta**	**151.15**	**349**		**PKPbc**	15 40 56.7	+0.1
UPM	**Unac-Piva**	**151.18**	**333**	*e*P	**PKPbc**	15 40 56.2	-0.5
KIJV	**Kijevo**	**151.49**	**337**	*i* P	**PKPbc**	15 40 57.3	+0.1
NVLJ	**Novalja**	**151.53**	**340**	*i* P	**PKPbc**	15 40 56.7	-0.5
SENIN	**Lac Senin/Sane**	**151.58**	**352**		**PKiKP**	15 40 57.7	-0.1
BRY	**Bratogost**	**151.58**	**333**	⇓*i*P	**PKPbc**	15 40 57.2	-0.4
PDG	**Podgorica**	**151.65**	**332**	⇓P	**PKPbc**	15 40 56.8	-0.7
PDG	**Podgorica**	**151.65**	**332**	*e*P	**PKPbc**	15 40 57.4	-0.2
PDG	**Podgorica**	**151.65**	**332**		**PKPbc**	15 40 57.3	-0.2
RICI	**Ricice**	**151.66**	**336**	P	**PKPbc**	15 40 57.3	-0.2
LIT	**Litokhoron**	**151.79**	**325**		**PKPbc**	15 40 57.1	-0.8
LIT				PKPab	**PKPab**	15 41 10.0	-0.2
TREB	**Trebinje**	**151.81**	**333**	*e*P	**PKPbc**	15 40 57.4	-0.5
KYMI	**Kymi, Euboea I**	**151.85**	**321**	P	**PKPbc**	15 40 57.2	-0.9
MORI	**Morici**	**151.87**	**338**	*i* P	**PKPbc**	15 40 57.7	-0.3
DRME	**Dracevica, Mon**	**151.87**	**332**	⇓*i*P	**PKPbc**	15 40 58.0	-0.1
MAKA	**Makarska**	**151.88**	**336**	*i* P	**PKPbc**	15 40 57.5	-0.5
FNA	**Florina**	**151.89**	**327**	P	**PKPbc**	15 40 57.9	-0.3
FNA	**Florina**	**151.89**	**327**		**PKPdf**	15 40 49.7	-1.3
FNA				PKPbc	**PKPbc**	15 40 57.7	-0.5
FNA				PKPab	**PKPab**	15 41 10.7	+0.1
XOR	**Xorichti**	**151.90**	**323**	P	**PKPbc**	15 40 57.4	-0.9
DBRK	**Dubrovnik**	**151.94**	**334**	*i* P	**PKPbc**	15 40 57.6	-0.6
STON	**Ston**	**151.95**	**335**	*e*P	**PKPbc**	15 40 57.5	-0.7
STON	**Ston**	**151.95**	**335**	*i* P	**PKPbc**	15 40 57.4	-0.7
HCY	**Herceg Novi**	**151.97**	**333**	⇓*i*P	**PKPbc**	15 40 57.7	-0.6
DUGI	**Dugi Otok**	**151.98**	**339**	*i* P	**PKPbc**	15 40 58.0	-0.3
ANAF	**Anafi Island**	**152.15**	**315**	P	**PKPbc**	15 40 57.9	-1.0
IOSP	**Ios Island**	**152.26**	**316**	P	**PKPbc**	15 40 58.1	-1.0
DION	**Dionisos Attik**	**152.30**	**320**	P	**PKPbc**	15 40 58.6	-0.6
PTL	**Penteli**	**152.36**	**320**	P	**PKPbc**	15 40 58.4	-0.9
VILL	**Villia**	**152.62**	**321**	P	**PKPbc**	15 40 59.0	-0.9
SSB	**Saint Sauveur**	**152.94**	**356**		**PKiKP**	15 41 00.8	+0.4
BNI	**Bardonecchia**	**152.95**	**352**		**PKiKP**	15 41 01.1	+0.5
BNI					**PKPab**	15 41 15.5	+0.5
DID	**Didima**	**153.09**	**320**	P	**PKPbc**	15 40 59.6	-1.3
KALE	**Kalithea**	**153.16**	**323**	P	**PKiKP**	15 41 01.1	0.0
IDI	**Anoyia**	**153.34**	**314**	PKPbc	**PKiKP**	15 41 02.5	+1.0
	comp=Z,4.5nm,0.4s,baz=299,slow=9.0,SNR=11						
KLV	**Kalavryta, Ach**	**153.39**	**322**	P	**PKPbc**	15 41 01.1	-0.5
INTR	**Introdacqua**	**154.12**	**339**		**PKPdf**	15 40 53.4	-0.8
PBRG	**Braganca**	**155.43**	**15**	*e*PKPab	**PKPab**	15 41 26.0	+0.4
MVO	**Moncorvo**	**155.95**	**16**	*e*PKPdf	**PKPdf**	15 40 57.7	+1.0
MVO	**Moncorvo**	**155.95**	**16**	*e*PKPab	**PKPab**	15 41 28.4	+0.4
PVIS	**Viseu**	**156.12**	**18**	*e*PKPab	**PKPab**	15 41 28.9	+0.2
MTE	**Manteigas**	**156.52**	**18**	*e*PKPdf	**PKPdf**	15 40 58.2	+0.7
PCBR	**Castelo Branco**	**157.05**	**18**	*e*PKPdf	**PKPdf**	15 40 59.2	+1.2
PMTG	**Montargil**	**157.52**	**21**	*e*PKPab	**PKPab**	15 41 34.7	0.0
EVO	**Evora**	**158.07**	**21**	*e*PKPdf	**PKPdf**	15 41 00.2	+0.9
ESDC	**Sonseca Array**	**158.08**	**12**	PKP	**PKPdf**	15 40 59.5	+0.1
	comp=Z,1.4nm,1.0s,baz=336,slow=3.0,SNR=8.4						
ESDC				PKPab	**PKPab**	15 41 37.5	+0.2
	comp=Z,2.8nm,0.9s,baz=344,slow=4.2,SNR=12						
MDT	**Midelt**	**164.41**	**20**	PKP	**PKPdf**	15 41 07.5	+1.3
	comp=Z,7.3nm,0.9s,baz=84,slow=1.3,SNR=12						
MDT				PKPab	**PKPab**	15 42 06.3	+1.0
	comp=Z,3.5nm,0.9s,baz=356,slow=0.9,SNR=4.1						
LIC	**Lamto**	**166.36**	**150**	*e*PKIKP	**PKPdf**	15 41 07.4	-0.8
	comp=Z,54nm,0.9s						
KIC	**Kosan Boka**	**166.62**	**151**	*e*PKIKP	**PKPdf**	15 41 07.4	-1.0
	comp=Z,52nm,1.2s						
TIC	**Toumodi**	**166.73**	**149**	*e*PKIKP	**PKPdf**	15 41 07.9	-0.6
DBIC	**Dimbokro**	**166.84**	**150**		**PKPdf**	15 41 07.5	-1.0
TOA0	**Torodi Ar. Sit**	**174.94**	**180**		**PKPdf**	15 41 11.6	-1.0
TOA0					**PKPab**	15 42 51.7	-0.3
TORD	**Torodi Ar. Bea**	**174.94**	**180**	PKP	**PKPdf**	15 41 11.9	-0.7
	comp=Z,10nm,1.1s,baz=347,slow=1.2,SNR=37						
TORD				PKPab	**PKPab**	15 42 52.4	+0.4
	comp=Z,2.4nm,0.5s,baz=191,slow=3.5,SNR=18						
TORD				PP	**PP**	15 46 44.9	+1.3
	comp=Z,3.8nm,0.8s,baz=169,slow=3.4,SNR=8.0						

*ANF **18** 15:32:29.5±0.1,34˚.80N×117˚.27W,h14km±1km, ML2.2/20, Error ellipse: s-maj=1.0km s-min=0.9km az=2.0*

SCEDC 18 15:32:30.7,34˚.80N×117˚.27W,h9km, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RRX	**Edison Barstow**	**0.24**	**67**	P	Pg	15 32 35.2	+0.4
	baz=250						
RRX				S	Sg	15 32 39.0	+0.6
	baz=250						
BBRC	**Big Bear Solar**	**0.59**	**151**	P	Pb	15 32 41.7	-0.1
	baz=332,SNR=12						
BBRC				S	Sb	15 32 50.1	-0.1
	baz=332						
EDW2	**Edwards Air Fo**	**0.60**	**280**	P	Pb	15 32 41.7	-0.3
	baz=98,SNR=20						
EDW2				S	Sg	15 32 49.8	+0.4
	baz=98						
BFSC	**Mount Baldy Ra**	**0.63**	**211**	P	Pb	15 32 42.4	0.0
	baz=30,SNR=8.8						
BFSC				S	Sb	15 32 50.9	-0.2
	baz=30						
GSC	**Goldstone, Bar**	**0.65**	**36**	P	Pg	15 32 42.2	0.0
	baz=217,SNR=12						
GSC				S	Sg	15 32 50.7	0.0
	baz=217						
HEC	**Hector,Ludlow**	**0.77**	**86**	P	Pb	15 32 44.7	-0.1
	baz=268,SNR=8.3						
HEC				S	Sb	15 32 55.2	0.0
	baz=268						
LRMC	**Laurel Mtn Rad**	**0.78**	**334**	S	Sb	15 32 55.8	+0.4
	baz=153						
DECC	**Green Verdugo**	**1.02**	**239**	S	Sn	15 33 03.4	-0.3
	baz=58						
MURC	**Murrieta**	**1.18**	**177**	Pg	Pg	15 32 52.3	+0.1
	baz=357						
OSI	**Osito Audit: C**	**1.21**	**263**	P	Pg	15 32 52.9	+0.1
	baz=81						
OSI				S	Sg	15 33 08.6	0.0
	baz=81						
TUQ	**Turquoise Moun**	**1.28**	**59**	Pg	Pg	15 32 54.1	-0.2
	baz=240,SNR=7.7						
TUQ				S	Sg	15 33 11.0	0.0
	baz=240						
MPMC	**Manual Prospec**	**1.29**	**352**	P	Pn	15 32 52.9	-0.5
	baz=172,SNR=9.7						
MPMC				S	Sg	15 33 11.5	+0.4
	baz=172						
BELC	**

RRL	**Rocca Remolon**	**0.72**	**334**	P	**Pb**	**15 46 58.0**	**-0.8**
RRL				S	**Sg**	**15 47 07.9**	**-0.2**
RRL	**Rocca Remolon**	**0.72**	**334**	P	**Pb**	**15 46 57.8**	**-1.1**
RRL				S	**Sg**	**15 47 07.9**	**-0.2**
RRL				AML	AML		
	comp=E,326µm,0.3s						
RRL				AML	AML		
	comp=N,358µm,0.8s						
RRL				AML	AML		
	comp=E,325µm,0.3s						
FINB	**Finale Ligure**	**0.79**	**97**	P	**Pb**	**15 46 59.5**	**-0.3**
FINB				S	**Sb**	**15 47 10.2**	**-0.1**
FINB				AML	AML		
	comp=N,494µm,0.3s						
FINB				AML	AML		
	comp=E,506µm,0.2s						
QLNO	**Quiliano**	**0.80**	**86**	P	**Pb**	**15 46 59.8**	**-0.3**
QLNO				S	**Sg**	**15 47 10.7**	**+0.3**
QLNO				AML	AML		
	comp=N,434µm,0.5s						
QLNO				AML	AML		
	comp=E,418µm,0.4s						
QLNO				AML	AML		
	comp=N,434µm,0.5s						
FRF	**La Foret Royal**	**0.83**	**211**	*e*Pg	**Pb**	**15 46 59.3**	**-1.3**
FRF				*e*Sg	**Sb**	**15 47 09.9**	**-1.7**
	comp=N,173nm,0.2s						
RSP	**Reno Superiore**	**0.87**	**1**	P	**Pb**	**15 46 59.5**	**-1.9**
RSP				S	**Sb**	**15 47 12.3**	**-0.6**
RSP	**Reno Superiore**	**0.87**	**1**	P	**Pb**	**15 46 59.5**	**-1.9**
RSP				AML	AML		
	comp=N,350µm,0.1s						
RSP				AML	AML		
	comp=E,294µm,0.2s						
BNI	**Bardonecchia**	**0.87**	**333**	P	**Pb**	**15 47 00.7**	**-0.7**
BNI				S	**Sb**	**15 47 12.1**	**-0.8**
BNI				AML	AML		
	comp=N,71µm,0.3s						
BNI				AML	AML		
	comp=E,116µm,0.3s						
BLAF	**les Blancs**	**0.92**	**250**	Pg	**Pb**	**15 47 01.9**	**-0.2**
BLAF				Sg	**Sb**	**15 47 14.5**	**+0.4**
MONC	**Moncucco Torin**	**0.94**	**31**	P	**Pb**	**15 47 01.9**	**-0.5**
MONC				AML	AML		
	comp=E,428µm,0.3s						
MONC				AML	AML		
	comp=N,488µm,0.4s						
MONC				AML	AML		
	comp=N,489µm,0.4s						
PCP	**Piancastagn**	**0.97**	**74**	P	**Pb**	**15 47 02.9**	**-0.1**
PCP				S	**Sb**	**15 47 16.1**	**+0.3**
PCP	**Piancastagn**	**0.97**	**74**	P	**Pb**	**15 47 02.7**	**-0.3**
PCP				S	**Sb**	**15 47 16.0**	**+0.3**
PCP				AML	AML		
	comp=E,217µm,0.8s						
PCP				AML	AML		
	comp=E,216µm,0.8s						
PCP				AML	AML		
	comp=N,178µm,1.6s						
ROTM	**Rocchetta Tana**	**0.98**	**54**	P	**Pb**	**15 47 03.8**	**+0.7**
ROTM				S	**Sn**	**15 47 17.5**	**+0.1**
LMR	**La Mourre**	**1.08**	**210**	*e*Pg	**Pb**	**15 47 04.1**	**-0.7**
LMR				*e*Sg	**Sb**	**15 47 17.4**	**-1.3**
	comp=N,254nm,0.3s						
MLYF	**Mely**	**1.10**	**255**	Pg	**Pn**	**15 47 05.5**	**+0.1**
MLYF				Sg	**Sb**	**15 47 20.7**	**+1.4**
ORIF	**Oris-en-Rattie**	**1.16**	**304**	*e*Pn	**Pn**	**15 47 06.0**	**-0.3**
ORIF				*e*Sg	**Sb**	**15 47 21.9**	**+0.6**
	comp=N,45nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.16**	**304**	P	**Pn**	**15 47 05.6**	**-0.7**
ORIF				AML	AML		
	comp=N,150µm,1.0s						
ORIF				AML	AML		
	comp=E,218µm,1.2s						
LSD	**Lago del Serru**	**1.19**	**356**	P	**Pn**	**15 47 04.9**	**-1.8**
LSD				AML	AML		
	comp=E,239µm,1.2s						
LSD				AML	AML		
	comp=N,132µm,0.5s						
GDM	**Grand'Maison**	**1.23**	**320**	Pg	**Pn**	**15 47 07.6**	**+0.4**
SMRF	**Simiane la Rot**	**1.23**	**257**	*e*Pg	**Pn**	**15 47 07.7**	**+0.5**
SMRF				*e*Sg	**Sb**	**15 47 23.4**	**+0.1**
	comp=N,122nm,0.2s						
ARTF	**Artigues**	**1.24**	**237**	Pg	**Pn**	**15 47 07.6**	**+0.3**
ARTF				Sg	**Sb**	**15 47 24.0**	**+0.5**
LPG	**La Plagne**	**1.27**	**344**	*e*Pn	**Pn**	**15 47 08.2**	**+0.3**
LPG				*e*Sn	**Sb**	**15 47 25.1**	**+0.6**
	comp=N,52nm,0.3s						
TRAV	**Traversella**	**1.29**	**16**	AML	AML		
	comp=N,91µm,0.2s						
TRAV				AML	AML		
	comp=N,92µm,0.2s						
TRAV				AML	AML		
	comp=E,80µm,0.4s						
LPL	**La Plagne**	**1.29**	**344**	*e*Pn	**Pn**	**15 47 08.6**	**+0.4**
LPL				*e*Sn	**Sb**	**15 47 25.9**	**+0.8**
	comp=E,34nm,0.3s						
RUSF	**Rustrel**	**1.31**	**256**	Pg	**Pn**	**15 47 09.3**	**+1.1**
RUSF				Sg	**Sb**	**15 47 27.1**	**+1.8**
CIRO	**Champorcher**	**1.35**	**10**	AML	AML		
	comp=N,59µm,0.8s						
CIRO				AML	AML		
	comp=E,118µm,1.4s						
CIRO				AML	AML		
	comp=N,59µm,0.8s						
CIRO				AML	AML		
	comp=E,118µm,1.4s						
GRN	**Grenoble**	**1.44**	**313**	Pn	**Pn**	**15 47 11.8**	**+1.8**
GRN				Sn	**Sn**	**15 47 30.6**	**+1.8**
MRGE	**Morge**	**1.50**	**355**	P	**Pn**	**15 47 11.2**	**+0.3**
MRGE				AML	AML		
	comp=E,89µm,0.6s						
MRGE				AML	AML		
	comp=N,71µm,0.4s						
GORR	**Gorreto**	**1.51**	**77**	P	**Pn**	**15 47 11.8**	**+0.8**
GORR				AML	AML		
	comp=N,83µm,0.6s						
GORR				AML	AML		
	comp=E,130µm,0.3s						
REMY	**Saint-Rhmy-en**	**1.56**	**358**	AML	AML		
	comp=N,105µm,0.6s						
REMY				AML	AML		
	comp=E,80µm,0.9s						
ARBF	**Arbois**	**1.59**	**241**	Pn	**Pn**	**15 47 13.7**	**+1.7**
ARBF				Sn	**Sn**	**15 47 34.1**	**+1.9**
OGSM	**Saint Maurice**	**1.73**	**321**	Pn	**Pn**	**15 47 16.0**	**+2.0**
OGSM				Sn	**Sb**	**15 47 38.7**	**+1.3**
MMK	**Mattmark**	**1.85**	**16**	AML	AML		
	comp=E,25µm,0.3s						
MMK				AML	AML		
	comp=N,27µm,1.4s						
VIVF	**Saint-Julien-l**	**1.92**	**288**	*e*Pn	**Pn**	**15 47 16.6**	**-0.1**
VIVF	**Saint-Julien-l**	**1.92**	**288**	*e*Pg	**Pb**	**15 47 20.3**	**+1.1**
VIVF				*e*Sn	**Sn**	**15 47 40.1**	**-0.5**
	comp=N,30nm,0.3s						
VIVF				*e*Sg	**Sb**	**15 47 45.3**	**+2.2**
	comp=N,28nm,0.3s						
OG35	**Corcelles**	**2.13**	**327**	Pn	**Pn**	**15 47 21.3**	**+1.8**
PGF	**Pioggiola**	**2.15**	**143**	*e*Pn	**Pn**	**15 47 19.4**	**-0.5**
PGF	**Pioggiola**	**2.15**	**143**	*e*Pg	**Pb**	**15 47 24.2**	**+1.0**
PGF				*e*Sn	**Sn**	**15 47 44.7**	**-1.7**
	comp=N,20nm,0.2s						
PGF	**Pioggiola**	**2.15**	**143**	AML	AML		
	comp=N,58µm,1.2s						
PGF				AML	AML		
	comp=E,63µm,1.1s						
LASF	**Ste Croix**	**2.44**	**266**	*e*Pn	**Pn**	**15 47 23.2**	**-0.6**
LASF	**Ste Croix**	**2.44**	**266**	*e*Pg	**Pb**	**15 47 29.3**	**+1.3**
LASF				*e*Sn	**Sn**	**15 47 52.1**	**-1.3**
	comp=E,6.5nm,0.2s						
LASF				*e*Sg	**Sb**	**15 48 01.3**	**+3.3**
	comp=E,11nm,0.3s						
CABF	**La Chapelle**	**2.47**	**341**	*e*Pn	**Pn**	**15 47 24.5**	**+0.2**
CABF				*e*Sn	**Sn**	**15 47 53.7**	**-0.6**
	comp=E,5.5nm,0.2s						
POPM	**Popiglio**	**2.54**	**94**	AML	AML		
	comp=E,31µm,1.3s						
POPM				AML	AML		
	comp=N,31µm,0.7s						
SMPL	**Sampolo**	**2.65**	**145**	P	**Pn**	**15 47 26.4**	**-0.1**
SMPL	**Sampolo**	**2.65**	**145**	P	**Pn**	**15 47 26.9**	**+0.3**
SMF	**Signal de Mont**	**3.37**	**316**	*e*Pn	**Pn**	**15 47 37.0**	**+0.5**
SMF				*e*Sn	**Sn**	**15 48 14.6**	**-1.6**
	comp=N,8.1nm,0.4s						
SMF				*e*Sg	**Sg**	**15 48 30.7**	**-1.8**
	comp=N,10nm,0.5s						
DAVA	**Damuels**	**3.53**	**31**	*e*Pn	**Pn**	**15 47 43.1**	**+4.1**
	comp=N,0.4nm,0.1s						
HINF	**Hinteralfeld**	**3.55**	**356**	*e*Pn	**Pn**	**15 47 39.0**	**-0.1**
HINF				*e*Sn	**Sn**	**15 48 19.6**	**-1.2**
	comp=N,4.2nm,0.2s						
FETA	**Feichten**	**3.68**	**40**	*e*Pn	**Pn**	**15 47 44.1**	**+3.2**
	comp=N,1.1nm,0.4s						
FETA	**Feichten**	**3.68**	**40**	*e*PcP	**PcP**	**15 55 12.2**	**-1.9**
	comp=N,0.9nm,0.4s						
AVF	**Avril sur Loir**	**3.71**	**314**	*e*Pn	**Pn**	**15 47 41.7**	**+0.5**
AVF				*e*Sn	**Sn**	**15 48 23.3**	**-1.4**
	comp=N,3.7nm,0.3s						
AVF				*e*Sg	**Sb**	**15 48 41.0**	**+6.5**
	comp=N,4.1nm,0.5s						
CAF	**Calviac**	**3.75**	**282**	*e*Pn	**Pn**	**15 47 42.0**	**+0.2**
CAF				*e*Sn	**Sn**	**15 48 24.1**	**-1.7**
	comp=N,5.1nm,0.4s						
CAF				*e*Sg	**Sb**	**15 48 42.4**	**+6.7**
	comp=N,3.5nm,0.3s						
MTLF	**Montolieu**	**3.75**	**257**	*e*Pn	**Pn**	**15 47 41.7**	**-0.1**
MTLF	**Montolieu**	**3.75**	**257**	*e*Pg	**Pb**	**15 47 53.5**	**+3.1**
MTLF				*e*Sn	**Sn**	**15 48 23.8**	**-1.9**
	comp=N,7.8nm,0.4s						
MTLF				*e*Sg	**Sb**	**15 48 41.9**	**+6.2**
	comp=N,2.8nm,0.3s						
HAU	**Haudompre**	**3.78**	**351**	*e*Pn	**Pn**	**15 47 42.5**	**+0.3**
HAU				*e*Sn	**Sn**	**15 48 24.8**	**-1.7**
	comp=N,26nm,0.3s						
LOR	**Lormes**	**3.81**	**323**	*e*Pn	**Pn**	**15 47 43.2**	**+0.5**
	baz=144						
LOR				*e*Sn	**Sn**	**15 48 26.0**	**-1.2**
	comp=N,18nm,0.6s						
LOR				*e*Sg	**Sg**	**15 48 44.8**	**-2.0**
	comp=N,5.7nm,0.4s,baz=152						
SSF	**Saint Saulge**	**3.82**	**318**	*e*Pn	**Pn**	**15 47 43.0**	**+0.3**
SSF				*e*Sn	**Sn**	**15 48 26.0**	**-1.4**
	comp=N,2.7nm,0.3s						
SSF				*e*Sg	**Sb**	**15 48 44.3**	**+6.7**
	comp=N,4.6nm,0.4s						
BGF	**Bois d'Agland**	**3.84**	**308**	*e*Pn	**Pn**	**15 47 43.7**	**+0.7**
BGF				*e*Sg	**Sg**	**15 48 45.1**	**-2.7**
	comp=N,12nm,0.5s						
RETA	**Reutte**	**4.05**	**36**	*e*Pn	**Pn**	**15 47 47.2**	**+1.3**
	comp=N,0.5nm,0.3s						
SQTA	**Sankt Quirin**	**4.05**	**42**	*e*Pn	**Pn**	**15 47 48.5**	**+2.6**
	comp=N,0.6nm,0.2s						
SQTA	**Sankt Quirin**	**4.05**	**42**	*e*PcP	**PcP**	**15 55 15.7**	**+1.5**
	comp=N,2.9nm,0.3s						
TCF	**Toulx Ste Croi**	**4.08**	**301**	*e*Pn	**Pn**	**15 47 46.5**	**+0.2**
TCF				*e*Sn	**Sn**	**15 48 31.7**	**-2.1**
	comp=N,3.3nm,0.4s						
TCF				*e*Sg	**Sg**	**15 48 52.4**	**-3.0**
	comp=N,2.2nm,0.4s						
MOTA	**Moosalm**	**4.09**	**40**	*e*Pn	**Pn**	**15 47 47.8**	**+1.3**
	comp=N,0.5nm,0.3s						
MOTA	**Moosalm**	**4.09**	**40**	*e*PcP	**PcP**	**15 55 16.5**	**+2.3**
	comp=N,0.8nm,0.3s						
CDF	**Champ du Feu**	**4.14**	**0**	*e*Pn	**Pn**	**15 47 47.3**	**+0.1**
CDF				*e*Sn	**Sn**	**15 48 33.6**	**-1.7**
	comp=N,5.1nm,0.3s						
RJF	**Les Rejaudoux**	**4.20**	**286**	*e*Pn	**Pn**	**15 47 48.1**	**+0.1**
RJF				*e*Sn	**Sn**	**15 48 34.8**	**-2.0**
	comp=N,3.5nm,0.4s						
SFTF	**Sexfontaines**	**4.22**	**340**	*e*Pn	**Pn**	**15 47 48.3**	**+0.1**
SFTF				*e*Sn	**Sn**	**15 48 35.4**	**-1.7**
	comp=N,6.3nm,0.2s						
WTTA	**Wattenberg**	**4.29**	**44**	*e*Pn	**Pn**	**15 47 52.7**	**+3.4**
	comp=N,7.7nm,0.2s						
WTTA	**Wattenberg**	**4.29**	**44**	*e*PcP	**PcP**	**15 55 16.9**	**+2.5**
	comp=N,2.3nm,0.3s						
HYF	**Humbligny**	**4.39**	**315**	*e*Pn	**Pn**	**15 47 50.8**	**+0.2**
HYF				*e*Sn	**Sn**	**15 48 39.7**	**-1.8**
PAGF	**Fort de Pagny**	**4.41**	**347**	*e*Pn	**Pn**	**15 47 52.0**	**+1.2**
	baz=165						
PAGF				*e*Sn	**Sn**	**15 48 39.9**	**-1.9**
	comp=N,4.5nm,0.2s						
MEZF	**Maizieres J'vi**	**4.49**	**341**	*e*Pn	**Pn**	**15 47 52.2**	**+0.3**
	baz=160						
MEZF				*e*Sn	**Sn**	**15 48 42.1**	**-1.7**
	comp=N,6.2nm,0.3s						
LFF	**La Frestale**	**4.69**	**280**	*e*Sn	**Sn**	**15 48 46.2**	**-2.5**
	comp=N,5.2nm,0.4s						
EPF	**Esparros**	**5.16**	**258**	*e*Pn	**Pn**	**15 48 00.9**	**-0.3**
EPF	**Esparros**	**5.16**	**258**	*e*Pg	Pb	15 48 19.7	+5.3
EPF				*e*Sg	**Sg**	**15 49 25.9**	**-4.0**
	comp=N,2.4nm,0.3s						
MFF	**Saint Martin d**	**5.69**	**297**	*e*Pn	**Pn**	**15 48 08.8**	**+0.4**
MFF				*e*Sn	**Sn**	**15 49 11.1**	**-2.4**
	comp=N,1.2nm,0.4s						
ETSF	**Etsaut**	**5.83**	**259**	*e*Pn	**Pn**	**15 48 10.1**	**-0.3**
ETSF	**Etsaut**	**5.83**	**259**	*e*Pg	Pb	15 48 31.4	+5.6
ETSF				*e*Sn	**Sn**	**15 49 13.4**	**-3.6**
	comp=N,1.4nm,0.3s						
BAIF	**Baives**	**6.14**	**341**	*e*Pn	**Pn**	**15 48 15.2**	**+0.6**
SJPF	**Ste Jean**	**6.25**	**262**	*e*Pn	**Pn**	**15 48 15.5**	**-0.5**
SJPF				*e*Sn	**Sn**	**15 49 22.9**	**-4.3**
SJPF				*e*Sg	**Sg**	**15 50 00.1**	**-4.7**
	comp=N,0.7nm,0.4s						
LDF	**La Druitiere**	**6.67**	**313**	*e*Pn	**Pn**	**15 48 22.3**	**+0.5**
LDF				*e*Sn	**Sn**	**15 49 33.6**	**-4.0**
	comp=N,2.6nm,0.6s						
GRR	**Gorron**	**6.95**	**309**	*e*Pn	**Pn**	**15 48 26.1**	**+0.4**
GRR	**Gorron**	**6.95**	**309**	*e*Pg	Pg	15 48 53.7	-3.7
FLN	**La Foliniere**	**6.96**	**313**	*e*Pn	**Pn**	**15 48 25.6**	**-0.2**
	baz=133						
SGMF	**Saint Gilles**	**7.87**	**304**	*e*Pn	**Pn**	**15 48 36.6**	**-1.6**
SGMF				*e*Sn	**Sn**	**15 50 02.0**	**-5.0**
	comp=N,0.8nm,0.3s						
ROSF	**Rostrenen**	**8.33**	**303**	*e*Pn	**Pn**	**15 48 44.1**	**-0.5**

*IDC **18** 15:48:50.6±1.3, 38˚.45N×70˚.07E, h0km, mb3.6/8, mb1 3.7/13, mb1mx3.5/59, mbtmp3.6/13, ML3.2/5, MS3.1/3, Ms1 3.1/3, ms1mx2.5/53, Error ellipse: s-maj=27.6km s-min=11.4km az=150.0*

*NNC **18** 15:48:52.6±3.2, 38˚.50N×69˚.97E, h2km±14km, mb4.5, mpv4.1, Error ellipse: s-maj=23.1km s-min=15.1km az=0.0*

ISC 18 15:48:54.0±0.9, 38˚.38N±0˚.08×70˚.07E±0˚.06, h27km, n28, σ1§95/35, mb3.6/8, 7C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
AML	**Almayashu**	**4.67**	**35**	P		**Pn**	**15 50 00.7**	**-2.2**
	SNR=19							
KK31	**Karatay Array**	**4.74**	**4**	⇓Pn		**Pn**	**15 50 04.0**	**+0.4**
	6.9nm,0.4s,baz=200,slow=13,SNR=171							
KK31				⇓Pg		**Pb**	**15 50 16.2**	**-0.1**
	7.9nm,0.4s,baz=196,slow=19,SNR=8.2							
KK31				⇑Sn		**Sn**	**15 50 59.6**	**+2.0**
	32nm,0.8s,baz=193,slow=24,SNR=4.0							
KK31				⇑Lg		Lg	15 51 17.8	
	59nm,0.7s,baz=190,slow=34,SNR=8.8							
EKS2	**Erkin-Say**	**5.13**	**32**	P		**Pn**	**15 50 10.2**	**+1.1**
	SNR=33							
UCH	**Uchtor**	**5.13**	**40**	P		**Pn**	**15 50 06.6**	**-2.9**
	SNR=12							
KZA	**Kyzart**	**5.42**	**45**	P		**Pn**	**15 50 10.7**	**-2.7**
	SNR=78							
AAK	**Ala-Archa**	**5.43**	**37**	Pn		**Pn**	**15 50 15.0**	**+1.7**
	7.3nm,0.3s,baz=210,slow=5.4,SNR=36							
AAK				Sn		**Sn**	**15 51 18.2**	**+3.2**
	2.1nm,0.3s,baz=205,slow=13,SNR=4.0							
AAK				LR		LR	15 52 26.9	
	comp=Z,109nm,20.8s,baz=234,slow=40							
AAK	**Ala-Archa**	**5.43**	**37**	P		**Pn**	**15 50 11.0**	**-2.3**
	SNR=22							
AAK	**Ala-Archa**	**5.43**	**37**	Pn		**Pn**	**15 50 14.8**	**+1.5**
	13nm,0.5s							
AAK				Sn		**Sn**	**15 51 18.5**	**+3.5**
	32nm,0.9s							
AAK				Lg		Lg	15 51 42.7	
	47nm,1.1s							
KBK	**Karagaybulak**	**5.67**	**39**	P		**Pn**	**15 50 19.2**	**+2.6**
	SNR=74							
CHMS	**Chumysh**	**5.83**	**36**	P		**Pn**	**15 50 16.4**	**-2.3**
	SNR=20							
USP	**Ospenovka**	**5.93**	**33**	P		**Pn**	**15 50 20.6**	**+0.6**
	SNR=16							
TKM2	**Tokmak 2**	**6.19**	**41**	P		**Pn**	**15 50 25.5**	**+1.8**
	SNR=14							
TKM2	**Tokmak 2**	**6.19**	**41**	⇑Pn		**Pn**	**15 50 25.0**	**+1.3**
	34nm,0.5s							
TKM2				⇑Sn		**Sn**	**15 51 33.5**	**-0.1**
	11nm,0.7s							
TKM2				⇑Lg		Lg	15 52 11.4	
	24nm,1.1s							
GEYT	**Alibeck**	**9.43**	**271**	Pn		**Pn**	**15 51 06.3**	**-1.6**
	0.2nm,0.3s,baz=86,slow=10,SNR=1.2							
GEYT				Sn		**Sn**	**15 52 54.9**	**+1.9**
	0.4nm,0.3s,baz=318,slow=54,SNR=3.0							
MKAR	**Makanchi Array**	**12.31**	**43**	Pn		**Pn**	**15 51 46.1**	**-1.3**
	0.1nm,0.3s,baz=229,slow=12,SNR=12							
MKAR				Lg		Lg	15 55 21.8	
	0.1nm,0.3s,baz=250,slow=29,SNR=1.5							
AB31	**Akbulak array**	**13.09**	**329**	⇓Pn		**Pn**	**15 51 55.8**	**-2.2**
	3.2nm,0.3s,baz=154,slow=11,SNR=53							
AB31				⇑Sn		**Sn**	**15 54 21.5**	**-1.1**
	3.8nm,0.3s,baz=149,slow=22,SNR=6.8							
KURBB	**Kurchatov Arra**	**13.64**	**23**	Pn		**Pn**	**15 52 01.3**	**-4.2**
	0.0nm,0.3s,baz=213,slow=12,SNR=4.2							
KURBB				Lg		Lg	15 55 57.8	
	0.0nm,0.3s,baz=208,slow=27,SNR=4.6							
AKTO	**Aktyubinsk**	**14.79**	**328**	⇑Pn		**Pn**	**15 52 19.7**	**-1.5**
	3.8nm,0.6s							
AKTO				⇓Sn		**Sn**	**15 55 04.7**	**+0.6**
	5.6nm,0.9s							
ZALV	**Zalesovo Beam**	**18.57**	**28**	P		**P**	**15 53 06.3**	**-2.3**
	0.3nm,0.3s,baz=218,slow=11,SNR=5.6							
ZALV				LR		LR	16 00 37.0	
	comp=Z,58nm,20.4s,baz=222,slow=38							
SONM	**Songino Array**	**27.93**	**58**	P		**P**	**15 54 41.9**	**-0.1**
	0.3nm,0.5s,baz=258,slow=7.1,SNR=2.4							
AKASG	**Malin Array Be**	**31.21**	**307**	P		**P**	**15 55 10.4**	**-0.4**
	0.1nm,0.3s,baz=76,slow=7.8,SNR=2.3							
FINES	**FINESS Array B**	**35.52**	**325**	P		**P**	**15 55 48.1**	**-0.1**
	0.8nm,0.7s,baz=104,slow=4.6,SNR=2.3							
HFS	**Hagfors**	**41.14**	**321**	P		**P**	**15 56 35.6**	**+0.2**
	1.1nm,0.5s,baz=104,slow=11,SNR=8.1							
NOA	**NORSAR Array B**	**42.44**	**322**	P		**P**	**15 56 46.2**	**+0.1**
	0.7nm,0.7s,baz=95,slow=8.1,SNR=3.4							
ESDC	**Sonseca Array**	**55.94**	**296**	P		**P**	**15 58 31.7**	**+1.9**
	0.4nm,0.6s,baz=57,slow=7.5,SNR=5.5							
TORD	**Torodi Ar. Bea**	**65.04**	**267**	P		**P**	**15 59 33.1**	**+1.0**
	0.5nm,0.5s,baz=46,slow=6.8,SNR=3.5							
FRB	**Frobisher Bay**	**73.05**	**342**	LR		LR	16 35 04.1	
	comp=Z,28nm,18.6s,baz=174,slow=38							
ASAR	**Alice Springs**	**85.93**	**124**	P		**P**	**16 01 32.7**	**+1.1**
	0.2nm,0.7s,baz=310,slow=4.7,SNR=2.0							

*IDC **18** 15:57:00.2±3.7, 60˚.81N×152˚.43W, h96km±30km, mb2.8/1, mb1 3.2/5, mb1mx2.9/66, mbtmp3.2/5, Error ellipse: s-maj=87.7km s-min=14.0km az=104.0*

*NEIC **18** 15:57:02.0±0.9, 60˚.84N±0˚.03×151˚.73W±0˚.04, h81km±3km, Error ellipse: s-maj=4.5km s-min=2.7km az=153.0*

*AEIC **18** 15:57:02±0.9, 60˚.83N±0˚.03×151˚.69W±0˚.06, h75km±5km, ML3.1, Error ellipse: s-maj=4.5km s-min=4.0km az=103.0*

ISC 18 15:57:02.3±0.9, 60˚.82N±0˚.03×151˚.69W±0˚.03, h80km±7km, n92, σ0§79/112, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
RDT	**Redoubt**	**0.43**	**235**			**Pn**	**15 57 15.2**	**-0.4**
RDT						**Sn**	**15 57 25.6**	**+0.2**
SPCR	**Spurr Chakacha**	**0.46**	**327**			**Pn**	**15 57 15.1**	**-0.6**
SPCR						**Sn**	**15 57 25.2**	**-0.5**
SPCG	**Spurr Capps Gl**	**0.50**	**341**			**Pn**	**15 57 15.9**	**-0.3**
SPCG						**Sn**	**15 57 25.8**	**-0.7**
CRP	**Crater Peak**	**0.50**	**333**			**Pn**	**15 57 15.9**	**-0.3**
CRP						**Sn**	**15 57 26.1**	**-0.1**
SPBG	**Spurr Blockage**	**0.55**	**323**			**Pn**	**15 57 16.1**	**-0.5**
SPBG						**Sn**	**15 57 27.0**	**-0.1**
RDJH	**Redoubt Jeurge**	**0.59**	**247**			**Pn**	**15 57 16.6**	**-0.5**
RDJH						**Sn**	**15 57 27.8**	**-0.2**
SPWE	**Spurr West**	**0.62**	**318**			**Pn**	**15 57 16.8**	**-0.5**
RSO	**Redoubt South**	**0.64**	**236**			**Pn**	**15 57 16.9**	**-0.6**
RDWB	**Redoubt West**	**0.66**	**240**			**Pn**	**15 57 17.3**	**-0.4**
RDWB						**Sn**	**15 57 28.9**	**-0.2**
RED	**Redoubt Volcan**	**0.67**	**233**			**Pn**	**15 57 17.5**	**-0.3**
RED						**Sn**	**15 57 29.4**	**+0.2**
STLK	**Strandline Lak**	**0.68**	**354**			**Pn**	**15 57 17.4**	**-0.5**
SPNN	**North Nagishla**	**0.73**	**319**			**Pn**	**15 57 18.0**	**-0.5**
SPNN						**Sn**	**15 57 30.2**	**-0.3**
FIS	**Fire Island**	**0.79**	**65**			**Pn**	**15 57 19.6**	**+0.8**
SLKM	**Skilak Lake**	**0.79**	**113**			**Pn**	**15 57 18.9**	**-0.1**
SLKM						**Sn**	**15 57 32.4**	**+1.1**
RC01	**Rabbit Creek A**	**0.99**	**73**			**Pn**	**15 57 21.1**	**-0.1**
RC01						**Sn**	**15 57 35.7**	**+0.3**
IVE	**Iliamna Volcan**	**1.04**	**220**			**Pn**	**15 57 21.8**	**-0.2**
IVE						**Sn**	**15 57 36.7**	**+0.1**
ILW	**Iliamna West**	**1.05**	**224**			**Pn**	**15 57 21.8**	**-0.3**
ILS	**Iliamna Low So**	**1.10**	**219**			**Pn**	**15 57 22.7**	**0.0**
BRLK	**Bradley Lake**	**1.14**	**159**			**Pn**	**15 57 23.1**	**+0.1**
HOM	**Homer**	**1.17**	**179**			**Pn**	**15 57 23.6**	**+0.2**
BRSE	**Bradley Lake S**	**1.18**	**156**			**Pn**	**15 57 23.6**	**0.0**
CNPM	**China Poot**	**1.32**	**170**			**Pn**	**15 57 25.5**	**+0.2**
SEW	**Seward**	**1.32**	**122**			**Pn**	**15 57 24.7**	**-0.6**
PMR	**Palmer**	**1.46**	**57**			**Pn**	**15 57 26.6**	**-0.5**
PMR						**Sn**	**15 57 45.4**	**-0.4**
GHO	**Glory Hole Cre**	**1.64**	**53**			**Pn**	**15 57 29.1**	**-0.4**
PWL	**Port Wells**	**1.65**	**87**			**Pn**	**15 57 28.7**	**-0.7**
PWL						**Sn**	**15 57 49.5**	**-0.6**
KNK

DAWY	Dawson	6.57	55		Pn		15 58 36.5	+0.4
HYT	Haines Junctio	6.94	84	Pn	Pn		15 58 41.0	-0.3
DHAK	Deception Hill	6.99	98		Pn		15 58 41.3	-0.5
BM03	Burnt Mountain	7.31	22		Pn		15 58 45.2	-1.0
ANM	Nome	7.32	307	Pn	Pn		15 58 47.0	+0.6
CNBA	Chernabura Isl	7.34	218	Pn	Pn		15 58 47.4	+0.7
TOLK	Toolik Lake Re	7.90	6	Pn	Pn		15 58 55.0	+0.8
INK	Inuvik	10.79	38	P	Pn		15 59 33.7	+0.2
	0.0nm,0.3s,baz=336,slow=30,SNR=1.6							
INK				S	Sn		16 01 36.4	+4.2
	0.1nm,0.3s,baz=267,slow=19,SNR=1.8							
MOBC	Moresby Island	13.18	117	Pn	Pn		16 00 05.8	-0.2
YKA	Yellowknife Ar	17.53	68	P	Pn		16 01 00.8	-0.2
	0.1nm,0.3s,baz=278,slow=9.7,SNR=9.6							
TXAR	Lajitas Array	44.68	113	P	P		16 05 06.6	-0.4
	0.1nm,0.4s,baz=331,slow=5.4,SNR=2.4							

IDC ***18*** *15:59:21.1±1.2,38˚.44N×70˚.20E, h0km, mb3.6/7, mb1 3.7/13, mb1mx3.5/59, mbtmp3.6/13, ML3.5/6, MS2.7/3, Ms1 2.7/3, ms1mx2.3/51, Error ellipse: s-maj=23.9km s-min=12.1km az=147.0*

NNC ***18*** *15:59:23.3±2.8,38˚.63N×69˚.90E, h0km, mb4.7, mpv4.1, Error ellipse: s-maj=21.5km s-min=14.4km az=1.0*

ISC 18 15:59:26.6±0.7,**38˚.64N**±0˚.06×**69˚.97E**±0˚.06,**h27**km,**n34,**
σ2§00/38,mb3.8/7,MS2.7/3,1C,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	4.48	5	P		Pn	Pn	16 00 33.4	+0.7
	6.3nm,0.4s,baz=181,slow=13,SNR=129								
KK31				Pg		Pb	Pb	16 00 45.4	+0.8
	15nm,0.6s,baz=193,slow=21,SNR=8.6								
KK31				Sn		Sn	Sn	16 01 28.4	+4.4
	7.2nm,0.5s,baz=188,slow=38,SNR=7.3								
KK31				Lg		Lg	Lg	16 01 43.9	
	30nm,0.6s,baz=192,slow=28,SNR=3.8								
AML	Almayashu	4.50	38	P		Pn	Pn	16 00 34.6	+1.2
	SNR=25								
EKS2	Erkin-Say	4.96	35	P		Pn	Pn	16 00 40.0	+0.7
	SNR=27								
UCH	Uchtor	4.99	43	P		Pn	Pn	16 00 41.4	+1.3
	SNR=15								
CEP	Cherat	5.05	161	P		Pn	Pn	16 00 46.0	+5.3
AAK	Ala-Archa	5.27	39	Pn		Pn	Pn	16 00 44.9	+1.1
	9.8nm,0.3s,baz=202,slow=4.6,SNR=58								
AAK				Sn		Sn	Sn	16 01 47.1	+3.4
	1.0nm,0.3s,baz=214,slow=11,SNR=3.7								
AAK				LR		LR	LR	16 02 57.4	
	comp=Z,65nm,20.5s,baz=204,slow=41								
AAK	Ala-Archa	5.27	39	P		Pn	Pn	16 00 44.7	+0.9
	SNR=33								
AAK	Ala-Archa	5.27	39	Pn		Pn	Pn	16 00 44.7	+0.9
	14nm,0.4s								
AAK				Sn		Sn	Sn	16 01 46.3	+2.6
	19nm,0.8s								
AAK				Lg		Lg	Lg	16 02 14.4	
	28nm,0.9s								
KZA	Kyzart	5.30	48	P		Pn	Pn	16 00 46.5	+2.2
	SNR=8.6								
KBK	Karagaybulak	5.52	42	P		Pn	Pn	16 00 49.0	+1.8
	SNR=26								
CHCP	Chirah Chowk	5.63	151	P		Pn	Pn	16 00 51.8	+3.2
CHMS	Chumysh	5.67	38	P		Pn	Pn	16 00 50.0	+0.9
	SNR=22								
USP	Ospenovka	5.76	35	P		Pn	Pn	16 00 50.7	+0.4
	SNR=19								
THW	Thamme Wali	6.00	166	P		Pn	Pn	16 00 54.4	+0.7
TKM2	Tokmak 2	6.05	43	P		Pn	Pn	16 00 55.5	+1.1
	SNR=129								
TKM2	Tokmak 2	6.05	43	Pn		Pn	Pn	16 00 55.1	+0.7
	26nm,0.4s								
TKM2				Sn		Sn	Sn	16 02 05.3	+2.5
	7.5nm,0.6s								
GEYT	Alibeck	9.35	269	Pn		Pn	Pn	16 01 40.1	+0.5
	0.3nm,0.3s,baz=73,slow=11,SNR=1.8								
GEYT				Sn		Sn	Sn	16 03 25.2	+1.4
	0.5nm,0.3s,baz=108,slow=19,SNR=3.1								
MKAR	Makanchi Array	12.18	44	Pn		Pn	Pn	16 02 16.0	-2.2
	0.1nm,0.3s,baz=231,slow=13,SNR=11								
MKAR				Lg		Lg	Lg	16 05 48.8	
	0.1nm,0.3s,baz=238,slow=27,SNR=1.5								
AB31	Akbulak array	12.83	329	Pn		Pn	Pn	16 02 25.8	-1.3
	28nm,0.3s,baz=150,slow=12,SNR=78								
AB31				Sn		Sn	Sn	16 04 46.2	-2.7
	2.7nm,0.3s,baz=153,slow=22,SNR=5.8								
KURBB	Kurchatov Arra	13.43	24	Pn		Pn	Pn	16 02 31.6	-3.7
	0.0nm,0.3s,baz=216,slow=13,SNR=4.2								
KURBB				Lg		Lg	Lg	16 06 25.1	
	0.0nm,0.3s,baz=217,slow=30,SNR=4.3								
BVAR	Borovoye Array	14.39	1	Pn		Pn	Pn	16 02 44.9	-3.6
	0.2nm,0.3s,baz=153,slow=13,SNR=6.5								
AKTO	Aktyubinsk	14.53	328	Pn		Pn	Pn	16 02 48.8	-1.5
	0.5nm,0.3s,baz=139,slow=12,SNR=6.1								
AKTO	Aktyubinsk	14.53	328	Pn		Pn	Pn	16 02 49.0	-1.4
	3.3nm,0.5s								
AKTO				⇑Sn		Sn	Sn	16 05 31.7	+1.3
	2.9nm,0.7s								
ZALV	Zalesovo Beam	18.37	29	P		P	P	16 03 35.5	-3.5
	0.2nm,0.3s,baz=222,slow=11,SNR=6.8								
KIRV	Kirov	23.97	333	LR		LR	LR	16 13 51.5	
	comp=Z,26nm,19.2s,baz=264,slow=36								
TLY	Talaya	26.83	50	LR		LR	LR	16 16 54.2	
	comp=Z,12nm,20.3s,baz=109,slow=39								
FINES	FINESS Array B	35.27	325	P		P	P	16 06 18.9	+0.3
	0.6nm,0.5s,baz=122,slow=7.2,SNR=4.2								
HFS	Hagfors	40.89	321	P		P	P	16 07 06.8	+0.7
	1.2nm,0.6s,baz=104,slow=12,SNR=7.0								
EKA	Eskdalemuir Ar	50.20	315	P		P	P	16 08 19.6	-0.1
	0.6nm,0.6s,baz=89,slow=11,SNR=3.7								
ESDC	Sonseca Array	55.76	296	P		P	P	16 09 01.6	+0.6
	0.2nm,0.5s,baz=55,slow=8.2,SNR=5.0								
JCJ	Chichijima	60.33	78	LR		LR	LR	16 37 56.9	
	comp=Z,281nm,21.7s,baz=247,slow=38								
TORD	Torodi Ar. Bea	64.98	267	P		P	P	16 10 04.6	+0.3
	0.5nm,0.5s,baz=46,slow=6.3,SNR=4.7								
YKA	Yellowknife Ar	79.15	2	P		P	P	16 11 27.1	-1.3
	0.1nm,0.4s,baz=355,slow=5.4,SNR=2.6								
ASAR	Alice Springs	86.14	124	P		P	P	16 12 03.3	-2.0
	0.5nm,0.9s,baz=316,slow=4.6,SNR=4.2								

NEIC ***18*** *16:16:55.9±1.4,4˚.5S×151˚.9E±0˚.3, h94km±11km, mb4.4/5, Error ellipse: s-maj=56.0km s-min=13.0km az=127.0*

IDC ***18*** *16:16:56.1±0.9,4˚.50S×151˚.89E, h90km±10km, mb3.6/4, mb1 3.8/4, mb1mx3.2/36, mbtmp3.9/4, MS3.0/1, Ms1 3.0/1, ms1mx2.3/32, Error ellipse: s-maj=49.8km s-min=24.4km az=124.0*

ISC 18 16:16:55.9±1.5,**4.7S**±0˚.2×**152˚.1E**±0˚.3,**h100**km,**n14,**
σ1§19/13,mb3.8/6,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.37	346	P		Pn	Pn	16 17 10.2	-0.7
	283nm,0.3s,baz=206,slow=1.6,SNR=287								
KRVT				S		Sn	Sn	16 17 24.2	+2.1
	299nm,0.3s,baz=16,slow=19,SNR=30								
RABL	Rabaul	0.47	5			Pn	Pn	16 17 10.5	-1.2
PMG	Port Moresby	6.81	226	Pn		Pn	Pn	16 18 32.7	-0.6
KNRA	Kununurra	25.42	243	P		P	P	16 22 16.1	+1.6
KNRA				IAmb		IAmb	IAmb	16 22 55.5	
	comp=Z,45nm,1.5s								
AS31	Alice Springs	25.79	221	P		P	P	16 22 17.7	-0.1
AS31				IAmb		IAmb	IAmb	16 22 20.7	
	comp=Z,1.1nm,0.5s								
ASAR	Alice Springs	25.80	221	P		P	P	16 22 17.7	-0.2
	comp=Z,2.0nm,0.8s,baz=55,slow=9.1,SNR=28								
FITZ	Fitzroy Crossi	29.13	241	P		P	P	16 22 48.6	+0.9
	comp=Z,2.3nm,0.6s,baz=62,slow=8.3,SNR=15								
FITZ	Fitzroy Crossi	29.13	241	IAmb		IAmb	IAmb	16 23 28.5	
	comp=Z,20nm,1.4s								
FORT	Forrest	34.47	218	P		P	P	16 23 34.0	-0.3
MORW	Morawa	41.90	231	P		P	P	16 24 36.3	-0.5
KLR	Kul'dur	56.53	344	LR		LR	LR	16 48 38.7	
	comp=Z,14nm,19.9s,baz=161,slow=34								
CMAR	Chiang Mai Arr	57.21	295	P		P	P	16 26 31.6	-1.5
	comp=Z,1.0nm,0.8s,baz=84,slow=6.7,SNR=9.1								
ILAR	Eielson Array	82.29	22	P		P	P	16 29 06.5	+0.3
	comp=Z,0.4nm,1.0s,baz=230,slow=6.9,SNR=4.4								
TORD	Torodi Ar. Bea	149.62	288	PKPbc		PKiKP		16 36 37.0	+1.0
	comp=Z,0.5nm,0.4s,baz=64,slow=3.3,SNR=4.5								

IDC ***18*** *16:33:32.0±6.8, 1˚.87N×96˚.08E, h0km, mb4.0/6, mb1 4.0/7, mb1mx3.6/50, mbtmp3.9/7, ML3.5/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/40, Error ellipse: s-maj=131.5km s-min=59.2km az=0.0*

DJA ***18*** *16:33:43.9±0.7,3˚.N×2˚.9E±˚, h28km±3km, M3.7/8, mb4.2/1, MLv3.6/8, MLv3.5/4*

ISC 18 16:33:43.4±1.3,**2.54N**±0˚.05×**96˚.0E**±0˚.1,**h46**km±12km,**n31,**
σ0§84/30,mb4.0/6,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.36	112	P		Pn	Pn	16 33 41.8	-0.9
SNSI				S		Sn	Sn	16 33 59.9	+0.6
TPTI		1.38	59	P		Pn	Pn	16 34 05.6	-0.6
TPTI				S		Sn	Sn	16 34 24.4	+1.1
MLSI	Meulaboh, Aceh	1.76	13	P		Pn	Pn	16 34 12.1	+0.7
MLSI				S		Sn	Sn	16 34 34.1	+1.5
GSI	Gunungsitoli	2.00	128	P		Pn	Pn	16 34 15.4	+0.6
GSI				S		Sn	Sn	16 34 39.7	+1.1
KCSI	Kotacane, Aceh	2.02	61	P		Pn	Pn	16 34 15.5	+0.5
KCSI				S		Sn	Sn	16 34 39.8	+0.7
LHMI	Lhok Sumawe	2.83	20	P		Pn	Pn	16 34 28.8	+2.7
LHMI				S		Sn	Sn	16 35 00.1	+1.1
PBSI	Pulau Batu	3.45	138	P		Pn	Pn	16 34 35.0	+0.4
PBSI				S		Sn	Sn	16 35 15.6	+1.4
LEM	Lembang	14.87	129	LR		LR	LR	16 42 54.5	
	comp=Z,53nm,20.6s,baz=233,slow=39								
CMAR	Chiang Mai Arr	16.08	10	Pn		P	P	16 37 27.9	-1.3
	0.1nm,0.3s,baz=204,slow=11,SNR=7.8								
H08S2	Diego Garcia H	25.54	246	T		T	T	17 05 24.1	
	baz=67,slow=75,SNR=72								
H08S3	Diego Garcia H	25.54	247	T		T	T	17 05 24.3	
	baz=67,slow=75,SNR=70								
ODAN	Odare	25.55	342	*eP*		P	P	16 39 08.8	+0.5
H08S1	Diego Garcia H	25.56	246	T		T	T	17 05 23.3	
	baz=67,slow=75,SNR=26								
RAMN	Ramite	25.89	340	*eP*		P	P	16 39 12.4	+1.0
	15nm,0.6s								
TAPN	Taplejung	25.91	343	*eP*		P	P	16 39 12.5	+0.8
	8.6nm,0.8s								
JIRN	Jiri	26.68	340	*eP*		P	P	16 39 19.3	+0.6
	27nm,0.7s								
PKI	Pulchoki	26.87	339	*eP*		P	P	16 39 20.5	+0.1
	4.6nm,0.6s								
GUN	Gumba	27.01	340	*eP*		P	P	16 39 22.1	+0.4
	13nm,0.7s								
KKN	Kakani	27.11	339	*eP*		P	P	16 39 22.6	+0.1
GKN	Gorkha	27.54	338	*eP*		P	P	16 39 26.4	+0.2
KOLN	Koldanda	27.74	336	*eP*		P	P	16 39 28.5	+0.4
	6.3nm,0.6s								
DANN	Dangsing	28.19	337	*eP*		P	P	16 39 32.9	+0.7
	12nm,0.6s								
H01W3	Cape Leeuwin H	40.94	157	T		T	T	17 24 59.7	
	baz=332,slow=76								
H01W2	Cape Leeuwin H	40.95	157	T		T	T	17 25 04.5	
	baz=332,slow=76								
H01W1	Cape Leeuwin H	40.96	157	T		T	T	17 25 00.4	
	baz=332,slow=76								
KSRS	Korea Array	45.45	36	P		P	P	16 41 56.5	-1.6
	0.7nm,0.8s,baz=216,slow=8.2,SNR=4.1								
MKAR	Makanchi Array	45.66	347	P		P	P	16 41 59.6	0.0
	1.2nm,0.5s,baz=163,slow=8.2,SNR=19								
SONM	Songino Array	46.00	10	P		P	P	16 42 02.3	-0.1
	0.9nm,0.6s,baz=190,slow=9.0,SNR=6.6								
KURBB	Kurchatov Arra	50.13	346	P		P	P	16 42 34.5	+0.5
	3.2nm,0.2s,baz=169,slow=6.8,SNR=4.1								
ZALV	Zalesovo Beam	52.06	352	P		P	P	16 42 48.4	0.0
	1.3nm,0.5s,baz=180,slow=5.8,SNR=7.7								
BVAR	Borovoye Array	54.60	341	P		P	P	16 43 06.7	-0.4
	0.7nm,0.6s,baz=139,slow=7.9,SNR=5.4								

IDC ***18*** *16:42:43.8±3.1,3˚.47S×98˚.34E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/45, mbtmp3.7/5, MS2.9/2, Ms1 3.0/2, ms1mx2.5/43, Error ellipse: s-maj=125.7km s-min=24.9km az=60.0*

NEIC ***18*** *16:42:47.2±1.1,3˚.34S±0˚.07×98˚.5E±0˚.1, h22km±5km, mb4.5/7, Error ellipse: s-maj=15.1km s-min=9.7km az=75.0*

DJA ***18*** *16:42:47.9±0.6,3˚.S±3˚×9˚8E±˚, h51km±32km, M4.2/13, MLv4.2/13, MLv4.2/4*

ISC 18 16:42:48.5±0.8,**3.30S**±0˚.06×**98.45E**±0˚.07,**h35**km,**n42,**
σ1§01/41,mb4.0/10,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	1.64	71	P		Pn	Pn	16 43 14.5	-0.4
PPSI				S		Sn	Sn	16 43 33.9	-0.9
SISI	Saibi	2.06	18	P		Pn	Pn	16 43 19.6	-1.0
SISI				S		Sn	Sn	16 43 45.2	+0.1
PDSI	Padang	3.10	40	P		Pn	Pn	16 43 34.3	-0.7
PDSI				S		Sn	Sn	16 44 09.2	-1.8
PBSI	Pulau Batu	3.23	357	P		Pn	Pn	16 43 35.6	-1.1
PBSI				S		Sn	Sn	16 44 13.9	0.0
KRJI	Kerinci	3.23	68	P		Pn	Pn	16 43 36.4	-0.5
KRJI				S		Sn	Sn	16 44 13.3	-1.0
SDSI	Sungai Dareh	3.79	52	P		Pn	Pn	16 43 44.7	+0.3
SDSI				S		Sn	Sn	16 44 26.7	-1.1
MNSI	Mandailing Nat	4.22	15	P		Pn	Pn	16 43 49.3	-1.0
MNSI				S		Sn	Sn	16 44 39.4	+1.0
BKNI	Bangkinang	4.43	36	P		Pn	Pn	16 43 53.3	0.0
BKNI	Bangkinang	4.43	36			Pn	Pn	16 43 53.1	-0.1
MNAI	Manna	4.61	103	P		Pn	Pn	16 43 54.2	-1.6
MNAI	Manna	4.61	103	Pn		Pn	Pn	16 43 54.5	-1.4
GSI	Gunungsitoli	4.65	349	P		Pn	Pn	16 43 55.6	-0.7
GSI	Gunungsitoli	4.65	349			Pn	Pn	16 43 55.0	-1.3
SBSI	Sibolga	4.83	5	P		Pn	Pn	16 43 56.4	-2.4
RPSI	Rantau Prapat	5.97	5	Pn		Pn	Pn	16 44 12.9	-1.6
PSI	Prapat	6.08	4	LR		LR	LR	16 46 53.8	
	comp=Z,154nm,21.1s,baz=248,slow=41								
MYKOM	Kota Tinggi	7.39	47	Pn		Pn	Pn	16 44 34.7	+0.8
IPM	Ipoh	8.14	18	Pn		Pn	Pn	16 44 44.9	+0.6
KULM	Kulim	8.81	14	Pn		Pn	Pn	16 44 52.3	-1.1
COCO	West Island	8.98	190	Pn		Pn	Pn	16 44 54.9	-0.9
XMIS	Christmas Isla	10.10	135	Pn		Pn	Pn	16 45 10.7	-0.4
UGM	Wanagama	12.85	111	Pn		Pn	Pn	16 45 49.0	+0.1
SBUM	Sibu	14.90	68	Pn		Pn	Pn	16 46 15.9	-0.7
CM31	Chiang Mai Arr	21.62	1	P		P	P	16 47 36.8	+1.0
CM31				IAmb		IAmb	IAmb	16 47 43.1	
	comp=Z,7.4nm,0.8s								
CMAR	Chiang Mai Arr	21.62	1	P		P	P	16 47 37.2	+1.5
	comp=Z,4.3nm,0.8s,baz=189,slow=10,SNR=22								
CMAR				LR		LR	LR	16 56 38.2	
	comp=Z,23nm,19.1s,baz=190,slow=38								
H08S2	Diego Garcia H	26.19	259	T		T	T	17 15 26.7	
	baz=81,slow=74,SNR=61								
H08S3	Diego Garcia H	26.20	259	T		T	T	17 15 25.6	
	baz=81,slow=74,SNR=103								
H08S1	Diego Garcia H	26.21	259	T		T	T	17 15 26.1	
	baz=81,slow=74,SNR=53								
FITZ	Fitzroy Crossi	30.42	121	P		P	P	16 48 58.6	+0.7
FITZ				IAmb		IAmb	IAmb	16 49 58.9	
	comp=Z,31nm,1.8s								
KNRA	Kununurra	32.27	114	P		P	P	16 49 14.1	0.0
H01W3	Cape Leeuwin H	34.64	157	T		T	T	17 25 58.3	
	baz=331,slow=74								
H01W2	Cape Leeuwin H	34.65	157	T		T	T	17 25 58.9	
	baz=331								
H01W1	Cape Leeuwin H	34.66	157	T		T	T	17 25 59.5	
	baz=331,slow=74								
WRAB	Tennant Creek	38.72	118	P		P	P	16 50 09.3	-0.2
WRAB				IAmb		IAmb	IAmb	16 51 28.8	
	comp=Z,8.6nm,0.5s								
FORT	Forrest	39.09	138	P		P	P	16 50 12.6	+0.1
FORT				IAmb		IAmb	IAmb	16 50 19.5	
	comp=Z,12nm,0.9s								
ASAR	Alice Springs	39.78	124	P		P	P	16 50 18.4	-0.1
	comp=Z,0.9nm,0.8s,baz=298,slow=8.2,SNR=11								
AS31	Alice Springs	39.78	124	P		P	P	16 50 18.8	+0.4
STKA	Stephens Creek	49.47	130	P		P	P	16 51 36.2	+0.5
STKA				IAmb		IAmb	IAmb	16 52 21.9	
	comp=Z,2.3nm,1.6s								
SONM	Songino Array	51.39	7	P		P	P	16 51 52.3	+2.3
	comp=Z,0.3nm,0.5s,baz=191,slow=7.1,SNR=3.6								
MKAR	Makanchi Array	51.88	346	P		P	P	16 51 54.6	+1.2
	comp=Z,0.6nm,0.7s,baz=148,slow=7.1,SNR=6.1								
ZALV	Zalesovo Beam	58.17	351	P		P	P	16 52 39.9	+1.2
	comp=Z,0.5nm,0.3s,baz=165,slow=6.0,SNR=4.7								
TXAR	Lajitas Array	146.66	37	PKPbc		PKiKP		17 02 29.0	-1.2
	comp=Z,0.6nm,0.7s,baz=238,slow=0.3,SNR=9.8								

IDC ***18*** *16:46:36.0±4.4, 68˚.16N×162˚.80W, h0km, mb3.1/2, mb1 3.7/4, mb1mx3.3/46, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=65.7km s-min=52.8km az=5.0*

AEIC ***18*** *16:46:37.2±2.2, 67˚.68N±0˚.03×162˚.14W±0˚.09, h10km±6km, ML2.9, Error ellipse: s-maj=6.3km s-min=1.9km az=49.0*

NEIC ***18*** *16:46:39.2±2.5, 67˚.69N±0˚.05×162˚.5W±0˚.1, h27km±8km, Error ellipse: s-maj=8.3km s-min=6.7km az=151.0*

ISC 18 16:46:38.5±0.9,**67.72N**±0˚.06×**162˚.13W**±0˚.06,**h10**km,**n28,**
σ1§24/32,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	0.45	319			Pn	Pg	16 46 46.8	-0.5
RDOG							Sb	16 46 54.6	-0.8
ANM	Nome	3.43	204				Pn	16 47 30.8	-1.1
ANM							Sn	16 48 13.3	+0.8
IM03		3.74	114				Pn	16 47 36.5	+0.4
COLD	Coldfoot	4.62	91				Pn	16 47 49.0	+0.8
TOLK	Toolik Lake Re	4.78	73				Pn	16 47 52.2	+1.7
TOLK							Sn	16 48 48.7	+2.9
TTA	Tatalina	5.44	149				Pn	16 48 00.0	+0.3
TT01	Tatalina	5.46	149				Pn	16 48 00.1	+0.2
BPAW	Bear Paw Mtn.	5.83	123				Pn	16 48 05.4	+0.5
BPAW	Bear Paw Mtn.	5.83	123				Sn	16 49 11.0	-0.7
NEA	Nenana	6.16	115				Pn	16 48 09.8	+0.4
COLA	College	6.42	110				Pn	16 48 12.8	-0.1
POKR	Poker Plat Res	6.44	107				Pn	16 48 13.9	+0.6
CCB	Clear Creek Bu	6.56	111				Pn	16 48 15.6	+0.6
WRH	Wood River Hil	6.56	113				Pn	16 48 14.6	-0.4
BM03	Burnt Mountain	6.71	84				Pn	16 48 17.3	+0.3
IL31		6.82	108				Pn	16 48 18.9	+0.4
ILAR	Eielson Array	6.82	108	Pn			Pn	16 48 19.4	+0.9
	1.4nm,0.3s,baz=303,slow=14,SNR=96								
ILAR				Sn			Sn	16 49 34.6	-1.5
	0.3nm,0.3s,baz=296,slow=23,SNR=9.1								
RND	Reindeer	6.99	122	Pn			Pn	16 48 21.8	+0.9
HDA	Harding Lake	7.00	111				Pn	16 48 21.9	+0.9
SVW2	Sparrevohn	7.22	154	Pn			Pn	16 48 25.1	+1.1
DHY	Denali Highway	7.71	120	Pn			Pn	16 48 29.1	-1.7
SPU	Mount Spurr	7.86	142	Pn			Pn	16 48 28.9	-3.9
RIDG	Independent Ri	8.14	111	Pn			Pn	16 48 34.0	-2.7
SCRK	Sand Creek	8.31	108	Pn			Pn	16 48 37.8	-1.3
INK	Inuvik	10.69	74	Pn			Pn	16 49 10.3	-1.1
	0.2nm,0.3s,baz=282,slow=11,SNR=5.5								
INK				Sn			Sn	16 51 08.3	-2.7
	0.1nm,0.3s,baz=55,slow=27,SNR=1.8								
YKA	Yellowknife Ar	20.23	82	P			P	16 51 13.6	+0.3
	0.4nm,0.6s,baz=307,slow=11,SNR=5.2								
SPA0	Spitsbergen Ar	34.32	1	*eS*			S	16 58 50.6	-0.6
TXAR	Lajitas Array	51.34	108	P			P	16 55 44.1	+1.3
	0.2nm,0.7s,baz=345,slow=4.3,SNR=3.6								

IDC ***18*** *17:13:06.7±1.2,34˚.20N×25˚.11E, h0km, mb3.7/4, mb1 3.7/7, mb1mx3.4/38, mbtmp3.6/7, ML3.7/2, Error ellipse: s-maj=22.5km s-min=13.1km az=82.0*

ATH ***18*** *17:13:07.7,34˚.23N×25˚.03E, h17km±5km, ML2.9/6, Error ellipse: s-maj=5.5km s-min=2.0km az=345.0*

THE ***18*** *17:13:07.2,34˚.18N×25˚.06E, h0km±1km, ML2.9/8, Error ellipse: s-maj=2.7km s-min=0.9km az=183.0*

ISC 18 17:13:07.6±1.7,**34˚.22N**±0˚.06×**25˚.05E**±0˚.03,**h8**km±10km,
n31,σ0§97/46,mb3.8/4,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.82	346	P		P	Pb	17 13 23.7	-0.4
SIVA				S		Sn	Sn	17 13 37.0	-0.8
	4µm,0.7s								
SIVA	Sivas	0.82	346	P		P	Pb	17 13 23.6	-0.5
SIVA				S		Sg	Sg	17 13 34.0	-0.1
SIVA				AML		AML		17 13 39.2	
	comp=E,7416µm,0.4s								
SIVA				AML		AML		17 13 43.8	
	comp=N,5329µm,0.6s								
TMBK	Timbaki Herakl	0.88	344	P		P	Pb	17 13 25.1	-0.1
TMBK				S		Sn	Sn	17 13 39.8	+0.5
	comp=N,702nm,0.6s							

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT1	**Agia Thekli**	**0.03**	**324**	P	**Pg**	**17 25 18.8**	**-0.2**
AGT1				S	**Sg**	**17 25 20.5**	**-0.8**
LXRA	**Lixouri, Kepha**	**0.03**	**137**	P	**Pg**	**17 25 19.1**	**+0.1**
LXRA				S	**Sg**	**17 25 21.3**	**0.0**
KEF4	**Livadi, Kephal**	**0.04**	**21**	P	**Pg**	**17 25 18.7**	**-0.3**
KEF4				S	**Sg**	**17 25 20.7**	**-0.6**
KEF3	**Kipouria, Keph**	**0.05**	**245**	P	**Pg**	**17 25 19.2**	**+0.1**
KEF3				S	**Sg**	**17 25 21.5**	**+0.1**
ARG2	**Argostoli**	**0.08**	**126**	P	**Pg**	**17 25 19.3**	**+0.1**
ARG2				S	**Sg**	**17 25 21.5**	**-0.2**
	53μm,0.2s						
KEF2	**Argostoli. Kep**	**0.09**	**134**	P	**Pg**	**17 25 19.4**	**+0.1**
KEF2				S	**Sg**	**17 25 21.7**	**-0.1**
VLS	**Valsamata**	**0.15**	**108**	P	**Pg**	**17 25 19.9**	**-0.1**
VLS				S	**Sg**	**17 25 22.9**	**-0.1**
VLS	**Valsamata**	**0.15**	**108**	P	**Pg**	**17 25 19.9**	**-0.1**
VLS				S	**Sg**	**17 25 22.9**	**-0.1**
VLS				AML	AML	17 25 23.4	
	comp=N,43428μm,0.2s						
VLS				AML	AML	17 25 23.6	
	comp=E,37091μm,0.1s						
VSK1	**VASILIKIADES**	**0.22**	**34**	P	**Pg**	**17 25 20.6**	**-0.4**
VSK1				S	**Sg**	**17 25 24.0**	**-0.7**
	comp=E,27μm,0.5s						
KFL	**Anninata**	**0.32**	**111**	P	**Pb**	**17 25 22.7**	**0.0**
KFL				S	**Sb**	**17 25 27.9**	**+0.4**
	comp=E,17μm,0.4s						
KFL	**Anninata**	**0.32**	**111**	P	**Pb**	**17 25 22.8**	**0.0**
KFL				S	**Sb**	**17 25 27.9**	**+0.4**
KFL				AML	AML	17 25 28.7	
	comp=N,25954μm,0.5s						
KFL				AML	AML	17 25 28.9	
	comp=E,43994μm,0.4s						
EVGI	**Lefkada island**	**0.44**	**26**	P	**Pg**	**17 25 24.4**	**-0.3**
EVGI				S	**Sg**	**17 25 30.6**	**-0.2**
EVGI	**Lefkada island**	**0.44**	**26**	P	**Pg**	**17 25 24.4**	**-0.3**
EVGI				S	**Sg**	**17 25 30.6**	**-0.2**
MGNA	**Meganis**	**0.53**	**35**	P	**Pg**	**17 25 26.2**	**0.0**
MGNA				S	**Sg**	**17 25 33.2**	**-0.1**
LKD2	**Lefkada island**	**0.60**	**19**	P	**Pg**	**17 25 26.8**	**-0.7**
LKD2				S	**Sg**	**17 25 35.9**	**+0.3**
	comp=E,1μm,0.5s						
LKD2	**Lefkada island**	**0.60**	**19**	P	**Pg**	**17 25 26.8**	**-0.7**
LKD2				S	**Sg**	**17 25 35.8**	**+0.3**
LKD2				AML	AML	17 25 40.9	
	comp=N,2727μm,0.4s						
LKD2				AML	AML	17 25 43.1	
	comp=E,2491μm,0.2s						
AST1	**Astakos**	**0.62**	**59**	P	**Pg**	**17 25 27.7**	**-0.3**
KRI1	**kERI**	**0.65**	**150**	P	**Pn**	**17 25 29.1**	**-0.6**
KRI1				S	**Sn**	**17 25 39.6**	**+0.2**
RLS	**Riolos of Patr**	**0.85**	**101**	P	**Pg**	**17 25 32.1**	**-0.1**
RLS				S	**Sn**	**17 25 45.0**	**+0.6**
RLS				AML	AML	17 25 51.1	
	comp=E,913μm,0.8s						
RLS				AML	AML	17 25 54.0	
	comp=N,1273μm,0.4s						
DRO	**Drossia**	**1.06**	**104**	P	**Pg**	**17 25 36.9**	**+0.6**
DRO	**Drossia**	**1.06**	**104**	P	**Pg**	**17 25 36.8**	**+0.6**
DRO				AML	AML	17 25 59.8	
	comp=N,2433μm,0.7s						
DRO				AML	AML	17 26 00.4	
	comp=E,3603μm,0.7s						
EFP	**Efpalio**	**1.20**	**80**	P	**Pb**	**17 25 37.6**	**0.0**
EFP				S	**Sg**	**17 25 55.1**	**+0.7**
	comp=E,712nm,0.8s						
EFP	**Efpalio**	**1.20**	**80**	P	**Pb**	**17 25 37.5**	**0.0**
EFP				AML	AML	17 26 00.3	
	comp=E,1441μm,0.6s						
EFP				AML	AML	17 26 01.0	
	comp=N,1252μm,0.9s						
LAKA	**Lakka**	**1.24**	**89**	P	**Pb**	**17 25 38.5**	**+0.2**
LAKA				S	**Sg**	**17 25 55.8**	**+0.1**
LAKA	**Lakka**	**1.24**	**89**	P	**Pb**	**17 25 38.3**	**-0.1**
LAKA				AML	AML	17 26 02.0	
	comp=N,818μm,0.8s						
LAKA				AML	AML	17 26 06.4	
	comp=E,841μm,1.0s						
AMT	**Artemida-Makis**	**1.24**	**123**	AML	AML	17 26 10.6	
	comp=N,1727μm,0.8s						
AMT				AML	AML	17 26 10.9	
	comp=E,1273μm,1.0s						
ANX	**Ano Chora**	**1.24**	**72**	P	**Pb**	**17 25 38.6**	**+0.1**
ANX				S	**Sg**	**17 25 55.4**	**-0.6**
	comp=E,1μm,0.6s						
IGT	**Igoumenitsa**	**1.31**	**357**	P	**Pn**	**17 25 39.8**	**+1.0**
IGT				S	**Sb**	**17 25 57.4**	**+1.5**
	comp=E,605nm,0.5s						
IGT	**Igoumenitsa**	**1.31**	**357**	P	**Pn**	**17 25 39.8**	**+1.0**
IGT				AML	AML	17 26 00.6	
	comp=E,1097μm,0.8s						
IGT				AML	AML	17 26 02.2	
	comp=N,1294μm,0.4s						
TRIZ	**Trizonia**	**1.32**	**83**	P	**Pb**	**17 25 39.9**	**+0.3**
KALE	**Kalithea**	**1.37**	**83**	P	**Pb**	**17 25 40.6**	**-0.1**
KALE				S	**Sg**	**17 25 58.9**	**-1.2**
	comp=N,392nm,0.6s						
KALE	**Kalithea**	**1.37**	**83**	P	**Pb**	**17 25 40.5**	**-0.2**
KALE				AML	AML	17 26 06.2	
	comp=N,1040μm,0.5s						
KALE				AML	AML	17 26 06.9	
	comp=E,488μm,0.7s						
KLV	**Kalavryta, Ach**	**1.39**	**97**	P	**Pb**	**17 25 41.1**	**+0.2**
KLV				S	**Sg**	**17 25 59.8**	**-0.7**
KLV	**Kalavryta, Ach**	**1.39**	**97**	P	**Pb**	**17 25 41.1**	**+0.2**
KLV				AML	AML	17 26 07.8	
	comp=E,568μm,1.1s						
KLV				AML	AML	17 26 08.0	
	comp=N,646μm,1.1s						
JAN	**Janina**	**1.47**	**13**	P	**Pg**	**17 25 44.1**	**+0.1**
JAN				AML	AML	17 26 07.2	
	comp=N,776μm,0.6s						
JAN				AML	AML	17 26 08.2	
	comp=E,1289μm,0.4s						
KEK	**Kerkira**	**1.56**	**342**	P	**Pn**	**17 25 43.6**	**+1.3**
KEK	**Kerkira**	**1.56**	**342**	P	**Pn**	**17 25 43.7**	**+1.4**
KEK				AML	AML	17 26 19.1	
	comp=N,472μm,0.5s						
KEK				AML	AML	17 26 20.0	
	comp=E,614μm,0.4s						
KASA	**Kassiopi**	**1.56**	**347**	P	**Pb**	**17 25 45.5**	**+1.6**
ITM	**Ithomi**	**1.59**	**130**	P	**Pg**	**17 25 46.0**	**-0.3**
ITM				AML	AML	17 26 22.0	
	comp=E,347μm,0.6s						
ITM				AML	AML	17 26 23.6	
	comp=N,418μm,0.7s						
TRIP	**Tripoli**	**1.63**	**115**	P	**Pg**	**17 25 46.5**	**-0.5**
TRIP				AML	AML	17 26 18.7	
	comp=N,559μm,0.7s						
TRIP				AML	AML	17 26 18.9	
	comp=E,629μm,0.8s						
AGG	**Agios Georgios**	**1.70**	**62**	P	**Pb**	**17 25 47.1**	**+0.8**
AGG				AML	AML	17 26 27.6	
	comp=N,396μm,0.5s						
AGG				AML	AML	17 26 29.3	
	comp=E,381μm,0.6s						
THL	**Klokotos Trika**	**1.83**	**43**	P	**Pb**	**17 25 49.2**	**+0.7**
KPRO	**Kipourio**	**1.88**	**23**	P	**Pb**	**17 25 50.6**	**+1.2**
KPRO				AML	AML	17 26 23.7	
	comp=E,683μm,0.5s						
KPRO				AML	AML	17 26 27.3	
	comp=N,680μm,0.5s						
PROD	**Prodromos**	**1.96**	**88**	P	**Pb**	**17 25 51.1**	**+0.5**
VIL2	**Platees**	**2.25**	**89**	P	**Pb**	**17 25 55.5**	**-0.2**
DID	**Didima**	**2.35**	**107**	P	**Pb**	**17 25 56.8**	**-0.5**
DID				AML	AML	17 26 44.4	
	comp=N,331μm,0.7s						
DID				AML	AML	17 26 44.8	
	comp=E,349μm,0.9s						
DION	**Dionisos Attik**	**2.78**	**92**	P	**Pn**	**17 26 01.9**	**+2.8**
SG1	**Sgolgore (BA)**	**3.89**	**313**	*e*Pn	**Pn**	**17 26 16.1**	**+1.8**
DBRK	**Dubrovnik**	**4.76**	**339**	*i* Pn	**Pn**	**17 26 26.2**	**-0.1**
DBRK				Sn	**Sn**	**17 27 18.3**	**-2.7**
STON	**Ston**	**5.08**	**337**	*e*Pn	**Pn**	**17 26 30.0**	**-0.6**
STON				Sn	**Sn**	**17 27 25.6**	**-3.0**
MAKA	**Makarska**	**5.67**	**334**	*i* Pn	**Pn**	**17 26 39.5**	**+0.7**
MAKA				Sn	**Sn**	**17 27 39.3**	**-4.0**
RICI	**Ricice**	**5.82**	**336**	*e*Pn	**Pn**	**17 26 41.0**	**+0.1**
RICI				Sn	**Sn**	**17 27 45.1**	**-1.9**
ZIRJ	**Zirje**	**6.51**	**328**	*e*Pn	**Pn**	**17 26 50.4**	**+0.1**
ZIRJ				Sn	**Sn**	**17 28 01.3**	**-2.7**
KIJV	**Kijevo**	**6.52**	**334**	*e*Pn	**Pn**	**17 26 51.2**	**+0.8**
MORI	**Morici**	**6.66**	**329**	*e*Pn	**Pn**	**17 26 53.3**	**+1.0**
DUGI	**Dugi Otok**	**7.04**	**327**	*e*Pn	**Pn**	**17 26 58.6**	**+1.1**
DUGI				Sn	**Sn**	**17 28 15.5**	**-1.4**
NVLJ	**Novalja**	**7.58**	**328**	*e*Pn	**Pn**	**17 27 05.9**	**+1.1**
GERES	**GERESS Array B**	**11.67**	**338**	Pn	**Pn**	**17 28 02.3**	**+1.2**
	comp=E,0.2nm,0.3s,baz=165,slow=15,SNR=1.9						
HFS	**Hagfors**	**22.34**	**351**	P	**P**	**17 30 10.9**	**-1.1**
	comp=E,0.9nm,0.7s,baz=159,slow=12,SNR=1.3						
FINES	**FINESS Array B**	**23.51**	**7**	P	**P**	**17 30 23.6**	**-0.5**
	comp=E,0.6nm,0.6s,baz=182,slow=15,SNR=1.5						
MKAR	**Makanchi Array**	**45.35**	**58**	P	**P**	**17 33 33.4**	**+1.0**
	comp=E,0.3nm,0.5s,baz=282,slow=6.3,SNR=4.5						
ZALV	**Zalesovo Beam**	**45.73**	**48**	P	**P**	**17 33 35.6**	**+0.4**
	comp=E,0.4nm,0.5s,baz=282,slow=7.2,SNR=2.2						

IDC 18 17:28:50.0±2.6, 5.48S×132.04E, h0km, mb3.9/3, mb1 3.9/4, mb1mx3.5/25, mbtmp3.8/4, ML3.7/1, Error ellipse: s-maj=242.2km s-min=24.2km az=69.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**18.17**	**175**	P	Pn	17 33 03.8	-0.2
	0.3nm,0.3s,baz=349,slow=10,SNR=27						
ASAR				S	Sn	17 36 09.1	-18
	0.1nm,0.3s,baz=355,slow=20,SNR=2.5						
STKA	**Stephens Creek**	**27.74**	**162**	P	P	17 34 40.5	0.0
	0.6nm,0.4s,baz=324,slow=8.4,SNR=5.7						
MKAR	**Makanchi Array**	**68.10**	**326**	P	P	17 39 52.4	+0.5
	1.3nm,0.5s,baz=119,slow=7.9,SNR=20						
KURBB	**Kurchatov Arra**	**72.31**	**327**	P	P	17 40 16.6	-0.8
	0.2nm,0.4s,baz=117,slow=6.2,SNR=3.5						

*IDC **18** 17:33:05.5±2.4, 37.53N×142.51E, h0km, mb3.7/4, mb1 3.6/7, mb1mx3.4/43, mbtmp3.6/7, ML2.6/3, MS2.8/2, Ms1 2.8/2, ms1mx2.4/36, Error ellipse: s-maj=55.4km s-min=29.5km az=63.0*
*JMA **18** 17:33:17.0, 37.50N×141.59E, h49km±1km, M3.9*
JMA Felt II J1.
ISC 18 17:33:13.7±2.0, 37.47N±0.05×141.83E±0.09, h29km±11km, n28, σ1s58/32, mb3.6/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.77**	**263**	P	Pn	17 33 29.1	+0.5
JFK				S	Sb	17 33 37.8	-0.9
JMST	**Minamisoumatoc**	**0.79**	**289**	P	Pn	17 33 29.3	+0.4
JMST				S	Sb	17 33 38.1	-1.3
JIKH	**Ishinomakikobu**	**0.89**	**341**	P	Pn	17 33 32.3	+2.0
JIKH				S	Sn	17 33 43.2	+1.0
ONAJ	**Iwakimizuishiy**	**0.90**	**247**	P	Pb	17 33 31.2	+0.4
ONAJ				S	Sb	17 33 41.3	-1.2
JMM	**Marumori**	**0.92**	**296**	P	Pb	17 33 31.3	+0.3
JMM				S	Sb	17 33 41.5	-1.4
JIO	**Ouri**	**1.06**	**339**	P	Pb	17 33 34.6	+1.1
JIO				S	Sn	17 33 47.1	+0.8
JFT	**Otama**	**1.19**	**273**	P	Pn	17 33 35.3	+0.9
JFT				S	Sn	17 33 48.3	-1.3
JOU	**Okura**	**1.29**	**315**	P	Pb	17 33 36.8	-0.6
JOU				S	Sn	17 33 52.1	+0.1
JMK	**Ichinoseki**	**1.56**	**342**	P	Pb	17 33 41.7	-0.3
JMK				*e*S	Sb	17 34 00.2	-1.1
JYS	**Shirataka**	**1.59**	**299**	P	Pb	17 33 41.1	-1.3
JFY	**Yanaizu**	**1.69**	**269**	P	Pn	17 33 42.2	+0.9
JYK	**Kaneyama**	**1.86**	**322**	P	Pb	17 33 45.2	-1.8
JYA	**Atsumi**	**2.02**	**305**	P	Pn	17 33 47.0	+1.3
MJAR	**Matsushiro Arr**	**3.04**	**253**	Pn	Pn	17 34 01.7	+1.8
	0.5nm,0.3s,baz=81,slow=15,SNR=29						
MJAR				Sn	Sn	17 34 38.2	+2.9
	0.8nm,0.3s,baz=79,slow=16,SNR=2.5						
MAT	**Matsushiro**	**3.04**	**253**	P	Pn	17 34 01.9	+2.0
MAT				*e*S	Sn	17 34 38.2	+2.9
USRK	**Ussuriysk Ar.**	**10.04**	**315**	Pn	Pn	17 35 37.8	+1.9
	baz=124,slow=15,SNR=4.2						
KSRS	**Korea Array**	**11.06**	**274**	Pn	Pn	17 35 52.8	+3.0
	0.1nm,0.3s,baz=86,slow=14,SNR=3.1						
KSRS				LR	LR	17 39 36.0	
	comp=Z,22nm,19.7s,baz=125,slow=34						
SONM	**Songino Array**	**27.82**	**303**	P	P	17 38 59.6	-0.8
	0.5nm,0.5s,baz=110,slow=9.4,SNR=4.4						
H11N2	**WAKE ISLAND Hy**	**28.09**	**122**	T	T	18 08 42.0	
	baz=311						
H11N1	**WAKE ISLAND Hy**	**28.10**	**122**	T	T	18 08 42.4	
	baz=311						
H11N3	**WAKE ISLAND Hy**	**28.11**	**122**	T	T	18 08 40.4	
	baz=311						
H11S1	**WAKE ISLAND Hy**	**28.82**	**124**	T	T	18 09 37.7	
	baz=321,slow=74,SNR=79						
H11S3	**WAKE ISLAND Hy**	**28.82**	**124**	T	T	18 09 37.1	
	baz=321						
H11S2	**WAKE ISLAND Hy**	**28.84**	**124**	T	T	18 09 36.4	
	baz=321,slow=74,SNR=70						
ZALV	**Zalesovo Beam**	**41.87**	**312**	LR	LR	17 57 58.3	
	comp=Z,18nm,18.3s,baz=112,slow=35						
MKAR	**Makanchi Array**	**44.17**	**302**	P	**P**	**17 41 19.1**	**-0.7**
	0.3nm,0.4s,baz=86,slow=9.0,SNR=5.1						
KURBB	**Kurchatov Arra**	**46.00**	**308**	P	**P**	**17 41 33.1**	**-1.1**
	1.2nm,0.4s,baz=81,slow=7.8,SNR=12						
ASAR	**Alice Springs**	**61.26**	**188**	P	**P**	**17 43 23.6**	**-2.6**
	0.6nm,0.9s,baz=7.3,slow=8.8,SNR=4.0						

*ATH **18** 17:40:42.9, 36.97N×26.56E, h31km±1km, ML3.6/6, Error ellipse: s-maj=2.0km s-min=1.1km az=36.0*
*ISK **18** 17:40:42.8, 36.98N×26.57E, h26km, ML3.4/25*
*THE **18** 17:40:43.9, 36.99N×26.56E, h8km±2km, ML3.5/8, Error ellipse: s-maj=2.5km s-min=0.5km az=68.0*
*DDA **18** 17:40:44.8, 36.94N×26.56E, h10km±3km, MW3.5*
ISC 18 17:40:43.8±1.1, 36.97N±0.02×26.56E±0.02, h17km±9km, n91, σ1s01/112, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOSK	**Kos Island**	**0.40**	**123**	P	**Pb**	**17 40 52.1**	**-0.3**
KOSK				S	**Sb**	**17 40 58.1**	**-0.1**
	6μm,0.4s						
KOSK	**Kos Island**	**0.40**	**123**	PG	**Pb**	**17 40 52.1**	**-0.3**
KOSK				SG	**Sb**	**17 40 58.6**	**+0.4**
AMGA	**Amorgos Island**	**0.55**	**256**	P	**Pg**	**17 40 54.2**	**-0.6**
AMGA				S	**Sb**	**17 41 02.4**	**-0.2**
	6μm,0.3s						
AMGA	**Amorgos Island**	**0.55**	**256**	P	**Pg**	**17 40 54.1**	**-0.7**
AMGA				S	**Sb**	**17 41 02.9**	**+0.3**
AMGA				AML	AML	17 41 04.2	
	comp=E,12276μm,0.3s						
AMGA				AML	AML	17 41 05.1	
	comp=N,12377μm,0.3s						
NISR	**Nisiros**	**0.58**	**128**	P	**Pb**	**17 40 55.6**	**+0.1**
NISR				S	**Sb**	**17 41 04.0**	**+0.6**
	comp=N,8μm,0.3s						
NISR	**Nisiros**	**0.58**	**128**	P	**Pg**	**17 40 54.7**	**-0.5**
NISR				S	**Sb**	**17 41 04.2**	**+0.8**
NISR				AML	AML	17 41 07.1	
	comp=E,19136μm,0.3s						
NISR				AML	AML	17 41 07.4	
	comp=N,11692μm,0.3s						
BODT	**Bodrum**	**0.61**	**81**	P	**Pb**	**17 40 55.7**	**-0.3**
BODT				S	**Sb**	**17 41 04.1**	**-0.2**
BODT	**Bodrum**	**0.61**	**81**	PG	**Pb**	**17 40 55.6**	**-0.4**
BODT				SG	**Sb**	**17 41 04.5**	**+0.2**
BDRM	**Kayabasi**	**0.71**	**82**	*i* P	**Pb**	**17 40 58.2**	**+0.4**
BDRM				*i* S	**Sb**	**17 41 08.4**	**+1.1**
SMG	**Samos**	**0.77**	**17**	P	**Pb**	**17 40 58.5**	**-0.3**
SMG				S	**Sb**	**17 41 08.9**	**-0.1**
	comp=N,7μm,0.2s						
SMG	**Samos**	**0.77**	**17**	P	**Pb**	**17 40 58.5**	**-0.3**
SMG				S	**Sb**	**17 41 09.0**	**0.0**
SMG				AML	AML	17 41 12.8	
	comp=N,13648μm,0.2s						
SMG				AML	AML	17 41 13.3	
	comp=E,14434μm,0.2s						
APE	**Apeiranthos**	**0.83**	**277**	P	**Pb**	**17 40 59.9**	**+0.1**
APE				S	**Sb**	**17 41 11.3**	**+0.6**
	comp=E,1μm,0.3s						
APE	**Apeiranthos**	**0.83**	**277**	P	**Pb**	**17 40 59.5**	**-0.3**
APE				AML	AML	17 41 14.3	
	comp=N,3661μm,0.4s						
APE				AML	AML	17 41 17.4	
	comp=E,2040μm,0.2s						
APE	**Apeiranthos**	**0.83**	**277**	PG	**Pb**	**17 40 59.6**	**-0.2**
APE	**Apeiranthos**	**0.83**	**277**	*i* P	**Pb**	**17 40 59.9**	**+0.1**
APE				*i* S	**Sb**	**17 41 11.5**	**+0.8**
DAT	**Datca**	**0.85**	**106**	P	**Pb**	**17 41 00.4**	**+0.2**
DAT				S	**Sb**	**17 41 12.2**	**+0.8**
DAT	**Datca**	**0.85**	**106**	PG	**Pb**	**17 41 00.1**	**-0.1**
ANAF	**Anafi Island**	**0.88**	**226**	P	**Pn**	**17 41 01.1**	**-0.3**
ANAF				S	**Sn**	**17 41 13.4**	**-0.4**
	comp=E,8μm,0.3s						
ANAF	**Anafi Island**	**0.88**	**226**	P	**Pb**	**17 41 00.5**	**-0.1**
ANAF				S	**Sb**	**17 41 12.0**	**-0.1**
ANAF				AML	AML	17 41 13.9	
	comp=E,15480μm,0.5s						
ANAF				AML	AML	17 41 17.9	
	comp=N,16629μm,0.3s						
GCAM	**G?zelcami?**	**0.91**	**36**	PG	**Pg**	**17 41 00.6**	**-0.8**
GCAM	**G?zelcami?**	**0.91**	**36**	*i* P	**Pb**	**17 41 00.7**	**-0.3**
GCAM				*i* S	**Sn**	**17 41 13.7**	**-0.7**
IOSP	**Ios island**	**1.05**	**257**	P	**Pn**	**17 41 04.3**	**+0.6**
IOSP				S	**Sn**	**17 41 18.0**	**+0.1**
	comp=N,2μm,0.2s						
IOSP	**Ios island**	**1.05**	**257**	P	**Pn**	**17 41 03.7**	**0.0**
IOSP				AML	AML	17 41 20.5	
	comp=N,4198μm,0.2s						
IOSP				AML	AML	17 41 20.8	
	comp=E,3351μm,0.2s						
SAP2K	**Karterados**	**1.05**	**238**	P	**Pg**	**17 41 03.5**	**-0.7**
THT2	**Imerovigli**	**1.06**	**240**	PG	**Pb**	**17 41 02.6**	**-1.1**
SANT	**Santorini**	**1.07**	**236**	P	**Pn**	**17 41 04.5**	**+0.5**
SANT				S	**Sn**	**17 41 18.7**	**+0.2**
	comp=E,2μm,0.3s						
SANT	**Santorini**	**1.07**	**236**	P	**Pg**	**17 41 03.8**	**-0.7**
SANT	**Santorini**	**1.07**	**236**	PN	**Pb**	**17 41 02.9**	**-0.9**
SANT	**Santorini**	**1.07**	**236**	*i* P	**Pn**	**17 41 04.6**	**+0.6**
THR3	**Thira Island,**	**1.09**	**239**	P	**Pg**	**17 41 04.7**	**-0.1**
DGB	**zmir**	**1.11**	**13**	*i* P	**Pg**	**17 41 04.8**	**-0.5**
DGB				*i* S	**Sn**	**17 41 21.2**	**+1.8**
THR6	**Thira Island,**	**1.12**	**237**	P	**Pg**	**17 41 05.2**	**-0.2**
TNSA	**Tinos**	**1.25**	**297**	P	**Pb**	**17 41 06.8**	**-0.1**
AYDN	**Tasoluk**	**1.26**	**56**	*i* P	**Pg**	**17 41 07.6**	**-0.5**
MRSB	**Marmaris-Mugla**	**1.34**	**100**	PN	**Pn**	**17 41 06.3**	**-1.4**
YER	**Yerkesik**	**1.39**	**83**	P	**Pn**	**17 41 08.7**	**+0.3**
YER	**Yerkesik**	**1.39**	**83**	PN	**Pn**	**17 41 06.8**	**-1.6**
URLA	**Izmir**	**1.39**	**1**	PN	**Pn**	**17 41 06.5**	**-1.9**
URLA	**Izmir**	**1.39**	**1**	*i* P	**Pg**	**17 41 09.5**	**-1.1**
AYDB	**Zeytinkoy-Aydi**	**1.44**	**47**	PN	**Pn**	**17 41 07.4**	**-1.8**
BLCB	**Balcova**	**1.46**	**15**	PN	**Pn**	**17 41 07.8**	**-1.6**
ARG	**Arkhangelos**	**1.47**	**120**	PN	**Pn**	**17 41 08.0**	**-1.5**
CHOS	**Chios island**	**1.47**	**344**	PN	**Pn**	**17 41 07.9**	**-1.7**
KARP	**Karpathos**	**1.50**	**161**	P	**Pn**	**17 41 09.6**	**-0.4**
KARP	**Karpathos**	**1.50**	**161**	P	**Pn**	**17 41 09.4**	**-0.6**
KARP	**Karpathos**	**1.50**	**161**	PN	**Pn**	**17 41 08.3**	**-1.7**
KRBN	**Karaburun**	**1.62**	**360**	PN	**Pn**	**17 41 09.9**	**-1.7**
TURN	**Turunc**	**1.64**	**93**	PN	Pn	17 41 06.9	-4.9
TURN	**Turunc**	**1.64**	**93**	*i* P	**Pn**	**17 41 07.8**	**-4.1**
SERI	**Serifos**	**1.67**	**277**	P	**Pn**	**17 41 10.7**	**-1.6**
SERI	**Serifos**	**1.67**	**277**	P	**Pn**	**17 41 10.7**	**-1.6**
DALY	**Dalyan (Mula)**	**1.69**	**95**	PN	**Pn**	**17 41 10.8**	**-1.6**
MHLA	**Plaka, Milos I**	**1.73**	**263**	P	**Pn**	**17 41 13.8**	**+0.7**
ZKR	**Zakros**	**1.87**	**189**	P	**Pn**	**17 41 15.1**	**+0.1**
ZKR	**Zakros**	**1.87**	**189**	PN	**Pn**	**17 41 14.3**	**-0.7**
TAVA	**DENIZLI_Tavas**	**1.94**	**75**	*i* P	**Pn**	**17 41 17.3**	**+1.2**
HRKL	**Herakleio**	**2.03**	**216**	PN	**Pn**	**17 41 16.4**	**-0.8**
ZEDA	**zmir-Bergama**	**2.04**	**11**	*i* P	**Pn**	**17 41 17.1**	**-0.2**
GOMA	**Golmarmara-Man**	**2.04**	**31**	PN	**Pn**	**17 41 16.2**	**-1.2**
FETY	**Fethiye**	**2.05**	**99**	PN	**Pn**	**17 41 15.8**	**-1.7**
DKL	**Dikili**	**2.12**	**7**	PN	**Pn**	**17 41 17.3**	**-1.1**
AKHS	**Akhisar**	**2.15**	**27**	*i* P	**Pg**	**17 41 24.5**	**-0.6**
AKHS				*i* S	**Sg**	**17 41 54.7**	**+1.7**
AKS	**Akhisar**	**2.15**	**27**	PN	**Pn**	**17 41 17.1**	**-1.8**
IDI	**Anoyia**	**2.15**	**219**	PN	**Pn**	**17 41 17.9**	**-1.1**
MANT	**Manisa**	**2.19**	**46**	*i* P	**Pg**	**17 41 27.1**	**+1.2**
KULA	**Kula-Manisa**	**2.27**	**47**	PN	**Pn**	**17 41 19.8**	**-0.8**
SIGR	**SIGRI**	**2.31**	**346**	P	**Pn**	**17 41 20.5**	**-0.5**
SIGR	**SIGRI**	**2.31**	**346**	PN	**Pn**	**17 41 19.9**	**-1.1**
AYVA	**Ayvalik**	**2.34**	**2**	*i* P	**Pg**	**17 41 27.5**	**-1.1**
AKAS	**Kas**	**2.56**	**106**	PN	**Pn**	**17 41 23.9**	**-0.7**
KYMI	**Kymi, Euboea I**	**2.56**	**311**	P	**Pn**	**17 41 24.5**	**0.0**
STEP	**BALIKESIR_Sava**	**2.57**	**20**	*i* P	**Pg**	**17 41 31.7**	**-1.4**
STEP				*i* S	**Sg**	**17 42 08.3**	**+1.8**
IMMV	**Iera Moni Meta**	**2.57**	**235**	PN	**Pn**	**17 41 24.2**	**-0.5**
RODP	**Rodopos**	**2.67**	**239**	PN	**Pn**	**17 41 25.0**	**-1.0**
ELL	**Elmali**	**2.69**	**94**	PN	**Pn**	**17 41 24.7**	**-1.8**
SIMA	**Simav-Kutahya**	**2.85**	**41**	PN	**Pn**	**17 41 27.7**	**-0.9**
EZN	**Ezine**	**2.86**	**356**	PN	**Pn**	**17 41 27.8**	**-0.8**
BALB	**Balikesir**	**2.86**	**21**	PN	**Pn**	**17 41 28.0**	**-0.6**
MRKA	**Markates**	**2.92**	**307**	P	**Pn**	**17 41 29.8**	**+0.3**
GVD	**Gavdhos**	**2.92**	**224**	PN	**Pn**	**17 41 28.9**	**-0.6**
BASM	**Basmaki-Afyon**	**2.

JAY	**Jayapura**	**17.06 102**	P		**Pn**	**17 50 04.0**	**-1.6**
	0.6nm,0.3s,baz=228,slow=10,SNR=4.7							
FITZ	**Fitzroy Crossi**	**19.20 175**	P		**P**	**17 50 25.4**	**-0.1**
	0.2nm,0.3s,baz=358,slow=8.2,SNR=9.9							
PMG	**Port Moresby**	**25.31 115**	P		**P**	**17 51 23.8**	**+0.8**
	15nm,0.8s,baz=293,slow=13,SNR=2.1							
ASAR	**Alice Springs**	**26.48 159**	P		**P**	**17 51 34.6**	**+1.2**
	1.5nm,0.3s,baz=335,slow=8.7,SNR=41							
ASAR			PcP		**PcP**	**17 54 51.6**	**+1.7**
	0.3nm,0.3s,baz=346,slow=2.2,SNR=4.8							
ASAR			ScP		**ScP**	**17 58 03.0**	**+1.9**
	0.2nm,0.6s,baz=333,slow=2.4,SNR=2.3							
KSRS	**Korea Array**	**36.29 5**	P		**P**	**17 52 58.8**	**+0.4**
	0.8nm,0.8s,baz=185,slow=9.1,SNR=2.9							
STKA	**Stephens Creek**	**36.84 155**	P		**P**	**17 53 04.8**	**+1.7**
	3.4nm,0.3s,baz=328,slow=9.5,SNR=47							
MJAR	**Matsushiro Arr**	**37.57 19**	P		**P**	**17 53 09.5**	**+0.3**
	2.4nm,0.8s,baz=198,slow=9.4,SNR=12							
USRK	**Ussuriysk Ar.**	**43.43 8**	P		**P**	**17 53 58.0**	**+1.3**
	2.3nm,0.4s,baz=195,slow=6.8,SNR=17							
SONM	**Songino Array**	**48.94 344**	P		**P**	**17 54 39.4**	**0.0**
	0.6nm,0.4s,baz=159,slow=7.5,SNR=4.7							
KSH	**Kashi**	**58.02 317**	P		**P**	**17 55 47.6**	**+2.4**
KSH			pmax		pmax			
	comp=Z,8.0nm,0.8s							
KSH			pmax		pmax			
	comp=Z,81nm,5.7s							
MKAR	**Makanchi Array**	**58.19 327**	P		**P**	**17 55 45.0**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=122,slow=8.4,SNR=6.3							
PETK	**Petropavlovsk-**	**58.82 23**	P		**P**	**17 55 52.2**	**+1.9**
	comp=Z,0.8nm,0.5s,baz=212,slow=1.5,SNR=9.1							
VNDA	**Vanda**	**81.25 172**	P		**P**	**17 58 06.6**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=323,slow=8.4,SNR=1.7							

TRN 18 18:01:29.2, 14.71N×59.26W, h20km, MD3.7, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILAM	**Ilet Lapin Mar**	**1.57**	**273**	*eP*	Pb	18 01 57.2	-0.2
ILAM	**Ilet Lapin Mar**	**1.57**	**273**	*e*	Pg	18 02 08.8	+9.4
ILAM				*eS*	Sg	18 02 19.0	-0.8
MPOM	**Morne Pois Mar**	**1.57**	**261**	*eP*	Pb	18 01 57.2	-0.4
MPOM	**Morne Pois Mar**	**1.57**	**261**	*e*	Pg	18 02 07.3	+7.8
MPOM				*eS*	Sb	18 02 18.4	+1.3
BBGH	**Gun Hill**	**1.58**	**191**	*eP*	Pb	18 01 57.1	-0.6
BBGH				*eS*	Sb	18 02 18.0	+0.6
BBSP	**Saint Philip**	**1.60**	**187**	*eP*	Pb	18 01 57.9	-0.2
BBSP				*eS*	Sb	18 02 19.1	+1.1
BCHC	**Barbados, Cave**	**1.60**	**193**	*eP*	Pb	18 01 57.7	-0.5
BCHC				*eS*	Sb	18 02 18.8	+0.8
LPMF	**Morne Lapointe**	**1.66**	**266**	*eP*	Pb	18 01 58.3	-0.8
ZAM	**Aeronautique**	**1.72**	**266**	*eP*	Pn	18 01 59.0	+1.1
BIM	**Bigot**	**1.77**	**264**	*eP*	Pb	18 02 00.3	-0.6
BIM	**Bigot**	**1.77**	**264**	*e*	Pg	18 02 12.2	+9.0
BIM				*eS*	Sb	18 02 23.5	+0.8
SLAC	**Saint Lucia, A**	**1.78**	**243**	*eP*	Pb	18 02 00.1	-1.1
SLAC	**Saint Lucia, A**	**1.78**	**243**	*e*	Pg	18 02 10.9	+7.4
SLAC				*eS*	Sb	18 02 22.5	-0.6
SLBI	**Saint Lucia, B**	**1.80**	**248**	*eP*	Pn	18 01 59.9	+0.8
SLBI				*eS*	Sb	18 02 22.9	-0.7
FDF	**Fort de France**	**1.83**	**271**	*eP*	Pb	18 02 01.0	-1.1
FDF	**Fort de France**	**1.83**	**271**	*e*	Pg	18 02 14.0	+9.5
FDF				*eS*	Sb	18 02 24.7	0.0
BAMF	**Morne Balai**	**1.83**	**274**	*eP*	Pn	18 02 00.7	+1.1
GBMF	**Grand Be**	**1.85**	**273**	*eP*	Pb	18 02 01.2	-1.1
CXM	**Morne La Croix**	**1.85**	**273**	*eP*	Pb	18 02 02.1	-0.4
SVN	**Savane Anatole**	**1.85**	**274**	*eP*	Pb	18 02 01.4	-1.0
PML	**Morne Lenard**	**1.87**	**273**	*eP*	Pb	18 02 01.7	-0.9
PCM	**Pelee Case Pet**	**1.89**	**274**	*eP*	Pb	18 02 02.0	-1.0
MCLT	**Moule a Chique**	**1.91**	**239**	*eP*	Pb	18 02 04.5	+1.2
MCLT	**Moule a Chique**	**1.91**	**239**	*e*	Pg	18 02 12.2	+6.3
MCLT				*eS*	Sn	18 02 25.5	+1.3
SLB	**Belfond**	**1.94**	**243**	*eP*	Pb	18 02 03.6	-0.3
SLB				*eS*	Sb	18 02 27.2	-0.5
MAGL	**Barre de l'ile**	**2.31**	**303**	*eP*	Pn	18 02 07.4	+1.2
MAGL				*eS*	Sn	18 02 35.3	+1.2
SSV	**Crater Summit**	**2.33**	**234**	*eP*	Pn	18 02 08.0	+1.6
SSV				*eS*	Sn	18 02 36.7	+2.1
SVV	**Soufriere Volc**	**2.35**	**234**	*eP*	Pn	18 02 08.6	+1.9
SVV				*eS*	Sb	18 02 37.5	-1.9
SVB	**Belmont**	**2.41**	**234**	*eP*	Pn	18 02 08.8	+1.3
SVB	**Belmont**	**2.41**	**234**	*e*	Pg	18 02 27.1	+12
SVB				*eS*	Sn	18 02 37.8	+1.5
TDBA	**Terre de Bas,**	**2.56**	**297**	*eP*	Pn	18 02 11.2	+1.6
TDBA				*eS*	Sn	18 02 42.0	+1.8
CBE	**Ff, Capester**	**2.64**	**301**	*eP*	Pn	18 02 11.9	+1.2
CBE				*eS*	Sn	18 02 44.1	+1.8
GCMP	**Grenada, Carri**	**3.05**	**224**	*eP*	Pn	18 02 17.1	+0.7
GCMP				*eS*	Sn	18 02 53.2	+0.9
GRGR	**Grenville**	**3.46**	**223**	*eP*	Pn	18 02 23.9	+2.0

*NNC **18** 18:11:21.3±19.0, 35.67N×73.74E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=170.1km s-min=147.1km az=109.0*
ISC 18 18:11:06.5±3.2, 34.8N±0.2×73.8E±0.4, h21km, n18, σ1s0.1/13, 1C-3D, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**2.90**	**145**	*eP*	Pb	18 11 59.0	+1.5
THN				*eS*	**Sb**	**18 12 32.5**	**0.0**
AML	**Almayashu**	**7.28**	**360**	P	Pn	18 12 57.9	+6.0
	SNR=26						
KZA	**Kyzart**	**7.32**	**9**	P	Pn	18 12 57.5	+5.1
	SNR=7.0						
UCH	**Uchtor**	**7.40**	**4**	P	Pn	18 12 58.2	+4.6
	SNR=6.1						
AAK	**Ala-Archa**	**7.81**	**4**	⇓Pn	Pn	18 13 06.9	+8.0
	1.5nm,0.8s						
AAK				⇓Sn	**Sn**	**18 14 27.9**	**+1.2**
	1.2nm,0.7s						
EKS2	**Erkin-Say**	**7.81**	**0**	P	Pn	18 13 05.5	+6.6
	SNR=5.4						
TKM2	**Tokmak 2**	**8.19**	**9**	P	Pn	18 13 10.4	+6.1
	SNR=5.1						
KK31	**Karatay Array**	**8.63**	**344**	⇓Pn	Pn	18 13 14.1	+4.0
	1.1nm,0.4s,baz=151,slow=12,SNR=36						
KK31				⇑Sn	**Sn**	**18 14 46.0**	**-0.8**
	1.1nm,0.4s,baz=157,slow=24,SNR=7.5						
PYUN	**Piuthan**	**10.35**	**128**	*eP*	**Pn**	**18 13 34.7**	**+0.8**
	8.2nm,0.3s						
DANN	**Dangsing**	**10.70**	**124**	*eP*	**Pn**	**18 13 39.8**	**+1.1**
	5.9nm,0.2s						
KOLN	**Koldanda**	**10.97**	**127**	*eP*	**Pn**	**18 13 43.7**	**+1.3**
	3.1nm,0.3s						
GKN	**Gorkha**	**11.52**	**123**	*eP*	**Pn**	**18 13 50.1**	**+0.3**
	8.5nm,0.2s						
KKN	**Kakani**	**12.09**	**122**	*eP*	**Pn**	**18 13 57.5**	**-0.2**
PKIN	**Phulchoki**	**12.30**	**123**	*eP*	**Pn**	**18 14 00.3**	**-0.4**
	3.4nm,0.3s						
PKI	**Pulchoki**	**12.32**	**123**	*eP*	**Pn**	**18 14 00.0**	**-0.9**
	2.2nm,0.2s						
JIRN	**Jiri**	**12.81**	**121**	*eP*	**Pn**	**18 14 06.8**	**-0.9**
	8.4nm,0.4s						
RAMN	**Ramite**	**13.53**	**122**	*eP*	**Pn**	**18 14 16.0**	**-1.4**
	3.3nm,0.3s						
TAPN	**Taplejung**	**14.08**	**118**	*eP*	**Pn**	**18 14 24.2**	**-0.8**

*IDC **18** 18:32:01.1±1.1, 7.20S×155.18E, h0km, mb4.0/9, mb1 4.2/11, mb1mx4.0/25, mbtmp4.0/11, ML1.9/1, MS3.2/5, Ms1 3.2/5, ms1mx2.9/27, Error ellipse: s-maj=33.7km s-min=21.2km az=112.0*
ISC 18 18:32:07.8±1.0, 7.1S±0.1×155.0E±0.1, h41km, n14, σ0s0.79/15, mb4.0/9, MS3.2/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**4.06**	**314**	Pn	**Pn**	**18 33 06.8**	**-0.6**
	6.5nm,0.3s,baz=120,slow=2.7,SNR=9.2						
HNR	**Honiara**	**5.42**	**115**	LR	LR	18 35 31.5	
	comp=Z,141nm,21.2s,baz=264,slow=40						
PMG	**Port Moresby**	**8.05**	**253**	Pn	**Pn**	**18 34 02.7**	**+0.4**
	0.8nm,0.3s,baz=87,slow=19,SNR=1.7						
PMG				Sn	**Sn**	**18 35 31.2**	**-1.0**
	0.5nm,0.3s,baz=62,slow=15,SNR=1.9						
PMG				LR	LR	18 36 45.8	
	comp=Z,114nm,19.8s,baz=48,slow=34						
ASAR	**Alice Springs**	**26.06**	**229**	P	**P**	**18 37 37.0**	**-0.7**
	0.6nm,0.6s,baz=60,slow=9.1,SNR=17						
ASAR				LR	LR	18 46 39.9	
	comp=Z,63nm,19.6s,baz=68,slow=34						
STKA	**Stephens Creek**	**27.60**	**205**	P	**P**	**18 37 50.8**	**-0.5**
	2.3nm,0.6s,baz=51,slow=14,SNR=8.5						
STKA				LR	LR	18 48 07.0	
	comp=Z,49nm,20.3s,baz=26,slow=35						
KSRS	**Korea Array**	**51.05**	**332**	P	**P**	**18 41 05.6**	**-0.4**
	1.0nm,0.9s,baz=157,slow=8.8,SNR=4.7						
CMAR	**Chiang Mai Arr**	**60.83**	**296**	P	**P**	**18 42 17.9**	**+1.6**
	1.9nm,1.0s,baz=124,slow=5.7,SNR=9.9						
SONM	**Songino Array**	**69.44**	**327**	P	**P**	**18 43 12.6**	**+0.7**
	0.4nm,0.5s,baz=161,slow=4.2,SNR=4.6						
MKAR	**Makanchi Array**	**83.50**	**319**	P	**P**	**18 44 32.2**	**+0.9**
	1.5nm,0.7s,baz=101,slow=6.3,SNR=11						
ILAR	**Eielson Array**	**83.51**	**21**	P	**P**	**18 44 30.3**	**-0.7**
	0.5nm,0.6s,baz=218,slow=6.3,SNR=7.8						
ZALV	**Zalesovo Beam**	**84.28**	**326**	P	**P**	**18 44 35.4**	**+0.2**
	0.8nm,0.5s,baz=112,slow=4.3,SNR=4.0						
YKA	**Yellowknife Ar**	**96.47**	**28**	P	**P**	**18 45 32.1**	**-0.4**
	0.9nm,0.8s,baz=265,slow=4.4,SNR=11						
PDAR	**Pinedale Array**	**98.81**	**48**	LR	LR	19 26 22.3	
	comp=Z,26nm,18.0s,baz=286,slow=33						
TORD	**Torodi Ar. Bea**	**153.04**	**285**	PKP	**PKPdf**	**18 51 54.5**	**-0.1**
	0.1nm,0.4s,baz=50,slow=2.3,SNR=1.4						
TORD				PKPbc	**PKiKP**	**18 52 02.5**	**+0.4**
	0.8nm,0.7s,baz=90,slow=1.8,SNR=5.3						
TORD				PKPab	**pPKPbc**	**18 52 12.6**	**-0.7**
	0.6nm,0.6s,baz=50,slow=4.1,SNR=3.6						

*ATH **18** 18:44:37.9, 38.26N×20.42E, h17km, ML2.7/7, Error ellipse: s-maj=1.9km s-min=0.8km az=258.0*
*THE **18** 18:44:38.2, 38.26N×20.41E, h13km, ML2.8/4, Error ellipse: s-maj=0.9km s-min=0.3km az=248.0*
ISC 18 18:44:37.4±0.9, 38.25N±0.03×20.38E±0.04, h18km±2km, n47, σ0s0.88/72, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGT1	**Agia Thekli**	**0.01**	**123**	P	**Pg**	**18 44 40.1**	**-0.5**
AGT1				S	**Sg**	**18 44 42.5**	**-0.2**
KEF4	**Livadi, Kephal**	**0.04**	**83**	P	**Pg**	**18 44 40.8**	**+0.1**
KEF4				S	**Sg**	**18 44 42.7**	**-0.2**
LXRA	**Lixouri, Kepha**	**0.07**	**139**	P	**Pg**	**18 44 41.1**	**+0.3**
LXRA				S	**Sg**	**18 44 43.3**	**+0.1**
KEF1	**Kardakata, Kep**	**0.08**	**72**	P	**Pg**	**18 44 40.8**	**-0.1**
KEF1				S	**Sg**	**18 44 42.6**	**-0.7**
ARGA	**Argostoli. Kep**	**0.11**	**134**	P	**Pg**	**18 44 41.4**	**+0.1**
ARGA				S	**Sg**	**18 44 43.6**	**-0.2**
ARG2	**Argostoli**	**0.12**	**131**	P	**Pg**	**18 44 41.4**	**+0.1**
ARG2				S	**Sg**	**18 44 43.7**	**-0.2**
KEF2	**Argostoli. Kep**	**0.12**	**136**	P	**Pg**	**18 44 41.5**	**+0.1**
KEF2				S	**Sg**	**18 44 43.9**	**-0.2**
VLS	**Valsamata**	**0.18**	**115**	P	**Pg**	**18 44 42.1**	**-0.1**
VLS				S	**Sg**	**18 44 44.9**	**-0.5**
VLS	**Valsamata**	**0.18**	**115**	P	**Pg**	**18 44 42.1**	**-0.1**
VLS				S	**Sg**	**18 44 44.9**	**-0.5**
VLS				AML	AML	18 44 45.3	
	comp=N,16118μm,0.1s						
VLS				AML	AML	18 44 45.6	
	comp=E,46675μm,0.1s						
VSK1	**VASILIKIADES**	**0.21**	**43**	P	**Pg**	**18 44 42.7**	**+0.1**
VSK1				S	**Sg**	**18 44 45.6**	**-0.6**
KFL	**Anninata**	**0.35**	**114**	P	**Pg**	**18 44 44.8**	**-0.1**
KFL				S	**Sg**	**18 44 49.9**	**-0.1**
	comp=E,11μm,0.4s						
KFL	**Anninata**	**0.35**	**114**	P	**Pg**	**18 44 44.9**	**0.0**
KFL				S	**Sb**	**18 44 50.4**	**0.0**
KFL				AML	AML	18 44 50.5	
	comp=N,15912μm,0.4s						
KFL				AML	AML	18 44 50.7	
	comp=E,26988μm,0.3s						
EVGI	**Lefkada island**	**0.43**	**31**	P	**Pg**	**18 44 46.4**	**+0.2**
EVGI				S	**Sb**	**18 44 52.6**	**0.0**
EVGI	**Lefkada island**	**0.43**	**31**	P	**Pg**	**18 44 46.3**	**+0.1**
EVGI				S	**Sb**	**18 44 52.8**	**+0.2**
MGNA	**Meganis**	**0.52**	**39**	P	**Pg**	**18 44 47.9**	**+0.1**
MGNA				S	**Sg**	**18 44 54.8**	**0.0**
LKD2	**Lefkada island**	**0.58**	**22**	P	**Pg**	**18 44 48.8**	**-0.2**
LKD2				S	**Sb**	**18 44 57.7**	**+1.0**
	comp=E,535nm,0.2s						
LKD2	**Lefkada island**	**0.58**	**22**	P	**Pg**	**18 44 48.8**	**-0.2**
LKD2				S	**Sb**	**18 44 57.8**	**+1.0**
LKD2				AML	AML	18 45 01.6	
	comp=E,1120μm,0.3s						
LKD2				AML	AML	18 45 02.9	
	comp=N,979μm,0.3s						
VTN	**Vitineika**	**0.72**	**118**	P	**Pg**	**18 44 51.4**	**-0.1**
RLS	**Riolos of Patr**	**0.88**	**103**	P	**Pb**	**18 44 53.9**	**-0.2**
RLS				AML	AML	18 45 16.1	
	comp=N,596μm,0.3s						
RLS				AML	AML	18 45 17.7	
	comp=E,463μm,0.9s						
DRO	**Drossia**	**1.09**	**106**	P	**Pb**	**18 44 57.9**	**+0.1**
DRO				S	**Sn**	**18 45 13.9**	**+1.5**
	comp=E,592nm,0.5s						
DRO	**Drossia**	**1.09**	**106**	P	**Pb**	**18 44 57.9**	**+0.1**
EFP	**Efpalio**	**1.21**	**81**	P	**Pn**	**18 44 59.7**	**+0.3**
EFP	**Efpalio**	**1.21**	**81**	P	**Pn**	**18 44 59.5**	**+0.1**
EFP				AML	AML	18 45 22.3	
	comp=E,753μm,0.6s						
EFP				AML	AML	18 45 23.0	
	comp=N,484μm,0.4s						
LAKA	**Lakka**	**1.26**	**90**	P	**Pn**	**18 45 00.6**	**+0.5**
LAKA				S	**Sb**	**18 45 16.7**	**+0.2**
LAKA	**Lakka**	**1.26**	**90**	P	**Pn**	**18 45 00.6**	**+0.5**
IGT	**Igoumenitsa**	**1.28**	**358**	P	**Pb**	**18 45 01.7**	**+0.8**
IGT				S	**Sg**	**18 45 19.3**	**+0.5**
	comp=N,245nm,0.6s						
IGT	**Igoumenitsa**	**1.28**	**358**	P	**Pb**	**18 45 01.8**	**+0.8**
IGT				AML	AML	18 45 24.1	
	comp=N,604μm,0.4s						
IGT				AML	AML	18 45 25.1	
	comp=E,364μm,0.4s						
TRIZ	**Trizonia**	**1.34**	**85**	P	**Pn**	**18 45 01.6**	**+0.4**
KALE	**Kalithea**	**1.39**	**84**	P	**Pn**	**18 45 02.3**	**+0.4**
KALE	**Kalithea**	**1.39**	**84**	P	**Pn**	**18 45 02.4**	**+0.4**
KLV	**Kalavryta, Ach**	**1.41**	**98**	P	**Pn**	**18 45 03.1**	**+0.9**
KLV	**Kalavryta, Ach**	**1.41**	**98**	P	**Pn**	**18 45 03.1**	**+0.9**
KEK	**Kerkira**	**1.52**	**343**	P	**Pb**	**18 45 06.0**	**+0.9**
MAKR	**Makrakomi, Fth**	**1.57**	**61**	P	**Pg**	**18 45 07.1**	**-0.5**
ITM	**Ithomi**	**1.63**	**131**	P	**Pg**	**18 45 08.3**	**-0.5**
AGG	**Agios Georgios**	**1.71**	**63**	P	**Pb**	**18 45 09.3**	**+1.0**
AGG				AML	AML	18 45 44.4	
	comp=N,149μm,0.5s						
AGG				AML	AML	18 45 46.4	
	comp=E,161μm,0.5s						
PYL	**PYLOS**	**1.74**	**141**	P	**Pb**	**18 45 09.6**	**+0.9**
THL	**Klokotos Trika**	**1.83**	**44**	P	**Pb**	**18 45 10.9**	**+0.6**
VIL2	**Platees**	**2.28**	**90**	P	**Pb**	**18 45 17.4**	**-0.6**
DBRK	**Dubrovnik**	**4.73**	**340**	*e*Pn	**Pn**	**18 45 47.8**	**0.0**
DBRK				Sn	**Sn**	**18 46 40.7**	**-1.4**
STON	**Ston**	**5.04**	**337**	*e*Pn	**Pn**	**18 45 53.0**	**+1.0**
STON				Sn	**Sn**	**18 46 46.5**	**-3.3**
MAKA	**Makarska**	**5.64**	**334**	*i* Pn	**Pn**	**18 46 00.5**	**+0.3**
MAKA				Sn	**Sn**	**18 47 02.6**	**-1.8**
RICI	**Ricice**	**5.78**	**336**	*e*Pn	**Pn**	**18 46 02.9**	**+0.7**
RICI				Sn	**Sn**	**18 47 06.6**	**-1.5**
ZIRJ	**Zirje**	**6.47**	**328**	*i* Pn	**Pn**	**18 46 12.6**	**+0.9**
ZIRJ				Sn	**Sn**	**18 47 21.8**	**-3.3**
KIJV	**Kijevo**	**6.48**	**334**	*e*Pn	**Pn**	**18 46 13.3**	**+1.5**
MORI	**Morici**	**6.62**	**329**	*e*Pn	**Pn**	**18 46 15.7**	**+1.9**
DUGI	**Dugi Otok**	**7.00**	**327**	*i* Pn	**Pn**	**18 46 20.0**	**+1.1**

*TUL **18** 18:53:47.1±1.6, 36.592N±0.008×97.80W±0.02, h5km±2km, ML3.0, Error ellipse: s-maj=3.1km s-min=3.0km az=268.0*
*NEIC **18** 18:53:47.4±1.2, 36.57N±0.02×97.82W±0.02, h4km±7km, Error ellipse: s-maj=2.7km s-min=2.1km az=65.0*
*ANF **18** 18:53:48.1±0.4, 36.50N×97.77W, h0km, ML3.6/4, Error ellipse: s-maj=4.1km s-min=2.9km az=171.0*
ISC 18 18:53:47.8±0.9, 36.56N±0.04×97.81W±0.03, h10km, n18, σ1s0.26/22, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADOK	**Arcadia Dam**	**0.97**	**159**	Pg	**Pg**	**18 54 06.1**	**-0.3**
U32A	**Winter Ranch,**	**0.98**	**260**	Pg	**Pg**	**18 54 05.5**	**-1.2**
U32A					**Pb**	**18 54 05.7**	**-1.3**
U32A				Sg	**Sg**	**18 54 19.2**	**-0.2**
T35A	**Sooner Cattle**	**1.10**	**71**		**Pb**	**18 54 07.6**	**-1.3**
OKCFA	**Oklahoma City**	**1.18**	**166**		**Pb**	**18 54 09.2**	**-1.1**
TUL1	**Leonard**	**1.75**	**111**	P	**Pn**	**18 54 18.9**	**+0.7**
	baz=293						
TUL1				S	**Sb**	**18 54 42.5**	**+0.4**
	baz=293						
TUL1	**Leonard**	**1.75**	**111**		**Pn**	**18 54 18.8**	**+0.5**
WMOK	**Wichita Mounta**	**1.98**	**204**	P	**Pn**	**18 54 22.4**	**+0.9**
	baz=23						
WMOK				S	**Sb**	**18 54 49.0**	**+0.2**
	baz=23						
WMOK	**Wichita Mounta**	**1.98**	**204**		**Pn**	**18 54 21.9**	**+0.4**
R32A	**Long Quarter,**	**2.00**	**339**		**Pn**	**18 54 22.7**	**+1.0**
KSU1	**Kansas State U**	**2.71**	**20**		**Pn**	**18 54 33.1**	**+1.7**
CBKS	**Cedar Bluff**	**2.72**	**326**	S	**Sb**	**18 55 10.1**	**-0.1**
	baz=145						
U38A	**Gravette**	**2.76**	**91**		**Pn**	**18 54 33.5**	**+1.4**
X37A	**Clayton**	**2.79**	**134**		**Pn**	**18 54 33.4**	**+0.8**
AMTX	**Amarillo**	**3.57**	**243**	Sb	**Sb**	**18 55 38.0**	**+3.5**
	baz=60						
MIAR	**Mount Ida**	**3.99**	**119**		**Pn**	**18 54 50.6**	**+1.5**
U40A	**Yellville**	**4.00**	**91**		**Pn**	**18 54 49.9**	**+0.8**
WHTX	**Lake Whitney,**	**4.56**	**176**	Pn	**Pn**	**18 54 57.4**	**+0.5**
R40A	**Maddies Statio**	**4.74**	**67**		**Pn**	**18 54 59.9**	**+0.6**

*NEIC **18** 19:09:13.9±1.7, 17.78S±0.09×175.17W±0.09, h239km±6km, mb4.6/35, Error ellipse: s-maj=14.4km s-min=12.1km az=140.0*
*IDC **18** 19:09:16.7±2.6, 17.86S×175.35W, h257km±25km, mb3.7/13, mb1 3.9/14, mb1mx3.8/24, mbtmp4.4/14, Error ellipse: s-maj=17.4km s-min=12.3km az=125.0*
ISC 18 19:09:15.5±0.5, 17.85S±0.08×175.23W±0.09, h250km, n123, σ1s27/116, mb4.5/35, 11C-15D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.13**	**41**		Pn	19 10 28.2	-4.9
NIUE	**Niue**	**5.18**	**104**		Pn	19 10 31.0	-2.5
MSVF	**Nonsavu**	**6.40**	**270**		**Pn**	**19 10 51.5**	**+2.7**
DZM	**Mont Dzumac**	**17.73**	**253**	P	**P**	**19 13 05.2**	**-0.2**
	1.3nm,0.3s,baz=78,slow=17,SNR=15						
DZM	**Mont Dzumac**	**17.73**	**253**	P	**P**	**19 13 06.0**	**+0.6**
MXZ	**Matakaoa Point**	**20.45**	**195**	P	**P**	**19 13 34.7**	**+0.4**
MXZ	**Matakaoa Point**	**20.45**	**195**	P	**P**	**19 13 35.2**	**+1.0**
KUZ	**Kuaotunu**	**20.45**	**201**	P	**P**	**19 13 37.0**	**+2.7**
WMGZ	**Waiomatatini S**	**20.66**	**194**	P	**P**	**19 13 38.1**	**+1.5**
HAZ	**Te Kaha**	**20.76**	**196**	P	**P**	**19 13 37.9**	**+0.4**
MBAZ	**Motutapu North**	**20.77**	**203**	P	**P**	**19 13 40.4**	**+2.8**
PKGZ	**Pakihiroa**	**20.81**	**195**	P	**P**	**19 13 39.6**	**+1.4**
PUZ	**Puketiti**	**20.94**	**195**	P	**P**	**19 13 40.4**	**+0.9**
RUGZ	**Raukumara Rang**	**20.99**	**196**	P	**P**	**19 13 40.2**	**+0.2**
TWGZ	**Tauwhareparae**	**21.11**	**195**	P	**P**	**19 13 42.6**	**+1.5**
MARZ	**Manawahe**	**21.28**	**198**	P	**P**	**19 13 45.7**	**+2.9**
CNGZ	**Carnagh Statio**	**21.35**	**194**	P	**P**	**19 13 45.6**	**+2.2**
URZ	**Urewera**	**21.41**	**197**	P	**P**	**19 13 43.0**	**-1.0**
	24nm,0.5s,baz=108,slow=20,SNR=30						
URZ				S	**S**	**19 17 22.7**	**-1.6**
	6.2nm,0.7s,baz=41,slow=20,SNR=1.9						
URZ	**Urewera**	**21.41**	**197**	P	**P**	**19 13 43.0**	**-1.0**
URZ	**Urewera**	**21.41**	**197**	P	**P**	**19 13 43.0**	**-1.0**
URZ				IAmb	IAmb	19 13 51.7	
	comp=Z,26nm,0.9s						
RAGZ	**Rawiri**	**21.55**	**196**	P	**P**	**19 13 46.5**	**+1.0**
RIGZ	**Rimuhau**	**21.66**	**195**	P	**P**	**19 13 47.3**	**+0.9**
MUGZ	**Murupara**	**21.71**	**197**	P	**P**	**19 13 46.4**	**-0.4**
RTZ	**Ruatahuna**	**21.78**	**197**	P	**P**	**19 13 49.5**	**+2.0**
BFZ	**Birch Farm**	**23.91**	**196**	P	**P**	**19 14 08.0**	**+1.2**
LTZ	**Lake Taylor**	**27.03**	**201**	P	**P**	**19 14 33.0**	**-1.8**
LTZ				IAmb	IAmb	19 14 41.6	
	comp=Z,17nm,0.8s						
RPZ	**Rata Peaks**	**28.27**	**201**	P	**P**	**19 14 45.3**	**-0.5**
	comp=Z,4.8nm,0.4s,baz=46,slow=19,SNR=2.3						
RPZ	**Rata Peaks**	**28.27**	**201**	IAmb	IAmb	19 14 58.6	
	comp=Z,20nm,0.9s						
ARMA	**Armidale**	**32.61**	**241**	P	**P**	**19 15 24.7**	**+0.5**
CAN	**Canberra**	**36.17**	**234**	P	**P**	**19 15 54.7**	**+0.2**
CAN				IAmb	IAmb	19 15 55.4	
	comp=Z,12nm,0.9s						
CTA	**Charters

comp=Z,0.7nm,0.8s,baz=233,slow=8.3,SNR=5.0
NJ2 Nanjing 80.26 308 *e*P **P** 19 20 57.8 -1.0
NJ2 pmax pmax
comp=Z,9.0nm,0.7s
TXAR Lajitas Array 83.42 56 P **P** 19 21 16.3 +0.9
comp=Z,0.3nm,0.7s,baz=202,slow=6.5,SNR=4.3
MAW Mawson 84.92 199 P **P** 19 21 22.4 +0.2
comp=Z,1.9nm,0.6s,baz=146,slow=8.4,SNR=8.9
ILAR Eielson Array 85.18 12 P **P** 19 21 22.6 -0.7
comp=Z,0.7nm,0.5s,baz=226,slow=5.8,SNR=17
H03S2 Juan Fernandez 85.31 124 T T 20 55 06.7
baz=249,slow=75,SNR=13
H03S1 Juan Fernandez 85.32 124 T T 20 55 10.5
baz=249,slow=75,SNR=13
H03S3 Juan Fernandez 85.33 124 T T 20 55 07.3
baz=249,slow=75,SNR=12
HHC Hu-ho-hao-te 89.41 313 *e*P **P** 19 21 43.8 -0.4
HHC pmax pmax
comp=Z,9.0nm,0.9s
HHC pmax pmax
comp=Z,37nm,6.0s
CMAR Chiang Mai Arr 91.72 289 P **P** 19 21 56.9 +1.5
comp=Z,1.6nm,0.8s,baz=85,slow=2.6,SNR=8.7
LZH Lanzhou 93.27 307 ⇓P **P** 19 22 01.3 -0.9
LZH pP pwP 19 23 05.6 +0.6
LZH sP sP 19 23 33.3 +5.2
LZH PP **PP** 19 25 52.5 +2.6
LZH pmax pmax
comp=Z,21nm,1.4s
LZH pmax pmax
comp=Z,85nm,9.5s
KSH Kashi 115.50 306 PKP **PKPdf** 19 27 22.6 -5.5
FINES FINESS Array B 133.91 346 PKP **PKPdf** 19 28 01.4 -1.0
comp=Z,1.6nm,1.0s,baz=35,slow=4.7,SNR=3.5
AKASG Malin Array Be 141.85 335 PKhKP PKPpre 19 28 10.7
comp=Z,0.3nm,0.4s,baz=41,slow=4.0,SNR=4.4
SORM Soroca 144.19 333 ⇑P **PKPab** 19 28 19.7 -0.2
DIKM Dikmen 144.77 319 ⇑P PKPbc 19 28 18.6 -3.7
BURAR Bucovina Array 145.91 335 ⇑P **PKPab** 19 28 27.4 +0.8
CLL Collm 145.98 351 *i* PKPbc **PKPbc** 19 28 26.7 +1.0
comp=Z,16nm,1.6s
BIZ Bicaz 146.08 333 ⇓P **PKPbc** 19 28 26.9 +0.8
OSTC Ostas 146.10 347 *e*PKP **PKPbc** 19 28 27.1 +1.0
CHVC Chvalec 146.11 347 *e*PKP **PKPbc** 19 28 27.1 +0.9
TLCR 146.15 329 ⇓P **PKPbc** 19 28 27.1 +0.8
TESR Tescani 146.17 332 ⇓P **PKPdf** 19 28 26.8 +1.8
BRG Berggiesshubel 146.25 350 *e*PKP **PKPdf** 19 28 26.6 +1.7
comp=Z,4.9nm,1.1s
DPC Dobruska-Polom 146.28 347 *e*PKP **PKPbc** 19 28 27.5 +0.8
TUDR 146.40 330 ⇑P **PKPdf** 19 28 27.1 +1.8
CFR Carcaliu 146.49 329 ⇑P **PKPdf** 19 28 27.0 +1.5
TRPA Tarpa 146.49 338 ⇓P **PKPbc** 19 28 27.6 +0.4
MORC Moravsky Berou 146.53 345 ⇓P **PKPbc** 19 28 28.5 +1.1
TOPG Topolog 146.59 329 ⇓P **PKPbc** 19 28 27.8 +0.1
VRI Vrincioaia 146.63 332 ⇑P **PKPdf** 19 28 27.6 +1.8
PLOR Plostina 146.68 332 ⇓P **PKPbc** 19 28 28.4 +0.4
BRTR Keskin Array B 146.84 317 PKPbc **PKPbc** 19 28 28.9 +0.2
comp=Z,3.0nm,0.8s,baz=133,slow=3.6,SNR=17
HARR Harsova 146.94 329 ⇑P **PKPbc** 19 28 28.7 +0.1
PRU Pruhonice 146.99 348 *e*PKP **PKPbc** 19 28 29.3 +0.7
MLR Muntele Rosu 147.27 332 ⇓P **PKPbc** 19 28 30.4 +0.7
CJR Cluj-Napoca 147.28 336 ⇑P **PKPbc** 19 28 30.5 +0.9
VYHS Vyhne 147.35 343 *e*PKP **PKPbc** 19 28 30.2 +0.5
VOIR 147.71 333 ⇑P **PKPbc** 19 28 32.0 +1.2
ARR Arges 147.95 333 ⇓P **PKPbc** 19 28 32.3 +0.9
KHC Kasperske Hory 147.99 349 *e*PKP **PKPdf** 19 28 24.5 -3.5
KHC *ex* x 19 28 31.7
GERES GERESS Array B 148.24 349 PKPbc **PKPbc** 19 28 32.3 +0.2
comp=Z,1.1nm,0.7s,baz=54,slow=3.4,SNR=10
SIRR Siria 148.39 337 ⇓P **PKPbc** 19 28 32.9 +0.4
CONA Conrad Observa 148.65 346 PKiKP **PKPbc** 19 28 34.2 +1.0
comp=Z,2.9nm,0.8s
BZS Buzias 148.96 337 ⇑P **PKPbc** 19 28 33.9 0.0
ELND Elena 149.25 329 ⇓P **PKPbc** 19 28 33.8 -0.9
HERR Herculane 149.26 335 ⇑P **PKPbc** 19 28 34.3 -0.3
PLVB Pleven 149.50 331 ⇓P **PKPbc** 19 28 35.4 +0.1
MDVR Moldovita 149.62 336 ⇓P **PKPbc** 19 28 35.4 -0.2
WTTA Wattenberg 150.12 351 *e*PKiKP **PKPbc** 19 28 37.1 +0.2
comp=Z,4.1nm,0.5s
SQTA Sankt Quirin 150.23 351 PKiKP **PKPbc** 19 28 37.5 +0.4
comp=Z,1.9nm,0.6s
ABTA Abfaltersbach 150.48 349 *e*PKiKP **PKPbc** 19 28 37.4 -0.2
comp=Z,3.0nm,0.6s
FETA Feichten 150.49 352 *e*PKiKP **PKPbc** 19 28 38.3 +0.5
comp=Z,2.7nm,0.8s
VTS Vitosha 150.74 331 ⇓P **PKPbc** 19 28 38.4 0.0

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*UPP **18** 19:30:40.4±2.6, 57.66N×23.51E, h0km, ML2.0, Suspected explosion*
*HEL **18** 19:30:44.4±0.5, 57.69N×22.52E, h0km, ML2.1, Explosion*
*NAO **18** 19:30:46.4±1.9, 57.92N×22.74E, ML2.4*
*EST **18** 19:30:47.3±0.1, 57.87N×22.74E, h0km, ML2.0(HEL), Explosion*
*BER **18** 19:30:47.8±6.1, 57.60N×23.00E, h23km±25km, ML2.4(NAO)*
*LVSN **18** 19:30:49.0±7.5, 57.81N×22.72E, h0km±40km, ML2.7*

ISC 18 19:30:45.4±0.7, **57.86N**±0.02×**22.59E**±0.02, **h0km, n51,**
σ1s60/82, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.28**	**215**	*e*P	**Pb**	**19 30 53.3**	**0.0**
SLIT				IAML		19 31 21.8	
	comp=Z,1μm,0.6s						
SLIT	**Slitere, Latvi**	**0.28**	**215**	*e*P	**Pb**	**19 30 53.3**	**0.0**
SLIT				*e*S	**Sb**	**19 30 58.7**	**+0.2**
SLIT				AML	AML	19 31 21.5	
	comp=N,1μm,0.6s						
SLIT				AML	AML	19 31 21.8	
	comp=Z,2μm,0.7s						
SLIT				AML	AML	19 31 22.7	
	comp=E,1μm,0.5s						
SLIT	**Slitere, Latvi**	**0.28**	**215**	*e*P	**Pb**	**19 30 53.2**	**0.0**
SLIT				*e*S	**Sb**	**19 30 58.1**	**-0.4**
MTSE	**Matsula**	**1.07**	**37**	*e*P	**Pg**	**19 31 05.5**	**-0.5**
MTSE				*e*S	**Sg**	**19 31 20.4**	**+0.6**
MTSE	**Matsula**	**1.07**	**37**	*e*P	**Pg**	**19 31 05.4**	**-0.5**
PBUR	**Paburge**	**1.88**	**191**	*e*P	**Pn**	**19 31 19.2**	**+0.5**
PBUR				IAML		19 31 50.4	
	comp=Z,40nm,0.2s						
PBUR	**Paburge**	**1.88**	**191**	*e*P	**Pn**	**19 31 19.7**	**+1.1**
PBUR				*e*S	**Sg**	**19 31 47.4**	**+1.8**
GOTU	**Gotland**	**2.16**	**267**	P	**Pn**	**19 31 24.4**	**+1.9**
GOTU				S	**Sg**	**19 31 56.1**	**+1.4**
VSU	**Vasula**	**2.28**	**73**	Pn	**Pn**	**19 31 25.3**	**+1.1**
VSU				Lg	Lg	19 31 54.5	
VSU	**Vasula**	**2.28**	**73**	*e*P	**Pn**	**19 31 24.9**	**+0.8**
VSU				IAML		19 31 58.1	
	comp=Z,110nm,0.2s						
VSU	**Vasula**	**2.28**	**73**	*e*P	**Pn**	**19 31 25.4**	**+1.2**
VSU				*e*S	**Sb**	**19 31 54.7**	**-1.3**
VSU				AML	AML	19 31 57.2	
	comp=Z,80nm,0.4s						
VSU				AML	AML	19 31 57.6	
	comp=N,268nm,0.4s						
VSU				AML	AML	19 31 59.9	
	comp=E,249nm,0.4s						
VSU	**Vasula**	**2.28**	**73**	*e*P	**Pn**	**19 31 25.1**	**+0.9**
VSU				*e*SG	**Sn**	**19 31 54.5**	**+1.6**
VSU	**Vasula**	**2.28**	**73**	Pn	**Pn**	**19 31 25.3**	**+1.1**
VSU				Sg	**Sn**	**19 31 54.5**	**+1.6**
ARBE	**Arbavere**	**2.38**	**47**	*e*P	**Pn**	**19 31 26.8**	**+1.2**
ARBE				*e*PB	**Pb**	**19 31 27.3**	**-1.7**
ARBE				*e*SG	**Sb**	**19 31 58.5**	**-0.2**
PABE	**Paberze**	**2.48**	**162**	*e*P	**Pn**	**19 31 28.4**	**+1.4**
PABE				IAML		19 31 29.6	
	comp=Z,19nm,0.2s						
PABE	**Paberze**	**2.48**	**162**	*e*P	**Pn**	**19 31 28.8**	**+1.9**
PABE				*e*S	**Sb**	**19 32 00.9**	**-0.9**
MEF	**Metsahovi**	**2.54**	**21**	*e*P	**Pb**	**19 31 30.6**	**-1.2**
MEF				*e*S	**Sb**	**19 32 03.5**	**0.0**
MEF				AML	AML	19 32 04.7	
	comp=N,14nm,0.4s						
MEF				AML	AML	19 32 05.7	
	comp=Z,24nm,0.5s						
MEF				AML	AML	19 32 06.4	
	comp=E,34nm,0.3s						
MEF	**Metsahovi**	**2.54**	**21**	*e*P	**Pn**	**19 31 29.9**	**+2.1**
MEF				*e*SG	**Sb**	**19 32 04.0**	**+0.5**
MEF				MSG		19 32 06.4	
	comp=Z,8.6nm,0.1s						
NRTU	**Norrtaelje**	**2.75**	**313**	P	**Pn**	**19 31 32.4**	**+1.7**
NRTU				S	**Sb**	**19 32 12.6**	**+3.1**
ISAL	**Salakas**	**3.01**	**138**	*e*P	**Pn**	**19 31 34.8**	**+0.5**
ISAL				IAML		19 32 19.8	
	comp=Z,4.6nm,0.4s						
PVF	**Pernaja**	**3.17**	**31**	*e*P	**Pn**	**19 31 38.2**	**+1.7**
PVF				*e*SB	**Sb**	**19 32 21.0**	**-0.7**
PVF				MSG		19 32 23.8	
	comp=Z,3.6nm,0.1s						
VIKU	**Vikbolandet**	**3.19**	**284**	P	**Pn**	**19 31 38.8**	**+2.2**
RAF	**Rauma**	**3.20**	**353**	*e*P	**Pn**	**19 31 38.9**	**+2.1**
RAF				*e*S	**Sb**	**19 32 22.2**	**-0.2**
RAF				AML	AML	19 32 31.4	
	comp=Z,10nm,0.5s						
RAF				AML	AML	19 32 32.5	
	comp=N,11nm,0.5s						
RAF				AML	AML	19 32 33.4	
	comp=E,14nm,0.4s						
RAF	**Rauma**	**3.20**	**353**	*e*P	**Pn**	**19 31 38.5**	**+1.7**
RAF				MSG		19 32 29.2	
	comp=Z,4.0nm,0.1s						
IIGN	**Ignalina**	**3.22**	**140**	*e*P	**Pn**	**19 31 33.9**	**-3.3**
IIGN				IAML		19 32 28.1	
	comp=Z,4.7nm,0.2s						
GRAU	**Graesoe**	**3.24**	**322**	P	**Pn**	**19 31 38.4**	**+1.0**
UPP	**Uppsala**	**3.26**	**310**	P	**Pn**	**19 31 40.2**	**+2.5**
FLYU	**Flymyra**	**3.33**	**315**	P	**Pn**	**19 31 39.7**	**+1.1**
VJF	**Virojoki**	**3.71**	**41**	*e*P	**Pn**	**19 31 44.4**	**+0.6**
VJF				*e*PG	**Pb**	**19 31 52.9**	**+1.3**
SUW	**Suwalki**	**3.87**	**175**	*e*S	**Sn**	**19 32 28.7**	**-3.5**
SUW				AML	AML	19 32 50.8	
	comp=N,161nm,0.4s						
SUW				AML	AML	19 32 52.7	
	comp=E,187nm,0.7s						
SUW				AML	AML	19 32 54.5	
	comp=Z,162nm,0.4s						
FIA0	**FINESS Array S**	**4.00**	**25**	Pn	**Pn**	**19 31 48.6**	**+0.7**
	baz=192,slow=12						
FIA0				Sn	**Sn**	**19 32 35.2**	**-0.2**
	baz=202,slow=28						
FIA0				Lg	Lg	19 32 49.5	
	baz=197,slow=37						
FIA0	**FINESS Array S**	**4.00**	**25**	*e*P	**Pn**	**19 31 48.9**	**+1.0**
FIA0				*e*S	**Sn**	**19 32 35.7**	**+0.2**
FIA0	**FINESS Array S**	**4.00**	**25**	Pn	**Pn**	**19 31 48.6**	**+0.7**
	baz=192,slow=12						
FIA0				Sn	**Sn**	**19 32 35.2**	**-0.2**
	baz=202,slow=28						
FIA0				Sg	**Sb**	**19 32 49.5**	**+3.9**
	baz=197,slow=37						
FIA1	**FINESS Array S**	**4.01**	**25**	*e*P	**Pn**	**19 31 48.8**	**+0.9**
FIA1				*e*PG	**Pb**	**19 31 59.1**	**+2.4**
FIA1				*e*S	**Sn**	**19 32 34.5**	**-1.0**
KEF	**Keuruu**	**4.47**	**14**	*e*P	**Pn**	**19 31 56.6**	**+2.3**
KAF	**Kangasniemi**	**4.66**	**22**	*e*P	**Pn**	**19 31 58.2**	**+1.4**
BSD	**Bornholm Skovb**	**5.07**	**240**	*e*P	**Pn**	**19 32 02.8**	**+0.4**
BSD	**Bornholm Skovb**	**5.07**	**240**	*i* P	**Pn**	**19 32 02.6**	**+0.2**
HFS	**Hagfors**	**5.13**	**300**	Pn	**Pn**	**19 32 04.6**	**+1.3**
HFS	baz=117,slow=14			Sn	**Sn**	**19 33 04.0**	**+0.7**
	baz=105,slow=37						
HFS				Lg	Lg	19 33 27.8	
	baz=124,slow=28						
HFS	**Hagfors**	**5.13**	**300**	Pn	**Pn**	**19 32 04.6**	**+1.3**
	baz=117,slow=14						
HFS				Sn	**Sn**	**19 33 04.0**	**+0.7**
	baz=105,slow=37						
HFS				Sg	**Sg**	**19 33 27.8**	**-2.3**
	baz=124,slow=28						
VAF	**Ylistaro**	**5.20**	**0**	*e*P	**Pn**	**19 32 06.0**	**+1.8**
NRA0	**NORESS Array S**	**6.35**	**302**	Pn	**Pn**	**19 32 20.4**	**+0.3**
	baz=91,slow=12						
NRA0				Sn	**Sn**	**19 33 31.0**	**-2.2**
	baz=98,slow=28						
NRA0				Lg	Lg	19 34 08.0	
	baz=112,slow=28						
NRA0	**NORESS Array S**	**6.35**	**302**	Pn	**Pn**	**19 32 20.4**	**+0.3**
	baz=91,slow=12						
NRA0				Sn	**Sn**	**19 33 31.0**	**-2.2**
	baz=98,slow=28						
NRA0				Sg	**Sg**	**19 34 08.0**	**-1.1**
	baz=112,slow=28						
NB2	**NORSAR Subarra**	**6.62**	**304**	Pn	**Pn**	**19 32 24.4**	**+0.7**
	baz=119,slow=14						
NB2				Lg	Lg	19 34 14.3	
	baz=111,slow=37						
NB2	**NORSAR Subarra**	**6.62**	**304**	Pn	**Pn**	**19 32 24.4**	**+0.7**
	baz=119,slow=14						
NB2				Sg	**Sg**	**19 34 14.3**	**-3.3**
	baz=111,slow=37						
KON	**Kongsberg**	**6.99**	**290**	Sn	**Sn**	**19 33 49.1**	**+0.1**
KON				Lg	Lg	19 34 26.2	
KONO	**Kongsberg**	**6.99**	**290**	Sn	**Sn**	**19 33 49.1**	**+0.1**
KONO				Sg	**Sg**	**19 34 26.2**	**-3.5**
APA0	**Apatity Array**	**10.86**	**22**	Pn	**Pn**	**19 33 20.9**	**-0.9**
	baz=209,slow=12						
APA0	**Apatity Array**	**10.86**	**22**	Pn	**Pn**	**19 33 20.9**	**-0.9**
	baz=209,slow=12						
ARA0	**ARCESS Array S**	**11.79**	**5**	Pn	**Pn**	**19 33 31.6**	**-3.0**
	baz=186,slow=14						
ARA0	**ARCESS Array S**	**11.79**	**5**	Pn	**Pn**	**19 33 31.6**	**-3.0**
	baz=186,slow=14						

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*IDC **18** 19:33:42.2±1.2, 6.31S×151.97E, h0km, mb4.1/5, mb1 4.3/6, mb1mx3.8/39, mbtmp4.1/6, ML1.8/1, MS2.9/3, Ms1 2.9/3, ms1mx2.6/26, Error ellipse: s-maj=48.3km s-min=17.3km az=115.0*

ISC 18 19:33:47.6±1.1, **6.3S**±0.1×**151.8E**±0.2, **h37km, n10,**
σ1s27/10, mb3.9/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.98**	**7**	Pn	**Pn**	**19 34 18.1**	**-0.4**
	35nm,0.3s,baz=183,slow=1.9,SNR=36						
KRVT				Sn	**Sn**	**19 34 43.2**	**+1.1**
	89nm,0.3s,baz=180,slow=20,SNR=9.0						
PMG	**Port Moresby**	**5.55**	**236**	Pn	**Pn**	**19 35 08.8**	**+1.2**
	1.6nm,0.3s,baz=93,slow=2.7,SNR=5.1						
PMG				Sn	**Sn**	**19 36 08.1**	**-2.1**
	7.1nm,0.3s,baz=156,slow=21,SNR=10.0						
PMG				LR	LR	19 37 12.7	
	comp=Z,52nm,18.7s,baz=56,slow=37						
DZM	**Mont Dzumac**	**21.13**	**139**	LR	LR	19 44 58.2	
	comp=Z,86nm,20.1s,baz=2.0,slow=32						
ASAR	**Alice Springs**	**24.39**	**223**	P	**P**	**19 39 04.2**	**+1.5**
	4.8nm,0.7s,baz=54,slow=8.9,SNR=63						
STKA	**Stephens Creek**	**27.19**	**199**	P	**P**	**19 39 27.8**	**0.0**
	2.2nm,0.8s,baz=9.4,slow=14,SNR=4.9						
FITZ	**Fitzroy Crossi**	**28.09**	**243**	P	**P**	**19 39 35.9**	**-0.2**
	1.9nm,0.7s,baz=46,slow=7.6,SNR=6.4						
DAV	**Davao City (W)**	**29.33**	**296**	LR	LR	19 51 47.0	
	comp=Z,20nm,19.6s,baz=191,slow=37						
ILAR	**Eielson Array**	**83.90**	**22**	P	**P**	**19 46 13.6**	**+0.3**
	1.2nm,0.8s,baz=247,slow=5.7,SNR=14						
YKA	**Yellowknife Ar**	**97.19**	**28**	P	**P**	**19 47 14.7**	**-1.3**
	0.1nm,0.5s,baz=265,slow=9.4,SNR=1.8						
TORD	**Torodi Ar. Bea**	**149.78**	**285**	PKPbc	**PKiKP**	**19 53 35.9**	**+0.2**
	0.8nm,0.8s,baz=104,slow=2.1,SNR=4.2						

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*IDC **18** 19:33:49.4±1.0, 26.47N×92.81E, h0km, mb3.8/8, mb1 3.8/9, mb1mx3.5/53, mbtmp3.7/9, ML3.6/1, MS2.8/1, Ms1 2.8/1, ms1mx2.2/28, Error ellipse: s-maj=38.9km s-min=20.7km az=60.0*
*NDI **18** 19:33:52.9±1.8, 26.41N×93.18E, h57km±43km, ML3.7, mb4.2(NEIC)*
*DMN **18** 19:33:53.5±0.5, 27.07N×93.13E, h10km, Ml4.6/11, Error ellipse: s-maj=40.5km s-min=9.6km az=6.0*
*NEIC **18** 19:33:55.8±2.3, 26.41N±0.07×93.0E±0.1, h52km±9km, mb4.2/5, Error ellipse: s-maj=14.1km s-min=10.6km az=94.0*

ISC 18 19:33:55.4±0.7, **26.45N**±0.06×**92.82E**±0.05, **h43km, n34,**
σ1s53/47, mb3.8/9, Northeastern India

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**1.22**	**224**	*e*P	**Pn**	**19 34 17.5**	**+1.3**
SHL				*e*S	**Sn**	**19 34 34.5**	**+2.9**
SHL				IAML		19 34 36.4	
	comp=E,2μm,0.1s						
SHL				IAML		19 34 37.1	
	comp=N,1μm,0.1s						
SHL	**Shillong**	**1.22**	**224**		**Pn**	**19 34 18.4**	**+2.2**
KOHI	**KOHIMA**	**1.37**	**122**	*e*P	**Pn**	**19 34 16.6**	**-1.6**
KOHI				*e*S	**Sn**	**19 34 32.4**	**-2.7**
KOHI				IAML		19 34 36.3	
	comp=E,1μm,0.3s						
KOHI				IAML		19 34 36.5	
	comp=N,1μm,0.1s						
LSA	**Lhasa**	**3.56**	**336**		**Pn**	**19 34 51.6**	**+3.1**
GTK	**Tadong**	**3.87**	**284**	*e*P	**Pn**	**19 34 54.2**	**+1.7**
GTK				*e*S	**Sn**	**19 35 38.3**	**+1.5**
TAPN	**Taplejung**	**4.65**	**282**	*e*Pn	**Pn**	**19 35 05.1**	**+1.7**
TAPN				*e*Sn	**Sn**	**19 35 57.6**	**+1.3**
	comp=N,82nm,0.2s						
ODAN	**Odare**	**4.88**	**276**	*e*Pn	**Pn**	**19 35 08.1**	**+1.6**
ODAN				*e*Sn	**Sn**	**19 36 03.1**	**+1.3**
	comp=N,192nm,0.3s						
RAMN	**Ramite**	**5.59**	**276**	*e*Pn	**Pn**	**19 35 18.4**	**+2.2**
RAMN				*e*Sn	**Sn**	**19 36 20.9**	**+1.6**
	comp=N,143nm,0.4s						
JIRN	**Jiri**	**6.04**	**283**	*e*Pn	**Pn**	**19 35 23.9**	**+1.4**
JIRN				*e*Sn	**Sn**	**19 36 29.9**	**-0.6**
	comp=N,157nm,0.3s						
GUN	**Gumba**	**6.35**	**285**	*e*Pn	**Pn**	**19 35 28.1**	**+1.3**
GUN				*e*Sn	**Sn**	**19 36 37.7**	**-0.6**
	comp=N,74nm,0.2s						
PKI	**Pulchoki**	**6.71**	**281**	*e*Pn	**Pn**	**19 35 32.3**	**+0.6**
PKI				*e*Sn	**Sn**	**19 36 46.0**	**-1.0**
	comp=N,50nm,0.4s						
PKIN	**Phulchoki**	**6.72**	**281**	*e*Pn	**Pn**	**19 35 32.6**	**+0.8**
PKIN				*e*Sn	**Sn**	**19 36 46.0**	**-1.2**
	comp=N,41nm,0.2s						
BOK	**Bokaro**	**6.82**	**249**	*e*P	**Pn**	**19 35 35.2**	**+2.2**
BOK				*e*S	**Sn**	**19 36 47.3**	**-2.0**
BOK				IAML		19 36 51.5	
	comp=E,45nm,0.2s						
BOK				IAML		19 36 52.4	
	comp=N,57nm,0.1s						
KKN	**Kakani**	**6.85**	**283**	*e*Pn	**Pn**	**19 35 34.5**	**+0.9**
KKN				*e*Sn	**Sn**	**19 36 50.0**	**-0.4**
	comp=N,52nm,0.2s						
DMN	**Daman**	**6.98**	**281**	*e*Pn	**Pn**	**19 35 35.8**	**+0.5**
GKN	**Gorkha**	**7.45**	**284**	*e*Pn	**Pn**	**19 35 42.6**	**+0.9**
GKN				*e*Sn	**Sn**	**19 37 03.6**	**-1.4**
	comp=N,97nm,0.3s						
DANN	**Dangsing**	**8.28**	**285**	*e*Pn	**Pn**	**19 35 52.4**	**-0.7**
DANN				*e*Sn	**Sn**	**19 37 22.0**	**-3.5**
	comp=N,80nm,0.4s						
KOLN	**Koldanda**	**8.32**	**281**	*e*Pn	**Pn**	**19 35 53.4**	**-0.3**
KOLN				*e*Sn	**Sn**	**19 37 23.9**	**-2.6**
	comp=N,36nm,0.3s						
PYUN	**Piuthan**	**8.90**	**283**	*e*Pn	**Pn**	**19 36 01.0**	**-0.7**
CMAR	**Chiang Mai Arr**	**9.76**	**143**	Pn	**Pn**	**19 36 13.3**	**0.0**
	comp=N,0.1nm,0.3s,baz=308,slow=12,SNR=7.9						
BHPL	**Bhopal**	**14.34**	**260**	*e*S	Sn	19 39 42.7	-11
ENH	**Enshi**	**15.15**	**72**	P	**P**	**19 37 29.5**	**-1.5**
ENH				IAmb	IAmb	19 37 49.0	
	comp=Z,7.5nm,0.7s						
MK31	**Makanchi Array**	**21.95**	**340**	P	**P**	**19 38 44.9**	**-0.4**
MKAR	**Makanchi Array**	**21.95**	**340**	P	**P**	**19 38 45.0**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=144,slow=13,SNR=10.0						
GAR	**Garm**	**22.62**	**309**	P	**P**	**19 38 52.9**	**+0.2**
BTK	**Batken**	**22.79**	**312**	P	**P**	**19 38 55.6**	**+1.2**
BTK				IAmb	IAmb	19 39 01.6	
	comp=Z,8.0nm,0.6s						
SONM	**Songino Array**	**23.86**	**23**	P	**P**	**19 39 03.6**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=210,slow=8.3,SNR=2.3						
ZALV	**Zalesovo Beam**	**28.10**	**350**	P	**P**	**19 39 43.8**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=157,slow=6.4,SNR=2.8						
KSRS	**Korea Array**	**31.57**	**61**	LR	LR	19 53 59.3	
	comp=Z,14nm,18.5s,baz=125,slow=38						
FINES	**FINESS Array B**	**56.04**	**328**	P	**P**	**19 43 28.9**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=107,slow=10,SNR=6.1						
GERES	**GERESS Array B**	**63.62**	**314**	P	**P**	**19 44 22.0**	**0.0**
	comp=Z,0.5nm,0.6s,baz=84,slow=5.5,SNR=7.2						
ASAR	**Alice Springs**	**63.72**	**138**	P	**P**	**19 44 22.8**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=322,slow=6.5,SNR=6.9						
TORD	**Torodi Ar. Bea**	**85.24**	**282**	P	**P**	**19 46 28.4**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=65,slow=4.2,SNR=15						
DBIC	**Dimbokro**	**93.89**	**279**	P	**P**	**19 47 09.4**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=349,slow=10,SNR=1.5						

ROM 18 19:41:56.8±0.1, **43.450N**±0.003×**12.629E**±0.004,
h12km, Md1.3/3, Error ellipse: s-maj=0.3km
s-min=0.2km az=79.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.09**	**207**	P	Pg	19 41 60.0	+0.3
ATFO				S	Sg	19 42 02.4	+0.6
PIEI	**Pieia**	**0.11**	**322**	P	Pg	19 42 00.1	+0.3
PIEI				S	Sg	19 42 02.7	+0.6
PIEI				END			
SSFR	**Montelago di S**	**0.11**	**97**	P	Pg	19 42 00.2	+0.3
SSFR				S	Sg	19 42 02.8	+0.6
SSFR				END			
NARO	**Abbazia di Nar**	**0.16**	**348**	P	Pg	19 42 01.1	+0.5
NARO				S	Sg	19 42 04.1	+0.8
NARO				END			
FOSV	**Fossato di Vic**	**0.18**	**148**	P	Pg	19 42 01.4	+0.4
FOSV				S	Sg	19 42 04.6	+0.8
MPAG	**Monte Paganucc**	**0.20**	**28**	P	Pg	19 42 01.7	+0.4
MPAG				S	Sg	19 42 05.5	+1.1
ARVD	**Arcevia**	**0.23**	**78**	P	Pg	19 41 59.8	-2.0
SNTG	**Esanatoglia**	**0.30**	**131**	P	Pg	19 42 02.5	-0.5
CESI	**CESI - Serrava**	**0.49**	**156**	AML	AML		
	comp=N,32μm,0.2s						
CESI				AML	AML		
	comp=E,22μm,0.2s						

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*TAP **18** 19:46:29.3, 23.91N×121.96E, h27km, ML2.8, B*
*JMA **18** 19:46:29.1, 23.90N×121.99E, h31km±2km, M2.1*

ISC 18 19:46:29.1±1.0, **23.89N**±0.02×**121.99E**±0.02, **h32km**±9km,
n92, σ0s50/165, 1C-9D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.36**	**283**	*e*P	**Pn**	**19 46 38.3**	**+0.1**
	baz=282						
HWA				S	**Sn**	**19 46 43.8**	**-0.3**
	baz=282						
TWD	**Chiawan**	**0.40**	**298**	⇓*i*P	**Pn**	**19 46 38.4**	**-0.4**
	baz=298						
TWD				*i* S	**S

CHGB	**Renai** baz=282	**0.76**	**283**	⇓P	**Pn**	**19 46 44.0**	**+0.1**
CHGB	baz=282			S	**Sb**	**19 46 54.1**	**-0.1**
NNSB	**Datong** baz=314	**0.77**	**314**	P	**Pb**	**19 46 43.5**	**-0.6**
NNSB	baz=314			S	**Sb**	**19 46 53.9**	**-0.4**
NNSH	**Datong** baz=314	**0.77**	**314**	*e*P	**Pb**	**19 46 43.8**	**-0.3**
NNSH	baz=314			*e*S	**Sb**	**19 46 54.1**	**-0.2**
NNS	**Nan Shan** baz=314	**0.78**	**314**	*i* P	**Pb**	**19 46 43.9**	**-0.5**
NNS	baz=314			*i* S	**Sb**	**19 46 54.1**	**-0.7**
VWDT	**VWDT** baz=258	**0.79**	**260**	⇓P	**Pn**	**19 46 44.5**	**+0.5**
VWDT	baz=258			S	**Sn**	**19 46 55.2**	**+0.5**
YULB	**Yu-li** baz=230	**0.81**	**232**	P	**Pn**	**19 46 44.3**	**0.0**
YULB	baz=230			S	**Sb**	**19 46 55.0**	**-0.3**
TWT	**Tachien** baz=295	**0.82**	**296**	P	**Pb**	**19 46 45.2**	**+0.1**
TWT	baz=295			S	**Sn**	**19 46 56.1**	**+0.2**
NDT	**Datong Townshi** baz=329	**0.83**	**329**	*i* P	**Pb**	**19 46 44.9**	**-0.2**
NDT	baz=329			S	**Sn**	**19 46 56.0**	**+0.2**
TWF1	**Yuli** baz=227	**0.83**	**230**	⇓*i*P	**Pn**	**19 46 44.8**	**+0.1**
TWF1	baz=227			*i* S	**Sb**	**19 46 55.8**	**-0.2**
ENTT	**Nioudou** baz=333	**0.84**	**333**	*i* P	**Pn**	**19 46 44.8**	**0.0**
ENTT	baz=333			*i* S	**Sn**	**19 46 56.1**	**0.0**
TDCB	**Techi** baz=295	**0.84**	**295**	P	**Pb**	**19 46 45.1**	**-0.2**
TDCB	baz=295			S	**Sb**	**19 46 56.0**	**-0.3**
TWE	**Neicheng** baz=342	**0.87**	**341**	*i* P	**Pn**	**19 46 45.2**	**0.0**
TWE	baz=342			*i* S	**Sn**	**19 46 57.1**	**+0.2**
ILA	**Ilan** baz=347	**0.90**	**346**	*e*S	**Sn**	**19 46 58.8**	**+1.3**
FULB	**Fuli** baz=221	**0.94**	**223**	P	**Pn**	**19 46 45.8**	**-0.3**
FULB	baz=221			*i* S	**Sb**	**19 46 59.4**	**+0.3**
SSLB	**Suanglung** baz=262	**0.95**	**264**	P	**Pn**	**19 46 46.7**	**+0.3**
SSLB	baz=262			S	**Sn**	**19 46 58.9**	**0.0**
YHNB	**Yeheng** baz=324	**0.95**	**324**	P	**Pn**	**19 46 46.5**	**+0.1**
YHNB	baz=324			S	**Sn**	**19 46 58.4**	**-0.6**
NTC	**Toucheng** baz=352	**0.97**	**352**	*e*P	**Pb**	**19 46 47.2**	**-0.2**
NTC	baz=352			*e*S	**Sb**	**19 47 00.8**	**+0.9**
CHKT	**Chengkung** baz=214	**0.97**	**216**	*e*P	**Pb**	**19 46 47.5**	**0.0**
CHKT	baz=214			*e*S	**Sn**	**19 46 58.9**	**-0.5**
DPDB	**Guoxing** baz=277	**0.98**	**278**	⇓*i*P	**Pb**	**19 46 47.5**	**-0.2**
DPDB	baz=277			*e*S	**Sb**	**19 47 00.1**	**-0.2**
NWLT	**Wulai** baz=334	**0.98**	**333**	*e*P	**Pn**	**19 46 46.8**	**0.0**
NWLT	baz=334			S	**Sn**	**19 46 59.4**	**-0.3**
SMLT	**Sun Moon Lake** baz=268	**0.99**	**270**	⇓*i*P	**Pb**	**19 46 47.7**	**-0.3**
SMLT	baz=268			*i* S	**Sn**	**19 47 00.2**	**+0.2**
WHP	**Taichung City** baz=291	**1.02**	**292**	P	**Pb**	**19 46 48.3**	**-0.1**
WHP	baz=291			*e*S	**Sb**	**19 47 01.2**	**-0.4**
TYC	**Yuchr** baz=269	**1.03**	**271**	*i* P	**Pb**	**19 46 48.2**	**-0.3**
TYC	baz=269			S	**Sb**	**19 47 01.7**	**0.0**
JYNG	**Yonagunijimaku**	**1.04**	**57**	P	**Pn**	**19 46 47.6**	**+0.1**
JYNG				S	**Sn**	**19 47 00.9**	**0.0**
WHYT	**Xinyi Township** baz=258	**1.06**	**259**	*i* P	**Pb**	**19 46 48.9**	**-0.1**
WHYT	baz=258			S	**Sb**	**19 47 02.7**	**+0.2**
TIPB	**Shuangxi** baz=353	**1.08**	**352**	P	**Pb**	**19 46 49.0**	**-0.4**
TIPB	baz=353			S	**Sn**	**19 47 02.5**	**+0.4**
YOJ	**Yonaguni jima** baz=59	**1.09**	**59**	P	**Pn**	**19 46 48.6**	**+0.3**
YOJ	baz=59			S	**Sn**	**19 47 02.3**	**-0.1**
YOJ	**Yonaguni jima**	**1.09**	**59**	P	**Pn**	**19 46 48.6**	**+0.3**
YOJ				S	**Sn**	**19 47 02.4**	**+0.1**
TWB1	**Santiao Chiao** baz=1.0	**1.11**	**0**	S	**Sb**	**19 47 04.3**	**+0.4**
ELDTW	**Lidau** baz=230	**1.13**	**232**	*i* P	**Pn**	**19 46 49.0**	**+0.1**
ELDTW	baz=230			*i* S	**Sn**	**19 47 03.9**	**+0.4**
TWA	**Mucha** baz=342	**1.14**	**341**	*e*P	**Pb**	**19 46 49.9**	**-0.4**
TWA	baz=342			*e*S	**Sb**	**19 47 04.8**	**0.0**
NHDH	**Xindian Distri** baz=339	**1.14**	**339**	P	**Pb**	**19 46 50.2**	**-0.2**
NHDH	baz=339			*e*S	**Sb**	**19 47 04.2**	**-0.8**
ALS	**Alishan** baz=249	**1.15**	**251**	P	**Pb**	**19 46 50.4**	**-0.3**
ALS	baz=249			S	**Sb**	**19 47 05.2**	**-0.1**
WJS	**Zhushan** baz=265	**1.15**	**267**	*e*P	**Pn**	**19 46 49.7**	**+0.6**
LIOB	**Emei** baz=310	**1.16**	**310**	P	**Pb**	**19 46 50.5**	**-0.1**
NSTT	**Nanjuang** baz=309	**1.16**	**309**	*i* P	**Pb**	**19 46 50.8**	**+0.1**
NSTT	baz=309			S	**Sb**	**19 47 05.2**	**-0.1**
TATO	**Taipei** baz=338	**1.17**	**337**	*e*P	**Pb**	**19 46 50.2**	**-0.6**
TATO	baz=338			S	**Sb**	**19 47 05.5**	**-0.1**
NWF	**Wu-fen Shan** baz=351	**1.19**	**351**	P	**Pb**	**19 46 51.0**	**-0.1**
NWF	baz=351			*i* S	**Sb**	**19 47 05.9**	**-0.3**
WFSB	**Wu-fen Shan** baz=351	**1.19**	**351**	P	**Pb**	**19 46 51.0**	**-0.1**
WFSB	baz=351			S	**Sb**	**19 47 05.8**	**-0.4**
TWQ1	**Liyutan** baz=291	**1.20**	**292**	*i* P	**Pb**	**19 46 51.6**	**+0.3**
TWQ1	baz=291			S	**Sb**	**19 47 06.2**	**-0.2**
TAP	**Taipei** baz=339	**1.22**	**339**	*e*S	**Sb**	**19 47 06.6**	**-0.5**
TCU	**Taichung** baz=281	**1.22**	**282**	*e*P	**Pb**	**19 46 52.2**	**+0.5**
TCU	baz=281			*e*S	**Sb**	**19 47 06.9**	**-0.3**
CHN5	**Tsauling** baz=255	**1.23**	**256**	*e*P	**Pb**	**19 46 52.1**	**+0.2**
CHN5	baz=255			*e*S	**Sb**	**19 47 07.4**	**-0.2**
NSY	**Sanyi** baz=294	**1.23**	**295**	P	**Pb**	**19 46 51.3**	**-0.6**
NSY	baz=294			S	**Sb**	**19 47 06.6**	**-0.9**
NMLH	**Miaoli** baz=300	**1.27**	**301**	*e*P	**Pb**	**19 46 52.5**	**+0.1**
NMLH	baz=300			*e*S	**Sb**	**19 47 08.1**	**-0.3**
TWH	**Lutao** baz=199	**1.27**	**202**	*e*P	**Pn**	**19 46 50.6**	**0.0**
HSN	**Hsinchu** baz=316	**1.29**	**315**	*e*S	**Sb**	**19 47 08.2**	**-1.0**
NCUH	**Zhongli** baz=326	**1.29**	**326**	P	**Pn**	**19 46 51.7**	**+0.6**
NCUH	baz=326			*e*S	**Sb**	**19 47 08.9**	**-0.3**
NCU	**National Centr** baz=326	**1.30**	**326**	*e*S	**Sb**	**19 47 08.9**	**-0.3**
YM01	**YM01** baz=343	**1.30**	**343**	P	**Pb**	**19 46 52.4**	**-0.7**
YM01	baz=343			S	**Sb**	**19 47 08.5**	**-1.0**
TWS1	**Kuangyinshan** baz=337	**1.31**	**337**	*e*P	**Pb**	**19 46 52.2**	**-0.9**
TWS1	baz=337			*e*S	**Sb**	**19 47 09.3**	**-0.3**
WDJ	**Dajia District** baz=290	**1.31**	**290**	*e*P	**Pb**	**19 46 53.1**	**-0.1**
WDJ	baz=290			*e*S	**Sb**	**19 47 09.2**	**-0.5**
YM10	**YM10** baz=343	**1.31**	**343**	*e*P	**Pn**	**19 46 52.0**	**+0.6**
YM10	baz=343			S	**Sn**	**19 47 08.6**	**+0.7**
WCHH	**Zhanghua** baz=277	**1.32**	**278**	*e*P	**Pb**	**19 46 52.9**	**-0.4**
WCHH	baz=277			*e*S	**Sb**	**19 47 09.3**	**-0.6**
WGK	**Gukeng** baz=260	**1.32**	**261**	P	**Pb**	**19 46 53.1**	**-0.3**
YM04	**YM04** baz=342	**1.32**	**342**	*e*P	**Pn**	**19 46 51.6**	**+0.1**
YM04	baz=342			S	**Sb**	**19 47 09.6**	**-0.4**
YM11	**YM11** baz=344	**1.32**	**344**	P	**Pn**	**19 46 52.1**	**+0.6**
YM11	baz=344			S	**Sb**	**19 47 09.6**	**-0.5**
YM08	**YM08** baz=345	**1.34**	**344**	*e*P	**Pn**	**19 46 52.6**	**+0.9**
YM08	baz=345			*e*S	**Sn**	**19 47 09.1**	**+0.7**
STYT	**Tauyuan** baz=236	**1.34**	**237**	P	**Pb**	**19 46 53.1**	**-0.7**
STYT	baz=236			S	**Sn**	**19 47 09.6**	**+1.0**
WDLH	**Douliu** baz=260	**1.34**	**262**	*e*P	**Pb**	**19 46 53.3**	**-0.4**
WDLH	baz=260			*e*S	**Sb**	**19 47 10.8**	**+0.3**
YM03	**YM03** baz=343	**1.34**	**342**	*e*P	**Pb**	**19 46 53.2**	**-0.6**
YM03	baz=343			S	**Sn**	**19 47 09.4**	**+0.8**
ANP	**Anpu** baz=342	**1.35**	**342**	*e*P	**Pn**	**19 46 52.9**	**+0.9**
ANP	baz=342			*e*S	**Sb**	**19 47 10.0**	**-1.0**
TPUB	**Ta-pu** baz=243	**1.38**	**245**	*e*P	**Pb**	**19 46 54.0**	**-0.3**
TPUB	baz=243			*e*S	**Sb**	**19 47 11.9**	**+0.3**
NHW	**Xinwu Township** baz=322	**1.40**	**323**	*e*S	**Sb**	**19 47 11.5**	**-0.7**
WTP	**Ta-pu** baz=241	**1.41**	**243**	*e*P	**Pb**	**19 46 54.4**	**-0.6**
RLNB	**Erlin** baz=269	**1.49**	**270**	*e*P	**Pn**	**19 46 54.8**	**+1.1**
TWK	**Hsinying** baz=244	**1.51**	**246**	*e*P	**Pb**	**19 46 56.0**	**-0.5**
CHN1	**Nanshi** baz=241	**1.51**	**242**	*e*P	**Pb**	**19 46 56.4**	**-0.2**
SGST	**Jiashian** baz=236	**1.52**	**238**	*e*P	**Pn**	**19 46 55.5**	**+1.3**
SLGT	**Liugui** baz=233	**1.52**	**234**	*e*P	**Pb**	**19 46 56.2**	**-0.6**
SLGT	baz=233			*e*S	**Sb**	**19 47 15.3**	**-0.4**
IRIF	**Iriomote-Funau**	**1.65**	**74**	P	**Pn**	**19 46 56.8**	**+0.8**
IRIF				S	**Sn**	**19 47 17.0**	**+0.9**
HATJ	**Hateruma jima**	**1.67**	**84**	P	**Pn**	**19 46 57.2**	**+1.0**
MASBT	**Mashibuluo** baz=223	**1.78**	**225**	*e*P	**Pb**	**19 46 59.8**	**-1.3**
MASBT	baz=223			*e*S	**Sn**	**19 47 19.8**	**+0.4**
EAST	**Anshuo** baz=213	**1.83**	**215**	*e*P	**Pn**	**19 46 59.1**	**+0.7**
JKRS	**Kuro-shima**	**1.88**	**79**	P	**Pn**	**19 47 00.1**	**+1.0**
JKRS				*e*S	**Sn**	**19 47 23.0**	**+1.2**
LAY	**Lan-yu** baz=191	**1.89**	**192**	*e*P	**Pn**	**19 46 58.8**	**-0.5**
JIJ	**Ishigaki jima**	**2.03**	**76**	P	**Pn**	**19 47 01.2**	**+0.1**
JIJ				S	**Sn**	**19 47 24.5**	**-0.8**
JISG	**Ishigakijimahi**	**2.23**	**72**	P	**Pn**	**19 47 03.9**	**0.0**
JISG				S	**Sn**	**19 47 29.1**	**-1.3**
JTJ	**Tarama**	**2.59**	**73**	P	**Pn**	**19 47 09.1**	**+0.3**
JTJ				S	**Sn**	**19 47 39.5**	**+0.3**

TAP 18 19:48:12.4,24°39N×121°70E,h8km,ML1.7,3C-1D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau** baz=49	**0.06**	**43**	*i* P	Pg	19 48 14.3	+0.1
ENA	baz=49			*i* S	Sg	19 48 15.6	+0.1
NACB	**Ninganchiao** baz=203	**0.23**	**204**	⇑P	Pg	19 48 16.9	-0.1
NACB	baz=203			S	Sg	19 48 20.2	+0.1
TWC	**Suao** baz=33	**0.26**	**32**	⇑*i*P	Pg	19 48 17.6	0.0
TWC	baz=33			*i* S	Sg	19 48 21.2	+0.1
ETLH	**Xiulin Townshi** baz=227	**0.27**	**228**	P	Pg	19 48 17.7	0.0
ETLH	baz=227			S	Sg	19 48 21.2	-0.1
NDT	**Datong Townshi** baz=322	**0.27**	**322**	*e*P	Pg	19 48 17.9	+0.1
NDT	baz=322			S	Sg	19 48 22.1	+0.6
ENTT	**Nioudou** baz=335	**0.28**	**335**	*i* P	Pg	19 48 18.1	+0.2
ENTT	baz=335			*i* S	Sg	19 48 22.2	+0.4
NNSB	**Datong** baz=278	**0.29**	**278**	⇑P	Pg	19 48 18.3	+0.1
NNSB	baz=278			S	Sg	19 48 21.9	-0.2
NNSH	**Datong** baz=278	**0.29**	**278**	*e*P	Pg	19 48 18.3	+0.1
NNSH	baz=278			*e*S	Sg	19 48 21.9	-0.2
NNS	**Nan Shan** baz=280	**0.30**	**280**	*i* P	Pg	19 48 18.4	0.0
NNS	baz=280			*i* S	Sg	19 48 22.4	0.0
TWD	**Chiawan** baz=195	**0.32**	**197**	⇓*i*P	Pg	19 48 18.6	0.0
TWD	baz=195			*i* S	Sg	19 48 23.0	+0.1
TWE	**Neicheng** baz=357	**0.34**	**355**	P	Pg	19 48 18.2	-0.8
TWE	baz=357			*i* S	Sg	19 48 23.6	+0.1
YHNB	**Yeheng** baz=313	**0.41**	**314**	P	Pg	19 48 20.1	-0.3
YHNB	baz=313			S	Sg	19 48 26.3	+0.5
EOS1	**EOS1** baz=67	**0.42**	**67**	P	Pg	19 48 21.2	+0.6
EOS1	baz=67			*e*S	Sb	19 48 28.6	0.0
NWLT	**Wulai** baz=335	**0.43**	**335**	*e*P	Pg	19 48 20.0	-0.7
NWLT	baz=335			*e*S	Sg	19 48 26.7	+0.3
WHF	**Hehuan Shan** baz=238	**0.46**	**239**	*i* P	Pg	19 48 21.3	-0.1
WHF	baz=238			*i* S	Sg	19 48 28.0	+0.4
TWT	**Tachien** baz=254	**0.49**	**255**	*e*P	Pg	19 48 21.7	-0.3
TWT	baz=254			*e*S	Sg	19 48 28.6	0.0
TDCB	**Techi** baz=254	**0.51**	**255**	P	Pg	19 48 21.8	-0.5
TDCB	baz=254			*e*S	Sg	19 48 29.1	+0.1
CHGB	**Renai** baz=235	**0.58**	**236**	P	Pg	19 48 23.9	+0.2
CHGB	baz=235			S	Sb	19 48 32.4	-0.9
TIPB	**Shuangxi** baz=11	**0.59**	**11**	P	Pg	19 48 24.1	+0.2
TIPB	baz=11			S	Sg	19 48 31.6	-0.1
ESL	**Shilin** baz=202	**0.62**	**203**	P	Pg	19 48 23.9	-0.4
ESL	baz=202			S	Sg	19 48 33.3	+0.8
OWD	**Renai** baz=227	**0.64**	**228**	*e*P	Pg	19 48 24.6	-0.2
OWD	baz=227			*e*S	Sg	19 48 33.6	+0.4
WHP	**Taichung City** baz=261	**0.69**	**261**	*e*P	Pg	19 48 25.2	-0.6
WHP	baz=261			*e*S	Sg	19 48 34.7	-0.2
YM01	**YM01** baz=351	**0.77**	**351**	P	Pg	19 48 26.4	-0.8
YM01	baz=351			*e*S	Sg	19 48 37.4	+0.2
VWDT	**VWDT** baz=218	**0.81**	**219**	*e*P	Pg	19 48 27.7	-0.3
VWDT	baz=218			*e*S	Sg	19 48 39.1	+0.6
SSLB	**Suanglung** baz=228	**0.90**	**229**	*e*P	Pg	19 48 28.8	-0.9
SSLB	baz=228			*e*S	Sg	19 48 42.0	+0.5

JMA 18 19:48:51.8,24°51N×123°55E,h0km,M0.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.24**	**137**	P	Pg	19 48 56.8	+0.4
IRIF				S	Sg	19 49 00.5	+1.0
YOJ	**Yonaguni jima**	**0.49**	**265**	P	Pg	19 49 02.0	+0.7
YOJ				*e*S	Sg	19 49 08.8	+1.1
JKRS	**Kuro-shima**	**0.50**	**123**	P	Pg	19 49 02.2	+0.8
JKRS				S	Sb	19 49 09.6	-1.7
JYNG	**Yonagunijimaku**	**0.55**	**264**	P	Pg	19 49 03.1	+0.7
JYNG				*e*S	Sg	19 49 10.5	+0.9
JIJ	**Ishigaki jima**	**0.56**	**105**	P	Pg	19 49 02.8	+0.3
JIJ				S	Sg	19 49 10.5	+0.7
JISG	**Ishigakijimahi**	**0.70**	**84**	P	Pg	19 49 06.0	+0.8
JISG				S	Sb	19 49 15.8	-1.2
JTJ	**Tarama**	**1.06**	**83**	P	Pg	19 49 12.5	+0.4
JTJ				S	Sb	19 49 27.1	-0.3

IDC ***18*** *19:53:26.8±0.6,65°38N×133°45W,h0km,mb3.7/8, mb1 3.9/13,mb1mx3.7/41,mbtmp3.8/13,ML4.1/5,MS3.0/4, Ms1 3.0/4,ms1mx2.5/36,Error ellipse: s-maj=10.5km s-min=8.7km az=31.0*

PGC ***18*** *19:53:28.3±0.0,65°29N×133°24W,h1km,ML3.8/11, 245km Sse of Fort McPherson, Nt Northern Yukon Territory, Canada*

ISC 18 19:53:27.3±0.5,65°31N±0°03×133°25W±0°04,h10km,n49, σ3°04/72,mb3.8/8,Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EPYK	**Eagle Plains** baz=127	**1.78**	**308**	P	**Pn**	**19 53 59.0**	**+0.8**
EPYK	baz=127			S	**Sb**	**19 54 23.0**	**+0.7**
DAWY	**Dawson**	**2.92**	**247**	Pn	**Pn**	**19 54 14.7**	**+0.9**
DAWY				Sg	**Sb**	**19 54 57.9**	**+2.7**
INK	**Inuvik** 4.9nm,0.3s,baz=172,slow=13,SNR=99	**3.01**	**358**	Pn	**Pn**	**19 54 16.1**	**+1.2**
INK	29nm,0.3s,baz=154,slow=12,SNR=6.4			Sn	**Sn**	**19 54 50.1**	**-0.9**
INK	45nm,0.3s,baz=141,slow=14,SNR=5.6			Lg	Lg	19 54 60.0	
INK	comp=Z,136nm,18.2s,baz=152,slow=47			LR	LR	19 55 45.0	
INK	**Inuvik**	**3.01**	**358**	Pn	**Pn**	**19 54 16.2**	**+1.2**
INK				Sn	**Sn**	**19 54 53.1**	**+2.1**
YUK1	**Sand Pete Hill**	**4.53**	**229**	Pn	**Pn**	**19 54 36.6**	**+0.5**
YUK1				Sg	**Sb**	**19 55 47.5**	**+5.9**
YUK4	**Talbot Arm**	**4.67**	**214**	Pn	**Pn**	**19 54 36.8**	**-1.1**
YUK5	**Granite Creek**	**4.69**	**209**	Pn	**Pn**	**19 54 38.7**	**+0.5**
WHY	**Whitehorse**	**4.73**	**190**	Pn	**Pn**	**19 54 39.1**	**+0.3**
WHY				Sn	**Sn**	**19 55 32.1**	**-1.5**
WHY				Sg	**Sb**	**19 55 52.3**	**+5.0**
YUK3	**Moose Creek**	**4.79**	**226**	Pn	**Pn**	**19 54 40.5**	**+0.8**
YUK3				Sg	**Sb**	**19 55 55.6**	**+6.4**
YUK2	**White River**	**4.90**	**227**	Pn	**Pn**	**19 54 41.3**	**+0.2**
YUK2				Sg	**Sg**	**19 55 59.4**	**-5.2**
YUK6	**Outpost Mounta**	**4.96**	**210**	Sg	**Sb**	**19 56 01.0**	**+7.0**
DOT	**Dot Lake**	**4.97**	**255**	Pn	**Pn**	**19 54 42.3**	**+0.4**
DOT				Sg	**Sg**	**19 56 01.8**	**-4.7**
YUK7	**Dusty Glacier**	**5.29**	**207**	Pn	**Pn**	**19 54 47.5**	**+0.9**
YUK7				Sg	**Sb**	**19 56 09.9**	**+6.3**
C36M	**Paulatuk** baz=226	**5.38**	**37**	P	**Pn**	**19 54 47.7**	**+0.2**
C36M	baz=226			S	**Sn**	**19 55 47.8**	**-1.6**
CTGM	**Chitina Glacie**	**5.70**	**224**	Pn	**Pn**	**19 54 53.3**	**+1.2**
CTGM				Sg	**Sg**	**19 56 24.4**	**-5.6**
ILAR	**Eielson Array** 0.5nm,0.3s,baz=81,slow=12,SNR=19	**5.80**	**271**	Pn	**Pn**	**19 54 52.9**	**-0.5**
ILAR	1.7nm,0.3s,baz=83,slow=16,SNR=5.3			Sn	**Sn**	**19 55 56.0**	**-3.8**
ILAR	3.1nm,0.3s,baz=69,slow=26,SNR=6.2			Lg	Lg	19 56 25.4	
DHRN	**Dharma Camp**	**5.83**	**67**	Pn	**Pn**	**19 54 54.4**	**+0.7**
DHRN				Sn	**Sn**	**19 55 58.0**	**-2.4**
PAX	**Paxson**	**5.84**	**252**	Sg	**Sg**	**19 56 29.8**	**-4.8**
PTPK	**Patty Peak**	**5.87**	**229**	Pn	**Pn**	**19 54 54.8**	**+0.4**
PTPK				Sn	**Sn**	**19 55 59.7**	**-2.1**
BALM	**Baldy**	**5.95**	**228**	Pn	**Pn**	**19 54 56.6**	**+1.2**
BALM				Sg	**Sb**	**19 56 30.6**	**+8.4**
KIAG	**Kiagna River**	**6.04**	**227**	Pn	**Pn**	**19 54 58.5**	**+1.8**
KIAG				Sn	**Sn**	**19 56 03.7**	**-2.2**
PLBC	**Pleasant Camp**	**6.05**	**195**	Pn	**Pn**	**19 54 57.6**	**+0.8**
PLBC				Sn	**Sn**	**19 56 03.9**	**-2.2**
PLBC				Sg	**Sg**	**19 56 36.0**	**-5.5**
PCA	**Pinnacle**	**6.14**	**215**	Pn	**Pn**	**19 54 59.9**	**+1.7**
PNL	**Peninsula**	**6.34**	**209**	Pn	**Pn**	**19 55 01.6**	**+0.8**
PNL				Sg	**Sg**	**19 56 43.8**	**-6.7**
BESE	**Bessie Mountai**	**6.80**	**187**	Pn	**Pn**	**19 55 07.8**	**+0.6**
BESE				Sn	**Sn**	**19 56 21.5**	**-3.1**
DLBC	**Dease Lake** 9.5nm,0.3s,baz=6.1,slow=11,SNR=44	**7.07**	**166**	Pn	**Pn**	**19 55 11.3**	**+0.5**
DLBC	2.1nm,0.3s,baz=336,slow=20,SNR=3.2			Sn	**Sn**	**19 56 25.9**	**-5.2**
DLBC	1.4nm,0.3s,baz=300,slow=20,SNR=7.9			Lg	Lg	19 57 03.5	
DLBC	**Dease Lake**	**7.07**	**166**	Pn	**Pn**	**19 55 11.3**	**+0.5**
DLBC				Sg	Sb	19 57 05.0	+11
COLD	**Coldfoot**	**7.10**	**293**	Pn	**Pn**	**19 55 11.8**	**+0.6**
COLD				Sn	**Sn**	**19 56 29.3**	**-2.4**
TOLK	**Toolik Lake Re** baz=110	**7.21**	**305**	P	**Pn**	**19 55 14.2**	**+1.6**
A36M	**Sachs Harbour** baz=208	**7.30**	**20**	P	**Pn**	**19 55 16.9**	**+3.0**
NBC2	**NorthernBC 2**	**7.45**	**133**	Pn	**Pn**	**19 55 16.9**	**+1.0**
KUKN	**Kugluktuk,NWT**	**7.65**	**63**	Pn	**Pn**	**19 55 19.1**	**+0.4**
KUKN				Sn	**Sn**	**19 56 41.8**	**-3.6**
YKW3	**Yellowknife Ar**	**8.64**	**100**	Pn	**Pn**	**19 55 32.0**	**-0.3**
YKW3				Sn	**Sn**	**19 57 03.1**	**-6.5**
YKA	**Yellowknife Ar** 2.3nm,0.3s,baz=296,slow=12,SNR=42	**8.68**	**100**	Pn	**Pn**	**19 55 32.1**	**-0.7**
YKA	2.4nm,0.3s,baz=293,slow=22,SNR=7.6			Sn	Sn	19 57 03.1	-7.5
YKA	baz=105,slow=24,SNR=2.1			Lg	Lg	19 58 02.3	
VIB	**Van Inlet**	**12.11**	**178**	P	**Pn**	**19 56 21.4**	**+1.7**
DIB	**Dawson Inlet,**	**12.16**	**178**	P	**Pn**	**19 56 22.0**	**+1.7**
BBB	**Bella Bella** comp=Z,60nm,20.0s,baz=26,slow=38	**13.43**	**166**	LR	LR	20 02 05.4	
RES	**Resolute Bay** 0.6nm,0.3s,baz=251,slow=14,SNR=20	**15.76**	**37**	Pn	**Pn**	**19 57 08.0**	**-0.9**
RES				Sn	Sn	19 59 51.4	-12

0.3nm,0.3s,baz=319,slow=9.3,SNR=2.0

RES	**Resolute Bay**	**15.76**	**37**	P	**Pn**	**19 57 08.2 -0.7**
RES				S	Sn	19 59 52.6 -11
NEW	**Newport**	**19.13**	**146**	LR	LR	20 05 38.8
	comp=Z,53nm,20.2s,baz=294,slow=38					
YBH	**Yreka Blue Hor**	**24.37**	**161**	LR	LR	20 09 18.7
	comp=Z,45nm,19.6s,baz=276,slow=39					
TXAR	**Lajitas Array**	**40.43**	**138**	P	**P**	**20 01 07.2 +1.6**
	0.3nm,0.6s,baz=1.9,slow=7.5,SNR=5.0					
ARCES	**ARCESS Array B**	**44.61**	**10**	P	**P**	**20 01 38.1 -1.0**
	2.9nm,0.9s,baz=16,slow=9.1,SNR=4.7					
FINES	**FINESS Array B**	**52.62**	**12**	P	**P**	**20 02 41.0 +0.3**
	0.9nm,0.5s,baz=356,slow=8.8,SNR=20					
ZALV	**Zalesovo Beam**	**57.55**	**334**	P	**P**	**20 03 17.1 +0.7**
	0.4nm,0.5s,baz=26,slow=2.7,SNR=2.7					
SONM	**Songino Array**	**58.15**	**317**	P	**P**	**20 03 20.6 -0.3**
	0.3nm,0.5s,baz=29,slow=3.3,SNR=1.6					
AKASG	**Malin Array Be**	**63.53**	**12**	P	**P**	**20 03 58.3 +1.1**
	0.3nm,0.3s,baz=353,slow=6.7,SNR=1.8					
MKAR	**Makanchi Array**	**64.87**	**334**	P	**P**	**20 04 06.6 +0.4**
	0.3nm,0.6s,baz=23,slow=3.8,SNR=2.0					
ESDC	**Sonseca Array**	**68.17**	**40**	P	**P**	**20 04 29.1 +1.7**
	0.8nm,1.0s,baz=331,slow=6.0,SNR=4.4					

WEL 18 20:30:45.5,38°S±4.4″×17°6E±1″,h268km±9km,M3.0/43, MLv3.0/43,Error ellipse: s-maj=0.0km s-min=0.0km az=101.2,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOZ	**Tahuroa Road**	**0.39**	**298**	P	Pn	20 31 19.5	-0.7
HSRZ	**Hossack Road**	**0.46**	**149**	P	Pn	20 31 24.2	+3.9
MUGZ	**Murupara**	**0.86**	**131**	P	Pn	20 31 21.3	-0.4
URZ	**Urewera**	**0.98**	**111**	P	Pn	20 31 21.2	-1.1
MRHZ	**Matea Rd**	**0.99**	**158**	P	Pn	20 31 21.9	-0.5
MKAZ	**Moumakai**	**1.02**	**322**	P	Pn	20 31 22.7	+0.1
HIZ	**Hauiti**	**1.04**	**235**	P	Pn	20 31 23.1	+0.4
RTZ	**Ruatahuna**	**1.08**	**131**	P	Pn	20 31 22.5	-0.4
KUZ	**Kuaotunu**	**1.18**	**351**	P	Pn	20 31 23.2	-0.3
TWVZ	**Taurewa**	**1.22**	**199**	P	Pn	20 31 24.0	+0.3
WIAZ	**Waiheke Island**	**1.29**	**330**	P	Pn	20 31 24.5	+0.3
RAGZ	**Rawiri**	**1.30**	**117**	P	Pn	20 31 24.2	-0.1
MWZ	**Matawai**	**1.32**	**109**	P	Pn	20 31 23.9	-0.5
BKZ	**Black Stump Fm**	**1.32**	**161**	P	Pn	20 31 24.1	-0.3
RAHZ	**Arahi**	**1.34**	**138**	P	Pn	20 31 24.9	+0.4
TUVZ	**Tukino**	**1.37**	**189**	P	Pn	20 31 25.2	+0.4
FWVZ	**Far West T-bar**	**1.37**	**193**	P	Pn	20 31 25.1	+0.3
RUGZ	**Raukumara Rang**	**1.37**	**93**	P	Pn	20 31 23.3	-1.5
SNGZ	**Shannon Statio**	**1.40**	**129**	P	Pn	20 31 25.2	+0.4
TRVZ	**Turoa**	**1.42**	**192**	P	Pn	20 31 25.7	+0.5
HAZ	**Te Kaha**	**1.47**	**84**	P	Pn	20 31 24.6	-0.7
MOVZ	**Moawhango**	**1.50**	**186**	P	Pn	20 31 25.4	-0.2
WHHZ	**Waihua**	**1.54**	**139**	P	Pn	20 31 25.3	-0.5
KWHZ	**Kaweka Forest**	**1.55**	**166**	P	Pn	20 31 26.7	+0.7
BHHZ	**Black Hill Sta**	**1.57**	**177**	P	Pn	20 31 26.1	0.0
ARHZ	**Aropaoanui**	**1.58**	**199**	P	Pn	20 31 27.0	+0.9
TWGZ	**Tauwhareparae**	**1.63**	**100**	P	Pn	20 31 26.8	+0.3
RIGZ	**Rimuhau**	**1.64**	**119**	P	Pn	20 31 27.0	+0.4
PKGZ	**Pakihiroa**	**1.69**	**90**	P	Pn	20 31 27.5	+0.5
KRHZ	**Kereru**	**1.76**	**169**	P	Pn	20 31 27.9	+0.5
PRGZ	**Paritu Road**	**1.83**	**124**	P	Pn	20 31 28.7	+0.7
PUZ	**Puketiti**	**1.84**	**96**	P	Pn	20 31 28.1	0.0
CNGZ	**Carnagh Statio**	**1.87**	**108**	P	Pn	20 31 27.3	-1.1
MXZ	**Matakaoa Point**	**1.91**	**80**	P	Pn	20 31 28.9	+0.2
CKHZ	**Cape Kidnapper**	**1.95**	**153**	P	Pn	20 31 30.2	+1.2
WMGZ	**Waiomatatini S**	**1.96**	**88**	P	Pn	20 31 29.2	+0.1
MHGZ	**Mahia Peninsul**	**1.98**	**129**	P	Pn	20 31 30.0	+0.8
PKE	**Pukeiti**	**1.99**	**230**	P	Pn	20 31 31.7	+2.3
PNHZ	**Puhenui**	**2.00**	**174**	P	Pn	20 31 30.0	+0.5
KAHZ	**Kahuranaki**	**2.01**	**159**	P	Pn	20 31 30.5	+1.0
TSZ	**Takapari Road**	**2.14**	**180**	P	Pn	20 31 31.2	+0.5
DVHZ	**Dannevirke**	**2.39**	**176**	P	Pn	20 31 33.3	+0.4
PRHZ	**Porangahau**	**2.41**	**167**	P	Pn	20 31 33.7	+0.6
POWZ	**Post Office Ro**	**2.48**	**183**	P	S	20 32 06.6	-5.5
ANWZ	**Angora Road**	**2.57**	**171**	P	Pn	20 31 35.6	+0.9
PRWZ	**Pori Road**	**2.63**	**179**	P	Pn	20 31 36.2	+0.9
PRWZ	**Pori Road**	**2.63**	**179**	P	S	20 32 06.9	-8.1
MRZ	**Mangatainoka R**	**2.75**	**186**	P	Pn	20 31 35.9	-0.6
BFZ	**Birch Farm**	**2.77**	**175**	P	Pn	20 31 37.4	+0.7
TIWZ	**Tintock**	**2.86**	**181**	P	Pn	20 31 38.2	+0.6
TIWZ	**Tintock**	**2.86**	**181**	P	S	20 32 10.8	-8.3
HOWZ	**Holdsworth Sta**	**3.00**	**186**	P	Pn	20 31 39.4	+0.3
HOWZ	**Holdsworth Sta**	**3.00**	**186**	P	S	20 32 16.4	-5.2
CPWZ	**Castlepoint**	**3.00**	**176**	P	S	20 32 16.2	-5.3
KIW	**Kapiti Island**	**3.05**	**195**	P	Pn	20 31 39.8	+0.3
TMWZ	**Te Maipa**	**3.19**	**181**	P	Pn	20 31 41.8	+0.8
TMWZ	**Te Maipa**	**3.19**	**181**	P	S	20 32 15.8	-9.5
MTW	**Mount Morrison**	**3.26**	**186**	P	Pn	20 31 42.2	+0.4
MTW	**Mount Morrison**	**3.26**	**186**	P	S	20 32 18.0	-8.5
CAW	**Cannon Point**	**3.26**	**192**	P	Pn	20 31 42.3	+0.6
DUVZ	**D'Urville Isla**	**3.27**	**208**	P	Pn	20 31 42.7	+0.6
TRWZ	**Traveller**	**3.48**	**183**	P	Pn	20 31 44.9	+0.7
TRWZ	**Traveller**	**3.48**	**183**	P	S	20 32 23.9	-7.1
PAWZ	**Paruwai Farm**	**3.48**	**186**	P	Pn	20 31 44.6	+0.4
PAWZ	**Paruwai Farm**	**3.48**	**186**	P	S	20 32 26.6	-4.5
MSWZ	**Moikau Station**	**3.54**	**188**	P	Pn	20 31 45.0	+0.2
MSWZ	**Moikau Station**	**3.54**	**188**	P	S	20 32 26.3	-5.8
PLWZ	**Palliser**	**3.69**	**188**	P	Pn	20 31 46.7	+0.2
NNZ	**Nelson**	**3.84**	**210**	P	Pn	20 31 48.9	+0.7
BSWZ	**Blackbirch Sta**	**4.11**	**202**	P	Pn	20 31 52.4	+1.0
THZ	**Tophouse**	**4.50**	**210**	P	Pn	20 31 56.8	+1.0
KHZ	**Kahutara**	**4.86**	**202**	P	Pn	20 32 01.3	+1.3
GVZ	**Greta Valley S**	**5.51**	**203**	P	Pn	20 32 09.3	+1.3
LTZ	**Lake Taylor**	**5.61**	**209**	P	Pn	20 32 09.2	0.0
OXZ	**Oxford**	**6.17**	**208**	P	Pn	20 32 15.8	-0.1
OKCZ	**Okains Bay**	**6.20**	**200**	P	Pn	20 32 17.7	+1.3
MQZ	**McQueen's Vall**	**6.30**	**202**	P	Pn	20 32 17.8	+0.3

UCR 18 20:50:41.5±1.4, 11°.21N×85°.66W,h164km±4km, MD3.9
INET 18 20:50:41.2, 11°.42N×85°.58W,h169km, ML2.9
ISC 18 20:50:40.9±3.7, 11°.3N±0°.1×85°.8W±0°.2,h163km±18km,n23, σ0°.58/35,1C,Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBS3	**Finca Las Img**	**0.57**	**149**	*i* P	**Pn**	**20 51 04.2**	**0.0**
GBS3				*i* S	**Sn**	**20 51 22.7**	**+0.7**
BUAI	**Buenos Aires**	**0.58**	**133**	*i* P	**Pn**	**20 51 04.6**	**+0.4**
BUAI				*i* S	**Sn**	**20 51 22.4**	**+0.3**
LAPC	**Finca la Perla**	**0.60**	**148**	*i* P	**Pn**	**20 51 04.1**	**-0.3**
LAPC				*i* S	**Sn**	**20 51 22.0**	**-0.3**
GPS1	**Guardaparques**	**0.64**	**141**	*i* P	**Pn**	**20 51 04.9**	**+0.2**
GPS2	**Hotel Rincn d**	**0.66**	**142**	*i* P	**Pn**	**20 51 04.7**	**0.0**
LIM1	**Limonal**	**0.76**	**139**	*i* P	**Pn**	**20 51 05.3**	**0.0**
LIM1				*i* S	**Sn**	**20 51 24.2**	**+0.1**
GUAB	**Guayabo de Bag**	**0.77**	**137**	⇑*i* P	**Pn**	**20 51 05.4**	**0.0**
HORNC	**Hornillas**	**0.80**	**134**	*i* P	**Pn**	**20 51 05.5**	**-0.1**
HORNC				*i* S	**Sn**	**20 51 24.7**	**+0.2**
CUI	**Cuipilapa**	**0.85**	**136**	*i* P	**Pn**	**20 51 06.0**	**+0.1**
CUI				*i* S	**Sn**	**20 51 24.6**	**-0.5**
ACON	**Acoyapa**	**0.90**	**40**	*eP*	**Pn**	**20 51 05.8**	**-0.4**
PTEN	**Parque Tenorio**	**0.94**	**126**	*i* P	**Pn**	**20 51 06.9**	**+0.3**
ACAL	**Aguas Claras**	**0.95**	**132**	*i* P	**Pn**	**20 51 06.5**	**-0.2**
PLVR	**Palo Verde**	**1.01**	**157**	*eP*	**Pn**	**20 51 07.3**	**0.0**
PLVR				*eS*	**Sn**	**20 51 27.7**	**+0.2**
GUAI	**GUAI**	**1.03**	**166**	*i* P	**Pn**	**20 51 07.6**	**+0.3**
GUAI				*i* S	**Sn**	**20 51 27.6**	**+0.1**
JTS	**Las Juntas de**	**1.26**	**141**	*eP*	**Pn**	**20 51 08.8**	**-0.4**
JTS				*eS*	**Sn**	**20 51 29.7**	**-1.3**
CEDE	**Laguna Cedeo**	**1.30**	**127**	*i* P	**Pn**	**20 51 09.8**	**+0.1**
CEDE				*eS*	**Sn**	**20 51 33.0**	**+1.2**
ARE1	**Arenal 1**	**1.30**	**128**	*eP*	**Pn**	**20 51 10.0**	**+0.3**
ARE1				*eS*	**Sn**	**20 51 31.8**	**0.0**
CASO	**Castillo**	**1.31**	**130**	*i* P	**Pn**	**20 51 09.7**	**-0.1**
FORC	**Fortuna**	**1.34**	**127**	*i* P	**Pn**	**20 51 10.1**	**+0.1**
HDC	**Heredia**	**2.05**	**128**	*eP*	**Pn**	**20 51 17.7**	**+0.1**
LCR2	**La Lucha 2**	**2.30**	**131**	*eP*	**Pn**	**20 51 20.4**	**-0.2**
LCR2				*eS*	**Sn**	**20 51 49.4**	**-1.8**
CVTR	**Volcan Turrial**	**2.33**	**122**	*eP*	**Pn**	**20 51 22.5**	**+1.4**
DRK0	**Durika**	**3.18**	**129**	*eP*	**Pn**	**20 51 31.6**	**+0.3**

IDC 18 20:56:47.5±1.1,36°.45N×29°.40E,h0km,mb3.4/7, mb1 3.6/13,mb1mx3.5/40,mbtmp3.5/13,ML3.7/6,MS2.2/2, Ms1 2.2/2,ms1mx1.9/38,Error ellipse: s-maj=20.1km s-min=16.9km az=32.0
DDA 18 20:56:53.9,36°.43N×29°.46E,h47km,MW3.7
ISK 18 20:56:53.9,36°.45N×29°.50E,h50km±1km,ML3.8/49

ATH 18 20:56:54.1,36°.49N×29°.38E,h36km±3km,ML3.5/6,Error ellipse: s-maj=4.1km s-min=0.8km az=172.0
NIC 18 20:56:54.1±0.0,36°.42N×29°.51E,h57km±1km,Ml3.8/3
THE 18 20:56:56.0,36°.44N×29°.50E,h39km±1km,ML3.4/8,Error ellipse: s-maj=1.6km s-min=0.6km az=87.0
GII 18 20:56:57.2±0.5,36°.20N×29°.79E,h40km,MD2.5/4, Mm3.2/9
HLW 18 20:56:58.0,36°.01N×29°.47E,h26km±13km,Md4.3,Ml4.2
ISC 18 20:56:53.9±0.7,36°.37N±0°.03×29°.52E±0°.02,h50km±5km, n195,σ1ş45/255,mb3.4/7,6C-8D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.15**	**154**	PG	**Pn**	**20 57 02.9**	**+0.8**
AKAS				SG	**Sn**	**20 57 09.9**	**+2.0**
AKAS	**Kas**	**0.15**	**154**	*i* P	**Pn**	**20 57 02.7**	**+0.6**
AKAS				*i* S	**Sn**	**20 57 09.7**	**+1.8**
AKAS				IAML		20 57 10.0	
	comp=N,7μm,0.6s						
AKAS				IAML		20 57 10.0	
	comp=E,2μm,0.5s						
KSL	**Kastellorizon**	**0.22**	**167**	P	**Pn**	**20 57 03.5**	**+1.2**
KSL				S	**Sn**	**20 57 10.6**	**+2.3**
	comp=E,4μm,0.6s						
KSL	**Kastellorizon**	**0.22**	**167**	P	**Pn**	**20 57 03.4**	**+1.2**
KSL				S	**Sn**	**20 57 09.8**	**+1.4**
KSL				AML	AML	20 57 12.1	
	comp=N,6763μm,0.4s						
KSL				AML	AML	20 57 13.1	
	comp=E,6943μm,0.4s						
KSL	**Kastellorizon**	**0.22**	**167**	P	**Pn**	**20 57 03.6**	**+1.2**
KSL				S	**Sn**	**20 57 11.2**	**+2.8**
DEMR	**Demre-Antalya**	**0.34**	**113**	PG	**Pn**	**20 57 03.9**	**+0.6**
DEMR				SG	**Sn**	**20 57 11.5**	**+1.5**
FETY	**Fethiye**	**0.45**	**307**	P	**Pn**	**20 57 04.1**	**-0.4**
FETY				S	**Sn**	**20 57 11.6**	**-0.6**
FETY	**Fethiye**	**0.45**	**307**	PG	**Pn**	**20 57 04.2**	**-0.3**
FETY				SG	**Sn**	**20 57 11.6**	**-0.6**
FETY	**Fethiye**	**0.45**	**307**	*i* P	**Pn**	**20 57 04.1**	**-0.4**
FETY				IAML		20 57 11.0	
	comp=N,3μm,0.2s						
FETY				IAML		20 57 11.0	
	comp=E,4μm,0.5s						
FETY				*i* S	**Sn**	**20 57 11.5**	**-0.7**
ELL	**Elmali**	**0.49**	**39**	PG	**Pn**	**20 57 05.3**	**+0.1**
ELL				SG	**Sn**	**20 57 13.5**	**+0.2**
ELL	**Elmali**	**0.49**	**39**	P	**Pn**	**20 57 05.3**	**+0.1**
ELL				S	**Sn**	**20 57 14.1**	**+0.9**
AKUM	**Antalya-Kumluc**	**0.66**	**94**	*i* P	**Pn**	**20 57 08.7**	**+1.6**
AKUM				*i* S	**Sn**	**20 57 19.9**	**+3.2**
AKUM				IAML		20 57 21.0	
	comp=E,2μm,0.4s						
AKUM				IAML		20 57 21.0	
	comp=N,2μm,0.3s						
DALY	**Dalyan (Mula)**	**0.83**	**303**	PG	**Pn**	**20 57 09.6**	**+0.2**
DALY				SG	**Sn**	**20 57 20.7**	**+0.1**
DALY	**Dalyan (Mula)**	**0.83**	**303**	*i* P	**Pn**	**20 57 09.5**	**+0.2**
DALY				*i* S	**Sn**	**20 57 21.2**	**+0.6**
DALY				IAML		20 57 22.0	
	comp=E,5μm,0.4s						
DALY				IAML		20 57 22.0	
	comp=N,6μm,0.3s						
KEMT	**Kemer-ANTALYA**	**0.86**	**74**	PG	**Pn**	**20 57 10.7**	**+0.9**
GOLH	**Golhisar**	**0.87**	**2**	*i* P	**Pn**	**20 57 10.5**	**+0.5**
GOLH				*i* S	**Sn**	**20 57 22.9**	**+1.1**
GOLH				IAML		20 57 23.0	
	comp=E,270nm,0.4s						
GOLH				IAML		20 57 24.0	
	comp=N,3μm,0.9s						
TURN	**Turunc**	**0.90**	**305**	PG	**Pn**	**20 57 13.1**	**+2.9**
TURN	**Turunc**	**0.90**	**305**	*i* P	Pn	20 57 14.2	+4.0
TURN				*i* S	**Sn**	**20 57 29.0**	**+6.8**
TURN				IAML		20 57 30.0	
	comp=N,5μm,0.4s						
TURN				IAML		20 57 31.0	
	comp=E,2μm,0.2s						
KORT	**Korkueli**	**0.92**	**46**	PG	**Pn**	**20 57 11.1**	**+0.4**
ANTB	**Antalya**	**1.05**	**59**	PG	**Pn**	**20 57 13.3**	**+1.0**
MRSB	**Marmaris-Mugla**	**1.12**	**288**	PN	**Pn**	**20 57 14.3**	**+1.0**
ARG	**Arkhangelos**	**1.14**	**263**	P	**Pn**	**20 57 14.4**	**+0.9**
ARG				S	**Sn**	**20 57 28.6**	**+0.6**
	comp=E,1μm,0.5s						
ARG	**Arkhangelos**	**1.14**	**263**	P	**Pn**	**20 57 14.4**	**+0.9**
ARG				S	**Sn**	**20 57 28.3**	**+0.3**
ARG				AML	AML	20 57 32.4	
	comp=N,1774μm,0.4s						
ARG				AML	AML	20 57 34.4	
	comp=E,2488μm,0.5s						
ARG	**Arkhangelos**	**1.14**	**263**	PN	**Pn**	**20 57 14.0**	**+0.5**
ARG	**Arkhangelos**	**1.14**	**263**	P	**Pn**	**20 57 14.5**	**+0.9**
ARG				S	**Sn**	**20 57 29.1**	**+1.1**
TAVA	**DENIZLI_Tavas**	**1.20**	**336**	*i* P	**Pn**	**20 57 14.6**	**+0.2**
TAVA				*i* S	**Sn**	**20 57 30.9**	**+1.2**
TAVA				IAML		20 57 32.0	
	comp=E,764nm,0.2s						
TAVA				IAML		20 57 32.0	
	comp=N,808nm,0.6s						
YER	**Yerkesik**	**1.26**	**308**	P	**Pn**	**20 57 16.1**	**+0.9**
YER				S	**Sn**	**20 57 31.6**	**+0.6**
YER	**Yerkesik**	**1.26**	**308**	PN	**Pn**	**20 57 15.9**	**+0.7**
BCK	**Bucak**	**1.39**	**38**	PN	**Pn**	**20 57 17.2**	**+0.3**
BRDR	**BURDUR-Merkez**	**1.40**	**18**	*i* P	**Pn**	**20 57 18.2**	**+1.2**
BRDR				*i* S	**Sn**	**20 57 36.4**	**+2.0**
BRDR				IAML		20 57 38.0	
	comp=E,1μm,0.5s						
BRDR				IAML		20 57 38.0	
	comp=N,1μm,0.4s						
BASM	**Basmaki-Afyon**	**1.61**	**15**	PN	**Pn**	**20 57 19.9**	**0.0**
DAT	**Datca**	**1.61**	**284**	P	**Pn**	**20 57 21.0**	**+1.0**
DAT				S	**Sn**	**20 57 40.6**	**+1.0**
DAT	**Datca**	**1.61**	**284**	PN	**Pn**	**20 57 21.0**	**+1.0**
DAT	**Datca**	**1.61**	**284**	*i* P	**Pn**	**20 57 21.5**	**+1.6**
DAT				*i* S	**Sn**	**20 57 42.6**	**+3.0**
DAT				IAML		20 57 44.0	
	comp=N,755nm,0.8s						
DAT				IAML		20 57 46.0	
	comp=E,493nm,0.5s						
ISP	**Isparta**	**1.66**	**28**	PN	**Pn**	**20 57 20.8**	**+0.1**
ISP	**Isparta**	**1.66**	**28**	Pn	**Pn**	**20 57 23.2**	**+2.5**
KEPZ	**Antalya-Kepez**	**1.76**	**72**	*i* P	**Pn**	**20 57 24.6**	**+2.6**
KEPZ				*i* S	**Sn**	**20 57 47.9**	**+4.7**
KEPZ				IAML		20 57 48.0	
	comp=E,467nm,0.8s						
KEPZ				IAML		20 57 52.0	
	comp=N,205nm,0.7s						
BDRM	**Kayabasi**	**1.81**	**293**	*i* P	**Pn**	**20 57 24.0**	**+1.3**
BDRM				*i* S	**Sn**	**20 57 46.0**	**+1.6**
BDRM				IAML		20 57 50.0	
	comp=N,2μm,0.4s						
BDRM				IAML		20 57 50.0	
	comp=E,858nm,0.4s						
BODT	**Bodrum**	**1.91**	**292**	P	**Pn**	**20 57 25.1**	**+1.1**
BODT				S	**Sn**	**20 57 47.5**	**+0.6**
BODT	**Bodrum**	**1.91**	**292**	PN	**Pn**	**20 57 25.1**	**+1.1**
NISR	**Nisiros**	**1.95**	**278**	P	**Pn**	**20 57 25.6**	**+1.1**
KHAL	**Karahalli**	**2.00**	**359**	*i* P	**Pn**	**20 57 24.8**	**-0.6**
KHAL				*i* S	**Sn**	**20 57 47.5**	**-1.8**
KHAL				IAML		20 57 52.0	
	comp=E,250nm,0.5s						
KHAL				IAML		20 57 52.0	
	comp=N,177nm,0.5s						
AYDB	**Zeytinkoy-Aydi**	**2.05**	**321**	PN	**Pn**	**20 57 25.8**	**-0.2**
KARP	**Karpathos**	**2.08**	**248**	P	**Pn**	**20 57 28.2**	**+1.8**
KARP				S	**Sn**	**20 57 52.3**	**+1.1**
KARP	**Karpathos**	**2.08**	**248**	P	**Pn**	**20 57 28.2**	**+1.8**
KARP				AML	AML	20 57 54.5	
	comp=N,1375μm,0.2s						
KARP				AML	AML	20 57 57.0	
	comp=E,1000μm,0.2s						
KARP	**Karpathos**	**2.08**	**248**	PN	**Pn**	**20 57 28.1**	**+1.8**
KOSK	**Kos Island**	**2.08**	**281**	PN	**Pn**	**20 57 26.9**	**+0.5**
SEYD	**Seydisehir-KON**	**2.13**	**60**	PN	**Pn**	**20 57 28.7**	**+1.6**
KULA	**Kula-Manisa**	**2.25**	**343**	P	**Pn**	**20 57 28.3**	**-0.5**
KULA	**Kula-Manisa**	**2.25**	**343**	PN	**Pn**	**20 57 28.0**	**-0.8**
GAZI	**Gazipasa**	**2.26**	**92**	PN	**Pn**	**20 57 29.7**	**+0.9**
GAZI	**Gazipasa**	**2.26**	**92**	*i* P	**Pn**	**20 57 29.8**	**+0.9**
GAZI				IAML		20 57 57.0	
	comp=E,275nm,0.5s						
GAZI				IAML		20 57 57.0	
	comp=N,355nm,0.6s						
GAZI				*i* S	**Sn**	**20 57 57.3**	**+1.8**
GCAM	**G?zelcaml?**	**2.27**	**307**	PN	**Pn**	**20 57 29.1**	**+0.3**
GCAM	**G?zelcaml?**	**2.27**	**307**	*i* P	**Pn**	**20 57 29.1**	**+0.3**
GCAM				*i* S	**Sn**	**20 57 53.8**	**-1.7**
GCAM				IAML		20 58 00.0	
	comp=N,391nm,0.2s						
GCAM				IAML		20 58 08.0	
	comp=E,429nm,0.5s						
SHUT	**Suhut-Afyon**	**2.33**	**20**	PN	**Pn**	**20 57 30.0**	**+0.1**
USAK	**Uak-Merkez**	**2.38**	**350**	*i* P	**Pn**	**20 57 30.2**	**-0.3**
USAK				IAML		20 58 01.0	
	comp=N,112nm,0.7s						
USAK				IAML		20 58 02.0	
	comp=E,136nm,0.5s						
DOGA	**KONYA_Doganhis**	**2.44**	**44**	*i* P	**Pn**	**20 57 33.4**	**+2.0**
DOGA				*i* S	**Sn**	**20 58 02.5**	**+2.4**
DOGA				IAML		20 58 03.0	
	comp=E,443nm,0.5s						
DOGA				IAML		20 58 05.0	
	comp=N,426nm,0.5s						
SMG	**Samos**	**2.53**	**303**	P	**Pn**	**20 57 32.7**	**+0.2**
SMG				S	**Sn**	**20 58 02.0**	**-0.2**
	comp=N,878nm,0.4s						
SMG	**Samos**	**2.53**	**303**	P	**Pn**	**20 57 32.5**	**-0.1**
SMG				AML	AML	20 58 03.0	
	comp=N,2046μm,0.4s						
SMG				AML	AML	20 58 17.1	
	comp=E,1307μm,0.4s						
AKMS	**Akamas**	**2.65**	**120**	P	**Pn**	**20 57 35.3**	**+1.1**
AKMS				AML	AML	20 58 06.5	
	comp=E,1.0nm,0.4s						
AKMS				AML	AML	20 58 06.5	
	comp=E,1.0nm,0.4s						
AKMS				S	**Sn**	**20 58 06.6**	**+1.4**
SHAP	**Saphane-Kutahy**	**2.66**	**355**	PN	**Pn**	**20 57 34.1**	**-0.3**
GEDZ	**Gediz**	**2.67**	**358**	PN	**Pn**	**20 57 34.4**	**-0.2**
DGB	**zmir**	**2.70**	**309**	*i* P	**Pn**	**20 57 34.6**	**-0.2**
DGB				IAML		20 58 06.0	
	comp=N,162nm,0.2s						
DGB				IAML		20 58 06.0	
	comp=E,206nm,0.2s						
SIMA	**Simav-Kutahya**	**2.75**	**351**	PN	**Pn**	**20 57 34.8**	**-0.7**
DEMI	**Demirci**	**2.75**	**347**	*i* P	**Pn**	**20 57 35.0**	**-0.5**
DEMI				IAML		20 58 11.0	
	comp=E,54nm,0.3s						
DEMI				IAML		20 58 20.0	
	comp=N,41nm,0.9s						
KONT	**Konya--Tatoy**	**2.76**	**54**	PN	**Pn**	**20 57 37.0**	**+1.3**
KONT	**Konya--Tatoy**	**2.76**	**54**	*i* P	**Pn**	**20 57 38.9**	**+3.2**
KONT				IAML		20 58 16.0	
	comp=N,66nm,0.3s						
KONT				IAML		20 58 18.0	
	comp=E,77nm,0.5s						
SMAA	**Simav-Kutahya**	**2.76**	**351**	PN	**Pn**	**20 57 35.2**	**-0.6**
ALFC	**Alefka**	**2.78**	**115**	P	**Pn**	**20 57 37.1**	**+1.2**
ALFC				S	**Sn**	**20 58 08.4**	**+0.2**
BLCB	**Balcova**	**2.82**	**316**	P	**Pn**	**20 57 36.3**	**-0.2**
BLCB	**Balcova**	**2.82**	**316**	PN	**Pn**	**20 57 36.2**	**-0.2**
TEKE	**Tekeli-Mersin**	**2.91**	**93**	PN	**Pn**	**20 57 39.9**	**+2.2**
TEKE				SN	**Sn**	**20 58 13.4**	**+2.0**
LADK	**Ladik-KONYA**	**2.91**	**50**	PN	**Pn**	**20 57 39.2**	**+1.4**
NATA	**Nata**	**2.94**	**122**	P	**Pn**	**20 57 39.4**	**+1.2**
AMGA	**Amorgos Island**	**2.96**	**280**	P	**Pn**	**20 57 38.9**	**+0.5**
AMGA	**Amorgos Island**	**2.96**	**280**	P	**Pn**	**20 57 38.6**	**+0.2**
ZKR	**Zakros**	**2.96**	**246**	P	**Pn**	**20 57 40.5**	**+2.1**
ZKR				S	**Sn**	**20 58 14.8**	**+2.0**
	comp=E,302nm,0.3s						
ZKR	**Zakros**	**2.96**	**246**	P	**Pn**	**20 57 40.6**	**+2.1**
ZKR	**Zakros**	**2.96**	**246**	PN	**Pn**	**20 57 40.7**	**+2.2**
BERE	**Bereket-Mersin**	**2.99**	**89**	PN	**Pn**	**20 57 40.6**	**+1.7**
AKDN	**Akdeniz- Kıbrı**	**3.00**	**110**	PN	**Pn**	**20 57 41.7**	**+2.9**
LEF	**Lefka**	**3.01**	**113**	⇑P	**Pn**	**20 57 38.7**	**-0.3**
LEF				⇑S	**Sn**	**20 58

IDI	comp=E,251µm,0.5s				AML	AML	20 58 44.0		
IDI	comp=N,308µm,0.4s			⇑P		Pn	**20 57 52.0**	**+0.5**	
IDI	**Anoyia**	**3.92**	**255**	⇓S		**Sn**	**20 58 33.5**	**-2.7**	
SIVA	**Sivas**	**4.07**	**252**	P		**Pn**	**20 57 56.0**	**+2.5**	
VAM	**Vamos**	**4.43**	**259**	P		**Pn**	**20 57 59.8**	**+1.3**	
IMMV	**Iera Moni Meta**	**4.59**	**260**	P		**Pn**	**20 58 01.6**	**+0.9**	
IMMV	**Iera Moni Meta**	**4.59**	**260**	P		**Pn**	**20 58 01.4**	**+0.7**	
IMMV	comp=N,367µm,0.8s				AML	AML	20 58 58.0		
IMMV	comp=E,354µm,0.6s				AML	AML	20 59 00.4		
BRTR	**Keskin Array B**	**4.67**	**43**	Pn		**Pn**	**20 58 02.7**	**+0.8**	
BRTR	comp=E,1.5nm,0.3s,baz=218,slow=15,SNR=60			Sn		**Sn**	**20 58 54.6**	**-0.2**	
BRTR	comp=E,4.9nm,0.3s,baz=217,slow=26,SNR=27			LR		LR	21 00 29.1		
GVD	comp=E,36nm,21.8s,baz=206,slow=47 **Gavdhos**	**4.68**	**253**	P		**Pn**	**20 58 03.5**	**+1.4**	
RODP	**Rodopos**	**4.75**	**262**	P		**Pn**	**20 58 03.6**	**+0.7**	
DION	**Dionisos Attik**	**4.78**	**293**	P		**Pn**	**20 58 05.0**	**+1.7**	
LIA	**Limnos Island**	**4.91**	**317**	P		**Pn**	**20 58 05.7**	**+0.6**	
LIA	**Limnos Island**	**4.91**	**317**	P		**Pn**	**20 58 05.6**	**+0.4**	
SMTH	**Samothraki Isl**	**5.16**	**324**	P		**Pn**	**20 58 08.5**	**-0.1**	
VLI	**Veliai**	**5.32**	**276**	P		**Pn**	**20 58 12.5**	**+1.8**	
MATC	**Matruh** baz=203	**5.36**	**202**	P		**Pn**	**20 58 11.7**	**+0.5**	
HNTI	**Hanita**	**5.69**	**124**	Pn		**Pn**	**20 58 15.9**	**+0.1**	
HNTI				Sn		**Sn**	**20 59 17.3**	**-2.6**	
OFRI	**`Ofer**	**5.86**	**128**	Pn		**Pn**	**20 58 18.5**	**+0.3**	
OFRI				Sn		**Sn**	**20 59 23.0**	**-1.0**	
MMA0B	**Mount Meron ar**	**5.88**	**123**	Pn		**Pn**	**20 58 18.8**	**+0.2**	
MMA0B				Sn		**Sn**	**20 59 22.6**	**-2.1**	
MMAI	**Mount Meron Ar** comp=E,11nm,0.3s,baz=300,slow=12,SNR=89	**5.88**	**123**	Pn		**Pn**	**20 58 18.8**	**+0.2**	
MMAI	comp=E,14nm,0.3s,baz=309,slow=24,SNR=12			Sn		**Sn**	**20 59 21.1**	**-3.6**	
BLGI	**Bet Lehem HaGe**	**5.92**	**126**	Pn		**Pn**	**20 58 19.4**	**+0.5**	
GEM	**Giv'at Ha'Em**	**5.95**	**120**	Pn		**Pn**	**20 58 19.7**	**+0.3**	
GEM				Sn		**Sn**	**20 59 23.9**	**-2.4**	
KSDI	**Kefar Szold**	**5.96**	**120**	Pn		**Pn**	**20 58 20.0**	**+0.5**	
KSDI				Sn		**Sn**	**20 59 23.9**	**-2.6**	
NATI	**Neve Ativ**	**5.97**	**119**	Pn		**Pn**	**20 58 20.1**	**+0.4**	
NATI				Sn		**Sn**	**20 59 24.1**	**-2.7**	
SLUM	**Salum** baz=220	**6.04**	**218**	P		**Pn**	**20 58 21.6**	**+1.0**	
SLUM	baz=220			AMP			20 59 00.0		
SLUM	baz=220			S		Sn	20 59 22.3	-6.2	
SLTI	**Sal'it**	**6.14**	**130**	Pn		**Pn**	**20 58 22.3**	**+0.2**	
SLTI				Sn		**Sn**	**20 59 28.2**	**-2.9**	
MMLI	**Mount Malkishu**	**6.25**	**127**	Pn		**Pn**	**20 58 24.3**	**+0.7**	
MMLI				Sn		**Sn**	**20 59 31.3**	**-2.5**	
HMDT	**Nahal Hemdat**	**6.44**	**128**	Pn		**Pn**	**20 58 26.9**	**+0.8**	
HMDT				Sn		**Sn**	**20 59 36.1**	**-2.2**	
KOT	**Kottamia** baz=161	**6.71**	**163**	P		**Pn**	**20 58 30.3**	**+0.5**	
HHAG	**Hagoal** baz=159	**6.75**	**161**	P		**Pn**	**20 58 32.0**	**+1.6**	
HNAT	**Natroun** baz=171	**6.78**	**172**	P		**Pn**	**20 58 31.9**	**+1.2**	
KZIT	**Kziot**	**6.79**	**142**	Pn		**Pn**	**20 58 31.6**	**+0.6**	
KZIT				Sn		**Sn**	**20 59 43.7**	**-3.3**	
YTIR	**Yattir**	**6.82**	**135**	Sn		**Sn**	**20 59 44.7**	**-3.1**	
DSI	**Dead Sea**	**6.82**	**133**	Pn		**Pn**	**20 58 31.8**	**+0.4**	
HSAF	**As Saff** baz=164	**6.94**	**165**	P		**Pn**	**20 58 33.7**	**+0.7**	
GLL	**Jalalah** baz=163	**7.01**	**164**	P		**Pn**	**20 58 34.5**	**+0.4**	
SUZ	**Suez** baz=154	**7.07**	**156**	P		**Pn**	**20 58 35.8**	**+1.0**	
ASF	**Jabal al Asfar** comp=E,0.4nm,0.3s,baz=247,slow=11,SNR=2.7	**7.40**	**122**	Pn		**Pn**	**20 58 40.2**	**+0.8**	
ASF	comp=E,0.6nm,0.3s,baz=337,slow=3.7,SNR=2.2			Sn		**Sn**	**21 00 02.2**	**+0.2**	
PRNI	**Paran**	**7.55**	**141**	Pn		**Pn**	**20 58 41.7**	**+0.3**	
HRFI	**Mount Harif**	**7.82**	**142**	Sn		**Sn**	**21 00 09.0**	**-3.3**	
NBNS	**Bani Suef** baz=167	**7.87**	**169**	P		**Pn**	**20 58 46.3**	**+0.6**	
SWA2	baz=208	**7.88**	**207**	P		**Pn**	**20 58 46.6**	**+0.7**	
SWA2	baz=208			AMP			21 00 00.0		
SWA2	baz=208			S		Sn	21 00 06.3	-7.4	
VTS	**Vitosha**	**7.91**	**324**	⇓P		**Pn**	**20 58 47.5**	**+1.2**	
MBRI	**Mt Berech**	**7.96**	**144**	Pn		**Pn**	**20 58 47.4**	**+0.3**	
EIL	**Elat** comp=E,0.7nm,0.3s,baz=331,slow=3.4,SNR=6.4	**8.08**	**144**	Pn		**Pn**	**20 58 48.2**	**-0.4**	
EIL	comp=E,1.5nm,0.3s,baz=22,slow=19,SNR=2.3			Sn		**Sn**	**21 00 15.6**	**-3.0**	
EIL	**Elat**	**8.08**	**144**	Pn		**Pn**	**20 58 48.3**	**-0.4**	
TIRR	**Tirgusor**	**8.13**	**354**	⇓P		**Pn**	**20 58 49.3**	**+0.1**	
TOPG	**Topolog**	**8.55**	**355**	⇑P		**Pn**	**20 58 56.6**	**+1.7**	
TAMRE	**El Minia** baz=171	**8.74**	**172**	P		**Pn**	**20 58 58.2**	**+0.6**	
TLCR		**8.83**	**357**	⇓P		**Pn**	**20 58 59.6**	**+0.8**	
CFR	**Carcaliu**	**8.87**	**354**	⇓P		**Pn**	**20 59 00.0**	**+0.8**	
HFRF	**Wahat Farafira** baz=187	**9.25**	**187**	P		**Pn**	**20 59 05.1**	**+0.5**	
MLR	**Muntele Rosu** comp=E,0.3nm,0.3s,baz=113,slow=15,SNR=6.1	**9.51**	**345**	Pn		**Pn**	**20 59 07.6**	**-0.6**	
MLR	**Muntele Rosu**	**9.51**	**345**	⇓P		**Pn**	**20 59 08.9**	**+0.7**	
VRI	**Vrincioaia**	**9.72**	**348**	⇓P		**Pn**	**20 59 12.5**	**+1.4**	
VYHS	**Vyhne**	**14.44**	**330**	*e*PN		**P**	**21 00 22.7**	**+1.8**	
GERES	**GERESS Array B** comp=E,0.1nm,0.3s,baz=125,slow=12,SNR=7.5	**17.02**	**322**	Pn		**Pn**	**21 00 46.8**	**-1.5**	
GEYT	**Alibeck** comp=E,0.6nm,0.4s,baz=260,slow=8.6,SNR=2.3	**22.81**	**77**	P		**P**	**21 01 51.8**	**-0.7**	
FINES	**FINESS Array B** comp=E,0.9nm,0.7s,baz=164,slow=9.9,SNR=5.6	**25.19**	**356**	P		**P**	**21 02 13.1**	**-1.4**	
HFS	**Hagfors** comp=E,1.8nm,0.9s,baz=174,slow=14,SNR=2.3	**25.88**	**342**	P		**P**	**21 02 18.8**	**-1.9**	
ESDC	**Sonseca Array** comp=E,0.2nm,0.8s,baz=81,slow=8.4,SNR=1.4	**26.50**	**287**	P		**P**	**21 02 26.5**	**-0.1**	
TORD	**Torodi Ar. Bea** comp=E,0.5nm,0.7s,baz=49,slow=9.8,SNR=3.2	**34.03**	**234**	P		**P**	**21 03 32.4**	**-0.9**	
MKAR	**Makanchi Array** comp=E,0.3nm,0.7s,baz=283,slow=8.5,SNR=2.4	**40.14**	**58**	P		**P**	**21 04 24.6**	**-0.3**	
YKA	**Yellowknife Ar** comp=E,0.2nm,0.6s,baz=44,slow=5.0,SNR=5.2	**77.34**	**344**	P		**P**	**21 08 42.8**	**-0.1**	

BJI ***18*** *21:16:44.0±0.0, 19˚.10S×169˚.60E, h270km, mB4.8/26, mb4.6/33*
IDC ***18*** *21:16:45.2±0.5, 19˚.27S×169˚.67E, h275km±4km, mb4.1/21, mb1 4.2/24, mb1mx4.2/35, mbtmp4.8/24, Error ellipse: s-maj=11.2km s-min=8.4km az=98.0*
NEIC ***18*** *21:16:45.1±1.4, 19˚.12S±0˚.08×169˚.59E±0˚.03, h281km±5km, mb4.8/131, Error ellipse: s-maj=11.9km s-min=3.1km az=191.0*
GCMT ***18*** *21:16:48.1±0.1, 19˚.15S±0˚.01×169˚.48E±0˚.01, h289km±1km, MW5.4/135, Moment Tensor Solution. s126,c173; s135,c198; Duration: 1ŝ2 Moment tensor: Scale 10^17 Nm; Mrr0.29±.02; Mθθ-1.35±.02; Mφφ1.05±.02; Mrθ0.14±.02; Mθφ-0.30±.02; Mφr-0.66±.02; Best double couple: M₀1.43100×10^17 NP1:φ₈222.00000°, δ68.00000°, λ20.00000°. NP2:φ₈124.00000°, δ71.00000°, λ156.00000°. Principal axes: T 1.4720, Plg30.0000°, Azm82.0000°; N -0.0870, Plg60.0000°, Azm267.0000°; P -1.3900, Plg2.0000°, Azm174.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 21:16:45.1±0.3, 19˚.25S±0˚.05×169˚.69E±0˚.05, h276km±3km, h275km:pP-P, n372, σ1ŝ04/360, mb4.8/86, 13C-8D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 76nm,0.3s,baz=60,slow=12,SNR=438	**4.14**	**227**	P		**Pn**	**21 17 52.8**	**+1.0**
DZM	61nm,0.3s,baz=292,slow=20,SNR=8.1			S		**S**	**21 18 44.6**	**-0.4**
DZM	**Mont Dzumac**	**4.14**	**227**			**Pn**	**21 17 52.3**	**+0.6**
DZM				S		**S**	**21 18 42.6**	**-2.5**
MSVF	**Nonsavu**	**8.07**	**81**			**Pn**	**21 18 41.2**	**+1.7**
HNR	**Honiara** 32nm,0.3s,baz=196,slow=1.3,SNR=30	**13.57**	**315**	P		**Pn**	**21 19 47.3**	**0.0**
HNR	**Honiara**	**13.57**	**315**	P		**Pn**	**21 19 46.7**	**-0.7**
FUNA	**Funafuti**	**14.09**	**42**	P		**P**	**21 19 53.1**	**-0.4**

LHI	**Lord Howe Isla**	**15.53**	**216**	P		**Pn**	**21 20 11.1**	**+0.5**	
LHI	comp=E,54nm,0.9s			IAmb		IAmb	21 20 20.8		
OUZ	**Omahuta**	**16.28**	**169**	P		**Pn**	**21 20 19.8**	**+0.5**	
GRZ	**Great Barrier**	**17.68**	**164**	P		**Pn**	**21 20 36.2**	**+0.4**	
WIAZ	**Waiheke Island**	**18.12**	**166**	P		**Pn**	**21 20 40.5**	**-0.3**	
KUZ	**Kuaotunu**	**18.22**	**164**	P		P	21 20 31.1	-7.3	
EIDS	**Eidsvold**	**18.26**	**247**	P		**P**	**21 20 39.0**	**0.0**	
EIDS	comp=E,18nm,0.8s			IAmb		IAmb	21 20 58.0		
MKAZ	**Mounumakai**	**18.43**	**166**	P		**Pn**	**21 20 43.6**	**-0.6**	
AFI	**Afiamalu**	**18.53**	**76**	P		**P**	**21 20 42.5**	**+0.4**	
HIZ	**Hauiti**	**19.72**	**168**	P		**Pn**	**21 20 56.9**	**-2.4**	
MXZ	**Matakaoa Point**	**19.74**	**159**	P		**Pn**	**21 20 57.5**	**-2.1**	
MXZ	**Matakaoa Point**	**19.74**	**159**	P		**P**	**21 20 56.3**	**+1.7**	
MXZ	comp=Z,56nm,1.0s			IAmb		IAmb	21 21 02.4		
HAZ	**Te Kaha**	**19.75**	**161**	P		**Pn**	**21 20 57.7**	**-2.0**	
ARMA	**Armidale**	**19.78**	**232**	P		**P**	**21 20 55.4**	**+0.1**	
ARMA	comp=E,18nm,0.7s			IAmb		IAmb	21 20 58.9		
RUGZ	**Raukumara Rang**	**19.91**	**161**	P		**Pn**	**21 21 01.3**	**-0.4**	
WMGZ	**Waiomatatini S**	**20.01**	**159**	P		**P**	**21 20 59.8**	**+2.3**	
URZ	**Urewera** comp=Z,3.4nm,0.3s,baz=27,slow=5.7,SNR=14	**20.02**	**163**	P		**P**	**21 20 59.4**	**+1.9**	
URZ	comp=Z,0.7nm,0.3s,baz=150,slow=20,SNR=2.0			S		**S**	**21 24 33.1**	**+6.4**	
URZ	**Urewera**	**20.02**	**163**	P		**P**	**21 21 00.2**	**+2.7**	
URZ	**Urewera**	**20.02**	**163**	P		**P**	**21 21 00.0**	**+2.5**	
URZ	comp=Z,40nm,0.7s			IAmb		IAmb	21 21 02.1		
MUGZ	**Murupara**	**20.13**	**164**	P		Pn	21 21 02.8	-1.3	
TWGZ	**Tauwhareparae**	**20.20**	**161**	P		**P**	**21 21 02.2**	**+2.7**	
MWZ	**Matawai**	**20.20**	**162**	P		Pn	21 21 02.4	-2.6	
BKZ	**Black Stump Fm**	**20.70**	**165**	P		**P**	**21 21 06.9**	**+2.2**	
BKZ	comp=Z,52nm,0.9s			IAmb		IAmb	21 21 08.9		
QRZ	**Quartz Range**	**21.64**	**174**	P		**P**	**21 21 16.1**	**+2.5**	
QRZ	comp=Z,48nm,1.0s			IAmb		IAmb	21 21 22.3		
CTA	**Charters Tower** comp=Z,27nm,0.9s,baz=86,slow=11,SNR=14	**22.09**	**264**	P		**P**	**21 21 18.3**	**+0.4**	
CTA	comp=Z,12nm,0.9s,baz=86,slow=13,SNR=2.4			pP		**pP**	**21 22 02.5**	**-0.3**	
CTAO	**Charters Tower**	**22.09**	**264**	P		**P**	**21 21 16.2**	**-1.7**	
CTAO	comp=Z,41nm,0.9s			IAmb		IAmb	21 21 20.0		
CTAO						**pP**	**21 22 03.3**	**+0.5**	
BFZ	**Birch Farm**	**22.09**	**167**	P		**P**	**21 21 18.9**	**+1.2**	
BFZ	comp=Z,43nm,0.9s			IAmb		IAmb	21 21 22.7		
THZ	**Tophouse** comp=Z,30nm,0.8s	**22.61**	**174**	IAmb		IAmb	21 21 28.3		
PLWZ	**Palliser**	**22.75**	**169**	P		**P**	**21 21 24.1**	**+0.4**	
KHZ	**Kahutara** comp=Z,59nm,1.2s	**23.33**	**173**	IAmb		IAmb	21 21 35.4		
LTZ	**Lake Taylor**	**23.56**	**175**	P		**P**	**21 21 30.4**	**-0.7**	
LTZ	comp=Z,39nm,1.0s			IAmb		IAmb	21 21 35.3		
PMG	**Port Moresby** comp=Z,36nm,0.8s,baz=153,slow=9.0,SNR=2.5	**23.90**	**291**	P		**P**	**21 21 35.0**	**+0.6**	
RPZ	**Rata Peaks** comp=Z,22nm,0.8s,baz=67,slow=5.3,SNR=5.6	**24.42**	**178**	P		**P**	**21 21 40.1**	**+1.2**	
RPZ	**Rata Peaks** comp=Z,23nm,0.8s	**24.42**	**178**	IAmb		IAmb	21 21 45.0		
KNTN	**Kanton**	**24.46**	**50**	P		**P**	**21 21 38.2**	**-1.3**	
TOO	**Toolangi**	**27.91**	**224**	P		**P**	**21 22 10.0**	**-0.2**	
STKA	**Stephens Creek** comp=Z,10nm,0.6s,baz=65,slow=8.7,SNR=40	**28.20**	**238**	P		**P**	**21 22 13.1**	**+0.3**	
STKA	comp=Z,14nm,1.0s,baz=72,slow=13,SNR=4.8			pP		**pP**	**21 23 05.5**	**+0.5**	
STKA	**Stephens Creek**	**28.20**	**238**	P		**P**	**21 22 13.0**	**+0.3**	
STKA						**pP**	**21 23 05.5**	**+0.5**	
BBOO	**Buckleboo**	**32.95**	**239**	P		**P**	**21 22 54.1**	**-0.2**	
GENI	**Genyem** comp=Z,128nm,0.8s	**33.28**	**296**	P		**P**	**21 22 58.4**	**+1.1**	
AS31	**Alice Springs**	**33.54**	**256**	P		**P**	**21 22 58.8**	**-0.7**	
ASAR	**Alice Springs** comp=Z,46nm,0.6s,baz=83,slow=9.2,SNR=451	**33.54**	**256**	P		**P**	**21 22 58.5**	**-1.0**	
FORT	**Forrest**	**39.23**	**245**	P		**P**	**21 23 46.6**	**-0.8**	
FITZ	**Fitzroy Crossi**	**41.67**	**264**	P		**P**	**21 24 07.0**	**-0.3**	
SIJI	**Sorong** comp=Z,14nm,0.9s,baz=112,slow=7.9,SNR=7.9	**41.84**	**291**	P		**P**	**21 24 09.1**	**+0.3**	
PSA00	**Pilbara Seismi**	**46.62**	**258**	P		**P**	**21 24 45.9**	**-0.5**	
PSA00						**pP**	**21 25 42.2**	**-0.5**	
NWAO	**Narrogin (SRO)** comp=Z,11nm,0.9s,baz=99,slow=6.5,SNR=10	**48.59**	**243**	P		**P**	**21 25 00.8**	**-0.5**	
NWAO	comp=Z,16nm,1.0s,baz=96,slow=9.2,SNR=4.0			pP		**pP**	**21 25 59.7**	**+1.7**	
NWAO	**Narrogin (SRO)**	**48.59**	**243**	P		**P**	**21 25 00.4**	**-0.9**	
NWAO						**pP**	**21 25 58.9**	**+0.9**	
MORW	**Morawa**	**49.57**	**248**	P		**P**	**21 25 07.4**	**-1.4**	
KCP	**Kidapawan**	**51.10**	**296**	⇑P		pP	21 26 19.4	+1.5	
HMH	**Humu'ula Sheep**	**51.54**	**43**	P		**P**	**21 25 23.4**	**-0.5**	
MPSI	**Mapaga** comp=Z,11nm,0.9s	**52.56**	**286**	P		**P**	**21 25 31.2**	**+0.1**	
JCJ	**Chichijima** comp=Z,34nm,0.7s,baz=274,slow=19,SNR=1.9	**53.23**	**329**	P		**P**	**21 25 37.0**	**+1.3**	
JAGI	**Jajag, Banyuwa** comp=Z,16nm,1.4s	**54.78**	**273**	P		**P**	**21 25 48.9**	**+1.8**	
VNDA	**Vanda** comp=Z,2.2nm,0.8s,baz=255,slow=8.1,SNR=10.0	**58.44**	**182**	P		**P**	**21 26 10.1**	**-1.6**	
VNDA	**Vanda**	**58.44**	**182**	P		**P**	**21 26 12.4**	**+0.6**	
CASY	**Casey**	**60.29**	**204**	P		**P**	**21 26 23.6**	**-0.9**	
DBJI	**Dramaga** comp=Z,2µmcomp=Z,51nm,0.7s	**62.35**	**273**	P		**P**	**21 26 39.8**	**+0.6**	
MJAR	**Matsushiro Arr** comp=Z,6.3nm,0.9s,baz=162,slow=7.5,SNR=16	**62.96**	**332**	P		**P**	**21 26 42.0**	**-0.8**	
MAJO	**Matsushiro**	**62.96**	**332**	P		**P**	**21 26 42.1**	**-0.6**	
MAT	**Matsushiro**	**62.96**	**332**	P		**P**	**21 26 41.7**	**-1.0**	
MJB9	**Matsu-Tunnel**	**62.97**	**332**	P		**P**	**21 26 41.7**	**-1.1**	
QZH	**Quanzhou**	**66.35**	**310**	*e*P		P	21 27 09.8	+5.1	
QZH						**S**	**21 35 33.9**	**+1.9**	
ASAJ	**Asahikawa** comp=Z,17nm,1.2s,baz=150,slow=8.1,SNR=2.4	**67.76**	**339**	P		**P**	**21 27 14.0**	**+0.9**	
KSRS	**Korea Array** comp=Z,1.4nm,1.0s,baz=120,slow=7.2,SNR=6.6	**68.76**	**325**	P		**P**	**21 27 20.9**	**+1.5**	
NJ2	**Nanjing** comp=Z,11nm,0.5s	**70.51**	**316**	*e*P		**P**	**21 27 31.0**	**+0.7**	
NJ2				pmax		pmax			
QSPA	**South Pole Qui** comp=Z,11nm,0.9s,baz=43,slow=2.2,SNR=12	**70.81**	**180**	P		**P**	**21 27 31.7**	**0.0**	
QSPA	comp=Z,7.2nm,1.0s,baz=37,slow=3.0,SNR=4.0			pP		**pP**	**21 28 33.8**	**-0.6**	
QSPA	**South Pole Qui**	**70.81**	**180**	P		**P**	**21 27 31.8**	**0.0**	
QSPA	comp=Z,10nm,0.8s			IAmb		IAmb	21 27 33.3		
QSPA						**pP**	**21 28 33.8**	**-0.6**	
ADK	**Adak**	**71.82**	**9**	P		**P**	**21 27 37.5**	**-0.1**	
USRK	**Ussuriysk Ar.** comp=Z,7.4nm,1.1s,baz=128,slow=6.1,SNR=11	**71.94**	**332**	P		**P**	**21 27 40.0**	**+1.5**	
PETK	**Petropavlovsk-** comp=Z,15nm,0.9s,baz=159,slow=9.5,SNR=15	**72.80**	**352**	P		**P**	**21 27 44.5**	**+1.2**	
GSI	**Gunungsitoli** comp=Z,49nm,2.8s	**73.58**	**277**	P		**P**	**21 27 50.3**	**+1.4**	
BJI	**Beijing**	**77.22**	**321**	P		**P**	**21 28 09.4**	**+0.6**	
BJI				PcP		**PcP**	**21 28 18.8**	**+0.5**	
BJI				S		**S**	**21 37 38.1**	**+3.1**	
BJI				sS		**sS**	**21 39 29.3**	**+1.7**	
BJI	comp=Z,9.0nm,0.8s			pmax		pmax			
BJI	comp=Z,83nm,15.7s			LR		LR			
XAN	**Xi'an**	**78.43**	**312**	P		**P**	**21 28 16.9**	**+1.2**	
XAN				pP		pP	21 29 20.3	+0.5	
XAN				sP		sP	21 29 46.4	-2.4	
XAN				S		**S**	**21 37 47.5**	**-0.9**	
XAN				sS		sS	21 39 35.9	-3.6	
XAN	comp=Z,9.0nm,1.3s			pmax		pmax			
XAN	comp=Z,99nm,4.7s			pmax		pmax			
XAN	**Xi'an**	**78.43**	**312**	P		**P**	**21 28 14.0**	**-1.8**	
MAW	**Mawson** comp=Z,2.1nm,0.7s,baz=116,slow=4.7,SNR=4.7	**78.59**	**202**	P		**P**	**21 28 16.3**	**+0.4**	
MAW	comp=Z,2.6nm,0.9s,baz=114,slow=8.5,SNR=3.0			pP		**pP**	**21 29 20.9**	**+0.9**	
MAW	**Mawson**	**78.59**	**202**	P		**P**	**21 28 16.1**	**+0.2**	
MAW						**pP**	**21 29 20.4**	**+0.5**	
CMAR	**Chiang Mai Arr** comp=Z,2.1nm,0.8s,baz=135,slow=4.1,SNR=14	**78.90**	**294**	P		**P**	**21 28 19.9**	**+1.4**	
CMAR	comp=Z,3.3nm,0.8s,baz=136,slow=4.5,SNR=8.2			pP		**pP**	**21 29 23.1**	**+0.3**	
CHTO	**Chiang Mai**	**79.05**	**294**	P		**P**	**21 28 17.5**	**-1.9**	
CHTO						**pP**	**21 29 22.6**	**-1.0**	

HHC	**Hu-ho-hao-te**	**80.51**	**319**	*e*P		**P**	**21 28 26.1**	**-0.7**	
HHC	comp=Z,12nm,1.0s			pmax		pmax			
HHC	comp=Z,50nm,5.5s			pmax		pmax			
CD2	**Chengdu**	**80.58**	**307**	P		**P**	**21 28 27.6**	**+0.3**	
OHAK	**Old Harbor** comp=Z,20nm,0.9s	**82.22**	**19**	IAmb		IAmb	21 28 36.9		
LZH	**Lanzhou**	**83.05**	**312**	⇑P		**P**	**21 28 41.3**	**+1.1**	
LZH				pP		pP	21 29 45.8	+0.7	
LZH				sP		sP	21 30 14.3	+0.3	
LZH				PP		**PP**	**21 31 58.3**	**+2.6**	
LZH	comp=Z,24nm,1.3s			pmax		pmax			
LZH	comp=Z,97nm,8.7s			pmax		pmax			
SYO	**Syowa Base**	**85.05**	**196**	⇑*e*P		**P**	**21 28 47.2**	**-2.2**	
SYO	**Syowa Base**	**85.05**	**196**	⇑*e*PcP		**PcP**	**21 28 52.4**	**+0.2**	
SNCC	**San Nicolas Is** baz=244	**85.31**	**53**	P		**P**	**21 28 51.7**	**+0.3**	
HOPS	**Hopland Field** comp=Z,25nm,1.0s	**85.44**	**46**	IAmb		IAmb	21 28 54.8		
SAO	**San Andreas Ge** comp=Z,28nm,1.1s	**85.50**	**49**	IAmb		IAmb	21 28 55.2		
GDXM	**Geysers**	**85.53**	**46**	P		**P**	**21 28 51.7**	**-0.8**	
GDXM	comp=Z,26nm,1.2s			IAmb		IAmb	21 28 56.4		
SCZ2	**Santa Cruz Isl** baz=243	**85.56**	**52**	P		**P**	**21 28 52.7**	**+0.1**	
SBC	**Santa Barbara** baz=243	**85.70**	**51**	P		**P**	**21 28 53.6**	**+0.4**	
PKM	**Mcpherson Peak** baz=243	**85.83**	**51**	P		**P**	**21 28 55.0**	**+0.9**	
SMMC	**Simmler** baz=243	**85.88**	**51**	P		**P**	**21 28 55.3**	**+1.1**	
PAGB	**Antelope Grade** comp=Z,12nm,0.8s	**85.89**	**50**	IAmb		IAmb	21 28 56.4		
KHMM	**Horse Mountain**	**85.92**	**44**	P		**P**	**21 28 54.0**	**-0.4**	
SCI2	**San Clemente I** baz=244	**85.92**	**53**	P		**P**	**21 28 54.8**	**+0.4**	
KRMB	**Red Mountain** comp=Z,24nm,1.1s	**86.12**	**44**	IAmb		IAmb	21 28 58.7		
O02D	**Mt. Diablo Mer** baz=241,SNR=31	**86.20**	**45**	P		**P**	**21 28 56.8**	**+1.1**	
CIS	**Catalina Islan** baz=244	**86.21**	**53**	P		**P**	**21 28 56.9**	**+1.1**	
FMP	**Fort Macarthur** baz=244	**86.44**	**53**	P		**P**	**21 28 58.1**	**+1.2**	
OSI	**Osito Audit: C** baz=244	**86.51**	**52**	P		**P**	**21 28 58.2**	**+0.9**	
WDC	**Whiskeytown Da** comp=Z,14nm,1.0s	**86.56**	**45**	P		**P**	**21 28 57.2**	**-0.1**	
WDC				IAmb		IAmb	21 28 59.9		
DECC	**Green Verdugo** baz=244	**86.64**	**52**	P		**P**	**21 28 59.1**	**+1.2**	
N02D	**Trinity Center** baz=241,SNR=23	**86.64**	**45**	P		**P**	**21 28 59.0**	**+1.2**	
ARVC	**Arvin** baz=244,SNR=6.8	**86.65**	**51**	P		**P**	**21 28 58.4**	**+0.5**	
M02C	**Callahan** baz=241,SNR=26	**86.75**	**44**	P		**P**	**21 28 59.3**	**+1.0**	
ORV	**Oroville** comp=Z,20nm,1.1s	**86.78**	**46**	IAmb		IAmb	21 29 01.1		
VOG	**Valley Oaks Go** baz=244	**86.78**	**50**	P		**P**	**21 28 58.6**	**+0.2**	
VES	**Vestal, Richgr** baz=244	**86.78**	**50**	P		**P**	**21 28 59.0**	**+0.5**	
MWC	**Mount Wilson** comp=Z,24nm,1.0s	**86.83**	**52**	IAmb		IAmb	21 29 01.5		
CMB	**Columbia Colle**	**86.84**	**48**	P		**P**	**21 28 58.5**	**-0.3**	
K02D	**Willamette Mer** baz=240,SNR=5.7	**86.86**	**43**	P		**P**	**21 28 59.4**	**+0.6**	
O03E	**Paynes Creek** baz=242,SNR=18	**86.92**	**45**	P		**P**	**21 28 59.5**	**+0.3**	
J01E	**Myrtle Point** baz=240	**86.92**	**42**	P		**P**	**21 29 00.3**	**+1.4**	
109C	**Camp Elliot, M** baz=245	**86.98**	**54**	P		**P**	**21 29 00.1**	**+0.6**	
109C	**Camp Elliot, M** comp=Z,13nm,0.8s	**86.98**	**54**	IAmb		IAmb	21 29 01.5		
YBH	**Yreka Blue Hor**	**87.00**	**44**	P		**P**	**21 28 59.1**	**-0.5**	
YBH	comp=Z,24nm,1.1s			IAmb		IAmb	21 29 02.7		
BILL	**Bilibino** comp=Z,10nm,1.0s	**87.07**	**359**	P		**P**	**21 28 58.9**	**-0.2**	
BILL				IAmb		IAmb	21 29 00.5		
ULN	**Ulaanbaatar**	**87.13**	**323**	P		**P**	**21 28 59.1**	**-1.0**	
BFSC	**Mount Baldy Ra** baz=245,SNR=8.3	**87.14**	**52**	P		**P**	**21 29 00.5**	**+0.1**	
ISA	**Isabella, Lake** baz=244,SNR=15	**87.15**	**51**	P		**P**	**21 29 00.7**	**

GRAC Grapevine Rang 88.53 50 P P 21 29 08.0 +1.2
baz=245
BC3 Big Chuckawall 88.56 54 P P 21 29 07.6 +0.5
baz=246,SNR=6.0
NV11 Mina Array Sit 88.59 48 IAmb IAmb 21 29 09.9
comp=Z,23nm,1.1s
FURC Furnace Creek, 88.67 51 P P 21 29 08.0 +0.6
baz=245,SNR=21
J05D Fort Rock, OR 88.70 43 P P 21 29 08.3 +0.7
baz=242,SNR=20
H04A Detroit Lake 88.77 41 IAmb IAmb 21 29 10.1
comp=Z,22nm,1.0s
GLA Glamis 88.79 54 P P 21 29 09.2 +1.1
baz=246
GLA Glamis 88.79 54 P P 21 29 08.1 -0.1
GMRC Granite Mounta 88.86 53 P P 21 29 08.8 +0.2
baz=246,SNR=9.5
SHOC Shoshone, Teco 88.87 51 P P 21 29 09.2 +0.8
baz=245
KVN Kaiserville 88.90 48 P P 21 29 08.0 -0.7
KVN IAmb IAmb 21 29 11.3
comp=Z,18nm,1.0s
TUQ Turquoise Moun 88.94 52 P P 21 29 09.3 +0.4
baz=246
F04D Rainier, OR 88.94 40 P P 21 29 09.4 +1.1
baz=241
IRM Iron Mountain 89.00 53 P P 21 29 09.7 +0.6
baz=246,SNR=15
NLWA Neilton Lookou 89.07 39 IAmb IAmb 21 29 12.2
comp=Z,19nm,1.1s
I05D Terrebonne, OR 89.13 42 P P 21 29 10.0 +0.5
baz=242,SNR=7.0
SNAA Sanae 89.17 182 P P 21 29 08.5 -0.9
SNAA Sanae 89.17 182 P P 21 29 08.4 -0.9
Y12C Blythe 89.30 54 P P 21 29 10.9 +0.5
baz=246
TPNV Topopah Spring 89.32 50 P P 21 29 10.8 +0.2
baz=245,SNR=20
E04D Cinebar 89.44 40 P P 21 29 11.4 +0.7
baz=241,SNR=8.3
113A Mohawk Valley, 89.50 55 IAmb IAmb 21 29 14.4
comp=Z,12nm,1.1s
G05D Wamic, OR 89.57 41 P P 21 29 11.7 +0.3
baz=242
D03D Eldon 89.60 39 P P 21 29 12.1 +0.6
baz=241,SNR=9.1
D04E Lakebay 89.62 39 P P 21 29 12.8 +1.3
baz=241
NEE2 Needles Airpor 89.64 53 P P 21 29 12.9 +0.9
baz=246
VNA3 Neumayer Olymp 89.75 180 P P 21 29 11.0 -0.9
F05D White Salmon 89.79 41 P P 21 29 13.4 +1.0
baz=242
PDMCI Parker Dam,Lak 89.81 53 P P 21 29 13.3 +0.6
baz=247,SNR=10.0
HDA Harding Lake 89.82 17 P P 21 29 13.9 +1.8
baz=220
TCOL CIGO, UAF Yank 89.92 17 P P 21 29 12.4 -0.1
baz=220
RIDG Independent Ri 89.92 18 IAmb IAmb 21 29 13.2
comp=Z,9.2nm,1.0s
214A Organ Pipe Nat 89.92 56 P P 21 29 13.7 +0.3
baz=247
214A Organ Pipe Nat 89.92 56 P P 21 29 13.3 -0.1
214A IAmb IAmb 21 29 16.7
comp=Z,17nm,1.1s
COLA College 89.92 17 P P 21 29 13.1 +0.5
COLA IAmb IAmb 21 29 13.8
comp=Z,8.5nm,0.7s
SHPR Sheep Range 89.94 51 IAmb IAmb 21 29 16.6
comp=Z,15nm,1.1s
PGC Sidney 89.94 38 P P 21 29 12.0 -1.0
LON Longmire 89.99 40 IAmb IAmb 21 29 15.6
comp=Z,7.8nm,1.1s
G06A Carlson Farm, 90.00 41 IAmb IAmb 21 29 15.9
comp=Z,7.0nm,0.9s
VNA2 Neumayer--Watz 90.04 181 P P 21 29 12.9 -0.4
baz=163,slow=4.9
ILAR Eielson Array 90.11 17 P P 21 29 11.9 -1.5
comp=Z,3.5nm,0.9s,baz=234,slow=5.6,SNR=29
ILAR pP pP 21 30 19.5 +0.5
comp=Z,1.7nm,0.9s,baz=232,slow=5.8,SNR=4.2
POKR Poker Plat Res 90.22 17 P P 21 29 14.6 +0.6
baz=220
HSIG 90.30 59 IAmb IAmb 21 29 18.7
comp=Z,19nm,1.1s
W13A Hualapai Mount 90.32 53 IAmb IAmb 21 29 18.5
comp=Z,13nm,1.1s
VNA1 Neumayer--Stat 90.33 181 P P 21 29 14.9 +0.4
R11A Troy Canyon, C 90.38 49 P P 21 29 15.9 +0.3
baz=246,SNR=7.5
A04D Lummi Island 90.41 38 P P 21 29 16.0 +0.9
baz=241
J08A Circle Bar Ran 90.53 44 IAmb IAmb 21 29 18.7
comp=Z,18nm,1.0s
B05A Bryant 90.54 38 P P 21 29 16.2 +0.4
baz=241,SNR=9.7
Y14A Wickenburg 90.54 54 IAmb IAmb 21 29 19.1
comp=Z,8.2nm,1.1s
LTY Liberty 90.91 40 IAmb IAmb 21 29 20.0
comp=Z,14nm,1.1s
G08A Pilot Rock 91.08 42 IAmb IAmb 21 29 21.1
comp=Z,13nm,1.0s
C06D Leavenworth 91.09 39 P P 21 29 18.6 +0.2
baz=242
WHY Whitehorse 91.21 24 IAmb IAmb 21 29 20.0
comp=Z,9.1nm,1.0s
HAWA Hanford 91.21 41 IAmb IAmb 21 29 21.9
comp=Z,12nm,0.9s
TUC Tucson 91.65 56 P P 21 29 22.0 +0.6
baz=248
TUC Tucson 91.65 56 P P 21 29 20.9 -0.5
TUC IAmb IAmb 21 29 24.8
comp=Z,13nm,1.1s
DLBC Dease Lake 91.85 27 IAmb IAmb 21 29 23.9
comp=Z,12nm,1.0s
X16A Lo Mia Camp, P 91.92 54 IAmb IAmb 21 29 26.1
comp=Z,12nm,0.9s
U15A North Rim 92.03 52 IAmb IAmb 21 29 34.7
comp=Z,8.2nm,1.1s
MFID Camas Ranch 92.30 45 IAmb IAmb 21 29 26.6
comp=Z,6.7nm,1.1s
WUAZ Wupatki 92.38 53 P P 21 29 24.8 0.0
baz=248
TOLK Toolik Lake Re 92.44 14 P P 21 29 24.6 +0.3
baz=218
DUG Dugway, Tooele 93.09 48 P P 21 29 28.2 +0.2
baz=248
NEW Newport 93.50 40 P P 21 29 30.0 +0.4
baz=245
121A Cookes Peak, D 94.10 57 P P 21 29 33.4 +0.5
baz=250
EPYK Eagle Plains 94.23 19 P P 21 29 32.8 +0.3
baz=230
MCMT McKenzie Canyo 94.83 44 P P 21 29 33.3 -2.7
MCMT pP pP 21 30 37.8 -3.7
DLMT Dillon 95.20 44 IAmb IAmb 21 29 52.7
comp=Z,4.3nm,1.1s
MNTX Cornudas Mount 95.74 59 P P 21 29 40.9 +0.7
baz=251
IMW Indian Meadow 95.76 46 IAmb IAmb 21 29 37.3
comp=Z,4.7nm,0.7s
ANMO Albuquerque 95.95 55 P P 21 29 42.1 +0.8
baz=251
O20A White River Ci 96.34 50 P P 21 29 43.0 +0.1
baz=250
TX31 Lajitas Ar. Si 96.39 61 IAmb IAmb 21 29 45.1
comp=Z,4.2nm,0.9s
TXAR Lajitas Array 96.39 61 P P 21 29 44.1 +0.9
comp=Z,1.2nm,0.8s,baz=217,slow=4.8,SNR=14
INK Inuvik 96.42 18 P P 21 29 41.5 -0.7
INK IAmb IAmb 21 29 43.0
comp=Z,3.8nm,0.9s
WMQ Urumqi 97.52 314 eP Pdif 21 29 49.8 +1.8
WMQ pmax pmax
comp=Z,18nm,0.7s
WMQ pmax pmax
comp=Z,61nm,4.9s
C36M Paulatuk 99.86 19 P Pdif 21 29 58.0 +0.3
baz=241
YKA Yellowknife Ar 100.48 27 P Pdif 21 30 00.8 +0.2
comp=Z,1.9nm,0.9s,baz=248,slow=4.2,SNR=17
YKA pP pwP 21 31 09.1 -0.6
comp=Z,1.0nm,0.9s,baz=252,slow=4.5,SNR=5.0
MKAR Makanchi Array 102.04 315 P Pdif 21 30 09.4 +1.4
comp=Z,0.8nm,0.8s,baz=113,slow=5.9,SNR=5.1
I48A Sherman Twp 114.95 49 P PKPdf 21 34 53.2 0.0
baz=267

T53A Wise 115.29 57 P PKPdf 21 34 53.3 -0.9
baz=264
J49A Marlette 115.31 50 P PKiKP 21 34 54.3 +0.4
baz=267
Y55A Saluda 115.51 61 P PKiKP 21 34 55.3 +0.7
baz=263
I49A Point Hope 115.57 50 P PKiKP 21 34 54.9 +0.5
baz=268
X55A Gracelyn & Ava 115.75 60 P PKPdf 21 34 54.9 -0.2
baz=264
U54A Nelsons Funny 115.81 58 P PKPdf 21 34 55.2 0.0
baz=265
KMSC Kings Mountain 116.07 60 P PKiKP 21 34 55.7 0.0
baz=264
Q53A Leroy 116.25 56 P PKiKP 21 34 56.0 +0.1
baz=266
U55A TA2, Sparta 116.43 58 P PKPdf 21 34 55.9 -0.5
baz=265
Q54A Coxs Mills 116.79 55 P PKiKP 21 34 57.1 +0.1
baz=266
V56A Mocksville 116.82 59 P PKiKP 21 34 57.1 0.0
baz=265
M53A WI Miller and 117.05 53 P PKPdf 21 34 57.1 -0.3
baz=268
T56A Rocky Mt 117.29 58 P PKPdf 21 34 57.4 -0.5
baz=266
R55A Marlinton 117.31 56 P PKPdf 21 34 57.7 -0.3
baz=266
D50A G1974 Best Tow 117.70 46 P PKiKP 21 34 59.0 +0.6
baz=271
W58A Raeford 117.78 60 P PKPdf 21 34 58.7 -0.2
baz=265
M54A Oil Creek Stat 117.81 53 P PKPdf 21 34 58.8 -0.1
baz=268
O55A Ligonier 118.03 54 P PKPdf 21 34 58.6 -0.7
baz=268
L54A Sinclairville 118.08 52 P PKPdf 21 34 58.8 -0.5
baz=269
N55A Marion Center 118.30 53 P PKiKP 21 35 00.0 +0.2
baz=268
GEYT Alibeck 118.38 303 PKP PKPdf 21 34 59.2 -0.9
comp=Z,1.9nm,1.0s,baz=294,slow=1.4,SNR=4.2
T58A Grand View Acr 118.48 58 P PKPdf 21 34 59.6 -0.6
baz=267
Y60A Bolivia 118.53 61 P PKPdf 21 35 00.3 -0.1
baz=265
O56A Blue Knob Stat 118.60 54 P PKPdf 21 35 00.2 -0.3
baz=268
H53A Bobcaygeon 118.63 49 P PKiKP 21 35 00.3 0.0
baz=271
V59A Middlesex 118.64 59 P PKPdf 21 35 00.4 -0.2
baz=266
Q57A Strasburg 118.68 55 P PKPdf 21 35 00.3 -0.2
baz=268
L55A Hinsdale 118.74 52 P PKPdf 21 35 00.2 -0.4
baz=270
G54A Lake Saint Pet 118.96 48 P PKiKP 21 35 01.7 +0.8
baz=272
MATQ Matagami 119.05 43 P PKiKP 21 35 01.5 +0.6
baz=274
R58B Mineral 119.05 57 P PKiKP 21 35 01.6 +0.3
baz=268
Q58A Fox Den Farm, 119.24 56 P PKiKP 21 35 01.7 +0.1
baz=268
L56A Greenwood 119.39 52 P PKPdf 21 35 01.8 -0.1
baz=270
E54A Lac Daplat, Po 119.55 47 P PKPdf 21 35 01.9 0.0
baz=273
H55A Tweed 119.63 49 P PKPdf 21 35 02.1 -0.1
baz=272
O58A Lewisberry 119.86 54 P PKPdf 21 35 02.8 0.0
baz=270
J56A Wycott 119.89 51 P PKPdf 21 35 02.4 -0.3
baz=271
L57A Andrews Acres 119.92 52 P PKPdf 21 35 02.5 -0.3
baz=271
G55A Calabogie 119.93 48 P PKiKP 21 35 02.9 +0.1
baz=273
N58A Sunbury 120.02 53 P PKPdf 21 35 02.8 -0.3
baz=270
M58A Price's Panora 120.21 53 P PKPdf 21 35 03.1 -0.3
baz=270
P59A Jarrettsville 120.23 55 P PKPdf 21 35 03.5 0.0
baz=270
H56A Elgin 120.29 49 P PKiKP 21 35 03.6 0.0
baz=272
D55A Sainte-Anne-du 120.69 46 P PKPdf 21 35 03.7 -0.5
baz=274
M59A Waymart 120.98 53 P PKiKP 21 35 05.3 +0.2
baz=271
J59A Pisco 121.60 50 P PKPdf 21 35 06.0 -0.1
baz=273
D57A Chemin Vers le 121.77 46 P PKPdf 21 35 05.5 -0.8
baz=276
H58A Gabriels 121.78 49 P PKPdf 21 35 05.9 -0.5
baz=274
J60A Lant Hill Farm 122.40 51 P PKPdf 21 35 07.2 -0.4
baz=274
D58A Chemin du LacG 122.45 46 P PKPdf 21 35 07.0 -0.6
baz=274
K61A Williamstown 122.55 51 P PKiKP 21 35 08.0 -0.1
baz=274
H60A Morristown 122.83 49 P PKPdf 21 35 08.3 -0.1
baz=275
L61B Northampton 123.00 51 P PKPdf 21 35 08.5 -0.2
baz=274
J61A Chester 123.03 50 P PKPdf 21 35 08.8 0.0
baz=274
F60A Warwick 123.21 47 P PKPdf 21 35 09.0 0.0
baz=277
I61A Oroboro, Fairl 123.23 50 P PKPdf 21 35 09.2 0.0
baz=275
L63A North Scituate 123.83 52 P PKPdf 21 35 09.9 -0.4
baz=274
F61A St Evariste 123.88 47 P PKPdf 21 35 10.4 +0.1
baz=277
H62A Milan 123.92 49 P PKPdf 21 35 10.2 -0.3
baz=276
E61A Lac Etchemin 124.16 46 P PKiKP 21 35 11.2 0.0
baz=278
D61A St Aubert, Com 124.26 46 P PKPdf 21 35 10.9 -0.1
baz=279
E62A Clayton Lake 124.80 46 P PKPdf 21 35 11.6 -0.5
baz=279
ARCES ARCESS Array B 125.18 345 PKP PKPdf 21 35 10.5 -1.7
comp=Z,5.4nm,1.1s,baz=46,slow=3.5,SNR=8.0
ARCES pPKP pPKPdf 21 36 22.2 +1.1
comp=Z,3.2nm,1.0s,baz=54,slow=2.3,SNR=1.7
F63A Nahmakanta, Br 125.22 47 P PKiKP 21 35 13.2 -0.1
baz=279
G64A Maxfield 125.53 48 P PKPdf 21 35 13.6 +0.2
baz=279
E63A Oxbow 125.58 46 P PKPdf 21 35 13.4 -0.2
baz=280
PQI Presque Isle 125.81 46 PKPdf 21 35 12.4 -1.6
E64A Bridgewater 125.98 46 P PKPdf 21 35 13.4 -1.0
baz=280
G65A Princeton 126.37 48 P PKPdf 21 35 15.0 -0.1
baz=280
RAYN Ar Rayn 128.12 285 PKPdf 21 35 16.9 -2.3
FINES FINESS Array B 130.76 338 PKP PKPdf 21 35 21.6 -1.3
comp=Z,0.9nm,0.8s,baz=77,slow=3.0,SNR=2.3
MBAR Mbarara 135.16 249⇑ eP PKPdf 21 35 32.1 -0.9
NOA NORSAR Array B 135.56 345 PKP PKiKP 21 35 33.1 -0.5
comp=Z,0.3nm,0.6s,baz=34,slow=1.6,SNR=3.4
AKASG Malin Array Be 135.75 325 PKP PKiKP 21 35 33.5 -0.7
comp=Z,0.2nm,0.4s,baz=64,slow=2.2,SNR=3.1
BRTR Keskin Array B 137.16 308 PKP PKiKP 21 35 37.2 -0.5
comp=Z,0.4nm,0.8s,baz=46,slow=7.2,SNR=4.0
SORM Soroca 137.52 322 ⇓P PKPdf 21 35 33.5 -2.5
BIZ Bicaz 139.43 321 ⇓P PKPdf 21 35 40.4 +0.8
BURAR Bucovina Array 139.60 323 ⇓P PKPdf 21 35 36.1 -3.9
MLR Muntele Rosu 140.25 319 ⇓P PKPdf 21 35 39.4 -1.9
KOLS Kolonicke sedl 140.47 326 eP PKP PKPdf 21 35 42.7 +1.3
ARR Arges 141.11 320 ⇑P PKPdf 21 35 40.3 -2.5
MORC Moravsky Berou 142.28 330 ⇓P PKPdf 21 35 42.3 -2.3
SIRR Siria 142.38 323 ⇓P PKPdf 21 35 41.7 -3.2
BZS Buzias 142.77 322 ⇑P PKPdf 21 35 43.0 -2.6
BRG Berggiesshubel 143.06 334 eP PKP PKPbc 21 35 43.1 -0.6
comp=Z,5.6nm,1.2s
CLL Collm 143.10 336 eP PKPdf PKPbc 21 35 43.0 -0.7
comp=Z,3.0nm,0.8s
MDVR Moldovita 143.18 321 ⇓P PKPbc 21 35 44.1 -0.1
VTS Vitosha 143.35 317 ⇓P PKPbc 21 35 45.4 +0.4
APE Apeiranthos 144.03 307 ⇑P PKPab 21 35 45.9 -0.5
NKC Novy Kostel 144.16 335 eP PKP PKPab 21 35 46.2 -0.2
SANT Santorini 144.31 306 ⇑P PKPab 21 35 47.0 -0.5

CONA Conrad Observa 144.37 329 PKPdf PKPdf 21 35 48.6 +0.2
comp=Z,11nm,1.7s,SNR=6.2
CONA eP PKPdf pPKPdf 21 36 56.8 -1.0
comp=Z,10nm,1.4s
KHC Kasperske Hory 144.54 333 eP PKP PKPbc 21 35 48.1 +0.1
KHC eX x 21 36 55.5
GERES GERESS Array B 144.70 332 PKP PKPbc 21 35 47.5 -1.0
comp=Z,5.1nm,0.8s,baz=46,slow=3.9,SNR=44
ARSA Arzberg 145.00 329 eP PKPdf PKPab 21 35 50.0 +0.2
comp=Z,7.0nm,1.2s
ARSA pPKPdf pPKPbc 21 36 58.4 +0.2
comp=Z,12nm,1.4s
LIT Litokhoron 145.03 314 PKPbc PKPdf 21 35 48.1 -1.7
LIT PKPbc 21 35 48.3 -1.5
GRF Grafenberg Arr 145.08 335 eP PKP PKPab 21 35 50.0 +0.1
baz=37,slow=2.6
GRF eP PKP pPKPab 21 36 56.7 -0.8
IDI Anoyia 145.09 305 ⇑P PKPab 21 35 50.6 +0.1
MOA Molln 145.18 331 PKPab PKPdf 21 35 49.3 -0.4
comp=Z,7.9nm,1.0s,SNR=6.5
MOA pPKPdf pPKPdf 21 36 58.9 -0.2
comp=Z,12nm,1.3s
SOKA Soboth 145.65 329 eP PKPab PKPdf 21 35 50.9 +0.2
comp=Z,5.6nm,1.0s
SOKA eP PKPbc pPKPbc 21 36 58.8 -1.1
comp=Z,16nm,1.3s
PDG Podgorica 145.96 319 ⇑P PKPbc 21 35 52.4 -0.1
PDG Podgorica 145.96 319 PKPdf PKPdf 21 35 50.2 -1.0
MEM Membach 146.13 341 PKPdf PKPdf 21 35 52.0 +0.7
MEM pPKP pPKPdf 21 36 59.9 -0.4
MEM x x 21 37 14.0
TIR Tirane 146.16 317 ⇑P PKPab 21 35 54.2 -0.2
KBA Koelnbreinsper 146.17 330 eP PKPab PKPbc 21 35 52.7 -0.5
comp=Z,4.5nm,0.8s
KBA eP PKPbc pPKPdf 21 37 00.5 -0.5
comp=Z,13nm,1.2s
BHOU Houvegnez 146.35 341 PKPdf PKPab 21 35 54.3 -0.5
BHOU pPKP pPKPdf 21 37 00.5 -0.2
BHOU x x 21 37 14.6
MYKA Terra Mystica 146.35 330 eP PKPdf PKPdf 21 37 00.4 -0.8
comp=Z,16nm,1.1s
BCLA Clavier 146.51 342 pPKP pPKPdf 21 37 01.6 +0.6
SNF Seneffe 146.72 343 pPKP pPKPdf 21 37 02.0 +0.7
SNF x x 21 37 16.0
BMRD Maredsous 146.77 342 PKPdf PKPbc 21 35 54.7 +0.2
BMRD pPKP pPKPbc 21 37 02.8 0.0
BMRD x x 21 37 15.9
WATA Walderalm 146.77 332 eP PKPab PKPbc 21 35 54.9 0.0
comp=Z,3.7nm,0.7s
WATA eP PKPbc pPKPdf 21 37 02.2 +0.2
comp=Z,9.3nm,1.2s
ABTA Abfaltersbach 146.80 331 eP PKiKP PKPab 21 35 56.7 -0.1
comp=Z,7.2nm,0.9s
ABTA eP PKPdf pPKPdf 21 37 01.5 -0.5
comp=Z,10.0nm,1.3s
WTTA Wattenberg 146.80 332 eP PKPab PKPbc 21 35 55.0 0.0
comp=Z,5.4nm,1.0s
WTTA eP PKPbc pPKPdf 21 37 02.9 +0.8
comp=Z,16nm,1.3s
WLF Walferdange 146.91 340 PKPdf PKPbc 21 35 54.6 -0.4
WLF pPKP pPKPbc 21 37 03.5 0.0
WLF x x 21 37 16.1
WLF Walferdange 146.91 340 PKPdf PKPdf 21 35 51.1 -1.5
MOTA Moosalm 146.97 333 eP PKPab PKPbc 21 35 55.2 -0.2
comp=Z,9.8nm,1.1s
MOTA eP PKPbc pPKPbc 21 37 03.2 -0.6
comp=Z,13nm,1.2s
DOU Dourbes 147.00 342 PKPdf PKPbc 21 35 54.5 -0.7
DOU pPKP pPKPbc 21 37 02.7 -0.8
DOU x x 21 37 23.6
RETA Reutte 147.01 333 eP PKPab PKPbc 21 35 55.4 0.0
comp=Z,2.2nm,0.6s
RETA pPKPbc pPKPbc 21 37 03.4 -0.5
comp=Z,11nm,1.2s
SQTA Sankt Quirin 147.02 333 eP PKPab PKPbc 21 35 55.3 -0.2
comp=Z,7.0nm,0.9s
SQTA eP PKPbc pPKPbc 21 37 03.4 -0.6
comp=Z,12nm,1.2s
BFO Black Forest 147.29 337 PKPdf PKPdf 21 35 52.1 -1.2
FETA Feichten 147.38 333 eP PKPab PKPbc 21 35 55.9 -0.6
comp=Z,12nm,1.0s
FETA eP PKPbc pPKPbc 21 37 04.6 -0.5
comp=Z,9.3nm,1.5s
DAVA Damuels 147.53 334 eP PKiKP PKPbc 21 35 57.3 +0.4
comp=Z,6.2nm,0.9s
DAVA eP PKPbc pPKPbc 21 37 05.2 -0.3
comp=Z,12nm,1.3s
FUORN Ofenpass-Fuorn 147.90 333 PKPdf PKPdf 21 35 53.3 -1.4
DAVOX Davos/Dischmat 147.93 333 PKPbc PKPbc 21 35 56.8 -1.2
comp=Z,8.4nm,0.7s,baz=17,slow=3.6,SNR=18
DAVOX pPKPbc pPKPbc 21 37 05.5 -1.2
comp=Z,5.1nm,0.6s,baz=84,slow=5.8,SNR=3.0
TUE Stuetta 148.40 334 PKPbc PKPdf 21 35 57.2 +1.8
TIP Timpagrande 149.33 316 ⇑P PKPbc 21 36 01.8 +0.2
TIP Timpagrande 149.33 316 PKPdf PKPdf 21 35 56.1 -0.9
TIP PKPbc 21 36 00.6 -1.0
ESDC Sonseca Array 158.92 346 PKPab PKPab 21 36 47.1 -0.7
comp=Z,0.4nm,0.9s,baz=8.1,slow=3.1,SNR=4.4
TORD Torodi Ar. Bea 166.98 244 PKP PKPdf 21 36 18.3 -0.3
comp=Z,1.7nm,1.0s,baz=39,slow=1.6,SNR=6.8
TORD PKPab PKPab 21 37 23.9 -0.2
comp=Z,3.6nm,1.2s,baz=124,slow=3.1,SNR=5.8
TORD pPKPab pPKPab 21 38 29.9 -0.4
comp=Z,2.8nm,1.2s,baz=116,slow=3.4,SNR=4.5

IDC ***18*** *21:16:47.9±0.6, 44.˚79S×36.˚61E, h0km, mb4.3/10, mb1 4.3/12, mb1mx4.0/41, mbtmp4.3/12, ML3.7/2, MS3.9/16, Ms1 3.9/16, ms1mx3.8/24, Error ellipse: s-maj=29.2km s-min=14.3km az=72.0*

NEIC ***18*** *21:16:49.2±1.5, 44.˚8S±0.˚1×36.˚7E±0.˚2, h15km±3km, mb4.7/15, Error ellipse: s-maj=20.6km s-min=15.3km az=63.0*

ISC 18 21:16:48.8±0.5**, 44.˚81S**±0.˚09×**36.˚6E**±0.˚1**, h10**km**, n63,** σ**0°96**/50**, mb4.4**/15**, MS3.8**/15**, 1C, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SUR	**Sutherland**	**17.44**	**310**	P	**P**	**21 20 53.1**	**-0.4**
	0.4nm,0.3s,baz=128,slow=12,SNR=6.3						
SUR	**Sutherland**	**17.44**	**310**	P	**P**	**21 20 53.0**	**-0.5**
SUR				IAmb	IAmb	21 21 07.0	
	comp=Z,59nm,1.6s						
BOSA	**Boshof**	**18.50**	**327**	P	**Pn**	**21 21 05.7**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=152,slow=11,SNR=5.7						
BOSA				LR	LR	21 26 46.5	
	comp=Z,617nm,21.7s,baz=158,slow=32						
BOSA	**Boshof**	**18.50**	**327**	P	**Pn**	**21 21 05.0**	**-0.2**
LBTB	**Lobatse**	**21.66**	**332**	P	**P**	**21 21 39.8**	**+0.3**
	comp=Z,8.6nm,0.9s,baz=156,slow=10,SNR=8.4						
LBTB				LR	LR	21 28 42.6	
	comp=Z,587nm,20.6s,baz=162,slow=33						
LBTB	**Lobatse**	**21.66**	**332**	P	**P**	**21 21 39.1**	**-0.4**
LBTB				IAmb	IAmb	21 21 42.9	
	comp=Z,24nm,1.2s						
SYO	**Syowa Base**	**24.31**	**177**⇑	eP	**P**	**21 22 05.2**	**-0.9**
MATP	**Matopo**	**25.22**	**342**	P	**P**	**21 22 14.4**	**-0.4**
	comp=Z,4.0nm,0.8s,baz=168,slow=10,SNR=14						
MAW	**Mawson**	**26.71**	**158**	P	**P**	**21 22 29.7**	**+1.9**
MAW				LR	LR	21 30 20.4	
	comp=Z,281nm,21.3s,baz=2.5,slow=30						
MAW	**Mawson**	**26.71**	**158**	P	**P**	**21 22 28.1**	**+0.3**
LSZ	**Lusaka**	**30.28**	**344**	P	**P**	**21 23 00.2**	**0.0**
	comp=Z,8.3nm,0.7s,baz=169,slow=11,SNR=20						
LSZ	**Lusaka**	**30.28**	**344**	P	**P**	**21 23 00.1**	**0.0**
LSZ				IAmb	IAmb	21 23 03.4	
	comp=Z,13nm,1.0s						
SNAA	**Sanae**	**32.83**	**202**	P	**P**	**21 23 23.3**	**+1.2**
SNAA	**Sanae**	**32.83**	**202**	P	**P**	**21 23 23.0**	**+1.0**
	comp=Z,2.3nm,0.8s,baz=81,slow=7.6,SNR=10						
SNAA	**Sanae**	**32.83**	**202**	P	**P**	**21 23 22.9**	**+0.8**
SNAA				IAmb	IAmb	21 23 26.6	
	comp=Z,13nm,1.7s						
VNA2	**Neumayer--Watz**	**33.72**	**204**	P	**P**	**21 23 31.3**	**+1.5**
	baz=53,slow=9.3						
VNA3	**Neumayer Olymp**	**34.52**	**204**	P	**P**	**21 23 37.9**	**+1.1**
KMBO	**Kilima Mbogo**	**43.50**	**1**	LR	LR	21 40 32.2	
	comp=Z,275nm,21.3s,baz=98,slow=33						
QSPA	**South Pole Qui**	**45.41**	**180**	P	**P**	**21 25 06.9**	**-0.4**
	comp=Z,3.5nm,0.7s,baz=248,slow=2.4,SNR=37						
QSPA	**South Pole Qui**	**45.41**	**180**	P	**P**	**21 25 07.4**	**+0.1**
QSPA				IAmb	IAmb	21 25 18.4	
	comp=Z,21nm,1.6s						

VNDA	**Vanda**	**53.41**	**167**	LR	LR	21 46 52.5		
	comp=Z,337nm,21.7s,baz=226,slow=34							
VNDA	**Vanda**	**53.41**	**167**	P	**P**	**21 26 08.1**	**+0.1**	
VNDA				IAmb	IAmb	21 26 14.6		
	comp=Z,4.5nm,1.1s							
H10S2	**ASCENSION HYDR**	**56.68**	**293**	T	T	22 27 52.2		
	baz=136,slow=74,SNR=42							
H10S3	**ASCENSION HYDR**	**56.70**	**293**	T	T	22 27 53.4		
	baz=84,slow=74,SNR=134							
DBIC	**Dimbokro**	**63.31**	**313**	P	**P**	**21 27 20.2**	**+2.4**	
	comp=Z,5.9nm,1.1s,baz=127,slow=3.9,SNR=3.2							
DBIC				LR	LR	21 51 27.0		
	comp=Z,42nm,19.8s,baz=124,slow=33							
DBIC	**Dimbokro**	**63.31**	**313**	P	**P**	**21 27 17.0**	**-0.9**	
TOA0	**Torodi Ar. Sit**	**65.78**	**322**	P	**P**	**21 27 33.8**	**-0.2**	
TOA0				IAmb	IAmb	21 27 38.8		
	comp=Z,15nm,1.6s							
TORD	**Torodi Ar. Bea**	**65.78**	**322**	P	**P**	**21 27 34.6**	**+0.6**	
	comp=Z,2.9nm,1.1s,baz=155,slow=6.1,SNR=8.7							
TORD				LR	LR	21 57 00.3		
	comp=Z,55nm,19.0s,baz=135,slow=37							
MCQ	**Macquarie Isla**	**69.63**	**148**	P	**P**	**21 27 57.0**	**-0.9**	
SPB	**Sao Paulo**	**69.64**	**257**	P	**P**	**21 27 56.5**	**-1.9**	
SPB				IAmb	IAmb	21 27 57.5		
	comp=Z,14nm,1.2s							
FORT	**Forrest**	**70.03**	**114**	P	**P**	**21 28 00.3**	**-0.4**	
FORT				IAmb	IAmb	21 28 09.3		
	comp=Z,12nm,0.9s							
BKNI	**Bangkinang**	**72.38**	**71**	P	**P**	**21 28 13.8**	**-1.4**	
RPSI	**Rantau Prapat**	**72.72**	**68**	P	**P**	**21 28 15.9**	**-1.3**	
CPUP	**Villa Florida**	**74.54**	**248**	LR	LR	21 54 59.2		
	comp=Z,42nm,21.0s,baz=187,slow=31							
BDFB	**Brasilia**	**75.34**	**262**	LR	LR	21 56 06.7		
	comp=Z,33nm,19.5s,baz=227,slow=31							
ASAR	**Alice Springs**	**78.64**	**112**	P	**P**	**21 28 50.3**	**-0.8**	
	comp=Z,0.8nm,0.7s,baz=226,slow=4.8,SNR=5.4							
BRDH	**Bariadhala**	**83.85**	**50**	P	**P**	**21 29 21.0**	**+2.5**	
	comp=Z,627nm,0.6s,baz=136,slow=0.4,SNR=20							
KEST	**Kesra**	**83.88**	**338**	LR	LR	22 09 03.9		
	comp=Z,221nm,18.2s,baz=210,slow=37							
BR131	**Keskin Array S**	**84.19**	**358**	P	**P**	**21 29 18.6**	**-1.4**	
BRTR	**Keskin Array B**	**84.19**	**358**	P	**P**	**21 29 19.8**	**-0.2**	
	comp=Z,0.9nm,0.7s,baz=174,slow=8.0,SNR=9.0							
CMAR	**Chiang Mai Arr**	**84.71**	**58**	LR	LR	22 01 55.7		
	comp=Z,25nm,18.9s,baz=205,slow=32							
LPAZ	**La Paz**	**88.72**	**248**	LR	LR	22 07 12.5		
	comp=Z,36nm,18.6s,baz=174,slow=34							
ESDC	**Sonseca Array**	**91.66**	**330**	LR	LR	22 12 15.8		
	comp=Z,121nm,18.1s,baz=155,slow=36							
AKASG	**Malin Array Be**	**95.34**	**355**	LR	LR	22 17 48.5		
	comp=Z,27nm,19.4s,baz=200,slow=38							
PMG	**Port Moresby**	**97.65**	**111**	LR	LR	22 09 15.0		
	comp=Z,68nm,18.5s,baz=195,slow=32							
MKAR	**Makanchi Array**	**99.73**	**30**	LR	LR	22 09 41.8		
	comp=Z,32nm,21.6s,baz=104,slow=32							
ABTX	**Abilene, Hawle**	**144.14**	**266**			**PKPdf**	**21 36 23.6**	**-0.9**
I37A	**Lemond, Waseca**	**144.70**	**287**			**PKPdf**	**21 36 24.7**	**-0.4**
TXAR	**Lajitas Array**	**145.09**	**257**	PKPbc		**PKPdf**	**21 36 26.9**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=137,slow=5.5,SNR=30							
TX31	**Lajitas Ar. Si**	**145.09**	**257**			**PKPdf**	**21 36 26.2**	**-0.2**
TX32	**Lajitas Array**	**145.09**	**257**			**PKPbc**	**21 36 25.8**	**-0.1**
BILL	**Bilibino**	**145.27**	**31**			**PKPdf**	**21 36 26.3**	**+1.0**
F36A	**Milaca**	**145.36**	**290**			**PKPab**	**21 36 26.7**	**+0.4**
B35A	**Bob, Littlefor**	**146.13**	**294**			**PKPdf**	**21 36 27.0**	**-0.5**
ECSD	**EROS Data Cent**	**146.81**	**285**			**PKPdf**	**21 36 29.4**	**+0.6**
MSTX	**Muleshoe**	**147.07**	**265**			**PKPbc**	**21 36 32.5**	**+0.8**
ULM	**Lac du Bonnet**	**147.87**	**297**	PKPbc		**PKPbc**	**21 36 32.8**	**-0.5**
	comp=Z,3.8nm,0.5s,baz=131,slow=2.2,SNR=5.7							
ULM	**Lac du Bonnet**	**147.87**	**297**			**PKPdf**	**21 36 30.7**	**+0.5**
ANMO	**Albuquerque**	**150.18**	**264**	PKPdf		**PKPdf**	**21 36 33.7**	**-1.1**
TUC	**Tucson**	**151.77**	**255**			**PKiKP**	**21 36 44.4**	**+0.5**
PV10	**Paradox Valley**	**153.62**	**268**			**PKPbc**	**21 36 46.9**	**-0.8**
YKA	**Yellowknife Ar**	**155.72**	**327**	PKPab		**PKPab**	**21 37 09.3**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=53,slow=4.6,SNR=10.0							
ILAR	**Eielson Array**	**159.90**	**4**	PKPab		**PKPab**	**21 37 26.1**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=328,slow=3.2,SNR=5.9							

IDC 18 22:11:40.9±14.0, 17.72N×145.86E, h353km±164km, mb2.9/6, mb1 3.1/6, mb1mx2.8/38, mbtmp3.6/6, Error ellipse: s-maj=51.6km s-min=17.0km az=90.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**25.19**	**325**	P	P	22 16 35.6	0.0
	1.1nm,0.6s,baz=141,slow=9.6,SNR=6.2						
FITZ	**Fitzroy Crossi**	**40.77**	**210**	P	P	22 18 49.0	-0.2
	1.2nm,0.2s,baz=24,slow=10.0,SNR=36						
ASAR	**Alice Springs**	**42.76**	**196**	P	P	22 19 05.0	-0.1
	0.3nm,0.5s,baz=15,slow=7.7,SNR=2.8						
SONM	**Songino Array**	**44.00**	**322**	P	P	22 19 14.8	0.0
	0.3nm,0.6s,baz=132,slow=7.8,SNR=2.5						
MKAR	**Makanchi Array**	**59.41**	**319**	P	P	22 21 06.3	-0.1
	0.2nm,0.3s,baz=91,slow=8.9,SNR=1.9						
ILAR	**Eielson Array**	**64.45**	**26**	P	P	22 21 40.3	-0.1
	0.2nm,0.4s,baz=250,slow=5.9,SNR=5.2						

MAN 18 23:26:56.3, 6.17N×126.53E, h139km, mb4.7, ML3.5, MS3.4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.81**	**265**	*e*P	Pn	23 27 19.7	+1.3
DDMP				*e*S	Sn	23 27 36.8	+1.6
KCP	**Kidapawan**	**1.65**	**300**	*i*P	Pn	23 27 27.5	+0.7
SKMP	**Bagumbayan, Su**	**2.00**	**280**	*e*P	Pn	23 27 31.8	+1.0
SKMP				*e*S	Sn	23 27 57.7	+0.5
BUKP	**Musuan**	**2.23**	**319**	*e*P	Pn	23 27 33.4	-0.2
BUKP				*e*S	Sn	23 28 03.6	+1.3

*IDC **18** 23:47:00.3±0.7, 4.73S×106.08W, h0km, mb4.4/20, mb1 4.6/20, mb1mx4.5/30, mbtmp4.4/20, MS5.4/22, Ms1 5.4/22, ms1mx5.4/27, Error ellipse: s-maj=22.5km s-min=12.9km az=58.0*

*NEIC **18** 23:47:04.3±1.9, 4.42S±0.09×105.94W±0.07, h10km±1km, mb5.3/493, Ms_20 5.5/749, Mww5.8, Mwc5.9(GCMT), Error ellipse: s-maj=17.2km s-min=9.8km az=149.0*

*BJI **18** 23:47:04.5±0.0, 4.50S×105.90W, h10km, mB5.5/19, Ms5.7/31, MS7 5.6/30*

*NEIC **18** 23:47:09, 4.50S×105.78W, h15km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.16; $M_{\theta\theta}$2.62; $M_{\phi\phi}$-2.78; $M_{r\theta}$0.70; $M_{\theta\phi}$7.50; $M_{\phi r}$1.12; Fault plane solution: M_o8.08000×10^{17} NP1:ϕ_s10.00000°, δ86.00000°, λ171.00000°. NP2:ϕ_s100.00000°, δ81.00000°, λ4.00000°. Principal axes: T 8.0783, Plg9.0000°, Azm325.0000°; N 0.0063, Plg81.0000°, Azm167.0000°; P -8.0846, Plg4.0000°, Azm55.0000°;*

*NEIC **18** 23:47:10, 4.49S×105.90W, h22km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.15; $M_{\theta\theta}$1.46; $M_{\phi\phi}$-1.61; $M_{r\theta}$-0.10; $M_{\theta\phi}$6.82; $M_{\phi r}$0.75; Fault plane solution: M_o7.03000×10^{17} NP1:ϕ_s186.00000°, δ89.00000°, λ-174.00000°. NP2:ϕ_s96.00000°, δ84.00000°, λ-1.00000°. Principal axes: T 6.9414, Plg3.0000°, Azm321.0000°; N 0.1835, Plg84.0000°, Azm198.0000°; P -7.1249, Plg5.0000°, Azm51.0000°;*

*GCMT **18** 23:47:10.3±0.1, 4.47S×105.76W, h15km, MW5.9/170, Moment Tensor Solution. s161,c335; s170,c560; Duration: 2s1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.02±.04; $M_{\theta\theta}$2.64±.05; $M_{\phi\phi}$-2.62±.05; $M_{r\theta}$-0.93±.14; $M_{\theta\phi}$7.17±.04; $M_{\phi r}$2.27±.14; Best double couple: M_o8.00300×10^{17} NP1:ϕ_s99.00000°, δ76.00000°, λ-9.00000°. NP2:ϕ_s191.00000°, δ82.00000°, λ-165.00000°. Principal axes: T 7.6860, Plg4.0000°, Azm324.0000°; N 0.6310, Plg73.0000°, Azm220.0000°; P -8.3190, Plg16.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 18 23:47:04.1±0.3, 4.45S±0.06×106.02W±0.06, h17km, n1168, σ1959/761, mb5.2/238, MS5.5/410, 2C, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAYG	**Puerto Ayora**	**16.16**	**77**	Pn	**Pn**	**23 50 50.0**	**-0.6**
PAYG				IAmb	IAmb	23 51 06.7	
	comp=Z,311nm,1.6s						
RPN	**Rapa Nui**	**22.77**	**188**	LR	LR	23 58 37.6	
	comp=Z,12µm,19.4s,baz=4.5,slow=31						
RPN	**Rapa Nui**	**22.77**	**188**	IAms_20	IAms_20	23 58 14.8	
	comp=Z,13µm,20.0s						
TLIG	**Tlapa**	**23.08**	**18**	P	**P**	**23 52 08.8**	**-0.5**
TLIG				IAmb	IAmb	23 52 48.3	
	comp=Z,196nm,1.8s						
CMIG	**Matias Romero**	**24.07**	**27**	P	**P**	**23 52 21.9**	**+3.1**
	comp=Z,8.7nm,0.9s,baz=208,slow=6.9,SNR=6.9						
CMIG				LR	LR	23 59 40.5	
	comp=Z,10µm,21.9s,baz=198,slow=31						
MOIG	**Morelia**	**24.45**	**11**	P	**P**	**23 52 24.3**	**+1.8**
SNET	**Serv Nac Est T**	**24.55**	**43**	P	**P**	**23 52 23.4**	**+0.1**
UNM	**Universidad Na**	**24.57**	**16**	P	**P**	**23 52 24.0**	**+0.3**
APG	**El Apazote**	**24.73**	**38**	P	**P**	**23 52 26.9**	**+1.8**
	comp=Z,121nm,1.2s,baz=235,slow=7.9,SNR=16						
APG				LR	LR	00 00 06.2	
	comp=Z,19µm,19.1s,baz=194,slow=32						
CCIG	**Comitan**	**24.76**	**33**	P	**P**	**23 52 27.5**	**+2.2**
CCIG				IAMs_20	IAMs_20	23 59 50.6	
	comp=Z,14µm,21.0s						
CSGN	**Cosiguina Volc**	**25.22**	**46**	P	**P**	**23 52 30.1**	**+0.7**
CRIN	**San Cristobal**	**25.41**	**48**	P	**P**	**23 52 31.0**	**-0.2**
CRIN				IAMs_20	IAMs_20	23 59 55.9	
	comp=Z,12µm,19.0s						
JTS	**Las Juntas de**	**25.59**	**55**	P	**P**	**23 52 34.7**	**+2.0**
	comp=Z,40nm,1.0s,baz=301,slow=6.7,SNR=14						
JTS	**Las Juntas de**	**25.59**	**55**	P	**P**	**23 52 34.8**	**+2.0**
HDC	**Heredia**	**26.12**	**57**	P	**P**	**23 52 38.2**	**+0.5**
ACON	**Acoyapa**	**26.38**	**52**	P	**P**	**23 52 40.8**	**+1.0**
ACON				IAMs_20	IAMs_20	00 00 25.2	
	comp=Z,15µm,18.0s						
MATN	**Matagalpa**	**26.40**	**49**	P	**P**	**23 52 40.7**	**+0.6**
MATN				IAmb	IAmb	23 52 58.9	
	comp=Z,48nm,0.9s						
MATN				IAMs_20	IAMs_20	00 00 27.7	
	comp=Z,14µm,20.0s						
ESPN	**Las Esperanzas**	**27.20**	**52**	P	**P**	**23 52 47.3**	**+0.1**
ESPN				IAmb	IAmb	23 53 04.3	
	comp=Z,122nm,1.4s						
ESPN				IAMs_20	IAMs_20	00 00 51.0	
	comp=Z,15µm,19.0s						
ZAIG	**Zacatecas**	**27.27**	**7**	P	**P**	**23 52 49.5**	**+1.5**
ZAIG				IAMs_20	IAMs_20	00 01 23.6	
	comp=Z,11µm,21.0s						
ATAH	**Atahualpa**	**27.61**	**97**	P	**P**	**23 52 51.7**	**+0.3**
	comp=Z,5.2nm,0.9s,baz=276,slow=9.2,SNR=2.2						
ATAH				LR	LR	00 00 57.1	
	comp=Z,8µm,19.4s,baz=271,slow=30						
TUMC	**Tumaco**	**27.98**	**78**	P	**P**	**23 52 53.2**	**-1.0**
CUSE	**Cuicocha Este**	**28.00**	**81**	*e*P	**P**	**23 53 01.3**	**+6.3**
LPIG	**La Paz**	**28.69**	**352**	LR	LR	00 01 37.7	
	comp=Z,11µm,21.5s,baz=173,slow=30						
GCUF	**Volcan Galeras**	**29.20**	**80**	*e*P	**P**	**23 53 09.4**	**+3.6**
BCIP	**Isla Barro Col**	**29.40**	**63**	*e*P	**P**	**23 53 09.1**	**+2.2**
BBAC	**Balboa, Cauca**	**29.46**	**78**	*e*P	**P**	**23 53 07.1**	**-0.6**
NNA	**Nana**	**29.81**	**106**	LR	LR	00 01 44.3	
	comp=Z,13µm,20.6s,baz=277,slow=30						
NNA	**Nana**	**29.81**	**106**	P	**P**	**23 53 11.0**	**+0.3**
NNA				IAmb	IAmb	23 53 33.5	
	comp=Z,81nm,1.5s						
NNA	**Nana**	**29.81**	**106**	IAMs_20	IAMs_20	00 01 18.6	
	comp=Z,16µm,21.0s						
TEIG	**Tepich**	**30.09**	**35**	P	**P**	**23 53 11.7**	**-1.2**
TEIG				IAmb	IAmb	23 53 41.8	
	comp=Z,62nm,1.5s						
TEIG	**Tepich**	**30.09**	**35**	IAMs_20	IAMs_20	00 03 09.8	
	comp=Z,14µm,21.0s						
SOTA	**Rioblanco**	**30.11**	**78**	*e*P	**P**	**23 53 12.1**	**-1.7**
PCON	**Cinco Dias**	**30.36**	**78**	*e*P	**P**	**23 53 14.8**	**-1.3**
YOTC	**Yotoco, Valle**	**30.81**	**75**	*e*P	P	23 53 12.1	-7.5
HPIG		**31.20**	**1**	P	**P**	**23 53 24.3**	**+1.3**
PTLC	**Puerto Leguiza**	**31.53**	**82**	*e*P	**P**	**23 53 22.9**	**-2.9**
CBOC	**Ciudad Bolivar**	**31.67**	**71**	*e*P	**P**	**23 53 27.5**	**+0.3**
ORTC	**Ortega, Tolima**	**31.85**	**75**	*e*P	P	23 53 22.9	-5.8
DBBC	**Dabeiba**	**31.86**	**69**	*e*P	**P**	**23 53 25.6**	**-3.2**
TOLC	**Tolima**	**31.96**	**74**	*e*P	P	23 53 22.9	-7.0
RREF	**El Recreo**	**32.02**	**73**	*e*P	**P**	**23 53 33.1**	**+2.3**
GUY2C	**Guyana, Caldas**	**32.09**	**73**	*e*P	P	23 53 25.6	-5.7
PRAC	**Prado**	**32.15**	**76**	*e*P	P	23 53 22.9	-8.4
SRIG	**Santa Rosalia**	**32.15**	**350**	P	**P**	**23 53 28.6**	**-2.5**
SRIG				IAmb	IAmb	23 53 33.4	
	comp=Z,33nm,1.1s						
SRIG				IAMs_20	IAMs_20	00 03 24.8	
	comp=Z,10µm,18.0s						
HELC	**Santa Helena**	**32.23**	**71**	*e*P	**P**	**23 53 30.9**	**-1.4**
MACC	**Macarena, Meta**	**32.81**	**79**	*e*P	P	23 53 30.9	-6.1
ROSC	**El Rosal**	**32.98**	**74**	P	**P**	**23 53 39.2**	**+0.2**
	comp=Z,7.8nm,0.8s,baz=1.0,slow=8.8,SNR=4.9						
ROSC				LR	LR	00 04 17.4	
	comp=Z,14µm,21.0s,baz=258,slow=31						
ROSC	**El Rosal**	**32.98**	**74**	*e*P	**P**	**23 53 35.7**	**-3.3**
ROSC	**El Rosal**	**32.98**	**74**	P	**P**	**23 53 41.8**	**+2.8**
ROSC				IAmb	IAmb	23 54 02.3	
	comp=Z,79nm,1.6s						
833A	**Chaparral WMA,**	**33.21**	**11**	P	**P**	**23 53 39.6**	**-0.6**
	baz=192						
VILC	**Villavicencio,**	**33.40**	**76**	*e*P	**P**	**23 53 41.7**	**-0.6**
SPBC	**San Pablo de B**	**33.45**	**73**	*e*P	P	23 53 36.3	-6.3
CHIC	**Chingaza**	**33.49**	**75**	*e*P	P	23 53 38.0	-5.4
RKT	**Rikitea**	**33.56**	**234**	*e*LR	LR	00 02 35.9	
	comp=Z,16µm,28.8s						
RKT	**Rikitea**	**33.56**	**234**	*e*T	T	00 28 56.3	
	comp=Z,5.9nm,0.3s						
HSIG		**33.62**	**352**	IAmb	IAmb	23 53 47.2	
	comp=Z,34nm,1.2s						
HSIG				IAMs_20	IAMs_20	00 03 57.4	
	comp=Z,6µm,21.0s						
TX31	**Lajitas Ar. Si**	**33.67**	**4**	IAmb	IAmb	23 54 20.8	
	comp=Z,50nm,1.5s						
TX32	**Lajitas Array**	**33.67**	**4**	P	**P**	**23 53 46.0**	**+1.6**
TXAR	**Lajitas Array**	**33.67**	**4**	P	**P**	**23 53 45.4**	**+1.0**
	comp=Z,1.6nm,1.0s,baz=188,slow=8.5,SNR=13						
TXAR				PcP	**PcP**	**23 56 24.7**	**+0.4**
	comp=Z,1.3nm,1.0s,baz=188,slow=3.3,SNR=4.0						
TXAR				LR	LR	00 05 09.7	
	comp=Z,5µm,21.1s,baz=0.0,slow=32						
TAOE	**Nuku Hiva Isla**	**34.17**	**261**	*e*S	**S**	**23 59 13.7**	**-1.3**
	comp=Z,593nm,30.0s						
TAOE				*e*LQ	LQ	00 01 23.0	
	comp=Z,4µm,27.7s						
TAOE				*e*LR	LR	00 02 49.6	
	comp=Z,12µm,27.6s						
TAOE	**Nuku Hiva Isla**	**34.17**	**261**	*e*T	T	00 29 42.3	
	comp=Z,41nm,0.3s						
BRRC	**Barranca, Sant**	**34.23**	**71**	*e*P	P	23 53 44.2	-5.2
RUSC	**La Rusia**	**34.46**	**73**	*e*P	**P**	**23 53 49.0**	**-2.9**
SMLC	**San Martn de**	**34.47**	**68**	*e*P	**P**	**23 53 47.1**	**-4.3**
ARGC	**Ariguani, Magd**	**34.70**	**66**	*e*P	**P**	**23 53 49.7**	**-3.8**
OCAC	**Ocana**	**34.97**	**69**	*e*P	**P**	**23 53 52.1**	**-3.8**
JCT	**Junction City**	**35.24**	**9**	P	**P**	**23 53 56.2**	**-1.7**
	baz=190						
JCT	**Junction City**	**35.24**	**9**	IAmb	IAmb	23 54 25.6	
	comp=Z,40nm,1.3s						
JCT				IAMs_20	IAMs_20	00 06 39.8	
	comp=Z,7µm,19.0s						
HKT	**Hockley**	**35.57**	**15**	P	**P**	**23 54 01.5**	**+0.9**
HKT				IAmb	IAmb	23 54 32.6	
	comp=Z,79nm,1.9s						
319A	**Douglas**	**35.76**	**355**	IAMs_20	IAMs_20	00 05 37.2	
	comp=Z,7µm,20.0s						
435B	**Jarrell**	**35.95**	**12**	P	**P**	**23 54 02.1**	**-1.9**
	baz=194						
MNTX	**Cornudas Mount**	**35.95**	**1**	P	**P**	**23 54 04.1**	**+0.1**
	baz=181,SNR=7.3						
MTDJ	**Mount Denham**	**36.01**	**50**	P	**P**	**23 54 04.3**	**-0.4**
MTDJ				IAMs_20	IAMs_20	00 07 03.4	
	comp=Z,8µm,18.0s						
214A	**Organ Pipe Nat**	**36.78**	**350**	P	**P**	**23 54 11.5**	**+0.4**
	baz=168,SNR=8.8						
214A	**Organ Pipe Nat**	**36.78**	**350**	IAMs_20	IAMs_20	00 05 45.3	
	comp=Z,11µm,21.0s						
121A	**Cookes Peak, D**	**36.82**	**358**	P	**P**	**23 54 09.9**	**-1.6**
	baz=177						
121A	**Cookes Peak, D**	**36.82**	**358**	IAMs_20	IAMs_20	00 06 20.0	
	comp=Z,6µm,20.0s						
TUC	**Tucson**	**36.84**	**353**	P	**P**	**23 54 10.3**	**-1.4**
	baz=172						
TUC	**Tucson**	**36.84**	**353**	P	**P**	**23 54 13.7**	**+2.1**
TUC	**Tucson**	**36.84**	**353**	IAMs_20	IAMs_20	00 06 05.7	
	comp=Z,7µm,20.0s						
WHTX	**Lake Whitney,**	**37.15**	**12**	P	**P**	**23 54 13.7**	**-0.4**
	baz=194						
WHTX	**Lake Whitney,**	**37.15**	**12**	P	**P**	**23 54 15.0**	**+0.9**
ABTX	**Abilene, Hawle**	**37.37**	**9**	P	**P**	**23 54 16.1**	**+0.1**
	baz=190						
ABTX	**Abilene, Hawle**	**37.37**	**9**	P	**P**	**23 54 16.9**	**+0.8**
ABTX				IAMs_20	IAMs_20	00 07 47.1	
	comp=Z,5µm,19.0s						
URIC	**Uribia, Colomb**	**37.46**	**64**	P	**P**	**23 54 17.6**	**+0.6**
AP01	**Chacalluta**	**37.51**	**115**	IAMs_20	IAMs_20	00 05 14.7	
	comp=Z,8µm,21.0s						
237A	**Washetta, Mont**	**37.53**	**14**	P	**P**	**23 54 19.6**	**+2.2**
237A				IAmb	IAmb	23 54 42.1	
	comp=Z,44nm,1.1s						
PB12	**IPOC Station P**	**37.59**	**115**	P	**P**	**23 54 17.9**	**-0.4**
PB12				IAmb	IAmb	23 54 48.6	
	comp=Z,50nm,1.3s						
PB12				IAMs_20	IAMs_20	00 05 15.0	
	comp=Z,6µm,20.0s						
NATX	**Nacogdoches**	**37.60**	**16**	P	**P**	**23 54 16.5**	**-1.5**
	baz=198						
SDV	**Santo Domingo**	**37.69**	**69**	*e*P	**P**	**23 54 17.3**	**-2.0**
SDV	**Santo Domingo**	**37.69**	**69**	P	**P**	**23 54 18.5**	**-0.8**
SDV				IAmb	IAmb	23 54 42.6	
	comp=Z,33nm,0.9s						
SDV	**Santo Domingo**	**37.69**	**69**	*e*P	**P**	**23 54 18.3**	**-1.0**
PSGCX	**Pisagua**	**38.08**	**116**	IAMs_20	IAMs_20	00 05 26.0	
	comp=Z,10µm,21.0s						
IKP	**In-Ko-Pah, Jac**	**38.12**	**346**	P	**P**	**23 54 21.7**	**-0.8**
	baz=163						
GLA	**Glamis**	**38.22**	**348**	P	**P**	**23 54 21.9**	**-1.4**
	baz=166						
PB16	**IPOC Station P**	**38.26**	**114**	P	**P**	**23 54 22.8**	**-1.6**
PB16				IAmb	IAmb	23 54 36.5	
	comp=Z,57nm,1.2s						
H03N2	**Juan Fernandez**	**38.32**	**142**	T	T	00 34 46.4	
	baz=315,slow=77,SNR=102						
SWSC	**Sam W. Stewart**	**38.33**	**347**	P	**P**	**23 54 23.1**	**-1.1**
	baz=164						
H03N1	**Juan Fernandez**	**38.34**	**142**	T	T	00 34 44.4	
	baz=315,slow=77,SNR=196						
MSTX	**Muleshoe**	**38.34**	**4**	P	**P**	**23 54 23.0**	**-1.4**
	baz=185						
H03N3	**Juan Fernandez**	**38.34**	**142**	T	T	00 34 54.0	
	baz=315,slow=77,SNR=83						
MNMC	**Minye Minye**	**38.41**	**115**	IAmb	IAmb	23 54 57.6	
	comp=Z,145nm,1.9s						
MNMC				IAMs_20	IAMs_20	00 05 56.7	
	comp=Z,7µm,20.0s						
MONP2	**Monument Peak**	**38.43**	**346**	P	**P**	**23 54 24.3**	**-0.9**
	baz=163,SNR=6.3						
PB11	**IPOC Station P**	**38.55**	**116**	IAMs_20	IAMs_20	00 06 00.4	
	comp=Z,10µm,20.0s						
344A	**Westbrook Farm**	**38.57**	**21**	P	**P**	**23 54 27.6**	**+1.4**
344A					**pP**	**23 54 28.2**	**-2.2**
344A				IAmb	IAmb	23 54 57.0	
	comp=Z,119nm,1.6s						
109C	**Camp Elliot, M**	**38.60**	**345**	P	**P**	**23 54 25.1**	**-1.3**
	baz=162						
109C	**Camp Elliot, M**	**38.60**	**345**	IAMs_20	IAMs_20	00 06 12.6	
	comp=Z,5µm,19.0s						
Y14A	**Wickenburg**	**38.75**	**351**	IAMs_20	IAMs_20	00 06 55.4	
	comp=Z,8µm,20.0s						
Y12C	**Blythe**	**38.84**	**349**	P	**P**	**23 54 25.5**	**-2.9**
	baz=166						
GTBY	**Guantanamo Bay**	**38.86**	**50**	IAMs_20	IAMs_20	00 07 53.9	
	comp=Z,7µm,20.0s						
GO01	**Chusmiza**	**38.93**	**116**	P	**P**	**23 54 32.4**	**+2.3**
GO01				IAmb	IAmb	23 55 09.7	
	comp=Z,109nm,1.9s						
BC3	**Big Chuckawall**	**38.94**	**347**	P	**P**	**23 54 30.3**	**+0.9**
	baz=165,SNR=8.5						
X18A	**Snowflake**	**38.95**	**355**	IAMs_20	IAMs_20	00 07 15.5	
	comp=Z,5µm,22.0s						
PB04	**IPOC Station P**	**39.00**	**120**	P	**P**	**23 54 34.3**	**+4.1**
PB04				IAmb	IAmb	23 55 01.0	
	comp=Z,76nm,1.2s						
PB04				IAMs_20	IAMs_20	00 05 51.4	
	comp=Z,9µm,19.0s						
LPAZ	**La Paz**	**39.00**	**110**	P	**P**	**23 54 28.5**	**-2.3**
	comp=Z,3.7nm,1.1s,baz=290,slow=9.9,SNR=6.1						
LPAZ				LR	LR	00 08 08.7	
	comp=Z,5µm,18.9s,baz=276,slow=33						
LPAZ	**La Paz**	**39.00**	**110**	P	**P**	**23 54 33.7**	**+3.0**
LPAZ	**La Paz**	**39.00**	**110**	*e*P	**P**	**23 54

MIAR	Mount Ida	40.52	16	IAmb	IAmb	23 55 13.7					
	comp=Z,163nm,1.9s										
OSI	Osito Audit: C	40.66	344	IAMs_20	IAMs_20	00 07 08.3					
	comp=Z,8µm,22.0s										
X40A	Basin Creek Fa	40.68	17	P	P	23 54 43.1	-0.6				
	baz=200										
X40A	Basin Creek Fa	40.68	17	P	P	23 54 46.2	+2.5				
X40A				IAmb	IAmb	23 55 21.9					
	comp=Z,104nm,2.0s										
EDW2	Edwards Air Fo	40.72	345	P	P	23 54 41.5	-2.6				
	baz=161										
SBC	Santa Barbara	40.78	343	P	P	23 54 45.3	+0.7				
	baz=159										
250A	Grady	40.82	26	P	P	23 54 46.2	+1.3				
250A				IAmb	IAmb	23 55 55.3					
	comp=Z,61nm,0.8s										
GSC	Goldstone, Bar	40.82	346	P	P	23 54 45.9	+0.8				
	baz=163,SNR=7.7										
GSC	Goldstone, Bar	40.82	346	IAMs_20	IAMs_20	00 07 36.5					
	comp=Z,6µm,19.0s										
352A	Blakely	41.00	28	P	P	23 54 46.9	+0.5				
W39A	Magazine	41.08	15	P	P	23 54 48.3	+1.3				
	baz=198,SNR=13										
W39A	Magazine	41.08	15	IAmb	IAmb	23 55 40.3					
	comp=Z,68nm,1.6s										
U15A	North Rim	41.09	352	IAMs_20	IAMs_20	00 08 23.3					
	comp=Z,5µm,21.0s										
UALR	University of	41.09	17	P	P	23 54 49.0	+1.9				
UALR				IAmb	IAmb	23 55 57.9					
	comp=Z,85nm,1.9s										
GO03	Copiap	41.12	128	P	P	23 54 47.5	-0.1				
GO03				IAmb	IAmb	23 55 10.1					
	comp=Z,127nm,1.7s										
Z47A	Carrollton	41.13	23	P	P	23 54 47.9	+0.5				
Z47A				IAmb	IAmb	23 55 17.4					
	comp=Z,143nm,1.9s										
U32A	Winter Ranch,	41.15	9	P	P	23 54 49.6	+2.0				
U32A				IAmb	IAmb	23 55 19.4					
	comp=Z,65nm,1.3s										
Y45A	Yeager Farm, C	41.17	21	P	P	23 54 49.0	+1.2				
ARVC	Arvin	41.17	344	P	P	23 54 46.3	-1.5				
	baz=160										
PKM	Mcpherson Peak	41.23	343	P	P	23 54 50.3	+1.8				
	baz=159										
TUL1	Leonard	41.28	13	P	P	23 54 49.7	+1.0				
	baz=195										
X43A	Marvell	41.31	19	P	P	23 54 50.9	+2.1				
	baz=203										
SDDR	Presa de Saban	41.37	55	IAMs_20	IAMs_20	00 10 46.5					
	comp=Z,5µm,19.0s										
T25A	Trinidad	41.40	2	P	P	23 54 49.0	-0.9				
	baz=182										
LRAL	Lakeview Retre	41.42	24	P	P	23 54 50.7	+0.9				
	baz=209										
W41B	Gary Mavity, V	41.49	17	P	P	23 54 51.9	+1.5				
	baz=201,SNR=13										
MVCO	Mesa Verde	41.51	357	P	P	23 54 50.0	-0.9				
	baz=176										
MVCO	Mesa Verde	41.51	357	IAMs_20	IAMs_20	00 08 56.3					
	comp=Z,5µm,22.0s										
ISA	Isabella, Lake	41.58	345	P	P	23 54 52.7	+1.5				
	baz=161,SNR=5.2										
ISA	Isabella, Lake	41.58	345	IAMs_20	IAMs_20	00 08 34.6					
	comp=Z,6µm,20.0s										
WHAR	Wooly Hollow	41.59	17	IAmb	IAmb	23 55 29.5					
	comp=Z,119nm,1.7s										
TIGA	Tifton	41.61	29	P	P	23 54 51.6	+0.1				
TIGA				IAmb	IAmb	23 55 41.2					
	comp=Z,141nm,1.8s										
AC02	Maricunga	41.66	126	P	P	23 54 53.5	+0.9				
SMMC	Simmler	41.68	343	P	P	23 54 51.6	-0.4				
	baz=159										
MPMC	Manual Prospec	41.71	346	P	P	23 54 53.2	+0.8				
	baz=162,SNR=5.4										
KNB	Kanab	41.74	352	P	P	23 54 53.2	+0.6				
OXF	Oxford	41.80	21	P	P	23 54 52.5	-0.5				
	baz=205										
OXF	Oxford	41.80	21	P	P	23 54 54.5	+1.5				
OXF				IAmb	IAmb	23 55 12.1					
	comp=Z,56nm,1.4s										
456A	Hilliard	41.83	32	P	P	23 54 53.3	+0.1				
BANI	BANI	41.84	56	P	P	23 54 53.7	0.0				
VES	Vestal, Richgr	41.91	344	P	P	23 54 54.2	+0.3				
	baz=160,SNR=5.4										
GO04	Tololo Observa	41.94	132	P	P	23 54 56.0	+1.5				
GO04				IAmb	IAmb	23 55 15.5					
	comp=Z,102nm,1.4s										
FURC	Furnace Creek,	41.95	347	P	P	23 54 53.5	-0.6				
	baz=164										
SDCO	Great Sand Dun	41.98	1	P	P	23 54 55.1	+0.3				
	baz=181										
S22A	4UR Ranch, Cre	41.99	359	P	P	23 54 54.7	-0.2				
	baz=179,SNR=8.6										
SC01	Santiago de lo	42.05	54	P	P	23 54 55.4	+0.1				
SC01				IAmb	IAmb	23 55 08.3					
	comp=Z,90nm,1.1s										
SC01				IAMs_20	IAMs_20	00 09 16.6					
	comp=Z,4µm,21.0s										
Z50A	Ashland	42.06	25	P	P	23 54 57.1	+1.9				
	baz=210,SNR=5.6										
PKCU	Pink Cliffs	42.09	353	P	P	23 54 57.8	+2.1				
U38A	Gravette	42.11	14	IAmb	IAmb	23 55 32.2					
	comp=Z,92nm,2.0s										
PAGB	Antelope Grade	42.14	343	IAMs_20	IAMs_20	00 07 50.6					
	comp=Z,9µm,22.0s										
CWC	Cottonwood Cre	42.22	345	P	P	23 54 55.0	-1.6				
	baz=162										
TPNV	Topopah Spring	42.28	348	P	P	23 54 56.1	-1.0				
	baz=185										
TPNV	Topopah Spring	42.28	348	IAmb	IAmb	23 55 40.0					
	comp=Z,60nm,1.4s										
HBAR	Harrisburg	42.33	19	P	P	23 54 58.2	+1.0				
HBAR				IAmb	IAmb	23 55 24.6					
	comp=Z,60nm,1.2s										
SZCU	Shurtz Canyon	42.35	352	P	P	23 54 57.5	-0.1				
CO03	El Pedregal	42.36	132	IAmb	IAmb	23 55 19.7					
	comp=Z,84nm,1.4s										
Y49A	Blount Mountai	42.37	24	P	P	23 54 59.2	+1.5				
Y49A				IAmb	IAmb	23 55 30.5					
	comp=Z,79nm,1.9s										
PV05	Paradox Valley	42.41	356	IAMs_20	IAMs_20	00 09 33.7					
	comp=Z,5µm,21.0s										
U40A	Yellville	42.42	16	P	P	23 54 57.5	-0.5				
	baz=199										
PV01	Paradox Valley	42.44	357	IAMs_20	IAMs_20	00 09 55.8					
	comp=Z,5µm,22.0s										
W45A	Hickory Valley	42.46	21	P	P	23 54 59.4	+1.0				
W45A				IAmb	IAmb	23 55 27.9					
	comp=Z,36nm,0.8s										
PV13	Radium Mtn., P	42.48	357	IAMs_20	IAMs_20	00 09 34.8					
	comp=Z,4µm,20.0s										
LPAR	Lepanto	42.49	19	P	P	23 54 60.0	+1.4				
LPAR				IAmb	IAmb	23 55 49.2					
	comp=Z,85nm,1.2s										
PV02	Paradox Valley	42.52	357	P	P	23 54 55.4	-3.6				
255A	Hazlehurst	42.56	30	P	P	23 54 58.7	-0.5				
255A				IAmb	IAmb	23 55 18.3					
	comp=Z,85nm,1.4s										
PV18	Skein Mesa, Pa	42.57	357	IAMs_20	IAMs_20	00 09 47.2					
	comp=Z,5µm,21.0s										
GRAC	Grapevine Rang	42.57	347	P	P	23 54 58.1	-1.2				
	baz=163										
PV17	East Wray Mesa	42.60	357	P	P	23 55 00.1	+0.4				
PV17				IAmb	IAmb	23 55 56.7					
	comp=Z,99nm,1.9s										
PV17				IAMs_20	IAMs_20	00 09 39.2					
	comp=Z,5µm,20.0s										
PV11	David Mesa, Pa	42.62	357	P	P	23 55 00.2	+0.4				
PV11				IAmb	IAmb	23 55 36.0					
	comp=Z,83nm,1.9s										
PV11				IAMs_20	IAMs_20	00 09 48.6					
	comp=Z,5µm,21.0s										
PV12	Saucer Basin,	42.63	357	P	P	23 55 00.6	+0.7				
PV12				IAmb	IAmb	23 56 21.1					
	comp=Z,40nm,0.9s										
PV12				IAMs_20	IAMs_20	00 09 60.0					
	comp=Z,5µm,20.0s										
PV16	Nyswonger Mesa	42.63	357	P	P	23 54 59.2	-0.7				
PV16				IAMs_20	IAMs_20	00 09 39.0					
	comp=Z,4µm,21.0s										
X48A	Hartselle	42.63	23	IAmb	IAmb	23 55 29.3					
	comp=Z,72nm,1.7s										
PV19	Morning Glory	42.63	357	P	P	23 55 00.5	+0.5				
PV19				IAMs_20	IAMs_20	00 09 49.0					
	comp=Z,5µm,21.0s										
PV15	Paradox Valley	42.64	357	P	P	23 55 00.0	0.0				
PV15				IAmb	IAmb	23 56 15.5					
	comp=Z,72nm,1.8s										
PV15				IAMs_20	IAMs_20	00 09 53.1					
	comp=Z,4µm,21.0s										
LCAR	Lake Charles	42.65	18	IAmb	IAmb	23 55 29.6					
	comp=Z,130nm,1.9s										
MTPU	Mount Pierson	42.66	353	P	P	23 55 02.3	+1.9				
PV20	West Nyswonger	42.66	357	P	P	23 55 01.2	+1.0				
PV20				IAMs_20	IAMs_20	00 09 49.8					
	comp=Z,5µm,20.0s										
PV14	Lion Creek, Pa	42.70	357	P	P	23 54 59.8	-0.8				
PV14				IAMs_20	IAMs_20	00 09 50.8					
	comp=Z,5µm,20.0s										
PV10	Paradox Valley	42.70	357	P	P	23 55 00.5	-0.1				
PV10				IAmb	IAmb	23 56 12.1					
	comp=Z,67nm,1.6s										
PLAL	Pickwick Lake	42.71	22	IAmb	IAmb	23 55 30.6					
	comp=Z,55nm,1.1s										
PV04	Paradox Valley	42.71	357	IAMs_20	IAMs_20	00 09 42.0					
	comp=Z,5µm,21.0s										
SAML	Samuel	42.76	98	IAMs_20	IAMs_20	00 11 51.6					
	comp=Z,4µm,19.0s										
SAML	Samuel	42.76	98	*eP*	P	23 54 58.2	-2.9				
PMPB	Monarch Peak	42.76	342	P	P	23 55 03.5	+2.7				
PMPB				IAmb	IAmb	23 55 18.9					
	comp=Z,84nm,1.3s										
PMPB				IAMs_20	IAMs_20	00 08 26.9					
	comp=Z,7µm,20.0s										
PV23	Carpenter Ridg	42.78	357	IAMs_20	IAMs_20	00 09 44.8					
	comp=Z,6µm,20.0s										
154A	Montrose	42.80	29	P	P	23 55 01.7	+0.5				
PV22	Blue Mesa, Par	42.85	357	IAMs_20	IAMs_20	00 09 47.7					
	comp=Z,4µm,21.0s										
PV21	Cone Mtn., Par	42.88	357	IAMs_20	IAMs_20	00 09 56.6					
	comp=Z,5µm,20.0s										
GNAR	Gosnell	42.91	19	P	P	23 55 02.9	+1.0				
HALT	Halls	43.09	20	P	P	23 55 06.6	+3.2				
PEBM	Pemiscott Bayo	43.10	19	P	P	23 55 05.2	+1.8				
R32A	Long Quarter,	43.19	8	P	P	23 55 05.5	+1.3				
Q24A	Divide	43.21	1	P	P	23 55 03.5	-1.2				
	baz=181										
LNXT	Lenox	43.21	20	P	P	23 55 04.9	+0.5				
GOGA	Godfrey	43.29	28	P	P	23 55 06.6	+1.5				
	baz=214										
GOGA	Godfrey	43.29	28	P	P	23 55 05.6	+0.6				
GOGA	Godfrey	43.29	28	IAMs_20	IAMs_20	00 12 52.5					
	comp=Z,4µm,19.0s										
FPAL	Fort Paine	43.29	25	IAmb	IAmb	23 55 34.6					
	comp=Z,75nm,1.6s										
MT02	Curacav	43.33	136	P	P	23 55 08.8	+3.2				
KSCO	Kaye Shedlock'	43.36	4	P	P	23 55 06.4	+0.7				
Y52A	Lilburn	43.39	27	P	P	23 55 06.7	+0.8				
	baz=213										
SMCO	Snowmass	43.42	359	IAMs_20	IAMs_20	00 10 39.8					
	comp=Z,6µm,20.0s										
CBKS	Cedar Bluff	43.44	7	P	P	23 55 02.8	-3.5				
	baz=189										
CBKS	Cedar Bluff	43.44	7	P	P	23 55 07.0	+0.7				
CBKS				IAmb	IAmb	23 55 34.3					
	comp=Z,41nm,1.1s										
SAO	San Andreas Ge	43.46	342	P	P	23 55 08.7	+2.3				
SAO				IAMs_20	IAMs_20	00 08 27.5					
	comp=Z,9µm,22.0s										
R11A	Troy Canyon, C	43.50	349	P	P	23 55 06.5	-0.5				
	baz=166,SNR=22										
PBMO	Poplar Bluff	43.53	18	IAmb	IAmb	23 55 29.6					
	comp=Z,43nm,1.0s										
MLAC	Mammoth, Mammo	43.53	345	P	P	23 55 08.3	+1.1				
	baz=161										
PCDR	Punta Cana, DR	43.55	57	P	P	23 55 07.6	+0.2				
OMMB	Old Mammoth Mi	43.56	345	P	P	23 55 08.9	+1.3				
OMMB				IAMs_20	IAMs_20	00 09 56.0					
	comp=Z,5µm,20.0s										
MT01	Popeta	43.59	137	IAmb	IAmb	23 55 29.3					
	comp=Z,118nm,1.7s										
MDPB	Devils Postpil	43.60	345	P	P	23 55 10.0	+2.2				
MDPB				IAMs_20	IAMs_20	00 09 57.0					
	comp=Z,4µm,21.0s										
X51A	Calhoun	43.64	26	IAmb	IAmb	23 55 16.0					
	comp=Z,41nm,1.1s										
PARMO	Parma	43.64	19	P	P	23 55 09.4	+1.6				
MT05	Renca	43.69	136	P	P	23 55 09.4	+1.0				
HICK	Hickman	43.70	20	P	P	23 55 09.0	+0.7				
PCRV	Puerta La Cruz	43.70	70	LR	LR	00 11 04.2					
	comp=Z,7µm,22.0s,slow=33										
SWET	Sewanee	43.74	24	P	P	23 55 09.9	+1.1				
SWET				IAmb	IAmb	23 55 39.3					
	comp=Z,72nm,1.5s										
HENM	Henderson Moun	43.78	19	P	P	23 55 12.1	+3.2				
GO05	Huala	43.80	138	IAmb	IAmb	23 55 32.0					
	comp=Z,68nm,1.2s										
WVT	Waverly	43.82	21	P	P	23 55 07.3	-2.0				
	baz=206										
WVT	Waverly	43.82	21	P	P	23 55 09.0	-0.3				
WVT				IAmb	IAmb	23 55 39.5					
	comp=Z,121nm,1.8s										
V48A	Smith Brothers	43.85	23	IAmb	IAmb	23 55 17.8					
	comp=Z,40nm,1.1s										
157A	Early Branch	43.91	31	P	P	23 55 12.4	+2.3				
	baz=217										
W50A	Signal Mountai	43.99	25	P	P	23 55 12.6	+1.9				
ISCO	Idaho Springs	44.03	0	P	P	23 55 08.7	-2.7				
	baz=180										
ISCO	Idaho Springs	44.03	0	IAMs_20	IAMs_20	00 11 06.0					
	comp=Z,4µm,21.0s										
NV11	Mina Array Sit	44.13	346	IAMs_20	IAMs_20	00 09 31.0					
	comp=Z,4µm,19.0s										
NVAR	Mina Array Bea	44.16	346	P	P	23 55 14.5	+2.2				
	comp=Z,7.3nm,1.1s,baz=171,slow=9.5,SNR=15										
NVAR				LR	LR	00 09 51.7					
	comp=Z,4µm,18.2s,baz=164,slow=31										
KSU1	Kansas State U	44.20	11	P	P	23 55 07.7	-4.6				
	baz=193										
KSU1	Kansas State U	44.20	11	P	P	23 55 13.0	+0.6				
KSU1				IAmb	IAmb	23 55 42.7					
	comp=Z,103nm,1.9s										
BI03	Tigo	44.20	141	P	P	23 55 13.8	+1.4				
Z56A	Williston	44.23	30	P	P	23 55 14.9	+2.3				
Z56A				IAMs_20	IAMs_20	00 11 59.5					
	comp=Z,5µm,20.0s										
CMB	Columbia Colle	44.33	344	P	P	23 55 13.7	+0.3				
CMB				IAMs_20	IAMs_20	00 09 31.4					
	comp=Z,6µm,20.0s										
CLTN	Cedars of Leba	44.35	23	IAmb	IAmb	23 55 43.0					
	comp=Z,59nm,1.7s										
158A	Hollywood	44.37	32	P	P	23 55 17.2	+3.4				
	baz=218										
R40A	Maddies Statio	44.40	16	IAmb	IAmb	23 55 37.8					
	comp=Z,104nm,1.9s										
RYN	Ryan	44.40	346	IAmb	IAmb	23 55 48.2					
	comp=Z,57nm,1.4s										
RYN				IAMs_20	IAMs_20	00 09 47.2					
	comp=Z,4µm,19.0s										
O20A	White River Ci	44.41	358	P	P	23 55 13.5	-0.8				
	baz=177,SNR=7.0										
O20A	White River Ci	44.41	358	IAmb	IAmb	23 55 37.9					
	comp=Z,39nm,1.1s										
O20A				IAMs_20	IAMs_20	00 11 01.1					
	comp=Z,4µm,20.0s										
BO02	Sierra Bellavi	44.44	137	IAmb	IAmb	23 55 40.1					
	comp=Z,32nm,0.9s										
CCM	Cathedral Cave	44.46	17	P	P	23 55 12.9	-1.5				
	baz=201										
CCM	Cathedral Cave	44.46	17	P	P	23 55 14.8	+0.4				
Y55A	Saluda	44.49	29	P	P	23 55 14.8	+0.1				
	baz=215,SNR=7.5										
W52A	Murphy	44.49	26	P	P	23 55 16.2	+1.5				
WAKR	Walker	44.51	345	IAmb	IAmb	23 55 45.6					
	comp=Z,50nm,1.3s										
WAKR				IAMs_20	IAMs_20	00 10 49.2					
	comp=Z,5µm,20.0s										
CPCT	Cooper Cave	44.53	25	IAmb	IAmb	23 55 34.3					
	comp=Z,49nm,1.4s										
Z57A	Bowman	44.55	31	P	P	23 55 16.4	+1.2				
	baz=217										
CFA	Coronel Fontan	44.56	132	P	P	23 55 13.0	-2.4				
	comp=Z,7.3nm,1.1s,baz=301,slow=8.1,SNR=6.1										
PPT	Papeete	44.57	249	LR	LR	00 08 51.9					
	comp=Z,2µm,18.7s,baz=81,slow=30										
PPT2	Papeete2	44.57	249	*eS*	S	00 01 51.2	0.0				
	comp=Z,2µm,26.5s										
PPT2				*eLQ*	LQ	00 05 49.8					
	comp=Z,7µm,28.8s										
PPT2				*eLR*	LR	00 07 41.2					
	comp=Z,14µm,27.5s,baz=77										
AGPR	Aguadilla, PR	44.60	58	P	P	23 55 16.8	+1.0				
CSU	Charleston Sou	44.63	32	P	P	23 55 18.4	+2.6				
Y56A	Pelion	44.64	30	P	P	23 55 16.4	+0.4				
	baz=216										
NHSC	New Hope	44.67	31	P	P	23 55 18.5	+2.3				
	baz=218										
KVN	Kaiserville	44.70	347	IAmb	IAmb	23 55 46.5					
	comp=Z,49nm,1.6s										
KVN				IAMs_20	IAMs_20	00 09 51.2					
	comp=Z,4µm,20.0s										
S44A	Carbondale	44.74	19	P	P	23 55 18.1	+1.5				
S44A				IAmb	IAmb	23 55 35.0					
	comp=Z,63nm,1.5s										
X54A	Belton	44.74	28	P	P	23 55 15.4	-1.3				
	baz=214,SNR=10.0										
SIUC	Southern Illin	44.77	19	P	P	23 55 17.8	+0.9				
SIUC				IAmb	IAmb	23 55 35.2					
	comp=Z,48nm,1.3s										
OBIP	Obispado Ponce	44.84	59	IAmb	IAmb	23 55 25.8					
	comp=Z,34nm,0.9s										
AOPR	Arecibo Observ	44.84	58	P	P	23 55 16.7	-1.1				
AOPR				IAmb	IAmb	23 55 24.4					
	comp=Z,41nm,0.9s										
T47A	Sharon Grove	44.85	22	P	P	23 55 18.6	+1.1				
T47A				IAmb	IAmb	23 55 53.6					
	comp=Z,87nm,1.8s										
BG3	Lake Jocassee	44.85	27	IAmb	IAmb	23 55 26.1					
	comp=Z,33nm,1.1s										
DUG	Dugway, Tooele	44.87	353	P	P	23 55 18.4	+0.6				
	baz=170,SNR=24										
DUG	Dugway, Tooele	44.87	353	IAmb	IAmb	23 55 47.3					
	comp=Z,38nm,1.3s										
DUG				IAMs_20	IAMs_20	00 10 57.2					
	comp=Z,7µm,20.0s										
V51A	Loudon	44.91	25	IAmb	IAmb	23 55 37.1					
	comp=Z,71nm,1.4s										
YERR	Yerington	44.92	345	IAMs_20	IAMs_20	00 11 11.9					
	comp=Z,4µm,20.0s										
U49A	Red Boiling Sp	44.93	23	IAmb	IAmb	23 55 47.4					
	comp=Z,77nm,1.7s										
X55A	Gracelyn & Ava	45.03	29	P	P	23 55 17.5	-1.5				
	baz=215,SNR=7.5										
TKL	Tuckaleechee C	45.03	26	P	P	23 55 20.9	+1.9				
TKL				IAmb	IAmb	23 55 27.0					
	comp=Z,44nm,1.2s										
Z58A	St. Stephen	45.03	32	P	P	23 55 20.0	+0.9				
	baz=218										
PNTR	Pine Nut	45.11	345	IAmb	IAmb	23 55 43.0					
	comp=Z,41nm,0.9s										
PNTR				IAMs_20	IAMs_20	00 11 07.9					
	comp=Z,5µm,20.0s										
N23A	Red Feather La	45.13	0	P	P	23 55 18.3	-1.8				
	baz=180										
MCCM	Marconi Confer	45.18	341	IAMs_20	IAMs_20	00 09 14.0					
	comp=Z,5µm,19.0s										
BI02	San Fabin de	45.21	140	IAmb	IAmb	23 55 40.8					
	comp=Z,43nm,1.0s										
RUBR	Rubicon Trail	45.22	344	IAMs_20	IAMs_20	00 10 01.9					
	comp=Z,5µm,21.0s										
PAULI	Pauline	45.23	28	IAmb	IAmb	23 55 28.9					
	comp=Z,39nm,1.1s										
CTU	Camp Tracy	45.23	354	P	P	23 55 21.3	+0.6				
Z59A	Georgetown, SC	45.24	32	P	P	23 55 21.3	+0.6				
	baz=219										
MACA	Manacapuru-AM	45.25	90	*eP*	P	23 55 18.8	-2.3				
SJG	San Juan	45.26	59	LR	LR	00 10 29.1					
	comp=Z,6µm,21.7s,baz=248,slow=31										
SJG	San Juan	45.26	59	P	P	23 55 21.4	+0.4				
SJG				IAmb	IAmb	23 55 26.0					
	comp=Z,40nm,1.2s										
SJG	San Juan	45.26	59	IAMs_20	IAMs_20	00 10 17.4					
	comp=Z,5µm,21.0s										
V52A	Sevierville	45.26	26	P	P	23 55 22.0	+1.1				
V52A				IAmb	IAmb	23 55 42.9					
	comp=Z,33nm,1.2s										
W54A	Cherokee Point	45.27	28	P	P	23 55 20.8	-0.2				
	baz=214,SNR=5.7										
Y57A	Sumter	45.27	30	P	P	23 55 20.1	-0.8				
	baz=217										
Y57A	Sumter	45.27	30	P	P	23 55 23.1	+2.1				
Y57A				IAmb	IAmb	23 55 28.8					
	comp=Z,36nm,1.2s										
Y57A				IAMs_20	IAMs_20	00 12 40.0					
	comp=Z,6µm,20.0s										
SLM	Saint Louis	45.30	17	P	P	23 55 23.1	+2.0				
SLM				IAmb	IAmb	23 55 58.0					
	comp=Z,56n

comp=Z,4µm,18.0s
PTGA Pitinga 46.15 87 *e*P P **23 55 26.4 -1.9**
LC01 Cunco 46.20 143 IAmb IAmb 23 55 48.1
comp=Z,33nm,1.1s
BGNE Belgrade 46.20 8 P P **23 55 27.0 -1.3**
baz=191
X58A Rowland 46.23 31 P P **23 55 29.1 +0.6**
baz=218
X58A Rowland 46.23 31 P P **23 55 28.6 +0.1**
X58A IAmb IAmb 23 55 36.4
comp=Z,42nm,1.1s
WCI Wyandotte Cave 46.24 22 P P **23 55 26.9 -1.7**
baz=208
WCI Wyandotte Cave 46.24 22 P P **23 55 29.4 +0.9**
WCI IAmb IAmb 23 56 04.5
comp=Z,41nm,1.3s
V55A Taylorsville 46.35 28 P P **23 55 28.2 -1.2**
baz=215,SNR=8.3
W57A Gilead 46.38 30 P P **23 55 30.8 +1.2**
baz=217
W57A Gilead 46.38 30 IAmb IAmb 23 55 37.2
comp=Z,29nm,1.1s
W57A IAMs_20 IAMs_20 00 13 15.2
comp=Z,6µm,20.0s
Y60A Bolivia 46.39 32 P P **23 55 31.3 +1.5**
baz=220
Y60A Bolivia 46.39 32 IAMs_20 IAMs_20 00 13 06.6
comp=Z,7µm,20.0s
HVU Hansel Valley 46.42 353 P P **23 55 30.5 +0.4**
P43A Skaggs, Pawnee 46.44 18 P P **23 55 30.3 +0.2**
P43A IAmb IAmb 23 55 59.5
comp=Z,46nm,1.5s
U54A Nelsons Funny 46.62 27 P P **23 55 31.0 -0.6**
baz=214
U54A Nelsons Funny 46.62 27 P P **23 55 32.1 +0.5**
U54A IAmb IAmb 23 55 50.2
comp=Z,48nm,1.4s
X59A McDuffie Farm, 46.63 32 P P **23 55 32.8 +1.2**
baz=219
W58A Raeford 46.65 31 P P **23 55 32.3 +0.5**
baz=218
V56A Mocksville 46.66 29 P P **23 55 32.8 +0.9**
baz=216,SNR=6.2
T53A Wise 46.68 26 P P **23 55 33.6 +1.5**
baz=213
S51A Beattyville 46.79 25 P P **23 55 34.1 +1.3**
S51A IAmb IAmb 23 56 02.7
comp=Z,25nm,1.2s
KCPM Cahto Peak 46.81 341 P P **23 55 34.6 +1.4**
KCPM IAMs_20 IAMs_20 00 10 17.1
comp=Z,4µm,21.0s
O03E Paynes Creek 46.83 343 P P **23 55 30.8 -2.5**
baz=158
K22A Casper 46.88 359 P P **23 55 32.0 -1.8**
baz=179
K22A Casper 46.88 359 IAmb IAmb 23 55 49.1
comp=Z,20nm,1.1s
K22A IAMs_20 IAMs_20 00 12 55.4
comp=Z,5µm,20.0s
U55A TA2, Sparta 46.96 28 P P **23 55 34.3 0.0**
baz=215,SNR=8.0
X60A Albert Glenn T 46.96 32 P P **23 55 31.3 -2.9**
baz=220
BLO Bloomington 47.00 21 P P **23 55 35.7 +1.2**
BLO IAmb IAmb 23 56 03.5
comp=Z,61nm,1.8s
O02D Mt. Diablo Mer 47.01 342 P P **23 55 34.7 0.0**
baz=157
R50A Paris 47.04 23 IAmb IAmb 23 56 10.2
comp=Z,45nm,1.5s
V57A Coltrane Farms 47.07 29 P P **23 55 33.5 -1.6**
baz=217,SNR=5.7
GRGR Grenville 47.08 69 IAMs_20 IAMs_20 00 13 33.9
comp=Z,4µm,21.0s
BW06 Boulder Array 47.11 356 P P **23 55 32.5 -3.1**
baz=175,SNR=10
BW06 Boulder Array 47.11 356 IAmb IAmb 23 56 02.5
comp=Z,39nm,1.6s
BW06 IAMs_20 IAMs_20 00 12 59.4
comp=Z,5µm,19.0s
PD31 Pinedale Array 47.11 356 IAmb IAmb 23 56 02.5
comp=Z,30nm,1.5s
PDAR Pinedale Array 47.11 356 P P **23 55 35.7 +0.1**
comp=Z,3.0nm,0.9s,baz=165,slow=6.2,SNR=26
PDAR LR LR 00 13 19.5
comp=Z,5µm,18.0s,baz=184,slow=33
U56A King 47.14 28 P P **23 55 33.6 -2.1**
baz=216
U56A King 47.14 28 P P **23 55 35.9 +0.2**
U56A IAmb IAmb 23 55 43.6
comp=Z,47nm,1.4s
P46A Rosedale 47.16 20 P P **23 55 37.1 +1.4**
W59A Clinton 47.17 31 P P **23 55 35.0 -0.8**
baz=219
T54A Tazewell 47.17 27 P P **23 55 34.8 -1.2**
baz=214,SNR=7.0
AHID Auburn Hatcher 47.22 355 P P **23 55 37.2 +0.8**
AHID IAmb IAmb 23 56 01.6
comp=Z,37nm,1.6s
AHID IAMs_20 IAMs_20 00 13 06.5
comp=Z,4µm,18.0s
O44A Mansfield 47.23 18 P P **23 55 37.9 +1.6**
WDC Whiskeytown Da 47.31 343 IAmb IAmb 23 56 06.5
comp=Z,28nm,1.2s
WDC IAMs_20 IAMs_20 00 10 39.3
comp=Z,6µm,22.0s
K31A O'Neill 47.32 7 P P **23 55 37.3 +0.3**
V58A Windy Hill, Pi 47.32 30 P P **23 55 35.4 -1.7**
baz=218,SNR=6.0
V58A Windy Hill, Pi 47.32 30 IAmb IAmb 23 55 44.5
comp=Z,25nm,1.1s
V58A IAMs_20 IAMs_20 00 13 41.2
comp=Z,6µm,20.0s
KMRM Mail Ridge 47.34 342 IAMs_20 IAMs_20 00 10 44.6
comp=Z,5µm,22.0s
HDIL Hopedale 47.35 17 P P **23 55 35.1 -2.1**
baz=203
HDIL Hopedale 47.35 17 P P **23 55 38.0 +0.9**
PTLB Pontes e Lacer 47.35 107 *e*P P **23 55 35.7 -1.9**
S53A Williamson 47.45 26 P P **23 55 37.1 -0.9**
baz=213
W60A Pink Hill 47.46 32 P P **23 55 38.4 +0.3**
baz=220
CNNC Cliffs of the 47.51 32 P P **23 55 38.7 +0.2**
baz=219
SABA Saba 47.57 61 IAMs_20 IAMs_20 00 12 03.7
comp=Z,7µm,20.0s
T55A Pulaski 47.58 27 P P **23 55 37.5 -1.6**
baz=215,SNR=7.1
U57A Blanch 47.72 29 P P **23 55 41.0 +0.9**
baz=217
N02D Trinity Center 47.72 343 P P **23 55 38.6 -1.5**
baz=157
V59A Middlesex 47.74 31 P P **23 55 39.4 -0.9**
baz=219,SNR=5.7
BLA Blacksburg 47.83 28 P P **23 55 41.4 +0.4**
baz=215
BLA Blacksburg 47.83 28 P P **23 55 41.9 +0.9**
BLA IAmb IAmb 23 56 02.7
comp=Z,25nm,1.1s
T56A Rocky Mt 47.86 28 P P **23 55 40.7 -0.5**
baz=216,SNR=5.1
SFIN Lafayette 47.88 20 P P **23 55 39.5 -1.8**
baz=206
SFIN Lafayette 47.88 20 P P **23 55 43.1 +1.8**
SFIN IAmb IAmb 23 56 17.1
comp=Z,45nm,1.6s
SNOW Snow King Moun 47.88 355 P P **23 55 43.3 +1.7**
SNOW IAMs_20 IAMs_20 00 13 13.0
comp=Z,4µm,19.0s
TOSP Speyside 47.88 71 IAMs_20 IAMs_20 00 13 56.1
comp=Z,6µm,21.0s
SMRT St. Maarten 47.89 61 IAMs_20 IAMs_20 00 12 13.1
comp=Z,4µm,19.0s
SKI Saint Kitts 47.90 62 IAMs_20 IAMs_20 00 16 26.5
comp=Z,5µm,19.0s
S54A Dingess, Beckl 47.90 27 P P **23 55 40.0 -1.6**
baz=214,SNR=6.4
TPAW Teton Pass 47.93 355 IAmb IAmb 23 56 53.7
comp=Z,71nm,2.0s
TPAW IAMs_20 IAMs_20 00 13 30.2
comp=Z,4µm,18.0s
MOD Modoc Plateau 47.94 346 IAMs_20 IAMs_20 00 12 48.8
comp=Z,3µm,18.0s
KHMM Horse Mountain 47.94 342 IAMs_20 IAMs_20 00 11 33.0
comp=Z,5µm,21.0s
P49A Miami Univ. Ec 47.98 22 P P **23 55 41.7 -0.3**
baz=209
JCC Jacoby Creek, 47.98 342 P P **23 55 43.2 +1.2**
WVOR Wild Horse Val 48.05 347 P P **23 55 43.9 +1.1**
WVOR IAMs_20 IAMs_20 00 13 06.8
comp=Z,4µm,18.0s
R53A Hurricane 48.06 26 P P **23 55 43.0 +0.3**
baz=213,SNR=5.2
R53A Hurricane 48.06 26 P P **23 55 43.8 +1.0**
Q51A Peebles 48.07 24 P P **23 55 40.9 -1.9**
baz=211
Q51A Peebles 48.07 24 P P **23 55 43.7 +0.9**
Q51A IAmb IAmb 23 56 11.1
comp=Z,24nm,1.4s
U58A Oxford 48.07 30 P P **23 55 42.1 -0.8**
baz=218
FXWY Fox Creek 48.08 355 IAMs_20 IAMs_20 00 13 45.3
comp=Z,4µm,18.0s
M02C Callahan 48.15 343 P P **23 55 42.8 -0.7**
baz=157,SNR=12
PLCA Paso Flores 48.15 144 P P **23 55 41.4 -2.1**
comp=Z,2.9nm,1.0s,baz=286,slow=4.2,SNR=2.9
PLCA Paso Flores 48.15 144 P P **23 55 46.1 +2.5**
PLCA Paso Flores 48.15 144 *e*P P 23 55 48.8 +5.2
LL01 San Ignacio de 48.16 147 P P **23 55 46.9 +3.4**
T57A Hurt 48.20 29 P P **23 55 42.8 -1.1**
baz=217
T57A Hurt 48.20 29 IAmb IAmb 23 55 51.6
comp=Z,23nm,1.1s
T57A IAMs_20 IAMs_20 00 14 32.6
comp=Z,4µm,20.0s
L40A Anamosa 48.22 15 P P **23 55 44.2 +0.3**
L40A IAmb IAmb 23 55 51.3
comp=Z,32nm,1.4s
M04C Macdoel 48.22 344 P P **23 55 44.1 0.0**
baz=158,SNR=13
MCLT Moule a Chique 48.24 67 IAMs_20 IAMs_20 00 13 39.3
comp=Z,6µm,20.0s
V60A Jim Taylor Roa 48.24 32 P P **23 55 44.3 +0.1**
baz=220
V60A Jim Taylor Roa 48.24 32 IAMs_20 IAMs_20 00 14 04.6
comp=Z,7µm,21.0s
S55A Lewisburg 48.24 27 P P **23 55 43.7 -0.6**
baz=215,SNR=5.2
IMW Indian Meadow 48.33 355 IAmb IAmb 23 56 13.1
comp=Z,57nm,1.6s
IMW IAMs_20 IAMs_20 00 13 52.9
comp=Z,4µm,18.0s
R54A Victor 48.36 26 P P **23 55 45.7 +0.6**
baz=214
BIM Bigot 48.38 66 *e*P P **23 55 42.3 -3.4**
FDF Fort de France 48.38 66 *e*P P **23 55 46.2 +0.6**
FDF Fort de France 48.38 66 IAMs_20 IAMs_20 00 13 18.5
comp=Z,5µm,22.0s
RSSD Black Hills 48.38 2 P P **23 55 42.6 -2.8**
baz=182
RSSD Black Hills 48.38 2 P P **23 55 46.4 +1.0**
RSSD IAmb IAmb 23 56 09.1
comp=Z,28nm,1.2s
P50A Jamestown 48.39 23 P P **23 55 43.2 -2.1**
baz=210
K38A Parkersburg 48.40 13 P P **23 55 46.1 +0.9**
K38A IAmb IAmb 23 56 07.0
comp=Z,35nm,1.4s
YBH Yreka Blue Hor 48.42 343 IAMs_20 IAMs_20 00 11 28.7
comp=Z,4µm,21.0s
U59A Littleton 48.42 31 P P **23 55 45.8 +0.3**
baz=219
U59A Littleton 48.42 31 P P **23 55 46.0 +0.4**
U59A IAmb IAmb 23 56 24.5
comp=Z,53nm,1.9s
O48A Farmland 48.45 21 P P **23 55 43.7 -2.0**
baz=208
Q52A Bidwell 48.46 25 P P **23 55 45.1 -0.8**
baz=212
MFID Camas Ranch 48.46 350 IAMs_20 IAMs_20 00 12 53.6
comp=Z,6µm,20.0s
M44A Midewin, Midew 48.49 18 P P **23 55 46.6 +0.6**
FLWY Flagg Ranch 48.50 355 IAMs_20 IAMs_20 00 13 34.2
comp=Z,3µm,20.0s
T58A Grand View Acr 48.51 30 P P **23 55 43.0 -3.3**
baz=218
P51A Williamsport 48.58 24 P P **23 55 44.8 -1.9**
baz=211
P51A Williamsport 48.58 24 P P **23 55 46.8 +0.1**
P51A IAmb IAmb 23 56 15.0
comp=Z,26nm,1.2s
L42A Oliver, Polo 48.58 16 P P **23 55 47.6 +0.9**
L42A IAmb IAmb 23 56 08.3
comp=Z,38nm,1.4s
KRMB Red Mountain 48.58 342 P P **23 55 46.6 -0.3**
KRMB IAMs_20 IAMs_20 00 11 52.1
comp=Z,4µm,22.0s
S56A Natural Bridge 48.60 28 P P **23 55 45.1 -1.9**
baz=216
V61A Roper 48.62 32 P P **23 55 47.4 +0.2**
baz=221
V61A Roper 48.62 32 IAMs_20 IAMs_20 00 14 24.7
comp=Z,6µm,21.0s
Q53A Levy 48.69 26 P P **23 55 45.8 -1.8**
baz=213,SNR=7.6
Q49A Covington 48.69 22 P P **23 55 48.0 +0.5**
ECSD EROS Data Cent 48.71 9 P P **23 55 46.3 -1.4**
baz=192
ECSD EROS Data Cent 48.71 9 IAmb IAmb 23 56 24.2
comp=Z,34nm,1.6s
L04D Klamath Falls 48.76 344 P P 23 55 43.1 -5.1
baz=158
V62A Hyde County Ai 48.78 33 P P **23 55 46.9 -1.4**
baz=221
V62A Hyde County Ai 48.78 33 IAMs_20 IAMs_20 00 13 55.9
comp=Z,7µm,22.0s
H17A Grant Village 48.80 356 P P **23 55 46.3 -2.3**
baz=174
H17A Grant Village 48.80 356 IAmb IAmb 23 56 15.8
comp=Z,70nm,1.8s
R55A Marlinton 48.83 27 P P **23 55 51.3 +2.5**
baz=215
R55A Marlinton 48.83 27 P P **23 55 48.6 -0.2**
R55A **pP 23 55 50.6 -2.5**
U60A Pendleton 48.84 31 P P **23 55 52.9 +4.1**
baz=220
K05A Summer Lake 48.86 345 IAMs_20 IAMs_20 00 12 25.2
comp=Z,6µm,20.0s
ANWB Willy Bob 48.87 62 IAMs_20 IAMs_20 00 12 26.1
comp=Z,4µm,21.0s
J08A Circle Bar Ran 48.90 348 IAmb IAmb 23 56 03.3
comp=Z,31nm,1.2s
J08A IAMs_20 IAMs_20 00 12 39.3
comp=Z,5µm,21.0s
O50A Cable 48.92 23 P P **23 55 46.8 -2.7**
baz=210
LKWY Lake 48.95 356 P P **23 55 49.8 -0.1**
LKWY IAmb IAmb 23 56 30.4
comp=Z,23nm,0.6s
LKWY IAMs_20 IAMs_20 00 13 33.3
comp=Z,6µm,22.0s
S57A Dark Hollow, R 48.96 29 P P **23 55 49.3 -0.4**
baz=217
S57A Dark Hollow, R 48.96 29 P P **23 55 50.6 +0.9**
S57A IAMs_20 IAMs_20 00 14 57.5
comp=Z,3µm,20.0s
K04D Chiloquin, OR 48.98 345 P P **23 55 47.5 -2.4**
baz=159
N48A Decatur 49.02 21 P P **23 55 49.9 -0.2**
baz=208
T59A Double "B" Far 49.02 30 P P **23 55 50.8 +0.6**
baz=219
T59A Double "B" Far 49.02 30 P P **23 55 51.4 +1.2**
T59A IAmb IAmb 23 55 57.7
comp=Z,27nm,1.1s
P52A Corning 49.08 24 P P **23 55 51.1 +0.5**
baz=212
SUSD Miller 49.09 7 P P 23 55 43.9 -6.7
baz=189
Q54A Coxs Mills 49.09 26 P P **23 55 50.1 -0.6**
baz=214,SNR=9.0
YMR Madison River 49.10 355 P P **23 55 52.4 +1.4**
U61A Possum Corner 49.10 32 IAMs_20 IAMs_20 00 14 50.4
comp=Z,6µm,20.0s
YMP Mirror Lake Pl 49.11 356 P P **23 55 52.6 +1.5**
YNR Norris Junctio 49.12 356 P P **23 55 54.4 +3.3**
YHB Horse Butte 49.20 355 P P **23 55 52.4 +0.7**
ACSO Alum Creek Sta 49.25 23 P P **23 55 49.3 -2.6**
baz=211
ACSO Alum Creek Sta 49.25 23 P P **23 55 52.3 +0.4**
L44A Lake County Fo 49.25 18 P P **23 55 50.6 -1.2**
baz=204
L44A Lake County Fo 49.25 18 P P **23 55 53.7 +1.9**
M47A Cromwell 49.26 20 P P **23 55 50.1 -1.8**
baz=207
JFWS Jewell Farm 49.27 15 P P **23 55 50.3 -1.6**
baz=201
JFWS Jewell Farm 49.27 15 P P **23 55 52.5 +0.5**
P53A Whipple 49.27 25 P P **23 55 52.1 +0.1**
baz=213,SNR=6.2
S58A Poland Farm, P 49.28 29 P P **23 55 52.4 +0.3**
baz=218
S58A Poland Farm, P 49.28 29 IAMs_20 IAMs_20 00 15 03.0
comp=Z,5µm,21.0s
O51A Pataskala 49.33 24 P P **23 55 52.8 +0.3**
baz=211
N49A Columbus Grove 49.38 22 P P **23 55 54.0 +1.1**
Q55A Buckhannon 49.43 27 P P **23 55 54.7 +1.4**
baz=215
RLMT Red Lodge 49.44 357 P P **23 55 51.7 -1.8**
baz=176,SNR=7.5
RLMT Red Lodge 49.44 357 IAMs_20 IAMs_20 00 14 34.1
comp=Z,3µm,20.0s
J05D Fort Rock, OR 49.47 345 P P **23 55 52.5 -1.2**
baz=160,SNR=14
I37A Lemond, Waseca 49.57 12 P P **23 55 55.1 +0.9**
I37A IAmb IAmb 23 56 10.0
comp=Z,28nm,1.0s
T60A Surry 49.57 31 P P **23 55 55.0 +0.7**
baz=220
K02D Willamette Mer 49.58 343 P P **23 55 54.2 -0.3**
baz=156
R57A Stanardsville 49.59 28 P P **23 55 54.2 -0.3**
baz=217,SNR=6.3
L46A Eue Claire 49.61 19 P P **23 55 52.2 -2.4**
baz=206
L46A Eue Claire 49.61 19 P P **23 55 54.9 +0.3**
O52A Adamsville 49.61 24 P P **23 55 55.1 +0.4**
baz=212
O52A Adamsville 49.61 24 P P **23 55 56.5 +1.9**
R58B Mineral 49.64 29 P P **23 55 55.2 +0.4**
R58B IAmb IAmb 23 57 11.1
comp=Z,41nm,1.8s
R58B IAMs_20 IAMs_20 00 15 14.5
comp=Z,5µm,21.0s
N50A Nevada 49.65 23 P P **23 55 55.0 +0.1**
baz=210
J04D Umpqua Nationa 49.65 345 P P **23 55 52.6 -2.6**
baz=159
M48A Edgerton 49.68 21 P P **23 55 55.5 +0.4**
M48A IAmb IAmb 23 56 30.0
comp=Z,50nm,1.6s
P54A Burton 49.76 26 P P **23 55 54.8 -1.0**
baz=214,SNR=5.8
S59A Mechanicsville 49.77 30 P P **23 55 54.4 -1.5**
baz=219
I07A Izee 49.81 347 IAmb IAmb 23 56 14.2
comp=Z,44nm,1.1s
I07A IAMs_20 IAMs_20 00 14 15.5
comp=Z,3µm,18.0s
R58A Rapidan 49.84 29 P P **23 55 55.6 -0.8**
baz=218
PINE Pine Mountain 49.87 346 IAmb IAmb 23 56 30.5
comp=Z,54nm,1.2s
Q56A Snyder Ridge, 49.88 27 P P **23 55 57.3 +0.6**
baz=216
Q56A Snyder Ridge, 49.88 27 P P **23 55 57.9 +1.2**
DLMT Dillon 49.94 354 IAMs_20 IAMs_20 00 14 03.5
comp=Z,5µm,21.0s
P55A Reedsville 49.97 26 P P **23 55 57.3 -0.1**
baz=215
O53A New Philadelph 49.98 25 P P **23 55 56.6 -0.9**
baz=213
S60A Water View 50.04 30 P P **23 55 58.5 +0.5**
baz=219
CBN Corbin Frederi 50.07 30 P P **23 56 00.3 +2.1**
baz=218
CBN Corbin Frederi 50.07 30 P P **23 55 59.0 +0.9**
CBN IAMs_20 IAMs_20 00 15 36.0
comp=Z,6µm,21.0s
N51A Ashland 50.07 23 P P **23 55 59.4 +1.3**
N51A IAmb IAmb 23 56 26.1
comp=Z,45nm,1.4s
MCWV Mont Chateau 50.08 26 P P **23 55 57.0 -1.2**
baz=215,SNR=5.9
MCWV Mont Chateau 50.08 26 P P **23 55 59.9 +1.7**
I40A Norwalk 50.09 14 IAmb IAmb 23 56 34.1
comp=Z,84nm,1.9s
J01E Myrtle Point 50.09 343 P P **23 55 55.7 -2.5**
baz=156
ITTB Itaituba 50.13 92 *e*P P **23 55 59.3 +0.2**
L48A N Adams 50.19 21 P P **23 55 58.2 -0.8**
baz=208
R59A King George, V 50.20 30 P P **23 55 58.9 -0.2**
baz=219
M50A Fremont 50.23 22 P P **23 55 59.3 0.0**
M50A IAmb IAmb 23 56 28.4
comp=Z,70nm,1.6s
Q57A Strasburg 50.23 28 P P **23 55 59.2 -0.2**
baz=217,SNR=7.2
I04A Tendick Farm, 50.25 345 P P **23 55 58.0 -1.5**
baz=158
N52A McGinn's Farm, 50.26 24 P P **23 55 58.0 -1.6**
baz=212
O54A Avella 50.28 26 P P **23 55 58.5 -1.2**
baz=214
O54A Avella 50.28 26 P P **23 55 59.9 +0.2**
O54A IAmb IAmb 23 56 18.0
comp=Z,49nm,1.4s
P56A Dayton Farm, R 50.41 27 P P **23 56 00.4 -0.3**
baz=216
I03D Drain, OR 50.41 344 P P **23 56 00.8 +0.1**
baz=157
I05D Terrebonne, OR 50.48 346 P P **23 56 00.5 -0.7**
baz=160
Q58A Fox Den Farm, 50.50 29 P P **23 56 01.4 0.0**
baz=218,SNR=5.7
M51A Elyria 50.50 23 P P **23 56 00.1 -1.3**
baz=211
R60A Leonardtown, M 50.52 30 P P **23 56 02.8 +1.3**
baz=219
S61A Accomac 50.53 31 P P **23 56 02.8 +1.2**
baz=220
S61A Accomac 50.53 31 IAMs_20 IAMs_20 00 15 34.1
comp=Z,6µm,20.0s
I42A Draeger Farm, 50.53 16 P P **23 56 03.3 +1.7**
N53A Lisbon 50.60 25 P P **23 56 01.4 -0.7**
baz=213,SNR=5.6
K47A Vermontville 50.63 20 P P **23 56 01.8 -0.5**
baz=207
SALV Santo Antonio 50.70 107 *e*P P **23 56 01.5 -1.8**
O55A Ligonier 50.77 26 P P **23 56 02.4 -1.1**
baz=215
P57A Homestead Farm 50.77 28 P P **23 56 01.9 -1.6**
baz=217
P57A Homestead Farm 50.77 28 P P **23 56 03.6 +0.1**
P57A IAmb IAmb 23 56 33.7
comp=Z,56nm,1.4s
AAM Ann Arbor 50.78 21 P P **23 56 06.0 +2.6**
AAM IAmb IAmb 23 57 46.9
comp=Z,23nm,0.5s
F33A 5 Mile Ranch, 50.81 9 P P **23 56 04.9 +1.3**
SPMN Marine on St. 50.85 12 P P **23 56 03.7 -0.2**
baz=197
SPMN Marine on St. 50.85 12 P P **23 56 04.6 +0.7**
SPMN IAmb IAmb 23 56 34.2
comp=Z,79nm,1.9s
SPMN IAMs_20 IAMs_20 00 16 54.9
comp=Z,3µm,18.0s
G08A Pilot Rock 50.85 348 IAmb IAmb 23 56 27.9
comp=Z,36nm,1.3s
G08A IAMs_20 IAMs_20 00 13 52.9
comp=Z,6µm,22.0s
J45A Montague 50.86 18 P P **23 55 59.5 -4.5**
baz=205
L50A Kingsville 50.87 22 P P **23 56 04.0 -0.1**
baz=210
LAO LASA Array 50.92 360 P P **23 56 03.1 -1.4**
baz=180
LAO LASA Array 50.92 360 IAmb IAmb 23 56 25.7
comp=Z,91nm,1.9s
LAO IAMs_20 IAMs_20 00 15 32.2
comp=Z,3µm,20.0s
Q59A Harwood 50.94 30 P P 23 56 10.0 +5.3
baz=219
M52A Chesterland 51.01 24 P P **23 56 01.7 -3.5**
baz=212
M52A Chesterland 51.01 24 P P **23 56 06.9 +1.7**
M52A IAmb IAmb 23 56 34.5

comp=Z,84nm,1.7s
H04D Lebanon 51.01 345 P P 23 56 05.6 +0.4
baz=158
H04A Detroit Lake 51.02 345 IAmb IAmb 23 56 32.0
comp=Z,46nm,1.3s
H04A IAMs_20 IAMs_20 00 14 25.4
comp=Z,3µm,19.0s
E28A Huff 51.02 5 P P 23 56 06.1 +0.8
E28A IAmb IAmb 23 56 35.2
comp=Z,55nm,1.3s
E28A IAMs_20 IAMs_20 00 16 01.8
comp=Z,3µm,19.0s
K48A Perry 51.05 21 P P 23 56 05.1 -0.4
baz=208
N54A Moraine State 51.09 25 P P 23 56 05.5 -0.4
baz=214,SNR=8.1
P58A Pank, Wackersv 51.11 29 P P 23 56 06.4 +0.4
baz=218
O56A Blue Knob Stat 51.15 27 P P 23 56 06.9 +0.6
baz=216,SNR=7.3
O56A Blue Knob Stat 51.15 27 P P 23 56 07.7 +1.3
O56A IAmb IAmb 23 56 36.1
comp=Z,71nm,1.4s
G06A Carlson Farm, 51.16 347 IAmb IAmb 23 56 23.8
comp=Z,35nm,1.1s
F10A Beach Ranch, E 51.19 350 IAmb IAmb 23 56 30.9
comp=Z,55nm,1.4s
R61A Willards 51.19 31 P P 23 56 08.1 +1.5
baz=221
R61A Willards 51.19 31 P P 23 56 07.6 +1.0
R61A IAMs_20 IAMs_20 00 16 05.6
comp=Z,6µm,20.0s
J47A Sunmer 51.20 20 P P 23 56 02.7 -3.8
baz=207
J47A Sunmer 51.20 20 P P 23 56 07.6 +1.1
M53A WI Miller and 51.20 24 P P 23 56 05.6 -1.1
baz=213
COR Corvallis 51.22 344 P P 23 56 08.9 +2.2
COR Corvallis 51.22 344 IAMs_20 IAMs_20 00 13 32.8
comp=Z,3µm,19.0s
SDMD Soldier's Deli 51.27 29 P P 23 56 07.3 +0.1
F36A Milaca 51.31 11 IAmb IAmb 23 56 38.0
comp=Z,79nm,1.6s
F36A IAMs_20 IAMs_20 00 16 38.3
comp=Z,3µm,18.0s
G05D Wamic, OR 51.33 346 P P 23 56 06.8 -0.8
baz=160
CPUP Villa Florida 51.34 120 P P 23 56 05.0 -3.0
comp=Z,3.8nm,0.8s,baz=281,slow=9.2,SNR=10
CPUP LR LR 00 14 08.6
comp=Z,6µm,21.6s,baz=284,slow=32
CPUP Villa Florida 51.34 120 IAmb IAmb 23 56 29.9
comp=Z,55nm,1.4s
N55A Marion Center 51.38 26 P P 23 56 08.4 +0.4
baz=215,SNR=8.6
Q60A Greensboro 51.45 30 P P 23 56 09.3 +0.8
baz=220
I45A Fountain 51.45 18 P P 23 56 07.6 -0.8
baz=205
G40A Rib Lake 51.48 14 IAmb IAmb 23 56 16.5
comp=Z,33nm,1.3s
O57A Amberson 51.53 28 P P 23 56 10.6 +1.5
baz=217
MSO Missoula 51.54 353 P P 23 56 07.1 -2.1
baz=170
MSO Missoula 51.54 353 IAMs_20 IAMs_20 00 15 26.8
comp=Z,3µm,20.0s
K50A Casco 51.57 22 P P 23 56 10.1 +0.7
baz=210
K50A Casco 51.57 22 P P 23 56 11.3 +2.0
K50A IAMs_20 IAMs_20 00 17 46.8
comp=Z,3µm,20.0s
ALLY Alegheny Colle 51.59 25 P P 23 56 10.4 +0.8
ALLY IAmb IAmb 23 56 16.9
comp=Z,35nm,1.1s
J48A Bridge Port 51.60 21 P P 23 56 09.2 -0.4
baz=209
J48A Bridge Port 51.60 21 P P 23 56 10.4 +0.7
I46A Reed City 51.61 19 P P 23 56 09.4 -0.3
baz=206
P59A Jarrettsville 51.63 29 P P 23 56 10.8 +0.9
baz=219
F07A Phinny Hill Vi 51.63 348 P P 23 56 11.6 +1.8
F07A IAmb IAmb 23 56 36.5
comp=Z,41nm,1.2s
F07A IAMs_20 IAMs_20 00 14 16.6
comp=Z,6µm,21.0s
M54A Oil Creek Stat 51.68 25 P P 23 56 11.0 +0.7
baz=214,SNR=12
M54A Oil Creek Stat 51.68 25 IAmb IAmb 23 56 17.9
comp=Z,56nm,1.1s
SSPA Standing Stone 51.75 27 P P 23 56 08.4 -2.4
baz=217
G03D McMinnville, O 51.79 345 P P 23 56 09.0 -1.9
baz=158
O58A Lewisberry 51.79 28 P P 23 56 12.3 +1.2
baz=218
N56A West Decatur 51.79 27 P P 23 56 11.9 +0.7
baz=216,SNR=5.7
L53A Girard 51.80 24 P P 23 56 10.5 -0.7
baz=213
E09A Wood Farm, Sta 51.87 349 P P 23 56 13.7 +2.1
E09A IAMs_20 IAMs_20 00 14 26.8
comp=Z,5µm,22.0s
F05D White Salmon 51.97 346 P P 23 56 11.9 -0.4
baz=160
MVL Millersville 51.97 29 P P 23 56 13.3 +0.9
MVL IAmb IAmb 23 56 20.2
comp=Z,33nm,1.1s
MVL IAMs_20 IAMs_20 00 16 46.2
comp=Z,3µm,20.0s
PAGS Pennsylvania G 51.97 28 P P 23 56 13.5 +1.1
PAGS IAMs_20 IAMs_20 00 16 38.3
comp=Z,3µm,21.0s
I47A Gladwin 51.99 20 P P 23 56 12.3 -0.2
baz=207
I47A Gladwin 51.99 20 P P 23 56 12.8 +0.3
I47A IAmb IAmb 23 56 48.0
comp=Z,32nm,1.2s
N57A Milroy 52.00 27 P P 23 56 12.1 -0.5
baz=217,SNR=6.1
E08A Dider Farm, El 52.02 349 P P 23 56 14.0 +1.3
E08A IAMs_20 IAMs_20 00 14 39.9
comp=Z,4µm,22.0s
HAWA Hanford 52.02 348 IAmb IAmb 23 56 41.8
comp=Z,42nm,1.4s
HAWA IAMs_20 IAMs_20 00 15 09.9
comp=Z,3µm,20.0s
M55A Ridgway 52.03 26 P P 23 56 11.7 -1.2
baz=215,SNR=7.2
M55A Ridgway 52.03 26 P P 23 56 14.0 +1.1
M55A IAmb IAmb 23 56 20.4
comp=Z,42nm,1.1s
M55A IAMs_20 IAMs_20 00 19 10.0
comp=Z,3µm,18.0s
H45A Beulah 52.04 18 P P 23 56 12.4 -0.4
baz=205
ERPA Erie 52.05 24 P P 23 56 12.8 -0.2
baz=214
ERPA Erie 52.05 24 P P 23 56 13.5 +0.5
P60A Greenville 52.17 30 P P 23 56 13.5 -0.4
baz=220
F04A Amboy 52.24 346 P P 23 56 15.6 +1.2
F04A IAmb IAmb 23 56 47.1
comp=Z,33nm,1.1s
E07A Sunnyside 52.25 348 P P 23 56 15.4 +1.0
E07A IAMs_20 IAMs_20 00 14 36.9
comp=Z,6µm,21.0s
O59A Robesonia 52.29 29 P P 23 56 15.6 +0.8
baz=219
M56A Emporium 52.30 26 P P 23 56 15.0 +0.1
baz=216,SNR=5.8
M56A Emporium 52.30 26 IAmb IAmb 23 56 22.5
comp=Z,51nm,1.1s
K52A Tillsonburg 52.31 23 P P 23 56 13.1 -1.8
baz=212
PSUB Penn St. - Bra 52.35 30 P P 23 56 16.1 +0.9
EGMT Eagleton 52.36 357 P P 23 56 16.2 +0.9
baz=175
EGMT Eagleton 52.36 357 IAMs_20 IAMs_20 00 15 50.4
comp=Z,3µm,20.0s
MDND Maddock 52.38 5 P P 23 56 15.8 +0.4
MDND IAMs_20 IAMs_20 00 16 58.7
comp=Z,4µm,20.0s
I48A Sherman Twp 52.41 20 P P 23 56 16.5 +0.8
baz=208
L54A Sinclairville 52.42 25 P P 23 56 14.7 -1.1
baz=214
N58A Sunbury 52.45 28 P P 23 56 17.5 +1.5
baz=218
N58A Sunbury 52.45 28 P P 23 56 16.6 +0.6
N58A IAMs_20 IAMs_20 00 17 06.1
comp=Z,4µm,21.0s
JTMT Jette 52.48 353 IAMs_20 IAMs_20 00 15 18.8
comp=Z,4µm,22.0s
P61A Hammonton 52.49 30 P P 23 56 19.3 +3.1
baz=220
P61A Hammonton 52.49 30 P P 23 56 16.5 +0.3
I49A Point Hope 52.51 21 IAMs_20 IAMs_20 00 18 23.6
comp=Z,3µm,19.0s
G45A Suttons Bay 52.53 18 P P 23 56 15.6 -0.9
baz=206
G45A Suttons Bay 52.53 18 P P 23 56 17.9 +1.4
F04D Rainier, OR 52.53 345 P P 23 56 16.7 +0.3
baz=158
F03A Seaside 52.53 345 IAMs_20 IAMs_20 00 14 17.5
comp=Z,5µm,22.0s
D08A Wollman Farm, 52.54 349 IAmb IAmb 23 56 39.6
comp=Z,33nm,1.2s
D08A IAMs_20 IAMs_20 00 14 55.5
comp=Z,4µm,22.0s
H47A Mio 52.61 20 P P 23 56 18.2 +1.2
baz=208
M57A Sunshine Farm, 52.66 27 IAmb IAmb 23 56 25.3
comp=Z,30nm,1.1s
GLMI Grayling 52.67 19 P P 23 56 18.6 +1.1
baz=207
GLMI Grayling 52.67 19 P P 23 56 19.7 +2.2
GLMI IAmb IAmb 23 57 34.4
comp=Z,23nm,0.5s
DGMT Dagmar 52.73 2 P P 23 56 17.0 -0.9
baz=182
DGMT Dagmar 52.73 2 IAMs_20 IAMs_20 00 16 24.9
comp=Z,5µm,21.0s
L55A Hindale 52.76 26 P P 23 56 17.8 -0.5
baz=215
J52A Paris 52.79 23 P P 23 56 17.0 -1.4
baz=212
E04D Cinebar 52.86 346 P P 23 56 18.2 -0.8
baz=159
WVNY West Valley, N 52.87 25 IAmb IAmb 23 56 26.8
comp=Z,48nm,1.1s
LUPA Lehigh Univers 52.91 29 P P 23 56 21.1 +1.7
O61A Allentown 52.92 30 P P 23 56 18.2 -1.2
baz=220
ITQB Itaqui 52.94 124 eP P 23 56 23.9 +4.1
N59A State Game Lan 52.96 29 P P 23 56 20.0 +0.2
baz=219
N59A State Game Lan 52.96 29 P P 23 56 20.0 +0.2
N59A IAMs_20 IAMs_20 00 17 18.5
comp=Z,4µm,20.0s
H48A Harrisville 52.99 20 P P 23 56 19.3 -0.6
baz=209
H48A Harrisville 52.99 20 P P 23 56 21.5 +1.6
H48A IAmb IAmb 23 56 50.1
comp=Z,64nm,1.5s
K54A Basiliko Farm, 53.00 25 P P 23 56 20.8 +0.8
baz=215
G46A Petoskey 53.03 19 P P 23 56 19.3 -0.9
baz=207
I51A Listowel 53.05 23 P P 23 56 20.7 +0.3
baz=212
LTY Liberty 53.09 348 P P 23 56 22.4 +1.7
LTY IAmb IAmb 23 56 46.1
comp=Z,50nm,1.6s
LTY IAMs_20 IAMs_20 00 14 58.9
comp=Z,6µm,22.0s
L56A Greenwood 53.10 26 P P 23 56 18.5 -2.3
baz=216,SNR=13
L56A Greenwood 53.10 26 IAmb IAmb 23 56 28.5
comp=Z,56nm,1.1s
E03A Lebam 53.11 345 P P 23 56 22.1 +1.4
E03A IAMs_20 IAMs_20 00 14 35.6
comp=Z,5µm,22.0s
C09A Chrisman Ranch 53.14 350 IAmb IAmb 23 56 44.0
comp=Z,33nm,1.1s
C09A IAMs_20 IAMs_20 00 15 36.2
comp=Z,6µm,20.0s
F45A CMU Biological 53.16 18 P P 23 56 19.6 -1.4
baz=206
G47A Hillman 53.23 19 P P 23 56 21.8 +0.2
baz=208
N60A Cedar Hill Far 53.25 29 P P 23 56 21.7 -0.1
baz=220
AGMN Agassiz Nation 53.28 8 P P 23 56 19.0 -3.0
baz=192
AGMN Agassiz Nation 53.28 8 IAmb IAmb 23 56 51.7
comp=Z,67nm,1.6s
L57A Andrews Acres 53.31 27 P P 23 56 22.8 +0.4
baz=217,SNR=5.9
D05A Enumclaw 53.32 346 IAMs_20 IAMs_20 00 15 38.2
comp=Z,5µm,19.0s
E43A Lone Tree Farm 53.35 16 P P 23 56 24.0 +1.5
K55A Perry 53.36 25 P P 23 56 23.1 +0.4
baz=215,SNR=5.1
BRNJ Basking Ridge 53.36 30 IAMs_20 IAMs_20 00 17 45.2
comp=Z,6µm,20.0s
NEW Newport 53.39 351 P P 23 56 19.2 -3.6
baz=166,SNR=14
NEW Newport 53.39 351 IAmb IAmb 23 56 47.5
comp=Z,51nm,1.5s
NEW Newport 53.39 351 IAMs_20 IAMs_20 00 15 56.9
comp=Z,5µm,20.0s
MMNY Mt. Morris Dam 53.43 26 P P 23 56 24.6 +1.5
KSPA Keystone Colle 53.46 28 P P 23 56 24.8 +1.4
MEDO Medina 53.55 25 P P 23 56 24.9 +0.9
MEDO IAmb IAmb 23 56 31.4
comp=Z,50nm,1.1s
N61A South Mountain 53.55 30 P P 23 56 26.0 +1.9
baz=220
D41A Chassel 53.56 15 P P 23 56 24.3 +0.3
D41A IAmb IAmb 23 56 32.2
comp=Z,44nm,1.2s
J54A Appleton 53.56 25 P P 23 56 23.0 -1.2
baz=215
J54A Appleton 53.56 25 P P 23 56 25.3 +1.2
I52A Shelburne 53.60 23 P P 23 56 25.2 +0.8
baz=212
M59A Waymart 53.60 28 P P 23 56 24.6 +0.1
baz=219
I53A Kortright Cn E 53.63 24 P P 23 56 23.7 -0.9
baz=215
K56A Middlesex 53.66 26 P P 23 56 25.4 +0.5
baz=216
BBSR BB Station 53.66 44 P P 23 56 25.0 -0.1
BBSR IAmb IAmb 23 56 29.6
comp=Z,55nm,1.3s
BBSR BB Station 53.66 44 IAMs_20 IAMs_20 00 14 29.1
comp=Z,3µm,22.0s
B35A Bob, Littlefor 53.68 10 IAmb IAmb 23 56 55.3
comp=Z,69nm,1.6s
EYMN Ely 53.72 12 P P 23 56 23.0 -2.3
baz=198
EYMN Ely 53.72 12 IAmb IAmb 23 56 40.1
comp=Z,31nm,1.1s
WALA Waterton Lakes 53.73 354 IAMs_20 IAMs_20 00 16 12.9
comp=Z,4µm,21.0s
CPNY Central Park 53.75 30 P P 23 56 25.7 +0.2
CPNY IAmb IAmb 23 56 32.5
comp=Z,30nm,1.2s
C06D Leavenworth 53.77 348 P P 23 56 23.1 -2.5
baz=161
L58A Harry Jones Me 53.80 28 P P 23 56 25.4 -0.6
baz=218
M60A Port Jervis 53.83 29 P P 23 56 29.2 +3.1
baz=220
BINY Binghamton 53.86 27 P P 23 56 30.4 +4.0
baz=218
BINY Binghamton 53.86 27 IAmb IAmb 23 56 34.1
comp=Z,42nm,1.1s
BINY IAMs_20 IAMs_20 00 18 31.3
comp=Z,3µm,20.0s
B08A Colville Reser 53.87 349 IAMs_20 IAMs_20 00 16 29.6
comp=Z,3µm,20.0s
E44A Grand Marais A 53.88 17 P P 23 56 25.2 -1.2
baz=205
E44A Grand Marais A 53.88 17 P P 23 56 27.4 +1.0
E44A IAmb IAmb 23 56 58.3
comp=Z,33nm,1.2s
J55A Hilton 53.90 25 P P 23 56 28.8 +2.2
baz=216
J55A Hilton 53.90 25 P P 23 56 26.4 -0.2
J55A IAmb IAmb 23 56 33.9
comp=Z,43nm,1.2s
D03D Eldon 53.91 346 P P 23 56 27.1 +0.6
baz=159
PAL Palisades 53.93 30 P P 23 56 27.8 +1.0
baz=221
PAL Palisades 53.93 30 P P 23 56 26.9 0.0
PAL IAmb IAmb 23 56 34.1
comp=Z,30nm,1.1s
NLWA Neilton Lookou 53.97 345 IAmb IAmb 23 56 53.0
comp=Z,40nm,1.2s
NLWA IAMs_20 IAMs_20 00 15 14.5
comp=Z,4µm,21.0s
K57A Scipio Center 54.04 27 P P 23 56 28.7 +1.1
baz=217
H52A Wyevale 54.20 23 P P 23 56 28.6 -0.2
baz=213
F48A Evansville 54.22 20 P P 23 56 31.5 +2.6
baz=209
M61A Granite Spring 54.23 30 P P 23 56 30.2 +1.1
baz=221,SNR=5.3
MLOA Mauna Loa Obse 54.24 298 IAMs_20 IAMs_20 00 12 43.2
comp=Z,3µm,22.0s
L59A Walton 54.29 28 P P 23 56 29.0 -0.5
baz=219
L59A Walton 54.29 28 P P 23 56 30.0 +0.4
L59A IAmb IAmb 23 56 59.3
comp=Z,61nm,1.6s
L59A IAMs_20 IAMs_20 00 18 10.7
comp=Z,5µm,21.0s
J56A Wolcott 54.33 26 P P 23 56 28.8 -0.9
baz=216
WSPT Westport, CT 54.35 30 IAMs_20 IAMs_20 00 18 13.2
comp=Z,5µm,20.0s
B05A Bryant 54.35 347 P P 23 56 27.8 -2.0
baz=160,SNR=5.2
F49A Sandfield 54.36 20 P P 23 56 28.9 -1.1
baz=210
ARAG Araguaiana, MT 54.38 106 eP P 23 56 31.8 +1.1
B06A Marblemount 54.46 347 P P 23 56 31.7 +1.1
B06A IAMs_20 IAMs_20 00 15 51.3
comp=Z,6µm,21.0s
K58A Earlville 54.46 27 P P 23 56 31.7 +1.0
baz=218,SNR=5.1
K58A Earlville 54.46 27 P P 23 56 31.7 +1.0
K58A IAmb IAmb 23 56 38.2
comp=Z,46nm,1.2s
K58A IAMs_20 IAMs_20 00 19 50.2
comp=Z,3µm,20.0s
GO09 Cerro Castillo 54.47 155 P P 23 56 32.0 +1.4
GO09 IAmb IAmb 23 56 57.3
comp=Z,46nm,1.3s
L60A Shokan 54.53 29 P P 23 56 31.4 +0.1
baz=220
KHLU Kahalu`u 54.54 298 IAMs_20 IAMs_20 00 13 23.1
comp=Z,3µm,20.0s
E47A Iron Bridge 54.55 19 P P 23 56 28.6 -2.7
baz=208
SADO Sadowa 54.60 23 IAmb IAmb 23 56 39.0
comp=Z,43nm,1.1s
SADO IAMs_20 IAMs_20 00 19 32.9
comp=Z,3µm,21.0s
YLE Yale 54.65 30 IAMs_20 IAMs_20 00 17 40.2
comp=Z,5µm,22.0s
H53A Bobcaygeon 54.66 24 P P 23 56 33.0 +0.9
baz=214
D46A Sault St. Mari 54.69 18 P P 23 56 33.2 +0.9
baz=207
RAR Rarotonga 54.70 247 LR LR 00 14 17.4
comp=Z,859nm,19.9s,baz=88,slow=30
I55A Frankford 54.73 25 P P 23 56 32.3 -0.4
baz=215,SNR=6.1
M62A Hamden 54.77 30 P P 23 56 33.5 +0.5
baz=222
PECO Prince Edward 54.79 25 IAmb IAmb 23 57 08.4
comp=Z,78nm,2.0s
J57A Williamstown 54.81 26 P P 23 56 32.4 -0.8
baz=217
J57A Williamstown 54.81 26 P P 23 56 34.1 +0.9
J57A IAmb IAmb 23 57 02.6
comp=Z,38nm,1.6s
K59A Cooperstown 54.83 28 P P 23 56 33.7 +0.2
baz=219,SNR=5.8
A04D Lummi Island 54.92 347 P P 23 56 34.8 +0.9
baz=159
E48A Lockeyer 54.95 20 P P 23 56 32.9 -1.2
baz=209
DELO Deloro Mine 55.01 25 IAmb IAmb 23 57 04.0
comp=Z,62nm,1.6s
L61A Hillsdale 1, H 55.01 29 P P 23 56 35.4 +0.7
baz=221
PGC Sidney 55.03 346 IAmb IAmb 23 56 52.1
comp=Z,28nm,1.1s
PGC IAMs_20 IAMs_20 00 17 24.6
comp=Z,3µm,18.0s
J58A Remsen 55.09 27 P P 23 56 33.9 -1.4
baz=218,SNR=7.0
J58A Remsen 55.09 27 IAMs_20 IAMs_20 00 20 18.9
comp=Z,3µm,18.0s
G53A Haliburton 55.09 23 P P 23 56 35.1 -0.1
baz=214
D47A Chapleau 55.14 19 P P 23 56 33.7 -1.9
baz=208
K60A Five Rivers En 55.17 29 P P 23 56 35.9 +0.1
baz=220
M63A Gales Ferry 55.17 31 P P 23 56 37.4 +1.6
baz=223
ULM Lac du Bonnet 55.19 8 P P 23 56 35.8 -0.1
comp=Z,6.2nm,0.9s,baz=201,slow=6.7,SNR=5.2
ULM LR LR 00 18 40.2
comp=Z,5µm,20.3s,baz=190,slow=34
ULM Lac du Bonnet 55.19 8 IAmb IAmb 23 57 06.0
comp=Z,57nm,1.6s
ULM IAMs_20 IAMs_20 00 18 28.8
comp=Z,5µm,20.0s
H55A Tweed 55.21 25 P P 23 56 35.4 -0.8
baz=216
F51A Arnstein 55.27 22 P P 23 56 35.2 -1.3
baz=212
TRY Troy 55.36 29 P P 23 56 37.4 +0.2
TRY IAMs_20 IAMs_20 00 18 41.0
comp=Z,5µm,21.0s
I57A Carthage 55.38 26 P P 23 56 36.1 -1.3
baz=218,SNR=6.4
F52A Sundridge 55.38 22 P P 23 56 38.0 +0.6
baz=213
E50A Wahnapitae 55.39 21 P P 23 56 36.4 -1.0
baz=211
I58A Old Forge 55.49 27 P P 23 56 35.0 -3.2
baz=218
K61A Williamstown 55.50 29 P P 23 56 37.5 -0.8
baz=221
J59A Piesco 55.53 27 P P 23 56 37.8 -0.7
baz=219
J59A Piesco 55.53 27 IAMs_20 IAMs_20 00 18 50.5
comp=Z,4µm,20.0s
G54A Lake Saint Pet 55.53 24 P P 23 56 36.9 -1.6
baz=214,SNR=5.4
L61B Northampton 55.62 30 P P 23 56 38.9 -0.2
baz=221
H56A Elgin 55.64 25 P P 23 56 38.5 -0.7
baz=217
PLVO Plevna 55.65 25 IAmb IAmb 23 56 46.8
comp=Z,25nm,1.2s
QUA2 Belchertown 55.66 30 IAMs_20 IAMs_20 00 19 30.9
comp=Z,3µm,18.0s
D48A Paudash Townsh 55.67 20 P P 23 56 38.9 -0.5
baz=210,SNR=5.7
ACCN Adirondack Com 55.86 28 P P 23 56 41.3 +0.5
ACCN IAmb IAmb 23 56 48.2
comp=Z,48nm,1.2s
ACCN IAMs_20 IAMs_20 00 19 08.1
comp=Z,4µm,22.0s
J60A Lant Hill Farm 55.87 28 P P 23 56 41.2 +0.3
baz=220,SNR=5.4
D49A Beulah Townshi 55.91 20 P P 23 56 40.3 -0.8
baz=210
E51A G1948 Merrick 55.94 22 P P 23 56 41.8 +0.5
baz=212
PRPB Parauapebas 55.97 94 eP P 23 56 42.5 +0.3
G55A Calabogie 55.98 25 P P 23 56 40.7 -0.8
baz=216
K62A Royalston 56.01 30 P P 23 56 44.0 +2.1
baz=222
K62A Royalston 56.01 30 IAMs_20 IAMs_20 00 19 42.1
comp=Z,3µm,19.0s
ALGO Algonquin Park 56.01 23 P P 23 56 41.6 -0.2
baz=214
E52A Mattawa 56.05 23 P P 23 56 41.3 -0.8
baz=213

NCB	**Newcomb**	**56.05**	**27**	IAmb	IAmb	23 57 11.6		
	comp=Z,34nm,1.5s							
NCB				IAMs_20	IAMs_20	00 18 57.3		
	comp=Z,3µm,21.0s							
PLTB	**Pedras Altas**	**56.06**	**126**	*e*P	**P**	**23 56 44.5**	**+2.0**	
M66A	**Nantucket**	**56.06**	**32**	P	**P**	**23 56 44.6**	**+2.3**	
	baz=225							
ITAB	**Concordia**	**56.06**	**120**	*e*P	**P**	**23 56 46.1**	**+3.5**	
I59A	**Olmsteadville**	**56.08**	**28**	P	**P**	**23 56 44.0**	**+1.6**	
	baz=220							
L64A	**Middleborough**	**56.17**	**31**	P	**P**	**23 56 46.5**	**+3.5**	
	baz=224							
HRV	**Adam Dziewonsk**	**56.22**	**30**	P	**P**	**23 56 48.0**	**+4.6**	
	baz=223							
HRV	**Adam Dziewonsk**	**56.22**	**30**	IAMs_20	IAMs_20	00 19 10.9		
	comp=Z,4µm,20.0s							
D50A	**G1974 Best Tow**	**56.35**	**21**	P	**P**	**23 56 46.4**	**+2.2**	
	baz=212							
K63A	**Dunstable**	**56.37**	**30**	P	**P**	**23 56 45.8**	**+1.3**	
	baz=222							
I60A	**Shoreham**	**56.38**	**28**	P	**P**	**23 56 46.2**	**+1.7**	
	baz=220,SNR=5.1							
LONY	**Lake Ozonia**	**56.39**	**27**	P	**P**	**23 56 46.0**	**+1.4**	
	baz=218							
LONY	**Lake Ozonia**	**56.39**	**27**	P	**P**	**23 56 44.5**	**-0.1**	
LONY				IAmb	IAmb	23 57 20.1		
	comp=Z,57nm,1.9s							
LONY				IAMs_20	IAMs_20	00 19 23.3		
	comp=Z,3µm,21.0s							
H58A	**Gabriels**	**56.42**	**27**	P	**P**	**23 56 46.3**	**+1.4**	
	baz=219							
D51A	**Lot 18 Range I**	**56.45**	**22**	P	**P**	**23 56 45.4**	**+0.4**	
	baz=212							
E53A	**Dumoine, Ponti**	**56.51**	**23**	P	**P**	**23 56 46.6**	**+1.2**	
	baz=214							
LLLB	**Lillooet**	**56.52**	**348**	P	**P**	**23 56 46.5**	**+1.0**	
LLLB				IAMs_20	IAMs_20	00 17 17.8		
	comp=Z,5µm,20.0s							
G57A	**Newington**	**56.59**	**26**	P	**P**	**23 56 47.3**	**+1.3**	
	baz=218							
J62A	**Henniker**	**56.63**	**29**	P	**P**	**23 56 47.0**	**+0.7**	
	baz=222							
ORIO	**Orleans, Innes**	**56.64**	**25**	P	**P**	**23 56 45.5**	**-0.8**	
E54A	**Lac Daplat, Po**	**56.74**	**24**	P	**P**	**23 56 47.4**	**+0.3**	
	baz=215							
HNH	**Hanover**	**56.76**	**29**	IAMs_20	IAMs_20	00 19 59.9		
	comp=Z,5µm,20.0s							
H59A	**Cadyville**	**56.81**	**27**	P	**P**	**23 56 50.5**	**+2.9**	
	baz=219							
I61A	**Oroboro, Fairl**	**56.96**	**29**	P	**P**	**23 56 50.5**	**+1.8**	
	baz=221							
FRNY	**Flat Rock**	**57.01**	**27**	P	**P**	**23 56 49.2**	**+0.3**	
FRNY				IAmb	IAmb	23 56 56.5		
	comp=Z,40nm,1.2s							
FRNY				IAMs_20	IAMs_20	00 19 26.6		
	comp=Z,3µm,21.0s							
J63A	**Strafford**	**57.03**	**30**	P	**P**	**23 56 48.5**	**-0.6**	
	baz=223							
G58A	**Ormstown**	**57.04**	**27**	P	**P**	**23 56 49.6**	**+0.5**	
	baz=219							
D53A	**Lac Vacive, Po**	**57.08**	**23**	P	**P**	**23 56 50.8**	**+1.4**	
	baz=214,SNR=5.2							
H60A	**Morristown**	**57.21**	**28**	P	**P**	**23 56 52.5**	**+2.1**	
	baz=220							
LBNH	**Lisbon**	**57.33**	**29**	P	**P**	**23 56 53.5**	**+2.3**	
	baz=221							
LBNH	**Lisbon**	**57.33**	**29**	IAMs_20	IAMs_20	00 19 58.1		
	comp=Z,4µm,20.0s							
G59A	**Clarenceville**	**57.38**	**27**	P	**P**	**23 56 54.0**	**+2.4**	
	baz=220							
D54A	**Lac Fusel, La**	**57.54**	**23**	P	**P**	**23 56 53.9**	**+1.1**	
	baz=215							
H61A	**Lyndonville**	**57.55**	**28**	P	**P**	**23 56 56.9**	**+4.0**	
	baz=221							
E56A	**St. Veronique**	**57.71**	**25**	P	**P**	**23 56 55.8**	**+1.9**	
	baz=217							
I63A	**Otisfield**	**57.84**	**30**	P	**P**	**23 56 57.3**	**+2.5**	
	baz=223							
I63A	**Otisfield**	**57.84**	**30**	IAMs_20	IAMs_20	00 19 50.6		
	comp=Z,4µm,22.0s							
D55A	**Sainte-Anne-du**	**57.91**	**24**	P	**P**	**23 56 56.1**	**+0.8**	
	baz=217							
H62A	**Milan**	**57.95**	**29**	P	**P**	**23 56 58.8**	**+3.2**	
	baz=222							
H62A	**Milan**	**57.95**	**29**	IAMs_20	IAMs_20	00 21 03.4		
	comp=Z,3µm,19.0s							
E57A	**Chemin Saint G**	**57.98**	**26**	P	**P**	**23 56 56.0**	**+0.1**	
	baz=218,SNR=5.6							
BDFB	**Brasilia**	**58.02**	**106**	P	**P**	**23 56 55.2**	**-1.6**	
	comp=Z,3.3nm,0.8s,baz=226,slow=8.2,SNR=4.8							
BDFB				LR	LR	00 19 35.2		
	comp=Z,6µm,18.6s,baz=276,slow=34							
BDFB	**Brasilia**	**58.02**	**106**	IAmb	IAmb	23 57 26.1		
	comp=Z,57nm,1.5s							
VLDQ	**Val d'Or**	**58.02**	**22**	IAMs_20	IAMs_20	00 21 56.2		
	comp=Z,3µm,19.0s							
IPMB	**Ipameri, GO**	**58.05**	**108**	*e*P	**P**	**23 56 58.0**	**+1.1**	
SMTB	**Santa Maria do**	**58.16**	**98**	*e*P	**P**	**23 56 59.0**	**+1.4**	
I64A	**Boothbay**	**58.22**	**30**	P	**P**	**23 56 59.2**	**+1.7**	
	baz=224							
D56A	**ZEC Mazanza, M**	**58.23**	**25**	P	**P**	**23 56 56.1**	**-1.5**	
	baz=217,SNR=6.4							
G61A	**St-Isidore-de-**	**58.30**	**28**	P	**P**	**23 57 00.1**	**+2.1**	
	baz=221							
E58A	**La Victoria**	**58.33**	**26**	P	**P**	**23 56 59.0**	**+0.7**	
	baz=219							
D57A	**Chemin Vers le**	**58.57**	**25**	P	**P**	**23 57 00.3**	**+0.4**	
	baz=218,SNR=5.6							
F60A	**Warwick**	**58.62**	**27**	P	**P**	**23 57 01.1**	**+0.8**	
	baz=221,SNR=6.3							
G62A	**West of Eustis**	**58.72**	**29**	P	**P**	**23 57 03.2**	**+2.2**	
	baz=222							
G62A	**West of Eustis**	**58.72**	**29**	IAMs_20	IAMs_20	00 23 54.9		
	comp=Z,2µm,18.0s							
LSQQ	**Lebel-sur-Quev**	**58.98**	**22**	P	**P**	**23 57 04.0**	**+1.3**	
	baz=214							
F61A	**St Evariste**	**59.06**	**28**	P	**P**	**23 57 04.9**	**+1.5**	
	baz=222							
FFC	**Flin Flon**	**59.06**	**3**	P	**P**	**23 57 02.8**	**-0.4**	
FFC	**Flin Flon**	**59.06**	**3**	IAMs_20	IAMs_20	00 20 20.5		
	comp=Z,4µm,21.0s							
D58A	**Chemin du LacG**	**59.06**	**26**	P	**P**	**23 57 03.5**	**+0.2**	
	baz=219							
E60A	**Ste Agathe de**	**59.15**	**27**	P	**P**	**23 57 03.5**	**-0.4**	
	baz=221							
MATQ	**Matagami**	**59.33**	**21**	P	**P**	**23 57 04.1**	**-1.0**	
	baz=213,SNR=6.0							
LATQ	**La Tuque**	**59.33**	**26**	P	**P**	**23 57 07.2**	**+2.0**	
	baz=219							
LATQ	**La Tuque**	**59.33**	**26**	P	**P**	**23 57 05.7**	**+0.5**	
SPB	**Sao Paulo**	**59.51**	**115**	*e*P	**P**	**23 57 10.3**	**+3.4**	
G64A	**Maxfield**	**59.61**	**30**	P	**P**	**23 57 06.3**	**-0.8**	
	baz=224							
E61A	**Lac Etchemin**	**59.64**	**28**	P	**P**	**23 57 07.4**	**+0.1**	
	baz=222							
F63A	**Nahmakanta, Br**	**59.76**	**29**	P	**P**	**23 57 07.2**	**-1.0**	
	baz=224							
F63A	**Nahmakanta, Br**	**59.76**	**29**	IAMs_20	IAMs_20	00 21 00.5		
	comp=Z,5µm,22.0s							
PET01	**Itanhaem-SP**	**59.76**	**115**	*e*P	**P**	**23 57 10.9**	**+2.3**	
VAO	**Valinhos**	**59.84**	**114**	*e*P	**P**	**23 57 11.8**	**+2.4**	
E62A	**Clayton Lake**	**60.23**	**28**	P	**P**	**23 57 10.1**	**-1.2**	
	baz=223							
E62A	**Clayton Lake**	**60.23**	**28**	IAMs_20	IAMs_20	00 21 30.8		
	comp=Z,2µm,19.0s							
D61A	**St Aubert, Com**	**60.35**	**27**	P	**P**	**23 57 12.6**	**+0.5**	
	baz=222							
E63A	**Oxbow**	**60.61**	**29**	P	**P**	**23 57 15.3**	**+1.3**	
	baz=224							
CHGQ	**Chibougamau**	**60.67**	**23**	P	**P**	**23 57 13.9**	**-0.4**	
	baz=217							
D62A	**Allapoint, All**	**60.79**	**28**	P	**P**	**23 57 16.7**	**+1.5**	
	baz=223							
D62A	**Allapoint, All**	**60.79**	**28**	IAmb	IAmb	23 57 22.8		
	comp=Z,22nm,1.1s							
D62A				IAMs_20	IAMs_20	00 21 37.6		
	comp=Z,4µm,22.0s							
E64A	**Bridgewater**	**60.90**	**29**	P	**P**	**23 57 16.8**	**+0.9**	
	baz=225							
PARB	**Paraibuna**	**61.12**	**114**	*e*P	**P**	**23 57 19.6**	**+1.6**	
D63A	**Stockholm**	**61.20**	**29**	P	**P**	**23 57 20.1**	**+2.1**	
	baz=224							
JANB	**Januaria**	**61.55**	**105**	*e*P	**P**	**23 57 22.3**	**+1.2**	
ROSB	**Rosrio**	**61.77**	**91**	*e*P	**P**	**23 57 22.4**	**-0.2**	
BATG	**Bathurst New B**	**62.36**	**30**	IAMs_20	IAMs_20	00 21 48.3		
	comp=Z,4µm,22.0s							
GBN	**Guysborough**	**63.50**	**33**	IAMs_20	IAMs_20	00 21 28.5		
	comp=Z,2µm,22.0s							
FCC	**Fort Churchill**	**63.73**	**7**	P	**P**	**23 57 34.2**	**-0.5**	
SJMB	**Sao Joao De Ma**	**64.76**	**108**	*e*P	**P**	**23 57 43.8**	**+1.5**	
BSFB	**Barra de Sao F**	**65.09**	**109**	*e*P	**P**	**23 57 46.8**	**+2.4**	
NBPN	**Ponto Novo - B**	**65.44**	**100**	*e*P	**P**	**23 57 47.2**	**+0.4**	
DLBC	**Dease Lake**	**65.58**	**346**	IAMs_20	IAMs_20	00 23 58.4		
	comp=Z,2µm,18.0s							
SIT	**Sitka**	**65.77**	**343**	IAMs_20	IAMs_20	00 19 30.6		
	comp=Z,2µm,21.0s							
NBMO	**Morrinhos-CE**	**65.82**	**92**	*e*P	**P**	**23 57 50.2**	**+1.0**	
GDU01	**Guandu, BA**	**66.08**	**103**	*e*P	**P**	**23 57 51.6**	**+0.7**	
JIS	**Juneau Island**	**66.54**	**344**	IAmb	IAmb	23 58 10.9		
	comp=Z,22nm,1.0s							
YKA	**Yellowknife Ar**	**67.08**	**356**	P	**P**	**23 57 55.4**	**-0.9**	
	comp=Z,9.7nm,0.9s,baz=162,slow=6.6,SNR=85							
YKA				LR	LR	00 25 52.0		
	comp=Z,3µm,18.3s,baz=0.0,slow=35							
SCHQ	**Schefferville**	**67.41**	**23**	P	**P**	**23 57 57.8**	**-0.8**	
	comp=Z,2.3nm,0.5s,baz=238,slow=7.2,SNR=2.9							
SCHQ				LR	LR	00 26 34.1		
	comp=Z,3µm,20.8s,baz=226,slow=35							
SCHQ	**Schefferville**	**67.41**	**23**	IAmb	IAmb	23 58 05.7		
	comp=Z,20nm,1.1s							
SCHQ				IAMs_20	IAMs_20	00 26 12.7		
	comp=Z,3µm,21.0s							
NBCL	**Cascavel-CE**	**67.51**	**93**	*e*P	**P**	**23 58 01.5**	**+1.5**	
NBTA	**Tacaratu-PE**	**67.56**	**98**	*e*P	**P**	**23 58 03.3**	**+2.9**	
DRLN	**Deer Lake**	**68.01**	**32**	IAMs_20	IAMs_20	00 25 57.7		
	comp=Z,4µm,21.0s							
DHAK	**Deception Hill**	**68.31**	**343**	IAMs_20	IAMs_20	00 20 41.0		
	comp=Z,2µm,21.0s							
YKU2	**Yakutat**	**69.09**	**342**	IAMs_20	IAMs_20	00 21 14.6		
	comp=Z,3µm,22.0s							
HYT	**Haines Junctio**	**69.55**	**344**	IAmb	IAmb	23 58 35.7		
	comp=Z,30nm,1.2s							
YAH	**Yahtse**	**70.41**	**342**	IAMs_20	IAMs_20	00 21 49.3		
	comp=Z,3µm,22.0s							
CTGM	**Chitina Glacie**	**70.76**	**343**	IAMs_20	IAMs_20	00 21 52.6		
	comp=Z,3µm,21.0s							
BALM	**Baldy**	**71.12**	**342**	IAmb	IAmb	23 58 41.3		
	comp=Z,24nm,1.2s							
BALM				IAMs_20	IAMs_20	00 21 42.1		
	comp=Z,3µm,22.0s							
RAGM	**Ragged Mountai**	**71.35**	**341**	IAMs_20	IAMs_20	00 22 24.4		
	comp=Z,3µm,20.0s							
MCARA	**McCarthy VSAT**	**71.59**	**342**	IAMs_20	IAMs_20	00 22 12.8		
	comp=Z,2µm,19.0s							
VRDI	**Verde Repeater**	**71.61**	**342**	IAmb	IAmb	23 58 42.2		
	comp=Z,26nm,1.0s							
VRDI				IAMs_20	IAMs_20	00 21 55.1		
	comp=Z,2µm,22.0s							
EYAK	**Cordova Ski Ar**	**71.83**	**341**	IAMs_20	IAMs_20	00 22 37.0		
	comp=Z,3µm,20.0s							
GLB	**Gilahina Butte**	**71.88**	**342**	IAmb	IAmb	23 58 43.6		
	comp=Z,28nm,1.0s							
HIN	**Hinchinbrook I**	**71.97**	**340**	IAMs_20	IAMs_20	00 23 05.7		
	comp=Z,3µm,19.0s							
FID	**Port Fidalgo**	**72.22**	**340**	IAMs_20	IAMs_20	00 23 16.0		
	comp=Z,2µm,20.0s							
OHAK	**Old Harbor**	**72.34**	**335**		**PcP**	**23 58 42.6**	**-4.2**	
GLI	**Glacier Island**	**72.52**	**340**	IAMs_20	IAMs_20	00 22 07.3		
	comp=Z,2µm,22.0s							
DAWY	**Dawson**	**72.73**	**345**	IAmb	IAmb	23 58 53.9		
	comp=Z,29nm,1.2s							
DAWY				IAMs_20	IAMs_20	00 23 58.6		
	comp=Z,3µm,20.0s							
SEW	**Seward**	**72.79**	**339**	IAMs_20	IAMs_20	00 22 27.5		
	comp=Z,3µm,22.0s							
MENT	**Mesata**	**73.01**	**343**	IAmb	IAmb	23 58 49.8		
	comp=Z,18nm,0.9s							
MENT				IAMs_20	IAMs_20	00 23 30.1		
	comp=Z,2µm,22.0s							
BRLK	**Bradley Lake**	**73.08**	**338**	IAMs_20	IAMs_20	00 22 23.1		
	comp=Z,3µm,20.0s							
HOM	**Homer**	**73.29**	**338**	IAMs_20	IAMs_20	00 22 51.9		
	comp=Z,4µm,21.0s							
SCM	**Sheep Creek Mo**	**73.29**	**341**	IAMs_20	IAMs_20	00 23 35.7		
	comp=Z,3µm,22.0s							
KNK	**Knik Glacier**	**73.36**	**340**	IAMs_20	IAMs_20	00 24 55.7		
	comp=Z,1µm,19.0s							
RC01	**Rabbit Creek A**	**73.57**	**340**	IAMs_20	IAMs_20	00 22 54.3		
	comp=Z,2µm,22.0s							
SML	**Sawmill**	**73.60**	**341**	IAMs_20	IAMs_20	00 23 03.0		
	comp=Z,2µm,22.0s							
DOT	**Dot Lake**	**73.66**	**343**	IAmb	IAmb	23 58 53.4		
	comp=Z,21nm,0.8s							
DOT				IAMs_20	IAMs_20	00 23 40.2		
	comp=Z,3µm,21.0s							
PMR	**Palmer**	**73.72**	**340**		**sP**	**23 58 42.4**	**-0.6**	
PMR				IAmb	IAmb	23 58 53.8		
	comp=Z,33nm,0.9s							
PMR				IAMs_20	IAMs_20	00 23 03.0		
	comp=Z,2µm,22.0s							
CNBA	**Chernabura Isl**	**73.75**	**331**	IAMs_20	IAMs_20	00 23 34.8		
	comp=Z,3µm,20.0s							
EGAK	**Eagle**	**73.76**	**345**	IAmb	IAmb	23 58 54.2		
	comp=Z,24nm,0.8s							
EGAK				IAMs_20	IAMs_20	00 24 26.8		
	comp=Z,2µm,21.0s							
GHO	**Glory Hole Cre**	**73.78**	**340**	IAmb	IAmb	23 58 59.0		
	comp=Z,47nm,1.3s							
GHO				IAMs_20	IAMs_20	00 22 59.6		
	comp=Z,1µm,19.0s							
SCRK	**Sand Creek**	**73.89**	**344**	IAMs_20	IAMs_20	00 23 49.3		
	comp=Z,3µm,22.0s							
RIDG	**Independent Ri**	**73.95**	**343**	IAMs_20	IAMs_20	00 23 59.0		
	comp=Z,2µm,22.0s							
EPYK	**Eagle Plains**	**74.04**	**348**	P	**P**	**23 58 37.2**	**-1.5**	
	baz=148,SNR=15							
EPYK	**Eagle Plains**	**74.04**	**348**	IAmb	IAmb	23 59 01.2		
	comp=Z,43nm,1.1s							
DHY	**Denali Highway**	**74.22**	**342**	IAmb	IAmb	23 59 01.5		
	comp=Z,30nm,1.1s							
DHY				IAMs_20	IAMs_20	00 24 10.0		
	comp=Z,2µm,22.0s							
SDPT	**Sand Point**	**74.47**	**331**	IAMs_20	IAMs_20	00 22 53.5		
	comp=Z,2µm,22.0s							
C36M	**Paulatuk**	**74.68**	**353**	P	**P**	**23 58 42.4**	**0.0**	
	baz=161							
RND	**Reindeer**	**74.92**	**342**	IAMs_20	IAMs_20	00 24 40.7		
	comp=Z,3µm,20.0s							
HDA	**Harding Lake**	**75.07**	**343**	P	**P**	**23 58 47.5**	**+2.8**	
	baz=137							
HDA	**Harding Lake**	**75.07**	**343**	IAmb	IAmb	23 59 32.5		
	comp=Z,41nm,1.6s							
INK	**Inuvik**	**75.10**	**350**	P	**P**	**23 58 45.6**	**+0.8**	
MCK	**McKinley**	**75.18**	**342**	IAmb	IAmb	23 59 02.3		
	comp=Z,34nm,0.9s							
MCK				IAMs_20	IAMs_20	00 25 08.5		
	comp=Z,2µm,19.0s							
IL31		**75.32**	**343**	IAmb	IAmb	23 59 03.0		
	comp=Z,19nm,0.9s							
ILAR	**Eielson Array**	**75.32**	**343**	P	**P**	**23 58 46.4**	**+0.2**	
	comp=Z,5.3nm,0.9s,baz=158,slow=4.8,SNR=37							
TRF	**Thorofare Moun**	**75.41**	**341**	IAmb	IAmb	23 59 14.1		
	comp=Z,23nm,0.9s							
TRF				IAMs_20	IAMs_20	00 24 33.6		
	comp=Z,2µm,21.0s							
WRH	**Wood River Hil**	**75.45**	**343**	IAMs_20	IAMs_20	00 25 15.7		
	comp=Z,2µm,20.0s							
CCB	**Clear Creek Bu**	**75.49**	**343**		**PcP**	**23 58 58.7**	**-1.5**	
PRP	**Porcupine Dome**	**75.49**	**344**	IAmb	IAmb	23 59 04.4		
	comp=Z,37nm,1.0s							
PRP				IAMs_20	IAMs_20	00 25 02.7		
	comp=Z,3µm,21.0s							
BWN	**Browne**	**75.66**	**342**	IAMs_20	IAMs_20	00 25 23.8		
	comp=Z,2µm,20.0s							
FALS	**False Pass**	**75.66**	**330**	IAMs_20	IAMs_20	00 23 12.1		
	comp=Z,3µm,20.0s							
PPLA	**Purkeypile**	**75.66**	**340**	IAMs_20	IAMs_20	00 23 54.3		
	comp=Z,2µm,22.0s							
POKR	**Poker Plat Res**	**75.73**	**343**	P	**P**	**23 58 52.7**	**+4.1**	
	baz=137							
MIDW	**Midway**	**75.81**	**300**	IAMs_20	IAMs_20	00 22 08.4		
	comp=Z,1µm,18.0s							
NEA	**Nenana**	**75.82**	**342**	IAMs_20	IAMs_20	00 26 24.8		
	comp=Z,1µm,20.0s							
MXZ	**Matakaoa Point**	**75.94**	**233**	IAMs_20	IAMs_20	00 23 31.1		
	comp=Z,3µm,22.0s							
FYU	**Fort Yukon**	**76.22**	**345**	IAMs_20	IAMs_20	00 25 39.7		
	comp=Z,3µm,21.0s							
AKUT	**Kutan**	**76.51**	**328**	IAMs_20	IAMs_20	00 24 31.8		
	comp=Z,3µm,22.0s							
UNV	**Unalaska Valle**	**76.77**	**328**	IAMs_20	IAMs_20	00 25 28.5		
	comp=Z,3µm,20.0s							
URZ	**Urewera**	**76.95**	**232**	IAMs_20	IAMs_20	00 24 12.6		
	comp=Z,2µm,22.0s							
TTA	**Tatalina**	**77.02**	**339**		**PcP**	**23 59 06.6**	**-0.3**	
A36M	**Sachs Harbour**	**77.31**	**354**	P	**P**	**23 58 59.8**	**+2.5**	
	baz=160							
BKZ	**Black Stump Fm**	**77.50**	**231**	IAMs_20	IAMs_20	00 24 17.2		
	comp=Z,3µm,22.0s							
NIKH	**Nikolski High**	**77.65**	**327**	IAMs_20	IAMs_20	00 24 06.0		
	comp=Z,3µm,21.0s							
HIZ	**Hauiti**	**78.73**	**232**	IAMs_20	IAMs_20	00 25 08.8		
	comp=Z,2µm,22.0s							
TOLK	**Toolik Lake Re**	**78.88**	**345**	P	**P**	**23 59 05.0**	**-1.1**	
	baz=135,SNR=5.8							
TOLK	**Toolik Lake Re**	**78.88**	**345**	IAMs_20	IAMs_20	00 26 30.0		
	comp=Z,2µm,22.0s							
RES	**Resolute Bay**	**79.30**	**3**	IAMs_20	IAMs_20	00 32 11.5		
	comp=Z,2µm,21.0s							
OUZ	**Omahuta**	**79.59**	**235**	IAMs_20	IAMs_20	00 25 23.8		
	comp=Z,2µm,21.0s							
TUWZ	**Tuamarina**	**79.60**	**229**	P	P	23 59 15.8	+5.2	
NRS	**Narsarsuaq**	**80.22**	**25**	IAMs_20	IAMs_20	00 34 05.6		
	comp=Z,3µm,20.0s							
QRZ	**Quartz Range**	**80.64**	**230**	IAMs_20	IAMs_20	00 30 07.1		
	comp=Z,1µm,19.0s							
SFJD	**Kangerlussuaq**	**81.28**	**19**	IAMs_20	IAMs_20	00 35 15.5		
	comp=Z,2µm,20.0s							
ANM	**Nome**	**81.38**	**338**	IAMs_20	IAMs_20	00 27 36.6		
	comp=Z,3µm,22.0s							
RDOG	**Red Dog Mine**	**82.34**	**341**	IAMs_20	IAMs_20	00 29 58.9		
	comp=Z,1µm,21.0s							
ILULI	**Ilulissat**	**82.38**	**17**	IAMs_20	IAMs_20	00 35 16.6		
	comp=Z,2µm,20.0s							
CMLA	**Cha da Macela**	**85.21**	**52**	IAMs_20	IAMs_20	00 29 36.5		
	comp=Z,2µm,21.0s							
QSPA	**South Pole Qui**	**85.60**	**180**	P	**P**	**23 59 39.9**	**-1.6**	
DZM	**Mont Dzumac**	**86.07**	**248**	*e*S	**S**	**00 10 17.3**	**-1.7**	
	comp=Z,475nm,26.8s							
DZM				*e*SS	**SS**	**00 15 57.4**	**0.0**	
	comp=Z,577nm,27.4s							
DZM	**Mont Dzumac**	**86.07**	**248**	*e*LR	LR	00 26 56.0		
	comp=Z,3µm,30.2s							
VNDA	**Vanda**	**86.14**	**193**	P	**P**	**23 59 42.8**	**-1.1**	
	comp=Z,2.1nm,1.1s,baz=133,slow=3.6,SNR=5.5							
VNDA				LR	LR	00 30 59.7		
	comp=Z,987nm,19.0s,baz=94,slow=31							
VNDA	**Vanda**	**86.14**	**193**	P	**P**	**23 59 46.1**	**+2.2**	
VNDA				IAmb	IAmb	00 00 11.0		
	comp=Z,28nm,1.4s							
SMY	**Shemya**	**87.40**	**323**	IAMs_20	IAMs_20	00 29 50.2		
	comp=Z,3µm,22.0s							
SUMG	**Summit**	**87.64**	**16**	IAmb	IAmb	00 00 04.8		
	comp=Z,11nm,0.9s							
H11N3	**WAKE ISLAND Hy**	**88.73**	**290**	T	T	01 38 34.6		
	baz=96,slow=74,SNR=1290							
H11N2	**WAKE ISLAND Hy**	**88.74**	**290**	T	T	01 38 38.7		
	baz=96,slow=74,SNR=1061							
H11N1	**WAKE ISLAND Hy**	**88.75**	**290**	T	T	01 38 39.2		
	baz=96,slow=74,SNR=440							
H11S2	**WAKE ISLAND Hy**	**88.81**	**289**	T	T	01 38 49.6		
	baz=95,slow=75,SNR=664							
H11S1	**WAKE ISLAND Hy**	**88.82**	**289**	T	T	01 38 48.0		
	baz=95,slow=75,SNR=602							
H11S3	**WAKE ISLAND Hy**	**88.83**	**289**	T	T	01 38 50.9		
	baz=95,slow=75,SNR=407							
WAKE	**Wake Island**	**88.93**	**289**	IAMs_20	IAMs_20	00 30 15.8		
	comp=Z,1µm,20.0s							
PMOZ	**Porto Moniz, M**	**91.40**	**57**	*e*LQ	LQ	00 27 30.9		
PMOZ				*e*LR	LR	00 29 53.7		
	comp=Z,997nm,24.0s							
PET	**Petropavlovsk**	**96.74**	**323**	IAMs_20	IAMs_20	00 36 29.3		
	comp=Z,2µm,22.0s							
PEA0B	**Petropavlovsk-**	**97.31**	**323**	IAMs_20	IAMs_20	00 36 17.4		
	comp=Z,2µm,20.0s							
PETK	**Petropavlovsk-**	**97.31**	**323**	LR	LR	00 36 38.7		
	comp=Z,2µm,21.0s,baz=74,slow=30							
ARMA	**Armidale**	**98.36**	**239**	IAMs_20	IAMs_20	00 34 17.0		
	comp=Z,929nm,20.0s							
PFVI	**Vila Bisbo**	**98.40**	**53**	IAMs_20	IAMs_20	00 37 44.7		
	comp=Z,2µm,21.0s							
COI	**Coimbra**	**98.67**	**50**	IAMs_20	IAMs_20	00 36 37.5		
	comp=Z,2µm,22.0s							
PGAV	**Gavieira, Arco**	**98.72**	**48**	*e*SS	SS	00 19 06.0	+7.6	
PGAV				*e*LQ	LQ	00 28 48.1		
PGAV	

CLL					*e*SSS	SSS	00 26 00.0			
CLL					*e*		00 27 00.0			
CLL	**Collm**	**111.33**	**36**		IAMs_20	IAMs_20	00 47 27.4			
	comp=Z,1μm,22.0s									
NKC	**Novy Kostel**	**111.37**	**37**	*e*PS		PS	00 15 51.1	+1.3		
NKC				AMS		AMS	00 47 50.0			
	comp=Z,1μm,20.7s									
TAM	**Tamanrasset**	**111.57**	**67**		IAMs_20	IAMs_20	00 46 30.4			
	comp=Z,1μm,22.0s									
SALO	**Salr**	**111.57**	**42**		IAMs_20	IAMs_20	00 51 05.4			
	comp=Z,1μm,21.0s									
VLC	**Villacollemand**	**111.88**	**44**		IAMs_20	IAMs_20	00 45 40.8			
	comp=Z,888nm,22.0s									
CTI	**Castel Tesino**	**112.20**	**42**		IAMs_20	IAMs_20	00 50 02.9			
	comp=Z,1μm,20.0s									
ZCCA	**Zocca**	**112.24**	**44**		IAMs_20	IAMs_20	00 48 10.1			
	comp=Z,1μm,21.0s									
VSL	**Villasalto**	**112.32**	**49**		IAMs_20	IAMs_20	00 43 45.7			
	comp=Z,1μm,22.0s									
KHC	**Kasperske Hory**	**112.43**	**38**	*e*PP		**PP**	**00 06 24.9**	**-0.3**		
KHC				*e*PS		**PS**	**00 15 58.6**	**-1.1**		
KHC				AMS		AMS	00 53 50.0			
	comp=Z,900nm,17.0s									
GEC2	**GERESS Array S**	**112.61**	**38**		IAMs_20	IAMs_20	00 47 13.6			
	comp=Z,1μm,22.0s									
PRU	**Pruhonice**	**112.71**	**37**	*e*PS		PS	00 15 54.8	-7.3		
PRU				AMS		AMS	00 58 10.0			
	comp=Z,700nm,17.9s									
GOPC	**GO Pecny, Ondr**	**112.89**	**37**		AMS	AMS	00 58 20.0			
	comp=Z,600nm,15.6s									
KEST	**Kesra**	**113.10**	**53**		IAMs_20	IAMs_20	00 50 18.8			
	comp=Z,900nm,21.0s									
MAJO	**Matsushiro**	**113.25**	**308**		IAMs_20	IAMs_20	00 42 48.1			
	comp=Z,2μm,22.0s									
CHVC	**Chvalec**	**113.39**	**36**		AMS	AMS	00 52 00.0			
	comp=Z,1μm,19.9s									
UPC	**Upice**	**113.39**	**36**	*e*PS		PS	00 16 04.8	-3.5		
UPC				AMS		AMS	00 52 00.0			
	comp=Z,900nm,18.4s									
OSTC	**Ostas**	**113.49**	**36**		AMS	AMS	00 52 10.0			
	comp=Z,1μm,20.3s									
TREC	**Trest**	**113.54**	**38**	*e*PS		PS	00 16 13.5	+3.7		
TREC				AMS		AMS	00 53 00.0			
	comp=Z,900nm,18.8s									
DPC	**Dobruska-Polom**	**113.64**	**36**		AMS	AMS	00 50 00.0			
	comp=Z,1μm,19.4s									
TRI	**Trieste**	**113.71**	**42**		IAMs_20	IAMs_20	00 46 14.9			
	comp=Z,1μm,22.0s									
KRLC	**Kraliky**	**114.02**	**36**		AMS	AMS	00 51 30.0			
	comp=Z,900nm,21.9s									
INU	**Inuyama**	**114.45**	**307**		IAMs_20	IAMs_20	00 44 02.7			
	comp=Z,955nm,22.0s									
MORC	**Moravsky Berou**	**114.59**	**36**		IAMs_20	IAMs_20	01 05 05.7			
	comp=Z,2μm,19.0s									
OKC	**Ostrava-Krasne**	**114.92**	**36**		AMS	AMS	00 49 10.0			
	comp=Z,700nm,21.2s									
USA0B	**Ussuriysk Arra**	**115.69**	**317**		IAMs_20	IAMs_20	00 43 23.2			
	comp=Z,888nm,22.0s									
WRAB	**Tennant Creek**	**115.95**	**245**		IAMs_20	IAMs_20	00 48 04.4			
	comp=Z,916nm,21.0s									
MDJ	**Mudanjiang**	**117.14**	**319**		IAMs_20	IAMs_20	00 47 31.3			
	comp=Z,1μm,21.0s									
PDG	**Podgorica**	**118.56**	**43**		IAMs_20	IAMs_20	00 54 53.6			
	comp=Z,1μm,22.0s									
AKASG	**Malin Array Be**	**120.65**	**31**		PKP	**PKPdf**	**00 05 52.8**	**-2.3**		
	comp=Z,0.5nm,0.6s,baz=276,slow=2.8,SNR=2.5									
FNA	**Florina**	**120.66**	**45**		IAMs_20	IAMs_20	01 06 32.4			
	comp=Z,1μm,19.0s									
MTN	**Manton Dam**	**120.69**	**252**		IAMs_20	IAMs_20	00 56 13.7			
	comp=Z,662nm,19.0s									
HIA	**Hailar**	**120.92**	**327**		IAMs_20	IAMs_20	00 49 48.3			
	comp=Z,2μm,22.0s									
VTS	**Vitosha**	**121.18**	**42**		IAMs_20	IAMs_20	01 04 18.6			
	comp=Z,1μm,18.0s									
OBN	**Obninsk**	**121.21**	**24**		IAMs_20	IAMs_20	00 59 24.9			
	comp=Z,1μm,20.0s									
LIT	**Litokhoron**	**121.71**	**45**		IAMs_20	IAMs_20	01 08 04.0			
	comp=Z,1μm,21.0s									
INCN	**Inchon**	**121.86**	**312**		IAMs_20	IAMs_20	00 47 05.6			
	comp=Z,2μm,22.0s									
KNRA	**Kununurra**	**122.22**	**248**		IAMs_20	IAMs_20	00 49 41.9			
	comp=Z,789nm,21.0s									
JOW	**Kunigami**	**123.68**	**299**		IAMs_20	IAMs_20	01 02 07.3			
	comp=Z,716nm,22.0s									
ALN	**Alexandroupoli**	**123.83**	**43**		IAMs_20	IAMs_20	01 01 27.8			
	comp=Z,700nm,22.0s									
FITZ	**Fitzroy Crossi**	**124.36**	**245**		IAMs_20	IAMs_20	00 54 02.4			
	comp=Z,790nm,21.0s									
NWAO	**Narrogin (SRO)**	**124.68**	**224**		IAMs_20	IAMs_20	00 48 28.4			
	comp=Z,846nm,20.0s									
IDI	**Anoyia**	**125.35**	**49**		IAMs_20	IAMs_20	01 07 21.6			
	comp=Z,1μm,19.0s									
ARU	**Arti**	**126.73**	**11**		IAMs_20	IAMs_20	01 00 28.6			
	comp=Z,1μm,21.0s									
TLY	**Talaya**	**126.85**	**337**		IAMs_20	IAMs_20	00 58 20.8			
	comp=Z,1μm,20.0s									
MORW	**Morawa**	**127.64**	**228**		IAMs_20	IAMs_20	00 51 41.3			
	comp=Z,1μm,20.0s									
BJT	**Baijiatuan**	**128.08**	**319**		IAMs_20	IAMs_20	00 55 11.8			
	comp=Z,1μm,20.0s									
PSAA3	**Pilbara Seismi**	**128.16**	**238**		IAMs_20	IAMs_20	00 53 50.3			
	comp=Z,754nm,21.0s									
PSAA1	**Pilbara Seismi**	**128.18**	**238**		IAMs_20	IAMs_20	00 53 44.8			
	comp=Z,628nm,19.0s									
PSAC1	**Pilbara Seismi**	**128.22**	**238**		IAMs_20	IAMs_20	00 53 09.9			
	comp=Z,942nm,20.0s									
SSE	**Sheshan**	**128.37**	**307**		IAMs_20	IAMs_20	00 51 14.2			
	comp=Z,852nm,22.0s									
MBWA	**Marble Bar**	**128.44**	**239**		IAMs_20	IAMs_20	00 54 01.7			
	comp=Z,923nm,20.0s									
SONM	**Songino Array**	**128.61**	**332**		PKP	**PKPdf**	**00 06 10.7**	**0.0**		
	comp=Z,0.8nm,0.8s,baz=79,slow=0.5,SNR=4.3									
BR131	**Keskin Array S**	**129.43**	**40**		PKP	**PKPdf**	**00 06 12.2**	**-0.3**		
BRTR	**Keskin Array B**	**129.43**	**40**		PKP	**PKPdf**	**00 06 12.1**	**-0.5**		
	comp=Z,1.6nm,0.9s,baz=245,slow=1.5,SNR=9.6									
NJ2	**Nanjing**	**129.84**	**309**	*e*PKP		**PKPdf**	**00 06 13.0**	**-0.3**		
NJ2				LR		LR				
	comp=Z,510nm,24.2s									
NJ2				LR		LR				
	comp=Z,640nm,21.8s									
NJ2				LR		LR				
	comp=Z,1μm,23.2s									
ZAA0	**Zalesovo Array**	**129.87**	**352**		IAMs_20	IAMs_20	01 00 30.2			
	comp=Z,992nm,22.0s									
ZALV	**Zalesovo Beam**	**129.87**	**352**		PKP	**PKPdf**	**00 06 11.6**	**-1.2**		
	comp=Z,0.6nm,0.7s,baz=354,slow=1.5,SNR=4.2									
YHNB	**Yeheng**	**130.24**	**299**		IAMs_20	IAMs_20	00 59 55.2			
	comp=Z,594nm,20.0s									
HHC	**Hu-ho-hao-te**	**130.51**	**323**	*e*PKP		**PKiKP**	**00 06 20.3**	**+4.9**		
HHC				PP		PP	00 08 37.8	+9.4		
HHC				SS		SS	00 25 57.3	+1.5		
HHC				AMB		AMB				
	comp=Z,59nm,7.2s									
HHC				LR		LR				
	comp=Z,260nm,22.4s									
HHC				LR		LR				
	comp=Z,320nm,20.2s									
HHC				LR		LR				
	comp=Z,530nm,20.3s									
CSS	**Mathiatis**	**131.71**	**46**		IAMs_20	IAMs_20	01 11 00.7			
	comp=Z,1μm,21.0s									
KIV	**Kislovodsk**	**131.96**	**30**		IAMs_20	IAMs_20	01 04 40.9			
	comp=Z,664nm,21.0s									
KBZ	**Khabaz**	**132.23**	**30**		PKP	**PKPdf**	**00 06 16.6**	**-0.8**		
	comp=Z,1.6nm,0.8s,baz=0.0,slow=3.0,SNR=1.8									
GIRL	**Giralia**	**132.33**	**234**		IAMs_20	IAMs_20	00 56 31.3			
	comp=Z,1μm,20.0s									
SZP	**Santa**	**132.70**	**290**		IAMs_20	IAMs_20	00 51 38.3			
	comp=Z,720nm,21.0s									
GAZ	**Gaziantep**	**133.19**	**41**		IAMs_20	IAMs_20	01 09 13.3			
	comp=Z,1μm,19.0s									
AKH	**Akhalkalaki**	**134.19**	**32**		IAMs_20	IAMs_20	01 11 22.1			
	comp=Z,1μm,21.0s									
XAN	**Xi'an**	**136.19**	**317**		PKP	**PKiKP**	**00 06 27.0**	**0.0**		
XAN				LR		LR				
	comp=Z,440nm,20.6s									
XAN				LR		LR				
	comp=Z,850nm,21.6s									
XAN				LR		LR				
	comp=Z,1μm,22.1s									
XAN	**Xi'an**	**136.19**	**317**		IAMs_20	IAMs_20	00 57 33.0			
	comp=Z,1μm,21.0s									
MKAR	**Makanchi Array**	**137.21**	**352**		PKP	**PKPdf**	**00 06 26.0**	**-0.8**		
	comp=Z,1.2nm,0.9s,baz=31,slow=2.8,SNR=6.9									
MAKZ	**Makanchi**	**137.24**	**352**		IAMs_20	IAMs_20	01 06 32.2			
	comp=Z,1μm,20.0s									
HKPS	**Hong Kong Po S**	**137.29**	**298**		IAMs_20	IAMs_20	00 58 59.0			
	comp=Z,664nm,20.0s									
ENH	**Enshi**	**137.80**	**312**		IAMs_20	IAMs_20	00 57 17.2			
	comp=Z,938nm,22.0s									
LZH	**Lanzhou**	**138.21**	**323**	*e*PKP		**PKPdf**	**00 06 29.5**	**+0.3**		
LZH				SKKS			00 16 11.3			
LZH				SS		**SS**	**00 27 32.6**	**+4.0**		
LZH				LR		LR				
	comp=Z,760nm,17.3s									
LZH				LR		LR				
	comp=Z,1μm,17.3s									
LZH				LR		LR				
	comp=Z,1μm,20.1s									
WMQ	**Urumqi**	**138.96**	**345**	*e*PKP		**PKiKP**	**00 06 31.9**	**-0.5**		
WMQ				LR		LR				
	comp=Z,810nm,21.9s									
WMQ				LR		LR				
	comp=Z,600nm,18.7s									
WMQ				LR		LR				
	comp=Z,2μm,22.7s									
CD2	**Chengdu**	**141.55**	**317**	PKP		**PKPdf**	**00 06 34.8**	**-0.4**		
CD2				PP		**PP**	**00 09 38.4**	**+0.4**		
CD2				SS		SS	00 28 16.3	+8.2		
CD2				AMB		AMB				
	comp=Z,240nm,7.8s									
CD2				LR		LR				
	comp=Z,1μm,27.5s									
CD2				LR		LR				
	comp=Z,1μm,22.1s									
CD2				LR		LR				
	comp=Z,1μm,24.5s									
GYA	**Guiyang**	**141.85**	**308**	*e*PKP		**PKPdf**	**00 06 33.3**	**-2.7**		
GYA				SKKS			00 16 30.3			
GYA				SS		**SS**	**00 28 15.5**	**+3.1**		
GYA				AMB		AMB				
	comp=Z,80nm,7.8s									
GYA				LR		LR				
	comp=Z,410nm,20.7s									
GYA				LR		LR				
	comp=Z,520nm,20.0s									
GYA				LR		LR				
	comp=Z,770nm,19.7s									
QIZ	**Qiongzhong**	**142.13**	**295**	PKP		**PKPdf**	**00 06 35.9**	**-0.6**		
QIZ				PP		**PP**	**00 09 42.1**	**-0.2**		
QIZ				SS		SS	00 28 18.9	+2.6		
QIZ				LR		LR				
	comp=Z,320nm,22.6s									
QIZ				LR		LR				
	comp=Z,190nm,23.7s									
QIZ				LR		LR				
	comp=Z,410nm,20.7s									
QIZ	**Qiongzhong**	**142.13**	**295**		IAMs_20	IAMs_20	01 00 03.4			
	comp=Z,615nm,22.0s									
GEYT	**Alibeck**	**143.67**	**21**	PKP		**PKPdf**	**00 06 37.7**	**-1.1**		
	comp=Z,1.6nm,0.7s,baz=52,slow=2.4,SNR=6.1									
CISI	**Cisompet, Garu**	**144.19**	**251**		IAMs_20	IAMs_20	01 06 18.4			
	comp=Z,558nm,19.0s									
KSH	**Kashi**	**145.05**	**357**	PKPbc		**PKPdf**	**00 06 42.6**	**+1.4**		
KSH				PP		PP	00 10 07.0	+9.0		
KSH				PKS		**PKSdf**	**00 10 15.4**	**-1.5**		
KSH				SKKS			00 16 56.8			
KSH				SS		**SS**	**00 28 54.6**	**+8.1**		
KSH				AMB		AMB				
	comp=Z,380nm,4.2s									
KSH				LR		LR				
	comp=Z,110nm,9.5s									
KSH				LR		LR				
	comp=Z,95nm,7.1s									
KSH				LR		LR				
	comp=Z,400nm,15.3s									
DLV	**T Lat**	**145.07**	**284**		IAMs_20	IAMs_20	00 58 21.8			
	comp=Z,617nm,22.0s									
GAR	**Garm**	**145.45**	**5**			**PKPab**	**00 06 42.6**	**+0.6**		
KMI	**Kunming**	**145.57**	**310**	PKPbc		**PKPdf**	**00 06 42.6**	**-0.1**		
KMI				pPKP		PKPab	00 06 44.9	+1.8		
KMI				sPKP			00 06 46.3			
KMI				LR		LR				
	comp=Z,500nm,21.9s									
KMI				LR		LR				
	comp=Z,610nm,24.3s									
KMI				LR		LR				
	comp=Z,990nm,23.5s									
KMI	**Kunming**	**145.57**	**310**		IAMs_20	IAMs_20	01 01 15.6			
	comp=Z,693nm,22.0s									
CHGR	**Chuyangaron**	**145.67**	**7**			**PKPab**	**00 06 43.8**	**+1.0**		
SLVN	**Son La**	**146.46**	**303**		IAMs_20	IAMs_20	01 01 49.2			
	comp=Z,692nm,22.0s									
RAYN	**Ar Rayn**	**146.62**	**53**			**PKPdf**	**00 06 44.0**	**-0.2**		
KBL	**Kabul**	**149.71**	**8**		IAMs_20	IAMs_20	01 18 39.7			
	comp=Z,733nm,21.0s									
MYKOM	**Kota Tinggi**	**150.06**	**266**		IAMs_20	IAMs_20	01 15 24.7			
	comp=Z,460nm,20.0s									
LSA	**Lhasa**	**150.09**	**329**		IAMs_20	IAMs_20	01 11 28.3			
	comp=Z,844nm,21.0s									
NIL	**Nilore**	**150.94**	**1**		IAMs_20	IAMs_20	01 17 58.3			
	comp=Z,640nm,20.0s									
CHTO	**Chiang Mai**	**151.75**	**302**		IAMs_20	IAMs_20	01 29 02.4			
	comp=Z,789nm,22.0s									
CMAR	**Chiang Mai Arr**	**151.91**	**302**	PKP		**PKPdf**	**00 06 51.9**	**-0.9**		
	comp=Z,0.5nm,0.3s,baz=98,slow=1.8,SNR=1.3									
CMAR				PKPbc		**sPKPdf**	**00 06 59.2**	**+0.2**		
	comp=Z,1.2nm,0.4s,baz=27,slow=1.5,SNR=4.7									
BKNI	**Bangkinang**	**152.66**	**262**		IAMs_20	IAMs_20	01 31 12.5			
	comp=Z,890nm,18.0s									
IPM	**Ipoh**	**153.04**	**271**		IAMs_20	IAMs_20	01 30 38.5			
	comp=Z,818nm,21.0s									
KULM	**Kulim**	**153.41**	**273**		IAMs_20	IAMs_20	01 23 01.5			
	comp=Z,804nm,22.0s									

*MDD **19** 00:09:26.6±1.7,32.˚30N×5.˚81W,h0km,mb4.3/17,Error ellipse: s-maj=15.4km s-min=13.5km az=12.0,PRXIMO*
*CNRM **19** 00:09:27.8±0.3,32.˚39N×5.˚62W,h0km, Error ellipse: s-maj=3.4km s-min=2.6km az=125.0*
*INMG **19** 00:09:28.2±1.4,32.˚36N×5.˚50W, h23km,s9km,ML2.7, Error ellipse: s-maj=8.3km s-min=4.6km az=175.0*
*IGIL **19** 00:09:29.3,32.˚40N×5.˚48W,h22km*

ISC 19 00:09:26.4±0.7,32.˚38N±0.˚02×5.˚72W±0.˚02,h10km,n93,
α2s10/159,Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CZD	**Col de Zad**	**0.87**	**41**	P	**Pg**	**00 09 42.1**	**-1.2**
CZD				S	**Sg**	**00 09 55.2**	**+0.5**
GOLM	**Goulmima**	**0.94**	**135**	P	**Pg**	**00 09 44.8**	**+0.3**
GOLM				S	**Sn**	**00 09 59.7**	**+0.4**
MD31	**MD31**	**0.95**	**59**	P	**Pg**	**00 09 42.7**	**-2.1**
MD31				S	**Sg**	**00 09 55.8**	**-1.4**
MDT	**Midelt** SNR=791	**1.04**	**65**	P	**Pb**	**00 09 44.6**	**-2.0**
MDT				S	**Sg**	**00 09 58.7**	**-1.3**
IFR	**Ifrane**	**1.25**	**24**	*e*P	**Pn**	**00 09 50.1**	**0.0**
IFR				*e*S	**Sb**	**00 10 08.5**	**+2.2**
ARF	**Arif**	**1.59**	**126**	P	**Pn**	**00 09 55.1**	**+0.4**
ARF				S	**Sg**	**00 10 18.1**	**+0.6**
TZRR	**Tazzarine**	**1.59**	**175**	P	**Pg**	**00 09 57.4**	**+0.4**
TZRR				S	**Sg**	**00 10 19.8**	**+2.2**
AVE	**Averroes** SNR=63	**1.69**	**303**	P	**Pg**	**00 09 59.7**	**+0.8**
AVE	**Averroes**	**1.69**	**303**	*e*P	**Pg**	**00 09 59.9**	**+1.0**
AVE				*e*S	**Sg**	**00 10 26.1**	**+5.2**
OUZM	**OUZ**	**1.71**	**211**	P	**Pg**	**00 10 00.1**	**+0.9**
OUZM				S	**Sg**	**00 10 25.5**	**+4.1**
SICH	**Sidi Chahed**	**1.76**	**11**	P	**Pb**	**00 09 59.4**	**+0.6**
SICH				S	**Sb**	**00 10 24.7**	**+3.7**
SRHM	**Skhour des Reh**	**1.84**	**274**	P	**Pg**	**00 10 02.0**	**+0.3**
SRHM				S	**Sg**	**00 10 29.6**	**+4.0**
RTC	**Rabat Centre**	**1.87**	**330**	S	**Sg**	**00 10 28.6**	**+2.1**
OUK	**Oukaimeden**	**2.16**	**238**	P	**Pg**	**00 10 06.2**	**-1.7**
ZGR	**Zagora**	**2.25**	**178**	P	**Pb**	**00 10 06.4**	**-0.8**
RSA	**Sarsar**	**2.50**	**358**	P	**Pn**	**00 10 10.0**	**+2.8**
AKLM	**AKL**	**2.64**	**36**	P	**Pn**	**00 10 10.3**	**+1.1**
TTIG	**Tnine Tigouga,**	**2.95**	**233**	P	**Pb**	**00 10 17.5**	**-1.6**
PVLZ	**Peæn de**	**3.03**	**23**	P	**Pn**	**00 10 18.6**	**+4.2**
PVLZ				S	**Sn**	**00 10 53.6**	**+2.8**
PVLZ	**Peæn de**	**3.03**	**23**	*e*P	**Pn**	**00 10 18.6**	**+4.2**
PVLZ				*e*S	**Sn**	**00 10 53.6**	**+2.8**
TDRA	**Tendrara**	**3.19**	**77**	P	**Pn**	**00 10 17.3**	**+0.6**
PALE	**Palemas**	**3.20**	**27**	P	**Pn**	**00 10 18.3**	**+1.5**
PALE				S	**Sn**	**00 10 58.6**	**+3.5**
SMIR	**Smir Dam**	**3.31**	**5**	P	**Pn**	**00 10 19.8**	**+1.5**
SMIR				S	**Sn**	**00 11 00.8**	**+3.1**
EAH	**EAH**	**3.36**	**259**	P	**Pb**	**00 10 21.6**	**-4.5**
EAH				S	**Sb**	**00 11 01.6**	**-5.4**
CEU	**Ceuta**	**3.53**	**5**	P	**Pn**	**00 10 25.2**	**+4.0**
CEU				S	**Sn**	**00 11 05.9**	**+2.9**
CEU	**Ceuta**	**3.53**	**5**	*e*P	**Pn**	**00 10 25.2**	**+4.0**
CEU				*e*S	**Sn**	**00 11 05.9**	**+2.9**
GOG	**Mont Gurugu**	**3.64**	**38**	P	**Pn**	**00 10 22.7**	**-0.2**
EJIF	**Jimena Fronter** 72nm,0.1s,SNR=7.9	**4.07**	**3**	P	**Pn**	**00 10 31.0**	**+2.3**
EJIF				S	**Sn**	**00 11 15.0**	**-1.5**
EMIJ	**Mijas** 192nm,0.3s,SNR=7.9 1.4nm,0.2s,SNR=10	**4.25**	**10**	P	**Pn**	**00 10 31.6**	**+0.3**
EMIJ				S	**Sn**	**00 11 21.2**	**+0.2**
ESPR	**Espera** 3.7nm,0.3s 1.1nm,0.2s,SNR=5.1	**4.48**	**359**	P	**Pn**	**00 10 36.6**	**+2.2**
ESPR				S	**Sn**	**00 11 28.4**	**+1.8**
EMAL	**Malaga-Limoner** 2.2nm,0.2s	**4.50**	**13**	*e*P	**Pn**	**00 10 35.6**	**+1.0**
EMAL				*e*S	**Sn**	**00 11 25.7**	**-1.5**
ELGU	**Los Guajares,** 2.6nm,0.2s,SNR=7.9	**4.80**	**21**	P	**Pn**	**00 10 39.2**	**+0.3**
ELGU				S	**Sn**	**00 11 35.2**	**+0.5**
EGOR	**Sierra Gorda,** 5.3nm,0.2s,SNR=7.9 1.5nm,0.2s,SNR=7.9	**4.91**	**15**	P	**Pn**	**00 10 41.8**	**+1.4**
EGOR				S	**Sn**	**00 11 40.2**	**+3.0**
EBER	**Berja** 5.3nm,0.5s,SNR=7.9 2.0nm,0.3s,SNR=5.0	**5.08**	**27**	P	**Pn**	**00 10 45.5**	**+2.7**
EBER				S	**Sn**	**00 11 41.5**	**-0.1**
EQUE	**Quentar** 4.1nm,0.4s 1.5nm,0.2s,SNR=7.9	**5.17**	**21**	P	**Pn**	**00 10 46.6**	**+2.6**
EQUE				S	**Sn**	**00 11 44.5**	**+0.7**
PBDV	**Barranco-do-Ve** 0.8nm,0.4s,SNR=7.9	**5.18**	**340**	P	**Pn**	**00 10 44.5**	**+0.4**
PBDV				S	**Sn**	**00 11 42.4**	**-1.6**
PBDV	**Barranco-do-Ve** 4.2nm,0.4s	**5.18**	**340**	*e*Pn	**Pn**	**00 10 44.5**	**+0.4**
PBDV				*e*Sn	**Sn**	**00 11 42.4**	**-1.6**
PBDV				A	A	00 11 48.7	
PVAQ	**Vaqueiros** 4.2nm,0.4s	**5.28**	**342**	P	**Pn**	**00 10 45.5**	**+0.2**
PVAQ				S	**Sn**	**00 11 44.9**	**-1.3**
PVAQ	**Vaqueiros** 5.7nm,0.2s	**5.28**	**342**	*e*Pn	**Pn**	**00 10 45.5**	**+0.2**
PVAQ				*e*Sn	**Sn**	**00 11 44.9**	**-1.3**
PVAQ				A	A	00 11 48.5	
EGRO	**El Granado** 5.7nm,0.2s 2.9nm,0.1s,SNR=28	**5.35**	**345**	P	**Pn**	**00 10 46.5**	**+0.2**
EGRO				S	**Sn**	**00 11 45.4**	**-2.5**
PFVI	**Vila Bisbo** 6.5nm,0.2s,SNR=4.6 7.7nm,0.1s,SNR=22	**5.39**	**333**	P	**Pn**	**00 10 47.6**	**+0.7**
PFVI				S	**Sn**	**00 11 47.2**	**-1.8**
PFVI	**Vila Bisbo** 0.4nm,0.2s,SNR=5.5	**5.39**	**333**	*e*Pn	**Pn**	**00 10 47.6**	**+0.7**
PFVI				*e*Sn	**Sn**	**00 11 48.1**	**-0.9**
PFVI				A	A	00 11 57.4	
EMIN	**Mina Concepcio** 4.6nm,0.3s 1.6nm,0.1s,SNR=20	**5.44**	**352**	P	**Pn**	**00 10 48.0**	**+0.5**
EMIN				S	**Sn**	**00 11 48.2**	**-2.0**
MORF	**Marmelete** 1.6nm,0.1s,SNR=7.4	**5.48**	**335**	*e*P	**Pn**	**00 10 48.6**	**+0.5**
MORF	**Marmelete**	**5.48**	**335**	P	**Pn**	**00 10 49.0**	**+0.9**
MORF				S	**Sn**	**00 11 49.6**	**-1.6**
MORF	**Marmelete** 10.0nm,0.2s	**5.48**	**335**	*e*Pn	**Pn**	**00 10 49.0**	**+0.9**
MORF				*e*Sn	**Sn**	**00 11 49.6**	**-1.6**
MORF				A	A	00 11 56.0	
PCVE	**Castro Verde** 10.0nm,0.2s	**5.58**	**341**	P	**Pn**	**00 10 51.1**	**+1.6**
PCVE				S	**Sn**	**00 11 52.3**	**-1.3**
PCVE	**Castro Verde** 5.7nm,0.4s	**5.58**	**341**	*e*Pn	**Pn**	**00 10 51.1**	**+1.6**
PCVE				*e*Sn	**Sn**	**00 11 52.3**	**-1.3**
PCVE				A	A	00 11 55.9	
ECAB	**El Cabril** 5.7nm,0.4s 1.4nm,0.3s,SNR=15	**5.69**	**2**	P	**Pn**	**00 10 51.6**	**+0.5**
ECAB				S	**Sn**	**00 11 54.0**	**-2.5**
PTEO	**Sao Teotonio** 3.7nm,0.3s	**5.72**	**335**	P	**Pn**	**00 10 52.7**	**+1.4**
PTEO				S	**Sn**	**00 11 55.5**	**-1.5**
PTEO	**Sao Teotonio** 2.0nm,0.3s	**5.72**	**335**	*e*Pn	**Pn**	**00 10 52.7**	**+1.4**
PTEO				*e*Sn	**Sn**	**00 11 55.5**	**-1.5**
PTEO				A	A	00 12 04.5	
MESJ	**Messejana** 4.0nm,0.3s	**5.82**	**340**	*e*P	**Pn**	**00 10 53.0**	**+0.2**
MESJ	**Messejana**	**5.82**	**340**	P	**Pn**	**00 10 53.6**	**+0.8**
MESJ			

MTE				S		Sn	00 12 53.9	-2.9
	1.6nm,0.5s							
MTE	**Manteigas**	**8.14**	**350**	*e*Pn		**Pn**	**00 11 25.1**	**+0.4**
MTE				*e*Sn		**Sn**	**00 12 53.9**	**-2.9**
MTE				A		A	00 13 00.1	
	3.1nm,0.5s							
PVIS	**Viseu**	**8.51**	**349**	P		**Pn**	**00 11 31.3**	**+1.6**
PVIS	**Viseu**	**8.51**	**349**	*e*Pn		**Pn**	**00 11 31.3**	**+1.6**
MVO	**Moncorvo**	**8.84**	**354**	P		**Pn**	**00 11 35.0**	**+0.8**
	2.9nm,0.1s,SNR=13							
MVO				S		**Sn**	**00 13 10.0**	**-3.9**
	2.4nm,0.2s,SNR=7.9							
MVO	**Moncorvo**	**8.84**	**354**	*e*Pn		**Pn**	**00 11 35.0**	**+0.8**
ETOR	**Torete**	**8.93**	**18**	P		**Pn**	**00 11 35.8**	**+0.2**
	2.6nm,0.2s,SNR=7.9							
PVRL	**Vila Real**	**9.03**	**350**	P		**Pn**	**00 11 37.6**	**+0.8**
PVRL	**Vila Real**	**9.03**	**350**	*e*Pn		**Pn**	**00 11 37.6**	**+0.8**
PBRG	**Braganca**	**9.45**	**355**	P		**Pn**	**00 11 44.0**	**+1.4**
PBRG	**Braganca**	**9.45**	**355**	*e*Pn		**Pn**	**00 11 44.0**	**+1.4**
PCAB	**Cabril**	**9.50**	**349**	P		**Pn**	**00 11 44.8**	**+1.5**
PCAB	**Cabril**	**9.50**	**349**	*e*Pn		**Pn**	**00 11 44.8**	**+1.5**
ECAL	**Calabor**	**9.58**	**355**	P		**Pn**	**00 11 45.8**	**+1.3**
	1.1nm,0.1s,SNR=7.9							
ECAL				S		**Sn**	**00 13 28.1**	**-4.2**
	3.7nm,0.4s,SNR=7.9							
ELOB	**Lobios**	**9.66**	**350**	P		**Pn**	**00 11 47.0**	**+1.5**
	0.7nm,0.2s,SNR=7.9							
ELOB				S		**Sn**	**00 13 28.9**	**-5.1**
	1.3nm,0.4s,SNR=7.9							
PGAV	**Gavieira, Arco**	**9.79**	**349**	P		**Pn**	**00 11 50.2**	**+2.9**
PGAV	**Gavieira, Arco**	**9.79**	**349**	*e*Pn		**Pn**	**00 11 50.2**	**+2.9**

PDG ***19*** *00:18:21.9±0.3, 42°.95N×17°.53E, h2km, ML2.4/12, Error ellipse: s-maj=0.7km s-min=1.2km az=0.0*
BEO ***19*** *00:18:21.0±0.7, 42°.80N×17°.35E, h0km, ML2.7/12*
RHSSO ***19*** *00:18:22.2±0.3, 42°.93N×17°.50E, h5km, 2km, ML2.7/15*

ISC 19 00:18:21.6±1.1**, 42°.91N**±0°.03**×17°.47E**±0°.02**, h4**km±9km**, n77,** σ1°**14**/141**, 5C-13D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
STON	**Ston**	**0.18**	**103**	*e*Pg		**Pg**		**00 18 25.2**	**+0.2**
STON				*e*Sg		**Sg**		**00 18 28.3**	**+0.9**
STON	**Ston**	**0.18**	**103**	⇓*i*Pg		**Pg**		**00 18 25.2**	**+0.2**
STON				*e*Sg		**Sg**		**00 18 28.2**	**+0.9**
STON	**Ston**	**0.18**	**103**	*i* Pg		**Pg**		**00 18 25.3**	**+0.2**
STON				Sg		**Sg**		**00 18 28.2**	**+0.9**
MAKA	**Makarska**	**0.50**	**319**	*i* Pg		**Pg**		**00 18 30.6**	**-0.6**
MAKA				Sg		**Sg**		**00 18 38.2**	**+0.6**
DBRK	**Dubrovnik**	**0.56**	**115**	*i* Pg		**Pg**		**00 18 31.9**	**-0.4**
DBRK				Sg		**Sb**		**00 18 41.0**	**-1.2**
RICI	**Ricice**	**0.63**	**337**	*i* Pg		**Pg**		**00 18 32.8**	**-0.9**
RICI				Sg		**Sg**		**00 18 42.2**	**+0.2**
TREB	**Trebinje**	**0.68**	**106**	*e*Pg		**Pg**		**00 18 33.9**	**-0.7**
TREB				*e*Sg		**Sb**		**00 18 44.5**	**-1.2**
TREB	**Trebinje**	**0.68**	**106**	⇓*i*Pg		**Pg**		**00 18 33.8**	**-0.8**
TREB				*e*Sg		**Sg**		**00 18 43.9**	**+0.5**
BRY	**Bratogost**	**0.79**	**90**	*e*Pg		**Pg**		**00 18 35.7**	**-1.0**
BRY				*e*Sg		**Sg**		**00 18 47.3**	**+0.3**
BRY	**Bratogost**	**0.79**	**90**	⇑*i*Pg		**Pg**		**00 18 35.5**	**-1.2**
BRY				*i* Sg		**Sg**		**00 18 46.3**	**-0.7**
HVAR	**Hvar**	**0.79**	**290**	*e*Pg		**Pg**		**00 18 35.2**	**-1.6**
HVAR				Sg		**Sg**		**00 18 47.2**	**+0.2**
HCY	**Herceg Novi**	**0.89**	**121**	⇓*i*Pg		**Pg**		**00 18 37.3**	**-1.3**
HCY				*e*Sg		**Sg**		**00 18 50.8**	**+0.7**
HCY	**Herceg Novi**	**0.89**	**121**	⇑*i*Pg		**Pg**		**00 18 37.5**	**-1.1**
HCY				*i* Sg		**Sb**		**00 18 51.6**	**-0.2**
UPM	**Unac-Piva**	**1.09**	**74**	*e*Pg		**Pg**		**00 18 40.8**	**-1.8**
UPM				*e*Sg		**Sg**		**00 18 56.2**	**-0.6**
UPM	**Unac-Piva**	**1.09**	**74**	⇓*i*Pg		**Pg**		**00 18 41.1**	**-1.5**
UPM				*i* Sg		**Sb**		**00 18 57.2**	**-0.7**
NKME	**Niksic**	**1.10**	**97**	⇑*i*Pg		**Pg**		**00 18 41.4**	**-1.3**
NKME				*i* Sg		**Sb**		**00 18 57.9**	**-0.1**
NKY	**Niksic**	**1.13**	**94**	⇓*i*Pg		**Pg**		**00 18 41.7**	**-1.5**
NKY				*i* Sg		**Sb**		**00 18 58.0**	**-0.8**
CEME	**Cevo**	**1.13**	**108**	⇓*i*Pg		**Pg**		**00 18 41.8**	**-1.5**
CEME				*i* Sg		**Sb**		**00 18 59.2**	**+0.4**
BUM	**Brajici-Budva**	**1.22**	**120**	⇓*i*Pg		**Pg**		**00 18 43.9**	**-1.0**
BUM				*i* Sg		**Sn**		**00 19 02.6**	**+0.2**
KIJV	**Kijevo**	**1.34**	**325**	*e*Pn		**Pg**		**00 18 45.2**	**-2.0**
KIJV				Sg		**Sb**		**00 19 05.2**	**+0.5**
PDG	**Podgorica**	**1.41**	**109**	*e*Pn		**Pn**		**00 18 47.7**	**-0.2**
PDG				*e*Sn		**Sn**		**00 19 08.8**	**+1.9**
PDG	**Podgorica**	**1.41**	**109**	⇓*i*Pg		**Pn**		**00 18 47.1**	**-0.8**
PDG				*e*Sg		**Sn**		**00 19 06.9**	**0.0**
TTG	**Podgorica**	**1.41**	**109**	⇑*i*Pg		**Pn**		**00 18 46.9**	**-1.0**
TTG				*i* Sg		**Sn**		**00 19 08.4**	**+1.5**
DRME	**Dracevica, Mon**	**1.46**	**119**	*e*Pg		**Pn**		**00 18 48.1**	**-0.7**
DRME				*e*Sg		**Sn**		**00 19 08.5**	**+0.2**
PLE	**Pljevlja**	**1.47**	**73**	⇑*i*Pg		**Pn**		**00 18 48.4**	**-0.6**
PLE				*i* Sg		**Sn**		**00 19 10.2**	**+1.5**
KOME	**Kolasin**	**1.51**	**92**	⇓*i*Pg		**Pn**		**00 18 49.1**	**-0.4**
KOME				*i* Sg		**Sn**		**00 19 11.5**	**+1.9**
ZIRJ	**Zirje**	**1.52**	**300**	*e*Pn		**Pn**		**00 18 48.9**	**-0.7**
ZIRJ				Sn		**Sn**		**00 19 10.4**	**+0.6**
MGRS	**Mrkonjic Grad**	**1.53**	**350**	*e*Pg		**Pn**		**00 18 49.7**	**-0.1**
MGRS				*e*Sg		**Sg**		**00 19 10.6**	**-0.2**
RUDO	**Rudo**	**1.56**	**62**	*e*Pg		**Pn**		**00 18 49.2**	**-0.9**
RUDO				*e*Sg		**Sb**		**00 19 10.7**	**-0.5**
HAPS	**Han Pijesak,Bl**	**1.60**	**42**	*e*Pn		**Pn**		**00 18 50.3**	**-0.4**
HAPS	**Han Pijesak,Bl**	**1.60**	**42**	⇓*i*Pg		**Pn**		**00 18 50.1**	**-0.6**
HAPS				*e*Sg		**Sn**		**00 19 11.6**	**-0.3**
MORI	**Morici**	**1.60**	**307**	*e*Pn		**Pn**		**00 18 50.7**	**+0.1**
MORI				Sn		**Sn**		**00 19 12.5**	**+0.8**
ULC	**Ulcinj**	**1.62**	**125**	⇓*i*Pn		**Pn**		**00 18 51.4**	**+0.4**
ULC				*i* Sn		**Sg**		**00 19 15.6**	**+1.9**
BBLS	**Lazići**	**1.71**	**55**	*e*Pn		**Pg**		**00 18 53.8**	**-0.5**
BBLS				*e*Sn		**Sg**		**00 19 18.6**	**+2.2**
BBLS	**Lazići**	**1.71**	**55**	*e*Pn		**Pn**		**00 18 52.5**	**+0.3**
BBLS				*e*Sn		**Sn**		**00 19 13.9**	**-0.6**
IVA	**Berane**	**1.78**	**90**	⇓*i*Pn		**Pb**		**00 18 54.3**	**-0.6**
IVA				*i* Sn		**Sg**		**00 19 18.7**	**-0.2**
BLY	**Banja Luka**	**1.85**	**354**	*e*Pn		**Pb**		**00 18 56.2**	**+0.2**
BLY				*e*Sn		**Sg**		**00 19 21.5**	**+0.5**
BLY	**Banja Luka**	**1.85**	**354**	*e*Pn		**Pn**		**00 18 55.0**	**+0.9**
BLY				*e*Sn		**Sn**		**00 19 18.4**	**+0.5**
BAI	**Bari**	**1.85**	**194**	*e*Pn		**Pn**		**00 18 54.8**	**+0.7**
PVY	**Plav**	**1.86**	**99**	⇓*i*Pn		**Pn**		**00 19 55.4**	**+1.0**
PVY				*i* Sn		**Sg**		**00 21.1**	**-0.3**
SJES	**Sjenica**	**1.87**	**78**	*e*Pn		**Pb**		**00 18 56.6**	**+0.2**
SJES				*e*Sn		**Sg**		**00 19 22.2**	**+0.5**
DUGI	**Dugi Otok**	**2.06**	**302**	*e*Pn		**Pn**		**00 18 57.9**	**+0.9**
DUGI				Sn		**Sb**		**00 19 25.2**	**-0.2**
IVAS	**Ivanjica**	**2.07**	**70**	*e*Pn		**Pn**		**00 18 58.4**	**+1.2**
SG1	**Sgolgore (BA)**	**2.15**	**196**	*e*Pn		**Pn**		**00 18 56.8**	**-1.5**
DIVS	**Divibare**	**2.19**	**56**	*e*Pn		**Pn**		**00 19 00.0**	**+1.2**
DIVS	**Divibare**	**2.19**	**56**	*e*Pn		**Pn**		**00 18 59.2**	**+0.4**
DIVS				*e*Sn		**Sn**		**00 19 26.1**	**-0.3**
TEKS	**Tekeris**	**2.22**	**42**	*e*Pn		**Pn**		**00 19 00.6**	**+1.4**
TEKS	**Tekeris**	**2.22**	**42**	*e*Pn		**Pn**		**00 18 59.5**	**+0.3**
TEKS				*e*Sn		**Sn**		**00 19 26.7**	**-0.4**
NVLJ	**Novalja**	**2.50**	**312**	*e*Pn		**Pn**		**00 19 04.1**	**+1.0**
NVLJ				Sn		**Sn**		**00 19 35.2**	**+1.2**
TRUS	**Trudelj**	**2.51**	**57**	*e*Pn		**Pn**		**00 19 04.1**	**+0.9**
MOSL	**Moslavina**	**2.75**	**350**	*i* Pn		**Pn**		**00 19 07.5**	**+1.0**
MOSL				*e*Sn		**Sn**		**00 19 41.1**	**+0.9**
FRGS	**Fruska Gora**	**2.81**	**36**	*e*Pn		**Pn**		**00 19 06.9**	**-0.4**
FRGS				*e*Sn		**Sn**		**00 19 40.7**	**-1.0**
BOJS	**Bojanci**	**3.04**	**329**	*i* Pn		**Pn**		**00 19 12.6**	**+2.1**
BOJS				*e*Sn		**Sb**		**00 19 52.2**	**-1.5**
	comp=Z,9.0nm,0.3s								
OZLJ	**Ozalj**	**3.06**	**333**	*e*Pn		**Pn**		**00 19 12.5**	**+1.8**
ZAG	**Zagreb**	**3.10**	**341**	*e*Pn		**Pn**		**00 19 12.2**	**+0.9**
ZAG	**Zagreb**	**3.10**	**341**	*e*Pn		**Pn**		**00 19 13.1**	**+1.8**
RIY	**Rijeka**	**3.23**	**319**	*e*Pn		**Pn**		**00 19 13.6**	**+0.5**
RIY				*e*Sn		**Sn**		**00 19 51.9**	**-0.1**
CRES	**Cresnjev**	**3.25**	**334**	*e*Pn		**Pn**		**00 19 13.6**	**+0.2**
CRES				*e*Sn		**Sn**		**00 19 51.9**	**-0.6**
KALN	**Kalnik**	**3.30**	**348**	*e*Pn		**Pn**		**00 19 14.5**	**+0.4**
KALN				Sn		**Sn**		**00 19 53.6**	**-0.1**
GOLS	**Golise**	**3.37**	**338**	*i* Pn		**Pn**		**00 19 16.3**	**+1.3**
GOLS				*e*Sn		**Sn**		**00 19 58.5**	**+3.1**
MORH	**Mrgy, Hungar**	**3.41**	**14**	*e*Pn		**Pn**		**00 19 15.8**	**+0.3**
MORH				*e*Sn		**Sn**		**00 19 55.2**	**-1.2**
CEY	**Cerknica**	**3.57**	**323**	*e*Pn		**Pn**		**00 19 17.7**	**-0.1**
CEY				*e*Sn		**Sn**		**00 20 00.0**	**-0.4**
ZAGS	**Zajecar**	**3.59**	**74**	*e*Pn		**Pn**		**00 19 19.4**	**+1.4**
ZAPS	**Zavoj**	**3.80**	**83**	*e*Pn		**Pn**		**00 19 22.9**	**+1.9**
SOKA	**Soboth**	**4.15**	**336**	*i* Pn		**Pn**		**00 19 27.2**	**+1.5**
SOKA				*i* Sn		**Sn**		**00 20 15.9**	**+1.2**
	comp=Z,1.4nm,0.4s								
OBKA	**Obir**	**4.16**	**331**	*i* Pn		**Pn**		**00 19 26.9**	**+1.0**
	comp=Z,0.4nm,0.2s								
OBKA				*i* Sn		**Sn**		**00 20 16.9**	**+1.9**
	comp=Z,4.7nm,0.8s								
ARSA	**Arzberg**	**4.55**	**343**	*i* Pn		**Pn**		**00 19 32.2**	**+0.9**
	comp=Z,1.9nm,0.4s								
ARSA				*i* Sn		**Sn**		**00 20 25.1**	**+0.4**
	comp=Z,3.6nm,0.8s								
MYKA	**Terra Mystica**	**4.61**	**325**	*i* Pn		**Pn**		**00 19 31.3**	**-0.8**
	comp=Z,0.3nm,0.2s								
MYKA				*i* Sn		**Sn**		**00 20 25.8**	**-0.2**
	comp=Z,0.4nm,0.2s								
KBA	**Koelnbreinsper**	**5.09**	**326**	*i* Pn		**Pn**		**00 19 40.6**	**+1.8**
	comp=Z,1.0nm,0.6s								
KBA				*i* Sn		**Sn**		**00 20 40.7**	**+2.7**
	comp=Z,1.7nm,0.7s								
CONA	**Conrad Observa**	**5.14**	**348**	*i* Pn		**Pn**		**00 19 41.2**	**+1.7**
	comp=Z,0.7nm,0.3s								
CONA				*i* Sn		**Sn**		**00 20 39.3**	**0.0**
	comp=Z,2.8nm,0.5s								
ABTA	**Abfaltersbach**	**5.21**	**319**	*i* Pn		**Pn**		**00 19 40.7**	**+0.3**
	comp=Z,0.4nm,0.2s								
ABTA				*i* Sn		**Sn**		**00 20 42.9**	**+2.0**
	comp=Z,1.8nm,0.4s								
MOA	**Molln**	**5.43**	**337**	*i* Pn		**Pn**		**00 19 45.4**	**+2.1**
	comp=Z,0.4nm,0.1s								
MOA				*i* Sn		**Sn**		**00 20 45.7**	**-0.5**
	comp=Z,0.2nm,0.1s								
MODS	**Modra-Piesok**	**5.46**	**359**	*e*SN		**Sn**		**00 20 43.1**	**-4.0**
VYHS	**Vyhne**	**5.67**	**9**	*e*PN		**Pn**		**00 19 48.2**	**+1.7**
VYHS				*e*SN		**Sn**		**00 20 53.0**	**+1.0**
WTTA	**Wattenberg**	**6.00**	**319**	*i* Pn		**Pn**		**00 19 52.6**	**+1.4**
	comp=Z,0.4nm,0.2s								
WTTA				*i* Sn		**Sn**		**00 20 58.9**	**-1.5**
	comp=Z,1.9nm,0.4s								
WATA	**Walderalm**	**6.08**	**319**	*i* Pn		**Pn**		**00 19 53.1**	**+0.8**
	comp=Z,0.9nm,0.2s								
WATA				*i* Sn		**Sn**		**00 21 04.2**	**+1.8**
	comp=Z,0.8nm,0.2s								
MOTA	**Moosalm**	**6.32**	**317**	*i* Pn		**Pn**		**00 19 57.0**	**+1.4**
	comp=Z,0.9nm,0.4s								
MOTA				*i* Sn		**Sn**		**00 21 07.6**	**-0.6**
	comp=Z,3.5nm,0.7s								

IDC ***19*** *00:28:09.4±2.4, 8°.68S×115°.27E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/23, mbtmp3.7/4, Error ellipse: s-maj=152.7km s-min=26.8km az=50.0*
DJA ***19*** *00:28:14.4±0.3, 8°.5S×3°×11°.6E±°, h11km±2km, M3.9/9, mb4.2/2, MLv3.8/9*

ISC 19 00:28:13.1±3.3**, 8°.29S**±0°.07**×115°.71E**±0°.04**, h15**km±24km**, n12,** σ1°**63**/17**, mb3.8**/4**, Bali region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
SRBI	**Singaraja**	**0.54**	**292**	P		**Pn**		**00 28 25.7**	**-0.5**
SRBI				S		**Sn**		**00 28 34.4**	**-0.6**
DNP	**Denpasar**	**0.63**	**232**	P		**Pb**		**00 28 25.5**	**-0.3**
DNP				S		**Sb**		**00 28 34.7**	**+0.2**
JAGI	**Jajag, Banyuwa**	**1.56**	**263**	P		**Pn**		**00 28 40.3**	**0.0**
JAGI				S		**Sn**		**00 29 00.6**	**+0.4**
PLAI	**Plampang**	**2.11**	**105**	P		**Pb**		**00 28 49.6**	**-1.5**
PLAI				S		**Sb**		**00 29 16.2**	**-1.0**
KMMI	**Kalianget**	**2.12**	**305**	P		**Pb**		**00 28 50.7**	**-0.6**
KMMI				S		**Sb**		**00 29 19.1**	**+1.6**
GRJI	**Gresik**	**3.48**	**293**	P		**Pn**		**00 29 09.5**	**+2.7**
WBSI	**Waikabubak, Su**	**3.87**	**111**	P		**Pn**		**00 29 14.8**	**+2.5**
EDFI	**Ende, Flores**	**5.93**	**95**	P		**Pn**		**00 29 44.0**	**+3.4**
WRA	**Warramunga Arr**	**21.43**	**125**	P		**P**		**00 32 59.8**	**-1.1**
	1.3nm,0.3s,baz=299,slow=12,SNR=6.7								
ASAR	**Alice Springs**	**23.18**	**133**	P		**P**		**00 33 18.7**	**-0.8**
	1.7nm,0.5s,baz=307,slow=9.3,SNR=29								
STKA	**Stephens Creek**	**33.61**	**138**	P		**P**		**00 34 52.4**	**-0.7**
	0.7nm,0.5s,baz=315,slow=11,SNR=1.4								
MKAR	**Makanchi Array**	**62.39**	**335**	P		**P**		**00 38 35.4**	**0.0**
	0.2nm,0.5s,baz=162,slow=5.7,SNR=2.6								

GCG ***19*** *00:51:03.4±0.3, 13°.00N×88°.95W, h145km±34km, MD3.9*
SNET ***19*** *00:51:12.4±0.9, 12°.81N×90°.50W, h13km±7km, ML3.2*

ISC 19 00:51:07.3±4.2**, 12°.4N**±0°.2**×90°.5W**±0°.1**, h25**km±20km**, n16,** σ1°**87**/23**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
CEVE	**Cerro Verde**	**1.64**	**31**	*e*P		**Pb**		**00 51 36.5**	**-0.6**
CEVE				*e*S		**Sn**		**00 51 55.2**	**-0.2**
SBLS	**San Blas**	**1.65**	**31**	*e*P		**Pb**		**00 51 36.6**	**-0.7**
SBLS				*e*S		**Sn**		**00 51 55.6**	**0.0**
SNJE	**San Jose**	**1.69**	**31**	*e*P		**Pb**		**00 51 37.1**	**-0.7**
SNJE				*e*S		**Sn**		**00 51 56.6**	**+0.2**
RTR	**El Retiro**	**1.69**	**29**	*e*P		**Pb**		**00 51 36.9**	**-1.0**
RTR				*e*S		**Sn**		**00 51 55.4**	**-1.1**
IXG	**Ixpaco**	**1.75**	**2**	*e*P		**Pb**		**00 51 37.6**	**-1.3**
IXG	**Ixpaco**	**1.75**	**2**	*e*P		**Pb**		**00 51 36.6**	**-2.2**
BOQS	**Boqueron**	**1.77**	**42**	*e*P		**Pb**		**00 51 39.1**	**-0.1**
LFRS	**El Faro**	**1.84**	**49**	*e*P		**Pb**		**00 51 40.2**	**-0.2**
LFRS				*e*S		**Sb**		**00 52 02.5**	**-0.6**
LBRS	**Las Brisas**	**1.93**	**47**	*e*P		**Pb**		**00 51 42.1**	**+0.2**
COEG	**Centro de Oper**	**1.98**	**53**	*e*P		**Pb**		**00 51 42.5**	**-0.2**
COEG				IAML				00 51 46.0	
	comp=Z,277nm,0.3s								
FUG	**Fuego 3**	**2.05**	**351**	*e*P		**Pb**		**00 51 43.3**	**-0.7**
FUG				*e*S		**Sb**		**00 52 14.4**	**+5.2**
NBG	**Las Nubes**	**2.17**	**4**	*e*P		**Pb**		**00 51 42.7**	**-3.3**
NBG				*e*S		**Sn**		**00 52 09.5**	**+1.2**
TECA	**Tecapa**	**2.22**	**61**	*e*P		**Pb**		**00 51 46.2**	**-0.7**
MTO3	**Montecristo**	**2.26**	**29**	*e*P		**Pb**		**00 51 45.4**	**-2.2**
ESQI	**Esquipulas**	**2.41**	**28**	*e*P		**Pb**		**00 51 46.9**	**-3.2**
LCND	**La Caada**	**2.69**	**70**	*e*P		**Pb**		**00 51 54.3**	**-0.6**
LCND				IAML				00 52 27.4	
	comp=Z,104nm,0.2s								

PRE ***19*** *00:58:41.9±0.8, 21°.33S×32°.83E, h5km, ML3.1*

ISC 19 00:58:42.9±2.9**, 21°.42S**±0°.08**×32°.9E**±0°.2**, h15**km, n10,** σ1°**83**/17**, 2D, Mozambique**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
MOPA	**Mopani**	**2.50**	**213**	*e*P		**Pn**		**00 59 24.5**	**+1.3**
MOPA				*e*S		**Sn**		**00 59 56.0**	**+2.6**
MOPA				AML		AML		01 00 04.0	
	comp=Z,110nm,0.2s								
MSNA	**Messina**	**2.82**	**250**	*e*P		**Pn**		**00 59 28.6**	**+1.1**
MSNA				*e*S		**Sn**		**01 00 02.9**	**+1.6**
MSNA				AML		AML		01 00 16.6	
	comp=Z,188nm,0.7s								
MATP	**Matopo**	**4.22**	**283**	*i* P		**Pn**		**00 59 47.8**	**+0.9**
MATP				*i* S		**Sn**		**01 00 38.1**	**+2.0**
MATP	**Matopo**	**4.22**	**283**	*i* P		**Pn**		**00 59 47.8**	**+0.9**
MATP				*i*				00 59 49.0	
	baz=92,slow=18								
MATP				*i* S		**Sn**		**01 00 36.7**	**+0.7**
MATP	**Matopo**	**4.22**	**283**	*i* P		**Pn**		**00 59 47.8**	**+0.9**
MATP				*i* S		**Sn**		**01 00 38.1**	**+2.0**
SLR	**Silverton**	**6.03**	**224**	*e*P		**Pn**		**01 00 12.6**	**+0.9**
SLR				*e*S		**Sn**		**01 01 19.2**	**-1.3**
SLR				AML		AML		01 01 52.4	
	comp=Z,15nm,0.5s								
LSZ	**Lusaka**	**7.57**	**323**	*e*P		**Pn**		**01 00 32.5**	**-0.4**
LSZ				AML		AML		01 02 00.0	
	comp=Z,86nm,0.6s								
LBTB	**Lobatse**	**7.60**	**241**	*e*P		**Pn**		**01 00 34.4**	**+1.0**
LBTB				*e*S		**Sn**		**01 01 55.9**	**-3.4**
LBTB				AML		AML		01 02 03.5	
	comp=Z,4.9nm,0.7s								
TSUM	**Tsumeb**	**14.53**	**276**	⇓*i*P		**Pn**		**01 02 06.3**	**-1.9**
TSUM	**Tsumeb**	**14.53**	**276**	⇓*i*P		**Pn**		**01 02 06.3**	**-1.9**

BGS ***19*** *00:59:11.5±1.4, 40°.53N×20°.71E, h10km, mb5.0*
BGR ***19*** *00:59:12.8±0.8, 40°.18N×19°.76E, h10km, Ms3.8, Error ellipse: s-maj=23.3km s-min=10.0km az=22.0*
BJI ***19*** *00:59:15.2±0.0, 41°.22N×19°.48E, h6km, mB5.2/32, mb4.8/52, Ms5.1/35, Ms7 4.7/35*
PRU ***19*** *00:59:17.3±0.0, 40°.58N×19°.76E, h0km, Ms1.1*
IDC ***19*** *00:59:17.8±0.4, 40°.98N×19°.89E, h0km, mb4.6/39, mb1 4.7/55, mb1mx4.7/64, mbtmp4.6/55, ML4.1/15, MS4.3/25, Ms1 4.3/25, ms1mx4.2/55, Error ellipse: s-maj=8.4km s-min=7.9km az=155.0*
BEO ***19*** *00:59:18.4±0.5, 40°.82N×19°.81E, h0km, ML5.1/20*
TIR ***19*** *00:59:18.7, 40°.93N×19°.92E, h18km, Md5.2/7*
NEIC ***19*** *00:59:19.8, 40°.94N×19°.89E, h24km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr1.15; Mθθ-3.71; Mφφ2.56; Mrθ-0.10; Mrφ0.58; Mθφ1.66; Fault plane solution: M₀3.7300×10¹⁶ NP1:φs55.20000°, δ64.82000°, λ22.45000°. NP2:φs315.22000°, δ69.78000°, λ153.03000°. Principal axes: T 3.6864, Plg33.0000°, Azm274.0000°; N 0.0925, Plg57.0000°, Azm101.0000°; P -3.7789, Plg3.0000°, Azm6.0000°;*
LDG ***19*** *00:59:19.6±0.2, 41°.12N×19°.78E, h10km, Md5.0/2, Ml4.6/46, ms4.1 Error ellipse: s-maj=6.0km s-min=3.7km az=15.0*
NEIC ***19*** *00:59:19.7±2.1, 40°.94N±0°.04×19°.91E±0°.05, h10km±1km, mb5.1/321, Mwr5.0/21, ML4.6/46(LDG), Error ellipse: s-maj=7.0km s-min=6.1km az=74.0*
MOS ***19*** *00:59:19.9±1.2, 40°.99N×19°.80E, h26km, mb5.0/50, MS4.5/31, Error ellipse: s-maj=3.3km s-min=2.5km az=93.4*
PDG ***19*** *00:59:19.2±0.5, 40°.96N×19°.81E, h12km, MD5.1/13, ML4.5/12, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
ATH ***19*** *00:59:19.9, 40°.91N×19°.98E, h21km±1km, ML4.6/22, Error ellipse: s-maj=1.7km s-min=1.0km az=290.0*
SKO ***19*** *00:59:20.0, 40°.94N×19°.88E, h14km*
THE ***19*** *00:59:20.4, 40°.93N×20°.00E, h0km±1km, ML4.7/12, Error ellipse: s-maj=1.3km s-min=0.4km az=315.0*
ROM ***19*** *00:59:20.0±0.1, 40°.95N×19°.82E, h2km, mb5.3, Mw4.8, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr0.68; Mθθ-1.95; Mφφ1.27; Mrθ-0.10; Mθφ0.41; Mrφ0.73; Fault plane solution: M₀1.89608×10¹⁶ NP1:φs57.00000°, δ64.00000°, λ22.00000°. NP2:φs317.00000°, δ71.00000°, λ152.00000°.*
GII ***19*** *00:59:20.3±0.0, 40°.90N×19°.81E, h10km*
MED_RC ***19*** *00:59:20.0±0.2, 40°.89N×19°.93E, h10km, MW5.0/24, Moment Tensor Solution.Mantle waves: s24,c46; Duration: 1s3 Moment tensor: Scale 10¹⁶Nm; Mrr0.61±.12; Mθθ-3.78±.10; Mφφ3.17±.09; Mrθ-1.57±.29; Mθφ1.09±.08; Mrφ2.44±.32; Best double couple: M₀4.69000×10¹⁶ NP1:φs56.00000°, δ51.00000°, λ7.00000°. NP2:φs321.00000°, δ84.00000°, λ141.00000°. Principal axes: T 4.6500, Plg31.0000°, Azm271.0000°; N 0.0800, Plg51.0000°, Azm134.0000°; P -4.7200, Plg22.0000°, Azm15.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
RHSSO ***19*** *00:59:20.3±0.6, 40°.89N×19°.78E, h10km±3km, ML5.3/11*
GCMT ***19*** *00:59:22.7±0.2, 40°.91N±0°.01×19°.94E±0°.02, h

DRME	Dracevica, Mon	1.37	336	⇓	*i*	Pg	Pn	00 59 44.6	-0.3
DRME						eSg	Sg	01 00 04.3	-1.0
DRME	Dracevica, Mon	1.37	336	⇓	*i*	Pg	Pn	00 59 44.5	-0.3
DRME						*i* Sg	Sg	01 00 04.2	-1.0
SCTE	Santa Cesarea	1.42	233				Pn	00 59 45.3	-0.1
SCTE							Sb	01 00 04.3	+0.1
BCI	Bajram Curri	1.43	4		*i*	PN	Pn	00 59 45.3	-0.5
IGT	Igoumenitsa	1.44	168			P	Pb	00 59 46.7	-0.2
IGT						S	Sg	01 00 07.3	0.0
	comp=E,26µm,0.9s								
IGT	Igoumenitsa	1.44	168			P	Pb	00 59 47.2	+0.3
IGT						AML	AML	01 00 10.1	
	comp=N,44042µm,0.9s								
IGT						AML	AML	01 00 19.9	
	comp=E,41223µm,0.7s								
JAN	Janina	1.46	151			P	Pb	00 59 46.7	-0.6
JAN						S	Sb	01 00 06.1	+0.6
	comp=E,31µm,1.5s								
JAN	Janina	1.46	151			P	Pb	00 59 46.7	-0.6
KPRO	Kipourio	1.47	132			P	Pn	00 59 45.9	-0.4
KPRO	Kipourio	1.47	132			P	Pn	00 59 46.2	-0.1
KPRO						AML	AML	01 00 20.2	
	comp=E,34383µm,1.2s								
KPRO						AML	AML	01 00 21.6	
	comp=N,48818µm,1.4s								
MEV	Metsovon	1.52	139			P	Pn	00 59 47.1	0.0
SKO	Skopje	1.53	47		*eP*		Pb	00 59 48.7	+0.1
SKO						eSg	Sg	01 00 10.3	0.0
SKO	Skopje	1.53	47		*i*	Pn	Pn	00 59 47.3	+0.2
SKO	Skopje	1.53	47		*i*	Pn	Pn	00 59 47.3	+0.2
KZN	Kozani	1.53	114			P	Pn	00 59 47.4	+0.3
KZN						S	Sb	01 00 08.7	+1.1
	comp=N,13µm,0.8s								
KZN	Kozani	1.53	114			P	Pn	00 59 47.5	+0.3
KZN						AML	AML	01 00 15.0	
	comp=N,25956µm,1.0s								
KZN						AML	AML	01 00 17.6	
	comp=E,24097µm,0.7s								
BUM	Brajici-Budva	1.57	330	⇑	*i*	Pg	Pn	00 59 47.1	-0.6
BUM						*i* Sg	Sb	01 00 09.4	+0.6
PDG	Podgorica	1.58	341		*eP*	g	Pb	00 59 49.1	-0.2
PDG	Podgorica	1.58	341	⇑		P	Pb	00 59 49.6	+0.2
PDG				⇓		S	Sg	01 00 10.9	-0.9
PDG	Podgorica	1.58	341	⇓	*i*	Pn	Pn	00 59 47.6	-0.1
PDG						eSg	Sg	01 00 11.1	-0.7
PDG	Podgorica	1.58	341				Pb	00 59 49.6	+0.2
PDG							Sg	01 00 10.9	-0.9
TTG	Podgorica	1.58	341	⇑	*i*	Pg	Pn	00 59 47.3	-0.4
TTG						*i* Sg	Sb	01 00 09.9	+1.1
PVY	Plav	1.66	1	⇓	*i*	Pn	Pn	00 59 49.4	+0.5
CEME	Cevo	1.78	335	⇓	*i*	Pn	Pn	00 59 51.5	+0.9
CEME						*i* Sn	Sb	01 00 14.8	0.0
HCY	Herceg Novi	1.85	325	⇑	*i*	Pn	Pn	00 59 51.8	+0.2
HCY						eSg	Sb	01 00 18.3	+1.4
HCY	Herceg Novi	1.85	325	⇑	*i*	Pn	Pn	00 59 51.2	-0.4
HCY						*i* Sn	Sb	01 00 16.0	-0.9
IVA	Berane	1.93	359	⇓	*i*	Pn	Pn	00 59 53.0	+0.3
IVA						*i* Sn	Sb	01 00 19.0	-0.2
KOME	Kolasin	1.94	351	⇓	*i*	Pn	Pb	00 59 54.4	-1.1
KOME						*i* Sn	Sb	01 00 19.2	-0.1
NKME	Niksic	1.97	338	⇓	*i*	Pn	Pn	00 59 53.1	-0.1
NKME						*i* Sn	Sb	01 00 19.4	-0.8
NKY	Niksic	2.00	340	⇑	*i*	Pn	Pn	00 59 53.3	-0.4
NKY						*i* Sn	Sb	01 00 20.0	-1.2
VAY	Valandovo	2.02	78		*eP*	n	Pn	00 59 54.7	+0.8
VAY						eSn	Sg	01 00 24.9	-1.2
VAY	Valandovo	2.02	78		*i*	Pn	Pn	00 59 54.5	+0.6
VAY	Valandovo	2.02	78		*i*	Pn	Pn	00 59 54.5	+0.6
TAR1	Taranto	2.06	259	⇑	*i*	Pn	Pn	00 59 53.7	-0.6
TAR1						Sn	Sg	01 00 28.4	+1.3
THL	Klokotos Trika	2.10	130			P	Pb	00 59 57.0	-1.2
THL	Klokotos Trika	2.10	130			P	Pb	00 59 56.5	-1.7
LIT	Litokhoron	2.12	112			P	Pn	00 59 56.6	+1.4
LIT	Litokhoron	2.12	112			P	Pn	00 59 56.6	+1.4
LIT	Litokhoron	2.12	112			P	Pn	00 59 56.4	+1.2
LIT	Litokhoron	2.12	112				Pn	00 59 56.4	+1.2
TREB	Trebinje	2.14	327		*eP*	n	Pn	00 59 55.6	+0.1
TREB						eSn	Sb	01 00 24.5	-0.5
TREB	Trebinje	2.14	327	⇑	*i*	Pn	Pn	00 59 55.5	+0.1
TREB						eSn	Sn	01 00 21.5	+0.1
DBRK	Dubrovnik	2.19	323		*i*	Pn	Pn	00 59 56.2	+0.1
DBRK						Sn	Sn	01 00 24.5	+1.9
LKD2	Lefkada island	2.22	165			P	Pn	00 59 57.4	+0.8
LKD2	Lefkada island	2.22	165			P	Pn	00 59 57.6	+1.0
BRY	Bratogost	2.22	332	⇑	*i*	Pn	Pn	00 59 57.0	+0.3
BRY	Bratogost	2.22	332	⇓	*i*	Pn	Pn	00 59 56.4	+0.3
BRY						Sn	Sn	01 00 24.9	+1.2
KNT	Kendrikon	2.25	83			P	Pn	00 59 57.5	+0.6
KNT						S	Sb	01 00 27.2	-1.1
	comp=E,8µm,1.0s								
KNT	Kendrikon	2.25	83			P	Pn	00 59 58.1	+1.1
KNT						AML	AML	01 00 38.9	
	comp=E,8693µm,2.2s								
KNT						AML	AML	01 00 39.3	
	comp=N,19632µm,1.1s								
KNT	Kendrikon	2.25	83		*eP*		Pn	00 59 57.6	+0.6
THE	Thessaloniki	2.32	97			P	Pn	00 59 58.3	+0.4
THE	Thessaloniki	2.32	97			P	Pn	00 59 58.3	+0.4
THE						AML	AML	01 00 44.0	
	comp=N,9731µm,1.5s								
THE						AML	AML	01 00 53.6	
	comp=E,3209µm,1.1s								
BAI	Bari	2.32	275	⇑	*i*	Pn	Pn	00 59 57.5	-0.4
SJES	Sjenica	2.32	1		*eP*	n	Pb	01 00 00.6	-1.5
SJES						eSn	Sb	01 00 30.0	-0.4
BARS	Barje	2.34	36		*eP*	n	Pn	01 00 00.0	+1.7
BARS	Barje	2.34	36		*eP*	n	Pg	01 00 14.4	+8.6
EVGI	Lefkada island	2.38	166			P	Pn	00 59 59.3	+0.5
EVGI	Lefkada island	2.38	166			P	Pn	00 59 59.4	+0.7
UPM	Unac-Piva	2.39	342	⇑	*i*	Pn	Pn	01 00 00.4	+1.3
UPM						eSn	Sn	01 00 29.0	+1.1
UPM	Unac-Piva	2.39	342	⇑	*i*	Pn	Pn	00 59 58.7	-0.4
UPM						*i* Sn	Sn	01 00 29.1	+1.1
PLE	Pljevlja	2.42	350	⇑	*i*	Pn	Pn	00 59 59.4	-0.1
PLE						*i* Sn	Sn	01 00 30.6	+1.9
HORT	Hortiatis	2.43	97			P	Pn	00 59 59.8	+0.3
HORT	Hortiatis	2.43	97			P	Pn	00 59 59.7	+0.2
HORT						AML	AML	01 00 51.6	
	comp=E,5592µm,1.9s								
HORT						AML	AML	01 00 54.2	
	comp=N,4721µm,1.0s								
HORT	Hortiatis	2.43	97		*eP*		Pn	01 00 00.2	+0.7
SELS	Selova	2.44	21		*eP*	n	Pn	01 00 01.0	+1.3
SELS						eSn	Sb	01 00 34.1	+0.3
BOSS	Bosilegrad	2.46	50		*eP*	n	Pn	01 00 01.4	+1.5
MATE	Matera	2.47	264	⇑		P	Pn	00 59 59.5	-0.5
MATE	Matera	2.47	264			P	Pn	00 59 59.5	+0.5
SG1	Sgolgore (BA)	2.47	269	⇑	*i*	Pn	Pn	00 59 59.5	-0.6
EVR	Evrytania	2.48	144			P	Pb	01 00 03.0	-1.8
EVR	Evrytania	2.48	144			P	Pb	01 00 02.9	-1.9
EVR						AML	AML	01 00 50.0	
	comp=N,24282µm,1.1s								
EVR						AML	AML	01 00 51.7	
	comp=E,17446µm,0.9s								
AST1	Astakos	2.55	159			P	Pn	01 00 02.5	+1.4
STON	Ston	2.55	320		*eP*	n	Pn	01 00 01.4	+0.3
STON						eSn	Sn	01 00 32.3	+0.7
STON	Ston	2.55	320	⇑	*i*	Pn	Pn	01 00 00.8	-0.3
STON						eSn	Sn	01 00 31.8	+0.1
STON	Ston	2.55	320		*i*	Pn	Pn	01 00 01.1	-0.1
STON						*i* Sn	Sn	01 00 31.7	+0.1
MAKR	Makrakomi, Fth	2.56	138			P	Pb	01 00 03.7	-2.4
VSK1	VASILIKIADES	2.57	169			P	Pn	01 00 01.7	+0.3
SOH	Sokhos	2.59	91			P	Pn	01 00 02.9	+1.2
IVAS	Ivanjica	2.64	3		*eP*	n	Pn	01 00 03.6	+1.2
AGG	Agios Georgios	2.65	135			P	Pn	01 00 04.8	+2.2
AGG	Agios Georgios	2.65	135			P	Pn	01 00 04.4	+1.8
AGG						AML	AML	01 01 01.3	
	comp=E,10147µm,1.1s								
AGG						AML	AML	01 01 04.8	
	comp=N,8799µm,1.2s								
AGG	Agios Georgios	2.65	135		*eP*		Pn	01 00 02.8	+0.2
AGG	Agios Georgios	2.65	135			P	Pn	01 00 04.8	+2.2
AGG	Agios Georgios	2.65	135				Pn	01 00 04.8	+2.2
KEF1	Kardakata, Kep	2.69	171			P	Pn	01 00 03.0	0.0
KEF4	Livadi, Kephal	2.70	172			P	Pn	01 00 03.2	0.0
RUDO	Rudo	2.71	351		*eP*	n	Pn	01 00 04.3	+1.0
PLG	Polygyros	2.73	101			P	Pn	01 00 04.7	+1.1
PLG	Polygyros	2.73	101			P	Pn	01 00 04.7	+1.1
PLG						AML	AML	01 00 54.1	
	comp=E,4467µm,0.9s								
PLG						AML	AML	01 00 56.3	
	comp=N,9850µm,1.4s								
KEF3	Kipouria, Keph	2.75	173			P	Pn	01 00 03.6	-0.2
LXRA	Lixouri, Kepha	2.76	172			P	Pn	01 00 03.9	-0.1
SRS	Serrai	2.77	85			P	Pn	01 00 05.2	+1.1
SRS	Serrai	2.77	85			P	Pn	01 00 05.2	+1.1
ARG2	Argostoli	2.79	171			P	Pn	01 00 04.5	+0.1
KEF2	Argostoli. Kep	2.80	171			P	Pn	01 00 04.5	-0.1
VLS	Valsamata	2.80	169			P	Pn	01 00 04.5	-0.1
VLS	Valsamata	2.80	169			P	Pn	01 00 04.5	-0.1
VLS						AML	AML	01 01 03.3	
	comp=N,9684µm,0.7s								
VLS						AML	AML	01 01 10.3	
	comp=E,8535µm,0.8s								
KFL	Anninata	2.90	167			P	Pn	01 00 06.2	+0.3
KFL	Anninata	2.90	167			P	Pn	01 00 06.1	+0.1
EFP	Efpalio	2.93	148			P	Pn	01 00 08.3	+2.0
EFP	Efpalio	2.93	148			P	Pn	01 00 08.7	+2.3
EFP						AML	AML	01 01 11.2	
	comp=N,19211µm,1.7s								
EFP						AML	AML	01 01 11.3	
	comp=E,12734µm,2.4s								
XOR	Xorichti	2.95	121			P	Pn	01 00 07.7	+1.1
XOR	Xorichti	2.95	121			P	Pn	01 00 07.6	+1.1
BBLS	Lazići	2.95	353		*eP*	n	Pn	01 00 08.3	+1.6
BBLS	Lazići	2.95	353	⇓	*i*	Pn	Pn	01 00 08.1	+1.4
BBLS						eSn	Sn	01 00 43.4	+1.8
VTS	Vitosha	2.98	55	⇑		P	Pn	01 00 08.5	+1.3
VTS				⇓		S	Sb	01 00 46.8	-2.7
VTS	Vitosha	2.98	55			P	Pn	01 00 08.5	+1.3
VTS	Vitosha	2.98	55				Pn	01 00 08.5	+1.3
NVR	Nevrokopi	2.99	81			P	Pn	01 00 08.3	+1.1
NVR						S	Sn	01 00 45.5	+3.0
	comp=E,5µm,1.7s								
NVR	Nevrokopi	2.99	81			P	Pn	01 00 08.6	+1.4
NVR						AML	AML	01 01 05.1	
	comp=N,9358µm,1.8s								
NVR						AML	AML	01 01 09.3	
	comp=E,7161µm,1.5s								
BOVS	Bovan	3.00	25		*eP*	n	Pb	01 00 10.6	-3.0
NEO	Neokhori	3.00	122			P	Pn	01 00 08.5	+1.1
NEO	Neokhori	3.00	122			P	Pn	01 00 08.4	+1.1
GRUS	Gruza	3.00	11		*eP*	n	Pn	01 00 09.5	+2.2
TIP	Timpagrande	3.01	235	⇑		P	Pn	01 00 07.1	-0.4
TIP	Timpagrande	3.01	235				Pn	01 00 07.1	-0.4
AXAR	Agios Charalam	3.02	135			P	Pn	01 00 10.1	+2.6
PAIG	Paliouri	3.03	108			P	Pn	01 00 08.2	+0.5
PAIG	Paliouri	3.03	108			P	Pn	01 00 08.0	+0.3
TRIZ	Trizonia	3.05	147			P	Pn	01 00 10.4	+2.4
KALE	Kalithea	3.06	146			P	Pn	01 00 10.4	+2.2
ZAPS	Zavoj	3.08	40		*eP*	n	Pn	01 00 10.6	+2.2
RLS	Riolos of Patr	3.11	157			P	Pn	01 00 10.2	+1.4
RLS	Riolos of Patr	3.11	157			P	Pn	01 00 10.1	+1.4
LAKA	Lakka	3.12	149			P	Pn	01 00 11.1	+2.1
OUR	Ouranopolis	3.14	100			P	Pn	01 00 10.3	+1.1
OUR	Ouranopolis	3.14	100			P	Pn	01 00 10.2	+1.1
OUR	Ouranopolis	3.14	100		*eP*		Pn	01 00 10.4	+1.3
DIVS	Divibare	3.16	1		*eP*	n	Pn	01 00 11.0	+1.4
DIVS	Divibare	3.16	1	⇓	*i*	Pn	Pn	01 00 10.5	+0.9
HAPS	Han Pijesak,Bl	3.23	347		*eP*	n	Pn	01 00 11.3	+0.7
HAPS	Han Pijesak,Bl	3.23	347	⇓	*i*	Pn	Pn	01 00 11.3	+0.7
HAPS						eSn	Sn	01 00 50.2	+1.7
SKIA	Skiathos	3.23	122			P	Pn	01 00 11.6	+1.1
SGRT	San Giovanni R	3.26	286				Pn	01 00 10.6	-0.3
DRO	Drossia	3.28	155			P	Pn	01 00 12.6	+1.4
DRO	Drossia	3.28	155			P	Pn	01 00 12.5	+1.4
DRO						AML	AML	01 01 22.0	
	comp=N,7598µm,0.8s								
DRO						AML	AML	01 01 26.8	
	comp=E,13193µm,1.1s								
LKR	Lokris	3.28	133			P	Pn	01 00 13.3	+2.1
LKR	Lokris	3.28	133			P	Pn	01 00 12.9	+1.7
RICI	Ricice	3.30	322		*i*	Pn	Pn	01 00 11.6	+0.2
RICI						Sn	Sn	01 00 51.6	+1.6
TRUS	Trudelj	3.30	6		*eP*	n	Pn	01 00 13.1	+1.7
ZAGS	Zajecar	3.34	30		*eP*	n	Pn	01 00 13.2	+1.3
KLV	Kalavryta, Ach	3.36	149			P	Pn	01 00 14.2	+1.9
KLV	Kalavryta, Ach	3.36	149			P	Pn	01 00 14.1	+1.9
KAVA	Kavala	3.47	88			P	Pn	01 00 14.8	+1.1
AOS	Alonnisos	3.50	119			P	Pn	01 00 14.7	+0.5
AOS	Alonnisos	3.50	119			P	Pn	01 00 14.5	+0.3
AOS	Alonnisos	3.50	119		*eP*		Pn	01 00 14.7	+0.5
PROD	Prodromos	3.52	138			P	Pn	01 00 15.7	+1.2
MRKA	Markates	3.59	127			P	Pn	01 00 17.1	+1.7
TEKS	Tekeris	3.62	355		*eP*	n	Pn	01 00 17.2	+1.3
TEKS	Tekeris	3.62	355	⇓	*i*	Pn	Pn	01 00 16.9	+1.0
TEKS						eSn	Sn	01 00 59.9	+1.9
THAS	Thassos island	3.65	94			P	Pn	01 00 16.4	+0.2
THAS	Thassos island	3.65	94			P	Pn	01 00 16.2	0.0
THAS						AML	AML	01 01 33.8	
	comp=N,3632µm,1.7s								
THAS						AML	AML	01 01 41.1	
	comp=E,1724µm,1.5s								
AMT	Artemida-Makis	3.67	157			P	Pn	01 00 18.1	+1.6
AMT	Artemida-Makis	3.67	157			P	Pn	01 00 18.2	+1.7
KUBS	Kucevo	3.70	20		*eP*	n	Pn	01 00 17.5	+0.6
PLD	Plovdiv	3.76	70		*eP*		Pn	01 00 19.1	+1.3
LOUT	Loutraki	3.77	145			P	Pn	01 00 19.9	+1.2
VILL	Villia	3.81	136			P	Pn	01 00 19.9	+1.5
TRIP	Tripoli	3.86	151			P	Pn	01 00 20.8	+1.6
BEO	Beograd	3.89	6		*eP*	n	Pn	01 00 19.2	-0.3
KYMI	Kymi, Euboea I	3.95	124			P	Pn	01 00 22.1	+1.8
KYMI	Kymi, Euboea I	3.95	124			P	Pn	01 00 21.8	+1.5
BAIL	Bailesti	3.98	38	⇑		P	Pn	01 00 21.8	+1.1
BAIL	Bailesti	3.98	38				Pn	01 00 21.8	+1.1
PUNG	Punghina	4.00	33	⇓		P	Pn	01 00 22.1	+1.1
PUNG	Punghina	4.00	33				Pn	01 00 22.1	+1.1
KIJV	Kijevo	4.03	321		*i*	Pn	Pn	01 00 22.0	+0.5
KIJV						Sn	Sn	01 01 09.6	+1.5
VLX	Vlachokerasia	4.04	151			P	Pn	01 00 24.2	+2.6
MDVR	Moldovita	4.06	18	⇓		P	Pn	01 00 22.9	+1.1
MDVR	Moldovita	4.06	18				Pn	01 00 22.9	+1.1
ITM	Ithomi	4.06	157			P	Pn	01 00 22.9	+1.0
ITM	Ithomi	4.06	157			P	Pn	01 00 22.9	+1.0
ITM	Ithomi	4.06	157		*eP*		Pn	01 00 22.4	+0.5
ITM	Ithomi	4.06	157				Pn	01 00 23.1	+1.2
MGRS	Mrkonjic Grad	4.06	330	⇑	*i*	Pn	Pn	01 00 22.7	+0.8
MGRS						eSn	Sn	01 01 08.7	-0.2
PAOL	Paolisi	4.07	273				Pn	01 00 22.7	+0.7
SKY	Skiros Island	4.10	119			P	Pn	01 00 24.4	+2.0
CEL	Celeste	4.11	231				Pn	01 00 21.9	-0.7
LIA	Limnos Island	4.14	103			P	Pn	01 00 23.6	+0.7
LIA	Limnos Island	4.14	103			P	Pn	01 00 23.7	+0.8
ATH	Athens Observa	4.16	134			P	Pn	01 00 24.8	+1.5
DJES	Djerdap	4.18	26		*eP*	n	Pn	01 00 25.6	+2.1
ZIRJ	Zirje	4.18	312		*i*	Pn	Pn	01 00 23.2	-0.3
ZIRJ						Sn	Sn	01 01 10.7	-1.2
KDZ	Kurdzhali	4.19	78		*eP*		Pn	01 00 24.2	+0.6
PTL	Penteli	4.19	132			P	Pn	01 00 25.5	+1.8
PTL	Penteli	4.19	132			P	Pn	01 00 25.4	+1.8
PTL						AML	AML	01 01 31.7	
	comp=E,2766µm,1.1s								
PTL						AML	AML	01 01 54.6	
	comp=N,3715µm,2.0s								
ATHU	Athens Univers	4.20	134			P	Pn	01 00 25.2	+1.4
DION	Dionisos Attik	4.21	131			P	Pn	01 00 25.6	+1.7
FRGS	Fruska Gora	4.22	359		*eP*	n	Pn	01 00 24.6	+0.5
FRGS	Fruska Gora	4.22	359	⇓	*i*	Pn	Pn	01 00 24.5	+0.5
RDO	Rodhopi	4.24	85			P	Pn	01 00 25.3	+1.0
RDO	Rodhopi	4.24	85			P	Pn	01 00 25.1	+0.8
RDO	Rodhopi	4.24	85		*eP*		Pn	01 00 25.4	+1.1
PLVB	Pleven	4.25	53	⇓		P	Pn	01 00 25.9	+1.4
PLVB	Pleven	4.25	53				Pn	01 00 25.9	+1.4
PYL	PYLOS	4.28	160			P	Pn	01 00 24.8	0.0
SMTH	Samothraki Isl	4.28	94			P	Pn	01 00 25.2	+0.3
SMTH	Samothraki Isl	4.28	94			P	Pn	01 00 25.4	+0.5
DID	Didima	4.28	142			P	Pn	01 00 25.3	+0.4
MORI	Morici	4.29	314		*i*	Pn	Pn	01 00 25.2	+0.3
MORI						Sn	Sn	01 01 15.1	+0.7
VLY	Voula,Athens	4.29	135			P	Pn	01 00 26.6	+1.5
VLY	Voula,Athens	4.29	135			P	Pn	01 00 26.4	+1.3
BLY	Banja Luka	4.31	333		*eP*	n	Pn	01 00 26.3	+1.0
BLY	Banja Luka	4.31	333	⇑	*i*	Pn	Pn	01 00 26.1	+0.8
BLY						eSn	Sn	01 01 14.3	-0.7
HERR	Herculane	4.34	24	⇓		P	Pn	01 00 27.1	+1.4
HERR	Herculane	4.34	24				Pn	01 00 27.1	+1.4
SRE	Strehaia	4.43	32	⇓		P	Pn	01 00 28.3	+1.4
SRE	Strehaia	4.43	32			P	Pn	01 00 28.4	+1.4
SRE	Strehaia	4.43	32				Pn	01 00 28.4	+1.4
VLAD	Vladila	4.50	46	⇓		P	Pn	01 00 29.5	+1.6
VLAD	Vladila	4.50	46				Pn	01 00 29.5	+1.6
BANR	Banloc	4.53	11	⇓		P	Pn	01 00 29.3	+1.0
BANR	Banloc	4.53	11				Pn	01 00 29.3	+1.0
KARY	Karystos	4.53	128			P	Pn	01 00 30.4	+2.1
GADA	Gvkgeada	4.60	97			P	Pn	01 00 30.1	+0.8
GADA	Gvkgeada	4.60	97		*eP*		Pn	01 00 30.7	+1.4
ALN	Alexandroupoli	4.63	89			P	Pn	01 00 30.6	+1.0
ALN	Alexandroupoli	4.63	89		*eP*		Pn	01 00 30.8	+1.2
ALN	Alexandroupoli	4.63	89			P	Pn	01 00 31.1	+1.4
ALN	Alexandroupoli	4.63	89				Pn	01 00 31.1	+1.4
INTR	Introdacqua	4.66	285				Pn	01 00 30.3	+0.2
ENEZ	Enez	4.72	90		*eP*		Pn	01 00 31.9	+1.0
DUGI	Dugi Otok	4.73	312		*i*	Pn	Pn	01 00 31.3	+0.3
DUGI						Sn	Sn	01 01 24.6	-0.7
BZS	Buzias	4.83	14	⇓		P	Pn	01 00 33.1	+0.6
BZS	Buzias	4.83	14			P	Pn	01 00 33.1	+0.6
BZS	Buzias	4.83	14				Pn	01 00 33.1	+0.6
ELND	Elena	4.86	64	⇑		P	Pn	01 00 34.6	+1.8
ELND	Elena	4.86	64				Pn	01 00 34.6	+1.8
SIGR	SIGRI	4.86	109		*eP*		Pn	01 00 34.0	+1.2
GZR	Gura Zlata	4.91	24	⇑		P	Pn	01 00 35.0	+1.3
GZR	Gura Zlata	4.91	24			P	Pn	01 00 35.0	+1.3
GZR	Gura Zlata	4.91	24				Pn	01 00 35.0	+1.3
ERIK	Erikli-Kesan	5.00	91		*eP*		Pn	01 00 36.8	+2.1
GELI	Tayfur-Gelibol	5.00	94		*eP*		Pn	01 00 36.6	+1.8
EZN	Ezine	5.00	101		*eP*		Pn	01 00 36.0	+1.2
COPA	Copaceanca	5.04	49	⇓		P	Pn	01 00 36.4	+1.1
COPA	Copaceanca	5.04	49				Pn	01 00 36.4	+1.1
UKOP	Uzunkopru-Edir	5.07	86		*eP*		Pn	01 00 37.8	+2.1
AQU	L'Aquila	5.10	288			P	Pn	01 00 36.7	+0.5
AQU	L'Aquila	5.10	288				Pn	01 00 36.7	+0.5
PRK	Paraskevi	5.14	107			P	Pn	01 00 39.7	+3.0
PRK	Paraskevi	5.14	107			P	Pn	01 00 39.5	+2.8
HUMR	Humele	5.16	44	⇑		P	Pn	01 00 38.4	+1.4
HUMR	Humele	5.16	44				Pn	01 00 38.4	+1.4
SERI	Serifos	5.17	135			P	Pn	01 00 37.8	+0.6
NVLJ	Novalja	5.20	316		*i*	Pn	Pn	01 00 37.5	0.0
NVLJ						Sn	Sn	01 01 35.7	-1.2
EDRB	Edirne	5.20	78		*eP*		Pn	01 00 39.2	+1.7
MOSL	Moslavina	5.22	335		*i*	Pn	Pn	01 00 37.9	+0.1
LPK	Lapseki	5.22	94		*eP*		Pn	01 00 39.2	+1.4
LOT	Lotru	5.31	31	⇑		P	Pn	01 00 40.4	+1.4
LOT	Lotru	5.31	31		*eP*		Pn	01 00 40.5	+1.4
LOT	Lotru	5.31	31				Pn	01 00 40.4	+1.4
MORH

VOJS Vojsko 6.73 321 *i* Pn **Pn 01 00 58.1 -0.5**
VOJS *e*Sn **Sn 01 02 13.2 -1.4**
comp=Z,3µm,1.6s
SOKA Soboth 6.75 330 *i* Pn **Pn 01 00 58.3 -0.5**
comp=Z,32nm,0.3s,SNR=74
SOKA *i* Sn **Sn 01 02 14.3 -0.8**
comp=Z,403nm,1.0s
BISRR Bisoca 6.76 45 ⇑P **Pn 01 01 01.8 +2.9**
BISRR Bisoca 6.76 45 P **Pn 01 01 01.8 +2.9**
ARMT Armutlu 6.79 90 *e*P **Pn 01 01 01.3 +2.0**
GRER 6.79 47 ⇑P **Pn 01 01 03.4 +4.0**
OBKA Obir 6.80 327 *e*Pn **Pn 01 00 59.2 -0.3**
OBKA Obir 6.80 327 *i* Pn **Pn 01 00 59.0 -0.5**
comp=Z,74nm,0.7s,SNR=35
OBKA *i* Sn **Sn 01 02 17.9 +1.5**
comp=Z,351nm,0.7s
MDNY Mudanya-Bursa 6.83 92 *e*P **Pn 01 01 01.8 +1.9**
AYDB Zeytinkoy-Aydi 6.84 113 *e*P **Pn 01 01 02.4 +2.2**
IDI Anoyia 6.86 144 Pn **Pn 01 00 59.5 -0.9**
comp=Z,1.4nm,0.3s,baz=341,slow=16,SNR=20
IDI Sn **Sn 01 02 12.9 -5.0**
comp=Z,6.2nm,0.3s,baz=291,slow=14,SNR=3.6
IDI LR LR 01 04 40.2
comp=Z,1µm,21.8s,baz=330,slow=47
IDI Anoyia 6.86 144 ⇓P **Pn 01 00 59.7 -0.7**
IDI Anoyia 6.86 144 *e*P **Pn 01 01 00.6 +0.2**
IDI Anoyia 6.86 144 **Pn 01 00 59.7 -0.7**
KLYT Kilyos 6.88 84 *e*P **Pn 01 01 02.9 +2.3**
ISK Istanbul-Kandi 6.90 86 *e*P **Pn 01 01 03.0 +2.1**
KAVV Kandilli-Istan 6.90 86 *e*P **Pn 01 01 03.1 +2.2**
KOSK Kos Island 6.90 125 *e*P **Pn 01 01 02.7 +1.8**
SRO2 Moca 6.91 351 *e*P **Pn 01 01 01.9 +0.9**
SRO2 Moca 6.91 351 *e*PN **Pn 01 01 01.9 +0.9**
ARCR ARCALIA 6.92 26 ⇑P **Pn 01 01 03.1 +2.0**
ARCR ARCALIA 6.92 26 **Pn 01 01 03.1 +2.0**
BODT Bodrum 6.92 122 *e*P **Pn 01 01 03.1 +1.9**
PLOR Plostina 6.93 43 ⇓P **Pn 01 01 03.4 +2.1**
PLOR Plostina 6.93 43 P **Pn 01 01 03.4 +2.1**
PLOR Plostina 6.93 43 **Pn 01 01 03.4 +2.1**
HRKL Herakleio 6.94 142 *e*P **Pn 01 01 00.9 -0.5**
HARR Harsova 6.97 55 ⇓P **Pn 01 01 03.9 +2.1**
HARR Harsova 6.97 55 P **Pn 01 01 03.9 +2.1**
HARR Harsova 6.97 55 **Pn 01 01 03.9 +2.1**
TLBR Topalu 6.97 56 ⇑P **Pn 01 01 04.3 +2.5**
VRI Vrincioaia 6.98 43 ⇓P **Pn 01 01 04.7 +2.8**
VRI Vrincioaia 6.98 43 P **Pn 01 01 04.7 +2.8**
VRI Vrincioaia 6.98 43 **Pn 01 01 04.7 +2.8**
PSZ Piszkesteto 6.98 360 ⇓P **Pn 01 01 02.4 +0.4**
PSZ Piszkesteto 6.98 360 *e*Pn **Pn 01 01 02.8 +0.7**
PSZ Piszkesteto 6.98 360 P **Pn 01 01 02.4 +0.4**
PSZ Piszkesteto 6.98 360 **Pn 01 01 02.3 +0.4**
PSZ Piszkesteto 6.98 360 **Pn 01 01 02.4 +0.4**
CASP Castiglione de 7.02 288 Pn **Pn 01 01 02.0 -0.6**
MANR Mangalia 7.02 63 ⇓P **Pn 01 01 04.8 +2.4**
MANR Mangalia 7.02 63 **Pn 01 01 04.8 +2.4**
GEMT Gemlik 7.05 91 *e*P **Pn 01 01 04.8 +1.9**
MFTR Murfatlar 7.05 60 ⇓P **Pn 01 01 05.1 +2.2**
MFTR Murfatlar 7.05 60 **Pn 01 01 05.1 +2.2**
ARSA Arzberg 7.06 335 *e*Pn **Pn 01 01 03.3 +0.1**
ARSA Arzberg 7.06 335 *i* Pn **Pn 01 01 03.6 +0.5**
comp=Z,46nm,0.5s,SNR=41
ARSA *i* Sn **Sn 01 02 26.1 +3.3**
comp=Z,314nm,1.0s
MANT Manisa 7.08 107 **Pn 01 01 05.8 +2.2**
KULA Kula-Manisa 7.15 107 *e*P **Pn 01 01 06.5 +2.2**
EFOR EFORIE 7.15 61 ⇑P **Pn 01 01 06.8 +2.6**
EFOR EFORIE 7.15 61 **Pn 01 01 06.8 +2.6**
SOP Sopron 7.17 341 *e*Pn **Pn 01 01 05.1 +0.6**
TIRR Tirgusor 7.17 58 ⇑P **Pn 01 01 06.2 +1.8**
TIRR Tirgusor 7.17 58 ⇑P **Pn 01 01 06.2 +1.8**
TIRR Tirgusor 7.17 58 *e*Pn **Pn 01 01 06.2 +1.8**
TIRR Tirgusor 7.17 58 P **Pn 01 01 06.2 +1.8**
TIRR Tirgusor 7.17 58 **Pn 01 01 06.2 +1.8**
YLV Yalova 7.17 90 *e*P **Pn 01 01 06.8 +2.1**
SIMA Simav-Kutahya 7.19 102 *e*P **Pn 01 01 06.8 +1.9**
BMR Baia Mare 7.20 20 ⇑P **Pn 01 01 06.9 +1.9**
BMR Baia Mare 7.20 20 P **Pn 01 01 06.9 +1.9**
BMR Baia Mare 7.20 20 **Pn 01 01 06.9 +1.9**
MYKA Terra Mystica 7.29 323 *i* Pn **Pn 01 01 05.6 -0.6**
comp=Z,53nm,0.9s,SNR=18
MYKA *i* Sn **Sn 01 02 28.4 0.0**
comp=Z,189nm,2.2s
DAT Datca 7.29 123 *e*P **Pn 01 01 08.1 +1.7**
TUDR 7.31 48 ⇑P **Pn 01 01 08.4 +1.9**
TUDR 7.31 48 **Pn 01 01 08.4 +1.9**
SILT Sile 7.34 85 *e*P **Pn 01 01 09.5 +2.6**
TOPG Topolog 7.34 55 ⇑P **Pn 01 01 08.6 +1.7**
CFR Carcaliu 7.35 52 ⇓P **Pn 01 01 07.7 +0.7**
CFR Carcaliu 7.35 52 P **Pn 01 01 07.7 +0.7**
CFR Carcaliu 7.35 52 **Pn 01 01 07.7 +0.7**
SCHL Schela 7.35 49 ⇓P **Pn 01 01 08.4 +1.4**
HRT Hereke 7.38 88 *e*P **Pn 01 01 09.4 +2.0**
TESR Tescani 7.39 39 ⇓P **Pn 01 01 09.5 +1.9**
TESR Tescani 7.39 39 **Pn 01 01 09.5 +1.9**
TRPA Tarpa 7.43 14 ⇑P **Pn 01 01 09.5 +1.4**
TRPA Tarpa 7.43 14 **Pn 01 01 09.5 +1.4**
BIZ Bicaz 7.47 34 ⇓P **Pn 01 01 11.1 +2.4**
BIZ Bicaz 7.47 34 **Pn 01 01 11.1 +2.4**
ZST Bratislava 7.53 345 *e*P **Pn 01 01 10.4 +0.9**
ZST *e* 01 02 30.6
ZST MLR MLR
comp=Z,6µm,5.8s
ZST Bratislava 7.53 345 *e*PN **Pn 01 01 10.3 +0.8**
ZST *e*SN **Sn 01 02 30.6 -3.7**
ZST *e*SG Sb 01 03 28.7 +29
ZST *e*LG Lg 01 04 00.3
KECS Kecovo 7.55 3 *e*P **Pn 01 01 11.9 +2.1**
KECS Kecovo 7.55 3 *e*PN **Pn 01 01 11.9 +2.1**
CONA Conrad Observa 7.57 339 *i* Pn **Pn 01 01 11.9 +1.8**
comp=Z,225nm,1.6s,SNR=44
CONA *i* Sn **Sn 01 02 38.6 +3.2**
comp=Z,594nm,1.7s
VYHS Vyhne 7.60 354 *e*P **Pn 01 01 11.7 +1.3**
VYHS MLR MLR
comp=Z,2µm,24.6s
VYHS Vyhne 7.60 354 *e*PN **Pn 01 01 11.7 +1.3**
VYHS *e*L L 01 04 19.2
VARL Varlezi 7.60 47 ⇑P **Pn 01 01 12.9 +2.5**
GIRR Girov 7.65 36 ⇓P **Pn 01 01 14.1 +3.0**
GIRR Girov 7.65 36 **Pn 01 01 14.1 +3.0**
MODS Modra-Piesok 7.67 347 *e*P **Pn 01 01 12.4 +0.9**
MODS *e* 01 02 39.3
MODS MLR MLR
comp=Z,2µm,2.2s
MODS Modra-Piesok 7.67 347 *e*PN **Pn 01 01 12.4 +0.9**
MODS *e*SN **Sn 01 02 39.3 +1.5**
MODS *e*LG Lg 01 03 48.9
MODS *e*L L 01 04 48.0
BURAR Bucovina Array 7.67 28 ⇑P **Pn 01 01 14.1 +2.6**
BURAR Bucovina Array 7.67 28 **Pn 01 01 14.1 +2.6**
KBA Koelnbreinsper 7.76 324 *e*Pn **Pn 01 01 12.5 -0.4**
KBA Koelnbreinsper 7.76 324 *i* Pn **Pn 01 01 12.2 -0.6**
comp=Z,125nm,1.1s,SNR=47
KBA *i* Sn **Sn 01 02 39.5 -0.7**
comp=Z,166nm,1.0s
TLCR 7.76 54 ⇑P **Pn 01 01 15.3 +2.6**
TLCR 7.76 54 P **Pn 01 01 15.3 +2.6**
TLCR 7.76 54 **Pn 01 01 15.2 +2.6**
SMOL Smolenice 7.78 348 *e*P **Pn 01 01 14.6 +1.6**
SMOL MLR MLR
comp=Z,600nm,2.2s
SMOL Smolenice 7.78 348 *e*PN **Pn 01 01 14.6 +1.6**
KARP Karpathos 7.83 131 **Pn 01 01 15.7 +2.0**
UZH Uzhgorod 7.87 11 *i* P **Pn 01 01 15.4 +1.2**
UZH *e*S **Sn 01 02 45.3 +2.7**
UZH MLR MLR
comp=N,900nm,12.0s
UZH MLR MLR
comp=E,1µm,12.0s
UZH MLR MLR
comp=Z,500nm,12.0s
ABTA Abfaltersbach 7.90 320 *i* Pn **Pn 01 01 13.8 -1.0**
comp=Z,86nm,0.6s,SNR=56
ABTA *i* Sn **Sn 01 02 44.9 +1.3**
comp=Z,677nm,1.0s
MOA Molln 8.01 331 *e*Pn **Pn 01 01 16.5 +0.3**
MOA *e*Sn **Sn 01 02 47.4 +1.3**
MOA Molln 8.01 331 *i* Pn **Pn 01 01 16.4 +0.2**
comp=Z,68nm,0.7s,SNR=52
MOA *i* Sn **Sn 01 02 48.3 +2.2**
comp=Z,35nm,0.4s
VASR Vaslui 8.05 42 ⇓P **Pn 01 01 18.0 +1.5**

JAVC Velka Javorina 8.08 349 *e*PN **Pn 01 01 18.8 +1.7**
JAVC *e*SN **Sn 01 02 49.5 +1.6**
KOLS Kolonicke sedl 8.16 11 *e*P **Pn 01 01 20.7 +2.5**
KOLS MLR MLR
comp=Z,3µm,14.8s
KOLS Kolonicke sedl 8.16 11 *e*PN **Pn 01 01 20.7 +2.5**
KOLS *e*L L 01 04 59.1
LEOM Leova 8.17 45 ⇑P **Pn 01 01 19.6 +1.3**
LEOM Leova 8.17 45 P **Pn 01 01 19.6 +1.3**
LEOM Leova 8.17 45 **Pn 01 01 19.6 +1.3**
SALO Salr 8.31 307 Pn **Pn 01 01 18.9 -1.3**
PGF Pioggiola 8.34 285 *e*P **Pn 01 01 20.7 0.0**
PGF *e*Sn Sn 01 02 43.3 -11
comp=Z,113nm,0.9s
PGF Pioggiola 8.34 285 P **Pn 01 01 20.7 0.0**
PGF Pioggiola 8.34 285 **Pn 01 01 20.7 0.0**
PGF Sn 01 02 43.3 -11
MSSA Maissana 8.39 297 Pn **Pn 01 01 20.3 -1.1**
KRUC Moravsky 8.50 344 *e*PN **Pn 01 01 24.3 +1.5**
KRUC *e*SN **Sn 01 02 57.5 -0.6**
RJOB Jochberg 8.51 325 *e*Pn **Pn 01 01 22.6 -0.3**
RJOB *e*Sn **Sn 01 02 58.0 -0.4**
MDUB Mudurnu 8.57 89 Pn **Pn 01 01 25.9 +2.0**
WTTA Wattenberg 8.69 319 *e*Pn **Pn 01 01 25.8 +0.2**
WTTA *e*Sn **Sn 01 03 03.3 +0.1**
WTTA Wattenberg 8.69 319 *i* Pn **Pn 01 01 26.0 +0.4**
comp=Z,122nm,0.4s,SNR=90
WTTA *i* Sn **Sn 01 03 02.6 -0.5**
comp=Z,836nm,1.0s
VRAC Vranov 8.70 345 Pn **Pn 01 01 26.0 +0.5**
comp=Z,1.3nm,0.3s,baz=169,slow=13,SNR=33
VRAC Sn **Sn 01 02 58.3 -4.6**
comp=Z,1.0nm,0.3s,baz=242,slow=15,SNR=0.8
VRAC LR LR 01 05 08.1
comp=Z,2µm,20.6s,baz=172,slow=40
VRAC Vranov 8.70 345 *e*PN **Pn 01 01 26.6 +1.1**
VRAC *e*SN **Sn 01 03 03.1 +0.2**
VRAC Vranov 8.70 345 ⇓P **Pn 01 01 26.7 +1.2**
VRAC Vranov 8.70 345 P **Pn 01 01 26.0 +0.5**
VRAC Vranov 8.70 345 **Pn 01 01 26.7 +1.2**
MILM Milestii Mici 8.76 44 ⇓P **Pn 01 01 28.2 +1.9**
MILM Milestii Mici 8.76 44 **Pn 01 01 28.2 +1.9**
ISP Isparta 8.77 107 P **Pn 01 01 28.8 +2.2**
ISP Isparta 8.77 107 Pn **Pn 01 01 30.0 +3.4**
ISP Isparta 8.77 107 Pn **Pn 01 01 28.8 +2.2**
WATA Walderalm 8.77 320 *i* Pn **Pn 01 01 26.7 0.0**
comp=Z,494nm,0.9s,SNR=215
WATA *i* Sn **Sn 01 03 05.7 +0.6**
comp=Z,893nm,1.1s
KIS Kishinev 8.81 44 *e*P **Pn 01 01 30.0 +3.0**
comp=Z,430nm,1.6s
KIS Kishinev 8.81 44 *i* PP Pn 01 01 36.0 +9.0
KIS *i* S **Sn 01 03 10.0 +4.3**
KIS *i* Li 01 03 36.0
KIS *e*LQ LQ 01 03 51.0
KIS *i* RQ 01 04 50.0
KIS LRM MLR 01 05 24.0
comp=Z,4µm,14.0s
KIS Kishinev 8.81 44 *e*P **Pn 01 01 30.0 +3.0**
KIS *i* S **Sn 01 03 10.0 +4.3**
KIS pmax pmax
comp=Z,430nm,1.6s
KIS MLR MLR
comp=Z,4µm,14.0s
KIS MLR MLR
comp=N,7µm,10.0s
ELL Elmali 8.83 115 P **Pn 01 01 30.2 +2.7**
ELL Elmali 8.83 115 Pn **Pn 01 01 30.2 +2.7**
SQTA Sankt Quirin 8.88 318 *i* Pn **Pn 01 01 28.2 +0.1**
comp=N,152nm,0.7s,SNR=110
SQTA *i* Sn **Sn 01 03 08.9 +1.3**
comp=N,106nm,0.6s
TREC Trest 8.93 341 *e*P **Pn 01 01 30.5 +1.8**
TREC MLR MLR
comp=Z,5µm,11.1s
TREC Trest 8.93 341 *e*PN **Pn 01 01 30.5 +1.8**
TREC AMS AMS 01 05 20.0
comp=Z,5µm,11.1s
OKC Ostrava-Krasne 8.99 353 *e*P **Pn 01 01 31.7 +2.2**
OKC MLR MLR
comp=Z,3µm,11.9s
OKC Ostrava-Krasne 8.99 353 *e*PN **Pn 01 01 31.7 +2.2**
OKC AMS AMS 01 06 10.0
comp=Z,3µm,11.9s
FETA Feichten 9.00 316 *i* Pn **Pn 01 01 29.0 -0.8**
comp=Z,84nm,0.9s,SNR=47
FETA *i* Sn **Sn 01 03 11.3 +0.7**
comp=Z,102nm,0.9s
MORC Moravsky Berou 9.00 350 *e*PN **Pn 01 01 30.8 +1.1**
MORC *e*SN **Sn 01 03 09.9 -0.5**
MORC Moravsky Berou 9.00 350 P **Pn 01 01 30.5 +0.8**
MORC Moravsky Berou 9.00 350 Pn **Pn 01 01 30.4 +0.8**
FUORN Ofenpass-Fuorn 9.01 312 Pn **Pn 01 01 30.4 +0.4**
MOTA Moosalm 9.02 318 *i* Pn **Pn 01 01 29.6 -0.4**
comp=Z,425nm,1.0s,SNR=152
MOTA *i* Sn **Sn 01 03 10.9 -0.1**
comp=Z,2µm,1.9s
GEC2 GERESS Array S 9.06 333 *e*Pn **Pn 01 01 29.8 -0.8**
GEC2 GERESS Array S 9.06 333 Pn **Pn 01 01 30.0 -0.6**
GERES GERESS Array B 9.06 333 Pn **Pn 01 01 29.9 -0.6**
comp=Z,2.1nm,0.3s,baz=153,slow=13,SNR=108
GERES Sn **Sn 01 03 07.5 -4.5**
baz=141,slow=17,SNR=1.0
PART Garmisch-Parte 9.11 319 *e*Pn **Pn 01 01 31.4 +0.1**
PART *e*Sn **Sn 01 03 10.2 -3.0**
ZUGS Zugspitze, Sch 9.13 318 *e*Pn **Pn 01 01 31.6 -0.1**
ZUGS *e*Sn **Sn 01 03 10.3 -3.6**
OJC Ojcow 9.28 359 *e*P **Pn 01 01 35.8 +2.3**
OJC Ojcow 9.28 359 P **Pn 01 01 33.9 +0.4**
OJC Ojcow 9.28 359 Pn **Pn 01 01 33.9 +0.4**
RETA Reutte 9.28 318 *i* Pn **Pn 01 01 32.9 -0.7**
comp=Z,59nm,0.6s,SNR=25
RETA *i* Sn **Sn 01 03 18.7 +1.3**
comp=Z,302nm,1.1s
DAVOX Davos/Dischmat 9.32 312 Pn **Pn 01 01 33.6 -0.6**
comp=Z,2.9nm,0.3s,baz=125,slow=14,SNR=76
DAVOX Sn **Sn 01 03 15.8 -2.7**
comp=Z,4.0nm,0.3s,baz=261,slow=21,SNR=3.8
DAVOX LR LR 01 06 01.6
comp=Z,690nm,18.4s,baz=228,slow=44
LVV L'vov 9.34 17 *e*P **Pn 01 01 37.5 +3.3**
LVV *e*S **Sn 01 03 25.5 +6.9**
LVV MLR MLR
comp=Z,4µm,10.0s
KHC Kasperske Hory 9.34 333*c* *i*P **Pn 01 01 33.7 -0.7**
KHC pmax pmax
comp=Z,227nm,1.7s
KHC Kasperske Hory 9.34 333 *e*PN **Pn 01 01 34.2 -0.2**
KHC *e*SN **Sn 01 03 18.6 -0.3**
KHC AMS AMS 01 05 50.0
comp=Z,4µm,8.2s
KHC Kasperske Hory 9.34 333 Pn **Pn 01 01 34.1 -0.3**
BE1 Monatshausen 9.35 321 *e*Pn **Pn 01 01 33.5 -1.0**
SORM Soroca 9.37 37 ⇓P **Pn 01 01 36.7 +2.0**
SORM Soroca 9.37 37 P **Pn 01 01 36.7 +2.0**
SORM Soroca 9.37 37 **Pn 01 01 36.7 +2.0**
TUE Stuetta 9.45 309 Pn **Pn 01 01 35.0 -1.0**
FUR Furstenfeldbru 9.50 322 *e*Pn **Pn 01 01 35.1 -1.5**
WET Wettzell 9.60 331 *e*Pn **Pn 01 01 35.8 -2.1**
WET *e*L L 01 05 40.6
comp=Z,2µm,23.1s
DAVA Damuels 9.62 315 *e*Pn **Pn 01 01 37.1 -1.1**
DAVA Damuels 9.62 315 *i* Pn **Pn 01 01 37.5 -0.7**
comp=Z,92nm,0.8s,SNR=46
DAVA *i* Sn **Sn 01 03 26.0 +0.2**
comp=Z,701nm,1.6s
GOPC GO Pecny, Ondr 9.68 340 *e*P **Pn 01 01 40.5 +1.6**
GOPC GO Pecny, Ondr 9.68 340 *e*PN **Pn 01 01 40.5 +1.6**
PBCC Pribram 9.69 336 *e*PN **Pn 01 01 40.1 +1.0**
SBF Sospel 9.70 292 *e*P **Pn 01 01 39.7 +0.4**
SBF *e*Sn Sn 01 03 15.3 -12
comp=Z,78nm,0.7s
SBF Sospel 9.70 292 P **Pn 01 01 39.7 +0.4**
SBF Sospel 9.70 292 **Pn 01 01 39.7 +0.4**
SBF Sn 01 03 15.3 -12
UBR Ueberruh 9.74 317 *e*Pn **Pn 01 01 38.3 -1.7**
DPC Dobruska-Polom 9.75 346 *e*P **Pn 01 01 41.3 +1.4**
DPC MLR MLR
comp=Z,5µm,11.8s
DPC Dobruska-Polom 9.75 346 *e*PN **Pn 01 01 41.3 +1.4**
DPC AMS AMS 01 06 00.0
comp=Z,5µm,11.8s
KEST Kesra 9.81 241 Pn **Pn 01 01 41.1 +0.3**
comp=Z,0.5nm,0.3s,baz=293,slow=2.7,SNR=21

PRU Pruhonice 9.81 339 *e*P **Pn 01 01 41.5 +0.8**
PRU MLR MLR
comp=Z,5µm,9.5s
PRU Pruhonice 9.81 339 *e*PN **Pn 01 01 41.5 +0.8**
PRU AMS AMS 01 06 00.0
comp=Z,5µm,9.5s
UPC Upice 9.95 345 *e*P **Pn 01 01 44.8 +2.1**
UPC MLR MLR
comp=Z,4µm,10.5s
UPC Upice 9.95 345 *e*PN **Pn 01 01 44.8 +2.1**
UPC AMS AMS 01 06 20.0
comp=Z,4µm,10.5s
OSTC Ostas 9.96 346 *e*PN **Pn 01 01 45.0 +2.2**
OSTC AMS AMS 01 06 00.0
comp=Z,4µm,11.8s
CHVC Chvalec 10.02 346 *e*PN **Pn 01 01 45.2 +1.5**
CHVC AMS AMS 01 06 20.0
comp=Z,4µm,10.6s
FRF La Foret Royal 10.20 289 *e*P **Pn 01 01 47.1 +1.0**
FRF *e*Sn Sn 01 03 27.7 -12
comp=Z,46nm,0.8s
FRF La Foret Royal 10.20 289 P **Pn 01 01 47.1 +1.0**
FRF La Foret Royal 10.20 289 **Pn 01 01 47.1 +1.0**
FRF Sn 01 03 27.7 -12
NORI Noerdlinger Ri 10.21 323 *e*Pn **Pn 01 01 44.6 -1.6**
KSP Ksiaz 10.22 347 *e*P **Pn 01 01 47.8 +1.4**
LMR La Mourre 10.26 288 *e*P **Pn 01 01 46.6 -0.3**
LMR *e*Sn Sn 01 03 29.2 -12
comp=Z,11nm,0.5s
LMR La Mourre 10.26 288 P **Pn 01 01 46.6 -0.3**
LMR La Mourre 10.26 288 **Pn 01 01 46.6 -0.3**
LMR Sn 01 03 29.2 -12
ROTZ Rotzenmuhle 10.36 331 *e*Pn **Pn 01 01 46.2 -2.1**
MBDF Montbardon 10.38 296 *e*P **Pn 01 01 48.4 -0.4**
MBDF *e*Sn Sn 01 03 31.8 -13
comp=Z,97nm,0.8s
MBDF Montbardon 10.38 296 P **Pn 01 01 48.4 -0.4**
MBDF Montbardon 10.38 296 **Pn 01 01 48.4 -0.4**
MBDF Sn 01 03 31.8 -13
BR131 Keskin Array S 10.53 92*d*e P **Pn 01 01 52.6 +1.8**
BR131 Keskin Array S 10.53 92 Pn **Pn 01 01 52.2 +1.4**
BRTR Keskin Array B 10.53 92 Pn **Pn 01 01 52.5 +1.6**
comp=Z,0.4nm,0.3s,baz=270,slow=12,SNR=19
BRTR LR LR 01 06 48.0
comp=Z,1µm,18.4s,baz=272,slow=43
BNI Bardonecchia 10.54 297 P **Pn 01 01 49.9 -1.1**
BNI Bardonecchia 10.54 297 Pn **Pn 01 01 49.9 -1.1**
MANZ Manzenberg 10.58 331 *e*L L 01 06 06.7
comp=Z,2µm,23.7s
SENIN Lac Senin/Sane 10.64 305 Pn **Pn 01 01 50.6 -1.7**
LPG La Plagne 10.64 300 *e*P **Pn 01 01 53.0 +0.5**
LPG *e*Sn Sn 01 03 37.8 -13
comp=Z,266nm,0.8s
LPG La Plagne 10.64 300 P **Pn 01 01 53.0 +0.5**
LPG La Plagne 10.64 300 **Pn 01 01 53.0 +0.5**
LPG Sn 01 03 37.8 -13
LPL La Plagne 10.66 300 *e*P **Pn 01 01 50.5 -2.2**
LPL *e*Sn Sn 01 03 38.4 -13
comp=Z,176nm,0.6s
LPL La Plagne 10.66 300 P **Pn 01 01 50.5 -2.2**
LPL La Plagne 10.66 300 **Pn 01 01 50.5 -2.2**
LPL Sn 01 03 38.4 -13
NKC Novy Kostel 10.67 333 *e*P **Pn 01 01 53.4 +0.9**
NKC Novy Kostel 10.67 333 *e*PN **Pn 01 01 53.4 +0.9**
GRA1 Grafenberg Arr 10.68 328 Pn **Pn 01 01 50.9 -1.8**
GRF Grafenberg Arr 10.68 328 *e*L L 01 06 27.7
comp=Z,1µm,28.5s
GRF Grafenberg Arr 10.68 328 P **Pn 01 01 50.9 -1.8**
BRG Berggiesshubel 10.77 339 *i* P **Pn 01 01 54.1 +0.2**
comp=Z,67nm,1.8s
BRG *i* 01 05 26.1
comp=Z,168nm,1.7s
comp=N,3µm,9.8s
comp=E,5µm,16.4s
comp=Z,3µm,9.8s
BEL Belsk 10.92 3 *e*P Pn 01 02 01.9 +6.1
SMRF Simiane la Rot 11.04 291 *e*P **Pn 01 01 58.6 +1.0**
SMRF *e*Sn Sn 01 03 47.0 -13
comp=Z,25nm,0.8s
SMRF Simiane la Rot 11.04 291 **Pn 01 01 58.6 +1.0**
SMRF Sn 01 03 47.0 -13
ORIF Oris-en-Rattie 11.05 296 *e*P **Pn 01 01 57.0 -0.8**
ORIF *e*Sn Sn 01 03 48.0 -13
comp=Z,45nm,0.6s
ORIF *e*R
comp=Z,3µm,21.8s
ORIF Oris-en-Rattie 11.05 296 P **Pn 01 01 57.0 -0.8**
ORIF Oris-en-Rattie 11.05 296 **Pn 01 01 57.0 -0.8**
ORIF Sn 01 03 48.0 -13
BFO Black Forest 11.08 316 *e*L L 01 06 12.0
comp=Z,905nm,22.5s
BFO Black Forest 11.08 316 P **Pn 01 01 56.0 -2.2**
BFO Black Forest 11.08 316 Pn **Pn 01 01 56.0 -2.2**
CLL Collm 11.43 338 *e*Pn **Pn 01 02 04.0 +1.2**
comp=Z,92nm,1.5s
CLL *e*Pg 01 02 55.0
CLL *e* 01 03 44.0
CLL *e*Sn Sn 01 03 56.0 -14
CLL *e* 01 04 07.0
CLL *e* 01 04 37.0
CLL *e*Sb 01 04 48.0
CLL *e*Sg 01 05 28.0
CLL Lmax 01 07 00.0
CLL Collm 11.43 338 *e*P **Pn 01 02 04.0 +1.2**
CLL pmax pmax
comp=Z,92nm,1.5s
CLL Collm 11.43 338 Pn **Pn 01 02 03.6 +0.8**
CABF La Chapelle 11.50 304 *e*P **Pn 01 02 01.7 -2.3**
CABF *e*Sn Sn 01 03 58.5 -13
comp=Z,82nm,0.7s
CABF La Chapelle 11.50 304 P **Pn 01 02 01.7 -2.3**
CABF La Chapelle 11.50 304 **Pn 01 02 01.7 -2.3**
CABF Sn 01 03 58.5 -13
HINF Hinteralfeld 11.61 311 *e*P **Pn 01 02 04.4 -1.0**
HINF *e*Sn Sn 01 04 00.6 -14
comp=Z,42nm,0.6s
HINF Hinteralfeld 11.61 311 P **Pn 01 02 04.4 -1.0**
HINF Hinteralfeld 11.61 311 **Pn 01 02 04.4 -1.0**
HINF Sn 01 04 00.6 -14
ECH Echery 11.65 313 P **Pn 01 02 04.4 -1.6**
ECH Echery 11.65 313 Pn **Pn 01 02 04.4 -1.6**
CDF Champ du Feu 11.70 314 *e*P **Pn 01 02 05.3 -1.4**
CDF *e*Sn Sn 01 04 02.2 -14
comp=Z,49nm,0.7s
CDF Champ du Feu 11.70 314 P **Pn 01 02 05.3 -1.4**
CDF Champ du Feu 11.70 314 **Pn 01 02 05.3 -1.4**
CDF Sn 01 04 02.2 -14
AKASG Malin Array Be 11.71 30 Pn **Pn 01 02 06.5 -0.2**
comp=Z,1.0nm,0.3s,baz=215,slow=13,SNR=61
AKASG LR LR 01 07 08.7
comp=Z,3µm,18.9s,baz=225,slow=40
AKBB Malin Array Si 11.71 30*d* *i*P **Pn 01 02 07.4 +0.7**
AKBB Malin Array Si 11.71 30 Pn **Pn 01 02 07.3 +0.7**
VIVF Saint-Julien-l 11.86 294 *e*P **Pn 01 02 07.5 -1.3**
VIVF *e*Sn Sn 01 04 06.6 -14
comp=Z,57nm,1.2s
VIVF Saint-Julien-l 11.86 294 P **Pn 01 02 07.5 -1.3**
VIVF Saint-Julien-l 11.86 294 **Pn 01 02 07.5 -1.3**
VIVF Sn 01 04 06.6 -14
HAU Haudompre 12.00 311 *e*P **Pn 01 02 09.5 -1.2**
HAU *e*Sn Sn 01 04 09.3 -15
comp=Z,154nm,0.7s
HAU *e*R
comp=Z,2µm,16.0s
HAU Haudompre 12.00 311 P **Pn 01 02 09.5 -1.2**
HAU Haudompre 12.00 311 **Pn 01 02 09.5 -1.2**
HAU Sn 01 04 09.3 -15
SSB Saint Sauveur 12.06 296 P **Pn 01 02 08.7 -2.9**
SSB Saint Sauveur 12.06 296 Pn **Pn 01 02 08.7 -2.9**
CSS Mathiatis 12.13 115 Pn **Pn 01 02 12.0 -0.6**
LASF Ste Croix 12.28 290 *e*P **Pn 01 02 14.8 +0.3**
LASF *e*Sn Sn 01 04 17.1 -14
comp=Z,5.4nm,0.6s
LASF Ste Croix 12.28 290 **Pn 01 02 14.8 +0.3**
LASF Sn 01 04 17.1 -14
RUE Ruedersdorf 12.29 342 *e*P **Pn 01 02 16.3 +1.7**
SET Setif 12.32 252 P **Pn 01 02 18.0 +2.8**
GKP Gorka Klasztor 12.47 352 *e*P **Pn 01 02 19.6 +2.6**
PAGF Fort de Pagny 12.64 312 *e*P **Pn 01 02 19.2 -0.2**
baz=128
PAGF *e*Sn Sn 01 04 25.2 -14
comp=Z,47nm,0.7s
PAGF Fort de Pagny 12.64 312 **Pn 01 02 19.2 -0.2**

PAGF Sn 01 04 25.2 -14
SFTF Sexfontaines 12.86 309 *e*P **Pn 01 02 22.1 -0.3**
baz=130
SFTF *e*Sn Sn 01 04 30.4 -14
comp=Z,64nm,0.7s
SFTF Sexfontaines 12.86 309 Pn 01 02 22.1 -0.3
SFTF Sn 01 04 30.4 -14
SMF Signal de Mont 12.95 301 *e*P **Pn 01 02 20.6 -3.0**
SMF *e*Sn Sn 01 04 32.4 -15
comp=Z,50nm,0.6s
SMF Signal de Mont 12.95 301 P **Pn 01 02 20.6 -3.0**
SMF Signal de Mont 12.95 301 Pn 01 02 20.6 -3.0
SMF Sn 01 04 32.4 -15
MEZF Maizieres J'vi 12.99 311 *e*P **Pn 01 02 23.9 -0.4**
baz=137
MEZF *e*Sn Sn 01 04 33.4 -15
comp=Z,43nm,0.8s
MEZF Maizieres J'vi 12.99 311 Pn 01 02 23.9 -0.4
MEZF Sn 01 04 33.4 -15
WLF Walferdange 13.03 317 Pn **Pn 01 02 23.6 -1.2**
WLF PnPn **P 01 02 31.5 -3.5**
WLF PbPb **PbPb 01 03 05.7 -1.9**
WLF Walferdange 13.03 317 P **Pn 01 02 24.1 -0.7**
WLF Walferdange 13.03 317 Pn **Pn 01 02 24.1 -0.7**
LOR Lormes 13.16 304 *e*P **Pn 01 02 24.5 -2.1**
baz=121
LOR *e*Sn Sn 01 04 36.4 -16
comp=Z,46nm,0.5s
LOR *e*R
comp=Z,3µm,21.2s
LOR Lormes 13.16 304 P **Pn 01 02 24.5 -2.1**
LOR Lormes 13.16 304 Pn 01 02 24.5 -2.1
LOR Sn 01 04 36.4 -16
SUW Suwalki 13.26 8 *e*P **Pn 01 02 29.8 +1.9**
SSF Saint Saulge 13.31 303 *e*P **Pn 01 02 26.0 -2.6**
SSF *e*Sn Sn 01 04 41.6 -14
comp=Z,17nm,0.5s
SSF Saint Saulge 13.31 303 P **Pn 01 02 26.0 -2.6**
SSF Saint Saulge 13.31 303 Pn 01 02 26.0 -2.6
SSF Sn 01 04 41.6 -14
AVF Avril sur Loir 13.31 302 *e*P **Pn 01 02 26.2 -2.4**
AVF *e*Sn Sn 01 04 41.1 -15
comp=Z,58nm,0.9s
AVF Avril sur Loir 13.31 302 P **Pn 01 02 26.2 -2.4**
AVF Avril sur Loir 13.31 302 Pn 01 02 26.2 -2.4
AVF Sn 01 04 41.1 -15
MTLF Montolieu 13.37 286 *e*P **Pn 01 02 30.2 +0.8**
MTLF *e*Sn Sn 01 04 43.3 -14
comp=Z,0.2nm,0.2s
MTLF Montolieu 13.37 286 P **Pn 01 02 30.2 +0.8**
MTLF Montolieu 13.37 286 Pn 01 02 30.2 +0.8
MTLF Sn 01 04 43.3 -14
ANN Anapa 13.40 67 P **P 01 02 37.5 -1.6**
ANN *e*S Sn 01 05 08.2 +10
ANN pmax pmax
comp=Z,72nm,1.5s
BHOU Houvegnez 13.53 319 Pn **Pn 01 02 28.7 -2.9**
BHOU PnPn **P 01 02 37.7 -2.9**
BHOU x x 01 02 57.9
BGF Bois d'Agland 13.56 300 *e*P **Pn 01 02 29.9 -2.2**
BGF *e*Sn Sn 01 04 47.0 -15
comp=Z,70nm,0.7s
BGF Bois d'Agland 13.56 300 P **Pn 01 02 29.9 -2.2**
BGF Bois d'Agland 13.56 300 Pn 01 02 29.9 -2.2
BGF Sn 01 04 47.0 -15
KLNR Kaliningrad 13.68 1⇓ *e*P **Pn 01 02 34.7 +1.2**
CAF Calviac 13.69 293 *e*P **Pn 01 02 34.1 +0.3**
CAF *e*Sn Sn 01 04 50.4 -15
comp=Z,12nm,0.8s
CAF Calviac 13.69 293 P **Pn 01 02 34.1 +0.3**
CAF Calviac 13.69 293 Pn 01 02 34.1 +0.3
CAF Sn 01 04 50.4 -15
BSTI Sart Tilman 13.89 319 Pn **Pn 01 02 35.3 -1.2**
BSTI x x 01 03 04.2
BSTI PbPb **PbPb 01 03 17.9 -4.3**
TCF Toulx Ste Croi 13.90 299 *e*P **Pn 01 02 33.7 -3.0**
TCF *e*Sn Sn 01 04 55.7 -15
comp=Z,28nm,0.9s
TCF Toulx Ste Croi 13.90 299 P **Pn 01 02 33.7 -3.0**
TCF Toulx Ste Croi 13.90 299 Pn 01 02 33.7 -3.0
TCF Sn 01 04 55.7 -15
BCLA Clavier 13.93 318 Pn **Pn 01 02 35.5 -1.5**
BCLA PnPn **P 01 02 43.3 -1.7**
BCLA x x 01 02 47.4
BCLA x x 01 02 51.0
BCLA PbPb **PbPb 01 03 21.3 -1.5**
HYF Humbligny 13.94 303 *e*P **Pn 01 02 36.7 -0.4**
HYF *e*Sn Sn 01 04 56.0 -15
HYF Humbligny 13.94 303 Pn 01 02 36.7 -0.4
HYF Sn 01 04 56.0 -15
BEBN Eben Emael 13.97 320 Pn **Pn 01 02 36.4 -1.2**
BEBN x x 01 02 48.5
BEBN x x 01 03 07.5
BEBN PbPb **PbPb 01 03 20.2 -3.4**
GIVF Givet 13.98 316 *e*P **Pn 01 02 38.0 +0.2**
GIVF *e*Sn Sn 01 04 56.8 -16
comp=Z,35nm,0.9s
GIVF Givet 13.98 316 P **Pn 01 02 38.0 +0.2**
GIVF Givet 13.98 316 Pn 01 02 38.0 +0.2
GIVF Sn 01 04 56.8 -16
BGES Gesves 14.01 317 Pn **Pn 01 02 37.0 -1.2**
BGES PnPn **P 01 02 44.7 -1.3**
BGES x x 01 02 56.6
DOU Dourbes 14.10 316 Pn **Pn 01 02 38.5 -0.9**
DOU PnPn **P 01 02 44.8 -2.1**
DOU x x 01 02 49.4
DOU x x 01 03 03.7
RJF Les Rejaudoux 14.14 294 *e*P **Pn 01 02 39.8 -0.1**
RJF *e*Sn Sn 01 05 00.9 -15
comp=Z,9.9nm,0.6s
RJF *e*R
comp=Z,2µm,18.3s
RJF Les Rejaudoux 14.14 294 P **Pn 01 02 39.8 -0.1**
RJF Les Rejaudoux 14.14 294 Pn 01 02 39.8 -0.1
RJF Sn 01 05 00.9 -15
BAIF Baives 14.29 315 *e*P **Pn 01 02 41.2 -0.7**
BAIF *e*Sn Sn 01 05 04.4 -15
comp=Z,183nm,1.6s
BAIF Baives 14.29 315 P **Pn 01 02 41.2 -0.7**
BAIF Baives 14.29 315 Pn 01 02 41.2 -0.7
BAIF Sn 01 05 04.4 -15
CLF Chambon-Foret 14.45 305 Pn **Pn 01 02 41.6 -2.6**
SNF Seneffe 14.50 317 Pn **Pn 01 02 44.1 -0.7**
SNF x x 01 02 58.4
SNF x x 01 03 16.0
BSD Bornholm Skovb 14.57 348 *e*P **P 01 02 50.9 -1.2**
BSD pmax pmax
comp=Z,30nm,1.0s
BSD Bornholm Skovb 14.57 348 *i* P **P 01 02 50.9 -1.2**
comp=Z,30nm,1.0s
MICGM Minsk 14.57 19 *e*P **Pn 01 02 43.0 -2.8**
MICGM *e*P P 01 02 44.0 -8.1
MICGM *e*PP **PnPn 01 02 54.0 +0.3**
MICGM *e*S **Sn 01 05 28.0 +1.4**
MICGM *e*LQ LQ 01 07 10.0
MICGM *e*LR LR 01 07 34.0
MICGM LRM MLR 01 08 24.0
comp=Z,7.7nm,10.0s
MNK Minsk 14.57 19 *e*P **Pn 01 02 43.0 -2.8**
MNK *e*S **Sn 01 05 28.0 +1.4**
MNK MLR MLR
comp=Z,8µm,10.0s
LFF La Frestale 14.62 292 *e*P **Pn 01 02 46.2 -0.2**
LFF *e*Sn Sn 01 05 12.8 -15
comp=Z,28nm,0.9s
LFF La Frestale 14.62 292 P **Pn 01 02 46.2 -0.2**
LFF La Frestale 14.62 292 Pn 01 02 46.2 -0.2
LFF Sn 01 05 12.8 -15
MMA0B Mount Meron ar 14.66 118 Pn **Pn 01 02 49.0 +1.8**
MMAI Mount Meron Ar 14.66 118 Pn **Pn 01 02 47.6 +0.5**
comp=Z,1.3nm,0.3s,baz=310,slow=14,SNR=16
MMAI LR LR 01 09 36.0
comp=Z,745nm,19.1s,baz=315,slow=42
NACGM Naroch 14.70 16 *e*P **Pn 01 02 48.0 +0.5**
NACGM PM 01 02 52.0
comp=Z,0.9nm,1.0s
NACGM *e*S **Sn 01 05 26.0 -3.6**
NACGM *e*LQ LQ 01 07 10.0
NACGM *e*LR LR 01 08 04.0
NACGM LRM MLR 01 08 44.0
comp=Z,14nm,10.0s
GEM Giv'at Ha'Em 14.72 117 Pn **Pn 01 02 49.6 +1.7**

EPF Esparros 14.73 285 *e*P **Pn 01 02 48.4 +0.4**
EPF *e*Sn Sn 01 05 16.0 -15
comp=Z,0.1nm,0.1s
EPF Esparros 14.73 285 P **Pn 01 02 48.4 +0.4**
EPF Esparros 14.73 285 Pn 01 02 48.4 +0.4
EPF Sn 01 05 16.0 -15
KSDI Kefar Szold 14.73 117 Pn **Pn 01 02 49.7 +1.7**
NATI Neve Ativ 14.74 116 Pn **Pn 01 02 49.5 +1.3**
PABE Paberze 14.82 9 *e*P **Pn 01 02 48.8 -0.3**
PABE IAmb IAmb 01 02 59.9
comp=Z,180nm,0.8s
SOC Sochi 14.88 73 *e*P **Pn 01 02 49.4 -0.6**
SOC *e* 01 05 36.2
SOC pmax pmax
comp=Z,46nm,0.8s
SOC MLR MLR
comp=Z,648nm,13.0s
SLTI Sal'it 14.90 121 Pn **Pn 01 02 52.0 +1.6**
IIGN Ignalina 15.01 14 *e*P **P 01 02 55.8 -1.2**
IIGN IAmb IAmb 01 03 00.9
comp=Z,74nm,0.9s
SHMJ Saham 15.08 118 P **Pn 01 02 54.9 +2.2**
EBNR Beni Rached 15.12 258 P **Pn 01 02 55.2 +1.9**
PBUR Paburge 15.15 4 *e*P **Pn 01 02 53.2 -0.4**
ISAL Salakas 15.20 14 *e*P **Pn 01 02 55.2 +1.0**
ISAL IAmb IAmb 01 02 59.6
comp=Z,76nm,1.0s
HMDT Nahal Hemdat 15.21 120 Pn **Pn 01 02 55.9 +1.4**
AMAZ Amatzia 15.28 123 Pn **Pn 01 02 55.5 0.0**
ECHA Ech Chlef 15.29 258 P **Pn 01 02 57.1 +1.6**
ETSF Etsaut 15.38 284 *e*P **Pn 01 02 58.4 +1.6**
ETSF *e*Sn Sn 01 05 32.0 -15
comp=Z,23nm,1.3s
ETSF Etsaut 15.38 284 P **Pn 01 02 58.4 +1.6**
ETSF Etsaut 15.38 284 P **Pn 01 02 58.4 +1.6**
ETSF Sn 01 05 32.0 -15
IZAR Zarasai 15.39 14 *e*P **Pn 01 02 57.1 +0.4**
IZAR IAmb IAmb 01 03 02.2
comp=Z,89nm,1.0s
YTIR Yattir 15.52 123 Pn **Pn 01 02 58.4 -0.3**
DSI Dead Sea 15.56 122 Pn **Pn 01 03 00.1 +1.1**
MFF Saint Martin d 15.56 298 *e*P **Pn 01 02 58.3 -0.7**
MFF *e*Sn Sn 01 05 35.2 -15
comp=Z,32nm,1.1s
MFF Saint Martin d 15.56 298 **Pn 01 02 58.3 -0.7**
MFF Sn 01 05 35.2 -15
EANR 'Ain N'Sour 15.57 257 P **P 01 03 03.0 -0.4**
ETRT Tiaret 15.66 255 P **Pn 01 03 01.2 +0.7**
GHAJ Ghor Haditha 15.85 122 Pn **Pn 01 03 03.4 +0.6**
SJPF Ste Jean 15.87 285 *e*P **Pn 01 03 03.0 -0.1**
SJPF *e*Sn Sn 01 05 43.3 -15
comp=Z,17nm,1.1s
SJPF Ste Jean 15.87 285 P **Pn 01 03 03.0 -0.1**
SJPF Ste Jean 15.87 285 **Pn 01 03 03.0 -0.1**
SJPF Sn 01 05 43.3 -15
ARXR Arkhyz 16.01 74*de*P **P 01 03 08.2 -0.2**
ZFRI Zfri 16.11 125 Pn **Pn 01 03 06.7 +0.5**
LDF La Druitiere 16.14 305 *e*P **Pn 01 03 07.8 +1.3**
LDF *e*Sn Sn 01 05 48.4 -16
comp=Z,48nm,1.1s
LDF La Druitiere 16.14 305 P **Pn 01 03 07.8 +1.3**
LDF La Druitiere 16.14 305 P **Pn 01 03 07.8 +1.3**
LDF Sn 01 05 48.4 -16
KRMI Paran Flat 16.15 127 Pn **Pn 01 03 08.1 +1.4**
PRNI Paran 16.15 126 Pn **P 01 03 08.9 -0.9**
ASF Jabal al Asfar 16.17 117 Pn **Pn 01 03 07.9 +0.8**
comp=Z,0.2nm,0.3s,baz=270,slow=12,SNR=2.8
HRFI Mount Harif 16.39 127 Pn **Pn 01 03 09.0 -0.8**
FLN La Foliniere 16.43 305 *e*P **Pn 01 03 09.0 -1.1**
baz=123
FLN *e*Sn Sn 01 05 55.5 -16
comp=Z,90nm,1.5s
FLN *e*R
comp=Z,2µm,22.5s
FLN La Foliniere 16.43 305 **Pn 01 03 09.0 -1.1**
FLN Sn 01 05 55.5 -16
MBRI Mt Berech 16.49 128 Pn **Pn 01 03 11.7 +0.6**
GRR Gorron 16.53 304 *e*P **P 01 03 13.3 -0.6**
GRR *e*Sn Sn 01 05 58.5 -16
comp=Z,50nm,1.0s
GRR Gorron 16.53 304 P **P 01 03 13.3 -0.6**
GRR Sn 01 05 58.5 -16
CART Cartagena 16.55 265 *e*P **P 01 03 13.8 -0.4**
CART Cartagena 16.55 265 Pn **Pn 01 03 10.8 -0.9**
EIL Elat 16.60 128 Pn **Pn 01 03 10.1 -2.4**
comp=Z,0.4nm,0.3s,baz=324,slow=13,SNR=2.1
EIL Sn **Sn 01 06 06.3 -10**
comp=Z,0.4nm,0.3s,baz=343,slow=17,SNR=1.6
EIL Elat 16.60 128 Pn **P 01 03 14.3 -0.5**
AQBJ Aqaba 16.62 128 Pn **P 01 03 15.1 +0.1**
VORD Divnogorie 16.74 47 *e*P **P 01 03 15.6 -0.5**
VORD pmax pmax
comp=Z,140nm,1.0s
VORD MLR MLR
comp=Z,600nm,7.0s
SLIT Slitere, Latvi 16.77 4 *e*P **Pn 01 03 11.2 -3.2**
SLIT IAmb IAmb 01 03 25.1
comp=Z,1µm,1.4s
VSR Storozhevoye 16.79 46*ce*P **Pn 01 03 14.5 -0.2**
SHA1 Shidzhatmaz 17.02 73*de*P **P 01 03 21.6 +2.0**
MUD Monsted U'grnd 17.04 339 *i* P **P 01 03 21.3 +1.8**
MUD pmax pmax
comp=Z,44nm,0.9s
MUD Monsted U'grnd 17.04 339 *i* P **P 01 03 21.3 +1.8**
comp=Z,44nm,0.9s
VORR Voronezh 17.05 45 *e*P **Pn 01 03 17.0 -0.9**
VORR pmax pmax
comp=Z,300nm,1.4s
KIV Kislovodsk 17.05 72*de*P **P 01 03 20.0 +0.2**
KIV pmax pmax
comp=Z,16nm,1.2s
KIV MLR MLR
comp=Z,489nm,17.0s
KIV Kislovodsk 17.05 72 **P 01 03 19.6 -0.2**
KVAR Kislovodsk Arr 17.06 72 P **P 01 03 19.1 -0.8**
baz=287,slow=19,SNR=2.8
NEY Neytrino 17.06 75⇓ *e*P **P 01 03 21.5 +1.5**
KBZ Khabaz 17.20 73 P **P 01 03 21.5 +0.2**
comp=Z,0.2nm,0.3s,baz=278,slow=8.1,SNR=16
KBZ LR LR 01 13 09.7
comp=Z,615nm,18.5s,baz=342,slow=48
KBZ Khabaz 17.20 73*ce*P **P 01 03 23.4 +2.1**
GOF Gofitskoye 17.38 69⇑ *e*P **P 01 03 24.9 +1.6**
GOF pmax pmax
comp=Z,67nm,1.0s
LPSR Galich'ya Gora 17.41 42 *e*P **Pn 01 03 22.8 +0.4**
LPSR pmax pmax
comp=Z,120nm,0.9s
LPSR MLR MLR
comp=Z,2µm,16.0s
SESP Santiago Espad 17.56 268 P **P 01 03 27.0 +1.4**
SNR=35
SGMF Saint Gilles 17.57 302 *e*P **Pn 01 03 24.9 +0.4**
SGMF *e*Sn Sn 01 06 22.6 -17
comp=Z,36nm,1.1s
SGMF Saint Gilles 17.57 302 P **Pn 01 03 24.9 +0.4**
SGMF Sn 01 06 22.6 -17
UCM Universidad Co 17.61 276 *e*P **Pn 01 03 24.9 0.0**
NCK Nalchik 17.70 74⇓ *e*P **P 01 03 27.8 +0.9**
NCK pmax pmax
comp=Z,22nm,1.6s
AKH Akhalkalaki 17.73 81 P **P 01 03 28.1 +0.6**
AKH pmax pmax
comp=Z,29nm,0.9s
AKH Akhalkalaki 17.73 81 **P 01 03 28.1 +0.6**
QUIF Quistinic 17.88 301 *e*P **P 01 03 29.1 +0.3**
QUIF *e*Sn Sn 01 06 30.9 -16
comp=Z,23nm,1.0s
QUIF Quistinic 17.88 301 P **P 01 03 29.1 +0.3**
QUIF Quistinic 17.88 301 P **P 01 03 29.1 +0.3**
QUIF Sn 01 06 30.9 -16
ZEI Tsey 17.93 76 *e*P **P 01 03 33.3 +3.6**
ZEI *e*S **S 01 06 56.3 +1.4**
ZEI pmax pmax
comp=Z,50nm,0.9s
OBN Obninsk 17.95 32 P **Pn 01 03 26.6 -2.5**
comp=Z,1.6nm,0.3s,baz=215,slow=2.5,SNR=18
OBN LR LR 01 10 56.8
comp=Z,244nm,18.2s,baz=218,slow=39
OBN Obninsk 17.95 32*ce*P **Pn 01 03 27.2 -1.9**
OBN pmax pmax
comp=Z,165nm,1.0s
OBN MLR MLR
comp=Z,797nm,14.0s

OBN Obninsk 17.95 32 Pn **Pn 01 03 27.2 -1.9**
ROSF Rostrenen 18.05 302 *e*P **Pn 01 03 29.2 -1.2**
ROSF *e*Sn Sn 01 06 34.4 -17
comp=Z,60nm,1.4s
ROSF Rostrenen 18.05 302 P **Pn 01 03 29.2 -1.2**
ROSF Rostrenen 18.05 302 P **Pn 01 03 29.2 -1.2**
ROSF Sn 01 06 34.4 -17
VSU Vasula 18.07 12 *e*P **Pn 01 03 30.0 -0.4**
VSU Vasula 18.07 12*de*P **Pn 01 03 29.7 -0.7**
VRH Novokhopyorsk 18.20 48 *e*P **P 01 03 32.6 +0.3**
VRH pmax pmax
comp=Z,60nm,0.7s
VRH MLR MLR
comp=Z,2µm,12.0s
ESDC Sonseca Array 18.27 274 P **Pn 01 03 31.8 -1.4**
comp=Z,0.3nm,0.3s,baz=73,slow=9.9,SNR=99
ESDC LR LR 01 10 45.4
comp=Z,574nm,19.4s,baz=40,slow=38
PAB San Pablo 18.58 274 P **P 01 03 35.8 -0.9**
PAB pmax pmax
comp=Z,90nm,1.2s
PAB San Pablo 18.58 274 **P 01 03 35.8 -0.9**
TBLG Delisi 18.63 79 P **Pn 01 03 38.3 +0.8**
TBLG pmax pmax
comp=Z,71nm,1.4s
TBLG Delisi 18.63 79 P **Pn 01 03 38.3 +0.8**
STRD Stroud 18.64 313 *e*P **P 01 03 37.2 +0.1**
STRD IAmb IAmb 01 03 41.7
comp=Z,204nm,1.4s
CWF Charnwood Fore 18.64 316 *e*P **P 01 03 36.7 -0.4**
CWF IAmb IAmb 01 03 45.4
comp=Z,42nm,0.9s
OLDB Oldbury-Upon-S 18.80 312 *e*P **P 01 03 38.9 0.0**
MOS Moscow 18.82 32 *e*P **P 01 03 38.1 -1.0**
MOS *e*S **S 01 07 11.7 -0.5**
MOS pmax pmax
comp=Z,289nm,1.2s
MOS pmax pmax
comp=Z,500nm,1.5s
MOS pmax pmax
comp=N,200nm,1.6s
MOS pmax pmax
comp=E,200nm,1.4s
MOS MLR MLR
comp=N,1µm,11.0s
MOS MLR MLR
comp=E,1µm,11.0s
MOS MLR MLR
comp=Z,1µm,11.0s
GOG Mont Gurugu 18.91 260 P **Pn 01 03 42.0 +0.9**
SNR=6.7
MONM Monmouth 19.02 313 *e*P **P 01 03 40.8 -0.5**
MONM IAmb IAmb 01 03 45.6
comp=Z,100nm,1.1s
MCH1 Michaelchurch 19.20 313 *e*P **P 01 03 43.1 -0.1**
MCH1 IAmb IAmb 01 03 51.8
comp=Z,130nm,1.2s
LBWR Ladybower, Pea 19.20 318 *e*P **P 01 03 42.6 -0.7**
LBWR IAmb IAmb 01 03 46.5
comp=Z,62nm,1.1s
TDRA Tendrara 19.20 253 P **P 01 03 44.0 +0.3**
SNR=24
GROC Groznyy 19.31 75⇓ *e*P **Pn 01 03 47.3 +1.6**
HLM1 Long Mynd 19.37 314 *e*P **P 01 03 44.7 -0.4**
HLM1 IAmb IAmb 01 03 53.0
comp=Z,68nm,1.0s
EMAL Malaga-Limoner 19.41 266 *e*P **P 01 03 44.8 -0.9**
HPK Haverah Park 19.45 319 *e*P **P 01 03 45.5 -0.5**
HFS Hagfors 19.61 351 P **P 01 03 46.3 -1.4**
comp=Z,1.7nm,0.3s,baz=152,slow=9.9,SNR=52
HFS LR LR 01 11 59.4
comp=Z,659nm,21.4s,baz=170,slow=39
BTLR Botlikh 19.65 76⇑ *e*P **P 01 03 49.0 +0.6**
HORN Hornachuelos 19.70 269 P **Pn 01 03 50.1 -0.3**
SNR=26
FOEL Foel Wylfa 19.72 315 *e*P **P 01 03 49.2 +0.2**
FOEL IAmb IAmb 01 03 54.4
comp=Z,130nm,1.3s
CCA1 Carnmenellis 19.82 306 *e*P **P 01 03 50.0 -0.1**
KONO Kongsberg 19.82 344⇓ *e*P **P 01 03 50.8 +0.8**
KONO pmax pmax
comp=Z,56nm,3.1s
KONO Kongsberg 19.82 344 P **P 01 03 50.2 +0.3**
KONO Kongsberg 19.82 344 *e*P **P 01 03 50.7 +0.7**
AKLM AKL 19.86 259 P **P 01 03 51.0 +0.2**
SNR=21
OSL Oslo 19.87 346 *e*P **P 01 03 51.2 +0.7**
PVLZ Pæan de 19.91 261 *e*P **Pn 01 03 52.3 -0.6**
PUL Pulkovo 19.94 16⇓ *e*P **P 01 03 50.3 -1.0**
PUL pmax pmax
comp=Z,74nm,0.7s
PBRG Braganca 20.02 281 *e*P **P 01 03 51.9 -0.5**
comp=Z,116nm,1.4s
EDMD Edmundbyers 20.10 321 *e*P **P 01 03 52.5 -0.6**
RSBS Rosebush, Pemb 20.16 311 *e*P **P 01 03 53.0 -0.8**
RSBS IAmb IAmb 01 03 56.0
comp=Z,28nm,0.9s
MVO Moncorvo 20.31 280 *e*P **P 01 03 55.0 -0.6**
comp=Z,156nm,1.4s
MVO *e*LR LR 01 11 48.7
comp=Z,606nm,18.0s
BLS5 Blasjo 20.34 340 *e*P **P 01 03 56.2 +0.5**
YLL Llanberis 20.35 315 *e*P **P 01 03 54.9 -0.9**
CEU Ceuta 20.43 264 *e*P **P 01 03 55.5 -1.3**
WLF1 Llynfaes 20.54 315 *e*P **P 01 03 57.1 -0.8**
WLF1 IAmb IAmb 01 04 03.5
comp=Z,74nm,1.0s
WME Myndd Eilian 20.54 316 *e*P **P 01 03 57.5 -0.4**
MAK Makhachkala 20.57 75 *e*P **P 01 03 55.8 -2.5**
MAK *e*S **S 01 07 43.7 -3.7**
MAK pmax pmax
comp=Z,275nm,1.4s
MAK MLR MLR
comp=Z,957nm,12.0s
YRC Rhoscolyn 20.62 315 *e*P **P 01 03 58.4 -0.3**
WPS Cemaes, Angles 20.64 315 *e*P **P 01 03 58.6 -0.4**
WPS IAmb IAmb 01 04 04.7
comp=Z,82nm,1.0s
NAO01 NORSAR Array S 20.70 347 P **P 01 03 59.7 +0.2**
NAO01 IAmb IAmb 01 04 06.7
comp=Z,104nm,0.8s
NAO01 NORSAR Array S 20.70 347 *e*P **P 01 04 00.0 +0.5**
CNIL Conil 20.77 266 *e*P **P 01 04 00.0 -0.5**
PVRL Vila Real 20.81 280 *e*P **P 01 04 01.9 +0.9**
comp=Z,131nm,1.8s
NB201 NORSAR Array S 20.82 348 P **P 01 04 01.2 +0.3**
MTE Manteigas 20.82 278 *e*P **P 01 04 00.3 -0.9**
comp=Z,154nm,1.5s
MTE *e*S **S 01 07 53.5 +0.9**
MTE *e*LR LR 01 11 44.6
comp=Z,802nm,18.0s
MTE Manteigas 20.82 278 P **P 01 04 00.7 -0.5**
MTE IAmb IAmb 01 04 05.4
comp=Z,135nm,1.3s
NB2 NORSAR Subarra 20.83 348 P **P 01 03 59.1 -1.9**
comp=Z,58nm,1.0s,baz=161,slow=11
NB2 NORSAR Subarra 20.83 348 P **P 01 03 59.1 -1.9**
baz=161,slow=11
NOA NORSAR Array B 20.83 348 P **P 01 03 59.1 -1.9**
comp=Z,3.4nm,0.8s,baz=165,slow=10,SNR=29
NOA LR LR 01 12 43.3
comp=Z,758nm,20.9s,baz=170,slow=39
SFS San Fernando 20.86 266 P **P 01 04 01.5 +0.1**
SFS pmax pmax
comp=Z,93nm,0.9s
SFS San Fernando 20.86 266 P **P 01 04 01.5 +0.1**
SFS IAmb IAmb 01 04 18.2
comp=Z,93nm,0.9s
FINES FINESS Array B 20.87 8 P **P 01 04 00.1 -1.3**
comp=Z,62nm,0.7s,baz=168,slow=12,SNR=139
FINES PcP **PcP 01 08 08.1 -0.9**
comp=Z,2.5nm,0.7s,baz=174,slow=1.4,SNR=2.1
FINES LR LR 01 13 22.4
comp=Z,1µm,18.1s,baz=192,slow=40
FINES FINESS Array B 20.87 8 *i* P **P 01 04 00.3 -1.1**
FINES pmax pmax
comp=Z,63nm,0.7s
FIA1 FINESS Array S 20.87 8 P **P 01 03 59.8 -1.6**
FIA1 IAmb IAmb 01 04 05.8
comp=Z,103nm,0.9s
PCBR Castelo Branco 20.88 276 *e*P **P 01 04 00.7 -1.0**
comp=Z,104nm,1.8s
AKT Akhty 20.89 79⇑ *e*P **P 01 04 02.2 +0.3**
NBO00 NORSAR Array S 20.89 347 P Pn 01 04 03.2 -1.0
PMRV Marv??o 20.91 275 *e*P **P 01 04 01.2 -0.8**

comp=Z,139nm,1.0s
PMRV eS **S** **01 07 55.1 +0.9**
PMRV eLR LR 01 11 52.2
comp=Z,555nm,18.0s
EKA Eskdalemuir Ar 20.95 321 P **P** **01 04 02.0 -0.3**
comp=Z,9.4nm,0.6s,baz=116,slow=11,SNR=41
ESK Eskdalemuir 20.97 321 eP **P** **01 04 02.2 -0.3**
ESK IAmb IAmb 01 04 09.0
comp=Z,66nm,0.9s
ESK Eskdalemuir 20.97 321 P **P** **01 04 02.7 +0.2**
ESK pmax pmax
comp=Z,63nm,0.9s
ESK Eskdalemuir 20.97 321 P **P** **01 04 02.7 +0.2**
ESK IAmb IAmb 01 04 09.2
comp=Z,63nm,0.8s
PCAB Cabril 20.98 281 eP **P** **01 04 02.6 -0.2**
comp=Z,214nm,1.4s
SKAR Skarslia 21.03 344 eP **P** **01 04 03.0 -0.1**
PVIS Viseu 21.03 279 eP **P** **01 04 02.4 -1.0**
comp=Z,150nm,1.7s
IOMK Kirk Michael 21.09 317 eP **P** **01 04 03.6 -0.2**
IOMK IAmb IAmb 01 04 09.3
comp=Z,246nm,1.0s
WIM Isle of Man 21.09 317 eP **P** **01 04 03.0 -0.8**
SICH Sidi Chahed 21.12 259 P **P** **01 04 04.0 -0.3**
SNR=27
PGAV Gavieira, Arco 21.13 282 eP **P** **01 04 04.0 -0.5**
comp=Z,274nm,1.6s
PGAV eS Sn 01 08 03.3 -2.4
PGAV eLR LR 01 11 41.9
comp=Z,709nm,18.0s
MDT Midelt 21.20 255 P **P** **01 04 03.9 -1.3**
comp=Z,26nm,0.9s,baz=77,slow=11,SNR=23
MDT LR LR 01 12 09.5
comp=Z,459nm,19.0s,baz=70,slow=36
IFR Ifrane 21.24 258 eP **P** **01 04 03.8 -2.1**
NEWG New Galloway 21.35 320 eP **P** **01 04 06.0 -0.7**
GAL1 Galloway 21.46 319 eP **P** **01 04 07.3 -0.5**
COI Coimbra 21.51 277 eP **P** **01 04 07.7 -0.8**
comp=Z,293nm,1.2s
ASK Askoy 21.58 340 eP **P** **01 04 10.1 +1.1**
EVO Evora 21.59 273 eP **P** **01 04 07.8 -1.6**
comp=Z,74nm,1.7s
PCAS Casmilo, Conde 21.61 277 eP **P** **01 04 08.9 -0.6**
comp=Z,308nm,1.3s
PMTG Montargil 21.62 274 eP **P** **01 04 08.0 -1.6**
comp=Z,193nm,1.6s
PBEJ Beja 21.62 271 eP **P** **01 04 07.8 -1.9**
comp=Z,107nm,1.6s
PVAQ Vaqueiros 21.69 270 eP **P** **01 04 09.9 -0.5**
comp=Z,158nm,1.1s
PVAQ eS Sn 01 08 17.1 -1.9
PVAQ Vaqueiros 21.69 270 IAmb IAmb 01 04 23.8
comp=Z,104nm,0.9s
GMM Mts of Mourne 21.80 316 eP **P** **01 04 10.8 -0.6**
ELO Logie Almond 21.86 323 eP **P** **01 04 11.3 -0.7**
PCVE Castro Verde 21.87 270 eP **P** **01 04 10.7 -1.6**
comp=Z,97nm,1.2s
PBDV Barranco-do-Ve 21.90 269 eP **P** **01 04 12.5 -0.2**
comp=Z,165nm,1.2s
HYA Hoyanger 21.93 342 eP **P** **01 04 13.7 +1.0**
MESJ Messejana 21.94 271 eP **P** **01 04 11.7 -1.4**
MESJ AMb AMB 01 04 15.0
comp=Z,78nm,1.5s
MESJ eS **S** **01 08 14.3 -0.2**
MESJ Messejana 21.94 271 eP **P** **01 04 11.7 -1.4**
MESJ eS **S** **01 08 14.2 -0.2**
MESJ pmax pmax
comp=Z,78nm,1.5s
MESJ Messejana 21.94 271 eP **P** **01 04 11.7 -1.4**
comp=Z,87nm,1.8s
INVG Invergeldie, C 21.98 323 eP **P** **01 04 12.3 -1.1**
INVG IAmb IAmb 01 04 19.5
comp=Z,58nm,0.9s
EAB Aberfoyle 21.99 322 eP **P** **01 04 12.4 -1.0**
PNCL Nicolau / Gran 22.10 272 eP **P** **01 04 13.8 -1.0**
comp=Z,95nm,1.5s
DOMB Dombas 22.13 346 eP **P** **01 04 16.1 +1.1**
CLGH Cloghs, Cushen 22.27 318 eP **P** **01 04 16.5 0.0**
CLGH IAmb IAmb 01 04 21.9
comp=Z,77nm,1.1s
MCD Coleburn Disti 22.32 326 eP **P** **01 04 16.1 -1.0**
LIS Lisbon 22.41 274 eP **P** **01 04 16.6 -1.5**
LIS AMb AMB 01 04 22.0
comp=Z,92nm,2.0s
LIS Lisbon 22.41 274 eP **P** **01 04 16.6 -1.5**
LIS pmax pmax
comp=Z,92nm,2.0s
PTEO Sao Teotonio 22.41 271 eP **P** **01 04 17.4 -0.7**
comp=Z,118nm,1.0s
MORF Marmelete 22.43 270 eP **P** **01 04 16.7 -1.7**
MORF AMb AMB 01 04 24.6
comp=Z,92nm,1.6s
MORF eS **S** **01 08 23.7 -0.1**
MORF Marmelete 22.43 270 eP **P** **01 04 16.7 -1.7**
MORF eS **S** **01 08 23.7 -0.1**
MORF pmax pmax
comp=Z,92nm,1.6s
MORF Marmelete 22.43 270 eP **P** **01 04 18.4 0.0**
comp=Z,91nm,1.5s
PMAFR Mafra 22.45 275 eP **P** **01 04 21.6 +3.1**
PFVI Vila Bisbo 22.62 270 eP **P** **01 04 19.1 -1.3**
comp=Z,156nm,1.5s
PFVI Vila Bisbo 22.62 270 IAmb IAmb 01 04 34.8
comp=Z,75nm,1.0s
MOL Molde 22.90 345 eP **P** **01 04 22.4 -0.6**
AVE Averroes 23.04 259 eP **P** **01 04 22.3 -2.5**
TBLU Trondheim 23.07 349 eP **P** **01 04 25.9 +1.1**
KAC Achnashellach 23.16 324 eP **P** **01 04 24.4 -1.4**
KPL Plockton 23.23 324 eP **P** **01 04 25.3 -1.2**
KLMR Klimovskoe 23.28 25*c* iP **P** **01 04 25.5 -1.4**
KLMR eS **S** **01 08 37.1 -0.9**
KLMR pmax pmax
comp=Z,235nm,1.4s
KLMR Klimovskoe 23.28 25⇑ *i*P **P** **01 04 25.5 -1.4**
KLMR ⇑ *i*P **P** **01 04 25.5 -1.4**
KLMR ⇑ *i*P **P** **01 04 25.5 -1.4**
KLMR AMP 01 04 35.7
comp=Z,235nm,1.4s
KLMR eS **S** **01 08 37.2 -0.8**
KLMR eS **S** **01 08 37.2 -0.8**
KLMR LQ LQ 01 11 13.9
KLMR LQ LQ 01 11 13.9
KLMR LR LR 01 13 16.4
NSS Namsos 24.08 352 eP **P** **01 04 33.9 -0.8**
MOR8 Moi Rana 25.47 355 eP **P** **01 04 47.8 +0.6**
TMCR Tamitsa 25.54 18 eP **P** **01 04 46.0 -1.9**
TMCR eS **S** **01 09 14.2 0.0**
TMCR pmax pmax
comp=Z,270nm,0.6s
KIRV Kirov 25.65 37 P **P** **01 04 46.9 -2.0**
comp=Z,22nm,0.8s,baz=277,slow=5.3,SNR=13
KIRV LR LR 01 15 48.8
comp=Z,2µm,20.3s,baz=240,slow=39
PRGR Permogore 25.91 28 eP **P** **01 04 48.8 -2.4**
PRGR pmax pmax
comp=Z,35nm,0.9s
STEI Steigen 27.17 356 eP **P** **01 05 02.0 -0.5**
RAYN Ar Rayn 27.58 121 P **P** **01 05 07.8 +1.0**
RAYN pmax pmax
comp=Z,25nm,1.5s
RAYN Ar Rayn 27.58 121 P **P** **01 05 07.8 +1.0**
APA Apatity 27.69 11⇑ *i*P **P** **01 05 05.7 -1.5**
APA pmax pmax
comp=Z,11nm,1.0s
APA MLR MLR
comp=Z,2µm,12.0s
AKTO Aktyubinsk 27.97 57 P **P** **01 05 08.7 -1.3**
comp=Z,7.7nm,0.9s,baz=269,slow=10.0,SNR=19
LVZ Lovozero 28.18 12⇑ eP **P** **01 05 10.5 -1.2**
LVZ pmax pmax
comp=Z,10.0nm,0.8s
LVZ MLR MLR
comp=Z,959nm,15.0s
LVZ Lovozero 28.18 12 P **P** **01 05 12.0 +0.3**
KTK1 Kautokeino 28.19 3 eP **P** **01 05 10.5 -1.3**
TRO Tromso 28.76 359 eP **P** **01 05 15.5 -1.3**
ARCES ARCESS Array B 28.81 4 P **P** **01 05 15.1 -2.2**
comp=Z,4.1nm,0.6s,baz=190,slow=8.1,SNR=21
ARCES LR LR 01 18 00.2
comp=Z,1µm,18.9s,baz=188,slow=39
ARE0 ARCESS Array S 28.81 4 P **P** **01 05 16.4 -0.8**
ARE0 ARCESS Array S 28.81 4 eP **P** **01 05 15.6 -1.6**
KEV Kevo 29.12 5 P **P** **01 05 20.0 0.0**
KEV pmax pmax
comp=Z,13nm,0.9s
KEV Kevo 29.12 5 P **P** **01 05 19.9 0.0**
ARU Arti 29.36 45 P **P** **01 05 21.3 -0.9**
comp=Z,2.7nm,0.5s,baz=251,slow=8.5,SNR=10
ARU LR LR 01 17 12.7
comp=Z,855nm,21.7s,baz=247,slow=37
ARU Arti 29.36 45*c* iP **P** **01 05 20.5 -1.7**
ARU 01 08 25.0
ARU S **S** **01 10 15.2 +0.6**
ARU SS **SnSn** **01 11 42.9 +1.8**
ARU pmax pmax
comp=Z,28nm,1.7s
ARU MLR MLR
comp=Z,654nm,13.0s
ARU Arti 29.36 45 P **P** **01 05 20.9 -1.4**
ARU IAmb IAmb 01 05 39.0
comp=Z,28nm,1.1s
GEYT Alibeck 29.49 83 P **P** **01 05 23.0 -0.7**
comp=Z,6.3nm,0.6s,baz=285,slow=5.8,SNR=11
GYA0 ALIBECK ARRAY 29.49 83 P **P** **01 05 23.1 -0.5**
GYA0B ALIBECK ARRAY 29.49 83 IAmb IAmb 01 05 39.1
comp=Z,32nm,1.1s
SVE Sverdlovsk 30.57 45 eP **P** **01 05 32.6 -0.3**
SVE pmax pmax
comp=Z,39nm,1.1s
SVE MLR MLR
comp=Z,1µm,12.0s
TOA0 Torodi Ar. Sit 31.96 215 P **P** **01 05 45.8 +0.2**
TOA0 IAmb IAmb 01 05 51.7
comp=Z,24nm,1.1s
TORD Torodi Ar. Bea 31.96 215 P **P** **01 05 45.6 0.0**
comp=Z,14nm,1.0s,baz=30,slow=8.2,SNR=66
TORD LR LR 01 21 28.3
comp=Z,467nm,19.4s,baz=5.0,slow=42
DAMY Dhamar 33.81 134 P **P** **01 06 03.5 +1.5**
DAMY IAmb IAmb 01 06 17.1
comp=Z,34nm,1.3s
HRA Herat 33.87 87 IAmb IAmb 01 06 09.4
comp=Z,44nm,1.2s
UOSS Minazif 34.08 107 P **P** **01 06 06.1 +2.1**
BRVK Borovoye 35.69 53*d* iP **P** **01 06 17.4 -0.2**
BRVK pmax pmax
comp=Z,55nm,0.8s
BRVK MLR MLR
comp=Z,500nm,14.0s
BRVK Borovoye 35.69 53 P **P** **01 06 17.8 +0.2**
SCO Scoresbysund 36.46 338 P **P** **01 06 23.6 -0.3**
SCO pmax pmax
comp=Z,18nm,1.0s
SCO Scoresbysund 36.46 338 P **P** **01 06 23.6 -0.3**
SCO Scoresbysund 36.46 338 *i* P **P** **01 06 25.1 +1.2**
comp=Z,10nm,0.9s
WSAR Wadi Sarin 36.87 107 P **P** **01 06 28.9 +0.9**
comp=Z,5.1nm,0.8s,baz=343,slow=11,SNR=2.6
KK31 Karatay Array 37.17 69 *i* P **P** **01 06 29.4 -1.1**
SPITS Spitsbergen Ar 37.38 359 P **P** **01 06 30.9 -0.9**
comp=Z,11nm,1.1s,baz=160,slow=9.8,SNR=6.3
CHGR Chuyangaron 37.49 77 IAmb IAmb 01 06 39.6
comp=Z,31nm,0.9s
GAR Garm 38.23 76 IAmb IAmb 01 06 47.2
comp=Z,57nm,1.1s
KBS Kingsbay 38.24 358 P **P** **01 06 38.5 -0.5**
KBS pmax pmax
comp=Z,35nm,1.3s
KBS Kingsbay 38.24 358 P **P** **01 06 38.5 -0.5**
KBS IAmb IAmb 01 06 45.9
comp=Z,35nm,1.3s
KBL Kabul 38.94 83 P **P** **01 06 45.6 0.0**
KBL pmax pmax
comp=Z,9.0nm,0.9s
KBL Kabul 38.94 83 P **P** **01 06 45.6 0.0**
DAG Danmarks Havn 39.51 347 *i* P **P** **01 06 49.0 -0.6**
DAG pmax pmax
comp=Z,7.0nm,0.7s
DAG Danmarks Havn 39.51 347 *i* P **P** **01 06 49.0 -0.6**
comp=Z,6.7nm,0.7s
AAK Ala-Archa 40.12 69⇑ *i*P **P** **01 06 54.9 -0.5**
AAK pmax pmax
comp=Z,15nm,1.3s
AAK MLR MLR
comp=Z,499nm,17.0s
AAK Ala-Archa 40.12 69 P **P** **01 06 55.3 -0.1**
FRU1 Bishkek 40.17 69 P **P** **01 06 56.2 +0.6**
FRU1 pmax pmax
comp=Z,26nm,0.9s
FRU1 Bishkek 40.17 69 P **P** **01 06 56.2 +0.6**
DBIC Dimbokro 40.67 220 P **P** **01 06 59.4 -0.6**
comp=Z,11nm,0.9s,baz=15,slow=10,SNR=12
DBIC LR LR 01 25 49.7
comp=Z,584nm,19.6s,baz=10.0,slow=39
DBIC Dimbokro 40.67 220 P **P** **01 07 00.1 +0.2**
DBIC pmax pmax
comp=Z,30nm,1.0s
DBIC Dimbokro 40.67 220 P **P** **01 07 00.1 +0.2**
DBIC IAmb IAmb 01 07 08.3
comp=Z,30nm,1.0s
TIC Toumodi 40.77 220 eP **P** **01 06 59.1 -1.7**
TKM2 Tokmak 2 40.81 68 *i* P **P** **01 07 05.0 +3.8**
TKM2 pmax pmax
comp=Z,3.0nm,1.0s
KIC Kosan Boka 40.88 219 eP **P** **01 07 01.4 -0.3**
comp=Z,45nm,1.1s
KURBB Kurchatov Arra 41.01 56 P **P** **01 07 01.5 -0.8**
KURK Kurchatov 41.05 56*c* iP **P** **01 07 02.2 -0.5**
KURK pmax pmax
comp=Z,17nm,1.3s
KURK MLR MLR
comp=Z,345nm,17.0s
KURK Kurchatov 41.05 56 P **P** **01 07 02.4 -0.3**
KURK IAmb IAmb 01 07 10.2
comp=Z,40nm,1.2s
LIC Lamto 41.14 220 eP **P** **01 07 03.6 -0.2**
comp=Z,89nm,1.0s
SOCY Socotra 41.35 124 P **P** **01 07 04.4 -1.3**
SOCY IAmb IAmb 01 07 13.1
comp=Z,32nm,1.0s
SUMG Summit 42.10 337 eP **P** **01 07 11.5 0.0**
SUMG Summit 42.10 337 *i* P **P** **01 07 11.5 0.0**
KSH Kashi 42.18 73 P **P** **01 07 15.4 +3.1**
KSH pP pP 01 07 17.6 -0.9
KSH PP **PP** **01 08 54.6 +4.7**
KSH S **S** **01 13 35.4 +4.1**
KSH pmax pmax
comp=Z,24nm,1.1s
KSH pmax pmax
comp=Z,280nm,4.8s
KSH LR LR
comp=Z,470nm,12.8s
KSH LR LR
comp=Z,640nm,13.1s
KSH LR LR
comp=Z,490nm,13.4s
MBAR Mbarara 42.50 164 P **P** **01 07 15.3 +0.2**
comp=Z,3.1nm,0.2s,baz=284,slow=8.2,SNR=5.5
MBAR LR LR 01 26 14.4
comp=Z,541nm,20.4s,baz=2.0,slow=38
MBAR Mbarara 42.50 164⇑ eP **P** **01 07 15.4 +0.3**
MBAR pmax pmax
comp=Z,5.0nm,1.1s
MBAR Mbarara 42.50 164 P **P** **01 07 16.1 +1.0**
NOR Nord 42.69 353 *i* P **P** **01 07 14.7 -1.0**
NOR pmax pmax
comp=Z,6.0nm,0.7s
NOR Nord 42.69 353 *i* P **P** **01 07 14.7 -1.0**
comp=Z,5.9nm,0.7s
TARG Taragay, Kyrgy 42.74 69 P **P** **01 07 17.9 +0.7**
PRZ Przheval'sk 42.92 68 P **P** **01 07 20.3 +2.0**
PRZ pmax pmax
comp=Z,13nm,1.2s
PRZ Przheval'sk 42.92 68 P **P** **01 07 20.3 +2.0**
PDGK Podgornoye 43.41 66 P **P** **01 07 21.0 -1.2**
MAKZ Makanchi 44.08 61 P **P** **01 07 27.7 +0.3**
MAKZ pmax pmax
comp=Z,7.0nm,1.1s
MAKZ Makanchi 44.08 61 P **P** **01 07 27.7 +0.3**
ZALV Zalesovo Beam 44.23 50 P **P** **01 07 28.1 -0.4**
comp=Z,37nm,0.6s,baz=278,slow=8.8,SNR=137
ZALV LR LR 01 28 42.7
comp=Z,554nm,18.5s,baz=274,slow=40
MK31 Makanchi Array 44.29 61 P **P** **01 07 27.7 -1.4**
MKAR Makanchi Array 44.29 61 P **P** **01 07 28.2 -0.9**
comp=Z,1.3nm,0.3s,baz=282,slow=7.4,SNR=25
MKAR PcP **PcP** **01 09 14.1 +0.9**
comp=Z,6.4nm,0.9s,baz=294,slow=2.8,SNR=2.6
NRIK Noril'sk 44.55 28 P **P** **01 07 30.9 0.0**
comp=Z,21nm,0.7s,baz=249,slow=3.4,SNR=36
NRIK LR LR 01 28 42.1
comp=Z,428nm,18.9s,baz=257,slow=40
KMBO Kilima Mbogo 44.73 155 P **P** **01 07 35.1 +1.9**
comp=Z,2.0nm,0.9s,baz=352,slow=4.3,SNR=3.3
KMBO Kilima Mbogo 44.73 155 P **P** **01 07 33.3 +0.1**
KMBO pmax pmax
comp=Z,5.0nm,1.2s
KMBO Kilima Mbogo 44.73 155 P **P** **01 07 33.3 +0.1**
IVI Ivigtut 44.94 321 P **P** **01 07 33.7 -0.3**
ILULI Ilulissat 45.77 332 P **P** **01 07 39.5 -1.0**
ILULI pmax pmax
comp=Z,23nm,1.0s
ILULI Ilulissat 45.77 332 P **P** **01 07 39.5 -1.0**
ILULI IAmb IAmb 01 07 55.6
comp=Z,23nm,1.0s
DGZ Jazzator, Alta 46.79 55⇑ eP **P** **01 07 49.0 0.0**
DGZ pmax pmax
comp=Z,8.0nm,0.8s
DGZ MLR MLR
comp=Z,369nm,16.0s
WMQ Urumqi 48.86 63 eP **P** **01 08 08.4 +3.4**
WMQ pP sP 01 08 11.9 -1.8
WMQ sP pP 01 08 15.3 +4.0
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ pmax pmax
comp=Z,160nm,4.9s
WMQ LR LR
comp=Z,690nm,16.7s
WMQ LR LR
comp=Z,460nm,15.7s
WMQ LR LR
comp=Z,670nm,19.1s
PYUN Piuthan 52.47 83 eP **P** **01 08 31.6 -1.1**
comp=Z,83nm,0.7s
DANN Dangsing 52.92 83 eP **P** **01 08 35.1 -1.0**
comp=Z,108nm,0.6s
DRLN Deer Lake 53.06 307 P **P** **01 08 36.5 +0.1**
KOLN Koldanda 53.10 83 eP **P** **01 08 35.9 -1.4**
comp=Z,40nm,0.7s
GKN Gorkha 53.76 82 eP **P** **01 08 40.6 -1.5**
MOY Mondy 54.27 49 eP **P** **01 08 46.4 +1.0**
MOY pmax pmax
comp=Z,4.0nm,1.4s
DMN Daman 54.32 83 eP **P** **01 08 44.8 -1.5**
comp=Z,197nm,1.3s
KKN Kakani 54.36 82 eP **P** **01 08 44.9 -1.6**
comp=Z,52nm,0.8s
PKIN Phulchoki 54.56 82 eP **P** **01 08 46.5 -1.6**
comp=Z,106nm,1.2s
PKI Pulchoki 54.57 82 eP **P** **01 08 46.7 -1.5**
comp=Z,123nm,1.2s
GUN Gumba 54.74 82 eP **P** **01 08 48.3 -1.2**
comp=Z,229nm,1.1s
JIRN Jiri 55.11 82 eP **P** **01 08 51.1 -1.1**
comp=Z,323nm,1.3s
TLY Talaya 55.77 48*d* iP **P** **01 08 56.7 +0.5**
TLY pmax pmax
comp=Z,17nm,1.0s
TLY MLR MLR
comp=Z,582nm,15.0s
TLY Talaya 55.77 48 P **P** **01 08 57.3 +1.1**
TLY IAmb IAmb 01 09 03.4
comp=Z,21nm,0.8s
RAMN Ramite 55.80 82 eP **P** **01 08 55.4 -1.6**
comp=Z,98nm,0.6s
ZAK Zakamensk 56.11 50 eP **P** **01 08 57.0 -1.7**
ZAK pmax pmax
comp=Z,10.0nm,1.2s
SCHQ Schefferville 56.15 316 P **P** **01 08 58.5 -0.3**
comp=Z,10nm,0.8s,baz=75,slow=6.9,SNR=9.6
SCHQ Schefferville 56.15 316 IAmb IAmb 01 08 59.7
comp=Z,13nm,0.9s
TAPN Taplejung 56.41 81 eP **P** **01 09 00.3 -1.1**
ODAN Odare 56.44 82 eP **P** **01 09 00.3 -1.2**
comp=Z,81nm,0.7s
LSZ Lusaka 56.45 170 P **P** **01 09 02.7 +1.3**
LSZ pmax pmax
comp=Z,9.0nm,1.1s
LSZ Lusaka 56.45 170 P **P** **01 09 02.7 +1.3**
RES Resolute Bay 57.00 343 P **P** **01 09 03.4 -1.1**
RES pmax pmax
comp=Z,11nm,1.0s
RES Resolute Bay 57.00 343 P **P** **01 09 03.4 -1.1**
TIXI Tiksi 57.23 21*d* iP **P** **01 09 05.8 -0.4**
TIXI pmax pmax
comp=Z,12nm,1.3s
TIXI MLR MLR
comp=Z,978nm,17.0s
TIXI Tiksi 57.23 21 P **P** **01 09 06.3 +0.1**
TIXI IAmb IAmb 01 09 14.0
comp=Z,14nm,1.0s
BOD Bodaibo 58.49 39 eP **P** **01 09 14.4 -0.8**
BOD pmax pmax
comp=Z,22nm,1.3s
GTA Gaotai 58.94 63 eP **P** **01 09 18.8 -0.1**
GTA pP pP 01 09 22.8 -2.5
GTA sP sP 01 09 25.9 -1.7
GTA pmax pmax
comp=Z,3.0nm,1.2s
GTA pmax pmax
comp=Z,120nm,6.2s
GTA LR LR
comp=Z,680nm,22.0s
GTA LR LR
comp=Z,480nm,22.0s
GTA LR LR
comp=Z,990nm,22.7s
SONM Songino Array 59.08 52 P **P** **01 09 19.9 +0.2**
comp=Z,13nm,1.1s,baz=277,slow=5.5,SNR=35
ULN Ulaanbaatar 59.45 51*d* iP **P** **01 09 22.3 0.0**
ULN pmax pmax
comp=Z,11nm,1.3s
ULN MLR MLR
comp=Z,255nm,15.0s
ULN Ulaanbaatar 59.45 51 P **P** **01 09 23.3 +1.0**
ULN IAmb IAmb 01 09 32.8
comp=Z,24nm,1.3s
TSUM Tsumeb 59.87 183 P **P** **01 09 25.5 +0.2**
D63A Stockholm 60.41 308 P **P** **01 09 29.2 +0.5**
baz=60
E64A Bridgewater 60.54 307 P **P** **01 09 29.8 +0.2**
baz=60,SNR=7.2
E63A Oxbow 60.90 308 P **P** **01 09 32.2 +0.2**
baz=60
E63A Oxbow 60.90 308 IAmb IAmb 01 09 46.0
comp=Z,27nm,1.4s
D62A Allapoint, All 60.94 309 P **P** **01 09 32.7 +0.4**
baz=60,SNR=6.3
D62A Allapoint, All 60.94 309 IAmb IAmb 01 09 33.6
comp=Z,14nm,0.9s
G65A Princeton 60.99 306 P **P** **01 09 33.1 +0.4**
baz=60
G65A Princeton 60.99 306 P **P** **01 09 32.9 +0.3**
G65A IAmb IAmb 01 09 43.3
comp=Z,17nm,1.1s
H66A Whiting 61.04 306 P **P** **01 09 33.5 +0.5**
baz=60
F64A Sherman 61.13 307 P **P** **01 09 33.7 +0.1**
baz=60
F64A Sherman 61.13 307 P **P** **01 09 31.6 -2.1**
F64A IAmb IAmb 01 09 38.3
comp=Z,20nm,1.3s
EMMW East Machias 61.17 306 P **P** **01 09 32.9 -1.0**
EMMW IAmb IAmb 01 09 35.3
comp=Z,20nm,1.0s
E62A Clayton Lake 61.46 308 P **P** **01 09 36.1 +0.3**
baz=60
D61A St Aubert, Com 61.55 309 P **P** **01 09 37.1 +0.7**
baz=59
H65A Eastbrook 61.66 306 P **P** **01 09 37.5 +0.3**
baz=59
F63A Nahmakanta, Br 61.67 307 P **P** **01 09 37.7 +0.4**
baz=59
G64A Maxfield 61.69 307 P **P** **01 09 37.9 +0.6**
baz=59
E61A Lac Etchemin 62.13 309 P **P** **01 09 40.5 +0.1**
baz=59
D60A Saint Jean D'O 62.13 309 P **P** **01 09 40.5 +0.2**
baz=59
G63A Kingsbury 62.28 307 P **P** **01 09 41.8 +0.4**
baz=59
H64A Troy 62.29 306 P **P** **01 09 41.7 +0.3**
baz=59
E60A Ste Agathe de 62.73 309 P **P** **01 09 44.4 +0.1**
baz=58
H63A New Sharon 62.77 307 P **P** **01 09 45.0 +0.3**

baz=58
G62A West of Eustis 62.78 307 P **P** **01 09 45.4 +0.6**
baz=58
YAK Yakutsk 62.94 30 *e*P **P** **01 09 45.1 -0.3**
YAK pmax pmax
comp=Z,11nm,0.9s
YAK pmax pmax
comp=N,11nm,1.1s
YAK pmax pmax
comp=E,7.0nm,1.0s
LATQ La Tuque 62.97 310 P **P** **01 09 46.4 +0.4**
baz=58
LATQ La Tuque 62.97 310 P **P** **01 09 45.3 -0.6**
F60A Warwick 63.23 309 P **P** **01 09 48.2 +0.5**
baz=58
G61A St-Isidore-de- 63.35 308 P **P** **01 09 49.5 +1.0**
baz=58,SNR=5.8
LZH Lanzhou 63.39 64 *e*P **P** **01 09 50.1 +1.0**
LZH pP pP 01 09 55.5 -0.1
LZH sP sP 01 09 58.9 +1.0
LZH pmax pmax
comp=E,23nm,1.2s
LZH pmax pmax
comp=E,89nm,6.0s
LZH LR LR
comp=E,450nm,15.7s
LZH LR LR
comp=E,580nm,17.3s
LZH LR LR
comp=E,640nm,18.4s
I63A Otisfield 63.43 306 P **P** **01 09 49.4 +0.3**
baz=58
H62A Milan 63.50 307 P **P** **01 09 50.0 +0.5**
baz=58
F59A Saint Guilaume 63.79 309 P **P** **01 09 51.5 +0.1**
baz=57
E58A La Victoria 63.80 310 P **P** **01 09 51.7 +0.3**
baz=57
D57A Chemin Vers le 63.80 310 P **P** **01 09 51.5 +0.1**
baz=57
G60A Masonville 63.93 308 P **P** **01 09 52.5 +0.2**
baz=57
I62A Tamworth 63.98 306 P **P** **01 09 53.2 +0.6**
baz=57
H61A Lyndonville 63.99 307 P **P** **01 09 53.4 +0.6**
baz=57
LBNH Lisbon 64.14 307 P **P** **01 09 54.2 +0.4**
baz=57
J63A Strafford 64.15 306 P **P** **01 09 54.3 +0.6**
baz=57
E57A Chemin Saint G 64.28 310 P **P** **01 09 54.9 +0.3**
baz=57
D56A ZEC Mazanza, M 64.29 311 P **P** **01 09 54.9 +0.3**
baz=57
MATQ Matagami 64.40 315 P **P** **01 09 55.6 +0.3**
baz=56,SNR=6.0
LSQQ Lebel-sur-Quev 64.43 314 P **P** **01 09 55.8 +0.3**
baz=56
H60A Morristown 64.44 308 P **P** **01 09 55.6 -0.1**
baz=57
G59A Clarenceville 64.44 308 P **P** **01 09 55.5 -0.1**
baz=57
I61A Oroboro, Fairl 64.48 307 P **P** **01 09 56.5 +0.5**
baz=57
J62A Henniker 64.62 306 P **P** **01 09 57.6 +0.7**
baz=57
D55A Sainte-Anne-du 64.71 311 P **P** **01 09 57.7 +0.3**
baz=56
E56A St. Veronique 64.72 310 P **P** **01 09 58.0 +0.5**
baz=56,SNR=6.4
L64A Middleborough 64.73 304 P **P** **01 09 58.3 +0.7**
baz=57
A36M Sachs Harbour 64.73 349 P **P** **01 09 57.6 +0.5**
baz=29
K63A Dunstable 64.74 305 P **P** **01 09 57.9 +0.3**
baz=57
M65A Busby, Falmout 64.81 304 P **P** **01 09 58.5 +0.4**
baz=57
HRV Adam Dziewonsk 64.86 305 P **P** **01 09 59.0 +0.6**
baz=57
G58A Ormstown 64.92 309 P **P** **01 09 59.1 +0.4**
baz=56
H59A Cadyville 64.98 308 P **P** **01 09 59.8 +0.5**
baz=56
J61A Chester 65.01 306 P **P** **01 10 00.3 +0.9**
baz=56
BTO Baotou 65.02 57 *e*P P 01 10 04.5 +4.8
M64A Tiverton 65.17 304 P **P** **01 10 00.6 +0.2**
baz=56
I60A Shoreham 65.19 307 P **P** **01 10 00.8 +0.2**
baz=56
K62A Royalston 65.19 306 P **P** **01 10 01.2 +0.6**
baz=56
VLDQ Val d'Or 65.22 313 IAmb IAmb 01 10 03.1
comp=Z,15nm,0.9s
D54A Lac Fusel, La 65.31 312 P **P** **01 10 01.6 +0.3**
baz=56,SNR=5.3
E55A Montcerf-Lytto 65.36 311 P **P** **01 10 02.2 +0.6**
baz=56
H58A Gabriels 65.40 308 P **P** **01 10 02.4 +0.4**
baz=56
G57A Newington 65.49 309 P **P** **01 10 03.3 +0.8**
baz=56
LONY Lake Ozonia 65.53 309 P **P** **01 10 03.3 +0.5**
baz=56
LONY Lake Ozonia 65.53 309 P **P** **01 10 02.1 -0.7**
LONY IAmb IAmb 01 10 04.7
comp=Z,15nm,1.1s
I59A Olmsteadville 65.56 307 P **P** **01 10 04.1 +1.1**
baz=56,SNR=5.6
L61B Northampton 65.58 306 P **P** **01 10 04.1 +0.9**
baz=56
J60A Lant Hill Farm 65.60 307 P **P** **01 10 04.0 +0.8**
baz=56
ORIO Orleans, Innes 65.61 310 P **P** **01 10 04.2 +1.0**
baz=56
M63A Gales Ferry 65.77 304 P **P** **01 10 05.3 +1.0**
baz=56
L62A Suffield 65.81 305 P **P** **01 10 05.5 +0.9**
baz=56
K61A Williamstown 65.82 306 P **P** **01 10 05.8 +1.1**
baz=56
HHC Hu-ho-hao-te 65.86 56 *e*P **P** **01 10 08.3 +3.2**
HHC sP sP 01 10 17.1 +3.2
HHC S **S** **01 18 51.6 +0.5**
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,69nm,5.5s
HHC LR LR
comp=Z,220nm,13.9s
HHC LR LR
comp=Z,260nm,13.0s
HHC LR LR
comp=Z,280nm,15.5s
HIA Hailar 65.88 45*de*P **P** **01 10 05.4 +0.4**
HIA pmax pmax
comp=Z,15nm,1.1s
HIA MLR MLR
comp=Z,293nm,16.0s
F55A Otter Lake 65.88 310 P **P** **01 10 05.8 +0.8**
baz=56
D53A Lac Vacive, Po 65.94 312 P **P** **01 10 06.1 +0.8**
baz=55
D53A Lac Vacive, Po 65.94 312 IAmb IAmb 01 10 07.4
comp=Z,18nm,1.2s
E54A Lac Daplat, Po 66.02 311 P **P** **01 10 06.6 +0.8**
baz=55
J59A Piesco 66.13 307 P **P** **01 10 07.2 +0.5**
baz=56
J59A Piesco 66.13 307 IAmb IAmb 01 10 09.1
comp=Z,24nm,1.2s
CD2 Chengdu 66.19 69 P **P** **01 10 06.0 -1.3**
L61A Hillsdale 1, H 66.27 306 P **P** **01 10 08.3 +0.8**
baz=56
I58A Old Forge 66.28 308 P **P** **01 10 08.5 +0.8**
baz=55
M62A Hamden 66.28 305 P **P** **01 10 07.9 +0.3**
baz=56
E53A Dumoine, Ponti 66.32 311 P **P** **01 10 08.4 +0.5**
baz=55
G55A Calabogie 66.42 310 P **P** **01 10 09.3 +0.8**
baz=55
H56A Elgin 66.53 309 P **P** **01 10 10.3 +1.1**
baz=55,SNR=6.5
I57A Carthage 66.55 308 P **P** **01 10 10.5 +1.2**
baz=55,SNR=6.5
FCC Fort Churchill 66.65 329 IAmb IAmb 01 10 18.1
comp=Z,14nm,0.8s
J58A Remsen 66.66 308 P **P** **01 10 11.0 +1.0**
baz=55
J58A Remsen 66.66 308 IAmb IAmb 01 10 12.0
comp=Z,17nm,1.1s
K59A Cooperstown 66.73 307 P **P** **01 10 10.6 +0.1**
baz=55
ALGO Algonquin Park 66.78 311 P **P** **01 10 10.9 +0.1**
baz=55
L60A Shokan 66.79 306 P **P** **01 10 11.8 +0.9**
baz=55
D51A Lot 18 Range I 66.87 313 P **P** **01 10 11.8 +0.5**
baz=54
C36M Paulatuk 66.87 347 P **P** **01 10 11.0 +0.1**
baz=29,SNR=7.2
C36M Paulatuk 66.87 347 IAmb IAmb 01 10 14.7
comp=Z,13nm,0.9s
M61A Granite Spring 66.90 305 P **P** **01 10 12.2 +0.6**
baz=55
E52A Mattawa 66.94 312 P **P** **01 10 12.3 +0.5**
baz=54
ZEA Zeya 66.97 38 *e*P **P** **01 10 12.8 +0.9**
J57A Williamstown 67.05 308 P **P** **01 10 13.5 +1.0**
baz=55,SNR=6.0
J57A Williamstown 67.05 308 IAmb IAmb 01 10 14.8
comp=Z,20nm,1.1s
D50A G1974 Best Tow 67.08 313 P **P** **01 10 13.3 +0.6**
baz=54,SNR=7.7
H55A Tweed 67.09 310 P **P** **01 10 14.0 +1.2**
baz=55,SNR=12
G54A Lake Saint Pet 67.13 311 P **P** **01 10 13.9 +0.9**
baz=54,SNR=9.8
PAL Palisades 67.16 305 P **P** **01 10 13.6 +0.4**
baz=55
L59A Walton 67.18 307 P **P** **01 10 14.6 +1.1**
baz=55,SNR=6.4
K58A Earlville 67.21 307 P **P** **01 10 14.7 +1.1**
baz=55
K58A Earlville 67.21 307 IAmb IAmb 01 10 15.9
comp=Z,22nm,1.1s
E51A G1948 Merrick 67.26 312 P **P** **01 10 14.2 +0.4**
baz=54
PECO Prince Edward 67.34 309 IAmb IAmb 01 10 16.5
comp=Z,14nm,0.9s
DELO Deloro Mine 67.37 310 IAmb IAmb 01 10 16.2
comp=Z,11nm,1.0s
M60A Port Jervis 67.42 306 P **P** **01 10 15.7 +0.8**
baz=55
I55A Frankford 67.58 310 P **P** **01 10 16.7 +0.8**
baz=54
G53A Haliburton 67.60 311 P **P** **01 10 16.4 +0.4**
baz=54
F52A Sundridge 67.60 312 P **P** **01 10 16.7 +0.8**
baz=54
J56A Wolcott 67.64 308 P **P** **01 10 17.4 +1.1**
baz=54,SNR=5.7
BINY Binghamton 67.75 307 P **P** **01 10 17.9 +0.9**
baz=54
BINY Binghamton 67.75 307 P **P** **01 10 17.5 +0.5**
BINY IAmb IAmb 01 10 35.0
comp=Z,14nm,1.1s
L58A Harry Jones Me 67.75 307 P **P** **01 10 17.7 +0.7**
baz=54
K57A Scipio Center 67.75 308 P **P** **01 10 18.2 +1.2**
baz=54,SNR=5.1
M59A Waymart 67.79 306 P **P** **01 10 18.3 +1.0**
baz=54
D49A Beulah Townshi 67.85 314 P **P** **01 10 18.3 +0.7**
baz=53
F51A Arnstein 67.85 312 P **P** **01 10 18.1 +0.5**
baz=54
H53A Bobcaygeon 67.89 310 P **P** **01 10 18.8 +1.0**
baz=54,SNR=5.1
N60A Cedar Hill Far 67.97 305 P **P** **01 10 19.3 +0.9**
baz=54
XAN Xi'an 67.98 64 P **P** **01 10 16.4 -2.3**
XAN pP pP 01 10 22.6 -2.6
XAN sP sP 01 10 26.3 -1.2
XAN pmax pmax
comp=Z,6.0nm,1.5s
XAN LR LR
comp=Z,190nm,21.7s
XAN LR LR
comp=Z,430nm,20.6s
XAN LR LR
comp=Z,620nm,20.6s
E50A Wahnapitae 68.02 313 P **P** **01 10 19.6 +1.0**
baz=53
O61A Allentown 68.08 304 P **P** **01 10 20.0 +0.9**
baz=54
SADO Sadowa 68.10 311 P **P** **01 10 19.8 +0.7**
comp=Z,8.5nm,0.7s,baz=49,slow=5.8,SNR=12
SADO Sadowa 68.10 311 IAmb IAmb 01 10 21.2
comp=Z,14nm,0.9s
D48A Paudash Townsh 68.16 314 P **P** **01 10 19.8 +0.3**
baz=53
J55A Hilton 68.22 309 P **P** **01 10 20.7 +0.8**
baz=54
J55A Hilton 68.22 309 IAmb IAmb 01 10 22.1
comp=Z,18nm,0.9s
K56A Middlesex 68.26 308 P **P** **01 10 21.5 +1.2**
baz=54,SNR=8.4
N59A State Game Lan 68.36 306 P **P** **01 10 22.1 +1.3**
baz=54,SNR=8.5
L57A Andrews Acres 68.38 307 P **P** **01 10 22.2 +1.2**
baz=54,SNR=7.3
BILL Bilibino 68.43 13 *d i*P **P** **01 10 21.2 +0.4**
BILL *e* 01 10 45.9
BILL *e* 01 12 48.6
BILL *e*PPP PPP 01 14 30.3
BILL pmax pmax
comp=Z,12nm,1.3s
BILL MLR MLR
comp=Z,439nm,20.0s
BILL Bilibino 68.43 13 P **P** **01 10 20.9 0.0**
BILL IAmb IAmb 01 10 31.4
comp=Z,11nm,1.1s
P61A Hammonton 68.48 304 P **P** **01 10 22.2 +0.6**
baz=54
O60A Telford 68.48 305 P **P** **01 10 22.7 +1.1**
baz=54
M58A Price's Panora 68.52 307 P **P** **01 10 22.6 +0.8**
baz=54
MEDO Medina 68.65 309 P **P** **01 10 22.9 +0.3**
K55A Perry 68.68 308 P **P** **01 10 23.7 +0.9**
baz=54
J54A Appleton 68.70 309 P **P** **01 10 23.6 +0.7**
baz=53
L56A Greenwood 68.73 308 P **P** **01 10 24.3 +1.1**
baz=54,SNR=6.7
L56A Greenwood 68.73 308 IAmb IAmb 01 10 25.4
comp=Z,19nm,0.9s
PSUB Penn St. - Bra 68.74 305 IAmb IAmb 01 10 25.5
comp=Z,17nm,1.0s
E48A Lockeyer 68.77 314 P **P** **01 10 24.1 +0.8**
baz=52
KMI Kunming 68.80 75 P **P** **01 10 26.9 +2.8**
KMI pP pP 01 10 28.8 -1.8
KMI sP sP 01 10 31.5 -1.4
KMI pmax pmax
comp=Z,15nm,0.8s
KMI pmax pmax
comp=Z,300nm,6.7s
KMI LR LR
comp=Z,560nm,18.2s
KMI LR LR
comp=Z,440nm,20.7s
KMI LR LR
comp=Z,610nm,23.1s
I53A Kortright Cn E 68.92 310 P **P** **01 10 25.0 +0.7**
baz=53
P60A Greenville 68.92 305 P **P** **01 10 25.0 +0.6**
baz=54
P60A Greenville 68.92 305 IAmb IAmb 01 10 26.1
comp=Z,19nm,1.1s
D47A Chapleau 68.94 314 P **P** **01 10 25.1 +0.7**
baz=52
M57A Sunshine Farm, 68.94 307 P **P** **01 10 25.8 +1.3**
baz=54,SNR=8.0
O59A Robesonia 68.97 305 P **P** **01 10 25.5 +0.8**
baz=54
N58A Sunbury 68.98 306 P **P** **01 10 25.7 +0.9**
baz=54,SNR=6.7
N58A Sunbury 68.98 306 IAmb IAmb 01 10 26.8
comp=Z,14nm,0.9s
I52A Shelburne 69.11 311 P **P** **01 10 26.7 +1.2**
baz=53,SNR=6.5
K54A Basiliko Farm, 69.12 309 P **P** **01 10 26.4 +0.8**
baz=53
F49A Sandfield 69.14 313 P **P** **01 10 26.7 +1.1**
baz=52,SNR=8.3
L55A Hinsdale 69.23 308 P **P** **01 10 27.4 +1.1**
baz=53,SNR=5.1
BOSA Boshof 69.38 175 P **P** **01 10 27.4 +0.2**
comp=Z,5.0nm,0.8s,baz=357,slow=6.1,SNR=7.1
BOSA Boshof 69.38 175 P **P** **01 10 27.4 +0.2**
BOSA pmax pmax
comp=Z,12nm,1.0s
BOSA Boshof 69.38 175 IAmb IAmb 01 10 40.8
comp=Z,12nm,0.9s
E47A Iron Bridge 69.40 314 P **P** **01 10 28.1 +0.9**
baz=52,SNR=7.1
F48A Evansville 69.42 313 P **P** **01 10 28.1 +0.8**
baz=52
M56A Emporium 69.49 307 P **P** **01 10 29.0 +1.1**
baz=53,SNR=6.8
Q60A Greensboro 69.53 304 P **P** **01 10 29.0 +0.9**
baz=54
D46A Sault St. Mari 69.54 315 P **P** **01 10 29.2 +1.2**
baz=52,SNR=10
P59A Jarrettsville 69.54 305 P **P** **01 10 28.8 +0.6**
baz=53
N57A Milroy 69.55 306 P **P** **01 10 29.2 +1.0**
baz=53,SNR=10
R61A Willards 69.61 303 P **P** **01 10 29.2 +0.5**
baz=54
L54A Sinclairville 69.72 309 P **P** **01 10 29.9 +0.7**
baz=53
SEY Seymchan 69.72 21⇑ *e*P **P** **01 10 29.4 +0.5**
CHTO Chiang Mai 69.75 82 P **P** **01 10 32.0 +2.2**
CHTO pmax pmax
comp=Z,13nm,0.9s
CHTO Chiang Mai 69.75 82 P **P** **01 10 32.0 +2.2**
CHTO IAmb IAmb 01 10 38.7
comp=Z,12nm,0.8s
I51A Listowel 69.76 311 P **P** **01 10 30.5 +1.0**
baz=52,SNR=5.7
J52A Paris 69.79 310 P **P** **01 10 30.5 +0.8**
baz=52
M55A Ridgway 69.85 308 P **P** **01 10 31.1 +1.0**
baz=53,SNR=10
N56A West Decatur 69.90 307 P **P** **01 10 31.7 +1.3**
baz=53,SNR=8.7
O57A Amberson 69.92 306 P **P** **01 10 31.4 +0.8**
baz=53
CMAR Chiang Mai Arr 69.97 83 P **P** **01 10 32.1 +1.0**
comp=Z,2.6nm,0.7s,baz=307,slow=7.9,SNR=8.2
CMAR Chiang Mai Arr 69.97 83 *ce*P **P** **01 10 34.0 +2.9**
CMAR pmax pmax
comp=Z,5.0nm,0.7s
Q59A Harwood 70.12 304 P **P** **01 10 32.6 +0.9**
baz=53
P58A Pank, Wackersv 70.15 305 P **P** **01 10 32.6 +0.7**
baz=53,SNR=8.1
ERPA Erie 70.19 309 P **P** **01 10 32.8 +0.7**
baz=52
S61A Accomac 70.21 303 P **P** **01 10 33.3 +1.0**
baz=53
M54A Oil Creek Stat 70.36 308 P **P** **01 10 34.3 +1.0**
baz=52,SNR=8.7
N55A Marion Center 70.40 307 P **P** **01 10 34.7 +1.2**
baz=52,SNR=15
R60A Leonardtown, M 70.43 304 P **P** **01 10 34.4 +0.8**
baz=53
L53A Girard 70.44 309 P **P** **01 10 34.7 +0.9**
baz=52,SNR=6.1
O56A Blue Knob Stat 70.46 307 P **P** **01 10 34.8 +1.0**
baz=52,SNR=8.6
O56A Blue Knob Stat 70.46 307 IAmb IAmb 01 10 36.1
comp=Z,18nm,0.9s
TOLK Toolik Lake Re 70.46 356 P **P** **01 10 33.2 -0.2**
baz=8.4
G47A Hillman 70.51 313 P **P** **01 10 35.4 +1.4**
baz=51,SNR=5.6
H48A Harrisville 70.51 313 P **P** **01 10 34.7 +0.7**
baz=51
ALLY Alegheny Colle 70.56 309 IAmb IAmb 01 10 36.4
comp=Z,19nm,0.9s
P57A Homestead Farm 70.59 306 P **P** **01 10 35.8 +1.2**
baz=53
P57A Homestead Farm 70.59 306 IAmb IAmb 01 10 36.9
comp=Z,17nm,1.1s
YKA Yellowknife Ar 70.65 339 P **P** **01 10 34.6 +0.1**
comp=Z,3.6nm,0.5s,baz=40,slow=5.7,SNR=82
YKA LR LR 01 43 11.3
comp=Z,216nm,18.5s,baz=0.0,slow=37
I49A Point Hope 70.70 312 P **P** **01 10 35.9 +0.7**
baz=51
K51A Iona Station 70.70 310 P **P** **01 10 36.0 +0.7**
baz=52
Q58A Fox Den Farm, 70.72 305 P **P** **01 10 36.2 +0.8**
baz=53,SNR=9.2
E44A Grand Marais A 70.72 315 P **P** **01 10 36.5 +1.2**
baz=50
R59A King George, V 70.81 304 P **P** **01 10 36.9 +0.9**
baz=53
GYA Guiyang 70.85 71⇑ *i*P **P** **01 10 39.5 +2.9**
GYA PP **PP** **01 13 16.9 +3.5**
GYA S **S** **01 19 46.1 -4.8**
GYA SS **SS** **01 24 23.8 +0.7**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,80nm,3.5s
GYA LR LR
comp=Z,360nm,21.2s
GYA LR LR
comp=Z,260nm,21.4s
GYA LR LR
comp=Z,510nm,23.5s
N54A Moraine State 70.89 308 P **P** **01 10 37.5 +1.0**
baz=52,SNR=8.5
O55A Ligonier 70.94 307 P **P** **01 10 37.8 +1.0**
baz=52,SNR=9.9
CBN Corbin Frederi 70.97 304 P **P** **01 10 37.9 +1.0**
baz=52
G46A Petoskey 70.97 314 P **P** **01 10 37.3 +0.4**
baz=51
M53A Wl Miller and 71.01 309 P **P** **01 10 37.7 +0.6**
baz=51
I48A Sherman Twp 71.04 312 P **P** **01 10 38.2 +0.9**
baz=51
H47A Mio 71.06 313 P **P** **01 10 38.3 +0.9**
baz=51
P56A Dayton Farm, R 71.09 306 P **P** **01 10 38.6 +0.9**
baz=52,SNR=6.8
F45A CMU Biological 71.10 314 P **P** **01 10 37.7 +0.1**
baz=50
Q57A Strasburg 71.11 305 P **P** **01 10 38.8 +0.9**
baz=52
GLMI Grayling 71.15 313 P **P** **01 10 38.8 +0.9**
baz=51
S59A Mechanicsville 71.19 304 P **P** **01 10 39.1 +0.8**
baz=52
T60A Surry 71.21 303 P **P** **01 10 39.0 +0.6**
baz=52
J49A Marlette 71.24 311 P **P** **01 10 39.6 +1.0**
baz=51,SNR=5.1
R58A Rapidan 71.31 305 P **P** **01 10 39.5 +0.5**
baz=52
K50A Casco 71.31 311 P **P** **01 10 39.4 +0.5**
baz=51
M52A Chesterland 71.35 309 P **P** **01 10 39.8 +0.6**
baz=52
R58B Mineral 71.43 304 P **P** **01 10 40.1 +0.3**
baz=52
R58B Mineral 71.43 304 IAmb IAmb 01 10 41.7
comp=Z,20nm,1.0s
E43A Lone Tree Farm 71.44 316 IAmb IAmb 01 10 48.7
comp=Z,24nm,1.2s
E43A **PcP** **01 10 56.2 -3.0**
N53A Lisbon 71.49 308 P **P** **01 10 41.0 +0.9**
baz=52
U61A Possum Corner 71.52 302 P **P** **01 10 41.3 +1.0**
baz=52
EPYK Eagle Plains 71.52 350 P **P** **01 10 39.9 0.0**
baz=18,SNR=16
EPYK Eagle Plains 71.52 350 IAmb IAmb 01 10 46.9
comp=Z,17nm,0.8s
G45A Suttons Bay 71.58 314 P **P** **01 10 41.1 +0.6**
baz=50
Q56A Snyder Ridge, 71.58 306 P **P** **01 10 41.8 +1.1**
baz=52,SNR=10
I47A Gladwin 71.60 313 P **P** **01 10 41.5 +0.8**
baz=50
O54A Avella 71.61 307 P **P** **01 10 41.7 +0.9**

baz=52,SNR=5.9
O54A Avella 71.61 307 IAmb IAmb 01 10 43.0
comp=Z,27nm,1.2s
MCWV Mont Chateau 71.61 307 P **P** **01 10 41.9 +1.1**
baz=52,SNR=6.1
MCWV Mont Chateau 71.61 307 IAmb IAmb 01 10 43.2
comp=Z,16nm,1.0s
R57A Stanardsville 71.63 305 P **P** **01 10 41.7 +0.7**
baz=52,SNR=6.2
J48A Bridge Port 71.65 312 P **P** **01 10 41.7 +0.7**
baz=51
J48A Bridge Port 71.65 312 IAmb IAmb 01 10 43.0
comp=Z,24nm,1.0s
P55A Reedsville 71.69 307 P **P** **01 10 42.4 +1.0**
baz=52,SNR=5.6
S58A Poland Farm, P 71.75 304 P **P** **01 10 42.2 +0.5**
baz=52
S58A Poland Farm, P 71.75 304 IAmb IAmb 01 10 43.7
comp=Z,20nm,0.9s
K49A Clarkson 71.79 311 P **P** **01 10 42.5 +0.7**
baz=51
T59A Double "B" Far 71.83 303 P **P** **01 10 43.1 +0.9**
baz=52,SNR=5.4
T59A Double "B" Far 71.83 303 IAmb IAmb 01 10 44.6
comp=Z,21nm,1.1s
L50A Kingsville 71.88 310 P **P** **01 10 43.0 +0.6**
baz=51
U60A Pendleton 71.89 303 P **P** **01 10 43.3 +0.8**
baz=52
SLVN Son La 71.92 77 pP 01 10 48.5 -1.1
MA2 Magadan 71.95 24*c i* P **P** **01 10 43.1 +0.6**
MA2 pmax pmax
comp=Z,13nm,1.0s
MA2 MLR MLR
comp=Z,260nm,17.0s
M51A Elyria 71.96 309 P **P** **01 10 43.3 +0.4**
baz=51
N52A McGinn's Farm, 72.00 309 P **P** **01 10 43.3 +0.1**
baz=51
P54A Burton 72.03 307 P **P** **01 10 44.4 +1.0**
baz=52,SNR=9.4
KLR Kul'dur 72.04 40*c i* P **P** **01 10 43.3 +0.1**
KLR pmax pmax
comp=Z,6.0nm,0.9s
KLR MLR MLR
comp=Z,363nm,17.0s
O53A New Philadelph 72.06 308 P **P** **01 10 44.6 +1.0**
baz=51,SNR=8.7
K48A Perry 72.15 311 P **P** **01 10 44.7 +0.7**
baz=50
Q55A Buckhannon 72.16 306 P **P** **01 10 45.3 +1.1**
baz=52
I46A Reed City 72.17 313 P **P** **01 10 45.2 +1.0**
baz=50,SNR=5.3
AAM Ann Arbor 72.21 311 P **P** **01 10 44.6 +0.3**
baz=50
FYU Fort Yukon 72.22 354 IAmb IAmb 01 10 52.7
comp=Z,23nm,1.0s
J47A Sunmer 72.27 312 P **P** **01 10 45.6 +0.9**
baz=50,SNR=5.2
CN2 Changchun 72.33 47 *e* P **P** **01 10 45.3 +0.2**
CN2 *es* P sP 01 10 56.0 +2.1
CN2 *eS* **S** **01 20 05.0 -2.2**
CN2 pmax pmax
comp=Z,30nm,0.8s
CN2 LR LR
comp=Z,770nm,16.0s
CN2 LR LR
comp=Z,610nm,16.0s
CN2 LR LR
comp=Z,800nm,18.0s
N51A Ashland 72.33 309 P **P** **01 10 45.5 +0.3**
baz=51
U59A Littleton 72.36 303 P **P** **01 10 46.0 +0.7**
baz=52,SNR=7.7
U59A Littleton 72.36 303 IAmb IAmb 01 10 47.5
comp=Z,24nm,0.9s
V60A Jim Taylor Roa 72.39 302 P **P** **01 10 46.6 +1.0**
baz=52
T58A Grand View Acr 72.47 304 P **P** **01 10 46.7 +0.7**
baz=52
O52A Adamsville 72.52 308 P **P** **01 10 46.9 +0.6**
baz=51,SNR=5.7
I45A Fountain 72.55 313 P **P** **01 10 47.0 +0.7**
baz=50
W61A Ground Anchor 72.57 302 P **P** **01 10 46.8 +0.1**
baz=52
FFC Flin Flon 72.58 329 P **P** **01 10 47.1 +0.7**
FFC pmax pmax
comp=Z,8.0nm,0.8s
FFC Flin Flon 72.58 329 P **P** **01 10 47.1 +0.7**
Q54A Coxs Mills 72.63 307 P **P** **01 10 47.2 +0.3**
baz=51
Q54A Coxs Mills 72.63 307 IAmb IAmb 01 10 48.7
comp=Z,18nm,1.1s
R55A Marlinton 72.63 306 P **P** **01 10 47.7 +0.7**
baz=51,SNR=8.1
R55A Marlinton 72.63 306 IAmb IAmb 01 10 49.2
comp=Z,22nm,1.0s
P53A Whipple 72.65 307 P **P** **01 10 48.0 +0.9**
baz=51,SNR=9.3
S56A Natural Bridge 72.66 305 P **P** **01 10 47.9 +0.7**
baz=51
EYMN Ely 72.72 319 P **P** **01 10 47.4 +0.1**
baz=48
EYMN Ely 72.72 319 IAmb IAmb 01 10 56.1
comp=Z,18nm,1.2s
K47A Vermontville 72.74 312 P **P** **01 10 48.0 +0.5**
baz=50
COWI Conover 72.75 316 IAmb IAmb 01 10 56.5
comp=Z,19nm,1.0s
U58A Oxford 72.82 303 P **P** **01 10 48.8 +0.7**
baz=52,SNR=5.5
L48A N Adams 72.88 311 P **P** **01 10 48.9 +0.6**
baz=50
N50A Nevada 72.88 309 P **P** **01 10 48.9 +0.5**
baz=50
T57A Hurt 72.89 304 P **P** **01 10 49.4 +0.9**
baz=51,SNR=6.2
T57A Hurt 72.89 304 IAmb IAmb 01 10 50.6
comp=Z,22nm,1.2s
O51A Pataskala 72.96 309 P **P** **01 10 49.7 +0.8**
baz=50,SNR=8.7
P52A Corning 73.00 308 P **P** **01 10 49.9 +0.7**
baz=51,SNR=6.2
V59A Middlesex 73.01 303 P **P** **01 10 50.0 +0.7**
baz=52,SNR=5.6
CNNC Cliffs of the 73.11 302 P **P** **01 10 50.3 +0.5**
baz=52
W60A Pink Hill 73.11 302 P **P** **01 10 49.9 0.0**
baz=52
Q53A Leroy 73.12 307 P **P** **01 10 50.6 +0.7**
baz=51,SNR=6.8
ACSO Alum Creek Sta 73.13 309 P **P** **01 10 50.5 +0.6**
baz=50
ACSO Alum Creek Sta 73.13 309 IAmb IAmb 01 10 51.5
comp=Z,23nm,1.1s
K46A Dorr 73.17 312 P **P** **01 10 50.1 0.0**
baz=50
S55A Lewisburg 73.18 305 P **P** **01 10 51.2 +0.9**
baz=51,SNR=5.5
ULM Lac du Bonnet 73.22 323 P **P** **01 10 49.9 -0.4**
comp=Z,8.6nm,0.7s,baz=42,slow=5.7,SNR=10
ULM LR LR 01 43 44.6
comp=Z,331nm,18.3s,baz=36,slow=36
ULM Lac du Bonnet 73.22 323*c i* P **P** **01 10 50.4 +0.2**
R54A Victor 73.22 306 P **P** **01 10 50.7 +0.2**
baz=51
U57A Blanch 73.29 304 P **P** **01 10 51.8 +0.9**
baz=51,SNR=6.0
M48A Edgerton 73.34 311 P **P** **01 10 51.0 -0.1**
baz=50
T56A Rocky Mt 73.35 305 P **P** **01 10 52.2 +1.0**
baz=51,SNR=7.4
N49A Columbus Grove 73.39 310 IAmb IAmb 01 10 52.9
comp=Z,18nm,0.9s
BLA Blacksburg 73.48 305 P **P** **01 10 52.4 +0.4**
baz=51
Q52A Bidwell 73.51 307 P **P** **01 10 52.6 +0.5**
baz=50
B35A Bob, Littlefor 73.53 320 IAmb IAmb 01 10 56.1
comp=Z,22nm,1.4s
V58A Windy Hill, Pi 73.55 303 P **P** **01 10 52.6 +0.2**
baz=51
O50A Cable 73.56 309 P **P** **01 10 52.5 +0.1**
baz=50
S54A Dingess, Beckl 73.66 306 P **P** **01 10 53.2 +0.1**
baz=51
R53A Hurricane 73.72 307 P **P** **01 10 54.3 +0.9**
baz=50,SNR=5.1
R53A Hurricane 73.72 307 IAmb IAmb 01 10 55.2
comp=Z,25nm,0.9s
WHN Wuhan 73.75 64 P P 01 10 44.5 -9.2
POKR Poker Plat Res 73.82 354 P **P** **01 10 54.3 +0.8**
baz=10.0
G40A Rib Lake 73.86 316 IAmb IAmb 01 11 03.1
comp=Z,13nm,0.9s
L46A Eue Claire 73.89 312 P **P** **01 10 54.7 +0.4**
baz=49
V57A Coltrane Farms 73.91 304 P **P** **01 10 55.0 +0.4**
baz=51,SNR=5.5
N48A Decatur 73.92 310 P **P** **01 10 54.7 +0.1**
baz=50,SNR=6.2
M47A Cromwell 73.94 311 P **P** **01 10 54.6 0.0**
baz=49
O49A Covington 73.95 309 IAmb IAmb 01 10 56.0
comp=Z,22nm,0.9s
X59A McDuffie Farm, 73.99 302 P **P** **01 10 55.7 +0.7**
baz=51
U56A King 74.00 304 P **P** **01 10 55.6 +0.5**
baz=51
U56A King 74.00 304 IAmb IAmb 01 10 57.1
comp=Z,18nm,1.0s
P50A Jamestown 74.01 309 P **P** **01 10 55.3 +0.2**
baz=50,SNR=5.2
MDM Murphy Dome 74.03 355 IAmb IAmb 01 11 02.7
comp=Z,12nm,0.8s
MDJ Mudanjiang 74.04 44 P P 01 11 07.8 +13
MDJ pmax pmax
comp=Z,10.0nm,0.5s
MDJ pmax pmax
comp=Z,270nm,18.1s
DAWY Dawson 74.06 351 IAmb IAmb 01 10 59.9
comp=Z,14nm,0.8s
COLA College 74.09 355 *i* P **P** **01 10 56.1 +1.1**
COLA pmax pmax
comp=Z,4.0nm,1.0s
W58A Raeford 74.11 303 P **P** **01 10 56.4 +0.7**
baz=51
Q51A Peebles 74.11 308 P **P** **01 10 55.9 +0.2**
baz=50,SNR=5.2
Q51A Peebles 74.11 308 IAmb IAmb 01 10 57.1
comp=Z,19nm,1.0s
ILAR Eielson Array 74.12 354 P **P** **01 10 56.1 +0.8**
comp=Z,2.4nm,0.7s,baz=0.1,slow=4.4,SNR=33
S53A Williamson 74.23 306 P **P** **01 10 56.9 +0.5**
baz=50
N47A Urbana 74.29 311 IAmb IAmb 01 11 07.6
comp=Z,15nm,0.9s
T54A Tazewell 74.29 305 P **P** **01 10 57.2 +0.3**
baz=50,SNR=9.1
U55A TA2, Sparta 74.32 305 P **P** **01 10 57.8 +0.8**
baz=50
O48A Farmland 74.38 310 P **P** **01 10 57.2 -0.1**
baz=49
V56A Mocksville 74.41 304 P **P** **01 10 57.6 +0.1**
baz=50
HDA Harding Lake 74.48 354 P **P** **01 10 57.8 +0.4**
baz=10,SNR=14
HDA Harding Lake 74.48 354 IAmb IAmb 01 11 05.2
comp=Z,19nm,0.9s
WRH Wood River Hil 74.51 355 IAmb IAmb 01 11 04.9
comp=Z,16nm,1.0s
W57A Gilead 74.51 303 P **P** **01 10 58.1 0.0**
baz=51
Y59A Loris 74.53 302 P **P** **01 10 58.1 -0.1**
baz=51
AGMN Agassiz Nation 74.59 321 P **P** **01 10 58.6 +0.3**
baz=45
P49A Miami Univ. Ec 74.60 309 P **P** **01 10 58.0 -0.5**
baz=49
U54A Nelsons Funny 74.79 305 P **P** **01 11 00.0 +0.3**
baz=50,SNR=6.4
U54A Nelsons Funny 74.79 305 IAmb IAmb 01 11 01.4
comp=Z,22nm,0.9s
V55A Taylorsville 74.84 304 P **P** **01 11 00.5 +0.6**
baz=50,SNR=7.7
V55A Taylorsville 74.84 304 IAmb IAmb 01 11 02.0
comp=Z,21nm,1.0s
W56A Indian Trail 74.89 303 P **P** **01 11 00.4 +0.1**
baz=50
T53A Wise 74.93 306 P **P** **01 11 00.6 0.0**
baz=50
RIDG Independent Ri 74.97 353 IAmb IAmb 01 11 08.4
comp=Z,27nm,1.0s
DOT Dot Lake 74.98 353 IAmb IAmb 01 11 08.5
comp=Z,14nm,0.9s
P48A Milroy 75.06 309 IAmb IAmb 01 11 10.1
comp=Z,15nm,1.1s
Y58A Scranton 75.09 302 P **P** **01 11 01.8 +0.4**
baz=50
SPMN Marine on St. 75.24 318 P **P** **01 11 01.8 -0.2**
baz=46
MCK McKinley 75.30 355 IAmb IAmb 01 11 10.0
comp=Z,15nm,0.9s
V54A Nebo 75.34 305 P **P** **01 11 03.4 +0.5**
baz=50,SNR=6.3
KMSC Kings Mountain 75.36 304 P **P** **01 11 03.5 +0.5**
baz=50,SNR=5.8
KMSC Kings Mountain 75.36 304 IAmb IAmb 01 11 04.8
comp=Z,19nm,1.1s
SFIN Lafayette 75.42 311 P **P** **01 11 03.2 -0.1**
baz=48
SFIN Lafayette 75.42 311 IAmb IAmb 01 11 04.3
comp=Z,12nm,0.8s
JFWS Jewell Farm 75.47 315 P **P** **01 11 03.3 -0.2**
baz=47
Y57A Sumter 75.48 302 P **P** **01 11 03.8 +0.2**
baz=50
Y57A Sumter 75.48 302 IAmb IAmb 01 11 05.7
comp=Z,24nm,1.0s
Z58A St. Stephen 75.55 302 P **P** **01 11 04.7 +0.6**
baz=50
USRK Ussuriysk Ar. 75.59 43 P **P** **01 11 03.5 -0.6**
comp=Z,2.2nm,0.7s,baz=309,slow=2.9,SNR=3.4
USRK LR LR 01 48 09.8
comp=Z,523nm,18.2s,baz=306,slow=39
X56A White Oak 75.59 303 P **P** **01 11 05.1 +0.8**
baz=50,SNR=7.3
R49A Shelbyville 75.67 308 IAmb IAmb 01 11 06.1
comp=Z,18nm,1.2s
NJ2 Nanjing 75.82 60 *e* P **P** **01 11 05.6 0.0**
NJ2 pmax pmax
comp=Z,12nm,0.5s
PAULI Pauline 75.87 304 IAmb IAmb 01 11 07.8
comp=Z,16nm,0.9s
BLO Bloomington 75.89 310 IAmb IAmb 01 11 07.3
comp=Z,18nm,0.8s
NHSC New Hope 75.93 302 P **P** **01 11 07.0 +0.8**
baz=50
W54A Cherokee Point 75.94 304 P **P** **01 11 06.6 +0.3**
baz=50
X55A Gracelyn & Ava 75.98 303 P **P** **01 11 07.1 +0.6**
baz=50,SNR=6.1
Z57A Bowman 76.14 302 P **P** **01 11 08.4 +0.9**
baz=50,SNR=5.6
Y56A Pelion 76.21 303 P **P** **01 11 08.2 +0.4**
baz=50
T50A Nancy 76.31 307 IAmb IAmb 01 11 10.1
comp=Z,12nm,1.1s
PPLA Purkeypile 76.32 356 IAmb IAmb 01 11 23.7
comp=Z,26nm,1.4s
O44A Mansfield 76.35 312 IAmb IAmb 01 11 19.4
comp=Z,11nm,0.8s
WCI Wyandotte Cave 76.38 309 P **P** **01 11 09.2 +0.5**
WCI pmax pmax
comp=Z,19nm,0.9s
WCI Wyandotte Cave 76.38 309 P **P** **01 11 09.0 +0.3**
baz=48
WCI Wyandotte Cave 76.38 309 P **P** **01 11 09.2 +0.5**
WCI IAmb IAmb 01 11 10.3
comp=Z,18nm,0.8s
X54A Belton 76.40 304 P **P** **01 11 09.6 +0.7**
baz=50,SNR=5.1
Y55A Saluda 76.47 303 P **P** **01 11 09.8 +0.5**
baz=50
HDIL Hopedale 76.55 312 P **P** **01 11 09.9 +0.3**
baz=47
TKL Tuckaleechee C 76.55 306 P **P** **01 11 09.4 -0.4**
comp=Z,9.1nm,1.1s,baz=69,slow=4.3,SNR=4.4
TKL Tuckaleechee C 76.55 306 IAmb IAmb 01 11 11.3
comp=Z,18nm,1.3s
Z56A Williston 76.55 302 P **P** **01 11 10.5 +0.7**
baz=50
L40A Anamosa 76.58 314 IAmb IAmb 01 11 10.9
comp=Z,12nm,0.9s
MDND Maddock 76.65 323 P **P** **01 11 10.3 +0.2**
baz=43
157A Early Branch 76.73 302 P **P** **01 11 11.4 +0.6**
baz=50
V51A Loudon 76.81 306 IAmb IAmb 01 11 13.2
comp=Z,15nm,1.1s
W52A Murphy 77.02 305 IAmb IAmb 01 11 14.0
comp=Z,21nm,1.2s
CPCT Cooper Cave 77.15 306 IAmb IAmb 01 11 15.0
comp=Z,26nm,1.4s
U49A Red Boiling Sp 77.21 307 IAmb IAmb 01 11 15.1
comp=Z,20nm,1.1s
GHO Glory Hole Cre 77.24 355 IAmb IAmb 01 11 20.8
comp=Z,16nm,0.9s
BALM Baldy 77.35 351 IAmb IAmb 01 11 19.1
comp=Z,11nm,1.0s
PMR Palmer 77.44 355 IAmb IAmb 01 11 25.6
comp=Z,13nm,0.9s
Q44A Meyer Farm, Va 77.51 311 IAmb IAmb 01 11 16.4
comp=Z,13nm,0.9s
W50A Signal Mountai 77.80 306 IAmb IAmb 01 11 18.7
comp=Z,23nm,1.1s
CLTN Cedars of Leba 77.82 307 IAmb IAmb 01 11 18.4
comp=Z,13nm,0.9s
GOGA Godfrey 77.83 304 P **P** **01 11 17.4 +0.5**
baz=49
KS19 Wonju Array Si 77.86 51 pP 01 11 21.7 -1.9
Y52A Lilburn 77.91 304 P **P** **01 11 18.1 +0.7**
baz=49,SNR=7.5
Y52A Lilburn 77.91 304 IAmb IAmb 01 11 19.3
comp=Z,21nm,0.9s
KSRS Korea Array 77.93 51 P **P** **01 11 17.2 -0.2**
comp=Z,5.8nm,0.8s,baz=315,slow=5.2,SNR=19
KSRS LR LR 01 49 27.3
comp=Z,428nm,19.4s,baz=274,slow=39
X51A Calhoun 77.94 305 IAmb IAmb 01 11 19.3
comp=Z,15nm,1.1s
YAH Yahtse 77.94 351 IAmb IAmb 01 11 22.2
comp=Z,16nm,0.8s
RC01 Rabbit Creek A 77.98 355 IAmb IAmb 01 11 24.9
comp=Z,18nm,0.9s
DGMT Dagmar 78.21 326 P **P** **01 11 19.0 +0.1**
baz=40
ECSD EROS Data Cent 78.22 319 P **P** **01 11 19.1 +0.1**
baz=44
TJN Taejon 78.33 52 *e* P **P** **01 11 19.4 -0.2**
V48A Smith Brothers 78.35 307 IAmb IAmb 01 11 21.2
comp=Z,14nm,1.0s
FPAL Fort Paine 78.42 306 IAmb IAmb 01 11 22.0
comp=Z,25nm,1.3s
WVT Waverly 78.70 308 P **P** **01 11 21.7 0.0**
WVT pmax pmax
comp=Z,9.0nm,1.1s
WVT Waverly 78.70 308 P **P** **01 11 21.4 -0.4**
baz=47
WVT Waverly 78.70 308 P **P** **01 11 21.7 0.0**
SDDR Presa de Saban 78.71 285 IAmb IAmb 01 11 25.2
comp=Z,28nm,1.1s
YSS Yuzh-Sakhalins 78.80 36 *e* P **P** **01 11 22.3 +0.2**
YSS *e* S **S** **01 21 16.4 -2.3**
YSS *e* PS **PnS** **01 21 53.6 -7.8**
YSS *e* SS **SS** **01 26 19.4 -2.8**
YSS *e* SSS SSS 01 29 41.7
YSS pmax pmax
comp=Z,40nm,1.1s
YSS MLR MLR
comp=Z,700nm,12.0s
YSS MLR MLR
comp=N,500nm,17.0s
YSS MLR MLR
comp=E,500nm,17.0s
152A Waverly Hall 79.11 304 IAmb IAmb 01 11 25.7
comp=Z,23nm,1.1s
TIGA Tifton 79.20 302 P **P** **01 11 25.0 +0.4**
baz=48
X48A Hartselle 79.36 306 IAmb IAmb 01 11 26.9
comp=Z,27nm,1.1s
CCM Cathedral Cave 79.36 312 P **P** **01 11 25.5 +0.2**
CCM pmax pmax
comp=Z,10.0nm,0.8s
CCM Cathedral Cave 79.36 312 P **P** **01 11 25.4 +0.1**
baz=46
CCM Cathedral Cave 79.36 312 P **P** **01 11 25.5 +0.2**
Z50A Ashland 79.47 305 P **P** **01 11 26.3 +0.2**
baz=48
PETK Petropavlovsk- 79.48 24 P **P** **01 11 25.5 -0.2**
comp=Z,2.3nm,0.8s,baz=263,slow=12,SNR=2.5
P38A Dawn 79.54 314 IAmb IAmb 01 11 27.7
comp=Z,14nm,0.8s
PLAL Pickwick Lake 79.62 307 IAmb IAmb 01 11 27.8
comp=Z,16nm,1.1s
PBMO Poplar Bluff 79.78 310 IAmb IAmb 01 11 29.1
comp=Z,25nm,1.4s
DWPF Disney Wildern 79.98 298 P **P** **01 11 29.3 +0.5**
baz=49
LRAL Lakeview Retre 80.28 305 P **P** **01 11 30.9 +0.5**
baz=47,SNR=11
LRAL Lakeview Retre 80.28 305 IAmb IAmb 01 11 32.1
comp=Z,29nm,1.1s
LAO LASA Array 80.46 326 P **P** **01 11 32.0 +0.8**
baz=38
BGNE Belgrade 80.69 318 P **P** **01 11 32.9 +0.4**
baz=42
OXF Oxford 80.74 308 P **P** **01 11 32.0 -0.8**
baz=46
OXF Oxford 80.74 308 IAmb IAmb 01 11 43.8
comp=Z,20nm,0.9s
EGMT Eagleton 80.85 328 P **P** **01 11 34.4 +1.1**
baz=36,SNR=9.0
KDAK Kodiak Island 81.44 356 P **P** **01 11 36.2 +0.1**
comp=Z,14nm,0.9s,baz=345,slow=3.9,SNR=3.8
KDAK Kodiak Island 81.44 356 P **P** **01 11 36.2 +0.1**
KDAK pmax pmax
comp=Z,39nm,1.2s
KDAK Kodiak Island 81.44 356 IAmb IAmb 01 11 40.8
comp=Z,39nm,1.1s
U40A Yellville 81.47 311 P **P** **01 11 36.8 0.0**
baz=45
U40A Yellville 81.47 311 IAmb IAmb 01 11 48.7
comp=Z,14nm,1.1s
RSSD Black Hills 81.49 323 P **P** **01 11 38.2 +1.2**
RSSD pmax pmax
comp=Z,10.0nm,1.2s
RSSD Black Hills 81.49 323 P **P** **01 11 37.2 +0.2**
baz=39
RSSD Black Hills 81.49 323 P **P** **01 11 38.2 +1.2**
KSU1 Kansas State U 81.57 315 P **P** **01 11 37.7 +0.5**
baz=43,SNR=6.6
X43A Marvell 81.61 309 P **P** **01 11 37.7 +0.2**
baz=46
WHAR Wooly Hollow 81.90 310 IAmb IAmb 01 11 40.7
comp=Z,25nm,1.0s
W41B Gary Mavity, V 81.95 310 P **P** **01 11 39.7 +0.5**
baz=45,SNR=8.8
U38A Gravette 82.28 312 IAmb IAmb 01 11 42.5
comp=Z,11nm,0.9s
X40A Basin Creek Fa 82.78 310 P **P** **01 11 43.8 +0.2**
baz=45
JTMT Jette 82.81 331 IAmb IAmb 01 11 53.4
comp=Z,15nm,0.9s
W39A Magazine 82.82 311 P **P** **01 11 44.0 +0.2**
baz=44
PTGA Pitinga 82.85 263 P **P** **01 11 45.8 +1.6**
PTGA IAmb IAmb 01 11 46.7
comp=Z,15nm,1.2s
OGNE Ogallala 82.98 320 P **P** **01 11 44.7 +0.1**
baz=40
RLMT Red Lodge 83.00 326 P **P** **01 11 45.9 +1.1**
baz=36,SNR=7.7
RLMT Red Lodge 83.00 326 IAmb IAmb 01 11 54.6
comp=Z,10nm,1.0s
VBMS Vicksburg 83.00 307 P **P** **01 11 45.4 +0.6**
baz=46
MIAR Mount Ida 83.17 310 P **P** **01 11 46.6 +1.0**
baz=44
MIAR Mount Ida 83.17 310 IAmb IAmb 01 11 47.8
comp=Z,15nm,0.9s
NEW Newport 83.39 333 P **P** **01 11 47.3 +0.7**
baz=31
CBKS Cedar Bluff 83.43 317 P **P** **01 11 47.5 +0.5**
baz=41
TUL1 Leonard 83.44 313 P **P** **01 11 47.4 +0.4**
baz=43
TUL1 Leonard 83.44 313 IAmb IAmb 01 11 48.7
comp=Z,15nm,0.8s
MSO Missoula 83.45 330 P **P** **01 11 48.8 +1.8**
baz=33,SNR=7.1
MSO Missoula 83.45 330 IAmb IAmb 01 11 51.0

comp=Z,18nm,1.4s
Z41A Richland Creek 83.63 309 P P 01 11 48.9 +0.9
baz=44
K22A Casper 83.77 323 P P 01 11 49.4 +0.5
baz=38
H17A Grant Village 84.13 327 P P 01 11 53.2 +2.5
baz=35
C09A Chrisman Ranch 84.19 333 IAmb IAmb 01 11 58.9
comp=Z,15nm,0.9s
BDFB Brasilia 84.31 244 P P 01 11 52.7 +1.0
comp=Z,15nm,0.9s,baz=34,slow=5.9,SNR=18
MJB9 Matsu-Tunnel 84.37 45 pP 01 11 56.7 -1.6
MAJO Matsushiro 84.38 45 pP 01 11 56.8 -1.6
MAT Matsushiro 84.38 45 P P 01 11 51.2 -0.6
MJAR Matsushiro Arr 84.38 45 P P 01 11 51.5 -0.3
comp=Z,4.5nm,0.7s,baz=308,slow=5.3,SNR=13
SDV Santo Domingo 84.68 277 P P 01 11 52.3 -1.6
comp=Z,15nm,1.0s,baz=15,slow=3.3,SNR=1.4
SDV Santo Domingo 84.68 277 *eP* P 01 11 53.9 0.0
SDV Santo Domingo 84.68 277 P P 01 11 54.6 +0.7
SDV IAmb IAmb 01 11 55.8
comp=Z,27nm,1.1s
IMW Indian Meadow 84.69 327 IAmb IAmb 01 12 04.5
comp=Z,16nm,0.9s
KSCO Kaye Shedlock' 84.75 319 P P 01 11 54.9 +1.1
baz=40
N23A Red Feather La 84.89 322 P P 01 11 55.4 +0.8
baz=38,SNR=7.0
FXWY Fox Creek 84.94 327 IAmb IAmb 01 12 05.4
comp=Z,13nm,1.2s
PDAR Pinedale Array 85.02 325 P P 01 11 55.2 0.0
comp=Z,2.4nm,0.7s,baz=54,slow=3.8,SNR=12
BW06 Boulder Array 85.02 325 P P 01 11 55.4 +0.2
baz=36
TPAW Teton Pass 85.03 326 IAmb IAmb 01 12 05.7
comp=Z,9.3nm,0.9s
F10A Beach Ranch, E 85.39 332 IAmb IAmb 01 12 13.1
comp=Z,12nm,1.0s
ISCO Idaho Springs 85.59 321 P P 01 11 58.6 +0.4
baz=38
NATX Nacogdoches 85.80 309 P P 01 11 59.9 +0.9
baz=44
HAWA Hanford 85.84 333 IAmb IAmb 01 12 07.4
comp=Z,12nm,0.7s
WMOK Wichita Mounta 85.96 314 P P 01 12 00.6 +0.8
baz=42
D03D Eldon 85.99 336 P P 01 12 00.5 +0.9
baz=27
Q24A Divide 86.03 320 P P 01 12 00.8 +0.4
baz=38
BMO Blue Mountains 86.38 331 IAmb IAmb 01 12 12.7
comp=Z,8.3nm,0.7s
E04D Cinebar 86.70 335 P P 01 12 04.2 +1.1
baz=28
HWUT Hardware Ranch 86.83 326 IAmb IAmb 01 12 11.7
comp=Z,10nm,1.1s
MFID Camas Ranch 87.05 329 IAmb IAmb 01 12 14.9
comp=Z,10.0nm,1.0s
T25A Trinidad 87.09 319 P P 01 12 05.2 -0.3
baz=39
WHTX Lake Whitney, 87.25 311 P P 01 12 06.9 +0.8
baz=42
SMLC San Martn de 87.31 279 *eP* P 01 12 06.8 +0.1
SJCC San Jacinto, C 87.43 281 *eP* P 01 12 09.5 +2.2
S22A 4UR Ranch, Cre 87.80 321 P P 01 12 09.6 +0.5
baz=37
HKT Hockley 87.80 309 P P 01 12 10.7 +2.0
HKT pmax pmax
comp=Z,15nm,1.3s
HKT Hockley 87.80 309 P P 01 12 10.7 +2.0
HKT IAmb IAmb 01 12 18.9
comp=Z,15nm,1.2s
I07A Izee 87.84 332 IAmb IAmb 01 12 18.3
comp=Z,15nm,1.5s
ABTX Abilene, Hawle 88.02 313 P P 01 12 10.6 +0.8
baz=41
PV22 Blue Mesa, Par 88.09 322 IAmb IAmb 01 12 19.6
comp=Z,10.0nm,1.0s
PV07 Paradox Valley 88.11 322 IAmb IAmb 01 12 19.0
comp=Z,6.7nm,0.9s
PV21 Cone Mtn., Par 88.16 322 IAmb IAmb 01 12 18.1
comp=Z,13nm,1.3s
435B Jarrell 88.22 310 P P 01 12 11.3 +0.6
baz=42
I05D Terrebonne, OR 88.25 333 P P 01 12 11.5 +0.8
baz=28
PV23 Carpenter Ridg 88.26 322 IAmb IAmb 01 12 22.1
comp=Z,12nm,0.8s
PV11 David Mesa, Pa 88.32 322 IAmb IAmb 01 12 21.4
comp=Z,12nm,0.8s
PV18 Skein Mesa, Pa 88.38 322 IAmb IAmb 01 12 21.1
comp=Z,9.4nm,0.8s
DUG Dugway, Tooele 88.53 326 P P 01 12 12.5 +0.3
baz=34,SNR=7.3
DUG Dugway, Tooele 88.53 326 IAmb IAmb 01 12 21.7
comp=Z,2nm,0.8s
PINE Pine Mountain 88.60 333 IAmb IAmb 01 12 21.7
comp=Z,9.1nm,1.1s
MVCO Mesa Verde 89.02 321 P P 01 12 15.6 +0.8
baz=36
PTBC PUERTO BERRIO, 89.07 278 *eP* P 01 12 15.3 +0.3
I04A Tendick Farm, 89.09 334 P P 01 12 15.6 +0.9
baz=28
J05D Fort Rock, OR 89.14 333 P P 01 12 16.3 +1.2
baz=28
I02D Swisshome 89.29 335 P P 01 12 17.3 +1.8
baz=26
I03D Drain, OR 89.49 334 P P 01 12 17.2 +0.8
baz=27
K05A Summer Lake 89.52 332 IAmb IAmb 01 12 25.8
comp=Z,15nm,1.1s
JCT Junction City 89.71 311 P P 01 12 18.7 +0.8
baz=41
ANMO Albuquerque 89.83 319 P P 01 12 18.3 -0.2
comp=Z,0.7nm,0.6s,baz=108,slow=3.4,SNR=4.7
ANMO Albuquerque 89.83 319‖ *eP* P 01 12 19.2 +0.7
ANMO pmax pmax
comp=Z,2.0nm,1.3s
ANMO Albuquerque 89.83 319 P P 01 12 18.9 +0.3
baz=38
ANMO Albuquerque 89.83 319 **sP** 01 12 26.1 -1.4
ANMO IAmb IAmb 01 12 28.2
comp=Z,2.8nm,0.9s
NORC Norcasia 90.02 277 *eP* P 01 12 20.2 +0.7
DBBC Dabeiba 90.08 279 *eP* P 01 12 21.3 +1.5
HELC Santa Helena 90.11 278 *eP* P 01 12 21.9 +1.7
L04D Klamath Falls 90.45 333 P P 01 12 22.0 +0.8
baz=28
GUY2C Guyana, Caldas 90.61 277 *eP* P 01 12 20.2 -2.6
M04C Macdoel 90.68 332 P P 01 12 23.3 +1.0
baz=28
CBOC Ciudad Bolivar 90.68 278 *eP* P 01 12 23.8 +1.1
RREF El Recreo 90.81 277 *eP* P 01 12 25.9 +2.0
833A Chaparral WMA, 91.09 310 P P 01 12 25.4 +1.1
baz=41
PRAC Prado 91.24 276 *eP* P 01 12 25.3 +0.1
R11A Troy Canyon, C 91.24 327 P P 01 12 25.2 +0.2
baz=32,SNR=9.9
R11A Troy Canyon, C 91.24 327 IAmb IAmb 01 12 28.8
comp=Z,10nm,1.5s
M02C Callahan 91.38 333 P P 01 12 25.6 +0.1
baz=27
ORTC Ortega, Tolima 91.38 276 *eP* P 01 12 26.1 +0.3
N02D Trinity Center 91.70 333 P P 01 12 27.1 +0.1
baz=27
WUAZ Wupatki 91.75 322 P P 01 12 27.8 +0.4
baz=35
MNTX Cornudas Mount 91.84 316 P P 01 12 27.8 +0.1
baz=38,SNR=6.0
MNTX Cornudas Mount 91.84 316 IAmb IAmb 01 12 35.1
comp=Z,8.4nm,1.2s
O03E Paynes Creek 91.98 332 P P 01 12 28.6 +0.4
baz=28
YERR Yerington 92.17 329 IAmb IAmb 01 12 39.5
comp=Z,18nm,1.5s
NVAR Mina Array Bea 92.28 328 P P 01 12 30.6 +0.8
comp=Z,0.2nm,0.3s,baz=12,slow=4.6,SNR=1.0
O02D Mt. Diablo Mer 92.43 332 P P 01 12 30.7 +0.4
baz=27
WAKR Walker 92.66 329 IAmb IAmb 01 12 40.3
comp=Z,14nm,1.5s
TX32 Lajitas Array 92.75 313 IAmb IAmb 01 12 40.5
comp=Z,10nm,1.1s
TXAR Lajitas Array 92.75 313 P P 01 12 32.7 +0.6
comp=Z,4.8nm,0.9s,baz=57,slow=4.6,SNR=26
PCON Cinco Dias 93.28 276 *eP* P 01 12 35.5 +0.2
SIV San Ignacio 93.72 252 P P 01 12 36.8 +0.3
comp=Z,1.6nm,0.9s,baz=20,slow=2.2,SNR=4.9
CWC Cottonwood Cre 93.91 327 P P 01 12 38.6 +1.3
baz=30
MPMC Manual Prospec 93.99 327 P P 01 12 38.9 +1.1
baz=31
TUC Tucson 94.09 320 P P 01 12 39.6 +1.4
baz=35
BBAC Balboa, Cauca 94.12 276 *eP* P 01 12 39.0 +0.3
GMRC Granite Mounta 94.29 325 P P 01 12 40.4 +1.3
baz=32
IRM Iron Mountain 94.59 324 P P 01 12 40.9 +0.5
baz=32
214A Organ Pipe Nat 95.36 321 P P 01 12 44.1 +0.2
baz=34
MONP2 Monument Peak 96.23 324 P P 01 12 47.4 -0.6
baz=32
WRA Warramunga Arr 121.05 90 PKP PKiKP 01 18 13.1 +0.7
comp=Z,1.1nm,0.9s,baz=307,slow=2.9,SNR=2.2
ASAR Alice Springs 122.87 94 PKP PKiKP 01 18 16.0 0.0
comp=Z,1.2nm,0.8s,baz=330,slow=1.5,SNR=7.7

MAN 19 00:59:46.8,11°.26N×124°.68E,h13km,mb5.2,ML4.1, MS4.2,2C,Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.22**	**197**	*eP*			Pb	00 59 52.6	0.0
OCLP				*eS*			Sb	00 59 57.5	+1.0
MSLP	**Maasin**	**1.13**	**171**	*eP*			Pb	01 00 07.0	-1.3
MSLP				*eS*			Sn	01 00 29.3	+5.5
LLP	**Lapu-Lapu**	**1.17**	**217**‖	*eP*			Pb	01 00 08.2	-0.7
LLP				*eS*			Sn	01 00 24.9	+0.2
CNP	**Catarman**	**1.24**	**359**	*eP*			Pn	01 00 09.0	-0.9
CNP				*eS*			Sn	01 00 26.6	+0.1
TBP	**Tagbilaran**	**1.75**	**207**	*i* P			Pg	01 00 20.7	+0.2
TBP				*i* S			Sg	01 00 49.9	+6.7
RCP	**Roxas**	**1.92**	**279**‖	*eP*			Pg	01 00 27.9	+4.3
RCP				*eS*			Sg	01 00 48.6	+0.1
GUIM	**Jordan**	**2.14**	**253**	*eP*			Pn	01 00 21.6	-0.7
GUIM				*eS*			Sn	01 00 49.8	+1.0
PVCP	**Virac**	**2.38**	**348**	*eP*			Pn	01 00 27.2	+1.6
PVCP				*eS*			Sn	01 00 54.9	+0.3
CNOP	**Candoni, Negro**	**2.46**	**235**	*eP*			Pn	01 00 27.2	+0.6
CNOP				*eS*			Sn	01 00 54.8	-1.7
BUKP	**Musuan**	**3.38**	**173**	*eP*			Pb	01 00 46.2	-0.5
BUKP				*eS*			Sn	01 01 11.1	-8.3

MAN 19 01:01:41.4,13°.52N×120°.46E,h10km,mb3.8,ML2.5, MS2.0,Mindoro

*GCG **19** 01:02:18.9±0.5, 13°.55N×91°.93W,h35km±19km, MD4.4*
*INET **19** 01:02:20.3, 13°.77N×92°.01W,h15km, ML4.7*
*NEIC **19** 01:02:22.9±2.6, 13°.83N±0°.04×91°.81W±0°.02,h45km±5km, mb4.3/97, Error ellipse: s-maj=6.7km s-min=1.8km az=162.0*
*SNET **19** 01:02:23.8±1.1, 13°.97N×91°.54W,h12km±14km, ML4.0*
*UCR **19** 01:02:24.0±1.2, 13°.97N×91°.55W,h15km±13km, ML3.9, mb4.3(NEIC)*
*IDC **19** 01:02:27.2±2.4, 13°.91N×91°.57W,h82km±19km,mb3.8/12, mb1 4.1/15,mb1mx3.8/42,mbtmp4.2/15,MS3.6/4, Ms1 3.6/4,ms1mx3.4/30,Error ellipse: s-maj=23.7km s-min=12.5km az=52.0*

ISC 19 01:02:22.7±1.2, 13°.83N±0°.06×91°.84W±0°.06, h47km±11km, n143,σ1$36/117,mb4.3/42, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.66**	**23**	*eP*			**Pn**	**01 02 35.7**	**-0.2**
RTAL	**Retalhuleu**	**0.71**	**11**	*eP*			**Pn**	**01 02 35.1**	**-1.3**
RTAL				*eS*			**Sn**	**01 02 43.0**	**-3.4**
RTAL				IAML				01 02 49.6	
comp=Z,4μm,0.4s									
FUG	**Fuego 3**	**1.15**	**57**	*eP*			**Pn**	**01 02 42.1**	**-0.5**
THIG		**1.15**	**339**				**Pn**	**01 02 40.4**	**-2.0**
PCG	**Pacaya**	**1.32**	**65**	*eP*			**Pn**	**01 02 44.9**	**0.0**
IXG	**Ixpaco**	**1.40**	**76**	*eP*			**Pn**	**01 02 43.5**	**-2.5**
IXG	**Ixpaco**	**1.40**	**76**	*eP*			**Pn**	**01 02 44.8**	**-1.2**
IXG	**Ixpaco**	**1.40**	**76**	*eP*			**Pn**	**01 02 43.5**	**-2.5**
HUEH	**Huehuetenango**	**1.52**	**12**	*eP*			**Pn**	**01 02 47.5**	**-0.2**
HUEH				*eS*			**Sn**	**01 03 07.8**	**+1.4**
HUEH				IAML				01 03 11.8	
comp=Z,5μm,0.6s									
NBG	**Las Nubes**	**1.64**	**62**	*eP*			**Pn**	**01 02 50.5**	**+1.2**
NBG				*eS*			**Sn**	**01 03 12.7**	**+3.4**
APG	**El Apazote**	**1.77**	**49**	P			**Pn**	**01 02 51.6**	**+0.5**
comp=Z,48nm,0.3s,baz=220,slow=8.7,SNR=144									
APG				S			**Sn**	**01 03 12.9**	**+0.2**
comp=Z,124nm,0.3s,baz=330,slow=20,SNR=15									
RTR	**El Retiro**	**2.13**	**88**	*eP*			**Pn**	**01 02 55.9**	**-0.1**
RTR	**El Retiro**	**2.13**	**88**	*eP*			**Pn**	**01 02 55.9**	**-0.1**
CEVE	**Cerro Verde**	**2.15**	**90**	*eP*			**Pn**	**01 02 55.6**	**-0.8**
CEVE				*eS*			**Sn**	**01 03 20.9**	**-1.1**
CEVE				IAML				01 03 31.4	
comp=Z,3μm,0.5s									
CEVE	**Cerro Verde**	**2.15**	**90**	*eP*			**Pn**	**01 02 55.6**	**-0.8**
CEVE				*eS*			**Sn**	**01 03 20.9**	**-1.1**
CEVE				IAML				01 03 31.4	
comp=Z,3μm,0.5s									
SBLS	**San Blas**	**2.15**	**89**	*eP*			**Pn**	**01 02 55.3**	**-1.1**
SBLS	**San Blas**	**2.15**	**89**	*eP*			**Pn**	**01 02 55.3**	**-1.1**
SNJE	**San Jose**	**2.17**	**89**	*eP*			**Pn**	**01 02 55.7**	**-0.9**
SNJE	**San Jose**	**2.17**	**89**	*eP*			**Pn**	**01 02 55.7**	**-0.9**
PCIG		**2.29**	**325**				**Pn**	**01 02 56.3**	**-1.8**
CCIG	**Comitan**	**2.46**	**353**				**Pn**	**01 03 02.4**	**+1.9**
MTO3	**Montecristo**	**2.47**	**76**	*eP*			**Pn**	**01 02 59.9**	**-0.8**
MTO3	**Montecristo**	**2.47**	**76**	*eP*			**Pn**	**01 02 59.9**	**-0.8**
BOQS	**Boqueron**	**2.49**	**92**	*eP*			**Pn**	**01 03 00.6**	**-0.4**
BOQS	**Boqueron**	**2.49**	**92**	*eP*			**Pn**	**01 03 00.6**	**-0.4**
SNET	**Serv Nac Est T**	**2.54**	**93**				**Pn**	**01 03 01.6**	**+0.1**
LFRS	**El Faro**	**2.71**	**94**	*eP*			**Pn**	**01 03 03.1**	**-0.8**
LFRS	**El Faro**	**2.71**	**94**	*eP*			**Pn**	**01 03 03.1**	**-0.8**
LBRS	**Las Brisas**	**2.72**	**92**	*eP*			**Pn**	**01 03 03.7**	**-0.3**
LBRS	**Las Brisas**	**2.72**	**92**	*eP*			**Pn**	**01 03 03.7**	**-0.3**
COEG	**Centro de Oper**	**2.88**	**94**	*eP*			**Pn**	**01 03 06.3**	**+0.1**
COEG				IAML				01 03 50.9	
comp=Z,708nm,0.4s									
COEG	**Centro de Oper**	**2.88**	**94**	*eP*			**Pn**	**01 03 06.3**	**+0.1**
COEG				IAML				01 03 50.9	
comp=Z,708nm,0.4s									
TGIG		**3.19**	**337**				**Pn**	**01 03 10.7**	**+0.4**
COEB	**Comit de Eme**	**3.23**	**95**	*eP*			**Pn**	**01 03 11.3**	**+0.2**
COEB				IAML				01 03 56.7	
comp=Z,298nm,0.3s									
COEB	**Comit de Eme**	**3.23**	**95**	*eP*			**Pn**	**01 03 11.3**	**+0.2**
COEB				IAML				01 03 56.7	
comp=Z,298nm,0.3s									
LCND	**La Caada**	**3.88**	**97**	*eP*			**Pn**	**01 03 19.8**	**0.0**
LCND				IAML				01 04 15.4	
comp=Z,279nm,0.5s									
LCND	**La Caada**	**3.88**	**97**	*eP*			**Pn**	**01 03 19.8**	**0.0**
LCND				IAML				01 04 15.4	
comp=Z,279nm,0.5s									
CMIG	**Matias Romero**	**4.38**	**318**	P			**Pn**	**01 03 25.0**	**-1.6**
comp=Z,4.4nm,0.3s,baz=138,slow=11,SNR=34									
CMIG				S			**Sn**	**01 04 17.8**	**+1.4**
comp=Z,74nm,0.3s,baz=160,slow=12,SNR=10									
CMIG				LR		LR		01 05 29.9	
comp=Z,1μm,19.3s,baz=136,slow=41									
CMIG	**Matias Romero**	**4.38**	**318**				**Pn**	**01 03 25.5**	**-1.1**
TGUH	**Tegucigalpa,Un**	**4.44**	**86**	Pn	Pn		**Pn**	**01 03 25.9**	**-1.8**
CRIN	**San Cristobal**	**4.80**	**103**	Pn	Pn		**Pn**	**01 03 34.1**	**+1.6**
MATN	**Matagalpa**	**5.83**	**98**				**Pn**	**01 03 46.0**	**-0.7**
TEIG	**Tepich**	**7.22**	**28**				**Pn**	**01 04 06.4**	**+0.7**
TEIG	**Tepich**	**7.22**	**28**				**Sn**	**01 05 24.5**	**-1.9**
TLIG	**Tlapa**	**7.47**	**301**				**Pn**	**01 04 11.3**	**+2.1**
ESPN	**Las Esperanzas**	**7.53**	**102**				**Pn**	**01 04 10.0**	**+0.1**
JTS	**Las Juntas de**	**7.60**	**117**	P			**Pn**	**01 04 11.7**	**+0.8**
comp=Z,1.1nm,0.3s,baz=9.3,slow=6.3,SNR=9.2									
JTS				S			**Sn**	**01 05 32.1**	**-3.7**
baz=162,slow=20,SNR=0.4									
JTS				LR		LR		01 06 38.9	
comp=Z,385nm,18.8s,baz=21,slow=34									
JTS	**Las Juntas de**	**7.60**	**117**				**Pn**	**01 04 12.4**	**+1.4**
UPD2	**Meteti**	**14.54**	**110**	*eP*			P	01 06 08.9	+18
CBOC	**Ciudad Bolivar**	**17.48**	**115**	*eP*			**P**	**01 06 25.1**	**+1.0**
553A	**Crawfordville**	**17.66**	**22**	P			**P**	**01 06 27.4**	**+1.6**
NATX	**Nacogdoches**	**18.04**	**352**				**Pn**	**01 06 30.4**	**+0.5**
JCT	**Junction City**	**18.13**	**337**	P			**Pn**	**01 06 32.5**	**+1.4**
YOTC	**Yotoco, Valle**	**18.15**	**121**	*eP*			**Pn**	**01 06 34.4**	**+2.8**
GUY2C	**Guyana, Caldas**	**18.35**	**116**	*eP*			**Pn**	**01 06 36.0**	**+1.7**
HPIG		**18.36**	**317**	P			**Pn**	**01 06 34.8**	**+0.6**
RREF	**El Recreo**	**18.52**	**117**	*eP*			**Pn**	**01 06 39.0**	**+2.5**
PTBC	**PUERTO BERRIO,**	**18.57**	**111**	*eP*			**P**	**01 06 36.2**	**+0.3**
BBAC	**Balboa, Cauca**	**18.59**	**128**	*eP*			**Pn**	**01 06 38.2**	**+1.1**
NORC	**Norcasia**	**18.62**	**115**	*eP*			**P**	**01 06 37.2**	**+0.7**
352A	**Blakely**	**18.68**	**19**	P			**Pn**	**01 06 38.5**	**+0.7**
352A				IAmb			IAmb	01 06 44.6	
comp=Z,30nm,0.9s									
143A	**Socs Landing,**	**18.80**	**1**	P			**Pn**	**01 06 38.6**	**-0.5**
143A				IAmb			IAmb	01 06 43.8	
comp=Z,27nm,1.0s									
146A	**Union**	**18.90**	**7**	P			**Pn**	**01 06 39.7**	**-0.7**
146A				IAmb			IAmb	01 06 44.8	
comp=Z,40nm,1.2s									
TX31	**Lajitas Ar. Si**	**18.93**	**327**	P			**Pn**	**01 06 42.6**	**+1.8**
TX31				IAmb			IAmb	01 06 50.0	
comp=Z,16nm,0.8s									
TX32	**Lajitas Array**	**18.93**	**327**	P			**Pn**	**01 06 42.7**	**+1.9**
TXAR	**Lajitas Array**	**18.93**	**327**	P			**Pn**	**01 06 42.3**	**+1.5**
comp=Z,0.3nm,0.3s,baz=155,slow=12,SNR=50									
TXAR				LR			LR	01 14 28.4	
comp=Z,80nm,19.6s,baz=0.0,slow=38									
SOTA	**Rioblanco**	**19.02**	**126**	*eP*			**Pn**	**01 06 45.2**	**+2.7**
PCON	**Cinco Dias**	**19.07**	**125**	*eP*			**Pn**	**01 06 44.5**	**+1.5**
ORTC	**Ortega, Tolima**	**19.11**	**120**	*eP*			**Pn**	**01 06 45.2**	**+2.1**
SPBC	**San Pablo de B**	**19.29**	**113**	*eP*			**Pn**	**01 06 46.6**	**+1.3**
ROSC	**El Rosal**	**19.44**	**116**	P			**P**	**01 06 46.5**	**+0.6**
baz=21,slow=5.3,SNR=9.0									
ROSC	**El Rosal**	**19.44**	**116**	*eP*			**Pn**	**01 06 48.9**	**+1.5**
ROSC	**El Rosal**	**19.44**	**116**	P			**P**	**01 06 44.7**	**-1.2**
ROSC				IAmb			IAmb	01 06 51.7	
comp=Z,31nm,1.4s									
PRAC	**Prado**	**19.52**	**119**	*eP*			**P**	**01 06 44.5**	**-1.9**
Z47A	**Carrollton**	**19.59**	**9**	P			**P**	**01 06 47.1**	**+0.2**
Z47A				IAmb			IAmb	01 06 50.4	
comp=Z,19nm,0.7s									
LRAL	**Lakeview Retre**	**19.62**	**12**				**Pn**	**01 06 49.4**	**+0.3**
LRAL				IAmb			IAmb	01 06 54.2	
comp=Z,17nm,0.8s									
WLAR	**White Oak Lake**	**19.81**	**357**	P			**P**	**01 06 49.6**	**+0.3**
152A	**Waverly Hall**	**19.85**	**18**	IAmb			IAmb	01 06 56.4	
comp=Z,19nm,0.8s									
PAMC	**Pamplona, Colo**	**19.88**	**107**	*eP*			**P**	**01 06 49.1**	**-1.7**
ABTX	**Abilene, Hawle**	**20.02**	**340**	P			**P**	**01 06 52.0**	**+0.2**
ABTX				IAmb			IAmb	01 06 54.8	
comp=Z,11nm,0.9s									
CHIC	**Chingaza**	**20.06**	**115**	*eP*			Pn	01 06 55.1	+0.4
RUSC	**La Rusia**	**20.08**	**111**	*eP*			**P**	**01 06 54.3**	**+1.4**
Z50A	**Ashland**	**20.08**	**15**	P			**P**	**01 06 51.6**	**-0.7**
Z50A				IAmb			IAmb	01 07 07.0	
comp=Z,11nm,0.8s									
LPIG	**La Paz**	**20.21**	**303**	P			Pn	01 06 56.8	+0.7
comp=Z,10.0nm,0.3s,baz=195,slow=4.0,SNR=2.1									
MIAR	**Mount Ida**	**20.69**	**356**	IAmb			IAmb	01 07 07.3	
comp=Z,15nm,1.0s									
UALR	**University of**	**20.86**	**359**	IAmb			IAmb	01 07 09.1	
comp=Z,15nm,1.1s									
X37A	**Clayton**	**20.92**	**352**	IAmb			IAmb	01 07 09.3	
comp=Z,21nm,1.1s									
X48A	**Hartselle**	**20.99**	**11**	IAmb			IAmb	01 07 16.7	
comp=Z,12nm,0.9s									
MACC	**Macarena, Meta**	**21.24**	**122**	*eP*			**P**	**01 07 06.7**	**+1.7**
SDV	**Santo Domingo**	**21.36**	**101**	P			**P**	**01 07 06.2**	**-0.2**
comp=Z,1.0nm,0.3s,baz=309,slow=4.1,SNR=3.8									
FPAL	**Fort Paine**	**21.38**	**14**	IAmb			IAmb	01 07 14.1	
comp=Z,16nm,1.0s									
GDL2	**Guadalupe Moun**	**21.58**	**330**	P			**P**	**01 07 07.1**	**-1.6**
X51A	**Calhoun**	**21.59**	**16**	IAmb			IAmb	01 07 17.3	
comp=Z,22nm,1.0s									
MNTX	**Cornudas Mount**	**21.70**	**327**	IAmb			IAmb	01 07 15.4	
comp=Z,11nm,0.8s									
SWET	**Sewanee**	**21.95**	**13**	IAmb			IAmb	01 07 15.9	
comp=Z,7.0nm,0.7s									
W50A	**Signal Mountai**	**22.08**	**14**	IAmb			IAmb	01 07 32.8	
comp=Z,15nm,0.9s									
MSTX	**Muleshoe**	**22.37**	**336**	IAmb			IAmb	01 07 28.9	
comp=Z,12nm,1.0s									
WVT	**Waverly**	**22.50**	**9**	P			**P**	**01 07 17.7**	**-0.5**
WVT				IAmb			IAmb	01 07 27.8	
comp=Z,15nm,1.2s									
CPCT	**Cooper Cave**	**22.52**	**16**	IAmb			IAmb	01 07 37.7	
comp=Z,7.7nm,0.8s									
CLTN	**Cedars of Leba**	**22.72**	**12**	IAmb			IAmb	01 07 21.9	
comp=Z,8.2nm,0.8s									
PBMO	**Poplar Bluff**	**22.89**	**3**	IAmb			IAmb	01 07 24.1	
comp=Z,14nm,0.8s									
TKL	**Tuckaleechee C**	**22.92**	**17**	P			**P**	**01 07 22.7**	**0.0**
comp=Z,4.6nm,0.8s,baz=186,slow=13,SNR=7.8									
TKL	**Tuckaleechee C**	**22.92**	**17**	IAmb			IAmb	01 07 29.5	
comp=Z,9.9nm,1.1s									
V53A	**Saluda**	**23.22**	**19**	IAmb			IAmb	01 07 36.4	
comp=Z,9.3nm,0.9s									
U49A	**Red Boiling Sp**	**23.24**	**12**	IAmb			IAmb	01 07 43.1	
comp=Z,16nm,1.4s									
KMSC	**Kings Mountain**	**23.25**	**22**	IAmb			IAmb	01 07 46.1	
comp=Z,11nm,0.8s									
T47A	**Sharon Grove**	**23.45**	**10**	IAmb			IAmb	01 07 29.3	
comp=Z,14nm,0.9s									
CCM	**Cathedral Cave**	**24.14**	**1**	P			**P**	**01 07 33.0**	**-1.2**
CCM				IAmb			IAmb	01 07 34.7	
comp=Z,6.2nm,0.8s									
V58A	**Windy Hill, Pi**	**24.69**	**25**	IAmb			IAmb	01 07 39.8	
comp=Z,7.4nm,0.8s									
WCI	**Wyandotte Cave**	**24.80**	**10**	P			**P**	**01 07 38.5**	**-1.8**
WCI				IAmb			IAmb	01 07 41.6	
comp=Z,9.4nm,0.7s									
ANMO	**Albuquerque**	**24.83**	**330**	P			**P**	**01 07 42.5**	**+1.7**
comp=Z,3.1nm,0.5s,baz=145,slow=11,SNR=21									
ANMO	**Albuquerque**	**24.83**	**330**	P			**P**	**01 07 40.5**	**-0.4**
TUC	**Tucson**	**25.27**	**320**	P			**P**	**01 07 45.8**	**+1.1**
T59A	**Double "B" Far**	**26.35**	**26**	IAmb			IAmb	01 07 55.4	
comp=Z,7.1nm,1.0s									
X16A	**Lo Mia Camp, P**	**27.11**	**323**	IAmb			IAmb	01 08 05.5	
comp=Z,6.8nm,0.8s									
MVCO	**Mesa Verde**	**27.63**	**330**	IAmb			IAmb	01 08 09.3	
comp=Z,11nm,1.1s									
Y14A	**Wickenburg**	**27.74**	**320**	P			**P**	**01 08 07.6**	**+0.6**
PV03	**Paradox Valley**	**28.63**	**331**	IAmb			IAmb	01 08 18.3	
comp=Z,7.2nm,1.2s									
PV18	**Skein Mesa, Pa**	**28.65**	**331**	IAmb			IAmb	01 08 18.4	
comp=Z,12nm,1.3s									
R11A	**Troy Canyon, C**	**32.24**	**324**	IAmb			IAmb	01 08 50.9	
comp=Z,3.7nm,1.1s									
HWUT	**Hardware Ranch**	**32.56**	**332**	IAmb			IAmb	01 08 53.1

ILAR	**Eielson Array**	**63.06**	**337**	P	**P**	**01 12 45.8**	**+0.9**
	comp=Z,5.8nm,0.9s,baz=128,slow=4.9,SNR=19						
EKA	**Eskdalemuir Ar**	**78.02**	**36**	P	**P**	**01 14 13.7**	**-2.4**
	comp=Z,1.3nm,0.7s,baz=286,slow=5.8,SNR=4.3						
BILL	**Bilibino**	**81.68**	**338**	P	**P**	**01 14 34.6**	**-1.2**
MKAR	**Makanchi Array**	**119.43**	**5**	PKP	**PKPdf**	**01 21 06.4**	**-0.9**
	comp=Z,0.6nm,0.9s,baz=331,slow=5.4,SNR=2.8						
CMAR	**Chiang Mai Arr**	**146.21**	**341**	PKPbc	**PKPab**	**01 22 00.1**	**+0.6**
	comp=Z,5.0nm,0.7s,baz=343,slow=4.5,SNR=33						

NEIC ***19*** *01:04:24.9±2.5, 11°.1S±0°.1×164°.6E±0°.1, h10km±1km, mb4.3/7, Error ellipse: s-maj=21.2km s-min=15.7km az=52.0*
IDC ***19*** *01:04:29.2±3.7, 11°.18S×164°.66E, h42km±34km, mb3.9/9, mb1 4.1/12, mb1mx3.9/30, mbtmp4.2/12, ML4.4/3, MS3.3/1, Ms1 3.3/1, ms1mx3.1/28, Error ellipse: s-maj=32.4km s-min=22.4km az=119.0*
ISC 19 01:04:28.0±0.7, 11°.10S±0°.09×164°.57E±0°.10, h29km, n22, σ1s01/23, mb4.2/11, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time			Res
				Op			h	m	s	ISC
HNR	**Honiara**	**4.84**	**290**	P		**Pn**	**01**	**05**	**40.3**	**+1.3**
	26nm,0.3s,baz=158,slow=19,SNR=1.6									
HNR				S		**Sn**	**01**	**06**	**33.0**	**-1.1**
	28nm,0.3s,baz=172,slow=18,SNR=1.6									
HNR				LR		LR	01	07	28.9	
	comp=Z,353nm,21.0s,baz=63,slow=36									
HNR	**Honiara**	**4.84**	**290**			**Pn**	**01**	**05**	**39.5**	**+0.5**
DZM	**Mont Dzumac**	**11.05**	**171**	P		**Pn**	**01**	**07**	**03.9**	**-0.5**
	3.6nm,0.3s,baz=332,slow=14,SNR=19									
CTA	**Charters Tower**	**19.76**	**241**	P		**Pn**	**01**	**08**	**57.8**	**+0.3**
	0.4nm,0.3s,baz=74,slow=11,SNR=4.3									
CTAO	**Charters Tower**	**19.76**	**241**	P		**P**	**01**	**08**	**54.3**	**-1.6**
CTAO				IAmb		IAmb	01	08	59.0	
	comp=Z,21nm,1.1s									
STKA	**Stephens Creek**	**29.62**	**222**	P		**P**	**01**	**10**	**31.1**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=354,slow=13,SNR=3.0									
WR0	**Warramunga Arr**	**30.20**	**249**	P		**P**	**01**	**10**	**35.1**	**-1.2**
WB2	**Warramunga Arr**	**30.37**	**249**	P		**P**	**01**	**10**	**37.9**	**+0.1**
WB2				IAmb		IAmb	01	10	42.9	
	comp=Z,5.4nm,1.1s									
WRA	**Warramunga Arr**	**30.38**	**249**	P		**P**	**01**	**10**	**37.4**	**-0.5**
	comp=Z,3.7nm,0.8s,baz=80,slow=9.1,SNR=7.2									
ASAR	**Alice Springs**	**31.74**	**243**			**P**	**01**	**10**	**49.1**	**-0.7**
	comp=Z,2.1nm,0.6s,baz=64,slow=10,SNR=24									
BBOO	**Buckleboo**	**33.95**	**226**	P		**P**	**01**	**11**	**09.1**	**+0.1**
FITZ	**Fitzroy Crossi**	**38.25**	**255**	P		**P**	**01**	**11**	**44.9**	**-1.1**
MORW	**Morawa**	**48.59**	**241**	P		**P**	**01**	**13**	**10.2**	**+1.0**
USRK	**Ussuriysk Ar.**	**62.49**	**334**	P		**P**	**01**	**14**	**49.6**	**+0.9**
	comp=Z,1.3nm,0.8s,baz=131,slow=4.4,SNR=2.8									
PETK	**Petropavlovsk-**	**64.22**	**355**	P		**P**	**01**	**15**	**00.5**	**+0.4**
	comp=Z,3.1nm,0.7s,baz=169,slow=9.4,SNR=4.6									
SONM	**Songino Array**	**78.03**	**324**	P		**P**	**01**	**16**	**24.8**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=150,slow=6.0,SNR=6.0									
QSPA	**South Pole Qui**	**78.90**	**180**	P		**P**	**01**	**16**	**30.5**	**+1.9**
QSPA				IAmb		IAmb	01	16	32.6	
	comp=Z,3.6nm,1.1s									
ILAR	**Eielson Array**	**83.93**	**19**	P		**P**	**01**	**16**	**54.6**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=226,slow=6.6,SNR=9.5									
MKAR	**Makanchi Array**	**92.77**	**317**	P		**P**	**01**	**17**	**37.8**	**0.0**
	comp=Z,1.1nm,0.8s,baz=104,slow=5.1,SNR=7.1									
YKA	**Yellowknife Ar**	**95.55**	**27**	P		**P**	**01**	**17**	**48.3**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=257,slow=4.9,SNR=3.9									
ESDC	**Sonseca Array**	**149.78**	**342**	PKPbc		**PKPbc**	**01**	**24**	**14.3**	**-1.3**
	comp=Z,0.3nm,0.8s,baz=33,slow=3.1,SNR=4.2									
TORD	**Torodi Ar. Bea**	**163.13**	**279**	PKP		**PKPdf**	**01**	**24**	**28.6**	**-0.1**
	comp=Z,0.5nm,1.0s,baz=90,slow=2.6,SNR=2.3									

TIR ***19*** *01:06:36.5, 40°.94N×19°.99E, h2km, Md2.8/7*
THE ***19*** *01:06:37.9, 40°.97N×20°.04E, h6km±2km, ML2.3/5, Error ellipse: s-maj=2.4km s-min=1.1km az=302.0*
ATH ***19*** *01:06:37.0, 40°.97N×19°.89E, h21km±2km, ML2.5/2, Error ellipse: s-maj=2.4km s-min=1.8km az=36.0*
ISC 19 01:06:36.6±1.3, 40°.95N±0°.02×19°.98E±0°.03, h4km±11km, n43, σ1s19/57, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time			Res
				Op			h	m	s	ISC
TIR	**Tirane**	**0.40**	**348**	P		**Pb**	**01**	**06**	**46.1**	**-0.3**
TIR	**Tirane**	**0.40**	**348**	*i* PG		**Pb**	**01**	**06**	**46.0**	**-0.3**
TIR				*i* SG		**Sb**	**01**	**06**	**52.5**	**-0.4**
TIR	**Tirane**	**0.40**	**348**	P		**Pb**	**01**	**06**	**46.0**	**-0.4**
TIR				AML	AML		01	07	04.7	
	comp=E,1129μm,0.5s									
TIR				AML	AML		01	07	05.0	
	comp=N,2382μm,0.5s									
VLO	**Vlora**	**0.61**	**217**	P		**Pb**	**01**	**06**	**49.2**	**-0.6**
VLO	**Vlora**	**0.61**	**217**	*i* PG		**Pb**	**01**	**06**	**49.6**	**-0.3**
VLO				*i* SG		**Sb**	**01**	**06**	**58.7**	**0.0**
TPE	**Tepelena**	**0.66**	**178**	P		**Pg**	**01**	**06**	**49.8**	**+0.6**
TPE				S		**Sb**	**01**	**07**	**00.6**	**+0.4**
	comp=N,322nm,0.4s									
TPE	**Tepelena**	**0.66**	**178**	*i* PG		**Pg**	**01**	**06**	**49.7**	**+0.4**
TPE				*i* SG		**Sb**	**01**	**06**	**59.8**	**-0.5**
PHP	**Peshkopia**	**0.81**	**25**	P		**Pb**	**01**	**06**	**52.5**	**-0.8**
PHP	**Peshkopia**	**0.81**	**25**	*i* PG		**Pb**	**01**	**06**	**52.6**	**-0.8**
PHP				*i* SG		**Sn**	**01**	**07**	**06.1**	**-1.4**
NEST	**Nestorio**	**0.97**	**123**	P		**Pg**	**01**	**06**	**55.2**	**-0.1**
NEST	**Nestorio**	**0.97**	**123**	P		**Pb**	**01**	**06**	**55.9**	**-0.3**
SRN	**Sarande**	**1.07**	**179**	P		**Pn**	**01**	**06**	**57.8**	**-0.7**
SRN				S		**Sn**	**01**	**07**	**14.5**	**+0.7**
	comp=N,102nm,0.5s									
SRN	**Sarande**	**1.07**	**179**	*i* PG		**Pn**	**01**	**06**	**58.1**	**-0.4**
SRN				*i* SG		**Sn**	**01**	**07**	**12.9**	**-0.9**
FNA	**Florina**	**1.07**	**99**	P		**Pb**	**01**	**06**	**57.5**	**-0.3**
FNA	**Florina**	**1.07**	**99**	*i* PG		**Pn**	**01**	**06**	**59.7**	**+1.1**
FNA				*i* SG		**Sg**	**01**	**07**	**07.9**	**-3.2**
FNA	**Florina**	**1.07**	**99**	P		**Pn**	**01**	**06**	**57.8**	**-0.8**
FNA				AML	AML		01	07	18.2	
	comp=E,338μm,0.4s									
FNA				AML	AML		01	07	18.3	
	comp=N,635μm,0.6s									
PUK	**Puka**	**1.09**	**357**	*i* PN		**Pn**	**01**	**06**	**59.9**	**+1.0**
PUK				*i* SN		**Sn**	**01**	**07**	**18.6**	**+4.1**
PENT	**Pentalofos**	**1.16**	**130**	P		**Pn**	**01**	**07**	**01.4**	**+1.6**
KASA	**Kassiopi**	**1.21**	**182**	P		**Pg**	**01**	**07**	**00.5**	**+0.7**
KASA				S		**Sn**	**01**	**07**	**17.3**	**+0.2**
KEK	**Kerkira**	**1.25**	**186**	P		**Pg**	**01**	**07**	**00.8**	**+0.3**
KEK				S		**Sn**	**01**	**07**	**18.3**	**+0.2**
	comp=N,118nm,0.5s									
KEK	**Kerkira**	**1.25**	**186**	P		**Pg**	**01**	**07**	**01.0**	**+0.4**
KEK				S		**Sn**	**01**	**07**	**18.4**	**+0.2**
IGT	**Igoumenitsa**	**1.44**	**169**	P		**Pg**	**01**	**07**	**04.6**	**+0.3**
IGT				S		**Sg**	**01**	**07**	**25.0**	**+1.9**
	comp=N,105nm,0.5s									
IGT	**Igoumenitsa**	**1.44**	**169**	P		**Pg**	**01**	**07**	**04.8**	**+0.5**
IGT				S		**Sg**	**01**	**07**	**24.9**	**+1.9**
KPRO	**Kipourio**	**1.45**	**133**	P		**Pg**	**01**	**07**	**05.0**	**+0.5**
JAN	**Janina**	**1.46**	**152**	P		**Pg**	**01**	**07**	**05.7**	**+1.1**
MEV	**Metsovon**	**1.51**	**140**	P		**Pg**	**01**	**07**	**06.6**	**+1.1**
KZN	**Kozani**	**1.51**	**115**	P		**Pg**	**01**	**07**	**06.2**	**+0.7**
THL	**Klokotos Trika**	**2.09**	**131**	P		**Pb**	**01**	**07**	**14.2**	**-0.8**
LIT	**Litokhoron**	**2.10**	**113**	P		**Pb**	**01**	**07**	**15.0**	**-0.2**
DBRK	**Dubrovnik**	**2.19**	**322**	*e*Pn		**Pn**	**01**	**07**	**14.0**	**+0.1**
NOCI	**Noci**	**2.22**	**267**	P		**Pn**	**01**	**07**	**13.0**	**-1.2**
KNT	**Kendrikon**	**2.22**	**84**	P		**Pb**	**01**	**07**	**15.7**	**-1.6**
LKD2	**Lefkada island**	**2.22**	**166**	P		**Pn**	**01**	**07**	**15.0**	**+0.7**
EVR	**Evrytania**	**2.47**	**145**	P		**Pb**	**01**	**07**	**19.7**	**-2.0**
MAKR	**Makrakomi, Fth**	**2.55**	**139**	P		**Pb**	**01**	**07**	**21.0**	**-1.9**
STON	**Ston**	**2.56**	**319**	*e*Pn		**Pn**	**01**	**07**	**18.2**	**-0.7**
PLG	**Polygyros**	**2.70**	**101**	P		**Pb**	**01**	**07**	**23.5**	**-2.1**
XOR	**Xorichti**	**2.93**	**122**	P		**Pn**	**01**	**07**	**26.1**	**+2.0**
TIP	**Timpagrande**	**3.04**	**235**	P		**Pn**	**01**	**07**	**24.5**	**-1.1**
MAKA	**Makarska**	**3.21**	**318**	*e*Pn		**Pn**	**01**	**07**	**27.7**	**-0.2**
RICI	**Ricice**	**3.30**	**321**	*e*Pn		**Pn**	**01**	**07**	**28.7**	**-0.5**
KIJV	**Kijevo**	**4.04**	**320**	*e*Pn		**Pn**	**01**	**07**	**39.7**	**+0.4**
ZIRJ	**Zirje**	**4.20**	**311**	*e*Pn		**Pn**	**01**	**07**	**41.1**	**-0.4**

TIR ***19*** *01:16:58.1, 40°.95N×20°.08E, h2km, Md4.1/8*
IDC ***19*** *01:16:58.2±3.6, 41°.03N×20°.24E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.1/37, mbtmp3.2/3, ML3.2/1, Error ellipse: s-maj=88.7km s-min=31.8km az=52.0*
BEO ***19*** *01:16:59.8±1.1, 40°.85N×19°.88E, h6km±4km, ML3.1/12*
ATH ***19*** *01:16:59.6, 40°.95N×19°.90E, h20km±1km, ML3.1/21, Error ellipse: s-maj=2.1km s-min=1.5km az=345.0*
NEIC ***19*** *01:17:00.8±2.6, 40°.95N±0°.04×19°.94E±0°.02, h14km±10km, Error ellipse: s-maj=5.1km s-min=2.1km az=168.0*

PDG ***19*** *01:17:00.6±0.6, 41°.00N×19°.87E, h8km±1km, ML3.0/13, Error ellipse: s-maj=0.6km s-min=1.1km az=0.0*
THE ***19*** *01:17:00.9, 40°.93N×19°.97E, h2km, ML3.1/8, Error ellipse: s-maj=0.9km s-min=0.3km az=290.0*
ISC 19 01:17:00.2±1.0, 40°.94N±0°.01×19°.93E±0°.02, h9km±8km, n180, σ1s08/225, 16C-29D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time			Res
				Op			h	m	s	ISC
TIR	**Tirane**	**0.41**	**353**	*e*Pg		**Pb**	**01**	**17**	**09.4**	**-0.2**
TIR				*e*Sg		**Sb**	**01**	**17**	**16.0**	**0.0**
TIR	**Tirane**	**0.41**	**353**	P		**Pb**	**01**	**17**	**09.2**	**-0.5**
TIR				S		**Sb**	**01**	**17**	**15.3**	**-0.7**
	2μm,0.5s									
TIR	**Tirane**	**0.41**	**353**	*i* PG		**Pg**	**01**	**17**	**08.6**	**+0.3**
TIR				*i* SG		**Sb**	**01**	**17**	**15.1**	**-0.9**
TIR	**Tirane**	**0.41**	**353**	P		**Pb**	**01**	**17**	**09.1**	**-0.6**
TIR				AML	AML		01	17	28.2	
	comp=N,15073μm,0.5s									
TIR				AML	AML		01	17	29.5	
	comp=E,8137μm,0.5s									
TIR	**Tirane**	**0.41**	**353**	||P	**Pb**	**01**	**17**	**09.1**	**-0.5**
TIR				||S	**Sb**	**01**	**17**	**15.5**	**-0.5**
TIR	**Tirane**	**0.41**	**353**			**Pb**	**01**	**17**	**08.9**	**-0.7**
VLO	**Vlora**	**0.57**	**216**	P		**Pb**	**01**	**17**	**11.9**	**-0.5**
VLO				S		**Sb**	**01**	**17**	**20.5**	**-0.1**
	comp=E,10μm,0.4s									
VLO	**Vlora**	**0.57**	**216**	*i* PG		**Pg**	**01**	**17**	**11.7**	**+0.4**
VLO				*i* SG		**Sb**	**01**	**17**	**22.2**	**+1.6**
TPE	**Tepelena**	**0.64**	**175**	P		**Pg**	**01**	**17**	**12.6**	**0.0**
TPE				S		**Sb**	**01**	**17**	**22.1**	**-0.5**
	comp=E,3μm,0.5s									
TPE	**Tepelena**	**0.64**	**175**	*i* PG		**Pg**	**01**	**17**	**12.3**	**-0.3**
TPE				*i* SG		**Sb**	**01**	**17**	**22.4**	**-0.3**
PHP	**Peshkopia**	**0.84**	**27**	*i* PG		**Pg**	**01**	**17**	**15.5**	**-0.8**
PHP				*i* SG		**Sg**	**01**	**17**	**27.6**	**+0.4**
NEST	**Nestorio**	**1.00**	**121**	P		**Pg**	**01**	**17**	**19.1**	**-0.2**
NEST	**Nestorio**	**1.00**	**121**	P		**Pg**	**01**	**17**	**18.1**	**-1.2**
NEST				AML	AML		01	17	42.7	
	comp=E,858μm,0.3s									
NEST				AML	AML		01	17	53.0	
	comp=N,735μm,0.6s									
SRN	**Sarande**	**1.06**	**177**	P		**Pg**	**01**	**17**	**20.5**	**0.0**
SRN				S		**Sn**	**01**	**17**	**36.0**	**+0.1**
	comp=N,825nm,0.5s									
SRN	**Sarande**	**1.06**	**177**	*i* PG		**Pb**	**01**	**17**	**20.7**	**+0.1**
SRN				*i* SG		**Sn**	**01**	**17**	**36.9**	**+1.0**
FNA	**Florina**	**1.10**	**98**	P		**Pg**	**01**	**17**	**20.8**	**-0.6**
FNA				S		**Sn**	**01**	**17**	**37.0**	**-0.2**
	comp=N,1μm,0.4s									
FNA	**Florina**	**1.10**	**98**	*i* PG		**Pg**	**01**	**17**	**20.6**	**-0.8**
FNA				*i* SG		**Sg**	**01**	**17**	**35.3**	**-0.5**
FNA	**Florina**	**1.10**	**98**	P		**Pg**	**01**	**17**	**20.6**	**-0.8**
FNA				S		**Sn**	**01**	**17**	**37.0**	**-0.2**
FNA				AML	AML		01	17	42.0	
	comp=N,3258μm,0.5s									
FNA				AML	AML		01	17	44.1	
	comp=E,1995μm,0.5s									
FNA	**Florina**	**1.10**	**98**			**Pg**	**01**	**17**	**20.4**	**-0.9**
PUK	**Puka**	**1.10**	**358**	*i* PG		**Pg**	**01**	**17**	**21.0**	**-0.4**
PUK				*i* SG		**Sn**	**01**	**17**	**37.7**	**+0.4**
ULC	**Ulcinj**	**1.15**	**333**	||*i* Pg	**Pg**	**01**	**17**	**20.2**	**-2.0**
ULC				*i* Sg		**Sb**	**01**	**17**	**37.2**	**0.0**
PENT	**Pentalofos**	**1.18**	**129**	P		**Pg**	**01**	**17**	**22.0**	**-0.8**
PENT				AML	AML		01	17	46.3	
	comp=E,1020μm,0.5s									
PENT				AML	AML		01	17	49.5	
	comp=N,800μm,0.4s									
KASA	**Kassiopi**	**1.19**	**180**	P		**Pn**	**01**	**17**	**23.0**	**+0.1**
KASA				AML	AML		01	17	44.8	
	comp=N,1696μm,0.3s									
KASA				AML	AML		01	17	44.9	
	comp=E,1906μm,0.2s									
KEK	**Kerkira**	**1.23**	**185**	P		**Pg**	**01**	**17**	**23.8**	**+0.1**
KEK				S		**Sn**	**01**	**17**	**41.7**	**+1.6**
	comp=E,782nm,0.6s									
KEK	**Kerkira**	**1.23**	**185**	P		**Pg**	**01**	**17**	**23.8**	**+0.1**
KEK				AML	AML		01	17	44.8	
	comp=E,1638μm,0.6s									
KEK				AML	AML		01	17	45.3	
	comp=N,1479μm,0.6s									
DRME	**Dracevica, Mon**	**1.37**	**336**	||*i* Pg	**Pn**	**01**	**17**	**25.6**	**+0.2**
DRME				*i* Sg		**Sg**	**01**	**17**	**44.8**	**+0.6**
SCTE	**Santa Cesarea**	**1.41**	**233**	P		**Pn**	**01**	**17**	**25.8**	**-0.2**
SCTE				AML	AML		01	17	49.2	
	comp=N,556μm,0.6s									
SCTE				AML	AML		01	17	49.6	
	comp=E,736μm,0.3s									
SCTE	**Santa Cesarea**	**1.41**	**233**			**Pn**	**01**	**17**	**26.0**	**0.0**
BCI	**Bajram Curri**	**1.43**	**4**	*i* PN		**Pn**	**01**	**17**	**26.5**	**+0.2**
BCI				*i* SN		**Sg**	**01**	**17**	**48.3**	**+2.1**
IGT	**Igoumenitsa**	**1.44**	**168**	P		**Pb**	**01**	**17**	**26.8**	**-0.3**
IGT				S		**Sg**	**01**	**17**	**47.4**	**+1.1**
	comp=E,685nm,0.6s									
IGT	**Igoumenitsa**	**1.44**	**168**	P		**Pg**	**01**	**17**	**27.5**	**-0.2**
IGT				AML	AML		01	17	51.1	
	comp=N,1496μm,0.5s									
IGT				AML	AML		01	17	56.0	
	comp=E,1246μm,0.7s									
JAN	**Janina**	**1.46**	**151**	P		**Pb**	**01**	**17**	**27.4**	**0.0**
JAN				AML	AML		01	17	56.4	
	comp=N,2001μm,0.6s									
JAN				AML	AML		01	17	56.4	
	comp=E,2430μm,0.4s									
KPRO	**Kipourio**	**1.47**	**132**	P		**Pn**	**01**	**17**	**27.0**	**+0.2**
KPRO				S		**Sg**	**01**	**17**	**47.8**	**+0.5**
	comp=E,478nm,0.7s									
KPRO	**Kipourio**	**1.47**	**132**	P		**Pn**	**01**	**17**	**26.8**	**0.0**
KPRO				AML	AML		01	18	02.6	
	comp=E,1053μm,0.9s									
KPRO				AML	AML		01	18	04.0	
	comp=N,649μm,0.5s									
MEV	**Metsovon**	**1.52**	**139**	P		**Pb**	**01**	**17**	**28.2**	**-0.3**
KZN	**Kozani**	**1.53**	**114**	P		**Pn**	**01**	**17**	**27.9**	**+0.2**
KZN				AML	AML		01	17	53.5	
	comp=E,578μm,0.4s									
KZN				AML	AML		01	18	04.6	
	comp=N,759μm,0.6s									
SKO	**Skopje**	**1.53**	**47**	*e*Pn		**Pb**	**01**	**17**	**28.9**	**+0.2**
SKO				*e*Sg		**Sg**	**01**	**17**	**50.5**	**+1.1**
BUM	**Brajici-Budva**	**1.57**	**331**	||*i* Pg	**Pn**	**01**	**17**	**28.3**	**0.0**
BUM				*i* Sg		**Sg**	**01**	**17**	**51.2**	**+0.5**
PDG	**Podgorica**	**1.58**	**341**	*e*Pg		**Pg**	**01**	**17**	**30.5**	**+0.1**
PDG				*e*Sg		**Sg**	**01**	**17**	**52.4**	**+1.6**
PDG	**Podgorica**	**1.58**	**341**	||P	**Pb**	**01**	**17**	**29.6**	**+0.1**
PDG				||S	**Sn**	**01**	**17**	**48.9**	**+0.1**
PDG	**Podgorica**	**1.58**	**341**			**Pb**	**01**	**17**	**29.4**	**-0.1**
TTG	**Podgorica**	**1.58**	**341**	||*i* Pg	**Pn**	**01**	**17**	**28.0**	**-0.2**
TTG				*i* Sg		**Sg**	**01**	**17**	**51.5**	**+0.7**
PVY	**Plav**	**1.66**	**1**	||*i* Pn	**Pn**	**01**	**17**	**29.7**	**+0.2**
PVY				*i* Sn		**Sg**	**01**	**17**	**54.0**	**+0.6**
CEME	**Cevo**	**1.78**	**335**	||*i* Pn	**Pn**	**01**	**17**	**31.6**	**+0.5**
CEME				*i* Sn		**Sg**	**01**	**17**	**56.4**	**-1.0**
HCY	**Herceg Novi**	**1.85**	**325**	||*i* Pn	**Pn**	**01**	**17**	**32.4**	**+0.3**
HCY				*i* Sn		**Sb**	**01**	**17**	**58.1**	**+0.6**
IVA	**Berane**	**1.93**	**359**	||*i* Pn	**Pn**	**01**	**17**	**34.3**	**+1.0**
IVA				*i* Sn		**Sb**	**01**	**18**	**00.5**	**+0.6**
KOME	**Kolasin**	**1.94**	**351**	||*i* Pn	**Pn**	**01**	**17**	**34.3**	**+1.0**
KOME				*i* Sn		**Sb**	**01**	**18**	**00.3**	**+0.3**
NKME	**Niksic**	**1.97**	**338**	||*i* Pn	**Pn**	**01**	**17**	**34.5**	**+0.8**
NKME				*i* Sn		**Sb**	**01**	**18**	**00.8**	**-0.1**
NKY	**Niksic**	**2.00**	**340**	||*i* Pn	**Pn**	**01**	**17**	**34.8**	**+0.6**
NKY				*i* Sn		**Sb**	**01**	**18**	**01.8**	**0.0**
VAY	**Valandovo**	**2.03**	**78**	*e*Pn		**Pn**	**01**	**17**	**35.2**	**+0.7**
TAR1	**Taranto**	**2.06**	**259**	*e*Pn		**Pn**	**01**	**17**	**34.3**	**-0.5**
THL	**Klokotos Trika**	**2.10**	**130**	P		**Pb**	**01**	**17**	**37.2**	**-1.2**
THL				AML	AML		01	18	16.5	
	comp=E,276μm,0.8s									
THL				AML	AML		01	18	16.9	
	comp=N,276μm,0.7s									
LIT	**Litokhoron**	**2.12**	**112**	P		**Pn**	**01**	**17**	**37.2**	**+1.4**
LIT	**Litokhoron**	**2.12**	**112**			**Pn**	**01**	**17**	**37.0**	**+1.2**
TREB	**Trebinje**	**2.14**	**327**	*e*Pn		**Pn**	**01**	**17**	**36.3**	**+0.3**
NOCI	**Noci**	**2.18**	**267**	P		**Pn**	**01**	**17**	**36.1**	**-0.5**
NOCI				AML	AML		01	18	19.3	
	comp=N,888μm,0.3s									
NOCI				AML	AML		01	18	19.7	
	comp=E,657μm,0.3s									
DBRK	**Dubrovnik**	**2.19**	**323**	*e*Pn		**Pn**	**01**	**17**	**36.6**	**0.0**
LKD2	**Lefkada island**	**2.22**	**165**	P		**Pn**	**01**	**17**	**38.1**	**+1.0**
BRY	**Bratogost**	**2.22**	**333**	||*i* Pn	**Pn**	**01**	**17**	**37.7**	**+0.4**
BRY				*i* Sn		**Sb**	**01**	**18**	**06.6**	**-1.6**
KNT	**Kendrikon**	**2.25**	**83**	P		**Pn**	**01**	**17**	**38.3**	**+0.8**
KNT				AML	AML		01	18	20.3	
	comp=N,179μm,0.8s									
KNT				AML	AML		01	18	23.0	
	comp=E,122μm,1.1s									
BAI	**Bari**	**2.32**	**275**	||*i* Pn	**Pn**	**01**	**17**	**38.0**	**-0.4**
THE	**Thessaloniki**	**2.32**	**97**	P		**Pn**	**01**	**17**	**39.0**	**+0.5**
SJES	**Sjenica**	**2.32**	**1**	*e*Pn		**Pb**	**01**	**17**	**40.4**	**-1.8**
BARS	**Barje**	**2.34**	**36**	*e*Pn		**Pb**	**01**	**17**	**40.9**	**-1.7**
BARS	**Barje**	**2.34**	**36**	*e*Pn		Pg	01	17	56.0	+11
EVGI	**Lefkada island**	**2.38**	**166**	P		**Pn**	**01**	**17**	**39.8**	**+0.5**
UPM	**Unac-Piva**	**2.39**	**342**	||*i* Pn	**Pn**	**01**	**17**	**40.3**	**+0.7**
UPM				*i* Sn		**Sn**	**01**	**18**	**10.8**	**+1.7**
PLE	**Pljevlja**	**2.42**	**351**	||*i* Pn	**Pn**	**01**	**17**	**40.9**	**+0.8**
PLE				*i* Sn		**Sn**	**01**	**18**	**11.7**	**+1.8**
EVR				AML	AML		01	18	27.2	
	comp=E,423μm,0.7s									
EVR				AML	AML		01	18	38.9	
	comp=N,351μm,0.7s									
STON	**Ston**	**2.55**	**320**	*e*Pn		**Pn**	**01**	**17**	**41.5**	**-0.2**
STON	**Ston**	**2.55**	**320**	*i* Pn		**Pn**	**01**	**17**	**41.3**	**-0.3**
MAKR	**Makrakomi, Fth**	**2.56**	**138**	P		**Pn**	**01**	**17**	**43.6**	**+1.8**
MAKR				AML	AML		01	18	32.1	
	comp=E,549μm,0.9s									
MAKR				AML	AML		01	18	40.2	
	comp=N,443μm,0.7s									
IVAS	**Ivanjica**	**2.64**	**3**	*e*Pn		**Pn**	**01**	**17**	**44.9**	**+1.9**
AGG	**Agios Georgios**	**2.66**	**135**	P		**Pn**	**01**	**17**	**45.3**	**+2.2**
AGG				AML	AML		01	18	36.5	
	comp=E,225μm,0.5s									
AGG				AML	AML		01	18	40.7	
	comp=N,219μm,1.0s									
AGG	**Agios Georgios**	**2.66**	**135**			**Pn**	**01**	**17**	**43.3**	**+0.1**
KEF1	**Kardakata, Kep**	**2.69**	**171**	P		**Pn**	**01**	**17**	**44.1**	**+0.6**
KEF4	**Livadi, Kephal**	**2.70**	**172**	P		**Pn**	**01**	**17**	**44.2**	**+0.5**
PLG	**Polygyros**	**2.73**	**101**	P		**Pn**	**01**	**17**	**45.7**	**+1.6**
KEF3	**Kipouria, Keph**	**2.75**	**173**	P		**Pn**	**01**	**17**	**44.3**	**-0.1**
SRS	**Serrai**	**2.77**	**85**	P		**Pn**	**01**	**17**	**45.1**	**+0.4**
KEF2	**Argostoli. Kep**	**2.80**	**171**	P		**Pn**	**01**	**17**	**45.2**	**+

ABTA	**Abfaltersbach**	**7.90**	**320**	*i* Pn		**Pn**	**01 18 55.7**	**+0.5**
	comp=N,1.2nm,0.3s							
MOA	**Molln**	**8.01**	**331**	*i* Pn		**Pn**	**01 18 58.2**	**+1.5**
	comp=N,0.4nm,0.3s							
WTTA	**Wattenberg**	**8.69**	**319**	*e*Pn		**Pn**	**01 19 06.7**	**+0.5**
	comp=N,2.1nm,0.5s,SNR=8.7							
WATA	**Walderalm**	**8.77**	**320**	*e*Pn		**Pn**	**01 19 07.8**	**+0.6**
	comp=N,1.7nm,0.4s,SNR=6.4							
SQTA	**Sankt Quirin**	**8.88**	**318**	*i* Pn		**Pn**	**01 19 09.7**	**+1.0**
	comp=N,0.7nm,0.2s							
MOTA	**Moosalm**	**9.01**	**318**	*i* Pn		**Pn**	**01 19 11.7**	**+1.1**
	comp=N,0.2nm,0.2s							
GERES	**GERESS Array B**	**9.06**	**333**	Pn		**Pn**	**01 19 11.3**	**+0.3**
	comp=N,0.1nm,0.3s,baz=157,slow=16,SNR=2.0							
GERES				Sn		**Sn**	**01 20 53.2**	**+0.1**
	comp=N,0.1nm,0.3s,baz=156,slow=25,SNR=2.8							
SENIN	**Lac Senin/Sane**	**10.64**	**305**	Pn		**Pn**	**01 19 33.3**	**+0.5**
FINES	**FINESS Array B**	**20.87**	**8**	P		**P**	**01 21 40.6**	**-1.6**
	comp=N,2.0nm,0.8s,baz=172,slow=11,SNR=5.7							
YKA	**Yellowknife Ar**	**70.65**	**339**	P		**P**	**01 28 15.2**	**-0.3**
	comp=N,0.1nm,0.2s,baz=26,slow=7.7,SNR=1.3							

*TIR **19** 01:25:30.0, 40.°97N× 19.°97E, h22km, Md3.5/8*
*BEO **19** 01:25:29.4±1.0, 40.°83N× 19.°88E, h7km±4km, ML3.0/14*
*PDG **19** 01:25:30.0±0.3, 40.°97N× 19.°92E, h11km, ML2.8/13, Error ellipse: s-maj=1.0km s-min=1.1km az=0.0*

ISC 19 01:25:30.3±1.0, **40.°97N**±0.°02× **19.°87E**±0.°03, **h10**km±9km, **n92**, σ1**1**8/128, **22C-19D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.38**	**359**	*e*Pg		**Pb**	**01 25 38.8**	**-0.4**
TIR				*e*Sg		**Sb**	**01 25 46.6**	**+1.4**
TIR	**Tirane**	**0.38**	**359**	*i* PG		**Pg**	**01 25 38.1**	**+0.3**
TIR				*i* SG		**Sb**	**01 25 44.3**	**-0.9**
TIR	**Tirane**	**0.38**	**359**	⇓P		**Pb**	**01 25 38.8**	**-0.4**
TIR				⇑S		**Sb**	**01 25 46.2**	**+1.0**
VLO	**Vlora**	**0.58**	**210**	*i* PG		**Pg**	**01 25 42.0**	**+0.5**
VLO				*i* SG		**Sg**	**01 25 51.6**	**+2.6**
TPE	**Tepelena**	**0.68**	**171**	*i* PG		**Pg**	**01 25 42.2**	**-1.3**
TPE				*i* SG		**Sg**	**01 25 53.8**	**+1.4**
PHP	**Peshkopia**	**0.83**	**31**	*i* PG		**Pg**	**01 25 44.8**	**-1.6**
PHP				*i* SG		**Sg**	**01 25 57.2**	**-0.1**
PUK	**Puka**	**1.07**	**1**	*i* PG		**Pb**	**01 25 51.0**	**-0.1**
PUK				*i* SG		**Sn**	**01 26 06.4**	**-0.2**
SRN	**Sarande**	**1.09**	**175**	*i* PG		**Pb**	**01 26 50.5**	**-0.9**
SRN				*i* SG		**Sb**	**01 26 06.2**	**+0.6**
ULC	**Ulcinj**	**1.10**	**335**	⇑*i* Pg		**Pb**	**01 25 51.0**	**-0.5**
ULC				*i* Sg		**Sn**	**01 26 07.5**	**+0.3**
FNA	**Florina**	**1.16**	**99**	*i* PG		**Pn**	**01 25 50.7**	**-2.0**
FNA				*i* SG		**Sb**	**01 26 05.3**	**-2.2**
DRME	**Dracevica, Mon**	**1.32**	**337**	⇑*i* Pg		**Pn**	**01 25 54.6**	**-0.3**
DRME				*i* Sg		**Sg**	**01 26 14.2**	**+1.3**
BCI	**Bajram Curri**	**1.41**	**6**	*i* PN		**Pn**	**01 25 56.4**	**+0.4**
BCI				*i* SN		**Sg**	**01 26 16.2**	**+0.6**
BUM	**Brajici-Budva**	**1.52**	**331**	⇑*i* Pg		**Pn**	**01 25 57.9**	**+0.2**
BUM				*i* Sg		**Sg**	**01 26 19.5**	**+0.3**
PDG	**Podgorica**	**1.53**	**343**	*e*Pg		**Pg**	**01 26 00.1**	**+0.4**
PDG				*e*Sg		**Sg**	**01 26 22.5**	**+2.9**
PDG	**Podgorica**	**1.53**	**343**	⇑P		**Pg**	**01 25 59.4**	**-0.4**
PDG				⇑S		**Sg**	**01 26 21.5**	**+1.8**
TTG	**Podgorica**	**1.53**	**343**	⇓*i* Pg		**Pb**	**01 25 58.2**	**-0.6**
TTG				*i* Sg		**Sg**	**01 26 20.3**	**+0.7**
SKO	**Skopje**	**1.55**	**49**	*e*Pg		**Pn**	**01 25 58.6**	**+0.6**
SKO				*e*Sg		**Sg**	**01 26 20.7**	**+0.6**
PVY	**Plav**	**1.63**	**2**	⇓*i* Pn		**Pb**	**01 25 59.9**	**-0.6**
PVY				*i* Sn		**Sg**	**01 26 22.6**	**0.0**
CEME	**Cevo**	**1.73**	**336**	⇑*i* Pn		**Pb**	**01 26 01.4**	**-0.9**
CEME				*i* Sn		**Sg**	**01 26 25.7**	**-0.3**
HCY	**Herceg Novi**	**1.80**	**326**	⇓*i* Pn		**Pn**	**01 26 02.0**	**+0.5**
HCY				*i* Sn		**Sg**	**01 26 27.4**	**-0.9**
KOME	**Kolasin**	**1.90**	**352**	⇓*i* Pn		**Pn**	**01 26 03.9**	**+1.0**
KOME				*i* Sn		**Sg**	**01 26 29.7**	**-1.7**
IVA	**Berane**	**1.90**	**0**	⇓*i* Pn		**Pn**	**01 26 03.8**	**+0.8**
IVA				*i* Sn		**Sg**	**01 26 29.8**	**-1.7**
NKME	**Niksic**	**1.92**	**339**	⇑*i* Pn		**Pb**	**01 26 04.2**	**-1.4**
NKME				*i* Sn		**Sg**	**01 26 30.4**	**-1.8**
NKY	**Niksic**	**1.96**	**341**	⇑*i* Pn		**Pb**	**01 26 04.8**	**-1.4**
NKY				*i* Sn		**Sg**	**01 26 31.1**	**-2.1**
TAR1	**Taranto**	**2.02**	**258**	*e*Pn		**Pb**	**01 26 08.0**	**+0.9**
VAV	**Valandovo**	**2.07**	**79**	*e*Pn		**Pn**	**01 26 04.4**	**-0.7**
TREB	**Trebinje**	**2.08**	**327**	*e*Pn		**Pn**	**01 26 05.5**	**+0.1**
DBRK	**Dubrovnik**	**2.13**	**323**	*i* Pn		**Pn**	**01 26 06.0**	**-0.1**
BRY	**Bratogost**	**2.17**	**333**	⇑*i* Pn		**Pn**	**01 26 07.6**	**+0.9**
BRY				*i* Sn		**Sb**	**01 26 36.3**	**-0.6**
BAI	**Bari**	**2.27**	**274**	⇑*i* Pn		**Pn**	**01 26 07.7**	**-0.2**
BAI				Sn		**Sn**	**01 26 34.7**	**-1.2**
SJES	**Sjenica**	**2.29**	**2**	*e*Pn		**Pb**	**01 26 11.4**	**-0.5**
UPM	**Unac-Piva**	**2.35**	**342**	⇑*i* Pn		**Pn**	**01 26 09.9**	**+0.7**
UPM				*i* Sn		**Sb**	**01 26 40.5**	**-1.5**
BARS	**Barje**	**2.35**	**38**	*e*Pn		**Pn**	**01 26 10.1**	**+1.1**
BARS	**Barje**	**2.35**	**38**	*e*Pn		Pg	01 26 24.7	+9.4
PLE	**Pljevlja**	**2.39**	**352**	⇓*i* Pn		**Pn**	**01 26 10.7**	**+1.0**
PLE				*i* Sn		**Sb**	**01 26 41.4**	**-1.7**
SG1	**Sgolgore (BA)**	**2.42**	**268**	⇑*i* Pn		**Pn**	**01 26 09.6**	**-0.5**
SG1				Sn		**Sg**	**01 26 47.7**	**-0.5**
MATE	**Matera**	**2.42**	**263**	⇓P		**Pn**	**01 26 10.0**	**0.0**
SELS	**Selova**	**2.43**	**22**	*e*Pn		**Pn**	**01 26 11.0**	**+0.8**
BOSS	**Bosilegrad**	**2.48**	**51**	*e*Pn		**Pn**	**01 26 11.3**	**+0.7**
STON	**Ston**	**2.50**	**320**	*e*Pn		**Pn**	**01 26 11.0**	**+0.2**
STON	**Ston**	**2.50**	**320**	*e*Pn		**Pn**	**01 26 11.0**	**0.0**
IVAS	**Ivanjica**	**2.61**	**4**	*e*Pn		**Pn**	**01 26 14.0**	**+1.3**
BBLS	**Lazići**	**2.92**	**353**	*e*Pn		**Pn**	**01 26 18.9**	**+2.0**
GRUS	**Gruza**	**2.98**	**12**	*e*Pn		**Pn**	**01 26 20.1**	**+2.3**
TIP	**Timpagrande**	**2.98**	**234**	⇓P		**Pn**	**01 26 17.3**	**-0.5**
VTS	**Vitosha**	**3.01**	**56**	⇓P		**Pn**	**01 26 18.8**	**+0.6**
VTS				⇓S		**Sn**	**01 26 54.3**	**-0.1**
ZAPS	**Zavoj**	**3.09**	**41**	*e*Pn		**Pn**	**01 26 21.2**	**+2.0**
DIVS	**Divibare**	**3.13**	**2**	*e*Pn		**Pn**	**01 26 21.3**	**+1.5**
MAKA	**Makarska**	**3.14**	**318**	*e*Pn		**Pn**	**01 26 19.7**	**-0.1**
MAKA				Sn		**Sn**	**01 26 58.0**	**+0.5**
HAPS	**Han Pijesak,BI**	**3.19**	**348**	*e*Pn		**Pn**	**01 26 21.0**	**+0.3**
RICI	**Ricice**	**3.24**	**322**	*i* Pn		**Pn**	**01 26 21.4**	**+0.1**
RICI				Sn		**Sn**	**01 26 58.4**	**-1.6**
TRUS	**Trudelj**	**3.28**	**7**	*e*Pn		**Pn**	**01 26 23.3**	**+1.5**
ZAGS	**Zajecar**	**3.34**	**31**	*e*Pn		**Pn**	**01 26 23.2**	**+0.6**
BLKB	**Belogradchik**	**3.37**	**37**	⇓S		**Sn**	**01 27 04.5**	**+1.3**
KIJV	**Kijevo**	**3.97**	**321**	*e*Pn		**Pn**	**01 26 31.9**	**+0.5**
KIJV				Sn		**Sn**	**01 27 17.9**	**-0.1**
PUNG	**Punghina**	**4.00**	**33**	⇑P		**Pn**	**01 26 32.8**	**+1.0**
MDVR	**Moldovita**	**4.04**	**19**	⇓P		**Pn**	**01 26 33.2**	**+0.8**
ZIRJ	**Zirje**	**4.13**	**312**	*e*Pn		**Pn**	**01 26 33.1**	**-0.3**
FRGS	**Fruska Gora**	**4.19**	**359**	*e*Pn		**Pn**	**01 26 34.9**	**+0.6**
MORI	**Morici**	**4.23**	**315**	*i* Pn		**Pn**	**01 26 35.1**	**+0.2**
BLY	**Banja Luka**	**4.26**	**333**	*e*Pn		**Pn**	**01 26 36.4**	**+1.1**
PLVB	**Pleven**	**4.28**	**54**	⇑P		**Pn**	**01 26 36.7**	**+1.2**
HERR	**Herculane**	**4.33**	**25**	⇓P		**Pn**	**01 26 37.3**	**+1.0**
HERR				⇓S		**Sn**	**01 27 30.3**	**+3.5**
SRE	**Strehaia**	**4.43**	**32**	⇓P		**Pn**	**01 26 37.5**	**-0.1**
DUGI	**Dugi Otok**	**4.67**	**312**	*e*Pn		**Pn**	**01 26 41.3**	**+0.4**
BZS	**Buzias**	**4.82**	**15**	⇑P		**Pn**	**01 26 43.7**	**+0.7**
ELND	**Elena**	**4.89**	**64**	⇑P		**Pn**	**01 26 44.5**	**+0.6**
GZR	**Gura Zlata**	**4.91**	**25**	⇑P		**Pn**	**01 26 45.5**	**+1.3**
NVLJ	**Novalja**	**5.14**	**316**	*e*Pn		**Pn**	**01 26 47.5**	**+0.1**
MOSL	**Moslavina**	**5.17**	**335**	*e*Pn		**Pn**	**01 26 47.1**	**-0.7**
SIRR	**Siria**	**5.45**	**13**	⇑P		**Pn**	**01 26 52.8**	**+1.1**
OZLJ	**Ozalj**	**5.65**	**327**	*e*Pn		**Pn**	**01 26 53.9**	**-0.4**
VOIR		**5.85**	**39**	⇑P		**Pn**	**01 26 58.8**	**+1.6**
APE	**Apeiranthos**	**5.88**	**130**	⇓P		**Pn**	**01 26 55.8**	**-1.8**
MLR	**Muntele Rosu**	**6.33**	**42**	⇓P		**Pn**	**01 27 05.3**	**+1.4**
SOKA	**Soboth**	**6.69**	**330**	*i* Pn		**Pn**	**01 27 09.4**	**+0.6**
	0.3nm,0.3s							
SOKA				*i* Sn		**Sn**	**01 28 23.4**	**-1.8**
	1.0nm,0.5s							
OBKA	**Obir**	**6.75**	**327**	*i* Pn		**Pn**	**01 27 10.3**	**+0.8**
	0.6nm,0.2s							
OBKA				*i* Sn		**Sn**	**01 28 28.2**	**+1.7**
	5.1nm,0.4s							
VRI	**Vrincioaia**	**6.99**	**43**	⇓P		**Pn**	**01 27 13.7**	**+0.9**
ARSA	**Arzberg**	**7.02**	**335**	*i* Pn		**Pn**	**01 27 14.7**	**+1.5**
	0.7nm,0.3s							
ARSA				*i* Sn		**Sn**	**01 28 36.0**	**+3.0**
	1.5nm,0.6s							
TRPA	**Tarpa**	**7.41**	**14**	⇑P		**Pn**	**01 27 19.2**	**+0.7**
CONA	**Conrad Observa**	**7.53**	**339**	*i* Pn		**Pn**	**01 27 20.1**	**-0.1**
	0.4nm,0.4s							
VYHS	**Vyhne**	**7.56**	**355**	*e*PN		**Pn**	**01 27 19.0**	**-1.6**
BURAR	**Bucovina Array**	**7.67**	**28**	⇓P		**Pn**	**01 27 23.7**	**+1.5**
KBA	**Koelnbreinsper**	**7.71**	**325**	*i* Pn		**Pn**	**01 27 22.7**	**-0.1**
	0.5nm,0.3s							
ABTA	**Abfaltersbach**	**7.85**	**320**	*i* Pn		**Pn**	**01 27 24.9**	**+0.2**
	1.4nm,0.3s							
MOA	**Molln**	**7.96**	**332**	*i* Pn		**Pn**	**01 27 26.1**	**-0.1**
	0.3nm,0.2s							
KOLS	**Kolonicke sedl**	**8.14**	**11**	*e*PN		**Pn**	**01 27 31.5**	**+2.9**
WTTA	**Wattenberg**	**8.64**	**319**	*i* Pn		**Pn**	**01 27 36.4**	**+0.8**
	2.3nm,0.3s							
WATA	**Walderalm**	**8.72**	**320**	*i* Pn		**Pn**	**01 27 37.3**	**+0.7**
	3.1nm,0.5s							
SQTA	**Sankt Quirin**	**8.82**	**318**	*i* Pn		**Pn**	**01 27 39.2**	**+1.2**
	1.8nm,0.4s							
FETA	**Feichten**	**8.94**	**316**	*i* Pn		**Pn**	**01 27 41.5**	**+1.8**
	1.0nm,0.5s							
MOTA	**Moosalm**	**8.96**	**318**	*i* Pn		**Pn**	**01 27 40.7**	**+0.8**
	0.9nm,0.4s							

*IDC **19** 01:53:53.0±0.6, 4.°61S× 105.°60W, h0km, mb4.3/21, mb1 4.4/21, mb1mx4.4/33, mbtmp4.3/21, MS5.2/27, Ms1 5.2/27, ms1mx5.2/28, Error ellipse: s-maj=21.9km s-min=12.1km az=63.0*
*NEIC **19** 01:53:54.1±2.0, 4.°8S±0.°1× 105.°6W±0.°2, h10km±1km, mb5.0/310, Ms_20 5.2/717, Mwb5.5/22, Mwc5.6(GCMT), Error ellipse: s-maj=26.4km s-min=17.9km az=251.0*
*NEIC **19** 01:53:58, 4.°54S× 105.°59W, h19km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.01; $M_{\theta\theta}$1.00; $M_{\phi\phi}$-1.02; $M_{r\theta}$0.27; $M_{\theta\phi}$3.01; $M_{\phi r}$0.02; Fault plane solution: $M_0$3.19000×10^{17} NP1:$\phi_0$99.00000°, δ89.00000°, λ5.00000°. NP2:$\phi_0$9.00000°, δ85.00000°, λ179.00000°. Principal axes: T 3.1839, Plg4.0000°, Azm324.0000°; N 0.0053, Plg85.0000°, Azm113.0000°; P -3.1892, Plg3.0000°, Azm234.0000°;*
*GCMT **19** 01:53:59.1±0.1, 4.°51S±0.°01× 105.°56W±0.°01, h18km, MW5.6/162, Moment Tensor Solution. s131,c226; s162,c330; Duration: 1s5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.03±.03; $M_{\theta\theta}$1.04±.03; $M_{\phi\phi}$-1.01±.04; $M_{r\theta}$0.02±.08; $M_{\theta\phi}$2.73±.03; $M_{\phi r}$0.26±.08; Best double couple: $M_0$2.92800×10^{17} NP1:$\phi_0$100.00000°, δ85.00000°, λ-1.00000°. NP2:$\phi_0$190.00000°, δ89.00000°, λ-175.00000°. Principal axes: T 2.9400, Plg3.0000°, Azm325.0000°; N -0.0270, Plg85.0000°, Azm197.0000°; P -2.9150, Plg4.0000°, Azm55.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **19** 01:54:00.3, 4.°65S× 105.°52W, h7km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.44; $M_{\theta\theta}$0.39; $M_{\phi\phi}$-0.83; $M_{r\theta}$0.11; $M_{\theta\phi}$2.07; $M_{\phi r}$-0.32; Fault plane solution: $M_0$2.22000×10^{17} NP1:$\phi_0$8.27000°, δ88.16000°, λ-172.57000°. NP2:$\phi_0$278.03000°, δ82.57000°, λ-1.85000°. Principal axes: T 1.9463, Plg4.0000°, Azm143.0000°; N 0.4668, Plg82.0000°, Azm22.0000°; P -2.4131, Plg7.0000°, Azm233.0000°;*

ISC 19 01:53:56.7±0.4, **4.°62S**±0.°07× **105.°53W**±0.°07, **h13**km, **n811**, σ1**9**8/378, **mb5.0**/163, **MS5.2**/394, **1C, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**22.67**	**189**		LR	LR	02 05 26.4	
	comp=Z,4μm,19.6s,baz=6.5,slow=31							
TLIG	**Tlapa**	**23.09**	**17**	P		**P**	**01 59 01.3**	**-1.2**
TLIG					IAmb	IAmb	01 59 18.5	
	comp=Z,94nm,1.9s							
CMIG	**Matias Romero**	**24.00**	**26**	P		**P**	**01 59 09.9**	**-1.4**
	comp=Z,2.5nm,0.8s,baz=205,slow=7.1,SNR=7.5							
CMIG					LR	LR	02 06 28.8	
	comp=Z,5μm,22.0s,baz=193,slow=32							
SNET	**Serv Nac Est T**	**24.34**	**41**		IAMs_20	IAMs_20	02 06 22.0	
	comp=Z,8μm,20.0s							
MOIG	**Morelia**	**24.52**	**10**	P		**P**	**01 59 14.5**	**-1.9**
APG	**El Apazote**	**24.56**	**37**	P		**P**	**01 59 15.7**	**-1.1**
	comp=Z,52nm,1.1s,baz=242,slow=7.4,SNR=16							
APG					LR	LR	02 06 52.9	
	comp=Z,8μm,19.3s,baz=198,slow=32							
CCIG	**Comitan**	**24.63**	**32**	P		**P**	**01 59 17.7**	**+0.2**
CCIG					IAMs_20	IAMs_20	02 06 36.9	
	comp=Z,6μm,22.0s							
CRIN	**San Cristobal**	**25.16**	**47**	P		**P**	**01 59 21.0**	**-1.1**
JTS	**Las Juntas de**	**25.29**	**54**	P		**P**	**01 59 22.1**	**-1.0**
	comp=Z,12nm,0.9s,baz=340,slow=12,SNR=3.6							
JTS					LR	LR	02 06 42.5	
	comp=Z,14μm,20.9s,baz=296,slow=30							
JTS	**Las Juntas de**	**25.29**	**54**	*e*P		**P**	**01 59 21.0**	**-2.2**
JTS	**Las Juntas de**	**25.29**	**54**	P		**P**	**01 59 22.7**	**-0.5**
HDC	**Heredia**	**25.81**	**56**	P		**P**	**01 59 26.4**	**-1.6**
TGUH	**Tegucigalpa,Un**	**25.93**	**44**	P		**P**	**01 59 27.3**	**-1.8**
TGUH					IAmb	IAmb	01 59 41.9	
	comp=Z,34nm,0.9s							
ACON	**Acoyapa**	**26.10**	**51**	P		**P**	**01 59 30.1**	**-0.4**
MATN	**Matagalpa**	**26.14**	**48**	P		**P**	**01 59 30.2**	**-0.8**
MATN					IAmb	IAmb	01 59 44.3	
	comp=Z,52nm,1.3s							
MATN					IAMs_20	IAMs_20	02 07 12.4	
	comp=Z,5μm,20.0s							
ESPN	**Las Esperanzas**	**26.92**	**51**	P		**P**	**01 59 39.0**	**+1.1**
ESPN					IAMs_20	IAMs_20	02 07 34.9	
	comp=Z,6μm,19.0s							
ATAH	**Atahualpa**	**27.10**	**97**	LR		LR	02 07 51.1	
	comp=Z,3μm,19.6s,baz=272,slow=31							
ZAIG	**Zacatecas**	**27.38**	**6**	P		**P**	**01 59 41.0**	**-1.3**
ZAIG					IAMs_20	IAMs_20	02 08 13.8	
	comp=Z,6μm,21.0s							
CUSE	**Cuicocha Este**	**27.54**	**80**	*e*P		**P**	**01 59 44.7**	**+0.6**
LPIG	**La Paz**	**28.93**	**351**	LR		LR	02 08 29.0	
	comp=Z,6μm,20.5s,baz=152,slow=30							
BBAC	**Balboa, Cauca**	**29.02**	**77**	*e*P		**P**	**01 59 58.4**	**+1.4**
NNA	**Nana**	**29.29**	**106**	LR		LR	02 08 27.6	
	comp=Z,5μm,20.5s,baz=276,slow=30							
NNA	**Nana**	**29.29**	**106**		IAMs_20	IAMs_20	02 08 02.5	
	comp=Z,5μm,20.0s							
PUAC	**Puerto Asis, P**	**29.38**	**81**	*e*P		**P**	**02 00 00.6**	**+0.5**
SOTA	**Sioblanco**	**29.66**	**78**	*e*P		**P**	**02 00 03.4**	**+0.3**
PCON	**Cinco Dias**	**29.91**	**77**	*e*P		**P**	**02 00 04.3**	**-1.1**
TEIG	**Tepich**	**29.95**	**34**		IAMs_20	IAMs_20	02 10 06.8	
	comp=Z,6μm,20.0s							
YOTC	**Yotoco, Valle**	**30.38**	**74**	*e*P		**P**	**02 00 07.0**	**-2.0**
CBOC	**Ciudad Bolivar**	**31.26**	**71**	*e*P		**P**	**02 00 18.6**	**+1.8**
HPIG		**31.37**	**360**	P		**P**	**02 00 18.8**	**+1.1**
ORTC	**Ortega, Tolima**	**31.42**	**75**	*e*P		**P**	**02 00 17.6**	**-0.4**
DBBC	**Dabeiba**	**31.46**	**69**	*e*P		**P**	**02 00 17.6**	**-0.9**
RREF	**El Recreo**	**31.59**	**73**	*e*P		**P**	**02 00 21.2**	**+1.0**
GUY2C	**Guyana, Caldas**	**31.67**	**72**	*e*P		**P**	**02 00 21.3**	**+0.5**
PRAC	**Prado**	**31.71**	**75**	*e*P		**P**	**02 00 21.2**	**+0.5**
NORC	**Norcasia**	**32.24**	**72**	*e*P		**P**	**02 00 23.2**	**-2.1**
UREC	**San Jos de Ur**	**32.35**	**68**	*e*P		**P**	**02 00 26.5**	**+0.3**
ROSC	**El Rosal**	**32.56**	**74**	P		**P**	**02 00 27.2**	**-1.2**
	comp=Z,2.7nm,0.4s,baz=259,slow=6.5,SNR=1.8							
ROSC					LR	LR	02 11 01.5	
	comp=Z,5μm,20.6s,baz=260,slow=32							
ROSC	**El Rosal**	**32.56**	**74**		IAmb	IAmb	02 00 43.3	
	comp=Z,58nm,2.0s							
ROSC					IAMs_20	IAMs_20	02 10 50.2	
	comp=Z,6μm,19.0s							
ZARC	**Zaragoza, Cauc**	**32.88**	**69**	*e*P		**P**	**02 00 31.8**	**+0.9**
PTBC	**PUERTO BERRIO,**	**32.94**	**71**	*e*P		P	02 00 25.5	-5.9
SPBC	**San Pablo de B**	**33.03**	**72**	*e*P		**P**	**02 00 32.1**	**-0.1**
CHIC	**Chingaza**	**33.06**	**74**	*e*P		**P**	**02 00 34.6**	**+1.7**
833A	**Chaparral WMA,**	**33.28**	**10**	P		**P**	**02 00 35.4**	**+1.3**
	baz=191							
TX31	**Lajitas Ar. Si**	**33.81**	**3**	P		**P**	**02 00 37.3**	**-1.5**
TX32	**Lajitas Array**	**33.81**	**3**	P		**P**	**02 00 37.1**	**-1.8**
TXAR	**Lajitas Array**	**33.81**	**3**	P		**P**	**02 00 37.0**	**-1.8**
	comp=Z,0.4nm,0.8s,baz=200,slow=9.5,SNR=2.3							
TXAR					PcP	**PcP**	**02 03 17.1**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=186,slow=5.2,SNR=3.2							
TXAR					LR	LR	02 12 00.8	
	comp=Z,3μm,20.9s,baz=0.0,slow=32							
BRRC	**Barranca, Sant**	**33.82**	**70**	*e*P		**P**	**02 00 39.4**	**+0.3**
HSIG		**33.85**	**351**	P		**P**	**02 00 37.5**	**-1.6**
HSIG					IAmb	IAmb	02 00 53.2	
	comp=Z,26nm,1.4s							
HSIG					IAMs_20	IAMs_20	02 10 48.6	
	comp=Z,3μm,20.0s							
RKT	**Rikitea**	**33.86**	**234**	*e*LQ		LQ	02 08 13.7	
	comp=Z,901nm,34.8s							
RKT					eLR	LR	02 09 40.0	
	comp=Z,8μm,28.0s							
RKT	**Rikitea**	**33.86**	**234**	*e*T		T	02 36 07.0	
	comp=Z,7.2nm,0.3s							
RUSC	**La Rusia**	**34.04**	**72**	*e*P		**P**	**02 00 41.0**	**-0.5**
RUSC	**La Rusia**	**34.04**	**72**	P		**P**	**02 00 40.9**	**-0.6**
SMLC	**San Martn de**	**34.08**	**67**	*e*P		**P**	**02 00 42.4**	**+1.1**
TAOE	**Nuku Hiva Isla**	**34.63**	**261**	*e*S		**S**	**02 06 19.8**	**+4.1**
	comp=Z,216nm,27.3s							
TAOE					eLR	LR	02 09 45.7	
	comp=Z,7μm,26.1s,baz=86							
TAOE	**Nuku Hiva Isla**	**34.63**	**261**		IAMs_20	IAMs_20	02 10 17.2	
	comp=Z,5μm,21.0s							
JCT	**Junction City**	**35.33**	**9**	P		**P**	**02 00 53.1**	**+1.1**
	baz=190							
JCT	**Junction City**	**35.33**	**9**	P		**P**	**02 00 52.1**	**+0.2**
JCT					IAmb	IAmb	02 00 56.1	
	comp=Z,43nm,1.6s							
JCT					IAMs_20	IAMs_20	02 13 31.4	
	comp=Z,3μm,19.0s							
HKT	**Hockley**	**35.61**	**15**	P		**P**	**02 00 54.1**	**0.0**
HKT					IAmb	IAmb	02 00 59.8	
	comp=Z,38nm,1.9s							
MTDJ	**Mount Denham**	**35.74**	**50**		IAMs_20	IAMs_20	02 13 48.7	
	comp=Z,3μm,18.0s							
319A	**Douglas**	**35.98**	**355**	P		**P**	**02 00 57.5**	**0.0**
319A					IAmb	IAmb	02 01 03.5	
	comp=Z,45nm,1.8s							
319A					IAMs_20	IAMs_20	02 12 28.3	
	comp=Z,3μm,20.0s							
435B	**Jarrell**	**36.02**	**12**	P		**P**	**02 00 58.9**	**+1.1**
	baz=193							
MNTX	**Cornudas Mount**	**36.12**	**0**	P		**P**	**02 00 59.3**	**+0.6**
	baz=180							
MNTX	**Cornudas Mount**	**36.12**	**0**	P		**P**	**02 00 57.4**	**-1.2**
SOCV	**Socops**	**36.88**	**70**	*e*P		**P**	**02 01 06.0**	**+0.6**
AP01	**Chacalluta**	**36.99**	**115**		IAMs_20	IAMs_20	02 11 57.3	
	comp=Z,3μm,20.0s							
121A	**Cookes Peak, D**	**37.01**	**357**	P		**P**	**02 01 07.5**	**+1.1**
	baz=176							
121A	**Cookes Peak, D**	**37.01**	**357**		IAMs_20	IAMs_20	02 13 11.3	
	comp=Z,3μm,20.0s							
214A	**Organ Pipe Nat**	**37.03**	**350**	P		**P**	**02 01 07.9**	**+1.5**
	baz=168							
214A	**Organ Pipe Nat**	**37.03**	**350**	P		**P**	**02 01 06.2**	**-0.2**
TUC	**Tucson**	**37.07**	**353**	P		**P**	**02 01 07.7**	**+0.9**
	baz=171							
TUC	**Tucson**	**37.07**	**353**	P		**P**	**02 01 07.3**	**+0.5**
TUC	**Tucson

comp=Z,45nm,1.7s
PB15 IAMs_20 IAMs_20 02 13 22.3

comp=Z,4µm,20.0s
XPFO Pion Flat 39.41 346 P **P** **02 01 24.5 -2.0**
PFO Pinyon Flats O 39.41 346 P **P** **02 01 25.9 -0.7**
comp=Z,1.2nm,0.6s,baz=214,slow=5.9,SNR=3.7
PFO Pinyon Flats O 39.41 346 P **P** **02 01 24.8 -1.8**
AMTX Amarillo 39.46 5 P **P** **02 01 27.5 +0.6**
baz=186
AMTX Amarillo 39.46 5 P **P** **02 01 25.8 -1.2**
AMTX IAMs_20 IAMs_20 02 15 37.9

comp=Z,3µm,22.0s
143A Socs Landing, 39.47 19 P **P** **02 01 25.9 -1.0**
143A IAmb IAmb 02 01 33.3

comp=Z,56nm,1.4s
Z41A Richland Creek 39.56 17 P **P** **02 01 28.8 +1.1**
baz=200
LVC Limon Verde 39.65 120 P **P** **02 01 29.0 -0.1**
comp=Z,12nm,1.1s,baz=298,slow=6.2,SNR=10.0
LVC Limon Verde 39.65 120 P **P** **02 01 26.9 -2.2**
LVC IAmb IAmb 02 01 40.5

comp=Z,58nm,1.6s
LVC Limon Verde 39.65 120 IAMs_20 IAMs_20 02 13 12.2

comp=Z,4µm,21.0s
LVC Limon Verde 39.65 120 *e*P **P** **02 01 31.7 +2.5**
WMOK Wichita Mounta 39.66 9 P **P** **02 01 28.1 -0.4**
W18A Petrified Fore 39.73 355 P **P** **02 01 30.8 +1.5**
baz=173
W18A Petrified Fore 39.73 355 IAMs_20 IAMs_20 02 14 38.0

comp=Z,3µm,20.0s
DWPF Disney Wildern 39.98 34 IAMs_20 IAMs_20 02 15 58.4

comp=Z,3µm,21.0s
GO02 Mina Guanaco 40.07 124 IAmb IAmb 02 01 35.5

comp=Z,34nm,1.1s
146A Union 40.22 22 P **P** **02 01 32.6 -0.6**
WUAZ Wupatki 40.30 353 P **P** **02 01 35.6 +1.6**
baz=171
WUAZ Wupatki 40.30 353 P **P** **02 01 33.3 -0.7**
GMRC Granite Mounta 40.34 347 P **P** **02 01 35.8 +1.5**
baz=164
PASC Pasadena Art C 40.40 344 IAMs_20 IAMs_20 02 13 44.0

comp=Z,4µm,20.0s
MWC Mount Wilson 40.41 344 IAMs_20 IAMs_20 02 13 45.5

comp=Z,3µm,20.0s
CCAR Cane Creek 40.48 18 P **P** **02 01 34.5 -0.8**
MIAR Mount Ida 40.55 15 P **P** **02 01 36.2 +0.3**
baz=198
GO03 Copiap 40.62 128 P **P** **02 01 33.3 -3.5**
GO03 IAmb IAmb 02 01 39.6

comp=Z,44nm,1.3s
X40A Basin Creek Fa 40.70 16 P **P** **02 01 38.2 +1.1**
baz=199
X40A Basin Creek Fa 40.70 16 P **P** **02 01 36.6 -0.5**
250A Grady 40.75 25 P **P** **02 01 37.0 -0.7**
OSI Osito Audit: C 40.96 343 IAMs_20 IAMs_20 02 14 00.3

comp=Z,4µm,22.0s
EDW2 Edwards Air Fo 41.01 344 P **P** **02 01 40.4 +0.7**
baz=161
SDDR Presa de Saban 41.07 54 IAMs_20 IAMs_20 02 17 31.8

comp=Z,2µm,18.0s
Z47A Carrollton 41.09 22 IAmb IAmb 02 01 47.3

comp=Z,36nm,1.3s
GSC Goldstone, Bar 41.10 346 P **P** **02 01 42.0 +1.4**
baz=163
GSC Goldstone, Bar 41.10 346 IAmb IAmb 02 02 00.4

comp=Z,47nm,1.6s
GSC IAMs_20 IAMs_20 02 14 28.9

comp=Z,3µm,20.0s
UALR University of 41.11 17 P **P** **02 01 39.5 -1.0**
W39A Magazine 41.12 15 P **P** **02 01 41.3 +0.7**
baz=198
W39A Magazine 41.12 15 IAmb IAmb 02 01 55.1

comp=Z,57nm,1.6s
AC02 Maricunga 41.16 126 P **P** **02 01 39.6 -2.1**
AC02 IAmb IAmb 02 01 53.7

comp=Z,40nm,1.4s
AC05 El Transito 41.19 130 P **P** **02 01 39.6 -1.9**
AC05 IAmb IAmb 02 01 44.5

comp=Z,58nm,1.2s
U32A Winter Ranch, 41.24 8 P **P** **02 01 40.7 -0.9**
U32A IAmb IAmb 02 01 54.4

comp=Z,31nm,1.0s
X43A Marvell 41.31 18 P **P** **02 01 44.1 +2.0**
baz=202
TUL1 Leonard 41.34 12 P **P** **02 01 42.6 +0.2**
baz=195
LRAL Lakeview Retre 41.37 24 IAmb IAmb 02 02 00.2

comp=Z,48nm,1.9s
ARVC Arvin 41.47 343 P **P** **02 01 44.0 +0.5**
baz=160
W41B Gary Mavity, V 41.51 16 P **P** **02 01 44.6 +0.8**
baz=200
T25A Trinidad 41.56 1 P **P** **02 01 45.7 +1.3**
baz=182
WHAR Wooly Hollow 41.61 16 IAmb IAmb 02 01 50.8

comp=Z,61nm,1.6s
MVCO Mesa Verde 41.71 356 P **P** **02 01 46.6 +0.9**
baz=176
MVCO Mesa Verde 41.71 356 IAmb IAmb 02 02 00.5

comp=Z,41nm,1.8s
MVCO IAMs_20 IAMs_20 02 15 47.7

comp=Z,2µm,21.0s
OXF Oxford 41.79 20 P **P** **02 01 46.2 +0.1**
baz=204
OXF Oxford 41.79 20 IAmb IAmb 02 01 50.5

comp=Z,53nm,1.6s
ISA Isabella, Lake 41.88 344 IAMs_20 IAMs_20 02 15 26.5

comp=Z,4µm,19.0s
CO03 El Pedregal 41.88 133 IAmb IAmb 02 01 49.0

comp=Z,31nm,1.2s
SDD Santo Domingo 41.93 56 IAMs_20 IAMs_20 02 17 08.4

comp=Z,4µm,21.0s
MPMC Manual Prospec 41.99 345 P **P** **02 01 49.3 +1.3**
baz=162
Z50A Ashland 42.00 25 P **P** **02 01 48.5 +0.6**
baz=210
VES Vestal, Richgr 42.21 344 P **P** **02 01 50.3 +0.8**
baz=160
FCAR Ozark Folk Cen 42.22 16 P **P** **02 01 48.6 -1.0**
FCAR IAmb IAmb 02 01 53.5

comp=Z,48nm,1.9s
SAML Samuel 42.24 98 P **P** **02 01 48.2 -1.9**
SAML IAmb IAmb 02 02 00.0

comp=Z,31nm,1.2s
CO04 Los Peladeros 42.31 134 IAmb IAmb 02 02 01.6

comp=Z,84nm,1.8s
PKCU Pink Cliffs 42.33 352 P **P** **02 01 48.8 -2.1**
U40A Yellville 42.46 15 P **P** **02 01 52.0 +0.5**
baz=199
255A Hazlehurst 42.46 30 P **P** **02 01 50.9 -0.7**
255A IAMs_20 IAMs_20 02 17 47.1

comp=Z,2µm,19.0s
LPAR Lepanto 42.49 18 P **P** **02 01 51.3 -0.5**
CWC Cottonwood Cre 42.50 345 P **P** **02 01 51.9 -0.2**
baz=161
TPNV Topopah Spring 42.55 347 P **P** **02 01 52.9 +0.4**
baz=164
TPNV Topopah Spring 42.55 347 IAmb IAmb 02 02 12.9

comp=Z,85nm,2.0s
X48A Hartselle 42.59 23 IAmb IAmb 02 02 04.5

comp=Z,44nm,1.6s
PV05 Paradox Valley 42.61 356 P **P** **02 01 53.4 +0.4**
PV05 IAMs_20 IAMs_20 02 16 36.2

comp=Z,2µm,21.0s
PV01 Paradox Valley 42.63 356 IAMs_20 IAMs_20 02 16 49.1

comp=Z,2µm,20.0s
PV13 Radium Mtn., P 42.67 356 IAMs_20 IAMs_20 02 16 26.2

comp=Z,2µm,20.0s
PLAL Pickwick Lake 42.68 21 IAmb IAmb 02 02 01.1

comp=Z,28nm,1.0s
154A Montrose 42.72 28 IAmb IAmb 02 02 08.8

comp=Z,49nm,1.1s
PV18 Skein Mesa, Pa 42.77 356 P **P** **02 01 54.8 +0.5**
PV18 IAMs_20 IAMs_20 02 16 49.7

comp=Z,2µm,21.0s
PV03 Paradox Valley 42.77 356 IAMs_20 IAMs_20 02 16 39.1

comp=Z,2µm,22.0s
PV11 David Mesa, Pa 42.82 356 P **P** **02 01 54.8 +0.1**
PV12 Saucer Basin, 42.83 356 IAMs_20 IAMs_20 02 16 33.2

comp=Z,3µm,22.0s
PV16 Nyswonger Mesa 42.83 356 IAMs_20 IAMs_20 02 16 51.4

comp=Z,2µm,20.0s
PV15 Paradox Valley 42.84 357 P **P** **02 01 56.3 +1.4**
PV15 IAMs_20 IAMs_20 02 17 04.5

comp=Z,2µm,19.0s
PV19 Morning Glory 42.84 356 P **P** **02 01 54.7 -0.1**
PV19 IAMs_20 IAMs_20 02 16 40.5

comp=Z,2µm,21.0s
GRAC Grapevine Rang 42.85 346 P **P** **02 01 56.1 +1.3**
baz=162
PV20 West Nyswonger 42.87 356 IAMs_20 IAMs_20 02 16 51.6

comp=Z,2µm,20.0s
MT02 Curacav 42.87 136 IAmb IAmb 02 01 57.3

comp=Z,48nm,1.4s
PV14 Lion Creek, Pa 42.90 356 IAMs_20 IAMs_20 02 16 43.2

comp=Z,3µm,21.0s
PV10 Paradox Valley 42.91 356 P **P** **02 01 53.9 -1.6**
GNAR Gosnell 42.91 19 P **P** **02 01 54.7 -0.5**
PV04 Paradox Valley 42.91 356 P **P** **02 01 54.9 -0.6**
PV07 Paradox Valley 42.94 356 P **P** **02 01 54.9 -0.8**
PV22 Blue Mesa, Par 43.05 356 P **P** **02 01 53.0 -3.6**
HALT Halls 43.08 19 P **P** **02 01 57.0 +0.4**
HALT IAmb IAmb 02 02 04.2

comp=Z,32nm,0.7s
PV21 Cone Mtn., Par 43.09 356 IAMs_20 IAMs_20 02 16 57.4

comp=Z,3µm,22.0s
PEL Peldehue 43.12 135 IAmb IAmb 02 01 59.0

comp=Z,47nm,1.4s
MT01 Popeta 43.13 137 IAmb IAmb 02 02 07.6

comp=Z,37nm,1.2s
GOGA Godfrey 43.21 27 P **P** **02 01 59.2 +1.5**
baz=213
GOGA Godfrey 43.21 27 P **P** **02 01 55.8 -1.9**
FPAL Fort Paine 43.24 24 IAmb IAmb 02 02 03.9

comp=Z,26nm,1.2s
Y52A Lilburn 43.32 26 IAmb IAmb 02 02 13.9

comp=Z,34nm,1.4s
GO05 Huala 43.34 139 IAmb IAmb 02 02 00.7

comp=Z,38nm,1.2s
Q24A Divide 43.37 0 P **P** **02 02 00.3 +1.0**
baz=180
KSCO Kaye Shedlock' 43.50 3 IAMs_20 IAMs_20 02 18 09.8

comp=Z,2µm,18.0s
PBMO Poplar Bluff 43.53 18 IAmb IAmb 02 02 08.3

comp=Z,42nm,1.2s
CBKS Cedar Bluff 43.55 7 P **P** **02 02 01.0 +0.6**
baz=188
X51A Calhoun 43.58 25 IAmb IAmb 02 02 12.3

comp=Z,28nm,1.1s
Q16A Castle Valley 43.64 354 P **P** **02 02 00.0 -1.3**
PARMO Parma 43.64 18 P **P** **02 02 00.4 -0.7**
PARMO IAmb IAmb 02 02 16.6

comp=Z,47nm,1.3s
HICK Hickman 43.69 19 P **P** **02 02 01.7 +0.2**
SWET Sewanee 43.70 23 IAmb IAmb 02 02 13.3

comp=Z,52nm,1.7s
R11A Troy Canyon, C 43.76 349 P **P** **02 02 03.5 +1.2**
baz=165
WVT Waverly 43.80 21 P **P** **02 02 02.4 0.0**
baz=206
WVT Waverly 43.80 21 P **P** **02 01 59.8 -2.6**
WVT IAmb IAmb 02 02 09.3

comp=Z,57nm,1.5s
V48A Smith Brothers 43.82 22 IAmb IAmb 02 02 14.2

comp=Z,26nm,1.1s
OMMB Old Mammoth Mi 43.85 345 P **P** **02 01 59.9 -3.3**
OMMB IAmb IAmb 02 02 14.4

comp=Z,37nm,1.7s
OMMB IAMs_20 IAMs_20 02 16 38.7

comp=Z,3µm,18.0s
MDPB Devils Postpil 43.89 344 IAMs_20 IAMs_20 02 16 30.7

comp=Z,2µm,18.0s
W50A Signal Mountai 43.94 24 P **P** **02 02 00.6 -2.9**
W50A IAmb IAmb 02 02 15.2

comp=Z,19nm,1.1s
BO02 Sierra Bellavi 43.98 138 IAmb IAmb 02 02 08.4

comp=Z,21nm,0.8s
CFA Coronel Fontan 44.08 132 P **P** **02 02 03.1 -1.7**
comp=Z,20nm,1.1s,baz=303,slow=7.2,SNR=20
Z56A Williston 44.13 29 P **P** **02 02 02.8 -2.3**
Z56A IAmb IAmb 02 02 11.6

comp=Z,45nm,1.4s
Z56A IAMs_20 IAMs_20 02 18 46.5

comp=Z,3µm,20.0s
ISCO Idaho Springs 44.20 360 P **P** **02 02 06.3 +0.3**
baz=180
ISCO Idaho Springs 44.20 360 IAMs_20 IAMs_20 02 17 56.6

comp=Z,2µm,20.0s
KSU1 Kansas State U 44.28 10 P **P** **02 02 06.1 -0.1**
baz=193
Y55A Saluda 44.40 28 P **P** **02 02 07.6 +0.4**
baz=215
NV11 Mina Array Sit 44.41 346 IAMs_20 IAMs_20 02 16 23.4

comp=Z,3µm,20.0s
W52A Murphy 44.42 26 IAmb IAmb 02 02 15.7

comp=Z,30nm,1.1s
NVAR Mina Array Bea 44.44 346 P **P** **02 02 06.5 -1.3**
comp=Z,1.4nm,0.6s,baz=177,slow=10,SNR=5.7
NVAR LR LR 02 16 44.2

comp=Z,3µm,18.9s,baz=166,slow=31
HODGE Hodges 44.45 28 IAmb IAmb 02 02 14.7

comp=Z,41nm,1.6s
CPCT Cooper Cave 44.48 25 IAmb IAmb 02 02 15.7

comp=Z,22nm,1.1s
CCM Cathedral Cave 44.49 16 P **P** **02 02 08.2 +0.3**
baz=200
CCM Cathedral Cave 44.49 16 P **P** **02 02 05.6 -2.3**
CCM IAmb IAmb 02 02 19.4

comp=Z,18nm,1.1s
NHSC New Hope 44.56 31 IAMs_20 IAMs_20 02 18 54.7

comp=Z,4µm,20.0s
O20A White River Ci 44.61 357 IAmb IAmb 02 02 17.2

comp=Z,22nm,1.2s
O20A IAMs_20 IAMs_20 02 18 04.4

comp=Z,2µm,19.0s
CMB Columbia Colle 44.63 343 IAmb IAmb 02 02 22.2

comp=Z,52nm,1.9s
X54A Belton 44.66 27 P **P** **02 02 10.2 +0.9**
baz=214
RYN Ryan 44.69 345 P **P** **02 02 07.1 -2.6**
RYN IAmb IAmb 02 02 18.4

comp=Z,19nm,1.2s
RYN IAMs_20 IAMs_20 02 16 30.7

comp=Z,2µm,20.0s
S44A Carbondale 44.74 18 IAmb IAmb 02 02 17.0

comp=Z,18nm,1.1s
MACA Manacapuru-AM 44.76 90 *e*P **P** **02 02 13.4 +3.0**
SIUC Southern Illin 44.77 18 IAmb IAmb 02 02 17.2

comp=Z,27nm,1.2s
BG3 Lake Jocassee 44.78 27 IAmb IAmb 02 02 22.4

comp=Z,16nm,0.9s
WAKR Walker 44.81 344 P P 02 02 05.5 -5.2
WAKR IAmb IAmb 02 02 19.8

comp=Z,28nm,1.3s
WAKR IAMs_20 IAMs_20 02 17 51.7

comp=Z,3µm,19.0s
T47A Sharon Grove 44.83 21 IAmb IAmb 02 02 17.5

comp=Z,47nm,1.6s
V51A Loudon 44.85 25 IAmb IAmb 02 02 22.5

comp=Z,27nm,1.0s
U49A Red Boiling Sp 44.90 23 IAmb IAmb 02 02 18.0

comp=Z,30nm,1.4s
SJG San Juan 44.92 59 IAMs_20 IAMs_20 02 17 01.6

comp=Z,2µm,20.0s
X55A Gracelyn & Ava 44.94 28 P **P** **02 02 12.0 +0.5**
baz=215
TKL Tuckaleechee C 44.97 25 IAmb IAmb 02 02 23.4

comp=Z,21nm,1.1s
PPT Papeete 44.97 250 LR LR 02 16 05.6

comp=Z,2µm,19.3s,baz=76,slow=30
PPT2 Papeete2 44.98 250 *e*S **S** **02 08 54.5 +3.8**
PPT2 eLQ LQ 02 12 54.9

comp=Z,859nm,25.5s
PPT2 eLR LR 02 14 40.2

comp=Z,3µm,27.8s
comp=Z,7µm,26.2s,baz=74
KVN Kaiserville 44.98 346 IAMs_20 IAMs_20 02 16 43.6

comp=Z,3µm,20.0s
SIV San Ignacio 45.07 108 P **P** **02 02 10.4 -2.6**
comp=Z,1.1nm,0.8s,baz=302,slow=6.9,SNR=5.5
DUG Dugway, Tooele 45.10 352 P **P** **02 02 13.7 +0.7**
baz=170
DUG Dugway, Tooele 45.10 352 IAmb IAmb 02 02 32.5

comp=Z,21nm,1.4s
DUG IAMs_20 IAMs_20 02 17 39.5

comp=Z,3µm,20.0s
PAULI Pauline 45.14 28 IAmb IAmb 02 02 19.2

comp=Z,22nm,1.1s
Y57A Sumter 45.17 30 IAMs_20 IAMs_20 02 19 27.0

comp=Z,3µm,19.0s
W54A Cherokee Point 45.19 27 P **P** **02 02 13.8 +0.3**
baz=214
YERR Yerington 45.21 345 IAmb IAmb 02 02 22.8

comp=Z,20nm,1.2s
X56A White Oak 45.24 29 P **P** **02 02 14.5 +0.5**
baz=215
N23A Red Feather La 45.30 360 P **P** **02 02 15.7 +1.1**
baz=179
V53A Saluda 45.40 26 IAmb IAmb 02 02 27.0

comp=Z,23nm,1.0s
PNTR Pine Nut 45.40 345 IAMs_20 IAMs_20 02 18 10.6

comp=Z,3µm,18.0s
Y58A Scranton 45.45 31 IAMs_20 IAMs_20 02 19 22.3

comp=Z,4µm,21.0s
VILB Vilhena 45.49 104 *e*P **P** **02 02 17.1 +0.8**
MCCM Marconi Confer 45.50 341 IAMs_20 IAMs_20 02 16 06.4

comp=Z,3µm,20.0s
RUBR Rubicon Trail 45.51 344 IAMs_20 IAMs_20 02 17 05.7

comp=Z,3µm,20.0s
VCNR Virginia City 45.61 345 IAMs_20 IAMs_20 02 18 17.9

comp=Z,3µm,19.0s
KMSC Kings Mountain 45.63 28 P **P** **02 02 17.1 +0.1**
baz=215
AFDM Forest Hills D 45.65 343 IAmb IAmb 02 02 25.6

comp=Z,16nm,1.2s
PTGA Pitinga 45.66 87 P **P** **02 02 14.4 -3.3**
PTGA Pitinga 45.66 87 *e*P **P** **02 02 19.7 +2.1**
X57A Johnson Farm, 45.68 30 P **P** **02 02 18.5 +1.1**
baz=216
LC01 Cunco 45.77 143 P **P** **02 02 18.8 +0.7**
V54A Nebo 45.87 27 P **P** **02 02 19.4 +0.4**
baz=214
Y59A Loris 45.92 31 IAMs_20 IAMs_20 02 19 45.8

comp=Z,4µm,20.0s
PAHR Pah Rah Range 45.92 345 IAMs_20 IAMs_20 02 17 16.6

comp=Z,2µm,19.0s
W56A Indian Trail 45.98 29 P **P** **02 02 20.1 +0.3**
baz=216
ELK Elko 46.02 350 LR LR 02 18 38.3

comp=Z,4µm,18.0s,baz=158,slow=32
ELK Elko 46.02 350 IAmb IAmb 02 02 34.8

comp=Z,45nm,2.0s
OLIL Olney 46.06 19 IAmb IAmb 02 02 33.9

comp=Z,21nm,1.0s
GDXM Geysers 46.08 341 IAMs_20 IAMs_20 02 17 10.7

comp=Z,3µm,20.0s
X58A Rowland 46.13 30 IAMs_20 IAMs_20 02 19 53.3

comp=Z,4µm,20.0s
WCI Wyandotte Cave 46.22 21 P **P** **02 02 22.2 +0.6**
baz=207
WCI Wyandotte Cave 46.22 21 P **P** **02 02 19.0 -2.6**
WCI IAmb IAmb 02 02 27.5

comp=Z,34nm,1.4s
V55A Taylorsville 46.27 28 P **P** **02 02 22.5 +0.4**
baz=214
V55A Taylorsville 46.27 28 IAmb IAmb 02 02 29.8

comp=Z,23nm,1.0s
TBI Tubuai 46.27 242 *e*S **S** **02 09 11.0 +1.9**
comp=Z,826nm,28.2s
TBI *e*LQ LQ 02 13 18.0

comp=Z,2µm,32.2s
TBI *e*LR LR 02 15 26.3

comp=Z,5µm,28.2s,baz=70
TBI Tubuai 46.27 242 *e*T T 02 51 37.4

comp=Z,7.6nm,0.3s
Y60A Bolivia 46.27 32 IAMs_20 IAMs_20 02 19 54.2

comp=Z,3µm,20.0s
W57A Gilead 46.28 29 P **P** **02 02 23.1 +0.9**
baz=216
W57A Gilead 46.28 29 IAMs_20 IAMs_20 02 20 02.3

comp=Z,3µm,20.0s
BEKR Beckworth 46.33 344 IAmb IAmb 02 02 35.2

comp=Z,19nm,1.3s
BEKR IAMs_20 IAMs_20 02 17 40.3

comp=Z,3µm,19.0s
HWUT Hardware Ranch 46.34 354 IAmb IAmb 02 02 28.3

comp=Z,36nm,1.9s
HWUT IAMs_20 IAMs_20 02 19 12.5

comp=Z,3µm,18.0s
ORV Oroville 46.36 343 P **P** **02 02 22.5 -0.3**
P43A Skaggs, Pawnee 46.45 17 IAmb IAmb 02 02 36.3

comp=Z,21nm,1.2s
P43A IAMs_20 IAMs_20 02 21 38.3

comp=Z,2µm,18.0s
U54A Nelsons Funny 46.55 26 P **P** **02 02 25.1 +0.7**
baz=213
U54A Nelsons Funny 46.55 26 IAmb IAmb 02 02 31.7

comp=Z,19nm,1.1s
W58A Raeford 46.55 30 P **P** **02 02 25.8 +1.5**
baz=217
T53A Wise 46.62 25 P **P** **02 02 25.9 +1.0**
baz=212
PTLB Pontes e Lacer 46.83 107 *e*P **P** **02 02 29.2 +2.5**
U55A TA2, Sparta 46.88 27 P **P** **02 02 28.2 +1.3**
baz=214
V57A Coltrane Farms 46.98 29 P **P** **02 02 28.5 +0.9**
baz=216
R50A Paris 47.00 23 IAmb IAmb 02 02 38.5

comp=Z,15nm,1.0s
K22A Casper 47.06 359 IAMs_20 IAMs_20 02 19 37.0

comp=Z,3µm,20.0s
T54A Tazewell 47.10 26 P **P** **02 02 29.1 +0.4**
baz=213
L34A Svendsen Farm, 47.11 9 IAMs_20 IAMs_20 02 20 45.2

comp=Z,3µm,18.0s
KCPM Cahto Peak 47.13 341 IAMs_20 IAMs_20 02 17 10.5

comp=Z,3µm,20.0s
SABA Saba 47.22 61 IAMs_20 IAMs_20 02 18 50.4

comp=Z,3µm,20.0s
V58A Windy Hill, Pi 47.22 30 P **P** **02 02 30.8 +1.3**
baz=217
V58A Windy Hill, Pi 47.22 30 IAMs_20 IAMs_20 02 20 39.2

comp=Z,3µm,20.0s
BW06 Boulder Array 47.31 356 IAMs_20 IAMs_20 02 19 51.2

comp=Z,3µm,18.0s
PDAR Pinedale Array 47.31 356 P **P** **02 02 28.1 -2.2**
comp=Z,0.6nm,0.6s,baz=168,slow=7.6,SNR=7.6
PDAR LR LR 02 20 02.6

comp=Z,3µm,18.7s,baz=184,slow=33
S53A Williamson 47.38 25 P **P** **02 02 31.2 +0.3**
baz=212
CNNC Cliffs of the 47.40 31 IAMs_20 IAMs_20 02 20 40.0

comp=Z,3µm,20.0s
AHID Auburn Hatcher 47.44 354 IAMs_20 IAMs_20 02 19 51.6

comp=Z,3µm,18.0s
TOSP Speyside 47.48 70 IAMs_20 IAMs_20 02 20 48.8

comp=Z,3µm,21.0s
SMRT St. Maarten 47.54 61 IAMs_20 IAMs_20 02 18 57.0

comp=Z,2µm,19.0s
SKI Saint Kitts 47.55 62 IAMs_20 IAMs_20 02 23 11.1

comp=Z,2µm,20.0s
WDC Whiskeytown Da 47.62 342 IAmb IAmb 02 02 39.8

comp=Z,14nm,1.1s
WDC IAMs_20 IAMs_20 02 17 32.2

comp=Z,3µm,22.0s
U57A Blanch 47.62 29 P **P** **02 02 33.3 +0.6**
baz=216
P48A Milroy 47.62 21 IAmb IAmb 02 02 38.4

comp=Z,25nm,1.2s
V59A Middlesex 47.63 30 P **P** **02 02 33.0 +0.3**
baz=218
KMRM Mail Ridge 47.65 341 IAMs_20 IAMs_20 02 17 38.0

comp=Z,3µm,20.0s
PLCA Paso Flores 47.72 144 P **P** **02 02 32.7 -0.8**
comp=Z,12nm,1.0s,baz=312,slow=9.3,SNR=8.2
PLCA LR LR 02 17 33.3

comp=Z,5µm,19.4s,baz=323,slow=30
PLCA Paso Flores 47.72 144 P **P** **02 02 30.4 -3.1**
BLA Blacksburg 47.75 27 P **P** **02 02 34.5 +0.9**
baz=215
T56A Rocky Mt 47.78 28 P **P** **02 02 34.9 +1.0**
baz=215
P49A Miami Univ. Ec 47.95 22 P **P** **02 02 34.2 -0.9**
baz=208
FDF Fort de France 48.00 66 IAMs_20 IAMs_20 02 20 02.6

comp=Z,2µm,22.0s
N02D Trinity Center 48.03 342 P **P** **02 02 36.5 +0.8**
baz=157
Q51A Peebles 48.03 23 IAmb IAmb 02 02 40.9

comp=Z,14nm,1.2s
SNOW Snow King Moun 48.09 355 IAMs_20 IAMs_20 02 19 56.0

comp=Z,2µm,20.0s
T57A Hurt 48.12 28 P **P** **02 02 37.3 +0.8**
baz=216
T57A Hurt 48.12 28 IAmb IAmb 02 02 43.9

comp=Z,14nm,1.0s
T57A IAMs_20 IAMs_20 02 21 20.0

comp=Z,2µm,20.0s
V60A Jim Taylor Roa 48.13 31 IAMs_20 IAMs_20 02 20 52.3

comp=Z,3µm,21.0s
TPAW Teton Pass 48.14 355 IAMs_20 IAMs_20 02 20 23.7

comp=Z,3µm,18.0s

S55A	**Lewisburg** baz=214	48.17	27	P	P		02 02 37.8	+0.9	
MOD	**Modoc Plateau** comp=Z,2µm,18.0s	48.22	345	IAMs_20	IAMs_20		02 19 16.5		
KHMM	**Horse Mountain** comp=Z,3µm,20.0s	48.25	341	IAMs_20	IAMs_20		02 18 25.3		
R54A	**Victor** baz=213	48.29	26	P	P		02 02 38.0	+0.2	
FXWY	**Fox Creek** comp=Z,3µm,18.0s	48.29	355	IAMs_20	IAMs_20		02 20 38.3		
JCC	**Jacoby Creek,** comp=Z,2µm,20.0s	48.30	341	IAMs_20	IAMs_20		02 18 15.4		
WVOR	**Wild Horse Val** comp=Z,31nm,1.8s	48.33	347	IAmb	IAmb		02 02 43.2		
WVOR	comp=Z,2µm,22.0s			IAMs_20	IAMs_20		02 18 52.9		
P50A	**Jamestown** baz=209	48.36	22	P	P		02 02 37.5	-0.8	
Q52A	**Bidwell** baz=212	48.41	24	P	P		02 02 38.7	0.0	
O48A	**Farmland** baz=207	48.43	21	P	P		02 02 38.3	-0.5	
M02C	**Callahan** baz=157	48.45	343	P	P		02 02 39.5	+0.4	
V61A	**Roper** comp=Z,3µm,21.0s	48.51	32	IAMs_20	IAMs_20		02 21 12.3		
ANWB	**Willy Bob** comp=Z,2µm,21.0s	48.51	62	IAMs_20	IAMs_20		02 19 10.7		
M04C	**Macdoel** baz=158	48.52	344	P	P		02 02 40.1	+0.4	
P51A	**Williamsport** baz=210	48.53	23	P	P		02 02 39.0	-0.7	
RSSD	**Black Hills** baz=182	48.54	1	P	P		02 02 40.6	+0.7	
RSSD	**Black Hills**	48.54	1	P	P		02 02 38.6	-1.3	
RSSD	comp=Z,13nm,1.1s			IAmb	IAmb		02 02 49.3		
IMW	**Indian Meadow** comp=Z,3µm,18.0s	48.54	355	IAMs_20	IAMs_20		02 20 36.4		
Q53A	**Leroy** baz=212	48.63	25	P	P		02 02 40.7	+0.3	
V62A	**Hyde County Ai** comp=Z,3µm,22.0s	48.66	32	IAMs_20	IAMs_20		02 20 43.3		
FLWY	**Flagg Ranch** comp=Z,25nm,1.2s	48.71	355	IAmb	IAmb		02 02 48.6		
FLWY	comp=Z,2µm,19.0s			IAMs_20	IAMs_20		02 20 26.2		
MFID	**Camas Ranch** comp=Z,26nm,1.3s	48.71	350	IAmb	IAmb		02 02 50.7		
YBH	**Yreka Blue Hor** comp=Z,2.8nm,0.7s,baz=98,slow=6.2,SNR=8.6	48.72	343	P	P		02 02 39.6	-1.5	
YBH	comp=Z,2µm,21.5s,baz=166,slow=31			LR	LR		02 18 43.7		
YBH	**Yreka Blue Hor** comp=Z,3µm,22.0s	48.72	343	IAMs_20	IAMs_20		02 18 21.5		
ECSD	**EROS Data Cent** comp=Z,14nm,1.2s	48.80	9	IAmb	IAmb		02 02 52.5		
S57A	**Dark Hollow, R** baz=216	48.87	28	P	P		02 02 42.0	-0.3	
S57A	**Dark Hollow, R** comp=Z,14nm,1.0s	48.87	28	IAmb	IAmb		02 02 54.8		
S57A	comp=Z,2µm,20.0s			IAMs_20	IAMs_20		02 21 54.3		
O50A	**Cable** baz=209	48.89	22	P	P		02 02 42.1	-0.3	
BBGH	**Gun Hill** comp=Z,3µm,22.0s	48.94	68	IAMs_20	IAMs_20		02 22 35.7		
U61A	**Possum Corner** comp=Z,3µm,20.0s	48.99	31	IAMs_20	IAMs_20		02 21 37.0		
Q54A	**Coxs Mills** baz=213	49.03	26	P	P		02 02 43.2	-0.2	
L04D	**Klamath Falls** baz=158	49.05	344	P	P		02 02 43.8	+0.1	
LKWY	**Lake** comp=Z,3µm,20.0s	49.16	355	IAMs_20	IAMs_20		02 20 25.2		
J08A	**Circle Bar Ran** comp=Z,15nm,1.2s	49.17	348	IAmb	IAmb		02 02 52.8		
J08A	comp=Z,3µm,22.0s			IAMs_20	IAMs_20		02 19 20.6		
S58A	**Poland Farm, P** comp=Z,2µm,20.0s	49.18	29	IAMs_20	IAMs_20		02 21 49.2		
P53A	**Whipple** baz=212	49.21	25	P	P		02 02 45.0	+0.1	
L44A	**Lake County Fo** baz=203	49.26	17	P	P		02 02 45.7	+0.6	
O51A	**Pataskala** baz=211	49.28	23	P	P		02 02 45.1	-0.3	
JFWS	**Jewell Farm** baz=200	49.30	15	P	P		02 02 46.0	+0.5	
N49A	**Columbus Grove** comp=Z,23nm,1.4s	49.36	21	IAmb	IAmb		02 02 50.8		
T60A	**Surry** baz=219	49.46	30	P	P		02 02 47.0	+0.3	
T60A	**Surry** comp=Z,4µm,22.0s	49.46	30	IAMs_20	IAMs_20		02 21 21.6		
R58B	**Mineral** comp=Z,21nm,1.4s	49.54	29	IAmb	IAmb		02 03 01.4		
R58B	comp=Z,2µm,20.0s			IAMs_20	IAMs_20		02 22 00.7		
N50A	**Nevada** baz=210	49.61	22	P	P		02 02 47.4	-0.4	
CLDB	**Colider**	49.62	100	eP	P		02 02 50.0	+1.6	
ITTB	**Itaituba**	49.63	92	eP	P		02 02 50.6	+2.1	
RLMT	**Red Lodge** baz=175	49.63	357	P	P		02 02 48.6	+0.3	
RLMT	**Red Lodge** comp=Z,2µm,18.0s	49.63	357	IAMs_20	IAMs_20		02 21 34.8		
P54A	**Burton** baz=213	49.70	25	P	P		02 02 48.4	-0.2	
R58A	**Rapidan** baz=217	49.75	28	P	P		02 02 49.1	+0.1	
J05D	**Fort Rock, OR** baz=159	49.76	345	P	P		02 02 49.9	+0.8	
P55A	**Reedsville** baz=214	49.90	26	P	P		02 02 50.8	+0.6	
O53A	**New Philadelph** baz=212	49.93	24	P	P		02 02 50.3	0.0	
CBN	**Corbin Frederi** comp=Z,3µm,20.0s	49.98	29	IAMs_20	IAMs_20		02 22 23.2		
I07A	**Izee** comp=Z,26nm,1.2s	50.09	347	IAmb	IAmb		02 03 00.1		
I07A	comp=Z,2µm,21.0s			IAMs_20	IAMs_20		02 20 11.9		
I40A	**Norwalk** comp=Z,16nm,1.1s	50.13	14	IAmb	IAmb		02 02 56.5		
Q57A	**Strasburg** baz=216	50.15	28	P	P		02 02 53.1	+1.1	
PINE	**Pine Mountain** comp=Z,30nm,1.2s	50.16	345	IAmb	IAmb		02 03 00.6		
DLMT	**Dillon** comp=Z,2µm,20.0s	50.16	354	IAMs_20	IAMs_20		02 20 43.7		
SALV	**Santo Antonio**	50.17	107	eP	P		02 02 54.7	+2.1	
O54A	**Avella** baz=213	50.22	25	P	P		02 02 52.2	-0.3	
O54A	**Avella** comp=Z,15nm,0.8s	50.22	25	IAmb	IAmb		02 03 04.0		
Q58A	**Fox Den Farm,** baz=217	50.41	28	P	P		02 02 54.2	+0.2	
S61A	**Accomac** comp=Z,3µm,21.0s	50.42	31	IAMs_20	IAMs_20		02 22 22.9		
I04A	**Tendick Farm,** baz=158	50.54	344	P	P		02 02 55.8	+0.9	
N53A	**Lisbon** baz=212	50.55	24	P	P		02 02 55.3	+0.2	
P57A	**Homestead Farm** comp=Z,36nm,1.4s	50.69	28	IAmb	IAmb		02 03 11.8		
P57A	comp=Z,2µm,19.0s			IAMs_20	IAMs_20		02 22 52.2		
I05D	**Terrebonne, OR** baz=160	50.77	345	P	P		02 02 58.2	+1.6	
CPUP	**Villa Florida** comp=Z,4.8nm,0.9s,baz=279,slow=9.7,SNR=8.2	50.83	120	P	P		02 02 56.0	-1.5	
CPUP	comp=Z,2µm,21.8s,baz=285,slow=32			LR	LR		02 20 52.2		
CPUP	**Villa Florida**	50.83	120	P	P		02 02 53.8	-3.6	
CPUP	comp=Z,24nm,1.1s			IAmb	IAmb		02 03 07.3		
J45A	**Montague** comp=Z,1µm,18.0s	50.87	18	IAMs_20	IAMs_20		02 24 22.4		
SPMN	**Marine on St.** baz=196	50.91	12	P	P		02 02 58.2	+0.5	
M52A	**Chesterland** comp=Z,1µm,18.0s	50.97	23	IAMs_20	IAMs_20		02 25 02.4		
P58A	**Pank, Wackersv** baz=217	51.03	28	P	P		02 02 58.9	+0.3	
N54A	**Moraine State** baz=213	51.03	25	P	P		02 02 58.6	-0.1	
O56A	**Blue Knob Stat** baz=215	51.08	26	P	P		02 02 59.0	0.0	
O56A	**Blue Knob Stat** comp=Z,18nm,1.1s	51.08	26	IAmb	IAmb		02 03 06.5		
O56A	comp=Z,1µm,19.0s			IAMs_20	IAMs_20		02 23 39.3		
R61A	**Willards** comp=Z,3µm,20.0s	51.08	31	IAMs_20	IAMs_20		02 22 43.5		
LAO	**LASA Array** comp=Z,2µm,20.0s	51.09	359	IAMs_20	IAMs_20		02 22 13.3		
G08A	**Pilot Rock**	51.12	348	P	P		02 02 58.5	-0.9	
G08A	comp=Z,3µm,21.0s			IAMs_20	IAMs_20		02 20 44.8		
M53A	**WI Miller and** baz=212	51.15	24	P	P		02 02 59.8	+0.3	
E28A	**Huff** comp=Z,2µm,18.0s	51.16	4	IAMs_20	IAMs_20		02 22 51.4		
MALB	**Monte Alegre**	51.24	89	eP	P		02 03 01.4	+0.6	
H04A	**Detroit Lake**	51.31	345	P	P		02 02 58.9	-1.8	
H04A	comp=Z,28nm,1.2s			IAmb	IAmb		02 03 11.0		
H04A	comp=Z,2µm,19.0s			IAMs_20	IAMs_20		02 21 18.2		
N55A	**Marion Center** baz=215	51.31	26	P	P		02 03 01.2	+0.4	
F36A	**Milaca** comp=Z,30nm,1.4s	51.39	11	IAmb	IAmb		02 03 07.7		
F10A	**Beach Ranch, E** comp=Z,27nm,1.7s	51.44	350	IAmb	IAmb		02 03 07.8		
I45A	**Fountain** comp=Z,2µm,19.0s	51.46	18	IAMs_20	IAMs_20		02 24 30.0		
ALLY	**Alegheny Colle** comp=Z,19nm,0.9s	51.54	24	IAmb	IAmb		02 03 13.2		
M54A	**Oil Creek Stat** baz=214	51.62	25	P	P		02 03 03.1	0.0	
M54A	**Oil Creek Stat** comp=Z,28nm,1.1s	51.62	25	IAmb	IAmb		02 03 14.2		
SSPA	**Standing Stone** baz=216	51.68	27	P	P		02 03 04.1	+0.6	
SSPA	**Standing Stone**	51.68	27	P	P		02 03 01.0	-2.5	
SSPA	comp=Z,41nm,1.4s			IAmb	IAmb		02 03 09.0		
MSO	**Missoula** comp=Z,1µm,19.0s	51.77	353	IAMs_20	IAMs_20		02 22 19.3		
MVL	**Millersville** comp=Z,2µm,20.0s	51.88	28	IAMs_20	IAMs_20		02 23 33.6		
PAGS	**Pennsylvania G** comp=Z,43nm,1.7s	51.89	28	IAmb	IAmb		02 03 20.0		
PAGS	comp=Z,2µm,21.0s			IAMs_20	IAMs_20		02 23 25.7		
F07A	**Phinny Hill Vi** comp=Z,3µm,20.0s	51.91	347	IAMs_20	IAMs_20		02 21 19.4		
M55A	**Ridgway** baz=214	51.97	25	P	P		02 03 06.1	+0.4	
M55A	**Ridgway** comp=Z,23nm,1.1s	51.97	25	IAmb	IAmb		02 03 18.2		
P60A	**Greenville** comp=Z,3µm,20.0s	52.08	29	IAMs_20	IAMs_20		02 23 35.8		
E09A	**Wood Farm, Sta** comp=Z,3µm,22.0s	52.13	349	IAMs_20	IAMs_20		02 21 18.5		
O59A	**Robesonia** baz=218	52.20	28	P	P		02 03 07.7	+0.3	
M56A	**Emporium** comp=Z,23nm,1.1s	52.23	26	IAmb	IAmb		02 03 13.5		
PSUB	**Penn St. - Bra** comp=Z,3µm,20.0s	52.26	29	IAMs_20	IAMs_20		02 23 51.5		
E08A	**Dider Farm, El** comp=Z,2µm,21.0s	52.29	348	IAMs_20	IAMs_20		02 21 32.1		
HAWA	**Hanford** comp=Z,2µm,19.0s	52.29	348	IAMs_20	IAMs_20		02 21 53.2		
N58A	**Sunbury** comp=Z,2µm,21.0s	52.37	27	IAMs_20	IAMs_20		02 23 52.6		
P61A	**Hammonton** comp=Z,3µm,19.0s	52.38	30	IAMs_20	IAMs_20		02 23 53.9		
ITQB	**Itaqui**	52.43	124	eP	P		02 03 09.8	+0.5	
E38A	**The Farm, Brul** comp=Z,2µm,18.0s	52.49	12	IAMs_20	IAMs_20		02 24 23.5		
MDND	**Maddock** comp=Z,2µm,20.0s	52.51	5	IAMs_20	IAMs_20		02 23 50.2		
F04A	**Amboy** comp=Z,2µm,20.0s	52.53	345	IAMs_20	IAMs_20		02 21 22.2		
G45A	**Suttons Bay** comp=Z,2µm,19.0s	52.54	18	IAMs_20	IAMs_20		02 25 10.7		
EGMT	**Eagleton** comp=Z,2µm,19.0s	52.56	356	IAMs_20	IAMs_20		02 22 53.1		
M57A	**Sunshine Farm,** comp=Z,21nm,1.1s	52.58	27	IAmb	IAmb		02 03 16.3		
M57A	comp=Z,2µm,20.0s			IAMs_20	IAMs_20		02 23 53.2		
L55A	**Hinsdale** baz=215	52.70	25	P	P		02 03 11.0	-0.1	
JTMT	**Jette** comp=Z,2µm,20.0s	52.71	353	IAMs_20	IAMs_20		02 22 33.3		
D08A	**Wiman Farm,** comp=Z,2µm,21.0s	52.80	349	IAMs_20	IAMs_20		02 21 48.2		
F03A	**Seaside** comp=Z,2µm,21.0s	52.83	344	IAMs_20	IAMs_20		02 21 10.1		
N59A	**State Game Lan** comp=Z,2µm,20.0s	52.88	28	IAMs_20	IAMs_20		02 24 05.9		
DGMT	**Dagmar** baz=182	52.88	1	P	P		02 03 12.3	0.0	
DGMT	**Dagmar** comp=Z,2µm,21.0s	52.88	1	IAMs_20	IAMs_20		02 23 06.2		
L56A	**Greenwood** baz=216	53.04	26	P	P		02 03 13.4	-0.3	
L56A	**Greenwood** comp=Z,22nm,0.9s	53.04	26	IAmb	IAmb		02 03 21.4		
LON	**Longmire** comp=Z,29nm,1.6s	53.15	346	IAmb	IAmb		02 03 27.6		
E04D	**Cinebar** baz=159	53.15	345	P	P		02 03 15.0	+0.7	
N60A	**Cedar Hill Far** baz=219	53.16	29	P	P		02 03 14.5	0.0	
L57A	**Andrews Acres** baz=216	53.24	27	P	P		02 03 14.8	-0.3	
BRNJ	**Basking Ridge** comp=Z,2µm,20.0s	53.27	29	IAMs_20	IAMs_20		02 24 22.3		
LTY	**Liberty** comp=Z,25nm,1.9s	53.36	347	IAmb	IAmb		02 03 21.0		
AGMN	**Agassiz Nation** baz=192	53.38	8	P	P		02 03 15.7	-0.2	
AGMN	**Agassiz Nation** comp=Z,24nm,1.2s	53.38	8	IAmb	IAmb		02 03 22.4		
KSPA	**Keystone Colle** comp=Z,2µm,20.0s	53.38	28	IAMs_20	IAMs_20		02 24 33.2		
E03A	**Lebam** comp=Z,3µm,22.0s	53.40	345	IAMs_20	IAMs_20		02 21 28.5		
MEDO	**Medina** comp=Z,1µm,19.0s	53.50	24	IAMs_20	IAMs_20		02 27 08.4		
NEW	**Newport** comp=Z,4µm,18.4s,baz=175,slow=33	53.64	350	LR	LR		02 23 19.5		
NEW	**Newport** comp=Z,47nm,1.9s	53.64	350	IAmb	IAmb		02 03 29.5		
L58A	**Harry Jones Me** baz=218	53.73	27	P	P		02 03 18.7	+0.1	
B35A	**Bob, Littlefor** comp=Z,24nm,1.2s	53.77	10	IAmb	IAmb		02 03 25.1		
B35A	comp=Z,2µm,19.0s			IAMs_20	IAMs_20		02 24 31.3		
EYMN	**Ely** baz=197	53.78	12	P	P		02 03 19.0	+0.1	
EYMN	**Ely** comp=Z,32nm,1.4s	53.78	12	IAmb	IAmb		02 03 25.3		
BINY	**Binghamton** baz=217	53.79	27	P	P		02 03 19.4	+0.3	
BINY	**Binghamton** comp=Z,1µm,20.0s	53.79	27	IAMs_20	IAMs_20		02 25 09.0		
PAL	**Palisades** comp=Z,3µm,20.0s	53.84	29	IAMs_20	IAMs_20		02 24 39.4		
ARAG	**Araguaiana, MT**	53.86	106	eP	P		02 03 22.6	+2.4	
WALA	**Waterton Lakes** comp=Z,2µm,18.0s	53.96	353	IAMs_20	IAMs_20		02 24 00.8		
K57A	**Scipio Center** baz=216	53.97	26	P	P		02 03 19.9	-0.6	
B08A	**Colville Reser** comp=Z,2µm,20.0s	54.13	349	IAMs_20	IAMs_20		02 23 20.8		
TRCB	**Terra Rica**	54.14	115	eP	P		02 03 25.8	+3.7	
L59A	**Walton** comp=Z,2µm,20.0s	54.21	28	IAMs_20	IAMs_20		02 24 58.3		
F48A	**Evansville** baz=208	54.21	20	P	P		02 03 22.7	+0.6	
WSPT	**Westport, CT** comp=Z,2µm,20.0s	54.25	30	IAMs_20	IAMs_20		02 25 10.2		
NLWA	**Neilton Lookou** comp=Z,2µm,18.0s	54.26	345	IAMs_20	IAMs_20		02 23 09.3		
J56A	**Wolcott** baz=216	54.26	26	P	P		02 03 22.0	-0.5	
J56A	**Wolcott** comp=Z,22nm,1.1s	54.26	26	IAmb	IAmb		02 03 33.4		
K58A	**Earlville** comp=Z,1µm,18.0s	54.38	27	IAMs_20	IAMs_20		02 25 36.9		
YLE	**Yale** comp=Z,2µm,19.0s	54.55	30	IAMs_20	IAMs_20		02 25 47.2		
SADO	**Sadowa** comp=Z,21nm,1.0s	54.56	23	IAmb	IAmb		02 03 35.3		
KSCT	**Kent School, K** comp=Z,3µm,20.0s	54.59	29	IAMs_20	IAMs_20		02 25 12.4		
H53A	**Bobcaygeon** baz=213	54.61	23	P	P		02 03 25.0	0.0	
B05A	**Bryant** baz=160	54.63	346	P	P		02 03 25.7	+0.7	
I55A	**Frankford** baz=215	54.68	24	P	P		02 03 24.8	-0.7	
KHU	**Kahuku** comp=Z,2µm,22.0s	54.69	297	IAMs_20	IAMs_20		02 19 53.3		
PECO	**Prince Edward** comp=Z,14nm,1.2s	54.74	25	IAmb	IAmb		02 03 36.5		
J57A	**Williamstown** comp=Z,1µm,20.0s	54.74	26	IAMs_20	IAMs_20		02 25 21.4		
K59A	**Cooperstown** baz=218	54.76	27	P	P		02 03 26.0	-0.1	
MLOA	**Mauna Loa Obse** comp=Z,2µm,19.0s	54.76	298	IAMs_20	IAMs_20		02 20 28.1		
POHA	**Pohakuloa** comp=Z,2µm,19.0s	54.80	298	IAMs_20	IAMs_20		02 21 08.2		
E48A	**Lockeyer** baz=209	54.94	20	P	P		02 03 27.8	+0.5	
DELO	**Deloro Mine** comp=Z,27nm,1.4s	54.95	24	IAmb	IAmb		02 03 32.4		
J58A	**Remsen** baz=218	55.02	27	P	P		02 03 27.7	-0.4	
J58A	**Remsen** comp=Z,25nm,1.1s	55.02	27	IAmb	IAmb		02 03 40.5		
J58A	comp=Z,1µm,20.0s			IAMs_20	IAMs_20		02 25 18.7		
HPAH	**Hawaii Prepara** comp=Z,2µm,20.0s	55.04	298	IAMs_20	IAMs_20		02 21 42.6		
PTGB	**Pitanga**	55.04	117	eP	P		02 03 32.3	+3.6	
G53A	**Haliburton** baz=213	55.05	23	P	P		02 03 27.8	-0.5	
KHLU	**Kahalu`u** comp=Z,2µm,22.0s	55.06	298	IAMs_20	IAMs_20		02 20 04.0		
H55A	**Tweed** baz=215	55.16	24	P	P		02 03 28.5	-0.5	
PCMB	**Pacaembu**	55.18	113	eP	P		02 03 33.5	+3.9	
A04D	**Lummi Island** baz=159	55.20	346	P	P		02 03 29.8	+0.6	
TRY	**Troy** comp=Z,2µm,20.0s	55.27	28	IAMs_20	IAMs_20		02 25 47.4		
ULM	**Lac du Bonnet** comp=Z,1.6nm,0.3s,baz=191,slow=9.5,SNR=7.6	55.29	8	P	P		02 03 27.9	-1.9	
ULM	comp=Z,3µm,18.7s,baz=192,slow=35			LR	LR		02 25 50.0		
ULM	**Lac du Bonnet** comp=Z,15nm,1.0s	55.29	8	IAmb	IAmb		02 03 35.9		
ULM	comp=Z,3µm,20.0s			IAMs_20	IAMs_20		02 25 19.6		
I57A	**Carthage** baz=217	55.31	26	P	P		02 03 30.0	-0.1	
PGC	**Sidney** comp=Z,2µm,18.0s	55.32	346	IAMs_20	IAMs_20		02 24 25.9		
F52A	**Sundridge** baz=212	55.35	22	P	P		02 03 29.9	-0.5	
E50A	**Wahnapitae** baz=210	55.38	21	P	P		02 03 29.6	-0.9	
J59A	**Piesco** baz=218	55.45	27	P	P		02 03 30.5	-0.7	
J59A	**Piesco** comp=Z,14nm,1.1s	55.45	27	IAmb	IAmb		02 03 43.4		
J59A	comp=Z,2µm,20.0s			IAMs_20	IAMs_20		02 25 38.1		
PRPB	**Parauapebas**	55.47	94	eP	P		02 03 35.5	+3.7	
G54A	**Lake Saint Pet** baz=214	55.49	23	P	P		02 03 30.5	-0.9	
ITAB	**Concordia**	55.55	120	eP	P		02 03 35.5	+3.3	
PLTB	**Pedras Altas**	55.56	126	eP	P		02 03 35.7	+3.5	
QUA2	**Belchertown** comp=Z,1µm,19.0s	55.56	29	IAMs_20	IAMs_20		02 26 18.0		
H56A	**Elgin** baz=216	55.58	25	P	P		02 03 31.6	-0.5	
PLVO	**Plevna** comp=Z,18nm,1.2s	55.60	24	IAmb	IAmb		02 03 43.1		
PLVO	comp=Z,1µm,18.0s			IAMs_20	IAMs_20		02 27 55.6		
ITRB	**Iturama**	55.72	111	eP	P		02 03 36.9	+3.3	
ACCN	**Adirondack Com** comp=Z,29nm,1.4s	55.77	28	IAmb	IAmb		02 03 46.0		
J60A	**Lant Hill Farm** baz=220	55.78	28	P	P		02 03 33.1	-0.4	
M65A	**Busby, Falmout** comp=Z,1µm,19.0s	55.89	31	IAMs_20	IAMs_20		02 26 27.8		
D49A	**Beulah Townshi** baz=209	55.90	20	P	P		02 03 34.4	+0.1	
K62A	**Royalston** comp=Z,2µm,19.0s	55.91	29	IAMs_20	IAMs_20		02 26 29.2		
E51A	**G1948 Merrick** baz=212	55.92	21	P	P		02 03 34.1	-0.3	
G55A	**Calabogie** baz=215	55.92	24	P	P		02 03 34.0	-0.5	
NCB	**Newcomb** comp=Z,39nm,1.9s	55.98	27	IAmb	IAmb		02 03 41.1		
NCB	comp=Z,1µm,20.0s			IAMs_20	IAMs_20		02 25 54.0		
HRV	**Adam Dziewonsk** comp=Z,2µm,20.0s	56.12	30	IAMs_20	IAMs_20		02 25 57.9		
I60A	**Shoreham** baz=220	56.30	28	P	P		02 03 36.6	-0.6	
LONY	**Lake Ozonia** comp=Z,2µm,20.0s	56.32	26	IAMs_20	IAMs_20		02 26 20.2		
HNH	**Hanover** comp=Z,2µm,19.0s	56.67	28	IAMs_20	IAMs_20		02 26 56.3		
H59A	**Cadyville** baz=219	56.74	27	P	P		02 03 39.7	-0.6	
FRNY	**Flat Rock** comp=Z,1µm,20.0s	56.93	27	IAMs_20	IAMs_20		02 26 23.3		
D53A	**Lac Vacive, Po** comp=Z,25nm,1.2s	57.04	22	IAmb	IAmb		02 03 48.5		
D53A	comp=Z,1µm,19.0s			IAMs_20	IAMs_20		02 28 03.2		
CNLB	**Canela**	57.16	122	eP	P		02 03 47.5	+3.8	
LBNH	**Lisbon** comp=Z,2µm,20.0s	57.24	28	IAMs_20	IAMs_20		02 26 55.5		
BDFB	**Brasilia** comp=Z,1.7nm,0.6s,baz=158,slow=7.2,SNR=4.1	57.50	106	P	P		02 03 45.2	-1.2	
BDFB	**Brasilia** comp=Z,26nm,1.6s	57.50	106	IAmb	IAmb		02 03 55.5		
BDFB	comp=Z,2µm,20.0s			IAMs_20	IAMs_20		02 25 58.1		
IPMB	**Ipameri, GO**	57.53	108	eP	P		02 03 49.9	+3.4	
BB19B	**Bebedouro**	57.61	112	eP	P		02 03 51.1	+4.1	
SMTB	**Santa Maria do**	57.65	98	eP	P		02 03 50.7	+3.4	
I63A	**Otisfield** comp=Z,2µm,21.0s	57.75	29	IAMs_20	IAMs_20		02 26 37.8		
H62A	**Milan** comp=Z,2µm,18.0s	57.86	28	IAMs_20	IAMs_20		02 27 49.8		
D55A	**Sainte-Anne-du** baz=216	57.86	24	P	P		02 03 47.6	-0.6	
VLDQ	**Val d'Or** comp=Z,1µm,18.0s	57.99	22	IAMs_20	IAMs_20		02 28 45.7		
D56A	**ZEC Mazanza, M** baz=217	58.18	24	P	P		02 03 50.3	-0.1	
D57A	**Chemin Vers le** baz=218	58.52	25	P	P		02 03 52.2	-0.6	
WVL	**Waterville** comp=Z,2µm,22.0s	58.57	29	IAMs_20	IAMs_20		02 26 48.7		
G62A	**West of Eustis** comp=Z,1µm,20.0s	58.63	28	IAMs_20	IAMs_20		02 27 31.3		
RCLB	**Rio Claro- Sao**	58.72	113	eP	P		02 03 58.4	+3.6	
LSQQ	**Lebel-sur-Quev** baz=214	58.96	22	P	P		02 03 55.9	+0.1	
SPB	**Sao Paulo** comp=Z,2µm,19.0s	58.99	115	IAMs_20	IAMs_20		02 27 06.3		
SPB	**Sao Paulo**	58.99	115	eP	P		02 04 00.4	+3.9	
FFC	**Flin Flon**	59.21	2	P	P		02 03 54.9	-2.6	
KEKH	**Kekaha** comp=Z,2µm,19.0s	59.23	299	IAMs_20	IAMs_20		02 22 16.7		
PKME	**Peaks-Kenny Pk** comp=Z,2µm,22.0s	59.26	29	IAMs_20	IAMs_20		02 27 21.9		
MATQ	**Matagami** baz=213	59.31	21	P	P		02 03 58.3	0.0	
F63A	**Nahmakanta, Br** comp=Z,2µm,21.0s	59.67	29	IAMs_20	IAMs_20		02 27 24.8		
BBB	**Bella Bella** comp=Z,1µm,18.2s,baz=160,slow=33	59.77	344	LR	LR		02 26 41.9		
BBB	**Bella Bella** comp=Z,1µm,19.0s	59.77	344	IAMs_20	IAMs_20		02 26 21.6		
G65A	**Princeton**	60.07	30	IAMs_20	IAMs_20		02 28 54.2		

	comp=Z,2µm,20.0s								
F64A	**Sherman**	**60.15**	**29**	P	**P**	**02 04 03.8**	**-0.3**		
	baz=224								
F64A	**Sherman**	**60.15**	**29**	IAMs_20	IAMs_20	02 27 59.5			
	comp=Z,2µm,21.0s								
E63A	**Oxbow**	**60.52**	**29**	IAMs_20	IAMs_20	02 28 12.2			
	comp=Z,2µm,22.0s								
D62A	**Allapoint, All**	**60.70**	**28**	P	**P**	**02 04 08.0**	**+0.1**		
	baz=223								
D62A	**Allapoint, All**	**60.70**	**28**	IAMs_20	IAMs_20	02 28 44.1			
	comp=Z,2µm,20.0s								
PQI	**Presque Isle**	**60.89**	**29**	IAMs_20	IAMs_20	02 28 23.1			
	comp=Z,2µm,22.0s								
D63A	**Stockholm**	**61.11**	**28**	P	**P**	**02 04 10.9**	**+0.2**		
	baz=224								
ROSB	**Rosrio**	**61.28**	**91**	*e*P	**P**	**02 04 16.6**	**+4.1**		
LMN	**Caledonia Moun**	**61.92**	**31**	IAMs_20	IAMs_20	02 29 08.2			
	comp=Z,2µm,20.0s								
BATG	**Bathurst New B**	**62.27**	**29**	P	**P**	**02 04 16.5**	**-1.9**		
BATG				IAMs_20	IAMs_20	02 29 09.5			
	comp=Z,2µm,22.0s								
FCC	**Fort Churchill**	**63.84**	**7**	P	**P**	**02 04 27.1**	**-1.6**		
BSFB	**Barra de Sao F**	**64.57**	**109**	*e*P	**P**	**02 04 38.8**	**+4.6**		
WRAK	**Wrangell Islan**	**64.67**	**344**	IAMs_20	IAMs_20	02 28 27.4			
	comp=Z,1µm,19.0s								
GDU01	**Guandu, BA**	**65.57**	**103**	*e*P	**P**	**02 04 43.3**	**+2.4**		
DLBC	**Dease Lake**	**65.86**	**346**	LR	LR	02 31 10.4			
	comp=Z,2µm,18.6s,baz=155,slow=34								
DLBC	**Dease Lake**	**65.86**	**346**	IAMs_20	IAMs_20	02 29 43.6			
	comp=Z,1µm,22.0s								
SIT	**Sitka**	**66.07**	**343**	IAMs_20	IAMs_20	02 26 35.5			
	comp=Z,1µm,22.0s								
JIS	**Juneau Island**	**66.84**	**344**	IAMs_20	IAMs_20	02 30 38.7			
	comp=Z,1µm,19.0s								
BESE	**Bessie Mountai**	**67.23**	**344**	IAMs_20	IAMs_20	02 30 50.0			
	comp=Z,1µm,20.0s								
YKA	**Yellowknife Ar**	**67.29**	**355**	P	**P**	**02 04 48.1**	**-2.8**		
	comp=Z,5.0nm,0.8s,baz=161,slow=6.5,SNR=48								
YKA				LR	LR	02 32 53.9			
	comp=Z,1µm,18.2s,baz=0.0,slow=35								
SCHQ	**Schefferville**	**67.37**	**23**	LR	LR	02 33 30.1			
	comp=Z,1µm,20.1s,baz=220,slow=35								
SCHQ	**Schefferville**	**67.37**	**23**	IAMs_20	IAMs_20	02 33 28.3			
	comp=Z,1µm,20.0s								
DRLN	**Deer Lake**	**67.89**	**32**	IAMs_20	IAMs_20	02 32 55.3			
	comp=Z,2µm,22.0s								
SKAG	**Skagway**	**68.11**	**344**	IAMs_20	IAMs_20	02 31 27.2			
	comp=Z,893nm,20.0s								
DHAK	**Deception Hill**	**68.62**	**343**	IAMs_20	IAMs_20	02 27 17.2			
	comp=Z,1µm,22.0s								
WHY	**Whitehorse**	**69.01**	**345**	P	**P**	**02 04 59.6**	**-2.3**		
WHY				IAmb	IAmb	02 05 07.1			
	comp=Z,26nm,1.8s								
YAH	**Yahtse**	**70.72**	**342**	IAMs_20	IAMs_20	02 28 42.2			
	comp=Z,2µm,21.0s								
BALM	**Baldy**	**71.43**	**342**	IAMs_20	IAMs_20	02 29 05.1			
	comp=Z,2µm,22.0s								
MCARA	**McCarthy VSAT**	**71.91**	**342**	IAMs_20	IAMs_20	02 29 06.7			
	comp=Z,896nm,20.0s								
VRDI	**Verde Repeater**	**71.92**	**342**	IAMs_20	IAMs_20	02 28 46.1			
	comp=Z,1µm,22.0s								
GLB	**Gilahina Butte**	**72.19**	**342**	IAMs_20	IAMs_20	02 30 29.4			
	comp=Z,885nm,19.0s								
FID	**Port Fidalgo**	**72.54**	**340**	IAMs_20	IAMs_20	02 30 08.3			
	comp=Z,1µm,19.0s								
KDAK	**Kodiak Island**	**72.77**	**336**	LR	LR	02 30 21.3			
	comp=Z,3µm,18.2s,baz=131,slow=30								
GLI	**Glacier Island**	**72.84**	**340**	IAMs_20	IAMs_20	02 31 00.1			
	comp=Z,1µm,20.0s								
DAWY	**Dawson**	**73.02**	**345**	P	**P**	**02 05 24.6**	**-1.5**		
DAWY				IAMs_20	IAMs_20	02 30 53.0			
	comp=Z,1µm,19.0s								
SEW	**Seward**	**73.12**	**339**	IAMs_20	IAMs_20	02 29 21.0			
	comp=Z,2µm,22.0s								
MENT	**Mentasta**	**73.31**	**343**	IAMs_20	IAMs_20	02 30 22.9			
	comp=Z,1µm,21.0s								
BRLK	**Bradley Lake**	**73.42**	**338**	IAMs_20	IAMs_20	02 29 58.8			
	comp=Z,2µm,21.0s								
SCM	**Sheep Creek Mo**	**73.61**	**341**	IAMs_20	IAMs_20	02 30 28.9			
	comp=Z,1µm,20.0s								
PAX	**Paxson**	**73.86**	**342**	IAMs_20	IAMs_20	02 29 21.4			
	comp=Z,1µm,21.0s								
RC01	**Rabbit Creek A**	**73.91**	**339**	IAMs_20	IAMs_20	02 30 00.7			
	comp=Z,1µm,22.0s								
SML	**Sawmill**	**73.93**	**340**	IAMs_20	IAMs_20	02 29 56.2			
	comp=Z,988nm,21.0s								
DOT	**Dot Lake**	**73.96**	**343**	IAMs_20	IAMs_20	02 30 46.0			
	comp=Z,2µm,22.0s								
PMR	**Palmer**	**74.05**	**340**	IAMs_20	IAMs_20	02 32 02.4			
	comp=Z,1µm,18.0s								
EGAK	**Eagle**	**74.05**	**345**	IAmb	IAmb	02 05 38.4			
	comp=Z,34nm,1.4s								
EGAK				IAMs_20	IAMs_20	02 31 22.2			
	comp=Z,954nm,20.0s								
GHO	**Glory Hole Cre**	**74.10**	**340**	IAMs_20	IAMs_20	02 32 22.8			
	comp=Z,926nm,18.0s								
SCRK	**Sand Creek**	**74.19**	**343**	IAmb	IAmb	02 05 39.2			
	comp=Z,23nm,1.4s								
RIDG	**Independent Ri**	**74.26**	**343**	IAMs_20	IAMs_20	02 32 05.8			
	comp=Z,2µm,20.0s								
EPYK	**Eagle Plains**	**74.31**	**347**	P	**P**	**02 05 33.4**	**-0.2**		
	baz=148								
EPYK	**Eagle Plains**	**74.31**	**347**	IAMs_20	IAMs_20	02 35 36.0			
	comp=Z,776nm,20.0s								
DHY	**Denali Highway**	**74.53**	**342**	IAMs_20	IAMs_20	02 31 14.1			
	comp=Z,1µm,20.0s								
SDPT	**Sand Point**	**74.86**	**331**	IAMs_20	IAMs_20	02 29 59.3			
	comp=Z,2µm,22.0s								
RND	**Reindeer**	**75.23**	**341**	IAMs_20	IAMs_20	02 31 33.8			
	comp=Z,2µm,20.0s								
INK	**Inuvik**	**75.35**	**350**	LR	LR	02 36 28.6			
	comp=Z,2µm,18.7s,baz=145,slow=34								
INK	**Inuvik**	**75.35**	**350**	P	**P**	**02 05 38.4**	**-1.1**		
INK				IAmb	IAmb	02 05 45.6			
	comp=Z,24nm,1.2s								
MCK	**McKinley**	**75.49**	**342**	P	**P**	**02 05 38.7**	**-1.8**		
IL31		**75.62**	**343**	IAmb	IAmb	02 05 46.8			
	comp=Z,16nm,1.2s								
ILAR	**Eielson Array**	**75.62**	**343**	P	**P**	**02 05 39.4**	**-1.8**		
	comp=Z,2.8nm,0.8s,baz=153,slow=4.8,SNR=17								
TRF	**Thorofare Moun**	**75.73**	**341**	IAmb	IAmb	02 05 56.1			
	comp=Z,19nm,1.2s								
TRF				IAMs_20	IAMs_20	02 33 32.8			
	comp=Z,1µm,18.0s								
WRH	**Wood River Hil**	**75.76**	**342**	IAMs_20	IAMs_20	02 32 09.6			
	comp=Z,1µm,20.0s								
PRP	**Porcupine Dome**	**75.79**	**344**	IAMs_20	IAMs_20	02 32 06.3			
	comp=Z,2µm,21.0s								
CCB	**Clear Creek Bu**	**75.80**	**343**	IAMs_20	IAMs_20	02 32 12.6			
	comp=Z,913nm,19.0s								
BWN	**Browne**	**75.97**	**342**	IAMs_20	IAMs_20	02 32 16.8			
	comp=Z,1µm,19.0s								
COLA	**College**	**75.98**	**343**	P	**P**	**02 05 42.2**	**-1.0**		
COLA	**College**	**75.98**	**343**	IAMs_20	IAMs_20	02 32 19.4			
	comp=Z,820nm,20.0s								
PPLA	**Purkeypile**	**75.99**	**340**	IAMs_20	IAMs_20	02 33 06.6			
	comp=Z,1µm,18.0s								
SVW2	**Sparrevohn**	**76.06**	**337**	IAMs_20	IAMs_20	02 32 00.3			
	comp=Z,2µm,21.0s								
NEA	**Nenana**	**76.14**	**342**	IAMs_20	IAMs_20	02 33 27.7			
	comp=Z,1µm,19.0s								
MDM	**Murphy Dome**	**76.15**	**343**	P	**P**	**02 05 41.8**	**-2.4**		
MDM				IAmb	IAmb	02 05 50.8			
	comp=Z,19nm,1.6s								
MIDW	**Midway**	**76.32**	**300**	IAMs_20	IAMs_20	02 31 34.5			
	comp=Z,1µm,19.0s								
BPAW	**Bear Paw Mtn.**	**76.40**	**341**	IAMs_20	IAMs_20	02 32 27.6			
	comp=Z,1µm,20.0s								
FYU	**Fort Yukon**	**76.51**	**345**	IAMs_20	IAMs_20	02 32 45.2			
	comp=Z,2µm,22.0s								
COLD	**Coldfoot**	**78.33**	**344**	IAmb	IAmb	02 06 03.5			
	comp=Z,17nm,1.4s								
IVI	**Ivigtut**	**79.03**	**25**	IAMs_20	IAMs_20	02 38 36.7			
	comp=Z,2µm,21.0s								
TOLK	**Toolik Lake Re**	**79.17**	**345**	P	**P**	**02 06 01.5**	**+0.5**		
	baz=135								
TOLK	**Toolik Lake Re**	**79.17**	**345**	IAMs_20	IAMs_20	02 33 48.4			
	comp=Z,1µm,20.0s								
RES	**Resolute Bay**	**79.44**	**3**	IAMs_20	IAMs_20	02 38 52.6			
	comp=Z,1µm,21.0s								
NRS	**Narsarsuaq**	**80.16**	**25**	IAMs_20	IAMs_20	02 40 02.7			
	comp=Z,2µm,22.0s								
SFJD	**Kangerlussuaq**	**81.28**	**19**	IAMs_20	IAMs_20	02 43 03.6			
	comp=Z,1µm,18.0s								
ANM	**Nome**	**81.72**	**338**	IAMs_20	IAMs_20	02 34 41.3			
	comp=Z,2µm,22.0s								
ILULI	**Ilulissat**	**82.40**	**17**	IAMs_20	IAMs_20	02 44 00.2			
	comp=Z,834nm,19.0s								
RDOG	**Red Dog Mine**	**82.66**	**341**	IAMs_20	IAMs_20	02 36 52.9			
	comp=Z,749nm,20.0s								
QSPA	**South Pole Qui**	**85.43**	**180**	P	**P**	**02 06 31.9**	**-2.1**		
	comp=Z,7.7nm,1.0s,baz=129,slow=3.0,SNR=9.7								
QSPA	**South Pole Qui**	**85.43**	**180**	P	**P**	**02 06 31.7**	**-2.3**		
QSPA	**South Pole Qui**	**85.43**	**180**	IAMs_20	IAMs_20	02 37 36.5			
	comp=Z,1µm,20.0s								
VNDA	**Vanda**	**86.09**	**193**	P	**P**	**02 06 36.5**	**-0.4**		
	comp=Z,7.7nm,1.3s,baz=88,slow=3.2,SNR=9.0								
VNDA				LR	LR	02 37 56.8			
	comp=Z,482nm,18.9s,baz=94,slow=31								
DZM	**Mont Dzumac**	**86.46**	**248**	*e*LR	LR	02 34 07.0			
	comp=Z,1µm,30.1s								
SUMG	**Summit**	**87.67**	**16**	*i* P	P	02 06 39.4	-5.7		
H11N3	**WAKE ISLAND Hy**	**89.25**	**290**	T	T	03 45 41.9			
	baz=96,slow=74,SNR=180								
H11N2	**WAKE ISLAND Hy**	**89.27**	**290**	T	T	03 45 37.0			
	baz=96,slow=74,SNR=349								
H11N1	**WAKE ISLAND Hy**	**89.27**	**290**	T	T	03 45 37.5			
	baz=96,slow=74,SNR=145								
H11S2	**WAKE ISLAND Hy**	**89.33**	**288**	T	T	03 45 42.0			
	baz=95,slow=75,SNR=172								
H11S1	**WAKE ISLAND Hy**	**89.34**	**289**	T	T	03 45 49.2			
	baz=95,slow=75,SNR=120								
H11S3	**WAKE ISLAND Hy**	**89.35**	**288**	T	T	03 45 43.7			
	baz=95,slow=75,SNR=103								
PMOZ	**Porto Moniz, M**	**91.07**	**57**	*e*SS	SS	02 24 04.3	+0.6		
PMOZ	**Porto Moniz, M**	**91.07**	**57**	*e*LR	LR	02 37 23.7			
	comp=Z,358nm,22.0s								
LHI	**Lord Howe Isla**	**92.21**	**238**	IAMs_20	IAMs_20	02 38 47.6			
	comp=Z,631nm,20.0s								
PETK	**Petropavlovsk-**	**97.75**	**323**	LR	LR	02 43 43.2			
	comp=Z,1µm,20.7s,baz=66,slow=31								
PFVI	**Vila Bisbo**	**98.11**	**53**	IAMs_20	IAMs_20	02 44 18.3			
	comp=Z,658nm,22.0s								
COI	**Coimbra**	**98.40**	**50**	IAMs_20	IAMs_20	02 43 34.8			
	comp=Z,806nm,21.0s								
PGAV	**Gavieira, Arco**	**98.47**	**48**	*e*SS	SS	02 25 55.5	+7.0		
PGAV	**Gavieira, Arco**	**98.47**	**48**	*e*LR	LR	02 40 18.1			
	comp=Z,513nm,20.0s								
ARMA	**Armidale**	**98.69**	**238**	IAMs_20	IAMs_20	02 45 42.1			
	comp=Z,755nm,18.0s								
PVAQ	**Vaqueiros**	**98.99**	**53**	*e*SS	SS	02 26 03.0	+7.1		
PVAQ	**Vaqueiros**	**98.99**	**53**	*e*LR	LR	02 40 39.3			
	comp=Z,630nm,20.0s								
PVAQ	**Vaqueiros**	**98.99**	**53**	IAMs_20	IAMs_20	02 44 43.6			
	comp=Z,831nm,22.0s								
MTE	**Manteigas**	**99.06**	**50**	*e*SS	SS	02 26 03.0	+6.3		
MTE				*e*LQ	LQ	02 35 52.6			
MTE				*e*LR	LR	02 41 00.6			
	comp=Z,374nm,22.0s								
PMRV	**Marv??o**	**99.20**	**51**	*e*SS	SS	02 26 06.8	+8.1		
PMRV	**Marv??o**	**99.20**	**51**	*e*LQ	LQ	02 36 10.9			
PMRV				*e*LR	LR	02 41 05.3			
	comp=Z,830nm,22.0s								
MVO	**Moncorvo**	**99.42**	**49**	*e*SS	SS	02 26 05.8	+4.0		
MVO				*e*LQ	LQ	02 36 00.8			
MVO				*e*LR	LR	02 41 06.9			
	comp=Z,475nm,18.0s								
CAN	**Canberra**	**99.87**	**233**	IAMs_20	IAMs_20	02 43 30.7			
	comp=Z,1µm,22.0s								
EIDS	**Eidsvold**	**100.06**	**243**	IAMs_20	IAMs_20	02 46 22.3			
	comp=Z,576nm,19.0s								
SFS	**San Fernando**	**100.22**	**54**	IAMs_20	IAMs_20	02 44 54.3			
	comp=Z,521nm,22.0s								
PAB	**San Pablo**	**101.55**	**51**	IAMs_20	IAMs_20	02 45 38.2			
	comp=Z,894nm,21.0s								
SYO	**Syowa Base**	**102.71**	**168**	*e*X	**Pdif**	**02 07 45.6**	**-7.8**		
CASY	**Casey**	**104.64**	**194**	IAMs_20	IAMs_20	02 51 49.0			
	comp=Z,584nm,18.0s								
TIXI	**Tiksi**	**105.06**	**345**	IAMs_20	IAMs_20	02 50 49.8			
	comp=Z,779nm,22.0s								
SSB	**Saint Sauveur**	**107.35**	**44**	IAMs_20	IAMs_20	02 49 49.1			
	comp=Z,583nm,20.0s								
WLF	**Walferdange**	**107.47**	**39**	IAMs_20	IAMs_20	02 54 51.3			
	comp=Z,501nm,22.0s								
TOC5	**Torodi Ar. Sit**	**107.77**	**78**	IAMs_20	IAMs_20	02 51 45.3			
	comp=Z,918nm,22.0s								
TOC7	**Torodi Ar. Sit**	**107.78**	**78**	IAMs_20	IAMs_20	02 51 45.4			
	comp=Z,764nm,22.0s								
TOB5	**Torodi Ar. Sit**	**107.78**	**78**	IAMs_20	IAMs_20	02 51 45.5			
	comp=Z,838nm,22.0s								
TOB4	**Torodi Ar. Sit**	**107.78**	**78**	IAMs_20	IAMs_20	02 51 46.6			
	comp=Z,768nm,22.0s								
TOA3	**Torodi Ar. Sit**	**107.79**	**78**	IAMs_20	IAMs_20	02 51 46.8			
	comp=Z,706nm,21.0s								
TOB1	**Torodi Ar. Sit**	**107.79**	**78**	IAMs_20	IAMs_20	02 51 46.8			
	comp=Z,738nm,21.0s								
TOA0	**Torodi Ar. Sit**	**107.79**	**78**	IAMs_20	IAMs_20	02 51 46.8			
	comp=Z,756nm,22.0s								
TOC4	**Torodi Ar. Sit**	**107.80**	**78**	IAMs_20	IAMs_20	02 52 30.0			
	comp=Z,651nm,20.0s								
TOC1	**Torodi Ar. Sit**	**107.80**	**78**	IAMs_20	IAMs_20	02 51 47.0			
	comp=Z,857nm,21.0s								
TOB3	**Torodi Ar. Sit**	**107.80**	**78**	IAMs_20	IAMs_20	02 51 47.1			
	comp=Z,795nm,21.0s								
TOC2	**Torodi Ar. Sit**	**107.82**	**78**	IAMs_20	IAMs_20	02 52 29.5			
	comp=Z,641nm,20.0s								
TOC3	**Torodi Ar. Sit**	**107.82**	**78**	IAMs_20	IAMs_20	02 52 29.5			
	comp=Z,677nm,20.0s								
ECH	**Echery**	**108.46**	**41**	IAMs_20	IAMs_20	02 58 19.6			
	comp=Z,544nm,20.0s								
BNI	**Bardonecchia**	**108.88**	**44**	IAMs_20	IAMs_20	02 50 48.4			
	comp=Z,737nm,21.0s								
SENIN	**Lac Senin/Sane**	**109.00**	**42**	IAMs_20	IAMs_20	02 56 06.6			
	comp=Z,621nm,21.0s								
BFO	**Black Forest**	**109.19**	**40**	IAMs_20	IAMs_20	02 52 21.8			
	comp=Z,535nm,20.0s								
GUMO	**Guam**	**110.11**	**283**	IAMs_20	IAMs_20	03 00 34.1			
	comp=Z,459nm,19.0s								
RGN	**Rugen**	**110.20**	**33**	IAMs_20	IAMs_20	02 53 37.1			
	comp=Z,554nm,21.0s								
TUE	**Stuetta**	**110.34**	**42**	IAMs_20	IAMs_20	02 52 20.2			
	comp=Z,581nm,20.0s								
GRA1	**Grafenberg Arr**	**110.62**	**38**	IAMs_20	IAMs_20	03 02 56.7			
	comp=Z,413nm,18.0s								
FUORN	**Ofenpass-Fuorn**	**110.91**	**42**	IAMs_20	IAMs_20	03 00 06.2			
	comp=Z,668nm,19.0s								
CLL	**Collm**	**111.17**	**36**	*e*PP	**PP**	**02 13 15.0**	**+5.7**		
CLL				*e*Sdif	Sdif	02 20 54.0	+4.6		
CLL				*e*		02 21 30.0			
CLL				*e*PS	**PS**	**02 22 44.0**	**+3.0**		
CLL				*e*PPS	PPS	02 23 43.0			
CLL				*e*		02 27 24.0			
CLL				*e*SS	**SS**	**02 28 49.0**	**+7.6**		
CLL				*e*		02 30 00.0			
CLL				*e*		02 34 12.0			
CLL				LmV		02 54 00.0			
	comp=Z,400nm,21.9s								
TAM	**Tamanrasset**	**111.18**	**67**	IAMs_20	IAMs_20	02 54 33.7			
	comp=Z,409nm,20.0s								
NKC	**Novy Kostel**	**111.20**	**37**	AMS	AMS	02 54 30.0			
	comp=Z,400nm,19.2s								
VLC	**Villacollemand**	**111.66**	**44**	IAMs_20	IAMs_20	02 52 15.2			
	comp=Z,457nm,22.0s								
ZCCA	**Zocca**	**112.02**	**44**	IAMs_20	IAMs_20	02 50 15.6			
	comp=Z,732nm,21.0s								
VSL	**Villasalto**	**112.06**	**49**	IAMs_20	IAMs_20	02 50 52.3			
	comp=Z,525nm,22.0s								
KHC	**Kasperske Hory**	**112.26**	**38**	AMS	AMS	03 00 20.0			
	comp=Z,500nm,17.5s								
OSSC	**Osservatorio P**	**112.43**	**45**	IAMs_20	IAMs_20	02 51 25.5			
	comp=Z,569nm,21.0s								
GEC2	**GERESS Array S**	**112.44**	**39**	IAMs_20	IAMs_20	02 53 38.6			
	comp=Z,492nm,21.0s								
PRU	**Pruhonice**	**112.55**	**37**	AMS	AMS	02 55 30.0			
	comp=Z,300nm,19.9s								
GOPC	**GO Pecny, Ondr**	**112.73**	**37**	AMS	AMS	03 05 30.0			
	comp=Z,400nm,16.3s								
KEST	**Kesra**	**112.81**	**53**	IAMs_20	IAMs_20	02 57 04.4			
	comp=Z,394nm,20.0s								
CHVC	**Chvalec**	**113.23**	**36**	AMS	AMS	02 58 40.0			
	comp=Z,400nm,16.7s								
UPC	**Upice**	**113.24**	**36**	AMS	AMS	02 57 50.0			
	comp=Z,400nm,16.8s								
OSTC	**Ostas**	**113.34**	**36**	AMS	AMS	02 56 50.0			
	comp=Z,400nm,18.1s								
TREC	**Trest**	**113.38**	**38**	AMS	AMS	03 01 20.0			
	comp=Z,500nm,17.9s								
DPC	**Dobruska-Polom**	**113.48**	**36**	AMS	AMS	02 58 00.0			
	comp=Z,500nm,20.2s								
TRI	**Trieste**	**113.50**	**42**	IAMs_20	IAMs_20	02 53 11.8			
	comp=Z,511nm,22.0s								
AQU	**L'Aquila**	**114.28**	**45**	IAMs_20	IAMs_20	02 53 23.5			
	comp=Z,758nm,22.0s								
MORC	**Moravsky Berou**	**114.43**	**37**	IAMs_20	IAMs_20	02 58 56.4			
	comp=Z,438nm,21.0s								
OKC	**Ostrava-Krasne**	**114.76**	**36**	AMS	AMS	02 58 50.0			
	comp=Z,400nm,27.7s								
INU	**Inuyama**	**114.95**	**307**	IAMs_20	IAMs_20	02 50 47.0			
	comp=Z,703nm,20.0s								
CORL	**Corleone**	**115.42**	**50**	IAMs_20	IAMs_20	02 51 28.9			
	comp=Z,753nm,21.0s								
PAOL	**Paolisi**	**115.50**	**46**	IAMs_20	IAMs_20	02 56 27.2			
	comp=Z,414nm,22.0s								
SUW	**Suwalki**	**115.63**	**31**	IAMs_20	IAMs_20	03 04 10.5			
	comp=Z,437nm,19.0s								
USA0B	**Ussuriysk Arra**	**116.15**	**317**	IAMs_20	IAMs_20	02 54 15.5			
	comp=Z,597nm,21.0s								
PSZ	**Piszkesteto**	**116.61**	**38**	IAMs_20	IAMs_20	03 05 22.9			
	comp=Z,397nm,18.0s								
CEL	**Celeste**	**117.29**	**49**	IAMs_20	IAMs_20	02 53 14.7			
	comp=Z,415nm,21.0s								
TIP	**Timpagrande**	**117.66**	**48**	IAMs_20	IAMs_20	02 59 39.8			
	comp=Z,496nm,20.0s								
PDG	**Podgorica**	**118.35**	**44**	IAMs_20	IAMs_20	02 56 03.2			
	comp=Z,423nm,21.0s								
SCTE	**Santa Cesarea**	**118.62**	**46**	IAMs_20	IAMs_20	02 58 15.8			
	comp=Z,528nm,21.0s								
CN2	**Changchun**	**120.64**	**319**	*e*PKP	**PKiKP**	**02 12 50.3**	**+1.5**		
VTS	**Vitosha**	**120.97**	**42**	IAMs_20	IAMs_20	02 58 45.5			
	comp=Z,394nm,22.0s								
MLR	**Muntele Rosu**	**121.42**	**38**	IAMs_20	IAMs_20	03 09 03.2			
	comp=Z,583nm,19.0s								
AGG	**Agios Georgios**	**121.78**	**46**	IAMs_20	IAMs_20	03 16 38.7			
	comp=Z,328nm,19.0s								
FAKI	**Fak Fak**	**121.79**	**264**	IAMs_20	IAMs_20	02 56 12.3			
	comp=Z,448nm,22.0s								
KNRA	**Kununurra**	**122.61**	**248**	IAMs_20	IAMs_20	02 56 50.2			
	comp=Z,666nm,20.0s								
FITZ	**Fitzroy Crossi**	**124.73**	**244**	IAMs_20	IAMs_20	03 01 17.9			
	comp=Z,644nm,20.0s								
NWAO	**Narrogin (SRO)**	**124.90**	**224**	IAMs_20	IAMs_20	02 56 04.1			
	comp=Z,678nm,20.0s								
ARU	**Arti**	**126.81**	**11**	IAMs_20	IAMs_20	03 11 40.8			
	comp=Z,544nm,18.0s								
ELL	**Elmali**	**128.18**	**46**	IAMs_20	IAMs_20	03 06 28.4			
	comp=Z,737nm,22.0s								
SSE	**Sheshan**	**128.86**	**307**	IAMs_20	IAMs_20	02 58 42.5			
	comp=Z,564nm,22.0s								
SONM	**Songino Array**	**128.99**	**333**	PKP	**PKPdf**	**02 13 03.5**	**-1.2**		
	comp=Z,0.2nm,0.3s,baz=45,slow=0.4,SNR=1.5								
BRTR	**Keskin Array B**	**129.24**	**41**	PKP	**PKPdf**	**02 13 04.6**	**-0.9**		
	comp=Z,0.7nm,1.0s,baz=244,slow=0.8,SNR=3.0								
YOJ	**Yonaguni jima**	**129.38**	**298**	IAMs_20	IAMs_20	03 12 13.6			
	comp=Z,339nm,18.0s								
NJ2	**Nanjing**	**130.33**	**309**	*e*PKP	**PKPdf**	**02 13 06.9**	**-0.7**		
TATO	**Taipei**	**130.57**	**299**	IAMs_20	IAMs_20	02 59 55.9			
	comp=Z,395nm,21.0s								
NACB	**Ninganchiao**	**130.70**	**298**	IAMs_20	IAMs_20	03

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.50**	**322**	Pn	**Pn**	**02 03 00.3**	**-0.2**
VNA1	**Neumayer--Stat**	**14.17**	**150**	P	**Pn**	**02 04 44.0**	**-1.2**
VNA3	**Neumayer Olymp**	**14.24**	**153**	P	**Pn**	**02 04 44.4**	**-1.9**
VNA2	**Neumayer--Watz** baz=312,slow=11	**14.57**	**150**	P	**Pn**	**02 04 51.9**	**+1.1**
SNAA	**Sanae**	**16.19**	**149**	P	**P**	**02 05 14.6**	**-0.6**
SNAA	**Sanae**	**16.19**	**149**	Pn	**Pn**	**02 05 13.3**	**+1.2**
SNAA	0.1nm,0.3s,baz=300,slow=11,SNR=9.3			LR	LR	02 10 10.0	
	comp=Z,388nm,19.4s,baz=326,slow=32						
SNAA	**Sanae**	**16.19**	**149**		**Pn**	**02 05 12.2**	**+0.1**
MG01	**Puerto William**	**20.88**	**266**	P	**P**	**02 06 05.9**	**-0.7**
SYO	**Syowa Base**	**29.76**	**137**	*eP*	P	02 07 36.2	+5.5
QSPA	**South Pole Qui** 5.2nm,1.0s,baz=200,slow=3.7,SNR=1.4	**30.67**	**180**	P	**P**	**02 07 40.1**	**+1.1**
QSPA	**South Pole Qui** comp=Z,6.7nm,1.1s	**30.67**	**180**	IAmb	IAmb	02 07 42.8	
MT02	**Curacav**	**37.90**	**295**	P	**P**	**02 08 42.1**	**+0.4**
CFA	**Coronel Fontan** comp=Z,3.9nm,0.8s,baz=155,slow=6.5,SNR=8.5	**37.99**	**300**	P	**P**	**02 08 42.2**	**-0.3**
MAW	**Mawson**	**38.13**	**142**	P	**P**	**02 08 44.3**	**+1.1**
MAW	comp=Z,7.6nm,1.0s,baz=273,slow=10.0,SNR=5.9			LR	LR	02 22 48.3	
	comp=Z,197nm,18.7s,baz=248,slow=34						
CPUP	**Villa Florida** comp=Z,4.2nm,0.9s,baz=149,slow=4.6,SNR=6.8	**38.37**	**318**	P	**P**	**02 08 45.3**	**-0.3**
CPUP	**Villa Florida**	**38.37**	**318**	P	**P**	**02 08 45.4**	**-0.2**
CPUP	comp=Z,6.0nm,1.1s			IAmb	IAmb	02 08 46.3	
AC02	**Maricunga**	**42.50**	**303**	P	**P**	**02 09 21.8**	**+1.4**
VNDA	**Vanda** comp=Z,2.1nm,0.8s,baz=199,slow=6.8,SNR=8.0	**42.98**	**184**	P	**P**	**02 09 23.4**	**+0.2**
BOSA	**Boshof** comp=Z,1.2nm,0.9s,baz=214,slow=11,SNR=3.5	**48.11**	**75**	P	**P**	**02 10 04.2**	**-0.3**
GO01	**Chusmiza**	**48.88**	**307**	P	**P**	**02 10 09.8**	**-1.1**
PB16	**IPOC Station P**	**50.21**	**308**	P	**P**	**02 10 21.2**	**+0.1**
PB16	comp=Z,2.9nm,1.0s			IAmb	IAmb	02 10 23.1	
LPAZ	**La Paz** comp=Z,2.4nm,0.6s,baz=87,slow=5.5,SNR=16	**51.52**	**310**	P	**P**	**02 10 31.8**	**+0.8**
LPAZ	**La Paz**	**51.52**	**310**	P	**P**	**02 10 32.2**	**+1.2**
LPAZ	comp=Z,2.7nm,0.7s			IAmb	IAmb	02 10 32.4	
H10N1	**ASCENSION HYDR** baz=188,slow=75	**52.87**	**19**	T	T	03 08 05.1	
H10N3	**ASCENSION HYDR** baz=188,slow=75	**52.87**	**19**	T	T	03 08 08.3	
H10N2	**ASCENSION HYDR** baz=188,slow=75	**52.89**	**19**	T	T	03 08 04.5	
SAML	**Samuel**	**56.50**	**319**	P	**P**	**02 11 07.2**	**+0.5**
SAML	comp=Z,4.0nm,0.9s			IAmb	IAmb	02 11 07.3	
TORD	**Torodi Ar. Bea** comp=Z,0.4nm,0.6s,baz=199,slow=6.2,SNR=7.2	**76.75**	**31**	P	**P**	**02 13 16.3**	**+0.5**
ASAR	**Alice Springs** comp=Z,0.8nm,0.9s,baz=168,slow=3.4,SNR=4.2	**95.97**	**165**	P	**P**	**02 14 51.0**	**-0.6**
ASAR	comp=Z,662nm,18.3s,baz=112,slow=36			LR	LR	02 58 24.7	
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.7s,baz=124,slow=2.1,SNR=5.1	**137.88**	**316**	PKP	**PKPdf**	**02 20 46.6**	**-0.9**
ZALV	**Zalesovo Beam** comp=Z,1.4nm,0.6s,baz=262,slow=5.7,SNR=5.8	**144.95**	**70**	PKP	**PKPab**	**02 20 58.8**	**-1.0**
INK	**Inuvik** comp=Z,5.1nm,1.0s,baz=122,slow=3.7,SNR=9.3	**147.63**	**318**	PKPbc	**PKPbc**	**02 21 07.0**	**-0.3**
INK	**Inuvik**	**147.63**	**318**		**PKPbc**	**02 21 07.1**	**-0.2**
ILAR	**Eielson Array** comp=Z,1.7nm,0.9s,baz=154,slow=2.0,SNR=14	**151.37**	**307**	PKPbc	**PKiKP**	**02 21 16.6**	**-0.6**
SONM	**Songino Array** comp=Z,0.7nm,0.9s,baz=270,slow=1.4,SNR=2.4	**151.97**	**95**	PKPbc	**PKiKP**	**02 21 19.6**	**+0.4**

*ANF **19** 02:19:38.5±1.8,43.99N×129.18W,h0km,ML3.6/4, Error ellipse: s-maj=19.5km s-min=9.6km az=32.0*
*IDC **19** 02:19:40.7±2.5,44.10N×128.87W,h0km,mb3.0/3, mb1 3.6/8,mb1mx3.4/45,mbtmp3.3/8,ML3.5/5, Error ellipse: s-maj=43.0km s-min=17.0km az=52.0*
*NEIC **19** 02:19:41.8±1.4,44.12N±0.09×129.1W±0.1,h10km±2km, ML3.2/18, Error ellipse: s-maj=14.6km s-min=13.3km az=193.0*
ISC 19 02:19:42.0±1.6,44.07N±0.07×129.2W±0.1,h15km,n47, σ1§13/51,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I02D	**Swisshome** baz=270,SNR=40	**3.83**	**88**	P	**Pn**	**02 20 39.4**	**-1.0**
I02D	baz=270			S	**Sn**	**02 21 24.9**	**-0.1**
J01E	**Myrtle Point** baz=284,SNR=17	**3.90**	**102**	P	**Pn**	**02 20 39.1**	**-2.2**
J01E	baz=284			S	**Sn**	**02 21 26.9**	**0.0**
I03D	**Drain, OR** baz=276,SNR=129	**4.21**	**93**	P	**Pn**	**02 20 45.2**	**-0.5**
I03D	baz=276			S	**Sn**	**02 21 34.7**	**+0.1**
K02D	**Willamette Mer** baz=290,SNR=29	**4.23**	**107**	P	**Pn**	**02 20 43.3**	**-2.7**
K02D	baz=290			S	**Sn**	**02 21 34.0**	**-1.1**
COR	**Corvallis**	**4.23**	**81**	Pn	**Pn**	**02 20 45.8**	**-0.1**
COR				Sn	**Sn**	**02 21 34.2**	**-0.8**
COR	26nm,2.6s			IAML		02 21 37.6	
COR	28nm,2.5s			IAML		02 21 41.1	
G03D	**McMinnville, O** baz=256,SNR=9.9	**4.36**	**73**	P	**Pn**	**02 20 46.7**	**-1.0**
G03D	baz=256			S	**Sn**	**02 21 39.7**	**+1.6**
F03A	**Seaside**	**4.38**	**63**		**Pn**	**02 20 47.5**	**-0.6**
H04D	**Lebanon** baz=266,SNR=18	**4.63**	**82**	P	**Pn**	**02 20 50.9**	**-0.5**
H04D	baz=266			S	**Sn**	**02 21 45.4**	**+0.5**
E03A	**Lebam**	**4.66**	**56**		**Pn**	**02 20 50.9**	**-0.9**
E03A	comp=E,19nm,1.7s			IAML		02 22 31.5	
E03A	comp=N,18nm,1.6s			IAML		02 23 21.3	
F04D	**Rainier, OR** baz=247	**4.80**	**63**	P	**Pn**	**02 20 53.0**	**-0.7**
F04D	baz=247			S	**Sn**	**02 21 51.0**	**+2.0**
NLWA	**Neilton Lookou**	**4.97**	**46**		**Pn**	**02 20 55.0**	**-1.2**
NLWA	comp=N,15nm,0.5s			IAML		02 21 55.0	
H04A	**Detroit Lake**	**5.03**	**81**		**Pn**	**02 20 57.2**	**+0.2**
H04A				Sn	**Sn**	**02 21 55.0**	**+0.1**
H04A	comp=N,17nm,0.4s			IAML		02 22 00.5	
H04A	comp=E,15nm,0.3s			IAML		02 22 01.1	
KHMM	**Horse Mountain**	**5.12**	**127**	Pn	**Pn**	**02 20 58.8**	**+0.5**
F04A	**Amboy**	**5.13**	**66**		**Pn**	**02 20 58.4**	**+0.2**
F04A	comp=N,17nm,1.0s			IAML		02 22 03.6	
E04D	**Cinebar** baz=244,SNR=14	**5.27**	**60**	P	**Pn**	**02 20 58.7**	**-1.5**
YBH	**Yreka Blue Hor** comp=N,0.6nm,0.3s,baz=304,slow=12,SNR=16	**5.28**	**114**	Pn	**Pn**	**02 20 59.9**	**-0.5**
YBH	comp=N,0.1nm,0.3s,baz=97,slow=2.3,SNR=3.3			Sn	**Sn**	**02 22 00.2**	**-0.8**
YBH	**Yreka Blue Hor** comp=N,4.0nm,3.0s	**5.28**	**114**	IAML		02 23 58.5	
YBH	comp=E,4.4nm,3.1s			IAML		02 24 01.5	
D04E	**Lakebay** baz=237	**5.45**	**53**	P	**Pn**	**02 21 00.9**	**-1.8**
D03D	**Eldon** baz=232,SNR=16	**5.48**	**49**	P	**Pn**	**02 21 01.5**	**-1.5**
F05D	**White Salmon** baz=254	**5.75**	**69**	S	**Sn**	**02 22 14.7**	**+2.1**
LON	**Longmire**	**5.83**	**60**		**Pn**	**02 21 07.7**	**-0.2**
D05A	**Enumclaw**	**5.92**	**56**		**Pn**	**02 21 09.5**	**+0.4**
PINE	**Pine Mountain**	**5.94**	**90**		**Pn**	**02 21 10.5**	**+0.9**
PGC	**Sidney**	**6.05**	**39**	Pn	**Pn**	**02 21 09.8**	**-1.1**
PGC					**Sn**	**02 22 17.0**	**-2.8**
K05A	**Summer Lake**	**6.17**	**100**	Pn	**Pn**	**02 21 12.4**	**-0.3**
G06A	**Carlson Farm,**	**6.19**	**76**	Pn	**Pn**	**02 21 13.2**	**+0.2**
B05A	**Bryant** baz=232,SNR=25	**6.45**	**47**	P	**Pn**	**02 21 16.1**	**-0.3**
LTY	**Liberty**	**6.75**	**59**		**Pn**	**02 21 20.9**	**+0.3**
B06A	**Marblemount**	**6.93**	**47**		**Pn**	**02 21 22.6**	**-0.3**
I07A	**Izee**	**6.95**	**87**		**Pn**	**02 21 21.5**	**-1.9**
B08A	**Colville Reser**	**8.05**	**54**	Pn	**Pn**	**02 21 39.5**	**+1.1**
BBB	**Bella Bella** comp=E,0.3nm,0.3s,baz=161,slow=5.6,SNR=5.3	**8.15**	**5**	Pn	**Pn**	**02 21 40.6**	**+0.9**
PAHR	**Pah Rah Range**	**8.49**	**118**	Pn	**Pn**	**02 21 44.8**	**+0.3**
BMO	**Blue Mountains**	**8.51**	**81**	Pn	**Pn**	**02 21 44.9**	**0.0**
NEW	**Newport** comp=E,0.5nm,0.3s,baz=254,slow=15,SNR=5.3	**9.34**	**59**	Pn	**Pn**	**02 21 55.0**	**-1.1**
NEW	**Newport** baz=247	**9.34**	**59**	P	**Pn**	**02 21 55.0**	**-1.1**
NVAR	**Mina Array Bea** comp=E,0.1nm,0.3s,baz=283,slow=14,SNR=2.4	**9.92**	**121**	Pn	**Pn**	**02 22 03.0**	**-1.3**
PDAR	**Pinedale Array** comp=E,0.1nm,0.3s,baz=268,slow=7.2,SNR=3.8	**14.30**	**88**	Pn	**Pn**	**02 23 05.2**	**+1.0**
YKA	**Yellowknife Ar** comp=E,0.7nm,0.8s,baz=207,slow=11,SNR=10	**20.32**	**20**	P	**P**	**02 24 17.0**	**-0.2**
ILAR	**Eielson Array** comp=E,1.3nm,1.1s,baz=147,slow=7.5,SNR=5.5	**23.01**	**340**	P	**P**	**02 24 46.2**	**+0.2**
TXAR	**Lajitas Array** comp=E,0.3nm,0.8s,baz=312,slow=11,SNR=2.3	**25.04**	**117**	P	**P**	**02 25 06.2**	**+0.5**
H11N3	**WAKE ISLAND Hy** baz=49,slow=75,SNR=1049	**57.94**	**267**	T	T	03 31 59.4	
H11N2	**WAKE ISLAND Hy** baz=49,slow=75,SNR=289	**57.94**	**267**	T	T	03 32 09.7	
H11N1	**WAKE ISLAND Hy** baz=49,slow=75,SNR=496	**57.95**	**267**	T	T	03 32 00.6	
H11S1	**WAKE ISLAND Hy** baz=48,slow=75,SNR=80	**58.87**	**266**	T	T	03 33 21.1	
H11S2	**WAKE ISLAND Hy** baz=48,slow=75,SNR=72	**58.88**	**266**	T	T	03 33 19.1	
H11S3	**WAKE ISLAND Hy** baz=48,slow=75,SNR=52	**58.89**	**266**	T	T	03 33 22.3	

*BJI **19** 02:43:23.5±0.0,5.45S×146.96E,h128km,mB4.9/19, mb4.7/28*
*IDC **19** 02:43:24.8±2.4,5.40S×146.65E,h118km±20km,mb4.2/15, mb1 4.4/19,mb1mx4.2/29,mbtmp4.6/19, Error ellipse: s-maj=19.2km s-min=11.8km az=74.0*
*NEIC **19** 02:43:26.6±2.4,5.52S±0.05×146.48E±0.07,h131km±6km, mb4.7/36, Error ellipse: s-maj=11.7km s-min=2.0km az=55.0*
*DJA **19** 02:43:27.1±0.4,6°S-4°×14°6E±°,h132km±5km,M4.8/31, mb4.9/31,mB5.2/12,MLv5.1/4,Mw(mB)4.6/12,Mwp6.0/1*
ISC 19 02:43:25.8±0.4,5.53S±0.05×146.47E±0.06,h123km,n121, σ1§31/124,mb4.7/47,1D,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 40nm,0.3s,baz=30,slow=5.0,SNR=72	**3.91**	**170**	P	**Pn**	**02 44 23.2**	**-1.0**
PMG	40nm,0.3s,baz=358,slow=10,SNR=5.1			S	**Sn**	**02 45 06.0**	**-3.5**
KRVT	**Keravat (AS076** 37nm,0.3s,baz=97,slow=2.6,SNR=20	**5.67**	**78**	P	**Pn**	**02 44 47.2**	**-0.6**
RABL	**Rabaul**	**5.83**	**77**		**Pn**	**02 44 51.3**	**+1.3**
JAY	**Jayapura** 7.0nm,0.3s,baz=90,slow=5.6,SNR=30	**6.49**	**297**	P	**Pn**	**02 44 59.8**	**+0.8**
JAY	**Jayapura** 0.2nm2nm26nm,0.6s	**6.49**	**297**	P	**Pn**	**02 44 59.8**	**+0.8**
GENI	**Genyem** 1.1nm8µm116nm,0.6s	**6.93**	**295**	P	**Pn**	**02 45 06.0**	**+1.1**
SMPI	**Sarmi** 2µm61nm,1.1s	**8.51**	**294**	P	**Pn**	**02 45 26.2**	**0.0**
COEN	**Coen** baz=8.9,SNR=63	**8.98**	**201**	P	**Pn**	**02 45 33.8**	**+1.3**
COEN	baz=8.9			S	**Sn**	**02 47 10.1**	**-1.9**
COEN	**Coen**	**8.98**	**201**		**Pn**	**02 45 33.8**	**+1.3**
COEN					**Sn**	**02 47 10.5**	**-1.5**
MTSU	**Mount Surprise** baz=13,SNR=9.4	**12.70**	**189**	P	**Pn**	**02 46 24.2**	**+2.1**
FAKI	**Fak Fak**	**14.42**	**280**	Pn	**Pn**	**02 46 43.8**	**-0.5**
CTA	**Charters Tower** 3.1nm,0.3s,baz=0.6,slow=14,SNR=28	**14.47**	**181**	P	**P**	**02 46 48.2**	**+0.1**
CTAO	**Charters Tower**	**14.47**	**181**	P	**P**	**02 46 49.5**	**+1.4**
SIJI	**Sorong** 2.9nm,0.3s,baz=196,slow=22,SNR=4.0	**15.87**	**286**	P	**Pn**	**02 47 02.9**	**+0.4**
QIS	**Mount Isa** baz=16,SNR=28	**16.36**	**203**	P	**Pn**	**02 47 09.1**	**+0.6**
MTN	**Manton Dam** baz=17,SNR=4.6	**16.79**	**243**	P	**P**	**02 47 15.0**	**+1.2**
MTN	**Manton Dam**	**16.79**	**243**	P	**P**	**02 47 15.0**	**+1.2**
WB0	**Warramunga Arr**	**18.39**	**219**	P	**P**	**02 47 32.9**	**+1.4**
WR0	**Warramunga Arr**	**18.45**	**218**		**P**	**02 47 33.3**	**+1.3**
WB7	**Warramunga Arr** baz=18	**18.46**	**219**	P	**P**	**02 47 34.1**	**+1.9**
WRAB	**Tennant Creek**	**18.55**	**218**	P	**P**	**02 47 34.0**	**+0.9**
WRA	**Warramunga Arr** 9.6nm,0.3s,baz=38,slow=11,SNR=184	**18.56**	**218**	P	**P**	**02 47 34.1**	**+0.8**
WRA	0.2nm,0.3s,baz=81,slow=14,SNR=2.2			S	**S**	**02 50 56.3**	**-2.4**
KNRA	**Kununurra** baz=20,SNR=31	**20.09**	**239**	P	**P**	**02 47 50.0**	**0.0**
KNRA	**Kununurra**	**20.09**	**239**	P	**P**	**02 47 48.2**	**-1.7**
EIDS	**Eidsvold** baz=20,SNR=8.2	**20.21**	**168**	P	**P**	**02 47 53.0**	**+1.9**
EIDS	**Eidsvold** comp=Z,22nm,0.8s	**20.21**	**168**	P	**P**	**02 47 53.0**	**+1.9**
EIDS				IAmb	IAmb	02 47 54.1	
SANI	**Sanana** comp=Z,1µmcomp=Z,15nm,0.7s	**20.73**	**279**	P	**P**	**02 47 59.3**	**+2.5**
RMQ	**Roma** baz=21,SNR=12	**20.95**	**174**	P	**P**	**02 48 01.7**	**+2.6**
QLP	**Quilpie** baz=21,SNR=46	**21.04**	**186**	P	**P**	**02 48 01.6**	**+1.6**
AS31	**Alice Springs**	**21.71**	**213**	P	**P**	**02 48 08.5**	**+1.2**
AS31	comp=Z,22nm,0.6s			IAmb	IAmb	02 48 10.6	
ASAR	**Alice Springs** comp=Z,98nm,0.9s,baz=40,slow=7.6,SNR=188	**21.71**	**213**	P	**P**	**02 48 08.4**	**+1.1**
ASAR	comp=Z,1.0nm,0.6s,baz=28,slow=22,SNR=2.5			S	**S**	**02 51 58.5**	**-1.7**
SOEI	**Soe** comp=Z,70nm,0.7s	**22.40**	**258**	P	**P**	**02 48 15.9**	**+1.3**
SOEI	**Soe**	**22.40**	**258**	P	**P**	**02 48 15.8**	**+1.3**
BATI	**Baumata** comp=Z,76nm,0.6s,baz=322,slow=1.3,SNR=8.2	**23.06**	**257**	P	**P**	**02 48 22.4**	**+1.5**
BATI	**Baumata** comp=Z,58nm,0.6s	**23.06**	**257**	P	**P**	**02 48 22.0**	**+1.2**
FITZ	**Fitzroy Crossi** baz=24,SNR=179	**23.87**	**237**	P	**P**	**02 48 28.8**	**+0.6**
FITZ	**Fitzroy Crossi** comp=Z,79nm,0.5s,baz=52,slow=8.4,SNR=164	**23.87**	**237**	P	**P**	**02 48 29.4**	**+1.3**
FITZ	**Fitzroy Crossi**	**23.87**	**237**	P	**P**	**02 48 29.4**	**+1.3**
EDFI	**Ende, Flores** comp=Z,32nm,0.8s	**24.79**	**261**	P	**P**	**02 48 35.5**	**-1.2**
ARMA	**Armidale** baz=25,SNR=11	**25.23**	**170**	P	**P**	**02 48 41.8**	**+1.3**
ARMA	**Armidale** comp=Z,17nm,0.8s	**25.23**	**170**	P	**P**	**02 48 41.8**	**+1.3**
ARMA				IAmb	IAmb	02 48 43.1	
DZM	**Mont Dzumac** comp=Z,11nm,0.8s,baz=43,slow=19,SNR=2.5	**25.37**	**132**	P	**P**	**02 48 42.1**	**+0.3**
DZM	**Mont Dzumac** comp=Z,14nm,0.9s	**25.37**	**132**	IAmb	IAmb	02 48 47.1	
CMSA	**Cobar Meteorol** baz=26,SNR=18	**25.88**	**182**	P	**P**	**02 48 47.4**	**+1.2**
BASI	**Baing, Sumba** comp=Z,92nm,0.7s	**26.06**	**258**	P	**P**	**02 48 48.3**	**+0.2**
WRKA	**Warakurna** baz=26,SNR=44	**26.08**	**220**	P	**P**	**02 48 49.1**	**+0.9**
STKA	**Stephens Creek** baz=27,SNR=42	**26.60**	**189**	P	**P**	**02 48 53.6**	**+0.8**
STKA	**Stephens Creek** comp=Z,22nm,0.8s,baz=354,slow=9.3,SNR=19	**26.60**	**189**	P	**P**	**02 48 53.8**	**+1.1**
STKA	**Stephens Creek**	**26.60**	**189**	P	**P**	**02 48 53.2**	**+0.5**
KAPI	**Kappang** comp=Z,61nm,0.5s,baz=85,slow=3.2,SNR=5.3	**26.61**	**270**	P	**P**	**02 48 54.5**	**+1.5**
WBSI	**Waikabubak, Su** comp=Z,42nm,1.1s	**27.14**	**260**	P	**P**	**02 48 57.7**	**-0.2**
MPSI	**Mapaga** comp=Z,805nmcomp=Z,7.0nm,0.8s	**27.17**	**282**	P	**P**	**02 48 56.6**	**-1.4**
HTT	**Hallett** baz=29,SNR=8.3	**28.63**	**193**	P	**P**	**02 49 13.6**	**+2.7**
PLAI	**Plampang** comp=Z,24nm,1.7s	**28.65**	**262**	P	**P**	**02 49 10.4**	**-0.8**
BBOO	**Buckleboo** baz=29,SNR=9.5	**28.82**	**198**	P	**P**	**02 49 13.6**	**+1.1**
BBOO	**Buckleboo** comp=Z,17nm,1.1s	**28.82**	**198**	P	**P**	**02 49 12.9**	**+0.4**
BBOO				IAmb	IAmb	02 49 15.1	
PSAB2	**Pilbara Seismi**	**30.29**	**236**	P	**P**	**02 49 25.5**	**-0.2**
PSA00	**Pilbara Seismi**	**30.31**	**236**	P	**P**	**02 49 25.9**	**+0.1**
PSA00	comp=Z,19nm,0.8s			IAmb	IAmb	02 49 28.8	
FORT	**Forrest** baz=30,SNR=13	**30.50**	**212**	P	**P**	**02 49 28.7**	**+1.3**
FORT	**Forrest**	**30.50**	**212**	P	**P**	**02 49 27.4**	**0.0**
ARPS	**Mount Arapiles** baz=31	**31.38**	**187**	P	**P**	**02 49 36.8**	**+1.8**
TOO	**Toolangi**	**31.90**	**181**	P	**P**	**02 49 39.0**	**-0.7**
TOO	comp=Z,19nm,1.1s			IAmb	IAmb	02 49 42.2	
MEEK	**Meekatharra** baz=44,SNR=44	**33.86**	**229**	P	**P**	**02 49 57.9**	**+1.0**
PWJI	**Pagerwojo** comp=Z,20nm,0.9s	**34.51**	**264**	P	**P**	**02 50 03.2**	**+0.6**
KMBL	**Kambalda** baz=34,SNR=9.2	**34.53**	**219**	P	**P**	**02 50 03.3**	**+0.8**
PBKI	**Pangkalan Bun** comp=Z,118nm,0.5s	**34.82**	**273**	P	**P**	**02 50 05.5**	**+0.2**
GIRL	**Giralia** baz=35,SNR=6.2	**35.46**	**238**	P	**P**	**02 50 12.2**	**+1.6**
GIRL	**Giralia** baz=37,SNR=11	**35.46**	**238**	P	**P**	**02 50 10.1**	**-0.6**
MORW	**Morawa** baz=37,SNR=11	**37.09**	**227**	P	**P**	**02 50 25.5**	**+1.0**
MORW	**Morawa**	**37.09**	**227**	P	**P**	**02 50 23.9**	**-0.6**
KLBR	**Kellerberrin** baz=37,SNR=15	**37.35**	**223**	P	**P**	**02 50 27.2**	**+0.5**
BLDU	**Ballidu** baz=37,SNR=23	**37.49**	**225**	P	**P**	**02 50 28.6**	**+0.8**
TPUB	**Ta-pu**	**38.19**	**320**	P	**P**	**02 50 33.0**	**-0.8**
TPUB	comp=Z,14nm,0.8s			IAmb	IAmb	02 50 34.5	
CISI	**Cisompet, Garu** comp=Z,34nm,0.7s	**38.45**	**265**	P	**P**	**02 50 34.5**	**-1.6**
NWAO	**Narrogin (SRO)**	**38.53**	**221**	P	**P**	**02 50 34.8**	**-1.7**
NWAO	comp=Z,30nm,1.4s			IAmb	IAmb	02 50 38.2	
MUN	**Mundaring** baz=39,SNR=5.1	**38.64**	**223**	P	**P**	**02 50 39.0**	**+1.7**
OUZ	**Omahuta**	**38.71**	**143**	P	**P**	**02 50 38.9**	**+1.1**
OUZ	comp=Z,14nm,0.8s			IAmb	IAmb	02 50 40.8	
CNJI	**Cibinong** comp=Z,16µmcomp=Z,1µmcomp=Z,80nm,1.1s	**39.13**	**265**	P	**P**	**02 50 40.9**	**-0.8**
RKGY	**Rocky Gully** baz=40,SNR=6.3	**39.76**	**219**	P	**P**	**02 50 48.1**	**+1.5**
BKZ	**Black Stump Fm**	**43.09**	**145**	P	**P**	**02 51 14.9**	**+1.0**
TUWZ	**Tuamarina**	**43.34**	**150**	P	**P**	**02 51 15.9**	**+0.1**
SNZO	**South Karori**	**43.64**	**149**	P	**P**	**02 51 16.9**	**-1.2**
RPZ	**Rata Peaks**	**43.75**	**154**	P	**P**	**02 51 19.5**	**+0.4**
RPZ	comp=Z,16nm,1.0s			IAmb	IAmb	02 51 21.9	
LBZ	**Lake Benmore**	**43.93**	**155**	P	**P**	**02 51 20.1**	**-0.4**
LBZ	comp=Z,6.6nm,0.6s			IAmb	IAmb	02 51 22.0	
MLZ	**Mavora Lakes**	**43.93**	**158**	P	**P**	**02 51 20.1**	**-0.4**
MLZ	comp=Z,25nm,1.1s			IAmb	IAmb	02 51 21.6	
BFZ	**Birch Farm**	**44.01**	**147**	P	**P**	**02 51 21.1**	**0.0**
BFZ	comp=Z,13nm,0.8s			IAmb	IAmb	02 51 24.0	
PLWZ	**Palliser**	**44.11**	**149**	P	**P**	**02 51 21.0**	**-1.0**
MQZ	**McQueen's Vall**	**44.46**	**153**	P	**P**	**02 51 24.7**	**+0.1**
MQZ	comp=Z,10nm,0.9s			IAmb	IAmb	02 51 26.8	
NJ2	**Nanjing**	**45.70**	**327**	*eP*	**P**	**02 51 38.9**	**+4.3**
NJ2	comp=Z,18nm,0.5s			pmax	pmax		
KSRS	**Korea Array** comp=Z,2.1nm,0.8s,baz=163,slow=8.9,SNR=5.0	**46.13**	**339**	P	**P**	**02 51 38.0**	**+0.1**
KCSI	**Kotacane, Aceh**	**49.47**	**279**	P	**P**	**02 52 02.7**	**-1.4**
USRK	**Ussuriysk Ar.** comp=Z,1.1nm,0.6s,baz=139,slow=10,SNR=2.6	**51.20**	**347**	P	**P**	**02 52 15.2**	**-1.3**
CMAR	**Chiang Mai Arr** comp=Z,1.4nm,0.5s,baz=118,slow=5.3,SNR=6.5	**52.57**	**298**	P	**P**	**02 52 27.8**	**+0.6**
XAN	**Xi'an**	**52.99**	**321**	P	**P**	**02 52 28.8**	**-1.3**
XAN	comp=Z,8.0nm,1.1s			pmax	pmax		
CD2	**Chengdu**	**54.58**	**314**	*eP*	**P**	**02 52 42.0**	**+0.3**
HHC	**Hu-ho-hao-te**	**56.16**	**328**	*eP*	**P**	**02 52 55.4**	**+2.4**
HHC	comp=Z,7.0nm,0.8s			pmax	pmax		
HHC	comp=Z,47nm,5.6s			pmax	pmax		
LZH	**Lanzhou**	**57.52**	**319**	*eP*	**P**	**02 53 05.3**	**+2.6**
LZH				pP	pP	02 53 35.4	+3.7
LZH				sP	sP	02 53 50.1	+5.1
LZH	comp=Z,15nm,1.0s			pmax	pmax		
SONM	**Songino Array** comp=Z,2.4nm,0.9s,baz=151,slow=12,SNR=9.0	**63.74**	**331**	P	**P**	**02 53 44.6**	**0.0**
CASY	**Casey**	**65.56**	**195**	P	**P**	**02 53 56.8**	**+0.8**
CASY	comp=Z,16nm,0.9s			IAmb	IAmb	02 53 57.6	
WMQ	**Urumqi**	**72.10**	**319**	*eP*	**P**	**02 54 38.3**	**+1.3**
WMQ	comp=Z,14nm,0.7s			pmax	pmax		
WMQ	comp=Z,53nm,5.9s			pmax	pmax		
WMQ	comp=Z,290nm,18.5s			LR	LR		
WMQ	comp=Z,240nm,21.7s			LR	LR		
WMQ	comp=Z,400nm,21.7s			LR	LR		
VNDA	**Vanda** comp=Z,6.0nm,0.6s,baz=331,slow=6.6,SNR=69	**72.41**	**177**	P	**P**	**02 54 39.0**	**+0.9**
VNDA	**Vanda**	**72.41**	**177**	P	**P**	**02 54 39.0**	**+0.9**
VNDA	comp=Z,7.3nm,0.8s			IAmb	IAmb	02 54 39.9	
MKAR	**Makanchi Array** comp=Z,1.2nm,0.7s,baz=96,slow=7.4,SNR=12	**76.81**	**321**	P	**P**	**02 55 03.3**	**-0.8**
MKAR				pP	**pP**	**02 55 35.2**	**+0.7**
ZALV	**Zalesovo Beam** comp=Z,1.1nm,0.3s,baz=117,slow=1.6,SNR=3.0	**78.34**	**328**	P	**P**	**02 55 10.9**	**-1.5**
MAW	**Mawson** baz=82,SNR=7.7	**82.47**	**203**	P	**P**	**02 55 34.8**	**+0.5**
MAW	**Mawson** comp=Z,3.6nm,0.6s,baz=94,slow=4.7,SNR=12	**82.47**	**203**	P	**P**	**02 55 34.6**	**+0.3**
MAW	**Mawson**	**82.47**	**203**	P	**P**	**02 55 34.8**	**+0.5**
RND	**Reindeer**	**83.91**	**24**	P	**P**	**02 55 39.9**	**-1.9**
QSPA	**South Pole Qui** comp=Z,12nm,0.8s	**84.43**	**180**	P	**P**	**02 55 44.5**	**0.0**
QSPA				IAmb	IAmb	02 55 45.4	
NRIK	**Noril'sk** comp=Z,3.4nm,0.6s,baz=118,slow=3.8,SNR=5.6	**84.67**	**342**	P	**P**	**02 55 43.8**	**-1.6**
CCB	**Clear Creek Bu**	**84.85**	**23**	P	**P**	**02 55 45.0**	**-1.4**
ILAR	**Eielson Array** comp=Z,2.5nm,0.7s,baz=256,slow=5.0,SNR=26	**85.26**	**23**	P	**P**	**02 55 46.3**	**-2.2**
DAWY	**Dawson** comp=Z,5.5nm,1.1s	**88.

MAK	**Makhachkala**	**1.93**	**328**	*e*Pg	Pb	02 49 48.1	-0.6
MAK				*e*Sg	Sb	02 50 15.6	+3.3
LGD	**Lagodekhi**	**2.05**	**285**	*e*Pg	Pb	02 49 51.0	+0.2
LGD				*e*Sg	Sb	02 50 18.2	+2.4
DBC	**Dubki**	**2.28**	**319**	*e*Pn	Pb	02 49 53.3	-1.4
DBC				*e*Sn	Sb	02 50 21.6	-0.9
DGRG	**David-gareji**	**2.65**	**274**	*e*Pn	Pb	02 49 60.0	-1.0
DGRG				*e*Sn	Sb	02 50 31.0	-2.1
GROC	**Groznyy**	**2.96**	**310**	*e*Pn	Pn	02 50 01.7	+1.9
GUDG	**Gudauri**	**3.48**	**291**	*e*Pn	Pn	02 50 11.1	+3.9
GUDG				*e*Sn	Sn	02 50 49.6	+1.9
LACR	**Lac**	**3.73**	**295**	*e*Pn	Pn	02 50 12.5	+2.1
LACR				*e*Sn	Sn	02 50 55.5	+1.7
KIV0	**Kislovodsk Arr**	**5.27**	**302**	*i* Pn	Pn	02 50 31.7	+0.1
KIV0				*i* Sn	Sn	02 51 32.8	+1.2

IDC 19 02:56:08.7±2.6, 9°56S×157°81E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.6/19, mbtmp3.6/4, Error ellipse: s-maj=131.7km s-min=37.0km az=135.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**26.80**	**235**	P	P	03 01 50.5	-0.3
	0.3nm,0.7s,baz=65,slow=8.7,SNR=2.4						
ILAR	**Eielson Array**	**84.74**	**21**	P	P	03 08 43.1	-1.3
	0.2nm,0.7s,baz=249,slow=5.6,SNR=5.5						
MKAR	**Makanchi Array**	**87.16**	**318**	P	P	03 08 57.5	+0.7
	0.3nm,0.5s,baz=92,slow=4.1,SNR=3.7						
YKA	**Yellowknife Ar**	**97.28**	**28**	P	Pdif	03 09 44.4	+0.9
	0.4nm,0.9s,baz=272,slow=4.4,SNR=4.6						
TORD	**Torodi Ar. Bea**	**156.32**	**281**	PKPbc	PKPdf	03 16 17.4	+11
	0.7nm,1.2s,baz=11,slow=2.9,SNR=4.0						

BEO 19 03:38:56.6±0.7, 40°.82N×19°.83E, h0km, ML2.2/9
TIR 19 03:38:57.2, 40°.95N×19°.94E, h14km, Md3.0/8
SKO 19 03:38:58.4, 40°.88N×19°.92E, h6km
ISC 19 03:38:57.1±1.3, 40°.90N±0°.03×19°.86E±0°.03, h3km±11km, n28, σ1°68/45, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.45**	**0**	*e*Pg	**Pg**	**03 39 06.5**	**+0.7**
TIR				*e*Sg	**Sg**	**03 39 13.4**	**+1.8**
TIR	**Tirane**	**0.45**	**0**	*i* Pg	**Pg**	**03 39 06.3**	**+0.5**
TIR				*i* Sg	**Sg**	**03 39 12.3**	**+0.6**
VLO	**Vlora**	**0.51**	**213**	*i* Pg	**Pb**	**03 39 09.5**	**+0.7**
VLO				*i* Sg	**Sb**	**03 39 17.8**	**+1.2**
TPE	**Tepelena**	**0.61**	**169**	*i* Pg	**Pb**	**03 39 10.0**	**-0.5**
TPE				*i* Sg	**Sb**	**03 39 19.8**	**+0.3**
OHR	**Ohrid**	**0.74**	**73**	*i* Pg	**Pg**	**03 39 10.7**	**-0.6**
OHR				*i* Sg	**Sb**	**03 39 21.4**	**-1.9**
OHR	**Ohrid**	**0.74**	**73**	*i* Pg	**Pg**	**03 39 10.7**	**-0.6**
OHR				*i* Sg	**Sb**	**03 39 21.4**	**-1.9**
PHP	**Peshkopia**	**0.90**	**29**	*i* PG	**Pg**	**03 39 13.3**	**-1.1**
PHP				*i* SG	**Sg**	**03 39 26.0**	**0.0**
SRN	**Sarande**	**1.02**	**174**	*i* PG	**Pn**	**03 39 18.3**	**-0.1**
SRN				*i* SG	**Sn**	**03 39 35.1**	**+1.8**
PUK	**Puka**	**1.15**	**1**	*i* PN	Pn	03 39 25.3	+5.1
PUK				*i* SN	**Sn**	**03 39 44.8**	**+8.3**
FNA	**Florina**	**1.15**	**95**	*i* PG	**Pg**	**03 39 18.1**	**-1.1**
FNA				*i* SG	**Sb**	**03 39 33.7**	**-1.4**
PDG	**Podgorica**	**1.60**	**344**	*e*Pg	**Pn**	**03 39 26.4**	**+0.1**
PDG				*e*Sg	**Sg**	**03 39 50.0**	**+1.5**
SKO	**Skopje**	**1.60**	**47**	*e*Pn	**Pn**	**03 39 27.0**	**-0.3**
SKO				*e*Sg	**Sg**	**03 39 48.8**	**+0.3**
TREB	**Trebinje**	**2.14**	**329**	*e*Pn	**Pn**	**03 39 33.3**	**-0.5**
DBRK	**Dubrovnik**	**2.19**	**325**	*e*Pn	**Pn**	**03 39 32.6**	**-1.8**
DBRK				Sn	**Sn**	**03 40 02.0**	**-0.1**
SJES	**Sjenica**	**2.36**	**2**	*e*Pn	**Pb**	**03 39 39.4**	**-1.1**
SELS	**Selova**	**2.50**	**22**	*e*Pn	**Pn**	**03 39 39.8**	**+1.0**
STON	**Ston**	**2.55**	**321**	*e*Pn	**Pn**	**03 39 38.9**	**-0.5**
STON	**Ston**	**2.55**	**321**	*e*Pn	**Pn**	**03 39 39.1**	**-0.3**
STON				Sn	**Sn**	**03 40 09.8**	**-1.2**
IVAS	**Ivanjica**	**2.69**	**4**	*e*Pn	**Pn**	**03 39 41.7**	**+0.3**
ZAPS	**Zavoj**	**3.14**	**40**	*e*Pn	**Pn**	**03 39 49.6**	**+2.0**
MAKA	**Makarska**	**3.19**	**319**	*i* Pn	**Pn**	**03 39 47.7**	**-0.5**
MAKA				Sn	**Sn**	**03 40 26.0**	**-0.8**
DIVS	**Divibare**	**3.20**	**2**	*e*Pn	**Pn**	**03 39 49.2**	**+0.7**
HAPS	**Han Pijesak,BI**	**3.26**	**348**	*e*Pn	**Pn**	**03 39 48.9**	**-0.4**
RICI	**Ricice**	**3.29**	**323**	*i* Pn	**Pn**	**03 39 49.0**	**-0.7**
RICI				Sn	**Sn**	**03 40 29.5**	**+0.1**
KIJV	**Kijevo**	**4.02**	**322**	*e*Pn	**Pn**	**03 39 59.3**	**-0.4**
ZIRJ	**Zirje**	**4.17**	**313**	*e*Pn	**Pn**	**03 40 00.8**	**-0.9**
ZIRJ				Sn	**Sn**	**03 40 48.3**	**-2.7**
MORI	**Morici**	**4.28**	**315**	*e*Pn	**Pn**	**03 40 02.7**	**-0.4**
MORI				Sn	**Sn**	**03 40 53.0**	**-0.6**
DUGI	**Dugi Otok**	**4.71**	**313**	*e*Pn	**Pn**	**03 40 08.5**	**-0.7**

TAP 19 03:44:16.3, 24°.86N×122°.57E, h1km±1km, ML3.5, D
JMA 19 03:44:17.2±0.2, 24°.84N×122°.55E, h0km, M3.2
IDC 19 03:44:48.7±5.4, 25°.67N×122°.20E, h258km±56km, mb3.0/5, mb1 3.1/6, mb1mx2.8/43, mbtmp3.6/6, Error ellipse: s-maj=39.6km s-min=21.4km az=65.0
ISC 19 03:44:17.8±1.2, 24°.86N±0°.04×122°.56E±0°.02, h9km±10km, n62, σ0°70/68, mb3.5/5, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.50**	**231**	*e*P	**Pb**	**03 44 28.6**	**-0.1**
	baz=215						
EOS1				*e*S	**Sb**	**03 44 37.0**	**+0.8**
	baz=215						
TWB1	**Santiao Chiao**	**0.54**	**286**	P	**Pb**	**03 44 29.1**	**-0.3**
	baz=286						
TWB1				*e*S	**Sb**	**03 44 38.4**	**+1.3**
	baz=286						
JYNG	**Yonagunijimaku**	**0.54**	**139**	P	**Pg**	**03 44 28.1**	**-0.2**
YOJ	**Yonaguni jima**	**0.58**	**134**	P	**Pg**	**03 44 28.6**	**-0.4**
	baz=134						
YOJ	**Yonaguni jima**	**0.58**	**134**	P	**Pg**	**03 44 28.5**	**-0.4**
YOJ				*e*S	**Sg**	**03 44 37.0**	**+0.5**
NTC	**Toucheng**	**0.66**	**269**	*e*P	**Pg**	**03 44 30.5**	**0.0**
	baz=270						
TIPB	**Shuangxi**	**0.67**	**279**	*i* P	**Pb**	**03 44 31.2**	**-0.5**
	baz=280						
TIPB				*e*S	**Sb**	**03 44 41.4**	**+0.2**
	baz=280						
TWC	**Suao**	**0.69**	**249**	*e*P	**Pb**	**03 44 31.5**	**-0.5**
	baz=249						
TWC				*e*S	**Sb**	**03 44 42.4**	**+0.7**
	baz=249						
NWF	**Wu-fen Shan**	**0.73**	**286**	*e*P	**Pb**	**03 44 33.0**	**+0.2**
	baz=287						
WFSB	**Wu-fen Shan**	**0.73**	**286**	P	**Pb**	**03 44 32.9**	**+0.2**
	baz=287						
TWE	**Neicheng**	**0.82**	**260**	P	**Pb**	**03 44 34.2**	**0.0**
	baz=260						
ENA	**Nanau**	**0.86**	**240**	*e*P	**Pb**	**03 44 34.4**	**-0.5**
	baz=240						
PCYT	**Pengchaiyu**	**0.88**	**330**	*e*P	**Pg**	**03 44 34.0**	**-0.7**
	baz=330						
ENTT	**Nioudou**	**0.93**	**256**	*e*P	**Pb**	**03 44 35.7**	**-0.4**
	baz=256						
YM08	**YM08**	**0.94**	**290**	*e*P	**Pb**	**03 44 35.7**	**-0.5**
	baz=290						
YM01	**YM01**	**0.94**	**288**	*e*P	**Pn**	**03 44 37.0**	**-0.2**
	baz=288						
YM11	**YM11**	**0.94**	**289**	P	**Pn**	**03 44 37.0**	**-0.2**
	baz=289						
YM05	**YM05**	**0.95**	**289**	P	**Pb**	**03 44 36.7**	**+0.3**
	baz=289						
YM10	**YM10**	**0.95**	**288**	*i* P	**Pn**	**03 44 37.3**	**-0.1**
	baz=288						
TWY	**Chenhua**	**0.96**	**295**	P	**Pn**	**03 44 37.8**	**+0.3**
	baz=295						
NWLT	**Wulai**	**0.96**	**265**	*e*P	**Pb**	**03 44 36.3**	**-0.3**
	baz=265						
YM04	**YM04**	**0.97**	**287**	P	**Pn**	**03 44 37.7**	**+0.1**
	baz=288						
YM03	**YM03**	**0.97**	**289**	*e*P	**Pn**	**03 44 37.8**	**+0.1**
	baz=289						
TATO	**Taipei**	**0.98**	**277**	*e*P	**Pb**	**03 44 36.7**	**-0.1**
	baz=277						
NDT	**Datong Townshi**	**0.98**	**255**	*i* P	**Pb**	**03 44 36.8**	**-0.2**
	baz=255						
YHNB	**Yeheng**	**1.09**	**260**	P	**Pb**	**03 44 38.7**	**-0.2**
	baz=260						
NSK	**Sanguang**	**1.11**	**260**	P	**Pb**	**03 44 38.9**	**-0.2**
	baz=261						
NACB	**Ninganchiao**	**1.11**	**232**	*e*P	**Pb**	**03 44 39.0**	**-0.3**
	baz=232						
NNSB	**Datong**	**1.15**	**248**	*e*P	**Pb**	**03 44 39.8**	**-0.2**
	baz=248						
NNSH	**Datong**	**1.15**	**248**	P	**Pn**	**03 44 40.2**	**0.0**
	baz=249						
TWD	**Chiawan**	**1.17**	**228**	*e*P	**Pn**	**03 44 41.2**	**+0.9**
	baz=228						
ETLH	**Xiulin Townshi**	**1.18**	**236**	*e*P	**Pb**	**03 44 40.1**	**-0.3**
	baz=237						
IRIF	**Iriomote-Funau**	**1.19**	**116**	P	**Pb**	**03 44 40.6**	**+0.1**
IRIF				*e*S	**Sn**	**03 44 57.4**	**+0.5**
WHF	**Hehuan Shan**	**1.38**	**239**	P	**Pb**	**03 44 44.4**	**+0.4**
	baz=239						
HATJ	**Hateruma jima**	**1.39**	**125**	P	**Pb**	**03 44 44.9**	**+0.9**
HATJ				*e*S	**Sb**	**03 45 02.3**	**+0.5**
TDCB	**Techi**	**1.41**	**245**	P	**Pb**	**03 44 45.1**	**+0.7**
	baz=245						
LIOB	**Emei**	**1.42**	**261**	*e*P	**Pb**	**03 44 44.6**	**+0.2**
	baz=262						
JKRS	**Kuro-shima**	**1.46**	**115**	P	**Pb**	**03 44 45.2**	**+0.1**
CHGB	**Renai**	**1.49**	**238**	P	**Pb**	**03 44 46.0**	**+0.2**
	baz=229						
JIJ	**Ishigaki jima**	**1.53**	**109**	P	**Pn**	**03 44 43.4**	**-1.8**
OWD	**Renai**	**1.55**	**235**	*e*P	**Pb**	**03 44 46.6**	**-0.2**
	baz=227						
EGFH	**Guangfu**	**1.57**	**221**	*e*P	**Pn**	**03 44 45.1**	**-0.8**
	baz=201						
WHP	**Taichung City**	**1.58**	**249**	P	**Pg**	**03 44 47.6**	**-0.5**
	baz=249						
VWDT	**VWDT**	**1.70**	**230**	*e*P	**Pn**	**03 44 47.8**	**+0.2**
	baz=213						
TWQ1	**Liyutan**	**1.70**	**253**	*e*P	**Pg**	**03 44 49.8**	**-0.7**
	baz=273						
HGSD	**Ruisui**	**1.71**	**217**	*e*P	**Pn**	**03 44 47.8**	**0.0**
	baz=202						
EHY	**Hungye**	**1.76**	**220**	*e*P	**Pn**	**03 44 48.1**	**-0.4**
	baz=220						
SMLT	**Sun Moon Lake**	**1.80**	**237**	*e*P	**Pg**	**03 44 51.8**	**-0.5**
	baz=219						
SSLB	**Suanglung**	**1.81**	**234**	*e*P	**Pn**	**03 44 49.8**	**+0.6**
	baz=217						
TCU	**Taichung**	**1.86**	**248**	*e*P	**Pb**	**03 44 51.3**	**-0.6**
	baz=248						
YULB	**Yu-li**	**1.86**	**218**	P	**Pn**	**03 44 49.6**	**-0.3**
	baz=204						
TWF1	**Yuli**	**1.90**	**218**	*e*P	**Pn**	**03 44 49.6**	**-0.8**
	baz=203						
JTJ	**Tarama**	**1.96**	**96**	P	**Pn**	**03 44 50.9**	**-0.3**
FULB	**Fuli**	**2.02**	**215**	*e*P	**Pn**	**03 44 52.5**	**+0.5**
	baz=198						
ALS	**Alishan**	**2.09**	**230**	P	**Pb**	**03 44 55.7**	**-0.4**
	baz=213						
CHN5	**Tsauling**	**2.13**	**234**	*e*P	**Pb**	**03 44 55.8**	**-0.8**
	baz=214						
KSRS	**Korea Array**	**13.36**	**19**	P	**P**	**03 47 40.4**	**+3.1**
	0.3nm,0.3s,baz=198,slow=11,SNR=13						
SONM	**Songino Array**	**26.26**	**335**	P	**P**	**03 49 53.2**	**-0.2**
	1.0nm,0.9s,baz=140,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**38.73**	**315**	P	**P**	**03 51 41.3**	**-1.0**
	0.4nm,0.6s,baz=109,slow=7.9,SNR=6.5						
ZALV	**Zalesovo Beam**	**40.37**	**326**	P	**P**	**03 51 54.3**	**-1.4**
	0.6nm,0.5s,baz=120,slow=8.7,SNR=2.0						
ASAR	**Alice Springs**	**49.48**	**166**	P	P	03 53 19.7	+11
	0.6nm,0.8s,baz=345,slow=6.9,SNR=4.4						
YKA	**Yellowknife Ar**	**81.86**	**23**	P	**P**	**03 56 35.7**	**-1.5**
	0.3nm,0.7s,baz=317,slow=4.5,SNR=7.3						

IDC 19 03:51:05.7±3.0, 19°.25S×177°.59W, h554km±34km, mb3.5/17, mb1 3.8/18, mb1mx3.6/33, mbtmp4.4/18, Error ellipse: s-maj=16.5km s-min=14.0km az=79.0
NEIC 19 03:51:05.5±1.8, 19°.30S±0°.10×177°.6W±0°.1, h557km±6km, mb4.4/52, Error ellipse: s-maj=17.2km s-min=13.6km az=118.0
ISC 19 03:51:05.0±0.4, 19°36S±0°.07×177°50W±0°.08, h550km, n161, σ1°12/159, mb4.3/42, 22C-16D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.52**	**290**	P	**P**	**03 52 35.2**	**+4.2**
NIUE	**Niue**	**7.17**	**89**	P	**P**	**03 52 54.8**	**+0.2**
AFI	**Afiamalu**	**7.71**	**46**	P	**P**	**03 53 00.6**	**+0.5**
AFI					**S**	**03 54 33.7**	**-0.6**
FUNA	**Funafuti**	**11.24**	**343**	P	**P**	**03 53 35.9**	**+0.1**
DZM	**Mont Dzumac**	**15.26**	**257**	P	**P**	**03 54 16.5**	**-0.8**
DZM				lAmb	lAmb	03 54 28.7	
	comp=Z,20nm,1.1s						
OUZ	**Omahuta**	**17.65**	**205**	P	**P**	**03 54 40.6**	**+1.1**
URZ	**Urewera**	**19.40**	**193**	P	**P**	**03 54 54.8**	**-0.7**
	comp=Z,4.7nm,0.3s,baz=265,slow=2.1,SNR=27						
URZ				S	**S**	**03 57 55.5**	**-7.1**
	comp=Z,0.1nm,0.3s,baz=9.5,slow=22,SNR=1.2						
URZ	**Urewera**	**19.40**	**193**	P	**P**	**03 54 54.9**	**-0.5**
BKZ	**Black Stump Fm**	**20.41**	**193**	P	**P**	**03 55 04.2**	**-0.5**
BKZ				lAmb	lAmb	03 55 09.1	
	comp=Z,21nm,1.5s						
BFZ	**Birch Farm**	**21.91**	**193**	P	**P**	**03 55 18.0**	**-0.1**
QRZ	**Quartz Range**	**23.03**	**200**	P	**P**	**03 55 29.1**	**+1.0**
NNZ	**Nelson**	**23.13**	**198**	P	**P**	**03 55 28.9**	**-0.1**
THZ	**Tophouse**	**23.77**	**198**	P	**P**	**03 55 35.3**	**+0.6**
THZ				lAmb	lAmb	03 55 36.4	
	comp=Z,12nm,0.6s						
LTZ	**Lake Taylor**	**24.89**	**198**	P	**P**	**03 55 43.4**	**-1.3**
LTZ				lAmb	lAmb	03 55 50.8	
	comp=Z,8.2nm,1.0s						
RPZ	**Rata Peaks**	**26.11**	**199**	P	**P**	**03 55 57.3**	**+1.9**
	comp=Z,5.6nm,0.7s,baz=21,slow=8.6,SNR=1.9						
FOZ	**Fox Glacier**	**26.35**	**201**	P	**P**	**03 55 59.3**	**+1.9**
LBZ	**Lake Benmore**	**26.99**	**200**	P	**P**	**03 56 02.6**	**-0.5**
LBZ				lAmb	lAmb	03 56 09.5	
	comp=Z,12nm,1.2s						
MLZ	**Mavora Lakes**	**28.54**	**201**	P	**P**	**03 56 17.8**	**+1.2**
CTAO	**Charters Tower**	**34.08**	**263**	P	**P**	**03 57 04.3**	**0.0**
CTAO				lAmb	lAmb	03 57 06.4	
	comp=Z,16nm,1.1s						
TOO	**Toolangi**	**36.95**	**233**	P	**P**	**03 57 27.6**	**-0.3**
TOO				lAmb	lAmb	03 57 29.9	
	comp=Z,6.9nm,0.7s						
COEN	**Coen**	**37.99**	**272**	P	**P**	**03 57 36.4**	**-0.3**
COEN				lAmb	lAmb	03 57 38.4	
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	**38.71**	**243**	P	**P**	**03 57 43.3**	**+1.1**
	comp=Z,6.9nm,0.8s,baz=87,slow=9.6,SNR=16						
STKA	**Stephens Creek**	**38.71**	**243**	P	**P**	**03 57 43.4**	**+1.1**
WRA	**Warramunga Arr**	**45.23**	**261**	P	**P**	**03 58 32.9**	**-0.9**
	comp=Z,1.7nm,0.5s,baz=98,slow=7.7,SNR=42						
WRA				PcP	**PcP**	**04 00 01.8**	**-0.4**
	comp=Z,2.4nm,0.7s,baz=93,slow=4.1,SNR=7.4						
ASAR	**Alice Springs**	**45.24**	**256**	P	**P**	**03 58 33.9**	**+0.1**
	comp=Z,9.9nm,0.9s,baz=87,slow=8.6,SNR=64						
ASAR				PcP	**PcP**	**04 00 01.9**	**-0.3**
	comp=Z,4.5nm,0.8s,baz=100,slow=4.0,SNR=14						
ASAR				S	**S**	**04 04 31.4**	**-2.9**
	comp=Z,2.5nm,0.8s,baz=92,slow=15,SNR=19						
FORT	**Forrest**	**50.18**	**246**	P	**P**	**03 59 10.5**	**0.0**
SIJI	**Sorong**	**53.41**	**284**	P	**P**	**03 59 34.1**	**0.0**
	comp=Z,18nm,0.7s,baz=115,slow=8.4,SNR=4.9						
FITZ	**Fitzroy Crossi**	**53.65**	**261**	P	**P**	**03 59 35.1**	**-0.6**
PSA00	**Pilbara Seismi**	**58.38**	**256**	P	**P**	**04 00 07.5**	**-0.9**
PSA00				lAmb	lAmb	04 00 08.8	
	comp=Z,21nm,0.8s						
VNDA	**Vanda**	**59.08**	**185**	P	**P**	**04 00 14.3**	**+2.3**
	comp=Z,2.3nm,0.8s,baz=358,slow=8.6,SNR=23						
VNDA	**Vanda**	**59.08**	**185**	P	**P**	**04 00 14.8**	**+2.7**
MORW	**Morawa**	**60.70**	**247**	P	**P**	**04 00 22.8**	**-0.8**
GIRL	**Giralia**	**63.31**	**254**	P	**P**	**04 00 41.4**	**+0.6**
CASY	**Casey**	**65.19**	**205**	P	**P**	**04 00 52.7**	**+0.9**
CASY				lAmb	lAmb	04 00 53.5	
	comp=Z,12nm,1.1s						
MJAR	**Matsushiro Arr**	**69.58**	**323**	P	**P**	**04 01 18.2**	**-1.0**
	comp=Z,1.5nm,0.6s,baz=145,slow=6.0,SNR=4.5						
UGM	**Wanagama**	**70.46**	**268**	P	**P**	**04 01 23.7**	**-1.2**
QSPA	**South Pole Qui**	**70.70**	**180**	P	**P**	**04 01 26.3**	**+0.8**
QSPA				lAmb	lAmb	04 01 28.0	
	comp=Z,14nm,0.8s						
ADK	**Adak**	**70.94**	**1**	P	**P**	**04 01 25.2**	**-1.7**
ADK				lAmb	lAmb	04 01 33.6	
	comp=Z,20nm,1.3s						
JKA	**Kamikawa-asahi**	**72.96**	**331**	P	**P**	**04 01 38.8**	**0.0**
ASAJ	**Asahikawa**	**72.96**	**331**	P	**P**	**04 01 38.8**	**0.0**
	comp=Z,4.0nm,0.5s,baz=45,slow=18,SNR=2.4						
PETK	**Petropavlovsk-**	**75.30**	**345**	P	**P**	**04 01 51.3**	**-0.5**
	comp=Z,3.4nm,0.6s,baz=160,slow=9.5,SNR=3.7						
USRK	**Ussuriysk Ar.**	**78.29**	**325**	P	**P**	**04 02 08.2**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=113,slow=11,SNR=5.4						
PNTR	**Pine Nut**	**79.43**	**42**	P	**P**	**04 02 12.2**	**-2.6**
PNTR				lAmb	lAmb	04 02 16.5	
	comp=Z,8.0nm,0.9s						
NVAR	**Mina Array Bea**	**79.88**	**43**	P	**P**	**04 02 18.1**	**+1.0**
	comp=Z,1.3nm,0.6s,baz=224,slow=9.6,SNR=7.7						
K05A	**Summer Lake**	**80.79**	**39**	P	**P**	**04 02 22.5**	**+0.8**
K05A				lAmb	lAmb	04 02 26.5	
	comp=Z,9.5nm,1.1s						
PINE	**Pine Mountain**	**81.40**	**38**	P	**P**	**04 02 25.0**	**+0.2**
PINE				lAmb	lAmb	04 02 26.9	
	comp=Z,9.3nm,1.0s						
TUC	**Tucson**	**81.91**	**52**	P	**P**	**04 02 26.9**	**-0.7**
I07A	**Izee**	**82.41**	**38**	lAmb	lAmb	04 02 31.7	
	comp=Z,6.2nm,0.9s						
MAW	**Mawson**	**82.79**	**200**	P	**P**	**04 02 31.6**	**+0.3**
	comp=Z,2.9nm,0.6s,baz=148,slow=6.6,SNR=9.6						
MAW	**Mawson**	**82.79**	**200**	P	**P**	**04 02 31.8**	**+0.5**
TRF	**Thorofare Moun**	**85.25**	**12**	lAmb	lAmb	04 02 42.6	
	comp=Z,6.1nm,0.8s						
RND	**Reindeer**	**85.49**	**13**	lAmb	lAmb	04 02 44.7	
	comp=Z,7.9nm,0.8s						
TX31	**Lajitas Ar. Si**	**86.05**	**57**	P	**P**	**04 02 48.5**	**+0.5**
TX31				lAmb	lAmb	04 02 50.6	
	comp=Z,9.3nm,0.9s						
TX32	**Lajitas Array**	**86.05**	**57**	P	**P**	**04 02 49.3**	**+1.2**
TXAR	**Lajitas Array**	**86.05**	**57**	P	**P**	**04 02 49.6**	**+1.5**
	comp=Z,2.6nm,0.8s,baz=218,slow=6.4,SNR=28						
BWN	**Browne**	**86.06**	**12**	P	**P**	**04 02 45.2**	**-2.0**
ANMO	**Albuquerque**	**86.33**	**51**	P	**P**	**04 02 47.5**	**-2.0**
WRH	**Wood River Hil**	**86.60**	**12**	lAmb	lAmb	04 02 49.5	
	comp=Z,8.5nm,1.0s						
CCB	**Clear Creek Bu**	**86.81**	**12**	lAmb	lAmb	04 02 50.2	
	comp=Z,5.4nm,0.6s						
COLA	**College**	**87.00**	**12**	P	**P**	**04 02 50.8**	**-0.8**
COLA				lAmb	lAmb	04 02 51.2	
	comp=Z,8.5nm,0.7s						
IL31		**87.11**	**13**	lAmb	lAmb	04 02 51.3	
	comp=Z,3.4nm,0.8s						
ILAR	**Eielson Array**	**87.11**	**13**	P	**P**	**04 02 50.8**	**-1.3**
	comp=Z,1.4nm,0.7s,baz=231,slow=5.2,SNR=22						
DLMT	**Dillon**	**87.22**	**40**	P	**P**	**04 02 53.7**	**+0.4**
DLMT				lAmb	lAmb	04 02 54.9	
	comp=Z,4.7nm,1.0s						
FXWY	**Fox Creek**	**87.31**	**42**	P	**P**	**04 02 53.6**	**-0.2**
PDAR	**Pinedale Array**	**87.82**	**43**	P	**P**	**04 02 56.2**	**0.0**
	comp=Z,0.9nm,0.6s,baz=209,slow=2.3,SNR=9.6						
XAN	**Xi'an**	**87.82**	**307**	P	**P**	**04 02 56.8**	**+0.6**
XAN				pP	PcP	04 03 21.4	+24
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
YHL	**Hebgen Lake**	**87.82**	**41**	P	**P**	**04 02 56.5**	**+0.2**
YMR	**Madison River**	**87.86**	**41**	P	**P**	**04 02 56.4**	**0.0**
H17A	**Grant Village**	**87.97**	**41**	P	**P**	**04 02 58.0**	**+1.0**
H17A				lAmb	lAmb	04 02 59.7	
	comp=Z,3.8nm,1.0s						
HHC	**Hu-ho-hao-te**	**88.90**	**314**	*e*P	**P**	**04 03 01.8**	**+0.6**
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,26nm,5.3s						
VNA3	**Neumayer Olymp**	**89.24**	**176**	P	**P**	**04 03 02.6**	**+0.4**
VNA2	**Neumayer--Watz**	**89.69**	**177**	P	**P**	**04 03 05.0**	**+0.8**
	baz=194,slow=4.6						
VNA1	**Neumayer--Stat**	**89.91**	**176**	P	**P**	**04 03 06.2**	**+1.0**
CMAR	**Chiang Mai Arr**	**90.18**	**289**	P	**P**	**04 03 08.3**	**+0.9**
	comp=Z,2.7nm,0.8s,baz=124,slow=2.8,SNR=15						
YKA	**Yellowknife Ar**	**95.29**	**25**	P	**P**	**04 03 28.9**	**-0.9**
	comp=Z,1.1nm,1.0s,baz=243,slow=3.8,SNR=7.7						
ZALV	**Zalesovo Beam**	**109.90**	**321**	PKiKP	**PKiKP**	**04 08 32.0**	**-1.7**
	comp=Z,0.7nm,0.4s,baz=335,slow=0.4,SNR=3.6						
MKAR	**Makanchi Array**	**110.76**	**314**	PKiKP	**PKiKP**	**04 08 34.0**	**-1.6**
	comp=Z,1.1nm,0.5s,baz=143,slow=0.8,SNR=14						
SUR	**Sutherland**	**125.64**	**199**	PKP	**PKPdf**	**04 09 04.7**	**-0.2**
	baz=194,slow=4.2						
BOSA	**Boshof**	**127.48**	**205**	PKP	**PKPdf**	**04 09 07.8**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=81,slow=2.3,SNR=2.0						
ARCES	**ARCESS Array B**	**127.89**	**350**	PKP	**PKPdf**	**04 09 07.2**	**-0.6**
	comp=Z,2.4nm,0.4

comp=Z,7.1nm,0.5s
WATA Walderalm 151.13 347 *i* PKPbc **PKPbc** **04 09 55.6 -0.8**
comp=Z,6.6nm,0.5s
RETA Reutte 151.15 348 *i* PKPbc **PKPbc** **04 09 55.6 -0.8**
comp=Z,2.9nm,0.5s
OBKA Obir 151.17 343 *i* PKPbc **PKPbc** **04 09 54.2 -2.2**
comp=Z,1.7nm,0.5s
WTTA Wattenberg 151.19 347 *i* PKPbc **PKPbc** **04 09 55.9 -0.7**
comp=Z,14nm,0.5s,SNR=6.5
MOTA Moosalm 151.22 348 *i* PKPbc **PKPbc** **04 09 55.7 -0.9**
comp=Z,11nm,1.0s
MYKA Terra Mystica 151.30 344 *i* PKPbc **PKPbc** **04 09 55.2 -1.5**
comp=Z,7.0nm,0.5s
SQTA Sankt Quirin 151.31 348 *i* PKPbc **PKPbc** **04 09 55.9 -0.9**
comp=Z,9.6nm,0.6s
ABTA Abfaltersbach 151.48 345 *i* PKPbc **PKPbc** **04 09 55.8 -1.3**
comp=Z,14nm,0.6s,SNR=8.2
DAVA Damuels 151.50 349 *i* PKiKP **PKPbc** **04 09 57.1 -0.1**
comp=Z,6.1nm,0.6s
LJU Ljubljana 151.60 342 *i* PKPbc **PKPbc** **04 09 56.6 -0.7**
FETA Feichten 151.60 348 *i* PKiKP **PKPbc** **04 09 57.0 -0.5**
comp=Z,5.6nm,0.6s
FUORN Ofenpass-Fuorn 152.07 349 **PKPbc** **04 09 58.2 -0.4**
TORD Torodi Ar. Bea 173.77 173 PKPab **PKPab** **04 11 46.8 +0.7**
comp=Z,0.6nm,0.6s,baz=190,slow=4.6,SNR=2.2

IDC ***19*** *03:56:42.3±0.4,57°.01S×24°.87W,h0km,mb4.8/16, mb1 4.8/17,mb1mx4.8/19,mbtmp4.8/17,ML4.4/1,MS5.1/18, Ms1 5.1/18,ms1mx4.9/23,Error ellipse: s-maj=16.6km s-min=13.7km az=32.0*

NEIC ***19*** *03:56:43.6±1.9,56°.99S±0°.10×24°.9W±0°.2,h10km±1km, mb5.1/61,Ms_20 5.3/629,Mwb5.4/13,Mwc5.5(GCMT), Error ellipse: s-maj=17.5km s-min=12.4km az=212.0*

NEIC ***19*** *03:56:46,57°.00S×24°.92W,h8km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.46; Mθθ-0.65; Mϕϕ-0.81; Mrθ-0.82; Mθϕ0.56; Mϕr0.96; Fault plane solution: M₀1.88000×10¹⁷ NP1:ϕs319.32000°, δ66.28000°, λ90.25000°. NP2:ϕs138.69000°,δ23.72000°, λ89.43000°. Principal axes: T 1.9557, Plg69.0000°, Azm230.0000°; N -0.1640, Plg0.0000°, Azm139.0000°; P -1.7917, Plg21.0000°, Azm49.0000°;*

MOS ***19*** *03:56:47.0±1.3,57°.04S×25°.19W,h37km,mb5.2/23, MS5.2/8 Error ellipse: s-maj=23.6km s-min=12.6km az=115.6*

BJI ***19*** *03:56:47.0±0.0,57°.10S×25°.00W,h35km,mB5.5/23, Ms5.6/32,Ms7 5.4/31*

GCMT ***19*** *03:56:49.6±0.1,57°.03S±0°.01×24°.35W±0°.01,h12km, MW5.5/155,Moment Tensor Solution. s121,c209; s155,c310; Duration: 1s3 Moment tensor: Scale 10¹⁷ Nm; Mrr1.46±.02; Mθθ0.05±.02; Mϕϕ-1.51±.01; Mrθ-0.53±.05; Mθϕ0.39±.01; Mϕr0.97±.04; Best double couple: M₀1.88900×10¹⁷ NP1:ϕs177.00000°,δ28.00000°, λ108.00000°. NP2:ϕs337.00000°,δ63.00000°,λ81.00000°. Principal axes: T 1.8400, Plg70.0000°, Azm227.0000°; N 0.0940, Plg8.0000°, Azm342.0000°; P -1.9380, Plg18.0000°, Azm74.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***19*** *03:56:50,57°.02S×24°.36W,h12km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.61; Mθθ-0.04; Mϕϕ-1.57; Mrθ-0.28; Mθϕ0.44; Mϕr0.94; Fault plane solution: M₀1.92000×10¹⁷ NP1:ϕs344.00000°, δ60.00000°,λ89.00000°. NP2:ϕs166.00000°,δ30.00000°, λ92.00000°. Principal axes: T 1.8790, Plg75.0000°, Azm252.0000°; N 0.0771, Plg1.0000°, Azm345.0000°; P -1.9561, Plg15.0000°, Azm75.0000°;*

ISC 19 03:56:45.8±0.2,57°.07S±0°.06×24°.98W±0°.05,h22km,n613, σ1§94/302,mb5.0/46,MS5.3/354,9C-7D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.08**	**288**	P	**Pn**	**03 58 29.3**	**+1.4**
HOPE						03 59 45.8	
HOPE	**Hope Point**	**7.08**	**288**		**Pn**	**03 58 29.3**	**+1.4**
HOPE				Sn	**Sn**	**03 59 45.8**	**-1.8**
VNA1	**Neumayer--Stat**	**15.40**	**159**	P	**Pn**	**04 00 20.1**	**-1.1**
VNA3	**Neumayer Olymp**	**15.63**	**162**	P	**Pn**	**04 00 22.5**	**-1.8**
VNA2	**Neumayer--Watz**	**15.79**	**159**	P	**Pn**	**04 00 24.6**	**-1.8**
	baz=329,slow=16						
SNAA	**Sanae**	**17.32**	**156**	P	**Pn**	**04 00 45.2**	**-0.6**
SNAA	**Sanae**	**17.32**	**156**	P	**Pn**	**04 00 45.1**	**-0.6**
	1.4nm,0.3s,baz=322,slow=14,SNR=79						
SNAA				S	Sn	04 03 46.0	-12
	0.2nm,0.3s,baz=75,slow=14,SNR=1.2						
SNAA				LR	LR	04 06 53.2	
	comp=Z,7μm,18.9s,baz=318,slow=35						
SNAA	**Sanae**	**17.32**	**156**		**Pn**	**04 00 45.1**	**-0.6**
EFI	**East Falkland**	**19.88**	**272**	*c iP*	**P**	**04 01 16.1**	**+0.9**
EFI				pmax	pmax		
	comp=Z,66nm,1.1s						
EFI	**East Falkland**	**19.88**	**272**	P	**P**	**04 01 15.3**	**0.0**
EFI				IAmb	IAmb	04 01 24.6	
	comp=Z,98nm,1.0s						
PMSA	**Palmer Station**	**20.19**	**231**	P	**P**	**04 01 18.8**	**+0.4**
	comp=Z,42nm,0.8s,baz=79,slow=11,SNR=4.6						
PMSA				LR	LR	04 07 43.2	
	comp=Z,7μm,21.8s,baz=78,slow=33						
PMSA	**Palmer Station**	**20.19**	**231**	P	Pn	04 01 19.6	-0.9
PMSA				IAmb	IAmb	04 01 26.7	
	comp=Z,74nm,0.8s						
NVL	**N'lazarevskaya**	**20.74**	**146**	*eP*	Pn	04 01 28.5	+1.7
NVL				*eS*	**S**	**04 05 07.0**	**-7.5**
NVL				pmax	pmax		
	comp=Z,64nm,1.0s						
MG01	**Puerto William**	**23.66**	**257**	P	**P**	**04 01 55.8**	**+0.6**
USHA	**Ushuaia**	**24.13**	**257**	P	**P**	**04 02 00.5**	**+0.9**
	comp=Z,13nm,0.4s,baz=82,slow=0.5,SNR=14						
GO10	**Punta Arenas**	**26.25**	**259**	P	**P**	**04 02 17.2**	**-1.7**
GO10				IAmb	IAmb	04 02 36.5	
	comp=Z,56nm,0.8s						
GO10				IAMs_20	IAMs_20	04 11 43.5	
	comp=Z,8μm,19.0s						
GO09	**Cerro Castillo**	**27.85**	**262**	P	**P**	**04 02 31.8**	**-1.5**
GO09				IAmb	IAmb	04 02 44.1	
	comp=Z,43nm,1.1s						
SYO	**Syowa Base**	**30.02**	**139**	*eP*	**P**	**04 02 50.8**	**-1.5**
SYO	**Syowa Base**	**30.02**	**139**	*epP*	**P**	**04 02 52.4**	**+0.1**
SYO	**Syowa Base**	**30.02**	**139**	*esP*	**P**	**04 02 54.4**	**+2.1**
LPA	**La Plata**	**31.36**	**301**	*eP*	**P**	**04 03 03.0**	**-1.5**
LPA				PPP	PPP	04 04 16.2	
LPA				PCP	**PcP**	**04 05 53.0**	**-4.8**
LPA				S	**S**	**04 08 13.9**	**+3.5**
LPA				SS	**SnSn**	**04 09 49.3**	**-5.2**
LPA				SSS	SSS	04 10 13.6	
LPA				PKIKP	PKiKP	04 13 16.4	-11
LPA				SKIKS		04 20 29.6	
PLTB	**Pedras Altas**	**32.09**	**310**	*eP*	**P**	**04 03 11.5**	**+0.5**
CNLB	**Canela**	**33.15**	**316**	*eP*	**P**	**04 03 21.5**	**+1.2**
CNLB				*epP*	**pP**	**04 03 24.1**	**-1.5**
QSPA	**South Pole Qui**	**33.18**	**180**	P	**P**	**04 03 21.3**	**+0.8**
QSPA	**South Pole Qui**	**33.18**	**180**	IAMs_20	IAMs_20	04 16 29.6	
	comp=Z,5μm,20.0s						
CPSB	**Cacapava Do Su**	**33.20**	**311**	*eP*	**P**	**04 03 21.6**	**+0.8**
PLCA	**Paso Flores**	**33.38**	**279**	P	**P**	**04 03 21.2**	**-1.1**
	comp=Z,8.6nm,0.9s,baz=150,slow=8.6,SNR=12						
PLCA				LR	LR	04 16 37.8	
	comp=Z,2μm,19.9s,baz=128,slow=36						
PLCA	**Paso Flores**	**33.38**	**279**	P	**P**	**04 03 20.7**	**-1.6**
PLCA				pmax	pmax		
	comp=Z,15nm,1.1s						
PLCA	**Paso Flores**	**33.38**	**279**	P	**P**	**04 03 20.7**	**-1.6**
PLCA	**Paso Flores**	**33.38**	**279**	*eP*	**P**	**04 03 21.2**	**-1.1**
LC01	**Cunco**	**35.40**	**280**	IAMs_20	IAMs_20	04 19 21.3	
	comp=Z,4μm,18.0s						
ITAB	**Concordia**	**35.51**	**316**	*eP*	**P**	**04 03 42.3**	**+1.6**
ITAB				*epP*	**pP**	**04 03 44.9**	**-1.0**
SPB	**Sao Paulo**	**37.20**	**325**	P	**P**	**04 03 54.2**	**-1.0**
SPB				IAmb	IAmb	04 04 01.2	
	comp=Z,23nm,1.0s						
SPB	**Sao Paulo**	**37.20**	**325**	*eP*	**P**	**04 03 56.4**	**+1.2**
SPB				*eS*	**S**	**04 09 45.6**	**+5.0**
VAO	**Valinhos**	**37.61**	**326**	*eP*	**P**	**04 04 01.0**	**+2.2**
PTGB	**Pitanga**	**37.76**	**317**	*eP*	**P**	**04 04 00.9**	**+0.9**
PTGB				*epP*	**pP**	**04 04 03.5**	**-1.8**
PTGB				*eS*	**S**	**04 09 52.4**	**+3.0**
BO02	**Sierra Bellavi**	**37.89**	**286**	P	**P**	**04 03 59.3**	**-1.8**
FRTB	**Fartura**	**38.13**	**322**	*eP*	**P**	**04 04 04.2**	**+1.1**
FRTB				*epP*	**pP**	**04 04 07.2**	**-1.2**
GO05	**Huala**	**38.33**	**285**	P	**P**	**04 04 03.2**	**-1.5**
CPUP	**Villa Florida**	**38.40**	**309**	P	**P**	**04 04 05.2**	**-0.2**
	comp=Z,27nm,0.9s,baz=149,slow=7.6,SNR=40						
CPUP				LR	LR	04 19 28.2	
	comp=Z,2μm,20.9s,baz=156,slow=36						
CPUP	**Villa Florida**	**38.40**	**309**	P	**P**	**04 04 04.9**	**-0.4**
CPUP				pmax	pmax		
	comp=Z,35nm,1.0s						
CPUP	**Villa Florida**	**38.40**	**309**	P	**P**	**04 04 04.9**	**-0.4**
CPUP				IAmb	IAmb	04 04 07.9	
	comp=Z,35nm,0.9s						
MAW	**Mawson**	**38.60**	**142**	P	**P**	**04 04 06.7**	**+0.2**
	comp=Z,9.2nm,0.9s,baz=237,slow=7.8,SNR=12						
MAW				LR	LR	04 18 47.3	
	comp=Z,4μm,18.2s,baz=252,slow=34						
MAW	**Mawson**	**38.60**	**142**	P	**P**	**04 04 06.8**	**+0.2**
MAW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAW				MLR	MLR		
	comp=Z,1μm,18.0s						
MAW	**Mawson**	**38.60**	**142**	P	**P**	**04 04 06.8**	**+0.2**
BSCB	**Bom Sucesso**	**38.86**	**330**	*eP*	**P**	**04 04 09.9**	**+0.6**
PEL	**Peldehue**	**39.12**	**288**	P	**P**	**04 04 10.1**	**-1.3**
PEL						04 06 20.7	
PEL				pmax	pmax		
	comp=Z,15nm,0.7s						
PEL	**Peldehue**	**39.12**	**288**	P	**P**	**04 04 10.1**	**-1.3**
PEL				PcP	**PcP**	**04 06 20.7**	**0.0**
VA03	**San Esteban**	**39.35**	**288**	P	**P**	**04 04 11.7**	**-1.6**
ROC1	**El Roble**	**39.42**	**288**	P	**P**	**04 04 11.8**	**-2.4**
TRCB	**Terra Rica**	**39.72**	**318**	*eP*	**P**	**04 04 17.2**	**+0.8**
TRCB				*epP*	**pP**	**04 04 20.1**	**-1.6**
TRCB				*eS*	**S**	**04 10 20.3**	**+1.5**
SUR	**Sutherland**	**39.76**	**71**	P	**P**	**04 04 15.6**	**-1.3**
	comp=Z,9.6nm,0.9s,baz=115,slow=23,SNR=2.7						
SUR	**Sutherland**	**39.76**	**71**	P	**P**	**04 04 16.1**	**-0.8**
BSFB	**Barra de Sao F**	**39.97**	**336**	*eP*	**P**	**04 04 18.8**	**+0.4**
SJMB	**Sao Joao De Ma**	**40.17**	**336**	*eP*	**P**	**04 04 21.0**	**+0.9**
PCMB	**Pacaembu**	**40.32**	**320**	*eP*	**P**	**04 04 22.4**	**+1.0**
CO03	**El Pedregal**	**40.95**	**290**	IAMs_20	IAMs_20	04 24 02.1	
	comp=Z,3μm,18.0s						
GO04	**Tololo Observa**	**41.53**	**291**	IAMs_20	IAMs_20	04 24 48.7	
	comp=Z,3μm,18.0s						
AC05	**El Transito**	**42.35**	**292**	IAmb	IAmb	04 04 39.8	
	comp=Z,21nm,0.9s						
IPMB	**Ipameri, GO**	**42.71**	**326**	*eP*	**P**	**04 04 42.8**	**+1.8**
MC01	**Montes Claros**	**42.74**	**333**	*eP*	**P**	**04 04 41.9**	**+0.5**
AQDB	**Aquidauana**	**42.98**	**315**	*eP*	**P**	**04 04 42.6**	**-0.6**
AC02	**Maricunga**	**43.42**	**295**	IAmb	IAmb	04 04 51.1	
	comp=Z,18nm,0.8s						
C2SB	**Chapadao do Su**	**43.49**	**320**	*eP*	**P**	**04 04 48.1**	**+0.9**
SHEL	**Horse Pasture**	**43.53**	**27**	IAMs_20	IAMs_20	04 18 41.6	
	comp=Z,4μm,19.0s						
JANB	**Januaria**	**44.42**	**333**	*eP*	**P**	**04 04 55.9**	**+1.0**
GDU01	**Guandu, BA**	**44.67**	**340**	*eP*	**P**	**04 04 56.4**	**-0.4**
GDU01				*epP*	**pP**	**04 05 01.4**	**-0.6**
BDFB	**Brasilia**	**44.87**	**328**	P	**P**	**04 04 59.2**	**+0.7**
	comp=Z,2.4nm,0.6s,baz=153,slow=6.4,SNR=4.2						
BDFB				LR	LR	04 23 45.0	
	comp=Z,2μm,18.1s,baz=151,slow=36						
BDFB	**Brasilia**	**44.87**	**328**	P	**P**	**04 04 57.2**	**-1.2**
BDFB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BDFB				MLR	MLR		
	comp=Z,3μm,18.0s						
BDFB	**Brasilia**	**44.87**	**328**	P	**P**	**04 04 57.2**	**-1.2**
BDFB				IAMs_20	IAMs_20	04 24 28.6	
	comp=Z,3μm,18.0s						
GO02	**Mina Guanaco**	**45.04**	**296**	IAmb	IAmb	04 05 01.1	
	comp=Z,22nm,0.6s						
BOSA	**Boshof**	**45.07**	**73**	P	**P**	**04 04 59.9**	**-0.1**
	comp=Z,12nm,0.9s,baz=203,slow=7.8,SNR=14						
BOSA				LR	LR	04 20 51.8	
	comp=Z,7μm,18.2s,baz=214,slow=32						
BOSA	**Boshof**	**45.07**	**73**	P	**P**	**04 04 58.8**	**-1.2**
BOSA				pmax	pmax		
	comp=Z,17nm,1.0s						
BOSA	**Boshof**	**45.07**	**73**	P	**P**	**04 04 58.8**	**-1.2**
BOSA				IAmb	IAmb	04 05 14.0	
	comp=Z,17nm,1.0s						
VNDA	**Vanda**	**45.61**	**182**	P	**P**	**04 05 04.7**	**+1.1**
	comp=Z,9.5nm,0.7s,baz=190,slow=4.7,SNR=54						
VNDA				LR	LR	04 24 33.8	
	comp=Z,2μm,18.3s,baz=169,slow=37						
VNDA	**Vanda**	**45.61**	**182**	P	**P**	**04 05 04.0**	**+0.4**
VNDA				pmax	pmax		
	comp=Z,14nm,0.8s						
VNDA	**Vanda**	**45.61**	**182**	P	**P**	**04 05 04.0**	**+0.4**
VNDA				IAmb	IAmb	04 05 18.4	
	comp=Z,14nm,0.8s						
PB14	**IPOC Station P**	**45.89**	**295**	P	**P**	**04 05 04.7**	**-2.0**
PB14				IAmb	IAmb	04 05 06.7	
	comp=Z,11nm,0.6s						
ARAG	**Araguaiana, MT**	**45.99**	**323**	*eP*	**P**	**04 05 07.6**	**+0.4**
PB15	**IPOC Station P**	**46.63**	**298**	IAmb	IAmb	04 05 20.3	
	comp=Z,21nm,0.9s						
LVC	**Limon Verde**	**46.87**	**299**	P	**P**	**04 05 14.2**	**-0.3**
LVC				pmax	pmax		
	comp=Z,41nm,1.0s						
LVC	**Limon Verde**	**46.87**	**299**	P	**P**	**04 05 14.2**	**-0.3**
LVC	**Limon Verde**	**46.87**	**299**	*eP*	**P**	**04 05 14.5**	**0.0**
LVC				*epP*	**pP**	**04 05 17.3**	**-2.7**
PB06	**IPOC Station P**	**47.10**	**298**	IAmb	IAmb	04 05 24.3	
	comp=Z,16nm,0.7s						
SALV	**Santo Antonio**	**47.16**	**318**	*eP*	**P**	**04 05 16.8**	**+0.4**
PB04	**IPOC Station P**	**47.70**	**297**	P	**P**	**04 05 19.1**	**-1.6**
LBTB	**Lobatse**	**48.16**	**70**	IAmb	IAmb	04 05 38.5	
	comp=Z,26nm,1.1s						
PB01	**IPOC Station P**	**48.48**	**299**	IAmb	IAmb	04 05 32.5	
	comp=Z,23nm,0.8s						
PTLB	**Pontes e Lacer**	**48.88**	**314**	*eP*	**P**	**04 05 29.7**	**0.0**
PATCX	**Punta Patache**	**48.99**	**298**	IAmb	IAmb	04 05 31.7	
	comp=Z,18nm,0.7s						
TSUM	**Tsumeb**	**49.15**	**58**	P	**P**	**04 05 30.8**	**-1.1**
TSUM				IAmb	IAmb	04 05 33.7	
	comp=Z,14nm,0.9s						
H10N1	**ASCENSION HYDR**	**49.78**	**14**	T	T	04 59 59.2	
	baz=197						
H10N3	**ASCENSION HYDR**	**49.78**	**14**	T	T	04 59 56.8	
	baz=197,slow=74						
H10N2	**ASCENSION HYDR**	**49.80**	**14**	T	T	05 00 01.9	
	baz=197,slow=74						
PSGCX	**Pisagua**	**50.02**	**299**	IAmb	IAmb	04 05 39.4	
	comp=Z,12nm,0.6s						
PB16	**IPOC Station P**	**50.82**	**301**	IAmb	IAmb	04 05 53.9	
	comp=Z,12nm,0.7s						
PB12	**IPOC Station P**	**50.96**	**300**	IAmb	IAmb	04 05 54.2	
	comp=Z,20nm,1.1s						
VILB	**Vilhena**	**51.57**	**314**	*eP*	**P**	**04 05 50.0**	**-0.1**
RCBR	**Riachuelo**	**51.82**	**346**	IAMs_20	IAMs_20	04 25 04.8	
	comp=Z,2μm,18.0s						
CLDB	**Colider**	**51.84**	**320**	*eP*	**P**	**04 05 51.1**	**-1.1**
LPAZ	**La Paz**	**51.96**	**303**	P	**P**	**04 05 54.0**	**+0.4**
	comp=Z,40nm,0.7s,baz=135,slow=4.5,SNR=119						
LPAZ				LR	LR	04 26 02.0	
	comp=Z,585nm,21.6s,baz=162,slow=34						
LPAZ	**La Paz**	**51.96**	**303**	*eP*	**P**	**04 05 54.1**	**+0.4**
LPAZ	**La Paz**	**51.96**	**303**	*eP*	**P**	**04 05 54.1**	**+0.4**
CASY	**Casey**	**52.53**	**159**	P	**P**	**04 05 57.2**	**+0.6**
CASY				IAmb	IAmb	04 06 00.0	
	comp=Z,12nm,0.8s						
PRPB	**Paraupebas**	**54.38**	**329**	*eP*	**P**	**04 06 11.6**	**+0.8**
NPGB	**Novo Progresso**	**55.26**	**322**	*eP*	**P**	**04 06 17.3**	**+0.1**
SAML	**Samuel**	**56.39**	**313**	P	**P**	**04 06 25.3**	**0.0**
SAML				pmax	pmax		
	comp=Z,25nm,0.8s						
SAML	**Samuel**	**56.39**	**313**	P	**P**	**04 06 25.3**	**0.0**
SAML				IAmb	IAmb	04 06 28.1	
	comp=Z,25nm,0.8s						
LSZ	**Lusaka**	**57.63**	**66**	P	**P**	**04 06 34.3**	**+0.1**
LSZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LSZ	**Lusaka**	**57.63**	**66**	P	**P**	**04 06 34.3**	**+0.1**
MALB	**Monte Alegre**	**59.80**	**326**	*eP*	**P**	**04 06 50.5**	**+1.4**
NNA	**Nana**	**59.81**	**297**	*eP*	**P**	**04 06 49.9**	**+0.6**
NNA				pmax	pmax		
	comp=Z,35nm,1.0s						
MACA	**Manacapuru-AM**	**60.74**	**318**	*eP*	**P**	**04 06 54.6**	**-1.0**
PTGA	**Pitinga**	**62.73**	**320**	P	**P**	**04 07 08.2**	**-0.8**
PTGA				IAmb	IAmb	04 07 11.4	
	comp=Z,9.1nm,0.9s						
PTGA	**Pitinga**	**62.73**	**320**	*eP*	**P**	**04 07 08.8**	**-0.2**
ABPO	**Ambohimpanom**	**64.58**	**86**	IAMs_20	IAMs_20	04 35 56.8	
	comp=Z,2μm,18.0s						
LIC	**Lamto**	**65.15**	**22**	*eP*	**P**	**04 07 25.4**	**+0.6**
	comp=Z,31nm,1.2s						
KIC	**Kosan Boka**	**65.34**	**22**	*eP*	**P**	**04 07 26.6**	**+0.5**
	comp=Z,35nm,1.3s						
TIC	**Toumodi**	**65.56**	**22**	*eP*	**P**	**04 07 28.0**	**+0.5**
DBIC	**Dimbokro**	**65.62**	**22**	P	**P**	**04 07 28.3**	**+0.4**
	comp=Z,9.2nm,0.9s,baz=156,slow=6.4,SNR=7.4						
DBIC				LR	LR	04 30 35.2	
	comp=Z,1μm,18.0s,baz=180,slow=31						
DBIC	**Dimbokro**	**65.62**	**22**	P	**P**	**04 07 27.8**	**0.0**
DBIC				pmax	pmax		
	comp=Z,11nm,1.1s						
DBIC	**Dimbokro**	**65.62**	**22**	P	**P**	**04 07 27.8**	**0.0**
DBIC				IAmb	IAmb	04 07 32.8	
	comp=Z,11nm,1.1s						
PTLC	**Puerto Leguiza**	**69.52**	**305**	*eP*	**P**	**04 07 51.1**	**-1.5**
PUAC	**Puerto Asis, P**	**70.65**	**304**	*eP*	**P**	**04 08 01.8**	**+2.2**
MACC	**Macarena, Meta**	**70.86**	**307**	*eP*	**P**	**04 08 01.3**	**+0.5**
PAC1	**Pacto, Paraso**	**71.42**	**302**	*eP*	**P**	**04 08 03.4**	**-1.0**
MBAR	**Mbarara**	**71.55**	**61**	*eP*	**P**	**04 08 03.0**	**-2.2**
MBAR				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MBAR	**Mbarara**	**71.55**	**61**	IAMs_20	IAMs_20	04 37 09.4	
	comp=Z,2μm,19.0s						
GCUF	**Volcan Galeras**	**71.60**	**303**	*eP*	**P**	**04 08 04.9**	**-1.0**
GARC	**Garzon, Huila**	**71.62**	**306**	*eP*	**P**	**04 08 05.9**	**+0.3**
CRUC	**La Cruz**	**71.72**	**304**	*eP*	P	04 08 14.4	+8.0
BETC	**Betania**	**72.03**	**306**	*eP*	**P**	**04 08 09.3**	**+1.4**
SOTA	**Rioblanco**	**72.07**	**305**	*eP*	**P**	**04 08 10.7**	**+2.0**
PCON	**Cinco Dias**	**72.15**	**305**	*eP*	**P**	**04 08 11.2**	**+2.0**
BBAC	**Balboa, Cauca**	**72.26**	**304**	*eP*	**P**	**04 08 09.4**	**-0.1**
VILC	**Villavicencio,**	**72.55**	**308**	*eP*	P	04 08 20.6	+9.5
PRAC	**Prado**	**72.71**	**307**	*eP*	**P**	**04 08 12.3**	**+0.3**
CHIC	**Chingaza**	**73.03**	**308**	*eP*	**P**	**04 08 14.6**	**+0.3**
ORTC	**Ortega, Tolima**	**73.04**	**307**	*eP*	**P**	**04 08 14.4**	**+0.5**
TOC4	**Torodi Ar. Sit**	**73.35**	**27**	IAMs_20	IAMs_20	04 34 39.9	
	comp=Z,1μm,20.0s						
TOC5	**Torodi Ar. Sit**	**73.35**	**27**	IAMs_20	IAMs_20	04 34 39.9	
	comp=Z,1μm,20.0s						
TOB4	**Torodi Ar. Sit**	**73.36**	**27**	IAMs_20	IAMs_20	04 34 50.2	
	comp=Z,1μm,19.0s						
TOB3	**Torodi Ar. Sit**	**73.36**	**27**	IAMs_20	IAMs_20	04 34 40.3	
	comp=Z,1μm,19.0s						
TOA3	**Torodi Ar. Sit**	**73.36**	**27**	IAMs_20	IAMs_20	04 34 49.3	
	comp=Z,1μm,19.0s						
TOC3	**Torodi Ar. Sit**	**73.37**	**27**	IAMs_20	IAMs_20	04 34 40.4	
	comp=Z,1μm,20.0s						
TOA0	**Torodi Ar. Sit**	**73.37**	**27**	P	**P**	**04 08 14.6**	**-1.1**
TOA0				IAmb	IAmb	04 08 17.9	
	comp=Z,19nm,0.8s						
TOA0				IAMs_20	IAMs_20	04 34 40.5	
	comp=Z,1μm,20.0s						
TORD	**Torodi Ar. Bea**	**73.37**	**27**	P	**P**	**04 08 14.4**	**-1.3**
	comp=Z,19nm,0.7s,baz=198,slow=6.1,SNR=63						
TORD				LR	LR	04 35 01.2	
	comp=Z,1μm,19.1s,baz=175,slow=31						
TOB5	**Torodi Ar. Sit**	**73.37**	**27**	IAMs_20	IAMs_20	04 34 40.5	
	comp=Z,1μm,20.0s						
TOC7	**Torodi Ar. Sit**	**73.38**	**27**	IAMs_20	IAMs_20	04 34 50.8	
	comp=Z,1μm,18.0s						
TOC2	**Torodi Ar. Sit**	**73.39**	**27**	IAMs_20	IAMs_20	04 34 50.9	
	comp=Z,1μm,19.0s						
TOC1	**Torodi Ar. Sit**	**73.39**	**27**	IAMs_20	IAMs_20	04 34 42.2	
	comp=Z,1μm,19.0s						
ELOV	**Elorza**	**73.42**	**313**	*eP*	**P**	**04 08 16.3**	**+0.2**
ROSC	**El Rosal**	**73.47**	**308**	P	**P**	**04 08 17.5**	**+0.6**
	comp=Z,13nm,0.7s,baz=122,slow=19,SNR=14						
ROSC				LR	LR	04 41 36.5	
	comp=Z,882nm,20.8s,baz=182,slow=37						
ROSC	**El Rosal**	**73.47**	**308**	*eP*	**P**	**04 08 14.1**	**-2.8**
GR1C	**Gorgona, Isla**	**73.54**	**304**	*eP*	**P**	**04 08 15.0**	**-1.8**
YOTC	**Yotoco, Valle**	**73.59**	**306**	*eP*	**P**	**04 08 17.8**	**+0.6**
ANIL	**Santa Ana**	**73.63**	**307**	*eP*	**P**	**04 08 15.8**	**-1.8**
RUSC	**La Rusia**	**73.89**	**310**	*eP*	**P**	**04 08 18.6**	**-0.8**
RREF	**El Recreo**	**73.97**	**307**	*eP*	**P**	**04 08 24.0**	**+3.9**
SPBC	**San Pablo de B**	**74.09**	**309**	*eP*	**P**	**04 08 18.8**	**-1.4**
GUY2C	**Guyana, Caldas**	**74.27**	**307**	*eP*	**P**	**04 08 21.2**	**-0.4**
KMBO	**Kilima Mbogo**	**74.29**	**67**	P	**P**	**04 08 25.7**	**+4.2**
	comp=Z,1.4nm,0.8s,baz=224,slow=6.0,SNR=3.1						
KMBO				LR	LR	04 37 54.0	
	comp=Z,964nm,20.2s,baz=225,slow=33						
NORC	**Norcasia**	**74.36**	**308**	*eP*	**P**	**04 08 20.3**	**-1.3**
PLMC	**San Jos del P**	**74.39**	**306**	*eP*	**P**	**04 08 19.4**	**-2.4**
PAMC	**Pamplona, Colo**	**75.04**	**311**	*eP*	**P**	**04 08 23.9**	**-2.2**
PTBC	**P

	comp=Z,524nm,18.0s,baz=140,slow=32							
TEIG	**Tepich**	**93.29**	**303**	P	**P**	**04 09 59.1**	**+0.6**	
PFVI	**Vila Bisbo**	**94.83**	**13**	IAMs_20	IAMs_20	04 49 31.9		
	comp=Z,1µm,18.0s							
061Z	**Ochoppi**	**95.03**	**311**	IAMs_20	IAMs_20	04 57 32.1		
	comp=Z,1µm,19.0s							
PVAQ	**Vaqueiros**	**95.23**	**14**	IAMs_20	IAMs_20	04 49 44.6		
	comp=Z,976nm,18.0s							
PSAD3	**Pilbara Seismi**	**96.19**	**147**	IAMs_20	IAMs_20	04 50 42.4		
	comp=Z,1µm,20.0s							
PSAA3	**Pilbara Seismi**	**96.28**	**147**	IAMs_20	IAMs_20	04 50 34.6		
	comp=Z,1µm,20.0s							
PSAD1	**Pilbara Seismi**	**96.39**	**147**	IAMs_20	IAMs_20	04 50 47.5		
	comp=Z,1µm,20.0s							
MBWA	**Marble Bar**	**96.64**	**147**	IAMs_20	IAMs_20	04 50 08.2		
	comp=Z,1µm,19.0s							
KEST	**Kesra**	**96.89**	**28**	LR	LR	04 50 37.8		
	comp=Z,1µm,18.6s,baz=172,slow=33							
DWPF	**Disney Wildern**	**97.24**	**312**	IAMs_20	IAMs_20	04 55 45.5		
	comp=Z,841nm,19.0s							
ASAR	**Alice Springs**	**97.64**	**161**	P	**P**	**04 10 18.5**	**-0.1**	
	comp=Z,1.2nm,0.7s,baz=188,slow=4.1,SNR=11							
ASAR				PP	**PP**	**04 14 18.8**	**+3.4**	
	comp=Z,0.7nm,0.8s,baz=183,slow=7.8,SNR=4.5							
ASAR				LR	LR	04 52 46.7		
	comp=Z,1µm,18.1s,baz=182,slow=34							
PAB	**San Pablo**	**97.81**	**16**	IAMs_20	IAMs_20	04 51 52.8		
	comp=Z,997nm,18.0s							
COI	**Coimbra**	**97.91**	**13**	IAMs_20	IAMs_20	04 49 24.5		
	comp=Z,941nm,20.0s							
ESDC	**Sonseca Array**	**97.99**	**16**	P	Pdif	04 10 20.5	+0.9	
	comp=Z,0.5nm,0.9s,baz=196,slow=4.6,SNR=2.9							
ESDC				LR	LR	04 51 42.9		
	comp=Z,632nm,18.2s,baz=130,slow=34							
MTE	**Manteigas**	**98.21**	**13**	IAMs_20	IAMs_20	04 50 16.3		
	comp=Z,1µm,20.0s							
WDD	**Wied Dalam**	**98.38**	**31**	IAMs_20	IAMs_20	04 53 14.0		
	comp=Z,966nm,19.0s							
656A	**Willston**	**98.80**	**312**	IAMs_20	IAMs_20	04 55 08.8		
	comp=Z,1µm,22.0s							
CORL	**Corleone**	**99.97**	**30**	IAMs_20	IAMs_20	05 03 18.0		
	comp=Z,870nm,18.0s							
DZM	**Mont Dzumac**	**100.59**	**191**	*e*LR	LR	04 43 43.3		
	comp=Z,599nm,22.1s							
255A	**Hazlehurst**	**101.02**	**313**	IAMs_20	IAMs_20	05 01 00.8		
	comp=Z,837nm,19.0s							
CEL	**Celeste**	**101.03**	**32**	IAMs_20	IAMs_20	05 01 43.2		
	comp=Z,926nm,18.0s							
TIGA	**Tifton**	**101.04**	**312**	IAMs_20	IAMs_20	05 05 37.3		
	comp=Z,960nm,18.0s							
FITZ	**Fitzroy Crossi**	**101.19**	**152**	IAMs_20	IAMs_20	04 54 00.6		
	comp=Z,890nm,18.0s							
Y60A	**Bolivia**	**101.23**	**317**	IAMs_20	IAMs_20	05 00 47.1		
	comp=Z,693nm,18.0s							
Z56A	**Williston**	**101.82**	**315**	IAMs_20	IAMs_20	04 58 33.9		
	comp=Z,813nm,19.0s							
154A	**Montrose**	**101.88**	**313**	IAMs_20	IAMs_20	05 04 11.0		
	comp=Z,818nm,18.0s							
ZAIG	**Zacatecas**	**102.36**	**293**	IAMs_20	IAMs_20	05 00 40.3		
	comp=Z,819nm,18.0s							
152A	**Waverly Hall**	**102.58**	**312**	IAMs_20	IAMs_20	05 06 24.0		
	comp=Z,932nm,18.0s							
U61A	**Possum Corner**	**102.67**	**320**	IAMs_20	IAMs_20	05 05 59.2		
	comp=Z,720nm,18.0s							
PAOL	**Paolisi**	**103.24**	**30**	IAMs_20	IAMs_20	05 00 13.7		
	comp=Z,818nm,18.0s							
PAULI	**Pauline**	**103.31**	**315**	IAMs_20	IAMs_20	05 07 22.4		
	comp=Z,672nm,18.0s							
Z51A	**Franklin**	**103.33**	**312**	IAMs_20	IAMs_20	05 06 55.9		
	comp=Z,859nm,18.0s							
Z50A	**Ashland**	**103.58**	**311**	IAMs_20	IAMs_20	05 07 28.6		
	comp=Z,931nm,19.0s							
S61A	**Accomac**	**103.61**	**321**	IAMs_20	IAMs_20	04 59 04.1		
	comp=Z,810nm,18.0s							
CSS	**Mathiatis**	**104.01**	**46**	IAMs_20	IAMs_20	04 59 05.2		
	comp=Z,713nm,18.0s							
U56A	**King**	**104.11**	**317**	IAMs_20	IAMs_20	04 57 40.6		
	comp=Z,732nm,20.0s							
AQU	**L'Aquila**	**104.17**	**28**	IAMs_20	IAMs_20	04 55 13.3		
	comp=Z,954nm,18.0s							
Y49A	**Blount Mountai**	**104.31**	**311**	IAMs_20	IAMs_20	05 06 25.8		
	comp=Z,893nm,18.0s							
V53A	**Saluda**	**104.45**	**315**	IAMs_20	IAMs_20	05 03 30.3		
	comp=Z,791nm,19.0s							
FPAL	**Fort Paine**	**104.57**	**312**	IAMs_20	IAMs_20	05 07 49.8		
	comp=Z,989nm,18.0s							
R58B	**Mineral**	**104.64**	**319**	IAMs_20	IAMs_20	05 07 00.3		
	comp=Z,708nm,18.0s							
Q60A	**Greensboro**	**104.85**	**321**	IAMs_20	IAMs_20	04 59 07.0		
	comp=Z,880nm,19.0s							
W50A	**Signal Mountai**	**105.03**	**313**	IAMs_20	IAMs_20	05 00 56.7		
	comp=Z,748nm,20.0s							
X48A	**Hartselle**	**105.08**	**311**	IAMs_20	IAMs_20	04 58 42.3		
	comp=Z,880nm,21.0s							
P61A	**Hammonton**	**105.10**	**322**	IAMs_20	IAMs_20	04 55 32.6		
	comp=Z,831nm,19.0s							
VLC	**Villacollemand**	**105.12**	**26**	IAMs_20	IAMs_20	04 54 13.4		
	comp=Z,1µm,20.0s							
SWET	**Sewanee**	**105.29**	**312**	IAMs_20	IAMs_20	05 08 20.7		
	comp=Z,806nm,18.0s							
M65A	**Busby, Falmout**	**105.49**	**326**	IAMs_20	IAMs_20	04 58 28.8		
	comp=Z,827nm,19.0s							
PSUB	**Penn St. - Bra**	**105.55**	**322**	IAMs_20	IAMs_20	04 55 59.5		
	comp=Z,747nm,19.0s							
Y45A	**Yeager Farm, C**	**105.63**	**309**	IAMs_20	IAMs_20	05 04 28.8		
	comp=Z,772nm,18.0s							
CPNY	**Central Park**	**105.84**	**323**	IAMs_20	IAMs_20	05 05 27.0		
	comp=Z,852nm,18.0s							
MVL	**Millersville**	**105.92**	**321**	IAMs_20	IAMs_20	04 58 59.3		
	comp=Z,737nm,18.0s							
BRNJ	**Basking Ridge**	**105.94**	**323**	IAMs_20	IAMs_20	04 55 09.7		
	comp=Z,675nm,20.0s							
PLAL	**Pickwick Lake**	**105.97**	**310**	IAMs_20	IAMs_20	05 04 39.7		
	comp=Z,1µm,20.0s							
PAL	**Palisades**	**106.01**	**324**	IAMs_20	IAMs_20	04 55 07.7		
	comp=Z,763nm,21.0s							
Q56A	**Snyder Ridge,**	**106.06**	**319**	IAMs_20	IAMs_20	05 08 27.0		
	comp=Z,633nm,18.0s							
BRYW	**Bryant College**	**106.09**	**326**	IAMs_20	IAMs_20	04 58 03.0		
	comp=Z,861nm,20.0s							
V48A	**Smith Brothers**	**106.11**	**312**	IAMs_20	IAMs_20	05 08 47.3		
	comp=Z,612nm,18.0s							
PAGS	**Pennsylvania G**	**106.25**	**321**	IAMs_20	IAMs_20	04 56 12.0		
	comp=Z,760nm,20.0s							
BCX	**Boston College**	**106.36**	**326**	IAMs_20	IAMs_20	04 58 51.7		
	comp=Z,1µm,21.0s							
WES	**Weston**	**106.45**	**326**	IAMs_20	IAMs_20	04 59 05.2		
	comp=Z,898nm,19.0s							
N59A	**State Game Lan**	**106.55**	**322**	IAMs_20	IAMs_20	04 56 16.8		
	comp=Z,792nm,21.0s							
HRV	**Adam Dziewonsk**	**106.63**	**326**	IAMs_20	IAMs_20	04 58 28.0		
	comp=Z,888nm,19.0s							
QUA2	**Belchertown**	**106.67**	**325**	IAMs_20	IAMs_20	04 58 32.0		
	comp=Z,739nm,19.0s							
N58A	**Sunbury**	**106.80**	**322**	IAMs_20	IAMs_20	05 09 26.4		
	comp=Z,631nm,18.0s							
WVT	**Waverly**	**106.85**	**311**	IAMs_20	IAMs_20	05 08 56.2		
	comp=Z,727nm,18.0s							
O56A	**Blue Knob Stat**	**106.93**	**320**	IAMs_20	IAMs_20	04 56 31.0		
	comp=Z,808nm,19.0s							
K62A	**Royalston**	**106.99**	**326**	IAMs_20	IAMs_20	04 58 39.3		
	comp=Z,979nm,19.0s							
TUE	**Stuetta**	**107.07**	**24**	IAMs_20	IAMs_20	04 58 06.0		
	comp=Z,745nm,18.0s							
KRJI	**Kerinci**	**107.09**	**123**	P	**Pdif**	**04 11 14.4**	**+14**	
KSPA	**Keystone Colle**	**107.12**	**323**	IAMs_20	IAMs_20	04 56 20.0		
	comp=Z,659nm,20.0s							
CTI	**Castel Tesino**	**107.20**	**26**	IAMs_20	IAMs_20	04 55 41.4		
	comp=Z,867nm,20.0s							
T47A	**Sharon Grove**	**107.30**	**312**	IAMs_20	IAMs_20	05 05 02.9		
	comp=Z,670nm,18.0s							
R50A	**Paris**	**107.31**	**315**	IAMs_20	IAMs_20	05 10 06.3		
	comp=Z,647nm,18.0s							
HPIG		**107.37**	**293**	IAMs_20	IAMs_20	05 08 45.1		
	comp=Z,785nm,18.0s							
M57A	**Sunshine Farm,**	**107.38**	**321**	IAMs_20	IAMs_20	05 09 42.9		
	comp=Z,766nm,18.0s							
FUORN	**Ofenpass-Fuorn**	**107.42**	**25**	IAMs_20	IAMs_20	04 56 19.1		
	comp=Z,920nm,20.0s							
L59A	**Walton**	**107.45**	**323**	IAMs_20	IAMs_20	04 55 51.7		
	comp=Z,717nm,21.0s							
EMMW	**East Machias**	**107.46**	**330**	IAMs_20	IAMs_20	04 59 34.7		
	comp=Z,705nm,19.0s							
GAZ	**Gaziantep**	**107.48**	**48**	IAMs_20	IAMs_20	05 06 18.1		
	comp=Z,718nm,18.0s							
TRY	**Troy**	**107.49**	**325**	IAMs_20	IAMs_20	05 08 09.8		
	comp=Z,672nm,18.0s							
O54A	**Avella**	**107.50**	**319**	IAMs_20	IAMs_20	05 03 08.1		
	comp=Z,653nm,19.0s							
HBAR	**Harrisburg**	**107.55**	**309**	IAMs_20	IAMs_20	05 10 05.2		
	comp=Z,869nm,18.0s							
I63A	**Otisfield**	**107.75**	**327**	IAMs_20	IAMs_20	05 00 54.4		
	comp=Z,813nm,18.0s							
HICK	**Hickman**	**107.78**	**310**	IAMs_20	IAMs_20	05 10 26.8		
	comp=Z,762nm,18.0s							
I62A	**Tamworth**	**107.81**	**327**	IAMs_20	IAMs_20	05 01 25.1		
	comp=Z,796nm,18.0s							
LMN	**Caledonia Moun**	**107.81**	**332**	IAMs_20	IAMs_20	04 57 06.0		
	comp=Z,926nm,19.0s							
G65A	**Princeton**	**107.94**	**330**	IAMs_20	IAMs_20	04 58 27.5		
	comp=Z,800nm,19.0s							
HNH	**Hanover**	**107.94**	**326**	IAMs_20	IAMs_20	04 58 47.7		
	comp=Z,760nm,19.0s							
WVL	**Waterville**	**107.95**	**328**	IAMs_20	IAMs_20	04 58 44.7		
	comp=Z,856nm,18.0s							
HENM	**Henderson Moun**	**108.03**	**310**	IAMs_20	IAMs_20	05 10 43.5		
	comp=Z,800nm,18.0s							
N54A	**Moraine State**	**108.05**	**319**	IAMs_20	IAMs_20	04 57 19.5		
	comp=Z,674nm,19.0s							
K58A	**Earlville**	**108.16**	**323**	IAMs_20	IAMs_20	05 06 25.5		
	comp=Z,622nm,18.0s							
N53A	**Lisbon**	**108.21**	**319**	IAMs_20	IAMs_20	05 03 37.0		
	comp=Z,619nm,18.0s							
L56A	**Greenwood**	**108.24**	**322**	IAMs_20	IAMs_20	05 00 40.6		
	comp=Z,659nm,20.0s							
BRTR	**Keskin Array B**	**108.29**	**44**	PP	**PP**	**04 15 35.2**	**-1.1**	
	comp=Z,0.9nm,0.9s,baz=191,slow=5.8,SNR=4.6							
LBNH	**Lisbon**	**108.32**	**326**	IAMs_20	IAMs_20	05 01 42.6		
	comp=Z,721nm,19.0s							
H62A	**Milan**	**108.39**	**327**	IAMs_20	IAMs_20	05 01 05.5		
	comp=Z,924nm,19.0s							
M54A	**Oil Creek Stat**	**108.41**	**320**	IAMs_20	IAMs_20	05 09 18.2		
	comp=Z,713nm,18.0s							
FCAR	**Ozark Folk Cen**	**108.46**	**308**	IAMs_20	IAMs_20	05 01 49.3		
	comp=Z,646nm,20.0s							
VT1	**Waterbury**	**108.66**	**326**	IAMs_20	IAMs_20	04 59 09.2		
	comp=Z,736nm,20.0s							
ALLY	**Alegheny Colle**	**108.71**	**319**	IAMs_20	IAMs_20	05 09 54.0		
	comp=Z,742nm,18.0s							
F64A	**Sherman**	**108.77**	**330**	IAMs_20	IAMs_20	04 59 23.4		
	comp=Z,620nm,19.0s							
NCB	**Newcomb**	**108.79**	**325**	IAMs_20	IAMs_20	05 00 06.1		
	comp=Z,663nm,18.0s							
G62A	**West of Eustis**	**108.80**	**328**	IAMs_20	IAMs_20	04 59 04.2		
	comp=Z,827nm,19.0s							
J57A	**Williamstown**	**108.85**	**323**	IAMs_20	IAMs_20	05 06 37.8		
	comp=Z,633nm,18.0s							
MMNY	**Mt. Morris Dam**	**108.89**	**322**	IAMs_20	IAMs_20	05 01 10.7		
	comp=Z,698nm,19.0s							
BLO	**Bloomington**	**108.94**	**314**	IAMs_20	IAMs_20	05 03 34.4		
	comp=Z,663nm,19.0s							
T42A	**Van Buren**	**108.98**	**309**	IAMs_20	IAMs_20	05 11 18.6		
	comp=Z,580nm,18.0s							
BKNI	**Bangkinang**	**109.02**	**121**	IAMs_20	IAMs_20	05 01 10.3		
	comp=Z,902nm,18.0s							
M52A	**Chesterland**	**109.05**	**319**	IAMs_20	IAMs_20	05 04 03.0		
	comp=Z,636nm,19.0s							
ERPA	**Erie**	**109.06**	**320**	IAMs_20	IAMs_20	05 09 20.5		
	comp=Z,660nm,18.0s							
U40A	**Yellville**	**109.17**	**308**	IAMs_20	IAMs_20	05 02 21.5		
	comp=Z,648nm,20.0s							
E63A	**Oxbow**	**109.30**	**330**	IAMs_20	IAMs_20	05 00 42.8		
	comp=Z,708nm,20.0s							
FRNY	**Flat Rock**	**109.37**	**326**	IAMs_20	IAMs_20	05 02 56.3		
	comp=Z,763nm,19.0s							
PQI	**Presque Isle**	**109.42**	**330**	IAMs_20	IAMs_20	04 59 12.6		
	comp=Z,836nm,19.0s							
MEDO	**Medina**	**109.46**	**321**	IAMs_20	IAMs_20	05 01 27.8		
	comp=Z,722nm,19.0s							
LONY	**Lake Ozonia**	**109.48**	**325**	IAMs_20	IAMs_20	05 00 08.4		
	comp=Z,707nm,21.0s							
M50A	**Fremont**	**109.54**	**317**	IAMs_20	IAMs_20	05 05 40.2		
	comp=Z,576nm,18.0s							
N49A	**Columbus Grove**	**109.55**	**316**	IAMs_20	IAMs_20	05 08 58.4		
	comp=Z,602nm,18.0s							
J54A	**Appleton**	**109.61**	**321**	IAMs_20	IAMs_20	05 01 33.0		
	comp=Z,714nm,19.0s							
PECO	**Prince Edward**	**109.65**	**323**	IAMs_20	IAMs_20	05 07 32.9		
	comp=Z,690nm,18.0s							
Q44A	**Meyer Farm, Va**	**109.71**	**312**	IAMs_20	IAMs_20	05 01 35.8		
	comp=Z,706nm,20.0s							
E62A	**Clayton Lake**	**109.79**	**329**	IAMs_20	IAMs_20	04 56 08.4		
	comp=Z,768nm,21.0s							
CCM	**Cathedral Cave**	**109.91**	**310**	IAMs_20	IAMs_20	05 11 44.2		
	comp=Z,984nm,19.0s							
D62A	**Allapoint, All**	**110.08**	**330**	IAMs_20	IAMs_20	04 56 05.0		
	comp=Z,732nm,20.0s							
N47A	**Urbana**	**110.09**	**315**	IAMs_20	IAMs_20	05 12 08.7		
	comp=Z,647nm,18.0s							
SFIN	**Lafayette**	**110.20**	**314**	IAMs_20	IAMs_20	05 12 03.8		
	comp=Z,876nm,18.0s							
M48A	**Edgerton**	**110.24**	**316**	IAMs_20	IAMs_20	05 04 52.6		
	comp=Z,681nm,18.0s							
GEC2	**GERESS Array S**	**110.31**	**26**	IAMs_20	IAMs_20	04 57 45.7		
	comp=Z,890nm,19.0s							
DELO	**Deloro Mine**	**110.37**	**323**	IAMs_20	IAMs_20	05 08 09.0		
	comp=Z,675nm,18.0s							
S39A	**Bolivar**	**110.49**	**308**	IAMs_20	IAMs_20	05 00 12.5		
	comp=Z,728nm,21.0s							
P43A	**Skaggs, Pawnee**	**110.55**	**312**	IAMs_20	IAMs_20	05 01 49.9		
	comp=Z,835nm,20.0s							
KHC	**Kasperske Hory**	**110.55**	**26**	*e*PS	PS	04 25 20.9	-0.9	
KHC				AMS	AMS	04 59 40.0		
	comp=Z,700nm,17.5s							
O44A	**Mansfield**	**110.56**	**313**	IAMs_20	IAMs_20	05 12 01.1		
	comp=Z,574nm,18.0s							
TIRR	**Tirgusor**	**110.57**	**38**	IAMs_20	IAMs_20	05 04 21.7		
	comp=Z,970nm,19.0s							
MLR	**Muntele Rosu**	**110.68**	**36**	IAMs_20	IAMs_20	05 03 55.6		
	comp=Z,631nm,18.0s							
MNTX	**Cornudas Mount**	**111.12**	**296**	IAMs_20	IAMs_20	05 08 15.5		
	comp=Z,715nm,18.0s							
TREC	**Trest**	**111.17**	**27**	AMS	AMS	05 02 10.0		
	comp=Z,1µm,15.9s							
NKC	**Novy Kostel**	**111.31**	**25**	AMS	AMS	04 58 50.0		
	comp=Z,900nm,17.9s							
M44A	**Midewin, Midew**	**111.44**	**314**	IAMs_20	IAMs_20	05 12 59.5		
	comp=Z,768nm,18.0s							
J48A	**Bridge Port**	**111.46**	**318**	IAMs_20	IAMs_20	04 59 33.9		
	comp=Z,638nm,19.0s							
P40A	**Paris**	**111.49**	**310**	IAMs_20	IAMs_20	05 03 32.0		
	comp=Z,719nm,20.0s							
GOPC	**GO Pecny, Ondr**	**111.57**	**26**	AMS	AMS	04 58 50.0		
	comp=Z,600nm,19.0s							
PRU	**Pruhonice**	**111.58**	**26**	*e*PS	PS	04 25 26.9	-4.1	
PRU				AMS	AMS	05 00 00.0		
	comp=Z,600nm,19.2s							
MYKOM	**Kota Tinggi**	**111.61**	**123**	IAMs_20	IAMs_20	04 55 42.9		
	comp=Z,740nm,19.0s							
HSIG		**111.75**	**290**	IAMs_20	IAMs_20	05 11 29.3		
	comp=Z,574nm,18.0s							
J47A	**Sunmer**	**111.79**	**317**	IAMs_20	IAMs_20	05 00 21.7		
	comp=Z,700nm,19.0s							
N41A	**Harden Midland**	**111.99**	**312**	IAMs_20	IAMs_20	05 02 33.1		
	comp=Z,635nm,20.0s							
L44A	**Lake County Fo**	**112.06**	**314**	IAMs_20	IAMs_20	05 13 01.9		
	comp=Z,887nm,18.0s							
OKC	**Ostrava-Krasne**	**112.34**	**29**	*e*PS	PS	04 25 39.7	+1.6	
OKC				AMS	AMS	05 02 10.0		
	comp=Z,700nm,16.4s							
I47A	**Gladwin**	**112.35**	**318**	IAMs_20	IAMs_20	05 02 49.9		
	comp=Z,641nm,19.0s							
DPC	**Dobruska-Polom**	**112.35**	**27**	*e*PS	PS	04 25 35.0	-3.2	
DPC				AMS	AMS	04 59 40.0		
	comp=Z,800nm,16.8s							
UPC	**Upice**	**112.42**	**27**	*e*PS	PS	04 25 51.7	+13	
UPC				AMS	AMS	04 59 30.0		
	comp=Z,800nm,18.2s							
CLL	**Collm**	**112.44**	**25**	*e*PS	PS	04 25 45.0	+6.1	
CLL				*e*PPS	PPS	04 26 48.0		
CLL				*e*SS	SS	04 31 49.0	+4.2	
CLL				*e*SSS	SSS	04 36 00.0		
CLL				*e*SSSS		04 39 06.0		
CLL	**Collm**	**112.44**	**25**	IAMs_20	IAMs_20	05 07 27.1		
	comp=Z,759nm,18.0s							
H48A	**Harrisville**	**112.50**	**319**	IAMs_20	IAMs_20	05 11 41.5		
	comp=Z,628nm,18.0s							
OSTC	**Ostas**	**112.51**	**27**	*e*S	**Sdif**	**04 23 30.2**	**-15**	
OSTC				*e*PS	PS	04 25 50.2	+11	
OSTC				AMS	AMS	04 59 40.0		
	comp=Z,700nm,17.8s							
D53A	**Lac Vacive, Po**	**112.67**	**324**	IAMs_20	IAMs_20	05 02 26.7		
	comp=Z,728nm,19.0s							
K43A	**Burlington**	**112.67**	**314**	IAMs_20	IAMs_20	05 12 45.1		
	comp=Z,700nm,19.0s							
KIS	**Kishinev**	**112.94**	**37**	*e*PP	**PP**	**04 16 16.0**	**+6.5**	
KIS	**Kishinev**	**112.94**	**37**	*e*PS	PS	04 25 52.0	+8.4	
KIS				*e*SS	SS	04 30 28.0	-84	
KIS				*e*L	L	04 51 04.0		
KIS				LRM	MLR	05 04 00.0		
	comp=Z,500nm,18.0s							
I45A	**Fountain**	**113.00**	**317**	IAMs_20	IAMs_20	05 06 43.8		
	comp=Z,760nm,19.0s							
N38A	**Joes South For**	**113.05**	**310**	IAMs_20	IAMs_20	05 03 26.1		
	comp=Z,830nm,20.0s							
KSU1	**Kansas State U**	**113.09**	**307**	IAMs_20	IAMs_20	05 08 36.4		
	comp=Z,625nm,18.0s							
L40A	**Anamosa**	**113.28**	**312**	IAMs_20	IAMs_20	05 03 55.2		
	comp=Z,732nm,20.0s							
VLDQ	**Val d'Or**	**113.50**	**325**	IAMs_20	IAMs_20	05 03 04.0		
	comp=Z,709nm,19.0s							
G45A	**Suttons Bay**	**113.64**	**318**	IAMs_20	IAMs_20	05 12 05.7		
	comp=Z,660nm,18.0s							
Y22D	**IRIS PASSCAL I**	**113.80**	**296**	IAMs_20	IAMs_20	05 10 49.4		
	comp=Z,858nm,18.0s							
I42A	**Draeger Farm,**	**113.90**	**315**	IAMs_20	IAMs_20	05 09 23.6		
	comp=Z,825nm,18.0s							
H43A	**Windswept, Lux**	**113.95**	**316**	IAMs_20	IAMs_20	05 05 37.9		
	comp=Z,556nm,18.0s							
ANMO	**Albuquerque**	**114.28**	**297**	IAMs_20	IAMs_20	05 10 21.0		
	comp=Z,602nm,18.0s							
TUC	**Tucson**	**114.31**	**292**	IAMs_20	IAMs_20	05 09 06.1		
	comp=Z,614nm,19.0s							
K38A	**Parkersburg**	**114.40**	**311**	IAMs_20	IAMs_20	05 06 26.9		
	comp=Z,977nm,20.0s							
I40A	**Norwalk**	**114.57**	**314**	IAMs_20	IAMs_20	05 03 15.3		
	comp=Z,594nm,20.0s							
N33A	**J Bar K, Exete**	**114.80**	**307**	IAMs_20	IAMs_20	05 14 35.7		
	comp=Z,866nm,18.0s							
KIV	**Kislovodsk**	**115.43**	**48**	*e*PKIKP	**PKiKP**	**04 15 25.6**	**+0.7**	
KIV				*e*		04 16 26.9		
KIV				pmax	pmax			
	comp=Z,4.0nm,0.9s							
G40A	**Rib Lake**	**115.56**	**315**	IAMs_20	IAMs_20	05 06 56.4		
	comp=Z,615nm,19.0s							
BGNE	**Belgrade**	**115.66**	**307**	IAMs_20	IAMs_20	05 13 45.3		
	comp=Z,668nm,20.0s							
X18A	**Snowflake**	**115.66**	**294**	IAMs_20	IAMs_20	05 10 10.8		
	comp=Z,534nm,18.0s							
COWI	**Conover**	**115.84**	**316**	IAMs_20	IAMs_20	05 04 51.0		
	comp=Z,598nm,19.0s							
W18A	**Petrified Fore**	**116.03**	**295**	IAMs_20	IAMs_20	05 14 52.3		
	comp=Z,756nm,18.0s							
SDCO	**Great Sand Dun**	**116.06**	**299**	P	**PKiKP**	**04 15 26.9**	**+0.3**	
	baz=143							
113A	**Mohawk Valley,**	**116.20**	**290**	IAMs_20	IAMs_20	05 14 20.0		
	comp=Z,824nm,18.0s							
D41A	**Chassel**	**116.43**	**317**	IAMs_20	IAMs_20	05 01 50.5		
	comp=Z,610nm,21.0s							
SPMN	**Marine on St.**	**116.55**	**313**	IAMs_20	IAMs_20	05 04 44.6		
	comp=Z,591nm,19.0s							
SCHQ	**Schefferville**	**116.60**	**334**	IAMs_20	IAMs_20	05 02 20.5		
	comp=Z,842nm,20.0s							
MAK	**Makhachkala**	**116.62**	**52**	*e*P	**Pdif**	**04 11 44.2**	**+2.0**	
MAK				*i*		04 15 28.8		
MAK				*e*		04 16 35.8		
MAK				pmax	pmax			
	comp=Z,189nm,1.2s							
S22A	**4UR Ranch, Cre**	**116.69**	**299**	P	**PKiKP**	**04 15 28.7**	**+0.9**	
	baz=143							
ECSD	**EROS Data Cent**	**116.89**	**310**	IAMs_20	IAMs_20	05 06 29.8		
	comp=Z,683nm,19.0s							
GLA	**Glamis**	**116.97**	**290**	IAMs_20	IAMs_20	05 14 32.4		
	comp=Z,709nm,19.0s							
OGNE	**Ogallala**	**117.01**	**304**	IAMs_20	IAMs_20	05 07 18.1		
	comp=Z,582nm,19.0s							
MVCO	**Mesa Verde**	**117.08**	**297**	IAMs_20	IAMs_20	05 11 56.1		
	comp=Z,769nm,19.0s							
E38A	**The Farm, Brul**	**117.19**	**315**	IAMs_20	IAMs_20	05 15 32.7		
	comp=Z,791nm,18.0s							
F36A	**Milaca**	**117.36**	**313**	IAMs_20	IAMs_20	05

PMPB	Monarch Peak	122.52	287		IAMs_20	IAMs_20	05 16 06.3			
	comp=Z,892nm,21.0s									
MDPB	Devils Postpil	122.70	290		IAMs_20	IAMs_20	05 08 37.3			
	comp=Z,529nm,18.0s									
NVAR	Mina Array Bea	122.91	291		PKP	**PKiKP**	**04 15 40.0**	**+0.2**		
	comp=Z,1.7nm,0.7s,baz=132,slow=2.8,SNR=6.5									
RYN	Ryan	123.17	291		IAMs_20	IAMs_20	05 18 36.7			
	comp=Z,469nm,18.0s									
KVN	Kaiserville	123.28	292		IAMs_20	IAMs_20	05 18 00.4			
	comp=Z,499nm,18.0s									
LAO	LASA Array	123.39	305		P	**PKiKP**	**04 15 40.4**	**+0.1**		
	baz=140									
LAO	LASA Array	123.39	305		IAMs_20	IAMs_20	05 20 55.9			
	comp=Z,747nm,19.0s									
IMW	Indian Meadow	123.43	300		IAMs_20	IAMs_20	05 16 22.2			
	comp=Z,806nm,19.0s									
FLWY	Flagg Ranch	123.46	301		IAMs_20	IAMs_20	05 11 56.9			
	comp=Z,757nm,18.0s									
WAKR	Walker	123.55	290		IAMs_20	IAMs_20	05 17 41.6			
	comp=Z,563nm,18.0s									
CMAR	Chiang Mai Arr	123.57	109		PKP	**PKPdf**	**04 15 40.9**	**-0.2**		
	comp=Z,9.4nm,0.8s,baz=224,slow=3.3,SNR=9.9									
CMAR	Chiang Mai Arr	123.57	109		PKiKP	**PKPdf**	**04 15 41.0**	**-0.2**		
RLMT	Red Lodge	123.58	302		IAMs_20	IAMs_20	05 20 53.1			
	comp=Z,688nm,18.0s									
CMB	Columbia Colle	123.68	289		IAMs_20	IAMs_20	05 18 07.2			
	comp=Z,565nm,18.0s									
DGMT	Dagmar	123.86	308		IAMs_20	IAMs_20	05 09 10.4			
	comp=Z,654nm,19.0s									
CHTO	Chiang Mai	123.87	109		PKiKP	**PKPdf**	**04 15 40.8**	**-1.0**		
CHTO					MLR	MLR				
	comp=Z,300nm,18.0s									
CHTO	Chiang Mai	123.87	109			**PKPdf**	**04 15 40.8**	**-1.0**		
PNTR	Pine Nut	124.07	291		IAMs_20	IAMs_20	05 04 53.5			
	comp=Z,529nm,19.0s									
RUBR	Rubicon Trail	124.33	290		IAMs_20	IAMs_20	05 18 47.3			
	comp=Z,515nm,19.0s									
AFDM	Forest Hills D	124.67	289		IAMs_20	IAMs_20	05 18 00.3			
	comp=Z,533nm,20.0s									
FINES	FINESS Array B	124.72	27		PKP	**PKPdf**	**04 15 41.3**	**-0.7**		
	comp=Z,4.7nm,0.7s,baz=116,slow=4.4,SNR=21									
FINES	FINESS Array B	124.72	27	*c i*	PKiKP	**PKiKP**	**04 15 42.5**	**+0.2**		
FINES					pmax	pmax				
	comp=Z,5.0nm,0.7s									
BEKR	Beckworth	125.05	291		IAMs_20	IAMs_20	05 19 13.2			
	comp=Z,530nm,18.0s									
DLMT	Dillon	125.31	300		IAMs_20	IAMs_20	05 15 43.0			
	comp=Z,646nm,18.0s									
ORV	Oroville	125.40	290		IAMs_20	IAMs_20	05 18 40.6			
	comp=Z,494nm,19.0s									
BTK	Batken	125.40	70		IAMs_20	IAMs_20	05 13 06.1			
	comp=Z,501nm,18.0s									
TAS	Tashkent	125.57	67		IAMs_20	IAMs_20	05 13 48.5			
	comp=Z,756nm,18.0s									
EGMT	Eagleton	125.98	304		P	**PKiKP**	**04 15 45.5**	**+0.1**		
	baz=138									
EGMT	Eagleton	125.98	304		IAMs_20	IAMs_20	05 21 42.4			
	comp=Z,631nm,18.0s									
WVOR	Wild Horse Val	126.08	294		IAMs_20	IAMs_20	05 19 36.5			
	comp=Z,555nm,19.0s									
O03E	Paynes Creek	126.10	290		P	**PKiKP**	**04 15 46.0**	**+0.1**		
	baz=138									
MOD	Modoc Plateau	126.53	292		IAMs_20	IAMs_20	05 18 43.3			
	comp=Z,619nm,19.0s									
J08A	Circle Bar Ran	126.68	295		IAMs_20	IAMs_20	05 12 16.3			
	comp=Z,530nm,18.0s									
MSO	Missoula	127.03	301		P	**PKiKP**	**04 15 47.6**	**0.0**		
	baz=137									
N02D	Trinity Center	127.07	290		P	**PKiKP**	**04 15 48.5**	**+0.7**		
	baz=137									
BMO	Blue Mountains	127.20	297		IAMs_20	IAMs_20	05 15 32.0			
	comp=Z,719nm,18.0s									
M04C	Macdoel	127.22	291		P	**PKiKP**	**04 15 49.5**	**+1.3**		
	baz=137									
K05A	Summer Lake	127.43	293		IAMs_20	IAMs_20	05 06 30.2			
	comp=Z,608nm,18.0s									
FFC	Flin Flon	127.66	314		PKiKP	**PKiKP**	**04 15 48.8**	**+0.4**		
FFC					MLR	MLR				
	comp=Z,700nm,20.0s									
FFC	Flin Flon	127.66	314			**PKiKP**	**04 15 48.8**	**+0.4**		
FFC	Flin Flon	127.66	314		IAMs_20	IAMs_20	05 12 49.7			
	comp=Z,678nm,20.0s									
KSH	Kashi	127.67	74		PKP	**PKiKP**	**04 15 49.8**	**+0.7**		
KSH					sPKP		04 15 59.8			
KSH					PP	**PP**	**04 17 53.5**	**+2.7**		
KSH					SKKS		04 24 41.0			
KSH					SS	**SS**	**04 34 57.4**	**-3.8**		
KSH					AMB	AMB				
	comp=Z,220nm,5.1s									
KSH					LR	LR				
	comp=Z,59nm,4.1s									
KSH					LR	LR				
	comp=Z,68nm,6.9s									
KSH					LR	LR				
	comp=Z,410nm,11.5s									
I07A	Izee	127.72	295		IAMs_20	IAMs_20	05 20 17.8			
	comp=Z,777nm,20.0s									
JTMT	Jette	127.85	301		IAMs_20	IAMs_20	05 21 33.2			
	comp=Z,616nm,19.0s									
KLMR	Klimovskoe	127.97	34	*e*	PKiKP	**PKPdf**	**04 15 46.6**	**-1.6**		
KLMR				*e*			04 17 50.2			
KLMR					pmax	pmax				
	comp=Z,14nm,1.3s									
KLMR	Klimovskoe	127.97	34	*e*	PKPdf	**PKPdf**	**04 15 46.6**	**-1.6**		
KLMR					AMP		04 15 50.6			
	comp=Z,14nm,1.3s									
KLMR				*e*	PP	**PP**	**04 17 50.2**	**-2.0**		
KLMR					LQ	LQ	05 03 54.2			
KLMR					LQ	LQ	05 03 54.2			
KLMR					LR	LR	05 09 33.0			
F10A	Beach Ranch, E	127.97	298		IAMs_20	IAMs_20	05 23 36.4			
	comp=Z,704nm,18.0s									
J05D	Fort Rock, OR	128.00	293		P	**PKiKP**	**04 15 50.4**	**+0.7**		
	baz=137									
PINE	Pine Mountain	128.22	294		IAMs_20	IAMs_20	05 21 05.2			
	comp=Z,684nm,18.0s									
G08A	Pilot Rock	128.32	296			**PKiKP**	**04 15 50.3**	**+0.1**		
G08A					IAMs_20	IAMs_20	05 16 28.8			
	comp=Z,633nm,18.0s									
LSA	Lhasa	128.48	94		IAMs_20	IAMs_20	05 08 40.7			
	comp=Z,723nm,18.0s									
SLVN	Son La	128.51	112		IAMs_20	IAMs_20	05 10 11.7			
	comp=Z,480nm,19.0s									
E09A	Wood Farm, Sta	128.80	298		IAMs_20	IAMs_20	05 22 54.4			
	comp=Z,480nm,19.0s									
G06A	Carlson Farm,	129.11	295		IAMs_20	IAMs_20	05 21 12.6			
	comp=Z,699nm,18.0s									
AAK	Ala-Archa	129.17	70	‖ *i*	PKiKP	**PKiKP**	**04 15 53.2**	**+1.1**		
AAK					pmax	pmax				
	comp=Z,4.0nm,1.0s									
AAK	Ala-Archa	129.17	70			**PKPdf**	**04 15 51.1**	**-0.2**		
AAK	Ala-Archa	129.17	70		IAMs_20	IAMs_20	05 11 52.8			
	comp=Z,491nm,18.0s									
E08A	Dider Farm, El	129.23	297		IAMs_20	IAMs_20	05 15 43.7			
	comp=Z,434nm,18.0s									
FRU1	Bishkek	129.36	70		IAMs_20	IAMs_20	05 12 51.0			
	comp=Z,476nm,19.0s									
HAWA	Hanford	129.39	297		IAMs_20	IAMs_20	05 20 51.0			
	comp=Z,628nm,18.0s									
H04A	Detroit Lake	129.49	294		IAMs_20	IAMs_20	05 21 23.7			
	comp=Z,628nm,18.0s									
D08A	Wollman Farm,	129.56	298		IAMs_20	IAMs_20	05 22 53.6			
	comp=Z,663nm,19.0s									
C09A	Chrisman Ranch	129.78	299		IAMs_20	IAMs_20	05 16 05.2			
	comp=Z,612nm,18.0s									
BOOM	Boomskoye usch	129.81	71		IAMs_20	IAMs_20	05 15 14.8			
	comp=Z,674nm,18.0s									
TARG	Taragay, Kyrgy	130.23	73		IAMs_20	IAMs_20	05 15 34.1			
	comp=Z,690nm,19.0s									
F04A	Amboy	130.49	295		IAMs_20	IAMs_20	05 20 55.1			
	comp=Z,439nm,18.0s									
LTY	Liberty	130.55	297		IAMs_20	IAMs_20	05 23 28.7			
	comp=Z,536nm,18.0s									
LON	Longmire	130.76	296		IAMs_20	IAMs_20	05 25 14.2			
	comp=Z,575nm,18.0s									
KMI	Kunming	131.04	108		IAMs_20	IAMs_20	05 13 00.9			
	comp=Z,609nm,18.0s									
PRZ	Przheval'sk	131.08	73		IAMs_20	IAMs_20	05 15 53.2			
	comp=Z,548nm,18.0s									
D05A	Enumclaw	131.15	296		IAMs_20	IAMs_20	05 22 05.6			
	comp=Z,613nm,18.0s									
ARCES	ARCESS Array B	131.44	21		PKP	**PKPdf**	**04 15 54.0**	**-0.7**		
	comp=Z,1.1nm,0.5s,baz=188,slow=1.5,SNR=11									
ARCES	ARCESS Array B	131.44	21		PKiKP	**PKPdf**	**04 15 54.0**	**-0.7**		
ARU	Arti	131.48	47	*i*	PKiKP	**PKPdf**	**04 15 54.2**	**-0.9**		
ARU	Arti	131.48	47		IAMs_20	IAMs_20	05 16 21.0			
	comp=Z,507nm,20.0s									
E03A	Lebam	131.48	294		IAMs_20	IAMs_20	05 22 47.5			
	comp=Z,583nm,18.0s									
GYA	Guiyang	134.15	111	*e*	PKP	**PKPdf**	**04 15 59.1**	**-2.2**		
GYA					PP	**PP**	**04 18 32.0**	**-0.6**		
GYA					PKS		04 19 36.3			
GYA					SKKS		04 25 26.3			
GYA					SS	**SS**	**04 36 23.8**	**+3.6**		
GYA					AMB	AMB				
	comp=Z,80nm,6.5s									
GYA					LR	LR				
	comp=Z,430nm,17.1s									
GYA					LR	LR				
	comp=Z,200nm,20.2s									
GYA					LR	LR				
	comp=Z,420nm,18.1s									
BRVK	Borovoye	134.27	57	‖ *i*	PKiKP	**PKiKP**	**04 16 03.4**	**+1.6**		
BRVK					pmax	pmax				
	comp=Z,5.0nm,0.8s									
BRVK	Borovoye	134.27	57		IAMs_20	IAMs_20	05 17 07.3			
	comp=Z,656nm,19.0s									
MKAR	Makanchi Array	136.06	71		PKhKP	PKPpre	04 15 55.1			
	comp=Z,0.8nm,0.7s,baz=247,slow=6.2,SNR=5.3									
MKAR					PKP	**PKPdf**	**04 16 03.7**	**-0.3**		
	comp=Z,2.3nm,0.7s,baz=266,slow=3.3,SNR=12									
MKAR					PP	**PP**	**04 18 47.3**	**+2.7**		
	comp=Z,1.4nm,1.1s,baz=250,slow=4.2,SNR=2.2									
MKAR					SKPbc	**SKPbc**	**04 19 36.0**	**+1.7**		
	comp=Z,2.2nm,1.1s,baz=238,slow=4.6,SNR=6.2									
MKAR	Makanchi Array	136.06	71	*c i*	PKiKP	**PKPdf**	**04 16 04.0**	**0.0**		
MKAR					pmax	pmax				
	comp=Z,2.0nm,0.7s									
CD2	Chengdu	136.21	104		PKP	**PKPdf**	**04 16 04.5**	**-0.4**		
CD2					PP	**PP**	**04 18 45.8**	**+0.2**		
CD2					AMB	AMB				
	comp=Z,150nm,7.8s									
CD2					LR	LR				
	comp=Z,530nm,16.2s									
CD2					LR	LR				
	comp=Z,380nm,19.1s									
CD2					LR	LR				
	comp=Z,540nm,18.1s									
TULEG	Thule	136.22	346			**PKPdf**	**04 16 02.1**	**-1.3**		
KURK	Kurchatov	136.74	64	‖ *i*	PKiKP	**PKiKP**	**04 16 06.7**	**-0.2**		
KURK	Kurchatov	136.74	64			**PKPdf**	**04 16 04.0**	**-1.1**		
KURK	Kurchatov	136.74	64		IAMs_20	IAMs_20	05 19 13.8			
	comp=Z,434nm,19.0s									
WMQ	Urumqi	136.92	78	*e*	PKP	**PKPdf**	**04 16 06.3**	**+0.5**		
WMQ					LR	LR				
	comp=Z,180nm,23.1s									
WMQ					LR	LR				
	comp=Z,140nm,20.7s									
WMQ					LR	LR				
	comp=Z,330nm,20.7s									
BBB	Bella Bella	137.43	298		IAMs_20	IAMs_20	05 18 39.7			
	comp=Z,524nm,19.0s									
YKA	Yellowknife Ar	137.75	316		PKhKP	PKPpre	04 15 56.3			
	comp=Z,0.3nm,0.6s,baz=122,slow=3.4,SNR=9.8									
YKA					PKP	**PKPdf**	**04 16 07.0**	**+0.4**		
	comp=Z,9.4nm,0.9s,baz=133,slow=1.7,SNR=6.7									
YKA					PP	**PP**	**04 18 55.3**	**+0.5**		
	comp=Z,0.5nm,0.8s,baz=102,slow=5.7,SNR=4.7									
YKA					SKPbc	**SKiKP**	**04 19 41.0**	**-1.9**		
	comp=Z,2.5nm,1.0s,baz=129,slow=2.3,SNR=6.5									
YKA					PKKP	**PKKPdf**	**04 25 39.6**	**-0.2**		
	comp=Z,0.1nm,0.3s,baz=289,slow=1.6,SNR=4.6									
YKA	Yellowknife Ar	137.75	316		PKiKP	**PKPdf**	**04 16 07.0**	**+0.4**		
YKA							05 15 56.3			
KNMB	Chin-men Tao	138.11	125		IAMs_20	IAMs_20	05 15 47.0			
	comp=Z,561nm,18.0s									
YULB	Yu-li	138.43	130		IAMs_20	IAMs_20	05 18 03.3			
	comp=Z,433nm,18.0s									
QZH	Quanzhou	138.62	125	*e*	PKP	**PKPdf**	**04 16 07.0**	**-2.4**		
QZH				*e*	PP	**PP**	**04 19 05.8**	**+5.6**		
QZH					LR	LR				
	comp=Z,390nm,16.6s									
QZH					LR	LR				
	comp=Z,270nm,17.1s									
QZH					LR	LR				
	comp=Z,650nm,17.1s									
SSLB	Suanglung	138.63	129		IAMs_20	IAMs_20	05 17 46.8			
	comp=Z,397nm,18.0s									
ENH	Enshi	138.69	111		IAMs_20	IAMs_20	05 15 42.7			
	comp=Z,469nm,18.0s									
NACB	Ninganchiao	139.24	130		IAMs_20	IAMs_20	05 19 28.0			
	comp=Z,468nm,18.0s									
YHNB	Yeheng	139.59	129		IAMs_20	IAMs_20	05 15 13.1			
	comp=Z,490nm,19.0s									
MOBC	Moresby Island	139.88	297		IAMs_20	IAMs_20	05 31 11.6			
	comp=Z,604nm,18.0s									
TATO	Taipei	139.90	129		IAMs_20	IAMs_20	05 15 31.5			
	comp=Z,535nm,19.0s									
YOJ	Yonaguni jima	140.09	131		IAMs_20	IAMs_20	05 27 28.4			
	comp=Z,448nm,19.0s									
GTA	Gaotai	140.45	92	*e*	PKP	**PKPdf**	**04 16 12.3**	**-0.2**		
WHN	Wuhan	141.35	116		PKP	**PKiKP**	**04 16 18.3**	**+1.3**		
WHN					LR	LR				
	comp=Z,570nm,14.0s									
WHN					LR	LR				
	comp=Z,1μm,17.1s									
WHN					LR	LR				
	comp=Z,930nm,17.3s									
XAN	Xi'an	141.37	107		PKP	**PKPdf**	**04 16 13.3**	**-0.9**		
XAN					PKS	**PKSdf**	**04 19 51.3**	**+1.2**		
XAN					SKKS		04 26 08.6			
XAN					AMB	AMB				
	comp=Z,280nm,13.7s									
XAN					LR	LR				
	comp=Z,130nm,19.6s									
XAN					LR	LR				
	comp=Z,220nm,18.1s									
XAN					LR	LR				
	comp=Z,300nm,17.6s									
XAN	Xi'an	141.37	107		PKiKP	**PKPdf**	**04 16 13.6**	**-0.6**		
XAN					MLR	MLR				
	comp=Z,300nm,19.0s									
XAN	Xi'an	141.37	107			**PKPdf**	**04 16 13.6**	**-0.6**		
ZAA0	Zalesovo Array	141.72	64		IAMs_20	IAMs_20	05 22 52.6			
	comp=Z,436nm,18.0s									
ZALV	Zalesovo Beam	141.72	64		PKhKP	PKPpre	04 16 08.2			
	comp=Z,2.3nm,0.6s,baz=248,slow=3.0,SNR=8.7									
WRAK	Wrangell Islan	141.91	301		IAMs_20	IAMs_20	05 19 42.9			
	comp=Z,508nm,18.0s									
SIT	Sitka	143.64	300		IAMs_20	IAMs_20	05 32 20.8			
	comp=Z,581nm,18.0s									
BESE	Bessie Mountai	144.17	303		IAMs_20	IAMs_20	05 25 36.8			
	comp=Z,530nm,18.0s									
C36M	Paulatuk	144.46	323		P	**PKPdf**	**04 16 18.6**	**+0.1**		
	baz=112									
NJ2	Nanjing	144.77	120	*e*	PKP	PKPbc	04 16 19.8	+0.6		
SKAG	Skagway	144.80	304		IAMs_20	IAMs_20	05 25 15.1			
	comp=Z,498nm,19.0s									
WHY	Whitehorse	145.14	306		IAMs_20	IAMs_20	05 23 00.2			
	comp=Z,482nm,20.0s									
A36M	Sachs Harbour	145.72	327		P	**PKPab**	**04 16 21.4**	**0.0**		
	baz=107									
TIY	Taiyuan	146.01	106	*e*	PKPbc	**PKPbc**	**04 16 23.1**	**0.0**		
TIY					SKS	**SKSdf**	**04 23 21.4**	**-8.3**		
TIY					AMB	AMB				
	comp=Z,360nm,10.6s									
TIY					LR	LR				
	comp=Z,310nm,13.1s									
TIY					LR	LR				
	comp=Z,580nm,19.3s									
TIY					LR	LR				
	comp=Z,460nm,19.1s									
BTO	Baotou	146.84	100	*e*	PKPbc	**PKPbc**	**04 16 25.3**	**-0.2**		
TIA	Tai'an	147.28	113		PKPbc	**PKPbc**	**04 16 26.5**	**-0.2**		
INK	Inuvik	147.37	319		PKP2	**PKPdf**	**04 16 24.4**	**+1.0**		
INK					MLR	MLR				
	comp=Z,700nm,20.0s									
INK	Inuvik	147.37	319			**PKPdf**	**04 16 24.4**	**+1.0**		
HHC	Hu-ho-hao-te	147.84	101	*e*	PKPbc	**PKPab**	**04 16 31.3**	**+0.5**		
HHC					PP	PP	04 20 09.1	+13		
EPYK	Eagle Plains	148.01	315		P	**PKPbc**	**04 16 27.8**	**0.0**		
	baz=107									
YAH	Yahtse	148.12	303		IAMs_20	IAMs_20	05 25 39.0			
	comp=Z,498nm,18.0s									
CTGM	Chitina Glacie	148.16	304		IAMs_20	IAMs_20	05 27 42.1			
	comp=Z,590nm,20.0s									
BALM	Baldy	148.64	304		IAMs_20	IAMs_20	05 23 23.8			
	comp=Z,632nm,20.0s									
MOY	Mondy	148.78	77	*e*	PKP2	**PKiKP**	**04 16 32.7**	**+1.0**		
NRIK	Noril'sk	149.02	40		PKPbc	**PKPbc**	**04 16 30.8**	**+0.5**		
	comp=Z,8.9nm,0.8s,baz=344,slow=1.4,SNR=17									
MCARA	McCarthy VSAT	149.07	304		IAMs_20	IAMs_20	05 26 53.2			
	comp=Z,499nm,20.0s									
ZAK	Zakamensk	149.32	80	*e*	PKiKP	**PKPdf**	**04 16 24.8**	**-2.6**		
ZAK					pmax	pmax				
	comp=Z,17nm,1.7s									
EGAK	Eagle	149.33	311		IAMs_20	IAMs_20	05 22 39.6			
	comp=Z,473nm,21.0s									
GLB	Gilahina Butte	149.45	304		IAMs_20	IAMs_20	05 27 12.2			
	comp=Z,433nm,20.0s									
SONM	Songino Array	149.57	87		PKP	**PKPdf**	**04 16 27.3**	**-0.6**		
	comp=Z,0.8nm,0.6s,baz=87,slow=28,SNR=3.8									
SONM					PKPbc	**PKPbc**	**04 16 31.8**	**-0.6**		
	comp=Z,7.8nm,0.7s,baz=228,slow=1.9,SNR=25									
BJT	Baijiatuau	149.68	107		PKP2	**PKPbc**	**04 16 33.2**	**+0.4**		
BJT	Baijiatuau	149.68	107			**PKPbc**	**04 16 33.2**	**+0.4**		
BJT	Baijiatuau	149.68	107		IAMs_20	IAMs_20	05 32 31.3			
	comp=Z,548nm,18.0s									
BJI	Beijing	149.69	107		PKPbc	**PKPbc**	**04 16 32.0**	**-0.8**		
BJI					SKS	**SKSdf**	**04 23 35.1**	**+0.7**		
BJI					LR	LR				
	comp=Z,370nm,15.3s									
BJI					LR	LR				
	comp=Z,250nm,20.2s									
ULN	Ulaanbaatar	149.94	87	*d i*	PKiKP	**PKPbc**	**04 16 33.0**	**-0.4**		
ULN					pmax	pmax				
	comp=Z,14nm,1.7s									
ULN	Ulaanbaatar	149.94	87			**PKPbc**	**04 16 33.8**	**+0.4**		
TLY	Talaya	150.20	78	*e*	PKiKP	**PKPbc**	**04 16 33.6**	**-0.1**		
TLY					pmax	pmax				
	comp=Z,25nm,0.9s									
TLY	Talaya	150.20	78			**PKPbc**	**04 16 34.2**	**+0.5**		
JNU	Nakatsue	150.91	135			**PKPbc**	**04 16 35.7**	**-0.4**		
SCM	Sheep Creek Mo	151.16	304		IAMs_20	IAMs_20	05 30 22.6			
	comp=Z,571nm,21.0s									
DHY	Denali Highway	151.53	306		IAMs_20	IAMs_20	05 26 60.0			
	comp=Z,482nm,20.0s									
DL2	Dalian	151.61	115		PKPbc	**PKiKP**	**04 16 39.1**	**+1.3**		
DL2					PP	**PP**	**04 20 19.3**	**+1.6**		
SML	Sawmill	151.61	303		IAMs_20	IAMs_20	05 27 14.5			
	comp=Z,548nm,19.0s									
HDA	Harding Lake	151.66	309		P	**PKiKP**	**04 16 37.1**	**-0.1**		
	baz=103									
HDA	Harding Lake	151.66	309		IAMs_20	IAMs_20	05 27 40.3			
	comp=Z,470nm,20.0s									
ILAR	Eielson Array	151.71	310		PKPbc	**PKPbc**	**04 16 36.9**	**+0.1**		
	comp=Z,18nm,0.8s,baz=139,slow=1.3,SNR=66									
GHO	Glory Hole Cre	151.87	303		IAMs_20	IAMs_20	05 32 16.4			
	comp=Z,531nm,19.0s									
POKR	Poker Plat Res	152.00	310		P	**PKPbc**	**04 16 37.0**	**-0.5**		
	baz=101									
RC01	Rabbit Creek A	152.06	302		IAMs_20	IAMs_20	05 33 51.3			
	comp=Z,564nm,19.0s									
COLA	College	152.13	310		PKiKP	**PKPdf**	**04 16 31.7**	**+0.6**		
COLA							04 16 38.2			
COLA	College	152.13	310		PKPdf	**PKPdf**	**04 16 31.7**	**+0.6**		
COLA						**PKiKP**	**04 16 38.2**	**+0.1**		
TJN	Taejon	152.26	126	‖ *i*	PKiKP	**PKPbc**	**04 16 38.9**	**-0.1**		
BWN	Browne	152.68	308		IAMs_20	IAMs_20	05 28 22.5			
	comp=Z,548nm,19.0s									
TOLK	Toolik Lake Re	153.25	318		P	**PKPbc**	**04 16 40.4**	**+0.2**		
	baz=92									
TOLK	Toolik Lake Re	153.25	318		PKPbc	**PKiKP**	**04 16 41.2**	**+0.8**		
TOLK					IAMs_20	IAMs_20	05 24 09.0			
	comp=Z,566nm,19.0s									
BPAW	Bear Paw Mtn.	153.32	308		IAMs_20	IAMs_20	05 26 38.4			
	comp=Z,489nm,19.0s									
KSRS	Korea Array	153.41	126		PKPbc	**PKPbc**	**04 16 41.0**	**-0.5**		
	comp=Z,3.3nm,0.7s,baz=201,slow=1.9,SNR=13									
PPLA	Purkeypile	153.62	305		IAMs_20	IAMs_20	05 26 39.5			
	comp=Z,602nm,20.0s									
INU	Inuyama	155.11	143		IAMs_20	IAMs_20	05 27 43.7			
	comp=Z,480nm,21.0s									
MJAR	Matsushiro Arr	156.59	144		PKPab	**PKPab**	**04 17 08.2**	**+0.8**		
	comp=Z,0.8nm,0.3s,baz=202,slow=5.5,SNR=4.4									
BOD	Bodaibo	158.15	71	*e*	PKiKP	**PKPdf**	**04 16 37.9**	**-1.6**		
BOD					pmax	pmax				

WHAR	**Wooly Hollow**	**4.34**	**100**		**Pn**	**04 17 09.3**	**-0.3**
FCAR	**Ozark Folk Cen**	**4.38**	**92**	Pn	**Pn**	**04 17 10.2**	**+0.1**
WLAR	**White Oak Lake**	**4.38**	**123**	Pn	**Pn**	**04 17 10.3**	**+0.1**
237A	**Washetta, Mont**	**4.38**	**161**		**Pn**	**04 17 09.6**	**-0.7**
P38A	**Dawn**	**4.68**	**41**	Pn	**Pn**	**04 17 15.0**	**+0.8**
R40A	**Maddies Statio**	**4.70**	**62**		**Pn**	**04 17 15.2**	**+0.6**
R40A					**Pb**	**04 17 27.2**	**+1.5**
MSTX	**Muleshoe**	**4.83**	**245**		**Pn**	**04 17 18.1**	**+1.6**
KSCO	**Kaye Shedlock'**	**4.96**	**307**	Pn	**Pn**	**04 17 17.8**	**-0.4**
KSCO					**Pg**	**04 17 36.7**	**-0.8**
BGNE	**Belgrade**	**5.26**	**355**	Pn	**Pn**	**04 17 21.5**	**-0.8**
BGNE					**Pg**	**04 17 41.1**	**-2.3**
PBMO	**Poplar Bluff**	**5.75**	**82**	Pn	**Pn**	**04 17 28.3**	**-0.6**
L34A	**Svendsen Farm,**	**5.87**	**8**	Pn	**Pn**	**04 17 30.5**	**-0.1**
OGNE	**Ogallala**	**5.94**	**325**	Pn	**Pn**	**04 17 32.4**	**+0.6**
ISCO	**Idaho Springs**	**7.35**	**302**	Pn	**Pn**	**04 17 52.8**	**+1.5**
ISCO					**Pg**	**04 18 21.9**	**-1.5**
ANMO	**Albuquerque**	**7.39**	**263**	Pn	**Pn**	**04 17 51.3**	**-0.3**
ANMO					**Pg**	**04 18 20.8**	**-3.3**
ECSD	**EROS Data Cent**	**7.59**	**5**	Pn	**Pn**	**04 17 53.9**	**-0.5**
ECSD					**Sn**	**04 19 19.4**	**-1.6**
BNM	**Barren Site**	**7.73**	**258**	Pn	**Pn**	**04 17 57.7**	**+1.4**
PHWY	**Pilot Hill**	**8.05**	**312**	Pn	**Pn**	**04 18 02.9**	**+2.0**
L42A	**Oliver, Polo**	**8.44**	**44**	Pn	**Pn**	**04 18 06.2**	**+0.2**

IDC ***19*** *04:43:32.8±0.7, 56.°94S×24.°51W, h0km, mb4.2/8, mb1 4.3/9, mb1mx4.0/38, mbtmp4.2/9, ML3.8/1, Error ellipse: s-maj=27.8km s-min=18.0km az=67.0*
NEIC ***19*** *04:43:34.1±1.9, 56.°96S±0.°09×24.°6W±0.°2, h10km±1km, mb4.3/9, Error ellipse: s-maj=19.2km s-min=12.9km az=58.0*

ISC 19 04:43:34.2±0.7, **57.°0S**±0.°1×**24.°9W**±0.°1, **h10**km, **n30, σ1§21/30, mb4.2/10, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.12**	**288**	Pn	**Pn**	**04 45 19.8**	**+1.5**
HOPE				Sn	**Sn**	**04 46 35.5**	**-3.8**
VNA1	**Neumayer--Stat**	**15.43**	**159**	P	**Pn**	**04 47 10.8**	**-0.8**
VNA3	**Neumayer Olymp**	**15.67**	**162**	P	**Pn**	**04 47 13.3**	**-1.3**
VNA2	**Neumayer--Watz**	**15.82**	**159**	P	**Pn**	**04 47 15.6**	**-1.1**
	baz=326,slow=16						
SNAA	**Sanae**	**17.34**	**157**	P	**Pn**	**04 47 35.4**	**-0.6**
SNAA	**Sanae**	**17.34**	**157**	P	**Pn**	**04 47 35.6**	**-0.4**
	0.3nm,0.3s,baz=326,slow=13,SNR=28						
SNAA	**Sanae**	**17.34**	**157**		**Pn**	**04 47 35.8**	**-0.3**
EFI	**East Falkland**	**19.95**	**271**	P	**P**	**04 48 07.0**	**+1.0**
USHA	**Ushuaia**	**24.21**	**257**	P	**P**	**04 48 53.3**	**+2.7**
	16nm,0.4s,baz=194,slow=1.3,SNR=2.0						
GO09	**Cerro Castillo**	**27.93**	**261**	P	**P**	**04 49 23.5**	**-0.7**
GO09				IAmb	IAmb	04 49 24.3	
	comp=Z,9.3nm,1.1s						
QSPA	**South Pole Qui**	**33.24**	**180**	P	**P**	**04 50 11.2**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=210,slow=1.8,SNR=18						
QSPA	**South Pole Qui**	**33.24**	**180**	P	**P**	**04 50 12.4**	**+1.3**
QSPA				IAmb	IAmb	04 50 13.5	
	comp=Z,1.6nm,0.7s						
CPUP	**Villa Florida**	**38.42**	**309**	P	**P**	**04 50 56.9**	**+1.3**
	comp=Z,1.5nm,0.7s,baz=182,slow=9.6,SNR=5.7						
VNDA	**Vanda**	**45.67**	**182**	P	**P**	**04 51 55.2**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=183,slow=7.2,SNR=16						
VNDA	**Vanda**	**45.67**	**182**	P	**P**	**04 51 53.7**	**-0.6**
VNDA				IAmb	IAmb	04 51 57.5	
	comp=Z,1.5nm,0.7s						
SIV	**San Ignacio**	**49.18**	**311**	P	**P**	**04 52 22.2**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=134,slow=10,SNR=6.7						
GO01	**Chusmiza**	**49.55**	**300**	P	**P**	**04 52 25.2**	**-0.4**
PSGCX	**Pisagua**	**50.05**	**299**	P	**P**	**04 52 29.0**	**0.0**
PSGCX				IAmb	IAmb	04 52 30.9	
	comp=Z,5.9nm,1.1s						
LPAZ	**La Paz**	**51.98**	**303**	P	**P**	**04 52 45.2**	**+1.1**
	comp=Z,3.9nm,0.6s,baz=140,slow=5.1,SNR=30						
LPAZ	**La Paz**	**51.98**	**303**		**P**	**04 52 45.3**	**+1.1**
TOA0	**Torodi Ar. Sit**	**73.29**	**27**	P	**P**	**04 55 04.9**	**-0.7**
TOA0				IAmb	IAmb	04 55 06.3	
	comp=Z,2.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**73.29**	**27**	P	**P**	**04 55 05.3**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=200,slow=6.9,SNR=14						
ASAR	**Alice Springs**	**97.67**	**160**	P	Pdif	04 57 10.6	+1.4
	comp=Z,0.2nm,0.4s,baz=202,slow=7.0,SNR=1.6						
CMAR	**Chiang Mai Arr**	**123.53**	**109**	PKP	**PKiKP**	**05 02 31.6**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=226,slow=3.6,SNR=1.1						
FINES	**FINESS Array B**	**124.64**	**27**	PKP	**PKPdf**	**05 02 31.3**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=185,slow=34,SNR=1.7						
MKAR	**Makanchi Array**	**135.97**	**71**	PKP	**PKPdf**	**05 02 54.6**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=222,slow=1.9,SNR=2.4						
YKA	**Yellowknife Ar**	**137.75**	**316**	PKP	**PKPdf**	**05 02 57.2**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=123,slow=2.6,SNR=7.1						
INK	**Inuvik**	**147.37**	**319**	PKPbc	**PKPbc**	**05 03 16.4**	**0.0**
	comp=Z,1.4nm,0.7s,baz=190,slow=0.5,SNR=6.7						
SONM	**Songino Array**	**149.50**	**86**	PKPbc	**PKPbc**	**05 03 21.5**	**-1.2**
	comp=Z,1.2nm,0.7s,baz=221,slow=2.5,SNR=4.8						
ILAR	**Eielson Array**	**151.72**	**310**	PKPbc	**PKiKP**	**05 03 27.6**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=139,slow=2.7,SNR=17						

IDC ***19*** *04:47:33.1±2.5, 3.°56N×82.°91W, h0km, mb3.6/3, mb1 3.9/6, mb1mx3.6/33, mbtmp3.8/6, ML2.4/2, MS3.9/1, Ms1 3.9/1, ms1mx3.2/30, Error ellipse: s-maj=61.3km s-min=27.7km az=28.0*

ISC 19 04:47:35.4±1.4, **3.°4N**±0.°1×**83.°1W**±0.°1, **h24**km, **n28, σ1§34/25, mb3.8/3, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AZU	**Azuero**	**5.20**	**32**	*e*P	**Pn**	**04 48 51.1**	**-0.6**
BBAC	**Balboa, Cauca**	**5.95**	**103**	*e*P	**Pn**	**04 48 59.4**	**-2.8**
GCUF	**Volcan Galeras**	**6.08**	**110**	*e*P	**Pn**	**04 49 02.9**	**-1.5**
CRUC	**La Cruz**	**6.35**	**106**	*e*P	**Pn**	**04 49 05.9**	**-2.0**
SOTA	**Rioblanco**	**6.55**	**101**	*e*P	**Pn**	**04 49 10.4**	**-0.3**
UPA	**Univ. de Panam**	**6.59**	**32**	*e*P	**Pn**	**04 49 11.2**	**+0.4**
YOTC	**Yotoco, Valle**	**6.72**	**85**	*e*P	**Pn**	**04 49 11.6**	**-1.2**
PCON	**Cinco Dias**	**6.72**	**99**	*e*P	**Pn**	**04 49 14.2**	**+1.0**
PLMC	**San Jos del P**	**6.92**	**74**	*e*P	**Pn**	**04 49 15.4**	**-0.1**
JTS	**Las Juntas de**	**7.14**	**345**	Pn	**Pn**	**04 49 16.2**	**-2.3**
	3.6nm,0.3s,baz=154,slow=13,SNR=78						
JTS				Sn	**Sn**	**04 50 37.3**	**-1.6**
	baz=47,slow=17,SNR=0.5						
CBOC	**Ciudad Bolivar**	**7.44**	**70**	*e*P	**Pn**	**04 49 22.6**	**-0.2**
DBBC	**Dabeiba**	**7.72**	**62**	*e*P	**Pn**	**04 49 27.2**	**+0.8**
ORTC	**Ortega, Tolima**	**7.81**	**86**	*e*P	**Pn**	**04 49 28.3**	**+0.6**
RREF	**El Recreo**	**7.83**	**78**	*e*P	**Pn**	**04 49 28.6**	**+0.1**
GUY2C	**Guyana, Caldas**	**7.88**	**76**	*e*P	**Pn**	**04 49 30.5**	**+1.5**
HELC	**Santa Helena**	**8.01**	**69**	*e*P	**Pn**	**04 49 31.3**	**+0.7**
PRAC	**Prado**	**8.16**	**87**	*e*P	**Pn**	**04 49 33.6**	**+1.1**
NORC	**Norcasia**	**8.45**	**75**	*e*P	**Pn**	**04 49 37.8**	**+1.3**
ROSC	**El Rosal**	**8.83**	**80**	Pn	**Pn**	**04 49 41.0**	**-1.0**
	0.8nm,0.3s,baz=4.3,slow=22,SNR=2.4						
PTBC	**PUERTO BERRIO,**	**9.13**	**69**	*e*P	**Pn**	**04 49 47.2**	**+1.5**
ATAH	**Atahualpa**	**11.41**	**156**	LR	LR	04 54 48.8	
	comp=Z,569nm,18.8s,baz=30,slow=38						
SDV	**Santo Domingo**	**13.51**	**65**	Pn	**Pn**	**04 50 45.5**	**-0.4**
	0.2nm,0.3s,baz=273,slow=5.9,SNR=2.6						
H03N2	**Juan Fernandez**	**36.81**	**174**	T	T	05 33 43.8	
	baz=351						
H03N1	**Juan Fernandez**	**36.81**	**174**	T	T	05 33 42.8	
	baz=351						
H03N3	**Juan Fernandez**	**36.82**	**174**	T	T	05 33 38.4	
	baz=351						
NVAR	**Mina Array Bea**	**47.44**	**322**	P	**P**	**04 56 10.7**	**+2.1**
	0.5nm,0.5s,baz=134,slow=7.7,SNR=5.3						
YKA	**Yellowknife Ar**	**63.48**	**344**	P	**P**	**04 58 03.1**	**-0.1**
	0.4nm,0.8s,baz=130,slow=5.7,SNR=8.7						
TORD	**Torodi Ar. Bea**	**84.13**	**77**	P	**P**	**05 00 05.0**	**-0.3**
	0.8nm,1.1s,baz=256,slow=5.8,SNR=3.0						

IDC ***19*** *04:54:58.9±0.8, 4.°69S×105.°45W, h0km, mb3.8/12, mb1 4.1/12, mb1mx3.8/41, mbtmp3.8/12, MS4.2/18, Ms1 4.2/18, ms1mx4.1/26, Error ellipse: s-maj=40.0km s-min=18.3km az=76.0*
GCMT ***19*** *04:55:02.0±0.3, 4.°68S±0.°02×105.°52W±0.°02, h23km±1km, MW4.9/106, Moment Tensor Solution. s28,c32; s106,c148; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.14±.15; Mθθ0.93±.12; Mϕϕ-0.79±.12; Mrθ0.41±.17; Mθϕ2.90±.10; Mϕr-0.41±.16; Best double couple: M0 3.08300×10^16 NP1:ϕs9.00000°, δ81.00000°, λ-173.00000°. NP2:ϕs278.00000°, δ83.00000°, λ-9.00000°. Principal axes: T 3.0990, Plg2.0000°, Azm323.0000°; N -0.0320, Plg79.0000°, Azm62.0000°; P -3.0670, Plg11.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 19 04:55:01.1±0.8, **4.°8S**±0.°1×**105.°5W**±0.°2, **h13**km, **n41, σ1§14/14, mb3.9/14, MS4.2/22, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**22.56**	**189**	LR	LR	05 06 21.6	
	comp=Z,301nm,21.7s,baz=1.5,slow=30						
CMIG	**Matias Romero**	**24.08**	**25**	LR	LR	05 07 32.8	
	comp=Z,441nm,20.2s,baz=152,slow=31						
APG	**El Apazote**	**24.61**	**37**	P	**P**	**05 00 21.3**	**-0.3**
	7.9nm,0.9s,baz=201,slow=8.6,SNR=4.0						
APG				LR	LR	05 07 45.7	
	comp=Z,896nm,21.9s,baz=246,slow=31						
JTS	**Las Juntas de**	**25.30**	**54**	LR	LR	05 07 43.7	
	comp=Z,1μm,20.4s,baz=320,slow=30						
ATAH	**Atahualpa**	**27.01**	**96**	LR	LR	05 08 44.1	
	comp=Z,229nm,19.3s,baz=360,slow=30						
LPIG	**La Paz**	**29.07**	**351**	LR	LR	05 09 33.6	
	comp=Z,616nm,19.2s,baz=174,slow=30						
NNA	**Nana**	**29.18**	**106**	LR	LR	05 08 54.1	
	comp=Z,307nm,20.0s,baz=294,slow=29						
RKT	**Rikitea**	**33.85**	**235**	*e*LR	LR	05 10 34.2	
	comp=Z,594nm,27.0s						
RKT	**Rikitea**	**33.85**	**235**	*e*T	T	05 37 07.0	
	4.3nm,0.3s						
TXAR	**Lajitas Array**	**33.93**	**3**	P	**P**	**05 01 46.7**	**+2.4**
	0.4nm,0.9s,baz=181,slow=14,SNR=2.9						
TXAR				LR	LR	05 12 40.3	
	comp=Z,378nm,19.5s,baz=0.0,slow=31						
TAOE	**Nuku Hiva Isla**	**34.68**	**261**	*e*LR	LR	05 10 53.2	
	comp=Z,493nm,25.7s						
H03N2	**Juan Fernandez**	**37.74**	**142**	T	T	05 42 41.1	
	baz=317,slow=77,SNR=11						
H03N1	**Juan Fernandez**	**37.76**	**142**	T	T	05 42 33.9	
	baz=317,slow=77,SNR=16						
H03N3	**Juan Fernandez**	**37.76**	**142**	T	T	05 42 45.4	
	baz=317,slow=77,SNR=16						
LPAZ	**La Paz**	**38.37**	**110**	LR	LR	05 15 44.9	
	comp=Z,273nm,18.1s,baz=282,slow=32						
CFA	**Coronel Fontan**	**43.94**	**132**	P	**P**	**05 03 08.1**	**0.0**
	1.3nm,0.6s,baz=327,slow=6.7,SNR=5.4						
NVAR	**Mina Array Bea**	**44.58**	**346**	P	**P**	**05 03 12.6**	**-0.6**
	0.5nm,0.7s,baz=185,slow=8.8,SNR=2.2						
NVAR				LR	LR	05 16 46.2	
	comp=Z,326nm,20.1s,baz=124,slow=29						
PPT	**Papeete**	**45.00**	**250**	LR	LR	05 16 54.3	
	comp=Z,228nm,18.6s,baz=104,slow=29						
PPT2	**Papeete2**	**45.00**	**250**	*e*LR	LR	05 15 48.6	
	comp=Z,610nm,27.5s,baz=68						
TKL	**Tuckaleechee C**	**45.05**	**25**	P	**P**	**05 03 16.9**	**+0.1**
	2.3nm,0.9s,baz=214,slow=12,SNR=2.6						
TBI	**Tubuai**	**46.27**	**242**	*e*LR	LR	05 16 22.0	
	comp=Z,421nm,28.5s						
PDAR	**Pinedale Array**	**47.44**	**356**	P	**P**	**05 03 35.6**	**-0.1**
	0.1nm,0.3s,baz=186,slow=8.2,SNR=1.3						
PDAR				LR	LR	05 21 07.9	
	comp=Z,386nm,18.5s,baz=141,slow=33						
PLCA	**Paso Flores**	**47.58**	**144**	P	**P**	**05 03 36.4**	**-0.4**
	2.0nm,1.0s,baz=245,slow=18,SNR=2.0						
PLCA				LR	LR	05 18 24.9	
	comp=Z,478nm,21.9s,baz=330,slow=30						
YBH	**Yreka Blue Hor**	**48.87**	**343**	P	**P**	**05 03 46.6**	**0.0**
	1.0nm,0.7s,baz=82,slow=7.1,SNR=2.2						
CPUP	**Villa Florida**	**50.70**	**120**	P	P	05 04 06.8	+6.0
	4.3nm,1.0s,baz=278,slow=8.6,SNR=5.9						
CPUP				LR	LR	05 21 29.3	
	comp=Z,248nm,19.2s,baz=296,slow=31						
BDFB	**Brasilia**	**57.40**	**105**	LR	LR	05 26 37.0	
	comp=Z,198nm,21.4s,baz=292,slow=33						
YKA	**Yellowknife Ar**	**67.42**	**355**	P	**P**	**05 05 53.9**	**-2.1**
	0.5nm,0.8s,baz=160,slow=6.7,SNR=7.4						
INK	**Inuvik**	**75.49**	**350**	P	**P**	**05 06 44.8**	**+0.2**
	0.8nm,0.8s,baz=140,slow=4.4,SNR=2.4						
ILAR	**Eielson Array**	**75.77**	**343**	P	**P**	**05 06 45.2**	**-1.1**
	0.9nm,1.0s,baz=147,slow=5.1,SNR=4.1						
URZ	**Urewera**	**77.21**	**232**	LR	LR	05 34 09.3	
	comp=Z,156nm,18.3s,baz=152,slow=30						
QSPA	**South Pole Qui**	**85.31**	**180**	P	**P**	**05 07 37.8**	**0.0**
	2.5nm,1.0s,baz=120,slow=3.9,SNR=4.7						
VNDA	**Vanda**	**85.98**	**193**	P	**P**	**05 07 41.2**	**+0.5**
	1.1nm,1.1s,baz=7.7,slow=3.0,SNR=3.4						
DZM	**Mont Dzumac**	**86.48**	**248**	LR	LR	05 39 09.3	
	comp=Z,120nm,18.4s,baz=226,slow=31						
H11N3	**WAKE ISLAND Hy**	**89.36**	**290**	T	T	06 46 43.6	
	baz=96,slow=74,SNR=89						
H11N2	**WAKE ISLAND Hy**	**89.38**	**290**	T	T	06 46 44.8	
	baz=96,slow=74,SNR=105						
H11N1	**WAKE ISLAND Hy**	**89.38**	**290**	T	T	06 46 45.0	
	baz=96,slow=74,SNR=93						
H11S2	**WAKE ISLAND Hy**	**89.45**	**288**	T	T	06 46 48.9	
	baz=95,slow=75,SNR=41						
H11S1	**WAKE ISLAND Hy**	**89.45**	**289**	T	T	06 46 49.5	
	baz=95,slow=75,SNR=40						
H11S3	**WAKE ISLAND Hy**	**89.46**	**288**	T	T	06 46 49.7	
	baz=95,slow=75,SNR=44						
HNR	**Honiara**	**93.75**	**260**	LR	LR	05 39 46.3	
	comp=Z,93nm,20.1s,baz=146,slow=29						
CMAR	**Chiang Mai Arr**	**152.55**	**302**	PKPbc	**PKiKP**	**05 14 59.9**	**+1.3**
	0.7nm,0.5s,baz=14,slow=4.0,SNR=1.6						

TIR ***19*** *04:59:56.6, 40.°94N×20.°04E, h12km, Md2.6/5*
BEO ***19*** *04:59:58.4±0.9, 40.°87N×19.°93E, h0km, ML2.1/7*
SKO ***19*** *04:59:58.8, 40.°99N×19.°98E, h19km*
THE ***19*** *04:59:58.1, 40.°94N×20.°00E, h6km±1km, ML2.0/5, Error ellipse: s-maj=1.1km s-min=0.3km az=61.0*

ISC 19 04:59:55.9±1.3, **40.°95N**±0.°02×**20.°08E**±0.°04, **h1**km±12km, **n21, σ1§49/33, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.42**	**338**	*e*Pg	**Pb**	**05 00 06.1**	**-0.2**
TIR				*e*Sg	**Sb**	**05 00 14.1**	**+0.9**
TIR	**Tirane**	**0.42**	**338**	P	**Pb**	**05 00 06.0**	**-0.2**
TIR				S	**Sb**	**05 00 12.4**	**-0.8**
	218nm,0.3s						
TIR	**Tirane**	**0.42**	**338**	*i* PG	**Pb**	**05 00 05.7**	**-0.5**
TIR				*i* SG	**Sb**	**05 00 12.0**	**-1.2**
OHR	**Ohrid**	**0.57**	**74**	*i* Pg	**Pn**	**05 00 10.6**	**-0.6**
OHR				*i* Sg	**Sn**	**05 00 20.9**	**-0.3**
OHR	**Ohrid**	**0.57**	**74**	*i* Pg	**Pn**	**05 00 10.6**	**-0.6**
OHR				*i* Sg	**Sn**	**05 00 20.9**	**-0.3**
TPE	**Tepelena**	**0.66**	**184**	P	**Pb**	**05 00 10.0**	**-0.2**
TPE				S	**Sb**	**05 00 19.6**	**-0.2**
	220nm,0.2s						
TPE	**Tepelena**	**0.66**	**184**	*i* PG	Pn	05 00 18.6	+6.2
TPE				*i* SG	**Sg**	**05 00 12.3**	**-4.7**
PHP	**Peshkopia**	**0.78**	**20**	P	**Pn**	**05 00 13.2**	**-0.9**
PHP	**Peshkopia**	**0.78**	**20**	*i* PG	**Sb**	**05 00 24.4**	**+1.0**
PHP				*i* SG	**Sg**	**05 00 18.4**	**-2.5**
FNA	**Florina**	**1.00**	**99**	P	**Pn**	**05 00 17.9**	**+0.8**
FNA				S	**Sn**	**05 00 33.6**	**+1.7**
	145nm,0.5s						
SRN	**Sarande**	**1.07**	**183**	P	**Pn**	**05 00 17.9**	**-0.1**
SRN				S	**Sn**	**05 00 33.5**	**-0.1**
	98nm,0.6s						
SRN	**Sarande**	**1.07**	**183**	*i* PG	**Sn**	**05 00 32.9**	**-0.6**
SRN				*i* SG	**Pn**	**05 00 18.0**	**0.0**
PUK	**Puka**	**1.10**	**353**	*i* PG	**Sb**	**05 00 34.7**	**+2.2**
KEK	**Kerkira**	**1.26**	**190**	P	**Pg**	**05 00 21.2**	**+1.3**
KEK				S	**Sg**	**05 00 38.7**	**+2.5**
	62nm,0.4s						
PDG	**Podgorica**	**1.60**	**338**	*e*Pg	**Pg**	**05 00 26.9**	**+0.4**
PDG				*e*Sg	**Sg**	**05 00 50.5**	**+3.3**
TREB	**Trebinje**	**2.18**	**324**	*e*Pn	**Pg**	**05 00 37.3**	**-0.4**
SJES	**Sjenica**	**2.31**	**358**	*e*Pn	**Pb**	**05 00 38.4**	**0.0**
BOSS	**Bosilegrad**	**2.37**	**49**	*e*Pn	**Pb**	**05 00 39.6**	**+0.2**
SELS	**Selova**	**2.39**	**19**	*e*Pn	**Pg**	**05 00 42.2**	**+0.5**
IVAS	**Ivanjica**	**2.62**	**1**	*e*Pn	**Pb**	**05 00 42.4**	**-1.3**
ZAPS	**Zavoj**	**3.00**	**39**	*e*Pn	**Pb**	**05 00 49.7**	**-0.4**

INET ***19*** *05:10:08.9, 12.°98N×89.°17W, h21km, MD3.8*
SNET ***19*** *05:10:09.8±1.1, 13.°05N×89.°17W, h46km±10km, ML3.4*
GCG ***19*** *05:10:10.3±0.7, 13.°30N×89.°00W, h28km±999km, MD4.0*

ISC 19 05:10:10.1±1.8, **13.°07N**±0.°09×**89.°14W**±0.°04, **h25**km±14km, **n31, σ0§56/45, 1C, El Salvador**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.45**	**336**	*e*P	**Pn**	**05 10 20.4**	**-0.6**
LALI				*e*S	**Sn**	**05 10 28.1**	**-0.2**
LALI				IAML		05 10 28.5	
	comp=Z,766nm,0.1s						
LFRS	**El Faro**	**0.55**	**7**	*e*P	**Pn**	**05 10 21.9**	**-0.6**
COEG	**Centro de Oper**	**0.60**	**24**	*e*P	**Pb**	**05 10 22.4**	**+0.3**
COEG				IAML		05 10 34.1	
	comp=Z,1μm,0.2s						
ALJI	**Alcalda de J**	**0.60**	**65**	*e*P	**Pn**	**05 10 22.8**	**-0.3**
ALJI				IAML		05 10 34.8	
	comp=Z,2μm,0.2s						
SNET	**Serv Nac Est T**	**0.62**	**351**	*e*P	**Pb**	**05 10 22.6**	**+0.2**
AEIL	**Aeropuerto Ilo**	**0.62**	**2**	*e*P	**Pn**	**05 10 23.0**	**-0.5**
AEIL				IAML		05 10 36.8	
	comp=Z,2μm,0.3s						
UTEC	**Universidad Te**	**0.63**	**354**	*e*P	**Pn**	**05 10 23.2**	**-0.4**
UTEC				*i* S	**Sn**	**05 10 33.5**	**+0.7**
UDBS	**Universidad Do**	**0.64**	**358**	*e*P	**Pn**	**05 10 23.2**	**-0.5**
UDBS				*e*S	**Sn**	**05 10 33.2**	**+0.2**
UESS	**Universidad de**	**0.65**	**354**	*e*P	**Pn**	**05 10 24.1**	**+0.3**
UESS				IAML		05 10 37.0	
	comp=Z,2μm,0.1s						
UEES	**Universidad Ev**	**0.65**	**351**	*e*P	**Pb**	**05 10 23.1**	**+0.2**
UEES				*e*S	**Sn**	**05 10 34.0**	**+0.6**
LBRS	**Las Brisas**	**0.67**	**8**	*e*P	**Pn**	**05 10 23.7**	**-0.4**
LBRS				*e*S	**Sn**	**05 10 34.0**	**+0.2**
BOQS	**Boqueron**	**0.67**	**348**	*e*P	**Pn**	**05 10 23.8**	**-0.5**
BOQS				*e*S	**Sn**	**05 10 34.7**	**+0.6**
COEB	**Comit de Eme**	**0.72**	**54**	*e*P	**Pb**	**05 10 24.3**	**+0.1**
COEB				IAML		05 10 37.0	
	comp=Z,2μm,0.2s						
TECA	**Tecapa**	**0.74**	**56**	*e*P	**Pb**	**05 10 24.8**	**+0.2**
TECA				*e*S	**Sn**	**05 10 36.5**	**+0.6**
JUCU	**Jucuar¡n**	**0.88**	**78**	*e*P	**Pn**	**05 10 25.9**	**-1.1**
JUCU				IAML		05 10 47.4	
	comp=Z,780nm,0.5s						
PACA	**Pacayal**	**0.88**	**63**	*e*P	**Pn**	**05 10 26.9**	**-0.2**
CEVE	**Cerro Verde**	**0.89**	**328**	*e*P	**Pn**	**05 10 26.2**	**-1.1**
CEVE				IAML		05 10 42.6	
	comp=Z,2μm,0.3s						
LCY	**Lacayo**	**0.89**	**67**	*e*P	**Pn**	**05 10 27.1**	**0.0**
LCY				*e*S	**Sn**	**05 10 40.0**	**+0.7**
SBLS	**San Blas**	**0.90**	**328**	*e*P	**Pn**	**05 10 26.4**	**-1.0**
SBLS				*e*S	**Sb**	**05 10 38.7**	**-0.2**
SNJE	**San Jose**	**0.91**	**330**	*e*P	**Pn**	**05 10 26.6**	**-1.0**
BLLM	**Bellamira**	**0.95**	**67**	*e*P	**Pn**	**05 10 27.6**	**-0.3**
BLLM				*e*S	**Sn**	**05 10 40.9**	**+0.2**
RTR	**El Retiro**	**0.96**	**329**	*e*P	**Pn**	**05 10 27.5**	**-0.7**
RTR				*e*S	**Sn**	**05 10 41.0**	**-0.1**
UNIC	**Universidad Ca**	**0.99**	**336**	*e*P	**Pn**	**05 10 28.0**	**-0.5**
LLGN	**La Laguna**	**1.10**	**10**	*e*P	**Pn**	**05 10 29.4**	**-0.7**
LLGN				IAML		05 10 45.9	
	comp=Z,310nm,0.3s						
FAGO	**Alcalda de S**	**1.18**	**58**	*e*P	**Pn**	**05 10 30.2**	**-0.8**
LCND	**La Caada**	**1.23**	**79**	*e*P	**Pn**	**05 10 31.3**	**-0.5**
LCND				IAML		05 10 49.8	
	comp=Z,910nm,0.4s						
MTO3	**Montecristo**	**1.34**	**351**	*e*P	**Pn**	**05 10 32.8**	**-0.6**
ESQI	**Esquipulas**	**1.49**	**352**	*e*P	**Pn**	**05 10 34.9**	**-0.5**
ESQI				*e*S	**Sn**	**05 10 54.7**	**+0.5**
IXG	**Ixpaco**	**1.68**	**311**	*e*P	**Pn**	**05 10 37.8**	**-0.3**
FUG	**Fuego 3**	**2.15**	**310**	*e*P	**Pn**	**05 10 45.3**	**+0.8**
FUG				*e*S	**Sn**	**05 11 11.0**	**+0.5**
STG3	**

XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN	**Xi'an**	**29.94**	**293**	P	**P**	**05 34 51.3**	**-1.8**
XAN				IAmb	IAmb	05 34 53.1	
	comp=Z,6.6nm,1.0s						
GYA	**Guiyang**	**32.07**	**278**	*e*P	**P**	**05 35 12.9**	**+0.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2	**Chengdu**	**34.22**	**287**	P	**P**	**05 35 29.0**	**-1.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	**Lanzhou**	**34.28**	**296**	*e*P	**P**	**05 35 32.8**	**+1.6**
LZH				pP	sP	05 35 42.4	-0.9
LZH				sP	pP	05 35 47.3	+7.3
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,150nm,4.5s						
SONM	**Songino Array**	**35.44**	**317**	P	**P**	**05 35 41.6**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=98,slow=5.1,SNR=3.5						
SONM				PcP	**PcP**	**05 38 10.7**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=155,slow=4.8,SNR=6.1						
SLVN	**Son La**	**35.61**	**270**	P	**P**	**05 35 42.3**	**-0.4**
SEY	**Seymchan**	**37.10**	**7**	P	**P**	**05 35 55.5**	**+0.7**
	comp=Z,2.2nm,0.6s,baz=175,slow=7.1,SNR=5.4						
MTN	**Manton Dam**	**40.56**	**197**	P	**P**	**05 36 22.9**	**-1.4**
MTN				IAmb	IAmb	05 36 25.6	
	comp=Z,12nm,0.6s						
CHTO	**Chiang Mai**	**40.81**	**269**	P	**P**	**05 36 24.4**	**-2.0**
CHTO				IAmb	IAmb	05 36 27.9	
	comp=Z,7.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**40.92**	**268**	P	**P**	**05 36 28.6**	**+1.2**
	comp=Z,3.5nm,0.8s,baz=56,slow=8.6,SNR=13						
CMAR				PcP	**PcP**	**05 38 28.0**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=72,slow=2.9,SNR=1.8						
SHL	**Shillong**	**45.31**	**281**	P	**P**	**05 37 02.9**	**-0.1**
SHL				IAmb	IAmb	05 37 03.6	
	comp=Z,7.3nm,0.9s						
TIXI	**Tiksi**	**45.93**	**354**	P	**P**	**05 37 05.7**	**-1.3**
TIXI				IAmb	IAmb	05 37 08.4	
	comp=Z,4.0nm,0.5s						
WB0	**Warramunga Arr**	**46.58**	**191**	P	**P**	**05 37 13.3**	**+0.6**
WB0				IAmb	IAmb	05 37 24.3	
	comp=Z,23nm,1.3s						
WR0	**Warramunga Arr**	**46.74**	**190**	P	**P**	**05 37 13.9**	**-0.1**
WR0				IAmb	IAmb	05 37 25.3	
	comp=Z,12nm,1.1s						
WRAB	**Tennant Creek**	**46.74**	**191**	P	**P**	**05 37 14.3**	**+0.3**
WRAB				IAmb	IAmb	05 37 25.6	
	comp=Z,11nm,0.7s						
WB2	**Warramunga Arr**	**46.75**	**191**	P	**P**	**05 37 14.8**	**+0.7**
WRA	**Warramunga Arr**	**46.76**	**191**	P	**P**	**05 37 14.4**	**+0.3**
	comp=Z,7.9nm,0.5s,baz=10,slow=8.7,SNR=64						
FITZ	**Fitzroy Crossi**	**47.19**	**202**	P	**P**	**05 37 18.3**	**+0.8**
FITZ				IAmb	IAmb	05 37 19.3	
	comp=Z,9.2nm,0.9s						
WMQ	**Urumqi**	**47.24**	**306**	*e*P	**P**	**05 37 19.5**	**+1.6**
WMQ				pP	pwP	05 37 28.3	-0.7
WMQ				pmax	pmax		
	comp=Z,17nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,64nm,6.3s						
WMQ				LR	LR		
	comp=Z,210nm,22.5s						
WMQ				LR	LR		
	comp=Z,200nm,22.5s						
WMQ				LR	LR		
	comp=Z,250nm,21.5s						
RPSI	**Rantau Prapat**	**48.00**	**248**	P	**P**	**05 37 24.2**	**+0.2**
GSI	**Gunungsitoli**	**49.89**	**248**	P	**P**	**05 37 37.0**	**-1.5**
ZALV	**Zalesovo Beam**	**50.22**	**319**	P	**P**	**05 37 41.3**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=115,slow=6.7,SNR=6.9						
ZALV				PcP	**PcP**	**05 38 59.8**	**+0.6**
	comp=Z,2.3nm,0.5s,baz=88,slow=3.7,SNR=8.5						
AS31	**Alice Springs**	**50.47**	**190**	P	**P**	**05 37 43.9**	**+1.2**
ASAR	**Alice Springs**	**50.48**	**190**	P	**P**	**05 37 42.4**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=4.7,slow=5.1,SNR=7.9						
MK31	**Makanchi Array**	**51.17**	**310**	P	**P**	**05 37 47.0**	**-0.8**
MKAR	**Makanchi Array**	**51.17**	**310**	P	**P**	**05 37 46.8**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=90,slow=7.7,SNR=5.0						
MKAR				PcP	**PcP**	**05 39 04.1**	**+1.1**
	comp=Z,1.7nm,0.7s,baz=79,slow=7.3,SNR=6.4						
NRIK	**Noril'sk**	**53.41**	**339**	P	**P**	**05 38 03.5**	**-0.5**
	comp=Z,3.8nm,0.6s,baz=110,slow=9.8,SNR=6.6						
KURK	**Kurchatov**	**53.70**	**315**	P	**P**	**05 38 06.3**	**-0.1**
KURK				IAmb	IAmb	05 38 08.1	
	comp=Z,6.3nm,1.1s						
TARG	**Taragay, Kyrgy**	**54.57**	**304**	P	**P**	**05 38 12.6**	**-0.9**
TARG				IAmb	IAmb	05 38 16.1	
	comp=Z,6.2nm,1.0s						
BOOM	**Boomskoye usch**	**55.87**	**305**	P	**P**	**05 38 21.8**	**-0.7**
BOOM				IAmb	IAmb	05 38 31.8	
	comp=Z,4.7nm,1.1s						
KSH	**Kashi**	**56.21**	**301**	P	P	05 38 30.8	+5.8
KSH				pP	sP	05 38 39.6	+2.2
KSH				pmax	pmax		
	comp=Z,29nm,1.3s						
KSH				pmax	pmax		
	comp=Z,150nm,5.4s						
TRF	**Thorofare Moun**	**56.52**	**30**	P	**P**	**05 38 26.4**	**-0.5**
TRF				IAmb	IAmb	05 38 38.0	
	comp=Z,8.4nm,1.1s						
TOLK	**Toolik Lake Re**	**57.64**	**24**	P	**P**	**05 38 36.5**	**+2.0**
STKA	**Stephens Creek**	**57.96**	**181**	P	**P**	**05 38 36.0**	**-1.1**
	comp=Z,0.8nm,0.4s,baz=276,slow=8.5,SNR=2.3						
STKA	**Stephens Creek**	**57.96**	**181**	P	**P**	**05 38 35.8**	**-1.3**
ILAR	**Eielson Array**	**58.16**	**28**	P	**P**	**05 38 36.9**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=271,slow=6.3,SNR=5.7						
BRVK	**Borovoye**	**58.83**	**318**	P	**P**	**05 38 43.9**	**+0.8**
BRVK				IAmb	IAmb	05 38 44.6	
	comp=Z,5.7nm,1.1s						
BBOO	**Buckleboo**	**59.21**	**186**	P	**P**	**05 38 46.3**	**+0.6**
BBOO				IAmb	IAmb	05 38 55.9	
	comp=Z,11nm,1.2s						
SCRK	**Sand Creek**	**59.37**	**29**	P	**P**	**05 38 47.8**	**+1.1**
KK31	**Karatay Array**	**59.75**	**306**	P	**P**	**05 38 49.2**	**-0.4**
KK31				IAmb	IAmb	05 38 51.0	
	comp=Z,6.3nm,0.8s						
KKAR	**Karatay Array**	**59.75**	**306**	P	**P**	**05 38 49.4**	**-0.2**
KKAR				IAmb	IAmb	05 38 51.0	
	comp=Z,6.3nm,0.8s						
YAH	**Yahtse**	**60.40**	**34**	P	**P**	**05 38 54.1**	**+0.1**
GAR	**Garm**	**60.63**	**302**	P	**P**	**05 38 54.5**	**-1.3**
GAR				IAmb	IAmb	05 39 07.3	
	comp=Z,6.5nm,0.7s						
CHGR	**Chuyangaron**	**61.58**	**301**	P	**P**	**05 39 01.3**	**-1.0**
EPYK	**Eagle Plains**	**62.42**	**27**	P	**P**	**05 39 09.2**	**+1.9**
EPYK				IAmb	IAmb	05 39 09.9	
	comp=Z,6.6nm,0.8s						
INK	**Inuvik**	**63.52**	**24**	P	**P**	**05 39 13.8**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=294,slow=4.9,SNR=7.7						
INK	**Inuvik**	**63.52**	**24**	P	**P**	**05 39 14.8**	**+0.3**
INK				IAmb	IAmb	05 39 18.7	
	comp=Z,7.5nm,1.4s						
NWAO	**Narrogin (SRO)**	**63.73**	**204**	P	**P**	**05 39 15.6**	**-0.7**
NIUE	**Niue**	**64.59**	**129**	P	**P**	**05 39 21.7**	**-0.5**
ARU	**Arti**	**65.17**	**322**	P	**P**	**05 39 25.9**	**+0.4**
C36M	**Paulatuk**	**66.75**	**23**	P	**P**	**05 39 36.3**	**+0.9**
C36M				IAmb	IAmb	05 39 51.2	
	comp=Z,4.0nm,1.1s						
YKA	**Yellowknife Ar**	**72.59**	**28**	P	**P**	**05 40 12.3**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=294,slow=5.5,SNR=12						
KLMR	**Klimovskoe**	**73.34**	**330**	*e*P	**P**	**05 40 15.8**	**-0.2**
KLMR				AMP		05 40 27.3	
	comp=Z,13nm,1.5s						
SNZO	**South Karori**	**73.67**	**155**	P	**P**	**05 40 18.4**	**+0.4**
ARCES	**ARCESS Array B**	**74.30**	**341**	P	**P**	**05 40 23.0**	**+1.5**
	comp=Z,5.4nm,0.8s,baz=78,slow=6.3,SNR=8.9						
ARE0	**ARCESS Array S**	**74.30**	**341**	P	**P**	**05 40 22.5**	**+1.0**
FIA1	**FINESS Array S**	**78.71**	**334**	P	**P**	**05 40 46.8**	**+0.2**
FIA1				IAmb	IAmb	05 40 59.1	
	comp=Z,20nm,1.3s						
FINES	**FINESS Array B**	**78.71**	**334**	P	**P**	**05 40 47.4**	**+0.9**
	comp=Z,4.3nm,0.6s,baz=70,slow=5.6,SNR=29						
KBZ	**Khabaz**	**78.72**	**313**	P	**P**	**05 40 47.9**	**+0.9**
	comp=Z,9.0nm,0.8s,baz=86,slow=2.8,SNR=14						
FFC	**Flin Flon**	**82.15**	**32**	P	**P**	**05 41 06.2**	**+0.9**
AKASG	**Malin Array Be**	**83.36**	**324**	P	**P**	**05 41 11.4**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=51,slow=5.0,SNR=1.8						
NC405	**NORSAR Array S**	**84.15**	**338**	P	**P**	**05 41 15.8**	**+0.3**
PFO	**Pinyon Flats O**	**84.20**	**55**	P	**P**	**05 41 17.0**	**+0.6**
PFO				IAmb	IAmb	05 41 18.3	
	comp=Z,6.3nm,1.1s						
XPFO	**Pion Flat**	**84.20**	**55**	P	**P**	**05 41 17.2**	**+0.7**
XPFO				IAmb	IAmb	05 41 18.3	
	comp=Z,6.4nm,1.1s						
NB201	**NORSAR Array S**	**84.34**	**338**	P	**P**	**05 41 16.0**	**-0.4**
NC204	**NORSAR Array S**	**84.34**	**339**	P	**P**	**05 41 16.5**	**0.0**
NB2	**NORSAR Subarra**	**84.37**	**338**	P	**P**	**05 41 16.5**	**-0.1**
	comp=Z,3.2nm,0.7s,baz=46,slow=5.1						
NOA	**NORSAR Array B**	**84.37**	**338**	P	**P**	**05 41 16.6**	**-0.1**
	comp=Z,2.6nm,0.7s,baz=46,slow=4.8,SNR=10						
PDAR	**Pinedale Array**	**84.47**	**45**	P	**P**	**05 41 18.9**	**+1.2**
	comp=Z,0.2nm,0.4s,baz=328,slow=3.2,SNR=2.2						
NBO00	**NORSAR Array S**	**84.52**	**339**	P	**P**	**05 41 17.0**	**-0.4**
BRTR	**Keskin Array B**	**86.71**	**313**	P	**P**	**05 41 28.5**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=82,slow=2.6,SNR=7.0						
GERES	**GERESS Array B**	**92.27**	**329**	P	**P**	**05 41 54.1**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=44,slow=4.4,SNR=5.1						
TXAR	**Lajitas Array**	**95.75**	**53**	P	P	05 42 16.6	+5.4
	comp=Z,0.2nm,0.7s,baz=286,slow=3.7,SNR=2.5						
TORD	**Torodi Ar. Bea**	**125.28**	**311**	PKP	**PKPdf**	**05 47 46.1**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=24,slow=2.1,SNR=6.4						
PLCA	**Paso Flores**	**149.14**	**126**	PKPbc	**PKiKP**	**05 48 34.1**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=217,slow=3.4,SNR=3.7						
PLCA	**Paso Flores**	**149.14**	**126**	PKPbc	**PKiKP**	**05 48 33.9**	**-0.4**
LPAZ	**La Paz**	**149.77**	**77**	PKPbc	**PKiKP**	**05 48 37.3**	**+0.4**
	comp=Z,2.4nm,0.8s,baz=250,slow=1.4,SNR=13						

AUST 19 05:31:31.9±0.6, 36.29S×148.89E, h4km±6km, Error ellipse: s-maj=13.4km s-min=2.0km az=89.0, New South Wales

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MILA	**Mila**	**0.79**	**165**	P	Pb	05 31 48.0	-0.2
	baz=0.8						
MILA				S	Sg	05 31 57.6	+0.2
	baz=0.8						
CAN	**Canberra**	**0.97**	**5**	P	Pg	05 31 50.7	+0.2
	baz=1.0						
CAN				S	Sg	05 32 03.2	+0.2
	baz=1.0						
CNB	**Canberra Magne**	**1.04**	**22**	P	Pb	05 31 52.6	0.0
	baz=1.0						
CNB				S	Sb	05 32 06.9	+0.3
	baz=1.0						
YNG	**Young**	**2.03**	**348**	P	Pn	05 32 07.2	+0.3
	baz=2.0						
YNG				S	Sn	05 32 33.5	+0.9
	baz=2.0						

MAN 19 05:55:03.4, 9.22N×121.92E, h27km, mb4.3, ML3.1, MS2.9, 1C, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNOP	**Candoni, Negro**	**0.94**	**49**	*e*P	Pn	05 55 20.2	-0.7
CNOP				*e*S	Sb	05 55 31.6	-1.5
GUIM	**Jordan**	**1.55**	**25**	*e*P	Pn	05 55 28.3	-0.9
GUIM				*e*S	Sn	05 55 46.9	-1.6
CUYO	**Cuyo Island**	**1.85**	**331**	*e*P	Pn	05 55 33.8	+0.3
CUYO				*e*S	Sn	05 55 53.9	-2.1
TBP	**Tagbilaran**	**1.98**	**76**	*e*P	Pn	05 55 32.9	-2.2
PAGZ	**Pagadian**	**1.99**	**133**	*e*P	Pn	05 55 36.5	+1.2
PAGZ				*e*S	Sn	05 55 59.3	+0.1
LLP	**Lapu-Lapu**	**2.30**	**61**	*e*P	Pn	05 55 40.9	+1.3
LLP				*e*S	Sn	05 56 08.2	+1.2
RCP	**Roxas**	**2.47**	**19**	*e*P	Pb	05 55 45.8	-1.3
RCP				*e*S	Sn	05 56 13.3	+2.1

ISC 19 05:57:08.4±1.2, 44.43N±0.03×17.13E±0.07, h3km±9km, n8, σ0.59/14, 1C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MGRS	**Mrkonjic Grad**	**0.04**	**248**	↓*i*Pg	**Pg**	**05 57 09.2**	**-0.1**
MGRS				*e*Sg	**Sg**	**05 57 09.7**	**-0.3**
BLY	**Banja Luka**	**0.32**	**7**	↑*i*Pg	**Pg**	**05 57 15.3**	**+0.7**
BLY				*e*Sg	**Sg**	**05 57 19.6**	**+0.8**
KUJV	**Kijevo**	**0.68**	**231**	*i* Pg	**Pg**	**05 57 21.6**	**+0.3**
KUJV				Sg	**Sg**	**05 57 30.4**	**+0.3**
RICI	**Ricice**	**0.94**	**180**	*e*Pg	**Pb**	**05 57 27.2**	**-0.1**
RICI				Sg	**Sb**	**05 57 40.0**	**-0.1**
MAKA	**Makarska**	**1.15**	**184**	*e*Pg	**Pb**	**05 57 30.7**	**-0.1**
MAKA				Sg	**Sn**	**05 57 47.1**	**-0.4**
MOSL	**Moslavina**	**1.21**	**347**	*i* Pg	**Pb**	**05 57 31.1**	**-0.9**
MOSL				Sg	**Sb**	**05 57 47.3**	**-0.8**
DUGI	**Dugi Otok**	**1.56**	**254**	*e*Pn	**Pb**	**05 57 38.4**	**+0.6**
NVLJ	**Novalja**	**1.62**	**275**	*i* Pn	**Pb**	**05 57 39.2**	**+0.2**

NNC 19 06:11:35.9±1.5, 54.69N×83.63E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=13.9km s-min=4.7km az=17.0

ASRS 19 06:11:35.7, 54.58N×83.75E, M2.3, 7C-4D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**0.89**	**135**	↓P	Pn	06 11 55.2	-0.3
	7.9nm,0.8s						
ZAA0				↓S	Sn	06 12 09.5	+0.5
	54nm,0.5s						
KURK	**Kurchatov**	**4.97**	**221**	↓Pn	Pn	06 12 53.6	+2.1
	9.7nm,0.8s						
KURK				↑Pg	Pg	06 13 07.4	-3.5
	31nm,0.7s						
KURK				↑Sn	Sn	06 13 51.2	+1.5
	28nm,0.7s						
KURK				↑Lg	Lg	06 14 17.3	
	129nm,1.0s						
MK31	**Makanchi Array**	**7.85**	**187**	Pn	Pn	06 13 34.5	+3.4
	1.7nm,0.6s,baz=11,slow=12,SNR=24						
MK31				↑Sn	Sn	06 15 05.4	+4.9
	1.6nm,0.6s,baz=169,slow=59,SNR=5.4						
MK31				↓Lg	Lg	06 15 49.4	
	24nm,0.9s,baz=23,slow=28,SNR=9.6						
MAKZ	**Makanchi**	**7.86**	**189**	↑Pn	Pn	06 13 34.5	+3.2
	3.9nm,1.0s						
MAKZ				↑Sn	Sn	06 15 04.2	+3.4
	3.4nm,0.7s						
MAKZ				↑Lg	Lg	06 15 48.7	
	24nm,0.9s						
BRVK	**Borovoye**	**8.12**	**265**	Pn	Pn	06 13 35.6	+0.9
BRVK				Sn	Sn	06 15 04.0	-3.0

MAN 19 06:14:04.6, 16.13N×121.38E, h29km, mb3.9, ML2.6, MS2.2, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALP	**Baler**	**0.43**	**154**	*e*P	Pn	06 14 15.6	+0.7
BALP				*e*S	Sn	06 14 23.2	+1.4
SMPP	**San Manuel, Pa**	**0.67**	**272**	*e*P	Pb	06 14 17.8	-0.1
SMPP				*e*S	Sn	06 14 29.1	+1.3
CAUP	**Cauayan**	**0.91**	**28**	*e*P	Pn	06 14 20.6	-0.9
CAUP				*e*S	Sn	06 14 33.3	-0.4

SKO 19 06:14:46.5, 40.69N×21.67E, h17km
ATH 19 06:14:47.1, 40.71N×21.68E, h16km±2km, ML2.7/10, Error ellipse: s-maj=2.5km s-min=1.2km az=305.0
THE 19 06:14:47.6, 40.70N×21.67E, h9km, ML2.7/7, Error ellipse: s-maj=0.9km s-min=0.3km az=336.0
BEO 19 06:14:49.0±0.3, 40.75N×21.66E, h6km±2km, ML2.4/13

ISC 19 06:14:46.8±1.0, 40.71N±0.02×21.72E±0.02, h8km±9km, n45, σ0.91/70, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FNA	**Florina**	**0.28**	**286**	*e*Pg	**Pg**	**06 14 52.1**	**-0.2**
FNA				*e*Sg	**Sg**	**06 14 56.1**	**+0.1**
FNA	**Florina**	**0.28**	**286**	P	**Pg**	**06 14 52.1**	**-0.2**
FNA				S	**Sg**	**06 14 56.1**	**+0.1**
	5μm,0.3s						
FNA	**Florina**	**0.28**	**286**	P	**Pg**	**06 14 52.2**	**-0.1**
FNA				S	**Sg**	**06 14 55.9**	**-0.1**
FNA				AML	AML	06 14 56.6	
	comp=E,8643μm,0.2s						
FNA				AML	AML	06 14 56.9	
	comp=N,9997μm,0.2s						
KZN	**Kozani**	**0.41**	**175**	P	**Pg**	**06 14 55.2**	**+0.4**
KZN				S	**Sb**	**06 15 01.4**	**-1.3**
	comp=N,2μm,0.5s						
KZN	**Kozani**	**0.41**	**175**	P	**Pg**	**06 14 55.1**	**+0.4**
KZN				S	**Sb**	**06 15 01.8**	**-0.9**
KZN				AML	AML	06 15 03.8	
	comp=E,3171μm,0.3s						
KZN				AML	AML	06 15 05.4	
	comp=N,2708μm,0.5s						
KTI	**Kastanea**	**0.44**	**137**	P	**Pb**	**06 14 56.2**	**-0.7**
NEST	**Nestorio**	**0.59**	**240**	P	**Pg**	**06 14 58.1**	**-0.2**
NEST				S	**Sg**	**06 15 06.5**	**+0.4**
	comp=N,1μm,0.3s						
NEST	**Nestorio**	**0.59**	**240**	P	**Pg**	**06 14 58.1**	**-0.2**
NEST				S	**Sg**	**06 15 06.7**	**+0.7**
NEST				AML	AML	06 15 09.1	
	comp=N,1577μm,0.3s						
NEST				AML	AML	06 15 09.1	
	comp=E,2551μm,0.4s						
PENT	**Pentalofos**	**0.68**	**221**	P	**Pg**	**06 15 00.0**	**0.0**
PENT				S	**Sg**	**06 15 09.0**	**+0.1**
	comp=E,645nm,0.3s						
PENT	**Pentalofos**	**0.68**	**221**	P	**Pg**	**06 15 00.1**	**+0.1**
PENT				S	**Sb**	**06 15 09.9**	**-0.8**
PENT				AML	AML	06 15 15.1	
	comp=N,1442μm,0.4s						
PENT				AML	AML	06 15 15.8	
	comp=E,1130μm,0.3s						
KPRO	**Kipourio**	**0.80**	**200**	P	**Pg**	**06 15 02.2**	**-0.1**
KPRO	**Kipourio**	**0.80**	**200**	P	**Pg**	**06 15 02.2**	**-0.1**
KPRO				AML	AML	06 15 20.0	
	comp=N,2123μm,0.6s						
KPRO				AML	AML	06 15 21.0	
	comp=E,2009μm,0.4s						
OHR	**Ohrid**	**0.81**	**300**	*i* Pg	**Pg**	**06 15 01.9**	**-0.5**
OHR				*i* Sg	**Sb**	**06 15 14.8**	**+0.5**
OHR				*e*Lg	Lg	06 15 15.2	
	comp=N,319nm,0.5s						
OHR				*e*Lg	Lg	06 15 16.2	
	comp=E,531nm,0.5s						
OHR	**Ohrid**	**0.81**	**300**	*i* Pg	**Pg**	**06 15 01.9**	**-0.5**
OHR				*i* Sg	**Sb**	**06 15 14.8**	**+0.5**
OHR				*e*Lg	Lg	06 15 15.2	
	comp=N,319nm,0.5s						
OHR				*e*Lg	Lg	06 15 16.2	
	comp=E,531nm,0.5s						
LIT	**Litokhoron**	**0.84**	**136**	P	**Pb**	**06 15 03.8**	**0.0**
LIT				S	**Sn**	**06 15 16.2**	**-1.5**
	comp=E,598nm,0.4s						
LIT	**Litokhoron**	**0.84**	**136**	P	**Pb**	**06 15 03.4**	**-0.4**
LIT				AML	AML	06 15 18.9	
	comp=E,1260μm,0.3s						
LIT				AML	AML	06 15 23.7	
	comp=N,979μm,0.4s						
VAY	**Valandovo**	**0.88**	**46**	*e*Pg	**Pn**	**06 15 06.8**	**+1.2**
VAY				*e*Sg	**Sn**	**06 15 16.1**	**-0.6**
KNT	**Kendrikon**	**1.00**	**63**	P	**Pn**	**06 15 06.9**	**-0.3**
KNT	**Kendrikon**	**1.00**	**63**	P	**Pn**	**06 15 07.0**	**-0.2**
KNT				AML	AML	06 15 25.2	
	comp=N,295μm,0.4s						
KNT				AML	AML	06 15 26.3	
	comp=E,184μm,0.6s						
HORT	**Hortiatis**	**1.05**	**96**	P	**Pn**	**06 15 08.0**	**0.0**
HORT				S	**Sn**	**06 15 24.2**	**+1.3**
	comp=E,190nm,0.6s						
HORT	**Hortiatis**	**1.05**	**96**	P	**Pn**	**06 15 07.8**	**-0.2**
HORT				AML	AML	06 15 25.8	
	comp=N,490μm,0.6s						
HORT				AML	AML	06 15 27.4	
	comp=E,278μm,0.7s						
THL	**Klokotos Trika**	**1.17**	**169**	P	**Pg**	**06 15 09.2**	**0.0**
THL				S	**Sn**	**06 15 25.8**	**+0.2**
	comp=E,298nm,0.5s						
THL	**Klokotos Trika**	**1.17**	**169**	P	**Pg**	**06 15 09.0**	**-0.2**
THL				AML	AML	06 15 29.5	
	comp=N,516μm,0.5s						
THL				AML	AML	06 15 32.7	
	comp=E,657μm,0.4s						
SKO	**Skopje**	**1.28**	**350**	*e*Pg	**Pg**	**06 15 11.8**	**+0.4**
SKO				*e*Sg	**Sn**	**06 15 28.2**	**-0.2**
PLG	**Polygyros**	**1.35**	**104**	P	**Pg**	**06 15 13.6**	**+0.8**
PLG				AML	AML	06 15 34.5	
	comp=N,444μm,0.6s						
PLG				AML	AML	06 15 36.3	
	comp=E,402μm,0.5s						
SRS	**Serrai**	**1.47**	**73**	*e*Pg	**Pg**	**06 15 15.5**	**+0.4**
SRS				*e*Sg	**Sg**	**06 15 35.7**	**+1.5**
TIR	**Tirane**	**1.54**	**295**	*e*Pg	**Pb**	**06 15 16.2**	**+0.5**
IGT	**Igoumenitsa**	**1.59**	**223**	*e*Pg	**Pg**	**06 15 18.3**	**+1.0**
IGT				*e*Sg	**Sg**	**06 15 40.1**	**+2.2**
PAIG	**Paliouri**	**1.69**	**117**	P	**Pb**	**06 15 17.7**	**-0.5**
XOR	**Xorichti**	**1.75**	**140**	P	**Pb**	**06 15 18.4**	**-0.9**
BOSS	**Bosilegrad**	**1.87**	**17**	*e*Pg	**Pb**	**06 15 20.6**	**-0.7**
BOSS				*e*Sg	**Sg**	**06 15 47.0**	**0.0**
LKD2	**Lefkada island**	**2.09**	**204**	P	**Pb**	**06 15 24.2**	**-0.8**
BARS	**Barje**	**2.10**	**2**	*e*Pn	**Pn**	**06 15 23.8**	**+1.4**
BARS				*e*Sg	**Sg**	**06 15 54.8**	**+0.3**
ANX	**Ano Chora**	**2.12**	**176**	P	**Pb**	**06 15 24.9**	**-0.7**
VTS	**Vitosha**	**2.22**	**30**	*e*Pn	**Pb**	**06 15 25.7**	**-1.6**
VTS				*e*Sg	**Sg**	**06 15 58.3**	**+0.2**
FSK	**Fiskardo**	**2.42**	**202**	P	**Pb**	**06 15 28.5**	**-2.2**
PDG	**Podgorica**	**2.53**	**314**	*e*Pn	**Pn**	**06 15 29.4**	**+1.2**
PDG				*e*Sg	**Sg**	**06 16 06.7**	**-1.3**
SELS	**Selova**	**2.55**	**350**	*e*Pn	**Pn**	**06 15 29.4**	**+0.9**
ZAPS	**Zavoj**	**2.65**	**15**	*e*Pn	**Pb**	**06 15 32.3**	**-2.3**
ZAPS				*e*Sg	**Sg**	**06 16 13.1**	**+1.2**
SJES	**Sjenica**	**2.86**	**333**	*e*Pn	**Pn**	**06 15 34.1**	**+1.1**
SJES				*e*Sg	**Sg**	**06 16 18.3**	**-0.5**
IVAS	**Ivanjica**	**3.09**	**338**

	baz=312							
NNS	**Nan Shan**	**0.45**	**265**	*e*S		Sb	06 52 35.0	+0.9
	baz=264							
YHNB	**Yeheng**	**0.48**	**293**	*e*P		Pb	06 52 28.4	+0.1
	baz=293							
YHNB					S	Sb	06 52 35.8	+0.6
	baz=293							
TIPB	**Shuangxi**	**0.49**	**356**	*e*P		Pb	06 52 29.2	+0.8
	baz=356							
NSK	**Sanguang**	**0.50**	**293**	*e*P		Pg	06 52 27.9	-0.2
	baz=293							
NSK					S	Sb	06 52 35.8	+0.1
	baz=293							
TDCB	**Techi**	**0.68**	**251**	*e*S		Sb	06 52 41.0	+0.1
	baz=250							
CHGB	**Renai**	**0.75**	**237**	*e*P		Pb	06 52 33.6	+0.6
	baz=236							
CHGB					S	Sb	06 52 43.5	+0.4
	baz=236							

TAP 19 06:52:25.2,24°48N×121°87E,h13km,ML1.7,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.12**	**247**	P	Pg	06 52 28.6	+0.1
	baz=244						
ENA				*e*S	Sg	06 52 31.1	+0.2
	baz=244						
TWC	**Suao**	**0.13**	**353**	*i* P	Pg	06 52 28.4	-0.2
	baz=357						
TWC				*i* S	Sg	06 52 30.8	-0.2
	baz=357						
EOS1	**EOS1**	**0.25**	**73**	P	Pg	06 52 30.4	-0.1
	baz=73						
EOS1				S	Sg	06 52 34.5	+0.5
	baz=73						
TWE	**Neicheng**	**0.30**	**323**	*e*P	Pg	06 52 30.7	-0.8
	baz=325						
TWE				*e*S	Sg	06 52 35.0	-0.7
	baz=325						
ENTT	**Nioudou**	**0.32**	**301**	*e*P	Pg	06 52 31.2	-0.6
	baz=301						
ENTT				*e*S	Sg	06 52 36.0	-0.1
	baz=301						
ENTT	**Nioudou**	**0.32**	**301**	*e*S	Pg	06 52 31.1	-0.6
	baz=301						
NDT	**Datong Townshi**	**0.34**	**291**	*e*P	Pg	06 52 32.2	-0.1
	baz=291						
NDT				*e*S	Sg	06 52 37.8	+0.8
	baz=291						
NTC	**Toucheng**	**0.38**	**355**	*e*P	Pb	06 52 33.4	-0.3
	baz=355						
NTC				*e*S	Sg	06 52 38.3	+0.4
	baz=355						
NACB	**Ninganchiao**	**0.39**	**219**	*e*P	Pg	06 52 32.6	-0.5
	baz=219						
NACB				S	Sg	06 52 37.9	-0.4
	baz=219						
NACB	**Ninganchiao**	**0.39**	**219**	*e*S	Pg	06 52 32.5	-0.6
	baz=218						
ETLH	**Xiulin Townshi**	**0.44**	**233**	*e*P	Pg	06 52 33.6	-0.4
	baz=232						
ETLH				*e*S	Sg	06 52 40.0	+0.1
	baz=232						
ETLH	**Xiulin Townshi**	**0.44**	**233**	*e*S	Pg	06 52 34.0	0.0
	baz=232						
NNSB	**Datong**	**0.44**	**264**	*e*P	Pg	06 52 33.1	-1.0
	baz=263						
NNSB				*e*S	Sg	06 52 40.4	+0.4
	baz=263						
NNSH	**Datong**	**0.44**	**264**	*e*P	Pg	06 52 34.2	+0.2
	baz=263						
NNSH				*e*S	Sg	06 52 39.9	-0.1
	baz=263						
NWLT	**Wulai**	**0.45**	**312**	*e*P	Pg	06 52 34.3	+0.2
	baz=312						
NWLT				*e*S	Sg	06 52 39.5	-0.5
	baz=312						
NWLT	**Wulai**	**0.45**	**312**	*e*S	Pg	06 52 34.5	+0.4
	baz=312						
NNS	**Nan Shan**	**0.45**	**265**	*e*P	Pg	06 52 34.4	+0.2
	baz=264						
NNS				*e*S	Sg	06 52 41.0	+0.7
	baz=264						
TWD	**Chiawan**	**0.47**	**212**	*e*S	Sg	06 52 39.3	-1.3
	baz=211						
YHNB	**Yeheng**	**0.49**	**293**	*e*P	Pg	06 52 34.5	-0.3
	baz=293						
YHNB				*e*S	Sb	06 52 42.0	-0.7
	baz=293						
TIPB	**Shuangxi**	**0.49**	**356**	*e*P	Pb	06 52 35.6	-0.2
	baz=355						
TIPB				S	Sg	06 52 41.5	0.0
	baz=355						
TIPB	**Shuangxi**	**0.49**	**356**	S	Pb	06 52 35.8	+0.1
	baz=356						
NSK	**Sanguang**	**0.50**	**293**	*e*P	Pg	06 52 35.2	0.0
	baz=293						
NSK				*e*S	Sg	06 52 42.2	+0.3
	baz=293						
TWB1	**Santiao Chiao**	**0.54**	**12**	*e*P	Pg	06 52 35.3	-0.6
	baz=12						
TWB1				*e*S	Sg	06 52 42.4	-0.6
	baz=12						
TDCB	**Techi**	**0.68**	**251**	*e*P	Pg	06 52 38.0	-0.6
	baz=250						
TDCB				*e*S	Sg	06 52 47.8	+0.2
	baz=250						
YM10	**YM10**	**0.73**	**338**	*e*S	Sg	06 52 48.9	-0.1
	baz=337						

*IDC **19** 07:06:37.8±1.4,23°.45N×126°.21E,h0km,mb3.5/3, mb1 3.6/4,mb1mx3.3/33,mbtmp3.4/4,ML2.6/1,MS3.3/2, Ms1 3.3/2,ms1mx2.5/35,Error ellipse: s-maj=54.4km s-min=25.8km az=81.0*

*JMA **19** 07:06:42.5±0.2,23°.61N×125°.90E,h85km,M2.9*

ISC 19 07:06:41.7±1.2,23°.57N±0°.09×126°.04E±0°.06,h32km,n17, σ0s91/23,mb3.6/3,Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**1.32**	**334**	P	Pb	07 07 05.0	-0.8
JMJ2	**Miyako jima3**	**1.33**	**331**	P	Pb	07 07 05.2	-0.9
JIRB	**Irabujima**	**1.48**	**328**	P	Pn	07 07 06.7	+0.6
JIKM	**Ikemajima**	**1.53**	**332**	P	Pn	07 07 07.6	+0.9
JTJ	**Tarama**	**1.62**	**311**	P	Pn	07 07 08.5	+0.5
JISG	**Ishigakijimahi**	**1.88**	**303**	P	Pn	07 07 11.6	+0.1
JISG				*e*S	Sn	07 07 33.8	-0.3
JIJ	**Ishigaki jima**	**1.91**	**295**	P	Pn	07 07 11.9	-0.1
JIJ				*e*S	Sn	07 07 34.1	-0.8
JKRS	**Kuro-shima**	**1.98**	**290**	P	Pn	07 07 13.1	+0.2
JKRS				*e*S	Sn	07 07 36.0	-0.6
HATJ	**Hateruma jima**	**2.10**	**284**	P	Pn	07 07 14.4	-0.3
HATJ				*e*S	Sn	07 07 38.9	-0.9
IRIF	**Iriomote-Funau**	**2.25**	**290**	P	Pn	07 07 16.9	+0.3
IRIF				*e*S	Sn	07 07 42.8	-0.5
YOJ	**Yonaguni jima**	**2.91**	**288**	P	Pn	07 07 25.9	+0.1
JYNG	**Yonagunijimaku**	**2.96**	**288**	P	Pn	07 07 26.5	0.0
JYNG				S	Sn	07 07 59.2	-1.8
JOW	**Kunigami**	**3.82**	**31**	Pn	Pn	07 07 38.1	-0.2
	0.9nm,0.3s,baz=355,slow=17,SNR=17						
JOW				Sn	Sn	07 08 20.9	-1.3
	0.4nm,0.3s,baz=90,slow=18,SNR=2.0						
MKAR	**Makanchi Array**	**41.90**	**315**	P	P	07 14 31.6	+2.5
	0.3nm,0.7s,baz=92,slow=10.0,SNR=2.1						
WRA	**Warramunga Arr**	**44.00**	**169**	P	P	07 14 45.8	-0.5
	0.9nm,0.6s,baz=348,slow=8.7,SNR=9.8						
ASAR	**Alice Springs**	**47.57**	**170**	P	P	07 15 14.4	-0.1
	0.3nm,0.5s,baz=356,slow=12,SNR=6.0						
ASAR				LR	LR	07 38 10.3	
	comp=Z,24nm,18.1s,baz=128,slow=40						
KVAR	**Kislovodsk Arr**	**69.40**	**310**	LR	LR	07 51 27.0	
	comp=Z,27nm,19.3s,baz=238,slow=39						

*NEIC **19** 07:12:58.5±1.8,13°.72N±0°.07×92°.92W±0°.04,h10km±2km, Md4.0/11(MEX),Error ellipse: s-maj=13.9km s-min=3.4km az=207.0*

*GCG **19** 07:13:00.0±0.5,13°.92N×93°.18W,h35km±999km,MD3.9*

*MEX **19** 07:13:03.4±0.4,13°.70N×92°.61W,h71km±69km,MD4.0*

ISC 19 07:13:02.9±2.6,13°.9N±0°.1×92°.92W±0°.08,h33km±9km,n11, σ0s90/17,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**1.15**	**33**	*i* P	Pb	07 13 23.7	-0.6
THIG				*i* S	Sb	07 13 39.5	+0.5
THIG		**1.15**	**33**		Pb	07 13 23.7	-0.6
THIG					Sb	07 13 39.5	+0.5
STG3	**Santiaguito 3,**	**1.52**	**59**	*e*P	Pn	07 13 28.5	+0.6
STG3				*e*S	Sb	07 13 50.7	+1.2
PCIG		**1.78**	**351**	*e*P	Pb	07 13 35.0	+0.1
PCIG		**1.78**	**351**		Pb	07 13 35.0	+0.1
FUG	**Fuego 3**	**2.08**	**76**	*e*P	Pn	07 13 36.6	+1.0
FUG				*e*S	Sb	07 14 05.4	-0.2
IXG	**Ixpaco**	**2.42**	**84**	*e*P	Pn	07 13 41.4	+1.1
IXG				*e*S	Sb	07 14 13.4	-1.9
CCIG	**Comitan**	**2.45**	**18**	*e*P	Pb	07 13 46.0	-0.4
CCIG	**Comitan**	**2.45**	**18**		Pb	07 13 46.4	0.0
CCIG				Sn	Sn	07 14 08.5	-1.2
CMIG	**Matias Romero**	**3.66**	**329**	*e*P	Pn	07 13 57.5	+0.2
CMIG	**Matias Romero**	**3.66**	**329**		Pn	07 13 57.5	+0.2

TRN 19 07:30:54.2,17°.01N×60°.25W,h30km,MD4.1,1C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABD	**La Joyeuse, An**	**1.30**	**246**	*e*P	Pb	07 31 17.7	-0.3
ABD	**La Joyeuse, An**	**1.30**	**246**	*e*P	Pb	07 31 18.0	0.0
ABD				*e*S	Sb	07 31 35.9	+1.5
MAGL	**Barre de l'ile**	**1.45**	**223**	*e*P	Pn	07 31 19.2	+0.8
MAGL				*e*S	Sb	07 31 38.0	-0.6
CBE	**Ff, Capester**	**1.60**	**235**	*e*P	Pb	07 31 21.9	-1.3
CBE				*e*S	Sb	07 31 42.7	-0.4
ANWB	**Willy Bob**	**1.61**	**294**	*e*P	Pn	07 31 20.3	-0.3
ANWB				*e*S	Sn	07 31 39.6	-0.8
TDBA	**Terre de Bas,**	**1.76**	**229**	*e*P	Pb	07 31 24.6	-1.2
TDBA				*e*S	Sb	07 31 46.1	-1.5
MLYT	**Lee's Yard**	**1.88**	**262**	*e*P	Pb	07 31 26.5	-1.5
MLYT				*e*S	Sb	07 31 50.4	-0.6
MDN	**Morne-Daniel**	**2.01**	**213**	*e*P	Pn	07 31 27.3	+1.2
NVDO	**Nevis, Disaste**	**2.27**	**273**	*e*S	Sn	07 31 59.0	+2.3
ILAM	**Ilet Lapin Mar**	**2.30**	**195**	*e*P	Pn	07 31 31.8	+1.7
ILAM				*e*S	Sn	07 31 59.0	+1.5
BAMF	**Morne Balai**	**2.35**	**202**	*e*P	Pn	07 31 33.2	+2.4
CXM	**Morne La Croix**	**2.36**	**202**	*e*P	Pb	07 31 33.7	-2.4
GBMF	**Grand Be**	**2.37**	**202**	*e*P	Pn	07 31 33.3	+2.2
PCM	**Pelee Case Pet**	**2.37**	**203**	*e*P	Pn	07 31 32.5	+1.4
PML	**Morne Lenard**	**2.39**	**202**	*e*P	Pn	07 31 32.9	+1.5
SKI	**Saint Kitts**	**2.40**	**278**	*e*P	Pn	07 31 33.0	+1.4
SKI				*e*S	Sn	07 32 03.0	+2.9
FDF	**Fort de France**	**2.42**	**201**	*e*P	Pn	07 31 34.1	+2.2
FDF				*e*S	Sn	07 32 01.8	+1.2
LPMF	**Morne Lapointe**	**2.52**	**196**	*e*P	Pn	07 31 34.5	+1.4
ZAM	**Aeronautique**	**2.54**	**197**	*e*P	Pn	07 31 34.8	+1.5
BIM	**Bigot**	**2.60**	**198**	*e*P	Pn	07 31 36.2	+1.9
BIM				*e*S	Sn	07 32 06.2	+1.3
MPOM	**Morne Pois Mar**	**2.62**	**193**	*e*P	Pn	07 31 35.9	+1.5
MPOM				*e*S	Sn	07 32 06.7	+1.5
SMRT	**St. Maarten**	**2.89**	**291**	*e*P	Pn	07 31 37.9	-0.3
SMRT				*e*S	Sn	07 32 11.0	-1.0
SABA	**Saba**	**2.93**	**282**	*e*P	Pn	07 31 40.5	+1.8
SABA				*e*S	Sn	07 32 14.0	+1.1
SLBI	**Saint Lucia, B**	**3.05**	**193**	*e*P	Pn	07 31 42.4	+2.0
SLBI				*e*S	Sn	07 32 17.1	+1.2
SLAC	**Saint Lucia, A**	**3.16**	**192**	*e*P	Pn	07 31 43.8	+1.9
SLAC				*e*S	Sn	07 32 19.5	+0.9
SLB	**Belfond**	**3.25**	**194**	*e*P	Pn	07 31 44.8	+1.5
SLB				*e*S	Sn	07 32 21.9	+0.8
MCLT	**Moule a Chique**	**3.35**	**192**	*e*P	Pn	07 31 46.6	+2.1
MCLT				*e*S	Sn	07 32 25.1	+1.8
SSV	**Crater Summit**	**3.77**	**194**	*e*P	Pn	07 31 53.6	+3.2
SSV				*e*S	Sn	07 32 36.5	+2.6
SVV	**Soufriere Volc**	**3.79**	**194**	*e*P	Pn	07 31 53.4	+2.8
SVV				*e*S	Sn	07 32 35.0	+0.8
SVCV	**St. Vincent, C**	**3.81**	**193**	*e*P	Pn	07 31 53.5	+2.5
SVCV				*e*S	Sn	07 32 36.5	+1.6
SVB	**Belmont**	**3.84**	**195**	*e*P	Pn	07 31 53.6	+2.3
SVB				*e*S	Sn	07 32 36.7	+1.2
BBGH	**Gun Hill**	**3.90**	**170**	*e*P	Pn	07 31 55.0	+2.9
BBGH				*e*S	Sn	07 32 38.3	+1.4
GCMP	**Grenada, Carri**	**4.64**	**194**	*e*S	Sn	07 32 56.5	+1.4
GRHS	**Sauteurs**	**4.94**	**196**	*e*P	Pn	07 32 09.2	+2.7
GRGR	**Grenville**	**5.04**	**196**	*e*P	Pn	07 32 09.9	+2.1
GRGR	**Grenville**	**5.04**	**196**	*e*S	Sn	07 33 06.4	+1.4
TRN	**Trinidad (W)**	**6.42**	**190**	*e*P	Pn	07 32 28.9	+2.1
TRN	**Trinidad (W)**	**6.42**	**190**	*e*S	Sn	07 33 39.1	0.0

*IDC **19** 07:43:20.6±1.9,40°.50N×49°.91E,h0km,mb3.5/3, mb1 3.6/8,mb1mx3.3/44,mbtmp3.5/8,ML3.8/4,MS2.8/2, Ms1 2.8/2,ms1mx2.2/42,Error ellipse: s-maj=26.9km s-min=17.4km az=177.0*

*AZER **19** 07:43:21.8,40°.71N×50°.01E,h2km,ML3.1*

ISC 19 07:43:23.4±1.2,40°.69N±0°.03×50°.08E±0°.04,h6km±8km, n32,σ2s02/52,mb3.4/3,Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NDR	**Nardaran**	**0.13**	**214**	P	Pg	07 43 26.2	+0.2
NDR				S	Sg	07 43 29.2	+1.4
GALA	**Gala**	**0.28**	**168**	P	Pn	07 43 32.0	-2.0
	SNR=14						
GALA				S	Sb	07 43 41.5	+5.8
GOBA	**Gobu**	**0.39**	**223**	P	Pb	07 43 32.6	0.0
	SNR=93						
GOBA				S	Sb	07 43 43.3	+4.5
GBS	**Qobustan**	**0.88**	**261**	P	Pn	07 43 42.6	+0.3
	SNR=14						
GBS				S	Sn	07 43 57.5	+2.0
ATGJ	**Altiaghaj**	**0.89**	**282**	P	Pn	07 43 40.6	-1.8
	SNR=44						
ATGJ				S	Sn	07 43 58.2	+2.5
SIZA	**Siyzn**	**0.98**	**294**	P	Pn	07 43 43.3	-0.3
	SNR=107						
SIZA				S	Sn	07 43 60.0	+2.1
ALIB	**Äli-Bayra**	**1.10**	**229**	P	Pn	07 43 47.1	+1.9
ALIB				S	Sn	07 44 02.9	+2.3
PQL	**Pirkuli**	**1.14**	**276**	P	Pn	07 43 45.9	0.0
	SNR=83						
PQL				S	Sn	07 44 04.1	+2.2
QUBA	**Quba, Azerbaij**	**1.37**	**300**	P	Pb	07 43 49.8	+0.4
	SNR=18						
QUBA				S	Sn	07 44 11.1	+3.5
IML	**Ismayilli**	**1.45**	**275**	P	Pb	07 43 50.4	-0.3
	SNR=7.6						
IML				S	Sn	07 44 12.8	+3.4
KDMR	**Kurdemir**	**1.48**	**259**	Pn	Pg	07 43 50.4	-1.2
KDMR				Sn	Sn	07 44 13.8	+3.8
XNQ	**Khinaliq**	**1.55**	**289**	Pn	Pg	07 43 52.0	-1.0
	SNR=76						
XNQ				Sn	Sn	07 44 15.0	+2.8
QSAR	**Qusar**	**1.60**	**302**	Pn	Pg	07 43 53.5	-0.6
	SNR=25						
QSAR				Sn	Sg	07 44 18.1	+3.2
QBL	**Gabala**	**1.72**	**279**	Pn	Pg	07 43 54.1	-2.3
	SNR=11						
QBL				Sn	Sg	07 44 19.9	+1.2
GLBA	**Clilabad**	**1.94**	**223**	Sg	Sb	07 44 21.8	-1.7
SEKA	**Sheki**	**2.25**	**284**	Pn	Pb	07 44 01.7	-2.6
	SNR=13						
YRD	**Yardimli**	**2.27**	**219**	Pg	Pn	07 44 01.6	+0.1
YRD				Sg	Sn	07 44 28.5	-1.3
AGDM	**Agdam**	**2.34**	**257**	Pn	Pn	07 44 01.5	-0.9
	SNR=3.1						
AGDM				Sn	Sb	07 44 33.3	-1.8
ASTR	**Astara**	**2.34**	**206**	Sn	Sg	07 44 36.9	-1.8
LRK	**Lerik**	**2.44**	**214**	Pn	Pb	07 44 06.8	-1.0
	SNR=4.0						
LRK				Sn	Sn	07 44 33.3	-0.8
GANJ	**Ganja**	**2.86**	**270**	Pn	Pn	07 44 08.4	-1.1
	SNR=9.1						
GANJ				Sn	Sn	07 44 42.9	-1.4
GDB	**GEDABAY**	**3.29**	**272**	Pn	Pn	07 44 14.0	-1.5
	SNR=6.4						
GDB				Sn	Sn	07 44 53.7	-1.4
QZX	**Qazax, Azerbai**	**3.59**	**277**	Pn	Pn	07 44 19.0	-0.6
	SNR=5.5						
QZX				Sn	Sn	07 45 02.1	-0.1
KBZ	**Khabaz**	**6.14**	**302**	Pn	Pn	07 44 55.4	+0.9
	0.1nm,0.3s,baz=120,slow=8.1,SNR=2.0						
GEYT	**Alibeck**	**6.81**	**111**	Pn	Pn	07 45 03.1	-0.7
	1.1nm,0.3s,baz=291,slow=17,SNR=23						

AKTO	**Aktyubinsk**	**11.22**	**27**	Pn	Pn	07 46 02.7	-1.4
	0.9nm,0.3s,baz=210,slow=9.2,SNR=7.9							
AKTO					Sn	Sn	07 48 08.9	-0.9
	0.1nm,0.3s,baz=356,slow=20,SNR=2.7							
AKASG	**Malin Array Be**	**17.62**	**312**	P	P	07 47 29.0	-1.4
	0.6nm,0.3s,baz=110,slow=12,SNR=2.8							
BVAR	**Borovoye Array**	**18.50**	**41**	P	Pn	07 47 41.6	+1.5
	0.2nm,0.3s,baz=221,slow=15,SNR=1.4							
KURBB	**Kurchatov Arra**	**22.11**	**54**	P	P	07 48 20.2	+1.0
	1.0nm,0.7s,baz=258,slow=12,SNR=5.7							
MKAR	**Makanchi Array**	**23.95**	**64**	P	P	07 48 38.2	0.0
	0.6nm,0.6s,baz=264,slow=10,SNR=5.7							
MKAR				LR	LR	08 00 07.8		
	comp=Z,20nm,18.3s,baz=242,slow=42							
VRAC	**Vranov**	**25.03**	**301**	LR	LR	08 00 05.6		
	comp=Z,20nm,21.3s,baz=350,slow=40							
FINES	**FINESS Array B**	**25.40**	**333**	P	P	07 48 50.7	-0.5	
	1.1nm,0.6s,baz=128,slow=9.0,SNR=6.1							

IDC 19 08:13:09.1±1.4,20°.50N×146°.85E,h0km,mb3.6/4, mb1 3.9/4,mb1mx3.5/35,mbtmp3.6/4,Error ellipse: s-maj=47.5km s-min=33.7km az=104.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**23.58**	**320**	P	P	08 18 22.6	+1.1
	0.7nm,0.3s,baz=146,slow=8.8,SNR=2.4						
WRA	**Warramunga Arr**	**42.02**	**198**	P	P	08 21 02.2	-0.2
	0.4nm,0.8s,baz=15,slow=9.2,SNR=1.4						
YKA	**Yellowknife Ar**	**75.90**	**28**	P	P	08 24 55.8	-1.5
	0.3nm,0.6s,baz=288,slow=5.5,SNR=6.1						
NVAR	**Mina Array Bea**	**81.18**	**52**	P	P	08 25 28.7	+1.5
	0.5nm,0.7s,baz=281,slow=5.4,SNR=4.8						

*IDC **19** 08:28:11.7±4.3,12°.24S×166°.93E,h152km±37km,mb3.6/8, mb1 3.8/9,mb1mx3.5/31,mbtmp4.1/9,MS3.4/3,Ms1 3.4/3, ms1mx2.9/36,Error ellipse: s-maj=29.1km s-min=20.1km az=113.0*

*NEIC **19** 08:28:12.5±1.1,12°.3S±0°.1×167°.0E±0°.1,h162km±7km, mb4.6/21,Error ellipse: s-maj=17.8km s-min=14.5km az=130.0*

ISC 19 08:28:11.1±0.5,12°.26S±0°.09×166°.97E±0°.09,h150km,n43, σ0s74/40,mb4.5/19,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.45**	**291**	P	Pn	08 29 57.2	+0.1
	15nm,0.3s,baz=166,slow=21,SNR=6.8						
HNR	**Honiara**	**7.45**	**291**		Pn	08 29 57.9	+0.8
DZM	**Mont Dzumac**	**9.77**	**183**	P	Pn	08 30 35.2	+7.0
	0.6nm,0.3s,baz=150,slow=23,SNR=9.9						
DZM	**Mont Dzumac**	**9.77**	**183**		Pn	08 30 28.1	-0.1
FUNA	**Funafuti**	**12.59**	**74**	Pn	Pn	08 31 06.3	+1.3
EIDS	**Eidsvold**	**19.88**	**227**	P	P	08 32 31.2	+0.4
ARMA	**Armidale**	**22.99**	**216**	P	P	08 33 03.2	+0.3
STKA	**Stephens Creek**	**30.43**	**226**	P	P	08 34 10.3	+0.8
	1.9nm,0.8s,baz=50,slow=9.8,SNR=5.9						
STKA	**Stephens Creek**	**30.43**	**226**	P	P	08 34 09.8	+0.3
LTZ	**Lake Taylor**	**30.76**	**172**	P	P	08 34 13.1	+0.9
RPZ	**Rata Peaks**	**31.54**	**174**	P	P	08 34 19.7	+0.6
	6.4nm,0.5s,baz=0.2,slow=3.0,SNR=5.8						
RPZ	**Rata Peaks**	**31.54**	**174**	P	P	08 34 19.4	+0.3
TOO	**Toolangi**	**31.70**	**214**	P	P	08 34 21.1	+0.5
TOO				IAmb	IAmb	08 34 23.1	
	comp=Z,34nm,1.6s						
MQZ	**McQueen's Vall**	**31.72**	**172**	P	P	08 34 20.0	-0.5
WR0	**Warramunga Arr**	**32.04**	**252**	P	P	08 34 24.3	+0.6
WR0				IAmb	IAmb	08 35 15.2	
	comp=Z,23nm,1.7s						
LBZ	**Lake Benmore**	**32.14**	**176**	P	P	08 34 24.7	+0.5
WB0	**Warramunga Arr**	**32.15**	**252**	P	P	08 34 25.0	+0.3
WB0				IAmb	IAmb	08 34 29.5	
	comp=Z,28nm,2.0s						
WB2	**Warramunga Arr**	**32.21**	**252**	P	P	08 34 25.2	-0.1
WB2				IAmb	IAmb	08 35 06.1	
	comp=Z,27nm,1.8s						
WRA	**Warramunga Arr**	**32.22**	**252**	P	P	08 34 25.2	-0.2
	comp=Z,0.6nm,0.8s,baz=46,slow=32,SNR=12						
ASAR	**Alice Springs**	**33.35**	**245**	P	P	08 34 35.2	0.0
	comp=Z,0.8nm,0.7s,baz=72,slow=9.7,SNR=15						
BBOO	**Buckleboo**	**34.91**	**229**	P	P	08 34 49.0	+0.5
FITZ	**Fitzroy Crossi**	**40.24**	**256**	P	P	08 35 32.8	-0.7
FITZ				IAmb	IAmb	08 36 48.6	
	comp=Z,23nm,1.6s						
FORT	**Forrest**	**40.35**	**237**	P	P	08 35 34.9	+0.6
FORT				IAmb	IAmb	08 35 35.6	
	comp=Z,9.4nm,0.7s						
NWAO	**Narrogin (SRO)**	**49.80**	**237**	LR	LR	08 57 37.1	
	comp=Z,61nm,20.8s,baz=128,slow=36						
KSRS	**Korea Array**	**61.55**	**325**	LR	LR	09 04 02.8	
	comp=Z,17nm,18.1s,baz=110,slow=35						
VNDA	**Vanda**	**65.31**	**181**	P	P	08 38 36.9	+0.4
VNDA				IAmb	IAmb	08 40 30.7	
	comp=Z,12nm,2.0s						
CASY	**Casey**	**65.70**	**202**	P	P	08 38 38.7	-0.4
CASY				IAmb	IAmb	08 40 53.7	
	comp=Z,28nm,1.9s						
PSI	**Prapat**	**69.22**	**278**	LR	LR	09 16 09.4	
	comp=Z,32nm,18.5s,baz=90,slow=42						
QSPA	**South Pole Qui**	**77.76**	**180**	P	P	08 39 50.9	-0.5
QSPA				IAmb	IAmb	08 40 15.1	
	comp=Z,21nm,1.8s						
QSPA	**South Pole Qui**	**77.76**	**180**	P	P	08 39 51.1	-0.3
QSPA				IAmb	IAmb	08 40 04.3	
	comp=Z,6.2nm,1.2s						
GHO	**Glory Hole Cre**	**81.48**	**20**	P	P	08 40 09.1	-2.3
CCB	**Clear Creek Bu**	**83.91**	**18**	P	P	08 40 24.3	+0.6
CCB				IAmb	IAmb	08 40 26.0	
	comp=Z,14nm,1.7s						
HDA	**Harding Lake**	**84.00**	**18**	P	P	08 40 24.3	+0.1
HDA				IAmb	IAmb	08 40 26.4	
	comp=Z,5.1nm,0.7s						
IL31		**84.28**	**18**	P	P	08 40 25.3	-0.2
**

KHZ IAmb IAmb 08 33 37.9
comp=Z,12nm,1.1s
LTZ Lake Taylor 16.23 209 Pn **Pn** **08 33 31.8 -0.6**
LTZ IAmb IAmb 08 33 32.4
comp=Z,34nm,1.5s
OXZ Oxford 16.77 208 Pn **Pn** **08 33 36.7 -2.5**
OXZ IAmb IAmb 08 33 53.2
comp=Z,9.3nm,0.6s
RAR Rarotonga 17.49 68 P **P** **08 33 51.7 +2.5**
comp=Z,1.3nm,0.3s,baz=232,slow=19,SNR=1.7
RAR Rarotonga 17.49 68 P **P** **08 33 52.0 +2.8**
RAR IAmb IAmb 08 34 01.0
comp=Z,72nm,1.5s
WKZ Wanaka 19.28 211 P **P** **08 34 08.2 -0.6**
STKA Stephens Creek 35.58 255 P **P** **08 36 39.3 -1.9**
comp=Z,0.6nm,0.5s,baz=53,slow=17,SNR=1.6
STKA Stephens Creek 35.58 255 P **P** **08 36 40.0 -1.2**
BBOO Buckleboo 40.12 252 P **P** **08 37 18.5 -1.1**
BBOO IAmb IAmb 08 37 24.7
comp=Z,13nm,1.5s
AS31 Alice Springs 43.98 265 P **P** **08 37 50.0 -1.3**
ASAR Alice Springs 43.98 265 P **P** **08 37 49.4 -1.9**
comp=Z,0.7nm,0.5s,baz=101,slow=6.9,SNR=13
ASAR PcP **PcP** **08 39 37.6 +1.0**
comp=Z,0.3nm,0.5s,baz=115,slow=4.0,SNR=2.0
WR0 Warramunga Arr 44.66 270 P **P** **08 37 55.5 -1.2**
WB2 Warramunga Arr 44.83 270 P **P** **08 37 56.9 -1.1**
WB2 IAmb IAmb 08 38 09.0
comp=Z,8.9nm,1.4s
WRA Warramunga Arr 44.84 270 P **P** **08 37 56.3 -1.9**
comp=Z,0.6nm,0.4s,baz=109,slow=7.8,SNR=21
WB0 Warramunga Arr 44.86 271 P **P** **08 37 56.4 -1.9**
FORT Forrest 47.18 254 P **P** **08 38 15.0 -1.4**
FORT IAmb IAmb 08 38 22.2
comp=Z,9.4nm,1.1s
VNDA Vanda 49.59 186 P **P** **08 38 36.2 +1.9**
comp=Z,0.7nm,0.9s,baz=36,slow=2.0,SNR=3.9
FITZ Fitzroy Crossi 53.16 268 P **P** **08 39 00.6 -1.3**
baz=89,slow=6.8
FITZ Fitzroy Crossi 53.16 268 P **P** **08 39 00.1 -1.8**
CASY Casey 56.76 207 P **P** **08 39 27.5 +0.3**
SNAA Sanae 79.55 178 P **P** **08 41 49.7 -0.4**
H03S2 Juan Fernandez 80.60 123 T T 10 11 38.3
baz=240,slow=74,SNR=54
H03S1 Juan Fernandez 80.61 123 T T 10 11 41.5
baz=240,slow=74,SNR=48
H03S3 Juan Fernandez 80.62 123 T T 10 11 40.8
baz=240,slow=74,SNR=47
H03N3 Juan Fernandez 80.78 123 T T 10 11 50.2
baz=244,slow=72,SNR=30
H03N2 Juan Fernandez 80.79 123 T T 10 11 55.4
baz=244,slow=72,SNR=24
H03N1 Juan Fernandez 80.80 123 T T 10 11 50.3
baz=244,slow=72,SNR=34
FINES FINESS Array B 144.06 341 PKP **PKPab** **08 49 15.2 -0.7**
comp=Z,1.1nm,0.6s,baz=46,slow=5.5,SNR=5.7
NOA NORSAR Array B 147.45 352 PKPbc **PKPbc** **08 49 26.5 -0.2**
comp=Z,0.8nm,0.6s,baz=15,slow=4.6,SNR=3.4
AKASG Malin Array Be 150.61 325 PKPbc **PKPbc** **08 49 33.2 -1.7**
comp=Z,0.7nm,0.3s,baz=45,slow=3.1,SNR=4.3
BRTR Keskin Array B 152.57 301 PKPbc **PKPbc** **08 49 40.4 +0.3**
comp=Z,0.3nm,0.5s,baz=93,slow=2.9,SNR=2.3
TORD Torodi Ar. Bea 164.21 176 PKPab **PKPab** **08 50 42.5 +1.4**
comp=Z,0.4nm,0.9s,baz=152,slow=37,SNR=2.2

*IDC **19** 08:39:59.6±0.7,3.00S×141.81E,h0km,mb4.2/11, mb1 4.3/12,mb1mx4.1/37,mbtmp4.2/12,ML4.1/1,MS3.7/5, Ms1 3.7/5,ms1mx3.0/44,Error ellipse: s-maj=18.2km s-min=12.3km az=40.0*
*NEIC **19** 08:40:01.0±1.4,2.96S±0.09×141.77E±0.09,h10km±1km, mb4.5/22,Error ellipse: s-maj=18.7km s-min=10.6km az=39.0*
*DJA **19** 08:40:01.6±1.4,2.2S±8.1×14.2E±.1,h10km,M4.2/4, MLv4.2/4*
ISC 19 08:40:03.9±0.5,3.03S±0.07×141.79E±0.06,h30km,n65, σ1§20/57,mb4.3/19,MS3.6/3,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.20**	**295**	Pg	**Pn**	**08 40 22.5**	**-2.2**
	24nm,0.3s,baz=156,slow=8.3,SNR=72						
JAY				Lg	Lg	08 40 39.2	
	119nm,0.3s,baz=229,slow=24,SNR=10						
JAY	**Jayapura**	**1.20**	**295**	P	**Pn**	**08 40 22.7**	**-2.0**
GENI	**Genyem**	**1.68**	**285**	P	**Pn**	**08 40 30.8**	**-0.4**
GENI				S	**Sb**	**08 40 54.6**	**-0.3**
WAMI	**Wamena**	**3.19**	**254**	P	**Pn**	**08 40 54.0**	**+1.9**
WAMI				S	**Sb**	**08 41 35.2**	**-3.2**
SMPI	**Sarmi**	**3.24**	**288**	P	**Pn**	**08 40 53.7**	**+0.9**
SMPI				S	**Sn**	**08 41 31.1**	**+0.6**
PMG	**Port Moresby**	**8.29**	**140**	LR	LR	08 46 05.0	
	comp=Z,534nm,18.5s,baz=50,slow=44						
PMG	**Port Moresby**	**8.29**	**140**	Pn	**Pn**	**08 42 01.7**	**-0.5**
FAKI	**Fak Fak**	**9.53**	**270**	Pn	**Pn**	**08 42 18.3**	**-0.9**
SIJI	**Sorong**	**10.73**	**281**	Pn	**Pn**	**08 42 37.9**	**+2.2**
	1.5nm,0.3s,baz=78,slow=11,SNR=6.1						
SIJI				LR	LR	08 47 41.0	
	comp=Z,293nm,19.4s,baz=106,slow=43						
COEN	**Coen**	**10.95**	**173**	Pn	**Pn**	**08 42 36.0**	**-2.7**
MTN	**Manton Dam**	**14.36**	**227**	Pn	**Pn**	**08 43 25.0**	**-0.4**
KNRA	**Kununurra**	**17.96**	**225**	P	**P**	**08 44 12.0**	**+0.1**
KNRA				IAmb	IAmb	08 44 25.3	
	comp=Z,33nm,0.8s						
WB0	**Warramunga Arr**	**18.14**	**203**	P	**P**	**08 44 14.3**	**+0.4**
WR0	**Warramunga Arr**	**18.26**	**202**	P	**Pn**	**08 44 15.3**	**+0.1**
WR0				IAmb	IAmb	08 44 34.9	
	comp=Z,21nm,1.1s						
WRAB	**Tennant Creek**	**18.31**	**203**	P	**Pn**	**08 44 16.1**	**+0.3**
WB2	**Warramunga Arr**	**18.32**	**203**	P	**Pn**	**08 44 16.5**	**+0.6**
WB2				IAmb	IAmb	08 44 22.9	
	comp=Z,31nm,1.4s						
WRA	**Warramunga Arr**	**18.32**	**203**	P	**Pn**	**08 44 16.0**	**0.0**
	comp=Z,0.6nm,0.3s,baz=17,slow=12,SNR=35						
FITZ	**Fitzroy Crossi**	**21.79**	**225**	P	**P**	**08 44 53.2**	**-0.4**
	comp=Z,2.4nm,0.6s,baz=50,slow=13,SNR=5.4						
FITZ				LR	LR	08 54 01.3	
	comp=Z,159nm,18.8s,baz=54,slow=39						
FITZ	**Fitzroy Crossi**	**21.79**	**225**	P	**P**	**08 44 53.5**	**-0.2**
AS31	**Alice Springs**	**21.89**	**200**	P	**P**	**08 44 55.1**	**+0.4**
ASAR	**Alice Springs**	**21.89**	**200**	P	**P**	**08 44 54.3**	**-0.4**
	comp=Z,3.8nm,1.0s,baz=30,slow=11,SNR=21						
TTSI	**Tana Toraja**	**21.94**	**269**	P	P	08 45 07.7	+12
MPSI	**Mapaga**	**22.14**	**278**	P	**P**	**08 45 00.4**	**+3.0**
EIDS	**Eidsvold**	**23.95**	**159**	P	**P**	**08 45 16.3**	**+0.7**
EIDS				IAmb	IAmb	08 45 31.4	
	comp=Z,18nm,1.2s						
STKA	**Stephens Creek**	**28.70**	**180**	P	**P**	**08 45 59.4**	**+0.8**
	comp=Z,1.8nm,1.0s,baz=305,slow=14,SNR=3.1						
STKA	**Stephens Creek**	**28.70**	**180**	P	**P**	**08 45 59.2**	**+0.8**
BBOO	**Buckleboo**	**30.11**	**190**	P	**P**	**08 46 12.2**	**+1.1**
BBOO				IAmb	IAmb	08 46 29.8	
	comp=Z,11nm,1.4s						
FORT	**Forrest**	**30.50**	**204**	P	**P**	**08 46 14.7**	**+0.2**
H11S3	**WAKE ISLAND Hy 32.53**	**48**		T	T	09 20 43.9	
	baz=232,slow=75,SNR=92						
H11S2	**WAKE ISLAND Hy 32.55**	**48**		T	T	09 20 44.3	
	baz=232,slow=75,SNR=74						
H11S1	**WAKE ISLAND Hy 32.55**	**48**		T	T	09 20 45.2	
	baz=232,slow=75,SNR=96						
H11N1	**WAKE ISLAND Hy 33.45**	**46**		T	T	09 21 52.5	
	baz=229,slow=76,SNR=609						
H11N2	**WAKE ISLAND Hy 33.46**	**46**		T	T	09 21 53.7	
	baz=229,slow=76,SNR=733						
H11N3	**WAKE ISLAND Hy 33.47**	**46**		T	T	09 21 53.8	
	baz=229,slow=76,SNR=510						
MORW	**Morawa**	**35.63**	**221**	P	**P**	**08 47 00.1**	**+0.8**
MORW				IAmb	IAmb	08 47 03.6	
	comp=Z,11nm,1.1s						
RGRI	**Rengat**	**39.52**	**273**	P	**P**	**08 47 34.5**	**+2.0**
URZ	**Urewera**	**47.64**	**142**	LR	LR	09 06 38.7	
	comp=Z,66nm,19.4s,baz=152,slow=34						
BKZ	**Black Stump Fm**	**47.84**	**143**	P	**P**	**08 48 39.6**	**+0.5**
TUWZ	**Tuamarina**	**47.91**	**147**	P	**P**	**08 48 40.3**	**+0.8**
RPZ	**Rata Peaks**	**48.10**	**152**	LR	LR	09 08 16.0	
	comp=Z,84nm,18.8s,baz=8.5,slow=35						
BFZ	**Birch Farm**	**48.68**	**145**	P	**P**	**08 48 46.5**	**+1.0**
PETK	**Petropavlovsk-**	**57.51**	**11**	P	**P**	**08 49 51.1**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=179,slow=11,SNR=1.9						
MK31	**Makanchi Array**	**71.93**	**321**	P	**P**	**08 51 23.5**	**-1.1**
MK31				IAmb	IAmb	08 51 33.2	
	comp=Z,3.7nm,1.3s						
MKAR	**Makanchi Array**	**71.93**	**321**	P	**P**	**08 51 25.6**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=114,slow=8.1,SNR=7.9						
MAKZ	**Makanchi**	**72.13**	**321**	P	**P**	**08 51 24.2**	**-1.6**
MAKZ				IAmb	IAmb	08 51 35.4	
	comp=Z,2.7nm,0.8s						
ZALV	**Zalesovo Beam**	**73.77**	**329**	P	**P**	**08 51 35.4**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=131,slow=6.8,SNR=3.8						
VNDA	**Vanda**	**75.21**	**176**	P	**P**	**08 51 44.0**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=309,slow=5.6,SNR=7.4						
MLY	**Manley**	**83.40**	**23**	P	**P**	**08 52 27.8**	**-0.4**
MLY				IAmb	IAmb	08 52 42.7	
	comp=Z,2.6nm,1.1s						
RND	**Reindeer**	**83.59**	**25**	P	**P**	**08 52 28.8**	**-0.4**
CCB	**Clear Creek Bu**	**84.44**	**24**	P	**P**	**08 52 33.2**	**-0.1**
CCB				IAmb	IAmb	08 52 33.8	
	comp=Z,6.0nm,0.8s						
IL31		**84.86**	**24**	P	**P**	**08 52 34.9**	**-0.5**
IL31				IAmb	IAmb	08 52 35.8	
	comp=Z,4.1nm,0.7s						
ILAR	**Eielson Array**	**84.86**	**24**	P	**P**	**08 52 34.8**	**-0.8**
	comp=Z,3.6nm,0.7s,baz=260,slow=4.6,SNR=34						
GEYT	**Alibeck**	**86.85**	**308**	P	**P**	**08 52 45.5**	**-0.6**
	comp=Z,2.6nm,0.7s,baz=58,slow=5.8,SNR=4.6						
QSPA	**South Pole Qui**	**86.92**	**180**	P	**P**	**08 52 46.2**	**+0.3**
	comp=Z,4.6nm,0.9s,baz=320,slow=1.0,SNR=18						
QSPA	**South Pole Qui**	**86.92**	**180**	P	**P**	**08 52 46.4**	**+0.5**
DAWY	**Dawson**	**87.82**	**26**	P	**P**	**08 52 50.5**	**+0.4**
DAWY				IAmb	IAmb	08 52 52.2	
	comp=Z,4.8nm,0.8s						
YKA	**Yellowknife Ar**	**98.95**	**27**	P	Pdif	08 53 41.5	+0.2
	comp=Z,0.5nm,0.6s,baz=280,slow=4.5,SNR=11						
TORD	**Torodi Ar. Bea**	**139.29**	**287**	PKP	**PKiKP**	**08 59 30.4**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=51,slow=1.6,SNR=2.9						
ROSC	**El Rosal**	**143.93**	**86**	PKP	**PKPdf**	**08 59 37.4**	**-0.7**
	comp=Z,9.7nm,0.6s,baz=225,slow=21,SNR=7.3						
LPAZ	**La Paz**	**144.75**	**124**	PKP	**PKPdf**	**08 59 40.0**	**+0.2**
	comp=Z,3.8nm,0.7s,baz=261,slow=1.8,SNR=22						
LPAZ	**La Paz**	**144.75**	**124**	PKPdf	**PKPdf**	**08 59 38.8**	**-0.9**
RUSC	**La Rusia**	**145.12**	**84**	PKPbc	**PKPab**	**08 59 38.9**	**-1.0**
CPUP	**Villa Florida**	**145.45**	**149**	PKPbc	**PKiKP**	**08 59 41.4**	**-2.5**
	comp=Z,3.2nm,1.2s,baz=294,slow=4.0,SNR=2.8						
DBIC	**Dimbokro**	**146.57**	**277**	PKPbc	**PKPab**	**08 59 44.3**	**-0.4**
	comp=Z,4.7nm,1.0s,baz=86,slow=3.0,SNR=4.0						
DBIC	**Dimbokro**	**146.57**	**277**	PKPdf	**PKPdf**	**08 59 40.3**	**-1.8**

*IDC **19** 08:53:10.0±1.8,21.19S×178.37W,h426km±18km, mb3.6/17,mb1 3.8/18,mb1mx3.7/33,mbtmp4.4/18,Error ellipse: s-maj=16.1km s-min=13.5km az=120.0*
*NEIC **19** 08:53:11.1±1.9,21.17S±0.10×178.36W±0.09, h442km±6km,mb4.3/56,Error ellipse: s-maj=15.1km s-min=11.4km az=151.0*
ISC 19 08:53:11.8±0.4,21.15S±0.07×178.31W±0.07,h450km, n146,σ1§45/159,mb4.2/43,27C-5D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.83**	**314**	P	**P**	**08 54 38.7**	**+3.9**
NIUE	**Niue**	**8.14**	**77**	P	**P**	**08 55 10.2**	**+1.4**
NIUE					**S**	**08 56 48.1**	**+3.4**
AFI	**Afiamalu**	**9.52**	**42**	P	**P**	**08 55 22.1**	**-1.8**
AFI				S	**S**	**08 57 06.9**	**-5.6**
DZM	**Mont Dzumac**	**14.21**	**264**	P	**P**	**08 56 16.8**	**+2.1**
	0.4nm,0.3s,baz=140,slow=22,SNR=2.1						
DZM	**Mont Dzumac**	**14.21**	**264**	P	**P**	**08 56 14.7**	**-0.1**
OUZ	**Omahuta**	**15.72**	**205**	P	**P**	**08 56 30.9**	**+0.4**
OUZ				IAmb	IAmb	08 56 44.7	
	comp=Z,16nm,1.2s						
MXZ	**Matakaoa Point**	**16.62**	**189**	P	**P**	**08 56 39.1**	**-0.9**
URZ	**Urewera**	**17.51**	**192**	P	**P**	**08 56 46.1**	**-3.3**
	comp=Z,1.7nm,0.3s,baz=1.5,slow=4.2,SNR=20						
URZ				S	**S**	**08 59 47.0**	**-1.5**
	comp=Z,1.1nm,0.3s,baz=317,slow=20,SNR=2.9						
URZ	**Urewera**	**17.51**	**192**	P	**P**	**08 56 45.3**	**-4.1**
BKZ	**Black Stump Fm**	**18.51**	**193**	P	**P**	**08 56 58.2**	**-1.2**
BKZ				IAmb	IAmb	08 57 03.7	
	comp=Z,19nm,1.4s						
BKZ					**S**	**09 00 10.3**	**+4.7**
BFZ	**Birch Farm**	**20.02**	**192**	P	**P**	**08 57 11.8**	**-1.5**
BFZ				IAmb	IAmb	08 57 18.2	
	comp=Z,22nm,1.1s						
PLWZ	**Palliser**	**21.07**	**194**	P	**P**	**08 57 21.9**	**-1.0**
QRZ	**Quartz Range**	**21.11**	**200**	P	**P**	**08 57 22.4**	**-0.8**
NNZ	**Nelson**	**21.21**	**198**	P	**P**	**08 57 21.9**	**-2.2**
NNZ				IAmb	IAmb	08 57 25.8	
	comp=Z,21nm,1.0s						
TUWZ	**Tuamarina**	**21.26**	**196**	P	**P**	**08 57 22.9**	**-1.6**
BSWZ	**Blackbirch Sta**	**21.54**	**196**	P	**P**	**08 57 26.7**	**-0.4**
THZ	**Tophouse**	**21.85**	**198**	P	**P**	**08 57 29.4**	**-0.6**
THZ				IAmb	IAmb	08 57 37.9	
	comp=Z,12nm,1.0s						
KHZ	**Kahutara**	**22.29**	**196**	P	**P**	**08 57 31.6**	**-2.2**
KHZ				IAmb	IAmb	08 57 35.8	
	comp=Z,32nm,1.3s						
LTZ	**Lake Taylor**	**22.97**	**198**	P	**P**	**08 57 39.7**	**-0.4**
OXZ	**Oxford**	**23.54**	**198**	P	**P**	**08 57 44.4**	**-0.7**
MOZ	**McQueen's Vall**	**23.72**	**196**	P	**P**	**08 57 46.3**	**-0.4**
RPZ	**Rata Peaks**	**24.19**	**199**	P	**P**	**08 57 51.1**	**+0.2**
	comp=Z,8.6nm,0.5s,baz=338,slow=2.3,SNR=8.4						
RPZ	**Rata Peaks**	**24.19**	**199**	P	**P**	**08 57 50.2**	**-0.7**
CTAO	**Charters Tower**	**33.15**	**265**	P	**P**	**08 59 10.3**	**+0.8**
CTAO				IAmb	IAmb	08 59 11.4	
	comp=Z,15nm,1.2s						
STKA	**Stephens Creek**	**37.25**	**245**	P	**P**	**08 59 43.4**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=98,slow=12,SNR=7.1						
STKA				PP	**PP**	**09 01 19.0**	**-2.5**
	comp=Z,1.2nm,0.7s,baz=53,slow=10,SNR=3.1						
STKA	**Stephens Creek**	**37.25**	**245**	P	**P**	**08 59 42.4**	**-1.5**
COEN	**Coen**	**37.34**	**275**	P	**P**	**08 59 46.0**	**+1.2**
COEN				IAmb	IAmb	09 00 04.2	
	comp=Z,15nm,1.1s						
BBOO	**Buckleboo**	**42.01**	**244**	P	**P**	**09 00 21.3**	**-1.0**
JAY	**Jayapura**	**43.98**	**289**	P	**P**	**09 00 38.2**	**+0.1**
	comp=Z,14nm,0.7s,baz=117,slow=0.6,SNR=7.1						
WR0	**Warramunga Arr**	**44.04**	**263**	P	**P**	**09 00 37.7**	**-0.8**
WR0				IAmb	IAmb	09 00 54.7	
	comp=Z,13nm,1.5s						
AS31	**Alice Springs**	**44.09**	**257**	P	**P**	**09 00 37.7**	**-1.2**
ASAR	**Alice Springs**	**44.09**	**257**	P	**P**	**09 00 38.5**	**-0.5**
	comp=Z,5.0nm,0.9s,baz=96,slow=8.1,SNR=41						
ASAR				PcP	**PcP**	**09 02 14.8**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=100,slow=3.8,SNR=11						
ASAR				PP	**PP**	**09 02 33.0**	**+2.2**
	comp=Z,0.3nm,0.6s,baz=91,slow=8.3,SNR=2.4						
ASAR				ScP	**ScP**	**09 05 25.2**	**+1.9**
	comp=Z,0.5nm,0.7s,baz=116,slow=4.4,SNR=3.8						
WB0	**Warramunga Arr**	**44.21**	**263**	P	**P**	**09 00 39.0**	**-0.8**
WB2	**Warramunga Arr**	**44.22**	**263**	P	**P**	**09 00 37.6**	**-2.3**
WRA	**Warramunga Arr**	**44.23**	**263**	P	**P**	**09 00 37.4**	**-2.6**
	comp=Z,3.6nm,0.7s,baz=95,slow=7.5,SNR=22						
WRA				PcP	**PcP**	**09 02 15.5**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=99,slow=3.1,SNR=2.6						
FORT	**Forrest**	**48.78**	**247**	P	**P**	**09 01 13.8**	**-0.7**
FORT				IAmb	IAmb	09 01 30.1	
	comp=Z,13nm,1.2s						
KNRA	**Kununurra**	**50.33**	**267**	P	**P**	**09 01 23.9**	**-2.3**
KNRA				IAmb	IAmb	09 01 32.9	
	comp=Z,32nm,1.2s						
FAKI	**Fak Fak**	**51.37**	**284**	P	**P**	**09 01 30.8**	**-3.1**
FAKI				IAmb	IAmb	09 01 34.6	
	comp=Z,9.9nm,0.7s						
VNDA	**Vanda**	**57.24**	**185**	P	**P**	**09 02 14.9**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=359,slow=6.9,SNR=10.0						
VNDA	**Vanda**	**57.24**	**185**	P	**P**	**09 02 15.4**	**+0.9**
CASY	**Casey**	**63.26**	**205**	P	**P**	**09 02 54.6**	**-0.1**
CASY				IAmb	IAmb	09 02 56.6	
	comp=Z,5.0nm,0.9s						
QSPA	**South Pole Qui**	**68.92**	**180**	P	**P**	**09 03 30.4**	**+0.1**
QSPA				IAmb	IAmb	09 03 32.0	
	comp=Z,7.0nm,1.2s						
MJAR	**Matsushiro Arr**	**70.56**	**324**	P	**P**	**09 03 41.0**	**+0.5**
	comp=Z,1.7nm,0.5s,baz=143,slow=6.0,SNR=6.3						
MAT	**Matsushiro**	**70.56**	**324**	P	**P**	**09 03 40.6**	**+0.2**
ADK	**Adak**	**72.73**	**1**	P	**P**	**09 03 53.4**	**+0.7**
UNV	**Unalaska Valle**	**75.37**	**7**	P	**P**	**09 04 08.1**	**+0.3**
PEA0B	**Petropavlovsk-**	**76.82**	**345**	P	**P**	**09 04 16.8**	**+0.9**
PETK	**Petropavlovsk-**	**76.82**	**345**	P	**P**	**09 04 16.9**	**+1.0**
	comp=Z,7.8nm,0.8s,baz=149,slow=8.6,SNR=10						
KSRS	**Korea Array**	**77.18**	**319**	P	**P**	**09 04 18.9**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=124,slow=5.6,SNR=4.3						
USRK	**Ussuriysk Ar.**	**79.34**	**326**	P	**P**	**09 04 30.9**	**+1.3**
	comp=Z,3.0nm,0.7s,baz=83,slow=3.4,SNR=8.5						
KHMM	**Horse Mountain**	**79.83**	**39**	P	**P**	**09 04 33.7**	**+1.1**
KHMM				IAmb	IAmb	09 04 49.5	
	comp=Z,13nm,1.3s						
YBH	**Yreka Blue Hor**	**80.97**	**39**	P	**P**	**09 04 40.3**	**+1.8**
YBH				IAmb	IAmb	09 04 40.6	
	comp=Z,5.2nm,1.1s						
WAKR	**Walker**	**81.01**	**43**	P	**P**	**09 04 40.8**	**+2.0**
WAKR				IAmb	IAmb	09 04 42.0	
	comp=Z,5.8nm,1.2s						
PNTR	**Pine Nut**	**81.25**	**42**	P	**P**	**09 04 41.5**	**+1.4**
PNTR				IAmb	IAmb	09 04 42.5	
	comp=Z,6.4nm,0.9s						
VCNR	**Virginia City**	**81.34**	**42**	P	**P**	**09 04 42.0**	**+1.5**
YERR	**Yerington**	**81.42**	**43**	P	**P**	**09 04 42.1**	**+1.2**
NVAR	**Mina Array Bea**	**81.69**	**43**	P	**P**	**09 04 43.2**	**+0.8**
	comp=Z,1.7nm,0.9s,baz=222,slow=9.5,SNR=9.1						
NV11	**Mina Array Sit**	**81.79**	**43**	P	**P**	**09 04 44.0**	**+1.1**
KVN	**Kaiserville**	**82.18**	**43**	P	**P**	**09 04 45.9**	**+1.1**
MOD	**Modoc Plateau**	**82.50**	**40**	P	**P**	**09 04 43.4**	**-3.0**
MOD				IAmb	IAmb	09 04 49.6	
	comp=Z,4.2nm,1.1s						
PINE	**Pine Mountain**	**83.27**	**38**	P	**P**	**09 04 51.1**	**+0.9**
PINE				IAmb	IAmb	09 04 53.6	
	comp=Z,4.7nm,0.8s						
CNPM	**China Poot**	**83.39**	**14**	P	**P**	**09 04 50.0**	**-0.3**
TUC	**Tucson**	**83.60**	**52**	P	**P**	**09 04 53.0**	**+0.9**
BRLK	**Bradley Lake**	**83.69**	**14**	P	**P**	**09 04 52.3**	**+0.6**
RPSI	**Rantau Prapat**	**84.23**	**275**	P	**P**	**09 04 55.4**	**-0.1**
PSI	**Prapat**	**84.26**	**275**	P	**P**	**09 04 55.4**	**-0.4**
	comp=Z,2.1nm,0.3s,baz=178,slow=1.3,SNR=3.8						
I07A	**Izee**	**84.27**	**38**	P	**P**	**09 04 56.0**	**+0.9**
F10A	**Beach Ranch, E**	**86.69**	**38**	P	**P**	**09 05 07.5**	**+0.7**
F10A				IAmb	IAmb	09 05 08.9	
	comp=Z,6.2nm,1.0s						
MNTX	**Cornudas Mount**	**87.36**	**55**	P	**P**	**09 05 10.6**	**+0.4**
TX31	**Lajitas Ar. Si**	**87.64**	**57**	P	**P**	**09 05 11.8**	**+0.1**
TX31				IAmb	IAmb	09 05 14.3	
	comp=Z,13nm,1.3s						
TX32	**Lajitas Array**	**87.64**	**57**	P	**P**	**09 05 11.8**	**+0.1**
TX32				IAmb	IAmb	09 05 14.3	
	comp=Z,4.0nm,1.2s						
TXAR	**Lajitas Array**	**87.64**	**57**	P	**P**	**09 05 12.9**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=224,slow=7.0,SNR=14						
PV14	**Lion Creek, Pa**	**87.83**	**47**	P	**P**	**09 05 13.5**	**+0.9**
XAN	**Xi'an**	**88.30**	**307**	P	**P**	**09 05 16.3**	**+1.7**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MLY	**Manley**	**88.48**	**11**	P	**P**	**09 05 14.5**	**-0.2**
MLY				IAmb	IAmb	09 05 15.6	
	comp=Z,9.0nm,1.3s						
RDMU	**Red Mountain**	**88.54**	**45**	P	**P**	**09 05 16.3**	**+0.5**
MCMT	**McKenzie Canyo**	**88.63**	**40**	P	**P**	**09 05 17.2**	**+1.1**
HDA	**Harding Lake**	**88.67**	**13**	P	**P**	**09 05 15.3**	**-0.3**
HDA				IAmb	IAmb	09 05 16.8	
	comp=Z,4.0nm,0.6s						
CCB	**Clear Creek Bu**	**88.71**	**13**	P	**P**	**09 05 15.4**	**-0.3**
CCB				IAmb	IAmb	09 05 16.6	
	comp=Z,5.0nm,0.6s						
IL31		**89.01**	**13**	P	**P**	**09 05 16.9**	**-0.2**
IL31				IAmb	IAmb	09 05 19.2	
	comp=Z,2.5nm,0.6s						
ILAR	**Eielson Array**	**89.01**	**13**	P	**P**	**09 05 16.6**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=218,slow=5.8,SNR=27						
SNOW	**Snow King Moun**	**89.22**	**42**	P	**P**	**09 05 19.0**	**0.0**
SNOW				IAmb	IAmb	09 05 21.0	
	comp=Z,4.4nm,1.1s						
HHC	**Hu-ho-hao-te**	**89.60**	**314**	*e*P	**P**	**09 05 21.6**	**+1.0**
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,16nm,6.4s						
PDAR	**Pinedale Array**	**89.63**	**43**	P	**P**	**09 05 21.4**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=197,slow=3.1,SNR=9.7						
YHL	**Hebgen Lake**	**89.66**	**41**	P	**P**	**09 05 20.6**	**-0.3**
CMAR	**Chiang Mai Arr**	**90.06**	**290**	P	**P**	**09 05 24.5**	**+1.4**
	comp=Z,3.4nm,0.8s,baz=128,slow=3.2,SNR=9.3						
YKA	**Yellowknife Ar**	**97.22**	**25**	P	Pdif	09 05 54.9	+0.2
	comp=Z,0.1nm,0.5s,baz=187,slow=24,SNR=2.7						
YKA				PP	**PP**	**09 10 00.1**	**+1.6**
	comp=Z,0.1nm,0.4s,baz=140,slow=5.5,SNR=4.7						
ZALV	**Zalesovo Beam**	**110.81**	**321**	PKiKP	**PKiKP**	**09 10 51.9**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=274,slow=0.7,SNR=5.6						
MKAR	**Makanchi Array**	**111.43**	**313**	PKiKP	**PKiKP**	**09 10 54.

ABD				eS	Sg	09 00 37.1	+1.3	
MAGL	**Barre de l'ile**	**1.52**	**222**	*eP*	Pb	09 00 19.7	0.0	
MAGL				eS	Sb	09 00 39.7	+1.1	
ANWB	**Willy Bob**	**1.59**	**291**	*eP*	Pb	09 00 21.7	+0.8	
ANWB				eS	Sn	09 00 39.0	-0.4	
CBE	**Ff, Capester**	**1.67**	**233**	*eP*	Pb	09 00 21.8	-0.4	
CBE				eS	Sg	09 00 44.5	-1.3	
TDBA	**Terre de Bas,**	**1.83**	**228**	*eP*	Pb	09 00 25.1	+0.1	
TDBA				eS	Sb	09 00 48.7	+1.2	
MLYT	**Lee's Yard**	**1.91**	**259**	*eP*	Pb	09 00 26.1	-0.3	
MLYT				eS	Sb	09 00 50.3	+0.3	
MDN	**Morne-Daniel**	**2.09**	**212**	*e*	Pb	09 00 29.6	+0.2	
MDN	**Morne-Daniel**	**2.09**	**212**	*eP*	Pg	09 00 43.1	+11	
MDN				eS	Sb	09 00 54.5	-0.5	
ILAM	**Ilet Lapin Mar**	**2.39**	**195**	eS	Sn	09 00 57.7	-1.3	
SKI	**Saint Kitts**	**2.41**	**276**	*eP*	Pb	09 00 33.1	-1.8	
SKI				eS	Sn	09 01 01.8	+2.2	
PCM	**Pelee Case Pet**	**2.45**	**203**	*eP*	Pn	09 00 33.3	+2.1	
FDF	**Fort de France**	**2.51**	**201**	*e*	Pn	09 00 22.6	-9.3	
FDF	**Fort de France**	**2.51**	**201**	*eP*	Pg	09 00 49.1	+9.0	
FDF				eS	Sn	09 01 03.6	+1.4	
LPMF	**Morne Lapointe**	**2.60**	**196**	*eP*	Pn	09 00 34.9	+1.7	
ZAM	**Aeronautique**	**2.62**	**197**	*eP*	Pb	09 00 36.4	-2.1	
BIM	**Bigot**	**2.69**	**198**	*e*	Pn	09 00 27.1	-7.3	
BIM	**Bigot**	**2.69**	**198**	*eP*	Pg	09 00 50.5	+6.9	
BIM				eS	Sn	09 01 07.3	+0.8	
MPOM	**Morne Pois Mar**	**2.70**	**193**	*e*	Pn	09 00 24.2	-10	
MPOM	**Morne Pois Mar**	**2.70**	**193**	*eP*	Pg	09 00 50.3	+6.5	
MPOM				eS	Sn	09 01 07.5	+0.6	
SLBI	**Saint Lucia, B**	**3.14**	**193**	*e*	Pn	09 00 35.8	-4.7	
SLBI	**Saint Lucia, B**	**3.14**	**193**	*eP*	Pg	09 00 56.4	+4.3	
SLBI				eS	Sn	09 01 18.1	+0.5	
SLAC	**Saint Lucia, A**	**3.24**	**192**	*e*	Pn	09 00 40.5	-1.5	
SLAC	**Saint Lucia, A**	**3.24**	**192**	*eP*	Pg	09 00 59.0	+4.8	
SLAC				eS	Sn	09 01 20.9	+0.7	
SVCV	**St. Vincent, C**	**3.90**	**193**	*eP*	Pg	09 01 07.3	+0.6	
SVCV				eS	Sn	09 01 36.3	-0.2	

IDC ***19*** *09:00:58.1±3.2,36°.26N×71°.09E,h115km±27km,mb3.6/9, mb1 3.7/15,mb1mx3.4/49,mbtmp4.0/15,Error ellipse: s-maj=22.6km s-min=18.4km az=20.0*

NEIC ***19*** *09:01:01.6±2.3,36°.47N±0°.06×71°.00E±0°.08,h146km±8km, mb4.1/2,Error ellipse: s-maj=10.8km s-min=7.1km az=138.0*

NNC ***19*** *09:01:03.4±1.6,36°.69N×70°.78E,h161km±17km,mb3.6, mpv4.5,Error ellipse: s-maj=15.4km s-min=8.5km az=162.0*

ISC 19 09:01:01.3±0.5,36°.51N±0°.05×70°.98E±0°.05,h150km,n69, σ1§73/83,mb3.6/8,9C-5D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.52**	**219**		**Pn**	**09 01 43.9**	**+1.0**
GAR	**Garm**	**2.54**	**348**		**Pn**	**09 01 44.6**	**+1.5**
CHGR	**Chuyangaron**	**2.59**	**326**		**Pn**	**09 01 44.8**	**+1.2**
CEP	**Cherat**	**2.79**	**164**	P	**Pn**	**09 01 49.2**	**+3.0**
CEP				S	**Sn**	**09 02 23.0**	**+2.3**
CHCP	**Chirah Chowk**	**3.40**	**146**	P	**Pn**	**09 01 54.4**	**+0.5**
NIL	**Nilore**	**3.41**	**146**		**Pn**	**09 01 54.7**	**+0.8**
BTK	**Batken**	**3.55**	**358**	Pn	**Pn**	**09 01 58.0**	**+2.3**
THW	**Thamme Wali**	**3.76**	**170**	P	**Pn**	**09 01 58.7**	**+0.2**
SARP	**Sargodha**	**4.79**	**163**	P	**Pn**	**09 02 11.7**	**-0.2**
KSH	**Kashi**	**4.95**	**51**	Pn	**Pn**	**09 02 11.1**	**-3.1**
KSH				Sn	Sn	09 03 01.8	-9.2
KSH				smax	smax		
	comp=N,990nm,0.3s						
KSH				smax	smax		
	comp=E,510nm,0.3s						
ARSB	**Arslanbob**	**5.05**	**17**		**Pn**	**09 02 16.0**	**+0.5**
THN	**Thein Dam**	**5.64**	**135**	*eP*	**Pn**	**09 02 23.5**	**+0.3**
THN				eS	**Sn**	**09 03 23.0**	**-4.2**
AML	**Almayashu**	**6.00**	**20**	P	**Pn**	**09 02 29.0**	**+0.8**
	SNR=345						
UCH	**Uchtor**	**6.33**	**25**	P	**Pn**	**09 02 33.3**	**+0.5**
	SNR=79						
KZA	**Kyzart**	**6.47**	**29**	P	**Pn**	**09 02 34.8**	**+0.2**
	SNR=20						
EKS2	**Erkin-Say**	**6.51**	**18**	P	**Pn**	**09 02 36.2**	**+1.4**
	SNR=22						
KK31	**Karatay Array**	**6.60**	**357**	P	**Pn**	**09 02 37.1**	**+1.2**
	comp=E,38nm,0.5s,baz=183,slow=13,SNR=359						
KK31				⇓S	**Sn**	**09 03 49.1**	**-0.9**
	comp=E,7.2nm,0.3s,baz=185,slow=26,SNR=9.2						
KK31	**Karatay Array**	**6.60**	**357**		**Pn**	**09 02 37.0**	**+1.0**
KKAR	**Karatay Array**	**6.60**	**357**		**Pn**	**09 02 36.8**	**+0.8**
AAK	**Ala-Archa**	**6.69**	**23**	P	**Pn**	**09 02 37.4**	**+0.1**
	comp=E,10.0nm,0.3s,baz=166,slow=5.6,SNR=44						
AAK				S	**Sn**	**09 03 51.7**	**-0.9**
	comp=E,2.0nm,0.3s,baz=324,slow=22,SNR=8.0						
AAK	**Ala-Archa**	**6.69**	**23**	P	**Pn**	**09 02 38.4**	**+1.0**
	SNR=31						
AAK	**Ala-Archa**	**6.69**	**23**	⇑P	**Pn**	**09 02 37.7**	**+0.4**
	comp=E,13nm,0.5s						
AAK				⇑S	**Sn**	**09 03 53.0**	**+0.4**
	comp=E,50nm,1.1s						
AAK	**Ala-Archa**	**6.69**	**23**		**Pn**	**09 02 38.2**	**+0.9**
KBK	**Karagaybulak**	**6.86**	**25**	P	**Pn**	**09 02 40.5**	**+0.9**
	SNR=14						
BOOM	**Boomskoye usch**	**7.09**	**31**		**Pn**	**09 02 43.3**	**+0.6**
BOOM					**Sn**	**09 04 03.2**	**+0.9**
CHMS	**Chumysh**	**7.10**	**23**	P	**Pn**	**09 02 43.5**	**+0.9**
	SNR=9.4						
USP	**Ospenovka**	**7.27**	**21**	P	**Pn**	**09 02 45.9**	**+0.9**
	SNR=19						
TKM2	**Tokmak 2**	**7.32**	**28**	P	**Pn**	**09 02 46.4**	**+0.6**
	SNR=27						
TKM2	**Tokmak 2**	**7.32**	**28**	⇑P	**Pn**	**09 02 47.2**	**+1.4**
	comp=E,27nm,0.8s						
TKM2				⇑S	**Sn**	**09 04 06.7**	**-1.1**
	comp=E,21nm,1.0s						
KDJ	**Kajisay**	**7.39**	**39**		**Pn**	**09 02 46.8**	**+0.2**
SMLA	**Simla**	**7.43**	**134**	*eP*	**Pn**	**09 02 46.2**	**-0.9**
SMLA				eS	**Sn**	**09 04 05.8**	**-4.4**
TARG	**Taragay, Kyrgy**	**7.43**	**43**		**Pn**	**09 02 47.7**	**+0.2**
MDOK	**Medeo**	**8.12**	**33**	⇑P	**Pn**	**09 02 59.1**	**+2.7**
	comp=E,9.6nm,0.6s						
GEYT	**Alibeck**	**10.36**	**282**	P	**Pn**	**09 03 24.8**	**-1.3**
	comp=E,1.4nm,0.3s,baz=98,slow=11,SNR=16						
GEYT				S	**Sn**	**09 05 18.8**	**-1.8**
	comp=E,3.0nm,0.3s,baz=112,slow=18,SNR=15						
GYA0B	**ALIBECK ARRAY**	**10.36**	**282**	⇓P	**Pn**	**09 03 24.4**	**-1.7**
GYA0B				⇓S	**Sn**	**09 05 17.7**	**-3.0**
GYA0B	**ALIBECK ARRAY**	**10.36**	**282**	Pn	**Pn**	**09 03 25.9**	**-0.2**
GYA0B					**Sn**	**09 05 19.6**	**-1.0**
MAKZ	**Makanchi**	**13.15**	**35**	⇑P	**Pn**	**09 04 02.0**	**-0.4**
	comp=E,5.9nm,0.6s						
MAKZ	**Makanchi**	**13.15**	**35**		**Pn**	**09 04 02.6**	**+0.2**
MK31	**Makanchi Array**	**13.29**	**36**	P	**Pn**	**09 04 04.5**	**+0.4**
	comp=E,4.4nm,0.8s,baz=202,slow=11,SNR=32						
MK31	**Makanchi Array**	**13.29**	**36**		**Pn**	**09 04 05.7**	**+1.5**
MKAR	**Makanchi Array**	**13.29**	**36**	P	**Pn**	**09 04 04.5**	**+0.4**
	comp=E,0.8nm,0.3s,baz=200,slow=10,SNR=13						
DANN	**Dangsing**	**13.51**	**123**	*eP*	**Pn**	**09 04 08.0**	**+0.7**
	comp=E,18nm,0.3s						
KOLN	**Koldanda**	**13.78**	**126**	*eP*	**Pn**	**09 04 10.1**	**-0.6**
	comp=E,7.4nm,0.2s						
GKN	**Gorkha**	**14.32**	**122**	*eP*	**Pn**	**09 04 17.8**	**+0.4**
	comp=E,47nm,0.4s						
AB31	**Akbulak array**	**15.07**	**331**	P	**Pn**	**09 04 25.6**	**-0.8**
	comp=E,4.6nm,0.6s,baz=141,slow=10,SNR=52						
AB31				S	**Sn**	**09 07 08.3**	**-5.3**
	comp=E,1.8nm,0.6s,baz=160,slow=22,SNR=8.4						
PKIN	**Phulchoki**	**15.11**	**122**	*eP*	**Pn**	**09 04 26.9**	**-0.5**
	comp=E,18nm,0.4s						
KURBB	**Kurchatov Arra**	**15.12**	**19**	P	**Pn**	**09 04 26.1**	**-0.9**
	comp=E,0.1nm,0.3s,baz=206,slow=11,SNR=6.7						
KURBB	**Kurchatov Arra**	**15.12**	**19**	⇓P	**Pn**	**09 04 26.3**	**-0.7**
	comp=E,6.0nm,0.6s						
PKI	**Pulchoki**	**15.12**	**122**	*eP*	**Pn**	**09 04 27.1**	**-0.5**
	comp=E,12nm,0.2s						
KURK	**Kurchatov**	**15.23**	**19**	P	**Pn**	**09 04 26.8**	**-1.6**
KURK				IAmb	IAmb	09 04 33.0	
	comp=Z,3.8nm,0.8s						
JIRN	**Jiri**	**15.60**	**120**	*eP*	**Pn**	**09 04 33.4**	**-0.2**
	comp=Z,29nm,0.4s						
RAMN	**Ramite**	**16.33**	**121**	*eP*	**Pn**	**09 04 40.9**	**-1.5**
	comp=Z,15nm,0.5s						
BVAR	**Borovoye Array**	**16.52**	**359**	P	**Pn**	**09 04 45.1**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=163,slow=11,SNR=12						
BRVK	**Borovoye**	**16.55**	**359**	⇑P	**P**	**09 04 44.2**	**-0.3**
	comp=Z,3.7nm,0.6s						
AKTO	**Aktyubinsk**	**16.77**	**330**	P	**Pn**	**09 04 49.4**	**+2.2**
	comp=Z,0.6nm,0.3s,baz=141,slow=12,SNR=13						
AKTO				S	**S**	**09 07 47.6**	**-5.7**
	comp=Z,0.3nm,0.3s,baz=346,slow=21,SNR=3.6						
AKTO	**Aktyubinsk**	**16.77**	**330**	⇓P	**P**	**09 04 46.3**	**-0.5**
	comp=Z,7.2nm,0.9s						
AKTO				⇑S	**S**	**09 07 50.2**	**-3.2**
	comp=Z,4.3nm,0.6s						
TAPN	**Taplejung**	**16.86**	**118**	*eP*	**P**	**09 04 46.6**	**-1.8**
	comp=Z,20nm,0.3s						
ZAA0	**Zalesovo Array**	**19.91**	**25**	⇑P	**P**	**09 05 21.5**	**+0.4**
	comp=Z,1.1nm,0.5s						
ZAA0	**Zalesovo Array**	**19.91**	**25**	P	**P**	**09 05 22.3**	**+1.2**
ZAA0				IAmb	IAmb	09 05 23.3	
	comp=Z,11nm,0.5s						
ZALV	**Zalesovo Beam**	**19.91**	**25**	P	**P**	**09 05 22.3**	**+1.2**
	comp=Z,9.5nm,0.4s,baz=223,slow=12,SNR=38						
NRIK	**Noril'sk**	**34.12**	**10**	P	**P**	**09 07 33.2**	**+1.9**
	comp=Z,1.8nm,0.5s,baz=176,slow=15,SNR=3.6						
FINES	**FINESS Array B**	**37.47**	**326**	P	**P**	**09 08 02.2**	**+2.3**
	comp=Z,0.5nm,0.3s,baz=120,slow=11,SNR=4.9						
ARCES	**ARCESS Array B**	**41.13**	**338**	P	**P**	**09 08 32.9**	**+2.7**
	comp=Z,2.1nm,0.8s,baz=108,slow=8.3,SNR=12						
NB2	**NORSAR Subarra**	**44.36**	**323**	P	**P**	**09 08 58.1**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=91,slow=7.9						
NOA	**NORSAR Array B**	**44.36**	**323**	P	**P**	**09 08 58.1**	**+1.7**
	comp=Z,0.9nm,0.6s,baz=96,slow=7.7,SNR=6.6						
TORD	**Torodi Ar. Bea**	**65.70**	**269**	P	**P**	**09 11 31.3**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=51,slow=6.0,SNR=6.7						
YKA	**Yellowknife Ar**	**81.24**	**3**	P	**P**	**09 13 02.0**	**+1.9**
	comp=Z,0.5nm,0.5s,baz=355,slow=5.3,SNR=17						
WRA	**Warramunga Arr**	**82.01**	**122**	P	**P**	**09 13 04.5**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=323,slow=4.8,SNR=12						
ASAR	**Alice Springs**	**84.27**	**125**	P	**P**	**09 13 16.0**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=313,slow=4.7,SNR=11						

ATH 19 09:09:56.3,38°.26N×20°.39E,h15km±1km,ML2.1/3,Error ellipse: s-maj=2.1km s-min=1.3km az=235.0,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.03**	**97**	P	Pg	09 09 59.0	0.0
KEF4				S	Sg	09 10 00.7	-0.1
KEF3	**Kipouria, Keph**	**0.07**	**208**	P	Pg	09 09 59.3	+0.1
KEF3				S	Sg	09 10 01.3	+0.1
KEF1	**Kardakata, Kep**	**0.07**	**76**	P	Pg	09 09 59.2	0.0
KEF1				S	Sg	09 10 01.1	-0.1
ARGA	**Argostoli. Kep**	**0.11**	**140**	P	Pg	09 09 59.9	+0.1
ARGA				S	Sg	09 10 02.2	+0.3
KEF2	**Argostoli. Kep**	**0.12**	**141**	P	Pg	09 10 00.1	+0.2
KEF2				S	Sg	09 10 02.4	+0.2
VLS	**Valsamata**	**0.18**	**118**	P	Pg	09 10 00.8	+0.1
VLS				S	Sg	09 10 03.8	+0.2
VLS				AML	AML	09 10 04.1	
	comp=N,3467μm,0.2s						
VLS				AML	AML	09 10 04.1	
	comp=E,4563μm,0.1s						
FSK	**Fiskardo**	**0.24**	**35**	P	Pg	09 10 01.6	0.0
FSK				S	Sg	09 10 05.6	+0.4
FSK				AML	AML	09 10 05.9	
	comp=N,201μm,0.2s						
FSK				AML	AML	09 10 05.9	
	comp=E,470μm,0.2s						
KFL	**Anninata**	**0.35**	**116**	P	Pg	09 10 02.9	-0.6
KFL				S	Sg	09 10 08.0	-0.4
KFL				AML	AML	09 10 09.7	
	comp=N,671μm,0.4s						
KFL				AML	AML	09 10 09.8	
	comp=E,1606μm,0.3s						
EVGI	**Lefkada island**	**0.42**	**30**	P	Pg	09 10 04.2	-0.5
LKD2	**Lefkada island**	**0.57**	**22**	P	Pg	09 10 07.1	-0.4
KLV	**Kalavryta, Ach**	**1.41**	**98**	P	Pb	09 10 22.6	+0.3

IDC ***19*** *09:12:36.0±4.8,34°.52N×81°.84E,h51km±42km,mb3.2/5, mb1 3.5/7,mb1mx3.1/40,mbtmp3.5/7,ML2.8/2,Error ellipse: s-maj=47.8km s-min=26.2km az=59.0*

ISC 19 09:12:34.3±1.3,34°.5N±0°.2×81°.8E±0°.3,h35km,n7,σ0§61/6, mb3.6/4,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**12.31**	**2**	P	**Pn**	**09 15 27.8**	**+0.7**
	0.1nm,0.3s,baz=182,slow=13,SNR=5.0						
KURBB	**Kurchatov Arra**	**16.31**	**353**	P	**Pn**	**09 16 20.3**	**-0.2**
	0.0nm,0.3s,baz=181,slow=8.3,SNR=2.8						
BVAR	**Borovoye Array**	**20.23**	**340**	P	Pn	09 17 07.1	-1.2
	0.5nm,0.4s,baz=140,slow=11,SNR=3.9						
CMAR	**Chiang Mai Arr**	**22.11**	**132**	P	**P**	**09 17 27.1**	**+0.3**
	1.1nm,0.3s,baz=311,slow=11,SNR=4.3						
ILAR	**Eielson Array**	**74.03**	**20**	P	**P**	**09 24 05.5**	**-0.6**
	0.2nm,0.6s,baz=305,slow=5.4,SNR=2.2						
TORD	**Torodi Ar. Bea**	**74.55**	**275**	P	**P**	**09 24 10.2**	**+0.3**
	0.4nm,0.6s,baz=57,slow=5.9,SNR=2.5						
YKA	**Yellowknife Ar**	**82.47**	**8**	P	**P**	**09 24 52.4**	**-0.4**
	0.3nm,0.6s,baz=341,slow=5.0,SNR=9.7						

IDC ***19*** *09:12:48.7±3.4,34°.58N×81°.71E,h56km±31km,mb3.5/9, mb1 3.6/13,mb1mx3.4/42,mbtmp3.7/13,ML3.0/3,Error ellipse: s-maj=30.3km s-min=17.4km az=53.0*

ISC 19 09:12:46.7±0.9,34°.6N±0°.1×81°.8E±0°.1,h35km,n13, σ1§09/13,mb3.7/8,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**9.89**	**327**	P	**Pn**	**09 15 08.3**	**+1.9**
	0.1nm,0.3s,baz=188,slow=14,SNR=1.6						
MKAR	**Makanchi Array**	**12.23**	**2**	P	**Pn**	**09 15 38.4**	**0.0**
	0.3nm,0.3s,baz=180,slow=13,SNR=17						
KURBB	**Kurchatov Arra**	**16.24**	**353**	P	**Pn**	**09 16 30.7**	**-1.3**
	0.0nm,0.3s,baz=162,slow=12,SNR=5.3						
ZALV	**Zalesovo Beam**	**19.51**	**5**	P	**P**	**09 17 11.4**	**+0.7**
	baz=180,slow=8.9,SNR=4.7						
BVAR	**Borovoye Array**	**20.17**	**340**	P	**P**	**09 17 18.8**	**+0.8**
	5.7nm,0.9s,baz=139,slow=12,SNR=16						
CMAR	**Chiang Mai Arr**	**22.13**	**132**	P	**P**	**09 17 40.0**	**+0.6**
	5.0nm,0.8s,baz=311,slow=11,SNR=20						
SONM	**Songino Array**	**22.66**	**47**	P	**P**	**09 17 46.1**	**+1.3**
	0.6nm,0.7s,baz=341,slow=7.8,SNR=3.9						
FINES	**FINESS Array B**	**44.07**	**325**	P	**P**	**09 20 50.2**	**-0.7**
	0.5nm,0.5s,baz=112,slow=15,SNR=1.5						
WRA	**Warramunga Arr**	**73.69**	**129**	P	**P**	**09 24 17.4**	**+0.4**
	0.6nm,1.1s,baz=322,slow=6.2,SNR=1.8						
ILAR	**Eielson Array**	**73.94**	**20**	P	**P**	**09 24 17.1**	**-0.9**
	0.9nm,0.9s,baz=309,slow=5.6,SNR=8.4						
TORD	**Torodi Ar. Bea**	**74.59**	**275**	P	**P**	**09 24 21.4**	**-1.1**
	0.6nm,0.6s,baz=45,slow=5.0,SNR=6.0						
ASAR	**Alice Springs**	**76.14**	**132**	P	**P**	**09 24 31.8**	**+0.6**
	0.2nm,0.6s,baz=312,slow=5.6,SNR=5.6						
YKA	**Yellowknife Ar**	**82.39**	**8**	P	**P**	**09 25 04.0**	**-0.7**
	1.7nm,0.7s,baz=341,slow=5.1,SNR=24						

IDC ***19*** *09:29:45.0±0.5,32°.03S×57°.12E,h0km,mb4.4/20, mb1 4.5/21,mb1mx4.4/46,mbtmp4.4/21,ML5.1/1,MS3.6/23, Ms1 3.6/23,ms1mx3.5/48,Error ellipse: s-maj=17.3km s-min=13.4km az=61.0*

BJI ***19*** *09:29:46.0±0.0,32°.00S×57°.10E,h10km,mB5.0/19, mb4.8/24,Ms4.7/2,Ms7 4.9/1*

NEIC ***19*** *09:29:47.0±1.9,32°.0S±0°.1×57°.1E±0°.1,h10km±1km, mb4.7/25,Error ellipse: s-maj=21.8km s-min=15.4km az=239.0*

ISC 19 09:29:48.4±0.4,31°.96S±0°.08×57°.01E±0°.09,h19km,n82, σ1§40/64,mb4.6/37,MS3.6/23,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABPO	**Ambohimpanom**	**15.61**	**323**		**Pn**	**09 33 28.1**	**+0.5**
ABPO				IAmb	IAmb	09 33 28.7	
	comp=Z,26nm,0.6s						
OPO	**Ambohidratompo**	**16.00**	**324**	Pn	**Pn**	**09 33 33.4**	**+0.8**
	comp=Z,6.9nm,0.3s,baz=152,slow=11,SNR=47						
OPO				Sn	**Sn**	**09 36 23.0**	**-6.8**
	comp=Z,1.9nm,0.3s,baz=199,slow=22,SNR=3.5						
OPO				LR	LR	09 38 33.8	
	comp=Z,288nm,20.7s,baz=39,slow=33						
BOSA	**Boshof**	**27.57**	**269**	LR	LR	09 45 02.1	
	comp=Z,71nm,18.0s,baz=144,slow=33						
MATP	**Matopo**	**27.96**	**287**	P	**P**	**09 35 37.0**	**-1.0**
	comp=Z,1.6nm,0.7s,baz=148,slow=13,SNR=2.3						
MATP				LR	LR	09 45 05.8	
	comp=Z,162nm,19.2s,baz=120,slow=33						
H08S1	**Diego Garcia H**	**28.15**	**34**	T	T	10 05 02.2	
	baz=207,slow=76,SNR=98						
H08S2	**Diego Garcia H**	**28.16**	**34**	T	T	10 04 59.9	
	baz=207,slow=76,SNR=124						
H08S3	**Diego Garcia H**	**28.17**	**34**	T	T	10 05 04.1	
	baz=207,slow=76,SNR=269						
LBTB	**Lobatse**	**28.39**	**276**	P	**P**	**09 35 42.3**	**+0.5**
	comp=Z,1.9nm,0.6s,baz=103,slow=7.0,SNR=2.4						
LBTB				LR	LR	09 45 57.5	
	comp=Z,98nm,18.5s,baz=112,slow=34						
LBTB	**Lobatse**	**28.39**	**276**	P	**P**	**09 35 41.3**	**-0.6**
MAW	**Mawson**	**35.85**	**176**	P	**P**	**09 36 45.2**	**-1.3**
	comp=Z,5.7nm,0.9s,baz=348,slow=9.7,SNR=7.3						
MAW				LR	LR	09 47 30.2	
	comp=Z,61nm,19.3s,baz=26,slow=30						
MAW	**Mawson**	**35.85**	**176**	P	**P**	**09 36 46.2**	**-0.3**
TSUM	**Tsumeb**	**37.56**	**280**	P	**P**	**09 37 02.1**	**+0.3**
	comp=Z,1.9nm,0.4s,baz=155,slow=9.7,SNR=1.9						
TSUM	**Tsumeb**	**37.56**	**280**	IAmb	IAmb	09 37 09.3	
	comp=Z,6.2nm,1.1s						
H01W2	**Cape Leeuwin H**	**47.22**	**110**	T	T	10 28 30.2	
	baz=256,slow=75,SNR=227						
H01W3	**Cape Leeuwin H**	**47.22**	**110**	T	T	10 28 30.7	
	baz=256,slow=75,SNR=258						
H01W1	**Cape Leeuwin H**	**47.23**	**110**	T	T	10 28 31.6	
	baz=256,slow=75,SNR=219						
SNAA	**Sanae**	**50.60**	**201**	P	**P**	**09 38 45.2**	**-0.4**
SNAA	**Sanae**	**50.60**	**201**	P	**P**	**09 38 45.3**	**-0.4**
	comp=Z,13nm,0.9s,baz=92,slow=5.3,SNR=48						
SNAA	**Sanae**	**50.60**	**201**	P	**P**	**09 38 45.5**	**-0.1**
VNA2	**Neumayer--Watz**	**51.82**	**202**	P	**P**	**09 38 54.8**	**+0.1**
	baz=72,slow=6.8						
VNA1	**Neumayer--Stat**	**52.04**	**203**	P	**P**	**09 38 56.8**	**+0.5**
VNA3	**Neumayer Olymp**	**52.61**	**202**	P	**P**	**09 39 00.1**	**-0.4**
SMRI	**Semarang**	**55.47**	**75**	P	**P**	**09 39 23.1**	**+0.9**
	comp=Z,138nm,0.8s						
QSPA	**South Pole Qui**	**58.21**	**180**	P	**P**	**09 39 40.3**	**-0.8**
	comp=Z,21nm,0.9s,baz=266,slow=2.2,SNR=91						
QSPA	**South Pole Qui**	**58.21**	**180**	P	**P**	**09 39 40.7**	**-0.5**
VNDA	**Vanda**	**62.18**	**166**	P	**P**	**09 40 07.0**	**-0.9**
	comp=Z,3.0nm,1.1s,baz=250,slow=7.4,SNR=8.5						
VNDA				LR	LR	10 04 41.2	
	comp=Z,91nm,20.0s,baz=254,slow=34						
CMAR	**Chiang Mai Arr**	**64.25**	**45**	P	**P**	**09 40 22.2**	**-0.2**
	comp=Z,8.3nm,0.7s,baz=228,slow=7.0,SNR=39						
CMAR				LR	LR	10 06 10.9	
	comp=Z,45nm,18.1s,baz=215,slow=34						
ASAR	**Alice Springs**	**67.23**	**104**	P	**P**	**09 40 40.8**	**-1.1**
	comp=Z,2.2nm,0.7s,baz=239,slow=5.7,SNR=25						
ASAR				LR	LR	10 05 46.7	
	comp=Z,40nm,19.7s,baz=218,slow=32						
AS31	**Alice Springs**	**67.24**	**104**	P	**P**	**09 40 40.1**	**-1.8**
WRA	**Warramunga Arr**	**69.27**	**101**	P	**P**	**09 40 53.6**	**-1.1**
	comp=Z,2.6nm,0.6s,baz=241,slow=5.5,SNR=9.2						
TOA0	**Torodi Ar. Sit**	**69.38**	**301**	P	**P**	**09 40 56.6**	**+1.4**
TOA0				IAmb	IAmb	09 40 58.5	
	comp=Z,5.1nm,1.1s						
TORD	**Torodi Ar. Bea**	**69.38**	**301**	P	**P**	**09 40 55.8**	**+0.5**
	comp=Z,3.1nm,0.8s,baz=134,slow=5.2,SNR=17						
TORD				LR	LR	10 10 35.5	
	comp=Z,170nm,20.2s,baz=110,slow=35						
SLVN	**Son La**	**69.45**	**47**	P	**P**	**09 40 55.7**	**+0.1**
SLVN				IAmb	IAmb	09 40 56.8	
	comp=Z,8.9nm,1.1s						
GEYT	**Alibeck**	**69.53**	**1**	P	**P**	**09 40 56.2**	**+0.5**
	comp=Z,2.4nm,0.8s,baz=225,slow=3.6,SNR=4.4						
GEYT				LR	LR	10 09 15.2	
	comp=Z,29nm,18.4s,baz=40,slow=34						
STKA	**Stephens Creek**	**69.81**	**116**	P	**P**	**09 40 56.7**	**-1.1**
	comp=Z,3.4nm,0.6s,baz=248,slow=4.7,SNR=9.6						
STKA	**Stephens Creek**	**69.81**	**116**	P	**P**	**09 40 56.4**	**-1.4**
DBIC	**Dimbokro**	**70.28**	**291**	LR	LR	10 08 51.7	

comp=Z,16nm,21.3s,baz=10.0,slow=34

WRH	**Wood River Hil**	**143.93**	**18**		**PKPdf**	09 49 22.3	+0.6
ILAR	**Eielson Array**	**144.00**	**17**	PKP	PKPab	09 49 19.1	-0.1
	comp=Z,1.1nm,0.6s,baz=313,slow=2.8,SNR=10						
DHY	**Denali Highway**	**145.23**	**19**		**PKPbc**	**09 49 23.6**	**-0.3**
EGAK	**Eagle**	**145.28**	**14**		**PKPab**	**09 49 23.9**	**0.0**
SCRK	**Sand Creek**	**145.36**	**16**		**PKPab**	**09 49 24.8**	**+0.4**
DAWY	**Dawson**	**146.27**	**13**		**PKPbc**	**09 49 26.7**	**-0.3**
YKA	**Yellowknife Ar**	**148.98**	**352**	PKPbc	**PKPbc**	**09 49 33.2**	**-1.0**
	comp=Z,3.6nm,0.6s,baz=13,slow=2.3,SNR=48						
YKA				PKPab	**PKiKP**	**09 49 36.1**	**+0.5**
	comp=Z,3.6nm,0.6s,baz=12,slow=2.2,SNR=42						
CLTN	**Cedars of Leba**	**149.46**	**288**		**PKiKP**	**09 49 37.8**	**+0.3**
WVT	**Waverly**	**150.67**	**288**		**PKiKP**	**09 49 41.6**	**+1.6**
EYMN	**Ely**	**151.31**	**313**		**PKiKP**	**09 49 42.0**	**+1.1**
NVAR	**Mina Array Bea**	**172.49**	**331**	PKPab	**PKPab**	**09 51 22.8**	**+1.7**
	comp=Z,0.8nm,0.8s,baz=52,slow=3.8,SNR=5.5						

CNRM ***19*** *09:33:26.3±0.8, 36.23N×7.77W, h14km, Error ellipse: s-maj=9.2km s-min=5.7km az=75.0*
SFS ***19*** *09:33:31.0, 36.50N×7.60W, h16km, ML2.9, GOLFO DE CADIZ*
MDD ***19*** *09:33:32.5±0.9, 36.52N×7.67W, h24km±8km, mbLg2.6/31, Error ellipse: s-maj=8.3km s-min=3.9km az=30.0, PRXIMO*
INMG ***19*** *09:33:32.0±1.4, 36.48N×7.72W, h20km±4km, ML2.3, Error ellipse: s-maj=4.0km s-min=2.7km az=40.0*
IGIL ***19*** *09:33:32.4, 36.50N×7.75W, h19km, ML2.2*

ISC 19 09:33:28.9±1.1, 36.39N±0.03×7.67W±0.03, h32km±12km, n74, σ1s62/133, 5D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.88**	**346**	P		**Pb**	**09 33 46.4**	**+0.7**
PBDV				S		**Sn**	**09 33 56.4**	**-0.2**
	40nm,0.2s							
PBDV	**Barranco-do-Ve**	**0.88**	**346**	*e*P		**Pb**	**09 33 46.4**	**+0.7**
PBDV				*e*S		**Sn**	**09 33 56.4**	**-0.2**
PBDV				A		A	09 33 59.1	
	40nm,0.2s							
PVAQ	**Vaqueiros**	**1.01**	**358**	P		**Pb**	**09 33 48.2**	**+0.3**
PVAQ				S		**Sn**	**09 33 59.5**	**-0.5**
	69nm,0.1s							
PVAQ	**Vaqueiros**	**1.01**	**358**	P		**Pb**	**09 33 47.9**	**0.0**
	SNR=43							
PVAQ				S		**Sn**	**09 33 59.5**	**-0.5**
	SNR=14							
PVAQ	**Vaqueiros**	**1.01**	**358**	*e*P		**Pb**	**09 33 48.2**	**+0.3**
PVAQ				*e*S		**Sn**	**09 33 59.5**	**-0.5**
PVAQ				A		A	09 34 00.5	
	69nm,0.1s							
EGRO	**El Granado**	**1.15**	**7**	P		**Pb**	**09 33 50.3**	**+0.1**
	5.2nm,0.1s,SNR=18							
EGRO				S		**Sn**	**09 34 03.1**	**-0.2**
	41nm,0.1s,SNR=17							
PFVI	**Vila Bisbo**	**1.19**	**309**	P		**Pb**	**09 33 50.9**	**0.0**
	13nm,0.7s,SNR=18							
PFVI				S		**Sn**	**09 34 04.5**	**+0.2**
	27nm,0.1s,SNR=8.3							
PFVI	**Vila Bisbo**	**1.19**	**309**	P		**Pn**	**09 33 49.8**	**+0.6**
	SNR=6.9							
PFVI				S		**Sb**	**09 34 05.5**	**-0.5**
PFVI	**Vila Bisbo**	**1.19**	**309**	*e*P		**Pb**	**09 33 50.9**	**0.0**
PFVI				*e*S		**Sn**	**09 34 04.8**	**+0.5**
PFVI				A		A	09 34 13.0	
	26nm,0.5s							
MORF	**Marmelete**	**1.21**	**320**	*e*P		**Pb**	**09 33 50.9**	**-0.3**
MORF	**Marmelete**	**1.21**	**320**	P		**Pb**	**09 33 51.1**	**-0.1**
MORF	**Marmelete**	**1.21**	**320**	*e*P		**Pb**	**09 33 51.1**	**-0.1**
MORF				A		A	09 34 14.1	
	53nm,0.2s							
PCVE	**Castro Verde**	**1.27**	**347**	P		**Pb**	**09 33 52.1**	**-0.2**
PCVE				S		**Sn**	**09 34 06.8**	**+0.4**
	54nm,0.2s							
PCVE	**Castro Verde**	**1.27**	**347**	*e*P		**Pb**	**09 33 52.1**	**-0.2**
PCVE				*e*S		**Sn**	**09 34 06.8**	**+0.4**
PCVE				A		A	09 34 07.3	
	54nm,0.2s							
PTEO	**Sao Teotonio**	**1.43**	**324**	P		**Pb**	**09 33 54.4**	**-0.5**
PTEO				S		**Sn**	**09 34 10.7**	**+0.5**
	9.1nm,0.5s							
PTEO	**Sao Teotonio**	**1.43**	**324**	*e*P		**Pb**	**09 33 54.4**	**-0.5**
PTEO				*e*S		**Sn**	**09 34 10.7**	**+0.5**
PTEO				A		A	09 34 19.9	
	18nm,0.5s							
MESJ	**Messejana**	**1.51**	**343**	*e*P		**Pn**	**09 33 55.3**	**+1.7**
MESJ				*e*S		**Sn**	**09 34 11.8**	**-0.5**
MESJ				AML		AML	09 34 14.1	
	comp=N,31nm,0.1s							
MESJ	**Messejana**	**1.51**	**343**	P		**Pn**	**09 33 55.4**	**+1.7**
MESJ				S		**Sn**	**09 34 12.2**	**-0.1**
	comp=N,19nm,0.3s							
MESJ	**Messejana**	**1.51**	**343**	*e*P		**Pn**	**09 33 55.4**	**+1.7**
MESJ				*e*S		**Sn**	**09 34 12.2**	**-0.1**
MESJ				A		A	09 34 13.5	
	comp=N,19nm,0.3s							
ESPR	**Espera**	**1.54**	**71**	P		**Pn**	**09 33 56.4**	**+2.4**
	comp=N,3.9nm,0.1s,SNR=7.9							
ESPR				S		**Sn**	**09 34 14.2**	**+1.4**
	comp=N,34nm,0.3s,SNR=7.9							
EMIN	**Mina Concepcio**	**1.59**	**30**	P		**Pn**	**09 33 56.2**	**+1.4**
	comp=N,1.8nm,0.0s,SNR=31							
EMIN				S		**Sn**	**09 34 14.2**	**0.0**
	comp=N,8.5nm,0.1s,SNR=10							
PBEJ	**Beja**	**1.64**	**355**	P		**Pn**	**09 33 57.1**	**+1.6**
PBEJ				S		**Sn**	**09 34 15.4**	**-0.1**
	comp=N,8.1nm,0.2s							
PBEJ	**Beja**	**1.64**	**355**	*e*P		**Pn**	**09 33 57.1**	**+1.6**
PBEJ				*e*S		**Sn**	**09 34 15.4**	**-0.1**
PBEJ				A		A	09 34 18.9	
	comp=N,16nm,0.2s							
EJIF	**Jimena Fronter**	**1.78**	**87**	P		**Pb**	**09 34 00.8**	**0.0**
	comp=N,96nm,0.1s,SNR=7.9							
PNCL	**Nicolau / Gran**	**1.85**	**338**	P		**Pn**	**09 34 00.0**	**+1.7**
PNCL				S		**Sn**	**09 34 20.4**	**-0.2**
	comp=N,11nm,0.4s							
PNCL	**Nicolau / Gran**	**1.85**	**338**	*e*Pn		**Pn**	**09 34 00.0**	**+1.7**
PNCL				*e*Sn		**Sn**	**09 34 20.4**	**-0.2**
PNCL				A		A	09 34 34.5	
	comp=N,11nm,0.4s							
CEU	**Ceuta**	**1.92**	**104**	P		**Pb**	**09 34 04.3**	**+1.0**
CEU				S		**Sb**	**09 34 26.6**	**-0.3**
CEU	**Ceuta**	**1.92**	**104**	*e*P		**Pb**	**09 34 04.3**	**+1.0**
CEU				*e*S		**Sb**	**09 34 26.6**	**-0.3**
EVO	**Evora**	**2.15**	**353**	S		**Sn**	**09 34 28.6**	**+0.5**
	comp=N,28nm,0.1s							
EVO	**Evora**	**2.15**	**353**	*e*S		**Sn**	**09 34 25.9**	**-2.3**
EVO	**Evora**	**2.15**	**353**	*e*Sn		**Sn**	**09 34 28.6**	**+0.5**
EVO				A		A	09 34 31.1	
	comp=N,28nm,0.1s							
HORN	**Hornachuelos**	**2.41**	**52**	P		**Pn**	**09 34 07.8**	**+1.6**
	SNR=11							
HORN				S		**Sb**	**09 34 38.6**	**-2.4**
EBAD	**Badajoz**	**2.42**	**12**	P		**Pn**	**09 34 07.4**	**+1.2**
	comp=N,2.8nm,0.1s,SNR=11							
EBAD				S		**Sn**	**09 34 34.0**	**-0.7**
	comp=N,5.3nm,0.0s,SNR=5.9							
ECAB	**El Cabril**	**2.46**	**46**	P		**Pn**	**09 34 09.2**	**+2.4**
	comp=N,0.6nm,0.1s,SNR=7.9							
ECAB				S		**Sn**	**09 34 36.8**	**+1.1**
	comp=N,1.5nm,0.0s,SNR=7.9							
PESTR	**Estremoz**	**2.47**	**1**	*e*Pn		**Pn**	**09 34 08.3**	**+1.4**
PESTR				*e*Sn		**Sn**	**09 34 35.7**	**-0.3**
PMTG	**Montargil**	**2.71**	**351**	P		**Pn**	**09 34 12.1**	**+1.9**
PMTG				S		**Sn**	**09 34 41.0**	**-0.8**
	comp=N,12nm,0.1s							
PMTG	**Montargil**	**2.71**	**351**	*e*Pn		**Pn**	**09 34 12.1**	**+1.9**
PMTG				*e*Sn		**Sn**	**09 34 41.0**	**-0.8**
PMTG				A		A	09 34 43.0	
	comp=N,12nm,0.1s							
PMAFR	**Mafra**	**2.86**	**334**	P		**Pn**	**09 34 14.2**	**+1.9**
	comp=N,1.7nm,0.1s,SNR=7.9							
PMAFR				S		**Sn**	**09 34 44.9**	**-0.7**
	comp=N,9.8nm,0.1s,SNR=7.9							
PMAFR	**Mafra**	**2.86**	**334**	*e*Pn		**Pn**	**09 34 14.5**	**+2.2**
PMAFR				*e*Sn		**Sn**	**09 34 45.8**	**+0.2**
PMAFR				A		A	09 34 47.6	
	comp=N,22nm,0.2s							
EGOR	**Sierra Gorda,**	**2.95**	**75**	P		**Pn**	**09 34 16.3**	**+2.7**
	comp=N,0.1nm,0.1s,SNR=4.0							
EGOR				S		**Sn**	**09 34 48.3**	**+0.4**
	comp=N,3.3nm,0.3s,SNR=4.0							
EADA	**Adamuz**	**3.04**	**53**	P		**Pn**	**09 34 17.0**	**+2.3**
	comp=N,1.8nm,0.2s,SNR=7.9							
EADA				S		**Sn**	**09 34 50.2**	**+0.2**
	comp=N,4.2nm,0.1s,SNR=7.9							
PMRV	**Marv??o**	**3.04**	**4**	P		**Pn**	**09 34 16.2**	**+1.5**
PMRV				S		**Sn**	**09 34 49.4**	**-0.6**
	comp=N,7.6nm,0.2s							
PMRV	**Marv??o**	**3.04**	**4**	*e*Pn		**Pn**	**09 34 16.2**	**+1.5**
PMRV				*e*Sn		**Sn**	**09 34 49.4**	**-0.6**
PMRV				A		A	09 34 50.3	
	comp=N,7.6nm,0.2s							
ZHG	**ZHG**	**3.06**	**164**	P		**Pn**	**09 34 16.4**	**+1.4**
ZHG				S		**Sn**	**09 34 51.0**	**+0.5**
ELGU	**Los Guajares,**	**3.29**	**80**	P		**Pn**	**09 34 21.1**	**+2.9**
	comp=N,0.3nm,0.2s,SNR=7.9							
ELGU				S		**Sn**	**09 34 57.6**	**+1.4**
	comp=N,2.1nm,0.1s,SNR=7.9							
PCBR	**Castelo Branco**	**3.45**	**2**	P		**Pn**	**09 34 21.9**	**+1.6**
PCBR				S		**Sn**	**09 34 58.9**	**-1.1**
	comp=N,3.2nm,0.3s							
PCBR	**Castelo Branco**	**3.45**	**2**	*e*Pn		**Pn**	**09 34 21.9**	**+1.6**
PCBR				*e*Sn		**Sn**	**09 34 58.9**	**-1.1**
PCBR				A		A	09 34 59.7	
	comp=N,6.5nm,0.3s							
EQUE	**Quentar**	**3.49**	**75**	S		**Sn**	**09 35 03.1**	**+1.8**
	comp=N,0.7nm,0.1s,SNR=4.0							
AKLM	**AKL**	**3.63**	**120**	P		**Pn**	**09 34 21.5**	**-1.5**
AKLM				S		**Sn**	**09 35 01.9**	**-2.8**
PCAS	**Casmilo, Conde**	**3.71**	**350**	S		**Sn**	**09 35 05.9**	**-0.7**
PCAS	**Casmilo, Conde**	**3.71**	**350**	*e*Sn		**Sn**	**09 35 05.9**	**-0.7**
EPLA	**Plasencia**	**3.87**	**18**	P		**Pn**	**09 34 28.0**	**+1.8**
	comp=N,1.5nm,0.1s,SNR=7.5							
EPLA				S		**Sn**	**09 35 08.3**	**-2.4**
	comp=N,3.5nm,0.1s,SNR=7.9							
SRHM	**Skhour des Reh**	**3.92**	**183**	P		**Pn**	**09 34 27.8**	**+1.0**
SRHM				S		**Sn**	**09 35 12.7**	**+0.9**
EQES	**Quesada**	**3.94**	**68**	P		**Pn**	**09 34 27.9**	**+0.7**
	SNR=7.9							
EQES				S		**Sn**	**09 35 12.2**	**-0.1**
	comp=N,1.6nm,0.1s,SNR=7.9							
CZD	**Col de Zad**	**3.99**	**146**	P		**Pn**	**09 34 26.5**	**-1.6**
CZD				S		**Sn**	**09 35 11.2**	**-2.6**
PAB	**San Pablo**	**4.10**	**39**	P		**Pn**	**09 34 31.2**	**+1.8**
	comp=N,1.1nm,0.1s,SNR=7.9							
PAB				S		**Sn**	**09 35 12.6**	**-3.7**
	comp=N,1.6nm,0.1s,SNR=7.9							
MD31	**MD31**	**4.26**	**145**	P		**Pn**	**09 34 33.7**	**+2.2**
MD31				S		**Sn**	**09 35 17.3**	**-2.9**
MDT	**Midelt**	**4.37**	**144**	P		**Pn**	**09 34 34.8**	**+1.6**
	SNR=20							
MDT				S		**Sn**	**09 35 21.5**	**-1.5**
ESDC	**Sonseca Array**	**4.39**	**41**	P		**Pn**	**09 34 35.4**	**+2.0**
	comp=N,6.4nm,0.2s,baz=225,slow=13,SNR=11							
ESDC				S		**Sn**	**09 35 19.8**	**-3.7**
	comp=N,0.8nm,0.3s,baz=225,slow=23,SNR=20							
MVO	**Moncorvo**	**4.79**	**6**	P		**Pn**	**09 34 40.0**	**+1.1**
	comp=N,1.2nm,0.1s,SNR=7.9							
MVO				S		**Sn**	**09 35 30.9**	**-2.4**
	comp=N,4.2nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**4.79**	**6**	*e*Pn		**Pn**	**09 34 40.0**	**+1.1**
MVO				*e*Sn		**Sn**	**09 35 30.9**	**-2.4**
MVO				A		A	09 35 32.0	
	comp=N,5.2nm,0.3s							
GUD	**Guadarrama**	**5.06**	**32**	P		**Pn**	**09 34 44.8**	**+2.2**
	comp=N,0.4nm,0.1s,SNR=7.9							
GUD				S		**Sn**	**09 35 37.1**	**-3.0**
	comp=N,0.4nm,0.1s,SNR=7.9							
OUK	**Oukaimeden**	**5.17**	**182**	P		Pn	09 34 41.7	-2.7
OUK				S		**Sn**	**09 35 39.5**	**-3.6**
PCAB	**Cabril**	**5.32**	**357**	S		**Sn**	**09 35 43.2**	**-3.0**
PCAB	**Cabril**	**5.32**	**357**	*e*Sn		**Sn**	**09 35 43.2**	**-3.0**
ETOB	**Tobarra**	**5.36**	**63**	P		**Pn**	**09 34 48.5**	**+1.8**
	comp=N,0.7nm,0.1s,SNR=9.8							
ETOB				S		**Sn**	**09 35 45.3**	**-2.0**
	comp=N,2.9nm,0.1s,SNR=7.9							
PBRG	**Braganca**	**5.45**	**7**	P		**Pn**	**09 34 49.3**	**+1.4**
PBRG				S		**Sn**	**09 35 47.0**	**-2.6**
	comp=N,1.2nm,0.1s							
PBRG	**Braganca**	**5.45**	**7**	*e*Pn		**Pn**	**09 34 49.3**	**+1.4**
PBRG				*e*Sn		**Sn**	**09 35 47.0**	**-2.6**
PBRG				A		A	09 35 48.2	
	comp=N,2.5nm,0.1s							
ELOB	**Lobios**	**5.48**	**357**	P		**Pn**	**09 34 50.0**	**+1.7**
	comp=N,0.0nm,0.1s,SNR=7.9							
ELOB				S		**Sn**	**09 35 46.5**	**-3.7**
	comp=N,3.1nm,0.1s,SNR=7.9							
OUZM	**OUZ**	**5.52**	**172**	P		**Pn**	**09 34 48.9**	**-0.1**
OUZM				S		**Sn**	**09 35 51.4**	**0.0**
PGAV	**Gavieira, Arco**	**5.58**	**355**	S		**Sn**	**09 35 51.1**	**-1.8**
	comp=N,2.4nm,0.1s							
PGAV	**Gavieira, Arco**	**5.58**	**355**	*e*Sn		**Sn**	**09 35 51.1**	**-1.8**
PGAV				A		A	09 35 53.2	
	comp=N,2.4nm,0.1s							
ECAL	**Calabor**	**5.59**	**7**	P		**Pn**	**09 34 51.3**	**+1.4**
	comp=N,0.4nm,0.1s,SNR=7.9							
ECAL				S		**Sn**	**09 35 50.4**	**-2.6**
	comp=N,4.8nm,0.2s,SNR=7.9							
ETOR	**Torete**	**6.23**	**43**	P		**Pn**	**09 35 01.0**	**+2.3**
	comp=N,4.6nm,0.1s,SNR=7.9							
ETOR				S		**Sn**	**09 36 04.7**	**-4.2**
	comp=N,3.8nm,0.2s,SNR=7.9							

KRSC ***19*** *09:46:07.2±0.8, 55.61N×161.05E, h169km±7km, ML4.0*
IDC ***19*** *09:46:09.8±2.1, 55.66N×160.77E, h170km±22km, mb3.1/6, mb1 3.3/9, mb1mx3.0/39, mbtmp3.6/9, Error ellipse: s-maj=27.2km s-min=17.1km az=107.0*

ISC 19 09:46:08.9±0.7, 55.62N±0.04×161.04E±0.05, h166km±5km, n54, σ0s96/84, mb3.4/6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BZGR	**Bezymyannyi-Gr**	**0.38**	**330**	P		**Pn**	**09 46 31.7**	**+0.1**
BZGR				S		**Sn**	**09 46 49.4**	**+0.3**
ZLN	**Zelenaya**	**0.42**	**342**	P		**Pn**	**09 46 32.0**	**+0.2**
ZLN				S		**Sn**	**09 46 50.2**	**+0.8**
BZMR	**Bezymyannaya**	**0.45**	**316**	S		**Sn**	**09 46 49.2**	**-0.4**
BZWR	**Bezymyannyi-We**	**0.46**	**319**	P		**Pn**	**09 46 32.1**	**+0.1**
BZWR				S		**Sn**	**09 46 49.9**	**+0.1**
KMNR	**Kamenistaya**	**0.47**	**288**	P		**Pn**	**09 46 32.1**	**+0.1**
KMNR				S		**Sn**	**09 46 50.1**	**+0.4**
LGNR	**Loginova**	**0.51**	**338**	P		**Pn**	**09 46 32.7**	**+0.3**
LGNR				S		**Sn**	**09 46 50.9**	**+0.5**
KIRR	**Kirishev**	**0.52**	**311**	P		**Pn**	**09 46 32.1**	**-0.1**
KIRR				S		**Sn**	**09 46 49.9**	**-0.3**
CIRR	**Tsirk**	**0.53**	**342**	P		**Pn**	**09 46 32.6**	**+0.3**
CIRR				S		**Sn**	**09 46 50.6**	**+0.3**
TUMD	**Tumrok D**	**0.55**	**222**	P		**Pn**	**09 46 31.9**	**-0.4**
TUMD				S		**Sn**	**09 46 49.6**	**-0.5**
KPT	**Kopyto**	**0.58**	**308**	P		**Pn**	**09 46 32.1**	**-0.3**
KPT				S		**Sn**	**09 46 50.1**	**-0.5**
TUMR	**Tumrok**	**0.61**	**237**	P		**Pn**	**09 46 32.8**	**+0.1**
TUMR				S		**Sn**	**09 46 51.0**	**+0.2**
KZV	**Kizimen**	**0.66**	**220**	P		**Pn**	**09 46 33.0**	**0.0**
KZV				S		**Sn**	**09 46 51.0**	**-0.4**
KRSR	**Krestovskiy**	**0.66**	**337**	P		**Pn**	**09 46 32.4**	**-0.5**
KRSR				S		**Sn**	**09 46 51.0**	**-0.4**
KLY	**Klyuchi**	**0.73**	**343**	P		**Pn**	**09 46 32.6**	**-0.6**
KLY				S		**Sn**	**09 46 51.2**	**-0.7**
KOZ	**Kozyrevsk**	**0.79**	**305**	P		**Pn**	**09 46 33.0**	**-0.6**
KOZ				S		**Sn**	**09 46 52.2**	**-0.5**
BDR	**Baidarnaya**	**0.96**	**6**	P		**Pn**	**09 46 34.6**	**-0.3**
BDR				S		**Sn**	**09 46 54.9**	**-0.1**
SMKR	**Semkarok**	**1.00**	**14**	P		**Pn**	**09 46 35.1**	**-0.1**
SMKR				S		**Sn**	**09 46 55.5**	**0.0**
SRDR	**Sredinnyy**	**1.02**	**314**	P		**Pn**	**09 46 34.4**	**-0.9**
SRDR				S		**Sn**	**09 46 54.3**	**-1.5**
SRKR	**Sorokina**	**1.04**	**4**	P		**Pn**	**09 46 35.4**	**-0.1**
SRKR				S		**Sn**	**09 46 55.6**	**-0.5**
KBG	**Krutoberegovo**	**1.14**	**55**	P		**Pn**	**09 46 35.7**	**-0.5**
KBG				S		**Sn**	**09 46 56.6**	**-0.7**
KBTR	**Krutoberegovo**	**1.17**	**59**	P		**Pn**	**09 46 36.0**	**-0.5**
KBTR				S		**Sn**	**09 46 56.4**	**-1.3**
ESO	**Esso**	**1.35**	**284**	P		**Pn**	**09 46 37.9**	**-0.3**
ESO				S		**Sn**	**09 47 00.0**	**-0.8**
KII	**Karymskiy**	**1.83**	**211**	P		**Pn**	**09 46 43.5**	**+0.4**
SPN	**Mys Shipunski**	**2.59**	**194**	P		**Pn**	**09 46 50.4**	**-1.4**
SPN				S		**Sn**	**09 47 21.6**	**-3.5**
KRX	**Arik**	**2.66**	**213**	P		**Pn**	**09 46 53.5**	**+0.7**
KRX				S		**Sn**	**09 47 27.4**	**+0.7**
SDLR	**Sedlovina**	**2.66**	**209**	P		**Pn**	**09 46 53.2**	**+0.4**
SDLR				S		**Sn**	**09 47 26.5**	**-0.2**
KRER	**Koryakskii**	**2.67**	**211**	P		**Pn**	**09 46 53.8**	**+0.8**
SMAR	**Somma**	**2.69**	**210**	P		**Pn**	**09 46 53.4**	**+0.1**
SMAR				S		**Sn**	**09 47 25.8**	**-1.9**
AVH	**Avacha**	**2.71**	**211**	P		**Pn**	**09 46 53.9**	**+0.5**
AVH				S		**Sn**	**09 47 28.8**	**+1.0**
KOK	**Koryaka**	**2.72**	**212**	P		**Pn**	**09 46 54.6**	**+1.1**
UGLR	**Uglovaya**	**2.74**	**209**	P		**Pn**	**09 46 53.8**	**+0.1**
UGLR				S		**Sn**	**09 47 27.6**	**-0.8**
BKI	**Bering**	**2.84**	**96**	P		**Pn**	**09 46 55.6**	**+0.8**
BKI				S		**Sn**	**09 47 30.2**	**-0.3**
DALK	**Dalny**	**2.91**	**208**	P		**Pn**	**09 46 55.6**	**-0.1**
DALK				S		**Sn**	**09 47 30.9**	**-1.2**
PETK	**Petropavlovsk-**	**3.18**	**219**	P		**Pn**	**09 46 59.1**	**0.0**
	0.9nm,0.3s,baz=60,slow=13,SNR=16							
PETK				S		**Sn**	**09 47 42.1**	**+4.0**
	0.6nm,0.3s,baz=68,slow=20,SNR=1.7							
KRMR	**Karymshinskiy**	**3.27**	**213**	P		**Pn**	**09 46 59.3**	**-0.9**
KRMR				S		**Sn**	**09 47 38.6**	**-1.5**
RUS	**Russkaya**	**3.52**	**206**	S		**Sn**	**09 47 42.6**	**-3.1**
APC	**Apacha**	**3.53**	**222**	P		**Pn**	**09 47 04.1**	**+0.7**
GRL	**Gorelyy**	**3.53**	**211**	P		**Pn**	**09 47 03.8**	**+0.2**
PALN	**Palana**	**3.53**	**351**	P		**Pn**	**09 47 02.9**	**-0.5**
MTVR	**Mutnovka**	**3.56**	**209**	P		**Pn**	**09 47 03.7**	**-0.3**
MTVR				S		**Sn**	**09 47 47.0**	**+0.1**
ASAK	**Asacha**	**3.73**	**211**	P		**Pn**	**09 47 06.1**	**0.0**
OSSR	**Ossora**	**3.81**	**16**	P		**Pn**	**09 47 07.2**	**+0.3**
OSSR				S		**Sn**	**09 47 50.5**	**-1.7**
MA2	**Magadan**	**6.79**	**310**	P		**Pn**	**09 47 45.2**	**-0.9**
	0.4nm,0.3s,baz=121,slow=14,SNR=3.2							
SEY	**Seymchan**	**8.56**	**332**	P		**Pn**	**09 48 09.4**	**0.0**
	0.2nm,0.3s,baz=100,slow=12,SNR=2.3							
ASAJ	**Asahikawa**	**16.48**	**233**	P		**Pn**	**09 49 50.4**	**-0.1**
	0.7nm,0.3s,baz=50,slow=7.5,SNR=9.7							
TIXI	**Tiksi**	**21.06**	**332**	P		**P**	**09 50 39.0**	**-0.5**
	0.8nm,0.3s,baz=129,slow=12,SNR=3.7							
MJAR	**Matsushiro Arr**	**24.59**	**229**	P		**P**	**09 51 13.0**	**-0.5**
	0.5nm,0.4s,baz=29,slow=8.6,SNR=5.4							
H11N2	**WAKE ISLAND Hy**	**36.10**	**171**	T		T	10 30 59.5	
	baz=355,slow=76,SNR=20							
H11N3	**WAKE ISLAND Hy**	**36.11**	**171**	T		T	10 30 47.4	
	baz=355,slow=76,SNR=19							
H11N1	**WAKE ISLAND Hy**	**36.12**	**171**	T		T	10 30 48.1	
	baz=355,slow=76,SNR=25							
YKA	**Yellowknife Ar**	**40.95**	**45**	P		**P**	**09 53 35.2**	**+0.5**
	0.1nm,0.4s,baz=298,slow=6.7,SNR=2.3							
FINES	**FINESS Array B**	**58.02**	**336**	P		**P**	**09 55 43.0**	**-0.7**
	0.8nm,0.8s,baz=96,slow=13,SNR=1.9							
TXAR	**Lajitas Array**	**69.17**	**68**	P		**P**	**09 56 58.9**	**+1.6**
	0.3nm,0.5s,baz=303,slow=5.2,SNR=5.8							
ASAR	**Alice Springs**	**82.28**	**205**	P		**P**	**09 58 12.2**	**+0.6**
	0.3nm,0.7s,baz=8.7,slow=6.7,SNR=2.4							

IDC ***19*** *09:58:44.2±0.9, 0.96N×126.14E, h0km, mb3.9/10, mb1 3.9/11, mb1mx3.7/41, mbtmp3.8/11, ML3.5/1, MS3.1/2, Ms1 3.1/2, ms1mx2.5/40, Error ellipse: s-maj=51.3km s-min=14.7km az=79.0*
DJA ***19*** *09:58:48.6±1.0, 1.1N×3.12°6E±1°, h17km±9km, M4.0/11, mB4.7/2, mb4.4/2, MLv3.8/11, Mw(mB)4.0/2*
NEIC ***19*** *09:58:51.1±1.7, 0.96N±0.08×126.40E±0.07, h52km±11km, mb4.1/9, Error ellipse: s-maj=13.9km s-min=6.8km az=139.0*

ISC 19 09:58:50.3±0.7, 1.02N±0.07×126.38E±0.05, h39km, n32, σ1s16/33, mb4.0/15, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.02**	**104**	P		**Pn**	**09 59 08.1**	**0.0**
TNTI				S		**Sn**	**09 59 22.4**	**+1.2**
TNTI	**Ternate**	**1.02**	**104**			**Pn**	**09 59 08.6**	**+0.5**
LBMI	**Labuha**	**2.00**	**146**	P		**Pn**	**09 59 22.2**	**+0.7**
LBMI				S		**Sn**	**09 59 47.6**	**+2.3**
KMSI	**Cibinong**	**2.44**	**260**	P		**Pn**	**09 59 28.1**	**+0.5**
K

AOPR	**Arecibo Observ**	**1.19**	**85**	*eS*	Sn	10 06 06.4	-0.4
AOPR	**Arecibo Observ**	**1.19**	**85**‖	*eP*	Pn	10 05 49.6	-0.2
AOPR	**Arecibo Observ**	**1.19**	**85**	*eS*	Sn	10 06 07.4	+0.5
AOPR	**Arecibo Observ**	**1.19**	**85**		Pn	10 05 49.6	-0.2
AOPR					Sn	10 06 07.4	+0.5
DR12	**Loma Pena Alta**	**1.42**	**293**	Pn	Pn	10 05 49.1	-3.5
CBYP	**Canovanas**	**2.04**	**89**‖	*eP*	Pn	10 05 58.6	-1.9
CBYP	**Canovanas**	**2.04**	**89**	*eS*	Sn	10 06 24.5	-1.2
CBYP	**Canovanas**	**2.04**	**89**‖	*eP*	Pn	10 05 59.7	-0.8
CBYP	**Canovanas**	**2.04**	**89**	*eS*	Sn	10 06 24.6	-1.1
CBYP	**Canovanas**	**2.04**	**89**		Pn	10 05 59.7	-0.8
CBYP					Sn	10 06 24.6	-1.1
MTP	**Monte Pirata**	**2.33**	**93**	*eS*	Sn	10 06 34.5	+1.9
MTP	**Monte Pirata**	**2.33**	**93**‖	*eP*	Pn	10 06 04.5	+0.2
MTP	**Monte Pirata**	**2.33**	**93**	*eS*	Sn	10 06 31.7	-0.8
MTP	**Monte Pirata**	**2.33**	**93**‖	*eP*	Pn	10 06 04.4	+0.1
MTP	**Monte Pirata**	**2.33**	**93**		Pn	10 06 04.4	+0.1
MTP					Sn	10 06 31.7	-0.8
MTP					Sn	10 06 34.5	+1.9

*ATH **19** 10:06:19.1,38°.25N×20°.43E, h16km±1km, ML2.4/6, Error ellipse: s-maj=1.6km s-min=0.8km az=255.0*
*THE **19** 10:06:19.4,38°.26N×20°.42E, h14km, ML2.9/5, Error ellipse: s-maj=0.8km s-min=0.3km az=256.0*
ISC 19 10:06:19.2±1.0, 38°.25N±0°.03×20°.43E±0°.04, h15km±5km, n31, σ0s.25/51, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.01**	**338**	P	**Pg**	**10 06 21.8**	**-0.1**
KEF4				S	**Sg**	**10 06 23.7**	**0.0**
AGT1	**Agia Thekli**	**0.03**	**267**	P	**Pg**	**10 06 21.8**	**-0.2**
AGT1				S	**Sg**	**10 06 23.5**	**-0.3**
	16μm,0.1s						
KEF1	**Kardakata, Kep**	**0.04**	**53**	P	**Pg**	**10 06 21.9**	**-0.1**
KEF1				S	**Sg**	**10 06 23.6**	**-0.3**
LXRA	**Lixouri, Kepha**	**0.05**	**172**	P	**Pg**	**10 06 22.2**	**+0.1**
LXRA				S	**Sg**	**10 06 24.3**	**+0.4**
KEF3	**Kipouria, Keph**	**0.08**	**232**	P	**Pg**	**10 06 22.3**	**-0.1**
KEF3				S	**Sg**	**10 06 24.4**	**+0.1**
ARGA	**Argostoli. Kep**	**0.09**	**152**	P	**Pg**	**10 06 22.4**	**+0.1**
ARGA				S	**Sg**	**10 06 24.4**	**0.0**
ARG2	**Argostoli**	**0.09**	**147**	P	**Pg**	**10 06 22.4**	**0.0**
ARG2				S	**Sg**	**10 06 24.7**	**+0.3**
	26μm,0.1s						
KEF2	**Argostoli. Kep**	**0.10**	**152**	P	**Pg**	**10 06 22.6**	**+0.1**
KEF2				S	**Sg**	**10 06 25.0**	**+0.3**
VLS	**Valsamata**	**0.15**	**120**	P	**Pg**	**10 06 23.1**	**0.0**
VLS				S	**Sg**	**10 06 25.9**	**+0.2**
	4μm,0.1s						
VLS	**Valsamata**	**0.15**	**120**	P	**Pg**	**10 06 23.2**	**0.0**
VLS				S	**Sg**	**10 06 25.9**	**+0.2**
VLS				AML	AML	10 06 26.3	
	comp=E,7205μm,0.1s						
VLS				AML	AML	10 06 26.6	
	comp=N,7678μm,0.1s						
VSK1	**VASILIKIADES**	**0.19**	**34**	P	**Pg**	**10 06 23.7**	**-0.1**
VSK1				S	**Sg**	**10 06 26.9**	**+0.1**
FSK	**Fiskardo**	**0.23**	**27**	P	**Pg**	**10 06 24.3**	**-0.1**
FSK				S	**Sg**	**10 06 28.2**	**+0.3**
	comp=N,2μm,0.1s						
FSK	**Fiskardo**	**0.23**	**27**	P	**Pg**	**10 06 24.3**	**-0.1**
FSK				S	**Sg**	**10 06 28.4**	**+0.4**
FSK				AML	AML	10 06 28.4	
	comp=E,6261μm,0.1s						
FSK				AML	AML	10 06 28.6	
	comp=N,1634μm,0.2s						
KFL	**Anninata**	**0.32**	**116**	P	**Pg**	**10 06 25.9**	**0.0**
KFL				S	**Sb**	**10 06 31.2**	**-0.3**
	comp=N,3μm,0.4s						
KFL	**Anninata**	**0.32**	**116**	P	**Pg**	**10 06 26.0**	**+0.2**
KFL				S	**Sg**	**10 06 31.0**	**+0.6**
KFL				AML	AML	10 06 31.8	
	comp=N,4200μm,0.4s						
KFL				AML	AML	10 06 31.8	
	comp=E,8088μm,0.3s						
EVGI	**Lefkada island**	**0.41**	**26**	P	**Pg**	**10 06 27.4**	**-0.1**
EVGI				S	**Sb**	**10 06 33.8**	**-0.4**
EVGI	**Lefkada island**	**0.41**	**26**	P	**Pg**	**10 06 27.3**	**-0.1**
EVGI				S	**Sb**	**10 06 34.0**	**-0.2**
MGNA	**Meganis**	**0.49**	**35**	P	**Pg**	**10 06 28.9**	**-0.1**
MGNA				S	**Sg**	**10 06 36.0**	**+0.3**
LKD2	**Lefkada island**	**0.57**	**19**	P	**Pg**	**10 06 30.2**	**-0.2**
LKD2				S	**Sb**	**10 06 38.8**	**+0.1**
LKD2	**Lefkada island**	**0.57**	**19**	P	**Pg**	**10 06 30.1**	**-0.2**
LKD2				S	**Sb**	**10 06 38.6**	**-0.1**
LKD2				AML	AML	10 06 43.2	
	comp=N,301μm,0.1s						
LKD2				AML	AML	10 06 45.1	
	comp=E,366μm,0.2s						
RLS	**Riolos of Patr**	**0.84**	**103**	P	**Pb**	**10 06 35.2**	**-0.3**
RLS				AML	AML	10 06 51.7	
	comp=E,98μm,0.2s						
RLS				AML	AML	10 06 57.3	
	comp=N,167μm,0.3s						
DRO	**Drossia**	**1.05**	**106**	P	**Pb**	**10 06 38.8**	**-0.4**
DRO	**Drossia**	**1.05**	**106**	P	**Pb**	**10 06 39.1**	**-0.1**
DRO				AML	AML	10 07 03.4	
	comp=E,286μm,0.3s						
DRO				AML	AML	10 07 04.0	
	comp=N,251μm,0.7s						
EFP	**Efpalio**	**1.18**	**81**	P	**Pn**	**10 06 40.8**	**-0.3**
LAKA	**Lakka**	**1.22**	**90**	P	**Pn**	**10 06 41.8**	**+0.1**
ANX	**Ano Chora**	**1.22**	**73**	P	**Pb**	**10 06 42.4**	**+0.4**
TRIZ	**Trizonia**	**1.30**	**84**	P	**Pb**	**10 06 43.3**	**0.0**
KALE	**Kalithea**	**1.35**	**84**	P	**Pb**	**10 06 44.4**	**+0.1**
KLV	**Kalavryta, Ach**	**1.37**	**98**	P	**Pb**	**10 06 44.5**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.54**	**60**	P	**Pb**	**10 06 48.0**	**+0.6**
KEK	**Kerkira**	**1.54**	**342**	P	**Pb**	**10 06 47.9**	**+0.5**

*IDC **19** 10:09:45.4±2.7,4°.15N×127°.69E, h0km, mb3.4/3, mb1 3.5/3,mb1mx3.2/49,mbtmp3.4/3, Error ellipse: s-maj=211.1km s-min=28.5km az=67.0*
ISC 19 10:09:47.3±2.9, 4°.1N±0°.7×12°.7E±°, h10km, n4, σ2s.35/5, mb3.4/3, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**3.58**	**325**‖	*i* P	**Pb**	**10 10 49.2**	**-1.5**
KCP				*i* S	**Sb**	**10 11 35.1**	**+0.9**
WRA	**Warramunga Arr**	**24.89**	**164**	P	**P**	**10 15 08.2**	**-2.3**
	0.7nm,0.8s,baz=344,slow=9.7,SNR=9.8						
ASAR	**Alice Springs**	**28.35**	**167**	P	**P**	**10 15 42.6**	**+0.9**
	0.1nm,0.4s,baz=353,slow=7.7,SNR=1.4						
MKAR	**Makanchi Array**	**57.53**	**325**	P	**P**	**10 19 38.3**	**+1.3**
	0.3nm,0.4s,baz=119,slow=8.2,SNR=4.1						

*IDC **19** 10:21:02.5±0.9, 7°.16S×154°.91E, h0km, mb4.1/12, mb1 4.3/13,mb1mx4.1/25,mbtmp4.1/13,ML4.1/1,MS3.3/5, Ms1 3.3/5,ms1mx2.9/24, Error ellipse: s-maj=30.3km s-min=19.2km az=115.0*
*NEIC **19** 10:21:09.9±2.6, 7°.2S±0°.1×154°.9E±0°.2, h55km±4km, mb4.1/6, Error ellipse: s-maj=23.8km s-min=16.4km az=68.0*
ISC 19 10:21:08.9±0.7, 7°.1S±0°.1×154°.8E±0°.1, h41km, n22, σ1s27/23, mb4.1/16, MS3.2/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.92**	**318**		**Pn**	**10 22 09.2**	**+2.5**
KRVT	**Keravat (AS076**	**3.93**	**315**	Pn	**Pn**	**10 22 06.2**	**-0.6**
	12nm,0.3s,baz=209,slow=2.4,SNR=21						
KRVT					Sn	**10 22 50.5**	**-1.2**
	18nm,0.3s,baz=116,slow=18,SNR=7.7						
HNR	**Honiara**	**5.59**	**115**	LR	LR	10 24 32.8	
	comp=Z,170nm,21.4s,baz=232,slow=38						
PMG	**Port Moresby**	**7.89**	**253**	LR	LR	10 25 44.3	
	comp=Z,166nm,19.6s,baz=9.5,slow=35						
WRA	**Warramunga Arr**	**23.58**	**235**	P	**P**	**10 26 15.1**	**-1.0**
	3.2nm,0.9s,baz=60,slow=9.9,SNR=5.6						
WRA				PcP	**PcP**	**10 30 01.9**	**+1.3**
	0.5nm,0.7s,baz=58,slow=2.8,SNR=4.7						
ASAR	**Alice Springs**	**25.94**	**228**	P	**P**	**10 26 35.5**	**-2.1**
	0.9nm,0.9s,baz=62,slow=9.7,SNR=5.6						
ASAR				PcP	**PcP**	**10 30 06.9**	**+1.1**
	0.4nm,0.9s,baz=40,slow=2.2,SNR=2.4						
ASAR				LR	LR	10 35 39.2	
	comp=Z,74nm,20.3s,baz=121,slow=34						

STKA	**Stephens Creek**	**27.53**	**205**	P	**P**	**10 26 51.3**	**-0.5**
	0.6nm,0.4s,baz=73,slow=15,SNR=2.5						
STKA				LR	LR	10 36 30.9	
	comp=Z,65nm,20.1s,baz=20,slow=34						
KSRS	**Korea Array**	**50.96**	**332**	P	**P**	**10 30 05.9**	**-0.6**
	1.2nm,0.7s,baz=154,slow=8.6,SNR=7.5						
PETK	**Petropavlovsk-**	**60.06**	**2**	P	**P**	**10 31 09.7**	**-1.9**
	2.5nm,0.8s,baz=163,slow=6.2,SNR=5.9						
CMAR	**Chiang Mai Arr**	**60.66**	**296**	P	**P**	**10 31 18.5**	**+2.1**
	3.2nm,0.7s,baz=115,slow=5.5,SNR=12						
SONM	**Songino Array**	**69.34**	**327**	P	**P**	**10 32 12.8**	**+0.4**
	1.2nm,0.7s,baz=145,slow=7.0,SNR=5.5						
MLY	**Manley**	**82.35**	**20**	P	**P**	**10 33 26.0**	**-0.2**
MLY				IAmb	IAmb	10 33 31.5	
	comp=Z,1.3nm,0.7s						
QSPA	**South Pole Qui**	**82.85**	**180**	P	**P**	**10 33 29.6**	**+0.6**
QSPA				IAmb	IAmb	10 33 30.3	
	comp=Z,2.5nm,0.9s						
CCB	**Clear Creek Bu**	**83.17**	**21**	P	**P**	**10 33 29.2**	**-1.2**
CCB				IAmb	IAmb	10 33 30.4	
	comp=Z,0.8nm,0.6s						
MK31	**Makanchi Array**	**83.37**	**319**	P	**P**	**10 33 32.5**	**+0.6**
MK31				IAmb	IAmb	10 33 33.2	
	comp=Z,2.5nm,0.8s						
MKAR	**Makanchi Array**	**83.37**	**319**	P	**P**	**10 33 32.2**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=102,slow=5.6,SNR=16						
ILAR	**Eielson Array**	**83.57**	**22**	P	**P**	**10 33 31.1**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=235,slow=4.9,SNR=9.2						
ILAR				LR	LR	11 06 46.6	
	comp=Z,24nm,19.6s,baz=272,slow=33						
MAKZ	**Makanchi**	**83.58**	**319**	P	**P**	**10 33 34.0**	**+1.0**
ZALV	**Zalesovo Beam**	**84.18**	**326**	P	**P**	**10 33 35.4**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=131,slow=6.3,SNR=2.7						
NVAR	**Mina Array Bea**	**91.96**	**52**	P	**P**	**10 34 14.8**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=257,slow=5.7,SNR=4.5						
YKA	**Yellowknife Ar**	**96.55**	**28**	P	**P**	**10 34 34.2**	**+0.2**
	comp=Z,2.0nm,0.9s,baz=263,slow=4.2,SNR=25						
TORD	**Torodi Ar. Bea**	**152.87**	**285**	PKPbc	**PKiKP**	**10 41 02.2**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=61,slow=2.7,SNR=8.7						

JMA 19 10:33:51.5±0.1, 27°.25N×143°.80E, h38km, M4.1, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.45**	**264**	P	Pn	10 34 16.0	+0.9
CBIJ				S	Sn	10 34 33.7	+0.8
JHH2	**Haha-jima-NKT2**	**1.57**	**247**	P	Pn	10 34 17.7	+0.8
JHH2				*eS*	Sn	10 34 37.3	+1.3
JAG	**Ashikaga**	**9.86**	**339**	P	Pn	10 36 13.9	+3.2

*BER **19** 10:58:04.4±1.3, 56°.14N×21°.44E, h0km, ML1.8, Suspected explosion*
*LVSN **19** 10:58:10.0±2.8, 56°.43N×20°.69E, h0km±23km, ML1.7*
UPP 19 10:58:07.0±2.5, 56°.27N×21°.04E, h0km, ML2.8, Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBUR	**Paburge**	**0.56**	**116**	*eP*	Pn	10 58 23.1	+0.9
PBUR				IAML		10 58 41.3	
	comp=Z,47nm,0.2s						
PBUR	**Paburge**	**0.56**	**116**	*eP*	Pn	10 58 23.5	+1.4
SLIT	**Slitere, Latvi**	**1.53**	**26**	*eP*	Pn	10 58 33.9	-1.6
SLIT				IAML		10 58 59.1	
	comp=Z,364nm,0.2s						
SLIT	**Slitere, Latvi**	**1.53**	**26**	*eP*	Pn	10 58 34.4	-1.1
SLIT				*eS*	Sn	10 58 55.7	-0.4
SLIT				AML	AML	10 58 59.0	
	comp=E,124nm,0.1s						
SLIT				AML	AML	10 58 59.1	
	comp=Z,180nm,0.1s						
SLIT				AML	AML	10 59 00.2	
	comp=N,134nm,0.2s						
PABE	**Paberze**	**1.82**	**114**	*eP*	Pg	10 58 45.2	+3.4
PABE				IAML		10 59 14.0	
	comp=Z,27nm,0.1s						
PABE	**Paberze**	**1.82**	**114**	*eP*	Pg	10 58 46.0	+4.2
PABE				*eS*	Sg	10 59 11.1	+5.8
BYXU	**Byxelkrok**	**2.44**	**297**	P	Pn	10 58 48.5	+0.5
BYXU				S	Sn	10 59 17.5	-0.7
VSTU	**Vaestervik**	**2.83**	**301**	P	Pn	10 58 54.2	+0.8
MTSE	**Matsula**	**2.88**	**30**	*eP*	Pn	10 58 54.9	+0.9
MTSE				*eS*	Sn	10 59 29.9	+0.7
OSKU	**Oskarshamn**	**2.88**	**291**	P	Pn	10 58 54.2	+0.2
BLEU	**Blekinge**	**2.91**	**273**	P	Pn	10 58 54.4	-0.1
ISAL	**Salakas**	**2.95**	**102**	*eP*	Pn	10 58 50.9	-4.1
IIGN	**Ignalina**	**3.07**	**105**	*eP*	Pb	10 59 03.2	+0.9
NYNU	**Nynaeshamn**	**3.19**	**331**	P	Pn	10 58 58.4	0.0
VIKU	**Víkbolandet**	**3.25**	**315**	P	Pn	10 58 58.5	-0.6
EKSU	**Eksjoe**	**3.41**	**295**	P	Pn	10 59 01.2	-0.1
VXJU	**Vaexsjoe**	**3.44**	**284**	P	Pn	10 59 01.3	-0.4
LNKU	**Linkoeping**	**3.59**	**305**	P	Pn	10 59 03.7	-0.1
BSD	**Bornholm Skovb**	**3.65**	**254**	*eP*	Pn	10 59 05.3	+0.6
BSD				AML	AML	11 00 04.2	
	comp=N,0.5nm,0.9s						
BSD				AML	AML	11 00 05.0	
	comp=Z,0.5nm,0.6s						
BSD				AML	AML	11 00 05.8	
	comp=E,0.5nm,0.4s						
BSD	**Bornholm Skovb**	**3.65**	**254**	*i* P	Pn	10 59 04.7	0.0
BSD				*i*		10 59 12.8	
BSD				*eS*	Sn	10 59 46.9	-1.5
VSU	**Vasula**	**3.79**	**52**	*eP*	Pn	10 59 09.0	+2.4
NC602	**NORSAR Array S**	**6.69**	**316**	*eP*	Pn	10 59 44.1	-2.3
NC602				*eS*	Sn	11 00 58.4	-4.9
NC602				IAML		11 01 03.3	
	comp=Z,0.7nm,0.3s						
NB201	**NORSAR Array S**	**6.98**	**317**	*eP*	Pn	10 59 48.0	-2.4
NB201				*eS*	Sn	11 01 05.8	-4.8
NB201				IAML		11 01 11.2	
	comp=Z,1.5nm,0.7s						
NAO01	**NORSAR Array S**	**7.02**	**315**	*eP*	Pn	10 59 48.5	-2.4
NAO01				*eS*	Sn	11 01 04.9	-6.4
NAO01				IAML		11 01 14.1	
	comp=Z,1.2nm,0.5s						
NC303	**NORSAR Array S**	**7.07**	**319**	*eP*	Pn	10 59 49.7	-1.9
NC303				*eS*	Sn	11 01 05.9	-6.7
NC303				IAML		11 01 18.4	
	comp=Z,1.3nm,0.6s						
HOMB	**Homborsund**	**7.09**	**292**	*eP*	Pn	10 59 48.8	-3.0
NBO00	**NORSAR Array S**	**7.17**	**316**	*eP*	Pn	10 59 49.9	-3.1
NBO00				IAML		11 01 08.8	
	comp=Z,1.2nm,0.2s						
NC204	**NORSAR Array S**	**7.33**	**317**	*eP*	Pn	10 59 53.3	-1.8
NC204				*eS*	Sn	11 01 13.8	-5.2
NC204				IAML		11 01 15.5	
	comp=Z,0.9nm,0.4s						
VRAC	**Vranov**	**7.47**	**203**	*eSG*	Sg	11 02 33.6	+27
JAVC	**Velka Javorina**	**7.70**	**197**	*ePG*	Pn	10 59 55.1	-5.2
JAVC				*eSG*		11 00 03.6	
KRUC	**Moravsky**	**7.75**	**203**	*eSG*	Sg	11 02 41.0	+25
SNART	**Snartemo**	**7.77**	**291**	*eP*	Pn	10 59 59.1	-2.1
SKAR	**Skarslia**	**8.00**	**309**	*eP*	Pn	11 00 01.3	-3.1
BLS5	**Blasjo**	**8.39**	**298**	*eP*	Pn	11 00 07.0	-2.7
BLS5				*eS*	Sn	11 01 37.4	-7.8
BLS5				IAML		11 01 49.1	
	comp=Z,1.3nm,0.5s						
KMY	**Karmoy**	**8.94**	**296**	*eP*	Pn	11 00 14.2	-3.1
KMY				*eS*	Sn	11 01 48.5	-10
KMY				IAML		11 01 52.3	
	comp=Z,2.0nm,0.7s						

HEL 19 10:58:41.0±0.1, 62°.66N×25°.04E, h0km, ML0.9, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF	**Keuruu**	**0.50**	**189**	*eP*	Pg	10 58 49.7	-0.9
KEF				*eS*	Sg	10 58 56.2	-0.9
SUF	**Sumiainen**	**0.51**	**83**	*eP*	Pg	10 58 49.8	-1.0
SUF				*eS*	Sg	10 58 56.6	-0.9
KAF	**Kangasniemi**	**0.81**	**133**	*eP*	Pg	10 58 55.7	-0.7
KAF				*eS*	Sg	10 59 05.3	-1.5
VAF	**Ylistaro**	**1.15**	**290**	*eP*	Pg	10 59 01.6	-1.5
VAF				*eS*	Sg	10 59 16.4	-1.6
FIA0	**FINESS Array S**	**1.31**	**158**	*eP*	Pg	10 59 04.8	-1.4
FIA0				*eS*	Sg	10 59 21.6	-1.5
FIA1	**FINESS Array S**	**1.31**	**158**	*eP*	Pg	10 59 04.8	-1.3
FIA1				*eS*	Sg	10 59 21.6	-1.5

OUF	**Merijarvi**	**1.72**	**355**	*eP*	Pn	10 59 11.6	-0.6
OUF				*eS*	Sn	10 59 33.1	-1.7
OUF				MSG		10 59 38.2	
	comp=Z,0.4nm,0.1s						
OBF0	**Syolatti, Pyha**	**1.88**	**349**	*eP*	Pn	10 59 14.3	0.0
OBF0				*eS*	Sn	10 59 38.8	+0.1
OBF0				MSG		10 59 42.8	
	comp=Z,0.6nm,0.1s						

*IDC **19** 10:58:48.5±0.6, 33°.09S×178°.00W, h0km, mb4.2/8, mb1 4.4/9,mb1mx4.2/25,mbtmp4.2/9,ML4.1/1,MS3.4/10, Ms1 3.4/10,ms1mx3.2/23, Error ellipse: s-maj=22.5km s-min=20.3km az=38.0*
*WEL **19** 10:58:51.8±0.7, 33°.5S±3°.×17°.8W±°, h33km, M4.8/13, mB5.0/6, ML5.3/13, MLv5.0/13, Mw(mB)4.3/6*
*NEIC **19** 10:58:52.5±3.0, 33°.27S±0°.07×178°.1W±0°.1, h29km±4km, mb4.6/10, Error ellipse: s-maj=15.4km s-min=10.2km az=95.0*
ISC 19 10:58:54.0±0.5, 33°.28S±0°.06×178°.15W±0°.09, h34km, n94, σ2s30/96, mb4.4/14, MS3.4/11, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.01**	**3**	P	**Pn**	**10 59 52.9**	**-0.1**
GLKZ				S	**Sn**	**11 00 36.8**	**-2.0**
RAO	**Raoul Island**	**4.02**	**3**	Sn	**Sn**	**11 00 34.9**	**-4.2**
	223nm,0.3s,baz=292,slow=22,SNR=4.2						
RIZ	**Raoul Island**	**4.03**	**3**	S	**Sn**	**11 00 37.2**	**-2.0**
MXZ	**Matakaoa Point**	**5.16**	**213**	P	**Pn**	**11 00 11.7**	**+2.8**
MXZ				S	**Sn**	**11 01 09.6**	**+2.3**
MXZ	**Matakaoa Point**	**5.16**	**213**	Pn	**Pn**	**11 00 10.6**	**+1.7**
WMGZ	**Waiomatatini S**	**5.33**	**211**	P	**Pn**	**11 00 13.3**	**+2.2**
WMGZ				S	**Sn**	**11 01 11.3**	**0.0**
PKGZ	**Pakihiroa**	**5.54**	**213**	S	**Sn**	**11 01 19.4**	**+2.9**
HAZ	**Te Kaha**	**5.57**	**215**	P	**Pn**	**11 00 18.8**	**+4.4**
HAZ				S	**Sn**	**11 01 22.9**	**+5.7**
PUZ	**Puketiti**	**5.61**	**210**	P	**Pn**	**11 00 16.1**	**+1.1**
PUZ				S	**Sn**	**11 01 21.3**	**+3.1**
TWGZ	**Tauwhareparae**	**5.81**	**212**	P	**Pn**	**11 00 20.7**	**+2.8**
WHRZ	**Whale Island**	**6.06**	**220**	P	Pn	11 00 26.5	+5.3
TKGZ	**Te Karaka**	**6.09**	**211**	P	Pb	11 00 36.1	-3.3
KUZ	**Kuaotunu**	**6.11**	**234**	P	Pn	11 00 28.0	+6.2
MWZ	**Matawai**	**6.15**	**214**	P	**Pn**	**11 00 24.2**	**+1.7**
URZ	**Urewera**	**6.29**	**216**	Pn	**Pn**	**11 00 24.9**	**+0.6**
	3.9nm,0.3s,baz=39,slow=3.7,SNR=39						
URZ					Sn	**11 01 36.8**	**+1.8**
	25nm,0.3s,baz=195,slow=20,SNR=15						
URZ	**Urewera**	**6.29**	**216**		**Pn**	**11 00 26.6**	**+2.3**
RAGZ	**Rawiri**	**6.33**	**213**	P	**Pn**	**11 00 26.5**	**+1.5**
RIGZ	**Rimuhau**	**6.35**	**210**	P	**Pn**	**11 00 26.5**	**+1.2**
PRGZ	**Paritu Road**	**6.49**	**209**	P	**Pn**	**11 00 27.6**	**+0.6**
SNGZ	**Shannon Statio**	**6.60**	**212**	P	**Pn**	**11 00 29.9**	**+1.3**
MHGZ	**Mahia Peninsul**	**6.67**	**207**	P	**Pn**	**11 00 29.1**	**-0.5**
WCZ	**Waipu Caves**	**6.74**	**245**	P	Pn	11 00 38.7	+8.3
OUZ	**Omahuta**	**7.11**	**252**	P	Pn	11 00 43.3	+7.8
BKZ	**Black Stump Fm**	**7.30**	**215**		**Pn**	**11 00 39.1**	**+0.8**
HIZ	**Hauiti**	**7.71**	**225**	Pn	**Pn**	**11 00 45.2**	**+1.4**
DVHZ	**Dannevirke**	**8.36**	**211**	P	**Pn**	**11 00 51.5**	**-1.3**
ANWZ	**Angora Road**	**8.36**	**209**	P	**Pn**	**11 00 52.6**	**-0.1**
POWZ	**Post Office Ro**	**8.61**	**213**	P	**Pn**	**11 00 56.8**	**+0.6**
BFZ	**Birch Farm**	**8.64**	**210**	P	Pn	11 00 53.1	-3.6
BFZ	**Birch Farm**	**8.64**	**210**	Pn	**Pn**	**11 00 56.7**	**0.0**
BFZ					**Sn**	**11 02 30.9**	**-2.0**
PRWZ	**Pori Road**	**8.65**	**211**	P	**Pn**	**11 00 56.4**	**-0.3**
TIWZ	**Tintock**	**8.87**	**211**	P	**Pn**	**11 01 01.8**	**+2.0**
MRZ	**Mangatainoka R**	**8.91**	**212**	P	**Pn**	**11 01 00.0**	**-0.3**
MRZ				S	**Sn**	**11 02 34.2**	**-5.3**
HOWZ	**Holdsworth Sta**	**9.13**	**212**	P	**Pn**	**11 01 02.5**	**-0.8**
TMWZ	**Te Maipa**	**9.15**	**210**	P	**Pn**	**11 01 02.1**	**-1.4**
MTW	**Mount Morrison**	**9.35**	**211**	P	**Pn**	**11 01 04.6**	**-1.8**
KIW	**Kapiti Island**	**9.38**	**214**	P	**Pn**	**11 01 06.0**	**-0.7**
PAWZ	**Paruwai Farm**	**9.57**	**210**	P	**Pn**	**11 01 09.3**	**-0.1**
MSWZ	**Moikau Station**	**9.67**	**211**	Pn	**Pn**	**11 01 09.3**	**-1.5**
MSWZ					**Sn**	**11 02 52.9**	**-5.3**
PLWZ	**Palliser**	**9.80**	**210**	Pn	**Pn**	**11 01 12.3**	**-0.2**
PLWZ					**Sn**	**11 02 56.4**	**-4.9**
SNZO	**South Karori**	**9.83**	**213**		**Sn**	**11 02 57.6**	**-4.4**
BHW	**Baring Head**	**9.83**	**212**		**Sn**	**11 02 57.3**	**-4.8**
TUWZ	**Tuamarina**	**10.28**	**215**		**Pn**	**11 01 19.7**	**+0.6**
NNZ	**Nelson**	**10.41**	**218**	Pn	**Pn**	**11 01 21.3**	**+0.6**
BSWZ	**Blackbirch Sta**	**10.54**	**215**		**Sn**	**11 03 15.7**	**-3.6**
QRZ	**Quartz Range**	**10.59**	**222**	Pn	**Pn**	**11 01 22.7**	**-0.6**
THZ	**Tophouse**	**11.05**	**217**	Pn	**Pn**	**11 01 31.2

comp=Z,31nm,21.4s,baz=190,slow=29
PETK Petropavlovsk- 88.56 346 P **P** 11 11 44.3 +1.5
comp=Z,3.2nm,1.0s,baz=122,slow=5.2,SNR=3.1
NVAR Mina Array Bea 90.43 43 P **P** 11 11 52.2 +0.1
comp=Z,1.4nm,0.8s,baz=219,slow=7.4,SNR=7.8
TXAR Lajitas Array 94.04 58 P **P** 11 12 08.3 -0.7
comp=Z,0.2nm,0.7s,baz=209,slow=6.9,SNR=3.5
LPAZ La Paz 97.07 115 LR LR 11 46 03.7
comp=Z,15nm,20.6s,baz=304,slow=29
CPUP Villa Florida 98.29 129 LR LR 11 47 44.6
comp=Z,20nm,21.5s,baz=212,slow=30
MKAR Makanchi Array 119.50 309 PKP **PKPdf** 11 17 38.5 -1.3
comp=Z,0.4nm,0.6s,baz=145,slow=2.5,SNR=4.9
FIA1 FINESS Array S 147.78 338 **PKPdf** 11 18 33.2 +1.7
FINES FINESS Array B 147.78 338 PKPbc **PKPdf** 11 18 33.8 +2.3
comp=Z,6.4nm,0.8s,baz=54,slow=3.3,SNR=20
NB2 NORSAR Subarra151.56 350 PKP **PKPbc** 11 18 43.1 -0.8
comp=Z,1.1nm,0.6s,baz=17,slow=2.5
NOA NORSAR Array B151.56 350 PKPbc **PKPbc** 11 18 42.4 -1.5
comp=Z,1.5nm,0.6s,baz=14,slow=4.1,SNR=7.8
AKASG Malin Array Be 153.45 319 PKPbc **PKPbc** 11 18 47.4 -0.9
comp=Z,1.5nm,0.8s,baz=90,slow=1.2,SNR=1.5
AKASG PKPab **pPKPbc** 11 18 59.5 +2.1
comp=Z,0.3nm,0.4s,baz=54,slow=4.2,SNR=5.2
BRTR Keskin Array B 153.74 293 PKPbc **PKPbc** 11 18 50.0 +0.5
comp=Z,0.3nm,0.4s,baz=163,slow=14,SNR=1.9
BRTR PKPab **sPKPbc** 11 19 01.4 -0.2
comp=Z,0.5nm,0.6s,baz=96,slow=5.0,SNR=4.1
TORD Torodi Ar. Bea 159.96 180 PKPab **PKPab** 11 19 28.2 -1.2
comp=Z,1.9nm,0.7s,baz=175,slow=3.5,SNR=11

*GUC **19** 11:07:05.7±0.6,21˚.45S×68˚.58W,h123km±6km,ML3.6*
*IDC **19** 11:07:24.2±7.6, 19˚.80S×67˚.55W,h227km±48km,mb3.4/2, mb1 3.6/3,mb1mx3.1/36,mbtmp3.9/3,Error ellipse: s-maj=102.2km s-min=41.1km az=24.0*
ISC 19 11:07:06.1±1.1,**21˚.46S**±0˚.04×**68˚.6W**±0˚.1,**h132**km±10km, **n17**,σ0**80**/30,**7C**,**Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.90**	**297**	⇑*iP*			**Pn**	**11 07 27.9**	**-0.4**
PB01				*i*S			**Sn**	**11 07 44.6**	**-0.6**
PB01				IAML				11 07 46.2	
	comp=N,1μm,0.3s								
PB02	**IPOC Station P**	**1.18**	**276**	⇑*iP*			**Pn**	**11 07 31.2**	**+0.1**
PB02				*i*S			**Sn**	**11 07 50.1**	**+0.1**
PB02				IAML				11 07 51.9	
	comp=N,1μm,0.4s								
PB03	**IPOC Station P**	**1.20**	**240**	⇑*iP*			**Pn**	**11 07 31.3**	**0.0**
PB03				*i*S			**Sn**	**11 07 50.5**	**+0.2**
PB03				IAML				11 07 52.1	
	comp=E,1μm,0.2s								
PB07	**IPOC Station P**	**1.20**	**257**	⇑*iP*			**Pn**	**11 07 31.4**	**+0.1**
PB07				*i*S			**Sn**	**11 07 50.6**	**+0.2**
PB07				IAML				11 07 51.6	
	comp=E,1μm,0.2s								
PB08	**IPOC Station P**	**1.40**	**340**	⇑*iP*			**Pn**	**11 07 33.9**	**+0.2**
PB08				*i*S			**Sn**	**11 07 54.2**	**-0.3**
PB08				IAML				11 07 55.6	
	comp=N,627nm,0.5s								
PB06	**IPOC Station P**	**1.52**	**215**	*i*P			**Pn**	**11 07 34.7**	**0.0**
PB06				*i*S			**Sn**	**11 07 56.8**	**+0.2**
PB04	**IPOC Station P**	**1.66**	**238**	*i*P			**Pn**	**11 07 36.2**	**0.0**
PB04				*i*S			**Sn**	**11 07 60.0**	**+0.7**
TA01	**Diego Aracena**	**1.69**	**301**	⇑*iP*			**Pn**	**11 07 36.7**	**+0.2**
TA01				*i*S			**Sn**	**11 08 00.1**	**+0.4**
GO01	**Chusmiza**	**1.85**	**343**	*eP*			**Pn**	**11 07 39.1**	**+0.2**
GO01				*i*S			**Sn**	**11 08 04.6**	**+0.6**
PB15	**IPOC Station P**	**1.91**	**204**	*i*P			**Pn**	**11 07 39.5**	**+0.2**
PB15				*i*S			**Sn**	**11 08 05.4**	**+0.7**
PB11	**IPOC Station P**	**1.94**	**330**	⇑*iP*			**Pn**	**11 07 39.5**	**-0.2**
PB11				*i*S			**Sn**	**11 08 04.9**	**-0.4**
PB11				IAML				11 08 07.2	
	comp=E,1μm,0.3s								
PSGC	**Pisagua**	**2.32**	**323**	*eP*			**Pn**	**11 07 43.7**	**-0.5**
PSGC				*i*S			**Sn**	**11 08 13.0**	**-0.4**
MNMC	**Minye Minye**	**2.48**	**339**	*i*P			**Pn**	**11 07 46.8**	**+0.3**
MNMC				*i*S			**Sn**	**11 08 18.4**	**+1.0**
LPAZ	**La Paz**	**5.16**	**5**	P			**Pn**	**11 08 22.7**	**+0.6**
	comp=E,2.9nm,0.3s,baz=173,slow=6.8,SNR=74								
LPAZ				S			Sn	11 09 08.2	-13
	comp=E,0.2nm,0.3s,baz=192,slow=0.1,SNR=1.1								
TORD	**Torodi Ar. Bea 77.10 70** P **P**							**11 18 44.7**	**-0.7**
	comp=E,0.6nm,0.4s,baz=255,slow=5.3,SNR=14								
YKA	**Yellowknife Ar 91.23 340** P **P**							**11 19 57.9**	**+2.0**
	comp=E,0.5nm,0.6s,baz=129,slow=4.7,SNR=16								
MKAR	**Makanchi Array 145.45 36** PKP **PKiKP**							**11 26 29.7**	**-2.8**
	comp=E,0.6nm,0.9s,baz=323,slow=2.2,SNR=3.2								

*JMA **19** 11:22:54.6±0.2,23˚.98N×122˚.43E,h17km±4km,M3.3*
*TAP **19** 11:22:55.3,24˚.04N×122˚.39E,h18km,ML3.6,D*
ISC 19 11:22:54.8±1.1,**24˚.01N**±0˚.04×**122˚.43E**±0˚.02,**h18**km±7km, **n53**,σ0**54**/88,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.60**	**333**	*i*P			**Pb**	**11 23 07.0**	**+0.3**
	baz=335								
EOS1				*e*S			**Sb**	**11 23 16.2**	**+1.4**
	baz=335								
JYNG	**Yonagunijimaku**	**0.65**	**47**	P			**Pb**	**11 23 07.3**	**-0.2**
JYNG				S			**Sg**	**11 23 15.7**	**-0.4**
YOJ	**Yonaguni jima**	**0.70**	**50**	P			**Pb**	**11 23 08.4**	**0.0**
YOJ				*e*S			**Sb**	**11 23 17.3**	**-0.4**
ENA	**Nanau**	**0.75**	**304**	*i*P			**Pg**	**11 23 09.4**	**0.0**
	baz=303								
ENA				S			**Sg**	**11 23 19.9**	**+0.5**
	baz=303								
TWD	**Chiawan**	**0.76**	**275**	P			**Pn**	**11 23 10.4**	**-0.2**
	baz=273								
TWD				*i*S			**Sg**	**11 23 20.2**	**+0.4**
	baz=273								
NACB	**Ninganchiao**	**0.78**	**282**	P			**Pg**	**11 23 10.0**	**+0.1**
	baz=280								
NACB				S			**Sg**	**11 23 20.4**	**+0.1**
	baz=280								
TWC	**Suao**	**0.79**	**319**	*i*P			**Pb**	**11 23 09.8**	**-0.3**
	baz=319								
TWC				*i*S			**Sb**	**11 23 20.4**	**-0.1**
	baz=319								
ETLH	**Xiulin Townshi**	**0.88**	**283**	P			**Pg**	**11 23 11.9**	**-0.1**
	baz=281								
ETLH				S			**Sg**	**11 23 24.0**	**+0.4**
	baz=281								
TWE	**Neicheng**	**0.99**	**316**	*i*P			**Pb**	**11 23 13.6**	**+0.3**
	baz=316								
TWE				S			**Sg**	**11 23 26.5**	**-0.5**
	baz=316								
NTC	**Toucheng**	**1.00**	**327**	P			**Pb**	**11 23 13.8**	**+0.2**
	baz=328								
NTC				S			**Sg**	**11 23 27.1**	**-0.1**
	baz=328								
ENTT	**Nioudou**	**1.00**	**309**	P			**Pn**	**11 23 13.9**	**-0.1**
	baz=308								
NDT	**Datong Townshi**	**1.02**	**305**	P			**Pn**	**11 23 14.2**	**0.0**
	baz=305								
NDT				S			**Sg**	**11 23 27.6**	**-0.3**
	baz=305								
NNSB	**Datong**	**1.04**	**294**	P			**Pb**	**11 23 14.2**	**0.0**
	baz=292								
NNSB				S			**Sg**	**11 23 28.4**	**-0.2**
	baz=292								
NNSH	**Datong**	**1.04**	**294**	*i*P			**Pb**	**11 23 14.2**	**-0.1**
	baz=292								
NNSH				*e*S			**Sg**	**11 23 28.1**	**-0.4**
	baz=292								
NNS	**Nan Shan**	**1.05**	**294**	P			**Pb**	**11 23 14.1**	**-0.4**
	baz=293								
NNS				*e*S			**Sg**	**11 23 28.6**	**-0.3**
	baz=293								
TWB1	**Santiao Chiao**	**1.07**	**338**	P			**Pb**	**11 23 14.0**	**-0.8**
	baz=339								
WHF	**Hehuan Shan**	**1.07**	**277**	*eP*			**Pb**	**11 23 14.3**	**-0.7**
	baz=275								
WHF				*e*S			**Sb**	**11 23 28.2**	**-0.6**
	baz=275								
TIPB	**Shuangxi**	**1.10**	**330**	P			**Pb**	**11 23 15.3**	**0.0**
	baz=331								
TIPB				*e*S			**Sb**	**11 23 29.2**	**-0.1**
	baz=331								
NWLT	**Wulai**	**1.13**	**312**	P			**Pb**	**11 23 16.0**	**+0.1**
	baz=312								
NWLT				*e*S			**Sn**	**11 23 31.2**	**+0.2**
	baz=312								
CHGB	**Renai**	**1.14**	**273**	P			**Pb**	**11 23 15.7**	**-0.5**
	baz=271								
CHGB				*e*S			**Sb**	**11 23 30.6**	**-0.2**
	baz=271								
OWD	**Renai**	**1.14**	**267**	P			**Pn**	**11 23 15.2**	**-0.9**
	baz=265								
OWD				*e*S			**Sb**	**11 23 29.9**	**-0.8**
	baz=265								
YHNB	**Yeheng**	**1.16**	**305**	P			**Pb**	**11 23 16.4**	**0.0**
	baz=304								
NSK	**Sanguang**	**1.18**	**304**	*i*P			**Pn**	**11 23 16.4**	**0.0**
	baz=304								
TDCB	**Techi**	**1.18**	**282**	P			**Pn**	**11 23 16.6**	**+0.1**
	baz=280								
VWDT	**VWDT**	**1.20**	**258**	P			**Pn**	**11 23 16.3**	**-0.4**
	baz=255								
NWF	**Wu-fen Shan**	**1.21**	**331**	P			**Pn**	**11 23 16.4**	**-0.4**
	baz=331								
NWF				S			**Sn**	**11 23 32.8**	**0.0**
	baz=331								
WFSB	**Wu-fen Shan**	**1.21**	**331**	P			**Pn**	**11 23 16.5**	**-0.3**
	baz=331								
WFSB				*e*S			**Sn**	**11 23 33.3**	**+0.6**
	baz=331								
TWA	**Mucha**	**1.23**	**322**	*e*P			**Pb**	**11 23 17.6**	**+0.1**
	baz=322								
TWA				*e*S			**Sg**	**11 23 35.0**	**+0.3**
	baz=322								
IRIF	**Iriomote-Funau**	**1.23**	**75**	P			**Pn**	**11 23 17.6**	**+0.4**
IRIF				S			**Sb**	**11 23 33.6**	**+0.4**
NHDH	**Xindian Distri**	**1.25**	**319**	*e*P			**Pb**	**11 23 18.4**	**+0.5**
	baz=319								
HATJ	**Hateruma jima**	**1.26**	**88**	P			**Pn**	**11 23 17.7**	**+0.2**
HATJ				S			**Sb**	**11 23 34.3**	**+0.3**
SSLB	**Suanglung**	**1.36**	**261**	*e*P			**Pb**	**11 23 19.8**	**-0.1**
	baz=259								
YM01	**YM01**	**1.37**	**326**	*e*P			**Pn**	**11 23 18.4**	**-0.6**
	baz=326								
YM01				*e*S			**Sb**	**11 23 37.1**	**0.0**
	baz=326								
WHP	**Taichung City**	**1.38**	**281**	*e*P			**Pg**	**11 23 21.3**	**0.0**
	baz=280								
WHP				*e*S			**Sg**	**11 23 39.7**	**+0.3**
	baz=280								
YM10	**YM10**	**1.38**	**326**	*e*P			**Pn**	**11 23 18.9**	**-0.4**
	baz=325								
YM11	**YM11**	**1.38**	**326**	*e*P			**Pn**	**11 23 18.9**	**-0.4**
	baz=326								
YM04	**YM04**	**1.39**	**325**	*e*P			**Pn**	**11 23 18.4**	**-1.0**
	baz=325								
YM08	**YM08**	**1.39**	**327**	*e*P			**Pn**	**11 23 18.5**	**-0.9**
	baz=327								
YM03	**YM03**	**1.41**	**325**	*e*P			**Pn**	**11 23 19.4**	**-0.3**
	baz=325								
ANP	**Anpu**	**1.43**	**325**	*e*P			**Pn**	**11 23 20.1**	**+0.2**
	baz=325								
NSTT	**Nanjuang**	**1.44**	**296**	P			**Pb**	**11 23 21.1**	**0.0**
	baz=295								
TYC	**Yuchr**	**1.44**	**266**	*e*P			**Pb**	**11 23 20.6**	**-0.4**
	baz=264								
TYC				*e*S			**Sg**	**11 23 43.1**	**+1.8**
	baz=264								
TWY	**Chenhua**	**1.46**	**329**	P			**Pb**	**11 23 22.0**	**+0.5**
	baz=330								
JKRS	**Kuro-shima**	**1.47**	**81**	P			**Pn**	**11 23 21.2**	**+0.9**
JKRS				*e*S			**Sb**	**11 23 40.6**	**+0.8**
TWQ1	**Liyutan**	**1.54**	**283**	*e*P			**Pb**	**11 23 22.2**	**-0.6**
	baz=281								
TWQ1				*e*S			**Sb**	**11 23 43.1**	**+1.0**
	baz=281								
WJS	**Zhushan**	**1.56**	**263**	*e*P			**Pb**	**11 23 23.6**	**+0.4**
	baz=261								
WJS				*e*S			**Sg**	**11 23 44.5**	**-0.7**
	baz=261								
NSY	**Sanyi**	**1.57**	**285**	*e*P			**Pb**	**11 23 22.8**	**-0.6**
	baz=284								
WNT	**Mingjian**	**1.60**	**265**	*e*P			**Pn**	**11 23 22.5**	**+0.3**
	baz=263								
WNT				*e*S			**Sb**	**11 23 44.5**	**+0.8**
	baz=263								
JIJ	**Ishigaki jima**	**1.61**	**77**	P			**Pn**	**11 23 21.9**	**-0.4**
JIJ				S			**Sn**	**11 23 41.3**	**-1.3**
WCHH	**Zhanghua**	**1.71**	**273**	*e*S			**Sb**	**11 23 48.0**	**+1.2**
	baz=271								
JISG	**Ishigakijimahi**	**1.81**	**71**	P			**Pn**	**11 23 24.7**	**-0.4**
JISG				S			**Sn**	**11 23 46.8**	**-0.9**
JTJ	**Tarama**	**2.17**	**73**	P			**Pn**	**11 23 30.2**	**+0.2**
JTJ				S			**Sn**	**11 23 56.6**	**+0.1**
JIRB	**Irabujima**	**2.63**	**72**	P			**Pn**	**11 23 36.5**	**+0.1**
JIRB				S			**Sn**	**11 24 08.1**	**+0.2**

*CNRM **19** 11:39:00.2,36˚.00N×9˚.61W,h70km*
*MDD **19** 11:39:01.5±1.2,36˚.21N×9˚.81W,h65km±24km,mb4.3/18, Error ellipse: s-maj=11.7km s-min=8.0km az=40.0, PRXIMO*
*SFS **19** 11:39:01.0,36˚.25N×9˚.87W,h53km,ML4.6,SW. AZORES - CABO DE SAN VICENTE*
*INMG **19** 11:39:02.4±0.9,36˚.19N×9˚.78W,h31km,ML2.6,Error ellipse: s-maj=3.4km s-min=2.2km az=84.0*
*IGIL **19** 11:39:02.1,36˚.18N×9˚.77W,h27km,ML2.8*
*LDG **19** 11:39:03.6±0.5,36˚.56N×9˚.48W,h30km,Ml3.5/5,Error ellipse: s-maj=9.4km s-min=6.4km az=35.0*
ISC 19 11:38:58.7±1.6,**36˚.14N**±0˚.05×**9˚.78W**±0˚.07,**h35**km,**n93**, σ2**92**/163,**9D**,**West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.25**	**37**	⇓P			**Pn**	**11 39 21.9**	**+2.2**
	101nm,0.1s,SNR=18								
PFVI				S			**Sn**	**11 39 36.2**	**+0.7**
	120nm,0.1s,SNR=7.9								
PFVI	**Vila Bisbo**	**1.25**	**37**	P			**Pn**	**11 39 21.7**	**+1.9**
PFVI				S			**Sn**	**11 39 40.3**	**+4.9**
PFVI	**Vila Bisbo**	**1.25**	**37**	⇓*iP*			**Pn**	**11 39 21.9**	**+2.2**
PFVI				*e*S			**Sn**	**11 39 36.4**	**+1.0**
PFVI				A			A	11 39 37.6	
	53nm,0.1s								
MORF	**Marmelete**	**1.48**	**38**	*e*P			**Pn**	**11 39 25.0**	**+2.1**
MORF				*e*S			**Sn**	**11 39 41.6**	**+0.7**
MORF				AML			AML	11 39 42.9	
	comp=E,128nm,0.1s								
MORF	**Marmelete**	**1.48**	**38**	P			**Pn**	**11 39 25.0**	**+2.1**
MORF				S			**Sn**	**11 39 41.7**	**+0.7**
	comp=E,55nm,0.4s								
MORF	**Marmelete**	**1.48**	**38**	⇓*iP*			**Pn**	**11 39 25.0**	**+2.1**
MORF				*e*S			**Sn**	**11 39 41.7**	**+0.7**
MORF				A			A	11 39 42.7	
	comp=E,55nm,0.4s								
PTEO	**Sao Teotonio**	**1.64**	**31**	P			**Pn**	**11 39 27.1**	**+2.0**
PTEO				S			**Sn**	**11 39 45.8**	**+0.9**
	comp=E,15nm,0.2s								
PTEO	**Sao Teotonio**	**1.64**	**31**	⇓*e*Pn			**Pn**	**11 39 27.1**	**+2.0**
PTEO				*e*Sn			**Sn**	**11 39 45.8**	**+0.9**
PTEO				A			A	11 39 49.1	
	comp=E,31nm,0.2s								
PBDV	**Barranco-do-Ve**	**1.85**	**53**	P			**Pn**	**11 39 30.3**	**+2.3**
PBDV				S			**Sn**	**11 39 50.9**	**+0.7**
	comp=E,21nm,0.1s								
PBDV	**Barranco-do-Ve**	**1.85**	**53**	⇓*e*Pn			**Pn**	**11 39 30.3**	**+2.3**
PBDV				*e*Sn			**Sn**	**11 39 50.9**	**+0.7**
PBDV				A			A	11 39 53.9	
	comp=E,21nm,0.1s								
PCVE	**Castro Verde**	**2.04**	**43**	P			**Pn**	**11 39 32.9**	**+2.3**
PCVE				S			**Sn**	**11 39 55.5**	**+0.6**
	comp=E,28nm,0.2s								
PCVE	**Castro Verde**	**2.04**	**43**	⇓*e*Pn			**Pn**	**11 39 32.9**	**+2.3**
PCVE				*e*Sn			**Sn**	**11 39 55.5**	**+0.6**
PCVE				A			A	11 39 57.7	
	comp=E,28nm,0.2s								
PVAQ	**Vaqueiros**	**2.08**	**52**	P			**Pn**	**11 39 33.4**	**+2.2**
PVAQ				S			**Sn**	**11 39 56.5**	**+0.7**
	comp=E,74nm,0.3s								
PVAQ	**Vaqueiros**	**2.08**	**52**	P			**Pn**	**11 39 32.9**	**+1.7**
PVAQ				S			**Sn**	**11 39 56.8**	**+1.0**
PVAQ	**Vaqueiros**	**2.08**	**52**	⇓*i*Pn			**Pn**	**11 39 33.4**	**+2.2**
PVAQ				*e*Sn			**Sn**	**11 39 56.5**	**+0.7**
PVAQ				A			A	11 39 57.9	
	comp=E,74nm,0.3s								
MESJ	**Messejana**	**2.11**	**36**	*e*P			**Pn**	**11 39 33.6**	**+2.1**
MESJ				*e*S			**Sn**	**11 39 56.9**	**+0.4**
MESJ				AML			AML	11 39 59.1	
	comp=E,61nm,0.3s								
MESJ	**Messejana**	**2.11**	**36**	P			**Pn**	**11 39 33.6**	**+2.1**
MESJ				S			**Sn**	**11 39 56.9**	**+0.4**
	comp=E,61nm,0.3s								
MESJ	**Messejana**	**2.11**	**36**	⇓*e*Pn			**Pn**	**11 39 33.5**	**+2.1**
MESJ				*e*Sn			**Sn**	**11 39 57.3**	**+0.8**
MESJ				A			A	11 39 59.6	
	comp=E,21nm,0.2s								
PNCL	**Nicolau / Gran**	**2.21**	**27**	P			**Pn**	**11 39 34.6**	**+1.7**
PNCL				S			**Sn**	**11 39 58.8**	**-0.2**
	comp=E,22nm,0.3s								
PNCL	**Nicolau / Gran**	**2.21**	**27**	*e*Pn			**Pn**	**11 39 34.6**	**+1.7**
PNCL				*e*Sn			**Sn**	**11 39 58.8**	**-0.2**
PNCL				A			A	11 40 01.4	
	comp=E,22nm,0.3s								
EGRO	**El Granado**	**2.31**	**52**	⇓P			**Pn**	**11 39 36.4**	**+2.1**
	comp=E,7.2nm,0.1s,SNR=18								
EGRO				S			**Sn**	**11 40 01.7**	**+0.3**
	comp=E,31nm,0.1s,SNR=7.9								
PBEJ	**Beja**	**2.43**	**38**	P			**Pn**	**11 39 37.7**	**+1.8**
PBEJ				S			**Sn**	**11 40 04.8**	**+0.4**
	comp=E,10nm,0.2s								
PBEJ	**Beja**	**2.43**	**38**	*e*Pn			**Pn**	**11 39 37.7**	**+1.8**
PBEJ				*e*Sn			**Sn**	**11 40 04.8**	**+0.4**
PBEJ				A			A	11 40 06.1	
	comp=E,20nm,0.2s								
EVO	**Evora**	**2.77**	**30**	P			**Pn**	**11 39 42.0**	**+1.4**
EVO				S			**Sn**	**11 40 12.6**	**-0.4**
EVO	**Evora**	**2.77**	**30**	*e*P			**Pn**	**11 39 42.0**	**+1.4**
EVO				*e*S			**Sn**	**11 40 12.6**	**-0.4**
EVO	**Evora**	**2.77**	**30**	*e*Pn			**Pn**	**11 39 42.3**	**+1.6**
EVO				*e*Sn			**Sn**	**11 40 12.5**	**-0.4**
EVO				A			A	11 40 13.4	
	comp=E,39nm,0.1s								
PMAFR	**Mafra**	**2.84**	**8**	P			**Pn**	**11 39 43.3**	**+1.7**
	comp=E,14nm,0.1s,SNR=21								
PMAFR				S			**Sn**	**11 40 13.0**	**-1.6**
	comp=E,13nm,0.1s,SNR=7.9								
PMAFR	**Mafra**	**2.84**	**8**	*e*Pn			**Pn**	**11 39 43.2**	**+1.6**
PMAFR				*e*Sn			**Sn**	**11 40 14.4**	**-0.2**
PMAFR				A			A	11 40 16.2	
	comp=E,29nm,0.2s								
EMIN	**Mina Concepcio**	**2.97**	**56**	P			**Pn**	**11 39 45.3**	**+1.9**
	comp=E,3.2nm,0.1s,SNR=39								
EMIN				S			**Sn**	**11 40 17.6**	**-0.3**
	comp=E,8.2nm,0.1s,SNR=5.0								
PBAR	**Barrancos**	**2.99**	**46**	P			**Pn**	**11 39 45.5**	**+1.9**
PBAR				S			**Sn**	**11 40 18.2**	**0.0**
	comp=E,28nm,0.5s								
PBAR	**Barrancos**	**2.99**	**46**	*e*Pn			**Pn**	**11 39 45.5**	**+1.9**
PBAR				*e*Sn			**Sn**	**11 40 18.2**	**0.0**
PBAR				A			A	11 40 21.1	
	comp=E,28nm,0.5s								
PMTG	**Montargil**	**3.17**	**22**	P			**Pn**	**11 39 47.8**	**+1.6**
PMTG				S			**Sn**	**11 40 22.4**	**-0.4**
	comp=E,6.3nm,0.2s								
PMTG	**Montargil**	**3.17**	**22**	*e*Pn			**Pn**	**11 39 47.8**	**+1.6**
PMTG				*e*Sn			**Sn**	**11 40 22.4**	**-0.4**
PMTG				A			A	11 40 23.6	
	comp=E,6.3nm,0.2s								
PESTR	**Estremoz**	**3.23**	**32**	*e*Pn			**Pn**	**11 39 48.3**	**+1.3**
PESTR				*e*Sn			**Sn**	**11 40 23.6**	**-0.7**
ESPR	**Espera**	**3.24**	**76**	P			**Pn**	**11 39 49.1**	**+2.0**
	comp=E,3.4nm,0.1s,SNR=7.9								
ESPR				S			**Sn**	**11 40 24.6**	**+0.1**
	comp=E,45nm,0.2s,SNR=7.9								
EBAD	**Badajoz**	**3.42**	**39**	P			**Pn**	**11 39 50.9**	**+1.4**
	comp=E,5.9nm,0.1s,SNR=7.9								
EBAD				S			**Sn**	**11 40 27.3**	**-1.4**
	comp=E,4.1nm,0.1s,SNR=7.9								
AVE	**Averroes**	**3.44**	**145**	*e*S			**Sn**	**11 40 27.9**	**-1.4**
CEU	**Ceuta**	**3.58**	**93**	S			**Sn**	**11 40 34.7**	**+1.9**
CEU	**Ceuta**	**3.58**	**93**	*e*S			**Sn**	**11 40 34.7**	**+1.9**
ZHG	**ZHG**	**3.73**	**135**	P			**Pn**	**11 39 55.3**	**+1.5**
ZHG				S			**Sn**	**11 40 35.0**	**-1.5**
PMRV	**Marv??o**	**3.79**	**29**	P			**Pn**	**11 39 56.2**	**+1.5**
PMRV				S			**Sn**	**11 40 36.6**	**-1.4**
	comp=E,8.7nm,0.2s								
PMRV	**Marv??o**	**3.79**	**29**	*e*Pn			**Pn**	**11 39 56.2**	**+1.5**
PMRV				*e*Sn			**Sn**	**11 40 36.6**	**-1.4**
PMRV				A			A	11 40 39.0	
	comp=E,8.7nm,0.2s								
ECAB	**El Cabril**	**3.98**	**60**	P			**Pn**	**11 39 59.1**	**+1.8**
	comp=E,3.6nm,0.1s,SNR=14								
ECAB				S			**Sn**	**11 40 40.5**	**-2.4**
	comp=E,3.0nm,0.1s,SNR=12								
HORN	**Hornachuelos**	**4.00**	**63**	P			**Pn**	**11 39 59.3**	**+1.8**
HORN				S			**Sn**	**11 40 42.9**	**-0.2**
PCAS	**Casmilo, Conde**	**4.04**	**14**	P			**Pn**	**11 40 00.0**	**+2.0**
PCAS	**Casmilo, Conde**	**4.04**	**14**	*e*Pn			**Pn**	**11 40 00.0**	**+2.0**
EMIJ	**Mijas**	**4.06**	**83**	P			**Pn**	**11 40 00.5**	**+2.0**
	comp=E,0.5nm,0.1s,SNR=7.9								
EMIJ				S			**Sn**	**11 40 43.2**	**-1.6**
	comp=E,1.8nm,0.2s,SNR=7.9								
PCBR	**Castelo Branco**	**4.12**	**25**	P			**Pn**	**11 40 00.8**	**+1.7**
PCBR				S			**Sn**	**11 40 44.5**	**-1.6**
	comp=E,1.9nm,0.2s								
PCBR	**Castelo Branco**	**4.12**	**25**	*e*Pn			**Pn**	**11 40 00.8**	**+1.7**
PCBR				*e*Sn			**Sn**	**11 40 44.5**	**-1.6**
PCB

comp=E,2.9nm,0.6s
SESP Santiago Espad 6.11 69 P **Pn 11 40 25.9 -0.8**
PBRG Braganca 6.13 22 P **Pn 11 40 27.9 +1.0**
PBRG Braganca 6.13 22 *e*Pn **Pn 11 40 27.9 +1.0**
ECAL Calabor 6.26 21 P **Pn 11 40 30.0 +1.4**
comp=E,5.7nm,0.2s,SNR=7.9
ECAL S **Sn 11 41 35.0 -3.9**
comp=E,0.7nm,0.1s,SNR=7.9
GUD Guadarrama 6.30 43 P **Pn 11 40 30.2 +0.9**
comp=E,1.5nm,0.1s,SNR=13
GUD S **Sn 11 41 36.3 -3.8**
comp=E,0.7nm,0.2s,SNR=7.9
TZRR Tazzarine 6.39 145 P **Pn 11 40 28.7 -1.9**
TZRR S **Sn 11 41 40.0 -2.3**
EAGO Agolada(Pontev 6.78 11 P **Pn 11 40 36.5 +0.8**
comp=E,3.3nm,0.1s,SNR=7.9
EAGO S **Sn 11 41 46.0 -5.7**
comp=E,0.6nm,0.2s,SNR=7.9
EMAZ Mazaricos 6.83 5 P **Pn 11 40 36.5 +0.1**
comp=E,3.7nm,0.1s,SNR=7.9
EMAZ S **Sn 11 41 46.5 -6.4**
comp=E,2.1nm,0.1s,SNR=7.9
ETOB Tobarra 7.01 67 P **Pn 11 40 39.1 +0.1**
comp=E,0.5nm,0.1s,SNR=7.9
ETOB S **Sn 11 41 54.7 -2.8**
comp=E,2.2nm,0.1s,SNR=7.9
EPON Pontenova 7.46 15 P **Pn 11 40 45.3 +0.3**
comp=E,0.8nm,0.1s,SNR=7.9
ETOR Torete 7.65 50 P **Pn 11 40 49.2 +1.5**
comp=E,5.6nm,0.3s,SNR=7.9
ETOR S **Sn 11 42 09.9 -3.3**
comp=E,1.7nm,0.1s,SNR=7.9
EARI Arriondas 7.97 25 P **Pn 11 40 54.1 +2.1**
comp=E,0.6nm,0.2s,SNR=7.9
EMOS Mosqueruela 8.45 57 P **Pn 11 41 01.1 +2.3**
comp=E,0.4nm,0.2s,SNR=7.9
EMOS S **Sn 11 42 29.2 -3.8**
comp=E,0.3nm,0.1s,SNR=7.9
SJPF Ste Jean 9.59 41 *e*P **Pn 11 41 15.5 +1.2**
SJPF *e*Sn Sn 11 42 47.1 -14
comp=E,3.2nm,0.5s
ETSF Etsaut 9.81 44 *e*P **Pn 11 41 19.2 +1.9**
ETSF *e*Sn Sn 11 42 52.4 -14
comp=E,7.6nm,0.4s
EPF Esparros 10.40 46 *e*P **Pn 11 41 27.1 +1.7**
EPF *e*Sn Sn 11 43 06.6 -14
comp=E,1.9nm,0.3s
MTLF Montolieu 11.70 48 *e*P **Pn 11 41 45.7 +2.6**
MTLF *e*Sn Sn 11 43 37.3 -15
comp=E,1.2nm,0.4s

MAN 19 11:57:34.4, 11°32N×124°60E, h7km, mb5.0, ML3.9, MS4.0, 2C-3D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.27**	**177**	*e*P		Pg	11 57 40.6	+0.9
OCLP				*e*S		Sb	11 57 46.2	-0.2
LLP	**Lapu-Lapu**	**1.18**	**212**↑	*e*P		Pg	11 57 55.3	-1.7
LLP				*i* S		Sg	11 58 12.2	-0.1
CNP	**Catarman**	**1.18**	**3**	*e*P		Pg	11 57 56.4	-0.8
CNP				*e*S		Sn	11 58 13.9	+0.1
MSLP	**Maasin**	**1.21**	**168**	*e*P		Pg	11 57 56.7	-0.9
MSLP				*e*S		Sn	11 58 16.6	+2.2
TBP	**Tagbilaran**	**1.77**	**204**	*e*P		Pg	11 58 09.2	+0.7
TBP				*i* S		Sg	11 58 35.8	+4.3
RCP	**Roxas**	**1.83**	**278**↓	*e*P		Pn	11 58 06.5	+0.2
RCP				*e*S		Sb	11 58 31.6	+0.2
GUIM	**Jordan**	**2.09**	**251**	*e*P		Pn	11 58 09.9	0.0
GUIM				*e*S		Sn	11 58 37.3	+1.1
PVCP	**Virac**	**2.30**	**349**	*e*P		Pn	11 58 12.4	-0.5
PVCP				*e*S		Sg	11 58 46.9	-1.6
CNOP	**Candoni, Negro**	**2.43**	**233**	*e*P		Pn	11 58 12.8	-1.8
CNOP				*e*S		Sn	11 58 43.2	-1.4
BUTP	**Butuan**	**2.54**	**157**	*e*P		Pn	11 58 17.1	+0.9
JAP	**San Jose, Anti**	**2.66**	**258**↓	*e*P		Pn	11 58 13.5	-4.3
DCPH	**Dipolog City**	**2.98**	**204**↓	*e*P		Pn	11 58 25.1	+2.9
DCPH				*e*S		Sb	11 59 07.4	+2.7
BUKP	**Musuan**	**3.45**	**172**	*e*P		Pn	11 58 30.1	+1.4
KCP	**Kidapawan**	**4.31**	**173**↑	*e*P		Pg	11 59 00.1	+3.0

NIED ***19*** *12:02:00,41°.00N×142°.10E,h62km,Mw4.2 Best double couple: M₀2.28000×10¹⁵ NP1:φs25.00000°,δ78.00000°, λ108.00000°. NP2:φs148.00000°,δ21.00000°,λ35.00000°.*
BJI ***19*** *12:02:26.2±0.0,40°.86N×142°.19E,h69km,mB4.7/26, mb4.5/34,Ms4.1/4*
MOS ***19*** *12:02:28.5±0.8,41°.03N×142°.04E,h72km,mb4.7/25,Error ellipse: s-maj=7.1km s-min=5.4km az=88.8*
JMA ***19*** *12:02:28.8±0.1,40°.97N×142°.01E,h57km±2km,M4.2 Broadband fault plane solution: P waves. NP1: φs187.00000°,δ13.00000°,λ71.00000°. NP2:φs27.00000°, δ78.00000°,λ94.00000°. Principal axes: T Plg57.0000°, Azm302.0000°; N Plg4.0000°, Azm206.0000°; P Plg33.0000°, Azm113.0000°;*
JMA Felt III J1.
NEIC ***19*** *12:02:29.5±1.5,40°.98N±0°.07×142°.1E±0°.1,h66km±7km, mb4.6/43 Error ellipse: s-maj=13.2km s-min=6.4km az=128.0*
IDC ***19*** *12:02:29.9±1.5,40°.94N×141°.97E,h71km±12km,mb3.8/24, mb1 3.9/31,mb1mx3.9/61,mbtmp4.1/31,MS3.2/14, Ms1 3.2/14,ms1mx2.9/45,Error ellipse: s-maj=14.1km s-min=9.5km az=114.0*
ISC 19 12:02:28.8±0.7, 40°.95N±0°.03×142°.03E±0°.04, h60km±6km, n180, σ1s34/191, mb4.4/60, MS3.3/10, 15C-12D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JARK	**Aomorirokkasho**	**0.50**	**276**	↓P		**Pn**	**12 02 40.5**	**-0.2**
JARK				*e*S		**Sn**	**12 02 48.6**	**-0.8**
JAHD	**Aomorihigashid**	**0.61**	**301**	↓P		**Pn**	**12 02 41.6**	**-0.3**
JAHD				S		**Sn**	**12 02 50.8**	**-0.6**
JANG	**Nango**	**0.70**	**214**	↓P		**Pn**	**12 02 42.9**	**-0.1**
JANG				S		**Sn**	**12 02 52.8**	**-0.6**
JTM	**Tenmabayashi**	**0.75**	**257**	↓P		**Pn**	**12 02 43.4**	**-0.1**
JTM				S		**Sn**	**12 02 53.8**	**-0.6**
JKEN	**Kujiedanarisaw**	**0.79**	**198**	↑P		**Pn**	**12 02 44.1**	**+0.1**
JKEN				S		**Sn**	**12 02 55.0**	**-0.2**
JOT	**Ohata**	**0.85**	**300**	↓P		**Pn**	**12 02 44.3**	**-0.6**
JOT				S		**Sn**	**12 02 56.2**	**-0.6**
JKB	**Kayabe**	**1.20**	**322**	↓P		**Pn**	**12 02 49.0**	**-0.3**
JKB				*e*S		**Sn**	**12 03 03.3**	**-1.4**
JAH	**Hinai**	**1.31**	**235**	↓P		**Pn**	**12 02 51.1**	**+0.3**
JAH				*e*S		**Sn**	**12 03 08.2**	**+0.9**
JSR	**Shiriuchi**	**1.34**	**296**	↓P		**Pn**	**12 02 51.2**	**-0.1**
JSR				*e*S		**Sn**	**12 03 06.9**	**-1.3**
ERM	**Erimo**	**1.36**	**38**	*i* P		**Pn**	**12 02 52.3**	**+0.8**
ERM	**Erimo**	**1.36**	**38**			**Pn**	**12 02 52.5**	**+1.0**
ERM					Sn	**Sn**	**12 03 10.0**	**+1.4**
JEM	**Erimo**	**1.36**	**38**	P		**Pn**	**12 02 52.4**	**+0.9**
JEM				*e*S		**Sn**	**12 03 09.7**	**+1.1**
JNBK	**Urakawa-nobuka**	**1.43**	**22**	P		**Pn**	**12 02 53.2**	**+0.7**
JIW	**Iwasaki**	**1.58**	**257**	↓P		**Pn**	**12 02 54.4**	**-0.1**
JIW				*e*S		**Sn**	**12 03 12.4**	**-1.5**
JOM	**Ohasama**	**1.58**	**201**	↑P		**Pn**	**12 02 55.1**	**+0.5**
JOM				*e*S		**Sn**	**12 03 14.3**	**+0.3**
JOMM	**Oshimamatsumae**	**1.63**	**291**	↓P		**Pn**	**12 02 54.4**	**-0.7**
JOMM				*e*S		**Sn**	**12 03 14.1**	**-0.9**
JIAM	**Iburiatsuma**	**1.67**	**357**	P		**Pn**	**12 02 56.5**	**+0.8**
JNB	**Noboribetsu**	**1.69**	**334**	↓P		**Pn**	**12 02 55.2**	**-0.7**
JNB				*e*S		**Sn**	**12 03 16.0**	**-0.4**
JYM2	**Yakumo 2**	**1.70**	**314**	↓P		**Pn**	**12 02 56.1**	**-0.1**
ASAJ	**Asahikawa**	**3.19**	**7**	P		**Pn**	**12 03 17.6**	**+1.2**
	11nm,0.3s,baz=218,slow=8.9,SNR=65							
ASAJ					S	**Sn**	**12 03 55.8**	**+2.6**
	12nm,0.3s,baz=350,slow=27,SNR=9.1							
ASAJ					LR	LR	12 05 00.5	
	comp=Z,206nm,22.0s,baz=201,slow=47							
JKA	**Kamikawa-asahi**	**3.19**	**7**			**Pn**	**12 03 17.6**	**+1.2**
JKA						**Sn**	**12 03 55.8**	**+2.6**
NMR	**Nemuro--Hokkai**	**3.66**	**48**↑	*i* P		**Pn**	**12 03 21.8**	**-1.0**
NMR				*i* S		**Sn**	**12 04 01.2**	**-3.5**
GRPR	**Tuman**	**4.11**	**41**	*e*P		**Pn**	**12 03 28.7**	**-0.3**
GRPR				*e*S		**Sn**	**12 04 12.8**	**-3.0**
GRPR					pmax	pmax		
	comp=Z,165nm,0.1s							
GRPR					pmax	pmax		
	comp=N,51nm,0.2s							
GRPR					pmax	pmax		
	comp=E,105nm,0.1s							
GRPR					smax	smax		
	comp=N,483nm,0.4s							
GRPR					smax	smax		
	comp=E,287nm,0.2s							
LAGR	**Lagunnoye**	**4.16**	**41**	P		**Pn**	**12 03 30.7**	**+1.0**
LAGR				*e*S		**Sn**	**12 04 15.4**	**-1.6**
LAGR					smax	smax		
	comp=N,813nm,0.6s							
LAGR					smax	smax		
	comp=E,634nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**4.18**	**41**	*c i* P		**Pn**	**12 03 31.0**	**+1.0**
YUK				*i* S		**Sn**	**12 04 15.0**	**-2.6**
YUK					pmax	pmax		
	comp=Z,221nm,0.2s							
YUK					pmax	pmax		
	comp=N,41nm,0.1s							
YUK					pmax	pmax		
	comp=E,44nm,0.1s							
YUK					smax	smax		
	comp=N,630nm,0.4s							
YUK					smax	smax		
	comp=E,314nm,0.5s							
MJB9	**Matsu-Tunnel**	**5.32**	**215**			**Pn**	**12 03 48.4**	**+2.8**
MAJO	**Matsushiro**	**5.32**	**215**	P		**Pn**	**12 03 48.3**	**+2.6**
MAJO	**Matsushiro**	**5.32**	**215**			**Pn**	**12 03 48.3**	**+2.6**
MAT	**Matsushiro**	**5.32**	**215**	P		**Pn**	**12 03 48.0**	**+2.3**
MAT				*e*S		**Sn**	**12 04 49.2**	**+3.6**
MJAR	**Matsushiro Arr**	**5.32**	**215**	P		**Pn**	**12 03 47.8**	**+2.1**
	comp=E,0.3nm,0.3s,baz=25,slow=14,SNR=24							
YSS	**Yuzh-Sakhalins**	**6.02**	**5**	*e*P		**Pn**	**12 03 57.3**	**+2.2**
YSS				*e*S		**Sn**	**12 05 05.8**	**+3.2**
YSS					pmax	pmax		
	comp=Z,20nm,1.0s							
YSS					smax	smax		
	comp=N,20nm,1.3s							
YSS					MLR	MLR		
	comp=Z,200nm,17.0s							
YSS	**Yuzh-Sakhalins**	**6.02**	**5**	Pn		**Pn**	**12 03 55.8**	**+0.7**
KUR	**Kuril'sk**	**6.05**	**43**	*e*P		**Pn**	**12 03 56.4**	**+0.9**
KUR				S		**Sn**	**12 05 00.7**	**-2.5**
KUR					pmax	pmax		
	comp=E,23nm,0.5s							
KUR					pmax	pmax		
	comp=Z,111nm,0.5s							
KUR					pmax	pmax		
	comp=N,16nm,0.2s							
KUR					smax	smax		
	comp=E,34nm,0.3s							
KUR					smax	smax		
	comp=N,119nm,0.7s							
INU	**Inuyama**	**6.85**	**217**			**Pn**	**12 04 09.1**	**+2.5**
JHJ	**Hachijo jima 2**	**8.02**	**194**	P		**Pn**	**12 04 22.4**	**-0.2**
	comp=N,7.4nm,0.3s,baz=242,slow=22,SNR=1.5							
JHJ				S		**Sn**	**12 05 45.3**	**-6.6**
	comp=N,4.1nm,0.3s,baz=122,slow=8.5,SNR=1.9							
USA0B	**Ussuriysk Arra**	**8.09**	**297**	*i* P		**Pn**	**12 04 26.4**	**+3.0**
USA0B	**Ussuriysk Arra**	**8.09**	**297**			**Pn**	**12 04 24.8**	**+1.3**
USRK	**Ussuriysk Ar.**	**8.09**	**297**	P		**Pn**	**12 04 23.7**	**+0.3**
	baz=103,slow=14,SNR=32							
USRK					LR	LR	12 07 20.9	
	comp=N,138nm,21.3s,baz=155,slow=36							
MSHR	**Mys Shultsa**	**8.29**	**285**	*ce*P		**Pn**	**12 04 27.5**	**+1.3**
MDJ	**Mudanjiang**	**9.85**	**296**			**Pn**	**12 04 51.2**	**+3.7**
TYV	**Tymovskoe**	**9.92**	**2**	*e*P		Pn	12 04 42.6	-5.9
TYV					pmax	pmax		
	comp=Z,8.0nm,1.5s							
TYV					pmax	pmax		
	comp=Z,300nm,3.9s							
KLR	**Kul'dur**	**11.00**	**322**	P		**Pn**	**12 05 05.2**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=124,slow=12,SNR=6.0							
KLR	**Kul'dur**	**11.00**	**322**	*ce*P		**Pn**	**12 05 04.4**	**+1.1**
KSRS	**Korea Array**	**11.49**	**257**	P		**Pn**	**12 05 12.3**	**+2.4**
	comp=Z,0.4nm,0.3s,baz=64,slow=13,SNR=10.0							
KSRS					LR	LR	12 09 20.3	
	comp=Z,67nm,18.3s,baz=76,slow=36							
KS19	**Wonju Array Si**	**11.51**	**257**	Pn		**Pn**	**12 05 12.9**	**+2.6**
JNU	**Nakatsue**	**11.84**	**232**	LR		LR	12 09 53.1	
	comp=Z,49nm,18.1s,baz=40,slow=38							
JNU	**Nakatsue**	**11.84**	**232**	Pn		**Pn**	**12 05 17.5**	**+2.6**
TJN	**Taejon**	**12.34**	**253**	*ce*P		**Pn**	**12 05 25.4**	**+3.9**
PETK	**Petropavlovsk-**	**16.14**	**36**	P		**Pn**	**12 06 11.1**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=212,slow=10,SNR=4.7							
ZEA	**Zeya**	**16.20**	**327**	*e*P		**Pn**	**12 06 12.0**	**-0.3**
HIA	**Hailar**	**17.74**	**305**	P		**Pn**	**12 06 30.0**	**-1.5**
HIA					pmax	pmax		
	comp=Z,7.0nm,0.5s							
HIA	**Hailar**	**17.74**	**305**	P		**Pn**	**12 06 30.0**	**-1.5**
MA2	**Magadan**	**19.43**	**13**	LR		LR	12 13 50.7	
	comp=Z,33nm,19.9s,baz=98,slow=35							
MA2	**Magadan**	**19.43**	**13**	P		**P**	**12 06 49.1**	**-0.9**
MA2					pmax	pmax		
	comp=Z,17nm,1.4s							
MA2	**Magadan**	**19.43**	**13**	P		**P**	**12 06 49.1**	**-0.9**
BJI	**Beijing**	**19.66**	**276**	P		**P**	**12 06 52.6**	**-0.1**
BJI					pmax	pmax		
	comp=Z,6.0nm,0.6s							
TIA	**Tai'an**	**20.01**	**264**	P		**P**	**12 06 55.8**	**-0.7**
TIA					pmax	pmax		
	comp=Z,6.0nm,0.6s							
NJ2	**Nanjing**	**20.59**	**252**	*e*P		**P**	**12 07 03.3**	**+0.5**
NJ2					pmax	pmax		
	comp=Z,12nm,0.6s							
YAK	**Yakutsk**	**22.39**	**345**	*e*P		**P**	**12 07 19.0**	**-2.7**
YAK					pmax	pmax		
	comp=Z,17nm,1.1s							
YAK					pmax	pmax		
	comp=N,7.0nm,1.1s							
YAK					pmax	pmax		
	comp=E,2.0nm,1.1s							
YAK	**Yakutsk**	**22.39**	**345**	P		**P**	**12 07 19.1**	**-2.7**
SEY	**Seymchan**	**22.86**	**12**	P		**P**	**12 07 25.9**	**-0.9**
	comp=E,2.2nm,0.8s,baz=192,slow=11,SNR=4.6							
SEY	**Seymchan**	**22.86**	**12**	*i* P		**P**	**12 07 25.1**	**-1.7**
HHC	**Hu-ho-hao-te**	**22.97**	**280**	*e*P		**P**	**12 07 28.8**	**+0.5**
HHC					pmax	pmax		
	comp=E,6.0nm,0.9s							
HHC					pmax	pmax		
	comp=E,47nm,5.2s							
WHN	**Wuhan**	**24.66**	**254**	P		**P**	**12 07 48.8**	**+5.0**
SMY	**Shemya**	**24.68**	**51**	P		**P**	**12 07 42.9**	**-0.9**
SMY					pmax	pmax		
	comp=Z,169nm,1.2s							
SMY	**Shemya**	**24.68**	**51**	P		**P**	**12 07 42.9**	**-0.9**
ULN	**Ulaanbaatar**	**25.76**	**297**	*ce*P		**P**	**12 07 54.7**	**+0.8**
ULN					pmax	pmax		
	comp=Z,3.0nm,0.8s							
ULN	**Ulaanbaatar**	**25.76**	**297**	P		**P**	**12 07 54.5**	**+0.6**
SONM	**Songino Array**	**26.20**	**297**	P		**P**	**12 07 57.5**	**-0.4**
	comp=Z,1.9nm,0.5s,baz=93,slow=9.2,SNR=6.2							
SONM					LR	LR	12 19 06.5	
	comp=Z,67nm,18.5s,baz=102,slow=38							
TLY	**Talaya**	**28.29**	**305**	LR		LR	12 20 22.5	
	comp=Z,31nm,18.9s,baz=96,slow=38							
H11N2	**WAKE ISLAND Hy**	**29.95**	**127**	T		T	12 39 33.7	
	baz=318,slow=75,SNR=126							
H11N1	**WAKE ISLAND Hy**	**29.96**	**128**	T		T	12 39 39.1	
	baz=318,slow=75,SNR=136							
H11N3	**WAKE ISLAND Hy**	**29.97**	**127**	T		T	12 39 41.9	
	baz=318,slow=75,SNR=145							
BILL	**Bilibino**	**30.14**	**18**	*e*P		**P**	**12 08 31.9**	**-0.7**
BILL				*e*			12 09 35.9	
BILL				*e*			12 11 37.0	
BILL					pmax	pmax		
	comp=Z,2.0nm,1.0s							
H11S1	**WAKE ISLAND Hy**	**30.78**	**129**	T		T	12 41 00.8	
	baz=322,slow=76,SNR=51							
H11S3	**WAKE ISLAND Hy**	**30.78**	**129**	T		T	12 41 01.9	
	baz=322,slow=76,SNR=35							
H11S2	**WAKE ISLAND Hy**	**30.80**	**129**	T		T	12 41 03.0	
	baz=322,slow=76,SNR=33							
CD2	**Chengdu**	**32.34**	**264**	*e*P		**P**	**12 08 52.0**	**-0.4**
DGZ	**Jazzator, Alta**	**38.60**	**302**	*i* P		**P**	**12 09 46.2**	**+0.2**
DGZ					pmax	pmax		
	comp=Z,4.0nm,0.8s							
WMQ	**Urumqi**	**39.63**	**293**	*e*P		**P**	**12 09 54.6**	**0.0**
WMQ					pP	sP	12 10 13.5	-2.9
WMQ					pmax	pmax		
	comp=Z,47nm,1.1s							
WMQ					pmax	pmax		
	comp=Z,140nm,4.5s							
WMQ					LR	LR		
	comp=Z,230nm,22.5s							
WMQ					LR	LR		
	comp=Z,420nm,20.9s							
ZAA0	**Zalesovo Array**	**39.72**	**309**	P		**P**	**12 09 54.9**	**-0.2**
ZAA0					IAmb	IAmb	12 09 55.6	
	comp=Z,3.4nm,0.5s							
ZALV	**Zalesovo Beam**	**39.72**	**309**	P		**P**	**12 09 55.1**	**0.0**
	comp=Z,3.8nm,0.6s,baz=90,slow=8.3,SNR=14							
ZALV					PcP	**PcP**	**12 11 59.9**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=108,slow=4.8,SNR=3.6							
ZALV					LR	LR	12 27 14.5	
	comp=Z,42nm,18.3s,baz=147,slow=37							
NRIK	**Noril'sk**	**39.95**	**333**	P		**P**	**12 09 56.0**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=143,slow=6.5,SNR=4.6							
MK31	**Makanchi Array**	**42.55**	**299**	P		**P**	**12 10 18.4**	**-0.1**
MK31					pmax	pmax		
	comp=Z,3.0nm,0.7s							
MK31	**Makanchi Array**	**42.55**	**299**	P		**P**	**12 10 18.4**	**-0.1**
MKAR	**Makanchi Array**	**42.55**	**299**	P		**P**	**12 10 18.3**	**-0.2**
	comp=Z,2.4nm,0.5s,baz=83,slow=10,SNR=26							
MAKZ	**Makanchi**	**42.76**	**299**	P		**P**	**12 10 20.1**	**0.0**
MAKZ					pmax	pmax		
	comp=Z,4.0nm,0.7s							
MAKZ	**Makanchi**	**42.76**	**299**	P		**P**	**12 10 20.1**	**0.0**
CHTO	**Chiang Mai**	**42.84**	**252**	P		**P**	**12 10 21.4**	**+0.3**
CHTO					pmax	pmax		
	comp=Z,4.0nm,0.8s							
CHTO	**Chiang Mai**	**42.84**	**252**	P		**P**	**12 10 21.4**	**+0.3**
CM31	**Chiang Mai Arr**	**43.07**	**252**	P		**P**	**12 10 22.1**	**-0.9**
CMAR	**Chiang Mai Arr**	**43.07**	**252**	P		**P**	**12 10 22.9**	**0.0**
	comp=Z,1.8nm,0.8s,baz=44,slow=7.0,SNR=10							
CMAR					LR	LR	12 27 48.0	
	comp=Z,17nm,19.6s,baz=50,slow=35							
CMAR	**Chiang Mai Arr**	**43.07**	**252**	*i* P		**P**	**12 10 23.5**	**+0.6**
CMAR					pmax	pmax		
	comp=Z,2.0nm,0.8s							
PPLA	**Purkeypile**	**43.72**	**37**	P		**P**	**12 10 29.2**	**+1.4**
PPLA					IAmb	IAmb	12 10 32.1	
	comp=Z,14nm,1.4s							
KURK	**Kurchatov**	**43.98**	**305**	*ce*P		**P**	**12 10 29.3**	**-0.6**
KURK					pmax	pmax		
	comp=Z,8.0nm,1.0s							
KURK	**Kurchatov**	**43.98**	**305**	P		**P**	**12 10 29.6**	**-0.3**
KURK					IAmb	IAmb	12 10 33.0	
	comp=Z,6.0nm,0.8s							
SHL	**Shillong**	**44.06**	**266**	P		**P**	**12 10 30.8**	**-0.3**
SHL					pmax	pmax		
	comp=Z,7.0nm,1.0s							
SHL	**Shillong**	**44.06**	**266**	P		**P**	**12 10 30.8**	**-0.3**
SHL					IAmb	IAmb	12 10 32.6	
	comp=Z,6.5nm,1.0s							
COLA	**College**	**45.54**	**34**	P		**P**	**12 10 42.5**	**+0.4**
COLA					pmax	pmax		
	comp=Z,4.0nm,0.8s							
COLA	**College**	**45.54**	**34**	P		**P**	**12 10 42.5**	**+0.4**
COLA					IAmb	IAmb	12 10 48.1	
	comp=Z,3.7nm,0.8s							
IL31		**45.96**	**34**	P		**P**	**12 10 45.6**	**+0.2**
ILAR	**Eielson Array**	**45.96**	**34**	P		**P**	**12 10 45.8**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=270,slow=6.1,SNR=16							
ODAN	**Odare**	**46.76**	**270**	*e*P		**P**	**12 10 53.1**	**+0.6**
	comp=Z,14nm,0.8s							
TARG	**Taragay, Kyrgy**	**47.19**	**293**	P		**P**	**12 10 56.2**	**+0.3**
TARG					IAmb	IAmb	12 11 00.4	
	comp=Z,4.7nm,0.7s							
JIRN	**Jiri**	**47.25**	**272**	*e*P		**P**	**12 10 56.9**	**+0.4**
RAMN	**Ramite**	**47.31**	**271**	*e*P		**P**	**12 10 57.0**	**+0.2**
	comp=Z,18nm,0.6s							
GUN	**Gumba**	**47.36**	**272**	*e*P		**P**	**12 10 57.5**	**+0.2**
	comp=Z,60nm,0.6s							
KKN	**Kakani**	**47.87**	**273**	*e*P		**P**	**12 11 01.6**	**+0.5**
	comp=Z,32nm,0.6s							
PKI	**Pulchoki**	**47.89**	**272**	*e*P		**P**	**12 11 01.2**	**-0.2**
	comp=Z,14nm,0.5s							
PKIN	**Phulchoki**	**47.90**	**272**	*e*P		**P**	**12 11 01.2**	**-0.1**
	comp=Z,12nm,0.5s							
BRVK	**Borovoye**	**48.41**	**310**	*ce*P		**P**	**12 11 04.0**	**-0.6**
BRVK					pmax	pmax		
	comp=Z,2.0nm,0.7s							
BRVK	**Borovoye**	**48.41**	**310**	P		**P**	**12 11 05.1**	**+0.5**
BRVK					IAmb	IAmb	12 11 16.5	
	comp=Z,3.8nm,0.5s							
DANN	**Dangsing**	**48.73**	**274**	*e*P		**P**	**12 11 08.5**	**+0.7**
	comp=Z,116nm,0.5s							
AAK	**Ala-Archa**	**49.14**	**296**	LR		LR	12 32 13.9	
	comp=Z,43nm,19.8s,baz=56,slow=36							
AAK	**Ala-Archa**	**49.14**	**296**	*ce*P		**P**	**12 11 11.2**	**+0.6**
AAK					pmax	pmax		
	comp=Z,2.0nm,0.7s							
AAK	**Ala-Archa**	**49.14**	**296**	P		**P**	**12 11 10.5**	**-0.1**
KOLN	**Koldanda**	**49.16**	**274**	*e*P		**P**	**12 11 11.1**	**+0.2**
	comp=Z,10.0nm,0.4s							
EPYK	**Eagle Plains**	**49.91**	**31**	IAmb		IAmb	12 11 18.6	
	comp=Z,4.8nm,0.8s							
ARSB	**Arslanbob**	**50.69**	**295**	P		**P**	**12 11 22.8**	**+0.5**
ARSB					pmax	pmax		
	comp=Z,8.0nm,0.8s							
ARSB	**Arslanbob**	**50.69**	**295**	P		**P**	**12 11 22.8**	**+0.5**
ARSB					IAmb	IAmb	12 11 28.0	
	comp=Z,7.7nm,0.8s							
INK	**Inuvik**	**50.70**	**29**	P		**P**	**12 11 22.7**	**+0.9**
	comp=Z,3.1nm,0.7s,baz=292,slow=6.5,SNR=13							
INK	**Inuvik**	**50.70**	**29**	P		**P**	**12 11 22.9**	**+1.1**
INK					pmax	pmax		
	comp=Z,4.0nm,0.9s							
INK	**Inuvik**	**50.70**	**29**	P		**P**	**12 11 22.9**	**+1.1**
INK					IAmb	IAmb	12 11 23.9	
	comp=Z,4.0nm,0.8s							
KK31	**Karatay Array**	**51.65**	**298**	P		**P**	**12 11 28.7**	**-0.7**
KK31					pmax	pmax		
	comp=Z,3.0nm,0.9s							
KK31	**Karatay Array**	**51.65**	**298**	P		**P**	**12 11 28.7**	**-0.7**
KK31					IAmb	IAmb	12 11 29.7	
	comp=Z,3.2nm,0.8s							
KKAR	**Karatay Array**	**51.65**	**298**	P		**P**	**12 11 28.8**	**-0.6**
KKAR					pmax	pmax

comp=Z,2.3nm,0.7s,baz=77,slow=19,SNR=2.8
AS31 Alice Springs 64.73 188 P **P** **12 13 00.9 +0.2**
ASAR Alice Springs 64.73 188 P **P** **12 13 00.7 0.0**
comp=Z,1.3nm,0.8s,baz=14,slow=14,SNR=19
OBN Obninsk 65.26 322 *e*P **P** **12 13 02.6 -1.2**
OBN *e* 12 13 32.0
OBN *e* 12 15 24.7
OBN *e*PPP PPP 12 17 01.0
OBN pmax pmax
comp=Z,10.0nm,0.5s
FIA1 FINESS Array S 65.58 332 P **P** **12 13 05.5 -0.3**
FINES FINESS Array B 65.58 332 P **P** **12 13 05.3 -0.5**
comp=Z,13nm,0.7s,baz=44,slow=7.9,SNR=41
FINES LR LR 12 43 53.5
comp=Z,40nm,18.0s,baz=186,slow=38
FINES FINESS Array B 65.58 332 *i* P **P** **12 13 05.6 -0.2**
FINES pmax pmax
comp=Z,13nm,0.7s
KIV Kislovodsk 68.72 310 *e*P **P** **12 13 25.9 -0.3**
KIV *e* 12 13 50.1
KIV *e* 12 15 59.4
KIV *e*PPP PPP 12 17 39.7
KIV pmax pmax
comp=Z,8.0nm,1.0s
KBZ Khabaz 68.74 310 P **P** **12 13 26.1 0.0**
comp=Z,3.2nm,0.7s,baz=80,slow=4.3,SNR=7.0
KBZ Khabaz 68.74 310*ce*P **P** **12 13 26.0 -0.1**
NC405 NORSAR Array S 70.56 337 IAmb IAmb 12 13 40.2
comp=Z,11nm,1.4s
NB2 NORSAR Subarra 70.76 337 P **P** **12 13 38.4 +0.1**
comp=Z,1.8nm,0.7s,baz=37,slow=6.2
NOA NORSAR Array B 70.76 337 P **P** **12 13 38.3 -0.1**
comp=Z,3.0nm,0.7s,baz=38,slow=6.1,SNR=17
NOA LR LR 12 50 00.4
comp=Z,11nm,18.1s,baz=265,slow=40
NBO00 NORSAR Array S 70.90 337 P **P** **12 13 39.1 0.0**
UOSS Minazif 71.10 287 P **P** **12 13 40.7 -0.3**
UOSS IAmb IAmb 12 13 50.6
comp=Z,8.7nm,0.9s
AKASG Malin Array Be 71.50 322 P **P** **12 13 42.7 -0.2**
comp=Z,2.4nm,0.5s,baz=44,slow=6.0,SNR=12
AKBB Malin Array Si 71.50 322*ce*P **P** **12 13 42.0 -0.9**
AKBB Malin Array Si 71.50 322 P **P** **12 13 42.7 -0.2**
AKBB IAmb IAmb 12 13 43.6
comp=Z,5.9nm,0.8s
NVAR Mina Array Bea 72.29 54 P **P** **12 13 49.5 +1.4**
comp=Z,0.5nm,0.7s,baz=283,slow=7.4,SNR=5.6
PDAR Pinedale Array 74.60 46 P **P** **12 14 02.2 +0.6**
comp=Z,0.7nm,0.7s,baz=295,slow=1.9,SNR=5.3
OJC Ojcow 76.06 326 P **P** **12 14 10.3 +0.7**
OJC pmax pmax
comp=Z,7.0nm,0.8s
OJC Ojcow 76.06 326 P **P** **12 14 10.3 +0.7**
OJC IAmb IAmb 12 14 12.5
comp=Z,6.7nm,0.8s
BRTR Keskin Array B 76.62 311 P **P** **12 14 13.2 0.0**
comp=Z,0.5nm,0.7s,baz=46,slow=6.2,SNR=2.8
KHC Kasperske Hory 79.46 328*ce*P **P** **12 14 27.9 -0.7**
KHC pmax pmax
comp=Z,6.0nm,0.8s
KHC Kasperske Hory 79.46 328 *e*P **P** **12 14 29.5 +0.9**
GERES GERESS Array B 79.64 328 P **P** **12 14 29.6 0.0**
comp=Z,0.6nm,0.4s,baz=1.9,slow=4.0,SNR=6.3
GERES LR LR 12 51 17.0
comp=Z,20nm,18.2s,baz=358,slow=37
FUORN Ofenpass-Fuorn 82.80 329 P **P** **12 14 47.6 +0.9**
FUORN IAmb IAmb 12 14 48.1
comp=Z,7.1nm,0.7s
ITM Ithomi 84.86 316 P **P** **12 14 56.5 -0.5**
TXAR Lajitas Array 87.36 53 P **P** **12 15 09.9 +0.3**
comp=Z,0.1nm,0.7s,baz=316,slow=2.5,SNR=2.6
H06N1 SOCORRO T-PHAS 89.98 65 T T 13 55 59.8
SNR=4.3
H03N2 Juan Fernandez 146.76 90 T T 15 07 02.8
baz=300,slow=77,SNR=14
H03N3 Juan Fernandez 146.77 90 T T 15 06 53.3
baz=300,slow=77,SNR=17
H03N1 Juan Fernandez 146.78 90 T T 15 06 59.4
baz=300,slow=77,SNR=14

IDC ***19*** *12:02:40.0±8.0,21.°65N×143.°15E,h346km±83km, mb3.1/10,mb1 3.3/10,mb1mx3.0/57,mbtmp3.8/10,Error ellipse: s-maj=41.4km s-min=15.4km az=85.0*
ISC 19 12:02:39.8±1.0,21.°7N±0.°1×143.°3E±0.°3,h350km,n10, σ0s83/10,mb3.5/10,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KLR	**Kul'dur**	**29.01**	**344**	P		**P**	**12 08 08.2**	**-0.2**
	1.8nm,0.6s,baz=161,slow=8.7,SNR=5.9							
WRA	**Warramunga Arr**	**42.24**	**193**	P		**P**	**12 10 00.3**	**+0.2**
	0.3nm,0.3s,baz=17,slow=9.2,SNR=17							
ASAR	**Alice Springs**	**45.95**	**192**	P		**P**	**12 10 29.3**	**+0.1**
	0.2nm,0.3s,baz=13,slow=6.9,SNR=7.0							
ZALV	**Zalesovo Beam**	**54.29**	**322**	P		**P**	**12 11 30.3**	**-0.5**
	0.5nm,0.4s,baz=101,slow=7.5,SNR=1.3							
MKAR	**Makanchi Array**	**54.78**	**313**	P		**P**	**12 11 35.1**	**+0.6**
	0.3nm,0.5s,baz=81,slow=9.1,SNR=1.1							
YKA	**Yellowknife Ar**	**76.47**	**28**	P		**P**	**12 13 52.8**	**+1.3**
	0.4nm,0.4s,baz=295,slow=5.6,SNR=6.8							
ARCES	**ARCESS Array B**	**78.99**	**342**	P		**P**	**12 14 06.0**	**+0.9**
	0.9nm,0.5s,baz=80,slow=8.1,SNR=6.5							
FINES	**FINESS Array B**	**83.25**	**335**	P		**P**	**12 14 27.5**	**-0.1**
	0.7nm,0.4s,baz=66,slow=4.6,SNR=4.6							
AKASG	**Malin Array Be**	**87.59**	**324**	P		**P**	**12 14 48.1**	**-0.8**
	0.2nm,0.3s,baz=18,slow=17,SNR=2.0							
TXAR	**Lajitas Array**	**98.03**	**54**	P		**P**	**12 15 36.4**	**-1.1**
	0.2nm,0.6s,baz=256,slow=2.7,SNR=3.4							

IDC ***19*** *12:50:32.6±0.7,21.°69S×169.°85E,h0km,mb4.3/17, mb1 4.4/18,mb1mx4.2/39,mbtmp4.3/18,ML4.2/1,MS3.7/16, Ms1 3.7/16,ms1mx3.6/32,Error ellipse: s-maj=22.3km s-min=17.2km az=118.0*
NEIC ***19*** *12:50:38.8±1.4,21.°67S±0.°06×169.°49E±0.°06,h35km±1km, mb4.6/38,Error ellipse: s-maj=11.1km s-min=8.6km az=50.0*
BJI ***19*** *12:50:39.0±0.0,21.°70S×169.°70E,h57km,mB5.0/8, mb4.7/10,Ms5.0/1*
ISC 19 12:50:37.7±0.4,21.°69S±0.°07×169.°47E±0.°06,h25km,n104, σ1s34/95,mb4.5/34,MS3.7/16,1C,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DZM	**Mont Dzumac**	**2.83**	**262**	*e*Pn		**Pn**	**12 51 22.6**	**+1.2**
	179nm,0.3s							
DZM				*e*Sn		**Sn**	**12 51 51.8**	**-3.0**
	240nm,0.3s							
DZM	**Mont Dzumac**	**2.83**	**262**	Pn		**Pn**	**12 51 22.6**	**+1.2**
	29nm,0.3s,baz=125,slow=13,SNR=257							
DZM				Sn		**Sn**	**12 51 51.9**	**-3.0**
	30nm,0.3s,baz=98,slow=19,SNR=4.5							
DZM				LR	LR	LR	12 52 03.7	
	comp=Z,762nm,20.9s,baz=157,slow=29							
DZM	**Mont Dzumac**	**2.83**	**262**			**Pn**	**12 51 21.9**	**+0.5**
DZM						**Sn**	**12 51 53.4**	**-1.4**
MSVF	**Nonsavu**	**8.99**	**66**			**Pn**	**12 52 47.2**	**+1.1**
OUZ	**Omahuta**	**13.96**	**166**	Pn		**Pn**	**12 53 53.9**	**0.0**
EIDS	**Eidsvold**	**17.25**	**254**	Pn		**Pn**	**12 54 36.0**	**-1.0**
HIZ	**Hauiti**	**17.40**	**166**			**Pn**	**12 54 38.9**	**+0.2**
HIZ				IAmb	IAmb	IAmb	12 54 56.0	
	comp=Z,40nm,1.0s							
MXZ	**Matakaoa Point**	**17.57**	**156**			**P**	**12 54 42.0**	**+0.3**
URZ	**Urewera**	**17.78**	**160**	P		**Pn**	**12 54 42.8**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=142,slow=15,SNR=6.6							
URZ				LR	LR	LR	13 00 21.7	
	comp=Z,277nm,18.5s,baz=355,slow=33							
URZ	**Urewera**	**17.78**	**160**	P		**P**	**12 54 46.2**	**+2.2**
ARMA	**Armidale**	**18.21**	**238**			**P**	**12 54 50.5**	**+1.4**
BKZ	**Black Stump Fm**	**18.43**	**162**	P		**Pn**	**12 54 51.8**	**+0.3**
BKZ				IAmb	IAmb	IAmb	12 55 05.1	
	comp=Z,26nm,1.0s							
TUWZ	**Tuamarina**	**20.04**	**170**	P		**Pn**	**12 55 10.7**	**-0.1**
THZ	**Tophouse**	**20.23**	**173**	Pn		Pn	12 55 12.7	-0.3
THZ				IAmb	IAmb	IAmb	12 55 29.5	
	comp=Z,19nm,0.8s							
CTA	**Charters Tower**	**21.74**	**270**	P		**P**	**12 55 30.4**	**+3.0**
	comp=Z,5.5nm,0.7s,baz=156,slow=14,SNR=1.8							
CTAO	**Charters Tower**	**21.74**	**270**	P		**P**	**12 55 28.1**	**+0.7**
CTAO				IAmb	IAmb	IAmb	12 55 46.9	
	comp=Z,26nm,1.2s							
RPZ	**Rata Peaks**	**22.01**	**177**	LR		LR	13 03 30.8	
	comp=Z,338nm,18.3s,baz=341,slow=35							
CAN	**Canberra**	**22.48**	**228**	P		**P**	**12 55 34.9**	**-0.4**
PMG	**Port Moresby**	**24.67**	**296**	P		**P**	**12 56 01.6**	**+4.9**
	comp=Z,27nm,0.9s,baz=83,slow=5.0,SNR=3.7							
PMG				LR	LR		13 03 49.4	
	comp=Z,249nm,19.1s,baz=118,slow=32							
PMG	**Port Moresby**	**24.67**	**296**	P		**P**	**12 55 57.2**	**+0.4**
TOO	**Toolangi**	**26.06**	**227**	P		**P**	**12 56 09.1**	**-0.1**
TOO				IAmb	IAmb	IAmb	12 56 27.3	
	comp=Z,28nm,1.4s							
COEN	**Coen**	**26.15**	**283**	P		**P**	**12 56 10.2**	**0.0**
COEN				IAmb	IAmb	IAmb	12 56 26.8	
	comp=Z,21nm,1.4s							
STKA	**Stephens Creek**	**26.80**	**242**	P		**P**	**12 56 18.3**	**+2.3**
	comp=Z,1.7nm,0.6s,baz=95,slow=14,SNR=5.6							
STKA				LR	LR		13 06 15.3	
	comp=Z,314nm,19.9s,baz=50,slow=35							
STKA	**Stephens Creek**	**26.80**	**242**	P		**P**	**12 56 17.2**	**+1.2**
RAR	**Rarotonga**	**28.61**	**95**	LR		LR	13 07 33.6	
	comp=Z,49nm,18.2s,baz=272,slow=36							
BBOO	**Buckleboo**	**31.57**	**242**	P		**P**	**12 56 58.9**	**+0.5**
BBOO				IAmb	IAmb	IAmb	12 57 05.4	
	comp=Z,6.3nm,0.9s							
WB0	**Warramunga Arr**	**32.82**	**267**	P		**P**	**12 57 09.1**	**-0.3**
WB0				IAmb	IAmb	IAmb	12 57 20.3	
	comp=Z,10nm,1.4s							
AS31	**Alice Springs**	**32.82**	**260**	P		**P**	**12 57 09.7**	**+0.3**
ASAR	**Alice Springs**	**32.82**	**260**	P		**P**	**12 57 10.6**	**+1.1**
	comp=Z,2.9nm,0.9s,baz=86,slow=9.1,SNR=41							
ASAR				PcP		**PcP**	**12 59 53.5**	**-0.7**
	comp=Z,1.2nm,0.9s,baz=72,slow=3.9,SNR=4.6							
WRA	**Warramunga Arr**	**32.84**	**267**	P		**P**	**12 57 10.3**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=99,slow=8.1,SNR=4.2							
WRA				LR	LR		13 10 55.3	
	comp=Z,465nm,18.7s,baz=105,slow=37							
MTN	**Manton Dam**	**37.56**	**277**	P		**P**	**12 57 51.0**	**+0.7**
TBI	**Tubuai**	**37.89**	**101**	*e*LR		LR	13 08 34.0	
	comp=Z,87nm,25.5s							
PPT2	**Papeete2**	**38.71**	**91**	*e*LR		LR	13 08 47.0	
	comp=Z,90nm,23.0s							
KNRA	**Kununurra**	**38.94**	**272**	P		**P**	**12 58 01.7**	**-0.2**
FAKI	**Fak Fak**	**40.69**	**292**	P		**P**	**12 58 17.0**	**+0.5**
FITZ	**Fitzroy Crossi**	**41.27**	**267**	P		**P**	**12 58 22.4**	**+1.2**
FITZ				IAmb	IAmb	IAmb	12 58 38.5	
	comp=Z,10nm,1.1s							
NWAO	**Narrogin (SRO)**	**47.33**	**245**	P		**P**	**12 59 10.1**	**+0.5**
KAPI	**Kappang**	**50.88**	**282**	LR		LR	13 23 58.0	
	comp=Z,58nm,18.2s,baz=118,slow=39							
DAV	**Davao City (W)**	**51.66**	**299**	LR		LR	13 22 18.1	
	comp=Z,42nm,18.8s,baz=128,slow=37							
VNDA	**Vanda**	**56.00**	**182**	P		**P**	**13 00 13.2**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=20,slow=8.7,SNR=4.5							
VNDA				LR	LR		13 21 47.8	
	comp=Z,48nm,18.4s,baz=3.5,slow=34							
VNDA	**Vanda**	**56.00**	**182**	P		**P**	**13 00 13.5**	**-0.2**
CASY	**Casey**	**57.98**	**204**	P		**P**	**13 00 28.9**	**+1.1**
CASY				IAmb	IAmb	IAmb	13 00 32.8	
	comp=Z,8.6nm,1.2s							
LEM	**Lembang**	**61.37**	**274**	LR		LR	13 29 21.0	
	comp=Z,53nm,18.1s,baz=88,slow=38							
YOJ	**Yonaguni jima**	**64.37**	**313**	P		**P**	**13 01 11.8**	**+0.2**
MJAR	**Matsushiro Arr**	**65.01**	**333**	P		**P**	**13 01 14.8**	**-0.8**
	comp=Z,4.2nm,0.8s,baz=163,slow=7.6,SNR=8.6							
MAJO	**Matsushiro**	**65.01**	**333**	P		**P**	**13 01 15.2**	**-0.5**
MAJO				IAmb	IAmb	IAmb	13 01 26.2	
	comp=Z,7.4nm,0.9s							
MAT	**Matsushiro**	**65.01**	**333**	P		**P**	**13 01 15.1**	**-0.6**
MJB9	**Matsu-Tunnel**	**65.01**	**333**	P		**P**	**13 01 14.9**	**-0.8**
MJB9				IAmb	IAmb	IAmb	13 01 26.4	
	comp=Z,4.0nm,0.8s							
SSLB	**Suanglung**	**65.35**	**311**	P		**P**	**13 01 17.7**	**-0.5**
SSLB				IAmb	IAmb	IAmb	13 01 24.2	
	comp=Z,6.9nm,0.8s							
JNU	**Nanatsue**	**65.78**	**325**	P		**P**	**13 01 20.6**	**-0.2**
QSPA	**South Pole Qui**	**68.38**	**180**	P		**P**	**13 01 36.4**	**-0.6**
QSPA				IAmb	IAmb	IAmb	13 01 44.6	
	comp=Z,8.5nm,1.1s							
JKA	**Kamikawa-asahi**	**69.96**	**340**	P		**P**	**13 01 47.1**	**+0.4**
ASAJ	**Asahikawa**	**69.96**	**340**	P		**P**	**13 01 47.1**	**+0.3**
	comp=Z,4.9nm,0.6s,baz=126,slow=8.8,SNR=3.4							
KSRS	**Korea Array**	**70.64**	**326**	P		**P**	**13 01 51.9**	**+0.8**
	comp=Z,1.5nm,0.9s,baz=147,slow=5.9,SNR=7.1							
USA0B	**Ussuriysk Arra**	**74.00**	**333**	P		**P**	**13 02 10.8**	**-0.2**
USA0B				IAmb	IAmb	IAmb	13 02 23.4	
	comp=Z,7.6nm,1.1s							
USRK	**Ussuriysk Ar.**	**74.00**	**333**	P		**P**	**13 02 10.1**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=152,slow=40,SNR=3.4							
PEA0B	**Petropavlovsk-**	**75.18**	**353**	P		**P**	**13 02 17.5**	**-0.1**
PEA0B				IAmb	IAmb	IAmb	13 02 28.2	
	comp=Z,3.9nm,0.9s							
PETK	**Petropavlovsk-**	**75.18**	**353**	P		**P**	**13 02 17.5**	**-0.1**
	comp=Z,2.8nm,0.6s,baz=154,slow=6.5,SNR=21							
PETK				LR	LR		13 33 38.8	
	comp=Z,49nm,18.1s,baz=226,slow=34							
MAW	**Mawson**	**76.26**	**202**	P		**P**	**13 02 23.8**	**0.0**
	comp=Z,2.8nm,0.7s,baz=48,slow=8.8,SNR=3.9							
MAW	**Mawson**	**76.26**	**202**	P		**P**	**13 02 23.6**	**-0.1**
ENH	**Enshi**	**77.39**	**310**	P		**P**	**13 02 30.4**	**-0.5**
ENH				IAmb	IAmb	IAmb	13 02 36.9	
	comp=Z,9.9nm,1.1s							
KLR	**Kul'dur**	**78.18**	**336**	P		**P**	**13 02 34.6**	**-0.1**
	comp=Z,3.0nm,0.7s,baz=119,slow=2.6,SNR=10							
CM31	**Chiang Mai Arr**	**79.70**	**295**	P		**P**	**13 02 43.3**	**-0.5**
CM31				IAmb	IAmb	IAmb	13 02 52.2	
	comp=Z,7.6nm,1.1s							
CMAR	**Chiang Mai Arr**	**79.70**	**295**	P		**P**	**13 02 45.6**	**+1.8**
	comp=Z,1.8nm,0.8s,baz=133,slow=4.0,SNR=10							
KMI	**Kunming**	**79.75**	**302**	P		**P**	**13 02 43.5**	**-0.7**
CHTO	**Chiang Mai**	**79.86**	**295**	P		**P**	**13 02 44.8**	**+0.2**
CHTO				IAmb	IAmb	IAmb	13 02 52.3	
	comp=Z,6.8nm,0.8s							
XAN	**Xi'an**	**79.92**	**313**	P		P	13 02 52.5	+7.8
XAN				pP		pwP	13 03 01.9	+4.7
XAN				pmax	pmax			
	comp=Z,6.0nm,0.8s							
SNAA	**Sanae**	**86.74**	**182**	P		**P**	**13 03 18.1**	**-1.2**
SNAA	**Sanae**	**86.74**	**182**	P		**P**	**13 03 17.6**	**-1.6**
	comp=Z,4.3nm,0.9s,baz=193,slow=4.7,SNR=16							
SNAA	**Sanae**	**86.74**	**182**	P		**P**	**13 03 18.0**	**-1.2**
SNAA				IAmb	IAmb	IAmb	13 03 19.1	
	comp=Z,6.0nm,1.0s							
VNA2	**Neumayer--Watz**	**87.61**	**181**	P		**P**	**13 03 22.7**	**-0.7**
	baz=171,slow=4.5							
SHL	**Shillong**	**88.69**	**298**			**P**	**13 03 29.2**	**-0.3**
SONM	**Songino Array**	**89.30**	**323**	P		**P**	**13 03 31.8**	**0.0**
	comp=Z,1.1nm,0.6s,baz=152,slow=6.7,SNR=5.6							
NVAR	**Mina Array Bea**	**90.26**	**48**	P		**P**	**13 03 34.6**	**-2.0**
	comp=Z,0.9nm,0.6s,baz=226,slow=7.7,SNR=12							
ILAR	**Eielson Array**	**92.49**	**17**	P		P	13 03 42.6	-3.4
	comp=Z,1.0nm,0.5s,baz=230,slow=4.6,SNR=16							
ILAR				LR	LR	LR	13 41 26.9	
	comp=Z,34nm,18.6s,baz=234,slow=33							
PLCA	**Paso Flores**	**96.57**	**139**	LR		LR	13 44 43.5	
	comp=Z,18nm,18.1s,baz=191,slow=34							
TXAR	**Lajitas Array**	**97.74**	**62**	LR		LR	13 42 13.5	
	comp=Z,51nm,18.2s,baz=0.0,slow=32							
PDAR	**Pinedale Array**	**98.11**	**47**	LR		LR	13 44 04.2	
	comp=Z,23nm,18.3s,baz=298,slow=33							
YKA	**Yellowknife Ar**	**102.73**	**27**	P		**Pdif**	**13 04 30.7**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=255,slow=3.8,SNR=2.3							
ARCES	**ARCESS Array B**	**127.48**	**345**	PKP		**PKPdf**	**13 09 38.1**	**-1.6**
	comp=Z,2.4nm,0.4s,baz=70,slow=2.4,SNR=34							
FINES	**FINESS Array B**	**132.92**	**337**	PKP		**PKPdf**	**13 09 48.8**	**-1.4**
	comp=Z,0.8nm,0.5s,baz=180,slow=1.8,SNR=7.6							
NOA	**NORSAR Array B**	**137.85**	**344**	PKP		**PKPdf**	**13 09 59.4**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=44,slow=17,SNR=2.5							
BRG	**Berggiesshubel**	**145.14**	**333**	*i* PKP		**PKPbc**	**13 10 11.4**	**-1.0**
	comp=Z,15nm,0.6s							
CLL	**Collm**	**145.21**	**334**	*i* PKPbc		**PKPbc**	**13 10 12.6**	**+0.1**
	comp=Z,14nm,0.6s							
CLL				*i*	pPKPbc	sPKPbc	13 10 23.0	+0.8
GOPC	**GO Pecny, Ondr**	**145.47**	**331**	*e*PKP		**PKPdf**	**13 10 12.9**	**-0.6**
GOPC				*e*pPKP		sPKPbc	13 10 24.2	+1.2
CONA	**Conrad Observa**	**146.32**	**327**	*i* PKPab		**PKPdf**	**13 10 16.3**	**+1.2**
	comp=Z,2.1nm,0.4s							
KHC	**Kasperske Hory**	**146.58**	**331**	*e*PKP		**PKPdf**	**13 10 16.5**	**+1.1**
GERES	**GERESS Array B**	**146.73**	**330**	PKPbc		**PKPdf**	**13 10 16.9**	**+1.2**
	comp=Z,4.3nm,0.6s,baz=33,slow=3.2,SNR=38							
GRF	**Grafenberg Arr**	**147.18**	**334**	*e*PKP		**PKPdf**	**13 10 17.8**	**+1.5**
	baz=39,slow=2.4							
SOKA	**Soboth**	**147.58**	**326**	*i* PKPdf		**PKPdf**	**13 10 16.7**	**-0.5**
	comp=Z,2.3nm,0.7s							
OBKA	**Obir**	**147.94**	**327**	*i* PKPbc		**PKPdf**	**13 10 19.5**	**+1.7**
	comp=Z,2.0nm,0.4s							
KBA	**Koelnbreinsper**	**148.15**	**328**	*i* PKPbc		**PKPdf**	**13 10 20.0**	**+1.8**
	comp=Z,3.2nm,0.6s							
MYKA	**Terra Mystica**	**148.32**	**327**	*i* PKPbc		**PKPdf**	**13 10 20.5**	**+2.1**
	comp=Z,1.7nm,0.4s							
ABTA	**Abfaltersbach**	**148.79**	**329**	*i* PKPdf		**PKPdf**	**13 10 17.3**	**-1.9**
	comp=Z,5.2nm,0.8s							
WATA	**Walderalm**	**148.80**	**330**	*i* PKPbc		**PKPdf**	**13 10 20.0**	**+0.7**
	comp=Z,5.0nm,0.6s							
WTTA	**Wattenberg**	**148.83**	**330**	*i* PKPdf		**PKPdf**	**13 10 19.4**	**0.0**
	comp=Z,3.7nm,0.6s							
MOTA	**Moosalm**	**149.01**	**331**	*i* PKPbc		**PKPdf**	**13 10 22.4**	**+2.8**
	comp=Z,6.6nm,0.9s							
SQTA	**Sankt Quirin**	**149.06**	**331**	*i* PKPbc		**PKPdf**	**13 10 22.9**	**+3.3**
	comp=Z,4.6nm,0.5s							
RETA	**Reutte**	**149.06**	**331**	*i* PKPbc		**PKPdf**	**13 10 20.8**	**+1.2**
	comp=Z,1.6nm,0.5s							
FETA	**Feichten**	**149.42**	**331**	*i* PKPbc		**PKPdf**	**13 10 23.4**	**+3.1**
	comp=Z,6.9nm,1.1s							
DAVA	**Damuels**	**149.60**	**332**	*i* PKPdf		**PKPdf**	**13 10 18.2**	**-2.4**
	comp=Z,3.6nm,0.6s							
FUORN	**Ofenpass-Fuorn**	**149.94**	**331**			**PKPbc**	**13 10 25.7**	**-0.5**
TUE	**Stuetta**	**150.46**	**332**			**PKPbc**	**13 10 26.7**	**-0.7**
TORD	**Torodi Ar. Bea**	**165.57**	**236**	PKP		**PKPdf**	**13 10 39.8**	**-1.2**
	comp=Z,0.7nm,0.9s,baz=122,slow=36,SNR=3.5							

IDC ***19*** *12:54:40.4±1.0,31.°92S×67.°46W,h116km±9km,mb3.7/4, mb1 3.8/9,mb1mx3.6/30,mbtmp4.1/9,Error ellipse: s-maj=26.0km s-min=21.0km az=124.0*
NEIC ***19*** *12:54:40.3±2.6,31.°94S±0.°06×67.°4W±0.°1,h118km±4km, mb4.4/7,Md4.4(SJA),Error ellipse: s-maj=14.1km s-min=8.4km az=97.0*
SJA ***19*** *12:54:40.7±0.8,31.°89S×67.°50W,h125km±5km,ML3.8, MW4.0*
ISC 19 12:54:40.4±0.7,31.°86S±0.°05×67.°52W±0.°04,h122km±7km, n67,σ1s81/84,mb4.3/5,San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CFA	**Coronel Fontan**	**0.66**	**293**	P		**Pn**	**12 55 00.8**	**+1.1**
	84nm,0.3s,baz=203,slow=1.5,SNR=1085							
CFA				S		**Sn**	**12 55 15.1**	**+0.8**
	801nm,0.3s,baz=256,slow=20,SNR=54							
RTCV	**Cerro Valdivia**	**0.87**	**270**	*i* P		**Pn**	**12 55 03.0**	**+1.6**
RTCV				IAML			12 55 23.0	
	comp=Z,549nm,1.0s							
RTLL	**Cerro Villicun**	**0.97**	**303**	*i* P		**Pn**	**12 55 04.2**	**+1.9**
RTLL				*i* S		**Sn**	**12 55 20.8**	**+1.8**
RTLL				IAML			12 55 22.8	
	comp=Z,3μm,0.4s							
ASAL	**Salagasta**	**1.33**	**237**	*i* P		**Pn**	**12 55 07.6**	**+1.5**
ASAL				*i* S		**Sn**	**12 55 27.1**	**+1.5**
ASAL				IAML			12 55 29.5	
	comp=Z,938nm,1.3s							
UTNM	**Universidad Te**	**1.53**	**227**	*i* P		**Pn**	**12 55 09.7**	**+1.5**
UTNM				IAML			12 55 42.4	
	comp=Z,566nm,0.6s							
ARCO	**CERRO ARCO**	**1.54**	**230**	*i* P		**Pn**	**12 55 09.9**	**+1.4**
ARCO				IAML			12 55 38.5	
	comp=Z,2μm,0.3s							
MRA	**San Martin**	**1.63**	**110**	*i* P		**Pn**	**12 55 11.3**	**+1.8**
MRA				*i* S		**Sn**	**12 55 32.7**	**+1.0**
MRA				IAML			12 55 33.9	
	comp=Z,441nm,0.3s							
AAGR	**Agrelo**	**1.65**	**222**	*i* P		**Pn**	**12 55 11.2**	**+1.5**
ACCO	**Cerro Coronel**	**1.84**	**313**	*i* P		**Pn**	**12 55 14.9**	**+2.6**
ACCO				*i* S		**Sn**	**12 55 39.4**	**+2.9**
ACCO				IAML			12 55 42.3	
	comp=Z,1μm,0.9s							
ACDV	**Cuesta del Vie**	**2.18**	**320**	*i* P		**Pn**	**12 55 18.7**	**+2.4**
ACDV				IAML			12 55 50.5	
	comp=Z,197nm,0.3s							
VA03	**San Esteban**	**2.72**	**250**			**Pn**	**12 55 24.7**	**+1.6**
VA03					Sn	**Sn**	**12 55 53.9**	**-2.2**
CO03	**El Pedregal**	**2.90**	**290**			**Pn**	**12 55 28.3**	**+2.8**
CO03					Sn	**Sn**	**12 56 02.1**	**+1.9**
CO04	**Los Peladeros**	**2.94**	**266**			**Pn**	**12 55 27.1**	**+0.9**
CO04					Sn	**Sn**	**12 56 01.9**	**+0.4**
PEL	**Peldehue**	**2.96**	**244**			**Pn**	**12 55 27.2**	**+0.9**
PEL					Sn	**Sn**	**12 56 04.0**	**+2.4**
PEL	**Peldehue**	**2.96**	**244**	*i* P		**Pn**	**12 55 27.3**	**+1.1**
CO02	**Combarbal**	**3.04**	**282**			**Pn**	**12 55 29.2**	**+1.8**
CO02					Sn	**Sn**	**12 56 05.3**	**+1.7**
MT05	**Renca**	**3.11**	**240**			**Pn**	**12 55 29.2**	**+1.0**
MT05					Sn	**Sn**	**12 56 07.5**	**+2.3**
**ROC1

NIED ***19*** *12:56:00.38˚.70N×142˚.30E,h47km,Mw3.6 Best double couple: M₀2.86000×10¹⁴ NP1:φ₈32.00000°,δ87.00000°, λ94.00000°. NP2:φ₈162.00000°,δ5.00000°,λ40.00000°.*
JMA ***19*** *12:56:14.7±0.1,38˚.69N×142˚.24E,h38km±2km,M3.8*
JMA Felt I J1.
IDC ***19*** *12:56:16.0±2.6,38˚.69N×142˚.35E,h54km±24km,mb3.2/6, mb1 3.4/10,mb1mx3.2/48,mbtmp3.6/10,ML2.9/4,MS2.3/2, Ms1 2.3/2,ms1mx2.0/26,Error ellipse: s-maj=26.2km s-min=15.9km az=108.0*
ISC 19 12:56:15.0±1.1,38˚.69N±0˚.05×142˚.2E±0˚.1,h39km±6km, n28,σ1§60/34,mb3.4/6,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.59**	**311**	P			**Pn**	**12 56 26.6**	**-0.4**
OFUJ				S			**Sn**	**12 56 34.7**	**-0.7**
JKMT	**Kesennumamotoy**	**0.61**	**282**	P			**Pn**	**12 56 26.9**	**-0.3**
JKMT				S			**Sn**	**12 56 35.2**	**-0.6**
JIKH	**Ishinomakikobu**	**0.71**	**238**	P			**Pn**	**12 56 28.2**	**-0.4**
JIKH				S			**Sn**	**12 56 37.7**	**-0.6**
JIO	**Ouri**	**0.73**	**252**	P			**Pn**	**12 56 28.4**	**-0.4**
JIO				S			**Sn**	**12 56 38.1**	**-0.7**
JMK	**Ichinoseki**	**0.84**	**288**	P			**Pn**	**12 56 30.2**	**0.0**
JMK				S			**Sn**	**12 56 41.1**	**-0.3**
JOM	**Ohasama**	**1.07**	**317**	P			**Pn**	**12 56 33.7**	**+0.2**
JOM				*e*S			**Sn**	**12 56 47.2**	**0.0**
JOU	**Okura**	**1.28**	**256**	P			**Pn**	**12 56 36.5**	**+0.2**
JOU				S			**Sn**	**12 56 53.1**	**+0.9**
JTH	**Tanohata**	**1.28**	**347**	P			**Pn**	**12 56 36.0**	**-0.3**
JTH				*e*S			**Sn**	**12 56 52.6**	**+0.3**
JMM	**Marumori**	**1.40**	**235**	P			**Pn**	**12 56 37.6**	**-0.4**
JMM				*e*S			**Sn**	**12 56 55.7**	**+0.4**
JRG	**Rokugo**	**1.43**	**300**	P			**Pn**	**12 56 39.1**	**+0.7**
JRG				*e*S			**Sn**	**12 56 57.0**	**+1.0**
JYK	**Kaneyama**	**1.48**	**279**	P			**Pn**	**12 56 39.6**	**+0.5**
MJAR	**Matsushiro Arr**	**3.85**	**237**	P			**Pn**	**12 57 13.0**	**+1.3**
	0.3nm,0.3s,baz=56,slow=8.3,SNR=15								
MJAR				S			**Sn**	**12 57 59.8**	**+4.1**
	0.1nm,0.3s,baz=218,slow=22,SNR=1.5								
MJAR				LR			LR	12 59 04.6	
	comp=Z,37nm,18.7s,baz=50,slow=43								
ASAJ	**Asahikawa**	**5.43**	**3**	P			**Pn**	**12 57 33.2**	**0.0**
	0.6nm,0.3s,baz=208,slow=18,SNR=9.9								
ASAJ				S			**Sn**	**12 58 30.6**	**-3.9**
	0.2nm,0.3s,baz=328,slow=27,SNR=1.4								
JHJ	**Hachijo jima 2**	**5.91**	**200**	P			**Pn**	**12 57 39.4**	**-0.5**
	2.3nm,0.3s,baz=50,slow=24,SNR=1.3								
JHJ				S			**Sn**	**12 58 41.5**	**-4.8**
	4.2nm,0.3s,baz=77,slow=19,SNR=1.4								
USRK	**Ussuriysk Ar.**	**9.46**	**309**	P			**Pn**	**12 58 32.2**	**+3.6**
	baz=123,slow=13,SNR=12								
KSRS	**Korea Array**	**11.35**	**268**	LR			LR	13 03 23.2	
	comp=Z,13nm,20.3s,baz=167,slow=37								
H11N2	**WAKE ISLAND Hy 28.49**	**125**		T			T	13 32 24.2	
	baz=316,slow=75,SNR=140								
H11N1	**WAKE ISLAND Hy 28.50**	**125**		T			T	13 32 24.9	
	baz=316,slow=75,SNR=101								
H11N3	**WAKE ISLAND Hy 28.51**	**125**		T			T	13 32 25.6	
	baz=316,slow=75,SNR=101								
H11S1	**WAKE ISLAND Hy 29.27**	**127**		T			T	13 33 26.8	
	baz=318,slow=76,SNR=20								
H11S3	**WAKE ISLAND Hy 29.27**	**127**		T			T	13 33 25.5	
	baz=318,slow=76,SNR=26								
H11S2	**WAKE ISLAND Hy 29.28**	**127**		T			T	13 33 27.7	
	baz=318,slow=76,SNR=23								
ZALV	**Zalesovo Beam**	**41.30**	**311**	P			**P**	**13 03 56.1**	**-0.3**
	0.9nm,0.5s,baz=69,slow=8.1,SNR=3.8								
MKAR	**Makanchi Array**	**43.81**	**301**	P			**P**	**13 04 16.6**	**-0.4**
	0.3nm,0.5s,baz=80,slow=11,SNR=3.4								
KURBB	**Kurchatov Arra**	**45.52**	**307**	P			**P**	**13 04 29.5**	**-0.9**
	0.9nm,0.3s,baz=83,slow=8.1,SNR=5.7								
ILAR	**Eielson Array**	**47.75**	**33**	P			**P**	**13 04 48.2**	**+0.5**
	0.4nm,1.0s,baz=243,slow=8.0,SNR=1.6								
WRA	**Warramunga Arr**	**58.79**	**189**	P			**P**	**13 06 08.5**	**-0.7**
	0.2nm,0.6s,baz=5.8,slow=7.2,SNR=4.7								
ASAR	**Alice Springs**	**62.52**	**189**	P			**P**	**13 06 34.6**	**-0.1**
	0.1nm,0.8s,baz=18,slow=9.1,SNR=1.2								

NIED ***19*** *13:12:00,29˚.90N×140˚.60E,h135km,Mw4.7 Best double couple: M₀1.34000×10¹⁶ NP1:φ₈100.00000°, δ80.00000°,λ-169.00000°. NP2:φ₈8.00000°,δ79.00000°, λ-10.00000°.*
MOS ***19*** *13:12:12.4±0.8,30˚.03N×140˚.27E,h127km,mb4.6/50, Error ellipse: s-maj=8.6km s-min=4.3km az=105.3*
IDC ***19*** *13:12:13.7±1.3,30˚.01N×140˚.30E,h126km±10km, mb4.3/37,mb1 4.4/41,mb1mx4.2/70,mbtmp4.7/41,MS3.4/3, Ms1 3.4/3,ms1mx2.7/36,Error ellipse: s-maj=11.9km s-min=9.9km az=85.0*
BJI ***19*** *13:12:13.0±0.0,30˚.10N×140˚.40E,h140km,mB4.6/35, mb4.7/57*
JMA ***19*** *13:12:13.3±0.1,29˚.89N×140˚.58E,h106km,M4.8*
NEIC ***19*** *13:12:16.4±1.4,30˚.11N±0˚.07×140˚.34E±0˚.10, h146km±5km,mb4.6/179,Error ellipse: s-maj=12.8km s-min=10.5km az=109.0*
ISC 19 13:12:14.1±0.6,30˚.02N±0˚.03×140˚.43E±0˚.05,h133km±4km, n434,σ1§33/460,mb4.7/168,37C-10D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**2.50**	**347**	P			**Pn**	**13 12 55.5**	**+1.2**
JAOM				S			**Sn**	**13 13 27.0**	**+1.6**
JHCJ	**Hachijojimakas**	**3.09**	**350**	P			**Pn**	**13 13 03.2**	**+1.4**
JHCJ				S			**Sn**	**13 13 38.0**	**-0.8**
JHJ2	**Mitsune**	**3.12**	**351**	P			**Pn**	**13 13 03.6**	**+1.3**
JHJ2	**Mitsune**	**3.12**	**351**				**Pn**	**13 13 03.4**	**+1.1**
JHJ	**Hachijo jima 2**	**3.13**	**350**	P			**Pn**	**13 13 03.3**	**+0.8**
	140nm,0.3s,baz=267,slow=22,SNR=117								
JHJ				S			**Sn**	**13 13 38.4**	**-1.5**
	134nm,0.3s,baz=91,slow=21,SNR=8.4								
CBIJ	**Chichi jima**	**3.30**	**152**	P			**Pn**	**13 13 01.4**	**-3.3**
JCJ	**Chichijima**	**3.30**	**152**	P			**Pn**	**13 13 01.5**	**-3.2**
	553nm,0.3s,baz=68,slow=9.1,SNR=180								
JCJ				S			**Sn**	**13 13 39.2**	**-4.6**
	949nm,0.3s,baz=283,slow=22,SNR=10								
JHH2	**Haha-jima-NKT2**	**3.71**	**155**	P			**Pn**	**13 13 07.0**	**-3.1**
JHH2				S			**Sn**	**13 13 48.6**	**-4.9**
JMKN	**Mikurajimanish**	**3.92**	**350**	P			**Pn**	**13 13 13.6**	**+0.8**
JMKN				S			**Sn**	**13 13 57.1**	**-1.3**
JKO	**Kozu shima**	**4.29**	**346**	P			**Pn**	**13 13 19.1**	**+1.4**
JKO				S			**Sn**	**13 14 10.7**	**+3.5**
BSO1	**Boso 1**	**4.64**	**6**	P			**Pn**	**13 13 21.2**	**-0.6**
TTO1	**TONANKAI O.B.S**	**4.74**	**320**	P			**Pn**	**13 13 25.8**	**+2.4**
JOD2	**Odawara 2**	**5.34**	**348**	P			**Pn**	**13 13 32.2**	**+0.4**
JOD2				S			**Sn**	**13 14 32.3**	**-0.1**
JIE	**Ise**	**5.38**	**325**	P			**Pn**	**13 13 34.5**	**+2.3**
JTNC	**Tanabenakahech**	**5.58**	**314**	P			**Pn**	**13 13 37.1**	**+2.2**
INU	**Inuyama**	**6.04**	**332**				**Pn**	**13 13 43.3**	**+2.3**
JRY	**Ryogami san**	**6.11**	**348**	P			**Pn**	**13 13 42.3**	**+0.2**
JRY				S			**Sn**	**13 14 49.4**	**-1.4**
MJAR	**Matsushiro Arr**	**6.76**	**345**	P			**Pn**	**13 13 50.8**	**0.0**
	2.2nm,0.3s,baz=146,slow=9.9,SNR=104								
MJAR				S			**Sn**	**13 15 02.5**	**-4.0**
	1.0nm,0.3s,baz=160,slow=20,SNR=7.1								
MAJO	**Matsushiro**	**6.76**	**345**	P			**Pn**	**13 13 51.3**	**+0.5**
MAJO	**Matsushiro**	**6.76**	**345**				**Pn**	**13 13 51.3**	**+0.5**
MAT	**Matsushiro**	**6.76**	**345**	P			**Pn**	**13 13 50.7**	**-0.1**
MAT				S			**Sn**	**13 15 10.1**	**+3.6**
MJB9	**Matsu-Tunnel**	**6.77**	**345**				**Pn**	**13 13 51.4**	**+0.6**
JTO	**Tosashimizu**	**7.10**	**295**	P			**Pn**	**13 13 58.6**	**+3.2**
JHS	**Saijyo**	**7.92**	**311**	P			**Pn**	**13 14 09.4**	**+3.0**
JOI	**OKI**	**8.68**	**318**	P			**Pn**	**13 14 18.4**	**+1.9**
JNU	**Nakatsue**	**8.71**	**293**	P			**Pn**	**13 14 20.7**	**+3.6**
	3.8nm,0.3s,baz=104,slow=5.6,SNR=51								
JNU	**Nakatsue**	**8.71**	**293**				**Pn**	**13 14 21.0**	**+3.9**
JTU	**Tsushima**	**10.36**	**299**	P			**Pn**	**13 14 42.2**	**+3.1**
JOW	**Kunigami**	**11.16**	**256**	P			**Pn**	**13 14 53.3**	**+3.4**
	0.1nm,0.3s,baz=108,slow=16,SNR=5.2								
ERM	**Erimo**	**12.17**	**10**	*i* P			**Pn**	**13 15 01.3**	**-1.6**
ERM	**Erimo**	**12.17**	**10**				**Pn**	**13 15 00.7**	**-2.2**
KSRS	**Korea Array**	**12.77**	**309**	P			**Pn**	**13 15 13.1**	**+2.3**
	0.3nm,0.3s,baz=126,slow=14,SNR=19								
KS19	**Wonju Array Si**	**12.83**	**309**	Pn			**Pn**	**13 15 12.6**	**+1.0**
INCN	**Inchon**	**13.67**	**307**	P			**P**	**13 15 25.2**	**-1.5**
INCN	**Inchon**	**13.67**	**307**	P			**P**	**13 15 25.2**	**-1.5**
NMR	**Nemuro--Hokkai**	**13.98**	**16**	*e*P			**Pn**	**13 15 22.1**	**-4.1**
JKA	**Kamikawa-asahi**	**14.17**	**6**	P			**Pn**	**13 15 27.2**	**-1.5**
JKA							Sn	13 17 49.5	-16
ASAJ	**Asahikawa**	**14.17**	**6**	P			**Pn**	**13 15 27.2**	**-1.5**
	5.4nm,0.3s,baz=229,slow=9.8,SNR=28								
ASAJ				S			Sn	13 17 49.5	-16
	0.5nm,0.3s,baz=270,slow=28,SNR=1.9								
MSHR	**Mys Shultsa**	**14.58**	**332**	*ce*P			**Pn**	**13 15 32.6**	**-1.2**
YUK	**Yuzh-Kuril'sk**	**14.64**	**16**	P			Pn	13 15 29.7	-4.8
VLA	**Vladivostok**	**14.75**	**335**	*d* iP			**Pn**	**13 15 34.9**	**-1.1**
TEY	**Ternei**	**15.29**	**350**	↑ *e*P			Pn	13 15 32.2	-10
TEY					pmax	pmax			
	comp=Z,10.0nm,0.8s								
TEY					pmax	pmax			
	comp=E,10.0nm,1.0s								
TEY					pmax	pmax			
	comp=E,40nm,0.8s								
TEY					pmax	pmax			
	comp=Z,220nm,0.7s								
TEY					pmax	pmax			
	comp=N,150nm,0.7s								
USA0B	**Ussuriysk Arra**	**15.65**	**337**	*c* iP			**Pn**	**13 15 46.0**	**-1.3**
USA0B	**Ussuriysk Arra**	**15.65**	**337**				**Pn**	**13 15 45.6**	**-1.7**
USA0B					IAmb	IAmb		13 15 49.1	
	comp=Z,43nm,0.7s								
USRK	**Ussuriysk Ar.**	**15.65**	**337**	P			**Pn**	**13 15 45.9**	**-1.4**
	baz=151,slow=12,SNR=55								
YOJ	**Yonaguni jima**	**16.45**	**254**	P			**P**	**13 15 59.1**	**+1.6**
YOJ					pmax	pmax			
	comp=Z,38nm,1.0s								
YOJ	**Yonaguni jima**	**16.45**	**254**	P			**P**	**13 15 59.1**	**+1.6**
YOJ					IAmb	IAmb		13 16 11.5	
	comp=Z,38nm,1.0s								
GUMO	**Guam**	**16.86**	**165**	P			**Pn**	**13 16 03.9**	**+1.6**
GUMO					pmax	pmax			
	comp=Z,256nm,0.7s								
GUMO	**Guam**	**16.86**	**165**	P			**Pn**	**13 16 03.9**	**+1.6**
MDJ	**Mudanjiang**	**16.90**	**332**	P			**P**	**13 16 01.3**	**-1.0**
MDJ					IAmb	IAmb		13 16 07.2	
	comp=Z,17nm,0.8s								
YSS	**Yuzh-Sakhalins**	**17.00**	**5**	↓ *i* P			**Pn**	**13 16 04.7**	**+1.0**
YSS				*eS*			**Sn**	**13 19 03.1**	**-10**
YSS					pmax	pmax			
	comp=Z,80nm,0.7s								
YSS					smax	smax			
	comp=N,300nm,4.4s								
YSS	**Yuzh-Sakhalins**	**17.00**	**5**	P			**Pn**	**13 16 04.3**	**+0.7**
TATO	**Taipei**	**17.54**	**258**	P			**P**	**13 16 09.8**	**+0.3**
YHNB	**Yeheng**	**17.74**	**257**				**Pn**	**13 16 13.7**	**+0.8**
YHNB					IAmb	IAmb		13 16 14.9	
	comp=Z,33nm,1.0s								
NACB	**Ninganchiao**	**17.75**	**255**	P			**Pn**	**13 16 12.8**	**-0.1**
NACB					IAmb	IAmb		13 16 16.2	
	comp=Z,16nm,0.6s								
CN2	**Changchun**	**18.20**	**323**	*e*P			**Pn**	**13 16 18.5**	**+0.5**
YULB	**Yu-li**	**18.31**	**253**	P			**Pn**	**13 16 19.4**	**-0.3**
SSLB	**Suanglung**	**18.44**	**255**	P			**Pn**	**13 16 20.4**	**-0.7**
SSLB					IAmb	IAmb		13 16 24.0	
	comp=Z,47nm,1.2s								
NJ2	**Nanjing**	**18.60**	**282**	*e*P			**Pn**	**13 16 22.3**	**-0.6**
NJ2					pmax	pmax			
	comp=Z,36nm,1.0s								
TWG	**Pinlang**	**18.75**	**252**				**Pn**	**13 16 24.2**	**-0.6**
TPUB	**Ta-pu**	**18.91**	**254**		Pn		**Pn**	**13 16 26.8**	**+0.2**
TPUB					IAmb	IAmb		13 16 38.6	
	comp=Z,30nm,1.0s								
UGL	**Uglegorsk**	**19.07**	**3**	*e*P			**Pn**	**13 16 28.6**	**+0.4**
UGL				S			**S**	**13 19 54.8**	**-0.4**
UGL					pmax	pmax			
	comp=Z,80nm,1.1s								
UGL					smax	smax			
	comp=E,46nm,1.5s								
KLR	**Kul'dur**	**20.29**	**343**	P			**P**	**13 16 38.8**	**-0.3**
	comp=E,46nm,0.7s,baz=146,slow=10,SNR=72								
KLR	**Kul'dur**	**20.29**	**343**	*ce*P			**P**	**13 16 38.7**	**-0.5**
TYV	**Tymovskoe**	**20.88**	**4**	*e*P			Pn	13 16 48.0	-1.5
TYV					pmax	pmax			
	comp=Z,18nm,0.7s								
WHN	**Wuhan**	**22.52**	**278**	P			**P**	**13 17 03.1**	**+0.4**
WHN					sS	sS		13 21 51.1	+8.1
WHN					pmax	pmax			
	comp=Z,260nm,2.5s								
HIA	**Hailar**	**24.82**	**327**	P			**P**	**13 17 23.5**	**-0.3**
HIA					pmax	pmax			
	comp=Z,16nm,0.9s								
HIA	**Hailar**	**24.82**	**327**	P			**P**	**13 17 23.5**	**-0.3**
HIA					IAmb	IAmb		13 17 24.5	
	comp=Z,16nm,0.9s								
ZEA	**Zeya**	**25.56**	**342**	*e*P			**P**	**13 17 30.4**	**0.0**
ZEA					pmax	pmax			
	comp=Z,300nm,1.0s								
ZEA					pmax	pmax			
	comp=E,62nm,0.8s								
ZEA					pmax	pmax			
	comp=N,130nm,1.0s								
ZEA					pmax	pmax			
	comp=Z,180nm,1.0s								
HHC	**Hu-ho-hao-te**	**25.77**	**303**	*e*P			**P**	**13 17 33.8**	**+1.2**
HHC					pmax	pmax			
	comp=Z,8.0nm,0.9s								
HHC					pmax	pmax			
	comp=Z,33nm,6.8s								
H11N2	**WAKE ISLAND Hy 26.05**	**107**		T			T	13 44 02.8	
	baz=296,slow=74,SNR=20								
H11N1	**WAKE ISLAND Hy 26.05**	**107**		T			T	13 44 02.8	
	baz=296,slow=74,SNR=8.6								
H11N3	**WAKE ISLAND Hy 26.07**	**107**		T			T	13 44 02.8	
	baz=296,slow=74,SNR=10								
H11S3	**WAKE ISLAND Hy 26.48**	**110**		T			T	13 45 44.8	
	baz=302,slow=75,SNR=4.4								
H11S1	**WAKE ISLAND Hy 26.48**	**110**		T			T	13 45 45.6	
	baz=302,slow=75,SNR=5.2								
H11S2	**WAKE ISLAND Hy 26.50**	**110**		T			T	13 45 47.2	
	baz=302,slow=75,SNR=5.3								
ENH	**Enshi**	**26.72**	**278**	P			**P**	**13 17 41.3**	**+0.2**
ENH					IAmb	IAmb		13 17 45.0	
	comp=Z,12nm,0.7s								
XAN	**Xi'an**	**26.95**	**287**	P			**P**	**13 17 42.1**	**-1.1**
XAN					pmax	pmax			
	comp=Z,12nm,0.9s								
XAN	**Xi'an**	**26.95**	**287**	P			**P**	**13 17 43.2**	**0.0**
XAN					pmax	pmax			
	comp=Z,17nm,1.1s								
XAN	**Xi'an**	**26.95**	**287**	P			**P**	**13 17 43.1**	**0.0**
XAN					IAmb	IAmb		13 17 44.8	
	comp=Z,16nm,1.1s								
GYA	**Guiyang**	**29.90**	**272**	↑ *i* P			**P**	**13 18 09.6**	**+0.1**
GYA					pP	pwP		13 18 41.1	+0.8
GYA					PP	**PnPn**		**13 19 10.5**	**-1.5**
GYA					S	**S**		**13 22 57.5**	**+0.3**
GYA					pmax	pmax			
	comp=Z,10.0nm,0.5s								
GYA					pmax	pmax			
	comp=Z,50nm,5.1s								
GYA					LR	LR			
	comp=Z,190nm,16.9s								
GYA					LR	LR			
	comp=Z,60nm,6.6s								
GYA					LR	LR			
	comp=Z,40nm,7.2s								
MA2	**Magadan**	**30.37**	**10**	*ce*P			**P**	**13 18 13.0**	**-0.1**
MA2					pmax	pmax			
	comp=Z,8.0nm,0.8s								
MA2	**Magadan**	**30.37**	**10**	P			**P**	**13 18 13.9**	**+0.8**
MA2					IAmb	IAmb		13 18 54.8	
	comp=Z,10.0nm,0.8s								
LZH	**Lanzhou**	**31.13**	**291**	*e*P			**P**	**13 18 20.8**	**+0.5**
LZH					pP	pwP		13 18 51.5	+0.7
LZH					sP	sP		13 19 05.6	+2.2
LZH					pmax	pmax			
	comp=Z,29nm,1.1s								
ULN	**Ulaanbaatar**	**31.16**	**314**	*ce*P			**P**	**13 18 20.4**	**0.0**
ULN					pmax	pmax			
	comp=Z,6.0nm,0.8s								
ULN	**Ulaanbaatar**	**31.16**	**314**	P			**P**	**13 18 20.2**	**-0.2**
CD2	**Chengdu**	**31.53**	**281**	*e*P			**P**	**13 18 23.0**	**-0.8**
CD2					pmax	pmax			
	comp=Z,20nm,0.4s								
SONM	**Songino Array**	**31.56**	**314**	P			**P**	**13 18 23.4**	**-0.5**
	comp=Z,2.5nm,0.4s,baz=126,slow=9.7,SNR=10								
SONM					ScP		**ScP**	**13 24 43.7**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=156,slow=4.0,SNR=4.4								
TNTI	**Ternate**	**31.64**	**206**	P			**P**	**13 18 25.3**	**+0.7**
TNTI					IAmb	IAmb		13 18 42.5	
	comp=Z,15nm,0.7s								
YAK	**Yakutsk**	**32.78**	**351**	*d* iP			**P**	**13 18 34.2**	**0.0**
YAK				*e**PP			**pP**	**13 19 02.7**	**+0.4**
YAK				*e*				13 19 46.2	
YAK				*e*S			**S**	**13 23 40.7**	**-0.3**
YAK				*e**SS			**sS**	**13 24 32.4**	**+2.3**
YAK				*e*SS			**SnSn**	**13 25 54.4**	**+1.8**
YAK				*e*				13 28 49.7	
YAK					pmax	pmax			
	comp=Z,10.0nm,0.7s								
YAK					pmax	pmax			
	comp=N,9.0nm,0.9s								
YAK					pmax	pmax			
	comp=E,3.0nm,1.0s								
YAK					pmax	pmax			
	comp=Z,27nm,2.3s								
YAK					pmax	pmax			
	comp=N,37nm,2.0s								
YAK					pmax	pmax			
	comp=E,12nm,1.9s								
YAK					smax	smax			
	comp=N,21nm,1.5s								
YAK					smax	smax			
	comp=E,9.0nm,1.4s								
YAK	**Yakutsk**	**32.78**	**351**	P			**P**	**13 18 34.0**	**-0.2**
BOD	**Bodaibo**	**33.26**	**334**	*e*P			**P**	**13 18 38.2**	**-0.2**
BOD					pmax	pmax			
	comp=Z,13nm,1.6s								
KMI	**Kunming**	**33.66**	**271**	P			**P**	**13 18 45.0**	**+2.4**
KMI					pmax	pmax			
	comp=Z,10.0nm,0.6s								
KMI					pmax	pmax			
	comp=Z,50nm,4.9s								
FAKI	**Fak Fak**	**33.68**	**195**	P			**P**	**13 18 42.2**	**-0.3**
ZAK	**Zakamensk**	**34.41**	**317**	*e*P			**P**	**13 18 47.7**	**-0.9**
ZAK					pmax	pmax			
	comp=Z,4.0nm,1.1s								
GTA	**Gaotai**	**34.43**	**297**	*e*P			**P**	**13 18 47.8**	**-1.2**
GTA					pmax	pmax			
	comp=Z,4.0nm,0.7s								
LUWI	**Luwuk**	**35.19**	**212**	P			**P**	**13 18 55.5**	**0.0**
MOY	**Mondy**	**36.23**	**318**	*e*P			**P**	**13 19 04.3**	**+0.1**
SBUM	**Sibu**	**38.31**	**230**	P			**P**	**13 19 21.5**	**-0.5**
ADK	**Adak**	**38.32**	**43**	P			**P**	**13 19 21.6**	**0.0**
ADK					pmax	pmax			
	comp=Z,14nm,1.0s								
ADK	**Adak**	**38.32**	**43**	P			**P**	**13 19 21.6**	**0.0**
ADK					IAmb	IAmb		13 19 27.4	
	comp=Z,14nm,1.0s								
PBKT	**Sadao Pong**	**38.44**	**259**	P			**P**	**13 19 23.3**	**+0.2**
PBKT					IAmb	IAmb		13 19 24.8	
	comp=Z,9.2nm,1.0s								
CHTO	**Chiang Mai**	**39.20**	**263**	P			**P**	**13 19 29.2**	**-0.2**
CHTO					pmax	pmax			
	comp=Z,14nm,0.8s								
CHTO	**Chiang Mai**	**39.20**	**263**	P			**P**	**13 19 29.2**	**-0.2**
CHTO					IAmb	IAmb		13 19 30.6	
	comp=Z,14nm,0.8s								
CM31	**Chiang Mai Arr**	**39.35**	**263**	P			**P**	**13 19 30.8**	**+0.1**
CM31					IAmb	IAmb		13 19 33.2	
	comp=Z,6.2nm,0.7s								
CMAR	**Chiang Mai Arr**	**39.35**	**263**	P			**P**	**13 19 31.2**	**+0.6**
	comp=Z,3.3nm,0.7s,baz=65,slow=5.8,SNR=25								
CMAR	**Chiang Mai Arr**	**39.35**	**263**	*i* P			**P**	**13 19 31.2**	**+0.6**
CMAR					pmax	pmax			
	comp=Z,4.0nm,0.8s								
KSM	**Kuching**	**40.30**	**231**	P			**P**	**13 19 40.2**	**+1.7**
KSM					IAmb	IAmb		13 20 00.9	
	comp=Z,27nm,1.4s								
BILL	**Bilibino**	**40.98**	**14**	*c* iP			**P**	**13 19 44.5**	**+1.0**
BILL				*e*				13 21 20.1	
BILL				*e*				13 21 38.8	
BILL					pmax	pmax			
	comp=Z,6.0nm,0.9s								
BILL	**Bilibino**	**40.98**	**14**	P			**P**	**13 19 44.0**	**+0.5**
TIXI	**Tiksi**	**42.15**	**355**	P			**P**	**13 19 52.7**	**-0.2**
	comp=Z,2.9nm,0.5s,baz=156,slow=5.5,SNR=13								
TIXI	**Tiksi**	**42.15**	**355**	P			**P**	**13 19 52.9**	**0.0**
SOEI	**Soe**	**42.50**	**204**	P			**P**	**13 19 56.5**	**0.0**
NIKH	**Nikolski High**	**43.23**	**43**	P			**P**	**13 20 02.2**	**+0.3**
MTN	**Manton Dam**	**43.55**	**193**	P			**P**	**13 20 04.0**	**-0.8**
MTN					IAmb	IAmb		13 20 05.8	
	comp=Z,16nm,0.8s								
WMQ	**Urumqi**	**43.65**	**303**	*e*P			**P**	**13 20 07.1**	**+1.6**
WMQ					pmax	pmax			
	comp=Z,20nm,1.5s								
WMQ					pmax	pmax			
	comp=Z,81nm,4.5s								
WMQ					LR	LR			
	comp=Z,190nm,21.9s								
WMQ					LR	LR			
	comp=Z,290nm,23.5s								
WMQ					LR	LR			
	comp=Z,170nm,25.1s								
DGZ	**Jazzator, Alta**	**44.15**	**312**	*d* iP			**P**	**13 20 09.4**	**-0.1**
DGZ					pmax	pmax			
	comp=Z,15nm,0.9s								
KULM

comp=Z,17nm,1.6s
WR0 Warramunga Arr 50.02 187 P **P** **13 20 53.9 -1.2**
WR0 IAmb IAmb 13 21 33.4
comp=Z,6.7nm,0.7s
WB2 Warramunga Ar 50.02 187 P **P** **13 20 54.1 -0.9**
WB2 IAmb IAmb 13 21 33.6
comp=Z,13nm,0.9s
WRA Warramunga Arr 50.02 187 P **P** **13 20 54.2 -0.9**
comp=Z,4.1nm,0.4s,baz=4.4,slow=7.6,SNR=57
TARG Taragay, Kyrgy 51.05 301 P **P** **13 21 02.6 -0.6**
SVW2 Sparrevohn 51.69 34 P **P** **13 21 07.8 +0.7**
TTA Tatalina 51.73 31 P **P** **13 21 08.6 +1.1**
TTA Tatalina 51.73 31 P **P** **13 21 08.6 +1.1**
BOOM Boomskoye usch 52.32 302 P **P** **13 21 12.6 +0.3**
BOOM pmax pmax
comp=Z,9.0nm,1.1s
BOOM Boomskoye usch 52.32 302 P **P** **13 21 12.6 +0.3**
BOOM IAmb IAmb 13 21 32.3
comp=Z,8.7nm,1.1s
OHAK Old Harbor 52.59 39 P **P** **13 21 14.6 +0.8**
KSH Kashi 52.79 299 P **P** **13 21 19.3 +3.5**
KSH pP sP 13 21 54.0 -6.8
KSH PcP **PcP** **13 22 26.4 +2.9**
KSH S **S** **13 28 34.4 +0.4**
KSH pmax pmax
comp=Z,23nm,0.6s
KSH pmax pmax
comp=Z,61nm,5.1s
KSH LR LR
comp=Z,220nm,11.6s
KSH LR LR
comp=Z,170nm,11.2s
KSH LR LR
comp=Z,190nm,6.4s
KDAK Kodiak Island 52.99 38 P **P** **13 21 17.4 +0.7**
comp=Z,6.8nm,0.6s,baz=302,slow=2.6,SNR=12
KDAK Kodiak Island 52.99 38 P **P** **13 21 17.6 +0.9**
KDAK pmax pmax
comp=Z,207nm,2.0s
KDAK Kodiak Island 52.99 38 P **P** **13 21 17.6 +0.9**
AAK Ala-Archa 53.35 303 *ceP* **P** **13 21 19.2 -0.7**
AAK pmax pmax
comp=Z,4.0nm,0.7s
AAK Ala-Archa 53.35 303 P **P** **13 21 19.2 -0.7**
PPLA Purkeypile 53.46 32 P **P** **13 21 22.4 +2.0**
CNPM China Poot 53.73 36 P **P** **13 21 22.6 +0.3**
AS31 Alice Springs 53.75 187 P **P** **13 21 21.4 -1.3**
ASAR Alice Springs 53.75 187 P **P** **13 21 21.8 -0.9**
comp=Z,1.2nm,0.4s,baz=3.8,slow=5.3,SNR=42
BRLK Bradley Lake 53.92 36 P **P** **13 21 24.3 +0.7**
BPAW Bear Paw Mtn. 54.10 30 P **P** **13 21 26.3 +1.5**
BPAW IAmb IAmb 13 21 44.2
comp=Z,19nm,1.8s
MLY Manley 54.29 29 P **P** **13 21 27.8 +1.6**
MLY IAmb IAmb 13 21 29.0
comp=Z,9.0nm,1.1s
TRF Thorofare Moun 54.36 31 P **P** **13 21 27.8 +0.9**
TRF IAmb IAmb 13 23 06.7
comp=Z,37nm,1.9s
RC01 Rabbit Creek A 54.52 34 P **P** **13 21 29.0 +1.2**
BWN Browne 54.77 30 P **P** **13 21 29.6 0.0**
BWN IAmb IAmb 13 23 25.4
comp=Z,11nm,0.7s
BVAR Borovoye Array 54.86 316 P **P** **13 21 30.1 -0.3**
comp=Z,24nm,0.5s,baz=94,slow=8.4,SNR=132
BVAR PcP **PcP** **13 22 31.2 +0.3**
comp=Z,9.7nm,0.7s,baz=90,slow=4.4,SNR=13
BVAR ScP **ScP** **13 26 16.8 -0.3**
comp=Z,1.2nm,0.7s,baz=96,slow=6.1,SNR=3.9
BRVK Borovoye 54.92 316 *ceP* **P** **13 21 30.5 -0.4**
BRVK pmax pmax
comp=Z,24nm,0.7s
BRVK Borovoye 54.92 316 P **P** **13 21 30.4 -0.4**
BRVK **PcP** **13 22 31.7 +0.5**
NEA Nenana 54.97 30 P **P** **13 21 32.3 +1.3**
NEA IAmb IAmb 13 21 33.6
comp=Z,9.4nm,0.8s
PSAB2 Pilbara Seismi 54.97 204 P **P** **13 21 32.0 +0.4**
PSAB2 IAmb IAmb 13 23 13.4
comp=Z,9.8nm,1.2s
PSAA2 Pilbara Seismi 54.98 204 P **P** **13 21 30.9 -0.7**
PSAA2 IAmb IAmb 13 23 27.5
comp=Z,18nm,1.5s
MCK McKinley 54.98 31 P **P** **13 21 32.0 +0.8**
MCK pmax pmax
comp=Z,31nm,1.8s
MCK McKinley 54.98 31 P **P** **13 21 32.0 +0.8**
MCK IAmb IAmb 13 23 22.7
comp=Z,31nm,1.8s
RND Reindeer 55.01 31 P **P** **13 21 31.8 +0.4**
RND pmax pmax
comp=Z,30nm,1.7s
RND Reindeer 55.01 31 P **P** **13 21 31.8 +0.4**
RND IAmb IAmb 13 22 35.8
comp=Z,30nm,1.7s
TOLK Toolik Lake Re 55.12 25 P **P** **13 21 33.6 +1.5**
KNK Knik Glacier 55.14 34 P **P** **13 21 33.1 +0.7**
SML Sawmill 55.21 33 P **P** **13 21 33.4 +0.6**
SML IAmb IAmb 13 22 11.3
comp=Z,9.4nm,0.8s
CCB Clear Creek Bu 55.52 30 P **P** **13 21 36.1 +1.2**
CCB IAmb IAmb 13 21 48.7
comp=Z,9.2nm,1.5s
DHY Denali Highway 55.67 32 P **P** **13 21 37.5 +1.3**
DHY IAmb IAmb 13 23 34.9
comp=Z,20nm,1.8s
SCM Sheep Creek Mo 55.69 33 P **P** **13 21 37.5 +1.2**
SCM pmax pmax
comp=Z,14nm,0.7s
SCM Sheep Creek Mo 55.69 33 P **P** **13 21 37.5 +1.2**
GLI Glacier Island 55.81 34 P **P** **13 21 38.3 +1.2**
HDA Harding Lake 55.88 30 P **P** **13 21 37.7 +0.1**
HDA IAmb IAmb 13 21 39.3
comp=Z,6.4nm,1.1s
IL31 55.91 30 P **P** **13 21 37.2 -0.5**
IL31 IAmb IAmb 13 22 10.8
comp=Z,23nm,1.9s
ILAR Eielson Array 55.91 30 P **P** **13 21 38.2 +0.4**
comp=Z,2.7nm,0.8s,baz=268,slow=6.1,SNR=26
FID Port Fidalgo 56.11 34 P **P** **13 21 40.8 +1.5**
KK31 Karatay Array 56.15 304 P **P** **13 21 39.1 -0.7**
KK31 pmax pmax
comp=Z,16nm,0.9s
KK31 Karatay Array 56.15 304 P **P** **13 21 39.1 -0.7**
KKAR Karatay Array 56.15 304 P **P** **13 21 39.2 -0.6**
KKAR pmax pmax
comp=Z,16nm,0.9s
KKAR Karatay Array 56.15 304 P **P** **13 21 39.2 -0.6**
NIL Nilore 56.28 292 P **P** **13 21 40.7 -0.2**
NIL pmax pmax
comp=Z,11nm,0.7s
NIL Nilore 56.28 292 P **P** **13 21 40.7 -0.2**
RIDG Independent Ri 56.80 31 P **P** **13 21 44.7 +0.5**
RIDG IAmb IAmb 13 23 06.6
comp=Z,6.3nm,1.0s
SCRK Sand Creek 57.18 31 P **P** **13 21 47.8 +0.9**
SCRK IAmb IAmb 13 21 48.8
comp=Z,5.0nm,0.5s
MENT Mentasta 57.34 32 P **P** **13 21 49.3 +1.4**
MENT IAmb IAmb 13 22 21.9
comp=Z,19nm,1.6s
DZM Mont Dzumac 57.52 151 P **P** **13 21 50.8 +1.0**
BALM Baldy 58.11 34 P **P** **13 21 54.6 +1.1**
BALM IAmb IAmb 13 23 10.0
comp=Z,17nm,1.4s
CHGR Chuyangaron 58.15 299 P **P** **13 21 53.1 -1.0**
EGAK Eagle 58.37 30 P **P** **13 21 55.9 +0.9**
EGAK IAmb IAmb 13 24 05.2
comp=Z,17nm,1.9s
DAWY Dawson 59.19 30 P **P** **13 22 02.0 +1.2**
DAWY IAmb IAmb 13 22 55.1
comp=Z,16nm,1.9s
KBL Kabul 59.37 295 P **P** **13 22 02.1 -0.6**
KBL pmax pmax
comp=Z,6.0nm,0.8s
KBL Kabul 59.37 295 P **P** **13 22 02.1 -0.6**
KBL IAmb IAmb 13 22 03.2
comp=Z,6.1nm,0.8s
SVE Sverdlovsk 59.98 321 ⇑ *eP* **P** **13 22 06.7 +0.5**
SVE pmax pmax
comp=Z,41nm,0.8s
EPYK Eagle Plains 60.06 27 P **P** **13 22 08.4 +1.7**
EPYK IAmb IAmb 13 23 00.6
comp=Z,8.7nm,1.1s
HYT Haines Junctio 60.48 34 P **P** **13 22 11.3 +1.5**
HYT IAmb IAmb 13 22 12.7
comp=Z,4.9nm,0.9s
INK Inuvik 61.03 25 P **P** **13 22 13.8 +0.7**
comp=Z,0.8nm,0.5s,baz=290,slow=5.1,SNR=7.8
INK Inuvik 61.03 25 P **P** **13 22 13.8 +0.7**
INK pmax pmax
comp=Z,15nm,1.9s
INK Inuvik 61.03 25 P **P** **13 22 13.8 +0.7**
INK IAmb IAmb 13 23 04.8
comp=Z,15nm,1.9s
ARMA Armidale 61.05 169 P **P** **13 22 15.5 +1.7**
ARMA IAmb IAmb 13 23 48.4
comp=Z,19nm,1.6s
ARU Arti 61.18 321 P **P** **13 22 14.6 +0.3**
comp=Z,23nm,0.5s,baz=89,slow=4.1,SNR=94
ARU Arti 61.18 321 *d iP* **P** **13 22 14.2 -0.2**
ARU 13 22 55.2
ARU S **S** **13 30 24.2 +0.9**
ARU SS **SS** **13 34 18.1 -6.9**
ARU pmax pmax
comp=Z,54nm,0.6s
ARU Arti 61.18 321 P **P** **13 22 14.1 -0.2**
STKA Stephens Creek 61.57 179 P **P** **13 22 17.4 +0.1**
comp=Z,3.8nm,0.7s,baz=336,slow=8.3,SNR=11
STKA Stephens Creek 61.57 179 P **P** **13 22 17.6 +0.4**
STKA pmax pmax
comp=Z,1.0nm,0.7s
STKA Stephens Creek 61.57 179 P **P** **13 22 17.6 +0.4**
FORT Forrest 61.60 192 P **P** **13 22 16.6 -0.8**
FORT IAmb IAmb 13 22 59.1
comp=Z,8.7nm,0.7s
WHY Whitehorse 61.78 34 P **P** **13 22 20.4 +1.9**
WHY IAmb IAmb 13 22 21.7
comp=Z,6.0nm,0.7s
ABKAR Akbulak array 61.97 313 P **P** **13 22 19.2 -0.5**
BBOO Buckleboo 62.63 184 P **P** **13 22 23.5 -0.7**
BBOO IAmb IAmb 13 22 25.0
comp=Z,18nm,1.4s
AKTO Aktyubinsk 62.87 315 P **P** **13 22 25.6 -0.2**
comp=Z,12nm,0.8s,baz=89,slow=7.4,SNR=23
HRA Herat 64.74 296 P **P** **13 22 38.1 -0.5**
DIB Dawson Inlet, 64.90 42 P **P** **13 22 40.2 +1.2**
DIB IAmb IAmb 13 23 43.2
comp=Z,19nm,1.2s
MOBC Moresby Island 65.21 42 P **P** **13 22 42.4 +1.3**
KIRV Kirov 65.42 325 P **P** **13 22 42.9 +0.7**
comp=Z,78nm,0.7s,baz=51,slow=2.9,SNR=24
GEYT Alibeck 66.64 301 P **P** **13 22 50.3 -0.2**
comp=Z,6.8nm,0.8s,baz=86,slow=1.9,SNR=15
GYA0B ALIBECK ARRAY 66.64 301 P **P** **13 22 50.1 -0.4**
GYA0B IAmb IAmb 13 22 51.7
comp=Z,7.2nm,0.8s
SPA0 Spitsbergen Ar 67.23 349 P **P** **13 22 54.5 +0.9**
SPA0 IAmb IAmb 13 24 52.8
comp=Z,21nm,1.1s
SPITS Spitsbergen Ar 67.23 349 P **P** **13 22 53.8 +0.3**
comp=Z,3.4nm,0.6s,baz=80,slow=6.0,SNR=13
KBS Kingsbay 67.41 351 *ceP* **P** **13 22 54.8 +0.2**
KBS pmax pmax
comp=Z,7.0nm,0.8s
KBS Kingsbay 67.41 351 P **P** **13 22 55.2 +0.6**
KBS IAmb IAmb 13 24 32.6
comp=Z,23nm,1.4s
TMCR Tamitsa 68.53 333 *eP* **P** **13 23 02.2 +0.4**
TMCR pmax pmax
comp=Z,37nm,1.1s
KLMR Klimovskoe 69.28 329 *eP* **P** **13 23 04.6 -1.9**
KLMR pmax pmax
comp=Z,28nm,0.9s
KLMR Klimovskoe 69.28 329 *eP* **P** **13 23 04.7 -1.8**
KLMR AMP 13 23 07.7
comp=Z,28nm,0.9s
RES Resolute Bay 69.58 13 P **P** **13 23 09.2 +1.1**
comp=Z,3.1nm,0.8s,baz=318,slow=2.7,SNR=5.3
RES Resolute Bay 69.58 13 P **P** **13 23 09.0 +0.8**
KEV Kevo 69.71 340 P **P** **13 23 10.0 +1.0**
KEV pmax pmax
comp=Z,98nm,1.9s
KEV Kevo 69.71 340 P **P** **13 23 10.0 +1.0**
ARCES ARCESS Array B 70.28 340 P **P** **13 23 13.3 +0.8**
comp=Z,6.6nm,0.6s,baz=72,slow=8.6,SNR=41
ARE0 ARCESS Array S 70.28 340 P **P** **13 23 13.5 +1.0**
YKA Yellowknife Ar 70.31 28 P **P** **13 23 13.8 +1.0**
comp=Z,2.0nm,0.7s,baz=295,slow=5.9,SNR=31
PGC Sidney 71.86 44 P **P** **13 23 22.3 0.0**
PGC IAmb IAmb 13 24 03.2
comp=Z,7.9nm,0.9s
LLLB Lillooet 71.95 42 P **P** **13 23 24.0 +1.0**
VRH Novokhopyorsk 72.28 319 *eP* **P** **13 23 24.4 -0.4**
VRH pmax pmax
comp=Z,50nm,0.8s
MOS Moscow 72.43 325 *eP* **P** **13 23 25.0 -0.6**
MOS *eS* **S** **13 32 36.3 -2.2**
MOS pmax pmax
comp=Z,53nm,1.0s
AKT Akhty 72.67 308 *eP* **P** **13 23 27.5 0.0**
AKT *e* 13 23 43.6
AKT pmax pmax
comp=Z,42nm,0.8s
LPSR Galich'ya Gora 73.20 321 *eP* **P** **13 23 30.2 0.0**
LPSR pmax pmax
comp=Z,40nm,0.8s
OBN Obninsk 73.25 324 P **P** **13 23 31.1 +0.7**
comp=Z,5.7nm,0.4s,baz=102,slow=5.4,SNR=7.6
OBN Obninsk 73.25 324 *d iP* **P** **13 23 30.8 +0.3**
OBN *e* 13 23 46.5
OBN *e* 13 26 15.0
OBN *e* PPP PPP 13 28 00.7
OBN pmax pmax
comp=Z,32nm,1.0s
OBN Obninsk 73.25 324 P **P** **13 23 30.6 +0.1**
VSR Storozhevoye 73.71 320 *eP* **P** **13 23 33.5 +0.3**
VSR pmax pmax
comp=Z,80nm,1.1s
VORD Divnogorie 73.75 320 *eP* **P** **13 23 33.7 +0.2**
VORD pmax pmax
comp=Z,30nm,1.0s
LTY Liberty 74.15 44 P **P** **13 23 37.1 +1.1**
H04A Detroit Lake 74.37 47 P **P** **13 23 38.7 +1.4**
H04A IAmb IAmb 13 23 40.5
comp=Z,8.9nm,0.9s
B08A Colville Reser 74.45 43 P **P** **13 23 39.0 +1.3**
B08A IAmb IAmb 13 23 40.2
comp=Z,7.0nm,0.8s
FIA1 FINESS Array S 74.64 333 P **P** **13 23 38.7 +0.2**
FIA1 IAmb IAmb 13 23 39.8
comp=Z,22nm,1.0s
FINES FINESS Array B 74.65 333 P **P** **13 23 38.9 +0.4**
comp=Z,13nm,0.6s,baz=65,slow=5.3,SNR=118
ZEI Tsey 74.67 311 *eP* P 13 23 30.6 -8.7
ZEI pmax pmax
comp=Z,6.0nm,0.5s
KBZ Khabaz 74.90 312 P **P** **13 23 40.8 +0.6**
comp=Z,18nm,0.8s,baz=86,slow=2.5,SNR=30
KBZ LR LR 13 58 30.8
comp=Z,24nm,18.9s,baz=40,slow=37
KIV Kislovodsk 74.93 312 ⇑P **P** **13 23 41.5 +0.8**
KIV Kislovodsk 74.93 312 *eP* **P** **13 23 40.2 -0.4**
KIV *e* 13 23 52.2
KIV *e* 13 26 28.6
KIV pmax pmax
comp=Z,23nm,1.0s
KIV Kislovodsk 74.93 312 P **P** **13 23 40.9 +0.2**
KIV IAmb IAmb 13 23 42.9
comp=Z,18nm,0.9s
HAWA Hanford 75.24 45 P **P** **13 23 42.6 +0.4**
D08A Wollman Farm, 75.30 44 P **P** **13 23 43.1 +0.5**
D08A IAmb IAmb 13 23 45.1
comp=Z,7.4nm,0.7s
C09A Chrisman Ranch 75.33 43 P **P** **13 23 44.1 +1.3**
C09A IAmb IAmb 13 23 45.2
comp=Z,7.8nm,0.7s
YBH Yreka Blue Hor 75.37 50 P **P** **13 23 44.7 +1.6**
YBH pmax pmax
comp=Z,5.0nm,0.9s
YBH Yreka Blue Hor 75.37 50 P **P** **13 23 44.7 +1.6**
AKH Akhalkalaki 75.57 310 ⇑P **P** **13 23 45.0 +0.5**
PINE Pine Mountain 75.58 48 P **P** **13 23 46.5 +2.1**
PINE IAmb IAmb 13 23 47.8
comp=Z,13nm,0.8s
NEW Newport 75.79 42 P **P** **13 23 46.9 +1.5**
NEW pmax pmax
comp=Z,7.0nm,0.9s
NEW Newport 75.79 42 P **P** **13 23 46.9 +1.5**
NEW IAmb IAmb 13 23 48.4
comp=Z,7.4nm,0.8s
E09A Wood Farm, Sta 76.03 44 P **P** **13 23 47.9 +1.2**
E09A IAmb IAmb 13 23 49.5
comp=Z,8.7nm,0.7s
MOD Modoc Plateau 76.88 49 P **P** **13 23 53.2 +1.4**
NNZ Nelson 77.16 155 P **P** **13 23 53.0 +0.2**
ORV Oroville 77.19 52 P **P** **13 23 54.1 +0.7**
ORV pmax pmax
comp=Z,5.0nm,0.9s
ORV Oroville 77.19 52 P **P** **13 23 54.0 +0.7**
WALA Waterton Lakes 77.23 40 P **P** **13 23 54.9 +1.3**
WALA IAmb IAmb 13 23 56.3
comp=Z,11nm,0.8s
BMO Blue Mountains 77.36 45 P **P** **13 23 55.4 +1.1**
BMO pmax pmax
comp=Z,4.0nm,0.7s
BMO Blue Mountains 77.36 45 P **P** **13 23 55.4 +1.1**
J08A Circle Bar Ran 77.36 47 P **P** **13 23 55.8 +1.4**
J08A IAmb IAmb 13 23 57.3
comp=Z,12nm,1.1s
TUWZ Tuamarina 77.55 155 P **P** **13 23 54.9 -0.1**
JTMT Jette 77.70 42 P **P** **13 23 57.8 +1.5**
JTMT IAmb IAmb 13 23 58.9
comp=Z,7.3nm,0.7s
WVOR Wild Horse Val 77.71 48 P **P** **13 23 57.5 +1.1**
WVOR pmax pmax
comp=Z,3.0nm,0.8s
WVOR Wild Horse Val 77.71 48 P **P** **13 23 57.5 +1.1**
BEKR Beckworth 77.82 51 P **P** **13 23 58.0 +0.9**
BEKR IAmb IAmb 13 23 59.9
comp=Z,7.3nm,0.8s
RUBR Rubicon Trail 78.35 52 P **P** **13 24 01.2 +1.1**
RUBR IAmb IAmb 13 24 02.7
comp=Z,10nm,0.9s
PAHR Pah Rah Range 78.55 51 P **P** **13 24 01.9 +0.8**
CMB Columbia Colle 78.69 53 P **P** **13 24 02.3 +0.6**
CMB pmax pmax
comp=Z,3.0nm,0.8s
CMB Columbia Colle 78.69 53 P **P** **13 24 02.3 +0.6**
SCO Scoresbysund 78.98 354 P **P** **13 24 04.1 +1.5**
SCO pmax pmax
comp=Z,6.0nm,1.2s
SCO Scoresbysund 78.98 354 P **P** **13 24 04.1 +1.5**
MFID Camas Ranch 79.00 46 P **P** **13 24 04.9 +1.5**
YERR Yerington 79.00 51 P **P** **13 24 04.7 +1.1**
WAKR Walker 79.11 52 P **P** **13 24 05.3 +1.1**
AKASG Malin Array Be 79.36 323 P **P** **13 24 05.0 0.0**
comp=Z,5.7nm,0.4s,baz=48,slow=6.0,SNR=40
AKASG Malin Array Be 79.36 323 *i* P **P** **13 24 05.0 0.0**
AKASG pmax pmax
comp=Z,6.0nm,0.4s
AKBB Malin Array Si 79.36 323 *ceP* **P** **13 24 05.1 +0.1**
AKBB Malin Array Si 79.36 323 P **P** **13 24 04.7 -0.4**
RYN Ryan 79.67 51 P **P** **13 24 07.5 +0.3**
KVN Kaiserville 79.74 51 P **P** **13 24 08.5 +0.9**
KVN pmax pmax
comp=Z,3.0nm,0.8s
KVN Kaiserville 79.74 51 P **P** **13 24 08.5 +0.9**
LRM Limekiln Ridge 79.78 43 P **P** **13 24 09.0 +1.2**
NVAR Mina Array Bea 79.92 51 P **P** **13 24 10.1 +1.5**
comp=Z,2.0nm,0.6s,baz=294,slow=5.8,SNR=20
NVAR LR LR 13 56 15.8
comp=Z,34nm,18.9s,baz=280,slow=33
DLMT Dillon 79.95 43 P **P** **13 24 09.8 +1.2**
FFC Flin Flon 80.07 31 P **P** **13 24 09.6 +0.8**
FFC pmax pmax
comp=Z,6.0nm,1.0s
FFC Flin Flon 80.07 31 P **P** **13 24 09.6 +0.8**
NC405 NORSAR Array S 80.11 337 P **P** **13 24 09.2 +0.2**
HFS Hagfors 80.13 336 P **P** **13 24 09.1 +0.1**
comp=Z,6.4nm,0.7s,baz=57,slow=5.5,SNR=17
NC303 NORSAR Array S 80.14 338 P **P** **13 24 09.5 +0.4**
NC303 IAmb IAmb 13 24 10.5
comp=Z,21nm,1.1s
NB201 NORSAR Array S 80.29 337 P **P** **13 24 10.3 +0.4**
NC204 NORSAR Array S 80.30 338 P **P** **13 24 10.5 +0.4**
NB2 NORSAR Subarra 80.33 338 P **P** **13 24 10.2 +0.1**
comp=Z,8.3nm,0.7s,baz=43,slow=5.3
NOA NORSAR Array B 80.33 338 P **P** **13 24 10.4 +0.2**
comp=Z,7.8nm,0.9s,baz=43,slow=5.3,SNR=24
NOA PP **PP** **13 27 09.9 -4.1**
comp=Z,1.7nm,1.0s,baz=46,slow=8.7,SNR=3.3
SUW Suwalki 80.36 328 *eP* **P** **13 24 10.7 +0.4**
NBO00 NORSAR Array S 80.48 338 P **P** **13 24 11.2 +0.2**
NBO00 IAmb IAmb 13 24 11.8
comp=Z,22nm,1.1s
NAO01 NORSAR Array S 80.58 337 P **P** **13 24 11.2 -0.3**
ELK Elko 80.76 48 P **P** **13 24 14.0 +0.9**
ELK pmax pmax
comp=Z,2.0nm,0.8s
ELK Elko 80.76 48 P **P** **13 24 14.0 +0.9**
YHB Horse Butte 81.11 43 P **P** **13 24 16.6 +1.7**
SORM Soroca 81.30 321 ⇑P **P** **13 24 15.5 0.0**
YNE Yellowstone No 81.67 42 P **P** **13 24 19.5 +1.6**
RLMT Red Lodge 82.04 42 P **P** **13 24 20.5 +0.7**
TPNV Topopah Spring 82.07 52 P **P** **13 24 20.9 +0.9**
TPNV pmax pmax
comp=Z,5.0nm,0.7s
TPNV Topopah Spring 82.07 52 P **P** **13 24 20.9 +0.9**
DUG Dugway, Tooele 82.62 48 P **P** **13 24 24.0 +1.2**
DUG pmax pmax
comp=Z,3.0nm,0.7s
DUG Dugway, Tooele 82.62 48 P **P** **13 24 24.0 +1.2**
HWUT Hardware Ranch 82.63 46 P **P** **13 24 24.0 +1.1**
PSUT Pine Spring 82.84 50 P **P** **13 24 25.0 +1.0**
BR131 Keskin Array S 82.89 312 P **P** **13 24 24.3 +0.1**
BR131 pmax pmax
comp=Z,22nm,0.9s
BR131 Keskin Array S 82.89 312 P **P** **13 24 24.3 +0.1**
BRTR Keskin Array B 82.89 312 P **P** **13 24 24.5 +0.3**
comp=Z,19nm,0.9s,baz=101,slow=3.9,SNR=75
CFR Carcaliu 83.15 319 ⇑P **P** **13 24 25.8 +0.7**
TOPG Topolog 83.19 318 ⇓P **P** **13 24 26.3 +0.9**
TESR Tescani 83.19 320 ⇓P **P** **13 24 26.1 +0.7**
BW06 Boulder Array 83.21 44 P **P** **13 24 26.2 +0.3**
PDAR Pinedale Array 83.21 44 P **P** **13 24 25.8 -0.1**
comp=Z,0.9nm,0.8s,baz=255,slow=2.9,SNR=6.8
BIZ Bicaz 83.23 321 ⇑P **P** **13 24 26.7 +1.1**
BUR08 Bucovina Ar. S 83.29 322 P **P** **13 24 26.3 +0.2**
BUR08 IAmb IAmb 13 24 27.7
comp=Z,13nm,0.9s
BURAR Bucovina Array 83.30 322 ⇑P **P** **13 24 26.7 +0.6**
ANTO Ankara 83.36 312 ⇓P **P** **13 24 27.0 +0.5**
ANTO Ankara 83.36 312 P **P** **13 24 26.8 +0.3**
ANTO pmax pmax
comp=Z,18nm,0.9s
ANTO Ankara 83.36 312 P **P** **13 24 26.8 +0.3**
ODBI Odobesti 83.42 320 ⇑P **P** **13 24 28.8 +2.3**
TIRR Tirgusor 83.42 318 ⇑P **P** **13 24 27.4 +0.9**
TIRR Tirgusor 83.42 318 P **P** **13 24 26.8 +0.3**
TIRR pmax pmax
comp=Z,31nm,0.8s
TIRR Tirgusor 83.42 318 P **P** **13 24 26.8 +0.3**
VRI Vrincioaia 83.54 320 ⇑P **P** **13 24 27.7 +0.5**
HARR Harsova 83.56 318 ⇓P **P** **13 24 28.0 +0.8**
TLBR Topalu 83.58 318 ⇑P **P** **13 24 28.4 +1.0**
PLOR Plostina 83.59 320 ⇑P **P** **13 24 28.5 +1.0**
BISRR Bisoca 83.74 320 ⇑P **P** **13 24 30.0 +1.7**
OZUR 83.92 321 ⇑P **P** **13 24 30.8 +1.6**
ICOR Ion Corvin 83.97 318 ⇑P **P** **13 24 30.3 +0.9**
MDUB Mudurnu 84.03 314 P **P** **13 24 30.3 +0.4**
MLR Muntele Rosu 84.20 320 P **P** **13 24 31.5 +0.8**
comp=Z,3.6nm,0.5s,baz=356,slow=7.2,SNR=6.8
MLR Muntele Rosu 84.20 320 ⇑P **P** **13 24 32.4 +1.6**
MLR Muntele Rosu 84.20 320 P **P** **13 24 30.9 +0.1**
MLR IAmb IAmb 13 24 32.8
comp=Z,12nm,1.2s
DOPR Dopca 84.22 321 ⇑P **P** **13 24 31.5 +0.8**
TRPA Tarpa 84.39 323 ⇑P **P** **13 24 32.1 +0.7**
OJC Ojcow 84.39 326 *eP* **P** **13 24 31.9 +0.4**
OJC Ojcow 84.39 326 P **P** **13 24 31.6 +0.1**
OJC pmax pmax
comp=Z,13nm,1.0s
OJC Ojcow 84.39 326 P **P** **13 24 31.6 +0.1**
OJC IAmb IAmb 13 24 33.0
comp=Z,13nm,1.0s
RDMU Red Mountain 84.46 46 P **P** **13 24 33.1 +0.8**
NIE Niedzica 84.68 325 *eP* **P** **13 24 34.0 +1.0**
SRU San Rafael Swe 84.69 48 P **P** **13 24 33.9 +0.5**
SRU pmax pmax
comp=Z,7.0nm,0.7s
SRU San Rafael Swe 84.69 48 P **P** **13 24 33.9 +0.5**
VOIR 84.73 320 ⇑P **P** **13 24 33.9 +0.5**

ASF	**Jabal al Asfar**	**84.74**	**304**	P		**P**	**13 24 33.0**	**-0.7**
	comp=Z,1.9nm,0.6s,baz=218,slow=6.1,SNR=4.0							
ASF	**Jabal al Asfar**	**84.74**	**304**	P		**P**	**13 24 33.0**	**-0.7**
ARR	**Arges**	**85.01**	**320**	⇑P		**P**	**13 24 36.1**	**+1.4**
MMAI	**Mount Meron Ar**	**85.35**	**305**	P		**P**	**13 24 35.5**	**-1.1**
	comp=Z,1.6nm,0.4s,baz=32,slow=27,SNR=5.5							
O20A	**White River Ci**	**85.54**	**46**	P		**P**	**13 24 38.5**	**+0.8**
KSP	**Ksiaz**	**85.62**	**328**	*e*P		**P**	**13 24 37.9**	**+0.4**
MORC	**Moravsky Berou**	**85.77**	**327**	*e*P		**P**	**13 24 38.4**	**0.0**
MORC	**Moravsky Berou**	**85.77**	**327**	⇑P		**P**	**13 24 38.5**	**+0.2**
PV09	**Paradox Valley**	**85.93**	**47**	P		**P**	**13 24 40.3**	**+0.6**
DPC	**Dobruska-Polom**	**85.94**	**328**	*e*P		**P**	**13 24 39.7**	**+0.5**
DPC	**Dobruska-Polom**	**85.94**	**328**	*e*P		**P**	**13 24 39.7**	**+0.5**
UPC	**Upice**	**85.98**	**328**	*e*P		**P**	**13 24 40.2**	**+0.9**
UPC	**Upice**	**85.98**	**328**	*e*P		**P**	**13 24 40.2**	**+0.9**
VYHS	**Vyhne**	**86.02**	**325**	*e*P		**P**	**13 24 40.2**	**+0.6**
VYHS					pmax	pmax		
	comp=Z,9.0nm,1.2s							
VYHS	**Vyhne**	**86.02**	**325**	*e*P		**P**	**13 24 40.2**	**+0.6**
PV23	**Carpenter Ridg**	**86.03**	**47**	P		**P**	**13 24 41.2**	**+1.0**
PV23					IAmb	IAmb	13 24 42.9	
	comp=Z,11nm,0.9s							
PV20	**West Nyswonger**	**86.12**	**48**	P		**P**	**13 24 40.4**	**-0.1**
PV20					IAmb	IAmb	13 24 43.2	
	comp=Z,6.2nm,0.8s							
PV22	**Blue Mesa, Par**	**86.13**	**47**	P		**P**	**13 24 41.1**	**+0.5**
PV16	**Nyswonger Mesa**	**86.17**	**48**	P		**P**	**13 24 41.9**	**+1.1**
PV11	**David Mesa, Pa**	**86.21**	**48**	P		**P**	**13 24 42.1**	**+1.2**
PV11					IAmb	IAmb	13 24 44.8	
	comp=Z,5.9nm,0.8s							
PV18	**Skein Mesa, Pa**	**86.22**	**48**	P		**P**	**13 24 42.3**	**+1.3**
PV18					IAmb	IAmb	13 25 29.0	
	comp=Z,6.0nm,0.9s							
PV12	**Saucer Basin,**	**86.24**	**47**	P		**P**	**13 24 41.9**	**+0.7**
PV12					IAmb	IAmb	13 24 44.5	
	comp=Z,4.7nm,0.7s							
PV03	**Paradox Valley**	**86.25**	**48**	P		**P**	**13 24 41.7**	**+0.5**
JAVC	**Velka Javorina**	**86.34**	**326**	*e*P		**P**	**13 24 41.2**	**+0.4**
BRG	**Berggiesshubel**	**86.65**	**329**	*e*P		**P**	**13 24 42.5**	**0.0**
	comp=Z,5.3nm,0.9s							
CLL	**Collm**	**86.75**	**330**	*i* P		**P**	**13 24 43.7**	**+0.6**
	comp=Z,11nm,1.4s							
CLL				*e*PP		**PP**	**13 28 07.0**	**+0.5**
CLL	**Collm**	**86.75**	**330**	*i* P		**P**	**13 24 43.7**	**+0.6**
CLL					pmax	pmax		
	comp=Z,11nm,1.4s							
KRUC	**Moravsky**	**86.81**	**327**	*e*P		**P**	**13 24 43.4**	**0.0**
MODS	**Modra-Piesok**	**86.86**	**326**	*e*P		**P**	**13 24 44.1**	**+0.4**
MODS					pmax	pmax		
	comp=Z,6.0nm,0.9s							
MODS	**Modra-Piesok**	**86.86**	**326**	*e*P		**P**	**13 24 44.1**	**+0.4**
MDVR	**Moldovita**	**86.98**	**321**	⇑P		**P**	**13 24 44.3**	**-0.1**
VTS	**Vitosha**	**87.52**	**319**	P		**P**	**13 24 47.0**	**-0.2**
VTS					pmax	pmax		
	comp=Z,5.0nm,0.8s							
VTS	**Vitosha**	**87.52**	**319**	P		**P**	**13 24 47.0**	**-0.2**
VTS					IAmb	IAmb	13 24 48.3	
	comp=Z,4.6nm,0.8s							
CONA	**Conrad Observa**	**87.85**	**326**	*e*PcP		**P**	**13 24 48.4**	**-0.2**
	comp=Z,5.1nm,1.2s							
KHC	**Kasperske Hory**	**88.07**	**328**	*ce*P		**P**	**13 24 50.1**	**+0.6**
KHC					pmax	pmax		
	comp=Z,17nm,2.5s							
KHC	**Kasperske Hory**	**88.07**	**328**	*e*P		**P**	**13 24 49.2**	**-0.3**
GERES	**GERESS Array B**	**88.22**	**328**	P		**P**	**13 24 50.2**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=40,slow=5.2,SNR=17							
ARSA	**Arzberg**	**88.49**	**326**	*e*PcP		**PcP**	**13 24 51.2**	**-1.8**
	comp=Z,5.7nm,1.1s							
SOKA	**Soboth**	**89.13**	**326**	*e*PcP		**PcP**	**13 24 54.7**	**-1.3**
	comp=Z,7.2nm,1.0s							
LIT	**Litokhoron**	**89.56**	**317**	P		**P**	**13 24 55.5**	**-1.2**
LIT					pmax	pmax		
	comp=Z,11nm,0.7s							
LIT	**Litokhoron**	**89.56**	**317**	P		**P**	**13 24 55.5**	**-1.2**
KBA	**Koelnbreinsper**	**89.66**	**327**	*e*PcP		**PcP**	**13 24 56.9**	**-1.5**
	comp=Z,3.7nm,0.9s							
ANMO	**Albuquerque**	**89.76**	**49**	*ce*P		**P**	**13 24 58.7**	**+0.8**
ANMO					pmax	pmax		
	comp=Z,4.0nm,2.5s							
MYKA	**Terra Mystica**	**89.84**	**327**	*e*PcP		**PcP**	**13 24 57.3**	**-1.7**
	comp=Z,2.7nm,0.5s							
ABTA	**Abfaltersbach**	**90.29**	**327**	*e*PcP		**PcP**	**13 24 59.3**	**-1.8**
	comp=Z,7.5nm,0.8s							
WTTA	**Wattenberg**	**90.32**	**328**	*e*PcP		**PcP**	**13 25 00.0**	**-1.3**
	comp=Z,4.0nm,0.6s							
MOTA	**Moosalm**	**90.50**	**328**	*e*PcP		**PcP**	**13 25 01.0**	**-1.1**
	comp=Z,5.2nm,0.9s							
SQTA	**Sankt Quirin**	**90.55**	**328**	*e*PcP		**PcP**	**13 25 01.2**	**-1.1**
	comp=Z,3.6nm,0.5s							
STAL	**STALIGIAL**	**90.55**	**327**	P		**P**	**13 24 59.5**	**-1.6**
RETA	**Reutte**	**90.55**	**329**	*i* PcP		**PcP**	**13 25 01.4**	**-0.8**
	comp=Z,3.6nm,0.5s							
FETA	**Feichten**	**90.91**	**328**	*e*PcP		**PcP**	**13 25 03.1**	**-0.9**
	comp=Z,7.5nm,0.9s							
DAVA	**Damuels**	**91.10**	**329**	*i* PcP		**PcP**	**13 25 04.0**	**-0.7**
	comp=Z,9.2nm,0.8s							
DAVOX	**Davos/Dischmat**	**91.48**	**329**	P		**P**	**13 25 06.0**	**+0.3**
	comp=Z,6.3nm,0.7s,baz=52,slow=3.2,SNR=5.1							
DAVOX	**Davos/Dischmat**	**91.48**	**329**	P		**P**	**13 25 06.0**	**+0.3**
TX31	**Lajitas Ar. Si**	**95.06**	**52**	P		**P**	**13 25 23.5**	**+1.1**
TX32	**Lajitas Array**	**95.06**	**52**	P		**P**	**13 25 23.5**	**+1.1**
TX32					IAmb	IAmb	13 26 22.8	
	comp=Z,11nm,1.8s							
TXAR	**Lajitas Array**	**95.06**	**52**	P		**P**	**13 25 23.4**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=310,slow=4.0,SNR=12							
ESDC	**Sonseca Array**	**103.16**	**333**	PP		**PKiKP**	**13 30 15.1**	**-2.1**
	comp=Z,0.3nm,0.6s,baz=21,slow=5.7,SNR=4.1							
TORD	**Torodi Ar. Bea**	**121.50**	**311**	PKP		**PKPdf**	**13 30 52.5**	**0.0**
	comp=Z,0.4nm,0.5s,baz=346,slow=2.5,SNR=3.3							
TORD				PP		**PP**	**13 32 26.8**	**+1.6**
	comp=Z,0.9nm,0.9s,baz=24,slow=4.0,SNR=3.9							
LPAZ	**La Paz**	**150.49**	**69**	PKPbc		**PKiKP**	**13 31 52.5**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=230,slow=5.9,SNR=5.1							
PLCA	**Paso Flores**	**152.70**	**121**	PKPbc		**PKiKP**	**13 31 57.9**	**+2.5**
	comp=Z,1.6nm,0.7s,baz=89,slow=4.4,SNR=3.2							

*LVSN **19** 13:14:07.9±6.7,59°.30N×27°.59E, h0km±40km, ML2.2*
*EST **19** 13:14:07.1±0.1,59°.25N×27°.72E, h0km, ML1.8(HEL), Explosion*
*IDC **19** 13:14:11.4±3.1,59°.52N×27°.24E, h0km, mb1 2.9/4, mb1mx2.8/65, mbtmp2.8/4, ML2.2/4, Error ellipse: s-maj=31.8km s-min=14.0km az=147.0*
ISC 19 13:14:06.8±1.2,59°.28N±0°.03×27°.56E±0°.06, h0km, n24, σ1°53/43, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARBE	**Arbavere**	**0.82**	**282**	*e*P	**Pb**	**13 14 24.2**	**+0.3**
VSU	**Vasula**	**0.92**	**208**	*e*P	**Pg**	**13 14 24.2**	**-0.2**
VSU				*e*S	**Sg**	**13 14 35.9**	**-0.5**
VSU				AML	AML	13 14 45.0	
	comp=N,89nm,0.4s						
VSU				AML	AML	13 14 45.0	
	comp=Z,45nm,0.3s						
VSU				AML	AML	13 14 52.1	
	comp=E,98nm,0.5s						
VSU	**Vasula**	**0.92**	**208**	*e*P	**Pg**	**13 14 23.8**	**-0.6**
VJF	**Virojoki**	**1.27**	**360**	*e*P	**Pg**	**13 14 29.9**	**-1.1**
VJF				*e*SB	**Sg**	**13 14 47.6**	**+0.2**
VJF				MSG		13 14 52.5	
	comp=Z,15nm,0.1s						
PVF	**Pernaja**	**1.53**	**327**	*e*PG	**Pn**	**13 14 35.6**	**+0.3**
PVF				MSG		13 14 55.0	
	comp=Z,7.9nm,0.2s						
PVF				*e*S	**Sn**	**13 14 56.0**	**+0.1**
MEF	**Metsahovi**	**1.86**	**302**	*e*P	**Pb**	**13 14 41.9**	**+0.3**
MEF				AML	AML	13 14 42.2	
	comp=E,22nm,0.1s						
MEF				AML	AML	13 14 42.5	
	comp=Z,16nm,0.2s						
MEF				*e*S	**Sg**	**13 15 06.5**	**+0.1**
MEF				AML	AML	13 15 08.2	
	comp=N,25nm,0.2s						
MEF	**Metsahovi**	**1.86**	**302**	*e*PG	**Pb**	**13 14 41.8**	**+0.2**
MEF				*e*SG	**Sg**	**13 15 06.5**	**+0.1**
MEF				MSG		13 15 08.3	
	comp=Z,5.8nm,0.1s						
MTSE	**Matsula**	**2.02**	**255**	*e*P	**Pb**	**13 14 43.7**	**-0.6**
MTSE				*e*S	**Sg**	**13 15 11.2**	**-0.4**
MTSE	**Matsula**	**2.02**	**255**	*e*PB	**Pb**	**13 14 43.7**	**-0.6**
MTSE				*e*SB	**Sg**	**13 15 10.7**	**-0.9**
FIA0	**FINESS Array S**	**2.29**	**342**	*e*P	**Pn**	**13 14 46.4**	**+0.6**
FIA0				*e*PB	**Pb**	**13 14 47.8**	**-1.2**
FIA0				*e*SB	**Sb**	**13 15 17.8**	**-0.1**
FIA0				MSG		13 15 21.6	
	comp=Z,2.5nm,0.1s						
FINES	**FINESS Array B**	**2.29**	**342**	Pn	**Pn**	**13 14 46.5**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=158,slow=14,SNR=29						
FINES				Sn	**Sn**	**13 15 15.4**	**+0.6**
	comp=Z,2.1nm,0.3s,baz=165,slow=26,SNR=9.9						
FIA1	**FINESS Array S**	**2.30**	**342**	*e*P	**Pn**	**13 14 46.4**	**+0.6**
FIA1				*e*PB	**Pb**	**13 14 47.8**	**-1.2**
FIA1				*e*SB	**Sb**	**13 15 17.5**	**-0.3**
FIA1				MSG		13 15 19.3	
	comp=Z,3.9nm,0.1s						
KAF	**Kangasniemi**	**2.91**	**348**	*e*P	**Pn**	**13 14 55.4**	**+1.1**
KAF				*e*PB	**Pb**	**13 14 57.7**	**-1.8**
KAF				*e*SG	**Sb**	**13 15 37.6**	**+2.0**
KAF				MSG		13 15 38.3	
	comp=Z,2.0nm,0.1s						
KEF	**Keuruu**	**3.19**	**337**	*e*P	**Pn**	**13 14 59.8**	**+1.8**
KEF				*e*PB	**Pb**	**13 15 03.0**	**-1.2**
SLIT	**Slitere, Latvi**	**3.23**	**241**	*e*P	**Pb**	**13 15 05.4**	**+0.6**
SLIT				*e*S	**Sb**	**13 15 45.8**	**+1.2**
SLIT				AML	AML	13 15 49.0	
	comp=Z,55nm,0.4s						
SLIT				AML	AML	13 15 50.4	
	comp=E,88nm,0.6s						
SLIT				AML	AML	13 15 55.0	
	comp=N,116nm,0.5s						
RAF	**Rauma**	**3.39**	**304**	*e*P	**Pn**	**13 15 02.9**	**+2.1**
RAF				*e*S	**Sn**	**13 15 44.7**	**+3.1**
RAF				AML	AML	13 15 56.2	
	comp=Z,4.5nm,0.6s						
RAF				AML	AML	13 15 57.8	
	comp=N,5.4nm,0.6s						
RAF				AML	AML	13 16 02.1	
	comp=E,6.1nm,0.4s						
RAF	**Rauma**	**3.39**	**304**	*e*P	**Pn**	**13 15 02.8**	**+2.0**
SUF	**Sumiainen**	**3.52**	**349**	*e*P	**Pn**	**13 15 04.1**	**+1.4**
SUF				*e*SG	**Sb**	**13 15 56.6**	**+3.4**
SUF				MSG		13 16 02.7	
	comp=Z,2.9nm,0.2s						
AAL	**Aland**	**3.94**	**287**	*e*SG	**Sg**	**13 16 10.8**	**-2.3**
JOF	**Joensuu**	**4.08**	**25**	*e*P	**Pn**	**13 15 10.8**	**+0.4**
VAF	**Ylistaro**	**4.46**	**330**	*e*P	**Pn**	**13 15 17.7**	**+2.2**
HFS	**Hagfors**	**7.07**	**283**	Pn	**Pn**	**13 15 50.0**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=178,slow=40,SNR=2.2						
HFS				Sn	**Sn**	**13 17 07.4**	**-4.8**
	comp=Z,0.1nm,0.3s,baz=106,slow=15,SNR=1.8						
HFS				Lg	Lg	13 17 44.1	
	comp=Z,0.2nm,0.3s,baz=87,slow=28,SNR=2.9						
NOA	**NORSAR Array B**	**8.34**	**289**	Pn	**Pn**	**13 16 07.7**	**-1.2**
	comp=Z,0.0nm,0.3s,baz=98,slow=13,SNR=2.0						
NOA				Lg	Lg	13 18 19.3	
	comp=Z,0.0nm,0.3s,baz=57,slow=9.4,SNR=3.3						
ARCES	**ARCESS Array B**	**10.34**	**356**	Pn	**Pn**	**13 16 34.7**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=172,slow=14,SNR=8.5						

PRU 19 13:35:58.2±0.0, 49°.94N×18°.50E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.25**	**246**	*e*PG	Pg	13 36 03.1	+0.1
OKC				*e*SG	Sg	13 36 06.1	-0.1
	comp=Z,8.6nm,0.7s						
MORC	**Moravsky Berou**	**0.64**	**256**	*e*PG	Pg	13 36 09.9	-0.6
MORC				*e*SG	Sg	13 36 17.6	-1.2
DPC	**Dobruska-Polom**	**1.46**	**287**	*e*SG	Sg	13 36 44.7	-0.4
DPC	**Dobruska-Polom**	**1.46**	**287**	*e*	Sg	13 36 44.7	-0.4

IDC 19 13:45:28.1±2.5, 6°.18S×129°.70E, h0km, mb3.6/1, mb1 3.6/3, mb1mx3.4/30, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=148.0km s-min=32.8km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.40**	**162**	Pn	Pn	13 48 53.1	-0.3
	0.3nm,0.3s,baz=345,slow=13,SNR=21						
WRA				Sn	Sn	13 51 20.3	-14
	0.2nm,0.3s,baz=328,slow=29,SNR=5.5						
ASAR	**Alice Springs**	**17.85**	**167**	P	Pn	13 49 38.3	+0.2
	0.2nm,0.3s,baz=344,slow=9.8,SNR=22						
ASAR				S	Sn	13 52 46.9	-11
	0.1nm,0.3s,baz=104,slow=27,SNR=4.3						
MKAR	**Makanchi Array**	**67.38**	**327**	P	P	13 56 25.3	0.0
	0.3nm,0.5s,baz=110,slow=8.3,SNR=2.6						

IDC 19 13:52:40.0±4.9, 18°.87S×168°.67E, h255km±81km, mb3.4/3, mb1 3.5/4, mb1mx3.1/30, mbtmp3.9/4, Error ellipse: s-maj=179.0km s-min=50.6km az=143.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.81**	**213**	P	Pn	13 53 42.7	+0.8
	1.5nm,0.3s,baz=27,slow=16,SNR=13						
DZM				S	S	13 54 30.8	-0.4
	0.5nm,0.3s,baz=77,slow=15,SNR=1.4						
WRA	**Warramunga Arr**	**32.37**	**262**	P	P	13 58 46.0	-0.1
	0.3nm,0.3s,baz=96,slow=8.4,SNR=22						
ASAR	**Alice Springs**	**32.70**	**255**	P	P	13 58 49.2	+0.2
	3.2nm,0.5s,baz=81,slow=9.0,SNR=132						
SONM	**Songino Array**	**86.60**	**323**	P	P	14 04 54.1	-0.6
	0.4nm,0.4s,baz=114,slow=5.1,SNR=1.7						

*IDC **19** 13:53:09.7±7.4,52°.48N×173°.23W, h71km±67km, mb3.2/6, mb1 3.6/8, mb1mx3.2/45, mbtmp3.6/8, ML3.8/2, MS2.7/1, Ms1 2.7/1, ms1mx2.3/13, Error ellipse: s-maj=51.1km s-min=30.5km az=148.0*
*NEIC **19** 13:53:12.0±1.9,52°.2N±0°.1×173°.0W±0°.1, h84km±5km, mb3.9/3, ML3.6/29(AEIC), Error ellipse: s-maj=20.4km s-min=7.0km az=163.0*
*AEIC **19** 13:53:11±1.6,52°.2N±0°.1×172°.89W±0°.08, h75km±6km, Error ellipse: s-maj=19.4km s-min=6.3km az=167.0*
ISC 19 13:53:10.3±0.8, 52°.1N±0°.1×172°.85W±0°.04, h59km, n45, σ2°26/39, mb3.6/6, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOSE	**Korovin Southe**	**0.77**	**287**		**Pn**	**13 53 27.7**	**+2.3**
KOFP	**Korovin Flat P**	**0.78**	**281**		**Pn**	**13 53 28.0**	**+2.5**
ATKA	**Atka Island**	**0.83**	**275**	Pn	**Pn**	**13 53 27.9**	**+1.8**
ATKA	**Atka Island**	**0.83**	**275**		**Sn**	**13 53 40.5**	**+2.8**
GSTR	**Great Sitkin T**	**1.98**	**270**		**Pn**	**13 53 43.0**	**+1.6**
GSMY	**Great Sitkin M**	**1.98**	**269**		**Pn**	**13 53 43.0**	**+1.5**
GSTD	**Great Sitkin T**	**2.03**	**269**		**Pn**	**13 53 43.7**	**+1.5**
GSTD					**Sn**	**13 54 09.0**	**+2.5**
ADAG	**Mount Adagdak**	**2.32**	**268**		**Pn**	**13 53 48.3**	**+2.3**
ADK	**Adak**	**2.38**	**265**		**Pn**	**13 53 48.7**	**+1.8**
NIKH	**Nikolski High**	**2.58**	**69**		**Pn**	**13 53 51.3**	**+1.7**
NIKH	**Nikolski High**	**2.58**	**69**		**Sn**	**13 54 22.1**	**+2.3**
KIKV	**Kanaga Island**	**2.68**	**266**		**Pn**	**13 53 52.8**	**+1.8**
KICM	**Kanaga Island**	**2.69**	**267**		**Pn**	**13 53 53.2**	**+2.0**
KIMD	**Kanaga Island**	**2.74**	**264**		**Pn**	**13 53 54.1**	**+2.3**
OKSP	**Okmok Steeple**	**3.00**	**66**		**Pn**	**13 53 57.5**	**+2.1**
OKWE	**Okmok W'ng Wal**	**3.10**	**63**		**Pn**	**13 53 59.1**	**+2.2**
OKCE	**Okmok Cone E**	**3.13**	**64**		**Pn**	**13 53 59.7**	**+2.6**
TAFP	**Tanaga Falls P**	**3.18**	**268**		**Pn**	**13 53 60.0**	**+2.1**
TASE	**Tanaga Southea**	**3.22**	**267**		**Pn**	**13 54 01.3**	**+2.9**
MREP	**Makushin Rep't**	**4.06**	**63**		**Pn**	**13 54 11.9**	**+2.0**
MSW	**Makushin Switc**	**4.08**	**62**		**Pn**	**13 54 11.4**	**+1.3**
MNAT	**Makushin Natee**	**4.12**	**62**		**Pn**	**13 54 12.4**	**+1.8**
MNAT					**Sn**	**13 55 03.1**	**+5.5**
UNV	**Unalaska Valle**	**4.20**	**63**		**Pn**	**13 54 13.8**	**+2.1**
AKUT	**Akutan**	**4.71**	**62**	Pn	**Pn**	**13 54 21.6**	**+2.8**
SPIA	**Saint Paul Isl**	**5.28**	**16**	Pn	**Pn**	**13 54 27.0**	**+0.6**
KDAK	**Kodiak Island**	**12.92**	**56**	P	**Pn**	**13 56 09.7**	**-1.2**
	0.4nm,0.3s,baz=225,slow=4.8,SNR=9.6						
KDAK	**Kodiak Island**	**12.92**	**56**		**Pn**	**13 56 09.9**	**-1.0**
TTA	**Tatalina**	**14.05**	**33**	P	**P**	**13 56 33.5**	**+1.3**
PETK	**Petropavlovsk-**	**17.85**	**285**	LR	LR	14 03 42.5	
	comp=Z,22nm,18.9s,baz=110,slow=36						
HDA	**Harding Lake**	**18.18**	**37**	P	**Pn**	**13 57 17.4**	**-0.8**
HDA					IAmb	IAmb	13 57 31.4
	comp=Z,30nm,1.9s						
IL31		**18.39**	**37**	P	**P**	**13 57 18.7**	**-1.3**
IL31					IAmb	IAmb	13 57 27.6
	comp=Z,9.5nm,1.8s						
ILAR	**Eielson Array**	**18.39**	**37**	P	**P**	**13 57 17.8**	**-2.3**
	comp=Z,0.4nm,0.3s,baz=230,slow=8.8,SNR=26						
INK	**Inuvik**	**24.73**	**34**	P	**P**	**13 58 22.7**	**-3.0**
	comp=Z,0.6nm,0.5s,baz=239,slow=7.8,SNR=5.6						
INK	**Inuvik**	**24.73**	**34**	IAmb	IAmb	13 58 47.4	
	comp=Z,9.1nm,1.8s						
YKA	**Yellowknife Ar**	**32.00**	**48**	P	**P**	**13 59 27.7**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=273,slow=9.0,SNR=3.3						
H11N2	**WAKE ISLAND Hy**	**36.00**	**214**	T	T	14 38 18.8	
	baz=21,slow=76,SNR=4.7						
H11N3	**WAKE ISLAND Hy**	**36.01**	**214**	T	T	14 38 16.3	
	baz=21,slow=76,SNR=4.9						
H11N1	**WAKE ISLAND Hy**	**36.02**	**214**	T	T	14 38 15.7	
	baz=21,slow=76,SNR=5.8						
H11S1	**WAKE ISLAND Hy**	**37.20**	**213**	T	T	14 39 33.5	
	baz=20,slow=76,SNR=7.5						
H11S2	**WAKE ISLAND Hy**	**37.22**	**213**	T	T	14 39 34.6	
	baz=20,slow=76,SNR=8.6						
H11S3	**WAKE ISLAND Hy**	**37.22**	**213**	T	T	14 39 33.4	
	baz=20,slow=76,SNR=4.6						
NVAR	**Mina Array Bea**	**39.81**	**88**	P	**P**	**14 00 38.8**	**+1.0**
	comp=Z,0.1nm,0.5s,baz=311,slow=8.2,SNR=1.8						
TXAR	**Lajitas Array**	**54.90**	**86**	P	**P**	**14 02 33.8**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=316,slow=4.6,SNR=6.2						
WRA	**Warramunga Arr**	**85.21**	**229**	P	**P**	**14 05 37.8**	**-2.4**
	comp=Z,0.4nm,0.8s,baz=35,slow=5.8,SNR=2.0						
ASAR	**Alice Springs**	**88.63**	**227**	P	**P**	**14 05 55.5**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=25,slow=5.4,SNR=14						

*IDC **19** 14:00:59.9±0.8, 15°.65S×74°.59W, h0km, mb3.8/6, mb1 4.1/10, mb1mx3.9/32, mbtmp3.9/10, ML4.0/4, MS3.4/11, Ms1 3.4/11, ms1mx3.3/24, Error ellipse: s-maj=29.0km s-min=19.7km az=68.0*
*NEIC **19** 14:01:04.7±2.1, 15°.87S±0°.03×74°.56W±0°.08, h35km±7km, mb4.7/11, Error ellipse: s-maj=11.5km s-min=3.4km az=107.0*
*VAO **19** 14:01:15.4±0.9, 16°.04S×73°.23W, h10km, mb4.1*
ISC 19 14:01:05.7±0.5, 15°.94S±0°.06×74°.57W±0°.08, h49km, n83, σ1°88/70, mb4.5/10, MS3.5/5, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.50**	**330**	Pn	**Pn**	**14 02 10.0**	**-1.5**
	15nm,0.3s,baz=119,slow=9.3,SNR=14						
NNA				Lg	Lg	14 03 11.0	
	66nm,0.3s,baz=257,slow=18,SNR=11						
NNA				LR	LR	14 03 55.7	
	comp=Z,237nm,19.3s,baz=170,slow=41						
NNA	**Nana**	**4.50**	**330**		**Pn**	**14 02 10.7**	**-0.8**
AP01	**Chacalluta**	**4.71**	**122**	Pn	**Pn**	**14 02 14.5**	**+0.3**
PB12	**IPOC Station P**	**4.85**	**124**		**Pn**	**14 02 16.1**	**-0.1**
PB16	**IPOC Station P**	**5.39**	**117**	Pn	**Pn**	**14 02 24.7**	**+0.5**
PSGCX	**Pisagua**	**5.58**	**131**		**Pn**	**14 02 25.8**	**-0.6**
MNMC	**Minye Minye**	**5.71**	**125**		**Pn**	**14 02 27.9**	**-0.4**
PB11	**IPOC Station P**	**6.03**	**130**		**Pn**	**14 02 32.8**	**+0.2**
LPAZ	**La Paz**	**6.20**	**94**	Pn	**Pn**	**14 02 39.6**	**+4.3**
	3.3nm,0.3s,baz=287,slow=8.6,SNR=57						
LPAZ				LR	LR	14 05 16.0	
	comp=Z,663nm,18.9s,baz=290,slow=41						
LPAZ	**La Paz**	**6.20**	**94**	Pn	**Pn**	**14 02 39.0**	**+3.7**
TA01	**Diego Aracena**	**6.21**	**138**		**Pn**	**14 02 34.7**	**-0.2**
GO01	**Chusmiza**	**6.32**	**127**		**Pn**	**14 02 36.2**	**-0.6**
PATCX	**Punta Patache**	**6.42**	**140**		**Pn**	**14 02 37.5**	**-0.2**
PB08	**IPOC Station P**	**6.63**	**130**		**Pn**	**14 02 41.7**	**+0.6**
PB01	**IPOC Station P**	**7.00**	**137**		**Pn**	**14 02 46.1**	**+0.3**
PB07	**IPOC Station P**	**7.27**	**143**		**Pn**	**14 02 49.2**	**-0.3**
PB04	**IPOC Station P**	**7.61**	**147**		**Pn**	**14 02 54.0**	**-0.2**
PB09	**IPOC Station P**	**7.71**	**140**		**Pn**	**14 02 54.6**	**-0.9**
PB06	**IPOC Station P**	**8.22**	**146**	Pn	**Pn**	**14 03 03.0**	**+0.4**
PB10	**IPOC Station P**	**8.43**	**154**		**Pn**	**14 03 04.5**	**-0.8**
LVC	**Limon Verde**	**8.52**	**142**	Pn	**Pn**	**14 03 08.3**	**+1.4**
	1.9nm,0.3s,baz=325,slow=10,SNR=12						
LVC				Sn	**Sn**	**14 04 38.1**	**-3.7**
	1.4nm,0.3s,baz=88,slow=18,SNR=2.0						
LVC				Lg	Lg	14 05 30.9	
	baz=167,slow

VNDA	**Vanda**	**81.34 191**	P	**P**	**14 13 19.6**	**+3.0**	
	comp=Z,0.6nm,0.7s,baz=126,slow=2.9,SNR=5.5						
YKA	**Yellowknife Ar**	**84.24 343**	P	**P**	**14 13 30.8**	**-0.9**	
	comp=Z,0.5nm,0.8s,baz=136,slow=6.0,SNR=7.6						
H11N3	**WAKE ISLAND Hyl**	**21.62 284**	T	T	16 33 07.2		
	baz=97,slow=74,SNR=25						
H11N2	**WAKE ISLAND Hyl**	**21.63 284**	T	T	16 33 08.2		
	baz=97,slow=74,SNR=31						
H11N1	**WAKE ISLAND Hyl**	**21.64 284**	T	T	16 33 09.3		
	baz=97,slow=74,SNR=31						
H11S2	**WAKE ISLAND Hyl**	**21.66 282**	T	T	16 33 11.3		
	baz=99,slow=75,SNR=29						
H11S1	**WAKE ISLAND Hyl**	**21.66 282**	T	T	16 33 09.2		
	baz=99,slow=75,SNR=17						
H11S3	**WAKE ISLAND Hyl**	**21.67 282**	T	T	16 33 09.7		
	baz=99,slow=75,SNR=16						
ASAR	**Alice Springs**	**131.80 216**	PKP	**PKiKP**	**14 20 15.3**	**0.0**	
	comp=Z,0.4nm,0.6s,baz=121,slow=1.5,SNR=7.3						
ZALV	**Zalesovo Beam**	**138.79 18**	PKP	**PKiKP**	**14 20 27.4**	**-1.1**	
	comp=Z,0.6nm,0.5s,baz=219,slow=1.9,SNR=4.3						
SONM	**Songino Array**	**148.18 359**	PKPbc	**PKiKP**	**14 20 46.8**	**-1.4**	
	comp=Z,1.2nm,0.4s,baz=16,slow=42,SNR=2.1						
KSRS	**Korea Array**	**150.76 321**	PKPbc	**PKiKP**	**14 20 54.6**	**+1.0**	
	comp=Z,1.6nm,0.9s,baz=325,slow=1.5,SNR=8.3						

NEIC ***19*** *14:16:53.9±1.4, 35.3°S±0.3×176.5°W±0.2, h10km±2km, mb4.6/9, Error ellipse: s-maj=52.8km s-min=21.2km az=148.0*

IDC ***19*** *14:17:14.9±0.8, 34.96°S×179.90°W, h0km, mb4.2/7, mb1 4.4/8, mb1mx4.1/23, mbtmp4.2/8, ML4.3/1, MS3.2/5, Ms1 3.2/5, ms1mx3.0/21, Error ellipse: s-maj=26.4km s-min=24.2km az=49.0*

WEL ***19*** *14:17:22.4±0.7, 35.2°S±4.4°×18.0°W±4.1°, h33km, M4.7/27, ML5.0/27, MLv4.7/27*

ISC 19 14:17:20.7±0.7, 35.20S±0.07×179.86W±0.09, h39km, n115, σ1s82/111, mb4.4/12, MS3.3/5, East of North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.78**	**212**	P		**Pn**	**14 18 02.9**	**+0.2**
MXZ				S		**Sn**	14 18 36.2	+1.1
MXZ	**Matakaoa Point**	**2.78**	**212**			**Pn**	**14 18 02.9**	**+0.2**
WMGZ	**Waiomatatini S**	**2.96**	**207**	P		**Pn**	**14 18 06.5**	**+1.3**
WMGZ				S		**Sn**	**14 18 43.3**	**+3.9**
PKGZ	**Pakihiroa**	**3.16**	**211**	P		**Pn**	**14 18 10.0**	**+2.1**
PKGZ				S		**Sn**	**14 18 45.2**	**+0.9**
HAZ	**Te Kaha**	**3.18**	**216**	P		**Pn**	**14 18 09.7**	**+1.6**
PUZ	**Puketiti**	**3.24**	**207**	P		**Pn**	**14 18 10.9**	**+1.9**
WIZ	**White Island**	**3.33**	**225**	P		**Pn**	**14 18 12.3**	**+2.2**
WIZ				S		**Sn**	**14 18 46.5**	**-1.8**
TWGZ	**Tauwhareparae**	**3.44**	**210**	P		**Pn**	**14 18 12.7**	**+0.9**
TWGZ				S		**Sn**	**14 18 53.1**	**+1.8**
CNGZ	**Carnagh Statio**	**3.63**	**205**	P		**Pn**	**14 18 16.2**	**+1.9**
WHRZ	**Whale Island**	**3.68**	**223**	P		**Pn**	**14 18 16.5**	**+1.5**
MWZ	**Matawai**	**3.77**	**213**	P		**Pn**	**14 18 16.9**	**+0.7**
KUZ	**Kuaotunu**	**3.90**	**245**	P		**Pn**	**14 18 18.2**	**+0.2**
URZ	**Urewera**	**3.91**	**218**	Pn		**Pn**	**14 18 18.0**	**-0.1**
	20nm,0.3s,baz=275,slow=4.8,SNR=95							
URZ				Sn		**Sn**	**14 19 02.2**	**-0.4**
	16nm,0.3s,baz=148,slow=20,SNR=3.2							
URZ				LR		LR	14 19 25.4	
	comp=Z,101nm,18.3s,baz=66,slow=32							
URZ	**Urewera**	**3.91**	**218**	P		**Pn**	**14 18 19.0**	**+0.9**
URZ	**Urewera**	**3.91**	**218**			**Pn**	**14 18 17.8**	**-0.3**
MARZ	**Manawahe**	**3.94**	**224**	P		**Pn**	**14 18 19.1**	**+0.6**
GRZ	**Great Barrier**	**3.95**	**253**	P		**Pn**	**14 18 19.2**	**+0.5**
RAGZ	**Rawiri**	**3.95**	**213**	P		**Pn**	**14 18 20.2**	**+1.4**
RIGZ	**Rimuhau**	**3.98**	**208**	P		**Pn**	**14 18 19.2**	**0.0**
EDRZ	**Edgecumbe**	**3.99**	**222**	P		**Pn**	**14 18 20.4**	**+1.1**
PRGZ	**Paritu Road**	**4.13**	**205**	P		**Pn**	**14 18 21.1**	**-0.2**
MKRZ	**Makatiti**	**4.16**	**224**	P		**Pn**	**14 18 24.1**	**+2.3**
OMRZ	**Omania**	**4.19**	**225**	P		**Pn**	**14 18 23.4**	**+1.2**
TARZ	**Mount Tarawera**	**4.21**	**223**	P		**Pn**	**14 18 25.5**	**+3.2**
KARZ	**Kaharoa**	**4.21**	**227**	P		**Pn**	**14 18 23.8**	**+1.5**
SNGZ	**Shannon Statio**	**4.22**	**211**	P		**Pn**	**14 18 23.4**	**+1.0**
MUGZ	**Murupara**	**4.24**	**219**	P		**Pn**	**14 18 23.3**	**+0.5**
RTZ	**Ruatahuna**	**4.25**	**216**	P		**Pn**	**14 18 24.3**	**+1.5**
RRRZ	**Republican Roa**	**4.28**	**222**	P		**Pn**	**14 18 24.2**	**+0.9**
HLRZ	**Highlands Stat**	**4.30**	**224**	P		**Pn**	**14 18 27.9**	**+4.2**
MHGZ	**Mahia Peninsul**	**4.33**	**204**	P		**Pn**	**14 18 23.2**	**-0.8**
UTU	**Uhuhina**	**4.34**	**226**	P		**Pn**	**14 18 28.8**	**+4.6**
WIAZ	**Waiheke Island**	**4.36**	**247**	P		**Pn**	**14 18 26.8**	**+2.5**
HSRZ	**Hossack Road**	**4.41**	**224**	P		**Pn**	**14 18 28.5**	**+3.4**
RAHZ	**Arahi**	**4.44**	**212**	P		**Pn**	**14 18 26.4**	**+0.9**
PRRZ	**Plateau Road**	**4.46**	**221**	P		**Pn**	**14 18 26.4**	**+0.7**
MTHZ	**Maungataniwha**	**4.50**	**215**	P		**Pn**	**14 18 26.2**	**-0.1**
GRRZ	**Galatos Road**	**4.51**	**225**	P		**Pn**	**14 18 29.5**	**+3.1**
WHHZ	**Waihua**	**4.51**	**210**	P		**Pn**	**14 18 27.2**	**+0.7**
ALRZ	**Allen Road**	**4.53**	**221**	P		**Pn**	**14 18 28.3**	**+1.6**
WPRZ	**Whakapapatarin**	**4.60**	**223**	P		**Pn**	**14 18 30.9**	**+3.3**
NMHZ	**Naumai**	**4.71**	**213**	P		**Pn**	**14 18 29.8**	**+0.5**
ARHZ	**Aropaoanui**	**4.77**	**211**	P		**Pn**	**14 18 29.4**	**-0.6**
KUTZ	**Kaahu Road**	**4.77**	**225**	P		**Pn**	**14 18 32.3**	**+2.3**
WCZ	**Waipu Caves**	**4.78**	**259**	P		**Pn**	**14 18 31.4**	**+1.3**
WHTZ	**Whakaora**	**4.82**	**223**	P		**Pn**	**14 18 32.0**	**+1.3**
TLZ	**Tolley Road**	**4.84**	**228**	P		**Pn**	**14 18 33.1**	**+2.1**
HATZ	**Hinemaiaia**	**4.91**	**220**	P		**Pn**	**14 18 30.2**	**-1.7**
BKZ	**Black Stump Fm**	**4.92**	**215**	P		**Pn**	**14 18 31.6**	**-0.4**
BKZ	**Black Stump Fm**	**4.92**	**215**			**Pn**	**14 18 30.5**	**-0.7**
WATZ	**Wairara**	**4.97**	**224**	P		**Pn**	**14 18 33.6**	**+0.8**
RATZ	**Rangitukua**	**5.06**	**222**	P		**Pn**	**14 18 34.2**	**+0.2**
CKHZ	**Cape Kidnapper**	**5.07**	**208**	P		**Pn**	**14 18 33.7**	**-0.5**
RITZ	**Rihia Road**	**5.09**	**221**	P		**Pn**	**14 18 35.5**	**+1.1**
OUZ	**Omahuta**	**5.36**	**268**	P		**Pn**	**14 18 38.3**	**+0.3**
TRVZ	**Turoa**	**5.49**	**220**	P		**Pn**	**14 18 40.5**	**+0.4**
PKVZ	**Pokaka**	**5.59**	**222**	P		**Pn**	**14 18 42.7**	**+1.4**
MTVZ	**Mangateitei**	**5.59**	**220**	P		**Pn**	**14 18 41.3**	**0.0**
PNHZ	**Pukenui**	**5.65**	**212**	P		**Pn**	**14 18 40.3**	**-1.8**
PRHZ	**Porangahau**	**5.77**	**208**	P		**Pn**	**14 18 42.0**	**-1.8**
TSZ	**Takapari Road**	**5.88**	**213**	P		**Pn**	**14 18 44.4**	**-0.8**
DVHZ	**Dannevirke**	**5.99**	**211**	P		**Pn**	**14 18 45.9**	**-0.8**
ANWZ	**Angora Road**	**6.00**	**208**	P		**Pn**	**14 18 45.7**	**-1.2**
BFZ	**Birch Farm**	**6.28**	**208**			**Pn**	**14 18 48.5**	**-2.2**
MSWZ	**Moikau Station**	**7.30**	**210**	Pn		**Pn**	**14 19 03.0**	**-1.7**
PLWZ	**Palliser**	**7.43**	**210**	Pn		**Pn**	**14 19 02.3**	**-4.2**
BHW	**Baring Head**	**7.45**	**212**	Pn		**Pn**	**14 19 05.3**	**-1.5**
TUWZ	**Tuamarina**	**7.90**	**216**			**Pn**	**14 19 10.0**	**-2.9**
CMWZ	**Cape Campbell**	**8.02**	**214**	Pn		**Pn**	**14 19 10.8**	**-3.8**
NNZ	**Nelson**	**8.02**	**220**	Pn		**Pn**	**14 19 12.8**	**-1.9**
BSWZ	**Blackbirch Sta**	**8.15**	**215**	Pn		**Pn**	**14 19 12.4**	**-4.0**
KHZ	**Kahutara**	**8.86**	**214**	Pn		**Pn**	**14 19 22.9**	**-3.1**
LTZ	**Lake Taylor**	**9.73**	**217**	Pn		**Pn**	**14 19 34.9**	**-3.2**
OXZ	**Oxford**	**10.26**	**215**	Pn		**Pn**	**14 19 42.4**	**-2.8**
MQZ	**McQueen's Vall**	**10.28**	**212**	Pn		Pn	14 19 40.5	-4.9
RPZ	**Rata Peaks**	**11.02**	**217**	Pn		**Pn**	**14 19 51.2**	**-4.5**
	0.6nm,0.3s,baz=106,slow=15,SNR=2.6							
RPZ				Sn		Sn	14 21 44.0	-14
	1.5nm,0.3s,baz=137,slow=21,SNR=2.7							
RPZ				LR		LR	14 24 02.7	
	comp=Z,169nm,21.9s,baz=38,slow=36							
WKZ	**Wanaka**	**12.84**	**218**	Pn		**Pn**	**14 20 20.0**	**-0.5**
DZM	**Mont Dzumac**	**17.74**	**314**	*e*LR		LR	14 25 37.7	
	comp=Z,286nm,23.5s							
TBI	**Tubuai**	**28.91**	**74**	*e*LR		LR	14 30 22.6	
	comp=Z,113nm,27.8s							
PPT2	**Papeete2**	**32.12**	**65**	*e*LR		LR	14 31 49.5	
	comp=Z,137nm,26.2s							
PPT	**Papeete**	**32.14**	**65**	LR		LR	14 37 19.7	
	comp=Z,31nm,18.7s,baz=231,slow=38							
STKA	**Stephens Creek**	**32.16**	**265**	P		**P**	**14 23 44.7**	**0.0**
	2.2nm,0.8s,baz=83,slow=11,SNR=5.0							
STKA				LR		LR	14 34 58.8	
	comp=Z,68nm,20.9s,baz=28,slow=33							
STKA	**Stephens Creek**	**32.16**	**265**	P		**P**	**14 23 45.7**	**+1.0**
BBOO	**Buckleboo**	**36.40**	**261**	P		**P**	**14 24 21.0**	**-0.4**
BBOO					IAmb	IAmb	14 24 22.6	
	comp=Z,4.3nm,0.8s							
AS31	**Alice Springs**	**41.54**	**273**	P		**P**	**14 25 03.3**	**-1.3**
AS31					IAmb	IAmb	14 25 08.3	
	comp=Z,2.3nm,0.5s							
ASAR	**Alice Springs**	**41.54**	**273**	P		**P**	**14 25 03.7**	**-0.9**
	comp=Z,5.2nm,0.6s,baz=117,slow=7.5,SNR=46							
ASAR				LR		LR	14 41 44.9	
	comp=Z,88nm,19.3s,baz=128,slow=35							
WR0	**Warramunga Arr**	**42.80**	**278**	P		**P**	**14 25 13.8**	**-1.0**
WR0					IAmb	IAmb	14 25 17.5	
	comp=Z,8.5nm,0.8s							
WB2	**Warramunga Arr**	**42.96**	**278**	P		**P**	**14 25 13.1**	**-3.0**
WRAB	**Tennant Creek**	**42.97**	**278**	P		**P**	**14 25 15.2**	**-1.0**
WRAB					IAmb	IAmb	14 25 19.1	
	comp=Z,11nm,0.7s							
WRA	**Warramunga Arr**	**42.97**	**278**	P		**P**	**14 25 16.4**	**+0.2**
	comp=Z,10nm,0.7s,baz=122,slow=7.5,SNR=28							
FORT	**Forrest**	**43.50**	**261**	P		**P**	**14 25 19.1**	**-1.2**
FITZ	**Fitzroy Crossi**	**50.98**	**275**	P		**P**	**14 26 17.3**	**-1.4**
FITZ					IAmb	IAmb	14 26 19.7	
	comp=Z,7.2nm,0.8s							
MORW	**Morawa**	**53.80**	**257**	P		**P**	**14 26 37.8**	**-1.8**
QSPA	**South Pole Qui**	**54.92**	**180**	P		**P**	**14 26 49.8**	**+2.5**
	comp=Z,1.0nm,0.6s,baz=182,slow=0.4,SNR=11							
SNAA	**Sanae**	**73.41**	**179**	P		**P**	**14 28 50.3**	**+2.1**
SNAA	**Sanae**	**73.41**	**179**	P		**P**	**14 28 49.4**	**+1.1**
	comp=Z,1.8nm,1.0s,baz=200,slow=6.9,SNR=3.8							
VNA3	**Neumayer Olymp**	**73.63**	**177**	P		**P**	**14 28 50.7**	**+1.1**
H03S2	**Juan Fernandez**	**79.12**	**124**	T		T	15 57 33.9	
	baz=232,slow=74,SNR=4.9							
H03S1	**Juan Fernandez**	**79.13**	**124**	T		T	15 57 36.5	
	baz=232,slow=74,SNR=5.4							
H03S3	**Juan Fernandez**	**79.14**	**124**	T		T	15 57 45.7	
	baz=232,slow=74,SNR=4.9							
H03N3	**Juan Fernandez**	**79.34**	**123**	T		T	15 57 46.5	
	baz=237,slow=72,SNR=18							
H03N2	**Juan Fernandez**	**79.34**	**123**	T		T	15 57 48.8	
	baz=237,slow=72,SNR=14							
H03N1	**Juan Fernandez**	**79.36**	**123**	T		T	15 57 44.9	
	baz=237,slow=72,SNR=16							
PETK	**Petropavlovsk-**	**90.08**	**347**	P		**P**	**14 30 16.2**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=116,slow=6.6,SNR=1.5							
TXAR	**Lajitas Array**	**96.26**	**59**	P		**P**	**14 30 46.7**	**+1.6**
	comp=Z,0.1nm,0.5s,baz=184,slow=4.4,SNR=1.2							
MKAR	**Makanchi Array**	**119.59**	**308**	PKP		**PKPdf**	**14 36 04.1**	**-1.8**
	comp=Z,0.3nm,0.6s,baz=119,slow=1.5,SNR=4.3							
FINES	**FINESS Array B**	**148.99**	**336**	PKPbc		**PKPbc**	**14 37 02.0**	**-1.5**
	comp=Z,5.7nm,0.8s,baz=72,slow=6.2,SNR=16							
LIC	**Lamto**	**150.78**	**169**	*e*PKP1		**PKiKP**	**14 37 10.3**	**+0.3**
	comp=Z,14nm,0.6s							
KIC	**Kosan Boka**	**150.95**	**170**	*e*PKP1		**PKiKP**	**14 37 10.7**	**+0.3**
	comp=Z,13nm,0.9s							
TIC	**Toumodi**	**151.19**	**169**	*e*PKP1		**PKiKP**	**14 37 11.3**	**+0.4**
DBIC	**Toumodi**	**151.24**	**170**	PKPbc		**PKiKP**	**14 37 11.4**	**+0.5**
	comp=Z,3.6nm,0.7s,baz=168,slow=3.6,SNR=5.3							
BRTR	**Keskin Array B**	**153.12**	**290**	PKPbc		**PKPbc**	**14 37 12.8**	**-1.3**
	comp=Z,1.6nm,0.8s,baz=125,slow=3.7,SNR=9.1							
NB2	**NORSAR Subarra**	**153.18**	**348**	PKP		**PKPbc**	**14 37 12.9**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=17,slow=2.6							
NOA	**NORSAR Array B**	**153.18**	**348**	PKPbc		**PKPbc**	**14 37 12.9**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=22,slow=4.8,SNR=6.9							
TORD	**Torodi Ar. Bea**	**158.00**	**184**	PKP		**PKPdf**	**14 37 15.1**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=153,slow=4.3,SNR=2.9							
TORD				PKPab		**PKPab**	**14 37 47.4**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=174,slow=3.6,SNR=6.9							

JMA 19 14:34:40.4±0.1, 24.50N×123.56E, h0km, M0.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.23**	**137**	P		Pg	14 34 45.2	+0.5
IRIF				S		Sg	14 34 48.8	+1.1
JKRS	**Kuro-shima**	**0.49**	**122**	P		Pg	14 34 50.5	+0.8
JKRS				S		Sg	14 34 57.6	+1.6
HATJ	**Hateruma jima**	**0.49**	**153**	P		Pg	14 34 50.3	+0.4
HATJ				*e*S		Sg	14 34 57.1	+0.8
JIJ	**Ishigaki jima**	**0.55**	**104**	P		Pg	14 34 51.2	+0.3
JIJ				S		Sg	14 34 58.9	+0.9
JYNG	**Yonagunijimaku**	**0.56**	**265**	P		Pg	14 34 51.9	+0.7
JYNG				*e*S		Sg	14 34 59.0	+0.5
JISG	**Ishigakijimahi**	**0.69**	**83**	P		Pg	14 34 54.4	+0.8
JISG				*e*S		Sb	14 35 04.0	-1.4
JTJ	**Tarama**	**1.05**	**82**	P		Pb	14 35 01.0	-0.4
JTJ				S		Sb	14 35 15.5	-0.2

TAP 19 14:34:42.1, 24.23N×121.71E, h11km, ML2.1, 9D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.12**	**241**	⇓*i*P		Pb	14 34 45.7	-0.7
	baz=240							
NACB				S		Sg	14 34 48.2	+1.2
	baz=240							
TWD	**Chiawan**	**0.18**	**214**	P		Pg	14 34 46.6	+0.6
	baz=211							
TWD				*e*S		Sg	14 34 49.9	+1.2
	baz=211							
ENA	**Nanau**	**0.20**	**9**	⇓*i*P		Pg	14 34 47.0	+0.6
	baz=11							
ENA				*e*S		Sg	14 34 50.3	+1.0
	baz=11							
ETLH	**Xiulin Townshi**	**0.21**	**263**	⇓P		Pb	14 34 47.4	-0.6
	baz=263							
ETLH				*e*S		Sg	14 34 50.9	+1.4
	baz=263							
NNSB	**Datong**	**0.35**	**304**	⇓*i*P		Pb	14 34 50.3	-0.3
	baz=303							
NNSB				*e*S		Sb	14 34 55.8	-0.5
	baz=303							
NNSH	**Datong**	**0.35**	**304**	⇓*e*P		Pb	14 34 50.3	-0.2
	baz=303							
NNSH				*e*S		Sb	14 34 55.6	-0.6
	baz=303							
NNS	**Nan Shan**	**0.37**	**304**	⇓*i*P		Pb	14 34 50.5	-0.3
	baz=304							
NNS				*e*S		Sb	14 34 56.2	-0.4
	baz=304							
TWC	**Suao**	**0.40**	**19**	*e*P		Pg	14 34 50.6	+0.6
	baz=20							
TWC				*e*S		Sg	14 34 56.1	+0.8
	baz=20							
NDT	**Datong Townshi**	**0.41**	**335**	⇓*i*P		Pb	14 34 51.4	0.0
	baz=334							
NDT				*e*S		Sb	14 34 57.5	-0.2
	baz=334							
WHF	**Hehuan Shan**	**0.41**	**258**	⇓*i*P		Pb	14 34 51.2	-0.5
	baz=257							
WHF				*e*S		Sb	14 34 57.4	-0.7
	baz=257							
ENTT	**Nioudou**	**0.43**	**343**	⇓*i*P		Pb	14 34 51.6	-0.2
	baz=343							
ENTT				*e*S		Sb	14 34 58.0	-0.2
	baz=343							
ESL	**Shilin**	**0.48**	**211**	*e*P		Pg	14 34 51.6	0.0
	baz=210							
ESL				*e*S		Sb	14 34 60.0	+0.1
	baz=210							
TWE	**Neicheng**	**0.49**	**356**	*e*P		Pb	14 34 52.6	-0.2
	baz=357							
TWE				*e*S		Sb	14 34 59.5	-0.5
	baz=357							
EOS1	**EOS1**	**0.50**	**50**	*e*P		Pg	14 34 52.4	+0.5
	baz=50							
EOS1				*e*S		Sb	14 35 00.8	+0.5
	baz=50							
TDCB	**Techi**	**0.50**	**273**	P		Pb	14 34 53.2	+0.1
	baz=272							
TDCB				*e*S		Sb	14 35 00.0	-0.5
	baz=272							
CHGB	**Renai**	**0.52**	**251**	P		Pb	14 34 53.2	-0.1
	baz=250							
CHGB				*e*S		Sb	14 35 00.2	-0.7
	baz=250							
YHNB	**Yeheng**	**0.53**	**325**	*e*P		Pb	14 34 53.7	+0.2
	baz=325							
YHNB				*e*S		Sb	14 35 01.2	-0.1
	baz=325							
NSK	**Sanguang**	**0.55**	**324**	P		Pb	14 34 54.0	+0.2
	baz=324							
NSK				S		Sb	14 35 01.6	-0.1
	baz=324							
OWD	**Renai**	**0.56**	**241**	*e*P		Pb	14 34 53.7	-0.3
	baz=240							
OWD				*e*S		Sg	14 35 01.1	+0.7
	baz=240							
NWLT	**Wulai**	**0.57**	**341**	P		Pb	14 34 54.4	+0.2
	baz=341							
NWLT				*e*S		Sb	14 35 02.1	-0.4
	baz=341							
EGFH	**Guangfu**	**0.61**	**205**	*e*P		Pb	14 34 55.5	+0.6
	baz=204							
WHP	**Taichung City**	**0.69**	**274**	*e*S		Sb	14 35 06.8	+0.8
	baz=273							
VWDT	**VWDT**	**0.70**	**228**	*e*P		Pb	14 34 56.4	0.0
	baz=227							
VWDT				*e*S		Sb	14 35 06.4	+0.3
	baz=227							
DPDB	**Guoxing**	**0.74**	**255**	*e*P		Pb	14 34 57.4	+0.3
	baz=254							
TIPB	**Shuangxi**	**0.75**	**8**	*e*P		Pb	14 34 57.2	0.0
	baz=8.0							
TIPB				*e*S		Sg	14 35 06.8	+0.5
	baz=8.0							
HGSD	**Ruisui**	**0.78**	**199**	*e*P		Pg	14 34 56.6	-0.6
	baz=199							
EHY	**Hungye**	**0.80**	**206**	*e*P		Pb	14 34 58.5	+0.4
	baz=205							
SMLT	**Sun Moon Lake**	**0.81**	**245**	*e*P		Pb	14 34 58.8	+0.4
	baz=244							
SSLB	**Suanglung**	**0.82**	**237**	*e*P		Pg	14 34 57.8	-0.1
	baz=237							
SSLB				*e*S		Sg	14 35 08.5	-0.1
	baz=237							
WFSB	**Wu-fen Shan**	**0.84**	**5**	*e*P		Pn	14 34 59.9	-0.1
	baz=4.0							
WFSB				*e*S		Sn	14 35 11.7	-0.6
	baz=4.0							
YULB	**Yu-li**	**0.92**	**204**	*e*P		Pg	14 34 59.3	-0.5
	baz=204							
YM10	**YM10**	**0.93**	**352**	*e*P		Pn	14 35 02.0	+0.8
	baz=351							
WHYT	**Xinyi Township**	**0.94**	**236**	*e*P		Pn	14 35 01.4	-0.1
	baz=235							
TWF1	**Yuli**	**0.95**	**203**	*e*P		Pg	14 34 59.8	-0.6
	baz=202							

TEH ***19*** *14:56:40.2, 30.14N×51.60E, h10km, ML3.8*
THR ***19*** *14:56:44.3±0.4, 30.11N×51.99E, h18km±7km, ML3.7*
DSN ***19*** *14:56:45.0±1.5, 30.37N×52.37E, h15km, ML4.5/7, Error ellipse: s-maj=56.0km s-min=10.5km az=44.0*
OMAN ***19*** *14:56:47.9±0.3, 29.50N×51.59E, h10km±4km, ml4.0/1, Error ellipse: s-maj=11.6km s-min=4.4km az=14.0*

ISC 19 14:56:41.3±0.8, 30.11N±0.06×51.66E±0.06, h8km, n70, σ1s58/79, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SHI	**Shiraz**	**0.87**	**122**	*e*Pg		**Pg**	**14 56 59.0**	**+0.9**
SHI				*e*Sg		**Sb**	**14 57 12.9**	**+2.2**
SHI				*e*			14 57 16.6	
KLNJ	**Kolanjah**	**0.90**	**356**	*e*Pg		**Pg**	**14 56 56.3**	**-2.4**
KLNJ				*e*			14 57 11.8	
GHB	**Gharebagh**	**1.05**	**133**	*e*Pg		**Pg**	**14 57 02.2**	**+0.7**
IRAM	**Ramesheh**	**1.81**	**20**	*e*Pn		**Pn**	**14 57 12.7**	**-0.3**
IRAM				*e*			14 57 40.9	
IBRJ	**Brojen**	**1.83**	**349**	*e*Pn		**Pn**	**14 57 13.6**	**+0.3**
JHBN	**Jahan bin**	**2.29**	**338**	*e*Pn		**Pn**	**14 57 19.7**	**+0.1**
ROKH	**ROKH**	**2.30**	**347**	*e*Pn		**Pn**	**14 57 20.1**	**+0.4**
ROKH				*e*			14 57 25.6	
IGAR	**Gharneh**	**2.31**	**8**	*e*Pn		**Pn**	**14 57 20.8**	**+0.9**
ISAD	**Sadrabad**	**2.50**	**43**	*e*Pn		**Pn**	**14 57 23.8**	**+1.2**
IPIR	**Pirpir**	**2.65**	**346**	*e*Pn		**Pn**	**14 57 24.6**	**-0.1**
IZEF	**Zefreh**	**2.84**	**11**	*e*Pn		**Pn**	**14 57 28.0**	**+0.8**
IMEH	**Mehriz**	**2.85**	**62**	*e*Pn		**Pn**	**14 57 28.5**	**+1.2**
SHGR	**Shooshtar-Gavs**	**3.16**	**310**	*e*Pn		**Pb**	**14 57 38.2**	**+0.4**
SHGR				*e*Sg		**Sg**	**14 58 29.5**	**+6.6**
SHGR				IAML			14 58 35.0	
	comp=N,160nm,0.5s							
SHGR				IAML			14 58 38.9	
	comp=E,217nm,0.5s							
ICHK	**Chekchek**	**3.18**	**47**	*e*Pn		**Pn**	**14 57 32.9**	**+1.1**
IKLH	**Kolahrood**	**3.21**	**359**	*e*Pn		**Pn**	**14 57 33.0**	**+0.8**
YZKH	**Yazd**	**3.39**	**47**	*e*Pn		**Pn**	**14 57 35.7**	**+1.1**
YZKH	**Yazd**	**3.39**	**47**	*e*Pn		**Pn**	**14 57 35.7**	**+1.1**
ANAR	**Anarak**	**3.54**	**29**	*e*Pn		**Pn**	**14 57 37.2**	**+0.4**
KHGB	**Koh Gabri**	**4.18**	**85**	*

AKASG	**Malin Array Be**	**40.71**	**348**	P		**P**	**15 10 10.5**	**-1.3**
	1.0nm,0.7s,baz=170,slow=7.3,SNR=4.8							
ESDC	**Sonseca Array**	**49.23**	**313**	LR		LR	15 32 17.0	
	comp=Z,27nm,20.4s,baz=125,slow=36							
MKAR	**Makanchi Array**	**49.42**	**36**	P		**P**	**15 11 21.4**	**+0.2**
	0.5nm,0.8s,baz=232,slow=6.0,SNR=5.0							
ZALV	**Zalesovo Beam**	**54.73**	**30**	P		**P**	**15 12 00.8**	**+0.3**
	0.3nm,0.3s,baz=251,slow=4.5,SNR=3.6							
CMAR	**Chiang Mai Arr**	**55.78**	**75**	P		**P**	**15 12 09.1**	**+0.3**
	0.5nm,0.7s,baz=269,slow=8.1,SNR=4.3							

*IDC **19** 15:14:08.6±1.0, 10°.41N×123°.69E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/33, mbtmp3.7/7, MS3.0/4, Ms1 3.1/4, ms1mx2.7/31, Error ellipse: s-maj=74.5km s-min=22.7km az=76.0*

*MAN **19** 15:14:12.3, 10°.49N×122°.30E, h29km, mb5.2, ML4.2, MS4.3*

*NEIC **19** 15:14:14.9±2.2, 10°.1N±0°.1×122°.7E±0°.2, h46km±7km, mb4.4/5, Error ellipse: s-maj=22.6km s-min=17.5km az=105.0*

ISC 19 15:14:11.9±1.0, 10°.44N±0°.03×122°.27E±0°.03, h34km±7km, n56, σ2s10/64, 6C-3D, Panay

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.36**	**59**	*eP*			**Pb**	**15 14 20.2**	**-0.4**
GUIM				*eS*			**Sb**	**15 14 25.8**	**-0.6**
JAP	**San Jose, Anti**	**0.45**	**314**	↑*iP*			**Pn**	**15 14 22.4**	**+0.4**
CNOP	**Candoni, Negro**	**0.70**	**149**	*eP*			**Pb**	**15 14 26.4**	**+0.5**
CNOP				*eS*			**Sn**	**15 14 36.9**	**+1.7**
RCP	**Roxas**	**1.21**	**23**	↑*eP*			**Pn**	**15 14 32.8**	**+0.3**
RCP				*eS*			**Sb**	**15 14 50.2**	**+0.6**
KALP	**Kalibo**	**1.23**	**3**	↑*eP*			**Pb**	**15 14 34.4**	**-0.3**
CUYO	**Cuyo Island**	**1.30**	**289**	*eP*			**Pb**	**15 14 35.5**	**-0.3**
CUYO				*eS*			**Sb**	**15 14 52.3**	**+0.1**
LLP	**Lapu-Lapu**	**1.67**	**94**	↑*eP*			**Pn**	**15 14 40.0**	**+1.2**
LLP				*eS*			**Sn**	**15 15 00.1**	**+0.9**
TBP	**Tagbilaran**	**1.73**	**115**	*eP*			**Sn**	**15 15 00.0**	**-0.6**
OTRP	**Odiongan**	**1.93**	**353**	*eP*			**Pn**	**15 14 43.2**	**+0.9**
OTRP				*eS*			**Sn**	**15 15 06.0**	**+0.5**
DCPH	**Dipolog City**	**2.13**	**150**	↑*eP*			**Pb**	**15 14 47.3**	**-2.5**
DCPH				*eS*			**Sb**	**15 15 13.3**	**-2.6**
OCLP	**Ormoc**	**2.38**	**75**	*eP*			**Pn**	**15 14 49.7**	**+1.2**
OCLP				*eS*			**Sn**	**15 15 18.1**	**+1.6**
BUSP	**Coron**	**2.56**	**308**	*eP*			**Pn**	**15 14 52.4**	**+1.3**
BUSP				*eS*			**Sn**	**15 15 21.9**	**+0.8**
MSLP	**Maasin**	**2.56**	**97**	*eP*			**Pn**	**15 14 52.9**	**+1.8**
MSLP				*eS*			**Sn**	**15 15 23.1**	**+1.9**
PAGZ	**Pagadian**	**2.80**	**157**	*eP*			**Pn**	**15 14 56.2**	**+1.9**
PAGZ				*eS*			**Sn**	**15 15 30.1**	**+3.2**
ENPP	**El Nido**	**2.90**	**286**	*eP*			**Pn**	**15 14 57.5**	**+1.7**
ENPP				*eS*			**Sn**	**15 15 30.5**	**+1.0**
BOAC	**Boac**	**3.03**	**352**	*eP*			**Pn**	**15 14 58.1**	**+0.5**
BOAC				*eS*			**Sn**	**15 15 32.6**	**-0.1**
CGP	**Cagayan de Oro**	**3.10**	**129**	↓*eP*			**Pn**	**15 15 01.2**	**+2.8**
PGP	**Puerto Galera**	**3.31**	**337**	↑*eP*			**Pn**	**15 15 04.3**	**+2.9**
PGP				*eS*			**Sn**	**15 15 41.1**	**+1.5**
ZCP	**Zamboanga City**	**3.49**	**183**	↓*eP*			**Pn**	**15 15 06.7**	**+2.9**
ZCP				*eS*			**Sn**	**15 15 44.8**	**+0.8**
BUTP	**Butuan**	**3.61**	**114**	*eP*			**Pn**	**15 15 05.9**	**+0.4**
PVCP	**Virac**	**3.64**	**30**	*eP*			**Pn**	**15 15 06.5**	**+0.6**
CTBH	**Cotabato--PC H**	**3.74**	**148**	↓*iP*			**Pn**	**15 15 11.1**	**+3.7**
BUKP	**Musuan**	**3.75**	**132**	*eP*			**Pn**	**15 15 09.8**	**+2.3**
LUBP	**Lubang**	**3.83**	**329**	*eP*			**Pn**	**15 15 09.3**	**+0.8**
LUBP				*eS*			**Sn**	**15 15 51.7**	**-0.7**
TGY	**Tagaytay City**	**3.87**	**340**	LR			LR	15 16 57.6	
	comp=Z,146nm,20.0s,baz=166,slow=37								
POLP	**Polillo Island**	**4.28**	**356**	*eP*			**Pn**	**15 15 18.7**	**+4.0**
BATP	**Bataraza**	**4.70**	**250**	*eP*			**Pn**	**15 15 20.9**	**+0.4**
KKM	**Kota Kinabalu**	**7.42**	**234**	Pn			Pn	15 16 02.5	+4.6
BATI	**Baumata**	**20.55**	**176**	P			Pn	15 18 49.8	-0.4
	17nm,0.7s,baz=37,slow=2.7,SNR=6.0								
NANT	**Nan**	**22.45**	**294**	P			P	15 19 21.3	+13
PHRA	**Phrae**	**22.78**	**293**	P			P	15 19 23.5	+12
LAMP	**Lampang**	**23.33**	**293**	P			**P**	**15 19 21.3**	**+4.0**
PAYA	**Payao**	**23.37**	**295**	P			P	15 19 10.2	-7.6
CM34	**Chiang Mai Arr**	**23.86**	**293**	P			**P**	**15 19 17.5**	**-5.0**
CM09	**Chiang Mai Arr**	**23.89**	**292**	P			**P**	**15 19 25.1**	**+2.4**
CM05	**Chiang Mai Arr**	**23.92**	**292**	P			**P**	**15 19 26.1**	**+3.0**
CM02	**Chiang Mai Arr**	**23.93**	**292**	P			**P**	**15 19 25.4**	**+2.3**
CM31	**Chiang Mai Arr**	**23.94**	**292**	P			**P**	**15 19 25.4**	**+2.2**
CMAR	**Chiang Mai Arr**	**23.94**	**292**	LR			LR	15 30 04.5	
	comp=Z,36nm,18.8s,baz=208,slow=38								
CM15	**Chiang Mai Arr**	**23.95**	**292**	P			**P**	**15 19 25.4**	**+2.1**
CM13	**Chiang Mai Arr**	**23.96**	**292**	P			**P**	**15 19 26.0**	**+2.6**
CMMT	**Chiang Mai**	**24.03**	**293**	P			**P**	**15 19 20.1**	**-4.0**
CM33	**Chiang Mai Arr**	**24.04**	**293**	P			**P**	**15 19 19.7**	**-4.4**
KSRS	**Korea Array**	**27.38**	**10**	LR			LR	15 30 33.1	
	comp=Z,18nm,21.8s,baz=175,slow=36								
WRA	**Warramunga Arr**	**32.44**	**158**	P			**P**	**15 20 36.6**	**-2.6**
	0.4nm,0.5s,baz=335,slow=10.0,SNR=9.8								
WRA				PcP			**PcP**	**15 23 25.3**	**-0.8**
	0.7nm,0.5s,baz=338,slow=2.9,SNR=12								
WB2	**Warramunga Arr**	**32.45**	**158**	P			**P**	**15 20 36.9**	**-2.4**
WB2				IAmb			IAmb	15 21 12.8	
	comp=Z,9.1nm,1.3s								
WR0	**Warramunga Arr**	**32.53**	**158**	P			**P**	**15 20 37.5**	**-2.5**
WR0				IAmb			IAmb	15 21 37.1	
	comp=Z,16nm,1.6s								
ASAR	**Alice Springs**	**35.75**	**162**	P			**P**	**15 21 06.2**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=341,slow=6.9,SNR=21								
ASAR				PcP			**PcP**	**15 23 34.9**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=342,slow=2.8,SNR=16								
BBOO	**Buckleboo**	**44.97**	**164**	P			**P**	**15 22 23.1**	**-0.9**
STKA	**Stephens Creek**	**45.96**	**157**	P			**P**	**15 22 30.9**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=340,slow=7.1,SNR=3.4								
MKAR	**Makanchi Array**	**49.56**	**325**	P			P	15 23 09.0	+9.3
	comp=Z,0.1nm,0.5s,baz=134,slow=7.2,SNR=1.7								
TIXI	**Tiksi**	**61.30**	**2**	P			**P**	**15 24 26.7**	**+3.0**
TIXI				IAmb			IAmb	15 24 45.2	
	comp=Z,2.2nm,1.1s								
ILAR	**Eielson Array**	**81.00**	**26**	P			**P**	**15 26 22.8**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=292,slow=4.8,SNR=2.0								
VNDA	**Vanda**	**90.62**	**172**	P			**P**	**15 27 09.5**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=320,slow=6.8,SNR=7.4								
NOA	**NORSAR Array B**	**90.85**	**333**	LR			LR	16 12 51.5	
	comp=Z,12nm,19.3s,baz=310,slow=38								
PLCA	**Paso Flores**	**147.76**	**162**	PKPbc			**PKPbc**	**15 33 53.4**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=217,slow=6.9,SNR=7.9								

*SOME **19** 15:29:08.3, 40°.55N×77°.58E, h10km*

*KRNET **19** 15:29:09.0±0.1, 40°.63N×77°.61E, h21km, mb3.5*

*NNC **19** 15:29:10.4±0.7, 40°.68N×77°.58E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=4.5km s-min=3.3km az=172.0*

ISC 19 15:29:11.7±1.5, 40°.75N±0°.07×77°.51E±0°.03, h10km, n79, σ1s60/116, 31C-26D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.00**	**13**	↓*iP*			**Pg**	**15 29 29.7**	**-1.4**
	baz=8.0								
TARG				↓*iS*			**Sb**	**15 29 45.1**	**+0.1**
	baz=8.0								
KDJ	**Kajisay**	**1.40**	**350**	↑*iP*			**Pb**	**15 29 37.4**	**-0.8**
	baz=48								
KDJ				↑*iS*			**Sg**	**15 29 57.7**	**+0.8**
	baz=48								
ULHL	**Ulahol**	**1.77**	**328**	↓*iP*			**Pb**	**15 29 44.1**	**-0.4**
	baz=28								
ULHL				↓*iS*			**Sg**	**15 30 09.4**	**+0.6**
	baz=28								
ULHL	**Ulahol**	**1.77**	**328**	P			**Pb**	**15 29 44.1**	**-0.4**
	SNR=86								
PRZ	**Przheval'sk**	**1.86**	**21**	↑*iP*			**Pb**	**15 29 44.3**	**-1.6**
	baz=18								
PRZ				↑*iS*			**Sg**	**15 30 10.1**	**-1.4**
	baz=18								
ANVS	**Anan'yevo**	**2.04**	**3**	↑*iP*			**Pb**	**15 29 47.4**	**-1.6**
	baz=1.0								
ANVS				↑*iS*			**Sb**	**15 30 15.2**	**+0.8**
	baz=1.0								
BOOM	**Boomskoye usch**	**2.10**	**326**	↑*iP*			**Pb**	**15 29 48.4**	**-1.7**
	baz=27								
BOOM				↑*iS*			**Sb**	**15 30 17.0**	**+0.7**
	baz=27								
KZA	**Kyzart**	**2.16**	**309**	↑*iP*			**Pb**	**15 29 49.5**	**-1.7**
	baz=10.0								
KZA				↑*iS*			**Sb**	**15 30 18.8**	**+0.7**
	baz=10.0								
KZA	**Kyzart**	**2.16**	**309**	P			**Pb**	**15 29 51.0**	**-0.1**
	SNR=52								
TNSS	**Tian-Shan**	**2.33**	**350**	↑*eP*			**Pb**	**15 29 54.6**	**+0.6**
	127nm,0.5s								
TNSS				*eS*			**Sg**	**15 30 27.7**	**+1.2**
	90nm,0.6s								
TNSS	**Tian-Shan**	**2.33**	**350**	Pg			**Pb**	**15 29 54.4**	**+0.4**
	127nm,0.5s								
TNSS				Lg			Lg	15 30 27.7	
	90nm,0.6s								
IZV	**Izvestkoviy**	**2.38**	**344**	↓*eP*			**Pb**	**15 29 55.1**	**+0.3**
	40nm,0.2s								
IZV				*eS*			**Sg**	**15 30 29.2**	**+0.9**
	54nm,0.4s								
IZV	**Izvestkoviy**	**2.38**	**344**	Pg			**Pb**	**15 29 55.1**	**+0.3**
	38nm,0.5s								
IZV				Lg			Lg	15 30 29.2	
	54nm,0.4s								
SATY	**Saty**	**2.40**	**16**	↑*eP*			**Pb**	**15 29 55.0**	**-0.1**
	12nm,0.3s								
SATY				*eS*			**Sg**	**15 30 29.2**	**+0.2**
	94nm,0.3s								
SATY	**Saty**	**2.40**	**16**	Pg			**Pb**	**15 29 54.9**	**-0.3**
	21nm,0.7s								
SATY				Lg			Lg	15 30 29.2	
	94nm,0.6s								
MDOK	**Medeo**	**2.44**	**352**	*eP*			**Pb**	**15 29 56.0**	**+0.3**
	72nm,0.5s								
MDOK				*eS*			**Sg**	**15 30 31.0**	**+0.9**
	76nm,0.5s								
MDOK	**Medeo**	**2.44**	**352**	↓Pn			**Pb**	**15 29 54.0**	**-1.8**
	58nm,0.6s								
MDOK				↓Lg			Lg	15 30 30.1	
	55nm,0.5s								
MDOK	**Medeo**	**2.44**	**352**	Pg			**Pb**	**15 29 56.0**	**+0.3**
	72nm,0.5s								
MDOK				Lg			Lg	15 30 31.0	
	76nm,0.5s								
AAA	**Alma-Ata**	**2.50**	**350**	*eP*			**Pg**	**15 29 58.0**	**-1.7**
	172nm,0.3s								
AAA				*eS*			**Sg**	**15 30 34.1**	**+2.1**
	86nm,0.6s								
AAA	**Alma-Ata**	**2.50**	**350**	Pg			**Pg**	**15 29 58.0**	**-1.7**
	172nm,0.3s								
AAA				Lg			Lg	15 30 34.1	
	86nm,0.6s								
KNDC	**Almaty**	**2.50**	**351**	↓Pn			**Pb**	**15 29 54.2**	**-2.6**
	45nm,0.5s								
KNDC				↑Lg			Lg	15 30 31.9	
	155nm,0.5s								
KOTS	**Kotyrbulak**	**2.50**	**353**	↑*eP*			**Pb**	**15 29 57.5**	**+0.6**
	92nm,0.2s								
KOTS				*eS*			**Sg**	**15 30 33.3**	**+1.1**
	167nm,0.5s								
KOTS	**Kotyrbulak**	**2.50**	**353**	Pg			**Pb**	**15 29 57.6**	**+0.8**
	93nm,0.4s								
KOTS				Lg			Lg	15 30 33.3	
	167nm,0.5s								
MTBS	**Maitube**	**2.51**	**342**	↓*eP*			**Pb**	**15 29 57.6**	**+0.6**
	33nm,0.3s								
MTBS				*eS*			**Sg**	**15 30 33.2**	**+0.7**
	26nm,0.4s								
MTBS	**Maitube**	**2.51**	**342**	Pg			**Pb**	**15 29 57.5**	**+0.4**
	33nm,0.3s								
MTBS				Lg			Lg	15 30 33.2	
	26nm,0.4s								
ZHN	**Zhinishke**	**2.52**	**16**	*eP*			**Pb**	**15 29 56.9**	**-0.2**
	24nm,0.2s								
ZHN				*eS*			**Sg**	**15 30 32.0**	**-0.5**
	70nm,0.5s								
ZHN	**Zhinishke**	**2.52**	**16**	Pg			**Pb**	**15 29 56.9**	**-0.2**
	24nm,0.2s								
ZHN				Lg			Lg	15 30 32.0	
	70nm,0.5s								
KST	**Kastek**	**2.57**	**334**	↓*eP*			**Pb**	**15 29 58.5**	**+0.6**
	19nm,0.2s								
KST				*eS*			**Sg**	**15 30 34.7**	**+0.5**
	42nm,0.5s								
KST	**Kastek**	**2.57**	**334**	Pg			**Pb**	**15 29 58.4**	**+0.4**
	29nm,0.4s								
KST				Lg			Lg	15 30 34.7	
	42nm,0.5s								
TKM2	**Tokmak 2**	**2.60**	**327**	↑*iP*			**Pn**	**15 29 55.6**	**+1.5**
	baz=27								
TKM2				↑*iS*			**Sb**	**15 30 29.1**	**-1.6**
	baz=27								
TKM2	**Tokmak 2**	**2.60**	**327**	P			**Pg**	**15 29 59.9**	**-1.6**
	SNR=7.1								
TKM2	**Tokmak 2**	**2.60**	**327**	↑Pg			**Pb**	**15 29 59.3**	**+0.8**
	2.2nm,0.3s								
TKM2				↑Lg			Lg	15 30 34.8	
	17nm,0.5s								
UZB	**Uzymbulak**	**2.65**	**25**	↓*eP*			**Pb**	**15 29 59.0**	**-0.4**
	8.4nm,0.3s								
UZB				*eS*			**Sg**	**15 30 35.8**	**-1.1**
	72nm,0.6s								
UZB	**Uzynbulak**	**2.65**	**25**	Pg			**Pb**	**15 29 59.0**	**-0.4**
	11nm,0.6s								
UZB				Lg			Lg	15 30 36.1	
	72nm,0.6s								
UCH	**Uchtor**	**2.69**	**304**	↓*iP*			**Pn**	**15 29 56.9**	**+1.3**
	baz=5.0								
UCH				↓*iS*			**Sb**	**15 30 31.6**	**-2.0**
	baz=5.0								
UCH	**Uchtor**	**2.69**	**304**	P			**Pb**	**15 30 01.1**	**+0.7**
	SNR=22								
KBK	**Karagaybulak**	**2.71**	**316**	↓*iP*			**Pn**	**15 29 57.1**	**+1.6**
	baz=16								
KBK				↓*iS*			**Sb**	**15 30 31.9**	**-1.8**
	baz=16								
KBK	**Karagaybulak**	**2.71**	**316**	P			**Pb**	**15 30 01.1**	**+0.8**
	SNR=16								
DGS	**Degeres**	**2.81**	**333**	↑*eP*			**Pb**	**15 30 02.9**	**+0.8**
	20nm,0.5s								
DGS				*eS*			**Sg**	**15 30 41.9**	**-0.1**
	41nm,0.4s								
DGS	**Degeres**	**2.81**	**333**	Pg			**Pb**	**15 30 02.6**	**+0.5**
	20nm,0.5s								
DGS				Lg			Lg	15 30 41.8	
	41nm,0.4s								
SHLS	**Shalkode**	**2.81**	**31**	*eP*			**Pg**	**15 30 05.1**	**-0.5**
	23nm,0.3s								
SHLS				*eS*			**Sg**	**15 30 46.5**	**+4.4**
	138nm,0.6s								
SHLS	**Shalkode**	**2.81**	**31**	Pg			**Pg**	**15 30 05.1**	**-0.5**
	23nm,0.3s								
SHLS				Lg			Lg	15 30 46.5	
	138nm,0.6s								
AAK	**Ala-Archa**	**2.94**	**311**	↓*iP*			**Pn**	**15 30 00.1**	**+1.4**
	baz=12								
AAK				↓*iS*			**Sb**	**15 30 37.5**	**-3.0**
	baz=12								
AAK	**Ala-Archa**	**2.94**	**311**	P			**Pb**	**15 30 05.3**	**+0.8**
	SNR=7.0								
AAK	**Ala-Archa**	**2.94**	**311**	↑Pg			**Pb**	**15 30 05.2**	**+0.8**
	14nm,0.6s								
AAK				↓Lg			Lg	15 30 46.5	
	53nm,0.8s								
PDGK	**Podgornoye**	**2.97**	**29**	Pg			**Pb**	**15 30 04.4**	**-0.4**
	7.8nm,0.5s								
PDGK				Lg			Lg	15 30 45.1	
	40nm,0.8s								
FRU1	**Bishkek**	**2.98**	**315**	↑*iP*			**Pn**	**15 30 00.6**	**+1.4**
	baz=15								
FRU1				↑*iS*			**Sb**	**15 30 38.1**	**-3.4**
	baz=15								
KTBS	**Karatobe**	**3.02**	**349**	↑*eP*			**Pb**	**15 30 06.3**	**+0.6**
	12nm,0.2s								
KTBS				*eS*			**Sg**	**15 30 48.2**	**-0.7**
	32nm,0.2s								
KTBS	**Karatobe**	**3.02**	**349**	Pg			**Pb**	**15 30 06.3**	**+0.6**
	13nm,0.7s								
KTBS				Lg			Lg	15 30 48.2	
	58nm,0.6s								
CHMS	**Chumysh**	**3.05**	**318**	↓*iP*			**Pn**	**15 30 01.7**	**+1.6**
	baz=19								
CHMS				↓*iS*			**Sb**	**15 30 39.9**	**-3.5**
	baz=19								
CHMS	**Chumysh**	**3.05**	**318**	P			**Pb**	**15 30 07.1**	**+1.0**
	SNR=12								
CHKK	**Chushkaly**	**3.13**	**353**	↓*eP*			**Pb**	**15 30 07.8**	**+0.4**
	25nm,0.3s								
CHKK				*eS*			**Sg**	**15 30 50.9**	**-1.4**
	58nm,0.3s								
CHKK	**Chushkaly**	**3.13**	**353**	Pg			**Pb**	**15 30 08.1**	**+0.7**
	25nm,0.3s								
CHKK				Lg			Lg	15 30 51.6	
	58nm,0.3s								
AML	**Almayashu**	**3.19**	**297**	↓*iP*			**Pn**	**15 30 03.5**	**+1.2**
	baz=98								
AML				↓*iS*			**Sn**	**15 30 43.2**	**+2.7**
	baz=98								
AML	**Almayashu**	**3.19**	**297**	P			**Pg**	**15 30 11.4**	**-1.4**
	SNR=12								
KRBS	**Karabastau**	**3.25**	**336**	↑*eP*			**Pb**	**15 30 10.6**	**+1.1**
	17nm,0.2s								
KRBS				*eS*			**Sg**	**15 30 55.2**	**-0.8**
	17nm,0.7s								
KRBS	**Karabastau**	**3.25**	**336**	Pg			**Pb**	**15 30 10.5**	**+1.1**
	22nm,0.4s								
KRBS				Lg			Lg	15 30 55.2	
	17nm,0.7s								
KUU	**Kurty**	**3.26**	**345**	*eP*			**Pb**	**15 30 10.5**	**+0.8**
	5.9nm,0.2s								
KUU				*eS*			**Sg**	**15 30 55.3**	**-1.2**
	20nm,0.6s								
KUU	**Kurty**	**3.26**	**345**	Pg			**Pb**	**15 30 10.5**	**+0.8**
	8.8nm,0.5s								
KUU				Lg			Lg	15 30 55.3	
	20nm,0.6s								
USP	**Ospenovka**	**3.37**	**319**	↑*eP*			**Pn**	**15 30 06.2**	**+1.7**
	baz=20								
USP				↑*iS*			**Sn**	**15 30 47.7**	**+3.1**
	baz=20								
USP	**Ospenovka**	**3.37**	**319**	P			**Pb**	**15 30 13.1**	**+1.4**
	SNR=18								
EKS2	**Erkin-Say**	**3.39**	**306**	↓*iP*			**Pn**	**15 30 06.5**	**+1.7**
	baz=7.0								
EKS2				↓*iS*			**Sn**	**15 30 48.2**	**+3.1**
	baz=7.0								
EKS2	**Erkin-Say**	**3.39**	**306**	P			**Pg**	**15 30 14.2**	**-2.4**
	SNR=12								
MNBS	**Baschi**	**3.39**	**11**	*eP*			**Pb**	**15 30 13.3**	**+1.2**
	10nm,0.6s								
MNBS				*eS*			**Sg**	**15 31 00.1**	**-0.7**
	35nm,0.4s								
MNBS	**Baschi**	**3.39**	**11**	Pg			**Pb**	**15 30 13.3**	**+1.2**
	10nm,0.6s								
MNBS				Lg			Lg	15 31 00.1	
	35nm,0.4s								
KTMS	**Ketmen**	**3.43**	**37**	*eP*			**Pb**	**15 30 12.2**	**-0.4**
	0.4nm,0.1s								
KTMS				*eS*			**Sg**	**15 30 58.3**	**-3.5**
	32nm,0.5s								
KTMS	**Ketmen**	**3.43**	**37**	Pg			**Pb**	**15 30 12.4**	**-0.2**
KTMS				Lg			Lg	15 30 58.1	
ARXS	**Arharly**	**3.47**	**4**	*eP*			**Pb**	**15 30 14.3**	**+1.0**
	17nm,0.5s								
ARXS				*eS*			**Sg**	**15 31 01.7**	**-1.5**
	35nm,0.5s								
ARXS	**Arharly**	**3.47**	**4**	Pg			**Pb**	**15 30 15.0**	**+1.7**
	17nm,0.5s								
ARXS				Lg			Lg	15 31 02.2	
	35nm,0.5s								
MRKS	**Merke**	**3.78**	**303**	*eP*			**Pb**	**15 30 20.2**	**+1.7**
	7.4nm,0.4s								
MRKS				*eS*			**Sg**	**15 31 11.7**	**-1.4**
	9.2nm,0.5s								
MRKS	**Merke**	**3.78**	**303**	Pg			**Pb**	**15 30 20.2**	**+1.7**
	7.4nm,0.4s								
MRKS				Lg			Lg	15 31 11.7	
	9.2nm,0.5s								
KAPS	**Kapalarasan**	**4.73**	**16**	*eP*			**Pg**	**15 30 38.6**	**-3.7**
	3.2nm,0.4s								
KAPS				*eS*			**Sg**	**15 31 44.0**	**+0.3**
	9.4nm,0.5s								
KAPS	**Kapalarasan**	**4.73**	**16**	Pg			**Pg**	**15 30 38.6**	**-3.7**
	3.1nm,0.8s								
KAPS				Lg			Lg	15 31 44.0	
	9.4nm,0.5s								
BTLS	**Baital**	**4.99**	**330**	*eP*			**Pg**	**15 30 43.6**	**-3.7**
	3.1nm,0.2s								
BTLS				*eS*			**Sg**	**15 31 52.4**	**+0.5**
	10nm,0.7s								
BTLS	**Baital**	**4.99**	**330**	Pg			**Pg**	**15 30 43.6**	**-3.7**
	4.3nm,0.7s								
BTLS				Lg			Lg	15 31 52.4	
	10nm,0.7s								
KK31	**Karatay Array**	**5.73**	**297**	Pg			**Pg**	**15 30 57.6**	**-3.8**
	0.4nm,0.3s,baz=116,slow=17,SNR=5.8								
KK31				↑Lg			Lg	15 32 13.8	
	0.9nm,0.4s,baz=107,slow=29,SNR=5.8								
MAKZ	**Makanchi**	**6.87**	**27**	↑Lg			Lg	15 32 47.6	
	3.0nm,1.1s								
MK31	**Makanchi Array**	**6.96**	**28**	↑Pn			**Pn**	**15 30 55.4**	**+1.6**
	0.3nm,0.5s								
MK31				↓Sn			**Sn**	**15 32 14.9**	**+1.9**
	0.7nm,0.6s,baz=68,slow=36,SNR=3.8								
MK31				↑Lg			Lg	15 32 53.3	
	1.6nm,0.7s,baz=209,slow=28,SNR=4.1								
KURBB	**Kurchatov Arra**	**9.90**	**4**	↑Lg			Lg	15 34 27.1	
	6.1nm,0.9s								

*BEO **19** 15:29:31.5±0.2, 43°.41N×19°.03E, h0

DRME					*e*Sg	Sg	15 30 10.1	-0.2
TRUS	**Trudelj**	**1.31**	**50**		*e*Pg	Pn	15 29 55.2	-0.9
TRUS					*e*Sg	Sg	15 30 12.6	-0.5
GRUS	**Gruza**	**1.33**	**68**		*e*Pn	Pb	15 29 56.9	+0.2
GRUS					*e*Sg	Sg	15 30 13.3	-0.6
RICI	**Ricice**	**1.37**	**275**		*e*Pn	Pb	15 29 57.2	-0.1
RICI					Sn	Sn	15 30 19.5	+4.0
MAKA	**Makarska**	**1.45**	**266**		*e*Pn	Pn	15 29 58.3	+0.2
FRGS	**Fruska Gora**	**1.85**	**18**		*e*Sg	Pn	15 30 03.0	-0.6
FRGS	**Fruska Gora**	**1.85**	**18**		*e*Pn	Sn	15 30 30.0	+2.5
FRGS	**Fruska Gora**	**1.85**	**18**		*e*Pn	Pn	15 30 02.7	-0.9
FRGS					*e*Sn	Sn	15 30 26.7	-0.8
FRGS	**Fruska Gora**	**1.85**	**18**		*e*Pn	Pn	15 30 03.4	-0.2
FRGS					*e*Sn	Sn	15 30 27.4	-0.1
KIJV	**Kijevo**	**1.98**	**289**		*i* Pn	Pg	15 30 09.5	+0.4
ZAGS	**Zajecar**	**2.38**	**79**		*e*Pn	Pn	15 30 10.8	-0.1
MORI	**Morici**	**2.44**	**282**		*e*Pn	Pb	15 30 15.2	-0.3
MORI					Sn	Sg	15 30 49.5	0.0
ZIRJ	**Zirje**	**2.46**	**277**		*e*Pn	Pb	15 30 13.9	-1.9
ZIRJ					Sn	Sb	15 30 47.7	+1.3
ZAPS	**Zavoj**	**2.65**	**91**		*e*Pn	Pb	15 30 18.2	-0.9

ISC 19 15:35:08.9±1.1, 49°.75N±0°.05×18°.52E±0°.05, h0km, n16, σ0§74/26, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.26**	**289**	*e*PG	**Pg**	**15 35 14.0**	**+0.2**
OKC				*e*SG	**Sg**	**15 35 17.9**	**+0.8**
	comp=Z,29nm,0.4s						
MORC	**Moravsky Berou**	**0.63**	**272**	*e*PG	**Pg**	**15 35 21.1**	**+0.1**
MORC				*e*SG	**Sg**	**15 35 29.3**	**+0.1**
MORC	**Moravsky Berou**	**0.63**	**272**	*e*PG		15 49 41.2	
MORC				*e*SG		15 49 54.3	
LANS	**Liptovska Anna**	**0.86**	**134**	*e*PG	**Pg**	**15 35 25.6**	**+0.1**
LANS				*e*SG	**Sb**	**15 35 38.9**	**0.0**
JAVC	**Velka Javorina**	**1.05**	**212**	*e*PG	**Pb**	**15 35 30.4**	**+0.4**
JAVC				*e*SG	**Sg**	**15 35 43.6**	**+0.9**
VYHS	**Vyhne**	**1.28**	**170**	*e*PN	**Pg**	**15 35 33.0**	**-0.4**
VYHS				*e*SN	**Sb**	**15 35 51.9**	**+1.1**
VRAC	**Vranov**	**1.33**	**251**	*e*PG	**Pg**	**15 35 34.0**	**-0.4**
VRAC				*e*SG	**Sg**	**15 35 51.7**	**+0.1**
DPC	**Dobruska-Polom**	**1.54**	**294**	*e*PG	**Pn**	**15 35 36.4**	**-1.2**
DPC				*e*SG	**Sg**	**15 35 57.4**	**-0.9**
	comp=Z,6.7nm,0.6s						
KRUC	**Moravsky**	**1.55**	**244**	*e*PG	**Pn**	**15 35 37.4**	**-0.4**
KRUC				*e*SG	**Sg**	**15 35 58.8**	**+0.1**
OSTC	**Ostas**	**1.69**	**299**	*e*PG	**Pn**	**15 35 39.1**	**-0.6**
OSTC				*e*SG	**Sn**	**15 36 01.4**	**-0.6**
UPC	**Upice**	**1.78**	**296**	*e*PG	**Pn**	**15 35 40.8**	**-0.2**
UPC				*e*SG	**Sn**	**15 36 03.9**	**-0.4**
CHVC	**Chvalec**	**1.79**	**299**	*e*SG	**Sb**	**15 36 05.3**	**-0.3**
PRU	**Pruhonice**	**2.58**	**277**	*e*SG	**Sg**	**15 36 30.4**	**-1.5**
BRG	**Berggiesshubel**	**3.14**	**293**	SG	**Sb**	**15 36 45.5**	**+1.2**
	2.0nm,0.7s						
KHC	**Kasperske Hory**	**3.28**	**261**	*e*SG	**Sg**	**15 36 53.7**	**-0.7**
CLL	**Collm**	**3.85**	**296**	*e*Pg	**Pg**	**15 36 24.0**	**+1.4**
CLL				*e*Sg	**Sg**	**15 37 13.0**	**+0.5**

*IDC **19** 15:35:32.9±0.9, 3°.63S×151°.49E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.7/27, mbtmp3.7/8, ML1.6/1, MS3.0/5, Ms1 3.1/5, ms1mx2.8/23, Error ellipse: s-maj=23.6km s-min=15.7km az=61.0*

ISC 19 15:35:38.2±0.8, 3°.60S±0°.09×151°.5E±0°.1, h35km, n15, σ1§42/12, mb3.5/7, MS3.0/4, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.87**	**144**	Pn	**Pn**	**15 35 52.2**	**-1.7**
	52nm,0.3s,baz=273,slow=1.3,SNR=69						
KRVT				Sn	**Sn**	**15 36 06.6**	**+1.1**
PMG	**Port Moresby**	**7.21**	**217**	Pn	**Pn**	**15 37 20.2**	**-1.0**
	0.6nm,0.3s,baz=118,slow=21,SNR=1.6						
HNR	**Honiara**	**10.19**	**125**	LR	LR	15 42 04.8	
	comp=Z,135nm,18.8s,baz=328,slow=38						
CTA	**Charters Tower**	**17.17**	**197**	P	**P**	**15 39 39.4**	**+2.6**
	0.1nm,0.3s,baz=35,slow=16,SNR=3.3						
WRA	**Warramunga Arr**	**23.33**	**225**	P	**P**	**15 40 43.3**	**-0.2**
	1.0nm,0.7s,baz=49,slow=10,SNR=5.4						
ASAR	**Alice Springs**	**26.22**	**219**	P	**P**	**15 41 08.1**	**-1.9**
	1.1nm,1.0s,baz=54,slow=8.1,SNR=5.8						
KSRS	**Korea Array**	**46.36**	**334**	LR	LR	16 00 12.4	
	comp=Z,7.4nm,21.9s,baz=170,slow=32						
CMAR	**Chiang Mai Arr**	**56.20**	**295**	P	**P**	**15 45 15.0**	**-0.2**
	0.7nm,0.9s,baz=117,slow=5.7,SNR=2.4						
CMAR				LR	LR	16 09 04.2	
	comp=Z,7.6nm,19.3s,baz=200,slow=36						
PETK	**Petropavlovsk-**	**56.74**	**4**	P	**P**	**15 45 18.5**	**+0.1**
	1.8nm,1.0s,baz=158,slow=5.8,SNR=1.4						
MKAR	**Makanchi Array**	**78.58**	**319**	P	**P**	**15 47 36.5**	**+0.1**
	0.7nm,0.7s,baz=79,slow=7.5,SNR=2.2						
ILAR	**Eielson Array**	**81.54**	**22**	P	**P**	**15 47 51.2**	**-0.7**
	0.3nm,0.7s,baz=247,slow=5.8,SNR=2.9						
ARU	**Arti**	**94.61**	**326**	LR	LR	16 31 57.7	
	comp=Z,22nm,19.1s,baz=246,slow=36						
YKA	**Yellowknife Ar**	**94.97**	**28**	P	**P**	**15 48 58.2**	**+1.4**
	0.1nm,0.5s,baz=278,slow=4.4,SNR=1.5						
AKTO	**Aktyubinsk**	**94.98**	**320**	LR	LR	16 31 51.2	
	comp=Z,7.3nm,18.0s,baz=25,slow=36						
TORD	**Torodi Ar. Bea**	**148.70**	**289**	PKPbc	**PKiKP**	**15 55 24.1**	**-0.3**
	0.6nm,0.7s,baz=53,slow=3.0,SNR=4.2						

MAN 19 15:52:04.5, 9°.51N×121°.91E, h1km, mb4.1, ML2.9, MS2.6, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	**0.79**	**66**	*e*P	Pg	15 52 19.6	0.0
CNOP				*e*S	Sg	15 52 30.8	+1.0
GUIM	**Jordan**	**1.30**	**31**	*e*P	Pg	15 52 28.9	-0.5
GUIM				*e*S	Sn	15 52 48.6	+0.8
CUYO	**Cuyo Island**	**1.60**	**327**	*e*P	Pn	15 52 34.2	+0.3
CUYO				*e*S	Sb	15 52 55.7	+0.1

*LVSN **19** 16:20:36.6±4.2, 57°.79N×21°.41E, h0km±19km, ML2.3*
*HEL **19** 16:20:36.4±0.5, 57°.66N×21°.46E, h0km, ML2.0, Explosion*
*EST **19** 16:20:36.7±0.2, 57°.71N×21°.42E, h0km, ML2.0(HEL), Explosion*
*IDC **19** 16:20:38.8±3.1, 57°.84N×21°.54E, h0km, mb1 3.0/3, mb1mx2.8/37, mbtmp2.8/3, ML2.4/3, Error ellipse: s-maj=32.7km s-min=13.5km az=161.0*
*UPP **19** 16:20:38.6±0.9, 57°.79N×21°.37E, h0km, ML2.5, Suspected explosion*

ISC 19 16:20:37.0±0.8, 57°.75N±0°.03×21°.51E±0°.03, h0km, n50, σ1§30/79, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.44**	**106**	*e*P	**Pg**	**16 20 45.2**	**-0.1**
SLIT				*e*S	**Sg**	**16 20 52.2**	**+1.2**
SLIT				IAML		16 20 54.8	
	comp=Z,1μm,0.1s						
SLIT	**Slitere, Latvi**	**0.44**	**106**	*e*P	**Pg**	**16 20 45.9**	**+0.6**
SLIT				*e*S	**Sg**	**16 20 51.4**	**+0.4**
SLIT				AML	AML	16 21 16.6	
	comp=N,1μm,0.8s						
SLIT				AML	AML	16 21 16.8	
	comp=E,2μm,0.8s						
SLIT				AML	AML	16 21 17.0	
	comp=Z,1μm,0.7s						
SLIT	**Slitere, Latvi**	**0.44**	**106**	*e*P	**Pg**	**16 20 45.2**	**-0.1**
SLIT				*e*S	**Sg**	**16 20 51.8**	**+0.7**
MTSE	**Matsula**	**1.56**	**51**	*e*P	**Pn**	**16 21 05.0**	**-0.8**
MTSE				*e*S	**Sb**	**16 21 26.1**	**-0.7**
MTSE	**Matsula**	**1.56**	**51**	*e*P	**Pn**	**16 21 05.0**	**-0.8**
MTSE				*e*SN	**Sn**	**16 21 28.1**	**+1.5**
GOTU	**Gotland**	**1.58**	**269**	P	**Pn**	**16 21 05.4**	**-0.7**
GOTU				S	**Sn**	**16 21 28.5**	**+1.2**
PBUR	**Paburge**	**1.75**	**172**	*e*P	**Pn**	**16 21 08.0**	**-0.5**
PBUR				*e*S	**Sn**	**16 21 31.0**	**-0.5**
PBUR				IAML		16 21 39.9	
	comp=Z,37nm,0.3s						
PBUR	**Paburge**	**1.75**	**172**	*e*P	**Pn**	**16 21 09.3**	**+0.8**
PBUR				*e*S	**Sb**	**16 21 34.0**	**+1.6**
NYNU	**Nynaeshamn**	**2.23**	**306**	P	**Pn**	**16 21 15.8**	**+0.7**
NYNU				S	**Sn**	**16 21 45.6**	**+2.2**
NRTU	**Norrtaelje**	**2.44**	**323**	P	**Pn**	**16 21 18.6**	**+0.5**
BYXU	**Byxelkrok**	**2.47**	**261**	P	**Pn**	**16 21 19.9**	**+1.5**
	baz=250						

AAL	**Aland**	**2.56**	**343**		P	**Pn**	**16 21 19.6**	**-0.1**
AAL					S	**Sb**	**16 21 56.6**	**+1.1**
AAL	**Aland**	**2.56**	**343**		*e*P	**Pn**	**16 21 19.5**	**-0.1**
AAL					*e*SG	**Sb**	**16 21 56.8**	**+1.2**
PABE	**Paberze**	**2.63**	**148**		*e*P	**Pn**	**16 21 21.5**	**+0.9**
PABE					IAML		16 22 04.5	
	comp=Z,8.7nm,0.1s							
VIKU	**Vikbolandet**	**2.66**	**288**		P	**Pn**	**16 21 21.9**	**+0.9**
VIKU					S	**Sb**	**16 21 57.7**	**-0.9**
ASPU	**Aespoe**	**2.67**	**265**		P	**Pn**	**16 21 22.1**	**+1.0**
VSTU	**Vaestervik**	**2.67**	**270**		P	**Pn**	**16 21 22.5**	**+1.3**
VSU	**Vasula**	**2.86**	**73**		*e*P	**Pn**	**16 21 24.2**	**+0.4**
VSU					*e*S	**Sn**	**16 22 00.6**	**+1.7**
VSU					IAML		16 22 12.1	
	comp=Z,43nm,0.2s							
VSU	**Vasula**	**2.86**	**73**		*e*P	**Pn**	**16 21 24.4**	**+0.6**
VSU					AML	AML	16 21 27.9	
	comp=Z,71nm,0.2s							
VSU					*e*S	**Sb**	**16 22 04.7**	**+0.3**
VSU					AML	AML	16 22 14.6	
	comp=E,64nm,0.5s							
VSU					AML	AML	16 22 18.8	
	comp=N,51nm,0.5s							
VSU	**Vasula**	**2.86**	**73**		*e*P	**Pn**	**16 21 24.4**	**+0.6**
VSU					*e*PB	**Pb**	**16 21 27.0**	**-1.9**
VSU					*e*S	**Sn**	**16 21 59.4**	**+0.4**
VSU					*e*SB	**Sb**	**16 22 04.3**	**-0.1**
ARBE	**Arbavere**	**2.89**	**52**		*e*SB	**Sb**	**16 22 05.2**	**+0.1**
MEF	**Metsahovi**	**2.89**	**30**		*e*P	**Pn**	**16 21 27.0**	**+2.8**
MEF					*e*S	**Sb**	**16 22 05.0**	**-0.1**
MEF					AML	AML	16 22 08.2	
	comp=N,5.5nm,0.4s							
MEF					AML	AML	16 22 08.3	
	comp=Z,7.2nm,0.4s							
MEF					AML	AML	16 22 08.4	
	comp=E,6.8nm,0.2s							
MEF	**Metsahovi**	**2.89**	**30**		*e*PB	**Pn**	**16 21 26.9**	**+2.8**
MEF					*e*S	**Sn**	**16 21 59.6**	**+0.1**
MEF					*e*SB	**Sb**	**16 22 04.5**	**-0.6**
MEF					MSG		16 22 08.3	
	comp=Z,4.9nm,0.1s							
OSKU	**Oskarshamn**	**2.98**	**261**		P	**Pn**	**16 21 26.7**	**+1.3**
GRAU	**Graesoe**	**3.01**	**331**		P	**Pn**	**16 21 26.8**	**+1.0**
FLYU	**Flymyra**	**3.03**	**323**		P	**Pn**	**16 21 27.3**	**+1.1**
FIBU	**Brunna**	**3.05**	**317**		P	**Pn**	**16 21 27.5**	**+1.1**
BACU	**Backbrunna**	**3.11**	**314**		P	**Pn**	**16 21 28.2**	**+1.0**
LNKU	**Linkoeping**	**3.23**	**281**		P	**Pn**	**16 21 30.1**	**+1.2**
RAF	**Rauma**	**3.28**	**2**		*e*P	**Pn**	**16 21 30.3**	**+0.7**
RAF					*e*S	**Sn**	**16 22 10.3**	**+1.0**
RAF					AML	AML	16 22 25.1	
	comp=E,9.9nm,0.4s							
RAF					AML	AML	16 22 28.1	
	comp=N,5.6nm,0.5s							
RAF					AML	AML	16 22 28.2	
	comp=Z,6.2nm,0.8s							
RAF	**Rauma**	**3.28**	**2**		*e*P	**Pn**	**16 21 30.2**	**+0.6**
RAF					*e*S	**Sn**	**16 22 09.6**	**+0.3**
RAF					MSG		16 22 26.4	
	comp=Z,3.7nm,0.1s							
EKSU	**Eksjoe**	**3.34**	**270**		P	**Pn**	**16 21 30.9**	**+0.5**
ISAL	**Salakas**	**3.36**	**129**		*e*P	**Pn**	**16 21 30.9**	**+0.3**
OSTU	**Oestervaala**	**3.36**	**320**		P	**Pn**	**16 21 31.3**	**+0.7**
BLEU	**Blekinge**	**3.44**	**247**		P	**Pn**	**16 21 32.4**	**+0.7**
IIGN	**Ignalina**	**3.55**	**131**		*e*P	**Pn**	**16 21 33.5**	**+0.2**
IIGN					*e*S	**Sn**	**16 22 16.3**	**+0.4**
PVF	**Pernaja**	**3.59**	**37**		*e*P	**Pn**	**16 21 35.3**	**+1.6**
PVF					*e*S	**Sn**	**16 22 17.3**	**+0.6**
PVF					MSG		16 22 30.6	
	comp=Z,2.3nm,0.1s							
VXJU	**Vaexsjoe**	**3.66**	**260**		P	**Pn**	**16 21 35.0**	**+0.3**
VJF	**Virojoki**	**4.18**	**46**		*e*P	**Pn**	**16 21 42.9**	**+1.0**
FIA0	**FINESS Array S**	**4.37**	**30**		*e*P	**Pn**	**16 21 45.5**	**+1.0**
FIA0					*e*SG	**Sg**	**16 22 52.7**	**-4.4**
FIA0					MSG		16 22 54.9	
	comp=Z,1.5nm,0.1s							
FINES	**FINESS Array B**	**4.37**	**30**		Pn	**Pn**	**16 21 45.2**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=214,slow=11,SNR=7.3							
FINES					Pg	**Pb**	**16 21 54.4**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=214,slow=15,SNR=12							
FINES					Sn	**Sn**	**16 22 36.5**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=211,slow=23,SNR=1.9							
FINES					Lg	Lg	16 22 52.0	
	comp=Z,1.5nm,0.3s,baz=227,slow=25,SNR=14							
FIA1	**FINESS Array S**	**4.37**	**30**		*e*P	**Pn**	**16 21 45.5**	**+1.0**
FIA1					*e*S	**Sn**	**16 22 36.2**	**+0.1**
FIA1					*e*SG	**Sb**	**16 22 52.7**	**+4.9**
BSD	**Bornholm Skovb**	**4.52**	**237**		*i* P	**Pn**	**16 21 45.6**	**-0.9**
KEF	**Keuruu**	**4.74**	**19**		*e*P	**Pn**	**16 21 50.6**	**+1.0**
KAF	**Kangasniemi**	**4.99**	**27**		*e*P	**Pn**	**16 21 54.0**	**+0.9**
VAF	**Ylistaro**	**5.34**	**6**		*e*P	**Pn**	**16 21 58.0**	**+0.2**
SUF	**Sumiainen**	**5.49**	**23**		*e*P	**Pn**	**16 22 00.6**	**+0.7**
NOA	**NORSAR Array B**	**6.20**	**306**		Pn	**Pn**	**16 22 09.0**	**-0.7**
	comp=Z,0.0nm,0.3s,baz=124,slow=13,SNR=2.3							
NOA					Lg	Lg	16 23 51.9	
	comp=Z,0.1nm,0.3s,baz=96,slow=16,SNR=5.1							
JOF	**Joensuu**	**7.10**	**39**		*e*P	**Pn**	**16 22 21.6**	**-0.4**
ARCES	**ARCESS Array B**	**11.96**	**7**		Pn	**Pn**	**16 23 25.2**	**-3.2**
	comp=Z,0.2nm,0.3s,baz=185,slow=12,SNR=11							

*IDC **19** 16:21:48.9±4.1, 36°.42N×71°.08E, h211km±37km, mb3.2/6, mb1 3.3/12, mb1mx3.0/40, mbtmp3.8/12, Error ellipse: s-maj=30.2km s-min=21.1km az=24.0*
*NNC **19** 16:21:59.2±1.4, 37°.21N×71°.22E, h250km±15km, mb2.7, mpv3.9, Error ellipse: s-maj=13.9km s-min=8.5km az=10.0*

ISC 19 16:21:52.9±0.7, 36°.75N±0°.05×71°.22E±0°.08, h250km, n35, σ1§57/43, mb3.4/6, 5C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.97**	**169**	P	**Pn**	**16 22 47.1**	**+1.9**
CEP				S	**S**	**16 23 26.0**	**-0.6**
CHCP	**Chirah Chowk**	**3.50**	**151**	P	**Pn**	**16 22 51.2**	**+0.2**
THW	**Thamme Wali**	**3.96**	**174**	P	**Pn**	**16 22 55.5**	**-0.8**
SARP	**Sargodha**	**4.96**	**166**	P	**Pn**	**16 23 07.2**	**-1.0**
THN	**Thein Dam**	**5.68**	**138**	*e*P	**Pn**	**16 23 17.5**	**+0.5**
THN				*e*S	S	16 24 44.0	+20
AML	**Almayashu**	**5.71**	**19**	P	**Pn**	**16 23 19.1**	**+1.4**
	SNR=62						
UCH	**Uchtor**	**6.04**	**24**	P	**Pn**	**16 23 23.5**	**+1.7**
	SNR=53						
DHRM	**DHARAMSHALA**	**6.14**	**135**	*e*P	**Pn**	**16 23 23.2**	**+0.2**
DHRM				*e*S	**S**	**16 24 33.2**	**-1.8**
KZA	**Kyzart**	**6.17**	**29**	P	**Pn**	**16 23 25.0**	**+1.6**
	SNR=7.0						
EKS2	**Erkin-Say**	**6.23**	**18**	P	**Pn**	**16 23 25.8**	**+2.0**
	SNR=5.4						
KK31	**Karatay Array**	**6.37**	**355**	P	**Pn**	**16 23 26.1**	**+0.5**
	14nm,0.6s,baz=181,slow=13,SNR=93						
KK31				S	**S**	**16 24 36.1**	**-3.8**
	9.3nm,0.8s,baz=177,slow=16,SNR=11						
AAK	**Ala-Archa**	**6.40**	**22**	P	**Pn**	**16 23 28.0**	**+1.9**
	2.6nm,0.3s,baz=201,slow=5.5,SNR=29						
AAK				S	**S**	**16 24 40.6**	**-0.1**
	1.5nm,0.3s,baz=318,slow=23,SNR=12						
AAK	**Ala-Archa**	**6.40**	**22**	P	**Pn**	**16 23 28.0**	**+1.9**
	SNR=14						
AAK	**Ala-Archa**	**6.40**	**22**	⇓P	**Pn**	**16 23 27.6**	**+1.5**
	6.2nm,0.5s						
AAK				⇑S	**S**	**16 24 38.9**	**-1.8**
	14nm,0.6s						
CHMS	**Chumysh**	**6.81**	**22**	P	**Pn**	**16 23 33.1**	**+2.1**
	SNR=5.5						
TKM2	**Tokmak 2**	**7.03**	**27**	P	**Pn**	**16 23 36.1**	**+2.2**
	SNR=8.0						
TKM2	**Tokmak 2**	**7.03**	**27**	⇑P	**Pn**	**16 23 35.2**	**+1.3**
	4.0nm,0.5s						
TKM2				⇓S	**S**	**16 24 53.0**	**-2.0**
	16nm,0.8s						
SMLA	**Simla**	**7.47**	**137**	*e*P	**Pn**	**16 23 39.5**	**+0.1**
MDOK	**Medeo**	**7.81**	**33**	P	**Pn**	**16 23 45.3**	**+1.5**
	2.6nm,0.6s						
MDOK				S	**S**	**16 25 10.2**	**-3.0**
	3.8nm,0.9s						
MAKZ	**Makanchi**	**12.85**	**35**	⇑P	**P**	**16 24 48.4**	**-0.4**
	1.7nm,0.6s						
MK31	**Makanchi Array**	**12.99**	**36**	⇑P	**P**	**16 24 50.3**	**+0.1**
	0.2nm,0.4s,baz=215,slow=9.3,SNR=4.0						
MKAR	**Makanchi Array**	**12.99**	**36**	P	**P**	**16 24 49.7**	**-0.5**
	0.1nm,0.3s,baz=217,slow=14,SNR=6.2						
KURBB	**Kurchatov Arra**	**14.83**	**18**	P	**Pn**	**16 25 12.1**	**+1.3**
	0.1nm,0.3s,baz=209,slow=12,SNR=10						
AB31	**Akbulak array**	**14.96**	**330**	P	**Pn**	**16 25 13.3**	**+1.0**
	0.3nm,0.3s,baz=142,slow=13,SNR=25						
AB31				S	**S**	**16 27 55.8**	**-1.5**
	1.2nm,0.9s,baz=152,slow=23,SNR=4.7						
BVAR	**Borovoye Array**	**16.29**	**358**	P	**Pn**	**16 25 29.1**	**+1.0**
	1.4nm,0.3s,baz=164,slow=12,SNR=24						
BRVK	**Borovoye**	**16.33**	**358**	⇑P	**Pn**	**16 25 29.8**	**+1.2**
	1.7nm,0.4s						
AKTO	**Aktyubinsk**	**16.66**	**329**	P	**Pn**	**16 25 32.7**	**+0.2**
	1.2nm,0.3s,baz=137,slow=11,SNR=16						
AKTO	**Aktyubinsk**	**16.66**	**329**	⇓P	**Pn**	**16 25 32.2**	**-0.3**
	6.8nm,0.7s						
ZALV	**Zalesovo Beam**	**19.62**	**24**	P	**Pn**	**16 26 04.9**	**-2.2**
	0.4nm,0.3s,baz=222,slow=9.8,SNR=5.9						
FINES	**FINESS Array B**	**37.38**	**326**	P	**P**	**16 28 42.8**	**+1.3**
	1.5nm,1.0s,baz=119,slow=11,SNR=1.3						
ARCES	**ARCESS Array B**	**40.99**	**337**	P	**P**	**16 29 13.3**	**+2.2**
	0.4nm,0.4s,baz=133,slow=7.1,SNR=4.7						
TORD	**Torodi Ar. Bea**	**65.90**	**269**	P	**P**	**16 32 11.1**	**-1.2**
	0.5nm,0.5s,baz=50,slow=5.8,SNR=8.8						
YKA	**Yellowknife Ar**	**80.99**	**3**	P	**P**	**16 33 41.3**	**+2.0**
	0.2nm,0.6s,baz=351,slow=5.3,SNR=3.7						
WRA	**Warramunga Arr**	**81.97**	**122**	P	**P**	**16 33 45.2**	**+0.2**
	0.8nm,0.9s,baz=329,slow=4.8,SNR=3.5						
ASAR	**Alice Springs**	**84.25**	**125**	P	**P**	**16 33 56.5**	**-0.1**
	0.4nm,0.7s,baz=314,slow=5.2,SNR=8.3						

WEL 19 16:49:32.5, 41°.S±8°×17°.2E±°, h12km, M3.4/11, ML3.5/11, MLv3.4/11, Error ellipse: s-maj=0.0km s-min=0.0km az=179.7, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THZ	**Tophouse**	**0.55**	**134**	P	Pg	16 49 43.5	+0.3
THZ				S	Sb	16 49 52.0	0.0
DSZ	**Denniston Nort**	**0.56**	**230**	P	Pb	16 49 44.1	-0.2
DSZ				S	Sb	16 49 52.2	-0.1
QRZ	**Quartz Range**	**0.57**	**12**	P	Pg	16 49 42.3	-1.4
QRZ				S	Sg	16 49 48.9	-2.4
NNZ	**Nelson**	**0.78**	**78**	P	Pg	16 49 46.3	-1.2
NNZ				S	Sg	16 49 56.8	-0.8
BSWZ	**Blackbirch Sta**	**1.17**	**107**	P	Pn	16 49 54.8	0.0
TUWZ	**Tuamarina**	**1.18**	**93**	P	Pb	16 49 53.6	-1.2
DUWZ	**D'Urville Isla**	**1.31**	**64**	P	Pn	16 49 55.4	-1.2
KHZ	**Kahutara**	**1.35**	**140**	P	Pg	16 49 59.1	+0.7
LTZ	**Lake Taylor**	**1.40**	**183**	P	Pg	16 49 59.2	-0.1
CMWZ	**Cape Campbell**	**1.43**	**105**	P	Pg	16 50 00.2	+0.3
TCW	**Tory Channel**	**1.44**	**84**	P	Pn	16 49 58.0	-0.5
INZ	**Inchbonnie**	**1.51**	**207**	P	Pb	16 50 00.6	+0.2
GVZ	**Greta Valley S**	**1.65**	**163**	P	Pb	16 50 02.9	0.0
AMCZ	**Amberley**	**1.80**	**174**	P	Pn	16 50 04.4	+1.0
WEL	**Wellington**	**1.80**	**88**	P	Pb	16 50 04.9	-0.6
BHW	**Baring Head**	**1.88**	**91**	P	Pn	16 50 05.4	+0.9
OXZ	**Oxford**	**1.95**	**187**	P	Pn	16 50 08.5	+0.4
KIW	**Kapiti Island**	**1.98**	**75**	P	Pn	16 50 07.0	+1.1
CAW	**Cannon Point**	**2.05**	**83**	P	Pn	16 50 08.0	+1.2
MSWZ	**Moikau Station**	**2.16**	**92**	P	Pn	16 50 08.8	+0.4
PLWZ	**Palliser**	**2.17**	**96**	P	Pn	16 50 08.9	+0.3
OGWZ	**Otaki Gorge**	**2.19**	**76**	P	Pn	16 50 10.0	+1.3
PAWZ	**Paruwai Farm**	**2.30**	**91**	P	Pn	16 50 10.4	+0.2
MQZ	**McQueen's Vall**	**2.33**	**175**	P	Pn	16 50 10.5	-0.1
MTW	**Mount Morrison**	**2.37**	**85**	P	Pn	16 50 11.3	+0.1
OKCZ	**Okains Bay**	**2.39**	**168**	P	Pn	16 50 12.5	+1.0
NBEZ	**Newall Road No**	**2.40**	**29**	P	Pn	16 50 11.6	-0.1
HOWZ	**Holdsworth Sta**	**2.42**	**79**	P	Pn	16 50 12.3	+0.4
KHEZ	**Kahui Hut**	**2.44**	**31**	P	Pn	16 50 12.2	0.0
PREZ	**Palmer Road**	**2.46**	**34**	P	Pn	16 50 13.0	+0.5
LREZ	**Lake Rotokare**	**2.47**	**39**	P	Pn	16 50 13.2	+0.7
TRWZ	**Traveller**	**2.49**	**91**	P	Pn	16 50 13.0	+0.1
**RPZ

ASAR	**Alice Springs**	**32.25**	**244**	P	**P**	**17 37 16.2**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=80,slow=9.9,SNR=4.4						
ILAR	**Eielson Array**	**84.18**	**19**	P	**P**	**17 43 18.1**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=234,slow=4.7,SNR=5.9						
MKAR	**Makanchi Array**	**93.75**	**317**	P	**P**	**17 44 04.6**	**0.0**
	comp=Z,0.4nm,0.7s,baz=94,slow=7.7,SNR=5.1						

*IDC **19** 17:33:11.0±1.1, 33.°60S×179.°64E, h0km, mb4.2/5, mb1 4.4/6, mb1mx4.0/28, mbtmp4.2/6, ML3.5/1, MS3.4/1, Ms1 3.4/1, ms1mx2.7/27, Error ellipse: s-maj=28.2km s-min=25.5km az=43.0*

*NEIC **19** 17:33:14.3±1.3, 33.°58S±0.°06×179.°4E±0.°2, h16km±7km, mb4.5/3, Error ellipse: s-maj=19.1km s-min=6.4km az=109.0*

*WEL **19** 17:34:07.3, 37.°S±41.°×17.°8E±1.°1, h70km±22km, M2.6/13, ML2.6/12, MLv2.6/13, Error ellipse: s-maj=0.1km s-min=0.0km az=175.1*

ISC 19 17:33:16.5±0.9, 33.°58S±0.°10×179.°5E±0.°1, h35km, n43, σ1§09/33, mb4.2/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.09**	**193**	P	**Pn**	**17 34 18.5**	**+2.0**
MXZ	**Matakaoa Point**	**4.09**	**193**	Pn	**Pn**	**17 34 16.0**	**-0.4**
WMGZ	**Waiomatatini S**	**4.32**	**191**	P	**Pn**	**17 34 19.1**	**-0.5**
HAZ	**Te Kaha**	**4.39**	**198**	P	**Pn**	**17 34 21.3**	**+0.7**
PKGZ	**Pakihiroa**	**4.45**	**194**	P	**Pn**	**17 34 20.9**	**-0.5**
PUZ	**Puketiti**	**4.59**	**192**	P	**Pn**	**17 34 22.0**	**-1.4**
RUGZ	**Raukumara Rang**	**4.62**	**198**	P	**Pn**	**17 34 23.8**	**0.0**
TWGZ	**Tauwhareparae**	**4.75**	**194**	P	**Pn**	**17 34 25.1**	**-0.5**
CNGZ	**Carnagh Station**	**5.00**	**192**	P	**Pn**	**17 34 28.0**	**-1.0**
MWZ	**Matawai**	**5.00**	**198**	P	**Pn**	**17 34 29.9**	**+0.8**
EDRZ	**Edgecumbe**	**5.04**	**205**	P	**Pn**	**17 34 32.2**	**+2.6**
URZ	**Urewera**	**5.05**	**202**	Pn	**Pn**	**17 34 28.3**	**-1.4**
	1.8nm,0.3s,baz=138,slow=3.4,SNR=11						
URZ				Sn	**Sn**	**17 35 27.0**	**+0.2**
	4.3nm,0.3s,baz=252,slow=22,SNR=6.0						
URZ	**Urewera**	**5.05**	**202**	P	**Pn**	**17 34 30.1**	**+0.4**
OUZ	**Omahuta**	**5.13**	**250**		**Pn**	**17 34 29.2**	**-1.7**
TOZ	**Tahuroa Road**	**5.26**	**217**	P	Pn	17 34 45.9	+13
RIGZ	**Rimuhau**	**5.30**	**195**	P	**Pn**	**17 34 32.4**	**-0.8**
SNGZ	**Shannon Statio**	**5.47**	**198**	P	**Pn**	**17 34 35.3**	**-0.3**
MTHZ	**Maungataniwha**	**5.68**	**201**	P	**Pn**	**17 34 39.9**	**+1.6**
BKZ	**Black Stump Fm**	**6.07**	**203**	P	**Pn**	**17 34 43.1**	**-0.7**
BKZ	**Black Stump Fm**	**6.07**	**203**		**Pn**	**17 34 42.8**	**-1.0**
BHHZ	**Black Hill Sta**	**6.51**	**204**	P	Pn	17 34 57.0	+7.3
TRVZ	**Turoa**	**6.53**	**208**	P	Pn	17 34 57.3	+7.1
KAHZ	**Kahuranaki**	**6.54**	**198**	P	**Pn**	**17 34 48.3**	**-2.0**
VRZ	**Vera Road**	**6.72**	**213**	P	Pn	17 34 58.1	+5.5
DZM	**Mont Dzumac**	**16.24**	**312**	LR	LR	17 42 13.4	
	comp=Z,146nm,20.1s,baz=32,slow=33						
ASAR	**Alice Springs**	**40.93**	**272**	P	**P**	**17 40 56.8**	**+1.0**
	1.7nm,0.8s,baz=111,slow=7.1,SNR=21						
WB2	**Warramunga Arr**	**42.21**	**277**	P	**P**	**17 41 07.0**	**+0.7**
WB2				IAmb	IAmb	17 41 10.5	
	comp=Z,8.7nm,1.0s						
WRA	**Warramunga Arr**	**42.22**	**277**	P	**P**	**17 41 06.8**	**+0.5**
	comp=Z,3.7nm,0.8s,baz=117,slow=8.1,SNR=17						
WB0	**Warramunga Arr**	**42.25**	**277**	P	**P**	**17 41 07.3**	**+0.7**
WB0				IAmb	IAmb	17 41 11.0	
	comp=Z,8.4nm,1.1s						
QSPA	**South Pole Qui**	**56.54**	**180**	P	**P**	**17 42 55.0**	**-0.2**
	comp=Z,6.1nm,0.8s,baz=21,slow=0.4,SNR=40						
QSPA	**South Pole Qui**	**56.54**	**180**	P	**P**	**17 42 55.7**	**+0.5**
QSPA				IAmb	IAmb	17 42 56.1	
	comp=Z,5.2nm,0.7s						
SNAA	**Sanae**	**75.03**	**179**	P	**P**	**17 44 53.1**	**-1.0**
VNA3	**Neumayer Olymp**	**75.27**	**177**	P	**P**	**17 44 54.4**	**-0.9**
VNA2	**Neumayer--Watz**	**75.67**	**178**	P	**P**	**17 44 57.2**	**-0.4**
H03S2	**Juan Fernandez**	**80.47**	**124**	T	T	19 13 57.3	
	baz=234,slow=74,SNR=17						
H03S1	**Juan Fernandez**	**80.48**	**124**	T	T	19 13 59.7	
	baz=234,slow=74,SNR=14						
H03S3	**Juan Fernandez**	**80.49**	**124**	T	T	19 14 00.9	
	baz=234,slow=74,SNR=12						
H03N3	**Juan Fernandez**	**80.69**	**124**	T	T	19 14 10.1	
	baz=239,slow=72,SNR=77						
H03N2	**Juan Fernandez**	**80.69**	**124**	T	T	19 14 11.7	
	baz=239,slow=72,SNR=67						
H03N1	**Juan Fernandez**	**80.70**	**124**	T	T	19 14 21.6	
	baz=239,slow=72,SNR=92						
PLCA	**Paso Flores**	**81.88**	**134**	P	**P**	**17 45 31.8**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=215,slow=5.1,SNR=6.3						
NVAR	**Mina Array Bea**	**92.01**	**44**	P	**P**	**17 46 22.4**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=231,slow=5.7,SNR=4.2						
FINES	**FINESS Array B**	**147.30**	**337**	PKPbc	**PKPdf**	**17 52 53.9**	**+0.8**
	comp=Z,2.4nm,0.9s,baz=64,slow=4.4,SNR=3.5						

*MAN **19** 18:01:46.4, 3.°11N×128.°60E, h41km, mb5.2, ML4.1, MS4.3*
*DJA **19** 18:01:48.0±0.4, 3.°N±5.°×12.°8E±.°, h211km±5km, M4.2/10, mB4.7/3, mb4.1/8, MLv4.2/10, Mw(mB)3.9/3*

*NEIC **19** 18:01:48.1±1.4, 3.°0N±0.°1×128.°58E±0.°09, h232km±9km, mb4.2/19, Error ellipse: s-maj=19.0km s-min=8.3km az=213.0*

*IDC **19** 18:01:49.3±2.2, 3.°01N×128.°73E, h249km±24km, mb3.5/14, mb1 3.6/16, mb1mx3.4/37, mbtmp4.1/16, Error ellipse: s-maj=22.4km s-min=9.1km az=82.0*

ISC 19 18:01:45.9±0.5, 3.°14N±0.°05×128.°61E±0.°08, h200km, n63, σ1§38/70, mb4.1/25, 1C-1D, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.66**	**208**	P	**Pn**	**18 02 33.3**	**+1.7**
TNTI	**Ternate**	**2.66**	**208**		**Pn**	**18 02 33.4**	**+1.8**
LBMI	**Labuha**	**3.91**	**196**	P	**Pn**	**18 02 47.9**	**+1.3**
LBMI				S	**Sn**	**18 03 35.6**	**+1.3**
DDMP	**Don Marcelino,**	**4.13**	**316**	*e*P	**Pn**	**18 02 49.6**	**+0.3**
DDMP				*e*S	**Sn**	**18 03 40.1**	**+0.9**
MATI	**Mati**	**4.45**	**328**	*e*P	**Pn**	**18 02 52.9**	**-0.5**
MATI				*e*S	**Sn**	**18 03 44.9**	**-1.7**
SIJI	**Sorong**	**4.78**	**146**	P	**Pn**	**18 03 00.8**	**+3.2**
	1.4nm,0.3s,baz=333,slow=20,SNR=8.4						
DAV	**Davao City (W)**	**4.94**	**322**	S	**Sn**	**18 04 02.9**	**+5.2**
	58nm,0.3s,baz=64,slow=13,SNR=2.4						
KCP	**Kidapawan**	**5.20**	**318**	*i*P	**Pn**	**18 03 05.5**	**+2.4**
KCP				*i* S	**Sn**	**18 04 05.7**	**+1.8**
SKMP	**Bagumbayan, Su**	**5.26**	**310**	*e*P	**Pn**	**18 03 04.1**	**+0.4**
SKMP				*e*S	**Sn**	**18 04 05.0**	**-0.1**
KMSI	**Cibinong**	**5.28**	**241**	P	**Pn**	**18 03 04.5**	**+0.6**
	1.1nm45nm,0.8s						
BUKP	**Musuan**	**5.89**	**323**	*e*P	**Pn**	**18 03 13.1**	**+1.3**
CTBH	**Cotabato--PC H**	**5.95**	**313**	*i*P	**Pn**	**18 03 13.6**	**+1.1**
NLAI	**Namlea**	**6.51**	**193**	P	**Pn**	**18 03 20.5**	**+0.7**
	0.2nm49nm,0.6s						
LUWI	**Luwuk**	**7.16**	**235**		**Pn**	**18 03 29.7**	**+1.4**
MRSI	**Marisa**	**7.17**	**249**	P	**Pn**	**18 03 29.5**	**+1.1**
	0.1nm501nm18nm,0.6s						
GENI	**Genyem**	**12.88**	**116**	P	**Pn**	**18 04 44.2**	**+2.2**
	14nm,0.7s						
JAY	**Jayapura**	**13.33**	**115**	P	**Pn**	**18 04 47.7**	**0.0**
	0.4nm,0.3s,baz=124,slow=16,SNR=1.5						
JAY	**Jayapura**	**13.33**	**115**	P	**P**	**18 04 52.1**	**+1.6**
	7.0nm,1.0s						
FITZ	**Fitzroy Crossi**	**21.30**	**188**	P	**P**	**18 06 15.3**	**-1.8**
	1.2nm,0.5s,baz=4.0,slow=8.0,SNR=9.2						
WB0	**Warramunga Arr**	**23.46**	**166**	P	**P**	**18 06 35.9**	**-1.7**
WB0				IAmb	IAmb	18 06 37.1	
	comp=Z,4.2nm,0.6s						
WRAB	**Tennant Creek**	**23.61**	**166**	P	**P**	**18 06 37.2**	**-1.7**
WRAB				IAmb	IAmb	18 07 26.0	
	comp=Z,19nm,1.6s						
WRA	**Warramunga Arr**	**23.61**	**166**	P	**P**	**18 06 36.7**	**-2.3**
	comp=Z,0.9nm,0.5s,baz=345,slow=10,SNR=31						
WB2	**Warramunga Arr**	**23.62**	**166**	P	**P**	**18 06 37.4**	**-1.6**
WB2				IAmb	IAmb	18 07 19.5	
	comp=Z,18nm,1.6s						
WR0	**Warramunga Arr**	**23.68**	**166**	P	**P**	**18 06 38.0**	**-1.6**
AS31	**Alice Springs**	**27.13**	**169**	P	**P**	**18 07 09.2**	**-1.5**
ASAR	**Alice Springs**	**27.14**	**169**	P	**P**	**18 07 08.9**	**-1.8**
	comp=Z,1.4nm,0.4s,baz=349,slow=7.0,SNR=101						
ASAR				pP	**pwP**	**18 07 54.4**	**+1.6**
	comp=Z,1.2nm,0.8s,baz=353,slow=10,SNR=8.7						
ASAR				PcP	**PcP**	**18 10 24.9**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=348,slow=2.5,SNR=4.7						
JNU	**Nakatsue**	**29.91**	**4**	P	**P**	**18 07 35.3**	**+0.2**
	comp=Z,3.1nm,0.6s,baz=358,slow=5.4,SNR=4.9						
CMAR	**Chiang Mai Arr**	**32.79**	**300**	P	**P**	**18 08 01.8**	**+1.2**
	comp=Z,1.3nm,0.6s,baz=116,slow=7.6,SNR=12						
CHTO	**Chiang Mai**	**32.94**	**300**	P	**P**	**18 08 02.1**	**+0.3**
CHTO				IAmb	IAmb	18 08 03.0	
	comp=Z,3.0nm,0.7s						
INU	**Inuyama**	**32.99**	**13**	P	**P**	**18 08 02.2**	**+0.2**
KSRS	**Korea Array**	**34.16**	**359**	P	**P**	**18 08 11.6**	**-0.5**
	comp=Z,1.8nm,0.4s,baz=177,slow=9.7,SNR=15						
KS19	**Wonju Array Si**	**34.21**	**359**	P	**P**	**18 08 12.8**	**+0.3**
MJAR	**Matsushiro Arr**	**34.40**	**14**	P	**P**	**18 08 13.3**	**-1.0**
	comp=Z,4.3nm,0.5s,baz=184,slow=9.0,SNR=20						
MAJO	**Matsushiro**	**34.40**	**14**	P	**P**	**18 08 13.4**	**-0.9**
MAJO				IAmb	IAmb	18 08 14.7	
	comp=Z,7.8nm,0.6s						
MAT	**Matsushiro**	**34.40**	**14**	P	**P**	**18 08 13.2**	**-1.0**
MJB9	**Matsu-Tunnel**	**34.41**	**14**	P	**P**	**18 08 13.3**	**-1.0**
MJB9				IAmb	IAmb	18 08 14.9	
	comp=Z,7.2nm,0.6s						
STKA	**Stephens Creek**	**36.94**	**161**	P	**P**	**18 08 33.3**	**-2.6**
	comp=Z,1.0nm,0.2s,baz=340,slow=7.9,SNR=22						
STKA	**Stephens Creek**	**36.94**	**161**	P	**P**	**18 08 34.0**	**-1.8**
USRK	**Ussuriysk Ar.**	**41.00**	**4**	P	**P**	**18 09 09.6**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=135,slow=8.9,SNR=5.7						
LSA	**Lhasa**	**44.24**	**311**	P	**P**	**18 09 35.8**	**-0.4**
TAPN	**Taplejung**	**45.88**	**306**	*e*P	**P**	**18 09 49.1**	**+0.1**
	comp=Z,9.7nm,0.6s						
RAMN	**Ramite**	**46.62**	**305**	*e*P	**P**	**18 09 55.0**	**+0.3**
	comp=Z,18nm,0.4s						
JIRN	**Jiri**	**47.24**	**305**	*e*P	**P**	**18 09 59.8**	**+0.2**
	comp=Z,21nm,0.3s						
GUN	**Gumba**	**47.59**	**306**	*e*P	**P**	**18 10 01.8**	**-0.5**
	comp=Z,14nm,0.4s						
PKI	**Pulchoki**	**47.84**	**305**	*e*P	**P**	**18 10 03.7**	**-0.5**
	comp=Z,4.6nm,0.3s						
PKIN	**Phulchoki**	**47.85**	**305**	*e*P	**P**	**18 10 03.7**	**-0.5**
	comp=Z,6.3nm,0.3s						
KKN	**Kakani**	**48.03**	**305**	*e*P	**P**	**18 10 05.0**	**-0.5**
	comp=Z,6.6nm,0.4s						
ULN	**Ulaanbaatar**	**48.28**	**341**	P	**P**	**18 10 07.4**	**+0.4**
SONM	**Songino Array**	**48.47**	**340**	P	**P**	**18 10 08.7**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=156,slow=9.5,SNR=5.7						
GKN	**Gorkha**	**48.64**	**305**	*e*P	**P**	**18 10 09.8**	**-0.3**
	comp=Z,5.0nm,0.3s						
KOLN	**Koldanda**	**49.40**	**304**	*e*P	**P**	**18 10 16.1**	**+0.1**
	comp=Z,17nm,0.3s						
DANN	**Dangsing**	**49.49**	**305**	*e*P	**P**	**18 10 16.5**	**-0.2**
	comp=Z,19nm,0.3s						
PYUN	**Piuthan**	**50.02**	**305**	*e*P	**P**	**18 10 20.5**	**-0.2**
	comp=Z,15nm,0.5s						
PETK	**Petropavlovsk-**	**55.29**	**21**	P	**P**	**18 10 59.0**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=170,slow=2.5,SNR=3.3						
YAK	**Yakutsk**	**58.76**	**1**	P	**P**	**18 11 22.8**	**+0.1**
MKAR	**Makanchi Array**	**59.12**	**325**	P	**P**	**18 11 25.1**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=111,slow=7.1,SNR=28						
MKAR				PcP	**pP**	**18 12 09.7**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=133,slow=4.6,SNR=3.7						
MAKZ	**Makanchi**	**59.30**	**325**	P	**P**	**18 11 26.4**	**-0.3**
MAKZ				IAmb	IAmb	18 11 27.3	
	comp=Z,4.1nm,1.1s						
KDJ	**Kajisay**	**60.04**	**318**	P	**P**	**18 11 32.2**	**+0.2**
KDJ				IAmb	IAmb	18 12 03.1	
	comp=Z,4.2nm,0.8s						
ZALV	**Zalesovo Beam**	**61.97**	**332**	P	**P**	**18 11 43.2**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=132,slow=6.6,SNR=6.0						
KURK	**Kurchatov**	**63.25**	**327**	P	**P**	**18 11 52.5**	**-0.6**
KURK				IAmb	IAmb	18 11 53.2	
	comp=Z,3.9nm,0.6s						
TIXI	**Tiksi**	**68.42**	**0**	P	**P**	**18 12 24.6**	**-1.1**
TIXI				IAmb	IAmb	18 12 25.6	
	comp=Z,2.3nm,0.7s						
BRVK	**Borovoye**	**68.91**	**327**	P	**P**	**18 12 28.4**	**-0.7**
BRVK				IAmb	IAmb	18 12 28.7	
	comp=Z,2.9nm,0.5s						
ARCES	**ARCESS Array B**	**91.65**	**340**	P	P	18 14 26.8	-3.2
	comp=Z,3.9nm,1.1s,baz=81,slow=7.5,SNR=6.4						

*IDC **19** 18:21:03.5±0.6, 49.°61S×126.°12E, h0km, mb4.5/15, mb1 4.7/16, mb1mx4.4/37, mbtmp4.6/16, ML3.6/1, MS4.0/18, Ms1 4.0/18, ms1mx3.9/32, Error ellipse: s-maj=29.5km s-min=13.4km az=94.0*

*NEIC **19** 18:21:05.2±2.2, 49.°59S±0.°09×126.°1E±0.°2, h10km±1km, mb4.8/18, Error ellipse: s-maj=24.7km s-min=14.6km az=108.0*

*GCMT **19** 18:21:06.2±0.2, 49.°53S±0.°01×125.°99E±0.°02, h22km±1km, MW5.1/105, Moment Tension Solution. s51,c75; s105,c159; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-0.43±.15; Mθθ2.62±.14; Mϕϕ-2.19±.15; Mrθ0.86±.21; Mθϕ4.38±.10; Mϕr-0.30±.22; Best double couple: M=5.08300×10^16^ NP1:ϕs15.00000°, δ79.00000°, λ-178.00000°. NP2:ϕs284.00000°, δ88.00000°, λ-11.00000°. Principal axes: T 5.2730, Plg6.0000°, Azm330.0000°; N -0.3860, Plg79.0000°, Azm93.0000°; P -4.8930, Plg9.0000°, Azm239.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 18:21:05.4±0.5, 49.°58S±0.°08×126.°1E±0.°1, h10km, n76, σ1§46/58, mb4.7/22, MS4.1/20, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAU	**Tasmania Unive**	**16.12**	**74**	P	**Pn**	**18 24 53.0**	**+1.0**
TAU				IAmb	IAmb	18 24 55.6	
	comp=Z,69nm,1.2s						
H01W1	**Cape Leeuwin H**	**17.08**	**325**	T	T	18 42 33.2	
	baz=154,slow=76,SNR=349						
H01W2	**Cape Leeuwin H**	**17.08**	**325**	T	T	18 42 31.4	
	baz=154,slow=76,SNR=359						
H01W3	**Cape Leeuwin H**	**17.09**	**325**	T	T	18 42 30.1	
	baz=154,slow=76,SNR=351						
NWAO	**Narrogin (SRO)**	**17.88**	**335**	P	**P**	**18 25 14.8**	**+0.1**
	comp=Z,9.1nm,0.3s,baz=160,slow=8.0,SNR=82						
NWAO				LR	LR	18 30 28.8	
	comp=Z,1μm,19.5s,baz=158,slow=32						
NWAO	**Narrogin (SRO)**	**17.88**	**335**	P	**Pn**	**18 25 11.8**	**-2.4**
NWAO				IAmb	IAmb	18 25 16.3	
	comp=Z,57nm,0.6s						
STKA	**Stephens Creek**	**21.17**	**39**	P	**P**	**18 25 49.0**	**-1.6**
	comp=Z,23nm,0.9s,baz=195,slow=11,SNR=34						
STKA				LR	LR	18 32 35.3	
	comp=Z,281nm,21.1s,baz=207,slow=33						
STKA	**Stephens Creek**	**21.17**	**39**	P	**P**	**18 25 50.4**	**-0.3**
CAN	**Canberra**	**22.01**	**58**	P	**P**	**18 26 00.2**	**+0.5**
CAN				IAmb	IAmb	18 26 05.3	
	comp=Z,41nm,1.3s						
ASAR	**Alice Springs**	**26.59**	**16**	P	**P**	**18 26 42.4**	**-1.3**
	comp=Z,24nm,0.7s,baz=194,slow=8.4,SNR=395						
ASAR				PcP	**PcP**	**18 30 08.8**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=197,slow=1.9,SNR=2.7						
ASAR				LR	LR	18 36 15.9	
	comp=Z,207nm,21.1s,baz=191,slow=34						
AS31	**Alice Springs**	**26.59**	**16**	P	**P**	**18 26 42.2**	**-1.5**
ARMA	**Armidale**	**27.17**	**55**	P	**P**	**18 26 49.3**	**+0.3**
WRA	**Warramunga Arr**	**30.30**	**16**	P	**P**	**18 27 14.9**	**-1.9**
	comp=Z,3.2nm,0.4s,baz=195,slow=8.2,SNR=44						
WB2	**Warramunga Arr**	**30.30**	**16**	P	**P**	**18 27 14.9**	**-1.9**
WB2				IAmb	IAmb	18 27 24.5	
	comp=Z,17nm,1.1s						
WRAB	**Tennant Creek**	**30.31**	**16**	P	**P**	**18 27 13.7**	**-3.2**
WRAB				IAmb	IAmb	18 27 25.2	
	comp=Z,14nm,1.1s						
WR0	**Warramunga Arr**	**30.32**	**16**	P	**P**	**18 27 14.5**	**-2.4**
WR0				IAmb	IAmb	18 27 42.2	
	comp=Z,16nm,1.3s						
WB0	**Warramunga Arr**	**30.48**	**16**	P	**P**	**18 27 15.4**	**-3.0**
VNDA	**Vanda**	**31.16**	**166**	P	**P**	**18 27 22.9**	**-0.9**
	comp=Z,2.6nm,0.8s,baz=315,slow=8.2,SNR=17						
VNDA				LR	LR	18 38 45.1	
	comp=Z,707nm,20.4s,baz=324,slow=34						
VNDA	**Vanda**	**31.16**	**166**	P	**P**	**18 27 22.7**	**-1.1**
FITZ	**Fitzroy Crossi**	**31.40**	**359**	P	**P**	**18 27 27.5**	**+1.0**
	comp=Z,2.8nm,0.7s,baz=188,slow=10,SNR=6.2						
FITZ				LR	LR	18 38 56.5	
	comp=Z,371nm,19.1s,baz=183,slow=34						
MAW	**Mawson**	**35.54**	**216**	LR	LR	18 40 10.5	
	comp=Z,219nm,18.3s,baz=66,slow=32						
BATI	**Baumata**	**39.30**	**356**	P	**P**	**18 28 35.4**	**+1.0**
	comp=Z,22nm,0.7s,baz=180,slow=7.1,SNR=2.9						
BATI				LR	LR	18 43 47.8	
	comp=Z,500nm,21.7s,baz=192,slow=35						
QSPA	**South Pole Qui**	**40.55**	**180**	P	**P**	**18 28 43.1**	**-1.4**
	comp=Z,2.8nm,0.8s,baz=131,slow=1.9,SNR=8.9						
QSPA	**South Pole Qui**	**40.55**	**180**	P	**P**	**18 28 44.6**	**+0.1**
QSPA				IAmb	IAmb	18 29 02.2	
	comp=Z,24nm,1.6s						
DZM	**Mont Dzumac**	**41.97**	**64**	*e*LR	LR	18 40 36.0	
	comp=Z,710nm,28.2s						
PMG	**Port Moresby**	**43.74**	**31**	LR	LR	18 47 59.3	
	comp=Z,131nm,19.3s,baz=194,slow=37						
CISI	**Cisompet, Garu**	**44.59**	**334**	P	**P**	**18 29 16.9**	**-0.8**
LEM	**Lembang**	**45.34**	**334**	P	**P**	**18 29 24.2**	**+0.4**
	comp=Z,12nm,0.5s,baz=174,slow=12,SNR=5.0						
LEM				LR	LR	18 45 21.9	
	comp=Z,249nm,21.2s,baz=172,slow=32						
JAY	**Jayapura**	**48.53**	**20**	P	**P**	**18 29 48.4**	**-0.1**
	comp=Z,8.3nm,1.1s,baz=9.8,slow=20,SNR=4.2						
HNR	**Honiara**	**48.95**	**47**	LR	LR	18 48 59.3	
	comp=Z,200nm,18.0s,baz=199,slow=34						
SNAA	**Sanae**	**53.79**	**198**	P	**P**	**18 30 27.1**	**-0.4**
SNAA	**Sanae**	**53.79**	**198**	P	**P**	**18 30 26.5**	**-1.0**
	comp=Z,5.7nm,0.9s,baz=147,slow=8.6,SNR=18						
SNAA	**Sanae**	**53.79**	**198**	P	**P**	**18 30 26.5**	**-1.0**
SNAA				IAmb	IAmb	18 30 38.0	
	comp=Z,13nm,0.9s						
BKNI	**Bangkinang**	**54.15**	**329**	P	**P**	**18 30 28.7**	**-2.0**
VNA2	**Neumayer--Watz**	**55.27**	**197**	P	**P**	**18 30 39.4**	**+1.2**
VNA3	**Neumayer Olymp**	**55.42**	**196**	P	**P**	**18 30 39.3**	**0.0**
VNA1	**Neumayer--Stat**	**55.66**	**197**	P	**P**	**18 30 41.5**	**+0.5**
GSI	**Gunungsitoli**	**56.30**	**325**	P	**P**	**18 30 46.9**	**+0.7**
DAV	**Davao City (W)**	**56.41**	**359**	LR	LR	18 54 27.6	
	comp=Z,96nm,20.9s,baz=122,slow=36						
RPSI	**Rantau Prapat**	**57.09**	**327**	P	**P**	**18 30 50.5**	**-1.3**
RPSI				IAmb	IAmb	18 31 00.7	
	comp=Z,13nm,0.7s						
RPSI	**Rantau Prapat**	**57.09**	**327**	P	**P**	**18 30 51.0**	**-0.8**
PSI	**Prapat**	**57.19**	**327**	P	**P**	**18 30 51.0**	**-1.6**
	comp=Z,5.3nm,0.3s,baz=178,slow=6.2,SNR=4.3						
PSI				LR	LR	18 56 12.7	
	comp=Z,115nm,18.0s,baz=264,slow=37						
IPM	**Ipoh**	**58.05**	**330**	P	**P**	**18 30 57.1**	**-1.4**
IPM				IAmb	IAmb	18 31 08.7	
	comp=Z,7.5nm,0.8s						
H08S2	**Diego Garcia H**	**61.08**	**294**	T	T	19 37 21.5	
	baz=143,slow=76,SNR=13						
H08S1	**Diego Garcia H**	**61.09**	**294**	T	T	19 37 29.6	
	baz=143,slow=76,SNR=12						
H08S3	**Diego Garcia H**	**61.10**	**294**	T	T	19 37 27.8	
	baz=143,slow=76,SNR=12						
TBI	**Tubuai**	**69.11**	**102**	*e*LR	LR	18 53 05.0	
	comp=Z,125nm,24.5s						
CMAR	**Chiang Mai Arr**	**71.87**	**333**	P	**P**	**18 32 27.9**	**-0.5**
	comp=Z,2.0nm,0.3s,baz=184,slow=5.5,SNR=14						
CMAR				LR	LR	19 05 35.1	
	comp=Z,91nm,18.2s,baz=206,slow=37						
PPT2	**Papeete2**	**73.21**	**97**	*e*LR	LR	18 54 57.1	
	comp=Z,103nm,22.2s						
PPT	**Papeete**	**73.22**	**97**	LR	LR	18 56 34.7	
	comp=Z,54nm,20.6s,baz=212,slow=29						
BOSA	**Boshof**	**75.26**	**243**	P	**P**	**18 32 48.3**	**-0.2**
	comp=Z,2.5nm,1.0s,baz=159,slow=10.0,SNR=4.0						
BOSA				LR	LR	18 59 04.3	
	comp=Z,110nm,20.2s,baz=162,slow=30						
RKT	**Rikitea**	**78.30**	**112**	*e*LQ	LQ	18 53 59.0	
	comp=Z,393nm,31.5s						
RKT				*e*LR	LR	18 57 17.1	
	comp=Z,316nm,30.2s						
ODAN	**Odare**	**83.51**	**326**	*e*P	**P**	**18 33 35.7**	**+2.3**
	comp=Z,4.9nm,0.6s						
RAMN	**Ramite**	**83.89**	**325**	*e*P	**P**	**18 33 38.0**	**+2.6**
	comp=Z,8.8nm,0.6s						
PKIN	**Phulchoki**	**84.90**	**325**	*e*P	**P**	**18 33 42.5**	**+2.0**
	comp=Z,10nm,0.9s						
KKN	**Kakani**	**85.14**	**325**	*e*P	**P**	**18 33 43.4**	**+1.7**
	comp=Z,19nm,0.8s						
KOLN	**Koldanda**	**85.77**	**323**	*e*P	**P**	**18 33 46.2**	**+1.4**
	comp=Z,12nm,0.6s						
DANN	**Dangsing**	**86.22**	**324**	*e*P	**P**	**18 33 48.6**	**+1.5**
	comp=Z,26nm,0.6s

PET pmax pmax
comp=Z,1µm,0.4s
PET pmax pmax
comp=Z,2µm,0.4s
PET smax smax
comp=N,2µm,1.2s
PET smax smax
comp=E,15µm,0.9s
PET smax smax
comp=E,17µm,0.8s
PET smax smax
comp=N,12µm,0.5s
PET smax smax
comp=N,17µm,0.5s
PET Petropavlovsk 0.82 304 Pn 18 51 07.4 -0.1
UGLR Uglovaya 0.86 318 *e*P **Pn 18 51 09.2 +1.0**
UGLR Uglovaya 0.86 318 PN **Pn 18 51 09.2 +1.0**
SDLR Sedlovina 0.89 323 *e*P **Pn 18 51 09.1 +0.5**
SDLR Sedlovina 0.89 323 PN **Pn 18 51 09.1 +0.5**
SMAR Somma 0.91 320 *e*P **Pn 18 51 09.5 +0.6**
SMAR Somma 0.91 320 PN **Pn 18 51 09.5 +0.6**
AVH Avacha 0.94 318 *i* P **Pn 18 51 10.5 +1.4**
AVH *e*S **Sn 18 51 23.5 +1.7**
AVH Avacha 0.94 318 PN **Pn 18 51 10.5 +1.4**
AVH S **Sn 18 51 23.5 +1.7**
KRER Koryakskii 0.96 320 *i* P **Pn 18 51 10.7 +1.1**
KRER Koryakskii 0.96 320 PN **Pn 18 51 10.7 +1.1**
MTVR Mutnovka 0.98 265 *i* P **Pn 18 51 10.4 +0.6**
MTVR Mutnovka 0.98 265 PN **Pn 18 51 10.4 +0.6**
KOK Koryaka 1.00 316 *i* P **Pn 18 51 11.0 +1.0**
KOK Koryaka 1.00 316 PN **Pn 18 51 11.0 +1.0**
KRMR Karymshinskiy 1.04 285 *i* P **Pn 18 51 11.3 +0.9**
KRMR *e*S **Sn 18 51 25.2 +1.2**
KRMR Karymshinskiy 1.04 285 PN **Pn 18 51 11.3 +0.9**
KRMR S **Sn 18 51 25.2 +1.2**
KRX Arik 1.04 319 *e*P **Pn 18 51 11.4 +0.8**
KRX Arik 1.04 319 PN **Pn 18 51 11.4 +0.8**
GRL Gorelyy 1.04 269 *i* P **Pn 18 51 11.7 +1.1**
GRL *e*S **Sn 18 51 26.4 +2.1**
GRL Gorelyy 1.04 269 PN **Pn 18 51 11.7 +1.1**
GRL S **Sn 18 51 26.4 +2.1**
ASAK Asacha 1.17 261 *i* P **Pn 18 51 13.3 +1.1**
ASAK Asacha 1.17 261 PN **Pn 18 51 13.3 +1.1**
PEA0B Petropavlovsk- 1.37 294*c*PN **Pn 18 51 14.9 0.0**
PEA0B Petropavlovsk- 1.37 294 **Pn 18 51 15.7 +0.9**
PETK Petropavlovsk- 1.37 294 P **Pn 18 51 16.1 +1.2**
comp=N,397nm,0.3s,baz=106,slow=18,SNR=2930
PETK S **Sn 18 51 33.1 +1.1**
comp=N,364nm,0.3s,baz=104,slow=29,SNR=12
KII Karymskiy 1.48 352 *e*P **Pn 18 51 17.6 +1.2**
KII *e*S **Sn 18 51 36.6 +1.9**
KII Karymskiy 1.48 352 PN **Pn 18 51 17.6 +1.2**
KII S **Sn 18 51 36.6 +1.9**
APC Apacha 1.63 283 *i* P **Pn 18 51 20.3 +1.9**
APC *e*S **Sn 18 51 41.7 +3.4**
APC Apacha 1.63 283 PN **Pn 18 51 20.3 +1.9**
APC S **Sn 18 51 41.7 +3.4**
MIPR Malaya Ipel'ka 1.88 262 *e*P **Pn 18 51 23.6 +1.9**
MIPR Malaya Ipel'ka 1.88 262 PN **Pn 18 51 23.6 +1.9**
PAU Pauzhetka 2.15 240 *e*P **Pn 18 51 26.6 +1.3**
PAU *e*S **Sn 18 51 51.7 +0.9**
PAU Pauzhetka 2.15 240 PN **Pn 18 51 26.6 +1.3**
PAU S **Sn 18 51 51.7 +0.9**
KZV Kizimen 2.56 7 *e*P **Pn 18 51 32.9 +1.7**
KZV *e*S **Sn 18 52 03.0 +1.8**
KZV Kizimen 2.56 7 PN **Pn 18 51 32.9 +1.7**
KZV S **Sn 18 52 03.0 +1.8**
TUMD Tumrok D 2.66 8 *e*P **Pn 18 51 33.7 +1.3**
TUMD *e*S **Sn 18 52 05.0 +1.6**
TUMR Tumrok 2.72 4 *e*P **Pn 18 51 35.7 +2.4**
TUMR *e*S **Sn 18 52 07.7 +2.6**
TUMR Tumrok 2.72 4 PN **Pn 18 51 33.7 +0.4**
TUMR S **Sn 18 52 05.0 -0.1**
SKR Severo-Kuril's 2.97 232 *e*P **Pn 18 51 37.1 +0.5**
SKR *e*S **Sn 18 52 10.7 -0.2**
SKR Severo-Kuril's 2.97 232 *e*PN **Pn 18 51 38.0 +1.4**
SKR *e*S **Sn 18 52 11.0 +0.1**
SKR pmax pmax
comp=Z,96nm,0.6s
SKR smax smax
comp=N,1µm,0.7s
SKR smax smax
comp=E,491nm,0.7s
SKR MLR MLR
comp=Z,100nm,15.0s
ALID Alaid 3.14 239 *e*P **Pn 18 51 41.0 +1.9**
ALID Alaid 3.14 239 PN **Pn 18 51 41.0 +1.9**
KMNR Kamenistaya 3.20 5 *e*P **Pn 18 51 42.3 +2.5**
KMNR Kamenistaya 3.20 5 PN **Pn 18 51 42.3 +2.5**
KIRR Kirishev 3.40 5 *e*P **Pn 18 51 44.9 +2.2**
KIRR Kirishev 3.40 5 PN **Pn 18 51 44.9 +2.2**
KPT Kopyto 3.41 4 *e*P **Pn 18 51 45.4 +2.7**
KPT Kopyto 3.41 4 PN **Pn 18 51 45.4 +2.7**
BZGR Bezymyannyi-Gr 3.42 9 *e*P **Pn 18 51 45.8 +3.0**
BZGR Bezymyannyi-Gr 3.42 9 PN **Pn 18 51 45.8 +3.0**
ESO Esso 3.42 350 *e*P **Pn 18 51 45.0 +2.2**
ESO Esso 3.42 350 PN **Pn 18 51 45.0 +2.2**
BZWR Bezymyannyi-We 3.42 7 *e*P **Pn 18 51 45.7 +2.7**
BZWR Bezymyannyi-We 3.42 7 PN **Pn 18 51 45.7 +2.7**
KOZ Kozyrevsk 3.49 1 *e*P **Pn 18 51 46.6 +2.8**
KOZ Kozyrevsk 3.49 1 PN **Pn 18 51 46.6 +2.8**
ZLN Zelenaya 3.50 9 *e*P **Pn 18 51 47.5 +3.5**
ZLN Zelenaya 3.50 9 PN **Pn 18 51 47.5 +3.5**
LGNR Loginova 3.56 8 *e*P **Pn 18 51 48.4 +3.5**
LGNR Loginova 3.56 8 PN **Pn 18 51 48.4 +3.5**
CIRR Tsirk 3.59 9 *e*P **Pn 18 51 48.5 +3.2**
CIRR Tsirk 3.59 9 PN **Pn 18 51 48.5 +3.2**
KRSR Krestovskiy 3.68 7 *e*P **Pn 18 51 48.9 +2.5**
KRSR Krestovskiy 3.68 7 PN **Pn 18 51 48.9 +2.5**
SRDR Sredinnyy 3.75 359 *e*P **Pn 18 51 49.7 +2.3**
SRDR Sredinnyy 3.75 359 PN **Pn 18 51 49.7 +2.3**
KLY Klyuchi 3.78 7 *e*P **Pn 18 51 50.4 +2.7**
KLY Klyuchi 3.78 7 PN **Pn 18 51 50.4 +2.7**
KBTR Krutoberegovo 4.05 25 *e*P **Pn 18 51 52.4 +1.0**
KBTR *e*S **Sn 18 52 37.6 +0.1**
KBTR Krutoberegovo 4.05 25 PN **Pn 18 51 52.4 +1.0**
KBTR S **Sn 18 52 37.6 +0.1**
KBG Krutoberegovo 4.06 24 *e*P **Pn 18 51 53.5 +2.0**
KBG *e*S **Sn 18 52 39.5 +1.7**
KBG Krutoberegovo 4.06 24 PN **Pn 18 51 53.5 +2.0**
KBG S **Sn 18 52 39.5 +1.7**
BDR Baidarnaya 4.09 11 *e*P **Pn 18 51 55.7 +3.7**
BDR Baidarnaya 4.09 11 PN **Pn 18 51 55.7 +3.7**
SMKR Semkarok 4.13 13 *e*P **Pn 18 51 56.1 +3.5**
SMKR Semkarok 4.13 13 PN **Pn 18 51 56.1 +3.5**
SRKR Sorokina 4.17 11 *e*P **Pn 18 51 56.1 +3.0**
SRKR Sorokina 4.17 11 PN **Pn 18 51 56.1 +3.0**
BKI Bering 4.51 52 *e*P **Pn 18 51 57.6 -0.1**
BKI *e*S **Sn 18 52 43.7 -5.0**
BKI Bering 4.51 52 PN **Pn 18 51 57.6 -0.1**
PALN Palana 6.53 1 *e*P **Pn 18 52 29.1 +3.8**
PALN Palana 6.53 1 PN **Pn 18 52 29.1 +3.8**
OSSR Ossora 6.94 14 P **Pn 18 52 33.8 +2.9**
OSSR Ossora 6.94 14 PN **Pn 18 52 33.8 +2.9**
MA2 Magadan 8.63 328 P **Pn 18 52 54.0 -0.1**
comp=Z,0.3nm,0.3s,baz=143,slow=12,SNR=4.9
MA2 LR LR 18 56 39.3
comp=Z,161nm,20.2s,baz=137,slow=41
MA2 Magadan 8.63 328 PN **Pn 18 52 54.0 -0.1**
KMSK Kamenskaya 10.49 17 *e*P **Pn 18 53 23.2 +3.7**
KMSK Kamenskaya 10.49 17 PN **Pn 18 53 23.2 +3.7**
SEY Seymchan 11.10 342 *i* PN **Pn 18 53 27.5 -0.3**
ASAJ Asahikawa 14.19 240 P **Pn 18 54 11.8 +1.9**
comp=Z,0.8nm,0.3s,baz=77,slow=13,SNR=9.4
ERM Erimo 15.41 233 *i* P **Pn 18 54 23.0 -2.7**
BILL Bilibino 15.83 9 *e*P **P 18 54 33.2 -0.5**
BILL pmax pmax
comp=Z,5.0nm,0.7s
BILL Bilibino 15.83 9 P **Pn 18 54 31.7 +0.8**
KLR Kul'dur 17.95 270 P **Pn 18 54 57.4 0.0**
comp=Z,0.2nm,0.3s,baz=79,slow=10,SNR=5.4
KLR Kul'dur 17.95 270 *i* P **P 18 54 55.1 -2.2**
KLR pmax pmax
comp=Z,2.0nm,1.1s
YAK Yakutsk 18.64 312 P **Pn 18 55 04.8 -0.8**
comp=Z,0.2nm,0.3s,baz=98,slow=1.5,SNR=7.2
YAK Yakutsk 18.64 312 *e*P **Pn 18 55 05.9 +0.3**
YAK *e*S **Sn 18 58 32.0 -1.1**
YAK pmax pmax
comp=Z,20nm,1.0s
YAK pmax pmax
comp=N,9.0nm,1.5s
YAK pmax pmax
comp=E,14nm,1.5s
YAK smax smax
comp=N,28nm,2.5s
YAK smax smax
comp=E,37nm,2.7s
YAK Yakutsk 18.64 312 P **P 18 55 02.5 -2.3**
YAK IAmb IAmb 18 55 09.4
comp=Z,19nm,0.7s
USA0B Ussuriysk Arra 20.17 257 *i* P **P 18 55 18.9 -2.7**
USRK Ussuriysk Ar. 20.17 257 P **P 18 55 21.3 -0.3**
comp=Z,1.3nm,0.5s,baz=47,slow=12,SNR=6.9
MJB9 Matsu-Tunnel 22.08 232 P **P 18 55 43.1 +0.9**
MJB9 IAmb IAmb 18 55 44.3
comp=Z,10nm,0.6s
MAJO Matsushiro 22.08 232 P **P 18 55 43.4 +1.2**
MAJO pmax pmax
comp=Z,12nm,0.6s
MAJO Matsushiro 22.08 232 P **P 18 55 43.4 +1.2**
MAJO IAmb IAmb 18 55 44.1
comp=Z,12nm,0.6s
MJAR Matsushiro Arr 22.08 232 P **P 18 55 43.7 +1.5**
comp=Z,5.5nm,0.6s,baz=18,slow=9.3,SNR=13
MJAR LR LR 19 06 04.6
comp=Z,35nm,19.7s,baz=250,slow=41
TIXI Tiksi 23.48 336 P **P 18 55 54.2 -2.0**
comp=Z,3.2nm,0.6s,baz=260,slow=2.3,SNR=18
TIXI LR LR 19 06 05.9
comp=Z,94nm,19.4s,baz=133,slow=39
TIXI Tiksi 23.48 336*c*P **P 18 55 54.1 -2.0**
TIXI pmax pmax
comp=Z,4.0nm,0.7s
TIXI Tiksi 23.48 336 P **P 18 55 54.2 -2.0**
RDOG Red Dog Mine 23.57 35 P **P 18 55 57.8 +0.6**
RDOG IAmb IAmb 18 55 59.2
comp=Z,48nm,1.7s
TTA Tatalina 25.24 48 P **P 18 56 13.7 +1.3**
TTA pmax pmax
comp=Z,8.0nm,1.0s
TTA Tatalina 25.24 48 P **P 18 56 13.7 +1.3**
BOD Bodaibo 26.24 300 *e*P **P 18 56 20.8 -0.6**
BOD pmax pmax
comp=Z,6.0nm,1.1s
KSRS Korea Array 26.85 248 P **P 18 56 27.1 0.0**
comp=Z,1.3nm,0.8s,baz=48,slow=8.9,SNR=6.4
KSRS LR LR 19 06 25.8
comp=Z,55nm,19.0s,baz=138,slow=35
TOLK Toolik Lake Re 28.49 36 P **P 18 56 42.1 +0.6**
IL31 29.32 45 P **P 18 56 48.4 -0.4**
ILAR Eielson Array 29.32 45 P **P 18 56 49.4 +0.6**
comp=Z,1.7nm,0.8s,baz=261,slow=7.7,SNR=20
ILAR PcP **PcP 18 59 53.7 -0.1**
comp=Z,0.6nm,0.5s,baz=282,slow=3.7,SNR=5.5
ILAR LR LR 19 08 18.9
comp=Z,30nm,19.2s,baz=264,slow=36
SCRK Sand Creek 30.62 46 P **P 18 57 00.6 +0.1**
SCRK IAmb IAmb 18 57 28.4
comp=Z,20nm,1.9s
EGAK Eagle 31.77 44 P **P 18 57 10.4 0.0**
H11N2 WAKE ISLAND Hy 33.24 168 T T 19 33 26.5
baz=352,slow=76,SNR=306
H11N3 WAKE ISLAND Hy 33.26 168 T T 19 33 17.6
baz=352,slow=76,SNR=467
H11N1 WAKE ISLAND Hy 33.26 168 T T 19 33 14.5
baz=352,slow=76,SNR=589
ULN Ulaanbaatar 33.43 283 *i* P **P 18 57 22.7 -2.7**
ULN pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 33.84 284 P **P 18 57 28.5 -0.3**
comp=Z,1.2nm,0.5s,baz=63,slow=7.0,SNR=8.3
INK Inuvik 34.40 37 P **P 18 57 34.6 +1.4**
comp=Z,2.2nm,0.7s,baz=309,slow=7.5,SNR=6.7
INK PcP **PcP 19 00 08.2 +0.7**
comp=Z,1.3nm,0.4s,baz=255,slow=3.7,SNR=5.0
INK Inuvik 34.40 37 P **P 18 57 34.7 +1.4**
INK pmax pmax
comp=Z,3.0nm,0.9s
INK Inuvik 34.40 37 P **P 18 57 34.6 +1.4**
H11S1 WAKE ISLAND Hy 34.43 168 T T 19 34 39.6
baz=352,slow=76,SNR=62
H11S3 WAKE ISLAND Hy 34.44 168 T T 19 34 48.0
baz=352,slow=76,SNR=112
H11S2 WAKE ISLAND Hy 34.44 168 T T 19 34 41.2
baz=352,slow=76,SNR=19
JOW Kunigami 34.86 235 P **P 18 57 39.8 +2.1**
comp=Z,0.7nm,0.5s,baz=63,slow=9.5,SNR=6.7
WHY Whitehorse 35.43 51 P **P 18 57 44.2 +1.8**
WHY IAmb IAmb 18 57 45.5
comp=Z,5.5nm,0.8s
NRIK Noril'sk 36.22 325 P **P 18 57 46.3 -2.7**
comp=Z,1.8nm,0.5s,baz=154,slow=3.3,SNR=3.8
NRIK LR LR 19 13 56.8
comp=Z,68nm,20.7s,baz=62,slow=38
DLBC Dease Lake 38.51 53 P **P 18 58 09.2 +0.7**
comp=Z,2.3nm,0.7s,baz=207,slow=11,SNR=3.7
ZALV Zalesovo Beam 42.90 303 P **P 18 58 42.9 -1.7**
comp=Z,1.0nm,0.5s,baz=64,slow=7.4,SNR=5.7
YKA Yellowknife Ar 43.67 42 P **P 18 58 50.8 +0.1**
comp=Z,1.7nm,0.7s,baz=300,slow=7.7,SNR=23
DGZ Jazzator, Alta 43.73 296 *i* P **P 18 58 49.5 -2.0**
DGZ pmax pmax
comp=Z,2.0nm,0.8s
SPA0 Spitsbergen Ar 47.62 350 P **P 18 59 21.2 -0.5**
SPA0 IAmb IAmb 18 59 32.1
comp=Z,12nm,1.1s
KURK Kurchatov 47.85 302*c*P **P 18 59 21.9 -1.9**
KURK pmax pmax
comp=Z,7.0nm,1.3s
KURK Kurchatov 47.85 302 P **P 18 59 21.9 -1.9**
KURBB Kurchatov Arra 47.95 302 P **P 18 59 23.1 -1.4**
comp=Z,2.9nm,0.5s,baz=60,slow=7.5,SNR=49
MK31 Makanchi Array 48.21 296 P **P 18 59 25.4 -1.3**
MK31 pmax pmax
comp=Z,1.0nm,0.6s
MK31 Makanchi Array 48.21 296 P **P 18 59 25.4 -1.3**
MKAR Makanchi Array 48.21 296 P **P 18 59 25.1 -1.6**
comp=Z,1.2nm,0.5s,baz=57,slow=9.0,SNR=19
MKAR LR LR 19 20 32.5
comp=Z,47nm,19.1s,baz=96,slow=37
MAKZ Makanchi 48.37 296 P **P 18 59 26.3 -1.6**
MAKZ pmax pmax
comp=Z,5.0nm,1.6s
MAKZ Makanchi 48.37 296 P **P 18 59 26.3 -1.6**
BRVK Borovoye 50.59 309*c*P **P 18 59 42.1 -2.6**
BRVK pmax pmax
comp=Z,2.0nm,0.6s
BRVK Borovoye 50.59 309 P **P 18 59 43.0 -1.7**
BRVK IAmb IAmb 18 59 44.8
comp=Z,2.8nm,0.6s
YBH Yreka Blue Hor 51.38 69 P **P 18 59 52.4 +1.5**
comp=Z,1.7nm,0.6s,baz=7.2,slow=4.3,SNR=3.7
WALA Waterton Lakes 51.50 57 P **P 18 59 52.5 +0.8**
WALA IAmb IAmb 18 59 54.0
comp=Z,5.3nm,0.7s
JTMT Jette 52.14 59 P **P 18 59 57.7 +1.2**
MOD Modoc Plateau 52.64 68 P **P 19 00 02.3 +2.0**
MOD IAmb IAmb 19 01 05.3
comp=Z,8.0nm,1.4s
MSO Missoula 52.91 59 P **P 19 00 01.8 -0.4**
MSO IAmb IAmb 19 00 04.6
comp=Z,11nm,1.6s
FFC Flin Flon 53.52 46 P **P 19 00 06.9 +0.5**
FFC pmax pmax
comp=Z,3.0nm,0.8s
FFC Flin Flon 53.52 46 P **P 19 00 06.9 +0.5**
ARU Arti 53.65 317 *i* P **P 19 00 04.5 -2.8**
ARU pmax pmax
comp=Z,2.0nm,0.9s
ARCES ARCESS Array B 53.72 342 P **P 19 00 06.0 -1.6**
comp=Z,2.4nm,0.8s,baz=43,slow=9.1,SNR=4.9
FCC Fort Churchill 54.00 38 P **P 19 00 10.3 +0.5**
FCC pmax pmax
comp=Z,6.0nm,0.6s
FCC Fort Churchill 54.00 38 P **P 19 00 10.3 +0.5**
FCC IAmb IAmb 19 00 11.6
comp=Z,5.5nm,0.6s
SUMG Summit 54.50 7 P **P 19 00 14.4 +0.6**
SUMG pmax pmax
comp=Z,7.0nm,0.9s
SUMG Summit 54.50 7 P **P 19 00 14.3 +0.6**
SUMG IAmb IAmb 19 00 15.6
comp=Z,7.3nm,0.9s
MCMT McKenzie Canyo 54.79 60 P **P 19 00 17.2 +1.1**
PNTR Pine Nut 54.91 70 P **P 19 00 18.1 +1.1**
AAK Ala-Archa 55.14 296 P **P 19 00 17.2 -1.4**
comp=Z,0.8nm,0.3s,baz=98,slow=7.1,SNR=5.9
AAK Ala-Archa 55.14 296*c*eP **P 19 00 16.8 -1.7**
AAK pmax pmax
comp=Z,5.0nm,2.5s
AAK Ala-Archa 55.14 296 P **P 19 00 17.3 -1.2**
WAKR Walker 55.40 70 P **P 19 00 22.4 +1.9**
WAKR IAmb IAmb 19 00 23.6
comp=Z,2.5nm,0.6s
KVN Kaiserville 55.79 69 P **P 19 00 25.5 +2.2**
KVN pmax pmax
comp=Z,11nm,1.4s
KVN Kaiserville 55.79 69 P **P 19 00 25.5 +2.2**
KVN IAmb IAmb 19 00 26.9
comp=Z,11nm,1.4s
YHH Holmes Hill 55.88 59 P **P 19 00 26.0 +2.0**
ELK Elko 56.24 66 P **P 19 00 27.4 +0.8**
ELK pmax pmax
comp=Z,1.0nm,0.6s
ELK Elko 56.24 66 P **P 19 00 27.4 +0.8**
H17A Grant Village 56.29 60 P **P 19 00 28.8 +1.9**
H17A IAmb IAmb 19 00 31.3
comp=Z,4.0nm,0.9s
IMW Indian Meadow 56.43 60 P **P 19 00 29.6 +1.6**
IMW IAmb IAmb 19 00 31.4
comp=Z,2.9nm,0.8s
RLMT Red Lodge 56.48 58 P **P 19 00 30.4 +2.2**
RLMT IAmb IAmb 19 00 31.4
comp=Z,6.5nm,0.9s
FXWY Fox Creek 56.56 60 P **P 19 00 30.0 +1.1**
KK31 Karatay Array 56.97 299 P **P 19 00 29.6 -1.9**
KK31 pmax pmax
comp=Z,5.0nm,0.7s
KK31 Karatay Array 56.97 299 P **P 19 00 29.6 -1.9**
KK31 IAmb IAmb 19 00 49.3
comp=Z,5.0nm,0.7s
KKAR Karatay Array 56.97 299 P **P 19 00 29.0 -2.4**
KKAR pmax pmax
comp=Z,5.0nm,0.7s
KKAR Karatay Array 56.97 299 P **P 19 00 29.0 -2.4**
KKAR IAmb IAmb 19 00 49.2
comp=Z,5.0nm,0.7s
HWUT Hardware Ranch 57.67 63 P **P 19 00 38.6 +2.0**
HWUT IAmb IAmb 19 00 39.5
comp=Z,3.2nm,0.8s
R11A Troy Canyon, C 57.70 68 P **P 19 00 38.0 +1.2**
CMAR Chiang Mai Arr 57.89 258 P **P 19 00 39.4 +1.2**
comp=Z,1.1nm,0.3s,baz=26,slow=6.3,SNR=5.8
CMAR LR LR 19 28 56.8
comp=Z,23nm,18.1s,baz=195,slow=40
CMAR Chiang Mai Arr 57.89 258 *i* P **P 19 00 37.0 -1.2**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
BW06 Boulder Array 57.94 60 P **P 19 00 40.4 +1.8**
BW06 IAmb IAmb 19 00 41.4
comp=Z,5.2nm,0.8s
PD31 Pinedale Array 57.94 60 P **P 19 00 39.8 +1.3**
PD31 IAmb IAmb 19 00 41.5
comp=Z,5.1nm,0.8s
PDAR Pinedale Array 57.94 60 P **P 19 00 40.6 +2.0**
comp=Z,4.0nm,0.7s,baz=313,slow=2.7,SNR=37
DUG Dugway, Tooele 57.97 65 P **P 19 00 40.3 +1.7**
DUG pmax pmax
comp=Z,3.0nm,0.9s
DUG Dugway, Tooele 57.97 65 P **P 19 00 40.3 +1.7**
DUG IAmb IAmb 19 00 42.0
comp=Z,2.6nm,0.8s
NLU North Lily Min 58.54 64 P **P 19 00 45.2 +2.4**
RDMU Red Mountain 59.47 62 P **P 19 00 51.7 +2.5**
TMUT Trail Mountain 59.48 64 P **P 19 00 50.8 +1.5**
Q16A Castle Valley 59.77 65 P **P 19 00 52.8 +1.6**
MTPU Mount Pierson 59.82 66 P **P 19 00 53.8 +2.0**
RSSD Black Hills 59.85 56 P **P 19 00 53.3 +1.6**
RSSD pmax pmax
comp=Z,29nm,0.8s
RSSD Black Hills 59.85 56 P **P 19 00 53.3 +1.6**
LCMT Little Creek M 59.96 67 P **P 19 00 54.5 +2.0**
SRU San Rafael Swe 59.98 64 P **P 19 00 54.4 +1.7**
SRU pmax pmax
comp=Z,5.0nm,0.7s
SRU San Rafael Swe 59.98 64 P **P 19 00 54.4 +1.7**
O20A White River Ci 60.50 62 P **P 19 00 56.6 +0.4**
FINES FINESS Array B 60.52 336 P **P 19 00 55.7 0.0**
comp=Z,1.9nm,0.5s,baz=35,slow=8.3,SNR=24
PV22 Blue Mesa, Par 61.34 63 P **P 19 01 03.6 +1.7**
PV22 IAmb IAmb 19 01 04.8
comp=Z,4.7nm,0.7s
PV16 Nyswonger Mesa 61.44 64 P **P 19 01 03.7 +1.1**
PV11 David Mesa, Pa 61.47 64 P **P 19 01 02.6 -0.2**
PV05 Paradox Valley 61.50 64 P **P 19 01 04.3 +1.2**
PV03 Paradox Valley 61.51 64 P **P 19 01 04.4 +1.2**
PV03 IAmb IAmb 19 01 05.9
comp=Z,5.5nm,0.9s
PV13 Radium Mtn., P 61.60 64 P **P 19 01 05.4 +1.7**
ISCO Idaho Springs 62.14 60 P **P 19 01 09.5 +2.1**
ISCO pmax pmax
comp=Z,4.0nm,0.8s
ISCO Idaho Springs 62.14 60 P **P 19 01 09.5 +2.1**
ISCO IAmb IAmb 19 01 10.7
comp=Z,4.0nm,0.8s
X16A Lo Mia Camp, P 62.84 68 P **P 19 01 14.2 +2.2**
X16A IAmb IAmb 19 01 15.3
comp=Z,3.2nm,0.8s
OBN Obninsk 62.85 327 *e*P **P 19 01 09.5 -2.0**
OBN *e* 19 01 49.9
OBN *e* 19 03 28.0
OBN pmax pmax
comp=Z,5.0nm,0.5s
SDCO Great Sand Dun 63.70 62 P **P 19 01 19.7 +1.9**
ECSD EROS Data Cent 63.79 52 P **P 19 01 18.3 +0.4**
ECSD IAmb IAmb 19 01 19.8
comp=Z,3.9nm,0.8s
NC405 NORSAR Array S 63.83 343 P **P 19 01 17.9 0.0**
NB201 NORSAR Array S 63.96 344 P **P 19 01 18.8 -0.1**
NOA NORSAR Array B 63.99 344 P **P 19 01 18.9 -0.1**
comp=Z,0.5nm,0.4s,baz=14,slow=5.2,SNR=14
I37A Lemond, Waseca 65.09 50 P **P 19 01 27.8 +1.4**
VSR Storozhevoye 65.14 323 *i* P **P 19 01 25.6 -1.0**
VSR pmax pmax
comp=Z,5.0nm,0.8s
ANMO Albuquerque 65.24 65 P **P 19 01 29.8 +2.0**
ANMO pmax pmax
comp=Z,2.0nm,0.7s
ANMO Albuquerque 65.24 65 P **P 19 01 29.8 +2.0**
GEYT Alibeck 67.21 303 P **P 19 01 39.7 -0.4**
comp=Z,2.3nm,0.6s,baz=35,slow=3.6,SNR=6.2
MNTX Cornudas Mount 68.26 66 P **P 19 01 48.1 +1.3**
VLDQ Val d'Or 68.49 37 P **P 19 01 46.4 -1.5**
VLDQ IAmb IAmb 19 01 47.7
comp=Z,5.9nm,0.8s
AKASG Malin Array Be 68.96 329 P **P 19 01 50.3 -0.5**
comp=Z,1.7nm,0.4s,baz=30,slow=6.4,SNR=6.9
AKASG LR LR 19 34 15.5
comp=Z,49nm,20.3s,baz=260,slow=38
P40A Paris 69.21 52 P **P 19 01 53.0 +0.4**
D53A Lac Vacive, Po 69.26 38 P **P 19 01 52.2 -0.5**
D53A IAmb IAmb 19 01 54.8
comp=Z,22nm,1.9s
WMOK Wichita Mounta 69.53 59 P **P 19 01 55.4 +0.7**
WMOK pmax pmax
comp=Z,7.0nm,1.0s
WMOK Wichita Mounta 69.53 59 P **P 19 01 55.4 +0.7**
WMOK IAmb IAmb 19 01 56.8
comp=Z,7.1nm,0.9s
KIV Kislovodsk 69.69 317 *e*P **P 19 01 54.0 -1.6**
KIV *e* 19 02 15.0
KIV *e* 19 04 29.5
KIV pmax pmax
comp=Z,2.0nm,0.7s
TX31 Lajitas Ar. Si 71.02 67 P **P 19 02 05.5 +1.6**
TX32 Lajitas Array 71.02 67 P **P 19 02 05.6 +1.7**
TX32 IAmb IAmb 19 02 06.5
comp=Z,6.1nm,0.7s
TXAR Lajitas Array 71.02 67 P **P 19 02 05.7 +1.8**
comp=Z,4.8nm,0.6s,baz=302,slow=4.4,SNR=36
U40A Yellville 71.31 54 P **P 19 02 05.9 +0.4**
SORM Soroca 71.48 328 ⇑P **P 19 02 05.8 -0.4**
CLL Collm 72.77 339 *i* P **P 19 02 15.4 +1.5**
CLL Collm 72.77 339 *i* P **P 19 02 15.4 +1.5**
BUR08 Bucovina Ar. S 72.91 330 P **P 19 02 15.0 +0.1**
BUR08 IAmb IAmb 19 02 15.8
comp=Z,3.2nm,0.6s
BURAR Bucovina Array 72.93 330 ⇑P **P 19 02 15.1 0.0**
MORC Moravsky Berou 73.12 335 ⇑P **P 19 02 17.3 +1.2**
LANS Liptovska Anna 73.19 334 *e*P **P 19 02 18.5 +2.0**
LANS pmax pmax

comp=Z,3.0nm,0.7s
LANS Liptovska Anna 73.19 334 *e*P **P** 19 02 18.5 +2.0
TRPA Tarpa 73.27 332 ⇑P **P** 19 02 18.0 +1.1
TESR Tescani 73.46 328 ⇑P **P** 19 02 17.7 -0.3
VYHS Vyhne 73.96 334 *e*P **P** 19 02 22.1 +1.1
VYHS Vyhne 73.96 334 *e*P **P** 19 02 22.1 +1.1
VRI Vrincioaia 74.00 328 ⇑P **P** 19 02 21.1 -0.2
CFR Carcaliu 74.15 327 ⇓P **P** 19 02 22.1 +0.1
DRGR 74.42 331 ⇑P **P** 19 02 24.3 +0.5
MLR Muntele Rosu 74.59 328 ⇑P **P** 19 02 25.7 +0.8
MLR Muntele Rosu 74.59 328 P **P** 19 02 23.5 -1.4
MLR pmax pmax
comp=Z,5.0nm,0.6s
MLR Muntele Rosu 74.59 328 P **P** 19 02 23.5 -1.4
MLR IAmb IAmb 19 02 26.8
comp=Z,4.5nm,0.6s
SSPA Standing Stone 74.60 42 P **P** 19 02 24.4 -0.5
KHC Kasperske Hory 74.68 338 *ce*P **P** 19 02 25.2 0.0
KHC pmax pmax
comp=Z,13nm,2.5s
KHC Kasperske Hory 74.68 338 *e*P **P** 19 02 26.0 +0.8
TIRR Tirgusor 74.69 326 ⇓P **P** 19 02 25.5 +0.3
GERES GERESS Array B 74.92 338 P **P** 19 02 27.7 +1.0
comp=Z,1.0nm,0.6s,baz=34,slow=4.9,SNR=13
GERES LR LR 19 39 45.2
comp=Z,27nm,18.6s,baz=86,slow=39
VOIR 74.92 329 ⇓P **P** 19 02 27.0 +0.3
CONA Conrad Observa 75.25 336 *e*P **P** 19 02 30.3 +1.7
comp=Z,1.4nm,0.6s
WRA Warramunga Arr 75.53 205 P **P** 19 02 30.9 +0.7
comp=Z,2.0nm,0.6s,baz=19,slow=6.0,SNR=16
WRA Warramunga Arr 75.53 205 *i* P **P** 19 02 31.0 +0.7
WRA pmax pmax
comp=Z,2.0nm,0.6s
BZS Buzias 75.81 331 ⇓P **P** 19 02 32.0 +0.3
SOKA Soboth 76.62 336 *e*P **P** 19 02 37.9 +1.5
comp=Z,1.6nm,0.5s
KBA Koelnbreinsper 76.66 337 *e*P **P** 19 02 38.9 +2.2
comp=Z,10.0nm,0.8s
WTTA Wattenberg 76.88 338 *i* P **P** 19 02 40.0 +2.0
comp=Z,3.2nm,0.6s
PLVB Pleven 76.89 328 ⇑P **P** 19 02 38.1 +0.2
BR131 Keskin Array S 76.90 320 P **P** 19 02 38.5 +0.3
BR131 pmax pmax
comp=Z,3.0nm,1.2s
BR131 Keskin Array S 76.90 320 P **P** 19 02 38.5 +0.3
BRTR Keskin Array B 76.90 320 P **P** 19 02 38.4 +0.3
comp=Z,1.1nm,0.6s,baz=46,slow=2.6,SNR=9.3
MOTA Moosalm 76.92 339 *i* P **P** 19 02 39.8 +1.6
comp=Z,2.4nm,0.8s
MYKA Terra Mystica 77.01 337 *e*P **P** 19 02 38.2 -0.4
comp=Z,2.8nm,0.7s
SQTA Sankt Quirin 77.02 339 *e*P **P** 19 02 40.6 +1.9
comp=Z,2.9nm,0.6s
ABTA Abfaltersbach 77.17 338 *e*P **P** 19 02 41.2 +1.8
comp=Z,3.7nm,0.7s
FETA Feichten 77.31 339 *e*P **P** 19 02 42.2 +1.8
comp=Z,3.0nm,0.7s
FUORN Ofenpass-Fuorn 77.80 339 P **P** 19 02 41.7 -1.5
FUORN IAmb IAmb 19 02 50.3
comp=Z,5.4nm,0.8s
TUE Stuetta 78.13 340 P **P** 19 02 45.3 +0.3
ASAR Alice Springs 79.21 204 P **P** 19 02 52.4 +1.6
comp=Z,1.3nm,0.6s,baz=14,slow=5.4,SNR=24
PDG Podgorica 79.41 331 ⇑P **P** 19 02 52.3 +0.5
ESDC Sonseca Array 87.05 348 P **P** 19 03 31.4 +0.2
comp=Z,0.6nm,0.5s,baz=357,slow=4.6,SNR=4.1
PLCA Paso Flores 144.19 91 PKP **PKPab** 19 10 19.6 +0.8
comp=Z,2.0nm,0.8s,baz=334,slow=2.8,SNR=5.0

*GEN **19** 19:08:30.8, 46˚.28N×7˚.52E, h13km±6km, Ml1.2*
*LDG **19** 19:08:31.6±0.1, 46˚.24N×7˚.55E, h13km, Md1.7/1, Ml1.7/1, Ml1.7/9, Error ellipse: s-maj=2.4km s-min=1.8km az=93.0*
*STR **19** 19:08:31.5±0.6, 46˚N±3˚×±˚, h0km, MLv1.4/7, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
ZUR 19 19:08:30.2, 46.34N×7.52E, h4km±1km, MLh1.3/20, 10C-2D, Error ellipse: s-maj=3.4km s-min=0.7km az=276.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIEB	**Ecole de Borzu**	**0.05**	**165**	⇑Pg	Pg	19 08 31.5	+0.2
	2.4nm,SNR=27						
LKBD	**Leukerbad**	**0.09**	**58**	⇑Pg	Pg	19 08 32.4	+0.3
	0.6nm,SNR=9.8						
LKBD				Sg	Sg	19 08 33.9	+0.4
VANNI	**Vissoie, Val d**	**0.14**	**157**	Pg	Pg	19 08 33.4	+0.4
VANNI				Pg	Pg	19 08 33.4	+0.4
	0.3nm,SNR=8.8						
SIOV	**Sion-Valere**	**0.15**	**226**	⇑Pg	Pg	19 08 33.3	+0.2
SIOV				⇑Pg	Pg	19 08 33.3	+0.2
	0.2nm,SNR=1.4						
SENIN	**Lac Senin/Sane**	**0.15**	**279**	⇓Pg	Pg	19 08 33.4	+0.2
SENIN				⇓Pg	Pg	19 08 33.4	+0.2
	0.3nm,SNR=9.0						
SENIN				Sg	Sg	19 08 35.8	+0.4
LAUCH	**Lauchernalp**	**0.19**	**67**	⇑Pg	Pg	19 08 34.4	+0.4
LAUCH				⇑Pg	Pg	19 08 34.4	+0.4
	0.2nm,SNR=7.8						
EMBD	**Embd, Matterta**	**0.25**	**119**	Pg	Pg	19 08 35.3	+0.3
EMBD				Pg	Pg	19 08 35.3	+0.3
	0.1nm,SNR=2.5						
EMBD				Sg	Sg	19 08 38.6	+0.3
DIX	**Grande Dixence**	**0.27**	**196**	⇑Pg	Pg	19 08 35.7	+0.2
	0.1nm,SNR=3.6						
DIX				⇑Pg	Pg	19 08 35.7	+0.2
GRYON	**Gryon**	**0.30**	**253**	Pg	Pg	19 08 36.1	+0.1
	0.1nm,SNR=1.9						
GRYON				Pg	Pg	19 08 36.1	+0.1
GRYON				Sg	Sg	19 08 40.3	+0.5
SIMPL	**Simplonpass**	**0.36**	**106**	Pg	Pg	19 08 37.4	+0.2
	0.1nm,SNR=1.9						
SIMPL				Pg	Pg	19 08 37.4	+0.2
FIESA	**Fiescheralp**	**0.42**	**77**	⇑Pg	Pg	19 08 38.5	+0.1
FIESA				⇑Pg	Pg	19 08 38.5	+0.1
	SNR=1.7						
SALAN	**Lac Salanfe**	**0.43**	**243**	Pg	Pg	19 08 38.6	+0.2
SALAN				Pg	Pg	19 08 38.6	+0.2
	0.1nm,SNR=1.4						
SATI	**Passo dei Sala**	**0.53**	**152**	P	Pg	19 08 40.3	0.0
SATI				S	Sg	19 08 46.0	-1.1
REMY	**Saint-Rhmy-en**	**0.56**	**207**	P	Pg	19 08 40.8	-0.2
REMY				S	Sg	19 08 46.8	-1.5
GRIMS	**Grimsel Gerste**	**0.60**	**66**	Pg	Pg	19 08 41.9	+0.1
	SNR=1.2						
GRIMS				Pg	Pg	19 08 41.9	+0.1
CIRO	**Champorcher**	**0.74**	**177**	P	Pg	19 08 44.2	-0.2
CIRO				S	Sg	19 08 52.8	-1.2
RSL	**Roselend**	**0.90**	**224**	Pg	Pg	19 08 48.0	+0.5
RSL				Sg	Sg	19 08 59.9	+0.8
LPL	**La Plagne**	**0.99**	**214**	*e*Pg	Pg	19 08 49.2	0.0
LPL				*e*Sg	Sg	19 09 01.2	-0.8
	1.1nm,0.2s						
LPG	**La Plagne**	**1.00**	**213**	*e*Pg	Pg	19 08 49.4	+0.1
LPG				*e*Sg	Sg	19 09 01.8	-0.5
	1.6nm,0.3s						
CABF	**La Chapelle**	**1.02**	**286**	*e*Pg	Pn	19 08 51.4	-0.1
CABF				*e*Sg	Sb	19 09 05.1	+0.6
	1.6nm,0.4s						
LOMF	**Lomont**	**1.12**	**335**	Pn	Pn	19 08 53.2	+0.5
LOMF	**Lomont**	**1.12**	**335**	Sn	Sn	19 09 09.2	+0.6
OG35	**Corcelles**	**1.38**	**258**	Pn	Pg	19 08 57.9	+1.1
OG35				Sn	Sn	19 09 15.8	+0.6
OGSM	**Saint Maurice**	**1.47**	**241**	Pn	Pg	19 08 58.2	-0.1
OGSM				Sn	Sg	19 09 18.5	+1.3
MOF	**Molkenrain**	**1.54**	**350**	Pn	Pg	19 08 59.6	0.0
MOF	**Molkenrain**	**1.54**	**350**	Sn	Sg	19 09 20.2	+0.7
HINF	**Hinteralfeld**	**1.55**	**343**	*e*Pn	Pn	19 08 58.2	-0.4
HINF	**Hinteralfeld**	**1.55**	**343**	*e*Pg	Pg	19 09 00.7	+0.9
HINF				*e*Sn	Sn	19 09 18.8	-0.4
	3.6nm,0.4s						
KIZ	**Kirchzarten**	**1.64**	**9**	Pn	Pg	19 09 01.9	+0.3
KIZ	**Kirchzarten**	**1.64**	**9**	Sn	Sg	19 09 23.2	+0.3
MBDF	**Montbardon**	**1.70**	**198**	*e*P	Pn	19 09 01.0	+0.2
MBDF				*e*Sg	Sn	19 09 22.7	-0.3
	1.2nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.83**	**220**	*e*Pn	Pn	19 09 01.3	-1.2
ORIF	**Oris-en-Rattie**	**1.83**	**220**	*e*Pg	Pb	19 09 04.6	+0.3
ORIF				*e*Sg	Sb	19 09 27.9	+0.4
	1.0nm,0.3s						
HAU	**Haudompre**	**1.85**	**335**	*e*Pn	Pn	19 09 02.8	+0.1
HAU				*e*Sn	Sn	19 09 25.0	-1.6
	1.7nm,0.3s						
CDF	**Champ du Feu**	**2.08**	**356**	*e*Pn	Pn	19 09 05.7	-0.3
CDF				*e*Sn	Sn	19 09 31.7	-0.7
	1.1nm,0.3s						
VIVF	**Saint-Julien-l**	**2.49**	**234**	*e*Pn	Pn	19 09 09.9	-1.6
VIVF				*e*Sg	Sg	19 09 48.3	-1.8
	1.4nm,0.3s						
PAGF	**Fort de Pagny**	**2.53**	**332**	*e*Pn	Pn	19 09 11.4	-0.7
LOR	**Lormes**	**2.68**	**292**	*e*Pn	Pn	19 09 14.4	+0.2

LJU 19 19:10:21.6, 45.60N×14.30E, h11km, ML0.6, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDS	**Knezji Dol**	**0.09**	**139**	⇑*i*Pg	Pg	19 10 24.2	-0.1
KNDS				*i* Sg	Sg	19 10 26.1	-0.2
	comp=Z,4.0nm,0.0s						
CEY	**Cerknica**	**0.17**	**33**	*i* Pg	Pg	19 10 25.4	0.0
CEY				*i* Sg	Sg	19 10 28.2	+0.1
	comp=Z,6.0nm,0.1s						
SKDS	**Skadanscina**	**0.20**	**256**	*i* Pg	Pg	19 10 25.9	-0.1
SKDS				*i* Sg	Sg	19 10 29.3	+0.3
	comp=Z,5.0nm,0.0s						
JAVS	**Javornik**	**0.34**	**331**	*i* Pg	Pg	19 10 28.3	-0.2
JAVS				*i* Sg	Sg	19 10 33.7	+0.7
	comp=Z,3.0nm,0.1s						
GBAS	**Gorenja Brezov**	**0.35**	**17**	*i* Pg	Pg	19 10 28.6	-0.1
GBAS				*i* Sg	Sg	19 10 34.2	+0.8
	comp=Z,2.0nm,0.1s						
GBRS	**Gornja Briga**	**0.37**	**100**	*i* Pg	Pg	19 10 29.2	+0.3
GBRS				*i* Sg	Sb	19 10 35.1	-0.8
VISS	**Visnje**	**0.43**	**61**	*i* Sg	Sg	19 10 36.4	+0.5
	comp=Z,1.0nm,0.1s						
CRNS	**Crni Vrh**	**0.48**	**357**	*i* Pg	Pg	19 10 31.1	0.0
CRNS				*e*Sg	Sg	19 10 38.0	+0.5
	comp=Z,1.0nm,0.1s						
VOJS	**Vojsko**	**0.52**	**327**	*i* Pg	Pg	19 10 32.0	+0.2
VOJS				*i* Sg	Sb	19 10 39.9	-0.5
	comp=Z,1.0nm,0.1s						

*NEIC **19** 19:18:41.6±1.5, 43.58N±0.06×104.83W±0.09, h0km±2km, ML3.5/58, Error ellipse: s-maj=13.2km s-min=7.8km az=131.0*
*IDC **19** 19:18:46.1±2.0, 43.89N×105.68W, h0km, mb1 3.4/3, mb1mx3.2/47, mbtmp3.2/3, ML2.6/2, Error ellipse: s-maj=49.3km s-min=9.8km az=147.0*
ISC 19 19:18:42.1±1.1, 43.63N±0.05×105.00W±0.06, h0km, n43, σ1§69/41, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.86**	**55**	Pn	**Pn**	**19 19 02.0**	**+0.4**
RSSD				IAML		19 19 22.4	
	1µm,0.6s						
K22A	**Casper**	**1.48**	**229**		**Pn**	**19 19 07.9**	**-2.2**
PHWY	**Pilot Hill**	**2.35**	**188**		**Pn**	**19 19 23.3**	**+1.1**
RWWY	**Rawlins**	**2.53**	**221**		**Pn**	**19 19 24.5**	**-0.2**
RWWY				IAML		19 20 00.3	
	224nm,0.7s						
LAO	**LASA Array**	**3.18**	**345**		**Pn**	**19 19 34.0**	**+0.6**
RLMT	**Red Lodge**	**3.40**	**298**		**Pn**	**19 19 37.1**	**+0.5**
RLMT				IAML		19 20 36.0	
	79nm,0.6s						
RLMT				IAML		19 22 01.9	
	93nm,4.3s						
BW06	**Boulder Array**	**3.44**	**257**		**Pn**	**19 19 37.3**	**+0.1**
PD31	**Pinedale Array**	**3.44**	**257**		**Pn**	**19 19 37.0**	**-0.1**
PDAR	**Pinedale Array**	**3.44**	**257**	Pn	**Pn**	**19 19 38.8**	**+1.6**
	4.7nm,0.3s,baz=72,slow=17,SNR=39						
PDAR				Lg	Lg	19 20 21.3	
	11nm,0.3s,baz=67,slow=36,SNR=9.5						
OGNE	**Ogallala**	**3.47**	**140**		**Pn**	**19 19 42.1**	**+4.7**
OGNE				IAML		19 20 48.5	
	141nm,0.7s						
YNE	**Yellowstone No**	**3.85**	**293**		**Pn**	**19 19 42.9**	**+0.2**
ISCO	**Idaho Springs**	**3.85**	**187**		**Pn**	**19 19 44.6**	**+1.7**
YMP	**Mirror Lake Pl**	**3.87**	**288**		**Pn**	**19 19 42.2**	**-0.9**
GCMT	**Greycliff**	**3.97**	**305**	Pn	**Pn**	**19 19 45.3**	**+1.1**
LKWY	**Lake**	**4.00**	**285**		**Pn**	**19 19 46.2**	**+1.4**
LKWY				IAML		19 21 03.5	
	62nm,0.7s						
LKWY				IAML		19 22 27.5	
	36nm,4.6s						
H17A	**Grant Village**	**4.09**	**283**		**Pn**	**19 19 48.3**	**+2.2**
H17A				IAML		19 20 52.8	
	comp=N,52nm,0.9s						
H17A				IAML		19 20 53.1	
	comp=E,34nm,1.1s						
FLWY	**Flagg Ranch**	**4.14**	**278**		**Pn**	**19 19 48.9**	**+2.1**
FLWY				IAML		19 20 59.0	
	comp=E,69nm,1.9s						
FLWY				IAML		19 21 02.6	
	comp=E,43nm,1.4s						
SNOW	**Snow King Moun**	**4.18**	**270**		**Pn**	**19 19 48.2**	**+0.9**
SNOW				IAML		19 20 55.5	
	comp=E,51nm,0.9s						
SNOW				IAML		19 21 06.4	
	comp=E,62nm,1.5s						
YPP	**Pitchstone Pla**	**4.24**	**281**		**Pn**	**19 19 48.8**	**+0.7**
E28A	**Huff**	**4.24**	**45**		**Pn**	**19 19 46.1**	**-1.8**
O20A	**White River Ci**	**4.25**	**216**		**Pn**	**19 19 48.2**	**0.0**
O20A				IAML		19 21 14.7	
	comp=E,51nm,0.8s						
O20A				IAML		19 21 45.2	
	comp=N,49nm,2.0s						
REDW	**Red Top Meadow**	**4.26**	**268**		**Pn**	**19 19 50.5**	**+2.0**
REDW				IAML		19 21 13.4	
	comp=N,69nm,1.1s						
IMW	**Indian Meadow**	**4.31**	**276**		**Pn**	**19 19 50.7**	**+1.6**
IMW				IAML		19 21 06.9	
	comp=N,49nm,0.5s						
IMW				IAML		19 21 08.7	
	comp=N,40nm,0.6s						
TPAW	**Teton Pass**	**4.33**	**270**		**Pn**	**19 19 50.5**	**+1.2**
TPAW				IAML		19 21 07.7	
	comp=N,50nm,0.7s						
TPAW				IAML		19 21 16.9	
	comp=N,31nm,0.8s						
YHH	**Holmes Hill**	**4.36**	**287**		**Pn**	**19 19 51.1**	**+1.2**
FXWY	**Fox Creek**	**4.37**	**272**		**Pn**	**19 19 50.4**	**+0.5**
RDMU	**Red Mountain**	**4.57**	**230**		**Pn**	**19 19 54.4**	**+1.8**
YHB	**Horse Butte**	**4.59**	**286**		**Pn**	**19 19 56.5**	**+3.6**
YHL	**Hebgen Lake**	**4.61**	**288**		**Pn**	**19 19 54.5**	**+1.4**
DGMT	**Dagmar**	**4.88**	**6**		**Pn**	**19 19 56.0**	**-0.6**
KSCO	**Kaye Shedlock'**	**4.95**	**158**		Pn	19 19 53.5	-4.2
BOZ	**Bozeman (W)**	**5.12**	**295**	Pn	**Pn**	**19 20 01.6**	**+1.4**
BOZ				IAML		19 21 34.3	
	comp=N,16nm,1.1s						
HWUT	**Hardware Ranch**	**5.25**	**250**		**Pn**	**19 20 02.2**	**+0.3**
HWUT				IAML		19 21 46.2	
	comp=N,31nm,0.9s						
TCUT	**Toone Canyon**	**5.37**	**244**		**Pn**	**19 20 03.8**	**+0.1**
EGMT	**Eagleton**	**5.51**	**325**		**Pn**	**19 20 06.8**	**+1.4**
MDND	**Maddock**	**5.66**	**40**	Pg	**Pg**	**19 20 28.1**	**-2.4**
LRM	**Limekiln Ridge**	**5.74**	**295**		**Pn**	**19 20 10.5**	**+1.8**
SDCO	**Great Sand Dun**	**5.89**	**184**	Pn	**Pn**	**19 20 10.0**	**-0.8**
Q16A	**Castle Valley**	**6.61**	**227**	Pn	**Pn**	**19 20 20.9**	**+0.3**
PSUT	**Pine Spring**	**8.40**	**236**	Pn	**Pn**	**19 20 45.5**	**+0.3**
ULM	**Lac du Bonnet**	**9.10**	**40**	Pn	**Pn**	**19 20 58.2**	**+3.7**
	comp=N,0.3nm,0.3s,baz=227,slow=12,SNR=1.5						
ULM				Lg	Lg	19 23 31.0	
	comp=N,0.8nm,0.3s,baz=121,slow=6.5,SNR=3.0						
I56US	**NEWPORT INFRAS**	**9.63**	**303**	*i*		20 14 20.0	
	baz=116,slow=316,SNR=12						
YKA	**Yellowknife Ar**	**19.72**	**347**	P	**Pn**	**19 23 13.9**	**-0.3**
	comp=N,0.1nm,0.3s,baz=157,slow=10,SNR=3.7						

*IDC **19** 19:18:56.8±1.8, 31.49N×140.03E, h56km±28km, mb3.4/6, mb1 3.5/8, mb1mx3.2/41, mbtmp3.6/8, ML1.8/1, Error ellipse: s-maj=77.0km s-min=8.7km az=74.0*
*JMA **19** 19:18:59.2±0.1, 32.04N×140.88E, h8km, M3.9*
ISC 19 19:18:57.3±1.2, 31.68N±0.06×140.78E±0.1, h74km±12km, n20, σ1§75/29, mb3.6/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.13**	**314**	P	**Pn**	**19 19 18.8**	**+1.1**
JAOM				*e*S	**Sn**	**19 19 32.5**	**-0.4**
JHCJ	**Hachijojimakas**	**1.60**	**331**	P	**Pn**	**19 19 24.2**	**+0.5**
JHCJ				S	**Sn**	**19 19 42.5**	**-1.1**
JHJ2	**Mitsune**	**1.62**	**332**	P	**Pn**	**19 19 24.9**	**+0.9**
JHJ2				*e*S	**Sn**	**19 19 43.0**	**-1.2**
JHJ	**Hachijo jima 2**	**1.64**	**331**	P	**Pn**	**19 19 24.9**	**+0.6**
	41nm,0.3s,baz=75,slow=22,SNR=210						
JHJ				LR	LR	19 19 36.3	
	comp=Z,20nm,20.6s,baz=102,slow=24						
JHJ				S	**Sn**	**19 19 43.0**	**-1.7**
	99nm,0.3s,baz=267,slow=22,SNR=9.6						
JMKN	**Mikurajimanish**	**2.40**	**337**	P	**Pn**	**19 19 35.8**	**+1.3**
JMKN				S	**Sn**	**19 20 01.9**	**-1.1**
BSO1	**Boso 1**	**2.97**	**4**	P	**Pn**	**19 19 43.0**	**+1.3**
BSO1				*e*S	**Sn**	**19 20 14.9**	**-1.0**
TK02	**Tokai 2**	**3.37**	**313**	P	**Pn**	**19 19 50.5**	**+3.1**
JOD2	**Odawara 2**	**3.83**	**339**	P	**Pn**	**19 19 55.9**	**+2.1**
JOD2				S	**Sn**	**19 20 37.5**	**-0.1**
JYN	**Shimob**	**4.22**	**335**	P	**Pn**	**19 20 02.8**	**+3.5**
JRY	**Ryogami san**	**4.58**	**341**	P	**Pn**	**19 20 07.4**	**+3.2**
JCJ	**Chichijima**	**4.74**	**164**	P	**Pn**	**19 20 07.2**	**+0.9**
	7.4nm,0.3s,baz=7.6,slow=20,SNR=16						
JCJ				S	**Sn**	**19 20 59.0**	**-1.1**
	6.2nm,0.3s,baz=275,slow=12,SNR=1.2						
JTNC	**Tanabenakahech**	**4.81**	**298**	P	**Pn**	**19 20 09.2**	**+1.9**
JAG	**Ashikaga**	**4.85**	**348**	P	**Pn**	**19 20 09.8**	**+2.0**
MJAR	**Matsushiro Arr**	**5.28**	**337**	P	**Pn**	**19 20 12.6**	**-1.1**
	0.0nm,0.3s,baz=159,slow=10,SNR=1.8						
MJAR				S	**Sn**	**19 21 12.3**	**-0.9**
	0.1nm,0.3s,baz=148,slow=14,SNR=1.3						
ZALV	**Zalesovo Beam**	**45.25**	**316**	P	**P**	**19 27 04.2**	**-2.9**
	0.3nm,0.3s,baz=106,slow=11,SNR=2.4						
KURBB	**Kurchatov Arra**	**48.99**	**312**	P	**P**	**19 27 35.2**	**-1.1**
	0.2nm,0.3s,baz=90,slow=8.5,SNR=4.8						
WRA	**Warramunga Arr**	**51.70**	**188**	P	**P**	**19 27 56.5**	**-0.4**
	0.3nm,0.4s,baz=2.7,slow=7.7,SNR=13						
ASAR	**Alice Springs**	**55.42**	**188**	P	**P**	**19 28 23.7**	**-0.5**
	0.2nm,0.7s,baz=5.2,slow=6.2,SNR=4.5						
ARCES	**ARCESS Array B**	**68.81**	**340**	P	**P**	**19 29 55.0**	**+1.7**
	3.3nm,0.9s,baz=59,slow=11,SNR=2.8						
FINES	**FINESS Array B**	**73.29**	**333**	P	**P**	**19 30 21.5**	**+1.0**
	0.5nm,0.5s,baz=23,slow=6.2,SNR=5.9						

*BGR **19** 19:27:16.4±0.0, 15.53N×94.14W, h33km, mb4.6*
*INET **19** 19:27:21.9, 15.43N×91.47W, h6km, ML4.9*
*GCG **19** 19:27:21.5±0.6, 15.40N×91.37W, h16km, MD4.7*
*IDC **19** 19:27:22.4±2.2, 15.31N×91.25W, h26km±14km, mb3.9/18, mb1 4.1/21, mb1mx4.0/37, mbtmp4.1/21, ML4.0/3, MS3.7/18, Ms1 3.7/18, ms1mx3.5/37, Error ellipse: s-maj=24.5km s-min=12.9km az=48.0*
*SNET **19** 19:27:23.3±1.2, 15.42N×91.43W, h13km±18km, ML4.5*
*NEIC **19** 19:27:23.7±2.0, 15.34N±0.07×91.31W±0.08, h33km±5km, mb4.7/198, Error ellipse: s-maj=12.4km s-min=8.4km az=225.0*
*UCR **19** 19:27:23.3±1.4, 15.43N×91.44W, h13km±84km, ML4.3, mb4.7(NEIC)*
ISC 19 19:27:24.0±0.4, 15.34N±0.04×91.36W±0.04, h35km, n506, σ2§19/438, mb4.6/86, MS3.7/16, 2C-5D, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG3	**Santiaguito 3,**	**0.66**	**198**	⇓*i*P	**Pn**	**19 27 35.2**	**-1.8**
RTAL	**Retalhuleu**	**0.87**	**202**	⇓*i*P	**Pn**	**19 27 39.1**	**-0.7**
RTAL				*e*S	**Sn**	**19 27 53.6**	**+2.2**
RTAL				IAML		19 27 59.7	
	comp=Z,13µm,0.5s						
ERG	**Entre ros, C**	**0.92**	**193**	⇓*i*P	**Pn**	**19 27 40.8**	**+0.4**
APG	**El Apazote**	**0.93**	**111**	Pg	**Pn**	**19 27 37.4**	**-3.4**
	comp=Z,546nm,0.3s,baz=300,slow=14,SNR=219						
APG				Lg	Lg	19 27 49.6	
	comp=Z,7µm,0.3s,baz=169,slow=12,SNR=49						
FUG	**Fuego 3**	**1.02**	**151**	⇓*i*P	**Pn**	**19 27 41.1**	**-0.9**
PCG	**Pacaya**	**1.19**	**142**	*e*P	**Pn**	**19 27 44.5**	**0.0**
CCIG	**Comitan**	**1.20**	**321**	Pn	**Pn**	**19 27 43.5**	**-0.9**
NBG	**Las Nubes**	**1.23**	**127**	⇑*i*P	**Pn**	**19 27 44.5**	**-0.5**
IXG	**Ixpaco**	**1.46**	**143**	⇑*i*P	**Pn**	**19 27 48.7**	**+0.6**
MRL	**Marmol**	**1.64**	**99**	⇓*e*P	**Pn**	**19 27 50.4**	**-0.2**
ESQI	**Esquipulas**	**2.10**	**111**	*e*P	**Pn**	**19 27 59.4**	**+2.6**
ESQI				*e*S	**Sn**	**19 28 27.1**	**+5.3**
PETF	**Flores**	**2.12**	**42**	*e*P	**Pn**	**19 27 58.0**	**+0.9**
MTO3	**Montecristo**	**2.15**	**116**	*e*P	**Pn**	**19 27 59.9**	**+2.3**
MTO3	**Montecristo**	**2.15**	**116**	*e*P	**Pn**	**19 27 59.9**	**+2.3**
RTR	**El Retiro**	**2.19**	**131**	*e*P	**Pn**	**19 28 01.4**	**+3.2**
RTR	**El Retiro**	**2.19**	**131**	*e*P	**Pn**	**19 28 01.4**	**+3.2**
SBLS	**San Blas**	**2.25**	**131**	*e*P	**Pn**	**19 28 02.2**	**+3.3**
SBLS	**San Blas**	**2.25**	**131**	*e*P	**Pn**	**19 28 02.2**	**+3.3**
BOQS	**Boqueron**	**2.57**	**128**	*e*P	**Pn**	**19 28 07.0**	**+3.6**
BOQS	**Boqueron**	**2.57**	**128**	*e*P	**Pn**	**19 28 07.0**	**+3.6**
SNET	**Serv Nac Est T**	**2.64**	**128**	*e*P	**Pn**	**19 28 07.2**	**+3.0**
SNET				IAML		19 28 50.5	
	comp=Z,2µm,0.4s						
SNET	**Serv Nac Est T**	**2.64**	**128**		**Pn**	**19 28 04.2**	**0.0**
SNET	**Serv Nac Est T**	**2.64**	**128**	*e*P	**Pn**	**19 28 07.2**	**+3.0**
SNET				IAML		19 28 50.5	
	comp=Z,2µm,0.4s						
LBRS	**Las Brisas**	**2.75**	**125**	*e*P	**Pn**	**19 28 08.9**	**+3.2**
LBRS	**Las Brisas**	**2.75**	**125**	*e*P	**Pn**	**19 28 08.9**	**+3.2**
LFRS	**El Faro**	**2.80**	**127**	*e*P	**Pn**	**19 28 09.9**	**+3.4**
LFRS	**El Faro**	**2.80**	**127**	*e*P	**Pn**	**19 28 09.9**	**+3.4**
CMIG	**Matias Romero**	**3.81**	**298**	Pn	**Pn**	**19 28 20.2**	**0.0**
	comp=Z,22nm,0.3s,baz=93,slow=9.6,SNR=45						
CM

X40A Basin Creek Fa 19.11 356 P P 19 31 43.3 -0.7
OXF Oxford 19.17 5 P Pn 19 31 44.9 -0.8
baz=184
OXF Oxford 19.17 5 P P 19 31 44.4 -0.2
OXF IAmb IAmb 19 31 56.2
comp=Z,57nm,1.1s
MIAR Mount Ida 19.23 354 P Pn 19 31 45.5 -0.9
baz=172,SNR=8.3
MIAR Mount Ida 19.23 354 P P 19 31 45.0 -0.2
MIAR IAmb IAmb 19 31 52.5
comp=Z,29nm,0.9s
GOGA Godfrey 19.36 20 P Pn 19 31 47.9 0.0
baz=202
GOGA Godfrey 19.36 20 P P 19 31 45.8 -0.9
UALR University of 19.37 358 P P 19 31 45.6 -1.2
X48A Hartselle 19.42 11 P P 19 31 46.5 -0.9
X48A IAmb IAmb 19 31 58.1
comp=Z,25nm,0.8s
X37A Clayton 19.50 350 P Pn 19 31 49.9 +0.3
X37A IAmb IAmb 19 31 56.2
comp=Z,34nm,0.9s
SDDR Presa de Saban 19.51 76 P P 19 31 47.5 -1.1
Y52A Lilburn 19.59 18 P Pn 19 31 49.4 -1.2
baz=200
Y52A Lilburn 19.59 18 P P 19 31 48.8 -0.4
Y52A IAmb IAmb 19 31 58.7
comp=Z,35nm,0.8s
ROSC El Rosal 19.73 120 LR LR 19 40 17.8
comp=Z,140nm,21.2s,baz=4.5,slow=40
W41B Gary Mavity, V 19.77 358 P Pn 19 31 53.0 +0.2
baz=176
PLAL Pickwick Lake 19.78 8 P Pn 19 31 51.8 -1.2
FPAL Fort Paine 19.81 14 P P 19 31 51.5 -0.1
FPAL IAmb IAmb 19 32 01.9
comp=Z,36nm,0.8s
LPIG La Paz 19.84 299 LR LR 19 39 34.6
comp=Z,300nm,18.8s,baz=119,slow=37
WHAR Wooly Hollow 19.88 358 P P 19 31 52.2 -0.1
W39A Magazine 19.89 354 P P 19 31 52.5 +0.1
baz=171,SNR=6.2
W39A Magazine 19.89 354 P Pn 19 31 53.6 -0.7
W39A IAmb IAmb 19 32 08.8
comp=Z,17nm,0.6s
SWET Sewanee 20.38 13 P P 19 31 56.9 -1.0
SWET IAmb IAmb 19 32 07.1
comp=Z,54nm,1.3s
WMOK Wichita Mounta 20.44 342 P P 19 31 59.0 +0.5
baz=157,SNR=7.6
WMOK Wichita Mounta 20.44 342 P P 19 31 56.8 -1.6
WMOK IAmb IAmb 19 32 05.0
comp=Z,58nm,1.5s
FCAR Ozark Folk Cen 20.48 358 P P 19 31 59.2 +0.4
W50A Signal Mountai 20.51 14 P P 19 31 59.4 +0.2
W50A IAmb IAmb 19 32 09.2
comp=Z,23nm,0.8s
GDL2 Guadalupe Moun 20.54 327 P P 19 31 59.9 +0.2
LCAR Lake Charles 20.64 0 P P 19 31 58.8 -1.8
MNTX Cornudas Mount 20.71 324 P Pn 19 32 02.9 -1.0
baz=137,SNR=8.1
MNTX Cornudas Mount 20.71 324 P P 19 32 02.5 +1.1
V48A Smith Brothers 20.72 10 P P 19 32 02.1 +0.7
TUL1 Leonard 20.86 350 P P 19 32 02.9 -0.1
baz=166
TUL1 Leonard 20.86 350 P P 19 32 02.4 -0.6
TUL1 IAmb IAmb 19 32 11.7
comp=Z,34nm,1.0s
CPCT Cooper Cave 20.94 16 P P 19 32 03.5 -0.3
CPCT IAmb IAmb 19 32 12.8
comp=Z,32nm,0.8s
WVT Waverly 20.94 8 P P 19 32 04.5 +0.7
baz=188
WVT Waverly 20.94 8 P P 19 32 04.0 +0.2
X55A Gracelyn & Ava 20.97 23 P P 19 32 01.7 -2.4
baz=206
U40A Yellville 20.97 357 P P 19 32 00.6 -3.6
baz=174
HHAR Hobbs 20.98 354 P P 19 32 02.9 -1.4
HHAR IAmb IAmb 19 32 10.2
comp=Z,35nm,0.8s
BG3 Lake Jocassee 20.98 20 P P 19 32 03.3 -1.0
CLTN Cedars of Leba 21.15 11 P P 19 32 06.8 +0.7
CLTN IAmb IAmb 19 32 15.6
comp=Z,42nm,0.8s
PAULI Pauline 21.21 22 P P 19 32 06.2 -0.5
PAULI IAmb IAmb 19 32 16.6
comp=Z,25nm,1.1s
MSTX Muleshoe 21.22 333 P P 19 32 09.5 +2.5
baz=146,SNR=7.8
MSTX Muleshoe 21.22 333 P P 19 32 08.0 +1.0
MSTX IAmb IAmb 19 32 17.9
comp=Z,20nm,0.9s
SDV Santo Domingo 21.24 105 P P 19 32 07.0 -0.5
comp=Z,11nm,0.7s,baz=304,slow=6.3,SNR=18
SDV LR LR 19 40 38.5
comp=Z,160nm,21.2s,baz=290,slow=38
SDV Santo Domingo 21.24 105 P P 19 32 07.8 +0.4
SDV IAmb IAmb 19 32 18.6
comp=Z,19nm,0.8s
W54A Cherokee Point 21.32 21 P P 19 32 08.1 +0.2
baz=204
V51A Loudon 21.32 16 P P 19 32 08.2 +0.3
V51A IAmb IAmb 19 32 17.2
comp=Z,43nm,0.9s
TKL Tuckaleechee C 21.34 17 P P 19 32 08.5 +0.4
comp=Z,9.5nm,0.9s,baz=200,slow=14,SNR=2.2
TKL LR LR 19 41 31.2
comp=Z,340nm,19.4s,baz=198,slow=40
TKL Tuckaleechee C 21.34 17 P P 19 32 08.6 +0.4
TKL IAmb IAmb 19 32 18.3
comp=Z,40nm,1.1s
PBMO Poplar Bluff 21.37 2 P P 19 32 08.5 +0.1
PBMO IAmb IAmb 19 32 16.0
comp=Z,21nm,0.7s
AMTX Amarillo 21.56 336 P P 19 32 11.4 +0.8
baz=150
AMTX Amarillo 21.56 336 P P 19 32 09.0 -1.6
V52A Sevierville 21.57 17 P P 19 32 10.7 +0.1
BIRD Birdtown, Kers 21.58 25 P P 19 32 10.9 +0.2
BIRD IAmb IAmb 19 32 17.8
comp=Z,38nm,1.4s
V53A Saluda 21.64 19 P P 19 32 12.4 +1.0
V53A IAmb IAmb 19 32 21.3
comp=Z,46nm,1.0s
U49A Red Boiling Sp 21.66 12 P P 19 32 11.7 +0.1
KMSC Kings Mountain 21.68 23 P P 19 32 12.1 +0.4
baz=206
KMSC Kings Mountain 21.68 23 P P 19 32 11.9 +0.2
KMSC IAmb IAmb 19 32 21.1
comp=Z,27nm,1.0s
W56A Indian Trail 21.96 24 P P 19 32 13.7 -1.1
baz=208
V54A Nebo 22.02 21 P P 19 32 12.8 -2.7
baz=204,SNR=7.0
W57A Gilead 22.21 25 P P 19 32 15.0 -2.5
baz=209
W57A Gilead 22.21 25 P P 19 32 16.6 -0.9
W57A IAmb IAmb 19 32 27.6
comp=Z,39nm,1.1s
TZTN Tazewell 22.23 17 P P 19 32 17.0 -0.7
baz=199
TZTN Tazewell 22.23 17 P P 19 32 17.9 +0.1
TZTN IAmb IAmb 19 32 24.6
comp=Z,39nm,0.9s
S44A Carbondale 22.34 4 P P 19 32 18.2 -0.7
V55A Taylorsville 22.35 22 P P 19 32 18.1 -0.9
baz=206
V55A Taylorsville 22.35 22 P P 19 32 17.7 -1.3
V55A IAmb IAmb 19 32 30.7
comp=Z,27nm,1.0s
T50A Nancy 22.36 14 P P 19 32 19.5 +0.5
T50A IAmb IAmb 19 32 27.9
comp=Z,39nm,0.8s
SIUC Southern Illin 22.37 4 P P 19 32 18.7 -0.4
W58A Raeford 22.42 27 P P 19 32 19.3 -0.4
baz=211
V56A Mocksville 22.58 24 P P 19 32 21.5 +0.1
baz=207
CCM Cathedral Cave 22.63 0 P P 19 32 22.4 +0.5
baz=179
CCM Cathedral Cave 22.63 0 P P 19 32 20.8 -1.1
121A Cookes Peak, D 22.71 322 P P 19 32 27.1 +4.1
baz=133
121A Cookes Peak, D 22.71 322 P P 19 32 24.2 +1.2
U54A Nelsons Funny 22.74 20 P P 19 32 24.3 +1.1
baz=203,SNR=7.7
U54A Nelsons Funny 22.74 20 P P 19 32 23.6 +0.3
U54A IAmb IAmb 19 32 30.4
comp=Z,40nm,0.9s
USIN University of 22.77 8 P P 19 32 23.7 +0.3
319A Douglas 22.87 317 P P 19 32 25.4 +0.7
319A IAmb IAmb 19 32 37.8
comp=Z,22nm,1.0s
R40A Maddies Statio 22.88 358 P P 19 32 26.2 +1.8
R40A IAmb IAmb 19 32 36.1
comp=Z,31nm,1.0s
V57A Coltrane Farms 22.93 25 P P 19 32 26.0 +0.9
baz=209
T53A Wise 22.94 18 P P 19 32 27.2 +1.9
baz=201
U55A TA2, Sparta 22.99 22 P P 19 32 28.0 +2.2
baz=205
U56A King 23.10 23 P P 19 32 27.6 +0.8
baz=207
U56A King 23.10 23 P P 19 32 27.1 +0.2
U56A IAmb IAmb 19 32 37.4
comp=Z,20nm,0.9s
V58A Windy Hill, Pi 23.13 26 P P 19 32 27.7 +0.6
baz=210
V58A Windy Hill, Pi 23.13 26 P P 19 32 26.5 -0.6
V58A IAmb IAmb 19 32 33.5
comp=Z,25nm,1.1s
WCI Wyandotte Cave 23.23 10 P P 19 32 29.7 +1.6
baz=191
WCI Wyandotte Cave 23.23 10 P P 19 32 28.4 +0.3
BNM Barren Site 23.25 326 P P 19 32 30.3 +1.7
S51A Beattyville 23.25 16 P P 19 32 28.7 +0.4
T54A Tazewell 23.32 20 P P 19 32 29.9 +0.8
baz=203,SNR=5.9
LENM Lemitar 23.45 326 P P 19 32 31.2 +0.7
OLIL Olney 23.48 6 P P 19 32 30.8 +0.2
V59A Middlesex 23.48 28 P P 19 32 31.9 +1.3
baz=212
R49A Shelbyville 23.50 12 P P 19 32 30.4 -0.4
Q44A Meyer Farm, Va 23.56 5 P P 19 32 31.3 0.0
U57A Blanch 23.58 25 P P 19 32 33.4 +1.9
baz=209,SNR=6.5
T55A Pulaski 23.64 21 P P 19 32 34.3 +2.1
baz=205
R50A Paris 23.68 14 P P 19 32 32.7 +0.3
S53A Williamson 23.71 18 P P 19 32 34.2 +1.4
baz=202
T56A Rocky Mt 23.83 23 P P 19 32 35.7 +1.7
baz=207
BLA Blacksburg 23.85 22 P P 19 32 36.5 +2.3
baz=206
U58A Oxford 23.88 26 P P 19 32 37.5 +3.2
baz=211
R32A Long Quarter, 23.89 346 P P 19 32 34.0 -0.5
S54A Dingess, Beckl 24.07 20 P P 19 32 36.0 -0.2
baz=203
S54A Dingess, Beckl 24.07 20 P P 19 32 36.1 -0.1
S54A IAmb IAmb 19 32 45.2
comp=Z,14nm,0.7s
P40A Paris 24.11 359 P P 19 32 35.7 -0.8
T57A Hurt 24.11 24 P P 19 32 37.1 +0.6
baz=209
T57A Hurt 24.11 24 P P 19 32 35.6 -0.9
T57A IAmb IAmb 19 32 50.5
comp=Z,17nm,1.1s
KSU1 Kansas State U 24.11 350 P P 19 32 39.3 +2.7
baz=166
KSU1 Kansas State U 24.11 350 P P 19 32 38.9 +2.4
KSU1 IAmb IAmb 19 32 41.6
comp=Z,31nm,0.8s
BLO Bloomington 24.12 9 P P 19 32 37.4 +0.9
U59A Littleton 24.17 28 P P 19 32 38.6 +1.5
baz=213
P43A Skaggs, Pawnee 24.26 3 P P 19 32 39.1 +1.2
P38A Dawn 24.27 356 P P 19 32 38.9 +1.0
P38A IAmb IAmb 19 32 43.3
comp=Z,27nm,0.8s
SJG San Juan 24.29 80 LR LR 19 42 16.5
comp=Z,105nm,19.1s,baz=238,slow=37
S55A Lewisburg 24.32 21 P P 19 32 38.8 +0.3
baz=205
T58A Grand View Acr 24.35 26 P P 19 32 39.3 +0.6
baz=210
R53A Hurricane 24.36 18 P P 19 32 39.9 +1.1
baz=201
R53A Hurricane 24.36 18 P P 19 32 39.0 +0.2
R53A IAmb IAmb 19 32 45.7
comp=Z,25nm,0.9s
TUC Tucson 24.45 317 P P 19 32 46.7 +7.0
baz=128
TUC Tucson 24.45 317 P P 19 32 41.7 +1.9
P46A Rosedale 24.46 8 P P 19 32 40.1 +0.5
CBKS Cedar Bluff 24.52 344 P P 19 32 43.5 +3.2
baz=159
R54A Victor 24.52 20 P P 19 32 40.0 -0.3
baz=204
S56A Natural Bridge 24.58 23 P P 19 32 40.7 -0.1
baz=207
P48A Milroy 24.59 11 P P 19 32 41.2 +0.4
T25A Trinidad 24.61 334 P P 19 32 44.2 +2.8
baz=147,SNR=11
Q51A Peebles 24.62 15 P P 19 32 42.8 +1.6
baz=198,SNR=14
Q51A Peebles 24.62 15 P P 19 32 41.7 +0.5
T59A Double "B" Far 24.79 27 P P 19 32 43.0 +0.2
baz=212,SNR=5.9
T59A Double "B" Far 24.79 27 P P 19 32 42.5 -0.2
T59A IAmb IAmb 19 32 49.9
comp=Z,47nm,1.4s
P49A Miami Univ. Ec 24.80 12 P P 19 32 43.0 +0.2
baz=194,SNR=6.2
Q52A Bidwell 24.85 17 P P 19 32 44.5 +1.2
baz=200,SNR=5.7
S57A Dark Hollow, R 24.89 24 P P 19 32 44.0 +0.4
baz=209,SNR=5.9
S57A Dark Hollow, R 24.89 24 P P 19 32 43.3 -0.2
S57A IAmb IAmb 19 32 52.0
comp=Z,19nm,1.0s
R55A Marlinton 24.91 21 P P 19 32 44.7 +0.8
baz=206,SNR=7.6
R55A Marlinton 24.91 21 P P 19 32 44.3 +0.4
R55A IAmb IAmb 19 32 51.1
comp=Z,34nm,1.0s
Q53A Leroy 24.97 18 P P 19 32 44.4 0.0
baz=202
P50A Jamestown 25.07 14 P P 19 32 46.7 +1.5
baz=196,SNR=9.8
S58A Poland Farm, P 25.12 26 P P 19 32 45.8 +0.1
baz=211
P51A Williamsport 25.13 15 P P 19 32 46.8 +1.1
baz=198
P51A Williamsport 25.13 15 P P 19 32 45.9 +0.2
HDIL Hopedale 25.19 4 P P 19 32 49.0 +2.7
baz=183
HDIL Hopedale 25.19 4 P P 19 32 46.1 -0.1
SFIN Lafayette 25.22 8 P P 19 32 49.1 +2.6
baz=188,SNR=10
SFIN Lafayette 25.22 8 P P 19 32 47.6 +1.1
T60A Surry 25.30 28 P P 19 32 48.9 +1.6
baz=214
Q54A Coxs Mills 25.30 19 P P 19 32 48.4 +1.1
baz=203,SNR=13
Q54A Coxs Mills 25.30 19 P P 19 32 47.8 +0.4
X18A Snowflake 25.40 322 P P 19 32 49.3 +0.8
O48A Farmland 25.41 11 P P 19 32 49.7 +1.5
baz=193,SNR=8.2
R58B Mineral 25.49 25 P P 19 32 50.8 +1.8
baz=211,SNR=9.2
R58B Mineral 25.49 25 P P 19 32 48.8 -0.2
O49A Covington 25.50 13 P P 19 32 50.2 +1.0
P52A Corning 25.52 17 P P 19 32 52.8 +3.5
baz=200
R57A Stanardsville 25.52 24 P P 19 32 50.6 +1.3
baz=209
Q55A Buckhannon 25.57 21 P P 19 32 52.6 +2.8
baz=205
S59A Mechanicsville 25.57 27 P P 19 32 50.6 +0.9
baz=212
KSCO Kaye Shedlock' 25.58 339 P P 19 32 53.1 +3.2
baz=153
KSCO Kaye Shedlock' 25.58 339 P P 19 32 50.8 +0.9
SDCO Great Sand Dun 25.59 333 P P 19 32 52.9 +2.6
baz=145
SDCO Great Sand Dun 25.59 333 P P 19 32 50.9 +0.6
P53A Whipple 25.59 18 P P 19 32 51.7 +1.7
baz=202
P53A Whipple 25.59 18 P P 19 32 49.4 -0.6
P53A IAmb IAmb 19 32 59.0
comp=Z,19nm,0.9s
214A Organ Pipe Nat 25.61 314 P P 19 32 55.9 +5.7
baz=124
O50A Cable 25.62 14 P P 19 32 51.2 +1.0
baz=196,SNR=5.7
W18A Petrified Fore 25.69 323 P P 19 32 55.1 +4.0
baz=134
N35A Tabor 25.70 352 P P 19 32 51.5 +0.6
R58A Rapidan 25.73 25 P P 19 32 51.1 -0.1
baz=210
ATAH Atahualpa 25.76 149 LR LR 19 41 49.0
comp=Z,77nm,19.0s,baz=322,slow=34
ACSO Alum Creek Sta 25.85 15 P P 19 32 55.7 +3.3
baz=198,SNR=9.2
ACSO Alum Creek Sta 25.85 15 P P 19 32 52.2 -0.1
O51A Pataskala 25.87 16 P P 19 32 57.2 +4.7
baz=199,SNR=6.7
N47A Urbana 25.92 10 P P 19 32 53.1 +0.2
Q56A Snyder Ridge, 25.92 22 P P 19 32 56.8 +3.8
baz=207,SNR=6.7
Q56A Snyder Ridge, 25.92 22 P P 19 32 53.8 +0.9
P54A Burton 25.98 19 P P 19 32 55.9 +2.4
baz=204
N48A Decatur 26.02 11 P P 19 32 56.6 +2.9
baz=193,SNR=13
O52A Adamsville 26.05 17 P P 19 32 55.4 +1.3
baz=200
O52A Adamsville 26.05 17 P P 19 32 54.5 +0.5
M44A Midewin, Midew 26.11 6 P P 19 32 54.8 +0.1
S22A 4UR Ranch, Cre 26.18 331 P P 19 33 01.3 +5.6
baz=143
Q57A Strasburg 26.20 23 P P 19 32 57.4 +1.9
baz=208
X16A Lo Mia Camp, P 26.23 320 P P 19 32 55.7 -0.3
N49A Columbus Grove 26.24 12 P P 19 32 56.0 +0.2
N49A IAmb IAmb 19 33 01.5
comp=Z,32nm,1.3s
N50A Nevada 26.32 14 P P 19 32 58.1 +1.5
baz=197
P56A Dayton Farm, R 26.46 22 P P 19 33 00.0 +2.3
baz=207
Q24A Divide 26.47 335 P P 19 33 04.1 +5.8
baz=147
MVCO Mesa Verde 26.57 328 P P 19 33 03.8 +4.7
baz=139
L42A Oliver, Polo 26.61 3 P P 19 33 00.6 +1.5
L42A IAmb IAmb 19 33 07.2
comp=Z,23nm,0.8s
L40A Anamosa 26.63 0 P P 19 32 58.3 -0.9
L40A IAmb IAmb 19 33 04.7
comp=Z,25nm,1.0s
N51A Ashland 26.65 15 P P 19 33 02.1 +2.5
baz=199
N51A Ashland 26.65 15 P P 19 32 58.5 -1.0
M48A Edgerton 26.68 11 P P 19 33 02.6 +2.9
baz=193
M48A Edgerton 26.68 11 P P 19 32 59.0 -0.7
M48A IAmb IAmb 19 33 05.3
comp=Z,29nm,0.9s
N52A McGinn's Farm, 26.74 16 P P 19 33 04.4 +4.1
baz=200
P57A Homestead Farm 26.75 23 P P 19 33 03.1 +2.7
baz=209
Q59A Harwood 26.77 26 P P 19 33 05.3 +4.8
baz=212
M49A Liberty Center 26.81 12 P P 19 33 04.7 +3.7
baz=195
L44A Lake County Fo 26.91 6 P P 19 33 05.2 +3.4
baz=186
O55A Ligonier 26.92 21 P P 19 33 05.5 +3.6
baz=206
N53A Lisbon 26.97 18 P P 19 33 05.6 +3.1
baz=202
P58A Pank, Wackersv 27.03 24 P P 19 33 05.9 +3.0
baz=210
M51A Elyria 27.09 15 P P 19 33 06.6 +3.1
baz=199
L48A N Adams 27.18 11 P P 19 33 07.4 +3.1
baz=194,SNR=6.6
O56A Blue Knob Stat 27.23 22 P P 19 33 08.4 +3.6
baz=207
ISCO Idaho Springs 27.37 336 P P 19 33 12.7 +6.3
baz=147
N54A Moraine State 27.37 19 P P 19 33 08.0 +2.0
baz=204
N54A Moraine State 27.37 19 P P 19 33 06.5 +0.5
N54A IAmb IAmb 19 33 18.4
comp=Z,32nm,1.4s
M52A Chesterland 27.50 16 P P 19 33 11.6 +4.4
baz=200
M52A Chesterland 27.50 16 P P 19 33 07.7 +0.5
M52A IAmb IAmb 19 33 18.1
comp=Z,39nm,1.3s
O57A Amberson 27.52 23 P P 19 33 10.1 +2.8
baz=209
PV03 Paradox Valley 27.55 329 P P 19 33 06.6 -1.4
PV18 Skein Mesa, Pa 27.58 329 P P 19 33 07.5 -0.6
PV18 IAmb IAmb 19 33 18.4
comp=Z,18nm,1.2s
PV12 Saucer Basin, 27.58 329 P P 19 33 07.8 -0.3
PV07 Paradox Valley 27.60 330 P P 19 33 08.7 +0.4
PV11 David Mesa, Pa 27.60 329 P P 19 33 05.3 -3.0
PV11 IAmb IAmb 19 33 18.7
comp=Z,19nm,1.1s
M53A WI Miller and 27.60 18 P P 19 33 12.7 +4.6
baz=202
L50A Kingsville 27.61 14 P P 19 33 12.7 +4.6
baz=197
PV20 West Nyswonger 27.68 329 P P 19 33 09.3 +0.3
PV04 Paradox Valley 27.69 329 P P 19 33 09.1 0.0
PV04 IAmb IAmb 19 33 19.6
comp=Z,15nm,0.8s
O58A Lewisberry 27.72 24 P P 19 33 12.1 +3.0
baz=210
PV22 Blue Mesa, Par 27.74 330 P P 19 33 09.6 0.0
K47A Vermontville 27.78 10 P P 19 33 13.9 +4.3
baz=192
SSPA Standing Stone 27.80 22 P P 19 33 12.9 +3.1
baz=208
SSPA Standing Stone 27.80 22 P P 19 33 10.3 +0.5
PDMCI Parker Dam,Lak 27.89 317 P P 19 33 17.4 +6.7
baz=126
N56A West Decatur 27.90 21 P P 19 33 14.7 +4.0
baz=207
M54A Oil Creek Stat 27.97 19 P P 19 33 16.5 +5.1
baz=204
P60A Greenville 27.99 26 P P 19 33 15.2 +3.7
baz=213
N57A Milroy 28.03 23 P P 19 33 15.5 +3.7
baz=208
K48A Perry 28.07 11 P P 19 33 16.2 +4.0
baz=194
K49A Clarkson 28.18 12 P P 19 33 17.4 +4.2
baz=195
O59A Robesonia 28.18 25 P P 19 33 17.0 +3.8
baz=212
L53A Girard 28.20 18 P P 19 33 16.3 +2.9
baz=202
W13A Hualapai Mount 28.21 318 P P 19 33 14.4 +0.6
M55A Ridgway 28.23 20 P P 19 33 15.8 +2.2
baz=206
BC3 Big Chuckawall 28.40 314 P P 19 33 22.6 +7.2
baz=123
N58A Sunbury 28.42 24 P P 19 33 18.9 +3.6
baz=210
M56A Emporium 28.44 21 P P 19 33 16.1 +0.5
baz=207
M56A Emporium 28.44 21 P P 19 33 16.5 +1.0
M56A IAmb IAmb 19 33 23.5
comp=Z,14nm,1.1s
I42A Draeger Farm, 28.53 4 P P 19 33 17.5 +1.1
I42A IAmb IAmb 19 33 21.8
comp=Z,13nm,0.8s
ECSD EROS Data Cent 28.65 352 P P 19 33 22.6 +5.2
baz=168
M57A Sunshine Farm, 28.69 23 P P 19 33 21.2 +3.4
baz=209
L54A Sinclairville 28.74 19 P P 19 33 22.8 +4.6
baz=204
O20A White River Ci 28.76 332 P P 19 33 25.2 +6.5
baz=143
O20A White River Ci 28.76 332 P P 19 33 20.2 +1.5
J49A Marlette 28.80 13 P P 19 33 22.7 +4.0
baz=196,SNR=6.2
KNB Kanab 28.80 323 P P 19 33 21.7 +2.7
N59A State Game Lan 28.86 25 P P 19 33 22.8 +3.5
baz=212

BELC Belle Mtn. Jos 28.97 314 P P 19 33 26.2 +5.7
baz=122
M58A Price's Panora 28.97 24 P **P** 19 33 23.9 +3.6
baz=210
L55A Hinsdale 28.98 20 P **P** 19 33 23.1 +2.8
baz=206
N60A Cedar Hill Far 29.10 26 P **P** 19 33 22.7 +1.3
baz=213
MTPU Mount Pierson 29.15 325 P **P** 19 33 21.4 -0.9
GMRC Granite Mounta 29.18 316 P P 19 33 28.0 +5.6
baz=124
L56A Greenwood 29.23 21 P **P** 19 33 25.6 +2.9
baz=207
J52A Paris 29.32 16 P P 19 33 28.2 +4.9
baz=201
L57A Andrews Acres 29.37 22 P P 19 33 28.8 +5.0
baz=209
I49A Point Hope 29.42 13 P **P** 19 33 27.9 +3.7
baz=196
I49A Point Hope 29.42 13 P **P** 19 33 21.7 -2.5
P17A Butcher Ranch, 29.43 328 P **P** 19 33 24.2 -0.4
M59A Waymart 29.52 25 P **P** 19 33 29.0 +3.8
baz=212
RWWY Rawlins 29.62 336 P **P** 19 33 26.6 +0.3
RWWY IAmb IAmb 19 33 32.7
comp=Z,18nm,1.2s
M60A Port Jervis 29.68 26 P **P** 19 33 28.9 +2.4
baz=213
I51A Listowel 29.71 15 P **P** 19 33 30.7 +3.9
baz=200,SNR=8.2
L58A Harry Jones Me 29.78 24 P P 19 33 32.8 +5.3
baz=210
K56A Middlesex 29.81 21 P **P** 19 33 31.5 +3.8
baz=207
SPMN Marine on St. 29.81 358 P **P** 19 33 31.4 +3.8
baz=176
SPMN Marine on St. 29.81 358 P **P** 19 33 29.5 +1.8
BINY Binghamton 29.86 23 P **P** 19 33 31.8 +3.6
baz=210
BINY Binghamton 29.86 23 P **P** 19 33 29.8 +1.6
BINY IAmb IAmb 19 33 34.9
comp=Z,35nm,1.5s
K57A Scipio Center 30.13 22 P P 19 33 35.6 +5.2
baz=209
J55A Hilton 30.15 20 P P 19 33 35.4 +4.8
baz=206
I52A Shelburne 30.17 16 P P 19 33 35.6 +4.7
baz=201
K22A Casper 30.17 337 P P 19 33 36.4 +5.3
baz=148
K22A Casper 30.17 337 P **P** 19 33 29.1 -2.0
L59A Walton 30.23 25 P P 19 33 35.9 +4.4
baz=212
G47A Hillman 30.41 11 P **P** 19 33 36.6 +3.7
baz=193
K58A Earlville 30.48 23 P P 19 33 38.5 +4.9
baz=210
K58A Earlville 30.48 23 P **P** 19 33 32.5 -1.1
K58A IAmb IAmb 19 33 42.0
comp=Z,19nm,1.1s
J56A Wolcott 30.48 21 P P 19 33 38.5 +4.9
baz=208
J56A Wolcott 30.48 21 P **P** 19 33 32.9 -0.7
RSSD Black Hills 30.65 342 P **P** 19 33 39.9 +4.5
baz=154
RSSD Black Hills 30.65 342 P **P** 19 33 34.6 -0.8
COWI Conover 30.72 3 P **P** 19 33 36.2 +0.5
COWI IAmb IAmb 19 33 40.7
comp=Z,8.7nm,0.8s
NNA Nana 30.72 151 LR LR 19 42 57.3
comp=Z,34nm,21.1s,baz=322,slow=30
TPNV Topopah Spring 30.85 319 P P 19 33 45.5 +8.3
baz=126
J57A Williamstown 30.90 22 P **P** 19 33 41.1 +3.8
baz=209
PECO Prince Edward 31.02 20 P **P** 19 33 39.3 +1.1
PECO IAmb IAmb 19 33 46.9
comp=Z,18nm,1.0s
TCUT Toone Canyon 31.02 330 P **P** 19 33 38.6 -0.1
I55A Frankford 31.04 19 P **P** 19 33 42.5 +4.0
baz=205
H53A Bobcaygeon 31.09 18 P **P** 19 33 42.6 +3.6
baz=204,SNR=6.3
SADO Sadowa 31.11 17 P **P** 19 33 38.0 -1.1
comp=Z,2.4nm,0.5s,baz=224,slow=9.2,SNR=4.4
SADO Sadowa 31.11 17 P **P** 19 33 38.5 -0.6
SADO IAmb IAmb 19 33 45.7
comp=Z,12nm,0.9s
J58A Remsen 31.12 23 P **P** 19 33 42.2 +2.9
baz=210
MPMC Manual Prospec 31.13 316 P P 19 33 45.8 +6.1
baz=123
E38A The Farm, Brul 31.17 360 P **P** 19 33 38.9 -0.7
F48A Evansville 31.27 12 P **P** 19 33 43.5 +3.0
baz=195,SNR=6.4
F49A Sandfield 31.32 13 P **P** 19 33 44.5 +3.5
baz=196,SNR=7.4
R11A Troy Canyon, C 31.32 322 P P 19 33 46.9 +5.6
baz=129,SNR=5.2
DELO Deloro Mine 31.33 19 P **P** 19 33 40.1 -1.0
DELO IAmb IAmb 19 33 49.4
comp=Z,9.3nm,0.8s
HWUT Hardware Ranch 31.47 330 P **P** 19 33 40.3 -2.3
PD31 Pinedale Array 31.48 334 P **P** 19 33 41.9 -0.9
PDAR Pinedale Array 31.48 334 P **P** 19 33 42.9 +0.2
comp=Z,0.2nm,0.3s,baz=121,slow=11,SNR=2.6
BW06 Boulder Array 31.48 334 P **P** 19 33 46.9 +4.2
baz=144
BW06 Boulder Array 31.48 334 P **P** 19 33 41.3 -1.4
H55A Tweed 31.50 20 P **P** 19 33 46.0 +3.5
baz=206
J59A Piesco 31.51 24 P **P** 19 33 45.0 +2.3
baz=212
I58A Old Forge 31.52 23 P P 19 33 48.0 +5.1
baz=211
G53A Haliburton 31.58 17 P **P** 19 33 47.4 +4.2
baz=203,SNR=5.2
GRAC Grapevine Rang 31.60 318 P P 19 33 51.0 +7.4
baz=125
BGU Big Grassy Mou 31.68 328 P **P** 19 33 42.4 -2.0
E47A Iron Bridge 31.75 11 P **P** 19 33 47.8 +3.1
baz=194,SNR=8.0
PLVO Plevna 31.97 19 P **P** 19 33 45.5 -1.2
PLVO IAmb IAmb 19 33 54.5
comp=Z,6.1nm,0.8s
F51A Arnstein 31.97 15 P P 19 33 51.1 +4.4
baz=200,SNR=8.1
G54A Lake Saint Pet 31.98 18 P P 19 33 51.2 +4.4
baz=204,SNR=5.4
E48A Lockeyer 31.98 12 P **P** 19 33 50.9 +4.1
baz=196
F52A Sundridge 32.00 16 P P 19 33 51.5 +4.6
baz=201,SNR=9.3
D46A Sault St. Mari 32.04 9 P P 19 33 51.8 +4.5
baz=192,SNR=9.4
E50A Wahnapitae 32.24 14 P **P** 19 33 53.2 +4.1
baz=199,SNR=8.2
I60A Shoreham 32.31 25 P **P** 19 33 51.7 +2.0
baz=213
D47A Chapleau 32.36 11 P **P** 19 33 54.2 +4.1
baz=194,SNR=6.5
H58A Gabriels 32.44 23 P **P** 19 33 55.2 +4.3
baz=211
LONY Lake Ozonia 32.46 23 P P 19 33 55.7 +4.6
baz=210,SNR=5.7
LONY Lake Ozonia 32.46 23 P **P** 19 33 50.5 -0.5
LONY IAmb IAmb 19 33 56.8
comp=Z,13nm,1.0s
ALGO Algonquin Park 32.50 17 P P 19 33 56.6 +5.3
baz=204
EYMN Ely 32.51 360 P **P** 19 33 55.0 +3.5
baz=179
REDW Red Top Meadow 32.52 333 P **P** 19 33 52.6 +0.8
SNOW Snow King Moun 32.56 333 P **P** 19 33 52.7 +0.5
E51A G1948 Merrick 32.64 15 P P 19 33 57.3 +4.7
baz=201,SNR=13
TPAW Teton Pass 32.66 333 P **P** 19 33 54.6 +1.5
TPAW IAmb IAmb 19 34 01.4
comp=Z,8.7nm,0.8s
D48A Paudash Townsh 32.72 12 P **P** 19 33 57.1 +3.9
baz=196,SNR=8.2
FXWY Fox Creek 32.82 333 P **P** 19 33 55.4 +0.9
ORIO Orleans, Innes 32.85 21 P P 19 33 59.4 +5.0
baz=208
ORIO Orleans, Innes 32.85 21 P **P** 19 33 54.1 -0.2
D49A Beulah Townshi 32.91 13 P **P** 19 33 59.2 +4.3
baz=197,SNR=11

F55A Otter Lake 32.91 19 P P 19 33 59.7 +4.8
baz=207
NV11 Mina Array Sit 32.95 319 P **P** 19 33 56.9 +1.3
NV11 IAmb IAmb 19 34 05.6
comp=Z,19nm,1.4s
B35A Bob, Littlefor 32.98 357 P **P** 19 33 56.5 +0.9
B35A IAmb IAmb 19 34 00.2
comp=Z,7.3nm,0.8s
IMW Indian Meadow 32.99 334 P **P** 19 33 56.7 +0.7
IMW IAmb IAmb 19 34 03.8
comp=Z,5.7nm,0.8s
E53A Dumoine, Ponti 33.00 18 P P 19 34 00.1 +4.4
baz=204
FLWY Flagg Ranch 33.03 334 P **P** 19 33 57.1 +0.8
FLWY IAmb IAmb 19 34 12.6
comp=Z,7.0nm,0.9s
NVAR Mina Array Bea 33.05 319 P **P** 19 33 58.5 +2.0
comp=Z,1.9nm,0.8s,baz=132,slow=8.9,SNR=6.0
NVAR LR LR 19 49 00.6
comp=Z,115nm,18.4s,baz=222,slow=39
AGMN Agassiz Nation 33.07 354 P **P** 19 33 59.9 +3.6
baz=171
AGMN Agassiz Nation 33.07 354 P **P** 19 33 55.8 -0.5
AGMN IAmb IAmb 19 34 03.1
comp=Z,6.1nm,0.8s
MDND Maddock 33.12 350 P **P** 19 34 01.1 +4.3
baz=164
MDND Maddock 33.12 350 P **P** 19 33 56.5 -0.3
H60A Morristown 33.14 25 P P 19 34 01.6 +4.6
baz=214
D50A G1974 Best Tow 33.15 14 P **P** 19 34 01.0 +4.0
baz=200,SNR=6.0
E54A Lac Daplat, Po 33.19 18 P **P** 19 34 00.9 +3.5
baz=205,SNR=7.8
D51A Lot 18 Range I 33.19 15 P **P** 19 34 01.7 +4.3
baz=201
YPP Pitchstone Pla 33.23 334 P **P** 19 33 56.0 -2.1
H17A Grant Village 33.24 334 P P 19 34 04.9 +6.8
baz=143
H17A Grant Village 33.24 334 P **P** 19 33 57.5 -0.6
H17A IAmb IAmb 19 34 08.5
comp=Z,11nm,1.3s
KVN Kaiserville 33.29 320 P **P** 19 33 59.4 +0.8
KVN IAmb IAmb 19 34 08.1
comp=Z,12nm,1.0s
RYN Ryan 33.30 319 P **P** 19 33 58.1 -0.6
RLMT Red Lodge 33.32 337 P P 19 34 03.6 +4.9
baz=146,SNR=5.2
RLMT Red Lodge 33.32 337 P **P** 19 33 59.4 +0.7
RLMT IAmb IAmb 19 34 05.4
comp=Z,7.1nm,1.1s
YMP Mirror Lake Pl 33.35 335 P **P** 19 33 59.3 +0.2
YMR Madison River 33.62 334 P **P** 19 34 03.2 +1.8
D53A Lac Vacive, Po 33.63 17 P P 19 34 06.1 +4.9
baz=204,SNR=10
D53A Lac Vacive, Po 33.63 17 P **P** 19 34 00.7 -0.5
I63A Otisfield 33.63 28 P P 19 34 06.5 +5.2
baz=218
WAKR Walker 33.81 318 P **P** 19 34 04.7 +1.6
YHL Hebgen Lake 33.86 334 P **P** 19 34 02.7 -0.9
E56A St. Veronique 33.97 20 P P 19 34 08.7 +4.5
baz=208
D54A Lac Fusel, La 33.99 18 P P 19 34 08.8 +4.5
baz=205,SNR=8.1
E57A Chemin Saint G 34.16 21 P P 19 34 11.0 +5.2
baz=210
D55A Sainte-Anne-du 34.24 19 P P 19 34 11.0 +4.5
baz=207,SNR=7.3
PNTR Pine Nut 34.25 319 P **P** 19 34 09.2 +2.2
PNTR IAmb IAmb 19 34 17.5
comp=Z,8.8nm,0.7s
E58A La Victoria 34.44 22 P P 19 34 12.7 +4.5
baz=211
PAHR Pah Rah Range 34.48 320 P **P** 19 34 08.3 -0.6
PAHR IAmb IAmb 19 34 17.7
comp=Z,5.9nm,0.9s
D56A ZEC Mazanza, M 34.50 20 P P 19 34 13.4 +4.6
baz=208,SNR=5.2
MCMT McKenzie Canyo 34.56 333 P **P** 19 34 11.1 +1.5
G62A West of Eustis 34.58 26 P **P** 19 34 13.5 +4.1
baz=217
F60A Warwick 34.60 24 P P 19 34 14.7 +5.0
baz=214
VLDQ Val d'Or 34.64 16 P **P** 19 34 09.1 -0.8
D57A Chemin Vers le 34.77 21 P P 19 34 15.7 +4.6
baz=210
G63A Kingsbury 34.89 27 P **P** 19 34 16.2 +4.0
baz=218
ULM Lac du Bonnet 35.01 355 P **P** 19 34 14.0 +0.9
comp=Z,7.8nm,0.8s,baz=175,slow=9.2,SNR=5.9
ULM LR LR 19 49 21.1
comp=Z,72nm,20.6s,baz=106,slow=38
LRM Limekiln Ridge 35.17 334 P **P** 19 34 16.9 +2.1
BEKR Beckworth 35.18 320 P **P** 19 34 12.8 -2.2
BEKR IAmb IAmb 19 34 25.2
comp=Z,18nm,1.2s
LATQ La Tuque 35.48 22 P P 19 34 22.7 +5.6
baz=211
LSQQ Lebel-sur-Quev 35.63 16 P P 19 34 23.4 +5.0
baz=204
G65A Princeton 35.90 29 P **P** 19 34 25.0 +4.2
baz=221
EGMT Eagleton 35.96 339 P P 19 34 26.9 +5.5
baz=148
EGMT Eagleton 35.96 339 P **P** 19 34 20.4 -1.0
EGMT IAmb IAmb 19 34 28.2
comp=Z,13nm,0.9s
MATQ Matagami 36.10 15 P P 19 34 27.4 +4.9
baz=202,SNR=16
J08A Circle Bar Ran 36.27 326 P **P** 19 34 23.8 -0.3
J08A IAmb IAmb 19 34 32.3
comp=Z,9.5nm,0.7s
O03E Paynes Creek 36.33 319 P P 19 34 30.5 +5.8
baz=123
MOD Modoc Plateau 36.37 322 P **P** 19 34 24.3 -0.8
E63A Oxbow 36.44 27 P **P** 19 34 28.1 +2.7
baz=219
MSO Missoula 36.60 334 P **P** 19 34 30.8 +3.8
baz=140
D62A Allapoint, All 36.68 26 P **P** 19 34 29.0 +1.5
baz=217
E64A Bridgewater 36.70 28 P **P** 19 34 30.0 +2.5
baz=220
O02D Mt. Diablo Mer 36.90 318 P P 19 34 35.0 +5.5
baz=122
CHGQ Chibougamau 37.14 18 P **P** 19 34 35.6 +4.3
baz=207,SNR=7.8
M04C Macdoel 37.21 321 P P 19 34 39.2 +6.9
baz=125
F10A Beach Ranch, E 37.45 330 P **P** 19 34 33.7 -0.5
PINE Pine Mountain 37.91 324 P **P** 19 34 38.2 0.0
LPAZ La Paz 38.90 143 P **P** 19 34 46.4 -0.8
comp=Z,1.2nm,0.6s,baz=245,slow=16,SNR=4.9
LPAZ LR LR 19 51 54.4
comp=Z,80nm,18.2s,baz=310,slow=38
C09A Chrisman Ranch 39.27 331 P **P** 19 34 49.7 +0.4
C09A IAmb IAmb 19 34 57.6
comp=Z,6.5nm,0.7s
J01E Myrtle Point 39.27 322 P P 19 34 54.7 +5.4
baz=124
I02D Swisshome 39.77 323 P P 19 34 58.8 +5.3
baz=125
FFC Flin Flon 40.16 350 P **P** 19 34 55.9 -0.7
SCHQ Schefferville 43.76 20 P **P** 19 35 24.2 -1.8
comp=Z,4.3nm,0.6s,baz=184,slow=5.1,SNR=4.2
SCHQ LR LR 19 54 15.7
comp=Z,202nm,19.2s,baz=199,slow=37
SCHQ Schefferville 43.76 20 P **P** 19 35 24.9 -1.1
YKA Yellowknife Ar 49.88 346 P **P** 19 36 12.9 -0.8
comp=Z,2.2nm,0.7s,baz=145,slow=7.9,SNR=31
PLCA Paso Flores 59.04 162 P **P** 19 37 19.1 -1.5
comp=Z,2.0nm,0.8s,baz=306,slow=8.2,SNR=5.3
PLCA LR LR 19 56 57.2
comp=Z,59nm,21.6s,baz=177,slow=30
PLCA Paso Flores 59.04 162 IAmb IAmb 19 37 21.4
comp=Z,3.5nm,0.9s
EPYK Eagle Plains 59.08 340 P P 19 37 26.0 +5.5
baz=126
INK Inuvik 59.34 343 P **P** 19 37 21.4 -0.8
INK IAmb IAmb 19 37 28.8
comp=Z,7.0nm,0.9s
A36M Sachs Harbour 60.06 348 P P 19 37 32.7 +5.5
baz=141
HDA Harding Lake 61.73 336 P P 19 37 44.6 +5.9
baz=115
ILAR Eielson Array 61.86 336 P **P** 19 37 38.0 -1.5
comp=Z,1.6nm,1.0s,baz=109,slow=5.4,SNR=10.0

POKR Poker Plat Res 62.22 337 P P 19 37 48.1 +6.2
baz=114
TRF Thorofare Moun 62.70 334 P **P** 19 37 44.6 -0.8
TRF IAmb IAmb 19 37 59.6
comp=Z,8.7nm,1.0s
MLY Manley 63.47 336 P **P** 19 37 50.0 -0.3
MLY IAmb IAmb 19 37 57.2
comp=Z,6.6nm,0.6s
TOLK Toolik Lake Re 64.48 340 P P 19 38 02.9 +6.1
baz=114
TOLK Toolik Lake Re 64.48 340 P **P** 19 37 57.0 +0.1
TOLK IAmb IAmb 19 38 04.2
comp=Z,4.3nm,0.9s
DAG Danmarks Havn 71.22 13 *i* P **P** 19 38 43.3 +4.2
comp=Z,6.2nm,0.7s
NOR Nord 72.69 9 *i* P P 19 38 52.5 +4.7
comp=Z,3.0nm,0.8s
ESDC Sonseca Array 78.40 52 P **P** 19 39 20.6 -0.8
comp=Z,0.9nm,0.7s,baz=292,slow=5.3,SNR=6.2
ESDC LR LR 20 09 58.0
comp=Z,46nm,19.7s,baz=330,slow=33
NB2 NORSAR Subarra 82.68 29 P P 19 39 49.4 +5.5
comp=Z,3.1nm,1.0s,baz=289,slow=5.6
NOA NORSAR Array B 82.68 29 P **P** 19 39 44.0 +0.2
comp=Z,0.3nm,0.5s,baz=290,slow=5.2,SNR=2.9
NOA LR LR 20 13 57.9
comp=Z,42nm,21.5s,baz=285,slow=34
ARCES ARCESS Array B 84.68 18 P **P** 19 39 53.1 -0.8
comp=Z,1.2nm,0.8s,baz=285,slow=1.9,SNR=4.6
ARCES LR LR 20 18 15.5
comp=Z,47nm,18.7s,baz=302,slow=36
DBIC Dimbokro 84.91 85 P **P** 19 39 53.9 -2.2
comp=Z,1.5nm,0.6s,baz=288,slow=4.5,SNR=4.8
DBIC Dimbokro 84.91 85 IAmb IAmb 19 40 06.2
comp=Z,8.5nm,1.2s
GRF Grafenberg Arr 86.36 39 *eP* **P** 19 40 02.4 -0.3
comp=Z,2.8nm,0.9s,baz=281,slow=5.2
CLL Collm 86.88 38 *eP* **P** 19 40 06.0 +0.8
CLL *esP* **pP** 19 40 18.0 +1.1
KHC Kasperske Hory 88.00 39 *eP* P 19 40 16.0 +5.3
GERES GERESS Array B 88.18 40 P **P** 19 40 12.6 +1.0
comp=Z,0.4nm,0.9s,baz=232,slow=5.9,SNR=1.6
GERES LR LR 20 18 04.8
comp=Z,45nm,19.8s,baz=283,slow=34
FINES FINESS Array B 89.03 25 P **P** 19 40 14.4 -0.8
comp=Z,2.6nm,0.9s,baz=108,slow=4.2,SNR=3.7
FINES LR LR 20 20 58.1
comp=Z,54nm,18.5s,baz=259,slow=36
TIXI Tiksi 89.08 348 P **P** 19 40 12.3 -2.9
TIXI IAmb IAmb 19 40 21.1
comp=Z,2.2nm,0.8s
TORD Torodi Ar. Bea 89.46 77 P **P** 19 40 16.1 -2.1
comp=Z,0.3nm,0.7s,baz=292,slow=5.1,SNR=2.4
VYHS Vyhne 91.45 39 *eP* P 19 40 32.8 +6.0
NRIK Noril'sk 95.54 0 LR LR 20 27 55.1
comp=Z,117nm,19.6s,baz=38,slow=38
WRA Warramunga Arr 136.31 257 PKP **PKPdf** 19 46 41.5 -1.4
comp=Z,0.3nm,0.6s,baz=88,slow=2.7,SNR=5.9
ASAR Alice Springs 136.69 252 PKP **PKPdf** 19 46 43.9 +0.4
comp=Z,0.5nm,1.0s,baz=82,slow=2.4,SNR=4.7
CMAR Chiang Mai Arr 144.91 343 PKP **PKPdf** 19 46 59.0 +0.6
comp=Z,1.7nm,0.8s,baz=340,slow=3.7,SNR=12

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*SNET **19** 19:32:58.7±1.0, 12.50N×89.92W, h13km±15km, ML3.5*
*UCR **19** 19:32:59.0±1.0, 12.50N×89.92W, h13km±10km, ML3.4, mb4.3(NEIC)*
*IDC **19** 19:33:01.9±1.7, 13.84N×88.65W, h0km, mb3.8/7, mb1 4.1/11, mb1mx3.9/40, mbtmp3.8/11, ML3.2/4, MS3.2/2, Ms1 3.2/2, ms1mx2.7/44, Error ellipse: s-maj=70.7km s-min=17.9km az=34.0*
*GCG **19** 19:33:01.9±0.8, 12.54N×89.92W, h50km, MD4.0*
*NEIC **19** 19:33:05.5±1.5, 12.80N±0.08×89.60W±0.05, h64km±14km, mb4.3/33, Error ellipse: s-maj=14.1km s-min=2.2km az=211.0*

ISC 19 19:33:01.7±0.8, **12.56N**±0.07×**89.79W**±0.06, **h35**km, **n82**, σ1.9**38**/85, **mb4.3**/18, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**1.03**	**26**	*eP*		**Pn**	**19 33 18.4**	**-1.2**
LALI				*eS*		**Sn**	**19 33 35.1**	**+2.2**
LALI	**Alcalda de L**	**1.03**	**26**	*eP*		**Pn**	**19 33 18.4**	**-1.2**
LALI				*eS*		**Sn**	**19 33 35.1**	**+2.2**
SNET	**Serv Nac Est T**	**1.25**	**26**			**Pn**	**19 33 22.0**	**-0.7**
BOQS	**Boqueron**	**1.27**	**23**	*eP*		**Pn**	**19 33 23.6**	**+0.5**
BOQS	**Boqueron**	**1.27**	**23**	*eP*		**Pn**	**19 33 23.6**	**+0.5**
CEVE	**Cerro Verde**	**1.27**	**7**	*eP*		**Pn**	**19 33 23.4**	**+0.1**
CEVE				*eS*		**Sn**	**19 33 42.1**	**+2.9**
CEVE	**Cerro Verde**	**1.27**	**7**	*eP*		**Pn**	**19 33 23.4**	**+0.1**
CEVE				*eS*		**Sn**	**19 33 42.1**	**+2.9**
LFRS	**El Faro**	**1.28**	**34**	*eP*		**Pn**	**19 33 23.5**	**+0.4**
LFRS	**El Faro**	**1.28**	**34**	*eP*		**Pn**	**19 33 23.5**	**+0.4**
SBLS	**San Blas**	**1.28**	**7**	*eP*		**Pn**	**19 33 23.5**	**+0.1**
SBLS	**San Blas**	**1.28**	**7**	*eP*		**Pn**	**19 33 23.5**	**+0.1**
RTR	**El Retiro**	**1.34**	**6**	*eP*		**Pn**	**19 33 24.3**	**+0.3**
RTR	**El Retiro**	**1.34**	**6**	*eP*		**Pn**	**19 33 24.3**	**+0.3**
COEG	**Centro de Oper**	**1.38**	**40**	*eP*		**Pn**	**19 33 24.9**	**+0.4**
COEG	**Centro de Oper**	**1.38**	**40**	*eP*		**Pn**	**19 33 24.9**	**+0.4**
LBRS	**Las Brisas**	**1.38**	**32**	*eP*		**Pn**	**19 33 25.7**	**+1.1**
LBRS	**Las Brisas**	**1.38**	**32**	*eP*		**Pn**	**19 33 25.7**	**+1.1**
COEB	**Comit de Eme**	**1.54**	**53**	*eP*		**Pn**	**19 33 28.6**	**+1.8**
COEB					IAML		19 34 02.4	
	comp=Z,438nm,0.5s							
COEB	**Comit de Eme**	**1.54**	**53**	*eP*		**Pn**	**19 33 28.6**	**+1.8**
COEB					IAML		19 34 02.4	
	comp=Z,438nm,0.5s							
TECA	**Tecapa**	**1.56**	**53**	*eP*		**Pn**	**19 33 27.8**	**+0.7**
TECA	**Tecapa**	**1.56**	**53**	*eP*		**Pn**	**19 33 27.8**	**+0.7**
PACA	**Pacayal**	**1.69**	**58**	*eP*		**Pn**	**19 33 29.6**	**+0.7**
PACA	**Pacayal**	**1.69**	**58**	*eP*		**Pn**	**19 33 29.6**	**+0.7**
IXG	**Ixpaco**	**1.72**	**339**	*eP*		**Pn**	**19 33 29.1**	**-0.3**
MTO3	**Montecristo**	**1.88**	**13**	*eP*		**Pn**	**19 33 32.3**	**+0.8**
MTO3	**Montecristo**	**1.88**	**13**	*eP*		**Pn**	**19 33 32.3**	**+0.8**
LCND	**La Caada**	**2.00**	**68**	*eP*		**Pn**	**19 33 33.8**	**+0.9**
LCND					IAML		19 34 12.8	
	comp=Z,353nm,0.5s							
LCND	**La Caada**	**2.00**	**68**	*eP*		**Pn**	**19 33 33.8**	**+0.9**
LCND					IAML		19 34 12.8	
	comp=Z,353nm,0.5s							
NBG	**Las Nubes**	**2.09**	**345**	*eP*		**Pn**	**19 33 35.8**	**+1.4**
FUG	**Fuego 3**	**2.14**	**332**	*eS*		**Sn**	**19 34 01.3**	**+0.9**
CSGN	**Cosiguina Volc**	**2.22**	**79**			**Pn**	**19 33 37.4**	**+1.3**
APG	**El Apazote**	**2.52**	**345**		Pn	**Pn**	**19 33 40.2**	**-0.1**
	comp=Z,7.5nm,0.3s,baz=125,slow=15,SNR=2.9							
CRIN	**San Cristobal**	**2.68**	**87**		Pn	**Pn**	**19 33 44.1**	**+1.7**
STG3	**Santiaguito 3,**	**2.75**	**321**	*eP*		**Pn**	**19 33 43.7**	**+0.2**
TGUH	**Tegucigalpa,Un**	**2.87**	**58**		Pn	**Pn**	**19 33 43.6**	**-1.4**
MATN	**Matagalpa**	**3.79**	**84**			**Pn**	**19 33 58.6**	**+0.9**
CCIG	**Comitan**	**4.34**	**329**		Pn	**Pn**	**19 34 08.2**	**+2.8**
JTS	**Las Juntas de**	**5.25**	**115**		Pn	**Pn**	**19 34 20.3**	**+2.6**
	comp=Z,2.9nm,0.3s,baz=13,slow=18,SNR=7.3							
JTS	**Las Juntas de**	**5.25**	**115**			**Pn**	**19 34 20.6**	**+2.8**
CMIG	**Matias Romero**	**6.67**	**313**		Pn	**Pn**	**19 34 41.5**	**+4.3**
	comp=Z,0.4nm,0.3s,baz=123,slow=10,SNR=1.7							
CMIG					LR	LR	19 37 31.7	
	comp=Z,134nm,21.6s,baz=148,slow=40							
SDV	**Santo Domingo**	**19.17**	**99**	P		P	19 37 17.3	-5.3
	comp=Z,0.4nm,0.3s,baz=278,slow=16,SNR=1.7							
152A	**Waverly Hall**	**20.55**	**12**	P		**P**	**19 37 35.9**	**-1.4**
152A					IAmb	IAmb	19 37 44.2	
	comp=Z,9.6nm,0.8s							
HPIG		**20.65**	**316**	P		**P**	**19 37 38.0**	**-0.7**
HPIG					IAmb	IAmb	19 37 54.3	
	comp=Z,7.9nm,0.5s							
TX31	**Lajitas Ar. Si**	**21.10**	**324**	P		**P**	**19 37 44.4**	**+1.0**
TX31					IAmb	IAmb	19 37 46.2	
	comp=Z,22nm,0.8s							
TX32	**Lajitas Array**	**21.10**	**324**	P		**P**	**19 37 44.0**	**+0.7**
TXAR	**Lajitas Array**	**21.10**	**324**	P		**P**	**19 37 45.5**	**+2.1**
	comp=Z,6.5nm,0.7s,baz=149,slow=12,SNR=31							
OXF	**Oxford**	**21.86**	**1**	P		**P**	**19 37 51.3**	**0.0**
MIAR	**Mount Ida**	**22.16**	**352**	P		**P**	**19 37 55.2**	**+0.7**
MIAR					IAmb	IAmb	19 37 57.7	
	comp=Z,11nm,0.8s							
UALR	**University of**	**22.24**	**354**	P		**P**	**19 37 55.2**	**-0.2**
OBIP	**Obispado Ponce**	**23.01**	**73**	P		**P**	**19 38 00.9**	**-2.8**
OBIP					IAmb	IAmb	19 38 06.7	
	comp=Z,10nm,0.8s							
WVT	**Waverly**	**23.54**	**4**	P		**P**	**19 38 07.1**	**-1.7**
MNTX	**Cornudas Mount**	**23.85**	**325**	P		**P**	**19 38 11.9**	**+0.1**
U38A	**Gravette**	**24.14**	**351**	P		**P**	**19 38 13.6**	**-0.8**
MSTX	**Muleshoe**	**24.38**	**333**	P		**P**	**19 38 17.0**	**+0.3**

MSTX					IAmb	IAmb	19 38 17.5		
	comp=Z,6.1nm,0.7s								
S44A	**Carbondale**	**25.04**	**1**	P	**P**		**19 38 21.2**	**-1.4**	
SIUC	**Southern Illin**	**25.06**	**1**	P	**P**		**19 38 20.9**	**-1.8**	
V58A	**Windy Hill, Pi**	**25.06**	**21**	P	**P**		**19 38 22.2**	**-0.6**	
V58A					IAmb	IAmb	19 38 33.2		
	comp=Z,10nm,1.0s								
CCM	**Cathedral Cave**	**25.43**	**357**	P	**P**		**19 38 26.0**	**-0.1**	
CCM					IAmb	IAmb	19 38 28.0		
	comp=Z,11nm,0.9s								
R40A	**Maddies Statio**	**25.72**	**356**	P	**P**		**19 38 29.3**	**+0.6**	
Q44A	**Meyer Farm, Va**	**26.25**	**1**	P	**P**		**19 38 34.9**	**+1.4**	
BNM	**Barren Site**	**26.40**	**327**	P	**P**		**19 38 37.1**	**+1.9**	
T59A	**Double "B" Far**	**26.68**	**22**	P	**P**		**19 38 36.9**	**-0.5**	
M56A	**Emporium**	**30.55**	**17**	P	**P**		**19 39 11.4**	**-0.5**	
I37A	**Lemond, Waseca**	**31.50**	**355**	P	**P**		**19 39 19.0**	**-1.2**	
ECSD	**EROS Data Cent**	**31.62**	**351**	P	**P**		**19 39 20.7**	**-0.6**	
ECSD					IAmb	IAmb	19 39 21.6		
	comp=Z,4.8nm,0.8s								
J56A	**Wolcott**	**32.59**	**18**	P	**P**		**19 39 28.8**	**-0.9**	
SADO	**Sadowa**	**33.37**	**14**	P	**P**		**19 39 35.0**	**-1.5**	
SADO					IAmb	IAmb	19 39 35.2		
	comp=Z,3.7nm,0.9s								
COWI	**Conover**	**33.44**	**1**	P	**P**		**19 39 35.8**	**-1.4**	
COWI					IAmb	IAmb	19 39 36.3		
	comp=Z,5.0nm,0.8s								
F33A	**5 Mile Ranch,**	**33.63**	**352**	P	**P**		**19 39 37.3**	**-1.5**	
RSSD	**Black Hills**	**33.75**	**341**	P	**P**		**19 39 40.2**	**0.0**	
RSSD					IAmb	IAmb	19 39 41.3		
	comp=Z,2.6nm,0.7s								
E43A	**Lone Tree Farm**	**33.79**	**3**	P	**P**		**19 39 39.0**	**-1.2**	
PDAR	**Pinedale Array**	**34.63**	**334**	P	**P**		**19 39 47.2**	**-0.7**	
	comp=Z,0.3nm,0.6s,baz=112,slow=11,SNR=2.6								
EYMN	**Ely**	**35.31**	**358**	P	**P**		**19 39 52.1**	**-1.2**	
EYMN					IAmb	IAmb	19 40 03.5		
	comp=Z,4.9nm,1.0s								
AGMN	**Agassiz Nation**	**35.99**	**353**	P	**P**		**19 39 57.9**	**-1.3**	
MDND	**Maddock**	**36.13**	**349**	P	**P**		**19 39 60.0**	**-0.4**	
NVAR	**Mina Array Bea**	**36.14**	**321**	P	**P**		**19 40 03.2**	**+2.4**	
	comp=Z,0.5nm,0.3s,baz=116,slow=6.1,SNR=4.3								
MCMT	**McKenzie Canyo**	**37.71**	**333**	P	**P**		**19 40 14.3**	**+0.1**	
YKA	**Yellowknife Ar**	**52.93**	**346**	P	**P**		**19 42 13.5**	**-0.6**	
	comp=Z,0.9nm,0.6s,baz=145,slow=7.9,SNR=16								
ILAR	**Eielson Array**	**65.01**	**337**	P	**P**		**19 43 37.7**	**-0.2**	
	comp=Z,0.5nm,0.8s,baz=95,slow=9.1,SNR=3.2								
DBIC	**Dimbokro**	**83.65**	**85**	P	**P**		**19 45 26.7**	**-0.7**	
	comp=Z,1.9nm,0.7s,baz=285,slow=5.5,SNR=4.1								
TORD	**Torodi Ar. Bea**	**88.62**	**77**	P	**P**		**19 45 50.8**	**-1.0**	
	comp=Z,0.4nm,0.7s,baz=266,slow=5.6,SNR=2.0								
TORD					LR	LR	20 24 06.4		
	comp=Z,19nm,19.1s,baz=165,slow=35								
CMAR	**Chiang Mai Arr**	**148.00**	**344**	PKPbc	**PKPbc**		**19 52 46.6**	**+2.3**	
	comp=Z,1.1nm,0.7s,baz=348,slow=3.8,SNR=2.9								

*IDC **19** 19:39:39.7±0.8, 56°.96S×25°.10W, h0km, mb4.4/7, mb1 4.5/8, mb1mx4.1/24, mbtmp4.3/8, ML3.7/1, MS3.4/1, Ms1 3.3/1, ms1mx2.8/25, Error ellipse: s-maj=29.9km s-min=19.1km az=68.0*

*NEIC **19** 19:39:48.1±1.4, 57°.0S±0°.1×25°.1W±0°.2, h62km±7km, mb4.5/12, Error ellipse: s-maj=16.0km s-min=13.7km az=125.0*

ISC 19 19:39:42.8±0.7, **56°.9S**±0°.1×**25°.0W**±0°.2, **h22**km, **n34, σ0s87/31, mb4.5/10, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.03**	**287**		Pn	19 41 29.8	+5.4
VNA1	**Neumayer--Stat**	**15.52**	**159**	P	**Pn**	**19 43 20.0**	**+0.1**
VNA3	**Neumayer Olymp**	**15.76**	**162**	P	**Pn**	**19 43 22.5**	**-0.6**
VNA2	**Neumayer--Watz**	**15.92**	**159**	P	**Pn**	**19 43 24.0**	**-1.0**
	baz=327,slow=15						
SNAA	**Sanae**	**17.44**	**157**	P	**P**	**19 43 45.6**	**+0.2**
SNAA	**Sanae**	**17.44**	**157**	P	**Pn**	**19 43 44.1**	**-0.2**
	0.3nm,0.3s,baz=316,slow=13,SNR=15						
SNAA	**Sanae**	**17.44**	**157**	P	**P**	**19 43 46.0**	**+0.5**
EFI	**East Falkland**	**19.87**	**271**	P	**P**	**19 44 12.2**	**+0.1**
EFI					IAmb	IAmb	19 44 13.4		
	comp=Z,41nm,1.4s								
USHA	**Ushuaia**	**24.15**	**256**	P	**P**	**19 44 56.5**	**-0.4**	
	comp=Z,41nm,0.8s,baz=309,slow=0.1,SNR=4.0								
QSPA	**South Pole Qui**	**33.31**	**180**	P	**P**	**19 46 18.5**	**-0.1**	
	comp=Z,3.0nm,0.5s,baz=205,slow=2.3,SNR=52								
QSPA	**South Pole Qui**	**33.31**	**180**	P	**P**	**19 46 19.3**	**+0.6**	
CPUP	**Villa Florida**	**38.31**	**309**	P	**P**	**19 47 01.0**	**-0.6**	
	comp=Z,4.9nm,0.9s,baz=164,slow=9.5,SNR=11								
CPUP	**Villa Florida**	**38.31**	**309**	P	**P**	**19 47 01.9**	**+0.2**	
CPUP					IAmb	IAmb	19 47 03.0		
	comp=Z,10nm,1.2s								
BOSA	**Boshof**	**45.04**	**73**	LR	LR	20 03 21.7			
	comp=Z,48nm,19.1s,baz=134,slow=32								
VNDA	**Vanda**	**45.74**	**182**	P	**P**	**19 48 01.9**	**+0.3**	
	comp=Z,1.2nm,0.6s,baz=187,slow=4.7,SNR=15								
VNDA	**Vanda**	**45.74**	**182**	P	**P**	**19 48 02.9**	**+1.2**	
PB09	**IPOC Station P**	**47.65**	**299**	P	**P**	**19 48 18.6**	**+1.2**	
PB07	**IPOC Station P**	**48.02**	**298**	P	**P**	**19 48 20.1**	**-0.2**	
PB07					IAmb	IAmb	19 48 24.2		
	comp=Z,4.8nm,0.9s								
GO01	**Chusmiza**	**49.45**	**300**	P	**P**	**19 48 32.3**	**+0.7**	
MNMC	**Minye Minye**	**50.10**	**300**	P	**P**	**19 48 36.1**	**-0.3**	
MNMC					IAmb	IAmb	19 48 43.1		
	comp=Z,6.7nm,0.8s								
PB16	**IPOC Station P**	**50.74**	**301**	P	**P**	**19 48 42.0**	**+0.4**	
PB16					IAmb	IAmb	19 48 50.1		
	comp=Z,4.0nm,1.0s								
LPAZ	**La Paz**	**51.88**	**303**	P	**P**	**19 48 50.9**	**+0.8**	
	comp=Z,10nm,0.6s,baz=143,slow=5.5,SNR=57								
LPAZ	**La Paz**	**51.88**	**303**	P	**P**	**19 48 51.0**	**+0.8**	
SAML	**Samuel**	**56.30**	**313**	P	**P**	**19 49 21.6**	**0.0**	
SAML					IAmb	IAmb	19 49 23.1		
	comp=Z,6.6nm,1.3s								
TORD	**Torodi Ar. Bea**	**73.26**	**27**	P	**P**	**19 51 12.8**	**+0.7**	
	comp=Z,1.1nm,0.7s,baz=198,slow=5.9,SNR=6.8								
ASAR	**Alice Springs**	**97.76**	**161**	P	Pdif	19 53 16.2	0.0		
	comp=Z,0.3nm,0.8s,baz=163,slow=3.5,SNR=2.4								
MDPB	**Devils Postpil**	**122.65**	**290**		**PKPdf**	**19 58 32.9**	**-3.4**		
MKAR	**Makanchi Array**	**136.02**	**71**	PKP	**PKiKP**	**19 59 02.6**	**-0.1**		
	comp=Z,0.1nm,0.4s,baz=259,slow=2.9,SNR=2.5								
YKA	**Yellowknife Ar**	**137.65**	**316**	PKP	**PKPdf**	**19 59 03.2**	**-0.3**		
	comp=Z,0.8nm,0.8s,baz=123,slow=2.4,SNR=9.4								
INK	**Inuvik**	**147.27**	**319**		**PKPbc**	**19 59 23.1**	**+0.4**		
SONM	**Songino Array**	**149.57**	**86**	PKPbc	**PKiKP**	**19 59 30.0**	**-0.6**		
	comp=Z,1.0nm,0.6s,baz=219,slow=2.2,SNR=6.8								
RIDG	**Independent Ri**	**150.51**	**308**		**PKiKP**	**19 59 32.2**	**+0.3**		
IL31		**151.62**	**310**		**PKiKP**	**19 59 34.7**	**+0.7**		
ILAR	**Eielson Array**	**151.62**	**310**	PKPbc	**PKPbc**	**19 59 33.6**	**-0.1**		
	comp=Z,3.3nm,1.0s,baz=126,slow=1.3,SNR=18								

*NIED **19** 19:58:00, 26°.40N×143°.00E, h11km, Mw3.9 Best double couple: M0 9.34000×10^14 NP1: ϕ=164.00000°, δ=87.00000°, λ=-78.00000°. NP2: ϕ=266.00000°, δ=12.00000°, λ=-167.00000°.*

*JMA **19** 19:58:55.8, 26°.42N×143°.02E, h10km, M4.0*

*IDC **19** 19:58:56.6±1.2, 26°.30N×142°.47E, h0km, mb3.6/9, mb1 3.8/11, mb1mx3.6/56, mbtmp3.7/11, ML3.0/2, MS3.0/5, Ms1 3.0/5, ms1mx2.7/42, Error ellipse: s-maj=40.2km s-min=14.6km az=83.0*

ISC 19 19:58:56.7±1.0, **26.4N**±0.1×**143.0E**±0.1, **h10**km, **n18, σ0s94/15, mb3.6/9, MS2.9/3, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**0.74**	**290**	P	**Pg**	**19 59 10.8**	**-0.1**
JHH2				*eS*	**Sg**	**19 59 21.4**	**+0.8**
CBIJ	**Chichi jima**	**0.99**	**317**	P	**Pg**	**19 59 14.9**	**-0.9**
JCJ	**Chichijima**	**0.99**	**317**	Pn	**Pg**	**19 59 14.9**	**-0.8**
	81nm,0.3s,baz=294,slow=17,SNR=50						
JCJ				Sn	**Sn**	**19 59 31.0**	**+0.3**
	213nm,0.3s,baz=272,slow=23,SNR=8.8						
JCJ				LR	LR	19 59 38.9	
	comp=Z,208nm,20.3s,baz=123,slow=51						
JHJ	**Hachijo jima 2**	**7.26**	**338**	Pn	**Pn**	**20 00 43.7**	**+0.8**
	3.0nm,0.3s,baz=73,slow=19,SNR=1.8						
MJAR	**Matsushiro Arr**	**10.91**	**339**	Pn	**Pn**	**20 01 33.0**	**+0.1**
	0.0nm,0.3s,baz=168,slow=11,SNR=4.8						
JNU	**Nakatsue**	**12.45**	**306**	LR	LR	20 06 28.2	
	comp=Z,57nm,18.5s,baz=46,slow=37						
KSRS	**Korea Array**	**16.85**	**315**	LR	LR	20 09 06.4	
	comp=Z,59nm,18.3s,baz=140,slow=37						
TGY	**Tagaytay City**	**23.95**	**244**	LR	LR	20 12 22.4	
	comp=Z,58nm,20.5s,baz=42,slow=34						
KLR	**Kul'dur**	**24.42**	**342**	P	**P**	**20 04 16.7**	**+1.4**
	1.3nm,0.8s,baz=173,slow=8.5,SNR=4.6						
PETK	**Petropavlovsk-**	**28.89**	**19**	LR	LR	20 17 17.8	
	comp=Z,16nm,20.3s,baz=60,slow=38						
CMAR	**Chiang Mai Arr**	**41.28**	**268**	P	**P**	**20 06 41.6**	**-0.8**
	0.6nm,0.6s,baz=67,slow=5.4,SNR=6.7						
CMAR				LR	LR	20 24 29.7	
	comp=Z,16nm,18.3s,baz=105,slow=38						
WRA	**Warramunga Arr**	**46.80**	**191**	P	**P**	**20 07 26.3**	**-0.3**
	1.2nm,0.4s,baz=8.5,slow=8.5,SNR=20						
ZALV	**Zalesovo Beam**	**50.48**	**319**	P	**P**	**20 07 53.8**	**-0.8**
	0.4nm,0.5s,baz=117,slow=8.3,SNR=1.6						
ASAR	**Alice Springs**	**50.51**	**191**	P	**P**	**20 07 56.2**	**+1.0**
	0.1nm,0.4s,baz=0.0,slow=5.6,SNR=1.8						
MKAR	**Makanchi Array**	**51.46**	**310**	P	**P**	**20 08 00.4**	**-1.8**
	0.3nm,0.7s,baz=97,slow=7.6,SNR=2.0						
YKA	**Yellowknife Ar**	**72.45**	**28**	P	P	20 10 27.3	+4.3
	0.1nm,0.7s,baz=290,slow=5.9,SNR=2.3						
FINES	**FINESS Array B**	**78.89**	**334**	P	**P**	**20 11 00.4**	**+0.4**
	1.7nm,0.6s,baz=85,slow=5.4,SNR=14						
BRTR	**Keskin Array B**	**86.99**	**313**	P	**P**	**20 11 42.9**	**+0.3**
	0.3nm,0.7s,baz=55,slow=5.5,SNR=1.8						

*AEIC **19** 20:01:15±2.6, 63°.36N±0°.04×145°.0W±0°.1, h2km±7km, ML3.2, Error ellipse: s-maj=6.5km s-min=5.1km az=95.0*

*NEIC **19** 20:01:17±1.8, 63°.40N±0°.04×144°.93W±0°.08, h10km±9km, Error ellipse: s-maj=5.3km s-min=5.1km az=94.0*

*ANF **19** 20:01:17.9±1.2, 63°.54N×144°.49W, h28km±6km, ML4.2/4, Error ellipse: s-maj=8.5km s-min=5.0km az=88.0*

ISC 19 20:01:15.9±0.8, **63°.37N**±0°.03×**145°.02W**±0°.03, **h5**km, **n58, σ1s04/63, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIDG	**Independent Ri**	**0.38**	**11**		**Pg**	**20 01 24.1**	**+0.8**
RIDG				Sg	**Sg**	**20 01 29.1**	**+0.9**
PAX	**Paxson**	**0.45**	**207**	Pg	**Pg**	**20 01 24.4**	**-0.2**
DOT	**Dot Lake**	**0.51**	**56**		**Pg**	**20 01 26.2**	**+0.5**
MENT	**Mentasta**	**0.73**	**126**	Pg	**Pg**	**20 01 29.4**	**-0.5**
SCRK	**Sand Creek**	**0.76**	**37**		**Pg**	**20 01 30.9**	**+0.4**
DHY	**Denali Highway**	**1.11**	**256**		**Pg**	**20 01 36.1**	**-1.1**
HDA	**Harding Lake**	**1.35**	**322**	P	**Pn**	**20 01 41.0**	**-0.4**
	baz=140						
HDA				S	**Sn**	**20 01 59.8**	**+0.1**
	baz=140						
HDA				S	**Sn**	**20 01 59.8**	**+0.1**
	baz=140						
HDA	**Harding Lake**	**1.35**	**322**		**Pn**	**20 01 41.0**	**-0.4**
IL31		**1.63**	**331**		**Pn**	**20 01 44.4**	**-0.8**
RND	**Reindeer**	**1.73**	**273**		**Pb**	**20 01 47.8**	**-0.3**
WRH	**Wood River Hil**	**1.75**	**311**		**Pn**	**20 01 46.7**	**-0.2**
CCB	**Clear Creek Bu**	**1.78**	**317**		**Pn**	**20 01 46.4**	**-0.8**
MCK	**McKinley**	**1.79**	**283**		**Pn**	**20 01 48.1**	**+0.6**
TCOL	**CIGO, UAF Yank**	**1.96**	**322**	Sb	**Sg**	**20 02 19.3**	**+0.5**
	baz=139						
GLB	**Gilahina Butte**	**2.02**	**163**		**Pn**	**20 01 50.2**	**-0.3**
POKR	**Poker Plat Res**	**2.05**	**330**	P	**Pn**	**20 01 50.5**	**-0.5**
	baz=148						
POKR				Sb	**Sg**	**20 02 20.7**	**-0.9**
	baz=148						
MDM	**Murphy Dome**	**2.13**	**320**		**Pn**	**20 01 51.6**	**-0.4**
BWN	**Browne**	**2.13**	**294**		**Pn**	**20 01 51.3**	**-0.8**
NEA	**Nenana**	**2.16**	**306**		**Pn**	**20 01 52.6**	**0.0**
PRP	**Porcupine Dome**	**2.17**	**354**		**Pn**	**20 01 53.0**	**+0.2**
SML	**Sawmill**	**2.19**	**226**		**Pn**	**20 01 53.8**	**+0.8**
MCARA	**McCarthy VSAT**	**2.20**	**154**		**Pn**	**20 01 54.1**	**+1.1**
EGAK	**Eagle**	**2.21**	**48**		**Pn**	**20 01 52.7**	**-0.5**
VRDI	**Verde Repeater**	**2.27**	**161**		**Pn**	**20 01 55.1**	**+0.9**
TRF	**Thorofare Moun**	**2.37**	**274**		**Pn**	**20 01 57.2**	**+1.6**
GHO	**Glory Hole Cre**	**2.42**	**230**		**Pn**	**20 01 56.7**	**+0.6**
KNK	**Knik Glacier**	**2.54**	**221**		**Pn**	**20 01 59.3**	**+1.6**
CUT	**Chulitna**	**2.59**	**250**	P	**Pb**	**20 02 02.4**	**-0.4**
	baz=66						
CUT				S	**Sb**	**20 02 35.6**	**+0.7**
	baz=66						
DAWY	**Dawson**	**2.60**	**72**		**Pn**	**20 01 58.2**	**-0.3**
PMR	**Palmer**	**2.61**	**229**		**Pn**	**20 02 00.1**	**+1.4**
BALM	**Baldy**	**2.66**	**151**		**Pn**	**20 02 00.3**	**+0.9**
KTH	**Kantishna Hill**	**2.66**	**277**		**Pn**	**20 02 00.8**	**+1.4**
GLI	**Glacier Island**	**2.68**	**202**		**Pn**	**20 02 00.9**	**+1.2**
FID	**Port Fidalgo**	**2.72**	**195**		**Pn**	**20 02 01.8**	**+1.6**
BPAW	**Bear Paw Mtn.**	**2.75**	**288**		**Pn**	**20 02 00.8**	**+0.1**
BARN	**Barnard Glacie**	**2.80**	**144**		**Pn**	**20 02 02.3**	**+0.8**
EYAK	**Cordova Ski Ar**	**2.85**	**187**		**Pn**	**20 02 03.5**	**+1.5**
CTGM	**Chitina Glacie**	**2.97**	**143**		**Pn**	**20 02 05.1**	**+1.4**
RAGM	**Ragged Mountai**	**3.00**	**177**		**Pn**	**20 02 06.0**	**+2.0**
MLY	**Manley**	**3.01**	**306**		**Pn**	**20 02 04.4**	**+0.2**
HIN	**Hinchinbrook I**	**3.06**	**194**		**Pn**	**20 02 06.3**	**+1.3**
RC01	**Rabbit Creek A**	**3.18**	**226**		**Pn**	**20 02 08.9**	**+2.4**
FYU	**Fort Yukon**	**3.21**	**358**		**Pn**	**20 02 07.3**	**+0.4**
PPLA	**Purkeypile**	**3.29**	**265**		**Pn**	**20 02 10.4**	**+2.2**
YAH	**Yahtse**	**3.39**	**151**		**Pn**	**20 02 08.6**	**-1.0**
SEW	**Seward**	**3.90**	**215**		**Pn**	**20 02 15.5**	**-0.8**
HYT	**Haines Junctio**	**4.36**	**122**		**Pn**	**20 02 22.1**	**-0.7**
COLD	**Coldfoot**	**4.44**	**333**		**Pn**	**20 02 24.3**	**+0.5**
EPYK	**Eagle Plains**	**4.64**	**46**		**Pn**	**20 02 26.5**	**-0.2**
RSO	**Redoubt South**	**4.68**	**235**		**Pn**	**20 02 26.3**	**-0.9**
CNPM	**China Poot**	**4.88**	**221**	Pn	**Pn**	**20 02 31.0**	**+1.2**
TTA	**Tatalina**	**5.01**	**270**		**Pn**	**20 02 31.4**	**-0.3**
WHY	**Whitehorse**	**5.49**	**115**	Pn	**Pn**	**20 02 37.9**	**-0.4**
TOLK	**Toolik Lake Re**	**5.61**	**343**	P	**Pn**	**20 02 41.8**	**+2.0**
	baz=159						
TOLK	**Toolik Lake Re**	**5.61**	**343**		**Pn**	**20 02 41.5**	**+1.6**
INK	**Inuvik**	**6.83**	**39**		**Pn**	**20 02 56.8**	**+0.3**
DLBC	**Dease Lake**	**8.81**	**117**	Pn	**Pn**	**20 03 22.9**	**-0.8**
C36M	**Paulatuk**	**10.28**	**45**	Pn	**Pn**	**20 03 41.6**	**-2.2**

IDC 19 20:01:32.4±52.0, **18°.93S×172°.86W, h0**km, **mb3.8**/3, **mb1 4.0/3, mb1mx3.5**/49, **mbtmp3.8**/3, **Error ellipse: s-maj=993.3km s-min=186.9km az=83.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.82**	**243**	P	P	20 09 31.9	-0.5
	0.6nm,0.6s,baz=76,slow=8.3,SNR=2.9						
ASAR	**Alice Springs**	**49.59**	**255**	P	P	20 10 26.0	+0.2
	0.7nm,0.5s,baz=92,slow=7.6,SNR=17						
WRA	**Warramunga Arr**	**49.63**	**260**	P	P	20 10 25.9	-0.2
	0.6nm,0.3s,baz=98,slow=7.0,SNR=25						

ANF 19 20:05:10.3±0.3, **43°.77N×105°.34W, h0**km, **ML3.5**/12, **Error ellipse: s-maj=3.7km s-min=3.2km az=94.0, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.01**	**69**	P	Pg	20 05 29.3	-0.3
	baz=250						
K22A	**Casper**	**1.41**	**218**	P	Pg	20 05 36.0	-1.4
	baz=37,SNR=227						
K22A				S	Sn	20 05 56.6	-0.2
	baz=37						
N23A	**Red Feather La**	**2.91**	**189**	P	Pn	20 05 58.8	+0.8
	baz=8.6						
N23A				Sb	Sb	20 06 40.5	+1.1
	baz=8.6						
LAO	**LASA Array**	**2.98**	**348**	P	Pn	20 05 59.1	+0.2
	baz=168						
LAO				Sb	Sb	20 06 42.8	+1.5
	baz=168						
RLMT	**Red Lodge**	**3.12**	**297**	P	Pn	20 06 01.2	+0.4
	baz=114,SNR=14						
BW06	**Boulder Array**	**3.24**	**253**	P	Pn	20 06 02.9	+0.4
	baz=70,SNR=58						
BW06				Sb	Sb	20 06 50.7	+1.9
	baz=70						
OGNE	**Ogallala**	**3.74**	**138**	P	Pn	20 06 09.5	+0.1
	baz=320						
OGNE				S	Sn	20 06 54.4	+0.2
	baz=320						
H17A	**Grant Village**	**3.82**	**281**	S	Sn	20 06 56.1	-0.2
	baz=98						
ISCO	**Idaho Springs**	**3.97**	**183**	P	Pn	20 06 13.2	+0.5
	baz=2.8						
ISCO				Sb	Sb	20 07 12.4	+2.4
	baz=2.8						
O20A	**White River Ci**	**4.23**	**212**	P	Pn	20 06 16.6	+0.5
	baz=30						
O20A				Sb	Sb	20 07 21.3	+4.1
	baz=30						
DGMT	**Dagmar**	**4.77**	**9**	P	Pn	20 06 24.0	+0.6
	baz=190						
DGMT				Sb	Sb	20 07 36.3	+3.7
	baz=190						
KSCO	**Kaye Shedlock'**	**5.18**	**156**	P	Pn	20 06 28.9	-0.2
	baz=338						
ECSD	**EROS Data Cent**	**6.32**	**87**	P	Pn	20 06 44.0	-0.8
	baz=273						

*NEIC **19** 20:08:37.4±1.0, 34°.25N±0°.01×116°.84W±0°.01, h3km±8km, Error ellipse: s-maj=1.6km s-min=1.5km az=193.0*

*PAS **19** 20:08:37.9±1.0, 34°.252N±0°.007×116°.819W±0°.010, h7km±6km, ML3.1/48, Error ellipse: s-maj=1.6km s-min=0.4km az=129.0*

ISC 19 20:08:37.3±1.0, **34°.26N**±0°.03×**116°.83W**±0°.03, **h14**km±10km, **n32, σ0s53/39, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMR	**Rimrock**	**0.22**	**102**		**Pg**	**20 08 41.9**	**-0.3**
SVD	**Seven Oaks Dam**	**0.27**	**235**		**Sg**	**20 08 47.0**	**+0.3**
DEVC	**Devers**	**0.39**	**146**		**Pg**	**20 08 45.7**	**+0.7**
GTM	**Goat Mountain**	**0.40**	**85**		**Pg**	**20 08 45.0**	**-0.3**
BLAC	**Blackrock camp**	**0.41**	**117**		**Sg**	**20 08 51.4**	**+0.2**
PEC	**Perris**	**0.46**	**217**		**Pg**	**20 08 46.4**	**+0.1**
EW2	**E Wide Canyon**	**0.47**	**132**		**Sg**	**20 08 53.3**	**+0.2**
HMTC	**Hemet**	**0.57**	**195**		**Pg**	**20 08 48.2**	**-0.2**
HMTC					**Sg**	**20 08 56.1**	**+0.2**
SME	**Santa Rosa Min**	**0.61**	**225**		**Pg**	**20 08 49.0**	**-0.3**
DGR	**Domenigoni Val**	**0.62**	**194**		**Pg**	**20 08 49.3**	**-0.2**
TPC	**Twentynine Pal**	**0.67**	**103**		**Pg**	**20 08 50.0**	**-0.3**
CRY	**Cary Ranch**	**0.70**	**173**		**Pg**	**20 08 50.6**	**-0.2**
CRY					**Sg**	**20 09 00.0**	**0.0**
SSK	**Sunset Peak**	**0.71**	**266**		**Pg**	**20 08 51.2**	**+0.1**
PFO	**Pinyon Flats O**	**0.72**	**154**	Pg	**Pg**	**20 08 50.3**	**-0.9**
XPFO	**Pion Flat**	**0.72**	**154**		**Pg**	**20 08 50.8**	**-0.5**
XPFO					**Sg**	**20 09 00.1**	**-0.7**
XPFO	**Pion Flat**	**0.72**	**154**	Pg	**Pg**	**20 08 50.7**	**-0.5**
BZNA	**Buzz No.'s Pla**	**0.78**	**170**		**Pg**	**20 08 52.1**	**-0.3**
BZNA					**Sg**	**20 09 02.3**	**-0.3**
FRD	**Ford Ranch, An**	**0.79**	**166**		**Pg**	**20 08 52.3**	**-0.2**
FRD					**Sg**	**20 09 02.8**	**0.0**
FRD	**Ford Ranch, An**	**0.79**	**166**		**Pg**	**20 08 52.2**	**-0.2**
FRD					**Sg**	**20 09 02.9**	**0.0**
KTL	**Crystal Lake,**	**0.85**	**273**		**Pg**	**20 08 53.7**	**-0.1**
HYS	**Haystack Butte**	**0.86**	**315**		**Pg**	**20 09 05.2**	**0.0**
HOLC	**Holcomb Ridge**	**0.86**	**284**		**Pg**	**20 08 53.8**	**-0.2**
PLM	**Palomar**	**0.90**	**181**		**Pg**	**20 08 54.4**	**-0.4**
SBB	**Saddle Back Bu**	**0.92**	**298**		**Pg**	**20 08 54.8**	**-0.3**
SBB					**Sb**	**20 09 08.6**	**+1.2**
JNH	**Juniper Hills**	**0.95**	**282**		**Sb**	**20 09 09.0**	**+1.0**
CHFC	**Chilao Flat St**	**0.99**	**275**		**Sg**	**20 09 09.8**	**+0.4**
MWC	**Mount Wilson**	**1.01**	**268**	Pg	**Pg**	**20 08 55.5**	**-1.3**
LRRC	**Littlerock Res**	**1.02**	**285**		**Sg**	**20 09 10.4**	**+0.1**
GSC	**Goldstone, Bar**	**1.04**	**1**	Pg	**Pg**	**20 08 57.2**	**-0.2**
BORC	**Borrego Spring**	**1.05**	**161**		**Sg**	**20 09 10.7**	**-0.4**
LCGC	**La Cienega, Cu**	**1.31**	**259**		**Pg**	**20 08 59.9**	**-1.2**
BAR	**Barrett**	**1.58**	**175**	Pn	**Pn**	**20 09 05.5**	**+0.6**

*IDC **19** 20:08:50.1±0.8, 34°.31N×116°.43W, h0km, mb1 3.6/4, mb1mx3.3/57, mbtmp3.1/4, ML3.6/4, Error ellipse: s-maj=19.2km s-min=5.9km az=90.0*

*ANF **19** 20:08:50.5±0.1, 34°.24N×116°.82W, h9km±1km, ML3.8/34, Error ellipse: s-maj=1.2km s-min=1.0km az=41.0*

*NEIC **19** 20:08:51.0±0.8, 34°.25N±0°.01×116°.827W±0°.008, h18km±1km, Error ellipse: s-maj=1.9km s-min=0.6km az=204.0*

*PAS **19** 20:08:51.6±1.0, 34°.253N±0°.008×116°.825W±0°.008, h8km±4km, ML3.8/248, Error

MURC	**Murrieta**	**0.72**	**206**	P		**Pg**	**20 09 04.8**	**-0.2**
	baz=25,SNR=174							
MURC				S		**Sg**	**20 09 14.6**	**+0.1**
	baz=25							
MURC	**Murrieta**	**0.72**	**206**			**Pg**	**20 09 04.8**	**-0.2**
MURC						**Sg**	**20 09 14.3**	**-0.1**
SSK	**Sunset Peak**	**0.72**	**267**			**Pg**	**20 09 05.0**	**+0.1**
BELC	**Belle Mtn. Jos**	**0.73**	**110**	P		**Pg**	**20 09 05.3**	**+0.3**
	baz=290							
BELC				S		**Sg**	**20 09 15.0**	**+0.4**
	baz=290							
BELC	**Belle Mtn. Jos**	**0.73**	**110**			**Pg**	**20 09 05.3**	**+0.3**
CHNC	**Chino**	**0.76**	**250**			**Pg**	**20 09 05.5**	**0.0**
CHNC						**Sg**	**20 09 15.7**	**+0.1**
BZNA	**Buzz No.'s Pla**	**0.77**	**170**			**Pg**	**20 09 06.0**	**+0.1**
FRD	**Ford Ranch, An**	**0.78**	**167**			**Pg**	**20 09 06.0**	**0.0**
FRD	**Ford Ranch, An**	**0.78**	**167**			**Pg**	**20 09 06.0**	**0.0**
FRD						**Sg**	**20 09 16.3**	**0.0**
ALV	**Alvord Mountai**	**0.82**	**11**			**Pg**	**20 09 06.7**	**-0.1**
PSRC	**Puddingstone R**	**0.83**	**259**			**Pg**	**20 09 07.0**	**0.0**
PSRC						**Sg**	**20 09 18.0**	**+0.1**
XTL	**Crystal Lake,**	**0.86**	**273**			**Pg**	**20 09 07.4**	**-0.2**
HYS	**Haystack Butte**	**0.87**	**315**			**Pg**	**20 09 07.5**	**-0.1**
HOLC	**Holcomb Ridge**	**0.87**	**284**			**Pg**	**20 09 07.5**	**-0.2**
PEM	**Pine Mountain**	**0.88**	**265**			**Pg**	**20 09 07.7**	**-0.1**
PLM	**Palomar**	**0.90**	**182**			**Pg**	**20 09 08.2**	**-0.1**
PLM						**Sb**	**20 09 20.1**	**-0.2**
CTCC	**Cactus City**	**0.91**	**131**			**Pg**	**20 09 08.5**	**0.0**
CTCC						**Sb**	**20 09 21.7**	**+1.0**
SBB	**Saddle Back Bu**	**0.94**	**298**			**Sg**	**20 09 20.6**	**-0.6**
JNH	**Juniper Hills**	**0.96**	**282**			**Sg**	**20 09 22.1**	**+0.1**
CHFC	**Chilao Flat St**	**1.00**	**275**			**Sg**	**20 09 23.1**	**-0.2**
RHC	**Rose Hills Cem**	**1.02**	**256**			**Pb**	**20 09 10.3**	**-0.1**
MWC	**Mount Wilson**	**1.03**	**269**	Pg		**Pg**	**20 09 10.1**	**-0.5**
MWC	**Mount Wilson**	**1.03**	**269**			**Sb**	**20 09 24.4**	**+0.4**
BORC	**Borrego Spring**	**1.04**	**161**			**Sg**	**20 09 23.9**	**-0.6**
GSC	**Goldstone, Bar**	**1.04**	**1**	P		**Pg**	**20 09 10.8**	**-0.1**
	baz=181,SNR=541							
GSC				S		**Sg**	**20 09 25.1**	**+0.5**
	baz=181							
GSC	**Goldstone, Bar**	**1.04**	**1**			**Pg**	**20 09 10.9**	**-0.1**
GSC	**Goldstone, Bar**	**1.04**	**1**	Pg		**Pb**	**20 09 10.6**	**-0.2**
DSCC	**Desert Studies**	**1.06**	**33**			**Pg**	**20 09 11.2**	**-0.2**
DSCC	**Desert Studies**	**1.06**	**33**			**Sn**	**20 09 26.6**	**+0.5**
CACC	**Caltech Cellar**	**1.09**	**264**			**Pb**	**20 09 11.4**	**-0.1**
HAY	**Hayfield**	**1.09**	**120**			**Pn**	**20 09 12.3**	**+0.5**
GMRC	**Granite Mounta**	**1.09**	**61**	P		**Pb**	**20 09 11.4**	**-0.3**
	baz=241,SNR=336							
GMRC				S		**Sb**	**20 09 26.2**	**+0.3**
	baz=241							
GMRC	**Granite Mounta**	**1.09**	**61**			**Pb**	**20 09 11.4**	**-0.3**
GMRC						**Sb**	**20 09 25.9**	**0.0**
GVRC	**Garvey Reservo**	**1.10**	**260**			**Pb**	**20 09 11.7**	**0.0**
CJV	**Casa Juvan**	**1.13**	**284**			**Pg**	**20 09 12.0**	**-0.6**
PASC	**Pasadena Art C**	**1.13**	**266**			**Pg**	**20 09 12.0**	**-0.7**
PASC	**Pasadena Art C**	**1.13**	**266**	Pg		**Pb**	**20 09 11.9**	**-0.4**
GORC	**Green Oak Ranc**	**1.15**	**197**			**Pb**	**20 09 11.8**	**-0.8**
EDW2	**Edwards Air Fo**	**1.15**	**303**	P		**Pb**	**20 09 12.6**	**-0.1**
	baz=123,SNR=152							
EDW2				S		**Sb**	**20 09 27.5**	**0.0**
	baz=123							
EDW2	**Edwards Air Fo**	**1.15**	**303**			**Pb**	**20 09 12.6**	**-0.1**
SALN	**Salton City**	**1.20**	**144**			**Pn**	**20 09 13.1**	**-0.1**
HWB	**Hans Werner Br**	**1.23**	**185**			**Pn**	**20 09 13.3**	**-0.4**
GR2C	**Griffith Obs.**	**1.23**	**264**			**Pg**	**20 09 14.6**	**0.0**
DANC	**Danby, Needles**	**1.25**	**72**			**Pg**	**20 09 15.0**	**+0.2**
DECC	**Green Verdugo**	**1.25**	**270**	P		**Pn**	**20 09 13.6**	**-0.4**
	baz=90,SNR=79							
DECC				S		**Sg**	**20 09 31.5**	**+0.2**
	baz=90							
DECC	**Green Verdugo**	**1.25**	**270**			**Pb**	**20 09 14.4**	**+0.1**
DPP	**Dos Picos Cty**	**1.26**	**185**			**Pn**	**20 09 13.7**	**-0.4**
LEOC	**Leona Valley**	**1.28**	**287**			**Pn**	**20 09 14.7**	**+0.2**
BC3	**Big Chuckawall**	**1.28**	**117**	P		**Pn**	**20 09 14.5**	**-0.1**
	baz=298,SNR=261							
BC3	**Big Chuckawall**	**1.28**	**117**			**Pn**	**20 09 14.6**	**0.0**
FRK	**Frink**	**1.30**	**131**			**Pn**	**20 09 13.8**	**-0.8**
TPC	**Tropico Hills**	**1.32**	**299**			**Pn**	**20 09 15.2**	**+0.2**
CCAC	**Calif City Air**	**1.33**	**313**			**Pb**	**20 09 16.0**	**+0.3**
FMP	**Fort Macarthur**	**1.34**	**247**	P		**Pn**	**20 09 15.4**	**+0.2**
	baz=66							
FMP				S		**Sb**	**20 09 32.6**	**-0.2**
	baz=66							
CCCA	**Chr Cany lake**	**1.34**	**341**			**Pg**	**20 09 16.9**	**+0.2**
EML	**El Monte Cty P**	**1.36**	**181**			**Pn**	**20 09 15.5**	**0.0**
DJJ	**Donna J Jenkin**	**1.36**	**264**			**Pn**	**20 09 15.8**	**+0.3**
109C	**Camp Elliot, M**	**1.38**	**190**	P		**Pn**	**20 09 15.9**	**0.0**
	baz=9.6							
109C				S		**Sb**	**20 09 33.5**	**-0.6**
	baz=9.6							
109C	**Camp Elliot, M**	**1.38**	**190**			**Pn**	**20 09 15.7**	**-0.1**
CPE	**Camp Elliot**	**1.38**	**190**			**Pn**	**20 09 15.7**	**-0.1**
TUQ	**Turquoise Moun**	**1.39**	**32**	P		**Pn**	**20 09 16.1**	**0.0**
	baz=212							
IRM	**Iron Mountain**	**1.39**	**94**	P		**Pn**	**20 09 15.6**	**-0.4**
	baz=274,SNR=417							
IRM	**Iron Mountain**	**1.39**	**94**			**Pn**	**20 09 15.6**	**-0.4**
MONP2	**Monument Peak**	**1.40**	**166**	P		**Pb**	**20 09 16.8**	**-0.1**
	baz=346							
MONP2				S		**Sn**	**20 09 35.0**	**+0.3**
	baz=346							
MONP2	**Monument Peak**	**1.40**	**166**			**Pb**	**20 09 17.2**	**+0.2**
LRMC	**Laurel Mtn Rad**	**1.41**	**330**	P		**Pn**	**20 09 16.4**	**0.0**
	baz=150							
LRMC				S		**Sb**	**20 09 36.3**	**+1.2**
	baz=150							
CBKC	**Canebrake**	**1.43**	**161**			**Pn**	**20 09 16.9**	**+0.4**
SWSC	**Sam W. Stewart**	**1.56**	**147**	P		**Pn**	**20 09 17.9**	**-0.3**
	baz=327,SNR=56							
SWSC	**Sam W. Stewart**	**1.56**	**147**			**Pn**	**20 09 18.0**	**-0.3**
BAR	**Barrett**	**1.58**	**175**			**Pn**	**20 09 19.2**	**+0.7**
CIS	**Catalina Islan**	**1.58**	**238**	P		**Pn**	**20 09 18.8**	**+0.3**
	baz=57							
OSI	**Osito Audit: C**	**1.61**	**283**	P		**Pn**	**20 09 19.8**	**+0.8**
	baz=102							
OSI	**Osito Audit: C**	**1.61**	**283**			**Pn**	**20 09 20.0**	**+1.0**
SHOC	**Shoshone, Teco**	**1.70**	**15**	P		**Pn**	**20 09 20.7**	**+0.5**
	baz=195,SNR=260							
IKP	**In-Ko-Pah, Jac**	**1.71**	**159**	P		**Pn**	**20 09 20.6**	**+0.3**
	baz=340,SNR=42							
ARVC	**Arvin**	**1.87**	**298**	P		**Pn**	**20 09 22.6**	**+0.1**
	baz=117,SNR=12							
ARVC				Sb		**Sg**	**20 09 51.1**	**+0.1**
	baz=117							
MPMC	**Manual Prospec**	**1.88**	**343**	P		**Pn**	**20 09 23.1**	**+0.2**
	baz=163,SNR=177							
MPMC				Sb		**Sg**	**20 09 51.8**	**+0.5**
	baz=163							
NEE2	**Needles Airpor**	**1.89**	**74**	P		**Pn**	**20 09 22.7**	**-0.1**
	baz=255,SNR=56							
NEE2				Sb		**Sg**	**20 09 51.3**	**-0.3**
	baz=255							
ISA	**Isabella, Lake**	**1.95**	**316**	P		**Pn**	**20 09 23.8**	**0.0**
	baz=136,SNR=62							
ISA	**Isabella, Lake**	**1.95**	**316**			**Pn**	**20 09 23.7**	**0.0**
Y12C	**Blythe**	**1.97**	**104**			**Pn**	**20 09 23.4**	**-0.5**
GLA	**Glamis**	**2.05**	**125**	P		**Pn**	**20 09 25.0**	**-0.1**
	baz=306,SNR=44							
GLA	**Glamis**	**2.05**	**125**			**Pn**	**20 09 24.9**	**-0.1**
SBC	**Santa Barbara**	**2.40**	**275**	P		**Pn**	**20 09 30.6**	**+0.8**
	baz=94							
SNCC	**San Nicolas Is**	**2.47**	**247**	Pn		**Pn**	**20 09 30.8**	**0.0**
PKM	**Mcpherson Peak**	**2.55**	**285**	P		**Pn**	**20 09 33.1**	**+1.0**
	baz=104,SNR=17							
W13A	**Hualapai Mount**	**2.56**	**70**			**Pn**	**20 09 32.3**	**+0.1**
SHPR	**Sheep Range**	**2.62**	**31**			**Pn**	**20 09 34.0**	**+1.0**
TPNV	**Topopah Spring**	**2.73**	**10**	P		**Pn**	**20 09 35.8**	**+1.3**
	baz=190,SNR=212							
TPNV	**Topopah Spring**	**2.73**	**10**			**Pn**	**20 09 35.5**	**+1.0**
GRAC	**Grapevine Rang**	**2.77**	**351**	P		**Pn**	**20 09 36.2**	**+1.2**
	baz=171,SNR=13							
SMMC	**Simmler**	**2.82**	**293**	Sb		**Sg**	**20 10 19.3**	**-2.2**
	baz=111							
113A	**Mohawk Valley,**	**2.95**	**119**	Pn		**Pn**	**20 09 36.4**	**-1.0**
PAGB	**Antelope Grade**	**3.18**	**299**	Pn		**Pn**	**20 09 40.8**	**+0.3**
Y14A	**Wickenburg**	**3.18**	**95**			**Pn**	**20 09 40.9**	**+0.3**
OMMB	**Old Mammoth Mi**	**3.79**	**333**			**Pn**	**20 09 51.3**	**+2.1**
PMPB	**Monarch Peak**	**3.80**	**302**			**Pn**	**20 09 49.6**	**+0.4**
MDPB	**Devils Postpil**	**3.84**	**332**	Pn		**Pn**	**20 09 50.2**	**+0.4**
LCMT	**Little Creek M**	**4.01**	**46**			**Pn**	**20 09 53.3**	**+1.3**
214A	**Organ Pipe Nat**	**4.07**	**123**			**Pn**	**20 09 52.5**	**-0.4**
R11A	**Troy Canyon, C**	**4.21**	**13**	Sb		**Sg**	**20 11 01.5**	**-4.4**
	baz=194							
R11A	**Troy Canyon, C**	**4.21**	**13**			**Pn**	**20 09 54.0**	**-0.8**

KNB	**Kanab**	**4.26**	**49**			**Pn**	**20 09 56.4**	**+0.7**
U15A	**North Rim**	**4.29**	**58**			**Pn**	**20 09 57.0**	**+1.0**
NV11	**Mina Array Sit**	**4.30**	**346**			**Pn**	**20 09 58.0**	**+1.9**
CCUT	**Cedar City**	**4.32**	**39**			**Pn**	**20 09 58.7**	**+2.2**
NVAR	**Mina Array Bea**	**4.33**	**344**	Pn		**Pn**	**20 09 57.6**	**+1.0**
	0.5nm,0.3s,baz=165,slow=15,SNR=8.3							
NVAR				Pg		**Pg**	**20 10 12.4**	**-1.4**
	6.7nm,0.3s,baz=165,slow=18,SNR=56							
NVAR				Lg		Lg	20 11 09.3	
	1.3nm,0.3s,baz=162,slow=35,SNR=2.3							
X16A	**Lo Mia Camp, P**	**4.45**	**86**			**Pn**	**20 09 58.9**	**+0.7**
SAO	**San Andreas Ge**	**4.53**	**305**	Pn		**Pn**	**20 10 00.0**	**+1.0**
RYN	**Ryan**	**4.57**	**343**			**Pn**	**20 10 01.3**	**+1.5**
WUAZ	**Wupatki**	**4.65**	**73**	Pn		**Pn**	**20 10 02.2**	**+1.3**
CMB	**Columbia Colle**	**4.75**	**324**			**Pn**	**20 10 04.1**	**+2.0**
PKCU	**Pink Cliffs**	**4.85**	**48**			**Pn**	**20 10 05.5**	**+1.7**
PSUT	**Pine Spring**	**4.89**	**28**			**Pn**	**20 10 06.1**	**+1.8**
KVN	**Kaiserville**	**4.89**	**348**			**Pn**	**20 10 05.9**	**+1.6**
TUC	**Tucson**	**5.41**	**109**	P		**Pn**	**20 10 11.3**	**0.0**
	baz=293							
TUC	**Tucson**	**5.41**	**109**			**Pn**	**20 10 10.5**	**-0.8**
X18A	**Snowflake**	**5.69**	**85**			**Pn**	**20 10 17.1**	**+1.9**
BEKR	**Beckworth**	**6.27**	**334**	Pn		**Pn**	**20 10 25.1**	**+1.9**
ELK	**Elko**	**6.60**	**11**	Pn		**Pn**	**20 10 28.8**	**+1.1**
	0.5nm,0.3s,baz=253,slow=15,SNR=5.7							
ELK				Pg		**Pg**	**20 10 53.7**	**-3.4**
	1.2nm,0.3s,baz=203,slow=16,SNR=13							
ELK				Lg		Lg	20 12 15.9	
	0.3nm,0.3s,baz=82,slow=14,SNR=2.0							
ELK	**Elko**	**6.60**	**11**			**Pn**	**20 10 28.6**	**+0.9**
121A	**Cookes Peak, D**	**7.75**	**100**			**Pn**	**20 10 45.0**	**+1.5**
PDAR	**Pinedale Array**	**10.22**	**32**	Pn		**Pn**	**20 11 16.1**	**-1.3**
	0.1nm,0.3s,baz=238,slow=17,SNR=1.3							
PDAR				Pg			20 12 01.4	
	0.7nm,0.3s,baz=209,slow=15,SNR=20							
TXAR	**Lajitas Array**	**12.21**	**110**	Pn		**Pn**	**20 11 44.1**	**-0.5**
	0.4nm,0.3s,baz=290,slow=13,SNR=11							

*IDC **19** 20:12:03.5±5.9, 18°.48S×175°.28W, h0km, mb4.1/2, mb1 4.4/2, mb1mx3.6/36, mbtmp4.1/2, Error ellipse: s-maj=304.1km s-min=54.8km az=148.0*
*NEIC **19** 20:12:27.0±2.5, 20°.2S±0°.2×174°.5W±0°.2, h245km±8km, mb4.3/7, Error ellipse: s-maj=32.2km s-min=18.3km az=146.0*

ISC 19 20:12:27.7±1.3, 20°.4S±0°.2×174°.4W±0°.2, h250km, n12, σ1s75/12, mb4.1/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.65**	**289**			**Pn**	**20 14 18.6**	**+1.9**
BHW	**Baring Head**	**22.87**	**201**	P		**P**	**20 17 11.3**	**+1.8**
LTZ	**Lake Taylor**	**25.01**	**204**	P		**P**	**20 17 29.5**	**+0.6**
LTZ				IAmb		IAmb	20 18 19.7	
	comp=Z,68nm,1.9s							
CTAO	**Charters Tower**	**36.90**	**263**	P		**P**	**20 19 11.3**	**-1.6**
WR0	**Warramunga Arr**	**47.81**	**261**	P		**P**	**20 20 38.7**	**-1.9**
WR0				IAmb		IAmb	20 21 33.1	
	comp=Z,14nm,1.4s							
AS31	**Alice Springs**	**47.87**	**256**	P		**P**	**20 20 40.9**	**-0.2**
ASAR	**Alice Springs**	**47.87**	**256**	P		**P**	**20 20 40.8**	**-0.3**
	comp=Z,1.4nm,0.4s,baz=87,slow=8.2,SNR=32							
WB0	**Warramunga Arr**	**47.98**	**261**	P		**P**	**20 20 39.8**	**-2.1**
WB0				IAmb		IAmb	20 21 29.3	
	comp=Z,13nm,1.4s							
WB2	**Warramunga Arr**	**47.99**	**261**	P		**P**	**20 20 40.1**	**-1.9**
WB2				IAmb		IAmb	20 22 14.9	
	comp=Z,23nm,1.7s							
WRA	**Warramunga Arr**	**48.00**	**261**	P		**P**	**20 20 40.3**	**-1.8**
	comp=Z,0.8nm,0.3s,baz=98,slow=7.4,SNR=51							
SZCU	**Shurtz Canyon**	**81.49**	**45**	P		**P**	**20 24 17.1**	**-0.5**
GERES	**GERESS Array B**	**150.87**	**349**	PKPbc		**PKiKP**	**20 31 52.6**	**+1.5**
	comp=Z,0.1nm,0.4s,baz=18,slow=4.3,SNR=1.6							

*IDC **19** 20:13:48.1±1.5, 4°.11S×103°.92W, h0km, mb3.9/12, mb1 4.2/12, mb1mx4.0/43, mbtmp3.9/12, MS3.9/23, Ms1 3.9/23, ms1mx3.9/29, Error ellipse: s-maj=41.4km s-min=21.9km az=39.0*
*NEIC **19** 20:13:50.3±1.3, 4°.0S±0°.1×103°.8W±0°.2, h10km±2km, mb4.5/25, Error ellipse: s-maj=32.2km s-min=21.6km az=238.0*
*GCMT **19** 20:13:55.3±0.4, 3°.86S±0°.02×103°.91W±0°.02, h20km±1km, MW4.8/97, Moment Tensor Solution. s26,c31; s97,c126; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.52±.11; Mθθ 1.31±.10; Mϕϕ -0.79±.09; Mrθ -0.03±.15; Mϕθ 2.09±.08; Mϕr-0.11±.17; Best double couple: M=2.34200×10^16 NP1:ϕ=283.00000°, δ87.00000°, λ-1.00000°. NP2: ϕ=13.00000°, δ89.00000°, λ-177.00000°. Principal axes: T 2.6010, Plg2.0000°, Azm148.0000°; N -0.5210, Plg87.0000°, Azm30.0000°; P -2.0830, Plg3.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 20:13:51.3±1.2, 4°.0S±0°.2×103°.8W±0°.2, h18km, n69, σ0s81/39, mb4.3/22, MS3.9/26, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**22.75**	**23**	LR		LR	20 25 48.0	
	comp=Z,274nm,19.7s,baz=207,slow=32							
APG	**El Apazote**	**23.06**	**35**	P		**P**	**20 18 57.4**	**+1.2**
	2.6nm,0.7s,baz=238,slow=12,SNR=4.9							
APG				LR		LR	20 25 55.9	
	comp=Z,534nm,21.7s,baz=250,slow=31							
JTS	**Las Juntas de**	**23.55**	**53**	LR		LR	20 25 49.3	
	comp=Z,552nm,21.0s,baz=306,slow=30							
RPN	**Rapa Nui**	**23.59**	**192**	LR		LR	20 25 35.2	
	comp=Z,258nm,18.6s,baz=45,slow=30							
ATAH	**Atahualpa**	**25.48**	**98**	LR		LR	20 27 29.5	
	comp=Z,196nm,18.3s,baz=274,slow=32							
NNA	**Nana**	**27.84**	**108**	LR		LR	20 28 14.5	
	comp=Z,266nm,18.9s,baz=297,slow=31							
TEIG	**Tepich**	**28.51**	**32**	LR		LR	20 29 41.2	
	comp=Z,330nm,18.6s,baz=178,slow=33							
LPIG	**La Paz**	**28.65**	**348**	LR		LR	20 28 48.2	
	comp=Z,75nm,18.9s,baz=192,slow=31							
ROSC	**El Rosal**	**30.75**	**74**	LR		LR	20 30 17.1	
	comp=Z,160nm,20.4s,baz=232,slow=32							
TXAR	**Lajitas Array**	**33.15**	**0**	P		**P**	**20 20 26.4**	**-0.4**
	0.1nm,0.4s,baz=162,slow=6.2,SNR=1.3							
TXAR				LR		LR	20 32 25.0	
	comp=Z,117nm,18.4s,baz=0.0,slow=34							
SDV	**Santo Domingo**	**35.47**	**69**	P		**P**	**20 20 47.5**	**+0.2**
	5.5nm,0.7s,baz=253,slow=6.6,SNR=8.7							
SDV				LR		LR	20 32 54.9	
	comp=Z,209nm,19.6s,baz=243,slow=32							
SDV	**Santo Domingo**	**35.47**	**69**	P		**P**	**20 20 45.7**	**-1.7**
SDV				IAmb		IAmb	20 20 50.2	
	comp=Z,8.5nm,0.9s							
MNTX	**Cornudas Mount**	**35.54**	**358**	P		**P**	**20 20 48.1**	**+0.6**
RKT	**Rikitea**	**35.61**	**235**	*e*LR		LR	20 30 13.1	
	comp=Z,462nm,27.8s							
RKT	**Rikitea**	**35.61**	**235**	*e*T		T	20 57 53.7	
	comp=Z,2.5nm,0.3s							
PB16	**IPOC Station P**	**36.44**	**116**	P		**P**	**20 20 56.4**	**+0.4**
PB16				IAmb		IAmb	20 21 06.3	
	comp=Z,9.1nm,1.0s							
LPAZ	**La Paz**	**37.10**	**112**	LR		LR	20 33 27.7	
	comp=Z,135nm,19.9s,baz=277,slow=32							
H03N2	**Juan Fernandez**	**37.36**	**145**	T		T	21 00 52.1	
	baz=323,slow=78,SNR=14							
H03N1	**Juan Fernandez**	**37.38**	**145**	T		T	21 00 50.3	
	baz=323,slow=78,SNR=32							
H03N3	**Juan Fernandez**	**37.38**	**145**	T		T	21 00 58.6	
	baz=323,slow=78,SNR=18							
W39A	**Magazine**	**40.12**	**13**	P		**P**	**20 21 27.4**	**+1.4**
W39A				IAmb		IAmb	20 21 34.4	
	comp=Z,9.9nm,1.1s							
SAML	**Samuel**	**40.65**	**99**	P		**P**	**20 21 30.4**	**-0.4**
PLAL	**Pickwick Lake**	**41.51**	**20**	P		**P**	**20 21 37.7**	**+0.2**
PLAL				IAmb		IAmb	20 21 45.9	
	comp=Z,10.0nm,0.9s							
V48A	**Smith Brothers**	**42.63**	**21**	P		**P**	**20 21 45.9**	**-0.8**
V48A				IAmb		IAmb	20 21 55.0	
	comp=Z,8.9nm,1.1s							
WVT	**Waverly**	**42.64**	**19**	P		**P**	**20 21 45.5**	**-1.2**
R11A	**Troy Canyon, C**	**43.53**	**347**	P		**P**	**20 21 54.5**	**+0.3**
PTGA	**Pitinga**	**43.92**	**87**	P		**P**	**20 21 58.2**	**+0.7**
	comp=Z,2.0nm,0.6s,baz=298,slow=6.2,SNR=4.7							
PTGA	**Pitinga**	**43.92**	**87**	P		**P**	**20 21 58.6**	**+1.0**
PTGA				IAmb		IAmb	20 22 17.2	

	comp=Z,9.9nm,1.2s							
NVAR	**Mina Array Bea**	**44.31**	**344**	P		**P**	**20 22 01.0**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=171,slow=6.1,SNR=2.7							
NVAR				LR		LR	20 36 39.3	
	comp=Z,129nm,18.1s,baz=186,slow=31							
U56A	**King**	**45.73**	**27**	P		**P**	**20 22 09.4**	**-2.2**
HWUT	**Hardware Ranch**	**45.95**	**352**	P		**P**	**20 22 13.5**	**+0.1**
HWUT				IAmb		IAmb	20 22 21.9	
	comp=Z,3.4nm,0.9s							
PPT2	**Papeete2**	**46.79**	**250**	*e*LR		LR	20 35 25.4	
	comp=Z,340nm,27.5s,baz=76							
BW06	**Boulder Array**	**46.85**	**354**	P		**P**	**20 22 20.6**	**0.0**
BW06				IAmb		IAmb	20 22 27.9	
	comp=Z,3.0nm,0.9s							
PD31	**Pinedale Array**	**46.85**	**354**	P		**P**	**20 22 20.6**	**+0.1**
PDAR	**Pinedale Array**	**46.85**	**354**	P		**P**	**20 22 20.6**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=168,slow=7.6,SNR=6.2							
PDAR				LR		LR	20 39 32.9	
	comp=Z,76nm,19.3s,baz=154,slow=33							
PLCA	**Paso Flores**	**47.23**	**145**	LR		LR	20 37 16.3	
	comp=Z,257nm,19.7s,baz=288,slow=30							
FXWY	**Fox Creek**	**47.87**	**353**	P		**P**	**20 22 28.9**	**+0.4**
FXWY				IAmb		IAmb	20 22 37.6	
	comp=Z,3.9nm,1.2s							
TBI	**Tubuai**	**48.06**	**242**	*e*LR		LR	20 35 58.6	
	comp=Z,237nm,27.8s,baz=62							
IMW	**Indian Meadow**	**48.12**	**353**	P		**P**	**20 22 30.8**	**+0.4**
RLMT	**Red Lodge**	**49.16**	**355**	P		**P**	**20 22 38.3**	**-0.1**
RLMT				IAmb		IAmb	20 24 23.1	
	comp=Z,4.0nm,0.8s							
CPUP	**Villa Florida**	**49.68**	**121**	P		**P**	**20 22 43.2**	**+0.8**
	comp=Z,2.8nm,1.0s,baz=286,slow=8.3,SNR=3.2							
CPUP				LR		LR	20 40 29.3	
	comp=Z,122nm,20.8s,baz=286,slow=32							
I07A	**Izee**	**49.91**	**345**	P		**P**	**20 22 44.6**	**+0.7**
I07A				IAmb		IAmb	20 22 53.2	
	comp=Z,5.1nm,0.9s							
NEW	**Newport**	**53.34**	**349**	P		**P**	**20 23 10.4**	**+0.9**
	comp=Z,1.3nm,0.4s,baz=173,slow=5.1,SNR=3.1							
ULM	**Lac du Bonnet**	**54.48**	**6**	LR		LR	20 45 24.5	
	comp=Z,152nm,19.3s,baz=256,slow=35							
BDFB	**Brasilia**	**56.02**	**106**	LR		LR	20 45 45.3	
	comp=Z,106nm,18.8s,baz=229,slow=34							
FFC	**Flin Flon**	**58.55**	**1**	P		**P**	**20 23 45.7**	**-0.8**
DLBC	**Dease Lake**	**65.69**	**345**	P		**P**	**20 24 35.1**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=120,slow=15,SNR=1.6							
SCHQ	**Schefferville**	**66.14**	**22**	LR		LR	20 53 02.8	
	comp=Z,100nm,18.6s,baz=304,slow=36							
YKA	**Yellowknife Ar**	**66.83**	**355**	P		**P**	**20 24 41.8**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=160,slow=6.6,SNR=9.3							
PMSA	**Palmer Station**	**66.96**	**163**	LR		LR	20 45 40.9	
	comp=Z,210nm,22.0s,baz=252,slow=29							
MCARA	**McCarthy VSAT**	**71.87**	**341**	P		**P**	**20 25 13.2**	**+0.2**
INK	**Inuvik**	**75.07**	**349**	P		**P**	**20 25 32.2**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=63,slow=2.3,SNR=2.1							
INK	**Inuvik**	**75.07**	**349**	P		**P**	**20 25 31.7**	**+0.1**
INK				IAmb		IAmb	20 25 39.4	
	comp=Z,3.9nm,1.0s							
IL31		**75.55**	**342**	P		**P**	**20 25 34.4**	**-0.1**
IL31				IAmb		IAmb	20 25 47.2	
	comp=Z,7.4nm,1.2s							
ILAR

TOSP	**Speyside**	**5.78**	**183**	*eS*	**Sn**	**20 19 50.6**	**-3.5**
SADO	**Sadowa**	**31.81**	**334**	LR	LR	20 36 34.2	
	comp=Z,17nm,18.0s,baz=332,slow=36						
YKA	**Yellowknife Ar**	**58.81**	**334**	P	**P**	**20 27 19.9**	**-0.2**
	0.7nm,0.6s,baz=104,slow=7.7,SNR=11						
TORD	**Torodi Ar. Bea**	**59.73**	**85**	P	**P**	**20 27 26.9**	**-0.3**
	0.4nm,0.7s,baz=283,slow=7.2,SNR=2.4						
GERES	**GERESS Array B**	**66.79**	**44**	P	**P**	**20 28 14.2**	**+0.5**
	0.4nm,0.7s,baz=264,slow=9.0,SNR=3.8						
ILAR	**Eielson Array**	**73.24**	**333**	P	**P**	**20 28 52.8**	**-0.2**
	0.4nm,0.7s,baz=81,slow=5.7,SNR=5.1						
FINES	**FINESS Array B**	**73.39**	**30**	P	**P**	**20 28 53.7**	**-0.1**
	0.8nm,0.6s,baz=240,slow=3.8,SNR=5.2						
BRTR	**Keskin Array B**	**82.19**	**51**	P	**P**	**20 29 44.0**	**+0.6**
	0.4nm,0.7s,baz=297,slow=3.9,SNR=3.8						

IDC 19 20:52:50.6±1.5, 4°07'N×123°36'E, h0km, mb3.7/4, mb1 3.7/4, mb1mx3.4/31, mbtmp3.7/4, MS2.9/2, Ms1 2.9/2, ms1mx2.6/26, Error ellipse: s-maj=257.6km s-min=22.8km az=62.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.19**	**156**	P	P	20 58 26.6	-0.6
	0.4nm,1.1s,baz=334,slow=11,SNR=1.4						
KSRS	**Korea Array**	**33.48**	**7**	LR	LR	21 13 57.4	
	comp=Z,7.2nm,21.2s,baz=70,slow=38						
STKA	**Stephens Creek**	**39.74**	**155**	P	P	21 00 25.7	+0.6
	1.1nm,0.8s,baz=337,slow=7.7,SNR=2.9						
SONM	**Songino Array**	**45.98**	**344**	LR	LR	21 23 26.2	
	comp=Z,36nm,18.1s,baz=60,slow=40						
MKAR	**Makanchi Array**	**55.39**	**327**	P	P	21 02 27.9	+1.1
	0.6nm,0.5s,baz=125,slow=8.3,SNR=8.9						
KURBB	**Kurchatov Arra**	**59.67**	**329**	P	P	21 02 55.6	-1.1
	1.3nm,0.7s,baz=125,slow=6.1,SNR=14						

IDC 19 21:49:22.6±1.0, 41°37'N×117°21'W, h0km, mb2.6/1, mb1 3.3/5, mb1mx3.2/58, mbtmp3.0/5, ML3.3/4, Error ellipse: s-maj=9.8km s-min=7.1km az=175.0
NEIC 19 21:49:23.7±1.6, 41°18'N±0'.04×117°19'W±0'.06, h0km±2km, ML2.4/54, Error ellipse: s-maj=7.9km s-min=6.3km az=225.0
ISC 19 21:49:23.2±0.9, 41°20'N±0'.04×117°19'W±0'.04, h0km, n31, σ0s91/32, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELK	**Elko**	**1.55**	**106**	Pn	**Pn**	**21 49 51.9**	**-0.3**
	2.5nm,0.3s,baz=294,slow=11,SNR=48						
ELK				Lg	Lg	21 50 13.4	
	4.7nm,0.3s,baz=188,slow=18,SNR=11						
ELK	**Elko**	**1.55**	**106**		**Pn**	**21 49 52.4**	**+0.1**
ELK				Sg	**Sg**	**21 50 12.4**	**-0.5**
WVOR	**Wild Horse Val**	**1.64**	**319**		**Pb**	**21 49 53.8**	**-0.7**
WVOR				IAML		21 50 26.0	
	32nm,1.0s						
PAHR	**Pah Rah Range**	**2.24**	**229**		**Pn**	**21 50 01.4**	**-0.3**
PAHR				IAML		21 50 48.2	
	comp=E,19nm,1.5s						
KVN	**Kaiserville**	**2.25**	**198**		**Pn**	**21 50 02.9**	**+1.0**
KVN				IAML		21 50 48.7	
	comp=E,19nm,0.9s						
J08A	**Circle Bar Ran**	**2.36**	**337**		**Pn**	**21 50 04.5**	**+1.1**
MFID	**Camas Ranch**	**2.44**	**24**		**Pn**	**21 50 04.7**	**+0.3**
MFID				IAML		21 50 46.0	
	comp=E,27nm,1.0s						
MFID				IAML		21 50 54.4	
	comp=E,24nm,0.7s						
MOD	**Modoc Plateau**	**2.44**	**288**		**Pn**	**21 50 04.9**	**+0.4**
MOD				IAML		21 50 50.6	
	comp=E,24nm,0.8s						
MOD				IAML		21 50 57.0	
	comp=N,18nm,0.9s						
VCNR	**Virginia City**	**2.67**	**226**	Pn	**Pn**	**21 50 07.8**	**+0.1**
YERR	**Yerington**	**2.71**	**216**		**Pn**	**21 50 08.5**	**+0.2**
YERR				IAML		21 50 57.4	
	comp=E,17nm,0.6s						
YERR				IAML		21 50 59.1	
	comp=N,20nm,0.9s						
BEKR	**Beckworth**	**2.75**	**242**		**Pn**	**21 50 08.3**	**-0.5**
BEKR				IAML		21 51 00.2	
	comp=E,12nm,0.7s						
RYN	**Ryan**	**2.76**	**202**		**Pn**	**21 50 09.2**	**+0.3**
RYN				IAML		21 50 59.0	
	comp=E,15nm,0.8s						
RYN				IAML		21 51 01.8	
	comp=N,16nm,0.8s						
PNTR	**Pine Nut**	**2.80**	**222**		**Pn**	**21 50 08.8**	**-0.7**
PNTR				IAML		21 51 08.9	
	comp=N,17nm,0.8s						
NV11	**Mina Array Sit**	**2.86**	**195**		**Pn**	**21 50 11.2**	**+1.0**
NV11				Pg	**Pg**	**21 50 19.5**	**+1.5**
NVAR	**Mina Array Bea**	**2.89**	**198**	Pn	**Pn**	**21 50 11.4**	**+0.7**
	comp=N,0.4nm,0.3s,baz=13,slow=12,SNR=17						
NVAR				Lg	Lg	21 50 59.7	
	comp=N,2.0nm,0.3s,baz=13,slow=25,SNR=8.9						
R11A	**Troy Canyon, C**	**3.10**	**156**		**Pn**	**21 50 14.4**	**+0.8**
K05A	**Summer Lake**	**3.16**	**300**		**Pn**	**21 50 14.8**	**+0.4**
K05A				IAML		21 51 34.8	
	comp=N,12nm,3.4s						
K05A				IAML		21 52 08.8	
	comp=E,11nm,4.0s						
BGU	**Big Grassy Mou**	**3.16**	**94**		**Pn**	**21 50 13.8**	**-0.5**
WAKR	**Walker**	**3.19**	**213**		**Pn**	**21 50 14.5**	**-0.4**
WAKR				IAML		21 51 14.8	
	comp=E,7.9nm,1.0s						
I07A	**Izee**	**3.35**	**330**		**Pn**	**21 50 19.2**	**+2.2**
I07A				IAML		21 51 21.9	
	comp=N,11nm,0.8s						
I07A				IAML		21 51 40.4	
	comp=E,9.4nm,3.7s						
DUG	**Dugway, Tooele**	**3.48**	**105**		**Pn**	**21 50 20.1**	**+1.3**
DUG				IAML		21 51 21.9	
	comp=E,9.9nm,1.1s						
DUG				IAML		21 51 26.5	
	comp=E,8.6nm,0.9s						
SPUT	**South Promonto**	**3.58**	**87**	Pn	**Pn**	**21 50 20.4**	**+0.3**
BMO	**Blue Mountains**	**3.66**	**359**		**Pn**	**21 50 22.0**	**+0.8**
BMO				IAML		21 51 22.3	
	comp=E,6.1nm,1.4s						
BMO				IAML		21 51 29.6	
	comp=E,4.6nm,1.4s						
PSUT	**Pine Spring**	**3.70**	**135**		**Pn**	**21 50 22.0**	**+0.2**
PINE	**Pine Mountain**	**3.80**	**314**		**Pn**	**21 50 23.6**	**+0.4**
YBH	**Yreka Blue Hor**	**4.18**	**279**	Pn	**Pn**	**21 50 28.9**	**+0.5**
	comp=E,0.2nm,0.3s,baz=96,slow=10,SNR=2.3						
HWUT	**Hardware Ranch**	**4.25**	**83**	IAML		21 51 49.4	
	comp=E,5.0nm,1.9s						
HWUT				IAML		21 51 50.9	
	comp=E,5.4nm,0.9s						
MCMT	**McKenzie Canyo**	**4.83**	**40**		**Pn**	**21 50 37.4**	**0.0**
PDAR	**Pinedale Array**	**5.90**	**72**	Pn	**Pn**	**21 50 54.1**	**+1.9**
	comp=E,0.1nm,0.3s,baz=260,slow=10.0,SNR=2.3						
DLBC	**Dease Lake**	**19.08**	**339**	P	**P**	**21 53 45.9**	**-1.3**
	comp=E,0.3nm,0.3s,baz=140,slow=16,SNR=3.1						
YKA	**Yellowknife Ar**	**21.39**	**3**	P	**P**	**21 54 10.8**	**-1.3**
	comp=E,0.3nm,0.7s,baz=181,slow=10,SNR=6.7						

IDC 19 21:53:24.0±2.7, 31°59'N×77°52'E, h0km, mb3.7/7, mb1 3.6/10, mb1mx3.4/53, mbtmp3.5/10, ML2.9/3, MS3.0/1, Ms1 3.0/1, ms1mx2.3/38, Error ellipse: s-maj=61.9km s-min=30.0km az=120.0
NDI 19 21:53:32.2±1.9, 31°92'N×77°13'E, h14km±5km, ML4.0
ISC 19 21:53:33.5±1.0, 31°89'N±0°.06×77°08'E±0°.07, h50km±12km, n22, σ2s49/26, mb3.6/7, Northern India

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BHK	**Bhakra**	**0.73**	**231**	*eP*	**Pn**	**21 53 47.0**	**-0.7**
BHK				*eS*	**Sn**	**21 53 59.6**	**+1.5**
DHRM	**DHARAMSHALA**	**0.76**	**299**	*eP*	**Pn**	**21 53 47.9**	**-0.3**
DHRM				*eS*	**Sn**	**21 53 58.7**	**-0.2**
DHRM				IAML		21 54 01.1	
	comp=E,4μm,0.2s						
SMLA	**Simla**	**0.76**	**174**	*eP*	**Pn**	**21 53 47.4**	**-0.7**
SMLA				*eS*	**Sn**	**21 53 58.2**	**-0.4**
SMLA				IAML		21 53 59.1	
	comp=E,7μm,0.2s						
SMLA				IAML		21 53 59.2	
	comp=N,5μm,0.1s						
THN	**Thein Dam**	**1.28**	**296**	*eP*	**Pn**	**21 53 55.6**	**+0.6**
THN				*eS*	**Sn**	**21 54 14.0**	**+3.0**
DDI	**Dehra Dun**	**1.77**	**152**	*eP*	**Pn**	**21 54 03.6**	**+1.9**
DDI				*eS*	**Sn**	**21 54 26.3**	**+3.2**
DDI				IAML		21 54 32.0	
	comp=E,2μm,0.4s						
NDI	**New Delhi**	**3.20**	**178**	*eP*	Pn	21 54 27.0	+5.8
NDI				*eS*	**Sn**	**21 55 03.0**	**+4.9**
CHCP	**Chirah Chowk**	**3.67**	**300**	P	**Pn**	**21 54 29.8**	**+2.1**
CHCP				S	Sn	21 55 26.0	+16
THW	**Thamme Wali**	**4.61**	**283**	P	**Pn**	**21 54 41.3**	**+0.7**
CEP	**Cherat**	**4.76**	**295**	P	**Pn**	**21 54 45.7**	**+2.9**
AJM	**Ajmer**	**5.79**	**202**	*ex*	Pn	21 55 04.0	+7.0
AJM				*i* S	**Sn**	**21 56 02.0**	**-0.1**
BHPL	**Bhopal**	**8.62**	**178**	*eS*	**Sn**	**21 57 05.7**	**-5.9**
AAK	**Ala-Archa**	**10.93**	**350**	Pn	**Pn**	**21 56 08.7**	**+1.5**
	comp=E,0.2nm,0.3s,baz=126,slow=8.7,SNR=2.1						
MKAR	**Makanchi Array**	**15.42**	**14**	Pn	**Pn**	**21 57 04.2**	**-3.4**
	comp=E,0.0nm,0.3s,baz=201,slow=7.6,SNR=2.3						
KURBB	**Kurchatov Arra**	**18.75**	**3**	P	**P**	**21 57 45.7**	**-2.4**
	comp=E,0.0nm,0.3s,baz=185,slow=10,SNR=2.3						
BVAR	**Borovoye Array**	**21.68**	**349**	P	**P**	**21 58 18.3**	**-1.4**
	comp=E,0.6nm,0.3s,baz=152,slow=11,SNR=8.8						
ZALV	**Zalesovo Beam**	**22.74**	**12**	P	**P**	**21 58 28.3**	**-2.8**
	comp=E,0.7nm,0.6s,baz=201,slow=5.9,SNR=4.0						
AKTO	**Aktyubinsk**	**23.32**	**328**	P	**P**	**21 58 37.6**	**+0.6**
	comp=E,0.8nm,0.5s,baz=144,slow=12,SNR=3.7						
ARU	**Arti**	**27.72**	**338**	LR	LR	22 11 42.3	
	comp=E,29nm,18.6s,baz=4.0,slow=39						
FINES	**FINESS Array B**	**44.09**	**328**	P	**P**	**22 01 38.0**	**+1.7**
	comp=E,0.6nm,0.4s,baz=117,slow=10,SNR=12						
ARCES	**ARCESS Array B**	**47.31**	**338**	P	**P**	**22 02 03.9**	**+2.3**
	comp=E,0.9nm,0.8s,baz=105,slow=8.9,SNR=6.6						
TORD	**Torodi Ar. Bea**	**70.86**	**274**	P	**P**	**22 04 44.6**	**-0.9**
	comp=E,0.4nm,0.5s,baz=48,slow=4.4,SNR=9.2						
YKA	**Yellowknife Ar**	**85.48**	**5**	P	**P**	**22 06 05.5**	**0.0**
	comp=E,0.3nm,0.6s,baz=345,slow=5.1,SNR=7.8						

GUC 19 21:55:40.7±0.6, 20°79'S×69°02'W, h98km±3km, ML3.9
IDC 19 21:55:42.4±1.3, 20°86'S×68°48'W, h108km±14km, mb3.5/3, mb1 3.5/6, mb1mx3.3/30, mbtmp3.8/6, MS3.1/1, Ms1 3.1/1, ms1mx2.4/20, Error ellipse: s-maj=39.1km s-min=14.0km az=107.0
ISC 19 21:55:40.8±0.8, 20°78'S±0°.04×69°01'W±0°.08, h99km±8km, n19, σ1s05/29, mb3.7/3, 6C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.52**	**239**	*iP*	**Pn**	**21 55 56.4**	**-0.3**
PB01				*eS*	**Sn**	**21 56 08.7**	**-0.1**
PB01				IAML		21 56 09.9	
	comp=E,6μm,0.2s						
PB08	**IPOC Station P**	**0.65**	**348**	↓*eP*	**Pn**	**21 55 58.6**	**+0.4**
PB08				*eS*	**Sn**	**21 56 11.8**	**+0.7**
PB08				IAML		21 56 12.6	
	comp=E,4μm,0.2s						
PB02	**IPOC Station P**	**0.99**	**237**	↑*iP*	**Pn**	**21 56 01.1**	**0.0**
PB02				*eS*	**Sn**	**21 56 16.9**	**+0.4**
PB02				IAML		21 56 19.0	
	comp=E,5μm,0.4s						
PB09	**IPOC Station P**	**1.04**	**192**	↑*iP*	**Pn**	**21 56 02.0**	**+0.2**
PB09				*eS*	**Sn**	**21 56 17.9**	**+0.4**
PB09				IAML		21 56 20.5	
	comp=N,3μm,0.5s						
GO01	**Chusmiza**	**1.11**	**351**	↓*eP*	**Pn**	**21 56 03.5**	**+0.6**
GO01				*eS*	**Sn**	**21 56 21.2**	**+1.6**
TA01	**Diego Aracena**	**1.11**	**281**	↓*eP*	**Pn**	**21 56 02.3**	**-0.1**
TA01				*eS*	**Sn**	**21 56 19.1**	**+0.3**
TA01				IAML		21 56 23.9	
	comp=N,2μm,0.8s						
TA02	**Huaiquique**	**1.16**	**295**	↑*iP*	**Pn**	**21 56 03.5**	**+0.5**
TA02				*eS*	**Sn**	**21 56 20.1**	**+0.4**
TA02				IAML		21 56 25.1	
	comp=N,7μm,0.1s						
PB11	**IPOC Station P**	**1.18**	**329**	↓*eP*	**Pn**	**21 56 03.7**	**+0.3**
PB11				*eS*	**Sn**	**21 56 21.3**	**+0.9**
PB07	**IPOC Station P**	**1.25**	**221**	↑*iP*	**Pn**	**21 56 04.2**	**0.0**
PB07				*eS*	**Sn**	**21 56 22.2**	**+0.3**
PB07				IAML		21 56 23.8	
	comp=E,5μm,0.2s						
PSGC	**Pisagua**	**1.57**	**318**	↑*iP*	**Pn**	**21 56 08.4**	**+0.4**
PSGC				*eS*	**Sn**	**21 56 29.1**	**+0.5**
LVC	**Limon Verde**	**1.83**	**177**	P	**Pn**	**21 56 12.3**	**+0.8**
	comp=E,109nm,0.3s,baz=36,slow=14,SNR=377						
LVC				S	**Sn**	**21 56 36.6**	**+1.7**
	comp=E,115nm,0.3s,baz=263,slow=19,SNR=5.2						
LPAZ	**La Paz**	**4.54**	**11**	P	**Pn**	**21 56 50.4**	**+2.5**
	comp=E,1.5nm,0.3s,baz=180,slow=7.0,SNR=30						
SIV	**San Ignacio**	**8.91**	**59**	P	**Pn**	**21 57 43.9**	**-2.9**
	comp=E,0.9nm,0.3s,baz=251,slow=13,SNR=12						
PLCA	**Paso Flores**	**19.94**	**183**	P	**P**	**22 00 05.4**	**+0.5**
	comp=E,0.1nm,0.3s,baz=4.7,slow=6.8,SNR=5.9						
PTGA	**Pitinga**	**21.80**	**25**	P	**P**	**22 00 23.7**	**-1.1**
	comp=E,1.3nm,0.3s,baz=302,slow=22,SNR=6.3						
MDP	**Montagnes des**	**30.33**	**34**	LR	LR	22 14 37.9	
	comp=E,32nm,18.7s,baz=252,slow=38						
TORD	**Torodi Ar. Bea**	**77.20**	**71**	P	**P**	**22 07 23.1**	**-1.3**
	comp=E,1.1nm,0.6s,baz=251,slow=5.4,SNR=11						
YKA	**Yellowknife Ar**	**90.48**	**341**	P	**P**	**22 08 31.2**	**+0.3**
	comp=E,0.1nm,0.2s,baz=137,slow=5.6,SNR=1.6						
MKAR	**Makanchi Array**	**145.10**	**35**	PKP	**PKPdf**	**22 15 06.8**	**+0.2**
	comp=E,0.9nm,0.7s,baz=305,slow=5.1,SNR=9.9						

NNC 19 21:58:47.4±7.5, 48°66'N×85°29'E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=61.2km s-min=30.4km az=82.0
SOME 19 21:58:48.9, 48°57'N×84°62'E, h0km
ISC 19 21:58:46.1±2.9, 48°73'N±0°.08×85°6E±0°.2, h10km, n6, σ1s35/11, 4C-3D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZSN	**Zaisan**	**1.36**	**200**	↓*eP*	**Pn**	**21 59 11.5**	**+0.3**
	17nm,0.2s						
ZSN				*eS*	**Sn**	**21 59 27.2**	**-2.1**
	37nm,0.1s						
MK31	**Makanchi Array**	**2.93**	**230**	P	**Pn**	**21 59 34.4**	**+1.6**
	0.8nm,0.2s,baz=61,slow=19,SNR=84						
MK31				S	**Sn**	**22 00 07.2**	**-0.8**
	6.4nm,0.4s,baz=54,slow=30,SNR=15						
MAKZ	**Makanchi**	**3.08**	**233**	↑P	**Pn**	**21 59 36.5**	**+1.6**
	2.3nm,0.3s						
MAKZ				↓S	**Sn**	**22 00 11.6**	**-0.2**
	6.5nm,0.3s						
SEM	**Semipalatinsk**	**3.83**	**298**	*eP*	**Pb**	**21 59 53.5**	**-0.5**
	1.9nm,0.2s						
SEM				*eS*	**Sb**	**22 00 39.7**	**-0.8**
	18nm,0.3s						
KURK	**Kurchatov**	**4.91**	**296**	↑Pn	**Pn**	**22 00 00.7**	**+0.7**
	4.9nm,1.1s						
KURK				↓Pg	**Pb**	**22 00 13.0**	**+0.8**
	1.7nm,0.6s						
KURBB	**Kurchatov Arra**	**4.93**	**295**	↑Sn	**Sn**	**22 00 55.8**	**-1.5**
	1.3nm,0.3s						
KURBB				↑Lg	Lg	22 01 17.7	
	30nm,0.7s						

IDC 19 22:47:11.9±0.4, 56°98'S×25°15'W, h0km, mb5.0/25, mb1 4.9/26, mb1mx4.8/34, mbtmp5.0/26, ML4.6/1, MS5.2/22, Ms1 5.2/22, ms1mx5.1/24, Error ellipse: s-maj=16.7km s-min=11.3km az=39.0
NEIC 19 22:47:13.0±1.8, 57°03'S±0°.10×25°2'W±0°.2, h10km±1km, mb5.4/54, Ms_20 5.3/641, Mww5.7, Mwc5.7(GCMT), Error ellipse: s-maj=17.2km s-min=13.1km az=208.0
MOS 19 22:47:16.1±1.3, 57°30'S×25°78'W, h33km, mb5.2/7, MS5.2/11, Error ellipse: s-maj=28.4km s-min=11.8km az=112.4
GCMT 19 22:47:19.0±0.1, 57°04'S±0°.01×24°73'W±0°.01, h14km, MW5.7/160, Moment Tensor Solution. s154,c299; s160,c344; Duration: 1s7 Moment tensor: Scale 10^17 Nm; Mrr3.39±.04; Mθθ 0.05±.03; Mφφ -3.44±.03; Mrθ -0.73±.08; Mθφ 1.11±.03; Mφr 2.13±.09; Best double couple: Mo 4.22700×10^17 NP1: ϕs166.00000°, δ29.00000°, λ93.00000°. NP2: ϕs342.00000°, δ61.00000°, λ88.00000°. Principal axes: T 4.0420, Plg74.0000°, Azm248.0000°; N 0.3670, Plg1.0000°, Azm343.0000°; P -4.4130, Plg16.0000°, Azm73.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
BJI 19 22:47:21.0±0.0, 57°10'S×25°30'W, h60km, mB5.4/35, Ms5.5/50, Ms7 5.3/50

NEIC 19 22:47:21, 57°08'S×24°75'W, h16km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr 3.90; Mθθ -0.09; Mφφ -3.81; Mrθ -0.15; Mθφ 1.27; Mφr 2.29; Fault plane solution: Mo 4.66000×10^17 NP1: ϕs350.00000°, δ60.00000°, λ97.00000°. NP2: ϕs155.00000°, δ31.00000°, λ78.00000°. Principal axes: T 4.5366, Plg74.0000°, Azm279.0000°; N 0.2439, Plg6.0000°, Azm166.0000°; P -4.7806, Plg15.0000°, Azm74.0000°;
NEIC 19 22:47:22, 56°78'S×25°20'W, h26km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr 3.35; Mθθ -0.11; Mφφ -3.24; Mrr 1.24; Mθφ 1.72; Mφr 1.79; Fault plane solution: Mo 4.31000×10^17 NP1: ϕs 1.00000°, δ59.00000°, λ120.00000°. NP2: ϕs133.00000°, δ42.00000°, λ50.00000°. Principal axes: T 4.4185, Plg63.0000°, Azm321.0000°; N -0.2281, Plg25.0000°, Azm164.0000°; P -4.1903, Plg9.0000°, Azm70.0000°;
ISC 19 22:47:14.6±0.5, 57°11'S±0°.05×25°36'W±0°.05, h15km±2km, n636, σ1s94/329, mb5.2/52, MS5.3/368, 7C-2D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**6.90**	**290**	P	**Pn**	**22 48 59.3**	**+4.3**
HOPE						22 50 12.1	
HOPE	**Hope Point**	**6.90**	**290**		**Pn**	**22 48 59.3**	**+4.3**
HOPE				Sn	**Sn**	**22 50 12.1**	**-1.0**
VNA1	**Neumayer--Stat**	**15.43**	**158**	P	**Pn**	**22 50 52.3**	**+1.1**
VNA3	**Neumayer Olymp**	**15.65**	**161**	P	**Pn**	**22 50 53.7**	**-0.5**
VNA2	**Neumayer--Watz**	**15.82**	**158**	P	**Pn**	**22 50 56.6**	**+0.2**
	baz=329,slow=16						
SNAA	**Sanae**	**17.36**	**156**	P	**Pn**	**22 51 16.6**	**+0.8**
SNAA	**Sanae**	**17.36**	**156**	P	**Pn**	**22 51 16.5**	**+0.6**
	2.1nm,0.3s,baz=323,slow=15,SNR=64						
SNAA				LR	LR	22 57 14.2	
	comp=Z,7μm,18.5s,baz=318,slow=34						
SNAA				ScP	**ScP**	**22 59 30.5**	**-0.5**
	0.0nm,0.3s,baz=219,slow=5.1,SNR=3.4						
SNAA	**Sanae**	**17.36**	**156**	*c iP*	**Pn**	**22 51 16.6**	**+0.8**
SNAA	**Sanae**	**17.36**	**156**	P	**Pn**	**22 51 16.8**	**+0.9**
EFI	**East Falkland**	**19.67**	**272**	*i* P	**Pn**	**22 51 43.9**	**-0.3**
EFI				pmax	pmax		
	comp=Z,102nm,1.2s						
EFI	**East Falkland**	**19.67**	**272**	P	**Pn**	**22 51 43.8**	**-0.3**
EFI				IAmb	IAmb	22 52 06.0	
	comp=Z,240nm,1.4s						
PMSA	**Palmer Station**	**20.00**	**232**	P	**Pn**	**22 51 48.2**	**+0.4**
	comp=Z,78nm,0.8s,baz=71,slow=8.1,SNR=9.5						
PMSA				LR	LR	22 58 53.1	
	comp=Z,13μm,18.6s,baz=78,slow=35						
PMSA	**Palmer Station**	**20.00**	**232**	P	**Pn**	**22 51 48.0**	**+0.2**
PMSA				IAmb	IAmb	22 51 54.3	
	comp=Z,116nm,0.9s						
PMSA	**Palmer Station**	**20.00**	**232**	IAMs_20	IAMs_20	22 58 32.5	
	comp=Z,13μm,19.0s						
PMSA	**Palmer Station**	**20.00**	**232**	*e*P	**Pn**	**22 51 50.4**	**+2.6**
PMSA				*ep*P	**pwP**	**22 51 53.7**	**-0.6**
NVL	**N'lazarevskaya**	**20.81**	**146**	*e*P	**P**	**22 51 55.3**	**+0.4**
NVL				*e*S	**S**	**22 55 46.6**	**+0.4**
NVL				pmax	pmax		
	comp=Z,50nm,1.0s						
NVL				MLR	MLR		
	comp=Z,7μm,16.0s						
H09W1	**TRISTAN DA CUN**	**21.83**	**29**	T	T	23 14 16.3	
	SNR=12						
MG01	**Puerto William**	**23.45**	**257**	P	**P**	**22 52 22.6**	**-0.3**
MG01				IAmb	IAmb	22 53 16.4	
	comp=Z,98nm,0.8s						
MG01				IAMs_20	IAMs_20	22 58 55.5	
	comp=Z,12μm,22.0s						
USHA	**Ushuaia**	**23.92**	**257**	P	**P**	**22 52 28.9**	**+1.5**
	comp=Z,41nm,0.8s,baz=358,slow=2.6,SNR=14						
USHA				LR	LR	22 59 57.2	
	comp=Z,9μm,18.7s,baz=96,slow=32						
GO10	**Punta Arenas**	**26.03**	**259**	P	**P**	**22 52 45.2**	**-1.6**
GO10				IAmb	IAmb	22 53 13.4	
	comp=Z,71nm,0.8s						
GO10				IAMs_20	IAMs_20	23 01 15.6	
	comp=Z,8μm,18.0s						
GO09	**Cerro Castillo**	**27.64**	**262**	P	**P**	**22 53 00.3**	**-0.9**
GO09				IAmb	IAmb	22 53 34.2	
	comp=Z,75nm,1.1s						
SYO	**Syowa Base**	**30.11**	**139**	↑*iP*	**P**	**22 53 21.4**	**-1.6**
SYO	**Syowa Base**	**30.11**	**139**	↓*iS*P	**P**	**22 53 25.3**	**+2.3**
SYO	**Syowa Base**	**30.11**	**139**	↓*e*PP	PP	22 54 25.4	-5.4
LPA	**La Plata**	**31.21**	**301**	*e*P	P	22 53 25.1	-7.9
LPA				PP	**PnPn**	**22 54 33.5**	**-1.3**
LPA				PCP	**PcP**	**22 56 30.7**	**+3.4**
LPA				S	**S**	**22 58 36.4**	**-2.0**
LPA				PSP	PSP	22 58 51.0	
LPA				SS	**SnSn**	**23 00 19.6**	**-1.1**
LPA				SSS	SSS	23 00 37.1	
LPA				PKIKP	**PKiKP**	**23 03 50.9**	**-6.0**
LPA				SCS	**ScS**	**23 04 14.1**	**+7.5**
LPA				SKIKS		23 10 49.3	
PLTB	**Pedras Altas**	**31.96**	**310**	*e*P	**P**	**22 53 40.2**	**+0.6**
PLTB				*ep*P	**pP**	**22 53 42.7**	**-0.6**
QSPA	**South Pole Qui**	**33.13**	**180**	P	**P**	**22 53 49.9**	**0.0**
QSPA				IAmb	IAmb	22 54 11.0	
	comp=Z,39nm,0.8s						
QSPA	**South Pole Qui**	**33.13**	**180**	IAMs_20	IAMs_20	23 06 49.6	
	comp=Z,5μm,20.0s						
PLCA	**Paso Flores**	**33.18**	**280**	P	**P**	**22 53 49.8**	**-0.6**
	comp=Z,4.6nm,0.9s,baz=123,slow=6.6,SNR=7.6						
PLCA				ScP	**ScP**	**23 00 16.2**	**0.0**
	comp=Z,3.5nm,0.9s,baz=98,slow=1.9,SNR=5.4						
PLCA				LR	LR	23 07 54.4	

PEL	Peldehue	38.94	288	P	P	22 54 38.5	-1.1			
PEL				pmax	pmax					
	comp=Z,31nm,0.8s									
PEL	Peldehue	38.94	288	P	P	22 54 38.5	-1.1			
MT02	Curacav	39.08	288	P	P	22 54 39.3	-1.5			
MT02				IAmb	IAmb	22 55 07.1				
	comp=Z,144nm,1.8s									
VA03	San Esteban	39.17	289	P	P	22 54 39.4	-2.2			
VA03				IAMs_20	IAMs_20	23 13 27.1				
	comp=Z,5μm,18.0s									
ROC1	El Roble	39.24	288	P	P	22 54 41.6	-0.8			
TRCB	Terra Rica	39.62	318	eP	P	22 54 46.0	+0.7			
TRCB				epP	pP	22 54 49.0	0.0			
TRCB				eS	S	23 00 46.5	-1.2			
BSFB	Barra de Sao F	39.93	337	eP	P	22 54 48.1	+0.2			
BSFB				eS	S	23 00 51.1	-1.2			
SJMB	Sao Joao De Ma	40.13	336	eP	P	22 54 49.7	+0.1			
PCMB	Pacaembu	40.23	321	eP	P	22 54 49.9	-0.5			
CO02	Combarbal	40.63	290	IAMs_20	IAMs_20	23 14 24.9				
	comp=Z,5μm,18.0s									
AC05	El Transito	42.18	293	P	P	22 55 05.4	-1.1			
AC05				IAmb	IAmb	22 55 14.5				
	comp=Z,160nm,1.8s									
AC05				IAMs_20	IAMs_20	23 15 30.6				
	comp=Z,4μm,18.0s									
IPMB	Ipameri, GO	42.64	327	eP	P	22 55 10.8	+0.6			
IPMB				eS	S	23 01 35.1	+2.5			
MC01	Montes Claros	42.69	333	eP	P	22 55 11.4	+0.7			
MC01				epP	pP	22 55 14.8	+0.5			
AC02	Maricunga	43.26	296	P	P	22 55 14.6	-1.1			
C2SB	Chapadao do Su	43.40	320	eP	P	22 55 18.0	+1.7			
SHEL	Horse Pasture	43.67	28	IAMs_20	IAMs_20	23 09 04.4				
	comp=Z,3μm,18.0s									
JANB	Januaria	44.37	333	eP	P	22 55 25.0	+0.7			
JANB				epP	pP	22 55 28.3	+0.5			
BDFB	Brasilia	44.80	328	P	P	22 55 27.6	-0.1			
	comp=Z,9.0nm,0.7s,baz=123,slow=3.7,SNR=12									
BDFB				LR	LR	23 13 51.0				
	comp=Z,4μm,18.1s,baz=157,slow=36									
BDFB	Brasilia	44.80	328	P	P	22 55 27.7	0.0			
BDFB				IAmb	IAmb	22 55 31.0				
	comp=Z,131nm,1.9s									
BDFB				IAMs_20	IAMs_20	23 16 04.3				
	comp=Z,4μm,18.0s									
GO02	Mina Guanaco	44.88	296	IAmb	IAmb	22 55 30.7				
	comp=Z,29nm,0.6s									
GO02				IAMs_20	IAMs_20	23 15 52.0				
	comp=Z,3μm,20.0s									
BOSA	Boshof	45.28	73	P	P	22 55 30.4	-1.1			
	comp=Z,4.6nm,0.9s,baz=215,slow=7.6,SNR=8.0									
BOSA				LR	LR	23 11 25.5				
	comp=Z,5μm,19.0s,baz=218,slow=32									
BOSA	Boshof	45.28	73	P	P	22 55 29.8	-1.7			
BOSA				pmax	pmax					
	comp=Z,31nm,1.3s									
BOSA	Boshof	45.28	73	P	P	22 55 29.8	-1.7			
VNDA	Vanda	45.55	182	P	P	22 55 34.1	+1.2			
	comp=Z,4.8nm,0.6s,baz=187,slow=6.5,SNR=60									
VNDA				LR	LR	23 13 44.6				
	comp=Z,1μm,20.1s,baz=169,slow=35									
VNDA	Vanda	45.55	182	P	P	22 55 33.4	+0.5			
VNDA				pmax	pmax					
	comp=Z,15nm,1.0s									
VNDA	Vanda	45.55	182	P	P	22 55 33.4	+0.5			
PB14	IPOC Station P	45.73	296	P	P	22 55 34.1	-1.2			
PB14				IAmb	IAmb	22 56 24.5				
	comp=Z,86nm,1.9s									
ARAG	Araguaiana, MT	45.90	323	eP	P	22 55 37.3	+1.0			
PB15	IPOC Station P	46.47	298	P	P	22 55 39.6	-1.4			
PB15				IAmb	IAmb	22 55 50.0				
	comp=Z,25nm,0.5s									
LVC	Limon Verde	46.71	299	P	P	22 55 42.5	-0.5			
	comp=Z,25nm,0.5s,baz=154,slow=2.7,SNR=24									
LVC	Limon Verde	46.71	299	P	P	22 55 40.8	-2.3			
LVC				pmax	pmax					
	comp=Z,52nm,0.9s									
LVC	Limon Verde	46.71	299	P	P	22 55 40.8	-2.3			
LVC	Limon Verde	46.71	299	eP	P	22 55 43.6	+0.5			
LVC				epP	pP	22 55 46.7	0.0			
PB06	IPOC Station P	46.94	298	IAmb	IAmb	22 55 55.2				
	comp=Z,23nm,0.8s									
SALV	Santo Antonio	47.06	318	eP	P	22 55 45.9	+0.5			
PB07	IPOC Station P	47.93	299	IAmb	IAmb	22 56 00.3				
	comp=Z,40nm,0.9s									
PB01	IPOC Station P	48.32	299	IAMs_20	IAMs_20	23 17 37.2				
	comp=Z,3μm,19.0s									
H10S2	ASCENSION HYDR	48.76	14	T	T	23 49 11.3				
	baz=32,slow=74,SNR=15									
H10S3	ASCENSION HYDR	48.76	14	T	T	23 49 09.1				
	baz=188,slow=74,SNR=28									
PTLB	Pontes e Lacer	48.77	315	eP	P	22 55 58.4	-0.2			
PTLB				eS	S	23 02 58.8	-2.0			
PATCX	Punta Patache	48.83	299	IAmb	IAmb	22 56 50.3				
	comp=Z,32nm,0.9s									
SIV	San Ignacio	49.04	312	P	P	22 56 00.2	-0.6			
	comp=Z,15nm,0.7s,baz=156,slow=7.9,SNR=55									
SIV				ScP	ScP	23 01 18.8	+0.1			
	comp=Z,1.0nm,0.6s,baz=120,slow=3.9,SNR=3.4									
TA01	Diego Aracena	49.06	299	IAmb	IAmb	22 56 41.8				
	comp=Z,35nm,0.9s									
TSUM	Tsumeb	49.35	58	P	P	22 56 00.9	-2.4			
TSUM				IAmb	IAmb	22 56 27.3				
	comp=Z,30nm,1.2s									
H10N1	ASCENSION HYDR	49.88	14	T	T	23 50 28.5				
	baz=189,slow=76,SNR=5.4									
H10N3	ASCENSION HYDR	49.88	14	T	T	23 50 22.0				
	baz=189,slow=76,SNR=38									
H10N2	ASCENSION HYDR	49.89	14	T	T	23 50 22.7				
	baz=189,slow=76,SNR=17									
PB16	IPOC Station P	50.66	301	IAmb	IAmb	22 56 52.1				
	comp=Z,36nm,0.5s									
PB12	IPOC Station P	50.81	300	IAmb	IAmb	22 56 25.6				
	comp=Z,34nm,0.6s									
VILB	Vilhena	51.45	315	eP	P	22 56 19.1	0.0			
CLDB	Colider	51.75	321	eP	P	22 56 20.1	-1.2			
LPAZ	La Paz	51.82	304	P	P	22 56 22.9	+0.5			
	comp=Z,121nm,0.6s,baz=169,slow=6.3,SNR=244									
LPAZ				LR	LR	23 22 20.7				
	comp=Z,930nm,18.1s,baz=183,slow=41									
LPAZ	La Paz	51.82	304	P	P	22 56 23.0	+0.5			
LPAZ	La Paz	51.82	304	eP	P	22 56 23.1	+0.5			
LPAZ				epP	pP	22 56 25.9	-0.2			
LPAZ				eS	S	23 03 43.9	-0.6			
RCBR	Riachuelo	51.82	347	IAMs_20	IAMs_20	23 17 27.5				
	comp=Z,2μm,18.0s									
CASY	Casey	52.56	159	P	P	22 56 26.3	-0.3			
PRPB	Parauapebas	54.32	330	eP	P	22 56 41.3	+1.1			
NPGB	Novo Progresso	55.18	323	eP	P	22 56 46.4	0.0			
NPGB				epP	pP	22 56 50.7	+0.6			
ROSB	Rosrio	56.09	337	eP	P	22 56 53.9	+1.0			
ROSB				epP	pP	22 56 56.8	+0.2			
SAML	Samuel	56.27	313	P	P	22 56 53.9	-0.4			
SAML				pmax	pmax					
	comp=Z,35nm,0.8s									
SAML				MLR	MLR					
	comp=Z,2μm,20.0s									
SAML	Samuel	56.27	313	P	P	22 56 53.9	-0.4			
SAML				IAmb	IAmb	22 56 58.6				
	comp=Z,35nm,0.8s									
SAML	Samuel	56.27	313	IAMs_20	IAMs_20	23 20 39.1				
	comp=Z,2μm,20.0s									
LSZ	Lusaka	57.84	66	P	P	22 57 03.0	-2.5			
LSZ				pmax	pmax					
	comp=Z,22nm,1.2s									
LSZ				MLR	MLR					
	comp=Z,2μm,18.0s									
LSZ	Lusaka	57.84	66	P	P	22 57 03.0	-2.5			
LSZ	Lusaka	57.84	66	IAMs_20	IAMs_20	23 19 46.1				
	comp=Z,2μm,18.0s									
NNA	Nana	59.65	297	P	P	22 57 18.6	+0.6			
	comp=Z,5.5nm,0.5s,baz=159,slow=7.7,SNR=3.7									
NNA	Nana	59.65	297	IAMs_20	IAMs_20	23 25 40.2				
	comp=Z,2μm,18.0s									
MALB	Monte Alegre	59.72	326	eP	P	22 57 19.1	+0.7			
MALB				epP	pP	22 57 23.0	+0.9			
MACA	Manacapuru-AM	60.64	319	eP	P	22 57 23.6	-1.1			
MACA				epP	pP	22 57 29.5	+1.1			
PTGA	Pitinga	62.64	320	P	P	22 57 38.0	-0.2			
	comp=Z,8.0nm,0.7s,baz=162,slow=4.7,SNR=12									
PTGA	Pitinga	62.64	320	P	P	22 57 37.3	-0.9			
PTGA				IAMs_20	IAMs_20	23 24 11.5				
	comp=Z,2μm,19.0s									
PTGA	Pitinga	62.64	320	eP	P	22 57 39.0	+0.8			
ATAH	Atahualpa	64.60	299	P	P	22 57 52.9	+1.2			
	comp=Z,24nm,0.9s,baz=241,slow=2.3,SNR=7.9									
OPO	Ambohidratompo	65.13	86	LR	LR	23 19 42.3				
	comp=Z,2μm,22.0s,baz=332,slow=30									
LIC	Lamto	65.27	22	eP	P	22 57 55.5	0.0			
	comp=Z,7.6nm,0.4s									
KIC	Kosan Boka	65.46	23	eP	P	22 57 54.3	-2.4			
	comp=Z,14nm,1.0s									
TIC	Toumodi	65.68	22	eP	P	22 57 56.4	-1.7			
DBIC	Dimbokro	65.74	22	P	P	22 57 56.9	-1.6			
	comp=Z,6.4nm,0.9s,baz=157,slow=12,SNR=5.7									
DBIC				LR	LR	23 20 48.7				
	comp=Z,2μm,18.5s,baz=183,slow=31									
DBIC	Dimbokro	65.74	22	IAmb	IAmb	22 58 21.3				
	comp=Z,23nm,1.3s									
MDP	Montagnes des	65.86	330	P	P	22 57 58.8	-0.5			
	comp=Z,23nm,0.9s,baz=157,slow=5.7,SNR=7.4									
PTLC	Puerto Leguiza	69.38	306	eP	P	22 58 16.4	-5.2			
PUAC	Puerto Asis, P	70.50	304	eP	P	22 58 28.1	-0.4			
MACC	Macarena, Meta	70.72	308	eP	P	22 58 28.9	-0.9			
PAC1	Pacto, Paraso	71.27	302	eP	P	22 58 32.8	-0.5			
GCUF	Volcan Galeras	71.45	304	eP	P	22 58 38.2	+3.4			
GARC	Garzon, Huila	71.48	306	eP	P	22 58 33.6	-1.1			
MBAR	Mbarara	71.76	61	iP	P	22 58 38.2	+1.9			
MBAR				pmax	pmax					
	comp=Z,10.0nm,1.3s									
MBAR	Mbarara	71.76	61	IAMs_20	IAMs_20	23 27 42.1				
	comp=Z,1μm,20.0s									
PTGC	Puerto Gaitan,	71.84	310	eP	P	22 58 34.9	-1.6			
BETC	Betania	71.90	306	eP	P	22 58 36.1	-0.9			
SOTA	Rioblanco	71.93	305	eP	P	22 58 37.9	+0.3			
PCON	Cinco Dias	72.00	305	eP	P	22 58 38.2	0.0			
BBAC	Balboa, Cauca	72.11	304	eP	P	22 58 37.3	-1.2			
POPC	Popayan, Colom	72.32	305	eP	P	22 58 39.0	-0.7			
PRAC	Prado	72.58	307	eP	P	22 58 40.5	-0.5			
CHIC	Chimaraza	72.90	309	eP	P	22 58 41.5	-1.8			
ORTC	Ortega, Tolima	72.91	307	eP	P	22 58 41.9	-1.1			
ROSC	El Rosal	73.34	308	P	P	22 58 46.5	+0.6			
	comp=Z,6.9nm,0.4s,baz=273,slow=0.9,SNR=10									
ROSC				LR	LR	23 33 53.3				
	comp=Z,1μm,18.7s,baz=178,slow=38									
ROSC	El Rosal	73.34	308	eP	P	22 58 44.5	-1.4			
YOTC	Yotoco, Valle	73.45	306	eP	P	22 58 44.6	-1.7			
TOC5	Torodi Ar. Sit	73.49	28	IAMs_20	IAMs_20	23 23 52.6				
	comp=Z,1μm,21.0s									
ANIL	Santa Ana	73.50	307	eP	P	22 58 44.3	-2.5			
TOA0	Torodi Ar. Sit	73.51	28	P	P	22 58 45.4	-0.9			
TOA0				IAmb	IAmb	22 58 57.5				
	comp=Z,24nm,1.1s									
TORD	Torodi Ar. Bea	73.51	28	P	P	22 58 45.2	-1.1			
	comp=Z,11nm,0.8s,baz=202,slow=6.0,SNR=48									
TORD				LR	LR	23 25 24.5				
	comp=Z,1μm,20.1s,baz=195,slow=31									
TOC1	Torodi Ar. Sit	73.53	28	IAMs_20	IAMs_20	23 23 53.9				
	comp=Z,2μm,21.0s									
RUSC	La Rusia	73.76	310	eP	P	22 58 46.7	-1.8			
RREF	El Recreo	73.84	307	eP	P	22 58 47.0	-2.1			
SPBC	San Pablo de B	73.96	309	eP	P	22 58 46.6	-2.7			
GUY2C	Guyana, Caldas	74.14	308	eP	P	22 58 49.3	-1.4			
NORC	Norcasia	74.22	308	eP	P	22 58 47.2	-3.5			
PCRV	Puerto La Cruz	74.42	320	P	P	22 58 52.4	+0.6			
	comp=Z,46nm,0.6s,baz=142,slow=1.3,SNR=14									
KMBO	Kilima Mbogo	74.50	67	LR	LR	23 30 03.6				
	comp=Z,1μm,18.4s,baz=228,slow=35									
KMBO	Kilima Mbogo	74.50	67	IAMs_20	IAMs_20	23 29 58.6				
	comp=Z,2μm,18.0s									
PTBC	PUERTO BERRIO,	74.92	309	eP	P	22 58 52.0	-2.8			
CBOC	Ciudad Bolivar	74.99	307	eP	P	22 58 52.5	-2.8			
HELC	Santa Helena	75.07	308	eP	P	22 58 53.6	-2.4			
BRRC	Barranca, Sant	75.12	310	eP	P	22 58 50.1	-5.8			
GRGR	Grenville	75.23	323	IAMs_20	IAMs_20	23 36 04.0				
	comp=Z,2μm,18.0s									
SDV	Santo Domingo	75.48	314	P	P	22 58 57.6	-0.5			
	comp=Z,20nm,0.8s,baz=180,slow=3.2,SNR=15									
SDV	Santo Domingo	75.48	314	eP	P	22 58 56.9	-1.2			
SDV	Santo Domingo	75.48	314	P	P	22 58 58.6	+0.5			
SDV				IAmb	IAmb	22 59 12.4				
	comp=Z,40nm,0.9s									
SDV	Santo Domingo	75.48	314	eP	P	22 58 59.0	+0.9			
SDV				eS	S	23 08 36.6	-1.3			
ZARC	Zaragoza, Cauc	75.95	309	eP	P	22 58 57.4	-3.2			
UREC	San Jos de Ur	76.47	308	eP	P	22 59 01.6	-2.0			
SMLC	San Martn de	76.80	310	eP	P	22 59 02.7	-2.7			
ARGC	Ariguani, Magd	77.82	311	eP	P	22 59 10.4	-0.7			
SJCC	San Jacinto, C	78.25	310	eP	P	22 59 12.1	-1.5			
LTZ	Lake Taylor	79.37	193	IAMs_20	IAMs_20	23 37 15.7				
	comp=Z,2μm,19.0s									
SNZO	South Karori	80.50	195	IAMs_20	IAMs_20	23 37 04.6				
	comp=Z,1μm,18.0s									
RKT	Rikitea	80.87	241	eS	S	23 09 24.5	-11			
	comp=Z,927nm,31.2s									
RKT	Rikitea	80.87	241	eLR	LR	23 24 47.4				
	comp=Z,2μm,31.5s									
SABA	Saba	80.88	324	IAMs_20	IAMs_20	23 39 21.8				
	comp=Z,1μm,20.0s									
MSEY	Mahe Island	81.12	85	IAMs_20	IAMs_20	23 28 45.2				
	comp=Z,2μm,20.0s									
SMRT	St. Maarten	81.23	324	IAMs_20	IAMs_20	23 39 53.1				
	comp=Z,1μm,19.0s									
SJG	San Juan	82.31	321	IAMs_20	IAMs_20	23 40 56.7				
	comp=Z,1μm,18.0s									
BKZ	Black Stump Fm	82.33	197	IAmb	IAmb	22 59 47.7				
	comp=Z,17nm,1.0s									
JTS	Las Juntas de	82.94	301	P	P	22 59 38.4	-0.3			
JTS				pmax	pmax					
	comp=Z,70nm,1.5s									
JTS	Las Juntas de	82.94	301	P	P	22 59 38.4	-0.3			
URZ	Urewera	83.11	198	IAMs_20	IAMs_20	23 35 17.9				
	comp=Z,1μm,19.0s									
MXZ	Matakaoa Point	83.59	199	IAMs_20	IAMs_20	23 37 29.6				
	comp=Z,1μm,18.0s									
TAM	Tamanrasset	83.73	28	P	P	22 59 41.5	-1.2			
TAM				IAmb	IAmb	22 59 56.0				
	comp=Z,18nm,1.3s									
TAM				PP	PP	23 02 51.8	-4.3			
FURI	Furi	83.84	63	IAMs_20	IAMs_20	23 34 23.4				
	comp=Z,1μm,20.0s									
ACON	Acoyapa	84.51	302	IAmb	IAmb	23 00 01.7				
	comp=Z,26nm,0.8s									
MATN	Matagalpa	85.70	302	IAmb	IAmb	23 00 09.2				
	comp=Z,40nm,1.1s									
MTDJ	Mount Denham	86.71	311	IAMs_20	IAMs_20	23 40 02.8				
	comp=Z,2μm,20.0s									
TBI	Tubuai	87.18	230	eS	S	23 10 26.6	-12			
	comp=Z,764nm,28.8s									
TBI	Tubuai	87.18	230	eLQ	LQ	23 24 05.4				
	comp=Z,983nm,28.5s									
TBI				eLR	LR	23 27 44.6				
	comp=Z,2μm,33.2s,baz=151									
CAN	Canberra	87.80	175	IAMs_20	IAMs_20	23 39 41.6				
	comp=Z,1μm,18.0s									
ATD	Ata Tunnel	88.16	66	IAMs_20	IAMs_20	23 39 05.8				
	comp=Z,1μm,18.0s									
APG	El Apazote	89.64	299	P	P	23 00 11.3	-0.5			
	comp=Z,9.1nm,0.8s,baz=225,slow=3.6,SNR=6.3									
APG				LR	LR	23 38 45.9				
	comp=Z,527nm,21.0s,baz=119,slow=34									
PMOZ	Porto Moniz, M	89.85	7	eS	S	23 11 14.6	+11			
PMOZ	Porto Moniz, M	89.85	7	eLR	LR	23 30 19.5				
	comp=Z,686nm,20.0s									
PMPST	Porto Santo, M	90.17	8	eS	S	23 11 08.4	+2.2			
STKA	Stephens Creek	90.67	169	P	P	23 00 17.1	+0.8			
	comp=Z,6.4nm,1.0s,baz=185,slow=4.2,SNR=7.2									
STKA				LR	LR	23 39 31.8				
	comp=Z,2μm,18.9s,baz=187,slow=35									
STKA	Stephens Creek	90.67	169	P	P	23 00 13.8	-2.5			
STKA				pmax	pmax					
	comp=Z,6.0nm,1.4s									
STKA				MLR	MLR					
	comp=Z,600nm,18.0s									
STKA	Stephens Creek	90.67	169	P	P	23 00 13.8	-2.5			
MDT	Midelt	91.28	17	P	P	23 00 19.3	+0.4			
	comp=Z,3.9nm,0.9s,baz=166,slow=4.1,SNR=6.8									
DAMY	Dhamar	91.53	65	IAMs_20	IAMs_20	23 47 44.1				
	comp=Z,1μm,19.0s									
PPT2	Papeete2	92.34	232	eSP	SP	23 12 39.4	+2.3			
	comp=Z,930nm,29.0s									
PPT2	Papeete2	92.34	232	eLR	LR	23 30 09.8				
	comp=Z,5μm,29.2s,baz=155									
PPT	Papeete	92.36	232	LR	LR	23 36 17.3				
	comp=Z,1μm,18.0s,baz=178,slow=32									
TEIG	Tepich	93.14	303	P	P	23 00 27.4	-0.2			
	comp=Z,24nm,0.8s,baz=101,slow=0.0,SNR=13									
PFVI	Vila Bisbo	94.92	13	eS	S	23 11 58.9	+10			
PFVI	Vila Bisbo	94.92	13	IAMs_20	IAMs_20	23 37 34.0				
	comp=Z,1μm,20.0s									
MORF	Marmelete	95.11	13	eS	S	23 11 52.6	+2.3			
BBSR	BB Station	95.14	327	IAMs_20	IAMs_20	23 43 27.2				
	comp=Z,1μm,19.0s									
PBDV	Barranco-do-Ve	95.14	14	eS	S	23 12 00.4	+10			
PVAQ	Vaqueiros	95.33	14	eS	S	23 12 00.2	+8.2			
PVAQ	Vaqueiros	95.33	14	eLR	LR	23 34 22.4				
	comp=Z,840nm,18.0s									
PVAQ	Vaqueiros	95.33	14	IAMs_20	IAMs_20	23 38 03.8				
	comp=Z,941nm,20.0s									
PNCL	Nicolau / Gran	95.92	13	eS	S	23 12 00.1	+3.0			
PESTR	Estremoz	96.79	14	eS	S	23 12 14.9	+10			
PMTG	Montargil	96.91	13	eS	S	23 12 11.5	+6.0			
KEST	Kesra	97.03	28	LR	LR	23 40 31.3				
	comp=Z,1μm,19.4s,baz=172,slow=33									
PMRV	Marv??o	97.37	14	eS	S	23 12 15.1	+5.6			
PMRV	Marv??o	97.37	14	eLR	LR	23 35 58.4				
	comp=Z,796nm,18.0s									
ASAR	Alice Springs	97.66	161	P	P	23 00 48.4	-0.1			
	comp=Z,4.5nm,1.0s,baz=191,slow=4.3,SNR=20									
ASAR				PP	PP	23 04 51.4	+6.1			
	comp=Z,1.2nm,0.7s,baz=186,slow=6.8,SNR=5.9									
ASAR				LR	LR	23 43 18.2				
	comp=Z,1μm,18.2s,baz=186,slow=34									
AS31	Alice Springs	97.66	161	P	P	23 00 46.6	-1.9			
PCAS	Casmilo, Conde	97.84	13	eS	S	23 12 18.8	+5.3			
PAB	San Pablo	97.91	16	IAMs_20	IAMs_20	23 42 42.1				
	comp=Z,1μm,19.0s									
COI	Coimbra	98.00	13	IAMs_20	IAMs_20	23 39 25.6				
	comp=Z,959nm,20.0s									
ESDC	Sonseca Array	98.10	17	LR	LR	23 42 03.3				
	comp=Z,653nm,18.7s,baz=205,slow=34									
MTE	Manteigas	98.30	14	eS	S	23 12 22.0	+4.4			
MTE	Manteigas	98.30	14	eLR	LR	23 37 56.6				
	comp=Z,1μm,18.0s									
MTE	Manteigas	98.30	14	IAMs_20	IAMs_20	23 40 17.5				
	comp=Z,1μm,20.0s									
WDD	Wied Dalam	98.53	32	IAMs_20	IAMs_20	23 46 53.9				
	comp=Z,780nm,18.0s									
MVO	Moncorvo	99.12	14	eS	SKSac	23 11 34.5	+3.0			
MVO	Moncorvo	99.12	14	eLR	LR	23 38 30.3				
	comp=Z,1μm,18.0s									
456A	Hilliard	99.67	313	IAMs_20	IAMs_20	23 44 06.0				
	comp=Z,1μm,22.0s									
RAYN	Ar Rayn	99.70	62	IAMs_20	IAMs_20	23 45 06.5				
	comp=Z,1μm,18.0s									
PGAV	Gavieira, Arco	99.75	13	eLR	LR	23 36 52.8				
	comp=Z,924nm,18.0s									
CORL	Corleone	100.11	30	IAMs_20	IAMs_20	23 48 56.8				
	comp=Z,1μm,18.0s									
257A	Skidaway Islan	100.38	314	IAMs_20	IAMs_20	23 51 02.8				
	comp=Z,858nm,18.0s									
DZM	Mont Dzumac	100.50	191	eLR	LR	23 34 00.9				
	comp=Z,888nm,22.5s									
VSL	Villasalto	100.60	27	IAMs_20	IAMs_20	23 41 54.9				
	comp=Z,1μm,21.0s									
255A	Hazlehurst	100.91	313	IAMs_20	IAMs_20	23 51 58.8				
	comp=Z,781nm,18.0s									
CEL	Celeste	101.18	32	IAMs_20	IAMs_20	23 48 39.1				
	comp=Z,848nm,18.0s									
WR2	Warramunga Arr	101.37	161	IAMs_20	IAMs_20	23 45 39.4				
	comp=Z,1μm,20.0s									
WRA	Warramunga Arr	101.37	161	P	Pdif	23 01 05.4	+0.3			
	comp=Z,0.7nm,0.8s,baz=198,slow=4.7,SNR=2.9									
WC2	Warramunga Arr	101.39	161	IAMs_20	IAMs_20	23 53 31.0				
	comp=Z,1μm,20.0s									
352A	Blakely	101.50	311

comp=Z,1µm,21.0s
HPIG 107.19 293 IAMs_20 IAMs_20 23 48 16.6
comp=Z,1µm,20.0s
R50A Paris 107.20 315 IAMs_20 IAMs_20 23 54 15.4
comp=Z,760nm,19.0s
CLF Chambon-Foret 107.26 19 IAMs_20 IAMs_20 23 45 42.3
comp=Z,1µm,22.0s
M57A Sunshine Farm, 107.29 322 IAMs_20 IAMs_20 23 56 19.3
comp=Z,695nm,18.0s
LPAR Lepanto 107.30 309 IAMs_20 IAMs_20 23 57 50.4
comp=Z,823nm,18.0s
CTI Castel Tesino 107.34 26 IAMs_20 IAMs_20 23 45 24.1
comp=Z,829nm,20.0s
L59A Walton 107.37 324 IAMs_20 IAMs_20 23 46 22.2
comp=Z,947nm,21.0s
LNXT Lenox 107.39 310 IAMs_20 IAMs_20 23 50 48.2
comp=Z,1µm,21.0s
O54A Avella 107.40 319 IAMs_20 IAMs_20 23 53 58.3
comp=Z,915nm,18.0s
HBAR Harrisburg 107.41 309 IAMs_20 IAMs_20 23 51 36.5
comp=Z,1µm,20.0s
UALR University of 107.47 307 IAMs_20 IAMs_20 23 56 40.1
comp=Z,814nm,18.0s
GNAR Gosnell 107.50 310 IAMs_20 IAMs_20 23 58 47.5
comp=Z,1µm,18.0s
R49A Shelbyville 107.54 314 IAMs_20 IAMs_20 23 53 52.3
comp=Z,858nm,20.0s
TRI Trieste 107.54 28 IAMs_20 IAMs_20 23 47 37.4
comp=Z,914nm,19.0s
FUORN Ofenpass-Fuorn 107.55 25 IAMs_20 IAMs_20 23 46 10.8
comp=Z,1µm,20.0s
PEBM Pemiscott Bayo 107.56 310 IAMs_20 IAMs_20 23 55 40.1
comp=Z,1µm,18.0s
I63A Otisfield 107.67 328 IAMs_20 IAMs_20 23 54 59.1
comp=Z,809nm,18.0s
BINY Binghamton 107.68 323 IAMs_20 IAMs_20 23 47 07.6
comp=Z,974nm,22.0s
I62A Tamworth 107.74 327 IAMs_20 IAMs_20 23 47 00.8
comp=Z,909nm,22.0s
PENMO Penman 107.75 310 IAMs_20 IAMs_20 23 51 10.1
comp=Z,1µm,20.0s
LMN Caledonia Moun 107.76 332 IAMs_20 IAMs_20 23 48 58.0
comp=Z,937nm,19.0s
G65A Princeton 107.88 330 IAMs_20 IAMs_20 23 53 54.3
comp=Z,925nm,20.0s
WVL Waterville 107.88 328 IAMs_20 IAMs_20 23 51 50.5
comp=Z,1µm,19.0s
WHAR Wooly Hollow 107.89 308 IAMs_20 IAMs_20 23 58 48.0
comp=Z,690nm,18.0s
HENM Henderson Moun 107.91 311 IAMs_20 IAMs_20 23 50 50.4
comp=Z,1µm,21.0s
WCI Wyandotte Cave 107.92 314 IAMs_20 IAMs_20 23 51 17.6
comp=Z,825nm,21.0s
PARMO Parma 107.98 310 IAMs_20 IAMs_20 23 50 55.3
comp=Z,1µm,22.0s
K58A Earlville 108.08 323 IAMs_20 IAMs_20 23 46 32.0
comp=Z,750nm,21.0s
N53A Lisbon 108.11 319 IAMs_20 IAMs_20 23 54 10.2
comp=Z,936nm,18.0s
L56A Greenwood 108.15 322 IAMs_20 IAMs_20 23 55 36.0
comp=Z,942nm,18.0s
TXAR Lajitas Array 108.18 296 PP PP 23 06 08.5 +3.2
comp=Z,0.3nm,0.7s,baz=148,slow=7.4,SNR=3.5
USIN University of 108.24 313 IAMs_20 IAMs_20 23 51 52.1
comp=Z,943nm,21.0s
LBNH Lisbon 108.25 327 IAMs_20 IAMs_20 23 49 06.3
comp=Z,858nm,20.0s
M54A Oil Creek Stat 108.32 320 IAMs_20 IAMs_20 23 51 50.6
comp=Z,863nm,19.0s
H62A Milan 108.32 327 IAMs_20 IAMs_20 23 55 46.2
comp=Z,1µm,18.0s
J59A Piseco 108.34 325 IAMs_20 IAMs_20 23 50 57.9
comp=Z,1µm,18.0s
ECH Echery 108.38 22 IAMs_20 IAMs_20 23 47 13.9
comp=Z,828nm,20.0s
ACSO Alum Creek Sta 108.39 317 IAMs_20 IAMs_20 00 00 01.8
comp=Z,863nm,18.0s
W39A Magazine 108.46 307 IAMs_20 IAMs_20 23 57 45.2
comp=Z,649nm,18.0s
BRTR Keskin Array B 108.47 44 PP PP 23 06 12.4 +5.1
comp=Z,0.4nm,0.8s,baz=182,slow=6.6,SNR=2.1
J58A Remsen 108.50 324 IAMs_20 IAMs_20 23 51 42.0
comp=Z,724nm,19.0s
VT1 Waterbury 108.58 326 IAMs_20 IAMs_20 23 49 38.9
comp=Z,1µm,20.0s
ALLY Alegheny Colle 108.61 320 IAMs_20 IAMs_20 23 51 26.3
comp=Z,913nm,18.0s
P48A Milroy 108.65 315 IAMs_20 IAMs_20 23 54 58.7
comp=Z,681nm,18.0s
SIUC Southern Illin 108.66 311 IAMs_20 IAMs_20 23 51 01.3
comp=Z,1µm,22.0s
F64A Sherman 108.70 330 IAMs_20 IAMs_20 23 48 56.2
comp=Z,726nm,19.0s
NCB Newcomb 108.71 325 IAMs_20 IAMs_20 23 49 17.7
comp=Z,928nm,20.0s
G62A West of Eustis 108.73 328 IAMs_20 IAMs_20 23 52 26.9
comp=Z,941nm,19.0s
BFO Black Forest 108.74 23 IAMs_20 IAMs_20 23 47 24.3
comp=Z,1µm,19.0s
F63A Nahmakanta, Br 108.77 329 IAMs_20 IAMs_20 23 51 15.8
comp=Z,810nm,20.0s
J57A Williamstown 108.77 323 IAMs_20 IAMs_20 23 47 14.3
comp=Z,939nm,22.0s
N51A Ashland 108.77 318 IAMs_20 IAMs_20 23 53 10.6
comp=Z,663nm,18.0s
MMNY Mt. Morris Dam 108.80 322 IAMs_20 IAMs_20 23 55 46.2
comp=Z,888nm,18.0s
BLO Bloomington 108.83 314 IAMs_20 IAMs_20 23 54 24.4
comp=Z,1µm,20.0s
M52A Chesterland 108.94 319 IAMs_20 IAMs_20 23 54 43.2
comp=Z,964nm,18.0s
U40A Yellville 109.03 308 IAMs_20 IAMs_20 23 52 18.3
comp=Z,1µm,21.0s
OLIL Olney 109.08 313 IAMs_20 IAMs_20 23 59 10.1
comp=Z,1µm,18.0s
E63A Oxbow 109.24 330 IAMs_20 IAMs_20 23 49 11.3
comp=Z,854nm,19.0s
FRNY Flat Rock 109.29 326 IAMs_20 IAMs_20 23 50 11.9
comp=Z,1µm,19.0s
PQI Presque Isle 109.36 330 IAMs_20 IAMs_20 23 51 24.4
comp=Z,948nm,20.0s
MEDO Medina 109.37 322 IAMs_20 IAMs_20 23 55 48.2
comp=Z,831nm,18.0s
LONY Lake Ozonia 109.40 325 IAMs_20 IAMs_20 23 50 48.0
comp=Z,990nm,19.0s
M50A Fremont 109.44 318 IAMs_20 IAMs_20 23 58 01.4
comp=Z,797nm,18.0s
HHAR Hobbs 109.44 307 IAMs_20 IAMs_20 23 56 18.1
comp=Z,716nm,19.0s
P46A Rosedale 109.48 314 IAMs_20 IAMs_20 23 54 43.7
comp=Z,815nm,20.0s
J54A Appleton 109.52 322 IAMs_20 IAMs_20 23 56 01.4
comp=Z,800nm,18.0s
WLF Walferdange 109.56 21 IAMs_20 IAMs_20 23 48 16.1
comp=Z,774nm,19.0s
U38A Gravette 109.77 307 IAMs_20 IAMs_20 23 52 59.8
comp=Z,782nm,20.0s
CCM Cathedral Cave 109.79 310 IAMs_20 IAMs_20 23 52 11.1
comp=Z,1µm,21.0s
N47A Urbana 109.98 315 IAMs_20 IAMs_20 00 01 23.8
comp=Z,820nm,18.0s
D62A Allapoint, All 110.02 330 IAMs_20 IAMs_20 23 52 04.9
comp=Z,840nm,20.0s
SFIN Lafayette 110.09 314 IAMs_20 IAMs_20 23 52 35.9
comp=Z,985nm,20.0s
M48A Edgerton 110.13 316 IAMs_20 IAMs_20 23 57 07.8
comp=Z,670nm,18.0s
S39A Bolivar 110.36 308 IAMs_20 IAMs_20 23 52 21.4
comp=Z,1µm,22.0s
R40A Maddies Statio 110.42 309 IAMs_20 IAMs_20 23 57 18.1
comp=Z,745nm,18.0s
P43A Skaggs, Pawnee 110.42 312 IAMs_20 IAMs_20 23 52 38.9
comp=Z,1µm,21.0s
AAM Ann Arbor 110.44 318 IAMs_20 IAMs_20 23 53 49.0
comp=Z,938nm,18.0s
GEC2 GERESS Array S 110.45 26 IAMs_20 IAMs_20 23 48 06.4
comp=Z,874nm,20.0s
GERES GERESS Array B 110.45 26 PP PP 23 06 21.4 -0.2
comp=Z,0.4nm,0.6s,baz=208,slow=5.4,SNR=3.6
K50A Casco 110.48 319 IAMs_20 IAMs_20 23 53 44.9
comp=Z,825nm,19.0s
PLVO Plevna 110.57 324 IAMs_20 IAMs_20 23 52 57.1
comp=Z,1µm,18.0s
GRA1 Grafenberg Arr 110.66 24 IAMs_20 IAMs_20 23 49 14.0
comp=Z,720nm,20.0s
KHC Kasperske Hory 110.68 26c iPKIKP PKiKP 23 05 45.2 -0.3
KHC pmax pmax
comp=Z,10.0nm,2.5s
KHC Kasperske Hory 110.68 26 eSKS SKSac 23 12 18.3 -5.2
KHC eSP SP 23 15 53.6 +2.7
KHC AMS AMS 23 52 30.0
comp=Z,700nm,19.4s
TIRR Tirgusor 110.74 38 IAMs_20 IAMs_20 23 52 50.8
comp=Z,1µm,20.0s
SRIG Santa Rosalia 110.87 288 IAMs_20 IAMs_20 23 47 15.0
comp=Z,966nm,20.0s
L46A Eue Claire 111.18 316 IAMs_20 IAMs_20 23 58 35.7
comp=Z,656nm,18.0s
TREC Trest 111.31 27 AMS AMS 23 53 10.0
comp=Z,1µm,17.1s
M44A Midewin, Midew 111.32 314 IAMs_20 IAMs_20 23 53 01.5
comp=Z,1µm,20.0s
J48A Bridge Port 111.36 318 IAMs_20 IAMs_20 23 53 41.1
comp=Z,971nm,19.0s
NKC Novy Kostel 111.44 25 AMS AMS 23 48 40.0
comp=Z,700nm,18.9s
I49A Point Hope 111.57 319 IAMs_20 IAMs_20 23 58 06.6
comp=Z,753nm,19.0s
EPT El Paso 111.57 295 IAMs_20 IAMs_20 23 51 22.3
comp=Z,1µm,18.0s
J47A Sunmer 111.69 317 IAMs_20 IAMs_20 23 55 45.8
comp=Z,1µm,18.0s
GOPC GO Pecny, Ondr 111.70 27 AMS AMS 23 48 40.0
comp=Z,700nm,17.9s
PRU Pruhonice 111.71 26 eSP SP 23 16 03.1 +2.9
PRU AMS AMS 23 48 20.0
comp=Z,700nm,20.4s
L44A Lake County Fo 111.95 315 IAMs_20 IAMs_20 23 52 44.0
comp=Z,1µm,21.0s
P38A Dawn 112.07 309 IAMs_20 IAMs_20 23 56 29.6
comp=Z,682nm,20.0s
PVCC Panska Ves 112.22 26 AMS AMS 23 47 40.0
comp=Z,500nm,16.8s
I47A Gladwin 112.24 318 IAMs_20 IAMs_20 23 56 30.6
comp=Z,913nm,19.0s
MORC Moravsky Berou 112.27 28 IAMs_20 IAMs_20 23 53 12.6
comp=Z,603nm,18.0s
KRLC Kraliky 112.35 28 eSP SP 23 16 12.1 +6.0
KRLC AMS AMS 23 54 00.0
comp=Z,600nm,16.0s
J45A Montague 112.44 316 IAMs_20 IAMs_20 23 54 34.9
comp=Z,1µm,19.0s
L42A Oliver, Polo 112.49 313 IAMs_20 IAMs_20 23 55 54.4
comp=Z,626nm,19.0s
OKC Ostrava-Krasne 112.49 29 AMS AMS 23 53 00.0
comp=Z,600nm,17.3s
DPC Dobruska-Polom 112.49 27 eSP SP 23 16 21.3 +14
DPC AMS AMS 23 49 10.0
comp=Z,800nm,20.8s
UPC Upice 112.56 27 eSP SP 23 16 20.0 +12
UPC AMS AMS 23 48 50.0
comp=Z,700nm,17.9s
K43A Burlington 112.56 315 IAMs_20 IAMs_20 23 52 40.1
comp=Z,1µm,21.0s
CLL Collm 112.58 25 ePdif Pdif 23 01 55.0 +1.1
CLL ePKiKP PKiKP 23 05 48.0 -0.9
CLL ePP PP 23 06 35.0 -1.6
CLL eSKSac SKSac 23 12 30.0 -1.0
CLL eSKKSac SKKSac 23 13 36.0 -0.8
CLL eSP SP 23 16 08.0 -0.1
CLL ePS PS 23 16 15.0 +5.1
CLL ePPS PPS 23 17 21.0
CLL eSS SS 23 22 15.0 -2.0
CLL eSSS SSS 23 26 12.0
CLL eSSSS 23 29 30.0
CLL Lm MLR 23 51 00.0
comp=Z,500nm,19.0s
CLL Collm 112.58 25 eP Pdif 23 01 55.0 +1.1
CLL e 23 05 48.0
CLL MLR MLR
comp=Z,500nm,19.0s
D53A Lac Vacive, Po 112.58 324 IAMs_20 IAMs_20 23 51 46.2
comp=Z,1µm,20.0s
CHVC Chvalec 112.64 27 AMS AMS 23 49 20.0
comp=Z,700nm,19.5s
OSTC Ostas 112.65 27 eSP SP 23 16 10.9 +2.1
OSTC AMS AMS 23 49 00.0
comp=Z,700nm,20.0s
IPM Ipoh 112.81 119 IAMs_20 IAMs_20 23 43 59.6
comp=Z,835nm,20.0s
121A Cookes Peak, D 112.82 295 IAMs_20 IAMs_20 23 51 02.4
comp=Z,871nm,18.0s
I45A Fountain 112.89 317 IAMs_20 IAMs_20 23 54 04.9
comp=Z,891nm,20.0s
KSU1 Kansas State U 112.95 307 IAMs_20 IAMs_20 23 54 54.2
comp=Z,935nm,21.0s
KIS Kishinev 113.11 37 ePP PP 23 06 56.0 +15
KIS Kishinev 113.11 37 ePS PS 23 16 20.0 +5.1
L40A Anamosa 113.16 312 IAMs_20 IAMs_20 23 54 56.2
comp=Z,843nm,20.0s
KULM Kulim 113.34 119 IAMs_20 IAMs_20 23 45 01.8
comp=Z,989nm,20.0s
VLDQ Val d'Or 113.42 325 IAMs_20 IAMs_20 23 53 13.6
comp=Z,850nm,20.0s
JFWS Jewell Farm 113.49 314 IAMs_20 IAMs_20 23 54 09.8
comp=Z,986nm,21.0s
G45A Suttons Bay 113.54 318 IAMs_20 IAMs_20 23 57 50.9
comp=Z,767nm,19.0s
AKH Akhalkalaki 113.84 50 IAMs_20 IAMs_20 23 54 57.1
comp=Z,1µm,18.0s
SOC Sochi 114.12 46 i PKIKP PKiKP 23 05 56.3 +4.2
SOC ePS PKKPbc 23 16 27.0 -4.9
SOC eSS SS 23 22 44.5 +6.8
I40A Norwalk 114.45 314 IAMs_20 IAMs_20 23 54 24.4
comp=Z,955nm,21.0s
N33A J Bar K, Exete 114.67 307 IAMs_20 IAMs_20 23 55 09.5
comp=Z,1µm,22.0s
214A Organ Pipe Nat 114.89 291 IAMs_20 IAMs_20 23 54 18.3
comp=Z,652nm,18.0s
E43A Lone Tree Farm 115.17 318 IAMs_20 IAMs_20 00 01 14.0
comp=Z,749nm,18.0s
G40A Rib Lake 115.44 315 IAMs_20 IAMs_20 23 57 47.5
comp=Z,889nm,19.0s
BGNE Belgrade 115.52 307 IAMs_20 IAMs_20 23 53 52.1
comp=Z,1µm,22.0s
KSCO Kaye Shedlock' 115.58 303 IAMs_20 IAMs_20 23 55 24.9
comp=Z,672nm,18.0s
KIV Kislovodsk 115.62 48 ePKIKP PKiKP 23 05 56.6 +1.5
KIV e 23 06 57.0
KIV ePPP PPP 23 09 28.9
KIV pmax pmax
comp=Z,4.0nm,1.0s
RGN Rugen 115.66 24 IAMs_20 IAMs_20 23 52 24.3
comp=Z,731nm,21.0s
SPMN Marine on St. 116.43 313 IAMs_20 IAMs_20 23 55 24.7
comp=Z,829nm,21.0s
ECSD EROS Data Cent 116.76 310 IAMs_20 IAMs_20 23 57 21.7
comp=Z,979nm,20.0s
K31A O'Neill 116.77 308 IAMs_20 IAMs_20 23 55 59.1
comp=Z,1µm,21.0s
MAK Makhachkala 116.81 52 eP Pdif 23 02 10.2 -2.7
MAK i 23 05 57.3
MAK e 23 12 43.3
MAK ePS PKKPdf 23 16 49.9 +0.3
MAK eSS SS 23 23 15.5 +2.5
MAK pmax pmax
comp=Z,34nm,0.5s
OGNE Ogallala 116.86 304 IAMs_20 IAMs_20 23 57 33.9
comp=Z,635nm,20.0s
WUAZ Wupatki 116.99 294 IAMs_20 IAMs_20 23 57 03.8
comp=Z,594nm,18.0s
E38A The Farm, Brul 117.08 315 IAMs_20 IAMs_20 00 00 34.8
comp=Z,946nm,19.0s
Y12C Blythe 117.18 291 IAMs_20 IAMs_20 23 55 10.1
comp=Z,628nm,18.0s
F36A Milaca 117.24 313 IAMs_20 IAMs_20 23 58 41.2
comp=Z,967nm,19.0s
ISCO Idaho Springs 117.59 301 IAMs_20 IAMs_20 00 03 57.4
comp=Z,674nm,18.0s
PV01 Paradox Valley 117.68 298 IAMs_20 IAMs_20 23 56 12.8
comp=Z,974nm,20.0s
ASHT Ashkhabad 117.78 63 IAMs_20 IAMs_20 23 54 27.5
comp=Z,1µm,22.0s
109C Camp Elliot, M 117.83 288 IAMs_20 IAMs_20 23 52 23.5
comp=Z,877nm,20.0s
EYMN Ely 118.17 316 IAMs_20 IAMs_20 00 03 18.5
comp=Z,669nm,18.0s
SUSD Miller 118.33 309 IAMs_20 IAMs_20 00 00 33.2
comp=Z,772nm,19.0s
SHPR Sheep Range 119.66 292 IAMs_20 IAMs_20 23 57 28.6
comp=Z,574nm,19.0s
KONO Kongsberg 119.66 20 IAMs_20 IAMs_20 23 56 39.3
comp=Z,689nm,19.0s
D32A Dogwood Acres, 119.68 312 IAMs_20 IAMs_20 23 56 42.9
comp=Z,1µm,22.0s
AGMN Agassiz Nation 120.15 313 P PKiKP 23 06 03.8 +0.1
baz=144
K22A Casper 120.26 302 IAMs_20 IAMs_20 23 59 40.9
comp=Z,672nm,19.0s
RSSD Black Hills 120.28 305 PKIKP PKPdf 23 06 03.2 -1.1
RSSD Black Hills 120.28 305 P PKPdf 23 06 04.3 0.0
baz=142
RSSD Black Hills 120.28 305 PKPdf 23 06 03.2 -1.1
TPNV Topopah Spring 120.56 292 P PKiKP 23 06 06.7 +1.6
baz=141
TPNV Topopah Spring 120.56 292 IAMs_20 IAMs_20 23 50 03.4
comp=Z,659nm,21.0s
ISA Isabella, Lake 120.70 289 P PKiKP 23 06 07.2 +1.9
baz=141
ISA Isabella, Lake 120.70 289 IAMs_20 IAMs_20 23 52 31.4
comp=Z,935nm,19.0s
E28A Huff 120.76 309 IAMs_20 IAMs_20 23 56 46.7
comp=Z,1µm,22.0s
R11A Troy Canyon, C 121.30 293 IAMs_20 IAMs_20 23 57 21.0
comp=Z,836nm,18.0s
DUG Dugway, Tooele 121.35 296 P PKiKP 23 06 07.6 +1.1
baz=140
DUG Dugway, Tooele 121.35 296 IAMs_20 IAMs_20 00 00 53.0
comp=Z,719nm,18.0s
ULM Lac du Bonnet 121.72 315 IAMs_20 IAMs_20 23 59 34.6
comp=Z,749nm,20.0s
PDAR Pinedale Array 121.76 300 PKP PKPdf 23 06 07.0 -0.2
comp=Z,0.6nm,0.6s,baz=114,slow=5.8,SNR=5.9
PDAR PP PP 23 07 42.9 +1.7
comp=Z,1.4nm,1.0s,baz=122,slow=5.4,SNR=5.9
NIL Nilore 122.03 77 PKIKP PKPdf 23 06 06.8 -0.9
NIL MLR MLR
comp=Z,700nm,21.0s
NIL Nilore 122.03 77 PKPdf 23 06 06.8 -0.9
NIL Nilore 122.03 77 IAMs_20 IAMs_20 23 54 54.6
comp=Z,728nm,21.0s
MDPB Devils Postpil 122.53 290 IAMs_20 IAMs_20 23 55 49.6
comp=Z,842nm,20.0s
OBN Obninsk 122.58 37 ePKIKP PKiKP 23 06 10.4 +2.2
OBN e 23 07 46.0
OBN ePPP PPP 23 10 24.7
OBN pmax pmax
comp=Z,5.0nm,0.5s
NVAR Mina Array Bea 122.74 291 PKP PKiKP 23 06 09.8 +0.4
comp=Z,1.1nm,0.7s,baz=159,slow=2.9,SNR=9.3
REDW Red Top Meadow 122.83 300 IAMs_20 IAMs_20 00 00 55.0
comp=Z,671nm,18.0s
DLV T Lat 122.83 123 IAMs_20 IAMs_20 23 59 34.8
comp=Z,691nm,18.0s
SNOW Snow King Moun 122.86 300 IAMs_20 IAMs_20 23 59 54.8
comp=Z,929nm,19.0s
TPAW Teton Pass 122.97 300 IAMs_20 IAMs_20 00 00 59.8
comp=Z,684nm,18.0s
SAO San Andreas Ge 123.09 288 IAMs_20 IAMs_20 23 54 44.6
comp=Z,690nm,18.0s
FXWY Fox Creek 123.12 300 IAMs_20 IAMs_20 23 58 34.7
comp=Z,717nm,19.0s
PBKT Sadao Pong 123.19 113 PKPdf 23 06 10.2 -0.2
LAO LASA Array 123.25 306 IAMs_20 IAMs_20 00 01 40.7
comp=Z,757nm,19.0s
FLWY Flagg Ranch 123.31 301 IAMs_20 IAMs_20 23 59 36.6
comp=Z,928nm,19.0s
WAKR Walker 123.37 290 IAMs_20 IAMs_20 23 55 04.0
comp=Z,828nm,19.0s
CMB Columbia Colle 123.50 289 IAMs_20 IAMs_20 23 54 06.5
comp=Z,758nm,18.0s
YERR Yerington 123.64 291 IAMs_20 IAMs_20 23 54 47.9
comp=Z,764nm,18.0s
DGMT Dagmar 123.73 308 IAMs_20 IAMs_20 00 02 56.2
comp=Z,779nm,20.0s
CMAR Chiang Mai Arr 123.75 109 PKP PKPdf 23 06 11.7 +0.2
comp=Z,3.5nm,0.8s,baz=241,slow=3.5,SNR=14
PNTR Pine Nut 123.90 291 IAMs_20 IAMs_20 23 55 03.8
comp=Z,925nm,19.0s
VCNR Virginia City 124.08 291 IAMs_20 IAMs_20 23 56 39.6
comp=Z,902nm,19.0s
PAHR Pah Rah Range 124.25 291 IAMs_20 IAMs_20 23 57 18.3
comp=Z,624nm,18.0s
FINES FINESS Array B 124.86 27 PKP PKPdf 23 06 11.5 -0.6
comp=Z,1.9nm,0.8s,baz=169,slow=1.9,SNR=7.8
BEKR Beckworth 124.87 291 IAMs_20 IAMs_20 23 55 04.6
comp=Z,798nm,18.0s
FRB Frobisher Bay 125.01 338 PKP PKPdf 23 06 11.2 -1.2
comp=Z,4.9nm,1.0s,baz=140,slow=4.8,SNR=7.3
DLMT Dillon 125.16 301 IAMs_20 IAMs_20 23 59 44.6
comp=Z,712nm,19.0s
ORV Oroville 125.22 290 IAMs_20 IAMs_20 23 54 38.9
comp=Z,671nm,18.0s
MFID Camas Ranch 125.25 297 IAMs_20 IAMs_20 00 03 06.4
comp=Z,644nm,19.0s
GDXM Geysers 125.33 288 IAMs_20 IAMs_20 23 56 52.9
comp=Z,693nm,18.0s
BTK Batken 125.61 70 IAMs_20 IAMs_20 00 04 39.2
comp=Z,652nm,19.0s
SHL Shillong 125.82 98 PKIKP PKPdf 23 06 14.7 -0.8
SHL MLR MLR
comp=Z,700nm,20.0s
SHL Shillong 125.82 98 PKPdf 23 06 14.7 -0.8
SHL IAMs_20 IAMs_20 23 57 58.3
comp=Z,668nm,20.0s
EGMT Eagleton 125.83 305 P PKiKP 23 06 15.6 +0.5
baz=138
EGMT Eagleton 125.83 305 IAMs_20 IAMs_20 00 01 37.0
comp=Z,873nm,20.0s
WVOR Wild Horse Val 125.91 294 IAMs_20 IAMs_20 23 58 23.9
comp=Z,774nm,18.0s
O03E Paynes Creek 125.92 290 P PKiKP 23 06 15.9 +0.4
baz=138
MOD Modoc Plateau 126.35 293 IAMs_20 IAMs_20 23 56 47.7
comp=Z,677nm,19.0s
J08A Circle Bar Ran 126.51 295 IAMs_20 IAMs_20 00 00 14.8
comp=Z,625nm,19.0s
MSO Missoula 126.87 301 P PKPdf 23 06 16.9 +0.2
baz=137
BMO Blue Mountains 127.03 297 IAMs_20 IAMs_20 00 01 25.6
comp=Z,794nm,20.0s
K05A Summer Lake 127.25 293 IAMs_20 IAMs_20 23 56 58.6
comp=Z,845nm,18.0s
SCO Scoresbysund 127.32 1 IAMs_20 IAMs_20 23 58 25.5
comp=Z,738nm,19.0s
FFC Flin Flon 127.55 315 PKIKP PKPdf 23 06 17.6 +0.1
FFC MLR MLR
comp=Z,1µm,18.0s
FFC Flin Flon 127.55 315 PKPdf 23 06 17.6 +0.1
I07A Izee 127.55 295 IAMs_20 IAMs_20 23 59 30.3
comp=Z,722nm,18.0s
F10A Beach Ranch, E 127.81 298 IAMs_20 IAMs_20 00 01 49.0
comp=Z,671nm,19.0s
J05D Fort Rock, OR 127.83 293 P PKiKP 23 06 20.5 +1.3
baz=137
KSH Kashi 127.88 74 PKP PKPdf 23 06 19.3 +0.4
KSH AMB AMB
comp=Z,210nm,4.4s
KSH LR LR
comp=Z,210nm,6.1s
KSH LR LR
comp=Z,150nm,11.3s
KSH LR LR
comp=Z,330nm,6.7s
PINE Pine Mountain 128.05 294 PKiKP 23 06 20.2 +0.5
PINE IAMs_20 IAMs_20 00 00 17.7
comp=Z,772nm,19.0s
KLMR Klimovskoe 128.13 34 ePKIKP PKPdf 23 06 17.7 -0.7
KLMR e 23 08 27.7
KLMR pmax pmax
comp=Z,22nm,1.5s
KLMR Klimovskoe 128.13 34 ePKPdf PKPdf 23 06 17.8 -0.7
KLMR AMP 23 06 24.0
comp=Z,22nm,1.5s
KLMR ePP PP 23 08 27.8 +4.7
KLMR LQ LQ 23 54 03.2
KLMR LQ LQ 23 54 03.2
KLMR LR LR 00 01 08.5
G08A Pilot Rock 128.16 296 IAMs_20 IAMs_20 00 04 20.2
comp=Z,542nm,20.0s
LSA Lhasa 128.68 94 IAMs_20 IAMs_20 00 00 57.0
comp=Z,565nm,19.0s
F07A Phinny Hill Vi 129.06 296 IAMs_20 IAMs_20 23 59 34.3
comp=Z,632nm,19.0s
E08A Dider Farm, El 129.07 297 IAMs_20 IAMs_20 00 04 32.3
comp=Z,614nm,20.0s
HAWA Hanford 129.23 297 IAMs_20 IAMs_20 00 05 58.5
comp=Z,650nm,20.0s
H04A Detroit Lake 129.32 294 IAMs_20 IAMs_20 00 02 49.1
comp=Z,659nm,19.0s
AAK Ala-Archa 129.38 70c iPKIKP PKPdf 23 06 22.1 +0.4
AAK pmax pmax

comp=Z,14nm,2.5s
AAK Ala-Archa 129.38 70 PKPdf 23 06 20.9 -0.7
AAK Ala-Archa 129.38 70 IAMs_20 IAMs_20 00 03 06.5
comp=Z,535nm,19.0s
D08A Wollman Farm, 129.40 298 IAMs_20 IAMs_20 00 10 46.1
comp=Z,795nm,18.0s
E07A Sunnyside 129.50 297 IAMs_20 IAMs_20 00 00 29.8
comp=Z,774nm,18.0s
FRU1 Bishkek 129.58 70 IAMs_20 IAMs_20 00 02 25.6
comp=Z,541nm,20.0s
C09A Chrisman Ranch 129.62 299 IAMs_20 IAMs_20 00 06 22.8
comp=Z,808nm,20.0s
QIZ Qiongzhong 129.63 120 PKP **PKPdf 23 06 22.8 +0.1**
QIZ PP **PP 23 08 34.6 +1.6**
QIZ SS SS 23 25 54.3 -0.9
QIZ LR LR
comp=Z,510nm,22.2s
QIZ LR LR
comp=Z,350nm,18.0s
QIZ LR LR
comp=Z,660nm,19.8s
QIZ Qiongzhong 129.63 120 IAMs_20 IAMs_20 23 57 35.4
comp=Z,762nm,20.0s
TMCR Tamitsa 130.26 31 *e*PKIKP **PKiKP 23 06 26.7 +3.5**
TMCR pmax pmax
comp=Z,16nm,0.5s
LTY Liberty 130.39 297 IAMs_20 IAMs_20 00 00 09.2
comp=Z,639nm,20.0s
TARG Taragay, Kyrgy 130.45 73 IAMs_20 IAMs_20 00 00 08.7
comp=Z,684nm,22.0s
B08A Colville Reser 130.52 299 IAMs_20 IAMs_20 00 06 39.5
comp=Z,844nm,19.0s
KMI Kunming 131.22 108 Pdif **Pdif 23 03 23.4 +5.6**
KMI PKP **PKiKP 23 06 30.5 +3.7**
KMI sPKP 23 06 50.8
KMI PP PP 23 08 57.8 +14
KMI PKS 23 09 49.3
KMI Kunming 131.22 108 PKP **PKiKP 23 06 30.5 +3.7**
KMI sPKP 23 06 50.8
KMI SKKS 23 15 37.0
KMI SS SS 23 26 18.3 +2.9
KMI LR LR
comp=Z,230nm,19.8s
KMI LR LR
comp=Z,280nm,20.0s
KMI LR LR
comp=Z,320nm,21.4s
E03A Lebam 131.31 295 IAMs_20 IAMs_20 00 07 57.9
comp=Z,630nm,20.0s
ARCES ARCESS Array B 131.56 21 PKP **PKPdf 23 06 23.6 -1.1**
comp=Z,1.6nm,0.8s,baz=209,slow=0.9,SNR=6.4
B06A Marblemount 131.66 298 IAMs_20 IAMs_20 00 07 34.9
comp=Z,754nm,20.0s
ARU Arti 131.66 48 *i* PKIKP **PKiKP 23 06 29.0 +2.7**
ARU 23 08 53.5
ARU MLR MLR
comp=Z,511nm,20.0s
ARU Arti 131.66 48 PKPdf 23 06 24.2 -1.1
ARU IAMs_20 IAMs_20 00 06 14.6
comp=Z,553nm,21.0s
D03D Eldon 131.76 296 P **PKiKP 23 06 26.5 -0.3**
baz=134
NLWA Neilton Lookou 132.05 295 IAMs_20 IAMs_20 00 12 45.3
comp=Z,565nm,18.0s
SVE Sverdlovsk 132.78 48 *e*PKIKP **PKiKP 23 06 31.4 +2.9**
GYA Guiyang 134.33 111 PKP **PKiKP 23 06 32.4 -0.5**
GYA sPKP 23 06 57.4
GYA PP **PP 23 09 04.3 +0.8**
GYA PKS 23 10 02.4
GYA SKKS 23 15 50.8
GYA SS SS 23 26 55.0 +2.1
GYA AMB AMB
comp=Z,70nm,6.3s
GYA LR LR
comp=Z,170nm,18.1s
GYA LR LR
comp=Z,210nm,18.3s
GYA LR LR
comp=Z,320nm,17.4s
HKPS Hong Kong Po S 134.44 123 IAMs_20 IAMs_20 23 57 13.8
comp=Z,619nm,21.0s
BRVK Borovoye 134.47 57 *c i* PKIKP **PKPdf 23 06 31.5 +0.8**
BRVK pmax pmax
comp=Z,13nm,2.5s
BRVK Borovoye 134.47 57 PKPdf 23 06 29.7 -1.0
BRVK Borovoye 134.47 57 IAMs_20 IAMs_20 00 06 48.0
comp=Z,830nm,20.0s
MAKZ Makanchi 136.12 71 IAMs_20 IAMs_20 00 07 42.7
comp=Z,650nm,21.0s
MKAR Makanchi Array 136.27 71 PKP **PKPdf 23 06 32.1 -2.2**
comp=Z,2.0nm,0.9s,baz=234,slow=5.4,SNR=8.7
CD2 Chengdu 136.40 105 PKP **PKPdf 23 06 35.8 +0.7**
CD2 PP **PP 23 09 23.3 +6.7**
CD2 AMB AMB
comp=Z,250nm,6.5s
CD2 LR LR
comp=Z,500nm,27.5s
CD2 LR LR
comp=Z,450nm,23.5s
CD2 LR LR
comp=Z,620nm,22.6s
KURK Kurchatov 136.95 65 PKIKP **PKPdf 23 06 34.1 -1.3**
KURK MLR MLR
comp=Z,500nm,19.0s
KURK Kurchatov 136.95 65 PKPdf 23 06 34.1 -1.3
KURK Kurchatov 136.95 65 IAMs_20 IAMs_20 00 08 17.5
comp=Z,504nm,19.0s
WMQ Urumqi 137.13 78 *e*PKP **PKPdf 23 06 37.1 +1.0**
WMQ LR LR
comp=Z,240nm,21.9s
WMQ LR LR
comp=Z,370nm,23.7s
WMQ LR LR
comp=Z,610nm,23.7s
YKA Yellowknife Ar 137.64 316 PKhKP PKPpre 23 06 28.8
comp=Z,0.4nm,0.6s,baz=124,slow=4.0,SNR=5.2
YKA PKP **PKPdf 23 06 35.7 -0.6**
comp=Z,16nm,1.0s,baz=124,slow=2.5,SNR=15
YKA PP **PP 23 09 23.6 -0.4**
comp=Z,2.1nm,0.9s,baz=124,slow=6.2,SNR=5.3
YKA SKPbc **SKPbc 23 10 09.3 +0.3**
comp=Z,2.7nm,1.0s,baz=116,slow=2.1,SNR=4.8
QZH Quanzhou 138.75 126 *e*PKP **PKPdf 23 06 36.1 -3.5**
QZH PP **PP 23 09 32.6 +1.7**
QZH SS SS 23 27 41.0 -4.0
QZH LR LR
comp=Z,370nm,15.6s
QZH LR LR
comp=Z,220nm,15.2s
QZH LR LR
comp=Z,380nm,18.0s
RES Resolute Bay 139.22 338 PKP **PKPdf 23 06 38.5 -0.4**
comp=Z,4.2nm,0.9s,baz=146,slow=3.4,SNR=4.9
RES Resolute Bay 139.22 338 IAMs_20 IAMs_20 00 12 21.6
comp=Z,634nm,20.0s
MOBC Moresby Island 139.72 297 IAMs_20 IAMs_20 00 08 52.2
comp=Z,682nm,20.0s
DIB Dawson Inlet, 140.00 297 IAMs_20 IAMs_20 00 09 12.6
comp=Z,782nm,21.0s
LZH Lanzhou 140.42 100 *e*PKP **PKPdf 23 06 40.3 -2.2**
LZH SKKS 23 16 31.6
LZH AMB AMB
comp=Z,350nm,8.7s
LZH LR LR
comp=Z,230nm,17.9s
LZH LR LR
comp=Z,280nm,19.0s
LZH LR LR
comp=Z,360nm,18.8s
WHN Wuhan 141.52 116 ⇑PKP **PKPdf 23 06 41.8 -2.6**
WHN PP **PP 23 09 54.1 +6.2**
WHN PKS 23 10 21.6
WHN SKKS 23 16 39.4
WHN LR LR
comp=Z,1μm,18.6s
WHN LR LR
comp=Z,700nm,17.0s
WHN LR LR
comp=Z,920nm,19.9s
XAN Xi'an 141.56 107 PKP **PKPdf 23 06 44.4 -0.1**
XAN SKKS 23 16 37.4
XAN AMB AMB
comp=Z,290nm,11.3s
XAN LR LR
comp=Z,280nm,19.1s
XAN LR LR
comp=Z,280nm,17.6s
ZAA0 Zalesovo Array 141.93 64 IAMs_20 IAMs_20 00 14 33.3
comp=Z,478nm,18.0s
ZALV Zalesovo Beam 141.93 64 PKhKP PKPpre 23 06 38.2
comp=Z,0.8nm,0.4s,baz=222,slow=2.0,SNR=3.9
ZALV PKP **PKPdf 23 06 44.2 -0.2**
comp=Z,1.3nm,0.5s,baz=230,slow=3.7,SNR=5.0
SIT Sitka 143.49 300 IAMs_20 IAMs_20 00 13 46.4
comp=Z,645nm,20.0s
C36M Paulatuk 144.38 323 P **PKPab 23 06 45.8 -0.6**
baz=112
C36M Paulatuk 144.38 323 PKPab 23 06 46.5 +0.1
SKAG Skagway 144.66 304 IAMs_20 IAMs_20 00 13 37.1
comp=Z,596nm,19.0s
NJ2 Nanjing 144.93 120 *e*PKP **PKPab 23 06 48.3 -1.3**
NJ2 pPKP sPKPdf 23 07 08.3 +13
NJ2 sPKP 23 07 16.1
NJ2 SKKS 23 16 56.6
NJ2 AMB AMB
comp=Z,460nm,13.7s
NJ2 LR LR
comp=Z,470nm,19.9s
NJ2 LR LR
comp=Z,340nm,18.9s
NJ2 LR LR
comp=Z,630nm,19.9s
WHY Whitehorse 145.00 306 IAMs_20 IAMs_20 00 14 12.0
comp=Z,624nm,20.0s
SSE Sheshan 145.20 124 PKPbc **PKPbc 23 06 49.8 -0.7**
SSE LR LR
comp=Z,280nm,19.8s
SSE LR LR
comp=Z,170nm,20.4s
SSE LR LR
comp=Z,290nm,19.4s
SSE Sheshan 145.20 124 IAMs_20 IAMs_20 00 05 35.4
comp=Z,700nm,20.0s
A36M Sachs Harbour 145.65 327 P **PKPbc 23 06 50.8 +0.1**
baz=108
TIY Taiyuan 146.20 107 *e*PKPbc **PKPdf 23 06 50.6 -1.9**
TIY SS SS 23 29 10.6 -1.2
TIY AMB AMB
comp=Z,240nm,9.9s
TIY LR LR
comp=Z,250nm,14.9s
TIY LR LR
comp=Z,94nm,8.0s
TIY LR LR
comp=Z,200nm,17.2s
BTO Baotou 147.03 101 *e*PKPbc **PKPdf 23 06 54.8 +1.0**
INK Inuvik 147.27 319 PKP2 **PKPbc 23 06 54.5 -1.1**
INK MLR MLR
comp=Z,1μm,19.0s
INK Inuvik 147.27 319 PKPbc 23 06 54.5 -1.1
TIA Tai'an 147.45 114 PKPbc **PKPdf 23 06 55.1 +0.6**
TIA sPKP 23 07 22.6
TIA LR LR
comp=Z,110nm,19.9s
TIA LR LR
comp=Z,180nm,21.4s
TIA LR LR
comp=Z,130nm,20.6s
EPYK Eagle Plains 147.90 315 P **PKPbc 23 06 57.2 -0.2**
baz=107
HHC Hu-ho-hao-te 148.03 102 *e*PKPbc **PKPbc 23 06 58.3 -0.4**
HHC PP **PP 23 10 28.5 +1.4**
HHC AMB AMB
comp=Z,170nm,10.4s
HHC LR LR
comp=Z,200nm,18.0s
HHC LR LR
comp=Z,170nm,20.0s
HHC LR LR
comp=Z,250nm,19.6s
DAWY Dawson 148.26 310 PKPbc 23 06 58.2 -0.2
BALM Baldy 148.50 304 IAMs_20 IAMs_20 00 18 45.6
comp=Z,715nm,20.0s
MOY Mondy 148.99 77 *e*PKHKP PKPpre 23 06 56.0
MOY pmax pmax
comp=Z,99nm,2.9s
NRIK Noril'sk 149.19 40 PKPbc **PKPbc 23 06 59.5 -1.1**
comp=Z,13nm,1.0s,baz=41,slow=0.8,SNR=20
ZAK Zakamensk 149.53 80 *e*PKHKP PKPpre 23 06 57.8
ZAK pmax pmax
comp=Z,26nm,1.4s
SONM Songino Array 149.78 87 PKPbc **PKPbc 23 07 01.5 -1.3**
comp=Z,24nm,1.0s,baz=224,slow=2.9,SNR=35
BJT Baijiatuan 149.86 108 PKIKP **PKPbc 23 07 02.6 -0.5**
BJT Baijiatuan 149.86 108 PKPbc 23 07 02.6 -0.5
BJI Beijing 149.88 108 PKPbc **PKPbc 23 07 01.9 -1.3**
ULN Ulaanbaatar 150.15 87 PKIKP **PKPbc 23 07 03.1 -0.7**
ULN Ulaanbaatar 150.15 87 PKPbc 23 07 03.1 -0.7
ULN Ulaanbaatar 150.15 87 IAMs_20 IAMs_20 00 27 07.3
comp=Z,593nm,18.0s
TLY Talaya 150.41 78 *c i* PKIKP **PKPbc 23 07 02.7 -1.4**
TLY pmax pmax
comp=Z,92nm,1.3s
TLY Talaya 150.41 78 PKPbc 23 07 03.9 -0.2
IRK Irkutsk 151.03 78 *e*PKIKP **PKiKP 23 07 06.0 -0.1**
IRK pmax pmax
comp=Z,78nm,2.7s
DHY Denali Highway 151.39 306 IAMs_20 IAMs_20 00 19 08.8
comp=Z,606nm,19.0s
HDA Harding Lake 151.53 309 P **PKPbc 23 07 05.7 -0.7**
baz=103
HDA Harding Lake 151.53 309 IAMs_20 IAMs_20 00 13 11.1
comp=Z,724nm,22.0s
ILAR Eielson Array 151.58 310 PKPbc **PKPbc 23 07 06.1 -0.3**
comp=Z,36nm,1.0s,baz=154,slow=1.1,SNR=76
GHO Glory Hole Cre 151.73 303 IAMs_20 IAMs_20 00 19 26.1
comp=Z,502nm,20.0s
DL2 Dalian 151.78 116 PKPbc **PKPdf 23 07 00.4 -0.9**
DL2 PP **PP 23 10 48.1 -0.4**
DL2 AMB AMB
comp=Z,240nm,10.4s
DL2 LR LR
comp=Z,470nm,15.3s
DL2 LR LR
comp=Z,280nm,16.1s
DL2 LR LR
comp=Z,460nm,17.7s
POKR Poker Flat Res 151.88 310 P **PKPbc 23 07 06.3 -0.8**
baz=101
COLA College 152.00 310 PKIKP **PKiKP 23 07 07.9 +0.2**
COLA 23 07 17.9
COLA College 152.00 310 PKiKP 23 07 07.9 +0.2
COLA PKPab **PKPab 23 07 17.9 +1.0**
TCOL CIGO, UAF Yank 152.01 310 P **PKPbc 23 07 06.8 -0.6**
baz=101
TOLK Toolik Lake Re 153.15 318 P **PKPbc 23 07 09.7 -0.2**
baz=93
BPAW Bear Paw Mtn. 153.19 308 IAMs_20 IAMs_20 00 21 14.3
comp=Z,597nm,19.0s
KSRS Korea Array 153.55 127 PKPbc **PKPbc 23 07 11.2 -0.5**
comp=Z,0.7nm,0.3s,baz=187,slow=3.1,SNR=5.2
SVW2 Sparrevohn 154.65 300 IAMs_20 IAMs_20 00 16 17.1
comp=Z,455nm,19.0s
MAT Matsushiro 156.67 145 *e*PKP **PKPab 23 07 36.9 -0.7**
MJAR Matsushiro Arr 156.67 145 PKPab **PKPab 23 07 36.5 -1.0**
comp=Z,2.6nm,0.9s,baz=197,slow=5.5,SNR=5.4
UNV Unalaska Valle 157.95 278 IAMs_20 IAMs_20 00 13 50.4
comp=Z,634nm,20.0s
BOD Bodaibo 158.36 71 *e*PKIKP **PKPdf 23 07 06.9 -2.7**
BOD *e* 23 07 44.9
BOD pmax pmax
comp=Z,9.0nm,2.5s
MDJ Mudanjiang 159.98 118 PKP **PKPdf 23 07 12.9 +0.9**
MDJ Mudanjiang 159.98 118 IAMs_20 IAMs_20 00 23 11.2
comp=Z,538nm,18.0s
USRK Ussuriysk Ar. 160.80 123 PKPab **PKPab 23 07 54.7 -0.6**
comp=Z,3.2nm,0.8s,baz=228,slow=4.2,SNR=4.1
YUK Yuzh-Kuril'sk 165.78 153 *e*PKIKP **PKPdf 23 07 13.5 -4.1**
YUK *e* 23 12 13.4
KUR Kuril'sk 167.38 158 *e*PKIKP **PKPdf 23 07 18.2 -0.6**
YSS Yuzh-Sakhalins 167.49 139 *i* PKIKP **PKPdf 23 07 18.4 -0.4**
YSS *e* 23 12 09.1
YSS *e*SS SS 23 32 55.5 -3.7
BILL Bilibino 167.83 339 *e*PKIKP **PKPdf 23 07 18.6 +0.2**
BILL *e*PPP PPP 23 16 17.7
BILL pmax pmax
comp=Z,2.0nm,1.1s
SKR Severo-Kuril's 173.50 188 *i* PKIKP **PKPdf 23 07 15.4 -6.6**
SKR *e* 23 12 41.4
PET Petropavlovsk 175.30 211 *i* PKIKP **PKPdf 23 07 19.7 -2.8**
PET *e* 23 12 47.7
PET *e*SS SS 23 34 06.9 -8.7

PET *e*SSS SSS 23 41 05.6

DJA 19 23:44:09.7±0.4,1°S±3°×12°0E±°,h10km,M3.8/6,mB5.5/1, mb4.2/1,MLv3.5/6,Mw(mB)4.9/1,Sulawesi

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.49**	**79**	P			Pn	23 44 36.2	-0.4
APSI				S			Sb	23 44 56.6	0.0
MPSI	**Mapaga**	**1.54**	**349**	P			Pn	23 44 36.8	-0.5
TTSI	**Tana Toraja**	**1.88**	**191**	P			Pn	23 44 42.0	+0.1
MRSI	**Marisa**	**2.42**	**47**	P			Pn	23 44 48.1	-1.2
LUWI	**Luwuk**	**2.59**	**87**	P			Pn	23 44 52.6	+0.8
SPSI	**Sidrap Palu**	**2.79**	**188**	P			Pn	23 44 55.0	+0.6
BNSI	**Bone**	**3.19**	**181**	P			Pn	23 45 02.3	+2.3
BKSI	**Bulukumba**	**4.11**	**181**	P			Pn	23 45 14.3	+1.8
MMRI	**Maumere**	**7.67**	**165**	P			Pn	23 46 00.2	-1.5
WBSI	**Waikabubak, Su**	**8.43**	**185**	P			Pn	23 46 12.5	+0.4

*IDC **20** 00:18:51.8±1.1, 11°.44N×125°.46E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/40, mbtmp3.7/6, Error ellipse: s-maj=95.5km s-min=19.9km az=74.0*
*MAN **20** 00:19:00.6, 11°.42N×125°.97E, h54km, mb4.6, ML3.5, MS3.4*
ISC 20 00:19:00.8±1.4,11°.45N±0°.05×126°.0E±0°.1,h77km±15km, n20,σ2s11/28,mb3.6/6,2C-1D,Samar

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**1.42**	**254**	*e*P			**Pn**	**00 19 24.6**	**-0.4**
OCLP				*e*S			**Sn**	**00 19 41.8**	**-1.4**
CNP	**Catarman**	**1.68**	**309**	*e*P			**Pn**	**00 19 27.8**	**-0.5**
CNP				*e*S			**Sn**	**00 19 49.4**	**+0.2**
MSLP	**Maasin**	**1.72**	**221**	*e*P			**Pn**	**00 19 28.6**	**-0.4**
MSLP				*e*S			**Sn**	**00 19 50.5**	**+0.2**
SCPH	**Surigao**	**1.73**	**197**	*e*P			**Pn**	**00 19 28.4**	**-0.7**
SCPH				*e*S			**Sn**	**00 19 49.9**	**-0.6**
LLP	**Lapu-Lapu**	**2.29**	**241**	*e*P			**Pn**	**00 19 36.2**	**-0.3**
LLP				*i* S			**Sn**	**00 20 07.9**	**+4.0**
BUTP	**Butuan**	**2.50**	**189**	*e*P			**Pn**	**00 19 40.0**	**+0.7**
BUTP				*e*S			**Sn**	**00 20 13.5**	**+4.7**
PVCP	**Virac**	**2.79**	**320**	*e*P			**Pn**	**00 19 44.6**	**+1.4**
PVCP				*e*S			**Sn**	**00 20 14.9**	**-0.9**
RCP	**Roxas**	**3.19**	**272**	⇑*e*P			**Pn**	**00 19 49.2**	**+0.5**
RCP				*e*S			**Sn**	**00 20 26.6**	**+1.0**
CGP	**Cagayan de Oro**	**3.24**	**203**	⇓*e*P			**Pn**	**00 19 49.3**	**-0.2**
CGP				*i* S			**Sn**	**00 20 26.9**	**-0.1**
BUKP	**Musuan**	**3.67**	**195**	*e*P			**Pn**	**00 19 56.1**	**+0.9**
BUKP				*e*S			**Sn**	**00 20 32.2**	**-5.2**
KCP	**Kidapawan**	**4.51**	**192**	⇑*e*P			**Pn**	**00 20 08.3**	**+1.6**
KCP				*i* S			**Sn**	**00 20 53.3**	**-4.6**
KSRS	**Korea Array**	**25.95**	**4**	P			**P**	**00 24 26.4**	**+0.4**
	0.6nm,0.3s,baz=185,slow=11,SNR=2.2								
WRA	**Warramunga Arr**	**32.26**	**165**	P			**P**	**00 25 22.8**	**+0.5**
	0.5nm,0.9s,baz=345,slow=9.4,SNR=2.2								
ASAR	**Alice Springs**	**35.75**	**168**	P			**P**	**00 25 54.0**	**+1.5**
	1.1nm,0.7s,baz=346,slow=7.5,SNR=3.6								
SONM	**Songino Array**	**39.82**	**339**	P			**P**	**00 26 25.4**	**-1.3**
	0.2nm,0.4s,baz=148,slow=8.6,SNR=2.2								
H11N1	**WAKE ISLAND Hy**	**40.15**	**73**	T			T	01 09 56.0	
	baz=265,slow=75,SNR=82								
H11N2	**WAKE ISLAND Hy**	**40.16**	**73**	T			T	01 10 01.4	
	baz=265,slow=75,SNR=45								
H11N3	**WAKE ISLAND Hy**	**40.17**	**73**	T			T	01 09 57.6	
	baz=265,slow=75,SNR=74								
STKA	**Stephens Creek**	**45.60**	**161**	P			**P**	**00 27 14.9**	**+1.4**
	1.3nm,0.5s,baz=306,slow=15,SNR=5.0								
MKAR	**Makanchi Array**	**50.93**	**322**	P			**P**	**00 27 52.6**	**-1.8**
	0.7nm,0.9s,baz=114,slow=7.1,SNR=2.0								

*IDC **20** 00:50:11.0±3.7, 38°.25N×73°.41E, h86km±28km, mb3.4/5, mb1 3.6/12, mb1mx3.2/54, mbtmp3.8/12, Error ellipse: s-maj=36.7km s-min=18.8km az=147.0*
*SOME **20** 00:50:13.8, 39°.17N×72°.67E, h20km*
*BJI **20** 00:50:15.5±0.0, 38°.44N×73°.49E, h120km, mB4.1/1, mb4.0/1*
*NNC **20** 00:50:17.4±5.7, 38°.84N×73°.19E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=44.7km s-min=31.1km az=167.0*
ISC 20 00:50:11.1±0.8,38°.21N±0°.07×73°.27E±0°.05,h100km,n38, σ2s70/46,mb3.6/5,2C-2D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.48**	**57**	P			**Pn**	**00 50 47.4**	**-2.7**
KSH				S			**Sn**	**00 51 11.3**	**-8.7**
KSH				smax			smax		
	comp=N,3μm,0.5s								
KSH				smax			smax		
	comp=E,4μm,0.5s								
AML	**Almayashu**	**3.93**	**5**	P			**Pn**	**00 51 11.6**	**+1.9**
	SNR=220								
UCH	**Uchtor**	**4.12**	**13**	P			**Pn**	**00 51 14.4**	**+2.0**
	SNR=77								
KZA	**Kyzart**	**4.15**	**21**	P			**Pn**	**00 51 14.1**	**+1.5**
	SNR=26								
EKS2	**Erkin-Say**	**4.46**	**5**	P			**Pn**	**00 51 19.0**	**+2.4**
	SNR=29								
AAK	**Ala-Archa**	**4.52**	**12**	P			**Pn**	**00 51 16.7**	**-0.7**
	6.9nm,0.3s,baz=180,slow=7.9,SNR=32								
AAK				S			**Sn**	**00 52 08.0**	**-0.9**
	2.1nm,0.3s,baz=293,slow=20,SNR=11								
AAK	**Ala-Archa**	**4.52**	**12**	P			**Pn**	**00 51 19.4**	**+2.0**
	SNR=23								
AAK	**Ala-Archa**	**4.52**	**12**	⇑P			**Pn**	**00 51 19.1**	**+1.6**
	14nm,0.5s								
AAK				⇓S			**Sn**	**00 52 08.0**	**-0.9**
	36nm,0.8s								
MRKS	**Merke**	**4.53**	**360**	*e*P			**Pn**	**00 51 19.4**	**+1.9**
	74nm,0.6s								
MRKS				*e*S			**Sn**	**00 52 06.9**	**-2.2**
	49nm,0.5s								
KBK	**Karagaybulak**	**4.62**	**16**	P			**Pn**	**00 51 20.9**	**+2.1**
	SNR=11								
ULHL	**Ulahol**	**4.63**	**28**	P			**Pn**	**00 51 20.5**	**+1.6**
	SNR=14								
IUG	**Iuzhnay**	**4.65**	**329**	*e*P			**Pn**	**00 51 17.7**	**-1.4**
	3.1nm,0.3s								
IUG				*e*S			**Sn**	**00 52 03.7**	**-8.3**
	160nm,0.5s								
CHMS	**Chumysh**	**4.92**	**13**	P			**Pn**	**00 51 24.6**	**+2.0**
	SNR=5.4								
TKM2	**Tokmak 2**	**5.03**	**20**	P			**Pn**	**00 51 26.1**	**+1.7**
	SNR=7.5								
TKM2	**Tokmak 2**	**5.03**	**20**	⇑P			**Pn**	**00 51 25.7**	**+1.3**
	6.1nm,0.5s								
TKM2				⇓S			**Sn**	**00 52 20.5**	**-0.8**
	16nm,0.8s								
USP	**Ospenovka**	**5.14**	**10**	P			**Pn**	**00 51 27.6**	**+1.9**
	SNR=7.1								
KK31	**Karatay Array**	**5.32**	**338**	P			**Pn**	**00 51 30.6**	**+2.5**
	16nm,0.7s,baz=146,slow=12,SNR=107								
KK31				S			**Sn**	**00 52 25.5**	**-2.6**
	50nm,0.6s,baz=156,slow=25,SNR=33								
BRLS	**Borolday**	**5.48**	**333**	*e*P			**Pn**	**00 51 30.5**	**+0.2**
	6.1nm,0.4s								
BRLS				*e*S			**Sn**	**00 52 25.4**	**-6.5**
	18nm,0.5s								
MDOK	**Medeo**	**5.72**	**29**	*e*P			Pn	00 51 47.4	+14
	4.3nm,0.6s								
MDOK				*e*S			Sn	00 52 54.9	+17
	12nm,0.8s								
MKAR	**Makanchi Array**	**10.85**	**35**	P			**Pn**	**00 52 42.0**	**-1.3**
	0.2nm,0.3s,baz=217,slow=14,SNR=7.2								
GEYT	**Alibeck**	**11.95**	**273**	P			**Pn**	**00 52 59.6**	**+1.5**
	1.7nm,0.3s,baz=95,slow=10,SNR=20								
GEYT				S			**Sn**	**00 55 04.1**	**-5.3**
	0.2nm,0.3s,baz=319,slow=20,SNR=2.4								
WMQ	**Urumqi**	**12.25**	**58**	*e*P			**Pn**	**00 53 04.3**	**+2.3**
PYUN	**Piuthan**	**12.95**	**138**	*e*P			**Pn**	**00 53 11.0**	**-0.5**
	10.0nm,0.3s								
KURBB	**Kurchatov Arra**	**12.96**	**15**	P			**Pn**	**00 53 10.0**	**-1.3**
	0.0nm,0.3s,baz=208,slow=11,SNR=5.5								
DANN	**Dangsing**	**13.17**	**135**	*e*P			**Pn**	**00 53 14.1**	**-0.4**
	9.0nm,0.4s								
KOLN	**Koldanda**	**13.54**	**137**	*e*P			**Pn**	**00 53 18.7**	**-0.5**
	4.2nm,0.3s								
GKN	**Gorkha**	**13.93**	**134**	*e*P			**Pn**	**00 53 24.7**	**+0.4**
PKI	**Pulchoki**	**14.70**	**133**	*e*P			**Pn**	**00 53 35.0**	**+0.7**
	3.8nm,0.3s								
BVAR	**Borovoye Array**	**14.95**	**353**	P			**Pn**	**00 53 37.1**	**+0.1**

0.2nm,0.3s,baz=161,slow=14,SNR=7.7
JIRN Jiri 15.09 130 *e*P **Pn 00 53 39.3 -0.1**
7.1nm,0.3s
RAMN Ramite 15.86 131 *e*P **Pn 00 53 47.9 -1.0**
6.1nm,0.6s
AKTO Aktyubinsk 16.34 323 P **P 00 53 55.5 -0.1**
0.2nm,0.3s,baz=104,slow=9.6,SNR=3.6
ZALV Zalesovo Beam 17.62 23 P **Pn 00 54 09.1 -0.9**
1.3nm,0.3s,baz=224,slow=11,SNR=30
SONM Songino Array 25.88 57 P **P 00 55 34.1 +0.5**
0.8nm,0.8s,baz=254,slow=8.2,SNR=5.7
ARCES ARCESS Array B 40.28 336 P **P 00 57 39.7 +1.7**
1.0nm,0.8s,baz=100,slow=9.2,SNR=5.2
TORD Torodi Ar. Bea 67.56 269 P **P 01 00 59.3 +2.2**
0.6nm,0.4s,baz=48,slow=5.8,SNR=23
INK Inuvik 71.92 10 P **P 01 01 23.5 +0.6**
0.5nm,0.5s,baz=52,slow=9.3,SNR=2.2
YKA Yellowknife Ar 79.44 4 P **P 01 02 07.2 +1.3**
0.2nm,0.4s,baz=351,slow=5.3,SNR=7.1

*IDC **20** 01:04:55.3±1.4,37.33S×176.65E,h256km±13km,mb2.9/2, mb1 3.2/3,mb1mx3.0/17,mbtmp3.7/3,Error ellipse: s-maj=40.5km s-min=29.9km az=111.0*
*WEL **20** 01:04:55.4,37°S±9°×177°E±18,h266km±11km,M2.9/18, MLv2.9/18,Error ellipse: s-maj=0.0km s-min=0.0km az=110.1*
ISC 20 01:04:54.4±1.2,37°2S±0.1×176°94E±0.10,h269km±8km, n73,σ1ᵃ57/79,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**0.84**	**128**	P		**Pn**	**01 05 30.4**	**-0.3**
HAZ				S		**S**	**01 05 57.3**	**-2.0**
RUGZ	**Raukumara Rang**	**0.93**	**141**	P		**Pn**	**01 05 30.9**	**-0.3**
RUGZ				S		**S**	**01 05 58.0**	**-2.3**
URZ	**Urewera**	**1.02**	**172**	P		**Pn**	**01 05 31.8**	**+0.3**
	5.0nm,0.3s,baz=284,slow=4.5,SNR=24							
URZ				S		**S**	**01 05 59.2**	**-1.6**
	8.2nm,0.3s,baz=196,slow=23,SNR=20							
URZ	**Urewera**	**1.02**	**172**	P		**Pn**	**01 05 32.1**	**+0.6**
URZ				S		**S**	**01 06 00.2**	**-0.7**
PKGZ	**Pakihiroa**	**1.11**	**126**	P		**Pn**	**01 05 32.6**	**+0.6**
MXZ	**Matakaoa Point**	**1.14**	**107**	P		**Pn**	**01 05 31.8**	**-0.3**
MXZ				S		**S**	**01 06 00.1**	**-1.8**
MWZ	**Matawai**	**1.19**	**157**	P		**Pn**	**01 05 33.5**	**+1.0**
MURZ	**Murupara**	**1.24**	**186**	P		**Pn**	**01 05 33.8**	**+1.0**
TWGZ	**Tauwhareparae**	**1.25**	**139**	P		**Pn**	**01 05 34.1**	**+1.3**
WMGZ	**Waiomatatini S**	**1.31**	**117**	P		**Pn**	**01 05 33.7**	**+0.5**
RAGZ	**Rawiri**	**1.31**	**163**	P		**Pn**	**01 05 34.8**	**+1.5**
PUZ	**Puketiti**	**1.33**	**129**	P		**Pn**	**01 05 33.9**	**+0.5**
RTZ	**Ruatahuna**	**1.37**	**179**	P		**Pn**	**01 05 34.8**	**+1.2**
KUTZ	**Kaahu Road**	**1.53**	**215**	P		**Pn**	**01 05 36.6**	**+1.9**
SNGZ	**Shannon Statio**	**1.57**	**168**	P		**Pn**	**01 05 36.6**	**+1.6**
CNGZ	**Carnagh Statio**	**1.60**	**141**	P		**Pn**	**01 05 36.5**	**+1.3**
RIGZ	**Rimuhau**	**1.60**	**156**	P		**Pn**	**01 05 36.9**	**+1.7**
MTHZ	**Maungataniwha**	**1.61**	**183**	P		**Pn**	**01 05 36.9**	**+1.6**
RAHZ	**Arahi**	**1.68**	**176**	P		**Pn**	**01 05 37.7**	**+1.9**
WHHZ	**Waihua**	**1.85**	**173**	P		**Pn**	**01 05 39.1**	**+2.0**
KNZ	**Kokohu**	**1.87**	**162**	P		**Pn**	**01 05 38.8**	**+1.6**
BKZ	**Black Stump Fm**	**1.95**	**190**	P		**Pn**	**01 05 39.6**	**+1.5**
ARHZ	**Aropaoanui**	**2.02**	**179**	P		**Pn**	**01 05 40.6**	**+2.1**
MHGZ	**Mahia Peninsul**	**2.06**	**159**	P		**Pn**	**01 05 40.8**	**+1.9**
HIZ	**Hauiti**	**2.08**	**232**	P		**Pn**	**01 05 42.0**	**+2.9**
WTVZ	**West Tongariro**	**2.15**	**209**	P		**Pn**	**01 05 41.8**	**+1.9**
TWVZ	**Taurewa**	**2.18**	**212**	P		**Pn**	**01 05 42.1**	**+2.1**
NGZ	**Ngauruhoe**	**2.20**	**208**	P		**Pn**	**01 05 42.7**	**+2.4**
MCHZ	**McNeill Hill**	**2.21**	**185**	P		**Pn**	**01 05 42.6**	**+2.4**
TUVZ	**Tukino**	**2.26**	**206**	P		**Pn**	**01 05 42.9**	**+2.0**
FWVZ	**Far West T-bar**	**2.29**	**208**	P		**Pn**	**01 05 43.4**	**+2.2**
WHVZ	**Whangaehu Hut**	**2.30**	**207**	P		**Pn**	**01 05 43.4**	**+2.1**
BHHZ	**Black Hill Sta**	**2.35**	**197**	P		**Pn**	**01 05 43.2**	**+1.7**
MOVZ	**Moawhango**	**2.35**	**203**	P		**Pn**	**01 05 43.1**	**+1.5**
PKVZ	**Pokaka**	**2.40**	**211**	P		**Pn**	**01 05 43.7**	**+1.7**
MTVZ	**Mangateitei**	**2.43**	**208**	P		**Pn**	**01 05 44.4**	**+2.0**
KRHZ	**Kereru**	**2.44**	**190**	P		**Pn**	**01 05 44.0**	**+1.6**
VRZ	**Vera Road**	**2.55**	**222**	P		**Pn**	**01 05 46.1**	**+2.7**
KAHZ	**Kahuranaki**	**2.55**	**181**	P		**Pn**	**01 05 46.0**	**+2.5**
PNHZ	**Pukenui**	**2.73**	**192**	P		**Pn**	**01 05 46.7**	**+1.4**
TSZ	**Takapari Road**	**2.92**	**195**	P		**Pn**	**01 05 48.6**	**+1.5**
PRWZ	**Pori Road**	**3.39**	**193**	P		**Pn**	**01 05 54.4**	**+2.2**
MRZ	**Mangatainoka R**	**3.58**	**197**	P		**Pn**	**01 05 55.6**	**+1.4**
HOWZ	**Holdsworth Sta**	**3.81**	**196**	P		**Pn**	**01 05 58.5**	**+1.6**
OGWZ	**Otaki Gorge**	**3.83**	**201**	P		**Pn**	**01 05 57.9**	**+0.9**
KIW	**Kapiti Island**	**3.94**	**203**	P		**Pn**	**01 05 59.1**	**+0.8**
TMWZ	**Te Maipa**	**3.94**	**192**	P		**Pn**	**01 06 00.5**	**+2.2**
MTW	**Mount Morrison**	**4.07**	**195**	P		**Pn**	**01 06 00.7**	**+0.9**
CAW	**Cannon Point**	**4.13**	**200**	P		**Pn**	**01 06 01.5**	**+1.1**
DUWZ	**D'Urville Isla**	**4.26**	**213**	P		**Pn**	**01 06 02.5**	**+0.5**
TRWZ	**Traveller**	**4.26**	**193**	P		**Pn**	**01 06 03.6**	**+1.6**
PAWZ	**Paruwai Farm**	**4.30**	**195**	P		**Pn**	**01 06 03.8**	**+1.4**
MSWZ	**Moikau Station**	**4.37**	**197**	P		**Pn**	**01 06 04.3**	**+1.1**
TCW	**Tory Channel**	**4.47**	**207**	P		**Pn**	**01 06 05.4**	**+1.0**
PLWZ	**Palliser**	**4.51**	**196**	P		**Pn**	**01 06 06.1**	**+1.2**
TUWZ	**Tuamarina**	**4.78**	**208**	P		**Pn**	**01 06 08.9**	**+0.8**
NNZ	**Nelson**	**4.84**	**214**	P		**Pn**	**01 06 09.5**	**+0.7**
QRZ	**Quartz Range**	**4.96**	**222**	P		**Pn**	**01 06 10.2**	**0.0**
BSWZ	**Blackbirch Sta**	**5.06**	**207**	P		**Pn**	**01 06 12.7**	**+1.3**
THZ	**Tophouse**	**5.49**	**213**	P		**Pn**	**01 06 16.5**	**-0.2**
KHZ	**Kahutara**	**5.79**	**208**	P		**Pn**	**01 06 21.7**	**+0.9**
DSZ	**Denniston Nort**	**6.00**	**220**	P		**Pn**	**01 06 23.6**	**+0.8**
GVZ	**Greta Valley S**	**6.45**	**206**	P		**Pn**	**01 06 29.4**	**+0.9**
LTZ	**Lake Taylor**	**6.59**	**211**	P		**Pn**	**01 06 30.5**	**+0.3**
INZ	**Inchbonnie**	**6.91**	**216**	P		**Pn**	**01 06 34.5**	**+0.4**
OKCZ	**Okains Bay**	**7.12**	**203**	P		**Pn**	**01 06 37.8**	**+1.1**
MQZ	**McQueen's Vall**	**7.24**	**205**	P		**Pn**	**01 06 38.1**	**0.0**
RPZ	**Rata Peaks**	**7.87**	**213**	P		**Pn**	**01 06 44.8**	**-1.2**
	1.3nm,0.3s,baz=276,slow=9.0,SNR=2.0							
RPZ				S		**S**	**01 08 12.3**	**-3.8**
	0.6nm,0.3s,baz=48,slow=17,SNR=1.1							
RPZ	**Rata Peaks**	**7.87**	**213**	P		**Pn**	**01 06 46.2**	**+0.2**
ODZ	**Otahua Downs**	**9.12**	**209**	P		**Pn**	**01 07 03.1**	**+1.4**
ASAR	**Alice Springs**	**39.16**	**278**	P		**P**	**01 11 56.6**	**-0.1**
	0.5nm,0.5s,baz=121,slow=7.3,SNR=6.6							
WRA	**Warramunga Arr**	**40.80**	**283**	P		**P**	**01 12 10.7**	**+0.6**
	0.5nm,0.6s,baz=120,slow=8.0,SNR=1.9							
TORD	**Torodi Ar. Bea**	**155.63**	**191**	PKPab		**PKPab**	**01 24 45.0**	**+1.1**
	0.7nm,1.0s,baz=178,slow=5.2,SNR=3.1							

IDC 20 01:08:35.5±2.2,4.02S×150.98E,h0km,mb3.2/2, mb1 3.5/2,mb1mx3.3/20,mbtmp3.2/2,Error ellipse: s-maj=54.1km s-min=12.8km az=5.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.08**	**105**	Pg		Pg	01 08 55.2	-1.1
	137nm,0.3s,baz=121,slow=1.7,SNR=25							
KRVT				Lg		Lg	01 09 12.3	
	120nm,0.3s,baz=230,slow=21,SNR=8.1							
WRA	**Warramunga Arr**	**22.66**	**224**	P		P	01 13 36.9	-1.7
	0.5nm,0.5s,baz=51,slow=10.0,SNR=2.4							
ASAR	**Alice Springs**	**25.56**	**219**	P		P	01 14 07.8	+1.4
	0.3nm,0.5s,baz=56,slow=8.1,SNR=2.6							
TORD	**Torodi Ar. Bea**	**148.34**	**289**	PKPbc		PKPbc	01 28 24.6	-0.4
	0.3nm,1.0s,baz=58,slow=2.2,SNR=4.7							

WEL 20 01:15:07.7,38°S±1°×177°E±°,h66km±2km,M3.4/23, ML3.7/23,MLv3.4/23,Error ellipse: s-maj=0.0km s-min=0.0km az=23.8,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MUGZ	**Murupara**	**0.07**	**191**	P		Pn	01 15 17.4	0.0
MUGZ				S		Sn	01 15 24.7	+0.3
RRRZ	**Republican Roa**	**0.23**	**289**	P		Pn	01 15 18.3	+0.3
RTZ	**Ruatahuna**	**0.25**	**143**	P		Pn	01 15 18.2	+0.1
RTZ				S		Sn	01 15 26.4	+0.6
TARZ	**Mount Tarawera**	**0.28**	**309**	P		Pn	01 15 19.0	+0.6
URZ	**Urewera**	**0.30**	**59**	P		Pn	01 15 18.4	+0.1
URZ				S		Sn	01 15 26.3	+0.2
EDRZ	**Edgecumbe**	**0.31**	**353**	P		Pn	01 15 18.8	+0.3
PRRZ	**Plateau Road**	**0.32**	**254**	P		Pn	01 15 18.8	+0.2
PRRZ				S		Sn	01 15 26.7	+0.3
MKRZ	**Makatiti**	**0.37**	**317**	P		Pn	01 15 20.4	+1.4
ALRZ	**Allen Road**	**0.38**	**247**	P		Pn	01 15 19.3	+0.3
ALRZ				S		Sn	01 15 28.0	+0.7
HLRZ	**Highlands Stat**	**0.38**	**295**	P		Pn	01 15 19.7	+0.7
HRRZ	**Handcock Road**	**0.40**	**273**	P		Pn	01 15 19.5	+0.3
MARZ	**Manawahe**	**0.44**	**348**	P		Pn	01 15 20.0	+0.4
HSRZ	**Hossack Road**	**0.44**	**283**	P		Pn	01 15 20.2	+0.7
MTHZ	**Maungataniwha**	**0.44**	**174**	P		Pn	01 15 19.7	+0.1
OMRZ	**Omania**	**0.45**	**313**	P		Pn	01 15 20.1	+0.5
RAGZ	**Rawiri**	**0.50**	**100**	P		Pn	01 15 20.4	+0.2
WPRZ	**Whakapapatarin**	**0.50**	**258**	P		Pn	01 15 20.7	+0.6
MRHZ	**Matea Rd**	**0.51**	**214**	P		Pn	01 15 20.2	-0.1
UTU	**Utuhina**	**0.52**	**297**	P		Pn	01 15 21.3	+1.0
GRRZ	**Galatos Road**	**0.54**	**277**	P		Pn	01 15 21.3	+0.8
RAHZ	**Arahi**	**0.55**	**155**	P		Pn	01 15 21.1	+0.4
NGRZ	**Ngongotaha**	**0.56**	**303**	P		Pn	01 15 21.8	+1.0
SNGZ	**Shannon Statio**	**0.57**	**130**	P		Pn	01 15 21.4	+0.6
WHRZ	**Whale Island**	**0.58**	**15**	P		Pn	01 15 21.4	+0.4
KARZ	**Kaharoa**	**0.58**	**312**	P		Pn	01 15 21.4	+0.5
MWZ	**Matawai**	**0.59**	**82**	P		Pn	01 15 21.3	+0.3
OPRZ	**Ohinepanea**	**0.60**	**342**	P		Pn	01 15 21.3	+0.2
NMHZ	**Naumai**	**0.68**	**179**	P		Pn	01 15 22.2	0.0
HATZ	**Hinemaiaia**	**0.72**	**229**	P		Pn	01 15 22.6	0.0
WHHZ	**Waihua**	**0.75**	**152**	P		Pn	01 15 23.6	+0.7
KUTZ	**Kaahu Road**	**0.76**	**264**	P		Pn	01 15 23.6	+0.6
BKZ	**Black Stump Fm**	**0.79**	**197**	P		Pn	01 15 23.2	-0.2
TGRZ	**Tauranga**	**0.80**	**329**	P		Pn	01 15 23.9	+0.4
RIGZ	**Rimuhau**	**0.82**	**111**	P		Pn	01 15 24.2	+0.5
RUGZ	**Raukumara Rang**	**0.83**	**58**	P		Pn	01 15 23.9	-0.1
ARHZ	**Aropaoanui**	**0.86**	**169**	P		Pn	01 15 25.1	+0.8
KMRZ	**Kaimai**	**0.88**	**310**	P		Pn	01 15 25.0	+0.6
WATZ	**Wairara**	**0.88**	**250**	P		Pn	01 15 24.7	+0.3
RATZ	**Rangitukua**	**0.91**	**240**	P		Pn	01 15 25.3	+0.4
RITZ	**Rihia Road**	**0.92**	**232**	P		Pn	01 15 25.5	+0.6
KNZ	**Kokohu**	**0.92**	**131**	P		Pn	01 15 24.9	-0.1
WIZ	**White Island**	**0.94**	**20**	P		Pn	01 15 25.2	0.0
TWGZ	**Tauwhareparae**	**0.97**	**76**	P		Pn	01 15 27.6	+2.0
PRGZ	**Paritu Road**	**1.00**	**121**	P		Pn	01 15 25.9	0.0
HAZ	**Te Kaha**	**1.02**	**51**	P		Pn	01 15 26.1	-0.1
MCHZ	**McNeill Hill**	**1.03**	**184**	P		Pn	01 15 27.1	+0.8
KWHZ	**Kaweka Forest**	**1.05**	**196**	P		Pn	01 15 27.1	+0.5
CNGZ	**Carnagh Statio**	**1.12**	**94**	P		Pn	01 15 28.9	+1.5
KRVZ	**Karewarewa**	**1.12**	**232**	P		Pn	01 15 28.2	+0.6
MHGZ	**Mahia Peninsul**	**1.15**	**130**	P		Pn	01 15 27.8	0.0
PKGZ	**Pakihiroa**	**1.15**	**63**	P		Pn	01 15 28.8	+1.0
WTVZ	**West Tongariro**	**1.17**	**233**	P		Pn	01 15 28.9	+0.6
NGZ	**Ngauruhoe**	**1.20**	**230**	P		Pn	01 15 29.2	+0.5
PUZ	**Puketiti**	**1.21**	**74**	P		Pn	01 15 29.4	+0.8
BHHZ	**Black Hill Sta**	**1.21**	**207**	P		Pn	01 15 28.7	-0.1
TOZ	**Tahuroa Road**	**1.22**	**304**	P		Pn	01 15 29.6	+0.8
TUVZ	**Tukino**	**1.23**	**226**	P		Pn	01 15 29.5	+0.4
TWVZ	**Taurewa**	**1.24**	**238**	P		Pn	01 15 29.7	+0.5
CKHZ	**Cape Kidnapper**	**1.26**	**170**	P		Pn	01 15 29.2	-0.2
KRHZ	**Kereru**	**1.27**	**195**	P		Pn	01 15 29.4	-0.1
WHVZ	**Whangaehu Hut**	**1.28**	**227**	P		Pn	01 15 30.0	+0.3
FWVZ	**Far West T-bar**	**1.28**	**229**	P		Pn	01 15 30.1	+0.3
MOVZ	**Moawhango**	**1.28**	**219**	P		Pn	01 15 29.5	-0.1
DRZ	**Dome Shelter**	**1.29**	**228**	P		Pn	01 15 30.3	+0.4
TRVZ	**Turoa**	**1.31**	**227**	P		Pn	01 15 30.5	+0.3
KAHZ	**Kahuranaki**	**1.38**	**177**	P		Pn	01 15 30.7	-0.2
MTVZ	**Mangateitei**	**1.41**	**226**	P		Pn	01 15 31.7	+0.3
WMGZ	**Waiomatatini S**	**1.42**	**66**	P		Pn	01 15 32.4	+1.1
PKVZ	**Pokaka**	**1.43**	**232**	P		Pn	01 15 32.1	+0.6
MXZ	**Matakaoa Point**	**1.47**	**55**	P		Pn	01 15 33.5	+1.5
HIZ	**Hauiti**	**1.52**	**266**	P		Pn	01 15 33.7	+0.9
PNHZ	**Pukenui**	**1.57**	**197**	P		Pn	01 15 32.7	-0.7
PXZ	**Pawanui**	**1.62**	**178**	P		Pn	01 15 32.9	-1.1
WPHZ	**Waipukurau**	**1.67**	**189**	P		Pn	01 15 34.4	-0.4
VRZ	**Vera Road**	**1.74**	**245**	P		Pn	01 15 36.5	+0.9
TSZ	**Takapari Road**	**1.76**	**201**	P		Pn	01 15 35.4	-0.7
MKAZ	**Moumakai**	**1.83**	**315**	P		Pn	01 15 37.9	+1.0
PRHZ	**Porangahau**	**1.85**	**184**	P		Pn	01 15 35.9	-1.4
KUZ	**Kuaotunu**	**1.87**	**333**	P		Pn	01 15 38.0	+0.5
WAZ	**Wanganui**	**1.94**	**226**	P		Pn	01 15 39.1	+1.1
WIAZ	**Waiheke Island**	**2.08**	**320**	P		Pn	01 15 41.5	+1.2
OHWZ	**Ohakea**	**2.12**	**212**	P		Pn	01 15 42.0	+1.2
LREZ	**Lake Rotokare**	**2.13**	**240**	P		Pn	01 15 42.6	+1.6
DREZ	**Durham Road**	**2.16**	**248**	P		Pn	01 15 43.9	+2.5
AWAZ	**Awhitu Peninsu**	**2.17**	**308**	P		Pn	01 15 42.7	+1.2
MBAZ	**Motutapu North**	**2.22**	**317**	P		Pn	01 15 43.6	+1.4
PREZ	**Palmer Road**	**2.25**	**245**	P		Pn	01 15 45.6	+3.0
PKE	**Pukeiti**	**2.32**	**250**	P		Pn	01 15 45.7	+2.1
KHEZ	**Kahui Hut**	**2.34**	**247**	P		Pn	01 15 46.0	+2.2
GRZ	**Great Barrier**	**2.41**	**333**	P		Pn	01 15 45.6	+0.9
MRZ	**Mangatainoka R**	**2.43**	**202**	P		Pn	01 15 43.1	-2.0
HOWZ	**Holdsworth Sta**	**2.67**	**201**	P		Pn	01 15 45.7	-2.6
OGWZ	**Otaki Gorge**	**2.71**	**207**	P		Pn	01 15 46.9	-1.8
TMWZ	**Te Maipa**	**2.78**	**194**	P		Pn	01 15 47.4	-2.4
KIW	**Kapiti Island**	**2.84**	**210**	P		Pn	01 15 48.6	-2.0
MTW	**Mount Morrison**	**2.91**	**199**	P		Pn	01 15 49.4	-2.2
TRWZ	**Traveller**	**3.10**	**195**	P		Pn	01 15 51.9	-2.3
PAWZ	**Paruwai Farm**	**3.10**	**198**	P		Pn	01 15 51.9	-2.9
WCZ	**Waipu Caves**	**3.15**	**321**	P		Pn	01 15 56.2	+1.4
MSWZ	**Moikau Station**	**3.22**	**201**	P		Pn	01 15 53.6	-2.3
DUWZ	**D'Urville Isla**	**3.25**	**222**	P		Pn	01 15 54.4	-1.9
BHW	**Baring Head**	**3.33**	**206**	P		Pn	01 15 54.7	-2.6
PLWZ	**Palliser**	**3.36**	**200**	P		Pn	01 15 54.7	-3.1
TCW	**Tory Channel**	**3.40**	**214**	P		Pn	01 15 55.3	-2.9
TUWZ	**Tuamarina**	**3.72**	**215**	P		Pn	01 15 59.9	-2.8
NNZ	**Nelson**	**3.84**	**222**	P		Pn	01 16 02.4	-1.8
BSWZ	**Blackbirch Sta**	**3.98**	**213**	P		Pn	01 16 03.8	-2.4
QRZ	**Quartz Range**	**4.08**	**232**	P		Pn	01 16 05.7	-1.8
OUZ	**Omahuta**	**4.09**	**320**	P		Pn	01 16 09.7	+2.1
THZ	**Tophouse**	**4.48**	**220**	P		Pn	01 16 10.0	-3.0
DSZ	**Denniston Nort**	**5.07**	**227**	P		Pn	01 16 18.7	-2.4

*UCR **20** 01:28:24.6±1.7,12.54N×87.79W,h56km±26km,ML3.8*
*SSS **20** 01:28:25.5,12.54N×87.89W,h31km,ML3.8*
*INET **20** 01:28:25.0,12.52N×87.74W,h55km,ML4.0*
*SNET **20** 01:28:25.5±1.1,12.54N×87.89W,h31km±4km,ML3.8*
ISC 20 01:28:25.3±1.4,12.58N±0.09×87.76W±0.06,h60km±20km, n42,σ0ᵃ93/56,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.44**	**26**	*e*P		**Pn**	**01 28 37.1**	**+0.3**
CRIN	**San Cristobal**	**0.70**	**80**	*e*P		**Pn**	**01 28 39.7**	**0.0**
LCND	**La Caada**	**0.74**	**350**	*e*P		**Pn**	**01 28 40.0**	**-0.1**
LCND				*e*S		**Sn**	**01 28 52.2**	**+1.3**
LCND				IAML			01 28 54.3	
	comp=Z,4μm,0.4s							
LCND	**La Caada**	**0.74**	**350**	*e*P		**Pn**	**01 28 40.0**	**-0.1**
LCND				*e*S		**Sn**	**01 28 52.2**	**+1.3**
LCND				IAML			01 28 54.3	
	comp=Z,4μm,0.4s							
JUCU	**Jucuarın**	**0.82**	**325**	*e*P		**Pn**	**01 28 40.2**	**-1.0**
JUCU				*e*S		**Sn**	**01 28 51.7**	**-1.1**
JUCU	**Jucuarın**	**0.82**	**325**	*e*P		**Pn**	**01 28 40.2**	**-1.0**
JUCU				*e*S		**Sn**	**01 28 51.7**	**-1.1**
BLLM	**Bellamira**	**0.98**	**331**	*e*P		**Pn**	**01 28 42.9**	**-0.3**
BLLM	**Bellamira**	**0.98**	**331**	*e*P		**Pn**	**01 28 42.9**	**-0.3**
LCY	**Lacayo**	**0.99**	**328**	*e*P		**Pn**	**01 28 43.3**	**0.0**
LCY	**Lacayo**	**0.99**	**328**	*e*P		**Pn**	**01 28 43.3**	**0.0**
CNGN	**Cerro Negro**	**1.04**	**94**	*e*P		**Pn**	**01 28 41.6**	**-2.2**
PACA	**Pacayal**	**1.04**	**328**	*e*P		**Pn**	**01 28 43.9**	**-0.2**
PACA				*e*S		**Sn**	**01 28 58.7**	**+0.8**
PACA	**Pacayal**	**1.04**	**328**	*e*P		**Pn**	**01 28 43.9**	**-0.2**
PACA				*e*S		**Sn**	**01 28 58.7**	**+0.8**
ALJI	**Alcalda de J**	**1.09**	**313**	*e*P		**Pn**	**01 28 43.8**	**-0.7**
ALJI				*e*S		**Sn**	**01 28 58.6**	**-0.2**
ALJI				IAML			01 29 01.6	
	comp=Z,2μm,0.1s							
ALJI	**Alcalda de J**	**1.09**	**313**	*e*P		**Pn**	**01 28 43.8**	**-0.7**
ALJI				*e*S		**Sn**	**01 28 58.6**	**-0.2**
ALJI				IAML			01 29 01.6	
	comp=Z,2μm,0.1s							
FAGO	**Alcalda de S**	**1.16**	**343**	*e*P		**Pn**	**01 28 45.3**	**-0.2**
FAGO				*e*S		**Sn**	**01 29 00.9**	**+0.3**
FAGO	**Alcalda de S**	**1.16**	**343**	*e*P		**Pn**	**01 28 45.3**	**-0.2**
FAGO				*e*S		**Sn**	**01 29 00.9**	**+0.3**
TECA	**Tecapa**	**1.17**	**322**	*e*P		**Pn**	**01 28 45.4**	**-0.3**
TECA	**Tecapa**	**1.17**	**322**	*e*P		**Pn**	**01 28 45.4**	**-0.3**
COEB	**Comit de Eme**	**1.19**	**321**	*e*P		**Pn**	**01 28 45.7**	**-0.2**
COEB				*e*S		**Sn**	**01 29 01.1**	**-0.1**
COEB	**Comit de Eme**	**1.19**	**321**	*e*P		**Pn**	**01 28 45.7**	**-0.2**
COEB				*e*S		**Sn**	**01 29 01.1**	**-0.1**
COEG	**Centro de Oper**	**1.51**	**314**	*e*P		**Pn**	**01 28 49.8**	**-0.4**
COEG				*e*S		**Sn**	**01 29 08.9**	**0.0**
COEG				IAML			01 29 13.2	
	comp=Z,2μm,0.3s							
COEG	**Centro de Oper**	**1.51**	**314**	*e*P		**Pn**	**01 28 49.8**	**-0.4**
COEG				*e*S		**Sn**	**01 29 08.9**	**0.0**
COEG				IAML			01 29 13.2	
	comp=Z,2μm,0.3s							
LFRS	**El Faro**	**1.64**	**309**	*e*P		**Pn**	**01 28 51.8**	**-0.3**
LFRS	**El Faro**	**1.64**	**309**	*e*P		**Pn**	**01 28 51.8**	**-0.3**
SNET	**Serv Nac Est T**	**1.81**	**308**	*e*S		**Sn**	**01 29 15.9**	**-0.4**
SNET				IAML			01 29 18.4	
	comp=Z,834nm,0.3s							
SNET	**Serv Nac Est T**	**1.81**	**308**	*e*S		**Sn**	**01 29 15.9**	**-0.4**
SNET				IAML			01 29 18.4	
	comp=Z,834nm,0.3s							
MATN	**Matagalpa**	**1.82**	**79**	*e*P		**Pn**	**01 28 53.6**	**-0.8**
BOQS	**Boqueron**	**1.88**	**308**	*e*P		**Pn**	**01 28 55.9**	**+0.6**
BOQS				*e*S		**Sn**	**01 29 18.3**	**+0.2**
BOQS	**Boqueron**	**1.88**	**308**	*e*P		**Pn**	**01 28 55.9**	**+0.6**
BOQS				*e*S		**Sn**	**01 29 18.3**	**+0.2**
ACON	**Acoyapa**	**2.60**	**103**	*e*P		**Pn**	**01 29 03.1**	**-1.8**
GBS3	**Finca Las Img**	**2.88**	**128**	*e*P		**Pn**	**01 29 08.8**	**0.0**
GB1A	**Borinquen Arri**	**2.90**	**127**	*e*P		**Pn**	**01 29 09.5**	**+0.3**
LAPC	**Finca la Perla**	**2.90**	**128**	*e*P		**Pn**	**01 29 08.6**	**-0.5**
BUEV	**Buena Vista**	**2.90**	**127**	*e*P		**Pn**	**01 29 08.2**	**-1.0**
BUAI	**Buenos Aires**	**2.92**	**125**	*e*P		**Pn**	**01 29 10.6**	**+1.2**
GUAI	**GUAI**	**3.18**	**136**	*e*P		**Pn**	**01 29 12.2**	**-0.7**
PLVR	**Palo Verde**	**3.24**	**133**	*e*P		**Pn**	**01 29 13.5**	**-0.3**
PTEN	**Parque Tenorio**	**3.29**	**124**	*e*P		**Pn**	**01 29 13.8**	**-0.6**
ESPN	**Las Esperanzas**	**3.40**	**96**	*e*P		Pn	01 29 11.0	-4.9
JTS	**Las Juntas de**	**3.57**	**129**	*e*P		Pn	01 29 24.0	+5.7
ARE1	**Arenal 1**	**3.65**	**125**	*e*P		**Pn**	**01 29 23.7**	**+4.3**

*BJI **20** 01:39:06.0±0.0,18.20N×100.00W,h5km,mB5.3/2, Ms5.0/6,Ms7 4.7/4*
*NEIC **20** 01:39:12.8±1.8,18.04N±0.04×100.04W±0.05,h58km±4km, Error ellipse: s-maj=7.0km s-min=5.1km az=81.0*
*IDC **20** 01:

441A DeRidder 14.09 25 Pn 01 42 29.5 +0.3
MNTX Cornudas Mount 14.41 341 P Pn 01 42 34.6 +1.2
baz=159,SNR=46
MNTX Cornudas Mount 14.41 341 Pn 01 42 34.6 +1.2
NATX Nacogdoches 14.49 19 P Pn 01 42 33.6 -0.8
baz=201,SNR=24
NATX Nacogdoches 14.49 19 Pn 01 42 33.7 -0.7
ABTX Abilene, Hawle 14.51 1 P Pn 01 42 34.5 -0.2
baz=181
ABTX Abilene, Hawle 14.51 1 Pn 01 42 35.0 +0.3
MATN Matagalpa 14.54 109 Pn 01 42 34.5 -0.8
GDL2 Guadalupe Moun 14.61 345 Pn 01 42 35.7 -0.4
HSIG 14.78 320 Pn 01 42 37.3 -0.9
342A Flagon Creek P 14.99 26 Pn Pn 01 42 40.3 -0.6
ACON Acoyapa 15.59 111 IAmb IAmb 01 43 08.6
comp=Z,69nm,1.1s
319A Douglas 15.67 330 Pn Pn 01 42 49.8 0.0
319A IAmb IAmb 01 42 59.7
comp=Z,102nm,0.8s
344A Westbrook Farm 15.79 31 IAmb IAmb 01 42 55.3
comp=Z,128nm,1.1s
Z38A Mt. Pleasant 15.81 16 Pn Pn 01 42 52.0 +0.5
121A Cookes Peak, D 16.01 336 P P 01 42 56.1 -0.7
baz=152,SNR=25
121A S S 01 46 03.8 +1.8
baz=152
MSTX Muleshoe 16.03 352 P Pn 01 42 54.2 -0.2
baz=170,SNR=145
346A Big Creek Wild 16.38 34 IAmb IAmb 01 43 03.1
comp=Z,116nm,0.8s
Z41A Richland Creek 16.48 22 P Pn 01 42 58.8 -1.1
baz=205,SNR=23
VBMS Vicksburg 16.52 30 P Pn 01 42 58.8 -1.6
baz=213
JTS Las Juntas de 16.55 116 P Pn 01 43 00.9 0.0
comp=Z,0.6nm,0.3s,baz=30,slow=9.5,SNR=3.2
JTS Las Juntas de 16.55 116 P P 01 43 02.1 -0.6
JTS Las Juntas de 16.55 116 P P 01 43 02.1 -0.6
WMOK Wichita Mounta 16.65 4 P Pn 01 43 00.4 -1.7
baz=184,SNR=46
AMTX Amarillo 16.82 355 IAmb IAmb 01 43 07.6
comp=Z,96nm,0.7s
X37A Clayton 16.99 13 IAmb IAmb 01 43 11.0
comp=Z,128nm,1.0s
TUC Tucson 17.18 328 P P 01 43 09.9 +0.3
TUC pmax pmax
comp=Z,22nm,1.0s
TUC Tucson 17.18 328 P P 01 43 09.9 +0.3
baz=143
TUC Tucson 17.18 328 P P 01 43 09.9 +0.3
MIAR Mount Ida 17.41 18 P Pn 01 43 09.7 -1.7
baz=201,SNR=75
OKCFA Oklahoma City 17.44 7 P P 01 43 12.5 +0.1
CCAR Cane Creek 17.45 24 P Pn 01 43 11.7 -0.2
146A Union 17.57 32 IAmb IAmb 01 43 16.2
comp=Z,87nm,0.8s
X40A Basin Creek Fa 17.59 20 P Pn 01 43 12.3 -1.3
baz=203,SNR=19
ANMO Albuquerque 17.76 343 P Pn 01 43 15.8 -0.1
comp=Z,0.6nm,0.3s,baz=152,slow=14,SNR=95
ANMO Albuquerque 17.76 343 *ceP* Pn 01 43 15.6 -0.3
ANMO pmax pmax
comp=Z,38nm,0.8s
ANMO Albuquerque 17.76 343 P P 01 43 17.9 +1.7
baz=159
ANMO Albuquerque 17.76 343 P P 01 43 17.4 +1.3
W39A Magazine 17.96 17 P P 01 43 17.5 -0.6
baz=199,SNR=73
W39A Magazine 17.96 17 IAmb IAmb 01 43 26.1
comp=Z,89nm,0.8s
214A Organ Pipe Nat 18.01 323 P Pn 01 43 20.9 +2.0
baz=137,SNR=31
214A Organ Pipe Nat 18.01 323 P Pn 01 43 19.6 +0.7
UALR University of 18.01 21 P P 01 43 18.4 -0.3
UALR IAmb IAmb 01 43 32.9
comp=Z,73nm,0.9s
TUL1 Leonard 18.18 11 P P 01 43 20.1 -0.4
baz=193,SNR=88
TUL1 Leonard 18.18 11 P Pn 01 43 20.9 0.0
X43A Marvell 18.32 25 P Pn 01 43 22.4 -0.2
baz=209
W41B Gary Mavity, V 18.41 21 P P 01 43 22.5 -0.5
baz=204,SNR=32
WHAR Wooly Hollow 18.50 20 IAmb IAmb 01 43 26.3
comp=Z,114nm,1.1s
Z47A Carrollton 18.52 33 P P 01 43 23.7 -0.6
Z47A IAmb IAmb 01 43 26.1
comp=Z,55nm,0.8s
X18A Snowflake 18.63 334 P Pn 01 43 27.0 +0.5
X18A IAmb IAmb 01 43 33.0
comp=Z,46nm,0.8s
X18A PcP 01 47 53.4 +0.7
HHAR Hobbs 18.94 15 P P 01 43 28.2 -0.7
HHAR IAmb IAmb 01 43 31.9
comp=Z,61nm,1.0s
OXF Oxford 18.94 28 P P 01 43 27.5 -1.4
baz=212,SNR=18
OXF Oxford 18.94 28 IAmb IAmb 01 43 29.9
comp=Z,103nm,1.0s
LRAL Lakeview Retre 18.98 36 P P 01 43 28.5 -0.8
baz=221,SNR=20
U38A Gravette 18.98 14 IAmb IAmb 01 43 29.7
comp=Z,78nm,0.8s
W18A Petrified Fore 19.05 335 P Pn 01 43 31.5 0.0
baz=150
FCAR Ozark Folk Cen 19.10 20 P P 01 43 30.6 -0.1
FCAR IAmb IAmb 01 43 33.2
comp=Z,91nm,0.9s
352A Blakely 19.13 43 P P 01 43 31.2 +0.2
352A IAmb IAmb 01 43 36.9
comp=Z,64nm,0.8s
CBCY The Bluff, Cay 19.28 82 P P 01 43 32.7 0.0
U40A Yellville 19.31 18 P P 01 43 32.4 -0.4
baz=201,SNR=64
U40A Yellville 19.31 18 P P 01 43 32.5 -0.4
U40A IAmb IAmb 01 43 35.2
comp=Z,107nm,0.9s
T25A Trinidad 19.39 349 P Pn 01 43 35.4 -0.2
baz=167,SNR=58
W45A Hickory Valley 19.58 27 IAmb IAmb 01 43 38.5
comp=Z,83nm,0.9s
LCAR Lake Charles 19.59 22 IAmb IAmb 01 43 47.5
comp=Z,79nm,1.1s
Y14A Wickenburg 19.60 326 P Pn 01 43 37.4 -0.6
Z50A Ashland 19.75 37 P P 01 43 36.8 -1.0
baz=223,SNR=37
Z50A Ashland 19.75 37 IAmb IAmb 01 43 42.8
comp=Z,47nm,0.7s
DWPF Disney Wildern 19.82 56 P P 01 43 37.9 -0.6
baz=244
Y49A Blount Mountai 19.92 35 IAmb IAmb 01 43 42.2
comp=Z,92nm,0.9s
GLA Glamis 19.98 321 P P 01 43 41.1 +0.8
GLA pmax pmax
comp=Z,53nm,0.9s
GLA Glamis 19.98 321 P Pn 01 43 42.3 -0.1
baz=134,SNR=8.9
GLA Glamis 19.98 321 P P 01 43 41.1 +0.8
GLA IAmb IAmb 01 43 50.1
comp=Z,53nm,0.8s
TIGA Tifton 19.99 45 P P 01 43 40.4 0.0
baz=232
X48A Hartselle 20.03 33 IAmb IAmb 01 43 43.8
comp=Z,77nm,1.0s
152A Waverly Hall 20.06 41 P P 01 43 40.0 -1.1
WUAZ Wupatki 20.08 332 P Pn 01 43 44.1 +0.4
baz=147,SNR=85
SDCO Great Sand Dun 20.19 347 P P 01 43 43.4 +0.6
baz=165,SNR=42
Y12C Blythe 20.30 323 P Pn 01 43 45.7 -0.5
baz=136,SNR=28
Y12C Blythe 20.30 323 IAmb IAmb 01 43 46.8
comp=Z,96nm,0.9s
R32A Long Quarter, 20.32 3 IAmb IAmb 01 43 44.3
comp=Z,81nm,0.9s
MVCO Mesa Verde 20.47 340 P P 01 43 47.0 +1.2
baz=156,SNR=45
MVCO Mesa Verde 20.47 340 IAmb IAmb 01 43 51.0
comp=Z,75nm,1.1s
IKP In-Ko-Pah, Jac 20.49 318 P P 01 43 46.8 +0.9
baz=131,SNR=10
PDMCI Parker Dam,Lak 20.49 325 P Pn 01 43 47.4 -1.0
baz=138,SNR=19
S22A 4UR Ranch, Cre 20.49 345 P Pn 01 43 47.8 -0.9
baz=161,SNR=72
SWSC Sam W. Stewart 20.49 319 P Pn 01 43 47.7 -0.7
baz=132,SNR=8.3

CBKS Cedar Bluff 20.68 1 P P 01 43 47.3 -0.6
baz=181,SNR=41
HICK Hickman 20.74 25 P P 01 43 48.1 -0.4
BC3 Big Chuckawall 20.77 321 P P 01 43 49.9 +0.9
baz=134,SNR=13
MONP2 Monument Peak 20.85 318 P Pn 01 43 51.5 -1.4
baz=131,SNR=18
FPAL Fort Paine 20.87 35 IAmb IAmb 01 43 53.2
comp=Z,62nm,1.0s
BAR Barrett 20.87 317 P P 01 43 49.0 -0.9
BAR IAmb IAmb 01 43 55.8
comp=Z,51nm,0.9s
IRM Iron Mountain 20.95 323 P Pn 01 43 52.6 -1.3
baz=136,SNR=19
KSCO Kaye Shedlock' 21.00 354 P P 01 43 51.4 0.0
baz=173,SNR=9.2
KSCO Kaye Shedlock' 21.00 354 IAmb IAmb 01 43 53.0
comp=Z,80nm,0.8s
WVT Waverly 21.00 29 P P 01 43 49.8 -1.4
WVT pmax pmax
comp=Z,29nm,0.6s
WVT Waverly 21.00 29 P P 01 43 49.2 -2.1
baz=214
WVT Waverly 21.00 29 P P 01 43 49.8 -1.4
WVT IAmb IAmb 01 43 53.1
comp=Z,29nm,0.6s
154A Montrose 21.05 43 IAmb IAmb 01 43 54.7
comp=Z,96nm,1.0s
NEE2 Needles Airpor 21.10 325 P P 01 43 53.8 +1.5
baz=138,SNR=10
V48A Smith Brothers 21.16 31 IAmb IAmb 01 43 56.4
comp=Z,34nm,0.8s
KSU1 Kansas State U 21.18 7 P P 01 43 52.1 -1.1
baz=189,SNR=22
Y52A Lilburn 21.27 39 P P 01 43 52.0 -2.2
baz=226,SNR=13
Y52A Lilburn 21.27 39 IAmb IAmb 01 43 53.9
comp=Z,29nm,0.8s
109C Camp Elliot, M 21.28 317 P P 01 43 55.1 +0.8
baz=130,SNR=5.7
109C Camp Elliot, M 21.28 317 IAmb IAmb 01 43 56.9
comp=Z,35nm,0.8s
Q24A Divide 21.30 349 P P 01 43 54.0 -0.8
baz=166
X51A Calhoun 21.31 37 IAmb IAmb 01 43 56.7
comp=Z,39nm,0.8s
GOGA Godfrey 21.33 41 P P 01 43 52.8 -2.0
baz=226,SNR=27
GOGA Godfrey 21.33 41 IAmb IAmb 01 43 56.6
comp=Z,50nm,0.8s
BELC Belle Mtn. Jos 21.34 321 P P 01 43 56.3 +1.2
baz=134,SNR=9.9
XPFO Pion Flat 21.35 320 P P 01 43 54.7 -0.4
PFO Pinyon Flats O 21.35 320 P P 01 43 56.1 +0.9
comp=Z,19nm,0.9s,baz=124,slow=7.6,SNR=12
PFO Pinyon Flats O 21.35 320 P P 01 43 56.5 +1.3
baz=132,SNR=6.7
PFO Pinyon Flats O 21.35 320 P P 01 43 55.1 -0.1
CCM Cathedral Cave 21.36 19 P P 01 43 53.9 -1.2
CCM pmax pmax
comp=Z,123nm,1.0s
CCM Cathedral Cave 21.36 19 P P 01 43 53.7 -1.5
baz=203
CCM Cathedral Cave 21.36 19 P P 01 43 53.9 -1.2
T45A Paducah 21.39 26 P P 01 43 53.9 -1.5
PV13 Radium Mtn., P 21.44 341 IAmb IAmb 01 44 01.3
comp=Z,33nm,0.8s
PV15 Pax Valley 21.51 342 IAmb IAmb 01 44 17.6
comp=Z,52nm,0.9s
W50A Signal Mountai 21.52 35 IAmb IAmb 01 44 00.5
comp=Z,47nm,0.9s
PV12 Saucer Basin, 21.58 341 IAmb IAmb 01 44 02.1
comp=Z,45nm,0.9s
PV11 David Mesa, Pa 21.59 341 IAmb IAmb 01 44 06.0
comp=Z,31nm,0.8s
PV17 East Wray Mesa 21.60 341 P P 01 43 58.5 +0.6
PV16 Nyswonger Mesa 21.61 341 P P 01 43 58.8 +0.7
PV07 Paradox Valley 21.65 341 P P 01 43 59.7 +1.3
PV07 IAmb IAmb 01 44 04.8
comp=Z,47nm,1.0s
CLTN Cedars of Leba 21.68 31 IAmb IAmb 01 44 02.7
comp=Z,35nm,0.8s
PV04 Paradox Valley 21.68 341 IAmb IAmb 01 44 02.4
comp=Z,42nm,0.9s
GMRC Granite Mounta 21.69 323 P P 01 43 60.0 +1.1
baz=136,SNR=20
PV14 Lion Creek, Pa 21.70 341 P P 01 43 59.5 +0.5
PV10 Paradox Valley 21.71 341 P P 01 43 57.9 -1.2
PV10 IAmb IAmb 01 44 04.3
comp=Z,42nm,1.0s
PV23 Carpenter Ridg 21.77 341 IAmb IAmb 01 44 03.1
comp=Z,34nm,0.8s
PV22 Blue Mesa, Par 21.78 341 IAmb IAmb 01 44 03.2
comp=Z,38nm,1.0s
MURC Murrieta 21.80 319 P P 01 44 01.3 +1.4
baz=131,SNR=9.6
PV09 Paradox Valley 21.85 341 P P 01 44 01.2 +0.5
PV21 Cone Mtn., Par 21.86 341 P P 01 44 01.2 +0.5
PV21 IAmb IAmb 01 44 09.5
comp=Z,26nm,0.7s
BBRC Big Bear Solar 22.07 320 P P 01 44 03.9 +0.9
baz=132
HEC Hector,Ludlow 22.11 322 P P 01 44 04.2 +0.9
baz=135,SNR=9.6
CPCT Cooper Cave 22.14 35 IAmb IAmb 01 44 04.1
comp=Z,28nm,0.5s
ISCO Idaho Springs 22.19 349 P P 01 44 04.6 +0.3
ISCO pmax pmax
comp=Z,30nm,0.8s
ISCO Idaho Springs 22.19 349 P P 01 44 04.5 +0.1
baz=166,SNR=75
ISCO Idaho Springs 22.19 349 P P 01 44 04.6 +0.3
ISCO IAmb IAmb 01 44 08.1
comp=Z,30nm,0.8s
SLM Saint Louis 22.22 21 P P 01 44 02.5 -1.8
SLM pmax pmax
comp=Z,64nm,0.8s
SLM Saint Louis 22.22 21 P P 01 44 02.5 -1.8
SLM IAmb IAmb 01 44 09.9
comp=Z,64nm,0.8s
P38A Dawn 22.22 13 IAmb IAmb 01 44 22.1
comp=Z,81nm,1.0s
SCI2 San Clemente I 22.29 315 P P 01 44 06.1 +1.0
baz=127
TUQ Turquoise Moun 22.31 324 P P 01 44 06.1 +0.6
baz=136
CIS Catalina Islan 22.46 316 P P 01 44 07.7 +0.7
baz=128
V51A Loudon 22.49 35 IAmb IAmb 01 44 07.3
comp=Z,54nm,1.1s
157A Early Branch 22.50 46 P P 01 44 06.7 -0.6
baz=234
BFSC Mount Baldy Ra 22.51 319 P P 01 44 08.3 +0.7
baz=131,SNR=5.9
RRX Edison Barstow 22.54 321 P P 01 44 08.3 +0.5
baz=133
SZCU Shurtz Canyon 22.57 332 P P 01 44 09.3 +1.0
FMP Fort Macarthur 22.57 317 P P 01 44 07.8 -0.4
baz=129
Z56A Williston 22.63 44 P P 01 44 07.1 -1.6
baz=232
Y55A Saluda 22.69 42 P P 01 44 07.4 -2.0
baz=230,SNR=22
TKL Tuckaleechee C 22.71 36 P P 01 44 06.9 -2.6
comp=Z,29nm,0.7s,baz=197,slow=10,SNR=24
TKL Tuckaleechee C 22.71 36 IAmb IAmb 01 44 10.8
comp=Z,57nm,1.0s
GSC Goldstone, Bar 22.72 322 P P 01 44 10.8 +1.0
baz=135,SNR=13
BG3 Lake Jocassee 22.73 39 IAmb IAmb 01 44 10.9
comp=Z,59nm,0.8s
MWC Mount Wilson 22.75 319 P P 01 44 09.4 -0.8
MWC pmax pmax
comp=Z,23nm,1.2s
MWC Mount Wilson 22.75 319 P P 01 44 09.4 -0.8
X54A Belton 22.76 40 P P 01 44 08.5 -1.6
baz=228,SNR=34
SHOC Shoshone, Teco 22.85 324 P P 01 44 11.9 +0.8
baz=137
OGNE Ogallala 22.87 356 P P 01 44 10.8 -0.5
baz=175,SNR=5.5
OGNE Ogallala 22.87 356 IAmb IAmb 01 44 13.5
comp=Z,54nm,0.7s
V52A Sevierville 22.94 36 IAmb IAmb 01 44 12.3
comp=Z,66nm,0.9s
DECC Green Verdugo 22.94 318 P P 01 44 11.8 -0.3
baz=130

Y56A Pelion 22.96 43 P P 01 44 10.2 -2.0
baz=232
MSU Marysvale 22.96 335 P P 01 44 13.6 +1.2
MSU Marysvale 22.96 335 P P 01 44 13.6 +1.2
MSU PcP 01 48 00.4 -0.5
N35A Tabor 23.04 9 IAmb IAmb 01 44 12.7
comp=Z,79nm,1.1s
Z57A Bowman 23.06 45 P P 01 44 12.3 -0.8
baz=234,SNR=7.1
158A Hollywood 23.08 47 P P 01 44 11.9 -1.5
baz=235
OLIL Olney 23.09 24 IAmb IAmb 01 44 22.1
comp=Z,42nm,0.8s
SNCC San Nicolas Is 23.11 315 P P 01 44 13.3 -0.4
baz=126
O20A White River Ci 23.11 344 P P 01 44 13.6 -0.2
baz=160,SNR=47
O20A White River Ci 23.11 344 P P 01 44 15.0 +1.2
O20A IAmb IAmb 01 44 19.3
comp=Z,67nm,1.1s
EDW2 Edwards Air Fo 23.14 320 P P 01 44 14.1 +0.1
baz=132,SNR=7.9
X55A Gracelyn & Ava 23.18 42 P P 01 44 11.9 -2.4
baz=230,SNR=21
W54A Cherokee Point 23.24 40 P P 01 44 13.4 -1.5
baz=228,SNR=45
P17A Butcher Ranch, 23.27 339 P P 01 44 16.1 +0.8
V53A Saluda 23.27 38 IAmb IAmb 01 44 15.8
comp=Z,48nm,0.8s
PAULI Pauline 23.29 41 P P 01 44 14.1 -1.3
NHSC New Hope 23.30 46 P P 01 44 13.3 -2.2
baz=235,SNR=9.3
NHSC New Hope 23.30 46 P P 01 44 16.2 +0.6
N23A Red Feather La 23.32 349 P P 01 44 15.5 -0.4
baz=166,SNR=28
BGNE Belgrade 23.33 4 P P 01 44 14.7 -1.0
baz=184,SNR=7.4
LRMC Laurel Mtn Rad 23.36 321 P P 01 44 17.0 +0.8
baz=133,SNR=7.8
P43A Skaggs, Pawnee 23.36 21 IAmb IAmb 01 44 15.5
comp=Z,57nm,0.8s
OSI Osito Audit: C 23.42 318 P P 01 44 16.8 +0.1
baz=130
WCI Wyandotte Cave 23.42 28 P P 01 44 14.9 -1.7
WCI pmax pmax
comp=Z,35nm,0.8s
WCI Wyandotte Cave 23.42 28 P P 01 44 13.8 -2.8
baz=214
WCI Wyandotte Cave 23.42 28 P P 01 44 14.9 -1.7
WCI IAmb IAmb 01 44 25.0
comp=Z,35nm,0.8s
TZTN Tazewell 23.48 35 P P 01 44 15.0 -2.2
baz=222,SNR=23
TZTN Tazewell 23.48 35 IAmb IAmb 01 44 18.0
comp=Z,62nm,1.1s
X56A White Oak 23.57 42 P P 01 44 16.2 -1.9
baz=231,SNR=17
FURC Furnace Creek, 23.59 324 P P 01 44 18.2 0.0
baz=196
TPNV Topopah Spring 23.61 326 P P 01 44 19.8 +1.3
baz=138,SNR=27
TPNV Topopah Spring 23.61 326 IAmb IAmb 01 44 22.5
comp=Z,46nm,1.0s
MPMC Manual Prospec 23.65 323 P P 01 44 19.6 +0.7
baz=134,SNR=32
GTBY Guantanamo Bay 23.66 81 *eP* P 01 44 20.1 +1.1
Z58A St. Stephen 23.69 46 P P 01 44 17.6 -1.5
baz=235,SNR=7.4
PSUT Pine Spring 23.69 332 P P 01 44 19.7 +0.4
PSUT PcP 01 48 01.2 -1.2
Y57A Sumter 23.70 44 P P 01 44 17.3 -1.9
baz=233,SNR=5.4
Y57A Sumter 23.70 44 IAmb IAmb 01 44 22.4
comp=Z,24nm,0.7s
KMSC Kings Mountain 23.80 41 P P 01 44 18.2 -2.0
baz=229,SNR=34
KMSC Kings Mountain 23.80 41 IAmb IAmb 01 44 19.9
comp=Z,50nm,0.9s
ARVC Arvin 23.82 319 P P 01 44 21.6 +1.2
baz=130,SNR=6.8
V54A Nebo 23.85 39 P P 01 44 19.3 -1.3
baz=227,SNR=41
N41A Harden Midland 23.92 17 IAmb IAmb 01 44 21.9
comp=Z,38nm,0.8s
SBC Santa Barbara 23.95 317 P P 01 44 22.2 +0.7
baz=128
ISA Isabella, Lake 23.96 321 P P 01 44 22.9 +1.3
baz=132,SNR=13
Z59A Georgetown, SC 24.00 47 P P 01 44 21.3 -0.7
baz=236
BLO Bloomington 24.10 26 P P 01 44 21.6 -1.3
BLO pmax pmax
comp=Z,24nm,0.8s
BLO Bloomington 24.10 26 P P 01 44 21.6 -1.3
BLO IAmb IAmb 01 44 26.2
comp=Z,24nm,0.8s
Y58A Scranton 24.11 45 P P 01 44 22.0 -1.0
baz=234,SNR=9.3
X57A Johnson Farm, 24.16 44 P P 01 44 22.1 -1.3
baz=232,SNR=8.2
P46A Rosedale 24.20 25 IAmb IAmb 01 44 26.5
comp=Z,20nm,0.7s
GRAC Grapevine Rang 24.25 325 P P 01 44 25.8 +1.5
baz=136,SNR=18
CWC Cottonwood Cre 24.25 323 P P 01 44 25.0 +0.5
baz=134
HDIL Hopedale 24.26 20 P P 01 44 22.6 -1.7
baz=205,SNR=10
W56A Indian Trail 24.27 42 P P 01 44 22.7 -1.7
baz=230,SNR=12
S51A Beattyville 24.27 33 IAmb IAmb 01 44 30.2
comp=Z,28nm,0.8s
PKM Mcpherson Peak 24.29 318 P P 01 44 26.0 +1.1
baz=128,SNR=6.8
V55A Taylorsville 24.34 40 P P 01 44 23.9 -1.2
baz=228,SNR=27
R11A Troy Canyon, C 24.34 329 P P 01 44 26.0 +0.7
baz=142,SNR=47
T53A Wise 24.35 36 P P 01 44 24.2 -1.0
baz=224,SNR=16
U54A Nelsons Funny 24.43 38 P P 01 44 24.4 -1.7
baz=226,SNR=25
VES Vestal, Richgr 24.45 320 P P 01 44 27.2 +1.1
baz=131,SNR=18
SCIA State Center 24.48 12 P P 01 44 25.2 -1.1
baz=196,SNR=5.8
SCIA State Center 24.48 12 P P 01 44 25.1 -1.1
JLU Jordanelle 24.52 339 P P 01 44 26.4 -0.5
W57A Gilead 24.65 42 P P 01 44 26.5 -1.4
baz=231,SNR=31
W57A Gilead 24.65 42 P P 01 44 26.8 -1.1
DUG Dugway, Tooele 24.66 336 P P 01 44 28.4 +0.3
baz=150,SNR=52
DUG Dugway, Tooele 24.66 336 IAmb IAmb 01 44 31.4
comp=Z,37nm,0.8s
SMMC Simmler 24.67 318 P P 01 44 29.5 +1.3
baz=129,SNR=8.5
Y59A Loris 24.70 46 P P 01 44 27.6 -0.8
baz=235,SNR=6.9
X58A Rowland 24.72 44 P P 01 44 27.6 -0.9
baz=234,SNR=9.2
X58A Rowland 24.72 44 IAmb IAmb 01 44 32.2
comp=Z,49nm,0.8s
V56A Mocksville 24.75 41 P P 01 44 27.6 -1.2
baz=229,SNR=19
TIN Tinemaha, Big 24.77 323 P P 01 44 30.1 +1.0
baz=135
U55A TA2, Sparta 24.88 39 P P 01 44 28.5 -1.6
baz=227,SNR=22
SFIN Lafayette 24.90 24 P P 01 44 28.0 -2.0
baz=210,SNR=20
SFIN Lafayette 24.90 24 IAmb IAmb 01 44 31.3
comp=Z,49nm,1.0s
VOG Valley Oaks Go 24.94 321 P P 01 44 31.0 +0.5
baz=132
T54A Tazewell 24.95 37 P P 01 44 29.1 -1.6
baz=226,SNR=24
TCUT Toone Canyon 24.96 339 P P 01 44 31.7 +0.7
TCUT PcP 01 48 06.1 +0.9
W58A Raeford 25.06 44 P P 01 44 30.3 -1.3
baz=233,SNR=11
S53A Williamson 25.08 35 P P 01 44 30.1 -1.8
baz=224,SNR=5.8
L40A Anamosa 25.09 16 IAmb IAmb 01 44 32.1
comp=Z,37nm,0.8s
PAGB Antelope Grade 25.10 319 IAmb IAmb 01 44 40.1
comp=Z,34nm,1.2s

K22A **Casper** 25.12 349 P P 01 44 33.2 +0.9
baz=165,SNR=6.8
K22A **Casper** 25.12 349 IAmb IAmb 01 44 37.8
comp=Z,56nm,1.1s
Y60A **Bolivia** 25.16 47 P P 01 44 30.4 -2.2
baz=236
U56A **King** 25.17 40 P P 01 44 31.4 -1.3
baz=229,SNR=7.0
P49A **Miami Univ. Ec** 25.20 29 P P 01 44 30.5 -2.4
baz=216,SNR=14
X59A **McDuffie Farm,** 25.22 45 P P 01 44 32.3 -0.8
baz=235,SNR=8.0
V57A **Coltrane Farms** 25.25 41 P P 01 44 31.8 -1.5
baz=230,SNR=38
K38A **Parkersburg** 25.28 13 IAmb IAmb 01 44 51.8
comp=Z,49nm,1.0s
M44A **Midewin, Midew** 25.43 21 IAmb IAmb 01 44 35.5
comp=Z,42nm,0.8s
SJCC **San Jacinto, C** 25.44 105 eP P 01 44 37.4 +2.0
T55A **Pulaski** 25.45 38 P P 01 44 33.7 -1.5
baz=227,SNR=12
Q51A **Peebles** 25.45 31 P P 01 44 33.0 -2.1
baz=219,SNR=10.0
Q51A **Peebles** 25.45 31 IAmb IAmb 01 44 34.6
comp=Z,39nm,1.1s
HWUT **Hardware Ranch** 25.45 340 P P 01 44 35.8 +0.4
HWUT IAmb IAmb 01 44 41.9
comp=Z,40nm,0.8s
HWUT PcP 01 48 06.7 +0.6
L42A **Oliver, Polo** 25.46 18 IAmb IAmb 01 44 35.7
comp=Z,51nm,0.8s
SPUT **South Promonto** 25.49 338 P P 01 44 35.5 -0.2
SPUT PcP 01 48 06.9 +0.6
MLAC **Mammoth, Mammo** 25.52 324 P P 01 44 36.4 +0.4
baz=134
O48A **Farmland** 25.59 27 P P 01 44 34.2 -2.2
baz=214,SNR=28
OMMB **Old Mammoth Mi** 25.60 323 IAmb IAmb 01 44 42.5
comp=Z,32nm,1.0s
V58A **Windy Hill, Pi** 25.61 42 P P 01 44 35.0 -1.7
baz=232,SNR=28
S54A **Dingess, Beckl** 25.62 36 P P 01 44 34.8 -1.9
baz=225,SNR=9.0
S54A **Dingess, Beckl** 25.62 36 IAmb IAmb 01 44 37.6
comp=Z,58nm,1.1s
X60A **Albert Glenn T** 25.65 46 P P 01 44 35.8 -1.2
baz=236
R53A **Hurricane** 25.65 34 P P 01 44 35.2 -1.7
baz=223,SNR=13
R53A **Hurricane** 25.65 34 IAmb IAmb 01 44 39.8
comp=Z,54nm,0.9s
MDPB **Devils Postpil** 25.66 323 IAmb IAmb 01 44 39.9
comp=Z,34nm,0.9s
W59A **Clinton** 25.67 44 P P 01 44 36.0 -1.1
baz=234
P50A **Jamestown** 25.68 30 P P 01 44 35.0 -2.3
baz=218,SNR=11
DBBC **Dabeiba** 25.70 112 eP P 01 44 41.6 +3.9
NV11 **Mina Array Sit** 25.72 326 IAmb IAmb 01 44 40.4
comp=Z,33nm,0.9s
PIZC **Pizarro, Choco** 25.72 118 eP P 01 44 47.9 +10
BLA **Blacksburg** 25.72 38 P P 01 44 36.1 -1.6
baz=227,SNR=31
PMPB **Monarch Peak** 25.75 319 P P 01 44 39.2 +1.2
PMPB IAmb IAmb 01 44 42.7
comp=Z,59nm,1.1s
ECSD **EROS Data Cent** 25.76 6 P P 01 44 36.7 -1.2
baz=187,SNR=48
ECSD **EROS Data Cent** 25.76 6 IAmb IAmb 01 44 55.9
comp=Z,57nm,1.0s
NVAR **Mina Array Bea** 25.80 326 P P 01 44 39.5 +0.9
comp=Z,42nm,0.7s,baz=151,slow=10.0,SNR=112
NVAR sP sP 01 45 01.9 +2.7
comp=Z,19nm,0.8s,baz=152,slow=9.3,SNR=5.1
NVAR PcP PcP 01 48 07.7 +0.6
comp=Z,2.0nm,0.6s,baz=153,slow=2.8,SNR=4.2
NVAR LR LR 01 56 04.3
comp=Z,592nm,18.6s,baz=154,slow=39
T56A **Rocky Mt** 25.83 39 P P 01 44 37.1 -1.5
baz=228,SNR=15
U57A **Blanch** 25.87 41 P P 01 44 37.8 -1.2
baz=230,SNR=20
O49A **Covington** 25.90 28 IAmb IAmb 01 44 42.5
comp=Z,34nm,0.8s
BW06 **Boulder Array** 25.92 344 P P 01 44 39.1 -0.5
baz=159,SNR=37
BW06 **Boulder Array** 25.92 344 P P 01 44 39.5 -0.1
BW06 IAmb IAmb 01 44 46.1
comp=Z,37nm,0.9s
PD31 **Pinedale Array** 25.92 344 IAmb IAmb 01 44 46.1
comp=Z,35nm,0.9s
PDAR **Pinedale Array** 25.92 344 P P 01 44 39.2 -0.4
comp=Z,9.7nm,0.7s,baz=141,slow=9.6,SNR=63
PDAR sP sP 01 45 00.5 0.0
comp=Z,31nm,0.8s,baz=157,slow=6.6,SNR=12
PDAR PcP PcP 01 48 06.2 -1.1
comp=Z,2.3nm,0.7s,baz=174,slow=3.6,SNR=5.2
PDAR LR LR 01 56 01.0
comp=Z,1μm,20.2s,baz=166,slow=39
P51A **Williamsport** 25.94 31 P P 01 44 37.2 -2.4
baz=219,SNR=7.4
P51A **Williamsport** 25.94 31 IAmb IAmb 01 44 40.4
comp=Z,31nm,0.8s
Q52A **Bidwell** 25.95 33 P P 01 44 38.0 -1.7
baz=221,SNR=19
UREC **San Jos de Ur** 25.97 110 eP P 01 44 41.9 +1.8
RYN **Ryan** 26.06 326 IAmb IAmb 01 44 45.8
comp=Z,29nm,1.0s
S55A **Lewisburg** 26.06 37 P P 01 44 39.3 -1.4
baz=226,SNR=12
R54A **Victor** 26.07 36 P P 01 44 38.9 -1.8
baz=225,SNR=9.8
CNNC **Cliffs of the** 26.08 45 P P 01 44 39.6 -1.2
baz=235
W60A **Pink Hill** 26.09 45 P P 01 44 40.1 -0.9
baz=235,SNR=14
ELK **Elko** 26.11 333 P P 01 44 41.5 +0.1
comp=Z,4.5nm,0.8s,baz=149,slow=6.9,SNR=20
ELK PcP PcP 01 48 08.8 +1.0
comp=Z,3.1nm,0.8s,baz=229,slow=2.7,SNR=4.7
ELK **Elko** 26.11 333 P P 01 44 42.3 +0.9
ELK PcP 01 48 07.9 +0.2
JFWS **Jewell Farm** 26.14 17 P P 01 44 39.7 -1.6
baz=201,SNR=11
JFWS **Jewell Farm** 26.14 17 IAmb IAmb 01 44 44.4
comp=Z,34nm,0.7s
N48A **Decatur** 26.14 27 P P 01 44 38.9 -2.4
baz=214,SNR=20
KVN **Kaiserville** 26.15 327 IAmb IAmb 01 44 47.2
comp=Z,36nm,0.9s
V59A **Middlesex** 26.16 43 P P 01 44 39.4 -2.1
baz=233,SNR=9.3
L44A **Lake County Fo** 26.18 21 P P 01 44 40.6 -1.0
baz=207
L44A **Lake County Fo** 26.18 21 IAmb IAmb 01 44 44.2
comp=Z,40nm,0.9s
O50A **Cable** 26.19 29 P P 01 44 39.7 -2.2
baz=217,SNR=8.7
RSSD **Black Hills** 26.20 354 P P 01 44 42.2 +0.1
RSSD pmax pmax
comp=Z,8.0nm,0.7s
RSSD **Black Hills** 26.20 354 P P 01 44 41.0 -1.1
baz=171
RSSD **Black Hills** 26.20 354 P P 01 44 42.2 +0.1
MALC **Bahia Malaga** 26.26 119 eP P 01 44 33.1 -10
Q53A **Leroy** 26.26 34 P P 01 44 40.7 -1.8
baz=223,SNR=7.2
T57A **Hurt** 26.28 40 P P 01 44 41.3 -1.4
baz=230,SNR=16
T57A **Hurt** 26.28 40 IAmb IAmb 01 44 42.7
comp=Z,38nm,0.9s
M47A **Cromwell** 26.32 25 P P 01 44 41.2 -1.7
baz=212
SUSD **Miller** 26.32 2 P P 01 44 42.5 -0.5
baz=182
U58A **Oxford** 26.34 42 P P 01 44 41.7 -1.5
baz=232,SNR=14
CBOC **Ciudad Bolivar** 26.42 114 eP P 01 44 48.0 +3.6
I37A **Lemond, Waseca** 26.48 11 P P 01 44 43.6 -0.8
I37A IAmb IAmb 01 44 48.1
comp=Z,37nm,0.7s
K43A **Burlington** 26.51 20 IAmb IAmb 01 45 02.1
comp=Z,21nm,0.8s
P52A **Corning** 26.52 32 P P 01 44 42.4 -2.5
baz=221,SNR=7.6
S56A **Natural Bridge** 26.54 38 P P 01 44 43.6 -1.4
baz=228,SNR=10

N49A **Columbus Grove** 26.56 28 IAmb IAmb 01 44 47.5
comp=Z,20nm,0.8s
ACSO **Alum Creek Sta** 26.56 30 P P 01 44 42.8 -2.4
baz=218
L46A **Eue Claire** 26.61 23 P P 01 44 43.7 -1.9
baz=210
L46A **Eue Claire** 26.61 23 IAmb IAmb 01 45 04.0
comp=Z,26nm,0.8s
R55A **Marlinton** 26.63 37 P P 01 44 44.6 -1.3
baz=226,SNR=15
R55A **Marlinton** 26.63 37 IAmb IAmb 01 44 45.9
comp=Z,45nm,0.9s
W61A **Ground Anchor** 26.65 46 P P 01 44 43.8 -2.2
baz=236
O51A **Pataskala** 26.68 31 P P 01 44 43.8 -2.4
baz=219,SNR=6.8
HELC **Santa Helena** 26.68 113 eP P 01 44 54.1 +7.2
ZARC **Zaragoza, Cauc** 26.69 110 eP P 01 44 47.6 +1.0
T58A **Grand View Acr** 26.69 41 P P 01 44 44.6 -1.8
baz=231,SNR=25
Q54A **Coxs Mills** 26.73 35 P P 01 44 44.7 -2.0
baz=224
M48A **Edgerton** 26.79 26 P P 01 44 45.0 -2.2
baz=214
M48A **Edgerton** 26.79 26 IAmb IAmb 01 44 50.7
comp=Z,27nm,0.9s
P53A **Whipple** 26.79 33 P P 01 44 45.4 -1.9
baz=222
P53A **Whipple** 26.79 33 P P 01 44 45.8 -1.5
U59A **Littleton** 26.80 43 P P 01 44 45.4 -1.9
baz=233,SNR=10
U59A **Littleton** 26.80 43 IAmb IAmb 01 44 48.2
comp=Z,25nm,1.1s
V60A **Jim Taylor Roa** 26.80 44 P P 01 44 45.4 -1.9
baz=235
V60A **Jim Taylor Roa** 26.80 44 IAmb IAmb 01 44 47.1
comp=Z,37nm,0.8s
SMLC **Sam Martin de** 26.87 107 eP P 01 44 50.5 +2.3
SNOW **Snow King Moun** 26.89 343 IAmb IAmb 01 44 55.1
comp=Z,26nm,0.9s
N50A **Nevada** 26.91 29 P P 01 44 45.8 -2.5
baz=218
S57A **Dark Hollow, R** 26.96 39 P P 01 44 47.1 -1.7
baz=229,SNR=20
PNTR **Pine Nut** 26.97 325 IAmb IAmb 01 44 51.8
comp=Z,22nm,0.9s
O52A **Adamsville** 27.04 32 P P 01 44 47.1 -2.3
baz=221,SNR=10
O52A **Adamsville** 27.04 32 IAmb IAmb 01 44 49.9
comp=Z,27nm,0.7s
YOTC **Yotoco, Valle** 27.10 118 eP P 01 44 51.1 +0.7
M49A **Liberty Center** 27.10 27 P P 01 44 47.9 -2.1
baz=215,SNR=8.4
FXWY **Fox Creek** 27.13 342 P P 01 44 50.6 +0.1
FXWY IAmb IAmb 01 44 59.0
comp=Z,26nm,1.1s
FXWY PcP 01 48 10.5 +0.4
Q55A **Buckhannon** 27.15 36 P P 01 44 49.4 -1.1
baz=225,SNR=6.2
V61A **Roper** 27.27 45 P P 01 44 50.2 -1.4
baz=236
U60A **Pendleton** 27.28 43 P P 01 44 50.4 -1.2
baz=234,SNR=14
GUY2C **Guyana, Caldas** 27.29 115 eP P 01 44 55.6 +3.0
L48A **N Adams** 27.29 26 P P 01 44 49.6 -2.1
baz=214,SNR=9.7
T59A **Double "B" Far** 27.33 42 P P 01 44 50.4 -1.6
baz=232,SNR=10
T59A **Double "B" Far** 27.33 42 P P 01 44 51.3 -0.8
T59A IAmb IAmb 01 44 52.5
comp=Z,41nm,1.1s
IMW **Indian Meadow** 27.34 343 P P 01 44 52.4 -0.1
IMW PcP 01 48 11.6 +0.9
P54A **Burton** 27.36 34 P P 01 44 49.4 -3.0
baz=224
K46A **Dorr** 27.38 23 P P 01 44 50.4 -2.1
baz=210
N51A **Ashland** 27.39 30 P P 01 44 50.3 -2.3
baz=219
N51A **Ashland** 27.39 30 P P 01 44 51.1 -1.5
I42A **Draeger Farm,** 27.41 18 IAmb IAmb 01 44 55.7
comp=Z,25nm,0.9s
S58A **Poland Farm, P** 27.41 40 P P 01 44 50.6 -2.2
baz=231,SNR=6.2
FLWY **Flagg Ranch** 27.45 343 IAmb IAmb 01 45 02.2
comp=Z,22nm,0.8s
O53A **New Philadelph** 27.45 32 P P 01 44 50.7 -2.5
baz=222
PTBC **PUERTO BERRIO,** 27.46 111 eP P 01 44 55.6 +2.0
RREF **El Recreo** 27.47 115 eP P 01 44 58.2 +3.9
BBAC **Balboa, Cauca** 27.48 123 eP P 01 44 56.8 +2.9
NORC **Norcasia** 27.55 114 eP P 01 44 56.9 +2.5
R57A **Stanardsville** 27.57 39 P P 01 44 52.6 -1.6
baz=229,SNR=5.5
V62A **Hyde County Ai** 27.57 46 P P 01 44 51.7 -2.5
baz=237
AFDM **Forest Hills D** 27.64 323 P P 01 44 54.5 -0.4
AFDM PcP 01 48 11.2 0.0
P55A **Reedsville** 27.65 35 P P 01 44 53.4 -1.6
baz=225,SNR=5.2
TOLC **Tolima** 27.65 116 eP P 01 44 59.4 +3.8
YPP **Pitchstone Pla** 27.65 343 P P 01 44 56.2 +0.9
U61A **Possum Corner** 27.67 44 P P 01 44 53.3 -1.8
baz=235
K47A **Vermontville** 27.67 24 P P 01 44 53.2 -1.9
baz=212
Q56A **Snyder Ridge,** 27.68 37 P P 01 44 54.0 -1.2
baz=227
Q56A **Snyder Ridge,** 27.68 37 IAmb IAmb 01 44 58.4
comp=Z,22nm,0.9s
H17A **Grant Village** 27.70 344 P P 01 44 56.4 +0.7
baz=158
H17A **Grant Village** 27.70 344 P P 01 44 56.6 +1.0
R58B **Mineral** 27.74 40 P P 01 44 54.2 -1.6
baz=230,SNR=8.2
R58B **Mineral** 27.74 40 IAmb IAmb 01 44 56.0
comp=Z,27nm,1.1s
MCWV **Mont Chateau** 27.74 35 P P 01 44 54.4 -1.4
baz=225
SPMN **Marine on St.** 27.76 11 P P 01 44 53.4 -2.4
baz=195
M51A **Elyria** 27.80 30 P P 01 44 53.5 -2.7
baz=219
O54A **Avella** 27.83 34 P P 01 44 54.3 -2.3
baz=223
GCUF **Volcan Galeras** 27.88 124 eP P 01 45 14.7 +17
R58A **Rapidan** 27.88 39 P P 01 44 55.5 -1.5
baz=230,SNR=16
AAM **Ann Arbor** 27.91 27 P P 01 44 55.4 -1.8
baz=215
SOTA **Rioblanco** 27.92 122 eP P 01 45 01.8 +3.6
T60A **Surry** 27.95 42 P P 01 44 56.3 -1.3
baz=233,SNR=6.0
S59A **Mechanicsville** 27.97 41 P P 01 44 56.6 -1.3
baz=232,SNR=5.6
CRUC **La Cruz** 27.98 123 eP P 01 45 16.3 +18
N53A **Lisbon** 28.06 32 P P 01 44 56.0 -2.6
baz=222,SNR=6.9
RLMT **Red Lodge** 28.06 346 P P 01 44 58.1 -0.7
baz=161,SNR=22
ORTC **Ortega, Tolima** 28.07 117 eP P 01 45 03.6 +4.7
Q57A **Strasburg** 28.12 38 P P 01 44 58.2 -1.0
baz=228,SNR=10
K48A **Perry** 28.13 25 P P 01 44 57.2 -2.1
baz=213,SNR=6.0
P56A **Dayton Farm, R** 28.19 36 P P 01 44 58.5 -1.3
baz=227,SNR=7.4
CBN **Corbin Frederi** 28.20 40 P P 01 44 58.0 -1.8
baz=231
SPBC **San Pablo de B** 28.21 113 eP P 01 45 02.9 +2.5
J47A **Sunmer** 28.22 24 P P 01 44 58.1 -1.9
baz=212
S60A **Water View** 28.34 42 P P 01 45 00.4 -0.7
baz=233,SNR=7.3
G40A **Rib Lake** 28.35 15 P P 01 45 00.6 -0.5
G40A PcP 01 48 13.1 +0.4
M52A **Chesterland** 28.35 30 P P 01 44 58.7 -2.5
baz=220,SNR=6.2
ORV **Oroville** 28.36 323 P P 01 45 01.7 +0.5
ORV pmax pmax
comp=Z,6.0nm,0.9s
ORV **Oroville** 28.36 323 P P 01 45 01.7 +0.5
R59A **King George, V** 28.36 40 P P 01 44 59.9 -1.4
baz=231,SNR=5.9
ROSC **El Rosal** 28.38 114 LR LR 01 55 49.3
comp=Z,130nm,20.9s,baz=31,slow=35
K49A **Clarkson** 28.39 26 P P 01 44 59.6 -2.0
baz=215
O55A **Ligonier** 28.43 35 P P 01 45 00.1 -1.8
baz=225
PRAC **Prado** 28.47 117 eP P 01 45 04.9 +2.3
Q58A **Fox Den Farm,** 28.49 38 P P 01 45 01.3 -1.1
baz=229
I46A **Reed City** 28.59 22 P P 01 45 01.2 -2.1
baz=210
N54A **Moraine State** 28.60 33 P P 01 45 01.5 -1.9
baz=223
M53A **WI Miller and** 28.61 31 P P 01 45 01.7 -1.8
baz=221
P57A **Homestead Farm** 28.65 37 P P 01 45 02.3 -1.6
baz=228
J48A **Bridge Port** 28.68 25 P P 01 45 01.9 -2.1
baz=214,SNR=7.4
J48A **Bridge Port** 28.68 25 IAmb IAmb 01 45 03.7
comp=Z,24nm,0.9s
PAMC **Pamplona, Colo** 28.69 108 eP P 01 45 07.3 +2.3
R60A **Leonardtown, M** 28.73 41 P P 01 45 01.9 -2.6
baz=232
K50A **Casco** 28.74 27 P P 01 45 02.0 -2.7
baz=216
K50A **Casco** 28.74 27 IAmb IAmb 01 45 06.8
comp=Z,30nm,0.8s
O56A **Blue Knob Stat** 28.87 35 P P 01 45 04.1 -1.8
baz=226,SNR=8.8
O56A **Blue Knob Stat** 28.87 35 IAmb IAmb 01 45 05.3
comp=Z,17nm,0.7s
PUAC **Puerto Asis, P** 28.90 124 eP P 01 45 23.3 +17
S61A **Accomac** 28.95 43 P P 01 45 04.8 -1.8
baz=234
RUSC **La Rusia** 28.97 111 eP P 01 45 09.4 +1.9
H45A **Beulah** 28.97 21 P P 01 45 04.3 -2.4
baz=208
CHIC **Chingaza** 29.00 114 eP P 01 45 11.1 +3.4
J49A **Marlette** 29.00 26 P P 01 45 04.5 -2.4
baz=215,SNR=13
LAO **LASA Array** 29.00 351 P P 01 45 05.9 -1.0
baz=168,SNR=7.6
N55A **Marion Center** 29.00 34 P P 01 45 05.2 -1.8
baz=225,SNR=8.2
I47A **Gladwin** 29.00 24 P P 01 45 04.8 -2.1
baz=212,SNR=7.4
I47A **Gladwin** 29.00 24 IAmb IAmb 01 45 09.1
comp=Z,30nm,0.8s
O03E **Paynes Creek** 29.03 324 P P 01 45 06.5 -0.8
baz=133
Q59A **Harwood** 29.05 40 P P 01 45 05.9 -1.5
baz=231
P58A **Pank, Wackersv** 29.07 38 P P 01 45 06.0 -1.6
baz=229
DLMT **Dillon** 29.16 342 IAmb IAmb 01 45 10.3
comp=Z,20nm,0.9s
M54A **Oil Creek Stat** 29.17 32 P P 01 45 06.7 -1.8
baz=223,SNR=6.9
M54A **Oil Creek Stat** 29.17 32 IAmb IAmb 01 45 08.6
comp=Z,22nm,1.1s
K51A **Iona Station** 29.20 29 P P 01 45 06.1 -2.6
baz=218
L53A **Girard** 29.20 31 P P 01 45 06.8 -2.0
baz=221
O57A **Amberson** 29.35 37 P P 01 45 07.5 -2.6
baz=228,SNR=5.8
MOD **Modoc Plateau** 29.39 328 IAmb IAmb 01 45 12.2
comp=Z,20nm,0.9s
I48A **Sherman Twp** 29.46 24 P P 01 45 09.2 -1.8
baz=213,SNR=12
ERPA **Erie** 29.46 31 P P 01 45 08.7 -2.3
baz=221
N56A **West Decatur** 29.47 35 P P 01 45 09.4 -1.8
baz=226,SNR=10
G45A **Suttons Bay** 29.47 21 P P 01 45 08.9 -2.2
baz=208
G45A **Suttons Bay** 29.47 21 IAmb IAmb 01 45 12.8
comp=Z,22nm,0.6s
SSPA **Standing Stone** 29.50 36 P P 01 45 10.4 -1.0
SSPA IAmb IAmb 01 45 10.9
comp=Z,18nm,0.8s
LRM **Limekiln Ridge** 29.54 342 P P 01 45 12.1 +0.1
LRM PcP 01 48 16.2 +0.2
I49A **Point Hope** 29.61 26 P P 01 45 10.0 -2.3
baz=215
M55A **Ridgway** 29.61 34 P P 01 45 10.6 -1.7
baz=224
H47A **Mio** 29.61 23 P P 01 45 10.4 -1.9
baz=212,SNR=14
K52A **Tillsonburg** 29.61 30 P P 01 45 09.8 -2.5
baz=219
GLMI **Grayling** 29.65 23 P P 01 45 10.6 -2.1
baz=211
P59A **Jarrettsville** 29.66 39 P P 01 45 10.9 -1.9
baz=230
O58A **Lewisberry** 29.70 37 P P 01 45 10.8 -2.4
baz=229
MDND **Maddock** 29.71 1 P P 01 45 11.8 -1.4
baz=181
N57A **Milroy** 29.77 36 P P 01 45 12.2 -1.5
baz=227,SNR=10.0
L54A **Sinclairville** 29.88 32 P P 01 45 12.7 -2.0
baz=222
TAMC **Tame, Arauca** 29.89 109 eP P 01 45 18.1 +2.9
M56A **Emporium** 29.93 34 P P 01 45 13.2 -2.0
baz=225=8.1
M56A **Emporium** 29.93 34 IAmb IAmb 01 45 17.1
comp=Z,16nm,0.9s
G46A **Petoskey** 29.99 22 P P 01 45 13.8 -1.8
baz=210
SDV **Santo Domingo** 29.99 104 P P 01 45 16.1 -0.1
comp=Z,2.9nm,0.6s,baz=124,slow=2.6,SNR=4.9
SDV **Santo Domingo** 29.99 104 eP P 01 45 17.5 +1.2
SDV **Santo Domingo** 29.99 104 P P 01 45 16.9 +0.7
SOCV **Socops** 30.00 105 eP P 01 45 31.0 +15
H48A **Harrisville** 30.03 24 P P 01 45 14.1 -1.9
baz=213
H48A **Harrisville** 30.03 24 IAmb IAmb 01 45 18.5
comp=Z,26nm,0.9s
KMRM **Mail Ridge** 30.07 322 IAmb IAmb 01 45 19.2
comp=Z,30nm,1.0s
J52A **Paris** 30.08 29 P P 01 45 14.2 -2.3
baz=219
F45A **CMU Biological** 30.09 21 P P 01 45 14.7 -1.8
baz=208
M04C **Macdoel** 30.09 326 P P 01 45 16.1 -0.7
baz=135
MACC **Macarena, Meta** 30.19 119 eP P 01 45 19.6 +1.8
G47A **Hillman** 30.23 23 P P 01 45 15.7 -2.1
baz=212
E43A **Lone Tree Farm** 30.24 18 P P 01 45 16.5 -1.4
E43A IAmb IAmb 01 45 20.2
comp=Z,16nm,0.8s
O59A **Robesonia** 30.25 38 P P 01 45 16.6 -1.5
baz=230,SNR=6.1
P60A **Greenville** 30.26 39 P P 01 45 16.1 -2.1
baz=231
I51A **Listowel** 30.27 28 P P 01 45 15.6 -2.6
baz=218,SNR=6.0
L55A **Hinsdale** 30.29 33 P P 01 45 16.4 -2.0
baz=224
N58A **Sunbury** 30.29 37 P P 01 45 15.9 -2.5
baz=228
N58A **Sunbury** 30.29 37 IAmb IAmb 01 45 17.7
comp=Z,16nm,0.9s
AGMN **Agassiz Nation** 30.35 6 P P 01 45 17.8 -1.0
baz=188
M02C **Callahan** 30.36 325 P P 01 45 18.3 -0.8
baz=133
BMO **Blue Mountains** 30.36 335 P P 01 45 19.0 -0.1
BMO PcP 01 48 18.4 +0.5
M57A **Sunshine Farm,** 30.40 35 P P 01 45 17.7 -1.6
baz=227,SNR=9.9
M57A **Sunshine Farm,** 30.40 35 IAmb IAmb 01 45 19.1
comp=Z,21nm,0.7s
K54A **Basilika Farm,** 30.47 32 P P 01 45 18.3 -1.7
baz=223
KHMM **Horse Mountain** 30.51 323 IAmb IAmb 01 45 22.6
comp=Z,22nm,0.9s
DGMT **Dagmar** 30.52 355 P P 01 45 19.5 -0.8
baz=172,SNR=7.9
DGMT **Dagmar** 30.52 355 IAmb IAmb 01 45 21.0
comp=Z,27nm,0.9s
PTLC **Puerto Leguiza** 30.54 123 eP P 01 45 24.9 +4.1
EYMN **Ely** 30.62 11 P P 01 45 19.4 -1.9
baz=196
L04D **Klamath Falls** 30.64 327 P P 01 45 21.2 -0.5
baz=135
I07A **Izee** 30.67 332 P P 01 45 22.4 +0.5

I07A PcP 01 48 19.8 +1.0
L56A Greenwood 30.72 34 P P 01 45 20.2 -2.0
baz=225
O60A Telford 30.72 39 P P 01 45 20.0 -2.2
baz=231
M58A Price's Panora 30.79 36 P P 01 45 21.3 -1.6
baz=228,SNR=11
I52A Shelburne 30.86 29 P P 01 45 21.1 -2.3
baz=219
K55A Perry 30.87 33 P P 01 45 21.5 -2.1
baz=224
J05D Fort Rock, OR 30.87 329 P P 01 45 22.9 -0.8
baz=138
N59A State Game Lan 30.89 37 P P 01 45 21.9 -1.7
baz=230
MSO Missoula 30.89 341 P P 01 45 22.9 -0.8
baz=153,SNR=16
MSO Missoula 30.89 341 P P 01 45 23.8 0.0
MSO PcP 01 48 21.0 +1.6
EGMT Eagleton 30.92 347 P P 01 45 23.1 -0.8
baz=162
L57A Andrews Acres 31.00 35 P P 01 45 22.8 -1.9
baz=227,SNR=5.4
PINE Pine Mountain 31.11 330 P P 01 45 25.9 +0.1
PINE PcP 01 48 21.4 +1.2
K56A Middlesex 31.23 33 P P 01 45 24.7 -2.0
baz=225,SNR=8.3
N60A Cedar Hill Far 31.25 38 P P 01 45 25.5 -1.3
baz=231,SNR=5.1
F48A Evansville 31.25 24 P P 01 45 25.5 -1.2
baz=213,SNR=9.7
F10A Beach Ranch, E 31.27 337 IAmb IAmb 01 45 28.1
comp=Z,28nm,1.0s
J04D Umpqua Nationa 31.27 328 P P 01 45 27.4 +0.1
baz=136,SNR=7.8
J55A Hilton 31.39 32 P P 01 45 25.5 -2.5
baz=224
G08A Pilot Rock 31.40 334 P P 01 45 28.6 +0.4
G08A IAmb IAmb 01 45 29.2
comp=Z,20nm,0.9s
G08A PcP 01 48 21.9 +1.1
F49A Sandfield 31.42 25 P P 01 45 26.1 -2.2
baz=214,SNR=18
H52A Wyevale 31.43 28 P P 01 45 26.0 -2.4
baz=219
BRNJ Basking Ridge 31.45 39 IAmb IAmb 01 45 28.7
comp=Z,26nm,1.0s
M59A Waymart 31.48 37 P P 01 45 27.1 -1.8
baz=229
E47A Iron Bridge 31.53 22 P P 01 45 27.8 -1.4
baz=212,SNR=9.2
L58A Harry Jones Me 31.58 36 P P 01 45 28.3 -1.5
baz=228,SNR=9.6
BINY Binghamton 31.61 35 P P 01 45 28.4 -1.6
baz=228,SNR=8.8
BINY Binghamton 31.61 35 IAmb IAmb 01 45 32.9
comp=Z,24nm,0.8s
D46A Sault St. Mari 31.64 21 P P 01 45 29.4 -0.8
baz=210,SNR=9.4
N61A South Mountain 31.65 39 P P 01 45 28.9 -1.4
baz=232
K57A Scipio Center 31.68 34 P P 01 45 28.9 -1.8
baz=226
K02D Willamette Mer 31.70 326 P P 01 45 30.7 -0.2
baz=133
I05D Terrebonne, OR 31.71 330 P P 01 45 30.7 -0.3
baz=139,SNR=6.8
M60A Port Jervis 31.81 38 P P 01 45 30.2 -1.6
baz=231
JTMT Jette 31.82 342 P P 01 45 31.9 -0.1
JTMT IAmb IAmb 01 45 32.6
comp=Z,19nm,0.9s
JTMT PcP 01 48 22.9 +1.0
I04A Tendick Farm, 31.83 329 P P 01 45 31.2 -0.7
baz=136
SADO Sadowa 31.87 29 IAmb IAmb 01 45 33.8
comp=Z,14nm,0.8s
J56A Wolcott 31.89 33 P P 01 45 30.7 -1.7
baz=225
E48A Lockeyer 31.97 24 P P 01 45 31.6 -1.5
baz=213,SNR=6.6
H53A Bobcaygeon 31.98 30 P P 01 45 30.7 -2.5
baz=221,SNR=6.3
PAL Palisades 32.04 39 P P 01 45 32.6 -1.2
baz=232
PAL Palisades 32.04 39 IAmb IAmb 01 45 34.0
comp=Z,29nm,0.9s
D47A Chapleau 32.11 22 P P 01 45 33.2 -1.1
baz=211,SNR=10
L59A Walton 32.13 36 P P 01 45 33.2 -1.4
baz=229,SNR=6.2
L59A Walton 32.13 36 IAmb IAmb 01 45 34.3
comp=Z,21nm,0.8s
I55A Frankford 32.15 31 P P 01 45 31.2 -3.5
baz=223
J01E Myrtle Point 32.16 326 P P 01 45 35.2 +0.4
baz=134
K58A Earlville 32.17 35 P P 01 45 33.2 -1.8
baz=227,SNR=6.9
K58A Earlville 32.17 35 P P 01 45 34.1 -0.8
K58A IAmb IAmb 01 45 34.9
comp=Z,16nm,0.9s
SJG San Juan 32.21 85 *eP* P 01 45 35.6 +0.2
SJG San Juan 32.21 85 P P 01 45 36.9 +1.4
SJG pmax pmax
comp=Z,23nm,0.8s
SJG San Juan 32.21 85 P P 01 45 36.9 +1.4
SJG IAmb IAmb 01 45 40.6
comp=Z,23nm,0.8s
I03D Drain, OR 32.23 327 P P 01 45 35.7 +0.3
baz=135
GCPR Guaynabo City 32.25 84 P P 01 45 37.1 +1.2
ULM Lac du Bonnet 32.29 5 P P 01 45 34.1 -1.7
comp=Z,17nm,0.6s,baz=190,slow=7.8,SNR=15
ULM pP pP 01 45 49.8 -0.4
comp=Z,23nm,1.0s,baz=195,slow=9.3,SNR=4.4
ULM PcP PcP 01 48 21.6 -1.3
comp=Z,12nm,0.9s,baz=276,slow=2.4,SNR=3.8
ULM LR LR 01 59 35.0
comp=Z,132nm,20.4s,baz=230,slow=38
ULM Lac du Bonnet 32.29 5*c iP* P 01 45 34.2 -1.6
ULM Lac du Bonnet 32.29 5 P P 01 45 34.8 -1.1
ULM IAmb IAmb 01 45 38.2
comp=Z,30nm,0.9s
ULM PcP 01 48 22.2 -0.7
M61A Granite Spring 32.31 39 P P 01 45 34.7 -1.4
baz=232,SNR=6.7
G53A Haliburton 32.38 29 P P 01 45 34.4 -2.3
baz=220,SNR=8.4
G05D Wamic, OR 32.39 331 P P 01 45 36.8 0.0
baz=140
DELO Deloro Mine 32.40 31 IAmb IAmb 01 45 35.9
comp=Z,17nm,1.1s
F51A Arnstein 32.43 27 P P 01 45 34.7 -2.5
baz=218,SNR=12
J57A Williamstown 32.43 34 P P 01 45 35.0 -2.2
baz=226,SNR=8.6
J57A Williamstown 32.43 34 IAmb IAmb 01 45 36.5
comp=Z,34nm,1.1s
L60A Shokan 32.47 37 P P 01 45 36.1 -1.4
baz=230
E50A Wahnapitae 32.48 25 P P 01 45 35.4 -2.2
baz=216,SNR=6.7
H04D Lebanon 32.52 329 P P 01 45 37.0 -0.9
baz=137,SNR=5.8
F52A Sundridge 32.58 27 P P 01 45 36.0 -2.5
baz=218,SNR=9.5
K59A Cooperstown 32.62 36 P P 01 45 36.9 -2.0
baz=229,SNR=7.8
H55A Tweed 32.63 31 P P 01 45 36.7 -2.2
baz=223,SNR=6.5
D48A Paudash Townsh 32.68 23 P P 01 45 37.3 -2.1
baz=213,SNR=15
KSCT Kent School, K 32.73 38 IAmb IAmb 01 45 39.5
comp=Z,13nm,0.8s
MTP Monte Pirata 32.77 84 P P 01 45 42.0 +1.6
I02D Swisshome 32.77 328 P P 01 45 39.7 -0.4
baz=135
J58A Remsen 32.77 34 P P 01 45 38.2 -2.0
baz=227
G54A Lake Saint Pet 32.83 29 P P 01 45 38.1 -2.6
baz=221,SNR=6.2
WALA Waterton Lakes 32.90 343 IAmb IAmb 01 45 42.4
comp=Z,24nm,0.9s
M62A Hamden 32.91 39 P P 01 45 39.9 -1.4
baz=233
ATAH Atahualpa 32.92 138 LR LR 01 56 39.6
comp=Z,287nm,18.9s,baz=297,slow=32
D49A Beulah Townshi 32.94 24 P P 01 45 39.4 -2.2
baz=214,SNR=10
F05D White Salmon 32.95 332 P P 01 45 42.3 +0.7
baz=140,SNR=7.9
I57A Carthage 32.97 33 P P 01 45 39.6 -2.3
baz=226
L61A Hillsdale 1, H 32.98 38 P P 01 45 39.7 -2.3
baz=231
K60A Five Rivers En 33.06 37 P P 01 45 40.8 -1.8
baz=230
E51A G1948 Merrick 33.09 26 P P 01 45 40.9 -2.0
baz=218,SNR=19
H56A Elgin 33.12 32 P P 01 45 41.2 -2.0
baz=224
I58A Old Forge 33.16 34 P P 01 45 41.6 -2.1
baz=227,SNR=7.1
NEW Newport 33.18 339 P P 01 45 43.4 -0.3
baz=149,SNR=7.6
NEW Newport 33.18 339 P P 01 45 44.1 +0.3
NEW PcP PcP 01 48 25.6 +0.1
C09A Chrisman Ranch 33.20 337 IAmb IAmb 01 45 45.3
comp=Z,17nm,0.8s
E52A Mattawa 33.25 27 P P 01 45 42.6 -1.7
baz=219
J59A Piesco 33.27 35 P P 01 45 42.6 -2.0
baz=228
ALGO Algonquin Park 33.27 28 P P 01 45 42.4 -2.1
baz=220
G03D McMinnville, O 33.28 329 P P 01 45 44.4 -0.1
baz=137
G55A Calabogie 33.37 31 P P 01 45 43.3 -2.0
baz=223
M63A Gales Ferry 33.40 40 P P 01 45 44.8 -0.9
baz=234,SNR=11
F04A Amboy 33.42 331 IAmb IAmb 01 45 47.5
comp=Z,25nm,1.1s
K61A Williamstown 33.44 37 P P 01 45 45.2 -0.9
baz=231,SNR=6.9
D50A G1974 Best Tow 33.45 25 P P 01 45 44.0 -2.0
baz=216,SNR=7.7
D51A Lot 18 Range I 33.58 26 P P 01 45 45.1 -2.0
baz=217
L61B Northampton 33.65 38 P P 01 45 46.2 -1.7
baz=232
ACCN Adirondack Com 33.67 36 IAmb IAmb 01 45 47.3
comp=Z,14nm,0.8s
LTY Liberty 33.68 334 IAmb IAmb 01 45 49.0
comp=Z,12nm,1.1s
E53A Dumoine, Ponti 33.77 28 P P 01 45 47.3 -1.5
baz=220
LON Longmire 33.77 333 IAmb IAmb 01 45 53.6
comp=Z,21nm,1.1s
I59A Olmsteadville 33.83 35 P P 01 45 47.5 -1.8
baz=229,SNR=9.3
E04D Cinebar 33.95 332 P P 01 45 50.2 -0.2
baz=139
F55A Otter Lake 33.97 30 P P 01 45 49.5 -1.1
baz=223
M64A Tiverton 34.00 40 P P 01 45 49.7 -1.1
baz=235
LONY Lake Ozonia 34.00 33 P P 01 45 48.6 -2.3
baz=227
E54A Lac Daplat, Po 34.02 29 P P 01 45 49.3 -1.8
baz=221,SNR=12
K62A Royalston 34.04 38 P P 01 45 50.5 -0.8
baz=232
B08A Colville Reser 34.05 337 IAmb IAmb 01 45 52.3
comp=Z,18nm,1.0s
H58A Gabriels 34.08 34 P P 01 45 50.2 -1.4
baz=228
ORIO Orleans, Innes 34.11 31 P P 01 45 50.1 -1.6
baz=225
G57A Newington 34.13 32 P P 01 45 50.3 -1.6
baz=226
I60A Shoreham 34.18 35 P P 01 45 50.9 -1.5
baz=230
D05A Enumclaw 34.18 333 IAmb IAmb 01 45 54.1
comp=Z,16nm,0.9s
J61A Chester 34.28 37 P P 01 45 51.5 -1.8
baz=231,SNR=5.7
D53A Lac Vacive, Po 34.28 27 P P 01 45 51.7 -1.6
baz=220,SNR=5.5
D53A Lac Vacive, Po 34.28 27 IAmb IAmb 01 45 53.2
comp=Z,8.6nm,0.8s
HRV Adam Dziewonsk 34.34 39 P P 01 45 52.6 -1.2
baz=233
L64A Middleborough 34.45 40 P P 01 45 53.9 -0.8
baz=235
K63A Dunstable 34.47 38 P P 01 45 53.7 -1.2
baz=233
E55A Montcerf-Lytto 34.56 30 P P 01 45 54.5 -1.2
baz=223
J62A Henniker 34.63 37 P P 01 45 55.5 -0.8
baz=232
D54A Lac Fusel, La 34.80 28 P P 01 45 55.5 -2.2
baz=221,SNR=8.6
I61A Oroboro, Fairl 34.84 36 P P 01 45 57.5 -0.6
baz=231
D03D Eldon 34.93 332 P P 01 45 58.4 -0.4
baz=139,SNR=6.9
H60A Morristown 34.97 35 P P 01 45 57.7 -1.5
baz=230
G59A Clarenceville 35.05 34 P P 01 45 58.7 -1.2
baz=228
B05A Bryant 35.07 334 P P 01 45 59.1 -0.9
baz=141
J63A Strafford 35.09 38 P P 01 45 58.6 -1.7
baz=233
E56A St. Veronique 35.12 30 P P 01 45 58.7 -1.7
baz=224,SNR=6.0
NLWA Neilton Lookou 35.17 332 IAmb IAmb 01 46 02.3
comp=Z,14nm,0.8s
VLDQ Val d'Or 35.19 27 IAmb IAmb 01 45 59.5
comp=Z,9.0nm,0.8s
LBNH Lisbon 35.19 36 P P 01 46 00.1 -1.1
baz=231
D55A Sainte-Anne-du 35.25 30 P P 01 45 59.6 -2.0
baz=233,SNR=14
I62A Tamworth 35.30 37 P P 01 46 01.0 -1.1
baz=232,SNR=6.2
I62A Tamworth 35.30 37 P P 01 46 01.9 -0.2
H61A Lyndonville 35.38 36 P P 01 46 01.8 -1.0
baz=231
E57A Chemin Saint G 35.46 31 P P 01 46 01.6 -1.8
baz=226,SNR=5.2
G60A Masonville 35.51 35 P P 01 46 02.1 -1.9
baz=230
D56A ZEC Mazanza, M 35.61 30 P P 01 46 02.4 -2.3
baz=224,SNR=9.9
A04D Lummi Island 35.68 334 P P 01 46 05.0 -0.3
baz=141,SNR=6.4
H62A Milan 35.83 36 P P 01 46 06.0 -0.7
baz=232
I63A Otisfield 35.84 37 P P 01 46 05.7 -1.0
baz=233
E58A La Victoria 35.87 32 P P 01 46 05.4 -1.5
baz=227
D57A Chemin Vers le 36.01 31 P P 01 46 06.3 -1.9
baz=225,SNR=7.1
G61A St-Isidore-de- 36.07 35 P P 01 46 07.5 -1.2
baz=230
LSQQ Lebel-sur-Quev 36.12 26 P P 01 46 07.6 -1.4
baz=219
F60A Warwick 36.28 34 P P 01 46 08.9 -1.6
baz=229
MATQ Matagami 36.40 25 P P 01 46 10.2 -1.2
baz=218
H63A New Sharon 36.52 37 P P 01 46 12.8 +0.4
baz=233
D58A Chemin du LacG 36.56 32 P P 01 46 11.1 -1.7
baz=227,SNR=5.3
G62A West of Eustis 36.58 36 P P 01 46 12.3 -0.7
baz=232,SNR=9.5
FFC Flin Flon 36.63 358 P P 01 46 12.5 -0.8
FFC pmax pmax
comp=Z,24nm,0.8s
FFC Flin Flon 36.63 358 P P 01 46 12.5 -0.8
LATQ La Tuque 36.81 31 P P 01 46 13.6 -1.3
baz=226
E60A Ste Agathe de 36.81 34 P P 01 46 13.6 -1.4
baz=229
LLLB Lillooet 36.85 337 IAmb IAmb 01 46 16.4
comp=Z,18nm,0.9s
H64A Troy 36.97 37 P P 01 46 15.4 -0.9
baz=234
G63A Kingsbury 37.03 37 P P 01 46 15.8 -1.0
baz=233,SNR=5.3
D59A Saint-Raymond 37.03 33 P P 01 46 15.1 -1.7
baz=228
PKME Peaks-Kenny Pk 37.30 37 P P 01 46 18.0 -1.1
baz=233
E61A Lac Etchemin 37.36 34 P P 01 46 18.4 -1.2
baz=230
H65A Eastbrook 37.57 38 P P 01 46 20.2 -1.3
baz=235
G64A Maxfield 37.60 37 P P 01 46 20.4 -1.2
baz=234
NNA Nana 37.63 141 LR LR 01 58 51.1
comp=Z,388nm,21.6s,baz=324,slow=31
F63A Nahmakanta, Br 37.67 36 P P 01 46 21.4 -0.9
baz=233
CHGQ Chibougamau 37.87 27 P P 01 46 22.3 -1.6
baz=222
E62A Clayton Lake 38.00 35 P P 01 46 24.0 -1.0
baz=232,SNR=7.7
E62A Clayton Lake 38.00 35 IAmb IAmb 01 46 24.8
comp=Z,16nm,0.8s
D61A St Aubert, Com 38.01 33 P P 01 46 24.2 -0.9
baz=230
H66A Whiting 38.17 39 P P 01 46 26.1 -0.4
baz=236
F64A Sherman 38.19 36 P P 01 46 25.9 -0.7
baz=234
F64A Sherman 38.19 36 IAmb IAmb 01 46 26.5
comp=Z,14nm,0.8s
G65A Princeton 38.26 38 P P 01 46 26.5 -0.7
baz=236
E63A Oxbow 38.48 36 P P 01 46 27.4 -1.7
baz=233,SNR=10
D62A Allapoint, All 38.54 34 P P 01 46 28.2 -1.3
baz=232,SNR=12
GGN Saint George 38.64 38 IAmb IAmb 01 46 30.0
comp=Z,15nm,0.9s
E64A Bridgewater 38.81 36 P P 01 46 30.8 -1.0
baz=234
D63A Stockholm 39.02 35 P P 01 46 32.2 -1.3
baz=233,SNR=6.9
LMN Caledonia Moun 40.24 39 IAmb IAmb 01 46 47.4
comp=Z,18nm,1.1s
BATG Bathurst New B 40.30 36 P P 01 46 43.7 -0.5
BATG IAmb IAmb 01 46 43.8
comp=Z,14nm,0.7s
FCC Fort Churchill 40.88 5 P P 01 46 48.2 -0.6
FCC pmax pmax
comp=Z,15nm,0.9s
FCC Fort Churchill 40.88 5 P P 01 46 48.2 -0.6
FCC IAmb IAmb 01 46 48.6
comp=Z,15nm,0.8s
PTGA Pitinga 43.63 111 LR LR 02 06 53.7
comp=Z,88nm,19.8s,baz=307,slow=38
PTGA Pitinga 43.63 111 P P 01 47 12.8 +1.0
MACA Manacapuru-AM 44.16 115 *eP* P 01 47 15.9 -0.1
MACA *epP* P 01 47 18.9 +2.9
SCHQ Schefferville 44.62 27 P P 01 47 17.5 -1.7
comp=Z,21nm,0.6s,baz=229,slow=6.9,SNR=38
SCHQ PcP PcP 01 49 00.7 -0.5
comp=Z,8.6nm,0.7s,baz=241,slow=1.1,SNR=4.5
SCHQ LR LR 02 08 06.0
comp=Z,153nm,19.8s,baz=155,slow=39
SAML Samuel 45.23 123 P P 01 47 24.2 -0.3
SAML pmax pmax
comp=Z,15nm,1.1s
SAML Samuel 45.23 123 P P 01 47 24.2 -0.3
SAML IAmb IAmb 01 47 25.6
comp=Z,15nm,1.1s
YKA Yellowknife Ar 45.54 351 P P 01 47 24.7 -1.6
comp=Z,12nm,0.7s,baz=156,slow=7.6,SNR=173
YKA pP pP 01 47 40.5 -0.6
comp=Z,6.1nm,0.8s,baz=153,slow=8.1,SNR=6.1
YKA PcP PcP 01 49 04.3 +0.1
comp=Z,8.2nm,0.9s,baz=150,slow=3.6,SNR=12
YKA LR LR 02 07 51.5
comp=Z,772nm,18.1s,baz=0.0,slow=38
YKA PKPPKP P'P'df 02 18 57.1 -4.2
comp=Z,0.0nm,0.3s,baz=0.0,slow=3.1,SNR=3.9
DLBC Dease Lake 45.93 339 IAmb IAmb 01 47 35.1
comp=Z,14nm,0.8s
LPAZ La Paz 46.41 135 P P 01 47 34.6 +0.2
comp=Z,3.4nm,0.8s,baz=323,slow=5.8,SNR=16
LPAZ PcP PcP 01 49 09.0 +0.3
comp=Z,2.2nm,0.8s,baz=347,slow=8.0,SNR=3.9
LPAZ LR LR 02 05 42.3
comp=Z,217nm,19.7s,baz=314,slow=34
LPAZ La Paz 46.41 135 P P 01 47 34.9 +0.4
LPAZ PcP 01 49 08.8 0.0
LPAZ La Paz 46.41 135 *eP* P 01 47 33.3 -1.2
LPAZ *epP* P 01 47 35.7 +1.3
PB16 IPOC Station P 47.01 139 IAmb IAmb 01 47 56.7
comp=Z,18nm,1.0s
MNMC Minye Minye 47.55 139 IAmb IAmb 01 47 59.7
comp=Z,16nm,1.1s
PB11 IPOC Station P 47.99 140 P P 01 47 47.3 +1.1
PB11 pP 01 48 01.5 +0.4
PB11 IAmb IAmb 01 48 02.5
comp=Z,18nm,1.1s
PB11 PcP 01 49 13.8 +0.1
GO01 Chusmiza 48.20 140 P P 01 47 49.0 +0.8
GO01 IAmb IAmb 01 48 07.1
comp=Z,10.0nm,1.1s
PB08 IPOC Station P 48.59 140 P P 01 47 51.3 +0.2
PB08 IAmb IAmb 01 48 09.8
comp=Z,8.9nm,1.0s
MALB Monte Alegre 49.22 109 *eP* P 01 47 56.5 +0.8
PB07 IPOC Station P 49.36 142 IAmb IAmb 01 48 14.0
comp=Z,17nm,1.0s
HYT Haines Junctio 50.31 337 IAmb IAmb 01 48 24.3
comp=Z,9.0nm,1.0s
LVC Limon Verde 50.61 142 *eP* P 01 48 04.8 -1.7
LVC *epP* P 01 48 08.8 +2.4
NPGB Novo Progresso 50.68 116 *eP* P 01 48 06.1 -0.6
SIV San Ignacio 51.18 129 P P 01 48 10.1 -0.3
comp=Z,14nm,0.8s,baz=303,slow=7.3,SNR=83
SIV pP pP 01 48 25.5 0.0
comp=Z,13nm,1.0s,baz=323,slow=8.2,SNR=10
GO02 Mina Guanaco 52.21 144 P P 01 48 18.8 +0.5
GO02 IAmb IAmb 01 48 35.4
comp=Z,21nm,1.1s
BALM Baldy 52.29 336 IAmb IAmb 01 48 23.7
comp=Z,8.8nm,0.9s
HMH Humu'ula Sheep 52.29 281 P P 01 48 19.4 +0.3
PTLB Pontes e Lacer 52.29 127 *eP* P 01 48 18.2 -0.4
AIN Ainahou 52.30 281 P P 01 48 19.4 +0.4
CLDB Colider 52.30 120 *eP* P 01 48 17.3 -1.5
CLDB *epP* P 01 48 21.4 +2.5
GLB Gilahina Butte 53.10 335 IAmb IAmb 01 48 26.0
comp=Z,15nm,0.9s
DAWY Dawson 53.11 340 P P 01 48 24.3 +0.1
DAWY IAmb IAmb 01 48 25.3
comp=Z,9.2nm,0.8s
RKT Rikitea 53.28 221 *e*LR LR 02 03 23.9
comp=Z,242nm,26.2s
RKT Rikitea 53.28 221 *e*T T 02 44 28.4
comp=Z,4.1nm,0.3s
C36M Paulatuk 53.39 350 P P 01 48 25.6 -0.4
baz=151
AC02 Maricunga 53.78 145 P P 01 48 30.6 +0.5
AC02 IAmb IAmb 01 48 47.7
comp=Z,8.8nm,0.9s
EPYK Eagle Plains 53.87 343 P P 01 48 29.3 -0.4
baz=135,SNR=9.2
EPYK Eagle Plains 53.87 343 IAmb IAmb 01 48 30.9
comp=Z,19nm,1.1s
MENT Mentasta 53.93 337 IAmb IAmb 01 48 32.2
comp=Z,21nm,1.2s
INK Inuvik 54.47 345 P P 01 48 33.9 0.0
INK pmax pmax
comp=Z,35nm,1.0s
INK Inuvik 54.47 345 P P 01 48 33.9 0.0
SCRK Sand Creek 54.64 338 IAmb IAmb 01 48 37.5
comp=Z,19nm,1.0s
KNK Knik Glacier 54.98 334 IAmb IAmb 01 48 54.6
comp=Z,17nm,1.1s
SALV Santo Antonio 55.21 125 *eP* P 01 48 39.8 -0.2
PMR Palmer 55.34 334 IAmb IAmb 01 48 41.8
comp=Z,15nm,0.9s
DHY Denali Highway 55.39 336 IAmb IAmb 01 48 42.1
comp=Z,11nm,1.0s
HDA Harding Lake 55.95 338 P P 01 48 44.4 -0.3
baz=123,SNR=21
ILAR Eielson Array 56.13 338 P P 01 48 45.9 0.0
comp=Z,20nm,0.9s,baz=138,slow=5.5,SNR=124
ILAR PcP PcP 01 49 43.8 +0.5
comp=Z,2.3nm,0.7s,baz=152,slow=2.5,SNR=4.8
ILAR LR LR 02 14 56.5

comp=Z,305nm,18.8s,baz=140,slow=38
CCB Clear Creek Bu 56.39 338 IAmb IAmb 01 48 49.1
comp=Z,9.5nm,0.9s
WRH Wood River Hil 56.40 337 IAmb IAmb 01 48 51.1
comp=Z,17nm,0.9s
POKR Poker Plat Res 56.51 338 P **P** **01 48 48.5 -0.2**
baz=123,SNR=12
COLA College 56.53 338 *i* P **P** **01 48 48.5 -0.3**
COLA pmax pmax
comp=Z,26nm,1.0s
COLA College 56.53 338 P **P** **01 48 49.2 +0.4**
TCOL CIGO, UAF Yank 56.53 338 P **P** **01 48 49.0 +0.2**
baz=122
MDM Murphy Dome 56.71 338 IAmb IAmb 01 48 51.0
comp=Z,13nm,1.0s
BPAW Bear Paw Mtn. 57.31 336 IAmb IAmb 01 48 55.4
comp=Z,20nm,1.1s
PMOR Pomariorio Ree 57.46 238 *e*T T 02 49 51.9
comp=Z,2.9nm,0.2s
AQDB Aquidauana 57.95 129 *e*P **P** **01 48 59.4 -0.1**
CFA Coronel Fontan 58.06 148 P **P** **01 49 01.2 +1.2**
comp=Z,8.6nm,0.8s,baz=324,slow=6.5,SNR=17
CFA pP **pP** **01 49 16.6 +1.2**
comp=Z,11nm,0.8s,baz=329,slow=7.0,SNR=8.7
ARAG Araguaiana, MT 58.18 122 *e*P **P** **01 49 01.2 +0.1**
COLD Coldfoot 58.59 340 IAmb IAmb 01 49 05.1
comp=Z,7.8nm,1.0s
TTA Tatalina 58.83 334 IAmb IAmb 01 49 22.6
comp=Z,11nm,0.9s
ROSB Rosrio 58.88 105 *e*P **P** **01 49 06.5 +0.4**
C2SB Chapadao do Su 59.09 126 *e*P **P** **01 49 07.5 +0.1**
TOLK Toolik Lake Re 59.14 341 P **P** **01 49 06.7 -0.4**
baz=122,SNR=9.0
TOLK Toolik Lake Re 59.14 341 IAmb IAmb 01 49 08.3
comp=Z,13nm,1.1s
PPT Papeete 60.22 237 LR LR 02 08 18.9
comp=Z,101nm,20.6s,baz=34,slow=29
PPT2 Papeete2 60.23 237 *e*LR LR 02 06 38.0
comp=Z,401nm,26.5s,baz=58
CPUP Villa Florida 60.58 136 P **P** **01 49 17.3 -0.1**
comp=Z,8.6nm,0.8s,baz=334,slow=7.8,SNR=24
CPUP LR LR 02 15 30.7
comp=Z,98nm,19.4s,baz=331,slow=36
CPUP Villa Florida 60.58 136 P **P** **01 49 17.4 -0.1**
CPUP IAmb IAmb 01 49 18.4
comp=Z,11nm,0.9s
BI02 San Fabin de 60.84 154 IAmb IAmb 01 49 36.5
comp=Z,11nm,0.9s
KULLO Kullorsuaq 61.08 12 *i* P **P** **01 49 19.4 -0.8**
KULLO pmax pmax
comp=Z,14nm,0.9s
KULLO Kullorsuaq 61.08 12 *i* P **P** **01 49 19.4 -0.8**
comp=Z,14nm,0.9s
BDFB Brasilia 61.24 120 P **P** **01 49 22.4 +0.1**
comp=Z,9.4nm,0.8s,baz=295,slow=7.3,SNR=16
BDFB LR LR 02 15 04.3
comp=Z,98nm,21.5s,baz=298,slow=35
BDFB Brasilia 61.24 120 P **P** **01 49 23.1 +0.8**
BDFB pmax pmax
comp=Z,12nm,0.9s
BDFB Brasilia 61.24 120 P **P** **01 49 23.1 +0.8**
BDFB IAmb IAmb 01 49 24.1
comp=Z,12nm,0.9s
PCMB Pacaembu 61.94 127 *e*P **P** **01 49 26.7 -0.1**
PCMB *e*pP **P** **01 49 30.1 +3.3**
TBI Tubuai 63.41 231 *e*LR LR 02 08 07.9
comp=Z,327nm,26.0s,baz=54
JANB Januaria 64.04 117 *e*P **P** **01 49 41.1 +0.2**
FRTB Fartura 64.22 128 *e*P **P** **01 49 42.2 +0.2**
SUMG Summit 64.53 17 P **P** **01 49 43.6 -0.1**
SUMG pmax pmax
comp=Z,16nm,0.9s
SUMG Summit 64.53 17 P **P** **01 49 43.6 -0.1**
SUMG IAmb IAmb 01 49 44.7
comp=Z,16nm,0.9s
SUMG Summit 64.53 17 *i* P **P** **01 49 42.9 -0.7**
comp=Z,38nm,0.8s
PLCA Paso Flores 64.60 156 P **P** **01 49 45.0 +0.9**
comp=Z,5.2nm,1.0s,baz=340,slow=11,SNR=6.5
PLCA LR LR 02 12 51.6
comp=Z,142nm,19.2s,baz=332,slow=31
ITAB Concordia 64.70 133 *e*P **P** **01 49 45.7 +0.7**
MC01 Montes Claros 65.15 119 *e*P **P** **01 49 48.6 +0.4**
VAO Valinhos 66.00 126 *e*P **P** **01 49 54.0 +0.4**
PLTB Pedras Altas 66.62 138 *e*P **P** **01 49 57.9 +0.6**
PLTB *e*pP **P** **01 50 00.2 +3.0**
CNLB Canela 66.87 134 *e*P **P** **01 49 59.0 0.0**
GDU01 Guandu, BA 67.49 114 *e*P **P** **01 50 04.2 +1.1**
RCBR Riachuelo 67.57 104 P **P** **01 50 03.0 -0.7**
comp=Z,12nm,0.9s,baz=336,slow=5.2,SNR=2.6
RCBR Riachuelo 67.57 104 P **P** **01 50 03.2 -0.5**
RCBR IAmb IAmb 01 50 05.5
comp=Z,20nm,1.1s
ADK Adak 67.78 319 P **P** **01 50 04.0 -0.4**
ADK pmax pmax
comp=Z,73nm,1.1s
ADK Adak 67.78 319 P **P** **01 50 04.0 -0.4**
DAG Danmarks Havn 70.57 14 *i* P **P** **01 50 20.8 -0.4**
DAG pmax pmax
comp=Z,19nm,0.8s
DAG Danmarks Havn 70.57 14 *i* P **P** **01 50 20.8 -0.4**
comp=Z,19nm,0.8s
NOR Nord 71.28 9 *i* P **P** **01 50 25.2 -0.3**
NOR pmax pmax
comp=Z,12nm,0.9s
NOR Nord 71.28 9 *i* P **P** **01 50 25.2 -0.3**
comp=Z,12nm,0.9s
BILL Bilibino 74.78 337*ce*P **P** **01 50 46.4 +0.1**
BILL pmax pmax
comp=Z,26nm,1.7s
BILL Bilibino 74.78 337 P **P** **01 50 46.9 +0.5**
BILL IAmb IAmb 01 50 49.1
comp=Z,15nm,1.1s
PMPS Porto Santo 75.25 60 *e*P **P** **01 50 49.6 -0.1**
SPA0 Spitsbergen Ar 77.63 11 *e*P **P** **01 51 03.2 +0.8**
EFI East Falkland 78.51 155*ce*P **P** **01 51 08.9 +1.4**
EFI pmax pmax
comp=Z,36nm,2.5s
PCAS Casmilo, Conde 79.77 51 *e*P **P** **01 51 15.6 +0.8**
comp=Z,68nm,1.5s
PVIS Viseu 80.04 50 *e*P **P** **01 51 17.6 +1.2**
BJO1 Bjornoya 80.06 14 *e*P **P** **01 51 18.1 +2.4**
HOPEN Hopen 80.14 11 *e*P **P** **01 51 17.1 +0.9**
PMTG Montargil 80.23 52 *e*P P 01 51 33.2 +16
PNCL Nicolau / Gran 80.25 53 *e*P P 01 51 22.9 +5.5
comp=Z,42nm,1.7s
PFVI Vila Bisbo 80.28 54 *e*P P 01 51 23.3 +5.7
MORF Marmelete 80.37 54 *e*P P 01 51 34.4 +16
MTE Manteigas 80.38 51 *e*P **P** **01 51 17.7 -0.5**
comp=Z,37nm,2.0s
EVO Evora 80.53 53 *e*P **P** **01 51 21.4 +2.5**
MVO Moncorvo 80.56 50 *e*P **P** **01 51 19.6 +0.5**
comp=Z,37nm,1.4s
MESJ Messejana 80.56 53 *e*P P 01 51 24.5 +5.4
PCBR Castelo Branco 80.58 51 *e*P **P** **01 51 19.3 +0.1**
comp=Z,25nm,1.1s
PBRG Braganca 80.59 49 *e*P **P** **01 51 21.3 +2.0**
comp=Z,33nm,1.6s
PCVE Castro Verde 80.75 54 *e*P P 01 51 36.9 +17
comp=Z,44nm,1.5s
PMRV Marv??o 80.76 52 *e*P **P** **01 51 20.4 +0.2**
comp=Z,30nm,1.5s
PBEJ Beja 80.78 53 *e*P **P** **01 51 21.3 +1.0**
comp=Z,34nm,1.6s
PBDV Barranco-do-Ve 80.94 54 *e*P P 01 51 38.1 +17
comp=Z,62nm,1.4s
PVAQ Vaqueiros 81.06 54 *e*P P 01 51 38.0 +16
comp=Z,29nm,1.5s
FOO Floro 81.25 28 *e*P **P** **01 51 23.5 +1.3**
SUE Sulen 81.32 28 *e*P **P** **01 51 24.0 +1.4**
ASK Askoy 81.73 29 *e*P **P** **01 51 25.9 +1.1**
LOF Lofoten 81.78 20 *e*P **P** **01 51 26.8 +1.8**
SEY Seymchan 81.80 334 *i* P **P** **01 51 25.0 -0.2**
BER Bergen 81.84 29 *e*P **P** **01 51 26.6 +1.2**
AKN Aaknes 81.88 27 *e*P **P** **01 51 26.8 +1.1**
HYA Hoyanger 81.92 28 *e*P **P** **01 51 27.3 +1.4**
MOL Molde 81.96 26 *e*P **P** **01 51 29.3 +3.3**
KMY Karmoy 82.24 30 *e*P **P** **01 51 28.6 +1.1**
PET Petropavlovsk 82.35 323 P **P** **01 51 29.4 +1.2**
PET pmax pmax
comp=Z,43nm,0.9s
PET Petropavlovsk 82.35 323 P **P** **01 51 29.4 +1.2**
KONS Konsvik 82.41 22 *e*P **P** **01 51 29.8 +1.6**
STEI Steigen 82.44 20 *e*P **P** **01 51 29.8 +1.4**
STOK Stokkvaagen 82.45 22 *e*P **P** **01 51 30.3 +1.8**

ODD1 Odda 82.61 29 *e*P **P** **01 51 31.9 +2.3**
OUK Oukaimeden 82.66 60 P **P** **01 51 33.0 +2.2**
SNR=5.7
TRO Tromso 82.69 18 *e*P **P** **01 51 30.9 +1.2**
BLS5 Blasjo 82.73 30 *e*P **P** **01 51 31.9 +1.8**
TBLU Trondheim 82.80 25 *e*P **P** **01 51 32.0 +1.6**
DOMB Dombas 82.83 27 *e*P **P** **01 51 32.1 +1.5**
PEA0B Petropavlovsk- 82.87 324*ce*P **P** **01 51 31.2 +0.2**
PETK Petropavlovsk- 82.87 324 P **P** **01 51 32.1 +1.2**
comp=Z,52nm,1.0s,baz=88,slow=8.8,SNR=40
PETK sP **sP** **01 51 54.5 +1.1**
comp=Z,42nm,0.8s,baz=80,slow=11,SNR=12
NSS Namsos 82.90 24 *e*P **P** **01 51 32.0 +1.1**
PAB San Pablo 82.98 51 P **P** **01 51 32.6 +0.7**
PAB pmax pmax
comp=Z,16nm,1.0s
PAB San Pablo 82.98 51 P **P** **01 51 32.6 +0.7**
PAB IAmb IAmb 01 51 49.4
comp=Z,16nm,1.0s
MOR8 Moi Rana 83.03 22 *e*P **P** **01 51 33.0 +1.4**
SKAR Skarslia 83.07 28 *e*P **P** **01 51 33.4 +1.5**
ESDC Sonseca Array 83.22 51 P **P** **01 51 33.1 -0.1**
comp=Z,2.3nm,0.8s,baz=298,slow=4.7,SNR=15
ESDC pP **pP** **01 51 49.0 -0.5**
comp=Z,6.4nm,1.1s,baz=308,slow=5.1,SNR=10
HAMF Hammerfest 83.44 16 *e*P **P** **01 51 33.9 +0.4**
SNART Snartemo 83.52 30 *e*P **P** **01 51 35.6 +1.4**
OUZM OUZ 83.66 60 P **P** **01 51 37.0 +1.3**
SNR=6.6
MA2 Magadan 83.90 331*ce*P **P** **01 51 36.4 +0.2**
MA2 pmax pmax
comp=Z,22nm,1.3s
KONO Kongsberg 84.09 29*ce*P **P** **01 51 38.3 +1.2**
KONO pmax pmax
comp=Z,117nm,1.7s
KONO Kongsberg 84.09 29 P **P** **01 51 38.4 +1.3**
KONO Kongsberg 84.09 29 *e*P **P** **01 51 38.8 +1.7**
NAO01 NORSAR Array S 84.14 27 IAmb IAmb 01 51 42.5
comp=Z,21nm,1.1s
NAO01 NORSAR Array S 84.14 27 *e*P **P** **01 51 38.6 +1.2**
HOMB Homborsund 84.17 30 *e*P **P** **01 51 39.0 +1.5**
NB2 NORSAR Subarra 84.19 27 P **P** **01 51 38.6 +0.9**
comp=Z,28nm,1.0s,baz=301,slow=5.3
NB2 NORSAR Subarra 84.19 27 P **P** **01 51 38.6 +0.9**
baz=301,slow=5.3
NOA NORSAR Array B 84.19 27 P **P** **01 51 37.0 -0.7**
comp=Z,5.7nm,0.8s,baz=302,slow=5.1,SNR=36
NOA pP **pP** **01 51 54.2 +0.3**
comp=Z,3.2nm,0.8s,baz=303,slow=5.0,SNR=3.9
NOA sP **sP** **01 52 00.0 -0.2**
comp=Z,8.1nm,0.9s,baz=301,slow=5.0,SNR=7.4
NOA LR LR 02 30 56.0
comp=Z,34nm,20.3s,baz=290,slow=37
KTK1 Kautokeino 84.30 18 *e*P **P** **01 51 38.2 +0.2**
OSL Oslo 84.47 28 *e*P **P** **01 51 41.1 +2.1**
TIXI Tiksi 84.59 346*ce*P **P** **01 51 38.7 -0.7**
TIXI pmax pmax
comp=Z,55nm,1.3s
TIXI Tiksi 84.59 346 P **P** **01 51 39.5 +0.1**
TIXI pP **sP** **01 52 00.8 -1.0**
PALE Palemas 84.61 55 P **P** **01 51 41.1 +0.8**
SNR=6.8
ARCES ARCESS Array B 84.61 17 P **P** **01 51 39.4 -0.2**
comp=Z,10nm,0.7s,baz=297,slow=4.0,SNR=43
ARCES pP **pP** **01 51 56.5 +0.7**
comp=Z,8.3nm,0.8s,baz=306,slow=4.1,SNR=4.9
ARCES LR LR 02 32 31.4
comp=Z,50nm,19.4s,baz=326,slow=38
ARE0 ARCESS Array S 84.62 17 *e*P **P** **01 51 40.1 +0.5**
MDT Midelt 84.83 57 P **P** **01 51 42.5 +0.9**
SNR=14
GOET G??ttrup 85.05 31 *i* P **P** **01 51 44.3 +2.3**
comp=Z,63nm,0.9s
GOET *i* 01 52 05.5
MUD Monsted U'grnd 85.28 32 *i* P **P** **01 51 43.9 +0.8**
MUD pmax pmax
comp=Z,21nm,0.8s
MUD Monsted U'grnd 85.28 32 *i* P **P** **01 51 43.9 +0.8**
comp=Z,21nm,0.8s
DOU Dourbes 85.37 39 PcP **PcP** **01 51 46.6 -0.2**
DOU pP **pP** **01 52 00.7 +0.6**
DOU sP **sP** **01 52 06.6 +0.3**
BMRD Maredsous 85.39 38 PcP **P** **01 51 45.2 +1.4**
BMRD pP **pP** **01 52 00.1 0.0**
BMRD sP **sP** **01 52 06.8 +0.4**
BGES Gesves 85.55 38 P **P** **01 51 44.6 0.0**
BGES pP **pP** **01 52 01.2 +0.3**
BGES sP **sP** **01 52 07.2 0.0**
BCLA Clavier 85.66 38 PcP **PcP** **01 51 47.6 -0.4**
BCLA sP **sP** **01 52 08.1 +0.3**
BEBN Eben Emael 85.73 38 PcP **PcP** **01 51 48.3 0.0**
BEBN pP **pP** **01 52 02.5 +0.7**
BEBN sP **sP** **01 52 08.4 +0.3**
BSTI Sart Tilman 85.75 38 PcP **P** **01 51 46.5 +0.8**
BSTI sP **sP** **01 52 08.4 +0.2**
MEM Membach 86.00 38 PcP **P** **01 51 48.1 +1.3**
MEM sP **sP** **01 52 09.8 +0.3**
BHOU Houvegnez 86.10 38 PcP **PcP** **01 51 49.1 -0.9**
BHOU pP **pP** **01 52 04.5 +0.8**
BHOU sP **sP** **01 52 10.4 +0.4**
WLF Walferdange 86.47 39 PcP **P** **01 51 49.7 +0.5**
WLF sP **sP** **01 52 12.8 +1.0**
TDRA Tendrara 86.81 56 P **P** **01 51 53.0 +1.5**
SNR=9.8
MSVF Nonsavu 88.02 251 *i* P **P** **01 51 59.6 +2.3**
MSVF pmax pmax
comp=Z,30nm,1.0s
BFO Black Forest 88.33 39 P **P** **01 52 00.0 +1.8**
BFO pmax pmax
comp=Z,6.0nm,1.0s
BFO Black Forest 88.33 39 P **P** **01 52 00.0 +1.8**
BFO IAmb IAmb 01 52 00.8
comp=Z,6.3nm,1.0s
GRF Grafenberg Arr 89.42 37 *e*P **P** **01 52 02.5 -0.8**
comp=Z,17nm,1.1s,baz=288,slow=4.8
GRF *e*pP **sP** **01 52 26.1 +0.2**
CLL Collm 89.66 35 *i* P **P** **01 52 05.0 +0.7**
comp=Z,7.0nm,0.9s
CLL *e*pP **pP** **01 52 21.0 +0.3**
CLL *i* sP **sP** **01 52 27.7 +0.7**
comp=Z,19nm,1.3s
CLL Collm 89.66 35 *i* P **P** **01 52 05.0 +0.7**
CLL *e**PP **pP** **01 52 21.0 +0.3**
CLL *i **SP **sP** **01 52 27.7 +0.7**
CLL pmax pmax
comp=Z,7.0nm,0.9s
CLL Collm 89.66 35 IAmb IAmb 01 52 08.3
comp=Z,5.8nm,0.8s
DAVA Damuels 89.72 40 *e*P **P** **01 52 05.5 +0.6**
comp=Z,9.8nm,0.9s
DAVA *e*sP **sP** **01 52 28.0 +0.4**
comp=Z,20nm,1.1s
NKC Novy Kostel 89.87 36 *e*P **P** **01 52 07.0 +1.6**
NKC *e* 01 52 27.7
NKC Novy Kostel 89.87 36 *e*P **P** **01 52 07.0 +1.6**
NKC *e*sP **sP** **01 52 27.7 -0.3**
FIA1 FINESS Array S 89.96 23 IAmb IAmb 01 52 05.4
comp=Z,12nm,1.1s
FINES FINESS Array B 89.96 23 P **P** **01 52 04.9 -0.6**
comp=Z,7.3nm,0.9s,baz=323,slow=2.9,SNR=17
FINES LR LR 02 33 25.0
comp=Z,126nm,21.8s,baz=313,slow=36
RETA Reutte 90.17 39 P **P** **01 52 07.3 +0.4**
comp=Z,6.0nm,1.0s
RETA *e*sP **sP** **01 52 29.9 +0.4**
comp=Z,11nm,1.1s
FUORN Ofenpass-Fuorn 90.26 40 P **P** **01 52 08.1 +0.6**
FUORN IAmb IAmb 01 52 16.4
comp=Z,6.3nm,0.9s
FETA Feichten 90.36 40 *e*P **P** **01 52 08.6 +0.7**
comp=Z,2.9nm,0.7s
FETA *e*sP **sP** **01 52 31.1 +0.5**
comp=Z,11nm,1.2s
BRG Berggiesshubel 90.39 35 *e*P **P** **01 52 08.0 +0.2**
comp=Z,5.5nm,0.9s
BRG *e* 01 52 09.5
comp=Z,8.9nm,0.9s
BRG *e*pP **pP** **01 52 23.6 -0.5**
comp=Z,5.5nm,1.2s
BRG *e*sS **sP** **01 52 30.0 -0.4**
comp=Z,14nm,1.0s
MOTA Moosalm 90.44 39 *e*P **P** **01 52 08.8 +0.5**
comp=Z,7.7nm,0.9s
MOTA *e*sP **sP** **01 52 31.3 +0.3**
comp=Z,16nm,1.1s

SQTA Sankt Quirin 90.56 39 *e*P **P** **01 52 09.3 +0.5**
comp=Z,7.6nm,1.2s
SQTA *e*sP **sP** **01 52 31.9 +0.4**
comp=Z,17nm,1.2s
WATA Walderalm 90.73 39 *e*P **P** **01 52 10.0 +0.3**
comp=Z,4.8nm,1.0s
WATA *e*sP **sP** **01 52 32.5 +0.2**
comp=Z,15nm,1.2s
WTTA Wattenberg 90.80 39 *e*P **P** **01 52 10.0 0.0**
comp=Z,5.1nm,1.0s
WTTA *e*sP **sP** **01 52 33.0 +0.3**
comp=Z,11nm,1.3s
YAK Yakutsk 91.04 339 *e*P **P** **01 52 11.4 +0.9**
YAK *e**PP **sP** **01 52 32.2 -0.9**
YAK *e* 01 55 47.3
YAK *e*S **SKSac** **02 02 35.1 -2.6**
YAK *e*SP **SPn** **02 04 18.5 +7.2**
YAK pmax pmax
comp=Z,96nm,0.8s
YAK pmax pmax
comp=N,19nm,1.1s
YAK pmax pmax
comp=E,21nm,1.3s
YAK pmax pmax
comp=Z,105nm,3.7s
YAK pmax pmax
comp=N,52nm,2.8s
YAK pmax pmax
comp=E,58nm,4.5s
YAK smax smax
comp=N,69nm,3.4s
YAK smax smax
comp=E,34nm,2.5s
YAK Yakutsk 91.04 339 P **P** **01 52 11.5 +0.9**
KHC Kasperske Hory 91.04 37*ce*P **P** **01 52 10.0 -0.9**
KHC pmax pmax
comp=Z,12nm,1.2s
KHC Kasperske Hory 91.04 37 *e*P **P** **01 52 11.0 +0.1**
KHC *e*PCP **PcP** **01 52 13.4 +1.5**
KHC *e*sP **sP** **01 52 32.7 -0.9**
KHC *ex* x 01 53 11.0
PRU Pruhonice 91.16 36 *e*P **P** **01 52 11.5 +0.1**
PRU *e* 01 52 33.7
PRU Pruhonice 91.16 36 *e*P **P** **01 52 11.5 +0.1**
PRU *e*PCP **PcP** **01 52 13.9 +1.6**
PRU *e*sP **sP** **01 52 33.7 -0.3**
GEC2 GERESS Array S 91.25 37 IAmb IAmb 01 52 12.5
comp=Z,4.0nm,0.9s
GERES GERESS Array B 91.25 37 P **P** **01 52 11.1 -0.9**
comp=Z,2.5nm,0.8s,baz=321,slow=3.8,SNR=15
GERES pP **pP** **01 52 28.4 0.0**
comp=Z,0.5nm,0.6s,baz=319,slow=3.9,SNR=2.9
GERES sP **sP** **01 52 34.5 -0.2**
comp=Z,4.2nm,1.0s,baz=318,slow=3.8,SNR=6.6
GERES LR LR 02 35 28.3
comp=Z,60nm,19.1s,baz=297,slow=37
CTI Castel Tesino 91.37 40 IAmb IAmb 01 52 15.8
comp=Z,5.0nm,0.9s
ABTA Abfaltersbach 91.57 39 *e*P **P** **01 52 13.9 +0.4**
comp=Z,6.9nm,0.9s
ABTA *e*sP **sP** **01 52 36.4 +0.2**
comp=Z,20nm,1.5s
CHVC Chvalec 91.69 35 *e*P **P** **01 52 14.0 +0.1**
CHVC *ex* x 01 52 15.8
CHVC *ex* x 01 52 36.2
UPC Upice 91.71 35 *e*P **P** **01 52 13.9 0.0**
UPC *e* 01 52 37.1
UPC Upice 91.71 35 *e*P **P** **01 52 13.9 0.0**
UPC *e*PCP **PcP** **01 52 16.5 +1.7**
UPC *e*sP **sP** **01 52 37.1 +0.5**
OSTC Ostas 91.79 35 *e*P **P** **01 52 14.5 +0.2**
OSTC *e*PCP **PcP** **01 52 17.0 +1.8**
OSTC *e*sP **sP** **01 52 36.0 -1.0**
TMCR Tamitsa 91.91 17 *e*P **P** **01 52 13.0 -1.5**
KBA Koelnbreinsper 91.91 39 *e*P **P** **01 52 15.5 +0.4**
comp=Z,4.2nm,0.8s
KBA *e*sP **sP** **01 52 38.0 +0.2**
comp=Z,6.3nm,0.8s
STAL STALIGIAL 91.92 40 IAmb IAmb 01 52 20.4
comp=Z,5.4nm,0.9s
DPC Dobruska-Polom 91.96 35 *e*P **P** **01 52 15.0 -0.1**
DPC *e* 01 52 37.6
DPC Dobruska-Polom 91.96 35 *e*P **P** **01 52 15.0 -0.1**
DPC *e*PCP **PcP** **01 52 18.0 +2.1**
DPC *e*sP **sP** **01 52 37.6 -0.2**
MOA Molln 92.07 38 *e*P **P** **01 52 16.1 +0.4**
comp=Z,5.4nm,0.7s
MOA *e*sP **sP** **01 52 38.6 +0.2**
comp=Z,11nm,1.2s
TYV Tymovskoe 92.18 326 *e*P **P** **01 52 17.1 +1.0**
TYV pmax pmax
comp=Z,20nm,1.3s
TYV pmax pmax
comp=Z,100nm,3.3s
OSSC Osservatorio P 92.29 43 IAmb IAmb 01 52 16.5
comp=Z,6.7nm,0.9s
MYKA Terra Mystica 92.31 39 *e*P **P** **01 52 16.3 -0.6**
comp=Z,3.1nm,0.5s
MYKA *e*sP **sP** **01 52 39.8 +0.3**
comp=Z,10nm,1.6s
VRAC Vranov 92.66 36 *e*P **P** **01 52 18.8 +0.5**
VRAC *e* 01 52 40.8
VRAC Vranov 92.66 36 ⇓P **P** **01 52 18.6 +0.3**
NRIK Noril'sk 92.67 357 P **P** **01 52 18.3 +0.3**
comp=Z,20nm,0.9s,baz=39,slow=3.4,SNR=27
NRIK LR LR 02 36 26.1
comp=Z,69nm,20.6s,baz=46,slow=37
KRUC Moravsky 92.67 36 *e*P **P** **01 52 18.3 -0.1**
KRUC *e* 01 52 40.7
TIC Toumodi 92.73 82 *e*P **P** **01 52 18.8 -0.5**
LIC Lamto 92.85 83 *e*P **P** **01 52 19.4 -0.5**
comp=Z,70nm,1.1s
DBIC Dimbokro 92.87 82 P **P** **01 52 19.7 -0.3**
comp=Z,10.0nm,0.8s,baz=257,slow=5.0,SNR=11
DBIC LR LR 02 29 23.4
comp=Z,62nm,21.3s,baz=276,slow=32
DBIC Dimbokro 92.87 82 P **P** **01 52 19.8 -0.1**
OBKA Obir 92.91 39 *e*P **P** **01 52 19.7 +0.1**
comp=Z,12nm,1.1s,SNR=8.9
OBKA *e*sP **sP** **01 52 42.2 -0.1**
comp=Z,11nm,1.0s
MORC Moravsky Berou 92.93 35 *e*P **P** **01 52 20.1 +0.5**
MORC *e* 01 52 42.2
MORC Moravsky Berou 92.93 35 ⇑P **P** **01 52 20.5 +0.8**
MORC Moravsky Berou 92.93 35 IAmb IAmb 01 52 23.0
comp=Z,6.2nm,0.8s
CONA Conrad Observa 92.96 37 *e*P **P** **01 52 20.1 +0.2**
comp=Z,3.9nm,1.0s
CONA *e*sP **sP** **01 52 43.0 +0.5**
comp=Z,10nm,1.1s
KIC Kosan Boka 93.08 82 *e*P **P** **01 52 20.5 -0.4**
comp=Z,70nm,1.1s
SOKA Soboth 93.11 39 *e*P **P** **01 52 20.5 -0.1**
comp=Z,5.8nm,0.7s,SNR=7.9
SOKA *e*sP **sP** **01 52 43.0 -0.3**
comp=Z,15nm,1.3s
OKC Ostrava-Krasne 93.23 35 *e*P **P** **01 52 21.1 +0.2**
OKC *e* 01 52 43.5
OKC Ostrava-Krasne 93.23 35 *e*P **P** **01 52 21.1 +0.2**
OKC *e*PCP **PcP** **01 52 23.8 +2.3**
OKC *e*sP **sP** **01 52 43.5 -0.1**
JAVC Velka Javorina 93.50 36 *e*P **P** **01 52 23.8 +1.5**
JAVC *e* 01 52 45.4
MODS Modra-Piesok 93.53 36 *e*P **P** **01 52 22.3 -0.1**
MODS pmax pmax
comp=Z,7.0nm,1.1s
MODS Modra-Piesok 93.53 36 *e*P **P** **01 52 22.3 -0.1**
SMOL Smolenice 93.54 36 *e*P **P** **01 52 23.4 +1.0**
SMOL pmax pmax
comp=Z,4.0nm,1.2s
SMOL Smolenice 93.54 36 *e*P **P** **01 52 23.4 +1.0**
YSS Yuzh-Sakhalins 94.20 322‖ *e*P **P** **01 52 26.2 +0.7**
YSS *e* 01 52 48.6
YSS pmax pmax
comp=Z,10.0nm,0.6s
YSS MLR MLR
comp=Z,100nm,16.0s
VYHS Vyhne 94.34 36 *e*P **P** **01 52 26.5 +0.4**
VYHS pmax pmax
comp=Z,7.0nm,1.2s
VYHS Vyhne 94.34 36 *e*P **P** **01 52 26.5 +0.4**
KEST Kesra 94.47 50 LR LR 02 29 49.9
comp=Z,49nm,21.6s,baz=246,slow=32
KLMR Klimovskoe 94.92 19 *e*P **P** **01 52 26.3 -2.2**
KLMR *e**PP **sP** **01 52 48.6 -2.5**

KLMR pmax pmax
comp=Z,27nm,1.1s
KLMR Klimovskoe 94.92 19 *e*P **P 01 52 26.3 -2.2**
KLMR AMP 01 52 28.6
comp=Z,27nm,1.1s
KLMR *e*pP **sP 01 52 48.6 -2.5**
PSZ Piszkesteto 95.25 36 ||P **P 01 52 30.2 -0.2**
UZH Uzhgorod 96.15 34 ||*i*P **P 01 52 35.0 +0.7**
UZH *i* 01 52 57.5
UZH *i* 01 53 00.0
LVV L'vov 96.35 33 *e*P **P 01 52 34.8 -0.4**
ERM Erimo 96.55 318 *ce*P **P 01 52 37.2 +1.0**
ERM pmax pmax
comp=Z,17nm,1.2s
TRPA Tarpa 96.58 35 ||P **P 01 52 37.3 +1.1**
TAM Tamanrasset 96.73 64 P **P 01 52 37.4 -0.3**
TAM pmax pmax
comp=Z,5.0nm,1.0s
TAM Tamanrasset 96.73 64 P **P 01 52 37.4 -0.3**
TAM IAmb IAmb 01 52 55.6
comp=Z,4.9nm,1.0s
TORD Torodi Ar. Bea 96.84 74 P **P 01 52 37.0 -1.1**
comp=Z,2.3nm,0.7s,baz=283,slow=5.8,SNR=8.8
TORD pP **pP 01 52 53.5 -1.0**
comp=Z,3.4nm,1.1s,baz=285,slow=4.5,SNR=6.7
TORD sP **sP 01 53 02.0 +1.2**
comp=Z,2.3nm,0.8s,baz=285,slow=5.1,SNR=5.1
TORD PKKP **PKKPdf 02 09 20.5 -0.4**
comp=Z,1.3nm,0.8s,baz=113,slow=2.5,SNR=6.9
TORD LR LR 02 34 40.0
comp=Z,26nm,19.8s,baz=250,slow=34
SIRR Siria 97.18 36 ||P Pdif 01 52 39.2 0.0
BZS Buzias 97.53 37 ||P Pdif 01 52 41.0 +0.2
TIP Timpagrande 98.03 44 ||P **P 01 52 41.3 -1.8**
MDVR Moldovita 98.07 38 ||P **P 01 52 43.0 -0.1**
BURAR Bucovina Array 98.33 34 ||P Pdif 01 52 45.0 +0.7
OBN Obninsk 98.34 24 *de*P **P 01 52 43.0 -1.0**
OBN *i* *PP **sP 01 53 05.3 -1.4**
OBN *e* 01 56 41.0
OBN pmax pmax
comp=Z,15nm,1.2s
OBN MLR MLR
comp=Z,127nm,21.0s
AKASG Malin Array Be 98.35 30 P **P 01 52 42.8 -1.4**
comp=Z,0.6nm,0.5s,baz=291,slow=3.7,SNR=6.0
AKASG sP **sP 01 53 06.4 -0.4**
comp=Z,0.3nm,0.4s,baz=0.5,slow=8.8,SNR=1.5
AKBB Malin Array Si 98.35 30 *ce*P **P 01 52 42.0 -2.2**
KLR Kul'dur 98.80 329 *ce*P **P 01 52 45.3 -0.9**
comp=Z,0.7nm,0.7s,baz=358,slow=8.3,SNR=3.0
KLR Kul'dur 98.80 329 *ce*P **P 01 52 45.4 -0.9**
KLR pmax pmax
comp=Z,2.0nm,1.0s
ARR Arges 99.39 36 ||P **Pdif 01 52 49.7 +0.6**
SORM Soroca 99.62 32 ||P **Pdif 01 52 49.2 -0.8**
DZM Mont Dzumac 99.73 250 *e*LR LR 02 24 59.6
comp=Z,186nm,25.6s
MLR Muntele Rosu 100.04 35 ||P **Pdif 01 52 51.9 -0.2**
LPSR Galich'ya Gora 101.17 24 *e*P **Pdif 01 52 56.2 -0.5**
LPSR pmax pmax
comp=Z,9.0nm,0.6s
VSR Storozhevoye 102.33 25 *e*P **Pdif 01 53 01.3 -0.6**
VSR pmax pmax
comp=Z,10.0nm,0.8s
VORD Divnogorie 102.58 25 *e*P **Pdif 01 53 01.8 -1.2**
VORD pmax pmax
comp=Z,7.0nm,1.0s
VRH Novokhopyorsk 103.34 24 *e*P **Pdif 01 53 05.9 -0.5**
VRH pmax pmax
comp=Z,10.0nm,0.7s
ARU Arti 103.65 12 P **Pdif 01 53 06.9 -0.8**
SONM Songino Array 110.25 341 PKiKP **PKiKP 01 57 38.2 -0.2**
comp=Z,0.6nm,0.8s,baz=43,slow=2.8,SNR=3.2
SONM PP **PP 01 58 13.2 +0.9**
comp=Z,0.6nm,0.8s,baz=15,slow=7.7,SNR=4.1
KURK Kurchatov 111.52 1 *i* PKIKP **PKiKP 01 57 41.7 +1.2**
HHC Hu-ho-hao-te 114.44 334 *e*PKP PKPdf 01 57 49.8 +3.2
MKAR Makanchi Array 115.42 358 PKP **PKiKP 01 57 46.8 -1.4**
comp=Z,1.0nm,0.8s,baz=19,slow=4.1,SNR=5.6
CTA Charters Tower 117.67 256 PKP **PKPdf 01 57 53.0 -0.1**
comp=Z,5.8nm,0.9s,baz=304,slow=3.6,SNR=2.6
NJ2 Nanjing 117.77 323 *e*PKP **PKPdf 01 57 52.8 -0.2**
WMQ Urumqi 118.02 354 *e*PKP **PKPdf 01 57 48.9 -4.4**
WMQ LR LR
comp=Z,140nm,16.5s
WMQ LR LR
comp=Z,160nm,20.1s
WMQ LR LR
comp=Z,370nm,24.7s
AAK Ala-Archa 119.40 5 PKP **PKPdf 01 57 56.1 -0.1**
comp=Z,1.2nm,0.6s,baz=30,slow=24,SNR=3.8
AAK Ala-Archa 119.40 5 *i* PKIKP **PKPdf 01 57 55.9 -0.2**
AAK Ala-Archa 119.40 5 **PKiKP 01 57 56.7 +0.5**
TARG Taragay, Kyrgy 120.48 2 **PKiKP 01 57 58.9 +0.2**
GEYT Alibeck 120.65 20 PKP **PKPdf 01 57 58.0 -0.5**
comp=Z,4.9nm,0.8s,baz=266,slow=3.9,SNR=13
TSUM Tsumeb 121.19 102 PKP **PKiKP 01 58 00.3 +0.1**
comp=Z,1.2nm,0.7s,baz=335,slow=17
TSUM Tsumeb 121.19 102 PKP **PKPdf 01 57 59.8 -0.3**
XAN Xi'an 121.29 332 PKP **PKPdf 01 57 59.4 -0.5**
XAN LR LR
comp=Z,110nm,20.6s
CHGR Chuyangaron 122.68 10 **PKiKP 01 58 02.8 +0.1**
STKA Stephens Creek 123.11 243 PKP **PKiKP 01 58 03.5 0.0**
comp=Z,10nm,0.8s,baz=38,slow=2.2,SNR=25
ENH Enshi 124.16 329 **PKiKP 01 58 05.7 -0.1**
CD2 Chengdu 126.20 335 PKP **PKPdf 01 58 08.5 -0.9**
SIJI Sorong 126.81 283 PKP **PKPdf 01 58 10.7 -0.2**
comp=Z,4.8nm,0.3s,baz=167,slow=3.7,SNR=5.1
MBAR Mbarara 128.66 76 PKP **PKiKP 01 58 15.7 +0.4**
comp=Z,2.9nm,0.2s,baz=251,slow=2.1,SNR=6.1
MBAR Mbarara 128.66 76 *i* PKIKP **PKPdf 01 58 14.6 0.0**
WB2 Warramunga Arr 128.71 259 **PKPdf 01 58 14.7 +0.4**
WRAB Tennant Creek 128.71 259 *c* *i*PKIKP **PKPdf 01 58 14.0 -0.3**
WRAB pmax pmax
comp=Z,16nm,1.0s
WRA Warramunga Arr 128.72 259 PKP **PKPdf 01 58 14.6 +0.3**
comp=Z,13nm,0.9s,baz=77,slow=1.5,SNR=26
WRA pPKP **pPKPdf 01 58 31.3 +0.2**
comp=Z,4.5nm,0.9s,baz=80,slow=1.3,SNR=4.6
BOSA Boshof 129.07 112 PKP **PKPdf 01 58 14.7 -0.2**
comp=Z,4.5nm,1.0s,baz=166,slow=7.8,SNR=3.9
MAW Mawson 129.28 172 PKP **PKPdf 01 58 14.3 +0.4**
comp=Z,15nm,0.9s,baz=223,slow=4.6,SNR=9.2
MAW Mawson 129.28 172 **PKiKP 01 58 15.3 +0.6**
ASAR Alice Springs 129.51 254 PKP **PKPdf 01 58 15.8 0.0**
comp=Z,9.8nm,0.9s,baz=94,slow=2.2,SNR=52
ASAR pPKP **pPKPdf 01 58 32.6 +0.1**
comp=Z,3.7nm,0.9s,baz=96,slow=2.0,SNR=5.8
ASAR SKP **SKPdf 02 01 45.1 -1.4**
comp=Z,0.3nm,0.8s,baz=100,slow=3.9,SNR=1.6
ASAR SKKPbc **SKKPbc 02 11 14.9 -2.9**
comp=Z,0.5nm,0.9s,baz=255,slow=1.8,SNR=2.5
MATP Matopo 131.53 102 PKP **PKPdf 01 58 19.6 -0.2**
comp=Z,8.3nm,1.3s,baz=180,slow=2.5,SNR=7.3
CMAR Chiang Mai Arr 139.19 332 PKP **PKPdf 01 58 33.5 -0.5**
comp=Z,3.6nm,0.8s,baz=331,slow=2.0,SNR=16
PBKT Sadao Pong 139.84 328 **PKPdf 01 58 35.9 +0.7**
KSM Kuching 144.36 300 PKPbc 01 58 42.4 +0.6
HYB Hyderabad 144.72 2 *i* PKP **PKPab 01 58 41.0 -1.7**
OPO Ambohidratompo 148.92 96 PKPbc **PKPbc 01 58 54.1 -1.0**
comp=Z,8.2nm,0.9s,baz=255,slow=5.6,SNR=3.6
CISI Cisompet, Garu 150.93 287 PKPbc **PKPbc 01 58 59.4 -0.6**
PSI Prapat 152.08 316 PKIKP **PKPdf 01 58 56.3 +0.2**
RPSI Rantau Prapat 152.16 316 **PKPdf 01 58 56.3 +0.2**

*IDC **20** 01:52:27.8±5.9, 6.6S×155.05E, h69km±43km, mb3.7/6, mb1 4.0/8, mb1mx3.7/33, mbtmp4.0/8, ML2.9/2, MS3.2/3, Ms1 3.2/3, ms1mx2.8/28, Error ellipse: s-maj=60.2km s-min=23.3km az=112.0*

ISC 20 01:52:26.7±1.1, 6.6S±0.1×155.0E±0.1, h56km, n17, σ1°30/12, mb4.1/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.73**	**307**	P		**Pn**	**01 53 23.7**	**+1.9**
	5.5nm,0.3s,baz=351,slow=14,SNR=2.0							
KRVT				S		**Sn**	**01 54 02.5**	**-2.1**
	20nm,0.3s,baz=173,slow=4.0,SNR=3.8							
PMG	**Port Moresby**	**8.28**	**250**	P		**Pn**	**01 54 25.3**	**+1.2**
	2.4nm,0.3s,baz=339,slow=8.6,SNR=3.1							
PMG				LR		LR	01 56 50.4	
	comp=Z,27nm,19.9s,baz=268,slow=32							
DZM	**Mont Dzumac**	**18.95**	**146**	LR		LR	02 02 19.3	
	comp=Z,98nm,18.7s,baz=330,slow=31							
WRA	**Warramunga Arr**	**24.08**	**235**	P		**P**	**01 57 36.1**	**-1.0**
	6.6nm,0.7s,baz=56,slow=9.5,SNR=42							
WRA				PcP		**PcP**	**02 01 17.2**	**-0.3**
	0.2nm,0.3s,baz=47,slow=2.2,SNR=4.7							
ASAR	**Alice Springs**	**26.47**	**228**	P		**P**	**01 57 59.3**	**+0.4**
	0.4nm,0.5s,baz=59,slow=8.8,SNR=5.0							
ASAR				PcP		**PcP**	**02 01 21.7**	**-1.2**
	0.5nm,0.6s,baz=62,slow=2.6,SNR=2.6							
H11S3	**WAKE ISLAND Hy 27.44**	**25**		T		T	02 26 42.8	
	baz=203,slow=75,SNR=24							
H11S2	**WAKE ISLAND Hy 27.44**	**25**		T		T	02 26 38.2	
	baz=203,slow=75,SNR=33							
H11S1	**WAKE ISLAND Hy 27.45**	**25**		T		T	02 26 17.2	
	baz=203,slow=75,SNR=20							
H11N1	**WAKE ISLAND Hy 28.61**	**24**		T		T	02 28 02.8	
	baz=198							
H11N3	**WAKE ISLAND Hy 28.63**	**24**		T		T	02 28 01.7	
	baz=198							
H11N2	**WAKE ISLAND Hy 28.63**	**24**		T		T	02 28 06.8	
	baz=198							
PETK	**Petropavlovsk-**	**59.49**	**2**	P		**P**	**02 02 24.4**	**+0.5**
	1.1nm,0.7s,baz=183,slow=12,SNR=1.9							
CMAR	**Chiang Mai Arr**	**60.62**	**295**	P		**P**	**02 02 33.2**	**+0.9**
	1.2nm,0.3s,baz=118,slow=5.8,SNR=5.9							
SONM	**Songino Array**	**69.00**	**327**	P		**P**	**02 03 25.8**	**-0.5**
	0.3nm,0.4s,baz=144,slow=4.8,SNR=3.5							
YKA	**Yellowknife Ar**	**95.95**	**28**	P		**P**	**02 05 47.2**	**-0.1**
	0.4nm,0.7s,baz=266,slow=4.0,SNR=5.6							
GEYT	**Alibeck**	**99.44**	**307**	LR		LR	02 52 34.5	
	comp=Z,38nm,22.0s,baz=190,slow=36							
TORD	**Torodi Ar. Bea**	**152.94**	**286**	PKPbc		**PKPbc**	**02 12 17.5**	**-1.2**
	0.8nm,0.6s,baz=70,slow=1.9,SNR=14							

*EAF **20** 02:05:43.9, 12°.35N×41°.63E, h0km*
*AAE **20** 02:05:43.9, 10°.08N×43°.12E*
*IDC **20** 02:05:48.4±1.9, 11°.14N×41°.73E, h0km, mb3.8/10, mb1 3.9/10, mb1mx3.6/50, mbtmp3.8/10, MS3.7/2, Ms1 3.7/2, ms1mx2.8/39, Error ellipse: s-maj=42.1km s-min=12.2km az=176.0*
*NEIC **20** 02:05:50.5±1.2, 11°.2N±0°.1×41°.90E±0°.07, h16km±5km, mb4.1/6, Error ellipse: s-maj=21.9km s-min=4.6km az=156.0*

ISC 20 02:05:49.8±0.6, 11°.29N±0°.08×41°.77E±0°.04, h10km, n35, σ1°80/43, mb3.9/14, Ethiopia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**1.08**	**77**	Pg		**Pg**	**02 06 10.3**	**-0.3**
	234nm,0.3s,baz=148,slow=1.0,SNR=339							
ATD				Lg		Lg	02 06 26.8	
	184nm,0.3s,baz=259,slow=23,SNR=11							
ATD	**Arta Tunnel**	**1.08**	**77**	*e*P		**Pg**	**02 06 10.2**	**-0.4**
ATD				*e*S		**Sn**	**02 06 28.4**	**+2.3**
ATD	**Arta Tunnel**	**1.08**	**77**	*e*P		**Pg**	**02 06 10.2**	**-0.4**
ATD	**Arta Tunnel**	**1.08**	**77**	*e*P		**Pg**	**02 06 10.0**	**-0.6**
ATD				*e*S		**Sn**	**02 06 27.8**	**+1.7**
ATD	**Arta Tunnel**	**1.08**	**77**			**Pg**	**02 06 09.3**	**-1.2**
ATD				Sn		**Sg**	**02 06 23.1**	**-1.6**
I19DJ	**I19DJ**	**1.39**	**82**	Pg		**Pn**	**02 06 13.2**	**-1.9**
	baz=257,slow=34,SNR=3.5							
DESE	**Dese**	**2.10**	**266**	*e*P		**Pn**	**02 06 23.1**	**-2.2**
DESE				*e*S		**Sn**	**02 06 51.6**	**-0.1**
AAE	**Adis Abeba**	**3.71**	**233**	*e*P		**Pn**	**02 06 48.7**	**+1.2**
AAE				*i* S		**Sb**	**02 07 39.6**	**-1.3**
AAE	**Adis Abeba**	**3.71**	**233**	*e*P		**Pn**	**02 06 48.7**	**+1.2**
AAE	**Adis Abeba**	**3.71**	**233**	*e*P		**Pn**	**02 06 49.4**	**+1.8**
AAE				*i* Sg		**Sb**	**02 07 37.8**	**-3.1**
FURI	**Furi**	**3.86**	**232**	*i* P		**Pn**	**02 06 52.8**	**+3.3**
FURI	**Furi**	**3.86**	**232**	*e*P		**Pn**	**02 06 53.3**	**+3.7**
FURI				*e*S		**Sb**	**02 07 43.1**	**-2.1**
FURI	**Furi**	**3.86**	**232**	*e*P		**Pn**	**02 06 53.3**	**+3.7**
FURI				*e*S		**Sb**	**02 07 43.1**	**-2.1**
FURI	**Furi**	**3.86**	**232**	*e*P		**Pb**	**02 06 54.7**	**-3.5**
FURI				*i* Sg		**Sb**	**02 07 43.8**	**-1.4**
FURI	**Furi**	**3.86**	**232**	Pn		**Pn**	**02 06 50.6**	**+1.0**
FURI				Sn		**Sn**	**02 07 36.8**	**+1.6**
DAMY	**Dhamar**	**4.15**	**38**			**Pn**	**02 06 53.0**	**-0.4**
EIL	**Elat**	**19.37**	**342**	LR		LR	02 16 10.6	
	comp=Z,80nm,19.8s,baz=129,slow=32							
ASF	**Jabal al Asfar**	**21.27**	**349**	P		**P**	**02 10 38.8**	**+2.4**
	3.6nm,0.9s,baz=107,slow=3.5,SNR=5.5							
BR131	**Keskin Array S**	**29.23**	**347**	P		**P**	**02 11 51.5**	**-0.4**
BR131				IAmb	IAmb	IAmb	02 11 57.3	
	comp=Z,4.3nm,1.1s							
BRTR	**Keskin Array B**	**29.23**	**347**	P		**P**	**02 11 54.1**	**+2.1**
	comp=Z,2.6nm,1.1s,baz=172,slow=11,SNR=11							
ANTO	**Ankara**	**29.56**	**346**	P		**P**	**02 11 55.4**	**+0.5**
ANTO				IAmb	IAmb	IAmb	02 12 00.4	
	comp=Z,5.5nm,1.1s							
VTS	**Vitosha**	**35.15**	**336**	P		**P**	**02 12 44.0**	**+0.1**
VTS				IAmb	IAmb	IAmb	02 12 46.5	
	comp=Z,2.4nm,0.9s							
TORD	**Torodi Ar. Bea**	**39.19**	**277**	P		**P**	**02 13 18.6**	**+0.2**
	comp=Z,0.9nm,1.1s,baz=72,slow=9.5,SNR=3.6							
KK31	**Karatay Array**	**40.33**	**33**	P		**P**	**02 13 26.5**	**-1.1**
KKAR	**Karatay Array**	**40.33**	**33**	P		**P**	**02 13 26.2**	**-1.4**
KKAR				IAmb	IAmb	IAmb	02 13 34.4	
	comp=Z,4.5nm,1.5s							
AKASG	**Malin Array Be**	**40.63**	**348**	P		**P**	**02 13 30.5**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=163,slow=6.8,SNR=5.7							
KSH	**Kashi**	**41.34**	**41**	P		**P**	**02 13 38.1**	**+2.0**
KSH				pmax	pmax			
	comp=Z,11nm,0.7s							
KSH				pmax	pmax			
	comp=Z,270nm,4.7s							
MAKZ	**Makanchi**	**49.01**	**36**	P		**P**	**02 14 35.4**	**-1.4**
MKAR	**Makanchi Array**	**49.19**	**36**	P		**P**	**02 14 39.5**	**+1.4**
	comp=Z,1.2nm,0.9s,baz=232,slow=6.6,SNR=4.5							
ESDC	**Sonseca Array**	**49.30**	**313**	P		**P**	**02 14 39.6**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=107,slow=9.5,SNR=4.1							
NOA	**NORSAR Array B**	**54.48**	**342**	P		**P**	**02 15 18.0**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=142,slow=7.5,SNR=3.6							
ZALV	**Zalesovo Beam**	**54.51**	**30**	P		**P**	**02 15 18.6**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=238,slow=8.5,SNR=4.6							
CMAR	**Chiang Mai Arr**	**55.53**	**75**	P		**P**	**02 15 26.9**	**+1.2**
	comp=Z,1.5nm,0.3s,baz=268,slow=9.0,SNR=5.7							
SONM	**Songino Array**	**64.73**	**42**	P		**P**	**02 16 29.5**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=242,slow=5.9,SNR=1.9							
MAW	**Mawson**	**80.15**	**172**	LR		LR	02 47 48.3	
	comp=Z,122nm,18.5s,baz=252,slow=32							

*IDC **20** 02:17:28.0±0.7, 9°.30N×122°.31E, h0km, mb3.9/17, mb1 4.0/17, mb1mx3.9/44, mbtmp3.9/17, MS3.2/4, Ms1 3.3/4, ms1mx2.8/47, Error ellipse: s-maj=26.7km s-min=16.3km az=74.0*
*NEIC **20** 02:17:28.8±1.5, 9.4N±0°.1×122°.4E±0°.1, h10km±1km, mb4.3/15, Error ellipse: s-maj=23.3km s-min=19.6km az=83.0*
*MAN **20** 02:17:31.4, 9°.17N×122°.08E, h28km, mb4.7, ML3.6, MS3.6*

ISC 20 02:17:32.3±1.3, 9°.23N±0°.03×122°.33E±0°.05, h32km±9km, n52, σ1°62/60, mb4.0/26, 3C-3D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	**0.67**	**27**	*e*P		**Pn**	**02 17 46.6**	**+1.1**
CNOP				*e*S		**Sn**	**02 17 57.3**	**+2.5**
DCPH	**Dipolog City**	**1.20**	**123**	||*i*P		**Pb**	**02 17 55.2**	**+0.7**
DCPH				*i* S		**Sb**	**02 18 08.5**	**-1.2**
GUIM	**Jordan**	**1.41**	**11**	*e*P		**Pb**	**02 17 57.0**	**-1.0**
GUIM				*e*S		**Sb**	**02 18 16.4**	**+0.8**
JAP	**San Jose, Anti**	**1.55**	**346**	||*i*P		**Pn**	**02 17 58.1**	**+0.5**
PAGZ	**Pagadian**	**1.73**	**143**	*e*P		**Pb**	**02 18 01.6**	**-1.8**
PAGZ				*e*S		**Sb**	**02 18 23.3**	**-1.4**
LLP	**Lapu-Lapu**	**1.94**	**56**	||*e*P		**Pb**	**02 18 06.7**	**-0.3**
LLP				*i* S		**Sb**	**02 18 32.8**	**+2.0**
RCP	**Roxas**	**2.35**	**10**	||*e*P		Pb	02 18 21.9	+8.0
RCP				*e*S		**Sb**	**02 18 45.8**	**+3.3**
CGP	**Cagayan de Oro**	**2.46**	**108**	||*e*P		**Pb**	**02 18 14.4**	**-1.5**
CGP				*e*S		**Sb**	**02 18 51.0**	**+5.2**
MSLP	**Maasin**	**2.65**	**70**	*e*P		**Pb**	**02 18 17.0**	**-2.1**
MSLP				*e*S		**Sb**	**02 18 52.6**	**+1.4**
CTBH	**Cotabato--PC H**	**2.76**	**136**	||*i*P		**Pb**	**02 18 21.2**	**+0.3**
OCLP	**Ormoc**	**2.88**	**51**	*e*P		**Pb**	**02 18 19.3**	**-3.7**
OCLP				*e*S		**Sb**	**02 18 53.2**	**-4.6**
OTRP	**Odiongan**	**3.12**	**354**	*e*P		**Pb**	**02 18 28.5**	**+1.4**
SJMP	**San Jose**	**3.42**	**340**	*e*P		**Pn**	**02 18 24.1**	**+0.7**
SJMP				*e*S		**Sn**	**02 19 00.8**	**-2.0**
BUSP	**Coron**	**3.46**	**323**	*e*P		**Pn**	**02 18 23.6**	**-0.3**
BUSP				*e*S		**Sn**	**02 19 02.2**	**-1.5**
DAV	**Davao City (W)**	**3.87**	**124**	LR		LR	02 19 49.7	
	comp=Z,102nm,19.4s,baz=268,slow=36							
KAPI	**Kappang**	**14.38**	**190**	LR		LR	02 26 31.1	
	comp=Z,54nm,18.5s,baz=24,slow=38							
LEM	**Lembang**	**21.67**	**223**	LR		LR	02 31 37.8	
	comp=Z,152nm,18.1s,baz=32,slow=39							
PBKT	**Sadao Pong**	**22.04**	**291**	P		**P**	**02 22 23.7**	**-0.7**
PBKT				IAmb	IAmb	IAmb	02 22 28.7	
	comp=Z,6.0nm,0.7s							
PSI	**Prapat**	**24.12**	**256**	P		**P**	**02 22 46.5**	**+0.9**
	comp=Z,13nm,0.9s,baz=0.9,slow=3.7,SNR=8.8							
RPSI	**Rantau Prapat**	**24.15**	**256**	P		**P**	**02 22 45.8**	**0.0**
CM31	**Chiang Mai Arr**	**24.46**	**295**	P		**P**	**02 22 48.9**	**+0.3**
CM31				IAmb	IAmb	IAmb	02 22 54.2	
	comp=Z,5.9nm,0.5s							
CMAR	**Chiang Mai Arr**	**24.46**	**295**	P		**P**	**02 22 49.5**	**+1.0**
	comp=Z,1.2nm,0.3s,baz=130,slow=8.3,SNR=2.2							
CMAR				LR		LR	02 32 15.8	
	comp=Z,102nm,18.5s,baz=168,slow=36							
CHTO	**Chiang Mai**	**24.58**	**295**	P		**P**	**02 22 48.8**	**-0.8**
CHTO				IAmb	IAmb	IAmb	02 22 51.3	
	comp=Z,4.7nm,0.9s							
INCN	**Inchon**	**28.39**	**7**	P		**P**	**02 23 24.8**	**+1.0**
KSRS	**Korea Array**	**28.55**	**9**	P		**P**	**02 23 25.2**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=178,slow=9.3,SNR=1.5							
WB0	**Warramunga Arr**	**31.17**	**158**	P		**P**	**02 23 49.3**	**+0.8**
WB0				IAmb	IAmb	IAmb	02 23 58.3	
	comp=Z,6.5nm,1.1s							
WRA	**Warramunga Arr**	**31.31**	**158**	P		**P**	**02 23 51.2**	**+1.4**
	comp=Z,1.6nm,1.1s,baz=336,slow=9.5,SNR=2.5							
WB2	**Warramunga Arr**	**31.32**	**158**	P		**P**	**02 23 50.1**	**+0.2**
WB2				IAmb	IAmb	IAmb	02 24 03.1	
	comp=Z,7.5nm,1.1s							
WR0	**Warramunga Arr**	**31.40**	**158**	P		**P**	**02 23 50.1**	**-0.5**
WR0				IAmb	IAmb	IAmb	02 23 51.4	
	comp=Z,4.9nm,1.1s							
AS31	**Alice Springs**	**34.60**	**161**	P		**P**	**02 24 19.2**	**+0.7**
ASAR	**Alice Springs**	**34.60**	**161**	P		**P**	**02 24 20.4**	**+1.8**
	comp=Z,1.0nm,0.6s,baz=344,slow=7.2,SNR=15							
ASAR				PcP		**PcP**	**02 26 53.1**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=341,slow=2.0,SNR=1.8							
USRK	**Ussuriysk Ar.**	**35.83**	**12**	P		**P**	**02 24 30.6**	**+1.7**
	comp=Z,2.7nm,0.7s,baz=228,slow=8.7,SNR=3.3							
SONM	**Songino Array**	**40.77**	**344**	P		**P**	**02 25 10.1**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=165,slow=6.2,SNR=4.9							
STKA	**Stephens Creek**	**44.84**	**157**	P		**P**	**02 25 44.0**	**+0.4**
STKA				IAmb	IAmb	IAmb	02 25 55.8	
	comp=Z,1.4nm,1.0s							
MKAR	**Makanchi Array**	**50.57**	**325**	P		**P**	**02 26 29.6**	**+1.7**
	comp=Z,1.5nm,0.6s,baz=131,slow=8.9,SNR=16							
NIL	**Nilore**	**51.15**	**306**	P		**P**	**02 26 30.5**	**-2.0**
NIL				IAmb	IAmb	IAmb	02 26 35.5	
	comp=Z,7.5nm,0.8s							
ZALV	**Zalesovo Beam**	**53.74**	**333**	P		**P**	**02 26 50.5**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=103,slow=31,SNR=1.4							
TIXI	**Tiksi**	**62.49**	**2**	P		**P**	**02 27 50.7**	**-1.5**
TIXI				IAmb	IAmb	IAmb	02 28 07.7	
	comp=Z,2.6nm,0.7s							
KLMR	**Klimovskoe**	**78.49**	**330**	*e*P		**P**	**02 29 30.4**	**+0.4**
KLMR				AMP			02 29 37.3	
	comp=Z,9.0nm,1.5s							
IL31		**82.05**	**26**	P		**P**	**02 29 48.2**	**-0.9**
ILAR	**Eielson Array**	**82.05**	**26**	P		**P**	**02 29 49.9**	**+0.7**
	comp=Z,0.2nm,0.8s,baz=285,slow=6.8,SNR=2.5							
BRTR	**Keskin Array B**	**83.17**	**309**	P		**P**	**02 29 55.4**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=116,slow=5.6,SNR=4.7							
ARCES	**ARCESS Array B**	**83.80**	**339**	P		**P**	**02 29 58.2**	**+0.1**
	comp=Z,2.1nm,1.0s,baz=87,slow=8.2,SNR=1.8							
EGAK	**Eagle**	**84.49**	**25**	P		**P**	**02 29 59.9**	**-1.8**
AKASG	**Malin Array Be**	**84.89**	**320**	P		**P**	**02 30 03.9**	**-0.1**
	comp=Z,0.2nm,0.2s,baz=78,slow=3.6,SNR=5.2							
FINES	**FINESS Array B**	**84.94**	**331**	P		**P**	**02 30 03.4**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=38,slow=7.2,SNR=6.6							
INK	**Inuvik**	**86.66**	**21**	P		**P**	**02 30 12.3**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=330,slow=8.1,SNR=2.0							
INK	**Inuvik**	**86.66**	**21**	P		**P**	**02 30 10.0**	**-2.4**
VNDA	**Vanda**	**89.42**	**172**	P		**P**	**02 30 25.6**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=4.1,slow=4.0,SNR=1.5							
YKA	**Yellowknife Ar**	**96.25**	**23**	P		**P**	**02 30 57.2**	**0.0**
	comp=Z,0.2nm,0.7s,baz=300,slow=4.1,SNR=3.0							
TORD	**Torodi Ar. Bea**	**117.00**	**290**	PKP		**PKiKP**	**02 36 15.6**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=57,slow=2.9,SNR=1.6							
PLCA	**Paso Flores**	**146.61**	**162**	PKPbc		**PKPbc**	**02 37 11.4**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=200,slow=14,SNR=1.4							

*IDC **20** 02:26:25.8±0.9, 13°.19N×49°.35E, h0km, mb3.9/16, mb1 4.1/18, mb1mx3.9/39, mbtmp3.9/18, ML3.5/2, MS3.3/4, Ms1 3.4/4, ms1mx2.9/38, Error ellipse: s-maj=21.1km s-min=18.5km az=141.0*
*NEIC **20** 02:26:25.8±1.8, 13°.09N±0°.10×49°.43E±0°.05, h10km±1km, mb4.5/13, Error ellipse: s-maj=17.9km s-min=5.3km az=157.0*

**ISC 20 02:26:26.2±0.5, 13°.09N±0°.08×49°.45E±0°.07, h10km

comp=Z,53nm,18.5s,baz=44,slow=41
ASAR Alice Springs 90.20 114 P **P 02 39 29.0 +1.4**
comp=Z,0.6nm,0.8s,baz=271,slow=5.3,SNR=4.9
CASY Casey 90.88 159 P **P 02 39 29.8 +0.1**
CASY IAmb IAmb 02 39 35.3
comp=Z,4.1nm,1.1s
SNAA Sanae 91.43 194 P **P 02 39 32.0 -0.3**

*IDC **20** 02:30:05.3±4.5, 68°.24N×162°.70W, h0km, mb3.1/2, mb1 3.7/4, mb1mx3.3/37, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=59.4km s-min=53.2km az=174.0*
*AEIC **20** 02:30:06±1.8, 67°.70N±0°.07×162°.3W±0°.1, h15km±6km, ML2.9, Error ellipse: s-maj=11.4km s-min=5.5km az=143.0*
ISC 20 02:30:07.5±0.9, 67°.74N±0°.06×162°.16W±0°.06, h10km, n17, σ1§87/22, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.42**	**318**		**Pg**	**02 30 15.0**	**-0.7**
RDOG					**Sg**	**02 30 22.1**	**+0.8**
ANM	**Nome**	**3.45**	**204**		Pn	02 30 59.5	-1.7
ANM					**Sn**	**02 31 41.2**	**-0.8**
IM03		**3.76**	**114**		**Pn**	**02 31 05.8**	**+0.4**
COLD	**Coldfoot**	**4.63**	**91**	Pn	**Pn**	**02 31 14.6**	**-2.7**
COLD				Sn	**Sn**	**02 32 12.3**	**+1.3**
TOLK	**Toolik Lake Re**	**4.78**	**73**		**Pn**	**02 31 20.8**	**+1.4**
TOLK					**Sn**	**02 32 16.0**	**+1.2**
TTA	**Tatalina**	**5.47**	**149**		**Pn**	**02 31 29.3**	**+0.3**
PS01	**TAPS Pump Stn**	**5.48**	**56**		**Pn**	**02 31 30.3**	**+1.3**
TT01	**Tatalina**	**5.49**	**149**		**Pn**	**02 31 29.4**	**+0.1**
BPAW	**Bear Paw Mtn.**	**5.85**	**123**		**Pn**	**02 31 35.1**	**+0.9**
NEA	**Nenana**	**6.18**	**115**		**Pn**	**02 31 39.5**	**+0.9**
CCB	**Clear Creek Bu**	**6.58**	**111**		**Pn**	**02 31 45.2**	**+1.1**
WRH	**Wood River Hil**	**6.58**	**113**		**Pn**	**02 31 45.5**	**+1.3**
BM03	**Burnt Mountain**	**6.72**	**85**		**Pn**	**02 31 47.1**	**+1.1**
ILAR	**Eielson Array**	**6.84**	**109**	Pn	**Pn**	**02 31 49.0**	**+1.3**
	0.8nm,0.3s,baz=305,slow=14,SNR=44						
ILAR					**Sn**	**02 33 04.5**	**-1.1**
	0.3nm,0.3s,baz=304,slow=26,SNR=4.3						
INK	**Inuvik**	**10.69**	**74**	Pn	**Pn**	**02 32 39.3**	**-1.1**
	0.2nm,0.3s,baz=291,slow=8.6,SNR=9.7						
INK					**Sn**	**02 34 33.7**	**-6.2**
	0.3nm,0.3s,baz=118,slow=18,SNR=6.8						
YKA	**Yellowknife Ar**	**20.24**	**82**	P	**P**	**02 34 42.6**	**+0.3**
	0.4nm,0.4s,baz=306,slow=10,SNR=7.1						
TXAR	**Lajitas Array**	**51.35**	**108**	P	**P**	**02 39 13.2**	**+1.3**
	0.1nm,0.5s,baz=338,slow=6.8,SNR=2.9						

*THE **20** 02:42:48.4, 38°.40N×20°.48E, h7km±1km, ML2.5/8, Error ellipse: s-maj=1.0km s-min=0.3km az=345.0*
*ATH **20** 02:42:48.0, 38°.39N×20°.54E, h11km±2km, ML2.6/7, Error ellipse: s-maj=2.7km s-min=0.7km az=262.0*
ISC 20 02:42:47.7±0.8, 38°.40N±0°.02×20°.49E±0°.02, h13km±4km, n46, σ0§92/76, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.06**	**84**	P	**Pg**	**02 42 50.0**	**-0.3**
VSK1				S	**Sg**	**02 42 51.4**	**-0.7**
FSK	**Fiskardo**	**0.08**	**45**	P	**Pg**	**02 42 50.3**	**-0.1**
FSK				S	**Sg**	**02 42 51.9**	**-0.5**
	6μm,0.2s						
FSK	**Fiskardo**	**0.08**	**45**	P	**Pg**	**02 42 50.3**	**-0.1**
FSK				S	**Sg**	**02 42 51.8**	**-0.6**
FSK				AML	AML	02 42 52.6	
	comp=N,13476μm,0.4s						
FSK				AML	AML	02 42 52.7	
	comp=E,11450μm,0.1s						
KEF1	**Kardakata, Kep**	**0.13**	**187**	P	**Pg**	**02 42 50.9**	**-0.1**
KEF1				S	**Sg**	**02 42 52.8**	**-0.5**
KEF4	**Livadi, Kephal**	**0.15**	**200**	P	**Pg**	**02 42 51.4**	**0.0**
KEF4				S	**Sg**	**02 42 54.0**	**+0.1**
AGT1	**Agia Thekli**	**0.17**	**209**	P	**Pg**	**02 42 51.8**	**+0.1**
AGT1				S	**Sg**	**02 42 54.9**	**+0.5**
LXRA	**Lixouri, Kepha**	**0.21**	**192**	P	**Pg**	**02 42 52.2**	**0.0**
LXRA				S	**Sg**	**02 42 56.0**	**+0.7**
ARG2	**Argostoli**	**0.22**	**181**	P	**Pg**	**02 42 52.7**	**+0.2**
ARG2				S	**Sg**	**02 42 55.9**	**+0.1**
ARGA	**Argostoli. Kep**	**0.23**	**182**	P	**Pg**	**02 42 52.6**	**+0.1**
ARGA				S	**Sg**	**02 42 55.8**	**-0.1**
KEF3	**Kipouria, Keph**	**0.23**	**209**	P	**Pg**	**02 42 52.8**	**+0.2**
KEF3				S	**Sg**	**02 42 55.8**	**-0.1**
KEF2	**Argostoli. Kep**	**0.24**	**181**	P	**Pg**	**02 42 52.9**	**+0.2**
KEF2				S	**Sg**	**02 42 56.6**	**+0.4**
VLS	**Valsamata**	**0.24**	**161**	P	**Pg**	**02 42 52.9**	**+0.1**
VLS				S	**Sg**	**02 42 56.6**	**+0.4**
	comp=E,2μm,0.1s						
VLS	**Valsamata**	**0.24**	**161**	P	**Pg**	**02 42 52.8**	**0.0**
VLS				S	**Sg**	**02 42 56.0**	**-0.3**
VLS				AML	AML	02 42 58.4	
	comp=E,3987μm,0.2s						
VLS				AML	AML	02 42 59.2	
	comp=N,3170μm,0.2s						
EVGI	**Lefkada island**	**0.25**	**31**	P	**Pg**	**02 42 53.6**	**+0.5**
EVGI				S	**Sg**	**02 42 58.0**	**+1.3**
EVGI	**Lefkada island**	**0.25**	**31**	P	**Pg**	**02 42 53.5**	**+0.5**
EVGI				S	**Sg**	**02 42 57.7**	**+1.0**
KFL	**Anninata**	**0.38**	**141**	P	**Pg**	**02 42 55.4**	**+0.2**
KFL				S	**Sb**	**02 43 01.6**	**-0.3**
KFL	**Anninata**	**0.38**	**141**	P	**Pg**	**02 42 55.4**	**+0.2**
KFL				S	**Sg**	**02 43 00.4**	**+0.2**
KFL				AML	AML	02 43 02.4	
	comp=E,4689μm,0.4s						
KFL				AML	AML	02 43 03.9	
	comp=N,4072μm,0.3s						
LKD2	**Lefkada island**	**0.41**	**19**	P	**Pg**	**02 42 56.1**	**+0.2**
LKD2	**Lefkada island**	**0.41**	**19**	P	**Pg**	**02 42 56.0**	**+0.2**
LKD2				S	**Sg**	**02 43 01.6**	**+0.3**
LKD2				AML	AML	02 43 05.0	
	comp=N,1026μm,0.3s						
LKD2				AML	AML	02 43 07.0	
	comp=E,1187μm,0.2s						
RLS	**Riolos of Patr**	**0.84**	**114**	P	**Pg**	**02 43 03.9**	**-0.1**
RLS				S	**Sn**	**02 43 17.1**	**-0.3**
	comp=E,158nm,0.3s						
RLS	**Riolos of Patr**	**0.84**	**114**	P	**Pg**	**02 43 03.6**	**-0.4**
RLS				S	**Sg**	**02 43 13.6**	**-1.4**
RLS				AML	AML	02 43 22.7	
	comp=N,311μm,0.3s						
RLS				AML	AML	02 43 25.7	
	comp=E,307μm,0.4s						
DRO	**Drossia**	**1.06**	**115**	P	**Pg**	**02 43 07.5**	**-0.6**
DRO				S	**Sn**	**02 43 23.9**	**+1.0**
	comp=E,390nm,0.4s						
DRO	**Drossia**	**1.06**	**115**	P	**Pg**	**02 43 07.4**	**-0.7**
DRO				S	**Sg**	**02 43 21.6**	**-0.3**
DRO				AML	AML	02 43 30.6	
	comp=E,858μm,0.7s						
DRO				AML	AML	02 43 31.5	
	comp=N,755μm,0.4s						
EFP	**Efpalio**	**1.11**	**88**	P	**Pg**	**02 43 08.4**	**-0.7**
EFP				S	**Sn**	**02 43 25.9**	**+1.8**
	comp=N,460nm,0.5s						
EFP	**Efpalio**	**1.11**	**88**	P	**Pg**	**02 43 08.3**	**-0.8**
EFP				S	**Sb**	**02 43 23.9**	**+0.8**
EFP				AML	AML	02 43 31.7	
	comp=N,784μm,0.5s						
EFP				AML	AML	02 43 31.9	
	comp=E,985μm,0.5s						
IGT	**Igoumenitsa**	**1.14**	**354**	P	**Pb**	**02 43 09.7**	**+0.6**
IGT				S	**Sn**	**02 43 26.8**	**+2.1**
	comp=E,115nm,0.6s						
ANX	**Ano Chora**	**1.14**	**80**	P	**Pg**	**02 43 09.0**	**-0.6**
ANX				S	**Sn**	**02 43 26.3**	**+1.4**
	comp=E,322nm,0.5s						
ANX	**Ano Chora**	**1.14**	**80**	P	**Pg**	**02 43 09.0**	**-0.6**
EVR	**Evrytania**	**1.15**	**63**	P	**Pg**	**02 43 08.5**	**-1.3**
SERG	**Sergoula**	**1.23**	**89**	P	**Pb**	**02 43 10.5**	**-0.3**
SERG	**Sergoula**	**1.23**	**89**	P	**Pb**	**02 43 10.2**	**-0.6**
TRIZ	**Trizonia**	**1.24**	**91**	P	**Pn**	**02 43 10.7**	**0.0**
TRIZ				S	**Sn**	**02 43 28.5**	**+1.2**
	comp=E,188nm,0.3s						
TRIZ	**Trizonia**	**1.24**	**91**	P	**Pn**	**02 43 10.6**	**-0.1**
KALE	**Kalithea**	**1.30**	**90**	P	**Pn**	**02 43 11.4**	**-0.1**
AMT	**Artemida-Makis**	**1.30**	**132**	P	**Pn**	**02 43 12.0**	**+0.5**
KLV	**Kalavryta, Ach**	**1.36**	**105**	P	**Pn**	**02 43 12.5**	**+0.2**
KLV	**Kalavryta, Ach**	**1.36**	**105**	P	**Pn**	**02 43 12.6**	**+0.3**
KEK	**Kerkira**	**1.42**	**338**	P	**Pg**	**02 43 15.8**	**+0.9**
MAKR	**Makrakomi, Fth**	**1.42**	**64**	P	**Pn**	**02 43 14.4**	**+1.2**
ITM	**Ithomi**	**1.67**	**137**	P	**Pb**	**02 43 18.6**	**+0.4**
STON	**Ston**	**4.94**	**335**	*e*Pn	**Pn**	**02 44 01.6**	**+0.1**
STON				Sn	**Sn**	**02 44 56.2**	**-2.3**
RICI	**Ricice**	**5.69**	**335**	*e*Pn	**Pn**	**02 44 11.3**	**-0.5**
KIJV	**Kijevo**	**6.39**	**332**	*e*Pn	**Pn**	**02 44 21.9**	**+0.4**
ZIRJ	**Zirje**	**6.40**	**327**	*e*Pn	**Pn**	**02 44 20.9**	**-0.6**
MORI	**Morici**	**6.54**	**328**	*e*Pn	**Pn**	**02 44 23.9**	**+0.4**
MORI				Sn	**Sn**	**02 45 34.5**	**-3.4**
DUGI	**Dugi Otok**	**6.92**	**325**	*e*Pn	**Pn**	**02 44 29.8**	**+1.1**
DUGI				Sn	**Sn**	**02 45 44.0**	**-3.4**

ZUR 20 03:06:37.5, 46°.66N×7°.59E, h8km±1km, MLh0.5/8, 2C-4D, Error ellipse: s-maj=3.2km s-min=1.0km az=127.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIMIS	**Wimmis**	**0.03**	**71**	⇑Pg	Pg	03 06 39.4	+0.2
	0.2nm,SNR=54						
WIMIS				⇑Pg	Pg	03 06 39.4	+0.2
WIMIS				Sg	Sg	03 06 40.7	+0.3
LKBD	**Leukerbad**	**0.27**	**174**	Pg	Pg	03 06 43.2	+0.3
	SNR=5.9						
LKBD				Pg	Pg	03 06 43.2	+0.3
LKBD				Sg	Sg	03 06 47.1	+0.5
LAUCH	**Lauchernalp**	**0.27**	**152**	⇓Pg	Pg	03 06 43.4	+0.3
LAUCH				⇓Pg	Pg	03 06 43.4	+0.3
	SNR=15						
SENIN	**Lac Senin/Sane**	**0.35**	**214**	Sg	Sg	03 06 49.9	+0.7
SENIN				Sg	Sg	03 06 49.9	+0.7
	SNR=8.0						
HASLI	**Hasliberg/Brie**	**0.40**	**75**	Sg	Sg	03 06 51.6	+0.9
HASLI				Sg	Sg	03 06 51.6	+0.9
	SNR=4.7						
FIESA	**Fiescheralp**	**0.42**	**121**	⇓Pg	Pg	03 06 46.2	+0.4
	SNR=7.0						
FIESA				⇓Pg	Pg	03 06 46.2	+0.4
FIESA				Sg	Sg	03 06 52.2	+0.7
GRIMS	**Grimsel Gerste**	**0.51**	**98**	Pg	Pg	03 06 47.7	+0.2
GRIMS				Pg	Pg	03 06 47.7	+0.2
	SNR=5.5						
GRIMS				Sg	Sg	03 06 54.5	+0.3
SIMPL	**Simplonpass**	**0.51**	**144**	Pg	Pg	03 06 47.9	+0.4
SIMPL				Pg	Pg	03 06 47.9	+0.4
	SNR=7.7						
MMK	**Mattmark**	**0.66**	**156**	Pg	Pg	03 06 50.4	+0.1
	SNR=4.6						
MMK				Pg	Pg	03 06 50.4	+0.1
MMK				Sg	Sg	03 06 58.9	0.0

ROM 20 03:08:15.7±0.1, 39°.125N±0°.006×15°.72E±0°.02, h75km±1km, ML1.8/2, Error ellipse: s-maj=1.1km s-min=0.9km az=108.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAR1	**CAROLEI**	**0.40**	**71**	P	Pn	03 08 28.2	-0.1
CAR1				S	Sn	03 08 37.6	+0.1
CET2	**Cetraro**	**0.44**	**24**	P	Pn	03 08 29.0	+0.4
CET2				S	Sn	03 08 38.5	+0.4
CET2				AML	AML		
	comp=N,87μm,0.1s						
CET2				AML	AML		
	comp=E,66μm,0.6s						
JOPP	**Joppolo**	**0.53**	**166**	P	Pn	03 08 29.7	+0.3
JOPP				S	Sn	03 08 39.7	+0.3
JOPP				AML	AML		
	comp=E,84μm,0.6s						
JOPP				AML	AML		
	comp=E,83μm,0.6s						
JOPP				AML	AML		
	comp=N,60μm,0.6s						
GRI	**Girifalco**	**0.62**	**119**	P	Pn	03 08 30.3	0.0
GRI				S	Sn	03 08 41.2	+0.2
T0702	**Acquaformosa (**	**0.66**	**25**	P	Pn	03 08 30.8	+0.1
T0702				S	Sn	03 08 42.1	+0.4
CELI	**Celico**	**0.67**	**65**	P	Pn	03 08 31.1	+0.2
TDS	**Terranova Siba**	**0.71**	**42**	P	Pn	03 08 31.4	+0.1
TDS				S	Sn	03 08 43.5	+0.8
CUC	**Castrocucco**	**0.87**	**5**	P	Pn	03 08 32.6	-0.2
CUC				S	Sn	03 08 46.1	+0.2
MSRU	**Castanea**	**0.88**	**191**	P	Pn	03 08 33.3	+0.3
MSRU				S	Sn	03 08 45.9	0.0
SALB	**San Lorenzo Be**	**0.89**	**32**	P	Pn	03 08 34.2	+0.8
MILZ	**Milazzo**	**0.94**	**204**	P	Pn	03 08 34.1	+0.4
SOI	**Samo**	**1.08**	**166**	P	Pn	03 08 36.2	+0.6
MCSR	**Castroreale**	**1.12**	**199**	P	Pn	03 08 36.5	+0.3
MCSR				S	Sn	03 08 52.5	+1.1

*KRSC **20** 03:22:54.9±1.3, 52°.68N×160°.02E, h46km±12km, ML4.4*
*MOS **20** 03:22:56.0±1.3, 52°.66N×159°.97E, h48km, mb4.0/8, Error ellipse: s-maj=7.7km s-min=3.9km az=88.0*
*IDC **20** 03:23:01.0±1.7, 52°.98N×159°.62E, h72km±13km, mb3.4/18, mb1 3.6/19, mb1mx3.5/53, mbtmp3.8/19, MS2.9/3, Ms1 2.9/3, ms1mx2.5/38, Error ellipse: s-maj=24.5km s-min=16.5km az=165.0*
ISC 20 03:22:56.3±0.9, 52°.73N±0°.04×159°.92E±0°.04, h41km±8km, n128, σ2§29/158, mb3.8/27, 1C, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.38**	**9**	*i* P	**Pn**	**03 23 05.8**	**+0.3**
SPN				*e*S	**Sn**	**03 23 12.1**	**+0.2**
SPN	**Mys Shipunski**	**0.38**	**9**	PN	**Pn**	**03 23 05.8**	**+0.3**
SPN				S	**Sn**	**03 23 12.1**	**+0.2**
DALK	**Dalny**	**0.77**	**294**	*e*P	**Pn**	**03 23 11.6**	**+0.9**
DALK				*e*S	**Sn**	**03 23 22.2**	**+1.1**
DALK	**Dalny**	**0.77**	**294**	PN	**Pn**	**03 23 11.6**	**+0.9**
DALK				S	**Sn**	**03 23 22.2**	**+1.1**
UGLR	**Uglovaya**	**0.82**	**306**	*e*P	**Pn**	**03 23 12.6**	**+1.1**
UGLR				*e*S	**Sn**	**03 23 24.1**	**+1.6**
UGLR	**Uglovaya**	**0.82**	**306**	PN	**Pn**	**03 23 12.6**	**+1.1**
UGLR				S	**Sn**	**03 23 24.1**	**+1.6**
PET	**Petropavlovsk**	**0.82**	**292**	PN	**Pn**	**03 23 12.4**	**+1.0**
PET				S	**Sn**	**03 23 23.7**	**+1.3**
SDLR	**Sedlovina**	**0.83**	**312**	*e*P	**Pn**	**03 23 12.8**	**+1.1**
SDLR	**Sedlovina**	**0.83**	**312**	PN	**Pn**	**03 23 12.8**	**+1.1**
SMAR	**Somma**	**0.86**	**309**	*e*P	**Pn**	**03 23 12.8**	**+0.6**
SMAR	**Somma**	**0.86**	**309**	PN	**Pn**	**03 23 12.8**	**+0.6**
AVH	**Avacha**	**0.90**	**307**	*i* P	**Pn**	**03 23 13.9**	**+1.4**
AVH				*e*S	**Sn**	**03 23 26.4**	**+2.1**
AVH	**Avacha**	**0.90**	**307**	PN	**Pn**	**03 23 13.9**	**+1.4**
AVH				S	**Sn**	**03 23 26.4**	**+2.1**
RUS	**Russkaya**	**0.91**	**252**	*e*P	**Pn**	**03 23 13.2**	**+0.6**
RUS				*e*S	**Sn**	**03 23 25.2**	**+0.8**
RUS	**Russkaya**	**0.91**	**252**	PN	**Pn**	**03 23 13.2**	**+0.6**
RUS				S	**Sn**	**03 23 25.2**	**+0.8**
KRER	**Koryakskii**	**0.91**	**310**	*e*P	**Pn**	**03 23 14.2**	**+1.3**
KRER	**Koryakskii**	**0.91**	**310**	PN	**Pn**	**03 23 14.2**	**+1.3**
KOK	**Koryaka**	**0.96**	**307**	*e*P	**Pn**	**03 23 14.7**	**+1.3**
KOK	**Koryaka**	**0.96**	**307**	PN	**Pn**	**03 23 14.7**	**+1.3**
KRX	**Arik**	**0.99**	**310**	*e*P	**Pn**	**03 23 14.9**	**+1.0**
KRX				*e*S	**Sn**	**03 23 28.0**	**+1.2**
KRX	**Arik**	**0.99**	**310**	PN	**Pn**	**03 23 14.9**	**+1.0**
KRX				S	**Sn**	**03 23 28.0**	**+1.2**
MTVR	**Mutnovka**	**1.09**	**258**	*e*P	**Pn**	**03 23 16.2**	**+1.0**
MTVR				*e*S	**Sn**	**03 23 30.6**	**+1.5**
MTVR	**Mutnovka**	**1.09**	**258**	PN	**Pn**	**03 23 16.2**	**+1.0**
MTVR				S	**Sn**	**03 23 30.6**	**+1.5**
KRMR	**Karymshinskiy**	**1.09**	**276**	*e*P	**Pn**	**03 23 15.5**	**+0.4**
KRMR				*e*S	**Sn**	**03 23 29.6**	**+0.6**
KRMR	**Karymshinskiy**	**1.09**	**276**	PN	**Pn**	**03 23 15.5**	**+0.4**
KRMR				S	**Sn**	**03 23 29.6**	**+0.6**
GRL	**Gorelyy**	**1.14**	**262**	*e*P	**Pn**	**03 23 17.4**	**+1.5**
GRL				*e*S	**Sn**	**03 23 32.6**	**+2.3**
GRL	**Gorelyy**	**1.14**	**262**	PN	**Pn**	**03 23 17.4**	**+1.5**
GRL				S	**Sn**	**03 23 32.6**	**+2.3**
ASAK	**Asacha**	**1.28**	**255**	*i* P	**Pn**	**03 23 19.4**	**+1.6**
ASAK	**Asacha**	**1.28**	**255**	PN	**Pn**	**03 23 19.4**	**+1.6**
KII	**Karymskiy**	**1.34**	**348**	*e*P	**Pn**	**03 23 19.8**	**+1.2**
KII				*e*S	**Sn**	**03 23 36.4**	**+1.2**
KII	**Karymskiy**	**1.34**	**348**	PN	**Pn**	**03 23 19.8**	**+1.2**
KII				S	**Sn**	**03 23 36.4**	**+1.2**
PEA0B	**Petropavlovsk-**	**1.40**	**287**	*i* PN	**Pn**	**03 23 20.8**	**+1.5**
PETK	**Petropavlovsk-**	**1.40**	**287**	P	**Pn**	**03 23 21.2**	**+1.9**
	164nm,0.3s,baz=93,slow=12,SNR=185						
PETK				S	**Sn**	**03 23 37.3**	**+0.7**
	195nm,0.3s,baz=344,slow=26,SNR=10						
PETK				LR	LR	03 24 00.5	
	comp=Z,188nm,20.0s,baz=60,slow=51						

APC Apacha 1.69 278 *e*P **Pn 03 23 25.9 +2.7**
APC *e*S **Sn 03 23 47.0 +3.4**
APC Apacha 1.69 278 PN **Pn 03 23 25.9 +2.7**
APC S **Sn 03 23 47.0 +3.4**
MIPR Malaya Ipel'ka 1.99 258 *e*P **Pn 03 23 30.0 +2.6**
MIPR Malaya Ipel'ka 1.99 258 PN **Pn 03 23 30.0 +2.6**
PAU Pauzhetka 2.30 238 *e*P **Pn 03 23 34.4 +2.8**
PAU *e*S **Sn 03 24 02.1 +3.5**
PAU Pauzhetka 2.30 238 PN **Pn 03 23 34.4 +2.8**
PAU S **Sn 03 24 02.1 +3.5**
KZV Kizimen 2.40 5 *e*P **Pn 03 23 35.3 +2.1**
KZV *e*S **Sn 03 24 03.1 +1.7**
KZV Kizimen 2.40 5 PN **Pn 03 23 35.3 +2.1**
KZV S **Sn 03 24 03.1 +1.7**
TUMD Tumrok D 2.50 6 *e*P **Pn 03 23 36.1 +1.7**
TUMD *e*S **Sn 03 24 04.8 +1.2**
TUMR Tumrok 2.56 3 *e*P **Pn 03 23 38.0 +2.6**
TUMR *e*S **Sn 03 24 07.9 +2.5**
TUMR Tumrok 2.56 3 PN **Pn 03 23 38.0 +2.6**
TUMR S **Sn 03 24 07.9 +2.5**
KMNR Kamenistaya 3.04 3 *e*P **Pn 03 23 45.2 +3.3**
KMNR Kamenistaya 3.04 3 PN **Pn 03 23 45.2 +3.3**
SKR Severo-Kuril's 3.13 231 *e*P **Pn 03 23 44.9 +1.9**
SKR *e*S **Sn 03 24 21.3 +2.1**
SKR Severo-Kuril's 3.13 231 *e*PN **Pn 03 23 45.3 +2.3**
SKR *e*S **Sn 03 24 21.2 +2.1**
SKR pmax pmax
comp=Z,23nm,0.9s
SKR smax smax
comp=E,124nm,0.8s
SKR smax smax
comp=N,197nm,0.7s
KIRR Kirishev 3.24 4 *e*P **Pn 03 23 47.7 +3.0**
KIRR Kirishev 3.24 4 PN **Pn 03 23 47.7 +3.0**
KPT Kopyto 3.25 3 *e*P **Pn 03 23 47.4 +2.6**
KPT Kopyto 3.25 3 PN **Pn 03 23 47.4 +2.6**
BZGR Bezymyannyi-Gr 3.25 8 *e*P **Pn 03 23 48.2 +3.4**
BZGR Bezymyannyi-Gr 3.25 8 PN **Pn 03 23 48.2 +3.4**
BZWR Bezymyannyi-We 3.26 6 *e*P **Pn 03 23 48.7 +3.7**
BZWR Bezymyannyi-We 3.26 6 PN **Pn 03 23 48.7 +3.7**
ALID Alaid 3.29 237 *e*P **Pn 03 23 48.4 +3.0**
ALID Alaid 3.29 237 PN **Pn 03 23 48.4 +3.0**
ZLN Zelenaya 3.34 9 *e*P **Pn 03 23 49.6 +3.6**
ZLN Zelenaya 3.34 9 PN **Pn 03 23 49.6 +3.6**
KOZ Kozyrevsk 3.34 360 *e*P **Pn 03 23 48.8 +2.9**
KOZ Kozyrevsk 3.34 360 PN **Pn 03 23 48.8 +2.9**
LGNR Loginova 3.39 7 *e*P **Pn 03 23 51.3 +4.4**
LGNR Loginova 3.39 7 PN **Pn 03 23 51.3 +4.4**
CIRR Tsirk 3.43 8 *e*P **Pn 03 23 51.4 +4.1**
CIRR Tsirk 3.43 8 PN **Pn 03 23 51.4 +4.1**
KRSR Krestovskiy 3.52 6 *e*P **Pn 03 23 52.3 +3.8**
KRSR Krestovskiy 3.52 6 PN **Pn 03 23 52.3 +3.8**
SRDR Sredinnyy 3.60 358 *e*P **Pn 03 23 51.9 +2.3**
SRDR Sredinnyy 3.60 358 PN **Pn 03 23 51.9 +2.3**
KLY Klyuchi 3.62 6 *e*P **Pn 03 23 52.9 +3.2**
KLY Klyuchi 3.62 6 PN **Pn 03 23 52.9 +3.2**
KBTR Krutoberegovo 3.88 25 *e*P **Pn 03 23 56.0 +2.7**
KBTR *e*S **Sn 03 24 40.8 +3.3**
KBTR Krutoberegovo 3.88 25 PN **Pn 03 23 56.0 +2.7**
KBTR S **Sn 03 24 40.8 +3.3**
KBG Krutoberegovo 3.89 24 *e*P **Pn 03 23 57.2 +3.8**
KBG *e*S **Sn 03 24 41.7 +3.9**
KBG Krutoberegovo 3.89 24 PN **Pn 03 23 57.2 +3.8**
KBG S **Sn 03 24 41.7 +3.9**
BDR Baidarnaya 3.92 10 *e*P **Pn 03 23 58.1 +4.1**
BDR Baidarnaya 3.92 10 PN **Pn 03 23 58.1 +4.1**
SMKR Semkarok 3.97 12 *e*P **Pn 03 23 58.8 +4.2**
SMKR Semkarok 3.97 12 PN **Pn 03 23 58.8 +4.2**
SRKR Sorokina 4.00 10 *e*P **Pn 03 23 59.3 +4.2**
SRKR Sorokina 4.00 10 PN **Pn 03 23 59.3 +4.2**
BKI Bering 4.35 53 *e*P **Pn 03 24 00.1 +0.3**
BKI *e*S **Sn 03 24 45.6 -3.5**
BKI Bering 4.35 53 PN **Pn 03 24 00.1 +0.3**
MA2 Magadan 8.55 327 LR LR 03 28 48.0
comp=N,63nm,18.7s,baz=105,slow=42
ASAJ Asahikawa 14.34 240 P **P 03 26 19.6 -3.2**
comp=N,0.5nm,0.3s,baz=36,slow=9.8,SNR=4.9
ERM Erimo 15.57 233 *i* P **P 03 26 33.9 -2.5**
BILL Bilibino 15.66 9 *e*P **Pn 03 26 33.2 -0.6**
BILL *e*S **Sn 03 29 25.2 -0.7**
BILL pmax pmax
comp=Z,1.0nm,0.9s
KLR Kul'dur 18.03 270 LR LR 03 34 08.3
comp=Z,28nm,21.2s,baz=69,slow=37
KLR Kul'dur 18.03 270 *i* P **Pn 03 27 04.9 +1.4**
KLR pmax pmax
comp=Z,2.0nm,1.0s
USRK Ussuriysk Ar. 20.29 256 P Pn 03 27 30.7 +0.2
comp=Z,13nm,0.6s,baz=55,slow=12,SNR=3.8
MJAR Matsushiro Arr 22.24 232 P **P 03 27 51.7 +2.4**
comp=Z,1.1nm,0.5s,baz=34,slow=12,SNR=4.9
TIXI Tiksi 23.37 336 P **P 03 28 00.1 -0.7**
comp=Z,1.7nm,0.5s,baz=130,slow=11,SNR=2.1
TIXI Tiksi 23.37 336 *i* P **P 03 27 58.7 -2.0**
TIXI pmax pmax
comp=Z,2.0nm,1.0s
TJN Taejon 28.06 247 *i* P **P 03 28 43.3 -0.3**
ILAR Eielson Array 29.15 45 P **P 03 28 53.7 +0.7**
comp=Z,0.4nm,0.7s,baz=262,slow=8.5,SNR=6.9
H11N2 WAKE ISLAND Hy 33.38 168 T T 04 05 14.0
baz=352,slow=76,SNR=248
H11N3 WAKE ISLAND Hy 33.39 168 T T 04 05 16.3
baz=352,slow=76,SNR=121
H11N1 WAKE ISLAND Hy 33.39 168 T T 04 05 15.2
baz=352,slow=76,SNR=326
TLY Talaya 33.76 291 *i* P **P 03 29 32.9 -0.8**
TLY pmax pmax
comp=Z,4.0nm,0.8s
SONM Songino Array 33.88 284 P **P 03 29 34.6 -0.4**
comp=Z,0.4nm,0.6s,baz=52,slow=9.3,SNR=2.8
SONM LR LR 03 45 04.3
comp=Z,31nm,18.2s,baz=113,slow=39
H11S1 WAKE ISLAND Hy 34.56 169 T T 04 06 44.4
baz=352,slow=76,SNR=31
H11S3 WAKE ISLAND Hy 34.57 169 T T 04 06 43.8
baz=352,slow=76,SNR=63
**H11S2 WAKE ISLAND Hy

comp=Z,1.1nm,0.5s
KBA Koelnbreinsper 76.55 337 *e*P **P 03 34 43.2 +1.1**
comp=Z,5.2nm,0.8s
BRTR Keskin Array B 76.84 320 P **P 03 34 42.9 -0.9**
comp=Z,0.3nm,0.6s,baz=42,slow=2.3,SNR=2.3
ABTA Abfaltersbach 77.06 338 *e*PcP **P 03 34 46.8 +2.0**
comp=Z,2.7nm,0.8s

IDC 20 03:54:51.7±1.4, 3°.67S×151°.22E, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.5/45, mbtmp3.6/3, MS3.3/1, Ms1 3.3/1, ms1mx2.5/29, Error ellipse: s-maj=29.1km s-min=12.8km az=31.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.02**	**128**	Pg		Pg	03 55 11.2	-0.1
	49nm,0.3s,baz=342,slow=6.4,SNR=10							
KRVT				Lg		Lg	03 55 25.4	
	83nm,0.3s,baz=355,slow=7.2,SNR=7.3							
WRA	**Warramunga Arr**	**23.08**	**224**	P		P	03 59 58.8	-0.3
	1.8nm,1.0s,baz=48,slow=10,SNR=2.9							
ASAR	**Alice Springs**	**25.98**	**219**	P		P	04 00 26.3	-0.1
	0.8nm,0.8s,baz=50,slow=8.8,SNR=6.9							
FITZ	**Fitzroy Crossi**	**28.86**	**238**	LR		LR	04 12 49.3	
	comp=Z,53nm,19.5s,baz=357,slow=37							
ILAR	**Eielson Array**	**81.72**	**22**	P		P	04 07 11.4	-0.5
	0.4nm,0.7s,baz=250,slow=4.9,SNR=4.3							
TORD	**Torodi Ar. Bea**	**148.45**	**289**	PKPbc		PKPbc	04 14 41.9	+0.4
	0.4nm,0.8s,baz=74,slow=2.4,SNR=2.8							

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*TUL **20** 03:58:31.9±1.5, 35°.49N±0°.02×97°.25W±0°.03, h8km±5km, ML3.2, Error ellipse: s-maj=4.2km s-min=3.1km az=59.0*
*ANF **20** 03:58:33.4±1.6, 35°.53N×97°.30W, h19km±12km, ML3.6/7, Error ellipse: s-maj=7.5km s-min=3.9km az=155.0*
ISC 20 03:58:32.5±0.9, 35°.51N±0°.03×97°.28W±0°.03, h11km±7km, n41, σ0§81/57, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ADOK	**Arcadia Dam**	**0.16**	**332**	Pg		**Pg**	**03 58 36.2**	**+0.1**
ADOK				Sg		**Sg**	**03 58 39.3**	**+0.6**
OKCFA	**Oklahoma City**	**0.17**	**235**			**Pg**	**03 58 36.1**	**-0.2**
OKCFA				Sg		**Sg**	**03 58 39.0**	**0.0**
TUL1	**Leonard**	**1.27**	**71**	P		**Pn**	**03 58 54.7**	**-1.5**
	baz=250							
TUL1				S		**Sb**	**03 59 12.4**	**-0.6**
	baz=250							
TUL1	**Leonard**	**1.27**	**71**			**Pn**	**03 58 55.4**	**-0.9**
TUL1				Sn		**Sb**	**03 59 12.8**	**-0.2**
WMOK	**Wichita Mounta**	**1.45**	**238**	P		**Pn**	**03 58 58.4**	**-0.4**
	baz=59							
WMOK				S		**Sb**	**03 59 18.0**	**-0.1**
	baz=59							
WMOK	**Wichita Mounta**	**1.45**	**238**	Pn		**Pn**	**03 58 58.5**	**-0.2**
WMOK						**Sb**	**03 59 18.0**	**-0.1**
T35A	**Sooner Cattle**	**1.53**	**24**			**Pn**	**03 58 59.9**	**0.0**
T35A				Sn		**Sb**	**03 59 21.2**	**+0.8**
U32A	**Winter Ranch,**	**1.64**	**302**			**Pb**	**03 59 02.6**	**-0.3**
U32A				Sn		**Sg**	**03 59 24.8**	**-0.6**
X37A	**Clayton**	**1.82**	**120**			**Pn**	**03 59 03.5**	**-0.2**
X37A				Sn		**Sn**	**03 59 27.0**	**+0.3**
Z35A	**Perchaven, San**	**2.18**	**179**			**Pn**	**03 59 09.2**	**+0.5**
Z35A						**Sn**	**03 59 34.9**	**-0.8**
U38A	**Gravette**	**2.52**	**68**			**Pn**	**03 59 14.6**	**+1.2**
U38A				Sn		**Sn**	**03 59 44.7**	**+0.5**
HHAR	**Hobbs**	**2.82**	**73**			**Pn**	**03 59 18.1**	**+0.6**
HHAR				Sn		**Sn**	**03 59 53.2**	**+1.7**
W39A	**Magazine**	**2.88**	**95**	P		**Pn**	**03 59 18.6**	**+0.3**
	baz=277							
W39A				S		**Sn**	**03 59 53.4**	**+0.5**
	baz=277							
W39A	**Magazine**	**2.88**	**95**			**Pn**	**03 59 18.7**	**+0.4**
W39A				Sn		**Sn**	**03 59 53.6**	**+0.8**
Z38A	**Mt. Pleasant**	**2.94**	**139**			**Pn**	**03 59 19.3**	**+0.1**
Z38A				Sn		**Sn**	**03 59 54.5**	**0.0**
R32A	**Long Quarter,**	**3.12**	**339**	Pn		**Pn**	**03 59 23.0**	**+1.3**
MIAR	**Mount Ida**	**3.19**	**107**	P		**Pn**	**03 59 23.7**	**+1.1**
	baz=288							
MIAR				S		**Sn**	**04 00 02.2**	**+1.6**
	baz=288							
MIAR	**Mount Ida**	**3.19**	**107**			**Pn**	**03 59 23.1**	**+0.4**
MIAR				Sn		**Sn**	**04 00 00.5**	**-0.1**
ABTX	**Abilene, Hawle**	**3.48**	**215**			**Pn**	**03 59 26.3**	**-0.4**
WHTX	**Lake Whitney,**	**3.52**	**182**	P		**Pn**	**03 59 27.0**	**-0.1**
	baz=2.5							
WHTX				Sb		**Sb**	**04 00 19.1**	**+1.7**
	baz=2.5							
WHTX	**Lake Whitney,**	**3.52**	**182**	Pn		**Pn**	**03 59 26.4**	**-0.7**
KSU1	**Kansas State U**	**3.62**	**8**	P		**Pn**	**03 59 29.0**	**+0.4**
	baz=188							
AMTX	**Amarillo**	**3.66**	**261**			**Pn**	**03 59 30.4**	**+1.3**
U40A	**Yellville**	**3.69**	**76**			**Pn**	**03 59 29.9**	**+0.4**
U40A				Sn		**Sn**	**04 00 12.2**	**-0.9**
X40A	**Basin Creek Fa**	**3.79**	**104**	Pn		**Pn**	**03 59 30.7**	**-0.2**
WLAR	**White Oak Lake**	**3.89**	**117**			**Pn**	**03 59 32.4**	**+0.2**
WHAR	**Wooly Hollow**	**4.08**	**92**			**Pn**	**03 59 34.2**	**-0.7**
UALR	**University of**	**4.11**	**99**	Pn		**Pn**	**03 59 33.9**	**-1.4**
W41B	**Gary Mavity, V**	**4.13**	**93**	P		**Pn**	**03 59 35.9**	**+0.4**
	baz=276							
FCAR	**Ozark Folk Cen**	**4.21**	**83**	Pn		**Pn**	**03 59 35.8**	**-0.9**
MSTX	**Muleshoe**	**4.78**	**253**	Pn		**Pn**	**03 59 44.4**	**-0.2**
JCT	**Junction City**	**5.45**	**204**	Pn		**Pn**	**03 59 52.3**	**-1.4**
CCM	**Cathedral Cave**	**5.47**	**61**	Pn		**Pn**	**03 59 53.2**	**-0.8**
N35A	**Tabor**	**5.49**	**13**	Pn		**Pn**	**03 59 53.9**	**-0.4**
N38A	**Joes South For**	**6.16**	**30**	Pn		**Pn**	**04 00 02.2**	**-1.2**
N38A						LR	04 01 49.5	
L34A	**Svendsen Farm,**	**6.48**	**6**	Pn		**Pn**	**04 00 07.5**	**-0.4**
ANMO	**Albuquerque**	**7.53**	**268**			Lg	04 02 29.5	
PLAL	**Pickwick Lake**	**7.55**	**91**	Pn		**Pn**	**04 00 21.6**	**-1.0**
PLAL						LR	04 02 30.4	
BNM	**Barren Site**	**7.80**	**263**			Lg	04 02 39.7	
ISCO	**Idaho Springs**	**7.87**	**305**			Lg	04 02 47.0	
ECSD	**EROS Data Cent**	**8.23**	**3**	Pn		**Pn**	**04 00 30.3**	**-1.5**
ECSD						LR	04 02 53.7	

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*IDC **20** 04:15:54.6±0.7, 15°.08S×173°.78W, h0km, mb3.9/10, mb1 4.2/10, mb1mx4.1/38, mbtmp3.9/10, MS3.5/9, Ms1 3.5/9, ms1mx3.2/28, Error ellipse: s-maj=36.8km s-min=18.8km az=136.0*
*NEIC **20** 04:15:57.9±1.4, 15°.09S±0°.08×173°.45W±0°.09, h35km±2km, mb4.5/14, Error ellipse: s-maj=18.3km s-min=7.8km az=133.0*
ISC 20 04:15:58.5±0.5, 15°.11S±0°.08×173°.6W±0°.1, h30km, n44, σ1§08/33, mb4.2/17, MS3.5/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**2.10**	**56**			**Pn**	**04 16 29.5**	**-2.3**
AFI				Sn		Sn	04 16 48.5	-8.5
NIUE	**Niue**	**5.26**	**139**			**Pn**	**04 17 13.7**	**-1.4**
KNTN	**Kanton**	**12.39**	**9**	Pn		**Pn**	**04 18 51.5**	**-1.5**
DZM	**Mont Dzumac**	**20.16**	**247**	LR		LR	04 27 05.5	
	comp=Z,206nm,21.1s,baz=60,slow=34							
URZ	**Urewera**	**24.48**	**198**	LR		LR	04 29 13.7	
	comp=Z,181nm,20.8s,baz=32,slow=33							
HIZ	**Hauiti**	**25.45**	**201**	P		**P**	**04 21 23.5**	**-0.3**
BKZ	**Black Stump Fm**	**25.51**	**198**	P		**P**	**04 21 23.2**	**-1.2**
LTZ	**Lake Taylor**	**30.14**	**201**	P		**P**	**04 22 06.5**	**+0.7**
LTZ						IAmb	04 22 15.0	
	comp=Z,15nm,1.2s							
H11S2	**WAKE ISLAND Hy**	**38.63**	**329**	T		T	05 04 05.0	
	baz=146,slow=76,SNR=46							
H11S3	**WAKE ISLAND Hy**	**38.65**	**329**	T		T	05 04 04.1	
	baz=146,slow=76,SNR=11							
H11S1	**WAKE ISLAND Hy**	**38.65**	**329**	T		T	05 04 04.4	
	baz=146,slow=76,SNR=11							
PMG	**Port Moresby**	**38.76**	**274**	P		**P**	**04 23 21.2**	**+0.7**
H11N3	**WAKE ISLAND Hy**	**39.58**	**330**	T		T	05 05 36.9	
	baz=149,slow=76,SNR=14							
H11N1	**WAKE ISLAND Hy**	**39.59**	**330**	T		T	05 05 36.5	
	baz=149,slow=76,SNR=13							
H11N2	**WAKE ISLAND Hy**	**39.60**	**330**	T		T	05 05 47.3	
	baz=149,slow=76,SNR=15							
STKA	**Stephens Creek**	**44.04**	**240**	P		**P**	**04 24 03.3**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=47,slow=6.8,SNR=3.6							
STKA	**Stephens Creek**	**44.04**	**240**	P		**P**	**04 24 03.6**	**-0.1**
BBOO	**Buckleboo**	**48.82**	**240**	P		**P**	**04 24 40.4**	**-0.9**
WR0	**Warramunga Arr**	**49.56**	**257**	P		**P**	**04 24 46.3**	**-0.8**
WR0						IAmb	04 24 55.1	
	comp=Z,4.1nm,1.1s							
WB0	**Warramunga Arr**	**49.71**	**257**	P		**P**	**04 24 47.8**	**-0.5**
WB0						IAmb	04 24 50.5	
	comp=Z,6.6nm,1.1s							
WB2	**Warramunga Arr**	**49.74**	**257**	P		**P**	**04 24 47.1**	**-1.4**
WB2						IAmb	04 25 00.3	
	comp=Z,4.4nm,0.9s							
WRA	**Warramunga Arr**	**49.75**	**257**	P		**P**	**04 24 47.6**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=93,slow=7.5,SNR=5.4							
AS31	**Alice Springs**	**50.05**	**252**	P		**P**	**04 24 50.0**	**-0.9**
ASAR	**Alice Springs**	**50.05**	**252**	P		**P**	**04 24 49.8**	**-1.1**
	comp=Z,4.6nm,0.6s,baz=85,slow=8.3,SNR=47							
SAUI	**Saumlaki**	**54.37**	**271**	P		**P**	**04 25 22.6**	**-0.4**
KNRA	**Kununurra**	**55.45**	**261**	P		**P**	**04 25 30.2**	**-0.6**
KNRA						IAmb	04 25 39.7	
	comp=Z,6.1nm,0.8s							
VNDA	**Vanda**	**63.65**	**186**	P		**P**	**04 26 27.3**	**+1.0**
	comp=Z,1.5nm,0.8s,baz=9.7,slow=6.4,SNR=10							
VNDA	**Vanda**	**63.65**	**186**	P		**P**	**04 26 25.4**	**-0.9**
VNDA						IAmb	04 26 28.6	
	comp=Z,2.3nm,1.0s							
PETK	**Petropavlovsk-**	**72.31**	**342**	P		**P**	**04 27 22.3**	**+1.3**
	comp=Z,1.3nm,0.7s,baz=148,slow=9.2,SNR=2.4							
NVAR	**Mina Array Bea**	**74.22**	**42**	P		**P**	**04 27 34.5**	**+1.5**
	comp=Z,1.4nm,0.9s,baz=231,slow=10,SNR=7.3							
NVAR				LR		LR	04 53 20.6	
	comp=Z,46nm,19.7s,baz=216,slow=30							
QSPA	**South Pole Qui**	**74.93**	**180**	P		**P**	**04 27 36.0**	**-0.6**
QSPA						IAmb	04 27 38.1	
	comp=Z,5.8nm,0.8s							
KSRS	**Korea Array**	**75.84**	**316**	LR		LR	04 57 20.0	
	comp=Z,15nm,20.4s,baz=116,slow=33							
TXAR	**Lajitas Array**	**80.59**	**56**	P		**P**	**04 28 11.4**	**+2.8**
	comp=Z,0.6nm,1.0s,baz=230,slow=5.9,SNR=6.6							
TXAR				LR		LR	04 58 13.0	
	comp=Z,19nm,18.6s,baz=0.0,slow=31							
CCB	**Clear Creek Bu**	**81.91**	**11**	P		**P**	**04 28 14.5**	**-0.2**
CCB						IAmb	04 28 16.5	
	comp=Z,3.2nm,0.8s							
PDAR	**Pinedale Array**	**82.16**	**42**	P		**P**	**04 28 17.4**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=241,slow=3.1,SNR=3.6							
ILAR	**Eielson Array**	**82.19**	**11**	P		**P**	**04 28 16.7**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=211,slow=6.7,SNR=6.7							
ILAR				LR		LR	05 01 21.5	
	comp=Z,28nm,18.5s,baz=157,slow=33							
YKA	**Yellowknife Ar**	**89.90**	**23**	P		**P**	**04 28 54.9**	**+0.7**
	comp=Z,0.1nm,0.4s,baz=235,slow=4.3,SNR=6.8							
YKA				LR		LR	05 03 10.3	
	comp=Z,26nm,20.5s,baz=0.0,slow=32							
CMAR	**Chiang Mai Arr**	**92.37**	**288**	LR		LR	05 08 10.2	
	comp=Z,4.9nm,20.7s,baz=210,slow=34							
VNA3	**Neumayer Olymp**	**93.16**	**175**	P		**P**	**04 29 09.7**	**+0.2**
VNA2	**Neumayer--Watz**	**93.65**	**175**	Pdiff		**P**	**04 29 12.3**	**+0.6**
ULM	**Lac du Bonnet**	**93.81**	**39**	LR		LR	05 04 48.2	
	comp=Z,37nm,20.0s,baz=114,slow=31							
ARCES	**ARCESS Array B**	**124.30**	**352**	PKP		**PKiKP**	**04 34 54.0**	**-0.1**
	comp=Z,2.5nm,0.9s,baz=25,slow=3.0,SNR=4.1							
BRTR	**Keskin Array B**	**145.83**	**321**	PKPbc		**PKPab**	**04 35 35.7**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=107,slow=2.8,SNR=13							
GERES	**GERESS Array B**	**145.83**	**351**	PKPbc		**PKPbc**	**04 35 34.9**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=26,slow=4.7,SNR=3.5							

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*IDC **20** 04:29:11.0±0.8, 6°.10S×151°.51E, h0km, mb4.1/10, mb1 4.4/10, mb1mx4.1/37, mbtmp4.1/10, MS3.7/1, Ms1 3.7/1, ms1mx2.7/25, Error ellipse: s-maj=40.6km s-min=14.8km az=117.0*
*NEIC **20** 04:29:15.8±1.7, 6°.06S±0°.10×151°.4E±0°.1, h35km±2km, mb4.4/18, Error ellipse: s-maj=23.4km s-min=11.4km az=127.0*
ISC 20 04:29:16.4±0.6, 6°.08S±0°.08×151°.4E±0°.1, h41km, n34, σ1§14/35, mb4.3/18, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.87**	**20**	Pn		**Pn**	**04 29 45.9**	**-0.1**
	111nm,0.3s,baz=98,slow=1.2,SNR=36							
KRVT				LR		LR	04 30 06.6	
	comp=Z,177nm,20.4s,baz=192,slow=30							
KRVT				Sn		**Sn**	**04 30 09.9**	**+1.5**
	285nm,0.3s,baz=123,slow=21,SNR=15							
RABL	**Rabaul**	**2.03**	**23**	Pn		**Pn**	**04 29 46.9**	**-1.3**
PMG	**Port Moresby**	**5.33**	**231**	Pn		**Pn**	**04 30 36.1**	**+2.6**
	8.7nm,0.3s,baz=51,slow=8.1,SNR=12							
PMG				Sn		**Sn**	**04 31 34.9**	**+1.2**
	8.8nm,0.3s,baz=350,slow=6.0,SNR=3.1							
PMG	**Port Moresby**	**5.33**	**231**	Pn		**Pn**	**04 30 32.7**	**-0.8**
PMG						**Sn**	**04 31 30.8**	**-2.9**
EIDS	**Eidsvold**	**19.19**	**181**	P		**Pn**	**04 33 37.5**	**-0.5**
GUMO	**Guam**	**20.58**	**342**	P		**P**	**04 33 51.2**	**-0.7**
WB0	**Warramunga Arr**	**21.40**	**229**	P		**P**	**04 34 01.3**	**+0.5**
WB0						IAmb	04 34 12.9	
	comp=Z,12nm,0.8s							
WR0	**Warramunga Arr**	**21.40**	**228**	P		**P**	**04 34 01.1**	**+0.3**
WR0						IAmb	04 34 15.6	
	comp=Z,9.6nm,0.8s							
WRAB	**Tennant Creek**	**21.53**	**229**	P		**P**	**04 34 02.4**	**+0.1**
WRAB						IAmb	04 34 05.2	
	comp=Z,7.4nm,0.8s							
WB2	**Warramunga Arr**	**21.53**	**229**	P		**P**	**04 34 02.9**	**+0.6**
WB2						IAmb	04 34 21.7	
	comp=Z,17nm,1.1s							
WRA	**Warramunga Arr**	**21.54**	**229**	P		**P**	**04 34 03.0**	**+0.6**
	comp=Z,6.0nm,0.7s,baz=55,slow=10,SNR=8.7							
DZM	**Mont Dzumac**	**21.56**	**139**	LR		LR	04 40 45.9	
	comp=Z,193nm,19.1s,baz=14,slow=32							
KNRA	**Kununurra**	**24.14**	**245**	P		**P**	**04 34 26.9**	**-1.9**
KNRA						IAmb	04 34 38.8	
	comp=Z,9.2nm,0.9s							
AS31	**Alice Springs**	**24.26**	**222**	P		**P**	**04 34 30.3**	**+0.4**
ASAR	**Alice Springs**	**24.26**	**222**	P		**P**	**04 34 30.9**	**+1.0**
	comp=Z,10.0nm,0.7s,baz=53,slow=9.4,SNR=58							
LHI	**Lord Howe Isla**	**26.32**	**165**	P		**P**	**04 34 48.8**	**+0.4**
LHI						IAmb	04 35 01.7	
	comp=Z,22nm,1.1s							
STKA	**Stephens Creek**	**27.25**	**198**	P		**P**	**04 34 57.9**	**+1.1**
	comp=Z,3.6nm,0.8s,baz=356,slow=12,SNR=7.8							
STKA	**Stephens Creek**	**27.25**	**198**	P		**P**	**04 34 56.7**	**-0.1**
FITZ	**Fitzroy Crossi**	**27.81**	**242**	P		**P**	**04 35 03.0**	**+1.0**
	comp=Z,4.9nm,0.7s,baz=75,slow=8.8,SNR=5.9							
FITZ	**Fitzroy Crossi**	**27.81**	**242**	P		**P**	**04 35 02.1**	**+0.1**
FITZ						IAmb	04 35 14.4	
	comp=Z,8.3nm,0.6s							
BBOO	**Buckleboo**	**30.18**	**206**	P		**P**	**04 35 22.1**	**-0.8**
GIRL	**Giralia**	**39.41**	**241**	P		**P**	**04 36 42.2**	**-0.5**
CASY	**Casey**	**66.39**	**197**	P		**P**	**04 39 59.6**	**-1.2**
CASY						IAmb	04 40 14.4	
	comp=Z,2.7nm,1.1s							
SONM	**Songino Array**	**66.66**	**329**	P		**P**	**04 40 04.6**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=143,slow=3.2,SNR=3.8							
VNDA	**Vanda**	**71.62**	**178**	P		**P**	**04 40 33.7**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=352,slow=7.0,SNR=2.2							
IL31		**83.87**	**22**	P		**P**	**04 41 41.4**	**0.0**
IL31						IAmb	04 41 52.7	
	comp=Z,4.7nm,0.9s							
ILAR	**Eielson Array**	**83.87**	**22**	P		**P**	**04 41 41.5**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=253,slow=5.4,SNR=31							
TOLK	**Toolik Lake Re**	**84.86**	**18**	P		**P**	**04 41 47.2**	**+0.7**
TOLK						IAmb	04 41 59.3	
	comp=Z,2.1nm,0.8s							
EGAK	**Eagle**	**86.08**	**23**	P		**P**	**04 41 51.1**	**-1.5**
INK	**Inuvik**	**90.14**	**21**	P		**P**	**04 42 11.7**	**-0.2**
	comp=Z,2.0nm,1.1s,baz=212,slow=1.5,SNR=4.5							
INK	**Inuvik**	**90.14**	**21**	P		**P**	**04 42 10.4**	**-1.4**
NVAR	**Mina Array Bea**	**93.98**	**52**	P		**P**	**04 42 31.8**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=233,slow=8.9,SNR=2.7							
YKA	**Yellowknife Ar**	**97.21**	**28**	P		Pdif	04 42 45.0	+0.5
	comp=Z,0.2nm,0.7s,baz=274,slow=4.3,SNR=5.1							
TORD	**Torodi Ar. Bea**	**149.32**	**285**	PKPbc		**PKiKP**	**04 49 02.6**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=94,slow=3.0,SNR=12							

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*BGR **20** 04:43:22.6±1.3, 40°.55N×20°.36E, h10km, Ms3.4, Error ellipse: s-maj=62.3km s-min=16.7km az=56.0*
*BJI **20** 04:43:23.0±0.0, 40°.90N×19°.90E, h5km, mB4.8/12, mb4.8/17, Ms4.5/4, Ms7 4.2/4*
*MOS **20** 04:43:24.7±1.1, 40°.93N×19°.84E, h14km, mb4.5/11, Error ellipse: s-maj=5.7km s-min=3.7km az=82.4*
*IDC **20** 04:43:24.8±0.5, 40°.97N×19°.87E, h0km, mb4.2/25, mb1 4.3/36, mb1mx4.2/51, mbtmp4.1/36, ML4.0/10, MS3.3/24, Ms1 3.3/24, ms1mx3.2/55, Error ellipse: s-maj=9.3km s-min=8.4km az=46.0*
*BEO **20** 04:43:25.1±0.6, 40°.80N×19°.87E, h4km±2km, ML4.2/12*
*NEIC **20** 04:43:25.8±2.0, 40°.89N±0°.03×19°.97E±0°.04, h15km±4km, Error ellipse: s-maj=4.6km s-min=3.9km az=63.0*
*PDG **20** 04:43:25.7±0.4, 40°.93N×19°.84E, h9km, MD4.3/14, ML4.0/11, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*
*PRU **20** 04:43:25.0±0.0, 40°.74N×19°.80E, h0km, M4.6*
*SKO **20** 04:43:26.4, 40°.89N×19°.90E, h14km*
*THE **20** 04:43:26.7, 40°.92N×20°.00E, h18km±1km, ML4.2/9, Error ellipse: s-maj=2.1km s-min=0.4km az=291.0*
*LDG **20** 04:43:26.3±0.1, 40°.94N×19°.91E, h10km, Ml3.8/24, Error ellipse: s-maj=3.3km s-min=2.2km az=34.0*
*MED_RC **20** 04:43:26.0±0.3, 40°.92N×19°.86E, h10km, MW4.3/13, Moment Tensor Solution. Mantle waves: s13,c25; Duration: 1§0 Moment tensor: Scale 10¹⁵Nm; M_{rr}0.87±.21; $M_{\theta\theta}$-3.74±.20; $M_{\phi\phi}$2.87±.18; $M_{r\theta}$-0.27±.54; $M_{\theta\phi}$2.31±.15; $M_{\phi r}$1.04±.52; Best double couple: M_o4.20000×10¹⁵ NP1:φ§63.00000°, δ74.00000°, λ8.00000°. NP2:φ§331.00000°, δ82.00000°, λ163.00000°. Principal axes: T 3.8800, Plg17.0000°, Azm286.0000°; N 0.6500, Plg72.0000°, Azm127.0000°; P -4.5300, Plg6.0000°, Azm18.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
ISC 20 04:43:26.1±0.9, 40°.91N±0°.02×19°.89E±0°.02, h14km±5km, n468, σ1§94/546, mb4.5/49, MS3.4/16, 52C-25D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TIR	**Tirane**	**0.44**	**357**	*e*Pg		**Pb**	**04 43 35.4**	**-0.2**
TIR				*e*Sg		**Sb**	**04 43 42.8**	**+0.8**
TIR	**Tirane**	**0.44**	**357**	P		**Pb**	**04 43 35.2**	**-0.3**
TIR				S		**Sb**	**04 43 42.7**	**+0.8**
	18μm,0.4s							
TIR	**Tirane**	**0.44**	**357**	P		**Pb**	**04 43 35.3**	**-0.3**
TIR							04 43 40.1	
TIR	**Tirane**	**0.44**	**357**			**Pb**	**04 43 35.3**	**-0.2**
TIR						**Sg**	**04 43 40.1**	**-0.6**
VLO	**Vlora**	**0.54**	**215**	P		**Pb**	**04 43 37.9**	**+0.7**
VLO	**Vlora**	**0.54**	**215**	P		**Pb**	**04 43 37.4**	**+0.2**
VLO	**Vlora**	**0.54**	**215**			**Pb**	**04 43 37.4**	**+0.2**
TPE	**Tepelena**	**0.62**	**172**	P		**Pg**	**04 43 38.1**	**-0.1**
TPE				S		**Sb**	**04 43 48.6**	**+1.4**
	36μm,0.6s							
TPE	**Tepelena**	**0.62**	**172**			**Sb**	**04 43 48.2**	**+1.0**
OHR	**Ohrid**	**0.71**	**73**	⇓*i*Pg		**Pg**	**04 43 38.8**	**-1.2**
OHR				*i* Sg		**Sb**	**04 43 50.3**	**+0.3**
OHR				*e*Lg		Lg	04 43 51.7	
	comp=E,12μm,0.5s							
OHR				*e*Lg		Lg	04 43 53.2	
	comp=N,18μm,1.0s							
OHR	**Ohrid**	**0.71**	**73**	⇓*i*Pg		**Pg**	**04 43 38.8**	**-1.2**
OHR				*i* Sg		**Sb**	**04 43 50.3**	**+0.3**
OHR				*e*Lg		Lg	04 43 51.7	
	comp=E,12μm,0.5s							
OHR				*e*Lg		Lg	04 43 53.2	
	comp=N,18μm,1.0s							
OHR	**Ohrid**	**0.71**	**73**	P		**Pg**	**04 43 38.8**	**-1.2**
OHR							04 43 50.3	
OHR	**Ohrid**	**0.71**	**73**	Pg		**Pg**	**04 43 38.8**	**-1.2**
OHR				Sg		**Sb**	**04 43 50.3**	**+0.3**
PHP	**Peshkopia**	**0.88**	**28**	P		**Pg**	**04 43 41.7**	**-1.4**
PHP				S		**Sb**	**04 43 54.5**	**-0.2**
	comp=N,16μm,0.8s							
NEST	**Nestorio**	**1.01**	**119**	P		**Pg**	**04 43 44.1**	**-1.5**
SRN	**Sarande**	**1.03**	**175**	P		**Pg**	**04 43 45.5**	**-0.5**
SRN				S		**Sb**	**04 43 59.8**	**+0.8**
	comp=N,11μm,0.6s							
FNA	**Florina**	**1.13**	**96**	P		**Pb**	**04 43 46.0**	**-1.4**
FNA				S		**Sg**	**04 44 00.1**	**-2.6**
	comp=N,20μm,0.6s							
FNA	**Florina**	**1.13**	**96**	P		**Pb**	**04 43 46.3**	**-1.1**
FNA	**Florina**	**1.13**	**96**	P		**Pb**	**04 43 46.8**	**-0.6**
FNA	**Florina**	**1.13**	**96**			**Pb**	**04 43 46.8**	**-0.6**
PUK	**Puka**	**1.13**	**360**			**Pb**	**04 43 45.8**	**-1.6**
PUK						**Sn**	**04 44 02.6**	**-0.3**
ULC	**Ulcinj**	**1.16**	**335**	P		**Pb**	**04 43 47.0**	**-0.9**
ULC							04 44 04.0	
ULC	**Ulcinj**	**1.16**	**335**			**Pb**	**04 43 47.0**	**-0.9**
ULC						**Sn**	**04 44 04.0**	**+0.5**
ULC	**Ulc

BRY Sn 04 44 32.0 +1.9
BRY Bratogost 2.23 334 ⇓*i* Pn **Pn 04 44 03.6 +0.9**
BRY *i* Sn **Sb 04 44 32.5 -1.2**
KNT Kendrikon 2.29 83 *e*P **Pn 04 44 04.5 +1.2**
BAI Bari 2.29 276 ⇑*i* Pn **Pn 04 44 04.1 +0.8**
BAI Sn **Sn 04 44 31.2 -0.1**
SJES Sjenica 2.35 1 *e*Pn **Pb 04 44 07.8 -0.4**
SJES *e*Sn **Sb 04 44 36.8 -0.3**
EVGI Lefkada island 2.36 165 P **Pn 04 44 03.5 -0.8**
BARS Barje 2.38 36 *e*Pn **Pn 04 44 06.1 +1.4**
BARS Barje 2.38 36 *e*Pn Pg 04 44 20.8 +9.0
BARS *e*Sn **Sb 04 44 38.0 0.0**
UPM Unac-Piva 2.41 343 Pn **Pn 04 44 06.2 +1.0**
UPM Unac-Piva 2.41 343 ⇓*i* Pn **Pn 04 44 06.1 +0.9**
UPM *i* Sn **Sb 04 44 37.7 -1.1**
SG1 Sgolgore (BA) 2.44 269 ⇓*i* Pn **Pn 04 44 05.9 +0.5**
SG1 Sn **Sg 04 44 44.4 0.0**
PLE Pljevlja 2.45 351 P **Pn 04 44 06.7 +1.1**
PLE Pljevlja 2.45 351 **Pn 04 44 06.7 +1.1**
PLE Pljevlja 2.45 351 ⇑*i* Pn **Pn 04 44 06.7 +1.1**
PLE *i* Sn **Sb 04 44 39.0 -0.9**
HORT Hortiatis 2.46 96 *e*P **Pn 04 44 06.4 +0.7**
SELS Selova 2.48 21 *e*Pn **Pn 04 44 07.0 +1.0**
SELS Selova 2.48 21 *e*Pn **Pn 04 44 07.4 +1.4**
BOSS Bosilegrad 2.50 50 *e*Pn **Pn 04 44 07.5 +1.2**
STON Ston 2.55 321 *e*Pn **Pn 04 44 07.6 +0.6**
STON Sn **Sn 04 44 37.9 +0.1**
IVAS Ivanjica 2.67 4 *e*Pn **Pn 04 44 10.1 +1.4**
IVAS *e*Sn **Sb 04 44 44.7 -1.6**
SRS Serrai 2.81 85 P **Pn 04 44 12.1 +1.6**
TIP Timpagrande 2.96 235 **Pn 04 44 13.3 +0.6**
BBLS Lazići 2.98 353 *e*Pn **Pn 04 44 15.3 +2.1**
BBLS *e*Sn **Sn 04 44 50.5 +2.1**
VTS Vitosha 3.03 55 *e*Pn **Pn 04 44 15.0 +1.3**
VTS *e*Sn **Sn 04 44 51.4 +1.7**
VTS Vitosha 3.03 55 ⇑P **Pn 04 44 14.9 +1.3**
VTS Vitosha 3.03 55 P **Pn 04 44 12.9 -0.7**
VTS Vitosha 3.03 55 **Pn 04 44 12.9 -0.7**
BOVS Bovan 3.04 26 *e*Pn **Pn 04 44 16.0 +2.4**
GRUS Gruza 3.04 11 *e*Pn **Pn 04 44 16.3 +2.7**
ZAPS Zavoj 3.12 40 *e*Pn **Pn 04 44 16.8 +2.0**
ZAPS *e*Sn **Sn 04 44 55.5 +3.6**
OUR Ouranopolis 3.16 99 *e*P **Pn 04 44 16.7 +1.3**
DIVS Divibare 3.19 1 *e*Pn **Pn 04 44 17.6 +1.8**
DIVS *e*Sn **Sn 04 44 56.4 +2.8**
MAKA Makarska 3.20 319 *i* Pn **Pn 04 44 16.5 +0.7**
MAKA Sn **Sn 04 44 53.8 +0.1**
SGRT San Giovanni R 3.24 286 **Pn 04 44 16.5 0.0**
RICI Ricice 3.30 322 *e*Pn **Pn 04 44 17.5 +0.3**
RICI Sn **Sn 04 44 58.2 +2.0**
TRUS Trudelj 3.33 6 *e*Pn **Pn 04 44 19.7 +2.0**
ZAGS Zajecar 3.38 30 *e*Pn **Pn 04 44 19.5 +1.2**
AOS Alonnisos 3.52 118 *e*P **Pn 04 44 21.3 +1.0**
TEKS Tekeris 3.65 356 *e*Pn **Pn 04 44 23.8 +1.8**
KUBS Kucevo 3.74 20 *e*Pn **Pn 04 44 23.8 +0.5**
PLD Plovdiv 3.80 70 *e*P **Pn 04 44 26.4 +2.2**
KIJV Kijevo 4.03 321 *e*Pn **Pn 04 44 28.5 +1.2**
PAOL Paolisi 4.03 273 **Pn 04 44 28.0 +0.6**
PUNG Punghina 4.04 33 ⇑P **Pn 04 44 28.8 +1.3**
ITM Ithomi 4.05 156 *e*P **Pn 04 44 29.5 +2.0**
ITM Ithomi 4.05 156 **Pn 04 44 26.7 -0.8**
CEL Celeste 4.07 231 **Pn 04 44 28.5 +0.6**
MDVR Moldovita 4.09 18 ⇓P **Pn 04 44 29.5 +1.3**
ZIRJ Zirje 4.18 312 *i* Pn **Pn 04 44 29.9 +0.6**
ZIRJ Sn **Sn 04 45 19.1 +1.2**
KDZ Kurdzhali 4.23 78 *e*P **Pn 04 44 30.9 +0.9**
FRGS Fruska Gora 4.25 359 *e*Pn **Pn 04 44 32.1 +1.1**
RDO Rodhopi 4.28 85 *e*P **Pn 04 44 32.0 +1.4**
MORI Morici 4.28 315 *e*Pn **Pn 04 44 31.9 +1.1**
PLVB Pleven 4.30 53 ⇑P **Pn 04 44 33.0 +2.0**
HERR Herculane 4.38 24 ⇑P **Pn 04 44 33.8 +1.7**
SRE Strehaia 4.47 32 ⇑P **Pn 04 44 35.3 +1.9**
VLAD Vladila 4.54 46 ⇑P **Pn 04 44 35.9 +1.5**
GADA Gvkgeada 4.63 97 *e*P **Pn 04 44 37.3 +1.8**
INTR Introdacqua 4.63 286 **Pn 04 44 35.9 +0.3**
ALN Alexandroupoli 4.66 88 *e*P **Pn 04 44 37.6 +1.6**
ALN Alexandroupoli 4.66 88 P **Pn 04 44 33.8 -2.1**
ALN Alexandroupoli 4.66 88 **Pn 04 44 33.8 -2.1**
DUGI Dugi Otok 4.72 312 *i* Pn **Pn 04 44 37.7 +0.9**
UDBI Udbina 4.72 321 *e*Pn **Pn 04 44 39.0 +2.2**
ENEZ Enez 4.75 90 *e*P **Pn 04 44 38.6 +1.4**
BZS Buzias 4.87 14 ⇓P **Pn 04 44 40.1 +1.3**
BZS Buzias 4.87 14 P **Pn 04 44 40.1 +1.3**
SIGR SIGRI 4.88 108 *e*P **Pn 04 44 40.4 +1.5**
ELND Elena 4.90 64 ⇓P **Pn 04 44 41.3 +2.1**
GZR Gura Zlata 4.95 24 ⇑P **Pn 04 44 41.6 +1.6**
ERIK Erikli-Kesan 5.03 91 *e*P **Pn 04 44 42.2 +1.2**
EZN Ezine 5.03 100 *e*P **Pn 04 44 42.8 +1.8**
GELI Tayfur-Gelibol 5.03 94 *e*P **Pn 04 44 42.9 +1.9**
AQU L'Aquila 5.07 289 P **Pn 04 44 41.7 0.0**
AQU L'Aquila 5.07 289 **Pn 04 44 41.7 0.0**
UKOP Uzunkopru-Edir 5.10 85 *e*P **Pn 04 44 44.3 +2.3**
NVLJ Novalja 5.20 316 *e*Pn **Pn 04 44 44.2 +1.0**
NVLJ Sn **Sn 04 45 41.8 -1.1**
HUMR Humele 5.21 44 ⇓P **Pn 04 44 45.1 +1.6**
MOSL Moslavina 5.23 335 *e*Pn **Pn 04 44 44.8 +1.0**
MOSL Sn **Sn 04 45 42.8 -1.1**
EDRB Edirne 5.24 77 *e*P **Pn 04 44 45.5 +1.6**
LPK Lapseki 5.25 94 *e*P **Pn 04 44 46.2 +2.1**
CHOS Chios island 5.38 116 *e*P **Pn 04 44 47.9 +2.0**
NRCA Norcia 5.41 293 **Pn 04 44 46.5 +0.2**
VAE Valguarnera 5.46 233 Pn **Pn 04 44 51.1 +4.1**
comp=E,6.8nm,0.3s,baz=36,slow=22,SNR=6.5
VAE Sn **Sn 04 45 54.9 +5.2**
comp=E,3.2nm,0.3s,baz=228,slow=16,SNR=1.8
SIRR Siria 5.51 13 ⇑P **Pn 04 44 49.4 +1.8**
RKY Sarkoy-Tekirda 5.53 90 *e*P **Pn 04 44 50.1 +2.1**
RAZG Razgrad 5.58 59 ⇑P **Pn 04 44 50.4 +1.8**
ARR Arges 5.64 36 ⇑P **Pn 04 44 51.4 +1.8**
ZAG Zagreb 5.68 331 *e*Pn **Pn 04 44 51.5 +1.6**
DKL Dikili 5.69 107 *e*P **Pn 04 44 51.9 +1.8**
OZLJ Ozalj 5.71 327 *i* Pn **Pn 04 44 51.6 +1.4**
BOJS Bojanci 5.71 325 *i* Pn **Pn 04 44 51.8 +1.5**
BOJS *e*Sn **Sn 04 45 54.8 -0.7**
comp=Z,74nm,0.6s
MTUR Matau 5.74 40 ⇑P **Pn 04 44 52.7 +1.8**
PTJ Puntijarka 5.75 332 *i* Pn **Pn 04 44 51.8 +0.7**
URLA Izmir 5.77 114 *e*P **Pn 04 44 53.3 +2.1**
KALN Kalnik 5.79 336 *e*Pn **Pn 04 44 52.7 +1.3**
APE Apeiranthos 5.83 129 ⇑P **Pn 04 44 53.8 +1.7**
APE Apeiranthos 5.83 129 *e*P **Pn 04 44 53.8 +1.7**
APE Apeiranthos 5.83 129 *i* P **Pn 04 44 53.6 +1.5**
MRMT Marmara Adasi 5.86 90 *e*P **Pn 04 44 54.2 +1.8**
CRES Cresnjev 5.88 328 *i* Pn **Pn 04 44 53.8 +1.1**
CRES *e*Sn **Sn 04 45 58.3 -1.6**
comp=Z,35nm,0.3s
VOIR 5.89 38 ⇑P **Pn 04 44 54.8 +1.9**
CORL Corleone 5.92 242 **Pn 04 44 54.3 +0.9**
GBRS Gornja Briga 5.93 323 ⇑*i* Pn **Pn 04 44 54.2 +0.9**
GBRS *e*Sn **Sn 04 45 01.4 +0.4**
RIY Rijeka 5.93 320 *e*Pn **Pn 04 44 54.2 +0.9**
RIY Sn **Sn 04 45 59.3 -1.7**
MURB Monte Urbino 5.96 296 **Pn 04 44 53.6 -0.3**
SECR 6.12 46 ⇓P **Pn 04 44 58.0 +1.9**
KNDS Knezji Dol 6.12 321 *e*Pn **Pn 04 44 56.6 +0.4**
KNDS *e*Sn **Sn 04 46 06.8 +0.8**
comp=Z,46nm,0.3s
KOGS Kog 6.13 336 *e*Pn **Pn 04 44 56.6 +0.5**
RODP Rodopos 6.15 149 *e*P **Pn 04 44 58.1 +1.7**
CLTB Caltabellotta 6.16 239 **Pn 04 44 58.1 +1.5**
DRGR 6.22 18 ⇑P **Pn 04 44 59.1 +1.7**
BALB Balikesir 6.24 99 *e*P **Pn 04 44 59.7 +2.1**
CEY Cerknica 6.26 322 *i* Pn **Pn 04 44 58.6 +0.7**
LATE Laterza 6.28 288 Pn **Pn 04 44 57.5 -0.8**
SANT Santorini 6.29 134 ⇑P **Pn 04 45 01.3 +3.0**
SANT Santorini 6.29 134 **Pn 04 45 00.8 -1.5**
IMMV Iera Moni Meta 6.32 148 *e*P **Pn 04 45 00.4 +1.3**
MLR Muntele Rosu 6.36 42 Pn **Pn 04 45 01.8 +2.3**
comp=Z,2.1nm,0.3s,baz=161,slow=14,SNR=17
MLR Sn **Sn 04 46 12.2 +0.3**
comp=Z,0.9nm,0.3s,baz=275,slow=21,SNR=3.9
MLR LR LR 04 48 26.8
comp=Z,307nm,19.6s,baz=98,slow=48
MLR Muntele Rosu 6.36 42 ⇑P **Pn 04 45 02.0 +2.5**
MLR Muntele Rosu 6.36 42 **Pn 04 44 58.6 -0.8**
CJR Cluj-Napoca 6.39 24 ⇑P **Pn 04 45 01.6 +1.9**
CJR Cluj-Napoca 6.39 24 P **Pn 04 45 01.6 +1.9**
CJR Cluj-Napoca 6.39 24 **Pn 04 45 01.6 +1.9**
ISR Istrita 6.44 47 ⇑P **Pn 04 45 03.4 +3.0**
DOPR Dopca 6.45 37 ⇑P **Pn 04 45 02.5 +2.1**
DOPR Dopca 6.45 37 **Pn 04 45 02.5 +2.1**
LJU Ljubljana 6.45 325 *e*Pn **Pn 04 45 00.9 +0.4**
KCTX Karacabey (Bur 6.47 93 *e*P **Pn 04 45 02.9 +2.0**
CTKS Kestanelik-??a 6.52 84 *e*P **Pn 04 45 03.7 +2.3**
GCAM G?zelcaml? 6.53 117 *e*P **Pn 04 45 04.1 +2.5**
JAVS Javornik 6.54 322 ⇑*i* Pn **Pn 04 45 02.0 +0.1**
JAVS *e*Sn **Sn 04 46 13.9 -2.4**
comp=Z,141nm,0.8s
ICOR Ion Corvin 6.66 59 ⇑P **Pn 04 45 05.1 +1.6**
ICOR Ion Corvin 6.66 59 **Pn 04 45 05.0 +1.6**
OZUR 6.72 38 ⇑P **Pn 04 45 06.5 +2.2**
OZUR 6.72 38 **Pn 04 45 06.5 +2.2**
SOKA Soboth 6.75 330 *e*Pn **Pn 04 45 05.3 +0.5**
comp=Z,12nm,0.3s,SNR=20
SOKA *e*Sn **Sn 04 46 19.8 -1.6**
comp=Z,7.3nm,0.3s
BISRR Bisoca 6.80 45 ⇑P **Pn 04 45 08.3 +2.9**
BISRR Bisoca 6.80 45 **Pn 04 45 08.3 +2.9**
OBKA Obir 6.80 327 *e*Pn **Pn 04 45 06.3 +0.8**
OBKA *e*Sn **Sn 04 46 23.2 +0.5**
OBKA Obir 6.80 327 *e*Pn **Pn 04 45 06.7 +1.2**
comp=Z,6.8nm,0.2s,SNR=14
OBKA *e*Sn **Sn 04 46 23.5 +0.8**
comp=Z,44nm,0.5s
ARMT Armutlu 6.82 90 *e*P **Pn 04 45 08.1 +2.5**
GRER 6.84 47 ⇓P **Pn 04 45 08.3 +2.4**
GRER 6.84 47 **Pn 04 45 08.3 +2.4**
IDI Anoyia 6.86 143 Pn **Pn 04 45 07.3 +1.2**
comp=Z,1.6nm,0.3s,baz=326,slow=14,SNR=11
IDI Sn **Sn 04 46 20.8 -3.2**
comp=Z,7.6nm,0.3s,baz=315,slow=8.2,SNR=6.9
IDI LR LR 04 48 43.9
comp=Z,128nm,20.3s,baz=335,slow=46
IDI Anoyia 6.86 143 **Pn 04 45 05.0 -1.2**
OSSC Osservatorio P 6.93 295 Pn **Pn 04 45 07.3 +0.2**
OSSC Sn **Sn 04 46 26.6 +0.9**
ARCR ARCALIA 6.96 26 ⇓P **Pn 04 45 09.8 +2.3**
ARCR ARCALIA 6.96 26 **Pn 04 45 09.8 +2.3**
PLOR Plostina 6.97 43 ⇓P **Pn 04 45 10.0 +2.3**
PLOR Plostina 6.97 43 P **Pn 04 45 10.0 +2.3**
PLOR Plostina 6.97 43 **Pn 04 45 10.0 +2.3**
CASP Castiglione de 7.00 289 Pn **Pn 04 45 07.9 -0.2**
PSZ Piszkesteto 7.01 0 ⇓P **Pn 04 45 10.3 +2.1**
PSZ Piszkesteto 7.01 0 P **Pn 04 45 10.3 +2.1**
PSZ Piszkesteto 7.01 0 **Pn 04 45 06.4 -1.8**
PSZ Piszkesteto 7.01 0 **Pn 04 45 10.3 +2.1**
HARR Harsova 7.01 55 ⇑P **Pn 04 45 10.5 +2.3**
HARR Harsova 7.01 55 P **Pn 04 45 10.5 +2.3**
HARR Harsova 7.01 55 **Pn 04 45 10.5 +2.3**
TLBR Topalu 7.02 56 ⇓P **Pn 04 45 10.4 +2.1**
VRI Vrincioaia 7.02 43 ⇑P **Pn 04 45 10.8 +2.4**
VRI Vrincioaia 7.02 43 P **Pn 04 45 10.8 +2.4**
VRI Vrincioaia 7.02 43 **Pn 04 45 10.8 +2.4**
MANR Mangalia 7.06 63 ⇑P **Pn 04 45 11.6 +2.7**
MANR Mangalia 7.06 63 **Pn 04 45 11.6 +2.7**
ARSA Arzberg 7.08 335 *e*Pn **Pn 04 45 10.2 +1.1**
ARSA Arzberg 7.08 335 *e*Pn **Pn 04 45 10.2 +1.1**
comp=Z,7.9nm,0.4s
MFTR Murfatlar 7.09 60 ⇓P **Pn 04 45 11.2 +1.9**
MFTR Murfatlar 7.09 60 **Pn 04 45 11.2 +1.9**
MANT Manisa 7.10 107 **Pn 04 45 06.8 -2.9**
SOP Sopron 7.18 342 P **Pn 04 45 13.7 +3.2**
SOP pmax pmax
comp=Z,25nm,1.1s
TIRR Tirgusor 7.21 58 ⇓P **Pn 04 45 13.1 +2.2**
TIRR Tirgusor 7.21 58 P **Pn 04 45 13.1 +2.2**
TIRR Tirgusor 7.21 58 **Pn 04 45 09.2 -1.6**
TIRR Tirgusor 7.21 58 **Pn 04 45 13.1 +2.2**
BMR Baia Mare 7.24 20 ⇑P **Pn 04 45 12.6 +1.3**
BMR Baia Mare 7.24 20 P **Pn 04 45 12.6 +1.3**
BMR Baia Mare 7.24 20 **Pn 04 45 12.6 +1.3**
MYKA Terra Mystica 7.29 324 *e*Pn **Pn 04 45 12.3 +0.2**
comp=Z,6.8nm,0.3s,SNR=6.6
MYKA *e*Sn **Sn 04 46 34.1 -0.5**
comp=Z,7.4nm,0.3s
TOPG Topolog 7.38 55 ⇑P **Pn 04 45 14.9 +1.6**
CFR Carcaliu 7.39 52 ⇑P **Pn 04 45 14.9 +1.5**
CFR Carcaliu 7.39 52 P **Pn 04 45 14.9 +1.5**
CFR Carcaliu 7.39 52 **Pn 04 45 14.9 +1.5**
ZCCA Zocca 7.42 301 Pn **Pn 04 45 13.6 -0.3**
TESR Tescani 7.43 39 ⇑P **Pn 04 45 15.1 +1.1**
TESR Tescani 7.43 39 **Pn 04 45 15.1 +1.1**
TRPA Tarpa 7.46 14 ⇑P **Pn 04 45 16.7 +2.4**
TRPA Tarpa 7.46 14 **Pn 04 45 16.7 +2.4**
BIZ Bicaz 7.51 35 ⇑P **Pn 04 45 17.8 +2.7**
BIZ Bicaz 7.51 35 **Pn 04 45 17.8 +2.7**
ZST Bratislava 7.55 346 *e*SG Sg 04 47 27.6 -0.7
CONA Conrad Observa 7.59 339 *e*Pn **Pn 04 45 19.1 +2.9**
comp=Z,1.1nm,0.2s
VYHS Vyhne 7.62 355 *e*P **Pn 04 45 17.2 +0.6**
VYHS Vyhne 7.62 355 *e*PN **Pn 04 45 17.2 +0.6**
JURR Jurilovca 7.64 57 ⇑P **Pn 04 45 19.6 +2.8**
MODS Modra-Piesok 7.69 347 *e*P Pn 04 45 12.0 -5.6
MODS MLR MLR
comp=Z,1µm,14.4s
MODS Modra-Piesok 7.69 347 *e*PN Pn 04 45 12.0 -5.6
MODS Modra-Piesok 7.69 347 *e*SG Sg 04 47 34.6 +1.9
MODS *e*L L 04 48 54.6
BURAR Bucovina Array 7.71 28 ⇓P **Pn 04 45 21.0 +3.0**
BURAR Bucovina Array 7.71 28 **Pn 04 45 21.0 +3.0**
BUR08 Bucovina Ar. S 7.73 28 **Pn 04 45 16.8 -1.4**
KBA Koelnbreinsper 7.76 325 *e*Pn **Pn 04 45 19.2 +0.5**
KBA *e*Sn **Sn 04 46 45.0 -1.4**
KBA Koelnbreinsper 7.76 325 *i* Pn **Pn 04 45 19.2 +0.5**
comp=Z,9.8nm,0.3s,SNR=18
KBA *e*Sn **Sn 04 46 45.3 -1.1**
comp=Z,14nm,0.4s
KARP Karpathos 7.83 131 **Pn 04 45 18.5 -1.0**
KARP Sn **Sn 04 46 46.2 -1.8**
CTI Castel Tesino 7.89 313 P **Pn 04 45 20.0 -0.4**
CTI Castel Tesino 7.89 313 Pn **Pn 04 45 20.0 -0.4**
ABTA Abfaltersbach 7.90 320 *e*Pn **Pn 04 45 21.4 +0.8**
comp=Z,16nm,0.4s,SNR=15
ABTA *e*Sn **Sn 04 46 49.3 -0.5**
comp=Z,35nm,0.6s
UZH Uzhgorod 7.91 12 *e*P Pn 04 45 25.4 +4.9
UZH *e*S **Sn 04 46 56.0 +6.4**
MOA Molln 8.02 332 *e*Pn **Pn 04 45 23.7 +1.7**
MOA Molln 8.02 332 *e*Pn **Pn 04 45 23.4 +1.3**
comp=Z,9.5nm,0.3s,SNR=10
MOA *e*Sn **Sn 04 46 53.7 +1.1**
comp=Z,9.1nm,0.4s
JAVC Velka Javorina 8.10 350 *e*PN **Pn 04 45 26.1 +2.9**
PGF Pioggiola 8.31 285 *e*Pn **Pn 04 45 26.3 +0.1**
PGF *e*Sn **Sn 04 46 53.9 -5.9**
comp=Z,0.9nm,0.3s
RJOB Jochberg 8.51 326 *e*Pn **Pn 04 45 30.5 +1.7**
RJOB *e*L L 04 50 05.1
comp=Z,636nm,15.6s
KRUC Moravsky 8.52 344 *e*PN **Pn 04 45 30.9 +2.0**
WTTA Wattenberg 8.69 320 *e*Pn **Pn 04 45 32.8 +1.3**
WTTA Wattenberg 8.69 320 *e*Pn **Pn 04 45 32.7 +1.2**
comp=Z,95nm,0.8s,SNR=40
WTTA *i* Sn **Sn 04 47 08.4 -0.9**
comp=Z,23nm,0.4s
VRAC Vranov 8.71 346 Pn **Pn 04 45 32.4 +0.9**
comp=Z,0.7nm,0.3s,baz=153,slow=13,SNR=4.1
VRAC Sn **Sn 04 47 09.0 -0.5**
comp=Z,0.4nm,0.3s,baz=224,slow=9.1,SNR=3.9
VRAC LR LR 04 49 27.5
comp=Z,306nm,18.6s,baz=166,slow=42
WATA Walderalm 8.77 320 *e*Pn **Pn 04 45 33.9 +1.4**
comp=Z,24nm,0.3s,SNR=32
WATA *e*Sn **Sn 04 47 09.7 -1.5**
comp=Z,45nm,0.9s
KIS Kishinev 8.85 44 *e*P Pn 04 45 39.0 +5.5
KIS *e*S Sn 04 47 23.0 +10
KIS LRM MLR 04 49 56.0
comp=Z,600nm,10.0s
KIS Kishinev 8.85 44 *e*P Pn 04 45 39.0 +5.5
KIS *e*S Sn 04 47 23.0 +10
KIS MLR MLR
comp=Z,600nm,10.0s
KIS MLR MLR
comp=N,500nm,12.0s
SQTA Sankt Quirin 8.88 318 *i* Pn **Pn 04 45 34.6 +0.7**
comp=N,12nm,0.3s,SNR=16
SQTA *e*Sn **Sn 04 47 11.9 -1.8**
comp=N,14nm,0.3s
TREC Trest 8.94 341 AMS AMS 04 49 20.0
comp=N,400nm,12.6s
FETA Feichten 8.99 316 *e*Pn **Pn 04 45 35.9 +0.3**
comp=N,17nm,0.6s,SNR=9.9
OKC Ostrava-Krasne 9.01 353 AMS AMS 04 50 10.0
comp=N,400nm,9.4s
MOTA Moosalm 9.01 318 *e*Pn **Pn 04 45 36.7 +0.9**
comp=N,35nm,0.8s,SNR=22
MOTA *e*Sn **Sn 04 47 16.4 -0.8**
comp=N,47nm,0.7s
MORC Moravsky Berou 9.02 350 *e*PN **Pn 04 45 36.7 +0.9**
MORC Moravsky Berou 9.02 350 ⇑P **Pn 04 45 38.3 +2.5**
MORC Moravsky Berou 9.02 350 P **Pn 04 45 38.3 +2.5**
MORC Moravsky Berou 9.02 350 **Pn 04 45 36.7 +0.9**
MORC Moravsky Berou 9.02 350 **Pn 04 45 38.3 +2.5**
GEC2 GERESS Array S 9.07 333 *e*L L 04 49 30.2
comp=N,239nm,22.2s
GEC2 GERESS Array S 9.07 333 **Pn 04 45 35.6 -0.9**
GERES GERESS Array B 9.07 333 Pn **Pn 04 45 36.9 +0.5**
comp=N,1.3nm,0.3s,baz=150,slow=14,SNR=25
GERES Sn **Sn 04 47 16.9 -1.4**
comp=N,1.5nm,0.3s,baz=149,slow=22,SNR=5.2
GERES GERESS Array B 9.07 333 P **Pn 04 45 37.0 +0.5**
ZUGS Zugspitze, Sch 9.12 318 *e*Pn **Pn 04 45 38.8 +1.3**
RETA Reutte 9.28 318 *e*Pn **Pn 04 45 40.2 +0.8**
comp=N,5.9nm,0.3s
RETA *e*Sn **Sn 04 47 23.3 -0.3**
comp=N,11nm,0.4s
DAVOX Davos/Dischmat 9.31 312 Pn **Pn 04 45 41.4 +1.4**
comp=N,1.9nm,0.3s,baz=160,slow=14,SNR=11
DAVOX Sn **Sn 04 47 23.4 -1.1**
comp=N,1.3nm,0.3s,baz=336,slow=20,SNR=1.6
DAVOX LR LR 04 50 50.9
comp=N,40nm,18.4s,baz=131,slow=48
BE1 Monatshausen 9.35 321 *e*Pn **Pn 04 45 40.9 +0.6**
KHC Kasperske Hory 9.35 334 *ce*P **Pn 04 45 40.5 +0.1**
KHC Kasperske Hory 9.35 334 *e*PN **Pn 04 45 40.4 +0.1**
KHC *e*SN **Sn 04 47 24.7 -0.6**
KHC AMS AMS 04 51 10.0
comp=N,500nm,9.5s
LVV L'vov 9.37 17 *e*P Pn 04 45 46.0 +5.4
LVV *e*S **Sn 04 47 33.7 +8.1**
LVV MLR MLR
comp=Z,500nm,10.0s
WET Wettzell 9.61 331 *e*L L 04 50 59.0
comp=Z,526nm,15.0s
DAVA Damuels 9.61 315 *e*Pn **Pn 04 45 45.0 +0.9**
comp=Z,6.6nm,0.4s
DAVA *e*Sn **Sn 04 47 31.2 -0.7**
comp=Z,22nm,0.5s
SBF Sospel 9.68 292 *e*Pn **Pn 04 45 44.7 -0.2**
SBF *e*Sn **Sn 04 47 27.0 -6.3**
comp=Z,4.1nm,0.3s
GOPC GO Pecny, Ondr 9.69 340 AMS AMS 04 49 50.0
comp=Z,500nm,11.0s
DPC Dobruska-Polom 9.77 346 AMS AMS 04 50 00.0
comp=Z,600nm,13.5s
KEST Kesra 9.77 241 Pn **Pn 04 45 47.5 +1.5**
comp=Z,0.0nm,0.3s,baz=249,slow=8.6,SNR=2.5
KEST Kesra 9.77 241 **Pn 04 45 46.3 +0.2**
PRU Pruhonice 9.82 339 *e*P **Pn 04 45 48.3 +1.6**
PRU MLR MLR
comp=Z,400nm,11.8s
PRU Pruhonice 9.82 339 *e*PN **Pn 04 45 48.3 +1.6**
PRU AMS AMS 04 50 00.0
comp=Z,400nm,11.8s
UPC Upice 9.97 346 AMS AMS 04 50 20.0
comp=Z,600nm,13.2s
OSTC Ostas 9.98 346 AMS AMS 04 50 20.0
comp=Z,600nm,14.5s
CHVC Chvalec 10.04 346 *e*SN **Sn 04 47 40.4 -1.8**
CHVC AMS AMS 04 50 20.0
comp=Z,500nm,12.8s
FRF La Foret Royal 10.18 289 *e*Pn **Pn 04 45 51.9 +0.3**
FRF *e*Sn **Sn 04 47 38.9 -6.5**
comp=Z,1.1nm,0.3s
LMR La Mourre 10.23 288 *e*Pn **Pn 04 45 53.0 +0.6**
PVCC Panska Ves 10.31 341 AMS AMS 04 50 10.0
comp=Z,300nm,11.7s
MBDF Montbardon 10.37 296 *e*Pn **Pn 04 45 54.0 -0.4**
MBDF *e*Sn **Sn 04 47 42.5 -7.8**
comp=Z,7.1nm,0.5s
ROTZ Rotzenmuhle 10.37 331 *e*L L 04 51 27.5
comp=Z,491nm,14.8s
BR131 Keskin Array S 10.56 92 *i* P **Pn 04 46 00.2 +3.1**
BR131 Keskin Array S 10.56 92 **Pn 04 45 56.1 -1.0**
BRTR Keskin Array B 10.56 92 Pn **Pn 04 45 59.8 +2.7**
comp=Z,0.5nm,0.3s,baz=266,slow=13,SNR=14
BRTR LR LR 04 49 53.5
comp=Z,121nm,19.5s,baz=267,slow=37
SENIN Lac Senin/Sane 10.63 305 **Pn 04 45 57.9 -0.1**
LPG La Plagne 10.63 300 *e*Pn **Pn 04 45 56.9 -1.2**
LPG *e*Sn **Sn 04 47 49.5 -7.5**
comp=Z,7.5nm,0.3s
LPL La Plagne 10.65 300 *e*Pn **Pn 04 45 57.4 -0.9**
LPL *e*Sn **Sn 04 47 49.9 -7.5**
comp=Z,23nm,0.6s
SLE Schleitheim 10.65 314 P **Pn 04 45 58.7 +0.5**
SLE pmax pmax
comp=Z,16nm,1.1s
NKC Novy Kostel 10.68 333 AMS AMS 04 51 30.0
comp=Z,300nm,13.7s
GRF Grafenberg Arr 10.69 328 *e*L L 04 51 56.1
comp=Z,625nm,14.0s
BRG Berggiesshubel 10.79 339 *e*P **Pn 04 46 01.0 +1.0**
comp=Z,9.8nm,1.3s
BRG *e* 04 49 04.3
comp=Z,5.0nm,1.2s
comp=N,314nm,15.6s
comp=E,378nm,14.9s
comp=Z,347nm,10.2s
SMRF Simiane la Rot 11.02 291 *e*Pn **Pn 04 46 02.7 -0.5**
SMRF *e*Sn **Sn 04 47 58.3 -7.8**
comp=Z,0.7nm,0.3s
ORIF Oris-en-Rattie 11.03 296 *e*Pn **Pn 04 46 03.3 -0.1**
ORIF *e*Sn **Sn 04 47 59.4 -7.1**
comp=Z,3.7nm,0.4s
BFO Black Forest 11.08 316 *e*P **Pn 04 46 03.0 -1.0**
BFO Black Forest 11.08 316 **Pn 04 46 03.0 -1.0**
MOX Moxa 11.31 332 P **Pn 04 46 07.1 0.0**
MOX pmax pmax
comp=Z,7.0nm,1.1s
CLL Collm 11.44 338 *e*Pn **Pn 04 46 11.0 +2.2**
CLL *e*Sb Sn 04 48 56.0 +40
CLL *e*Sg 04 49 41.0
CLL Collm 11.44 338 *e*P **Pn 04 46 11.0 +2.2**
CABF La Chapelle 11.49 304 *e*Pn **Pn 04 46 08.9 -0.8**
CABF *e*Sn **Sn 04 48 10.2 -7.5**
comp=Z,2.2nm,0.3s
HINF Hinteralfeld 11.60 311 *e*Pn **Pn 04 46 10.9 -0.2**
HINF *e*Sn **Sn 04 48 12.8 -7.6**
comp=Z,4.5nm,0.3s
ECH Echery 11.65 313 P **Pn 04 46 11.4 -0.3**
ECH Echery 11.65 313 **Pn 04 46 11.4 -0.3**
CDF Champ du Feu 11.69 314 *e*Pn **Pn 04 46 11.4 -1.0**
CDF *e*Sn **Sn 04 48 15.2 -7.5**
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 11.75 30 Pn **Pn 04 46 15.2 +2.2**
comp=Z,0.4nm,0.3s,baz=223,slow=12,SNR=4.1
AKBB Malin Array Si 11.75 30 *ce*P **Pn 04 46 14.8 +1.7**
AKBB Malin Array Si 11.75 30 **Pn 04 46 12.5 -0.6**
VIVF Saint-Julien-l 11.84 294 *e*Pn **Pn 04 46 14.2 -0.2**
VIVF *e*Sn **Sn 04 48 17.9 -8.4**
comp=Z,1.5nm,0.3s
HAU Haudompre 11.99 311 *e*Pn **Pn 04 46 16.0 -0.4**
HAU *e*Sn **Sn 04 48 21.6 -8.3**
comp=Z,13nm,0.5s
SFTF Sexfontaines 12.85 310 *e*Pn **Pn 04 46 28.4 +0.3**
baz=131
SFTF *e*Sn Sn 04 48 41.8 -9.0
comp=Z,3.7nm,0.4s
SMF Signal de Mont 12.93 302 *e*Pn **Pn 04 46 28.2 -1.1**
SMF *e*Sn Sn 04 48 44.2 -8.7
comp=Z,4.6nm,0.4s
LOR Lormes 13.15 304 *e*Pn **Pn 04 46 31.1 -1.2**
baz=123
LOR *e*Sn Sn 04 48 49.4 -8.9
comp=Z,8.0nm,0.4s
SSF Saint Saulge 13.30 303 *e*Pn **Pn 04 46 32.0 -2.2**
SSF *e*Sn Sn 04 48 52.7 -9.1
comp=Z,4.4nm,0.5s
AVF Avril sur Loir 13.30 302 *e*Pn **Pn 04 46 34.0 -0.2**
AVF *e*Sn Sn 04 48 52.8 -9.0
comp=Z,1.7nm,0.4s
BGF Bois d'Agland 13.55 300 *e*Pn **Pn 04 46 36.4 -1.3**
BGF *e*Sn Sn 04 48 59.0 -8.9
comp=Z,5.2nm,0.3s
TCF Toulx Ste Croi 13.89 299 *e*Pn **Pn 04 46 41.1 -1.3**
TCF *e*Sn Sn 04 49 06.9 -9.4
comp=Z,1.1nm,0.3s

HYF	**Humbligny**	**13.92**	**303**	*e*Pn	**Pn**	**04 46 42.4**	**-0.4**
HYF				*e*Sn	Sn	04 49 07.9	-9.2
GIVF	**Givet**	**13.98**	**316**	*e*Pn	**Pn**	**04 46 41.1**	**-2.5**
RJF	**Les Rejaudoux**	**14.12**	**294**	*e*Pn	**Pn**	**04 46 43.9**	**-1.6**
BAIF	**Baives**	**14.28**	**315**	*e*Pn	**Pn**	**04 46 46.9**	**-0.8**
MMAI	**Mount Meron Ar**	**14.68**	**118**	Pn	**Pn**	**04 46 54.3**	**+1.0**
	comp=Z,2.8nm,0.3s,baz=310,slow=16,SNR=2.0						
MMAI				LR	LR	04 53 33.3	
	comp=Z,111nm,20.5s,baz=210,slow=41						
PABE	**Paberze**	**14.85**	**9**	*e*P	**P**	**04 47 01.5**	**+0.4**
PABE				IAmb	IAmb	04 47 06.0	
	comp=Z,33nm,1.0s						
SOC	**Sochi**	**14.92**	**73**	*e*P	**Pn**	**04 46 57.9**	**+1.5**
SOC				*e*		04 49 46.1	
SOC				pmax	pmax		
	comp=Z,5.0nm,0.3s						
SOC				MLR	MLR		
	comp=Z,152nm,17.0s						
IIGN	**Ignalina**	**15.04**	**14**	*e*P	**P**	**04 47 03.5**	**+0.2**
IIGN				IAmb	IAmb	04 47 08.7	
	comp=Z,12nm,0.7s						
ISAL	**Salakas**	**15.24**	**14**	*e*P	**P**	**04 47 06.4**	**+1.0**
ISAL				IAmb	IAmb	04 47 09.3	
	comp=Z,9.7nm,0.6s						
IZAR	**Zarasai**	**15.43**	**14**	*e*P	**P**	**04 47 08.5**	**+0.9**
LDF	**La Druitiere**	**16.13**	**305**	*e*P	**P**	**04 47 15.9**	**+0.5**
FLN	**La Foliniere**	**16.41**	**305**	*e*Pn	**Pn**	**04 47 16.3**	**+0.5**
FLN				*e*Sn	**Sn**	**04 50 07.7**	**-10**
	comp=Z,2.8nm,0.5s						
GRR	**Gorron**	**16.52**	**304**	*e*Pn	**Pn**	**04 47 17.7**	**+0.6**
EIL	**Elat**	**16.61**	**128**	Pn	**P**	**04 47 20.1**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=338,slow=12,SNR=4.1						
VSR	**Storozhevoye**	**16.84**	**46**	*e*P	**Pn**	**04 47 21.5**	**+0.4**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NEY	**Neytrino**	**17.10**	**75**	*i* P	**P**	**04 47 27.3**	**+0.9**
NEY				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KBZ	**Khabaz**	**17.23**	**73**	P	**P**	**04 47 30.3**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=282,slow=9.3,SNR=2.8						
KBZ				LR	LR	04 56 17.9	
	comp=Z,53nm,18.0s,baz=300,slow=45						
KBZ	**Khabaz**	**17.23**	**73**	*c*eP	**P**	**04 47 27.3**	**-0.3**
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LPSR	**Galich'ya Gora**	**17.45**	**42**	*e*P	**P**	**04 47 29.8**	**-0.2**
LPSR				pmax	pmax		
	comp=Z,20nm,1.2s						
SGMF	**Saint Gilles**	**17.56**	**302**	*e*P	**P**	**04 47 33.7**	**+2.5**
QUIF	**Quistinic**	**17.86**	**301**	*e*Pn	**P**	**04 47 35.4**	**+0.9**
ZEI	**Tsey**	**17.97**	**76**	*e*P	**P**	**04 47 39.7**	**+3.6**
OBN	**Obninsk**	**18.00**	**32**	P	**P**	**04 47 38.7**	**+2.8**
	comp=Z,1.8nm,0.3s,baz=7.4,slow=24,SNR=4.1						
OBN				LR	LR	04 55 04.1	
	comp=Z,32nm,18.9s,baz=241,slow=39						
OBN	**Obninsk**	**18.00**	**32**	*i* P	**P**	**04 47 36.5**	**+0.5**
OBN				*e*S	**Sn**	**04 50 54.8**	**-1.0**
OBN				pmax	pmax		
	comp=Z,29nm,1.3s						
OBN				MLR	MLR		
	comp=Z,73nm,15.0s						
OBN	**Obninsk**	**18.00**	**32**	P	**Pn**	**04 47 33.9**	**-1.6**
ROSF	**Rostrenen**	**18.04**	**302**	*e*P	**P**	**04 47 40.3**	**+3.8**
VSU	**Vasula**	**18.10**	**12**	*e*P	**P**	**04 47 37.2**	**+0.1**
VSU				IAML		04 47 39.7	
	comp=Z,21nm,0.2s						
VSU	**Vasula**	**18.10**	**12**	*i* P	**P**	**04 47 37.7**	**+0.6**
VSU				pmax	pmax		
	comp=Z,52nm,0.9s						
ESDC	**Sonseca Array**	**18.23**	**274**	P	**P**	**04 47 39.1**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=73,slow=9.4,SNR=8.4						
VRH	**Novokhopyorsk**	**18.25**	**48**	*e*P	**Pn**	**04 47 38.7**	**+0.1**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
MOS	**Moscow**	**18.86**	**32**	*e*P	**P**	**04 47 44.6**	**-0.9**
MOS				*e*S	**Sn**	**04 51 16.7**	**-0.1**
MOS				pmax	pmax		
	comp=Z,30nm,0.7s						
HFS	**Hagfors**	**19.63**	**351**	P	**P**	**04 47 54.3**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=158,slow=13,SNR=11						
HFS				LR	LR	04 55 43.6	
	comp=Z,115nm,20.8s,baz=168,slow=38						
PBRG	**Braganca**	**19.99**	**281**	*e*P	**Pn**	**04 47 59.3**	**-0.5**
NAO01	**NORSAR Array S**	**20.71**	**347**	P	**P**	**04 48 05.0**	**-0.7**
NC405	**NORSAR Array S**	**20.84**	**349**	IAmb	IAmb	04 48 12.2	
	comp=Z,33nm,1.0s						
NB201	**NORSAR Array S**	**20.84**	**348**	P	**P**	**04 48 06.5**	**-0.6**
NB201				IAmb	IAmb	04 48 13.6	
	comp=Z,22nm,1.1s						
NB2	**NORSAR Subarra**	**20.85**	**348**	P	**P**	**04 48 07.9**	**+0.7**
	comp=Z,8.8nm,1.1s,baz=161,slow=11						
NOA	**NORSAR Array B**	**20.85**	**348**	P	Pn	04 48 09.0	-0.6
	comp=Z,4.6nm,0.8s,baz=155,slow=10,SNR=13						
NOA				LR	LR	04 56 51.9	
	comp=Z,90nm,20.1s,baz=170,slow=39						
PMRV	**Marv??o**	**20.88**	**275**	*e*P	Pn	04 48 12.0	+1.9
FINES	**FINESS Array B**	**20.91**	**8**	P	**P**	**04 48 06.9**	**-0.8**
	comp=Z,3.3nm,0.3s,baz=180,slow=10,SNR=46						
FINES				PcP	**PcP**	**04 52 15.2**	**0.0**
	comp=Z,1.1nm,0.6s,baz=180,slow=0.6,SNR=4.5						
FINES				LR	LR	04 56 30.7	
	comp=Z,77nm,22.0s,baz=192,slow=38						
FIA1	**FINESS Array S**	**20.91**	**8**	P	**P**	**04 48 06.7**	**-1.0**
NBO00	**NORSAR Array S**	**20.91**	**348**	P	**P**	**04 48 07.8**	**0.0**
EKA	**Eskdalemuir Ar**	**20.96**	**321**	P	**P**	**04 48 08.7**	**+0.4**
	comp=Z,9.1nm,0.9s,baz=116,slow=11,SNR=14						
NC303	**NORSAR Array S**	**21.00**	**348**	IAmb	IAmb	04 48 14.6	
	comp=Z,30nm,0.9s						
PVIS	**Viseu**	**21.00**	**279**	*e*P	**P**	**04 48 09.5**	**+0.5**
NC204	**NORSAR Array S**	**21.14**	**348**	IAmb	IAmb	04 48 17.2	
	comp=Z,17nm,0.9s						
MDT	**Midelt**	**21.16**	**255**	P	**P**	**04 48 11.9**	**+1.1**
	comp=Z,3.8nm,0.9s,baz=74,slow=9.9,SNR=7.0						
MDT				LR	LR	04 57 05.2	
	comp=Z,41nm,18.1s,baz=72,slow=39						
PVAQ	**Vaqueiros**	**21.66**	**270**	*e*P	**P**	**04 48 13.9**	**-2.1**
	comp=Z,30nm,1.6s						
TAM	**Tamanrasset**	**21.75**	**218**	P	**P**	**04 48 16.8**	**-0.4**
TAM				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TAM	**Tamanrasset**	**21.75**	**218**	P	**P**	**04 48 16.8**	**-0.4**
KLMR	**Klimovskoe**	**23.32**	**25**	*e*P	**P**	**04 48 31.8**	**-1.5**
KLMR				pmax	pmax		
	comp=Z,15nm,0.9s						
KLMR	**Klimovskoe**	**23.32**	**25**	*e*P	**P**	**04 48 31.8**	**-1.5**
KLMR				AMP		04 48 35.6	
	comp=Z,15nm,0.9s						
TMCR	**Tamitsa**	**25.58**	**18**	*e*P	**P**	**04 48 53.4**	**-0.8**
TMCR				*e*S	**S**	**04 53 25.1**	**+3.8**
TMCR				pmax	pmax		
	comp=Z,24nm,0.5s						
KIRV	**Kirov**	**25.69**	**37**	LR	LR	05 00 06.7	
	comp=Z,139nm,18.8s,baz=227,slow=39						
AKTO	**Aktyubinsk**	**28.02**	**57**	P	**P**	**04 49 17.3**	**+0.9**
	comp=Z,1.1nm,0.4s,baz=267,slow=11,SNR=5.5						
AKTO				LR	LR	05 01 42.6	
	comp=Z,89nm,21.3s,baz=275,slow=39						
ARCES	**ARCESS Array B**	**28.84**	**4**	P	**P**	**04 49 22.4**	**-1.1**
	comp=Z,1.9nm,0.8s,baz=186,slow=11,SNR=9.4						
ARU	**Arti**	**29.40**	**45**	LR	LR	05 01 29.2	
	comp=Z,73nm,18.5s,baz=69,slow=37						
ARU	**Arti**	**29.40**	**45**	*d* iP	**P**	**04 49 29.1**	**+0.5**
ARU						04 50 20.4	
ARU				S	**S**	**04 54 24.2**	**+2.4**
ARU				SS	**SnSn**	**04 55 47.2**	**-1.2**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GEYT	**Alibeck**	**29.52**	**83**	P	**P**	**04 49 31.0**	**+1.1**
	comp=Z,1.4nm,0.4s,baz=256,slow=9.0,SNR=4.4						
GEYT				LR	LR	05 04 12.7	
	comp=Z,42nm,18.3s,baz=10.0,slow=42						
TORD	**Torodi Ar. Bea**	**31.92**	**215**	P	**P**	**04 49 52.4**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=26,slow=8.0,SNR=5.8						
TORD				LR	LR	05 05 42.0	
	comp=Z,54nm,19.0s,baz=350,slow=42						
BRVK	**Borovoye**	**35.73**	**53**	*c*eP	**P**	**04 50 23.0**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,11nm,0.8s						
BRVK	**Borovoye**	**35.73**	**53**	P	**P**	**04 50 23.3**	**-0.7**
DBIC	**Dimbokro**	**40.63**	**220**	P	**P**	**04 51 06.2**	**+0.6**
	comp=Z,3.7nm,0.6s,baz=4.8,slow=11,SNR=5.4						
DBIC				LR	LR	05 09 43.9	
	comp=Z,59nm,19.3s,baz=31,slow=39						
DBIC	**Dimbokro**	**40.63**	**220**	P	**P**	**04 51 03.8**	**-1.7**
KURBB	**Kurchatov Arra**	**41.05**	**56**	P	**P**	**04 51 08.8**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=287,slow=9.5,SNR=6.6						
KURK	**Kurchatov**	**41.09**	**56**	*i* P	**P**	**04 51 11.2**	**+2.2**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	**41.09**	**56**	P	**P**	**04 51 08.6**	**-0.5**
ZAA0	**Zalesovo Array**	**44.27**	**50**	P	**P**	**04 51 33.7**	**-1.1**
ZAA0				IAmb	IAmb	04 51 39.2	
	comp=Z,7.5nm,0.8s						
ZALV	**Zalesovo Beam**	**44.27**	**50**	P	**P**	**04 51 34.8**	**0.0**
	comp=Z,6.9nm,0.5s,baz=282,slow=7.8,SNR=15						
ZALV				LR	LR	05 10 56.3	
	comp=Z,47nm,20.6s,baz=232,slow=37						
ZALV	**Zalesovo Beam**	**44.27**	**50**	*i* P	**P**	**04 51 34.7**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MKAR	**Makanchi Array**	**44.33**	**61**	P	**P**	**04 51 35.2**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=279,slow=7.6,SNR=8.5						
NRIK	**Noril'sk**	**44.59**	**28**	*e*P	**P**	**04 51 36.9**	**-0.3**
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
DGZ	**Jazzator, Alta**	**46.83**	**55**	*i* P	**P**	**04 51 56.9**	**+1.5**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WMQ	**Urumqi**	**48.90**	**63**	*e*P	**P**	**04 52 15.0**	**+3.6**
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,89nm,3.9s						
WMQ				LR	LR		
	comp=Z,110nm,17.7s						
WMQ				LR	LR		
	comp=Z,89nm,18.5s						
WMQ				LR	LR		
	comp=Z,310nm,22.5s						
SCHQ	**Schefferville**	**56.14**	**316**	P	**P**	**04 53 04.8**	**0.0**
	comp=Z,2.6nm,0.6s,baz=60,slow=8.1,SNR=2.7						
SCHQ	**Schefferville**	**56.14**	**316**	P	**P**	**04 53 03.7**	**-1.2**
SCHQ				IAmb	IAmb	04 53 05.7	
	comp=Z,4.6nm,0.9s						
SONM	**Songino Array**	**59.12**	**52**	P	**P**	**04 53 26.9**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=287,slow=7.1,SNR=5.1						
SONM				LR	LR	05 23 20.3	
	comp=Z,54nm,18.6s,baz=202,slow=40						
HHC	**Hu-ho-hao-te**	**65.90**	**56**	*e*P	**P**	**04 54 13.6**	**+2.2**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,33nm,6.4s						
PLVO	**Plevna**	**66.74**	**310**	P	**P**	**04 54 16.5**	**-0.1**
INK	**Inuvik**	**69.29**	**350**	P	**P**	**04 54 31.9**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=25,slow=13,SNR=3.7						
BOSA	**Boshof**	**69.35**	**175**	P	**P**	**04 54 34.1**	**+1.0**
	comp=Z,1.7nm,0.6s,baz=344,slow=7.0,SNR=5.4						
BOSA				LR	LR	05 26 14.6	
	comp=Z,45nm,18.7s,baz=20,slow=37						
BOSA	**Boshof**	**69.35**	**175**	P	**P**	**04 54 31.9**	**-1.2**
BOSA				IAmb	IAmb	04 54 41.7	
	comp=Z,4.4nm,0.9s						
CM31	**Chiang Mai Arr**	**70.00**	**83**	P	**P**	**04 54 36.4**	**-1.0**
CM31				IAmb	IAmb	04 54 51.0	
	comp=Z,3.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**70.00**	**83**	P	**P**	**04 54 39.3**	**+1.9**
	comp=Z,2.1nm,0.3s,baz=310,slow=9.6,SNR=4.2						
YKA	**Yellowknife Ar**	**70.66**	**339**	P	**P**	**04 54 41.3**	**+0.6**
	comp=Z,2.6nm,0.8s,baz=39,slow=5.4,SNR=34						
CN2	**Changchun**	**72.37**	**47**	*e*P	**P**	**04 54 49.8**	**-1.6**
CN2				*e*PP	**PP**	**04 57 31.3**	**-0.5**
CN2				*e*S	**S**	**05 04 11.1**	**-3.2**
FFC	**Flin Flon**	**72.59**	**329**	P	**P**	**04 54 52.0**	**-0.5**
FFC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FFC	**Flin Flon**	**72.59**	**329**	P	**P**	**04 54 52.0**	**-0.5**
ULM	**Lac du Bonnet**	**73.22**	**323**	P	**P**	**04 54 56.8**	**+0.5**
	comp=Z,4.7nm,0.7s,baz=65,slow=4.0,SNR=3.8						
ULM				LR	LR	05 28 14.6	
	comp=Z,42nm,20.2s,baz=88,slow=37						
ULM	**Lac du Bonnet**	**73.22**	**323**	IAmb	IAmb	04 54 57.9	
	comp=Z,5.2nm,0.8s						
P51A	**Williamsport**	**73.64**	**308**	P	**P**	**04 54 58.2**	**-0.8**
DAWY	**Dawson**	**74.09**	**351**	IAmb	IAmb	04 55 03.2	
	comp=Z,4.4nm,0.9s						
MDJ	**Mudanjiang**	**74.09**	**44**	P	**P**	**04 54 57.9**	**-3.6**
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ILAR	**Eielson Array**	**74.15**	**354**	P	**P**	**04 55 02.8**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=0.4,slow=5.7,SNR=6.9						
NJ2	**Nanjing**	**75.86**	**60**	*e*P	**P**	**04 55 12.3**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSRS	**Korea Array**	**77.97**	**51**	P	**P**	**04 55 25.2**	**+1.5**
	comp=Z,1.1nm,0.6s,baz=311,slow=4.8,SNR=2.4						
KSRS				LR	LR	05 33 43.4	
	comp=Z,31nm,18.8s,baz=283,slow=39						
LAO	**LASA Array**	**80.47**	**326**	IAmb	IAmb	04 55 40.3	
	comp=Z,9.3nm,0.9s						
JTMT	**Jette**	**82.82**	**331**	P	**P**	**04 55 49.3**	**-0.6**
JTMT				IAmb	IAmb	04 55 52.1	
	comp=Z,6.6nm,0.9s						
MIAR	**Mount Ida**	**83.16**	**310**	P	**P**	**04 55 50.1**	**-1.5**
MIAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MIAR	**Mount Ida**	**83.16**	**310**	P	**P**	**04 55 50.1**	**-1.5**
MIAR				IAmb	IAmb	04 55 54.2	
	comp=Z,5.0nm,0.9s						
DLMT	**Dillon**	**84.16**	**328**	IAmb	IAmb	04 55 59.5	
	comp=Z,5.1nm,1.1s						
BDFB	**Brasilia**	**84.27**	**244**	P	**P**	**04 55 59.6**	**+2.0**
	comp=Z,5.8nm,0.9s,baz=62,slow=6.5,SNR=10.0						
BDFB	**Brasilia**	**84.27**	**244**	P	**P**	**04 55 56.1**	**-1.5**
PHWY	**Pilot Hill**	**84.34**	**322**	IAmb	IAmb	04 56 00.9	
	comp=Z,4.8nm,1.1s						
MJAR	**Matsushiro Ar**	**84.42**	**45**	P	**P**	**04 56 00.2**	**+2.1**
	comp=Z,1.6nm,0.5s,baz=315,slow=5.1,SNR=3.2						
IMW	**Indian Meadow**	**84.69**	**327**	IAmb	IAmb	04 56 03.1	
	comp=Z,4.9nm,1.1s						
PDAR	**Pinedale Array**	**85.03**	**325**	P	**P**	**04 56 02.0**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=35,slow=5.4,SNR=6.3						
MFID	**Camas Ranch**	**87.06**	**329**	IAmb	IAmb	04 56 13.6	
	comp=Z,3.9nm,1.1s						
TX32	**Lajitas Array**	**92.75**	**313**	IAmb	IAmb	04 56 40.5	
	comp=Z,2.6nm,1.1s						
TXAR	**Lajitas Array**	**92.75**	**313**	P	**P**	**04 56 39.5**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=60,slow=4.3,SNR=11						
CPUP	**Villa Florida**	**97.89**	**242**	LR	LR	05 44 49.2	
	comp=Z,31nm,18.0s,baz=134,slow=38						
ASAR	**Alice Springs**	**122.90**	**94**	PKP	**PKPdf**	**05 02 21.2**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=306,slow=2.2,SNR=2.4						

IDC ***20*** *04:43:48.2±2.1,57.19S×24.96W,h0km,mb4.0/3, mb1 4.2/3,mb1mx3.8/19,mbtmp4.0/3,MS3.2/1,Ms1 3.1/1, ms1mx2.6/16,Error ellipse: s-maj=86.0km s-min=38.0km az=13.0*

ISC 20 04:43:52.5±0.9,57.0S±0.2×25.1W±0.3,h22km,n10, σ1.906/9,mb3.8/3,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**15.52**	**159**	P	**Pn**	**04 47 30.2**	**+0.5**
VNA3	**Neumayer Olymp**	**15.76**	**162**	P	**Pn**	**04 47 32.6**	**-0.1**
VNA2	**Neumayer--Watz**	**15.92**	**159**	P	**Pn**	**04 47 34.6**	**-0.2**
	baz=332,slow=16						
SNAA	**Sanae**	**17.44**	**156**	P	**P**	**04 47 55.5**	**+0.3**
CPUP	**Villa Florida**	**38.30**	**309**	P	**P**	**04 51 10.0**	**-1.2**
	0.4nm,0.4s,baz=162,slow=9.1,SNR=2.1						
MAW	**Mawson**	**38.72**	**142**	LR	LR	05 06 17.6	
	comp=Z,35nm,19.1s,baz=286,slow=35						
LPAZ	**La Paz**	**51.86**	**303**	P	**P**	**04 53 01.2**	**+1.4**
	2.8nm,0.4s,baz=124,slow=5.6,SNR=25						
TORD	**Torodi Ar. Bea**	**73.28**	**27**	P	**P**	**04 55 22.6**	**+0.7**
	0.7nm,0.8s,baz=201,slow=6.7,SNR=4.2						
SONM	**Songino Array**	**149.60**	**86**	PKPbc	**PKPbc**	**05 03 37.8**	**-1.5**
	0.7nm,0.8s,baz=215,slow=3.4,SNR=4.0						
ILAR	**Eielson Array**	**151.60**	**310**	PKPbc	**PKPbc**	**05 03 43.0**	**-0.3**
	0.5nm,0.9s,baz=116,slow=2.1,SNR=4.6						

IDC ***20*** *04:43:54.8±1.1,39.92S×174.89E,h87km±1.5km,mb3.2/2, mb1 3.5/4,mb1mx3.4/18,mbtmp3.6/4,Error ellipse: s-maj=35.2km s-min=9.4km az=132.0*

WEL ***20*** *04:43:55.7,40.3S±2.2×17.5E±.,h106km±3km,M3.9/18, ML4.4/7,MLv3.9/18,Error ellipse: s-maj=0.0km s-min=0.0km az=6.2*

ISC 20 04:43:56.2±0.9,39.75S±0.03×174.72E±0.04,h106km±5km, n135,σ0.985/140,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAZ	**Wanganui**	**0.20**	**91**	P	**Pn**	**04 44 11.2**	**+0.1**
WAZ				S	**Sn**	**04 44 22.5**	**+0.1**
LREZ	**Lake Rotokare**	**0.38**	**319**	P	**Pn**	**04 44 11.7**	**-0.2**
LREZ				S	**Sn**	**04 44 23.5**	**-0.2**
PREZ	**Palmer Road**	**0.60**	**313**	P	**Pn**	**04 44 13.2**	**-0.2**
PREZ				S	**Sn**	**04 44 26.2**	**-0.1**
VRZ	**Vera Road**	**0.62**	**3**	P	**Pn**	**04 44 12.9**	**-0.7**
VRZ				S	**Sn**	**04 44 25.4**	**-1.2**
OHWZ	**Ohakea**	**0.64**	**135**	P	**Pn**	**04 44 14.6**	**+1.0**
PKVZ	**Pokaka**	**0.67**	**47**	P	**Pn**	**04 44 13.4**	**-0.5**
PKVZ				S	**Sn**	**04 44 25.6**	**-1.8**
MTVZ	**Mangateitei**	**0.68**	**58**	P	**Pn**	**04 44 13.6**	**-0.5**
DREZ	**Durham Road**	**0.69**	**324**	P	**Pn**	**04 44 13.8**	**-0.3**
DREZ				S	**Sn**	**04 44 26.8**	**-0.7**
KHEZ	**Kahui Hut**	**0.71**	**310**	P	**Pn**	**04 44 13.9**	**-0.5**
NMEZ	**Namu Road**	**0.73**	**297**	P	**Pn**	**04 44 14.2**	**-0.2**
MHEZ	**Mangahewa**	**0.74**	**335**	P	**Pn**	**04 44 14.5**	**-0.1**
TRVZ	**Turoa**	**0.78**	**55**	P	**Pn**	**04 44 14.6**	**-0.6**
PKE	**Pukeiti**	**0.80**	**314**	P	**Pn**	**04 44 14.7**	**-0.4**
DRZ	**Dome Shelter**	**0.81**	**54**	P	**Pn**	**04 44 15.0**	**-0.5**
FWVZ	**Far West T-bar**	**0.81**	**53**	P	**Pn**	**04 44 14.8**	**-0.6**
WHVZ	**Whangaehu Hut**	**0.82**	**55**	P	**Pn**	**04 44 14.9**	**-0.6**
NBEZ	**Newall Road No**	**0.82**	**306**	P	**Pn**	**04 44 15.1**	**-0.2**
MOVZ	**Moawhango**	**0.87**	**67**	P	**Pn**	**04 44 15.2**	**-0.6**
TUVZ	**Tukino**	**0.87**	**57**	P	**Pn**	**04 44 15.7**	**-0.2**
TWVZ	**Taurewa**	**0.88**	**39**	P	**Pn**	**04 44 15.1**	**-0.9**
NGZ	**Ngauruhoe**	**0.89**	**50**	P	**Pn**	**04 44 15.6**	**-0.6**
WTVZ	**West Tongariro**	**0.92**	**47**	P	**Pn**	**04 44 15.8**	**-0.6**
KRVZ	**Karewarewa**	**0.97**	**48**	P	**Pn**	**04 44 16.3**	**-0.6**
TSZ	**Takapari Road**	**1.00**	**108**	P	**Pn**	**04 44 17.0**	**-0.1**
POWZ	**Post Office Roa**	**1.03**	**129**	P	**Pn**	**04 44 17.5**	**+0.1**
BHHZ	**Black Hill Sta**	**1.07**	**76**	P	**Pn**	**04 44 17.1**	**-0.8**
KATZ	**Kakaramea**	**1.08**	**45**	P	**Pn**	**04 44 17.7**	**-0.4**
KIW	**Kapiti Island**	**1.12**	**173**	P	**Pn**	**04 44 18.9**	**+0.5**
OGWZ	**Otaki Gorge**	**1.12**	**162**	P	**Pn**	**04 44 19.0**	**+0.6**
MRZ	**Mangatainoka R**	**1.12**	**144**	P	**Pn**	**04 44 18.4**	**+0.1**
PNHZ	**Pukenui**	**1.15**	**99**	P	**Pn**	**04 44 18.7**	**0.0**
RITZ	**Rihia Road**	**1.17**	**49**	P	**Pn**	**04 44 19.0**	**0.0**
RATZ	**Rangitukua**	**1.20**	**43**	P	**Pn**	**04 44 19.3**	**0.0**
DUWZ	**D'Urville Isla**	**1.22**	**210**	P	**Pn**	**04 44 20.2**	**+0.8**
DVHZ	**Dannevirke**	**1.24**	**117**	P	**Pn**	**04 44 19.3**	**-0.4**
HIZ	**Hauiti**	**1.24**	**5**	P	**Pn**	**04 44 19.2**	**-0.5**
PRWZ	**Pori Road**	**1.25**	**130**	P	**Pn**	**04 44 20.4**	**+0.6**
KRHZ	**Kereru**	**1.28**	**86**	P	**Pn**	**04 44 20.0**	**-0.1**
HOWZ	**Holdsworth Sta**	**1.30**	**152**	P	**Pn**	**04 44 20.5**	**+0.1**
WATZ	**Wairara**	**1.30**	**37**	P	**Pn**	**04 44 20.3**	**-0.1**
KWHZ	**Kaweka Forest**	**1.35**	**77**	P	**Pn**	**04 44 21.4**	**+0.3**
TIWZ	**Tintock**	**1.36**	**139**	P	**Pn**	**04 44 21.4**	**+0.3**
WPHZ	**Waipukurau**	**1.36**	**104**	P	**Pn**	**04 44 23.2**	**+2.2**
HATZ	**Hinemaiaia**	**1.37**	**52**	P	**Pn**	**04 44 21.0**	**-0.2**
CAW	**Cannon Point**	**1.38**	**169**	P	**Pn**	**04 44 21.9**	**+0.6**
WHTZ	**Whakaora**	**1.45**	**42**	P	**Pn**	**04 44 23.0**	**+0.8**
BKZ	**Black Stump Fm**	**1.49**	**68**	P	**Pn**	**04 44 22.1**	**-0.6**
BFZ	**Birch Farm**	**1.49**	**129**	P	**Pn**	**04 44 22.9**	**+0.2**
TCW	**Tory Channel**	**1.50**	**193**	P	**Pn**	**04 44 23.3**	**+0.6**
ANWZ	**Angora Road**	**1.52**	**118**	P	**Pn**	**04 44 23.5**	**+0.5**
KUTZ	**Kaahu Road**	**1.52**	**35**	P	**Pn**	**04 44 23.1**	**+0.1**
MTW	**Mount Morrison**	**1.53**	**157**	P	**Pn**	**04 44 23.3**	**+0.2**
WEL	**Wellington**	**1.53**	**179**	P	**Pn**	**04 44 23.6**	**+0.4**
TLZ	**Tolley Road**	**1.55**	**24**	P	**Pn**	**04 44 23.0**	**-0.5**
MCHZ	**McNeill Hill**	**1.56**	**79**	P	**Pn**	**04 44 23.8**	**+0.4**
PRHZ	**Porangahau**	**1.56**	**110**	P	**Pn**	**04 44 24.1**	**+0.6**
MRHZ	**Matea Rd**	**1.60**	**56**	P	**Pn**	**04 44 24.5**	**+0.4**
TMWZ	**Te Ma

MS3.5

ISC 20 06:00:54.3±2.1,15°01N±0°06×119°5E±0°1, h44km±22km, n13, σ1°56/19, mb3.8/3, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.88**	**30**	*eP*	**Pn**	**06 01 09.1**	**-1.1**
SCZP				*eS*	**Sn**	**06 01 22.7**	**+0.8**
BOLP	**Bolinao**	**1.43**	**18**	*eP*	**Pn**	**06 01 17.8**	**-0.1**
BOLP				*eS*	**Sn**	**06 01 35.9**	**+0.4**
SMPP	**San Manuel, Pa**	**1.64**	**46**	*eP*	**Pn**	**06 01 19.6**	**-1.0**
SMPP				*eS*	**Sn**	**06 01 41.0**	**+0.5**
PCPH	**Palayan**	**1.68**	**71**	⇓*eP*	**Pn**	**06 01 20.9**	**-0.2**
TGY	**Tagaytay City**	**1.69**	**122**	Pn	**Pn**	**06 01 22.0**	**+0.5**
	247nm,0.3s,baz=261,slow=19,SNR=7.9						
TGY					**Sn**	**06 01 46.1**	**+4.1**
	240nm,0.3s,baz=33,slow=22,SNR=8.5						
PGP	**Puerto Galera**	**2.09**	**136**	⇑*eP*	**Pn**	**06 01 26.3**	**-0.6**
PGP				*eS*	Sn	06 02 01.5	+10
BALP	**Baler**	**2.17**	**70**	*eP*	**Pn**	**06 01 27.5**	**-0.4**
BALP				*eS*	**Sn**	**06 01 54.9**	**+1.3**
LQP	**Lukban**	**2.21**	**114**	*eP*	**Pn**	**06 01 27.2**	**-1.4**
LQP				*i S*	**Sn**	**06 01 52.4**	**-2.4**
POLP	**Polilio Island**	**2.42**	**96**	*eP*	**Pn**	**06 01 30.9**	**-0.4**
POLP				*eS*	**Sn**	**06 02 00.1**	**+0.3**
CMAR	**Chiang Mai Arr**	**19.94**	**283**	P	Pn	06 05 44.7	+20
	0.6nm,0.3s,baz=108,slow=9.2,SNR=4.2						
WRA	**Warramunga Arr**	**37.69**	**157**	P	**P**	**06 08 04.0**	**-1.7**
	1.3nm,0.9s,baz=338,slow=9.3,SNR=5.5						
ASAR	**Alice Springs**	**40.95**	**160**	P	**P**	**06 08 32.2**	**-0.7**
	0.5nm,0.3s,baz=334,slow=6.6,SNR=13						
ARCES	**ARCESS Array B**	**77.44**	**339**	P	**P**	**06 12 46.1**	**+1.5**
	1.8nm,0.9s,baz=70,slow=8.0,SNR=4.0						

IDC 20 06:15:01.6±3.9, 30°35S×138°35E, h0km, mb1 2.8/3, mb1mx2.8/24, mbtmp2.6/3, ML2.6/3, Error ellipse: s-maj=100.3km s-min=16.7km az=42.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.17**	**120**	Pn	Pn	06 15 52.9	+0.2
	0.2nm,0.3s,baz=90,slow=12,SNR=2.1						
STKA				Pg	Pb	06 15 59.8	+1.0
	1.1nm,0.3s,baz=297,slow=15,SNR=13						
STKA				Sn	Sn	06 16 29.1	-2.1
	0.8nm,0.3s,baz=93,slow=22,SNR=2.9						
STKA				Lg	Lg	06 16 41.5	
	1.6nm,0.3s,baz=195,slow=21,SNR=7.6						
ASAR	**Alice Springs**	**7.75**	**328**	Pn	Pn	06 16 56.3	+0.6
	0.1nm,0.3s,baz=153,slow=13,SNR=5.4						
ASAR				Sn	Sn	06 18 23.6	-0.6
	0.1nm,0.3s,baz=152,slow=22,SNR=3.4						
WRA	**Warramunga Arr**	**10.98**	**340**	Pn	Pn	06 17 39.8	-0.2
	0.1nm,0.3s,baz=159,slow=14,SNR=1.2						

NNC 20 06:29:48.0±4.3, 53°.86N×86°.41E, h0km, mb3.7, mpv3.3, 4C-4D, Error ellipse: s-maj=42.3km s-min=27.7km az=168.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**5.72**	**240**	⇓Pn	Pn	06 31 16.5	+2.3
	1.4nm,0.5s						
KURK				⇑Sn	Sn	06 32 21.7	+1.2
	0.9nm,0.5s						
KURK				⇓Lg	Lg	06 32 50.2	
	3.6nm,0.7s						
KURBB	**Kurchatov Arra**	**5.83**	**239**	⇓Pn	Pn	06 31 13.7	-1.8
	3.4nm,0.5s						
KURBB				⇑Sn	Sn	06 32 23.6	+0.6
	2.6nm,0.5s						
KURBB				⇑Lg	Lg	06 32 53.5	
	5.4nm,0.7s						
MK31	**Makanchi Array**	**7.55**	**202**	Pn	Pn	06 31 38.5	-0.7
	0.7nm,0.5s,baz=26,slow=13,SNR=20						
MK31				⇑Sn	Sn	06 33 09.5	+4.0
	0.8nm,0.5s,baz=26,slow=27,SNR=4.7						
MK31				⇓Lg	Lg	06 33 45.6	
	0.7nm,0.6s						

*LVSN **20** 06:30:25.2±6.8, 57°.75N×21°.32E, h0km±34km, ML2.0*
*HEL **20** 06:30:25.0±0.1, 57°.74N×21°.48E, h0km, ML2.1, ML2.0(UPP), Explosion*
*BER **20** 06:30:26.7±5.8, 57°.52N×21°.67E, h22km±27km, ML2.2(NAO)*
*UPP **20** 06:30:26.4±1.1, 57°.79N×21°.28E, h0km, ML2.3, Suspected explosion*
*NAO **20** 06:30:26.1±1.9, 57°.91N×21°.53E, ML2.2*
*IDC **20** 06:30:28.8±2.4, 58°.05N×21°.41E, h0km, mb1 3.0/4, mb1mx2.9/55, mbtmp2.9/4, ML2.4/4, Error ellipse: s-maj=25.5km s-min=8.9km az=166.0*

ISC 20 06:30:24.3±0.8, 57.79N±0°.03×21.49E±0°.02, h0km, n77, σ1°48/107, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.46**	**110**	*eP*	**Pg**	**06 30 32.8**	**-0.3**
SLIT				IAML		06 31 04.5	
	comp=Z,1μm,0.6s						
SLIT	**Slitere, Latvi**	**0.46**	**110**	*eP*	**Pg**	**06 30 32.4**	**-0.6**
SLIT				*eS*	**Sg**	**06 30 39.9**	**+0.9**
SLIT				AML	AML	06 31 03.9	
	comp=N,1μm,0.7s						
SLIT				AML	AML	06 31 04.1	
	comp=E,2μm,0.7s						
SLIT				AML	AML	06 31 04.2	
	comp=Z,1μm,0.7s						
SLIT	**Slitere, Latvi**	**0.46**	**110**	*eP*	**Pg**	**06 30 32.4**	**-0.6**
SLIT				*eS*	**Sg**	**06 30 39.1**	**+0.1**
MTSE	**Matsula**	**1.54**	**52**	*eP*	**Pn**	**06 30 52.2**	**-0.7**
MTSE				*eS*	**Sn**	**06 31 13.2**	**-0.4**
MTSE	**Matsula**	**1.54**	**52**	*eP*	**Pn**	**06 30 52.1**	**-0.7**
MTSE				*eS*	**Sg**	**06 31 14.5**	**+0.8**
GOTU	**Gotland**	**1.57**	**267**	P	**Pn**	**06 30 52.7**	**-0.6**
GOTU				S	**Sg**	**06 31 15.6**	**+1.0**
GOTU	**Gotland**	**1.57**	**267**	*eP*	**Pn**	**06 30 52.7**	**-0.6**
GOTU				*eS*	**Sg**	**06 31 15.6**	**+1.0**
PBUR	**Paburge**	**1.79**	**172**	*eP*	**Pn**	**06 30 55.5**	**-0.8**
PBUR				IAML		06 31 21.1	
	comp=Z,33nm,0.2s						
PBUR	**Paburge**	**1.79**	**172**	*eP*	**Pn**	**06 30 55.3**	**-1.0**
PBUR				*eS*	**Sn**	**06 31 20.4**	**+0.7**
NYNU	**Nynaeshamn**	**2.20**	**305**	P	**Pn**	**06 31 03.1**	**+1.1**
NYNU	**Nynaeshamn**	**2.20**	**305**	*eP*	**Pn**	**06 31 03.1**	**+1.1**
NRTU	**Norrtaelje**	**2.41**	**323**	P	**Pn**	**06 31 05.8**	**+1.0**
NRTU	**Norrtaelje**	**2.41**	**323**	*eP*	**Pn**	**06 31 05.8**	**+1.0**
BYXU	**Byxelkrok**	**2.47**	**260**	P	**Pn**	**06 31 06.6**	**+0.9**
BYXU				S	**Sn**	**06 31 38.8**	**+2.4**
BYXU	**Byxelkrok**	**2.47**	**260**	*eP*	**Pn**	**06 31 06.6**	**+0.9**
BYXU				*eS*	**Sn**	**06 31 38.8**	**+2.4**
AAL	**Aland**	**2.52**	**343**	*eP*	**Pn**	**06 31 06.7**	**+0.3**
AAL				*eS*	**Sn**	**06 31 38.9**	**+1.2**
VIKU	**Vikbolandet**	**2.64**	**288**	P	**Pn**	**06 31 09.1**	**+1.1**
VIKU	**Vikbolandet**	**2.64**	**288**	*eP*	**Pn**	**06 31 09.1**	**+1.1**
ASPU	**Aespoe**	**2.66**	**264**	P	**Pn**	**06 31 09.4**	**+1.1**
ASPU	**Aespoe**	**2.66**	**264**	*eP*	**Pn**	**06 31 09.4**	**+1.1**
VSTU	**Vaestervik**	**2.66**	**269**	P	**Pn**	**06 31 09.4**	**+1.1**
VSTU	**Vaestervik**	**2.66**	**269**	*eP*	**Pn**	**06 31 09.4**	**+1.1**
PABE	**Paberze**	**2.67**	**148**	*eP*	**Pn**	**06 31 08.3**	**-0.1**
PABE				IAML		06 31 18.0	
	comp=Z,12nm,0.1s						
PABE	**Paberze**	**2.67**	**148**	*eP*	**Pn**	**06 31 08.8**	**+0.4**
PABE				*eS*	**Sn**	**06 31 41.9**	**+0.5**
MEF	**Metsahovi**	**2.86**	**30**	*eP*	**Pb**	**06 31 14.5**	**-1.7**
MEF				AML	AML	06 31 54.9	
	comp=N,5.3nm,0.2s						
MEF				AML	AML	06 31 55.5	
	comp=Z,6.4nm,0.3s						
MEF				AML	AML	06 31 55.9	
	comp=E,6.8nm,0.3s						
MEF	**Metsahovi**	**2.86**	**30**	*eP*	**Pn**	**06 31 13.2**	**+2.1**
MEF				*eS*	**Sn**	**06 31 48.1**	**+1.9**
MEF				MSG		06 31 55.3	
	comp=Z,5.9nm,0.2s						
VSU	**Vasula**	**2.86**	**74**	Pn	**Pn**	**06 31 13.5**	**+2.4**
VSU				Lg	Lg	06 31 52.1	
VSU	**Vasula**	**2.86**	**74**	*eP*	**Pn**	**06 31 11.9**	**+0.8**
VSU				IAML		06 31 53.1	
	comp=Z,69nm,0.1s						
VSU	**Vasula**	**2.86**	**74**	*eP*	**Pn**	**06 31 14.3**	**+3.2**
VSU				*eS*	**Sn**	**06 31 48.7**	**+2.5**
VSU				AML	AML	06 31 54.9	
	comp=E,74nm,0.3s						
VSU				AML	AML	06 31 55.3	
	comp=Z,39nm,0.3s						
VSU				AML	AML	06 31 55.8	
	comp=N,56nm,0.4s						
VSU	**Vasula**	**2.86**	**74**	Pn	**Pn**	**06 31 13.5**	**+2.4**
VSU				Sg	**Sb**	**06 31 52.1**	**+0.4**
UPP	**Uppsala**	**2.89**	**318**	P	**Pn**	**06 31 12.0**	**+0.6**
UPP	**Uppsala**	**2.89**	**318**	*eP*	**Pn**	**06 31 12.0**	**+0.6**
OSKU	**Oskarshamn**	**2.97**	**261**	P	**Pn**	**06 31 13.2**	**+0.6**
OSKU	**Oskarshamn**	**2.97**	**261**	*eP*	**Pn**	**06 31 13.2**	**+0.6**
GRAU	**Graesoe**	**2.97**	**330**	P	**Pn**	**06 31 13.9**	**+1.3**
GRAU	**Graesoe**	**2.97**	**330**	*eP*	**Pn**	**06 31 13.9**	**+1.3**
FLYU	**Flymyra**	**3.00**	**323**	P	**Pn**	**06 31 14.3**	**+1.4**
FLYU	**Flymyra**	**3.00**	**323**	*eP*	**Pn**	**06 31 14.3**	**+1.4**
FIBU	**Brunna**	**3.02**	**316**	P	**Pn**	**06 31 14.6**	**+1.3**
BACU	**Backbrunna**	**3.08**	**314**	P	**Pn**	**06 31 15.4**	**+1.3**
BACU	**Backbrunna**	**3.08**	**314**	*eP*	**Pn**	**06 31 15.4**	**+1.3**
LNKU	**Linkoeping**	**3.21**	**280**	P	**Pn**	**06 31 17.1**	**+1.2**
LNKU	**Linkoeping**	**3.21**	**280**	*eP*	**Pn**	**06 31 17.1**	**+1.2**
RAF	**Rauma**	**3.25**	**2**	*eP*	**Pn**	**06 31 17.4**	**+1.1**
RAF				*eS*	**Sn**	**06 31 56.1**	**+0.4**
RAF				AML	AML	06 32 11.6	
	comp=E,8.7nm,0.3s						
RAF				AML	AML	06 32 12.9	
	comp=N,5.4nm,0.4s						
RAF				AML	AML	06 32 14.7	
	comp=Z,5.9nm,0.9s						
OSTU	**Oestervaala**	**3.33**	**319**	P	**Pn**	**06 31 19.1**	**+1.7**
OSTU	**Oestervaala**	**3.33**	**319**	*eP*	**Pn**	**06 31 19.1**	**+1.7**
PVF	**Pernaja**	**3.56**	**37**	*eP*	**Pn**	**06 31 22.4**	**+1.6**
PVF				MSG		06 32 21.7	
	comp=Z,3.3nm,0.2s						
VXJU	**Vaexsjoe**	**3.65**	**259**	P	**Pn**	**06 31 22.1**	**+0.1**
VXJU	**Vaexsjoe**	**3.65**	**259**	*eP*	**Pn**	**06 31 22.1**	**+0.1**
ASKU	**Askersund**	**3.68**	**290**	P	**Pn**	**06 31 23.6**	**+1.2**
ASKU	**Askersund**	**3.68**	**290**	*eP*	**Pn**	**06 31 23.6**	**+1.2**
NRAU	**Nora**	**3.81**	**301**	P	**Pn**	**06 31 24.9**	**+0.7**
NRAU	**Nora**	**3.81**	**301**	*eP*	**Pn**	**06 31 24.9**	**+0.7**
FALU	**Falun**	**3.98**	**315**	P	**Pn**	**06 31 27.0**	**+0.6**
FALU	**Falun**	**3.98**	**315**	*eP*	**Pn**	**06 31 27.0**	**+0.6**
FKPU	**Falk**	**4.15**	**278**	P	**Pn**	**06 31 29.6**	**+0.7**
FKPU	**Falk**	**4.15**	**278**	*eP*	**Pn**	**06 31 29.6**	**+0.7**
GNOU	**Gnosjoe**	**4.20**	**266**	P	**Pn**	**06 31 30.1**	**+0.6**
GNOU	**Gnosjoe**	**4.20**	**266**	*eP*	**Pn**	**06 31 30.1**	**+0.6**
FIA0	**FINESS Array S**	**4.34**	**31**	Pn	**Pn**	**06 31 32.1**	**+0.6**
	baz=208,slow=12						
FIA0				Sn	**Sn**	**06 32 21.7**	**-1.0**
FIA0				Lg	Lg	06 32 39.6	
	baz=217,slow=28						
FIA0	**FINESS Array S**	**4.34**	**31**	Pn	**Pn**	**06 31 32.1**	**+0.6**
	baz=208,slow=12						
FIA0				Sn	**Sn**	**06 32 21.7**	**-1.0**
FIA0				Sg	**Sg**	**06 32 39.6**	**-4.0**
	baz=217,slow=28						
FINES	**FINESS Array B**	**4.34**	**31**	Pn	**Pn**	**06 31 33.0**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=217,slow=12,SNR=8.7						
FINES				Pg	**Pb**	**06 31 41.9**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=211,slow=15,SNR=12						
FINES				Sn	**Sn**	**06 32 23.5**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=222,slow=20,SNR=1.7						
FINES				Lg	Lg	06 32 37.9	
	comp=Z,1.5nm,0.3s,baz=223,slow=24,SNR=15						
FIA1	**FINESS Array S**	**4.34**	**31**	*eP*	**Pn**	**06 31 32.7**	**+1.2**
FIA1				*eS*	**Sn**	**06 32 23.2**	**+0.5**
FIA1				MSG		06 32 41.5	
	comp=Z,2.8nm,0.2s						
BSD	**Bornholm Skovb**	**4.53**	**236**	*eP*	Pn	06 31 28.8	-5.2
BSD				AML	AML	06 32 48.8	
	comp=N,0.4nm,0.7s						
BSD				AML	AML	06 32 54.3	
	comp=E,0.4nm,0.5s						
BSD				AML	AML	06 32 55.5	
	comp=Z,0.3nm,0.4s						
BSD	**Bornholm Skovb**	**4.53**	**236**	*i* P	Pn	06 31 27.8	-6.2
BSD				*i* S	**Sn**	**06 32 25.3**	**-1.9**
HFS	**Hagfors**	**4.67**	**304**	Pn	**Pn**	**06 31 36.4**	**+0.4**
	baz=108,slow=14						
HFS				Sn	**Sn**	**06 32 30.3**	**-0.5**
	baz=117,slow=37						
HFS				Lg	Lg	06 32 49.5	
	baz=116,slow=37						
HFS	**Hagfors**	**4.67**	**304**	Pn	**Pn**	**06 31 36.7**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=115,slow=16,SNR=22						
HFS				Pg	**Pb**	**06 31 47.3**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=118,slow=16,SNR=5.3						
HFS				Sn	**Sn**	**06 32 32.5**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=115,slow=28,SNR=2.4						
HFS				Lg	Lg	06 32 50.2	
	comp=Z,1.4nm,0.3s,baz=115,slow=31,SNR=10						
HFS	**Hagfors**	**4.67**	**304**	Pn	**Pn**	**06 31 36.4**	**+0.4**
	baz=108,slow=14						
HFS				Sn	**Sn**	**06 32 30.3**	**-0.5**
	baz=117,slow=37						
HFS				Sg	**Sb**	**06 32 49.5**	**+5.8**
	baz=116,slow=37						
KEF	**Keuruu**	**4.71**	**20**	*eP*	**Pn**	**06 31 37.8**	**+1.3**
KEF				*eS*	**Sn**	**06 32 31.7**	**0.0**
NRA0	**NORESS Array S**	**5.89**	**304**	Pn	**Pn**	**06 31 53.2**	**+0.5**
	baz=100,slow=12						
NRA0				Sn	**Sn**	**06 32 59.2**	**-1.7**
	baz=99,slow=28						
NRA0				Lg	Lg	06 33 29.7	
	baz=108,slow=37						
NRA0	**NORESS Array S**	**5.89**	**304**	Pn	**Pn**	**06 31 53.2**	**+0.5**
	baz=100,slow=12						
NRA0				Sn	**Sn**	**06 32 59.2**	**-1.7**
	baz=99,slow=28						
NRA0				Sg	**Sg**	**06 33 29.7**	**-3.7**
	baz=108,slow=37						
NB2	**NORSAR Subarra**	**6.17**	**306**	Pn	**Pn**	**06 31 56.6**	**0.0**
	baz=125,slow=14						
NB2				Lg	Lg	06 33 40.2	
	baz=125,slow=37						
NB2	**NORSAR Subarra**	**6.17**	**306**	Pn	**Pn**	**06 31 56.6**	**0.0**
	baz=125,slow=14						
NB2				Sg	**Sg**	**06 33 40.2**	**-2.1**
	baz=125,slow=37						
NOA	**NORSAR Array B**	**6.17**	**306**	Pn	**Pn**	**06 31 56.4**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=132,slow=12,SNR=2.2						
NOA				Lg	Lg	06 33 37.3	
	comp=Z,0.1nm,0.3s,baz=228,slow=19,SNR=5.4						
ARA0	**ARCESS Array S**	**11.92**	**7**	Pn	**Pn**	**06 33 12.2**	**-3.1**
	baz=186,slow=12						
ARA0	**ARCESS Array S**	**11.92**	**7**	Pn	**Pn**	**06 33 12.2**	**-3.1**
	baz=186,slow=12						
ARCES	**ARCESS Array B**	**11.92**	**7**	Pn	**Pn**	**06 33 12.1**	**-3.1**
	comp=Z,0.2nm,0.3s,baz=187,slow=12,SNR=13						

*IDC **20** 06:34:32.0±0.6, 56°.86S×24°.85W, h0km, mb4.3/10, mb1 4.4/11, mb1mx4.1/36, mbtmp4.3/11, ML4.3/1, MS3.6/4, Ms1 3.5/4, ms1mx3.2/26, Error ellipse: s-maj=22.8km s-min=16.6km az=65.0*
*NEIC **20** 06:34:37.0±1.3, 56°.9S±0°.1×25°.0W±0°.2, h35km±1km, mb4.6/22, Error ellipse: s-maj=26.8km s-min=17.2km az=215.0*

ISC 20 06:34:35.0±0.6, 56°.9S±0°.1×25°.0W±0°.1, h22km, n63, σ1°23/54, mb4.5/19, MS3.5/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.04**	**287**	Pn	**Pn**	**06 36 18.0**	**+1.5**
VNA1	**Neumayer--Stat**	**15.54**	**159**	P	**Pn**	**06 38 11.8**	**-0.6**
VNA3	**Neumayer Olymp**	**15.77**	**162**	P	**Pn**	**06 38 14.3**	**-1.2**
VNA2	**Neumayer--Watz**	**15.93**	**159**	P	**Pn**	**06 38 16.6**	**-0.8**
	baz=331,slow=16						
SNAA	**Sanae**	**17.45**	**157**	P	**Pn**	**06 38 37.0**	**+0.3**
SNAA	**Sanae**	**17.45**	**157**	*eP*	**Pn**	**06 38 36.9**	**+0.1**
	1.0nm,0.3s,baz=307,slow=14,SNR=50						
SNAA	**Sanae**	**17.45**	**157**	P	**Pn**	**06 38 37.1**	**+0.3**
EFI	**East Falkland**	**19.88**	**271**	P	**P**	**06 39 04.1**	**-0.3**
EFI				IAmb	IAmb	06 39 07.4	
	comp=Z,38nm,1.4s						
PMSA	**Palmer Station**	**20.28**	**231**	P	Pn	06 39 11.0	+0.2
	comp=Z,27nm,0.9s,baz=169,slow=5.2,SNR=6.4						
GO09	**Cerro Castillo**	**27.87**	**261**	P	**P**	**06 40 21.1**	**-1.7**
GO09				IAmb	IAmb	06 40 34.8	
	comp=Z,16nm,1.2s						
QSPA	**South Pole Qui**	**33.33**	**180**	P	**P**	**06 41 11.5**	**+0.5**
	comp=Z,2.7nm,0.5s,baz=226,slow=1.8,SNR=41						
QSPA	**South Pole Qui**	**33.33**	**180**	P	**P**	**06 41 11.5**	**+0.5**
QSPA				IAmb	IAmb	06 41 21.4	
	comp=Z,6.7nm,0.8s						
PLCA	**Paso Flores**	**33.36**	**279**	LR	LR	06 54 11.5	
	comp=Z,90nm,18.2s,baz=137,slow=35						
CPUP	**Villa Florida**	**38.31**	**309**	P	**P**	**06 41 53.5**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=149,slow=6.8,SNR=8.6						
CPUP	**Villa Florida**	**38.31**	**309**		**P**	**06 41 53.7**	**-0.1**
MT02	**Curacav**	**39.22**	**287**	P	**P**	**06 41 59.5**	**-2.0**
MT02				IAmb	IAmb	06 42 07.3	
	comp=Z,20nm,1.5s						
CO01	**Juntas del Tor**	**41.28**	**291**	P	**P**	**06 42 18.1**	**-0.7**
CO01				IAmb	IAmb	06 42 19.0	
	comp=Z,12nm,1.4s						
AC05	**El Transito**	**42.29**	**292**	P	**P**	**06 42 26.0**	**-0.9**
AC05				IAmb	IAmb	06 42 26.5	
	comp=Z,24nm,1.5s						
AC02	**Maricunga**	**43.36**	**295**	P	**P**	**06 42 35.6**	**-0.4**
BDFB	**Brasilia**	**44.74**	**328**	LR	LR	07 01 48.8	
	comp=Z,46nm,18.1s,baz=126,slow=37						
GO02	**Mina Guanaco**	**44.98**	**296**	P	**P**	**06 42 48.0**	**-0.8**
GO02				IAmb	IAmb	06 43 00.2	
	comp=Z,4.8nm,0.7s						
BOSA	**Boshof**	**45.02**	**73**	P	**P**	**06 42 48.6**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=211,slow=5.9,SNR=2.6						
BOSA				LR	LR	06 57 20.4	
	comp=Z,111nm,20.7s,baz=220,slow=30						
VNDA	**Vanda**	**45.76**	**182**	P	**P**	**06 42 54.8**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=189,slow=6.4,SNR=13						
VNDA	**Vanda**	**45.76**	**182**	P	**P**	**06 42 55.0**	**+1.0**
LVC	**Limon Verde**	**46.80**	**298**	P	**P**	**06 43 03.4**	**+0.2**
PB09	**IPOC Station P**	**47.65**	**299**	P	**P**	**06 43 10.6**	**+1.0**
PB07	**IPOC Station P**	**48.02**	**298**	P	**P**	**06 43 12.3**	**-0.3**
PB01	**IPOC Station P**	**48.41**	**299**	P	**P**	**06 43 15.4**	**-0.1**
PB08	**IPOC Station P**	**49.02**	**300**	P	**P**	**06 43 21.1**	**+0.6**
PB08				IAmb	IAmb	06 43 35.5	
	comp=Z,3.9nm,0.7s						
SIV	**San Ignacio**	**49.07**	**311**	P	**P**	**06 43 21.0**	**+0.5**
	baz=185,slow=11						
GO01	**Chusmiza**	**49.45**	**300**	P	**P**	**06 43 24.1**	**+0.2**
H10N1	**ASCENSION HYDR**	**49.63**	**14**	T	T	07 37 42.6	
	baz=188,slow=74,SNR=2.4						
H10N3	**ASCENSION HYDR**	**49.64**	**14**	T	T	07 37 51.2	
	baz=188,slow=74						
H10N2	**ASCENSION HYDR**	**49.65**	**14**	T	T	07 37 52.5	
	baz=188						
PSGCX	**Pisagua**	**49.95**	**299**	P	**P**	**06 43 26.6**	**-0.6**
PSGCX				IAmb	IAmb	06 43 44.4	
	comp=Z,5.3nm,0.9s						
MNMC	**Minye Minye**	**50.10**	**300**	P	**P**	**06 43 28.7**	**+0.2**
MNMC				IAmb	IAmb	06 43 44.1	
	comp=Z,6.0nm,0.7s						
PB16	**IPOC Station P**	**50.74**	**301**	P	**P**	**06 43 31.2**	**-2.6**
PB16				IAmb	IAmb	06 43 46.0	
	comp=Z,6.5nm,1.3s						
LPAZ	**La Paz**	**51.88**	**303**	P	**P**	**06 43 42.9**	**+0.5**
	comp=Z,12nm,0.5s,baz=125,slow=5.6,SNR=134						
LPAZ	**La Paz**	**51.88**	**303**	P	**P**	**06 43 42.7**	**+0.3**
SAML	**Samuel**	**56.29**	**313**	P	**P**	**06 44 14.3**	**+0.5**
PTGA	**Pitinga**	**62.62**	**320**	P	**P**	**06 44 58.5**	**+0.9**
	comp=Z,1.4nm,0.8s,baz=168,slow=19,SNR=1.6						
DBIC	**Dimbokro**	**65.48**	**22**	LR	LR	07 06 54.8	
	comp=Z,36nm,20.0s,baz=176,slow=30						
GARC	**Garzon, Huila**	**71.53**	**306**	*eP*	P	06 45 44.9	-10
SOTA	**Rioblanco**	**71.99**	**305**	*eP*	**P**	**06 46 01.5**	**+4.0**
VILC	**Villavicencio,**	**72.46**	**308**	*eP*	P	06 46 09.2	+9.3
PRAC	**Prado**	**72.62**	**307**	*eP*	**P**	**06 45 58.5**	**-2.2**
ORTC	**Ortega, Tolima**	**72.95**	**307**	*eP*	**P**	**06 46 02.0**	**-0.7**
TOA0	**Torodi Ar. Sit**	**73.24**	**27**	P	**P**	**06 46 04.1**	**-0.1**
TOA0				IAmb	IAmb	06 46 05.4	
	comp=Z,5.3nm,1.1s						
TORD	**Torodi Ar. Bea**	**73.24**	**27**	P	**P**	**06 46 04.5**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=198,slow=6.1,SNR=14						
YOTC	**Yotoco, Valle**	**73.51**	**306**	*eP*	**P**	**06 46 04.1**	**-1.9**
SPBC	**San Pablo de B**	**74.00**	**309**	*eP*	**P**	**06 46 09.3**	**+0.4**
GUY2C	**Guyana, Caldas**	**74.18**	**307**	*eP*	**P**	**06 46 06.8**	**-3.6**
NORC	**Norcasia**	**74.27**	**308**	*eP*	**P**	**06 46 09.1**	**-1.3**
PTBC	**PUERTO BERRIO,**	**74.96**	**309**	*eP*	**P**	**06 46 11.7**	**-2.7**
SDV	**Santo Domingo**	**75.50**	**313**	P	**P**	**06 46 18.1**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=157,slow=7.7,SNR=4.2						
URIC	**Uribia, Colomb**	**78.59**	**313**	P	**P**	**06 46 36.3**	**+1.6**
ASAR	**Alice Springs**	**97.78**	**161**	P	**P**	**06 48 08.4**	**-0.1**
	comp=Z,1.1nm,0.9s,baz=190,slow=4.2,SNR=7.2						
CMAR	**Chiang Mai Arr**	**123.62**	**109**	PKP	**PKiKP**	**06 53 31.0**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=255,slow=3.6,SNR=4.1						
ARCES	**ARCESS Array B**	**131.30**	**21**	PKP	**PKPdf**	**06 53 43.6**	**-0.1**
	comp=

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UON	**La Union**	**0.57**	**322**	*eP*	**Pb**	**06 37 19.5**	**-0.4**
UON				*eS*	**Sb**	**06 37 27.8**	**-0.9**
CAIG	**El Cayaco**	**1.22**	**112**	*eP*	**Pg**	**06 37 29.9**	**-0.5**
CAIG				*i* S	**Sg**	**06 37 46.8**	**+0.6**
CAIG	**El Cayaco**	**1.22**	**112**		**Pg**	**06 37 29.9**	**-0.5**
CAIG					**Sg**	**06 37 46.8**	**+0.6**
ARIG	**Puente Sto Nin**	**1.29**	**54**	*eP*	**Pb**	**06 37 31.9**	**-0.3**
ARIG				*eS*	**Sg**	**06 37 48.5**	**0.0**
ARIG	**Puente Sto Nin**	**1.29**	**54**		**Pb**	**06 37 31.9**	**-0.3**
ARIG					**Sn**	**06 37 49.9**	**-0.5**
MEIG	**Mezcala**	**1.79**	**77**	*eP*	**Pn**	**06 37 38.8**	**-0.4**
MEIG				*i* S	**Sn**	**06 38 01.2**	**-1.4**
MEIG	**Mezcala**	**1.79**	**77**		**Pb**	**06 37 40.5**	**-0.2**
MEIG					**Sg**	**06 38 07.0**	**+2.5**
PLIG	**Platanillo**	**2.04**	**64**	*eP*	**Pn**	**06 37 42.7**	**-0.1**
PLIG				*eS*	**Sn**	**06 38 08.5**	**-0.6**
PLIG	**Platanillo**	**2.04**	**64**		**Pb**	**06 37 45.2**	**+0.1**
PLIG					**Sg**	**06 38 14.7**	**+1.9**
MOIG	**Morelia**	**2.16**	**6**		**Pb**	**06 37 45.9**	**-1.3**
CRIG	**Cruz Grande**	**2.34**	**109**	*i* P	**Pn**	**06 37 46.3**	**-0.6**
CRIG				*i* S	**Sn**	**06 38 14.4**	**-1.9**
TLIG	**Tlapa**	**2.75**	**89**	*i* P	**Pn**	**06 37 51.5**	**-0.9**
TLIG				*eS*	**Sn**	**06 38 25.6**	**-0.8**
TLIG	**Tlapa**	**2.75**	**89**		**Pn**	**06 37 53.9**	**+1.4**
TLIG	**Tlapa**	**2.75**	**89**		**Sg**	**06 38 34.4**	**-1.0**
UNM	**Universidad Na**	**2.81**	**50**	Pn	**Pb**	**06 37 55.9**	**-2.3**
FTIG	**Fresnillo de T**	**3.18**	**82**	*eP*	**Pn**	**06 37 59.1**	**+0.6**
FTIG				*i* S	**Sn**	**06 38 36.8**	**-0.3**
PNIG	**Pinotepa**	**3.37**	**109**	*eP*	**Pn**	**06 38 00.4**	**-0.5**
PNIG				*i* S	**Sn**	**06 38 40.4**	**-1.2**
PNIG	**Pinotepa**	**3.37**	**109**		**Pn**	**06 38 00.4**	**-0.5**
PNIG					**Sn**	**06 38 45.0**	**+3.4**
HLIG	**Huajuapan de L**	**3.48**	**84**	*eP*	**Pn**	**06 38 03.3**	**+0.6**
HLIG				*i* S	**Sn**	**06 38 44.5**	**-0.3**
TXIG	**Tlaxiaco**	**3.52**	**94**	*eP*	**Pn**	**06 38 03.8**	**+0.5**
TXIG				*i* S	**Sn**	**06 38 45.3**	**-0.5**
ZAIG	**Zacatecas**	**5.33**	**349**	Pn	**Pn**	**06 38 31.8**	**+3.6**
CMIG	**Matias Romero**	**6.28**	**93**	Pn	**Pn**	**06 38 42.8**	**+1.8**
	0.1nm,0.3s,baz=265,slow=15,SNR=1.2						
CMIG				Sn	**Sn**	**06 39 53.1**	**-0.4**
	1.0nm,0.3s,baz=182,slow=11,SNR=2.8						
CMIG				Lg	Lg	06 40 24.1	
	1.7nm,0.3s,baz=356,slow=19,SNR=3.7						
H06E1	**SOCORRO T-PHAS**	**9.10**	**279**	T	T	06 48 29.3	
	SNR=44						
H06N1	**SOCORRO T-PHAS**	**9.17**	**280**	T	T	06 48 28.8	
	SNR=10						
TXAR	**Lajitas Array**	**11.94**	**351**	Pn	Pn	06 40 04.3	+5.7
	0.0nm,0.3s,baz=162,slow=15,SNR=4.5						
TXAR				Lg	Lg	06 43 26.0	
	0.1nm,0.3s,baz=179,slow=28,SNR=3.3						
TXAR				LR	LR	06 45 12.8	
	comp=Z,88nm,18.9s,baz=0.0,slow=40						
NVAR	**Mina Array Bea**	**25.52**	**328**	P	**P**	**06 42 38.7**	**+1.1**
	1.0nm,0.7s,baz=151,slow=9.9,SNR=4.5						
PDAR	**Pinedale Array**	**26.10**	**346**	P	**P**	**06 42 43.6**	**+0.9**
	0.8nm,0.9s,baz=148,slow=12,SNR=5.5						
YKA	**Yellowknife Ar**	**45.87**	**352**	P	**P**	**06 45 30.9**	**+0.1**
	0.2nm,0.7s,baz=160,slow=7.9,SNR=2.9						
H03N2	**Juan Fernandez**	**55.04**	**157**	T	T	07 45 57.5	
	baz=335,slow=77,SNR=84						
H03N1	**Juan Fernandez**	**55.05**	**157**	T	T	07 45 59.5	
	baz=335,slow=77,SNR=86						
H03N3	**Juan Fernandez**	**55.06**	**157**	T	T	07 46 00.8	
	baz=335,slow=77,SNR=68						
ILAR	**Eielson Array**	**56.14**	**338**	P	**P**	**06 46 48.1**	**+0.1**
	0.4nm,1.0s,baz=152,slow=5.9,SNR=3.0						

*IDC **20** 06:39:45.6±0.9,56.81S×24.89W,h0km,mb4.3/5, mb1 4.3/6,mb1mx4.0/28,mbtmp4.2/6,ML3.8/1,Error ellipse: s-maj=40.4km s-min=21.8km az=52.0*

*NEIC **20** 06:39:51.0±1.1,56.9S±0.2×25.0W±0.2,h36km±3km, mb4.3/8,Error ellipse: s-maj=24.3km s-min=15.6km az=213.0*

ISC 20 06:39:49.0±0.8,56.9S±0.1×25.0W±0.1,h22km,n23, σ0s86/22,mb4.5/8,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.03**	**287**	Pn	**Pn**	**06 41 31.5**	**+1.0**
VNA1	**Neumayer--Stat**	**15.54**	**159**	P	**Pn**	**06 43 25.1**	**-1.2**
VNA3	**Neumayer Olymp**	**15.77**	**162**	P	**Pn**	**06 43 28.0**	**-1.4**
VNA2	**Neumayer--Watz**	**15.93**	**159**	P	**Pn**	**06 43 31.1**	**-0.3**
	baz=329,slow=15						
SNAA	**Sanae**	**17.45**	**157**	P	**Pn**	**06 43 51.3**	**+0.5**
SNAA	**Sanae**	**17.45**	**157**	P	**Pn**	**06 43 51.2**	**+0.5**
	0.3nm,0.3s,baz=314,slow=13,SNR=12						
SNAA	**Sanae**	**17.45**	**157**	P	**P**	**06 43 51.7**	**-0.1**
GO09	**Cerro Castillo**	**27.87**	**261**	P	**P**	**06 45 34.4**	**-2.4**
GO09				IAmb	IAmb	06 45 48.0	
	comp=Z,17nm,1.4s						
QSPA	**South Pole Qui**	**33.33**	**180**	P	**P**	**06 46 25.0**	**0.0**
QSPA				IAmb	IAmb	06 46 40.4	
	comp=Z,7.1nm,1.4s						
MAW	**Mawson**	**38.72**	**142**	P	**P**	**06 47 11.4**	**+0.7**
	comp=Z,5.0nm,0.4s,baz=270,slow=8.1,SNR=3.2						
MAW	**Mawson**	**38.72**	**142**	IAmb	IAmb	06 47 16.1	
	comp=Z,2.4nm,1.1s						
VNDA	**Vanda**	**45.76**	**182**	P	**P**	**06 48 08.5**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=189,slow=8.3,SNR=2.0						
VNDA	**Vanda**	**45.76**	**182**	P	**P**	**06 48 09.2**	**+1.2**
VNDA				IAmb	IAmb	06 48 17.4	
	comp=Z,2.3nm,1.1s						
MNMC	**Minye Minye**	**50.09**	**300**	P	**P**	**06 48 42.8**	**+0.3**
PB16	**IPOC Station P**	**50.74**	**301**	P	**P**	**06 48 47.3**	**-0.4**
PB16				IAmb	IAmb	06 48 55.1	
	comp=Z,3.3nm,1.1s						
LPAZ	**La Paz**	**51.88**	**303**	P	**P**	**06 48 56.1**	**-0.1**
	comp=Z,3.5nm,0.4s,baz=149,slow=5.3,SNR=40						
LPAZ	**La Paz**	**51.88**	**303**	P	**P**	**06 48 56.2**	**-0.1**
ATAH	**Atahualpa**	**64.69**	**298**	P	**P**	**06 50 26.2**	**+0.6**
	comp=Z,4.8nm,0.4s,baz=114,slow=7.3,SNR=19						
TORD	**Torodi Ar. Bea**	**73.24**	**27**	P	**P**	**06 51 17.7**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=196,slow=5.8,SNR=4.2						
YKA	**Yellowknife Ar**	**137.64**	**316**	PKP	**PKPdf**	**06 59 09.6**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=118,slow=2.5,SNR=4.7						
SONM	**Songino Array**	**149.56**	**86**	PKPbc	**PKPbc**	**06 59 35.5**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=227,slow=2.9,SNR=6.0						
ILAR	**Eielson Array**	**151.61**	**310**	PKPbc	**PKPbc**	**06 59 39.2**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=134,slow=2.6,SNR=11						
TOLK	**Toolik Lake Re**	**153.14**	**318**		**PKiKP**	**06 59 43.2**	**-0.1**

*NIED **20** 06:49:00,22.90N×120.90E,h8km,Mw4.0 Best double couple: M0 1.12000×10^15 NP1:φs288.00000°,δ76.00000°, λ-144.00000°. NP2:φs188.00000°,δ55.00000°, λ-17.00000°.*

*IDC **20** 06:49:01.1±1.0,22.73N×120.91E,h0km,mb3.7/7, mb1 3.8/7,mb1mx3.6/60,mbtmp3.7/7,MS3.0/5,Ms1 3.1/5, ms1mx2.7/53,Error ellipse: s-maj=36.7km s-min=20.1km az=76.0*

*TAP **20** 06:49:01.6,22.90N×120.85E,h6km,ML4.1,C*

*JMA **20** 06:49:02.4±0.2,22.92N×120.94E,h9km±2km,M3.7*

ISC 20 06:49:02.1±0.9,22.89N±0.01×120.86E±0.01,h6km±7km, n139,σ0s96/201,mb3.7/7,MS2.8/3,15C-12D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**0.21**	**108**	⇑*iP*	**Pg**	**06 49 07.0**	**+0.8**
	baz=110						
TWG				*eS*	**Sg**	**06 49 10.3**	**+1.2**
	baz=110						
SLGT	**Liugui**	**0.22**	**299**	*eP*	**Pg**	**06 49 06.2**	**-0.2**
	baz=298						
SLGT				S	**Sg**	**06 49 08.8**	**-0.5**
	baz=298						
TWGBT	**Beinan**	**0.22**	**109**	⇑*iP*	**Pg**	**06 49 07.0**	**+0.6**
	baz=110						
TWGBT				*i* S	**Sg**	**06 49 10.2**	**+0.9**
	baz=110						
SSD	**Sandimen**	**0.25**	**236**	⇑*iP*	**Pg**	**06 49 06.7**	**-0.3**
	baz=224						
SSD				*eS*	**Sg**	**06 49 09.8**	**-0.5**
	baz=224						
STYT	**Tauyuan**	**0.29**	**342**	⇓*iP*	**Pg**	**06 49 07.7**	**-0.1**
	baz=347						
STYT				*eS*	**Sg**	**06 49 11.7**	**+0.1**
	baz=347						
TTN	**Taitung**	**0.30**	**116**	⇓P	**Pb**	**06 49 09.6**	**-0.3**
	baz=116						
TTN				S	**Sb**	**06 49 14.6**	**-0.4**
	baz=116						
ECL	**Taimali**	**0.30**	**162**	⇓*iP*	**Pg**	**06 49 08.3**	**+0.3**
	baz=158						
ECL				*eS*	**Sg**	**06 49 12.3**	**+0.3**
	baz=158						
SGST	**Jiashian**	**0.32**	**308**	⇓*iP*	**Pg**	**06 49 07.7**	**-0.6**
	baz=314						
SGST				*i* S	**Sg**	**06 49 12.4**	**-0.1**
	baz=314						
ELDTW	**Lidau**	**0.34**	**26**	⇑*iP*	**Pg**	**06 49 08.6**	**-0.1**
	baz=40						
ELDTW				*eS*	**Sg**	**06 49 13.6**	**+0.5**
	baz=40						
MASBT	**Mashibuluo**	**0.34**	**217**	⇑*iP*	**Pg**	**06 49 08.5**	**-0.2**
	baz=217						
MASBT				*eS*	**Sg**	**06 49 12.8**	**-0.5**
	baz=217						
SGLT	**Jiouru**	**0.37**	**244**	⇑*iP*	**Pb**	**06 49 10.3**	**-0.8**
	baz=240						
SGLT				*eS*	**Sb**	**06 49 15.3**	**-1.8**
	baz=240						
TWM1	**Shoushan**	**0.40**	**261**	⇑*iP*	**Pb**	**06 49 11.2**	**-0.5**
	baz=250						
TWM1				*eS*	**Sb**	**06 49 18.5**	**+0.4**
	baz=250						
WTP	**Ta-pu**	**0.42**	**328**	⇓*iP*	**Pb**	**06 49 10.8**	**-1.1**
	baz=331						
WTP				S	**Sb**	**06 49 17.7**	**-1.0**
	baz=331						
CHN1	**Nanshi**	**0.42**	**315**	⇓*iP*	**Pb**	**06 49 11.2**	**-0.8**
	baz=316						
CHN1				*eS*	**Sb**	**06 49 18.0**	**-0.6**
	baz=316						
TPUB	**Ta-pu**	**0.46**	**333**	⇓*iP*	**Pb**	**06 49 11.8**	**-0.9**
	baz=336						
TPUB				*eS*	**Sb**	**06 49 19.2**	**-0.6**
	baz=336						
SNST	**Tainan City**	**0.47**	**315**	*eP*	**Pb**	**06 49 12.4**	**-0.3**
	baz=320						
SNST				*eS*	**Sb**	**06 49 20.1**	**+0.1**
	baz=320						
SSPT	**Xinbi**	**0.48**	**213**	⇑*iP*	**Pb**	**06 49 11.9**	**-1.1**
	baz=196						
SSPT				S	**Sb**	**06 49 18.9**	**-1.4**
	baz=196						
CHN3	**Shinhua**	**0.49**	**293**	*eP*	**Pn**	**06 49 14.2**	**-1.4**
	baz=292						
CHN3				*eS*	**Sb**	**06 49 23.8**	**+3.2**
	baz=292						
SNJT	**Kaohsiung City**	**0.50**	**255**	*eP*	**Pb**	**06 49 13.5**	**+0.2**
	baz=246						
SNJT				*eS*	**Sb**	**06 49 21.8**	**+1.0**
	baz=246						
EAST	**Anshuo**	**0.50**	**181**	⇓*iP*	**Pg**	**06 49 12.1**	**+0.3**
	baz=165						
EAST				S	**Sg**	**06 49 18.8**	**+0.5**
	baz=165						
TWK	**Hsinying**	**0.51**	**318**	*i* P	**Pb**	**06 49 13.0**	**-0.5**
	baz=324						
TWK				*eS*	**Sb**	**06 49 21.5**	**+0.4**
	baz=324						
FULB	**Fuli**	**0.51**	**52**	⇑*iP*	**Pb**	**06 49 12.6**	**-0.9**
	baz=56						
FULB				*eS*	**Sb**	**06 49 20.4**	**-0.7**
	baz=56						
CHKT	**Chengkung**	**0.52**	**66**	⇑*iP*	**Pb**	**06 49 13.2**	**-0.4**
	baz=61						
CHKT				*eS*	**Sb**	**06 49 21.5**	**+0.2**
	baz=61						
CHN4	**Tsaushan**	**0.52**	**332**	⇓P	**Pb**	**06 49 13.2**	**-0.5**
	baz=333						
TAW	**Tawu**	**0.53**	**176**	⇓P	**Pg**	**06 49 12.6**	**+0.3**
	baz=171						
TAW				*eS*	**Sg**	**06 49 19.4**	**+0.3**
	baz=171						
SCZT	**Fangliau**	**0.56**	**203**	⇑*iP*	**Pg**	**06 49 12.8**	**-0.1**
	baz=190						
SCZT				*eS*	**Sg**	**06 49 19.9**	**-0.2**
	baz=190						
KAU	**Kaohsiung**	**0.60**	**238**	*eP*	**Pb**	**06 49 15.3**	**+0.3**
	baz=226						
TAI1	**Yung-k'ang**	**0.60**	**285**	*eP*	**Pn**	**06 49 16.6**	**-0.5**
	baz=284						
TAI1				*eS*	**Sn**	**06 49 27.7**	**+0.5**
	baz=284						
TWH	**Lutao**	**0.60**	**107**	⇓P	**Pb**	**06 49 14.7**	**-0.3**
	baz=97						
TWH				*eS*	**Sb**	**06 49 24.0**	**+0.2**
	baz=97						
YUS	**Yu-Shan**	**0.60**	**8**	*i* P	**Pg**	**06 49 13.3**	**-0.5**
	baz=20						
TWF1	**Yuli**	**0.62**	**41**	⇑*iP*	**Pg**	**06 49 13.9**	**-0.1**
	baz=52						
TWF1				*eS*	**Sg**	**06 49 21.8**	**-0.2**
	baz=52						
YULB	**Yu-li**	**0.65**	**39**	⇑*iP*	**Pg**	**06 49 14.2**	**-0.3**
	baz=51						
YULB				*eS*	**Sg**	**06 49 22.7**	**-0.3**
	baz=51						
SCLT	**Jiali**	**0.67**	**295**	*eP*	**Pn**	**06 49 17.1**	**-1.1**
	baz=295						
SCLT				S	**Sn**	**06 49 29.2**	**+0.2**
	baz=295						
WLCH	**Liuqiu**	**0.69**	**220**	*eP*	**Pn**	**06 49 18.6**	**+0.2**
	baz=219						
TWP	**Hsiaoliuchiu**	**0.70**	**220**	*eP*	**Pn**	**06 49 18.9**	**+0.3**
	baz=219						
CHN5	**Tsauling**	**0.72**	**347**	*eP*	**Pb**	**06 49 16.6**	**-0.6**
	baz=358						
CHN5				*eS*	**Sn**	**06 49 28.4**	**-2.1**
	baz=358						
CHY	**Chiayi**	**0.72**	**327**	⇓*eP*	**Pn**	**06 49 17.4**	**-1.5**
	baz=329						
CHY				*eS*	**Sn**	**06 49 28.5**	**-1.8**
	baz=329						
CHN8	**Yiju**	**0.75**	**308**	*eP*	**Pb**	**06 49 17.6**	**+0.1**
	baz=309						
CHN8				*eS*	**Sn**	**06 49 31.0**	**+0.1**
	baz=309						
EHY	**Hungye**	**0.75**	**35**	⇑*iP*	**Pg**	**06 49 16.0**	**-0.5**
	baz=47						
EHY				*eS*	**Sg**	**06 49 26.6**	**+0.3**
	baz=47						
HGSD	**Ruisui**	**0.80**	**41**	⇑*iP*	**Pb**	**06 49 17.8**	**-0.6**
	baz=36						
HGSD				*eS*	**Sb**	**06 49 29.9**	**+0.5**
	baz=36						
WHYT	**Xinyi Township**	**0.81**	**360**	*eP*	**Pb**	**06 49 17.8**	**-0.8**
	baz=11						
WHYT				*eS*	**Sb**	**06 49 28.9**	**-0.8**
	baz=11						
WGK	**Gukeng**	**0.84**	**341**	*eP*	**Pn**	**06 49 19.9**	**-0.6**
	baz=345						
WGK				*eS*	**Sn**	**06 49 32.3**	**-0.9**
	baz=345						
WDLH	**Douliu**	**0.85**	**340**	*eP*	**Pn**	**06 49 20.1**	**-0.5**
	baz=343						
WDLH				*eS*	**Sn**	**06 49 33.8**	**+0.5**
	baz=343						
HEN	**Hengchun**	**0.89**	**187**	*eP*	**Pn**	**06 49 20.1**	**-0.9**
	baz=183						
HEN				*eS*	**Sb**	**06 49 31.8**	**-0.2**
	baz=183						
SSLB	**Suanglung**	**0.90**	**6**	*eP*	**Pg**	**06 49 18.9**	**-0.5**
	baz=14						
SSLB				*eS*	**Sn**	**06 49 33.6**	**-1.1**
	baz=14						
VWDT	**VWDT**	**0.90**	**17**	*eP*	**Pg**	**06 49 18.6**	**-0.8**
	baz=16						
VWDT				*eS*	**Sg**	**06 49 30.2**	**-0.9**
	baz=16						
WJS	**Zhushan**	**0.94**	**353**	*eP*	**Pn**	**06 49 21.1**	**-0.8**
	baz=341						
WJS				*eS*	**Sn**	**06 49 37.6**	**+2.1**
	baz=341						
EGFH	**Guangfu**	**0.94**	**34**	*eP*	**Pg**	**06 49 19.6**	**-0.5**
	baz=37						
EGFH				*eS*	**Sn**	**06 49 34.2**	**-1.4**
	baz=37						
TWK1	**Hengchun**	**0.94**	**183**	*eP*	**Pn**	**06 49 21.1**	**-0.7**
	baz=182						
TWKBT	**Hengchun**	**0.94**	**182**	*eP*	**Pb**	**06 49 21.0**	**+0.1**
	baz=171						
TWKBT				*eS*	**Sn**	**06 49 35.1**	**-0.6**
	baz=171						
WSF	**Szhu**	**0.95**	**322**	*eP*	**Pb**	**06 49 20.2**	**-0.7**
	baz=325						
WSF				*eS*	**Sn**	**06 49 35.9**	**+0.1**
	baz=325						
TSEB	**Hengchuen, Pin**	**0.98**	**178**	*eP*	**Pn**	**06 49 21.9**	**-0.6**
	baz=180						
SMLT	**Sun Moon Lake**	**0.99**	**2**	*eP*	**Pb**	**06 49 21.3**	**-0.4**
	baz=13						
SMLT				*eS*	**Sn**	**06 49 37.0**	**0.0**
	baz=13						
WNT	**Mingjian**	**1.00**	**351**	*eP*	**Pn**	**06 49 22.5**	**-0.2**
	baz=341						
WNT				*eS*	**Sn**	**06 49 37.3**	**+0.2**
	baz=341						
TYC	**Yuchr**	**1.01**	**0**	*eP*	**Pb**	**06 49 21.6**	**-0.4**
	baz=11						
TYC				*eS*	**Sn**	**06 49 38.0**	**+0.6**
	baz=11						
LAY	**Lan-yu**	**1.06**	**143**	*eP*	**Pb**	**06 49 22.6**	**-0.3**
	baz=143						
ESL	**Shilin**	**1.06**	**30**	*eP*	**Pg**	**06 49 21.4**	**-1.2**
	baz=40						
ESL				*eS*	**Sn**	**06 49 37.5**	**-1.3**
	baz=40						
RLNB	**Erlin**	**1.10**	**336**	*eP*	**Pn**	**06 49 24.0**	**0.0**
	baz=339						
RLNB				*eS*	**Sn**	**06 49 39.3**	**-0.2**
	baz=339						
OWD	**Renai**	**1.10**	**15**	*eP*	**Pg**	**06 49 22.0**	**-1.3**
	baz=11						
OWD				*eS*	**Sn**	**06 49 38.9**	**-1.0**
	baz=11						
DPDB	**Guoxing**	**1.14**	**3**	*eP*	**Pn**	**06 49 24.0**	**-0.7**
	baz=16						
DPDB				*eS*	**Sn**	**06 49 42.2**	**+1.4**
	baz=16						
WDGT	**Dungji**	**1.16**	**289**	*eP*	**Pb**	**06 49 23.8**	**-0.8**
	baz=288						
WDGT				*eS*	**Sn**	**06 49 39.9**	**-1.1**
	baz=288						
CHGB	**Renai**	**1.20**	**14**	*eP*	**Pg**	**06 49 23.9**	**-1.3**
	baz=20						
CHGB				*eS*	**Sn**	**06 49 41.9**	**-0.6**
	baz=20						
WCHH	**Zhanghua**	**1.22**	**347**	*eP*	**Pn**	**06 49 26.9**	**+1.3**
	baz=334						
TCU	**Taichung**	**1.27**	**353**	*eP*	**Pn**	**06 49 27.1**	**+0.8**
	baz=341						
HWA	**Hwalien**	**1.28**	**32**	*eP*	**Pg**	**06 49 27.3**	**+0.6**
	baz=44						
WHF	**Hehuan Shan**	**1.31**	**17**	*eP*	**Pg**	**06 49 26.6**	**-0.6**
	baz=23						
WHF				*eS*	**Sn**	**06 49 45.4**	**+0.1**
	baz=23						
PHUB	**P'eng-hu**	**1.33**	**298**	*eP*	**Pn**	**06 49 26.7**	**-0.5**
	baz=298						
PHUB				*eS*	**Sb**	**06 49 43.9**	**-1.0**
	baz=298						
VCHM	**Qimei**	**1.35**	**284**	*eP*	**Pn**	**06 49 26.5**	**-1.0**
	baz=297						
TWD	**Chiawan**	**1.37**	**30**	*eP*	**Pn**	**06 49 27.1**	**-0.6**
	baz=36						
TWD				*eS*	**Sn**	**06 49 46.9**	**+0.7**
	baz=36						
PNG	**Penghu**	**1.37**	**300**	*eP*	**Pn**	**06 49 27.1**	**-0.7**
	baz=299						
PNG				*eS*	**Sb**	**06 49 45.2**	**-0.8**
	baz=299						
WHP	**Taichung City**	**1.39**	**3**	*eP*	**Pg**	**06 49 29.4**	**+0.7**
	baz=20						
WHP				*eS*	**Sn**	**06 49 50.1**	**+3.3**
	baz=20						
TDCB	**Techi**	**1.39**	**12**	*eP*	**Pn**	**06 49 27.8**	**-0.4**
	baz=28						
TDCB				*eS*	**Sn**	**06 49 47.8**	**+0.9**
	baz=28						
TWT	**Tachien**	**1.39**	**12**	*eP*	**Pg**	**06 49 28.7**	**-0.1**
	baz=16						
ETLH	**Xiulin Townshi**	**1.43**	**24**	*eP*	**Pb**	**06 49 28.5**	**-0.8**
	baz=41						
NACB	**Ninganchiao**	**1.45**	**28**	*eP*	**Pn**	**06 49 27.4**	**-1.5**
	baz=35						
NACB				*eS*	**Sg**	**06 49 48.9**	**+0.2**
	baz=35						
TWQ1	**Liyutan**	**1.46**	**357**	*eP*	**Pg**	**06 49 30.9**	**+0.8**
	baz=360						
WDJ	**Dajia District**	**1.47**	**352**	*eP*	**Pg**	**06 49 31.1**	**+0.9**
	baz=341						
NSY	**Sanyi**	**1.52**	**357**	*eP*	**Pg**	**06 49 31.8**	**+0.5**
	baz=3.0						
NSY				*eS*	**Sg**	**06 49 54.3**	**+3.2**
	baz=3.0						
PTSB	**Yuanli**	**1.56**	**355**	*eP*	**Pg**	**06 49 32.2**	**+0.2**
	baz=334						
NNSB	**Datong**	**1.61**	**17**	*eP*	**Pn**	**06 49 31.2**	**0.0**
	baz=26						
NNSB				*eS*	**Sg**	**06 49 55.0**	**+1.1**
	baz=26						
NNSH	**Datong**	**1.61**	**17**	*eP*	**Pb**	**06 49 31.3**	**-1.0**
	baz=33						
NNS	**Nan Shan**	**1.62**	**17**	*eP*	**Pb**	**06 49 32.2**	**-0.3**
	baz=26						
NNS				*eS*	**Sg**	**06 49 56.5**	**+2.4**
	baz=26						
NMLH	**Miaoli**	**1.64**	**358**	*eP*	**Pg**	**06 49 33.6**	**0.0**
	baz=4.0						
ENA	**Nanau**	**1.73**	**28**	*eP*	**Pn**	**06 49 32.4**	**-0.4**
	baz=44						
NSTT	**Nanjuang**	**1.74**	**4**	*eP*	**Pg**	**06 49 35.1**	**-0.3**
	baz=11						
NDT	**Datong Townshi**	**1.81**	**19**	*eP*	**Pg**	**06 49 35.8**	**-1.0**
	baz=41						
NDT				*eS*	**Sg**	**06 50 01.4**	**+1.1**
	baz=41						
YHNB	**Yeheng**	**1.84**	**15**	*eP*	**Pb**	**06 49 35.7**	**-0.5**
	baz=24						
YHNB				*eS*	**Sg**	**06 50 01.5**	**+0.4**
	baz=24						
NSK	**Sanguang**	**1.84**	**14**	*eP*	**Pb**	**06 49 36.2**	**0.0**
	baz=21						
ENTT	**Nioudou**	**1.86**	**20**	*eP*	**Pb**	**06 49 35.3**	**-1.3**
	baz=39						
TWC	**Suao**	**1.94**	**28**	*eP*	**Pn**	**06 49 36.1**	**+0.5**
	baz=33						
TWE	**Neicheng**	**1.97**	**22**	*eP*	**Pb**	**06 49 38.3**	**-0.1**
	baz=40						
NWLT	**Wulai**	**1.97**	**17**	*eP*	**Pb**	**06 49 38.2**	**-0.2**
	baz=23						
EOS1	**EOS1**	**2.02**	**35**	*eP*	**Pn**	**06 49 37.2**	**+0.4**
	baz=53						
NTC	**Toucheng**	**2.15**	**24**	*eP*	**Pb**	**06 49 41.5**	**0.0**
	baz=43						
TATO	**Taipei**	**2.16**	**15**	*eP*	**Pg**	**06 49 42.3**	**-1.2**
	baz=22						
EGS		**2.18**	**27**	*eP*	**Pb**	**06 49 40.9**	**-1.1**
	baz=44						
TWA	**Mucha**	**2.19**	**18**	*eP*	**Pb**	**06 49 41.

IRIF	**Iriomote-Funau**	**3.00**	**61**	P		**Pn**	**06 49 50.5**	**+0.2**
IRIF				S		**Sn**	**06 50 24.0**	**-2.6**
ZPLA	**Ao Xicun**	**3.04**	**291**	*eP*		**Pn**	**06 49 50.2**	**-0.4**
	baz=286							
JKRS	**Kuro-shima**	**3.19**	**64**	P		**Pn**	**06 49 53.5**	**+0.7**
JKRS				*eS*		**Sn**	**06 50 31.6**	**+0.4**
AXDP	**Jialang**	**3.31**	**308**	*eP*		**Pn**	**06 49 54.3**	**-0.2**
	baz=303							
MATB	**Ma-tsu**	**3.35**	**346**	*eP*		**Pn**	**06 49 55.4**	**+0.3**
	baz=343							
JIJ	**Ishigaki jima**	**3.35**	**63**	P		**Pn**	**06 49 54.2**	**-0.9**
JIJ				S		**Sn**	**06 50 32.9**	**-2.3**
JISG	**Ishigakijimahi**	**3.59**	**61**	P		**Pn**	**06 49 57.5**	**-0.8**
JISG				S		**Sn**	**06 50 38.9**	**-2.1**
MHZQ	**Yeshan**	**3.60**	**333**	*eP*		**Pn**	**06 49 59.5**	**+1.0**
	baz=325							
TGY	**Tagaytay City**	**8.74**	**179**	LR		LR	06 55 03.3	
	comp=Z,156nm,18.0s,baz=14,slow=42							
KSRS	**Korea Array**	**15.74**	**21**	LR		LR	06 59 28.4	
	comp=Z,33nm,19.1s,baz=216,slow=40							
MJAR	**Matsushiro Arr**	**20.26**	**44**	P		Pn	06 53 39.0	-1.2
	1.1nm,0.3s,baz=219,slow=7.1,SNR=1.7							
MJAR				LR		LR	07 02 24.5	
	comp=Z,36nm,18.1s,baz=250,slow=40							
CMAR	**Chiang Mai Arr**	**20.96**	**262**	LR		LR	07 02 24.5	
	comp=Z,36nm,18.9s,baz=131,slow=38							
ASAJ	**Asahikawa**	**27.72**	**35**	P		**P**	**06 54 52.4**	**+1.2**
	8.6nm,0.5s,baz=9.5,slow=6.1,SNR=4.0							
MKAR	**Makanchi Array**	**39.07**	**317**	P		**P**	**06 56 30.6**	**+0.7**
	0.5nm,0.7s,baz=96,slow=8.8,SNR=3.6							
ZALV	**Zalesovo Beam**	**41.17**	**328**	P		**P**	**06 56 48.2**	**+1.0**
	1.0nm,0.6s,baz=129,slow=11,SNR=4.2							
H11N1	**WAKE ISLAND Hy**	**42.88**	**85**	T		T	07 42 25.3	
	baz=282							
H11N2	**WAKE ISLAND Hy**	**42.88**	**85**	T		T	07 42 25.3	
	baz=282							
H11N3	**WAKE ISLAND Hy**	**42.89**	**85**	T		T	07 42 25.9	
	baz=282							
H11S3	**WAKE ISLAND Hy**	**42.97**	**87**	T		T	07 42 31.2	
	baz=283							
H11S1	**WAKE ISLAND Hy**	**42.98**	**87**	T		T	07 42 30.7	
	baz=283							
H11S2	**WAKE ISLAND Hy**	**42.99**	**87**	T		T	07 42 30.7	
	baz=283							
WRA	**Warramunga Arr**	**44.56**	**162**	P		**P**	**06 57 13.5**	**-1.5**
	1.0nm,0.7s,baz=342,slow=9.0,SNR=7.7							
ASAR	**Alice Springs**	**47.98**	**164**	P		**P**	**06 57 40.8**	**-1.2**
	0.2nm,0.4s,baz=338,slow=6.7,SNR=6.2							
NRIK	**Noril'sk**	**50.57**	**345**	P		**P**	**06 58 03.5**	**+2.4**
	1.1nm,0.4s,baz=147,slow=10,SNR=3.5							
NOA	**NORSAR Array B**	**79.22**	**332**	LR		LR	07 39 38.3	
	comp=Z,15nm,19.2s,baz=190,slow=38							
YKA	**Yellowknife Ar**	**84.28**	**23**	P		**P**	**07 01 34.2**	**-0.3**
	0.1nm,0.6s,baz=316,slow=4.5,SNR=2.7							

*IDC **20** 06:57:20.1±2.7,57°.72N×23°.04E,h0km,mb1 3.2/4, mb1mx3.0/58,mbtmp3.1/4,ML2.3/4,Error ellipse: s-maj=27.6km s-min=10.7km az=155.0*
*NAO **20** 06:57:21.9±1.9,57°.89N×22°.80E,ML2.2*
*UPP **20** 06:57:21.3±2.0,57°.95N×22°.99E,h0km,ML2.5,Suspected explosion*
*HEL **20** 06:57:21.7,57°.70N×23°.00E,h0km,ML2.2,Explosion*
*LVSN **20** 06:57:23.9±5.2,57°.89N×22°.61E,h0km±25km,ML2.0*
*BER **20** 06:57:24.7±5.9,57°.72N×22°.95E,h19km±23km,ML1.7*

ISC 20 06:57:22.0±0.7,**57°.95N**±0°.03×**22°.55E**±0°.02,**h0**km,**n67,** σ1**s57**/100,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.35**	**204**	*eP*	**Pg**	**06 57 28.8**	**+0.1**
SLIT				IAML		06 57 58.5	
	comp=Z,2μm,0.5s						
SLIT	**Slitere, Latvi**	**0.35**	**204**	*eP*	**Pg**	**06 57 28.8**	**+0.1**
SLIT				*eS*	**Sg**	**06 57 34.3**	**+1.1**
SLIT				AML	AML	06 57 58.3	
	comp=Z,2μm,0.7s						
SLIT				AML	AML	06 57 58.4	
	comp=E,2μm,0.6s						
SLIT				AML	AML	06 58 01.0	
	comp=N,1μm,0.6s						
SLIT	**Slitere, Latvi**	**0.35**	**204**	*eP*	**Pg**	**06 57 28.9**	**+0.2**
SLIT				*eS*	**Sg**	**06 57 33.7**	**+0.5**
MTSE	**Matsula**	**1.02**	**40**	*eP*	**Pg**	**06 57 40.9**	**-0.6**
MTSE				*eS*	**Sg**	**06 57 53.5**	**-1.1**
MTSE	**Matsula**	**1.02**	**40**	*eP*	**Pg**	**06 57 41.0**	**-0.4**
MTSE				*eS*	**Sb**	**06 57 56.5**	**+0.2**
PBUR	**Paburge**	**1.96**	**190**	*eS*	**Sn**	**06 58 21.3**	**-0.4**
VSU	**Vasula**	**2.27**	**75**	Pn	**Pn**	**06 58 00.5**	**-0.2**
VSU				Lg	Lg	06 58 30.2	
VSU	**Vasula**	**2.27**	**75**	*eP*	**Pn**	**06 58 00.5**	**-0.2**
VSU				IAML		06 58 01.7	
	comp=Z,172nm,0.1s						
VSU	**Vasula**	**2.27**	**75**	*eP*	**Pn**	**06 58 00.9**	**+0.2**
VSU				AML	AML	06 58 03.1	
	comp=Z,71nm,0.7s						
VSU				*eS*	**Sn**	**06 58 30.2**	**+0.8**
VSU				AML	AML	06 58 33.7	
	comp=N,130nm,0.4s						
VSU				AML	AML	06 58 34.6	
	comp=E,118nm,0.4s						
VSU	**Vasula**	**2.27**	**75**	Pn	**Pn**	**06 58 00.5**	**-0.2**
VSU				Sg	**Sn**	**06 58 30.2**	**+0.8**
MEF	**Metsahovi**	**2.47**	**22**	*eP*	**Pb**	**06 58 06.2**	**-0.9**
MEF				*eS*	**Sb**	**06 58 38.8**	**+0.8**
MEF				AML	AML	06 58 41.1	
	comp=N,12nm,0.2s						
MEF				AML	AML	06 58 41.9	
	comp=Z,13nm,0.6s						
MEF				AML	AML	06 58 42.0	
	comp=E,18nm,0.4s						
MEF	**Metsahovi**	**2.47**	**22**	*eP*	**Pn**	**06 58 05.6**	**+2.2**
MEF				*eS*	**Sb**	**06 58 37.9**	**-0.1**
MEF				MSG		06 58 42.4	
	comp=Z,14nm,0.1s						
PABE	**Paberze**	**2.57**	**162**	*eP*	**Pn**	**06 58 04.2**	**-0.7**
PABE				IAML		06 58 38.5	
	comp=Z,16nm,0.1s						
PABE	**Paberze**	**2.57**	**162**	*eP*	**Pn**	**06 58 04.4**	**-0.4**
PABE				*eS*	**Sn**	**06 58 36.4**	**-0.4**
AAL	**Aland**	**2.60**	**331**	P	**Pn**	**06 58 06.3**	**+1.2**
AAL				S	**Sb**	**06 58 42.0**	**+0.3**
AAL	**Aland**	**2.60**	**331**	*eP*	**Pb**	**06 58 08.7**	**-0.6**
NYNU	**Nynaeshamn**	**2.61**	**296**	P	**Pn**	**06 58 07.1**	**+1.7**
NYNU				S	**Sb**	**06 58 43.7**	**+1.5**
NYNU	**Nynaeshamn**	**2.61**	**296**	*eP*	**Pn**	**06 58 07.1**	**+1.7**
NRTU	**Norrtaelje**	**2.68**	**312**	P	**Pn**	**06 58 07.9**	**+1.7**
NRTU	**Norrtaelje**	**2.68**	**312**	*eP*	**Pn**	**06 58 07.9**	**+1.7**
BYXU	**Byxelkrok**	**3.05**	**260**	P	**Pn**	**06 58 14.0**	**+2.6**
BYXU	**Byxelkrok**	**3.05**	**260**	*eP*	**Pn**	**06 58 14.0**	**+2.6**
PVF	**Pernaja**	**3.11**	**32**	*eP*	**Pn**	**06 58 13.7**	**+1.4**
PVF				*eS*	**Sn**	**06 58 52.0**	**+2.0**
PVF				MSG		06 59 09.6	
	comp=Z,5.5nm,0.2s						
RAF	**Rauma**	**3.11**	**353**	*eP*	**Pn**	**06 58 14.5**	**+2.3**
RAF				AML	AML	06 58 22.7	
	comp=N,6.2nm,0.9s						
RAF				AML	AML	06 59 06.3	
	comp=E,9.8nm,0.7s						
RAF				AML	AML	06 59 10.7	
	comp=Z,6.6nm,0.3s						
VIKU	**Vikbolandet**	**3.14**	**283**	P	**Pn**	**06 58 14.5**	**+1.8**
VIKU				S	**Sb**	**06 58 55.8**	**-1.7**
VIKU	**Vikbolandet**	**3.14**	**283**	*eP*	**Pn**	**06 58 14.5**	**+1.8**
GRAU	**Graesoe**	**3.16**	**321**	P	**Pn**	**06 58 14.2**	**+1.3**
GRAU	**Graesoe**	**3.16**	**321**	*eP*	**Pn**	**06 58 14.2**	**+1.3**
VSTU	**Vaestervik**	**3.23**	**267**	P	**Pn**	**06 58 16.5**	**+2.6**
VSTU	**Vaestervik**	**3.23**	**267**	*eP*	**Pn**	**06 58 16.5**	**+2.6**
ASPU	**Aespoe**	**3.24**	**263**	P	**Pn**	**06 58 16.9**	**+2.9**
ASPU	**Aespoe**	**3.24**	**263**	*eP*	**Pn**	**06 58 16.9**	**+2.9**
FLYU	**Flymyra**	**3.25**	**314**	P	**Pn**	**06 58 15.5**	**+1.3**
FLYU	**Flymyra**	**3.25**	**314**	*eP*	**Pn**	**06 58 15.5**	**+1.3**
IIGN	**Ignalina**	**3.30**	**141**	*eP*	**Sn**	**06 58 58.2**	**+3.4**
FIBU	**Brunna**	**3.33**	**308**	P	**Pn**	**06 58 17.3**	**+2.0**
BACU	**Backbrunna**	**3.41**	**306**	P	**Pn**	**06 58 18.2**	**+1.9**
BACU	**Backbrunna**	**3.41**	**306**	*eP*	**Pn**	**06 58 18.2**	**+1.9**
OSTU	**Oestervaala**	**3.61**	**312**	P	**Pn**	**06 58 20.9**	**+1.8**
OSTU	**Oestervaala**	**3.61**	**312**	*eP*	**Pn**	**06 58 20.9**	**+1.8**
VJF	**Virojoki**	**3.65**	**43**	MSG		06 59 21.0	
	comp=Z,4.8nm,0.2s						
LNKU	**Linkoeping**	**3.75**	**277**	P	**Pn**	**06 58 22.9**	**+1.9**
LNKU	**Linkoeping**	**3.75**	**277**	*eP*	**Pn**	**06 58 22.9**	**+1.9**
FIA0	**FINESS Array S**	**3.93**	**26**	Pn	**Pn**	**06 58 24.3**	**+0.7**
	baz=187,slow=14						
FIA0				Sn	**Sn**	**06 59 10.8**	**+0.5**
	baz=200,slow=28						
FIA0				Lg	Lg	06 59 25.0	
	baz=191,slow=28						
FIA0	**FINESS Array S**	**3.93**	**26**	Pn	**Pn**	**06 58 24.3**	**+0.7**
	baz=187,slow=14						
FIA0				Sn	**Sn**	**06 59 10.8**	**+0.5**
	baz=200,slow=28						
FIA0				Sg	**Sg**	**06 59 25.0**	**-3.3**
	baz=191,slow=28						
FINES	**FINESS Array B**	**3.93**	**26**	Pn	**Pn**	**06 58 24.2**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=196,slow=11,SNR=8.8						
FINES				Pg	**Pb**	**06 58 34.3**	**+2.1**
	comp=Z,0.8nm,0.3s,baz=197,slow=15,SNR=17						
FINES				Sn	**Sn**	**06 59 11.1**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=203,slow=22,SNR=2.6						
FINES				Lg	Lg	06 59 27.5	
	comp=Z,2.0nm,0.3s,baz=202,slow=25,SNR=9.8						
FIA1	**FINESS Array S**	**3.94**	**26**	*eP*	**Pn**	**06 58 24.5**	**+0.9**
FIA1				*eS*	**Sn**	**06 59 11.4**	**+1.0**
FIA1				MSG		06 59 29.7	
	comp=Z,3.7nm,0.2s						
DEL	**Delary**	**4.95**	**256**	*i* P	**Pn**	**06 58 37.0**	**-0.5**
DEL				*i* S	**Sn**	**06 59 34.7**	**-0.6**
HFS	**Hagfors**	**5.07**	**299**	Pn	**Pn**	**06 58 41.0**	**+1.8**
	baz=125,slow=12						
HFS				Sn	**Sn**	**06 59 39.9**	**+1.6**
	baz=124,slow=28						
HFS				Lg	Lg	07 00 04.0	
	baz=110,slow=37						
HFS	**Hagfors**	**5.07**	**299**	Pn	**Pn**	**06 58 40.8**	**+1.7**
	comp=Z,0.7nm,0.3s,baz=118,slow=15,SNR=25						
HFS				Sn	**Sn**	**06 59 41.5**	**+3.2**
	comp=Z,0.7nm,0.3s,baz=111,slow=29,SNR=6.7						
HFS				Lg	Lg	07 00 04.1	
	comp=Z,1.0nm,0.3s,baz=123,slow=30,SNR=6.9						
HFS	**Hagfors**	**5.07**	**299**	Pn	**Pn**	**06 58 41.0**	**+1.8**
	baz=125,slow=12						
HFS				Sn	**Sn**	**06 59 39.9**	**+1.6**
	baz=124,slow=28						
HFS				Sg	**Sg**	**07 00 04.0**	**-0.7**
	baz=110,slow=37						
BSD	**Bornholm Skovb**	**5.09**	**239**	*eP*	**Pn**	**06 58 38.5**	**-0.9**
BSD				*eS*	**Sn**	**06 59 36.7**	**-2.2**
BSD				AML	AML	07 00 12.4	
	comp=E,0.2nm,0.6s						
BSD				AML	AML	07 00 16.1	
	comp=Z,0.3nm,0.6s						
BSD				AML	AML	07 00 17.7	
	comp=N,0.2nm,0.5s						
BSD	**Bornholm Skovb**	**5.09**	**239**	*i* P	**Pn**	**06 58 38.4**	**-1.0**
BSD				*i* S	**Sn**	**06 59 37.1**	**-1.8**
BSD	**Bornholm Skovb**	**5.09**	**239**	*i* P	**Pn**	**06 58 38.5**	**-0.9**
BSD				*i* S	**Sn**	**06 59 37.1**	**-1.8**
BSD				IAML		06 59 53.5	
	comp=Z,1.3nm,0.3s						
ONAU	**Onsala**	**5.73**	**269**	*i* P	**Pn**	**06 58 50.4**	**+2.1**
STRU	**Stroemstad**	**6.06**	**285**	*i* P	**Pn**	**06 58 53.6**	**+0.9**
STRU				*i* S	**Sn**	**07 00 03.9**	**+1.2**
NC602	**NORSAR Array S**	**6.29**	**301**	*eP*	**Pn**	**06 58 56.6**	**+0.8**
NC602				*eS*	**Sn**	**07 00 06.1**	**-2.2**
NC602				IAML		07 00 51.8	
	comp=Z,1.7nm,0.3s						
NRA0	**NORESS Array S**	**6.29**	**301**	Pn	**Pn**	**06 58 56.3**	**+0.5**
	baz=99,slow=12						
NRA0				Sn	**Sn**	**07 00 09.3**	**+1.1**
	baz=92,slow=28						
NRA0				Lg	Lg	07 00 42.2	
	baz=100,slow=37						
NRA0	**NORESS Array S**	**6.29**	**301**	Pn	**Pn**	**06 58 56.3**	**+0.5**
	baz=99,slow=12						
NRA0				Sn	**Sn**	**07 00 09.3**	**+1.1**
	baz=92,slow=28						
NRA0				Sg	**Sg**	**07 00 42.2**	**-1.4**
	baz=100,slow=37						
NB2	**NORSAR Subarra**	**6.55**	**303**	Pn	**Pn**	**06 58 59.0**	**-0.5**
	baz=119,slow=14						
NB2	**NORSAR Subarra**	**6.55**	**303**	Pn	**Pn**	**06 58 59.0**	**-0.5**
	baz=119,slow=14						
NOA	**NORSAR Array B**	**6.55**	**303**	Pn	**Pn**	**06 59 00.6**	**+1.1**
	comp=Z,0.0nm,0.3s,baz=117,slow=13,SNR=7.3						
NOA				Sn	**Sn**	**07 00 16.3**	**+1.5**
	comp=Z,0.0nm,0.3s,baz=319,slow=16,SNR=1.6						
NOA				Lg	Lg	07 00 48.7	
	comp=Z,0.1nm,0.3s,baz=50,slow=12,SNR=5.1						
NOD	**Norderasen**	**6.68**	**329**	*eP*	**Pn**	**06 59 01.3**	**+0.1**
NOD				*eS*	**Sn**	**07 00 15.7**	**-2.2**
SKAR	**Skarslia**	**7.78**	**297**	*eP*	**Pn**	**06 59 15.8**	**-0.6**
SKAR				IAML		07 00 46.2	
	comp=Z,1.4nm,0.3s						
ARA0	**ARCESS Array S**	**11.70**	**5**	Pn	**Pn**	**07 00 07.5**	**-2.5**
	baz=187,slow=14						
ARA0	**ARCESS Array B**	**11.70**	**5**	Pn	**Pn**	**07 00 07.5**	**-2.5**
	baz=187,slow=14						
ARCES	**ARCESS Array B**	**11.70**	**5**	Pn	**Pn**	**07 00 07.5**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=184,slow=13,SNR=1.7						

*IDC **20** 07:04:01.6±0.8, 11°.82N×142°.44E,h0km,mb3.9/12, mb1 4.1/12,mb1mx3.9/40,mbtmp3.9/12,MS3.2/4, Ms1 3.2/4,ms1mx2.7/49,Error ellipse: s-maj=29.3km s-min=21.9km az=89.0*
*NEIC **20** 07:04:09.4±0.8, 11°.76N×0°.10×142°.3E±0°.2, h59km±10km, mb4.4/8,Error ellipse: s-maj=21.9km s-min=13.6km az=104.0*

ISC 20 07:04:08.0±0.7,**11°.8N**±0°.1×**142°.3E**±0°.1,**h42**km,**n27,** σ0**s93**/23,**mb4.0**/16,**MS3.2**/4,**South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.14**	**54**		**Pn**	**07 04 56.2**	**+1.2**
JNU	**Nakatsue**	**23.69**	**336**	P	**P**	**07 09 15.9**	**-0.1**
JNU				IAmb	IAmb	07 09 19.4	
	comp=Z,13nm,1.0s						
MJAR	**Matsushiro Arr**	**24.95**	**352**	LR	LR	07 18 07.8	
	comp=Z,26nm,20.9s,baz=225,slow=34						
MJB9	**Matsu-Tunnel**	**24.95**	**352**	P	**P**	**07 09 27.1**	**-0.4**
MJB9				IAmb	IAmb	07 09 34.8	
	comp=Z,4.7nm,0.4s						
BATI	**Baumata**	**28.59**	**221**	LR	LR	07 20 02.9	
	comp=Z,74nm,20.2s,baz=290,slow=33						
WRA	**Warramunga Arr**	**32.45**	**194**	P	**P**	**07 10 34.5**	**0.0**
	comp=Z,0.5nm,0.7s,baz=17,slow=9.4,SNR=4.6						
AS31	**Alice Springs**	**36.14**	**193**	P	**P**	**07 11 06.8**	**+0.4**
ASAR	**Alice Springs**	**36.14**	**193**	P	**P**	**07 11 06.3**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=24,slow=12,SNR=1.4						
XAN	**Xi'an**	**37.61**	**312**	P	**P**	**07 11 18.8**	**-0.1**
KULM	**Kulim**	**41.60**	**265**	P	**P**	**07 11 52.5**	**+0.2**
KULM				IAmb	IAmb	07 11 56.8	
	comp=Z,9.9nm,1.0s						
CMAR	**Chiang Mai Arr**	**42.26**	**284**	P	**P**	**07 12 00.1**	**+2.4**
	comp=Z,1.1nm,0.3s,baz=87,slow=7.0,SNR=6.0						
BBOO	**Buckleboo**	**44.71**	**187**	P	**P**	**07 12 17.0**	**-0.1**
SONM	**Songino Array**	**46.82**	**327**	P	**P**	**07 12 33.9**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=144,slow=5.7,SNR=4.6						
LSA	**Lhasa**	**50.59**	**299**	P	**P**	**07 13 03.5**	**0.0**
LSA				IAmb	IAmb	07 13 07.1	
	comp=Z,3.1nm,0.7s						
MKAR	**Makanchi Array**	**61.06**	**317**	P	**P**	**07 14 18.0**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=86,slow=9.9,SNR=4.8						
ZALV	**Zalesovo Beam**	**61.65**	**326**	P	**P**	**07 14 20.7**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=89,slow=7.3,SNR=1.6						
KURK	**Kurchatov**	**64.36**	**321**	P	**P**	**07 14 38.8**	**-0.7**
BVAR	**Borovoye Array**	**69.79**	**322**	P	**P**	**07 15 13.6**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=108,slow=8.7,SNR=5.9						
ILAR	**Eielson Array**	**71.31**	**25**	P	**P**	**07 15 21.9**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=247,slow=6.1,SNR=10						
YKA	**Yellowknife Ar**	**85.65**	**27**	P	**P**	**07 16 42.2**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=287,slow=4.7,SNR=4.7						
ARCES	**ARCESS Array B**	**88.02**	**342**	P	**P**	**07 16 53.3**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=64,slow=5.6,SNR=4.9						
NEW	**Newport**	**88.28**	**41**	LR	LR	07 47 04.6	
	comp=Z,44nm,21.1s,baz=348,slow=29						
NVAR	**Mina Array Bea**	**90.05**	**51**	P	**P**	**07 17 05.0**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=280,slow=5.2,SNR=2.1						
FINES	**FINESS Array B**	**91.72**	**334**	P	**P**	**07 17 09.0**	**-1.9**
	comp=Z,0.9nm,0.4s,baz=98,slow=3.9,SNR=5.7						
NOA	**NORSAR Array B**	**97.82**	**338**	LR	LR	08 04 30.4	
	comp=Z,5.6nm,19.4s,baz=15,slow=37						
TORD	**Torodi Ar. Bea**	**133.71**	**301**	PKP	**PKiKP**	**07 23 21.8**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=107,slow=1.5,SNR=2.3						
LPAZ	**La Paz**	**150.20**	**102**	PKPbc	**PKPbc**	**07 23 54.8**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=0.0,slow=3.0,SNR=2.1						

*TUL **20** 07:30:18.8±0.7,35°.49N×0°.03×97°.25W±0°.05,h7km±1km, ML3.6,Mwr3.4/7(SLM),Error ellipse: s-maj=5.9km s-min=4.1km az=67.0,Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr=0.71; Mθθ 1.16; Mθφ=0.44; Mrθ 0.67; Mθθ-0.50; Mrφ 0.56;*
*NEIC **20** 07:30:19.6±0.9,35°.53N×0°.03×97°.21W±0°.03,h8km±6km Error ellipse: s-maj=5.1km s-min=1.6km az=136.0*
*IDC **20** 07:30:20.5±1.0,35°.83N×97°.42W,h0km,mb3.4/2, mb1 3.7/6,mb1mx3.4/54,mbtmp3.3/6,ML3.6/4,MS2.9/2, Ms1 2.9/2,ms1mx2.3/33,Error ellipse: s-maj=14.6km s-min=12.1km az=158.0*
*ANF **20** 07:30:20.4±0.8,35°.54N×97°.24W,h23km±8km,ML4.4/16, ML4.5/16,Error ellipse: s-maj=2.2km s-min=2.0km az=149.0*

ISC 20 07:30:19.6±0.9,**35°.52N**±0°.04×**97°.21W**±0°.04,**h9**km±7km, **n73,**σ1**s08**/85,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK001	**Jones High Sch**	**0.07**	**303**	Pg	**Pg**	**07 30 21.0**	**-0.7**
OK009	**Oakdale Elemen**	**0.18**	**290**		**Pg**	**07 30 22.7**	**-0.7**
ADOK	**Arcadia Dam**	**0.18**	**316**		**Pg**	**07 30 23.1**	**-0.3**
ADOK				Sg	**Sg**	**07 30 26.2**	**+0.2**
OKCFA	**Oklahoma City**	**0.22**	**242**	Pg	**Pg**	**07 30 22.8**	**-1.3**
OKCFA				Sg	**Sg**	**07 30 26.0**	**-1.1**
TUL1	**Leonard**	**1.22**	**71**	P	**Pn**	**07 30 41.4**	**-1.4**
	baz=252,SNR=72						
TUL1				S	**Sb**	**07 30 58.6**	**0.0**
	baz=252						
TUL1	**Leonard**	**1.22**	**71**		**Pn**	**07 30 41.2**	**-1.6**
WMOK	**Wichita Mounta**	**1.50**	**239**	P	**Pn**	**07 30 45.3**	**-1.4**
	baz=58,SNR=141						
WMOK				S	**Sn**	**07 31 05.0**	**-1.4**
	baz=58						
WMOK	**Wichita Mounta**	**1.50**	**239**		**Pn**	**07 30 45.3**	**-1.4**
T35A	**Sooner Cattle**	**1.50**	**22**		**Pn**	**07 30 46.3**	**-0.5**
U32A	**Winter Ranch,**	**1.69**	**301**		**Pn**	**07 30 49.0**	**-0.2**
X37A	**Clayton**	**1.77**	**121**		**Pn**	**07 30 50.7**	**+0.3**
U38A	**Gravette**	**2.47**	**67**		**Pn**	**07 31 00.3**	**+0.3**
HHAR	**Hobbs**	**2.76**	**73**		**Pn**	**07 31 03.1**	**-0.9**
W39A	**Magazine**	**2.82**	**96**	P	**Pn**	**07 31 04.9**	**+0.1**
	baz=278,SNR=16						
W39A				S	**Sn**	**07 31 39.7**	**+0.8**
	baz=278						
Z38A	**Mt. Pleasant**	**2.91**	**140**		**Pn**	**07 31 05.6**	**-0.4**
R32A	**Long Quarter,**	**3.13**	**338**		**Pn**	**07 31 09.4**	**+0.3**
MIAR	**Mount Ida**	**3.14**	**107**	P	**Pn**	**07 31 09.8**	**+0.6**
	baz=289,SNR=38						
MIAR				S	**Sn**	**07 31 47.5**	**+0.7**
	baz=289						
MIAR	**Mount Ida**	**3.14**	**107**		**Pn**	**07 31 09.8**	**+0.6**
ABTX	**Abilene, Hawle**	**3.52**	**216**	P	**Pn**	**07 31 14.3**	**-0.2**
	baz=34,SNR=16						
ABTX				S	**Sn**	**07 31 56.3**	**0.0**
	baz=34						
ABTX	**Abilene, Hawle**	**3.52**	**216**	Pn	**Pn**	**07 31 15.0**	**+0.5**
WHTX	**Lake Whitney,**	**3.53**	**183**	P	**Pn**	**07 31 14.1**	**-0.4**
	baz=3.1,SNR=22						
WHTX				S	**Sn**	**07 31 55.8**	**-0.5**
	baz=3.1						
WHTX	**Lake Whitney,**	**3.53**	**183**		**Pn**	**07 31 14.6**	**+0.1**
KSU1	**Kansas State U**	**3.61**	**7**	P	**Pn**	**07 31 15.2**	**-0.4**
	baz=188,SNR=13						
KSU1	**Kansas State U**	**3.61**	**7**		**Pn**	**07 31 15.7**	**+0.1**
U40A	**Yellville**	**3.63**	**75**	P	**Pn**	**07 31 16.2**	**+0.1**
	baz=258,SNR=12						
U40A	**Yellville**	**3.63**	**75**		**Pn**	**07 31 16.1**	**+0.1**
237A	**Washetta, Mont**	**3.70**	**161**		**Pn**	**07 31 16.2**	**-0.7**
AMTX	**Amarillo**	**3.71**	**261**	P	**Pn**	**07 31 16.4**	**-0.8**
	baz=79						
AMTX	**Amarillo**	**3.71**	**261**		**Pn**	**07 31 17.5**	**+0.3**
X40A	**Basin Creek Fa**	**3.74**	**105**	P	**Pn**	**07 31 17.2**	**-0.2**
	baz=287,SNR=9.9						
WLAR	**White Oak Lake**	**3.84**	**117**		**Pn**	**07 31 19.1**	**+0.2**
CBKS	**Cedar Bluff**	**3.86**	**329**	P	**Pn**	**07 31 18.5**	**-0.6**
	baz=148,SNR=9.3						
CBKS				S	**Sn**	**07 32 04.4**	**-0.1**
	baz=148						
CBKS	**Cedar Bluff**	**3.86**	**329**		**Pn**	**07 31 19.2**	**+0.1**
WHAR	**Wooly Hollow**	**4.03**	**92**		**Pn**	**07 31 21.5**	**+0.1**
W41B	**Gary Mavity, V

SPITS	**Spitsbergen Ar**	**60.09**	**13**	LR	LR	08 05 39.9			
	comp=Z,17nm,19.4s,baz=40,slow=35								

NEIC ***20*** *07:39:34.0±1.2,20.21S±0.05×177.6W±0.1, h507km±5km, mb4.5/98, Error ellipse: s-maj=14.7km s-min=6.5km az=75.0*

IDC ***20*** *07:39:37.1±2.1,20.26S×177.72W, h538km±24km, mb3.8/16,mb1 4.1/17, mb1mx4.0/21, mbtmp4.7/17, Error ellipse: s-maj=14.9km s-min=10.4km az=143.0*

ISC 20 07:39:33.6±0.3, 20.34S±0.05×177.64W±0.06, h500km, n211, σ1§48/212, mb4.5/72, 9C-23D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.83**	**302**	P	**P**	**07 41 00.9**	**+1.7**
NIUE	**Niue**	**7.37**	**81**	P	**P**	**07 41 23.0**	**-0.6**
NIUE				S	**S**	07 42 57.2	+3.5
AFI	**Afiamalu**	**8.50**	**42**	P	P	07 41 31.5	-3.9
GLKZ	**Green Lake**	**8.88**	**182**	P	**P**	**07 41 36.8**	**-2.2**
GLKZ				S	**S**	**07 43 20.5**	**-1.7**
FUNA	**Funafuti**	**12.14**	**345**	P	**P**	**07 42 13.2**	**-0.6**
DZM	**Mont Dzumac** 33nm,0.5s	**14.94**	**261**	*e*P	**P**	**07 42 46.2**	**+2.8**
DZM				*e*LR	LR	07 45 21.9	
DZM	**Mont Dzumac** 3.8nm,0.3s,baz=84,slow=16,SNR=30	**14.94**	**261**	P	**P**	**07 42 46.0**	**+2.6**
OUZ	**Omahuta**	**16.71**	**206**	P	**P**	**07 43 03.9**	**+2.4**
OUZ	**Omahuta**	**16.71**	**206**	P	**P**	**07 43 03.8**	**+2.3**
WCZ	**Waipu Caves**	**17.06**	**203**	P	**P**	**07 43 09.1**	**+4.2**
KUZ	**Kuaotunu**	**17.34**	**198**	P	**P**	**07 43 09.5**	**+1.8**
WIAZ	**Waiheke Island**	**17.56**	**200**	P	**P**	**07 43 12.7**	**+2.9**
WMGZ	**Waiomatatini S**	**17.75**	**190**	P	**P**	**07 43 13.4**	**+1.9**
WMGZ				S	**S**	**07 46 07.6**	**-1.8**
HAZ	**Te Kaha**	**17.80**	**192**	P	**P**	**07 43 12.6**	**+0.6**
HAZ				S	**S**	**07 46 06.8**	**-3.5**
PKGZ	**Pakihiroa**	**17.87**	**191**	P	**P**	**07 43 15.0**	**+2.3**
PKGZ				S	**S**	**07 46 11.8**	**+0.3**
AWAZ	**Awhitu Peninsu**	**17.97**	**200**	P	**P**	**07 43 15.4**	**+1.9**
PUZ	**Puketiti**	**18.02**	**191**	P	**P**	**07 43 15.8**	**+1.8**
PUZ				S	**S**	**07 46 12.6**	**-1.3**
RUGZ	**Raukumara Rang**	**18.02**	**192**	P	**P**	**07 43 15.0**	**+0.9**
TWGZ	**Tauwhareparae**	**18.17**	**191**	P	**P**	**07 43 17.3**	**+1.9**
TWGZ				S	**S**	**07 46 16.8**	**+0.4**
MWZ	**Matawai**	**18.41**	**192**	P	**P**	**07 43 17.0**	**-0.6**
MWZ				S	**S**	**07 46 17.3**	**-2.9**
URZ	**Urewera** 2.1nm,0.3s,baz=340,slow=9.8,SNR=20	**18.42**	**193**	P	**P**	**07 43 16.6**	**-1.0**
URZ	**Urewera**	**18.42**	**193**	P	**P**	**07 43 16.9**	**-0.8**
URZ				S	**S**	**07 46 16.3**	**-4.0**
URZ	**Urewera**	**18.42**	**193**	P	**P**	**07 43 16.6**	**-1.0**
URZ				IAmb	IAmb	07 43 21.2	
	comp=Z,16nm,0.9s						
CNGZ	**Carnagh Statio**	**18.43**	**190**	P	**P**	**07 43 19.2**	**+1.5**
HRRZ	**Handcock Road**	**18.74**	**195**	P	**P**	**07 43 21.0**	**+0.5**
QRZ	**Quartz Range**	**22.07**	**200**	P	**P**	**07 43 51.4**	**+0.6**
LHI	**Lord Howe Isla**	**23.67**	**237**	P	**P**	**07 44 06.5**	**+1.2**
RPZ	**Rata Peaks** comp=Z,3.7nm,0.4s,baz=344,slow=6.0,SNR=1.8	**25.15**	**200**	P	**P**	**07 44 19.3**	**+1.1**
RPZ	**Rata Peaks**	**25.15**	**200**	P	**P**	**07 44 19.3**	**+1.1**
RPZ				IAmb	IAmb	07 44 36.3	
	comp=Z,6.6nm,0.9s						
EIDS	**Eidsvold**	**29.21**	**254**	P	**P**	**07 44 54.6**	**+0.4**
EIDS				IAmb	IAmb	07 44 55.3	
	comp=Z,12nm,0.7s						
ARMA	**Armidale**	**29.44**	**244**	P	**P**	**07 44 57.4**	**+1.1**
CAN	**Canberra**	**32.88**	**236**	P	**P**	**07 45 26.4**	**+0.7**
CAN				IAmb	IAmb	07 45 27.4	
	comp=Z,24nm,1.0s						
CTAO	**Charters Tower**	**33.84**	**264**	P	**P**	**07 45 34.2**	**+0.2**
CTAO				IAmb	IAmb	07 45 35.2	
	comp=Z,28nm,1.1s						
TOO	**Toolangi**	**36.26**	**234**	P	**P**	**07 45 54.3**	**+0.3**
TOO				IAmb	IAmb	07 45 55.4	
	comp=Z,17nm,0.7s						
STKA	**Stephens Creek** comp=Z,19nm,0.5s,baz=92,slow=10,SNR=67	**38.16**	**244**	P	**P**	**07 46 10.2**	**+0.5**
STKA	**Stephens Creek**	**38.16**	**244**	P	**P**	**07 46 10.3**	**+0.6**
STKA				IAmb	IAmb	07 46 11.1	
	comp=Z,8.5nm,1.1s						
BBOO	**Buckleboo**	**42.92**	**243**	P	**P**	**07 46 47.8**	**+0.1**
JAY	**Jayapura** comp=Z,18nm,0.9s	**44.32**	**288**	P	**P**	**07 46 58.6**	**-0.3**
WR0	**Warramunga Arr**	**44.77**	**262**	P	**P**	**07 47 01.8**	**-0.5**
WR0				IAmb	IAmb	07 47 03.9	
	comp=Z,22nm,1.1s						
AS31	**Alice Springs**	**44.88**	**257**	P	**P**	**07 47 03.2**	**+0.1**
AS31				IAmb	IAmb	07 47 03.9	
	comp=Z,14nm,0.7s						
ASAR	**Alice Springs** comp=Z,66nm,0.8s,baz=99,slow=7.7,SNR=626	**44.88**	**257**	P	**P**	**07 47 03.2**	**+0.1**
ASAR				PcP	**PcP**	**07 48 33.9**	**-0.5**
	comp=Z,4.3nm,0.8s,baz=104,slow=3.9,SNR=6.8						
ASAR				S	**S**	**07 53 02.6**	**-1.6**
	comp=Z,1.7nm,0.8s,baz=93,slow=16,SNR=8.0						
WB2	**Warramunga Arr**	**44.95**	**262**	P	**P**	**07 47 03.2**	**-0.4**
WRAB	**Tennant Creek**	**44.95**	**262**	P	**P**	**07 47 03.2**	**-0.4**
WRA	**Warramunga Arr** comp=Z,9.4nm,0.4s,baz=98,slow=7.7,SNR=253	**44.96**	**262**	P	**P**	**07 47 03.4**	**-0.3**
WRA				PcP	**PcP**	**07 48 34.3**	**-0.3**
	comp=Z,1.5nm,0.4s,baz=86,slow=3.6,SNR=5.7						
WRA				S	**S**	**07 53 02.4**	**-2.9**
	comp=Z,1.6nm,1.1s,baz=102,slow=11,SNR=3.8						
MTN	**Manton Dam**	**49.50**	**270**	P	**P**	**07 47 37.6**	**-0.5**
MTN				IAmb	IAmb	07 47 38.5	
	comp=Z,24nm,0.8s						
FORT	**Forrest**	**49.67**	**246**	P	**P**	**07 47 38.7**	**-0.4**
KNRA	**Kununurra**	**51.01**	**266**	P	**P**	**07 47 48.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**53.38**	**262**	P	**P**	**07 48 06.2**	**0.0**
FITZ				IAmb	IAmb	07 48 07.0	
	comp=Z,13nm,0.6s						
SOEI	**Soe** comp=Z,139nm,0.9s	**56.83**	**272**	P	**P**	**07 48 30.0**	**-0.6**
SOEI	**Soe**	**56.83**	**272**	P	**P**	**07 48 31.7**	**+1.2**
SANI	**Sanana**	**57.89**	**281**	P	P	07 48 34.0	-3.6
PSA00	**Pilbara Seismi**	**58.03**	**257**	P	**P**	**07 48 38.2**	**-0.4**
VNDA	**Vanda** comp=Z,3.0nm,0.8s,baz=1.7,slow=8.0,SNR=25	**58.09**	**185**	P	**P**	**07 48 39.7**	**+1.7**
VNDA	**Vanda**	**58.09**	**185**	P	**P**	**07 48 39.6**	**+1.6**
NWAO	**Narrogin (SRO)**	**58.74**	**243**	P	**P**	**07 48 43.1**	**0.0**
NWAO				IAmb	IAmb	07 48 43.5	
	comp=Z,16nm,0.8s						
EDFI	**Ende, Flores** comp=Z,25nm,0.8s	**59.56**	**272**	P	**P**	**07 48 48.6**	**-0.5**
MORW	**Morawa**	**60.20**	**248**	P	**P**	**07 48 52.9**	**-0.1**
MORW				IAmb	IAmb	07 48 53.4	
	comp=Z,15nm,0.7s						
GIRL	**Giralia**	**62.92**	**254**	P	**P**	**07 49 11.5**	**+0.6**
PLAI	**Plampang** comp=Z,725nmcomp=Z,75nm,0.8s	**63.21**	**270**	P	**P**	**07 49 12.5**	**-0.4**
CASY	**Casey**	**64.25**	**205**	P	**P**	**07 49 19.1**	**+0.5**
CASY				IAmb	IAmb	07 49 19.7	
	comp=Z,13nm,0.7s						
MPSI	**Mapaga** comp=Z,25nm,0.9s	**64.42**	**281**	P	**P**	**07 49 20.4**	**-0.2**
JAGI	**Jajag, Banyuwa**	**66.72**	**269**	P	**P**	**07 49 34.0**	**-1.1**
QSPA	**South Pole Qui**	**69.72**	**180**	P	**P**	**07 49 53.6**	**+1.1**
QSPA				IAmb	IAmb	07 49 54.5	
	comp=Z,18nm,0.8s						
KKM	**Kota Kinabalu**	**70.05**	**285**	P	**P**	**07 49 55.3**	**-0.1**
KKM				IAmb	IAmb	07 49 56.3	
	comp=Z,19nm,0.9s						
MJAR	**Matsushiro Arr** comp=Z,4.0nm,0.5s,baz=149,slow=5.5,SNR=11	**70.29**	**323**	P	**P**	**07 49 55.4**	**-0.8**
MAT	**Matsushiro**	**70.29**	**323**	P	**P**	**07 49 55.6**	**-0.6**
MJB9	**Matsu-Tunnel**	**70.29**	**323**	P	**P**	**07 49 55.1**	**-1.2**
MJB9				IAmb	IAmb	07 49 56.0	
	comp=Z,4.4nm,0.5s						
UGM	**Wanagama**	**70.31**	**269**	P	**P**	**07 49 56.5**	**-0.4**
ADK	**Adak**	**71.92**	**1**	P	**P**	**07 50 04.0**	**-1.4**
ADK				IAmb	IAmb	07 50 08.8	
	comp=Z,15nm,0.8s						
KSM	**Kuching**	**73.73**	**278**	P	**P**	**07 50 16.8**	**0.0**
DBJI	**Dramaga** comp=Z,44nm,0.5s	**74.28**	**269**	P	**P**	**07 50 19.5**	**-0.4**
UNV	**Unalaska Valle**	**74.50**	**7**	P	**P**	**07 50 18.8**	**-1.4**
YSS	**Yuzh-Sakhalins**	**75.91**	**333**	P	**P**	**07 50 27.3**	**-0.9**
YSS				IAmb	IAmb	07 50 29.9	
	comp=Z,18nm,0.9s						
PEA0B	**Petropavlovsk-**	**76.21**	**345**	P	**P**	**07 50 28.9**	**-0.9**
PETK	**Petropavlovsk-** comp=Z,7.3nm,0.8s,baz=140,slow=9.4,SNR=11	**76.21**	**345**	P	**P**	**07 50 29.2**	**-0.6**
KASI	**Kota Agung** comp=Z,60nm,0.8s	**76.74**	**269**	P	**P**	**07 50 31.7**	**-1.9**
KSRS	**Korea Array** comp=Z,1.3nm,0.5s,baz=139,slow=6.8,SNR=7.5	**77.00**	**318**	P	**P**	**07 50 34.5**	**+0.2**
MDSI	**Maura Dua** comp=Z,932nmcomp=Z,28nm,0.8s	**77.38**	**270**	P	**P**	**07 50 35.7**	**-1.4**
KMRM	**Mail Ridge**	**78.42**	**39**	P	**P**	**07 50 41.9**	**-0.3**
KMRM				IAmb	IAmb	07 50 44.2	
	comp=Z,15nm,0.9s						
MNAI	**Manna**	**78.57**	**270**	P	**P**	**07 50 43.4**	**-0.1**
USA0B	**Ussuriysk Arra**	**79.03**	**326**	P	**P**	**07 50 45.3**	**+0.1**
USA0B				IAmb	IAmb	07 50 46.6	
	comp=Z,9.5nm,0.8s						
USRK	**Ussuriysk Ar.** comp=Z,8.2nm,0.8s,baz=149,slow=3.3,SNR=18	**79.03**	**326**	P	**P**	**07 50 46.0**	**+0.8**
CMB	**Columbia Colle**	**79.12**	**43**	P	**P**	**07 50 45.3**	**-0.7**
OHAK	**Old Harbor**	**79.92**	**13**	P	**P**	**07 50 48.6**	**-1.0**
OHAK				IAmb	IAmb	07 50 58.0	
	comp=Z,18nm,1.2s						
YBH	**Yreka Blue Hor**	**79.96**	**38**	P	**P**	**07 50 50.5**	**+0.1**
BEKR	**Beckworth**	**80.23**	**41**	P	**P**	**07 50 51.4**	**-0.5**
PNTR	**Pine Nut** comp=Z,9.3nm,0.9s	**80.24**	**42**	IAmb	IAmb	07 50 53.2	
VCNR	**Virginia City**	**80.33**	**42**	P	**P**	**07 50 52.0**	**-0.5**
YERR	**Yerington**	**80.41**	**42**	P	**P**	**07 50 52.1**	**-0.8**
MDJ	**Mudanjiang**	**80.59**	**325**	P	**P**	**07 50 53.2**	**-0.2**
MDJ				IAmb	IAmb	07 50 54.7	
	comp=Z,14nm,1.0s						
NVAR	**Mina Array Bea** comp=Z,3.8nm,0.9s,baz=224,slow=9.2,SNR=13	**80.68**	**43**	P	**P**	**07 50 54.6**	**+0.3**
NV11	**Mina Array Sit**	**80.78**	**43**	P	**P**	**07 50 54.2**	**-0.6**
K05A	**Summer Lake** comp=Z,11nm,1.0s	**81.63**	**39**	IAmb	IAmb	07 51 00.5	
MAW	**Mawson** comp=Z,3.0nm,0.4s,baz=121,slow=5.9,SNR=3.6	**81.82**	**200**	P	**P**	**07 50 59.5**	**0.0**
PINE	**Pine Mountain**	**82.25**	**38**	P	**P**	**07 51 02.7**	**+0.4**
PINE				IAmb	IAmb	07 51 03.8	
	comp=Z,13nm,0.9s						
CN2	**Changchun**	**82.38**	**322**	*e*P	**P**	**07 51 02.0**	**-0.7**
CN2				*e*pP	pP	07 52 53.9	+2.3
CN2				*e*S	**S**	**08 00 36.3**	**-0.7**
TUC	**Tucson**	**82.62**	**52**	P	**P**	**07 51 04.5**	**+0.3**
WHN	**Wuhan**	**82.62**	**306**	††P	P	07 51 09.8	+5.6
BRLK	**Bradley Lake**	**82.76**	**13**	P	**P**	**07 51 03.2**	**-1.1**
BRLK				IAmb	IAmb	07 51 03.9	
	comp=Z,8.0nm,0.8s						
WVOR	**Wild Horse Val**	**82.79**	**40**	P	**P**	**07 51 04.8**	**-0.2**
WVOR				IAmb	IAmb	07 51 06.0	
	comp=Z,9.2nm,1.1s						
LCMT	**Little Creek M**	**83.25**	**47**	P	**P**	**07 51 06.9**	**-0.5**
I07A	**Izee** comp=Z,6.8nm,0.9s	**83.26**	**38**	IAmb	IAmb	07 51 08.4	
IPM	**Ipoh**	**83.45**	**277**	P	**P**	**07 51 08.7**	**-0.1**
MNSI	**Mandailing Nat**	**83.50**	**273**	P	**P**	**07 51 08.3**	**-0.7**
SZCU	**Shurtz Canyon**	**83.67**	**46**	P	**P**	**07 51 09.2**	**-0.4**
KULM	**Kulim**	**84.08**	**278**	P	**P**	**07 51 12.0**	**+0.1**
KULM				IAmb	IAmb	07 51 13.2	
	comp=Z,12nm,0.6s						
TTA	**Tatalina**	**84.73**	**10**	P	**P**	**07 51 13.4**	**-0.7**
RPSI	**Rantau Prapat**	**84.78**	**275**	P	**P**	**07 51 14.6**	**-0.8**
RPSI				IAmb	IAmb	07 51 16.5	
	comp=Z,11nm,0.9s						
PMR	**Palmer**	**84.79**	**13**	P	**P**	**07 51 13.2**	**-1.0**
SCM	**Sheep Creek Mo** comp=Z,12nm,0.7s	**85.40**	**14**	IAmb	IAmb	07 51 17.2	
F10A	**Beach Ranch, E** comp=Z,11nm,0.8s	**85.67**	**37**	IAmb	IAmb	07 51 19.4	
TRF	**Thorofare Moun** comp=Z,12nm,0.9s	**86.23**	**12**	IAmb	IAmb	07 51 20.4	
ENH	**Enshi** comp=Z,17nm,1.1s	**86.23**	**304**	IAmb	IAmb	07 51 23.8	
MNTX	**Cornudas Mount** comp=Z,4.3nm,0.9s	**86.39**	**54**	IAmb	IAmb	07 51 24.0	
RND	**Reindeer** comp=Z,16nm,1.0s	**86.47**	**13**	IAmb	IAmb	07 51 22.5	
TX31	**Lajitas Ar. Si**	**86.69**	**57**	P	**P**	**07 51 24.2**	**-0.1**
TX31				IAmb	IAmb	07 51 25.8	
	comp=Z,9.9nm,0.9s						
TXAR	**Lajitas Array** comp=Z,2.2nm,0.7s,baz=217,slow=6.6,SNR=33	**86.69**	**57**	P	**P**	**07 51 24.8**	**+0.6**
MCK	**McKinley** comp=Z,8.5nm,0.8s	**86.75**	**12**	IAmb	IAmb	07 51 23.6	
ANMO	**Albuquerque**	**87.04**	**51**	P	**P**	**07 51 24.9**	**-1.0**
WRH	**Wood River Hil** comp=Z,11nm,0.9s	**87.58**	**12**	IAmb	IAmb	07 51 26.8	
HDA	**Harding Lake** comp=Z,7.4nm,0.6s	**87.76**	**13**	IAmb	IAmb	07 51 27.7	
PBKT	**Sadao Pong**	**87.89**	**288**	P	**P**	**07 51 30.3**	**+0.2**
PBKT				IAmb	IAmb	07 51 32.1	
	comp=Z,8.8nm,1.0s						
COLA	**College**	**87.98**	**12**	P	**P**	**07 51 27.9**	**-1.5**
DLMT	**Dillon** comp=Z,3.8nm,0.8s	**88.05**	**40**	IAmb	IAmb	07 51 31.4	
IL31		**88.09**	**13**	P	**P**	**07 51 28.4**	**-1.4**
ILAR	**Eielson Array** comp=Z,2.6nm,0.8s,baz=219,slow=5.9,SNR=29	**88.09**	**13**	P	**P**	**07 51 28.4**	**-1.5**
SNAA	**Sanae**	**88.16**	**178**	P	**P**	**07 51 29.6**	**-0.8**
SNAA	**Sanae**	**88.16**	**178**	P	**P**	**07 51 29.8**	**-0.5**
SNAA				IAmb	IAmb	07 51 30.2	
	comp=Z,3.4nm,0.9s						
SNOW	**Snow King Moun** comp=Z,4.8nm,0.9s	**88.20**	**42**	IAmb	IAmb	07 51 32.2	
VNA3	**Neumayer Olymp**	**88.27**	**176**	P	**P**	**07 51 30.2**	**-0.6**
XAN	**Xi'an**	**88.31**	**307**	P	**P**	**07 51 32.0**	**+0.3**
XAN				pP	PcP	07 51 53.4	+20
XAN				pmax	pmax		
	comp=Z,18nm,0.9s						
XAN	**Xi'an**	**88.31**	**307**	P	**P**	**07 51 31.4**	**-0.3**
PD31	**Pinedale Array**	**88.62**	**43**	P	**P**	**07 51 32.0**	**-1.2**
PDAR	**Pinedale Array** comp=Z,1.7nm,0.7s,baz=208,slow=2.9,SNR=14	**88.62**	**43**	P	**P**	**07 51 32.3**	**-0.9**
VNA2	**Neumayer--Watz** baz=181,slow=3.6	**88.72**	**177**	P	**P**	**07 51 32.8**	**-0.1**
VNA1	**Neumayer--Stat**	**88.94**	**176**	P	**P**	**07 51 33.9**	**0.0**
DAWY	**Dawson**	**89.22**	**16**	P	**P**	**07 51 34.7**	**-0.5**
DAWY				IAmb	IAmb	07 51 35.4	
	comp=Z,5.1nm,0.7s						
EGAK	**Eagle**	**89.37**	**15**	P	**P**	**07 51 35.0**	**-0.8**
EGAK				IAmb	IAmb	07 51 35.9	
	comp=Z,5.7nm,0.8s						
HHC	**Hu-ho-hao-te**	**89.49**	**314**	*e*P	**P**	**07 51 36.8**	**-0.3**
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,30nm,6.7s						
KMI	**Kunming**	**89.58**	**297**	P	**P**	**07 51 37.0**	**-1.0**
KMI				pmax	pmax		
	comp=Z,22nm,0.6s						
CMAR	**Chiang Mai Arr** comp=Z,6.3nm,0.8s,baz=118,slow=2.8,SNR=30	**90.38**	**289**	P	**P**	**07 51 42.2**	**+0.6**
CHTO	**Chiang Mai**	**90.51**	**290**	P	**P**	**07 51 42.5**	**+0.3**
EPYK	**Eagle Plains** comp=Z,2.2nm,1.1s	**91.75**	**15**	IAmb	IAmb	07 51 46.2	
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.5s,baz=244,slow=4.1,SNR=5.3	**96.23**	**25**	P	**P**	**07 52 06.2**	**-1.0**
MKAR	**Makanchi Array** comp=Z,1.1nm,0.6s,baz=70,slow=1.1,SNR=7.7	**111.34**	**313**	PKiKP	**PKiKP**	**07 57 08.6**	**-1.8**
ARCES	**ARCESS Array B** comp=Z,2.6nm,0.8s,baz=1.5,slow=1.8,SNR=13	**128.83**	**350**	PKP	**PKPdf**	**07 57 42.5**	**-0.7**
FINES	**FINESS Array B** comp=Z,1.5nm,0.8s,baz=107,slow=2.0,SNR=6.2	**135.72**	**344**	PKP	**PKPdf**	**07 57 56.5**	**+0.2**
AKASG	**Malin Array Be** comp=Z,9.7nm,0.6s,baz=43,slow=4.6,SNR=38	**143.04**	**331**	PKhKP	PKPpre	07 58 05.7	
SORM	**Soroca**	**145.25**	**329**	‖P	**PKPdf**	**07 58 13.1**	**-0.7**
MBAR	**Mbarara**	**145.28**	**237**		**PKPdf**	**07 58 16.0**	**+0.9**
ILGA	**Ilgaz**	**146.32**	**315**		**PKPdf**	**07 58 18.1**	**+1.9**
BR131	**Keskin Array S**	**146.98**	**313**		**PKPdf**	**07 58 19.0**	**+1.8**
BRTR	**Keskin Array B** comp=Z,4.1nm,0.7s,baz=134,slow=4.3,SNR=14	**146.98**	**313**	PKPbc	**PKPdf**	**07 58 19.1**	**+1.8**
BUR08	**Bucovina Ar. S**	**147.08**	**331**		**PKPdf**	**07 58 19.5**	**+2.5**
BURAR	**Bucovina Array**	**147.09**	**331**	‖P	**PKPdf**	**07 58 19.6**	**+2.5**
BIZ	**Bicaz**	**147.17**	**329**	‖P	**PKPdf**	**07 58 19.8**	**+2.7**
JURR	**Jurilovca**	**147.21**	**324**	††P	**PKPdf**	**07 58 18.8**	**+1.6**
CFR	**Carculiu**	**147.35**	**325**	‖P	**PKPdf**	**07 58 19.8**	**+2.4**
TOPG	**Topolog**	**147.42**	**325**	‖P	**PKPbc**	**07 58 21.1**	**+0.2**
VRI	**Vrancioaia**	**147.62**	**327**	‖P	**PKPdf**	**07 58 20.5**	**+2.5**
KSP	**Ksiaz**	**147.64**	**343**	*e*PKP	**PKPdf**	**07 58 20.8**	**+3.0**
NIE	**Niedzica**	**147.65**	**338**	*e*PKP	**PKPbc**	**07 58 21.1**	**-0.3**
TIRR	**Tirgusor**	**147.67**	**324**	‖P	**PKPdf**	**07 58 20.2**	**+2.2**
TIRR	**Tirgusor**	**147.67**	**324**		**PKPdf**	**07 58 20.4**	**+2.5**
PLOR	**Plostina**	**147.67**	**327**	‖P	**PKPdf**	**07 58 20.4**	**+2.4**
HARR	**Harsova**	**147.78**	**325**	‖P	**PKPdf**	**07 58 21.3**	**+3.2**
TRPA	**Tarpa**	**147.85**	**334**	‖P	**PKPdf**	**07 58 20.6**	**+2.5**
OSTC	**Ostas**	**147.92**	**343**	††*e*PKP	**PKPbc**	**07 58 22.1**	**+0.1**
OSTC				*e*PKPAB	PKPab	07 58 38.0	+12
CLL	**Collm** comp=Z,21nm,0.8s	**147.99**	**347**	*i* PKPbc	**PKPbc**	**07 58 22.5**	**+0.4**
CLL				*i* PKPab	**PKiKP**	**07 58 26.3**	**+2.8**
	comp=Z,7.0nm,0.8s						
CLL	**Collm**	**147.99**	**347**		**PKPbc**	**07 58 22.1**	**0.0**
DPC	**Dobruska-Polom**	**148.08**	**343**	†*e*PKP	**PKPbc**	**07 58 22.0**	**-0.5**
DPC				*e*PKPAB	**PKPab**	**07 58 29.0**	**+1.9**
LANS	**Liptovska Anna**	**148.16**	**339**	*e*PKP	**PKPbc**	**07 58 23.4**	**+0.7**
BRG	**Berggiesshubel** comp=Z,3.8nm,1.1s	**148.19**	**346**	*e*PKP	**PKPdf**	**07 58 17.5**	**-1.2**
BRG	**Berggiesshubel** comp=Z,1.9nm,1.0s	**148.19**	**346**	*i* PKP	**PKPdf**	**07 58 22.0**	**+3.3**
BRG	**Berggiesshubel** comp=Z,7.6nm,0.9s	**148.19**	**346**	*e*PKP	**PKiKP**	**07 58 26.4**	**+2.4**
DOPR	**Dopca**	**148.21**	**329**	‖P	**PKPbc**	**07 58 22.5**	**-0.4**
MORC	**Moravsky Berou**	**148.24**	**341**	‖P	**PKiKP**	**07 58 25.7**	**+1.5**
MORC	**Moravsky Berou**	**148.24**	**341**		**PKPbc**	**07 58 22.6**	**-0.3**
MORC				PKPab	**PKiKP**	**07 58 26.3**	**+2.2**
MDUB	**Mudurnu**	**148.27**	**316**		**PKPdf**	**07 58 22.6**	**+3.4**
MDUB				PKPab	**PKPab**	**07 58 28.3**	**0.0**
MLR	**Muntele Rosu**	**148.28**	**328**	‖P	**PKPdf**	**07 58 21.8**	**+2.7**
MLR	**Muntele Rosu**	**148.28**	**328**		**PKPdf**	**07 58 22.0**	**+2.9**
VOIR		**148.76**	**328**	‖P	**PKPbc**	**07 58 24.0**	**-0.4**
DRGR		**148.83**	**333**	‖P	**PKPdf**	**07 58 23.5**	**+3.6**
PRU	**Pruhonice**	**148.87**	**345**	†‖*e*PKP	**PKPdf**	**07 58 23.0**	**+3.2**
GOPC	**GO Pecny, Ondr**	**148.88**	**344**	†‖*e*PKP	**PKPbc**	**07 58 24.1**	**-0.3**
VRAC	**Vrancy**	**148.94**	**342**	‖P	**PKPdf**	**07 58 21.9**	**+1.9**
VYHS	**Vyhne**	**148.94**	**339**	*e*PKP	**PKPbc**	**07 58 24.1**	**-0.5**
JAVC	**Velka Javorina**	**149.01**	**340**	*e*PKP	**PKPbc**	**07 58 25.2**	**+0.4**
ARR	**Arges**	**149.01**	**329**	‖P	**PKPbc**	**07 58 24.6**	**-0.4**
NKC	**Novy Kostel**	**149.12**	**347**	†‖*e*PKP	**PKPbc**	**07 58 24.3**	**-0.7**
KRUC	**Moravsky**	**149.22**	**342**	*e*PKP	**PKPbc**	**07 58 24.5**	**-0.8**
TREC	**Trest**	**149.26**	**343**	†‖*e*PKP	**PKPbc**	**07 58 24.7**	**-0.7**
MODS	**Modra-Piesok**	**149.56**	**340**	*e*PKP	**PKPbc**	**07 58 25.2**	**-0.9**
MEM	**Membach**	**149.66**	**355**	PKiKP	**PKPbc**	**07 58 25.5**	**-0.7**
SIRR	**Siria**	**149.69**	**333**	‖P	**PKPdf**	**07 58 24.9**	**+3.7**
BSTI	**Sart Tilman**	**149.72**	**356**	PKiKP	**PKPbc**	**07 58 25.9**	**-0.5**
GZR	**Gura Zlata**	**149.87**	**331**	‖P	**PKPdf**	**07 58 25.2**	**+3.6**
GRF	**Grafenberg Arr**	**149.88**	**349**	*e*PKP	**PKPbc**	**07 58 26.3**	**-0.5**
KHC	**Kasperske Hory**	**149.91**	**345**	†*e*PKP	**PKPbc**	**07 58 26.1**	**-0.8**
KHC	**Kasperske Hory**	**149.91**	**345**		**PKPbc**	**07 58 26.4**	**-0.6**
BMRD	**Maredsous**	**150.04**	**357**	PKiKP	**PKPbc**	**07 58 26.6**	**-0.6**
GERES	**GERESS Array B** comp=Z,4.6nm,0.8s,baz=38,slow=2.4,SNR=16	**150.14**	**345**	PKPbc	**PKPbc**	**07 58 26.7**	**-0.9**
BZS	**Buzias**	**150.22**	**332**	‖P	**PKPbc**	**07 58 26.6**	**-1.1**
DOU	**Dourbes**	**150.26**	**357**	PKiKP	**PKPbc**	**07 58 27.2**	**-0.5**
PLVB	**Pleven**	**150.42**	**326**	‖P	**PKPbc**	**07 58 27.7**	**-0.6**
HERR	**Herculane**	**150.43**	**330**	‖P	**PKPbc**	**07 58 26.8**	**-1.4**
WLF	**Walferdange**	**150.59**	**355**	PKiKP	**PKPbc**	**07 58 28.4**	**-0.1**
MANT	**Manisa**	**151.04**	**314**		**PKPbc**	**07 58 29.0**	**-1.1**
VTS	**Vitosha**	**151.69**	**326**	‖P	**PKPdf**	**07 58 29.0**	**+4.4**
FUORN	**Ofenpass-Fuorn**	**153.00**	**348**		**PKPbc**	**07 58 33.6**	**-0.7**
FUORN				PKPab	**PKPab**	**07 58 47.6**	**-0.5**
TORD	**Torodi Ar. Bea** comp=Z,2.5nm,0.9s,baz=323,slow=0.6,SNR=12	**172.81**	**175**	PKP	**PKPdf**	**07 58 44.0**	**-1.7**
TORD

	comp=Z,29nm,0.1s								
PBUR	**Paburge**		**1.74**	**171**	*e*P		**Pn**	**08 20 43.7**	**+0.9**
PBUR					*e*S		**Sg**	**08 21 08.0**	**+0.7**
NYNU	**Nynaeshamn**		**2.21**	**306**	P		**Pn**	**08 20 50.5**	**+1.3**
NYNU					S		**Sb**	**08 21 21.0**	**+1.1**
NYNU	**Nynaeshamn**		**2.21**	**306**	*e*P		**Pn**	**08 20 50.5**	**+1.3**
NYNU					*e*S		**Sb**	**08 21 21.0**	**+1.1**
NRTU	**Norrtaelje**		**2.43**	**324**	P		**Pn**	**08 20 53.3**	**+1.0**
NRTU	**Norrtaelje**		**2.43**	**324**	*e*P		**Pn**	**08 20 53.3**	**+1.0**
BYXU	**Byxelkrok**		**2.43**	**261**	P		**Pn**	**08 20 54.0**	**+1.7**
BYXU	**Byxelkrok**		**2.43**	**261**	*e*P		**Pn**	**08 20 54.0**	**+1.7**
AAL	**Aland**		**2.56**	**344**	P		**Pn**	**08 20 54.1**	**+0.2**
AAL	**Aland**		**2.56**	**344**	*e*P		**Pn**	**08 20 54.3**	**+0.3**
AAL					*e*S		**Sn**	**08 21 25.7**	**-0.1**
ASPU	**Aespoe**		**2.63**	**265**	P		**Pn**	**08 20 57.0**	**+2.1**
ASPU	**Aespoe**		**2.63**	**265**	*e*P		**Pn**	**08 20 57.0**	**+2.1**
VIKU	**Vikbolandet**		**2.63**	**289**	P		**Pn**	**08 20 56.6**	**+1.6**
VIKU	**Vikbolandet**		**2.63**	**289**	*e*P		**Pn**	**08 20 56.6**	**+1.6**
VSTU	**Vaestervik**		**2.63**	**270**	P		**Pn**	**08 20 57.0**	**+1.9**
VSTU	**Vaestervik**		**2.63**	**270**	*e*P		**Pn**	**08 20 57.0**	**+1.9**
PABE	**Paberze**		**2.64**	**147**	*e*P		**Pn**	**08 20 56.2**	**+1.0**
PABE					IAML			08 21 23.6	
	comp=Z,12nm,0.3s								
PABE	**Paberze**		**2.64**	**147**	*e*P		**Pn**	**08 20 57.1**	**+1.9**
PABE					*e*S		**Sn**	**08 21 28.7**	**+0.8**
VSU	**Vasula**		**2.90**	**73**	*e*P		**Pn**	**08 21 01.6**	**+2.8**
VSU					IAML			08 21 45.1	
	comp=Z,56nm,0.2s								
VSU	**Vasula**		**2.90**	**73**	*e*P		**Pb**	**08 21 01.9**	**-2.0**
VSU					AML	AML		08 21 02.5	
	comp=Z,69nm,0.2s								
VSU					*e*S		**Sb**	**08 21 39.4**	**-0.5**
VSU					AML	AML		08 21 42.4	
	comp=E,65nm,0.4s								
VSU					AML	AML		08 22 00.8	
	comp=N,51nm,0.3s								
MEF	**Metsahovi**		**2.92**	**30**	*e*P		**Pn**	**08 21 02.1**	**+3.1**
MEF					AML	AML		08 21 18.3	
	comp=N,5.8nm,0.4s								
MEF					*e*S		**Sb**	**08 21 38.3**	**-2.0**
MEF					AML	AML		08 21 42.0	
	comp=Z,5.1nm,0.4s								
MEF					AML	AML		08 21 42.2	
	comp=E,7.3nm,0.2s								
MEF	**Metsahovi**		**2.92**	**30**	*e*P		**Pn**	**08 21 00.5**	**+1.6**
MEF					*e*S		**Sn**	**08 21 35.8**	**+1.1**
MEF					MSG			08 21 46.2	
	comp=Z,4.6nm,0.2s								
OSKU	**Oskarshamn**		**2.94**	**261**	P		**Pn**	**08 21 00.8**	**+1.6**
OSKU	**Oskarshamn**		**2.94**	**261**	*e*P		**Pn**	**08 21 00.8**	**+1.6**
FLYU	**Flymyra**		**3.02**	**324**	P		**Pn**	**08 21 02.2**	**+1.8**
FLYU	**Flymyra**		**3.02**	**324**	*e*P		**Pn**	**08 21 02.2**	**+1.8**
FIBU	**Brunna**		**3.03**	**317**	P		**Pn**	**08 21 02.3**	**+1.8**
BACU	**Backbrunna**		**3.09**	**315**	P		**Pn**	**08 21 02.9**	**+1.6**
BACU	**Backbrunna**		**3.09**	**315**	*e*P		**Pn**	**08 21 02.9**	**+1.6**
RAF	**Rauma**		**3.29**	**3**	*e*P		**Pn**	**08 21 04.8**	**+0.7**
RAF					*e*S		**Sn**	**08 21 46.7**	**+2.7**
RAF					AML	AML		08 22 02.3	
	comp=E,9.2nm,0.4s								
RAF					AML	AML		08 22 02.8	
	comp=Z,4.6nm,0.8s								
RAF					AML	AML		08 22 07.5	
	comp=N,4.2nm,0.4s								
RAF	**Rauma**		**3.29**	**3**	*e*P		**Pn**	**08 21 04.7**	**+0.5**
RAF					MSG			08 22 00.7	
	comp=Z,3.4nm,0.2s								
OSTU	**Oestervaala**		**3.34**	**320**	P		**Pn**	**08 21 07.0**	**+2.2**
OSTU	**Oestervaala**		**3.34**	**320**	*e*P		**Pn**	**08 21 07.0**	**+2.2**
ISAL	**Salakas**		**3.38**	**128**	*e*P		**Pn**	**08 21 05.8**	**+0.5**
IIGN	**Ignalina**		**3.57**	**130**	*e*P		**Pn**	**08 21 08.7**	**+0.8**
FIA0	**FINESS Array S**		**4.40**	**30**	Pn		**Pn**	**08 21 19.6**	**+0.4**
	baz=210,slow=12								
FIA0					Sn		**Sn**	**08 22 10.9**	**-0.2**
	baz=213,slow=28								
FIA0					Lg		Lg	08 22 27.4	
	baz=221,slow=28								
FIA0	**FINESS Array S**		**4.40**	**30**	Pn		**Pn**	**08 21 19.6**	**+0.4**
	baz=210,slow=12								
FIA0					Sn		**Sn**	**08 22 10.9**	**-0.2**
	baz=213,slow=28								
FIA0					Sg		**Sb**	**08 22 27.4**	**+4.5**
	baz=221,slow=28								
FINES	**FINESS Array B**		**4.40**	**30**	Pn		**Pn**	**08 21 20.3**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=219,slow=12,SNR=6.9								
FINES					Pg		**Pb**	**08 21 29.9**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=218,slow=13,SNR=14								
FINES					Lg		Lg	08 22 25.8	
	comp=Z,1.5nm,0.3s,baz=229,slow=25,SNR=15								
FIA1	**FINESS Array S**		**4.40**	**30**	*e*P		**Pn**	**08 21 20.2**	**+0.9**
FIA1					MSG			08 22 34.1	
	comp=Z,3.9nm,0.3s								
BSD	**Bornholm Skovb**		**4.48**	**237**	*e*P		**Pn**	**08 21 20.1**	**-0.3**
BSD					*e*S		**Sn**	**08 22 12.5**	**-0.6**
BSD					AML	AML		08 22 34.1	
	comp=N,0.3nm,0.8s								
BSD					AML	AML		08 22 43.0	
	comp=Z,0.2nm,0.4s								
BSD					AML	AML		08 22 49.5	
	comp=E,0.3nm,0.8s								
BSD	**Bornholm Skovb**		**4.48**	**237**	*i* P		**Pn**	**08 21 20.4**	**0.0**
BSD					*i* S		**Sn**	**08 22 12.6**	**-0.6**
HFS	**Hagfors**		**4.67**	**304**	Pn		**Pn**	**08 21 24.1**	**+1.0**
	baz=124,slow=12								
HFS					Sn		**Sn**	**08 22 16.1**	**-1.9**
	baz=111,slow=28								
HFS					Lg		Lg	08 22 35.2	
	baz=117,slow=28								
HFS	**Hagfors**		**4.67**	**304**	Pn		**Pn**	**08 21 24.1**	**+1.0**
	comp=E,0.7nm,0.3s,baz=114,slow=16,SNR=19								
HFS					Lg		Lg	08 22 36.6	
	comp=E,1.1nm,0.3s,baz=118,slow=30,SNR=9.6								
HFS	**Hagfors**		**4.67**	**304**	Pn		**Pn**	**08 21 24.1**	**+1.0**
	baz=124,slow=12								
HFS					Sn		**Sn**	**08 22 16.1**	**-1.9**
	baz=111,slow=28								
HFS					Sg		**Sb**	**08 22 35.2**	**+4.3**
	baz=117,slow=28								
NRA0	**NORESS Array S**		**5.90**	**305**	Pn		**Pn**	**08 21 39.9**	**0.0**
	baz=105,slow=14								
NRA0					Lg		Lg	08 23 15.3	
	baz=115,slow=28								
NRA0	**NORESS Array S**		**5.90**	**305**	Pn		**Pn**	**08 21 39.9**	**0.0**
	baz=105,slow=14								
NRA0					Sg		**Sg**	**08 23 15.3**	**-5.3**
	baz=115,slow=28								
NB2	**NORSAR Subarra**		**6.18**	**307**	Pn		**Pn**	**08 21 44.5**	**+0.7**
	baz=122,slow=12								
NB2	**NORSAR Subarra**		**6.18**	**307**	Pn		**Pn**	**08 21 44.5**	**+0.7**
	baz=122,slow=12								
NOA	**NORSAR Array B**		**6.18**	**307**	Pn		**Pn**	**08 21 44.2**	**+0.4**
	comp=E,0.0nm,0.3s,baz=131,slow=12,SNR=2.1								
NOA					Lg		Lg	08 23 23.6	
	comp=E,0.1nm,0.3s,baz=134,slow=23,SNR=5.0								
ARA0	**ARCESS Array S**		**11.97**	**7**	Pn		**Pn**	**08 22 59.4**	**-3.6**
	baz=187,slow=14								
ARA0	**ARCESS Array S**		**11.97**	**7**	Pn		**Pn**	**08 22 59.4**	**-3.6**
	baz=187,slow=14								
ARCES	**ARCESS Array B**		**11.97**	**7**	Pn		**Pn**	**08 22 59.7**	**-3.3**
	comp=E,0.1nm,0.3s,baz=187,slow=12,SNR=9.4								

ASRS ***20*** *08:58:51.1,54.80N×86.72E,M1.9,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC 20 08:58:58.0±7.6, 54.13N×86.97E, h0km, mb 3.7, mpv 3.4, 6C-1D, Error ellipse: s-maj=66.8km s-min=42.4km az=4.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**6.14**	**240**	⇑Pn	Pn	09 00 29.5	-0.5
	1.1nm,0.3s						
KURK				⇑Sn	Sn	09 01 41.2	+0.3
	0.7nm,0.4s						
KURK				⇓Lg	Lg	09 02 09.8	
	1.1nm,0.5s						
KURBB	**Kurchatov Arra**	**6.25**	**239**	⇑Pn	Pn	09 00 30.9	-0.5
	4.0nm,0.3s						
KURBB				⇑Sn	Sn	09 01 42.8	-0.6
	5.1nm,0.5s						
KURBB				⇑Lg	Lg	09 02 16.7	
	2.4nm,0.6s						
MK31	**Makanchi Array**	**7.92**	**204**	Pn	Pn	09 00 57.6	+3.2
	0.1nm,0.2s,baz=24,slow=13,SNR=26						
MK31				Sn	Sn	09 02 29.8	+5.1
	1.7nm,0.6s,baz=24,slow=26,SNR=6.0						
MK31				⇑Lg	Lg	09 03 15.5	
	2.8nm,0.9s,baz=24,slow=32						

ATH ***20*** *09:23:55.2, 36.41N×26.92E, h132km±4km, ML3.5/9, Error ellipse: s-maj=4.8km s-min=1.6km az=108.0*
ISK ***20*** *09:23:55.8, 36.41N×26.88E, h125km±1km, ML3.1/17*
IDC ***20*** *09:23:56.3±3.9, 36.20N×27.08E, h132km±45km, mb 3.3/2, mb1 3.0/4, mb1mx2.8/43, mbtmp3.5/4, Error ellipse: s-maj=73.4km s-min=25.1km az=142.0*
DDA ***20*** *09:23:57.0, 36.54N×26.97E, h116km±13km, ML3.2*
THE ***20*** *09:23:57.5, 36.41N×26.89E, h147km±4km, ML3.4/7, Error ellipse: s-maj=4.1km s-min=0.9km az=49.0*
NIC ***20*** *09:23:57.1±0.0, 36.06N×27.23E, h140km±1km, Ml3.5/3*
GII ***20*** *09:23:59.8±0.9, 36.25N×27.46E, h150km, MD3.0/1, Mm3.4/4*

ISC 20 09:23:55.2±0.8, 36°36N±0.04×27°01E±0.04, h131km±6km, n120, σ1°33/149, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NISR	**Nisiros**	**0.27**	**21**	P	**Pn**	**09 24 13.7**	**+0.3**
KOSK	**Kos Island**	**0.39**	**357**	PG	**Pn**	**09 24 13.7**	**-0.1**
DAT	**Datca**	**0.59**	**51**	P	**Pn**	**09 24 15.8**	**+0.7**
DAT				S	**Sn**	**09 24 30.5**	**+0.4**
DAT	**Datca**	**0.59**	**51**	PG	**Pn**	**09 24 15.9**	**+0.8**
DAT				SG	**Sn**	**09 24 30.2**	**+0.1**
BODT	**Bodrum**	**0.74**	**19**	P	**Pn**	**09 24 16.4**	**+0.4**
BODT	**Bodrum**	**0.74**	**19**	PG	**Pn**	**09 24 16.4**	**+0.4**
BDRM	**Kayabasi**	**0.79**	**26**	*i* P	**Pn**	**09 24 17.0**	**+0.6**
KARP	**Karpathos**	**0.82**	**171**	P	**Pn**	**09 24 17.8**	**+1.1**
KARP	**Karpathos**	**0.82**	**171**	P	**Pn**	**09 24 17.8**	**+1.1**
KARP				AML	AML	09 24 36.8	
	comp=N,3443μm,0.1s						
KARP				AML	AML	09 24 37.0	
	comp=E,3447μm,0.3s						
KARP	**Karpathos**	**0.82**	**171**	PG	**Pn**	**09 24 17.7**	**+1.1**
KARP				SG	**Sn**	**09 24 33.6**	**+0.6**
KARP	**Karpathos**	**0.82**	**171**	P	**Pn**	**09 24 17.8**	**+1.1**
KARP				S	**Sn**	**09 24 33.5**	**+0.6**
KARP				AML	AML	09 24 36.5	
	comp=E,3.4nm,0.3s						
KARP				AML	AML	09 24 36.5	
	comp=E,3.4nm,0.3s						
KARP				AML	AML	09 24 36.5	
	comp=E,3.3nm,0.2s						
KARP				AML	AML	09 24 36.5	
	comp=E,3.3nm,0.2s						
ARG	**Arkhangelos**	**0.92**	**99**	P	**Pn**	**09 24 19.2**	**+1.8**
ARG				S	**Sn**	**09 24 35.3**	**+1.1**
	comp=E,1μm,0.2s						
ARG	**Arkhangelos**	**0.92**	**99**	P	**Pn**	**09 24 19.2**	**+1.8**
ARG				AML	AML	09 24 36.1	
	comp=N,3270μm,0.4s						
ARG				AML	AML	09 24 36.9	
	comp=E,3667μm,0.3s						
ARG	**Arkhangelos**	**0.92**	**99**	PG	**Pn**	**09 24 19.3**	**+1.8**
ARG	**Arkhangelos**	**0.92**	**99**	P	**Pn**	**09 24 19.3**	**+1.8**
ARG				S	**Sn**	**09 24 35.7**	**+1.4**
ANAF	**Anafi Island**	**1.00**	**270**	P	**Pn**	**09 24 18.5**	**+0.3**
ANAF				S	**Sn**	**09 24 33.9**	**-1.7**
	comp=E,1μm,0.4s						
ANAF	**Anafi Island**	**1.00**	**270**	P	**Pn**	**09 24 18.5**	**+0.3**
ANAF				AML	AML	09 24 34.5	
	comp=N,3422μm,0.4s						
ANAF				AML	AML	09 24 34.7	
	comp=E,1741μm,0.4s						
MRSB	**Marmaris-Mugla**	**1.02**	**69**	PN	**Pn**	**09 24 19.6**	**+1.2**
SNT1	**Gialos, Santor**	**1.28**	**273**	P	**Pn**	**09 24 21.0**	**+0.1**
YER	**Yerkesik**	**1.28**	**53**	P	**Pn**	**09 24 22.6**	**+1.5**
YER				S	**Sn**	**09 24 41.0**	**+0.2**
YER	**Yerkesik**	**1.28**	**53**	PN	**Pn**	**09 24 22.6**	**+1.5**
THR6	**Thira Island,**	**1.30**	**270**	P	**Pn**	**09 24 21.4**	**+0.2**
THR6	**Thira Island,**	**1.30**	**270**	P	**Pn**	**09 24 21.3**	**+0.2**
SAP1	**Santorini-Akro**	**1.30**	**270**	P	**Pn**	**09 24 21.5**	**+0.3**
THR5	**Thira Island,**	**1.34**	**273**	P	**Pn**	**09 24 21.7**	**+0.1**
SAP3	**Santorini-Thir**	**1.34**	**274**	P	**Pn**	**09 24 21.7**	**+0.1**
GCAM	**G?zelcaml?**	**1.35**	**8**	PN	**Pn**	**09 24 22.2**	**+0.5**
GCAM	**G?zelcaml?**	**1.35**	**8**	*i* P	**Pn**	**09 24 21.8**	**+0.1**
SMG	**Samos**	**1.35**	**354**	P	**Pn**	**09 24 21.7**	**-0.1**
SMG	**Samos**	**1.35**	**354**	P	**Pn**	**09 24 21.6**	**-0.1**
APE	**Apeiranthos**	**1.38**	**301**	P	**Pn**	**09 24 22.2**	**+0.1**
APE	**Apeiranthos**	**1.38**	**301**	PN	**Pn**	**09 24 21.6**	**-0.5**
APE	**Apeiranthos**	**1.38**	**301**	*i* P	**Pn**	**09 24 21.7**	**-0.4**
APE				*i* S	**Sn**	**09 24 40.6**	**-2.0**
TURN	**Turunc**	**1.38**	**68**	PN	**Pn**	**09 24 20.2**	**-1.8**
TURN	**Turunc**	**1.38**	**68**	*i* P	**Pn**	**09 24 20.1**	**-1.9**
TURN				*i* S	**Sn**	**09 24 36.1**	**-6.4**
TURN				IAML		09 24 38.0	
	comp=N,457nm,0.3s						
TURN				IAML		09 24 38.0	
	comp=E,492nm,0.3s						
ZKR	**Zakros**	**1.40**	**208**	P	**Pn**	**09 24 23.9**	**+1.6**
ZKR				S	**Sn**	**09 24 44.0**	**+1.1**
	comp=E,740nm,0.4s						
ZKR	**Zakros**	**1.40**	**208**	P	**Pn**	**09 24 24.0**	**+1.7**
ZKR				AML	AML	09 24 45.9	
	comp=E,2473μm,0.4s						
ZKR				AML	AML	09 24 47.5	
	comp=N,475μm,0.4s						
ZKR	**Zakros**	**1.40**	**208**	PN	**Pn**	**09 24 23.3**	**+1.0**
ZKR	**Zakros**	**1.40**	**208**	P	**Pn**	**09 24 24.0**	**+1.7**
ZKR				S	**Sn**	**09 24 44.3**	**+1.4**
ZKR				AML	AML	09 24 45.3	
	comp=N,2.5nm,0.4s						
ZKR				AML	AML	09 24 45.3	
	comp=N,2.5nm,0.4s						
DALY	**Dalyan (Mula)**	**1.40**	**71**	PN	**Pn**	**09 24 24.1**	**+1.9**
IOSP	**Ios island**	**1.43**	**285**	P	**Pn**	**09 24 22.6**	**0.0**
IOSP				S	**Sn**	**09 24 41.3**	**-2.1**
	comp=N,398nm,1.0s						
IOSP	**Ios island**	**1.43**	**285**	P	**Pn**	**09 24 22.6**	**0.0**
AYDN	**Tasoluk**	**1.47**	**28**	*i* P	**Pn**	**09 24 23.9**	**+0.8**
AYDN				*i* S	**Sn**	**09 24 43.4**	**-1.1**
NPS	**Neapolis**	**1.58**	**226**	P	**Pn**	**09 24 24.3**	**0.0**
NPS				S	**Sn**	**09 24 45.3**	**-1.1**
	comp=N,1μm,0.2s						
NPS	**Neapolis**	**1.58**	**226**	P	**Pn**	**09 24 24.2**	**-0.1**
NPS				AML	AML	09 24 46.5	
	comp=N,2560μm,0.2s						
NPS				AML	AML	09 24 47.2	
	comp=E,2523μm,0.2s						
FETY	**Fethiye**	**1.69**	**80**	PN	**Pn**	**09 24 27.4**	**+1.8**
LAST	**Lasithi**	**1.73**	**227**	P	**Pn**	**09 24 26.4**	**+0.3**
LAST				S	**Sn**	**09 24 48.9**	**-0.7**
	comp=E,218nm,0.1s						
LAST	**Lasithi**	**1.73**	**227**	P	**Pn**	**09 24 26.4**	**+0.3**
LAST				AML	AML	09 24 49.2	
	comp=N,1018μm,0.2s						
LAST				AML	AML	09 24 50.0	
	comp=E,624μm,0.3s						
AYDB	**Zeytinkoy-Aydi**	**1.73**	**24**	PN	**Pn**	**09 24 26.8**	**+0.6**
HRKL	**Herakleio**	**1.87**	**236**	PN	**Pn**	**09 24 28.2**	**+0.5**
TAVA	**DENIZLI_Tavas**	**1.88**	**54**	*i* P	**Pn**	**09 24 28.7**	**+0.8**
TAVA				*i* S	**Sn**	**09 24 52.5**	**-0.4**
BLCB	**Balcova**	**2.02**	**1**	PN	**Pn**	**09 24 29.6**	**+0.1**
URLA	**Izmir**	**2.02**	**351**	PN	**Pn**	**09 24 29.7**	**+0.2**
IDI	**Anoyia**	**2.03**	**239**	P	**Pn**	**09 24 29.4**	**-0.2**
IDI				S	**Sn**	**09 24 53.9**	**-2.1**
	comp=E,518nm,0.3s						
IDI	**Anoyia**	**2.03**	**239**	P	**Pn**	**09 24 29.7**	**+0.1**
IDI				AML	AML	09 24 54.5	
	comp=N,1072μm,0.2s						
IDI				AML	AML	09 24 55.0	
	comp=E,1206μm,0.3s						
IDI	**Anoyia**	**2.03**	**239**	PN	**Pn**	**09 24 29.6**	**0.0**
KSL	**Kastellorizon**	**2.09**	**95**	P	**Pn**	**09 24 32.3**	**+2.0**
KSL	**Kastellorizon**	**2.09**	**95**	P	**Pn**	**09 24 32.3**	**+2.0**
KSL				AML	AML	09 25 00.3	
	comp=N,616μm,0.4s						
KSL				AML	AML	09 25 01.1	
	comp=E,1015μm,0.3s						
KSL	**Kastellorizon**	**2.09**	**95**	P	**Pn**	**09 24 32.2**	**+1.9**
KSL				S	**Sn**	**09 24 57.8**	**+0.6**
KSL				AML	AML	09 25 00.5	
	comp=E,0.6nm,0.4s						
KSL				AML	AML	09 25 00.5	
	comp=E,0.6nm,0.4s						
KSL				AML	AML	09 25 01.1	
	comp=E,1.0nm,0.3s						
KSL				AML	AML	09 25 01.1	
	comp=E,1.0nm,0.3s						
AKAS	**Kas**	**2.10**	**93**	PN	**Pn**	**09 24 32.5**	**+1.9**
AKAS	**Kas**	**2.10**	**93**	*i* P	**Pn**	**09 24 32.4**	**+1.9**
AKAS				*i* S	**Sn**	**09 24 57.3**	**-0.4**
AKAS				IAML		09 25 01.0	
	comp=N,151nm,0.5s						
AKAS				IAML		09 25 03.0	
	comp=E,148nm,0.3s						
MHLA	**Plaka, Milos I**	**2.12**	**281**	P	**Pn**	**09 24 30.8**	**+0.1**
MHLO	**Agia Marina, M**	**2.12**	**280**	P	**Pn**	**09 24 31.6**	**+0.8**
CHOS	**Chios island**	**2.16**	**340**	P	**Pn**	**09 24 31.3**	**0.0**
CHOS	**Chios island**	**2.16**	**340**	PN	**Pn**	**09 24 31.2**	**0.0**
SERI	**Serifos**	**2.18**	**292**	P	**Pn**	**09 24 31.3**	**-0.1**
GOLH	**Golhisar**	**2.23**	**66**	*i* P	**Pn**	**09 24 33.5**	**+1.4**
SIVA	**Sivas**	**2.23**	**234**	P	**Pn**	**09 24 33.3**	**+1.2**
ELL	**Elmali**	**2.37**	**80**	P	**Pn**	**09 24 36.0**	**+2.1**
ELL				S	**Sn**	**09 25 06.1**	**+2.5**
VAM	**Vamos**	**2.47**	**248**	P	**Pn**	**09 24 35.2**	**+0.1**
VAM				AML	AML	09 25 05.4	
	comp=N,1191μm,0.2s						
VAM				AML	AML	09 25 06.7	
	comp=E,722μm,0.4s						
IMMV	**Iera Moni Meta**	**2.62**	**251**	P	**Pn**	**09 24 37.0**	**+0.1**
IMMV	**Iera Moni Meta**	**2.62**	**251**	P	**Pn**	**09 24 37.3**	**+0.4**
KARY	**Karystos**	**2.65**	**310**	P	**Pn**	**09 24 37.2**	**-0.1**
AKUM	**Antalya-Kumluc**	**2.69**	**90**	*i* P	**Pn**	**09 24 39.8**	**+1.9**
KORT	**Korkueli**	**2.76**	**76**	*i* P	**Pn**	**09 24 42.0**	**+3.1**
KORT				*i* S	**Sn**	**09 25 15.6**	**+3.0**
BRDR	**BURDUR-Merkez**	**2.78**	**60**	*i* P	**Pn**	**09 24 40.1**	**+1.0**
BRDR				*i* S	**Sn**	**09 25 11.9**	**-1.1**
KHAL	**Karahalli**	**2.82**	**44**	*i* P	**Pn**	**09 24 39.8**	**+0.2**
KHAL				*i* S	**Sn**	**09 25 12.4**	**-1.4**
GVD	**Gavdhos**	**2.82**	**238**	P	**Pn**	**09 24 40.4**	**+0.8**
VLY	**Voula,Athens**	**2.97**	**301**	P	**Pn**	**09 24 41.8**	**+0.4**
DION	**Dionisos Attik**	**2.99**	**306**	P	**Pn**	**09 24 42.2**	**+0.4**
ATHU	**Athens Univers**	**3.03**	**303**	P	**Pn**	**09 24 42.7**	**+0.4**
ANKY	**Antikythira Is**	**3.04**	**262**	P	**Pn**	**09 24 41.9**	**-0.5**
KTHA	**Kythira Island**	**3.19**	**269**	P	**Pn**	**09 24 44.2**	**-0.1**
KTHA	**Kythira Island**	**3.19**	**269**	P	**Pn**	**09 24 44.3**	**-0.1**
KRND	**KRANIDI**	**3.26**	**289**	P	**Pn**	**09 24 45.7**	**+0.5**
VLI	**Veliai**	**3.30**	**277**	P	**Pn**	**09 24 45.3**	**-0.4**
VLI	**Veliai**	**3.30**	**277**	P	**Pn**	**09 24 45.3**	**-0.4**
VIL2	**Platees**	**3.51**	**303**	P	**Pn**	**09 24 48.4**	**-0.1**
KEPZ	**Antalya-Kepez**	**3.74**	**80**	*i* P	**Pn**	**09 24 53.6**	**+2.1**
KEPZ				*i* S	**Sn**	**09 25 37.0**	**+1.9**
KEPZ				IAML		09 25 40.0	
	comp=N,22nm,0.3s						
PROD	**Prodromos**	**3.78**	**301**	P	**Pn**	**09 24 52.7**	**+0.6**
ITM	**Ithomi**	**4.16**	**283**	P	**Pn**	**09 24 57.8**	**+0.7**
KLV	**Kalavryta, Ach**	**4.23**	**295**	P	**Pn**	**09 24 58.5**	**+0.5**
KALE	**Kalithea**	**4.38**	**299**	P	**Pn**	**09 25 00.8**	**+0.8**
TRIZ	**Trizonia**	**4.41**	**298**	P	**Pn**	**09 25 01.1**	**+0.8**
OSC1	**CSNet OBS 1**	**4.52**	**128**	P	**Pn**	**09 25 01.2**	**-0.7**
OSC1				S	**Sn**	**09 25 51.4**	**-2.4**
AKMS	**Akamas**	**4.54**	**106**	P	**Pn**	**09 25 02.0**	**-0.2**
ALFC	**Alefka**	**4.70**	**103**	P	**Pn**	**09 25 04.2**	**-0.1**
NATA	**Nata**	**4.80**	**108**	P	**Pn**	**09 25 05.6**	**-0.1**
SZAC	**Souni**	**5.05**	**107**	P	**Pn**	**09 25 09.1**	**+0.1**
ASGA	**Asgata**	**5.32**	**105**	P	**Pn**	**09 25 12.9**	**+0.3**
CSS	**Mathiatis**	**5.33**	**103**	Pn	**Pn**	**09 25 12.8**	**0.0**
CSS	**Mathiatis**	**5.33**	**103**	P	**Pn**	**09 25 13.1**	**+0.3**
OSC2	**CSNet OBS 4**	**5.43**	**126**	P	**Pn**	**09 25 14.1**	**0.0**
BRTR	**Keskin Array B**	**6.22**	**55**	P	**Pn**	**09 25 26.5**	**+1.7**
	comp=N,0.3nm,0.3s,baz=232,slow=15,SNR=8.4						
MMA0B	**Mount Meron ar**	**7.68**	**113**	Pn	**Pn**	**09 25 44.1**	**-0.3**
GEM	**Giv'at Ha'Em**	**7.78**	**111**	Pn	**Pn**	**09 25 45.4**	**-0.3**
NATI	**Neve Ativ**	**7.81**	**111**	Pn	**Pn**	**09 25 45.3**	**-0.8**
NATI				Sn	**Sn**	**09 27 09.4**	**-3.7**
SHMJ	**Saham**	**8.08**	**114**	Pn	**Pn**	**09 25 50.0**	**+0.2**
KZIT	**Kziot**	**8.22**	**129**	Pn	**Pn**	**09 25 51.5**	**-0.1**
KZIT				Sn	**Sn**	**09 27 20.2**	**-2.5**
YTIR	**Yattir**	**8.38**	**124**	Pn	**Pn**	**09 25 53.8**	**-0.1**
DSI	**Dead Sea**	**8.44**	**122**	Pn	**Pn**	**09 25 54.8**	**+0.3**
GHAJ	**Ghor Haditha**	**8.72**	**123**	Pn	**Pn**	**09 25 58.9**	**+0.5**
PRNI	**Paran**	**8.98**	**130**	Pn	**Pn**	**09 26 01.7**	**-0.2**
PRNI				Sn	**Sn**

	baz=240								
SGLT				eS	Sb	09 49 33.4	-0.4		
	baz=240								
TWM1	**Shoushan**	**0.40**	**261**	⇑*iP*	**Pb**	**09 49 28.7**	**+0.2**		
	baz=250								
TWM1				eS	Sb	09 49 36.1	+1.4		
	baz=250								
CHN1	**Nanshi**	**0.42**	**316**	⇓*iP*	**Pb**	**09 49 28.7**	**-0.2**		
	baz=316								
CHN1				eS	Sb	09 49 36.0	+0.7		
	baz=316								
WTP	**Ta-pu**	**0.42**	**329**	⇓*iP*	**Pb**	**09 49 28.4**	**-0.5**		
	baz=331								
WTP				eS	Sb	09 49 35.0	-0.4		
	baz=331								
TPUB	**Ta-pu**	**0.46**	**334**	⇓*iP*	**Pb**	**09 49 29.3**	**-0.3**		
	baz=336								
TPUB				eS	Sb	09 49 36.4	-0.1		
	baz=336								
SNST	**Tainan City**	**0.46**	**316**	*eP*	**Pn**	**09 49 29.9**	**-2.2**		
	baz=320								
SNST				eS	Sb	09 49 38.4	+1.8		
	baz=320								
SSPT	**Xinbi**	**0.47**	**213**	⇑*iP*	**Pb**	**09 49 29.5**	**-0.4**		
	baz=196								
SSPT				eS	Sb	09 49 36.6	-0.3		
	baz=196								
CHN3	**Shinhua**	**0.48**	**293**	*eP*	**Pn**	**09 49 31.9**	**-0.5**		
	baz=292								
CHN3				eS	Sb	09 49 39.8	+2.7		
	baz=292								
SNJT	**Kaohsiung City**	**0.49**	**255**	*eP*	**Pn**	**09 49 31.1**	**-1.4**		
	baz=246								
SNJT				eS	Sb	09 49 39.2	+1.9		
	baz=246								
EAST	**Anshuo**	**0.50**	**180**	⇑*iP*	**Pb**	**09 49 29.8**	**-0.5**		
	baz=165								
EAST				eS	Sg	09 49 36.5	+0.7		
	baz=165								
TWK	**Hsinying**	**0.50**	**319**	P	**Pn**	**09 49 30.5**	**-2.2**		
	baz=324								
TWK				eS	Sb	09 49 39.1	+1.3		
	baz=324								
FULB	**Fuli**	**0.52**	**53**	⇑*iP*	**Pb**	**09 49 30.2**	**-0.4**		
	baz=56								
FULB				eS	Sb	09 49 38.8	+0.6		
	baz=56								
CHN4	**Tsaushan**	**0.52**	**333**	⇓*iP*	**Pb**	**09 49 30.6**	**0.0**		
	baz=344								
CHN4				eS	Sb	09 49 39.5	+1.3		
	baz=344								
CHKT	**Chengkung**	**0.52**	**66**	*eP*	**Pb**	**09 49 30.8**	**+0.1**		
	baz=62								
CHKT				eS	Sb	09 49 39.1	+0.8		
	baz=62								
TAW	**Tawu**	**0.53**	**175**	*eP*	**Pb**	**09 49 29.9**	**-0.9**		
	baz=171								
TAW				eS	Sg	09 49 37.1	+0.4		
	baz=171								
SCZT	**Fangliau**	**0.55**	**202**	⇑*iP*	**Pb**	**09 49 30.4**	**-0.8**		
	baz=190								
SCZT				eS	Sg	09 49 37.5	+0.1		
	baz=190								
KAU	**Kaohsiung**	**0.59**	**238**	*eP*	**Pn**	**09 49 33.5**	**-0.3**		
	baz=226								
KAU				eS	Sn	09 49 42.6	-0.9		
	baz=226								
TWH	**Lutao**	**0.61**	**106**	⇓*iP*	**Pb**	**09 49 32.3**	**+0.2**		
	baz=97								
TWH				eS	Sb	09 49 41.5	+0.8		
	baz=97								
YUS	**Yu-Shan**	**0.61**	**9**	*eP*	**Pb**	**09 49 32.5**	**0.0**		
	baz=20								
YUS				eS	Sb	09 49 42.1	+0.8		
	baz=20								
TWF1	**Yuli**	**0.62**	**42**	⇑*iP*	**Pb**	**09 49 31.4**	**-1.0**		
	baz=52								
TWF1				eS	Sg	09 49 39.9	+0.1		
	baz=52								
YULB	**Yu-li**	**0.65**	**39**	⇑*iP*	**Pg**	**09 49 31.7**	**-0.5**		
	baz=51								
YULB				eS	Sg	09 49 39.9	-0.8		
	baz=51								
SCLT	**Jiali**	**0.67**	**296**	*eP*	**Pn**	**09 49 34.4**	**-0.5**		
	baz=295								
SCLT				eS	Sn	09 49 46.8	+1.4		
	baz=295								
WLCH	**Liuqiu**	**0.69**	**219**	⇑*iP*	**Pn**	**09 49 36.2**	**+1.0**		
	baz=219								
TWP	**Hsiaoliuchiu**	**0.70**	**220**	P	**Pn**	**09 49 36.4**	**+1.0**		
	baz=219								
CHY	**Chiayi**	**0.72**	**328**	⇓*iP*	**Pn**	**09 49 34.9**	**-0.8**		
	baz=329								
CHY				eS	Sn	09 49 46.1	-0.7		
	baz=329								
CHN5	**Tsauling**	**0.72**	**348**	⇑*iP*	**Pn**	**09 49 34.3**	**-1.6**		
	baz=358								
CHN5				eS	Sn	09 49 46.3	-0.7		
	baz=358								
CHN2	**Minshiung**	**0.73**	**332**	*eP*	**Pn**	**09 49 35.3**	**-0.5**		
	baz=333								
CHN2				eS	Sn	09 49 47.0	0.0		
	baz=333								
CHN8	**Yiju**	**0.74**	**308**	*eP*	**Pn**	**09 49 35.7**	**-0.2**		
	baz=309								
CHN8				eS	Sn	09 49 47.5	+0.2		
	baz=309								
EHY	**Hungye**	**0.76**	**35**	⇑*iP*	**Pg**	**09 49 33.6**	**-0.5**		
	baz=47								
EHY				eS	Sg	09 49 43.3	-0.7		
	baz=47								
HGSD	**Ruisui**	**0.81**	**41**	⇑*iP*	**Pb**	**09 49 35.3**	**-0.2**		
	baz=36								
HGSD				eS	Sb	09 49 47.3	+0.9		
	baz=36								
WHYT	**Xinyi Township**	**0.81**	**0**	⇑*P*	**Pb**	**09 49 35.3**	**-0.3**		
	baz=11								
WHYT				eS	Sb	09 49 46.1	-0.4		
	baz=11								
WGK	**Gukeng**	**0.84**	**342**	*eP*	**Pn**	**09 49 37.7**	**+0.4**		
	baz=345								
WGK				eS	Sn	09 49 50.1	+0.4		
	baz=345								
WDLH	**Douliu**	**0.85**	**341**	*eP*	**Pn**	**09 49 37.5**	**+0.1**		
	baz=343								
WDLH				eS	Sn	09 49 49.9	-0.1		
	baz=343								
HEN	**Hengchun**	**0.88**	**187**	*eP*	**Pn**	**09 49 37.6**	**-0.3**		
	baz=183								
HEN				eS	Sb	09 49 49.4	+0.8		
	baz=183								
SSLB	**Suanglung**	**0.90**	**6**	⇑*P*	**Pb**	**09 49 36.3**	**-0.9**		
	baz=14								
SSLB				eS	Sb	09 49 49.3	-0.1		
	baz=14								
VWDT	**VWDT**	**0.91**	**17**	*eP*	**Pb**	**09 49 36.1**	**-1.1**		
	baz=10.0								
TWK1	**Hengchun**	**0.94**	**182**	*eP*	**Pn**	**09 49 38.9**	**+0.2**		
	baz=171								
TWK1				eS	Sn	09 49 52.0	-0.1		
	baz=171								
WJS	**Zhushan**	**0.94**	**353**	⇑*iP*	**Pn**	**09 49 38.7**	**0.0**		
	baz=341								
WJS				eS	Sn	09 49 53.7	+1.6		
	baz=341								
TWKBT	**Hengchun**	**0.94**	**182**	*eP*	**Pn**	**09 49 38.5**	**-0.1**		
	baz=171								
TWKBT				eS	Sn	09 49 52.4	+0.3		
	baz=171								
WSF	**Szhu**	**0.94**	**323**	*eP*	**Pn**	**09 49 39.0**	**+0.3**		
	baz=324								
WSF				eS	Sn	09 49 53.5	+1.2		
	baz=324								
EGFH	**Guangfu**	**0.95**	**34**	*eP*	**Pb**	**09 49 37.2**	**-0.7**		
	baz=37								
EGFH				eS	Sg	09 49 49.0	-1.0		
	baz=37								
TSEB	**Hengchuen, Pin**	**0.98**	**177**	*eP*	**Pn**	**09 49 39.4**	**+0.1**		
	baz=180								
SMLT	**Sun Moon Lake**	**0.99**	**3**	*eP*	**Pn**	**09 49 38.8**	**-0.8**		
	baz=10.0								
WNT	**Mingjian**	**1.00**	**351**	*eP*	**Pn**	**09 49 39.9**	**+0.4**		
	baz=341								
WNT				eS	Sn	09 49 54.5	+0.8		
	baz=341								
TYC	**Yuchr**	**1.01**	**1**	*eP*	**Pn**	**09 49 39.4**	**-0.3**		
	baz=6.0								
TYC				eS	Sn	09 49 55.6	+1.6		
	baz=6.0								
ESL	**Shilin**	**1.07**	**30**	*eP*	**Pg**	**09 49 38.9**	**-1.2**		
	baz=40								
ESL				eS	Sg	09 49 52.8	-1.2		
	baz=40								
WMLT	**Mailiao**	**1.08**	**328**	*eS*	**Sn**	**09 49 57.0**	**+1.4**		
	baz=330								
RLNB	**Erlin**	**1.10**	**336**	*eP*	**Pn**	**09 49 41.7**	**+0.8**		
	baz=339								
RLNB				eS	Sn	09 49 57.9	+1.9		
	baz=339								
WTCT	**Ta-ch'eng**	**1.10**	**332**	*eP*	**Pn**	**09 49 41.1**	**+0.2**		
	baz=335								
WTCT				eS	Sn	09 49 57.1	+0.9		
	baz=335								
OWD	**Renai**	**1.11**	**16**	*eP*	**Pb**	**09 49 40.3**	**-0.5**		
	baz=16								
DPDB	**Guoxing**	**1.15**	**4**	*eP*	**Pn**	**09 49 41.6**	**0.0**		
	baz=20								
WDGT	**Dungji**	**1.15**	**289**	*eP*	**Pn**	**09 49 41.7**	**+0.1**		
	baz=288								
WDGT				eS	Sn	09 49 57.7	+0.2		
	baz=288								
CHGB	**Renai**	**1.21**	**14**	*eP*	**Pg**	**09 49 41.4**	**-1.3**		
	baz=19								
CHGB				eS	Sn	09 50 01.3	+2.2		
	baz=19								
WCHH	**Zhanghua**	**1.22**	**348**	*eP*	**Pn**	**09 49 43.3**	**+0.8**		
	baz=334								
WHF	**Hehuan Shan**	**1.31**	**17**	*eP*	**Pb**	**09 49 44.1**	**-0.3**		
	baz=23								
WHF				eS	Sn	09 50 03.9	+1.9		
	baz=23								
PHUB	**P'eng-hu**	**1.33**	**298**	*eP*	**Pg**	**09 49 44.0**	**-0.9**		
	baz=297								
PHUB				eS	Sn	09 50 01.9	+0.1		
	baz=297								
VCHM	**Qimei**	**1.34**	**284**	*eP*	**Pg**	**09 49 44.1**	**-1.2**		
	baz=297								
VCHM				eS	Sn	09 50 03.0	+0.9		
	baz=297								
PNG	**Penghu**	**1.37**	**300**	*eP*	**Pg**	**09 49 44.2**	**-1.5**		
	baz=299								
PNG				eS	Sn	09 50 02.9	+0.1		
	baz=299								
TWD	**Chiawan**	**1.37**	**30**	*eP*	**Pg**	**09 49 45.0**	**-0.8**		
	baz=35								
TWD				eS	Sn	09 50 04.3	+1.4		
	baz=35								
WHP	**Taichung City**	**1.39**	**4**	*eP*	**Pg**	**09 49 46.9**	**+0.7**		
	baz=8.0								
TDCB	**Techi**	**1.39**	**12**	*eP*	**Pg**	**09 49 45.6**	**-0.6**		
	baz=28								
TDCB				eS	Sn	09 50 05.3	+1.7		
	baz=28								
TWT	**Tachien**	**1.40**	**12**	*eP*	**Pg**	**09 49 46.1**	**-0.2**		
	baz=16								
ETLH	**Xiulin Townshi**	**1.44**	**24**	*eP*	**Pg**	**09 49 45.9**	**-1.2**		
	baz=40								
ETLH				eS	Sg	09 50 07.4	+1.6		
	baz=40								
NACB	**Ninganchiao**	**1.46**	**28**	*eP*	**Pn**	**09 49 45.1**	**-0.7**		
	baz=35								
NACB				eS	Sg	09 50 05.9	-0.4		
	baz=35								
TWQ1	**Liyutan**	**1.46**	**357**	*eP*	**Pg**	**09 49 48.0**	**+0.5**		
	baz=6.0								
TWQ1				eS	Sg	09 50 09.4	+3.0		
	baz=6.0								
WDJ	**Dajia District**	**1.47**	**353**	*eP*	**Pg**	**09 49 47.5**	**-0.1**		
	baz=360								
WDJ				eS	Sg	09 50 09.9	+3.2		
	baz=360								
NSY	**Sanyi**	**1.53**	**357**	*eP*	**Pg**	**09 49 49.4**	**+0.6**		
	baz=5.0								
NSY				eS	Sg	09 50 12.2	+3.6		
	baz=5.0								
PTSB	**Yuanli**	**1.56**	**355**	*eP*	**Pb**	**09 49 47.7**	**-0.7**		
	baz=334								
NNSB	**Datong**	**1.61**	**18**	*eP*	**Pb**	**09 49 48.8**	**-0.6**		
	baz=34								
NNSH	**Datong**	**1.61**	**18**	*eP*	**Pb**	**09 49 48.7**	**-0.7**		
	baz=25								
NNSH				eS	Sg	09 50 10.9	-0.5		
	baz=25								
NNS	**Nan Shan**	**1.62**	**17**	*eP*	**Pg**	**09 49 49.5**	**-1.1**		
	baz=35								
NMLH	**Miaoli**	**1.65**	**358**	*eP*	**Pg**	**09 49 51.1**	**0.0**		
	baz=4.0								
ENA	**Nanau**	**1.74**	**28**	*eP*	**Pb**	**09 49 50.8**	**-0.7**		
	baz=44								
NSTT	**Nanjuang**	**1.74**	**5**	*eP*	**Pg**	**09 49 52.3**	**-0.6**		
	baz=11								
NDT	**Datong Townshi**	**1.82**	**20**	*eP*	**Pg**	**09 49 52.7**	**-1.6**		
	baz=41								
NDT				eS	Sg	09 50 18.3	+0.5		
	baz=41								
YHNB	**Yeheng**	**1.84**	**15**	*eP*	**Pg**	**09 49 53.2**	**-1.6**		
	baz=24								
YHNB				eS	Sg	09 50 19.1	+0.4		
	baz=24								
NSK	**Sanguang**	**1.84**	**15**	*eP*	**Pg**	**09 49 53.7**	**-1.1**		
	baz=21								
ENTT	**Nioudou**	**1.87**	**21**	*eP*	**Pb**	**09 49 53.2**	**-0.5**		
	baz=39								
TWC	**Suao**	**1.95**	**28**	*eP*	**Pb**	**09 49 54.8**	**-0.2**		
	baz=33								
TWE	**Neicheng**	**1.98**	**22**	*eP*	**Pg**	**09 49 56.4**	**-1.0**		
	baz=40								
NWLT	**Wulai**	**1.98**	**18**	*eP*	**Pb**	**09 49 55.5**	**-0.1**		
	baz=6.0								
EOS1	**EOS1**	**2.03**	**35**	*eP*	**Pb**	**09 49 54.8**	**-1.6**		
	baz=53								
NTC	**Toucheng**	**2.16**	**24**	*eP*	**Pb**	**09 49 58.8**	**+0.2**		
	baz=43								
TATO	**Taipei**	**2.16**	**16**	*eP*	**Pb**	**09 49 58.4**	**-0.2**		
	baz=22								
TWA	**Mucha**	**2.19**	**18**	*eP*	**Pg**	**09 49 59.8**	**-1.7**		
	baz=9.0								
TIPB	**Shuangxi**	**2.26**	**23**	*eP*	**Pb**	**09 49 58.9**	**-1.5**		
	baz=48								
TIPB				eS	Sb	09 50 27.8	-0.7		
	baz=48								
NWF	**Wu-fen Shan**	**2.34**	**21**	*eP*	**Pb**	**09 50 01.5**	**-0.2**		
	baz=45								
WFSB	**Wu-fen Shan**	**2.34**	**21**	*eP*	**Pb**	**09 50 01.6**	**-0.1**		
	baz=45								
YM10	**YM10**	**2.35**	**16**	*eP*	**Pb**	**09 50 01.1**	**-0.8**		
	baz=26								
YM11	**YM11**	**2.37**	**16**	*eP*	**Pb**	**09 50 02.3**	**+0.1**		
	baz=26								
YM08	**YM08**	**2.39**	**16**	*eP*	**Pb**	**09 50 01.7**	**-0.9**		
	baz=26								
VWUC	**VWUC**	**2.46**	**329**	*eP*	**Pn**	**09 49 59.2**	**-0.3**		
	baz=324								
JYNG	**Yonagunijimaku**	**2.48**	**51**	P	**Pn**	**09 50 00.1**	**+0.3**		
JYNG				eS	Sn	09 50 30.8	+0.7		
YOJ	**Yonaguni jima**	**2.53**	**51**	*eP*	**Pn**	**09 50 00.4**	**-0.2**		
	baz=65								
YOJ	**Yonaguni jima**	**2.53**	**51**	P	**Pn**	**09 50 00.9**	**+0.4**		
YOJ				eS	Sn	09 50 32.0	+0.6		
PTMZ	**Houxiangcun**	**2.66**	**324**	*eP*	**Pb**	**09 50 04.5**	**-2.8**		
	baz=317								
KNMB	**Chin-men Tao**	**2.75**	**305**	*eP*	**Pn**	**09 50 03.6**	**+0.1**		
	baz=300								
HATJ	**Hateruma jima**	**2.96**	**66**	P	**Pn**	**09 50 05.6**	**-0.8**		
HATJ				eS	Sn	09 50 41.1	-0.9		
IRIF	**Iriomote-Funau**	**3.01**	**61**	P	**Pn**	**09 50 08.2**	**+1.0**		
IRIF				S	Sn	09 50 43.3	-0.1		
ZPLA	**Ao Xicun**	**3.03**	**291**	*eP*	**Pn**	**09 50 07.6**	**+0.2**		
	baz=286								
JKRS	**Kuro-shima**	**3.20**	**64**	P	**Pn**	**09 50 10.3**	**+0.5**		
ZZJH	**Jiuhuzhen**	**3.34**	**299**	*eP*	**Pn**	**09 50 12.5**	**+0.8**		
	baz=294								
JIJ	**Ishigaki jima**	**3.36**	**63**	P	**Pn**	**09 50 11.8**	**-0.2**		
JIJ				eS	Sn	09 50 50.1	-1.9		
JISG	**Ishigakijimahi**	**3.60**	**61**	P	**Pn**	**09 50 14.7**	**-0.5**		
JISG				eS	Sn	09 50 56.5	-1.3		
MHZQ	**Yeshan**	**3.60**	**333**	*eP*	**Pn**	**09 50 16.2**	**+0.9**		
	baz=325								
LYJJ	**Jianjiangzhen**	**3.78**	**345**	*eP*	**Pn**	**09 50 18.6**	**+0.9**		
	baz=337								
JIRB	**Irabujima**	**4.41**	**63**	P	**Pn**	**09 50 27.2**	**+0.8**		
JIRB				eS	Sn	09 51 16.1	-1.7		
JMJ2	**Miyako jima3**	**4.50**	**65**	P	**Pn**	**09 50 29.1**	**+1.4**		
JMJ2				S	Sn	09 51 19.3	-0.8		
JIKM	**Ikemajima**	**4.51**	**62**	P	**Pn**	**09 50 31.8**	**+4.0**		

WEL ***20*** *10:20:20.5±0.5, 32°S±4′×17°8E±°, h33km, M4.3/18, mB4.8/12, ML4.7/18, MLv4.7/18, Mw(mB)4.0/12*
IDC ***20*** *10:20:22.5±7.7, 32°.81S×179°.01E, h360km±52km, mb2.8/2, mb1 3.0/3, mb1mx2.8/20, mbtmp3.6/3, Error ellipse: s-maj=102.1km s-min=34.1km az=45.0*

ISC 20 10:20:21.5±2.2, 32°.5S±0°.1×179°.0E±0°.3, h350km, n37, σ1°.63/41, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.16**	**40**	S	S	10 22 08.5	-21
MXZ	**Matakaoa Point**	**5.11**	**186**	P	**Pn**	**10 21 43.5**	**+1.4**
MXZ				S	**S**	**10 22 49.4**	**+2.0**
WMGZ	**Waiomatatini S**	**5.35**	**185**	P	**Pn**	**10 21 44.8**	**-0.1**
HAZ	**Te Kaha**	**5.36**	**190**	P	**Pn**	**10 21 45.5**	**+0.5**
HAZ				S	**S**	**10 22 53.5**	**+0.9**
PKGZ	**Pakihiroa**	**5.45**	**188**	P	**Pn**	**10 21 46.3**	**+0.2**
RUGZ	**Raukumara Rang**	**5.58**	**191**	P	**Pn**	**10 21 48.6**	**+1.0**
RUGZ				S	**S**	**10 22 58.8**	**+1.4**
PUZ	**Puketiti**	**5.62**	**186**	P	**Pn**	**10 21 48.7**	**+0.9**
PUZ				S	**S**	**10 22 57.6**	**-0.3**
OPRZ	**Ohinepanea**	**5.72**	**200**	P	Pn	10 21 53.4	+4.4
TWGZ	**Tauwhareparae**	**5.75**	**188**	P	Pn	10 21 51.9	+2.5
TWGZ				S	**S**	**10 23 02.0**	**+1.4**
MWZ	**Matawai**	**5.97**	**191**	P	**Pn**	**10 21 52.0**	**+0.2**
MWZ				S	**S**	**10 23 04.7**	**-0.4**
URZ	**Urewera**	**5.97**	**194**	P	**Pn**	**10 21 51.3**	**-0.6**
	2.3nm,0.3s,baz=270,slow=4.3,SNR=50						
URZ				S	**S**	**10 22 58.8**	**-6.4**
	1.6nm,0.3s,baz=302,slow=9.8,SNR=1.9						
URZ	**Urewera**	**5.97**	**194**	P	**Pn**	**10 21 51.3**	**-0.6**
URZ				S	**S**	**10 23 05.3**	**+0.1**
TKGZ	**Te Karaka**	**6.02**	**189**	P	Pn	10 22 04.1	+12
TKGZ				S	S	10 23 18.1	+12
RAGZ	**Rawiri**	**6.14**	**192**	P	**Pn**	**10 21 55.5**	**+1.6**
RAGZ				S	**S**	**10 23 09.5**	**+0.6**
RIGZ	**Rimuhau**	**6.30**	**189**	P	**Pn**	**10 21 56.1**	**+0.5**
RIGZ				S	**S**	**10 23 10.6**	**-1.5**
HRRZ	**Handcock Road**	**6.30**	**200**	P	Pn	10 21 58.9	+3.2
RTZ	**Ruatahuna**	**6.34**	**194**	P	**Pn**	**10 21 57.8**	**+1.6**
SNGZ	**Shannon Statio**	**6.43**	**192**	P	**Pn**	**10 21 57.4**	**+0.2**
SNGZ				S	**S**	**10 23 14.8**	**-0.1**
WPRZ	**Whakapapatarin**	**6.46**	**200**	P	**Pn**	**10 21 58.5**	**+1.0**
MTHZ	**Maungataniwha**	**6.60**	**195**	P	**Pn**	**10 22 01.1**	**+2.0**
RAHZ	**Arahi**	**6.61**	**193**	P	**Pn**	**10 21 59.9**	**+0.7**
KNZ	**Kokohu**	**6.62**	**189**	P	**Pn**	**10 21 59.7**	**+0.4**
MRHZ	**Matea Rd**	**6.68**	**198**	P	**Pn**	**10 21 56.5**	**-3.6**
WHHZ	**Waihua**	**6.74**	**192**	P	**Pn**	**10 22 02.5**	**+1.8**
NMHZ	**Naumai**	**6.84**	**194**	P	**Pn**	**10 22 02.6**	**+0.7**
HIZ	**Hauiti**	**6.91**	**208**	P	Pn	10 22 08.6	+6.0
WHVZ	**Whangaehu Hut**	**7.33**	**201**	P	**Pn**	**10 22 09.9**	**+2.0**
MOVZ	**Moawhango**	**7.40**	**200**	P	**Pn**	**10 22 09.8**	**+1.3**
PKVZ	**Pokaka**	**7.42**	**203**	P	**Pn**	**10 22 10.8**	**+2.1**
KRHZ	**Kereru**	**7.46**	**196**	P	**Pn**	**10 22 09.8**	**+0.6**
VRZ	**Vera Road**	**7.47**	**206**	P	Pn	10 22 13.6	+4.3
KAHZ	**Kahuranaki**	**7.50**	**193**	P	**Pn**	**10 22 09.6**	**-0.1**
PNHZ	**Pukenui**	**7.76**	**196**	P	**Pn**	**10 22 13.1**	**+0.4**
TSZ	**Takapari Road**	**7.95**	**197**	P	**Pn**	**10 22 14.9**	**-0.1**
ASAR	**Alice Springs**	**40.50**	**271**	P	**P**	**10 27 28.5**	**+0.7**
	0.2nm,0.5s,baz=106,slow=7.3,SNR=4.9						
WRA	**Warramunga Arr**	**41.69**	**276**	P	**P**	**10 27 37.5**	**+0.1**
	0.5nm,0.3s,baz=114,slow=8.0,SNR=20						
TORD	**Torodi Ar. Bea**	**160.60**	**188**	PKPab	**PKPab**	**10 40 21.7**	**-2.1**
	0.3nm,0.5s,baz=176,slow=2.1,SNR=4.0						

UPP ***20*** *10:26:08.4±1.7, 57°.89N×22°.78E, h0km, ML2.8, Suspected explosion*
HEL ***20*** *10:26:09.4±0.1, 57°.92N×22°.64E, h0km, ML2.2, ML2.2(UPP), Explosion*
LVSN ***20*** *10:26:10.4±4.7, 57°.86N×22°.62E, h0km±32km, ML2.0*

ISC 20 10:26:08.7±0.8, 57°.88N±0°.03×22°.70E±0°.03, h0km, n54, σ0s97/72, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.34**	**221**	*eP*	**Pg**	**10 26 14.9**	**-0.3**
SLIT				IAML		10 26 44.6	
	comp=Z,843nm,0.6s						
SLIT	**Slitere, Latvi**	**0.34**	**221**	*eP*	**Pg**	**10 26 15.3**	**+0.1**
SLIT				*eS*	**Sg**	**10 26 21.2**	**+1.7**
SLIT				AML	AML	10 26 44.0	
	comp=Z,946nm,0.7s						
SLIT				AML	AML	10 26 44.2	
	comp=E,1μm,0.8s						
SLIT				AML	AML	10 26 44.3	
	comp=N,1μm,0.5s						
SLIT	**Slitere, Latvi**	**0.34**	**221**	*eP*	**Pg**	**10 26 15.2**	**+0.1**
SLIT				*eS*	**Sg**	**10 26 19.9**	**+0.4**
MTSE	**Matsula**	**1.02**	**35**	*eP*	**Pg**	**10 26 27.3**	**-0.9**
MTSE	**Matsula**	**1.02**	**35**	*eP*	**Pg**	**10 26 27.3**	**-0.9**
MTSE				*eS*	**Sg**	**10 26 40.6**	**-0.8**
PBUR	**Paburge**	**1.91**	**193**	*eP*	**Pn**	**10 26 41.9**	**-0.6**
PBUR	**Paburge**	**1.91**	**193**	*eP*	**Pn**	**10 26 42.0**	**-0.6**
VSU	**Vasula**	**2.21**	**73**	*eP*	**Pn**	**10 26 47.2**	**+0.6**
VSU				*eS*	**Sn**	**10 27 15.4**	**+0.8**
VSU				IAML		10 27 20.2	
	comp=Z,128nm,0.1s						
VSU	**Vasula**	**2.21**	**73**	*eP*	**Pn**	**10 26 47.2**	**+0.6**
VSU				*eS*	**Sn**	**10 27 16.2**	**+1.6**
VSU				AML	AML	10 27 20.3	
	comp=Z,69nm,0.4s						
VSU				AML	AML	10 27 20.3	
	comp=N,157nm,0.3s						
VSU				AML	AML	10 27 20.8	
	comp=E,136nm,0.4s						
VSU	**Vasula**	**2.21**	**73**	*eP*	**Pn**	**10 26 47.2**	**+0.6**
VSU				*eS*	**Sn**	**10 27 15.0**	**+0.4**
GOTU	**Gotland**	**2.22**	**267**	P	**Pn**	**10 26 46.5**	**-0.2**
GOTU				S	**Sb**	**10 27 16.6**	**-1.1**
GOTU	**Gotland**	**2.22**	**267**	*eP*	**Pn**	**10 26 46.5**	**-0.2**
GOTU				*eS*	**Sb**	**10 27 16.6**	**-1.1**
PABE	**Paberze**	**2.48**	**163**	*eP*	**

VSTU	**Vaestervik**	**3.31 269**	*eP*	**Pn**	**10 27 02.6**	**+0.9**
ASPU	**Aespoe**	**3.31 264**	P	**Pn**	**10 27 02.3**	**+0.6**
ASPU	**Aespoe**	**3.31 264**	*eP*	**Pn**	**10 27 02.3**	**+0.6**
FLYU	**Flymyra**	**3.36 314**	P	**Pn**	**10 27 02.0**	**-0.4**
FLYU	**Flymyra**	**3.36 314**	*eP*	**Pn**	**10 27 02.0**	**-0.4**
FIBU	**Brunna**	**3.44 308**	P	**Pn**	**10 27 03.3**	**-0.1**
BACU	**Backbrunna**	**3.51 307**	P	**Pn**	**10 27 04.4**	**0.0**
BACU	**Backbrunna**	**3.51 307**	*eP*	**Pn**	**10 27 04.4**	**0.0**
OSKU	**Oskarshamn**	**3.63 262**	P	**Pn**	**10 27 06.4**	**+0.4**
OSKU	**Oskarshamn**	**3.63 262**	*eP*	**Pn**	**10 27 06.4**	**+0.4**
VJF	**Virojoki**	**3.65 41**	*eP*	**Pn**	**10 27 06.2**	**-0.1**
VJF			MSG		10 28 12.7	
	comp=Z,4.9nm,0.2s					
OSTU	**Oestervaala**	**3.71 312**	P	**Pn**	**10 27 07.1**	**-0.1**
OSTU	**Oestervaala**	**3.71 312**	*eP*	**Pn**	**10 27 07.1**	**-0.1**
FIA1	**FINESS Array S**	**3.96 24**	*eP*	**Pn**	**10 27 10.5**	**-0.1**
FIA1			*eS*	**Sn**	**10 27 56.5**	**-1.2**
FIA1			MSG		10 28 17.4	
	comp=Z,6.0nm,0.3s					
NRAU	**Nora**	**4.34 296**	P	**Pn**	**10 27 15.5**	**-0.3**
NRAU	**Nora**	**4.34 296**	*eP*	**Pn**	**10 27 15.5**	**-0.3**
KAF	**Kangasniemi**	**4.61 22**	*eP*	**Pn**	**10 27 20.1**	**+0.6**
BSD	**Bornholm Skovb**	**5.13 241**	*eP*	**Pn**	**10 27 25.1**	**-1.5**
BSD			AML	AML	10 28 56.7	
	comp=N,0.3nm,0.4s					
BSD			AML	AML	10 28 57.8	
	comp=E,0.2nm,0.6s					
BSD			AML	AML	10 28 58.0	
	comp=Z,0.3nm,0.5s					
BSD	**Bornholm Skovb**	**5.13 241**	*i* P	**Pn**	**10 27 24.0**	**-2.7**
BSD			*i* S	**Sn**	**10 28 23.7**	**-2.8**

*NEIC **20** 10:32:17.1±1.6, 19.15°N±0.06°×66.80°W±0.04, h26km±13km, Error ellipse: s-maj=9.0km s-min=5.1km az=167.0*
*RSPR **20** 10:32:19.2, 19.16°N×66.84°W, h28km±13km, MD2.9/13*
ISC 20 10:32:18.2±1.4, **19.11°N**±0.07°×**66.83°W**±0.03°, **h29km**, **n45**, σ0**52**/53, **9C-5D**, **Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.69 156**		*eP*		**Pb**		**10 32 32.1**	**+0.4**
EMPR	**Esperanza - Ma**	**0.69 156**		*eS*		**Sb**		**10 32 41.6**	**+0.8**
EMPR	**Esperanza - Ma**	**0.69 156**				**Pb**		**10 32 32.1**	**+0.4**
AGPR	**Aguadilla, PR**	**0.69 203**		*eP*		**Pb**		**10 32 31.4**	**-0.4**
AGPR	**Aguadilla, PR**	**0.69 203**		*eS*		**Sb**		**10 32 40.8**	**-0.2**
AGPR	**Aguadilla, PR**	**0.69 203**				**Pb**		**10 32 31.4**	**-0.4**
AGPR						**Sb**		**10 32 40.8**	**-0.2**
AOPR	**Arecibo Observ**	**0.76 175**		*eP*		**Pn**		**10 32 32.6**	**-0.4**
AOPR	**Arecibo Observ**	**0.76 175**				**Pn**		**10 32 32.5**	**-0.4**
MPR	**Mayaguez**	**0.94 199**				**Pn**		**10 32 35.1**	**-0.3**
LSP	**Las Mesas**	**0.96 195**		*eP*		**Pn**		**10 32 36.1**	**+0.4**
LSP	**Las Mesas**	**0.96 195**				**Pn**		**10 32 36.1**	**+0.4**
GCPR	**Guaynabo City**	**1.06 138**		*eP*		**Pn**		**10 32 36.7**	**-0.4**
GCPR	**Guaynabo City**	**1.06 138**		*eS*		**Sn**		**10 32 50.6**	**-0.3**
GCPR	**Guaynabo City**	**1.06 138**				**Pb**		**10 32 38.7**	**+0.7**
GCPR						**Sn**		**10 32 50.3**	**-0.6**
OBIP	**Obispado Ponce**	**1.08 169**		*eP*		**Pn**		**10 32 37.4**	**+0.1**
OBIP	**Obispado Ponce**	**1.08 169**		*eS*		**Sn**		**10 32 50.7**	**-0.6**
OBIP	**Obispado Ponce**	**1.08 169**				**Pn**		**10 32 37.4**	**+0.1**
OBIP						**Sn**		**10 32 50.7**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.12 194**		*eP*		**Pn**		**10 32 37.9**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.12 194**		*eS*		**Sn**		**10 32 52.0**	**-0.5**
CRPR	**Cabo Rojo, PR**	**1.12 194**				**Pn**		**10 32 37.9**	**-0.1**
CRPR						**Sn**		**10 32 52.0**	**-0.5**
GBPR	**Guanica, Bosqu**	**1.12 183**		*eP*		**Pn**		**10 32 38.4**	**+0.4**
GBPR	**Guanica, Bosqu**	**1.12 183**		*eS*		**Sn**		**10 32 52.9**	**+0.4**
GBPR	**Guanica, Bosqu**	**1.12 183**				**Pn**		**10 32 38.4**	**+0.4**
GBPR						**Sn**		**10 32 52.9**	**+0.4**
MLPR	**Magueyes Islan**	**1.15 190**		*eP*		**Pn**		**10 32 38.4**	**0.0**
MLPR	**Magueyes Islan**	**1.15 190**		*eS*		**Sn**		**10 32 53.1**	**0.0**
MLPR	**Magueyes Islan**	**1.15 190**				**Pn**		**10 32 38.3**	**0.0**
MLPR						**Sn**		**10 32 52.7**	**-0.4**
SJG	**San Juan**	**1.18 147**				**Pb**		**10 32 39.8**	**-0.2**
CBYP	**Canovanas**	**1.24 132**		*eP*		**Pn**		**10 32 39.1**	**-0.5**
CBYP	**Canovanas**	**1.24 132**		*eS*		**Sn**		**10 32 55.5**	**+0.1**
CBYP	**Canovanas**	**1.24 132**				**Pn**		**10 32 38.9**	**-0.7**
CBYP						**Sn**		**10 32 56.1**	**+0.7**
ICMP	**Isla Caja de M**	**1.25 167**		Pn		**Pn**		**10 32 40.7**	**+1.0**
IGPR	**InterUniversit**	**1.32 149**		*eP*		**Pn**		**10 32 40.9**	**+0.2**
IGPR	**InterUniversit**	**1.32 149**		*eS*		**Sn**		**10 32 56.9**	**-0.5**
HUMP	**Col San Antoni**	**1.33 136**		*eP*		**Pn**		**10 32 40.4**	**-0.5**
HUMP	**Col San Antoni**	**1.33 136**		*eS*		**Sn**		**10 32 57.7**	**0.0**
HUMP	**Col San Antoni**	**1.33 136**				**Pn**		**10 32 41.1**	**+0.2**
HUMP						**Sn**		**10 32 58.6**	**+0.9**
MTP	**Monte Pirata**	**1.57 129**		*eP*		**Pn**		**10 32 44.2**	**0.0**
MTP	**Monte Pirata**	**1.57 129**				**Pn**		**10 32 43.4**	**-0.7**
PCDR	**Punta Cana, DR**	**1.59 249**		Pn		**Pb**		**10 32 46.4**	**-0.5**
CUPR	**Culebra, Puert**	**1.66 118**		*eP*		**Pn**		**10 32 44.7**	**-0.7**
CUPR	**Culebra, Puert**	**1.66 118**				**Pn**		**10 32 44.6**	**-0.9**
STVI	**Saint Thomas**	**1.93 113**		Pn		**Pn**		**10 32 48.9**	**-0.1**
CDVI	**St. Croix**	**2.37 124**		Pn		**Pn**		**10 32 54.5**	**-0.6**
DR12	**Loma Pena Alta**	**2.44 263**		Pn		**Pn**		**10 32 55.8**	**-0.4**
SDDR	**Presa de Saban**	**4.22 269**		Pn		**Pn**		**10 33 22.1**	**+1.4**

*SJA **20** 10:37:26.8±1.1, 31.27°S×68.23°W, h23km±3km, ML3.7, MW3.9*
*GUC **20** 10:37:27.8±0.7, 31.23°S×68.18°W, h25km±16km, ML4.3*
*IDC **20** 10:37:28.1±3.3, 31.57°S×67.86°W, h0km, mb1 3.9/3, mb1mx3.6/23, mbtmp3.6/3, ML3.9/3, Error ellipse: s-maj=58.6km s-min=24.0km az=120.0*
*NEIC **20** 10:37:29.6±2.7, 31.42°S±0.05°×68.14°W±0.06°, h17km±7km, mb4.3/3, Md4.2(SJA), Error ellipse: s-maj=8.2km s-min=6.2km az=131.0*
ISC 20 10:37:25.5±1.3, **31.25°S**±0.03°×**68.06°W**±0.04°, **h4**km±9km, **n53**, σ1**96**/74, **2C-2D**, **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	**0.37 258**		*i* P		**Pg**		**10 37 33.5**	**+0.9**
RTLL				*i* S		**Sg**		**10 37 37.6**	**+0.2**
RTLL				IAML				10 37 39.2	
	comp=Z,11μm,0.4s								
CFA	**Coronel Fontan**	**0.38 204**		*i* P		**Pg**		**10 37 34.6**	**+1.7**
CFA				*eS*		**Sg**		**10 37 40.0**	**+2.0**
CFA				IAML				10 37 41.4	
	comp=Z,6μm,0.1s								
RTCV	**Cerro Valdivia**	**0.73 214**		*i* P		**Pg**		**10 37 39.7**	**0.0**
RTCV				IAML				10 37 55.2	
	comp=Z,694nm,0.6s								
ACCO	**Cerro Coronel**	**1.09 307**		*i* P		**Pg**		**10 37 46.4**	**-0.1**
ACCO				*eS*		**Sg**		**10 37 58.9**	**-1.8**
ACCO				IAML				10 38 01.2	
	comp=Z,2μm,4.5s								
RTLS	**Leoncito**	**1.19 242**		*i* P		**Pg**		**10 37 47.1**	**-1.3**
RTLS				*i* S		**Sg**		**10 37 59.6**	**-4.3**
RTLS				IAML				10 38 03.6	
	comp=Z,928nm,0.3s								
ACAN	**Cantantal**	**1.26 144**		*i* P		**Pn**		**10 37 51.2**	**+1.2**
ACAN				IAML				10 38 12.4	
	comp=Z,998nm,0.5s								
ASAL	**Salagasta**	**1.49 206**		*i* P		**Pn**		**10 37 52.9**	**-0.4**
ASAL				*i* S		**Sn**		**10 38 12.9**	**-0.3**
ASAL				IAML				10 38 15.4	
	comp=Z,856nm,0.4s								
ARCO	**CERRO ARCO**	**1.75 205**		*i* P		**Pn**		**10 37 57.6**	**+0.7**
ARCO				*i* S		**Sn**		**10 38 21.1**	**+1.3**
ARCO				IAML				10 38 23.4	
	comp=Z,1μm,0.7s								
AAGR	**Agrelo**	**1.94 200**		*i* P		**Pn**		**10 38 00.4**	**+0.9**
AAGR				IAML				10 38 40.0	
	comp=Z,708nm,0.4s								
CO03	**El Pedregal**	**2.30 280**		*i* P		**Pn**		**10 38 05.4**	**+1.1**
CO03				*i* S		**Sn**		**10 38 34.0**	**+0.8**
CO03				IAML				10 38 37.4	
	comp=N,3μm,0.6s								
CO03	**El Pedregal**	**2.30 280**				**Pn**		**10 38 05.5**	**+1.1**
CO03					Sn	**Sn**		**10 38 33.6**	**+0.4**
MRA	**San Martin**	**2.31 121**		*i* P		**Pb**		**10 38 07.2**	**-0.6**
MRA				IAML				10 38 52.1	
	comp=Z,402nm,0.5s								
VCA	**Vinchina**	**2.51 357**		*i* P		**Pb**		**10 38 10.1**	**-1.2**
VCA				IAML				10 38 48.5	
	comp=Z,2μm,0.3s								
CO02	**Combarbal**	**2.52 270**		*i* P		**Pn**		**10 38 09.2**	**+1.7**
CO02				*i* S		**Sn**		**10 38 40.7**	**+1.9**
CO02				IAML				10 38 43.9	
	comp=N,5μm,0.3s								
CO02	**Combarbal**	**2.52 270**				**Pn**		**10 38 09.2**	**+1.7**
CO02					Sn	**Sn**		**10 38 40.6**	**+1.9**
GO04	**Tololo Observa**	**2.60 294**		*eP*		**Pn**		**10 38 10.3**	**+1.7**
GO04				*i* S		**Sn**		**10 38 42.9**	**+2.1**
GO04				IAML				10 38 54.6	
	comp=N,4μm,0.3s								
GO04	**Tololo Observa**	**2.60 294**				**Pn**		**10 38 10.4**	**+1.8**
GO04					Sn	**Sn**		**10 38 44.3**	**+3.5**
VA03	**San Esteban**	**2.60 234**		*iP*		**Pn**		**10 38 10.6**	**+2.0**
VA03				*i* S		**Sn**		**10 38 43.3**	**+2.6**
VA03				IAML				10 38 47.2	
	comp=N,2μm,0.4s								
VA03	**San Esteban**	**2.60 234**				**Pn**		**10 38 10.5**	**+2.0**
VA03					Sn	**Sn**		**10 38 43.1**	**+2.4**
CO04	**Los Peladeros**	**2.61 252**		*eP*		**Pn**		**10 38 10.1**	**+1.2**
CO04				*i* S		**Sn**		**10 38 42.8**	**+1.6**
CO04				IAML				10 38 47.5	
	comp=E,2μm,0.4s								
CO04	**Los Peladeros**	**2.61 252**				**Pn**		**10 38 10.1**	**+1.2**
CO04					Sn	**Sn**		**10 38 42.0**	**+0.9**
FCH	**Farellones**	**2.80 222**		*eP*		**Pn**		**10 38 13.6**	**+2.0**
FCH				*i* S		**Sn**		**10 38 49.2**	**+3.2**
FCH				IAML				10 38 54.1	
	comp=E,462nm,0.4s								
PEL	**Peldehue**	**2.92 229**		*i* P		**Pn**		**10 38 14.4**	**+1.5**
PEL				*i* S		**Sn**		**10 38 50.8**	**+2.3**
PEL				IAML				10 38 59.0	
	comp=N,736nm,0.7s								
PEL	**Peldehue**	**2.92 229**				**Pn**		**10 38 13.9**	**+1.0**
TCA	**Tanti**	**2.96 93**		IAML				10 39 06.3	
	comp=N,774nm,0.6s								
CLCH	**Cerro Calan**	**3.00 224**		*eP*		**Pn**		**10 38 16.0**	**+2.0**
CLCH				*i* S		**Sn**		**10 38 53.2**	**+2.8**
CLCH				IAML				10 39 00.6	
	comp=N,2μm,0.5s								
ROC1	**El Roble**	**3.04 235**				**Pn**		**10 38 15.4**	**+0.6**
MT03	**Universidad Ad**	**3.05 222**		*eP*		**Pn**		**10 38 16.7**	**+2.0**
MT03				*i* S		**Sn**		**10 38 54.8**	**+3.0**
AC05	**El Transito**	**3.08 321**				**Pn**		**10 38 17.9**	**+2.8**
AC05					Sn	**Sb**		**10 38 59.7**	**+0.6**
MT05	**Renca**	**3.12 226**				**Pn**		**10 38 16.4**	**+0.9**
LMEL	**Las Melosas**	**3.16 214**		*iP*		**Pn**		**10 38 18.4**	**+2.1**
LMEL				*i* S		**Sn**		**10 38 60.0**	**+5.4**
LMEL				IAML				10 39 06.2	
	comp=E,271nm,0.6s								
MT02	**Curacav**	**3.29 232**				**Pn**		**10 38 18.2**	**+0.3**
MT02					Sn	**Sn**		**10 38 56.7**	**-0.8**
MT01	**Popeta**	**3.75 225**				**Pn**		**10 38 24.0**	**-0.2**
MT01					Sn	**Sn**		**10 39 06.6**	**-2.2**
AC04	**Llanos de Chal**	**4.01 318**		Pn		**Pn**		**10 38 29.1**	**+1.3**
GO03	**Copiap**	**4.11 332**				**Pn**		**10 38 32.1**	**+2.8**
BO02	**Sierra Bellavi**	**4.21 212**				**Pn**		**10 38 32.1**	**+1.5**
AC02	**Maricunga**	**4.50 348**		Pn		**Pn**		**10 38 38.5**	**+3.5**
GO05	**Huala**	**4.96 220**				**Pn**		**10 38 39.8**	**-1.1**
AC01	**Pan de Azucar**	**5.55 336**		Pn		**Pn**		**10 38 51.4**	**+2.3**
BI02	**San Fabin de**	**6.02 205**				**Pn**		**10 38 55.9**	**-0.3**
GO02	**Mina Guanaco**	**6.22 347**				**Pn**		**10 39 01.8**	**+3.4**
PB14	**IPOC Station P**	**6.92 342**				Pn		10 39 13.3	+5.2
BI03	**Tigo**	**6.94 215**		Pn		**Pn**		**10 39 05.5**	**-2.5**
PB15	**IPOC Station P**	**8.11 351**				Pn		10 39 29.0	+4.7
LC01	**Cunco**	**8.24 201**				**Pn**		**10 39 25.7**	**-0.3**
LVC	**Limon Verde**	**8.64 355**				**Pn**		**10 39 35.1**	**+3.3**
PLCA	**Paso Flores**	**9.67 191**		Pn		**Pn**		**10 39 45.0**	**-0.6**
	comp=E,0.3nm,0.3s,baz=12,slow=18,SNR=6.3								
PLCA				Lg		Lg		10 42 26.0	
	comp=E,0.2nm,0.3s,baz=238,slow=19,SNR=1.7								
PLCA	**Paso Flores**	**9.67 191**				**Pn**		**10 39 44.9**	**-0.7**
CPUP	**Villa Florida**	**10.61 65**		Pn		Pn		10 40 02.1	+3.7
	comp=E,0.4nm,0.3s,baz=241,slow=12,SNR=6.2								
CPUP					Sn	**Sn**		**10 41 56.2**	**-1.5**
	comp=E,0.7nm,0.3s,baz=241,slow=19,SNR=1.8								
CPUP					Lg	Lg		10 43 02.8	
	comp=E,0.7nm,0.3s,baz=200,slow=11,SNR=2.8								
LPAZ	**La Paz**	**14.90 360**		Pn		**P**		**10 41 04.4**	**+0.8**
	comp=E,0.1nm,0.3s,baz=162,slow=7.3,SNR=2.7								
LPAZ	**La Paz**	**14.90 360**		Pn		**P**		**10 41 02.8**	**-0.8**
LPAZ				IAmb		IAmb		10 41 12.5	
	comp=Z,3.0nm,0.6s								
SNAA	**Sanae**	**52.89 159**		P		**P**		**10 46 40.3**	**-2.0**
SNAA				IAmb		IAmb		10 48 37.5	
	comp=Z,6.2nm,1.5s								
QSPA	**South Pole Qui**	**58.98 180**		P		**P**		**10 47 24.5**	**-1.7**
QSPA				IAmb		IAmb		10 47 25.5	
	comp=Z,3.2nm,1.0s								

*NIED **20** 10:38:00,23.10°N×123.10°E, h5km, Mw3.9 Best double couple: M0 8.18000×10^14 NP1:φs=271.00000°, δ55.00000°, λ-91.00000°. NP2:φs93.00000°, δ35.00000°, λ-88.00000°.*
*IDC **20** 10:38:27.9±1.0, 23.12°N×123.12°E, h0km, mb3.6/6, mb1 3.8/8, mb1mx3.6/57, mbtmp3.7/8, ML3.4/2, MS2.9/7, Ms1 2.9/7, ms1mx2.6/37, Error ellipse: s-maj=41.7km s-min=19.7km az=77.0*
*JMA **20** 10:38:30.0±0.1, 23.11°N×123.08°E, h52km, M3.8*
ISC 20 10:38:28.9±2.1, **23.18°N**±0.07°×**123.14°E**±0.07°, **h7**km±12km, **n26**, σ0**65**/32, **mb3.6**/6, **MS3.0**/5, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**1.07 35**				P	**Pn**	**10 38 50.2**	**-0.1**
HATJ						S	**Sb**	**10 39 04.7**	**+0.8**
IRIF	**Iriomote-Funau**	**1.27 25**				P	**Pb**	**10 38 53.4**	**+0.2**
IRIF						S	**Sb**	**10 39 10.1**	**+0.3**
JYNG	**Yonagunijimaku**	**1.28 352**				P	**Pn**	**10 38 53.0**	**-0.2**
JYNG						S	**Sg**	**10 39 09.5**	**-0.5**
YOJ	**Yonaguni jima**	**1.28 355**				P	**Pn**	**10 38 53.1**	**-0.1**
YOJ						S	**Sg**	**10 39 09.2**	**-0.9**
JKRS	**Kuro-shima**	**1.32 37**				P	**Pg**	**10 38 54.2**	**-0.1**
JKRS						S	**Sg**	**10 39 11.1**	**-0.3**
JIJ	**Ishigaki jima**	**1.50 38**				P	**Pn**	**10 38 56.1**	**-0.1**
JIJ						S	**Sn**	**10 39 14.7**	**-1.3**
JISG	**Ishigakijimahi**	**1.77 37**				P	**Pn**	**10 38 59.8**	**-0.1**
JISG						S	**Sn**	**10 39 21.8**	**-0.8**
JTJ	**Tarama**	**2.04 44**				P	**Pn**	**10 39 04.1**	**+0.4**
JTJ						S	**Sn**	**10 39 28.6**	**-0.8**
JIRB	**Irabujima**	**2.48 48**				P	**Pn**	**10 39 09.8**	**+0.1**
JIRB						S	**Sn**	**10 39 39.0**	**-1.3**
JMJ2	**Miyako jima3**	**2.54 52**				P	**Pn**	**10 39 10.7**	**+0.2**
JMJ2						S	**Sn**	**10 39 40.9**	**-0.7**
JIKM	**Ikemajima**	**2.59 48**				P	**Pn**	**10 39 11.6**	**+0.3**
JIKM						S	**Sn**	**10 39 42.8**	**-0.3**
JOGS	**Gusukube**	**2.60 52**				P	**Pn**	**10 39 11.7**	**+0.3**
JOGS						*eS*	**Sn**	**10 39 42.7**	**-0.6**
KSRS	**Korea Array**	**14.81 15**		Pn		**Pn**		**10 42 00.2**	**+1.4**
	0.2nm,0.3s,baz=194,slow=13,SNR=9.8								
KSRS				LR		LR		10 48 10.6	
	comp=Z,46nm,18.1s,baz=180,slow=39								
DAV	**Davao City (W)**	**16.19 171**		LR		LR		10 48 32.2	
	comp=Z,11nm,20.0s,baz=312,slow=38								
MJAR	**Matsushiro Arr**	**18.63 41**		P		**Pn**		**10 42 47.5**	**+0.2**
	0.1nm,0.3s,baz=229,slow=9.3,SNR=9.8								
CMAR	**Chiang Mai Arr**	**23.09 263**		LR		LR		10 52 06.5	
	comp=Z,12nm,19.1s,baz=180,slow=36								
ASAJ	**Asahikawa**	**26.30 33**		LR		LR		10 55 09.9	
	comp=Z,40nm,19.6s,baz=188,slow=38								
KLR	**Kul'dur**	**26.87 13**		LR		LR		10 56 41.9	
	comp=Z,33nm,18.3s,baz=194,slow=41								
KAPI	**Kappang**	**28.22 187**		LR		LR		10 55 16.3	
	comp=Z,41nm,19.5s,baz=46,slow=36								
TLY	**Talaya**	**32.18 337**		LR		LR		10 57 27.3	
	comp=Z,25nm,18.3s,baz=137,slow=35								
MKAR	**Makanchi Array**	**40.30 316**		P		**P**		**10 46 07.4**	**+0.6**
	0.6nm,0.7s,baz=99,slow=8.9,SNR=3.8								
ZALV	**Zalesovo Beam**	**42.06 327**		P		**P**		**10 46 21.0**	**-0.1**
	0.7nm,0.5s,baz=130,slow=5.8,SNR=2.0								
WRA	**Warramunga Arr**	**44.23 165**		P		**P**		**10 46 38.4**	**-0.7**
	1.2nm,1.0s,baz=348,slow=9.1,SNR=4.2								
ASAR	**Alice Springs**	**47.73 167**		P		**P**		**10 47 06.8**	**+0.2**
	0.3nm,0.7s,baz=349,slow=7.7,SNR=8.3								
STKA	**Stephens Creek**	**57.52 161**		P		**P**		**10 48 18.3**	**-0.7**
	0.7nm,0.6s,baz=331,slow=6.7,SNR=4.5								
YKA	**Yellowknife Ar**	**83.19 23**		P		**P**		**10 50 56.1**	**+0.5**
	0.2nm,0.7s,baz=307,slow=4.7,SNR=3.5								

*LVSN **20** 10:40:37.0±3.8, 57.77°N×21.39°E, h0km±17km, ML2.6*
*UPP **20** 10:40:39.1±1.1, 57.79°N×21.38°E, h0km, ML2.6, Suspected explosion*
*IDC **20** 10:40:41.6±2.4, 57.99°N×21.40°E, h0km, mb1 2.9/4, mb1mx2.8/49, mbtmp2.8/4, ML2.3/4, Error ellipse: s-maj=24.5km s-min=8.7km az=167.0*
ISC 20 10:40:38.0±1.4, **57.74°N**±0.04°×**21.52°E**±0.03°, **h5**km±12km, **n31**, σ1**56**/42, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.43 104**		*eP*		**Pg**		**10 40 45.2**	**-1.1**
SLIT				IAmb		IAmb		10 41 17.2	
	comp=Z,2μm,0.6s								
SLIT	**Slitere, Latvi**	**0.43 104**		*eP*		**Pg**		**10 40 45.8**	**-0.4**
SLIT				*eS*		**Sg**		**10 40 53.3**	**+1.5**
SLIT				AML		AML		10 41 17.3	
	comp=N,1μm,0.6s								
SLIT				AML		AML		10 41 17.6	
	comp=E,2μm,0.7s								
SLIT				AML		AML		10 41 17.7	
	comp=Z,1μm,0.7s								
MTSE	**Matsula**	**1.56 50**		*eP*		**Pn**		**10 41 05.7**	**-0.6**
MTSE				*eS*		**Sn**		**10 41 26.6**	**-0.3**
GOTU	**Gotland**	**1.58 269**		P		**Pn**		**10 41 06.3**	**-0.4**
GOTU				S		**Sn**		**10 41 28.7**	**+1.3**
PBUR	**Paburge**	**1.73 172**		*eP*		**Pn**		**10 41 07.8**	**-0.9**
PBUR				IAmb		IAmb		10 41 34.4	
	comp=Z,26nm,0.5s								
PBUR	**Paburge**	**1.73 172**		*eP*		**Pn**		**10 41 10.1**	**+1.5**
PBUR				*eS*		**Sg**		**10 41 33.9**	**+0.3**
NYNU	**Nynaeshamn**	**2.25 306**		P		**Pn**		**10 41 16.5**	**+0.8**
NYNU				S		**Sn**		**10 41 44.1**	**+0.3**
NRTU	**Norrtaelje**	**2.46 323**		P		**Pn**		**10 41 19.3**	**+0.6**
BYXU	**Byxelkrok**	**2.48 261**		P		**Pn**		**10 41 20.1**	**+1.3**
AAL	**Aland**	**2.57 343**		P		**Pn**		**10 41 20.1**	**-0.1**
PABE	**Paberze**	**2.61 148**		*eP*		**Pn**		**10 41 21.1**	**+0.3**
PABE	**Paberze**	**2.61 148**		*eP*		**Pn**		**10 41 22.5**	**+1.7**
ASPU	**Aespoe**	**2.67 265**		P		**Pn**		**10 41 22.8**	**+1.3**
ASPU				S		**Sn**		**10 41 56.0**	**+1.8**
VIKU	**Vikbolandet**	**2.67 289**		P		**Pn**		**10 41 22.5**	**+0.9**
VSTU	**Vaestervik**	**2.68 270**		P		**Pn**		**10 41 22.9**	**+1.2**
VSU	**Vasula**	**2.86 73**		*eP*		**Pn**		**10 41 26.4**	**+2.2**
VSU	**Vasula**	**2.86 73**		*eP*		**Pn**		**10 41 25.2**	**+1.1**
VSU				AML		AML		10 41 28.5	
	comp=Z,57nm,0.2s								
VSU				*eS*		**Sb**		**10 42 04.8**	**+0.1**
VSU				AML		AML		10 42 09.2	
	comp=N,52nm,0.4s								
VSU				AML		AML		10 42 10.4	
	comp=E,62nm,0.3s								
MEF	**Metsahovi**	**2.90 30**		*eP*		**Pn**		**10 41 27.9**	**+3.2**
MEF				*eS*		**Sb**		**10 42 05.3**	**-0.5**
MEF				AML		AML		10 42 25.4	
	comp=N,67nm,0.5s								
MEF				AML		AML		10 42 25.7	
	comp=E,52nm,0.5s								
MEF				AML		AML		10 42 26.9	
	comp=Z,56nm,0.5s								
OSKU	**Oskarshamn**	**2.98 262**		P		**Pn**		**10 41 26.6**	**+0.8**
FLYU	**Flymyra**	**3.05 323**		P		**Pn**		**10 41 27.4**	**+0.6**
FIBU	**Brunna**	**3.07 317**		P		**Pn**		**10 41 28.0**	**+1.0**
BACU	**Backbrunna**	**3.13 315**		P		**Pn**		**10 41 28.9**	**+1.0**
LNKU	**Linkoeping**	**3.24 281**		P		**Pn**		**10 41 30.8**	**+1.4**
RAF	**Rauma**	**3.30 2**		*eP*		**Pn**		**10 41 30.8**	**+0.6**
RAF				AML		AML		10 42 24.4	
	comp=N,4.3nm,0.4s

TBI	**Tubuai**	**24.18**	**92**	*e*S	S	10 52 32.6	-13		
	comp=Z,123nm,25.8s								
TBI				*e*LR	LR	10 54 09.8			
	comp=Z,848nm,28.2s,baz=258								
PPT2	**Papeete2**	**25.57**	**79**	*e*S	S	10 52 58.0	-10		
	comp=Z,143nm,28.2s								
PPT2				*e*LQ	LQ	10 53 43.0			
	comp=Z,764nm,22.8s								
PPT2				*e*LR	LR	10 54 46.4			
	comp=Z,1µm,27.2s,baz=248								
PPT	**Papeete**	**25.58**	**79**	LR	LR	10 57 14.1			
	comp=Z,285nm,18.2s,baz=257,slow=33								
HNR	**Honiara**	**27.64**	**300**	LR	LR	10 58 38.5			
	comp=Z,664nm,18.9s,baz=158,slow=34								
TOO	**Toolangi**	**35.11**	**240**	P	**P**	**10 50 04.7**	**+0.5**		
TOO				IAmb	IAmb	10 50 11.7			
	comp=Z,6.2nm,0.8s								
CTAO	**Charters Tower**	**35.20**	**270**	P	**P**	**10 50 04.2**	**-1.1**		
CTAO				IAmb	IAmb	10 50 09.1			
	comp=Z,11nm,0.9s								
RKT	**Rikitea**	**37.35**	**96**	*e*LR	LR	11 00 06.5			
	comp=Z,539nm,29.5s								
TAOE	**Nuku Hiva Isla**	**37.60**	**71**	*e*LR	LR	11 00 12.2			
	comp=Z,412nm,29.4s								
STKA	**Stephens Creek**	**37.84**	**249**	P	**P**	**10 50 28.2**	**+0.5**		
	comp=Z,1.9nm,0.7s,baz=90,slow=10,SNR=8.3								
STKA				LR	LR	11 05 07.5			
	comp=Z,868nm,18.4s,baz=79,slow=35								
STKA	**Stephens Creek**	**37.84**	**249**	P	**P**	**10 50 27.7**	**+0.1**		
PMG	**Port Moresby**	**38.34**	**287**	P	**P**	**10 50 32.7**	**+0.8**		
COEN	**Coen**	**39.94**	**278**	P	**P**	**10 50 47.0**	**+1.6**		
COEN				IAmb	IAmb	10 50 48.2			
	comp=Z,14nm,1.1s								
PATS	**Pohnpei**	**40.29**	**318**	P	**P**	**10 50 46.2**	**-2.0**		
BBOO	**Buckleboo**	**42.51**	**248**	P	**P**	**10 51 05.2**	**-1.1**		
AS31	**Alice Springs**	**45.55**	**261**	P	**P**	**10 51 30.5**	**-0.4**		
ASAR	**Alice Springs**	**45.55**	**261**	P	**P**	**10 51 31.0**	**+0.1**		
	comp=Z,3.0nm,0.8s,baz=101,slow=6,9,SNR=37								
ASAR				PcP	**PcP**	**10 53 10.4**	**+0.8**		
	comp=Z,0.9nm,0.7s,baz=118,slow=3,7,SNR=5.7								
ASAR				LR	LR	11 09 56.9			
	comp=Z,738nm,18.9s,baz=113,slow=35								
WR0	**Warramunga Arr**	**45.87**	**266**	P	**P**	**10 51 32.5**	**-0.9**		
WR0				IAmb	IAmb	10 51 47.0			
	comp=Z,11nm,1.4s								
WB2	**Warramunga Arr**	**46.04**	**266**	P	**P**	**10 51 34.7**	**-0.1**		
WRAB	**Tennant Creek**	**46.05**	**266**	P	**P**	**10 51 33.3**	**-1.5**		
WRAB				IAmb	IAmb	10 51 35.0			
	comp=Z,7.3nm,1.0s								
WB0	**Warramunga Arr**	**46.05**	**266**	P	**P**	**10 51 34.9**	**0.0**		
WB0				IAmb	IAmb	10 51 36.1			
	comp=Z,6.5nm,0.7s								
WRA	**Warramunga Arr**	**46.05**	**266**	P	**P**	**10 51 34.1**	**-0.8**		
	comp=Z,2.8nm,0.5s,baz=103,slow=8.1,SNR=24								
WRA				PcP	**PcP**	**10 53 12.9**	**+1.5**		
	comp=Z,2.6nm,0.9s,baz=105,slow=3.6,SNR=5.3								
WRA				LR	LR	11 10 08.2			
	comp=Z,727nm,19.2s,baz=110,slow=35								
FORT	**Forrest**	**49.47**	**250**	P	**P**	**10 52 01.5**	**+0.2**		
MTN	**Manton Dam**	**51.24**	**273**	P	**P**	**10 52 12.4**	**-2.4**		
MTN				IAmb	IAmb	10 52 28.5			
	comp=Z,21nm,1.4s								
KNRA	**Kununurra**	**52.40**	**269**	P	**P**	**10 52 23.2**	**-0.3**		
KNRA				IAmb	IAmb	10 52 27.1			
	comp=Z,13nm,0.8s								
VNDA	**Vanda**	**53.76**	**186**	P	**P**	**10 52 36.8**	**+4.2**		
	comp=Z,1.7nm,1.0s,baz=13,slow=7.2,SNR=5.6								
VNDA				LR	LR	11 11 23.5			
	comp=Z,116nm,21.7s,baz=19,slow=31								
VNDA	**Vanda**	**53.76**	**186**	P	**P**	**10 52 34.1**	**+1.5**		
FITZ	**Fitzroy Crossi**	**54.46**	**265**	P	**P**	**10 52 39.7**	**+1.0**		
SIJI	**Sorong**	**56.28**	**287**	P	**P**	**10 52 50.9**	**-0.9**		
	comp=Z,9.2nm,0.6s,baz=207,slow=19,SNR=4.2								
MORW	**Morawa**	**60.03**	**250**	P	**P**	**10 53 18.2**	**+0.3**		
MORW				IAmb	IAmb	10 53 20.4			
	comp=Z,4.1nm,0.9s								
QSPA	**South Pole Qui**	**65.21**	**180**	P	**P**	**10 53 55.6**	**+3.5**		
MJAR	**Matsushiro Arr**	**74.86**	**323**	P	**P**	**10 54 50.7**	**-0.8**		
	comp=Z,1.4nm,0.5s,baz=150,slow=6.4,SNR=5.1								
MJAR				LR	LR	11 22 53.5			
	comp=Z,94nm,21.9s,baz=140,slow=32								
JKA	**Kamikawa-asahi**	**78.47**	**331**	P	**P**	**10 55 12.9**	**+1.3**		
ASAJ	**Asahikawa**	**78.47**	**331**	P	**P**	**10 55 12.9**	**+1.3**		
	comp=Z,10nm,0.9s,baz=241,slow=5.6,SNR=13								
YSS	**Yuzh-Sakhalins**	**80.65**	**333**	P	**P**	**10 55 23.6**	**+0.1**		
PETK	**Petropavlovsk-**	**80.98**	**344**	P	**P**	**10 55 25.4**	**+0.3**		
	comp=Z,10nm,0.9s,baz=140,slow=6.9,SNR=15								
PETK				LR	LR	11 28 35.9			
	comp=Z,118nm,18.6s,baz=239,slow=34								
ISA	**Isabella, Lake**	**81.07**	**44**	P	**P**	**10 55 27.0**	**+0.9**		
ISA				IAmb	IAmb	10 55 34.5			
	comp=Z,12nm,1.4s								
CMB	**Columbia Colle**	**81.42**	**41**	P	**P**	**10 55 28.7**	**+0.9**		
KSRS	**Korea Array**	**81.42**	**318**	P	**P**	**10 55 28.6**	**+0.9**		
	comp=Z,3.5nm,1.0s,baz=140,slow=6.6,SNR=12								
KSRS				LR	LR	11 30 37.5			
	comp=Z,84nm,18.2s,baz=122,slow=35								
OMMB	**Old Mammoth Mi**	**81.98**	**42**	P	**P**	**10 55 31.0**	**-0.2**		
OMMB				IAmb	IAmb	10 55 39.4			
	comp=Z,9.7nm,1.5s								
WAKR	**Walker**	**82.29**	**41**	P	**P**	**10 55 31.7**	**-0.9**		
WAKR				IAmb	IAmb	10 55 39.8			
	comp=Z,9.1nm,1.3s								
YBH	**Yreka Blue Hor**	**82.54**	**37**	LR	LR	11 25 58.8			
	comp=Z,62nm,19.5s,baz=230,slow=31								
BEKR	**Beckworth**	**82.63**	**40**	P	**P**	**10 55 35.2**	**+0.9**		
BEKR				IAmb	IAmb	10 55 42.6			
	comp=Z,9.9nm,1.5s								
YERR	**Yerington**	**82.72**	**41**	P	**P**	**10 55 35.6**	**+0.8**		
YERR				IAmb	IAmb	10 55 48.5			
	comp=Z,8.4nm,1.4s								
NVAR	**Mina Array Bea**	**82.92**	**42**	P	**P**	**10 55 37.3**	**+1.3**		
	comp=Z,1.9nm,1.0s,baz=224,slow=8.3,SNR=8.7								
NVAR				LR	LR	11 33 09.5			
	comp=Z,90nm,18.1s,baz=246,slow=36								
NV11	**Mina Array Sit**	**83.02**	**42**	P	**P**	**10 55 34.5**	**-1.8**		
NV11				IAmb	IAmb	10 55 43.3			
	comp=Z,5.9nm,1.4s								
PAHR	**Pah Rah Range**	**83.09**	**40**	P	**P**	**10 55 33.1**	**-3.6**		
PAHR				IAmb	IAmb	10 55 43.6			
	comp=Z,6.0nm,1.3s								
SNAA	**Sanae**	**83.59**	**178**	P	**P**	**10 55 40.7**	**+1.9**		
SNAA	**Sanae**	**83.59**	**178**	P	**P**	**10 55 37.6**	**-1.2**		
SNAA				IAmb	IAmb	10 55 47.0			
	comp=Z,8.7nm,1.1s								
USRK	**Ussuriysk Ar.**	**83.64**	**325**	P	**P**	**10 55 41.0**	**+1.7**		
	comp=Z,19nm,1.0s,baz=131,slow=3.5,SNR=21								
USA0B	**Ussuriysk Arra**	**83.64**	**325**	P	**P**	**10 55 39.2**	**0.0**		
VNA3	**Neumayer Olymp**	**83.66**	**176**	P	**P**	**10 55 40.8**	**+1.7**		
W13A	**Hualapai Mount**	**83.69**	**47**	P	**P**	**10 55 41.2**	**+1.2**		
W13A				IAmb	IAmb	10 55 47.2			
	comp=Z,4.1nm,1.2s								
SHPR	**Sheep Range**	**83.70**	**45**	P	**P**	**10 55 41.4**	**+1.5**		
SHPR				IAmb	IAmb	10 55 42.9			
	comp=Z,6.0nm,1.4s								
MOD	**Modoc Plateau**	**84.00**	**38**	P	**P**	**10 55 41.0**	**-0.3**		
VNA2	**Neumayer--Watz**	**84.12**	**176**	P	**P**	**10 55 43.8**	**+2.4**		
K05A	**Summer Lake**	**84.21**	**37**	P	**P**	**10 55 43.1**	**+0.6**		
PLCA	**Paso Flores**	**84.89**	**133**	LR	LR	11 25 04.9			
	comp=Z,57nm,20.7s,baz=263,slow=30								
PINE	**Pine Mountain**	**84.89**	**37**	P	**P**	**10 55 45.2**	**-0.6**		
PINE				IAmb	IAmb	10 55 47.6			
	comp=Z,9.1nm,1.4s								
X16A	**Lo Mia Camp, P**	**84.94**	**48**	P	**P**	**10 55 46.2**	**-0.2**		
X16A				IAmb	IAmb	10 55 53.0			
	comp=Z,7.3nm,1.4s								
LCMT	**Little Creek M**	**85.24**	**46**	P	**P**	**10 55 48.7**	**+1.0**		
WVOR	**Wild Horse Val**	**85.28**	**39**	P	**P**	**10 55 48.0**	**+0.3**		
WVOR				IAmb	IAmb	10 55 54.4			
	comp=Z,9.0nm,1.4s								
KLR	**Kul'dur**	**87.25**	**329**	P	**P**	**10 55 56.7**	**-0.4**		
	comp=Z,2.6nm,0.8s,baz=6.3,slow=1.2,SNR=10.0								
MNTX	**Cornudas Mount**	**87.75**	**54**	P	**P**	**10 55 59.6**	**-0.4**		
MNTX				IAmb	IAmb	10 56 05.8			
	comp=Z,4.8nm,1.4s								
TX32	**Lajitas Array**	**87.83**	**56**	IAmb	IAmb	10 56 07.3			
	comp=Z,5.3nm,1.4s								
TXAR	**Lajitas Array**	**87.83**	**56**	P	**P**	**10 56 01.8**	**+1.3**		
	comp=Z,1.1nm,1.0s,baz=214,slow=6.0,SNR=11								
TXAR				LR	LR	11 26 56.3			
	comp=Z,82nm,21.4s,baz=0.0,slow=30								
BNM	**Barren Site**	**88.13**	**51**	P	**P**	**10 56 01.8**	**-0.3**		
ANMO	**Albuquerque**	**88.67**	**50**	P	**P**	**10 56 05.8**	**+1.3**		
	comp=Z,0.5nm,0.4s,baz=198,slow=5.4,SNR=4.9								
ANMO	**Albuquerque**	**88.67**	**50**	P	**P**	**10 56 04.0**	**-0.5**		
ANMO				IAmb	IAmb	10 56 10.5			
	comp=Z,8.1nm,1.4s								
ENH	**Enshi**	**90.06**	**303**	P	**P**	**10 56 10.0**	**-1.0**		
MCMT	**McKenzie Canyo**	**90.07**	**39**	P	**P**	**10 56 10.8**	**-0.1**		
PBKT	**Sadao Pong**	**90.81**	**288**	P	**P**	**10 56 13.7**	**-0.9**		
PDAR	**Pinedale Array**	**90.85**	**42**	P	**P**	**10 56 15.1**	**+0.5**		
	comp=Z,0.3nm,0.5s,baz=193,slow=5.3,SNR=4.1								
PDAR				LR	LR	11 34 48.9			
	comp=Z,52nm,18.5s,baz=283,slow=34								
SEY	**Seymchan**	**91.06**	**346**	P	**P**	**10 56 15.7**	**+1.0**		
	comp=Z,6.8nm,0.3s,baz=127,slow=5.1,SNR=4.3								
YHH	**Holmes Hill**	**91.21**	**40**	P	**P**	**10 56 17.0**	**+0.8**		
ILAR	**Eielson Array**	**92.16**	**12**	P	**P**	**10 56 19.6**	**-0.2**		
	comp=Z,0.4nm,0.9s,baz=215,slow=3.0,SNR=5.0								
CMAR	**Chiang Mai Arr**	**93.36**	**289**	P	**P**	**10 56 28.4**	**+2.0**		
	comp=Z,3.7nm,0.8s,baz=138,slow=2.4,SNR=17								
CMAR				LR	LR	11 35 49.1			
	comp=Z,28nm,21.6s,baz=145,slow=34								
CHTO	**Chiang Mai**	**93.51**	**289**	P	**P**	**10 56 25.8**	**-1.4**		
LPAZ	**La Paz**	**98.62**	**112**	LR	LR	11 33 54.1			
	comp=Z,45nm,18.4s,baz=236,slow=31								
YKA	**Yellowknife Ar**	**99.67**	**24**	P	**Pdif**	**10 56 53.6**	**-0.4**		
	comp=Z,0.1nm,0.7s,baz=230,slow=5.6,SNR=2.2								
YKA				LR	LR	11 35 49.3			
	comp=Z,41nm,21.3s,baz=0.0,slow=32								
ZALV	**Zalesovo Beam**	**115.08**	**320**	PKP	**PKiKP**	**11 01 52.9**	**+1.3**		
	comp=Z,0.9nm,0.5s,baz=20,slow=4.6,SNR=1.6								
MKAR	**Makanchi Array**	**115.56**	**312**	PKP	**PKPdf**	**11 01 52.6**	**-0.3**		
	comp=Z,0.4nm,0.6s,baz=134,slow=1.8,SNR=1.8								
ARCES	**ARCESS Array B**	**133.55**	**350**	PKP	**PKPdf**	**11 02 26.3**	**-0.3**		
	comp=Z,1.4nm,0.6s,baz=352,slow=1.3,SNR=7.1								
FINES	**FINESS Array B**	**140.49**	**344**	PKP	**PKPdf**	**11 02 38.6**	**-0.9**		
	comp=Z,1.3nm,0.8s,baz=8.1,slow=2.0,SNR=2.9								
NOA	**NORSAR Array B**	**143.52**	**354**	PKhKP	PKPpre	11 02 41.3			
	comp=Z,0.5nm,0.8s,baz=18,slow=2.8,SNR=2.3								
AKASG	**Malin Array Be**	**147.75**	**330**	PKPbc	**PKPbc**	**11 02 54.8**	**-0.6**		
	comp=Z,4.0nm,0.6s,baz=40,slow=3.8,SNR=7.0								
AKBB	**Malin Array Si**	**147.75**	**330**	PKPdf	**PKPdf**	**11 02 52.0**	**-0.5**		
ILGA	**Ilgaz**	**150.55**	**310**		**PKiKP**	**11 03 03.9**	**+0.1**		
ILGA				PKPab	**PKPab**	**11 03 09.5**	**-0.3**		
BRTR	**Keskin Array B**	**151.12**	**308**	PKPbc	**PKiKP**	**11 03 05.0**	**0.0**		
	comp=Z,2.9nm,0.9s,baz=108,slow=2.7,SNR=8.9								
CLL	**Collm**	**152.74**	**348**	*e*PKPbc	**PKiKP**	**11 03 09.0**	**+1.4**		
CLL				*e*PKPab	**PKPab**	**11 03 19.0**	**+0.8**		
BRG	**Berggiesshubel**	**152.95**	**346**	*e*PKP	**PKPdf**	**11 03 00.5**	**-0.2**		
	comp=Z,2.1nm,0.6s								
BRG				*e*		11 03 15.1			
	comp=Z,2.8nm,0.8s								
TORD	**Torodi Ar. Bea**	**168.12**	**169**	PKPab	**PKPab**	**11 04 28.2**	**+2.4**		
	comp=Z,1.4nm,0.8s,baz=173,slow=4.2,SNR=5.6								

ZUR 20 10:51:01.6, 46°.66N×7°.58E, h8$^{km}_{\pm 1}$, MLh0.9/6, 2C-4D, Error ellipse: s-maj=2.0km s-min=1.0km az=101.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIMIS	**Wimmis**	**0.03**	**77**	⇑P*g*	P*g*	10 51 03.5	+0.2
WIMIS				⇑P*g*	P*g*	10 51 03.5	+0.2
	0.3nm,SNR=36						
WIMIS				S*g*	S*g*	10 51 04.8	+0.3
LKBD	**Leukerbad**	**0.27**	**173**	P*g*	P*g*	10 51 07.4	+0.3
LKBD				P*g*	P*g*	10 51 07.4	+0.3
	SNR=6.4						
LKBD				S*g*	S*g*	10 51 11.3	+0.5
LAUCH	**Lauchernalp**	**0.28**	**151**	P*g*	P*g*	10 51 07.5	+0.3
	SNR=9.7						
LAUCH				P*g*	P*g*	10 51 07.5	+0.3
LAUCH				S*g*	S*g*	10 51 11.6	+0.6
SENIN	**Lac Senin/Sane**	**0.35**	**213**	P*g*	P*g*	10 51 08.8	+0.2
SENIN				P*g*	P*g*	10 51 08.8	+0.2
	SNR=8.1						
SENIN				S*g*	S*g*	10 51 13.8	+0.6
HASLI	**Hasliberg/Brie**	**0.41**	**76**	S*g*	S*g*	10 51 15.6	+0.7
HASLI				S*g*	S*g*	10 51 15.6	+0.7
	SNR=5.2						
FIESA	**Fiescheralp**	**0.43**	**121**	⇓P*g*	P*g*	10 51 10.4	+0.3
	SNR=5.7						
FIESA				⇓P*g*	P*g*	10 51 10.4	+0.3
FIESA				S*g*	S*g*	10 51 16.3	+0.6
BIBA	**Brigerbad**	**0.43**	**146**	P*g*	P*g*	10 51 10.3	+0.3
BIBA				S*g*	S*g*	10 51 16.2	+0.6
TORNY	**Torny/Romont**	**0.44**	**285**	P*g*	P*g*	10 51 10.7	+0.5
GRIMS	**Grimsel Gerste**	**0.52**	**99**	⇓P*g*	P*g*	10 51 11.8	+0.2
	SNR=21						
GRIMS				⇓P*g*	P*g*	10 51 11.8	+0.2

VIE 20 10:52:41.3±0.2, 46°.71N×13°.79E, h0^{km}, mb-0.3/1, ml1.0/3, Error ellipse: s-maj=2.5km s-min=1.4km az=175.0 3 km S of Afritz Suspected Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYKA	**Terra Mystica**	**0.13**	**234**	*e*P*g*	P*g*	10 52 43.9	+0.1
	3.5nm,0.1s						
MYKA				*e*S*g*	S*g*	10 52 45.8	+0.4
	6.9nm,0.1s						
KBA	**Koelnbreinsper**	**0.48**	**321**	*e*P*g*	P*g*	10 52 50.4	-0.2
	0.4nm,0.2s						
KBA				*e*S*g*	S*g*	10 52 57.9	+1.0
	1.4nm,0.1s						
OBKA	**Obir**	**0.56**	**110**	*e*P*g*	P*g*	10 52 52.3	+0.3
	1.4nm,0.2s						
OBKA				*e*S*g*	S*g*	10 52 59.7	+0.5
	2.2nm,0.2s						

*IDC **20** 10:53:01.9±3.5, 37°.77N×72°.53E, h109^{km}±28^{km}, mb3.3/5, mb1 3.5/11, mb1mx3.2/52, mbtmp3.8/11, Error ellipse: s-maj=33.3km s-min=20.2km az=150.0*
*NNC **20** 10:53:06.8±8.4, 38°.36N×72°.26E, h0^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=65.7km s-min=46.8km az=172.0*
*SOME **20** 10:53:09.9, 39°.23N×73°.80E, h0^{km}*

ISC 20 10:53:01.2±0.7, 37°.82N±0°.06×72°.58E±0°.06, h100^{km}, n28, σ3°.22/36, mb3.4/5, 2C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.15**	**56**	Pn	**Pn**	**10 53 48.8**	**-0.3**
KSH				Sn	**Sn**	**10 54 20.3**	**-5.7**
KSH				smax	smax		
	comp=N,1µm,0.8s						
KSH				smax	smax		
	comp=E,880nm,0.7s						
AML	**Almayashu**	**4.39**	**11**	P	**Pn**	**10 54 08.9**	**+2.9**
	SNR=29						
UCH	**Uchtor**	**4.65**	**18**	P	**Pn**	**10 54 12.8**	**+3.4**
	SNR=28						
KZA	**Kyzart**	**4.72**	**25**	P	**Pn**	**10 54 13.3**	**+2.8**
	SNR=8.4						
EKS2	**Erkin-Say**	**4.92**	**10**	P	**Pn**	**10 54 16.7**	**+3.8**
	SNR=19						
MRKS	**Merke**	**4.95**	**6**	*e*P	**Pn**	**10 54 16.2**	**+3.0**
	comp=E,62nm,0.4s						
MRKS				*e*S	**Sn**	**10 55 03.9**	**-5.3**
	comp=E,19nm,0.7s						
AAK	**Ala-Archa**	**5.03**	**16**	P	**Pn**	**10 54 18.0**	**+3.6**
	comp=E,7.3nm,0.3s,baz=188,slow=9.6,SNR=17						
AAK				S	**Sn**	**10 55 13.3**	**+1.9**
	comp=E,2.1nm,0.3s,baz=295,slow=22,SNR=13						
AAK	**Ala-Archa**	**5.03**	**16**	⇓P	**Pn**	**10 54 17.4**	**+3.0**
	comp=E,18nm,0.5s						
AAK				⇓S	**Sn**	**10 55 12.1**	**+0.8**
	comp=E,20nm,0.7s						
KBK	**Karagaybulak**	**5.16**	**20**	P	Pn	10 54 21.1	+4.9
	SNR=6.7						
CHMS	**Chumysh**	**5.43**	**17**	P	**Pn**	**10 54 23.0**	**+3.3**
	SNR=9.4						
KK31	**Karatay Array**	**5.51**	**344**	⇑P	**Pn**	**10 54 23.5**	**+2.8**
	comp=E,13nm,0.3s,baz=176,slow=13,SNR=322						
KK31				⇑S	**Sn**	**10 55 21.6**	**-1.1**
	comp=E,17nm,0.5s,baz=169,slow=22,SNR=22						
TKM2	**Tokmak 2**	**5.59**	**23**	P	**Pn**	**10 54 26.7**	**+4.6**
	SNR=11						
TKM2	**Tokmak 2**	**5.59**	**23**	⇓P	**Pn**	**10 54 26.3**	**+4.2**
	comp=E,4.5nm,0.5s						
TKM2				⇓S	**Sn**	**10 55 27.8**	**+2.7**
	comp=E,5.2nm,0.6s						
KST	**Kastek**	**5.82**	**25**	*e*P	**Pn**	**10 54 27.9**	**+2.8**
	comp=E,8.9nm,0.8s						
KST				*e*S	**Sn**	**10 55 24.3**	**-6.2**
	comp=E,10nm,1.1s						
THN	**Thein Dam**	**5.96**	**153**	*e*P	**Pn**	**10 54 30.0**	**+3.1**
THN				*e*S	**Sn**	**10 55 33.0**	**-0.7**
TNSS	**Tian-Shan**	**6.19**	**31**	*e*P	**Pn**	**10 54 33.5**	**+3.2**
	comp=E,2.5nm,0.3s						
TNSS				*e*S	**Sn**	**10 55 33.5**	**-6.3**
	comp=E,2.6nm,0.5s						
BTLS	**Baital**	**7.30**	**8**	*e*P	Pn	10 54 59.0	+14
	comp=E,1.1nm,0.2s						
BTLS				*e*S	Sn	10 56 17.5	+11
	comp=E,8.8nm,0.8s						
GEYT	**Alibeck**	**11.43**	**275**	P	**Pn**	**10 55 40.9**	**-0.3**
	comp=E,0.7nm,0.3s,baz=106,slow=11,SNR=2.6						
GEYT				S	**Sn**	**10 57 42.1**	**-4.8**
	comp=E,2.0nm,0.3s,baz=64,slow=21,SNR=4.0						
MKAR	**Makanchi Array**	**11.49**	**36**	P	**Pn**	**10 55 42.6**	**+0.7**
	comp=E,0.2nm,0.3s,baz=226,slow=15,SNR=5.5						
KURBB	**Kurchatov Arra**	**13.49**	**16**	P	**Pn**	**10 56 06.4**	**-1.8**
	comp=E,0.1nm,0.3s,baz=206,slow=12,SNR=7.2						
BVAR	**Borovoye Array**	**15.28**	**355**	P	**Pn**	**10 56 31.1**	**-0.2**
	comp=E,0.3nm,0.3s,baz=160,slow=11,SNR=3.3						
AKTO	**Aktyubinsk**	**16.34**	**325**	P	**Pn**	**10 56 45.9**	**+1.4**
	comp=E,0.3nm,0.3s,baz=117,slow=13,SNR=4.5						
ZALV	**Zalesovo Beam**	**18.20**	**24**	P	**P**	**10 57 06.4**	**+0.4**
	comp=E,0.7nm,0.3s,baz=213,slow=11,SNR=12						
SONM	**Songino Array**	**26.56**	**57**	P	**P**	**10 58 31.0**	**+1.3**
	comp=E,0.5nm,0.5s,baz=250,slow=7.7,SNR=3.5						
TORD	**Torodi Ar. Bea**	**67.00**	**269**	P	**P**	**11 03 43.2**	**-0.4**
	comp=E,0.5nm,0.5s,baz=50,slow=4.9,SNR=4.8						
INK	**Inuvik**	**72.40**	**10**	P	**P**	**11 04 16.3**	**+0.5**
	comp=E,0.6nm,0.7s,baz=342,slow=3.2,SNR=4.1						
YKA	**Yellowknife Ar**	**79.86**	**3**	P	**P**	**11 04 58.2**	**-0.1**
	comp=E,0.2nm,0.5s,baz=352,slow=5.4,SNR=13						
WRA	**Warramunga Arr**	**81.64**	**123**	P	**P**	**11 05 07.3**	**-1.1**
	comp=E,0.4nm,0.6s,baz=325,slow=5.1,SNR=2.3						

*IDC **20** 11:08:45.9±1.3, 68°.12N×136°.50W, h0^{km}, mb3.6/2, mb1 3.8/5, mb1mx3.4/39, mbtmp3.6/5, ML3.4/3, Error ellipse: s-maj=23.6km s-min=10.1km az=167.0*
*NEIC **20** 11:08:47.5±1.3, 68°.03N±0°.04×136°.2W±0°.1, h16^{km}±6^{km}, Error ellipse: s-maj=8.0km s-min=3.0km az=221.0*
*AEIC **20** 11:08:47±1.4, 68°.09N±0°.06×136°.5W±0°.2, h22^{km}±4^{km}, Error ellipse: s-maj=8.6km s-min=7.7km az=132.0*
*PGC **20** 11:08:49.6±1.5, 68°.05N×136°.30W, h20^{km}, ML3.3/2, 104km Wnw of Fort McPherson, Nt Northern Yukon Territory, Canada*

ISC 20 11:08:45.8±0.7, 67°.97N±0°.04×136°.20W±0°.04, h10^{km}, n54, σ2°.12/73, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INK	**Inuvik**	**1.06**	**70**	P*g*	**Pn**	**11 09 07.7**	**+1.1**
	13nm,0.3s,baz=243,slow=22,SNR=278						
INK				L*g*	L*g*	11 09 22.4	
	102nm,0.3s,baz=144,slow=19,SNR=21						
INK	**Inuvik**	**1.06**	**70**	P	**Pn**	**11 09 08.2**	**+1.6**
INK				S	**Sn**	**11 09 23.1**	**+1.8**
INK	**Inuvik**	**1.06**	**70**		**Pn**	**11 09 07.7**	**+1.1**
INK					**Sn**	**11 09 23.3**	**+2.0**
EPYK	**Eagle Plains**	**1.62**	**188**	P	**Pg**	**11 09 16.8**	**+0.1**
	baz=5.3						
EPYK	**Eagle Plains**	**1.62**	**188**		**Pg**	**11 09 16.9**	**+0.1**
EPYK				Sn	**Sg**	**11 09 38.6**	**+0.9**
BM03	**Burnt Mountain**	**3.25**	**264**		**Pn**	**11 09 36.7**	**-0.1**
EGAK	**Eagle**	**3.77**	**214**		**Pn**	**11 09 45.3**	**+1.4**
FYU	**Fort Yukon**	**3.78**	**252**		**Pn**	**11 09 44.6**	**+0.7**
DAWY	**Dawson**	**4.13**	**200**	Pn	**Pn**	**11 09 50.9**	**+2.1**
DAWY				Sn	**Sn**	**11 10 38.0**	**+0.9**
DAWY	**Dawson**	**4.13**	**200**		**Pn**	**11 09 51.2**	**+

	comp=Z,876nm,0.6s									
SLIT						AML	AML	11 16 13.7		
	comp=N,838nm,0.5s									
SLIT	**Slitere, Latvi**	**0.34**	**221**	*eP*		**Pg**	**Pn**	**11 15 43.0**	**+0.4**	
SLIT				*eS*		**Sg**		**11 15 46.4**	**-0.7**	
MTSE	**Matsula**	**1.02**	**35**	*eP*		**Pg**		**11 15 55.1**	**-0.9**	
MTSE	**Matsula**	**1.02**	**35**	*eP*		**Pg**		**11 15 55.0**	**-0.9**	
MTSE				*eS*		**Sg**		**11 16 08.9**	**-0.2**	
PBUR	**Paburge**	**1.91**	**193**	*eP*		**Pn**		**11 16 09.8**	**-0.3**	
PBUR					IAML			11 16 39.7		
	comp=Z,38nm,0.1s									
PBUR	**Paburge**	**1.91**	**193**	*eP*		**Pn**		**11 16 10.0**	**-0.1**	
PBUR				*eS*		**Sb**		**11 16 37.1**	**+0.8**	
VSU	**Vasula**	**2.21**	**73**	*eP*		**Pn**		**11 16 14.7**	**+0.4**	
VSU				*eS*		**Sb**		**11 16 44.2**	**-0.9**	
VSU					IAML			11 16 47.7		
	comp=Z,90nm,0.1s									
VSU	**Vasula**	**2.21**	**73**	*eP*		**Pn**		**11 16 15.1**	**+0.9**	
VSU				*eS*		**Sb**		**11 16 44.2**	**-0.9**	
VSU					AML	AML		11 16 45.6		
	comp=Z,49nm,0.3s									
VSU					AML	AML		11 16 45.6		
	comp=N,90nm,0.4s									
VSU					AML	AML		11 16 50.1		
	comp=E,130nm,0.4s									
VSU	**Vasula**	**2.21**	**73**	*eP*		**Pn**		**11 16 14.9**	**+0.6**	
VSU				*eS*		**Sn**		**11 16 43.1**	**+0.8**	
GOTU	**Gotland**	**2.22**	**267**	P		**Pn**		**11 16 14.2**	**-0.1**	
GOTU				S		**Sg**		**11 16 46.7**	**-1.0**	
GOTU	**Gotland**	**2.22**	**267**	*eP*		**Pn**		**11 16 14.2**	**-0.1**	
PABE	**Paberze**	**2.48**	**163**	*eP*		**Pn**		**11 16 19.0**	**+1.0**	
PABE					IAML			11 16 39.7		
	comp=Z,4.9nm,0.1s									
PABE	**Paberze**	**2.48**	**163**	*eP*		**Pn**		**11 16 18.8**	**+0.8**	
PABE				*eS*		**Sn**		**11 16 50.9**	**+2.0**	
MEF	**Metsahovi**	**2.50**	**20**	*eP*		**Pn**		**11 16 20.0**	**+1.8**	
MEF				*eS*		**Sb**		**11 16 52.9**	**-0.5**	
MEF					AML	AML		11 16 54.0		
	comp=E,18nm,0.4s									
MEF					AML	AML		11 16 54.3		
	comp=N,10nm,0.4s									
MEF					AML	AML		11 16 54.3		
	comp=Z,14nm,0.4s									
MEF	**Metsahovi**	**2.50**	**20**	*eP*		**Pn**		**11 16 19.8**	**+1.6**	
MEF				*eS*		**Sn**		**11 16 50.2**	**+0.9**	
MEF					MSG			11 16 55.1		
	comp=Z,7.7nm,0.1s									
AAL	**Aland**	**2.69**	**330**	P		**Pn**		**11 16 20.2**	**-0.6**	
AAL				S		**Sb**		**11 16 59.8**	**+0.9**	
AAL	**Aland**	**2.69**	**330**	*eP*		**Pn**		**11 16 21.7**	**+0.8**	
AAL				*eS*		**Sn**		**11 16 54.0**	**-0.2**	
NYNU	**Nynaeshamn**	**2.71**	**297**	P		**Pn**		**11 16 20.8**	**-0.3**	
NYNU				S		**Sb**		**11 17 00.8**	**+1.3**	
NYNU	**Nynaeshamn**	**2.71**	**297**	*eP*		**Pn**		**11 16 20.8**	**-0.3**	
NRTU	**Norrtaelje**	**2.78**	**312**	P		**Pn**		**11 16 21.1**	**-0.9**	
NRTU	**Norrtaelje**	**2.78**	**312**	*eP*		**Pn**		**11 16 21.1**	**-0.9**	
ISAL	**Salakas**	**2.99**	**139**	*eP*		**Pn**		**11 16 25.1**	**+0.2**	
ISAL					IAML			11 17 12.8		
	comp=Z,4.7nm,0.4s									
BYXU	**Byxelkrok**	**3.12**	**261**	P		**Pn**		**11 16 26.9**	**+0.2**	
BYXU	**Byxelkrok**	**3.12**	**261**	*eP*		**Pn**		**11 16 26.9**	**+0.2**	
RAF	**Rauma**	**3.19**	**352**	*eP*		**Pn**		**11 16 28.3**	**+0.7**	
RAF					AML	AML		11 16 35.9		
	comp=N,7.1nm,0.8s									
RAF					AML	AML		11 17 18.8		
	comp=E,9.8nm,0.5s									
RAF					AML	AML		11 17 21.0		
	comp=Z,7.5nm,0.5s									
RAF	**Rauma**	**3.19**	**352**	*eP*		**Pn**		**11 16 27.9**	**+0.3**	
RAF				*eS*		**Sn**		**11 17 05.9**	**-0.4**	
RAF					MSG			11 17 19.2		
	comp=Z,3.4nm,0.3s									
IIGN	**Ignalina**	**3.20**	**141**	*eP*		**Pn**		**11 16 28.2**	**+0.5**	
IIGN					IAML			11 17 16.1		
	comp=Z,3.7nm,0.3s									
VIKU	**Vikbolandet**	**3.24**	**284**	P		**Pn**		**11 16 29.4**	**+1.0**	
VIKU	**Vikbolandet**	**3.24**	**284**	*eP*		**Pn**		**11 16 29.4**	**+1.0**	
VSTU	**Vaestervik**	**3.31**	**269**	P		**Pn**		**11 16 29.5**	**+0.2**	
VSTU	**Vaestervik**	**3.31**	**269**	*eP*		**Pn**		**11 16 29.5**	**+0.2**	
ASPU	**Aespoe**	**3.31**	**265**	P		**Pn**		**11 16 29.4**	**+0.1**	
ASPU	**Aespoe**	**3.31**	**265**	*eP*		**Pn**		**11 16 29.4**	**+0.1**	
FLYU	**Flymyra**	**3.36**	**314**	P		**Pn**		**11 16 29.3**	**-0.7**	
FLYU	**Flymyra**	**3.36**	**314**	*eP*		**Pn**		**11 16 29.3**	**-0.7**	
FIBU	**Brunna**	**3.44**	**308**	P		**Pn**		**11 16 31.2**	**+0.1**	
BACU	**Backbrunna**	**3.51**	**307**	P		**Pn**		**11 16 32.4**	**+0.3**	
BACU	**Backbrunna**	**3.51**	**307**	*eP*		**Pn**		**11 16 32.4**	**+0.3**	
OSKU	**Oskarshamn**	**3.62**	**262**	P		**Pn**		**11 16 34.1**	**+0.5**	
OSKU	**Oskarshamn**	**3.62**	**262**	*eP*		**Pn**		**11 16 34.1**	**+0.5**	
VJF	**Virojoki**	**3.65**	**41**	*eP*		**Pn**		**11 16 34.0**	**+0.1**	
VJF					MSG			11 17 37.6		
	comp=Z,5.0nm,0.2s									
OSTU	**Oestervaala**	**3.72**	**312**	P		**Pn**		**11 16 34.9**	**0.0**	
OSTU				S		**Sn**		**11 17 23.1**	**+3.8**	
OSTU	**Oestervaala**	**3.72**	**312**	*eP*		**Pn**		**11 16 34.9**	**0.0**	
LNKU	**Linkoeping**	**3.84**	**278**	P		**Pn**		**11 16 36.9**	**+0.3**	
LNKU	**Linkoeping**	**3.84**	**278**	*eP*		**Pn**		**11 16 36.9**	**+0.3**	
FIA1	**FINESS Array S**	**3.96**	**24**	*eP*		**Pn**		**11 16 38.5**	**+0.2**	
FIA1				*eS*		**Sn**		**11 17 25.0**	**-0.4**	
NRAU	**Nora**	**4.34**	**296**	P		**Pn**		**11 16 43.1**	**-0.3**	
NRAU	**Nora**	**4.34**	**296**	*eP*		**Pn**		**11 16 43.1**	**-0.3**	
PUL	**Pulkovo**	**4.39**	**61**	AML		AML		11 17 16.5		
	comp=Z,345nm,0.2s									
PUL					AML	AML		11 17 19.7		
	comp=N,296nm,0.3s									
PUL					AML	AML		11 17 20.0		
	comp=E,322nm,0.3s									
MICGM	**Minsk**	**4.46**	**137**	*e*		**Sb**		**11 17 48.0**	**-1.6**	
BSD	**Bornholm Skovb**	**5.13**	**241**	*eP*		**Pn**		**11 16 52.7**	**-1.6**	
BSD				*eS*		**Sn**		**11 17 50.4**	**-3.7**	
BSD					AML	AML		11 18 27.2		
	comp=E,0.4nm,0.9s									
BSD					AML	AML		11 18 30.3		
	comp=N,0.3nm,0.5s									
BSD					AML	AML		11 18 31.6		
	comp=Z,0.2nm,0.5s									
BSD	**Bornholm Skovb**	**5.13**	**241**	*i P*		**Pn**		**11 16 52.6**	**-1.7**	

*BEO **20** 11:21:33.5±0.5, 40°.82N×19°.91E, h0km, ML3.2/14*
*ATH **20** 11:21:33.7, 40°.97N×19°.95E, h16km±3km, ML3.3/10, Error ellipse: s-maj=9.4km s-min=1.8km az=133.0*
*TIR **20** 11:21:34.6, 40°.92N×20°.05E, h6km, Md3.5/6*
*PDG **20** 11:21:34.9±0.5, 40°.98N×19°.95E, h6km, ML3.2/14, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
*SKO **20** 11:21:34.6, 40°.86N×19°.90E, h0km*
*THE **20** 11:21:35.9, 40°.97N×20°.09E, h18km±1km, ML3.2/8, Error ellipse: s-maj=2.5km s-min=0.4km az=261.0*

ISC 20 11:21:34.5±1.1, 40°.93N±0°.02×19°.96E±0°.02, h6km±9km, n111, σ1§16/162, 20C-18D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
TIR	**Tirane**	**0.42**	**350**	*e*Pg		**Pb**	**11 21 43.8**		**-0.7**
TIR				*e*Sg		**Sb**	**11 21 49.4**		**-1.7**
TIR	**Tirane**	**0.42**	**350**	P		**Pb**	**11 21 43.7**		**-0.7**
TIR				S		**Sb**	**11 21 50.8**		**-0.3**
	3µm,0.6s								
TIR	**Tirane**	**0.42**	**350**	*i* PG		**Pb**	**11 21 43.8**		**-0.7**
TIR				*i* SG		**Sb**	**11 21 52.8**		**+1.7**
TIR	**Tirane**	**0.42**	**350**	⇓P		**Pb**	**11 21 43.6**		**-0.9**
TIR				⇑S		**Sb**	**11 21 52.3**		**+1.2**
VLO	**Vlora**	**0.58**	**218**	*i* PG		**Pg**	**11 21 46.7**		**+1.0**
VLO				*i* SG		**Sb**	**11 21 57.7**		**+2.2**
OHR	**Ohrid**	**0.66**	**74**	⇑*i*Pg		**Pg**	**11 21 47.3**		**+0.1**
OHR				*i* Sg		**Sb**	**11 21 57.9**		**0.0**
OHR				*e*Lg		Lg	11 21 58.9		
	comp=N,749nm,0.4s								
OHR	**Ohrid**	**0.66**	**74**	⇑*i*Pg		**Pg**	**11 21 47.3**		**+0.1**
OHR				*i* Sg		**Sb**	**11 21 57.9**		**0.0**
OHR				*e*Lg		Lg	11 21 58.9		
	comp=N,749nm,0.4s								
PHP	**Peshkopia**	**0.84**	**25**	P		**Pg**	**11 21 50.4**		**-0.2**
PHP				S		**Sg**	**11 22 00.9**		**-0.6**
	comp=N,4µm,0.3s								
PHP	**Peshkopia**	**0.84**	**25**	*i* PG		**Pg**	**11 21 50.1**		**-0.5**
PHP				*i* SG		**Sn**	**11 22 04.3**		**-1.3**
NEST	**Nestorio**	**0.97**	**122**	P		**Pg**	**11 21 52.5**		**-0.8**
NEST				S		**Sg**	**11 22 06.1**		**+0.2**
	comp=N,770nm,0.5s								
NEST	**Nestorio**	**0.97**	**122**	P		**Pg**	**11 21 52.4**		**-0.8**
NEST					AML	AML	11 22 16.6		
	comp=E,1795µm,0.3s								
NEST					AML	AML	11 22 17.8		
	comp=N,1255µm,0.3s								
SRN	**Sarande**	**1.05**	**178**	P		**Pg**	**11 21 55.2**		**+0.6**
SRN	**Sarande**	**1.05**	**178**	*i* PG		**Pg**	**11 21 54.8**		**+0.1**
SRN				*i* SG		**Sn**	**11 22 11.8**		**+1.2**
FNA	**Florina**	**1.08**	**97**	P		**Pg**	**11 21 54.6**		**-0.7**
FNA				S		**Sg**	**11 22 08.1**		**-1.3**
	comp=N,4µm,0.4s								
FNA	**Florina**	**1.08**	**97**	*i* PG		**Pg**	**11 21 54.3**		**-1.0**
FNA				*i* SG		**Sb**	**11 22 11.1**		**+1.0**
FNA	**Florina**	**1.08**	**97**	P		**Pg**	**11 21 54.6**		**-0.7**
FNA				S		**Sb**	**11 22 10.3**		**+0.2**
FNA					AML	AML	11 22 13.3		
	comp=E,4756µm,0.3s								
FNA					AML	AML	11 22 15.8		
	comp=N,10403µm,0.6s								
PUK	**Puka**	**1.11**	**357**	*i* PG		**Pn**	**11 21 56.7**		**0.0**
PUK				*i* SG		**Sn**	**11 22 13.2**		**+0.7**
PENT	**Pentalofos**	**1.16**	**129**	P		**Pg**	**11 21 55.9**		**-0.8**
PENT				S		**Sg**	**11 22 11.5**		**-0.3**
	comp=N,822nm,0.7s								
PENT	**Pentalofos**	**1.16**	**129**	P		**Pg**	**11 21 56.2**		**-0.6**
PENT					AML	AML	11 22 21.6		
	comp=N,1781µm,0.7s								
PENT					AML	AML	11 22 21.8		
	comp=E,1568µm,0.6s								
ULC	**Ulcinj**	**1.16**	**333**	⇑*i*Pg		**Pg**	**11 21 55.9**		**-1.0**
ULC				*i* Sg		**Sn**	**11 22 13.7**		**+0.1**
KEK	**Kerkira**	**1.22**	**186**	P		**Pn**	**11 21 57.7**		**-0.5**
KEK				S		**Sg**	**11 22 15.1**		**+1.3**
KEK					AML	AML	11 22 19.1		
	comp=N,1863µm,0.3s								
KEK					AML	AML	11 22 22.9		
	comp=E,1911µm,0.2s								
DRME	**Dracevica, Mon**	**1.38**	**335**	*e*Pn		**Pg**	**11 22 00.7**		**-0.4**
DRME	**Dracevica, Mon**	**1.38**	**335**	⇑*i*Pg		**Pn**	**11 21 59.5**		**-0.9**
DRME				*i* Sg		**Sn**	**11 22 20.5**		**+1.5**
IGT	**Igoumenitsa**	**1.43**	**168**	P		**Pn**	**11 22 01.1**		**+0.2**
IGT				S		**Sn**	**11 22 18.4**		**-1.6**
	comp=E,1µm,0.6s								
IGT	**Igoumenitsa**	**1.43**	**168**	P		**Pn**	**11 22 01.8**		**+0.9**
IGT					AML	AML	11 22 25.7		
	comp=E,2553µm,0.6s								
IGT					AML	AML	11 22 25.8		
	comp=N,2909µm,0.6s								
BCI	**Bajram Curri**	**1.44**	**3**	*i* PN		**Pg**	**11 22 02.4**		**+0.3**
BCI				*i* SN		**Sg**	**11 22 25.3**		**+4.6**
JAN	**Janina**	**1.44**	**152**	P		**Pn**	**11 22 00.2**		**-1.0**
KPRO	**Kipourio**	**1.45**	**132**	P		**Pn**	**11 22 00.1**		**-1.2**
KPRO				S		**Sn**	**11 22 19.5**		**-1.2**
	comp=N,888nm,0.7s								
KPRO	**Kipourio**	**1.45**	**132**	P		**Pn**	**11 22 00.9**		**-0.4**
KPRO					AML	AML	11 22 36.8		
	comp=E,2002µm,0.6s								
KPRO					AML	AML	11 22 38.0		
	comp=N,1102µm,0.5s								
MEV	**Metsovon**	**1.50**	**139**	P		**Pn**	**11 22 01.9**		**-0.2**
MEV	**Metsovon**	**1.50**	**139**	P		**Pn**	**11 22 02.1**		**0.0**
KZN	**Kozani**	**1.51**	**114**	P		**Pn**	**11 22 01.2**		**-1.0**
KZN	**Kozani**	**1.51**	**114**	P		**Pn**	**11 22 02.1**		**-0.1**
KZN					AML	AML	11 22 34.7		
	comp=E,1818µm,0.5s								
KZN					AML	AML	11 22 35.3		
	comp=N,1386µm,0.5s								
SKO	**Skopje**	**1.52**	**46**	*e*Pg		**Pb**	**11 22 02.9**		**-0.3**
SKO				*e*Sg		**Sg**	**11 22 22.9**		**-0.6**
SKO	**Skopje**	**1.52**	**46**	⇓*i*Pn		**Pg**	**11 22 04.6**		**+0.9**
SKO				*i* Sn		**Sg**	**11 22 24.6**		**+1.2**
SKO				*e*Lg		Lg	11 22 27.4		
	comp=E,58nm,0.8s								
SKO	**Skopje**	**1.52**	**46**	⇓*i*Pn		**Pg**	**11 22 04.6**		**+0.9**
SKO				*i* Sn		**Sg**	**11 22 24.6**		**+1.2**
SKO				*e*Lg		Lg	11 22 27.4		
	comp=E,58nm,0.8s								
BUM	**Brajici-Budva**	**1.59**	**330**	⇓*i*Pg		**Pb**	**11 22 03.4**		**-0.9**
BUM				*i* Sg		**Sg**	**11 22 27.0**		**+1.5**
PDG	**Podgorica**	**1.59**	**341**	*e*Pg		**Pg**	**11 22 04.7**		**-0.3**
PDG				*e*Sg		**Sg**	**11 22 27.4**		**+1.8**
PDG	**Podgorica**	**1.59**	**341**	⇓P		**Pg**	**11 22 05.0**		**+0.1**
PDG				⇑S		**Sg**	**11 22 27.9**		**+2.3**
PDG	**Podgorica**	**1.59**	**341**	*e*Pn		**Pg**	**11 22 04.6**		**-0.4**
TTG	**Podgorica**	**1.59**	**341**	⇓*i*Pg		**Pn**	**11 22 02.9**		**-0.3**
TTG				*i* Sg		**Sg**	**11 22 26.7**		**+1.1**
PVY	**Plav**	**1.66**	**360**	⇑*i*Pn		**Pb**	**11 22 04.6**		**-1.0**
PVY				*i* Sn		**Sg**	**11 22 29.0**		**+1.0**
KTI	**Kastanea**	**1.73**	**107**	P		**Pn**	**11 22 02.4**		**-2.8**
CEME	**Cevo**	**1.79**	**335**	⇓*i*Pn		**Pb**	**11 22 06.8**		**-1.0**
CEME				*i* Pn		**Sg**	**11 22 32.0**		**-0.2**
STIP	**Stip**	**1.84**	**65**	*i* Pn		**Pg**	**11 22 09.8**		**-0.1**
STIP	**Stip**	**1.84**	**65**	*i* Pn		**Pg**	**11 22 09.8**		**-0.1**
HCY	**Herceg Novi**	**1.87**	**325**	*e*Pn		**Pn**	**11 22 07.0**		**-0.1**
HCY	**Herceg Novi**	**1.87**	**325**	⇓*i*Pn		**Pn**	**11 22 07.2**		**+0.1**
HCY				*i* Sn		**Sg**	**11 22 34.0**		**-0.7**
CGL1	**Ceglie Messapi**	**1.91**	**263**	*e*Pn		**Pn**	**11 22 06.9**		**-0.7**
CGL1				Sn		**Sg**	**11 22 36.2**		**+0.5**
IVA	**Berane**	**1.94**	**359**	⇓*i*Pn		**Pb**	**11 22 09.2**		**-1.2**
IVA				*i* Sn		**Sg**	**11 22 35.6**		**-1.3**
KOME	**Kolasin**	**1.95**	**350**	⇑*i*Pn		**Pb**	**11 22 08.9**		**-1.6**
KOME				*i* Sn		**Sg**	**11 22 36.0**		**-1.1**
NKME	**Niksic**	**1.98**	**338**	⇑*i*Pn		**Pb**	**11 22 09.6**		**-1.5**
NKME				*i* Sn		**Sg**	**11 22 36.4**		**-1.9**
VAY	**Valandovo**	**2.01**	**78**	*e*Pn		**Pn**	**11 22 09.8**		**+0.8**
VAY				*e*Sn		**Sb**	**11 22 36.2**		**-0.5**
VAY	**Valandovo**	**2.01**	**78**	⇑*i*Pn		**Pn**	**11 22 09.8**		**+0.8**
VAY				*i* Sn		**Sg**	**11 22 40.6**		**+1.5**
VAY				*e*Lg		Lg	11 22 41.2		
	comp=N,190nm,0.6s								
VAY	**Valandovo**	**2.01**	**78**	⇑*i*Pn		**Pn**	**11 22 09.8**		**+0.8**
VAY				*i* Sn		**Sg**	**11 22 40.6**		**+1.5**
VAY				*e*Lg		Lg	11 22 41.2		
	comp=N,190nm,0.6s								
NKY	**Niksic**	**2.02**	**339**	⇑*i*Pn		**Pn**	**11 22 09.4**		**+0.2**
NKY				*i* Sn		**Sb**	**11 22 36.2**		**-0.8**
TAR1	**Taranto**	**2.07**	**260**	*e*Pn		**Pn**	**11 22 10.5**		**+0.7**
LIT	**Litokhoron**	**2.10**	**112**	P		**Pn**	**11 22 11.3**		**+1.0**
LIT					AML	AML	11 22 51.4		
	comp=N,675µm,0.8s								
LIT					AML	AML	11 22 52.8		
	comp=E,647µm,0.5s								
TREB	**Trebinje**	**2.15**	**327**	*e*Pn		**Pn**	**11 22 10.7**		**-0.3**
TREB	**Trebinje**	**2.15**	**327**	*e*Pn		**Pn**	**11 22 10.6**		**-0.4**
LKD2	**Lefkada island**	**2.21**	**166**	P		**Pn**	**11 22 12.1**		**+0.4**
LKD2				S		**Sn**	**11 22 39.0**		**-0.3**
	comp=E,435nm,0.7s								
LKD2	**Lefkada island**	**2.21**	**166**	P		**Pn**	**11 22 12.1**		**+0.4**
LKD2					AML	AML	11 22 53.4		
	comp=N,787µm,0.4s								
LKD2					AML	AML	11 22 56.7		
	comp=E,869µm,0.7s								
KNT	**Kendrikon**	**2.23**	**83**	P		**Pn**	**11 22 12.7**		**+0.6**
KNT					AML	AML	11 22 49.7		
	comp=N,516µm,0.8s								
KNT					AML	AML	11 22 55.5		
	comp=E,294µm,1.1s								
BRY	**Bratogost**	**2.24**	**332**	*e*Pn		**Pn**	**11 22 12.7**		**+0.4**
BRY	**Bratogost**	**2.24**	**332**	⇑*i*Pn		**Pn**	**11 22 13.2**		**+0.9**
BRY				*i* Sn		**Sb**	**11 22 42.8**		**-0.6**
SJES	**Sjenica**	**2.33**	**0**	*e*Pn		**Pb**	**11 22 15.5**		**-1.5**
SJES				*e*Sn		**Sb**	**11 22 46.6**		**+0.5**
BARS	**Barje**	**2.34**	**36**	*e*Pn		**Pn**	**11 22 14.4**		**-0.9**
BARS	**Barje**	**2.34**	**36**	*e*Pn		Pg	11 22 29.4	+10	
BARS				*e*Sn		**Sb**	**11 22 45.4**		**-0.8**
EVGI	**Lefkada island**	**2.37**	**167**	P		**Pn**	**11 22 14.0**		**+0.1**
UPM	**Unac-Piva**	**2.40**	**341**	*e*Pn		**Pb**	**11 22 16.7**		**-1.6**
UPM	**Unac-Piva**	**2.40**	**341**	⇓*i*Pn		**Pn**	**11 22 15.5**		**+0.9**
UPM				*i* Sn		**Sb**	**11 22 46.8**		**-1.5**
PLE	**Pljevlja**	**2.44**	**350**	⇓*i*Pn		**Pn**	**11 22 15.9**		**+0.9**
PLE				*i* Sn		**Sb**	**11 22 47.2**		**-1.9**
SELS	**Selova**	**2.44**	**20**	*e*Pn		**Pn**	**11 22 15.6**		**+0.6**
BOSS	**Bosilegrad**	**2.45**	**49**	*e*Pn		**Pn**	**11 22 15.5**		**+0.4**
BOSS				*e*Sn		**Sb**	**11 22 48.2**		**-1.2**
MATE	**Matera**	**2.49**	**265**	⇑P		**Pb**	**11 22 19.6**		**0.0**
MATE				⇓S		**Sg**	**11 22 53.8**		**-0.6**
MAKR	**Makrakomi, Fth**	**2.54**	**138**	P		**Pn**	**11 22 18.4**		**+2.1**
STON	**Ston**	**2.57**	**320**	*e*Pn		**Pn**	**11 22 15.8**		**-0.9**
AGG	**Agios Georgios**	**2.64**	**136**	P		**Pn**	**11 22 19.7**		**+2.0**
IVAS	**Ivanjica**	**2.65**	**3**	*e*Pn		**Pn**	**11 22 18.2**		**+0.4**
BBLS	**Lazići**	**2.96**	**352**	*e*Pn		**Pn**	**11 22 23.1**		**+0.9**
BBLS	**Lazići**	**2.96**	**352**	*e*Pn		**Pn**	**11 22 23.3**		**+1.1**
VTS	**Vitosha**	**2.97**	**54**	*e*Pn		**Pn**	**11 22 23.1**		**+0.7**
VTS				*e*Sn		**Sn**	**11 22 59.1**		**+0.7**
VTS	**Vitosha**	**2.97**	**54**	⇓P		**Pn**	**11 22 23.1**		**+0.7**
VTS				⇓S		**Sn**	**11 22 59.5**		**+1.1**
GRUS	**Gruza**	**3.01**	**10**	*e*Pn		**Pn**	**11 22 25.1**		**+2.4**
PAIG	**Paliouri**	**3.01**	**108**	P		**Pn**	**11 22 22.8**		**+0.1**
TIP	**Timpagrande**	**3.02**	**236**	⇑P		**Pn**	**11 22 22.9**		**0.0**
ZAPS	**Zavoj**	**3.07**	**39**	*e*Pn		**Pn**	**11 22 24.7**		**+1.1**
ZAPS				*e*Sn		**Sb**	**11 23 04.2**		**-3.2**
DIVS	**Divibare**	**3.17**	**0**	*e*Pn		**Pn**	**11 22 26.0**		**+1.0**
DIVS	**Divibare**	**3.17**	**0**	*e*Pn		**Pn**	**11 22 25.7**		**+0.7**
HAPS	**Han Pijesak,Bl**	**3.24**	**347**	*e*Pn		**Pn**	**11 22 26.2**		**+0.2**
HAPS	**Han Pijesak,Bl**	**3.24**	**347**	*e*Pn		**Pn**	**11 22 26.0**		**0.0**
TRUS	**Trudelj**	**3.31**	**6**	*e*Pn		**Pn**	**11 22 27.8**		**+1.0**
ZAGS	**Zajecar**	**3.34**	**30**	*e*Pn		**Pn**	**11 22 27.7**		**+0.5**
ZAGS				*e*Sn		**Sn**	**11 23 09.5**		**+2.4**
TEKS	**Tekeris**	**3.63**	**355**	*e*Pn		**Pn**	**11 22 32.4**		**+1.1**
TEKS	**Tekeris**	**3.63**	**355**	*e*Pn		**Pn**	**11 22 29.6**		**-1.7**
KUBS	**Kucevo**	**3.70**	**19**	*e*Pn		**Pn**	**11 22 32.2**		**-0.1**
MDVR	**Moldovita**	**4.06**	**18**	⇑P		**Pn**	**11 22 37.9**		**+0.7**
FRGS	**Fruska Gora**	**4.23**	**359**	*e*Pn		**Pn**	**11 22 40.0**		**+0.5**
FRGS	**Fruska Gora**	**4.23**	**359**	*e*Pn		**Pn**	**11 22 39.5**		**0.0**
PLVB	**Pleven**	**4.25**	**53**	⇓P		**Pn**	**11 22 40.8**		**+1.1**
BLY	**Banja Luka**	**4.33**	**333**	*e*Pn		**Pn**	**11 22 39.9**		**-0.9**
HERR	**Herculane**	**4.34**	**24**	⇑P		**Pn**	**11 22 41.1**		**+0.1**
BZS	**Buzias**	**4.84**	**14**	⇓P		**Pn**	**11 22 49.1**		**+1.3**
GZR	**Gura Zlata**	**4.91**	**24**	⇑P		**Pn**	**11 22 50.4**		**+1.5**
MORH	**Mrgy, Hungar**	**5.37**	**350**	*e*Pn		**Pn**	**11 22 59.0**		**+3.9**
ARR	**Arges**	**5.60**	**36**	⇓P		**Pn**	**11 23 00.1**		**+1.7**
VOIR		**5.84**	**38**	⇑P		**Pn**	**11 23 03.5**		**+1.7**
CRES	**Cresnjev**	**5.89**	**328**	*e*Pn		**Pn**	**11 23 01.7**		**-0.6**
DRGR		**6.19**	**18**	⇓P		**Pn**	**11 23 08.9**		**+2.5**
CEY	**Cerknica**	**6.27**	**322**	*e*Pn		**Pn**	**11 23 07.1**		**-0.5**
VRI	**Vrincioaia**	**6.97**	**43**	⇑P		**Pn**	**11 23 18.4**		**+1.2**

*IDC **20** 11:24:20.4±2.2, 2°.36N×92°.56E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.4/49, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=76.2km s-min=30.7km az=50.0*
*DJA **20** 11:24:21.1±0.6, 2°.N±11°×9°.3E±°, h10km, M4.2/7, mb4.2/7, MLv4.2/6*
*NEIC **20** 11:24:24.7±1.9, 2°.4N±0°.2×92°.6E±0°.1, h30km±3km, mb4.4/9, Error ellipse: s-maj=24.0km s-min=14.2km az=197.0*

ISC 20 11:24:25.4±0.9, 2°.4N±0°.1×92°.73E±0°.08, h35km, n25, σ1§50/33, mb4.2/8, Off west coast of northern Sumatera

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

PPT2				*e*LR	LR	12 06 22.7		
	comp=Z,782nm,28.5s,baz=176							
PPT2	**Papeete2**	**38.74**	**351**	*e*T	T	12 36 50.0		
	comp=Z,4.5nm,0.3s							
TIAR	**Tiarei**	**38.76**	**351**	*e*T	T	12 36 47.9		
	comp=Z,3.1nm,0.3s							
PPT	**Papeete**	**38.77**	**351**	LR	LR	12 07 19.6		
	comp=Z,335nm,18.5s,baz=170,slow=29							
VAH	**Vaihoa**	**40.94**	**354**	*e*T	T	12 39 42.1		
	comp=Z,53nm,0.3s							
PMOR	**Pomariorio Ree**	**41.19**	**354**	*e*T	T	12 40 00.5		
	comp=Z,5.3nm,0.3s							
TAOE	**Nuku Hiva Isla**	**47.26**	**5**	*e*LR	LR	12 10 28.3		
	comp=Z,496nm,28.7s							
VNA3	**Neumayer Olymp**	**48.84**	**162**	P	**P**	**11 57 24.1**	**-1.1**	
H03S2	**Juan Fernandez**	**48.90**	**91**	T	T	12 49 37.2		
	baz=220,slow=74,SNR=28							
H03S1	**Juan Fernandez**	**48.91**	**91**	T	T	12 49 40.6		
	baz=220,slow=74,SNR=27							
H03S3	**Juan Fernandez**	**48.92**	**91**	T	T	12 49 37.2		
	baz=220,slow=74,SNR=21							
H03N3	**Juan Fernandez**	**49.19**	**91**	T	T	12 49 56.9		
	baz=224,slow=72,SNR=78							
H03N2	**Juan Fernandez**	**49.20**	**91**	T	T	12 49 57.4		
	baz=224,slow=72,SNR=82							
H03N1	**Juan Fernandez**	**49.20**	**91**	T	T	12 49 55.8		
	baz=224,slow=72,SNR=102							
VNA2	**Neumayer–Watz**	**49.50**	**163**	P	**P**	**11 57 29.6**	**-0.7**	
	baz=188,slow=7.0							
SNAA	**Sanae**	**49.55**	**165**	P	**P**	**11 57 29.8**	**-1.0**	
SNAA	**Sanae**	**49.55**	**165**	P	**P**	**11 57 29.9**	**-0.8**	
SNAA				IAmb	IAmb	11 57 30.9		
	comp=Z,11nm,1.3s							
DZM	**Mont Dzumac**	**49.85**	**292**	*e*LR	LR	12 12 15.8		
	comp=Z,274nm,23.5s							
MAW	**Mawson**	**54.98**	**192**	LR	LR	12 20 13.7		
	comp=Z,113nm,18.3s,baz=198,slow=34							
SYO	**Syowa Base**	**55.12**	**181**	*e*P	**P**	**11 58 10.0**	**-2.0**	
STKA	**Stephens Creek**	**55.83**	**263**	LR	LR	12 18 05.5		
	comp=Z,118nm,20.2s,baz=186,slow=32							
MNMC	**Minye Minye**	**65.53**	**88**	P	**P**	**11 59 25.9**	**+1.7**	
ASAR	**Alice Springs**	**66.46**	**262**	P	**P**	**11 59 30.1**	**+0.3**	
	comp=Z,1.2nm,0.8s,baz=141,slow=6.1,SNR=12							
ASAR				LR	LR	12 24 28.6		
	comp=Z,136nm,20.9s,baz=148,slow=32							
H01W1	**Cape Leeuwin H**	**67.93**	**240**	T	T	13 14 50.8		
	baz=144,slow=76,SNR=102							
H01W2	**Cape Leeuwin H**	**67.94**	**240**	T	T	13 14 51.3		
	baz=144,slow=76,SNR=50							
H01W3	**Cape Leeuwin H**	**67.95**	**240**	T	T	13 14 52.1		
	baz=144,slow=76,SNR=39							
NWAO	**Narrogin (SRO)**	**67.99**	**244**	LR	LR	12 23 15.0		
	comp=Z,75nm,21.4s,baz=135,slow=31							
LPAZ	**La Paz**	**68.64**	**87**	LR	LR	12 23 09.7		
	comp=Z,42nm,22.0s,baz=194,slow=30							
LPAZ	**La Paz**	**68.64**	**87**	P	**P**	**11 59 43.5**	**-0.9**	
WRA	**Warramunga Arr**	**69.19**	**265**	P	**P**	**11 59 47.4**	**+0.3**	
	comp=Z,0.8nm,0.7s,baz=146,slow=5.7,SNR=6.1							
FITZ	**Fitzroy Crossi**	**75.50**	**259**	LR	LR	12 30 07.6		
	comp=Z,123nm,19.6s,baz=150,slow=33							
BDFB	**Brasilia**	**80.33**	**103**	LR	LR	12 32 44.8		
	comp=Z,87nm,18.2s,baz=265,slow=33							
BATI	**Baumata**	**83.03**	**262**	LR	LR	12 35 37.5		
	comp=Z,130nm,19.9s,baz=188,slow=34							
SIJI	**Sorong**	**86.47**	**274**	LR	LR	12 38 13.5		
	comp=Z,49nm,20.0s,baz=124,slow=34							
KAPI	**Kappang**	**89.48**	**262**	LR	LR	12 39 54.2		
	comp=Z,89nm,19.2s,baz=146,slow=34							
H10N3	**ASCENSION HYDR**	**103.81**	**128**	T	T	13 59 34.4		
	baz=203,slow=75,SNR=4.1							
H10N1	**ASCENSION HYDR**	**103.81**	**128**	T	T	13 59 42.6		
	baz=203,slow=75,SNR=4.8							
H10N2	**ASCENSION HYDR**	**103.82**	**128**	T	T	13 59 26.0		
	baz=203,slow=75,SNR=3.3							
ILAR	**Eielson Array**	**120.62**	**358**	PKP	**PKPdf**	**12 07 31.2**	**+0.6**	
	comp=Z,0.3nm,0.8s,baz=190,slow=2.5,SNR=2.6							
ESDC	**Sonseca Array**	**148.97**	**105**	PKPbc	**PKiKP**	**12 08 29.7**	**+0.6**	
	comp=Z,1.1nm,1.0s,baz=248,slow=2.1,SNR=4.0							
MKAR	**Makanchi Array**	**150.34**	**271**	PKPbc	**PKiKP**	**12 08 32.0**	**+0.4**	
	comp=Z,1.0nm,0.8s,baz=147,slow=2.9,SNR=4.6							

IDC 20 12:02:57.7±1.1, **23.62N**×**45.15W**, **h0**km, **mb3.5/8, mb1 3.8**/8, **mb1mx3.7**/34, **mbtmp3.5**/8, **MS3.2**/1, **Ms1 3.2**/1, **ms1mx2.6**/32, **Error ellipse: s-maj=32.0km s-min=25.2km az=178.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**43.30**	**133**	T	T	12 56 56.1	
	baz=317,slow=75,SNR=42						
H10N3	**ASCENSION HYDR**	**43.30**	**133**	T	T	12 56 56.0	
	baz=317,slow=75,SNR=38						
H10N1	**ASCENSION HYDR**	**43.31**	**133**	T	T	12 56 57.4	
	baz=317,slow=75,SNR=42						
TORD	**Torodi Ar. Bea**	**45.48**	**95**	P	P	12 11 18.1	-1.0
	1.5nm,1.0s,baz=290,slow=7.4,SNR=5.5						
LPAZ	**La Paz**	**45.58**	**212**	P	P	12 11 20.8	+0.3
	0.6nm,0.4s,baz=58,slow=8.6,SNR=3.6						
GERES	**GERESS Array B**	**52.23**	**46**	P	P	12 12 11.9	+1.2
	0.2nm,0.2s,baz=246,slow=6.2,SNR=1.2						
TXAR	**Lajitas Array**	**52.23**	**290**	P	P	12 12 10.7	-0.3
	0.2nm,0.5s,baz=54,slow=4.7,SNR=3.2						
TXAR				LR	LR	12 33 06.0	
	comp=Z,24nm,21.1s,baz=0.0,slow=35						
NOA	**NORSAR Array B**	**53.47**	**30**	P	P	12 12 19.3	-0.2
	0.1nm,0.4s,baz=248,slow=7.3,SNR=2.2						
PDAR	**Pinedale Array**	**55.85**	**307**	P	P	12 12 37.3	-0.1
	0.6nm,0.8s,baz=92,slow=9.5,SNR=4.3						
YKA	**Yellowknife Ar**	**59.85**	**330**	P	P	12 13 04.0	-0.8
	0.4nm,0.9s,baz=100,slow=7.3,SNR=3.9						
H09N1	**TRISTAN DA CUN**	**67.83**	**152**	T	T	13 28 33.3	
	SNR=16						
ILAR	**Eielson Array**	**73.74**	**334**	P	P	12 14 33.7	+0.3
	0.2nm,0.7s,baz=75,slow=5.9,SNR=5.7						

*NEIC **20** 12:07:16.1±1.4, 23.8S×0.1×173.9W×0.1, h10km±1km, mb4.6/9, Error ellipse: s-maj=21.4km s-min=17.2km az=158.0*
*IDC **20** 12:07:23.4±28.0, 23.17S×175.09W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.8/37, mbtmp4.1/4, Error ellipse: s-maj=517.4km s-min=144.3km az=79.0*

ISC 20 12:07:16.3±1.1, **23.7S**±0.2×**173.9W**±0.1, **h10**km, **n18,** σ0**54**/17, **mb4.5/8, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.91**	**39**	Pn	**Pn**	**12 08 44.8**	**+0.8**
MSVF	**Nonsavu**	**9.64**	**307**	Pn	**Pn**	**12 09 35.3**	**0.0**
AFI	**Afiamalu**	**9.98**	**12**	Pn	**Pn**	**12 09 40.1**	**+0.2**
CTA	**Charters Tower**	**37.10**	**268**	P	**P**	**12 14 27.6**	**+0.4**
	3.3nm,0.3s,baz=92,slow=11,SNR=6.8						
CTAO	**Charters Tower**	**37.10**	**268**	P	**P**	**12 14 27.2**	**0.0**
CTAO				IAmb	IAmb	12 14 29.7	
	comp=Z,15nm,1.2s						
STKA	**Stephens Creek**	**40.00**	**248**	P	**P**	**12 14 52.2**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=93,slow=10.0,SNR=4.2						
STKA	**Stephens Creek**	**40.00**	**248**	P	**P**	**12 14 51.7**	**+0.2**
BBOO	**Buckleboo**	**44.67**	**247**	P	**P**	**12 15 29.9**	**+0.3**
BBOO				IAmb	IAmb	12 15 41.3	
	comp=Z,9.2nm,1.4s						
ASAR	**Alice Springs**	**47.59**	**259**	P	**P**	**12 15 53.0**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=92,slow=9.0,SNR=13						
WR0	**Warramunga Arr**	**47.83**	**264**	P	**P**	**12 15 54.4**	**-0.2**
WB2	**Warramunga Arr**	**48.01**	**264**	P	**P**	**12 15 55.7**	**-0.2**
WB2				IAmb	IAmb	12 15 57.4	
	comp=Z,5.6nm,1.1s						
WB0	**Warramunga Arr**	**48.01**	**264**	P	**P**	**12 15 55.4**	**-0.6**
WB0				IAmb	IAmb	12 15 57.5	
	comp=Z,11nm,1.2s						
WRA	**Warramunga Arr**	**48.02**	**264**	P	**P**	**12 15 56.1**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=101,slow=8.4,SNR=68						
FORT	**Forrest**	**51.62**	**249**	P	**P**	**12 16 23.7**	**+0.4**
QSPA	**South Pole Qui**	**66.35**	**180**	P	P	12 18 02.7	-2.4
PEA0B	**Petropavlovsk-**	**80.42**	**343**	P	**P**	**12 19 27.6**	**-0.3**
214A	**Organ Pipe Nat**	**80.43**	**49**	P	**P**	**12 19 28.0**	**-0.4**
214A				IAmb	IAmb	12 19 30.7	
	comp=Z,7.6nm,1.2s						
MAKZ	**Makanchi**	**116.42**	**312**		**PKPdf**	**12 25 59.0**	**-1.3**

*NEIC **20** 12:14:42.5±2.2, 9.45S×0.05×120.39E±0.06, h85km±4km, mb4.3/20, Error ellipse: s-maj=9.1km s-min=7.4km az=57.0*

*DJA **20** 12:14:44.0±0.2, 10.5S×12.0E±, h80km±4km, M4.5/12, mb4.6/11, mB5.0/6, MLv4.5/12, MLv4.5/2, Mw(mB)4.2/6*
*IDC **20** 12:14:45.7±2.1, 9.23S×120.61E, h103km±18km, mb3.9/11, mb1 4.1/16, mb1mx3.8/45, mbtmp4.4/16, MS3.0/3, Ms1 3.0/3, ms1mx2.6/35, Error ellipse: s-maj=26.6km s-min=11.3km az=53.0*

ISC 20 12:14:42.8±0.4, **9.46S**±0.04×**120.44E**±0.04, **h85**km, **n73,** σ1**99**/80, **mb4.2**/16, **Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	**0.76**	**170**	P	**Pn**	**12 15 01.5**	**+2.0**
BASI				S	**Sn**	**12 15 13.4**	**+1.4**
WBSI	**Waikabubak, Su**	**1.05**	**260**	P	**Pn**	**12 15 03.9**	**+1.1**
WBSI				S	**Sn**	**12 15 18.5**	**+0.7**
EDFI	**Ende, Flores**	**1.42**	**60**	P	**Pn**	**12 15 07.8**	**+0.4**
MMRI	**Maumere**	**1.95**	**65**	P	**Pn**	**12 15 15.7**	**+1.5**
MMRI	**Maumere**	**1.95**	**65**	Pn	**Pn**	**12 15 15.3**	**+1.1**
MMRI				Sn	**Sn**	**12 15 38.5**	**+0.3**
PLAI	**Plampang**	**2.71**	**283**	P	**Pn**	**12 15 26.4**	**+2.1**
BATI	**Baumata**	**3.26**	**103**	P	**Pn**	**12 15 34.5**	**+2.8**
	43nm,0.3s,baz=301,slow=2.6,SNR=58						
BATI				S	**Sn**	**12 16 06.4**	**-3.1**
	43nm,0.3s,baz=238,slow=4.8,SNR=6.0						
BATI	**Baumata**	**3.26**	**103**	P	**Pn**	**12 15 34.0**	**+2.3**
SOEI	**Soe**	**3.78**	**95**	P	**Pn**	**12 15 40.1**	**+1.2**
SOEI	**Soe**	**3.78**	**95**		**Pn**	**12 15 39.9**	**+1.0**
SOEI				Sn	**Sn**	**12 16 23.5**	**+1.1**
BKSI	**Bulukumba**	**4.13**	**356**	P	**Pn**	**12 15 44.7**	**+1.2**
KAPI	**Kappang**	**4.47**	**351**	P	**Pn**	**12 15 49.7**	**+1.5**
	13nm,0.3s,baz=187,slow=8.4,SNR=37						
KAPI				S	**Sn**	**12 16 38.1**	**-1.0**
	29nm,0.3s,baz=154,slow=21,SNR=9.1						
KAPI				LR	LR	12 17 47.3	
	comp=Z,126nm,20.7s,baz=158,slow=42						
KAPI	**Kappang**	**4.47**	**351**		**Pn**	**12 15 49.1**	**+0.9**
KAPI				Sn	**Sn**	**12 16 38.0**	**-1.0**
BNSI	**Bone**	**5.04**	**356**	P	**Pn**	**12 15 59.1**	**+3.1**
	0.3nm951nm84nm,0.6s						
SPSI	**Sidrap Palu**	**5.50**	**353**	P	**Pn**	**12 16 04.6**	**+2.3**
	0.2nm43nm,0.5s						
JAGI	**Jajag, Banyuwa**	**6.29**	**279**		**Pn**	**12 16 12.6**	**-0.4**
JAGI				Sn	**Sn**	**12 17 20.5**	**-3.1**
TTSI	**Tana Toraja**	**6.41**	**354**	P	**Pn**	**12 16 16.8**	**+2.2**
	0.2nm1μm45nm,0.6s						
KBKI	**Kotabaru**	**7.45**	**325**	P	**Pn**	**12 16 29.6**	**+0.7**
	0.1nm409nm29nm,0.7s						
LUWI	**Luwuk**	**8.68**	**16**	Pn	**Pn**	**12 16 46.9**	**+1.3**
NLAI	**Namlea**	**9.05**	**47**	P	**Pn**	**12 16 55.2**	**+4.5**
SANI	**Sanana**	**9.20**	**37**	P	**Pn**	**12 16 54.9**	**+2.2**
	612nm119nm,0.9s						
UGM	**Wanagama**	**9.93**	**278**	Pn	**Pn**	**12 17 01.7**	**-1.0**
FITZ	**Fitzroy Crossi**	**9.95**	**150**	P	**Pn**	**12 17 01.2**	**-1.7**
	0.8nm,0.3s,baz=325,slow=7.6,SNR=34						
FITZ				S	**Sn**	**12 18 46.1**	**-6.9**
	3.2nm,0.3s,baz=248,slow=5.5,SNR=3.8						
FITZ	**Fitzroy Crossi**	**9.95**	**150**		**Pn**	**12 17 02.8**	**-0.2**
KNRA	**Kununurra**	**10.20**	**128**		**Pn**	**12 17 05.9**	**-0.4**
MTN	**Manton Dam**	**11.01**	**109**		**Pn**	**12 17 17.4**	**0.0**
PSA00	**Pilbara Seismi**	**12.05**	**183**	Pn	**Pn**	**12 17 32.2**	**+0.7**
CISI	**Cisompet, Garu**	**12.63**	**278**	Pn	**Pn**	**12 17 37.9**	**-1.0**
FAKI	**Fak Fak**	**13.41**	**62**	P	**Pn**	**12 17 49.2**	**-0.5**
FAKI	**Fak Fak**	**13.41**	**62**		**Pn**	**12 17 49.4**	**-0.3**
SIJI	**Sorong**	**13.74**	**52**	P	**Pn**	**12 17 51.4**	**-2.7**
	0.4nm,0.3s,baz=183,slow=17,SNR=1.5						
SIJI				LR	LR	12 23 38.2	
	comp=Z,72nm,19.9s,baz=176,slow=40						
GIRL	**Giralia**	**14.39**	**204**	Pn	**Pn**	**12 18 02.4**	**0.0**
KKM	**Kota Kinabalu**	**15.97**	**345**	Pn	**Pn**	**12 18 22.0**	**-0.6**
KKM				IAmb	IAmb	12 18 36.3	
	comp=Z,38nm,1.2s						
WB0	**Warramunga Arr**	**16.93**	**129**		**Pn**	**12 18 33.9**	**-0.5**
WB0				IAmb	IAmb	12 18 36.1	
	comp=Z,17nm,0.8s						
WRA	**Warramunga Arr**	**16.99**	**129**	P	**Pn**	**12 18 34.2**	**-1.0**
	comp=Z,1.2nm,0.3s,baz=305,slow=14,SNR=79						
WRA				S	Sn	12 21 30.5	-13
	comp=Z,0.6nm,0.3s,baz=303,slow=24,SNR=6.7						
WRAB	**Tennant Creek**	**16.99**	**129**		**Pn**	**12 18 34.8**	**-0.4**
WB2	**Warramunga Arr**	**17.00**	**129**	Pn	**Pn**	**12 18 33.7**	**-1.5**
WR0	**Warramunga Arr**	**17.15**	**129**		**Pn**	**12 18 36.9**	**-0.2**
WR0				IAmb	IAmb	12 18 39.2	
	comp=Z,22nm,0.8s						
DAV	**Davao City (W)**	**17.20**	**17**	P	**Pn**	**12 18 36.8**	**-0.9**
	comp=Z,83nm,0.3s,baz=215,slow=13,SNR=1.9						
AS31	**Alice Springs**	**19.10**	**139**	P	**Pn**	**12 19 00.8**	**+0.1**
AS31				IAmb	IAmb	12 19 04.7	
	comp=Z,19nm,1.3s						
ASAR	**Alice Springs**	**19.10**	**139**	P	**Pn**	**12 19 01.0**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=325,slow=13,SNR=144						
ASAR				S	**S**	**12 22 29.5**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=306,slow=22,SNR=3.2						
SMPI	**Sarmi**	**19.62**	**69**	P	**P**	**12 19 04.7**	**+0.1**
MORW	**Morawa**	**19.94**	**191**	P	**P**	**12 19 08.1**	**+0.2**
JAY	**Jayapura**	**21.29**	**72**	P	**P**	**12 19 21.9**	**-0.8**
	comp=Z,4.4nm,0.6s,baz=221,slow=8.3,SNR=5.4						
FORT	**Forrest**	**22.36**	**163**	P	**P**	**12 19 33.8**	**-0.1**
COEN	**Coen**	**22.70**	**104**	P	**P**	**12 19 37.9**	**+0.3**
COEN				IAmb	IAmb	12 19 45.7	
	comp=Z,11nm,0.8s						
NWAO	**Narrogin (SRO)**	**23.54**	**187**	S	**S**	**12 24 03.1**	**+10**
	comp=Z,12nm,0.5s,baz=251,slow=15,SNR=8.4						
KULM	**Kulim**	**24.58**	**306**	P	**P**	**12 19 54.1**	**-0.9**
RPSI	**Rantau Prapat**	**24.61**	**298**	P	**P**	**12 19 56.0**	**+0.7**
PSI	**Prapat**	**24.66**	**299**	P	**P**	**12 19 56.0**	**+0.1**
	comp=Z,5.0nm,0.6s,baz=179,slow=6.1,SNR=8.1						
BBOO	**Buckleboo**	**27.35**	**150**	P	**P**	**12 20 19.3**	**-0.5**
STKA	**Stephens Creek**	**29.70**	**142**	P	**P**	**12 20 42.3**	**+1.6**
	comp=Z,2.7nm,0.6s,baz=314,slow=9.0,SNR=12						
STKA				LR	LR	12 32 34.6	
	comp=Z,55nm,21.2s,baz=23,slow=36						
STKA	**Stephens Creek**	**29.70**	**142**	P	**P**	**12 20 42.6**	**+1.9**
PBKT	**Sadao Pong**	**32.26**	**323**	P	**P**	**12 21 04.3**	**+1.0**
PBKT				IAmb	IAmb	12 21 07.2	
	comp=Z,3.2nm,0.5s						
CMAR	**Chiang Mai Arr**	**34.93**	**323**	P	**P**	**12 21 26.4**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=150,slow=6.3,SNR=5.1						
H08S2	**Diego Garcia H**	**47.42**	**268**	T	T	13 13 53.8	
	baz=94,slow=74						
H08S3	**Diego Garcia H**	**47.44**	**268**	T	T	13 13 53.2	
	baz=94,slow=74						
H08S1	**Diego Carcia H**	**47.44**	**268**	T	T	13 13 50.8	
	baz=94						
SONM	**Songino Array**	**58.39**	**349**	P	**P**	**12 24 28.8**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=171,slow=7.9,SNR=5.0						
KBL	**Kabul**	**65.43**	**315**	P	**P**	**12 25 15.5**	**-1.5**
MK31	**Makanchi Array**	**65.52**	**332**	P	**P**	**12 25 17.3**	**+0.2**
MKAR	**Makanchi Array**	**65.52**	**332**	P	**P**	**12 25 17.9**	**+0.8**
	comp=Z,2.3nm,0.5s,baz=142,slow=7.1,SNR=16						
PEA0B	**Petropavlovsk-**	**69.94**	**23**	P	**P**	**12 25 44.5**	**-0.2**
PETK	**Petropavlovsk-**	**69.94**	**23**	P	**P**	**12 25 43.5**	**-1.2**
	comp=Z,1.4nm,0.7s,baz=208,slow=4.9,SNR=7.2						
ZAA0	**Zalesovo Array**	**69.99**	**339**	P	**P**	**12 25 44.5**	**-0.5**
ZAA0				IAmb	IAmb	12 25 46.3	
	comp=Z,8.9nm,1.5s						
ZALV	**Zalesovo Beam**	**69.99**	**339**	P	**P**	**12 25 44.5**	**-0.5**
	comp=Z,3.4nm,0.4s,baz=137,slow=5.6,SNR=16						
GEYT	**Alibeck**	**74.79**	**313**	P	**P**	**12 26 14.6**	**+0.6**
	comp=Z,2.0nm,0.3s,baz=134,slow=6.2,SNR=5.3						
BVAR	**Borovoye Array**	**75.38**	**331**	P	**P**	**12 26 18.4**	**+1.4**
	comp=Z,0.8nm,0.4s,baz=139,slow=9.9,SNR=3.6						
AKTO	**Aktyubinsk**	**80.42**	**325**	P	**P**	**12 26 46.2**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=113,slow=11,SNR=5.9						
QSPA	**South Pole Qui**	**80.53**	**180**	P	**P**	**12 26 44.9**	**-0.6**
QSPA				IAmb	IAmb	12 27 03.1	
	comp=Z,6.6nm,1.5s						
TIXI	**Tiksi**	**81.13**	**3**	P	**P**	**12 26 46.8**	**-1.5**
TIXI				IAmb	IAmb	12 26 47.9	
	comp=Z,2.9nm,0.8s						
YKA	**Yellowknife Ar**	**114.02**	**25**	PKiKP	**PKiKP**	**12 33 12.1**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=311,slow=1.4,SNR=6.2						
TORD	**Torodi Ar. Bea**	**119.94**	**280**	PKP	**PKiKP**	**12 33 27.3**	**+2.8**
	comp=Z,0.6nm,0.7s,baz=74,slow=2.3,SNR=2.9						

*HEL **20** 12:18:04.7±0.3, 57.25N×21.35E, h0km, ML2.1, ML2.5(UPP), Explosion*
*UPP **20** 12:18:05.3±0.8, 57.25N×21.19E, h0km, ML2.7, Suspected explosion*
*LVSN **20** 12:18:05.6±4.1, 57.21N×21.28E, h0km±20km, ML1.9*
*IDC **20** 12:18:07.5±2.5, 57.48N×21.34E, h0km, mb1 3.0/4, mb1mx2.9/43, mbtmp2.9/4, ML2.4/4, Error ellipse: s-maj=27.6km s-min=11.1km az=170.0*

ISC 20 12:18:02.2±0.8, **57.14N**±0.03×**21.50E**±0.03, **h0**km, **n47,** σ1**39**/72, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.65**	**41**	*e*P	**Pb**	**12 18 16.2**	**-0.2**
SLIT				*e*S	**Sb**	**12 18 25.8**	**-0.3**
SLIT				IAmb	IAmb	12 18 51.2	
	comp=Z,292nm,1.0s						
SLIT	**Slitere, Latvi**	**0.65**	**41**	*e*P	**Pb**	**12 18 16.8**	**+0.4**
SLIT				*e*S	**Sb**	**12 18 25.7**	**-0.3**
SLIT				AML	AML	12 18 48.4	
	comp=E,243nm,0.7s						
SLIT				AML	AML	12 18 51.6	
	comp=Z,131nm,0.8s						
SLIT				AML	AML	12 18 55.4	
	comp=N,281nm,0.7s						
SLIT	**Slitere, Latvi**	**0.65**	**41**	*e*P	**Pb**	**12 18 16.8**	**+0.4**
SLIT				*e*S	**Sb**	**12 18 24.1**	**-1.8**
PBUR	**Paburge**	**1.15**	**168**	*e*P	**Pn**	**12 18 26.3**	**+0.9**
PBUR	**Paburge**	**1.15**	**168**	*e*P	**Pn**	**12 18 26.4**	**+0.9**
GOTU	**Gotland**	**1.67**	**290**	P	**Pn**	**12 18 31.9**	**-0.8**
GOTU				S	**Sn**	**12 18 53.3**	**-1.6**
GOTU	**Gotland**	**1.67**	**290**	*e*P	**Pn**	**12 18 31.9**	**-0.8**
GOTU				*e*S	**Sn**	**12 18 53.3**	**-1.6**
MTSE	**Matsula**	**2.00**	**37**	*e*P	**Pb**	**12 18 39.6**	**+0.1**
MTSE				*e*S	**Sg**	**12 19 06.9**	**+0.3**
MTSE	**Matsula**	**2.00**	**37**	*e*P	**Pb**	**12 18 39.6**	**+0.1**
MTSE				*e*S	**Sb**	**12 19 04.7**	**-0.2**
PABE	**Paberze**	**2.14**	**139**	*e*P	**Pg**	**12 18 43.2**	**0.0**
PABE				*e*S	**Sg**	**12 19 10.1**	**-0.9**
PABE	**Paberze**	**2.14**	**139**	*e*P	**Pg**	**12 18 43.5**	**+0.3**
PABE				*e*S	**Sg**	**12 19 12.8**	**+1.9**
BYXU	**Byxelkrok**	**2.45**	**275**	P	**Pn**	**12 18 44.5**	**+1.2**
BYXU				S	**Sn**	**12 19 15.1**	**+1.3**
BYXU	**Byxelkrok**	**2.45**	**275**	*e*P	**Pn**	**12 18 44.5**	**+1.2**
BYXU				*e*S	**Sn**	**12 19 15.1**	**+1.3**
NYNU	**Nynaeshamn**	**2.63**	**317**	P	**Pn**	**12 18 46.6**	**+0.8**
NYNU				S	**Sn**	**12 19 21.1**	**+2.7**
NYNU	**Nynaeshamn**	**2.63**	**317**	*e*P	**Pn**	**12 18 46.6**	**+0.8**
ASPU	**Aespoe**	**2.67**	**278**	P	**Pn**	**12 18 47.8**	**+1.4**
ASPU				S	**Sn**	**12 19 23.1**	**+3.6**
ASPU	**Aespoe**	**2.67**	**278**	*e*P	**Pn**	**12 18 47.8**	**+1.4**
VSTU	**Vaestervik**	**2.73**	**283**	P	**Pn**	**12 18 48.2**	**+1.0**
VSTU				S	**Sn**	**12 19 21.5**	**+0.6**
VSTU	**Vaestervik**	**2.73**	**283**	*e*P	**Pn**	**12 18 48.2**	**+1.0**
VSTU				*e*S	**Sn**	**12 19 21.5**	**+0.6**
VIKU	**Vikbolandet**	**2.91**	**300**	P	**Pn**	**12 18 50.7**	**+1.1**
VIKU				S	**Sn**	**12 19 28.3**	**+3.1**
VIKU	**Vikbolandet**	**2.91**	**300**	*e*P	**Pn**	**12 18 50.7**	**+1.1**
OSKU	**Oskarshamn**	**2.94**	**273**	P	**Pn**	**12 18 51.2**	**+1.1**
OSKU	**Oskarshamn**	**2.94**	**273**	*e*P	**Pn**	**12 18 51.2**	**+1.1**
NRTU	**Norrtaelje**	**2.96**	**331**	P	**Pn**	**12 18 51.2**	**+0.9**
NRTU	**Norrtaelje**	**2.96**	**331**	*e*P	**Pn**	**12 18 51.2**	**+0.9**
VSU	**Vasula**	**3.10**	**63**	*e*P	**Pb**	**12 18 56.6**	**-1.5**
VSU	**Vasula**	**3.10**	**63**	*e*P	**Pb**	**12 18 57.4**	**-0.8**
VSU				AML	AML	12 19 50.7	
	comp=E,66nm,0.5s						
VSU				AML	AML	12 19 59.1	
	comp=N,55nm,0.6s						
VSU				AML	AML	12 19 59.1	
	comp=Z,25nm,0.7s						
AAL	**Aland**	**3.14**	**346**	P	**Pn**	**12 18 53.2**	**+0.3**
AAL	**Aland**	**3.14**	**346**	*e*P	**Pn**	**12 18 53.3**	**+0.4**
AAL				*e*S	**Sn**	**12 19 29.2**	**-1.9**
IIGN	**

HNR	Honiara	5.67	121	Pn	Pn	12 39 02.9	-1.7
HNR				Sn	Sn	12 40 13.6	+5.1
PMG	Port Moresby	8.28	249	P	Pn	12 39 44.0	+3.5
	3.4nm,0.3s,baz=65,slow=5.9,SNR=17						
PMG				S	Sn	12 41 18.7	+6.0
	2.2nm,0.3s,baz=63,slow=22,SNR=3.2						
PMG				LR	LR	12 42 45.9	
	comp=Z,380nm,20.6s,baz=54,slow=36						
PMG	Port Moresby	8.28	249		Pn	12 39 42.1	+1.6
PMG				Sn	Sn	12 41 10.4	-2.3
PATS	Pohnpei	13.69	14	Pn	Pn	12 40 53.1	-1.2
JAY	Jayapura	14.81	285	P	P	12 41 13.2	-0.8
	baz=354,slow=5.5,SNR=2.0						
JAY				S	Sn	12 43 57.9	+5.6
	0.5nm,0.3s,baz=64,slow=10,SNR=2.1						
CTA	Charters Tower	15.93	211	P	P	12 41 25.7	-0.6
	0.3nm,0.3s,baz=32,slow=14,SNR=5.5						
CTAO	Charters Tower	15.93	211	Pn	Pn	12 41 20.3	-3.3
DZM	Mont Dzumac	18.98	146	*e*Pn	P	12 42 00.4	+0.3
	21nm,0.6s						
DZM				*e*LR	LR	12 46 23.8	
	comp=Z,292nm,26.2s						
DZM	Mont Dzumac	18.98	146	P	Pn	12 42 01.5	+0.3
	1.8nm,0.3s,baz=291,slow=10,SNR=18						
DZM				LR	LR	12 47 51.5	
	comp=Z,203nm,20.0s,baz=265,slow=32						
DZM	Mont Dzumac	18.98	146	P	P	12 41 59.5	-0.5
EIDS	Eidsvold	19.10	191	P	P	12 42 00.0	-1.2
FAKI	Fak Fak	22.97	278	P	P	12 42 42.2	-0.7
WR0	Warramunga Arr	23.94	234	P	P	12 42 52.7	+0.6
WR0				IAmb	IAmb	12 43 07.4	
	comp=Z,13nm,0.6s						
WB0	Warramunga Arr	23.96	235	P	P	12 42 53.0	+0.7
WB0				IAmb	IAmb	12 43 07.8	
	comp=Z,26nm,1.4s						
ARMA	Armidale	23.97	187	P	P	12 42 53.0	+0.7
WRAB	Tennant Creek	24.08	234	P	P	12 42 53.9	+0.6
WRAB				IAmb	IAmb	12 43 08.7	
	comp=Z,12nm,0.7s						
WB2	Warramunga Arr	24.08	234	P	P	12 42 53.8	+0.4
WRA	Warramunga Arr	24.09	234	P	P	12 42 54.1	+0.6
	comp=Z,5.5nm,0.6s,baz=58,slow=9.6,SNR=56						
WRA				PcP	PcP	12 46 34.0	+0.2
	comp=Z,3.4nm,0.7s,baz=59,slow=2.1,SNR=11						
WRA				S	S	12 47 11.6	+4.1
	comp=Z,3.4nm,1.2s,baz=60,slow=16,SNR=4.5						
WRA				LR	LR	12 52 16.3	
	comp=Z,102nm,18.2s,baz=195,slow=36						
MTN	Manton Dam	24.35	253	P	P	12 42 56.7	+0.9
SIJI	Sorong	24.35	282	P	P	12 42 56.8	+0.9
	comp=Z,14nm,0.5s,baz=56,slow=6.3,SNR=8.5						
MSVF	Nonsavu	25.08	118	P	P	12 43 02.8	+0.2
MSVF				IAmb	IAmb	12 43 13.0	
	comp=Z,20nm,1.1s						
AS31	Alice Springs	26.49	228	P	P	12 43 15.2	0.0
ASAR	Alice Springs	26.49	228	P	P	12 43 15.1	-0.2
	comp=Z,3.0nm,0.5s,baz=58,slow=9.3,SNR=56						
ASAR				PcP	PcP	12 46 39.6	+0.4
	comp=Z,2.8nm,0.7s,baz=57,slow=2.6,SNR=16						
ASAR				ScP	ScP	12 50 14.7	+0.1
	comp=Z,0.2nm,0.9s,baz=65,slow=3.5,SNR=4.4						
KNRA	Kununurra	27.28	248	P	P	12 43 21.7	-0.7
H11S3	WAKE ISLAND Hy	27.41	25	T	T	13 11 37.2	
	baz=203,slow=75,SNR=83						
H11S2	WAKE ISLAND Hy	27.41	25	T	T	13 11 51.6	
	baz=203,slow=75,SNR=78						
H11S1	WAKE ISLAND Hy	27.43	25	T	T	13 11 40.6	
	baz=203,slow=75,SNR=85						
LBMI	Labuha	28.07	281	P	P	12 43 21.6	-7.8
STKA	Stephens Creek	28.16	205	P	P	12 43 29.4	-0.6
	comp=Z,1.6nm,0.6s,baz=6.3,slow=7.5,SNR=7.0						
STKA				PcP	PcP	12 46 43.2	+0.2
	comp=Z,2.2nm,0.7s,baz=24,slow=5.5,SNR=5.3						
STKA				LR	LR	12 54 42.6	
	comp=Z,147nm,19.0s,baz=23,slow=36						
STKA	Stephens Creek	28.16	205	P	P	12 43 29.2	-0.8
H11N1	WAKE ISLAND Hy	28.59	24	T	T	13 13 23.3	
	baz=212,slow=78,SNR=11						
H11N3	WAKE ISLAND Hy	28.60	24	T	T	13 13 14.9	
	baz=212,slow=78,SNR=28						
H11N2	WAKE ISLAND Hy	28.61	24	T	T	13 13 26.9	
	baz=212,slow=78,SNR=5.1						
FITZ	Fitzroy Crossi	30.86	245	P	P	12 43 53.8	-0.3
	comp=Z,4.5nm,0.7s,baz=72,slow=8.0,SNR=14						
FITZ	Fitzroy Crossi	30.86	245	P	P	12 43 53.0	-1.1
FITZ				IAmb	IAmb	12 44 04.0	
	comp=Z,5.7nm,0.6s						
BBOO	Buckleboo	31.53	212	P	P	12 43 58.0	-1.9
MMRI	Maumere	32.55	264	P	P	12 44 09.0	-0.1
EDFI	Ende, Flores	33.09	264	P	P	12 44 09.0	-5.0
	comp=Z,15nm,0.8s						
FORT	Forrest	34.93	223	P	P	12 44 28.8	-0.8
FORT				IAmb	IAmb	12 44 30.2	
	comp=Z,11nm,0.7s						
TAU	Tasmania Unive	36.86	189	P	P	12 44 46.5	+0.7
TAU				IAmb	IAmb	12 44 59.0	
	comp=Z,22nm,1.1s						
PLAI	Plampang	36.96	264	P	P	12 44 41.6	-5.6
PSAD2	Pilbara Seismi	37.03	243	P	P	12 44 46.6	-1.1
PSAD2				IAmb	IAmb	12 44 58.4	
	comp=Z,7.3nm,0.9s						
PSAD1	Pilbara Seismi	37.10	243	P	P	12 44 46.0	-2.3
PSAD1				IAmb	IAmb	12 44 48.7	
	comp=Z,12nm,1.0s						
PSAB2	Pilbara Seismi	37.10	243	P	P	12 44 47.5	-0.8
PSAA2	Pilbara Seismi	37.12	243	P	P	12 44 47.7	-0.7
PSAA2				IAmb	IAmb	12 44 53.1	
	comp=Z,16nm,1.4s						
PSA00	Pilbara Seismi	37.12	243	P	P	12 44 48.4	-0.1
PSAA1	Pilbara Seismi	37.13	243	P	P	12 44 47.9	-0.6
PSAC3	Pilbara Seismi	37.15	243	P	P	12 44 47.2	-1.5
PSAD3	Pilbara Seismi	37.20	243	P	P	12 44 49.0	-0.1
PSAD3				IAmb	IAmb	12 44 57.7	
	comp=Z,6.5nm,0.7s						
URZ	Urewera	37.39	151	P	P	12 44 51.0	+0.5
	comp=Z,7.5nm,0.8s,baz=263,slow=20,SNR=2.9						
URZ				LR	LR	12 59 52.2	
	comp=Z,76nm,18.9s,baz=293,slow=36						
BKZ	Black Stump Fm	37.82	152	P	P	12 44 54.0	-0.2
BKZ				IAmb	IAmb	12 44 55.4	
	comp=Z,9.3nm,0.7s						
THZ	Tophouse	38.52	158	P	P	12 44 58.9	-1.1
THZ				IAmb	IAmb	12 45 00.6	
	comp=Z,16nm,0.8s						
TUWZ	Tuamarina	38.62	157	P	P	12 44 60.0	-0.8
BSWZ	Blackbirch Sta	38.84	157	P	P	12 45 02.1	-0.5
LTZ	Lake Taylor	39.19	160	P	P	12 45 05.5	-0.1
LTZ				IAmb	IAmb	12 45 07.3	
	comp=Z,16nm,1.0s						
KHZ	Kahutara	39.32	158	P	P	12 45 06.0	-0.5
KHZ				IAmb	IAmb	12 45 06.6	
	comp=Z,15nm,0.7s						
RPZ	Rata Peaks	39.62	162	P	P	12 45 09.1	0.0
	comp=Z,9.7nm,0.7s,baz=74,slow=18,SNR=2.6						
RPZ	Rata Peaks	39.62	162	P	P	12 45 09.4	+0.3
MQZ	McQueen's Vall	40.13	160	P	P	12 45 14.0	+0.6
JAGI	Jajag, Banyuwa	40.54	265	P	P	12 45 15.9	-1.3
JAGI				IAmb	IAmb	12 45 22.1	
	comp=Z,25nm,0.9s						
KKM	Kota Kinabalu	40.69	287	P	P	12 45 16.1	-2.4
KKM				IAmb	IAmb	12 45 20.3	
	comp=Z,17nm,0.9s						
MORW	Morawa	43.04	234	P	P	12 45 36.6	-0.8
YULB	Yu-li	44.38	313	P	P	12 45 47.5	-0.7
YULB				IAmb	IAmb	12 45 52.7	
	comp=Z,6.0nm,0.7s						
JNU	Nakatsue	45.62	331	P	P	12 45 56.4	-1.5
MJAR	Matsushiro Arr	45.66	341	P	P	12 45 59.7	+1.5
	comp=Z,1.2nm,0.6s,baz=149,slow=8.1,SNR=5.5						
MAJO	Matsushiro	45.66	341	P	P	12 45 55.5	-2.7
CISI	Cisompet, Garu	46.84	266	P	P	12 46 05.5	-2.3
KSRS	Korea Array	50.55	332	P	P	12 46 36.0	+0.2
	comp=Z,1.7nm,0.6s,baz=144,slow=7.3,SNR=9.6						
KSRS				LR	LR	13 06 13.5	
	comp=Z,15nm,20.8s,baz=140,slow=34						
MDSI	Maura Dua	50.62	270	P	P	12 46 31.1	-5.8
	comp=Z,5.8nm,0.9s						
ASAJ	Asahikawa	51.65	349	LR	LR	13 06 17.5	
	comp=Z,45nm,20.9s,baz=167,slow=33						
PPT2	Papeete2	55.11	107	*e*LR	LR	13 03 02.8	
	comp=Z,38nm,23.8s						
KULM	Kulim	55.52	281	P	P	12 47 12.2	-0.7
KULM				IAmb	IAmb	12 47 13.9	
	comp=Z,7.4nm,0.7s						
MNSI	Mandailing Nat	55.80	275	P	P	12 47 09.6	-5.3
	comp=Z,12nm,0.6s						
TBI	Tubuai	55.84	114	*e*LR	LR	13 03 20.9	
	comp=Z,104nm,27.5s						
GSI	Gunungsitoli	57.85	276	P	P	12 47 27.9	-1.6
GSI				IAmb	IAmb	12 47 29.1	
	comp=Z,8.2nm,0.8s						
KLR	Kul'dur	59.14	342	LR	LR	13 11 34.6	
	comp=Z,12nm,21.9s,baz=129,slow=34						
XAN	Xi'an	59.39	316	P	P	12 47 40.9	+1.0
XAN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PET	Petropavlovsk	59.41	3	P	P	12 47 39.8	+0.2
PEA0B	Petropavlovsk-	59.46	2	P	P	12 47 40.5	+0.6
PETK	Petropavlovsk-	59.46	2	P	P	12 47 40.9	+1.0
	comp=Z,7.2nm,0.6s,baz=149,slow=7.2,SNR=26						
PETK				LR	LR	13 09 21.9	
	comp=Z,31nm,21.6s,baz=228,slow=32						
CM31	Chiang Mai Arr	60.61	295	P	P	12 47 47.9	-0.5
CMAR	Chiang Mai Arr	60.61	295	P	P	12 47 49.7	+1.2
	comp=Z,11nm,0.7s,baz=123,slow=5.2,SNR=59						
CMAR				LR	LR	13 18 30.9	
	comp=Z,25nm,18.1s,baz=232,slow=40						
ADK	Adak	63.03	19	P	P	12 48 05.1	+1.1
MA2	Magadan	65.99	358	P	P	12 48 24.5	+1.3
UNV	Unalaska Valle	68.30	23	P	P	12 48 37.9	-0.1
SONM	Songino Array	68.96	327	P	P	12 48 42.9	+0.5
	comp=Z,3.2nm,0.8s,baz=137,slow=6.0,SNR=9.5						
SHL	Shillong	69.08	300	P	P	12 48 42.0	-1.7
SHL				IAmb	IAmb	12 48 56.3	
	comp=Z,8.5nm,0.7s						
VNDA	Vanda	71.03	178	P	P	12 48 54.7	+0.2
	comp=Z,1.3nm,0.7s,baz=332,slow=7.0,SNR=10						
VNDA	Vanda	71.03	178	P	P	12 48 54.8	+0.3
CNBA	Chernabura Isl	71.85	26	P	P	12 48 59.7	0.0
BILL	Bilibino	74.83	4	P	P	12 49 17.3	+0.3
BILL				IAmb	IAmb	12 49 18.4	
	comp=Z,7.2nm,0.8s						
OHAK	Old Harbor	76.11	26	P	P	12 49 24.6	0.0
KDAK	Kodiak Island	76.75	26	P	P	12 49 28.8	+0.7
CNPM	China Poot	78.34	25	P	P	12 49 37.4	+0.3
TTA	Tatalina	78.59	21	P	P	12 49 39.2	+0.8
BRLK	Bradley Lake	78.62	25	P	P	12 49 38.9	+0.3
SEW	Seward	79.41	25	P	P	12 49 41.6	-1.2
SEW				IAmb	IAmb	12 49 44.2	
	comp=Z,8.9nm,0.9s						
RC01	Rabbit Creek A	79.84	24	P	P	12 49 44.8	-0.4
PPLA	Purkeypile	79.94	22	P	P	12 49 45.0	-0.9
PPLA				IAmb	IAmb	12 49 53.1	
	comp=Z,5.9nm,1.0s						
PMR	Palmer	80.37	24	P	P	12 49 48.0	0.0
PMR				IAmb	IAmb	12 49 48.7	
	comp=Z,9.6nm,0.8s						
KTH	Kantishna Hill	80.80	22	P	P	12 49 49.5	-0.9
KTH				IAmb	IAmb	12 49 52.5	
	comp=Z,5.5nm,0.8s						
SML	Sawmill	80.80	24	P	P	12 49 50.1	-0.3
HIN	Hinchinbrook I	80.81	25	P	P	12 49 51.2	+0.7
GLI	Glacier Island	80.81	25	P	P	12 49 49.8	-0.6
TRF	Thorofare Moun	80.97	22	P	P	12 49 50.7	-0.7
TRF				IAmb	IAmb	12 49 55.2	
	comp=Z,8.1nm,0.8s						
FID	Port Fidalgo	81.00	25	P	P	12 49 50.9	-0.5
BPAW	Bear Paw Mtn.	81.09	21	P	P	12 49 50.4	-1.5
BPAW				IAmb	IAmb	12 50 04.0	
	comp=Z,8.9nm,1.5s						
EYAK	Cordova Ski Ar	81.21	25	P	P	12 49 52.3	-0.2
EYAK				IAmb	IAmb	12 50 00.4	
	comp=Z,18nm,1.5s						
RND	Reindeer	81.48	22	P	P	12 49 53.4	-0.6
RND				IAmb	IAmb	12 49 56.7	
	comp=Z,7.1nm,0.8s						
MCK	McKinley	81.63	22	P	P	12 49 54.2	-0.5
MCK				IAmb	IAmb	12 49 57.5	
	comp=Z,12nm,0.8s						
DHY	Denali Highway	81.86	23	P	P	12 49 55.5	-0.6
DHY				IAmb	IAmb	12 50 00.3	
	comp=Z,4.6nm,0.8s						
GLB	Gilahina Butte	82.47	25	P	P	12 49 58.3	-0.9
GLB				IAmb	IAmb	12 50 00.2	
	comp=Z,8.6nm,0.8s						
VRDI	Verde Repeater	82.52	25	P	P	12 49 58.9	-0.8
VRDI				IAmb	IAmb	12 50 02.8	
	comp=Z,7.4nm,1.0s						
CCB	Clear Creek Bu	82.54	21	P	P	12 49 58.3	-1.1
COLA	College	82.65	21	P	P	12 49 59.6	-0.4
COLA				IAmb	IAmb	12 50 02.4	
	comp=Z,6.3nm,0.9s						
HDA	Harding Lake	82.73	22	P	P	12 50 00.1	-0.3
HDA				IAmb	IAmb	12 50 03.2	
	comp=Z,4.8nm,0.9s						
IL31		82.94	22	P	P	12 50 00.5	-1.0
ILAR	Eielson Array	82.94	22	P	P	12 50 00.6	-1.0
	comp=Z,0.9nm,0.4s,baz=240,slow=5.5,SNR=18						
ILAR				LR	LR	13 21 25.9	
	comp=Z,56nm,21.2s,baz=230,slow=32						
MKAR	Makanchi Array	83.08	319	P	P	12 50 02.4	-0.3
	comp=Z,2.6nm,0.7s,baz=103,slow=5.2,SNR=9.6						
RIDG	Independent Ri	83.18	23	P	P	12 50 03.1	+0.2
RIDG				IAmb	IAmb	12 50 09.4	
	comp=Z,5.1nm,0.8s						
BARN	Barnard Glacie	83.22	26	P	P	12 50 04.0	+0.7
BARN				IAmb	IAmb	12 50 05.3	
	comp=Z,7.4nm,0.8s						
MENT	Mentasta	83.23	24	P	P	12 50 03.4	+0.3
MENT				IAmb	IAmb	12 50 06.0	
	comp=Z,3.4nm,0.6s						
CTGM	Chitina Glacie	83.32	26	P	P	12 50 02.7	-1.0
QSPA	South Pole Qui	83.43	180	P	P	12 50 03.6	-0.7
QSPA				IAmb	IAmb	12 50 05.2	
	comp=Z,8.6nm,0.8s						
DOT	Dot Lake	83.44	23	P	P	12 50 04.1	0.0
DOT				IAmb	IAmb	12 50 05.2	
	comp=Z,7.0nm,0.8s						
SCRK	Sand Creek	83.63	23	P	P	12 50 05.6	+0.4
ZALV	Zalesovo Beam	83.81	326	P	P	12 50 04.9	-1.3
	comp=Z,1.0nm,0.5s,baz=94,slow=6.1,SNR=5.5						
TOLK	Toolik Lake Re	84.18	18	P	P	12 50 08.3	+0.5
TOLK				IAmb	IAmb	12 50 11.7	
	comp=Z,4.6nm,0.7s						
MAW	Mawson	84.82	203	LR	LR	13 24 22.4	
	comp=Z,50nm,20.4s,baz=196,slow=33						
DAWY	Dawson	85.47	24	P	P	12 50 15.2	+0.7
DAWY				IAmb	IAmb	12 50 16.9	
	comp=Z,2.6nm,0.6s						
EPYK	Eagle Plains	87.43	22	P	P	12 50 24.4	+0.4
INK	Inuvik	89.29	21	P	P	12 50 32.8	+0.2
INK				IAmb	IAmb	12 50 48.0	
	comp=Z,5.6nm,1.5s						
NVAR	Mina Array Bea	91.42	52	P	P	12 50 44.9	+1.3
	comp=Z,1.4nm,0.7s,baz=256,slow=6.5,SNR=7.7						
NV11	Mina Array Sit	91.54	52	P	P	12 50 43.8	-0.2
YKA	Yellowknife Ar	95.93	28	P	P	12 51 03.5	+0.1
	comp=Z,4.1nm,0.8s,baz=266,slow=4.3,SNR=59						
PDAR	Pinedale Array	98.38	48	P	P	12 51 14.7	-0.6
	comp=Z,0.2nm,0.4s,baz=279,slow=2.4,SNR=2.5						
PDAR				LR	LR	13 30 37.7	
	comp=Z,25nm,19.1s,baz=132,slow=32						
FINES	FINESS Array B	113.53	336	PKKPbc	PKKPbc	13 06 58.0	-3.0
	comp=Z,1.4nm,0.9s,baz=249,slow=2.7,SNR=3.5						
FINES				PKKP	PKKPdf	13 07 21.1	-1.2
	comp=Z,1.2nm,0.9s,baz=322,slow=26,SNR=2.4						
AKASG	Malin Array Be	117.18	325	PKKPbc	PKKPbc	13 06 45.2	-2.8
	comp=Z,1.0nm,0.4s,baz=261,slow=3.8,SNR=4.8						
AKASG				PKKP	PKKPdf	13 07 14.5	-0.6
	comp=Z,1.0nm,0.5s,baz=217,slow=2.4,SNR=6.2						
Q54A	Coxs Mills	120.37	48		PKPdf	12 56 27.1	-1.3
GERES	GERESS Array B	126.67	329	PKP	PKPdf	12 56 40.4	+0.1
	comp=Z,0.4nm,0.2s,baz=35,slow=2.4,SNR=4.9						
BDFB	Brasilia	148.28	134	PKPbc	PKPdf	12 57 21.5	+0.8
	comp=Z,7.8nm,0.7s,baz=202,slow=6.9,SNR=2.2						
BDFB				PKPab	PKPab	12 57 26.6	-0.7
	comp=Z,7.8nm,0.7s,baz=221,slow=1.8,SNR=9.7						
BDFB	Brasilia	148.28	134		PKPdf	12 57 21.1	+0.5
BDFB					PKPab	12 57 26.5	-0.7
TORD	Torodi Ar. Bea	152.92	286	PKPbc	PKPbc	12 57 34.1	-0.9
	comp=Z,4.7nm,0.7s,baz=64,slow=2.4,SNR=33						
TORD				PKPab	PKPab	12 57 45.7	-0.7
	comp=Z,2.4nm,0.6s,baz=62,slow=3.4,SNR=7.8						
KIC	Kosan Boka	159.88	271	*e*PKP2	PKPab	12 58 15.6	-0.7
	comp=Z,18nm,0.9s						
DBIC	Dimbokro	160.00	272	PKPab	PKPab	12 58 16.6	-0.2
	comp=Z,5.6nm,0.9s,baz=70,slow=7.5,SNR=5.7						
DBIC	Dimbokro	160.00	272		PKPab	12 58 16.0	-0.8
LIC	Lamto	160.16	270	*e*PKP2	PKPab	12 58 16.7	-0.8
	comp=Z,1.3nm,0.2s						
TIC	Toumodi	160.16	271	*e*PKP2	PKPab	12 58 17.0	-0.6

TAP **20** *13:10:15.8, 24°.03N×122°.45E, h33km, ML3.0, D*

JMA **20** *13:10:15.4±0.3, 23°.99N×122°.44E, h19km±5km, M2.5*

ISC 20 13:10:15.4±1.1**, 23°.99N**±0°.02×**122°.43E**±0°.02**, h23**km±13km**,**
n83, σ0.67/155**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.62	334	P	Pb	13 10 27.7	+0.1
	baz=323						
EOS1				*e*S	Sn	13 10 37.7	-0.3
	baz=323						
JYNG	Yonagunijimaku	0.66	46	P	Pb	13 10 27.9	-0.3
JYNG				*e*S	Sb	13 10 36.2	-0.8
YOJ	Yonaguni jima	0.71	48	P	Pb	13 10 29.0	-0.1
	baz=50						
YOJ				*e*S	Sb	13 10 38.6	+0.2
	baz=50						
YOJ	Yonaguni jima	0.71	48	P	Pb	13 10 28.8	-0.3
YOJ				*e*S	Sb	13 10 37.5	-0.9
ENA	Nanau	0.76	305	P	Pb	13 10 29.9	-0.2
	baz=311						
ENA				S	Sn	13 10 41.1	-0.5
	baz=311						
TWD	Chiawan	0.77	277	*e*P	Pb	13 10 30.6	+0.5
	baz=273						
TWD				S	Sb	13 10 40.7	+0.6
	baz=273						
NACB	Ninganchiao	0.78	284	P	Pb	13 10 30.6	+0.2
	baz=267						
NACB				S	Sb	13 10 39.5	-1.1
	baz=267						
TWC	Suao	0.81	319	*i* P	Pb	13 10 30.4	-0.5
	baz=317						
TWC				*i* S	Sb	13 10 41.4	0.0
	baz=317						
ETLH	Xiulin Townshi	0.89	284	P	Pb	13 10 32.5	+0.2
	baz=270						
ETLH				S	Sn	13 10 45.1	+0.2
	baz=270						
ESL	Shilin	0.93	259	*e*S	Sn	13 10 45.8	+0.2
	baz=248						
EGFH	Guangfu	0.97	251	*e*P	Pn	13 10 33.5	-0.1
	baz=248						
EGFH				*e*S	Sb	13 10 46.4	+0.4
	baz=248						
ILA	Ilan	0.99	321	*e*S	Sb	13 10 46.2	-0.3
	baz=309						
TWE	Neicheng	1.01	316	⇑*i*P	Pn	13 10 34.0	-0.1
	baz=314						
TWE				S	Sb	13 10 46.3	-0.7
	baz=314						
ENTT	Nioudou	1.02	310	P	Pb	13 10 34.4	+0.1
	baz=294						
ENTT				S	Sn	13 10 48.7	+0.7
	baz=294						
NTC	Toucheng	1.02	328	*e*P	Pb	13 10 34.3	-0.1
	baz=325						
NTC				*e*S	Sn	13 10 47.7	-0.2
	baz=325						
NDT	Datong Townshi	1.03	306	*i* P	Pb	13 10 35.1	+0.4
	baz=291						
NDT				S	Sn	13 10 48.5	+0.2
	baz=291						
HGSD	Ruisui	1.05	242	P	Pn	13 10 34.0	-0.6
	baz=239						
HGSD				S	Sn	13 10 47.7	-0.9
	baz=239						
NNSB	Datong	1.05	295	P	Pn	13 10 34.7	-0.1
	baz=281						
NNSB				S	Sb	13 10 49.0	+0.7
	baz=281						
NNSH	Datong	1.05	295	*e*P	Pn	13 10 34.2	-0.6
	baz=282						
NNSH				*e*S	Sn	13 10 47.8	-1.1
	baz=282						
NNS	Nan Shan	1.06	295	*i* P	Pn	13 10 35.1	+0.1
	baz=281						
NNS				*i* S	Sn	13 10 48.8	-0.3
	baz=281						
WHF	Hehuan Shan	1.07	278	P	Pn	13 10 34.7	-0.8
	baz=265						
WHF				S	Sn	13 10 49.1	-0.8
	baz=265						
TWB1	Santiao Chiao	1.09	338	*i* P	Pn	13 10 34.9	-0.4
	baz=352						
TWB1				S	Sb	13 10 50.1	+0.7
	baz=352						
TIPB	Shuangxi	1.12	331	*i* P	Pn	13 10 35.7	0.0
	baz=329						
TIPB				*i* S	Sn	13 10 50.1	-0.4
	baz=329						
EHY	Hungye	1.12	245	P	Pn	13 10 35.4	-0.3
	baz=256						
EHY				S	Sn	13 10 49.8	-0.7
	baz=256						
OWD	Renai	1.15	268	*e*P	Pn	13 10 36.3	+0.1
	baz=265						
OWD				*e*S	Sn	13 10 50.4	-0.9
	baz=265						
CHGB	Renai	1.15	274	P	Pn	13 10 36.1	-0.2
	baz=261						
CHGB				S	Sn	13 10 51.2	-0.3
	baz=261						
NWLT	Wulai	1.15	313	*e*P	Pn	13 10 36.3	+0.2
	baz=310						
NWLT				*e*S	Sb	13 10 51.5	+0.3
	baz=310						
YHNB	Yeheng	1.18	305	*e*P	Pn	13 10 36.4	-0.1
	baz=291						
YHNB				S	Sn	13 10 51.5	-0.4
	baz=291						
TDCB	Techi	1.19	283	P	Pb	13 10 37.3	0.0
	baz=270						
TDCB				*e*S	Sn	13 10 52.4	0.0
	baz=270						
NSK	Sanguang	1.19	305	*i* P	Pn	13 10 37.0	+0.3
	baz=289						
NSK				*e*S	Sn	13 10 51.7	-0.6
	baz=289						
YULB	Yu-li	1.20	240	P	Pn	13 10 36.5	-0.3
	baz=253						
YULB				S	Sn	13 10 51.8	-0.5
	baz=253						
NWF	Wu-fen Shan	1.23	331	P	Pn	13 10 37.3	+0.1
	baz=329						
NWF				*e*S	Sb	13 10 53.5	+0.1
	baz=329						
WFSB	Wu-fen Shan	1.23	331	P	Pn	13 10 37.0	-0.1
	baz=329						
WFSB				*e*S	Sb	13 10 52.9	-0.4
	baz=329						
IRIF	Iriomote-Funau	1.24	74	P	Pb	13 10 38.2	+0.1
IRIF				S	Sb	13 10 53.7	+0.1
TWA	Mucha	1.25	322	P	Pb	13 10 38.1	-0.3
	baz=337						
TWA				*e*S	Sb	13 10 54.8	+0.7
	baz=337						
HATJ	Hateruma jima	1.26	87	P	Pb	13 10 38.5	0.0
HATJ				*e*S	Sb	13 10 54.6	+0.3
NHDH	Xindian Distri	1.27	320	*e*P	Pb	13 10 39.1	+0.5
	baz=317						
NHDH				*e*S	Sb	13 10 55.7	+1.1
	baz=317						
TATO	Taipei	1.30	319	P	Pb	13 10 39.5	+0.3
	baz=317						
TATO				*e*S	Sb	13 10 56.3	+0.8
	baz=317						
FULB	Fuli	1.31	233	P	Pn	13 10 37.8	-0.5
	baz=220						
FULB				S	Sn	13 10 55.5	+0.5
	baz=220						
CHKT	Chengkung	1.32	228	*e*P	Pn	13 10 37.2	-1.2
	baz=216						
CHKT				S	Sn	13 10 53.8	-1.5
	baz=216						
WLTB	Daxi	1.37	309	*e*P	Pn	13 10 39.7	+0.5
	baz=294						
WLTB				*e*S	Sn	13 10 56.2	-0.5
	baz=294						
DPDB	Guoxing	1.38	272	*e*P	Pn	13 10 39.0	-0.3
	baz=261						
DPDB				S	Sb	13 10 57.6	0.0
	baz=261						
WHP	Taichung City	1.39	282	P	Pb	13 10 41.4	+0.8
	baz=270						
WHP				*e*S	Sn	13 10 57.1	0.0
	baz=270						

YM01	**YM01**	**1.39 326**	P		**Pn**	**13 10 40.0**	**+0.6**
	baz=339							
YM01			*eS*		**Sn**	**13 10 56.9**	**-0.2**
	baz=339							
SMLT	**Sun Moon Lake**	**1.40 266**	*eP*		**Pn**	**13 10 39.0**	**-0.7**
	baz=263							
SMLT			S		**Sn**	**13 10 57.8**	**+0.3**
	baz=263							
YM10	**YM10**	**1.40 326**	P		**Pn**	**13 10 39.5**	**-0.2**
	baz=324							
YM10			S		**Sn**	**13 10 57.6**	**+0.1**
	baz=324							
YM11	**YM11**	**1.41 327**	*eP*		**Pn**	**13 10 39.5**	**-0.2**
	baz=324							
YM11			*eS*		**Sn**	**13 10 55.9**	**-1.7**
	baz=324							
YM04	**YM04**	**1.41 325**	P		**Pn**	**13 10 39.7**	**-0.1**
	baz=337							
YM04			*eS*		**Sn**	**13 10 56.9**	**-0.8**
	baz=337							
YM08	**YM08**	**1.42 328**	P		**Pb**	**13 10 40.5**	**-0.6**
	baz=326							
YM08			S		**Sb**	**13 10 58.7**	**-0.1**
	baz=326							
YM03	**YM03**	**1.43 326**	*eP*		**Pn**	**13 10 39.5**	**-0.6**
	baz=324							
YM03			*eS*		**Sn**	**13 10 58.1**	**-0.2**
	baz=324							
TYC	**Yuchr**	**1.44 267**	*eP*		**Pn**	**13 10 40.2**	**+0.1**
	baz=264							
TYC			*eS*		**Sn**	**13 10 59.0**	**+0.7**
	baz=264							
LIOB	**Emei**	**1.45 297**	P		**Pb**	**13 10 41.4**	**-0.2**
	baz=294							
LIOB			*eS*		**Sn**	**13 10 58.9**	**+0.4**
	baz=294							
ANP	**Anpu**	**1.45 325**	*eP*		**Pb**	**13 10 41.1**	**-0.7**
	baz=323							
NSTT	**Nanjuang**	**1.45 296**	P		**Pb**	**13 10 41.8**	**+0.1**
	baz=293							
NSTT			S		**Sb**	**13 11 00.3**	**+0.5**
	baz=293							
JKRS	**Kuro-shima**	**1.47 80**	P		**Pb**	**13 10 41.6**	**-0.4**
JKRS			*eS*		**Sb**	**13 11 00.8**	**+0.6**
TWY	**Chenhua**	**1.48 330**	P		**Pn**	**13 10 41.1**	**+0.4**
	baz=328							
TWY			*eS*		**Sn**	**13 10 58.9**	**-0.5**
	baz=328							
ELDTW	**Lidau**	**1.52 239**	*eP*		**Pn**	**13 10 41.1**	**-0.2**
	baz=236							
ELDTW			S		**Sn**	**13 10 58.9**	**-1.6**
	baz=236							
TWH	**Lutao**	**1.55 215**	P		**Pn**	**13 10 40.9**	**-0.6**
	baz=212							
TWH			S		**Sn**	**13 10 59.9**	**-1.0**
	baz=212							
TWQ1	**Liyutan**	**1.55 284**	*eP*		**Pn**	**13 10 42.5**	**+0.8**
	baz=280							
JIJ	**Ishigaki jima**	**1.61 76**	P		**Pn**	**13 10 42.8**	**+0.4**
JIJ			S		**Sn**	**13 11 02.6**	**+0.1**
CHN5	**Tsauling**	**1.65 257**	*eP*		**Pn**	**13 10 43.9**	**+0.8**
	baz=245							
CHN5			*eS*		**Sn**	**13 11 04.0**	**+0.3**
	baz=245							
PCYT	**Pengchaiyu**	**1.66 349**	P		**Pn**	**13 10 42.8**	**-0.3**
	baz=332							
PCYT			*eS*		**Sn**	**13 11 02.9**	**-0.9**
	baz=332							
TWGBT	**Beinan**	**1.70 227**	*eP*		**Pn**	**13 10 43.0**	**-0.7**
	baz=237							
TWGBT			*eS*		**Sn**	**13 11 04.2**	**-0.6**
	baz=237							
TTN	**Taitung**	**1.70 224**	*eP*		**Pn**	**13 10 44.6**	**+0.9**
	baz=222							
TWG	**Pinlang**	**1.71 227**	P		**Pn**	**13 10 43.2**	**-0.6**
	baz=236							
TWG			*eS*		**Sn**	**13 11 04.2**	**-0.7**
	baz=236							
WDLH	**Douliu**	**1.76 261**	*eP*		**Pn**	**13 10 45.5**	**+1.0**
	baz=257							
WDLH			*eS*		**Sb**	**13 11 09.1**	**+0.5**
	baz=257							
CHN4	**Tsaushan**	**1.80 250**	P		**Pb**	**13 10 47.8**	**+0.1**
	baz=247							
CHN4			*eS*		**Sb**	**13 11 09.3**	**-0.6**
	baz=247							
JISG	**Ishigakijimahi**	**1.82 71**	P		**Pn**	**13 10 45.2**	**-0.1**
JISG			S		**Sn**	**13 11 08.0**	**+0.4**
WTP	**Ta-pu**	**1.82 246**	P		**Pb**	**13 10 47.2**	**-0.9**
	baz=243							
WTP			*eS*		**Sn**	**13 11 08.9**	**+1.1**
	baz=243							
RLNB	**Erlin**	**1.90 267**	*eP*		**Pn**	**13 10 47.2**	**+0.9**
	baz=265							
SLGT	**Liugui**	**1.91 239**	*eP*		**Pb**	**13 10 49.5**	**-0.1**
	baz=229							
SLGT			*eS*		**Sn**	**13 11 11.4**	**+1.3**
	baz=229							
CHN1	**Nanshi**	**1.92 246**	P		**Pb**	**13 10 48.7**	**-1.1**
	baz=243							
CHN1			S		**Sn**	**13 11 12.1**	**+1.9**
	baz=243							
TWK	**Hsinying**	**1.92 248**	P		**Pb**	**13 10 48.7**	**-1.1**
	baz=245							
TWK			*eS*		**Sb**	**13 11 12.4**	**-0.9**
	baz=245							
SNST	**Tainan City**	**1.93 247**	*eP*		**Pb**	**13 10 49.7**	**-0.2**
	baz=244							
SNST			*eS*		**Sb**	**13 11 13.5**	**-0.1**
	baz=244							
ECL	**Taimali**	**1.94 225**	*eP*		**Pn**	**13 10 46.2**	**-0.8**
	baz=222							
ECL			*eS*		**Sn**	**13 11 09.4**	**-1.2**
	baz=222							
WSF	**Szhu**	**2.05 261**	*eP*		**Pn**	**13 10 49.2**	**+0.7**
	baz=258							
SSD	**Sandimen**	**2.06 233**	*eP*		**Pn**	**13 10 50.4**	**+1.7**
	baz=226							
SSD			*eS*		**Sn**	**13 11 13.7**	**-0.1**
	baz=226							
MASBT	**Mashibuluo**	**2.15 231**	*eP*		**Pn**	**13 10 50.1**	**+0.2**
	baz=224							
MASBT			*eS*		**Sn**	**13 11 16.5**	**+0.7**
	baz=224							
EAST	**Anshuo**	**2.16 223**	*eP*		**Pn**	**13 10 51.0**	**+0.9**
	baz=220							
EAST			*eS*		**Sn**	**13 11 16.7**	**+0.4**
	baz=220							
JTJ	**Tarama**	**2.17 72**	P		**Pn**	**13 10 51.1**	**+0.9**
SGLT	**Jiouru**	**2.18 235**	*eP*		**Pn**	**13 10 51.5**	**+1.2**
	baz=233							
SCZT	**Fangliau**	**2.32 226**	*eP*		**Pn**	**13 10 54.5**	**+2.3**
	baz=225							
JIRB	**Irabujima**	**2.64 71**	*eS*		**Sn**	**13 11 27.8**	**0.0**

*NEIC **20** 13:15:33.6±1.3, 19.°00N±0.°04×66.°74W±0.°03, h29km±3km, Error ellipse: s-maj=6.2km s-min=4.1km az=178.0*
*RSPR **20** 13:15:34.5, 19.°06N×66.°76W, h15km±5km, MD3.2/18*
*IDC **20** 13:15:36.2±1.7, 18.°24N×66.°26W, h119km±38km, mb3.1/4, mb1 3.5/4, mb1mx3.1/48, mbtmp3.4/4, MS3.2/1, Ms1 3.2/1, ms1mx2.5/18, Error ellipse: s-maj=117.0km s-min=34.2km az=146.0*

ISC 20 13:15:33.2±0.8, **19.°01N**±0.°04×**66.°74W**±0.°03, **h28**km, **n68**, σ0s**63**/84, **mb3.5**/4, **13C-8D**, **Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.57**	**159**	*eP*		**Pn**	**13 15 45.9**	**+0.4**
EMPR				*eS*		**Sn**	**13 15 54.7**	**+0.8**
EMPR	**Esperanza - Ma**	**0.57**	**159**			**Pn**	**13 15 45.9**	**+0.4**
EMPR						**Sn**	**13 15 54.7**	**+0.8**
AGPR	**Aguadilla, PR**	**0.65**	**213**	*eP*		**Pb**	**13 15 45.9**	**-0.1**
AGPR	**Aguadilla, PR**	**0.65**	**213**	*eS*		**Sb**	**13 15 55.3**	**+0.6**
AGPR	**Aguadilla, PR**	**0.65**	**213**			**Sb**	**13 15 55.3**	**+0.6**
AGPR	**Aguadilla, PR**	**0.65**	**213**			**Pb**	**13 15 45.3**	**-0.7**
AOPR	**Arecibo Observ**	**0.66**	**181**	*eP*		**Pn**	**13 15 46.6**	**-0.2**
AOPR	**Arecibo Observ**	**0.66**	**181**	*eS*		**Sn**	**13 15 56.4**	**+0.1**
AOPR	**Arecibo Observ**	**0.66**	**181**			**Pn**	**13 15 46.6**	**-0.2**
AOPR						**Sn**	**13 15 56.4**	**+0.1**
MPR	**Mayaguez**	**0.88**	**206**	Pg		**Pn**	**13 15 49.0**	**-0.8**
LSP	**Las Mesas**	**0.89**	**202**	*eP*		**Pn**	**13 15 49.9**	**-0.1**
LSP	**Las Mesas**	**0.89**	**202**			**Pn**	**13 15 49.9**	**-0.1**
IDE	**Isla Desecheo**	**0.93**	**228**	*eP*		**Pn**	**13 15 49.5**	**-1.0**
IDE	**Isla Desecheo**	**0.93**	**228**	*eS*		**Sb**	**13 16 03.5**	**+0.6**
IDE	**Isla Desecheo**	**0.93**	**228**			**Pn**	**13 15 49.5**	**-1.0**
IDE						**Sb**	**13 16 03.5**	**+0.6**
OBIP	**Obispado Ponce**	**0.97**	**172**	*eP*		**Pb**	**13 15 51.4**	**-0.1**
OBIP	**Obispado Ponce**	**0.97**	**172**	*eS*		**Sn**	**13 16 04.1**	**+0.2**
OBIP	**Obispado Ponce**	**0.97**	**172**			**Pb**	**13 15 51.4**	**-0.1**
OBIP						**Sn**	**13 16 04.1**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.04**	**187**	*eP*		**Pb**	**13 15 52.4**	**-0.2**
GBPR	**Guanica, Bosqu**	**1.04**	**187**	*eS*		**Sb**	**13 16 06.5**	**+0.7**
GBPR	**Guanica, Bosqu**	**1.04**	**187**			**Pb**	**13 15 52.4**	**-0.2**
GBPR						**Sb**	**13 16 06.5**	**+0.7**
SJG	**San Juan**	**1.05**	**148**	P		**Pb**	**13 15 53.3**	**+0.4**
	44nm,0.3s,baz=311,slow=9.3,SNR=21							
SJG				S		**Sn**	**13 16 06.2**	**+0.3**
	88nm,0.3s,baz=270,slow=23,SNR=11							
SJG	**San Juan**	**1.05**	**148**			**Pb**	**13 15 53.0**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.06**	**199**	*eP*		**Pn**	**13 15 51.9**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.06**	**199**	*eS*		**Sn**	**13 16 05.9**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.06**	**199**			**Pn**	**13 15 51.9**	**-0.3**
CRPR						**Sn**	**13 16 05.9**	**-0.1**
MLPR	**Magueyes Islan**	**1.08**	**196**	*eP*		**Pn**	**13 15 52.4**	**0.0**
MLPR	**Magueyes Islan**	**1.08**	**196**	*eS*		**Sn**	**13 16 06.8**	**+0.4**
MLPR	**Magueyes Islan**	**1.08**	**196**			**Pn**	**13 15 52.4**	**0.0**
MLPR						**Sn**	**13 16 06.8**	**+0.4**
CBYP	**Canovanas**	**1.11**	**131**	*eP*		**Pn**	**13 15 53.0**	**0.0**
CBYP	**Canovanas**	**1.11**	**131**	*eP*		**Pb**	**13 15 53.2**	**-0.7**
CBYP				*eS*		**Sb**	**13 16 08.0**	**0.0**
CBYP	**Canovanas**	**1.11**	**131**			**Pb**	**13 15 53.2**	**-0.7**
CBYP						**Sb**	**13 16 08.1**	**0.0**
ICMP	**Isla Caja de M**	**1.14**	**170**	*eP*		**Pb**	**13 15 54.4**	**+0.1**
ICMP	**Isla Caja de M**	**1.14**	**170**	*eS*		**Sn**	**13 16 08.7**	**+0.8**
ICMP	**Isla Caja de M**	**1.14**	**170**			**Pb**	**13 15 54.4**	**+0.1**
ICMP						**Sn**	**13 16 08.7**	**+0.8**
IGPR	**InterUniversit**	**1.20**	**150**	*eP*		**Pb**	**13 15 54.9**	**-0.5**
IGPR	**InterUniversit**	**1.20**	**150**	*eP*		**Pb**	**13 15 54.9**	**-0.5**
IGPR	**InterUniversit**	**1.20**	**150**	*eS*		**Sb**	**13 16 10.4**	**-0.1**
IGPR	**InterUniversit**	**1.20**	**150**			**Pb**	**13 15 54.9**	**-0.5**
HUMP	**Col San Antoni**	**1.21**	**136**	*eP*		**Pn**	**13 15 54.3**	**0.0**
HUMP	**Col San Antoni**	**1.21**	**136**	*eS*		**Sn**	**13 16 09.7**	**0.0**
HUMP	**Col San Antoni**	**1.21**	**136**	*eP*		**Pb**	**13 15 54.6**	**-0.9**
HUMP	**Col San Antoni**	**1.21**	**136**			**Pb**	**13 15 54.6**	**-0.9**
HUMP						**Sn**	**13 16 09.7**	**0.0**
MTP	**Monte Pirata**	**1.45**	**129**	*eP*		**Pn**	**13 15 57.6**	**0.0**
MTP	**Monte Pirata**	**1.45**	**129**	*eS*		**Sn**	**13 16 15.5**	**-0.1**
MTP	**Monte Pirata**	**1.45**	**129**			**Pn**	**13 15 57.6**	**0.0**
MTP						**Sn**	**13 16 15.5**	**-0.1**
CUPR	**Culebra, Puert**	**1.55**	**117**	*eP*		**Pn**	**13 15 58.2**	**-0.7**
CUPR	**Culebra, Puert**	**1.55**	**117**	*eS*		**Sn**	**13 16 18.3**	**+0.2**
CUPR	**Culebra, Puert**	**1.55**	**117**			**Pn**	**13 15 58.2**	**-0.7**
CUPR						**Sn**	**13 16 18.3**	**+0.2**
PCDR	**Punta Cana, DR**	**1.63**	**253**	*eP*		**Pn**	**13 16 00.6**	**+0.5**
PCDR	**Punta Cana, DR**	**1.63**	**253**			**Pn**	**13 16 00.6**	**+0.5**
STVI	**Saint Thomas**	**1.82**	**111**	*eS*		**Sn**	**13 16 24.6**	**-0.1**
STVI	**Saint Thomas**	**1.82**	**111**	*eP*		**Pn**	**13 16 03.0**	**+0.4**
STVI	**Saint Thomas**	**1.82**	**111**			**Pn**	**13 16 03.0**	**+0.4**
STVI						**Sn**	**13 16 24.6**	**-0.1**
TBVI	**Tortola**	**2.10**	**106**	*eS*		**Sn**	**13 16 32.2**	**+0.6**
TBVI	**Tortola**	**2.10**	**106**	*eP*		**Pn**	**13 16 07.5**	**+1.0**
TBVI	**Tortola**	**2.10**	**106**			**Pn**	**13 16 07.5**	**+1.0**
TBVI						**Sn**	**13 16 32.2**	**+0.6**
CDVI	**St. Croix**	**2.25**	**123**	Pn		**Pn**	**13 16 10.4**	**+1.8**
DR12	**Loma Pena Alta**	**2.51**	**265**			**Pn**	**13 16 12.1**	**-0.2**
BANI	**BANI**	**3.48**	**260**			**Pn**	**13 16 27.1**	**+1.4**
SMRT	**St. Maarten**	**3.61**	**105**	Pn		**Pn**	**13 16 28.7**	**+1.4**
SCO1	**Santiago de lo**	**3.79**	**277**	Pn		**Pn**	**13 16 30.9**	**+1.1**
SDDR	**Presa de Saban**	**4.30**	**270**			**Pn**	**13 16 37.2**	**+0.3**
MDP	**Montagnes des**	**19.50**	**133**	LR		LR	13 27 50.1	
	comp=Z,69nm,18.1s,baz=314,slow=39							
TXAR	**Lajitas Array**	**35.09**	**294**	P		**P**	**13 22 24.2**	**-0.2**
	0.7nm,0.6s,baz=122,slow=8.6,SNR=5.5							
PDAR	**Pinedale Array**	**43.10**	**313**	P		**P**	**13 23 33.1**	**+1.7**
	0.2nm,0.4s,baz=101,slow=8.5,SNR=2.5							
YKA	**Yellowknife Ar**	**54.44**	**335**	P		**P**	**13 24 56.1**	**-1.6**
	0.3nm,0.7s,baz=111,slow=7.8,SNR=5.7							
ILAR	**Eielson Array**	**68.78**	**333**	P		**P**	**13 26 33.3**	**-1.2**
	0.4nm,0.7s,baz=106,slow=4.5,SNR=4.4							

IDC 20 13:18:52.0±2.0, **2.°13S×138.°20E, h0**km, **mb3.3**/2, **mb1 3.6**/4, **mb1mx3.4**/42, **mbtmp3.3**/4, **ML3.2**/2, **Error ellipse: s-maj=38.5km s-min=27.9km az=135.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JAY	**Jayapura**	**2.53**	**99**	Pn		Pn	13 19 35.2	+0.8
	2.1nm,0.3s,baz=263,slow=8.1,SNR=9.3							
JAY				Sn		Sn	13 20 06.3	+0.2
	2.2nm,0.3s,baz=333,slow=23,SNR=1.9							
WRA	**Warramunga Arr**	**18.11**	**192**	P		P	13 23 06.0	+0.4
	0.1nm,0.3s,baz=16,slow=12,SNR=6.5							
ASAR	**Alice Springs**	**21.81**	**191**	P		P	13 23 45.5	-0.6
	0.5nm,0.7s,baz=20,slow=11,SNR=10							
ILAR	**Eielson Array**	**85.52**	**25**	P		P	13 31 31.5	-0.2
	0.4nm,0.8s,baz=238,slow=5.0,SNR=3.5							

*GII **20** 13:27:20.3±0.0, 29.°14N×32.°78E, h1km, MD3.1/6, Mm3.1/4*
*HLW **20** 13:27:23.3, 29.°34N×32.°90E, h10km±2km, Md3.3, Ml3.4*

ISC 20 13:27:23.0±2.9, **29.°3N**±0.°1×**32.°9E**±0.°1, **h10**km, **n14**, σ1s**09**/19, **Egypt**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HHAG	**Hagoal**	**0.97**	**312**	AMP			13 28 00.0	
	baz=312							
KOT	**Kottamia**	**1.14**	**304**	AMP			13 28 00.0	
	baz=303							
HBST	**Basata**	**1.58**	**93**	AMP			13 28 00.0	
	baz=93							
KRMI	**Paran Flat**	**1.77**	**62**	Pn		**Pn**	**13 27 54.1**	**+0.5**
KRMI				Sn		**Sg**	**13 28 19.6**	**-0.2**
MBRI	**Mt Berech**	**1.80**	**74**	Pn		**Pn**	**13 27 54.8**	**+0.6**
MBRI				Sn		**Sg**	**13 28 20.9**	**0.0**
EIL	**Elat**	**1.80**	**78**	Pn		**Pn**	**13 27 54.7**	**+0.5**
EIL				Sn		**Sg**	**13 28 20.5**	**-0.5**
AQBJ	**Aqaba**	**1.90**	**76**	Pn		**Pn**	**13 27 55.1**	**-0.4**
AQBJ				Sn		**Sb**	**13 28 22.3**	**+0.7**
HRFI	**Mount Harif**	**1.98**	**68**	Pn		**Pb**	**13 27 58.2**	**-0.9**
HRFI				Sn		**Sb**	**13 28 25.3**	**+1.4**
KZIT	**Kziot**	**2.05**	**38**	Pn		**Pn**	**13 27 57.8**	**+0.3**
KZIT				Sn		**Sg**	**13 28 27.6**	**-1.2**
PRNI	**Paran**	**2.09**	**59**	Pn		**Pb**	**13 27 59.4**	**-1.6**
PRNI				Sn		**Sb**	**13 28 28.7**	**+1.7**
ZFRI	**Zfri**	**2.32**	**57**	Sn		**Sb**	**13 28 33.9**	**+0.3**
YTIR	**Yattir**	**2.80**	**42**	Pn		**Pn**	**13 28 08.7**	**+0.8**
YTIR				Sn		**Sb**	**13 28 47.1**	**-0.3**
GHAJ	**Ghor Haditha**	**3.03**	**48**	Pn		**Pn**	**13 28 12.5**	**+1.5**
DSI	**Dead Sea**	**3.10**	**42**	Pn		**Pn**	**13 28 14.1**	**+2.1**

*IDC **20** 13:28:15.1±0.8, 2.°51S×138.°47E, h0km, mb4.1/7, mb1 4.3/10, mb1mx4.0/27, mbtmp4.0/10, ML3.8/3, MS3.2/3, Ms1 3.2/3, ms1mx2.8/21, Error ellipse: s-maj=22.0km s-min=19.6km az=88.0*
*DJA **20** 13:28:16.7±0.3, 2.°S±3.°×13.°8E±.°, h10km, M3.9/7, mb3.9/6, MLv3.8/7*
*NEIC **20** 13:28:19.6±1.9, 2.°58S±0.°09×138.°48E±0.°02, h33km±5km, mb4.4/21, Error ellipse: s-maj=13.6km s-min=2.5km az=172.0*

ISC 20 13:28:16.3±0.5, **2.°52S**±0.°05×**138.°46E**±0.°05, **h10**km, **n43**, σ1s**41**/45, **mb4.3**/14, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SMPI	**Sarmi**	**0.58**	**25**	P		**Pb**	**13 28 27.4**	**-1.2**
SMPI				S		**Sg**	**13 28 32.1**	**-3.2**
GENI	**Genyem**	**1.71**	**92**	P		**Pn**	**13 28 47.1**	**+1.0**
GENI				S		**Sb**	**13 29 09.8**	**+0.5**
JAY	**Jayapura**	**2.24**	**90**	Pn		**Pn**	**13 28 54.6**	**+1.0**
	11nm,0.3s,baz=252,slow=9.6,SNR=46							
JAY				Sn		**Sn**	**13 29 23.4**	**+2.2**
	15nm,0.3s,baz=176,slow=23,SNR=7.0							
JAY	**Jayapura**	**2.24**	**90**	P		**Pn**	**13 28 54.5**	**+1.0**
JAY				S		**Sn**	**13 29 22.4**	**+1.1**
SRPI	**Serui, Papua**	**2.31**	**286**	P		**Pn**	**13 28 54.6**	**+0.2**
FAKI	**Fak Fak**	**6.22**	**266**	P		**Pn**	**13 29 49.5**	**+1.3**
	0.1nm17nm,0.8s							
FAKI	**Fak Fak**	**6.22**	**266**	Pn		**Pn**	**13 29 49.6**	**+1.3**
SIJI	**Sorong**	**7.38**	**283**	LR		LR	13 33 41.7	
	comp=Z,268nm,18.8s,baz=170,slow=44							
SAUI	**Saumlaki**	**8.96**	**232**	P		**Pn**	**13 30 27.8**	**+1.9**
	248nm,1.1s							
COEN	**Coen**	**12.28**	**158**	Pn		**Pn**	**13 31 12.6**	**+1.2**

KNRA	**Kununurra**	**16.19**	**216**	Pn		**Pn**	**13 32 02.9**	**-1.2**
KNRA				IAmb		IAmb	13 32 28.8	
	comp=Z,27nm,1.4s							
WB0	**Warramunga Arr**	**17.60**	**193**	Pn		**Pn**	**13 32 20.5**	**-1.3**
WR0	**Warramunga Ar**	**17.75**	**192**	Pn		**Pn**	**13 32 22.6**	**-1.1**
WRAB	**Tennant Creek**	**17.77**	**193**	Pn		**Pn**	**13 32 22.8**	**-1.1**
WB2	**Warramunga Ar**	**17.78**	**193**	Pn		**Pn**	**13 32 23.0**	**-1.0**
WRA	**Warramunga Ar**	**17.78**	**193**	P		**Pn**	**13 32 22.9**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=15,slow=13,SNR=23							
WRA				S		**Sn**	**13 35 36.6**	**-5.8**
	comp=Z,0.1nm,0.3s,baz=2.6,slow=24,SNR=1.7							
FITZ	**Fitzroy Crossi**	**19.95**	**218**	P		**P**	**13 32 49.0**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=28,slow=16,SNR=2.3							
FITZ	**Fitzroy Crossi**	**19.95**	**218**	IAmb		IAmb	13 33 43.4	
	comp=Z,17nm,1.6s							
AS31	**Alice Springs**	**21.48**	**191**	P		**P**	**13 33 05.0**	**-0.2**
ASAR	**Alice Springs**	**21.48**	**191**	P		**P**	**13 33 05.0**	**-0.3**
	comp=Z,5.1nm,0.8s,baz=20,slow=12,SNR=71							
ASAR				S		**S**	**13 37 02.2**	**-1.5**
	comp=Z,1.1nm,0.9s,baz=9.0,slow=25,SNR=5.4							
FORT	**Forrest**	**29.78**	**198**	P		**P**	**13 34 22.9**	**-0.4**
MAJO	**Matsushiro**	**38.86**	**360**	P		**P**	**13 35 42.0**	**+0.1**
MAJO				IAmb		IAmb	13 36 38.1	
	comp=Z,30nm,1.9s							
MJB9	**Matsu-Tunnel**	**38.87**	**360**	P		**P**	**13 35 41.8**	**-0.1**
MJB9				IAmb		IAmb	13 36 38.3	
	comp=Z,1.9nm,0.8s							
CMAR	**Chiang Mai Arr**	**44.13**	**300**	P		**P**	**13 36 26.9**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=120,slow=6.1,SNR=4.5							
PETK	**Petropavlovsk-**	**57.73**	**14**	LR		LR	13 58 28.0	
	comp=Z,1.1nm,21.5s,baz=36,slow=31							
MK31	**Makanchi Array**	**69.49**	**322**	P		**P**	**13 39 24.6**	**-0.5**
MK31				IAmb		IAmb	13 39 37.9	
	comp=Z,8.2nm,1.6s							
MKAR	**Makanchi Array**	**69.49**	**322**	P		**P**	**13 39 25.4**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=116,slow=5.5,SNR=11							
MAKZ	**Makanchi**	**69.69**	**322**	P		**P**	**13 39 26.0**	**-0.3**
MAKZ				IAmb		IAmb	13 39 27.4	
	comp=Z,4.5nm,0.9s							
PPT	**Papeete**	**72.05**	**108**	LR		LR	14 09 20.4	
	comp=Z,18nm,19.6s,baz=112,slow=34							
TIXI	**Tiksi**	**74.30**	**357**	P		**P**	**13 39 53.9**	**+0.5**
TIXI				IAmb		IAmb	13 39 56.2	
	comp=Z,1.9nm,1.0s							
VNDA	**Vanda**	**75.99**	**175**	P		**P**	**13 40 04.2**	**+1.1**
	comp=Z,2.4nm,0.8s,baz=322,slow=5.8,SNR=16							
VNDA	**Vanda**	**75.99**	**175**	P		**P**	**13 40 03.9**	**+0.8**
VNDA				IAmb		IAmb	13 40 04.8	
	comp=Z,2.4nm,0.8s							
BRVK	**Borovoye**	**79.09**	**325**	P		**P**	**13 40 20.5**	**-0.3**
BRVK				IAmb		IAmb	13 40 21.3	
	comp=Z,3.4nm,0.7s							
NRIK	**Noril'sk**	**79.47**	**344**	P		**P**	**13 40 22.9**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=147,slow=3.2,SNR=3.9							
WRH	**Wood River Hil**	**85.18**	**25**	P		**P**	**13 40 52.0**	**-0.7**
CCB	**Clear Creek Bu**	**85.35**	**24**	P		**P**	**13 40 52.8**	**-0.7**
CCB				IAmb		IAmb	13 40 54.8	
	comp=Z,5.4nm,1.0s							
IL31		**85.76**	**24**	P		**P**	**13 40 54.3**	**-1.2**
ILAR	**Eielson Array**	**85.76**	**24**	P		**P**	**13 40 54.5**	**-1.1**
	comp=Z,1.9nm,0.9s,baz=254,slow=5.0,SNR=17							
TOLK	**Toolik Lake Re**	**85.83**	**20**	P		**P**	**13 40 56.3**	**+0.4**
TOLK				IAmb		IAmb	13 40 58.3	
	comp=Z,3.8nm,1.0s							
QSPA	**South Pole Qui**	**87.42**	**180**	P		**P**	**13 41 03.7**	**-0.1**
DAWY	**Dawson**	**88.81**	**26**	P		**P**	**13 41 10.9**	**+0.6**
YKA	**Yellowknife Ar**	**100.01**	**27**	P		**Pdif**	**13 42 02.0**	**+0.4**
	comp=Z,0.2nm,0.8s,baz=289,slow=4.2,SNR=3.3							
TORD	**Torodi Ar. Bea**	**135.97**	**286**	PKP		**PKPdf**	**13 47 39.3**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=104,slow=0.6,SNR=2.6							

*KOLA **20** 13:30:10.7, 67.°65N×33.°77E, M1.8, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NAO 20 13:30:10.9±1.1, **67.°68N×33.°68E, ML2.9, Baltic States-Belarus-Northwestern Russia**

| Code | Station Name | Δ° | AZ° | Phase |

	comp=Z,34nm,0.1s							
NYNU	**Nynaeshamn**	**2.22**	**306**	*P*		**Pn**	**13 31 22.9**	**+0.4**
NYNU	**Nynaeshamn**	**2.22**	**306**	*eP*		**Pn**	**13 31 22.9**	**+0.4**
BYXU	**Byxelkrok**	**2.44**	**261**	*P*		**Pn**	**13 31 26.3**	**+0.7**
BYXU	**Byxelkrok**	**2.44**	**261**	*eP*		**Pn**	**13 31 26.3**	**+0.7**
NRTU	**Norrtaelje**	**2.44**	**324**	*P*		**Pn**	**13 31 25.6**	**0.0**
NRTU	**Norrtaelje**	**2.44**	**324**	*eP*		**Pn**	**13 31 25.6**	**0.0**
AAL	**Aland**	**2.56**	**343**	*P*		**Pn**	**13 31 26.3**	**-0.9**
AAL	**Aland**	**2.56**	**343**	*eP*		**Pn**	**13 31 26.4**	**-0.8**
AAL				*eS*		**Sn**	**13 31 58.5**	**-0.6**
PABE	**Paberze**	**2.63**	**147**	*eP*		**Pn**	**13 31 28.8**	**+0.6**
PABE				IAML			13 31 37.3	
	comp=Z,12nm,0.2s							
ASPU	**Aespoe**	**2.63**	**265**	*P*		**Pn**	**13 31 29.2**	**+0.9**
ASPU	**Aespoe**	**2.63**	**265**	*eP*		**Pn**	**13 31 29.2**	**+0.9**
VIKU	**Vikbolandet**	**2.64**	**289**	*P*		**Pn**	**13 31 29.0**	**+0.7**
VIKU	**Vikbolandet**	**2.64**	**289**	*eP*		**Pn**	**13 31 29.0**	**+0.7**
VSTU	**Vaestervik**	**2.64**	**270**	*P*		**Pn**	**13 31 29.1**	**+0.8**
VSTU	**Vaestervik**	**2.64**	**270**	*eP*		**Pn**	**13 31 29.1**	**+0.8**
VSU	**Vasula**	**2.90**	**73**	*eP*		**Pn**	**13 31 33.6**	**+1.8**
VSU				IAML			13 32 18.1	
	comp=Z,65nm,0.3s							
MEF	**Metsahovi**	**2.92**	**30**	*eP*		**Pn**	**13 31 32.6**	**+0.5**
MEF				*eS*		**Sn**	**13 32 09.0**	**+1.2**
MEF				MSG			13 32 14.3	
	comp=Z,5.2nm,0.2s							
OSKU	**Oskarshamn**	**2.94**	**262**	*P*		**Pn**	**13 31 33.0**	**+0.5**
OSKU	**Oskarshamn**	**2.94**	**262**	*eP*		**Pn**	**13 31 33.0**	**+0.5**
FLYU	**Flymyra**	**3.03**	**324**	*P*		**Pn**	**13 31 33.8**	**+0.1**
FLYU	**Flymyra**	**3.03**	**324**	*eP*		**Pn**	**13 31 33.8**	**+0.1**
FIBU	**Brunna**	**3.04**	**317**	*P*		**Pn**	**13 31 34.3**	**+0.5**
BACU	**Backbrunna**	**3.10**	**315**	*P*		**Pn**	**13 31 35.0**	**+0.3**
BACU	**Backbrunna**	**3.10**	**315**	*eP*		**Pn**	**13 31 35.0**	**+0.3**
LNKU	**Linkoeping**	**3.21**	**281**	*P*		**Pn**	**13 31 36.9**	**+0.8**
LNKU	**Linkoeping**	**3.21**	**281**	*eP*		**Pn**	**13 31 36.9**	**+0.8**
RAF	**Rauma**	**3.30**	**3**	*eP*		**Pn**	**13 31 36.7**	**-0.6**
EKSU	**Eksjoe**	**3.31**	**270**	*P*		**Pn**	**13 31 38.5**	**+0.9**
EKSU	**Eksjoe**	**3.31**	**270**	*eP*		**Pn**	**13 31 38.5**	**+0.9**
OSTU	**Oestervaala**	**3.35**	**320**	*P*		**Pn**	**13 31 38.6**	**+0.4**
OSTU	**Oestervaala**	**3.35**	**320**	*eP*		**Pn**	**13 31 38.6**	**+0.4**
BLEU	**Blekinge**	**3.40**	**247**	*P*		**Pn**	**13 31 38.9**	**+0.2**
BLEU	**Blekinge**	**3.40**	**247**	*eP*		**Pn**	**13 31 38.9**	**+0.2**
IIGN	**Ignalina**	**3.56**	**130**	*eP*		**Pn**	**13 31 41.3**	**+0.3**
PVF	**Pernaja**	**3.62**	**37**	*eP*		**Pn**	**13 31 42.2**	**+0.5**
PVF				MSG			13 32 45.6	
	comp=Z,2.3nm,0.2s							
FIA1	**FINESS Array S**	**4.40**	**30**	*eP*		**Pn**	**13 31 52.5**	**+0.1**
FIA1				MSG			13 33 01.2	
	comp=Z,2.9nm,0.2s							
BSD	**Bornholm Skovb**	**4.48**	**237**	*i* P		**Pn**	**13 31 52.5**	**-1.1**
BSD				*i* S		**Sn**	**13 32 43.6**	**-2.8**

*HEL **20** 13:31:14.0±0.1,63°.91N×24°.06E,h0km,ML1.8(UPP), Explosion*
UPP 20 13:31:14.5±0.8, 63°.93N×23°.86E, h0km, ML1.9, Suspected explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUF	**Merijarvi**	**0.58**	**41**	*eP*	Pg	13 31 23.5	-2.1
OUF				*eS*	Sg	13 31 31.0	-2.1
OBF0	**Syolatti, Pyha**	**0.59**	**16**	*eP*	Pg	13 31 24.4	-1.5
OBF0				*eS*	Sg	13 31 32.8	-0.7
OBF4	**Vikkela, Lumij**	**1.04**	**31**	*eP*	Pg	13 31 32.3	-2.1
OBF4				*eS*	Sg	13 31 45.6	-2.2
VAF	**Ylistaro**	**1.04**	**212**	*eP*	Pg	13 31 33.8	-0.6
VAF				*eS*	Sg	13 31 47.0	-0.8
BURU	**Burvik**	**1.27**	**302**	*P*	Pg	13 31 38.0	-0.8
BURU				*S*	Sb	13 31 56.2	+0.1
BURU	**Burvik**	**1.27**	**302**	*eP*	Pg	13 31 38.0	-0.8
BURU				*eS*	Sb	13 31 56.2	+0.1
UMAU	**Umeaa**	**1.41**	**270**	*P*	Pn	13 31 40.4	-0.9
UMAU				*S*	Sb	13 31 59.9	-0.2
UMAU	**Umeaa**	**1.41**	**270**	*eP*	Pn	13 31 40.4	-0.9
UMAU				*eS*	Sb	13 31 59.9	-0.2
ODEU	**Stanfors**	**1.46**	**291**	*P*	Pn	13 31 41.4	-0.7
ODEU				*S*	Sb	13 32 01.6	0.0
ODEU	**Stanfors**	**1.46**	**291**	*eP*	Pn	13 31 41.4	-0.7
ODEU				*eS*	Sb	13 32 01.6	0.0
SUF	**Sumiainen**	**1.59**	**139**	*eP*	Pn	13 31 41.4	-2.5
SUF				*eS*	Sn	13 32 00.6	-4.5
SJUU	**Sjulsmark**	**1.86**	**330**	*P*	Pn	13 31 47.7	+0.2
SJUU				*S*	Sb	13 32 12.9	-0.1
SJUU	**Sjulsmark**	**1.86**	**330**	*eP*	Pn	13 31 47.7	+0.2
SJUU				*eS*	Sb	13 32 12.9	-0.1
SVAU	**Svanoeiden**	**1.96**	**289**	*P*	Pn	13 31 49.7	+0.8
SVAU	**Svanoeiden**	**1.96**	**289**	*eP*	Pn	13 31 49.7	+0.8
LILU	**Lilltraesk**	**2.20**	**310**	*P*	Pn	13 31 52.6	+0.4
LILU	**Lilltraesk**	**2.20**	**310**	*eP*	Pn	13 31 52.6	+0.4
HEMU	**Hemsoen**	**2.92**	**247**	*P*	Pn	13 32 02.2	+0.2
HEMU	**Hemsoen**	**2.92**	**247**	*eP*	Pn	13 32 02.2	+0.2

*NEIC **20** 13:59:28.9±1.2,35°.52N±0°.04×97°.25W±0°.05,h8km±5km, Error ellipse: s-maj=6.2km s-min=5.5km az=224.0*
*TUL **20** 13:59:28.2±1.4,35°.50N±0°.04×97°.24W±0°.05,h7km±5km, ML3.1, Error ellipse: s-maj=6.0km s-min=4.1km az=50.0*
*ANF **20** 13:59:29.8±1.3,35°.48N×97°.31W,h17km±8km,ML3.7/6, Error ellipse: s-maj=4.3km s-min=2.8km az=152.0*
ISC 20 13:59:28.8±1.1, 35°.51N±0°.03×97°.25W±0°.03, h6km±8km, n37, σ0°.74/41, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK001	**Jones High Sch**	**0.06**	**328**	Pg	**Pg**	**13 59 30.3**	**0.0**
OK009	**Oakdale Elemen**	**0.15**	**296**	Pg	**Pg**	**13 59 32.0**	**0.0**
ADOK	**Arcadia Dam**	**0.17**	**325**	Pg	**Pg**	**13 59 32.4**	**+0.2**
OKCFA	**Oklahoma City**	**0.19**	**239**	Pg	**Pg**	**13 59 32.4**	**-0.2**
OKCFA				Sg	**Sg**	**13 59 35.1**	**0.0**
TUL1	**Leonard**	**1.25**	**71**		**Pg**	**13 59 51.4**	**-1.5**
WMOK	**Wichita Mounta**	**1.47**	**239**	*P*	**Pn**	**13 59 54.7**	**-1.2**
	baz=58						
WMOK				*S*	**Sn**	**14 00 14.5**	**-1.1**
	baz=58						
WMOK	**Wichita Mounta**	**1.47**	**239**		**Pn**	**13 59 54.6**	**-1.3**
T35A	**Sooner Cattle**	**1.52**	**23**	Pn	**Pn**	**13 59 55.5**	**-1.1**
U32A	**Winter Ranch,**	**1.66**	**302**		**Pn**	**13 59 58.7**	**+0.2**
X37A	**Clayton**	**1.80**	**120**		**Pn**	**14 00 00.5**	**+0.1**
Z35A	**Perchaven, San**	**2.18**	**180**	Pn	**Pn**	**14 00 00.6**	**0.1**
U38A	**Gravette**	**2.50**	**68**		**Pn**	**14 00 10.8**	**+0.7**
HHAR	**Hobbs**	**2.80**	**73**		**Pn**	**14 00 14.7**	**+0.5**
W39A	**Magazine**	**2.85**	**95**	*P*	**Pn**	**14 00 14.7**	**-0.2**
	baz=277						
W39A				*S*	**Sn**	**14 00 49.6**	**0.0**
	baz=277						
W39A	**Magazine**	**2.85**	**95**	Pn	**Pn**	**14 00 14.6**	**-0.3**
Z38A	**Mt. Pleasant**	**2.93**	**140**	Pn	**Pn**	**14 00 15.0**	**-0.9**
R32A	**Long Quarter,**	**3.13**	**339**	Pn	**Pn**	**14 00 18.6**	**-0.1**
MIAR	**Mount Ida**	**3.17**	**107**	*P*	**Pn**	**14 00 20.1**	**+0.8**
	baz=289						
MIAR				*S*	**Sn**	**14 00 58.4**	**+1.0**
	baz=289						
MIAR	**Mount Ida**	**3.17**	**107**		**Pn**	**14 00 20.0**	**+0.8**
ABTX	**Abilene, Hawle**	**3.50**	**215**	Pn	**Pn**	**14 00 24.3**	**+0.4**
WHTX	**Lake Whitney,**	**3.52**	**183**	Sb	**Sb**	**14 01 15.6**	**+1.2**
	baz=2.9						
WHTX	**Lake Whitney,**	**3.52**	**183**	Pn	**Pn**	**14 00 23.2**	**-0.9**
KSU1	**Kansas State U**	**3.62**	**8**	*S*	**Sn**	**14 01 09.2**	**+0.8**
	baz=188						
KSU1	**Kansas State U**	**3.62**	**8**	Pn	**Pn**	**14 00 24.7**	**-0.7**
U40A	**Yellville**	**3.67**	**75**	*S*	**Sn**	**14 01 10.5**	**+0.8**
	baz=258						
U40A	**Yellville**	**3.67**	**75**		**Pn**	**14 00 26.6**	**+0.4**
AMTX	**Amarillo**	**3.68**	**261**		**Pn**	**14 00 26.9**	**+0.5**
237A	**Washetta, Mont**	**3.70**	**161**	Pn	**Pn**	**14 00 27.6**	**+1.0**
X40A	**Basin Creek Fa**	**3.77**	**104**	Pn	**Pn**	**14 00 27.1**	**-0.4**
WHAR	**Wooly Hollow**	**4.06**	**92**	Pn	**Pn**	**14 00 31.4**	**-0.1**
FCAR	**Ozark Folk Cen**	**4.19**	**83**	Pn	**Pn**	**14 00 33.4**	**+0.1**
MSTX	**Muleshoe**	**4.80**	**253**	Pn	**Pn**	**14 00 41.4**	**-0.4**
R40A	**Maddies Statio**	**4.86**	**54**	Pn	**Pn**	**14 00 41.7**	**-0.8**
LCAR	**Lake Charles**	**4.99**	**82**	Pn	**Pn**	**14 00 44.0**	**-0.2**
JCT	**Junction City**	**5.46**	**204**	Pn	**Pn**	**14 00 49.8**	**-1.0**
N35A	**Tabor**	**5.49**	**13**	Pn	**Pn**	**14 00 50.3**	**-0.8**
SDCO	**Great Sand Dun**	**7.00**	**291**		**Pn**	**14 01 11.6**	**-0.5**

MAN 20 14:03:01.9, 13°.24N×120°.99E, h53km, mb3.8, ML2.6, MS2.1, Mindoro

*IDC **20** 14:15:10.2±0.8,4°.74S×149°.87E,h432km±11km,mb3.2/6, mb1 3.4/10,mb1mx3.0/39,mbtmp4.0/10,Error ellipse: s-maj=21.7km s-min=17.2km az=155.0*
*NEIC **20** 14:15:10.4±1.4,4°.7S±0°.1×150°.0E±0°.1,h453km±14km, mb4.4/14,Error ellipse: s-maj=21.8km s-min=16.6km az=70.0*
ISC 20 14:15:09.9±0.7, 4°.7S±0°.1×150°.00E±0°.09, h450km, n26, σ1§32/27, mb4.3/12, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.06**	**80**	*P*	**P**	**14 16 09.6**	**-1.1**
	3.0nm,0.3s,baz=270,slow=4.0,SNR=1.4						
KRVT				*S*	**S**	**14 16 59.0**	**-1.0**
	1.2nm,0.3s,baz=295,slow=21,SNR=1.6						
PMG	**Port Moresby**	**5.48**	**211**	*P*	**P**	**14 16 38.3**	**-0.6**
	2.3nm,0.3s,baz=53,slow=3.9,SNR=9.6						
PMG	**Port Moresby**	**5.48**	**211**	*P*	**P**	**14 16 38.1**	**-0.9**
JAY	**Jayapura**	**9.52**	**283**	*P*	**P**	**14 17 22.3**	**+0.4**
	1.1nm,0.3s,baz=100,slow=6.1,SNR=8.0						
COEN	**Coen**	**11.41**	**216**	*P*	**P**	**14 17 43.0**	**+0.6**
SIJI	**Sorong**	**19.08**	**281**	*P*	**P**	**14 19 04.4**	**+1.3**
	2.2nm,0.3s,baz=214,slow=22,SNR=6.4						
MTN	**Manton Dam**	**20.32**	**245**	*P*	**P**	**14 19 14.2**	**-0.1**
MTN				IAmb	IAmb	14 19 43.0	
	comp=Z,37nm,1.4s						
EIDS	**Eidsvold**	**20.60**	**177**	*P*	**P**	**14 19 18.2**	**+1.5**
EIDS				IAmb	IAmb	14 19 20.0	
	comp=Z,6.0nm,0.7s						
WB0	**Warramunga Arr**	**21.35**	**224**	*P*	**P**	**14 19 23.7**	**0.0**
WB0				IAmb	IAmb	14 19 40.1	
	comp=Z,22nm,1.8s						
WR0	**Warramunga Arr**	**21.38**	**223**	*P*	**P**	**14 19 24.1**	**+0.1**
WR0				IAmb	IAmb	14 20 10.7	
	comp=Z,16nm,1.6s						
WRAB	**Tennant Creek**	**21.50**	**224**	*P*	**P**	**14 19 25.1**	**+0.1**
WRAB				IAmb	IAmb	14 19 33.1	
	comp=Z,39nm,1.8s						
WB2	**Warramunga Arr**	**21.50**	**224**	*P*	**P**	**14 19 25.0**	**0.0**
WB2				IAmb	IAmb	14 19 27.1	
	comp=Z,18nm,1.5s						
WRA	**Warramunga Arr**	**21.51**	**224**	*P*	**P**	**14 19 25.4**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=45,slow=11,SNR=55						
DZM	**Mont Dzumac**	**23.51**	**139**	*P*	**P**	**14 19 46.0**	**+2.7**
	comp=Z,8.3nm,0.8s,baz=315,slow=19,SNR=2.3						
DZM	**Mont Dzumac**	**23.51**	**139**	*P*	**P**	**14 19 43.5**	**+0.3**
KNRA	**Kununurra**	**23.55**	**241**	*P*	**P**	**14 19 41.6**	**-2.0**
KNRA				IAmb	IAmb	14 19 42.1	
	comp=Z,35nm,1.6s						
AS31	**Alice Springs**	**24.44**	**218**	*P*	**P**	**14 19 51.4**	**0.0**
ASAR	**Alice Springs**	**24.44**	**218**	*P*	**P**	**14 19 51.5**	**0.0**
	comp=Z,0.4nm,0.4s,baz=52,slow=8.6,SNR=24						
ARMA	**Armidale**	**25.65**	**177**	*P*	**P**	**14 20 04.5**	**+2.3**
ARMA				IAmb	IAmb	14 20 60.0	
	comp=Z,14nm,1.5s						
FITZ	**Fitzroy Crossi**	**27.30**	**239**	*P*	**P**	**14 20 16.2**	**-0.5**
	comp=Z,2.0nm,0.3s,baz=55,slow=7.5,SNR=36						
FITZ	**Fitzroy Crossi**	**27.30**	**239**	*P*	**P**	**14 20 16.0**	**-0.8**
STKA	**Stephens Creek**	**28.18**	**195**	*P*	**P**	**14 20 24.6**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=44,slow=14,SNR=4.5						
STKA	**Stephens Creek**	**28.18**	**195**	*P*	**P**	**14 20 21.6**	**-2.8**
AFI	**Afiamalu**	**38.77**	**106**	*P*	**P**	**14 21 53.5**	**-1.2**
JHJ2	**Mitsune**	**38.80**	**346**	*P*	**P**	**14 21 53.4**	**-1.1**
ILAR	**Eielson Array**	**83.11**	**23**	*P*	**P**	**14 26 49.5**	**+2.5**
	comp=Z,0.5nm,0.7s,baz=257,slow=5.0,SNR=5.6						

IDC 20 14:24:19.8±555.0, 57°.40N×30°.11E, h0km, Error ellipse: s-maj=213.0km s-min=44.5km az=161.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I37NO	**I37NO**	**12.78**	**341**	*i*		15 36 30.0	
	baz=151,slow=327,SNR=1.3						
I26DE	**FREYUNG INFRAS**	**13.01**	**236**	*i*		15 50 10.0	
	baz=50,slow=307,SNR=0.4						
I31KZ	**AKTYUBINSK INF**	**17.79**	**101**	*i*		16 21 50.0	
	baz=302,slow=329,SNR=0.7						

*IDC **20** 14:26:45.2±0.8,40°.47N×77°.76E,h0km,mb3.8/13, mb1 3.8/18,mb1mx3.6/67,mbtmp3.7/18,ML3.3/4,Error ellipse: s-maj=14.7km s-min=14.2km az=9.0*
*KRNET **20** 14:26:46.9±0.1,40°.62N×77°.68E,h17km,mb4.3*
*BJI **20** 14:26:47.4±0.0,40°.64N×77°.62E,h9km,mb4.0/3,ML3.7/8*
*SOME **20** 14:26:48.3,40°.68N×77°.65E,h15km,MS3.1*
*NEIC **20** 14:26:49.7±1.9,40°.61N±0°.06×77°.81E±0°.10,h25km±6km, mb4.1/1,Error ellipse: s-maj=11.5km s-min=8.3km az=123.0*
*NNC **20** 14:26:51.0±1.6,40°.78N×77°.68E,h0km,mb4.7,mpv4.3, Error ellipse: s-maj=11.3km s-min=8.6km az=166.0*
ISC 20 14:26:48.8±1.3, 40.74N±0°.04×77.75E±0°.03, h13km±8km, n109, σ1§70/154, mb3.8/13, 32C-13D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**0.99**	**3**	⇑*iP*	**Pb**	**14 27 08.2**	**0.0**
	baz=5.0						
TARG				⇑*iS*	**Sn**	**14 27 23.4**	**+0.3**
	baz=5.0						
TARG	**Taragay, Kyrgy**	**0.99**	**3**	Pn	**Pb**	**14 27 08.2**	**0.0**
KDJ	**Kajisay**	**1.46**	**343**	⇓*iP*	**Pn**	**14 27 15.8**	**+0.7**
	baz=46						
KDJ				⇓*iS*	**Sg**	**14 27 36.8**	**+1.0**
	baz=46						
KDJ	**Kajisay**	**1.46**	**343**		**Pb**	**14 27 16.0**	**0.0**
PRZ	**Przheval'sk**	**1.81**	**15**	⇑*iP*	**Pb**	**14 27 22.4**	**+0.4**
	baz=16						
PRZ				⇑*iS*	**Sg**	**14 27 48.1**	**+0.9**
	baz=16						
PRZ	**Przheval'sk**	**1.81**	**15**		**Pn**	**14 27 20.3**	**+0.3**
KSH	**Kashi**	**1.82**	**229**	Pn	**Pg**	**14 27 25.3**	**+1.4**
KSH				Sn	Sg	14 27 56.8	+9.3
KSH				smax	smax		
	comp=N,2μm,0.7s						
KSH				smax	smax		
	comp=E,2μm,0.6s						
ULHL	**Ulahol**	**1.89**	**324**	⇑*iP*	**Pn**	**14 27 22.3**	**+1.3**
	baz=27						
ULHL				⇑*iS*	**Sb**	**14 27 48.4**	**+1.5**
	baz=27						
ULHL	**Ulahol**	**1.89**	**324**	*P*	**Pb**	**14 27 23.0**	**-0.3**
	SNR=12						
ANVS	**Anan'yevo**	**2.05**	**358**	⇑*iP*	**Pb**	**14 27 25.5**	**-0.5**
	baz=60						
ANVS				⇑*iS*	**Sg**	**14 27 53.8**	**-0.9**
	baz=60						
BOOM	**Boomskoye usch**	**2.22**	**323**	⇑*iP*	**Pn**	**14 27 27.1**	**+1.6**
	baz=26						
BOOM				⇑*iS*	**Sb**	**14 27 56.5**	**+0.2**
	baz=26						
BOOM	**Boomskoye usch**	**2.22**	**323**	Pn	**Pb**	**14 27 28.4**	**-0.5**
KZA	**Kyzart**	**2.31**	**306**	⇑*iP*	**Pn**	**14 27 27.8**	**+0.8**
	baz=9.0						
KZA				⇑*iS*	**Sn**	**14 27 57.9**	**+2.4**
	baz=9.0						
KZA	**Kyzart**	**2.31**	**306**	*P*	**Pb**	**14 27 29.9**	**-0.7**
	SNR=79						
SATY	**Saty**	**2.37**	**12**	*eP*	**Pg**	**14 27 33.2**	**-1.1**
	168nm,0.8s						
SATY				*eS*	**Sg**	**14 28 05.6**	**+0.4**
	552nm,0.4s						
SATY	**Saty**	**2.37**	**12**	Pg	**Pg**	**14 27 33.2**	**-1.1**
	168nm,0.8s						
SATY				Lg	Lg	14 28 05.6	
	552nm,0.4s						
IZV	**Izvestkoviy**	**2.45**	**340**	*eP*	**Pb**	**14 27 34.1**	**+1.2**
	208nm,0.5s						
IZV				*eS*	**Sg**	**14 28 07.4**	**-0.2**
	652nm,0.4s						
IZV	**Izvestkoviy**	**2.45**	**340**	Pg	**Pb**	**14 27 34.1**	**+1.2**
	208nm,0.5s						
IZV				Lg	Lg	14 28 07.4	
	652nm,0.4s						
MDOK	**Medeo**	**2.48**	**348**	*eP*	**Pb**	**14 27 34.6**	**+1.2**
	442nm,0.6s						
MDOK				*eS*	**Sg**	**14 28 08.0**	**-0.6**
	644nm,0.7s						
MDOK	**Medeo**	**2.48**	**348**	⇑*P*	**Pb**	**14 27 32.6**	**-0.8**
MDOK				⇓*S*	**Sb**	**14 28 05.8**	**+1.9**
MDOK	**Medeo**	**2.48**	**348**	Pg	**Pb**	**14 27 34.6**	**+1.2**
	442nm,0.6s						
MDOK				Lg	Lg	14 28 08.0	
	644nm,0.7s						
ZHN	**Zhinishke**	**2.48**	**12**	*eP*	**Pg**	**14 27 36.5**	**0.0**
	63nm,0.2s						
ZHN				*eS*	**Sg**	**14 28 11.0**	**+2.3**
	261nm,0.5s						
KOTS	**Kotyrbulak**	**2.54**	**349**	*eP*	**Pb**	**14 27 36.0**	**+1.5**
	497nm,0.4s						
KOTS				*eS*	**Sg**	**14 28 10.2**	**-0.3**
	1μm,0.5s						
KOTS	**Kotyrbulak**	**2.54**	**349**	Pg	**Pb**	**14 27 36.0**	**+1.5**
	497nm,0.4s						
KOTS				Lg	Lg	14 28 11.0	
	1μm,0.5s						
KNDC	**Almaty**	**2.55**	**347**	⇓*P*	**Pb**	**14 27 35.8**	**+1.4**
KNDC				⇓*S*	**Sb**	**14 28 08.0**	**+2.3**
AAA	**Alma-Ata**	**2.55**	**346**	*eP*	**Pg**	**14 27 36.6**	**-1.1**
	604nm,0.5s						
AAA				*eS*	**Sg**	**14 28 11.9**	**+1.1**
	648nm,0.7s						
AAA	**Alma-Ata**	**2.55**	**346**	Pg	**Pg**	**14 27 36.6**	**-1.1**
	604nm,0.5s						
AAA				Lg	Lg	14 28 11.9	
	648nm,0.7s						
MTBS	**Maitube**	**2.59**	**338**	*eP*	**Pb**	**14 27 36.9**	**+1.8**
	71nm,0.4s						
MTBS				*eS*	**Sg**	**14 28 11.8**	**-0.2**
	201nm,0.3s						
UZB	**Uzynbulak**	**2.59**	**21**	*eP*	**Pg**	**14 27 37.5**	**-1.0**
	95nm,0.6s						
UZB				*eS*	**Sg**	**14 28 13.0**	**+0.9**
	366nm,0.6s						
UZB	**Uzynbulak**	**2.59**	**21**	Pg	**Pg**	**14 27 37.5**	**-1.0**
	95nm,0.6s						
UZB				Lg	Lg	14 28 13.0	
	366nm,0.6s						
KST	**Kastek**	**2.66**	**331**	*eP*	**Pb**	**14 27 36.8**	**+0.3**
	147nm,0.5s						
KST				*eS*	**Sb**	**14 28 12.1**	**+3.0**
	337nm,0.5s						
KST	**Kastek**	**2.66**	**331**	Pg	**Pb**	**14 27 36.8**	**+0.3**
	147nm,0.5s						
KST				Lg	Lg	14 28 12.1	
	337nm,0.5s						
TKM2	**Tokmak 2**	**2.71**	**324**	⇓*iP*	**Pn**	**14 27 34.4**	**+2.1**
	baz=27						
TKM2				⇓*iS*	**Sn**	**14 28 08.5**	**+3.4**
	baz=27						
TKM2	**Tokmak 2**	**2.71**	**324**	*P*	**Pn**	**14 27 35.2**	**+2.9**
	SNR=7.5						
TKM2	**Tokmak 2**	**2.71**	**324**	⇓Pn	**Pn**	**14 27 34.8**	**+2.4**
	104nm,0.7s						
TKM2				⇓Lg	Lg	14 28 13.6	
	116nm,0.6s						
SHLS	**Shalkode**	**2.74**	**27**	*eP*	**Pg**	**14 27 42.7**	**+1.4**
	180nm,0.5s						
SHLS				*eS*	**Sg**	**14 28 21.8**	**+5.0**
	1μm,0.6s						
SHLS	**Shalkode**	**2.74**	**27**	Pg	**Pg**	**14 27 42.7**	**+1.4**
	180nm,0.5s						
SHLS				Lg	Lg	14 28 21.8	
	1μm,0.6s						
KURS	**Kuram**	**2.77**	**6**	*eP*	**Pg**	**14 27 40.2**	**-1.7**
	150nm,0.5s						
KURS				*eS*	**Sg**	**14 28 17.3**	**-0.5**
	191nm,0.5s						
KBK	**Karagaybulak**	**2.84**	**313**	⇑*iP*	**Pn**	**14 27 35.5**	**+1.4**
	baz=16						
KBK				⇑*iS*	**Sn**	**14 28 11.0**	**+2.7**
	baz=16						
KBK	**Karagaybulak**	**2.84**	**313**	*P*	**Pb**	**14 27 39.8**	**+0.2**
	SNR=59						
UCH	**Uchtor**	**2.85**	**303**	⇑*iP*	**Pn**	**14 27 35.4**	**+0.9**
	baz=5.0						
UCH				⇑*iS*	**Sn**	**14 28 10.5**	**+1.6**
	baz=5.0						
UCH	**Uchtor**	**2.85**	**303**	*P*	**Pn**	**14 27 35.9**	**+1.4**
	SNR=25						
PDGK	**Podgornoye**	**2.90**	**26**	Pg	**Pg**	**14 27 42.8**	**-1.6**
	73nm,0.5s						
PDGK				Lg	Lg	14 28 22.1	
	303nm,0.7s						
DGS	**Degeres**	**2.91**	**330**	*eP*	**Pb**	**14 27 41.6**	**+1.0**
	54nm,0.6s						
DGS				*eS*	**Sg**	**14 28 20.5**	**-1.7**
	295nm,0.5s						
DGS	**Degeres**	**2.91**	**330**	Pg	**Pb**	**14 27 41.6**	**+1.0**
	54nm,0.6s						
DGS				Lg	Lg	14 28 20.5	
	295nm,0.5s						
KTBS	**Karatobe**	**3.08**	**345**	*eP*	**Pb**	**14 27 44.8**	**+1.3**
	58nm,0.4s						
KTBS				*eS*	**Sg**	**14 28 25.8**	**-1.9**
	756nm,0.5s						
KTBS	**Karatobe**	**3.08**	**345**	Pg	**Pb**	**14 27 44.8**	**+1.3**
	58nm,0.4s						
KTBS				Lg	Lg	14 28 25.8	
	756nm,0.5s						
AAK	**Ala-Archa**	**3.09**	**309**

	255nm,0.5s									
USP	**Ospenovka**	**3.50**	**317**	⇑	*i*P		**Pn**	**14 27 44.7**	**+1.7**
	baz=19									
USP				⇑	*i*S		**Sn**	**14 28 26.7**	**+2.3**
	baz=19									
USP	**Ospenovka**	**3.50**	**317**		P		**Pb**	**14 27 51.7**	**+1.0**
	SNR=22									
EKS2	**Erkin-Say**	**3.54**	**304**	⇑	*i*P		**Pn**	**14 27 44.8**	**+1.1**
	baz=6.0									
EKS2				⇑	*i*S		**Sn**	**14 28 27.1**	**+1.6**
	baz=6.0									
EKS2	**Erkin-Say**	**3.54**	**304**		P		**Pb**	**14 27 53.6**	**+2.2**
	SNR=16									
ARSB	**Arslanbob**	**3.65**	**281**	⇑	*i*P		**Pn**	**14 27 45.6**	**+0.4**
	baz=83									
ARSB				⇑	*i*S		**Sn**	**14 28 28.5**	**+0.3**
	baz=83									
DJR	**Jarkent**	**3.90**	**22**		*e*P		**Pg**	**14 28 01.4**	**-2.1**
	54nm,0.5s									
DJR					*e*S		**Sg**	**14 28 54.0**	**0.0**
	98nm,0.4s									
DJR	**Jarkent**	**3.90**	**22**		Pg		**Pg**	**14 28 01.4**	**-2.1**
	54nm,0.5s									
DJR					Lg		Lg	14 28 54.0		
	98nm,0.4s									
MRKS	**Merke**	**3.93**	**302**		*e*P		**Pb**	**14 27 58.7**	**+0.6**
	47nm,0.5s									
MRKS					*e*S		**Sb**	**14 28 49.2**	**+3.5**
	32nm,0.7s									
MRKS	**Merke**	**3.93**	**302**		Pg		**Pb**	**14 27 58.7**	**+0.6**
	47nm,0.5s									
MRKS					Lg		Lg	14 28 49.2		
	32nm,0.7s									
TDK	**Taldyqorghan**	**4.29**	**6**		*e*P		**Pg**	**14 28 07.8**	**-3.3**
	54nm,0.3s									
TDK					*e*S		**Sg**	**14 29 04.6**	**-2.0**
	634nm,0.5s									
KAPS	**Kapalarasan**	**4.70**	**14**		*e*P		**Pg**	**14 28 16.9**	**-1.9**
	27nm,0.5s									
KAPS					*e*S		**Sg**	**14 29 20.8**	**+1.2**
	71nm,0.5s									
KAPS	**Kapalarasan**	**4.70**	**14**		Pg		**Pg**	**14 28 16.9**	**-1.9**
	27nm,0.5s									
KAPS					Lg		Lg	14 29 20.8		
	71nm,0.5s									
BTLS	**Baital**	**5.09**	**329**		*e*P		**Pb**	**14 28 21.2**	**+3.5**
	12nm,0.7s									
BTLS					*e*S		**Sg**	**14 29 27.7**	**-4.5**
	63nm,0.5s									
KK31	**Karatay Array**	**5.89**	**296**		Pg		**Pb**	**14 28 34.8**	**+3.4**
	5.4nm,0.6s,baz=118,slow=16,SNR=34									
KK31				⇑	Lg		Lg	14 29 50.9		
	10nm,0.7s,baz=88,slow=28,SNR=6.4									
GAR	**Garm**	**5.97**	**256**				**Pn**	**14 28 16.1**	**-1.0**
MAKZ	**Makanchi**	**6.80**	**25**		Pn		**Pn**	**14 28 30.7**	**+2.4**
MK31	**Makanchi Array**	**6.89**	**27**		Pn		**Pn**	**14 28 31.9**	**+2.4**
	0.6nm,0.3s,baz=202,slow=14,SNR=38									
MK31				⇑	Pg		**Pb**	**14 28 47.0**	**-1.4**
	2.3nm,0.6s,baz=202,slow=15,SNR=4.8									
MK31				⇑	Lg		Lg	14 30 29.7		
	15nm,0.8s,baz=214,slow=25,SNR=3.6									
MK31	**Makanchi Array**	**6.89**	**27**				**Pn**	**14 28 31.7**	**+2.1**
MKAR	**Makanchi Array**	**6.89**	**27**		Pn		**Pn**	**14 28 32.1**	**+2.6**
	0.8nm,0.3s,baz=202,slow=15,SNR=36									
MKAR					Sn		**Sn**	**14 29 51.0**	**+3.1**
	1.1nm,0.3s,baz=208,slow=23,SNR=3.6									
MKAR					Lg		Lg	14 30 29.4		
	2.2nm,0.3s,baz=215,slow=26,SNR=4.3									
CHGR	**Chuyangaron**	**6.94**	**255**				**Pn**	**14 28 28.3**	**-2.0**
CHCP	**Chirah Chowk**	**7.92**	**208**		P		**Pn**	**14 28 42.8**	**-0.9**
NIL	**Nilore**	**7.93**	**208**				**Pn**	**14 28 42.4**	**-1.5**
WMQ	**Urumqi**	**8.00**	**64**		*e*P		**Pn**	**14 28 45.9**	**+1.1**
WMQ					Sn		**Sn**	**14 30 15.1**	**0.0**
CEP	**Cherat**	**8.32**	**216**		P		**Pn**	**14 28 49.5**	**+0.2**
KURBB	**Kurchatov Arra**	**9.90**	**3**		Pn		**Pn**	**14 29 12.4**	**+1.6**
	0.1nm,0.3s,baz=195,slow=12,SNR=4.9									
KURBB					Lg		Lg	14 32 03.1		
	0.2nm,0.3s,baz=202,slow=28,SNR=7.5									
KURK	**Kurchatov**	**10.00**	**3**				**Pn**	**14 29 12.4**	**+0.3**
BVAR	**Borovoye Array**	**13.27**	**340**		Pn		**Pn**	**14 29 56.5**	**-0.4**
	baz=151,slow=14,SNR=3.5									
BVAR					Lg		Lg	14 33 43.3		
	0.2nm,0.3s,baz=154,slow=24,SNR=4.1									
ZALV	**Zalesovo Beam**	**14.05**	**17**		Pn		**Pn**	**14 30 09.1**	**+1.6**
	0.2nm,0.3s,baz=314,slow=20,SNR=2.2									
ZALV					Lg		Lg	14 34 15.7		
	0.1nm,0.3s,baz=198,slow=37,SNR=2.3									
BRTR	**Keskin Array B**	**33.43**	**283**		P		**P**	**14 33 27.3**	**-0.1**
	0.5nm,0.4s,baz=305,slow=36,SNR=2.9									
FINES	**FINESS Array B**	**37.20**	**321**		P		**P**	**14 33 60.0**	**+0.5**
	1.1nm,0.6s,baz=111,slow=10,SNR=5.6									
KLR	**Kul'dur**	**38.40**	**59**		P		**P**	**14 34 09.5**	**-0.3**
	0.3nm,0.3s,baz=272,slow=6.0,SNR=3.7									
ARCES	**ARCESS Array B**	**39.45**	**334**		P		**P**	**14 34 18.8**	**+0.5**
	1.8nm,0.8s,baz=106,slow=8.9,SNR=5.6									
USRK	**Ussuriysk Ar.**	**39.56**	**66**		P		**P**	**14 34 18.1**	**-1.3**
	1.2nm,0.7s,baz=157,slow=29,SNR=1.6									
TIXI	**Tiksi**	**39.86**	**23**		P		**P**	**14 34 21.9**	**+0.3**
	0.3nm,0.4s,baz=99,slow=5.2,SNR=2.0									
TIXI	**Tiksi**	**39.86**	**23**		IAmb		IAmb	14 34 39.8		
	comp=Z,7.0nm,1.8s									
HFS	**Hagfors**	**43.18**	**319**		P		**P**	**14 34 49.5**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=74,slow=12,SNR=3.8									
NOA	**NORSAR Array B**	**44.34**	**320**		P		**P**	**14 34 58.2**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=87,slow=7.9,SNR=3.2									
ILAR	**Eielson Array**	**69.17**	**19**		P		**P**	**14 37 54.0**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=319,slow=5.0,SNR=6.4									
TORD	**Torodi Ar. Bea**	**71.01**	**271**		P		**P**	**14 38 04.0**	**-2.6**
	comp=Z,1.4nm,0.6s,baz=45,slow=5.2,SNR=8.7									
YKA	**Yellowknife Ar**	**76.64**	**6**		P		**P**	**14 38 38.2**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=350,slow=5.2,SNR=15									
WRA	**Warramunga Arr**	**80.03**	**127**		P		**P**	**14 38 56.3**	**-1.9**
	comp=Z,0.6nm,1.0s,baz=305,slow=3.1,SNR=2.2									
ASAR	**Alice Springs**	**82.61**	**130**		P		**P**	**14 39 09.7**	**-2.2**
	comp=Z,0.7nm,0.7s,baz=318,slow=5.6,SNR=8.4									

*DDA **20** 14:38:03.7, 41.91N×43.17E, h7km±2km, ML2.1*
*NORS **20** 14:38:04.7±0.0, 41.84N×43.16E, h11km, MPVA3.5*
*TIF **20** 14:38:04.5, 41.86N×43.20E, h15km±1km*
*ATA **20** 14:38:06.6±9.5, 41.27N×42.34E, h28km±999km, ML2.3, MW3.5*

ISC 20 14:38:05.1±0.9, 41.84N±0.02×43.17E±0.02, h15km±8km, n23, σ0.85/46, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BKRG	**Bakuriani**	**0.27**	**106**	P		**Pg**	**14 38 10.3**	**-0.6**
BKRG				S		**Sg**	**14 38 14.9**	**0.0**
EPOS	**Posof**	**0.47**	**225**	*e*P		**Pg**	**14 38 14.7**	**+0.2**
EPOS				*e*S		**Sb**	**14 38 22.1**	**+0.1**
EPOS				IAML			14 38 23.8	
	comp=Z,18nm,0.2s							
EPOS	**Posof**	**0.47**	**225**	*i* P		**Pg**	**14 38 14.5**	**0.0**
EPOS				*i* S		**Sb**	**14 38 22.3**	**+0.3**
AKH	**Akhalkalaki**	**0.49**	**151**	P		**Pg**	**14 38 15.2**	**+0.4**
AKH				S		**Sb**	**14 38 23.0**	**+0.5**
TKB	**Tkibuli**	**0.53**	**346**	P		**Pg**	**14 38 15.2**	**-0.4**
TKB				S		**Sg**	**14 38 22.7**	**0.0**
BGD	**Bogdanovka**	**0.65**	**151**	P		**Pg**	**14 38 17.9**	**0.0**
BGD				S		**Sb**	**14 38 27.3**	**0.0**
ONI	**Oni**	**0.78**	**15**	P		**Pg**	**14 38 19.6**	**-0.7**
ONI				S		**Sg**	**14 38 30.3**	**-0.3**
ONI	**Oni**	**0.78**	**15**	*i* Pg		**Pg**	**14 38 19.7**	**-0.7**
ONI				*e*Sg		**Sb**	**14 38 30.6**	**-0.3**
ZEI	**Tsey**	**1.09**	**29**	*e*Pg		**Pn**	**14 38 25.9**	**-0.2**
ZEI				*e*Sg		**Sn**	**14 38 41.2**	**+0.1**
DIGR	**Digorskoe uzhe**	**1.10**	**16**	*e*Pg		**Pn**	**14 38 26.0**	**-0.3**
DIGR				*e*Sg		**Sn**	**14 38 41.4**	**0.0**
BATM	**Batumi**	**1.13**	**259**	P		**Pb**	**14 38 26.0**	**-0.4**
BATM				S		**Sg**	**14 38 41.9**	**+0.2**
BATM	**Batumi**	**1.13**	**259**	*i* P		**Pb**	**14 38 25.6**	**-0.8**
BATM				*i* S		**Sb**	**14 38 41.0**	**+0.1**
GUDG	**Gudauri**	**1.16**	**57**	P		**Pb**	**14 38 26.3**	**-0.6**
GUDG				S		**Sn**	**14 38 42.6**	**0.0**
GUDG	**Gudauri**	**1.16**	**57**	*i* Pg		**Pb**	**14 38 26.4**	**-0.5**
GUDG				*e*Sg		**Sn**	**14 38 42.7**	**0.0**
EAK	**Akyaka**	**1.19**	**164**	*e*P		**Pg**	**14 38 28.1**	**0.0**
EAK				*e*S		**Sg**	**14 38 44.2**	**+0.5**
EAK				IAML			14 38 46.2	
	comp=Z,12nm,0.3s							
EAK	**Akyaka**	**1.19**	**164**	*i* P		**Pn**	**14 38 26.6**	**-0.9**
EAK				*i* S		**Sg**	**14 38 44.0**	**+0.3**
EAK				IAML			14 38 46.0	
	comp=N,25nm,0.2s							
DAGI	**Agillar**	**1.21**	**232**	*i* P		**Pb**	**14 38 27.8**	**-0.1**
DAGI				*i* S		**Sg**	**14 38 47.2**	**+2.9**
LACR	**Lac**	**1.29**	**40**	*e*Pg		**Pg**	**14 38 30.2**	**+0.2**
LACR				*e*Sg		**Sg**	**14 38 48.1**	**+1.2**
DBAD	**Bademkaya**	**1.38**	**234**	*i* P		**Pb**	**14 38 30.5**	**-0.2**
DBAD				*i* S		**Sg**	**14 38 49.7**	**+0.1**
DBAD				IAML			14 38 51.0	
	comp=E,34nm,0.6s							
DBAD				IAML			14 38 52.0	
	comp=N,29nm,0.4s							
KORR	**Kora**	**1.41**	**28**	*e*Pg		**Pg**	**14 38 34.9**	**+2.6**
KORR				*e*Sg		**Sg**	**14 38 52.9**	**+2.2**
DDEM	**Demirkent**	**1.43**	**229**	*i* P		**Pb**	**14 38 31.6**	**+0.1**
DDEM				*i* S		**Sg**	**14 38 52.6**	**+1.5**
DDEM				IAML			14 38 58.0	
	comp=N,52nm,0.5s							
DDEM				IAML			14 39 01.0	
	comp=E,44nm,0.4s							
NEY	**Neytrino**	**1.45**	**347**	*e*Pg		**Pb**	**14 38 32.3**	**+0.3**
NEY				*e*Sg		**Sg**	**14 38 51.4**	**-0.5**
KRIK	**Erzurum-spir**	**2.26**	**229**	*e*P		**Pn**	**14 38 41.3**	**-0.9**
KRIK				*e*S		**Pg**	**14 38 48.0**	**-0.5**
KRIK				IAML			14 39 03.3	
	comp=Z,948nm,0.1s							

*ROM **20** 14:55:50.8±0.3, 40.973N×0.009×12.58E×0.01, h6km±2km, ML3.1, Error ellipse: s-maj=1.0km s-min=0.8km az=78.0*
*IDC **20** 14:55:52.6±1.7, 41.16N×12.69E, h0km, mb3.3/4, mb1 3.5/6, mb1mx3.3/50, mbtmp3.3/6, ML2.9/2, MS2.4/2, Ms1 2.5/2, ms1mx2.2/22, Error ellipse: s-maj=52.6km s-min=30.8km az=113.0*
*LDG **20** 14:55:52.3±0.2, 40.98N×12.63E, h10km, Ml3.1/7, Error ellipse: s-maj=4.0km s-min=2.4km az=163.0*

ISC 20 14:55:52.9±1.1, 41.03N±0.03×12.58E±0.03, h19km±3km, n93, σ1.33/107, mb3.4/4, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LATB	**Latina**	**0.55**	**32**	P		**Pb**	**14 56 02.5**	**-1.4**
LATB				S		**Sb**	**14 56 11.2**	**-0.1**
LAV9	**Lanuvio**	**0.66**	**8**	P		**Pb**	**14 56 06.0**	**+0.3**
LAV9				AML		AML		
	comp=E,18950μm,0.5s							
LAV9				AML		AML		
	comp=N,19700μm,0.7s							
LAV9				AML		AML		
	comp=E,18700μm,0.5s							
LAV9				AML		AML		
	comp=N,19500μm,0.7s							
LAV9				AML		AML		
	comp=E,18650μm,0.5s							
LAV9				AML		AML		
	comp=E,18950μm,0.5s							
LAV9				AML		AML		
	comp=N,19700μm,0.7s							
VENT	**Ventotene**	**0.68**	**110**	P		**Pg**	**14 56 05.7**	**-0.7**
VENT				S		**Sg**	**14 56 15.3**	**-0.1**
VENT				AML		AML		
	comp=E,12300μm,0.2s							
VENT				AML		AML		
	comp=N,21300μm,0.5s							
VENT				AML		AML		
	comp=N,21250μm,0.5s							
VENT				AML		AML		
	comp=E,13200μm,0.2s							
GIUL	**Giuliano Di Ro**	**0.74**	**44**	P		**Pb**	**14 56 05.8**	**-1.4**
GIUL				S		**Sg**	**14 56 16.9**	**-0.3**
GIUL				AML		AML		
	comp=E,4555μm,0.6s							
GIUL				AML		AML		
	comp=N,4190μm,0.7s							
RDP	**Rocca di Papa**	**0.74**	**8**	P		**Pb**	**14 56 06.6**	**-0.6**
RDP				S		**Sb**	**14 56 17.4**	**+0.5**
RDP				AML		AML		
	comp=N,12100μm,0.6s							
RDP				AML		AML		
	comp=E,8655μm,0.6s							
MA9	**Marino**	**0.74**	**5**	P		**Pb**	**14 56 07.5**	**+0.2**
MA9				S		**Sg**	**14 56 18.4**	**+0.9**
SAMA	**S.Maria delle**	**0.75**	**1**	P		**Pb**	**14 56 07.7**	**+0.3**
SAMA				S		**Sg**	**14 56 18.9**	**+1.2**
RMP	**Rome, Mte Porz**	**0.79**	**7**	P		**Pb**	**14 56 07.5**	**-0.5**
RMP				S		**Sg**	**14 56 19.9**	**+1.0**
RMP				AML		AML		
	comp=E,4700μm,0.5s							
RMP				AML		AML		
	comp=N,8115μm,0.7s							
ROM9	**Roma**	**0.80**	**357**	P		**Pb**	**14 56 08.4**	**+0.2**
ROM9				S		**Sn**	**14 56 20.9**	**+0.3**
GUAR	**Guarcino**	**0.94**	**36**	P		**Pb**	**14 56 09.6**	**-1.1**
GUAR				S		**Sg**	**14 56 23.5**	**-0.3**
GUAR				AML		AML		
	comp=N,2640μm,0.5s							
GUAR				AML		AML		
	comp=E,2140μm,0.8s							
CERT	**Cerreto**	**0.97**	**18**	P		**Pb**	**14 56 10.0**	**-1.2**
CERT				S		**Sg**	**14 56 24.9**	**+0.3**
CERT				AML		AML		
	comp=N,2470μm,0.7s							
CERT				AML		AML		
	comp=E,5055μm,0.4s							
MODR	**Mondragone**	**0.99**	**83**	P		**Pb**	**14 56 10.0**	**-1.5**
MODR				AML		AML		
	comp=E,320μm,0.4s							
MODR				AML		AML		
	comp=N,1130μm,1.0s							
MTCE	**Montecelio**	**1.00**	**7**	P		**Pb**	**14 56 11.0**	**-0.7**
MTCE				S		**Sb**	**14 56 25.0**	**+0.5**
MTCE				AML		AML		
	comp=E,1176μm,1.5s							
MTCE				AML		AML		
	comp=N,1385μm,0.4s							
MTCE				AML		AML		
	comp=E,1175μm,1.5s							
OC9	**Casamicciola**	**1.04**	**105**	P		**Pb**	**14 56 11.3**	**-1.0**
POFI	**Posta Fibreno**	**1.10**	**51**	P		**Pb**	**14 56 11.9**	**-1.5**
POFI				S		**Sg**	**14 56 28.0**	**-0.6**
POFI				AML		AML		
	comp=N,1201μm,0.4s							
POFI				AML		AML		
	comp=N,1134μm,0.4s							
POFI				AML		AML		
	comp=N,1134μm,0.4s							
POFI				AML		AML		
	comp=E,1375μm,0.5s							
POFI				AML		AML		
	comp=N,1200μm,0.4s							
POFI				AML		AML		
	comp=E,1550μm,0.5s							
TOLF	**Tolfa**	**1.12**	**338**	P		**Pn**	**14 56 12.9**	**-0.7**
TOLF				AML		AML		
	comp=N,3075μm,0.4s							
TOLF				AML		AML		
	comp=E,2505μm,1.6s							
VVLD	**Villa Vallelon**	**1.15**	**43**	P		**Pn**	**14 56 12.6**	**-1.5**
VVLD				S		**Sn**	**14 56 29.5**	**+0.1**
VVLD				AML		AML		
	comp=E,554μm,1.3s							
VVLD				AML		AML		
	comp=N,448μm,0.4s							
VVLD				AML		AML		
	comp=E,555μm,1.3s							
PTQR	**Pietraquaria**	**1.17**	**32**	P		**Pn**	**14 56 13.4**	**-1.0**
PTQR				S		**Sg**	**14 56 30.5**	**-0.5**
PTQR				AML		AML		
	comp=E,760μm,0.8s							
PTQR				AML		AML		
	comp=N,1052μm,0.9s							
PTQR				AML		AML		
	comp=N,1053μm,0.9s							
PIGN	**Pignataro Magg**	**1.22**	**81**	P		**Pn**	**14 56 13.8**	**-1.2**
PIGN				AML		AML		
	comp=E,411μm,1.4s							
PIGN				AML		AML		
	comp=N,472μm,0.6s							
PIGN				AML		AML		
	comp=E,399μm,1.4s							
PIGN				AML		AML		
	comp=N,465μm,0.5s							
PIGN				AML		AML		
	comp=E,410μm,1.4s							
PIGN				AML		AML		
	comp=N,472μm,0.6s							
PIGN				AML		AML		
	comp=E,400μm,1.4s							
PIGN				AML		AML		
	comp=N,472μm,0.6s							
CERA	**Filignano**	**1.23**	**62**	P		**Pn**	**14 56 14.4**	**-0.7**
CERA				AML		AML		
	comp=E,914μm,0.6s							
CERA				AML		AML		
	comp=N,1100μm,0.7s							
CERA				AML		AML		
	comp=N,1102μm,0.7s							
CERA				AML		AML		
	comp=E,941μm,0.6s							
FIAM	**Fiamignano**	**1.30**	**18**	P		**Pn**	**14 56 15.9**	**-0.3**
FIAM				S		**Sg**	**14 56 34.6**	**-0.6**
FIAM				AML		AML		
	comp=E,1115μm,0.7s							
FIAM				AML		AML		
	comp=N,1165μm,0.6s							
VAGA	**Valle Agricola**	**1.31**	**72**	P		**Pn**	**14 56 15.4**	**-0.8**
VAGA				AML		AML		
	comp=E,418μm,0.7s							
VAGA				AML		AML		
	comp=N,790μm,0.4s							
VAGA				AML		AML		
	comp=E,442μm,0.7s							
VAGA				AML		AML		
	comp=N,823μm,0.4s							
RNI2	**Rionero Sannit**	**1.36**	**60**	P		**Pn**	**14 56 16.6**	**-0.4**
RNI2				AML		AML		
	comp=N,548μm,0.7s							
RNI2				AML		AML		
	comp=E,560μm,1.0s							
RNI2				AML		AML		
	comp=N,570μm,0.7s							
RNI2				AML		AML		
	comp=E,546μm,1.0s							
RNI2				AML		AML		
	comp=E,560μm,1.0s							
RNI2				AML		AML		
	comp=N,548μm,0.7s							
INTR	**Introdacqua**	**1.40**	**45**	P		**Pn**	**14 56 17.1**	**-0.5**
INTR				S		**Sg**	**14 56 36.8**	**-1.4**
INTR				AML		AML		
	comp=E,1625μm,1.1s							
INTR				AML		AML		
	comp=N,1280μm,0.6s							
INTR				AML		AML		
	comp=E,1620μm,1.1s							
INTR				AML		AML		
	comp=N,1405μm,0.9s							
INTR				AML		AML		
	comp=N,79000μm,1.3s							
INTR				AML		AML		
	comp=E,73500μm,1.6s							
MIDA	**Miranda**	**1.40**	**64**	AML		AML		
	comp=N,285μm,1.2s							
MIDA				AML		AML		
	comp=E,414μm,1.2s							
SGG	**Gregorio Mates**	**1.41**	**75**	AML		AML		
	comp=E,504μm,0.6s							
SGG				AML		AML		
	comp=E,1.5nm,0.6s							
SGG				AML		AML		
	comp=N,1.5nm,0.6s							
SGG				AML		AML		
	comp=N,418μm,1.0s							
FAGN	**Fagnano**	**1.45**	**31**	AML		AML		
	comp=E,1860μm,0.5s							
FAGN				AML		AML		
	comp=N,1440μm,0.5s							
FAGN				AML		AML		
	comp=E,2510μm,0.5s							
FAGN				AML		AML		
	comp=N,1945μm,0.5s							
ARRO	**Arrone**	**1.56**	**5**	P		**Pb**	**14 56 22.2**	**+1.1**
ARRO				AML		AML		
	comp=E,452μm,1.0s							
ARRO				AML		AML		
	comp=N,633μm,0.9s							
ARRO				AML		AML		
	comp=E,452μm,1.0s							
LPEL	**Lama dei Pelig**	**1.58**	**49**	P		**Pn**	**14 56 19.7**	**-0.2**
LPEL				S		**Sg**	**14 56 43.0**	**-0.9**
LPEL				AML		AML		
	comp=E,438μm,1.0s							
LPEL				AML		AML		
	comp=N,310μm,0.7s							
BSSO	**Busso**	**1.61**	**71**	P		**Pn**	**14 56 20.4**	**0.0**
BSSO				AML		AML		
	comp=E,236μm,0.8s							
BSSO				AML		AML		
	comp=N,258μm,0.8s							
BSSO				AML		AML		
	comp=E,102μm,0.8s							
BSSO				AML		AML		
	comp=N,97μm,0.8s							
BSSO				AML		AML		
	comp=E,308μm,0.7s							
BSSO				AML		AML		
	comp=E,124μm,0.7s							
BSSO				AML		AML		
	comp=N,120μm,1.6s							
BSSO				AML		AML		
	comp=N,282μm,0.8s							
BSSO				AML		AML		
	comp=N,283μm,0.8s							
LNSS	**Leonessa**	**1.61**	**12**	P		**Pn**	**14 56 20.4**	**-0.1**
LNSS				AML		AML		
	comp=E,812μm,0.6s							
LNSS				AML		AML		
	comp=N,606μm,1.0s							
TRIV	**Trivento**	**1.66**	**63**	P		**Pn**	**14 56 21.6**	**+0.6**
TRIV				AML		AML		
	comp=E,204μm,1.4s							
TRIV				AML		AML		
	comp=N,123μm,0.5s							
TRIV				AML		AML		
	comp=E,214μm,0.7s							
TRIV				AML		AML		
	comp=N,130μm,1.0s							
VCEL	**Villa Celiera**	**1.66**	**34**	AML		AML		
	comp=N,590μm,1.2s							
LATE	**Laterza**	**1.69**	**340**	P		**Pn**	**14 56 21.4**	**0.0**
LATE				AML		AML		
	comp=N,1065μm,1.5s							
LATE				AML		AML		
	comp=E,566μm,1.6s							
MAON	**Monte Argentar**	**1.77**	**323**	AML		AML		
	comp=N,252μm,0.7s							
MAON				AML		AML		
	comp=E,390μm,1.1s							
SACS	**San Casciano d**	**1.89**	**345**	P		**Pn**	**14 56 24.6**	**+0.3**
SACS				AML		AML		
	comp=E,228μm,1.1s							
SACS				AML		AML		
	comp=N,188μm,0.7s							
MGAB	**Montegabbione**	**1.92**	**350**	P		**Pn**	**14 56 25.3**	**+0.7**
MGAB				AML		AML		
	comp=E,258μm,1.2s							
MGAB				AML		AML		
	comp=N,213μm,0.4s							
MELA	**Melanico ??? S**	**2.04**	**70**	AML		AML		
	comp=N,164μm,0.5s							
MELA				AML		AML		
	comp=E,168μm,0.6s							
FDMO	**Fiordimonte**	**2.04**	**11**	P		**Pn**	**14 56 25.3**	**-1.0**
FDMO				S		**Sg**	**14 56 60.0**	**+1.3**
FDMO				AML		AML		
	comp=N,216μm,1.3s							
FDMO				AML		AML		
	comp=E,388μm,0.8s							
CDRU	**Civita di Ruta**	**2.14**	**104**	P		**Pn**	**14 56 26.5**	**-1.3**
CDRU				AML		AML		
	comp=N,56μm,0.6s							
CDRU				AML		AML		
	comp=E,59μm,0.8s							
ATTE	**AVT- Monte Tez**	**2.17**	**356**	AML		AML		
	comp=N,231μm,1.0s							
ATTE				AML		AML		
	comp=E,200μm,1.2s							
CASP	**Castiglione de**	**2.18**	**325**	P		**Pn**	**14 56 27.8**	**-0.3**
CASP				AML		AML		
	comp=N,263μm,0.3s							
CASP				AML		AML		
	comp=E,140μm,0.5s							
**G

GUMA				AML	AML		
	comp=N,1009μm,0.5s						
GUMA				AML	AML		
	comp=E,898μm,0.6s						
GUMA				AML	AML		
	comp=N,846μm,0.6s						
GUMA				AML	AML		
	comp=E,898μm,0.6s						
GUMA				AML	AML		
	comp=E,765μm,0.6s						
BULG	**Bulgheria - Ca**	**2.34**	**113**	P	**Pn**	**14 56 29.3**	**-1.1**
BULG				AML	AML		
	comp=E,101μm,0.5s						
BULG				AML	AML		
	comp=N,205μm,0.4s						
CAFI	**Castiglion Fio**	**2.34**	**349**	AML	AML		
	comp=E,105μm,1.1s						
CAFI				AML	AML		
	comp=N,71μm,1.5s						
MGR	**Morigerati**	**2.44**	**110**	P	**Pn**	**14 56 30.6**	**-1.1**
MGR				AML	AML		
	comp=E,72μm,0.4s						
MGR				AML	AML		
	comp=N,89μm,0.5s						
SGRT	**San Giovanni R**	**2.49**	**72**	P	**Pn**	**14 56 32.0**	**-0.5**
SGRT				AML	AML		
	comp=E,74μm,1.1s						
SGRT				AML	AML		
	comp=N,87μm,0.8s						
PIEI	**Pieia**	**2.51**	**359**	AML	AML		
	comp=E,72μm,1.3s						
PIEI				AML	AML		
	comp=N,87μm,1.1s						
MTSN	**Montesano sull**	**2.53**	**106**	AML	AML		
	comp=N,62μm,1.0s						
MTSN				AML	AML		
	comp=E,72μm,0.8s						
MSAG	**Monte S. Angel**	**2.60**	**74**	P	**Pn**	**14 56 33.9**	**-0.2**
MSAG				AML	AML		
	comp=E,90μm,0.8s						
MSAG				AML	AML		
	comp=N,148μm,0.9s						
MSAG				AML	AML		
	comp=E,90μm,0.8s						
CUC	**Castrocucco**	**2.68**	**112**	P	**Pn**	**14 56 34.5**	**-0.6**
CUC				AML	AML		
	comp=E,77μm,1.4s						
CUC				AML	AML		
	comp=N,75μm,0.9s						
CUC				AML	AML		
	comp=E,102μm,1.0s						
SMPL	**Sampolo**	**2.69**	**294**	P	**Pn**	**14 56 33.9**	**-1.3**
SMPL	**Sampolo**	**2.69**	**294**	AML	AML		
	comp=E,4745μm,0.9s						
SMPL				AML	AML		
	comp=N,3375μm,0.6s						
VSL	**Villasalto**	**2.89**	**239**	P	**Pn**	**14 56 37.0**	**-0.9**
T0702	**Acquaformosa (**	**2.98**	**115**	P	**Pn**	**14 56 38.2**	**-1.1**
CET2	**Cetraro**	**2.99**	**119**	P	**Pn**	**14 56 38.2**	**-1.1**
CET2				AML	AML		
	comp=E,98μm,0.6s						
CET2				AML	AML		
	comp=N,144μm,0.8s						
CGL	**Cagliari Serpe**	**3.01**	**238**	P	**Pn**	**14 56 38.9**	**-0.8**
PGF	**Pioggiola**	**3.08**	**301**	*e*Pn	**Pn**	**14 56 40.5**	**-0.1**
PGF				*e*Sn	**Sn**	**14 57 15.5**	**-1.4**
	comp=N,43nm,0.5s						
PGF	**Pioggiola**	**3.08**	**301**	AML	AML		
	comp=N,58μm,0.8s						
PGF				AML	AML		
	comp=E,75μm,0.6s						
SALB	**San Lorenzo Be**	**3.10**	**111**	P	**Pn**	**14 56 40.5**	**-0.4**
SALB				AML	AML		
	comp=E,44μm,1.1s						
SALB				AML	AML		
	comp=N,35μm,0.6s						
CAR1	**CAROLEI**	**3.30**	**121**	AML	AML		
	comp=E,107μm,0.7s						
CAR1				AML	AML		
	comp=N,71μm,0.6s						
MSFR	**San Fratello**	**3.37**	**152**	P	**Pn**	**14 56 44.9**	**+0.2**
MSFR				AML	AML		
	comp=E,22μm,1.6s						
MSFR				AML	AML		
	comp=N,18μm,1.4s						
MMGO	**Monte Magaggia**	**3.38**	**175**	P	**Pn**	**14 56 46.5**	**+1.9**
CELI	**Celico**	**3.42**	**117**	P	**Pn**	**14 56 44.9**	**-0.5**
CELI				AML	AML		
	comp=E,87μm,0.8s						
MUCR	**Ucria**	**3.47**	**148**	P	**Pn**	**14 56 46.1**	**0.0**
MUCR				AML	AML		
	comp=E,40μm,1.0s						
MUCR				AML	AML		
	comp=N,48μm,1.3s						
ZIRJ	**Zirje**	**3.47**	**40**	*i* Pn	**Pn**	**14 56 46.5**	**+0.5**
DUGI	**Dugi Otok**	**3.48**	**31**	*e*Pn	**Pn**	**14 56 46.5**	**+0.4**
MNO	**Monte Soro**	**3.50**	**151**	P	**Pn**	**14 56 46.9**	**+0.4**
MCSR	**Castroreale**	**3.61**	**144**	P	**Pn**	**14 56 47.6**	**-0.3**
MCSR				AML	AML		
	comp=N,48μm,0.4s						
MCSR				AML	AML		
	comp=E,44μm,1.3s						
AIO	**Antillo**	**3.68**	**145**	P	**Pn**	**14 56 49.1**	**+0.3**
NVLJ	**Novalja**	**3.92**	**25**	*e*Pn	**Pn**	**14 56 52.8**	**+0.7**
MAKA	**Makarska**	**4.00**	**54**	*e*Pn	**Pn**	**14 56 54.0**	**+0.8**
KIJV	**Kijevo**	**4.11**	**42**	*e*Pn	**Pn**	**14 56 55.5**	**+0.8**
KIJV				Sn	**Sn**	**14 57 42.4**	**+0.3**
RICI	**Ricice**	**4.18**	**52**	*e*Pn	**Pn**	**14 56 55.5**	**-0.2**
RICI				Sn	**Sn**	**14 57 42.9**	**-1.2**
STON	**Ston**	**4.24**	**63**	*e*Pn	**Pn**	**14 56 56.4**	**0.0**
DBRK	**Dubrovnik**	**4.47**	**67**	*e*Pn	**Pn**	**14 56 60.0**	**+0.3**
DBRK				Sn	**Sn**	**14 57 50.7**	**-0.5**
SBF	**Sospel**	**4.74**	**308**	*e*Pn	**Pn**	**14 57 02.7**	**-0.8**
SBF	**Sospel**	**4.74**	**308**	*e*Pg	**Pg**	**14 57 21.3**	**-2.4**
SBF				*e*Sn	**Sn**	**14 57 55.0**	**-3.0**
	comp=E,12nm,0.4s						
SAOF	**Saorge**	**4.75**	**310**	P	**Pn**	**14 57 02.6**	**-0.8**
LMR	**La Mourre**	**5.06**	**299**	*e*Pn	**Pn**	**14 57 06.6**	**-1.2**
LMR				*e*Sn	**Sn**	**14 58 02.3**	**-3.4**
	comp=E,3.7nm,0.3s						
FRF	**La Foret Royal**	**5.07**	**302**	*e*Pn	**Pn**	**14 57 07.1**	**-0.8**
FRF				*e*Sn	**Sn**	**14 58 02.9**	**-3.1**
	comp=E,2.0nm,0.3s						
MBDF	**Montbardon**	**5.64**	**313**	*e*Pn	**Pn**	**14 57 14.7**	**-1.2**
MBDF				*e*Sn	**Sn**	**14 58 16.8**	**-3.5**
	comp=E,1.2nm,0.2s						
KEST	**Kesra**	**5.87**	**207**	Pn	**Pn**	**14 57 23.0**	**+4.1**
	comp=E,0.5nm,0.3s,baz=274,slow=2.6,SNR=4.9						
KEST				Sn	**Sn**	**14 58 25.9**	**+0.2**
	comp=E,0.1nm,0.3s,baz=5.1,slow=22,SNR=1.7						
LPL	**La Plagne**	**6.19**	**318**	*e*Pn	**Pn**	**14 57 22.3**	**-1.2**
ORIF	**Oris-en-Rattie**	**6.26**	**311**	*e*Pn	**Pn**	**14 57 23.1**	**-1.3**
LASF	**Ste Croix**	**7.12**	**298**	*e*Pn	**Pn**	**14 57 34.4**	**-1.7**
LASF				*e*Sn	**Sn**	**14 58 51.6**	**-4.9**
	comp=E,3.5nm,0.5s						
GERES	**GERESS Array B**	**7.86**	**5**	LR	LR	15 00 47.7	
	comp=E,32nm,18.7s,baz=146,slow=38						
CDF	**Champ du Feu**	**8.29**	**335**	*e*Pn	**Pn**	**14 57 51.3**	**-0.8**
NOA	**NORSAR Array B**	**20.06**	**358**	P	**P**	**15 00 25.3**	**+0.5**
	comp=E,0.0nm,0.3s,baz=181,slow=9.4,SNR=2.8						
NOA				LR	LR	15 08 01.5	
	comp=E,9.1nm,20.5s,baz=100,slow=37						
FINES	**FINESS Array B**	**22.03**	**17**	P	**P**	**15 00 47.1**	**+1.1**
	comp=E,0.5nm,0.4s,baz=189,slow=9.7,SNR=5.6						
MKAR	**Makanchi Array**	**49.05**	**59**	P	**P**	**15 04 40.0**	**+1.3**
	comp=E,0.5nm,0.7s,baz=289,slow=7.1,SNR=2.8						
YKA	**Yellowknife Ar**	**68.48**	**337**	P	**P**	**15 06 55.5**	**+2.1**
	comp=E,0.3nm,0.7s,baz=39,slow=5.4,SNR=5.1						
ILAR	**Eielson Array**	**73.31**	**351**	P	**P**	**15 07 25.3**	**+2.6**
	comp=E,0.2nm,0.8s,baz=18,slow=6.6,SNR=2.5						

*IDC **20** 15:05:24.3±0.7, 4°.31S×122°.78E, h0^{km}, mb4.1/9, mb1 4.3/13, mb1mx4.0/41, mbtmp4.2/13, ML3.7/4, MS3.4/20, Ms1 3.4/20, ms1mx3.3/40, Error ellipse: s-maj=21.0km s-min=14.5km az=50.0*

*DJA **20** 15:05:26.1±0.2, 4°.S±2°×12°.3E±°, h10^{km}, M4.4/20, mb4.6/19, mB5.0/7, MLv4.3/20, Mw(mB)4.4/7*

*NEIC **20** 15:05:27.3±2.1, 4°.28S±0°.06×122°.82E±0°.07, h23^{km}±6^{km}, mb4.5/17, Error ellipse: s-maj=10.0km s-min=8.8km az=120.0*

ISC 20 15:05:29.1±0.5, **4°.34S**±0°.06×**122°.83E**±0°.05, **h33**^{km}, **n85,** σ1§**50**/78, **mb4.5**/20, **MS3.4**/14, **1C, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BNSI	**Bone**	**2.71**	**269**	P		**Pn**	**15 06 08.8**	**-1.6**
BNSI				S		**Sn**	**15 06 42.8**	**+0.7**
BKSI	**Bulukumba**	**2.87**	**250**	P		**Pn**	**15 06 11.8**	**-0.7**
SPSI	**Sidrap Palu**	**3.07**	**277**	P		**Pn**	**15 06 14.3**	**-1.1**
KAPI	**Kappang**	**3.14**	**258**	Pn		**Pn**	**15 06 16.2**	**0.0**
	14nm,0.3s,baz=105,slow=5.9,SNR=32							
KAPI				Sn		**Sn**	**15 06 53.9**	**+1.3**
	18nm,0.3s,baz=55,slow=23,SNR=13							
KAPI				LR		LR	15 07 38.2	
	comp=Z,600nm,18.6s,baz=72,slow=43							
KAPI	**Kappang**	**3.14**	**258**			**Pn**	**15 06 15.1**	**-1.2**
TTSI	**Tana Toraja**	**3.27**	**293**	P		**Pn**	**15 06 17.0**	**-1.0**
LUWI	**Luwuk**	**3.27**	**359**	P		**Pn**	**15 06 15.9**	**-2.2**
LUWI	**Luwuk**	**3.27**	**359**			**Pn**	**15 06 15.6**	**-2.5**
APSI	**Ampana**	**3.60**	**341**	P		**Pn**	**15 06 21.5**	**-1.1**
SANI	**Sanana**	**3.89**	**54**	P		**Pn**	**15 06 24.5**	**-2.1**
MMRI	**Maumere**	**4.31**	**188**	P		**Pn**	**15 06 31.7**	**-0.7**
MMRI	**Maumere**	**4.31**	**188**			**Pn**	**15 06 31.4**	**-1.0**
NLAI	**Namlea**	**4.40**	**76**	P		**Pn**	**15 06 33.0**	**-0.6**
EDFI	**Ende, Flores**	**4.53**	**194**	P		**Pn**	**15 06 34.6**	**-0.9**
MRSI	**Marisa**	**4.86**	**349**	P		**Pn**	**15 06 38.0**	**-2.0**
KMSI	**Cibinong**	**5.01**	**13**	P		**Pn**	**15 06 41.4**	**-0.7**
AAI	**Ambon**	**5.39**	**83**	P		**Pn**	**15 06 47.2**	**-0.1**
	0.1nm44nm,0.9s							
MPSI	**Mapaga**	**5.49**	**328**	P		**Pn**	**15 06 47.5**	**-1.1**
	0.2nm793nm74nm,1.0s							
SOEI	**Soe**	**5.57**	**165**	P		**Pn**	**15 06 50.5**	**+0.7**
	0.4nm125nm,1.2s							
SOEI	**Soe**	**5.57**	**165**			**Pn**	**15 06 48.3**	**-1.5**
BATI	**Baumata**	**5.89**	**172**	Pn		**Pn**	**15 06 57.3**	**+3.1**
	9.6nm,0.3s,baz=339,slow=5.0,SNR=7.9							
BATI				LR		LR	15 09 31.6	
	comp=Z,1μm,21.4s,baz=0.5,slow=42							
BATI	**Baumata**	**5.89**	**172**	P		**Pn**	**15 06 55.2**	**+1.1**
	0.2nm42nm,1.1s							
LBMI	**Labuha**	**5.94**	**52**	P		**Pn**	**15 06 54.4**	**-0.4**
	0.2nm628nm38nm,0.9s							
WBSI	**Waikabubak, Su**	**6.28**	**213**	P		**Pn**	**15 06 55.1**	**-4.4**
PLAI	**Plampang**	**6.71**	**228**	P		**Pn**	**15 07 04.5**	**-0.9**
	0.1nm23nm,0.9s							
TNTI	**Ternate**	**6.81**	**42**	P		**Pn**	**15 07 06.0**	**-0.7**
	0.2nm82nm,0.9s							
TNTI	**Ternate**	**6.81**	**42**			**Pn**	**15 07 04.1**	**-2.6**
SIJI	**Sorong**	**9.11**	**68**	Pn		**Pn**	**15 07 38.4**	**+0.1**
	2.9nm,0.3s,baz=279,slow=8.1,SNR=14							
SIJI				LR		LR	15 11 12.5	
	comp=Z,48nm,19.0s,baz=232,slow=38							
SAUI	**Saumlaki**	**9.17**	**114**	P		**Pn**	**15 07 39.4**	**+0.3**
	202nm,1.1s							
FAKI	**Fak Fak**	**9.51**	**82**	P		**Pn**	**15 07 43.4**	**-0.4**
	558nm42nm,0.5s							
FAKI	**Fak Fak**	**9.51**	**82**			**Pn**	**15 07 43.2**	**-0.6**
DDMP	**Don Marcelino,**	**10.76**	**16**	*e*P		**Pn**	**15 08 01.4**	**+0.4**
SKMP	**Bagusbayan, Su**	**10.92**	**9**	*e*P		**Pn**	**15 08 03.1**	**0.0**
CTBH	**Cotabato--PC H**	**11.57**	**7**	*i*P		**Pn**	**15 08 11.0**	**-1.0**
DAV	**Davao City (W)**	**11.66**	**14**	LR		LR	15 12 54.4	
	comp=Z,230nm,20.5s,baz=198,slow=39							
MTN	**Manton Dam**	**11.78**	**136**			**Pn**	**15 08 14.6**	**-0.3**
PAGZ	**Pagadian**	**12.12**	**3**	*e*P		Pn	15 08 13.1	-6.4
KNRA	**Kununurra**	**12.69**	**153**	Pn		**Pn**	**15 08 25.9**	**-1.4**
FITZ	**Fitzroy Crossi**	**13.95**	**169**	Pn		**Pn**	**15 08 42.4**	**-2.2**
	0.1nm,0.3s,baz=20,slow=12,SNR=2.1							
FITZ				LR		LR	15 15 39.6	
	comp=Z,83nm,18.4s,baz=352,slow=44							
FITZ	**Fitzroy Crossi**	**13.95**	**169**	Pn		**Pn**	**15 08 42.0**	**-2.5**
LEM	**Lembang**	**15.34**	**260**	LR		LR	15 15 29.5	
	comp=Z,153nm,19.7s,baz=76,slow=40							
GENI	**Genyem**	**17.39**	**85**	P		**Pn**	**15 09 29.5**	**0.0**
	2μm35nm,0.5s							
JAY	**Jayapura**	**17.94**	**85**	P		**P**	**15 09 39.6**	**+3.1**
	0.1nm,0.3s,baz=262,slow=19,SNR=4.7							
JAY	**Jayapura**	**17.94**	**85**	P		**P**	**15 09 37.9**	**+1.4**
	7.8nm,1.0s							
XMIS	**Christmas Isla**	**18.09**	**249**			**Pn**	**15 09 37.2**	**-0.8**
XMIS					IAmb	IAmb	15 10 33.4	
	comp=Z,43nm,0.9s							
MDSI	**Maura Dua**	**18.59**	**269**	P		**Pn**	**15 09 49.0**	**+4.8**
WB0	**Warramunga Arr**	**19.04**	**145**	P		**P**	**15 09 48.5**	**-0.1**
WRAB	**Tennant Creek**	**19.14**	**145**	P		**P**	**15 09 49.7**	**0.0**
WRAB					IAmb	IAmb	15 09 51.5	
	comp=Z,18nm,1.1s							
WRA	**Warramunga Arr**	**19.14**	**145**	P		**P**	**15 09 48.5**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=317,slow=13,SNR=26							
WB2	**Warramunga Arr**	**19.15**	**145**	P		**P**	**15 09 49.5**	**-0.3**
WB2					IAmb	IAmb	15 09 51.0	
	comp=Z,20nm,1.1s							
WR0	**Warramunga Arr**	**19.27**	**145**	P		**P**	**15 09 51.5**	**+0.3**
KRJI	**Kerinci**	**21.45**	**275**	P		**P**	**15 10 14.5**	**-0.4**
	comp=Z,6μmcomp=Z,60nm,0.4s							
AS31	**Alice Springs**	**21.99**	**152**	P		**P**	**15 10 20.7**	**+0.1**
ASAR	**Alice Springs**	**21.99**	**152**	P		**P**	**15 10 20.9**	**+0.3**
	comp=Z,6.7nm,1.0s,baz=326,slow=9.8,SNR=41							
ASAR				LR		LR	15 19 31.1	
	comp=Z,120nm,18.9s,baz=327,slow=38							
PDSI	**Padang**	**22.60**	**278**	P		**P**	**15 10 29.7**	**+2.5**
PMG	**Port Moresby**	**24.67**	**103**	LR		LR	15 22 46.5	
	comp=Z,67nm,18.6s,baz=238,slow=42							
RPSI	**Rantau Prapat**	**24.89**	**286**	P		**P**	**15 10 48.5**	**-0.7**
RPSI					IAmb	IAmb	15 11 10.8	
	comp=Z,12nm,1.1s							
RPSI	**Rantau Prapat**	**24.89**	**286**	P		**P**	**15 10 47.9**	**-1.3**
PSI	**Prapat**	**24.92**	**286**	P		**P**	**15 10 47.9**	**-1.7**
	comp=Z,3.4nm,0.5s,baz=180,slow=14,SNR=2.3							
PSI				LR		LR	15 20 08.7	
	comp=Z,197nm,19.9s,baz=273,slow=36							
MORW	**Morawa**	**25.43**	**194**	P		**P**	**15 10 53.9**	**0.0**
NWAO	**Narrogin (SRO)**	**28.92**	**190**	LR		LR	15 23 08.2	
	comp=Z,101nm,20.3s,baz=359,slow=37							
KRVT	**Keravat (AS076**	**29.11**	**91**	P		**P**	**15 11 28.8**	**+1.6**
	comp=Z,44nm,0.4s,baz=228,slow=3.9,SNR=4.3							
KRVT				LR		LR	15 25 35.3	
	comp=Z,52nm,18.1s,baz=143,slow=42							
BBOO	**Buckleboo**	**30.91**	**158**	P		**P**	**15 11 42.1**	**-0.8**
STKA	**Stephens Creek**	**32.57**	**149**	P		**P**	**15 11 59.4**	**+2.0**
	comp=Z,1.7nm,0.8s,baz=323,slow=5.7,SNR=3.4							
STKA				LR		LR	15 26 40.9	
	comp=Z,84nm,18.8s,baz=21,slow=39							
CMAR	**Chiang Mai Arr**	**32.67**	**315**	P		**P**	**15 11 59.0**	**+0.6**
	comp=Z,3.1nm,0.9s,baz=140,slow=7.2,SNR=17							
CMAR				LR		LR	15 28 38.9	
	comp=Z,75nm,18.6s,baz=184,slow=43							
NJ2	**Nanjing**	**36.38**	**354**	*e*P		**P**	**15 12 31.4**	**+1.0**
NJ2					pmax	pmax		
	comp=Z,15nm,0.5s							
ENH	**Enshi**	**36.71**	**340**	P		**P**	**15 12 32.3**	**-0.9**
ENH					IAmb	IAmb	15 12 34.4	
	comp=Z,6.0nm,1.0s							
KSRS	**Korea Array**	**41.85**	**6**	LR		LR	15 31 31.7	
	comp=Z,35nm,18.9s,baz=201,slow=38							
KS19	**Wonju Array Si**	**41.89**	**6**	P		**P**	**15 13 12.7**	**-3.7**
KS19					IAmb	IAmb	15 13 13.5	
	comp=Z,11nm,0.9s							
MJAR	**Matsushiro Arr**	**43.13**	**18**	LR		LR	15 34 33.5	
	comp=Z,18nm,18.1s,baz=210,slow=41							
HHC	**Hu-ho-hao-te**	**46.14**	**348**	*e*P		**P**	**15 13 50.0**	**-0.5**
HHC					pmax	pmax		
	comp=Z,10.0nm,0.9s							
HHC					pmax	pmax		
	comp=Z,55nm,7.2s							
USRK	**Ussuriysk Ar.**	**49.01**	**9**	P		**P**	**15 14 12.2**	**-0.4**
	comp=Z,4.8nm,0.9s,baz=201,slow=7.4,SNR=9.6							
USRK				LR		LR	15 34 33.9	
	comp=Z,28nm,19.8s,baz=149,slow=36							
MDJ	**Mudanjiang**	**49.11**	**6**	P		**P**	**15 14 14.7**	**+1.3**
SONM	**Songino Array**	**53.92**	**346**	P		**P**	**15 14 48.1**	**-1.5**
	comp=Z,2.5nm,0.9s,baz=168,slow=10,SNR=4.0							
WMQ	**Urumqi**	**57.42**	**330**	*e*P		**P**	**15 15 15.4**	**+0.7**
WMQ					pmax	pmax		
	comp=Z,33nm,0.7s							
WMQ					pmax	pmax		
	comp=Z,44nm,4.5s							
MK31	**Makanchi Array**	**62.22**	**330**	P		**P**	**15 15 47.8**	**+0.2**
MK31					IAmb	IAmb	15 17 31.7	
	comp=Z,3.9nm,1.3s							
MKAR	**Makanchi Array**	**62.22**	**330**	P		**P**	**15 15 48.3**	**+0.8**
	comp=Z,1.9nm,0.6s,baz=134,slow=8.1,SNR=13							
MKAR				LR		LR	15 45 17.7	
	comp=Z,36nm,18.8s,baz=82,slow=38							
MAKZ	**Makanchi**	**62.39**	**330**	P		**P**	**15 15 49.0**	**+0.3**
MAKZ					IAmb	IAmb	15 17 33.1	
	comp=Z,5.1nm,1.1s							
ZAA0	**Zalesovo Array**	**66.18**	**337**	P		**P**	**15 16 13.2**	**-0.2**
ZAA0					IAmb	IAmb	15 16 14.0	
	comp=Z,3.7nm,0.8s							
ZALV	**Zalesovo Beam**	**66.18**	**337**	P		**P**	**15 16 13.0**	**-0.4**
	comp=Z,4.1nm,0.8s,baz=125,slow=6.6,SNR=14							
KURK	**Kurchatov**	**66.65**	**331**	P		**P**	**15 16 16.7**	**+0.3**
VNDA	**Vanda**	**76.00**	**172**	P		**P**	**15 17 12.2**	**-0.3**
	comp=Z,0.6nm,0.9s,baz=322,slow=6.0,SNR=2.5							
VNDA				LR		LR	15 50 28.6	
	comp=Z,46nm,18.7s,baz=114,slow=36							
BRTR	**Keskin Array B**	**92.12**	**309**	LR		LR	16 07 25.9	
	comp=Z,5.1nm,18.0s,baz=170,slow=40							
SNAA	**Sanae**	**96.47**	**195**	LR		LR	16 00 47.8	
	comp=Z,33nm,18.9s,baz=324,slow=34							
TORD	**Torodi Ar. Bea**	**121.28**	**283**	PKP		**PKPdf**	**15 24 19.5**	**-0.3**
	comp=Z,0.6nm,0.9s,baz=106,slow=1.5,SNR=3.2							

*IDC **20** 15:07:58.8±2.4, 6°.58S×132°.51E, h0^{km}, mb3.4/2, mb1 3.7/6, mb1mx3.5/36, mbtmp3.5/6, ML3.7/4, Error ellipse: s-maj=106.7km s-min=24.7km az=84.0*

ISC 20 15:07:59.7±1.1, **6°.61S**±0°.06×**131°.7E**±0°.2, **h35**^{km}, **n6,** σ2§**81**/8, **Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.72**	**356**	Pn		**Pn**	**15 09 24.3**	**+2.2**
	1.3nm,0.3s,baz=190,slow=22,SNR=11							
SIJI				Sn		**Sn**	**15 10 23.9**	**-2.7**
	1.8nm,0.3s,baz=199,slow=22,SNR=3.5							
FITZ	**Fitzroy Crossi**	**12.83**	**207**	Pn		**P**	**15 11 07.3**	**-2.8**
	0.4nm,0.3s,baz=32,slow=10,SNR=21							
FITZ				Sn		**Sn**	**15 13 23.9**	**+2.4**
	0.3nm,0.3s,baz=132,slow=16,SNR=2.1							
WRA	**Warramunga Arr**	**13.51**	**169**	Pn		**Pn**	**15 11 10.1**	**+1.1**
	0.4nm,0.3s,baz=359,slow=13,SNR=19							
WRA				Sn		**Sn**	**15 13 36.9**	**-1.0**
	1.1nm,0.3s,baz=355,slow=24,SNR=8.0							
ASAR	**Alice Springs**	**17.10**	**173**	P		**P**	**15 11 59.1**	**+1.6**
	0.3nm,0.3s,baz=343,slow=8.7,SNR=10.0							
ASAR				S		**Sn**	**15 15 02.2**	**-3.0**
	0.2nm,0.3s,baz=357,slow=28,SNR=6.5							
MKAR	**Makanchi Array**	**68.81**	**326**	P		P	15 19 07.0	+6.5
	0.2nm,0.4s,baz=134,slow=6.7,SNR=1.8							
KURBB	**Kurchatov Arra**	**73.05**	**328**	P		P	15 19 34.8	+8.7
	0.3nm,0.7s,baz=119,slow=4.5,SNR=4.4							

*IDC **20** 15:41:46.8±1.2, 56°.87S×24°.81W, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.7/16, mbtmp3.7/3, Error ellipse: s-maj=49.4km s-min=36.7km az=74.0*

*NEIC **20** 15:41:50.6±0.9, 56°.9S±0°.2×24°.9W±0°.3, h26^{km}±6^{km}, mb4.4/5, Error ellipse: s-maj=27.0km s-min=12.3km az=222.0*

ISC 20 15:41:50.1±0.9, **56°.9S**±0°.1×**24°.9W**±0°.2, **h22**^{km}, **n17,** σ0§**59**/16, **mb4.0**/3, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.09**	**287**			Pn	15 43 26.0	-6.4
VNA1	**Neumayer--Stat**	**15.52**	**159**	P		**Pn**	**15 45 27.4**	**+0.3**
VNA3	**Neumayer Olymp**	**15.75**	**162**	P		**Pn**	**15 45 29.7**	**-0.6**
VNA2	**Neumayer--Watz**	**15.91**	**159**	P		**Pn**	**15 45 31.6**	**-0.7**
	baz=332,slow=16							
SNAA	**Sanae**	**17.43**	**157**	P		**P**	**15 45 52.7**	**0.0**
SNAA	**Sanae**	**17.43**	**157**	P		**P**	**15 45 52.8**	**+0.1**
EFI	**East Falkland**	**19.93**	**271**	P		**P**	**15 46 19.3**	**-0.9**
EFI					IAmb	IAmb	15 46 49.7	
	comp=Z,49nm,1.8s							
TRQA	**Tornquist**	**30.84**	**292**	P		**P**	**15 48 05.0**	**+0.7**
QSPA	**South Pole Qui**	**33.33**	**180**	P		**P**	**15 48 26.1**	**0.0**
VNDA	**Vanda**	**45.76**	**182**	P		**P**	**15 50 09.8**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=217,slow=5.1,SNR=1.7							
VNDA	**Vanda**	**45.76**	**182**	P		**P**	**15 50 09.8**	**+0.7**
VNDA					IAmb	IAmb	15 50 56.6	
	comp=Z,13nm,1.9s							
LPAZ	**La Paz**	**51.93**	**303**	P		**P**	**15 50 58.2**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=151,slow=5.7,SNR=6.7							
LPAZ	**La Paz**	**51.93**	**303**	P		**P**	**15 50 57.7**	**-0.1**
LPAZ					IAmb	IAmb	15 50 58.3	
	comp=Z,2.1nm,0.6s							
TORD	**Torodi Ar. Bea**	**73.21**	**27**	P		**P**	**15 53 19.4**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=224,slow=8.1,SNR=2.7							
YKA	**Yellowknife Ar**	**137.68**	**316**	PKP		**PKPdf**	**16 01 09.9**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=128,slow=2.6,SNR=4.0							
SONM	**Songino Array**	**149.50**	**86**	PKPbc		**PKPbc**	**16 01 36.4**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=207,slow=3.9,SNR=1.7							
ILAR	**Eielson Array**	**151.66**	**310**	PKPbc		**PKiKP**	**16 01 40.9**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=106,slow=1.7,

PB14	**IPOC Station P**	**45.78**	**296**	P		**P**	**15 56 48.3**	**-1.4**
ARAG	**Araguaiana, MT**	**45.90**	**323**	*e*P		**P**	**15 56 51.7**	**+1.4**
PB15	**IPOC Station P**	**46.52**	**298**	P		**P**	**15 56 55.4**	**0.0**
PB15				IAmb	IAmb		15 57 00.2	
	comp=Z,11nm,0.6s							
LVC	**Limon Verde**	**46.75**	**299**	P		**P**	**15 56 57.3**	**-0.1**
LVC				IAmb	IAmb		15 57 00.3	
	comp=Z,14nm,0.8s							
LVC	**Limon Verde**	**46.75**	**299**	*e*P		**P**	**15 56 56.6**	**-0.9**
SALV	**Santo Antonio**	**47.06**	**318**	*e*P		**P**	**15 57 00.3**	**+0.8**
PB04	**IPOC Station P**	**47.58**	**298**	P		**P**	**15 57 02.9**	**-0.8**
PB09	**IPOC Station P**	**47.60**	**299**	P		**P**	**15 57 04.1**	**+0.2**
PB07	**IPOC Station P**	**47.97**	**298**	P		**P**	**15 57 06.5**	**-0.2**
PB07				IAmb	IAmb		15 57 07.9	
	comp=Z,12nm,0.6s							
PB01	**IPOC Station P**	**48.37**	**299**	P		**P**	**15 57 09.3**	**-0.3**
PB01				IAmb	IAmb		15 57 15.2	
	comp=Z,8.1nm,0.5s							
H10S2	**ASCENSION HYDR**	**48.66**	**14**	T		T	16 50 11.1	
	baz=193							
H10S3	**ASCENSION HYDR**	**48.67**	**14**	T		T	16 50 55.5	
	baz=27,SNR=3.2							
PTLB	**Pontes e Lacer**	**48.78**	**314**	*e*P		**P**	**15 57 12.9**	**+0.2**
PB08	**IPOC Station P**	**48.98**	**300**	P		**P**	**15 57 14.6**	**-0.2**
PB08				IAmb	IAmb		15 57 18.9	
	comp=Z,13nm,0.6s							
GO01	**Chusmiza**	**49.41**	**300**	P		**P**	**15 57 18.0**	**-0.1**
PB11	**IPOC Station P**	**49.55**	**300**	P		**P**	**15 57 18.3**	**-0.5**
PB11				IAmb	IAmb		15 57 25.0	
	comp=Z,14nm,0.8s							
H10N1	**ASCENSION HYDR**	**49.78**	**14**	T		T	16 51 48.3	
	baz=203,slow=74,SNR=3.5							
H10N3	**ASCENSION HYDR**	**49.78**	**14**	T		T	16 52 13.6	
	baz=203,SNR=4.2							
H10N2	**ASCENSION HYDR**	**49.80**	**14**	T		T	16 51 38.2	
	baz=203,slow=74,SNR=3.8							
PSGCX	**Pisagua**	**49.91**	**299**	P		**P**	**15 57 20.9**	**-0.6**
PSGCX				IAmb	IAmb		15 57 30.6	
	comp=Z,9.7nm,0.6s							
MNMC	**Minye Minye**	**50.06**	**300**	P		**P**	**15 57 22.6**	**-0.3**
PB16	**IPOC Station P**	**50.70**	**301**	P		**P**	**15 57 27.6**	**-0.5**
PB16				IAmb	IAmb		15 57 39.6	
	comp=Z,9.3nm,0.9s							
PB12	**IPOC Station P**	**50.85**	**300**	P		**P**	**15 57 28.7**	**+0.1**
PB12				IAmb	IAmb		15 57 36.8	
	comp=Z,8.5nm,0.6s							
SMTB	**Santa Maria do**	**51.13**	**331**	*e*P		P	15 57 36.5	+5.9
VILB	**Vilhena**	**51.47**	**314**	*e*P		**P**	**15 57 33.0**	**-0.2**
LPAZ	**La Paz**	**51.85**	**304**	P		**P**	**15 57 37.4**	**+0.6**
	comp=Z,36nm,0.6s,baz=134,slow=4.7,SNR=170							
LPAZ	**La Paz**	**51.85**	**304**	P		**P**	**15 57 37.2**	**+0.5**
LPAZ	**La Paz**	**51.85**	**304**	*e*P		**P**	**15 57 37.2**	**+0.5**
SAML	**Samuel**	**56.29**	**313**	P		**P**	**15 58 08.0**	**-0.4**
SAML				IAmb	IAmb		15 58 10.8	
	comp=Z,11nm,1.1s							
DBIC	**Dimbokro**	**65.64**	**22**	LR		LR	16 21 22.5	
	comp=Z,50nm,20.0s,baz=139,slow=30							
TOA0	**Torodi Ar. Sit**	**73.40**	**27**	P		**P**	**16 00 01.2**	**+1.5**
TORD	**Torodi Ar. Bea**	**73.40**	**27**	P		**P**	**15 59 58.5**	**-1.2**
	comp=Z,1.6nm,0.7s,baz=201,slow=5.8,SNR=8.2							
TORD				LR		LR	16 26 37.1	
	comp=Z,49nm,21.4s,baz=165,slow=31							
SDV	**Santo Domingo**	**75.49**	**313**	P		**P**	**16 00 12.0**	**-0.2**
STKA	**Stephens Creek**	**90.73**	**169**	P		**P**	**16 01 32.0**	**+1.5**
	comp=Z,0.9nm,0.5s,baz=209,slow=2.3,SNR=3.7							
PPT	**Papeete**	**92.48**	**232**	LR		LR	16 33 23.7	
	comp=Z,32nm,20.7s,baz=142,slow=29							
ASAR	**Alice Springs**	**97.70**	**161**	P		**P**	**16 02 02.2**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=186,slow=4.0,SNR=16							
ESDC	**Sonseca Array**	**98.00**	**16**	LR		LR	16 43 46.1	
	comp=Z,15nm,18.4s,baz=195,slow=34							
WRA	**Warramunga Arr**	**101.41**	**160**	P		**Pdif**	**16 02 19.1**	**-0.2**
	comp=Z,0.5nm,0.9s,baz=195,slow=4.2,SNR=2.2							
CMAR	**Chiang Mai Arr**	**123.69**	**109**	PKP		**PKPdf**	**16 07 24.4**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=233,slow=2.8,SNR=6.6							
FINES	**FINESS Array B**	**124.75**	**27**	PKP		**PKPdf**	**16 07 24.8**	**-1.1**
	comp=Z,1.4nm,0.8s,baz=167,slow=3.3,SNR=5.2							
KSH	**Kashi**	**127.77**	**74**	PKP		**PKPdf**	**16 07 31.9**	**-0.7**
GYA	**Guiyang**	**134.27**	**111**	*e*PKP		**PKPdf**	**16 07 44.3**	**-1.0**
GYA				PP		**PP**	**16 10 24.3**	**+7.2**
GYA				AMB		AMB		
	comp=Z,40nm,4.5s							
GYA				LR		LR		
	comp=Z,70nm,3.8s							
GYA				LR		LR		
	comp=Z,50nm,4.5s							
GYA				LR		LR		
	comp=Z,90nm,11.1s							
MKAR	**Makanchi Array**	**136.16**	**71**	PKP		**PKPdf**	**16 07 46.9**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=355,slow=6.2,SNR=3.7							
CD2	**Chengdu**	**136.33**	**105**	PKP		**PKPdf**	**16 07 48.6**	**-0.3**
WMQ	**Urumqi**	**137.02**	**78**	*e*PKP		**PKiKP**	**16 07 51.5**	**-0.1**
WMQ				LR		LR		
	comp=Z,120nm,14.5s							
WMQ				LR		LR		
	comp=Z,120nm,13.9s							
WMQ				LR		LR		
	comp=Z,220nm,22.1s							
YKA	**Yellowknife Ar**	**137.65**	**316**	PKP		**PKPdf**	**16 07 50.1**	**-0.1**
	comp=Z,2.5nm,0.9s,baz=120,slow=2.5,SNR=22							
YKA				PP		**PP**	**16 10 36.4**	**-1.7**
	comp=Z,0.3nm,0.7s,baz=122,slow=6.9,SNR=4.3							
YKA				SKPbc		**SKPbc**	**16 11 22.3**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=116,slow=2.5,SNR=3.0							
LZH	**Lanzhou**	**140.34**	**100**	*e*PKP		**PKiKP**	**16 07 59.0**	**+0.2**
LZH				sPKP			16 08 22.9	
LZH				LR		LR		
	comp=Z,200nm,17.0s							
LZH				LR		LR		
	comp=Z,170nm,16.2s							
LZH				LR		LR		
	comp=Z,230nm,18.8s							
NJ2	**Nanjing**	**144.88**	**120**	*e*PKP		**PKPdf**	**16 08 05.4**	**+1.2**
INK	**Inuvik**	**147.28**	**319**			**PKPbc**	**16 08 09.2**	**-0.4**
TIA	**Tai'an**	**147.39**	**113**	PKPbc		**PKPbc**	**16 08 10.1**	**-0.8**
EPYK	**Eagle Plains**	**147.91**	**315**			**PKPbc**	**16 08 11.1**	**-0.3**
DAWY	**Dawson**	**148.28**	**310**	PKPdf		**PKPdf**	**16 08 10.4**	**+1.4**
NRIK	**Noril'sk**	**149.08**	**40**	PKPbc		**PKPbc**	**16 08 14.0**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=143,slow=1.2,SNR=4.9							
SONM	**Songino Array**	**149.68**	**87**	PKPbc		**PKPbc**	**16 08 15.3**	**-1.3**
	comp=Z,3.7nm,0.6s,baz=222,slow=3.0,SNR=7.3							
DOT	**Dot Lake**	**150.13**	**308**	PKPbc		**PKiKP**	**16 08 17.6**	**-0.3**
SCRK	**Sand Creek**	**150.19**	**309**			**PKiKP**	**16 08 17.6**	**-0.5**
RIDG	**Independent Ri**	**150.49**	**308**			**PKiKP**	**16 08 18.5**	**-0.2**
FYU	**Fort Yukon**	**151.28**	**314**			**PKiKP**	**16 08 20.0**	**-0.1**
DHY	**Denali Highway**	**151.42**	**306**			**PKiKP**	**16 08 20.7**	**0.0**
HDA	**Harding Lake**	**151.55**	**309**			**PKiKP**	**16 08 20.5**	**-0.2**
IL31		**151.60**	**310**			**PKiKP**	**16 08 20.5**	**-0.3**
ILAR	**Eielson Array**	**151.60**	**310**	PKPbc		**PKiKP**	**16 08 20.6**	**-0.2**
	comp=Z,5.0nm,0.8s,baz=127,slow=1.3,SNR=38							
CCB	**Clear Creek Blu**	**151.96**	**310**			**PKPbc**	**16 08 20.7**	**-0.5**
WRH	**Wood River Hil**	**152.05**	**309**			**PKPbc**	**16 08 21.1**	**-0.4**
RND	**Reindeer**	**152.15**	**307**			**PKiKP**	**16 08 22.3**	**+0.2**
MCK	**McKinley**	**152.25**	**307**			**PKiKP**	**16 08 22.2**	**0.0**
TOLK	**Toolik Lake Re**	**153.16**	**318**			**PKiKP**	**16 08 23.9**	**-0.1**
BPAW	**Bear Paw Mtn.**	**153.22**	**308**			**PKPbc**	**16 08 23.8**	**-0.3**

IDC 20 16:21:17.7±1.9, 28.18N×101.95E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.2/42, mbtmp3.4/2, Error ellipse: s-maj=83.0km s-min=32.4km az=62.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.06**	**197**	Pg	Pn	16 24 21.5	+38
	baz=6.5,slow=17,SNR=7.3						
CMAR				Lg	Lg	16 26 29.6	
	0.1nm,0.3s,baz=16,slow=27,SNR=3.1						
MKAR	**Makanchi Array**	**24.15**	**326**	P	P	16 26 35.6	+0.1
	0.4nm,0.6s,baz=130,slow=9.7,SNR=3.9						
WRA	**Warramunga Arr**	**57.18**	**143**	P	P	16 31 06.5	-0.2
	0.4nm,0.6s,baz=331,slow=8.0,SNR=2.7						

*SNET **20** 16:22:48.3±2.1, 14°.58N×87°.06W, h14km±248km, ML4.6*
*UCR **20** 16:22:52.9±3.0, 11°.88N×88°.23W, h44km±679km, ML4.5, mb4.5(NEIC)*
*INET **20** 16:22:53.9, 12°.14N×88°.01W, h15km, ML4.1*
*NEIC **20** 16:22:55.6±1.5, 12°.07N±0°.07×87°.89W±0°.05, h68km±6km, mb4.5/23, Error ellipse: s-maj=11.1km s-min=6.7km az=205.0*
*IDC **20** 16:22:56.1±1.9, 12°.05N×87°.92W, h70km±19km, mb3.7/7, mb1 3.9/10, mb1mx3.6/40, mbtmp3.9/10, MS3.3/4,*

Ms1 3.3/4, ms1mx2.8/44, Error ellipse: s-maj=44.0km s-min=13.5km az=38.0

ISC 20 16:22:55.6±1.2, 12°.03N±0°.06×88°.03W±0°.06, h69km±10km, n82, σ1°.73/91, mb4.3/18, 1C-1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**1.05**	**26**	*e*P	**Pn**	**16 23 12.8**	**-1.9**
CSGN				*e*S	**Sn**	**16 23 33.6**	**+4.6**
CSGN	**Cosiguina Volc**	**1.05**	**26**		**Pn**	**16 23 12.8**	**-1.9**
CRIN	**San Cristobal**	**1.17**	**55**	*e*P	**Pn**	**16 23 14.1**	**-2.1**
CRIN				*e*S	**Sn**	**16 23 35.4**	**+3.8**
CRIN	**San Cristobal**	**1.17**	**55**	Pn	**Pn**	**16 23 14.0**	**-2.2**
CNCH	**Conchagua**	**1.25**	**9**	*e*P	**Pn**	**16 23 14.9**	**-2.5**
CNCH				*e*S	**Sn**	**16 23 35.4**	**+1.6**
CNCH				IAML		16 23 43.5	
	comp=Z,7μm,0.4s						
CNCH	**Conchagua**	**1.25**	**9**	*e*P	**Pn**	**16 23 14.9**	**-2.5**
CNCH				*e*S	**Sn**	**16 23 35.4**	**+1.6**
CNCH				IAML		16 23 43.5	
	comp=Z,7μm,0.4s						
LCY	**Lacayo**	**1.41**	**350**	*e*P	**Pn**	**16 23 16.9**	**-2.5**
LCY	**Lacayo**	**1.41**	**350**	*e*P	**Pn**	**16 23 16.9**	**-2.5**
PACA	**Pacayal**	**1.46**	**349**	*e*P	**Pn**	**16 23 17.3**	**-2.8**
PACA				*e*S	**Sn**	**16 23 39.3**	**+0.8**
PACA				IAML		16 23 45.5	
	comp=Z,8μm,0.6s						
PACA	**Pacayal**	**1.46**	**349**	*e*P	**Pn**	**16 23 17.3**	**-2.8**
PACA				*e*S	**Sn**	**16 23 39.3**	**+0.8**
PACA				IAML		16 23 45.5	
	comp=Z,8μm,0.6s						
TECA	**Tecapa**	**1.53**	**343**	*e*P	**Pn**	**16 23 18.2**	**-2.9**
TECA	**Tecapa**	**1.53**	**343**	*e*P	**Pn**	**16 23 18.2**	**-2.9**
LFRS	**El Faro**	**1.88**	**328**	*e*P	**Pn**	**16 23 22.4**	**-3.3**
LFRS	**El Faro**	**1.88**	**328**	*e*P	**Pn**	**16 23 22.4**	**-3.3**
LBRS	**Las Brisas**	**1.96**	**330**	*e*P	**Pn**	**16 23 24.9**	**-1.9**
LBRS	**Las Brisas**	**1.96**	**330**	*e*P	**Pn**	**16 23 24.9**	**-1.9**
SNET	**Serv Nac Est T**	**2.02**	**325**	Pn	**Pn**	**16 23 27.5**	**-0.1**
BOQS	**Boqueron**	**2.09**	**324**	*e*P	**Pn**	**16 23 26.4**	**-2.1**
BOQS	**Boqueron**	**2.09**	**324**	*e*P	**Pn**	**16 23 26.4**	**-2.1**
TGUH	**Tegucigalpa,Un**	**2.15**	**20**	Pn	**Pn**	**16 23 28.0**	**-1.3**
MATN	**Matagalpa**	**2.24**	**66**	*e*P	**Pn**	**16 23 28.6**	**-2.0**
MATN	**Matagalpa**	**2.24**	**66**		**Pn**	**16 23 28.3**	**-2.2**
SBLS	**San Blas**	**2.38**	**319**	*e*P	**Pn**	**16 23 30.0**	**-2.5**
SBLS	**San Blas**	**2.38**	**319**	*e*P	**Pn**	**16 23 30.0**	**-2.5**
ACON	**Acoyapa**	**2.80**	**91**	*e*P	**Pn**	**16 23 35.2**	**-2.8**
ACON	**Acoyapa**	**2.80**	**91**		**Pn**	**16 23 35.1**	**-2.8**
GBS3	**Finca Las Img**	**2.81**	**116**	*e*P	**Pn**	**16 23 38.1**	**-0.2**
GBS3				*e*S	**Sn**	**16 24 08.9**	**-2.2**
LAPC	**Finca la Perla**	**2.84**	**116**	*e*P	**Pn**	**16 23 38.4**	**-0.2**
LAPC				*e*S	**Sn**	**16 24 11.5**	**-0.2**
GB1A	**Borinquen Arri**	**2.85**	**115**	*e*P	**Pn**	**16 23 38.8**	**0.0**
GB1A				*e*S	**Sn**	**16 24 12.7**	**+0.7**
GUAI	**GUAI**	**3.03**	**125**	*e*P	**Pn**	**16 23 39.6**	**-1.5**
COLC	**Colonia**	**3.09**	**116**	*e*P	**Pn**	**16 23 42.0**	**0.0**
HORNC	**Hornillas**	**3.09**	**115**	*e*P	**Pn**	**16 23 41.6**	**-0.5**
HORNC				*e*S	**Sn**	**16 24 16.5**	**-1.4**
PLVR	**Palo Verde**	**3.12**	**122**	*e*P	**Pn**	**16 23 40.9**	**-1.6**
CUI	**Cuipilapa**	**3.12**	**116**	*e*P	**Pn**	**16 23 41.8**	**-0.7**
CUI				*e*S	**Sn**	**16 24 17.6**	**-1.1**
ACAL	**Aguas Claras**	**3.25**	**115**	*e*P	**Pn**	**16 23 43.4**	**-0.8**
JTS	**Las Juntas de**	**3.48**	**119**	P	**Pn**	**16 23 46.8**	**-0.5**
	comp=Z,3.9nm,0.3s,baz=7.6,slow=22,SNR=7.7						
JTS				S	**Sn**	**16 24 26.6**	**-0.8**
	comp=Z,11nm,0.3s,baz=332,slow=23,SNR=4.7						
JTS	**Las Juntas de**	**3.48**	**119**	*e*P	**Pn**	**16 23 47.2**	**-0.1**
JTS	**Las Juntas de**	**3.48**	**119**		**Pn**	**16 23 46.4**	**-1.0**
ARE1	**Arenal 1**	**3.60**	**115**	*e*P	**Pn**	**16 23 48.0**	**-1.1**
ARE1				*e*S	**Sn**	**16 24 34.2**	**+3.8**
CEDE	**Laguna Cedeo**	**3.61**	**115**	*e*P	**Pn**	**16 23 48.8**	**-0.3**
ESPN	**Las Esperanzas**	**3.65**	**87**	*e*P	Pn	16 23 55.9	+6.3
APG	**El Apazote**	**3.79**	**322**	P	**Pn**	**16 23 54.0**	**+2.3**
	comp=Z,0.8nm,0.3s,baz=135,slow=10,SNR=2.1						
LCR2	**La Lucha 2**	**4.56**	**119**	*e*P	**Pn**	**16 24 02.9**	**+0.6**
TEIG	**Tepich**	**8.15**	**358**	LR	LR	16 28 48.0	
	comp=Z,124nm,21.8s,baz=231,slow=43						
CMIG	**Matias Romero**	**8.33**	**308**	P	**Pn**	**16 24 53.7**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=165,slow=7.4,SNR=4.2						
ATAH	**Atahualpa**	**21.32**	**153**	LR	LR	16 35 18.5	
	comp=Z,61nm,18.7s,baz=29,slow=35						
JCT	**Junction City**	**21.36**	**331**	P	**P**	**16 27 37.8**	**+0.5**
GOGA	**Godfrey**	**21.69**	**10**	P	**P**	**16 27 40.1**	**-0.6**
GOGA				IAmb	IAmb	16 28 12.4	
	comp=Z,14nm,0.9s						
EMPR	**Esperanza - Ma**	**21.70**	**70**	P	**P**	**16 27 42.2**	**+1.1**
TXAR	**Lajitas Array**	**22.55**	**322**	P	**P**	**16 27 51.5**	**+1.4**
	comp=Z,4.0nm,0.8s,baz=137,slow=10,SNR=28						
TX31	**Lajitas Ar. Si**	**22.55**	**322**	P	**P**	**16 27 50.9**	**+0.7**
TX31				IAmb	IAmb	16 27 55.7	
	comp=Z,11nm,0.8s						
TX32	**Lajitas Array**	**22.55**	**322**	P	**P**	**16 27 51.0**	**+0.8**
MIAR	**Mount Ida**	**22.98**	**348**	P	**P**	**16 27 54.9**	**+0.5**
MIAR				IAmb	IAmb	16 27 57.3	
	comp=Z,16nm,0.8s						
H06E1	**SOCORRO T-PHAS**	**23.05**	**290**	T	T	16 51 42.5	
	SNR=4.7						
CPCT	**Cooper Cave**	**23.53**	**7**	P	**P**	**16 27 57.7**	**-2.0**
TKL	**Tuckaleechee C**	**23.84**	**9**	P	**P**	**16 28 03.6**	**+1.2**
	comp=Z,7.5nm,0.9s,baz=184,slow=11,SNR=4.9						
U40A	**Yellville**	**24.61**	**351**	P	**P**	**16 28 09.8**	**+0.4**
WMOK	**Wichita Mounta**	**24.63**	**338**	P	**P**	**16 28 09.8**	**+0.2**
MSTX	**Muleshoe**	**25.65**	**331**	P	**P**	**16 28 20.2**	**+1.1**
MSTX				IAmb	IAmb	16 28 21.2	
	comp=Z,7.1nm,0.7s						
AMTX	**Amarillo**	**25.91**	**334**	P	**P**	**16 28 22.9**	**+1.5**
AMTX				IAmb	IAmb	16 28 24.9	
	comp=Z,8.9nm,0.8s						
CCM	**Cathedral Cave**	**26.08**	**354**	P	**P**	**16 28 22.8**	**+0.1**
CCM				IAmb	IAmb	16 28 24.1	
	comp=Z,5.3nm,0.7s						
J56A	**Wolcott**	**32.60**	**15**	P	**P**	**16 29 19.6**	**-0.9**
J56A				IAmb	IAmb	16 29 22.7	
	comp=Z,6.5nm,0.8s						
SADO	**Sadowa**	**33.51**	**12**	P	**P**	**16 29 29.1**	**+0.7**
F33A	**5 Mile Ranch,**	**34.42**	**350**	P	**P**	**16 29 35.2**	**-1.1**
PDAR	**Pinedale Array**	**35.88**	**333**	P	**P**	**16 29 49.8**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=136,slow=9.2,SNR=2.1						
EYMN	**Ely**	**35.92**	**356**	P	**P**	**16 29 48.6**	**-0.6**
AGMN	**Agassiz Nation**	**36.74**	**351**	P	**P**	**16 29 55.8**	**-0.4**
AGMN				IAmb	IAmb	16 29 56.7	
	comp=Z,14nm,1.4s						
ULM	**Lac du Bonnet**	**38.65**	**352**	P	**P**	**16 30 11.2**	**-1.1**
	comp=Z,6.0nm,0.5s,baz=162,slow=9.5,SNR=5.6						
ULM				LR	LR	16 49 34.0	
	comp=Z,40nm,18.0s,baz=202,slow=41						
ULM	**Lac du Bonnet**	**38.65**	**352**	P	**P**	**16 30 11.0**	**-1.3**
MCMT	**McKenzie Canyo**	**38.98**	**332**	P	**P**	**16 30 15.4**	**-0.1**
WDC	**Whiskeytown Da**	**41.56**	**319**	P	**P**	**16 30 36.3**	**-0.3**
WDC				IAmb	IAmb	16 31 29.4	
	comp=Z,13nm,1.6s						
SCHQ	**Schefferville**	**45.84**	**17**	P	**P**	**16 31 10.2**	**-0.6**
	comp=Z,4.2nm,0.6s,baz=217,slow=5.4,SNR=14						
SCHQ	**Schefferville**	**45.84**	**17**	P	**P**	**16 31 10.0**	**-0.7**
SCHQ				IAmb	IAmb	16 31 11.4	
	comp=Z,12nm,1.3s						
FCC	**Fort Churchill**	**46.86**	**356**	P	**P**	**16 31 18.4**	**-0.1**
FCC				IAmb	IAmb	16 32 05.6	
	comp=Z,5.0nm,0.9s						
ROC1	**El Roble**	**47.61**	**161**	P	**P**	**16 31 25.3**	**+0.2**
YKA	**Yellowknife Ar**	**53.87**	**345**	P	**P**	**16 32 11.8**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=137,slow=8.1,SNR=22						
YKA				PcP	**PcP**	**16 33 17.9**	**+1.7**
	comp=Z,0.3nm,0.7s,baz=143,slow=4.8,SNR=5.6						
RES	**Resolute Bay**	**62.76**	**358**	P	**P**	**16 33 13.0**	**-0.2**
RES				IAmb	IAmb	16 34 52.2	
	comp=Z,9.5nm,1.4s						
ILAR	**Eielson Array**	**66.17**	**336**	P	**P**	**16 33 36.7**	**+1.0**
	comp=Z,0.3nm,0.8s,baz=116,slow=6.1,SNR=3.1						
VAE	**Valguarnera**	**92.42**	**51**	LR	LR	17 12 33.3	
	comp=Z,41nm,19.8s,baz=144,slow=32						
ASAR	**Alice Springs**	**138.59**	**248**	PKP	**PKPdf**	**16 42 12.8**	**-1.6**
	comp=Z,0.1nm,0.8s,baz=106,slow=3.4,SNR=1.1						
WRA	**Warramunga Arr**	**138.61**	**254**	PKP	**PKPdf**	**16 42 13.2**	**-1.3**
	comp=Z,0.3nm,0.8s,baz=73,slow=3.3,SNR=1.8						
CMAR	**Chiang Mai Arr**	**148.94**	**347**	PKPbc	**PKPbc**	**16 42 36.2**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=316,slow=2.5,SNR=1.9						

MAN 20 16:34:23.6, 9.23N×122.14E, h100km, mb4.1, ML2.9, MS2.6, Negros

MAN 20 16:37:23.2, 9.18N×122.06E, h35km, mb4.1, ML2.9, MS2.5, Negros

*IDC **20** 16:50:02.7±1.7, 18°.83N×145°.64E, h0km, mb3.6/5, mb1 4.0/5, mb1mx3.5/41, mbtmp3.6/5, Error ellipse: s-maj=163.7km s-min=21.8km az=113.0*
*NEIC **20** 16:50:04.2±0.9, 18°.8N±0°.1×145°.7E±0°.2, h10km±1km, mb4.5/9, Error ellipse: s-maj=35.5km s-min=19.1km az=113.0*

ISC 20 16:50:04.2±0.8, 18°.9N±0°.2×145°.7E±0°.2, h10km, n15, σ0°.64/15, mb4.2/10, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**34.62**	**206**	P	**P**	**16 56 53.9**	**+0.1**
WB0	**Warramunga Arr**	**39.95**	**197**	P	**P**	**16 57 38.8**	**-0.2**
WB0				IAmb	IAmb	16 59 00.9	
	comp=Z,26nm,1.9s						
WR0	**Warramunga Arr**	**40.10**	**196**	P	**P**	**16 57 39.6**	**-0.6**
WR0				IAmb	IAmb	16 58 23.1	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**40.13**	**197**	P	**P**	**16 57 40.9**	**+0.4**
WB2				IAmb	IAmb	16 58 34.5	
	comp=Z,19nm,1.6s						
WRA	**Warramunga Arr**	**40.13**	**197**	P	**P**	**16 57 40.3**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=21,slow=8.3,SNR=16						
MA2	**Magadan**	**40.84**	**4**	P	**P**	**16 57 44.8**	**-1.2**
FITZ	**Fitzroy Crossi**	**41.68**	**209**	P	**P**	**16 57 53.1**	**-0.2**
FITZ				IAmb	IAmb	16 58 15.1	
	comp=Z,12nm,1.4s						
AS31	**Alice Springs**	**43.80**	**196**	P	**P**	**16 58 10.2**	**-0.3**
ASAR	**Alice Springs**	**43.80**	**196**	P	**P**	**16 58 09.9**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=20,slow=8.6,SNR=12						
GSI	**Gunungsitoli**	**50.28**	**255**	P	**P**	**16 59 01.9**	**+0.5**
MAKZ	**Makanchi**	**58.59**	**314**	P	**P**	**17 00 01.5**	**+0.1**
MAKZ				IAmb	IAmb	17 01 51.3	
	comp=Z,7.7nm,1.4s						
ILAR	**Eielson Array**	**63.50**	**26**	P	**P**	**17 00 34.7**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=258,slow=4.3,SNR=3.1						
YKA	**Yellowknife Ar**	**77.85**	**28**	P	**P**	**17 02 02.1**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=292,slow=5.2,SNR=4.9						
NVAR	**Mina Array Bea**	**83.03**	**52**	P	**P**	**17 02 31.5**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=262,slow=6.3,SNR=4.3						
LPAZ	**La Paz**	**147.66**	**91**	PKPbc	**PKPbc**	**17 09 49.7**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=338,slow=5.4,SNR=3.6						

*IDC **20** 16:58:30.7±0.6, 26°.76N×140°.40E, h374km±8km, mb3.2/10, mb1 3.2/13, mb1mx3.0/62, mbtmp3.9/13, Error ellipse: s-maj=24.6km s-min=11.3km az=83.0*
*NEIC **20** 16:58:31.5±0.9, 26°.73N±0°.10×140°.3E±0°.1, h381km±5km, mb4.1/19, Error ellipse: s-maj=19.9km s-min=13.1km az=111.0*
*JMA **20** 16:58:33.8±0.2, 27°.17N×141°.06E, h387km, M3.9*

ISC 20 16:58:32.4±0.6, 26°.91N±0°.06×140°.5E±0°.1, h400km, n50, σ2°.61/61, mb3.8/21, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.54**	**83**	P	**Pn**	**16 59 23.5**	**-2.3**
CBIJ				*e*S	**S**	**17 00 02.8**	**-6.1**
JCJ	**Chichijima**	**1.54**	**83**	P	**Pn**	**16 59 23.7**	**-2.1**
	7.3nm,0.3s,baz=9.4,slow=21,SNR=16						
JCJ				S	**S**	**17 00 03.1**	**-5.7**
	61nm,0.3s,baz=284,slow=23,SNR=17						
JHH2	**Haha-jima-NKT2**	**1.55**	**100**	P	**Pn**	**16 59 24.4**	**-1.4**
JHH2				*e*

NIED ***20*** *17:00:00.0, 31.10N × 128.10E, h11 km, Mw3.6 Best double couple: M0 2.72000 × 10^14 NP1: φ 92.00000°, δ 88.00000°, λ -4.00000°. NP2: φ 182.00000°, δ 86.00000°, λ -178.00000°.*

JMA 20 17:00:16.1 ± 0.2, 31.13N × 128.12E, h2 km ± 2 km, M3.6, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**1.47**	**68**	P	Pn	17 00 43.4	-0.2
JSJ				*e*S	Sb	17 01 02.7	-0.6
JFU	**Fukue jima 2**	**1.61**	**19**	P	Pn	17 00 45.7	+0.1
JFU				*e*S	Sn	17 01 07.0	0.0
JYAK	**Yakushimahirau**	**2.24**	**113**	P	Pn	17 00 55.0	+0.8
JMTN	**Minamitane**	**2.50**	**106**	P	Pn	17 00 59.0	+1.2
JTN	**Tanegashima 3**	**2.50**	**100**	P	Pn	17 00 59.0	+1.1
JTZ	**Takazaki**	**2.65**	**72**	P	Pn	17 01 01.1	+1.3
JIU3	**Izumi3**	**2.69**	**58**	P	Pn	17 01 01.6	+1.1

HEL ***20*** *17:03:21.8 ± 0.1, 67.06N × 20.95E, h0 km, ML2.2, ML2.3(UPP), Explosion*
UPP ***20*** *17:03:21.2 ± 0.1, 67.06N × 20.95E, h0 km, ML2.5, Explosion*
NAO ***20*** *17:03:21.9 ± 0.9, 67.07N × 21.40E, ML2.5*
IDC ***20*** *17:03:22.4 ± 1.0, 67.06N × 21.17E, h0 km, mb1 2.7/3, mb1mx2.7/46, mbtmp2.6/3, ML2.3/3, Error ellipse: s-maj=17.3km s-min=8.1km az=109.0*
BER ***20*** *17:03:23.5 ± 4.2, 67.07N × 21.16E, h0 km, Suspected explosion*

ISC 20 17:03:20.8 ± 0.7, 67.06N ± 0.02 × 20.95E ± 0.02, h0 km, n60, σ 0.97/92, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.16**	**294**	P	**Pg**	**17 03 24.5**	**+0.6**
DUNU				S	**Sg**	**17 03 26.9**	**+0.9**
DUNU	**Dundret**	**0.16**	**294**	*i* P	**Pg**	**17 03 24.5**	**+0.6**
DUNU				*i* S	**Sg**	**17 03 26.9**	**+0.9**
MASU	**Masugnsbyn**	**0.57**	**45**	P	**Pg**	**17 03 32.2**	**+0.4**
MASU	**Masugnsbyn**	**0.57**	**45**	*i* P	**Pg**	**17 03 32.2**	**+0.4**
ERTU	**Ertsjaerv**	**0.70**	**135**	P	**Pg**	**17 03 34.5**	**+0.2**
ERTU				S	**Sg**	**17 03 43.9**	**+0.6**
ERTU	**Ertsjaerv**	**0.70**	**135**	*e*P	**Pg**	**17 03 34.3**	**+0.1**
ERTU				*e*S	**Sg**	**17 03 43.8**	**+0.6**
PAJU	**Pajala**	**0.85**	**91**	P	**Pg**	**17 03 37.0**	**-0.1**
PAJU	**Pajala**	**0.85**	**91**	*i* P	**Pg**	**17 03 37.0**	**-0.1**
HARU	**Harads**	**0.90**	**179**	P	**Pg**	**17 03 38.0**	**+0.1**
HARU	**Harads**	**0.90**	**179**	*e*P	**Pg**	**17 03 38.0**	**+0.1**
KUA	**Kurravaara**	**0.93**	**346**	P	**Pg**	**17 03 38.2**	**-0.5**
KUA				S	**Sg**	**17 03 50.4**	**-0.3**
KUA	**Kurravaara**	**0.93**	**346**	*e*P	**Pg**	**17 03 38.2**	**-0.5**
KUA				*e*S	**Sg**	**17 03 50.4**	**-0.3**
SALU	**Saltoluokta**	**1.00**	**290**	*e*P	**Pn**	**17 03 44.5**	**+2.3**
LANU	**Lannavaara**	**1.08**	**21**	P	**Pg**	**17 03 40.6**	**-0.7**
LANU	**Lannavaara**	**1.08**	**21**	*e*P	**Pg**	**17 03 40.6**	**-0.7**
NIKU	**Nikkaluokta**	**1.10**	**319**	P	**Pg**	**17 03 41.3**	**-0.5**
NIKU				S	**Sg**	**17 03 56.7**	**+0.6**
NIKU	**Nikkaluokta**	**1.10**	**319**	*e*P	**Pg**	**17 03 41.3**	**-0.5**
NIKU				*e*S	**Sg**	**17 03 56.7**	**+0.6**
KOVU	**Salmi**	**1.21**	**346**	P	**Pg**	**17 03 43.3**	**-0.7**
KOVU	**Salmi**	**1.21**	**346**	*e*P	**Pg**	**17 03 43.3**	**-0.7**
SJUU	**Sjulsmark**	**1.58**	**170**	P	**Pn**	**17 03 50.1**	**+0.2**
SJUU	**Sjulsmark**	**1.58**	**170**	*e*P	**Pn**	**17 03 50.1**	**+0.2**
TOF	**Tornio** baz=308	**1.67**	**124**	*e*P	**Pn**	**17 03 51.6**	**+0.4**
TOF				MSG		17 04 11.4	
	comp=Z,26nm,0.2s						
TOF				*e*SN	**Sb**	**17 04 13.9**	**+0.1**
HEF	**Hetta**	**1.71**	**36**	Pn	**Pn**	**17 03 52.0**	**+0.2**
HEF				Lg	Lg	17 04 14.1	
HEF	**Hetta** baz=214	**1.71**	**36**	*e*P	**Pn**	**17 03 51.7**	**-0.1**
HEF				MSG		17 04 11.7	
	comp=Z,22nm,0.2s						
HEF				*e*SG	**Sn**	**17 04 14.2**	**-0.1**
HEF	**Hetta**	**1.71**	**36**	*e*P	**Pn**	**17 03 51.4**	**-0.4**
HEF				Pn	**Pn**	**17 03 52.0**	**+0.2**
HEF				Sg	**Sn**	**17 04 14.1**	**-0.1**
HEF				*e*S	**Sb**	**17 04 14.3**	**-0.7**
KIF	**Kilpisjarvi**	**1.96**	**358**	Pn	**Pb**	**17 03 56.8**	**-0.5**
KIF				Sn	**Sb**	**17 04 23.0**	**+0.8**
KIF	**Kilpisjarvi** baz=176	**1.96**	**358**	*e*PB	**Pb**	**17 03 56.9**	**-0.5**
KIF				MSG		17 04 20.2	
	comp=Z,30nm,0.2s						
KIF				*e*SG	**Sg**	**17 04 23.4**	**-0.3**
KIF	**Kilpisjarvi**	**1.96**	**358**	*e*P	**Pb**	**17 03 56.9**	**-0.4**
KIF				Sn	**Sb**	**17 04 23.0**	**+0.8**
RNF	**Rovaniemi**	**2.05**	**100**	*e*PB	**Pn**	**17 03 57.7**	**+1.2**
RNF				*e*SG	**Sb**	**17 04 25.1**	**+0.2**
KTK1	**Kautokeino**	**2.15**	**23**	*e*P	**Pb**	**17 03 59.3**	**-1.2**
SGF	**Sodankyl** baz=263	**2.20**	**77**	*e*P	**Pn**	**17 03 59.7**	**+1.1**
SGF				*e*SG	**Sb**	**17 04 29.4**	**+0.1**
I37NO	**I37NO** baz=158,slow=326,SNR=5.1	**2.21**	**338**	*i*		17 17 10.0	
BURU	**Burvik**	**2.49**	**176**	*e*P	**Pn**	**17 04 03.8**	**+1.4**
BURU				*e*SG	**Sg**	**17 04 39.7**	**-0.9**
MOR8	**Moi Rana**	**2.74**	**254**	*e*P	**Pn**	**17 04 06.0**	**0.0**
OUL	**Oulu**	**2.83**	**132**	*e*P	**Pn**	**17 04 08.8**	**+1.7**
OUL				*e*SG	**Sb**	**17 04 49.0**	**+2.0**
OBF0	**Syolatti, Pyha**	**2.90**	**151**	*e*PB	**Pb**	**17 04 11.0**	**-2.3**
ARA0	**ARCESS Array S** baz=212,slow=16	**3.01**	**32**	Pn	**Pn**	**17 04 10.1**	**+0.4**
ARA0				Sn	**Sn**	**17 04 46.4**	**0.0**
	baz=207,slow=28						
ARA0				Lg	Lg	17 04 51.1	
	baz=212,slow=28						
ARA0	**ARCESS Array S** baz=212,slow=16	**3.01**	**32**	Pn	**Pn**	**17 04 10.1**	**+0.4**
ARA0				Sn	**Sn**	**17 04 46.4**	**0.0**
	baz=207,slow=28						
ARA0				Sg	**Sb**	**17 04 51.1**	**-1.4**
	baz=212,slow=28						
ARCES	**ARCESS Array B** comp=Z,1.1nm,0.3s,baz=215,slow=14,SNR=36	**3.01**	**32**	Pn	**Pn**	**17 04 10.3**	**+0.6**
ARCES				Sn	**Sn**	**17 04 48.5**	**+2.0**
	comp=Z,2.1nm,0.3s,baz=207,slow=24,SNR=12						
ARCES				Lg	Lg	17 04 52.9	
	comp=Z,3.1nm,0.3s,baz=215,slow=28,SNR=7.8						
ARE0	**ARCESS Array S**	**3.01**	**32**	*e*P	**Pn**	**17 04 11.5**	**+1.8**
ARE0				*e*S	**Sn**	**17 04 48.6**	**+2.2**
ARE0	**ARCESS Array S**	**3.01**	**32**	*e*P	**Pn**	**17 04 10.4**	**+0.7**
LOF	**Lofoten**	**3.04**	**294**	*e*P	**Pn**	**17 04 09.6**	**-0.4**
OUF	**Merijarvi**	**3.12**	**148**	*e*P	**Pn**	**17 04 12.4**	**+1.3**
OUF				MSG		17 04 53.4	
	comp=Z,4.0nm,0.2s						
VRF	**Varrio**	**3.42**	**74**	*e*P	**Pn**	**17 04 17.2**	**+1.9**
VRF				*e*SG	**Sb**	**17 05 05.2**	**+1.1**
KU6	**Riekki** baz=291	**3.72**	**102**	*e*P	**Pn**	**17 04 20.1**	**+0.7**
HUSU	**Husum**	**3.80**	**192**	*e*P	**Pn**	**17 04 21.6**	**+1.1**
NOD	**Norderasen**	**4.44**	**218**	*e*P	**Pn**	**17 04 29.9**	**+0.6**
NSS	**Namsos**	**4.48**	**240**	*e*P	**Pn**	**17 04 31.4**	**+1.6**
HEMU	**Hemsoen**	**4.57**	**197**	*e*P	**Pn**	**17 04 31.4**	**+0.3**
APA0	**Apatity Array** baz=264,slow=22	**4.69**	**78**	Pn	**Pn**	**17 04 31.8**	**-1.0**
APA0				Sn	**Sn**	**17 05 27.1**	**-0.8**
APA0				Lg	Lg	17 05 43.7	
	baz=262,slow=22						
APA0	**Apatity Array** baz=264,slow=22	**4.69**	**78**	Pn	**Pn**	**17 04 31.8**	**-1.0**
APA0				Sn	**Sn**	**17 05 27.1**	**-0.8**
APA0				Sg	**Sb**	**17 05 43.7**	**+2.9**
	baz=262,slow=22						
FIA0	**FINESS Array S** baz=344,slow=14	**6.06**	**156**	Pn	**Pn**	**17 04 53.0**	**+1.5**
FIA0				Sn	**Sn**	**17 06 00.7**	**-0.8**
	baz=348,slow=28						
FIA0	**FINESS Array S** baz=344,slow=14	**6.06**	**156**	Pn	**Pn**	**17 04 53.0**	**+1.5**
FIA0				Sn	**Sn**	**17 06 00.7**	**-0.8**
	baz=348,slow=28						
FINES	**FINESS Array B** comp=Z,0.2nm,0.3s,baz=346,slow=13,SNR=8.6	**6.06**	**156**	Pn	**Pn**	**17 04 53.0**	**+1.5**
FINES				Sn	**Sn**	**17 06 01.7**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=352,slow=22,SNR=4.9						
FINES				Lg	Lg	17 06 32.3	
	comp=Z,0.5nm,0.3s,baz=353,slow=27,SNR=5.4						
NOA	**NORSAR Array B** comp=Z,0.0nm,0.3s,baz=28,slow=11,SNR=2.1	**7.39**	**220**	Pn	**Pn**	**17 05 10.6**	**+0.9**
NRA0	**NORESS Array S** baz=30,slow=14	**7.57**	**218**	Pn	**Pn**	**17 05 11.7**	**-0.6**
NRA0	**NORESS Array S** baz=30,slow=14	**7.57**	**218**	Pn	**Pn**	**17 05 11.7**	**-0.6**
HFS	**Hagfors** baz=17,slow=16	**7.66**	**208**	Pn	**Pn**	**17 05 13.4**	**0.0**
HFS	**Hagfors** baz=28,slow=13	**7.66**	**208**	Pn	**Pn**	**17 05 13.5**	**0.0**
HFS				Sn	**Sn**	**17 06 39.7**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=28,slow=25,SNR=1.6						
HFS				Lg	Lg	17 07 17.1	
	comp=Z,0.3nm,0.3s,baz=26,slow=17,SNR=4.3						
HFS	**Hagfors** baz=17,slow=16	**7.66**	**208**	Pn	**Pn**	**17 05 13.4**	**0.0**

IDC 20 17:05:52.8 ± 410.0, 48.16N × 45.70E, h0 km, Error ellipse: s-maj=188.1km s-min=167.5km az=25.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF** baz=259,slow=329,SNR=1.9	**8.37**	**70**	*i*		17 58 30.0	
I43RU	**DUBNA INFRASON** baz=145,slow=312,SNR=0.8	**10.01**	**332**	*i*		18 08 50.0	
I26DE	**FREYUNG INFRAS** baz=80,slow=322,SNR=0.8	**21.13**	**284**	*i*		19 14 50.0	
I37NO	**I37NO** baz=137,slow=328,SNR=1.7	**24.86**	**337**	*i*		19 41 00.0	

ATA ***20*** *17:16:38.7 ± 6.5, 40.54N × 42.96E, h7 km ± 167 km, ML2.3, MW3.8*
DDA ***20*** *17:16:40.5, 40.52N × 43.07E, h7 km ± 4 km, ML2.3*
ISK ***20*** *17:16:40.9, 40.56N × 43.03E, h8 km, ML2.4/5*
TIF ***20*** *17:16:40.7, 40.52N × 43.03E, h10 km ± 3 km*

ISC 20 17:16:40.2 ± 0.9, 40.52N ± 0.02 × 43.02E ± 0.02, h9 km ± 8 km, n34, σ 1.962/50, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARS	**Kars**	**0.11**	**23**	PG	**Pg**	**17 16 43.3**	**+0.2**
DIGO	**Kars**	**0.29**	**112**	*e*P	**Pg**	**17 16 46.3**	**+0.2**
DIGO				*e*S	**Sg**	**17 16 50.9**	**+0.8**
DIGO				IAML		17 16 53.1	
	comp=Z,388nm,0.5s						
DIGO	**Kars**	**0.29**	**112**	*i* P	**Pg**	**17 16 46.4**	**+0.2**
DIGO				*i* S	**Sg**	**17 16 49.5**	**-0.5**
DIGO				IAML		17 16 53.0	
	comp=N,884nm,0.6s						
DIGO				IAML		17 16 56.0	
	comp=E,1μm,0.6s						
EAK	**Akyaka**	**0.48**	**70**	*e*P	**Pg**	**17 16 50.3**	**+0.8**
EAK				*e*S	**Sb**	**17 16 57.7**	**-0.3**
EAK				IAML		17 17 07.9	
	comp=Z,249nm,0.5s						
EAK	**Akyaka**	**0.48**	**70**	*i* P	**Pg**	**17 16 50.4**	**+0.9**
EAK				*i* S	**Sg**	**17 16 55.7**	**-0.1**
EAK				IAML		17 17 00.0	
	comp=N,301nm,0.6s						
EAK				IAML		17 17 17.0	
	comp=E,214nm,0.6s						
SENK	**Senkaya-Erzuru**	**0.51**	**275**	PG	**Pg**	**17 16 51.4**	**+1.2**
SENK				SG	**Sb**	**17 16 58.8**	**-0.3**
EATA	**Eleskirt**	**0.77**	**212**	*e*P	**Pg**	**17 16 55.5**	**+0.4**
EATA				*e*S	**Sg**	**17 17 00.5**	**-4.8**
EATA				IAML		17 17 02.4	
	comp=Z,16nm,0.3s						
EATA	**Eleskirt**	**0.77**	**212**	*i* P	**Pg**	**17 16 55.6**	**+0.4**
EATA				*i* S	**Sg**	**17 17 04.8**	**-0.5**
AGRB	**Hanur-Agry**	**0.95**	**181**	PG	**Pb**	**17 16 59.9**	**+1.0**
AKH	**Akhalkalaki**	**0.96**	**22**	PG	**Pg**	**17 16 58.7**	**+0.1**
HOMI	**Horasan**	**0.98**	**241**	*e*P	**Pg**	**17 16 59.1**	**+0.1**
HOMI				IAML		17 17 00.9	
	comp=Z,35nm,0.2s						
EPOS	**Posof**	**1.00**	**347**	*e*P	**Pb**	**17 17 00.6**	**+0.7**
EPOS				*e*S	**Sg**	**17 17 08.7**	**-3.9**
EPOS				IAML		17 17 20.8	
	comp=Z,28nm,0.6s						
EPOS	**Posof**	**1.00**	**347**	*i* P	**Pb**	**17 17 00.4**	**+0.6**
EPOS				*i* S	**Sg**	**17 17 11.0**	**-1.6**
EPOS				IAML		17 17 19.0	
	comp=N,66nm,0.5s						
DAGI	**Agillar**	**1.01**	**304**	*i* P	**Pb**	**17 17 00.5**	**+0.6**
DAGI				*i* S	**Sg**	**17 17 10.5**	**-2.2**
DDEM	**Demirkent**	**1.03**	**291**	*i* P	**Pb**	**17 17 01.0**	**+0.7**
DDEM				*i* S	**Sg**	**17 17 13.7**	**+0.2**
DDEM				IAML		17 17 19.0	
	comp=N,105nm,0.5s						
DDEM				IAML		17 17 27.0	
	comp=E,72nm,0.5s						
IGDI	**IGDIR**	**1.04**	**129**	*e*P	**Pg**	**17 16 58.4**	**-1.8**
IGDI				IAML		17 17 04.2	
	comp=Z,5.2nm,0.3s						
IGDI	**IGDIR**	**1.04**	**129**	*i* S	**Sg**	**17 17 11.9**	**-1.8**
DYDN	**Diyadin**	**1.10**	**152**	*e*P	**Pn**	**17 17 03.2**	**+1.1**
DYDN				IAML		17 17 04.4	
	comp=Z,34nm,0.3s						
DYDN	**Diyadin**	**1.10**	**152**	*i* P	**Pb**	**17 17 02.5**	**+1.0**
DYDN				*i* S	**Sn**	**17 17 17.9**	**+0.4**
DYDN				IAML		17 17 28.0	
	comp=E,55nm,0.5s						
DBAD	**Bademkaya**	**1.12**	**297**	*i* P	**Pn**	**17 17 02.7**	**+0.5**
DBAD				*i* S	**Sg**	**17 17 15.6**	**-0.7**
DBAD				IAML		17 17 23.0	
	comp=N,48nm,0.6s						
TUTA	**Tutak**	**1.13**	**188**	*e*P	**Pg**	**17 17 02.6**	**+0.6**
TUTA				IAML		17 17 06.1	
	comp=Z,73nm,0.6s						
DBOC	**Borcka**	**1.31**	**309**	*i* P	**Pb**	**17 17 05.5**	**+0.5**
AKDA	**Akdag**	**1.33**	**252**	*i* P	**Pn**	**17 17 06.1**	**+0.9**
BCA	**Borcka**	**1.40**	**312**	PN	**Pb**	**17 17 07.1**	**+0.5**
BATM	**Batumi**	**1.47**	**318**	PN	**Pb**	**17 17 08.5**	**+0.7**
BATM	**Batumi**	**1.47**	**318**	*i* P	**Pb**	**17 17 08.4**	**+0.7**
BATM				*i* S	**Sn**	**17 17 25.8**	**-0.6**
CLDR	**Calderan**	**1.54**	**153**	PN	**Pb**	**17 17 09.8**	**+0.8**
CLDR	**Calderan**	**1.54**	**153**	*i* P	**Pb**	**17 17 09.4**	**+0.3**
KRIK	**Erzurum-spir**	**1.61**	**264**	*e*P	**Pg**	**17 17 11.8**	**+0.7**
KRIK				IAML		17 17 12.7	
	comp=Z,808nm,0.2s						
KRIK	**Erzurum-spir**	**1.61**	**264**	*i* P	**Pg**	**17 17 12.3**	**+1.2**
KRIK				*i* S	**Sn**	**17 17 30.2**	**+0.2**
EMRE	**Erzurum,Aziziy**	**1.64**	**253**	*i* P	**Pg**	**17 17 12.6**	**+0.9**
EMRE				IAML		17 17 42.0	
	comp=E,38nm,0.7s						
EMRE				IAML		17 17 42.0	
	comp=N,32nm,0.7s						
CHOM	**Cayeli-Rize**	**1.81**	**289**	PN	**Pb**	**17 17 13.7**	**+0.2**
ONI	**Oni**	**2.09**	**9**	PN	**Pn**	**17 17 16.9**	**+1.4**
HAKT	**HAKKARI**	**3.01**	**170**	*i* P	**Pg**	**17 17 41.4**	**+3.5**
HAKT				*i* S	**Sn**	**17 17 58.5**	**-6.0**

IDC ***20*** *17:27:19.1 ± 1.6, 36.90N × 144.30E, h0 km, mb3.5/5, mb1 3.8/9, mb1mx3.5/66, mbtmp3.8/9, ML3.7/4, MS2.6/4, Ms1 2.6/4, ms1mx2.4/45, Error ellipse: s-maj=38.9km s-min=23.0km az=87.0*
JMA ***20*** *17:27:26.1 ± 0.2, 37.12N × 143.78E, h52 km, M4.1*

ISC 20 17:27:25.4 ± 1.1, 37.06N ± 0.05 × 143.95E ± 0.09, h35 km, n41, σ 1.979/46, mb3.7/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.33**	**303**	P	**Pn**	**17 28 00.9**	**-0.3**
JIKH				*e*S	**Sn**	**17 28 26.6**	**-2.0**
JFK	**Kawauchi**	**2.47**	**278**	P	**Pn**	**17 28 03.3**	**+0.1**
JFK				*e*S	**Sn**	**17 28 30.4**	**-1.8**
ONAJ	**Iwakimizuishiy**	**2.52**	**272**	P	**Pn**	**17 28 04.0**	**+0.1**
ONAJ				*e*S	**Sn**	**17 28 31.4**	**-2.0**
JMST	**Minamisoumatoc**	**2.52**	**286**	P	**Pn**	**17 28 03.6**	**-0.3**
JMST				*e*S	**Sn**	**17 28 31.4**	**-2.0**
JHO	**Hitachi**	**2.75**	**262**	P	**Pn**	**17 28 06.8**	**-0.2**
CHOJ	**Chosi**	**2.84**	**242**	P	**Pn**	**17 28 08.8**	**+0.6**
JMK	**Ichinoseki**	**2.86**	**312**	P	**Pn**	**17 28 08.4**	**-0.1**
JMK				*e*S	**Sn**	**17 28 40.4**	**-1.4**
JFT	**Otama**	**2.92**	**280**	P	**Pn**	**17 28 10.4**	**+1.1**
JFT				*e*S	**Sn**	**17 28 42.0**	**-1.1**
JYT	**Yasato**	**3.13**	**256**	P	**Pn**	**17 28 12.3**	**+0.1**
JYT				*e*S	**Sn**	**17 28 46.1**	**-2.3**
JOM	**Ohasama**	**3.19**	**320**	P	**Pn**	**17 28 13.0**	**0.0**
JOM				*e*S	**Sn**	**17 28 47.6**	**-2.2**
JYK	**Kaneyama**	**3.39**	**304**	P	**Pn**	**17 28 16.1**	**+0.4**
BSO1	**Boso 1**	**3.40**	**226**	P	**Pn**	**17 28 16.0**	**+0.5**
BSO3	**Boso 3**	**3.59**	**232**	P	**Pn**	**17 28 19.1**	**+0.9**
BSO3				*e*X		17 29 00.3	
JAG	**Ashikaga**	**3.67**	**261**	P	**Pn**	**17 28 20.2**	**+0.6**
JAG				*e*S	**Sn**	**17 29 00.8**	**-0.8**
JANG	**Nango**	**3.81**	**331**	P	**Pn**	**17 28 21.5**	**-0.1**
JHU	**Hanno**	**3.95**	**254**	P	**Pn**	**17 28 23.0**	**-0.5**
JRY	**Ryogami san**	**4.19**	**257**	P	**Pn**	**17 28 27.1**	**+0.2**
JOD2	**Odawara 2**	**4.32**	**247**	P	**Pn**	**17 28 28.8**	**+0.2**
MJAR	**Matsushiro Arr** 0.8nm,0.3s,baz=86,slow=15,SNR=38	**4.63**	**265**	Pn	**Pn**	**17 28 34.5**	**+1.6**
MJAR				Sn	**Sn**	**17 29 27.1**	**+1.6**
	0.3nm,0.3s,baz=82,slow=32,SNR=5.6						
MJAR				LR	LR	17 31 19.2	
	comp=Z,41nm,19.4s,baz=90,slow=49						
MAT	**Matsushiro**	**4.63**	**265**	P	**Pn**	**17 28 34.8**	**+1.9**
MAT				S	**Sn**	**17 29 22.3**	**-3.2**
JOT	**Ohata**	**4.87**	**333**	P	**Pn**	**17 28 36.5**	**+0.5**
JOT				*e*S	**Sn**	**17 29 26.6**	**-4.5**
JNY	**Yasuok**	**5.21**	**253**	P	**Pn**	**17 28 43.1**	**+2.3**
JHJ	**Hachijo jima 2** 12nm,0.3s,baz=290,slow=23,SNR=6.4	**5.21**	**222**	Pn	**Pn**	**17 28 40.2**	**-0.6**
JHJ				Sn	**Sn**	**17 29 35.1**	**-4.5**
	53nm,0.3s,baz=80,slow=21,SNR=7.8						
ASAJ	**Asahikawa** 1.5nm,0.3s,baz=201,slow=16,SNR=23	**7.12**	**352**	Pn	**Pn**	**17 29 06.3**	**-0.7**
ASAJ				Sn	**Sn**	**17 30 22.6**	**-4.0**
	0.9nm,0.3s,baz=254,slow=31,SNR=1.9						
ASAJ				LR	LR	17 32 11.4	
	comp=Z,35nm,18.8s,baz=164,slow=40						
JCJ	**Chichijima** 5.2nm,0.3s,baz=107,slow=22,SNR=1.5	**10.05**	**189**	Sn	Sn	17 31 28.5	-10
JNU	**Nakatsue** 0.4nm,0.3s,baz=186,slow=12,SNR=11	**11.40**	**254**	Pn	**Pn**	**17 30 04.2**	**-1.5**
KSRS	**Korea Array** comp=Z,25nm,18.2s,baz=74,slow=42	**12.78**	**277**	LR	LR	17 36 35.8	
KLR	**Kul'dur** 0.1nm,0.3s,baz=142,slow=13,SNR=5.9	**15.05**	**328**	Pn	**P**	**17 31 01.1**	**+0.9**
H11N2	**WAKE ISLAND Hy** baz=320,slow=75,SNR=23	**26.45**	**124**	T	T	18 00 33.0	
H11N1	**WAKE ISLAND Hy** baz=320,SNR=10	**26.46**	**124**	T	T	18 00 36.7	
H11N3	**WAKE ISLAND Hy** baz=320,slow=75,SNR=11	**26.47**	**124**	T	T	18 00 03.1	
H11S1	**WAKE ISLAND Hy** baz=306	**27.21**	**127**	T	T	18 01 38.3	
H11S3	**WAKE ISLAND Hy** baz=306	**27.21**	**127**	T	T	18 01 37.5	
H11S2	**WAKE ISLAND Hy** baz=306	**27.23**	**127**	T	T	18 01 37.9	
ZALV	**Zalesovo Beam** 0.8nm,0.5s,baz=82,slow=2.1,SNR=3.9	**43.39**	**312**	PcP	**PcP**	**17 37 14.9**	**+2.7**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=82,slow=10,SNR=1.5	**45.82**	**303**	P	**P**	**17 35 45.3**	**+1.5**
KURBB	**Kurchatov Arra** 0.4nm,0.5s,baz=82,slow=8.0,SNR=3.8	**47.58**	**308**	P	**P**	**17 35 58.7**	**+1.2**
WRA	**Warramunga Arr** 0.6nm,0.7s,baz=13,slow=7.1,SNR=2.8	**57.42**	**191**	P	**P**	**17 37 08.7**	**-1.9**
ASAR	**Alice Springs** 0.3nm,0.7s,baz=15,slow=6.6,SNR=3.1	**61.14**	**191**	P	**P**	**17 37 34.4**	**-1.9**
FINES	**FINESS Array B** 1.1nm,0.8s,baz=39,slow=12,SNR=3.8	**69.72**	**333**	P	**P**	**17 38 32.7**	**+1.4**
ULM	**Lac du Bonnet** comp=Z,7.8nm,21.3s,baz=58,slow=36	**78.35**	**35**	LR	LR	18 14 09.7	

IDC ***20*** *17:29:08.3 ± 1.1, 2.48S × 138.41E, h0 km, mb3.6/4, mb1 3.8/6, mb1mx3.5/43, mbtmp3.6/6, ML3.4/2, MS3.4/2, Ms1 3.4/2, ms1mx2.5/28, Error ellipse: s-maj=26.3km s-min=25.1km az=30.0*

ISC 20 17:29:13.0 ± 0.9, 2.6S ± 0.1 × 138.51E ± 0.09, h32 km, n9, σ 0.878/8, mb3.8/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura** 3.7nm,0.3s,baz=246,slow=9.6,SNR=14	**2.20**	**89**	Pn	**Pn**	**17 29 48.2**	**+0.8**
JAY				Sn	**Sb**	**17 30 18.7**	**-0.3**
	3.0nm,0.3s,baz=116,slow=20,SNR=5.5						
BATI	**Baumata** 1.9nm,0.3s,baz=46,slow=2.1,SNR=4.5	**16.58**	**242**	Pn	**P**	**17 33 06.3**	**+0.8**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=16,slow=12,SNR=7.4	**17.75**	**193**	P	**Pn**	**17 33 17.2**	**-0.6**
ASAR	**Alice Springs** 0.9nm,0.7s,baz=18,slow=11,SNR=7.8	**21.45**	**192**	P	**P**	**17 33 58.6**	**-0.1**
STKA	**Stephens Creek** comp=Z,48nm,20.0s,baz=205,slow=36	**29.30**	**175**	LR	LR	17 46 45.9	
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=113,slow=6.2,SNR=5.3	**69.55**	**322**	P	**P**	**17 40 19.2**	**+0.4**
VNDA	**Vanda** comp=Z,32nm,20.1s,baz=290,slow=34	**75.94**	**175**	LR	LR	18 12 31.5	
BVAR	**Borovoye Array** 0.6nm,0.5s,baz=120,slow=8.8,SNR=4.1	**79.08**	**325**	P	**P**	**17 41 13.9**	**-0.2**
ILAR	**Eielson Array** 0.4nm,0.7s,baz=252,slow=5.9,SNR=5.1	**85.78**	**24**	P	**P**	**17 41 47.9**	**-1.0**

NEIC ***20*** *17:33:25.8 ± 1.9, 20.0S ± 0.1 × 176.0W ± 0.1, h201 km ± 10 km, mb4.4/21, Error ellipse: s-maj=18.3km s-min=15.6km az=113.0*
IDC ***20*** *17:33:36.1 ± 5.2, 20.30S × 175.87W, h315 km, 52 km, mb3.2/6, mb1 3.4/7, mb1mx3.2/37, mbtmp4.1

WR0				IAmb	IAmb	17 41 58.0	
	comp=Z,9.1nm,1.5s						
AS31	**Alice Springs**	**46.53**	**256**	P	**P**	**17 41 33.4**	**+0.3**
ASAR	**Alice Springs**	**46.53**	**256**	P	**P**	**17 41 33.2**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=97,slow=7.9,SNR=18						
WB0	**Warramunga Arr**	**46.60**	**262**	P	**P**	**17 41 33.1**	**-0.6**
WB2	**Warramunga Arr**	**46.62**	**261**	P	**P**	**17 41 33.3**	**-0.5**
WRA	**Warramunga Arr**	**46.63**	**261**	P	**P**	**17 41 33.1**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=95,slow=7.7,SNR=20						
MIDW	**Midway**	**48.21**	**358**	P	**P**	**17 41 47.7**	**+2.0**
FORT	**Forrest**	**51.23**	**246**	P	**P**	**17 42 08.0**	**-0.7**
FORT				IAmb	IAmb	17 42 27.2	
	comp=Z,7.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**55.05**	**262**	P	**P**	**17 42 37.0**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=101,slow=16,SNR=1.5						
FITZ	**Fitzroy Crossi**	**55.05**	**262**	P	**P**	**17 42 36.9**	**+0.3**
FITZ				IAmb	IAmb	17 43 11.2	
	comp=Z,13nm,1.6s						
VNDA	**Vanda**	**58.34**	**186**	P	**P**	**17 43 00.9**	**+2.2**
SOEI	**Soe**	**58.51**	**271**	P	**P**	**17 42 58.8**	**-2.3**
QSPA	**South Pole Qui**	**69.81**	**180**	P	**P**	**17 44 15.9**	**+2.2**
QSPA				IAmb	IAmb	17 44 18.8	
	comp=Z,3.7nm,1.2s						
KKM	**Kota Kinabalu**	**71.65**	**284**	P	**P**	**17 44 21.9**	**-3.6**
KKM				IAmb	IAmb	17 44 58.2	
	comp=Z,12nm,1.0s						
PEA0B	**Petropavlovsk-**	**76.57**	**344**	P	**P**	**17 44 53.1**	**+0.1**
PEA0B				IAmb	IAmb	17 45 09.5	
	comp=Z,13nm,1.1s						
PETK	**Petropavlovsk-**	**76.57**	**344**	P	**P**	**17 44 52.1**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=147,slow=8.6,SNR=1.9						
VNA3	**Neumayer Olymp**	**88.24**	**176**	P	**P**	**17 45 53.8**	**+0.7**
VNA2	**Neumayer--Watz**	**88.70**	**176**	P	**P**	**17 45 56.4**	**+1.1**
	baz=187,slow=3.7						

*SKHL **20** 17:45:12.6±0.4, 43.4°40N×146.9°2E, h30km±4km, mb3.7/4*
*JMA **20** 17:45:12.3±0.2, 43.4°35N×146.8°6E, h42km±3km, M3.5*
ISC 20 17:45:09.9±2.2, **43.3°9N**±0.1°07×**146.9°3E**±0.1°08, **h13**km±10km, **n17**, σ1=**8**/29, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.86**	**269**	P	**Pg**	**17 45 27.5**	**+0.9**
NEM2				*e*S	**Sg**	**17 45 38.5**	**+0.6**
NMR	**Nemuro--Hokkai**	**0.87**	**269**	*i* P	**Pg**	**17 45 27.6**	**+0.8**
NMR				*i* S	**Sg**	**17 45 39.2**	**+1.0**
YUK	**Yuzh-Kuril'sk**	**1.01**	**310**	*e*P	**Pg**	**17 45 29.7**	**+0.3**
YUK				AMB	AMB	17 45 30.0	
	40nm,0.2s						
YUK				*i* S	**Sg**	**17 45 42.6**	**+0.1**
YUK				A	A	17 45 44.0	
	190nm,0.2s						
YUK				A	A	17 45 44.0	
	110nm,0.2s						
GRPR	**Tuman**	**1.03**	**306**	*e*P	**Pg**	**17 45 30.0**	**+0.2**
GRPR				AMB	AMB	17 45 31.0	
	20nm,0.3s						
GRPR				*i* S	**Sg**	**17 45 42.7**	**-0.6**
GRPR				A	A	17 45 43.0	
	240nm,0.2s						
GRPR				A	A	17 45 43.0	
	130nm,0.2s						
LAGR	**Lagunnoye**	**1.06**	**309**	*e*P	**Pg**	**17 45 30.1**	**-0.3**
LAGR				AMB	AMB	17 45 31.0	
	30nm,0.3s						
LAGR				*i* S	**Sg**	**17 45 43.5**	**-0.8**
LAGR				A	A	17 45 44.0	
	200nm,0.3s						
LAGR				A	A	17 45 44.0	
	170nm,0.3s						
JKHN	**Kushirohamanak**	**1.33**	**257**	P	**Pg**	**17 45 34.4**	**-1.0**
JKHN				*e*S	**Sg**	**17 45 50.8**	**-1.8**
JRA	**Rausu**	**1.42**	**293**	P	**Pn**	**17 45 35.8**	**+0.4**
JRA				*e*S	**Sg**	**17 45 53.2**	**-2.5**
JNSB	**Nemuroshibetsu**	**1.45**	**286**	P	**Pn**	**17 45 36.1**	**+0.3**
JNK	**Nakash**	**1.62**	**278**	P	**Pn**	**17 45 38.1**	**0.0**
JNK				*e*S	**Sn**	**17 45 57.5**	**-1.3**
JAK	**Akkeshi**	**1.68**	**257**	P	**Pn**	**17 45 38.7**	**-0.2**
KUR	**Kuril'sk**	**1.97**	**20**	*e*P	**Pn**	**17 45 43.5**	**+0.6**
KUR				AMB	AMB	17 45 47.0	
	20nm,0.3s						
KUR				*i* S	**Sn**	**17 46 06.3**	**-1.1**
KUR				A	A	17 46 08.0	
	300nm,0.3s						
KUR				A	A	17 46 08.0	
	100nm,0.3s						
JTKR	**Abashiri--Toko**	**2.27**	**286**	P	**Pn**	**17 45 48.4**	**+1.4**
JTKR				*e*S	**Sn**	**17 46 15.5**	**+0.7**
JAR	**Ashorobuto**	**2.31**	**269**	P	**Pn**	**17 45 48.2**	**+0.7**
JAR				*e*S	**Sn**	**17 46 15.2**	**-0.5**
JOB	**Onbets**	**2.31**	**259**	P	**Pn**	**17 45 48.3**	**+0.7**
JMP	**Maruseppu**	**2.66**	**285**	P	**Pn**	**17 45 54.1**	**+1.6**
JCH	**Churui**	**2.73**	**255**	P	**Pn**	**17 45 54.2**	**+0.9**
JCH				*e*S	**Sn**	**17 46 25.5**	**-0.6**
JKK2	**Kamakawa 2**	**3.07**	**281**	P	**Pn**	**17 46 00.0**	**+1.9**

*GCG **20** 18:14:54.6±0.8, 12.5°50N×90.6°60W, h0km±21km, MD4.0*
*SNET **20** 18:14:55.7±0.9, 12.2°32N×90.3°35W, h35km±999km, ML3.9*
*UCR **20** 18:14:55.6±1.1, 12.3°31N×90.3°37W, h35km±110km, ML3.8*
ISC 20 18:14:55.1±2.8, **12.3°3N**±0.1×**90.3°9W**±0.1°08, **h30**km, **n28**, σ0=**7**/40, **4**, **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEVE	**Cerro Verde**	**1.68**	**26**	*e*P	**Pn**	**18 15 23.0**	**+0.4**
CEVE				IAML		18 15 48.1	
	comp=Z,1μm,0.4s						
CEVE	**Cerro Verde**	**1.68**	**26**	*e*P	**Pn**	**18 15 23.0**	**+0.4**
CEVE				IAML		18 15 48.1	
	comp=Z,1μm,0.4s						
SBLS	**San Blas**	**1.69**	**26**	*e*P	**Pn**	**18 15 22.7**	**-0.1**
SBLS				*e*S	**Sn**	**18 15 44.4**	**+0.9**
SBLS	**San Blas**	**1.69**	**26**	*e*P	**Pn**	**18 15 22.7**	**-0.1**
SBLS				*e*S	**Sn**	**18 15 44.4**	**+0.9**
SNJE	**San Jose**	**1.72**	**26**	*e*P	**Pn**	**18 15 23.4**	**+0.2**
SNJE				*e*S	**Sn**	**18 15 45.1**	**+0.8**
SNJE	**San Jose**	**1.72**	**26**	*e*P	**Pn**	**18 15 23.4**	**+0.2**
SNJE				*e*S	**Sn**	**18 15 45.1**	**+0.8**
RTR	**El Retiro**	**1.73**	**25**	*e*P	**Pn**	**18 15 23.7**	**+0.4**
RTR				*e*S	**Sb**	**18 15 46.3**	**-1.5**
RTR	**El Retiro**	**1.73**	**25**	*e*P	**Pn**	**18 15 23.7**	**+0.4**
RTR				*e*S	**Sb**	**18 15 46.3**	**-1.5**
BOQS	**Boqueron**	**1.78**	**37**	*e*P	**Pn**	**18 15 24.3**	**+0.3**
BOQS				*e*S	**Sn**	**18 15 46.9**	**+1.1**
BOQS	**Boqueron**	**1.78**	**37**	*e*P	**Pn**	**18 15 24.3**	**+0.3**
BOQS				*e*S	**Sn**	**18 15 46.9**	**+1.1**
LFRS	**El Faro**	**1.84**	**45**	*e*P	**Pn**	**18 15 24.9**	**+0.2**
LFRS				*e*S	**Sn**	**18 15 47.5**	**+0.5**
LFRS	**El Faro**	**1.84**	**45**	*e*P	**Pn**	**18 15 24.9**	**+0.2**
LFRS				*e*S	**Sn**	**18 15 47.5**	**+0.5**
IXG	**Ixpaco**	**1.84**	**359**	*e*P	**Pn**	**18 15 25.4**	**+0.5**
LBRS	**Las Brisas**	**1.93**	**43**	*e*P	**Pn**	**18 15 26.6**	**+0.6**
LBRS	**Las Brisas**	**1.93**	**43**	*e*P	**Pn**	**18 15 26.6**	**+0.6**
PCG	**Pacaya**	**2.07**	**354**	*e*P	**Pn**	**18 15 28.8**	**+0.7**
PCG				*e*S	**Sb**	**18 15 55.7**	**-2.0**
FUG	**Fuego 3**	**2.16**	**348**	*e*P	**Pn**	**18 15 29.0**	**-0.3**
FUG				*e*S	**Sn**	**18 15 56.1**	**+0.9**
TECA	**Tecapa**	**2.18**	**57**	*e*P	**Pn**	**18 15 29.7**	**+0.2**
TECA	**Tecapa**	**2.18**	**57**	*e*P	**Pn**	**18 15 29.7**	**+0.2**
MTO3	**Montecristo**	**2.30**	**26**	*e*P	**Pn**	**18 15 31.9**	**+0.7**
MTO3	**Montecristo**	**2.30**	**26**	*e*P	**Pn**	**18 15 31.9**	**+0.7**
PACA	**Pacayal**	**2.32**	**60**	*e*P	**Pn**	**18 15 31.6**	**+0.2**
PACA	**Pacayal**	**2.32**	**60**	*e*P	**Pn**	**18 15 31.6**	**+0.2**
STG3	**Santiaguito 3,**	**2.64**	**334**	*e*P	**Pn**	**18 15 35.8**	**0.0**
CNCH	**Conchagua**	**2.67**	**69**	*e*P	**Pn**	**18 15 36.0**	**-0.2**
CNCH	**Conchagua**	**2.67**	**69**	*e*P	**Pn**	**18 15 36.0**	**-0.2**
MRL	**Marmol**	**2.83**	**14**	*e*P	**Pn**	**18 15 39.4**	**+0.9**
MRL	**Marmol**	**2.83**	**14**	*e*P	**Pn**	**18 15 39.4**	**+0.9**

*WEL **20** 18:18:45.0, 38.8°S±1.0×17.8°E±°, h43km±2km, M4.0/106, ML4.6/15, MLv4.0/106, Error ellipse: s-maj=0.0km s-min=0.0km az=90.3*
*IDC **20** 18:18:46.7±3.8, 38.7°0S×178.0°2E, h42km±27km, mb3.6/2, mb1 3.9/2, mb1mx3.4/23, mbtmp3.8/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/20, Error ellipse: s-maj=62.7km s-min=34.4km az=25.0*
ISC 20 18:18:45.2±0.9, **38.8°5S**±0.0°03×**178.1°7E**±0.0°05, **h35**km±2km, **n131**, σ1=**49**/132, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRGZ	**Paritu Road**	**0.23**	**253**	P	**Pn**	**18 18 52.4**	**-0.7**
PRGZ				S	**Sn**	**18 18 59.0**	**-0.4**
RIGZ	**Rimuhau**	**0.35**	**295**	P	**Pn**	**18 18 51.7**	**-2.1**
MHGZ	**Mahia Peninsul**	**0.36**	**214**	P	**Pn**	**18 18 55.8**	**+1.9**
CNGZ	**Carnagh Statio**	**0.37**	**4**	P	**Pn**	**18 18 53.4**	**-0.5**
CNGZ				S	**Sn**	**18 19 00.7**	**+0.4**
KNZ	**Kokohu**	**0.42**	**246**	P	**Pn**	**18 18 54.8**	**+0.2**
KNZ				S	**Sn**	**18 19 02.9**	**+1.5**
SNGZ	**Shannon Statio**	**0.65**	**276**	P	**Pn**	**18 18 57.2**	**-0.9**
SNGZ				S	**Sn**	**18 19 06.2**	**-0.9**
RAGZ	**Rawiri**	**0.69**	**301**	P	**Pn**	**18 18 56.8**	**-1.8**
RAGZ				S	**Sn**	**18 19 05.8**	**-2.3**
TWGZ	**Tauwhareparae**	**0.69**	**348**	P	**Pn**	**18 18 57.4**	**-1.2**
TWGZ				S	**Sn**	**18 19 07.0**	**-1.1**
MWZ	**Matawai**	**0.72**	**316**	P	**Pn**	**18 18 57.0**	**-2.0**
WHHZ	**Waihua**	**0.76**	**253**	P	**Pn**	**18 18 59.8**	**+0.3**
PUZ	**Puketiti**	**0.78**	**5**	P	**Pn**	**18 18 58.8**	**-1.0**
PUZ				S	**Sn**	**18 19 09.4**	**-0.9**
RAHZ	**Arahi**	**0.85**	**265**	P	**Pn**	**18 19 00.5**	**-0.2**
RTZ	**Ruatahuna**	**0.96**	**284**	P	**Pn**	**18 19 01.4**	**-0.9**
PKGZ	**Pakihiroa**	**0.97**	**356**	P	**Pn**	**18 19 01.6**	**-0.7**
RUGZ	**Raukumara Rang**	**0.97**	**336**	P	**Pn**	**18 19 00.8**	**-1.6**
ARHZ	**Aropaoanui**	**1.00**	**246**	P	**Pn**	**18 19 03.4**	**+0.6**
URZ	**Urewera**	**1.02**	**305**	P	**Pn**	**18 19 01.7**	**-1.3**
	218nm,0.3s,baz=174,slow=3.8,SNR=1479						
URZ				S	**Sn**	**18 19 14.2**	**-1.9**
	736nm,0.3s,baz=325,slow=21,SNR=18						
URZ	**Urewera**	**1.02**	**305**	P	**Pn**	**18 19 01.7**	**-1.3**
MTHZ	**Maungataniwha**	**1.04**	**270**	P	**Pn**	**18 19 02.8**	**-0.5**
WMGZ	**Waiomatatini S**	**1.05**	**11**	P	**Pn**	**18 19 02.9**	**-0.5**
HAZ	**Te Kaha**	**1.14**	**344**	P	**Pn**	**18 19 03.5**	**-1.1**
MUGZ	**Murupara**	**1.16**	**289**	P	**Pn**	**18 19 04.3**	**-0.6**
CKHZ	**Cape Kidnapper**	**1.17**	**226**	P	**Pn**	**18 19 05.8**	**+0.7**
MCHZ	**McNeill Hill**	**1.29**	**242**	P	**Pn**	**18 19 07.3**	**+0.6**
MXZ	**Matakaoa Point**	**1.29**	**5**	P	**Pn**	**18 19 06.3**	**-0.5**
BKZ	**Black Stump Fm**	**1.34**	**256**	P	**Pn**	**18 19 07.5**	**0.0**
EDRZ	**Edgecumbe**	**1.35**	**303**	P	**Pn**	**18 19 07.6**	**0.0**
MRHZ	**Matea Rd**	**1.37**	**270**	P	**Pn**	**18 19 08.7**	**+0.8**
WHRZ	**Whale Island**	**1.37**	**316**	P	**Pn**	**18 19 08.1**	**+0.2**
KAHZ	**Kahuranaki**	**1.37**	**227**	P	**Pn**	**18 19 08.5**	**+0.5**
RRRZ	**Republican Roa**	**1.40**	**291**	P	**Pn**	**18 19 08.9**	**+0.7**
PRRZ	**Plateau Road**	**1.44**	**284**	P	**Pn**	**18 19 08.3**	**-0.4**
TARZ	**Mount Tarawera**	**1.44**	**295**	P	**Pn**	**18 19 09.6**	**+0.7**
ALRZ	**Allen Road**	**1.46**	**281**	P	**Pn**	**18 19 09.8**	**+0.7**
MARZ	**Manawahe**	**1.46**	**306**	P	**Pn**	**18 19 09.5**	**+0.4**
KWHZ	**Kaweka Forest**	**1.47**	**247**	P	**Pn**	**18 19 09.7**	**+0.4**
MKRZ	**Makatiti**	**1.52**	**298**	P	**Pn**	**18 19 11.9**	**+2.0**
WIZ	**White Island**	**1.53**	**329**	P	**Pn**	**18 19 10.8**	**+0.8**
HLRZ	**Highlands Stat**	**1.55**	**292**	P	**Pn**	**18 19 12.0**	**+1.7**
HRRZ	**Handcock Road**	**1.55**	**287**	P	**Pn**	**18 19 12.0**	**+1.7**
PXZ	**Pawanui**	**1.55**	**220**	P	**Pn**	**18 19 10.2**	**-0.1**
OMRZ	**Omania**	**1.60**	**297**	P	**Pn**	**18 19 11.2**	**+0.2**
HSRZ	**Hossack Road**	**1.60**	**289**	P	**Pn**	**18 19 11.8**	**+0.7**
KRHZ	**Kereru**	**1.60**	**240**	P	**Pn**	**18 19 11.0**	**-0.1**
WPRZ	**Whakapapataran**	**1.61**	**281**	P	**Pn**	**18 19 13.7**	**+2.6**
OPRZ	**Ohinepanea**	**1.62**	**308**	P	**Pn**	**18 19 10.0**	**-1.3**
HATZ	**Hinemaiaia**	**1.62**	**268**	P	**Pn**	**18 19 12.0**	**+0.7**
GRRZ	**Galatos Road**	**1.69**	**287**	P	**Pn**	**18 19 13.2**	**+1.0**
UTU	**Utuhina**	**1.69**	**293**	P	**Pn**	**18 19 15.0**	**+2.7**
KARZ	**Kaharoa**	**1.73**	**298**	P	**Pn**	**18 19 12.6**	**-0.2**
NGRZ	**Ngongotaha**	**1.73**	**295**	P	**Pn**	**18 19 13.3**	**+0.5**
WHTZ	**Whakaora**	**1.74**	**276**	P	**Pn**	**18 19 16.5**	**+3.6**
BHHZ	**Black Hill Sta**	**1.76**	**248**	P	**Pn**	**18 19 13.5**	**+0.3**
WPHZ	**Waipukurau**	**1.80**	**227**	P	**Pn**	**18 19 13.8**	**0.0**
RITZ	**Rihia Road**	**1.81**	**265**	P	**Pn**	**18 19 15.3**	**+1.4**
PNHZ	**Pukenui**	**1.86**	**235**	P	**Pn**	**18 19 14.2**	**-0.4**
RATZ	**Rangitukua**	**1.87**	**269**	P	**Pn**	**18 19 16.2**	**+1.4**
KUTZ	**Kaahu Road**	**1.87**	**280**	P	**Pn**	**18 19 14.7**	**-0.1**
TGRZ	**Tauranga**	**1.88**	**306**	P	**Pn**	**18 19 14.3**	**-0.5**
WATZ	**Wairara**	**1.91**	**274**	P	**Pn**	**18 19 15.9**	**+0.6**
KATZ	**Kakaramea**	**1.94**	**266**	P	Pn	18 19 21.9	+6.2
MOVZ	**Moawhango**	**1.96**	**253**	P	**Pn**	**18 19 16.9**	**+0.8**
KRVZ	**Karewarewa**	**1.99**	**262**	P	**Pn**	**18 19 17.0**	**+0.6**
TUVZ	**Tukino**	**2.00**	**257**	P	**Pn**	**18 19 17.2**	**+0.6**
KMRZ	**Kaimai**	**2.02**	**299**	P	Pn	18 19 21.2	+4.4
NGZ	**Ngauruhoe**	**2.03**	**260**	P	**Pn**	**18 19 17.4**	**+0.4**
WTVZ	**West Tongariro**	**2.03**	**262**	P	**Pn**	**18 19 17.6**	**+0.6**
WHVZ	**Whangaehu Hut**	**2.06**	**257**	P	**Pn**	**18 19 18.2**	**+0.7**
ANWZ	**Angora Road**	**2.07**	**219**	P	**Pn**	**18 19 17.0**	**-0.4**
FWVZ	**Far West T-bar**	**2.08**	**258**	P	**Pn**	**18 19 18.1**	**+0.3**
TRVZ	**Turoa**	**2.09**	**257**	P	**Pn**	**18 19 18.4**	**+0.4**
TSZ	**Takapari Road**	**2.09**	**234**	P	**Pn**	**18 19 17.1**	**-0.6**
DVHZ	**Dannevirke**	**2.12**	**226**	P	**Pn**	**18 19 17.8**	**-0.4**
TWVZ	**Taurewa**	**2.14**	**263**	P	**Pn**	**18 19 19.2**	**+0.7**
MTVZ	**Mangateitei**	**2.17**	**255**	P	**Pn**	**18 19 19.5**	**+0.7**
PKVZ	**Pokaka**	**2.24**	**258**	P	**Pn**	**18 19 20.4**	**+0.5**
BFZ	**Birch Farm**	**2.35**	**218**	P	**Pn**	**18 19 20.4**	**-0.9**
TOZ	**Tahuroa Road**	**2.38**	**297**	P	**Pn**	**18 19 21.0**	**-0.7**
PRWZ	**Pori Road**	**2.40**	**224**	P	**Pn**	**18 19 21.7**	**-0.3**
POWZ	**Post Office Ro**	**2.41**	**230**	P	**Pn**	**18 19 21.9**	**-0.2**
HIZ	**Hauiti**	**2.62**	**276**	P	**Pn**	**18 19 25.7**	**+0.7**
WAZ	**Wanganui**	**2.63**	**249**	P	**Pn**	**18 19 26.6**	**+1.4**
VRZ	**Vera Road**	**2.67**	**263**	P	**Pn**	**18 19 26.2**	**+0.5**
MRZ	**Mangatainoka R**	**2.69**	**227**	P	**Pn**	**18 19 24.9**	**-1.1**
TMWZ	**Te Maipa**	**2.85**	**217**	P	**Pn**	**18 19 26.7**	**-1.5**
KUZ	**Kuaotunu**	**2.86**	**317**	P	**Pn**	**18 19 27.7**	**-0.6**
HOWZ	**Holdsworth Sta**	**2.89**	**222**	P	**Pn**	**18 19 27.2**	**-1.5**
MKAZ	**Moumakai**	**2.95**	**305**	P	**Pn**	**18 19 29.0**	**-0.6**
LREZ	**Lake Rotokare**	**2.99**	**257**	P	**Pn**	**18 19 31.2**	**+1.1**
MHEZ	**Mangahewa**	**3.01**	**265**	P	**Pn**	**18 19 32.5**	**+2.2**
OGWZ	**Otaki Gorge**	**3.03**	**229**	P	**Pn**	**18 19 29.2**	**-1.4**
MTW	**Mount Morrison**	**3.08**	**221**	P	**Pn**	**18 19 29.7**	**-1.6**
DREZ	**Durham Road**	**3.11**	**263**	P	**Pn**	**18 19 33.4**	**+1.7**
WIAZ	**Waiheke Island**	**3.16**	**310**	P	**Pn**	**18 19 32.4**	**-0.1**
TRWZ	**Traveller**	**3.17**	**216**	P	**Pn**	**18 19 30.4**	**-2.3**
ETAZ	**East Tamaki Re**	**3.19**	**305**	P	Pn	18 19 39.2	+6.3
KIW	**Kapiti Island**	**3.21**	**230**	P	**Pn**	**18 19 31.8**	**-1.4**
KHEZ	**Kahui Hut**	**3.26**	**261**	P	**Pn**	**18 19 35.5**	**+1.6**
PKE	**Pukeiti**	**3.28**	**263**	P	**Pn**	**18 19 35.5**	**+1.5**
CAW	**Cannon Point**	**3.28**	**226**	P	**Pn**	**18 19 32.5**	**-1.6**
PAWZ	**Paruwai Farm**	**3.29**	**219**	P	**Pn**	**18 19 32.4**	**-1.8**
AWAZ	**Awhitu Peninsu**	**3.31**	**302**	P	**Pn**	**18 19 34.9**	**+0.4**
MBAZ	**Motutapu North**	**3.32**	**308**	P	**Pn**	**18 19 34.9**	**+0.2**
NBEZ	**Newall Road No**	**3.38**	**262**	P	**Pn**	**18 19 37.5**	**+2.1**
MSWZ	**Moikau Station**	**3.40**	**220**	P	**Pn**	**18 19 33.6**	**-2.1**
PLWZ	**Palliser**	**3.51**	**219**	P	**Pn**	**18 19 34.8**	**-2.5**
TCW	**Tory Channel**	**3.80**	**231**	P	**Pn**	**18 19 38.9**	**-2.4**
DUWZ	**D'Urville Isla**	**3.81**	**238**	P	**Pn**	**18 19 39.7**	**-1.7**
WCZ	**Waipu Caves**	**4.21**	**313**	P	**Pn**	**18 19 46.5**	**-0.4**
BSWZ	**Blackbirch Sta**	**4.35**	**228**	P	**Pn**	**18 19 46.2**	**-2.7**
NNZ	**Nelson**	**4.37**	**236**	P	**Pn**	**18 19 47.7**	**-1.3**
KHZ	**Kahutara**	**5.01**	**223**	P	**Pn**	**18 19 55.3**	**-2.5**
OUZ	**Omahuta**	**5.15**	**313**	P	**Pn**	**18 20 01.0**	**+1.2**
DSZ	**Denniston Nort**	**5.66**	**237**	P	**Pn**	**18 20 04.2**	**-2.6**
GVZ	**Greta Valley S**	**5.66**	**222**	P	**Pn**	**18 20 04.7**	**-2.1**
LTZ	**Lake Taylor**	**5.95**	**227**	P	**Pn**	**18 20 08.8**	**-2.0**
CTZ	**Chatham Island**	**6.26**	**143**	P	**Pn**	**18 20 17.9**	**+2.9**
AKCZ	**Akaroa Harbour**	**6.39**	**217**	P	**Pn**	**18 20 13.9**	**-2.8**
RPZ	**Rata Peaks**	**7.23**	**226**	S	**Sn**	**18 21 42.5**	**-6.7**
	6.6nm,0.3s,baz=148,slow=22,SNR=8.3						
ASAR	**Alice Springs**	**40.35**	**279**	P	**P**	**18 26 19.1**	**-0.5**
	2.0nm,0.6s,baz=131,slow=8.7,SNR=31						
WRA	**Warramunga Arr**	**42.12**	**284**	P	**P**	**18 26 33.2**	**-1.0**
	0.5nm,0.5s,baz=124,slow=8.2,SNR=17						
SIJI	**Sorong**	**57.12**	**300**	LR	LR	18 55 13.7	
	comp=Z,16nm,18.3s,baz=73,slow=38						
VNA3	**Neumayer Olymp**	**70.06**	**177**	P	**P**	**18 29 56.3**	**+3.2**
VNA2	**Neumayer--Watz**	**70.45**	**178**	P	**P**	**18 29 59.2**	**+3.7**
	baz=176,slow=6.5						
H03N3	**Juan Fernandez**	**78.64**	**124**	T	T	19 57 06.2	
	baz=233,slow=72,SNR=16						
H03N2	**Juan Fernandez**	**78.64**	**124**	T	T	19 57 04.7	
	baz=233,slow=72,SNR=14						
H03N1	**Juan Fernandez**	**78.65**	**124**	T	T	19 57 05.6	
	baz=233,slow=72,SNR=9.8						
ARCES	**ARCESS Array B**	**145.98**	**343**	PKPbc	**PKPab**	**18 38 20.2**	**-0.3**
	2.7nm,1.0s,baz=46,slow=3.5,SNR=5.5						
FINES	**FINESS Array B**	**151.58**	**332**	PKPbc	**PKPbc**	**18 38 33.9**	**-0.7**
	1.2nm,0.9s,baz=32,slow=4.7,SNR=4.0						
BRTR	**Keskin Array B**	**152.64**	**283**	PKPbc	**PKiKP**	**18 38 37.9**	**-0.3**
	0.3nm,0.7s,baz=178,slow=3.9,SNR=3.1						
TORD	**Torodi Ar. Bea**	**154.21**	**188**	PKPab	**PKPab**	**18 38 57.5**	**+1.9**
	0.5nm,0.7s,baz=144,slow=3.1,SNR=3.3						

IDC 20 18:32:11.2±6.2, **7.9°4S**×**124.2°4E, h134**km±69km, **mb3.0**/1, **mb1 2.9**/4, **mb1mx2.7**/44, **mbtmp3.2**/4, **Error ellipse: s-maj=94.0km s-min=35.3km az=46.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.30**	**192**	P	Pn	**18 32 50.4**	**+1.2**
	18nm,0.3s,baz=341,slow=4.0,SNR=6.1						
BATI				S	Sn	18 33 18.6	+0.2
	11nm,0.3s,baz=285,slow=23,SNR=7.2						
FITZ	**Fitzroy Crossi**	**10.21**	**172**	P	Pn	18 34 31.6	-2.7
	0.1nm,0.3s,baz=358,slow=11,SNR=7.0						
FITZ				S	Sn	18 36 19.4	-7.6
	0.6nm,0.3s,baz=153,slow=11,SNR=9.2						
WRA	**Warramunga Arr**	**15.49**	**141**	P	Pn	18 35 42.6	-0.1
	0.1nm,0.3s,baz=319,slow=12,SNR=2.0						
ASAR	**Alice Springs**	**18.23**	**150**	P	P	18 36 14.5	+0.2
	0.1nm,0.3s,baz=331,slow=12,SNR=4.4						
MKAR	**Makanchi Array**	**65.97**	**330**	P	P	18 42 43.0	-0.2
	0.3nm,0.7s,baz=134,slow=8.3,SNR=2.4						

*IDC **20** 18:32:41.2±3.1, 5.7°4S×147.5°4E, h0km, mb4.0/3, mb1 4.1/5, mb1mx3.6/41, mbtmp4.0/5, ML3.9/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/31, Error ellipse: s-maj=67.5km s-min=34.2km az=86.0*
*NEIC **20** 18:32:52.3±1.2, 6.1°1S±0.1°1×147.3°3E±0.2°2, h70km±14km, mb4.0/10, Error ellipse: s-maj=30.3km s-min=16.2km az=100.0*
ISC 20 18:32:53.3±1.8, **6.1°1S**±0.1°1×**147.2°E**±0.2°2, **h77**km, **n19**, σ1=**27**/21, **mb3.9**/4, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.30**	**180**	P	**Pn**	**18 33 41.4**	**-1.3**
	9.4nm,0.3s,baz=356,slow=7.4,SNR=42						
PMG				Pg		18 33 46.6	
	19nm,0.3s,baz=29,slow=8.2,SNR=19						
PMG				Sn	**Sn**	**18 34 23.9**	**+3.0**
	19nm,0.3s,baz=198,slow=13,SNR=8.3						
PMG	**Port Moresby**	**3.30**	**180**		**Pn**	**18 33 41.3**	**-1.5**
PMG					**Sn**	**18 34 21.5**	**+0.6**
COEN	**Coen**	**8.76**	**206**	Pn	**Pn**	**18 34 57.5**	**+0.2**
COEN				Sn	**Sn**	**18 36 32.3**	**-2.3**
WB0	**Warramunga Arr**	**18.43**	**221**	P	**P**	**18 37 02.6**	**-0.2**
WB0				IAmb	IAmb	18 37 26.7	
	comp=Z,18nm,1.4s						
WR0	**Warramunga Arr**	**18.47**	**221**	P	**P**	**18 37 03.1**

GOTU	**Gotland**	**2.21**	**267**	*e*P		**Pn**	**19 10 35.3**	**+0.1**
GOTU				*e*S		**Sb**	**19 11 05.8**	**-0.3**
VSU	**Vasula**	**2.23**	**72**	*e*P		**Pn**	**19 10 35.0**	**-0.4**
VSU	**Vasula**	**2.23**	**72**	*e*P		**Pn**	**19 10 36.0**	**+0.6**
VSU				*e*S		**Sn**	**19 11 04.2**	**+0.6**
ARBE	**Arbavere**	**2.34**	**46**	*e*P		**Pn**	**19 10 38.1**	**+1.1**
ARBE				*e*S		**Sn**	**19 11 06.6**	**+0.3**
PABE	**Paberze**	**2.46**	**163**	*e*P		**Pn**	**19 10 38.8**	**+0.2**
MEF	**Metsahovi**	**2.53**	**20**	*e*P		**Pn**	**19 10 41.0**	**+1.4**
MEF				*e*S		**Sn**	**19 11 11.3**	**+0.3**
MEF				MSG			19 11 15.2	
	comp=Z,8.9nm,0.1s							
AAL	**Aland**	**2.71**	**330**	P		**Pn**	**19 10 41.4**	**-0.7**
AAL				S		**Sb**	**19 11 21.4**	**+1.0**
AAL	**Aland**	**2.71**	**330**	*e*P		**Pn**	**19 10 41.4**	**-0.7**
NYNU	**Nynaeshamn**	**2.72**	**297**	P		**Pn**	**19 10 42.1**	**-0.1**
NYNU				S		**Sb**	**19 11 21.6**	**+1.0**
NYNU	**Nynaeshamn**	**2.72**	**297**	*e*P		**Pn**	**19 10 42.1**	**-0.1**
NRTU	**Norrtaelje**	**2.79**	**313**	P		**Pn**	**19 10 43.0**	**-0.2**
NRTU				S		**Sb**	**19 11 23.7**	**+1.0**
NRTU	**Norrtaelje**	**2.79**	**313**	*e*P		**Pn**	**19 10 43.0**	**-0.2**
IZAR	**Zarasai**	**2.88**	**136**	*e*P		**Pn**	**19 10 42.3**	**-2.1**
ISAL	**Salakas**	**2.97**	**139**	*e*P		**Pn**	**19 10 43.4**	**-2.3**
BYXU	**Byxelkrok**	**3.11**	**262**	P		**Pn**	**19 10 48.0**	**+0.4**
BYXU				S		**Sn**	**19 11 28.0**	**+2.6**
BYXU	**Byxelkrok**	**3.11**	**262**	*e*P		**Pn**	**19 10 48.0**	**+0.4**
IIGN	**Ignalina**	**3.18**	**141**	*e*P		**Pn**	**19 10 48.3**	**-0.2**
RAF	**Rauma**	**3.21**	**352**	*e*P		**Pn**	**19 10 49.1**	**+0.1**
RAF				*e*S		**Sn**	**19 11 26.8**	**-1.0**
RAF				MSG			19 11 47.0	
	comp=Z,4.2nm,0.2s							
VIKU	**Vikbolandet**	**3.24**	**284**	P		**Pn**	**19 10 49.9**	**+0.6**
VIKU	**Vikbolandet**	**3.24**	**284**	*e*P		**Pn**	**19 10 49.9**	**+0.6**
FINES	**FINESS Array B**	**3.99**	**24**	Pn		**Pn**	**19 10 59.1**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=207,slow=12,SNR=10							
FINES				Pg		**Pb**	**19 11 09.8**	**+1.4**
	comp=Z,0.7nm,0.3s,baz=200,slow=15,SNR=34							
FINES				Sn		**Sn**	**19 11 46.9**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=205,slow=23,SNR=7.4							
FINES				Lg		Lg	19 11 59.6	
	comp=Z,1.5nm,0.3s,baz=205,slow=27,SNR=5.8							
FIA1	**FINESS Array S**	**3.99**	**24**	*e*P		**Pn**	**19 11 00.7**	**+1.1**
FIA1				*e*S		**Sn**	**19 11 45.9**	**-1.1**
FIA1				MSG			19 12 05.8	
	comp=Z,2.5nm,0.2s							
BSD	**Bornholm Skovb**	**5.11**	**241**	*i* P		**Pn**	**19 11 13.5**	**-1.5**
BSD				*e*S		**Sn**	**19 12 12.8**	**-1.9**
NOA	**NORSAR Array B**	**6.66**	**303**	Pn		**Pn**	**19 11 35.2**	**-1.2**
	comp=Z,0.0nm,0.3s,baz=113,slow=14,SNR=9.5							
NOA				Sn		**Sn**	**19 12 49.1**	**-3.8**
	comp=Z,0.0nm,0.3s,baz=246,slow=17,SNR=1.3							
NOA				Lg		Lg	19 13 22.2	
	comp=Z,0.0nm,0.3s,baz=120,slow=18,SNR=2.1							
ARCES	**ARCESS Array B**	**11.79**	**5**	Pn		Pn	19 12 41.4	-5.1
	comp=Z,0.1nm,0.3s,baz=183,slow=14,SNR=5.2							

*BUC **20** 19:18:55.1±0.3, 45.67N×26.55E, h104km±2km, ml3.8/43, Error ellipse: s-maj=1.6km s-min=1.5km az=151.0*
*SOF **20** 19:18:56.9, 45.55N×26.61E, h31km, MD3.1*
ISC 20 19:18:54.7±1.2, 45.68N±0.02×26.54E±0.02, h110km±5km, n120, σ0.65/192, 92C-95D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BISRR	**Bisoca**	**0.18**	**139**	⇓P		**Pn**	**19 19 10.5**	**+0.3**
BISRR				⇓S		**Sn**	**19 19 21.8**	**0.0**
BISRR	**Bisoca**	**0.18**	**139**	⇓P		**Pn**	**19 19 10.5**	**+0.3**
BISRR				⇓S		**Sn**	**19 19 21.8**	**0.0**
PLOR	**Plostina**	**0.18**	**25**	⇑P		**Pn**	**19 19 09.9**	**-0.3**
PLOR				⇓S		**Sn**	**19 19 20.4**	**-1.4**
PLOR	**Plostina**	**0.18**	**25**	⇑P		**Pn**	**19 19 09.9**	**-0.3**
PLOR				⇓S		**Sn**	**19 19 20.4**	**-1.4**
VRI	**Vrincioaia**	**0.23**	**36**	⇑P		**Pn**	**19 19 10.2**	**-0.1**
VRI				⇓S		**Sn**	**19 19 21.2**	**-0.7**
VRI	**Vrincioaia**	**0.23**	**36**	⇑P		**Pn**	**19 19 10.2**	**-0.1**
VRI				⇓S		**Sn**	**19 19 21.2**	**-0.7**
ODBI	**Odobesti**	**0.37**	**77**	⇑P		**Pn**	**19 19 11.8**	**+1.0**
ODBI				⇓S		**Sn**	**19 19 23.9**	**+1.0**
ODBI	**Odobesti**	**0.37**	**77**	⇑P		**Pn**	**19 19 11.8**	**+1.0**
ODBI				⇓S		**Sn**	**19 19 23.9**	**+1.0**
MLR	**Muntele Rosu**	**0.46**	**245**	⇓P		**Pn**	**19 19 11.8**	**+0.3**
MLR				⇓S		**Sn**	**19 19 23.6**	**-0.5**
MLR	**Muntele Rosu**	**0.46**	**245**	⇓P		**Pn**	**19 19 11.8**	**+0.3**
MLR				⇓S		**Sn**	**19 19 23.6**	**-0.5**
PETR	**Petresti**	**0.49**	**85**	⇑P		**Pn**	**19 19 12.0**	**+0.5**
PETR				⇓S		**Sn**	**19 19 24.3**	**+0.3**
PETR	**Petresti**	**0.49**	**85**	⇑P		**Pn**	**19 19 12.0**	**+0.5**
PETR				⇓S		**Sn**	**19 19 24.3**	**+0.3**
OZUR		**0.67**	**308**	⇑P		**Pn**	**19 19 12.6**	**-0.3**
OZUR		**0.67**	**308**	⇑P		**Pn**	**19 19 12.6**	**-0.3**
SECR		**0.73**	**207**	⇓P		**Pn**	**19 19 14.3**	**+0.9**
SECR		**0.73**	**207**	⇓P		**Pn**	**19 19 14.3**	**+0.9**
TUDR		**0.80**	**96**	⇑P		**Pn**	**19 19 13.7**	**-0.2**
TUDR				⇓S		**Sn**	**19 19 27.6**	**-0.8**
TUDR		**0.80**	**96**	⇑P		**Pn**	**19 19 13.7**	**-0.2**
TUDR				⇓S		**Sn**	**19 19 27.6**	**-0.8**
TESR	**Tescani**	**0.83**	**5**	⇑P		**Pn**	**19 19 14.1**	**-0.2**
TESR				⇓S		**Sn**	**19 19 27.7**	**-1.4**
TESR	**Tescani**	**0.83**	**5**	⇑P		**Pn**	**19 19 14.1**	**-0.2**
TESR				⇓S		**Sn**	**19 19 27.7**	**-1.4**
PGOR	**Pogoanele**	**0.84**	**158**	⇓S		**Sn**	**19 19 29.0**	**0.0**
PGOR	**Pogoanele**	**0.84**	**158**	⇓S		**Sn**	**19 19 29.0**	**0.0**
DOPR	**Dopca**	**0.85**	**290**	⇑P		**Pn**	**19 19 14.6**	**+0.1**
DOPR				⇓S		**Sn**	**19 19 28.8**	**-0.6**
DOPR	**Dopca**	**0.85**	**290**	⇑P		**Pn**	**19 19 14.6**	**+0.1**
DOPR				⇓S		**Sn**	**19 19 28.8**	**-0.6**
SCHL	**Schela**	**0.92**	**101**	⇓P		**Pn**	**19 19 14.9**	**-0.2**
SCHL				⇓S		**Sn**	**19 19 29.6**	**-0.9**
SCHL	**Schela**	**0.92**	**101**	⇓P		**Pn**	**19 19 14.9**	**-0.2**
SCHL				⇓S		**Sn**	**19 19 29.6**	**-0.9**
VARL	**Varlezi**	**0.94**	**76**	⇑P		**Pn**	**19 19 15.7**	**+0.4**
VARL				⇓S		**Sn**	**19 19 30.8**	**-0.1**
VARL	**Varlezi**	**0.94**	**76**	⇑P		**Pn**	**19 19 15.7**	**+0.4**
VARL				⇓S		**Sn**	**19 19 30.8**	**-0.1**
BIR	**Birlad**	**0.96**	**52**	⇓P		**Pn**	**19 19 15.9**	**+0.4**
BIR				⇓S		**Sn**	**19 19 31.3**	**+0.1**
BIR	**Birlad**	**0.96**	**52**	⇓P		**Pn**	**19 19 15.9**	**+0.4**
BIR				⇓S		**Sn**	**19 19 31.3**	**+0.1**
SULR		**1.02**	**191**	⇓P		**Pn**	**19 19 17.0**	**+0.8**
SULR				⇓S		**Sn**	**19 19 33.6**	**+1.3**
SULR		**1.02**	**191**	⇓P		**Pn**	**19 19 17.0**	**+0.8**
SULR				⇓S		**Sn**	**19 19 33.6**	**+1.3**
VOIR		**1.08**	**257**	⇓P		**Pn**	**19 19 17.0**	**+0.2**
VOIR				⇓S		**Sn**	**19 19 32.7**	**-0.8**
VOIR		**1.08**	**257**	⇓P		**Pn**	**19 19 17.0**	**+0.2**
VOIR				⇓S		**Sn**	**19 19 32.7**	**-0.8**
GISR	**Galati**	**1.09**	**102**	⇑P		**Pn**	**19 19 17.3**	**+0.5**
GISR				⇓S		**Sn**	**19 19 33.5**	**-0.1**
GISR	**Galati**	**1.09**	**102**	⇑P		**Pn**	**19 19 17.3**	**+0.5**
GISR				⇓S		**Sn**	**19 19 33.5**	**-0.1**
GIUM	**Giurgiulesti**	**1.19**	**99**	⇑P		**Pn**	**19 19 18.1**	**+0.2**
GIUM				⇓S		**Sn**	**19 19 35.6**	**+0.1**
GIUM	**Giurgiulesti**	**1.19**	**99**	⇑P		**Pn**	**19 19 18.1**	**+0.2**
GIUM				⇓S		**Sn**	**19 19 35.6**	**+0.1**
AMRR	**Amara**	**1.21**	**152**	⇓P		**Pn**	**19 19 18.8**	**+0.6**
AMRR				⇓S		**Sn**	**19 19 36.1**	**+0.2**
AMRR	**Amara**	**1.21**	**152**	⇓P		**Pn**	**19 19 18.8**	**+0.6**
AMRR				⇓S		**Sn**	**19 19 36.1**	**+0.2**
LEHL	**Lehliu**	**1.23**	**171**	⇑P		**Pn**	**19 19 19.1**	**+0.7**
LEHL				⇓S		**Sn**	**19 19 36.7**	**+0.5**
LEHL	**Lehliu**	**1.23**	**171**	⇑P		**Pn**	**19 19 19.1**	**+0.7**
LEHL				⇓S		**Sn**	**19 19 36.7**	**+0.5**
CFR	**Carcaliu**	**1.23**	**114**	⇓P		**Pn**	**19 19 18.3**	**-0.1**
CFR	**Carcaliu**	**1.23**	**114**	⇓P		**Pn**	**19 19 18.3**	**-0.1**
BIZ	**Bicaz**	**1.29**	**347**	⇑P		**Pn**	**19 19 20.2**	**+1.0**
BIZ				⇓S		**Sn**	**19 19 38.0**	**+0.4**
BIZ	**Bicaz**	**1.29**	**347**	⇑P		**Pn**	**19 19 20.2**	**+1.0**
BIZ				⇓S		**Sn**	**19 19 38.0**	**+0.4**
VASR	**Vaslui**	**1.29**	**42**	⇑P		**Pn**	**19 19 19.5**	**+0.4**
VASR				⇓S		**Sn**	**19 19 36.9**	**-0.7**
VASR	**Vaslui**	**1.29**	**42**	⇑P		**Pn**	**19 19 19.5**	**+0.4**
VASR				⇓S		**Sn**	**19 19 36.9**	**-0.7**
ARR	**Arges**	**1.38**	**257**	⇓P		**Pn**	**19 19 19.1**	**-1.1**
ARR				⇓S		**Sn**	**19 19 39.0**	**-0.5**
ARR	**Arges**	**1.38**	**257**	⇓P		**Pn**	**19 19 19.1**	**-1.1**
ARR				⇓S		**Sn**	**19 19 39.0**	**-0.5**
BUC1	**Bucharest**	**1.38**	**195**	⇑S		**Sn**	**19 19 39.3**	**-0.1**
BUC1	**Bucharest**	**1.38**	**195**	⇑S		**Sn**	**19 19 39.3**	**-0.1**
HARR	**Harsova**	**1.40**	**135**	⇓P		**Pn**	**19 19 20.5**	**+0.2**
HARR	**Harsova**	**1.40**	**135**	⇓P		**Pn**	**19 19 20.5**	**+0.2**
LEOM	**Leova**	**1.43**	**56**	⇓P		**Pn**	**19 19 21.3**	**+0.6**
LEOM				⇓S		**Sn**	**19 19 40.0**	**-0.2**
LEOM	**Leova**	**1.43**	**56**	⇓P		**Pn**	**19 19 21.3**	**+0.6**
LEOM				⇓S		**Sn**	**19 19 40.0**	**-0.2**
SGRR	**Singureni**	**1.52**	**196**	⇓P		**Pn**	**19 19 22.0**	**+0.3**
SGRR				⇓S		**Sn**	**19 19 41.9**	**-0.2**
SGRR	**Singureni**	**1.52**	**196**	⇓P		**Pn**	**19 19 22.0**	**+0.3**
SGRR				⇓S		**Sn**	**19 19 41.9**	**-0.2**
TOPG	**Topolog**	**1.53**	**121**	⇑P		**Pn**	**19 19 21.8**	**-0.1**
TOPG				⇑S		**Sn**	**19 19 41.8**	**-0.6**
TOPG	**Topolog**	**1.53**	**121**	⇑P		**Pn**	**19 19 21.8**	**-0.1**
TOPG				⇑S		**Sn**	**19 19 41.8**	**-0.6**
RASA	**Rasa**	**1.53**	**163**	⇑S		**Sn**	**19 19 42.3**	**-0.2**
RASA	**Rasa**	**1.53**	**163**	⇑S		**Sn**	**19 19 42.3**	**-0.2**
TLBR	**Topalu**	**1.56**	**136**	⇓P		**Pn**	**19 19 22.5**	**+0.3**
TLBR				⇓S		**Sn**	**19 19 42.5**	**-0.6**
TLBR	**Topalu**	**1.56**	**136**	⇓P		**Pn**	**19 19 22.5**	**+0.3**
TLBR				⇓S		**Sn**	**19 19 42.5**	**-0.6**
HUMR	**Humele**	**1.60**	**224**	⇓P		**Pn**	**19 19 23.0**	**+0.3**
HUMR				⇓S		**Sn**	**19 19 43.7**	**-0.3**
HUMR	**Humele**	**1.60**	**224**	⇓P		**Pn**	**19 19 23.0**	**+0.3**
HUMR				⇓S		**Sn**	**19 19 43.7**	**-0.3**
IAS	**Iasi**	**1.67**	**25**	⇑P		**Pn**	**19 19 23.7**	**+0.2**
IAS	**Iasi**	**1.67**	**25**	⇑P		**Pn**	**19 19 23.7**	**+0.2**
TLCR		**1.68**	**106**	⇓P		**Pn**	**19 19 24.2**	**+0.5**
TLCR				⇓S		**Sn**	**19 19 45.7**	**0.0**
TLCR		**1.68**	**106**	⇓P		**Pn**	**19 19 24.2**	**+0.5**
TLCR				⇓S		**Sn**	**19 19 45.7**	**0.0**
CVDA	**Cernavoda**	**1.72**	**141**	⇓P		**Pn**	**19 19 24.6**	**+0.5**
CVDA				⇓S		**Sn**	**19 19 45.9**	**-0.7**
CVDA	**Cernavoda**	**1.72**	**141**	⇓P		**Pn**	**19 19 24.6**	**+0.5**
CVDA				⇓S		**Sn**	**19 19 45.9**	**-0.7**
ICOR	**Ion Corvin**	**1.80**	**150**	⇓P		**Pn**	**19 19 26.0**	**+0.7**
ICOR				⇓S		**Sn**	**19 19 47.5**	**-1.0**
ICOR	**Ion Corvin**	**1.80**	**150**	⇓P		**Pn**	**19 19 26.0**	**+0.7**
ICOR				⇓S		**Sn**	**19 19 47.5**	**-1.0**
TIRR	**Tirgusor**	**1.81**	**132**	⇓S		**Sn**	**19 19 47.4**	**-1.1**
TIRR	**Tirgusor**	**1.81**	**132**	⇓S		**Sn**	**19 19 47.4**	**-1.1**
COPA	**Copaceanca**	**1.81**	**212**	⇑P		**Pn**	**19 19 26.3**	**+1.0**
COPA				⇑S		**Sn**	**19 19 48.0**	**-0.6**
COPA	**Copaceanca**	**1.81**	**212**	⇑P		**Pn**	**19 19 26.3**	**+1.0**
COPA				⇑S		**Sn**	**19 19 48.0**	**-0.6**
LOT	**Lotru**	**1.96**	**264**	⇓P		**Pn**	**19 19 27.6**	**+0.3**
LOT				⇓S		**Sn**	**19 19 53.2**	**+1.0**
LOT	**Lotru**	**1.96**	**264**	⇓P		**Pn**	**19 19 27.6**	**+0.3**
LOT				⇓S		**Sn**	**19 19 53.2**	**+1.0**
MILM	**Milestii Mici**	**2.00**	**51**	⇓P		**Pn**	**19 19 28.2**	**+0.5**
MILM				⇓S		**Sn**	**19 19 51.9**	**-1.0**
MILM	**Milestii Mici**	**2.00**	**51**	⇓P		**Pn**	**19 19 28.2**	**+0.5**
MILM				⇓S		**Sn**	**19 19 51.9**	**-1.0**
MFTR	**Murfatlar**	**2.01**	**138**	⇑P		**Pn**	**19 19 28.2**	**+0.4**
MFTR	**Murfatlar**	**2.01**	**138**	⇑P		**Pn**	**19 19 28.2**	**+0.4**
KIS	**Kishinev**	**2.05**	**49**	⇓S		**Sn**	**19 19 53.4**	**-0.7**
KIS	**Kishinev**	**2.05**	**49**	⇓S		**Sn**	**19 19 53.4**	**-0.7**
RAZG	**Razgrad**	**2.12**	**181**	⇑P		**Pn**	**19 19 29.6**	**+0.4**
RAZG				⇑S		**Sn**	**19 19 54.7**	**-0.9**
RAZG	**Razgrad**	**2.12**	**181**	⇑P		**Pn**	**19 19 29.6**	**+0.4**
RAZG				⇑S		**Sn**	**19 19 54.7**	**-0.9**
BURAR	**Bucovina Array**	**2.14**	**335**	⇑P		**Pn**	**19 19 31.1**	**+1.6**
BURAR	**Bucovina Array**	**2.14**	**335**	⇑P		**Pn**	**19 19 31.1**	**+1.6**
TSCT	**Constanta Port**	**2.14**	**135**	⇓P		**Pn**	**19 19 30.0**	**+0.5**
TSCT				⇓S		**Sn**	**19 19 55.4**	**-0.6**
TSCT	**Constanta Port**	**2.14**	**135**	⇓P		**Pn**	**19 19 30.0**	**+0.5**
TSCT				⇓S		**Sn**	**19 19 55.4**	**-0.6**
EFOR	**EFORIE**	**2.19**	**136**	⇑S		**Sn**	**19 19 56.3**	**-0.8**
EFOR	**EFORIE**	**2.19**	**136**	⇑S		**Sn**	**19 19 56.3**	**-0.8**
ZIMR		**2.19**	**203**	⇓S		**Sn**	**19 19 56.2**	**-1.1**
ZIMR		**2.19**	**203**	⇓S		**Sn**	**19 19 56.2**	**-1.1**
VLAD	**Vladila**	**2.27**	**223**	⇓S		**Sn**	**19 19 57.4**	**-1.6**
TSSL	**Sulina**	**2.30**	**102**	⇓S		**Sn**	**19 20 00.1**	**+0.3**
TSSL	**Sulina**	**2.30**	**102**	⇓S		**Sn**	**19 20 00.1**	**+0.3**
PSN	**Preselentsi**	**2.32**	**149**	*i* P		**Pn**	**19 19 32.7**	**+0.9**
MANR	**Mangalia**	**2.37**	**141**	⇓P		**Pn**	**19 19 33.0**	**+0.6**
MANR				⇓S		**Sn**	**19 20 00.6**	**-0.7**
MANR	**Mangalia**	**2.37**	**141**	⇓P		**Pn**	**19 19 33.0**	**+0.6**
MANR				⇓S		**Sn**	**19 20 00.6**	**-0.7**
TSMN	**Mangalia Port-**	**2.38**	**141**	⇓S		**Sn**	**19 20 00.8**	**-0.9**
TSMN	**Mangalia Port-**	**2.38**	**141**	⇓S		**Sn**	**19 20 00.8**	**-0.9**
SZH	**Strazhica**	**2.46**	**190**	*i* P		**Pn**	**19 19 33.8**	**+0.2**
PRD	**Provadia**	**2.56**	**166**	*i* P		**Pn**	**19 19 36.2**	**+1.3**
SRE	**Strehaia**	**2.57**	**248**	⇓S		**Sn**	**19 20 06.3**	**+0.3**
SRE	**Strehaia**	**2.57**	**248**	⇓S		**Sn**	**19 20 06.3**	**+0.3**
ROIA	**ROIAK**	**2.66**	**167**	*i* P		**Pn**	**19 19 37.1**	**+0.9**
PLVB	**Pleven**	**2.67**	**212**	⇑P		**Pn**	**19 19 35.6**	**-0.9**
PLVB	**Pleven**	**2.67**	**212**	⇑P		**Pn**	**19 19 35.6**	**-0.9**
SORM	**Soroca**	**2.75**	**26**	⇓P		**Pn**	**19 19 37.2**	**-0.2**
SORM	**Soroca**	**2.75**	**26**	⇓P		**Pn**	**19 19 37.2**	**-0.2**
ELND	**Elena**	**2.79**	**190**	⇓P		**Pn**	**19 19 38.5**	**+0.5**
ELND				⇓S		**Sn**	**19 20 10.5**	**-0.9**
ELND	**Elena**	**2.79**	**190**	⇓P		**Pn**	**19 19 38.5**	**+0.5**
ELND				⇓S		**Sn**	**19 20 10.5**	**-0.9**
HERR	**Herculane**	**3.02**	**256**	⇓P		**Pn**	**19 19 41.2**	**+0.2**
HERR	**Herculane**	**3.02**	**256**	⇓P		**Pn**	**19 19 41.2**	**+0.2**
JMB	**Yambol**	**3.22**	**179**	*i* P		**Pn**	**19 19 43.9**	**+0.3**
MDVR	**Moldovita**	**3.53**	**257**	⇑P		**Pn**	**19 19 48.1**	**+0.3**
MDVR	**Moldovita**	**3.53**	**257**	⇑P		**Pn**	**19 19 48.1**	**+0.3**

*SNET **20** 19:28:08.1±0.6, 13.75N×90.70W, h27km±172km, ML2.3*
*GCG **20** 19:28:10.7±0.3, 13.69N×90.69W, h17km±120km, MD3.7*
ISC 20 19:28:10.0±2.3, 13.6N±0.1×90.66W±0.09, h38km, n11, σ0.49/14, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IXG	**Ixpaco**	**0.59**	**21**	*e*P		**Pn**	**19 28 21.7**	**-0.4**
PCG	**Pacaya**	**0.77**	**4**	*e*P		**Pn**	**19 28 24.7**	**+0.2**
PCG				*e*S		**Sn**	**19 28 35.5**	**+0.5**
FUG	**Fuego 3**	**0.84**	**348**	*e*P		**Pn**	**19 28 25.4**	**-0.1**
FUG				*e*S		**Sn**	**19 28 36.9**	**+0.2**
RTR	**El Retiro**	**1.02**	**74**	*e*P		**Pn**	**19 28 27.8**	**-0.1**
SBLS	**San Blas**	**1.03**	**78**	*e*P		**Pn**	**19 28 27.5**	**-0.6**
SNJE	**San Jose**	**1.05**	**76**	*e*P		**Pn**	**19 28 27.9**	**-0.4**
BOQS	**Boqueron**	**1.30**	**85**	*e*P		**Pn**	**19 28 32.0**	**-0.4**
STG3	**Santiaguito 3,**	**1.40**	**321**	*e*P		**Pn**	**19 28 32.7**	**-0.4**
MTO3	**Montecristo**	**1.48**	**58**	*e*P		**Pn**	**19 28 33.3**	**-0.9**
MTO3				*e*S		**Sn**	**19 28 53.0**	**+0.6**
MTO3				IAML			19 28 56.7	
	comp=Z,42nm,0.3s							
LFRS	**El Faro**	**1.55**	**90**	*e*P		**Pn**	**19 28 35.2**	**0.0**
TECA	**Tecapa**	**2.10**	**93**	*e*P		**Pn**	**19 28 43.0**	**+0.2**

*IDC **20** 19:28:09.3±4.4, 0.48S×91.31W, h0km, mb3.8/7, mb1 4.2/8, mb1mx3.8/41, mbtmp3.8/8, ML3.8/1, Error ellipse: s-maj=94.5km s-min=66.1km az=148.0*
*NEIC **20** 19:28:10.7±2.0, 0.6S±0.1×91.4W±0.1, h10km±2km, mb4.3/4, Error ellipse: s-maj=25.6km s-min=16.2km az=215.0*
ISC 20 19:28:12.6±1.7, 0.5S±0.2×91.3W±0.1, h23km, n23, σ0.86/16, mb4.0/8, Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PAYG	**Puerto Ayora**	**1.05**	**98**			**Pb**	**19 28 32.0**	**-0.2**
JTS	**Las Juntas de**	**12.48**	**30**	Pn		**Pn**	**19 31 09.1**	**+0.1**
	0.6nm,0.3s,baz=252,slow=9.8,SNR=1.5							
JTS	**Las Juntas de**	**12.48**	**30**			**Pn**	**19 31 10.0**	**+1.1**
RUSC	**La Rusia**	**19.30**	**70**	P		**Pn**	**19 32 38.0**	**+0.2**
H06E1	**SOCORRO T-PHAS**	**27.18**	**316**	T		T	20 01 39.5	
	SNR=57							
TXAR	**Lajitas Array**	**31.95**	**339**	P		**P**	**19 34 36.4**	**-0.6**
	0.3nm,0.5s,baz=171,slow=7.3,SNR=1.9							
ETX02	**Prairie Street**	**32.39**	**355**	P		**P**	**19 34 39.0**	**-1.7**
CCM	**Cathedral Cave**	**38.39**	**0**	P		**P**	**19 35 31.5**	**-0.7**
CCM				IAmb		IAmb	19 35 33.0	
	comp=Z,5.0nm,0.9s							
NVAR	**Mina Array Bea**	**46.03**	**330**	P		**P**	**19 36 35.5**	**+0.8**
	comp=Z,1.2nm,0.9s,baz=146,slow=9.0,SNR=5.4							
PDAR	**Pinedale Array**	**46.11**	**341**	P		**P**	**19 36 35.2**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=155,slow=6.7,SNR=3.1							
ELK	**Elko**	**46.48**	**335**	P		**P**	**19 36 38.4**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=157,slow=5.5,SNR=4.8							
ELK	**Elko**	**46.48**	**335**	P		**P**	**19 36 39.0**	**+0.6**
ELK				IAmb		IAmb	19 36 40.1	
	comp=Z,1.9nm,0.9s							
YKA	**Yellowknife Ar**	**65.27**	**348**	P		**P**	**19 38 51.1**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=148,slow=6.8,SNR=12							
INK	**Inuvik**	**74.52**	**345**	P		**P**	**19 39 49.5**	**+0.5**
	comp=Z,3.7nm,1.0s,baz=125,slow=7.5,SNR=6.2							
INK	**Inuvik**	**74.52**	**345**	P		**P**	**19 39 50.2**	**+1.2**
INK				IAmb		IAmb	19 39 51.4	
	comp=Z,6.2nm,1.1s							
ILAR	**Eielson Array**	**76.46**	**339**	P		**P**	**19 40 01.2**	**+0.9**
	comp=Z,2.1nm,1.2s,baz=156,slow=4.7,SNR=6.8							
H11N3	**WAKE ISLAND Hyl**	**01.25**	**290**	T		T	21 34 23.8	
	baz=86,slow=75,SNR=17							
H11N2	**WAKE ISLAND Hyl**	**01.26**	**290**	T		T	21 34 26.9	
	baz=86,slow=75,SNR=36							
H11N1	**WAKE ISLAND Hyl**	**01.27**	**290**	T		T	21 34 28.8	
	baz=86,slow=75,SNR=20							
H11S2	**WAKE ISLAND Hyl**	**01.51**	**289**	T		T	21 34 49.8	
	baz=85,slow=74,SNR=88							
H11S1	**WAKE ISLAND Hyl**	**01.52**	**289**	T		T	21 34 49.9	
	baz=85,slow=74,SNR=112							
H11S3	**WAKE ISLAND Hyl**	**01.53**	**289**	T		T	21 34 47.9	
	baz=85,slow=74,SNR=49							
CMAR	**Chiang Mai Arr**	**159.52**	**331**	PKPab		**PKPab**	**19 48 48.5**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=354,slow=5.4,SNR=4.3							

*JMA **20** 19:38:12.0, 37.05N×140.59E, h6km±1km, M3.2*
JMA Felt II J1.
*IDC **20** 19:38:16.7±3.0, 37.17N×140.48E, h81km±27km, mb3.0/2, mb1 3.2/3, mb1mx2.9/66, mbtmp3.4/3, Error ellipse: s-maj=32.8km s-min=20.2km az=123.0*
ISC 20 19:38:10.7±0.8, 37.08N±0.04×140.55E±0.04, h16km±5km, n20, σ1.30/25, 7C-1D, Eastern Honshu

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

	comp=Z,84nm,1.3s							
RPZ	**Rata Peaks**	**25.14**	**1**	LR	LR	20 18 55.9		
	comp=Z,368nm,18.8s,baz=208,slow=33							
RPZ	**Rata Peaks**	**25.14**	**1**	P	**P**	**20 10 34.1**	**+1.4**	
RPZ				IAmb	IAmb	20 10 56.3		
	comp=Z,44nm,1.3s							
MQZ	**McQueen's Vall**	**25.17**	**3**	P	**P**	**20 10 35.1**	**+2.2**	
THZ	**Tophouse**	**27.12**	**4**	P	**P**	**20 10 52.7**	**+2.1**	
THZ				IAmb	IAmb	20 10 53.1		
	comp=Z,21nm,0.9s							
MAW	**Mawson**	**35.13 219**		LR	LR	20 26 41.6		
	comp=Z,314nm,19.5s,baz=112,slow=37							
SYO	**Syowa Base**	**38.48 206**		⇓*eP*	**P**	**20 12 29.4**	**+0.2**	
SYO	**Syowa Base**	**38.48 206**		⇑*eX*	P	20 12 40.0	+11	
SNAA	**Sanae**	**39.72 183**		P	**P**	**20 12 41.0**	**+1.3**	
SNAA	**Sanae**	**39.72 183**		P	**P**	**20 12 40.7**	**+1.1**	
ARMA	**Armidale**	**39.97 334**		P	**P**	**20 12 43.0**	**+0.8**	
VNA3	**Neumayer Olymp**	**40.21 180**		P	**P**	**20 12 45.1**	**+1.4**	
STKA	**Stephens Creek**	**40.52 321**		P	**P**	**20 12 46.9**	**+0.3**	
	comp=Z,5.7nm,0.8s,baz=153,slow=6.8,SNR=15							
STKA				LR	LR	20 27 07.6		
	comp=Z,291nm,18.0s,baz=187,slow=33							
STKA	**Stephens Creek**	**40.52 321**		P	**P**	**20 12 47.3**	**+0.6**	
VNA2	**Neumayer--Watz**	**40.52 181**		P	**P**	**20 12 47.6**	**+1.4**	
	baz=181,slow=6.0							
VNA1	**Neumayer--Stat**	**40.80 181**		P	**P**	**20 12 49.6**	**+1.0**	
BBOO	**Buckleboo**	**41.01 313**		P	**P**	**20 12 51.2**	**+0.6**	
EIDS	**Eidsvold**	**45.00 335**		P	**P**	**20 13 22.9**	**-0.2**	
EIDS				IAmb	IAmb	20 13 24.2		
	comp=Z,29nm,1.1s							
H01W1	**Cape Leeuwin H**	**45.92 287**		T	T	21 02 46.3		
	baz=155,slow=76,SNR=22							
H01W2	**Cape Leeuwin H**	**45.92 287**		T	T	21 02 46.9		
	baz=155,slow=76,SNR=26							
H01W3	**Cape Leeuwin H**	**45.94 287**		T	T	21 02 45.9		
	baz=155,slow=76,SNR=26							
NWAO	**Narrogin (SRO)**	**46.66 292**		P	**P**	**20 13 35.9**	**-0.2**	
	comp=Z,9.7nm,1.0s,baz=157,slow=8.0,SNR=6.5							
NWAO	**Narrogin (SRO)**	**46.66 292**		P	**P**	**20 13 35.8**	**-0.2**	
NWAO				IAmb	IAmb	20 13 37.0		
	comp=Z,16nm,0.9s							
DZM	**Mont Dzumac**	**46.80 355**		*e*LR	LR	20 26 44.8		
	comp=Z,177nm,23.8s							
ASAR	**Alice Springs**	**50.27 315**		P	**P**	**20 14 03.8**	**-0.3**	
	comp=Z,10nm,0.8s,baz=159,slow=7.8,SNR=88							
ASAR				PcP	**PcP**	**20 15 21.6**	**-1.2**	
	comp=Z,2.8nm,0.9s,baz=155,slow=3.8,SNR=5.8							
ASAR				LR	LR	20 32 38.5		
	comp=Z,65nm,18.2s,baz=181,slow=33							
AS31	**Alice Springs**	**50.27 315**		P	**P**	**20 14 03.5**	**-0.5**	
MORW	**Morawa**	**50.59 293**		P	**P**	**20 14 05.7**	**-0.7**	
MORW				IAmb	IAmb	20 14 07.7		
	comp=Z,13nm,1.1s							
CTA	**Charters Tower**	**50.98 330**		P	**P**	**20 14 09.8**	**+0.5**	
	comp=Z,16nm,0.9s,baz=188,slow=6.8,SNR=6.6							
CTAO	**Charters Tower**	**50.98 330**		P	**P**	**20 14 09.9**	**+0.5**	
CTAO				IAmb	IAmb	20 14 10.2		
	comp=Z,24nm,1.1s							
TBI	**Tubuai**	**51.42 49**		*e*T	T	21 08 32.3		
	comp=Z,10nm,0.3s							
WR0	**Warramunga Arr**	**53.65 317**		P	**P**	**20 14 28.2**	**-1.0**	
WB2	**Warramunga Arr**	**53.72 316**		P	**P**	**20 14 28.8**	**-0.9**	
WB2				PcP	**PcP**	**20 15 35.0**	**-0.7**	
WRA	**Warramunga Arr**	**53.72 316**		P	**P**	**20 14 28.7**	**-1.0**	
	comp=Z,16nm,1.0s,baz=161,slow=7.0,SNR=44							
WRA				PcP	**PcP**	**20 15 35.1**	**-0.7**	
	comp=Z,4.7nm,0.9s,baz=168,slow=3.4,SNR=8.7							
WB0	**Warramunga Arr**	**53.88 316**		P	**P**	**20 14 29.6**	**-1.2**	
WB0				IAmb	IAmb	20 14 30.8		
	comp=Z,20nm,1.0s							
WB0				PcP	**PcP**	**20 15 35.3**	**-1.0**	
RKT	**Rikitea**	**56.04 64**		*e*T	T	21 14 19.5		
	comp=Z,3.2nm,0.2s							
PSA00	**Pilbara Seismi**	**56.31 300**		P	**P**	**20 14 48.0**	**-0.4**	
PSA00				IAmb	IAmb	20 14 49.2		
	comp=Z,9.6nm,0.9s							
PPT2	**Papeete2**	**56.88 47**		*e*S	**S**	**20 22 43.0**	**-3.0**	
	comp=Z,90nm,31.5s							
PPT2				*e*LR	LR	20 31 16.8		
	comp=Z,180nm,25.2s							
PPT	**Papeete**	**56.90 47**		LR	LR	20 33 43.9		
	comp=Z,67nm,20.5s,baz=205,slow=30							
FITZ	**Fitzroy Crossi**	**57.84 307**		P	**P**	**20 14 58.9**	**-0.3**	
	comp=Z,11nm,1.2s,baz=181,slow=8.0,SNR=6.5							
FITZ				LR	LR	20 36 08.5		
	comp=Z,196nm,20.2s,baz=170,slow=32							
FITZ	**Fitzroy Crossi**	**57.84 307**		P	**P**	**20 14 58.1**	**-1.1**	
FITZ				IAmb	IAmb	20 15 00.4		
	comp=Z,21nm,1.4s							
KNRA	**Kununurra**	**59.26 312**		P	**P**	**20 15 08.7**	**-0.5**	
VAH	**Vaihoa**	**59.65 48**		*e*T	T	21 18 35.9		
	comp=Z,30nm,0.2s							
PMG	**Port Moresby**	**61.28 333**		P	**P**	**20 15 23.5**	**+0.5**	
	comp=Z,19nm,0.8s,baz=170,slow=6.4,SNR=3.7							
PMG	**Port Moresby**	**61.28 333**		P	**P**	**20 15 23.0**	**+0.1**	
PLCA	**Paso Flores**	**61.83 131**		P	**P**	**20 15 27.5**	**+1.0**	
	comp=Z,2.0nm,0.9s,baz=198,slow=20,SNR=3.8							
PLCA	**Paso Flores**	**61.83 131**		P	**P**	**20 15 27.1**	**+0.6**	
PLCA				IAmb	IAmb	20 15 38.6		
	comp=Z,5.8nm,0.9s							
H03S1	**Juan Fernandez**	**65.77 121**		T	T	21 27 59.2		
	baz=200,slow=74,SNR=23							
H03S2	**Juan Fernandez**	**65.77 121**		T	T	21 28 00.9		
	baz=200,slow=74,SNR=23							
H03S3	**Juan Fernandez**	**65.78 121**		T	T	21 28 02.9		
	baz=200,slow=74,SNR=24							
BATI	**Baumata**	**65.89 308**		LR	LR	20 40 46.9		
	comp=Z,290nm,21.6s,baz=210,slow=32							
H03N3	**Juan Fernandez**	**66.12 121**		T	T	21 28 29.6		
	baz=198,slow=74,SNR=3.7							
H03N2	**Juan Fernandez**	**66.13 121**		T	T	21 28 29.4		
	baz=198							
H03N1	**Juan Fernandez**	**66.14 121**		T	T	21 28 31.7		
	baz=198,slow=74,SNR=5.1							
JAY	**Jayapura**	**69.17 328**		LR	LR	20 44 11.1		
	comp=Z,74nm,19.5s,baz=188,slow=34							
FAKI	**Fak Fak**	**70.61 319**		P	**P**	**20 16 23.5**	**+0.5**	
NLAI	**Namlea**	**71.60 314**		P	**P**	**20 16 28.3**	**-0.7**	
	comp=Z,471nmcomp=Z,39nm,1.1s							
KAPI	**Kappang**	**71.97 306**		P	**P**	**20 16 31.2**	**0.0**	
KAPI				IAmb	IAmb	20 16 32.7		
	comp=Z,23nm,1.3s							
SIJI	**Sorong**	**72.82 318**		P	**P**	**20 16 36.2**	**-0.1**	
	comp=Z,22nm,0.8s,baz=233,slow=6.8,SNR=24							
SPSI	**Sidrap Palu**	**72.96 306**		P	**P**	**20 16 37.4**	**+0.3**	
	comp=Z,25nm,1.3s							
LBMI	**Labuha**	**73.99 315**		P	**P**	**20 16 43.8**	**+0.6**	
	comp=Z,807nmcomp=Z,36nm,1.3s							
CPUP	**Villa Florida**	**78.92 137**		P	**P**	**20 17 12.0**	**+0.9**	
	comp=Z,4.6nm,0.9s,baz=210,slow=6.8,SNR=8.5							
CPUP	**Villa Florida**	**78.92 137**		P	**P**	**20 17 11.7**	**+0.7**	
LVC	**Limon Verde**	**79.30 126**		P	**P**	**20 17 14.2**	**+0.5**	
LVC				IAmb	IAmb	20 17 16.2		
	comp=Z,13nm,0.9s							
BOSA	**Boshof**	**79.60 211**		P	**P**	**20 17 14.9**	**0.0**	
	comp=Z,4.5nm,1.1s,baz=136,slow=4.4,SNR=3.7							
BOSA				LR	LR	20 50 04.8		
	comp=Z,180nm,20.8s,baz=132,slow=34							
BOSA	**Boshof**	**79.60 211**		P	**P**	**20 17 15.1**	**+0.1**	
PB07	**IPOC Station P**	**79.85 125**		P	**P**	**20 17 17.0**	**+0.6**	
PB07				IAmb	IAmb	20 17 28.6		
	comp=Z,18nm,1.0s							
KSM	**Kuching**	**81.01 298**		P	**P**	**20 17 22.3**	**-0.2**	
KSM				IAmb	IAmb	20 17 24.0		
	comp=Z,18nm,1.2s							
SBUM	**Sibu**	**81.32 301**		P	**P**	**20 17 23.9**	**-0.1**	
PB08	**IPOC Station P**	**81.56 125**		P	**P**	**20 17 26.2**	**+0.4**	
PB11	**IPOC Station P**	**81.77 124**		P	**P**	**20 17 26.5**	**-0.2**	
PB11				IAmb	IAmb	20 17 38.6		
	comp=Z,14nm,0.9s							
GO01	**Chusmiza**	**81.99 125**		P	**P**	**20 17 28.9**	**+0.6**	
MNMC	**Minye Minye**	**82.38 124**		P	**P**	**20 17 30.2**	**+0.2**	
MNMC				IAmb	IAmb	20 17 32.3		
	comp=Z,10nm,0.9s							
PB16	**IPOC Station P**	**83.16 124**		P	**P**	**20 17 34.8**	**+0.3**	
PB16				IAmb	IAmb	20 17 36.9		
	comp=Z,11nm,1.2s							
MYKOM	**Kota Tinggi**	**83.43 292**		P	**P**	**20 17 35.4**	**+0.3**	
LPAZ	**La Paz**	**85.50 125**		P	**P**	**20 17 47.5**	**+1.1**	
	comp=Z,2.3nm,0.7s,baz=151,slow=4.4,SNR=9.8							
LPAZ	**La Paz**	**85.50 125**		P	**P**	**20 17 47.3**	**+0.8**	
LPAZ				IAmb	IAmb	20 17 58.5		
	comp=Z,8.8nm,1.1s							
IPM	**Ipoh**	**86.89 291**		P	**P**	**20 17 52.4**	**-0.1**	
IPM				IAmb	IAmb	20 17 53.3		
	comp=Z,6.7nm,0.8s							

KULM	**Kulim**	**87.78 291**		P	**P**	**20 17 56.5**	**-0.2**	
BDFB	**Brasilia**	**91.39 143**		LR	LR	20 58 43.4		
	comp=Z,79nm,18.4s,baz=130,slow=35							
MDPB	**Devils Postpil**	**117.97**	**58**		**PKPdf**	**20 23 53.9**	**-0.1**	
KVN	**Kaiserville**	**119.57**	**58**		**PKPdf**	**20 23 56.7**	**-0.2**	
R11A	**Troy Canyon, C**	**119.71**	**60**		**PKiKP**	**20 23 57.2**	**0.0**	
GTA	**Gaotai**	**119.76 303**		*e*PKP	**PKPdf**	**20 23 56.6**	**-0.5**	
GTA				sPKP		20 24 04.0		
PETK	**Petropavlovsk-**	**121.96 351**		PKP	**PKPdf**	**20 23 59.4**	**-1.4**	
	comp=Z,2.7nm,0.8s,baz=116,slow=3.4,SNR=4.9							
TORD	**Torodi Ar. Bea**	**123.39 193**		PKP	**PKPdf**	**20 24 04.7**	**-1.1**	
	comp=Z,0.6nm,0.7s,baz=121,slow=1.3,SNR=4.7							
G08A	**Pilot Rock**	**125.01**	**54**		**PKiKP**	**20 24 07.5**	**+0.2**	
Z50A	**Ashland**	**125.40**	**89**		**PKPdf**	**20 24 05.7**	**-2.3**	
BW06	**Boulder Array**	**125.65**	**63**	P	**PKPdf**	**20 24 08.5**	**0.0**	
	baz=206							
BW06	**Boulder Array**	**125.65**	**63**		**PKPdf**	**20 24 07.2**	**-1.2**	
PDAR	**Pinedale Array**	**125.65**	**63**	PKP	**PKPdf**	**20 24 08.3**	**-0.2**	
	comp=Z,0.9nm,0.8s,baz=205,slow=2.5,SNR=9.0							
D03D	**Eldon**	**125.86**	**50**	P	**PKiKP**	**20 24 09.7**	**+0.9**	
	baz=204							
FXWY	**Fox Creek**	**125.96**	**61**		**PKiKP**	**20 24 09.3**	**-0.1**	
IMW	**Indian Meadow**	**126.22**	**61**		**PKiKP**	**20 24 10.4**	**+0.4**	
H17A	**Grant Village**	**126.78**	**61**	P	**PKiKP**	**20 24 13.3**	**+2.3**	
	baz=206							
H17A	**Grant Village**	**126.78**	**61**		**PKiKP**	**20 24 12.1**	**+1.0**	
YHL	**Hebgen Lake**	**126.99**	**61**		**PKiKP**	**20 24 12.3**	**+0.7**	
DLMT	**Dillon**	**127.01**	**59**		**PKPdf**	**20 24 10.8**	**-0.1**	
YHH	**Holmes Hill**	**127.04**	**61**		**PKiKP**	**20 24 12.1**	**+0.4**	
LRM	**Limekiln Ridge**	**127.46**	**59**		**PKiKP**	**20 24 12.2**	**-0.2**	
MSO	**Missoula**	**127.90**	**57**	P	**PKiKP**	**20 24 13.0**	**-0.1**	
	baz=206							
MSO	**Missoula**	**127.90**	**57**		**PKiKP**	**20 24 12.9**	**-0.1**	
H02S1	**DAWSON INLET T**	**128.65**	**40**	T	T	22 45 50.7		
	SNR=4.0							
RSSD	**Black Hills**	**128.68**	**67**	P	**PKPdf**	**20 24 13.9**	**-0.3**	
	baz=208							
RSSD	**Black Hills**	**128.68**	**67**		**PKPdf**	**20 24 13.4**	**-0.7**	
V54A	**Nebo**	**129.10**	**91**	P	**PKPdf**	**20 24 15.2**	**+0.2**	
	baz=207							
TARG	**Taragay, Kyrgy**	**129.13 285**			**PKPdf**	**20 24 14.7**	**-0.6**	
U54A	**Nelsons Funny**	**129.81**	**91**	P	**PKiKP**	**20 24 17.2**	**+0.1**	
	baz=207							
V57A	**Coltrane Farms**	**129.99**	**93**	P	**PKPdf**	**20 24 17.0**	**+0.4**	
	baz=206							
V59A	**Middlesex**	**130.44**	**95**	P	**PKPdf**	**20 24 17.7**	**+0.2**	
	baz=206							
U57A	**Blanch**	**130.64**	**93**	P	**PKiKP**	**20 24 18.4**	**-0.3**	
	baz=207							
ECSD	**EROS Data Cent**	**130.87**	**73**	P	**PKPdf**	**20 24 17.9**	**-0.1**	
	baz=209							
U58A	**Oxford**	**130.89**	**94**	P	**PKiKP**	**20 24 19.2**	**-0.1**	
	baz=207							
MKAR	**Makanchi Array**	**132.03 292**		PKP	**PKPdf**	**20 24 19.9**	**-0.3**	
	comp=Z,1.2nm,0.8s,baz=108,slow=4.0,SNR=8.8							
MAKZ	**Makanchi**	**132.15 292**			**PKPdf**	**20 24 19.5**	**-0.9**	
RND	**Reindeer**	**135.01**	**24**		**PKPdf**	**20 24 25.4**	**+0.1**	
BPAW	**Bear Paw Mtn.**	**135.36**	**23**		**PKPdf**	**20 24 25.4**	**-0.5**	
HDA	**Harding Lake**	**136.25**	**25**	P	**PKiKP**	**20 24 28.8**	**-0.4**	
	baz=201							
HDA	**Harding Lake**	**136.25**	**25**		**PKPdf**	**20 24 28.0**	**+0.5**	
CCB	**Clear Creek Bu**	**136.34**	**24**		**PKPdf**	**20 24 28.2**	**+0.5**	
IL31		**136.60**	**25**		**PKPdf**	**20 24 28.8**	**+0.7**	
ILAR	**Eielson Array**	**136.60**	**25**	PKP	**PKiKP**	**20 24 29.5**	**-0.4**	
	comp=Z,4.8nm,0.8s,baz=238,slow=3.0,SNR=30							
KURK	**Kurchatov**	**136.65 292**			**PKPdf**	**20 24 27.6**	**-1.0**	
ZALV	**Zasovo Beam**	**137.36 300**		PKP	**PKPdf**	**20 24 29.5**	**-0.3**	
	comp=Z,0.6nm,0.5s,baz=120,slow=2.3,SNR=2.6							
E50A	**Wahnapitae**	**138.86**	**85**	P	**PKiKP**	**20 24 35.0**	**0.0**	
	baz=212							
H62A	**Milan**	**140.75**	**95**	P	**PKPdf**	**20 24 37.7**	**+1.2**	
	baz=210							
YKA	**Yellowknife Ar**	**141.31**	**46**	PKhKP	PKPpre	20 24 30.1		
	comp=Z,1.2nm,0.7s,baz=203,slow=2.8,SNR=19							
INK	**Inuvik**	**142.07**	**30**		PKPpre	20 24 31.4		
G65A	**Princeton**	**142.59**	**98**	P	**PKPdf**	**20 24 40.0**	**+0.4**	
	baz=211							
BRTR	**Keskin Array B**	**142.95 241**		PKP	**PKPdf**	**20 24 39.7**	**-1.0**	
	comp=Z,1.5nm,1.0s,baz=145,slow=4.5,SNR=6.8							
KIV	**Kislovodsk**	**143.69 254**		⇓P	PKPab	20 24 37.8	-0.7	
KIV	**Kislovodsk**	**143.69 254**			PKPab	20 24 38.6	+0.1	
C36M	**Paulatuk**	**144.78**	**34**	P	**PKPab**	**20 24 41.0**	**-0.7**	
	baz=215							
C36M	**Paulatuk**	**144.78**	**34**		**PKPab**	**20 24 41.5**	**-0.2**	
ORH	**Orhaniye**	**145.10 237**		P	**PKiKP**	**20 24 55.4**	**+7.3**	
KEST	**Kesra**	**145.28 207**		PKPbc	**PKPab**	**20 24 44.7**	**0.0**	
	comp=Z,6.3nm,0.8s,baz=182,slow=4.9,SNR=6.6							
KEST	**Kesra**	**145.28 207**			**PKPdf**	**20 24 45.0**	**+0.2**	
AGG	**Agios Georgios**	**145.61 226**			**PKPdf**	**20 24 44.7**	**-0.5**	
LIT	**Litokhoron**	**146.58 227**			**PKPbc**	**20 24 47.7**	**-0.7**	
A36M	**Sachs Harbour**	**146.70**	**31**	P	**PKPbc**	**20 24 46.9**	**-0.8**	
	baz=217							
TIP	**Timpagrande**	**147.14 219**		⇑P	**PKPdf**	**20 24 47.8**	**0.0**	
TIP	**Timpagrande**	**147.14 219**			**PKPdf**	**20 24 48.2**	**+0.4**	
FNA	**Florina**	**147.52 226**			**PKPbc**	**20 24 50.2**	**-0.8**	
MMB	**Musomiste**	**147.63 230**		P	**PKPbc**	**20 24 50.1**	**-1.2**	
VAY	**Valandovo**	**147.70 228**		*i* Pg	**PKPbc**	**20 24 51.1**	**-0.3**	
VAY	**Valandovo**	**147.70 228**		*i* Pg	**PKPbc**	**20 24 51.1**	**-0.3**	
OHR	**Ohrid**	**147.97 226**		*i* Pg	**PKPbc**	**20 24 52.7**	**+0.5**	
OHR	**Ohrid**	**147.97 226**		*i* Pg	**PKPbc**	**20 24 52.7**	**+0.5**	
PRD	**Provadia**	**148.05 236**		P	**PKPbc**	**20 24 51.2**	**-1.0**	
STIP	**Stip**	**148.15 228**		*i* Pg	**PKPbc**	**20 24 51.8**	**-0.9**	
STIP	**Stip**	**148.15 228**		*i* Pg	**PKPbc**	**20 24 51.8**	**-0.9**	
PSN	**Preselentsi**	**148.25 237**		P	**PKPbc**	**20 24 51.8**	**-1.0**	
ARU	**Arti**	**148.26 282**			**PKPbc**	**20 24 51.3**	**-1.1**	
SKO	**Skopje**	**148.61 227**		*i* Pg	**PKPbc**	**20 24 53.7**	**-0.1**	
SKO	**Skopje**	**148.61 227**		*i* Pg	**PKPbc**	**20 24 53.7**	**-0.1**	
VTS	**Vitosha**	**148.72 230**		⇑P	**PKPbc**	**20 24 53.4**	**-0.8**	
VTS	**Vitosha**	**148.72 230**		P	**PKPbc**	**20 24 53.8**	**-0.5**	
VTS	**Vitosha**	**148.72 230**			**PKPbc**	**20 24 53.0**	**-1.2**	
NRIK	**Noril'sk**	**148.79 317**		PKPbc	**PKPbc**	**20 24 52.9**	**-0.5**	
	comp=Z,10nm,0.9s,baz=107,slow=1.8,SNR=19							
TIRR	**Tirgusor**	**148.88 238**		⇑P	**PKPbc**	**20 24 53.6**	**-0.7**	
TIRR	**Tirgusor**	**148.88 238**		P	**PKPbc**	**20 24 53.5**	**-0.8**	
TIRR	**Tirgusor**	**148.88 238**			**PKPbc**	**20 24 53.3**	**-1.1**	
JURR	**Jurilovca**	**149.01 239**		⇓P	**PKPbc**	**20 24 54.0**	**-0.7**	
HARR	**Harsova**	**149.24 238**		⇑P	**PKPbc**	**20 24 54.5**	**-0.8**	
TOPG	**Topolog**	**149.27 238**		⇓P	**PKPbc**	**20 24 54.1**	**-1.2**	
COPA	**Copaceanca**	**149.55 234**		⇑P	**PKPbc**	**20 24 56.1**	**+0.1**	
CFR	**Carcaliu**	**149.61 238**		⇓P	**PKPbc**	**20 24 55.5**	**-0.6**	
VARL	**Varlezi**	**150.35 239**		⇑P	**PKPbc**	**20 24 57.8**	**-0.1**	
BISRR	**Bisoca**	**150.38 237**		⇑P	**PKPbc**	**20 24 58.0**	**-0.2**	
INTR	**Introdacqua**	**150.48 217**			**PKPbc**	**20 24 57.2**	**-1.3**	
MLR	**Muntele Rosu**	**150.56 236**		⇓P	**PKPbc**	**20 24 57.8**	**-0.9**	
MLR	**Muntele Rosu**	**150.56 236**			**PKPbc**	**20 24 56.9**	**-1.8**	
GHRR		**150.63 238**		⇑P	**PKiKP**	**20 24 59.1**	**-0.1**	
VRI	**Vrincioaia**	**150.66 237**		⇓P	**PKPbc**	**20 24 57.7**	**-1.0**	
PLOR	**Plostina**	**150.68 237**		⇓P	**PKPbc**	**20 24 57.1**	**-1.7**	
ESDC	**Sonseca Array**	**150.68 189**		PKP	**PKPdf**	**20 24 53.2**	**-0.3**	
	comp=Z,2.5nm,1.2s,baz=150,slow=3.3,SNR=4.9							
ESDC				PKPbc	**PKPbc**	**20 24 58.4**	**-0.6**	
	comp=Z,2.6nm,0.9s,baz=170,slow=1.8,SNR=10							
SCHQ	**Schefferville**	**150.80**	**89**	PKPbc	**PKPbc**	**20 24 58.0**	**-0.8**	
	comp=Z,13nm,0.9s,baz=302,slow=2.3,SNR=9.9							
SCHQ	**Schefferville**	**150.80**	**89**		**PKPbc**	**20 24 57.1**	**-1.6**	
ARR	**Arges**	**150.84 234**		⇑P	**PKPbc**	**20 24 58.4**	**-0.8**	
DIVS	**Divibare**	**150.98 227**			**PKPbc**	**20 24 58.6**	**-1.0**	
HERR	**Herculane**	**151.04 231**		⇓P	**PKPbc**	**20 24 59.4**	**-0.2**	
MDVR	**Moldovita**	**151.14 230**		⇓P	**PKPbc**	**20 24 59.5**	**-0.4**	
OZUR		**151.16 236**		⇑P	**PKPdf**	**20 24 51.3**	**-2.7**	
DOPR	**Dopca**	**151.16 236**		⇑P	**PKPbc**	**20 24 59.7**	**-0.2**	
LOT	**Lotru**	**151.17 233**		⇑P	**PKPbc**	**20 25 00.1**	**+0.1**	
TESR	**Tescani**	**151.27 238**		⇑P	**PKPbc**	**20 24 59.1**	**-1.0**	
GZR	**Gura Zlata**	**151.40 232**		⇑P	**PKPbc**	**20 24 59.8**	**-0.7**	
BIZ	**Bicaz**	**151.82 237**		⇓P	**PKPbc**	**20 25 00.8**	**-0.5**	
BZS	**Buzias**	**151.94 230**		⇑P	**PKPbc**	**20 25 01.3**	**-0.4**	
SORM	**Soroca**	**152.18 241**		⇑P	**PKPbc**	**20 25 01.4**	**-0.7**	
ARCR	**ARCALIA**	**152.48 235**		⇓P	**PKPbc**	**20 25 02.7**	**-0.2**	
BURAR	**Bucovina Array**	**152.69 237**		⇓P	**PKiKP**	**20 25 03.6**	**-0.1**	
DRGR		**152.70 233**		⇑P	**PKPbc**	**20 25 03.0**	**-0.4**	
BUR08	**Bucovina Ar. S**	**152.72 237**			**PKPbc**	**20 25 03.3**	**-0.2**	
BUR08				PKPab	**PKPab**	**20 25 15.1**	**+0.7**	
TRPA	**Tarpa**	**153.96 234**		⇓P	**PKPbc**	**20 25 05.8**	**-0.2**	
AKASG	**Malin Array Be**	**154.12 245**		PKPbc	**PKPbc**	**20 25 05.5**	**-0.8**	
	comp=Z,1.0nm,0.5s,baz=108,slow=1.5,SNR=5.8							
CLL	**Collm**	**159.44 223**		*e*PKPab	**PKPab**	**20 25 44.0**	**+1.0**	
CLL				*e*(pPKPab)		20 25 55.0		
CLL				*e*PP	PP	20 29 36.0	+11	

IDC ***20*** *20:11:55.6±1.5,2.53S×139.42E,h0km,mb3.3/3,*
mb1 3.6*/4,****mb1mx3.4****/29,****mbtmp3.4****/4,****ML3.6****/1,****MS3.6****/2,*

Ms1 3.6*/2,****ms1mx2.8****/20,****Error ellipse: s-maj=30.1km***
s-min=14.0km az=168.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.29**	**90**	Pg	Pn	20 12 22.1	+1.2
	13nm,0.3s,baz=221,slow=10.0,SNR=100						
JAY				Lg	Lg	20 12 35.6	
	61nm,0.3s,baz=285,slow=20,SNR=13						
JAY				LR	LR	20 13 08.1	
	comp=Z,134nm,21.9s,baz=190,slow=56						
WRA	**Warramunga Arr**	**18.01**	**196**	P	Pn	20 16 06.0	-1.5
	0.2nm,0.3s,baz=17,slow=13,SNR=12						
WRA				S	Sn	20 19 11.8	-17
	0.1nm,0.3s,baz=12,slow=22,SNR=1.8						
FITZ	**Fitzroy Crossi**	**20.54**	**220**	P	P	20 16 35.9	0.0
	2.2nm,0.9s,baz=39,slow=11,SNR=13						
FITZ				S	S	20 20 15.6	-11
	2.7nm,0.9s,baz=62,slow=15,SNR=1.5						
ASAR	**Alice Springs**	**21.68**	**194**	P	P	20 16 48.8	+0.6
	0.9nm,0.7s,baz=25,slow=9.2,SNR=10						
ASAR				S	S	20 20 40.5	-8.7
	0.5nm,0.8s,baz=19,slow=29,SNR=4.1						
JCJ	**Chichijima**	**29.57**	**5**	LR	LR	20 27 34.5	
	comp=Z,180nm,18.6s,baz=74,slow=32						
RPZ	**Rata Peaks**	**49.69**	**150**	LR	LR	20 43 05.1	
	comp=Z,42nm,18.1s,baz=330,slow=38						
MKAR	**Makanchi Array**	**70.08**	**322**	P	P	20 23 09.0	-0.6
	0.1nm,0.5s,baz=107,slow=5.0,SNR=1.6						

IDC ***20*** *20:16:14.3±3.6,19.20S×177.48W,h552km±39km,*
mb3.4/13,mb1 3.6/15,mb1mx3.4/34,mbtmp4.3/15,Error
ellipse: s-maj=21.4km s-min=16.0km az=47.0
NEIC ***20*** *20:16:16.4±1.5,19.22S±0.10×177.50W±0.04,*
h582km±7km,mb4.5/41,Error ellipse: s-maj=14.7km
s-min=4.6km az=193.0
ISC 20 20:16:16.8±0.8,19.24S±0.07×177.54W±0.08,
h584*km±****9****km,****n115****,****o 0****98****/****121****,****mb4.3****/34,****14

MAW	**Mawson**	**82.89**	**200**	P		**P**	**20 27 41.1**	**+0.6**
TXAR	**Lajitas Array**	**86.02**	**57**	P		**P**	**20 27 58.2**	**+1.5**
	comp=Z,1.0nm,0.6s,baz=209,slow=5.9,SNR=11							
ILAR	**Eielson Array**	**87.00**	**13**	P		**P**	**20 27 59.6**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=233,slow=4.7,SNR=5.1							
PDAR	**Pinedale Array**	**87.75**	**43**	P		**P**	**20 28 04.8**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=200,slow=3.9,SNR=4.2							
SYO	**Syowa Base**	**88.04**	**193**	⇑*eP*		**P**	**20 28 03.4**	**-1.9**
SYO	**Syowa Base**	**88.04**	**193**	⇑*ePcP*		**P**	**20 28 05.6**	**+0.3**
HHC	**Hu-ho-hao-te**	**88.79**	**314**	*eP*		**P**	**20 28 11.3**	**+1.9**
HHC				pmax	pmax			
	comp=Z,11nm,0.9s							
HHC				pmax	pmax			
	comp=Z,63nm,5.7s							
SNAA	**Sanae**	**89.25**	**178**	P		**P**	**20 28 10.7**	**-0.3**
SNAA	**Sanae**	**89.25**	**178**	P		**P**	**20 28 10.4**	**-0.5**
SNAA				IAmb	IAmb		20 28 11.4	
	comp=Z,2.4nm,0.7s							
VNA3	**Neumayer Olymp**	**89.36**	**176**	P		**P**	**20 28 11.4**	**0.0**
VNA2	**Neumayer--Watz**	**89.81**	**177**	P		**P**	**20 28 13.7**	**+0.2**
	baz=184,slow=3.7							
VNA1	**Neumayer--Stat**	**90.03**	**176**	P		**P**	**20 28 15.0**	**+0.5**
CMAR	**Chiang Mai Arr**	**90.11**	**289**	P		**P**	**20 28 17.7**	**+1.9**
	comp=Z,0.8nm,1.0s,baz=122,slow=3.3,SNR=4.2							
MKAR	**Makanchi Array**	**110.65**	**314**	PKiKP		**PKiKP**	**20 33 42.8**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=166,slow=0.8,SNR=12							
KSH	**Kashi**	**114.52**	**305**	PKP	PKPdf		20 33 47.4	-4.1
IVI	**Ivigtut**	**125.22**	**27**	PKPdf		**PKPdf**	**20 34 08.5**	**-2.7**
ARCES	**ARCESS Array B**	**127.77**	**350**	PKP		**PKPdf**	**20 34 15.8**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=16,slow=1.5,SNR=14							
FINES	**FINESS Array B**	**134.69**	**344**	PKP		**PKPdf**	**20 34 29.9**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=29,slow=3.2,SNR=4.5							
SORM	**Soroca**	**144.35**	**330**	⇓P	PKPbc		20 34 46.1	-0.9
TLCR		**146.13**	**326**	⇑P		**PKPbc**	**20 34 52.4**	**+0.1**
BUR08	**Bucovina Ar. S**	**146.16**	**332**			**PKPbc**	**20 34 53.4**	**+0.9**
BURAR	**Bucovina Array**	**146.17**	**332**	⇑P		**PKPab**	**20 34 53.9**	**-0.9**
BIZ	**Bicaz**	**146.27**	**330**	⇑P		**PKPbc**	**20 34 53.5**	**+0.8**
BRTR	**Keskin Array B**	**146.30**	**314**	PKPbc		**PKPbc**	**20 34 53.1**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=120,slow=4.2,SNR=9.9							
JURR	**Jurilovca**	**146.38**	**325**	⇑P		**PKPbc**	**20 34 52.6**	**-0.3**
CFR	**Carcaliu**	**146.50**	**326**	⇑P		**PKPbc**	**20 34 53.0**	**-0.3**
TOPG	**Topolog**	**146.57**	**326**	⇓P		**PKPbc**	**20 34 53.5**	**0.0**
VRI	**Vrincioaia**	**146.74**	**328**	⇓P		**PKPbc**	**20 34 54.5**	**+0.5**
TIRR	**Tirgusor**	**146.83**	**325**	⇑P		**PKPbc**	**20 34 54.3**	**+0.1**
OSTC	**Ostas**	**146.90**	**344**	⇑*e*PKP		**PKPbc**	**20 34 54.9**	**+0.6**
TRPA	**Tarpa**	**146.90**	**335**	⇑P		**PKPbc**	**20 34 54.3**	**+0.1**
HARR	**Harsova**	**146.93**	**326**	⇑P		**PKPbc**	**20 34 54.4**	**-0.1**
CLL	**Collm**	**146.94**	**348**	⇓*i* PKPbc		**PKiKP**	**20 34 55.4**	**-0.7**
	comp=Z,5.0nm,0.6s							
CLL	**Collm**	**146.94**	**348**			**PKPbc**	**20 34 55.1**	**+0.9**
MANR	**Mangalia**	**147.15**	**324**	⇓P		**PKPbc**	**20 34 55.7**	**+0.6**
DOPR	**Dopca**	**147.32**	**330**	⇓P		**PKPbc**	**20 34 56.3**	**+0.8**
MLR	**Muntele Rosu**	**147.39**	**329**	⇓P		**PKPbc**	**20 34 55.3**	**-0.5**
MLR	**Muntele Rosu**	**147.39**	**329**			**PKPbc**	**20 34 55.6**	**-0.2**
VYHS	**Vyhne**	**147.95**	**339**	*e*PKP		**PKPbc**	**20 34 57.4**	**+0.4**
SIRR	**Síria**	**148.75**	**334**	⇑P		**PKiKP**	**20 34 59.7**	**-0.4**
KHC	**Kasperske Hory**	**148.87**	**346**	⇑*e*PKP		**PKPbc**	**20 34 59.4**	**+0.1**
KHC	**Kasperske Hory**	**148.87**	**346**			**PKPbc**	**20 34 59.5**	**+0.1**
GEC2	**GERESS Array S**	**149.10**	**345**			**PKPbc**	**20 35 00.1**	**+0.2**
GERES	**GERESS Array B**	**149.10**	**345**	PKPbc		**PKPbc**	**20 34 59.5**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=52,slow=2.9,SNR=16							
VLAD	**Vladila**	**149.23**	**328**	⇑P		**PKPdf**	**20 34 57.3**	**+2.1**
BZS	**Buzias**	**149.29**	**333**	⇓P		**PKPbc**	**20 35 00.4**	**+0.1**
CONA	**Conrad Observa**	**149.38**	**342**	*e*PKiKP		**PKPbc**	**20 35 00.8**	**+0.2**
	comp=Z,3.9nm,0.7s,SNR=5.1							
SOKA	**Soboth**	**150.75**	**342**	*i* PKPbc		**PKPbc**	**20 35 02.7**	**-1.1**
	comp=Z,3.7nm,1.2s							
KBA	**Koelnbreinsper**	**150.84**	**345**	*e*PKPbc		**PKPbc**	**20 35 03.6**	**-0.6**
	comp=Z,2.7nm,0.5s							
WATA	**Walderalm**	**151.00**	**347**	*e*PKPbc		**PKPbc**	**20 35 03.9**	**-0.6**
	comp=Z,3.5nm,0.5s,SNR=4.5							
OBKA	**Obir**	**151.04**	**343**	*e*PKPbc		**PKPbc**	**20 35 03.7**	**-0.8**
	comp=Z,1.2nm,0.6s							
WTTA	**Wattenberg**	**151.06**	**347**	*e*PKiKP		**PKPbc**	**20 35 04.2**	**-0.4**
	comp=Z,5.0nm,0.5s,SNR=6.5							
MOTA	**Moosalm**	**151.09**	**348**	*e*PKPbc		**PKPbc**	**20 35 03.8**	**-1.0**
	comp=Z,3.8nm,0.9s							
MYKA	**Terra Mystica**	**151.18**	**344**	*e*PKPbc		**PKPbc**	**20 35 03.6**	**-1.3**
	comp=Z,1.3nm,0.6s							
SQTA	**Sankt Quirin**	**151.19**	**348**	*e*PKPbc		**PKPbc**	**20 35 04.4**	**-0.5**
	comp=Z,3.7nm,0.7s							
ABTA	**Abfaltersbach**	**151.35**	**346**	*e*PKPbc		**PKPbc**	**20 35 04.5**	**-0.8**
	comp=Z,2.8nm,0.5s,SNR=8.8							
FETA	**Feichten**	**151.48**	**348**	*i* PKiKP		**PKPbc**	**20 35 05.2**	**-0.4**
	comp=Z,2.5nm,0.6s							
TORD	**Torodi Ar. Bea**	**173.90**	**173**	PKP		**PKPdf**	**20 35 19.4**	**-1.4**
	comp=Z,0.9nm,0.9s,baz=204,slow=3.2,SNR=3.5							
TORD				PKPab		**PKPab**	**20 36 54.9**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=202,slow=4.7,SNR=2.8							

MAN 20 20:17:23.6, 9.20N×122.06E, h58km, mb5.3, ML4.3, MS4.5, Negros

*IDC **20** 20:22:03.7±15.0, 55.64S×27.33W, h0km, mb3.6/1, mb1 3.6/1, mb1mx3.4/21, mbtmp3.6/1, Error ellipse: s-maj=952.3km s-min=83.7km az=143.0*

ISC 20 20:22:01.2±1.5, 57.1S±0.2×25.4W±0.6, h10km, n7, σ0s 43/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**15.49**	**158**	P	**Pn**	**20 25 39.8**	**+0.3**
VNA3	**Neumayer Olymp**	**15.71**	**161**	P	**Pn**	**20 25 42.1**	**-0.3**
VNA2	**Neumayer--Watz**	**15.89**	**158**	P	**Pn**	**20 25 44.1**	**-0.4**
	baz=330,slow=16						
SNAA	**Sanae**	**17.42**	**156**	P	**P**	**20 26 05.5**	**+0.2**
TORD	**Torodi Ar. Bea**	**73.45**	**28**	P	**P**	**20 33 33.5**	**-0.1**
	0.3nm,0.6s,baz=194,slow=6.4,SNR=2.9						
YKA	**Yellowknife Ar**	**137.59**	**316**	PKP	**PKPdf**	**20 41 24.2**	**+0.4**
	0.1nm,0.4s,baz=137,slow=1.9,SNR=2.2						
ILAR	**Eielson Array**	**151.53**	**310**	PKPbc	**PKPbc**	**20 41 53.6**	**-0.3**
	0.4nm,0.6s,baz=122,slow=3.3,SNR=2.6						

*IDC **20** 20:28:13.1±2.2, 16.28S×173.41W, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.8/40, mbtmp3.8/5, Error ellipse: s-maj=131.5km s-min=24.7km az=143.0*
*NEIC **20** 20:28:13.7±2.4, 16.28S±0.02×173.2W±0.1, h10km±1km, mb4.6/10, Error ellipse: s-maj=20.2km s-min=3.9km az=87.0*

ISC 20 20:28:13.6±0.6, 16.36S±0.08×173.1W±0.1, h10km, n31, σ1s 27/28, mb4.5/10, 3C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.75**	**28**		**Pn**	**20 28 57.8**	**0.0**
NIUE	**Niue**	**4.05**	**132**		**Pn**	**20 29 17.2**	**+1.5**
NIUE				Sn	**Sn**	**20 30 00.0**	**-3.2**
QRZ	**Quartz Range**	**27.38**	**204**	P	**P**	**20 34 01.2**	**+2.1**
H11S2	**WAKE ISLAND Hy**	**39.93**	**329**	T	T	21 18 11.0	
	baz=153						
H11S3	**WAKE ISLAND Hy**	**39.95**	**329**	T	T	21 18 09.8	
	baz=153						
H11S1	**WAKE ISLAND Hy**	**39.95**	**329**	T	T	21 18 11.0	
	baz=153						
H11N3	**WAKE ISLAND Hy**	**40.89**	**331**	T	T	21 19 24.7	
	baz=150,slow=76,SNR=6.6						
H11N1	**WAKE ISLAND Hy**	**40.89**	**330**	T	T	21 19 25.0	
	baz=150,slow=76,SNR=7.2						
H11N2	**WAKE ISLAND Hy**	**40.90**	**331**	T	T	21 19 26.2	
	baz=150,slow=76,SNR=9.4						
STKA	**Stephens Creek**	**43.83**	**241**	P	**P**	**20 36 19.1**	**-1.0**
	1.2nm,0.6s,baz=87,slow=8.6,SNR=5.4						
STKA	**Stephens Creek**	**43.83**	**241**	P	**P**	**20 36 19.2**	**-0.8**
BBOO	**Buckleboo**	**48.60**	**241**	P	**P**	**20 36 56.3**	**-1.3**
BBOO				IAmb	IAmb	20 37 06.7	
	comp=Z,19nm,1.6s						
WR0	**Warramunga Arr**	**49.73**	**258**	P	**P**	**20 37 05.9**	**-0.7**
WR0				IAmb	IAmb	20 37 09.1	
	comp=Z,5.5nm,1.1s						
WB0	**Warramunga Arr**	**49.89**	**258**	P	**P**	**20 37 06.9**	**-0.9**
WB0				IAmb	IAmb	20 37 29.8	
	comp=Z,8.3nm,1.2s						
WB2	**Warramunga Arr**	**49.91**	**258**	P	**P**	**20 37 06.7**	**-1.2**
WB2				IAmb	IAmb	20 37 27.0	
	comp=Z,9.8nm,1.4s						
WRA	**Warramunga Arr**	**49.92**	**258**	P	**P**	**20 37 06.2**	**-1.8**
	comp=Z,0.3nm,0.4s,baz=96,slow=7.7,SNR=15						
WRA				PcP	**PcP**	**20 38 28.2**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=95,slow=3.1,SNR=2.8						
AS31	**Alice Springs**	**50.10**	**253**	P	**P**	**20 37 07.8**	**-1.6**
ASAR	**Alice Springs**	**50.10**	**253**	P	**P**	**20 37 07.9**	**-1.5**
	comp=Z,3.2nm,0.6s,baz=90,slow=8.1,SNR=65						
ASAR				PcP	**PcP**	**20 38 29.3**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=91,slow=5.6,SNR=0.9						
KNRA	**Kununurra**	**55.72**	**262**	P	**P**	**20 37 51.0**	**+0.1**
FITZ	**Fitzroy Crossi**	**58.31**	**259**	P	**P**	**20 38 09.0**	**-0.2**
FITZ				IAmb	IAmb	20 38 35.2	
	comp=Z,6.3nm,1.4s						
SOEI	**Soe**	**61.19**	**268**	P	**P**	**20 38 30.5**	**+1.2**
PDAR	**Pinedale Array**	**82.78**	**42**	P	**P**	**20 40 39.6**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=169,slow=3.0,SNR=4.8						
ILAR	**Eielson Array**	**83.32**	**11**	P	**P**	**20 40 40.1**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=219,slow=7.0,SNR=4.2						
DPC	**Dobruska-Polom**	**145.25**	**349**	⇑*e*PKP	**PKPdf**	**20 47 53.5**	**+1.8**
PRU	**Pruhonice**	**145.89**	**351**	⇑*e*PKP	**PKPab**	**20 47 54.9**	**+1.2**
KHC	**Kasperske Hory**	**146.86**	**352**	⇑*e*PKP	**PKPab**	**20 47 57.5**	**0.0**
BRTR	**Keskin Array B**	**147.08**	**320**	PKPbc	**PKPab**	**20 47 58.7**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=116,slow=2.9,SNR=12						
GERES	**GERESS Array B**	**147.13**	**352**	PKPbc	**PKPab**	**20 47 58.2**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=48,slow=2.0,SNR=7.9						
CONA	**Conrad Observa**	**147.66**	**349**	*e*PKiKP	**PKPab**	**20 47 59.8**	**-0.9**
	comp=Z,2.5nm,0.8s						
DAVA	**Damuels**	**149.06**	**356**	*e*PKiKP	**PKiKP**	**20 48 03.5**	**-0.2**
	comp=Z,3.3nm,1.0s						
ABTA	**Abfaltersbach**	**149.34**	**352**	*e*PKiKP	**PKiKP**	**20 48 03.9**	**-0.3**
	comp=Z,1.9nm,0.6s						

IDC 20 20:30:20.3±7.5, 8.06S×121.76E, h212km±30km, mb3.3/1, mb1 3.0/4, mb1mx2.7/41, mbtmp3.4/4, Error ellipse: s-maj=125.7km s-min=77.0km az=52.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.84**	**139**	P	Pn	20 31 08.8	+0.1
	2.6nm,0.3s,baz=313,slow=1.1,SNR=4.6						
BATI				S	S	20 31 47.1	+0.7
	5.8nm,0.3s,baz=306,slow=19,SNR=12						
WRA	**Warramunga Arr**	**16.97**	**135**	P	P	20 34 04.3	+0.2
	0.1nm,0.3s,baz=312,slow=11,SNR=6.5						
ASAR	**Alice Springs**	**19.40**	**144**	P	P	20 34 30.9	+0.5
	0.2nm,0.3s,baz=332,slow=12,SNR=12						
STKA	**Stephens Creek**	**30.04**	**145**	P	P	20 36 08.8	-0.8
	0.5nm,0.3s,baz=326,slow=11,SNR=3.5						

*IDC **20** 20:32:57.7±0.8, 57.00S×24.89W, h0km, mb4.3/6, mb1 4.3/7, mb1mx4.0/26, mbtmp4.2/7, ML3.9/1, MS3.6/8, Ms1 3.6/8, ms1mx3.3/25, Error ellipse: s-maj=39.7km s-min=20.9km az=62.0*
*NEIC **20** 20:33:04.8±0.9, 57.1S±0.1×25.1W±0.2, h53km±6km, mb4.7/21, Error ellipse: s-maj=20.2km s-min=14.2km az=208.0*

ISC 20 20:33:00.7±0.6, 57.11S±0.09×25.0W±0.1, h22km, n49, σ1s 05/44, mb4.7/14, MS3.5/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.08**	**289**		**Pn**	**20 34 44.7**	**+1.8**
VNA1	**Neumayer--Stat**	**15.36**	**159**	P	**Pn**	**20 36 36.7**	**+1.0**
VNA3	**Neumayer Olymp**	**15.59**	**161**	P	**Pn**	**20 36 38.7**	**-0.1**
VNA2	**Neumayer--Watz**	**15.75**	**159**	P	**Pn**	**20 36 41.1**	**+0.3**
	baz=328,slow=16						
SNAA	**Sanae**	**17.28**	**156**	P	**P**	**20 37 02.2**	**+0.6**
SNAA	**Sanae**	**17.28**	**156**	P	**Pn**	**20 37 01.1**	**+0.9**
	0.4nm,0.3s,baz=318,slow=14,SNR=12						
SNAA				S	**Sn**	**20 40 07.0**	**-4.5**
	0.0nm,0.3s,baz=336,slow=20,SNR=2.1						
SNAA				LR	LR	20 42 47.9	
	comp=Z,89nm,18.1s,baz=6.5,slow=34						
SNAA	**Sanae**	**17.28**	**156**	P	**P**	**20 37 03.1**	**+1.5**
EFI	**East Falkland**	**19.87**	**272**	P	**Pn**	**20 37 30.7**	**-1.1**
EFI				IAmb	IAmb	20 37 31.5	
	comp=Z,17nm,0.7s						
PMSA	**Palmer Station**	**20.15**	**232**	LR	LR	20 44 37.5	
	comp=Z,218nm,18.5s,baz=55,slow=34						
GO09	**Cerro Castillo**	**27.83**	**262**	P	**P**	**20 38 46.6**	**-1.5**
GO09				IAmb	IAmb	20 39 15.2	
	comp=Z,44nm,1.6s						
QSPA	**South Pole Qui**	**33.13**	**180**	P	**P**	**20 39 36.3**	**+1.3**
QSPA				IAmb	IAmb	20 39 44.3	
	comp=Z,22nm,1.8s						
PLCA	**Paso Flores**	**33.38**	**280**	LR	LR	20 51 23.0	
	comp=Z,82nm,21.7s,baz=126,slow=33						
CPUP	**Villa Florida**	**38.42**	**309**	P	**P**	**20 40 20.1**	**-0.4**
	comp=Z,4.2nm,0.8s,baz=152,slow=8.0,SNR=11						
CPUP	**Villa Florida**	**38.42**	**309**	P	**P**	**20 40 19.7**	**-0.7**
CPUP				IAmb	IAmb	20 40 21.0	
	comp=Z,5.0nm,0.8s						
MAW	**Mawson**	**38.57**	**142**	LR	LR	20 54 53.0	
	comp=Z,46nm,21.6s,baz=286,slow=34						
CO01	**Juntas del Tor**	**41.34**	**292**	P	**P**	**20 40 44.4**	**-0.6**
CO01				IAmb	IAmb	20 41 14.5	
	comp=Z,19nm,1.8s						
BDFB	**Brasilia**	**44.90**	**328**	P	**P**	**20 41 13.8**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=166,slow=10,SNR=3.2						
BDFB	**Brasilia**	**44.90**	**328**	P	**P**	**20 41 13.4**	**-0.2**
VNDA	**Vanda**	**45.56**	**182**	P	**P**	**20 41 19.6**	**+1.4**
	comp=Z,1.0nm,0.6s,baz=184,slow=6.1,SNR=10						
VNDA				LR	LR	20 59 16.6	
	comp=Z,31nm,18.6s,baz=203,slow=35						
VNDA	**Vanda**	**45.56**	**182**	P	**P**	**20 41 19.5**	**+1.4**
LVC	**Limon Verde**	**46.88**	**299**	P	**P**	**20 41 29.0**	**-0.5**
LVC				IAmb	IAmb	20 41 37.2	
	comp=Z,16nm,1.4s						
PB07	**IPOC Station P**	**48.10**	**298**	P	**P**	**20 41 38.7**	**-0.1**
PB01	**IPOC Station P**	**48.49**	**299**	P	**P**	**20 41 42.1**	**+0.3**
PB01				IAmb	IAmb	20 41 42.4	
	comp=Z,6.6nm,0.8s						
TSUM	**Tsumeb**	**49.18**	**58**	P	**P**	**20 41 47.5**	**+0.4**
TSUM				IAmb	IAmb	20 41 55.5	
	comp=Z,18nm,1.6s						
TA01	**Diego Aracena**	**49.23**	**299**	P	**P**	**20 41 48.1**	**+0.8**
GO01	**Chusmiza**	**49.53**	**300**	P	**P**	**20 41 49.7**	**-0.5**
PB11	**IPOC Station P**	**49.67**	**300**	P	**P**	**20 41 50.9**	**0.0**
PB11				IAmb	IAmb	20 41 57.2	
	comp=Z,8.4nm,0.9s						
PSGCX	**Pisagua**	**50.03**	**299**	P	**P**	**20 41 53.2**	**-0.4**
MNMC	**Minye Minye**	**50.19**	**300**	P	**P**	**20 41 54.0**	**-0.9**
MNMC				IAmb	IAmb	20 41 55.9	
	comp=Z,7.1nm,0.6s						
PB16	**IPOC Station P**	**50.83**	**301**	P	**P**	**20 41 59.2**	**-1.0**
LPAZ	**La Paz**	**51.98**	**304**	P	**P**	**20 42 09.2**	**+0.4**
	comp=Z,5.7nm,0.5s,baz=203,slow=7.0,SNR=22						
LPAZ	**La Paz**	**51.98**	**304**	P	**P**	**20 42 08.9**	**+0.1**
SAML	**Samuel**	**56.41**	**313**	P	**P**	**20 42 40.2**	**-0.2**
SAML				IAmb	IAmb	20 42 42.7	
	comp=Z,5.4nm,0.8s						
TOA0	**Torodi Ar. Sit**	**73.42**	**27**	P	**P**	**20 44 31.2**	**+0.3**
TORD	**Torodi Ar. Bea**	**73.42**	**27**	P	**P**	**20 44 30.9**	**0.0**
	comp=Z,1.5nm,0.7s,baz=207,slow=6.3,SNR=5.8						
TORD				LR	LR	21 11 51.7	
	comp=Z,39nm,20.2s,baz=200,slow=32						
RUSC	**La Rusia**	**73.91**	**310**	P	**P**	**20 44 33.6**	**-0.9**
PCRV	**Puerto La Cruz**	**74.54**	**319**	LR	LR	21 21 08.9	
	comp=Z,156nm,19.0s,slow=39						
PPT	**Papeete**	**92.52**	**232**	LR	LR	21 18 34.7	
	comp=Z,32nm,18.2s,baz=111,slow=30						
ASAR	**Alice Springs**	**97.60**	**161**	P	Pdif	20 46 33.7	+0.3
	comp=Z,0.3nm,0.7s,baz=190,slow=5.1,SNR=4.5						
YKA	**Yellowknife Ar**	**137.78**	**316**	PKP	**PKPdf**	**20 52 21.0**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=122,slow=2.5,SNR=11						
INK	**Inuvik**	**147.40**	**319**	PKPbc	**PKPbc**	**20 52 40.9**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=84,slow=6.1,SNR=8.7						
SONM	**Songino Array**	**149.58**	**87**	PKPbc	**PKPbc**	**20 52 47.2**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=324,slow=2.0,SNR=3.7						
SCRK	**Sand Creek**	**150.31**	**309**		**PKiKP**	**20 52 49.1**	**-0.4**
RIDG	**Independent Ri**	**150.62**	**308**		**PKiKP**	**20 52 50.0**	**0.0**
IL31		**151.73**	**310**		**PKiKP**	**20 52 51.4**	**-0.7**
ILAR	**Eielson Array**	**151.73**	**310**	PKPbc	**PKiKP**	**20 52 52.4**	**+0.1**
	comp=Z,2.7nm,0.8s,baz=133,slow=2.4,SNR=20						
CCB	**Clear Creek Bu**	**152.09**	**309**		**PKPbc**	**20 52 51.8**	**-0.8**
WRH	**Wood River Hil**	**152.17**	**309**		**PKiKP**	**20 52 52.4**	**-0.8**
BPAW	**Bear Paw Mtn.**	**153.34**	**308**		**PKiKP**	**20 52 55.5**	**-0.2**

*BER **20** 20:57:00.9±2.4, 79.64N×3.20E, h10km, ML2.5, ML3.2(NAO), Confirmed Earthquake*
*NAO **20** 20:57:03.2±3.4, 79.86N×5.88E, h5km±22km, ML3.2*
*IDC **20** 20:57:04.0±5.5, 79.87N×9.15E, h0km, mb3.4/1, mb1 3.5/3, mb1mx3.2/41, mbtmp3.5/3, ML2.7/2, MS3.0/2, Ms1 3.0/2, ms1mx2.4/45, Error ellipse: s-maj=104.6km s-min=34.0km az=82.0*

*IEPN **20** 20:57:05.0, 79.69N×6.00E, h10km*

ISC 20 20:57:04.9±2.5, 79.77N±0.07×8.4E±0.1, h5km±11km, n29, σ2s 81/45, 4C, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.07**	**141**	Pn	**Pn**	**20 57 28.7**	**+2.3**
KBS				Lg	Lg	20 57 49.9	
KBS	**Kingsbay**	**1.07**	**141**	⇑*iP*	**Pn**	**20 57 28.7**	**+2.3**
KBS				*eS*	**Sn**	**20 57 46.4**	**+4.7**
KBS	**Kingsbay**	**1.07**	**141**	⇑*iP*	**Pn**	**20 57 28.8**	**+2.3**
KBS				*eS*	**Sn**	**20 57 50.0**	**+8.4**
KBS				IAML		20 57 54.6	
	comp=Z,113nm,0.3s						
BRBB	**Barentsburg B**	**2.02**	**144**	Pn	**Pb**	**20 57 41.9**	**-0.1**
BRBB				Sn	**Sg**	**20 58 11.5**	**+1.8**
BRBB	**Barentsburg B**	**2.02**	**144**	*eP*	**Pg**	**20 57 43.2**	**-0.3**
BRBB				*eS*	**Sg**	**20 58 11.5**	**+1.8**
BRBA	**Barentsburg A**	**2.05**	**144**	Pn	**Pg**	**20 57 43.7**	**-0.4**
BRBA				Sn	**Sg**	**20 58 12.7**	**+2.0**
BRBA	**Barentsburg A**	**2.05**	**144**	*eP*	**Pg**	**20 57 43.7**	**-0.4**
BRBA				*eS*	**Sg**	**20 58 12.2**	**+1.5**
BRBA				IAML		20 58 16.0	
	comp=Z,56nm,0.2s						
SPA0	**Spitsbergen Ar**	**2.21**	**133**	Pn	**Pg**	**20 57 45.5**	**-1.7**
	baz=324,slow=11						
SPA0				Sn	**Sg**	**20 58 17.6**	**+1.9**
	baz=340,slow=18						
SPA0	**Spitsbergen Ar**	**2.21**	**133**	⇑*iP*	**Pg**	**20 57 45.5**	**-1.7**
SPA0				*eS*	**Sg**	**20 58 15.8**	**0.0**
SPA0	**Spitsbergen Ar**	**2.21**	**133**	*eP*	**Pg**	**20 57 45.5**	**-1.7**
SPA0				*eS*	**Sg**	**20 58 18.6**	**+2.8**
SPA0				IAML		20 58 27.4	
	comp=Z,40nm,0.5s						
HSPB	**Hornsund (broa**	**3.13**	**149**	Pn	**Pn**	**20 57 55.6**	**+0.9**
HSPB				Sn	**Sn**	**20 58 35.6**	**+3.2**
HSPB	**Hornsund (broa**	**3.13**	**149**	⇑*iP*	**Pn**	**20 57 56.3**	**+1.5**
HSPB				*eS*	**Sn**	**20 58 34.4**	**+2.0**
HSPB	**Hornsund (broa**	**3.13**	**149**	*eP*	**Pn**	**20 57 56.3**	**+1.5**
HSPB				*eS*	**Sn**	**20 58 34.9**	**+2.5**
HSPB				IAML		20 58 39.9	
	comp=Z,41nm,0.6s						
NOR	**Nord**	**4.44**	**306**	Pn	Pn	20 58 05.0	-7.7
NOR	**Nord**	**4.44**	**306**	Pn	Pn	20 58 05.0	-7.7
HOPEN	**Hopen**	**4.71**	**125**	*eP*	**Pn**	**20 58 17.0**	**+1.4**
HOPEN				*eS*	**Sn**	**20 59 14.6**	**+3.3**
HOPEN	**Hopen**	**4.71**	**125**	*eP*	Pn	20 58 20.5	+4.1
HOPEN				*eS*	**Sb**	**20 59 18.0**	**-6.8**
HOPEN				IAML		20 59 20.7	
	comp=Z,20nm,0.2s						
BJO1	**Bjornoya**	**5.79**	**151**	Pn	**Pn**	**20 58 32.0**	**+0.9**
BJO1				Sn	**Sn**	**20 59 40.0**	**+2.2**
BJO1	**Bjornoya**	**5.79**	**151**	*eP*	**Pn**	**20 58 31.4**	**+0.3**
BJO1				*eS*	**Sn**	**20 59 37.6**	**-0.1**
BJO1	**Bjornoya**	**5.79**	**151**	*eP*	**Pn**	**20 58 32.0**	**+0.9**
BJO1				*eS*	**Sn**	**20 59 37.7**	**0.0**
BJO1				IAML		20 59 44.7	

GCPR				IAML		21 08 45.3	
	comp=E,168nm,0.3s						
GCPR				IAML		21 08 48.7	
	comp=N,158nm,0.5s						
IGPR	**InterUniversit**	**3.56**	**108**	Pn	**Pn**	**21 08 00.5**	**-0.1**
IGPR				IAML		21 08 45.7	
	comp=E,237nm,0.2s						
CBYP	**Canovanas**	**3.70**	**102**	Pn	**Pn**	**21 08 02.8**	**+0.2**
CUPR	**Culebra, Puert**	**4.23**	**100**	Pn	**Pn**	**21 08 09.2**	**-0.4**
STVI	**Saint Thomas**	**4.53**	**99**	Pn	**Pn**	**21 08 14.1**	**+0.3**
STVI				IAML		21 09 05.9	
	comp=E,89nm,0.2s						
STVI				IAML		21 09 08.8	
	comp=N,110nm,0.2s						
URIC	**Uribia, Colomb**	**7.68**	**197**	*e*P	**Pn**	**21 08 55.2**	**-1.4**
URIC				*e*S	Sn	21 10 09.7	-12
URIC				*i*		21 10 19.3	
	comp=Z,16nm,0.6s						
URIC	**Uribia, Colomb**	**7.68**	**197**	Pn	**Pn**	**21 08 56.2**	**-0.4**
DLPL	**La Plaine**	**8.87**	**114**	Pn	**Pn**	**21 09 15.5**	**+2.5**
SMRC	**Santa Marta, M**	**9.02**	**210**	*e*P	Pn	21 09 10.5	-4.5
SMRC				*e*S	Sn	21 10 38.0	-16
SDV	**Santo Domingo**	**10.18**	**185**	*e*P	**Pn**	**21 09 32.1**	**+1.1**
SDV	**Santo Domingo**	**10.18**	**185**		**Pn**	**21 09 32.4**	**+1.3**
SJCC	**San Jacinto, C**	**10.58**	**211**	*e*P	**Pn**	**21 09 34.9**	**-1.4**
SJCC				*e*S	Sn	21 11 19.6	-13
SJCC				*i*		21 11 44.0	
	comp=Z,2.1nm,0.6s						
SMLC	**San Martn de**	**11.08**	**203**	*e*P	**Pn**	**21 09 40.7**	**-2.4**
SMLC				*e*S	Sn	21 11 33.7	-11
PAMC	**Pamplona, Colo**	**12.04**	**195**	*e*P	**Pn**	**21 09 56.8**	**+0.3**
PTBC	**PUERTO BERRIO,**	**13.31**	**201**	*e*P	**Pn**	**21 10 12.7**	**-0.3**
RUSC	**La Rusia**	**13.53**	**195**	*e*P	**Pn**	**21 10 15.8**	**-0.5**
RUSC	**La Rusia**	**13.53**	**195**		**Pn**	**21 10 16.3**	**+0.1**
BCIP	**Isla Barro Col**	**13.94**	**226**	Pn	**Pn**	**21 10 20.9**	**-0.2**
BBSR	**BB Station**	**13.96**	**18**	Pn	**Pn**	**21 10 20.6**	**-0.7**

NEIC ***20*** *21:11:16.2±2.4, 17°.82S±0°.05×69°.33W±0°.08, h153km±6km, mb4.4/14, ML4.2(GUC), Error ellipse: s-maj=11.2km s-min=7.1km az=113.0*

IDC ***20*** *21:11:17.0±1.3, 17°.82S×69°.24W, h149km±12km, mb4.0/6, mb1 4.0/12, mb1mx3.7/44, mbtmp4.4/12, MS2.7/1, Ms1 2.7/1, ms1mx2.3/33, Error ellipse: s-maj=18.6km s-min=15.0km az=95.0*

GUC ***20*** *21:11:17.7±0.7, 17°.89S×69°.44W, h157km±3km, ML4.2*

VAO ***20*** *21:11:18.6±0.5, 17°.80S×69°.06W, h152km±6km, mb4.5*

ISC 20 21:11:16.2±0.6, 17°.83S±0°.04×69°.30W±0°.05, h150km±5km, n101, σ1$39/123, mb4.4/11, 1C-4D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.54**	**201**	⇑*i*P		**Pn**	**21 11 39.5**	**+1.0**
PB16				*i* S		**Sn**	**21 11 57.1**	**+1.7**
PB16	**IPOC Station P**	**0.54**	**201**			**Pn**	**21 11 39.5**	**+1.0**
PB16				Sn		**Sn**	**21 11 56.4**	**+0.9**
AP01	**Chacalluta**	**1.13**	**241**	*e*P		**Pn**	**21 11 42.1**	**-0.1**
AP01				*i* S		**Sn**	**21 12 01.5**	**-0.3**
AP01	**Chacalluta**	**1.13**	**241**	Pn		**Pn**	**21 11 42.0**	**-0.1**
AP01				Sn		**Sn**	**21 12 01.6**	**-0.3**
PB12	**IPOC Station P**	**1.25**	**231**	*e*P		**Pn**	**21 11 43.5**	**+0.1**
PB12				*i* S		**Sn**	**21 12 03.0**	**-1.2**
PB12				IAML			21 12 04.2	
	comp=E,4μm,0.4s							
PB12	**IPOC Station P**	**1.25**	**231**			**Pn**	**21 11 43.3**	**-0.1**
MNMC	**Minye Minye**	**1.33**	**192**	⇓*i*P		**Pn**	**21 11 45.5**	**+1.1**
MNMC				*i* S		**Sn**	**21 12 06.6**	**+0.7**
MNMC				IAML			21 12 07.7	
	comp=E,4μm,0.3s							
MNMC	**Minye Minye**	**1.33**	**192**			**Pn**	**21 11 45.5**	**+1.1**
GO01	**Chusmiza**	**1.84**	**177**	*e*P		**Pn**	**21 11 51.5**	**+1.5**
GO01				*i* S		**Sn**	**21 12 17.6**	**+1.7**
GO01	**Chusmiza**	**1.84**	**177**			**Pn**	**21 11 51.6**	**+1.6**
LPAZ	**La Paz**	**1.89**	**36**	P		**Pn**	**21 11 52.4**	**+1.6**
	comp=E,434nm,0.3s,baz=234,slow=2.0,SNR=7193							
LPAZ				S		**Sn**	**21 12 14.2**	**-3.0**
	comp=E,10nm,0.3s,baz=223,slow=6.3,SNR=3.9							
LPAZ	**La Paz**	**1.89**	**36**			**Pn**	**21 11 52.0**	**+1.2**
LPAZ	**La Paz**	**1.89**	**36**	*e*P		**Pn**	**21 11 52.4**	**+1.6**
PSGC	**Pisagua**	**1.93**	**204**	⇓*i*P		**Pn**	**21 11 50.7**	**+0.1**
PSGC				*i* S		**Sn**	**21 12 16.1**	**-1.0**
PSGC				IAML			21 12 17.0	
	comp=N,3μm,0.3s							
PSGCX	**Pisagua**	**1.93**	**204**			**Pn**	**21 11 50.8**	**+0.2**
PSGCX				Sn		**Sn**	**21 12 15.9**	**-1.2**
PB11	**IPOC Station P**	**1.95**	**190**	⇓*i*P		**Pn**	**21 11 51.6**	**+0.6**
PB11				*i* S		**Sn**	**21 12 17.5**	**-0.3**
PB11				IAML			21 12 22.3	
	comp=E,1μm,0.2s							
PB11	**IPOC Station P**	**1.95**	**190**			**Pn**	**21 11 52.1**	**+0.2**
PB08	**IPOC Station P**	**2.31**	**177**	⇓*i*P		**Pn**	**21 11 56.8**	**+1.3**
PB08				*i* S		**Sn**	**21 12 26.9**	**+1.4**
PB08				IAML			21 12 32.1	
	comp=E,706nm,0.2s							
PB08	**IPOC Station P**	**2.31**	**177**			**Pn**	**21 11 56.7**	**+1.3**
TA01	**Diego Aracena**	**2.85**	**197**	*e*P		**Pn**	**21 12 01.7**	**0.0**
TA01	**Diego Aracena**	**2.85**	**197**			**Pn**	**21 12 01.7**	**0.0**
PATCX	**Punta Patache**	**3.09**	**195**			**Pn**	**21 12 04.7**	**-0.1**
PB01	**IPOC Station P**	**3.21**	**183**	*e*P		**Pn**	**21 12 07.0**	**+0.7**
PB01				*i* S		**Sn**	**21 12 44.4**	**-0.7**
PB01				IAML			21 12 50.3	
	comp=N,615nm,0.2s							
PB01	**IPOC Station P**	**3.21**	**183**			**Pn**	**21 12 06.7**	**+0.4**
PB02	**IPOC Station P**	**3.52**	**189**	*e*P		**Pn**	**21 12 10.7**	**+0.3**
PB02				*i* S		**Sn**	**21 12 51.2**	**-1.1**
PB07	**IPOC Station P**	**3.92**	**188**	*e*P		**Pn**	**21 12 15.9**	**+0.3**
PB07				*i* S		**Sn**	**21 13 00.8**	**-1.0**
PB07	**IPOC Station P**	**3.92**	**188**			**Pn**	**21 12 16.0**	**+0.3**
PB09	**IPOC Station P**	**3.95**	**179**	*e*P		**Pn**	**21 12 17.3**	**+1.3**
PB09				*i* S		**Sn**	**21 13 02.5**	**0.0**
PB09	**IPOC Station P**	**3.95**	**179**			**Pn**	**21 12 17.4**	**+1.4**
PB03	**IPOC Station P**	**4.22**	**186**	*e*P		**Pn**	**21 12 20.0**	**+0.4**
PB04	**IPOC Station P**	**4.55**	**190**	*e*P		**Pn**	**21 12 24.1**	**+0.1**
PB04				*i* S		**Sn**	**21 13 14.4**	**-2.3**
PB04	**IPOC Station P**	**4.55**	**190**			**Pn**	**21 12 24.2**	**+0.3**
LVC	**Limon Verde**	**4.77**	**176**	P		**Pn**	**21 12 28.0**	**+1.0**
	comp=N,7.2nm,0.3s,baz=17,slow=8.9,SNR=71							
LVC				S		**Sn**	**21 13 19.3**	**-2.9**
	comp=N,27nm,0.3s,baz=337,slow=1.4,SNR=7.3							
LVC	**Limon Verde**	**4.77**	**176**			**Pn**	**21 12 27.8**	**+0.8**
LVC	**Limon Verde**	**4.77**	**176**	*e*P		**Pn**	**21 12 28.5**	**+1.5**
PB06	**IPOC Station P**	**4.86**	**183**			**Pn**	**21 12 28.0**	**0.0**
PB05	**IPOC Station P**	**5.07**	**189**	*e*P		**Pn**	**21 12 30.1**	**-0.6**
PB05				*i* S		**Sn**	**21 13 26.2**	**-2.7**
PB15	**IPOC Station P**	**5.36**	**182**			**Pn**	**21 12 34.8**	**+0.2**
PB10	**IPOC Station P**	**5.78**	**192**			**Pn**	**21 12 38.8**	**-1.2**
GO02	**Mina Guanaco**	**7.31**	**182**			**Pn**	**21 12 59.7**	**-0.9**
SIV	**San Ignacio**	**8.08**	**78**	P		**Pn**	**21 13 09.0**	**-1.8**
	comp=N,11nm,0.3s,baz=268,slow=11,SNR=76							
SIV				S		**Sn**	**21 14 35.6**	**-5.3**
	comp=N,4.7nm,0.3s,baz=167,slow=19,SNR=15							
SIV				LR		LR	21 17 01.6	
	comp=N,50nm,20.2s,baz=280,slow=43							
AC01	**Pan de Azucar**	**8.37**	**188**	Pn		**Pn**	**21 13 12.3**	**-2.3**
AC02	**Maricunga**	**8.97**	**179**	Pn		**Pn**	**21 13 23.1**	**+0.1**
AC02						**Sn**	**21 15 00.8**	**-2.1**
NNA	**Nana**	**9.32**	**307**	P		**Pn**	**21 13 27.1**	**-0.2**
	comp=N,15nm,0.3s,baz=146,slow=11,SNR=15							
NNA	**Nana**	**9.32**	**307**			**Pn**	**21 13 26.9**	**-0.4**
GO03	**Copiap**	**9.76**	**185**	Pn		**Pn**	**21 13 33.8**	**+0.6**
VILB	**Vilhena**	**10.02**	**62**	*e*P		**Pn**	**21 13 36.9**	**+0.2**
PTLB	**Pontes e Lacer**	**10.02**	**78**	*e*P		**Pn**	**21 13 34.9**	**-1.7**
AC04	**Llanos de Chal**	**10.46**	**189**	Pn		**Pn**	**21 13 37.9**	**-4.4**
SAML	**Samuel**	**10.64**	**35**			**Pn**	**21 13 42.9**	**-1.9**
SAML	**Samuel**	**10.64**	**35**	*e*P		**Pn**	**21 13 42.6**	**-2.2**
GO04	**Tololo Observa**	**12.37**	**186**	Pn		**Pn**	**21 14 04.4**	**-3.1**
CO03	**El Pedregal**	**13.02**	**185**			**Pn**	**21 14 14.7**	**-1.1**
CO02	**Combarbal**	**13.41**	**186**	Pn		**Pn**	**21 14 17.9**	**-2.8**
CFA	**Coronel Fontan**	**13.75**	**176**	P		**Pn**	**21 14 25.2**	**+0.1**
	comp=N,0.4nm,0.3s,baz=353,slow=18,SNR=2.4							
CPUP	**Villa Florida**	**13.95**	**129**	P		**Pn**	**21 14 26.1**	**-1.3**
	comp=N,0.3nm,0.3s,baz=310,slow=10,SNR=5.2							
CPUP	**Villa Florida**	**13.95**	**129**			**Pn**	**21 14 27.2**	**-0.2**
CO04	**Los Peladeros**	**14.24**	**186**	Pn		**Pn**	**21 14 31.1**	**-0.4**
CLDB	**Colider**	**14.79**	**64**	*e*P		**Pn**	**21 14 38.2**	**0.0**
VA03	**San Esteban**	**14.92**	**184**	P		**Pn**	**21 14 41.2**	**-0.4**
MT02	**Curacav**	**15.46**	**186**			**Pn**	**21 14 46.8**	**+0.5**
MT02				IAmb		IAmb	21 14 51.7	
	comp=Z,14nm,0.8s							
MT01	**Popeta**	**16.07**	**186**	P		**Pn**	**21 14 53.1**	**-0.7**
MT01				IAmb		IAmb	21 14 59.3	
	comp=Z,23nm,0.8s							
ARAG	**Araguaiana, MT**	**16.88**	**85**	*e*P		**P**	**21 15 01.7**	**-1.6**
BO02	**Sierra Bellavi**	**16.95**	**184**	Pn		**Pn**	**21 15 06.0**	**+1.4**
BO02				IAmb		IAmb	21 15 10.1	
	comp=Z,10nm,0.8s							
NPGB	**Novo Progresso**	**17.31**	**53**	*e*P		**Pn**	**21 15 09.2**	**+0.2**
PTGB	**Pitanga**	**17.45**	**116**	*e*P		**Pn**	**21 15 10.8**	**+0.1**
PTGB				*e*S		**S**	**21 18 22.9**	**-1.0**
ITAB	**Concordia**	**18.40**	**124**	*e*P		**P**	**21 15 20.3**	**+0.4**
FRTB	**Fartura**	**19.27**	**110**	*e*P		**P**	**21 15 30.1**	**+0.7**
FRTB				*e*S		**S**	**21 18 58.4**	**-1.3**
PTGA	**Pitinga**	**19.31**	**29**	P		**P**	**21 15 29.9**	**0.0**
	comp=Z,1.8nm,0.3s,baz=192,slow=20,SNR=8.9							
PTGA	**Pitinga**	**19.31**	**29**	P		**P**	**21 15 29.7**	**-0.2**
IPMB	**Ipameri, GO**	**20.07**	**94**	*e*P		**P**	**21 15 38.1**	**-0.1**
CNLB	**Canela**	**20.38**	**127**	*e*P		**P**	**21 15 41.8**	**+0.4**
BDFB	**Brasilia**	**20.50**	**87**	P		**P**	**21 15 43.3**	**+0.5**
	comp=Z,14nm,0.5s,baz=262,slow=9.1,SNR=22							
BDFB	**Brasilia**	**20.50**	**87**	P		**P**	**21 15 43.7**	**+0.9**
SPB	**Sao Paulo**	**21.23**	**109**	P		**P**	**21 15 50.3**	**-0.3**
SPB				IAmb		IAmb	21 15 50.9	
	comp=Z,11nm,0.6s							
SPB	**Sao Paulo**	**21.23**	**109**	*e*P		**P**	**21 15 50.2**	**-0.3**
PARB	**Paraibuna**	**22.82**	**108**	*e*P		**P**	**21 16 06.3**	**-0.3**
PLCA	**Paso Flores**	**22.85**	**182**	P		**P**	**21 16 08.0**	**+1.3**
	comp=Z,5.1nm,0.7s,baz=1.7,slow=11,SNR=19							
PLCA	**Paso Flores**	**22.85**	**182**	*e*P		**P**	**21 16 09.4**	**+2.7**
RUSC	**La Rusia**	**23.86**	**351**	P		**P**	**21 16 18.3**	**+1.8**
JANB	**Januaria**	**24.12**	**87**	*e*P		**P**	**21 16 18.3**	**-0.1**
LL01	**San Ignacio de**	**24.62**	**186**	P		**P**	**21 16 21.0**	**-1.6**
LL01				IAmb		IAmb	21 16 27.3	
	comp=Z,11nm,0.8s							
GDU01	**Guandu, BA**	**28.88**	**86**	*e*P		**P**	**21 17 01.4**	**+0.3**
BBGH	**Gun Hill**	**32.24**	**18**	P		**P**	**21 17 28.9**	**-1.7**
GOGA	**Godfrey**	**52.72**	**345**	P		**P**	**21 20 14.0**	**-1.5**
GOGA				IAmb		IAmb	21 20 21.0	
	comp=Z,6.0nm,0.8s							
T35A	**Sooner Cattle**	**60.20**	**335**	P		**P**	**21 21 08.1**	**-0.3**
T35A				IAmb		IAmb	21 21 14.5	
	comp=Z,3.8nm,0.8s							
VNA3	**Neumayer Olymp**	**63.66**	**162**	P		**P**	**21 21 33.8**	**+2.7**
VNA2	**Neumayer--Watz**	**64.22**	**161**	P		**P**	**21 21 37.6**	**+2.8**
	baz=293,slow=6.5							
SNAA	**Sanae**	**65.86**	**161**	P		**P**	**21 21 47.8**	**+2.4**
PV05	**Paradox Valley**	**67.00**	**327**	P		**P**	**21 21 52.8**	**-0.6**
LIC	**Lamto**	**67.77**	**75**	*e*PKP1		**P**	**21 22 00.0**	**+1.6**
	comp=Z,6.4nm,0.5s							
TIC	**Toumodi**	**67.93**	**75**	*e*PKP1		**P**	**21 21 59.9**	**+0.5**
KIC	**Kosan Boka**	**68.08**	**75**	*e*PKP1		**P**	**21 22 00.9**	**+0.6**
	comp=Z,11nm,0.5s							
DBIC	**Dimbokro**	**68.09**	**75**	P		**P**	**21 22 00.8**	**+0.5**
	comp=Z,5.4nm,0.6s,baz=242,slow=6.1,SNR=11							
DBIC	**Dimbokro**	**68.09**	**75**	IAmb		IAmb	21 22 07.6	
	comp=Z,3.6nm,1.1s							
ULM	**Lac du Bonnet**	**71.72**	**342**	P		**P**	**21 22 23.0**	**+1.2**
	comp=Z,3.0nm,0.5s,baz=172,slow=2.2,SNR=4.1							
ULM	**Lac du Bonnet**	**71.72**	**342**	P		**P**	**21 22 22.0**	**+0.2**
TORD	**Torodi Ar. Bea**	**76.50**	**71**	P		**P**	**21 22 50.9**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=250,slow=5.4,SNR=42							
YKA	**Yellowknife Ar**	**87.62**	**341**	P		**P**	**21 23 47.9**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=132,slow=5.2,SNR=7.2							
ASAR	**Alice Springs**	**132.95**	**210**	PKP		**PKPdf**	**21 30 15.5**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=122,slow=1.2,SNR=4.7							
ZALV	**Zalesovo Beam**	**138.76**	**23**	SKPbc		**SKiKP**	**21 33 47.6**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=300,slow=2.9,SNR=3.8							

IDC 20 21:18:24.4±412.0, 57°.52N×30°.02E, h0km, Error ellipse: s-maj=110.8km s-min=40.1km az=159.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.00**	**98**	*i*			21 46 15.0	
	baz=285,slow=318,SNR=3.6							
I37NO	**I37NO**	**12.65**	**341**	*i*			22 30 25.0	
	baz=151,slow=329,SNR=2.8							
I26DE	**FREYUNG INFRAS**	**13.04**	**235**	*i*			22 40 00.0	
	baz=50,slow=310,SNR=2.3							

IDC ***20*** *21:19:05.1±0.8, 17°.68N×94°.42W, h146km±7km, mb4.0/25, mb1 4.2/29, mb1mx4.1/44, mbtmp4.5/29, MS3.2/5, Ms1 3.2/5, ms1mx2.8/46, Error ellipse: s-maj=14.6km s-min=8.2km az=53.0*

NEIC ***20*** *21:19:05.3±2.0, 17°.61N±0°.06×94°.65W±0°.04, h150km±5km, Error ellipse: s-maj=10.5km s-min=2.7km az=213.0*

MEX ***20*** *21:19:07.0±0.5, 17°.52N×94°.68W, h152km±4km, MD4.2*

GCMT ***20*** *21:19:07.0±0.5, 17°.73N±0°.03×94°.55W±0°.03, h162km±5km, MW4.8/83, Moment Tensor Solution. s12,c12; s83,c96; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=.1.01±.08; Mθθ=0.60±.10; Mφφ 1.61±.10; Mrθ 0.82±.07; Mrφ=0.18±.12; Mθφ=-0.77±.07; Best double couple: M0 1.80600×10^16 NP1:ϕs326.00000°, δ38.00000°, λ-36.00000°. NP2: ϕs326.00000°, δ69.00000°, λ-123.00000°. Principal axes: T 1.8840, Plg17.0000°, Azm80.0000°; N -0.1540, Plg30.0000°, Azm339.0000°; P -1.7280, Plg54.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 21:19:05.2±0.5, 17°.54N±0°.04×94°.67W±0°.03, h154km±4km, n499, σ1$69/449, mb4.7/92, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.50**	**205**	P		**Pn**	**21 19 27.0**	**0.0**
	baz=36,slow=1.8							
CMIG				S		**Sn**	**21 19 42.6**	**-0.9**
	585nm,0.3s,baz=73,slow=19,SNR=23							
CMIG	**Matias Romero**	**0.50**	**205**	*e*P		**Pn**	**21 19 27.0**	**0.0**
CMIG				*i* S		**Sn**	**21 19 42.6**	**-0.9**
TUIG	**Tuzandepetl**	**0.54**	**25**	*e*P		**Pn**	**21 19 27.2**	**+0.1**
TUIG				*i* S		**Sn**	**21 19 43.5**	**-0.5**
TUIG	**Tuzandepetl**	**0.54**	**25**			**Pn**	**21 19 27.2**	**+0.1**
TUIG						**Sn**	**21 19 43.5**	**-0.5**
TGIG		**1.66**	**117**	*i* P		**Pn**	**21 19 37.2**	**+0.4**
TGIG				*i* S		**Sn**	**21 20 00.3**	**-0.7**
TGIG		**1.66**	**117**			**Pn**	**21 19 37.2**	**+0.4**
TGIG						**Sn**	**21 20 00.3**	**-0.7**
VHO	**Vista Hermosa**	**2.03**	**257**	*i* P		**Pn**	**21 19 41.2**	**+0.1**
VHO				*e*S		**Sn**	**21 20 07.5**	**-1.2**
HUIG	**Huatulco**	**2.24**	**218**	*e*P		**Pn**	**21 19 41.4**	**-2.0**
HUIG				*i* S		**Sn**	**21 20 11.8**	**-1.0**
HUIG	**Huatulco**	**2.24**	**218**			**Pn**	**21 19 41.4**	**-2.0**
HUIG						**Sn**	**21 20 11.8**	**-1.0**
PCIG		**2.29**	**143**	*e*P		**Pn**	**21 19 44.6**	**+0.6**
PCIG				*i* S		**Sn**	**21 20 14.2**	**+0.2**
PCIG		**2.29**	**143**			**Pn**	**21 19 44.6**	**+0.6**
PCIG						**Sn**	**21 20 14.2**	**+0.2**
TOIG	**Toxpalan**	**2.35**	**284**	*i* P		**Pn**	**21 19 45.1**	**+0.3**
TOIG				*i* S		**Sn**	**21 20 15.2**	**-0.2**
TPIG	**Tehuac#an**	**2.71**	**289**	*e*P		**Pn**	**21 19 49.7**	**+0.4**
TPIG				*i* S		**Sn**	**21 20 22.2**	**-1.0**
TPIG	**Tehuac#an**	**2.71**	**289**			**Pn**	**21 19 49.7**	**+0.4**
TPIG						**Sn**	**21 20 22.2**	**-1.0**
CCIG	**Comitan**	**2.73**	**117**	*i* P		**Pn**	**21 19 49.9**	**+0.5**
CCIG				*i* S		**Sn**	**21 20 23.3**	**-0.3**
CCIG	**Comitan**	**2.73**	**117**			**Sn**	**21 20 23.3**	**-0.3**
CCIG	**Comitan**	**2.73**	**117**			**Pn**	**21 19 49.4**	**-0.1**
LVIG	**Laguna Verde**	**2.73**	**323**	*i* P		**Pn**	**21 19 48.2**	**-1.1**
LVIG				*i* S		**Sn**	**21 20 20.1**	**-3.4**
LVIG	**Laguna Verde**	**2.73**	**323**			**Pn**	**21 19 48.2**	**-1.1**
LVIG						**Sn**	**21 20 20.1**	**-3.4**
PEIG	**Puerto Escondi**	**2.83**	**237**	*e*P		**Pn**	**21 19 48.2**	**-2.5**
PEIG				*i* S		**Sn**	**21 20 23.0**	**-2.7**
PEIG				*i* S		**Sn**	**21 20 24.4**	**-1.3**
HLIG	**Huajuapan de L**	**3.01**	**276**	*e*P		**Pn**	**21 19 52.8**	**-0.1**
HLIG				*i* S		**Sn**	**21 20 30.5**	**+0.6**
PNIG	**Pinotepa**	**3.51**	**251**	*i* P		**Pn**	**21 19 56.8**	**-2.3**
PNIG	**Pinotepa**	**3.51**	**251**			**Pn**	**21 19 56.8**	**-2.3**
TLIG	**Tlapa**	**3.72**	**271**			**Pn**	**21 20 01.7**	**-0.4**
UNM	**Universidad Na**	**4.64**	**293**			**Pn**	**21 20 15.5**	**+1.4**
APG	**El Apazote**	**4.76**	**121**	P		**Pn**	**21 20 15.0**	**-0.8**
	4.9nm,0.3s,baz=331,slow=15,SNR=47							
APG				S		**Sn**	**21 21 07.8**	**-2.9**
	24nm,0.3s,baz=328,slow=11,SNR=7.0							
MOIG	**Morelia**	**6.54**	**290**			**Pn**	**21 20 40.1**	**+0.7**
TEIG	**Tepich**	**6.61**	**65**	P		**Pn**	**21 20 38.2**	**-1.8**
	19nm,0.3s,baz=219,slow=12,SNR=71							
TEIG				LR		LR	21 23 49.4	
	comp=Z,199nm,18.9s,baz=253,slow=45							
TGUH	**Tegucigalpa,Un**	**7.91**	**115**	Pn		**Pn**	**21 20 59.0**	**+1.4**
CSGN	**Cosiguina Volc**	**8.22**	**123**			**Pn**	**21 21 05.3**	**+3.6**
CRIN	**San Cristobal**	**8.79**	**122**	Pn		**Pn**	**21 21 11.8**	**+2.6**
ZAIG	**Zacatecas**	**9.06**	**306**			**Pn**	**21 21 13.2**	**+0.3**
MATN	**Matagalpa**	**9.60**	**117**			**Pn**	**21 21 20.0**	**0.0**
ACON	**Acoyapa**	**10.72**	**120**			**Pn**	**21 21 35.1**	**+0.3**
ESPN	**Las Esperanzas**	**11.34**	**117**	Pn		**Pn**	**21 21 43.0**	**+0.2**
PLVR	**Palo Verde**	**11.52**	**127**	*e*P		**Pn**	**21 21 46.7**	**+1.3**
833A	**Chaparral WMA,**	**11.58**	**339**	P		**Pn**	**21 21 46.0**	**+0.1**
	baz=156							
JTS	**Las Juntas de**	**11.87**	**126**	P		**Pn**	**21 21 50.2**	**+0.4**
	5.1nm,0.3s,baz=347,slow=9.3,SNR=36							
JTS				S		**Sn**	**21 23 56.8**	**-4.3**
	1.2nm,0.3s,baz=331,slow=19,SNR=1.5							
JTS				LR		LR	21 26 53.9	
	comp=Z,74nm,20.1s,baz=20,slow=40							
JTS	**Las Juntas de**	**11.87**	**126**	*e*P		**Pn**	**21 21 50.3**	**+0.5**
CEDE	**Laguna Cedeo**	**11.94**	**125**	*e*P		**Pn**	**21 21 52.7**	**+1.9**
ARE1	**Arenal 1**	**11.94**	**125**	*e*P		**Pn**	**21 21 52.4**	**+1.7**
HKT	**Hockley**	**12.40**	**355**			**Pn**	**21 21 56.7**	**+0.3**
HDC	**Heredia**	**12.69**	**125**	Pn		**Pn**	**21 22 00.3**	**-0.2**
435B	**Jarrell**	**13.45**	**349**	P		**Pn**	**21 22 08.1**	**-1.9**
	baz=167							
JCT	**Junction City**	**13.70**	**341**	P		**Pn**	**21 22 13.1**	**-0.2**
	baz=158							
HPIG		**13.81**	**314**	Pn		**Pn**	**21 22 15.4**	**+0.6**
NATX	**Nacogdoches**	**14.15**	**0**	P		**Pn**	**21 22 17.9**	**-1.0**
	baz=179							
CBCY	**The Bluff, Cay**	**14.30**	**79**			**Pn**	**21 22 21.4**	**+0.7**
344A	**Westbrook Farm**	**14.30**	**14**	Pn		**Pn**	**21 22 21.5**	**+0.8**
TX31	**Lajitas Ar. Si**	**14.34**	**327**			**Pn**	**21 22 21.6**	**+0.2**
TX32	**Lajitas Array**	**14.34**	**327**			**Pn**	**21 22 21.8**	**+0.4**
TXAR	**Lajitas Array**	**14.34**	**327**	P		**P**	**21 22 23.0**	**-0.9**
	0.2nm,0.3s,baz=148,slow=15,SNR=8.8							
237A	**Washetta, Mont**	**14.43**	**356**	Pn		**Pn**	**21 22 22.2**	**-0.1**
WHTX	**Lake Whitney,**	**14.61**	**351**	P		**Pn**	**21 22 23.8**	**-0.7**
	baz=168							
WHTX	**Lake Whitney,**	**14.61**	**351**			**Pn**	**21 22 25.2**	**+0.7**
061Z	**Ochoppi**	**15.22**	**55**	Pn		**Pn**	**21 22 31.9**	**-0.3**
Z38A	**Mt. Pleasant**	**15.65**	**359**	P		**P**	**21 22 38.0**	**-0.3**
553A	**Crawfordville**	**15.67**	**35**	P		**P**	**21 22 40.2**	**+1.7**
553A						IAmb	IAmb	21 22 41.1
	comp=Z,45nm,0.8s							
ABTX	**Abilene, Hawle**	**15.67**	**344**	P		**Pn**	**21 22 37.5**	**-0.3**
	baz=161							
ABTX	**Abilene, Hawle**	**15.67**	**344**	P		**Pn**	**21 22 38.2**	**+0.5**
Z41A	**Richland Creek**	**15.74**	**6**	P		**Pn**	**21 22 36.1**

	baz=219							
X54A	**Belton**	20.18	31	P		P	21 23 26.6	-1.2
	baz=215,SNR=18							
NHSC	**New Hope**	20.25	37	P		P	21 23 26.5	-2.0
	baz=223							
ANMO	**Albuquerque**	20.27	331	P		P	21 23 30.5	+1.5
	comp=Z,2.6nm,0.7s,baz=122,slow=13,SNR=7.6							
ANMO	**Albuquerque**	20.27	331	P		P	21 23 30.3	+1.3
	baz=145							
ANMO	**Albuquerque**	20.27	331	P		Pn	21 23 31.0	-1.7
BG3	**Lake Jocassee**	20.29	29	P		P	21 23 28.2	-0.7
V51A	**Loudon**	20.36	25	IAmb		IAmb	21 23 31.7	
	comp=Z,29nm,0.7s							
TKL	**Tuckaleechee C**	20.47	26	P		P	21 23 30.2	-0.7
	comp=Z,25nm,0.4s,baz=210,slow=9.0,SNR=34							
X55A	**Gracelyn & Ava**	20.49	32	P		P	21 23 29.7	-1.4
	baz=217,SNR=16							
Z58A	**St. Stephen**	20.63	38	P		P	21 23 31.4	-1.1
	baz=223,SNR=5.6							
S44A	**Carbondale**	20.63	12	IAmb		IAmb	21 23 37.4	
	comp=Z,25nm,0.8s							
CCM	**Cathedral Cave**	20.66	8	P		P	21 23 31.7	-1.1
	baz=189							
CCM	**Cathedral Cave**	20.66	8	P		P	21 23 31.7	-1.1
CCM				IAmb		IAmb	21 23 33.2	
	comp=Z,42nm,0.7s							
SIUC	**Southern Illin**	20.66	12	IAmb		IAmb	21 23 37.7	
	comp=Z,29nm,0.8s							
PAULI	**Pauline**	20.68	31	IAmb		IAmb	21 23 34.4	
	comp=Z,38nm,0.7s							
TUC	**Tucson**	20.69	318	P		P	21 23 34.9	+1.5
	baz=131							
TUC	**Tucson**	20.69	318	P		P	21 23 33.7	+0.3
V52A	**Sevierville**	20.71	26	IAmb		IAmb	21 23 37.8	
	comp=Z,21nm,0.8s							
W54A	**Cherokee Point**	20.71	30	P		P	21 23 32.7	-0.7
	baz=215,SNR=4							
R40A	**Maddies Statio**	20.78	5	IAmb		IAmb	21 23 37.3	
	comp=Z,24nm,0.7s							
Y57A	**Sumter**	20.80	35	P		P	21 23 32.6	-1.8
	baz=221							
Y57A	**Sumter**	20.80	35	P		P	21 23 32.5	-1.9
Y57A				IAmb		IAmb	21 23 34.7	
	comp=Z,20nm,0.6s							
X56A	**White Oak**	20.82	33	P		P	21 23 33.1	-1.5
	baz=219,SNR=15							
Z59A	**Georgetown, SC**	20.88	39	P		P	21 23 33.7	-1.5
	baz=225							
Y58A	**Scranton**	21.12	37	P		P	21 23 35.6	-2.2
	baz=223							
KMSC	**Kings Mountain**	21.17	32	P		P	21 23 37.1	-1.2
	baz=217,SNR=25							
BIRD	**Birdtown, Kers**	21.24	34	IAmb		IAmb	21 23 38.8	
	comp=Z,17nm,0.8s							
T50A	**Nancy**	21.25	22	IAmb		IAmb	21 23 39.8	
	comp=Z,32nm,0.8s							
USIN	**University of**	21.25	15	P		P	21 23 38.0	-1.2
USIN				IAmb		IAmb	21 23 40.0	
	comp=Z,32nm,0.8s							
T25A	**Trinidad**	21.33	338	P		P	21 23 42.4	+2.1
	baz=153							
TZTN	**Tazewell**	21.33	25	P		P	21 23 38.4	-1.7
	baz=210,SNR=9.9							
TZTN	**Tazewell**	21.33	25	IAmb		IAmb	21 23 39.5	
	comp=Z,23nm,0.9s							
V54A	**Nebo**	21.39	29	P		P	21 23 39.4	-1.3
	baz=214,SNR=25							
KSU1	**Kansas State U**	21.55	356	P		P	21 23 42.1	-0.2
	baz=174							
KSU1	**Kansas State U**	21.55	356	P		P	21 23 41.0	-1.3
KSU1				IAmb		IAmb	21 23 44.8	
	comp=Z,24nm,1.1s							
W56A	**Indian Trail**	21.55	33	P		P	21 23 40.9	-1.5
	baz=219,SNR=16							
CBKS	**Cedar Bluff**	21.65	349	P		P	21 23 44.4	+0.9
	baz=166							
CBKS	**Cedar Bluff**	21.65	349	IAmb		IAmb	21 23 45.9	
	comp=Z,30nm,1.0s							
X58A	**Rowland**	21.78	36	P		P	21 23 42.4	-2.4
	baz=222							
X58A	**Rowland**	21.78	36	P		P	21 23 43.4	-1.5
X58A				IAmb		IAmb	21 23 44.6	
	comp=Z,26nm,0.5s							
V55A	**Taylorsville**	21.80	31	P		P	21 23 43.6	-1.4
	baz=216,SNR=31							
214A	**Organ Pipe Nat**	21.80	315	P		P	21 23 46.3	+1.1
	baz=126							
W57A	**Gilead**	21.87	34	P		P	21 23 43.9	-1.9
	baz=220,SNR=21							
WCI	**Wyandotte Cave**	21.88	18	P		P	21 23 43.8	-1.9
	baz=201							
WCI	**Wyandotte Cave**	21.88	18	P		P	21 23 44.0	-1.8
P38A	**Dawn**	22.02	2	IAmb		IAmb	21 23 46.4	
	comp=Z,22nm,0.8s							
P40A	**Paris**	22.03	5	IAmb		IAmb	21 23 47.4	
	comp=Z,44nm,0.8s							
U54A	**Nelsons Funny**	22.05	28	P		P	21 23 46.2	-1.5
	baz=214,SNR=21							
V56A	**Mocksville**	22.12	32	P		P	21 23 46.1	-2.2
	baz=218,SNR=10							
T53A	**Wise**	22.12	27	P		P	21 23 46.4	-2.0
	baz=212,SNR=8.3							
W58A	**Raeford**	22.18	35	P		P	21 23 47.0	-1.9
	baz=222							
S51A	**Beattyville**	22.26	24	IAmb		IAmb	21 23 48.5	
	comp=Z,33nm,0.6s							
U55A	**TA2, Sparta**	22.40	30	P		P	21 23 49.4	-1.6
	baz=216,SNR=42							
KSCO	**Kaye Shedlock'**	22.49	344	P		P	21 23 50.8	-1.1
V57A	**Coltrane Farms**	22.55	33	P		P	21 23 50.6	-1.8
	baz=219,SNR=18							
U56A	**King**	22.60	31	P		P	21 23 51.4	-1.5
	baz=217,SNR=11							
T54A	**Tazewell**	22.61	28	P		P	21 23 51.0	-2.0
	baz=214,SNR=16							
V58A	**Windy Hill, Pi**	22.82	34	P		P	21 23 53.1	-1.8
	baz=221,SNR=16							
S53A	**Williamson**	22.89	26	P		P	21 23 53.5	-2.1
	baz=212							
P46A	**Rosedale**	22.93	15	IAmb		IAmb	21 23 55.8	
	comp=Z,51nm,0.9s							
T55A	**Pulaski**	23.02	29	P		P	21 23 55.4	-1.4
	baz=215,SNR=23							
MVCO	**Mesa Verde**	23.07	331	P		P	21 23 57.9	+0.4
	baz=144							
O44A	**Mansfield**	23.16	12	IAmb		IAmb	21 23 57.6	
	comp=Z,38nm,0.7s							
U57A	**Blanch**	23.19	33	P		P	21 23 56.6	-1.7
	baz=219,SNR=19							
N38A	**Joes South For**	23.20	3	P		P	21 23 57.6	-0.7
N35A	**Tabor**	23.25	358	IAmb		IAmb	21 23 59.1	
	comp=Z,51nm,0.9s							
BLA	**Blacksburg**	23.27	30	P		P	21 23 57.2	-1.9
	baz=216,SNR=18							
P48A	**Milroy**	23.27	18			PcP	21 27 43.7	+1.7
V59A	**Middlesex**	23.28	36	P		P	21 23 56.8	-2.3
	baz=222							
T56A	**Rocky Mt**	23.31	31	P		P	21 23 57.7	-1.7
	baz=217,SNR=21							
S54A	**Dingess, Beckl**	23.34	28	P		P	21 23 57.6	-2.1
	baz=213,SNR=8.4							
S54A	**Dingess, Beckl**	23.34	28	IAmb		IAmb	21 23 59.5	
	comp=Z,30nm,0.9s							
HDIL	**Hopedale**	23.40	10	P		P	21 23 58.9	-1.3
	baz=192							
HDIL	**Hopedale**	23.40	10	P		P	21 23 59.4	-0.7
HDIL				IAmb		IAmb	21 24 00.0	
	comp=Z,44nm,0.9s							
R53A	**Hurricane**	23.51	26	P		P	21 23 59.5	-1.7
	baz=211,SNR=18							
P49A	**Miami Univ. Ec**	23.56	20	P		P	21 23 59.3	-2.3
	baz=204,SNR=22							
Q51A	**Peebles**	23.57	22	P		P	21 23 59.8	-2.0
	baz=207,SNR=22							
U58A	**Oxford**	23.58	34	P		P	21 23 59.4	-2.4
	baz=221,SNR=7.9							
T57A	**Hurt**	23.67	32	P		P	21 24 00.8	-1.8
	baz=219,SNR=17							
T57A	**Hurt**	23.67	32	IAmb		IAmb	21 24 03.2	
	comp=Z,28nm,0.6s							
SFIN	**Lafayette**	23.68	15	P		P	21 24 01.1	-1.6
	baz=198,SNR=11							
SFIN	**Lafayette**	23.68	15	IAmb		IAmb	21 24 02.8	
	comp=Z,38nm,0.8s							
S55A	**Lewisburg**	23.68	29	P		P	21 24 00.7	-2.2
	baz=215,SNR=10							
R54A	**Victor**	23.80	27	P		P	21 24 01.8	-2.1
	baz=213,SNR=19							
GLA	**Glamis**	23.82	314	P		P	21 24 04.6	+0.4
	baz=125							
GLA	**Glamis**	23.82	314	P		P	21 24 04.3	+0.1
Q52A	**Bidwell**	23.92	24	P		P	21 24 03.3	-1.7
	baz=210,SNR=28							
P50A	**Jamestown**	23.93	21	P		P	21 24 03.0	-2.0
	baz=206,SNR=32							
BGNE	**Belgrade**	23.97	354	P		P	21 24 04.5	-1.0
	baz=171							
T58A	**Grand View Acr**	24.00	33	P		P	21 24 03.6	-2.1
	baz=220,SNR=7.3							
S56A	**Natural Bridge**	24.05	30	P		P	21 24 03.8	-2.4
	baz=217							
RUSC	**La Rusia**	24.06	116	P		P	21 24 06.3	-0.7
P51A	**Williamsport**	24.08	22	P		P	21 24 04.3	-2.0
	baz=208,SNR=13							
O48A	**Farmland**	24.08	18	P		P	21 24 04.2	-2.2
	baz=202,SNR=37							
PDMCI	**Parker Dam,Lak**	24.12	318	P		P	21 24 08.0	+1.2
	baz=128							
ISCO	**Idaho Springs**	24.13	339	P		P	21 24 07.5	+0.3
	baz=153							
Q53A	**Leroy**	24.14	26	P		P	21 24 05.1	-1.8
	baz=211,SNR=13							
PV07	**Paradox Valley**	24.14	332	P		P	21 24 08.7	+1.4
OGNE	**Ogallala**	24.17	346	P		P	21 24 08.0	+0.7
	baz=162							
R55A	**Marlinton**	24.27	29	P		P	21 24 06.5	-1.7
	baz=215,SNR=24							
SCIA	**State Center**	24.31	3	P		P	21 24 07.5	-1.0
	baz=183,SNR=8.1							
L34A	**Svendsen Farm,**	24.39	357	P		P	21 24 07.9	-1.2
L34A				IAmb		IAmb	21 24 11.1	
	comp=Z,37nm,0.8s							
S57A	**Dark Hollow, R**	24.41	31	P		P	21 24 07.2	-2.2
	baz=218							
S57A	**Dark Hollow, R**	24.41	31	IAmb		IAmb	21 24 12.2	
	comp=Z,13nm,0.7s							
O50A	**Cable**	24.47	21	P		P	21 24 07.7	-2.2
	baz=206,SNR=5.3							
IKP	**In-Ko-Pah, Jac**	24.49	312	P		P	21 24 10.8	+0.5
	baz=122							
Q54A	**Coxs Mills**	24.53	27	P		P	21 24 08.8	-1.7
	baz=213,SNR=11							
Q54A	**Coxs Mills**	24.53	27	IAmb		IAmb	21 24 11.4	
	comp=Z,22nm,0.6s							
T59A	**Double "B" Far**	24.54	35	P		P	21 24 08.2	-2.4
	baz=222							
P52A	**Corning**	24.56	24	P		P	21 24 08.8	-2.0
	baz=209,SNR=6.6							
BC3	**Big Chuckawall**	24.60	315	P		P	21 24 12.7	+1.4
	baz=125							
N48A	**Decatur**	24.68	18	P		P	21 24 09.6	-2.2
	baz=202,SNR=24							
IRM	**Iron Mountain**	24.69	316	P		P	21 24 13.6	+1.6
	baz=126							
P53A	**Whipple**	24.72	25	P		P	21 24 10.6	-1.6
	baz=211,SNR=12							
P53A	**Whipple**	24.72	25	IAmb		IAmb	21 24 13.5	
	comp=Z,35nm,1.0s							
L42A	**Oliver, Polo**	24.75	9			pP	21 24 46.7	+2.7
S58A	**Poland Farm, P**	24.76	33	P		P	21 24 10.6	-2.0
	baz=220							
ACSO	**Alum Creek Sta**	24.77	22	P		P	21 24 10.4	-2.2
	baz=207,SNR=8.7							
O51A	**Waskala**	24.83	22	P		P	21 24 10.9	-2.3
	baz=208							
Q55A	**Buckhannon**	24.87	28	P		P	21 24 11.9	-1.7
	baz=214,SNR=11							
SDV	**Santo Domingo**	24.90	107	P		P	21 24 13.1	-1.2
	comp=Z,10nm,0.6s,baz=305,slow=5.5,SNR=12							
SDV	**Santo Domingo**	24.90	107	P		P	21 24 13.1	-1.2
SDV				IAmb		IAmb	21 24 17.3	
	comp=Z,14nm,0.8s							
N49A	**Columbus Grove**	24.99	19	IAmb		IAmb	21 24 15.7	
	comp=Z,30nm,0.7s							
N49A						PcP	21 27 46.4	+0.7
R57A	**Stanardsville**	25.04	31	P		P	21 24 13.1	-2.0
	baz=218							
O52A	**Adamsville**	25.09	24	P		P	21 24 13.6	-2.0
	baz=209,SNR=8.8							
O52A	**Adamsville**	25.09	24	IAmb		IAmb	21 24 14.7	
	comp=Z,41nm,1.0s							
O52A						pP	21 24 49.2	+1.8
R58B	**Mineral**	25.11	33	P		P	21 24 13.8	-1.9
	baz=220							
KNB	**Kanab**	25.15	324	P		P	21 24 15.9	-0.4
N50A	**Nevada**	25.19	21	P		P	21 24 14.9	-1.5
	baz=206							
P54A	**Burton**	25.20	26	P		P	21 24 14.9	-1.7
	baz=213,SNR=8.0							
L44A	**Lake County Fo**	25.22	12	P		P	21 24 15.4	-1.3
	baz=195							
K31A	**O'Neill**	25.24	353	P		P	21 24 15.9	-1.0
K31A				IAmb		IAmb	21 24 20.7	
	comp=Z,29nm,0.7s							
R58A	**Rapidan**	25.30	32	P		P	21 24 15.7	-1.8
	baz=219,SNR=5.6							
Q56A	**Snyder Ridge,**	25.31	29	P		P	21 24 16.1	-1.5
	baz=216							
M48A	**Edgerton**	25.34	18	P		P	21 24 15.5	-2.3
	baz=202							
M48A	**Edgerton**	25.34	18	IAmb		IAmb	21 24 20.3	
	comp=Z,29nm,0.9s							
O53A	**New Philadelph**	25.45	24	P		P	21 24 16.3	-2.5
	baz=210,SNR=8.5							
MCWV	**Mont Chateau**	25.52	27	P		P	21 24 17.5	-1.9
	baz=214							
M49A	**Liberty Center**	25.56	19	P		P	21 24 17.3	-2.4
	baz=204,SNR=7.3							
JFWS	**Jewell Farm**	25.57	8	P		P	21 24 18.1	-1.7
	baz=189,SNR=18							
JFWS	**Jewell Farm**	25.57	8			pP	21 24 53.2	+1.4
N51A	**Ashland**	25.59	22	P		P	21 24 19.3	-0.7
N51A				IAmb		IAmb	21 24 22.8	
	comp=Z,19nm,0.6s							
Q57A	**Strasburg**	25.68	30	P		P	21 24 19.1	-1.8
	baz=218							
O54A	**Avella**	25.73	26	P		P	21 24 19.6	-1.7
	baz=212							
O54A	**Avella**	25.73	26	P		P	21 24 19.6	-1.7
N52A	**McGinn's Farm,**	25.75	23	P		P	21 24 19.1	-2.4
	baz=209							
L48A	**N Adams**	25.85	18	P		P	21 24 20.3	-2.1
	baz=202							
N53A	**Lisbon**	26.07	24	P		P	21 24 22.4	-2.0
	baz=211,SNR=15							
ECSD	**EROS Data Cent**	26.16	357	P		P	21 24 24.1	-1.1
	baz=175,SNR=10.0							
ECSD	**EROS Data Cent**	26.16	357	IAmb		IAmb	21 24 26.5	
	comp=Z,12nm,0.8s							
SHPR	**Sheep Range**	26.17	320	P		P	21 24 25.5	0.0
O55A	**Ligonier**	26.21	27	P		P	21 24 23.4	-2.2
	baz=214							
K47A	**Verntville**	26.36	16	P		P	21 24 24.6	-2.4
	baz=201,SNR=8.5							
I37A	**Lemond, Waseca**	26.41	2	IAmb		IAmb	21 24 27.6	
	comp=Z,12nm,0.5s							
I40A	**Norwalk**	26.49	7	IAmb		IAmb	21 24 28.6	
	comp=Z,16nm,0.9s							
N54A	**Moraine State**	26.54	25	P		P	21 24 26.1	-2.5
	baz=212							
N54A	**Moraine State**	26.54	25	IAmb		IAmb	21 24 28.6	
	comp=Z,29nm,1.4s							
O56A	**Blue Knob Stat**	26.58	28	P		P	21 24 26.4	-2.6
	baz=216							
M53A	**WI Miller and**	26.67	24	P		P	21 24 27.7	-2.1
	baz=210,SNR=5.7							
I42A	**Draeger Farm,**	26.71	9	P		P	21 24 29.1	-0.9
I42A				IAmb		IAmb	21 24 30.0	
	comp=Z,10nm,0.6s							
I42A						pP	21 25 04.6	+2.5
SUSD	**Miller**	27.06	353	P		P	21 24 33.2	0.0
	baz=170							
P59A	**Jarrettsville**	27.09	32	P		P	21 24 30.8	-2.7
	baz=220							
M54A	**Oil Creek Stat**	27.13	25	P		P	21 24 32.3	-1.6
	baz=212							
K50A	**Casco**	27.16	20	P		P	21 24 32.4	-1.7
	baz=205							
N56A	**West Decatur**	27.23	28	P		P	21 24 32.7	-2.1
	baz=216							
L53A	**Girard**	27.27	24	P		P	21 24 33.2	-1.9
	baz=211,SNR=6.1							
MPMC	**Manual Prospec**	27.36	317	P		P	21 24 36.9	+0.6
	baz=126							
N57A	**Milroy**	27.44	29	P		P	21 24 34.5	-2.1
	baz=217							
M55A	**Ridgway**	27.48	27	P		P	21 24 34.7	-2.3
	baz=214							
ERPA	**Erie**	27.52	24	P		P	21 24 35.3	-2.0
	baz=211							
J49A	**Marlette**	27.53	18	P		P	21 24 34.9	-2.5
	baz=204							
SPMN	**Marine on St.**	27.64	3	P		P	21 24 37.1	-1.3
	baz=183,SNR=8.2							
R11A	**Troy Canyon, C**	27.65	323	P		P	21 24 40.7	+1.9
	baz=132							
O59A	**Robesonia**	27.75	31	P		P	21 24 37.4	-2.0
	baz=220							
K52A	**Tillsonburg**	27.82	22	P		P	21 24 36.7	-3.3
	baz=209							
L54A	**Sinclairville**	27.88	25	P		P	21 24 38.9	-1.7
	baz=212							
G40A	**Rib Lake**	27.89	7	IAmb		IAmb	21 24 40.3	
	comp=Z,13nm,1.2s							
N58A	**Sunbury**	27.90	30	P		P	21 24 38.1	-2.6
	baz=218							
CWC	**Cottonwood Cre**	27.97	317	P		P	21 24 42.7	+1.0
	baz=126							
M57A	**Sunshine Farm,**	28.09	29	P		P	21 24 40.5	-1.9
	baz=217							
O60A	**Telford**	28.15	32	P		P	21 24 41.4	-1.5
	baz=221							
PDAR	**Pinedale Array**	28.16	336	PP		PP	21 25 40.6	-9.2
	comp=Z,1.4nm,1.0s,baz=134,slow=8.5,SNR=5.0							
L55A	**Hinsdale**	28.20	26	P		P	21 24 42.0	-1.5
	baz=214							
F36A	**Milaca**	28.25	2	IAmb		IAmb	21 24 43.6	
	comp=Z,15nm,1.1s							
J52A	**Paris**	28.30	22	P		P	21 24 42.0	-2.2
	baz=209							
WVNY	**West Valley, N**	28.32	26	IAmb		IAmb	21 24 43.6	
	comp=Z,12nm,0.8s							
H47A	**Mio**	28.37	16	P		P	21 24 42.9	-2.0
	baz=201							
N59A	**State Game Lan**	28.41	31	P		P	21 24 43.3	-2.0
	baz=220							
M58A	**Price's Panora**	28.43	30	P		P	21 24 43.6	-1.9
	baz=218							
G45A	**Suttons Bay**	28.43	13	P		P	21 24 44.1	-1.3
	baz=198							
K54A	**Basiliko Farm,**	28.45	25	P		P	21 24 43.9	-1.7
	baz=213							
GLMI	**Grayling**	28.48	15	P		P	21 24 44.2	-1.6
	baz=200							
I51A	**Listowel**	28.61	21	P		P	21 24 44.4	-2.5
	baz=208,SNR=5.6							
N60A	**Cedar Hill Far**	28.71	32	P		P	21 24 45.0	-2.9
	baz=221							
L57A	**Andrews Acres**	28.75	28	P		P	21 24 46.2	-2.0
	baz=217							
K55A	**Perry**	28.80	26	P		P	21 24 47.1	-1.7
	baz=214							
M59A	**Waymart**	29.05	31	P		P	21 24 48.9	-2.1
	baz=220							
F45A	**CMU Biological**	29.08	13	P		P	21 24 49.2	-1.9
	baz=198							
E38A	**The Farm, Brul**	29.09	4	IAmb		IAmb	21 24 50.9	
	comp=Z,17nm,0.8s							
K56A	**Middlesex**	29.10	27	P		P	21 24 48.9	-2.4
	baz=215							
ELK	**Elko**	29.14	327	P		P	21 24 52.8	+0.8
	comp=Z,1.5nm,0.7s,baz=94,slow=9.9,SNR=4.4							
ELK	**Elko**	29.14	327	P		P	21 24 52.5	+0.4
L58A	**Harry Jones Me**	29.24	29	P		P	21 24 50.6	-2.1
	baz=219							
M60A	**Port Jervis**	29.29	32	P		P	21 24 50.7	-2.4
	baz=222							
BINY	**Binghamton**	29.30	29	P		P	21 24 50.9	-2.3
	baz=218							
NVAR	**Mina Array Bea**	29.32	320	P		P	21 24 56.1	+2.5
	comp=Z,6.2nm,0.7s,baz=135,slow=9.6,SNR=32							
NVAR				PcP		PcP	21 27 57.5	+1.1
	comp=Z,8.4nm,1.2s,baz=131,slow=3.1,SNR=6.3							
NVAR				LR		LR	21 37 18.7	
	comp=Z,49nm,20.3s,baz=252,slow=37							
MDPB	**Devils Postpil**	29.32	318	P		P	21 24 53.1	-0.6
J55A	**Hilton**	29.35	26	P		P	21 24 51.7	-1.8
	baz=214							
PAL	**Palisades**	29.42	33	P		P	21 24 51.9	-2.3
	baz=223							
E43A	**Lone Tree Farm**	29.45	11	IAmb		IAmb	21 24 53.3	
	comp=Z,11nm,0.6s							
K57A	**Scipio Center**	29.48	28	P		P	21 24 52.6	-2.1
	baz=217							
M61A	**Granite Spring**	29.72	33	P		P	21 24 54.4	-2.4
	baz=223							
L59A	**Walton**	29.74	30	P		P	21 24 54.9	-2.1
	baz=220							
J56A	**Wolcott**	29.77	27	P		P	21 24 55.1	-2.1
	baz=216							
J56A	**Wolcott**	29.77	27	IAmb		IAmb	21 24 56.1	
	comp=Z,16nm,1.1s							
K58A	**Earlville**	29.89	29	P		P	21 24 56.6	-1.8
	baz=218							
F48A	**Evansville**	29.93	17	P		P	21 24 57.1	-1.5
	baz=203							
L60A	**Shokan**	29.99	31	P		P	21 24 57.5	-1.7
	baz=221							
SADO	**Sadowa**	30.11	22	P		P	21 24 58.0	-2.3
	comp=Z,12nm,0.5s,baz=242,slow=8.4,SNR=12							
SADO	**Sadowa**	30.11	22	IAmb		IAmb	21 24 59.2	
	comp=Z,14nm,0.8s							
H53A	**Bobcaygeon**	30.15	23	P		P	21 24 58.5	-2.1
	baz=211,SNR=22							
I55A	**Frankford**	30.20	25	P		P	21 24 58.8	-2.2
	baz=213,SNR=6.2							
PECO	**Prince Edward**	30.24	26	IAmb		IAmb	21 25 00.9	
	comp=Z,11nm,0.8s							
J57A	**Williamstown**	30.25	28	P		P	21 24 59.1	-2.3
	baz=217,SNR=5.5							
J57A	**Williamstown**	30.25	28	IAmb		IAmb	21 25 00.2	
	comp=Z,16nm,0.9s							
E47A	**Iron Bridge**	30.34	16	P		P	21 25 00.0	-2.2
	baz=201							
EYMN	**Ely**	30.43	4	P		P	21 25 01.5	-1.6
	baz=186,SNR=5.6							
DELO	**Deloro Mine**	30.47	24	IAmb		IAmb	21 25 02.3	
	comp=Z,15nm,0.8s							
J58A	**Remsen**	30.53	28	P		P	21 25 01.7	-2.3
	baz=218							
D46A	**Sault St. Mari**	30.56	14	P		P	21 25 02.3	-1.8
	baz=200							
G53A	**Haliburton**	30.60	23	P		P	21 25 02.0	-2.5
	baz=211,SNR=12							
E48A	**Lockeyer**	30.66	17	P		P	21 25 03.3	-1.8
	baz=203							
H55A	**Tweed**	30.67	25	P		P	21 25 02.8	-2.4
	baz=214,SNR=8.8							

E52A	**Mattawa**	**31.59**	**21**	P	**P**	**21 25 11.0**	**-2.2**
	baz=210						
D49A	**Beulah Townshi**	**31.61**	**17**	P	**P**	**21 25 11.2**	**-2.2**
	baz=204						
L64A	**Middleborough**	**31.72**	**35**	P	**P**	**21 25 12.2**	**-2.2**
	baz=227						
HRV	**Adam Dziewonsk**	**31.73**	**33**	P	**P**	**21 25 12.0**	**-2.5**
	baz=225						
J61A	**Chester**	**31.82**	**31**	P	**P**	**21 25 13.5**	**-1.7**
	baz=222						
I60A	**Shoreham**	**31.83**	**30**	P	**P**	**21 25 13.2**	**-2.1**
	baz=221						
LONY	**Lake Ozonia**	**31.83**	**28**	P	**P**	**21 25 13.1**	**-2.3**
	baz=218,SNR=6.2						
LONY	**Lake Ozonia**	**31.83**	**28**	IAmb	IAmb	21 25 14.3	
	comp=Z,13nm,0.9s						
H58A	**Gabriels**	**31.85**	**28**	P	**P**	**21 25 13.4**	**-2.2**
	baz=219						
D50A	**G1974 Best Tow**	**31.97**	**19**	P	**P**	**21 25 14.3**	**-2.3**
	baz=207						
E53A	**Dumoine, Ponti**	**32.02**	**22**	P	**P**	**21 25 15.8**	**-1.2**
	baz=211						
G57A	**Newington**	**32.03**	**27**	P	**P**	**21 25 15.2**	**-1.9**
	baz=217						
D51A	**Lot 18 Range I**	**32.05**	**20**	P	**P**	**21 25 15.1**	**-2.2**
	baz=208						
ORIO	**Orleans, Innes**	**32.09**	**26**	P	**P**	**21 25 15.7**	**-1.9**
	baz=216						
E54A	**Lac Daplat, Po**	**32.24**	**23**	P	**P**	**21 25 16.8**	**-2.1**
	baz=212,SNR=8.6						
I61A	**Oroboro, Fairl**	**32.42**	**31**	P	**P**	**21 25 19.0**	**-1.5**
	baz=222						
D53A	**Lac Vacive, Po**	**32.61**	**22**	P	**P**	**21 25 20.1**	**-2.0**
	baz=211,SNR=6.1						
D53A	**Lac Vacive, Po**	**32.61**	**22**	IAmb	IAmb	21 25 21.4	
	comp=Z,20nm,1.5s						
ULM	**Lac du Bonnet**	**32.64**	**359**	P	**P**	**21 25 20.5**	**-1.9**
	comp=Z,17nm,0.9s,baz=177,slow=10,SNR=13						
ULM	**Lac du Bonnet**	**32.64**	**359**	IAmb	IAmb	21 25 22.2	
	comp=Z,19nm,1.0s						
J08A	**Circle Bar Ran**	**32.69**	**327**	IAmb	IAmb	21 25 25.6	
	comp=Z,11nm,0.6s						
LBNH	**Lisbon**	**32.78**	**31**	P	**P**	**21 25 22.2**	**-1.5**
	baz=222						
I62A	**Tamworth**	**32.81**	**32**	P	**P**	**21 25 21.7**	**-2.2**
	baz=224						
H61A	**Lyndonville**	**33.00**	**31**	P	**P**	**21 25 24.1**	**-1.5**
	baz=222						
D54A	**Lac Fusel, La**	**33.05**	**23**	P	**P**	**21 25 23.9**	**-2.0**
	baz=212,SNR=6.8						
E56A	**St. Veronique**	**33.17**	**25**	P	**P**	**21 25 24.3**	**-2.7**
	baz=215,SNR=7.0						
G60A	**Masonville**	**33.22**	**29**	P	**P**	**21 25 25.6**	**-1.9**
	baz=221						
I63A	**Otisfield**	**33.32**	**32**	P	**P**	**21 25 26.9**	**-1.4**
	baz=225						
D55A	**Sainte-Anne-du**	**33.38**	**24**	P	**P**	**21 25 26.9**	**-1.9**
	baz=214,SNR=14						
H62A	**Milan**	**33.40**	**31**	P	**P**	**21 25 27.4**	**-1.6**
	baz=223						
VLDQ	**Val d'Or**	**33.58**	**21**	IAmb	IAmb	21 25 29.1	
	comp=Z,12nm,1.1s						
D56A	**ZEC Mazanza, M**	**33.69**	**25**	P	**P**	**21 25 29.3**	**-2.2**
	baz=215,SNR=7.5						
E58A	**La Victoria**	**33.77**	**27**	P	**P**	**21 25 30.8**	**-1.4**
	baz=218						
D57A	**Chemin Vers le**	**34.02**	**26**	P	**P**	**21 25 32.5**	**-1.9**
	baz=217,SNR=5.8						
F60A	**Warwick**	**34.05**	**29**	P	**P**	**21 25 32.5**	**-2.2**
	baz=221						
G62A	**West of Eustis**	**34.17**	**31**	P	**P**	**21 25 34.3**	**-1.5**
	baz=224,SNR=6.5						
G62A	**West of Eustis**	**34.17**	**31**	IAmb	IAmb	21 25 35.1	
	comp=Z,17nm,0.8s						
H64A	**Troy**	**34.43**	**33**	P	**P**	**21 25 35.6**	**-2.3**
	baz=226						
F61A	**St Evariste**	**34.50**	**30**	P	**P**	**21 25 37.2**	**-1.4**
	baz=222						
D58A	**Chemin du LacG**	**34.51**	**27**	P	**P**	**21 25 36.8**	**-1.8**
	baz=218						
LSQQ	**Lebel-sur-Quev**	**34.55**	**21**	P	**P**	**21 25 36.5**	**-2.4**
	baz=210						
G63A	**Kingsbury**	**34.56**	**32**	P	**P**	**21 25 37.0**	**-2.0**
	baz=225						
E60A	**Ste Agathe de**	**34.59**	**29**	P	**P**	**21 25 37.2**	**-2.0**
	baz=221						
LATQ	**La Tuque**	**34.77**	**26**	P	**P**	**21 25 39.3**	**-1.5**
	baz=218						
MATQ	**Matagami**	**34.95**	**19**	P	**P**	**21 25 40.3**	**-2.0**
	baz=209,SNR=10.0						
H65A	**Eastbrook**	**34.98**	**34**	P	**P**	**21 25 40.2**	**-2.4**
	baz=227						
E61A	**Lac Etchemin**	**35.08**	**30**	P	**P**	**21 25 42.0**	**-1.5**
	baz=222						
G64A	**Maxfield**	**35.09**	**32**	P	**P**	**21 25 41.4**	**-2.2**
	baz=226						
H66A	**Whiting**	**35.53**	**34**	P	**P**	**21 25 45.2**	**-2.1**
	baz=229						
E62A	**Clayton Lake**	**35.67**	**30**	P	**P**	**21 25 46.8**	**-1.7**
	baz=224						
G65A	**Princeton**	**35.67**	**34**	P	**P**	**21 25 46.6**	**-2.0**
	baz=228						
G65A	**Princeton**	**35.67**	**34**	IAmb	IAmb	21 25 47.4	
	comp=Z,16nm,0.8s						
NEW	**Newport**	**35.70**	**334**	LR	LR	21 42 19.8	
	comp=Z,43nm,18.1s,baz=132,slow=39						
F64A	**Sherman**	**35.72**	**32**	P	**P**	**21 25 46.6**	**-2.3**
	baz=226						
D61A	**St Aubert, Com**	**35.78**	**29**	P	**P**	**21 25 48.0**	**-1.4**
	baz=222						
E63A	**Oxbow**	**36.07**	**31**	P	**P**	**21 25 49.9**	**-2.0**
	baz=225						
CHGQ	**Chibougamau**	**36.19**	**22**	P	**P**	**21 25 50.6**	**-2.3**
	baz=214						
D62A	**Allapoint, All**	**36.23**	**30**	P	**P**	**21 25 51.6**	**-1.6**
	baz=224,SNR=5.9						
D62A	**Allapoint, All**	**36.23**	**30**	IAmb	IAmb	21 25 52.6	
	comp=Z,18nm,1.1s						
E64A	**Bridgewater**	**36.36**	**32**	P	**P**	**21 25 52.8**	**-1.6**
	baz=226						
D63A	**Stockholm**	**36.65**	**31**	P	**P**	**21 25 55.2**	**-1.7**
	baz=225,SNR=7.7						
FFC	**Flin Flon**	**37.54**	**353**	P	**P**	**21 26 04.3**	**+0.2**
FFC				IAmb	IAmb	21 26 05.9	
	comp=Z,18nm,1.4s						
FCC	**Fort Churchill**	**41.16**	**0**	P	**P**	**21 26 34.0**	**-0.1**
LPAZ	**La Paz**	**42.59**	**141**	P	**P**	**21 26 47.9**	**+0.9**
	comp=Z,6.3nm,0.8s,baz=318,slow=6.5,SNR=20						
LPAZ				LR	LR	21 45 25.6	
	comp=Z,30nm,18.4s,baz=314,slow=37						
LPAZ	**La Paz**	**42.59**	**141**	P	**P**	**21 26 48.1**	**+1.2**
SCHQ	**Schefferville**	**42.90**	**23**	P	**P**	**21 26 46.3**	**-2.1**
	comp=Z,5.2nm,0.7s,baz=224,slow=8.1,SNR=8.5						
SCHQ	**Schefferville**	**42.90**	**23**	P	**P**	**21 26 46.1**	**-2.3**
PB16	**IPOC Station P**	**43.40**	**144**	P	**P**	**21 26 55.5**	**+2.1**
PB16				IAmb	IAmb	21 26 58.1	
	comp=Z,17nm,0.9s						
MNMC	**Minye Minye**	**43.99**	**145**	IAmb	IAmb	21 27 03.1	
	comp=Z,28nm,0.9s						
PSGCX	**Pisagua**	**44.08**	**146**	IAmb	IAmb	21 27 02.6	
	comp=Z,11nm,0.7s						
PB11	**IPOC Station P**	**44.47**	**145**	P	**P**	**21 27 02.4**	**+1.0**
PB11				IAmb	IAmb	21 27 06.3	
	comp=Z,24nm,1.0s						
GO01	**Chusmiza**	**44.65**	**145**	IAmb	IAmb	21 27 08.6	
	comp=Z,52nm,1.5s						
PB09	**IPOC Station P**	**46.35**	**147**	IAmb	IAmb	21 27 22.0	
	comp=Z,19nm,1.0s						
YKA	**Yellowknife Ar**	**47.02**	**348**	P	**P**	**21 27 20.8**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=150,slow=7.5,SNR=24						
YKA				pP	**pP**	**21 27 55.1**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=148,slow=7.9,SNR=5.7						
YKA				PP	**PP**	**21 29 13.6**	**+0.8**
	comp=Z,1.5nm,0.9s,baz=147,slow=9.7,SNR=5.0						
DLBC	**Dease Lake**	**48.39**	**336**	P	**P**	**21 27 34.2**	**+2.8**
MCARA	**McCarthy VSAT**	**55.40**	**334**	IAmb	IAmb	21 28 26.0	
	comp=Z,12nm,0.8s						
INK	**Inuvik**	**56.34**	**344**	P	**P**	**21 28 30.1**	**+0.4**
BDFB	**Brasilia**	**56.59**	**123**	P	**P**	**21 28 32.2**	**-0.2**
	comp=Z,1.6nm,0.4s,baz=216,slow=3.2,SNR=3.8						
CPUP	**Villa Florida**	**56.73**	**139**	P	**P**	**21 28 33.0**	**-0.1**
	comp=Z,3.1nm,0.8s,baz=332,slow=8.9,SNR=9.1						
HDA	**Harding Lake**	**58.44**	**336**	P	**P**	**21 28 44.7**	**+0.1**
	baz=117,SNR=5.6						
HDA	**Harding Lake**	**58.44**	**336**	P	**P**	**21 28 45.4**	**+0.8**
ILAR	**Eielson Array**	**58.59**	**337**	P	**P**	**21 28 46.1**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=155,slow=4.8,SNR=24						
ILAR				pP	**pP**	**21 29 22.9**	**+1.0**
	comp=Z,0.9nm,0.9s,baz=117,slow=7.9,SNR=4.9						
RND	**Reindeer**	**58.75**	**335**	IAmb	IAmb	21 28 49.0	
	comp=Z,11nm,0.8s						
TRF	**Thorofare Moun**	**59.35**	**334**	IAmb	IAmb	21 28 52.9	
	comp=Z,13nm,0.7s						
KTH	**Kantishna Hill**	**59.66**	**334**	IAmb	IAmb	21 28 54.5	
	comp=Z,10.0nm,1.1s						
BPAW	**Bear Paw Mtn.**	**59.90**	**335**	IAmb	IAmb	21 28 56.1	
	comp=Z,9.8nm,1.2s						
LC01	**Cunco**	**60.06**	**160**	P	**P**	**21 28 57.4**	**+1.3**
LC01				IAmb	IAmb	21 28 58.0	
	comp=Z,15nm,1.2s						
MLY	**Manley**	**60.18**	**336**	P	**P**	**21 28 57.2**	**+0.7**
MLY				IAmb	IAmb	21 28 58.1	
	comp=Z,8.8nm,1.0s						
TOLK	**Toolik Lake Re**	**61.33**	**340**	P	**P**	**21 29 04.9**	**+0.6**
	baz=117						
TOLK	**Toolik Lake Re**	**61.33**	**340**	P	**P**	**21 29 05.5**	**+1.2**
PLCA	**Paso Flores**	**62.16**	**159**	P	**P**	**21 29 11.7**	**+1.5**
	comp=Z,7.6nm,0.8s,baz=336,slow=8.6,SNR=20						
PLCA	**Paso Flores**	**62.16**	**159**	P	**P**	**21 29 11.6**	**+1.5**
PLCA				IAmb	IAmb	21 29 12.7	
	comp=Z,16nm,1.1s						
LL01	**San Ignacio de**	**63.06**	**162**	P	**P**	**21 29 17.8**	**+1.8**
LL01				IAmb	IAmb	21 29 18.4	
	comp=Z,12nm,1.0s						
SUMG	**Summit**	**63.54**	**16**	P	**P**	**21 29 20.2**	**+0.9**
EKA	**Eskdalemuir Ar**	**76.61**	**36**	P	**P**	**21 30 37.8**	**-0.9**
	comp=Z,10nm,0.7s,baz=281,slow=5.7,SNR=46						
SPITS	**Spitsbergen Ar**	**77.14**	**11**	P	**P**	**21 30 43.9**	**+2.5**
	comp=Z,5.9nm,1.0s,baz=339,slow=4.5,SNR=5.0						
BILL	**Bilibino**	**77.23**	**338**	P	**P**	**21 30 42.8**	**+0.9**
ESDC	**Sonseca Array**	**79.54**	**52**	P	**P**	**21 30 55.0**	**-0.3**
	comp=Z,3.7nm,0.9s,baz=289,slow=5.9,SNR=11						
CLF	**Chambon-Foret**	**81.67**	**42**	P	**P**	**21 31 05.7**	**-0.6**
CLF				IAmb	IAmb	21 31 07.1	
	comp=Z,16nm,0.9s						
NBO00	**NORSAR Array S**	**82.07**	**28**	P	**P**	**21 31 09.2**	**+1.0**
NBO00				IAmb	IAmb	21 31 09.9	
	comp=Z,12nm,0.9s						
NAO01	**NORSAR Array S**	**82.19**	**28**	IAmb	IAmb	21 31 11.1	
	comp=Z,11nm,1.0s						
NB2	**NORSAR Subarra**	**82.26**	**28**	P	**P**	**21 31 09.5**	**+0.3**
	comp=Z,6.3nm,1.0s,baz=293,slow=5.3						
NOA	**NORSAR Array B**	**82.26**	**28**	P	**P**	**21 31 09.8**	**+0.5**
	comp=Z,4.1nm,0.8s,baz=292,slow=5.2,SNR=21						
NC405	**NORSAR Array S**	**82.46**	**28**	P	**P**	**21 31 10.9**	**+0.7**
DOU	**Dourbes**	**82.51**	**40**	P	**P**	**21 31 09.5**	**-1.1**
BMRD	**Maredsous**	**82.55**	**40**	P	**P**	**21 31 10.2**	**-0.7**
BGES	**Gesves**	**82.72**	**39**	P	**P**	**21 31 11.2**	**-0.6**
ARCES	**ARCESS Array B**	**83.58**	**18**	P	**P**	**21 31 15.8**	**0.0**
	comp=Z,3.4nm,0.8s,baz=304,slow=4.8,SNR=8.9						
HFS	**Hagfors**	**83.74**	**29**	P	**P**	**21 31 16.2**	**-0.6**
	comp=Z,2.9nm,0.9s,baz=270,slow=3.0,SNR=5.9						
SENIN	**Lac Senin/Sane**	**85.46**	**43**	P	**P**	**21 31 26.6**	**+0.6**
PETK	**Petropavlovsk-**	**86.29**	**325**	P	**P**	**21 31 29.9**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=76,slow=6.0,SNR=5.5						
DAVOX	**Davos/Dischmat**	**86.96**	**42**	P	**P**	**21 31 31.9**	**-1.4**
	comp=Z,1.8nm,0.7s,baz=344,slow=18,SNR=3.9						
TIC	**Toumodi**	**87.69**	**84**	*e*P	**P**	**21 31 36.4**	**-0.8**
LIC	**Lamto**	**87.81**	**84**	*e*P	**P**	**21 31 35.7**	**-2.0**
	comp=Z,24nm,0.9s						
DBIC	**Dimbokro**	**87.84**	**84**	P	**P**	**21 31 36.8**	**-1.0**
	comp=Z,6.3nm,0.9s,baz=298,slow=3.2,SNR=5.9						
KIC	**Kosan Boka**	**88.04**	**84**	*e*P	**P**	**21 31 38.4**	**-0.4**
	comp=Z,14nm,0.8s						
FINES	**FINESS Array B**	**88.37**	**24**	P	**P**	**21 31 38.9**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=2.9,slow=2.8,SNR=2.1						
GERES	**GERESS Array B**	**88.49**	**39**	P	**P**	**21 31 39.3**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=328,slow=4.7,SNR=7.9						
TORD	**Torodi Ar. Bea**	**92.02**	**76**	P	**P**	**21 31 56.2**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=285,slow=6.6,SNR=6.4						
HHC	**Hu-ho-hao-te**	**117.00**	**338**	*e*PKP	**PKiKP**	**21 37 33.0**	**+0.8**
WMQ	**Urumqi**	**118.90**	**358**	*e*PKP	**PKiKP**	**21 37 36.3**	**+0.5**
WMQ				LR	LR		
	comp=Z,87nm,18.3s						
WMQ				LR	LR		
	comp=Z,130nm,20.9s						
WMQ				LR	LR		
	comp=Z,280nm,23.5s						
NJ2	**Nanjing**	**121.14**	**327**	*e*PKP	**PKiKP**	**21 37 41.1**	**+0.7**
GTA	**Gaotai**	**121.75**	**347**	*e*PKP	**PKPdf**	**21 37 40.1**	**-1.3**
KSH	**Kashi**	**122.57**	**9**	PKP	**PKiKP**	**21 37 43.8**	**+0.6**
LZH	**Lanzhou**	**123.86**	**342**	PKP	**PKiKP**	**21 37 46.8**	**+0.9**
STKA	**Stephens Creek**	**127.47**	**243**	PKP	**PKPdf**	**21 37 52.1**	**-0.2**
	comp=Z,2.8nm,0.7s,baz=66,slow=3.5,SNR=7.3						
WRA	**Warramunga Arr**	**133.66**	**259**	PKP	**PKPdf**	**21 38 05.0**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=80,slow=2.1,SNR=9.0						
ASAR	**Alice Springs**	**134.30**	**254**	PKP	**PKPdf**	**21 38 06.2**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=80,slow=1.8,SNR=15						
CMAR	**Chiang Mai Arr**	**141.80**	**339**	PKP	**PKPdf**	**21 38 19.3**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=324,slow=2.0,SNR=6.7						

*NEIC **20** 21:26:45.5±4.5, 18.4N±0.5×103.39W±0.10, h31km±41km, Error ellipse: s-maj=77.8km s-min=12.6km az=177.0*
*MEX **20** 21:26:45.5±0.3, 18.11N×103.17W, h12km±3km, MD4.1*
ISC 20 21:26:39.4±3.3, 17.9N±0.2×103.4W±0.1, h16km, n7, σ1°03/11, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMIG	**Aquila**	**0.38**	**10**	*i* P	**Pn**	**21 26 50.2**	**0.0**
MMIG				*i* S	**Sb**	**21 26 53.8**	**+0.5**
MMIG	**Aquila**	**0.38**	**10**		**Pn**	**21 26 50.2**	**0.0**
MMIG					**Sb**	**21 26 53.8**	**+0.5**
COIG	**Colima**	**1.28**	**348**	*e*P	**Pg**	**21 27 04.2**	**0.0**
COIG				*e*S	**Sn**	**21 27 18.2**	**-1.5**
R15V		**1.36**	**337**	*e*P	**Pg**	**21 27 05.4**	**-0.2**
R15V				*i* S	**Sg**	**21 27 22.6**	**-0.7**
R15V		**1.36**	**337**		**Pg**	**21 27 05.4**	**-0.2**
MOIG	**Morelia**	**2.74**	**50**	Pn	**Pn**	**21 27 22.5**	**-0.5**
ZAIG	**Zacatecas**	**4.89**	**9**	Pn	**Pn**	**21 27 54.8**	**+2.2**

IDC 20 21:27:28.5±1.2, 2.55S×138.47E, h0km, mb3.2/2, mb1 3.4/4, mb1mx3.3/27, mbtmp3.3/4, ML3.3/2, Error ellipse: s-maj=28.5km s-min=25.4km az=24.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.23**	**89**	Pn	Pn	21 28 06.9	+0.2
	1.3nm,0.3s,baz=307,slow=20,SNR=8.5						
JAY				Sn	Sn	21 28 36.4	+1.4
	1.5nm,0.3s,baz=287,slow=20,SNR=2.2						
WRA	**Warramunga Arr**	**17.75**	**193**	P	Pn	21 31 36.7	-0.5
	0.2nm,0.3s,baz=17,slow=12,SNR=5.3						
ASAR	**Alice Springs**	**21.45**	**192**	P	P	21 32 18.5	-0.1
	0.4nm,0.8s,baz=18,slow=11,SNR=4.6						
MKAR	**Makanchi Array**	**69.52**	**322**	P	P	21 38 39.8	+0.7
	0.6nm,0.9s,baz=101,slow=6.3,SNR=4.3						
BVAR	**Borovoye Array**	**79.05**	**325**	P	P	21 39 34.2	-0.4
	baz=124,slow=9.4						

*IDC **20** 21:31:00.1±1.4, 4.07N×123.41E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.6/29, mbtmp3.9/5, MS3.0/1, Ms1 3.0/1, ms1mx2.4/28, Error ellipse: s-maj=204.3km s-min=19.4km az=63.0*
*MAN **20** 21:31:08.2, 5.73N×127.09E, h113km, mb4.9, ML3.9, MS3.9*
ISC 20 21:31:09.3±1.5, 5.70N±0.10×127.1E±0.1, h113km±14km, n15, σ1°13/19, mb4.0/5, 3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.39**	**287**	*e*P	**Pn**	**21 31 35.5**	**+0.5**
DDMP				*e*S	**Sn**	**21 31 55.9**	**+1.4**
MATI	**Mati**	**1.46**	**328**	*e*P	**Pn**	**21 31 34.9**	**-1.1**
MATI				*e*S	**Sn**	**21 31 55.4**	**-0.6**
DMPH	**Davao City--Mi**	**2.06**	**312**	↓*e*P	**Pn**	**21 31 43.6**	**+0.4**
GSPH	**General Santos**	**2.12**	**280**	*e*P	**Pn**	**21 31 42.9**	**-1.2**
KCP	**Kidapawan**	**2.34**	**304**	↓*i* P	**Pn**	**21 31 46.7**	**-0.2**
KCP				*i* S	**Sn**	**21 32 16.3**	**+0.7**
SKMP	**Bagumbayan, Su**	**2.62**	**288**	*e*P	**Pn**	**21 31 49.5**	**-0.9**
SKMP				*e*S	**Sn**	**21 32 21.7**	**-0.3**
BUKP	**Musuan**	**2.93**	**318**	*e*P	**Pn**	**21 31 55.3**	**+0.8**
BUKP				*e*S	**Sn**	**21 32 29.4**	**+0.1**
CGP	**Cagayan de Oro**	**3.60**	**320**	↓*e*P	Pn	21 32 14.5	+11
CGP				*e*S	**Sn**	**21 32 45.0**	**-0.2**
PAGZ	**Pagadian**	**4.22**	**301**	*e*P	**Pn**	**21 32 11.8**	**+0.1**
WRA	**Warramunga Arr**	**26.48**	**164**	P	**P**	**21 36 37.7**	**+1.5**
	0.7nm,0.3s,baz=334,slow=11,SNR=7.1						
ASAR	**Alice Springs**	**29.95**	**167**	P	**P**	**21 37 04.6**	**-2.5**
	0.3nm,0.4s,baz=336,slow=7.1,SNR=2.4						
STKA	**Stephens Creek**	**39.86**	**161**	P	**P**	**21 38 33.7**	**+1.6**
	1.2nm,0.4s,baz=342,slow=7.9,SNR=3.4						
MKAR	**Makanchi Array**	**56.14**	**324**	P	**P**	**21 40 37.0**	**-0.2**
	1.5nm,0.7s,baz=138,slow=8.0,SNR=11						
MA2	**Magadan**	**56.73**	**14**	LR		22 09 20.4	
	comp=Z,11nm,18.3s,baz=283,slow=39						
KURBB	**Kurchatov Arra**	**60.27**	**327**	P	**P**	**21 41 05.7**	**-0.2**
	1.7nm,0.6s,baz=128,slow=6.1,SNR=16						

*MOS **20** 21:35:37.3±0.5, 52.62N×107.02E, h11km, mb3.6/1, Error ellipse: s-maj=11.7km s-min=7.7km az=64.6*
*BYKL **20** 21:35:38.8±0.1, 52.67N×106.90E, h10km±3km*
*IDC **20** 21:35:43.2±5.8, 52.33N×106.23E, h0km, mb1 3.1/4, mb1mx3.0/34, mbtmp3.1/4, ML2.8/4, Error ellipse: s-maj=72.5km s-min=21.0km az=55.0*
ISC 20 21:35:38.6±1.0, 52.60N±0.02×106.84E±0.02, h5km±9km, n58, σ2°64/99, 12C-8D, Lake Baikal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZRHB	**Zarechye**	**0.20**	**104**	↑*i*Pg	**Pg**	**21 35 43.2**	**+0.7**
ZRHB				*e*Sg	**Sg**	**21 35 46.3**	**+1.2**
TRG	**Tygran**	**0.34**	**298**	↑*i*Pg	**Pg**	**21 35 45.1**	**-0.1**
TRG				*e*		21 35 48.6	
TRG				*e*Sg	**Sg**	**21 35 50.0**	**+0.4**
TRG				Pmax			
	576nm,0.1s						
TRG				Smax			
	3μm,0.1s						
TRG	**Tygran**	**0.34**	**298**	↑*i*PG	**Pg**	**21 35 45.1**	**-0.1**
TRG				*e*		21 35 50.2	
TRG				pmax	pmax		
	comp=Z,593nm,0.1s						
TRG				smax	smax		
	comp=N,5μm,0.1s						
STDB	**Stepnoy Dvoret**	**0.52**	**214**	↑*i*Pg	**Pb**	**21 35 50.3**	**0.0**
STDB				*e*Sg	**Sb**	**21 35 58.1**	**0.0**
STDB				*e*		21 36 01.5	
KAB	**Kabansk**	**0.56**	**192**	↑*i*Pg	**Pg**	**21 35 49.3**	**-0.2**
KAB				*i* Sg	**Sb**	**21 35 58.9**	**-0.5**
KAB				*e*		21 36 00.4	
KAB				Pmax			
	comp=N,874nm,0.1s						
KAB				Smax			
	comp=N,8μm,0.3s						
KAB	**Kabansk**	**0.56**	**192**	↑*i*PG	**Pg**	**21 35 49.9**	**+0.4**
KAB				*e*		21 35 58.4	
KAB				pmax	pmax		
	comp=Z,876nm,0.2s						
KAB				smax	smax		
	comp=E,8μm,0.5s						
UUDB	**Ulan-Yde**	**0.90**	**145**	↑*i*Pg	**Pg**	**21 35 54.9**	**-0.9**
UUDB				*e*Sg	**Sg**	**21 36 07.0**	**-0.4**
UUDB				Pmax			
	comp=E,877nm,0.4s						
UUDB				Smax			
	comp=E,3μm,0.6s						
HRMR	**Khuramsha**	**0.98**	**176**	↑*i*	**Pg**	**21 35 57.0**	**-0.4**
HRMR				*e*Sg	**Sb**	**21 36 10.8**	**-0.5**
HRMR				*e*Sb	**Sn**	**21 36 15.0**	**+1.7**
HRMR				max			
	comp=E,873nm,0.2s						
BGT	**Bolshoye Golou**	**1.04**	**238**	*e*Pg	**Pg**	**21 35 58.7**	**+0.1**
BGT				*e*Sg	**Sn**	**21 36 14.8**	**0.0**
BGT				*e*Sb	**Sb**	**21 36 17.6**	**+4.5**
BGT				Pmax			
	comp=E,139nm,0.1s						
BGT				Smax			
	comp=E,716nm,0.3s						
OGRR	**Ongureny**	**1.14**	**23**	↓*i*Pg	**Pg**	**21 35 58.9**	**-1.6**
OGRR				*e*Pb	**Pb**	**21 36 00.9**	**+0.1**
OGRR				*e*Sg	**Sg**	**21 36 13.4**	**-1.8**
OGRR				*e*Sb	**Sn**	**21 36 17.1**	**-0.2**
OGRR				max			
	comp=E,359nm,0.2s						
OGRR				max			
	comp=E,1μm,0.4s						
OGRR	**Ongureny**	**1.14**	**23**	*e*PG	**Pg**	**21 35 58.9**	**-1.6**
OGRR				*e*		21 36 13.3	
OGRR				pmax	pmax		
	comp=Z,562nm,0.3s						
OGRR				smax	smax		
	comp=E,1μm,0.4s						
MXMB	**Maximikha**	**1.33**	**59**	↓*i*Pg	**Pn**	**21 36 01.4**	**-2.5**
MXMB				*e*Sg	**Sg**	**21 36 18.3**	**-3.1**
LSTR	**Listvyanka**	**1.44**	**240**	↓*i*Pg	**Pn**	**21 36 05.4**	**+0.1**
LSTR				*e*Sg	**Sg**	**21 36 25.7**	**+1.0**
LSTR				Pmax			
	comp=E,96nm,0.2s						
LSTR				Smax			
	comp=E,737nm,0.5s						
IRK	**Irkutsk**	**1.61**	**258**	*e*Pg	**Pn**	**21 36 08.3**	**+0.5**
IRK				*i* Sg	**Sb**	**21 36 30.2**	**+0.7**
IRK				*e*Sb	**Sg**	**21 36 31.9**	**+1.5**
IRK				Pmax			

comp=E,119nm,0.5s
YLYR Ulyunkhan 3.43 47⇓*i*Pn Pn 21 36 31.3 -1.5
YLYR *e*Pg **Pb 21 36 38.8 -1.1**
YLYR *e*Sg **Sb 21 37 22.6 +0.7**
YLYR Pmax
comp=E,37nm,0.7s
YLYR Smax
comp=E,190nm,0.8s
YLYR Ulyunkhan 3.43 47⇓*i*Pn Pn 21 36 31.3 -1.5
YLYR *e* 21 36 38.8
YLYR *e* 21 37 22.5
YLYR pmax pmax
comp=Z,48nm,1.2s
YLYR smax smax
comp=N,186nm,0.6s
NIZ Nizh Angarsk 3.55 25 *e*Pn Pn 21 36 33.5 -0.9
NIZ *e* 21 36 42.8
MOY Mondy 3.72 258 *e*Pn Pn 21 36 39.1 +2.2
MOY *e*Pg **Pb 21 36 45.4 +0.5**
MOY *e* 21 36 51.3
MOY *e* 21 37 24.3
MOY *e*Sg **Sb 21 37 34.0 +3.7**
MOY max
comp=N,120nm,0.8s
MOY Smax
comp=N,345nm,1.2s
MOY Mondy 3.72 258 *e*Pn Pn 21 36 39.2 +2.3
MOY *e* 21 36 46.9
MOY *e* 21 37 33.7
MOY pmax pmax
comp=Z,122nm,1.0s
MOY smax smax
comp=N,345nm,1.5s
CIT Chita 4.16 95 *e*Pg Pb 21 36 53.0 +0.7
CIT *e*Sg **Sb 21 37 46.9 +4.0**
CIT Pmax
comp=N,82nm,0.3s
CIT Smax
comp=N,623nm,0.4s
CIT Chita 4.16 95 *e*Pn Pn 21 36 40.2 -2.6
CIT *e* 21 36 52.0
KMO Kumora 4.17 36⇓*i*Pn Pn 21 36 41.7 -1.2
KMO *e*Pg **Pb 21 36 51.0 -1.4**
KMO *e*Sg **Sb 21 37 45.1 +2.0**
KMO Pmax
comp=N,53nm,0.7s
KMO Smax
comp=N,296nm,1.4s
KMO Kumora 4.17 36 *e*Pn Pn 21 36 41.6 -1.3
KMO *e* 21 36 52.1
KMO *e*S **Sn 21 37 29.0 -3.0**
KMO *e* 21 37 44.8
KMO pmax pmax
comp=Z,53nm,0.7s
KMO smax smax
comp=N,224nm,0.9s
ORL Orlik 4.29 272⇑*i*Pn Pn 21 36 45.8 +1.1
ORL *e* 21 36 52.6
ORL *e* 21 37 38.0
ORL *e*Sg **Sb 21 37 51.7 +5.1**
ORL max
comp=N,27nm,0.4s
ORL Smax
comp=N,173nm,0.7s
ORL Orlik 4.29 272 *e*PN Pn 21 36 45.7 +1.1
ORL *e* 21 36 56.4
ORL *e* 21 37 51.5
ORL pmax pmax
comp=Z,24nm,0.4s
ORL smax smax
comp=N,173nm,0.8s
KPC Khapcheranga 4.54 128 *e* Pn 21 36 46.0 -2.0
KPC *e* 21 36 59.1
KPC *e*Sg **Sg 21 37 58.7 -5.6**
KPC *e* 21 38 02.8
KPC max
comp=N,38nm,0.5s
KPC max
comp=N,233nm,1.1s
KPC Khapcheranga 4.54 128 *e*PN Pn 21 36 46.1 -2.0
KPC *e* 21 36 59.0
KPC *e* 21 37 57.9
KPC pmax pmax
comp=Z,38nm,0.5s
KPC smax smax
comp=E,233nm,1.3s
YOA Uoyan 4.55 37 *e* Pn 21 36 51.6 +3.5
YOA *e*Sn **Sn 21 37 37.8 -3.5**
YOA *e*Sg **Sb 21 37 57.6 +3.7**
YOA max
comp=E,85nm,0.3s
YOA Smax
comp=E,728nm,1.3s
ULN Ulaanbaatar 4.75 178⇑*e*PN Pn 21 36 51.7 +0.7
SONM Songino Array 4.78 184 Pn Pn **21 36 52.3 +0.9**
comp=E,1.1nm,0.3s,baz=1.5,slow=16,SNR=7.5
SONM Pg **Pb 21 37 05.2 +2.3**
comp=E,5.3nm,0.3s,baz=358,slow=16,SNR=24
SONM Lg Lg 21 38 06.9
comp=E,12nm,0.3s,baz=0.3,slow=32,SNR=4.3
UKT Uakit 4.94 51⇑*i*Pn Pn 21 36 52.3 -1.2
UKT *e* 21 37 01.1
UKT *e*Pg **Pb 21 37 05.6 +0.1**
UKT Sg **Sb 21 38 09.0 +3.8**
UKT Pmax
comp=E,17nm,0.9s
UKT Smax
comp=E,108nm,0.8s
SVKR Severomuysk 5.28 45 *e* Pg 21 37 20.5 +0.9
SVKR *e*Sg **Sb 21 38 20.0 +5.1**
SVKR max
comp=E,36nm,0.2s
SVKR Smax
comp=E,349nm,1.1s
NLYR Nelyaty 6.46 49 *e*Pn Pn 21 37 13.1 -1.3
NLYR *e* 21 37 34.9
NLYR *e* 21 38 13.4
NLYR *e*Sg **Sb 21 38 55.3 +6.3**
NLYR max
comp=E,6.0nm,0.8s
NLYR Smax
comp=E,75nm,1.3s
NLYR Nelyaty 6.46 49 *e*PN Pn 21 37 13.2 -1.2
NLYR *e* 21 37 33.8
NLYR *e* 21 38 55.2
NLYR pmax pmax
comp=Z,9.0nm,1.9s
NLYR smax smax
comp=E,75nm,1.4s
TDJR Todzha 6.56 272 *e*Pn Pn 21 37 18.8 +3.0
TDJR *e* 21 37 27.4
TDJR *e* 21 38 45.9
TDJR *e*Sg **Sg 21 39 03.8 -5.4**
BOD Bodaibo 6.64 35 *e* Pn 21 37 06.8 -10
BOD Sg **Sb 21 39 01.9 +7.8**
BOD max
comp=E,8.0nm,0.5s
BOD Smax
comp=E,113nm,2.6s
VTMR Vitim 7.56 23 *e*Sg Sg 21 39 31.1 -10
KZLR Kyzyl 7.67 268 *e*Sg **Sg 21 39 38.5 -6.3**
CRS Chara 7.89 52 *e*Pg **Pb 21 37 59.4 +3.6**
CRS *e* 21 39 34.9
CRS *e*Sg Sb 21 39 39.6 +10
CRS Pmax
comp=E,1.0nm,0.1s
CRS Smax
comp=E,74nm,1.1s
TUP Tupik 8.03 72⇑*i*Pn Pn 21 37 34.0 -2.0
TUP *e* 21 37 42.1
TUP *e*Pg **Pb 21 38 02.3 +4.1**
TUP *e*Sg Sb 21 39 44.7 +11
TUP Pmax
comp=E,3.0nm,0.8s
TUP Smax
comp=E,114nm,0.8s
TUP Tupik 8.03 72 *e*PN Pn 21 37 33.9 -2.0
TUP *e* 21 38 00.0
TUP *e*S **Sn 21 38 58.9 -8.1**
TUP pmax pmax
comp=Z,5.0nm,0.5s
TUP smax smax
comp=N,114nm,0.9s
ARDR Aradan 8.17 275 *e* Pb 21 37 52.4 -8.1
ARDR *e* 21 38 04.7
ARDR *e* 21 39 34.6
ARDR *e*Sg **Sg 21 39 52.3 -8.3**
KHNR Khani 8.74 55 Sg Sg 21 40 07.1 -12
KHNR *e* 21 40 10.1
KHNR *e* 21 40 15.0
YKLR Yuktali 9.48 59 *e* Pn 21 38 30.8 +35
YKLR *e*Sg Sn 21 40 30.9 +48
IENR Iengra 11.10 64 *e*Sg Sn 21 41 20.7 +58
IENR *e* 21 41 29.4
ZALV Zalesovo Beam 13.24 285 Pn **Pn 21 38 49.8 +2.7**
comp=N,0.1nm,0.3s,baz=84,slow=13,SNR=2.4
ZALV Lg Lg 21 42 32.8
comp=N,0.1nm,0.3s,baz=76,slow=24,SNR=2.3
MKAR Makanchi Array 16.87 260 Pn **Pn 21 39 35.0 -0.3**
comp=N,0.0nm,0.3s,baz=66,slow=9.8,SNR=2.1
KURK Kurchatov 17.57 275 P **P 21 39 45.4 +0.3**
KURBB Kurchatov Arra 17.65 275 P **Pn 21 39 45.4 +0.4**
comp=N,0.0nm,0.3s,baz=81,slow=14,SNR=3.3

*IDC **20** 21:56:32.8±1.2,6°.15S×149°.36E,h67km±11km,mb4.0/17, mb1 4.1/20,mb1mx3.9/48,mbtmp4.3/20,MS3.4/12, Ms1 3.4/12,ms1mx3.2/27,Error ellipse: s-maj=16.0km s-min=8.0km az=124.0*
*NEIC **20** 21:56:32.2±2.0,6°.20S±0°.09×149°.42E±0°.10,h69km±6km, mb4.5/15,Error ellipse: s-maj=16.5km s-min=9.5km az=126.0*
ISC 20 21:56:31.7±0.5,6°.21S±0°.07×149°.37E±0°.08,h58km,n47, σ1§27/49,mb4.3/19,MS3.4/9,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.25**	**55**	P	**Pn**	**Pn**	**21 57 19.9**	**-0.3**
	117nm,0.3s,baz=260,slow=0.2,SNR=41							
KRVT				S	**Sn**	**Sn**	**21 58 00.0**	**+2.2**
	40nm,0.3s,baz=189,slow=19,SNR=1.8							
KRVT				LR	LR	LR	21 58 44.0	
	comp=Z,632nm,21.1s,baz=220,slow=41							
RABL	**Rabaul**	**3.43**	**54**		**Pn**	**Pn**	**21 57 23.1**	**+0.4**
PMG	**Port Moresby**	**3.86**	**214**	P	**Pn**	**Pn**	**21 57 30.4**	**+1.7**
	51nm,0.3s,baz=48,slow=5.2,SNR=67							
PMG				S	**Sn**	**Sn**	**21 58 14.8**	**+2.1**
	59nm,0.3s,baz=3.3,slow=22,SNR=8.1							
PMG				LR	LR	LR	21 58 53.9	
	comp=Z,269nm,19.6s,baz=359,slow=36							
JAY	**Jayapura**	**9.38**	**293**	P	**Pn**	**Pn**	**21 58 46.8**	**+2.4**
	2.1nm,0.3s,baz=119,slow=4.9,SNR=12							
JAY				LR	LR	LR	22 03 05.1	
	comp=Z,177nm,20.2s,baz=222,slow=42							
COEN	**Coen**	**9.82**	**218**	Pn	**Pn**	**Pn**	**21 58 50.6**	**+0.2**
COEN				Sn	**Sn**	**Sn**	**22 00 35.0**	**-4.2**
CTA	**Charters Tower**	**14.13**	**192**	P	**Pn**	**Pn**	**21 59 50.1**	**+1.1**
	0.2nm,0.3s,baz=23,slow=16,SNR=2.6							
EIDS	**Eidsvold**	**19.13**	**175**	P	**P**	**P**	**22 00 49.9**	**-0.2**
MTN	**Manton Dam**	**19.15**	**249**	P	**P**	**P**	**22 00 50.8**	**+0.3**
MTN				IAmb	IAmb	IAmb	22 01 07.8	
	comp=Z,23nm,1.1s							
WB0	**Warramunga Arr**	**19.84**	**226**	P	**P**	**P**	**22 00 57.2**	**-0.8**
WB0				IAmb	IAmb	IAmb	22 01 12.3	
	comp=Z,19nm,0.9s							
WR0	**Warramunga Arr**	**19.86**	**225**	P	**P**	**P**	**22 00 58.5**	**+0.2**
WR0				IAmb	IAmb	IAmb	22 01 12.1	
	comp=Z,21nm,0.9s							
WRAB	**Tennant Creek**	**19.98**	**226**	P	**P**	**P**	**22 00 59.1**	**-0.5**
WRAB				IAmb	IAmb	IAmb	22 01 13.6	
	comp=Z,20nm,0.8s							
WB2	**Warramunga Arr**	**19.98**	**226**	P	**P**	**P**	**22 00 59.3**	**-0.3**
WB2				IAmb	IAmb	IAmb	22 01 13.8	
	comp=Z,18nm,0.7s							
WRA	**Warramunga Arr**	**19.99**	**226**	P	**P**	**P**	**22 01 00.0**	**+0.3**
	comp=Z,9.9nm,0.6s,baz=50,slow=10,SNR=75							
WRA				PcP	**PcP**	**PcP**	**22 05 14.0**	**-0.3**
	comp=Z,3.3nm,0.7s,baz=29,slow=1.9,SNR=11							
KNRA	**Kununurra**	**22.29**	**243**	P	**P**	**P**	**22 01 24.5**	**0.0**
KNRA				IAmb	IAmb	IAmb	22 01 28.2	
	comp=Z,20nm,0.8s							
DZM	**Mont Dzumac**	**22.82**	**135**	LR	LR	LR	22 09 10.8	
	comp=Z,281nm,18.8s,baz=246,slow=33							
AS31	**Alice Springs**	**22.86**	**219**	P	**P**	**P**	**22 01 31.8**	**+1.3**
ASAR	**Alice Springs**	**22.86**	**219**	P	**P**	**P**	**22 01 31.3**	**+0.8**
	comp=Z,3.8nm,0.4s,baz=52,slow=9.7,SNR=60							
ASAR				ScP	**ScP**	**ScP**	**22 08 53.2**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=46,slow=3.7,SNR=1.8							
ASAR				LR	LR	LR	22 10 36.5	
	comp=Z,94nm,18.4s,baz=28,slow=37							
SOEI	**Soe**	**25.10**	**260**	P	**P**	**P**	**22 01 50.8**	**-0.7**
BATI	**Baumata**	**25.75**	**259**	P	**P**	**P**	**22 01 57.0**	**-0.2**
	comp=Z,20nm,0.6s,baz=119,slow=6.3,SNR=4.0							
BATI				LR	LR	LR	22 14 23.9	
	comp=Z,154nm,18.4s,baz=96,slow=42							
FITZ	**Fitzroy Crossi**	**25.99**	**241**	P	**P**	**P**	**22 01 59.5**	**+0.1**
	comp=Z,13nm,0.7s,baz=52,slow=8.1,SNR=46							
FITZ	**Fitzroy Crossi**	**25.99**	**241**	P	**P**	**P**	**22 01 59.0**	**-0.4**
FITZ				IAmb	IAmb	IAmb	22 02 01.7	
	comp=Z,14nm,0.8s							
STKA	**Stephens Creek**	**26.55**	**195**	P	**P**	**P**	**22 02 06.7**	**+2.4**
	comp=Z,5.1nm,0.9s,baz=1.1,slow=9.3,SNR=9.0							
STKA				LR	LR	LR	22 12 24.2	
	comp=Z,106nm,21.3s,baz=28,slow=36							
MMRI	**Maumere**	**27.01**	**263**	P	**P**	**P**	**22 02 06.8**	**-1.8**
DAV	**Davao City (W)**	**27.16**	**299**	LR	LR	LR	22 12 53.0	
	comp=Z,35nm,18.7s,baz=136,slow=36							
KAPI	**Kappang**	**29.50**	**271**	LR	LR	LR	22 15 20.3	
	comp=Z,72nm,20.6s,baz=78,slow=38							
PSA00	**Pilbara Seismi**	**32.38**	**239**	P	**P**	**P**	**22 02 54.9**	**-1.3**
PSA00				IAmb	IAmb	IAmb	22 03 05.4	
	comp=Z,9.5nm,1.2s							
MJAR	**Matsushiro Arr**	**43.79**	**347**	P	**P**	**P**	**22 04 30.6**	**-1.3**
	comp=Z,1.6nm,0.7s,baz=169,slow=7.2,SNR=3.1							
MJAR				LR	LR	LR	22 20 56.5	
	comp=Z,29nm,20.3s,baz=170,slow=34							
KSRS	**Korea Array**	**47.83**	**337**	P	**P**	**P**	**22 05 03.1**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=155,slow=8.7,SNR=5.7							
ASAJ	**Asahikawa**	**50.46**	**354**	P	**P**	**P**	**22 05 22.7**	**-0.9**
	comp=Z,2.1nm,0.3s,baz=233,slow=7.9,SNR=4.7							
JKA	**Kamikawa-asahi**	**50.46**	**354**	P	**P**	**P**	**22 05 22.7**	**-0.9**
USRK	**Ussuriysk Ar.**	**52.57**	**344**	P	**P**	**P**	**22 05 39.6**	**+0.2**
	comp=Z,2.1nm,0.5s,baz=194,slow=7.7,SNR=11							
USRK				LR	LR	LR	22 25 36.6	
	comp=Z,46nm,19.6s,baz=190,slow=33							
CMAR	**Chiang Mai Arr**	**55.43**	**297**	P	**P**	**P**	**22 06 02.3**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=124,slow=5.1,SNR=5.5							
KLR	**Kul'dur**	**57.31**	**346**	P	**P**	**P**	**22 06 13.8**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=166,slow=6.3,SNR=8.5							
PETK	**Petropavlovsk-**	**59.51**	**6**	P	**P**	**P**	**22 06 28.6**	**-0.3**
	comp=Z,7.1nm,0.5s,baz=168,slow=7.8,SNR=19							
SONM	**Songino Array**	**65.75**	**330**	P	**P**	**P**	**22 07 11.9**	**+1.2**
	comp=Z,1.7nm,0.7s,baz=148,slow=5.9,SNR=2.6							
VNDA	**Vanda**	**71.58**	**177**	P	**P**	**P**	**22 07 47.2**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=321,slow=6.2,SNR=8.2							
VNDA				LR	LR	LR	22 35 58.4	
	comp=Z,30nm,19.8s,baz=336,slow=33							
MKAR	**Makanchi Array**	**79.16**	**320**	P	**P**	**P**	**22 08 29.6**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=106,slow=8.9,SNR=4.9							
ZALV	**Zalesovo Beam**	**80.45**	**327**	P	**P**	**P**	**22 08 36.2**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=126,slow=7.1,SNR=2.8							
RND	**Reindeer**	**83.36**	**24**	P	**P**	**P**	**22 08 50.7**	**-1.6**
RND				IAmb	IAmb	IAmb	22 08 52.4	
	comp=Z,5.4nm,0.8s							
QSPA	**South Pole Qui**	**83.76**	**180**	P	**P**	**P**	**22 08 54.6**	**+0.1**
CCB	**Clear Creek Bu**	**84.34**	**23**	P	**P**	**P**	**22 08 55.2**	**-2.0**
ILAR	**Eielson Array**	**84.75**	**23**	P	**P**	**P**	**22 08 57.4**	**-2.0**
	comp=Z,1.8nm,0.7s,baz=250,slow=5.2,SNR=18							
PLCA	**Paso Flores**	**120.64**	**145**	PKP	**PKPdf**		**22 15 17.2**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=260,slow=8.2,SNR=4.8							
LPAZ	**La Paz**	**136.68**	**122**	PKP	**PKPdf**		**22 15 49.1**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=280,slow=2.9,SNR=8.1							
CPUP	**Villa Florida**	**138.57**	**142**	PKP	**PKPdf**		**22 15 51.5**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=323,slow=3.5,SNR=4.0							
TORD	**Torodi Ar. Bea**	**147.42**	**285**	PKPbc	**PKPbc**		**22 16 09.1**	**-1.2**
	comp=Z,1.8nm,0.7s,baz=57,slow=3.2,SNR=20							
BDFB	**Brasilia**	**152.29**	**142**	PKPbc	**PKPbc**		**22 16 22.1**	**-0.2**
	comp=Z,13nm,0.7s,baz=205,slow=0.9,SNR=22							

*IDC **20** 22:00:02.6±1.0,2°.47S×138°.38E,h0km,mb3.8/4, mb1 4.1/6,mb1mx3.7/35,mbtmp3.8/6,ML3.5/2,MS3.5/2, Ms1 3.5/2,ms1mx2.7/30,Error ellipse: s-maj=26.4km s-min=24.3km az=96.0*
ISC 20 22:00:06.8±0.9,2°.4S±0°.1×138°.47E±0°.09,h32km,n12, σ1§20/11,mb3.9/4,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.49**	**30**	P	**Pb**		**22 00 15.7**	**-1.5**
GENI	**Genyem**	**1.71**	**96**	P	**Pn**		**22 00 35.1**	**+0.7**
JAY	**Jayapura**	**2.23**	**93**	Pn	**Pn**		**22 00 42.4**	**+0.6**
	7.1nm,0.3s,baz=236,slow=11,SNR=19							
JAY				Sn	**Sb**		**22 01 14.1**	**+0.1**
	4.5nm,0.3s,baz=143,slow=20,SNR=2.2							
JAY	**Jayapura**	**2.23**	**93**	P	**Pn**		**22 00 41.8**	**+0.1**
PMG	**Port Moresby**	**11.08**	**129**	LR	LR		22 08 37.3	
	comp=Z,80nm,19.1s,baz=258,slow=46							
WRA	**Warramunga Arr**	**17.88**	**193**	P	**Pn**		**22 04 12.3**	**-1.0**
	0.2nm,0.3s,baz=14,slow=12,SNR=3.4							
ASAR	**Alice Springs**	**21.58**	**191**	P	**P**		**22 04 52.8**	**-1.3**
	1.8nm,0.8s,baz=24,slow=11,SNR=5.4							
JCJ	**Chichijima**	**29.56**	**7**	LR	LR		22 17 21.8	
	comp=Z,279nm,19.1s,baz=116,slow=35							
MKAR	**Makanchi Array**	**69.41**	**322**	P	**P**		**22 11 13.1**	**+1.3**
	1.3nm,0.8s,baz=116,slow=8.4,SNR=8.8							
VNDA	**Vanda**	**76.09**	**175**	P	**P**		**22 11 51.7**	**+0.8**
	0.8nm,0.8s,baz=338,slow=5.5,SNR=5.9							
ILAR	**Eielson Array**	**85.67**	**24**	P	**P**		**22 12 42.1**	**-0.1**
	1.1nm,0.8s,baz=255,slow=5.1,SNR=7.5							
YKA	**Yellowknife Ar**	**99.91**	**27**	P	**Pdif**		**22 13 50.0**	**+1.8**
	0.2nm,0.6s,baz=277,slow=4.9,SNR=2.9							

IDC 20 22:02:14.3±1.6,2°.59S×138°.42E,h0km,mb3.4/2, mb1 3.6/4,mb1mx3.4/31,mbtmp3.5/4,ML3.0/2,Error ellipse: s-maj=32.4km s-min=27.5km az=168.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.28**	**88**	Pn	Pn	Pn	22 02 53.1	-0.2
	3.5nm,0.3s,baz=240,slow=9.7,SNR=6.0							
JAY				Sn	Sn	Sn	22 03 23.6	+1.5
	2.3nm,0.3s,baz=116,slow=20,SNR=2.0							
WRA	**Warramunga Arr**	**17.70**	**193**	P	P	P	22 06 23.9	+0.4
	0.1nm,0.3s,baz=14,slow=12,SNR=2.9							
ASAR	**Alice Springs**	**21.40**	**191**	P	P	P	22 07 03.0	-0.9
	1.0nm,0.8s,baz=21,slow=11,SNR=4.0							
MKAR	**Makanchi Array**	**69.52**	**322**	P	P	P	22 13 25.1	+0.1
	0.8nm,1.0s,baz=121,slow=6.9,SNR=3.9							

DJA 20 22:03:38.8±1.3,2°.N±5°×12°.6E±°,h13km±12km,M3.5/7, MLv3.5/7,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.91**	**126**	P	Pn	Pn	22 04 11.7	+0.7
KMSI	**Cibinong**	**2.28**	**234**	P	Pn	Pn	22 04 14.7	-1.4
LBMI	**Labuha**	**3.03**	**147**	P	Pn	Pn	22 04 25.5	-1.0
LUWI	**Luwuk**	**4.24**	**226**	P	Pn	Pn	22 04 45.0	+1.9

*SOME **20** 22:04:53.7,40°.53N×77°.65E,h20km*
*NNC **20** 22:04:55.3±0.7,40°.66N×77°.61E,h0km,mb4.1,mpv3.7, Error ellipse: s-maj=4.4km s-min=3.4km az=171.0*
*KRNET **20** 22:04:55.3±0.1,40°.69N×77°.66E,h16km,mb3.3*
ISC 20 22:04:59.5±1.5,40°.82N±0°.07×77°.61E±0°.03,h10km,n75, σ1§37/117,28C-14D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.92**	**9**	⇑*i*P	**Pg**		**22 05 15.4**	**-1.9**
	baz=6.0							
TARG				⇑*i*S	**Sb**		**22 05 30.0**	**-0.3**
	baz=6.0							
KDJ	**Kajisay**	**1.35**	**346**	⇓*i*P	**Pn**		**22 05 23.2**	**-1.4**
	baz=46							
KDJ				⇓*i*S	**Sg**		**22 05 43.7**	**+0.7**
	baz=46							
ULHL	**Ulahol**	**1.76**	**325**	⇑*i*P	**Pn**		**22 05 30.4**	**+0.2**
	baz=26							
ULHL				⇑*i*S	**Sg**		**22 05 56.2**	**+0.1**
	baz=26							
ULHL	**Ulahol**	**1.76**	**325**	P	**Pn**		**22 05 29.9**	**-0.3**
	SNR=64							
PRZ	**Przheval'sk**	**1.76**	**19**	⇓*i*P	**Pn**		**22 05 30.4**	**+0.1**
	baz=17							
PRZ				⇓*i*S	**Sg**		**22 05 56.0**	**-0.2**
	baz=17							
ANVS	**Anan'yevo**	**1.96**	**1**	⇑*i*P	**Pb**		**22 05 33.8**	**-1.6**
	baz=0.0							
ANVS				⇑*i*S	**Sg**		**22 06 01.7**	**-0.9**
	baz=0.0							
BOOM	**Boomskoye usch**	**2.09**	**324**	⇑*i*P	**Pn**		**22 05 35.4**	**+0.7**
	baz=25							
BOOM				⇑*i*S	**Sb**		**22 06 04.6**	**+1.0**
	baz=25							
KZA	**Kyzart**	**2.18**	**306**	⇓*i*P	**Pn**		**22 05 36.6**	**+0.5**
	baz=8.0							
KZA				⇓*i*S	**Sb**		**22 06 06.4**	**0.0**
	baz=8.0							
KZA	**Kyzart**	**2.18**	**306**	P	**Pn**		**22 05 37.1**	**+0.9**
	SNR=27							
TNSS	**Tian-Shan**	**2.27**	**348**	*e*P	**Pb**		**22 05 39.9**	**-0.9**
	39nm,0.4s							
TNSS				*e*S	**Sg**		**22 06 13.1**	**+0.6**
	103nm,0.5s							
TNSS	**Tian-Shan**	**2.27**	**348**	Pg	**Pb**		**22 05 39.9**	**-0.9**
	39nm,0.4s							
TNSS				Lg	Lg		22 06 13.6	
	103nm,0.5s							
SATY	**Saty**	**2.31**	**15**	*e*P	**Pb**		**22 05 41.0**	**-0.4**
	21nm,0.5s							
SATY				*e*S	**Sg**		**22 06 14.6**	**+0.7**
	74nm,0.5s							
SATY	**Saty**	**2.31**	**15**	Pg	**Pb**		**22 05 41.0**	**-0.4**
	21nm,0.5s							
SATY				Lg	Lg		22 06 14.6	
	74nm,0.5s							
IZV	**Izvestkoviy**	**2.34**	**342**	*e*P	**Pb**		**22 05 40.8**	**-1.0**
	23nm,0.4s							
IZV				*e*S	**Sg**		**22 06 14.6**	**0.0**
	202nm,0.4s							
IZV	**Izvestkoviy**	**2.34**	**342**	Pg	**Pb**		**22 05 40.8**	**-1.0**
	23nm,0.4s							
IZV				Lg	Lg		22 06 14.6	
	202nm,0.4s							
MDOK	**Medeo**	**2.38**	**350**	*e*P	**Pb**		**22 05 41.7**	**-0.9**
	38nm,0.5s							
MDOK				*e*S	**Sg**		**22 06 16.1**	**+0.1**
	99nm,0.7s							
MDOK	**Medeo**	**2.38**	**350**	Pg	**Pb**		**22 05 41.3**	**-1.2**
	24nm,0.5s							
MDOK				Lg	Lg		22 06 17.5	
	91nm,0.6s							
MDOK	**Medeo**	**2.38**	**350**	Pg	**Pb**		**22 05 41.7**	**-0.9**
	38nm,0.5s							
MDOK				Lg	Lg		22 06 16.1	
	99nm,0.7s							
ZHN	**Zhinishke**	**2.43**	**14**	*e*P	**Pb**		**22 05 41.2**	**-2.0**
	30nm,0.2s							
ZHN				*e*S	**Sg**		**22 06 15.2**	**-2.2**
	62nm,0.3s							
KOTS	**Kotyrbulak**	**2.44**	**351**	*e*P	**Pb**		**22 05 43.2**	**-0.4**
	96nm,0.4s							
KOTS				*e*S	**Sg**		**22 06 18.8**	**+0.9**
	271nm,0.5s							
KOTS	**Kotyrbulak**	**2.44**	**351**	Pg	**Pb**		**22 05 43.2**	**-0.4**
	96nm,0.4s							
KOTS				Lg	Lg		22 06 18.8	
	271nm,0.5s							
AAA	**Alma-Ata**	**2.44**	**348**	*e*P	**Pb**		**22 05 43.2**	**-0.3**
	6.6nm,0.1s							
AAA				*e*S	**Sg**		**22 06 18.9**	**+0.9**
	80nm,0.2s							
AAA	**Alma-Ata**	**2.44**	**348**	Pg	**Pb**		**22 05 43.2**	**-0.3**
	37nm,0.3s							
AAA				Lg	Lg		22 06 18.9	
	84nm,0.3s							
KNDC	**Almaty**	**2.44**	**349**	⇑Pg	**Pb**		**22 05 43.4**	**-0.1**
	42nm,0.6s							
KNDC				⇑Lg	Lg		22 06 19.8	
	218nm,0.6s							
MTBS	**Maitube**	**2.47**	**339**	*e*P	**Pb**		**22 05 43.5**	**-0.5**
	10nm,0.3s							
MTBS				*e*S	**Sg**		**22 06 19.2**	**+0.3**
	47nm,0.5s							
KST	**Kastek**	**2.54**	**332**	*e*P	**Pb**		**22 05 44.6**	**-0.7**
	18nm,0.3s							
KST				*e*S	**Sg**		**22 06 20.7**	**-0.4**
	28nm,0.3s							
KST	**Kastek**	**2.54**	**332**	Pg	**Pb**		**22 05 44.6**	**-0.7**
	18nm,0.3s							
KST				Lg	Lg		22 06 20.7	
	28nm,0.3s							

UZB	**Uzynbulak**	**2.55**	**24**	*e*P	**Pn**	**22 05 42.4**	**+1.4**
	2.0nm,0.2s							
UZB				*e*S	**Sb**	**22 06 17.3**	**+0.3**
	24nm,0.4s							
TKM2	**Tokmak 2**	**2.58**	**325**	⇑*i*P	**Pn**	**22 05 42.3**	**+0.7**
	baz=26							
TKM2				⇑*i*S	**Sb**	**22 06 17.0**	**-0.9**
	baz=26							
TKM2	**Tokmak 2**	**2.58**	**325**	P	**Pb**	**22 05 45.7**	**-0.3**
	SNR=9.5							
TKM2	**Tokmak 2**	**2.58**	**325**	⇑Pg	**Pb**	**22 05 44.8**	**-1.2**
	8.8nm,0.6s							
TKM2				⇓Lg	Lg	22 06 21.6		
	17nm,0.5s							
KURS	**Kuram**	**2.70**	**9**	*e*P	**Pb**	**22 05 47.7**	**-0.2**
	4.5nm,0.5s							
KURS				*e*S	**Sg**	**22 06 26.3**	**+0.2**
	26nm,0.6s							
KBK	**Karagaybulak**	**2.71**	**313**	⇑*i*P	**Pn**	**22 05 43.9**	**+0.6**
	baz=15							
KBK				⇑*i*S	**Sb**	**22 06 19.5**	**-2.1**
	baz=15							
KBK	**Karagaybulak**	**2.71**	**313**	P	**Pb**	**22 05 47.2**	**-0.9**
	SNR=13							
SHLS	**Shalkode**	**2.71**	**30**	*e*P	**Pg**	**22 05 50.8**	**-0.7**
	11nm,0.3s							
SHLS				*e*S	**Sg**	**22 06 31.6**	**+5.0**
	61nm,0.4s							
SHLS	**Shalkode**	**2.71**	**30**	Pg	**Pg**	**22 05 50.7**	**-0.7**
	11nm,0.3s							
SHLS				Lg	Lg	22 06 31.6		
	61nm,0.4s							
UCH	**Uchtor**	**2.72**	**302**	⇑*i*P	**Pn**	**22 05 43.9**	**+0.2**
	baz=4.0							
UCH				⇑*i*S	**Sn**	**22 06 19.4**	**+2.6**
	baz=4.0							
UCH	**Uchtor**	**2.72**	**302**	P	**Pn**	**22 05 43.4**	**-0.3**
	SNR=6.8							
DGS	**Degeres**	**2.78**	**331**	*e*P	**Pb**	**22 05 48.6**	**-0.8**
	11nm,0.3s							
DGS				*e*S	**Sg**	**22 06 27.8**	**-1.1**
	62nm,0.5s							
DGS	**Degeres**	**2.78**	**331**	Pg	**Pb**	**22 05 48.6**	**-0.8**
	11nm,0.3s							
DGS				Lg	Lg	22 06 27.8		
	62nm,0.5s							
PDGK	**Podgornoye**	**2.87**	**28**	Pg	**Pb**	**22 05 50.0**	**-0.8**
	5.2nm,0.3s							
PDGK				Lg	Lg	22 06 30.3		
	32nm,0.7s							
AAK	**Ala-Archa**	**2.96**	**309**	⇑*i*P	**Pn**	**22 05 47.3**	**+0.6**
	baz=10.0							
AAK				⇑*i*S	**Sn**	**22 06 25.0**	**+2.7**
	baz=10.0							
AAK	**Ala-Archa**	**2.96**	**309**	P	**Pb**	**22 05 51.1**	**-1.3**
	SNR=22							
AAK	**Ala-Archa**	**2.96**	**309**	⇑Pg	**Pb**	**22 05 52.0**	**-0.4**
	14nm,0.5s							
AAK				⇓Lg	Lg	22 06 32.3		
	31nm,0.7s							
KTBS	**Karatobe**	**2.97**	**347**	*e*P	**Pb**	**22 05 52.1**	**-0.5**
	15nm,0.4s							
KTBS				*e*S	**Sg**	**22 06 33.6**	**-1.3**
	173nm,0.5s							
KTBS	**Karatobe**	**2.97**	**347**	Pg	**Pb**	**22 05 52.1**	**-0.5**
	15nm,0.4s							
KTBS				Lg	Lg	22 06 34.5		
	173nm,0.5s							
FRU1	**Bishkek**	**2.99**	**313**	⇓*i*P	**Pn**	**22 05 47.6**	**+0.6**
	baz=14							
FRU1				⇓*i*S	**Sn**	**22 06 25.9**	**+3.0**
	baz=14							
CHMS	**Chumysh**	**3.05**	**316**	⇑*i*P	**Pn**	**22 05 48.6**	**+0.8**
	baz=18							
CHMS				⇑*i*S	**Sn**	**22 06 27.3**	**+2.9**
	baz=18							
CHMS	**Chumysh**	**3.05**	**316**	P	**Pb**	**22 05 53.6**	**-0.3**
	SNR=13							
CHKK	**Chushkaly**	**3.07**	**352**	*e*P	**Pb**	**22 05 53.6**	**-0.5**
	14nm,0.4s							
CHKK				*e*S	**Sg**	**22 06 36.7**	**-1.3**
	101nm,0.3s							
CHKK	**Chushkaly**	**3.07**	**352**	Pg	**Pb**	**22 05 53.6**	**-0.5**
	14nm,0.4s							
CHKK				Lg	Lg	22 06 36.7		
	101nm,0.3s							
KUU	**Kurty**	**3.21**	**343**	*e*P	**Pb**	**22 05 56.2**	**-0.5**
	2.7nm,0.2s							
KUU				*e*S	**Sg**	**22 06 41.0**	**-1.7**
	48nm,0.6s							
KUU	**Kurty**	**3.21**	**343**	Pg	**Pb**	**22 05 56.2**	**-0.5**
	3.6nm,0.2s							
KUU				Lg	Lg	22 06 41.0		
	39nm,0.8s							
KRBS	**Karabastau**	**3.21**	**334**	*e*P	**Pb**	**22 05 56.2**	**-0.5**
	3.2nm,0.3s							
KRBS				*e*S	**Sg**	**22 06 40.8**	**-1.9**
	28nm,0.7s							
AML	**Almayashu**	**3.22**	**295**	⇑*i*P	**Pn**	**22 05 50.7**	**+0.2**
	baz=97							
AML				⇑*i*S	**Sn**	**22 06 31.4**	**+2.2**
	baz=97							
AML	**Almayashu**	**3.22**	**295**	P	**Pb**	**22 05 55.3**	**-1.7**
	SNR=10							
MNBS	**Baschi**	**3.31**	**10**	*e*P	**Pb**	**22 05 58.2**	**-0.1**
	233nm,0.1s							
MNBS				*e*S	**Sg**	**22 06 44.5**	**-1.2**
	439nm,0.1s							
MNBS	**Baschi**	**3.31**	**10**	Pg	**Pb**	**22 05 58.2**	**-0.1**
MNBS				Lg	Lg	22 06 44.5		
KTMS	**Ketmen**	**3.32**	**37**	*e*P	**Pb**	**22 05 57.1**	**-1.4**
	0.6nm,0.1s							
KTMS				*e*S	**Sg**	**22 06 42.5**	**-3.7**
	29nm,0.5s							
USP	**Ospenovka**	**3.37**	**318**	⇓*e*P	**Pn**	**22 05 53.0**	**+0.8**
	baz=19							
USP				⇓*i*S	**Sn**	**22 06 34.9**	**+2.6**
	baz=19							
USP	**Ospenovka**	**3.37**	**318**	P	**Pb**	**22 05 59.0**	**-0.4**
	SNR=12							
ARXS	**Arharly**	**3.40**	**3**	*e*P	**Pb**	**22 05 59.6**	**-0.2**
	10.0nm,0.4s							
ARXS				*e*S	**Sg**	**22 06 47.0**	**-1.5**
	77nm,0.3s							
ARXS	**Arharly**	**3.40**	**3**	Pg	**Pb**	**22 05 59.6**	**-0.2**
	10.0nm,0.4s							
ARXS				Lg	Lg	22 06 47.0		
	77nm,0.3s							
EKS2	**Erkin-Say**	**3.41**	**304**	⇓*i*P	**Pn**	**22 05 53.3**	**+0.5**
	baz=5.0							
EKS2				⇓*i*S	**Sn**	**22 06 35.8**	**+2.4**
	baz=5.0							
EKS2	**Erkin-Say**	**3.41**	**304**	P	**Pb**	**22 05 59.8**	**-0.3**
	SNR=7.8							
ARSB	**Arslanbob**	**3.54**	**280**	⇑*i*P	**Pn**	**22 05 54.6**	**0.0**
	baz=82							
ARSB				⇑*i*S	**Sn**	**22 06 37.7**	**+1.1**
	baz=82							
MRKS	**Merke**	**3.80**	**302**	*e*P	**Pb**	**22 06 06.2**	**-0.5**
	7.8nm,0.4s							
MRKS				*e*S	**Sg**	**22 06 58.2**	**-3.4**
	6.9nm,0.5s							
MRKS	**Merke**	**3.80**	**302**	Pg	**Pb**	**22 06 06.2**	**-0.5**
	7.8nm,0.4s							
MRKS				Lg	Lg	22 06 58.2		
	6.9nm,0.5s							
DJR	**Jarkent**	**3.86**	**24**	*e*P	**Pb**	**22 06 07.8**	**+0.1**
	0.7nm,0.2s							
DJR				*e*S	**Sg**	**22 07 01.0**	**-2.4**
	13nm,0.4s							
DJR	**Jarkent**	**3.86**	**24**	Pg	**Pb**	**22 06 07.8**	**+0.1**
	4.4nm,0.4s							
DJR				Lg	Lg	22 07 01.0		
	14nm,0.4s							
TDK	**Taldyqorghan**	**4.22**	**8**	*e*P	**Pb**	**22 06 14.7**	**+0.9**
	13nm,0.2s							
TDK				*e*S	**Sg**	**22 07 12.7**	**-2.3**
	90nm,0.4s							
KAPS	**Kapalarasan**	**4.64**	**15**	*e*P	**Pb**	**22 06 22.3**	**+1.3**
	0.7nm,0.5s							
KAPS				*e*S	**Sg**	**22 07 25.8**	**-2.7**
	5.5nm,0.6s							
KAPS	**Kapalarasan**	**4.64**	**15**	Pg	**Pb**	**22 06 22.3**	**+1.3**
	1.6nm,0.4s							
KAPS				Lg	Lg	22 07 25.8		
	9.7nm,0.5s							
BTLS	**Baital**	**4.97**	**329**	*e*P	**Pb**	**22 06 28.1**	**+1.6**
	1.0nm,0.2s							
BTLS				*e*S	**Sg**	**22 07 35.5**	**-3.4**
	8.6nm,0.4s							
KK31	**Karatay Array**	**5.77**	**296**	⇑Pg	**Pb**	**22 06 42.3**	**+2.2**
	0.2nm,0.3s,baz=110,slow=15,SNR=5.9							
KK31				⇑Lg	Lg	22 07 58.7		
	1.3nm,0.5s,baz=125,slow=26,SNR=9.1							

NEIC ***20*** *22:06:01.1±0.7, 18°.35N±0°.08×101°.85W±0°.05, h22*$^{km}_{\pm}$*9km, Error ellipse: s-maj=11.5km s-min=6.7km az=166.0*
MEX ***20*** *22:06:02.0±0.3, 18°.34N×101°.74W, h60*^{km}*, MD4.0*
ISC 20 22:06:03.2±1.4, 18°.36N±0°.10×101°.86W±0°.06, h64^{km}**, n10, σ1^{s}55/16, Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMIG	**Aquila**	**1.41**	**267**	*e*P	**Pn**	**22 06 25.7**	**-1.1**
MMIG				*e*S	**Sn**	**22 06 44.0**	**-0.5**
MMIG	**Aquila**	**1.41**	**267**		**Pn**	**22 06 25.7**	**-1.1**
MMIG					**Sn**	**22 06 44.0**	**-0.5**
MOIG	**Morelia**	**1.46**	**26**	Pn	**Pn**	**22 06 26.0**	**-1.7**
COIG	**Colima**	**1.92**	**296**	*e*P	**Pn**	**22 06 32.2**	**-1.5**
COIG				*i*S	**Sn**	**22 06 56.5**	**-0.4**
EZ5V		**1.99**	**304**	*e*P	**Pn**	**22 06 33.6**	**-1.2**
EZ5V				*i*S	**Sn**	**22 06 58.0**	**-0.9**
EZ5V		**1.99**	**304**		**Pn**	**22 06 33.6**	**-1.2**
EZ5V					**Sn**	**22 06 58.0**	**-0.9**
R15V		**2.17**	**292**	*e*P	**Pn**	**22 06 36.1**	**-1.0**
R15V				*i*S	**Sn**	**22 07 02.9**	**0.0**
R15V		**2.17**	**292**		**Pn**	**22 06 36.1**	**-1.0**
TLIG	**Tlapa**	**3.23**	**104**	Pn	**Pn**	**22 06 50.6**	**-1.1**
PSUT	**Pine Spring**	**22.66**	**335**	P	**P**	**22 11 03.4**	**+3.9**

IDC ***20*** *22:31:05.1±1.5, 2°.36S×139°.90E, h0*^{km}*, mb3.5/3, mb1 3.8/4, mb1mx3.5/28, mbtmp3.6/4, ML3.2/1, Error ellipse: s-maj=29.2km s-min=11.0km az=3.0*
DJA ***20*** *22:31:06.3±1.8, 3°.S±62°.×14°.0E±1°.6, h36*$^{km}_{\pm}$*13km, M2.9/3, MLv2.9/3*
ISC 20 22:31:07.2±1.1, 2°.3S±0°.1×140°.02E±0°.08, h25^{km}**, n8, σ1^{s}20/10, mb3.6/3, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**0.33**	**153**	P	**Pb**	**22 31 14.8**	**+0.1**
GENI				S	**Sb**	**22 31 20.2**	**+0.4**
JAY	**Jayapura**	**0.72**	**107**	Pg	**Pb**	**22 31 20.7**	**-0.5**
	24nm,0.3s,baz=113,slow=23,SNR=104						
JAY				Lg	Lg	22 31 32.5	
	65nm,0.3s,baz=100,slow=17,SNR=9.8						
JAY	**Jayapura**	**0.72**	**107**	P	**Pb**	**22 31 20.7**	**-0.5**
SMPI	**Sarmi**	**1.34**	**283**	P	**Pn**	**22 31 29.1**	**-1.3**
SMPI				S	**Sn**	**22 31 47.5**	**+0.1**
WRA	**Warramunga Arr**	**18.39**	**197**	P	**P**	**22 35 18.6**	**-2.0**
	0.1nm,0.3s,baz=19,slow=12,SNR=3.3						
FITZ	**Fitzroy Crossi**	**21.11**	**221**	P	**P**	**22 35 50.5**	**+0.3**
	1.8nm,0.8s,baz=50,slow=7.9,SNR=2.7						
ASAR	**Alice Springs**	**22.05**	**195**	P	**P**	**22 36 01.2**	**+0.9**
	1.4nm,0.8s,baz=26,slow=10.0,SNR=11						
MKAR	**Makanchi Array**	**70.27**	**322**	P	**P**	**22 42 20.2**	**+1.7**
	0.4nm,0.7s,baz=105,slow=6.5,SNR=4.5						

IDC ***20*** *22:38:47.5±0.9, 56°.93S×24°.90W, h0*^{km}*, mb4.1/4, mb1 4.2/5, mb1mx3.9/29, mbtmp4.0/5, ML3.7/1, MS3.2/6, Ms1 3.2/6, ms1mx3.0/23, Error ellipse: s-maj=43.4km s-min=25.0km az=75.0*
ISC 20 22:38:50.5±0.9, 57°.0S±0°.2×24°.8W±0°.3, h22^{km}**, n16, σ0^{s}56/11, mb4.0/3, MS3.3/6, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**15.40**	**159**	P	**Pn**	**22 42 26.0**	**0.0**
VNA3	**Neumayer Olymp**	**15.64**	**162**	P	**Pn**	**22 42 28.3**	**-0.9**
VNA2	**Neumayer--Watz**	**15.79**	**159**	P	**Pn**	**22 42 30.6**	**-0.6**
	baz=328,slow=16						
SNAA	**Sanae**	**17.32**	**157**	P	**P**	**22 42 51.6**	**-0.2**
SNAA	**Sanae**	**17.32**	**157**	P	**Pn**	**22 42 50.7**	**+0.2**
	0.3nm,0.3s,baz=334,slow=13,SNR=19						
SNAA				LR	LR	22 47 51.7	
	comp=Z,74nm,19.5s,baz=92,slow=31						
PMSA	**Palmer Station**	**20.30**	**231**	LR	LR	22 50 02.3	
	comp=Z,100nm,22.0s,baz=74,slow=33						
USHA	**Ushuaia**	**24.25**	**257**	LR	LR	22 51 38.7	
	comp=Z,1μm,20.8s,baz=180,slow=32						
BDFB	**Brasilia**	**44.89**	**327**	LR	LR	23 02 51.5	
	comp=Z,33nm,19.1s,baz=146,slow=32						
VNDA	**Vanda**	**45.66**	**182**	P	**P**	**22 47 09.4**	**+0.8**
	0.8nm,0.7s,baz=198,slow=3.2,SNR=10						
VNDA				LR	LR	23 04 48.1	
	comp=Z,35nm,20.3s,baz=177,slow=34						
LPAZ	**La Paz**	**52.03**	**303**	P	**P**	**22 47 58.9**	**0.0**
	4.6nm,0.6s,baz=150,slow=6.3,SNR=20						
LPAZ				LR	LR	23 11 40.0	
	comp=Z,11nm,19.7s,baz=120,slow=38						
DBIC	**Dimbokro**	**65.53**	**22**	LR	LR	23 12 11.9	
	comp=Z,32nm,20.1s,baz=110,slow=31						
TORD	**Torodi Ar. Bea**	**73.28**	**27**	P	**P**	**22 50 20.1**	**+0.2**
	1.2nm,0.7s,baz=201,slow=6.4,SNR=8.9						
ASAR	**Alice Springs**	**97.64**	**160**	P	Pdif	22 52 25.7	+2.3
	0.2nm,0.4s,baz=177,slow=5.6,SNR=2.4						
MKAR	**Makanchi Array**	**135.94**	**71**	PKP	**PKiKP**	**22 58 10.4**	**+0.2**
	0.2nm,0.6s,baz=212,slow=5.1,SNR=2.2						
YKA	**Yellowknife Ar**	**137.79**	**316**	PKP	**PKPdf**	**22 58 11.3**	**-0.1**
	0.4nm,0.6s,baz=126,slow=2.4,SNR=6.8						
ILAR	**Eielson Array**	**151.76**	**310**	PKPbc	**PKPbc**	**22 58 40.9**	**-0.8**
	0.6nm,0.5s,baz=148,slow=1.3,SNR=8.4						

IDC 20 23:23:39.7±1.8, 1°.57N×126°.22E, h0^{km}**, mb3.6/3, mb1 3.7/4, mb1mx3.4/54, mbtmp3.6/4, ML3.5/1, MS3.4/1, Ms1 3.4/1, ms1mx2.4/24, Error ellipse: s-maj=116.4km s-min=23.3km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**11.97**	**192**	LR	LR	23 32 54.1	
	comp=Z,177nm,18.9s,baz=169,slow=46						
FITZ	**Fitzroy Crossi**	**19.55**	**182**	P	P	23 28 08.7	-0.5
	0.1nm,0.3s,baz=11,slow=10,SNR=1.3						
WRA	**Warramunga Arr**	**22.82**	**160**	P	P	23 28 44.2	-0.3
	1.3nm,0.5s,baz=339,slow=11,SNR=16						
ASAR	**Alice Springs**	**26.17**	**164**	P	P	23 29 16.6	+0.5
	0.3nm,0.4s,baz=352,slow=15,SNR=7.8						
MKAR	**Makanchi Array**	**59.04**	**326**	P	P	23 33 41.6	-0.1
	0.3nm,0.4s,baz=123,slow=6.2,SNR=8.3						

IDC ***20*** *23:24:49.3±6.9, 6°.71S×155°.03E, h65*$^{km}_{\pm}$*52km, mb3.7/6, mb1 3.9/7, mb1mx3.5/43, mbtmp3.9/7, MS2.7/3, Ms1 2.7/3, ms1mx2.5/28, Error ellipse: s-maj=64.4km s-min=24.0km az=118.0*
ISC 20 23:24:48.4±1.4, 6°.7S±0°.2×155°.0E±0°.2, h56^{km}**, n13, σ1^{s}20/8, mb4.0/6, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.83**	**309**	P	**Pn**	**23 25 44.5**	**-0.4**
	baz=72,slow=8.5,SNR=1.1						
KRVT				S	Sn	23 26 39.0	+10
	19nm,0.3s,baz=183,slow=17,SNR=2.3						
KRVT				LR	LR	23 27 31.7	
	comp=Z,91nm,20.6s,baz=175,slow=42						
HNR	**Honiara**	**5.57**	**119**	LR	LR	23 27 51.4	
	comp=Z,48nm,18.4s,baz=15,slow=33						
PMG	**Port Moresby**	**8.23**	**251**	LR	LR	23 29 38.0	
	comp=Z,81nm,18.4s,baz=297,slow=35						
WRA	**Warramunga Arr**	**23.99**	**235**	P	**P**	**23 29 59.1**	**+1.1**
	0.7nm,0.4s,baz=55,slow=9.8,SNR=5.7						
ASAR	**Alice Springs**	**26.37**	**228**	P	**P**	**23 30 20.2**	**+0.6**
	0.4nm,0.4s,baz=56,slow=9.1,SNR=6.0						
H11S3	**WAKE ISLAND Hy**	**27.57**	**24**	T	T	23 58 49.8	
	baz=204,slow=75,SNR=25						
H11S2	**WAKE ISLAND Hy**	**27.58**	**25**	T	T	23 58 44.8	
	baz=204,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**27.59**	**25**	T	T	23 58 42.1	
	baz=204,slow=75,SNR=26						
FITZ	**Fitzroy Crossi**	**30.79**	**246**	P	**P**	**23 30 59.0**	**0.0**
	2.6nm,1.0s,baz=87,slow=8.9,SNR=2.4						
PETK	**Petropavlovsk-**	**59.64**	**2**	P	**P**	**23 34 48.1**	**+1.5**
	1.1nm,0.7s,baz=182,slow=6.9,SNR=3.2						
CMAR	**Chiang Mai Arr**	**60.69**	**295**	P	**P**	**23 34 54.6**	**+0.1**
	2.0nm,0.7s,baz=121,slow=5.4,SNR=9.3						
YKA	**Yellowknife Ar**	**96.08**	**28**	P	**P**	**23 38 08.8**	**-0.8**
	0.5nm,0.8s,baz=263,slow=4.2,SNR=6.4						
TORD	**Torodi Ar. Bea**	**152.98**	**286**	PKPbc	**PKPbc**	**23 44 38.9**	**-1.7**
	0.4nm,0.5s,baz=70,slow=2.2,SNR=9.8						

IDC ***20*** *23:24:56.9±0.6, 56°.83S×24°.76W, h0*^{km}*, mb4.2/7, mb1 4.3/8, mb1mx4.0/36, mbtmp4.2/8, ML4.1/1, MS3.7/10, Ms1 3.6/10, ms1mx3.5/24, Error ellipse: s-maj=26.1km s-min=18.5km az=37.0*
NEIC ***20*** *23:24:59.9±1.0, 56°.9S±0°.1×24°.8W±0°.2, h21*$^{km}_{\pm}$*3km, mb4.7/19, Error ellipse: s-maj=19.3km s-min=14.4km az=195.0*
ISC 20 23:24:59.8±0.5, 56°.90S±0°.10×24°.76W±0°.10, h22^{km}**, n66, σ0^{s}68/57, mb4.5/14, MS3.6/9, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.14**	**287**		**Pn**	**23 26 43.5**	**+0.7**
VNA1	**Neumayer--Stat**	**15.51**	**159**	P	**Pn**	**23 28 36.6**	**-0.2**
VNA3	**Neumayer Olymp**	**15.75**	**162**	P	**Pn**	**23 28 38.9**	**-1.0**
VNA2	**Neumayer--Watz**	**15.90**	**159**	P	**Pn**	**23 28 41.1**	**-0.8**
	baz=328,slow=16						
SNAA	**Sanae**	**17.42**	**157**	P	**Pn**	**23 29 01.7**	**+0.6**
SNAA	**Sanae**	**17.42**	**157**	P	**Pn**	**23 29 01.3**	**+0.1**
	0.7nm,0.3s,baz=323,slow=15,SNR=51						
SNAA				S	Sn	23 32 02.0	-12
	0.1nm,0.3s,baz=335,slow=14,SNR=1.3						
SNAA				LR	LR	23 35 35.0	
	comp=Z,158nm,18.4s,baz=322,slow=36						
SNAA	**Sanae**	**17.42**	**157**	P	**P**	**23 29 02.1**	**-0.1**
EFI	**East Falkland**	**19.99**	**271**	P	**P**	**23 29 30.8**	**+0.3**
EFI				IAmb	IAmb	23 29 38.1	
	comp=Z,42nm,1.3s						
GO09	**Cerro Castillo**	**27.99**	**261**	P	**P**	**23 30 47.2**	**-1.5**
GO09				IAmb	IAmb	23 31 15.1	
	comp=Z,21nm,1.2s						
QSPA	**South Pole Qui**	**33.35**	**180**	P	**P**	**23 31 36.2**	**+0.3**
QSPA				IAmb	IAmb	23 31 59.8	
	comp=Z,14nm,1.0s						
PLCA	**Paso Flores**	**33.47**	**279**	LR	LR	23 43 54.8	
	comp=Z,125nm,21.7s,baz=146,slow=34						
CPUP	**Villa Florida**	**38.39**	**309**	P	**P**	**23 32 18.4**	**-0.8**
	comp=Z,5.2nm,0.9s,baz=143,slow=9.5,SNR=11						
CPUP				LR	LR	23 47 17.3	
	comp=Z,66nm,19.6s,baz=184,slow=35						
CPUP	**Villa Florida**	**38.39**	**309**	P	**P**	**23 32 18.5**	**-0.8**
MAW	**Mawson**	**38.66**	**142**	LR	LR	23 46 43.0	
	comp=Z,58nm,20.1s,baz=240,slow=34						
SUR	**Sutherland**	**39.60**	**71**	LR	LR	23 44 31.0	
	comp=Z,414nm,21.6s,baz=151,slow=30						
BDFB	**Brasilia**	**44.79**	**327**	P	**P**	**23 33 12.7**	**+0.8**
	comp=Z,1.2nm,0.3s,baz=119,slow=10,SNR=3.5						
BDFB				LR	LR	23 52 50.8	
	comp=Z,72nm,18.6s,baz=120,slow=37						
BDFB	**Brasilia**	**44.79**	**327**	IAmb	IAmb	23 33 30.7	
	comp=Z,10.0nm,1.4s						
BOSA	**Boshof**	**44.91**	**73**	P	**P**	**23 33 13.0**	**+0.2**
	comp=Z,3.0nm,1.0s,baz=212,slow=7.2,SNR=3.6						
BOSA				LR	LR	23 48 26.3	
	comp=Z,150nm,19.6s,baz=180,slow=31						
VNDA	**Vanda**	**45.78**	**182**	P	**P**	**23 33 20.0**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=188,slow=6.5,SNR=10						
VNDA	**Vanda**	**45.78**	**182**	P	**P**	**23 33 19.7**	**+0.7**
LVC	**Limon Verde**	**46.89**	**298**	LR	LR	23 51 32.7	
	comp=Z,38nm,21.4s,baz=167,slow=34						
LVC	**Limon Verde**	**46.89**	**298**	P	**P**	**23 33 29.0**	**+0.3**
LBTB	**Lobatse**	**48.00**	**70**	P	**P**	**23 33 35.5**	**-1.6**
	comp=Z,2.8nm,0.9s,baz=230,slow=7.9,SNR=1.7						
LBTB				LR	LR	23 52 15.0	
	comp=Z,135nm,18.0s,baz=210,slow=34						
PB01	**IPOC Station P**	**48.50**	**299**	P	**P**	**23 33 40.0**	**-1.0**
PB08	**IPOC Station P**	**49.11**	**300**	P	**P**	**23 33 46.2**	**+0.2**
PB08				IAmb	IAmb	23 33 52.0	
	comp=Z,7.8nm,0.7s						
SIV	**San Ignacio**	**49.15**	**311**	P	**P**	**23 33 45.3**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=178,slow=5.5,SNR=4.6						
GO01	**Chusmiza**	**49.54**	**300**	P	**P**	**23 33 48.8**	**-0.5**
H10N1	**ASCENSION HYDR**	**49.59**	**13**	T	T	00 27 56.9	
	baz=195						
H10N3	**ASCENSION HYDR**	**49.59**	**13**	T	T	00 28 10.4	
	baz=195						
H10N2	**ASCENSION HYDR**	**49.61**	**13**	T	T	00 28 11.6	
	baz=195						
PB11	**IPOC Station P**	**49.68**	**299**	P	**P**	**23 33 49.4**	**-0.6**
MNMC	**Minye Minye**	**50.19**	**300**	P	**P**	**23 33 52.0**	**-2.1**
PB16	**IPOC Station P**	**50.83**	**300**	P	**P**	**23 33 59.0**	**-0.3**
PB16				IAmb	IAmb	23 34 22.4	
	comp=Z,16nm,1.5s						
LPAZ	**La Paz**	**51.97**	**303**	P	**P**	**23 34 07.9**	**0.0**
	comp=Z,24nm,0.6s,baz=117,slow=6.2,SNR=42						
LPAZ	**La Paz**	**51.97**	**303**	P	**P**	**23 34 07.5**	**-0.4**
SAML	**Samuel**	**56.37**	**312**	P	**P**	**23 34 39.5**	**+0.4**
SAML				IAmb	IAmb	23 34 45.9	
	comp=Z,9.7nm,1.3s						
TOA0	**Torodi Ar. Sit**	**73.17**	**27**	P	**P**	**23 36 28.8**	**+0.2**
TOA0				IAmb	IAmb	23 36 31.5	
	comp=Z,7.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**73.17**	**27**	P	**P**	**23 36 29.1**	**+0.5**
	comp=Z,3.5nm,0.9s,baz=198,slow=5.9,SNR=14						
TORD				LR	LR	00 03 16.5	
	comp=Z,33nm,18.7s,baz=205,slow=32						
PDAR	**Pinedale Array**	**121.94**	**300**	PKP	**PKiKP**	**23 43 51.6**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=101,slow=3

0.3nm539nm50nm,0.9s
RKPI Ransiki, Papua 11.21 96 P Pn 23 32 35.1 +7.4

*IDC **20** 23:30:44.5±0.7,39°.58N×24°.15E,h0km,mb3.7/13, mb1 3.9/25,mb1mx3.8/62,mbtmp3.8/25,ML3.7/12, MS3.4/24,Ms1 3.4/24,ms1mx3.3/52,Error ellipse: s-maj=11.6km s-min=11.0km az=113.0*
*ATH **20** 23:30:45.0,39°.53N×24°.20E,h30km,ML4.3/52,Error ellipse: s-maj=0.9km s-min=0.6km az=279.0*
*ISK **20** 23:30:44.4,39°.60N×24°.22E,h8km,ML4.4/13*
*PDG **20** 23:30:45.5±0.5,39°.55N×24°.20E,h23km,ML3.7/13,Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*NEIC **20** 23:30:46.5±1.4,39°.57N±0°.05×24°.20E±0°.03,h14km±5km, Error ellipse: s-maj=7.5km s-min=1.1km az=206.0*
*MOS **20** 23:30:46.5±1.4,39°.61N×24°.22E,h27km,mb4.4/10,Error ellipse: s-maj=5.8km s-min=4.2km az=92.2*
*THE **20** 23:30:46.0,39°.53N×24°.19E,h12km,ML4.5/16,Error ellipse: s-maj=0.5km s-min=0.3km az=266.0*
*DDA **20** 23:30:48.4,39°.61N×24°.53E,h32km±4km,MW4.3*
ISC 20 23:30:47.0±0.9,39°.54N±0°.02×24°.18E±0°.02,h17km±6km, n520,σ1§46/592,mb4.0/28,MS3.4/15,60C-46D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AOS	**Alonnisos**	**0.43**	**212**	P	**Pg**	**23 30 54.7**	**-1.1**
AOS				S	**Sg**	**23 31 01.3**	**-0.5**
	82μm,0.6s						
AOS	**Alonnisos**	**0.43**	**212**	P	**Pg**	**23 30 54.5**	**-1.3**
AOS				S	**Sg**	**23 31 01.1**	**-0.6**
AOS				AML	AML	23 31 02.0	
AOS				AML	AML	23 31 02.5	
ALNA	**Alonissos**	**0.46**	**212**	P	**Pg**	**23 30 55.0**	**-1.3**
ALNA				S	**Sg**	**23 31 01.7**	**-0.8**
ALNA				AML	AML	23 31 02.0	
ALNA				AML	AML	23 31 06.2	
PAIG	**Paliouri**	**0.55**	**316**	P	**Pg**	**23 30 57.0**	**-0.9**
PAIG				S	**Sg**	**23 31 05.2**	**0.0**
	39μm,0.5s						
PAIG	**Paliouri**	**0.55**	**316**	P	**Pg**	**23 30 57.0**	**-0.9**
PAIG				S	**Sg**	**23 31 05.1**	**0.0**
PAIG				AML	AML	23 31 07.0	
	comp=N,67592μm,0.4s						
PAIG				AML	AML	23 31 07.3	
	comp=E,85360μm,0.7s						
SKIA	**Skiathos**	**0.66**	**236**	P	**Pg**	**23 30 58.9**	**-1.2**
SKIA				S	**Sg**	**23 31 09.1**	**+0.2**
	comp=E,103μm,0.6s						
SKIA	**Skiathos**	**0.66**	**236**	P	**Pg**	**23 30 58.8**	**-1.3**
SKIA				S	**Sb**	**23 31 09.3**	**+0.3**
SKIA				AML	AML	23 31 10.9	
SKIA				AML	AML	23 31 11.2	
SKY	**Skiros Island**	**0.72**	**156**	P	**Pg**	**23 30 59.5**	**-1.6**
SKY				S	**Sg**	**23 31 09.7**	**-1.0**
SKY	**Skiros Island**	**0.72**	**156**	P	**Pg**	**23 30 59.6**	**-1.6**
SKY				S	**Sg**	**23 31 09.9**	**-0.8**
SKY				AML	AML	23 31 11.9	
SKY				AML	AML	23 31 14.4	
NEO	**Neokhori**	**0.77**	**253**	P	**Pb**	**23 31 01.3**	**-0.7**
NEO				S	**Sb**	**23 31 11.7**	**-0.5**
	comp=E,52μm,0.6s						
NEO	**Neokhori**	**0.77**	**253**	P	**Pb**	**23 31 00.5**	**-1.5**
NEO				S	**Sb**	**23 31 11.6**	**-0.5**
NEO				AML	AML	23 31 12.8	
NEO				AML	AML	23 31 15.0	
	comp=E,70157μm,0.3s						
XOR	**Xorichti**	**0.78**	**258**	P	**Pb**	**23 31 00.5**	**-1.6**
XOR				S	**Sb**	**23 31 12.5**	**+0.1**
	comp=E,45μm,0.6s						
XOR	**Xorichti**	**0.78**	**258**	P	**Pb**	**23 31 00.5**	**-1.6**
XOR				S	**Sb**	**23 31 12.2**	**-0.2**
XOR				AML	AML	23 31 13.0	
	comp=E,67195μm,0.6s						
XOR				AML	AML	23 31 13.4	
OUR	**Ouranopolis**	**0.81**	**349**	P	**Pb**	**23 31 01.5**	**-1.0**
OUR				S	**Sg**	**23 31 13.5**	**0.0**
	comp=E,22μm,0.6s						
OUR	**Ouranopolis**	**0.81**	**349**	P	**Pb**	**23 31 01.6**	**-1.0**
OUR				S	**Sg**	**23 31 13.4**	**0.0**
OUR				AML	AML	23 31 16.5	
	comp=E,33283μm,0.5s						
OUR				AML	AML	23 31 17.0	
	comp=N,42887μm,0.4s						
LIA	**Limnos Island**	**0.85**	**65**	P	**Pb**	**23 31 01.9**	**-1.4**
LIA				S	**Sb**	**23 31 14.5**	**0.0**
	comp=N,19μm,0.6s						
LIA	**Limnos Island**	**0.85**	**65**	P	**Pb**	**23 31 02.0**	**-1.3**
LIA				S	**Sb**	**23 31 14.6**	**0.0**
LIA				AML	AML	23 31 15.2	
	comp=N,34731μm,0.7s						
LIA				AML	AML	23 31 15.6	
	comp=E,39031μm,0.5s						
KYMI	**Kymi, Euboea I**	**0.91**	**184**	P	**Pb**	**23 31 02.7**	**-1.5**
KYMI				S	**Sb**	**23 31 15.7**	**-0.3**
	comp=E,35μm,0.8s						
KYMI	**Kymi, Euboea I**	**0.91**	**184**	P	**Pb**	**23 31 02.7**	**-1.5**
KYMI				S	**Sb**	**23 31 15.1**	**-0.8**
KYMI				AML	AML	23 31 17.9	
	comp=E,84326μm,1.0s						
KYMI				AML	AML	23 31 20.4	
	comp=N,56655μm,0.6s						
MRKA	**Markates**	**0.95**	**209**	P	**Pb**	**23 31 03.9**	**-1.1**
MRKA				S	**Sb**	**23 31 17.3**	**+0.1**
	comp=N,54μm,0.6s						
MRKA	**Markates**	**0.95**	**209**	P	**Pb**	**23 31 03.7**	**-1.3**
MRKA				S	**Sb**	**23 31 17.3**	**+0.1**
MRKA				AML	AML	23 31 19.4	
MRKA				AML	AML	23 31 22.0	
	comp=N,88781μm,0.7s						
PLG	**Polygyros**	**1.00**	**326**	P	**Pb**	**23 31 04.3**	**-1.6**
PLG				S	**Sg**	**23 31 19.4**	**-0.3**
PLG	**Polygyros**	**1.00**	**326**	P	**Pb**	**23 31 04.3**	**-1.6**
PLG				S	**Sb**	**23 31 18.5**	**-0.4**
PLG				AML	AML	23 31 23.8	
	comp=E,18138μm,0.5s						
PLG				AML	AML	23 31 24.5	
	comp=N,10882μm,0.4s						
THAS	**Thassos island**	**1.15**	**21**	P	**Pn**	**23 31 05.9**	**-2.2**
THAS				S	**Sg**	**23 31 24.0**	**-0.1**
	comp=N,19μm,0.3s						
THAS	**Thassos island**	**1.15**	**21**	P	**Pn**	**23 31 05.9**	**-2.2**
THAS				AML	AML	23 31 25.8	
	comp=N,47229μm,0.3s						
THAS				AML	AML	23 31 26.6	
	comp=E,31390μm,0.3s						
LKR	**Lokris**	**1.27**	**226**	P	**Pn**	**23 31 08.6**	**-1.3**
LKR				S	**Sb**	**23 31 27.0**	**+0.4**
LKR	**Lokris**	**1.27**	**226**	P	**Pn**	**23 31 08.6**	**-1.3**
LKR				AML	AML	23 31 30.9	
	comp=E,13517μm,0.3s						
LKR				AML	AML	23 31 31.8	
	comp=N,13830μm,0.4s						
HORT	**Hortiatis**	**1.34**	**322**	P	**Pn**	**23 31 09.9**	**-1.1**
HORT				S	**Sn**	**23 31 27.7**	**-0.7**
	comp=N,5μm,0.6s						
HORT	**Hortiatis**	**1.34**	**322**	P	**Pn**	**23 31 09.9**	**-1.1**
HORT				AML	AML	23 31 32.4	
	comp=E,10930μm,0.6s						
HORT				AML	AML	23 31 34.8	
	comp=N,8979μm,0.6s						
HORT	**Hortiatis**	**1.34**	**322**	PN	**Pn**	**23 31 09.6**	**-1.4**
HORT				SN	**Sn**	**23 31 27.9**	**-0.5**
SIGR	**SIGRI**	**1.34**	**104**	P	**Pn**	**23 31 09.6**	**-1.3**
SIGR				S	**Sn**	**23 31 28.4**	**+0.1**
	comp=N,11μm,0.9s						
SIGR	**SIGRI**	**1.34**	**104**	P	**Pn**	**23 31 09.3**	**-1.5**
SIGR				AML	AML	23 31 30.1	
	comp=N,20506μm,0.9s						
SIGR				AML	AML	23 31 31.4	
	comp=E,24591μm,0.9s						
LRSO	**Larissa Observ**	**1.39**	**276**	P	**Pn**	**23 31 10.9**	**-0.6**
LRSO				AML	AML	23 31 30.9	
	comp=E,29853μm,1.0s						
LRSO				AML	AML	23 31 33.0	
	comp=N,28862μm,0.9s						
SMTH	**Samothraki Isl**	**1.40**	**48**	P	**Pn**	**23 31 09.3**	**-2.4**
SMTH				S	**Sn**	**23 31 30.2**	**+0.5**
SMTH	**Samothraki Isl**	**1.40**	**48**	P	**Pn**	**23 31 09.3**	**-2.4**
SMTH				AML	AML	23 31 32.8	
	comp=E,8987μm,0.5s						
SMTH				AML	AML	23 31 34.7	
	comp=N,9455μm,0.4s						
KVLA	**Kavala**	**1.41**	**6**	P	**Pn**	**23 31 09.6**	**-2.1**
KVLA				AML	AML	23 31 34.2	
	comp=E,22274μm,0.5s						
KVLA				AML	AML	23 31 35.4	
	comp=N,17512μm,0.4s						
AXAR	**Agios Charalam**	**1.41**	**237**	P	**Pn**	**23 31 10.9**	**-0.9**
AXAR	**Agios Charalam**	**1.41**	**237**	P	**Pn**	**23 31 11.0**	**-0.9**
AXAR				AML	AML	23 31 37.0	
	comp=E,32649μm,0.9s						
AXAR				AML	AML	23 31 44.2	
	comp=N,37839μm,0.7s						
LIT	**Litokhoron**	**1.42**	**294**	P	**Pn**	**23 31 10.6**	**-1.3**
LIT				S	**Sn**	**23 31 29.8**	**-0.3**
LIT	**Litokhoron**	**1.42**	**294**	P	**Pn**	**23 31 10.6**	**-1.3**
LIT				AML	AML	23 31 30.0	
	comp=E,7880μm,0.4s						
LIT				AML	AML	23 31 30.1	
	comp=N,14528μm,0.5s						
LIT	**Litokhoron**	**1.42**	**294**	P	**Pn**	**23 31 11.2**	**-0.7**
LIT						23 31 29.4	
LIT	**Litokhoron**	**1.42**	**294**	Pn	**Pn**	**23 31 11.2**	**-0.7**
LIT					**Sn**	**23 31 29.4**	**-0.8**
SOH	**Sokhos**	**1.43**	**334**	P	**Pn**	**23 31 11.3**	**-0.8**
SOH	**Sokhos**	**1.43**	**334**	P	**Pn**	**23 31 11.3**	**-0.8**
THE	**Thessaloniki**	**1.43**	**320**	P	**Pn**	**23 31 11.4**	**-0.7**
THE	**Thessaloniki**	**1.43**	**320**	P	**Pn**	**23 31 11.4**	**-0.7**
THE				AML	AML	23 31 35.2	
	comp=N,5103μm,1.0s						
THE				AML	AML	23 31 41.2	
	comp=E,3363μm,0.9s						
PSRA	**Psara**	**1.47**	**132**	P	**Pn**	**23 31 12.5**	**-0.1**
DION	**Dionisos Attik**	**1.47**	**187**	P	**Pn**	**23 31 11.5**	**-1.2**
DION	**Dionisos Attik**	**1.47**	**187**	P	**Pn**	**23 31 11.4**	**-1.3**
DION				AML	AML	23 31 37.5	
	comp=E,86157μm,0.9s						
DION				AML	AML	23 31 38.1	
	comp=N,85501μm,0.9s						
GADA	**Gvkgeada**	**1.48**	**63**	PN	**Pn**	**23 31 11.1**	**-1.6**
GADA				SN	**Sn**	**23 31 30.5**	**-1.1**
KAVA	**Kavala**	**1.48**	**10**	P	**Pn**	**23 31 10.9**	**-1.8**
KAVA				S	**Sn**	**23 31 31.5**	**-0.2**
	comp=N,8μm,0.3s						
KAVA	**Kavala**	**1.48**	**10**	P	**Pn**	**23 31 10.9**	**-1.8**
KAVA				AML	AML	23 31 36.8	
	comp=E,16646μm,0.3s						
KAVA				AML	AML	23 31 38.0	
	comp=N,15567μm,0.3s						
VIL2	**Platees**	**1.50**	**208**	P	**Pn**	**23 31 12.3**	**-0.9**
PTL	**Penteli**	**1.51**	**189**	P	**Pn**	**23 31 12.0**	**-1.2**
PTL	**Penteli**	**1.51**	**189**	P	**Pn**	**23 31 11.9**	**-1.2**
PTL				AML	AML	23 31 39.8	
	comp=N,18864μm,0.7s						
PTL				AML	AML	23 31 40.2	
	comp=E,22921μm,0.6s						
KARY	**Karystos**	**1.52**	**172**	P	**Pn**	**23 31 12.1**	**-1.2**
KARY				S	**Sn**	**23 31 32.1**	**-0.5**
	comp=E,5μm,0.6s						
KARY	**Karystos**	**1.52**	**172**	P	**Pn**	**23 31 12.0**	**-1.2**
KARY				AML	AML	23 31 39.4	
	comp=E,9782μm,0.5s						
KARY				AML	AML	23 31 39.6	
	comp=N,11340μm,0.8s						
AGG	**Agios Georgios**	**1.52**	**251**	P	**Pn**	**23 31 12.2**	**-1.2**
AGG	**Agios Georgios**	**1.52**	**251**	P	**Pn**	**23 31 12.3**	**-1.2**
AGG				AML	AML	23 31 44.5	
	comp=E,11866μm,0.8s						
AGG				AML	AML	23 31 45.7	
	comp=N,9766μm,0.9s						
AGG	**Agios Georgios**	**1.52**	**251**	PN	**Pn**	**23 31 12.6**	**-0.8**
AGG				SN	**Sb**	**23 31 34.3**	**+0.6**
AGG	**Agios Georgios**	**1.52**	**251**	P	**Pn**	**23 31 11.7**	**-1.7**
AGG	**Agios Georgios**	**1.52**	**251**	Pn	**Pn**	**23 31 11.7**	**-1.7**
VILL	**Villia**	**1.53**	**206**	P	**Pn**	**23 31 12.4**	**-1.1**
VILL				S	**Sn**	**23 31 32.2**	**-0.8**
ATHU	**Athens Univers**	**1.60**	**191**	P	**Pn**	**23 31 13.1**	**-1.3**
ATHU	**Athens Univers**	**1.60**	**191**	P	**Pn**	**23 31 13.1**	**-1.3**
ATHU				AML	AML	23 31 38.9	
	comp=E,5836μm,0.7s						
ATHU				AML	AML	23 31 39.4	
	comp=N,8877μm,0.7s						
ATH	**Athens Observa**	**1.60**	**193**	P	**Pn**	**23 31 13.3**	**-1.2**
ATH				S	**Sn**	**23 31 34.5**	**-0.3**
	comp=N,20μm,0.8s						
ATH	**Athens Observa**	**1.60**	**193**	P	**Pn**	**23 31 13.3**	**-1.2**
ATH				AML	AML	23 31 41.1	
	comp=E,33634μm,0.8s						
ATH				AML	AML	23 31 41.5	
	comp=N,45462μm,0.8s						
PROD	**Prodromos**	**1.62**	**218**	P	**Pn**	**23 31 13.3**	**-1.4**
PROD	**Prodromos**	**1.62**	**218**	P	**Pn**	**23 31 13.3**	**-1.4**
PROD				AML	AML	23 31 44.2	
	comp=N,15660μm,0.6s						
PROD				AML	AML	23 31 44.7	
	comp=E,14806μm,0.4s						
SRS	**Serrai**	**1.64**	**344**	P	**Pn**	**23 31 13.6**	**-1.3**
SRS	**Serrai**	**1.64**	**344**	P	**Pn**	**23 31 13.7**	**-1.3**
PRK	**Paraskevi**	**1.65**	**100**	P	**Pn**	**23 31 14.8**	**-0.3**
PRK	**Paraskevi**	**1.65**	**100**	P	**Pn**	**23 31 14.9**	**-0.3**
PRK				AML	AML	23 31 42.2	
	comp=N,23323μm,1.2s						
PRK				AML	AML	23 31 43.9	
	comp=E,26404μm,0.7s						
MAKR	**Makrakomi, Fth**	**1.67**	**252**	P	**Pn**	**23 31 14.9**	**-0.5**
MAKR	**Makrakomi, Fth**	**1.67**	**252**	P	**Pn**	**23 31 14.9**	**-0.5**
MAKR				AML	AML	23 31 46.7	
	comp=N,11104μm,0.4s						
MAKR				AML	AML	23 31 48.3	
	comp=E,13367μm,0.5s						
THL	**Klokotos Trika**	**1.67**	**272**	P	**Pn**	**23 31 14.6**	**-0.8**
THL				S	**Sn**	**23 31 36.0**	**-0.4**
THL	**Klokotos Trika**	**1.67**	**272**	P	**Pn**	**23 31 14.5**	**-0.8**
THL				AML	AML	23 31 50.2	
	comp=N,5040μm,0.8s						
THL				AML	AML	23 31 53.2	
	comp=E,3898μm,1.2s						
EZN	**Ezine**	**1.68**	**80**	PN	**Pn**	**23 31 14.6**	**-0.9**
DLFA	**Delphi**	**1.68**	**232**	P	**Pn**	**23 31 13.8**	**-1.8**
DLFA				AML	AML	23 31 43.7	
	comp=N,9613μm,1.2s						
DLFA				AML	AML	23 31 50.3	
	comp=E,8842μm,0.8s						
VLY	**Voula,Athens**	**1.71**	**190**	P	**Pn**	**23 31 14.7**	**-1.2**
VLY				S	**Sn**	**23 31 37.4**	**0.0**
	comp=E,22μm,0.6s						
VLY	**Voula,Athens**	**1.71**	**190**	P	**Pn**	**23 31 14.8**	**-1.2**
VLY				AML	AML	23 31 45.8	
	comp=N,42567μm,0.6s						
VLY				AML	AML	23 31 46.4	
	comp=E,43728μm,0.5s						
LOUT	**Loutraki**	**1.81**	**212**	P	**Pn**	**23 31 16.5**	**-0.8**
LOUT	**Loutraki**	**1.81**	**212**	P	**Pn**	**23 31 16.4**	**-1.0**
LOUT				AML	AML	23 31 50.5	
	comp=N,4052μm,0.9s						
LOUT				AML	AML	23 31 53.5	
	comp=E,4330μm,1.2s						
NVR	**Nevrokopi**	**1.82**	**353**	P	**Pn**	**23 31 16.2**	**-1.4**
NVR	**Nevrokopi**	**1.82**	**353**	P	**Pn**	**23 31 16.4**	**-1.2**
BAYC	**CANAKKALE_Bayr**	**1.84**	**83**	*i* P	**Pn**	**23 31 16.6**	**-1.2**
BAYC				*i* S	Sn	23 31 30.5	-10
BAYC				IAML		23 31 46.0	
	comp=N,966nm,0.4s						
BAYC				IAML		23 31 49.0	
	comp=E,880nm,0.7s						
CHOS	**Chios island**	**1.86**	**128**	P	**Pn**	**23 31 17.2**	**-0.9**
CHOS	**Chios island**	**1.86**	**128**	P	**Pn**	**23 31 16.9**	**-1.3**
CHOS				AML	AML	23 31 51.9	
	comp=N,7192μm,0.9s						
CHOS				AML	AML	23 31 52.6	
	comp=E,11706μm,0.6s						
CHOS	**Chios island**	**1.86**	**128**	PN	**Pn**	**23 31 17.9**	**-0.2**
KNT	**Kendrikon**	**1.89**	**329**	P	**Pn**	**23 31 17.9**	**-0.6**
KNT	**Kendrikon**	**1.89**	**329**	P	**Pn**	**23 31 17.9**	**-0.6**
KNT				AML	AML	23 31 53.0	
	comp=N,4373μm,0.8s						
KNT				AML	AML	23 31 53.6	
	comp=E,3759μm,0.5s						
KNT	**Kendrikon**	**1.89**	**329**	PN	**Pn**	**23 31 17.7**	**-0.8**
RDO	**Rodhopi**	**1.91**	**33**	P	**Pn**	**23 31 16.9**	**-1.8**
RDO	**Rodhopi**	**1.91**	**33**	P	**Pn**	**23 31 16.9**	**-1.8**
RDO	**Rodhopi**	**1.91**	**33**	PN	**Pn**	**23 31 17.0**	**-1.8**
ENEZ	**Enez**	**1.93**	**51**	PN	**Pn**	**23 31 17.2**	**-1.8**
EVR	**Evrytania**	**1.94**	**252**	P	**Pn**	**23 31 18.8**	**-0.4**
EVR	**Evrytania**	**1.94**	**252**	P	**Pn**	**23 31 18.6**	**-0.6**
KALE	**Kalithea**	**1.96**	**235**	P	**Pn**	**23 31 18.5**	**-0.9**
KALE	**Kalithea**	**1.96**	**235**	P	**Pn**	**23 31 18.4**	**-0.9**
KALE				AML	AML	23 31 53.8	
	comp=E,6458μm,0.7s						
KALE				AML	AML	23 31 55.0	
	comp=N,8016μm,0.7s						
AYVA	**Ayvalik**	**1.96**	**96**	*i* P	**Pn**	**23 31 18.5**	**-0.8**
AYVA				*i* S	**Sn**	**23 31 37.9**	**-5.7**
AYVA				IAML		23 31 57.0	
	comp=N,3μm,0.8s						
AYVA				IAML		23 32 08.0	
	comp=E,1μm,0.8s						
GELI	**Tayfur-Gelibol**	**1.96**	**63**	PN	**Pn**	**23 31 17.9**	**-1.5**
ALN	**Alexandroupoli**	**1.97**	**46**	P	**Pn**	**23 31 17.5**	**-2.0**
ALN	**Alexandroupoli**	**1.97**	**46**	P	**Pn**	**23 31 17.3**	**-2.3**
ALN				AML	AML	23 31 56.0	
	comp=N,5168μm,0.7s						
ALN				AML	AML	23 31 57.9	
	comp=E,4134μm,0.6s						
ALN	**Alexandroupoli**	**1.97**	**46**	PN	**Pn**	**23 31 18.0**	**-1.5**
ALN	**Alexandroupoli**	**1.97**	**46**	P	**Pn**	**23 31 18.1**	**-1.5**
ALN	**Alexandroupoli**	**1.97**	**46**	Pn	**Pn**	**23 31 18.1**	**-1.5**
ANX	**Ano Chora**	**1.99**	**242**	P	**Pn**	**23 31 19.5**	**-0.4**
ANX	**Ano Chora**	**1.99**	**242**	P	**Pn**	**23 31 19.4**	**-0.5**
ANX				AML	AML	23 31 59.9	
	comp=N,8168μm,0.6s						
ANX				AML	AML	23 32 07.2	
	comp=E,7025μm,0.8s						
SERG	**Sergoula**	**2.00**	**236**	P	**Pn**	**23 31 19.1**	**-0.9**
SERG	**Sergoula**	**2.00**	**236**	P	**Pn**	**23 31 19.0**	**-0.9**
SERG				AML	AML	23 31 55.5	
	comp=N,5817μm,0.4s						
SERG				AML	AML	23 31 56.7	
	comp=E,5974μm,0.9s						
KZN	**Kozani**	**2.00**	**293**	P	**Pn**	**23 31 19.7**	**-0.3**
KZN	**Kozani**	**2.00**	**293**	P	**Pn**	**23 31 19.7**	**-0.3**
KZN				AML	AML	23 31 45.5	
	comp=E,3951μm,1.1s						
KZN				AML	AML	23 32 02.4	
	comp=N,3994μm,1.1s						
TRIZ	**Trizonia**	**2.02**	**235**	P	**Pn**	**23 31 19.3**	**-0.9**
TRIZ	**Trizonia**	**2.02**	**235**	P	**Pn**	**23 31 19.2**	**-0.9**
CESE	**eme**	**2.05**	**125**	PN	**Pn**	**23 31 20.2**	**-0.4**
KRBN	**Karaburun**	**2.08**	**116**	PN	**Pn**	**23 31 20.4**	**-0.6**
EFP	**Efpalio**	**2.09**	**239**	P	**Pn**	**23 31 20.4**	**-0.8**
EFP	**Efpalio**	**2.09**	**239**	P	**Pn**	**23 31 20.3**	**-0.8**
EFP				AML	AML	23 32 01.3	
	comp=E,6132μm,1.0s						
EFP				AML	AML	23 32 02.4	
	comp=N,3438μm,1.1s						
ERIK	**Erikli-Kesan**	**2.12**	**57**	PN	**Pn**	**23 31 19.6**	**-1.9**
TNSA	**Tinos**	**2.14**	**159**	P	**Pn**	**23 31 20.6**	**-1.3**
LAKA	**Lakka**	**2.15**	**234**	P	**Pn**	**23 31 21.3**	**-0.7**
LPK	**Lapseki**	**2.15**	**66**	PN	**Pn**	**23 31 20.9**	**-1.1**
DID	**Didima**	**2.16**	**200**	P	**Pn**	**23 31 20.8**	**-1.4**
DID	**Didima**	**2.16**	**200**	P	**Pn**	**23 31 20.7**	**-1.5**
DID				AML	AML	23 31 57.5	
	comp=E,11431μm,0.5s						
DID				AML	AML	23 32 02.8	
	comp=N,15651μm,0.7s						
VAY	**Valandovo**	**2.16**	**326**	*i* Pn	**Pn**	**23 31 21.3**	**-0.8**
VAY	**Valandovo**	**2.16**	**326**	*i* Pn	**Pn**	**23 31 21.3**	**-0.8**
DKL	**Dikili**	**2.17**	**102**	PN	**Pn**	**23 31 21.9**	**-0.3**
KLV	**Kalavryta, Ach**	**2.18**	**227**	P	**Pn**	**23 31 21.5**	**-0.9**
KLV	**Kalavryta, Ach**	**2.18**	**227**	P	**Pn**	**23 31 21.5**	**-0.9**
KLV				AML	AML	23 32 00.8	
	comp=E,2763μm,1.0s						
KLV				AML	AML	23 32 02.5	
	comp=N,3012μm,1.0s						
KPRO	**Kipourio**	**2.21**	**282**	P	**Pn**	**23 31 22.7**	**-0.2**
KPRO	**Kipourio**	**2.21**	**282**	P	**Pn**	**23 31 22.5**	**-0.4**
URLA	**Izmir**	**2.22**	**121**	PN	**Pn**	**23 31 22.4**	**-0.6**
URLA	**Izmir**	**2.22**	**121**	*i* P	**Pn**	**23 31 22.6**	**-0.4**
URLA				*i* S	**Sn**	**23 31 50.4**	**+0.3**
URLA				IAML		23 32 06.0	
	comp=E,892nm,1.5s						
URLA				IAML		23 32 06.0	
	comp=N,1μm,1.3s						
MEV	**Metsovon**	**2.29**	**277**	P	**Pn**	**23 31 24.2**	**+0.2**
KRND	**KRANIDI**	**2.30**	**201**	P	**Pn**	**23 31 22.7**	**-1.3**
KRND	**KRANIDI**	**2.30**	**201**	P	**Pn**	**23 31 22.7**	**-1.3**
KRND				AML	AML	23 32 04.4	
	comp=N,13220μm,0.7s						
KRND				AML	AML	23 32 05.0	
	comp=E,17602μm,0.7s						
KESN	**Edirne-Kesan**	**2.31**	**55**	*i* P	**Pn**	**23 31 22.2**	**-2.3**
KESN				*i* S	**Sn**	**23 31 46.0**	**-6.6**
KESN				IAML		23 32 02.0	
	comp=N,2μm,0.8s						
KESN				IAML		23 32 08.0	
	comp=E,2μm,0.6s						
ZEDA	**zmir-Bergama**	**2.32**	**103**	*i* P	**Pn**	**23 31 23.9**	**-0.5**
ZEDA				*i* S	**Sn**	**23 31 48.4**	**-4.2**
ZEDA				IAML		23 32 02.0	
	comp=E,872nm,0.5s						
ZEDA				IAML		23 32 15.0	
	comp=N,751nm,1.1s						
SERI	**Serifos**	**2.39**	**174**	P	**Pn**	**23 31 23.7**	**-1.6**
SERI	**Serifos**	**2.39**	**174**	P	**Pn**	**23 31 23.6**	**-1.6**
SERI				AML	AML	23 32 05.2	
	comp=N,4829μm,0.6s						
SERI				AML	AML	23 32 09.8	
	comp=E,7570μm,1.0s						
PENT	**Pentalofos**	**2.43**	**287**	P	**Pn**	**23 31 26.2**	**+0.3**
FNA	**Florina**	**2.48**	**301**	P	**Pn**	**23 31 26.7**	**+0.1**
FNA	**Florina**	**2.48**	**301**	P	**Pn**	**23 31 26.6**	**+0.1**
FNA	**Florina**	**2.48**	**301**	PN	**Pn**	**23 31 26.3**	**-0.3**
FNA	**Florina**	**2.48**	**301**	P	**Pn**	**23 31 26.7**	**+0.1**
FNA	**Florina**	**2.48**	**301**		**Pn**	**23 31 26.7**	**+0.1**
DRO	**Drossia**	**2.50**	**231**	P	**Pn**	**23 31 26.2**	**-0.6**
DRO	**Drossia**	**2.50**	**231**	P	**Pn**	**23 31 26.1**	**-0.7**
BLCB	**Balcova**	**2.51**	**116**	PN	**Pn**	**23 31 26.7**	**-0.3**
NEST	**Nestorio**	**2.56**	**291**	P	**Pn**	**23 31 28.0**	**+0.3**
NEST	**Nestorio**	**2.56**	**291**	P	**Pn**	**23 31 28.0**	**+0.3**
JAN	**Janina**	**2.57**	**274**	P	**Pn**	**23 31 28.5**	**+0.6**
SART	**Tekirdag**	**2.57**	**63**	*i* P	**Pn**	**23 31 28.0**	**+0.2**
SART				*i* S	**Sn**	**23 31 51.5**	**-7.4**
SART				IAML		23 32 19.0	
	comp=E,336nm,1.0s						
SART				IAML		23 32 21.0	
	comp=N,317nm,0.6s						
RLS	**Riolos of Patr**

SMG	**Samos**	**2.77**	**130**	P		**Pn**	**23**	**31**	**29.9**	**-0.7**
SMG	**Samos**	**2.77**	**130**	P		**Pn**	**23**	**31**	**29.9**	**-0.7**
SMG				AML		AML	23	32	20.6	
	comp=N,2652µm,0.8s									
SMG				AML		AML	23	32	23.1	
	comp=E,2341µm,0.8s									
AMT	**Artemida-Makis**	**2.79**	**225**	P		**Pn**	**23**	**31**	**30.7**	**-0.1**
MHLA	**Plaka, Milos I**	**2.80**	**176**	P		**Pn**	**23**	**31**	**29.7**	**-1.2**
LKD2	**Lefkada island**	**2.84**	**256**	P		**Pn**	**23**	**31**	**32.9**	**+1.4**
MHLO	**Agia Marina, M**	**2.85**	**176**	P		**Pn**	**23**	**31**	**30.9**	**-0.7**
MHLO	**Agia Marina, M**	**2.85**	**176**	P		**Pn**	**23**	**31**	**30.9**	**-0.7**
MHLO				AML		AML	23	32	20.5	
	comp=E,13993µm,0.6s									
MHLO				AML		AML	23	32	22.0	
	comp=N,11522µm,0.8s									
AKHS	**Akhisar**	**2.90**	**102**	*i* P		**Pn**	**23**	**31**	**32.1**	**-0.3**
AKHS				*i* S		**Sn**	**23**	**32**	**03.8**	**-3.0**
AKHS				IAML			23	32	28.0	
	comp=E,201nm,0.8s									
IOSP	**Ios island**	**2.94**	**162**	P		**Pn**	**23**	**31**	**31.6**	**-1.3**
IOSP	**Ios island**	**2.94**	**162**	P		**Pn**	**23**	**31**	**31.6**	**-1.3**
ITM	**Ithomi**	**2.94**	**218**	P		**Pn**	**23**	**31**	**33.2**	**+0.2**
ITM	**Ithomi**	**2.94**	**218**	PN		**Pn**	**23**	**31**	**33.6**	**+0.6**
ITM	**Ithomi**	**2.94**	**218**			**Pn**	**23**	**31**	**33.4**	**+0.5**
IGT	**Igoumenitsa**	**2.97**	**271**	P		**Pn**	**23**	**31**	**35.2**	**+1.9**
IGT				S		**Sn**	**23**	**32**	**09.1**	**+0.6**
VLI	**Veliai**	**2.98**	**200**	P		**Pn**	**23**	**31**	**32.1**	**-1.3**
VLI	**Veliai**	**2.98**	**200**	P		**Pn**	**23**	**31**	**32.1**	**-1.3**
MNVA	**Monemvasia**	**2.98**	**198**	P		**Pn**	**23**	**31**	**32.3**	**-1.2**
KFL	**Anninata**	**3.01**	**243**	P		**Pn**	**23**	**31**	**34.9**	**+1.1**
FSK	**Fiskardo**	**3.02**	**250**	P		**Pn**	**23**	**31**	**35.0**	**+1.1**
GCAM	**G?zelcaml?**	**3.02**	**127**	*i* P		**Pn**	**23**	**31**	**33.6**	**-0.3**
GCAM				IAML			23	32	25.0	
	comp=E,730nm,1.2s									
GCAM				IAML			23	32	35.0	
	comp=N,1µm,1.2s									
OHR	**Ohrid**	**3.02**	**302**	*i* Pn		**Pn**	**23**	**31**	**34.5**	**+0.4**
OHR	**Ohrid**	**3.02**	**302**	*i* Pn		**Pn**	**23**	**31**	**34.5**	**+0.4**
AMGA	**Amorgos Island**	**3.02**	**153**	P		**Pn**	**23**	**31**	**33.1**	**-0.9**
VLS	**Valsamata**	**3.11**	**245**	P		**Pn**	**23**	**31**	**36.2**	**+1.0**
KIRK	**Kırklareli**	**3.15**	**44**	*i* P		**Pn**	**23**	**31**	**34.0**	**-1.8**
KIRK				IAML			23	32	41.0	
	comp=N,252nm,0.9s									
VTS	**Vitosha**	**3.16**	**347**	⇑P		**Pn**	**23**	**31**	**35.7**	**-0.3**
VTS				⇑S		**Sn**	**23**	**32**	**14.7**	**+1.4**
VTS	**Vitosha**	**3.16**	**347**	P		**Pn**	**23**	**31**	**35.4**	**-0.6**
VTS	**Vitosha**	**3.16**	**347**			**Pn**	**23**	**31**	**35.4**	**-0.6**
SKO	**Skopje**	**3.20**	**320**	*i* Pn		**Pn**	**23**	**31**	**36.6**	**+0.2**
SKO	**Skopje**	**3.20**	**320**	*i* Pn		**Pn**	**23**	**31**	**36.6**	**+0.2**
SKO	**Skopje**	**3.20**	**320**	P		**Pn**	**23**	**31**	**36.1**	**-0.3**
SAP3	**Santorini-Thir**	**3.23**	**163**	P		**Pn**	**23**	**31**	**35.9**	**-0.9**
SAP3	**Santorini-Thir**	**3.23**	**163**	P		**Pn**	**23**	**31**	**36.0**	**-0.9**
SRN	**Sarande**	**3.24**	**277**	P		**Pn**	**23**	**31**	**38.5**	**+1.6**
PYL	**PYLOS**	**3.26**	**217**	P		**Pn**	**23**	**31**	**37.9**	**+0.6**
SANT	**Santorini**	**3.32**	**162**	⇓P		**Pn**	**23**	**31**	**37.2**	**-0.9**
SANT				⇑S		**Sg**	**23**	**32**	**32.7**	**-0.9**
SANT	**Santorini**	**3.32**	**162**			**Pn**	**23**	**31**	**36.4**	**-1.7**
DURS	**Dursunbey**	**3.32**	**88**	*i* P		**Pn**	**23**	**31**	**37.8**	**-0.4**
DURS				*i* S		Sn	23	32	04.5	-13
DURS				IAML			23	32	34.0	
	comp=E,494nm,0.4s									
DURS				IAML			23	32	40.0	
	comp=N,350nm,0.5s									
KEK	**Kerkira**	**3.38**	**274**	P		**Pn**	**23**	**31**	**40.5**	**+1.5**
DEMI	**Demirci**	**3.56**	**97**	*i* P		**Pn**	**23**	**31**	**41.5**	**+0.1**
DEMI				IAML			23	32	44.0	
	comp=E,348nm,0.7s									
DEMI				IAML			23	32	53.0	
	comp=N,282nm,0.8s									
BDRM	**Kayabasi**	**3.56**	**133**	*i* P		**Pn**	**23**	**31**	**40.3**	**-1.1**
BDRM				IAML			23	32	58.0	
	comp=N,99nm,1.2s									
BDRM				IAML			23	32	59.0	
	comp=E,118nm,0.8s									
MANT	**Manisa**	**3.57**	**106**	*i* P		**Pn**	**23**	**31**	**41.7**	**0.0**
MANT				IAML			23	32	48.0	
	comp=E,138nm,0.8s									
MANT				IAML			23	32	57.0	
	comp=N,188nm,1.8s									
MANT	**Manisa**	**3.57**	**106**			**Pn**	**23**	**31**	**41.2**	**-0.5**
ELND	**Elena**	**3.62**	**20**	⇑P		**Pn**	**23**	**31**	**41.3**	**-1.0**
ELND				⇓S		**Sn**	**23**	**32**	**22.3**	**-2.3**
ANKY	**Antikythira Is**	**3.73**	**191**	P		**Pn**	**23**	**31**	**41.5**	**-2.2**
TIR	**Tirane**	**3.75**	**300**	⇓P		**Pn**	**23**	**31**	**43.9**	**-0.1**
TIR	**Tirane**	**3.75**	**300**	⇓S		**Sn**	**23**	**32**	**31.9**	**+4.1**
TIR	**Tirane**	**3.75**	**300**	P		**Pn**	**23**	**31**	**44.9**	**+0.9**
TIR	**Tirane**	**3.75**	**300**			**Pn**	**23**	**31**	**44.9**	**+0.9**
PLVB	**Pleven**	**3.86**	**5**	⇓P		**Pn**	**23**	**31**	**44.8**	**-0.6**
ULDT	**Uludag**	**3.87**	**79**	*i* P		**Pn**	**23**	**31**	**45.2**	**-0.6**
ULDT				IAML			23	32	57.0	
	comp=N,364nm,0.6s									
ULDT				IAML			23	32	58.0	
	comp=E,315nm,0.7s									
DAT	**Datca**	**3.88**	**135**	*i* P		**Pn**	**23**	**31**	**45.7**	**-0.2**
IGD	**Bursa**	**3.93**	**78**	*i* P		**Pn**	**23**	**31**	**45.3**	**-1.1**
IGD				IAML			23	33	00.0	
	comp=N,197nm,1.3s									
IGD				IAML			23	33	04.0	
	comp=E,131nm,0.9s									
BUY	**Buyukada**	**4.01**	**69**	*i* P		**Pn**	**23**	**31**	**47.4**	**-0.1**
BUY				IAML			23	33	00.0	
	comp=N,289nm,0.5s									
BUY				IAML			23	33	05.0	
	comp=E,246nm,0.6s									
GDZ	**Gediz**	**4.14**	**95**	*i* P		**Pn**	**23**	**31**	**49.8**	**+0.3**
GDZ				IAML			23	33	03.0	
	comp=N,104nm,1.3s									
GDZ				IAML			23	33	12.0	
	comp=E,64nm,1.4s									
ZIMR		**4.21**	**12**	⇑P		**Pn**	**23**	**31**	**49.3**	**-0.9**
TAVA	**DENIZLI_Tavas**	**4.25**	**118**	*i* P		**Pn**	**23**	**31**	**51.9**	**+0.9**
TAVA				IAML			23	33	13.0	
	comp=E,206nm,1.6s									
TAVA				IAML			23	33	18.0	
	comp=N,147nm,1.5s									
IDI	**Anoyia**	**4.28**	**172**	P		**Pn**	**23**	**31**	**50.3**	**-1.1**
IDI	**Anoyia**	**4.28**	**172**	Pn		**Pn**	**23**	**31**	**50.7**	**-0.7**
	comp=N,7.8nm,0.3s,baz=309,slow=14,SNR=133									
IDI				Lg		Lg	23	32	58.8	
	baz=99,slow=19,SNR=1.6									
IDI				LR		LR	23	33	03.4	
	comp=N,204nm,19.7s,baz=18,slow=32									
IDI	**Anoyia**	**4.28**	**172**	⇓P		**Pn**	**23**	**31**	**50.9**	**-0.5**
IDI	**Anoyia**	**4.28**	**172**			**Pn**	**23**	**31**	**50.8**	**-0.5**
KHAL	**Karahalli**	**4.30**	**104**	*i* P		**Pn**	**23**	**31**	**52.3**	**+0.6**
KHAL				IAML			23	33	08.0	
	comp=N,103nm,1.7s									
KHAL				IAML			23	33	23.0	
	comp=E,46nm,0.9s									
RAZG	**Razgrad**	**4.39**	**23**	⇓P		**Pn**	**23**	**31**	**51.8**	**-1.0**
RAZG				⇑S		**Sg**	**23**	**33**	**07.9**	**+0.1**
PVY	**Plav**	**4.41**	**315**	⇓*i* Pn		**Pn**	**23**	**31**	**52.7**	**-0.5**
PVY				*i* Sn		**Sn**	**23**	**32**	**42.7**	**-1.6**
SCTE	**Santa Cesarea**	**4.43**	**279**			**Pn**	**23**	**31**	**53.9**	**+0.6**
DALY	**Dalyan (Mula)**	**4.45**	**126**	*i* P		**Pn**	**23**	**31**	**54.0**	**+0.4**
DALY				IAML			23	33	19.0	
	comp=N,297nm,2.6s									
DALY				IAML			23	33	22.0	
	comp=E,164nm,1.6s									
VLAD	**Vladila**	**4.46**	**2**	⇑P		**Pn**	**23**	**31**	**53.1**	**-0.7**
ULC	**Ulcinj**	**4.46**	**304**	⇓*i* Pn		**Pn**	**23**	**31**	**53.3**	**-0.5**
ULC				*i* Sn		**Sn**	**23**	**32**	**44.1**	**-1.2**
BAIL	**Bailesti**	**4.52**	**352**	⇓P		**Pn**	**23**	**31**	**54.0**	**-0.6**
DRME	**Dracevica, Mon**	**4.62**	**307**	*e*Pn		**Pn**	**23**	**31**	**57.1**	**+1.2**
DRME	**Dracevica, Mon**	**4.62**	**307**	⇓*i* Pn		**Pn**	**23**	**31**	**55.7**	**-0.2**
DRME				*i* Sn		**Sn**	**23**	**32**	**48.0**	**-1.1**
KARP	**Karpathos**	**4.64**	**148**			**Pn**	**23**	**31**	**54.7**	**-1.2**
IVA	**Berane**	**4.64**	**317**	⇑*i* Pn		**Pn**	**23**	**31**	**56.1**	**-0.2**
IVA				*i* Sn		**Sn**	**23**	**32**	**48.2**	**-1.6**
COPA	**Copaceanca**	**4.66**	**9**	⇓P		**Pn**	**23**	**31**	**55.7**	**-0.7**
PDG	**Podgorica**	**4.71**	**309**	⇓P		**Pn**	**23**	**31**	**57.2**	**0.0**
PDG				⇑S		**Sn**	**23**	**32**	**53.3**	**+1.9**
PDG	**Podgorica**	**4.71**	**309**	⇑*i* Pn		**Pn**	**23**	**31**	**58.8**	**+1.6**
PDG	**Podgorica**	**4.71**	**309**			**Pn**	**23**	**31**	**57.4**	**+0.2**
TTG	**Podgorica**	**4.71**	**309**	⇓*i* Pn		**Pn**	**23**	**31**	**56.8**	**-0.4**
TTG				*i* Sn		**Sn**	**23**	**32**	**50.3**	**-1.1**
GEYV	**SAKARYA_Geyve**	**4.79**	**77**	*i* P		**Pn**	**23**	**31**	**57.6**	**-0.7**
GEYV				IAML			23	33	38.0	
	comp=E,234nm,1.6s									
GEYV				IAML			23	33	40.0	
	comp=N,194nm,0.8s									
GOLH	**Golhisar**	**4.81**	**117**	*i* P		**Pn**	**23**	**31**	**58.7**	**0.0**
GOLH				IAML			23	33	48.0	
	comp=N,234nm,1.7s									
GOLH				IAML			23	34	40.0	
	comp=E,49nm,6.0s									
KZIL	**AFYON_Kizioren**	**4.83**	**103**	*i* P		**Pn**	**23**	**31**	**59.6**	**+0.7**
KZIL				IAML			23	33	49.0	
	comp=E,102nm,1.4s									
KZIL				IAML			23	33	53.0	
	comp=N,77nm,2.5s									
PUNG	**Punghina**	**4.83**	**349**	⇓P		**Pn**	**23**	**31**	**58.6**	**-0.2**
KOME	**Kolasin**	**4.83**	**315**	⇓*i* Pn		**Pn**	**23**	**31**	**58.7**	**-0.2**
KOME				*i* Sn		**Sn**	**23**	**32**	**54.1**	**-0.3**
FETY	**Fethiye**	**4.84**	**125**	*i* P		**Pn**	**23**	**32**	**00.5**	**+1.5**
FETY				IAML			23	33	28.0	
	comp=E,48nm,1.8s									
FETY				IAML			23	33	47.0	
	comp=N,42nm,1.6s									
BORA	**Eskisehir**	**4.85**	**84**	*i* P		**Pn**	**23**	**31**	**59.4**	**+0.2**
BORA				IAML			23	33	25.0	
	comp=N,52nm,1.5s									
BORA				IAML			23	33	48.0	
	comp=E,45nm,1.0s									
KAND	**Kocaeli-Kandir**	**4.85**	**69**	*i* P		**Pn**	**23**	**31**	**58.4**	**-0.7**
KAND				IAML			23	33	25.0	
	comp=N,130nm,0.7s									
KAND				IAML			23	33	49.0	
	comp=E,85nm,1.0s									
BUM	**Brajici-Budva**	**4.86**	**306**	⇑*i* Pn		**Pn**	**23**	**31**	**59.0**	**-0.3**
BUM				*i* Sn		**Sn**	**23**	**32**	**54.9**	**-0.3**
SGRR	**Singureni**	**4.87**	**15**	⇓P		**Pn**	**23**	**31**	**58.9**	**-0.5**
AUKIR	**Kırka- Seyitga**	**4.93**	**91**	*i* P		**Pn**	**23**	**32**	**00.2**	**-0.1**
AUKIR				IAML			23	33	41.0	
	comp=E,308nm,1.5s									
AUKIR				IAML			23	33	51.0	
	comp=N,215nm,1.4s									
BRDR	**BURDUR-Merkez**	**4.96**	**110**	*i* P		**Pn**	**23**	**32**	**01.8**	**+1.1**
BRDR				IAML			23	33	43.0	
	comp=E,72nm,1.3s									
BRDR				IAML			23	33	44.0	
	comp=N,51nm,2.0s									
CEME	**Cevo**	**4.98**	**309**	⇑*i* Pn		**Pn**	**23**	**32**	**00.5**	**-0.5**
CEME				*i* Sn		**Sn**	**23**	**32**	**56.6**	**-1.6**
HUMR	**Humele**	**5.02**	**7**	⇑P		**Pn**	**23**	**32**	**01.0**	**-0.4**
NKME	**Niksic**	**5.09**	**311**	⇑*i* Pn		**Pn**	**23**	**32**	**02.1**	**-0.4**
NKME				*i* Sn		**Sn**	**23**	**32**	**59.1**	**-1.8**
NKY	**Niksic**	**5.10**	**312**	⇑*i* Pn		**Pn**	**23**	**32**	**02.3**	**-0.3**
NKY				*i* Sn		**Sn**	**23**	**33**	**00.5**	**-0.6**
SRE	**Strehaia**	**5.17**	**352**	⇓P		**Pn**	**23**	**32**	**02.8**	**-0.7**
HCY	**Herceg Novi**	**5.19**	**306**	*e*Pn		**Pn**	**23**	**32**	**04.0**	**+0.3**
HCY	**Herceg Novi**	**5.19**	**306**	⇑*i* Pn		**Pn**	**23**	**32**	**04.1**	**+0.3**
HCY				*i* Sn		**Sn**	**23**	**33**	**02.8**	**-0.4**
PLE	**Pljevlja**	**5.22**	**318**	⇑*i* Pn		**Pn**	**23**	**32**	**04.2**	**-0.1**
PLE				*i* Sn		**Sn**	**23**	**33**	**03.1**	**-1.1**
ISP	**Isparta**	**5.25**	**107**	P		**Pn**	**23**	**32**	**04.5**	**-0.2**
ISP	**Isparta**	**5.25**	**107**			**Pn**	**23**	**32**	**04.5**	**-0.2**
CGL1	**Ceglie Messapi**	**5.26**	**284**	*e*Pn		**Pn**	**23**	**32**	**04.6**	**-0.1**
SAHE	**Sakarya_HENDEK**	**5.28**	**73**	*i* P		**Pn**	**23**	**32**	**04.5**	**-0.5**
SAHE				IAML			23	33	54.0	
	comp=E,69nm,0.9s									
ELL	**Elmali**	**5.31**	**120**	P		**Pn**	**23**	**32**	**07.1**	**+1.6**
ELL	**Elmali**	**5.31**	**120**			**Pn**	**23**	**32**	**07.1**	**+1.6**
ICOR	**Ion Corvin**	**5.32**	**29**	⇑P		**Pn**	**23**	**32**	**04.6**	**-0.8**
BOLV	**Bolvadin**	**5.33**	**97**	*i* P		**Pn**	**23**	**32**	**07.1**	**+1.3**
BOLV				IAML			23	34	00.0	
	comp=N,65nm,1.0s									
BOLV				IAML			23	34	11.0	
	comp=E,46nm,0.7s									
SULR		**5.36**	**16**	⇑P		**Pn**	**23**	**32**	**06.4**	**+0.3**
BAGO	**Egridir - ISPA**	**5.39**	**105**	*i* P		**Pn**	**23**	**32**	**07.1**	**+0.5**
BAGO				IAML			23	33	50.0	
	comp=E,36nm,2.5s									
BAGO				IAML			23	33	59.0	
	comp=N,37nm,1.8s									
UPM	**Unac-Piva**	**5.40**	**314**	*e*Pn		**Pn**	**23**	**32**	**09.1**	**+2.3**
UPM	**Unac-Piva**	**5.40**	**314**	⇓*i* Pn		**Pn**	**23**	**32**	**06.5**	**-0.3**
UPM				*i* Sn		**Sn**	**23**	**33**	**07.7**	**-0.9**
MANR	**Mangalia**	**5.40**	**36**	⇓P		**Pn**	**23**	**32**	**05.3**	**-1.4**
AKAS	**Kas**	**5.42**	**126**	*i* P		**Pn**	**23**	**32**	**09.0**	**+2.0**
AKAS				IAML			23	33	56.0	
	comp=N,177nm,1.3s									
AKAS				IAML			23	34	07.0	
	comp=E,67nm,2.0s									
BRY	**Bratogost**	**5.42**	**310**	*e*Pn		**Pn**	**23**	**32**	**08.1**	**+1.1**
BRY	**Bratogost**	**5.42**	**310**	⇓*i* Pn		**Pn**	**23**	**32**	**06.8**	**-0.2**
BRY				*i* Sn		**Sn**	**23**	**33**	**08.2**	**-0.8**
TREB	**Trebinje**	**5.42**	**308**	*e*Pn		**Pn**	**23**	**32**	**07.6**	**+0.6**
RUDO	**Rudo**	**5.44**	**320**	*e*Pn		**Pn**	**23**	**32**	**06.5**	**-0.7**
MDUB	**Mudurnu**	**5.47**	**78**			**Pn**	**23**	**32**	**07.9**	**+0.2**
HERR	**Herculane**	**5.50**	**347**	⇓P		**Pn**	**23**	**32**	**06.6**	**-1.4**
DBRK	**Dubrovnik**	**5.52**	**306**	*e*Pn		**Pn**	**23**	**32**	**08.3**	**0.0**
DBRK				Sn		**Sn**	**23**	**33**	**08.7**	**-2.8**
DIVS	**Divibare**	**5.52**	**327**	⇑*i* Pn		**Pn**	**23**	**32**	**08.0**	**-0.4**
DIVS	**Divibare**	**5.52**	**327**			**Pn**	**23**	**32**	**08.1**	**-0.3**
BBLS	**Lazići**	**5.61**	**322**	⇑*i* Pn		**Pn**	**23**	**32**	**09.7**	**+0.1**
MFTR	**Murfatlar**	**5.62**	**33**	⇑P		**Pn**	**23**	**32**	**08.8**	**-0.8**
SECR		**5.67**	**14**	⇑P		**Pn**	**23**	**32**	**10.9**	**+0.5**
AUSIV	**SIVRIHISAR**	**5.70**	**89**	*i* P		**Pn**	**23**	**32**	**11.3**	**+0.4**
AUSIV				IAML			23	34	04.0	
	comp=E,39nm,1.2s									
AUSIV				IAML			23	34	09.0	
	comp=N,70nm,1.6s									
MTUR	**Matau**	**5.72**	**6**	⇓P		**Pn**	**23**	**32**	**11.2**	**+0.1**
YIGI	**Dzce**	**5.74**	**73**	*i* P		**Pn**	**23**	**32**	**11.3**	**-0.1**
YIGI				IAML			23	34	10.0	
	comp=N,52nm,1.8s									
YIGI				IAML			23	34	14.0	
	comp=E,34nm,1.2s									
TIP	**Timpagrande**	**5.76**	**269**	⇓P		**Pn**	**23**	**32**	**12.1**	**+0.4**
TIP				⇑S		**Sn**	**23**	**33**	**15.0**	**-2.4**
TLBR	**Topalu**	**5.77**	**29**	⇓P		**Pn**	**23**	**32**	**11.8**	**0.0**
BAI	**Bari**	**5.79**	**288**	*e*Pn		**Pn**	**23**	**32**	**12.0**	**0.0**
ARR	**Arges**	**5.83**	**3**	⇑P		**Pn**	**23**	**32**	**12.1**	**-0.6**
AKUM	**Antalya-Kumluc**	**5.84**	**121**	*i* P		**Pn**	**23**	**32**	**15.6**	**+2.9**
AKUM				IAML			23	34	06.0	
	comp=E,82nm,2.4s									
AKUM				IAML			23	34	10.0	
	comp=N,74nm,2.4s									
MATE	**Matera**	**5.84**	**283**	⇑P		**Pn**	**23**	**32**	**12.8**	**+0.1**
MATE				⇑S		**Sn**	**23**	**33**	**13.7**	**-5.3**
TIRR	**Tirgusor**	**5.84**	**31**	⇑P		**Pn**	**23**	**32**	**12.1**	**-0.6**
TIRR	**Tirgusor**	**5.84**	**31**	⇑P		**Pn**	**23**	**32**	**12.1**	**-0.6**
TIRR	**Tirgusor**	**5.84**	**31**	P		**Pn**	**23**	**32**	**11.4**	**-1.3**
TIRR	**Tirgusor**	**5.84**	**31**			**Pn**	**23**	**32**	**11.4**	**-1.3**
ISR	**Istrita**	**5.84**	**17**	⇑P		**Pn**	**23**	**32**	**12.9**	**+0.1**
HARR	**Harsova**	**5.86**	**27**	⇑P		**Pn**	**23**	**32**	**12.1**	**-0.8**
SG1	**Sgolgore (BA)**	**5.89**	**285**	*e*Pn		**Pn**	**23**	**32**	**13.2**	**-0.2**
STON	**Ston**	**5.91**	**306**	⇑*i* Pn		**Pn**	**23**	**32**	**13.1**	**-0.5**
STON	**Ston**	**5.91**	**306**	*e*Pn		**Pn**	**23**	**32**	**13.2**	**-0.4**
STON				Sn		**Sn**	**23**	**33**	**16.4**	**-4.5**
LOT	**Lotru**	**5.91**	**357**	⇑P		**Pn**	**23**	**32**	**12.9**	**-0.9**
VOIR		**5.93**	**6**	⇑P		**Pn**	**23**	**32**	**14.0**	**0.0**
KIBS	**BOLU**	**5.96**	**79**	*i* P		**Pn**	**23**	**32**	**13.8**	**-0.6**
KIBS				IAML			23	34	17.0	
	comp=N,138nm,1.5s									
KIBS				IAML			23	34	21.0	
	comp=E,125nm,1.1s									
HAPS	**Han Pijesak,Bl**	**5.99**	**321**	*e*Pn		**Pn**	**23**	**32**	**13.9**	**-1.0**
DOGA	**KONYA_Doganhis**	**6.02**	**101**	*i* P		**Pn**	**23**	**32**	**16.6**	**+1.2**
DOGA				IAML			23	34	20.0	
	comp=N,25nm,1.8s									
DOGA				IAML			23	34	25.0	
	comp=E,24nm,2.0s									
TEKS	**Tekeris**	**6.08**	**327**	*e*Pn		**Pn**	**23**	**32**	**14.6**	**-1.5**
MLR	**Muntele Rosu**	**6.09**	**12**	Pn		**Pn**	**23**	**32**	**16.2**	**0.0**
	comp=E,3.4nm,0.3s,baz=253,slow=4.9,SNR=87									
MLR				Sn		**Sn**	**23**	**33**	**25.3**	**-0.2**
	comp=E,4.3nm,0.3s,baz=268,slow=19,SNR=1.9									
MLR				Lg		Lg	23	34	00.5	
	comp=E,5.9nm,0.3s,baz=67,slow=19,SNR=5.1									
MLR				LR		LR	23	34	53.4	
	comp=E,293nm,19.2s,baz=220,slow=41									
MLR	**Muntele Rosu**	**6.09**	**12**	⇓P		**Pn**	**23**	**32**	**16.0**	**-0.3**
BCAM	**Yenicaga**	**6.18**	**76**	*i* P		**Pn**	**23**	**32**	**17.0**	**-0.4**
BCAM				IAML			23	34	26.0	
	comp=N,46nm,1.1s									
BCAM				IAML			23	34	28.0	
	comp=E,45nm,1.4s									
TOPG	**Topolog**	**6.18**	**29**	⇑P		**Pn**	**23**	**32**	**16.5**	**-0.9**
GRER		**6.19**	**19**	⇓P		**Pn**	**23**	**32**	**18.2**	**+0.7**
KDHN	**Kadinhani**	**6.26**	**97**	*i* P		**Pn**	**23**	**32**	**19.5**	**+0.8**
KDHN				IAML			23	34	32.0	
	comp=N,21nm,1.8s									
BISRR	**Bisoca**	**6.29**	**16**	⇓P		**Pn**	**23**	**32**	**19.4**	**+0.4**
CFR	**Carcaliu**	**6.35**	**26**	⇑P		**Pn**	**23**	**32**	**18.5**	**-1.2**
BZS	**Buzias**	**6.36**	**344**	⇑P		**Pn**	**23**	**32**	**18.7**	**-1.1**
BZS	**Buzias**	**6.36**	**344**	P		**Pn**	**23**	**32**	**18.7**	**-1.1**
DEV	**Deva**	**6.41**	**352**	⇑P		**Pn**	**23**	**32**	**20.4**	**-0.1**
FRGS	**Fruska Gora**	**6.48**	**331**	⇑*i* Pn		**Pn**	**23**	**32**	**20.1**	**-1.4**
DOPR	**Dopca**	**6.49**	**8**	⇓P		**Pn**	**23**	**32**	**21.7**	**+0.1**
MAKA	**Makarska**	**6.55**	**307**	*e*Pn		**Pn**	**23**	**32**	**22.1**	**-0.4**
MAKA				Sn		**Sn**	**23**	**33**	**33.2**	**-3.6**
PLOR	**Plostina**	**6.57**	**15**	⇓P		**Pn**	**23**	**32**	**22.8**	**+0.1**
PETR	**Petresti**	**6.58**	**19**	⇑P		**Pn**	**23**	**32**	**22.6**	**-0.1**
TUDR		**6.58**	**22**	⇑P		**Pn**	**23**	**32**	**22.0**	**-0.8**
VRI	**Vrincioaia**	**6.60**	**16**	⇓P		**Pn**	**23**	**32**	**23.0**	**-0.1**
RICI	**Ricice**	**6.60**	**309**	*i* Pn		**Pn**	**23**	**32**	**23.3**	**+0.2**
RICI				Sn		**Sn**	**23**	**33**	**36.2**	**-1.7**
MDB	**Medias**	**6.60**	**1**	⇓P		**Pn**	**23**	**32**	**24.5**	**+1.4**
TLCR		**6.61**	**30**	⇓P		**Pn**	**23**	**32**	**22.7**	**-0.5**
ANTO	**Ankara**	**6.65**	**84**	⇑P		**Pn**	**23**	**32**	**23.7**	**-0.3**
ANTO	**Ankara**	**6.65**	**84**	P		**Pn**	**23**	**32**	**23.1**	**-0.9**
ANTO	**Ankara**	**6.65**	**84**	Pn		**Pn**	**23**	**32**	**23.1**	**-0.9**
VARL	**Varlezi**	**6.91**	**22**	⇓P		**Pn**	**23**	**32**	**27.2**	**-0.1**
SIRR	**Siria**	**6.97**	**345**	⇓P		**Pn**	**23**	**32**	**27.3**	**-1.0**
CJR	**Cluj-Napoca**	**7.18**	**357**	⇑P		**Pn**	**23**	**32**	**31.0**	**-0.2**
BIR	**Birlad**	**7.18**	**20

	comp=Z,1.6nm,0.3s								
KHC	**Kasperske Hory**	**12.21**	**325**	⇓*e*P		**Pn**	**23 33 39.9**	**-0.1**
KHC	**Kasperske Hory**	**12.21**	**325**	*e*PN		**Pn**	**23 33 40.8**	**+0.7**
KHC				AMS	AMS	AMS	23 39 30.0	
	comp=Z,700nm,9.4s							
KHC	**Kasperske Hory**	**12.21**	**325**			**Pn**	**23 33 40.0**	**-0.1**
MOTA	**Moosalm**	**12.28**	**314**	*e*Pn		**Pn**	**23 33 41.5**	**+0.4**
	comp=Z,0.9nm,0.4s							
FETA	**Feichten**	**12.31**	**312**	Pn		**Pn**	**23 33 41.3**	**-0.3**
	comp=Z,2.5nm,0.8s							
GOPC	**GO Pecny, Ondr**	**12.32**	**330**	AMS	AMS	AMS	23 39 30.0	
	comp=Z,400nm,11.8s							
KEST	**Kesra**	**12.35**	**257**	Pn		**Pn**	**23 33 41.4**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=86,slow=14,SNR=3.2							
KEST				LR	LR	LR	23 39 34.2	
	comp=Z,90nm,20.6s,baz=318,slow=43							
KEST	**Kesra**	**12.35**	**257**	Pn		**Pn**	**23 33 42.7**	**+0.7**
OSTC	**Ostas**	**12.36**	**336**	AMS	AMS	AMS	23 39 30.0	
	comp=Z,500nm,10.1s							
FUORN	**Ofenpass-Fuorn**	**12.38**	**309**	Pn		**Pn**	**23 33 43.0**	**+0.4**
UPC	**Upice**	**12.38**	**335**	AMS	AMS	AMS	23 39 50.0	
CHVC	**Chvalec**	**12.44**	**335**	AMS	AMS	AMS	23 39 40.0	
	comp=Z,300nm,13.6s							
PRU	**Pruhonice**	**12.48**	**330**	AMS	AMS	AMS	23 39 40.0	
	comp=Z,300nm,12.0s							
ASF	**Jabal al Asfar**	**12.66**	**122**	Pn		**Pn**	**23 33 46.5**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=317,slow=19,SNR=1.2							
DAVOX	**Davos/Dischmat**	**12.69**	**309**	Pn		**Pn**	**23 33 46.1**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=121,slow=18,SNR=2.7							
DAVOX				Sn		**Sn**	**23 36 01.1**	**-6.5**
	comp=Z,0.1nm,0.3s,baz=108,slow=20,SNR=1.7							
DAVOX				LR	LR	LR	23 39 53.9	
	comp=Z,292nm,20.5s,baz=120,slow=43							
PVCC	**Panska Ves**	**12.90**	**332**	AMS	AMS	AMS	23 39 50.0	
	comp=Z,400nm,13.3s							
EIL	**Elat**	**13.24**	**135**	Pn		**Pn**	**23 33 55.2**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=318,slow=12,SNR=2.4							
EIL				LR	LR	LR	23 40 54.1	
	comp=Z,81nm,19.2s,baz=338,slow=46							
BRG	**Berggiesshubel**	**13.42**	**331**	*e*P		**P**	**23 34 07.3**	**+1.6**
	comp=Z,6.4nm,1.2s							
	comp=N,359nm,11.0s							
	comp=E,472nm,15.4s							
	comp=Z,547nm,11.9s							
BRG	**Berggiesshubel**	**13.42**	**331**	*e*P		**P**	**23 34 07.0**	**+1.3**
	baz=133,slow=11							
NKC	**Novy Kostel**	**13.53**	**326**	AMS	AMS	AMS	23 40 20.0	
	comp=Z,300nm,13.7s							
TANN	**Tannenbergstha**	**13.65**	**327**	*e*P		**P**	**23 34 09.8**	**+1.3**
	baz=133,slow=11							
GUNZ	**Gunzen**	**13.67**	**326**	*e*P		**P**	**23 34 10.4**	**+1.8**
	baz=133,slow=11							
FBE	**Freiberg**	**13.68**	**330**	*e*P		**P**	**23 34 09.9**	**+1.2**
	baz=133,slow=11							
PLN	**Plauen**	**13.84**	**326**	*e*P		**P**	**23 34 11.7**	**+1.3**
	baz=133,slow=11							
CLL	**Collm**	**14.12**	**330**	*e*pP		**Pn**	**23 34 09.0**	**+3.0**
CLL				*i* PP		**PnPn**	**23 34 14.9**	**+1.0**
	comp=Z,12nm,1.5s							
CLL				*i* sPPP			23 34 27.5	
CLL				LmH			23 40 00.0	
	comp=N,200nm,19.4s							
CLL				LmH			23 40 00.0	
	comp=E,400nm,18.4s							
CLL	**Collm**	**14.12**	**330**	*e*P		**P**	**23 34 15.3**	**+1.7**
	baz=133,slow=11							
CLL	**Collm**	**14.12**	**330**	*e*P		**Pn**	**23 34 09.0**	**+3.0**
CLL	**Collm**	**14.12**	**330**	Pn		**Pn**	**23 34 06.5**	**+0.5**
KIV	**Kislovodsk**	**14.50**	**66**	P		**Pn**	**23 34 09.6**	**-1.8**
KIV	**Kislovodsk**	**14.50**	**66**	Pn		**Pn**	**23 34 09.6**	**-1.8**
NEUB	**Neuenburg**	**14.54**	**327**	*e*P		**P**	**23 34 19.8**	**+1.6**
	comp=E,25nm,1.1s,baz=133,slow=11							
KBZ	**Khabaz**	**14.61**	**67**	Pn		**Pn**	**23 34 14.8**	**+2.0**
	comp=E,0.1nm,0.3s,baz=247,slow=18,SNR=1.5							
ZEI	**Tsey**	**15.21**	**71**	*e*P		**P**	**23 34 27.1**	**+1.2**
ZEI				pmax	pmax			
	comp=Z,4.0nm,0.6s							
TNS	**Taunus Mts**	**15.41**	**319**	*e*P		**P**	**23 34 29.0**	**+1.1**
	baz=133,slow=11							
GTTG	**Gottingen**	**15.56**	**325**	*e*P		**P**	**23 34 31.3**	**+1.7**
	baz=133,slow=11							
CLZ	**Clausthal**	**15.60**	**327**	*e*P		**P**	**23 34 31.0**	**+1.0**
	baz=133,slow=11							
VSR	**Storozhevoye**	**15.69**	**37**	*e*P		**Pn**	**23 34 28.2**	**+1.2**
VSR				pmax	pmax			
	comp=Z,8.0nm,1.4s							
VSR				MLR	MLR			
	comp=Z,350nm,12.0s							
NRDL	**Niedersach Rie**	**16.19**	**328**	*e*P		**P**	**23 34 37.9**	**+1.5**
	baz=133,slow=11							
LPSR	**Galich'ya Gora**	**16.55**	**33**	*e*P		**P**	**23 34 45.3**	**+4.8**
LPSR				pmax	pmax			
	comp=Z,10.0nm,1.3s							
LPSR				MLR	MLR			
	comp=Z,200nm,12.0s							
RETH	**Rethem/Aller,**	**16.68**	**327**	*e*P		**P**	**23 34 43.5**	**+1.6**
	baz=133,slow=11							
VRH	**Novokhopyorsk**	**16.92**	**41**	*e*P		**P**	**23 34 44.1**	**-0.5**
VRH				pmax	pmax			
	comp=Z,20nm,1.8s							
VRH				MLR	MLR			
	comp=Z,300nm,23.0s							
OBN	**Obninsk**	**17.66**	**24**	LR	LR	LR	23 41 59.7	
	comp=Z,57nm,18.4s,baz=192,slow=38							
MAK	**Makhachkala**	**17.86**	**71**	*e*P		**Pn**	**23 34 49.6**	**-4.9**
MAK				*e*S		**Sn**	**23 38 05.2**	**-7.9**
MAK				pmax	pmax			
	comp=Z,128nm,1.4s							
MAK				MLR	MLR			
	comp=Z,95nm,15.0s							
MOS	**Moscow**	**18.51**	**24**	*e*P		**P**	**23 35 01.4**	**-0.7**
VSU	**Vasula**	**19.01**	**4**	⇑*e*P		**Pn**	**23 35 10.9**	**+2.5**
HFS	**Hagfors**	**21.64**	**346**	P		**P**	**23 35 34.7**	**-1.4**
	comp=Z,2.2nm,0.4s,baz=151,slow=12,SNR=29							
HFS				LR	LR	LR	23 44 26.4	
	comp=Z,139nm,21.5s,baz=154,slow=38							
ESDC	**Sonseca Array**	**21.65**	**279**	P		**P**	**23 35 36.1**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=74,slow=10,SNR=7.6							
ESDC				LR	LR	LR	23 44 42.5	
	comp=Z,110nm,18.0s,baz=80,slow=39							
FINES	**FINESS Array B**	**21.96**	**2**	P		**P**	**23 35 38.7**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=185,slow=11,SNR=9.0							
FINES				LR	LR	LR	23 45 32.8	
	comp=Z,196nm,18.5s,baz=182,slow=40							
KONO	**Kongsberg**	**22.14**	**340**	*e*P		**P**	**23 35 41.0**	**-0.5**
KONO	**Kongsberg**	**22.14**	**340**	P		**P**	**23 35 41.0**	**-0.5**
KONO				IAmb	IAmb	IAmb	23 35 44.6	
	comp=Z,21nm,1.3s							
NC602	**NORSAR Array S**	**22.63**	**344**	P		**P**	**23 35 45.3**	**-1.4**
NC602				IAmb	IAmb	IAmb	23 35 46.5	
	comp=Z,44nm,1.2s							
NAO01	**NORSAR Array S**	**22.87**	**343**	P		**P**	**23 35 48.2**	**-1.1**
NC405	**NORSAR Array S**	**22.94**	**344**	P		**P**	**23 35 48.9**	**-1.1**
NB201	**NORSAR Array S**	**22.97**	**344**	P		**P**	**23 35 50.0**	**-0.3**
NB2	**NORSAR Subarra**	**22.98**	**344**	P		**P**	**23 35 48.9**	**-1.5**
	comp=Z,8.0nm,0.8s,baz=151,slow=11							
NOA	**NORSAR Array B**	**22.98**	**344**	P		**P**	**23 35 49.6**	**-0.8**
	comp=Z,5.6nm,0.9s,baz=153,slow=11,SNR=11							
NOA				LR	LR	LR	23 45 28.9	
	comp=Z,56nm,18.3s,baz=150,slow=39							
TAM	**Tamanrasset**	**23.02**	**229**	P		**P**	**23 35 51.6**	**+0.3**
TAM				pmax	pmax			
	comp=Z,7.0nm,1.2s							
TAM	**Tamanrasset**	**23.02**	**229**	P		**P**	**23 35 51.6**	**+0.3**
TAM				IAmb	IAmb	IAmb	23 36 01.1	
	comp=Z,7.5nm,1.2s							
NC303	**NORSAR Array S**	**23.11**	**344**	P		**P**	**23 35 50.2**	**-1.5**
NC303				IAmb	IAmb	IAmb	23 36 39.3	
	comp=Z,21nm,1.2s							
NC204	**NORSAR Array S**	**23.29**	**344**	P		**P**	**23 35 53.2**	**-0.4**
KLMR	**Klimovskoe**	**23.37**	**19**	*e*P		**P**	**23 35 54.8**	**+0.5**
KLMR				pmax	pmax			
	comp=Z,18nm,1.5s							
KLMR	**Klimovskoe**	**23.37**	**19**	*e*P		**P**	**23 35 54.9**	**+0.6**
KLMR				AMP			23 35 56.6	
	comp=Z,18nm,1.5s							
KLMR				LQ	LQ		23 42 53.0	
KLMR				LQ	LQ		23 42 53.0	
KLMR				LR	LR		23 43 50.6	
EKA	**Eskdalemuir Ar**	**24.10**	**320**	P		**P**	**23 36 00.3**	**-1.1**
	comp=Z,1.8nm,0.7s,baz=116,slow=8.6,SNR=5.6							
RAYN	**Ar Rayn**	**24.10**	**125**	P		**P**	**23 36 03.8**	**+2.0**
RAYN				pmax	pmax			
	comp=Z,21nm,2.0s							
RAYN	**Ar Rayn**	**24.10**	**125**	P		**P**	**23 36 03.8**	**+2.0**
RAYN				IAmb	IAmb	IAmb	23 36 10.8	
	comp=Z,21nm,1.9s							
MDT	**Midelt**	**24.12**	**263**	LR		LR	23 46 26.9	
	comp=Z,51nm,19.9s,baz=92,slow=39							
KIRV	**Kirov**	**24.98**	**32**	LR		LR	23 46 33.6	
	comp=Z,196nm,18.5s,baz=222,slow=38							
AKTO	**Aktyubinsk**	**26.08**	**54**	LR		LR	23 49 11.8	
	comp=Z,72nm,18.2s,baz=258,slow=42							
GEYT	**Alibeck**	**26.44**	**83**	P		**P**	**23 36 24.5**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=252,slow=11,SNR=1.9							
ARCES	**ARCESS Array B**	**30.07**	**1**	LR		LR	23 50 04.2	
	comp=Z,153nm,18.2s,baz=183,slow=39							
TORD	**Torodi Ar. Bea**	**32.93**	**223**	P		**P**	**23 37 21.1**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=33,slow=9.1,SNR=10							
KK31	**Karatay Array**	**34.64**	**69**	P		**P**	**23 37 34.7**	**-0.5**
KK31				pmax	pmax			
	comp=Z,2.0nm,1.2s							
KK31	**Karatay Array**	**34.64**	**69**	P		**P**	**23 37 34.7**	**-0.5**
KKAR	**Karatay Array**	**34.64**	**69**	P		**P**	**23 37 35.2**	**0.0**
KKAR				pmax	pmax			
	comp=Z,2.0nm,1.2s							
KKAR	**Karatay Array**	**34.64**	**69**	P		**P**	**23 37 35.2**	**0.0**
GAR	**Garm**	**35.42**	**76**	P		**P**	**23 37 41.6**	**-0.6**
GAR				IAmb	IAmb	IAmb	23 37 59.7	
	comp=Z,5.0nm,0.9s							
AAK	**Ala-Archa**	**37.60**	**69**	LR		LR	23 56 59.8	
	comp=Z,48nm,18.2s,baz=278,slow=42							
SPITS	**Spitsbergen Ar**	**38.88**	**357**	LR		LR	23 56 22.5	
	comp=Z,76nm,18.1s,baz=300,slow=40							
KURK	**Kurchatov**	**39.17**	**55**	⇑*e*P		**P**	**23 38 15.2**	**+1.6**
KURK				pmax	pmax			
	comp=Z,3.0nm,1.6s							
KSH	**Kashi**	**39.49**	**73**	P		**P**	**23 38 15.6**	**-1.0**
KSH				pP	pP		23 38 20.6	-1.3
KSH				pmax	pmax			
	comp=Z,11nm,0.6s							
DBIC	**Dimbokro**	**41.86**	**226**	P		**P**	**23 38 36.9**	**+0.7**
	comp=Z,3.1nm,0.9s,baz=323,slow=10,SNR=2.8							
DBIC				LR	LR	LR	23 58 58.0	
	comp=Z,37nm,18.6s,baz=8.5,slow=40							
DBIC	**Dimbokro**	**41.86**	**226**	P		**P**	**23 38 36.9**	**+0.7**
DBIC				pmax	pmax			
	comp=Z,40nm,1.9s							
DBIC	**Dimbokro**	**41.86**	**226**	IAmb	IAmb	IAmb	23 40 07.7	
	comp=Z,40nm,1.9s							
MK31	**Makanchi Array**	**42.15**	**60**	P		**P**	**23 38 38.5**	**+0.1**
MK31				pmax	pmax			
	comp=Z,1.0nm,0.7s							
MK31	**Makanchi Array**	**42.15**	**60**	P		**P**	**23 38 38.5**	**+0.1**
MKAR	**Makanchi Array**	**42.15**	**60**	P		**P**	**23 38 38.9**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=271,slow=7.0,SNR=9.3							
MKAR				LR	LR	LR	23 58 53.1	
	comp=Z,58nm,21.8s,baz=276,slow=40							
ZAA0	**Zalesovo Array**	**42.65**	**50**	P		**P**	**23 38 42.5**	**+0.3**
ZAA0				IAmb	IAmb	IAmb	23 38 48.7	
	comp=Z,2.4nm,0.6s							
ZALV	**Zalesovo Beam**	**42.65**	**50**	P		**P**	**23 38 42.2**	**0.0**
	comp=Z,1.8nm,0.4s,baz=272,slow=9.6,SNR=8.1							
ZALV	**Zalesovo Beam**	**42.65**	**50**	*i* P		**P**	**23 38 43.5**	**+1.3**
ZALV				pmax	pmax			
	comp=Z,2.0nm,0.4s							
NRIK	**Noril'sk**	**44.30**	**27**	LR		LR	23 58 50.7	
	comp=Z,122nm,18.0s,baz=239,slow=38							
WMQ	**Urumqi**	**46.60**	**63**	*e*P		**P**	**23 39 16.0**	**+2.0**
ILULI	**Ilulissat**	**48.52**	**333**	P		**P**	**23 39 28.7**	**+0.3**
ILULI				pmax	pmax			
	comp=Z,17nm,0.9s							
ILULI	**Ilulissat**	**48.52**	**333**	P		**P**	**23 39 28.6**	**+0.3**
SONM	**Songino Array**	**57.38**	**52**	P		**P**	**23 40 34.7**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=333,slow=5.4,SNR=1.6							
SONM				LR	LR		00 06 02.9	
	comp=Z,59nm,20.4s,baz=264,slow=37							
HHC	**Hu-ho-hao-te**	**63.91**	**58**	*e*P		**P**	**23 41 20.3**	**+1.4**
HHC				pmax	pmax			
	comp=Z,7.0nm,0.8s							
HHC				pmax	pmax			
	comp=Z,44nm,5.3s							
BOSA	**Boshof**	**67.81**	**179**	LR		LR	00 15 01.0	
	comp=Z,61nm,19.7s,baz=293,slow=39							
YKA	**Yellowknife Ar**	**73.05**	**341**	P		**P**	**23 42 15.0**	**-0.5**
	comp=Z,0.1nm,0.6s,baz=29,slow=5.6,SNR=2.3							
YKA	**Yellowknife Ar**	**73.05**	**341**	P		**P**	**23 42 15.0**	**-0.5**
KSRS	**Korea Array**	**76.25**	**53**	P		**P**	**23 42 34.3**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=298,slow=4.4,SNR=2.0							

*IDC **20** 23:32:19.0±1.6, 1.°59S×134.°90E, h0km, mb3.6/3, mb1 3.9/6, mb1mx3.6/39, mbtmp3.7/6, ML3.6/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/25, Error ellipse: s-maj=30.7km s-min=20.3km az=49.0*

ISC 20 23:32:23.6±1.7, 1.7S±0.°2×135.°0E±0.°2, h35km, n7, σ1§23/7, mb3.5/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.79**	**282**	Pn	**Pn**	**23 33 18.4**	**-1.2**
	3.0nm,0.3s,baz=260,slow=23,SNR=2.8						
SIJI				Sn	**Sn**	**23 34 04.4**	**+1.5**
	3.9nm,0.3s,baz=120,slow=23,SNR=3.9						
SIJI				Lg	Lg	23 34 15.6	
	6.2nm,0.3s,baz=135,slow=23,SNR=7.4						
PMG	**Port Moresby**	**14.36**	**123**	LR	LR	23 43 45.2	
	comp=Z,57nm,19.1s,baz=352,slow=48						
WRA	**Warramunga Arr**	**18.17**	**182**	P	**P**	**23 36 33.9**	**+0.6**
	0.2nm,0.3s,baz=1.2,slow=11,SNR=11						
FITZ	**Fitzroy Crossi**	**18.71**	**209**	P	**P**	**23 36 38.3**	**-1.0**
	0.2nm,0.3s,baz=28,slow=15,SNR=2.1						
ASAR	**Alice Springs**	**21.89**	**183**	P	**P**	**23 37 14.7**	**+0.9**
	2.8nm,0.5s,baz=7.3,slow=11,SNR=24						
MKAR	**Makanchi Array**	**66.71**	**324**	P	**P**	**23 43 11.2**	**0.0**
	0.2nm,0.6s,baz=118,slow=8.0,SNR=2.9						
KURBB	**Kurchatov Arra**	**70.75**	**326**	P	**P**	**23 43 36.8**	**+0.5**
	0.4nm,0.8s,baz=99,slow=5.7,SNR=2.4						

*IDC **20** 23:42:30.2±1.0, 56.°83S×25.°02W, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.8/23, mbtmp3.9/6, ML3.7/1, Error ellipse: s-maj=43.5km s-min=24.4km az=56.0*

ISC 20 23:42:33.3±0.8, 56.°9S±0.°2×25.°0W±0.°3, h22km, n16, σ0§78/13, mb3.8/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**15.54**	**159**	P	**Pn**	**23 46 10.7**	**0.0**
VNA3	**Neumayer Olymp**	**15.78**	**162**	P	**Pn**	**23 46 12.7**	**-1.1**
VNA2	**Neumayer--Watz**	**15.94**	**159**	P	**Pn**	**23 46 14.7**	**-1.0**
	baz=328,slow=16						
SNAA	**Sanae**	**17.46**	**157**	P	**P**	**23 46 36.3**	**+0.1**
SNAA	**Sanae**	**17.46**	**157**	P	**P**	**23 46 35.9**	**-0.3**
	0.2nm,0.3s,baz=310,slow=14,SNR=8.4						
CPUP	**Villa Florida**	**38.29**	**309**	P	**P**	**23 49 51.5**	**-0.4**
	1.2nm,0.7s,baz=184,slow=9.5,SNR=4.2						
VNDA	**Vanda**	**45.75**	**182**	P	**P**	**23 50 53.4**	**+1.2**
	0.4nm,0.6s,baz=209,slow=5.1,SNR=1.7						
SIV	**San Ignacio**	**49.05**	**311**	P	**P**	**23 51 17.6**	**-0.9**
	0.5nm,0.5s,baz=154,slow=9.8,SNR=4.7						
LPAZ	**La Paz**	**51.86**	**303**	P	**P**	**23 51 41.2**	**+0.8**
	5.8nm,0.5s,baz=200,slow=9.9,SNR=20						
TORD	**Torodi Ar. Bea**	**73.25**	**27**	P	**P**	**23 54 03.0**	**+0.5**
	0.8nm,1.0s,baz=205,slow=5.9,SNR=3.7						
H08S1	**Diego Carcia H**	**87.73**	**100**	T	T	01 33 23.2	
	baz=226,slow=76,SNR=7.1						
H08S2	**Diego Garcia H**	**87.74**	**100**	T	T	01 33 11.0	
	baz=226,slow=76,SNR=6.3						
H08S3	**Diego Garcia H**	**87.75**	**100**	T	T	01 33 29.9	
	baz=226,slow=76,SNR=5.6						
YKA	**Yellowknife Ar**	**137.63**	**316**	PKP	**PKPdf**	**00 01 54.1**	**+0.2**
	0.1nm,0.5s,baz=129,slow=2.6,SNR=4.3						
SONM	**Songino Array**	**149.58**	**86**	PKPbc	**PKPbc**	**00 02 20.1**	**+0.1**
	0.9nm,0.5s,baz=270,slow=1.4,SNR=2.4						
ILAR	**Eielson Array**	**151.59**	**310**	PKPbc	**PKPbc**	**00 02 23.4**	**-0.7**
	0.4nm,0.5s,baz=140,slow=5.2,SNR=5.6						

*ATA **20** 23:46:28.6±2.5, 39.°08N×41.°07E, h50km±25km, ML1.9, MW3.1*

*DDA **20** 23:46:29.5, 39.°19N×41.°34E, h20km±1km, ML2.1*

ISC 20 23:46:28.9±1.0, 39.°17N±0.°02×41.°23E±0.°03, h20km±4km, n19, σ1§66/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRTB	**Varto-Mus**	**0.18**	**93**	*i* P	**Pg**	**23 46 34.0**	**+0.1**
VRTB				*i* S	**Sg**	**23 46 36.4**	**-0.8**
VRTB				IAML		23 46 38.0	
	comp=E,536nm,0.6s						
ECAT	**Cat-ERZURUM**	**0.48**	**336**	*i* P	**Pb**	**23 46 39.1**	**+0.3**
ECAT				*i* S	**Sg**	**23 46 44.5**	**-0.9**
MUSM	**Mu-Merkez**	**0.50**	**153**	*i* P	**Pb**	**23 46 39.3**	**+0.2**
MUSM				*i* S	**Sg**	**23 46 44.3**	**-1.6**
EMRE	**Erzurum,Aziziy**	**0.88**	**347**	*i* P	**Pg**	**23 46 46.8**	**+0.6**
EMRE				*i* S	**Sn**	**23 47 01.4**	**+2.6**
AKDA	**Akdag**	**0.94**	**6**	*e*P	**Pn**	**23 46 48.0**	**+0.8**
AKDA				*e*S	**Sb**	**23 46 56.2**	**-2.5**
AKDA				IAML		23 47 04.3	
	comp=Z,16nm,0.3s						
AKDA	**Akdag**	**0.94**	**6**	*i* P	**Pn**	**23 46 47.6**	**+0.4**
HANI	**Diyarbakir_Han**	**0.99**	**221**	*i* P	**Pg**	**23 46 50.5**	**+2.3**
KOPT	**Kop Dagi**	**1.02**	**327**	*i* P	**Pg**	**23 46 50.0**	**+1.2**
KOPT				*i* S	**Sb**	**23 47 03.0**	**+1.9**
SVAN	**Silvan-Diyarba**	**1.02**	**181**	*i* P	**Pg**	**23 46 50.0**	**+1.3**
SVAN				*i* S	**Sn**	**23 47 03.1**	**+1.2**
BLIS	**Bitlis-Merkez**	**1.03**	**137**	*e*P	**Pn**	**23 46 48.4**	**+0.1**
BLIS				*e*S	**Sn**	**23 47 02.3**	**0.0**
BLIS				IAML		23 47 04.3	
	comp=Z,24nm,0.3s						
BLIS	**Bitlis-Merkez**	**1.03**	**137**	*i* P	**Pn**	**23 46 48.2**	**-0.2**
BLIS				*i* S	**Sb**	**23 46 59.5**	**-1.7**
BLIS				IAML		23 47 03.0	
	comp=N,51nm,0.3s						
BLIS				IAML		23 47 04.0	
	comp=E,50nm,0.4s						
KRIK	**Erzurum-spir**	**1.19**	**349**	*e*P	**Pb**	**23 46 51.9**	**+1.0**
EATA	**Eleskirt**	**1.20**	**54**	*e*P	**Pg**	**23 46 52.5**	**+0.3**
EATA				*e*S	**Sg**	**23 47 10.6**	**+2.7**
EATA				IAML		23 47 15.1	
	comp=Z,2.5nm,0.6s						
EATA	**Eleskirt**	**1.20**	**54**	*i* P	**Pg**	**23 46 52.6**	**+0.3**
EATA				*i* S	**Sg**	**23 47 05.9**	**-2.0**
TUTA	**Tutak**	**1.25**	**79**	*e*P	**Pg**	**23 46 53.8**	**+0.6**
TUTA				*e*S	**Sg**	**23 47 10.7**	**+1.1**
TUTA				IAML		23 47 12.7	
	comp=Z,27nm,0.2s						
TUTA	**Tutak**	**1.25**	**79**	*i* P	**Pg**	**23 46 53.1**	**-0.1**
TUTA				*i* S	**Sg**	**23 47 07.6**	**-2.1**
TUTA				IAML		23 47 12.0	
	comp=N,37nm,0.2s						
SRTM	**Siirt_Merkez**	**1.30**	**155**	*i* P	**Pg**	**23 46 54.8**	**+0.8**
SRTM				*i* S	**Sb**	**23 47 09.3**	**+0.3**
SRTM				IAML		23 47 16.0	
	comp=N,23nm,0.5s						
SRTM				IAML		23 47 18.0	
	comp=E,37nm,0.5s						
TNCL	**Tunceli-Merkez**	**1.31**	**268**	*e*P	**Pn**	**23 46 51.4**	**-0.8**
TNCL				*e*S	**Sn**	**23 47 05.2**	**-4.1**
TNCL				IAML		23 47 16.5	
	comp=Z,10nm,0.5s						
KELT	**Kelkit**	**1.81**	**303**	*e*P	**Pn**	**23 46 57.9**	**-1.2**
KELT				*e*S	**Sn**	**23 47 18.1**	**-3.6**
KELT				IAML		23 47 43.2	
	comp=Z,3.3nm,2.2s						

*MEX **21** 00:17:20.0±0.6, 14.°39N×92.°74W, h56km±46km, MD3.9*

*GCG **21** 00:17:22.7±0.8, 14.°71N×92.°56W, h67km±27km, MD3.9*

ISC 21 00:17:14.0±2.1, 14.°24N±0.°09×92.°94W±0.°06, h11km±12km, n11, σ1§60/18, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.93**	**44**	*i* P	**Pg**	**00 17 32.4**	**+0.5**
THIG				*e*S	**Sg**	**00 17 42.4**	**-1.7**
ERG	**Entre ros, C**	**1.34**	**81**	*e*P	**Pg**	**00 17 41.2**	**+1.4**
STG3	**Santiaguito 3,**	**1.41**	**70**	*e*P	**Pg**	**00 17 40.9**	**-0.1**
PCIG		**1.48**	**349**	*e*P	**Pn**	**00 17 41.9**	**+1.2**
PCIG				*i* S	**Sn**	**00 17 57.9**	**-2.2**
FUG	**Fuego 3**	**2.04**	**84**	*e*P	**Pb**	**00 17 50.6**	**-0.6**
FUG				*e*P		00 17 50.9	
FUG				*e*S	**Sn**	**00 18 13.0**	**-1.0**
CCIG	**Comitan**	**2.17**	**21**	*e*P	**Pn**	**00 17 52.3**	**+2.0**
CCIG				*i* S	**Sn**	**00 18 19.5**	**+2.1**
PCG	**Pacaya**	**2.26**	**86**	*e*P	**Pb**	**00 17 54.7**	**-0.3**
PCG				*e*S	**Sn**	**00 18 18.7**	**-1.0**
IXG	**Ixpaco**	**2.42**	**91**	*e*P	**Pb**	**00 17 56.6**	**-1.1**
IXG				*e*S	**Sn**	**00 18 23.0**	**-0.4**
TGIG		**2.53**	**356**	*i* P	**Pn**	**00 17 54.3**	**-0.8**
TGIG				*i* S	**Sn**	**00 18 25.7**	**-0.3**
CMIG	**

0.5nm,0.3s,baz=145,slow=11,SNR=13
AKTO Aktyubinsk 22.09 318 P **P** **00 23 10.8 +0.4**
0.5nm,0.5s,baz=131,slow=9.3,SNR=2.4
FINES FINESS Array B 42.62 324 P **P** **00 26 09.9 -1.4**
0.8nm,0.5s,baz=107,slow=8.9,SNR=8.6
NOA NORSAR Array B 49.75 323 P **P** **00 27 06.1 -1.4**
0.3nm,0.7s,baz=93,slow=7.1,SNR=1.4
ILAR Eielson Array 72.86 19 P **P** **00 29 42.0 -1.9**
0.2nm,0.5s,baz=305,slow=3.5,SNR=2.2
TORD Torodi Ar. Bea 73.88 275 P **P** **00 29 49.6 -1.1**
0.3nm,0.5s,baz=41,slow=4.6,SNR=5.8

NEIC ***21*** *00:21:07.5±2.7,24.8S±0.1×176.2W±0.1, h10km±1km, mb4.3/16, Error ellipse: s-maj=23.3km s-min=14.7km az=137.0*

IDC ***21*** *00:21:09.0±0.7,24.64S×176.70W, h0km, mb4.2/8, mb1 4.3/8, mb1mx4.2/24, mbtmp4.2/8, MS3.7/3, Ms1 3.7/3, ms1mx3.4/44, Error ellipse: s-maj=31.5km s-min=24.0km az=130.0*

ISC 21 00:21:08.6±0.5, 24.70S±0.08×176.3W±0.1, h10km, n82, s204/63, mb4.2/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**4.76**	**197**	Sn		**Sn**	**00 23 16.6**	**+1.0**
	210nm,0.3s,baz=104,slow=20,SNR=1.9							
NIUE	**Niue**	**8.15**	**48**	Pn		**Pn**	**00 23 04.9**	**-2.1**
MSVF	**Nonsavu**	**8.70**	**322**			Pn	00 23 20.8	+6.1
AFI	**Afiamalu**	**11.55**	**23**			**Pn**	**00 23 51.4**	**-2.3**
URZ	**Urewera**	**14.63**	**201**	Pn		**Pn**	**00 24 31.3**	**-4.4**
	0.5nm,0.3s,baz=282,slow=20,SNR=1.4							
URZ				Sn		Sn	00 27 06.3	-12
	1.4nm,0.3s,baz=75,slow=17,SNR=2.1							
URZ				LR		LR	00 29 31.0	
	comp=Z,257nm,20.7s,baz=18,slow=34							
MRHZ	**Matea Rd**	**15.38**	**202**	P		**P**	**00 24 55.3**	**+4.8**
RAR	**Rarotonga**	**15.62**	**80**	Pn		**Pn**	**00 24 46.5**	**-2.5**
	2.6nm,0.3s,baz=240,slow=11,SNR=2.5							
RAR				Sn		Sn	00 27 24.5	-18
	6.3nm,0.3s,baz=30,slow=20,SNR=3.4							
RAR	**Rarotonga**	**15.62**	**80**	IAmb		IAmb	00 24 51.7	
	comp=Z,20nm,1.1s							
BKZ	**Black Stump Fm**	**15.65**	**201**	P		**P**	**00 24 49.5**	**-4.0**
BKZ	**Black Stump Fm**	**15.65**	**201**	Pn		**Pn**	**00 24 48.1**	**-1.3**
MCHZ	**McNeill Hill**	**15.84**	**200**	P		**P**	**00 24 55.0**	**-0.6**
DZM	**Mont Dzumac**	**16.05**	**276**	Pn		**Pn**	**00 24 54.8**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=86,slow=3.6,SNR=3.5							
DZM				LR		LR	00 29 49.9	
	comp=Z,263nm,20.7s,baz=82,slow=33							
DZM	**Mont Dzumac**	**16.05**	**276**	IAmb		IAmb	00 25 03.2	
	comp=Z,27nm,1.1s							
BHHZ	**Black Hill Sta**	**16.09**	**202**	P		**Pn**	**00 24 52.4**	**-2.6**
KAHZ	**Kahuranaki**	**16.11**	**199**	P		**Pn**	**00 24 53.4**	**-1.8**
MOVZ	**Moawhango**	**16.12**	**203**	P		**P**	**00 24 57.8**	**-1.0**
PKVZ	**Pokaka**	**16.16**	**204**	P		**P**	**00 24 57.9**	**-1.3**
PXZ	**Pawanui**	**16.33**	**199**	P		**Pn**	**00 24 56.4**	**-1.6**
PNHZ	**Pukenui**	**16.43**	**201**	P		**Pn**	**00 24 56.7**	**-2.6**
BFZ	**Birch Farm**	**17.11**	**200**	P		**Pn**	**00 25 06.6**	**-1.3**
BFZ	**Birch Farm**	**17.11**	**200**	Pn		**Pn**	**00 25 05.8**	**-2.1**
MRZ	**Mangatainoka R**	**17.31**	**201**	P		**P**	**00 25 09.1**	**-2.6**
HOWZ	**Holdsworth Sta**	**17.54**	**201**	P		**Pn**	**00 25 09.7**	**-3.5**
OGWZ	**Otaki Gorge**	**17.58**	**202**	P		**Pn**	**00 25 11.0**	**-2.8**
TRWZ	**Traveller**	**17.94**	**200**	P		**P**	**00 25 16.4**	**-2.3**
MSWZ	**Moikau Station**	**18.09**	**201**	P		**Pn**	**00 25 17.7**	**-2.4**
MSWZ	**Moikau Station**	**18.09**	**201**			**Pn**	**00 25 17.2**	**-2.9**
PLWZ	**Palliser**	**18.23**	**201**	P		**P**	**00 25 20.7**	**-1.3**
THZ	**Tophouse**	**19.23**	**205**	P		**P**	**00 25 29.7**	**-3.3**
KHZ	**Kahutara**	**19.56**	**203**	P		**P**	**00 25 33.9**	**-2.7**
KHZ				IAmb		IAmb	00 25 37.4	
	comp=Z,24nm,1.2s							
RPZ	**Rata Peaks**	**21.61**	**206**	LR		LR	00 33 51.4	
	comp=Z,328nm,18.3s,baz=34,slow=35							
STKA	**Stephens Creek**	**37.57**	**249**	P		**P**	**00 28 22.8**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=117,slow=16,SNR=1.7							
STKA	**Stephens Creek**	**37.57**	**249**	IAmb		IAmb	00 28 23.7	
	comp=Z,0.9nm,1.2s							
AS31	**Alice Springs**	**45.23**	**261**	P		**P**	**00 29 26.1**	**-0.3**
AS31				IAmb		IAmb	00 29 30.4	
	comp=Z,2.6nm,1.1s							
ASAR	**Alice Springs**	**45.23**	**261**	P		**P**	**00 29 25.9**	**-0.6**
	comp=Z,4.1nm,0.7s,baz=90,slow=6.7,SNR=21							
VNDA	**Vanda**	**53.30**	**186**	P		**P**	**00 30 31.9**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=39,slow=7.6,SNR=2.2							
SIJI	**Sorong**	**55.89**	**287**	P		**P**	**00 30 44.9**	**-2.1**
	comp=Z,9.2nm,0.5s,baz=229,slow=20,SNR=2.4							
H06S1	**SOCORRO T**	**76.89**	**62**	T		T	01 57 33.7	
	SNR=15							
H06N1	**SOCORRO T-PHAS**	**76.93**	**62**	T		T	01 57 25.6	
	SNR=26							
H06E1	**SOCORRO T-PHAS**	**76.94**	**62**	T		T	01 57 37.2	
	SNR=49							
MAW	**Mawson**	**78.16**	**200**	P		**P**	**00 33 10.6**	**+2.8**
	comp=Z,3.6nm,0.8s,baz=157,slow=13,SNR=2.2							
MAW	**Mawson**	**78.16**	**200**	IAmb		IAmb	00 33 13.5	
	comp=Z,1.8nm,1.2s							
PETK	**Petropavlovsk-**	**80.71**	**344**	P		**P**	**00 33 22.1**	**+0.4**
	comp=Z,3.7nm,0.9s,baz=128,slow=9.6,SNR=4.4							
GSC	**Goldstone, Bar**	**82.04**	**45**	P		**P**	**00 33 29.4**	**+0.1**
MDPB	**Devils Postpil**	**82.06**	**42**	P		**P**	**00 33 26.9**	**-2.7**
MDPB				IAmb		IAmb	00 33 33.0	
	comp=Z,2.4nm,0.8s							
H03S2	**Juan Fernandez**	**82.36**	**124**	T		T	02 04 28.6	
	baz=243,slow=74,SNR=534							
H03S1	**Juan Fernandez**	**82.37**	**124**	T		T	02 04 29.8	
	baz=243,slow=74,SNR=524							
H03S3	**Juan Fernandez**	**82.37**	**124**	T		T	02 04 26.6	
	baz=243,slow=74,SNR=565							
H03N2	**Juan Fernandez**	**82.51**	**123**	T		T	02 04 32.9	
	baz=250,slow=73,SNR=142							
H03N3	**Juan Fernandez**	**82.51**	**123**	T		T	02 04 32.9	
	baz=250,slow=73,SNR=235							
H03N1	**Juan Fernandez**	**82.53**	**123**	T		T	02 04 37.4	
	baz=250,slow=73,SNR=126							
PNTR	**Pine Nut**	**82.67**	**41**	P		**P**	**00 33 30.6**	**-2.0**
NV11	**Mina Array Sit**	**83.12**	**42**	P		**P**	**00 33 35.0**	**+0.1**
NV11				IAmb		IAmb	00 33 43.4	
	comp=Z,1.6nm,1.0s							
PAHR	**Pah Rah Range**	**83.19**	**41**	P		**P**	**00 33 35.7**	**+0.4**
SNAA	**Sanae**	**83.78**	**178**	P		**P**	**00 33 38.9**	**+1.1**
SHPR	**Sheep Range**	**83.83**	**45**	P		**P**	**00 33 37.4**	**-1.3**
SHPR				IAmb		IAmb	00 33 46.6	
	comp=Z,1.4nm,0.9s							
VNA3	**Neumayer Olymp**	**83.86**	**176**	P		**P**	**00 33 39.2**	**+1.0**
VNA2	**Neumayer--Watz**	**84.32**	**176**	P		**P**	**00 33 42.1**	**+1.6**
	baz=198,slow=4.8							
TXAR	**Lajitas Array**	**88.03**	**57**	P		**P**	**00 34 02.6**	**+3.1**
	comp=Z,0.5nm,0.9s,baz=213,slow=7.5,SNR=4.1							
PDAR	**Pinedale Array**	**90.96**	**43**	P		**P**	**00 34 15.4**	**+2.3**
	comp=Z,0.7nm,1.0s,baz=222,slow=3.6,SNR=4.7							
YHL	**Hebgen Lake**	**91.14**	**40**	P		**P**	**00 34 12.5**	**-1.5**
MKAR	**Makanchi Array**	**115.18**	**312**	PKP		**PKiKP**	**00 39 52.2**	**+2.0**
	comp=Z,0.1nm,0.5s,baz=76,slow=7.6,SNR=1.1							
ARCES	**ARCESS Array B**	**133.31**	**350**	PKP		**PKiKP**	**00 40 27.2**	**+1.9**
	comp=Z,4.6nm,1.1s,baz=354,slow=3.6,SNR=3.5							
FINES	**FINESS Array B**	**140.22**	**343**	PKP		**PKiKP**	**00 40 39.0**	**-0.6**
	comp=Z,1.9nm,1.0s,baz=5.7,slow=2.8,SNR=2.3							
H10S3	**ASCENSION HYDR**	**142.06**	**150**	T		T	03 19 42.0	
H10S2	**ASCENSION HYDR**	**142.06**	**150**	T		T	03 19 45.1	
H10N3	**ASCENSION HYDR**	**143.11**	**149**	T		T	03 21 08.6	
	baz=206,slow=75,SNR=6.4							
H10N1	**ASCENSION HYDR**	**143.12**	**149**	T		T	03 21 08.7	
	baz=206,slow=75,SNR=3.9							
H10N2	**ASCENSION HYDR**	**143.13**	**149**	T		T	03 21 09.1	
	baz=206,slow=75,SNR=7.4							
NOA	**NORSAR Array B**	**143.31**	**354**	PKP		**PKPdf**	**00 40 43.1**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=3.0,slow=2.2,SNR=2.8							
HFS	**Hagfors**	**143.91**	**352**	PKhKP		PKPpre	00 40 41.3	
	comp=Z,1.1nm,0.6s,baz=18,slow=6.1,SNR=2.7							
AKASG	**Malin Array Be**	**147.42**	**329**	PKPbc		**PKPbc**	**00 40 52.6**	**+0.1**
	comp=Z,1.5nm,0.4s,baz=42,slow=4.3,SNR=5.6							
EKA	**Eskdalemuir Ar**	**148.99**	**8**	PKPbc		**PKiKP**	**00 40 58.2**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=312,slow=2.6,SNR=1.7							
ASF	**Jabal al Asfar**	**149.95**	**292**	PKPbc		**PKiKP**	**00 41 00.7**	**0.0**
	comp=Z,1.8nm,0.9s,baz=180,slow=6.1,SNR=2.8							
BRTR	**Keskin Array B**	**150.73**	**308**	PKPbc		**PKiKP**	**00 41 02.3**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=132,slow=5.1,SNR=4.7							
MMAI	**Mount Meron Ar**	**151.10**	**294**	PKPbc		**PKiKP**	**00 41 02.2**	**-0.9**
	comp=Z,1.4nm,0.4s,baz=91,slow=6.7,SNR=7.3							
EIL	**Elat**	**151.81**	**287**	PKPbc		**PKiKP**	**00 41 05.6**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=165,slow=16,SNR=1.6							
CLL	**Collm**	**152.49**	**347**	*e*PKPbc		**PKiKP**	**00 41 06.0**	**+0.8**
CLL				*e*			00 41 11.0	
CLL				*e*PKPab		**PKPab**	**00 41 15.0**	**-0.1**
CLL				*e*			00 41 22.0	
MLR	**Muntele Rosu**	**152.56**	**325**	PKPbc		**PKiKP**	**00 41 07.7**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=180,slow=13,SNR=1.5							
VRAC	**Vranov**	**153.44**	**341**	PKPab		**PKPab**	**00 41 21.4**	**+2.1**
	comp=Z,1.3nm,0.6s,baz=105,slow=3.3,SNR=3.2							
GERES	**GERESS Array B**	**154.65**	**344**	PKPbc		**PKiKP**	**00 41 10.5**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=336,slow=2.2,SNR=1.2							
GERES				PKPab		**pPKPab**	**00 41 26.8**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=38,slow=5.0,SNR=2.5							
TORD	**Torodi Ar. Bea**	**168.36**	**170**	PKPab		**PKPab**	**00 42 27.8**	**+2.9**
	comp=Z,0.4nm,0.8s,baz=199,slow=2.8,SNR=1.5							

NIED ***21*** *00:21:00,23.70N×121.50E, h32km, Mw5.5 Best double couple: M0 2.34000×10^17 NP1:φ=86.00000°, δ=78.00000°, λ=124.00000°. NP2:φ=193.00000°, δ=36.00000°, λ=21.00000°.*

IDC ***21*** *00:21:10.2±0.4,23.76N×121.67E, h0km, mb5.0/42, mb1 5.1/43, mb1mx5.1/47, mbtmp5.0/43, ML3.7/1, MS5.1/37, Ms1 5.1/37, ms1mx4.9/50, Error ellipse: s-maj=12.9km s-min=9.9km az=58.0*

MOS ***21*** *00:21:11.8±1.0,23.79N×121.66E, h21km, mb5.7/87, MS5.5/58, Error ellipse: s-maj=6.3km s-min=3.6km az=116.3*

NEIC ***21*** *00:21:12.9,23.76N×121.50E, h13km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr=1.34; Mθθ=0.75; Mφφ=0.60; Mrθ=0.90; Mrφ=-1.07; Mθφ=0.54; Fault plane solution: M0=1.90000×10^17 NP1:φ=199.55000°, δ=47.64000°, λ=44.72000°. NP2:φ=75.84000°, δ=58.67000°, λ=127.93000°. Principal axes: T 2.0004, Plg58.0000°, Azm40.0000°; N -0.2280, Plg32.0000°, Azm234.0000°; P -1.7725, Plg6.0000°, Azm140.0000°;*

BJI ***21*** *00:21:12.6±0.0,23.76N×121.49E, h20km, mB5.8/61, mb5.4/74, ML6.0/14, Ms5.9/92, Ms7 5.9/86*

BGR ***21*** *00:21:13.0±0.0,23.79N×121.99E, h33km, mb5.6, Ms5.7*

NEIC ***21*** *00:21:12.9±1.7,23.76N±0.06×121.50E±0.04, h13km±1km, mb5.6/303, Ms_20 5.4/641, Mwb5.5/68, Mww5.6, ML5.9(TAP), Mwc5.6(GCMT), Error ellipse: s-maj=9.5km s-min=6.3km az=178.0*

JMA ***21*** *00:21:12.6±0.1,23.69N×121.47E, h25km±3km, M5.7*

TAP ***21*** *00:21:13.9,23.74N×121.43E, h16km, ML6.0, C*

GCMT ***21*** *00:21:13.9±0.1,23.72N±0.01×121.44E±0.01, h24km, MW5.6/160, Moment Tensor Solution. s141,c260; s160,c317; Duration: 1s5 Moment tensor: Scale 10^17 Nm; Mrr2.03±.04; Mθθ-1.41±.03; Mφφ-0.61±.03; Mrθ 1.04±.04; Mθφ-1.69±.02; Mφr-1.38±.05; Best double couple: M0 2.98700×10^17 NP1:φ=81.00000°, δ=54.00000°, λ=135.00000°. NP2:φ=202.00000°, δ=55.00000°, λ=46.00000°. Principal axes: T 3.2230, Plg55.0000°, Azm52.0000°; N -0.4710, Plg35.0000°, Azm231.0000°; P -2.7510, Plg1.0000°, Azm321.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ASIES ***21*** *00:21:14.3,23.74N×121.45E, h20km, MW5.2*

NEIC ***21*** *00:21:15,23.73N×121.52E, h24km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr2.09; Mθθ-1.43; Mφφ-0.66; Mrθ1.15; Mφr-1.82; Mθr-0.88; Fault plane solution: M0 2.97000×10^17 NP1:φ=79.00000°, δ=57.00000°, λ=130.00000°. NP2:φ=203.00000°, δ=50.00000°, λ=45.00000°. Principal axes: T 3.0147, Plg57.0000°, Azm46.0000°; N -0.0841, Plg32.0000°, Azm235.0000°; P -2.9306, Plg4.0000°, Azm143.0000°;*

NEIC ***21*** *00:21:19,23.63N×121.69E, h16km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr2.22; Mθθ-1.47; Mφφ-0.75; Mrθ2.10; Mφr-1.59; Mθr-0.17; Fault plane solution: M0 3.28000×10^17 NP1:φ=77.00000°, δ=66.00000°, λ=116.00000°. NP2:φ=207.00000°, δ=34.00000°, λ=46.00000°. Principal axes: T 3.3438, Plg60.0000°, Azm25.0000°; N -0.1221, Plg23.0000°, Azm246.0000°; P -3.2217, Plg17.0000°, Azm148.0000°;*

ISC 21 00:21:13.7±0.4, 23.72N±0.01×121.47E±0.01, h18km±1km, h18km:pP-P, n1714, s1958/1613, mb5.5/346, MS5.4/426, 168C-83D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EGFH	**Guangfu**	**0.07**	**216**	⇑*i*P		**Pg**	**00 21 17.1**	**0.0**
	baz=184							
EGFH				S		**Sg**	**00 21 19.1**	**-0.3**
	baz=184							
ESL	**Shilin**	**0.10**	**340**	⇑*i*P		**Pg**	**00 21 17.2**	**-0.3**
	baz=6.0							
ESL				S		**Sg**	**00 21 19.4**	**-0.6**
	baz=6.0							
HGSD	**Ruisui**	**0.23**	**190**	⇑*i*P		**Pg**	**00 21 19.8**	**+0.6**
	baz=186							
HGSD				S		**Sg**	**00 21 24.3**	**+1.4**
	baz=186							
EHY	**Hungye**	**0.25**	**212**	⇑*i*P		**Pb**	**00 21 19.1**	**-0.4**
	baz=203							
EHY				S		**Sb**	**00 21 23.6**	**+0.1**
	baz=203							
HWA	**Hwalien**	**0.28**	**26**	⇑*e*P		**Pb**	**00 21 21.0**	**+0.8**
	baz=26							
HWA				*i* S		**Sg**	**00 21 26.3**	**+2.0**
	baz=26							
VWDT	**VWDT**	**0.30**	**276**	⇑*i*P		**Pg**	**00 21 20.1**	**-0.1**
	baz=274							
VWDT				S		**Sg**	**00 21 24.3**	**-0.5**
	baz=274							
OWD	**Renai**	**0.35**	**311**	⇓P		**Pg**	**00 21 20.8**	**-0.4**
	baz=313							
OWD				*e*S		**Sg**	**00 21 25.6**	**-0.9**
	baz=313							
YULB	**Yu-li**	**0.36**	**206**	⇓*i*P		**Pg**	**00 21 20.9**	**-0.5**
	baz=200							
YULB				*i* S		**Sg**	**00 21 26.2**	**-0.4**
	baz=200							
YULB	**Yu-li**	**0.36**	**206**	Pg		**Pg**	**00 21 20.7**	**-0.7**
TWD	**Chiawan**	**0.38**	**18**	⇑*e*P		**Pg**	**00 21 21.8**	**+0.2**
	baz=18							
TWD				S		**Sg**	**00 21 27.2**	**+0.3**
	baz=18							
TWF1	**Yuli**	**0.40**	**203**	*i* P		**Pg**	**00 21 21.5**	**-0.5**
	baz=200							
TWF1				*e*S		**Sg**	**00 21 26.8**	**-0.8**
	baz=200							
CHGB	**Renai**	**0.43**	**321**	⇓P		**Pg**	**00 21 22.5**	**-0.2**
	baz=331							
CHGB				*e*S		**Sg**	**00 21 28.1**	**-0.7**
	baz=331							
WHF	**Hehuan Shan**	**0.46**	**336**	⇓P		**Pg**	**00 21 22.8**	**-0.5**
	baz=341							
WHF				S		**Sg**	**00 21 28.8**	**-1.0**
	baz=341							
NACB	**Ninganchiao**	**0.47**	**14**	⇑*i*P		**Pg**	**00 21 22.9**	**-0.3**
	baz=19							
NACB				*i* S		**Sg**	**00 21 29.2**	**-0.3**
	baz=19							
NACB	**Ninganchiao**	**0.47**	**14**			**Pg**	**00 21 22.7**	**-0.5**
SSLB	**Suanglung**	**0.48**	**278**	⇓*i*P		**Pg**	**00 21 22.7**	**-0.6**
	baz=287							
SSLB				*i* S		**Sg**	**00 21 28.3**	**-1.6**
	baz=287							
SSLB	**Suanglung**	**0.48**	**278**			**Pg**	**00 21 22.6**	**-0.8**
ETLH	**Xiulin Townshi**	**0.48**	**1**	P		**Pg**	**00 21 23.5**	**-0.1**
	baz=6.0							
ETLH				*i* S		**Sg**	**00 21 29.7**	**-0.5**
	baz=6.0							
FULB	**Fuli**	**0.55**	**197**	⇓*i*P		**Pb**	**00 21 24.5**	**-0.2**
	baz=202							
FULB				S		**Sg**	**00 21 33.4**	**+1.4**
	baz=202							
SMLT	**Sun Moon Lake**	**0.55**	**287**	⇓*i*P		**Pb**	**00 21 24.2**	**-0.5**
	baz=293							
SMLT				*e*S		**Sb**	**00 21 31.4**	**-0.8**
	baz=293							
WHYT	**Xinyi Township**	**0.56**	**268**	⇓P		**Pb**	**00 21 24.9**	**-0.1**
	baz=266							
WHYT				*e*S		**Sb**	**00 21 31.8**	**-0.9**
	baz=266							
DPDB	**Guoxing**	**0.59**	**302**	⇓*e*P		**Pb**	**00 21 25.1**	**-0.3**
	baz=310							
DPDB				*e*S		**Sb**	**00 21 33.0**	**-0.3**
	baz=310							
TYC	**Yuchr**	**0.59**	**288**	⇓*i*P		**Pb**	**00 21 24.8**	**-0.5**
	baz=297							
TYC				*e*S		**Sb**	**00 21 31.4**	**-1.9**
	baz=297							
TDCB	**Techi**	**0.60**	**332**	⇓*i*P		**Pb**	**00 21 25.6**	**0.0**
	baz=334							
TDCB				*i* S		**Sb**	**00 21 32.6**	**-1.2**
	baz=334							
CHKT	**Chengkung**	**0.63**	**189**	⇓*i*P		**Pb**	**00 21 26.0**	**0.0**
	baz=172							
CHKT				*e*S		**Sg**	**00 21 35.5**	**+1.0**
	baz=172							
ELDTW	**Lidau**	**0.67**	**218**	⇓*e*P		**Pb**	**00 21 25.9**	**-0.9**
	baz=207							
ELDTW				*e*S		**Sb**	**00 21 35.0**	**-0.9**
	baz=207							
WJS	**Zhushan**	**0.69**	**279**	⇓*i*P		**Pg**	**00 21 27.9**	**+0.7**
	baz=278							
WJS				*i* S		**Sn**	**00 21 37.8**	**-0.9**
	baz=278							
NNSB	**Datong**	**0.71**	**354**	*i* P		**Pb**	**00 21 27.5**	**0.0**
	baz=3.0							
NNSB				S		**Sb**	**00 21 36.3**	**-0.6**
	baz=3.0							
NNSH	**Datong**	**0.71**	**354**	*e*P		**Pb**	**00 21 27.5**	**0.0**
	baz=2.0							
NNSH				S		**Sb**	**00 21 36.5**	**-0.5**
	baz=2.0							
NNS	**Nan Shan**	**0.72**	**353**	P		**Pb**	**00 21 27.8**	**+0.1**
	baz=7.0							
NNS				*i* S		**Sb**	**00 21 37.3**	**0.0**
	baz=7.0							
WHP	**Taichung City**	**0.73**	**319**	⇓*i*P		**Pb**	**00 21 27.8**	**-0.1**
	baz=321							
WHP				*e*S		**Sb**	**00 21 37.2**	**-0.4**
	baz=321							
CHN5	**Tsauling**	**0.74**	**260**	⇓P		**Pg**	**00 21 28.5**	**+0.4**
	baz=253							
CHN5				*e*S		**Sg**	**00 21 38.8**	**+0.8**
	baz=253							
WNT	**Mingjian**	**0.74**	**282**	⇓*i*P		**Pg**	**00 21 28.7**	**+0.6**
	baz=285							
WNT				*e*S		**Sn**	**00 21 39.2**	**-0.7**
	baz=285							
ENA	**Nanau**	**0.75**	**19**	*e*P		**Pb**	**00 21 27.6**	**-0.6**
	baz=23							
ENA				*e*S		**Sg**	**00 21 38.7**	**+0.4**
	baz=23							
WGK	**Gukeng**	**0.83**	**268**	⇓*i*P		**Pn**	**00 21 30.5**	**0.0**
	baz=267							
WGK				*e*S		**Sg**	**00 21 41.4**	**+0.4**
	baz=267							
TCU	**Taichung**	**0.84**	**300**	⇓P		**Pn**	**00 21 30.7**	**+0.1**
	baz=303							
TCU				*e*S		**Sn**	**00 21 42.9**	**+0.5**
	baz=303							
WDLH	**Douliu**	**0.85**	**268**	⇓*e*P		**Pn**	**00 21 31.0**	**+0.2**
	baz=268							
WDLH				S		**Sn**	**00 21 42.6**	**-0.2**
	baz=268							
TPUB	**Ta-pu**	**0.88**	**242**	⇑P		**Pg**	**00 21 30.9**	**+0.1**
	baz=240							
TPUB				S		**Sb**	**00 21 41.6**	**-0.1**
	baz=240							
TPUB	**Ta-pu**	**0.88**	**242**	Pg		**Pb**	**00 21 30.0**	**-0.4**
NDT	**Datong Townshi**	**0.88**	**3**	*e*P		**Pb**	**00 21 30.7**	**+0.4**
	baz=5.0							
NDT				*e*S		**Sb**	**00 21 41.7**	**-0.1**
	baz=5.0							
CHN4	**Tsaushan**	**0.88**	**246**	⇑P		**Pn**	**00 21 31.2**	**+0.1**
	baz=244							
CHN4				S		**Sg**	**00 21 42.9**	**+0.2**
	baz=244							
TWQ1	**Liyutan**	**0.89**	**315**	⇓*i*P		**Pn**	**00 21 31.4**	**+0.1**
	baz=323							
TWQ1				S		**Sb**	**00 21 42.4**	**+0.3**
	baz=323							
WCHH	**Zhanghua**	**0.91**	**293**	⇓*i*P		**Pg**	**00 21 31.7**	**+0.3**
	baz=294							
WCHH				*e*S		**Sn**	**00 21 44.5**	**+0.4**
	baz=294							
WTP	**Ta-pu**	**0.92**	**239**	P		**Pn**	**00 21 31.6**	**0.0**
	baz=237							
WTP				*e*S		**Sb**	**00 21 43.0**	**+0.1**
	baz=237							
ENTT	**Nioudou**	**0.92**	**6**	⇑P		**Pb**	**00 21 30.7**	**-0.4**
	baz=8.0							
ENTT				S		**Sg**	**00 21 43.6**	**-0.2**
	baz=8.0							
YHNB	**Yeheng**	**0.95**	**355**	⇑*i*P		**Pb**	**00 21 31.6**	**-0.1**
	baz=357							
YHNB				S		**Sb**	**00 21 43.9**	**+0.1**
	baz=357							
YHNB	**Yeheng**	**0.95**	**355**			**Pb**	**00 21 31.3**	**-0.3**
TWC	**Suao**	**0.95**	**21**	⇑P		**Pb**	**00 21 31.1**	**-0.5**
	baz=18							
TWC				*e*S		**Sn**	**00 21 45.4**	**+0.3**
	baz=18							
NSK	**Sanguang**	**0.95**	**354**	P		**Pb**	**00 21 32.0**	**+0.2**
	baz=357							
NSK				S		**Sb**	**00 21 43.7**	**-0.4**
	baz=357							
TWG	**Pinlang**	**0.97**	**202**	*e*P		**Pb**	**00 21 31.2**	**-0.7**
	baz=186							
TWG				S		**Sb**	**00 21 44.8**	**+0.5**
	baz=186							
TWG	**Pinlang**	**0.97**	**202**			**Pb**	**00 21 31.5**	**-0.4**
TWGBT	**Beinan**	**0.97**	**202**	*e*P		**Pb**	**00 21 31.1**	**-0.8**
	baz=186							
TWGBT				*e*S		**Sg**	**00 21 44.9**	**-0.4**
	baz=186							
WDJ	**

WTCT	**Ta-ch'eng**	**1.10**	**278**	⇓*i*	P	**Pn**	**00 21 34.1**	**0.0**
	baz=278								
WTCT				*e*	S	**Sg**	**00 21 50.1**	**+0.7**
	baz=278								
WMLT	**Mailiao**	**1.14**	**274**	*e*	P	**Pg**	**00 21 35.7**	**-0.1**
	baz=275								
WMLT				*e*	S	**Sn**	**00 21 50.6**	**+0.7**
	baz=275								
WSF	**Szhu**	**1.15**	**266**	*e*	P	**Pn**	**00 21 34.9**	**+0.1**
	baz=266								
WSF				*e*	S	**Sg**	**00 21 51.3**	**+0.4**
	baz=266								
SBCB	**Hsinchu**	**1.15**	**338**	⇓*i*	P	**Pg**	**00 21 36.6**	**+0.6**
	baz=339								
SBCB				*e*	S	**Sg**	**00 21 52.0**	**+0.8**
	baz=339								
HSN	**Hsinchu**	**1.17**	**337**	P		**Pg**	**00 21 37.1**	**+0.7**
	baz=341								
HSN				S		**Sg**	**00 21 52.8**	**+1.1**
	baz=341								
NTC	**Toucheng**	**1.18**	**16**	*e*	P	**Pn**	**00 21 35.2**	**0.0**
	baz=18								
NTC				*e*	S	**Sg**	**00 21 51.4**	**-0.4**
	baz=18								
EGS		**1.20**	**21**	P		**Pb**	**00 21 36.3**	**+0.5**
	baz=25								
CHN3	**Shinhua**	**1.20**	**238**	P		**Pg**	**00 21 37.5**	**+0.6**
	baz=233								
CHN8	**Yiju**	**1.21**	**252**	P		**Pg**	**00 21 36.9**	**-0.3**
	baz=252								
CHN8				*e*	S	**Sg**	**00 21 53.4**	**+0.4**
	baz=252								
ECL	**Taimali**	**1.22**	**203**	*e*	P	**Pn**	**00 21 35.2**	**-0.5**
	baz=184								
NHDH	**Xindian Distri**	**1.24**	**2**	*e*	P	**Pb**	**00 21 36.9**	**+0.4**
	baz=12								
NHDH				*e*	S	**Sn**	**00 21 52.9**	**+0.6**
	baz=12								
SSD	**Sandimen**	**1.24**	**219**	*e*	P	**Pn**	**00 21 36.3**	**+0.2**
	baz=216								
SSD				*e*	S	**Sg**	**00 21 55.1**	**+1.2**
	baz=216								
TATO	**Taipei**	**1.25**	**1**	⇑*i*	P	**Pn**	**00 21 36.5**	**+0.2**
	baz=18								
TATO				S		**Sg**	**00 21 53.7**	**-0.5**
	baz=18								
TATO	**Taipei**	**1.25**	**1**	P		**Pb**	**00 21 36.7**	**0.0**
TATO	**Taipei**	**1.25**	**1**			**Pn**	**00 21 36.4**	**+0.2**
NCUH	**Zhongli**	**1.27**	**348**	⇑P		**Pg**	**00 21 37.9**	**-0.3**
	baz=350								
NCUH				S		**Sg**	**00 21 55.3**	**+0.5**
	baz=350								
NCU	**National Centr**	**1.27**	**348**	⇑*i*	P	**Pg**	**00 21 37.9**	**-0.3**
	baz=350								
NCU				S		**Sg**	**00 21 55.9**	**+1.0**
	baz=350								
TIPB	**Shuangxi**	**1.29**	**15**	⇑*i*	P	**Pn**	**00 21 36.3**	**-0.5**
	baz=16								
TIPB				*e*	S	**Sb**	**00 21 54.5**	**+0.9**
	baz=16								
TAP	**Taipei**	**1.31**	**1**	*e*	P	**Pn**	**00 21 37.4**	**+0.4**
	baz=19								
TAP				*e*	S	**Sg**	**00 21 56.5**	**+0.3**
	baz=19								
TWM1	**Shoushan**	**1.31**	**227**	⇓P		**Pg**	**00 21 39.3**	**+0.2**
	baz=239								
TAI1	**Yung-k'ang**	**1.33**	**239**	*e*	P	**Pg**	**00 21 39.0**	**-0.3**
	baz=233								
SGLT	**Jiouru**	**1.34**	**222**	*e*	P	**Pg**	**00 21 40.1**	**+0.5**
	baz=206								
MASBT	**Mashibuluo**	**1.35**	**215**	P		**Pn**	**00 21 37.4**	**-0.1**
	baz=213								
MASBT				*e*	S	**Sg**	**00 21 56.4**	**-0.9**
	baz=213								
TWB1	**Santiao Chiao**	**1.37**	**20**	*e*	P	**Pn**	**00 21 38.0**	**+0.2**
	baz=22								
TWB1				*e*	S	**Sg**	**00 21 57.5**	**-0.4**
	baz=22								
NWF	**Wu-fen Shan**	**1.37**	**12**	*e*	P	**Pb**	**00 21 39.0**	**+0.1**
	baz=25								
NWF				*e*	S	**Sb**	**00 21 57.1**	**+1.0**
	baz=25								
WFSB	**Wu-fen Shan**	**1.37**	**12**	⇑*i*	P	**Pn**	**00 21 37.9**	**0.0**
	baz=25								
WFSB				S		**Sb**	**00 21 57.1**	**+1.1**
	baz=25								
TWS1	**Kuangyinshan**	**1.37**	**358**	*e*	P	**Pb**	**00 21 39.5**	**+0.7**
	baz=19								
TWS1				*e*	S	**Sg**	**00 21 59.0**	**+0.8**
	baz=19								
SNJT	**Kaohsiung City**	**1.42**	**227**	*e*	P	**Pg**	**00 21 41.3**	**+0.2**
	baz=220								
YM01	**YM01**	**1.42**	**4**	*e*	P	**Pn**	**00 21 39.0**	**+0.3**
	baz=5.0								
YM01				*e*	S	**Sg**	**00 21 59.9**	**+0.2**
	baz=5.0								
YM04	**YM04**	**1.43**	**2**	*e*	P	**Pn**	**00 21 38.9**	**+0.2**
	baz=19								
YM04				*e*	S	**Sn**	**00 21 56.0**	**-1.0**
	baz=19								
YM10	**YM10**	**1.43**	**3**	*e*	P	**Pn**	**00 21 39.0**	**+0.3**
	baz=20								
YM10				*e*	S	**Sb**	**00 21 58.6**	**+0.8**
	baz=20								
NTST	**Danshui**	**1.44**	**359**	*e*	P	**Pn**	**00 21 39.0**	**+0.3**
	baz=14								
NTST				*e*	S	**Sg**	**00 22 01.0**	**+0.8**
	baz=14								
YM11	**YM11**	**1.44**	**4**	*e*	P	**Pn**	**00 21 39.1**	**+0.2**
	baz=5.0								
YM11				*e*	S	**Sg**	**00 21 59.8**	**-0.5**
	baz=5.0								
EAST	**Anshuo**	**1.45**	**203**	*e*	P	**Pn**	**00 21 39.0**	**0.0**
	baz=186								
YM03	**YM03**	**1.45**	**3**	*e*	P	**Pn**	**00 21 38.6**	**-0.5**
	baz=26								
ANP	**Anpu**	**1.46**	**2**	*e*	P	**Pb**	**00 21 40.0**	**-0.4**
	baz=26								
YM08	**YM08**	**1.46**	**4**	*e*	P	**Pn**	**00 21 39.2**	**0.0**
	baz=9.0								
SSPT	**Xinbi**	**1.49**	**214**	*e*	P	**Pb**	**00 21 41.1**	**+0.4**
	baz=200								
JYNG	**Yonagunijimaku**	**1.53**	**61**	P		**Pn**	**00 21 40.5**	**+0.4**
JYNG				*e*	S	**Sb**	**00 22 00.9**	**+0.3**
TWY	**Chenhua**	**1.55**	**4**	*e*	P	**Pn**	**00 21 41.0**	**+0.7**
	baz=9.0								
SCZT	**Fangliau**	**1.55**	**210**	*e*	P	**Pb**	**00 21 41.5**	**-0.4**
	baz=203								
KAU	**Kaohsiung**	**1.57**	**223**	*e*	P	**Pg**	**00 21 44.3**	**+0.4**
	baz=236								
YOJ	**Yonaguni jima**	**1.59**	**62**	⇑*i*	P	**Pn**	**00 21 41.4**	**+0.5**
	baz=63								
YOJ	**Yonaguni jima**	**1.59**	**62**	P		**Pn**	**00 21 41.4**	**+0.5**
YOJ				S		**Sb**	**00 22 02.4**	**+0.1**
YOJ	**Yonaguni jima**	**1.59**	**62**	P		**Pn**	**00 21 41.1**	**+0.2**
YOJ	**Yonaguni jima**	**1.59**	**62**			**Pn**	**00 21 41.1**	**+0.2**
LAY	**Lan-yu**	**1.68**	**177**	*e*	P	**Pn**	**00 21 40.6**	**-1.5**
	baz=176								
WLCH	**Liuqiu**	**1.69**	**217**	*e*	P	**Pg**	**00 21 46.0**	**-0.3**
	baz=228								
TWP	**Hsiaoliuchiu**	**1.71**	**217**	*e*	P	**Pg**	**00 21 47.3**	**+0.7**
	baz=228								
WDGT	**Dungji**	**1.72**	**255**	*e*	P	**Pn**	**00 21 43.8**	**+1.1**
	baz=250								
PHUB	**P'eng-hu**	**1.75**	**264**	*e*	P	**Pn**	**00 21 43.4**	**+0.3**
	baz=247								
PHUB				*e*	S	**Sb**	**00 22 06.6**	**-0.3**
	baz=247								
PNG	**Penghu**	**1.76**	**265**	*e*	P	**Pn**	**00 21 43.7**	**+0.5**
	baz=267								
PNG				*e*	S	**Sn**	**00 22 06.2**	**+1.0**
	baz=267								
HEN	**Hengchun**	**1.84**	**202**	*e*	P	**Pb**	**00 21 46.9**	**+0.1**
	baz=186								
TWK1	**Hengchun**	**1.87**	**199**	*e*	P	**Pb**	**00 21 47.4**	**0.0**
	baz=186								
TWKBT	**Hengchun**	**1.87**	**199**	*e*	P	**Pb**	**00 21 46.3**	**-1.1**
	baz=186								
TSEB	**Hengchuen, Pin**	**1.89**	**196**	*e*	P	**Pb**	**00 21 47.0**	**-0.6**
	baz=181								
VCHM	**Qimei**	**1.94**	**255**	*e*	P	**Pn**	**00 21 46.2**	**+0.5**
	baz=251								
PCYT	**Pengchaiyu**	**1.98**	**16**	*e*	P	**Pn**	**00 21 44.2**	**-2.0**
	baz=21								
IRIF	**Iriomote-Funau**	**2.16**	**73**	P		**Pn**	**00 21 49.3**	**+0.6**
IRIF				*e*	S	**Sn**	**00 22 15.2**	**+0.3**
HATJ	**Hateruma jima**	**2.16**	**81**	P		**Pn**	**00 21 49.3**	**+0.5**
HATJ				*e*	S	**Sn**	**00 22 16.2**	**+1.1**
VWUC	**VWUC**	**2.23**	**305**	⇓*e*	P	**Pn**	**00 21 49.3**	**-0.4**
	baz=305								
PTTC	**Pingtan**	**2.35**	**319**	*e*	P	**Pn**	**00 21 51.1**	**-0.3**
	baz=321								
JKRS	**Kuro-shima**	**2.38**	**77**	P		**Pn**	**00 21 52.5**	**+0.8**
JKRS				*e*	S	**Sn**	**00 22 20.3**	**-0.1**
PTMZ	**Houxiangcun**	**2.51**	**302**	*e*	P	**Pn**	**00 21 53.1**	**-0.5**
	baz=301								
JIJ	**Ishigaki jima**	**2.53**	**75**	P		**Pn**	**00 21 54.0**	**+0.2**
JIJ				*e*	S	**Sn**	**00 22 24.6**	**+0.5**
JISG	**Ishigakijimahi**	**2.73**	**71**	P		**Pn**	**00 21 56.9**	**+0.3**
JISG				S		**Sn**	**00 22 29.6**	**+0.4**
MATB	**Ma-tsu**	**2.79**	**331**	*e*	P	**Pn**	**00 21 57.3**	**0.0**
	baz=335								
KNM	**Kinmen**	**2.86**	**285**	⇓*e*	P	**Pn**	**00 21 59.8**	**+1.5**
	baz=285								
QZH	**Quanzhou**	**2.89**	**295**	⇓*i*	Pn	**Pn**	**00 21 58.4**	**-0.4**
QZH					Sn	**Sn**	**00 22 33.5**	**+0.4**
QZH					smax	smax		
	comp=N,12μm,1.8s							
QZH					smax	smax		
	comp=E,8μm,1.1s							
KNMB	**Chin-men Tao**	**2.91**	**285**	⇓*e*	P	**Pn**	**00 21 58.9**	**-0.2**
	baz=272								
KNMB	**Chin-men Tao**	**2.91**	**285**			**Pn**	**00 21 59.0**	**0.0**
JTJ	**Tarama**	**3.09**	**72**	P		**Pn**	**00 22 02.0**	**+0.5**
JTJ				*e*	S	**Sn**	**00 22 38.1**	**+0.1**
LYJJ	**Jianjiangzhen**	**3.21**	**332**	*e*	P	**Pn**	**00 22 03.6**	**+0.3**
	baz=337								
MHZQ	**Yeshan**	**3.24**	**317**	*e*	P	**Pn**	**00 22 04.1**	**+0.5**
	baz=318								
BBP	**Basco**	**3.30**	**172**	*e*	P	**Pn**	**00 22 02.5**	**-1.9**
XPSS	**Dashiqiu**	**3.40**	**340**	*e*	P	**Pn**	**00 22 05.4**	**-0.3**
	baz=330								
AXDP	**Jialang**	**3.40**	**291**	*e*	P	**Pn**	**00 22 06.0**	**+0.2**
	baz=301								
ZPLA	**Ao Xicun**	**3.41**	**274**	⇓*e*	P	**Pn**	**00 22 06.2**	**+0.2**
	baz=275								
JIRB	**Irabujima**	**3.56**	**71**	P		**Pn**	**00 22 08.2**	**+0.3**
JIRB				*e*	S	**Sn**	**00 22 49.7**	**+0.2**
ZZJH	**Jiuhuzhen**	**3.59**	**283**	*e*	P	**Pn**	**00 22 08.2**	**-0.1**
	baz=284								
JIKM	**Ikemajima**	**3.65**	**70**	P		**Pn**	**00 22 10.0**	**+0.8**
JIKM				*e*	S	**Sn**	**00 22 52.4**	**+0.6**
JMJ	**Miyako jima 2**	**3.66**	**72**	*e*	P	**Pn**	**00 22 09.4**	**+0.1**
	baz=73								
JMJ				*e*	S	**Sn**	**00 22 52.9**	**+0.9**
	baz=73								
JMJ2	**Miyako jima3**	**3.67**	**73**	P		**Pn**	**00 22 10.3**	**+0.9**
JMJ2				S		**Sn**	**00 22 54.2**	**+2.0**
JOGS	**Gusukube**	**3.74**	**73**	P		**Pn**	**00 22 11.6**	**+1.1**
JOGS				*e*	S	**Sn**	**00 22 55.5**	**+1.5**
VDOS	**Pratas Island**	**5.32**	**237**	*e*	P	**Pn**	**00 22 33.3**	**+1.1**
	baz=227								
JKE	**Kume jima 2**	**5.48**	**61**	P		**Pn**	**00 22 34.8**	**+0.5**
APYP	**Conner**	**5.83**	**182**	*e*	P	**Pn**	**00 22 41.4**	**+2.1**
ABRA	**Dolores**	**6.08**	**187**	*e*	P	**Pn**	**00 22 45.5**	**+2.8**
SZP	**Santa**	**6.21**	**189**	Pn		**Pn**	**00 22 45.5**	**+1.0**
PALP	**Palanan**	**6.69**	**172**	*e*	P	**Pn**	**00 22 50.2**	**-0.8**
JOW	**Kunigami**	**6.89**	**62**	*e*	P	**Pn**	**00 22 52.8**	**-1.0**
	baz=63								
JOW	**Kunigami**	**6.89**	**62**	Pn		**Pn**	**00 22 53.0**	**-0.8**
	11nm,0.3s,baz=351,slow=27,SNR=94								
JOW					Sn	**Sn**	**00 24 12.3**	**+0.5**
	2.5nm,0.3s,baz=102,slow=17,SNR=4.0								
JOW	**Kunigami**	**6.89**	**62**	P		**Pn**	**00 22 53.0**	**-0.8**
JOW	**Kunigami**	**6.89**	**62**			**Pn**	**00 22 52.8**	**-1.0**
HKPS	**Hong Kong Po S**	**6.90**	**259**	*e*	P	**Pn**	**00 22 55.4**	**+1.4**
	baz=249								
HKPS	**Hong Kong Po S**	**6.90**	**259**			**Pn**	**00 22 54.2**	**+0.2**
SSE	**Sheshan**	**7.35**	**358**	P		**Pn**	**00 23 00.9**	**+0.8**
SSE				S		**Sn**	**00 24 20.0**	**-3.0**
SSE					smax	smax		
	comp=N,2μm,1.0s							
SSE					smax	smax		
	comp=E,5μm,1.2s							
SSE	**Sheshan**	**7.35**	**358**			**Pn**	**00 23 01.6**	**+1.5**
BOLP	**Bolinao**	**7.45**	**192**	*e*	P	**Pn**	**00 23 02.5**	**+1.0**
MCO	**Taipa Grande**	**7.46**	**259**	P		Pn	00 23 10.0	+8.3
GZH	**Guangzhou**	**7.49**	**267**	P		**Pn**	**00 22 59.1**	**-2.9**
GZH				S		**Sn**	**00 24 21.0**	**-5.5**
GZH					smax	smax		
	comp=N,5μm,1.4s							
GZH					smax	smax		
	comp=E,3μm,1.1s							
SMPP	**San Manuel, Pa**	**7.57**	**186**	*e*	P	**Pn**	**00 23 04.5**	**+1.4**
BALP	**Baler**	**7.94**	**179**	*e*	P	**Pn**	**00 23 10.1**	**+1.9**
NJ2	**Nanjing**	**8.61**	**345**	*e*	P	**Pn**	**00 23 17.0**	**-0.4**
NJ2				S		**Sn**	**00 24 52.9**	**-1.2**
NJ2					pmax	pmax		
	comp=Z,240nm,0.6s							
NJ2					smax	smax		
	comp=N,7μm,1.2s							
NJ2					smax	smax		
	comp=E,7μm,1.6s							
NJ2					LR	LR		
	comp=N,102μm,11.8s							
NJ2					LR	LR		
	comp=E,57μm,9.0s							
NJ2					LR	LR		
	comp=Z,116μm,10.9s							
POLP	**Polillo Island**	**8.96**	**177**	*e*	P	**Pn**	**00 23 24.6**	**+2.4**
WHN	**Wuhan**	**9.29**	**319**	⇑*i*	P	**Pn**	**00 23 27.1**	**+0.4**
WHN					pP		00 23 30.9	
WHN				S		**Sn**	**00 25 06.8**	**-4.0**
WHN					pmax	pmax		
	comp=Z,100nm,0.6s							
WHN					LR	LR		
	comp=N,78μm,8.8s							
WHN					LR	LR		
	comp=E,109μm,11.8s							
WHN					LR	LR		
	comp=Z,180μm,12.5s							
TGY	**Tagaytay City**	**9.58**	**183**	Pn		**Pn**	**00 23 34.4**	**+3.6**
	58nm,0.3s,baz=315,slow=7.1,SNR=1.9							
TGY					LR	LR	00 28 04.3	
	comp=Z,6μm,18.5s,baz=350,slow=43							
LUBP	**Lubang**	**10.00**	**187**	*e*	P	**Pn**	**00 23 40.4**	**+3.9**
PGP	**Puerto Galera**	**10.18**	**183**	⇑*e*	P	**Pn**	**00 23 36.9**	**-2.0**
PVCP	**Virac**	**10.39**	**165**	*e*	P	Pn	00 23 47.4	+5.6
QIZ	**Qiongzhong**	**11.79**	**249**	P		**Pn**	**00 24 01.8**	**+0.8**
QIZ				S		**Sn**	**00 26 14.8**	**+2.6**
QIZ					pmax	pmax		
	comp=Z,18nm,1.7s							
QIZ					pmax	pmax		
	comp=Z,1μm,7.1s							
QIZ					LR	LR		
	comp=N,19μm,15.1s							
QIZ					LR	LR		
	comp=E,13μm,12.6s							
QIZ					LR	LR		
	comp=Z,20μm,16.3s							
QIZ	**Qiongzhong**	**11.79**	**249**			**Pn**	**00 24 00.7**	**-0.4**
RCP	**Roxas**	**12.16**	**174**	⇓*e*	P	**Pn**	**00 24 09.9**	**+3.9**
JNU	**Nakatsue**	**12.49**	**39**	Pn		**Pn**	**00 24 11.9**	**+1.3**
	4.7nm,0.3s,baz=56,slow=6.9,SNR=30								
ENH	**Enshi**	**12.51**	**304**			**Pn**	**00 24 12.0**	**+1.1**
ENPP	**El Nido**	**12.60**	**189**	*e*	P	**Pn**	**00 24 12.6**	**+0.5**
TIA	**Tai'an**	**13.00**	**344**	P		**Pn**	**00 24 17.5**	**0.0**
TIA					pmax	pmax		
	comp=Z,6.0nm,0.6s							
TIA					pmax	pmax		
	comp=Z,2μm,5.9s							
TIA					LR	LR		
	comp=N,40μm,9.0s							
TIA					LR	LR		
	comp=E,23μm,9.4s							
TIA					LR	LR		
	comp=Z,65μm,10.0s							
GYA	**Guiyang**	**13.69**	**285**	⇑*i*	P	**Pn**	**00 24 28.3**	**+1.3**
GYA					pP	P	00 24 33.0	-2.7
GYA					PP	**PnPn**	**00 24 40.4**	**+5.4**
GYA				S		**Sn**	**00 27 02.0**	**+3.3**
GYA					SS	**S**	**00 27 18.6**	**-2.8**
GYA					pmax	pmax		
	comp=Z,130nm,0.9s							
GYA					pmax	pmax		
	comp=Z,400nm,4.4s							
GYA					LR	LR		
	comp=N,83μm,11.8s							
GYA					LR	LR		
	comp=E,44μm,14.8s							
GYA					LR	LR		
	comp=Z,59μm,13.3s							
CNOP	**Candoni, Negro**	**13.86**	**175**	*e*	P	**P**	**00 24 34.1**	**-3.5**
MSLP	**Maasin**	**13.89**	**166**	*e*	P	**P**	**00 24 37.2**	**-0.7**
INCN	**Inchon**	**14.41**	**17**	P		**Pn**	**00 24 39.4**	**+2.6**
INCN	**Inchon**	**14.41**	**17**	P		**Pn**	**00 24 38.3**	**+1.5**
INCN	**Inchon**	**14.41**	**17**	Pn		**Pn**	**00 24 38.3**	**+1.5**
KSRS	**Korea Array**	**14.77**	**21**	Pn		**Pn**	**00 24 43.8**	**+2.2**
	4.9nm,0.3s,baz=201,slow=12,SNR=54								
KSRS					LR	LR	00 31 12.5	
	comp=Z,11μm,18.1s,baz=206,slow=41								
KS19	**Wonju Array Si**	**14.79**	**20**			**Pn**	**00 24 43.5**	**+1.5**
XAN	**Xi'an**	**15.04**	**316**	P		**Pn**	**00 24 46.3**	**+1.0**
XAN				pP		P	00 24 52.3	+1.8
XAN				S		**Sn**	**00 27 36.4**	**+5.0**
XAN				SS		**S**	**00 27 50.6**	**+1.9**
XAN				pmax	pmax			
	comp=Z,190nm,3.5s							
XAN				LR	LR			
	comp=N,28μm,10.0s							
XAN				LR	LR			
	comp=E,29μm,14.1s							
XAN				LR	LR			
	comp=Z,45μm,15.1s							
XAN	**Xi'an**	**15.04**	**316**	P		**Pn**	**00 24 46.0**	**+0.7**
XAN				pmax	pmax			
	comp=Z,2μm,1.9s							
XAN	**Xi'an**	**15.04**	**316**			**Pn**	**00 24 46.0**	**+0.7**
DL2	**Dalian**	**15.14**	**0**	P		**Pn**	**00 24 48.3**	**+1.8**
DL2				S		**Sn**	**00 27 38.1**	**+4.4**
DL2				pmax	pmax			
	comp=Z,240nm,1.3s							
DL2				pmax	pmax			
	comp=Z,3μm,9.0s							
DL2				LR	LR			
	comp=Z,18μm,13.7s							
DL2				LR	LR			
	comp=Z,15μm,8.3s							
DL2				LR	LR			
	comp=Z,29μm,12.9s							
BATP	**Bataraza**	**15.25**	**194**	*e*	P	**P**	**00 24 53.0**	**0.0**
TIY	**Taiyuan**	**15.95**	**333**	*e*	P	**P**	**00 25 00.4**	**-0.3**
TIY				PP		**sP**	**00 25 14.0**	**+5.7**
TIY				S		**Sn**	**00 27 59.8**	**+6.2**
TIY				pmax	pmax			
	comp=Z,510nm,1.5s							
TIY				LR	LR			
	comp=Z,52μm,13.4s							
TIY				LR	LR			
	comp=Z,23μm,10.8s							
TIY				LR	LR			
	comp=Z,49μm,11.8s							
SLVN	**Son La**	**16.40**	**265**			**P**	**00 25 04.6**	**-1.2**
BJT	**Baijiatuao**	**16.85**	**346**	P		**P**	**00 25 12.2**	**+1.6**
BJT				pmax	pmax			
	comp=Z,477nm,1.4s							
BJT	**Baijiatuao**	**16.85**	**346**	P		**P**	**00 25 12.2**	**+1.6**
BJT				IAmb	IAmb		00 25 28.4	
	comp=Z,477nm,1.4s							
BJI	**Beijing**	**16.87**	**346**	P		**P**	**00 25 10.6**	**-0.2**
BJI				S		**Sn**	**00 28 20.8**	**+4.9**
BJI				pmax	pmax			
	comp=Z,160nm,2.4s							
BJI				LR	LR			
	comp=Z,26μm,12.4s							
BJI				LR	LR			
	comp=Z,15μm,11.9s							
BJI				LR	LR			
	comp=Z,9μm,14.7s							
KCP	**Kidapawan**	**16.98**	**168**	⇓*i*	P	**P**	**00 25 16.1**	**+3.9**
DLV	**T Lat**	**17.01**	**229**			**P**	**00 25 14.1**	**+1.4**
DAV	**Davao City (W)**	**17.02**	**166**	⇓*e*	P	**P**	**00 25 11.9**	**-0.7**
KMI	**Kunming**	**17.12**	**279**	P		**Pn**	**00 25 08.6**	**-3.7**
KMI				pP	P		00 25 14.5	+0.6
KMI				sP	pP		00 25 18.5	-0.7
KMI				PP	**sP**		**00 25 24.6**	**+3.5**
KMI				S	**S**		**00 28 29.0**	**-2.7**
KMI				pmax	pmax			
	comp=Z,57nm,1.5s							
KMI				pmax	pmax			
	comp=Z,350nm,4.2s							
KMI				LR	LR			
	comp=Z,14μm,10.0s							
KMI				LR	LR			
	comp=Z,54μm,11.0s							
KMI				LR	LR			
	comp=Z,62μm,11.9s							
CD2	**Chengdu**	**17.28**	**298**	⇓P		**Pn**	**00 25 14.3**	**+0.2**
CD2				sP	pP		00 25 22.0	+1.1
CD2				S		**Sn**	**00 28 28.0**	**+2.0**
CD2				sS	sS		00 28 42.6	-0.6
CD2				pmax	pmax			
	comp=Z,340nm,0.7s							
CD2				pmax	pmax			
	comp=Z,1μm,4.1s							
CD2				LR	LR			
	comp=N,52μm,7.3s							
CD2				LR	LR			
	comp=E,82μm,9.6s							
CD2				LR	LR			
	comp=Z,109μm,10.2s							
CD2	**Chengdu**	**17.28**	**298**	⇑*i*	P	**P**	**00 25 15.5**	**0.0**
CD2				pP	pP		00 25 18.8	-2.1
CD2				sP	sP		00 25 21.8	-0.7
CD2				PP	Pn		00 25 28.0	+14
CD2				S	**Sn**		**00 28 30.1**	**+4.1**
CD2				SS	**SnSn**		**00 28 47.0**	**+7.6**
CD2				pmax	pmax			
	comp=Z,340nm,0.9s							
CD2				pmax	pmax			
	comp=Z,980nm,4.9s							
CD2				LR	LR			
	comp=Z,63μm,9.4s							
CD2				LR	LR			
	comp=Z,82μm,9.0s							
CD2				LR	LR			
	comp=Z,104μm,10.8s							
INU	**Inuyama**	**17.79**	**46**			**P**	**00 25 22.6**	**+1.7**
DDMP	**Don Marcelino,**	**17.99**	**166**	*e*	P	**Pn**	**00 25 21.4**	**-1.4**
SNY	**Shenyang**	**18.14**	**5**	⇑P		**P**	**00 25 24.9**	**+0.1**
SNY				LR	LR			
	comp=Z,10μm,15.7s							
SNY				LR	LR			
	comp=Z,34μm,16.8s							
SNY				LR	LR			
	comp=Z,35μm,12.9s							
KKM	**Kota Kinabalu**	**18.29**	**197**	Pn		**P**	**00 25 29.6**	**+2.8**
JHJ	**Hachijo jima 2**	**18.61**	**56**	P		**Pn**	**00 25 33.3**	**+2.9**
	comp=Z,26nm,0.3s,baz=58,slow=22,SNR=5.3								
HHC	**Hu-ho-hao-te**	**19.00**	**336**	*e*	P	**Pn**	**00 25 36.9**	**+1.8**
HHC				sP	sP		00 25 46.5	+4.5
HHC				S	**S**		**00 29 09.6**	**+0.2**
HHC				SS	**SnSn**		**00 29 25.9**	**+4.2**
HHC				pmax	pmax			
	comp=Z,220nm,1.4s							
HHC				pmax	pmax			
	comp=Z,2μm,5.0s						

LZH comp=Z,4μm,7.6s LR LR
LZH comp=Z,30μm,11.9s LR LR
LZH comp=Z,30μm,12.5s LR LR
LZH comp=Z,32μm,14.6s LR LR
CN2 Changchun 20.30 8 *e*P **P 00 25 47.6 -0.8**
CN2 *e*S **S 00 29 31.9 -3.3**
CN2 sS Sn 00 29 38.9 +0.4
CN2 comp=Z,40nm,1.5s pmax pmax
CN2 comp=Z,2μm,13.0s pmax pmax
CN2 comp=Z,28μm,19.0s LR LR
CN2 comp=Z,28μm,19.0s LR LR
CN2 comp=Z,34μm,15.0s LR LR
MSHR Mys Shultsa 20.45 21⇓ *e*P **P 00 25 49.8 -0.3**
MSHR comp=Z,123nm,1.7s pmax pmax
MSHR comp=Z,4μm,15.0s MLR MLR
VLA Vladivostok 21.18 21 *c i*P **P 00 25 57.7 -0.2**
VLA comp=Z,126nm,0.9s pmax pmax
VLA comp=Z,9μm,14.0s MLR MLR
CHTO Chiang Mai 21.54 261 P **P 00 26 04.6 +2.5**
CHTO Chiang Mai 21.54 261 P **P 00 26 04.0 +1.9**
CHTO comp=Z,186nm,1.0s pmax pmax
CHTO comp=Z,6μm,19.0s MLR MLR
CHTO Chiang Mai 21.54 261 P **P 00 26 04.0 +1.9**
CHTO comp=Z,186nm,1.0s IAmb IAmb 00 26 13.6
CM31 Chiang Mai Arr 21.65 260 P **P 00 26 05.5 +2.2**
SNR=35
CM31 Chiang Mai Arr 21.65 260 P **P 00 26 05.3 +2.0**
CMAR Chiang Mai Arr 21.65 260 P **P 00 26 05.8 +2.5**
comp=Z,52nm,0.9s,baz=64,slow=8.3,SNR=119
CMAR PcP **PcP 00 30 05.6 +1.0**
comp=Z,3.1nm,0.4s,baz=9.1,slow=0.9,SNR=8.4
CMAR LR LR 00 34 08.8
comp=Z,5μm,20.2s,baz=114,slow=36
MDJ Mudanjiang 21.88 16 P **P 00 26 04.8 -0.6**
MDJ pP pP 00 26 08.3 -2.4
MDJ PP **PnPn 00 26 26.5 -0.6**
MDJ S **S 00 30 08.5 +2.1**
MDJ sS pS 00 30 14.3 -0.5
MDJ SS **SnSn 00 30 37.0 +4.9**
MDJ comp=Z,140nm,1.2s pmax pmax
MDJ comp=Z,850nm,3.4s pmax pmax
MDJ comp=Z,20μm,14.2s LR LR
MDJ comp=Z,28μm,14.0s LR LR
MDJ comp=Z,23μm,14.2s LR LR
MDJ Mudanjiang 21.88 16 P **P 00 26 04.9 -0.6**
MDJ IAmb IAmb 00 26 24.4
MDJ comp=Z,211nm,1.2s IAMs_20 IAMs_20 00 35 27.1
comp=Z,13μm,20.0s
USRK Ussuriysk Ar. 22.18 20 P **P 00 26 08.3 -0.3**
comp=Z,16nm,0.6s,baz=208,slow=9.2,SNR=25
SBUM Sibu 22.96 204 P **P 00 26 17.2 0.0**
SBUM Sibu 22.96 204 P **P 00 26 19.0 +1.8**
KMSI Cibinong 23.14 174 P **P 00 26 20.2 +1.2**
comp=Z,226nm,0.9s
MPSI Mapaga 23.30 184 P **P 00 26 20.4 -0.2**
comp=Z,6μmcomp=Z,60nm,0.9s
TNTI Ternate 23.52 165 P **P 00 26 22.5 -0.3**
GTA Gaotai 24.10 316 ⇑P **P 00 26 29.4 +1.0**
GTA pP pP 00 26 35.5 +1.1
GTA sP sP 00 26 38.6 +2.4
GTA S **S 00 30 46.8 +1.6**
GTA sS sS 00 30 56.6 +3.9
GTA comp=Z,300nm,2.0s pmax pmax
GTA comp=Z,3μm,4.8s pmax pmax
GTA comp=Z,15μm,12.7s LR LR
GTA comp=Z,32μm,12.7s LR LR
GTA comp=Z,36μm,13.3s LR LR
GUMO Guam 24.32 110 P **P 00 26 30.1 -0.3**
GUMO comp=Z,886nm,1.4s pmax pmax
GUMO comp=Z,4μm,21.0s MLR MLR
GUMO Guam 24.32 110 P **P 00 26 30.1 -0.3**
SMKI Samarinda 24.38 190 P **P 00 26 34.9 +4.0**
comp=Z,5μmcomp=Z,7μmcomp=Z,236nm,1.3s
TEY Ternei 24.58 26⇑ *e*P **P 00 26 28.8 -3.7**
TEY *e* 00 27 12.0
TEY *e*S **S 00 30 52.7 +0.2**
TEY comp=N,20nm,1.5s pmax pmax
TEY comp=Z,20nm,1.5s pmax pmax
TEY comp=E,2μm,19.0s MLR MLR
TEY comp=N,6μm,13.0s MLR MLR
TEY comp=Z,8μm,11.0s MLR MLR
KSM Kuching 24.62 208 IAmb IAmb 00 26 40.5
comp=Z,172nm,1.2s
KSM Kuching 24.62 208 P **P 00 26 36.0 +2.9**
LUWI Luwuk 24.65 177 P **P 00 26 34.5 +1.1**
comp=Z,5μmcomp=Z,426nm,1.0s
LUWI Luwuk 24.65 177 P **P 00 26 32.9 -0.5**
LBMI Labuha 24.91 166 P **P 00 26 37.1 +1.3**
comp=Z,3μmcomp=Z,253nm,1.1s
KOHI KOHIMA 24.92 280 *e*P **P 00 26 34.0 -2.0**
KOHI comp=Z,78nm,0.8s IAmb IAmb 00 26 45.2
HIA Hailar 25.53 357 P **P 00 26 41.4 +0.3**
HIA comp=Z,266nm,1.6s pmax pmax
HIA comp=Z,8μm,18.0s MLR MLR
HIA Hailar 25.53 357 P **P 00 26 41.4 +0.3**
HIA comp=Z,266nm,1.6s IAmb IAmb 00 27 00.6
HIA Hailar 25.53 357 IAMs_20 IAMs_20 00 37 44.6
comp=Z,8μm,18.0s
ERM Erimo 25.66 39 *c i*P **P 00 26 39.0 -3.3**
ERM comp=Z,37nm,0.7s pmax pmax
ERM comp=Z,4μm,16.0s MLR MLR
ERM Erimo 25.66 39 P **P 00 26 41.6 -0.8**
SIJI Sorong 26.23 157 P **P 00 26 46.6 -1.2**
comp=Z,12nm,0.6s,baz=337,slow=3.8,SNR=8.4
TTSI Tana Toraja 26.65 184 P **P 00 26 53.7 +2.2**
comp=Z,2μmcomp=Z,92nm,1.0s
ULN Ulaanbaatar 26.69 338 P **P 00 26 52.2 +0.4**
ULN Ulaanbaatar 26.69 338 *c i*P **P 00 26 51.8 0.0**
ULN comp=Z,195nm,1.4s pmax pmax
ULN comp=Z,15μm,17.0s MLR MLR
ULN Ulaanbaatar 26.69 338 P **P 00 26 52.0 +0.2**
ULN comp=Z,120nm,1.0s IAmb IAmb 00 27 08.1
ASAJ Asahikawa 26.72 35 P **P 00 26 48.9 -3.0**
comp=Z,14nm,0.6s,baz=246,slow=14,SNR=8.8
KLR Kul'dur 26.72 15 P **P 00 26 51.1 -0.7**
comp=Z,30nm,0.9s,baz=226,slow=8.2,SNR=48
KLR Kul'dur 26.72 15 *c i*P **P 00 26 50.7 -1.1**
KLR comp=Z,90nm,1.3s pmax pmax
KLR comp=Z,12μm,15.0s MLR MLR
SONM Songino Aray 26.89 337 P **P 00 26 53.7 +0.1**
comp=Z,41nm,0.8s,baz=157,slow=7.8,SNR=58
SONM LR LR 00 38 47.9
comp=Z,20μm,18.3s,baz=148,slow=39
SHL Shillong 26.93 280 *e*P **P 00 26 54.8 +0.5**
SHL Shillong 26.93 280 P **P 00 26 55.4 +1.1**
SNR=111
KULM Kulim 27.16 231 IAmb IAmb 00 27 04.4
KULM comp=Z,115nm,1.2s IAMs_20 IAMs_20 00 37 35.2
comp=Z,9μm,19.0s
KULM Kulim 27.16 231 P **P 00 27 00.0 +3.8**
KBKI Kotabaru 27.35 192 P **P 00 26 59.3 +1.5**
comp=Z,1μmcomp=Z,17nm,0.9s
NLAI Namlea 27.35 168 P **P 00 26 59.3 +1.5**
comp=Z,2μmcomp=Z,173nm,0.9s
BRDH Bariadhala 27.41 274 P **P 00 26 58.7 +0.3**
comp=Z,1μm,0.4s,baz=244,slow=0.4,SNR=6.3
IPM Ipoh 27.47 229 P **P 00 26 59.8 +0.8**
IPM comp=Z,6μm,18.0s IAMs_20 IAMs_20 00 38 34.4
IPM Ipoh 27.47 229 P **P 00 27 01.0 +2.0**
SPSI Sidrap Palu 27.57 184 P **P 00 27 01.6 +1.8**
comp=Z,1μmcomp=Z,51nm,1.2s
LSA Lhasa 27.68 289 P **P 00 27 04.1 +2.8**
LSA S **S 00 31 49.1 +6.1**
LSA comp=Z,170nm,1.1s pmax pmax
LSA comp=Z,6μm,13.5s LR LR
LSA comp=Z,8μm,14.2s LR LR
LSA comp=Z,16μm,12.1s LR LR
LSA Lhasa 27.68 289 *i* P **P 00 27 03.5 +2.3**
SNR=34
LSA Lhasa 27.68 289 P **P 00 27 03.9 +2.6**
LSA P **P 00 27 03.9 +2.6**
LSA Lhasa 27.68 289 P **P 00 27 03.6 +2.3**
LSA comp=Z,97nm,0.7s pmax pmax
LSA comp=Z,12μm,20.0s MLR MLR
LSA Lhasa 27.68 289 P **P 00 27 03.6 +2.3**
LSA comp=Z,96nm,0.7s IAmb IAmb 00 27 08.5
LSA comp=Z,12μm,20.0s IAMs_20 IAMs_20 00 39 02.3
MYKOM Kota Tinggi 27.69 221 P **P 00 27 02.1 +1.2**
MYKOM IAmb IAmb 00 27 11.8
comp=Z,140nm,1.2s
MYKOM Kota Tinggi 27.69 221 P **P 00 27 08.0 +7.1**
MSAI Masohi 27.87 164 P **P 00 27 03.8 +1.3**
BNSI Bone 27.98 183 P **P 00 27 04.7 +1.2**
comp=Z,1μmcomp=Z,56nm,1.1s
TPRI Tanjung Pinang 28.00 218 P **P 00 27 08.7 +5.1**
AAI Ambon 28.02 166 P **P 00 27 05.3 +1.5**
comp=Z,5μmcomp=Z,88nm,1.0s
YUK Yuzh-Kuril'sk 28.46 39 *e*P **P 00 27 07.5 0.0**
YUK *i* S **S 00 31 55.6 +1.5**
YUK comp=Z,245nm,1.4s pmax pmax
YUK comp=E,147nm,1.3s pmax pmax
YUK comp=N,140nm,0.9s pmax pmax
YUK comp=Z,262nm,1.5s pmax pmax
FAKI Fak Fak 28.49 157 P **P 00 27 07.5 -0.4**
comp=Z,2μmcomp=Z,691nmcomp=Z,80nm,1.1s
FAKI Fak Fak 28.49 157 P **P 00 27 07.6 -0.4**
KAPI Kappang 28.61 184 P **P 00 27 06.4 -2.6**
comp=Z,10nm,0.2s,baz=166,slow=18,SNR=8.7
KAPI LR LR 00 39 52.2
comp=Z,2μm,20.1s,baz=354,slow=39
KAPI Kappang 28.61 184 P **P 00 27 08.2 -0.9**
KAPI comp=Z,40nm,0.9s pmax pmax
KAPI comp=Z,2μm,18.0s MLR MLR
KAPI Kappang 28.61 184 P **P 00 27 08.2 -0.9**
YSS Yuzh-Sakhalins 28.79 31 *e*P **P 00 27 09.3 -1.0**
YSS *e**SP **pP 00 27 13.5 -2.5**
YSS *e* 00 27 20.9
YSS *e* 00 28 13.7
YSS *e*S **S 00 31 58.8 -0.3**
YSS *e*SS **SnSn 00 33 34.8 +14**
YSS comp=Z,40nm,1.0s pmax pmax
YSS comp=Z,1μm,7.0s pmax pmax
YSS comp=N,700nm,6.7s pmax pmax
YSS comp=E,600nm,7.3s pmax pmax
YSS Yuzh-Sakhalins 28.79 31 P **P 00 27 09.3 -1.0**
YSS IAmb IAmb 00 27 35.2
comp=Z,86nm,1.0s
BKSI Bulukumba 28.90 183 P **P 00 27 13.6 +2.0**
comp=Z,534nmcomp=Z,21nm,1.0s
CIT Chita 28.90 350 *e*P **P 00 27 10.5 -0.9**
CIT *e* 00 27 18.2
CIT *e* 00 28 03.3
CIT *e* 00 28 19.3
CIT *e* 00 37 54.7
CIT comp=Z,155nm,3.8s pmax pmax
TPI Tanjungpandan 29.56 209 P **P 00 27 18.1 +0.6**
comp=Z,1μmcomp=Z,78nm,1.3s
GTK Tadong 29.83 284 *ex* x 00 27 20.4
GTK *e*P **P 00 27 20.4 +0.4**
GTK IAmb IAmb 00 27 29.6
comp=Z,221nm,1.0s
LHMI Lhok Sumawe 29.93 236 P **P 00 27 24.0 +3.2**
comp=Z,70nm,0.8s
LHMI Lhok Sumawe 29.93 236 IAMs_20 IAMs_20 00 39 35.5
comp=Z,7μm,20.0s
ZAK Zakamensk 30.15 337 *e*P **P 00 27 21.6 -0.9**
ZAK comp=Z,21nm,1.3s pmax pmax
ZAK comp=Z,15nm,1.3s pmax pmax
RPSI Rantau Prapat 30.21 230 IAmb IAmb 00 27 30.9
comp=Z,120nm,1.1s
ZEA Zeya 30.29 7 *e*P **P 00 27 22.8 -0.8**
ZEA *e* 00 28 36.0
ZEA *e*S **S 00 32 25.0 +2.4**
ZEA comp=Z,1μm,4.0s pmax pmax
ZEA comp=N,800nm,5.0s pmax pmax
ZEA comp=N,130nm,1.2s pmax pmax
ZEA comp=E,94nm,1.2s pmax pmax
ZEA comp=Z,160nm,1.2s pmax pmax
ZEA comp=Z,1μm,11.0s pmax pmax
ZEA comp=N,600nm,12.0s pmax pmax
ZEA comp=E,900nm,12.0s smax smax
ZEA comp=N,900nm,10.0s smax smax
ZEA comp=Z,27μm,13.0s MLR MLR
ZEA comp=E,6μm,11.0s MLR MLR
ZEA comp=N,23μm,13.0s MLR MLR
KUR Kuril'sk 30.33 38 *c i*P **P 00 27 22.6 -1.4**
KUR *e* 00 28 23.9
KUR *e*PPP PPP 00 28 29.9
KUR *e* 00 30 23.5
KUR *e*S **S 00 32 25.2 +1.9**
KUR *e*SS **SnSn 00 34 00.7 +2.3**
KUR comp=Z,117nm,1.0s pmax pmax
KUR comp=Z,546nm,11.0s MLR MLR
KUR comp=Z,4μm,18.0s MLR MLR
KUR comp=N,2μm,15.0s MLR MLR
KUR comp=E,3μm,16.0s MLR MLR
KCSI Kotacane, Aceh 30.45 232 P **P 00 27 27.6 +2.1**
comp=E,1μmcomp=E,52nm,1.1s
BKNI Bangkinang 30.56 223 P **P 00 27 28.5 +2.1**
comp=E,2μmcomp=E,166nm,1.0s
BKNI Bangkinang 30.56 223 IAMs_20 IAMs_20 00 40 08.2
comp=Z,6μm,18.0s
SMPI Sarmi 30.57 144 P **P 00 27 27.5 +1.0**
comp=Z,2μmcomp=Z,5μmcomp=Z,56nm,1.7s
TAPN Taplejung 30.62 284 *e*P **P 00 27 29.1 +1.9**
comp=Z,501nm,1.3s
ODAN Odare 30.92 283 *e*P **P 00 27 31.3 +1.5**
comp=Z,270nm,1.1s
MLSI Meulaboh, Aceh 30.96 235 P **P 00 27 31.9 +1.9**
comp=Z,168nm,1.1s
TLY Talaya 31.10 338 P **P 00 27 30.4 -0.4**
comp=Z,12nm,0.6s,baz=187,slow=8.0,SNR=7.4
TLY Talaya 31.10 338 P **P 00 27 30.7 -0.1**
TLY Talaya 31.10 338 *c i*P **P 00 27 30.5 -0.4**
TLY *e* 00 28 45.5
TLY *e*S **S 00 32 34.8 -0.6**
TLY comp=Z,179nm,1.7s pmax pmax
TLY comp=Z,30μm,16.0s MLR MLR
TLY Talaya 31.10 338 P **P 00 27 32.3 +1.5**
TLY comp=Z,128nm,1.6s IAmb IAmb 00 27 57.8
MNSI Mandailing Nat 31.14 226 P **P 00 27 32.7 +1.1**
comp=Z,3μmcomp=Z,197nm,0.9s
IRK Irkutsk 31.37 340 *e*P **P 00 27 32.2 -1.0**
IRK comp=Z,189nm,2.2s pmax pmax
RAMN Ramite 31.62 283 *e*P **P 00 27 37.6 +1.6**
comp=Z,302nm,1.0s
TYV Tymovskoe 31.68 26 *e*P P 00 27 42.1 +6.2
TYV comp=Z,26nm,1.1s pmax pmax
TYV comp=Z,300nm,3.0s pmax pmax
TYV comp=Z,7μm,15.0s MLR MLR
GRJI Gresik 31.69 197 P **P 00 27 39.4 +3.1**
comp=Z,95nm,0.8s
GENI Genyem 31.87 143 P **P 00 27 38.9 +1.0**
comp=Z,3μmcomp=Z,3μmcomp=Z,107nm,1.7s
PDSI Padang 31.88 223 P **P 00 27 40.5 +2.4**
comp=Z,3μmcomp=Z,39nm,1.0s
JIRN Jiri 31.97 285 *e*P **P 00 27 40.8 +1.6**
comp=Z,494nm,0.9s
MOY Mondy 32.04 336 *e*P **P 00 27 38.4 -0.8**
MOY pmax pmax
comp=Z,163nm,2.5s
JAY Jayapura 32.10 142 LR LR 00 39 43.7
comp=Z,2μm,19.6s,baz=340,slow=35
GSI Gunungsitoli 32.14 230 P P 00 27 45.5 +5.2
GSI Gunungsitoli 32.14 230 IAmb IAmb 00 27 53.3
comp=Z,95nm,1.5s
GSI comp=Z,7μm,19.0s IAMs_20 IAMs_20 00 40 34.9
MMRI Maumere 32.17 179 P **P 00 27 40.6 +0.1**
comp=Z,110nm,0.6s
SRBI Singaraja 32.20 192 P **P 00 27 42.7 +1.9**
comp=Z,1μmcomp=Z,47nm,0.9s
KRJI Kerinci 32.21 220 P **P 00 27 43.4 +2.4**
comp=Z,10μmcomp=Z,432nm,1.1s
GUN Gumba 32.24 285 *e*P **P 00 27 43.1 +1.6**
comp=Z,388nm,1.0s
SMRI Semarang 32.42 201 P **P 00 27 44.9 +2.1**
comp=Z,90nm,0.8s
SMRI Semarang 32.42 201 IAmb IAmb 00 27 51.5
comp=Z,83nm,0.8s
LHSI Lahat 32.49 215 P **P 00 27 45.8 +2.4**
comp=Z,2μmcomp=Z,98nm,1.0s
BOK Bokaro 32.52 277 *e*P **P 00 27 43.6 0.0**
PLAI Plampang 32.55 187 P **P 00 27 45.3 +1.4**
comp=Z,1μmcomp=Z,66nm,0.8s
MASI Maura Aman, Be 32.62 218 P **P 00 27 47.3 +2.8**
comp=Z,5μmcomp=Z,178nm,1.3s
PKI Pulchoki 32.66 284 *e*P **P 00 27 46.1 +0.9**
comp=Z,327nm,1.4s
PKIN Phulchoki 32.67 284 *e*P **P 00 27 46.1 +0.8**
comp=Z,146nm,1.0s
MDSI Maura Dua 32.72 213 P **P 00 27 47.7 +2.4**
comp=Z,2μmcomp=Z,120nm,1.1s
KKN Kakani 32.77 285 *e*P **P 00 27 47.2 +1.1**
comp=Z,336nm,1.3s
JAGI Jajag, Banyuwa 32.78 193 P **P 00 27 46.8 +0.9**
comp=Z,42nm,0.9s
NKL Nikolayevsk 32.80 21 *e*P **P 00 27 44.3 -1.3**
NKL *e* 00 29 00.2
NKL comp=Z,19nm,1.0s pmax pmax
NKL comp=E,1.0nm,0.9s pmax pmax
NKL comp=N,6.0nm,1.3s pmax pmax
NKL comp=Z,75nm,2.2s pmax pmax
DMN Daman 32.93 285 *e*P **P 00 27 48.5 +1.0**
comp=Z,314nm,1.2s
WOJI Wonogiri, Jawa 33.02 199 P **P 00 27 48.8 +0.9**
comp=Z,2μmcomp=Z,112nm,0.9s
SISI Saibi 33.06 224 P **P 00 27 49.6 +1.2**
comp=Z,2μmcomp=Z,67nm,1.1s
BWNR Bhubaneshwar 33.19 271 *e*P **P 00 27 49.9 +0.4**
UGM Wanagama 33.21 200 P **P 00 27 49.6 -0.1**
comp=Z,207nm,1.6s
WBSI Waikabubak, Su 33.22 184 P **P 00 27 48.8 -1.0**
comp=Z,67nm,0.7s
LWLI Liwa 33.23 213 P **P 00 27 52.2 +2.2**
comp=Z,11μmcomp=Z,207nm,0.9s
LEM Lembang 33.24 206 LR LR 00 43 21.4
comp=Z,1μm,18.7s,baz=26,slow=40
GKN Gorkha 33.33 285 *e*P **P 00 27 51.8 +0.9**
comp=Z,338nm,1.1s
DBJI Dramaga 33.35 207 P P 00 27 56.4 +5.5
SOEI Soe 33.38 175 P **P 00 27 52.2 +0.9**
comp=Z,107nm,0.9s
SOEI Soe 33.38 175 IAmb IAmb 00 28 17.7
comp=Z,80nm,0.8s
BATI Baumata 33.79 176 LR LR 00 42 00.9
comp=Z,1μm,21.3s,baz=354,slow=37
BATI Baumata 33.79 176 P **P 00 27 51.4 -3.3**
CISI Cisompet, Garu 33.83 205 P **P 00 27 57.2 +2.1**
DANN Dangsing 34.10 286 *e*P **P 00 27 58.9 +1.1**
comp=Z,293nm,1.1s
WMQ Urumqi 34.16 314 ⇓P **P 00 28 00.3 +2.5**
WMQ pP sP 00 28 05.4 -0.3
WMQ S **S 00 33 26.8 +3.5**
WMQ SS **SnSn 00 35 33.1 +1.4**
WMQ ScS **ScS 00 38 22.8 +1.8**
WMQ comp=Z,78nm,2.3s pmax pmax
WMQ comp=Z,750nm,4.9s pmax pmax
WMQ comp=Z,10μm,12.5s LR LR
WMQ comp=Z,15μm,12.5s LR LR
WMQ comp=Z,9μm,13.1s LR LR
KOLN Koldanda 34.26 285 *e*P **P 00 28 00.2 +1.2**
comp=Z,161nm,0.8s
PYUN Piuthan 34.79 286 *e*P **P 00 28 05.0 +1.4**
comp=Z,550nm,1.1s
DGZ Jazzator, Alta 37.12 323 *c i*P **P 00 28 23.4 +0.2**
DGZ comp=Z,97nm,1.5s pmax pmax
DGZ comp=Z,11μm,17.0s MLR MLR
ZSN Zaisan 37.52 318⇑ *i*P **P 00 28 26.5 0.0**
comp=Z,234nm,3.7s
ZSN *e*LR LR 00 44 23.7
ZSN Zaisan 37.52 318 *c i*P **P 00 28 26.5 0.0**
ZSN comp=Z,234nm,3.7s pmax pmax
MTN Manton Dam 37.55 164 IAmb IAmb 00 28 41.7
comp=Z,108nm,1.4s
PVM Polavaram 37.78 268 *e*P **P 00 28 30.6 +1.6**
PVM IVmBBB 00 28 36.3
comp=Z,508nm,2.6s
PVM IVMs_BB IVMs_BB 00 48 32.3
comp=Z,648nm,12.2s
SKR Severo-Kuril's 37.97 36 *e*P **P 00 28 28.0 -2.2**
SKR *e* 00 29 56.7
SKR *e*PPP PPP 00 30 25.0
SKR *e*S **S 00 34 15.9 -5.4**
SKR comp=Z,400nm,4.1s pmax pmax

SKR pmax pmax
comp=Z,48nm,0.9s
SKR pmax pmax
comp=Z,2μm,18.6s
SKR MLR MLR
comp=Z,2μm,19.0s
YAK Yakutsk 38.70 6 *c iP* **P 00 28 34.1 -2.1**
YAK *e* 00 30 10.5
YAK *e*S **S 00 34 28.3 -3.6**
YAK *e*SS **SnSn 00 37 14.7 -6.1**
YAK pmax pmax
comp=Z,29nm,1.1s
YAK pmax pmax
comp=N,36nm,1.2s
YAK pmax pmax
comp=E,7.0nm,1.0s
YAK pmax pmax
comp=Z,131nm,2.3s
YAK pmax pmax
comp=N,170nm,2.1s
YAK pmax pmax
comp=E,44nm,1.8s
YAK smax smax
comp=N,147nm,3.3s
YAK smax smax
comp=E,58nm,2.8s
YAK MLR MLR
comp=Z,11μm,16.0s
YAK MLR MLR
comp=N,9μm,16.0s
YAK Yakutsk 38.70 6 IAMs_20 IAMs_20 00 46 50.6
comp=Z,5μm,18.0s
MK31 Makanchi Array 38.85 316 *i* P **P 00 28 38.1 +0.4**
MK31 Makanchi Array 38.85 316 P **P 00 28 38.2 +0.4**
MK31 IAmb IAmb 00 28 46.5
comp=Z,127nm,1.1s
MKAR Makanchi Array 38.85 316 P **P 00 28 38.5 +0.7**
comp=Z,56nm,0.7s,baz=111,slow=9.1,SNR=138
MKAR PcP **PcP 00 30 48.8 +0.2**
comp=Z,7.8nm,0.8s,baz=104,slow=3.7,SNR=3.0
MKAR LR LR 00 46 23.7
comp=Z,7μm,20.0s,baz=104,slow=39
DDI Dehra Dun 39.05 289 *e*P **P 00 28 40.7 +1.0**
DDI IAmb IAmb 00 28 48.3
comp=Z,197nm,0.8s
MAKZ Makanchi 39.05 316 P **P 00 28 40.1 +0.7**
MAKZ Makanchi 39.05 316 P **P 00 28 40.3 +0.8**
MAKZ IAmb IAmb 00 28 43.4
comp=Z,303nm,1.4s
PATS Pohnpei 39.14 109 P **P 00 28 40.3 -0.2**
NGP Nagpur 39.19 275 *e*P **P 00 28 42.3 +1.5**
NGP IAmb IAmb 00 28 49.1
comp=Z,258nm,1.8s
RPR Rampur 39.49 271 *e*P **P 00 28 44.5 +1.2**
RPR IVmB_BB 00 28 51.8
comp=Z,608nm,3.8s
RPR IVMs_BB IVMs_BB 00 48 50.4
comp=Z,592nm,10.5s
SHLS Shalkode 39.56 310 *i* P **P 00 28 42.5 -1.3**
comp=Z,213nm,2.0s
SHLS *e*S **S 00 34 45.7 -0.1**
SHLS *e*LR LR 00 47 14.4
SHLS Shalkode 39.56 310 *i* P **P 00 28 42.5 -1.3**
SHLS *e*S **S 00 34 45.6 -0.1**
SHLS pmax pmax
comp=Z,213nm,2.0s
PDGK Podgornoye 39.58 310 P **P 00 28 44.6 +0.6**
ADKI Addanki 39.72 266 *e*P **P 00 28 45.7 +0.4**
ADKI IVmBBB 00 28 48.1
comp=Z,473nm,2.5s
ADKI IVMs_BB IVMs_BB 00 49 51.8
comp=Z,532nm,14.5s
SMLA Simla 39.80 291 *e*P **P 00 28 45.8 -0.1**
SMLA IAmb IAmb 00 29 06.1
comp=Z,430nm,1.7s
NDI New Delhi 39.84 287 *ex* **P 00 28 47.0 +0.8**
UZB Uzynbulak 39.87 310⇑ *i*P **P 00 28 47.5 +1.0**
comp=Z,252nm,2.3s
UZB *e*S **S 00 34 51.1 +0.7**
UZB *e*LR LR 00 47 32.4
UZB Uzynbulak 39.87 310 *c i*P **P 00 28 47.4 +1.0**
UZB *e*S **S 00 34 51.0 +0.7**
UZB pmax pmax
comp=Z,252nm,2.3s
PEA0B Petropavlovsk- 40.10 34 *ce*P **P 00 28 47.8 -0.3**
PEA0B Petropavlovsk- 40.10 34 IAMs_20 IAMs_20 00 44 54.1
comp=Z,4μm,21.0s
PETK Petropavlovsk- 40.10 34 P **P 00 28 46.6 -1.5**
comp=Z,7.9nm,0.7s,baz=196,slow=6.2,SNR=17
PETK LR LR 00 45 05.0
comp=Z,4μm,22.0s,baz=230,slow=36
NJS Nagarjunasagar 40.11 268 *e*P **P 00 28 49.7 +1.2**
NJS IVmBBB 00 28 56.0
comp=Z,545nm,2.5s
NJS IVMs_BB IVMs_BB 00 47 48.1
comp=Z,576nm,11.2s
PRZ Przheval'sk 40.14 308 IAmb IAmb 00 28 58.4
comp=Z,108nm,1.1s
BHPL Bhopal 40.28 278 *e*P **P 00 28 51.6 +1.7**
BHPL IAMs_20 IAMs_20 00 47 28.1
comp=Z,5μm,13.4s
SATY Saty 40.28 309⇑ *i*P **P 00 28 51.1 +1.3**
comp=Z,224nm,2.5s
SATY *e*S **S 00 35 00.9 +4.3**
SATY *e*LR LR 00 47 41.2
SATY Saty 40.28 309 *c i*P **P 00 28 51.1 +1.3**
SATY *e*S **S 00 35 00.8 +4.3**
SATY pmax pmax
comp=Z,224nm,2.5s
SRSP Sriramsagar 40.34 272 *e*P **P 00 28 51.4 +0.9**
SRSP IVmBBB 00 28 59.0
comp=Z,666nm,2.8s
SRSP IVMs_BB IVMs_BB 00 47 02.9
comp=Z,577nm,14.2s
MDRS Chennai 40.39 262 IAMs_20 IAMs_20 00 48 13.4
comp=Z,3μm,18.2s
TARG Taragay, Kyrgy 40.40 307 IAmb IAmb 00 28 55.2
comp=Z,313nm,1.9s
PET Petropavlovsk 40.55 34 *ce*P **P 00 28 49.8 -1.9**
PET *e*S **S 00 34 55.3 -4.6**
PET pmax pmax
comp=Z,600nm,15.2s
PET pmax pmax
comp=Z,66nm,1.2s
PET pmax pmax
comp=Z,800nm,14.9s
PET MLR MLR
comp=Z,4μm,19.0s
PET MLR MLR
comp=Z,4μm,16.0s
PET Petropavlovsk 40.55 34 P **P 00 28 51.1 -0.6**
PET IAmb IAmb 00 28 55.6
comp=Z,263nm,1.8s
PET IAMs_20 IAMs_20 00 47 04.7
comp=Z,4μm,18.0s
HYB Hyderabad 40.55 269 *i* P **P 00 28 53.0 +0.7**
HYB *e*PP **PnPn 00 30 30.0 +0.3**
HYB *e*S **S 00 35 04.0 +3.1**
HYB Hyderabad 40.55 269 *e*P **P 00 28 52.7 +0.4**
HYB IAmb IAmb 00 28 56.4
comp=Z,26nm,1.0s
HYBB Hyderabad (bro 40.55 269 *e*P **P 00 28 53.5 +1.2**
HYBB IVmB_BB 00 28 59.6
comp=Z,698nm,2.9s
HYBB IVMs_BB IVMs_BB 00 50 11.4
comp=Z,829nm,15.4s
SRLM Srisailam 40.62 267 *e*P **P 00 28 54.1 +1.2**
SRLM IVmB_BB 00 29 01.3
comp=Z,480nm,2.4s
SRLM IVMs_BB IVMs_BB 00 50 03.5
comp=Z,552nm,18.6s
SKHT Srikalahasti 40.65 264 *e*P **P 00 28 55.1 +2.1**
SKHT IVmBBB 00 29 01.9
comp=Z,429nm,1.6s
SKHT IVMs_BB IVMs_BB 00 49 25.5
comp=Z,606nm,13.7s
ZAA0 Zalesovo Array 40.77 327 P **P 00 28 53.0 -0.5**
ZAA0 IAmb IAmb 00 28 56.9
comp=Z,299nm,1.6s
ZALV Zalesovo Beam 40.77 327 P **P 00 28 53.2 -0.4**
comp=Z,53nm,0.6s,baz=119,slow=6.9,SNR=140
ZALV LR LR 00 46 59.6
comp=Z,8μm,18.4s,baz=125,slow=38
ZALV Zalesovo Beam 40.77 327 *i* P **P 00 28 53.0 -0.6**
ZALV pmax pmax
comp=Z,53nm,0.6s

KRVT Keravat (AS076 40.78 129 P **P 00 28 56.0 +1.9**
comp=Z,52nm,0.7s,baz=174,slow=16,SNR=15
TDK Taldyqorghan 40.80 312 *i* P **P 00 28 55.2 +1.2**
comp=Z,735nm,2.3s
TDK *e*S **S 00 35 07.7 +3.7**
TDK *e*LR LR 00 47 01.0
comp=Z,5μm,13.7s
TDK Taldyqorghan 40.80 312 *i* P **P 00 28 55.2 +1.2**
TDK *e*S **S 00 35 07.7 +3.7**
TDK pmax pmax
comp=Z,735nm,2.3s
TDK MLR MLR
comp=Z,5μm,14.0s
KDJ Kajisay 40.94 308 P **P 00 28 56.2 +0.8**
KDJ pmax pmax
comp=Z,51nm,1.0s
KDJ Kajisay 40.94 308 P **P 00 28 56.2 +0.8**
MDOK Medeo 41.27 309 *i* P **P 00 28 59.3 +1.2**
comp=Z,2μm,3.1s
MDOK *e*S **S 00 35 15.2 +3.9**
MDOK *e*LR LR 00 48 08.3
comp=Z,4μm,13.1s
MDOK Medeo 41.27 309 *i* P **P 00 28 59.2 +1.2**
MDOK *e*S **S 00 35 15.2 +3.9**
MDOK pmax pmax
comp=Z,2μm,3.1s
MDOK MLR MLR
comp=Z,4μm,13.0s
TNSS Tian-Shan 41.31 309⇑ *i*P **P 00 29 00.3 +1.6**
TNSS Tian-Shan 41.31 309⇑ *i*P **P 00 29 00.2 +1.6**
MA2 Magadan 41.31 22 *c i*P **P 00 28 55.7 -2.2**
MA2 pmax pmax
comp=Z,25nm,1.3s
MA2 MLR MLR
comp=Z,3μm,15.0s
MA2 Magadan 41.31 22 P **P 00 28 58.5 +0.6**
MA2 Magadan 41.31 22 IAMs_20 IAMs_20 00 46 22.8
comp=Z,4μm,19.0s
KNDC Almaty 41.34 309 P **P 00 29 00.3 +1.8**
KSH Kashi 41.37 303 P **P 00 29 03.1 +4.2**
KSH pP sP 00 29 07.0 +0.1
KSH PP **PnPn 00 30 42.8 +3.7**
KSH S **S 00 35 18.9 +6.1**
KSH SS **SS 00 38 14.1 -2.7**
KSH ScS **ScS 00 39 00.3 -2.0**
KSH pmax pmax
comp=Z,270nm,1.4s
KSH pmax pmax
comp=Z,1μm,4.1s
KSH LR LR
comp=Z,830nm,11.7s
KSH LR LR
comp=Z,2μm,7.5s
KSH LR LR
comp=Z,2μm,9.7s
AAA Alma-Ata 41.37 309⇑ *i*P **P 00 29 00.1 +1.3**
AAA *e*LR LR 00 48 30.6
comp=Z,4μm,12.6s
AAA Alma-Ata 41.37 309 *c i*P **P 00 29 00.1 +1.3**
AAA MLR MLR
comp=Z,4μm,13.0s
PMG Port Moresby 41.41 140 LR LR 00 45 35.6
comp=Z,2μm,18.3s,baz=310,slow=36
PMG Port Moresby 41.41 140 *ce*P **P 00 28 59.5 +0.3**
PMG pmax pmax
comp=Z,584nm,2.5s
PMG MLR MLR
comp=Z,6μm,17.0s
PMG Port Moresby 41.41 140 P **P 00 28 59.7 +0.5**
PMG IAmb IAmb 00 29 55.3
comp=Z,95nm,1.1s
CHKK Chushkaly 41.48 310⇑ *i*P **P 00 29 00.1 +0.6**
CHKK Chushkaly 41.48 310⇑ *i*P **P 00 29 00.1 +0.6**
SEM Semipalatinsk 41.54 321 *i* P **P 00 28 59.8 -0.4**
comp=Z,160nm,1.5s
SEM *e*S **S 00 35 14.8 -0.4**
SEM *e*LR LR 00 46 51.1
SEM Semipalatinsk 41.54 321 *i* P **P 00 28 59.8 -0.4**
SEM *e*S **S 00 35 14.8 -0.4**
SEM pmax pmax
comp=Z,160nm,1.5s
ULHL Ulahol 41.65 308 P **P 00 29 03.0 +1.8**
SNR=17
KUU Kurty 41.94 310⇑ *i*P **P 00 29 04.4 +1.0**
comp=Z,586nm,2.3s
KUU *e*S **S 00 35 22.8 +1.8**
KUU *e*LR LR 00 48 37.0
comp=Z,4μm,12.0s
KUU Kurty 41.94 310 *c i*P **P 00 29 04.4 +1.0**
KUU *e*S **S 00 35 22.8 +1.8**
KUU pmax pmax
comp=Z,586nm,2.3s
KUU MLR MLR
comp=Z,4μm,12.0s
WAKE Wake Island 42.14 87 P **P 00 29 05.7 +0.5**
KLRI Killari 42.16 271 *e*P **P 00 29 06.3 +0.7**
KLRI IVmB_BB 00 29 13.7
comp=Z,863nm,3.7s
KLRI IVMs_BB IVMs_BB 00 48 09.6
comp=Z,788nm,13.0s
TKM2 Tokmak 2 42.25 308 P **P 00 29 07.9 +1.7**
SNR=68
TKM2 Tokmak 2 42.25 308 P **P 00 29 07.7 +1.5**
H11N1 WAKE ISLAND Hy 42.25 86 P **P 00 29 07.3 +1.3**
baz=255,slow=10,SNR=8.0
H11N1 T T 01 14 21.9
baz=283,slow=74,SNR=80
H11N2 WAKE ISLAND Hy 42.26 86 P **P 00 29 07.4 +1.5**
baz=255,slow=10,SNR=7.8
H11N2 T T 01 14 10.0
baz=283,slow=74,SNR=1653
H11N3 WAKE ISLAND Hy 42.27 86 P **P 00 29 07.2 +1.1**
baz=255,slow=10,SNR=11
H11N3 T T 01 14 11.2
baz=283,slow=74,SNR=2305
KZA Kyzart 42.34 307 P **P 00 29 09.2 +2.1**
SNR=27
PALK Pallekele 42.36 254 IAMs_20 IAMs_20 00 47 24.7
comp=Z,4μm,20.0s
H11S3 WAKE ISLAND Hy 42.37 88 P **P 00 29 07.7 +0.8**
baz=269,slow=6.6,SNR=6.6
H11S3 T T 01 14 16.5
baz=284,slow=74,SNR=5015
H11S1 WAKE ISLAND Hy 42.38 88 P **P 00 29 07.4 +0.4**
baz=269,slow=6.6,SNR=7.3
H11S1 T T 01 14 20.2
baz=284,slow=74,SNR=2544
H11S2 WAKE ISLAND Hy 42.39 88 P **P 00 29 08.7 +1.7**
baz=269,slow=6.6,SNR=7.5
H11S2 T T 01 14 17.6
baz=284,slow=74,SNR=2151
URV Uravakonda 42.48 266 *e*P **P 00 29 09.7 +1.6**
URV IVmB_BB 00 29 15.4
comp=Z,1μm,3.4s
URV IVMs_BB IVMs_BB 00 51 21.9
comp=Z,1μm,8.8s
KURK Kurchatov 42.61 320 P **P 00 29 09.0 +0.3**
KURK Kurchatov 42.61 320 *c i*P **P 00 29 08.5 -0.2**
KURK pmax pmax
comp=Z,294nm,1.5s
KURK MLR MLR
comp=Z,5μm,15.0s
KURK Kurchatov 42.61 320 P **P 00 29 08.9 +0.3**
KURK Kurchatov 42.61 320 PP 00 30 50.1 +2.6
KURBB Kurchatov Arra 42.63 320 P **P 00 29 09.1 +0.3**
comp=Z,24nm,0.6s,baz=117,slow=7.2,SNR=104
KURBB PP **PP 00 30 50.1 +2.4**
comp=Z,9.4nm,1.0s,baz=111,slow=9.2,SNR=2.2
KURBB Kurchatov Arra 42.63 320 P **P 00 29 08.5 -0.3**
KBK Karagaybulak 42.67 308 P **P 00 29 11.4 +1.9**
SNR=37
CHMS Chumysh 42.88 308 P **P 00 29 12.4 +1.4**
SNR=27
UCH Uchtor 42.91 307 P **P 00 29 14.1 +2.3**
SNR=81
FRU1 Bishkek 42.93 308 IAMs_20 IAMs_20 00 49 17.1
comp=Z,6μm,19.0s
AAK Ala-Archa 42.99 308 P **P 00 29 14.8 +2.7**
SNR=12
AAK Ala-Archa 42.99 308 *i* P **P 00 29 13.9 +1.8**
SNR=34
AAK Ala-Archa 42.99 308 P **P 00 29 13.8 +1.6**
AAK Ala-Archa 42.99 308 *c i*P **P 00 29 13.7 +1.6**
AAK pmax pmax
comp=Z,138nm,2.5s
AAK MLR MLR
comp=Z,8μm,14.0s
AAK Ala-Archa 42.99 308 P **P 00 29 13.0 +0.9**
AAK IAmb IAmb 00 29 28.9
comp=Z,201nm,1.9s
AAK Ala-Archa 42.99 308 IAMs_20 IAMs_20 00 47 16.8
comp=Z,4μm,21.0s
SGDS Sogindy 43.05 309⇑ *i*P **P 00 29 13.3 +0.8**
comp=Z,147nm,2.3s
SGDS *e*S **S 00 35 39.6 +2.1**
SGDS *e*LR LR 00 49 22.1
USP Ospenovka 43.11 309 P **P 00 29 14.3 +1.4**
SNR=30
NIL Nilore 43.11 294 P **P 00 29 13.8 +0.8**
NIL pmax pmax
comp=Z,441nm,2.0s
NIL MLR MLR
comp=Z,4μm,20.0s
NIL Nilore 43.11 294 P **P 00 29 13.8 +0.8**
NIL Nilore 43.11 294 IAMs_20 IAMs_20 00 49 38.9
comp=Z,4μm,20.0s
AML Almayashu 43.49 307 P **P 00 29 18.5 +2.1**
SNR=40
EKS2 Erkin-Say 43.52 308 P **P 00 29 17.8 +1.5**
SNR=24
BTLS Baital 43.80 311⇑ *i*P **P 00 29 19.1 +0.7**
comp=Z,144nm,2.0s
BTLS *e*S **S 00 35 50.3 +2.1**
comp=Z,82nm,3.7s
BTLS *e*LR LR 00 49 16.2
BTLS Baital 43.80 311 *c i*P **P 00 29 19.1 +0.7**
BTLS *e*S **S 00 35 50.3 +2.1**
BTLS pmax pmax
comp=Z,144nm,2.0s
BTLS smax smax
comp=E,82nm,3.7s
ARSB Arslanbob 43.89 306 IAmb IAmb 00 29 35.2
comp=Z,123nm,1.3s
ARSB IAMs_20 IAMs_20 00 49 30.8
comp=Z,6μm,22.0s
SEY Seymchan 44.32 20⇑ *e*P **P 00 29 21.7 -0.6**
POO Poona 44.56 273 *e*P **P 00 29 26.2 +1.3**
POO *ex* x 00 29 27.5
POO IAmb IAmb 00 29 32.9
comp=Z,51nm,0.9s
WRAB Tennant Creek 45.17 163 *ce*P **P 00 29 27.7 -1.8**
WRAB pmax pmax
comp=Z,19nm,0.8s
WRAB MLR MLR
comp=Z,504nm,19.0s
WRAB Tennant Creek 45.17 163 P **P 00 29 28.1 -1.5**
WRA Warramunga Arr 45.18 163 P **P 00 29 27.6 -1.9**
comp=Z,16nm,0.6s,baz=344,slow=8.7,SNR=59
WRA Warramunga Arr 45.18 163 *i* P **P 00 29 27.7 -1.9**
WRA pmax pmax
comp=Z,18nm,0.6s
WB2 Warramunga Arr 45.18 163 P **P 00 29 27.8 -1.8**
WB2 IAmb IAmb 00 29 37.1
comp=Z,44nm,0.8s
DZA Taraz 45.33 308 *e*P **P 00 29 30.8 +0.1**
DZA Taraz 45.33 308 *e*P **P 00 29 30.8 +0.1**
BTK Batken 45.38 303 P **P 00 29 31.8 +0.6**
BTK Batken 45.38 303 P **P 00 29 31.8 +0.6**
GOA Goa 45.45 269 *e*P **P 00 29 33.6 +1.7**
GOA IAmb IAmb 00 29 36.5
comp=Z,51nm,1.1s
OTUK Ortayu 45.70 315 P **P 00 29 34.4 +0.9**
JBG Jabagly 45.84 307 *ce*P **P 00 29 35.7 +0.8**
JBG pmax pmax
comp=Z,162nm,2.7s
BRZS Berezniki 45.95 317⇑ *i*P **P 00 29 36.0 +0.5**
comp=Z,277nm,2.0s
BRZS *e*S **S 00 36 21.0 +1.7**
BRZS *e*LR LR 00 50 31.1
BRZS Berezniki 45.95 317 *c i*P **P 00 29 35.9 +0.5**
BRZS *e*S **S 00 36 21.0 +1.7**
BRZS pmax pmax
comp=Z,277nm,2.0s
KK31 Karatay Array 45.96 308 *i* P **P 00 29 36.4 +0.8**
KK31 Karatay Array 45.96 308 IAmb IAmb 00 29 44.1
comp=Z,79nm,1.1s
KKAR Karatay Array 45.96 308 IAmb IAmb 00 29 44.1
comp=Z,79nm,1.1s
BRLS Borolday 46.44 307 *e*S **S 00 36 31.7 +5.1**
CHM Chimkent 46.52 306 *e*P **P 00 29 40.3 +0.2**
CHM *e*LR LR 00 51 22.2
CHM Chimkent 46.52 306 *e*P **P 00 29 40.3 +0.2**
KBL Kabul 46.60 296 P **P 00 29 42.7 +1.7**
KBL Kabul 46.60 296 P **P 00 29 41.7 +0.7**
KBL pmax pmax
comp=Z,213nm,1.3s
KBL MLR MLR
comp=Z,3μm,20.0s
KBL Kabul 46.60 296 P **P 00 29 41.7 +0.7**
KBL IAMs_20 IAMs_20 00 51 16.4
comp=Z,3μm,20.0s
TAS Tashkent 46.65 305 P **P 00 29 41.3 +0.2**
TAS pmax pmax
comp=Z,236nm,1.3s
TAS MLR MLR
comp=Z,5μm,18.0s
TAS Tashkent 46.65 305 P **P 00 29 41.3 +0.2**
TIXI Tiksi 48.14 3 *c i*P **P 00 29 49.4 -2.8**
TIXI pmax pmax
comp=Z,120nm,1.7s
TIXI MLR MLR
comp=Z,9μm,15.0s
TIXI Tiksi 48.14 3 P **P 00 29 50.3 -1.8**
BVAR Borovoye Array 48.20 321 P **P 00 29 53.1 +0.2**
comp=Z,19nm,0.5s,baz=115,slow=7.6,SNR=74
BVAR PcP **PcP 00 31 20.0 0.0**
comp=Z,14nm,0.7s,baz=90,slow=4.6,SNR=1.7
BRVK Borovoye 48.27 321 *c i*P **P 00 29 53.6 +0.2**
BRVK pmax pmax
comp=Z,198nm,1.5s
BRVK MLR MLR
comp=Z,2μm,15.0s
BRVK Borovoye 48.27 321 P **P 00 29 53.9 +0.4**
BRVK Borovoye 48.27 321 IAMs_20 IAMs_20 00 52 03.0
comp=Z,3μm,19.0s
AS31 Alice Springs 48.63 165 P **P 00 29 55.7 -0.8**
ASAR Alice Springs 48.63 165 P **P 00 29 55.6 -0.9**
comp=Z,20nm,0.8s,baz=340,slow=6.3,SNR=79
CTA Charters Tower 49.80 149 LR LR 00 48 51.4
comp=Z,922nm,21.8s,baz=342,slow=33
CTAO Charters Tower 49.80 149 P **P 00 30 05.3 -0.2**
CTAO pmax pmax
comp=Z,44nm,1.2s
CTAO Charters Tower 49.80 149 P **P 00 30 05.3 -0.2**
NRIK Noril'sk 49.91 345 P **P 00 30 03.9 -1.9**
comp=Z,14nm,0.7s,baz=138,slow=7.4,SNR=20
NRIK LR LR 00 52 47.7
comp=Z,4μm,18.3s,baz=150,slow=38
HNR Honiara 50.00 127 LR LR 00 49 10.0
comp=Z,832nm,19.6s,baz=308,slow=34
BILL Bilibino 52.03 20 *c i*P **P 00 30 20.1 -1.6**
BILL *i* 00 30 31.7
BILL *i* 00 32 18.6
BILL *i* S **S 00 37 36.0 -8.2**
BILL pmax pmax
comp=Z,82nm,2.5s
BILL MLR MLR
comp=Z,3μm,15.0s
BILL Bilibino 52.03 20 P **P 00 30 20.5 -1.3**
BILL IAmb IAmb 00 30 21.5
comp=Z,93nm,1.7s
HRA Herat 52.21 296 IAmb IAmb 00 30 32.2
comp=Z,103nm,1.4s
HRA IAMs_20 IAMs_20 00 56 34.1
comp=Z,3μm,19.0s
ADK Adak 54.41 42 P **P 00 30 39.5 0.0**
ADK Adak 54.41 42 P **P 00 30 39.5 0.0**
TARA Tarawa 54.52 106 P **P 00 30 41.4 +0.5**
FORT Forrest 54.56 173 IAmb IAmb 00 30 50.7
comp=Z,68nm,0.7s
SVE Sverdlovsk 54.57 324 *de*P **P 00 30 40.7 +0.1**
SVE *e*S **S 00 38 18.0 -1.0**
SVE pmax pmax
comp=Z,208nm,1.5s
SVE MLR MLR
comp=E,5μm,14.0s
SVE MLR MLR
comp=Z,6μm,14.0s
MIDW Midway 54.67 71 P **P 00 30 41.1 -0.7**
MIDW IAmb IAmb 00 30 44.0
comp=Z,119nm,1.1s

ASHT Ashkhabad 55.04 301 P **P** **00 30 45.7 +1.3**
ASHT pmax pmax
comp=Z,405nm,1.4s
ASHT Ashkhabad 55.04 301 P **P** **00 30 45.7 +1.3**
GEYT Alibeck 55.26 301 P **P** **00 30 47.6 +1.6**
comp=Z,31nm,0.8s,baz=92,slow=3.6,SNR=74
GEYT LR LR 00 58 30.3
comp=Z,7μm,18.7s,baz=85,slow=40
AKTO Aktyubinsk 55.28 316 P **P** **00 30 46.3 +0.4**
comp=Z,24nm,0.9s,baz=100,slow=7.4,SNR=42
AKTO Aktyubinsk 55.28 316 P **P** **00 30 45.4 -0.5**
ARU Arti 55.63 323 P **P** **00 30 47.9 -0.4**
comp=Z,17nm,0.6s,baz=115,slow=2.4,SNR=46
ARU LR LR 00 54 29.2
comp=Z,2μm,20.8s,baz=90,slow=36
ARU Arti 55.63 323*c i* P **P** **00 30 47.8 -0.4**
ARU 00 31 48.8
ARU 00 32 47.5
ARU PPP PPP 00 34 02.8
ARU S **S** **00 38 36.4 +3.1**
ARU 00 40 38.8
ARU pmax pmax
comp=Z,141nm,1.0s
ARU MLR MLR
comp=Z,4μm,14.0s
ARU Arti 55.63 323 P **P** **00 30 47.9 -0.4**
ATKA Atka Island 55.97 42 P **P** **00 30 50.6 -0.2**
ATKA IAmb IAmb 00 30 53.5
comp=Z,59nm,0.8s
NWAO Narrogin (SRO) 56.48 184 P **P** **00 30 54.5 0.0**
NWAO pmax pmax
comp=Z,64nm,1.2s
NWAO Narrogin (SRO) 56.48 184 P **P** **00 30 54.5 0.0**
NWAO IAmb IAmb 00 31 20.0
comp=Z,64nm,1.2s
EIDS Eidsvold 56.61 148 IAmb IAmb 00 30 57.2
comp=Z,110nm,1.9s
DGAR Diego Garcia 56.98 243 P **P** **00 30 58.3 -0.2**
DGAR pmax pmax
comp=Z,80nm,1.2s
DGAR MLR MLR
comp=Z,3μm,19.0s
DGAR Diego Garcia 56.98 243 P **P** **00 30 58.3 -0.2**
DGAR IAmb IAmb 00 31 02.5
comp=Z,80nm,1.1s
DGAR Diego Garcia 56.98 243 IAMs_20 IAMs_20 00 55 12.7
comp=Z,3μm,19.0s
WBK Wadi Bani Khal 57.05 282 P **P** **00 31 00.4 +1.5**
SNR=14
WBK P **P** **00 31 00.4 +1.5**
SNR=14
H08S3 Diego Garcia H 57.08 243 P **P** **00 30 57.7 -1.1**
H08S2 Diego Garcia H 57.08 243 P **P** **00 30 57.7 -1.1**
H08S1 Diego Garcia H 57.10 243 P **P** **00 30 57.9 -1.1**
WSAR Wadi Sarin 57.19 283 P **P** **00 31 01.3 +1.3**
comp=Z,14nm,1.0s,baz=103,slow=7.0,SNR=18
WSAR LR LR 00 58 11.3
comp=Z,2μm,20.1s,baz=100,slow=39
WSAR Wadi Sarin 57.19 283 P **P** **00 31 01.6 +1.7**
SNR=19
BIDO Bidbid 57.58 284 P **P** **00 31 04.2 +1.5**
SNR=26
BIDO P **P** **00 31 04.2 +1.5**
SNR=26
SMDO Samad 57.76 283 P **P** **00 31 05.1 +1.0**
SNR=24
SMDO P **P** **00 31 05.1 +1.0**
SNR=24
JMDO Jabal Madar 57.88 282 P **P** **00 31 05.6 +0.8**
SNR=13
JMDO P **P** **00 31 05.6 +0.8**
SNR=13
BBOO Buckleboo 57.91 166 P **P** **00 31 03.9 -0.8**
BBOO IAmb IAmb 00 31 10.8
comp=Z,60nm,0.9s
HOQ Hoqain 58.29 284 P **P** **00 31 09.0 +1.3**
SNR=25
HOQ P **P** **00 31 09.0 +1.3**
SNR=25
MHTO MHTO 58.36 281 P **P** **00 31 07.8 -0.3**
SNR=16
MHTO P **P** **00 31 07.8 -0.3**
SNR=16
STKA Stephens Creek 58.54 160 P **P** **00 31 08.0 -1.0**
comp=Z,30nm,0.7s,baz=337,slow=7.6,SNR=61
STKA LR LR 00 58 49.8
comp=Z,429nm,20.0s,baz=338,slow=39
STKA Stephens Creek 58.54 160 P **P** **00 31 08.1 -1.0**
STKA pmax pmax
comp=Z,7.0nm,0.8s
STKA Stephens Creek 58.54 160 P **P** **00 31 08.1 -1.0**
BSY Bisya 58.59 283 P **P** **00 31 10.8 +0.9**
SNR=15
BSY P **P** **00 31 10.8 +0.9**
SNR=15
BANOM Banah 58.63 287 *i* P **P** **00 31 10.8 +0.7**
SNR=5.1
BANOM Banah 58.63 287 P **P** **00 31 11.3 +1.3**
BANOM P **P** **00 31 11.3 +1.3**
SHME Shamm 58.74 287 *i* P **P** **00 31 12.2 +1.4**
SNR=9.4
MDH Madha 58.78 286 P **P** **00 31 10.9 -0.1**
MDH Madha 58.78 286 P **P** **00 31 11.2 +0.1**
MDH P **P** **00 31 11.2 +0.1**
SOHO SOHO 58.84 285 P **P** **00 31 12.1 +0.6**
SNR=25
SOHO P **P** **00 31 12.1 +0.6**
SNR=25
MSFE Esma-Masafi 58.88 286 *i* P **P** **00 31 12.6 +0.7**
SNR=6.2
UOSS Minazif 58.94 286 P **P** **00 31 12.6 +0.4**
UOSS Minazif 58.94 286 P **P** **00 31 12.4 +0.2**
UOSS P **P** **00 31 12.4 +0.2**
HATD Hatta, Dubai 59.03 286 *i* P **P** **00 31 13.8 +1.0**
SNR=14
HATD Hatta, Dubai 59.03 286 P **P** **00 31 14.0 +1.1**
SNR=11
HATD P **P** **00 31 14.0 +1.1**
SNR=11
ARQ Araqi 59.05 284 P **P** **00 31 13.9 +0.9**
SNR=24
ARQ P **P** **00 31 13.9 +0.9**
SNR=24
ASHO Ashiyiah 59.13 285 *i* P **P** **00 31 14.5 +1.0**
SNR=16
ASHO Ashiyiah 59.13 285 P **P** **00 31 14.7 +1.1**
SNR=13
ASHO P **P** **00 31 14.7 +1.1**
SNR=13
NIKH Nikolski High 59.26 41 P **P** **00 31 14.2 +0.3**
UMQ Umm Al-Quwin 59.28 287 *i* P **P** **00 31 16.6 +2.1**
SNR=8.8
UMQ Umm Al-Quwin 59.28 287 P **P** **00 31 16.9 +2.3**
SNR=7.0
UMQ P **P** **00 31 16.9 +2.3**
SNR=7.0
NAZ Nazwa, Dubai 59.41 286 *i* P **P** **00 31 16.4 +1.0**
SNR=10
NAZ Nazwa, Dubai 59.41 286 P **P** **00 31 16.4 +1.0**
SNR=14
NAZ P **P** **00 31 16.4 +1.0**
SNR=14
FAQ Al Faqa, Dubai 59.53 286 P **P** **00 31 17.2 +1.0**
FAQ Al Faqa, Dubai 59.53 286 P **P** **00 31 17.4 +1.1**
FAQ P **P** **00 31 17.4 +1.1**
ALNE Al Ain 59.56 285 *i* P **P** **00 31 17.5 +1.0**
SNR=9.1
AJN Ajban 60.11 286 *i* P **P** **00 31 20.9 +0.6**
SNR=13
AJN Ajban 60.11 286 P **P** **00 31 20.8 +0.6**
SNR=9.1
AJN P **P** **00 31 20.8 +0.6**
SNR=9.1
KIRV Kirov 60.75 325 *i* P **P** **00 31 23.2 -0.8**
SHAO Shalim 61.32 278 P **P** **00 31 28.8 +0.2**
DMTO DMTO 62.03 278 P **P** **00 31 33.3 -0.1**
RBK Rabkut 62.77 278 P **P** **00 31 38.6 +0.2**
SNR=10
RBK P **P** **00 31 38.6 +0.2**
SNR=10
MAK Makhachkala 62.77 307 *eP* P 00 31 33.1 -4.8
MAK *eS* **S** **00 40 00.8 -5.3**
MAK *eSS* **SS** **00 44 06.2 -4.6**
MAK pmax pmax
comp=Z,179nm,1.3s
MAK MLR MLR
comp=Z,3μm,14.0s
AKT Akhty 62.82 306 *eP* **P** **00 31 38.1 -0.4**
AKT *e* 00 32 15.5
AKT *e* 00 33 57.2
AKT pmax pmax
comp=Z,116nm,1.4s
RDOG Red Dog Mine 62.85 24 IAMs_20 IAMs_20 01 00 43.3
comp=Z,2μm,18.0s
WHFO Wadi Hawf 63.03 279 P **P** **00 31 40.0 -0.1**
WHFO P **P** **00 31 40.0 -0.1**
DZM Mont Dzumac 63.13 133 *eP* **P** **00 31 43.5 +2.9**
DZM comp=Z,94nm,1.4s *eS* **S** **00 40 14.2 +3.0**
DZM comp=Z,3μm,30.2s *eSS* **SS** **00 44 22.2 +4.5**
DZM comp=Z,1μm,25.2s *eLQ* LQ 00 47 57.3
DZM comp=Z,3μm,26.4s *eLR* LR 00 50 29.5
comp=Z,2μm,22.1s
DZM Mont Dzumac 63.13 133 P **P** **00 31 42.3 +1.7**
comp=Z,7.7nm,0.6s,baz=328,slow=8.0,SNR=9.4
DZM LR LR 00 56 10.9
comp=Z,2μm,19.7s,baz=268,slow=33
DZM Mont Dzumac 63.13 133 P **P** **00 31 41.2 +0.6**
DZM IAmb IAmb 00 31 44.5
comp=Z,80nm,1.6s
ABTO Aybut 63.64 278 P **P** **00 31 44.0 -0.1**
SNR=5.0
ABTO P **P** **00 31 44.0 -0.1**
SNR=5.0
CAN Canberra 64.25 155 P **P** **00 31 47.7 0.0**
CAN pmax pmax
comp=Z,24nm,1.1s
CAN MLR MLR
comp=Z,1μm,18.0s
CAN Canberra 64.25 155 P **P** **00 31 47.7 0.0**
JOHN Johnston Islan 64.59 82 P **P** **00 31 50.0 -0.3**
SOCY Socotra 64.72 273 IAMs_20 IAMs_20 01 03 17.1
comp=Z,2μm,19.0s
TOO Toolangi 65.02 159 P **P** **00 31 52.1 -0.6**
TOO pmax pmax
comp=Z,22nm,0.8s
TOO Toolangi 65.02 159 P **P** **00 31 52.1 -0.6**
ZEI Tsey 65.42 308 *eP* P 00 31 50.2 -5.4
ZEI *eS* **S** **00 40 36.2 -3.2**
ZEI pmax pmax
comp=Z,115nm,0.9s
NCK Nalchik 65.51 309*c i* P **P** **00 31 56.1 +0.1**
NCK pmax pmax
comp=Z,57nm,1.3s
NCK MLR MLR
comp=Z,4μm,16.0s
VRH Novokhopyorsk 65.57 317 *eP* **P** **00 31 55.4 -0.7**
VRH *eS* **S** **00 40 36.5 -4.0**
VRH pmax pmax
comp=Z,180nm,1.6s
VRH smax smax
comp=E,220nm,7.2s
VRH MLR MLR
comp=Z,2μm,14.0s
GOF Gofitskoye 65.64 310⇑ *i* P **P** **00 31 56.9 +0.2**
GOF pmax pmax
comp=Z,172nm,0.9s
TASB TASBURUN-IGDIR 65.69 305 *eP* **P** **00 31 57.7 +0.4**
KLMR Klimovskoe 65.69 328*c i* P **P** **00 31 55.6 -1.2**
KLMR *e* 00 34 19.4
KLMR *eS* **S** **00 40 43.0 +1.4**
KLMR pmax pmax
comp=Z,201nm,1.5s
KLMR MLR MLR
comp=Z,6μm,14.0s
KLMR Klimovskoe 65.69 328⇑ *i* P **P** **00 31 55.7 -1.1**
KLMR *i* P **P** **00 31 55.7 -1.1**
KLMR *i* P **P** **00 31 55.7 -1.1**
KLMR AMP 00 32 04.6
comp=Z,201nm,1.5s
KLMR *eP* PP **PP** **00 34 19.4 -1.7**
KLMR *eS* **S** **00 40 43.1 +1.4**
KLMR *eS* **S** **00 40 43.1 +1.4**
KLMR LQ LQ 00 55 51.4
KLMR LQ LQ 00 55 51.4
KLMR LR LR 01 01 37.3
KLMR AMP 01 02 52.8
comp=Z,6μm,14.4s
AKH Akhalkalaki 65.97 306 ⇓P **P** **00 32 00.1 +1.0**
AKH Akhalkalaki 65.97 306 IAMs_20 IAMs_20 01 03 58.0
comp=Z,2μm,18.0s
KBZ Khabaz 65.97 309 P **P** **00 31 59.5 +0.6**
comp=Z,32nm,0.8s,baz=87,slow=4.1,SNR=37
KBZ LR LR 01 05 22.0
comp=Z,2μm,19.8s,baz=69,slow=40
KBZ Khabaz 65.97 309*c i* P **P** **00 31 59.1 +0.2**
KVAR Kislovodsk Arr 66.07 309 P **P** **00 32 01.2 +1.5**
comp=Z,17nm,0.9s,baz=270,slow=20,SNR=11
TMCR Tamitsa 66.08 332 *eP* **P** **00 31 57.6 -1.6**
TMCR *eS* **S** **00 40 44.9 -1.3**
TMCR pmax pmax
comp=Z,163nm,1.3s
KIV Kislovodsk 66.08 309 *i* P **P** **00 32 00.3 +0.5**
SNR=50
KIV Kislovodsk 66.08 309*c i* P **P** **00 31 59.9 +0.2**
KIV *i* 00 32 07.2
KIV *i* 00 34 24.6
KIV *i* S **S** **00 40 48.1 +0.9**
KIV pmax pmax
comp=Z,252nm,1.8s
KIV MLR MLR
comp=Z,2μm,16.0s
KIV Kislovodsk 66.08 309 P **P** **00 32 00.1 +0.4**
KIV IAMs_20 IAMs_20 01 03 58.8
comp=Z,2μm,18.0s
CLDR Caldiran 66.10 304 *eP* **P** **00 32 01.2 +1.1**
NEY Neytrino 66.18 308*d i* P **P** **00 32 02.8 +2.3**
NEY pmax pmax
comp=Z,23nm,0.8s
NEY MLR MLR
comp=Z,596nm,15.0s
KARS Kars 66.43 306 *eP* **P** **00 32 03.9 +1.8**
VANB Van 66.62 303 *eP* **P** **00 32 03.8 +0.5**
AGRB Hanur-Agry 66.71 304 *eP* **P** **00 32 05.5 +1.5**
CUKT Cukurca 66.74 302 *eP* **P** **00 32 04.8 +0.7**
SENK Senkaya-Erzuru 66.99 306 *eP* **P** **00 32 07.5 +1.8**
AKDM Akdamar-Van 66.99 303 *eP* **P** **00 32 07.1 +1.4**
VORR Voronezh 67.05 318 *eP* **P** **00 32 05.0 -0.7**
VORR pmax pmax
comp=Z,250nm,1.8s
LPSR Galich'ya Gora 67.07 319 *eP* **P** **00 32 05.1 -0.6**
LPSR *eS* **S** **00 40 55.5 -3.2**
LPSR pmax pmax
comp=Z,240nm,1.8s
LPSR smax smax
comp=E,210nm,7.2s
LPSR MLR MLR
comp=Z,2μm,12.0s
LVZ Lovozero 67.07 336⇑ *eP* **P** **00 32 07.1 +1.5**
LVZ pmax pmax
comp=Z,30nm,1.1s
LVZ MLR MLR
comp=Z,4μm,16.0s
VORD Divnogorie 67.12 317 *eP* **P** **00 32 04.5 -1.6**
VORD pmax pmax
comp=Z,40nm,0.8s
MLAZ Malazgirt-MUS 67.14 304 *eP* **P** **00 32 07.5 +0.8**
VSR Storozhevoye 67.16 317 *eP* **P** **00 32 05.6 -0.7**
VSR *eS* **S** **00 40 54.5 -5.3**
VSR pmax pmax
comp=Z,110nm,1.0s
VSR smax smax
comp=E,160nm,9.8s
VSR MLR MLR
comp=Z,2μm,13.0s
BATM Batumi 67.25 307⇑ *eP* **P** **00 32 08.1 +0.9**
MOS Moscow 67.33 322 *eP* **P** **00 32 04.7 -2.6**
MOS *e* 00 32 31.0
MOS *e* 00 34 33.2
MOS *ePPP* PPP 00 36 12.8
MOS *eS* **S** **00 40 59.0 -2.6**
MOS *eSS* **SS** **00 45 22.1 +1.1**
MOS pmax pmax
comp=Z,86nm,1.2s
MOS MLR MLR
comp=Z,3μm,17.0s
MOS MLR MLR
comp=E,2μm,15.0s
BCA Borcka 67.34 307⇑ P **P** **00 32 08.6 +0.8**
BCA Borcka 67.34 307 *eP* **P** **00 32 07.9 +0.2**
KOPR Koprukoy-ERZUR 67.48 305 *eP* **P** **00 32 09.8 +1.0**
PPLA Purkeypile 67.52 30 IAMs_20 IAMs_20 01 01 47.7
comp=Z,2μm,19.0s
APA Apatity 67.59 335⇓ *iP* **P** **00 32 07.9 -0.9**
APA *i* PPP PPP 00 36 16.0
APA *i* S **S** **00 41 01.0 -3.4**
APA *i* 00 41 37.0
APA pmax pmax
comp=Z,25nm,0.9s
APA MLR MLR
comp=Z,5μm,14.0s
SIRT Sirnak 67.59 302 *eP* **P** **00 32 10.6 +1.1**
RSO Redoubt South 67.61 32 P **P** **00 32 09.2 -0.1**
GURO Guroymak-BITLI 67.67 304 *eP* **P** **00 32 10.9 +0.9**
TOLK Toolik Lake Re 67.77 23 P **P** **00 32 10.0 0.0**
baz=278
TOLK Toolik Lake Re 67.77 23 IAmb IAmb 00 32 11.9
comp=Z,58nm,0.9s
BPAW Bear Paw Mtn. 67.87 28 IAMs_20 IAMs_20 01 02 34.1
comp=Z,2μm,20.0s
VRTB Varto-Mus 67.97 304 *eP* **P** **00 32 13.7 +1.8**
KTH Kantishna Hill 67.99 29 IAMs_20 IAMs_20 01 02 56.1
comp=Z,2μm,18.0s
OBN Obninsk 68.02 322⇑ P **P** **00 32 12.1 +0.4**
OBN Obninsk 68.02 322*c i* P **P** **00 32 10.9 -0.8**
OBN *i* 00 32 32.7
OBN pmax pmax
comp=Z,64nm,1.2s
OBN MLR MLR
comp=Z,3μm,16.0s
OBN Obninsk 68.02 322 P **P** **00 32 11.6 -0.1**
CHOM Cayeli-Rize 68.05 306 *eP* **P** **00 32 13.2 +1.0**
KDAK Kodiak Island 68.13 35 P **P** **00 32 12.1 -0.2**
KDAK pmax pmax
comp=Z,496nm,1.5s
KDAK MLR MLR
comp=Z,900nm,19.0s
KDAK Kodiak Island 68.13 35 P **P** **00 32 12.1 -0.2**
SOC Sochi 68.26 309*c i* P **P** **00 32 13.4 -0.1**
SOC *e* 00 34 42.4
SOC *ePPP* PPP 00 36 25.7
SOC *eS* **S** **00 41 15.9 +2.6**
SOC *e* 00 45 37.5
SOC pmax pmax
comp=Z,98nm,0.9s
SOC MLR MLR
comp=Z,3μm,17.0s
TRF Thorofare Moun 68.28 29 IAmb IAmb 00 32 16.8
comp=Z,44nm,0.7s
TRF IAMs_20 IAMs_20 01 02 25.9
comp=Z,1μm,19.0s
HOM Homer 68.29 33 P **P** **00 32 13.7 +0.4**
SVAN Silvan-Diyarba 68.39 303 *eP* **P** **00 32 15.9 +1.4**
CNPM China Poot 68.52 33 IAmb IAmb 00 32 34.2
comp=Z,46m,1.1s
YEDI Yedisu-Bingol 68.59 305 *eP* **P** **00 32 17.0 +1.2**
BNGB Bingl 68.59 304 *eP* **P** **00 32 17.2 +1.4**
RAYN Ar Rayn 68.73 287 P **P** **00 32 16.9 +0.1**
RAYN pmax pmax
comp=Z,130nm,1.3s
RAYN MLR MLR
comp=Z,2μm,20.0s
RAYN Ar Rayn 68.73 287 P **P** **00 32 16.9 +0.1**
RAYN IAMs_20 IAMs_20 01 06 08.0
comp=Z,2μm,20.0s
KTUT Trabzon 68.81 307⇓ P **P** **00 32 17.6 +0.7**
KTUT Trabzon 68.81 307 *eP* **P** **00 32 19.3 +2.4**
MCK McKinley 68.83 28 IAMs_20 IAMs_20 01 03 22.3
comp=Z,2μm,20.0s
MSVF Nonsavu 68.90 121 P **P** **00 32 18.4 +0.6**
MSVF pmax pmax
comp=Z,65nm,1.0s
MSVF Nonsavu 68.90 121 P **P** **00 32 18.4 +0.6**
MSVF IAmb IAmb 00 32 30.4
comp=Z,65nm,1.0s
RND Reindeer 68.93 29 IAMs_20 IAMs_20 01 02 33.9
comp=Z,1μm,20.0s
WRH Wood River Hil 69.06 28 IAmb IAmb 00 32 21.0
comp=Z,73nm,1.0s
WRH IAMs_20 IAMs_20 01 04 18.2
comp=Z,1μm,18.0s
TCOL CIGO, UAF Yank 69.07 27 P **P** **00 32 17.7 -0.4**
baz=281
COLA College 69.08 27 *i* P **P** **00 32 17.4 -0.7**
COLA pmax pmax
comp=Z,159nm,2.6s
COLA MLR MLR
comp=Z,556nm,18.0s
COLA College 69.08 27 P **P** **00 32 19.1 +1.0**
COLA IAmb IAmb 00 32 20.9
comp=Z,45nm,0.8s
MAZI Mazidag 69.14 303 *eP* **P** **00 32 20.2 +1.0**
CCB Clear Creek Bu 69.14 27 IAmb IAmb 00 32 27.5
comp=Z,45nm,1.3s
ERZN Erzincan 69.17 305 *eP* **P** **00 32 20.6 +1.2**
POKR Poker Plat Res 69.20 27 P **P** **00 32 19.0 0.0**
baz=281
DYBB Diyarbakir 69.25 303 *eP* **P** **00 32 21.0 +1.2**
SML Sawmill 69.48 30 IAMs_20 IAMs_20 01 03 19.6
comp=Z,1μm,18.0s
ILAR Eielson Array 69.50 27 P **P** **00 32 19.4 -1.4**
comp=Z,12nm,0.7s,baz=264,slow=5.7,SNR=67
ILAR PKP2bc 01 00 27.6
comp=Z,1.0nm,1.0s,baz=135,slow=2.1,SNR=7.5
ILAR LR LR 01 05 12.8
comp=Z,544nm,18.7s,baz=306,slow=38
HDA Harding Lake 69.55 28 P **P** **00 32 19.9 -1.2**
baz=282
ESPY Espiye-Giresun 69.59 307 *eP* **P** **00 32 21.4 -0.4**
PTK Pertek 69.59 304 *eP* **P** **00 32 23.3 +1.2**
ANN Anapa 69.59 311*c i* P **P** **00 32 20.7 -1.0**
ANN *eS* **S** **00 41 31.1 +2.1**
ANN pmax pmax
comp=Z,199nm,0.9s
ANN pmax pmax
comp=E,27nm,1.2s
ANN pmax pmax
comp=E,126nm,1.9s
ANN pmax pmax
comp=Z,704nm,2.1s
ANN pmax pmax
comp=N,228nm,2.2s
ANN MLR MLR
comp=Z,3μm,15.0s
ANN MLR MLR
comp=E,1μm,17.0s
SVRC Sivrice-ELAZID 69.78 304 *eP* **P** **00 32 24.5 +1.2**
FYU Fort Yukon 69.78 25 IAMs_20 IAMs_20 01 06 44.4
comp=Z,1μm,18.0s
PRP Porcupine Dome 69.90 26 IAmb IAmb 00 32 25.3
comp=Z,79nm,1.2s
SCM Sheep Creek Mo 69.94 30 IAMs_20 IAMs_20 01 03 23.8
comp=Z,1μm,18.0s
SPA0 Spitsbergen Ar 69.99 348 *eP* **P** **00 32 25.8 +2.2**
ARCES ARCESS Array B 70.06 338 P **P** **00 32 23.9 -0.3**
comp=Z,4.5nm,0.6s,baz=54,slow=6.6,SNR=31
ARCES LR LR 01 06 46.7
comp=Z,3μm,18.6s,baz=56,slow=39
MSEY Mahe Island 70.16 255 IAMs_20 IAMs_20 01 00 20.9
comp=Z,2μm,20.0s
HAMF Hammerfest 70.38 339 *eP* **P** **00 32 27.0 +0.9**
URFA Urfa 70.40 303 *eP* **P** **00 32 28.1 +1.2**
MALT Malatya 70.47 304 *eP* **P** **00 32 28.9 +1.5**
PAX Paxson 70.52 29 IAmb IAmb 00 32 28.7
comp=Z,65nm,1.0s
PAX IAMs_20 IAMs_20 01 04 16.0
comp=Z,2μm,21.0s
DOT Dot Lake 70.97 28 IAmb IAmb 00 32 30.8
comp=Z,86nm,1.2s
KTK1 Kautokeino 70.98 338 *eP* **P** **00 32 29.6 -0.2**
EYAK Cordova Ski Ar 70.99 31 IAMs_20 IAMs_20 01 07 21.5
comp=Z,1μm,19.0s
DARE Darende-Malaty 71.11 305 *eP* **P** **00 32 32.5 +1.2**
SVSK Karacayir 71.12 306 *eP* **P** **00 32 32.4 +1.3**
MENT Mentasta 71.30 29 IAmb IAmb 00 32 33.9
comp=Z,86nm,1.0s
TOKT Tokat 71.35 307 *eP* **P** **00 32 33.2 +0.6**
KVT Kavak 71.51 307 *eP* **P** **00 32 34.4 +0.9**
RAGM Ragged Mountai 71.54 31 IAMs_20 IAMs_20 01 05 24.2
comp=Z,1μm,19.0s
GLB Gilahina Butte 71.67 30 P **P** **00 32 34.2 +0.1**
GLB IAMs_20 IAMs_20 01 05 01.4
comp=Z,1μm,18.0s

GAZ **Gaziantep** 71.70 303 *e*P **P** **00 32 35.9 +1.1**
GAZ **Gaziantep** 71.70 303 P **P** **00 32 34.3 -0.5**
GAZ IAmb IAmb 00 32 43.9
comp=Z,89nm,1.0s
SIM **Simferopol'** 71.84 312 *c i*P **P** **00 32 34.9 -0.5**
SIM *i* S **S** **00 41 56.7 +1.5**
SIM *i* PS PnS 00 42 41.0 +16
SIM *e*SS **SS** **00 46 39.0 +8.0**
SIM pmax pmax
comp=Z,171nm,1.9s
SIM pmax pmax
comp=Z,130nm,9.1s
KMRS **Kahramanmaras** 71.85 304 *e*P **P** **00 32 36.1 +0.4**
EGAK **Eagle** 71.88 27 IAmb IAmb 00 32 49.5
comp=Z,47nm,0.8s
EGAK IAMs_20 IAMs_20 01 08 27.8
comp=Z,1μm,19.0s
DIKM **Dikmen** 71.93 308 ⇓P **P** **00 32 36.4 +0.4**
DIKM **Dikmen** 71.93 308 *e*P **P** **00 32 36.5 +0.5**
SARI **SarD1z-Kayseri** 71.96 305 *e*P **P** **00 32 37.5 +1.0**
FIA1 **FINESS Array S** 71.97 330 IAmb IAmb 00 32 57.3
comp=Z,33nm,0.8s
FINES **FINESS Array B** 71.97 330 P **P** **00 32 35.6 -0.2**
comp=Z,7.6nm,0.5s,baz=67,slow=5.1,SNR=85
FINES LR LR 01 07 07.6
comp=Z,5μm,18.6s,baz=72,slow=38
BNN **Bunyan** 72.27 305 *e*P **P** **00 32 38.8 +0.5**
YOZ **Yozgat** 72.44 306 *e*P **P** **00 32 39.5 +0.2**
BALM **Baldy** 72.46 30 IAmb IAmb 00 32 40.6
comp=Z,100nm,1.3s
VSU **Vasula** 72.51 327 *e*P **P** **00 32 37.8 -1.3**
VSU **Vasula** 72.51 327 *c i*P **P** **00 32 37.8 -1.3**
VSU pmax pmax
comp=Z,213nm,1.3s
VSU MLR MLR
comp=Z,12μm,20.0s
DAMY **Dhamar** 72.63 279 P **P** **00 32 42.7 +1.7**
SNR=19
DAMY **Dhamar** 72.63 279 P **P** **00 32 41.5 +0.5**
DAMY IAmb IAmb 00 32 49.7
comp=Z,54nm,1.1s
KOZT **Kozan** 72.67 304 *e*P **P** **00 32 41.2 +0.6**
TAHT **Tahtakopru-Hat** 72.72 303 *e*P **P** **00 32 41.0 +0.2**
BARN **Barnard Glacie** 72.77 30 IAmb IAmb 00 32 42.9
comp=Z,96nm,1.2s
CORM **Corum** 72.79 307 *e*P **P** **00 32 42.3 +0.9**
NOR **Nord** 72.83 354 ⇑ *i*P **P** **00 32 39.0 -1.7**
NOR **Nord** 72.83 354 ⇑ *i*P **P** **00 32 39.0 -1.7**
DAWY **Dawson** 72.83 27 IAmb IAmb 00 32 43.1
comp=Z,64nm,0.9s
DAWY IAMs_20 IAMs_20 01 08 50.9
comp=Z,2μm,18.0s
CEYT **Ceyhan** 72.87 303 *e*P **P** **00 32 42.8 +1.1**
YAYL **Yayladag** 72.88 302 *e*P **P** **00 32 41.4 -0.5**
YAH **Yahtse** 72.94 31 IAMs_20 IAMs_20 01 03 28.2
comp=Z,2μm,22.0s
MICGM **Minsk** 73.05 323 *e*P **P** **00 32 42.0 -0.4**
MICGM PM 00 32 45.0
comp=Z,0.4nm,1.0s
MICGM *e*PcP **pP** **00 32 50.0 +1.5**
MICGM *e*PP **PP** **00 35 25.0 +0.2**
MICGM *e*PPP PPP 00 37 05.0
MICGM *e*S **S** **00 42 09.0 +0.3**
MICGM *e*LR LR 01 03 08.0
MICGM LRM MLR 01 07 20.0
comp=Z,6.4nm,10.0s
MNK **Minsk** 73.05 323 ⇓ *e*P **P** **00 32 42.0 -0.4**
MNK *e* 00 32 50.0
MNK *e* 00 35 25.0
MNK *e*PPP PPP 00 37 05.0
MNK *e*S **S** **00 42 09.0 +0.3**
MNK pmax pmax
comp=Z,440nm,1.0s
MNK MLR MLR
comp=Z,6μm,10.0s
EPYK **Eagle Plains** 73.11 24 P **P** **00 32 41.7 -1.0**
baz=290
EPYK **Eagle Plains** 73.11 24 IAmb IAmb 00 32 56.7
comp=Z,54nm,0.9s
ILGA **Ilgaz** 73.21 308 P **P** **00 32 44.0 +0.1**
ILGA IAmb IAmb 00 32 53.0
comp=Z,105nm,1.4s
ILGA IAMs_20 IAMs_20 01 10 13.5
comp=Z,2μm,18.0s
KRTS **Karatas** 73.29 303 *e*P **P** **00 32 44.7 +0.6**
KARA **Karaisali** 73.33 304 *e*P **P** **00 32 45.3 +0.9**
AKASG **Malin Array Be** 73.39 318 P **P** **00 32 43.3 -1.2**
comp=Z,24nm,0.8s,baz=60,slow=6.2,SNR=29
AKBB **Malin Array Si** 73.39 318 *c i*P **P** **00 32 43.4 -1.1**
AKBB **Malin Array Si** 73.39 318 IAmb IAmb 00 32 53.0
comp=Z,124nm,1.6s
AKBB IAMs_20 IAMs_20 01 06 48.0
comp=Z,2μm,19.0s
CANT **Cankiri** 73.41 307 *e*P **P** **00 32 45.1 +0.2**
NACGM **Naroch** 73.54 323 *e*P **P** **00 32 44.0 -1.3**
NACGM *e*P **pP** **00 32 45.0 -6.4**
NACGM *e*PP **PP** **00 35 35.0 +6.1**
NACGM *e*PPP PPP 00 37 18.0
NACGM *e*S **S** **00 42 14.0 -0.2**
NACGM *e*SS SS 00 46 22.0 -34
NACGM *e*SSS SSS 00 50 36.0
NACGM *e*LQ LQ 01 01 18.0
NACGM *e*LR LR 01 04 52.0
NACGM LRM MLR 01 07 54.0
comp=Z,15nm,18.0s
INK **Inuvik** 73.55 22 IAmb IAmb 00 33 01.2
comp=Z,63nm,1.1s
INK IAMs_20 IAMs_20 01 06 28.9
comp=Z,1μm,18.0s
IZAR **Zarasai** 73.57 324 *e*P **P** **00 32 46.4 +0.9**
BR131 **Keskin Array S** 73.66 307 P **P** **00 32 46.5 0.0**
SNR=68
BR131 **Keskin Array S** 73.66 307 IAmb IAmb 00 32 54.3
comp=Z,50nm,0.8s
BRTR **Keskin Array B** 73.66 307 P **P** **00 32 46.1 -0.3**
comp=Z,21nm,0.9s,baz=103,slow=6.1,SNR=43
BRTR LR LR 01 10 59.3
comp=Z,991nm,18.0s,baz=52,slow=40
BRTR **Keskin Array B** 73.66 307 *ce*P **P** **00 32 46.9 +0.4**
BRTR pmax pmax
comp=Z,21nm,0.9s
KURC **Kurucasile-Bar** 73.67 309 *e*P **P** **00 32 46.1 -0.2**
ISAL **Salakas** 73.69 324 *e*P **P** **00 32 47.2 +1.0**
IGN **Ignalina** 73.71 324 *e*P **P** **00 32 47.0 +0.7**
YAYX **Yaylak** 73.76 306 *e*P **P** **00 32 46.4 -0.7**
MERS **Mersin** 73.85 304 *e*P **P** **00 32 47.8 +0.2**
BHL **Bhannes** 73.88 300 *e*P **P** **00 32 48.0 +0.2**
SERE **Sereflikochisa** 73.94 306 *e*P **P** **00 32 47.9 -0.3**
SHBL **Chebaa** 73.97 300 *e*P **P** **00 32 49.0 +0.5**
STEI **Steigen** 74.12 338 *e*P **P** **00 32 48.4 -0.1**
AFSR **Afar-Bala (An** 74.16 306 *e*P **P** **00 32 49.6 +0.2**
YESY **Yesilyurt** 74.17 305 *e*P **P** **00 32 49.6 +0.1**
SULT **Sultanhani-AKS** 74.21 305 *e*P **P** **00 32 49.6 -0.1**
ANTO **Ankara** 74.23 307 ⇑P **P** **00 32 50.2 +0.5**
ANTO **Ankara** 74.23 307 P **P** **00 32 50.2 +0.5**
ANTO P **P** **00 32 50.2 +0.5**
ANTO **Ankara** 74.23 307 P **P** **00 32 50.0 +0.2**
ANTO pmax pmax
comp=Z,68nm,0.8s
ANTO MLR MLR
comp=Z,1μm,21.0s
ANTO **Ankara** 74.23 307 P **P** **00 32 50.0 +0.2**
ANTO IAmb IAmb 00 32 57.7
comp=Z,68nm,0.8s
LOD **Lodumlu** 74.25 307 *e*P **P** **00 32 50.5 +0.6**
BR231 **Keskin MP Arra** 74.25 307 IAmb IAmb 00 32 57.9
comp=Z,61nm,0.8s
KULU **Kulu** 74.33 306 *e*P **P** **00 32 50.4 0.0**
A36M **Sachs Harbour** 74.49 17 P **P** **00 32 49.2 -1.3**
baz=299
EREN **Erenkoy** 74.53 302 *e*P **P** **00 32 50.8 -0.7**
KEBE **Keben-Mersin** 74.60 303 *e*P **P** **00 32 52.1 +0.1**
SORM **Soroca** 74.71 316 ⇓P **P** **00 32 51.1 -1.2**
KIS **Kishinev** 74.77 315 ⇓ *i*P **P** **00 32 53.0 +0.3**
comp=Z,200nm,2.0s
KIS *e*S **S** **00 42 28.0 -0.4**
KIS **Kishinev** 74.77 315 ⇑ *i*P **P** **00 32 53.0 +0.3**
KIS *e* 00 35 38.0
KIS *e* 00 37 28.0
KIS *e*S **S** **00 42 28.0 -0.4**
KIS pmax pmax
comp=Z,200nm,2.0s
KIS pmax pmax
comp=Z,500nm,8.0s
KIS MLR MLR
comp=Z,4μm,16.0s
KIS MLR MLR
comp=N,2μm,16.0s
MILM **Milestii Mici** 74.80 315 ⇑P **P** **00 32 51.7 -1.1**
TEVE **Tevekalti-Mers** 74.81 303 *e*P **P** **00 32 53.7 +0.5**
PABE **Paberze** 74.88 324 *e*P **P** **00 32 52.5 -0.5**
BERE **Bereket-Mersin** 75.01 303 *e*P **P** **00 32 53.9 -0.5**
SLIT **Slitere, Latvi** 75.02 327 *e*P **P** **00 32 51.6 -2.2**
LADK **Ladik-KONYA** 75.07 305 *e*P **P** **00 32 54.1 -0.6**
ATD **Arta Tunnel** 75.13 276 P **P** **00 32 56.6 +1.3**
SNR=9.5
ATD **Arta Tunnel** 75.13 276 IAmb IAmb 00 33 04.0
comp=Z,63nm,1.4s
MOR8 **Moi Rana** 75.14 336 *e*P **P** **00 32 54.5 +0.1**
KONT **Konya--Tatoy** 75.15 305 *e*P **P** **00 32 54.9 -0.2**
TEKE **Tekeli-Mersin** 75.16 303 *e*P **P** **00 32 54.9 -0.2**
MDUB **Mudurnu** 75.21 308 *e*P **P** **00 32 55.5 +0.1**
MDUB **Mudurnu** 75.21 308 P **P** **00 32 55.8 +0.4**
KIZT **Kizilcal** 75.21 306 *e*P **P** **00 32 55.4 -0.1**
SVRH **Sivrihisar-ESK** 75.30 307 *e*P **P** **00 32 55.9 -0.1**
LEOM **Leova** 75.31 314 ⇓P **P** **00 32 56.1 +0.3**
TLCR 75.36 313 ⇓P **P** **00 32 56.5 +0.5**
CSS **Mathiatis** 75.36 302 P **P** **00 32 56.7 +0.3**
CSS IAmb IAmb 00 33 04.0
comp=Z,94nm,1.0s
JURR **Jurilovca** 75.45 313 ⇑P **P** **00 32 58.2 +1.7**
KONS **Konsvik** 75.48 337 *e* **P** **00 32 55.1 -1.2**
VASR **Vaslui** 75.56 315 ⇑P **P** **00 32 58.0 +0.8**
LEF **Lefka** 75.66 302 ⇑P **P** **00 32 57.8 -0.1**
LEF **Lefka** 75.66 302 *e*P **P** **00 32 57.9 -0.1**
CIFT **Cifteler, Eski** 75.66 307 *e*P **P** **00 32 57.8 -0.2**
GULT **Gulveren** 75.71 308 *e*P **P** **00 32 58.6 +0.3**
GAZI **Gazipasa** 75.74 303 *e*P **P** **00 32 58.0 -0.5**
SAUV **Serdivan-Sakar** 75.75 308 *e*P **P** **00 32 57.8 -0.6**
TOPG **Topolog** 75.75 313 ⇑P **P** **00 32 58.2 -0.1**
SRCK **Saricakaya, Es** 75.76 308 *e*P **P** **00 32 57.6 -0.9**
VARL **Varlezi** 75.76 314 ⇑P **P** **00 33 00.5 +2.1**
PBUR **Paburge** 75.77 325 *e*P **P** **00 32 57.4 -0.8**
SPNC **Sapanca-Adapaz** 75.78 308 *e*P **P** **00 32 58.8 +0.2**
CFR **Carcaliu** 75.81 313 ⇓P **P** **00 32 58.3 -0.4**
TIRR **Tirgusor** 75.86 312 ⇑P **P** **00 32 58.9 0.0**
TIRR **Tirgusor** 75.86 312 ⇑P **P** **00 32 58.9 0.0**
TIRR **Tirgusor** 75.86 312 *i* P **P** **00 32 58.9 0.0**
TIRR **Tirgusor** 75.86 312 IAmb IAmb 00 33 08.2
comp=Z,81nm,0.9s
SCHL **Schela** 75.91 314 ⇓P **P** **00 33 00.4 +1.2**
MANR **Mangalia** 75.96 312 ⇑P **P** **00 32 59.7 +0.2**
GHRR 76.00 314 ⇑P **P** **00 33 00.5 +0.7**
TLBR **Topalu** 76.08 313 ⇑P **P** **00 33 01.3 +1.1**
SILT **Sile** 76.10 309 *e*P **P** **00 33 00.0 -0.4**
HARR **Harsova** 76.11 313 ⇓P **P** **00 33 00.2 -0.1**
C36M **Paulatuk** 76.15 19 P **P** **00 32 58.7 -1.4**
baz=301
C36M **Paulatuk** 76.15 19 IAmb IAmb 00 33 15.7
comp=Z,50nm,0.9s
C36M IAMs_20 IAMs_20 01 07 12.4
comp=Z,1μm,21.0s
HRT **Hereke** 76.19 309 *e*P **P** **00 33 01.3 +0.3**
PETR **Petresti** 76.23 314 ⇑P **P** **00 33 01.8 +0.8**
ADVT **Abdulvahap** 76.27 308 *e*P **P** **00 33 01.7 +0.3**
PSN **Preselentsi** 76.28 312 *i* P **P** **00 33 01.3 -0.1**
SKAG **Skagway** 76.29 31 IAMs_20 IAMs_20 01 09 55.6
comp=Z,1μm,18.0s
SHUT **Suhut-Afyon** 76.30 306 *e*P **P** **00 33 02.1 +0.3**
PRAR **RASCA** 76.32 316 ⇓P **P** **00 33 02.5 +0.9**
ODBI **Odobesti** 76.33 314 ⇓P **P** **00 33 05.3 +3.7**
TESR **Tescani** 76.34 315 ⇑P **P** **00 33 01.0 -0.6**
ICOR **Ion Corvin** 76.39 312 ⇓P **P** **00 33 02.5 +0.5**
YLV **Yalova** 76.49 308 *e*P **P** **00 33 02.1 -0.6**
KLYT **Kilyos** 76.50 309 *e*P **P** **00 33 01.5 -1.1**
VRI **Vrincioaia** 76.51 314 ⇑P **P** **00 33 03.0 +0.3**
GRER 76.52 314 ⇑P **P** **00 33 06.4 +3.7**
AMRR **Amara** 76.54 313 ⇑P **P** **00 33 06.6 +3.8**
BIZ **Bicaz** 76.55 315 ⇓P **P** **00 33 02.6 -0.3**
ISK **Istanbul-Kandi** 76.55 309 *e*P **P** **00 33 02.7 -0.2**
KAVV **Kandilli-Istan** 76.55 309 *e*P **P** **00 33 01.9 -1.0**
ISP **Isparta** 76.57 306 P **P** **00 33 03.1 -0.2**
ISP pmax pmax
comp=Z,51nm,0.9s
ISP **Isparta** 76.57 306 P **P** **00 33 03.1 -0.2**
ISP IAmb IAmb 00 33 10.9
comp=Z,51nm,0.9s
PLOR **Plostina** 76.57 314 ⇓P **P** **00 33 03.4 +0.3**
BISRR **Bisoca** 76.63 314 ⇑P **P** **00 33 04.3 +0.8**
BCK **Bucak** 76.64 305 *e*P **P** **00 33 03.1 -0.5**
GEMT **Gemlik** 76.67 308 *e*P **P** **00 33 03.3 -0.3**
ANTB **Antalya** 76.78 305 *e*P **P** **00 33 02.9 -1.4**
NSS **Namsos** 76.80 335 *e*P **P** **00 33 03.6 -0.3**
TVSB **Tavsanli** 76.80 307 *e*P **P** **00 33 04.6 0.0**
LVV **L'vov** 76.83 319 *e*P **P** **00 33 04.1 -0.2**
LVV *e* 00 33 14.1
LVV *e* 00 35 55.7
LVV *e* 00 37 43.6
LVV *e*S **S** **00 42 47.3 -3.7**
LVV *e* 00 43 17.9
ARMT **Armutlu** 76.86 309 *e*P **P** **00 33 04.5 -0.2**
DAG **Danmarks Havn** 76.86 351 ⇑ *i*P **P** **00 33 01.7 -2.3**
DAG pmax pmax
comp=Z,5.0nm,1.0s
DAG **Danmarks Havn** 76.86 351 ⇑ *i*P **P** **00 33 01.7 -2.3**
comp=Z,5.3nm,1.0s
BESE **Bessie Mountai** 76.87 32 IAMs_20 IAMs_20 01 10 13.9
comp=Z,1μm,19.0s
BUR08 **Bucovina Ar. S** 76.88 316 IAmb IAmb 00 33 13.5
comp=Z,95nm,1.9s
BURAR **Bucovina Array** 76.88 316 ⇑P **P** **00 33 05.1 +0.3**
CTKS **Kestanelik-??a** 76.88 309 *e*P **P** **00 33 03.5 -1.3**
ISR **Istrita** 76.89 314 ⇑P **P** **00 33 05.9 +1.0**
MDNY **Mudanya-Bursa** 76.91 308 *e*P **P** **00 33 03.9 -1.1**
CTYL **Yalikoy Yolu** 76.95 310 *e*P **P** **00 33 04.5 -0.7**
KORT **Korkueli** 76.97 305 *e*P **P** **00 33 05.7 +0.1**
PRD **Provadia** 76.98 312 *i* P **P** **00 33 06.2 +0.9**
NEF **NEVSHA** 77.04 312 *i* P **P** **00 33 06.3 +0.6**
OZUR 77.05 315 ⇓P **P** **00 33 06.2 +0.4**
SLVT **Silivri** 77.09 309 *e*P **P** **00 33 05.6 -0.4**
MLR **Muntele Rosu** 77.16 314 P **P** **00 33 06.2 -0.3**
comp=Z,20nm,0.8s,baz=337,slow=1.5,SNR=29
MLR **Muntele Rosu** 77.16 314 ⇓P **P** **00 33 07.0 +0.5**
MLR **Muntele Rosu** 77.16 314 IAmb IAmb 00 33 16.1
comp=Z,47nm,0.8s
SECR 77.24 314 ⇓P **P** **00 33 09.5 +2.7**
SULR 77.24 313 ⇑P **P** **00 33 07.0 +0.3**
SIT **Sitka** 77.25 33 IAmb IAmb 00 33 18.4
comp=Z,90nm,1.2s
SIT IAMs_20 IAMs_20 01 11 40.3
comp=Z,1μm,18.0s
SIMA **Simav-Kutahya** 77.28 307 *e*P **P** **00 33 06.9 -0.3**
KCTX **Karacabey (Bur** 77.32 308 *e*P **P** **00 33 06.6 -0.8**
DOPR **Dopca** 77.35 315 ⇑P **P** **00 33 07.6 +0.2**
ELL **Elmali** 77.39 305 *e*P **P** **00 33 07.7 -0.3**
PHSR **Pinarhisar** 77.44 310 *e*P **P** **00 33 07.2 -0.8**
RAZG **Razgrad** 77.46 312 ⇓P **P** **00 33 08.5 +0.4**
CRLT **Corlu** 77.46 309 *e*P **P** **00 33 07.8 -0.3**
ARCR **ARCALIA** 77.61 316 ⇑P **P** **00 33 09.5 +0.7**
EDC **Edincik** 77.65 309 *e*P **P** **00 33 08.2 -0.9**
KULA **Kula-Manisa** 77.71 307 *e*P **P** **00 33 09.8 +0.2**
MRMT **Marmara Adasi** 77.75 309 *e*P **P** **00 33 07.8 -2.0**
VOIR 77.77 314 ⇑P **P** **00 33 10.9 +1.1**
JMB **Yambol** 77.80 311 *i* P **P** **00 33 10.1 +0.2**
AKAS **Kas** 77.80 304 *e*P **P** **00 33 08.6 -1.7**
KSL **Kastellorizon** 77.85 304 P **P** **00 33 08.6 -1.7**
BALB **Balikesir** 77.88 308 *e*P **P** **00 33 10.2 -0.3**
BMR **Baia Mare** 77.94 317 ⇑P **P** **00 33 11.2 +0.6**
SZH **Strazhica** 77.96 312 *i* P **P** **00 33 10.5 -0.3**
BEL **Belsk** 77.98 321 *e*P **P** **00 33 10.5 -0.2**
BEL LMZ LR 01 10 20.3
comp=Z,3.8nm,18.0s
RKY **Sarkoy-Tekirda** 78.02 309 *e*P **P** **00 33 10.1 -1.2**
FETY **Fethiye** 78.05 305 *e*P **P** **00 33 10.8 -0.7**
ARR **Arges** 78.06 314 ⇑P **P** **00 33 11.5 +0.1**
TBLU **Trondheim** 78.07 334 *e*P **P** **00 33 07.3 -3.7**
HFS **Hagfors** 78.09 331 PP PP 00 36 07.2 0.0
comp=Z,6.1nm,1.0s,baz=96,slow=8.8,SNR=3.9
ELND **Elena** 78.12 312 ⇓P **P** **00 33 12.8 +1.0**
COPA **Copaceanca** 78.13 313 ⇑P **P** **00 33 11.3 -0.4**
HUMR **Humele** 78.14 313 ⇑P **P** **00 33 11.7 -0.2**
ZIMR 78.20 313 ⇑P **P** **00 33 13.4 +1.2**
CJR **Cluj-Napoca** 78.23 316 ⇑P **P** **00 33 12.6 +0.2**
DALY **Dalyan (Mula)** 78.31 305 *e*P **P** **00 33 11.9 -1.0**
UZH **Uzhgorod** 78.32 318 *e*P **P** **00 33 11.3 -1.4**
UZH *i* 00 33 18.5
UZH *e* 00 33 22.7
UZH *e* 00 36 04.3
UZH *i* S **S** **00 43 02.0 -5.2**
UZH *e*PS **PnS** **00 43 46.0 -3.1**
UZH *e*SS **SS** **00 48 07.6 -1.6**
UZH *i* SSS SSS 00 51 25.0
TURN **Turunc** 78.33 305 *e*P **P** **00 33 14.1 +1.1**
TRPA **Tarpa** 78.36 317 ⇑P **P** **00 33 12.8 -0.1**
YER **Yerkesik** 78.48 305 *e*P **P** **00 33 14.2 +0.3**
AYDB **Zeytinkoy-Aydi** 78.48 306 *e*P **P** **00 33 14.5 +0.5**
ERIK **Erikli-Kesan** 78.49 309 *e*P **P** **00 33 13.9 +0.1**
LOT **Lotru** 78.60 315 ⇑P **P** **00 33 14.6 +0.1**
NC303 **NORSAR Array S** 78.60 332 IAmb IAmb 00 33 39.3
comp=Z,113nm,1.3s
GELI **Tayfur-Gelibol** 78.62 309 *e*P **P** **00 33 12.7 -1.8**
NB201 **NORSAR Array S** 78.71 332 IAmb IAmb 00 33 39.7
comp=Z,84nm,1.1s
VLAD **Vladila** 78.72 313 ⇑P **P** **00 33 15.0 -0.1**
ENEZ **Enez** 78.72 310 *e*P **P** **00 33 15.2 +0.1**
ALN **Alexandroupoli** 78.74 310 P **P** **00 33 13.9 -1.3**
NB2 **NORSAR Subarra** 78.75 332 P **P** **00 33 13.7 -1.2**
comp=Z,356nm,3.3s,baz=58,slow=5.9
NB2 **NORSAR Subarra** 78.75 332 P **P** **00 33 13.7 -1.2**
baz=58,slow=5.9
NOA **NORSAR Array B** 78.75 332 P **P** **00 33 13.4 -1.5**
comp=Z,12nm,0.8s,baz=58,slow=5.6,SNR=44
NOA LR LR 01 12 00.4
comp=Z,6μm,18.7s,baz=70,slow=39
NC602 **NORSAR Array S** 78.76 332 IAmb IAmb 00 33 39.8
comp=Z,92nm,1.5s
NC602 **NORSAR Array S** 78.76 332 *e*P **P** **00 33 13.6 -1.3**
DRGR 78.77 316 ⇑P **P** **00 33 15.1 -0.3**
DKL **Dikili** 78.79 308 *e*P **P** **00 33 14.3 -1.2**
PLVB **Pleven** 78.81 312 ⇓P **P** **00 33 15.1 -0.4**
KDZ **Kurdzhali** 78.91 311 *i* P **P** **00 33 16.4 +0.3**
ARG **Arkhangelos** 78.92 305 P **P** **00 33 15.4 -0.9**
EZN **Ezine** 78.94 309 *e*P **P** **00 33 15.9 -0.4**
BLCB **Balcova** 78.94 307 *e*P **P** **00 33 16.2 -0.1**
NAO01 **NORSAR Array S** 78.99 332 IAmb IAmb 00 33 40.4
comp=Z,71nm,1.3s
DEV **Deva** 78.99 315 ⇑P **P** **00 33 16.8 +0.3**
RDO **Rodhopi** 79.01 310 P **P** **00 33 15.7 -0.9**
GCAM **G?zelcaml?** 79.05 306 *e*P **P** **00 33 17.4 +0.5**
RES **Resolute Bay** 79.08 9 IAMs_20 IAMs_20 01 08 20.4
comp=Z,2μm,20.0s
DOMB **Dombas** 79.15 334 *e*P **P** **00 33 17.0 -0.1**
PRK **Paraskevi** 79.19 308 P **P** **00 33 17.9 +0.2**
OJC **Ojcow** 79.19 320 *e*P **P** **00 33 17.2 -0.3**
OJC *e*S **S** **00 43 12.9 -3.6**
OJC LMZ LR 01 11 04.2
comp=Z,2.7nm,18.3s
OJC **Ojcow** 79.19 320 IAmb IAmb 00 33 26.4
comp=Z,100nm,1.2s
DLBC **Dease Lake** 79.21 31 IAMs_20 IAMs_20 01 12 03.8
comp=Z,1μm,18.0s
NIE **Niedzica** 79.22 319 *e*P **P** **00 33 18.0 +0.3**
NIE *e*PP **PP** **00 36 15.3 -1.7**
NIE *e*S **S** **00 43 16.0 -0.9**
NIE LMZ LR 01 14 08.6
comp=Z,2.2nm,17.0s
BODT **Bodrum** 79.23 306 *e*P **P** **00 33 17.2 -0.8**
PLD **Plovdiv** 79.23 311 *i* P P 00 33 10.0 -7.8
SMTH **Samothraki Isl** 79.26 309 P **P** **00 33 17.2 -0.9**
GZR **Gura Zlata** 79.27 315 ⇓P **P** **00 33 19.1 +1.0**
URLA **Izmir** 79.28 307 *e*P **P** **00 33 17.6 -0.6**
SMG **Samos** 79.34 306 P **P** **00 33 16.5 -2.1**
GKP **Gorka Klasztor** 79.37 324 *e*P **P** **00 33 17.6 -0.7**
GKP LMZ LR 01 11 56.6
comp=Z,5.4nm,21.4s
RZN **Rozhen** 79.38 311 *i* P **P** **00 33 18.6 -0.3**
BAIL **Bailesti** 79.42 313 ⇑P **P** **00 33 19.1 +0.2**
PGB **Panagyurishte** 79.43 312 *i* P **P** **00 33 19.3 +0.3**
MOL **Molde** 79.49 334 *e*P **P** **00 33 19.2 +0.4**
SIGR **SIGRI** 79.50 308 P **P** **00 33 15.9 -3.5**
OSL **Oslo** 79.50 331 *e*P **P** **00 33 17.3 -1.6**
PUNG **Punghina** 79.59 314 ⇓P **P** **00 33 20.0 +0.2**
SIRR **Siria** 79.64 316 ⇓P **P** **00 33 20.9 +0.9**
CHOS **Chios island** 79.66 307 P **P** **00 33 18.8 -1.6**
HERR **Herculane** 79.70 314 ⇓P **P** **00 33 20.4 +0.1**
LIA **Limnos Island** 79.72 309 P **P** **00 33 19.7 -0.9**
TULEG **Thule** 79.77 2 IAMs_20 IAMs_20 01 13 26.7
comp=Z,2μm,20.0s
KAVA **Kavala** 79.78 310 P **P** **00 33 20.1 -0.8**
BSD **Bornholm Skovb** 79.78 326 ⇑ *i*P **P** **00 33 19.4 -1.2**
BSD pmax pmax
comp=Z,14nm,1.0s
BSD **Bornholm Skovb** 79.78 326 ⇑ *i*P **P** **00 33 19.4 -1.2**
comp=Z,14nm,1.0s
THAS **Thassos island** 79.78 310 P **P** **00 33 19.7 -1.2**
LANS **Liptovska Anna** 79.83 319 *e*P **P** **00 33 23.6 +2.6**
LANS pmax pmax
comp=Z,28nm,1.7s
LANS **Liptovska Anna** 79.83 319 *e*P **P** **00 33 23.6 +2.6**
AKN **Aaknes** 79.91 334 *e*P **P** **00 33 20.6 -0.6**
FURI **Furi** 79.92 275 P **P** **00 33 23.3 +0.9**
BZS **Buzias** 79.93 315 ⇓P **P** **00 33 22.6 +1.0**
VTS **Vitosha** 80.04 312 ⇑P **P** **00 33 22.5 +0.1**
VTS **Vitosha** 80.04 312 *i* P **P** **00 33 22.7 +0.3**
VTS **Vitosha** 80.04 312 IAmb IAmb 00 33 30.7
comp=Z,66nm,0.9s
PSZ **Piszkesteto** 80.08 318 ⇑P **P** **00 33 22.2 -0.2**
PSZ **Piszkesteto** 80.08 318 IAmb IAmb 00 33 35.8
comp=Z,154nm,1.9s
NVR **Nevrokopi** 80.10 311 P **P** **00 33 21.1 -1.5**
MMB **Musomiste** 80.10 311 *i* P **P** **00 33 21.8 -0.8**
KONO **Kongsberg** 80.14 331 *c i*P **P** **00 33 20.7 -1.7**
KONO pmax pmax
comp=Z,24nm,2.5s
KONO MLR MLR
comp=Z,14μm,16.0s
KONO **Kongsberg** 80.14 331 P **P** **00 33 22.8 +0.4**
KONO **Kongsberg** 80.14 331 *e*P **P** **00 33 21.1 -1.4**
SKAR **Skarslia** 80.17 333 *e*P **P** **00 33 22.0 -0.7**
MDVR **Moldovita** 80.20 315 ⇑P **P** **00 33 22.9 -0.2**
OKC **Ostrava-Krasne** 80.32 320 *e*P **P** **00 33 23.6 0.0**
OKC *e*S **S** **00 43 28.7 +0.3**
OKC MLR MLR
comp=Z,2μm,16.5s
OKC **Ostrava-Krasne** 80.32 320 *e*P **P** **00 33 23.6 0.0**
OKC *e*S **S** **00 43 28.7 +0.3**
OKC AMS AMS 01 11 30.0
comp=Z,2μm,16.5s
H02N1 **VAN INLET T-PH** 80.32 36 P **P** **00 33 24.6 +0.9**
BANR **Banloc** 80.33 315 ⇑P **P** **00 33 24.1 +0.3**
SRS **Serrai** 80.38 311 P **P** **00 33 22.3 -1.8**
H02S1 **DAWSON INLET T** 80.38 36 P **P** **00 33 23.2 -0.6**
OUR **Ouranopolis** 80.41 310 P **P** **00 33 23.6 -0.6**
KKB **Krupnik** 80.44 311 *i* P **P** **00 33 23.9 -0.5**
VYHS **Vyhne** 80.48 319 *e*P **P** **00 33 24.6 +0.1**
VYHS pmax pmax
comp=Z,70nm,1.2s
VYHS **Vyhne** 80.48 319 *e*P **P** **00 33 24.6 +0.1**
VYHS *e*L L 01 13 10.4
MOBC **Moresby Island** 80.68 36 IAMs_20 IAMs_20 01 14 11.1
comp=Z,1μm,18.0s
MORC **Moravsky Berou** 80.70 320 *e*P **P** **00 33 25.2 -0.5**
MORC **Moravsky Berou** 80.70 320 ⇑P **P** **00 33 25.5 -0.2**
URZ **Urewera** 80.76 139 P **P** **00 33 25.5 -0.5**
comp=Z,10nm,1.0s,baz=343,slow=11,SNR=2.3
URZ LR LR 01 05 27.4
comp=Z,494nm,20.8s,baz=316,slow=33
PLG **Polygyros** 80.77 310 P **P** **00 33 25.1 -1.2**
PAIG **Paliouri** 80.78 309 P **P** **00 33 25.2 -1.1**
HYA **Hoyanger** 80.78 334 *e*P **P** **00 33 25.5 -0.3**
KNT **Kendrikon** 80.84 311 P **P** **00 33 25.6 -1.0**
IOSP **Ios island** 80.86 306 P **P** **00 33 24.4 -2.4**
RGN **Rugen** 80.86 326 *e*P **P** **00 33 24.4 -2.0**
RGN **Rugen** 80.86 326 *e*P **P** **00 33 26.0 -0.4**
comp=Z,56nm,1.2s,baz=59,slow=5.0
SANT **Santorini** 80.87 306 P **P** **00 33 26.6 -0.3**
HORT **Hortiatis** 80.92 310 P **P** **00 33 25.1 -2.1**
AOS **Alonnisos** 80.93 309 P **P** **00 33 25.6 -1.5**
KSP **Ksiaz** 80.95 322 *e*P **P** **00 33 26.8 -0.2**
KSP *e*PP **PP** **00 36 32.1 +0.9**
KSP LMZ LR 01 12 32.1
comp=Z,2.6nm,19.2s
KYMI **Kymi, Euboea I** 80.99 308 P **P** **00 33 26.2 -1.2**
THE **Thessaloniki** 81.00 310 P **P** **00 33 26.1 -1.3**
VAY **Valandovo** 81.00 311 *i* P **P** **00 33 26.6 -0.9**
VAY **Valandovo** 81.00 311 *i* P **P** **00 33 26.6 -0.9**
FOO **Floro** 81.01 334 *e*P **P** **00 33 25.9 -1.1**
JAVC **Velka Javorina** 81.02 320 *e*P **P** **00 33 28.5 +1.0**

SRO2 Moca 81.06 318 *e*P **P 00 33 28.1 +0.5**
SRO2 pmax pmax
comp=Z,12nm,0.8s
SRO2 Moca 81.06 318 *e*P **P 00 33 28.1 +0.5**
RPZ Rata Peaks 81.06 146 P **P 00 33 26.7 -0.8**
comp=Z,22nm,1.0s,baz=315,slow=7.1,SNR=3.0
RPZ LR LR 01 07 01.6
comp=Z,578nm,19.8s,baz=320,slow=34
RPZ Rata Peaks 81.06 146 IAmb IAmb 00 36 01.4
comp=Z,199nm,2.0s
STIP Stip 81.12 312 *i* P **P 00 33 26.2 -1.8**
STIP Stip 81.12 312 *i* P **P 00 33 26.2 -1.8**
OSTC Ostas 81.12 321 *e*P **P 00 33 29.7 +1.8**
OSTC *e*S **S 00 43 32.8 -4.0**
OSTC AMS AMS 01 14 10.0
comp=Z,4μm,14.4s
DPC Dobruska-Polom 81.16 321 *e*P **P 00 33 28.7 +0.6**
DPC *e*S **S 00 43 33.6 -3.6**
DPC MLR MLR
comp=Z,3μm,15.9s
DPC Dobruska-Polom 81.16 321 *e*P **P 00 33 28.7 +0.6**
DPC *e*S **S 00 43 33.6 -3.6**
DPC AMS AMS 01 12 10.0
comp=Z,3μm,15.9s
NPS Neapolis 81.18 305 P **P 00 33 28.1 -0.4**
CHVC Chvalec 81.20 322 *e*P **P 00 33 30.0 +1.6**
CHVC AMS AMS 01 12 30.0
comp=Z,3μm,16.2s
SKIA Skiathos 81.23 309 P **P 00 33 26.6 -2.1**
UPC Upice 81.26 321 *e*P **P 00 33 30.4 +1.7**
UPC *e* 00 33 33.8
UPC *e*S **S 00 43 34.7 -3.5**
UPC MLR MLR
comp=Z,4μm,14.8s
UPC Upice 81.26 321 *e*P **P 00 33 30.4 +1.7**
UPC *e*pP **PcP 00 33 33.8 -1.0**
UPC *e*S **S 00 43 34.7 -3.5**
UPC AMS AMS 01 14 10.0
comp=Z,4μm,14.8s
FRGS Fruska Gora 81.28 315⇑*i*P **P 00 33 28.3 -0.6**
SERI Serifos 81.28 307 P **P 00 33 26.7 -2.3**
LAST Lasithi 81.32 304 P **P 00 33 29.1 -0.2**
SMOL Smolenice 81.32 319 *e*P **P 00 33 29.4 +0.4**
SMOL pmax pmax
comp=Z,35nm,1.7s
SMOL Smolenice 81.32 319 *e*P **P 00 33 29.4 +0.4**
DION Dionisos Attik 81.33 308 P **P 00 33 26.7 -2.6**
MRKA Markates 81.33 308 P **P 00 33 26.1 -3.1**
HOMB Homborsund 81.34 331 *e*P **P 00 33 26.2 -2.6**
XOR Xorichti 81.35 309 P **P 00 33 26.4 -3.0**
NEO Neokhori 81.35 309 P **P 00 33 27.3 -2.1**
SUE Sulen 81.42 334 *e*P **P 00 33 30.1 +0.8**
VRAC Vranov 81.46 320 P **P 00 33 29.9 +0.1**
comp=Z,6.9nm,0.7s,baz=65,slow=5.7,SNR=19
VRAC Vranov 81.46 320 *e*P **P 00 33 29.4 -0.4**
VRAC Vranov 81.46 320⇑P **P 00 33 29.9 +0.1**
MODS Modra-Piesok 81.47 319 *e*P **P 00 33 29.1 -0.7**
MODS Modra-Piesok 81.47 319 *e*P **P 00 33 29.1 -0.7**
VLY Voula,Athens 81.52 308 P **P 00 33 27.8 -2.4**
SKO Skopje 81.52 312 *i* P **P 00 33 30.4 +0.2**
SKO Skopje 81.52 312 *i* P **P 00 33 30.4 +0.2**
LIT Litokhoron 81.55 310 P **P 00 33 28.9 -1.5**
LIT Litokhoron 81.55 310 IAmb IAmb 00 33 33.7
comp=Z,182nm,2.0s
BER Bergen 81.57 333 *e*P **P 00 33 28.9 -1.1**
ASK Askoy 81.57 333 *e*P **P 00 33 30.6 +0.6**
MORH Mrgy, Hungar 81.57 317⇑*i*P **P 00 33 29.8 -0.5**
RUE Ruedersdorf 81.59 324 *e*P **P 00 33 28.3 -2.0**
RUE Ruedersdorf 81.59 324 *e*P **P 00 33 29.9 -0.4**
comp=Z,48nm,0.9s,baz=59,slow=5.0
DIVS Divibare 81.60 314⇑*i*P **P 00 33 29.5 -1.2**
BLS5 Blasjo 81.62 332 *e*P **P 00 33 30.8 +0.4**
GOET G??ttrup 81.65 329 *i* P **P 00 33 32.3 +1.8**
comp=Z,139nm,1.0s
ZST Bratislava 81.65 319 *e*P **P 00 33 30.6 -0.1**
ZST Bratislava 81.65 319 *e*P **P 00 33 30.6 -0.1**
KRUC Moravsky 81.69 320 *e*P **P 00 33 30.3 -0.6**
IDI Anoyia 81.71 305 P **P 00 33 30.2 -1.2**
IDI Anoyia 81.71 305 P **P 00 33 31.0 -0.4**
comp=Z,5.4nm,0.6s,baz=75,slow=12,SNR=3.0
IDI Anoyia 81.71 305⇑P **P 00 33 30.9 -0.5**
VILL Villia 81.74 308 P **P 00 33 29.1 -2.4**
LKR Lokris 81.77 309 P **P 00 33 29.3 -2.3**
KULLO Kullorsuaq 81.93 360⇑*i*P **P 00 33 29.8 -1.9**
KULLO pmax pmax
comp=Z,26nm,1.3s
KULLO Kullorsuaq 81.93 360⇑*i*P **P 00 33 29.8 -1.9**
comp=Z,26nm,1.3s
AXAR Agios Charalam 81.97 309 P **P 00 33 30.8 -1.8**
KZN Kozani 81.97 310 P **P 00 33 30.8 -1.9**
MUD Monsted U'grnd 81.97 329 *i* P **P 00 33 31.1 -1.1**
MUD pmax pmax
comp=Z,61nm,1.6s
MUD Monsted U'grnd 81.97 329 *i* P **P 00 33 31.1 -1.1**
comp=Z,61nm,1.6s
FNA Florina 82.05 311 P **P 00 33 31.4 -1.7**
FNA Florina 82.05 311 IAmb IAmb 00 33 40.1
comp=Z,174nm,2.0s
FNA IAMs_20 IAMs_20 01 16 07.1
comp=Z,1μm,21.0s
PVCC Panska Ves 82.07 322 *e*P **P 00 33 33.6 +0.7**
PVCC MLR MLR
comp=Z,3μm,16.0s
PVCC Panska Ves 82.07 322 *e*P **P 00 33 33.6 +0.7**
PVCC AMS AMS 01 14 40.0
comp=Z,3μm,16.0s
BBLS Lazići 82.08 314⇑*i*P **P 00 33 32.9 -0.3**
AGG Agios Georgios 82.10 309 P **P 00 33 31.1 -2.2**
THL Klokotos Trika 82.10 310 P **P 00 33 30.8 -2.5**
TREC Trest 82.11 321 AMS AMS 01 12 40.0
comp=Z,4μm,16.7s
KRND KRANIDI 82.17 307 P **P 00 33 29.3 -4.4**
VAM Vamos 82.18 305 P **P 00 33 32.4 -1.4**
IVA Berane 82.19 313⇑*i*P **P 00 33 34.0 +0.2**
GOPC GO Pecny, Ondr 82.23 321 *e*P **P 00 33 34.0 +0.2**
GOPC *e*S **S 00 43 48.9 +0.6**
GOPC MLR MLR
comp=Z,3μm,15.5s
GOPC GO Pecny, Ondr 82.23 321 *e*P **P 00 33 34.0 +0.2**
GOPC *e*S **S 00 43 48.9 +0.6**
GOPC AMS AMS 01 13 00.0
comp=Z,3μm,15.5s
MAKR Makrakomi, Fth 82.24 309 P **P 00 33 33.2 -0.9**
PVY Plav 82.26 313⇑*i*P **P 00 33 33.1 -1.1**
BRG Berggiesshubel 82.26 322 *e*P **P 00 33 34.0 +0.1**
comp=Z,51nm,2.0s
BRG *i* 00 33 40.3
comp=Z,43nm,1.5s
BRG *e*PP PP 00 36 31.5 -10
comp=Z,14nm,1.5s
BRG S **S 00 43 51.0 +2.5**
BRG SS **SS 00 49 07.0 -0.9**
comp=N,4μm,16.0s
comp=E,4μm,13.8s
comp=Z,6μm,14.0s
BRG Berggiesshubel 82.26 322 *e*P **P 00 33 33.4 -0.5**
comp=Z,81nm,1.9s,baz=59,slow=5.0
HAPS Han Pijesak,BI 82.29 315 *e*P **P 00 33 32.8 -1.5**
OHR Ohrid 82.31 311 *i* P **P 00 33 34.2 -0.2**
OHR Ohrid 82.31 311 *i* P **P 00 33 34.2 -0.2**
PHP Peshkopia 82.31 312 P **P 00 33 33.3 -1.1**
PLE Pljevlja 82.32 314⇑*i*P **P 00 33 34.1 -0.4**
IMMV Iera Moni Meta 82.33 305 P **P 00 33 32.9 -1.6**
PRU Pruhonice 82.34 321 *e*P **P 00 33 34.2 -0.1**
PRU *e*S **S 00 43 46.2 -3.1**
PRU MLR MLR
comp=Z,3μm,17.3s
PRU Pruhonice 82.34 321 *e*P **P 00 33 34.2 -0.1**
PRU *e*S **S 00 43 46.2 -3.1**
PRU AMS AMS 01 14 40.0
comp=Z,3μm,17.3s
KPRO Kipourio 82.40 310 P **P 00 33 33.0 -1.9**
KOME Kolasin 82.44 313⇓*i*P **P 00 33 34.7 -0.5**
KALE Kalithea 82.49 309 P **P 00 33 33.0 -2.4**
GVD Gavdhos 82.49 305 P **P 00 33 34.1 -1.3**
EVR Evrytania 82.51 309 P **P 00 33 33.8 -1.8**
CONA Conrad Observa 82.52 319 *e*P **P 00 33 35.0 -0.4**
comp=Z,34nm,1.6s,SNR=14
CONA PP **PP 00 36 44.4 +0.1**
comp=Z,26nm,1.6s
SERG Sergoula 82.54 309 P **P 00 33 33.5 -2.2**
TRIZ Trizonia 82.55 309 P **P 00 33 32.2 -3.4**
SCO Scoresbysund 82.56 348⇑*i*P **P 00 33 33.5 -1.6**
SCO pmax pmax
comp=Z,12nm,1.2s
SCO Scoresbysund 82.56 348 IAMs_20 IAMs_20 01 08 02.8
comp=Z,1μm,22.0s
SCO Scoresbysund 82.56 348⇑*i*P **P 00 33 33.5 -1.6**
comp=Z,12nm,1.2s
ANX Ano Chora 82.57 309 P **P 00 33 34.0 -1.9**
FBE Freiberg 82.57 323 *e*P **P 00 33 35.3 -0.2**
comp=Z,86nm,1.6s,baz=59,slow=5.0
CLL Collm 82.58 323⇑*i*P **P 00 33 35.7 +0.2**
comp=Z,47nm,1.8s
CLL *e*Pmax 00 33 40.0
CLL *i* (sP) **sP 00 33 43.8 -0.2**
CLL *e*PP **PP 00 36 43.0 -1.5**
CLL *e*PPP PPP 00 38 36.0
CLL *e*PPPP 00 39 54.0
CLL *e*S **S 00 43 47.0 -4.7**
CLL *e*PS 00 44 42.0
CLL *e*SS **SS 00 49 11.0 -1.5**
CLL *e*(SSS) 00 53 18.0
CLL *e*SSSS 00 55 30.0
CLL Lmax 01 15 00.0
CLL Collm 82.58 323 *e*P **P 00 33 35.7 +0.2**
comp=Z,42nm,1.3s,baz=59,slow=5.0
CLL Collm 82.58 323⇑*i*P **P 00 33 35.7 +0.2**
CLL *i* 00 33 43.8
CLL *e*S **S 00 43 47.0 -4.7**
CLL pmax pmax
comp=Z,47nm,1.8s
VLI Velíai 82.59 307 P **P 00 33 33.0 -2.9**
KLV Kalavryta, Ach 82.63 308 P **P 00 33 33.5 -2.7**
EFP Efpalio 82.64 309 P **P 00 33 33.7 -2.4**
ANKY Antikythira Is 82.67 306 P **P 00 33 34.6 -1.7**
UPM Unac-Piva 82.70 314 *e*P **P 00 33 39.0 +2.4**
UPM Unac-Piva 82.70 314⇑*i*P **P 00 33 36.2 -0.4**
BSEG Bad Segeberg 82.70 326 *e*P **P 00 33 35.6 -0.4**
comp=Z,32nm,1.2s,baz=59,slow=5.0
VLX Vlachokerasia 82.74 308 P **P 00 33 33.8 -3.0**
SKMB Sankelmark Bun 82.74 327 *e*P **P 00 33 36.2 -0.1**
comp=Z,80nm,0.8s,baz=59,slow=5.0
PDG Podgorica 82.80 313⇑P **P 00 33 36.5 -0.3**
PDG Podgorica 82.80 313⇑*i*P **P 00 33 36.0 -0.8**
PDG Podgorica 82.80 313 IAMs_20 IAMs_20 01 14 27.8
comp=Z,1μm,20.0s
TTG Podgorica 82.80 313⇓*i*P **P 00 33 36.1 -0.8**
NKY Niksic 82.81 314⇑*i*P **P 00 33 37.1 0.0**
TIR Tirane 82.85 312 P **P 00 33 36.2 -1.0**
TIR Tirane 82.85 312⇑P **P 00 33 37.1 0.0**
TIR Tirane 82.85 312 P **P 00 33 36.6 -0.6**
TIR pmax pmax
comp=Z,100nm,1.3s
TIR Tirane 82.85 312 P **P 00 33 36.6 -0.6**
TIR IAmb IAmb 00 34 04.4
comp=Z,100nm,1.3s
TIR IAMs_20 IAMs_20 01 15 44.4
comp=Z,1μm,21.0s
NKME Niksic 82.86 314⇑*i*P **P 00 33 36.4 -0.8**
JAN Janina 82.88 310 P **P 00 33 35.4 -2.0**
DRME Dracevica, Mon 82.95 313⇑*i*P **P 00 33 37.0 -0.7**
DRME Dracevica, Mon 82.95 313⇓*i*P **P 00 33 37.2 -0.5**
KOGS Kog 82.95 318 *i* P **P 00 33 37.1 -0.5**
KOGS *e*PP **PP 00 36 49.6 +1.8**
KALN Kalnik 82.97 317 *i* P **P 00 33 37.2 -0.5**
CEME Cevo 82.97 313⇓*i*P **P 00 33 37.0 -0.9**
DRO Drossia 82.98 308 P **P 00 33 36.6 -1.3**
SUMG Summit 82.99 354 *i* P **P 00 33 36.2 -1.6**
SUMG Summit 82.99 354 P **P 00 33 36.7 -1.1**
SUMG IAmb IAmb 00 34 02.5
comp=Z,95nm,2.0s
SUMG IAMs_20 IAMs_20 01 15 30.9
comp=Z,1μm,19.0s
SUMG Summit 82.99 354 *i* P **P 00 33 36.2 -1.6**
ULC Ulcinj 83.01 313⇑*i*P **P 00 33 37.3 -0.7**
MOSL Moslavina 83.02 317 *i* P **P 00 33 37.0 -1.0**
ARSA Arzberg 83.03 319 *e*P **P 00 33 37.4 -0.6**
comp=Z,11nm,1.2s
BRY Bratogost 83.07 314 *e*P **P 00 33 38.2 -0.3**
BRY Bratogost 83.07 314⇓*i*P **P 00 33 38.4 -0.1**
BUM Brajici-Budva 83.10 313⇓*i*P **P 00 33 35.2 -3.3**
RLS Riolos of Patr 83.11 308 P **P 00 33 36.8 -1.8**
BLY Banja Luka 83.14 316⇑*i*P **P 00 33 38.3 -0.3**
ITM Ithomi 83.14 308 P **P 00 33 37.2 -1.6**
AMT Artemida-Makis 83.16 308 P **P 00 33 37.1 -1.8**
TPE Tepelena 83.20 311 P **P 00 33 37.6 -1.4**
YKA Yellowknife Ar 83.29 23 P **P 00 33 37.8 -1.2**
comp=Z,46nm,1.1s,baz=314,slow=4.6,SNR=143
YKA PKKP **PKKPdf 00 51 45.7 -4.2**
comp=Z,0.1nm,0.2s,baz=170,slow=3.6,SNR=4.0
YKA PKKPbc **PKKPbc 00 51 56.4 -3.8**
comp=Z,0.6nm,0.7s,baz=124,slow=2.9,SNR=8.5
YKA LR LR 01 13 50.9
comp=Z,1μm,18.4s,baz=0.0,slow=38
IGT Igoumenitsa 83.30 310 P **P 00 33 37.6 -1.9**
KHC Kasperske Hory 83.30 321 *e*P **P 00 33 39.2 -0.2**
KHC *e* 00 36 50.5
KHC *e*S **S 00 43 57.5 -1.7**
KHC MLR MLR
comp=Z,4μm,16.3s
KHC Kasperske Hory 83.30 321 *e*P **P 00 33 39.2 -0.2**
KHC *ex* x 00 33 55.5
KHC *e*PP **PP 00 36 50.5 -0.1**
KHC *e*S **S 00 43 57.5 -1.7**
KHC AMS AMS 01 13 30.0
comp=Z,4μm,16.3s
KHC Kasperske Hory 83.30 321 IAMs_20 IAMs_20 01 13 60.0
comp=Z,1μm,22.0s
HCY Herceg Novi 83.30 313⇓*i*P **P 00 33 39.4 -0.1**
NEUB Neuenburg 83.30 323 *e*P **P 00 33 38.6 -0.7**
comp=Z,56nm,1.2s,baz=59,slow=5.0
TANN Tannenbergstha 83.31 322 *e*P **P 00 33 38.9 -0.6**
comp=Z,83nm,1.5s,baz=59,slow=5.0
MGRS Mrkonjic Grad 83.35 316 *e*P **P 00 33 41.3 +1.6**
GEC2 GERESS Array S 83.36 321 *e*P **P 00 33 39.3 -0.5**
comp=Z,35nm,1.2s,baz=59,slow=5.0
GEC2 *e*PP **PP 00 36 50.8 -0.4**
baz=60,slow=8.5
GEC2 GERESS Array S 83.36 321 P **P 00 33 39.7 -0.1**
GEC2 IAmb IAmb 00 33 57.9
comp=Z,30nm,1.0s
GERES GERESS Array B 83.36 321 P **P 00 33 39.3 -0.5**
comp=Z,7.2nm,0.7s,baz=57,slow=4.9,SNR=62
GERES LR LR 01 14 03.5
comp=Z,3μm,18.8s,baz=60,slow=38
PTJ Puntijarka 83.38 317 P **P 00 33 38.8 -1.1**
SRN Sarande 83.38 311 P **P 00 33 38.4 -1.5**
LKD2 Lefkada island 83.38 309 P **P 00 33 37.8 -2.2**
PYL PYLOS 83.40 307 P **P 00 33 37.9 -2.2**
ZAG Zagreb 83.40 317⇑*i*P **P 00 33 39.8 -0.1**
ZAG Zagreb 83.40 317 P **P 00 33 39.7 -0.1**
NKC Novy Kostel 83.41 322 *e*P **P 00 33 40.5 +0.6**
NKC *e*S **S 00 43 56.5 -3.8**
NKC Novy Kostel 83.41 322 *e*P **P 00 33 40.5 +0.6**
NKC *e*S S 00 43 56.5 -3.8
NKC AMS AMS 01 14 20.0
GUNZ Gunzen 83.41 322 *e*P **P 00 33 39.4 -0.5**
comp=Z,45nm,1.5s,baz=59,slow=5.0
GUNZ *e*PP **PP 00 36 51.2 -0.3**
baz=60,slow=8.5
WERN Wernitzgruen 83.42 322 *e*P **P 00 33 39.5 -0.4**
comp=Z,51nm,1.4s,baz=59,slow=5.0
ASSE Asse, Remlinge 83.43 325 *e*P **P 00 33 39.5 -0.3**
comp=Z,37nm,1.6s,baz=59,slow=5.0
DBRK Dubrovnik 83.43 314 *i* P **P 00 33 38.8 -1.3**
PLN Plauen 83.45 323 *e*P **P 00 33 39.5 -0.5**
comp=Z,43nm,1.5s,baz=59,slow=5.0
VLO Vlora 83.48 311 P **P 00 33 39.8 -0.6**
MOA Molln 83.51 320 *e*P **P 00 33 40.2 -0.3**
comp=Z,44nm,1.1s,SNR=13
NRDL Niedersach Rie 83.54 325 *e*P **P 00 33 40.4 0.0**
comp=Z,70nm,1.7s,baz=59,slow=5.0
PERS Pernice 83.56 318 *i* P **P 00 33 40.0 -0.8**
PERS *e*PP **PP 00 36 54.9 +2.1**
PERS *e*SKSac **S 00 43 58.3 -3.7**
PERS *e*S **SKKSac 00 44 07.0 -0.3**
KFL Anninata 83.58 309 P **P 00 33 39.5 -1.5**
FSK Fiskardo 83.59 309 P **P 00 33 39.3 -1.7**
KEK Kerkira 83.59 311 P **P 00 33 39.3 -1.7**
SOKA Soboth 83.59 318 *e*P **P 00 33 40.2 -0.8**
comp=Z,17nm,1.1s,SNR=16
STON Ston 83.64 314⇑*i*P **P 00 33 39.6 -1.6**
STON Ston 83.64 314 *i* P **P 00 33 39.2 -2.0**
MOX Moxa 83.67 323 *e*P **P 00 33 40.7 -0.5**
comp=Z,29nm,1.4s,baz=59,slow=5.0
MOX *e*PP **PP 00 36 54.4 +0.9**
baz=60,slow=8.5
WET Wettzell 83.69 321 *e*P **P 00 33 41.2 -0.2**
comp=Z,42nm,1.5s,baz=59,slow=5.0
WET *e*PP **PP 00 36 54.6 +0.8**
baz=60,slow=8.5
MANZ Manzenberg 83.72 322 *e*P **P 00 33 41.2 -0.3**
comp=Z,35nm,1.3s,baz=59,slow=5.0
RICI Ricice 83.73 315 P **P 00 33 39.4 -2.3**
CRES Cresnjev 83.73 317⇑*i*P **P 00 33 41.1 -0.5**
CLZ Clausthal 83.74 324 *e*P **P 00 33 41.4 -0.2**
comp=Z,51nm,1.1s,baz=59,slow=5.0
ROTZ Rotzenmuhle 83.77 322 *e*P **P 00 33 41.5 -0.2**
comp=Z,52nm,1.4s,baz=59,slow=5.0
RETH Rethem/Aller, 83.81 325 *e*P **P 00 33 41.4 -0.4**
comp=Z,69nm,1.9s,baz=59,slow=5.0
OZLJ Ozalj 83.82 317 *i* P **P 00 33 41.6 -0.4**
MAKA Makarska 83.90 315 *i* P **P 00 33 40.8 -1.7**
ABPO Ambohimpanom 83.92 246 P **P 00 33 43.5 +0.4**
ABPO pmax pmax
comp=Z,50nm,1.1s
ABPO Ambohimpanom 83.92 246 P **P 00 33 43.5 +0.4**
ABPO IAmb IAmb 00 33 54.6
comp=Z,50nm,1.1s
ABPO Ambohimpanom 83.92 246 IAMs_20 IAMs_20 01 06 10.4
comp=Z,2μm,20.0s
KIJV Kijevo 83.97 316 *i* P **P 00 33 40.7 -2.2**
OBKA Obir 83.97 318 *e*P **P 00 33 42.0 -0.9**
comp=Z,9.3nm,0.8s,SNR=13
OBKA PP **PP 00 36 58.5 +2.3**
comp=Z,12nm,1.3s
BOJS Bojanci 84.01 317 *i* P **P 00 33 42.6 -0.5**
GTTG Gottingen 84.11 324 *e*P **P 00 33 43.0 -0.4**
baz=59,slow=5.0
UDBI Udbina 84.14 316 *i* P **P 00 33 43.0 -0.8**
LJU Ljubljana 84.20 318 *i* P **P 00 33 43.5 -0.6**
LJU *e*PP **PP 00 36 59.4 +1.4**
LJU Ljubljana 84.20 318⇑*i*P **P 00 33 43.3 -0.7**
GRA1 Grafenberg Arr 84.36 322 IAmb IAmb 00 34 03.2
comp=Z,92nm,1.4s
GRF Grafenberg Arr 84.36 322 *e*P **P 00 33 44.6 -0.2**
comp=Z,63nm,1.2s,baz=59,slow=5.0
GRF *e*PP **PP 00 36 58.9 -0.3**
baz=60,slow=8.5
GRF *e*L L 01 15 22.4
comp=Z,3μm,21.9s
CEY Cerknica 84.41 318⇑*i*P **P 00 33 44.3 -0.8**
KBA Koelnbreinsper 84.42 319 *e*P **P 00 33 44.0 -1.3**
comp=Z,12nm,0.6s,SNR=17
KBA PP **PP 00 36 57.7 -2.3**
comp=Z,17nm,1.6s
RJOB Jochberg 84.43 320 *e*P **P 00 33 44.8 -0.4**
comp=Z,42nm,1.2s,baz=59,slow=5.0
MYKA Terra Mystica 84.46 319 *e*P **P 00 33 44.1 -1.3**
comp=Z,16nm,0.8s
UBBA Unterbreizbach 84.46 324 *e*P **P 00 33 44.8 -0.3**
comp=Z,25nm,1.2s,baz=59,slow=5.0
UBBA *e*PP **PP 00 36 59.0 -0.9**
baz=60,slow=8.5
MORI Morici 84.48 316 *i* P **P 00 33 43.4 -2.1**
RIY Rijeka 84.57 317⇑*i*P **P 00 33 44.9 -1.0**
RIY Rijeka 84.57 317 P **P 00 33 44.0 -1.9**
CADS Cadrg 84.60 318 *i* P **P 00 33 44.6 -1.5**
ZIRJ Zirje 84.62 315 *i* P **P 00 33 44.0 -2.1**
NVLJ Novalja 84.69 317 *i* P **P 00 33 45.4 -1.1**
DUGI Dugi Otok 84.84 316 *i* P **P 00 33 45.4 -1.9**
IBBN Ibbenburen 84.87 326 *e*P **P 00 33 46.6 -0.6**
comp=Z,76nm,1.4s,baz=59,slow=5.0
KIBK Kibwezi 84.91 265 P **P 00 33 50.0 +1.7**
SNR=9.1
LODK Lodwar 85.08 272 P **P 00 33 51.0 +1.9**
SNR=8.8
ABTA Abfaltersbach 85.08 319 *e*P **P 00 33 46.5 -2.0**
comp=Z,32nm,1.3s,SNR=12
FUR Furstenfeldbru 85.10 321 *e*P **P 00 33 48.4 -0.2**
comp=Z,112nm,1.3s,baz=59,slow=5.0
KMBO Kilima Mbogo 85.15 267 P **P 00 33 51.0 +1.4**
comp=Z,12nm,1.0s,baz=59,slow=5.3,SNR=13
KMBO LR LR 01 11 38.9
comp=Z,786nm,20.0s,baz=80,slow=36
KMBO Kilima Mbogo 85.15 267 *i* P **P 00 33 50.7 +1.0**
SNR=16
KMBO Kilima Mbogo 85.15 267 P **P 00 33 50.0 +0.3**
KMBO pmax pmax
comp=Z,74nm,1.6s
KMBO MLR MLR
comp=Z,800nm,20.0s
KMBO Kilima Mbogo 85.15 267 P **P 00 33 50.0 +0.3**
KMBO IAmb IAmb 00 33 59.6
comp=Z,74nm,1.6s
WATA Walderalm 85.35 320 *e*P **P 00 33 48.2 -1.7**
comp=Z,20nm,1.9s
WATA *i* PP **PP 00 37 07.2 -0.2**
comp=Z,32nm,1.6s
WTTA Wattenberg 85.35 320 *e*P **P 00 33 49.0 -1.0**
comp=Z,12nm,1.0s,SNR=11
WTTA *e*PP **PP 00 37 07.3 -0.2**
comp=Z,32nm,1.6s
SGRT San Giovanni R 85.44 314 IAmb IAmb 00 34 03.2
comp=Z,35nm,1.1s
BUG Bochum–Univer 85.59 325 *e*P **P 00 33 50.2 -0.7**
comp=Z,73nm,1.4s,baz=59,slow=5.0
MOTA Moosalm 85.62 320 *e*P **P 00 33 50.3 -1.0**
comp=Z,14nm,1.3s,SNR=6.7
MOTA PP **PP 00 37 06.1 -3.6**
comp=Z,21nm,1.8s
SQTA Sankt Quirin 85.62 320 *e*P **P 00 33 50.2 -1.1**
comp=Z,20nm,1.2s,SNR=8.7
TNS Taunus Mts 85.62 324 *e*P **P 00 33 50.7 -0.5**
comp=Z,38nm,1.4s,baz=59,slow=5.0
TNS *e*PP **PP 00 37 10.8 +1.3**
baz=60,slow=8.5
RETA Reutte 85.75 320 *e*P **P 00 33 50.9 -0.9**
comp=Z,8.1nm,1.0s
RETA PP **PP 00 37 10.1 -0.5**
comp=Z,14nm,1.2s
TIP Timpagrande 85.94 311⇑P **P 00 33 52.7 -0.3**
TIP Timpagrande 85.94 311 P **P 00 33 52.6 -0.3**
TIP IAmb IAmb 00 34 06.4
comp=Z,54nm,1.2s
TIP IAMs_20 IAMs_20 01 18 33.2
comp=Z,1μm,20.0s
FETA Feichten 86.00 320 *e*P **P 00 33 51.7 -1.6**
comp=Z,16nm,1.4s,SNR=11
UBR Ueberruh 86.03 321 *e*P **P 00 33 52.4 -0.8**
comp=Z,57nm,1.6s,baz=59,slow=5.0
AHRW Bad Neuenahr-A 86.19 324 *e*P **P 00 33 53.4 -0.4**
comp=Z,39nm,1.3s,baz=59,slow=5.0
DAVA Damuels 86.36 321 *e*P **P 00 33 54.1 -0.9**
comp=Z,12nm,1.3s
DAVA PP **PP 00 37 17.3 +1.6**
comp=Z,28nm,1.4s
FUORN Ofenpass-Fuorn 86.48 320 P **P 00 33 54.8 -0.9**
FUORN IAmb IAmb 00 34 18.6
comp=Z,29nm,0.9s
INTR Introdacqua 86.52 315 IAmb IAmb 00 34 10.2
comp=Z,38nm,1.2s
PAOL Paolisi 86.56 314 IAMs_20 IAMs_20 01 16 36.4
comp=Z,960nm,19.0s
DAVOX Davos/Dischmat 86.63 320 P **P 00 33 56.4 +0.1**
comp=Z,8.1nm,1.0s,baz=70,slow=4.1,SNR=9.9
DAVOX PP **PP 00 37 18.9 +1.1**
comp=Z,7.2nm,1.1s,baz=36,slow=6.4,SNR=3.1
NRCA Norcia 86.64 316 IAmb IAmb 00 34 14.8
comp=Z,67nm,1.1s
AQU L'Aquila 86.69 315⇑*i*P **P 00 33 56.1 -0.5**
AQU L'Aquila 86.69 315 P **P 00 33 56.5 -0.1**
AQU pmax pmax
comp=Z,80nm,1.1s
AQU L'Aquila 86.69 315 P **P 00 33 56.5 -0.1**
BFO Black Forest 86.70 322 *e*P **P 00 33 55.5 -0.9**
comp=Z,36nm,1.6s,baz=59,slow=5.0
BFO Black Forest 86.70 322 P **P 00 33 56.0 -0.5**
BFO pmax pmax
comp=Z,50nm,1.8s
BFO MLR MLR
comp=Z,4μm,21.0s
BFO Black Forest 86.70 322 P **P 00 33 56.0 -0.5**
MEM Membach 86.72 325 P **P 00 33 55.6 -0.9**
MEM PcP **PcP 00 33 59.3 -0.8**
MEM x x 00 34 03.4
MEM x x 00 34 11.0
BEBN Eben Emael 86.78 325 P **P 00 33 56.4 -0.3**
SALO Salr 86.84 319 IAmb IAmb 00 34 14.5
comp=Z,74nm,1.2s
BHOU Houvegnez 86.86 325 P **P 00 33 56.6 -0.6**

BHOU x x 00 34 09.9
BHOU x x 00 34 22.0
BSTI Sart Tilman 86.96 325 P **P** **00 33 57.1 -0.6**
BSTI x x 00 34 05.2
BSTI x x 00 34 13.4
CEL Celeste 86.96 311 IAMs_20 IAMs_20 01 19 42.4
comp=Z,1µm,20.0s
TUE Stuetta 87.10 320 IAmb IAmb 00 34 07.0
comp=Z,109nm,2.0s
WLF Walferdange 87.17 324 P **P** **00 33 58.2 -0.4**
comp=Z,32nm,1.3s
WLF x x 00 34 07.0
WLF x x 00 34 11.5
WLF Walferdange 87.17 324 *e*P **P** **00 33 58.4 -0.3**
comp=Z,64nm,1.1s,baz=59,slow=5.0
WLF Walferdange 87.17 324 IAmb IAmb 00 34 08.2
comp=Z,58nm,1.0s
ILULI Ilulissat 87.18 357 *i* P **P** **00 33 55.5 -2.8**
ILULI Ilulissat 87.18 357 IAMs_20 IAMs_20 01 17 43.5
comp=Z,2µm,19.0s
ILULI Ilulissat 87.18 357 *i* P **P** **00 33 55.5 -2.8**
BCLA Clavier 87.19 325 ⇑P **P** **00 33 57.8 -1.0**
BCLA PcP **PcP** **00 34 00.3 -0.6**
BGES Gesves 87.33 325 P **P** **00 33 58.7 -0.8**
BGES PcP **PcP** **00 34 00.9 -0.6**
LLLB Lillooet 87.34 35 IAmb IAmb 00 34 02.3
comp=Z,47nm,1.1s
ECH Echery 87.42 322 P **P** **00 34 00.1 +0.2**
ECH pmax pmax
comp=Z,28nm,1.5s
ECH MLR MLR
comp=Z,2µm,19.0s
ECH Echery 87.42 322 P **P** **00 34 00.1 +0.2**
OSSC Osservatorio P 87.47 317 IAmb IAmb 00 34 34.8
comp=Z,72nm,1.7s
OSSC IAMs_20 IAMs_20 01 15 05.4
comp=Z,1µm,20.0s
BMRD Maredsous 87.54 325 P **P** **00 33 59.9 -0.6**
BMRD PcP **PcP** **00 34 01.9 -0.5**
BMRD x x 00 34 12.8
LATE Laterza 87.58 316 IAmb IAmb 00 34 40.1
comp=Z,51nm,1.3s
PGC Sidney 87.61 37 P **P** **00 34 01.3 +0.5**
SNF Seneffe 87.68 325 P **P** **00 34 01.0 -0.1**
SNF x x 00 34 08.6
SNF x x 00 34 17.0
DOU Dourbes 87.75 325 P **P** **00 34 00.7 -0.8**
DOU x x 00 34 16.3
A04D Lummi Island 87.97 37 P **P** **00 34 02.9 +0.3**
baz=304
NLWA Neilton Lookou 88.07 38 IAmb IAmb 00 34 06.5
comp=Z,44nm,1.1s
EKA Eskdalemuir Ar 88.24 332 P **P** **00 34 02.0 -1.7**
comp=Z,2.3nm,0.8s,baz=39,slow=5.7,SNR=2.8
EKA Eskdalemuir Ar 88.24 332 P **P** **00 34 02.0 -1.7**
SENIN Lac Senin/Sane 88.35 321 IAmb IAmb 00 34 33.3
comp=Z,60nm,1.9s
VAE Valguarnera 88.37 310 P **P** **00 34 05.0 +0.2**
comp=Z,3.8nm,0.3s,baz=79,slow=10,SNR=1.4
D03D Eldon 88.43 38 P **P** **00 34 05.4 +0.6**
baz=304,SNR=26
B05A Bryant 88.57 37 P **P** **00 34 05.7 +0.3**
baz=305,SNR=11
D04E Lakebay 88.81 38 P **P** **00 34 07.7 +1.2**
baz=304
E04D Cinebar 89.28 38 P **P** **00 34 09.4 +0.6**
baz=305,SNR=7.9
F04D Rainier, OR 89.29 39 P **P** **00 34 09.5 +0.7**
baz=304
SFJD Kangerlussuaq 89.37 357 PP PP 00 37 36.8 -2.0
comp=Z,1.5nm,0.5s,baz=2.1,slow=18,SNR=0.8
SFJD Kangerlussuaq 89.37 357 P **P** **00 34 08.1 -0.6**
SFJD 00 37 36.9
SFJD pmax pmax
comp=Z,20nm,1.2s
SFJD MLR MLR
comp=Z,1µm,19.0s
SFJD Kangerlussuaq 89.37 357 P **P** **00 34 08.1 -0.6**
SFJD Kangerlussuaq 89.37 357 IAMs_20 IAMs_20 01 17 13.4
comp=Z,1µm,19.0s
SFJD Kangerlussuaq 89.37 357 *i* P **P** **00 34 06.2 -2.5**
C06D Leavenworth 89.42 37 P **P** **00 34 09.9 +0.5**
baz=306
LON Longmire 89.59 38 IAmb IAmb 00 34 13.0
comp=Z,42nm,1.2s
G03D McMinnville, O 89.63 40 P **P** **00 34 10.6 +0.1**
baz=304
F04A Amboy 89.72 39 IAmb IAmb 00 34 13.6
comp=Z,56nm,1.0s
I02D Swisshome 89.90 41 P **P** **00 34 11.8 0.0**
baz=304
LTY Liberty 89.94 37 IAmb IAmb 00 34 14.4
comp=Z,33nm,1.0s
COR Corvallis 89.96 40 P **P** **00 34 12.8 +0.8**
COR pmax pmax
comp=Z,175nm,1.5s
COR Corvallis 89.96 40 P **P** **00 34 12.8 +0.8**
B08A Colville Reser 90.01 36 IAmb IAmb 00 34 14.9
comp=Z,67nm,1.1s
CASY Casey 90.10 184 P **P** **00 34 11.9 0.0**
CLF Chambon-Foret 90.21 324 IAmb IAmb 00 34 32.8
comp=Z,30nm,1.1s
F05D White Salmon 90.29 38 P **P** **00 34 14.0 +0.4**
baz=305
H04D Lebanon 90.33 40 P **P** **00 34 14.0 +0.2**
baz=304
J01E Myrtle Point 90.37 42 P **P** **00 34 14.3 +0.4**
baz=304
I03D Drain, OR 90.43 41 P **P** **00 34 14.7 +0.5**
baz=304
H04A Detroit Lake 90.56 40 IAmb IAmb 00 34 17.6
comp=Z,56nm,1.3s
G05D Wamic, OR 90.75 39 P **P** **00 34 16.4 +0.7**
baz=306
K02D Willamette Mer 90.79 42 P **P** **00 34 15.8 -0.2**
baz=304
MBAR Mbarara 90.91 270 P **P** **00 34 18.3 +1.1**
MBAR pmax pmax
comp=Z,11nm,1.2s
MBAR Mbarara 90.91 270 P **P** **00 34 18.3 +1.1**
C09A Chrisman Ranch 90.91 36 IAmb IAmb 00 34 19.3
comp=Z,54nm,1.1s
I04A Tendick Farm, 90.93 41 P **P** **00 34 16.5 -0.1**
baz=305,SNR=9.6
D08A Wollman Farm, 91.01 36 IAmb IAmb 00 34 19.8
comp=Z,67nm,1.3s
HAWA Hanford 91.08 37 IAmb IAmb 00 34 20.3
comp=Z,56nm,1.2s
G06A Carlson Farm, 91.14 39 IAmb IAmb 00 34 20.8
comp=Z,61nm,1.3s
NEW Newport 91.23 35 P **P** **00 34 17.5 -0.4**
baz=309
NEW Newport 91.23 35 IAmb IAmb 00 34 20.7
comp=Z,59nm,1.4s
I05D Terrebonne, OR 91.25 40 P **P** **00 34 18.2 +0.1**
baz=306
E08A Dider Farm, El 91.28 37 P **P** **00 34 19.1 +1.0**
E08A IAmb IAmb 00 34 21.2
comp=Z,34nm,1.0s
J04D Umpqua Nationa 91.43 41 P **P** **00 34 18.3 -0.9**
baz=305,SNR=7.1
L04D Klamath Falls 91.89 42 P **P** **00 34 21.3 +0.1**
baz=305
YBH Yreka Blue Hor 91.92 42 IAmb IAmb 00 34 32.9
comp=Z,66nm,1.6s
J05D Fort Rock, OR 91.93 40 P **P** **00 34 21.0 -0.4**
baz=306,SNR=9.0
K04D Chiloquin, OR 92.00 41 P **P** **00 34 21.8 +0.1**
baz=305
M02C Callahan 92.02 43 P **P** **00 34 22.2 +0.4**
baz=304
G08A Pilot Rock 92.06 38 IAmb IAmb 00 34 24.9
comp=Z,42nm,1.6s
N02D Trinity Center 92.35 43 P **P** **00 34 23.6 +0.3**
baz=304
WALA Waterton Lakes 92.36 33 IAMs_20 IAMs_20 01 16 57.8
comp=Z,992nm,20.0s
M04C Macdoel 92.43 42 P **P** **00 34 23.9 +0.2**
baz=305
I07A Izee 92.47 39 IAmb IAmb 00 34 27.1
comp=Z,48nm,1.5s
F10A Beach Ranch, E 92.60 37 IAmb IAmb 00 34 27.3
comp=Z,68nm,1.9s
WDC Whiskeytown Da 92.68 43 IAmb IAmb 00 34 35.3
comp=Z,24nm,1.1s
FCC Fort Churchill 92.70 18 IAmb IAmb 00 34 25.6
comp=Z,83nm,1.9s
O02D Mt. Diablo Mer 92.75 44 P **P** **00 34 25.1 -0.1**
baz=304
KEST Kesra 92.77 311 P **P** **00 34 25.1 -0.2**
comp=Z,6.2nm,0.8s,baz=0.0,slow=4.0,SNR=5.3
KEST PP **PP** **00 38 05.8 -1.1**
comp=Z,3.8nm,0.9s,baz=16,slow=3.1,SNR=6.2
KEST LR LR 01 22 56.5
comp=Z,795nm,18.9s,baz=350,slow=40
KEST Kesra 92.77 311 P **P** **00 34 25.8 +0.5**
KEST IAmb IAmb 00 34 50.5
comp=Z,19nm,0.9s
KEST IAMs_20 IAMs_20 01 21 42.9
comp=Z,957nm,19.0s
JTMT Jette 93.03 34 IAmb IAmb 00 34 29.1
comp=Z,47nm,1.4s
JTMT IAMs_20 IAMs_20 01 19 03.7
comp=Z,976nm,21.0s
BMO Blue Mountains 93.25 38 IAmb IAmb 00 34 29.9
comp=Z,28nm,1.3s
MOD Modoc Plateau 93.29 41 IAmb IAmb 00 34 38.6
comp=Z,29nm,0.9s
O03E Paynes Creek 93.30 43 P **P** **00 34 27.3 -0.4**
baz=305
FFC Flin Flon 93.45 24 P **P** **00 34 27.6 -0.4**
FFC pmax pmax
comp=Z,29nm,1.3s
FFC MLR MLR
comp=Z,1µm,20.0s
FFC Flin Flon 93.45 24 P **P** **00 34 27.6 -0.4**
FFC IAmb IAmb 00 34 30.1
comp=Z,29nm,1.2s
FFC Flin Flon 93.45 24 IAMs_20 IAMs_20 01 18 56.9
comp=Z,1µm,20.0s
J08A Circle Bar Ran 93.50 39 IAmb IAmb 00 34 31.7
comp=Z,27nm,1.1s
GDXM Geysers 93.51 45 IAMs_20 IAMs_20 01 22 44.3
comp=Z,845nm,19.0s
MSO Missoula 93.81 35 P **P** **00 34 29.1 -0.8**
baz=311
MSO Missoula 93.81 35 IAmb IAmb 00 34 32.0
comp=Z,28nm,1.2s
MSO IAMs_20 IAMs_20 01 18 33.3
comp=Z,990nm,19.0s
ORV Oroville 93.92 44 P **P** **00 34 30.8 +0.3**
ORV pmax pmax
comp=Z,13nm,1.1s
ORV MLR MLR
comp=Z,500nm,21.0s
ORV Oroville 93.92 44 P **P** **00 34 30.8 +0.3**
MFID Camas Ranch 94.98 38 IAmb IAmb 00 34 38.2
comp=Z,38nm,1.5s
RUBR Rubicon Trail 95.06 43 IAmb IAmb 00 34 44.9
comp=Z,22nm,0.8s
EGMT Eagleton 95.10 32 P **P** **00 34 35.3 -0.5**
baz=314
EGMT Eagleton 95.10 32 IAMs_20 IAMs_20 01 18 52.1
comp=Z,1µm,19.0s
PAHR Pah Rah Range 95.15 43 IAmb IAmb 00 34 46.6
comp=Z,19nm,1.0s
PNTR Pine Nut 95.38 43 P **P** **00 34 38.1 +0.6**
PNTR IAmb IAmb 00 34 48.0
comp=Z,31nm,1.2s
DLMT Dillon 95.48 35 IAmb IAmb 00 35 09.1
comp=Z,53nm,1.5s
PPT Papeete 95.97 106 LR LR 01 13 54.4
comp=Z,388nm,18.7s,baz=322,slow=33
PPT2 Papeete2 95.98 106 *e*S **S** **00 45 59.7 +1.2**
comp=Z,764nm,26.5s
PPT2 *e*SP **SP** **00 47 19.5 +2.3**
comp=Z,530nm,26.2s
PPT2 *e*SS **SS** **00 52 32.5 +2.7**
comp=Z,577nm,29.0s
PPT2 *e*LQ LQ 01 01 32.0
comp=Z,614nm,27.2s
PPT2 *e*LR LR 01 05 52.7
comp=Z,798nm,22.2s,baz=292
PMPB Monarch Peak 96.29 46 IAMs_20 IAMs_20 01 12 54.0
comp=Z,948nm,20.0s
RYN Ryan 96.33 43 IAmb IAmb 00 34 52.3
comp=Z,20nm,1.3s
KVN Kaiserville 96.34 42 IAmb IAmb 00 34 53.0
comp=Z,16nm,1.1s
PMOR Pearlorio Ree 96.47 103 *e*T T 02 21 46.4
comp=Z,3.9nm,0.2s
NVAR Mina Array Bea 96.59 43 P **P** **00 34 43.1 +0.2**
comp=Z,4.2nm,0.8s,baz=293,slow=4.2,SNR=14
NVAR LR LR 01 15 22.6
comp=Z,405nm,20.2s,baz=298,slow=34
NV11 Mina Array Sit 96.68 43 P **P** **00 34 44.1 +0.9**
MLAC Mammoth, Mammo 96.73 44 P **P** **00 34 43.1 -0.5**
baz=307
PAGB Antelope Grade 96.93 46 IAmb IAmb 00 34 46.9
comp=Z,36nm,1.3s
PAGB IAMs_20 IAMs_20 01 10 33.1
comp=Z,930nm,21.0s
LKWY Lake 97.17 35 IAMs_20 IAMs_20 01 20 06.1
comp=Z,1µm,22.0s
H17A Grant Village 97.19 35 P Pdif 00 34 46.7 +1.0
baz=313
H17A Grant Village 97.19 35 IAmb IAmb 00 34 49.9
comp=Z,17nm,1.3s
H17A IAMs_20 IAMs_20 01 19 15.8
comp=Z,1µm,18.0s
DGMT Dagmar 97.33 29 P **P** **00 34 45.6 -0.3**
baz=319
DGMT Dagmar 97.33 29 IAmb IAmb 00 34 48.4
comp=Z,26nm,1.2s
DGMT Dagmar 97.33 29 IAMs_20 IAMs_20 01 20 44.1
comp=Z,771nm,19.0s
SMMC Simmler 97.34 46 P Pdif 00 34 46.2 0.0
baz=306
RLMT Red Lodge 97.36 34 P Pdif 00 34 46.4 +0.1
baz=314
RLMT Red Lodge 97.36 34 IAmb IAmb 00 34 48.7
comp=Z,19nm,1.5s
RLMT IAMs_20 IAMs_20 01 20 30.2
comp=Z,874nm,21.0s
TIN Tinemaha, Big 97.47 44 P Pdif 00 34 47.0 +0.1
baz=307
VES Vestal, Richgr 97.64 46 P **P** **00 34 46.9 -0.6**
baz=306
PKM Mcpherson Peak 97.71 47 P Pdif 00 34 48.2 +0.1
baz=306
LAO LASA Array 97.73 31 P **P** **00 34 47.3 -0.5**
baz=317
LAO LASA Array 97.73 31 IAmb IAmb 00 34 51.8
comp=Z,19nm,1.4s
LAO IAMs_20 IAMs_20 01 20 35.8
comp=Z,1µm,18.0s
REDW Red Top Meadow 97.75 36 IAMs_20 IAMs_20 01 27 54.7
comp=Z,873nm,18.0s
CWC Cottonwood Cre 97.93 45 P **P** **00 34 48.9 0.0**
baz=307
AHID Auburn Hatcher 98.02 36 IAMs_20 IAMs_20 01 22 41.3
comp=Z,872nm,18.0s
SBC Santa Barbara 98.04 47 P Pdif 00 34 49.4 +0.1
baz=306
GRAC Grapevine Rang 98.05 44 P **P** **00 34 49.2 -0.1**
baz=308
ISA Isabella, Lake 98.14 45 IAMs_20 IAMs_20 01 12 21.0
comp=Z,877nm,21.0s
ARVC Arvin 98.23 46 P **P** **00 34 49.8 -0.3**
baz=307
TBI Tubuai 98.28 112 *e*S **S** **00 46 18.9 +1.1**
comp=Z,384nm,30.2s
TBI *e*SP SP 00 47 44.2 +2.2
comp=Z,364nm,28.2s
TBI Tubuai 98.28 112 *e*LQ LQ 01 02 41.0
comp=Z,720nm,38.5s
TBI *e*LR LR 01 06 51.3
comp=Z,458nm,26.0s
R11A Troy Canyon, C 98.32 42 P Pdif 00 34 50.9 +0.1
baz=309
SCZ2 Santa Cruz Isl 98.36 47 P Pdif 00 34 50.9 +0.1
baz=306
MPMC Manual Prospec 98.54 45 P **P** **00 34 51.4 -0.3**
baz=308
OSI Osito Audit: C 98.60 46 P **P** **00 34 51.7 -0.2**
baz=307
OSI Osito Audit: C 98.60 46 IAMs_20 IAMs_20 01 14 33.2
comp=Z,1µm,20.0s
DUG Dugway, Tooele 98.78 39 P **P** **00 34 52.5 -0.2**
baz=311
BW06 Boulder Array 98.85 35 IAMs_20 IAMs_20 01 27 01.7
comp=Z,851nm,18.0s
PDAR Pinedale Array 98.85 35 P Pdif 00 34 53.4 +0.3
comp=Z,1.0nm,0.9s,baz=304,slow=0.5,SNR=5.0
PDAR PP **PP** **00 38 46.2 -7.7**
comp=Z,0.5nm,0.6s,baz=343,slow=4.6,SNR=3.7
EDW2 Edwards Air Fo 98.92 46 P **P** **00 34 53.2 -0.2**
baz=307
ESDC Sonseca Array 98.96 320 PP **PP** **00 38 50.0 -4.6**
comp=Z,2.0nm,1.0s,baz=38,slow=8.3,SNR=4.6
ESDC LR LR 01 20 56.6
comp=Z,1µm,19.2s,baz=350,slow=36
DECC Green Verdugo 99.07 46 P **Pdif** **00 34 53.4 -0.6**
baz=307
PASC Pasadena Art C 99.22 46 IAMs_20 IAMs_20 01 14 18.7
comp=Z,1µm,19.0s
PAB San Pablo 99.27 321 IAMs_20 IAMs_20 01 25 55.6
comp=Z,1µm,19.0s
ULM Lac du Bonnet 99.27 23 LR LR 01 23 04.4
comp=Z,1µm,18.5s,baz=348,slow=38
ULM Lac du Bonnet 99.27 23 IAMs_20 IAMs_20 01 22 43.8
comp=Z,1µm,20.0s
MWC Mount Wilson 99.28 46 IAMs_20 IAMs_20 01 14 23.1
comp=Z,1µm,19.0s
SHOC Shoshone, Teco 99.42 44 P **Pdif** **00 34 54.9 -0.6**
baz=308
FMP Fort Macarthur 99.42 47 P **Pdif** **00 34 54.6 -0.9**
baz=307
GSC Goldstone, Bar 99.44 45 P **Pdif** **00 34 54.2 -1.5**
baz=308
CIS Catalina Islan 99.53 47 P **Pdif** **00 34 55.6 -0.4**
baz=307
RRX Edison Barstow 99.58 45 P **Pdif** **00 34 55.9 -0.3**
baz=308
MDND Maddock 99.77 27 P **Pdif** **00 34 56.4 -0.4**
baz=322
MDND Maddock 99.77 27 IAMs_20 IAMs_20 01 23 04.4
comp=Z,1µm,19.0s
TUQ Turquoise Moun 99.93 44 P **Pdif** **00 34 57.4 -0.5**
baz=308
HEC Hector,Ludlow 100.04 45 P **Pdif** **00 34 57.2 -1.2**
baz=308
MURC Murrieta 100.22 46 P **Pdif** **00 34 58.0 -1.1**
baz=307
E28A Huff 100.31 28 IAMs_20 IAMs_20 01 21 57.8
comp=Z,800nm,18.0s
K22A Casper 100.51 34 P **Pdif** **00 34 59.4 -1.0**
baz=316
K22A Casper 100.51 34 IAMs_20 IAMs_20 01 22 25.6
comp=Z,796nm,20.0s
RSSD Black Hills 100.67 32 P **Pdif** **00 34 59.7 -1.4**
baz=318
RSSD Black Hills 100.67 32 IAMs_20 IAMs_20 01 24 42.4
comp=Z,859nm,18.0s
PFO Pinyon Flats O 100.70 46 IAMs_20 IAMs_20 01 15 46.9
comp=Z,1µm,19.0s
XPFO Pion Flat 100.70 46 IAMs_20 IAMs_20 01 15 46.9
comp=Z,1µm,19.0s
RWWY Rawlins 100.85 35 IAMs_20 IAMs_20 01 22 50.5
comp=Z,1µm,20.0s
AGMN Agassiz Nation 100.89 24 IAMs_20 IAMs_20 01 23 49.7
comp=Z,1µm,19.0s
TAOE Nuku Hiva Isla 101.14 95 *e*PP **PP** **00 39 10.4 -2.2**
comp=Z,151nm,24.0s
TAOE *e*SP SP 00 48 14.3 +1.1
comp=Z,159nm,27.8s
TAOE *e*SS **SS** **00 53 48.2 +5.9**
comp=Z,155nm,26.7s
TAOE Nuku Hiva Isla 101.14 95 *e*LR LR 01 08 07.3
comp=Z,545nm,22.2s
TAOE Nuku Hiva Isla 101.14 95 *e*T T 02 27 37.2
comp=Z,20nm,0.2s
D32A Dogwood Acres, 101.39 26 IAMs_20 IAMs_20 01 24 59.1
comp=Z,1µm,20.0s
SCHQ Schefferville 101.44 5 IAMs_20 IAMs_20 01 20 56.6
comp=Z,1µm,21.0s
B35A Bob, Littlefor 101.62 23 IAMs_20 IAMs_20 01 25 27.1
comp=Z,805nm,20.0s
Y12C Blythe 101.88 45 IAMs_20 IAMs_20 01 16 52.9
comp=Z,1µm,20.0s
PHWY Pilot Hill 102.04 34 IAMs_20 IAMs_20 01 28 12.0
comp=Z,745nm,18.0s
GLA Glamis 102.12 46 IAMs_20 IAMs_20 01 14 48.3
comp=Z,930nm,21.0s
PV23 Carpenter Ridg 102.13 38 IAMs_20 IAMs_20 01 25 13.9
comp=Z,1µm,19.0s
PV14 Lion Creek, Pa 102.18 38 IAMs_20 IAMs_20 01 26 57.2
comp=Z,772nm,20.0s
PV04 Paradox Valley 102.23 38 IAMs_20 IAMs_20 01 30 15.6
comp=Z,947nm,18.0s
PV11 David Mesa, Pa 102.32 38 IAMs_20 IAMs_20 01 26 17.8
comp=Z,1µm,20.0s
PV05 Paradox Valley 102.34 39 IAMs_20 IAMs_20 01 24 04.1
comp=Z,662nm,18.0s
PV12 Saucer Basin, 102.34 38 IAMs_20 IAMs_20 01 30 34.5
comp=Z,740nm,20.0s
PV03 Paradox Valley 102.36 38 IAMs_20 IAMs_20 01 31 07.0
comp=Z,919nm,19.0s
TAM Tamanrasset 102.47 302 IAMs_20 IAMs_20 01 30 05.7
comp=Z,733nm,19.0s
LIS Lisbon 102.57 323 *e*PP **PP** **00 39 22.5 +0.8**
LIS AMS AMS 01 28 38.7
comp=Z,3µm,18.7s
PV01 Paradox Valley 102.60 38 IAMs_20 IAMs_20 01 30 45.4
comp=Z,798nm,21.0s
MESJ Messejana 102.65 321 *e*PP **PP** **00 39 23.2 +0.8**
MESJ AMS AMS 01 28 49.8
comp=Z,3µm,19.6s
SUSD Miller 102.75 28 IAMs_20 IAMs_20 01 26 27.2
comp=Z,934nm,18.0s
EYMN Ely 102.76 22 IAMs_20 IAMs_20 01 24 55.1
comp=Z,884nm,19.0s
ISCO Idaho Springs 103.05 35 IAMs_20 IAMs_20 01 24 56.8
comp=Z,1µm,21.0s
MORF Marmelete 103.27 321 *e*PP **PP** **00 39 27.9 +0.7**
MORF AMS AMS 01 28 40.2
comp=Z,2µm,23.5s
F36A Milaca 103.80 24 IAMs_20 IAMs_20 01 29 39.1
comp=Z,900nm,19.0s
VNDA Vanda 103.80 172 PP **PP** **00 39 28.9 -2.2**
comp=Z,1.3nm,1.0s,baz=4.1,slow=5.8,SNR=4.0
MDT Midelt 103.81 316 PP **PP** **00 39 32.5 +1.1**
comp=Z,3.8nm,1.1s,baz=53,slow=8.9,SNR=6.8
E38A The Farm, Brul 103.89 23 IAMs_20 IAMs_20 01 24 40.1
comp=Z,1µm,20.0s
K31A O'Neill 104.28 29 IAMs_20 IAMs_20 01 27 33.8
comp=Z,802nm,20.0s
ECSD EROS Data Cent 104.32 27 IAMs_20 IAMs_20 01 25 29.8
comp=Z,1µm,19.0s
D41A Chassel 104.51 21 IAMs_20 IAMs_20 01 27 09.3
comp=Z,1µm,19.0s
SDCO Great Sand Dun 104.59 37 IAMs_20 IAMs_20 01 25 28.8
comp=Z,1µm,20.0s
SPMN Marine on St. 104.61 24 IAMs_20 IAMs_20 01 30 22.2
comp=Z,1µm,18.0s
COWI Conover 105.16 22 IAMs_20 IAMs_20 01 26 14.7
comp=Z,1µm,18.0s
KSCO Kaye Shedlock' 105.19 34 IAMs_20 IAMs_20 01 29 33.7
comp=Z,896nm,19.0s
TUC Tucson 105.21 44 IAMs_20 IAMs_20 01 18 58.9
comp=Z,772nm,20.0s
I37A Lemond, Waseca 105.40 25 IAMs_20 IAMs_20 01 26 39.2
comp=Z,911nm,19.0s
BGNE Belgrade 105.51 30 IAMs_20 IAMs_20 01 28 20.6
comp=Z,936nm,20.0s
G40A Rib Lake 105.52 23 IAMs_20 IAMs_20 01 31 40.6
comp=Z,981nm,18.0s
E43A Lone Tree Farm 105.62 20 IAMs_20 IAMs_20 01 28 32.6
comp=Z,1µm,18.0s
L34A Svendsen Farm, 105.86 28 IAMs_20 IAMs_20 01 26 55.5
comp=Z,982nm,19.0s
D47A Chapleau 106.14 17 P **PKiKP** **00 39 37.4 +0.5**
baz=337
N33A J Bar K, Exete 106.37 30 IAMs_20 IAMs_20 01 26 42.2
comp=Z,1µm,20.0s
E46A Sault Ste Mari 106.43 18 IAMs_20 IAMs_20 01 30 00.1
comp=Z,1µm,20.0s
VLDQ Val d'Or 106.50 13 IAMs_20 IAMs_20 01 33 27.1
comp=Z,1µm,19.0s
I40A Norwalk 106.56 24 IAMs_20 IAMs_20 01 26 24.8
comp=Z,976nm,18.0s
319A Douglas 106.78 44 IAMs_20 IAMs_20 01 21 56.6
comp=Z,727nm,20.0s
K38A Parkersburg 106.80 26 IAMs_20 IAMs_20 01 29 29.2
comp=Z,1µm,20.0s
H43A Windswept, Lux 107.06 21 IAMs_20 IAMs_20 01 26 49.8
comp=Z,929nm,20.0s
N35A Tabor 107.08 29 IAMs_20 IAMs_20 01 28 54.8
comp=Z,1µm,19.0s
I42A Draeger Farm, 107.17 23 IAMs_20 IAMs_20 01 24 26.9
comp=Z,1µm,22.0s
SCIA State Center 107.24 26 IAMs_20 IAMs_20 01 26 36.0

comp=Z,766nm,20.0s
DRLN **Deer Lake** 107.35 359 IAMs_20 IAMs_20 01 28 23.8
comp=Z,1µm,21.0s
D53A **Lac Vacive, Po** 107.43 14 IAMs_20 IAMs_20 01 23 46.3
comp=Z,863nm,20.0s
JFWS **Jewell Farm** 107.54 24 IAMs_20 IAMs_20 01 31 12.7
comp=Z,845nm,18.0s
L40A **Anamosa** 107.90 25 IAMs_20 IAMs_20 01 28 06.4
comp=Z,1µm,19.0s
I45A **Fountain** 107.95 21 IAMs_20 IAMs_20 01 27 59.3
comp=Z,871nm,20.0s
KSU1 **Kansas State U** 108.06 30 IAMs_20 IAMs_20 01 34 16.1
comp=Z,1µm,18.0s
H48A **Harrisville** 108.24 18 IAMs_20 IAMs_20 01 29 33.8
comp=Z,834nm,20.0s
K43A **Burlington** 108.42 23 IAMs_20 IAMs_20 01 24 40.8
comp=Z,1µm,22.0s
J45A **Montague** 108.43 21 IAMs_20 IAMs_20 01 27 52.2
comp=Z,837nm,20.0s
L42A **Oliver, Polo** 108.54 24 IAMs_20 IAMs_20 01 29 01.2
comp=Z,815nm,20.0s
MSTX **Muleshoe** 108.86 38 IAMs_20 IAMs_20 01 26 59.8
comp=Z,757nm,20.0s
U32A **Winter Ranch,** 109.05 34 IAMs_20 IAMs_20 01 31 00.6
comp=Z,1µm,19.0s
SYO **Syowa Base** 109.06 202⇑ePdiff Pdif 00 35 40.0 +2.7
I49A **Point Hope** 109.08 18 IAMs_20 IAMs_20 01 29 26.2
comp=Z,875nm,18.0s
N41A **Harden Midland** 109.20 25 IAMs_20 IAMs_20 01 28 56.8
comp=Z,762nm,20.0s
SADO **Sadowa** 109.29 15 IAMs_20 IAMs_20 01 29 22.4
comp=Z,1µm,20.0s
J48A **Bridge Port** 109.38 19 IAMs_20 IAMs_20 01 28 43.1
comp=Z,1µm,20.0s
M44A **Midewin, Midew** 109.67 23 IAMs_20 IAMs_20 01 28 40.1
comp=Z,917nm,21.0s
P40A **Paris** 109.72 27 IAMs_20 IAMs_20 01 28 05.6
comp=Z,876nm,20.0s
TSUM **Tsumeb** 109.79 257 IAMs_20 IAMs_20 01 25 41.1
comp=Z,1µm,20.0s
T35A **Sooner Cattle** 109.86 32 IAMs_20 IAMs_20 01 28 05.8
comp=Z,1µm,18.0s
DELO **Deloro Mine** 109.88 14 IAMs_20 IAMs_20 01 29 10.4
comp=Z,1µm,19.0s
HDIL **Hopedale** 109.94 24 IAMs_20 IAMs_20 01 35 41.2
comp=Z,988nm,18.0s
K50A **Casco** 110.20 19 IAMs_20 IAMs_20 01 32 15.9
comp=Z,674nm,19.0s
AAM **Ann Arbor** 110.33 20 IAMs_20 IAMs_20 01 26 17.1
comp=Z,1µm,22.0s
LONY **Lake Ozonia** 110.42 12 IAMs_20 IAMs_20 01 30 55.7
comp=Z,936nm,20.0s
WMOK **Wichita Mounta** 110.44 35 IAMs_20 IAMs_20 01 34 52.4
comp=Z,1µm,18.0s
OKCFA **Oklahoma City** 110.59 33 IAMs_20 IAMs_20 01 36 52.2
comp=Z,744nm,19.0s
O44A **Mansfield** 110.60 24 IAMs_20 IAMs_20 01 29 39.7
comp=Z,785nm,20.0s
P43A **Skaggs, Pawnee** 110.64 25 IAMs_20 IAMs_20 01 28 12.8
comp=Z,1µm,21.0s
R40A **Maddies Statio** 110.66 28 IAMs_20 IAMs_20 01 34 44.7
comp=Z,954nm,18.0s
TORD **Torodi Ar. Bea** 110.67 295 PKiKP PKiKP 00 39 45.1 -1.0
comp=Z,0.9nm,0.6s,baz=27,slow=2.9,SNR=8.3
TORD PP PP 00 40 22.2 -0.1
comp=Z,5.1nm,1.1s,baz=52,slow=7.0,SNR=6.9
TORD PKKPbc PKKPbc 00 50 43.5 -0.8
comp=Z,0.4nm,0.8s,baz=222,slow=1.4,SNR=2.6
RKT **Rikitea** 110.73 107 *e*SP SP 00 49 52.2 +0.5
comp=Z,407nm,28.0s
RKT *e*SS SS 00 55 51.9 -0.9
comp=Z,314nm,27.8s
RKT **Rikitea** 110.73 107 *e*LR LR 01 12 39.8
comp=Z,621nm,23.0s
J54A **Appleton** 110.82 16 IAMs_20 IAMs_20 01 30 19.9
comp=Z,914nm,20.0s
SFIN **Lafayette** 110.90 23 IAMs_20 IAMs_20 01 29 25.6
comp=Z,742nm,20.0s
N47A **Urbana** 110.95 22 IAMs_20 IAMs_20 01 32 01.7
comp=Z,868nm,18.0s
MEDO **Medina** 110.96 15 IAMs_20 IAMs_20 01 30 55.8
comp=Z,988nm,20.0s
TUL1 **Leonard** 111.01 32 IAMs_20 IAMs_20 01 29 45.3
comp=Z,952nm,20.0s
J55A **Hilton** 111.02 15 IAMs_20 IAMs_20 01 29 54.3
comp=Z,1µm,20.0s
VT1 **Waterbury** 111.04 11 IAMs_20 IAMs_20 01 26 46.9
comp=Z,1µm,21.0s
NCB **Newcomb** 111.12 12 IAMs_20 IAMs_20 01 27 47.0
comp=Z,874nm,21.0s
SLM **Saint Louis** 111.22 26 IAMs_20 IAMs_20 01 36 11.3
comp=Z,963nm,20.0s
J56A **Wolcott** 111.23 14 IAMs_20 IAMs_20 01 29 51.9
comp=Z,1µm,20.0s
U38A **Gravette** 111.25 30 IAMs_20 IAMs_20 01 29 44.5
comp=Z,902nm,19.0s
LBNH **Lisbon** 111.27 10 P PKiKP 00 39 46.6 +0.1
baz=347
LBNH **Lisbon** 111.27 10 IAMs_20 IAMs_20 01 26 29.6
comp=Z,1µm,22.0s
CCM **Cathedral Cave** 111.30 27 IAMs_20 IAMs_20 01 29 13.4
comp=Z,732nm,20.0s
J57A **Williamstown** 111.30 14 IAMs_20 IAMs_20 01 29 03.5
comp=Z,1µm,18.0s
M50A **Fremont** 111.33 20 IAMs_20 IAMs_20 01 28 47.8
comp=Z,1µm,21.0s
I59A **Olmsteadville** 111.35 12 P PKiKP 00 39 46.9 +0.2
baz=345
EMMW **East Machias** 111.41 7 IAMs_20 IAMs_20 01 31 26.5
comp=Z,1µm,20.0s
Q44A **Meyer Farm, Va** 111.47 25 IAMs_20 IAMs_20 01 27 26.9
comp=Z,1µm,19.0s
MMNY **Mt. Morris Dam** 111.50 15 IAMs_20 IAMs_20 01 25 39.1
comp=Z,862nm,21.0s
P46A **Rosedale** 111.53 23 IAMs_20 IAMs_20 01 30 46.4
comp=Z,1µm,19.0s
J59A **Piesco** 111.55 12 IAMs_20 IAMs_20 01 28 11.2
comp=Z,1µm,20.0s
HHAR **Hobbs** 111.58 30 IAMs_20 IAMs_20 01 30 10.3
comp=Z,809nm,19.0s
ABTX **Abilene, Hawle** 111.60 37 IAMs_20 IAMs_20 01 33 48.3
comp=Z,1µm,19.0s
TXAR **Lajitas Array** 111.69 42 PKiKP PKiKP 00 39 46.8 -1.1
comp=Z,0.3nm,0.7s,baz=274,slow=2.4,SNR=2.0
TXAR PP PP 00 40 23.2 -5.9
comp=Z,0.4nm,0.8s,baz=306,slow=3.0,SNR=1.5
M52A **Chesterland** 111.71 18 IAMs_20 IAMs_20 01 33 55.6
comp=Z,948nm,18.0s
I62A **Tamworth** 111.72 10 P PKiKP 00 39 48.0 +0.6
baz=347
HNH **Hanover** 111.73 11 IAMs_20 IAMs_20 01 27 05.8
comp=Z,1µm,22.0s
J60A **Lant Hill Farm** 111.97 12 P PKiKP 00 39 48.0 +0.1
baz=345
OLIL **Olney** 111.97 25 IAMs_20 IAMs_20 01 30 32.1
comp=Z,823nm,20.0s
N51A **Ashland** 111.98 19 IAMs_20 IAMs_20 01 32 10.9
comp=Z,1µm,19.0s
K58A **Earlville** 111.99 14 IAMs_20 IAMs_20 01 30 29.8
comp=Z,1µm,20.0s
U40A **Yellville** 112.02 29 IAMs_20 IAMs_20 01 31 15.7
comp=Z,1µm,20.0s
HPIG 112.11 45 IAMs_20 IAMs_20 01 30 51.8
comp=Z,696nm,19.0s
L56A **Greenwood** 112.15 15 IAMs_20 IAMs_20 01 26 07.6
comp=Z,830nm,21.0s
BLO **Bloomington** 112.17 23 IAMs_20 IAMs_20 01 27 07.3
comp=Z,922nm,22.0s
M54A **Oil Creek Stat** 112.21 17 IAMs_20 IAMs_20 01 27 36.8
comp=Z,1µm,21.0s
J62A **Henniker** 112.27 10 P PKiKP 00 39 48.6 +0.2
baz=347
P48A **Milroy** 112.31 22 IAMs_20 IAMs_20 01 26 24.8
comp=Z,902nm,22.0s
Z35A **Perchaven, San** 112.33 34 IAMs_20 IAMs_20 01 37 48.3
comp=Z,852nm,18.0s
TRY **Troy** 112.42 12 IAMs_20 IAMs_20 01 36 06.2
comp=Z,900nm,18.0s
S44A **Carbondale** 112.42 26 IAMs_20 IAMs_20 01 31 14.1
comp=Z,921nm,18.0s
BINY **Binghamton** 112.45 14 IAMs_20 IAMs_20 01 35 50.2
comp=Z,897nm,18.0s
M55A **Ridgway** 112.48 16 IAMs_20 IAMs_20 01 31 25.2
comp=Z,996nm,18.0s
N53A **Lisbon** 112.53 18 IAMs_20 IAMs_20 01 32 36.5
comp=Z,1µm,19.0s
W39A **Magazine** 112.55 31 IAMs_20 IAMs_20 01 30 53.8
comp=Z,1µm,20.0s

M56A **Emporium** 112.61 16 IAMs_20 IAMs_20 01 31 24.5
comp=Z,1µm,19.0s
N54A **Moraine State** 112.63 17 IAMs_20 IAMs_20 01 28 13.0
comp=Z,1µm,20.0s
PBMO **Poplar Bluff** 112.72 27 IAMs_20 IAMs_20 01 31 52.1
comp=Z,806nm,20.0s
FCAR **Ozark Folk Cen** 112.73 29 IAMs_20 IAMs_20 01 32 57.6
comp=Z,1µm,18.0s
K62A **Royalston** 112.75 11 IAMs_20 IAMs_20 01 27 36.8
comp=Z,1µm,22.0s
USIN **University of** 112.81 25 IAMs_20 IAMs_20 01 31 16.3
comp=Z,841nm,20.0s
O52A **Adamsville** 112.88 19 IAMs_20 IAMs_20 01 28 58.7
comp=Z,1µm,21.0s
L61A **Hillsdale 1, H** 112.96 12 P PKiKP 00 39 50.1 +0.3
baz=345
LCAR **Lake Charles** 113.01 28 IAMs_20 IAMs_20 01 36 22.9
comp=Z,815nm,20.0s
M57A **Sunshine Farm,** 113.01 15 IAMs_20 IAMs_20 01 28 43.0
comp=Z,1µm,21.0s
HRV **Adam Dziewonsk** 113.02 10 IAMs_20 IAMs_20 01 31 53.9
comp=Z,946nm,20.0s
P51A **Williamsport** 113.08 20 IAMs_20 IAMs_20 01 30 06.0
comp=Z,1µm,21.0s
WCI **Wyandotte Cave** 113.09 24 IAMs_20 IAMs_20 01 32 46.6
comp=Z,899nm,18.0s
QUA2 **Belchertown** 113.10 11 IAMs_20 IAMs_20 01 31 02.2
comp=Z,1µm,19.0s
JCT **Junction City** 113.13 38 IAMs_20 IAMs_20 01 37 23.0
comp=Z,820nm,18.0s
WHAR **Wooly Hollow** 113.16 30 IAMs_20 IAMs_20 01 31 59.9
comp=Z,996nm,19.0s
WES **Weston** 113.17 10 IAMs_20 IAMs_20 01 32 57.0
comp=Z,986nm,20.0s
HENM **Henderson Moun** 113.17 27 IAMs_20 IAMs_20 01 30 05.1
comp=Z,1µm,20.0s
MIAR **Mount Ida** 113.18 31 IAMs_20 IAMs_20 01 31 16.5
comp=Z,1µm,20.0s
M59A **Waymart** 113.20 14 P PKiKP 00 39 50.3 0.0
baz=343
T45A **Paducah** 113.25 26 IAMs_20 IAMs_20 01 31 47.1
comp=Z,1µm,19.0s
WHTX **Lake Whitney,** 113.26 36 IAMs_20 IAMs_20 01 38 29.3
comp=Z,807nm,18.0s
PVMO **Pogeyville** 113.34 27 IAMs_20 IAMs_20 01 30 01.4
comp=Z,1µm,21.0s
HICK **Hickman** 113.42 27 IAMs_20 IAMs_20 01 30 20.7
comp=Z,935nm,19.0s
KSCT **Kent School, K** 113.43 12 IAMs_20 IAMs_20 01 28 44.8
comp=Z,1µm,20.0s
R49A **Shelbyville** 113.44 23 IAMs_20 IAMs_20 01 26 23.8
comp=Z,874nm,22.0s
SSPA **Standing Stone** 113.49 16 IAMs_20 IAMs_20 01 31 53.6
comp=Z,970nm,20.0s
PEBM **Pemiscott Bayo** 113.53 27 IAMs_20 IAMs_20 01 29 46.5
comp=Z,930nm,21.0s
N58A **Sunbury** 113.58 15 IAMs_20 IAMs_20 01 33 42.0
comp=Z,1µm,18.0s
GNAR **Gosnell** 113.59 28 IAMs_20 IAMs_20 01 30 24.1
comp=Z,822nm,20.0s
BRYW **Bryant College** 113.59 11 IAMs_20 IAMs_20 01 32 20.2
comp=Z,984nm,20.0s
GLAT **Glass** 113.63 27 IAMs_20 IAMs_20 01 30 28.2
comp=Z,1µm,20.0s
O56A **Blue Knob Stat** 113.66 17 IAMs_20 IAMs_20 01 32 03.2
comp=Z,852nm,18.0s
LNXT **Lenox** 113.69 27 IAMs_20 IAMs_20 01 30 21.8
comp=Z,1µm,21.0s
R50A **Paris** 113.74 22 IAMs_20 IAMs_20 01 29 20.7
comp=Z,1µm,20.0s
LPAR **Lepanto** 113.77 28 IAMs_20 IAMs_20 01 30 32.1
comp=Z,946nm,19.0s
T47A **Shon Grove** 113.88 25 IAMs_20 IAMs_20 01 35 04.6
comp=Z,650nm,19.0s
HALT **Halls** 113.92 27 IAMs_20 IAMs_20 01 30 16.8
comp=Z,1µm,20.0s
WSPT **Westport, CT** 113.99 12 IAMs_20 IAMs_20 01 29 21.8
comp=Z,935nm,20.0s
237A **Washetta, Mont** 114.12 34 IAMs_20 IAMs_20 01 34 29.8
comp=Z,682nm,18.0s
PAGS **Pennsylvania G** 114.16 15 IAMs_20 IAMs_20 01 32 36.4
comp=Z,1µm,20.0s
BRNJ **Basking Ridge** 114.21 13 IAMs_20 IAMs_20 01 39 14.7
comp=Z,912nm,19.0s
P56A **Dayton Farm, R** 114.30 17 P PKiKP 00 39 52.2 -0.3
baz=340
MET **Memphis--Engin** 114.34 28 IAMs_20 IAMs_20 01 30 59.0
comp=Z,1µm,20.0s
WVT **Waverly** 114.34 26 IAMs_20 IAMs_20 01 28 23.0
comp=Z,878nm,21.0s
MVL **Millersville** 114.47 15 IAMs_20 IAMs_20 01 32 46.5
comp=Z,1µm,21.0s
CCAR **Cane Creek** 114.53 30 IAMs_20 IAMs_20 01 32 54.4
comp=Z,913nm,20.0s
S51A **Beattyville** 114.57 22 IAMs_20 IAMs_20 01 33 16.6
comp=Z,1µm,20.0s
W45A **Hickory Valley** 114.63 27 IAMs_20 IAMs_20 01 31 12.6
comp=Z,723nm,21.0s
T50A **Nancy** 114.69 23 IAMs_20 IAMs_20 01 28 36.0
comp=Z,1µm,22.0s
P60A **Greenville** 114.81 14 P PKiKP 00 39 53.0 -0.4
baz=343
NATX **Nacogdoches** 114.90 34 IAMs_20 IAMs_20 01 31 11.4
comp=Z,852nm,20.0s
SDMD **Soldier's Deli** 114.91 16 IAMs_20 IAMs_20 01 34 44.4
comp=Z,602nm,18.0s
CLTN **Cedars of Leba** 114.96 25 IAMs_20 IAMs_20 01 35 41.3
comp=Z,844nm,19.0s
R55A **Markinton** 115.08 19 IAMs_20 IAMs_20 01 34 05.9
comp=Z,1µm,19.0s
V48A **Smith Brothers** 115.08 25 IAMs_20 IAMs_20 01 36 01.5
comp=Z,1µm,19.0s
OXF **Oxford** 115.08 28 IAMs_20 IAMs_20 01 31 19.8
comp=Z,1µm,20.0s
P61A **Hammonton** 115.13 14 IAMs_20 IAMs_20 01 32 44.0
comp=Z,1µm,20.0s
PLAL **Pickwick Lake** 115.24 27 IAMs_20 IAMs_20 01 30 23.8
comp=Z,792nm,21.0s
735A **Kenedy** 115.48 38 IAMs_20 IAMs_20 01 29 59.4
comp=Z,773nm,21.0s
TZTN **Tazewell** 115.57 22 IAMs_20 IAMs_20 01 34 35.2
comp=Z,1µm,20.0s
Y45A **Yeager Farm, C** 115.58 28 IAMs_20 IAMs_20 01 31 37.8
comp=Z,1µm,20.0s
143A **Socs Landing,** 115.72 31 IAMs_20 IAMs_20 01 29 35.7
comp=Z,1µm,22.0s
HKT **Hockley** 115.72 36 IAMs_20 IAMs_20 01 33 43.1
comp=Z,1,000nm,19.0s
CBN **Corbin Frederi** 115.91 16 IAMs_20 IAMs_20 01 28 27.8
comp=Z,838nm,22.0s
V51A **Loudon** 115.95 23 IAMs_20 IAMs_20 01 29 24.4
comp=Z,989nm,22.0s
X48A **Hartselle** 116.12 26 IAMs_20 IAMs_20 01 34 44.0
comp=Z,662nm,19.0s
W50A **Signal Mountai** 116.14 24 IAMs_20 IAMs_20 01 34 50.3
comp=Z,884nm,18.0s
U54A **Nelsonville** 116.17 21 IAMs_20 IAMs_20 01 32 04.0
comp=Z,1µm,22.0s
V52A **Sevierville** 116.19 23 IAMs_20 IAMs_20 01 28 45.6
comp=Z,1µm,22.0s
CPCT **Cooper Cave** 116.21 24 IAMs_20 IAMs_20 01 29 33.1
comp=Z,848nm,22.0s
TKL **Tuckaleechee C** 116.29 23 IAMs_20 IAMs_20 01 31 05.4
comp=Z,1µm,21.0s
342A **Flagon Creek P** 116.37 32 IAMs_20 IAMs_20 01 34 41.3
comp=Z,985nm,20.0s
441A **DeRidder** 116.45 33 IAMs_20 IAMs_20 01 33 30.6
comp=Z,924nm,20.0s
T57A **Hurt** 116.52 18 IAMs_20 IAMs_20 01 29 18.1
comp=Z,1µm,22.0s
VBMS **Vicksburg** 116.53 30 IAMs_20 IAMs_20 01 35 26.2
comp=Z,928nm,19.0s
FPAL **Fort Paine** 116.61 25 IAMs_20 IAMs_20 01 35 21.8
comp=Z,642nm,20.0s
W52A **Murphy** 116.74 23 IAMs_20 IAMs_20 01 31 30.3
comp=Z,924nm,20.0s
Z47A **Carrollton** 116.78 28 IAMs_20 IAMs_20 01 30 44.6
comp=Z,792nm,21.0s
S61A **Accomac** 116.83 15 IAMs_20 IAMs_20 01 35 15.1
comp=Z,954nm,20.0s
X51A **Calhoun** 116.87 24 IAMs_20 IAMs_20 01 31 46.7
comp=Z,944nm,20.0s
Y49A **Blount Mountai** 116.89 26 IAMs_20 IAMs_20 01 34 44.8
comp=Z,685nm,19.0s
T59A **Double "B" Far** 117.02 17 IAMs_20 IAMs_20 01 31 08.3
comp=Z,840nm,20.0s
344A **Westbrook Farm** 117.07 31 IAMs_20 IAMs_20 01 30 29.6
comp=Z,991nm,22.0s

T60A **Surry** 117.08 16 IAMs_20 IAMs_20 01 28 50.8
comp=Z,977nm,22.0s
BG3 **Lake Jocassee** 117.19 22 IAMs_20 IAMs_20 01 34 52.0
comp=Z,974nm,19.0s
LRAL **Lakeview Retre** 117.37 27 IAMs_20 IAMs_20 01 37 42.2
comp=Z,803nm,19.0s
U59A **Littleton** 117.54 17 IAMs_20 IAMs_20 01 34 38.0
comp=Z,829nm,18.0s
KMSC **Kings Mountain** 117.59 21 IAMs_20 IAMs_20 01 32 47.6
comp=Z,1µm,21.0s
V58A **Windy Hill, Pi** 117.68 19 IAMs_20 IAMs_20 01 30 35.9
comp=Z,992nm,20.0s
Y52A **Lilburn** 117.79 24 P PKPdf 00 39 59.0 -0.3
baz=334
V60A **Jim Taylor Roa** 118.24 17 IAMs_20 IAMs_20 01 38 20.4
comp=Z,848nm,20.0s
W58A **Raeford** 118.37 19 P PKPdf 00 39 60.0 -0.4
baz=338
V61A **Roper** 118.39 17 IAMs_20 IAMs_20 01 34 51.6
comp=Z,942nm,19.0s
GOGA **Godfrey** 118.42 24 IAMs_20 IAMs_20 01 36 20.7
comp=Z,1µm,20.0s
CNNC **Cliffs of the** 118.56 18 IAMs_20 IAMs_20 01 40 11.9
comp=Z,881nm,18.0s
152A **Waverly Hall** 118.61 25 IAMs_20 IAMs_20 01 35 45.7
comp=Z,866nm,18.0s
DBIC **Dimbokro** 119.55 293 PKP PKPdf 00 40 01.6 -1.5
comp=Z,4.3nm,0.7s,baz=88,slow=2.7,SNR=3.4
DBIC PP PP 00 41 26.1 +1.0
comp=Z,4.6nm,0.9s,baz=60,slow=7.4,SNR=3.7
352A **Blakely** 119.57 26 IAMs_20 IAMs_20 01 34 02.4
comp=Z,891nm,20.0s
KIC **Kosan Boka** 119.61 293 *e*PKIKP PKiKP 00 40 03.5 +0.1
comp=Z,6.5nm,0.6s
TIC **Toumodi** 119.70 293 *e*PKIKP PKiKP 00 40 03.5 -0.1
LIC **Lamto** 119.92 293 *e*PKIKP PKiKP 00 40 04.1 +0.1
comp=Z,10nm,0.6s
451A **Vernon** 120.00 27 IAMs_20 IAMs_20 01 33 41.7
comp=Z,736nm,20.0s
255A **Hazlehurst** 120.11 24 IAMs_20 IAMs_20 01 31 53.6
comp=Z,1µm,21.0s
TIGA **Tifton** 120.13 25 IAMs_20 IAMs_20 01 37 40.2
comp=Z,897nm,19.0s
456A **Hilliard** 121.36 24 IAMs_20 IAMs_20 01 35 06.0
comp=Z,1µm,21.0s
SNAA **Sanae** 122.88 198 P PKPdf 00 40 06.3 -1.6
SNAA **Sanae** 122.88 198 IAMs_20 IAMs_20 01 29 45.9
comp=Z,587nm,20.0s
BBSR **BB Station** 123.91 6 IAMs_20 IAMs_20 01 36 49.2
comp=Z,696nm,20.0s
VNA2 **Neumayer--Watz** 124.53 198 P PKPdf 00 40 10.0 -1.0
VNA1 **Neumayer--Stat** 124.92 198 P PKPdf 00 40 10.9 -0.8
VNA3 **Neumayer Olymp** 125.00 197 P PKPdf 00 40 10.7 -1.3
TGUH **Tegucigalpa,Un** 133.10 40 IAMs_20 IAMs_20 01 48 07.5
comp=Z,436nm,18.0s
GTBY **Guantanamo Bay** 133.70 22 IAMs_20 IAMs_20 01 43 24.4
comp=Z,732nm,20.0s
MTDJ **Mount Denham** 134.37 26 IAMs_20 IAMs_20 01 41 44.3
comp=Z,914nm,21.0s
SJG **San Juan** 137.76 11 *e*P PKiKP 00 40 42.4 +2.8
SMRT **St. Maarten** 138.25 6 IAMs_20 IAMs_20 01 41 02.3
comp=Z,683nm,22.0s
FDF **Fort de France** 141.69 4 IAMs_20 IAMs_20 01 44 11.2
comp=Z,514nm,19.0s
SDV **Santo Domingo** 145.50 21 PKPbc PKPbc 00 40 50.2 -1.6
comp=Z,36nm,0.7s,baz=285,slow=3.6,SNR=38
SDV **Santo Domingo** 145.50 21 *e*P PKPbc 00 40 50.2 -1.6
SDV **Santo Domingo** 145.50 21 IAMs_20 IAMs_20 01 51 00.2
comp=Z,482nm,20.0s
PCRV **Puerto La Cruz** 145.78 11 PKPbc PKPdf 00 40 50.0 -2.1
comp=Z,21nm,0.7s,baz=344,slow=6.8,SNR=8.9
HELC **Santa Helena** 145.95 31 *e*P PKPdf 00 40 51.3 -1.5
BRRC **Barranca, Sant** 145.96 28 *e*P PKPdf 00 40 51.2 -1.2
CBOC **Ciudad Bolivar** 146.00 32 *e*P PKPdf 00 40 50.8 -1.9
PTBC **PUERTO BERRIO** 146.14 29 *e*P PKPdf 00 40 50.9 -1.8
PAMC **Pamplona, Colo** 146.17 26 *e*P PKPdf 00 40 53.1 -0.2
NORC **Norcasia** 146.81 31 *e*P PKPdf 00 40 51.6 -2.3
GUY2C **Guyana, Caldas** 146.87 32 *e*P PKPdf 00 40 55.3 +0.7
RRFF **El Recreo** 147.16 32 *e*P PKPdf 00 40 53.8 -1.4
RUSC **La Rusia** 147.32 28 PKPbc PKPbc 00 40 56.9 -0.7
YOTC **Yotoco, Valle** 147.44 35 *e*P PKPdf 00 40 53.1 -1.9
ANIL **Santa Ana** 147.49 33 *e*P PKPbc 00 40 58.4 +0.5
ROSC **El Rosal** 147.70 30 PKPbc PKPbc 00 40 57.6 -0.9
comp=Z,13nm,0.6s,baz=4.8,slow=4.4,SNR=8.4
ROSC **El Rosal** 147.70 30 PKPbc 00 40 57.5 -1.1
ROSC IAMs_20 IAMs_20 02 00 13.1
comp=Z,563nm,20.0s
ORTC **Ortega, Tolima** 148.07 33 *e*P PKPdf 00 40 53.7 -2.3
CHIC **Chingaza** 148.16 30 *e*P PKPdf 00 40 56.4 -0.2
PRAC **Prado** 148.41 32 *e*P PKPdf 00 40 57.4 +0.8
BBAC **Balboa, Cauca** 148.59 38 *e*P PKiKP 00 41 02.1 -0.2
PCON **Cinco Dias** 148.81 36 *e*P PKPbc 00 41 00.2 -1.5
SOLN **Soblanco** 148.85 37 *e*P PKPdf 00 40 58.4 +0.5
BETC **Betania** 149.02 34 *e*P PKPbc 00 41 01.4 -0.2
GO10 **Punta Arenas** 149.11 165 PKPbc 00 41 00.8 +0.2
CRUC **La Cruz** 149.13 38 *e*P PKPbc 00 41 01.8 -0.5
GARC **Garzon, Huila** 149.41 35 *e*P PKPbc 00 41 02.6 -0.2
GO09 **Cerro Castillo** 150.50 162 PKPbc 00 41 03.2 -0.8
MDP **Montagnes des** 150.78 348 PKPbc PKPbc 00 41 05.4 -0.4
comp=Z,14nm,0.9s,baz=201,slow=9.5,SNR=1.7
RCBR **Riachuelo** 151.88 306 PKPbc PKiKP 00 41 08.7 -0.1
comp=Z,19nm,0.9s,baz=33,slow=2.9,SNR=8.5
RCBR **Riachuelo** 151.88 306 PKiKP PKPbc 00 41 06.5 -1.9
RCBR **Riachuelo** 151.88 306 PKPbc 00 41 06.5 -1.9
EFI **East Falkland** 152.09 181 PKiKP PKPbc 00 41 06.8 -0.8
EFI **East Falkland** 152.09 181 PKPbc 00 41 06.8 -0.8
ATAH **Atahualpa** 154.79 52 PKP PKPdf 00 41 07.0 +0.4
comp=Z,2.8nm,0.7s,baz=212,slow=5.5,SNR=4.1
ATAH PKPbc sPKPdf 00 41 16.4 +1.2
comp=Z,6.9nm,0.7s,baz=283,slow=2.1,SNR=5.4
PTGA **Pitinga** 157.10 4 PKP PKPdf 00 41 09.0 -0.2
comp=Z,1.1nm,0.3s,baz=119,slow=3.9,SNR=4.1
PLCA **Paso Flores** 160.26 152 PKP PKPdf 00 41 10.6 -1.6
comp=Z,3.2nm,1.2s,baz=249,slow=10,SNR=2.0
PLCA PKPab PKPab 00 41 51.8 -0.8
comp=Z,3.3nm,0.8s,baz=217,slow=5.1,SNR=6.0
SAML **Samuel** 164.65 18 PKiKP PKPdf 00 41 17.7 +0.5
SAML **Samuel** 164.65 18 PKPdf 00 41 17.7 +0.5
CO04 **Los Peladeros** 166.23 130 PKPdf 00 41 18.1 -0.3
BDFB **Brasilia** 167.25 307 PKP PKPdf 00 41 17.7 -1.7
comp=Z,2.0nm,0.8s,baz=104,slow=6.5,SNR=2.2
BDFB PKPab PKPab 00 42 24.4 +0.4
comp=Z,7.6nm,1.0s,baz=50,slow=6.4,SNR=5.0
BDFB **Brasilia** 167.25 307 PKP2 PKPab 00 42 24.4 +0.4
BDFB 01 41 17.2
BDFB **Brasilia** 167.25 307 PKPdf PKPdf 00 41 17.2 -2.2
BDFB PKPab 00 42 24.4 +0.4
LPAZ **La Paz** 168.34 52 PKP PKPdf 00 41 20.1 -0.8
comp=Z,7.7nm,1.2s,baz=22,slow=2.0,SNR=15
LPAZ PKPab PKPab 00 42 28.7 -0.7
comp=Z,6.0nm,0.9s,baz=336,slow=5.0,SNR=4.6
LPAZ **La Paz** 168.34 52 PKPdf 00 41 21.0 +0.2
LPAZ PKPab PKPab 00 42 28.8 -0.7
PB16 **IPOC Station P** 168.44 64 PKPdf 00 41 20.8 0.0
MNMC **Minye Minye** 168.73 68 PKPdf 00 41 20.8 +0.3
GO01 **Chusmiza** 169.30 70 PKPdf 00 41 21.3 +0.1
SIV **San Ignacio** 171.95 18 PKP PKPdf 00 41 20.0 -2.1
comp=Z,3.7nm,1.0s,baz=187,slow=0.4,SNR=11
SIV PKPab PKPab 00 42 44.2 -0.3
comp=Z,2.7nm,1.0s,baz=351,slow=7.8,SNR=2.1
SIV PP PP 00 46 34.2 0.0
comp=Z,1.4nm,0.9s,baz=43,slow=1.2,SNR=3.7
CPUP **Villa Florida** 177.18 203 PKP PKPdf 00 41 23.1 -0.4
comp=Z,2.3nm,1.0s,baz=317,slow=4.8,SNR=3.9
CPUP PKPab PKPab 00 43 06.8 -0.7
comp=Z,2.7nm,0.8s,baz=156,slow=7.1,SNR=2.9
CPUP PP PP 00 47 09.8 +10
comp=Z,0.5nm,0.6s,baz=185,slow=12,SNR=1.4

TAP **21** *00:33:22.6, 23.74N×121.47E, h14km, ML3.3, C*
JMA **21** *00:33:22.6±0.1, 23.73N×121.48E, h5km*
ISC 21 00:33:22.9±0.8, 23.74N±0.01×121.48E±0.02, h15km±5km, n86, σ0.62/148, 5C-8D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu** baz=212	**0.08**	**214**	⇑*i*P		**Pg**	**00 33 25.8**	**-0.2**
EGFH				*i* S		**Sg**	**00 33 27.6**	**-0.4**
ESL	**Shilin** baz=340	**0.09**	**333**	⇑*i*P		**Pg**	**00 33 25.7**	**-0.3**
ESL				*i* S		**Sg**	**00 33 27.6**	**-0.5**
HGSD	**Ruisui**	**0.25**	**191**	⇑P		**Pg**	**00 33 28.8**	**+0.5**

	baz=197							
HGSD				S		Sg	00 33 32.7	+0.7
	baz=197							
HWA	**Hwalien**	**0.27**	**26**	*e*P		**Pb**	**00 33 29.4**	**0.0**
	baz=22							
HWA				*e*S		**Sb**	**00 33 34.0**	**+0.2**
	baz=22							
EHY	**Hungye**	**0.27**	**212**	⇑*i*P		**Pg**	**00 33 28.3**	**-0.4**
	baz=215							
EHY				*e*S		**Sg**	**00 33 31.9**	**-0.7**
	baz=215							
VWDT	**VWDT**	**0.31**	**273**	⇓*i*P		**Pg**	**00 33 29.3**	**0.0**
	baz=273							
VWDT				S		**Sg**	**00 33 33.4**	**-0.3**
	baz=273							
OWD	**Renai**	**0.35**	**308**	⇓P		**Pg**	**00 33 29.8**	**-0.4**
	baz=308							
OWD				*e*S		**Sg**	**00 33 34.1**	**-1.0**
	baz=308							
TWD	**Chiawan**	**0.36**	**18**	*e*P		**Pg**	**00 33 30.5**	**+0.2**
	baz=6.0							
TWD				*e*S		**Sg**	**00 33 35.2**	**0.0**
	baz=6.0							
YULB	**Yu-li**	**0.38**	**206**	*e*P		**Pg**	**00 33 30.2**	**-0.4**
	baz=214							
YULB				*e*S		**Sg**	**00 33 35.6**	**-0.3**
	baz=214							
TWF1	**Yuli**	**0.42**	**203**	*e*P		**Pg**	**00 33 30.7**	**-0.5**
	baz=210							
TWF1				*e*S		**Sg**	**00 33 36.7**	**-0.3**
	baz=210							
CHGB	**Renai**	**0.42**	**319**	⇓*i*P		**Pg**	**00 33 31.4**	**-0.1**
	baz=325							
CHGB				*e*S		**Sg**	**00 33 36.7**	**-0.7**
	baz=325							
NACB	**Ninganchiao**	**0.45**	**14**	*e*P		**Pg**	**00 33 31.6**	**-0.3**
	baz=2.0							
NACB				*e*S		**Sg**	**00 33 37.4**	**-0.6**
	baz=2.0							
WHF	**Hehuan Shan**	**0.45**	**335**	⇓*i*P		**Pg**	**00 33 31.6**	**-0.5**
	baz=334							
WHF				*e*S		**Sg**	**00 33 37.1**	**-1.2**
	baz=334							
ETLH	**Xiulin Townshi**	**0.47**	**1**	*e*P		**Pg**	**00 33 32.0**	**-0.2**
	baz=358							
ETLH				*e*S		**Sg**	**00 33 37.9**	**-0.7**
	baz=358							
SSLB	**Suanglung**	**0.48**	**276**	⇓*i*P		**Pg**	**00 33 32.0**	**-0.5**
	baz=276							
SSLB				*e*S		**Sg**	**00 33 37.6**	**-1.4**
	baz=276							
YUS	**Yu-Shan**	**0.54**	**243**	P		**Pb**	**00 33 34.0**	**-0.4**
	baz=250							
YUS				*e*S		**Sb**	**00 33 42.1**	**0.0**
	baz=250							
SMLT	**Sun Moon Lake**	**0.55**	**286**	⇓*i*P		**Pg**	**00 33 33.4**	**-0.4**
	baz=285							
SMLT				*e*S		**Sg**	**00 33 40.3**	**-0.8**
	baz=285							
WHYT	**Xinyi Township**	**0.57**	**266**	*e*P		**Pg**	**00 33 34.1**	**-0.1**
	baz=261							
WHYT				*e*S		**Sg**	**00 33 41.0**	**-0.8**
	baz=261							
DPDB	**Guoxing**	**0.58**	**301**	*e*P		**Pg**	**00 33 34.2**	**-0.2**
	baz=300							
DPDB				*e*S		**Sg**	**00 33 41.2**	**-1.0**
	baz=300							
TDCB	**Techi**	**0.59**	**331**	⇓*i*P		**Pg**	**00 33 34.5**	**-0.1**
	baz=330							
TDCB				*e*S		**Sg**	**00 33 41.5**	**-1.0**
	baz=330							
TYC	**Yuchr**	**0.59**	**287**	⇓*i*P		**Pg**	**00 33 33.9**	**-0.6**
	baz=294							
TYC				*e*S		**Sg**	**00 33 41.0**	**-1.4**
	baz=294							
CHKT	**Chengkung**	**0.64**	**189**	*e*P		**Pb**	**00 33 36.8**	**+1.0**
	baz=190							
CHKT				*e*S		**Sb**	**00 33 45.4**	**+0.8**
	baz=190							
ELDTW	**Lidau**	**0.69**	**218**	*e*P		**Pg**	**00 33 35.5**	**-0.9**
	baz=212							
ELDTW				*e*S		**Sg**	**00 33 44.5**	**-1.1**
	baz=212							
WJS	**Zhushan**	**0.69**	**277**	*e*P		**Pb**	**00 33 36.8**	**+0.1**
	baz=279							
WJS				*e*S		**Sb**	**00 33 47.2**	**+1.2**
	baz=279							
NNSB	**Datong**	**0.69**	**353**	⇑*i*P		**Pg**	**00 33 36.2**	**-0.3**
	baz=351							
NNSB				*e*S		**Sg**	**00 33 44.6**	**-1.1**
	baz=351							
NNSH	**Datong**	**0.69**	**353**	*e*P		**Pg**	**00 33 36.3**	**-0.2**
	baz=357							
NNSH				*e*S		**Sg**	**00 33 44.9**	**-0.8**
	baz=357							
NNS	**Nan Shan**	**0.71**	**352**	*e*P		**Pg**	**00 33 36.5**	**-0.3**
	baz=352							
NNS				*e*S		**Sg**	**00 33 45.6**	**-0.5**
	baz=352							
WHP	**Taichung City**	**0.72**	**318**	*e*P		**Pg**	**00 33 36.8**	**-0.3**
	baz=317							
WHP				*e*S		**Sg**	**00 33 45.5**	**-1.1**
	baz=317							
ENA	**Nanau**	**0.73**	**19**	*e*P		**Pg**	**00 33 36.7**	**-0.4**
	baz=8.0							
ENA				*e*S		**Sg**	**00 33 46.1**	**-0.7**
	baz=8.0							
WNT	**Mingjian**	**0.74**	**281**	*e*P		**Pb**	**00 33 37.8**	**+0.3**
	baz=283							
WNT				*e*S		**Sb**	**00 33 49.0**	**+1.6**
	baz=283							
CHN5	**Tsauling**	**0.74**	**259**	*e*P		**Pb**	**00 33 37.6**	**0.0**
	baz=252							
CHN5				*e*S		**Sb**	**00 33 47.4**	**-0.2**
	baz=252							
TCU	**Taichung**	**0.84**	**299**	*e*P		**Pb**	**00 33 39.8**	**+0.6**
	baz=303							
TCU				*e*S		**Sn**	**00 33 51.9**	**-0.4**
	baz=303							
WGK	**Gukeng**	**0.84**	**267**	*e*P		**Pb**	**00 33 39.8**	**+0.6**
	baz=267							
WGK				*e*S		**Sn**	**00 33 52.3**	**0.0**
	baz=267							
WDLH	**Douliu**	**0.86**	**267**	*e*P		**Pg**	**00 33 39.4**	**-0.2**
	baz=267							
WDLH				*e*S		**Sn**	**00 33 52.5**	**-0.4**
	baz=267							
NDT	**Datong Townshi**	**0.86**	**2**	*e*P		**Pb**	**00 33 39.6**	**+0.1**
	baz=360							
NDT				*e*S		**Sg**	**00 33 49.7**	**-1.3**
	baz=360							
STYT	**Tauyuan**	**0.87**	**229**	*e*P		**Pb**	**00 33 39.8**	**0.0**
	baz=230							
STYT				*e*S		**Sg**	**00 33 51.2**	**-0.1**
	baz=230							
TWQ1	**Liyutan**	**0.89**	**314**	*e*P		**Pb**	**00 33 40.7**	**+0.7**
	baz=313							
TWQ1				*e*S		**Sb**	**00 33 52.1**	**+0.4**
	baz=313							
TPUB	**Ta-pu**	**0.89**	**241**	*e*P		**Pb**	**00 33 40.5**	**+0.4**
	baz=242							
TPUB				*e*S		**Sb**	**00 33 52.0**	**+0.2**
	baz=242							
CHN4	**Tsaushan**	**0.90**	**245**	*e*P		**Pb**	**00 33 40.6**	**+0.4**
	baz=246							
CHN4				*e*S		**Sb**	**00 33 53.0**	**+1.0**
	baz=246							
ENTT	**Nioudou**	**0.90**	**5**	*e*P		**Pb**	**00 33 40.4**	**+0.1**
	baz=3.0							
ENTT				*e*S		**Sg**	**00 33 51.5**	**-0.8**
	baz=3.0							
WCHH	**Zhanghua**	**0.91**	**292**	*e*P		**Pn**	**00 33 41.0**	**-0.1**
	baz=292							
WCHH				*e*S		**Sb**	**00 33 53.6**	**+1.3**
	baz=292							
TWC	**Suao**	**0.93**	**21**	*e*P		**Pb**	**00 33 41.1**	**+0.3**
	baz=10.0							
TWC				*e*S		**Sb**	**00 33 53.3**	**+0.3**
	baz=10.0							
YHNB	**Yeheng**	**0.93**	**354**	*e*P		**Pg**	**00 33 40.6**	**-0.4**
	baz=352							
YHNB				*e*S		**Sg**	**00 33 52.0**	**-1.2**
	baz=352							
CHN2	**Minshiung**	**0.94**	**258**	*e*P		**Pn**	**00 33 42.6**	**+1.1**
	baz=258							
CHN2				*e*S		**Sn**	**00 33 55.7**	**+0.9**
	baz=258							
NSK	**Sanguang**	**0.94**	**353**	*e*P		**Pg**	**00 33 40.9**	**-0.3**
	baz=352							
NSK				*e*S		**Sg**	**00 33 52.6**	**-0.9**
	baz=352							
WDJ	**Dajia District**	**0.98**	**309**	*e*P		**Pn**	**00 33 42.6**	**+0.5**
	baz=308							
WDJ				*e*S		**Sn**	**00 33 56.7**	**+1.0**
	baz=308							
TWG	**Pinlang**	**0.98**	**202**	*e*P		**Pg**	**00 33 41.5**	**-0.5**
	baz=190							
TWGBT	**Beinan**	**0.98**	**202**	*e*P		**Pg**	**00 33 41.3**	**-0.6**
	baz=190							
NSTT	**Nanjuang**	**0.99**	**334**	*e*P		**Pg**	**00 33 41.8**	**-0.2**
	baz=333							
NSTT				*e*S		**Sg**	**00 33 54.3**	**-0.8**
	baz=333							
CHY	**Chiayi**	**0.99**	**256**	*e*P		**Pb**	**00 33 41.8**	**0.0**
	baz=257							
CHY				*e*S		**Sn**	**00 33 56.3**	**+0.3**
	baz=257							
TWE	**Neicheng**	**1.00**	**10**	*e*P		**Pb**	**00 33 42.2**	**+0.3**
	baz=8.0							
TWE				*e*S		**Sb**	**00 33 55.2**	**+0.4**
	baz=8.0							
PTSB	**Yuanli**	**1.00**	**315**	*e*P		**Pn**	**00 33 43.1**	**+0.7**
	baz=315							
PTSB				*e*S		**Sn**	**00 33 56.6**	**+0.4**
	baz=315							
EOS1	**EOS1**	**1.00**	**36**	*e*P		**Pn**	**00 33 43.1**	**+0.6**
	baz=53							
NMLH	**Miaoli**	**1.01**	**322**	*e*P		**Pn**	**00 33 43.1**	**+0.5**
	baz=321							
NMLH				*e*S		**Sn**	**00 33 56.9**	**+0.3**
	baz=321							
TWH	**Lutao**	**1.02**	**180**	*e*P		**Pg**	**00 33 41.3**	**-1.3**
	baz=182							
CHN1	**Nanshi**	**1.03**	**238**	*e*P		**Pb**	**00 33 42.7**	**+0.2**
	baz=249							
CHN1				*e*S		**Sn**	**00 33 57.1**	**+0.1**
	baz=249							
RLNB	**Erlin**	**1.03**	**279**	*e*S		**Sn**	**00 33 57.7**	**+0.6**
	baz=279							
NWLT	**Wulai**	**1.04**	**1**	*e*P		**Pg**	**00 33 42.3**	**-0.6**
	baz=358							
NWLT				*e*S		**Sg**	**00 33 55.7**	**-0.8**
	baz=358							
SNST	**Tainan City**	**1.04**	**240**	*e*P		**Pn**	**00 33 43.1**	**+0.2**
	baz=242							
SNST				*e*S		**Sb**	**00 33 56.6**	**+0.7**
	baz=242							
SGST	**Jiashian**	**1.05**	**232**	*e*P		**Pb**	**00 33 42.8**	**0.0**
	baz=233							
SGST				*e*S		**Sb**	**00 33 57.0**	**+0.7**
	baz=233							
SLGT	**Liugui**	**1.06**	**226**	*e*P		**Pg**	**00 33 43.0**	**-0.4**
	baz=218							
SLGT				*e*S		**Sn**	**00 33 58.5**	**+0.7**
	baz=218							
ECL	**Taimali**	**1.23**	**203**	*e*P		**Pn**	**00 33 45.1**	**-0.5**
	baz=192							
TATO	**Taipei**	**1.23**	**0**	*e*P		**Pg**	**00 33 47.0**	**+0.3**
	baz=9.0							
NCUH	**Zhongli**	**1.25**	**348**	*e*P		**Pn**	**00 33 46.1**	**+0.2**
	baz=1.0							
SSD	**Sandimen**	**1.25**	**218**	*e*P		**Pn**	**00 33 46.0**	**+0.1**
	baz=213							
TIPB	**Shuangxi**	**1.27**	**14**	*e*P		**Pg**	**00 33 47.2**	**-0.2**
	baz=13							
TWB1	**Santiao Chiao**	**1.35**	**20**	*e*P		**Pn**	**00 33 46.8**	**-0.4**
	baz=9.0							
NWF	**Wu-fen Shan**	**1.36**	**12**	*e*P		**Pn**	**00 33 47.1**	**-0.3**
	baz=10.0							
WFSB	**Wu-fen Shan**	**1.36**	**12**	*e*P		**Pg**	**00 33 48.5**	**-0.5**
	baz=10.0							
MASBT	**Mashibuluo**	**1.36**	**215**	*e*P		**Pn**	**00 33 46.9**	**-0.5**
	baz=211							
YM01	**YM01**	**1.41**	**3**	*e*P		**Pn**	**00 33 48.7**	**+0.6**
YM04	**YM04**	**1.41**	**2**	*e*P		**Pg**	**00 33 50.0**	**-0.1**
	baz=18							
YM11	**YM11**	**1.43**	**4**	*e*P		**Pb**	**00 33 49.4**	**+0.1**
	baz=1.0							
YM03	**YM03**	**1.44**	**2**	*e*P		**Pn**	**00 33 49.0**	**+0.5**
	baz=18							
JYNG	**Yonagunijimaku**	**1.52**	**62**	P		**Pn**	**00 33 49.6**	**+0.1**
JYNG				S		**Sn**	**00 34 09.1**	**+0.1**
SCZT	**Fangliau**	**1.57**	**210**	*e*P		**Pb**	**00 33 51.3**	**-0.3**
	baz=207							
YOJ	**Yonaguni jima**	**1.58**	**62**	P		**Pn**	**00 33 50.5**	**+0.2**
YOJ				S		**Sn**	**00 34 11.5**	**+1.0**
WDGT	**Dungji**	**1.73**	**254**	*e*P		**Pn**	**00 33 52.2**	**-0.2**
	baz=251							
PHUB	**P'eng-hu**	**1.76**	**263**	*e*P		**Pn**	**00 33 52.6**	**-0.3**
	baz=243							
PNG	**Penghu**	**1.77**	**265**	*e*P		**Pn**	**00 33 52.8**	**-0.1**
	baz=263							
IRIF	**Iriomote-Funau**	**2.14**	**73**	S		**Sn**	**00 34 25.2**	**+0.7**
HATJ	**Hateruma jima**	**2.15**	**81**	P		**Pn**	**00 33 58.2**	**-0.1**
HATJ				S		**Sn**	**00 34 24.5**	**-0.2**
JKRS	**Kuro-shima**	**2.37**	**77**	P		**Pn**	**00 34 01.7**	**+0.5**
JKRS				*i* S		**Sn**	**00 34 31.2**	**+1.2**
JIJ	**Ishigaki jima**	**2.52**	**75**	P		**Pn**	**00 34 03.0**	**-0.2**
JIJ				*e*S		**Sn**	**00 34 33.5**	**-0.2**
JISG	**Ishigakijimahi**	**2.72**	**71**	P		**Pn**	**00 34 05.9**	**-0.2**
JISG				S		**Sn**	**00 34 37.9**	**-0.9**
ZPLA	**Ao Xicun**	**3.42**	**274**	*e*P		**Pn**	**00 34 15.4**	**-0.2**
	baz=272							

*TAP **21** 00:35:08.7,24.4°.85N×122.0°.07E,h10km,ML2.6,C*
*JMA **21** 00:35:09.4±0.1,24.4°.83N×122.0°.06E,h6km,M1.9*
ISC 21 00:35:09.1±0.9,24°.84N±0°.03×122°.08E±0°.03,h12km±7km,
n35,σ0°35/46,4C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EGS		**0.13**	**272**	⇑*i*P		**Pg**	**00 35 12.4**	**0.0**
	baz=267							
EGS				S		**Sg**	**00 35 14.8**	**+0.1**
	baz=267							
TWB1	**Santiao Chiao**	**0.19**	**334**	⇑*i*P		**Pg**	**00 35 13.2**	**-0.1**
	baz=338							
TWB1				*e*S		**Sg**	**00 35 15.8**	**-0.3**
	baz=338							
NTC	**Toucheng**	**0.23**	**274**	⇑*i*P		**Pg**	**00 35 14.2**	**+0.2**
	baz=271							
NTC				S		**Sg**	**00 35 17.9**	**+0.7**
	baz=271							
TIPB	**Shuangxi**	**0.26**	**300**	⇑*i*P		**Pg**	**00 35 14.9**	**+0.3**
	baz=299							
TIPB				S		**Sg**	**00 35 18.6**	**+0.2**
	baz=299							
EOS1	**EOS1**	**0.29**	**171**	*i* P		**Pb**	**00 35 15.9**	**-0.4**
	baz=169							
EOS1				S		**Sb**	**00 35 20.8**	**-0.3**
	baz=169							
ILA	**Ilan**	**0.31**	**256**	*e*P		**Pg**	**00 35 15.6**	**+0.2**
	baz=253							
TWC	**Suao**	**0.31**	**222**	*i* P		**Pg**	**00 35 15.4**	**0.0**
	baz=218							
TWC				*e*S		**Sg**	**00 35 19.2**	**-0.5**
	baz=218							
NWF	**Wu-fen Shan**	**0.35**	**311**	*e*P		**Pg**	**00 35 16.6**	**+0.3**
	baz=310							
NWF				*e*S		**Sb**	**00 35 22.1**	**-1.0**
	baz=310							
WFSB	**Wu-fen Shan**	**0.35**	**311**	*e*P		**Pg**	**00 35 16.6**	**+0.3**
	baz=310							
TWE	**Neicheng**	**0.39**	**252**	P		**Pg**	**00 35 17.1**	**+0.2**
	baz=249							
ENTT	**Nioudou**	**0.51**	**247**	P		**Pb**	**00 35 19.6**	**-0.4**
	baz=244							
ENTT				*e*S		**Sb**	**00 35 27.0**	**-0.3**
	baz=244							
ENA	**Nanau**	**0.51**	**217**	*e*P		**Pb**	**00 35 19.8**	**-0.3**
	baz=214							
NWLT	**Wulai**	**0.53**	**263**	P		**Pg**	**00 35 19.5**	**+0.1**
	baz=262							
YM01	**YM01**	**0.55**	**304**	*e*P		**Pb**	**00 35 20.8**	**0.0**
	baz=303							
YM11	**YM11**	**0.56**	**306**	*e*P		**Pb**	**00 35 21.0**	**+0.1**
	baz=305							
YM08	**YM08**	**0.56**	**308**	*e*P		**Pb**	**00 35 20.8**	**-0.2**
	baz=308							
YM10	**YM10**	**0.56**	**304**	*e*P		**Pb**	**00 35 21.1**	**+0.1**
	baz=303							
NDT	**Datong Townshi**	**0.56**	**245**	P		**Pb**	**00 35 20.6**	**-0.3**
	baz=244							
YM05	**YM05**	**0.56**	**305**	*e*P		**Pb**	**00 35 20.9**	**-0.1**
	baz=304							
YM04	**YM04**	**0.58**	**303**	*e*P		**Pb**	**00 35 21.2**	**-0.1**
	baz=302							
TWY	**Chenhua**	**0.61**	**315**	*e*P		**Pb**	**00 35 21.8**	**0.0**
	baz=315							
YHNB	**Yeheng**	**0.66**	**255**	P		**Pg**	**00 35 21.9**	**-0.1**
	baz=254							
NSK	**Sanguang**	**0.67**	**256**	P		**Pg**	**00 35 22.1**	**-0.1**
	baz=254							
NNSB	**Datong**	**0.75**	**237**	*e*P		**Pb**	**00 35 23.9**	**-0.4**
	baz=236							
NNSH	**Datong**	**0.75**	**237**	*e*P		**Pb**	**00 35 23.9**	**-0.3**
	baz=236							
NNS	**Nan Shan**	**0.75**	**238**	*e*P		**Pb**	**00 35 24.1**	**-0.1**
	baz=236							
PCYT	**Pengchaiyu**	**0.79**	**360**	*e*P		**Pg**	**00 35 24.0**	**-0.3**
NACB	**Ninganchiao**	**0.80**	**214**	P		**Pb**	**00 35 24.8**	**-0.1**
	baz=212							
ETLH	**Xiulin Townshi**	**0.83**	**221**	*e*P		**Pb**	**00 35 25.7**	**+0.1**
	baz=219							
JYNG	**Yonagunijimaku**	**0.88**	**116**	P		**Pg**	**00 35 26.3**	**+0.2**
JYNG				S		**Sb**	**00 35 38.6**	**+0.6**
YOJ	**Yonaguni jima**	**0.93**	**114**	P		**Pg**	**00 35 27.0**	**-0.1**
YOJ				S		**Sb**	**00 35 39.9**	**+0.4**
WHF	**Hehuan Shan**	**1.01**	**227**	*e*P		**Pb**	**00 35 29.0**	**+0.2**
	baz=225							
JKRS	**Kuro-shima**	**1.86**	**108**	S		**Sn**	**00 36 05.1**	**+0.9**
JIJ	**Ishigaki jima**	**1.94**	**104**	P		**Pb**	**00 35 44.0**	**-0.4**
JIJ				S		**Sb**	**00 36 08.4**	**-0.2**
JISG	**Ishigakijimahi**	**2.05**	**97**	S		**Sb**	**00 36 11.2**	**-0.5**

*IDC **21** 00:40:18.8±0.6,7°.90S×104°.46E,h0km,mb4.2/20,*
mb1 4.3/20,mb1mx4.1/51,mbtmp4.2/20,Error ellipse:
s-maj=29.0km s-min=12.2km az=50.0
*DJA **21** 00:40:19.3±0.4,8°.5S±4°×10°4E±°,h10km,M4.8/16,mB5.9/3,*
mb4.8/9,MLv4.6/16,Mw(mB)5.5/3
*NEIC **21** 00:40:25.9±1.2,7°.8S±0°.1×104°.65E±0°.07,h50km±5km,*
mb4.5/27,Error ellipse: s-maj=15.6km s-min=10.2km
az=181.0
ISC 21 00:40:24.2±0.5,7°.85S±0°.07×104°.53E±0°.07,h35km,n92,
σ1s04/87,mb4.4/33,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KASI	**Kota Agung**	**2.31**	**359**	P		**Pn**	**00 40 58.5**	**-1.3**
SBJI	**Serang**	**2.34**	**43**	P		**Pn**	**00 41 00.4**	**+0.2**
DBJI	**Dramaga**	**2.55**	**60**	P		**Pn**	**00 41 03.9**	**+0.8**
BLSI	**Bandar Lampung**	**2.57**	**16**	P		**Pn**	**00 41 01.4**	**-2.0**
CNJI	**Cibinong**	**2.63**	**78**	P		**Pn**	**00 41 04.0**	**-0.2**
CBJI	**Citeko**	**2.71**	**58**	P		**Pn**	**00 41 03.8**	**-1.4**
LWLI	**Liwa**	**2.86**	**350**	P		**Pn**	**00 41 05.4**	**-2.0**
LEM	**Lembang**	**3.23**	**72**	Pn		**Pn**	**00 41 15.1**	**+2.6**
	12nm,0.3s,baz=278,slow=3.2,SNR=19							
LEM				Sn		**Sn**	**00 41 52.0**	**+2.2**
	37nm,0.3s,baz=168,slow=20,SNR=15							
LEM	**Lembang**	**3.23**	**72**	P		**Pn**	**00 41 12.2**	**-0.3**
CISI	**Cisompet, Garu**	**3.27**	**85**	P		**Pn**	**00 41 13.4**	**+0.4**
CISI	**Cisompet, Garu**	**3.27**	**85**			**Pn**	**00 41 11.3**	**-1.8**
MDSI	**Maura Dua**	**3.36**	**354**	P		**Pn**	**00 41 13.6**	**-0.7**
MNAI	**Manna**	**3.81**	**336**	P		Pn	00 41 15.6	-4.8
LHSI	**Lahat**	**4.12**	**346**	P		**Pn**	**00 41 24.0**	**-0.7**
UGM	**Wanagama**	**5.94**	**91**	P		**Pn**	**00 41 50.0**	**+0.3**
	0.6nm157nm,0.7s							
UGM	**Wanagama**	**5.94**	**91**			**Pn**	**00 41 49.9**	**+0.3**
WOJI	**Wonogiri, Jawa**	**6.33**	**90**	P		**Pn**	**00 41 55.0**	**-0.1**
	0.2nm22nm,0.7s							
KRJI	**Kerinci**	**6.49**	**332**	P		**Pn**	**00 41 55.7**	**-1.7**
	5.3nm199nm,0.7s							
UWJI	**Ujung Watu**	**6.52**	**78**	P		**Pn**	**00 41 57.8**	**+0.1**
	0.3nm2µm62nm,0.7s							
SDSI	**Sungai Dareh**	**7.54**	**336**	P		Pn	00 42 21.8	+10
JAGI	**Jajag, Banyuwa**	**9.54**	**94**	P		**Pn**	**00 42 39.4**	**+0.2**
	32nm,0.6s							
JAGI	**Jajag, Banyuwa**	**9.54**	**94**	Pn		**Pn**	**00 42 39.2**	**0.0**
SRBI	**Singaraja**	**10.58**	**92**	P		**Pn**	**00 42 53.7**	**+0.3**
KAPI	**Kappang**	**15.38**	**80**			**Pn**	**00 43 55.5**	**-3.3**
KAPI				IAmb		IAmb	00 43 55.5	
	comp=Z,14nm,0.5s							
MPSI	**Mapaga**	**17.35**	**63**	P		**P**	**00 44 24.6**	**-0.2**
FITZ	**Fitzroy Crossi**	**22.93**	**118**	P		**P**	**00 45 25.1**	**-0.3**
	comp=Z,3.9nm,0.7s,baz=261,slow=3.7,SNR=10							
FITZ				S		**S**	**00 49 29.6**	**-3.5**
	comp=Z,2.0nm,1.0s,baz=95,slow=12,SNR=2.0							
CM31	**Chiang Mai Arr**	**26.72**	**348**	P		**P**	**00 45 59.7**	**-0.8**
CM31				IAmb		IAmb	00 46 02.0	
	comp=Z,6.4nm,0.8s							
CMAR	**Chiang Mai Arr**	**26.72**	**348**	P		**P**	**00 46 01.0**	**+0.5**
	comp=Z,3.4nm,0.8s,baz=181,slow=8.4,SNR=16							
CHTO	**Chiang Mai**	**27.07**	**348**	P		**P**	**00 46 03.6**	**0.0**
WB0	**Warramunga Arr**	**31.26**	**115**	P		**P**	**00 46 40.8**	**-0.2**
WB0				IAmb		IAmb	00 46 42.0	
	comp=Z,8.5nm,0.8s							
WRA	**Warramunga Arr**	**31.27**	**116**	P		**P**	**00 46 41.1**	**+0.1**
	comp=Z,7.0nm,0.7s,baz=286,slow=10,SNR=14							
WB2	**Warramunga Arr**	**31.28**	**116**	P		**P**	**00 46 41.0**	**-0.2**
WB2				IAmb		IAmb	00 46 42.0	
	comp=Z,8.7nm,0.7s							
H08S2	**Diego Garcia H**	**31.74**	**268**	T		T	01 21 12.9	
	baz=87,slow=74							
H08S3	**Diego Garcia H**	**31.75**	**268**	T		T	01 21 10.6	
	baz=87,slow=74							
H08S1	**Diego Carcia H**	**31.76**	**268**	T		T	01 20 48.2	
	baz=87							
ASAR	**Alice Springs**	**32.24**	**123**	P		**P**	**00 46 49.2**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=297,slow=8.5,SNR=10							
ASAR				PcP		**PcP**	**00 49 37.5**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=304,slow=2.0,SNR=9.8							
NACB	**Ninganchiao**	**35.93**	**27**	P		**P**	**00 47 20.7**	**-0.7**
ENH	**Enshi**	**38.20**	**7**	P		**P**	**00 47 39.4**	**-1.4**
ENH				IAmb		IAmb	00 47 41.5	
	comp=Z,6.6nm,0.9s							
CD2	**Chengdu**	**38.55**	**359**	P		**P**	**00 47 44.6**	**+0.9**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
LSA	**Lhasa**	**39.49**	**342**	P		**P**	**00 47 52.2**	**+0.1**
LSA				IAmb		IAmb	00 49 14.0	
	comp=Z,5.4nm,0.5s							
STKA	**Stephens Creek**	**41.93**	**130**	P		**P**	**00 48 11.8**	**0.0**
	comp=Z,2.2nm,0.5s,baz=309,slow=8.0,SNR=8.4

	comp=Z,2.7nm,0.7s,baz=143,slow=8.1,SNR=27							
MAKZ	**Makanchi**	**58.01**	**342**	P		**P**	**00 50 13.4**	**0.0**
MAKZ				IAmb		IAmb	00 50 14.9	
	comp=Z,5.3nm,1.6s							
KURK	**Kurchatov**	**62.50**	**342**	P		**P**	**00 50 44.5**	**+0.4**
GEYT	**Alibeck**	**62.80**	**320**	P		**P**	**00 50 46.5**	**0.0**
	comp=Z,1.0nm,0.7s,baz=159,slow=5.6,SNR=3.9							
ZAA0	**Zalesovo Array**	**63.78**	**347**	P		**P**	**00 50 52.4**	**-0.2**
ZALV	**Zalesovo Beam**	**63.78**	**347**	P		**P**	**00 50 52.6**	**+0.1**
	comp=Z,3.7nm,0.6s,baz=149,slow=3.1,SNR=25							
YSS	**Yuzh-Sakhalins**	**64.26**	**28**	P		**P**	**00 50 55.5**	**-0.3**
AKTO	**Aktyubinsk**	**70.63**	**331**	P		**P**	**00 51 36.4**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=116,slow=12							
ARU	**Arti**	**74.35**	**335**	P		**P**	**00 51 58.8**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=127,slow=5.1							
ARU	**Arti**	**74.35**	**335**	IAmb		IAmb	00 52 10.7	
	comp=Z,11nm,1.3s							
PETK	**Petropavlovsk-**	**75.53**	**30**	P		**P**	**00 52 04.9**	**-0.1**
	comp=Z,1.1nm,0.9s,baz=198,slow=4.1,SNR=1.8							
VNDA	**Vanda**	**75.59**	**169**	P		**P**	**00 52 05.3**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=296,slow=6.3,SNR=9.4							
VNDA	**Vanda**	**75.59**	**169**	P		**P**	**00 52 04.8**	**-0.1**
KBZ	**Khabaz**	**75.66**	**319**	P		**P**	**00 52 06.3**	**+0.5**
	comp=Z,3.2nm,0.9s,baz=132,slow=8.8,SNR=4.3							
BOSA	**Boshof**	**76.89**	**242**	P		**P**	**00 52 13.3**	**-0.2**
	comp=Z,3.6nm,0.9s,baz=76,slow=12,SNR=2.7							
NRIK	**Noril'sk**	**77.91**	**354**	P		**P**	**00 52 17.6**	**-0.5**
	comp=Z,3.2nm,0.8s,baz=155,slow=3.6,SNR=5.5							
BR131	**Keskin Array S**	**80.58**	**312**	P		**P**	**00 52 33.3**	**-0.2**
BR131				IAmb		IAmb	00 52 33.9	
	comp=Z,3.7nm,0.8s							
BRTR	**Keskin Array B**	**80.58**	**312**	P		**P**	**00 52 33.0**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=136,slow=7.1,SNR=20							
QSPA	**South Pole Qui**	**82.14**	**180**	P		**P**	**00 52 41.4**	**+0.1**
MDUB	**Mudurnu**	**82.59**	**313**	P		**P**	**00 52 44.3**	**+0.2**
MLR	**Muntele Rosu**	**87.63**	**316**	P		**P**	**00 53 09.9**	**+0.7**
SNAA	**Sanae**	**87.98**	**198**	P		**P**	**00 53 11.4**	**+1.0**
SNAA	**Sanae**	**87.98**	**198**	P		**P**	**00 53 11.4**	**+1.0**
BUR08	**Bucovina Ar. S**	**88.62**	**318**	P		**P**	**00 53 14.7**	**+0.9**
LIT	**Litokhoron**	**88.96**	**311**	P		**P**	**00 53 15.5**	**0.0**
ADK	**Adak**	**89.26**	**37**	P		**P**	**00 53 15.1**	**-1.5**
VNA2	**Neumayer--Watz**	**89.62**	**198**	P		**P**	**00 53 19.6**	**+1.6**
	baz=90,slow=4.3							
VNA1	**Neumayer--Stat**	**90.00**	**198**	P		**P**	**00 53 21.3**	**+1.6**
FINES	**FINESS Array B**	**91.36**	**332**	P		**P**	**00 53 25.5**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=106,slow=7.7,SNR=4.2							
P38A	**Dawn**	**144.46**	**24**			PKPbc	00 59 56.1	+0.4
TX31	**Lajitas Ar. Si**	**145.95**	**47**			**PKPbc**	**01 00 00.8**	**-0.2**
TX32	**Lajitas Array**	**145.95**	**47**	PKPbc		**PKPab**	**01 00 01.5**	**0.0**
TXAR	**Lajitas Array**	**145.95**	**47**	PKPbc		**PKPab**	**01 00 02.2**	**+0.7**
	comp=Z,3.2nm,0.8s,baz=305,slow=2.6,SNR=19							
R40A	**Maddies Statio**	**146.11**	**24**	PKPbc		**PKPdf**	**01 00 00.5**	**+0.3**
M57A	**Sunshine Farm,**	**146.62**	**2**			**PKPbc**	**01 00 02.8**	**+0.3**
N58A	**Sunbury**	**147.13**	**2**			**PKPbc**	**01 00 03.8**	**-0.1**
FCAR	**Ozark Folk Cen**	**148.21**	**26**			**PKPbc**	**01 00 06.6**	**-0.4**
WVT	**Waverly**	**149.67**	**20**			**PKPbc**	**01 00 10.9**	**+0.1**
V52A	**Sevierville**	**151.17**	**14**			**PKPbc**	**01 00 14.2**	**-0.2**
V53A	**Saluda**	**151.51**	**13**			**PKPbc**	**01 00 15.0**	**-0.2**

*LDG **21** 00:56:15.4±0.1,47.°72N×4.°26W, h5km, Md3.1/2, Ml2.9/33, Error ellipse: s-maj=2.5km s-min=1.8km az=85.0*
*STR **21** 00:56:18.1±1.1,48.°N±4.°×,±.°, h29km±8km, MLv2.9/3, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/haslach_taup-2.11 preliminary*
*BGS **21** 00:56:22.1±1.6,47.°89N×3.°86W, h5km, ML2.2*

ISC 21 00:56:13.3±1.2, 47°68N±0.°03×4°31W±0.°05, h12km, n54, σ2^{s}26/95, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QUIF	**Quistinic**	**0.81**	**72**	*e*Pg	**Pg**	**00 56 29.7**	**+0.8**
QUIF	**Quistinic**	**0.81**	**72**	*e*Pn	**Pg**	**00 56 30.9**	**+2.0**
QUIF				*e*Sn	**Sb**	00 56 42.3	+2.2
	334nm,0.2s						
ROSF	**Rostrenen**	**0.96**	**46**	*e*Pg	**Pg**	**00 56 31.7**	**0.0**
ROSF	**Rostrenen**	**0.96**	**46**	*e*Pn	**Pg**	**00 56 32.7**	**+0.9**
ROSF	**Rostrenen**	**0.96**	**46**	*e*P	**Pb**	**00 56 33.9**	**+2.1**
ROSF				*e*Sg	**Sg**	**00 56 44.9**	**+0.7**
	65nm,0.2s						
ROSF	**Rostrenen**	**0.96**	**46**	*e*P	**Pg**	**00 56 31.8**	**0.0**
ROSF	**Rostrenen**	**0.96**	**46**	Pg	**Pg**	**00 56 32.3**	**+0.5**
ROSF				Sg	**Sg**	**00 56 45.0**	**+0.7**
SGMF	**Saint Gilles**	**1.31**	**63**	*e*Pn	**Pn**	**00 56 37.5**	**+0.1**
SGMF	**Saint Gilles**	**1.31**	**63**	*e*Pg	**Pn**	**00 56 39.1**	**+1.7**
SGMF	**Saint Gilles**	**1.31**	**63**	*e*P	**Pb**	**00 56 39.7**	**+1.8**
SGMF				*e*Sg	**Sb**	**00 56 55.5**	**+0.9**
	70nm,0.2s						
RENF	**Rennes**	**1.85**	**75**	Pn	**Pn**	**00 56 45.9**	**+1.1**
RENF				Sg	**Sg**	**00 57 13.7**	**+0.8**
JVM	**Valle D.L. Mar**	**2.08**	**41**	*e*P	**Pb**	**00 56 52.1**	**+1.1**
JRS	**Jersey**	**2.12**	**43**	*e*P	**Pb**	**00 56 52.7**	**+1.1**
JRS				*e*S	**Sn**	**00 57 14.7**	**0.0**
JRS				IAML		00 57 22.2	
	comp=E,21nm,0.3s						
JRS				IAML		00 57 26.2	
	comp=N,21nm,0.3s						
JDC	**Jersey Dam (Cr**	**2.13**	**44**	*e*P	**Pb**	**00 56 52.8**	**+0.9**
JLP	**Les Platons**	**2.15**	**42**	*e*P	**Pb**	**00 56 52.7**	**+0.6**
JQE	**Queens East**	**2.15**	**44**	*e*P	**Pb**	**00 56 52.6**	**+0.6**
GRR	**Gorron**	**2.42**	**72**	*e*Pn	**Pn**	**00 56 53.6**	**+0.9**
GRR	**Gorron**	**2.42**	**72**	*e*Pg	**Pb**	**00 56 59.6**	**+2.8**
	comp=N,40nm,0.3s						
GRR				*e*Sg	**Sb**	**00 57 30.1**	**+3.5**
	comp=N,35nm,0.2s						
CCA1	**Carnmenellis**	**2.58**	**347**	Pn	**Pn**	**00 56 54.1**	**-0.8**
FLN	**La Foliniere**	**2.78**	**66**	*e*Pn	**Pn**	**00 56 57.7**	**+0.1**
	baz=245						
FLN	**La Foliniere**	**2.78**	**66**	*e*Pg	**Pb**	**00 57 05.5**	**+2.6**
	baz=246						
FLN				*e*Sn	**Sn**	**00 57 29.4**	**-1.7**
FLN				*e*Sg	**Sb**	**00 57 40.7**	**+3.8**
	comp=N,28nm,0.4s,baz=246						
LDF	**La Druitiere**	**2.95**	**70**	*e*Pn	**Pn**	**00 57 01.1**	**+1.1**
LDF	**La Druitiere**	**2.95**	**70**	*e*Pg	**Pb**	**00 57 09.3**	**+3.5**
LDF				*e*Sn	**Sn**	**00 57 33.4**	**-1.9**
LDF				*e*Sg	**Sg**	**00 57 47.3**	**-0.7**
	comp=N,13nm,0.2s						
MFF	**Saint Martin d**	**3.04**	**109**	*e*Pn	**Pn**	**00 57 02.7**	**+1.5**
MFF	**Saint Martin d**	**3.04**	**109**	*e*Pg	**Pb**	**00 57 11.8**	**+4.5**
MFF				*e*Sn	**Sn**	**00 57 36.6**	**-0.9**
MFF				*e*Sg	**Sb**	**00 57 49.0**	**+4.7**
	comp=N,9.3nm,0.2s						
MFF	**Saint Martin d**	**3.04**	**109**	Pn	**Pn**	**00 57 02.8**	**+1.7**
MFF	**Saint Martin d**	**3.04**	**109**	Pg	**Pg**	**00 57 12.1**	**+0.6**
CHIF	**Chize**	**3.09**	**119**	Pn	**Pn**	**00 57 03.5**	**+1.7**
HTL	**Hartland**	**3.32**	**358**	Pn	**Pn**	**00 57 04.3**	**-0.7**
HTL	**Hartland**	**3.32**	**358**	Sn	**Sn**	**00 57 42.7**	**-1.7**
LFF	**La Frestale**	**4.44**	**126**	*e*Pn	**Pn**	**00 57 21.7**	**+1.2**
LFF	**La Frestale**	**4.44**	**126**	*e*Pg	**Pg**	**00 57 37.7**	**-0.7**
LFF				*e*Sn	**Sn**	**00 58 10.0**	**-2.1**
	comp=N,4.4nm,0.4s						
LFF				*e*Sg	**Sg**	**00 58 34.9**	**-1.0**
	comp=N,13nm,0.4s						
RJF	**Les Rejaudoux**	**4.67**	**118**	*e*Pn	**Pn**	**00 57 24.0**	**+0.4**
RJF	**Les Rejaudoux**	**4.67**	**118**	*e*Pg	**Pg**	**00 57 41.8**	**-0.9**
RJF				*e*Sn	**Sn**	**00 58 15.0**	**-2.7**
RJF				*e*Sg	**Sg**	**00 58 42.3**	**-0.9**
	comp=N,5.5nm,0.2s						
TCF	**Toulx Ste Croi**	**4.67**	**105**	*e*Pn	**Pn**	**00 57 24.3**	**+0.6**
TCF	**Toulx Ste Croi**	**4.67**	**105**	*e*Pg	**Pg**	**00 57 41.7**	**-1.1**
TCF				*e*Sn	**Sn**	**00 58 15.1**	**-2.7**
	comp=N,2.0nm,0.2s						
TCF				*e*Sg	**Sg**	**00 58 41.4**	**-1.9**
	comp=N,6.4nm,0.5s						
HYF	**Humbligny**	**4.73**	**92**	*e*Pn	**Pn**	**00 57 24.4**	**0.0**
HYF				*e*Sn	**Sn**	**00 58 16.1**	**-3.1**
HYF				*e*Sg	**Sg**	**00 58 42.8**	**-2.3**
BGF	**Bois d'Agland**	**5.01**	**100**	*e*Pn	**Pn**	**00 57 29.6**	**+1.3**
BGF	**Bois d'Agland**	**5.01**	**100**	*e*Pg	**Pg**	**00 57 48.7**	**-0.5**
BGF				*e*Sn	**Sn**	**00 58 22.9**	**-3.2**
BGF				*e*Sg	**Sg**	**00 58 51.8**	**-2.3**
	comp=N,12nm,0.3s						
SJPF	**Ste Jean**	**5.05**	**153**	*e*Pn	**Pn**	**00 57 29.8**	**+0.9**
SJPF				*e*Sn	**Sn**	**00 58 24.7**	**-2.5**
	comp=N,1.8nm,0.2s						
CAF	**Calviac**	**5.20**	**120**	*e*Pn	**Pn**	**00 57 32.0**	**+1.0**
CAF				*e*Sn	**Sn**	**00 58 28.6**	**-2.3**
	comp=N,2.0nm,0.2s						
AVF	**Avril sur Loir**	**5.29**	**97**	*e*Pn	**Pn**	**00 57 32.7**	**+0.6**
AVF				*e*Sn	**Sn**	**00 58 28.8**	**-4.2**
AVF				*e*Sg	**Sg**	**00 59 00.5**	**-2.7**
	comp=N,3.4nm,0.4s						

SSF	**Saint Saulge**	**5.34**	**94**	*e*Pn		**Pn**	**00 57 33.2**	**+0.3**
SSF	**Saint Saulge**	**5.34**	**94**	*e*Pg		**Pg**	**00 57 54.0**	**-1.6**
SSF				*e*Sn		**Sn**	**00 58 30.5**	**-3.8**
	comp=N,0.7nm,0.2s							
SSF				*e*Sg		**Sg**	**00 59 01.5**	**-3.3**
	comp=N,1.9nm,0.3s							
LOR	**Lormes**	**5.55**	**91**	*e*Pn		**Pn**	**00 57 36.8**	**+1.1**
	baz=271							
LOR				*e*Sn		**Sn**	**00 58 35.5**	**-4.0**
LOR				*e*Sg		**Sg**	**00 59 08.6**	**-2.9**
	comp=N,3.9nm,0.4s,baz=272							
SMF	**Signal de Mont**	**5.65**	**98**	*e*Pn		**Pn**	**00 57 37.6**	**+0.5**
SMF				*e*Sn		**Sn**	**00 58 37.5**	**-4.4**
	comp=N,1.1nm,0.2s							
SMF				*e*Sg		**Sg**	**00 59 11.8**	**-2.9**
	comp=N,1.7nm,0.3s							
EPF	**Esparros**	**5.69**	**143**	*e*Pn		**Pn**	**00 57 37.7**	**+0.1**
EPF				*e*Sn		**Sn**	**00 58 39.8**	**-3.0**
	comp=N,1.2nm,0.2s							
BAIF	**Baives**	**6.10**	**64**	*e*Pn		**Pn**	**00 57 43.0**	**-0.2**
BAIF	**Baives**	**6.10**	**64**	*e*Pg		Pb	00 58 06.6	+7.1
BAIF				*e*Sn		**Sn**	**00 58 49.6**	**-3.3**
	comp=N,1.8nm,0.4s							
BAIF				*e*Sg		**Sg**	**00 59 24.2**	**-4.9**
	comp=N,1.7nm,0.3s							
SFTF	**Sexfontaines**	**6.30**	**82**	*e*Pn		**Pn**	**00 57 45.7**	**-0.3**
	baz=263							
SFTF				*e*Sn		**Sn**	**00 58 53.2**	**-4.7**
SFTF				*e*Sg		**Sg**	**00 59 30.8**	**-4.7**
	comp=N,2.6nm,0.4s							
MTLF	**Montolieu**	**6.31**	**131**	*e*Pn		**Pn**	**00 57 46.8**	**+0.7**
MTLF				*e*Sn		**Sn**	**00 58 54.0**	**-4.1**
	comp=N,1.0nm,0.3s							
LASF	**Ste Croix**	**6.74**	**119**	*e*Pn		**Pn**	**00 57 52.6**	**+0.5**
LASF				*e*Sn		**Sn**	**00 59 05.2**	**-3.6**
	comp=N,0.7nm,0.2s							
LASF				*e*Sg		**Sg**	**00 59 46.8**	**-2.8**
	comp=N,1.0nm,0.4s							
PAGF	**Fort de Pagny**	**6.78**	**79**	*e*Pn		**Pn**	**00 57 52.2**	**-0.3**
VIVF	**Saint-Julien-l**	**6.83**	**111**	*e*Pn		**Pn**	**00 57 54.4**	**+1.0**
VIVF				*e*Sg		**Sg**	**00 59 49.2**	**-3.4**
	comp=N,2.8nm,0.5s							

DJA 21 01:00:05.9±0.4, 9°S±.8°×, 11°1E±°, h86km±14km, M4.0/13, mb4.1/3, MLv4.0/13, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**1.01**	**343**	P	Pn	01 00 25.7	+0.1
UGM				S	Sn	01 00 40.3	+0.1
WOJI	**Wonogiri, Jawa**	**1.05**	**6**	P	Pn	01 00 25.7	-0.2
SMRI	**Semarang**	**1.87**	**348**	P	Pn	01 00 36.7	+0.4
GRJI	**Gresik**	**2.56**	**40**	P	Pn	01 00 45.9	+0.4
GRJI				S	Sn	01 01 16.0	+0.2
CISI	**Cisompet, Garu**	**3.26**	**294**	P	Pn	01 00 55.2	+0.3
JAGI	**Jajag, Banyuwa**	**3.32**	**83**	P	Pn	01 00 56.0	+0.3
CNJI	**Cibinong**	**3.98**	**293**	P	Pn	01 01 04.3	-0.3
SRBI	**Singaraja**	**4.42**	**80**	P	Pn	01 01 11.0	+0.4
DBJI	**Dramaga**	**4.65**	**300**	P	Pn	01 01 13.5	-0.3
PLAI	**Plampang**	**6.88**	**90**	P	Pn	01 01 44.2	+0.1
	0.1nm21nm,1.1s						
WBSI	**Waikabubak, Su**	**8.49**	**96**	P	Pn	01 02 06.0	-0.2

*IDC **21** 01:08:44.7±2.3, 38.°96N×142.°48E, h0km, mb3.8/4, mb1 3.8/6, mb1mx3.4/55, mbtmp3.6/6, ML2.3/2, Error ellipse: s-maj=56.8km s-min=29.9km az=77.0*
*NEIC **21** 01:08:48.2±1.1, 38.°94N±0.°03×142.°7E±0.°1, h35km±2km, mb4.2/8, Error ellipse: s-maj=19.1km s-min=4.7km az=271.0*
*JMA **21** 01:08:52.4±0.1, 38.°86N×142.°05E, h46km±1km, M3.8*
JMA Felt I J1.

ISC 21 01:08:48.0±1.9, 38°92N±0.°07×142°42E±0.°08, h30km±12km, n34, σ1^{s}87/35, mb4.1/8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.61**	**286**	P	**Pn**	**01 09 02.0**	**+1.4**
OFUJ				S	**Sb**	**01 09 08.6**	**0.0**
JKMT	**Kesennumamotoy**	**0.75**	**262**	P	**Pn**	**01 09 02.8**	**+0.3**
JKMT				*i* S	**Sb**	**01 09 09.9**	**-2.6**
JMK	**Ichinoseki**	**0.94**	**272**	P	**Pn**	**01 09 05.4**	**+0.2**
JMK				S	**Sn**	**01 09 14.6**	**-3.0**
JIO	**Ouri**	**0.96**	**241**	P	**Pn**	**01 09 05.5**	**+0.1**
JIO				S	**Sn**	**01 09 14.3**	**-3.8**
JOM	**Ohasama**	**1.04**	**303**	P	**Pb**	**01 09 08.2**	**+0.8**
JOM				S	**Sn**	**01 09 19.5**	**-0.6**
JRG	**Rokugo**	**1.47**	**290**	P	**Pn**	**01 09 13.3**	**+0.8**
JOU	**Okura**	**1.48**	**249**	P	**Pn**	**01 09 12.7**	**0.0**
JOU				S	**Sn**	**01 09 27.7**	**-3.4**
JYK	**Kaneyama**	**1.61**	**271**	P	**Pn**	**01 09 14.6**	**+0.2**
JANG	**Nango**	**1.61**	**335**	P	**Pb**	**01 09 17.7**	**+0.5**
JMM	**Marumori**	**1.66**	**231**	P	**Pn**	**01 09 15.0**	**0.0**
JMM				S	**Sn**	**01 09 32.2**	**-3.1**
ERM	**Erimo**	**3.14**	**10**	Pn	**Pn**	**01 09 34.8**	**-0.6**
MJAR	**Matsushiro Arr**	**4.10**	**236**	Pn	**Pn**	**01 09 50.5**	**+1.9**
	0.3nm,0.3s,baz=37,slow=14,SNR=8.6						
MAJO	**Matsushiro**	**4.10**	**236**	Pn	**Pn**	**01 09 51.0**	**+2.4**
MAT	**Matsushiro**	**4.10**	**236**	P	**Pn**	**01 09 51.9**	**+3.3**
MJB9	**Matsu-Tunnel**	**4.10**	**236**		**Pn**	**01 09 51.0**	**+2.4**
USRK	**Ussuriysk Ar.**	**9.43**	**307**	Pn	**Pn**	**01 10 59.8**	**-2.0**
	baz=146,slow=18,SNR=1.1						
SSLB	**Suanglung**	**23.66**	**237**	P	**P**	**01 13 58.7**	**+1.7**
H11N2	**WAKE ISLAND Hy**	**28.50**	**125**	T	T	01 45 08.0	
	baz=317,slow=76,SNR=98						
H11N1	**WAKE ISLAND Hy**	**28.51**	**125**	T	T	01 45 10.8	
	baz=317,slow=76,SNR=208						
H11N3	**WAKE ISLAND Hy**	**28.52**	**125**	T	T	01 45 11.5	
	baz=317,slow=76,SNR=91						
H11S1	**WAKE ISLAND Hy**	**29.29**	**127**	T	T	01 46 07.8	
	baz=318,slow=76,SNR=31						
H11S3	**WAKE ISLAND Hy**	**29.29**	**127**	T	T	01 46 07.3	
	baz=318,slow=76,SNR=66						
H11S2	**WAKE ISLAND Hy**	**29.30**	**127**	T	T	01 46 07.9	
	baz=318,slow=76,SNR=44						
ZALV	**Zalesovo Beam**	**41.26**	**311**	P	**P**	**01 16 31.8**	**+1.6**
	0.6nm,0.4s,baz=93,slow=7.7,SNR=3.8						
CHTO	**Chiang Mai**	**42.55**	**255**	P	**P**	**01 16 43.0**	**+1.9**
MK31	**Makanchi Array**	**43.82**	**301**	P	**P**	**01 16 51.7**	**+0.6**
MKAR	**Makanchi Array**	**43.82**	**301**	P	**P**	**01 16 52.0**	**+0.9**
	0.6nm,0.4s,baz=87,slow=9.4,SNR=8.4						
KURK	**Kurchatov**	**45.42**	**307**	P	**P**	**01 17 04.5**	**+0.6**
KURK				IAmb	IAmb	01 17 05.2	
	comp=Z,1.9nm,0.7s						
TRF	**Thorofare Moun**	**46.03**	**35**	P	**P**	**01 17 06.0**	**-2.7**
TRF				IAmb	IAmb	01 17 18.0	
	comp=Z,2.4nm,1.2s						
FITZ	**Fitzroy Crossi**	**58.85**	**199**	P	**P**	**01 18 44.0**	**+0.1**
FITZ				IAmb	IAmb	01 18 52.0	
	comp=Z,2.8nm,1.1s						
WB0	**Warramunga Arr**	**58.86**	**189**	P	**P**	**01 18 43.9**	**-0.1**
WB0				IAmb	IAmb	01 18 60.0	
	comp=Z,3.4nm,1.1s						
WRA	**Warramunga Arr**	**59.04**	**189**	P	**P**	**01 18 46.1**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=3.5,slow=7.0,SNR=2.8						
FINES	**FINESS Array B**	**67.52**	**332**	P	**P**	**01 19 42.8**	**+1.9**
	comp=Z,1.8nm,0.9s,baz=21,slow=12,SNR=2.5						
ILULI	**Ilulissat**	**71.72**	**5**	P	**P**	**01 20 05.0**	**-1.7**

*IDC **21** 01:11:23.8±0.6, 33.°64N×131.°88E, h83km±5km, mb3.3/11, mb1 3.6/14, mb1mx3.4/53, mbtmp3.8/14, Error ellipse: s-maj=12.4km s-min=8.8km az=131.0*
*NEIC **21** 01:11:23.3±1.8, 33.°59N±0.°07×131.°93E±0.°06, h89km±7km, mb4.3/10, Error ellipse: s-maj=10.7km s-min=5.0km az=150.0*
*JMA **21** 01:11:24.1, 33.°66N×131.°93E, h77km±1km, M4.0 Broadband fault plane solution: P waves. NP1: ϕs217.00000°, δ29.00000°, λ138.00000°. NP2: ϕs345.00000°, δ71.00000°, λ68.00000°. Principal axes: T Plg58.0000°, Azm225.0000°; N Plg21.0000°, Azm353.0000°; P Plg23.0000°, Azm92.0000°;*
JMA Felt II J1.

ISC 21 01:11:23.3±0.6, 33°62N±0.°04×131°94E±0.°03, h83km±4km, n46, σ0^{s}93/67, mb4.0/16, 5C-6D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKI	**Kunimi**	**0.31**	**273**	⇓P	**Pn**	**01 11 36.1**	**+0.2**
JKI				S	**Sn**	**01 11 44.6**	**-0.7**

JKD	**Kudamatsu**	**0.44**	**353**	⇑P		**Pn**	**01 11 36.7**	**-0.2**
JKD				S		**Sn**	**01 11 45.8**	**-1.1**
JNA	**Nagahama**	**0.45**	**97**	⇑P		**Pn**	**01 11 37.2**	**+0.3**
JNA				S		**Sn**	**01 11 47.1**	**0.0**
JBEP	**Beppuamama**	**0.53**	**238**	⇓P		**Pn**	**01 11 38.1**	**+0.5**
JBEP				S		**Sn**	**01 11 48.4**	**+0.3**
UWA2	**Uwa jima 2**	**0.70**	**125**	⇓P		**Pn**	**01 11 39.5**	**+0.3**
UWA2				S		**Sn**	**01 11 51.2**	**+0.2**
JHM	**Kurahashi**	**0.72**	**43**	⇑P		**Pn**	**01 11 39.4**	**+0.1**
JHM				S		**Sn**	**01 11 51.0**	**-0.3**
JET	**Tanbara**	**0.94**	**80**	⇑P		**Pn**	**01 11 42.2**	**+0.4**
JET				S		**Sn**	**01 11 55.6**	**-0.1**
JKU	**Kubokawa**	**0.99**	**108**	⇓P		**Pn**	**01 11 42.7**	**+0.3**
JKU				*e*S		**Sn**	**01 11 57.3**	**+0.7**
JNU	**Nakatsue**	**1.02**	**241**	P		**Pn**	**01 11 43.2**	**+0.5**
	482nm,0.3s,baz=120,slow=4.0,SNR=3571							
JNU				S		**Sn**	**01 11 57.6**	**+0.3**
	106nm,0.3s,baz=202,slow=17,SNR=8.1							
JTO	**Tosashimizu**	**1.04**	**136**	⇓P		**Pn**	**01 11 43.5**	**+0.5**
JTO				S		**Sn**	**01 11 57.7**	**-0.1**
JHT	**Toyohira**	**1.12**	**21**	⇑P		**Pn**	**01 11 44.2**	**+0.2**
JHT				S		**Sn**	**01 11 58.6**	**-0.9**
JHGM	**Hagimishima**	**1.34**	**331**	⇓P		**Pn**	**01 11 46.8**	**+0.1**
JHGM				*e*S		**Sn**	**01 12 03.3**	**-1.0**
INU	**Inuyama**	**4.54**	**66**			**Pn**	**01 12 29.8**	**+0.3**
INU				Sn		**Sn**	**01 13 20.7**	**-0.3**
KSRS	**Korea Array**	**5.04**	**321**	P		**Pn**	**01 12 37.3**	**+1.0**
	5.5nm,0.3s,baz=140,slow=14,SNR=43							
KSRS				S		**Sn**	**01 13 33.0**	**-0.2**
	4.8nm,0.3s,baz=141,slow=25,SNR=13							
KS19	**Wonju Array Si**	**5.11**	**321**			**Pn**	**01 12 37.0**	**-0.2**
INCN	**Inchon**	**5.80**	**313**	Pn		**Pn**	**01 12 46.4**	**-0.3**
MJB9	**Matsu-Tunnel**	**5.91**	**59**			**Pn**	**01 12 48.4**	**+0.1**
MAJO	**Matsushiro**	**5.91**	**59**			**Pn**	**01 12 48.6**	**+0.3**
MAT	**Matsushiro**	**5.91**	**59**	P		**Pn**	**01 12 49.8**	**+1.6**
MAT				*e*S		**Sn**	**01 13 54.2**	**-0.4**
MJAR	**Matsushiro Arr**	**5.91**	**59**	P		**Pn**	**01 12 50.7**	**+2.4**
	2.0nm,0.3s,baz=242,slow=12,SNR=51							
MJAR				S		**Sn**	**01 13 54.2**	**-0.4**
	0.4nm,0.3s,baz=212,slow=16,SNR=3.1							
JHJ	**Hachijo jima 2**	**6.58**	**92**	P		**Pn**	**01 12 57.9**	**+0.5**
	34nm,0.3s,baz=68,slow=18,SNR=8.5							
JHJ				S		**Sn**	**01 14 07.4**	**-3.6**
	6.1nm,0.3s,baz=66,slow=20,SNR=1.9							
JHJ2	**Mitsune**	**6.61**	**92**	Pn		**Pn**	**01 12 57.2**	**-0.6**
KLR	**Kul'dur**	**15.60**	**360**	P		**P**	**01 15 02.8**	**+2.1**
	0.1nm,0.3s,baz=173,slow=6.4,SNR=4.2							
GUMO	**Guam**	**23.15**	**146**	P		**P**	**01 16 20.8**	**-1.9**
SONM	**Songino Array**	**23.87**	**314**	P		**P**	**01 16 30.1**	**+1.0**
	0.3nm,0.4s,baz=84,slow=14,SNR=1.6							
TNTI	**Ternate**	**32.95**	**188**	P		**P**	**01 17 49.2**	**-0.9**
MK31	**Makanchi Array**	**39.50**	**305**	P		**P**	**01 18 45.0**	**-0.8**
MKAR	**Makanchi Array**	**39.50**	**305**	P		**P**	**01 18 45.8**	**+0.1**
	0.2nm,0.6s,baz=76,slow=8.0,SNR=1.9							
MKAR				pP		**pP**	**01 19 05.6**	**+0.2**
	0.4nm,0.7s,baz=88,slow=10,SNR=3.8							
RPSI	**Rantau Prapat**	**43.56**	**232

comp=Z,65nm,0.9s
MG01 Puerto William 23.06 259 P P 01 33 18.9 -2.1
USHA Ushuaia 23.52 259 P P 01 33 24.7 -0.6
comp=Z,62nm,0.6s,baz=303,slow=9.9,SNR=26
GO10 Punta Arenas 25.66 261 P P 01 33 43.3 -1.4
GO10 IAmb IAmb 01 33 58.1
comp=Z,68nm,0.9s
GO09 Cerro Castillo 27.30 264 P P 01 33 58.5 -1.0
GO09 IAmb IAmb 01 33 58.7
comp=Z,23nm,0.6s
SYO Syowa Base 29.75 139|| eP P 01 34 18.5 -2.4
SYO Syowa Base 29.75 139↑ epP pP 01 34 41.0 -3.0
SYO Syowa Base 29.75 139↑ esP sP 01 34 54.0 -2.1
PLTB Pedras Altas 32.23 312 eP P 01 34 43.1 0.0
QSPA South Pole Qui 32.43 180 P P 01 34 44.9 +0.1
LL01 San Ignacio de 32.88 277 P P 01 34 48.1 -0.6
PLCA Paso Flores 33.06 281 P P 01 34 50.1 -0.3
comp=Z,27nm,0.8s,baz=142,slow=8.2,SNR=77
PLCA ScP **ScP 01 41 04.6 -0.6**
comp=Z,3.0nm,0.9s,baz=140,slow=4.8,SNR=5.3
PLCA LR LR 01 48 29.8
comp=Z,248nm,18.1s,baz=159,slow=36
PLCA Paso Flores 33.06 281 P P 01 34 49.9 -0.5
PLCA IAmb IAmb 01 34 51.5
comp=Z,34nm,0.8s
PLCA Paso Flores 33.06 281 eP P 01 34 49.5 -1.0
CNLB Canela 33.38 318 eP P 01 34 54.2 +0.9
LC01 Cunco 35.10 282 P P 01 35 04.5 -3.5
LC01 IAmb IAmb 01 35 09.6
comp=Z,32nm,1.1s
ITAB Concordia 35.73 317 eP P 01 35 14.2 +0.8
BI02 San Fabin de 36.47 285 P P 01 35 18.9 -0.9
PARB Paraibuna 37.28 329 eP P 01 35 27.6 +0.9
MAN01 Angra dos Reis 37.30 332 eP P 01 35 27.1 +0.3
SPB Sao Paulo 37.56 326 P P 01 35 28.2 -0.7
SPB IAmb IAmb 01 35 31.7
comp=Z,24nm,0.7s
SPB Sao Paulo 37.56 326 eP P 01 35 30.8 +1.9
VAO Valinhos 37.98 327 eP P 01 35 34.6 +2.0
PTGB Pitanga 38.01 319 eP P 01 35 33.1 +0.2
GO05 Huala 38.09 286 P P 01 35 32.4 -0.9
GO05 IAmb IAmb 01 35 39.2
comp=Z,20nm,0.7s
MAW Mawson 38.29 142 P P 01 35 34.5 -0.1
comp=Z,18nm,0.8s,baz=208,slow=7.3,SNR=17
MAW PcP **PcP 01 37 47.0 +0.9**
comp=Z,12nm,0.8s,baz=253,slow=4.4,SNR=5.2
MAW LR LR 01 49 43.2
comp=Z,164nm,20.6s,baz=250,slow=33
MAW Mawson 38.29 142 P P 01 35 34.9 +0.3
MAW **PcP 01 37 47.3 +1.1**
FRTB Fartura 38.45 323 eP P 01 35 38.3 +1.8
CPUP Villa Florida 38.54 311 P P 01 35 36.3 -0.8
comp=Z,5.5nm,0.5s,baz=149,slow=7.9,SNR=26
CPUP ScP **S 01 41 24.9 +0.1**
comp=Z,3.1nm,0.9s,baz=160,slow=5.8,SNR=8.4
CPUP Villa Florida 38.54 311 P P 01 35 35.9 -1.2
PEL Peldehue 38.92 290 IAmb IAmb 01 35 48.7
comp=Z,16nm,0.7s
CFA Coronel Fontan 38.95 294 P P 01 35 38.5 -2.0
comp=Z,3.6nm,0.5s,baz=146,slow=8.6,SNR=11
CFA PcP **PcP 01 37 48.9 0.0**
comp=Z,7.9nm,0.5s,baz=175,slow=2.0,SNR=5.8
CFA ScP **ScP 01 41 25.8 -1.1**
comp=Z,5.5nm,0.8s,baz=179,slow=5.3,SNR=9.4
MT02 Curacav 39.06 289 IAmb IAmb 01 35 42.8
comp=Z,18nm,0.7s
TRCB Terra Rica 39.98 320 eP P 01 35 49.6 +0.4
TRCB epP **P 01 35 52.2 +3.0**
SUR Sutherland 40.43 72 P P 01 35 54.1 +1.0
SUR IAmb IAmb 01 35 55.7
comp=Z,42nm,0.9s
BSFB Barra de Sao F 40.48 338 eP P 01 35 55.2 +2.0
PCMB Pacaembu 40.62 322 eP P 01 35 54.9 +0.4
CO02 Combarbal 40.64 291 P P 01 35 53.0 -1.7
SJMB Sao Joao De Ma 40.67 337 eP P 01 35 55.9 +1.0
AC05 El Transito 42.22 294 P P 01 36 06.9 -0.7
AC05 IAmb IAmb 01 36 12.8
comp=Z,15nm,0.5s
H03N3 Juan Fernandez 42.93 281 P P 01 36 15.1 +2.2
H03N1 Juan Fernandez 42.94 281 P P 01 36 15.1 +2.2
H03N2 Juan Fernandez 42.95 281 P P 01 36 15.1 +2.2
IPMB Ipameri, GO 43.09 328 eP P 01 36 15.9 +1.3
MC01 Montes Claros 43.21 334 eP P 01 36 16.6 +1.0
C2SB Chapadao do Su 43.78 322 eP P 01 36 20.7 +0.6
VNDA Vanda 44.84 182 P P 01 36 28.8 +0.9
comp=Z,46nm,0.7s,baz=186,slow=6.9,SNR=361
VNDA ScP **ScP 01 41 51.0 +1.3**
comp=Z,1.6nm,0.8s,baz=128,slow=4.7,SNR=4.8
VNDA LR LR 01 56 30.4
comp=Z,122nm,18.2s,baz=184,slow=38
VNDA Vanda 44.84 182 P P 01 36 28.2 +0.4
JANB Januaria 44.89 334 eP P 01 36 30.2 +1.2
GO02 Mina Guanaco 44.97 298 P P 01 36 29.0 -0.9
GO02 PcP **PcP 01 38 08.3 -0.9**
GDU01 Guandu, BA 45.22 341 eP P 01 36 32.6 +1.0
BDFB Brasilia 45.27 329 P P 01 36 33.6 +1.6
comp=Z,18nm,0.6s,baz=156,slow=5.6,SNR=33
BDFB ScP **ScP 01 41 53.4 +1.0**
comp=Z,1.8nm,0.7s,baz=193,slow=7.3,SNR=3.4
BDFB Brasilia 45.27 329 P P 01 36 32.2 +0.2
BDFB IAmb IAmb 01 36 34.4
comp=Z,22nm,0.7s
BDFB ScP **ScP 01 41 52.6 +0.1**
BOSA Boshof 45.73 73 P P 01 36 36.0 +0.3
comp=Z,30nm,0.8s,baz=212,slow=6.7,SNR=46
BOSA LR LR 01 51 31.5
comp=Z,259nm,21.4s,baz=206,slow=30
BOSA Boshof 45.73 73 P P 01 36 36.2 +0.6
BOSA pmax pmax
comp=Z,44nm,1.0s
BOSA Boshof 45.73 73 P P 01 36 36.2 +0.6
BOSA IAmb IAmb 01 36 37.0
comp=Z,44nm,0.9s
ARAG Araguaiana, MT 46.32 324 eP P 01 36 41.1 +0.9
LVC Limon Verde 46.83 300 eP P 01 36 44.2 -0.4
LVC Limon Verde 46.83 300 P P 01 36 44.0 -0.6
LVC Limon Verde 46.83 300 eP P 01 36 44.1 -0.5
SALV Santo Antonio 47.42 319 eP P 01 36 49.1 +0.4
SALV epP **P 01 36 52.7 +3.9**
PB09 IPOC Station P 47.69 300 P P 01 36 50.9 -0.1
PB09 IAmb IAmb 01 36 59.8
comp=Z,11nm,0.7s
PB07 IPOC Station P 48.05 300 P P 01 36 53.5 -0.3
PB07 IAmb IAmb 01 36 53.6
comp=Z,13nm,0.7s
PB01 IPOC Station P 48.45 300 IAmb IAmb 01 36 57.4
comp=Z,12nm,0.8s
LBTB Lobatse 48.85 70 P P 01 37 00.5 +0.6
LBTB pmax pmax
comp=Z,50nm,0.8s
LBTB Lobatse 48.85 70 P P 01 37 00.5 +0.6
PTLB Pontes e Lacer 49.08 316 eP P 01 37 01.2 -0.3
H10S2 ASCENSION HYDR 49.50 15 T T 02 31 52.8
baz=188,slow=74,SNR=52
H10S3 ASCENSION HYDR 49.50 15 T T 02 31 53.0
baz=32,slow=74,SNR=167
GO01 Chusmiza 49.51 302 P P 01 37 04.4 -0.9
GO01 IAmb IAmb 01 37 10.2
comp=Z,14nm,0.8s
TSUM Tsumeb 49.94 58 P P 01 37 08.0 -0.2
TSUM IAmb IAmb 01 37 10.3
comp=Z,21nm,0.9s
MNMC Minye Minye 50.16 302 P P 01 37 09.8 -0.3
H10N1 ASCENSION HYDR 50.62 15 T T 02 33 10.3
baz=191,slow=71,SNR=20
H10N3 ASCENSION HYDR 50.62 15 T T 02 33 16.8
baz=191,slow=71,SNR=158
H10N2 ASCENSION HYDR 50.63 15 T T 02 33 09.5
baz=191,slow=71,SNR=11
VILB Vilhena 51.77 316 eP P 01 37 21.5 -0.3
CASY Casey 51.99 159 P P 01 37 23.3 +0.5
LPAZ La Paz 52.00 305 P P 01 37 23.9 -0.3
comp=Z,11nm,0.6s,baz=146,slow=5.3,SNR=55
LPAZ ScP **ScP 01 42 20.6 -1.1**
comp=Z,1.4nm,0.8s,baz=154,slow=6.9,SNR=4.2
LPAZ La Paz 52.00 305 P P 01 37 23.8 -0.3
LPAZ IAmb IAmb 01 37 30.5
comp=Z,13nm,0.7s
LPAZ La Paz 52.00 305 eP P 01 37 23.9 -0.3
CLDB Colider 52.14 322 eP P 01 37 23.4 -1.1
CLDB epP **P 01 37 28.5 +4.0**
MATP Matopo 54.14 70 i P P 01 37 39.5 +0.3
MATP Matopo 54.14 70 i P P 01 37 39.5 +0.3

PRPB Parauapebas 54.80 330 eP P 01 37 45.0 +1.0
NPGB Novo Progresso 55.59 324 eP P 01 37 49.9 +0.3
SAML Samuel 56.57 314 P P 01 37 56.3 -0.3
SAML pmax pmax
comp=Z,21nm,0.9s
SAML Samuel 56.57 314 P P 01 37 56.3 -0.3
SAML IAmb IAmb 01 37 57.0
comp=Z,21nm,0.8s
ROSB Rosrio 56.64 338 eP P 01 37 58.4 +1.4
LSZ Lusaka 58.35 67 P P 01 38 10.0 +0.8
LSZ pmax pmax
comp=Z,48nm,0.8s
LSZ Lusaka 58.35 67 P P 01 38 10.0 +0.8
MALB Monte Alegre 60.16 327 eP P 01 38 22.5 +1.0
MACA Manacapuru-AM 61.00 319 epP P 01 38 31.8 +4.6
PTGA Pitinga 63.02 321 P P 01 38 39.8 -0.9
comp=Z,7.8nm,0.7s,baz=170,slow=7.5,SNR=14
PTGA Pitinga 63.02 321 P P 01 38 40.7 0.0
PTGA Pitinga 63.02 321 eP P 01 38 40.4 -0.3
PTGA epP **P 01 38 45.1 +4.4**
ABPO Ambohimpanom 65.09 86 P P 01 38 55.0 +0.5
ABPO pmax pmax
comp=Z,14nm,1.0s
ABPO Ambohimpanom 65.09 86 P P 01 38 55.0 +0.5
ABPO IAmb IAmb 01 38 58.3
comp=Z,14nm,0.9s
MDP Montagnes des 66.34 331 P P 01 39 02.9 +0.7
comp=Z,41nm,0.9s,baz=187,slow=6.3,SNR=11
DBIC Dimbokro 66.48 23 P P 01 39 04.3 +1.2
comp=Z,30nm,0.6s,baz=176,slow=5.1,SNR=55
DBIC LR LR 02 01 32.9
comp=Z,190nm,19.5s,baz=264,slow=30
DBIC Dimbokro 66.48 23 P P 01 39 04.0 +0.9
MBAR Mbarara 72.32 61 P P 01 39 39.0 -0.3
MBAR pmax pmax
comp=Z,10.0nm,1.0s
MBAR Mbarara 72.32 61 P P 01 39 39.0 -0.3
ROSC El Rosal 73.58 309 P P 01 39 46.8 -0.2
comp=Z,11nm,0.7s,baz=35,slow=22,SNR=5.7
ROSC LR LR 02 15 16.9
comp=Z,697nm,20.0s,baz=151,slow=38
ROSC El Rosal 73.58 309 IAmb IAmb 01 39 48.7
comp=Z,11nm,0.6s
RUSC La Rusia 74.02 311 P P 01 39 48.5 -1.2
TOA0 Torodi Ar. Sit 74.25 28 P P 01 39 51.2 +0.8
TORD Torodi Ar. Bea 74.25 28 P P 01 39 51.6 +1.3
comp=Z,48nm,0.6s,baz=199,slow=6.3,SNR=758
TORD LR LR 02 07 23.7
comp=Z,63nm,20.7s,baz=285,slow=32
PCRV Puerto La Cruz 74.79 320 P P 01 39 54.5 +1.0
comp=Z,54nm,1.0s,baz=160,slow=1.3,SNR=7.9
KMBO Kilima Mbogo 75.00 67 P P 01 40 00.8 +5.7
comp=Z,3.3nm,0.9s,baz=215,slow=6.9,SNR=7.6
KMBO LR LR 02 09 52.4
comp=Z,114nm,20.2s,baz=256,slow=33
KMBO Kilima Mbogo 75.00 67 P P 01 39 53.5 -1.6
KMBO pmax pmax
comp=Z,5.0nm,1.0s
KMBO Kilima Mbogo 75.00 67 P P 01 39 53.5 -1.6
SDV Santo Domingo 75.78 314 P P 01 39 59.2 -0.2
comp=Z,9.0nm,0.6s,baz=163,slow=4.4,SNR=18
SDV Santo Domingo 75.78 314 P P 01 39 58.9 -0.5
SDV IAmb IAmb 01 40 00.2
comp=Z,14nm,0.9s
SDV Santo Domingo 75.78 314 eP P 01 39 59.4 0.0
RPZ Rata Peaks 77.86 192 P P 01 40 11.3 +0.7
comp=Z,33nm,0.9s,baz=130,slow=3.8,SNR=4.1
RPZ Rata Peaks 77.86 192 P P 01 40 10.7 +0.1
RPZ IAmb IAmb 01 40 12.0
comp=Z,49nm,1.0s
LTZ Lake Taylor 78.63 193 P P 01 40 15.1 +0.2
LTZ IAmb IAmb 01 40 18.4
comp=Z,30nm,0.8s
TAU Tasmania Unive 79.48 175 P P 01 40 19.4 -0.1
TAU pmax pmax
comp=Z,48nm,1.0s
TAU Tasmania Unive 79.48 175 P P 01 40 19.4 -0.1
TAU IAmb IAmb 01 40 21.1
comp=Z,48nm,0.9s
BKZ Black Stump Fm 81.58 197 P P 01 40 30.8 -0.1
BKZ IAmb IAmb 01 40 39.6
comp=Z,27nm,1.2s
URZ Urewera 82.37 198 P P 01 40 35.3 +0.4
comp=Z,18nm,0.8s,baz=169,slow=2.4,SNR=5.4
STVI Saint Thomas 82.53 323 P P 01 40 35.7 0.0
CUPR Culebra, Puert 82.59 322 P P 01 40 36.4 +0.3
CBYP Canovanas 82.75 322 P P 01 40 37.4 +0.4
CBYP IAmb IAmb 01 40 37.5
comp=Z,28nm,0.8s
JTS Las Juntas de 83.09 302 P P 01 40 38.6 -0.2
comp=Z,4.8nm,0.9s,baz=49,slow=11,SNR=1.9
JTS Las Juntas de 83.09 302|| eP P 01 40 39.8 +1.0
JTS pmax pmax
comp=Z,10.0nm,1.5s
JTS Las Juntas de 83.09 302 P P 01 40 38.5 -0.3
NWAO Narrogin (SRO) 84.42 149 P P 01 40 44.2 -1.3
comp=Z,7.1nm,0.7s,baz=161,slow=3.3,SNR=5.1
NWAO Narrogin (SRO) 84.42 149 P P 01 40 44.9 -0.6
NWAO pmax pmax
comp=Z,9.0nm,0.9s
NWAO Narrogin (SRO) 84.42 149 P P 01 40 44.9 -0.6
TAM Tamanrasset 84.46 29 P P 01 40 46.8 +1.0
TAM *PP **pP 01 41 13.1 +0.6**
TAM pmax pmax
comp=Z,7.0nm,1.0s
TAM Tamanrasset 84.46 29 P P 01 40 46.8 +1.0
TAM **pP 01 41 13.1 +0.6**
OUZ Omahuta 85.89 196 P P 01 40 52.5 -0.3
TBI Tubuai 86.54 230 eLR LR 02 08 27.9
comp=Z,218nm,35.8s
MORW Morawa 87.72 147 P P 01 41 01.9 +0.1
MORW IAmb IAmb 01 41 02.8
comp=Z,16nm,0.8s
ATD Arta Tunnel 88.68 66 P P 01 41 06.2 -0.2
ATD IAmb IAmb 01 41 12.8
comp=Z,12nm,0.9s
FORT Forrest 89.06 158 P P 01 41 08.2 +0.2
STKA Stephens Creek 90.03 169 P P 01 41 12.9 +0.3
comp=Z,12nm,0.9s,baz=170,slow=5.1,SNR=20
STKA LR LR 02 20 49.7
comp=Z,77nm,18.5s,baz=32,slow=35
STKA Stephens Creek 90.03 169 P P 01 41 12.0 -0.6
PPT2 Papeete2 91.72 233 eLR LR 02 10 53.4
comp=Z,710nm,29.5s
PPT Papeete 91.73 233 LR LR 02 14 18.7
comp=Z,90nm,18.6s,baz=168,slow=30
ASAR Alice Springs 97.08 161 P Pdif 01 41 45.1 0.0
comp=Z,5.4nm,0.7s,baz=187,slow=3.8,SNR=45
ASAR PP **PP 01 45 38.9 -2.4**
comp=Z,1.0nm,0.7s,baz=189,slow=7.8,SNR=6.1
ASAR LR LR 02 22 22.6
comp=Z,95nm,21.1s,baz=204,slow=33
AS31 Alice Springs 97.08 161 IAmb IAmb 01 41 45.6
comp=Z,2.5nm,0.8s
KEST Kesra 97.77 28 LR LR 02 20 24.7
comp=Z,82nm,21.9s,baz=247,slow=32
ESDC Sonseca Array 98.84 17 LR LR 02 20 43.1
comp=Z,43nm,21.8s,baz=55,slow=32
DZM Mont Dzumac 99.76 192 eLR LR 02 14 35.6
comp=Z,279nm,22.3s
FITZ Fitzroy Crossi 100.75 152 P Pdif 01 42 02.7 +1.2
comp=Z,1.5nm,0.8s,baz=216,slow=8.7,SNR=1.8
FITZ Fitzroy Crossi 100.75 152 Pdif 01 41 59.2 -2.2
WRA Warramunga Arr 100.79 161 P Pdif 01 42 01.0 -0.7
comp=Z,1.7nm,0.7s,baz=195,slow=4.1,SNR=8.3
WRA PP **PP 01 46 09.0 -0.6**
comp=Z,0.8nm,0.7s,baz=196,slow=6.2,SNR=3.1
WRA PKKPbc **PKKPbc 01 58 11.2 -0.2**
comp=Z,0.4nm,0.7s,baz=358,slow=3.1,SNR=1.7
CTA Charters Tower 102.12 172 PP PP 01 46 23.8 +4.4
comp=Z,15nm,1.3s,baz=292,slow=5.4,SNR=3.5
BRTR Keskin Array B 109.15 45 PP PP 01 47 06.8 -5.8
comp=Z,0.8nm,0.8s,baz=185,slow=9.7,SNR=6.8
GERES GERESS Array B 111.19 27 PKKPbc PKKPbc 01 57 40.6 -0.3
comp=Z,0.6nm,0.8s,baz=357,slow=2.9,SNR=6.2
ANMO Albuquerque 114.21 297 i PKIKP PKiKP 01 46 51.9 +0.3
ANMO pmax pmax
comp=Z,4.0nm,2.5s
ANMO Albuquerque 114.21 297 P PKiKP 01 46 52.3 +0.7
baz=145
T25A Trinidad 115.03 300 P PKiKP 01 46 53.9 +0.8
baz=145
SDCO Great Sand Dun 116.03 300 P PKiKP 01 46 55.6 +0.5
baz=144
S22A 4UR Ranch, Cre 116.65 299 P PKiKP 01 46 57.2 +0.9
baz=144

ECSD EROS Data Cent 117.01 310 P PKPdf 01 46 56.4 -0.1
baz=146
AKASG Malin Array Be 117.19 36 PKP PKiKP 01 46 56.6 +0.1
comp=Z,0.7nm,0.5s,baz=237,slow=1.4,SNR=5.2
AKBB Malin Array Si 117.19 36 || i PKIKP PKPdf 01 46 55.9 -0.6
PDMCI Parker Dam,Lak 117.44 291 P PKiKP 01 46 58.5 +0.9
baz=143
ISCO Idaho Springs 117.74 301 P PKiKP 01 46 59.3 +0.9
baz=144
GEYT Alibeck 118.19 63 PKP PKiKP 01 46 59.8 +0.8
comp=Z,0.4nm,0.4s,baz=267,slow=10,SNR=1.9
GEYT PP **PP 01 48 12.1 -4.4**
comp=Z,0.5nm,0.3s,baz=289,slow=9.0,SNR=1.9
N23A Red Feather La 118.77 302 P PKiKP 01 47 00.6 +0.3
baz=143
O20A White River Ci 119.22 299 P PKiKP 01 47 01.2 +0.1
baz=143
SRU San Rafael Swe 119.49 297 PKIKP PKiKP 01 47 01.8 +0.2
SRU San Rafael Swe 119.49 297 PKiKP 01 47 01.8 +0.2
EDW2 Edwards Air Fo 119.84 289 P PKiKP 01 47 03.1 +0.8
baz=142
RWWY Rawlins 119.97 301 PKPdf 01 47 01.9 -0.7
RDMU Red Mountain 120.19 299 PKPdf 01 47 03.0 0.0
K22A Casper 120.42 302 P PKPdf 01 47 03.1 -0.2
baz=142
AGMN Agassiz Nation 120.45 313 P PKPdf 01 47 02.6 -0.2
baz=144
RSSD Black Hills 120.48 305 PKIKP PKPdf 01 47 02.7 -0.6
RSSD Black Hills 120.48 305 P PKPdf 01 47 02.9 -0.5
baz=143
RSSD Black Hills 120.48 305 PKPdf 01 47 02.7 -0.6
MPMC Manual Prospec 120.50 290 P PKiKP 01 47 04.4 +0.7
baz=142
TPNV Topopah Spring 120.58 291 P PKiKP 01 47 04.6 +0.8
baz=142
ISA Isabella, Lake 120.69 289 P PKiKP 01 47 05.4 +1.5
baz=142
VSR Storozhevoye 120.96 42 ↑ i PKIKP PKiKP 01 47 04.3 +0.5
CWC Cottonwood Cre 121.10 290 P PKiKP 01 47 05.8 +1.0
baz=142
R11A Troy Canyon, C 121.34 293 P PKiKP 01 47 06.0 +0.7
baz=141
DUG Dugway, Tooele 121.43 296 P PKiKP 01 47 06.0 +0.6
baz=141
HFS Hagfors 121.64 22 PKP PKPdf 01 47 03.7 -1.0
comp=Z,2.2nm,0.8s,baz=186,slow=1.5,SNR=5.7
HFS PP **PP 01 48 34.6 -5.2**
comp=Z,1.0nm,0.7s,baz=202,slow=11,SNR=3.7
HFS PKKPbc **PKKPbc 01 57 04.1 0.0**
comp=Z,4.4nm,0.9s,baz=27,slow=1.7,SNR=9.4
VRH Novokhopyorsk 121.87 43 e PKIKP PKPdf 01 47 05.5 +0.1
VRH pmax pmax
comp=Z,10.0nm,0.8s
BW06 Boulder Array 121.90 300 P PKPdf 01 47 05.7 -0.5
baz=141
PDAR Pinedale Array 121.90 300 PKP PKPdf 01 47 05.6 -0.6
comp=Z,1.4nm,0.5s,baz=140,slow=5.2,SNR=19
PDAR SKP **SKPdf 01 50 30.7 -0.6**
comp=Z,1.1nm,0.8s,baz=177,slow=3.0,SNR=6.2
NB2 NORSAR Subarra 122.00 20 PKPdf PKiKP 01 47 05.7 0.0
comp=Z,0.9nm,0.7s,baz=202,slow=1.9
NOA NORSAR Array B 122.00 20 PKP PKiKP 01 47 06.0 +0.4
comp=Z,2.2nm,0.9s,baz=199,slow=1.8,SNR=6.7
NOA pPKP **pPKPdf 01 47 33.0 -0.6**
comp=Z,0.7nm,0.7s,baz=202,slow=1.8,SNR=2.3
NOA PKKPbc **PKKPbc 01 57 02.5 -0.4**
comp=Z,1.9nm,0.9s,baz=27,slow=4.2,SNR=7.8
ULM Lac du Bonnet 122.03 315 PKP PKPdf 01 47 05.4 -0.4
comp=Z,4.3nm,0.4s,baz=59,slow=1.7,SNR=5.0
ULM SKP **SKPdf 01 50 30.8 -0.1**
comp=Z,3.7nm,0.7s,baz=136,slow=2.4,SNR=3.7
NIL Nilore 122.43 77 PKIKP PKiKP 01 47 07.6 +0.2
NIL Nilore 122.43 77 PKiKP 01 47 07.6 +0.2
NVAR Mina Array Bea 122.75 291 PKP PKiKP 01 47 09.2 +1.1
comp=Z,1.6nm,0.6s,baz=118,slow=3.5,SNR=13
NVAR SKP **SKPdf 01 50 33.8 +0.7**
comp=Z,0.2nm,0.3s,baz=134,slow=3.9,SNR=2.2
ELK Elko 123.03 295 SKP SKPdf 01 50 35.0 +1.5
comp=Z,1.4nm,0.8s,baz=100,slow=9.8,SNR=5.0
VSU Vasula 123.20 30 || i PKIKP PKPdf 01 47 07.5 -0.2
LAO LASA Array 123.45 306 P PKiKP 01 47 09.1 +0.1
baz=141
RLMT Red Lodge 123.59 302 P PKiKP 01 47 09.7 +0.1
baz=140
CMAR Chiang Mai Arr 123.75 110 PKP PKiKP 01 47 10.4 0.0
comp=Z,7.8nm,0.8s,baz=236,slow=3.6,SNR=28
CMAR pPKP **pPKPdf 01 47 38.8 +0.4**
comp=Z,3.9nm,0.6s,baz=233,slow=3.7,SNR=4.1
DGMT Dagmar 123.96 308 P PKiKP 01 47 10.6 +0.7
baz=141
FRB Frobisher Bay 125.57 338 PKP PKPdf 01 47 12.2 +0.1
comp=Z,6.0nm,0.8s,baz=121,slow=3.8,SNR=15
FRB pPKP **pPKPdf 01 47 40.2 -0.3**
comp=Z,4.0nm,0.6s,baz=128,slow=4.9,SNR=2.7
FINES FINESS Array B 125.60 28 PKP PKPdf 01 47 12.4 +0.2
comp=Z,6.7nm,0.6s,baz=162,slow=2.3,SNR=41
FINES pPKP **pPKPdf 01 47 41.0 +0.5**
comp=Z,3.2nm,0.5s,baz=129,slow=2.7,SNR=4.0
FINES PKKPab **PKKPbc 01 56 49.8 +1.1**
comp=Z,0.8nm,0.8s,baz=119,slow=2.4,SNR=3.5
O03E Paynes Creek 125.93 290 P PKPdf 01 47 13.9 +0.1
baz=139
EGMT Eagleton 126.02 304 P PKiKP 01 47 14.3 +0.2
baz=139
N02D Trinity Center 126.89 290 P PKiKP 01 47 16.0 -0.1
baz=138
MSO Missoula 127.01 301 P PKiKP 01 47 16.7 +0.5
baz=138
FFC Flin Flon 127.86 314 PKIKP PKiKP 01 47 17.7 +0.3
FFC Flin Flon 127.86 314 PKiKP 01 47 17.7 +0.3
J05D Fort Rock, OR 127.87 293 P PKiKP 01 47 18.5 +0.5
baz=138
PINE Pine Mountain 128.10 294 PKiKP 01 47 18.4 -0.2
KSH Kashi 128.32 75 PKP PKiKP 01 47 20.3 +1.3
KSH PP **PP 01 49 27.4 +2.6**
KSH PKS 01 50 56.5
KSH SKKS 01 56 09.1
KSH SS **SS 02 06 31.0 -0.7**
KSH AMB AMB
comp=Z,210nm,5.1s
KSH LR LR
comp=Z,61nm,5.6s
KSH LR LR
comp=Z,51nm,8.4s
KSH LR LR
comp=Z,210nm,6.8s
K02D Willamette Mer 128.65 291 P PKiKP 01 47 20.2 +0.7
baz=137
I05D Terrebonne, OR 128.70 294 P PKiKP 01 47 20.2 +0.6
baz=137
I04A Tendick Farm, 128.83 293 P PKiKP 01 47 20.1 +0.3
baz=137
KLMR Klimovskoe 128.85 35 e PKIKP PKPdf 01 47 18.6 +0.1
KLMR e 01 47 46.3
KLMR e 01 49 27.6
KLMR pmax pmax
comp=Z,31nm,1.3s
KLMR Klimovskoe 128.85 35 e PKPdf PKPdf 01 47 18.6 +0.1
KLMR AMP 01 47 20.2
comp=Z,31nm,1.3s
KLMR ep PKPdf **pPKPdf 01 47 46.3 -0.4**
KLMR e PP **PP 01 49 27.7 -0.1**
NEW Newport 129.53 300 PKP PKPdf 01 47 20.3 0.0
comp=Z,2.4nm,0.7s,baz=173,slow=1.4,SNR=6.5
NEW SKPbc SKPbc 01 50 35.0 +2.8
comp=Z,7.4nm,0.8s,baz=182,slow=2.9,SNR=12
NEW Newport 129.53 300 P PKPdf 01 47 20.7 +0.3
baz=136
AAK Ala-Archa 129.85 71 || i PKIKP PKiKP 01 47 22.0 -0.1
AAK Ala-Archa 129.85 71 PKiKP 01 47 21.9 -0.1
SUMG Summit 130.40 355 PKIKP PKiKP 01 47 23.2 +0.6
SUMG Summit 130.40 355 PKiKP 01 47 23.2 +0.6
KIRV Kirov 130.40 42 ↑ e PKIKP PKiKP 01 47 22.7 +0.4
D03D Eldon 131.84 296 P PKiKP 01 47 26.1 +0.4
baz=135
B05A Bryant 131.87 297 P PKiKP 01 47 25.4 -0.3
baz=135
ARCES ARCESS Array B 132.31 22 PKhKP PKPpre 01 47 19.8
comp=Z,2.3nm,1.0s,baz=210,slow=5.2,SNR=1.7
ARCES PKP **PKPdf 01 47 25.2 +0.4**
comp=Z,3.3nm,0.6s,baz=221,slow=1.6,SNR=16
ARCES PP **PP 01 49 48.3 -1.7**
comp=Z,3.4nm,0.8s,baz=224,slow=6.8,SNR=5.9
ARCES SKPbc **SKPbc 01 50 41.0 -0.4**
comp=Z,5.2nm,0.8s,baz=264,slow=4.3,SNR=6.2
ARU Arti 132.32 48 i PKIKP PKiKP 01 47 26.4 +0.1
GYA Guiyang 134.30 113 e Pdif Pdif 01 44 31.0 +0.5

GYA					PKP	**PKiKP**	**01 47 31.8**	**+0.3**	
GYA					PP	**PP**	**01 50 08.3**	**+5.2**	
GYA					AMB	AMB			
	comp=Z,150nm,8.3s								
CD2	**Chengdu**	**136.46**	**106**		Pdif	**Pdif**	**01 44 40.5**	**+0.6**	
MKAR	**Makanchi Array**	**136.73**	**72**		PKhKP	PKPpre	01 47 22.0		
	comp=Z,0.9nm,0.7s,baz=256,slow=4.9,SNR=7.1								
MKAR					pPKP	pPKPdf	01 48 01.4	-0.6	
	comp=Z,2.4nm,0.9s,baz=222,slow=1.6,SNR=3.5								
MKAR					PP	**PP**	**01 50 20.6**	**+2.2**	
	comp=Z,0.4nm,0.8s,baz=236,slow=6.8,SNR=2.3								
MKAR					SKPbc	**SKPbc**	**01 50 55.0**	**-1.4**	
	comp=Z,1.4nm,0.8s,baz=249,slow=3.4,SNR=5.8								
MKAR					PKKP	**PKKPdf**	**01 57 09.6**	**-0.5**	
	comp=Z,0.3nm,0.6s,baz=20,slow=1.6,SNR=3.7								
TULEG	**Thule**	**136.84**	**346**			**PKPdf**	**01 47 34.0**	**+0.8**	
KURBB	**Kurchatov Arra**	**137.37**	**66**		PKP	**PKPdf**	**01 47 33.5**	**-1.3**	
	comp=Z,2.3nm,0.8s,baz=232,slow=2.3,SNR=3.5								
KURBB					pPKP	**pPKPdf**	**01 48 03.2**	**+0.1**	
	comp=Z,1.6nm,0.7s,baz=232,slow=2.6,SNR=3.1								
KURBB					PP	**PP**	**01 50 24.0**	**+1.7**	
	comp=Z,0.5nm,0.7s,baz=245,slow=5.6,SNR=4.2								
KURBB					SKPbc	**SKPbc**	**01 50 57.2**	**-0.9**	
	comp=Z,2.9nm,0.9s,baz=233,slow=3.3,SNR=11								
KURK	**Kurchatov**	**137.47**	**66**	*e*	PKiKP	**PKPdf**	**01 47 33.5**	**-1.5**	
KURK	**Kurchatov**	**137.47**	**66**			**PKPdf**	**01 47 34.4**	**-0.6**	
WMQ	**Urumqi**	**137.51**	**79**	*e*	PKP	**PKiKP**	**01 47 37.8**	**+0.4**	
WMQ					sPKP		01 48 18.3		
WMQ					LR	LR			
	comp=Z,610nm,28.9s								
WMQ					LR	LR			
	comp=Z,540nm,28.8s								
WMQ					LR	LR			
	comp=Z,650nm,29.2s								
YKA	**Yellowknife Ar**	**137.97**	**316**		PKhKP	PKPpre	01 47 23.7		
	comp=Z,0.6nm,0.5s,baz=118,slow=3.4,SNR=16								
YKA					PKP	**PKPdf**	**01 47 36.4**	**+0.8**	
	comp=Z,22nm,0.8s,baz=137,slow=2.1,SNR=128								
YKA					PP	**PP**	**01 50 22.6**	**-3.3**	
	comp=Z,0.7nm,0.8s,baz=122,slow=7.1,SNR=4.4								
YKA					SKPbc	**SKPbc**	**01 50 59.3**	**-0.1**	
	comp=Z,4.4nm,0.7s,baz=119,slow=2.4,SNR=13								
YKA					SKKPbc	**SKKPbc**	**01 59 45.9**	**+0.3**	
	comp=Z,0.4nm,0.8s,baz=309,slow=4.3,SNR=5.3								
SPITS	**Spitsbergen Ar**	**138.14**	**12**		PKhKP	PKPpre	01 47 27.7		
	comp=Z,3.9nm,0.8s,baz=151,slow=3.3,SNR=5.3								
SPITS					pPKP	pPKPdf	01 48 03.1	-0.8	
	comp=Z,4.6nm,0.7s,baz=308,slow=8.4,SNR=1.9								
RES	**Resolute Bay**	**139.77**	**337**		PKhKP	PKPpre	01 47 30.7		
	comp=Z,1.3nm,0.4s,baz=97,slow=5.3,SNR=10								
RES					PKP	**PKiKP**	**01 47 40.0**	**-1.0**	
	comp=Z,3.8nm,0.8s,baz=82,slow=3.9,SNR=6.1								
RES					pPKP	pPKPdf	01 48 05.9	-1.0	
	comp=Z,6.1nm,0.9s,baz=147,slow=1.0,SNR=3.4								
RES					SKPbc	**SKPbc**	**01 51 05.1**	**+1.1**	
	comp=Z,6.5nm,0.9s,baz=141,slow=3.6,SNR=6.9								
RES	**Resolute Bay**	**139.77**	**337**			**PKPdf**	**01 47 31.6**	**-7.0**	
LZH	**Lanzhou**	**140.54**	**101**	*e*	PKP	**PKiKP**	**01 47 44.8**	**+0.8**	
LZH					sPKP		01 48 20.5		
GTA	**Gaotai**	**140.87**	**94**		PKP	**PKiKP**	**01 47 45.8**	**+1.3**	
GTA					LR	LR			
	comp=Z,79nm,18.1s								
GTA					LR	LR			
	comp=Z,400nm,21.9s								
GTA					LR	LR			
	comp=Z,57nm,18.7s								
DGZ	**Jazzator, Alta**	**141.23**	**72**	⇓ *i*	PKiKP	**PKPdf**	**01 47 43.2**	**+1.0**	
WHN	**Wuhan**	**141.43**	**118**		PKP	PKiKP	01 48 13.6	+28	
XAN	**Xi'an**	**141.59**	**108**		PKP	**PKiKP**	**01 47 46.4**	**+0.3**	
DLBC	**Dease Lake**	**141.95**	**304**		PKhKP	PKPpre	01 47 37.4		
	comp=Z,2.1nm,0.8s,baz=124,slow=11,SNR=2.4								
DLBC					SKPbc	**SKiKP**	**01 51 11.4**	**-0.4**	
	comp=Z,4.0nm,0.8s,baz=245,slow=8.0,SNR=5.5								
ZALV	**Zalesovo Beam**	**142.46**	**65**		PKhKP	PKPpre	01 47 39.3		
	comp=Z,2.7nm,0.6s,baz=254,slow=3.8,SNR=6.0								
ZALV					SKPbc	**SKPbc**	**01 51 10.6**	**-1.0**	
	comp=Z,2.4nm,0.7s,baz=219,slow=3.5,SNR=5.2								
NJ2	**Nanjing**	**144.78**	**122**	*e*	PKP	**PKPdf**	**01 47 49.4**	**+0.6**	
C36M	**Paulatuk**	**144.78**	**322**		P	**PKPab**	**01 47 46.5**	**-0.4**	
	baz=113								
C36M	**Paulatuk**	**144.78**	**322**			PKPbc	01 47 47.0	0.0	
A36M	**Sachs Harbour**	**146.10**	**327**		P	**PKPab**	**01 47 51.5**	**-0.3**	
	baz=109								
BTO	**Baotou**	**147.14**	**102**	*e*	PKPbc	**PKPbc**	**01 47 54.8**	**-0.3**	
TIA	**Tai'an**	**147.39**	**115**		PKPbc	**PKPbc**	**01 47 56.3**	**+0.6**	
INK	**Inuvik**	**147.63**	**319**		PKPbc	**PKPbc**	**01 47 55.3**	**-0.1**	
	comp=Z,31nm,0.7s,baz=148,slow=4.2,SNR=7.5								
INK					SKPbc	**SKiKP**	**01 51 23.7**	**+0.6**	
	comp=Z,5.1nm,0.9s,baz=90,slow=2.6,SNR=4.5								
HHC	**Hu-ho-hao-te**	**148.13**	**103**	*e*	PKPbc	**PKPdf**	**01 47 55.1**	**+0.8**	
EPYK	**Eagle Plains**	**148.21**	**314**		P	**PKPbc**	**01 47 57.2**	**+0.1**	
	baz=106								
MOY	**Mondy**	**149.39**	**78**	*e*	PKP2	**PKPbc**	**01 48 01.0**	**+0.4**	
MOY					pmax	pmax			
	comp=Z,55nm,1.9s								
BJT	**Baijiatuan**	**149.87**	**110**		PKP2	**PKPbc**	**01 48 02.4**	**+0.5**	
BJT	**Baijiatuan**	**149.87**	**110**			**PKPbc**	**01 48 02.4**	**+0.5**	
ZAK	**Zakamensk**	**149.89**	**82**	*e*	PKP2	**PKPbc**	**01 48 02.0**	**+0.2**	
ZAK					pmax	pmax			
	comp=Z,30nm,1.4s								
NRIK	**Noril'sk**	**149.89**	**40**		PKPbc	**PKPbc**	**01 48 01.3**	**+0.3**	
	comp=Z,14nm,0.9s,baz=179,slow=1.0,SNR=16								
SONM	**Songino Array**	**150.06**	**88**		PKP	**PKPdf**	**01 47 58.0**	**+0.8**	
	comp=Z,15nm,0.6s,baz=208,slow=2.9,SNR=5.1								
SONM					PKPbc	**PKPbc**	**01 48 02.6**	**+0.2**	
	comp=Z,20nm,0.8s,baz=216,slow=3.1,SNR=41								
SONM					pPKPbc	**pPKPbc**	**01 48 30.3**	**0.0**	
	comp=Z,21nm,0.8s,baz=222,slow=2.0,SNR=7.9								
ULN	**Ulaanbaatar**	**150.43**	**89**	*d*	PKiKP	**PKPbc**	**01 48 02.9**	**-0.3**	
ULN	**Ulaanbaatar**	**150.43**	**89**			**PKiKP**	**01 48 03.7**	**-0.2**	
JNU	**Nakatsue**	**150.69**	**137**		PKPbc	**PKPbc**	**01 48 04.1**	**-0.1**	
TLY	**Talaya**	**150.79**	**80**		PKPbc	**PKiKP**	**01 48 04.6**	**+0.2**	
	comp=Z,18nm,0.8s,baz=278,slow=3.9,SNR=9.5								
TLY					pPKPbc	**pPKPbc**	**01 48 32.9**	**+1.1**	
	comp=Z,9.6nm,0.8s,baz=222,slow=3.7,SNR=2.6								
TLY	**Talaya**	**150.79**	**80**	*e*	PKiKP	**PKiKP**	**01 48 04.6**	**+0.2**	
TLY				*e*			01 48 33.0		
TLY					pmax	pmax			
	comp=Z,47nm,0.8s								
TLY	**Talaya**	**150.79**	**80**			**PKiKP**	**01 48 04.8**	**+0.5**	
HDA	**Harding Lake**	**151.76**	**308**		P	**PKiKP**	**01 48 06.0**	**0.0**	
	baz=105								
ILAR	**Eielson Array**	**151.83**	**309**		PKP	**PKPdf**	**01 47 56.5**	**-2.7**	
	comp=Z,2.0nm,1.1s,baz=318,slow=1.9,SNR=11								
ILAR					PKPbc	**PKiKP**	**01 48 06.0**	**0.0**	
	comp=Z,64nm,1.0s,baz=138,slow=0.9,SNR=185								
POKR	**Poker Flat Res**	**152.13**	**310**		P	**PKPbc**	**01 48 06.6**	**+0.1**	
	baz=103								
TJN	**Taejon**	**152.17**	**129**	⇑ *e*	PKiKP	**PKiKP**	**01 48 08.2**	**+0.5**	
CNPM	**China Poot**	**152.23**	**297**		PKPbc	**PKiKP**	**01 48 07.7**	**+0.6**	
KDAK	**Kodiak Island**	**152.23**	**293**		PKPbc	**PKiKP**	**01 48 07.3**	**+0.2**	
	comp=Z,24nm,0.4s,baz=97,slow=3.4,SNR=49								
COLA	**College**	**152.25**	**309**	*c*	PKiKP	**PKPbc**	**01 48 06.7**	**+0.1**	
KSRS	**Korea Array**	**153.32**	**128**		PKP	**PKPdf**	**01 48 02.1**	**-0.1**	
	comp=Z,0.7nm,0.5s,baz=282,slow=2.3,SNR=4.5								
KSRS					PKPbc	**PKiKP**	**01 48 10.3**	**+0.3**	
	comp=Z,3.2nm,0.7s,baz=192,slow=2.0,SNR=12								
KSRS					PKPab	**PKPab**	**01 48 23.0**	**+0.7**	
	comp=Z,4.4nm,0.8s,baz=217,slow=3.9,SNR=9.1								
KSRS					pPKPbc	**pPKPbc**	**01 48 37.8**	**-0.2**	
	comp=Z,2.0nm,0.6s,baz=223,slow=3.2,SNR=2.4								
TOLK	**Toolik Lake Re**	**153.50**	**317**		P	**PKiKP**	**01 48 10.2**	**+0.8**	
	baz=94								
MJAR	**Matsushiro Arr**	**156.23**	**147**		PKPab	**PKPab**	**01 48 34.1**	**-0.7**	
	comp=Z,4.4nm,0.7s,baz=197,slow=4.9,SNR=7.4								
USRK	**Ussuriysk Ar.**	**160.62**	**125**		PKPab	**PKPab**	**01 48 52.8**	**-0.9**	
	comp=Z,2.0nm,0.7s,baz=231,slow=3.5,SNR=5.0								
TIXI	**Tiksi**	**162.64**	**27**		PKP	**PKPdf**	**01 48 12.3**	**-0.3**	
	comp=Z,1.8nm,0.3s,baz=315,slow=3.0,SNR=3.9								
TIXI					PKPab	**PKPab**	**01 49 02.5**	**+0.7**	
	comp=Z,1.6nm,0.3s,baz=3.2,slow=1.0,SNR=4.2								
TIXI					pPKPab	**pPKPab**	**01 49 27.4**	**-1.5**	
	comp=Z,1.6nm,0.3s,baz=0.8,slow=0.8,SNR=2.0								
KLR	**Kul'dur**	**164.20**	**113**		PKP	**PKPdf**	**01 48 15.1**	**+0.4**	
	comp=Z,2.4nm,1.0s,baz=206,slow=2.5,SNR=5.3								
KLR					PKPab	**PKPab**	**01 49 08.1**	**-1.2**	
	comp=Z,2.9nm,0.8s,baz=263,slow=4.5,SNR=8.5								
KLR					pPKPab	**pPKPab**	**01 49 35.8**	**-0.6**	
	comp=Z,2.7nm,0.8s,baz=270,slow=6.1,SNR=3.5								
KLR	**Kul'dur**	**164.20**	**113**	⇑ *e*	PKiKP	**PKPdf**	**01 48 14.9**	**+0.2**	
BILL	**Bilibino**	**168.38**	**337**	*i*	PKiKP	**PKPdf**	**01 48 14.1**	**-3.3**	
BILL					pmax	pmax			
	comp=Z,4.0nm,1.2s								
SEY	**Seymchan**	**174.79**	**9**		PKP	**PKPdf**	**01 48 21.1**	**+0.5**	
	comp=Z,3.4nm,0.9s,baz=184,slow=9.1,SNR=3.8								
PETK	**Petropavlovsk-**	**174.88**	**205**		PKP	**PKPdf**	**01 48 20.6**	**-0.4**	
	comp=Z,3.5nm,0.9s,baz=151,slow=7.4,SNR=6.0								
PETK					pPKP	**pPKPdf**	**01 48 50.1**	**+0.5**	
	comp=Z,2.7nm,0.9s,baz=44,slow=4.5,SNR=3.2								
PETK					PKPab	**PKPab**	**01 49 55.9**	**-0.5**	
	comp=Z,12nm,0.8s,baz=140,slow=7.2,SNR=15								

*GUC **21** 01:43:40.9±0.6, 17°.67S×69°.63W, h143km±3km, ML3.4*
*IDC **21** 01:43:44.1±5.4, 16°.78S×69°.48W, h177km±21km, mb3.6/3, mb1 3.6/3, mb1mx3.2/28, mbtmp4.2/3, Error ellipse: s-maj=143.8km s-min=65.9km az=2.0*
ISC 21 01:43:38.8±1.3, 17°.64S±0°.07×69°.7W±0°.1, h152km±8km, n13, σ1s41/23, 7C, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.72**	**165**	⇑ *i*	P	**Pn**	**01 44 03.2**	**+0.8**
PB16				*i*	S	**Sn**	**01 44 20.4**	**0.0**
PB12	**IPOC Station P**	**1.14**	**211**	⇑ *i*	P	**Pn**	**01 44 05.6**	**+0.5**
PB12				*i*	S	**Sn**	**01 44 25.1**	**-0.3**
PB12					IAML		01 44 26.0	
	comp=E,627nm,0.3s							
MNMC	**Minye Minye**	**1.49**	**176**	⇑ *i*	P	**Pn**	**01 44 09.4**	**+0.6**
MNMC				*i*	S	**Sn**	**01 44 31.5**	**-0.3**
MNMC					IAML		01 44 33.7	
	comp=N,405nm,0.6s							
PSGC	**Pisagua**	**1.99**	**192**	⇑ *i*	P	**Pn**	**01 44 14.2**	**+0.1**
PSGC				*i*	S	**Sn**	**01 44 39.6**	**-1.7**
PSGC					IAML		01 44 40.4	
	comp=N,222nm,0.4s							
LPAZ	**La Paz**	**2.02**	**48**	*i*	P	**Pn**	**01 44 15.4**	**+0.5**
	comp=N,29nm,0.3s,baz=230,slow=6.7,SNR=1010							
LPAZ					S	**Sn**	**01 44 39.5**	**-3.0**
	comp=N,1.2nm,0.3s,baz=8.8,slow=20,SNR=1.4							
GO01	**Chusmiza**	**2.08**	**167**	⇑ *i*	P	**Pn**	**01 44 16.3**	**+0.8**
GO01				*i*	S	**Sn**	**01 44 43.9**	**+0.2**
GO01					IAML		01 44 48.8	
	comp=E,214nm,0.1s							
PB11	**IPOC Station P**	**2.11**	**179**	⇑ *i*	P	**Pn**	**01 44 15.9**	**+0.3**
PB11				*i*	S	**Sn**	**01 44 42.8**	**-1.1**
PB11					IAML		01 44 45.6	
	comp=N,232nm,0.3s							
PB08	**IPOC Station P**	**2.54**	**168**	⇑ *i*	P	**Pn**	**01 44 21.9**	**+0.9**
PB08				*i*	S	**Sn**	**01 44 52.9**	**-0.6**
PB08					IAML		01 44 54.6	
	comp=E,77nm,0.4s							
PB01	**IPOC Station P**	**3.39**	**177**	*e*	P	**Pn**	**01 44 31.5**	**+0.2**
PB01				*i*	S	**Sn**	**01 45 09.4**	**-2.7**
PB01					IAML		01 45 10.2	
	comp=E,93nm,0.2s							
PB02	**IPOC Station P**	**3.67**	**183**	*e*	P	**Pn**	**01 44 35.8**	**+0.8**
PB02				*i*	S	**Sn**	**01 45 15.2**	**-3.4**
PB02					IAML		01 45 18.4	
	comp=E,87nm,0.4s							
BDFB	**Brasilia**	**20.87**	**88**		P	**P**	**01 48 10.6**	**+1.4**
	comp=E,1.4nm,0.3s,baz=216,slow=8.7,SNR=2.1							
DBIC	**Dimbokro**	**68.42**	**75**		P	**P**	**01 54 24.8**	**+0.1**
	comp=E,1.8nm,0.5s,baz=246,slow=10.0,SNR=4.9							
TORD	**Torodi Ar. Bea**	**76.80**	**71**		P	**P**	**01 55 14.3**	**0.0**
	comp=E,1.0nm,0.4s,baz=264,slow=4.7,SNR=19							

*IDC **21** 01:48:44.7±1.1, 58°.12N×153°.05W, h55km±25km, mb3.5/10, mb1 3.6/13, mb1mx3.4/48, mbtmp3.8/13, ML3.6/3, Error ellipse: s-maj=42.8km s-min=24.2km az=155.0*
*AEIC **21** 01:48:46.7±1.4, 58°.09N×0°.04×152°.81W±0°.08, h66km±6km, ML3.4/67, Error ellipse: s-maj=7.1km s-min=5.6km az=136.0*
ISC 21 01:48:45.9±0.8, 58°.14N±0°.04×152°.77W±0°.04, h69km±7km, n78, σ0s86/85, mb3.8/10, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**0.37**	**164**	P		**Pn**	**01 48 57.0**	**-0.5**
	318nm,0.3s,baz=66,slow=3.2,SNR=4567							
KDAK				S		**Sn**	**01 49 05.4**	**-0.5**
	180nm,0.3s,baz=128,slow=19,SNR=7.7							
KDAK	**Kodiak Island**	**0.37**	**164**			**Pn**	**01 48 57.3**	**-0.2**
KDAK	**Kodiak Island**	**0.37**	**164**			**Sn**	**01 49 05.3**	**-0.6**
OHAK	**Old Harbor**	**0.96**	**197**			**Pn**	**01 49 03.5**	**-0.3**
OHAK						**Sn**	**01 49 15.8**	**-1.2**
KAHG	**Katmai Hook Gl**	**1.00**	**292**			**Pn**	**01 49 04.6**	**+0.1**
KCG	**Knife Ck. Glac**	**1.25**	**279**			**Pn**	**01 49 07.4**	**-0.2**
KCG						**Sn**	**01 49 23.5**	**-0.3**
AUP	**Augustine Pinn**	**1.27**	**345**			**Pn**	**01 49 08.6**	**+0.6**
AUH	**Augustine H**	**1.28**	**344**			**Pn**	**01 49 08.6**	**+0.6**
KAHC	**Katmai Hardscr**	**1.28**	**294**			**Pn**	**01 49 07.7**	**-0.5**
AUW	**Augustine West**	**1.29**	**344**			**Pn**	**01 49 08.6**	**+0.6**
AUL	**Augustine Lava**	**1.29**	**345**			**Pn**	**01 49 08.8**	**+0.6**
KABU	**Katmai Buttres**	**1.34**	**277**			**Pn**	**01 49 08.9**	**+0.2**
KABU						**Sn**	**01 49 25.9**	**0.0**
CAHL	**Cahill**	**1.35**	**267**			**Pn**	**01 49 08.5**	**-0.3**
CNPM	**China Poot**	**1.60**	**29**			**Pn**	**01 49 13.0**	**+0.7**
CNPM						**Sn**	**01 49 32.3**	**+0.2**
HOM	**Homer**	**1.63**	**21**			**Pn**	**01 49 13.5**	**+0.9**
ILS	**Iliamna Low So**	**1.83**	**355**			**Pn**	**01 49 15.8**	**+0.4**
IVE	**Iliamna Volcan**	**1.89**	**356**			**Pn**	**01 49 16.5**	**+0.3**
BRLK	**Bradley Lake**	**1.90**	**30**			**Pn**	**01 49 16.5**	**+0.3**
BRSE	**Bradley Lake S**	**1.92**	**32**			**Pn**	**01 49 16.8**	**+0.3**
BRSE						**Sn**	**01 49 38.8**	**-0.9**
ILW	**Iliamna West**	**1.94**	**355**			**Pn**	**01 49 17.2**	**+0.4**
PLK1	**Peulik 1**	**2.07**	**262**			**Pn**	**01 49 18.5**	**0.0**
RSO	**Redoubt South**	**2.33**	**0**			**Pn**	**01 49 23.1**	**+1.0**
RDWB	**Redoubt West**	**2.36**	**359**			**Pn**	**01 49 22.9**	**+0.3**
SEW	**Seward**	**2.61**	**40**			**Pn**	**01 49 25.5**	**-0.2**
SLKM	**Skilak Lake**	**2.71**	**28**			**Pn**	**01 49 27.0**	**-0.2**
SPWE	**Spurr West**	**3.15**	**2**			**Pn**	**01 49 33.8**	**+0.6**
RC01	**Rabbit Creek A**	**3.34**	**26**			**Pn**	**01 49 35.7**	**+0.1**
STLK	**Strandline Lak**	**3.41**	**8**			**Pn**	**01 49 36.9**	**+0.2**
PWL	**Port Wells**	**3.54**	**38**			**Pn**	**01 49 38.5**	**0.0**
CHGN	**Chignik**	**3.58**	**241**			**Pn**	**01 49 38.7**	**-0.2**
PMR	**Palmer**	**3.92**	**26**			**Pn**	**01 49 43.2**	**-0.4**
HIN	**Hinchinbrook I**	**3.94**	**52**			**Pn**	**01 49 44.0**	**+0.2**
KNK	**Knik Glacier**	**3.94**	**32**			**Pn**	**01 49 43.6**	**-0.3**
GLI	**Glacier Island**	**3.99**	**44**			**Pn**	**01 49 44.0**	**-0.5**
GHO	**Glory Hole Cre**	**4.13**	**26**			**Pn**	**01 49 46.2**	**-0.3**
FID	**Port Fidalgo**	**4.14**	**48**			**Pn**	**01 49 45.9**	**-0.8**
VNWF	**Veniaminof 8**	**4.20**	**245**			**Pn**	**01 49 47.7**	**+0.1**
SML	**Sawmill**	**4.30**	**29**			**Pn**	**01 49 49.0**	**+0.1**
EYAK	**Cordova Ski Ar**	**4.33**	**53**			**Pn**	**01 49 49.2**	**0.0**
SCM	**Sheep Creek Mo**	**4.61**	**34**			**Pn**	**01 49 53.3**	**+0.3**
RAGM	**Ragged Mountai**	**4.73**	**58**			**Pn**	**01 49 55.1**	**+0.5**
CNBA	**Chernabura Isl**	**5.03**	**232**			**Pn**	**01 49 57.4**	**-1.4**
TT01	**Tatalina**	**5.05**	**343**			**Pn**	**01 49 58.5**	**-0.4**
TTA	**Tatalina**	**5.07**	**343**			**Pn**	**01 49 58.7**	**-0.6**
SDPT	**Sand Point**	**5.08**	**240**			**Pn**	**01 49 59.0**	**-0.5**
WAT2	**Susitna Watana**	**5.26**	**21**			**Pn**	**01 50 01.8**	**-0.2**
TRF	**Thorofare Moun**	**5.47**	**12**			**Pn**	**01 50 04.9**	**+0.1**
GLB	**Gilahina Butte**	**5.61**	**50**			**Pn**	**01 50 06.9**	**+0.2**
DHY	**Denali Highway**	**5.62**	**26**			**Pn**	**01 50 07.0**	**+0.1**
RND	**Reindeer**	**5.62**	**18**			**Pn**	**01 50 06.5**	**-0.4**
VRDI	**Verde Repeater**	**5.65**	**53**			**Pn**	**01 50 07.2**	**-0.1**
MCARA	**McCarthy VSAT**	**5.90**	**52**			**Pn**	**01 50 11.4**	**+0.8**
KIAG	**Kiagna River**	**5.99**	**58**			**Pn**	**01 50 12.2**	**+0.2**
BALM	**Baldy**	**6.04**	**57**			**Pn**	**01 50 13.0**	**+0.3**
BPAW	**Bear Paw Mtn.**	**6.04**	**7**			**Pn**	**01 50 13.0**	**+0.3**
PTPK	**Patty Peak**	**6.05**	**55**			**Pn**	**01 50 13.5**	**+0.6**
YAH	**Yahtse**	**6.08**	**64**			**Pn**	**01 50 14.1**	**+0.7**
CHX	**Chaix Hills**	**6.31**	**67**			**Pn**	**01 50 17.3**	**+1.0**
BARN	**Barnard Glacie**	**6.36**	**58**			**Pn**	**01 50 17.6**	**+0.6**
CTGM	**Chitina Glacie**	**6.47**	**59**			**Pn**	**01 50 19.1**	**+0.5**
RIDG	**Independent Ri**	**6.81**	**31**			**Pn**	**01 50 23.6**	**+0.5**
HDA	**Harding Lake**	**6.89**	**22**			**Pn**	**01 50 24.4**	**+0.3**
CCB	**Clear Creek Bu**	**6.95**	**18**			**Pn**	**01 50 24.5**	**-0.4**
ILAR	**Eielson Array**	**7.23**	**20**	P		**Pn**	**01 50 28.1**	**-0.6**
	0.6nm,0.3s,baz=202,slow=13,SNR=6.7							
ILAR				S		**Sn**	**01 51 43.8**	**-5.4**
	2.5nm,0.3s,baz=207,slow=16,SNR=2.4							
WHY	**Whitehorse**	**9.46**	**67**			**Pn**	**01 51 00.3**	**+0.9**
DLBC	**Dease Lake**	**11.96**	**79**	P		**Pn**	**01 51 35.8**	**+2.4**
	0.4nm,0.3s,baz=173,slow=12,SNR=1.9							
DLBC	**Dease Lake**	**11.96**	**79**			**Pn**	**01 51 34.1**	**+0.7**
YKA	**Yellowknife Ar**	**19.19**	**61**	P		**P**	**01 53 05.5**	**+1.8**
	0.1nm,0.3s,baz=272,slow=9.9,SNR=13							
KLR	**Kul'dur**	**43.34**	**292**	P		**P**	**01 56 40.6**	**-0.2**
	0.6nm,0.4s,baz=0.0,slow=3.0,SNR=2.0							
ARCES	**ARCESS Array B**	**52.62**	**1**	P		**P**	**01 57 52.1**	**0.0**
	2.0nm,0.8s,baz=34,slow=6.6,SNR=1.5							
SONM	**Songino Array**	**55.99**	**307**	P		**P**	**01 58 16.4**	**-0.7**
	0.7nm,0.4s,baz=52,slow=8.4,SNR=2.5							
ZALV	**Zalesovo Beam**	**58.95**	**324**	P		**P**	**01 58 37.6**	**0.0**
	1.5nm,0.5s,baz=14,slow=3.8,SNR=5.4							
FINES	**FINESS Array B**	**60.75**	**1**	P		**P**	**01 58 50.1**	**+0.4**
	0.5nm,0.5s,baz=3.7,slow=8.0,SNR=7.0							
HFS	**Hagfors**	**61.59**	**8**	P		**P**	**01 58 55.9**	**+0.4**
	0.5nm,0.3s,baz=339,slow=3.6,SNR=2.9							
MKAR	**Makanchi Array**	**65.97**	**322**	P		**P**	**01 59 24.1**	**-0.4**
	0.5nm,0.5s,baz=42,slow=5.8,SNR=7.7							
AKASG	**Malin Array Be**	**71.51**	**359**	P		**P**	**01 59 58.7**	**0.0**
	0.3nm,0.3s,baz=3.7,slow=5.7,SNR=2.1							
GERES	**GERESS Array B**	**72.80**	**9**	P		**P**	**02 00 07.7**	**+1.1**
	0.2nm,0.4s,baz=18,slow=1.7,SNR=4.1							
BRTR	**Keskin Array B**	**82.35**	**355**	P		**P**	**02 00 59.6**	**-0.4**
	0.3nm,0.6s,baz=27,slow=3.5,SNR=2.8							

*OSPL **21** 01:58:45.7±0.9, 19°.76N×70°.87W, h2km±15km, ML3.2*
*NEIC **21** 01:58:47.7±1.7, 19°.49N±0°.03×70°.68W±0°.03, h28km±9km, ML3.3/26, Error ellipse: s-maj=4.7km s-min=4.2km az=91.0*
ISC 21 01:58:47.6±1.0, 19°.48N±0°.05×70°.66W±0°.04, h28km±6km, n20, σ1s01/28, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SC01	**Santiago de lo**	**0.08**	**229**			**Pb**	**01 58 51.7**	**-0.9**
SC01					Sg	**Sb**	**01 58 56.0**	**+0.1**
SC01	**Santiago de lo**	**0.08**	**229**	*i*	P	**Pb**	**01 58 51.7**	**-0.9**
SC01				*e*	S	**Sb**	**01 58 57.3**	**+1.4**
SC01					IAML		01 59 02.8	
	comp=Z,3μm,0.3s							
SDDR	**Presa de Saban**	**0.77**	**230**			**Pb**	**01 59 01.9**	**-0.7**
SDDR					Sn	**Sb**	**01 59 13.5**	**+0.7**
SDDR		

baz=219
H11S1 WAKE ISLAND Hy 29.89 38 T T 02 39 48.5
baz=219,SNR=2.6
PSA00 Pilbara Seismi 31.77 236 P P **02 08 10.2 -0.7**
URZ Urewera 42.29 145 P P **02 09 40.0 0.0**
comp=Z,5.3nm,0.6s,baz=5.0,slow=2.0,SNR=7.0
USRK Ussuriysk Ar. 51.18 345 P P **02 10 50.2 +0.7**
comp=Z,0.7nm,0.5s,baz=154,slow=11,SNR=2.0
CM31 Chiang Mai Arr 53.71 297 P P **02 11 06.9 -1.8**
CMAR Chiang Mai Arr 53.71 297 P P **02 11 10.0 +1.3**
comp=Z,0.8nm,0.3s,baz=114,slow=6.0,SNR=1.8
PETK Petropavlovsk- 58.62 7 P P **02 11 43.4 +0.2**
comp=Z,1.3nm,0.7s,baz=166,slow=7.1,SNR=2.4
ULN Ulaanbaatar 63.84 331 P P **02 12 17.8 -1.0**
ULN IAmb IAmb 02 12 33.2
comp=Z,2.9nm,0.8s
SONM Songino Array 64.14 330 P P **02 12 22.9 +2.2**
comp=Z,0.3nm,0.3s,baz=123,slow=5.3,SNR=2.5
VNDA Vanda 72.70 177 P P **02 13 14.6 +0.9**
comp=Z,0.4nm,0.7s,baz=321,slow=6.7,SNR=3.9
MK31 Makanchi Array 77.46 320 P P **02 13 40.2 -1.4**
MKAR Makanchi Array 77.46 320 P P **02 13 41.5 -0.2**
comp=Z,0.4nm,0.8s,baz=115,slow=5.8,SNR=5.3
MAKZ Makanchi 77.67 320 P P **02 13 41.7 -1.1**
MAKZ IAmb IAmb 02 13 56.4
comp=Z,4.9nm,1.1s
ZAA0 Zalesovo Array 78.81 327 P P **02 13 47.4 -1.5**
ZAA0 IAmb IAmb 02 13 58.2
comp=Z,3.6nm,0.8s
ZALV Zalesovo Beam 78.81 327 P P **02 13 50.0 +1.1**
comp=Z,1.8nm,0.6s,baz=122,slow=5.7,SNR=7.5
NIL Nilore 80.22 305 P P **02 13 55.5 -1.6**
KURK Kurchatov 81.11 323 P P **02 14 00.5 -0.9**
KURK IAmb IAmb 02 14 14.3
comp=Z,5.0nm,1.1s
ILAR Eielson Array 84.32 23 P P **02 14 18.9 +1.1**
comp=Z,1.6nm,0.8s,baz=255,slow=5.0,SNR=12
NRIK Noril'sk 84.76 342 P P **02 14 22.1 +2.1**
comp=Z,1.7nm,0.3s,baz=56,slow=3.7,SNR=1.4
DOT Dot Lake 85.01 25 P P **02 14 20.5 -0.9**
YKA Yellowknife Ar 97.97 28 P Pdif 02 15 24.0 +2.0
comp=Z,0.4nm,0.8s,baz=277,slow=4.1,SNR=5.6
TORD Torodi Ar. Bea 145.80 286 PKPbc **PKPab 02 21 26.4 -0.3**
comp=Z,0.5nm,0.8s,baz=84,slow=3.3,SNR=4.2
SAML Samuel 145.93 114 **PKPdf 02 21 24.7 -1.3**

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*IDC **21** 02:11:55.5±1.0, 9.°64S×108.°15E, h0km, mb4.0/10, mb1 4.1/12, mb1mx3.9/38, mbtmp4.0/12, ML3.6/2, MS3.3/3, Ms1 3.3/3, ms1mx2.9/37, Error ellipse: s-maj=39.9km s-min=15.5km az=52.0*
*NEIC **21** 02:11:57.8±1.6, 9.°94S±0.°05×108.°17E±0.°06, h34km±5km, mb4.2/8, Error ellipse: s-maj=7.9km s-min=7.1km az=89.0*
*DJA **21** 02:11:57.5±0.5, 10.°5S±5.°×10.°8E±.°, h49km±57km, M4.5/14, mB5.1/2, mb4.7/8, MLv4.5/14, Mw(mB)4.5/2*
ISC 21 02:11:58.2±0.6, 9.°87S±0.°06×108.°15E±0.°05, h35km, n54, σ1s73/52, mb4.2/14, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**2.32**	**352**	P	**Pn**	**02 12 33.0**	**-1.0**
CISI	**Cisompet, Garu**	**2.32**	**352**		**Pn**	**02 12 32.8**	**-1.2**
CISI				Sn	**Sn**	**02 13 01.2**	**-0.1**
XMIS	**Christmas Isla**	**2.53**	**256**		**Pn**	**02 12 37.2**	**+0.4**
XMIS				Sn	**Sn**	**02 13 05.4**	**-1.1**
CNJI	**Cibinong**	**2.73**	**338**	P	**Pn**	**02 12 38.9**	**-0.7**
UGM	**Wanagama**	**3.05**	**51**	P	**Pn**	**02 12 43.4**	**-0.6**
UGM				S	**Sn**	**02 13 16.3**	**-3.0**
UGM	**Wanagama**	**3.05**	**51**		**Pn**	**02 12 43.6**	**-0.4**
LEM	**Lembang**	**3.07**	**350**	Pn	**Pn**	**02 12 45.5**	**+1.1**
	11nm,0.3s,baz=138,slow=9.4,SNR=8.5						
LEM				Sn	**Sn**	**02 13 22.8**	**+2.9**
	14nm,0.3s,baz=334,slow=19,SNR=8.8						
LEM				LR	LR	02 13 54.4	
	comp=Z,262nm,18.3s,baz=218,slow=42						
LEM	**Lembang**	**3.07**	**350**	P	**Pn**	**02 12 42.9**	**-1.5**
WOJI	**Wonogiri, Jawa**	**3.41**	**54**	P	**Pn**	**02 12 48.4**	**-0.5**
WOJI				S	**Sn**	**02 13 25.2**	**-2.9**
DBJI	**Dramaga**	**3.57**	**337**	P	**Pn**	**02 12 50.2**	**-1.0**
SMRI	**Semarang**	**3.60**	**39**	P	**Pn**	**02 12 52.5**	**+0.9**
SMRI				S	**Sn**	**02 13 33.4**	**+0.4**
SMRI	**Semarang**	**3.60**	**39**	Pn	**Pn**	**02 12 50.4**	**-1.2**
GRJI	**Gresik**	**5.20**	**56**	P	**Pn**	**02 13 12.0**	**-1.5**
	0.3nm60nm,0.8s						
KASI	**Kota Agung**	**5.63**	**320**	P	**Pn**	**02 13 16.6**	**-2.9**
	0.2nm23nm,0.8s						
JAGI	**Jajag, Banyuwa**	**6.09**	**77**	P	**Pn**	**02 13 25.2**	**-0.6**
	0.4nm2µm70nm,0.8s						
JAGI	**Jajag, Banyuwa**	**6.09**	**77**		**Pn**	**02 13 25.9**	**+0.1**
LWLI	**Liwa**	**6.30**	**320**	P	Pn	02 13 23.3	-5.5
MDSI	**Maura Dua**	**6.64**	**323**	P	**Pn**	**02 13 31.8**	**-1.6**
	0.1nm7.7nm,1.2s						
SRBI	**Singaraja**	**7.20**	**76**	P	**Pn**	**02 13 41.3**	**+0.2**
	0.3nm55nm,0.8s						
MNAI	**Manna**	**7.51**	**316**	Pn	**Pn**	**02 13 45.4**	**0.0**
PLAI	**Plampang**	**9.56**	**85**	P	**Pn**	**02 14 12.7**	**-0.7**
KAPI	**Kappang**	**12.47**	**68**	Pn	**Pn**	**02 14 54.0**	**+0.6**
	0.5nm,0.3s,baz=251,slow=7.0,SNR=4.1						
KAPI	**Kappang**	**12.47**	**68**		**Pn**	**02 14 53.1**	**-0.3**
EDFI	**Ende, Flores**	**13.41**	**86**	P	**Pn**	**02 15 02.7**	**-3.6**
MNSI	**Mandailing Nat**	**13.60**	**321**	P	**P**	**02 15 14.0**	**-3.2**
GIRL	**Giralia**	**13.98**	**156**	Pn	**Pn**	**02 15 11.2**	**-2.7**
PSA00	**Pilbara Seismi**	**16.18**	**137**	Pn	**Pn**	**02 15 42.0**	**-1.0**
PSA00				IAmb	IAmb	02 15 59.9	
	comp=Z,10nm,1.1s						
FITZ	**Fitzroy Crossi**	**18.83**	**118**	P	**Pn**	**02 16 18.1**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=274,slow=5.9,SNR=2.9						
FITZ				S	Sn	02 19 30.7	-15
	comp=Z,0.1nm,0.3s,baz=175,slow=19,SNR=2.0						
FITZ	**Fitzroy Crossi**	**18.83**	**118**	P	**Pn**	**02 16 16.1**	**+0.2**
NWAO	**Narrogin (SRO)**	**24.43**	**161**	LR	LR	02 25 42.2	
	comp=Z,122nm,20.2s,baz=56,slow=34						
WRA	**Warramunga Arr**	**27.18**	**115**	P	**P**	**02 17 41.2**	**+2.4**
	comp=Z,1.4nm,0.8s,baz=285,slow=11,SNR=4.4						
ASAR	**Alice Springs**	**28.15**	**122**	P	**P**	**02 17 51.6**	**+4.2**
	comp=Z,0.9nm,0.9s,baz=300,slow=8.6,SNR=7.1						
CM31	**Chiang Mai Arr**	**29.57**	**342**	P	**P**	**02 17 57.8**	**-2.2**
CMAR	**Chiang Mai Arr**	**29.57**	**342**	P	**P**	**02 18 00.9**	**+0.9**
	comp=Z,2.0nm,0.4s,baz=177,slow=8.7,SNR=14						
H08S2	**Diego Garcia H**	**35.30**	**271**	T	T	02 56 15.2	
	baz=95,slow=74,SNR=11						
H08S3	**Diego Garcia H**	**35.31**	**271**	T	T	02 56 16.7	
	baz=95,slow=74,SNR=10						
H08S1	**Diego Garcia H**	**35.31**	**271**	T	T	02 56 18.0	
	baz=95,slow=74,SNR=12						
STKA	**Stephens Creek**	**37.91**	**130**	P	**P**	**02 19 15.3**	**+3.0**
	comp=Z,5nm,0.7s,baz=295,slow=8.5,SNR=6.8						
STKA	**Stephens Creek**	**37.91**	**130**	P	**P**	**02 19 11.5**	**-0.8**
SONM	**Songino Array**	**57.47**	**359**	P	**P**	**02 21 45.5**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=201,slow=7.7,SNR=2.2						
KSH	**Kashi**	**57.50**	**331**	P	P	02 21 49.9	+5.7
KSH				pP	sP	02 21 54.8	-1.5
KSH				sP	pwP	02 21 57.4	-3.3
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,190nm,4.8s						
USRK	**Ussuriysk Ar.**	**58.00**	**20**	P	**P**	**02 21 47.3**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=210,slow=5.0,SNR=3.6						
MK31	**Makanchi Array**	**60.95**	**340**	P	**P**	**02 22 08.3**	**+0.5**
MKAR	**Makanchi Array**	**60.95**	**340**	P	**P**	**02 22 09.6**	**+1.8**
	comp=Z,3.1nm,0.8s,baz=141,slow=7.9,SNR=28						
MAKZ	**Makanchi**	**61.07**	**340**	P	**P**	**02 22 09.5**	**+0.9**
MAKZ				IAmb	IAmb	02 22 19.2	
	comp=Z,1.8nm,0.9s						
ZAA0	**Zalesovo Array**	**66.58**	**345**	P	**P**	**02 22 44.6**	**-0.1**
ZAA0				IAmb	IAmb	02 22 46.7	
	comp=Z,3.1nm,1.1s						
ZALV	**Zalesovo Beam**	**66.58**	**345**	P	**P**	**02 22 45.1**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=72,slow=9.5,SNR=3.6						
GEYT	**Alibeck**	**66.65**	**319**	P	**P**	**02 22 46.1**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=204,slow=3.3,SNR=3.6						
VNDA	**Vanda**	**72.96**	**169**	P	P	02 23 28.1	+4.5
	comp=Z,0.5nm,0.8s,baz=298,slow=4.3,SNR=2.5						
AKTO	**Aktyubinsk**	**74.15**	**329**	LR	LR	02 59 12.4	
	comp=Z,23nm,20.9s,baz=320,slow=38						
TIXI	**Tiksi**	**82.51**	**6**	P	**P**	**02 24 17.3**	**+0.6**
TIXI				IAmb	IAmb	02 24 18.6	
	comp=Z,2.9nm,1.0s						
KLMR	**Klimovskoe**	**88.44**	**333**	*e*	**P**	**02 24 46.4**	**-0.1**
KLMR				AMP		02 25 00.8	
	comp=Z,11nm,1.5s						
YKA	**Yellowknife Ar**	**119.13**	**21**	PKP	**PKiKP**	**02 30 45.8**	**+2.7**
	comp=Z,0.1nm,0.5s,baz=5.8,slow=1.8,SNR=2.0						
TXAR	**Lajitas Array**	**144.50**	**52**	PKP	**PKiKP**	**02 31 33.5**	**-1.9**

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comp=Z,0.1nm,0.6s,baz=335,slow=4.0,SNR=2.0

*SOME **21** 02:15:36.5, 39.°67N×73.°55E, h5km*
*KRNET **21** 02:15:36.4±0.1, 39.°38N×73.°63E, mb3.5*
*NNC **21** 02:15:44.4±4.0, 39.°92N×73.°95E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=29.4km s-min=16.2km az=167.0*
ISC 21 02:15:39.6±1.8, 39.°46N±0.°09×73.°50E±0.°04, h10km, n45, σ2s25/71, 19C-16D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**1.91**	**348**	⇑*iP*	**Pb**	**02 16 13.5**	**-1.1**
	baz=46						
ARSB				⇑*iS*	**Sg**	**02 16 41.0**	**+0.1**
	baz=46						
BTK	**Batken**	**2.15**	**287**	⇓*iP*	**Pb**	**02 16 17.3**	**-1.4**
	baz=88						
BTK				⇓*iS*	**Sg**	**02 16 47.1**	**-1.6**
	baz=88						
ARK	**Arkit**	**2.62**	**334**	⇑*iP*	**Pn**	**02 16 23.1**	**+1.1**
	baz=33						
ARK				⇑*iS*	**Sb**	**02 16 57.7**	**-1.1**
	baz=33						
AML	**Almayashu**	**2.68**	**3**	⇓*iP*	**Pn**	**02 16 24.1**	**+1.0**
	baz=1.0						
AML				⇓*iS*	**Sb**	**02 16 58.9**	**-2.0**
	baz=1.0						
AML	**Almayashu**	**2.68**	**3**	P	**Pb**	**02 16 26.1**	**-1.8**
	SNR=14						
UCH	**Uchtor**	**2.88**	**15**	⇓*iP*	**Pn**	**02 16 26.6**	**+0.7**
	baz=13						
UCH				⇓*iS*	**Sb**	**02 17 03.1**	**-3.6**
	baz=13						
UCH	**Uchtor**	**2.88**	**15**	P	**Pb**	**02 16 29.0**	**-2.3**
	SNR=28						
KZA	**Kyzart**	**2.94**	**26**	⇓*iP*	**Pn**	**02 16 27.1**	**+0.4**
	baz=24						
KZA				⇓*iS*	**Sn**	**02 17 04.3**	**+2.0**
	baz=24						
KZA	**Kyzart**	**2.94**	**26**	P	**Pb**	**02 16 29.0**	**-3.3**
	SNR=17						
EKS2	**Erkin-Say**	**3.21**	**4**	⇓*iP*	**Pn**	**02 16 31.3**	**+1.1**
	baz=2.0						
EKS2				⇓*iS*	**Sn**	**02 17 11.2**	**+2.6**
	baz=2.0						
AAK	**Ala-Archa**	**3.27**	**13**	⇓*iP*	**Pn**	**02 16 31.8**	**+0.8**
	baz=11						
AAK				⇓*iS*	**Sn**	**02 17 12.5**	**+2.4**
	baz=11						
AAK	**Ala-Archa**	**3.27**	**13**	P	**Pb**	**02 16 35.6**	**-2.2**
	SNR=10.0						
AAK	**Ala-Archa**	**3.27**	**13**	⇓Pg	**Pn**	**02 16 33.2**	**+2.2**
	6.4nm,0.5s						
AAK				⇓Lg	Lg	02 17 10.0	
	34nm,0.8s						
MRKS	**Merke**	**3.29**	**357**	*eP*	**Pn**	**02 16 32.7**	**+1.4**
	5.1nm,0.3s						
MRKS				*eS*	**Sb**	**02 17 14.3**	**-4.0**
	20nm,0.4s						
MRKS	**Merke**	**3.29**	**357**	Pg	**Pn**	**02 16 32.7**	**+1.4**
	5.1nm,0.3s						
MRKS				Lg	Lg	02 17 14.3	
	20nm,0.4s						
KBK	**Karagaybulak**	**3.38**	**18**	⇑*iP*	**Pn**	**02 16 33.3**	**+0.7**
	baz=17						
KBK				⇑*iS*	**Sn**	**02 17 15.1**	**+2.2**
	baz=17						
KBK	**Karagaybulak**	**3.38**	**18**	P	**Pb**	**02 16 37.3**	**-2.4**
	SNR=12						
FRU1	**Bishkek**	**3.46**	**14**	⇑*iP*	**Pn**	**02 16 34.5**	**+0.9**
	baz=12						
FRU1				⇑*iS*	**Sn**	**02 17 16.7**	**+2.1**
	baz=12						
ULHL	**Ulahol**	**3.48**	**36**	⇑*iP*	**Pn**	**02 16 34.2**	**+0.2**
	baz=34						
ULHL				⇑*iS*	**Sn**	**02 17 16.4**	**+1.0**
	baz=34						
BOOM	**Boomskoye usch**	**3.55**	**31**	⇑*iP*	**Pn**	**02 16 35.3**	**+0.4**
	baz=29						
BOOM				⇑*iS*	**Sn**	**02 17 18.1**	**+1.0**
	baz=29						
CHMS	**Chumysh**	**3.66**	**15**	⇑*iP*	**Pn**	**02 16 37.3**	**+0.9**
	baz=13						
CHMS				⇑*iS*	**Sn**	**02 17 21.6**	**+1.9**
	baz=13						
TKM2	**Tokmak 2**	**3.81**	**24**	⇑Pg	**Pb**	**02 16 43.9**	**-3.1**
	3.0nm,0.4s						
TKM2				⇑Lg	Lg	02 17 25.4	
	8.9nm,0.6s						
USP	**Ospenovka**	**3.88**	**11**	⇑*iP*	**Pn**	**02 16 40.4**	**+1.0**
	baz=9.0						
USP				⇑*iS*	**Sn**	**02 17 27.0**	**+2.0**
	baz=9.0						
KST	**Kastek**	**4.04**	**27**	*eP*	**Pb**	**02 16 46.9**	**-4.0**
	3.6nm,0.2s						
KST				*eS*	**Sb**	**02 17 38.8**	**-1.1**
	17nm,0.6s						
KST	**Kastek**	**4.04**	**27**	Pg	**Pb**	**02 16 46.9**	**-4.0**
	3.6nm,0.2s						
KST				Lg	Lg	02 17 38.8	
	17nm,0.6s						
SGDS	**Sogindy**	**4.08**	**12**	Pg	**Pb**	**02 16 48.5**	**-3.2**
	6.6nm,0.4s						
SGDS				Lg	Lg	02 17 40.9	
	6.5nm,0.5s						
DGS	**Degeres**	**4.15**	**24**	*eP*	**Pb**	**02 16 50.5**	**-2.4**
	2.8nm,0.3s						
DGS				*eS*	**Sb**	**02 17 44.7**	**+1.6**
	13nm,0.6s						
DGS	**Degeres**	**4.15**	**24**	Pg	**Pb**	**02 16 50.5**	**-2.4**
	2.8nm,0.3s						
DGS				Lg	Lg	02 17 44.7	
	13nm,0.6s						
KK31	**Karatay Array**	**4.28**	**329**	⇓Pn	Pn	**02 16 47.0**	**+2.2**
	0.6nm,0.3s,baz=130,slow=13						
KK31				⇑Sn	**Sn**	**02 17 39.6**	**+4.8**
	1.9nm,0.3s,baz=139,slow=24,SNR=3.0						
KK31				⇓Lg	Lg	02 17 53.7	
	7.1nm,0.6s,baz=129,slow=30,SNR=3.5						
MTBS	**Maitube**	**4.29**	**30**	*eP*	**Pb**	**02 16 52.4**	**-2.6**
	2.5nm,0.1s						
MTBS				*eS*	**Sb**	**02 17 47.8**	**+1.0**
	4.7nm,0.1s						
TNSS	**Tian-Shan**	**4.42**	**35**	*eP*	**Pb**	**02 16 54.7**	**-2.9**
	2.5nm,0.2s						
TNSS				*eS*	**Sb**	**02 17 52.0**	**+0.9**
	5.1nm,0.6s						
TNSS	**Tian-Shan**	**4.42**	**35**	Pg	**Pb**	**02 16 54.7**	**-2.9**
	2.5nm,0.2s						
TNSS				Lg	Lg	02 17 52.0	
	5.1nm,0.6s						
BRLS	**Borolday**	**4.51**	**323**	*eP*	**Pb**	**02 16 55.7**	**-3.2**
	1.3nm,0.1s						
BRLS				*eS*	**Sb**	**02 17 53.8**	**+0.4**
	0.7nm,0.6s						
BRLS	**Borolday**	**4.51**	**323**	Pg	**Pb**	**02 16 55.7**	**-3.2**
	1.3nm,0.1s						
BRLS				Lg	Lg	02 17 53.8	
	0.7nm,0.6s						
MDOK	**Medeo**	**4.57**	**35**	*eP*	**Pb**	**02 16 57.1**	**-2.8**
	3.3nm,0.3s						
MDOK				*eS*	**Sb**	**02 17 56.1**	**+1.0**
	5.7nm,0.6s						
MDOK	**Medeo**	**4.57**	**35**	Pg	**Pb**	**02 16 57.4**	**-2.5**
	2.7nm,0.5s						
MDOK				Lg	Lg	02 17 51.4	
	8.6nm,0.7s						
MDOK	**Medeo**	**4.57**	**35**	Pg	**Pb**	**02 16 57.1**	**-2.8**
	3.3nm,0.3s						
MDOK				Lg	Lg	02 17 56.1	
	5.7nm,0.6s						
KOTS	**Kotyrbulak**	**4.65**	**35**	*eP*	**Pb**	**02 16 59.2**	**-2.2**
	6.3nm,0.2s						
KOTS				*eS*	**Sb**	**02 17 59.5**	**+2.0**
	20nm,0.3s						
KOTS	**Kotyrbulak**	**4.65**	**35**	Pg	**Pb**	**02 16 59.2**	**-2.2**
	6.3nm,0.2s						
KOTS				Lg	Lg	02 17 59.5	
	20nm,0.3s						
KTBS	**Karatobe**	**4.88**	**28**	*eP*	**Pb**	**02 17 02.8**	**-2.4**
	1.4nm,0.3s						
KTBS				*eS*	**Sb**	**02 18 06.0**	**+2.2**
	9.3nm,0.5s						
KTBS	**Karatobe**	**4.88**	**28**	Pg	**Pb**	**02 17 02.8**	**-2.4**
	1.4nm,0.3s						
KTBS				Lg	Lg	02 18 06.0	
	9.3nm,0.5s						
KUU	**Kurty**	**4.92**	**25**	*eP*	**Pb**	**02 17 03.2**	**-2.6**
	0.7nm,0.1s						
KUU				*eS*	**Sb**	**02 18 06.3**	**+1.3**
	5.1nm,0.3s						
KUU	**Kurty**	**4.92**	**25**	Pg	**Pb**	**02 17 03.2**	**-2.6**
	0.7nm,0.1s						
KUU				Lg	Lg	02 18 06.3	
	5.1nm,0.3s						
KURS	**Kuram**	**5.34**	**40**	*eP*	**Pb**	**02 17 11.0**	**-2.1**
	1.5nm,0.2s						
KURS				*eS*	**Sb**	**02 18 19.6**	**+2.4**
	3.1nm,0.5s						
KURS	**Kuram**	**5.34**	**40**	Pg	**Pb**	**02 17 11.0**	**-2.1**
	1.5nm,0.2s						
KURS				Lg	Lg	02 18 19.6	
	3.1nm,0.5s						

JMA 21 02:30:31.3±0.1, 25.°30N×124.°15E, h136km±4km, M1.5, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JISG	**Ishigakijimahi**	**0.72**	**168**	P	Pn	02 30 52.5	0.0
JISG				S	Sn	02 31 08.9	+0.4
JISG	**Ishigakijimahi**	**0.72**	**168**	S	Sn	02 30 52.5	0.0
JTJ	**Tarama**	**0.83**	**143**	P	Pn	02 30 53.4	+0.1
JTJ				S	Sn	02 31 10.1	+0.2
JIJ	**Ishigaki jima**	**0.93**	**180**	P	Pn	02 30 54.1	-0.1
JIJ				S	Sn	02 31 11.3	-0.2
IRIF	**Iriomote-Funau**	**1.03**	**202**	P	Pn	02 30 55.2	+0.1
JKRS	**Kuro-shima**	**1.07**	**187**	P	Pn	02 30 55.4	0.0
JKRS				*eS*	Sn	02 31 13.9	+0.3

JMA 21 02:30:39.0, 24.°43N×123.°95E, h0km, M0.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIJ	**Ishigaki jima**	**0.19**	**111**	P	Pg	02 30 42.9	+0.3
JIJ				S	Sg	02 30 45.6	+0.6
JKRS	**Kuro-shima**	**0.20**	**164**	P	Pg	02 30 43.2	+0.4
JKRS				S	Sg	02 30 46.3	+0.9
IRIF	**Iriomote-Funau**	**0.22**	**245**	P	Pg	02 30 43.8	+0.5
IRIF				S	Sg	02 30 47.5	+1.4
JISG	**Ishigakijimahi**	**0.36**	**64**	P	Pg	02 30 46.4	+0.4

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*IDC **21** 02:47:45.5±8.1, 17.°76S×178.°35W, h460km±82km, mb3.1/6, mb1 3.4/6, mb1mx3.1/23, mbtmp3.9/6, Error ellipse: s-maj=59.7km s-min=32.7km az=136.0*
ISC 21 02:47:55.6±1.3, 17.°85S±0.°3×178.°6W±0.°3, h579km, n10, σ0s80/12, mb3.4/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.54**	**241**	P	**P**	**02 54 29.4**	**-0.3**
	0.6nm,0.3s,baz=115,slow=10.0,SNR=3.4						
WRA	**Warramunga Arr**	**44.50**	**259**	P	P	**02 55 16.0**	**-0.9**
	0.3nm,0.4s,baz=97,slow=7.4,SNR=8.7						
WRA				PcP	**PcP**	**02 56 48.7**	**+1.2**
	0.9nm,1.1s,baz=92,slow=3.4,SNR=1.9						
ASAR	**Alice Springs**	**44.67**	**254**	P	**P**	**02 55 18.0**	**-0.2**
	4.8nm,0.6s,baz=89,slow=8.3,SNR=70						
ASAR				PcP	**PcP**	**02 56 49.4**	**+1.4**
	0.3nm,0.4s,baz=98,slow=5.1,SNR=2.0						
MJAR	**Matsushiro Arr**	**67.76**	**323**	P	**P**	**02 57 56.8**	**+0.3**
	2.0nm,0.6s,baz=144,slow=5.8,SNR=2.1						
ILAR	**Eielson Array**	**85.84**	**13**	P	**P**	**02 59 33.5**	**-0.7**
	0.2nm,0.4s,baz=225,slow=5.5,SNR=5.2						
TXAR	**Lajitas Array**	**86.08**	**58**	P	**P**	**02 59 36.2**	**0.0**
	0.2nm,0.6s,baz=198,slow=6.6,SNR=3.5						
BRTR	**Keskin Array B**	**144.62**	**315**	PKP	**PKPab**	**03 06 29.2**	**+0.8**
	1.4nm,0.9s,baz=139,slow=4.1,SNR=8.5						
MLR	**Muntele Rosu**	**145.69**	**329**	PKPbc	**PKiKP**	**03 06 33.0**	**-0.3**
	0.9nm,0.5s,baz=41,slow=9.3,SNR=1.9						
GERES	**GERESS Array B**	**147.50**	**345**	PKPbc	**PKiKP**	**03 06 36.7**	**-0.2**
	0.8nm,0.6s,baz=34,slow=3.3,SNR=8.5						
DAVOX	**Davos/Dischmat**	**150.30**	**348**	PKPbc	**PKiKP**	**03 06 42.7**	**-0.2**
	1.2nm,0.4s,baz=0.2,slow=17,SNR=3.1						

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*IDC **21** 03:00:00.2±1.3, 1.°47S×135.°12E, h0km, mb3.7/3, mb1 4.0/6, mb1mx3.7/37, mbtmp3.7/6, ML3.6/3, Error ellipse: s-maj=39.4km s-min=22.8km az=90.0*
*DJA **21** 03:00:03.1±0.5, 2.°5S±8.°×13.°5E±.°, h10km±4km, M3.8/6, MLv3.8/6*
ISC 21 03:00:02.5±0.9, 1.°6S±0.°1×134.°94E±0.°04, h10km, n11, σ1s06/15, mb3.8/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**0.77**	**276**	P	**Pg**	**03 00 17.0**	**-0.3**
RKPI				S	**Sb**	**03 00 28.7**	**+0.2**
SRPI	**Serui, Papua**	**1.33**	**102**	P	**Pn**	**03 00 26.9**	**-0.2**
SRPI				S	**Sb**	**03 00 45.6**	**+1.0**
FAKI	**Fak Fak**	**3.00**	**244**	P	**Pn**	**03 00 50.2**	**+0.1**
FAKI				S	**Sn**	**03 01 25.3**	**-0.8**
SIJI	**Sorong**	**3.74**	**281**	Pn	**Pn**	**03 01 01.8**	**+1.4**
	4.3nm,0.3s,baz=153,slow=23,SNR=12						
SIJI				Sn	**Sn**	**03 01 44.8**	**+0.2**
	3.3nm,0.3s,baz=301,slow=23,SNR=2.7						
SMPI	**Sarmi**	**3.79**	**96**	P	**Pn**	**03 01 02.8**	**+1.9**
MSAI	**Masohi**	**6.26**	**254**	P	**Pn**	**03 01 36.2**	**+1.3**
WRA	**Warramunga Arr**	**18.25**	**182**	P	**Pn**	**03 04 15.2**	**-0.9**
	0.2nm,0.3s,baz=3.6,slow=12,SNR=12						
FITZ	**Fitzroy Crossi**	**18.78**	**209**	P	**Pn**	**03 04 23.5**	**+1.0**
	0.2nm,0.3s,baz=32,slow=8.2,SNR=7.5						
ASAR	**Alice Springs**	**21.97**	**183**	P	**P**	**03 04 57.4**	**+0.7**
	2.7nm,0.8s,baz=7.1,slow=12,SNR=23						
MKAR	**Makanchi Array**	**66.63**	**323**	P	**

0.2nm,0.4s,baz=105,slow=9.3,SNR=4.6
ZALV Zalesovo Beam 69.12 331 LR LR 03 45 16.8
comp=Z,18nm,19.2s,baz=89,slow=36
TIXI Tiksi 73.25 358 LR LR 03 45 55.5
comp=Z,28nm,18.9s,baz=123,slow=35
TORD Torodi Ar. Bea 132.32 286 PKP **PKPdf 03 22 43.4 -2.4**
0.5nm,0.9s,baz=75,slow=1.6,SNR=2.3
CPUP Villa Florida 149.80 158 PKPbc **PKPbc 03 23 20.9 -0.5**
1.3nm,0.8s,baz=222,slow=5.9,SNR=3.8

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*IDC **21** 03:10:19.3±6.0, 17°.47S×178°.53W, h549km±67km, mb3.2/9, mb1 3.5/9, mb1mx3.1/36, mbtmp4.1/9, Error ellipse: s-maj=52.2km s-min=24.5km az=148.0*
*NEIC **21** 03:10:21.9±1.0, 17°.5S±0°.1×178°.6W±0°.1, h587km±10km, mb4.2/20, Error ellipse: s-maj=23.6km s-min=17.0km az=143.0*
ISC 21 03:10:18.6±0.7, 17°.5S±0°.2×178°.5W±0°.1, h547km, n36, σ0s74/36, mb4.2/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.29**	**265**	P	P		03 11 41.4	+6.1
OUZ	**Omahuta**	**19.04**	**200**	P	**P**		**03 14 07.7**	**+1.7**
OUZ					IAmb	IAmb	03 14 23.1	
	comp=Z,12nm,1.2s							
CTA	**Charters Tower**	**33.43**	**260**	P	**P**		**03 16 12.9**	**+0.2**
	comp=Z,3.2nm,0.6s,baz=117,slow=18,SNR=1.6							
COEN	**Coen**	**37.01**	**270**	P	**P**		**03 16 44.0**	**+1.6**
COEN					IAmb	IAmb	03 16 45.0	
	comp=Z,5.3nm,0.7s							
STKA	**Stephens Creek**	**38.77**	**241**	P	**P**		**03 16 56.5**	**-0.1**
	comp=Z,3.5nm,0.5s,baz=98,slow=12,SNR=4.4							
STKA	**Stephens Creek**	**38.77**	**241**	P	**P**		**03 16 57.4**	**+0.9**
KEKH	**Kekaha**	**43.30**	**26**	P	**P**		**03 17 31.8**	**-0.8**
BBOO	**Buckleboo**	**43.54**	**241**	P	**P**		**03 17 34.4**	**0.0**
BBOO					IAmb	IAmb	03 17 35.1	
	comp=Z,5.4nm,0.7s							
WR0	**Warramunga Arr**	**44.43**	**259**	P	**P**		**03 17 41.3**	**-0.2**
WB0	**Warramunga Arr**	**44.58**	**259**	P	**P**		**03 17 42.5**	**-0.2**
WB0					IAmb	IAmb	03 17 43.3	
	comp=Z,4.9nm,0.7s							
WB2	**Warramunga Arr**	**44.61**	**259**	P	**P**		**03 17 42.8**	**-0.1**
WB2					IAmb	IAmb	03 17 43.5	
	comp=Z,7.2nm,0.7s							
WRAB	**Tennant Creek**	**44.61**	**259**	P	**P**		**03 17 42.8**	**-0.1**
WRAB					IAmb	IAmb	03 17 43.4	
	comp=Z,4.4nm,0.7s							
WRA	**Warramunga Arr**	**44.62**	**259**	P	**P**		**03 17 43.0**	**+0.1**
	comp=Z,3.2nm,0.5s,baz=94,slow=6.7,SNR=49							
AS31	**Alice Springs**	**44.82**	**254**	P	**P**		**03 17 44.8**	**+0.4**
ASAR	**Alice Springs**	**44.82**	**254**	P	**P**		**03 17 44.8**	**+0.3**
	comp=Z,28nm,0.6s,baz=88,slow=8.3,SNR=327							
ASAR					PcP	**PcP**	**03 19 13.9**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=101,slow=4.1,SNR=4.2							
FORT	**Forrest**	**50.12**	**244**	P	**P**		**03 18 23.4**	**-0.6**
KNRA	**Kununurra**	**50.44**	**264**	P	**P**		**03 18 25.9**	**-0.6**
KNRA					IAmb	IAmb	03 18 27.5	
	comp=Z,8.0nm,0.7s							
FITZ	**Fitzroy Crossi**	**53.01**	**260**	P	**P**		**03 18 45.2**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=87,slow=6.2,SNR=7.0							
FITZ	**Fitzroy Crossi**	**53.01**	**260**	P	**P**		**03 18 44.9**	**-0.1**
PSAC2	**Pilbara Seismi**	**57.88**	**255**	P	**P**		**03 19 18.5**	**-0.4**
PSAB2	**Pilbara Seismi**	**57.92**	**255**	P	**P**		**03 19 17.9**	**-1.2**
PSAB2					IAmb	IAmb	03 19 19.5	
	comp=Z,6.7nm,0.7s							
PSA00	**Pilbara Seismi**	**57.93**	**255**	P	**P**		**03 19 18.4**	**-0.9**
PSAD1	**Pilbara Seismi**	**57.96**	**255**	P	**P**		**03 19 18.8**	**-0.7**
PSAD1					IAmb	IAmb	03 19 19.5	
	comp=Z,6.6nm,0.6s							
MORW	**Morawa**	**60.57**	**246**	P	**P**		**03 19 35.8**	**-1.0**
JAGI	**Jajag, Banyuwa**	**65.95**	**268**	P	**P**		**03 20 10.7**	**-0.8**
UGM	**Wanagama**	**69.56**	**268**	P	**P**		**03 20 33.1**	**-0.5**
QSPA	**South Pole Qui**	**72.60**	**180**	P	**P**		**03 20 49.4**	**-1.1**
PEA0B	**Petropavlovsk-**	**73.22**	**345**	P	**P**		**03 20 53.8**	**-0.2**
PEA0B					IAmb	IAmb	03 21 10.9	
	comp=Z,11nm,1.1s							
PETK	**Petropavlovsk-**	**73.22**	**345**	P	**P**		**03 20 54.4**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=131,slow=11,SNR=4.5							
NVAR	**Mina Array Bea**	**79.17**	**44**	P	**P**		**03 21 28.1**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=229,slow=6.7,SNR=3.5							
ILAR	**Eielson Array**	**85.47**	**13**	P	**P**		**03 21 57.6**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=225,slow=5.2,SNR=5.6							
TXAR	**Lajitas Array**	**85.83**	**58**	P	**P**		**03 22 01.9**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=216,slow=6.8,SNR=9.7							
CMAR	**Chiang Mai Arr**	**88.64**	**290**	P	**P**		**03 22 15.6**	**+1.3**
	comp=Z,1.1nm,0.3s,baz=138,slow=4.2,SNR=4.0							
BRTR	**Keskin Array B**	**144.39**	**315**	PKP		**PKPdf**	**03 28 52.7**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=126,slow=3.7,SNR=9.7							
CLL	**Coillm**	**145.00**	**347**	*i* PKPbc		**PKPab**	**03 28 55.4**	**+0.1**
GERES	**GERESS Array B**	**147.15**	**345**	PKPbc		**PKPbc**	**03 29 00.6**	**0.0**
	comp=Z,1.2nm,0.5s,baz=23,slow=3.4,SNR=14							

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*SNET **21** 03:22:02.5±0.8, 13°.97N×91°.48W, h27km±6km, ML3.4*
*GCG **21** 03:22:04.4±0.4, 13°.93N×91°.44W, h30km±4km, MD3.9*
*MEX **21** 03:22:06.5±1.1, 14°.36N×91°.16W, h68km±39km, MD4.0*
ISC 21 03:22:04.0±2.1, 13°.9N±0°.1×91°.45W±0°.05, h35km±4km, n14, σ1s31/20, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.52**	**347**	*e*P	**P**	**n**	**03 22 17.2**	**+2.2**
FUG	**Fuego 3**	**0.78**	**48**	*e*P	**P**	**n**	**03 22 19.4**	**+0.6**
STG3	**Santiaguito 3,**	**0.79**	**351**	*e*P	**P**	**n**	**03 22 19.7**	**+0.7**
PCG	**Pacaya**	**0.94**	**60**	*e*P	**P**	**b**	**03 22 22.1**	**+0.1**
IXG	**Ixpaco**	**1.01**	**76**	*e*P	**P**	**n**	**03 22 22.7**	**+0.8**
IXG	**Ixpaco**	**1.01**	**76**	*e*P	**P**	**n**	**03 22 21.5**	**-0.4**
NBG	**Las Nubes**	**1.25**	**58**	*e*P	**P**	**b**	**03 22 26.7**	**-0.7**
NBG				*e*S		**Sb**	**03 22 43.8**	**+0.4**
THIG		**1.26**	**321**	*i* P	**P**	**b**	**03 22 27.1**	**-0.1**
THIG				*e*S		**Sn**	**03 22 41.3**	**+0.4**
HUEH	**Huehuetenango**	**1.39**	**358**	*e*P	**P**	**n**	**03 22 26.3**	**-0.9**
HUEH				*e*S		**Sn**	**03 22 44.6**	**+0.3**
HUEH				IAML			03 22 49.5	
	comp=Z,644nm,0.4s							
MRL	**Marmol**	**2.06**	**56**	*e*P	**P**	**n**	**03 22 35.6**	**-0.8**
MTO3	**Montecristo**	**2.08**	**77**	*e*P	**P**	**n**	**03 22 35.9**	**-0.8**
PCIG		**2.46**	**316**	*e*P	**P**	**n**	**03 22 42.2**	**+0.5**
PCIG				*e*S		**Sn**	**03 23 06.8**	**-3.8**
COEG	**Centro de Oper**	**2.51**	**97**	*e*P	**P**	**n**	**03 22 42.6**	**+0.1**
COEG				*e*S		**Sn**	**03 23 13.6**	**+1.6**
CMIG	**Matias Romero**	**4.57**	**314**	*e*P	**P**	**n**	**03 23 11.0**	**+0.3**
CMIG				*e*S		**Sn**	**03 24 03.4**	**+0.7**

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*IDC **21** 03:34:57.0±6.9, 12°.63N×91°.22W, h0km, mb3.2/3, mb1 3.8/6, mb1mx3.5/45, mbtmp3.5/6, ML3.5/2, MS3.0/1, Ms1 3.0/1, ms1mx2.3/21, Error ellipse: s-maj=105.8km s-min=43.4km az=156.0*
*GCG **21** 03:35:03.0±0.8, 13°.04N×91°.67W, h35km±999km, MD4.0*
*SNET **21** 03:35:08.1±1.2, 13°.34N×91°.45W, h37km±999km, ML3.1*
ISC 21 03:35:07.1±1.4, 13°.30N±0°.09×91°.48W±0°.06, h28km, n17, σ1s32/20, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**1.30**	**28**	*e*P	**P**	**n**	**03 35 29.6**	**0.0**
FUG				*e*S		**Sb**	**03 35 50.4**	**+3.1**
IXG	**Ixpaco**	**1.33**	**49**	*e*P	**P**	**n**	**03 35 29.6**	**-0.3**
PCG	**Pacaya**	**1.37**	**38**	*e*P	**P**	**b**	**03 35 31.3**	**-1.0**
PCG				*e*S		**Sb**	**03 35 51.4**	**+1.8**
STG3	**Santiaguito 3,**	**1.41**	**356**	*e*P	**P**	**n**	**03 35 30.4**	**-0.7**
NBG	**Las Nubes**	**1.69**	**40**	*e*P	**P**	**b**	**03 35 36.1**	**-1.5**
APG	**El Apazote**	**1.96**	**30**	Pn	**Pn**		**03 35 39.0**	**+0.3**
	23nm,0.3s,baz=184,slow=12,SNR=228							
APG				Sn		**Sb**	**03 36 04.3**	**-2.0**
	16nm,0.3s,baz=292,slow=19,SNR=6.6							
HUEH	**Huehuetenango**	**2.01**	**359**	*e*P	**P**	**n**	**03 35 39.4**	**+0.1**
LFRS	**El Faro**	**2.37**	**82**	*e*P	**P**	**n**	**03 35 45.3**	**+1.1**
MRL	**Marmol**	**2.48**	**44**	*e*P	**P**	**n**	**03 35 46.6**	**+0.7**
COEG	**Centro de Oper**	**2.54**	**83**	*e*P	**P**	**n**	**03 35 46.4**	**-0.2**
COEG				*e*S		**Sn**	**03 36 17.0**	**+0.2**
COEG				IAML			03 36 34.5	
	comp=Z,88nm,0.5s							
LCND	**La Caada**	**3.49**	**89**	*e*P	**P**	**n**	**03 35 59.9**	**+0.4**
LCND				IAML			03 36 05.5	
	comp=Z,41nm,0.5s							
CMIG	**Matias Romero**	**5.00**	**319**	Pn	**Pn**		**03 36 21.2**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=120,slow=9.8,SNR=7.6							
TEIG	**Tepich**	**7.54**	**24**	Pn	**Pn**		**03 36 56.1**	**+1.0**
TXAR	**Lajitas Array**	**19.56**	**327**	P	**Pn**		**03 39 34.6**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=156,slow=12,SNR=4.7							
TKL	**Tuckaleechee C**	**23.32**	**16**	LR	LR		03 50 31.8	
	comp=Z,34nm,18.8s,baz=136,slow=39							
NVAR	**Mina Array Bea**	**34.53**	**321**	P	**P**		**03 41 54.7**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=121,slow=8.5,SNR=3.6							
YKA	**Yellowknife Ar**	**51.82**	**347**	P	**P**		**03 44 10.5**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=147,slow=8.0,SNR=5.0							

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*INET **21** 03:41:26.5, 12°.06N×89°.04W, h15km, ML3.7*
*IDC **21** 03:41:34.8±1.6, 12°.51N×87°.85W, h0km, mb3.8/7, mb1 4.1/9, mb1mx3.8/37, mbtmp3.8/9, ML3.3/3, MS3.4/6, Ms1 3.4/6, ms1mx2.9/33, Error ellipse: s-maj=52.1km s-min=24.0km az=41.0*
*SNET **21** 03:41:36.5±0.9, 12°.06N×88°.34W, h14km±7km, ML3.6*
*UCR **21** 03:41:37.8±1.9, 12°.09N×88°.23W, h29km±21km, ML3.6, mb4.3(NEIC)*
*NEIC **21** 03:41:38.5±1.4, 12°.1N±0°.1×88°.22W±0°.09, h41km±11km, mb4.3/39, Error ellipse: s-maj=19.0km s-min=8.8km az=211.0*
ISC 21 03:41:37.7±0.7, 12°.08N±0°.06×88°.25W±0°.05, h33km, n104, σ1s09/106, mb4.2/24, MS3.6/5, 12C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JUCU	**Jucuarn**	**1.17**	**360**	*e*P	**P**	**n**	**03 41 57.8**	**-0.1**
JUCU				IAML			03 42 27.4	
	comp=Z,1µm,0.3s							
JUCU	**Jucuarn**	**1.17**	**360**	*e*P	**Pn**		**03 41 57.8**	**-0.1**
JUCU				IAML			03 42 27.4	
	comp=Z,1µm,0.3s							
CNCH	**Conchagua**	**1.26**	**19**	*e*P	**Pn**		**03 41 59.5**	**+0.3**
CNCH	**Conchagua**	**1.26**	**19**	*e*P	**Pn**		**03 41 59.5**	**+0.3**
LCND	**La Caada**	**1.27**	**16**	*e*P	**Pn**		**03 41 59.4**	**+0.1**
LCND				*e*S		**Sb**	**03 42 18.1**	**+0.9**
LCND				IAML			03 42 26.1	
	comp=Z,1µm,0.3s							
LCND	**La Caada**	**1.27**	**16**	*e*P	**Pn**		**03 41 59.4**	**+0.1**
LCND				*e*S		**Sb**	**03 42 18.1**	**+0.9**
LCND				IAML			03 42 26.1	
	comp=Z,1µm,0.3s							
ALJI	**Alcalda de J**	**1.28**	**346**	*i* P	**Pn**		**03 41 59.5**	**+0.1**
ALJI				IAML			03 42 18.9	
	comp=Z,662nm,0.3s							
ALJI	**Alcalda de J**	**1.28**	**346**	*i* P	**Pn**		**03 41 59.5**	**+0.1**
ALJI				IAML			03 42 18.9	
	comp=Z,662nm,0.3s							
CRIN	**San Cristobal**	**1.32**	**62**	*e*P	**Pn**		**03 41 59.0**	**-1.0**
BLLM	**Bellamira**	**1.35**	**0**	*e*P	**Pn**		**03 42 00.8**	**+0.3**
BLLM	**Bellamira**	**1.35**	**0**	*e*P	**Pn**		**03 42 00.8**	**+0.3**
PACA	**Pacayal**	**1.38**	**357**	*e*P	**Pn**		**03 42 01.2**	**+0.3**
PACA	**Pacayal**	**1.38**	**357**	*e*P	**Pn**		**03 42 01.2**	**+0.3**
TECA	**Tecapa**	**1.43**	**350**	*e*P	**Pn**		**03 42 01.8**	**+0.2**
TECA	**Tecapa**	**1.43**	**350**	*e*P	**Pn**		**03 42 01.8**	**+0.2**
COEB	**Comit de Eme**	**1.44**	**349**	*e*P	**Pn**		**03 42 01.7**	**+0.1**
COEB				IAML			03 42 28.6	
	comp=Z,836nm,0.3s							
COEB	**Comit de Eme**	**1.44**	**349**	*e*P	**Pn**		**03 42 01.7**	**+0.1**
COEB				IAML			03 42 28.6	
	comp=Z,836nm,0.3s							
FAGO	**Alcalda de S**	**1.61**	**5**	*e*P	**Pn**		**03 42 04.5**	**+0.6**
FAGO	**Alcalda de S**	**1.61**	**5**	*e*P	**Pn**		**03 42 04.5**	**+0.6**
COEG	**Centro de Oper**	**1.65**	**338**	*e*P	**Pn**		**03 42 04.6**	**0.0**
COEG				IAML			03 42 40.7	
	comp=Z,663nm,0.3s							
COEG	**Centro de Oper**	**1.65**	**338**	*e*P	**Pn**		**03 42 04.6**	**0.0**
COEG				IAML			03 42 40.7	
	comp=Z,663nm,0.3s							
LFRS	**El Faro**	**1.73**	**333**	*e*P	**Pn**		**03 42 05.5**	**-0.1**
LFRS				*e*S		**Sn**	**03 42 28.2**	**+1.6**
LFRS	**El Faro**	**1.73**	**333**	*e*P	**Pn**		**03 42 05.5**	**-0.1**
LFRS				*e*S		**Sn**	**03 42 28.2**	**+1.6**
LBRS	**Las Brisas**	**1.82**	**335**	*e*P	**Pn**		**03 42 07.5**	**+0.6**
LBRS	**Las Brisas**	**1.82**	**335**	*e*P	**Pn**		**03 42 07.5**	**+0.6**
SNET	**Serv Nac Est T**	**1.86**	**329**	*e*P	**Pn**		**03 42 07.8**	**+0.4**
SNET	**Serv Nac Est T**	**1.86**	**329**	*e*P	**Pn**		**03 42 07.0**	**-0.5**
SNET	**Serv Nac Est T**	**1.86**	**329**	*e*P	**Pn**		**03 42 07.8**	**+0.4**
RTR	**El Retiro**	**2.26**	**323**	*e*P	**Pn**		**03 42 13.7**	**+0.7**
RTR	**El Retiro**	**2.26**	**323**	*e*P	**Pn**		**03 42 13.7**	**+0.7**
MATN	**Matagalpa**	**2.42**	**69**	*e*P	**Pn**		**03 42 14.7**	**-0.4**
MATN	**Matagalpa**	**2.42**	**69**		**Pn**		**03 42 15.7**	**+0.6**
MTO3	**Montecristo**	**2.55**	**335**	*e*P	**Pn**		**03 42 17.9**	**+0.9**
MTO3	**Montecristo**	**2.55**	**335**	*e*P	**Pn**		**03 42 17.9**	**+0.9**
ACON	**Acoyapa**	**3.01**	**92**	*e*P	**Pn**		**03 42 22.4**	**-0.8**
ACON	**Acoyapa**	**3.01**	**92**		**Pn**		**03 42 22.5**	**-0.7**
GBS3	**Finca Las Img**	**3.03**	**115**	*e*P	**Pn**		**03 42 23.7**	**+0.3**
LAPC	**Finca la Perla**	**3.05**	**115**	*e*P	**Pn**		**03 42 24.3**	**+0.5**
GB1A	**Boringuen Arri**	**3.06**	**114**	*e*P	**Pn**		**03 42 23.4**	**-0.6**
GB1A				*e*S		**Sn**	**03 42 58.4**	**-1.2**
BUAI	**Buenos Aires**	**3.10**	**112**	*e*P	**Pn**		**03 42 25.8**	**+1.4**
LIM1	**Limonal**	**3.24**	**115**	*e*P	**Pn**		**03 42 26.8**	**+0.4**
ACAL	**Agua Claras**	**3.46**	**114**	*e*P	**Pn**		**03 42 30.2**	**+0.7**
APG	**El Apazote**	**3.62**	**324**	Pn	**Pn**		**03 42 32.2**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=109,slow=8.7,SNR=8.2							
APG				Sn		**Sn**	**03 43 08.3**	**-5.2**
	comp=Z,2.0nm,0.3s,baz=113,slow=9.2,SNR=4.5							
JTS	**Las Juntas de**	**3.69**	**118**	Pn	**Pn**		**03 42 33.0**	**+0.5**
	comp=Z,4.6nm,0.3s,baz=16,slow=18,SNR=21							
JTS				Sn		**Sn**	**03 43 14.3**	**-0.6**
	comp=Z,4.4nm,0.3s,baz=8.7,slow=22,SNR=6.6							
JTS	**Las Juntas de**	**3.69**	**118**	*e*P	**Pn**		**03 42 33.4**	**+0.8**
JTS	**Las Juntas de**	**3.69**	**118**		**Pn**		**03 42 32.7**	**+0.2**
JTS						**Sn**	**03 43 15.1**	**+0.1**
ARE1	**Arenal 1**	**3.82**	**115**	*e*P	**Pn**		**03 42 35.2**	**+0.9**
ESPN	**Las Esperanzas**	**3.86**	**88**	*e*P	**Pn**		**03 42 39.1**	**+4.3**
LCR2	**La Lucha 2**	**4.77**	**119**	*e*P	**Pn**		**03 42 48.7**	**+1.1**
TEIG	**Tepich**	**8.10**	**360**	LR	LR		03 46 57.7	
	comp=Z,172nm,19.0s,baz=74,slow=42							
CMIG	**Matias Romero**	**8.13**	**309**	Pn	**Pn**		**03 43 35.0**	**+1.5**
	comp=Z,0.9nm,0.3s,baz=131,slow=9.1,SNR=8.6							
152A	**Waverly Hall**	**20.75**	**8**	P	**P**		**03 46 15.8**	**0.0**
152A					IAmb	IAmb	03 46 21.1	
	comp=Z,9.8nm,0.9s							
LRAL	**Lakeview Retre**	**20.89**	**3**	P	**P**		**03 46 16.3**	**-1.0**
Z50A	**Ashland**	**21.18**	**5**	P	**P**		**03 46 19.8**	**-0.7**
JCT	**Junction City**	**21.21**	**331**	P	**P**		**03 46 20.2**	**-0.6**
GOGA	**Godfrey**	**21.68**	**11**	P	**P**		**03 46 25.9**	**+0.1**
GOGA					IAmb	IAmb	03 46 28.4	
	comp=Z,8.3nm,1.1s							
WLAR	**White Oak Lake**	**21.96**	**349**	P	**P**		**03 46 27.7**	**-1.1**
TXAR	**Lajitas Array**	**22.38**	**322**	P	**P**		**03 46 34.1**	**+0.7**
	comp=Z,1.7nm,0.8s,baz=143,slow=9.7,SNR=14							
TX31	**Lajitas Ar. Si**	**22.38**	**322**	P	**P**		**03 46 32.7**	**-0.7**
TX31					IAmb	IAmb	03 46 47.8	
	comp=Z,11nm,1.0s							
TX32	**Lajitas Array**	**22.38**	**322**	P	**P**		**03 46 32.7**	**-0.7**
X40A	**Basin Creek Fa**	**22.70**	**350**	P	**P**		**03 46 36.1**	**-0.5**
HODGE	**Hodges**	**22.72**	**13**	P	**P**		**03 46 37.6**	**+0.7**
HODGE					IAmb	IAmb	03 46 39.4	
	comp=Z,7.4nm,1.0s							
MIAR	**Mount Ida**	**22.89**	**349**	P	**P**		**03 46 38.1**	**-0.5**
UALR	**University of**	**22.90**	**351**	P	**P**		**03 46 39.1**	**+0.4**
UALR					IAmb	IAmb	03 46 42.0	
	comp=Z,8.5nm,0.9s							
WHAR	**Wooly Hollow**	**23.40**	**352**	P	**P**		**03 46 44.3**	**+0.6**
WHAR					IAmb	IAmb	03 46 45.1	
	comp=Z,13nm,1.1s							
W39A	**Magazine**	**23.56**	**349**	P	**P**		**03 46 46.0**	**+0.7**
W39A					IAmb	IAmb	03 46 48.5	
	comp=Z,10nm,1.1s							
TKL	**Tuckaleechee C**	**23.82**	**9**	P	**P**		**03 46 46.1**	**-1.7**
	comp=Z,7.2nm,0.9s,baz=191,slow=12,SNR=7.4							
TKL	**Tuckaleechee C**	**23.82**	**9**	P	**P**		**03 46 48.0**	**+0.1**
TKL					IAmb	IAmb	03 46 49.9	
	comp=Z,13nm,1.1s							
WMOK	**Wichita Mounta**	**24.50**	**339**	P	**P**		**03 46 54.4**	**+0.3**
WMOK					IAmb	IAmb	03 46 55.3	
	comp=Z,6.7nm,0.9s							
U40A	**Yellville**	**24.53**	**351**	P	**P**		**03 46 54.3**	**0.0**
U40A					IAmb	IAmb	03 46 55.9	
	comp=Z,12nm,1.1s							
HHAR	**Hobbs**	**24.64**	**349**	P	**P**		**03 46 55.0**	**-0.3**
TUL1	**Leonard**	**24.69**	**345**	P	**P**		**03 46 55.9**	**+0.1**
TUL1					IAmb	IAmb	03 47 02.6	
	comp=Z,9.2nm,1.1s							
T47A	**Sharon Grove**	**24.82**	**2**	P	**P**		**03 46 56.3**	**-0.7**
T47A					IAmb	IAmb	03 47 01.2	
	comp=Z,7.9nm,1.1s							
U38A	**Gravette**	**24.88**	**348**	P	**P**		**03 46 58.3**	**+0.8**
U38A					IAmb	IAmb	03 46 59.7	
	comp=Z,7.6nm,1.0s							
U54A	**Nelsons Funny**	**25.02**	**12**	P	**P**		**03 46 59.4**	**+0.5**
U54A					IAmb	IAmb	03 47 02.2	
	comp=Z,8.2nm,0.8s							
MNTX	**Cornudas Mount**	**25.11**	**324**	P	**P**		**03 47 00.2**	**+0.5**
MSTX	**Muleshoe**	**25.50**	**331**	P	**P**		**03 47 04.1**	**+0.8**
MSTX					IAmb	IAmb	03 47 08.6	
	comp=Z,10nm,0.9s							
AMTX	**Amarillo**	**25.77**	**334**	P	**P**		**03 47 05.9**	**+0.2**
AMTX					IAmb	IAmb	03 47 08.9	
	comp=Z,12nm,1.0s							
CCM	**Cathedral Cave**	**26.01**	**355**	P	**P**		**03 47 08.1**	**+0.4**
P38A	**Dawn**	**27.83**	**351**	P	**P**		**03 47 24.2**	**+0.1**
P38A					IAmb	IAmb	03 47 25.0	
	comp=Z,9.6nm,0.9s							
ECSD	**EROS Data Cent**	**32.36**	**349**	P	**P**		**03 48 02.8**	**-1.3**
ECSD					IAmb	IAmb	03 48 04.6	
	comp=Z,6.2nm,1.1s							
F33A	**5 Mile Ranch,**	**34.34**	**350**	P	**P**		**03 48 20.0**	**-1.3**
PDAR	**Pinedale Array**	**35.74**	**333**	P	**P**		**03 48 35.1**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=142,slow=7.5,SNR=4.7							
AGMN	**Agassiz Nation**	**36.66**	**351**	P	**P**		**03 48 39.8**	**-1.5**
REDW	**Red Top Meadow**	**36.79**	**332**	P	**P**		**03 48 42.6**	**-0.2**
SNOW	**Snow King Moun**	**36.82**	**332**	P	**P**		**03 48 43.3**	**+0.3**
TPAW	**Teton Pass**	**36.93**	**332**		pP		03 48 53.0	-0.3
NVAR	**Mina Array Bea**	**37.47**	**320**	P	**P**		**03 48 51.0**	**+2.4**
	comp=Z,0.5nm,0.7s,baz=146,slow=7.1,SNR=2.7							
RLMT	**Red Lodge**	**37.51**	**335**	P	**P**		**03 48 48.9**	**+0.1**
RLMT					IAmb	IAmb	03 48 57.5	
	comp=Z,2.9nm,1.0s							
YNE	**Yellowstone No**	**37.72**	**335**	P	**P**		**03 48 50.8**	**+0.1**
ULM	**Lac du Bonnet**	**38.57**	**352**	P	**P**		**03 48 55.9**	**-1.5**
	comp=Z,3.9nm,0.5s,baz=180,slow=8.1,SNR=4.2							
MSO	**Missoula**	**40.85**	**333**	P	**P**		**03 49 16.6**	**0.0**
RPN	**Rapa Nui**	**44.02**	**207**	LR	LR		04 03 23.0	
	comp=Z,53nm,21.0s,baz=345,slow=29							
SCHQ	**Schefferville**	**45.86**	**17**	LR	LR		04 10 18.4	
	comp=Z,70nm,18.2s,baz=6.5,slow=38							
YKA	**Yellowknife Ar**	**53.77**	**345**	P	**P**		**03 50 55.3**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=137,slow=8.0,SNR=23							
YKA					PcP	**PcP**	**03 52 02.0**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=142,slow=3.8,SNR=5.7							
INK	**Inuvik**	**63.33**	**343**	P	**P**		**03 52 02.7**	**-0.5**
	baz=141,slow=4.2							
GLB	**Gilahina Butte**	**63.38**	**334**	P	**P**		**03 52 04.4**	**+0.7**
DHY	**Denali Highway**	**65.57**	**335**	P	**P**		**03 52 16.8**	**-1.4**
ILAR	**Eielson Array**	**66.04**	**336**	P	**P**		**03 52 20.9**	**-0.1**
	comp=Z,0.7nm,1.0s,baz=133,slow=5.5,SNR=5.7							
ESDC	**Sonseca Array**	**78.03**	**52**	LR	LR		04 23 33.3	
	comp=Z,27nm,19.8s,baz=275,slow=32							
NOA	**NORSAR Array B**	**84.07**	**29**	LR	LR		04 29 13.6	
	comp=Z,12nm,21.2s,baz=70,slow=34							
NRIK	**Noril'sk**	**98.73**	**2**	LR	LR		04 40 17.7	
	comp=Z,21nm,21.9s,baz=48,slow=36							
KSH	**Kashi**	**126.61**	**15**	PKP		**PKiKP**	**04 00 43.0**	**+4.3**
KSH				sPKP			04 00 55.5	
CMAR	**Chiang Mai Arr**	**148.84**	**347**	PKPbc

HLNI	**Lentini**	**1.69**	**357**	P	**Pn**	**04 14 03.0**	**-1.2**
VAE	**Valguarnera**	**1.87**	**346**	Pn	**Pn**	**04 14 06.5**	**-0.2**
	comp=E,27nm,0.3s,baz=248,slow=4.3,SNR=37						
VAE				Sn	**Sg**	**04 14 34.3**	**+0.8**
	comp=E,78nm,0.3s,baz=326,slow=16,SNR=11						
GALF	**Gagliano Caste**	**2.07**	**351**	P	**Pn**	**04 14 09.5**	**0.0**
GALF				AML	AML		
	comp=E,823µm,0.5s						
GALF				AML	AML		
	comp=N,1085µm,0.9s						
GALF				AML	AML		
	comp=E,1205µm,0.8s						
GALF				AML	AML		
	comp=N,1235µm,0.6s						
EPZF	**Pizzo Felice**	**2.16**	**358**	P	**Pn**	**04 14 11.4**	**+0.5**
EPZF				AML	AML		
	comp=E,1101µm,0.5s						
EPZF				AML	AML		
	comp=N,864µm,0.6s						
EPZF				AML	AML		
	comp=N,1375µm,0.6s						
EPZF				AML	AML		
	comp=E,1350µm,0.6s						
PETRA	**Petralia Sopra**	**2.27**	**343**	P	**Pn**	**04 14 12.7**	**+0.3**
PETRA				AML	AML		
	comp=N,1520µm,0.8s						
PETRA				AML	AML		
	comp=E,880µm,1.1s						
MNO	**Monte Soro**	**2.28**	**355**	P	**Pn**	**04 14 12.9**	**+0.4**
MNO				AML	AML		
	comp=E,1360µm,0.7s						
MNO				AML	AML		
	comp=N,1635µm,0.8s						
AIO	**Antillo**	**2.32**	**5**	P	**Pn**	**04 14 12.8**	**-0.1**
AIO				AML	AML		
	comp=N,546µm,0.8s						
AIO				AML	AML		
	comp=E,606µm,0.8s						
NOV	**Novara**	**2.37**	**3**	P	**Pn**	**04 14 13.5**	**-0.1**
NOV	**Novara**	**2.37**	**3**	P	**Pn**	**04 14 13.5**	**-0.1**
NOV				AML	AML		
	comp=E,1535µm,1.0s						
NOV				AML	AML		
	comp=N,970µm,0.5s						
MUCR	**Ucria**	**2.38**	**358**	P	**Pn**	**04 14 13.9**	**+0.1**
MUCR				AML	AML		
	comp=N,646µm,0.7s						
MUCR				AML	AML		
	comp=E,624µm,0.5s						
MUCR	**Ucria**	**2.38**	**358**	P	**Pn**	**04 14 13.9**	**+0.1**
MSFR	**San Fratello**	**2.39**	**353**	P	**Pn**	**04 14 14.1**	**+0.3**
MSFR				AML	AML		
	comp=E,583µm,0.9s						
MSFR				AML	AML		
	comp=N,506µm,1.1s						
MSFR	**San Fratello**	**2.39**	**353**	P	**Pn**	**04 14 14.1**	**+0.3**
MCSR	**Castroreale**	**2.41**	**5**	P	**Pn**	**04 14 14.1**	**-0.1**
MCSR				AML	AML		
	comp=E,1335µm,1.1s						
MCSR				AML	AML		
	comp=N,1340µm,0.4s						
MPAZ	**Palizzi**	**2.44**	**20**	P	**Pn**	**04 14 14.6**	**+0.1**
MPAZ				AML	AML		
	comp=E,580µm,0.7s						
MPAZ				AML	AML		
	comp=N,730µm,0.8s						
MPAZ	**Palizzi**	**2.44**	**20**	P	**Pn**	**04 14 14.6**	**+0.1**
GIB	**Gibilmanna**	**2.44**	**342**	P	**Pn**	**04 14 15.0**	**+0.3**
GIB				AML	AML		
	comp=E,1690µm,1.0s						
GIB				AML	AML		
	comp=N,1450µm,0.6s						
MPNC	**Port Mandanici**	**2.50**	**7**	P	**Pn**	**04 14 15.8**	**+0.5**
MPNC	**Port Mandanici**	**2.50**	**7**	P	**Pn**	**04 14 15.8**	**+0.5**
MPNC	**Port Mandanici**	**2.50**	**7**	P	**Pn**	**04 14 15.8**	**+0.5**
SOI	**Samo**	**2.56**	**20**	P	**Pn**	**04 14 16.4**	**+0.2**
SOI	**Samo**	**2.56**	**20**	P	**Pn**	**04 14 16.4**	**+0.2**
GMB	**Gambarie**	**2.60**	**15**	P	**Pn**	**04 14 17.1**	**+0.3**
GMB				AML	AML		
	comp=N,1290µm,0.9s						
GMB				AML	AML		
	comp=E,2355µm,0.4s						
MSRU	**Castanea**	**2.63**	**9**	P	**Pn**	**04 14 17.7**	**+0.5**
MSRU	**Castanea**	**2.63**	**9**	P	**Pn**	**04 14 17.7**	**+0.5**
MSRU				AML	AML		
	comp=E,896µm,1.1s						
MSRU				AML	AML		
	comp=N,692µm,1.0s						
MSCL	**Scilla**	**2.65**	**14**	P	**Pn**	**04 14 17.9**	**+0.4**
MSCL				AML	AML		
	comp=E,1115µm,0.6s						
MSCL				AML	AML		
	comp=N,928µm,0.7s						
GRI	**Girifalco**	**3.36**	**20**	S	Sn	04 14 57.0	-11
KEST	**Kesra**	**4.57**	**273**	Pn	**Pn**	**04 14 44.0**	**0.0**
	comp=N,0.5nm,0.3s,baz=70,slow=7.2,SNR=12						
KEST				Sn	**Sn**	**04 15 35.7**	**-2.1**
	comp=N,1.0nm,0.3s,baz=31,slow=22,SNR=15						
TIR	**Tirane**	**6.86**	**33**	*e*Pn	**Pn**	**04 15 15.3**	**+0.1**
TIR				*e*Sn	Sn	04 16 06.0	-28
OHR	**Ohrid**	**7.11**	**38**	*i* Pn	**Pn**	**04 15 19.4**	**+0.6**
OHR	**Ohrid**	**7.11**	**38**	*i* Pn	**Pn**	**04 15 19.4**	**+0.6**
STON	**Ston**	**7.51**	**16**	*e*Pn	**Pn**	**04 15 23.0**	**-1.1**
STON				*e*Sn	Sn	04 16 18.9	-31
TREB	**Trebinje**	**7.52**	**19**	*e*Pn	**Pn**	**04 15 22.5**	**-1.8**
TREB				*e*Sn	Sn	04 16 17.9	-32
PDG	**Podgorica**	**7.54**	**25**	*e*Pn	**Pn**	**04 15 21.9**	**-2.6**
PDG				*e*Sn	Sn	04 16 19.3	-31
IDI	**Anoyia**	**8.11**	**90**	Pn	**Pn**	**04 15 35.5**	**+3.0**
	comp=N,2.2nm,0.3s,baz=302,slow=16,SNR=13						
IDI				Sn	**Sn**	**04 17 00.7**	**-4.1**
	comp=N,2.2nm,0.3s,baz=130,slow=22,SNR=8.4						
STIP	**Stip**	**8.26**	**41**	*i* Pn	**Pn**	**04 15 37.3**	**+2.9**
STIP	**Stip**	**8.26**	**41**	*i* Pn	**Pn**	**04 15 37.3**	**+2.9**
SJES	**Sjenica**	**8.52**	**25**	*e*Pn	**Pn**	**04 15 36.8**	**-1.3**
SJES				*e*Sn	Sn	04 16 42.2	-33
IVAS	**Ivanjica**	**8.86**	**25**	*e*Pn	**Pn**	**04 15 41.2**	**-1.5**
IVAS				*e*Sn	Sn	04 16 51.9	-31
BBLS	**Lazići**	**8.88**	**21**	*e*Pn	**Pn**	**04 15 41.9**	**-1.1**
BARS	**Barje**	**8.90**	**35**	*e*Pn	**Pn**	**04 15 42.1**	**-1.2**
SELS	**Selova**	**8.92**	**30**	*e*Pn	**Pn**	**04 15 42.7**	**-0.9**
DIVS	**Divibare**	**9.27**	**23**	*e*Pn	**Pn**	**04 15 46.2**	**-2.2**
DIVS				*e*Sn	Sn	04 17 00.0	-33
VTS	**Vitosha**	**9.46**	**40**	*e*Pn	**Pn**	**04 15 51.3**	**+0.3**
TRUS	**Trudelj**	**9.52**	**24**	*e*Pn	**Pn**	**04 15 50.2**	**-1.5**
ZAPS	**Zavoj**	**9.64**	**36**	*e*Pn	**Pn**	**04 15 52.9**	**-0.5**
ZAGS	**Zajecar**	**9.88**	**32**	*e*Pn	**Pn**	**04 15 55.1**	**-1.5**
FRGS	**Fruska Gora**	**10.18**	**20**	*e*Pn	**Pn**	**04 15 58.4**	**-2.4**
MLR	**Muntele Rosu**	**12.87**	**37**	Pn	**Pn**	**04 16 39.5**	**+1.8**
	comp=N,0.3nm,0.3s,baz=326,slow=24,SNR=3.2						
MLR				LR	LR	04 23 09.5	
	comp=N,35nm,20.9s,baz=126,slow=45						
BRTR	**Keskin Array B**	**15.33**	**69**	Pn	**Pn**	**04 17 13.1**	**+2.0**
	comp=N,0.1nm,0.3s,baz=251,slow=15,SNR=2.5						
ESDC	**Sonseca Array**	**15.51**	**291**	Pn	**Pn**	**04 17 14.1**	**+0.6**
	comp=N,0.1nm,0.3s,baz=87,slow=13,SNR=4.3						
AKASG	**Malin Array Be**	**18.23**	**30**	P	**P**	**04 17 48.8**	**+0.8**
	comp=N,0.3nm,0.3s,baz=224,slow=11,SNR=3.0						
HFS	**Hagfors**	**24.50**	**358**	P	**P**	**04 18 54.1**	**-0.1**
	comp=N,0.6nm,0.6s,baz=173,slow=13,SNR=2.2						
TORD	**Torodi Ar. Bea**	**25.41**	**211**	P	**P**	**04 19 04.0**	**+1.3**
	comp=N,0.4nm,0.5s,baz=18,slow=9.5,SNR=8.6						
FINES	**FINESS Array B**	**26.75**	**12**	P	**P**	**04 19 14.4**	**-0.1**
	comp=N,1.3nm,0.7s,baz=149,slow=7.8,SNR=5.0						
DBIC	**Dimbokro**	**34.11**	**217**	LR	LR	04 35 49.9	
	comp=N,35nm,18.5s,baz=62,slow=39						
KSH	**Kashi**	**47.69**	**66**	P	**P**	**04 22 10.4**	**-1.5**
KSH				pP		04 22 15.5	
KSH				sP		04 22 17.8	
KSH				pmax	pmax		
	comp=Z,46nm,1.4s						
KSH				pmax	pmax		
	comp=Z,51nm,4.6s						
MKAR	**Makanchi Array**	**50.40**	**55**	P	**P**	**04 22 33.2**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=292,slow=4.3,SNR=3.0						
ZALV	**Zalesovo Beam**	**50.66**	**46**	P	**P**	**04 22 33.5**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=276,slow=6.8,SNR=1.7						
SONM	**Songino Array**	**65.47**	**48**	P	**P**	**04 24 18.9**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=308,slow=7.0,SNR=1.5						
YKA	**Yellowknife Ar**	**74.15**	**338**	P	**P**	**04 25 10.9**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=44,slow=6.5,SNR=1.8						

*MEX **21** 04:30:09.9±0.3, 31°.05N×115°.97W, h16km±146km, MD3.5*
*ECX **21** 04:30:09.2±0.5, 31°.26N×115°.90W, h12km±4km, MD2.0,*
ML2.2

ISC 21 04:30:08.3±1.1, 31°.25N±0°.04×115°.90W±0°.04, h18km±4km, n13, σ0°.36/24, 4C-1D, Baja California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VTX	**Valle De La Tr**	**0.17**	**34**	*e*P	**Pg**	**04 30 13.1**	**+0.2**
VTX				*e*S	**Sg**	**04 30 15.8**	**-0.2**
SVX	**San Vicente**	**0.31**	**284**	*e*P	**Pg**	**04 30 14.9**	**-0.1**
SVX				*e*S	**Sg**	**04 30 19.4**	**-0.3**
SPIG	**San Pedro Mart**	**0.42**	**119**	*e*P	**Pg**	**04 30 17.0**	**-0.1**
SPIG	**San Pedro Mart**	**0.42**	**119**	*i* P	**Pg**	**04 30 17.5**	**+0.4**
SPIG				*e*S	**Sg**	**04 30 23.2**	**+0.1**
SPX	**San Pedro Mart**	**0.43**	**120**	*e*P	**Pg**	**04 30 17.5**	**+0.3**
SPX				*e*S	**Sg**	**04 30 23.3**	**+0.1**
SPX				IAML		04 30 24.0	
	comp=E,183nm,0.1s						
SPX				*e*		04 30 24.0	
SPX				*e*		04 30 24.1	
SPX				IAML		04 30 24.1	
	comp=N,196nm,0.1s						
SPX	**San Pedro Mart**	**0.43**	**120**	*e*P	**Pg**	**04 30 17.2**	**0.0**
SPX				*i* S	**Sg**	**04 30 23.0**	**-0.2**
SQX	**San Quintin**	**0.67**	**179**	*e*P	**Pg**	**04 30 21.4**	**-0.2**
SQX				*e*S	**Sg**	**04 30 30.5**	**-0.1**
ESJX	**Sierra Juarez**	**0.75**	**357**	*e*P	**Pg**	**04 30 22.9**	**-0.2**
ESJX				*e*S	**Sg**	**04 30 33.0**	**-0.1**
SFX	**San Felipe**	**0.92**	**103**	*e*P	**Pg**	**04 30 25.5**	**-0.7**
SFX				*e*S	**Sg**	**04 30 37.7**	**-0.6**
CBX	**Cerro Bola**	**1.25**	**328**	*e*P	**Pn**	**04 30 30.7**	**-0.2**
CBX				*e*S	**Sb**	**04 30 47.3**	**+0.2**
CBX				IAML		04 30 50.6	
	comp=N,25nm,0.2s						
CBX				*e*		04 30 50.6	
CBX	**Cerro Bola**	**1.25**	**328**	*i* P	**Pn**	**04 30 31.0**	**+0.1**
CBX				*i* S	**Sb**	**04 30 47.4**	**+0.4**
TJIG	**Tijuana**	**1.35**	**331**	*e*P	**Pn**	**04 30 32.7**	**+0.4**
TJIG				*e*S	**Sb**	**04 30 49.5**	**-0.6**
BAR	**Barrett**	**1.57**	**335**	*e*P	**Pn**	**04 30 36.0**	**+0.7**

IDC 21 04:54:21.1±2.8, 20°.33S×70°.07W, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.4/18, mbtmp3.4/3, ML3.2/1, Error ellipse: s-maj=68.9km s-min=65.0km az=145.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.42**	**25**	Pn		04 55 30.1	0.0
	0.8nm,0.3s,baz=199,slow=7.9,SNR=22						
TORD	**Torodi Ar. Bea**	**77.99**	**71**	P	P	05 06 22.0	+0.1
	0.3nm,1.0s,baz=266,slow=3.8,SNR=1.4						
YKA	**Yellowknife Ar**	**89.73**	**341**	P	P	05 07 20.7	-0.1
	0.1nm,0.2s,baz=130,slow=4.9,SNR=6.9						

*UCR **21** 04:55:07.6±1.6, 7°.67N×83°.03W, h0km±11km, MW3.5*
*UPA **21** 04:55:08.4±0.8, 7°.65N×82°.84W, h17km±7km, MW3.9*

ISC 21 04:55:01.6±2.0, 7°.48N±0°.09×82°.97W±0°.06, h7km±11km, n18, σ1°.20/28, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PEDE3	**Pedregal, Chir**	**1.05**	**31**	*e*P	**Pn**	**04 55 23.7**	**+1.0**
LOCO3	**Loma Colorada,**	**1.07**	**30**	*e*P	**Pn**	**04 55 23.7**	**+0.6**
DVD	**David**	**1.08**	**28**	*e*P	**Pn**	**04 55 24.0**	**+0.9**
DVD				*e*S	**Sb**	**04 55 35.3**	**-1.6**
PTJ1	**Puerto Jimnez**	**1.10**	**342**	*e*P	**Pn**	**04 55 25.9**	**+2.4**
PTJ1				*e*S	**Sn**	**04 55 41.3**	**+2.4**
BCO2	**Palmira**	**1.31**	**19**	*e*P	**Pg**	**04 55 28.2**	**+1.5**
BCO2				*e*S	**Sn**	**04 55 43.3**	**-0.9**
MLIR3	**Monte Lirio, C**	**1.31**	**6**	*e*S	**Sn**	**04 55 44.8**	**+0.5**
BRU2	**Volcan**	**1.34**	**12**	*e*P	**Pg**	**04 55 29.0**	**+1.7**
BRU2				*e*S	**Sn**	**04 55 44.7**	**-0.3**
BRU2	**Volcan**	**1.34**	**12**	*e*P	**Pg**	**04 55 28.7**	**+1.4**
BRU2				*e*S	**Sn**	**04 55 44.9**	**-0.1**
EDPN	**Palmar Norte**	**1.55**	**342**	*e*P	**Pg**	**04 55 31.9**	**+0.5**
EDPN				*e*S	**Sg**	**04 55 51.7**	**+0.1**
GMAL	**Guarumal, Vera**	**1.74**	**80**	*e*P	**Pg**	**04 55 35.2**	**+0.1**
GMAL	**Guarumal, Vera**	**1.74**	**80**	*e*P	**Pb**	**04 55 33.5**	**-0.3**
DRK0	**Durika**	**1.80**	**351**	*e*P	**Pg**	**04 55 36.0**	**-0.2**
DRK0				*e*S	**Sb**	**04 55 56.4**	**-1.4**
DRK0	**Durika**	**1.80**	**351**	*e*P	**Pg**	**04 55 36.1**	**0.0**
EDLM	**Las Mercedes**	**1.89**	**341**	*e*P	**Pg**	**04 55 38.1**	**+0.1**
EDLM				*e*S	**Sg**	**04 56 01.4**	**-1.1**
CACAO	**El Cacao, Vera**	**2.09**	**93**	*e*P	**Pb**	**04 55 39.2**	**-0.7**
CACAO				*e*S	**Sn**	**04 56 02.7**	**-0.7**
LCR2	**La Lucha 2**	**2.47**	**336**	*e*P	**Pb**	**04 55 46.0**	**-0.5**
AZU	**Azuero**	**2.69**	**83**	*e*P	**Pb**	**04 55 49.2**	**-0.8**
AZU				*e*S	**Sn**	**04 56 18.6**	**+0.6**
JTS	**Las Juntas de**	**3.42**	**325**	*e*P	**Pb**	**04 56 00.4**	**-2.2**

IDC 21 05:03:06.1±4.8, 2°.50S×139°.20E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.3/27, mbtmp3.3/3, ML3.2/1, Error ellipse: s-maj=191.7km s-min=31.2km az=87.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.97**	**195**	P	Pn	05 07 17.0	-0.7
	0.1nm,0.3s,baz=16,slow=13,SNR=2.2						
ASAR	**Alice Springs**	**21.66**	**193**	P	P	05 07 58.8	+0.4
	0.2nm,0.4s,baz=24,slow=9.2,SNR=1.9						
MKAR	**Makanchi Array**	**69.93**	**322**	P	P	05 14 19.3	0.0
	0.7nm,0.8s,baz=114,slow=6.6,SNR=4.9						

*IDC **21** 05:07:34.8±5.4, 7°.12S×155°.51E, h91km±43km, mb3.6/7, mb1 3.8/8, mb1mx3.6/27, mbtmp3.9/8, MS3.3/5, Ms1 3.3/5, ms1mx2.9/26, Error ellipse: s-maj=45.3km s-min=22.5km az=118.0*

ISC 21 05:07:28.8±1.1, 7°.4S±0°.2×155°.9E±0°.2, h50km, n17, σ0°.88/10, mb3.8/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.54**	**117**	LR	LR	05 10 49.4	
	comp=Z,249nm,18.8s,baz=356,slow=39						
KRVT	**Keravat (AS076**	**4.87**	**308**	P	**Pn**	**05 08 40.1**	**+0.6**
	7.3nm,0.3s,baz=275,slow=3.5,SNR=3.9						
KRVT				LR	LR	05 10 32.4	
	comp=Z,174nm,19.9s,baz=125,slow=40						
DZM	**Mont Dzumac**	**17.84**	**146**	LR	LR	05 17 31.1	
	comp=Z,123nm,18.1s,baz=204,slow=33						
WRA	**Warramunga Arr**	**24.33**	**237**	P	**P**	**05 12 43.0**	**+0.9**
	1.9nm,0.8s,baz=58,slow=9.4,SNR=9.7						
ASAR	**Alice Springs**	**26.59**	**230**	P	**P**	**05 13 03.0**	**+0.4**
	0.5nm,0.7s,baz=55,slow=9.2,SNR=6.0						
STKA	**Stephens Creek**	**27.79**	**207**	LR	LR	05 23 59.4	
	comp=Z,53nm,19.0s,baz=25,slow=35						
H11S3	**WAKE ISLAND Hy**	**27.82**	**22**	T	T	05 41 22.8	
	baz=204,slow=75,SNR=25						
H11S2	**WAKE ISLAND Hy**	**27.82**	**22**	T	T	05 41 23.1	
	baz=204,slow=75,SNR=26						
H11S1	**WAKE ISLAND Hy**	**27.84**	**22**	T	T	05 41 24.1	
	baz=204,slow=75,SNR=15						
URZ	**Urewera**	**36.28**	**151**	LR	LR	05 29 05.9	
	comp=Z,96nm,19.5s,baz=3.0,slow=35						
PETK	**Petropavlovsk-**	**60.25**	**1**	P	**P**	**05 17 32.4**	**+0.6**
	3.0nm,0.9s,baz=161,slow=11,SNR=2.8						
CMAR	**Chiang Mai Arr**	**61.71**	**295**	P	**P**	**05 17 41.8**	**-0.7**
	1.5nm,0.3s,baz=119,slow=5.4,SNR=6.9						
ILAR	**Eielson Array**	**83.40**	**21**	P	**P**	**05 19 50.1**	**-0.3**
	0.3nm,0.7s,baz=250,slow=6.2,SNR=5.4						
MKAR	**Makanchi Array**	**84.24**	**319**	P	**P**	**05 19 53.6**	**-1.6**
	0.7nm,0.7s,baz=99,slow=6.3,SNR=3.9						
YKA	**Yellowknife Ar**	**96.25**	**28**	P	**P**	**05 20 52.4**	**+0.9**
	0.5nm,0.9s,baz=262,slow=4.1,SNR=4.9						
BDFB	**Brasilia**	**147.12**	**134**	PKPbc	**PKiKP**	**05 27 09.9**	**-0.1**
	3.7nm,0.9s,baz=212,slow=2.4,SNR=4.7						
TORD	**Torodi Ar. Bea**	**153.94**	**285**	PKPbc	**PKPbc**	**05 27 23.6**	**-0.2**
	0.4nm,0.7s,baz=70,slow=1.5,SNR=2.4						

*IDC **21** 05:13:25.7±1.0, 56°.95S×24°.90W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/18, mbtmp3.9/4, MS3.1/2, Ms1 3.1/2, ms1mx2.8/18, Error ellipse: s-maj=40.5km s-min=28.8km az=63.0*
*NEIC **21** 05:13:32.6±1.9, 57°.0S×24°.9W×0°.3, h52km±7km, mb4.2/3, Error ellipse: s-maj=25.4km s-min=14.0km az=225.0*

ISC 21 05:13:27.0±0.9, 56°.9S±0°.1×24°.6W±0°.2, h10km, n18, σ0°.91/16, mb3.9/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.22**	**287**	Pn	**Pn**	**05 15 13.6**	**+1.2**
VNA1	**Neumayer--Stat**	**15.46**	**159**	P	**Pn**	**05 17 05.0**	**+0.2**
VNA3	**Neumayer Olymp**	**15.71**	**162**	P	**Pn**	**05 17 07.4**	**-0.6**
VNA2	**Neumayer--Watz**	**15.86**	**159**	P	**Pn**	**05 17 09.1**	**-0.8**
	baz=327,slow=14						
SNAA	**Sanae**	**17.37**	**157**	P	**Pn**	**05 17 29.5**	**+0.3**
SNAA	**Sanae**	**17.37**	**157**	Pn	**Pn**	**05 17 29.6**	**+0.4**
SNAA				IAmb	IAmb	05 17 42.7	
	comp=Z,5.3nm,1.2s						
QSPA	**South Pole Qui**	**33.33**	**180**	P	**P**	**05 20 04.7**	**0.0**
QSPA				IAmb	IAmb	05 20 23.4	
	comp=Z,5.0nm,1.2s						
PLCA	**Paso Flores**	**33.54**	**279**	LR	LR	05 32 57.5	
	comp=Z,28nm,19.2s,baz=140,slow=35						
CPUP	**Villa Florida**	**38.46**	**309**	P	**P**	**05 20 46.9**	**-1.9**
	comp=Z,1.5nm,0.8s,baz=178,slow=4.2,SNR=4.2						
BDFB	**Brasilia**	**44.85**	**327**	LR	LR	05 38 48.8	
	comp=Z,25nm,18.1s,baz=17,slow=34						
VNDA	**Vanda**	**45.76**	**182**	P	**P**	**05 21 48.0**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=190,slow=7.5,SNR=6.9						
VNDA	**Vanda**	**45.76**	**182**	P	**P**	**05 21 48.3**	**+0.6**
LPAZ	**La Paz**	**52.04**	**303**	P	**P**	**05 22 37.6**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=150,slow=5.5,SNR=25						
LPAZ	**La Paz**	**52.04**	**303**	P	**P**	**05 22 37.1**	**-0.3**
LPAZ				IAmb	IAmb	05 22 38.2	
	comp=Z,3.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.16**	**27**	P	**P**	**05 24 59.1**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=196,slow=6.8,SNR=5.9						
YKA	**Yellowknife Ar**	**137.78**	**316**	PKP	**PKPdf**	**05 32 49.0**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=117,slow=2.8,SNR=8.1						
SONM	**Songino Array**	**149.37**	**86**	PKPbc	**PKPbc**	**05 33 14.3**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=198,slow=2.6,SNR=3.6						
ILAR	**Eielson Array**	**151.76**	**310**	PKPbc	**PKPbc**	**05 33 20.2**	**0.0**
	comp=Z,1.3nm,0.8s,baz=144,slow=2.8,SNR=13						

*IDC **21** 05:42:27.0±0.9, 11°.78S×165°.26E, h0km, mb4.2/15, mb1 4.4/16, mb1mx4.2/30, mbtmp4.2/16, ML4.7/1, MS3.4/13, Ms1 3.4/13, ms1mx3.1/33, Error ellipse: s-maj=29.3km s-min=19.0km az=122.0*
*NEIC **21** 05:42:32.9±1.1, 11°.8S±0°.1×165°.2E±0°.2, h40km±3km, mb4.6/12, Error ellipse: s-maj=26.6km s-min=18.0km az=109.0*

ISC 21 05:42:32.4±0.7, 11°.8S±0°.1×165°.2E±0°.1, h35km, n39, σ0°.69/26, mb4.3/20, MS3.4/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.66**	**294**	LR	LR	05 45 53.0	
	comp=Z,272nm,20.8s,baz=142,slow=36						
DZM	**Mont Dzumac**	**10.28**	**173**	Pn	**Pn**	**05 44 57.6**	**+0.1**
	6.0nm,0.3s,baz=7.6,slow=12,SNR=44						
DZM				LR	LR	05 48 20.8	
	comp=Z,174nm,20.4s,baz=21,slow=34						
PMG	**Port Moresby**	**17.87**	**276**	LR	LR	05 52 30.0	
	comp=Z,124nm,20.7s,baz=90,slow=34						
CTA	**Charters Tower**	**19.35**	**243**	P	**P**	**05 47 02.8**	**-0.7**
	8.4nm,0.8s,baz=56,slow=14,SNR=4.6						
ARMA	**Armidale**	**22.38**	**212**	P	**P**	**05 47 29.0**	**+1.2**
URZ	**Urewera**	**28.42**	**160**	LR	LR	05 58 34.5	
	comp=Z,104nm,21.0s,baz=60,slow=34						
STKA	**Stephens Creek**	**29.50**	**224**	P	**P**	**05 48 33.2**	**-0.2**
	0.9nm,0.5s,baz=33,slow=13,SNR=3.8						
STKA				LR	LR	05 59 51.0	
	comp=Z,118nm,19.3s,baz=26,slow=35						
STKA	**Stephens Creek**	**29.50**	**224**	IAmb	IAmb	05 48 39.5	
	comp=Z,1.0nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**30.15**	**3**	T	T	06 20 16.2	
	baz=184,slow=76,SNR=16						
H11S3	**WAKE ISLAND Hy**	**30.15**	**3**	T	T	06 20 18.0	
	baz=184,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**30.16**	**3**	T	T	06 20 17.6	
	baz=184,slow=76,SNR=11						
WRA	**Warramunga Arr**	**30.70**	**251**	LR	LR	06 01 15.3	
	comp=Z,32nm,18.2s,baz=210,slow=37						
ASAR	**Alice Springs**	**31.95**	**244**	P	**P**	**05 48 54.5**	**-0.8**
	comp=Z,1.5nm,0.9s,baz=74,slow=9.3,SNR=10						
ASAR				PcP	**PcP**	**05 51 45.4**	**+0.3**
	comp=Z,0.6nm,1.0s,baz=90,slow=3.6,SNR=4.1						
ASAR				LR	LR	06 00 45.1	
	comp=Z,89nm,20.9s,baz=68,slow=34						
RPZ	**Rata Peaks**	**32.19**	**172**	LR	LR	06 01 16.7	
	comp=Z,67nm,18.4s,baz=23,slow=35						
FITZ	**Fitzroy Crossi**	**38.64**	**256**	P	**P**	**05 49 52.7**	**-0.1**
MJAR	**Matsushiro Arr**	**54.39**	**333**	P	**P**	**05 51 54.8**	**-1.2**
	comp=Z,1.0nm,0.5s,baz=151,slow=9.1,SNR=6.0						
KSRS	**Korea Array**	**60.19**	**326**	P	**P**	**05 52 37.0**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=116,slow=7.7,SNR=5.5						
USRK	**Ussuriysk Ar.**	**63.38**	**334**	P	**P**	**05 52 59.4**	**+1.1**

JKRS	**Kuro-shima**	**1.18 60**	P	**Pn**	**05 46 18.6**	**+2.0**
JKRS			S	**Sn**	**05 46 33.6**	**+0.7**
NACB	**Ninganchiao**	**1.29 294**	P	**Pb**	**05 46 18.5**	**+0.1**
	baz=278					
NACB			S	**Sb**	**05 46 33.8**	**-1.4**
	baz=278					
ENA	**Nanau**	**1.30 307**	*i* P	**Pg**	**05 46 19.5**	**+0.6**
	baz=302					
ENA			*i* S	**Sb**	**05 46 35.3**	**-0.2**
	baz=302					
EGFH	**Guangfu**	**1.34 271**	*e*P	**Pg**	**05 46 19.8**	**+0.2**
	baz=266					
EGFH			S	**Sb**	**05 46 36.1**	**-0.5**
	baz=266					
JIJ	**Ishigaki jima**	**1.35 58**	P	**Pg**	**05 46 20.2**	**+0.5**
JIJ			S	**Sg**	**05 46 36.4**	**-0.8**
TWC	**Suao**	**1.35 315**	P	**Pb**	**05 46 19.5**	**+0.2**
	baz=301					
TWC			*e*S	**Sb**	**05 46 36.2**	**-0.5**
	baz=301					
HGSD	**Ruisui**	**1.35 264**	⇓P	**Pg**	**05 46 20.1**	**+0.3**
	baz=258					
HGSD			S	**Sb**	**05 46 35.6**	**-1.4**
	baz=258					
ETLH	**Xiulin Townshi**	**1.40 293**	P	**Pg**	**05 46 21.0**	**+0.2**
	baz=279					
ETLH			S	**Sn**	**05 46 37.6**	**-1.0**
	baz=279					
EHY	**Hungye**	**1.45 265**	*i* P	**Pg**	**05 46 21.9**	**+0.3**
	baz=259					
EHY			*i* S	**Sn**	**05 46 37.8**	**-1.7**
	baz=259					
YULB	**Yu-li**	**1.48 260**	⇓P	**Pg**	**05 46 22.8**	**+0.5**
	baz=255					
YULB			S	**Sn**	**05 46 40.1**	**-0.3**
	baz=255					
TWF1	**Yuli**	**1.49 259**	P	**Pg**	**05 46 22.6**	**+0.1**
	baz=254					
TWF1			S	**Sn**	**05 46 40.0**	**-0.7**
	baz=254					
NTC	**Toucheng**	**1.54 321**	*e*P	**Pg**	**05 46 23.2**	**-0.1**
	baz=331					
NTC			*e*S	**Sn**	**05 46 40.8**	**-1.0**
	baz=331					
TWE	**Neicheng**	**1.54 314**	P	**Pb**	**05 46 23.2**	**+0.6**
	baz=300					
TWE			*e*S	**Sn**	**05 46 42.3**	**+0.4**
	baz=300					
ENTT	**Nioudou**	**1.56 309**	*i* P	**Pb**	**05 46 23.2**	**+0.3**
	baz=293					
ENTT			S	**Sn**	**05 46 41.0**	**-1.3**
	baz=293					
WHF	**Hehuan Shan**	**1.57 289**	⇓*i*P	**Pb**	**05 46 23.5**	**+0.1**
	baz=284					
WHF			S	**Sn**	**05 46 41.3**	**-1.7**
	baz=284					
NDT	**Datong Townshi**	**1.57 307**	P	**Pb**	**05 46 23.2**	**0.0**
	baz=292					
NDT			S	**Sn**	**05 46 42.3**	**-0.4**
	baz=292					
NNSH	**Datong**	**1.58 300**	*e*P	**Pb**	**05 46 23.6**	**+0.2**
	baz=286					
NNSH			*e*S	**Sn**	**05 46 41.5**	**-1.5**
	baz=286					
NNSB	**Datong**	**1.58 300**	P	**Pb**	**05 46 23.6**	**+0.2**
	baz=286					
NNSB			S	**Sn**	**05 46 41.9**	**-1.0**
	baz=286					
NNS	**Nan Shan**	**1.59 300**	P	**Pb**	**05 46 23.7**	**+0.1**
	baz=286					
NNS			S	**Sn**	**05 46 42.1**	**-1.2**
	baz=286					
JISG	**Ishigakijimahi**	**1.60 54**	P	**Pg**	**05 46 23.5**	**-1.0**
JISG			S	**Sn**	**05 46 42.0**	**-1.2**
OWD	**Renai**	**1.60 281**	*e*P	**Pb**	**05 46 24.1**	**+0.3**
	baz=276					
OWD			*e*S	**Sn**	**05 46 41.3**	**-2.2**
	baz=276					
TWH	**Lutao**	**1.60 234**	*i* P	**Pg**	**05 46 24.1**	**-0.6**
	baz=230					
TWH			S	**Sn**	**05 46 42.3**	**-1.1**
	baz=230					
VWDT	**VWDT**	**1.61 274**	⇓P	**Pb**	**05 46 24.2**	**+0.5**
	baz=261					
VWDT			S	**Sn**	**05 46 42.9**	**-0.5**
	baz=261					
CHGB	**Renai**	**1.62 285**	P	**Pb**	**05 46 24.2**	**0.0**
	baz=273					
CHGB			S	**Sn**	**05 46 43.4**	**-0.8**
	baz=273					
TIPB	**Shuangxi**	**1.63 324**	P	**Pb**	**05 46 23.9**	**-0.4**
	baz=333					
TIPB			S	**Sn**	**05 46 42.8**	**-1.4**
	baz=333					
NWLT	**Wulai**	**1.69 312**	*e*P	**Pb**	**05 46 25.5**	**+0.3**
	baz=296					
NWLT			*e*S	**Sn**	**05 46 44.9**	**-0.7**
	baz=296					
TDCB	**Techi**	**1.69 291**	*e*P	**Pb**	**05 46 25.9**	**+0.5**
	baz=278					
YHNB	**Yeheng**	**1.71 306**	P	**Pb**	**05 46 25.7**	**0.0**
	baz=290					
YHNB			S	**Sn**	**05 46 45.4**	**-0.9**
	baz=290					
NSK	**Sanguang**	**1.73 306**	⇑*i*P	**Pb**	**05 46 26.0**	**0.0**
	baz=290					
NSK			S	**Sn**	**05 46 45.2**	**-1.4**
	baz=290					
TWA	**Mucha**	**1.78 318**	*e*P	**Pb**	**05 46 26.3**	**-0.4**
	baz=316					
ELDTW	**Lidau**	**1.78 255**	P	**Pb**	**05 46 26.7**	**-0.2**
	baz=251					
ELDTW			S	**Sn**	**05 46 47.0**	**-1.0**
	baz=251					
DPDB	**Guoxing**	**1.84 282**	P	**Pb**	**05 46 27.6**	**-0.1**
	baz=279					
SMLT	**Sun Moon Lake**	**1.84 278**	P	**Pb**	**05 46 27.8**	**0.0**
	baz=273					
SMLT			S	**Sn**	**05 46 47.8**	**-1.5**
	baz=273					
TWGBT	**Beinan**	**1.86 244**	*e*S	**Sn**	**05 46 49.4**	**-0.3**
	baz=233					
TWG	**Pinlang**	**1.87 244**	P	**Pb**	**05 46 28.0**	**-0.2**
	baz=233					
TWG			S	**Sn**	**05 46 49.6**	**-0.3**
	baz=233					
WHYT	**Xinyi Township**	**1.87 272**	P	**Pb**	**05 46 28.9**	**+0.7**
	baz=262					
WHP	**Taichung City**	**1.88 290**	*e*P	**Pg**	**05 46 30.1**	**+0.1**
	baz=285					
WHP			*e*S	**Sn**	**05 46 50.9**	**+0.4**
	baz=285					
YM01	**YM01**	**1.91 321**	*e*P	**Pb**	**05 46 28.9**	**-0.1**
	baz=318					
YM01			*e*S	**Sn**	**05 46 50.4**	**-0.7**
	baz=318					
JTJ	**Tarama**	**1.93 59**	P	**Pg**	**05 46 29.1**	**-1.7**
JTJ			S	**Sb**	**05 46 51.7**	**-1.7**
LIOB	**Emei**	**1.98 300**	*i* P	**Pb**	**05 46 30.7**	**+0.6**
	baz=286					
LIOB			S	**Sn**	**05 46 53.2**	**+0.5**
	baz=286					
NSTT	**Nanjuang**	**1.98 300**	*e*P	**Pn**	**05 46 28.9**	**+1.2**
	baz=286					
NSTT			S	**Sn**	**05 46 53.0**	**+0.3**
	baz=286					
CHN5	**Tsauling**	**2.03 269**	*e*S	**Sn**	**05 46 55.0**	**+0.9**
	baz=265					
ECL	**Taimali**	**2.07 240**	*e*S	**Sn**	**05 46 53.8**	**-1.1**
	baz=247					
TPUB	**Ta-pu**	**2.10 261**	*e*P	**Pb**	**05 46 32.8**	**+0.5**
	baz=257					
TPUB			*e*S	**Sn**	**05 46 56.7**	**+0.9**
	baz=257					
WTP	**Ta-pu**	**2.13 259**	P	**Pb**	**05 46 33.3**	**+0.6**
	baz=256					
WTP			S	**Sb**	**05 46 58.2**	**-1.1**
	baz=256					
CHN4	**Tsaushan**	**2.13 262**	P	**Pb**	**05 46 33.8**	**+1.1**
	baz=253					
CHN4			S	**Sb**	**05 46 58.5**	**-0.8**
	baz=253					
SLGT	**Liugui**	**2.17 253**	*e*P	**Pb**	**05 46 33.2**	**-0.1**
	baz=244					
SLGT			*e*S	**Sn**	**05 46 58.0**	**+0.8**
	baz=244					
CHN1	**Nanshi**	**2.22 258**	*e*P	**Pb**	**05 46 34.8**	**+0.5**
	baz=255					
CHN1			*e*S	**Sb**	**05 47 01.8**	**-0.1**
	baz=255					
SSD	**Sandimen**	**2.27 247**	*e*S	**Sn**	**05 46 59.2**	**-0.6**
	baz=239					

IDC 21 05:54:53.9±3.2, 31°.37S×178°.50W, h0km, mb3.8/2, mb1 3.9/3, mb1mx3.6/21, mbtmp3.7/3, ML3.0/1, Error ellipse: s-maj=73.6km s-min=48.7km az=115.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.76**	**206**	Pn	Pn	05 56 47.8	-0.3
	0.2nm,0.3s,baz=30,slow=17,SNR=1.0						
ASAR	**Alice Springs**	**42.64**	**268**	P	P	06 02 52.5	+0.1
	0.8nm,0.8s,baz=108,slow=7.3,SNR=7.8						
WRA	**Warramunga Arr**	**43.71**	**273**	P	P	06 03 00.6	-0.4
	0.3nm,0.3s,baz=111,slow=8.1,SNR=5.3						
FINES	**FINESS Array B**	**145.90**	**339**	PKPbc	PKPdf	06 14 33.8	-0.1
	0.7nm,0.7s,baz=48,slow=4.1,SNR=3.8						

*IDC **21** 06:12:19.4±1.0, 45°.60N×153°.99E, h0km, mb3.6/12, mb1 3.8/14, mb1mx3.7/35, mbtmp3.6/14, ML2.5/2, MS2.6/1, Ms1 2.6/1, ms1mx2.0/54, Error ellipse: s-maj=28.7km s-min=19.6km az=155.0*
*NEIC **21** 06:12:23.6±2.1, 45°.6N±0°.1×154°.0E±0°.2, h27km±7km, mb4.2/3, Error ellipse: s-maj=20.8km s-min=15.0km az=142.0*

ISC 21 06:12:22.4±0.9, 45°.7N±0°.2×154°.0E±0°.1, h19km, n18, σ1§10/16, mb3.7/14, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**7.85**	**17**	Pn	**Pn**	**06 14 15.0**	**-0.5**
	0.4nm,0.3s,baz=187,slow=14,SNR=3.4						
KLR	**Kul'dur**	**15.43**	**291**	LR	LR	06 21 32.2	
	comp=Z,24nm,20.8s,baz=19,slow=36						
USRK	**Ussuriysk Ar.**	**15.62**	**273**	Pn	**Pn**	**06 15 59.1**	**-2.3**
	baz=88,slow=13,SNR=2.0						
SONM	**Songino Array**	**32.26**	**291**	P	**P**	**06 18 50.9**	**+1.2**
	0.2nm,0.3s,baz=108,slow=9.3,SNR=1.7						
PMR	**Palmer**	**36.00**	**43**	P	**P**	**06 19 20.4**	**-1.3**
PMR				IAmb	IAmb	06 19 32.4	
	comp=Z,2.4nm,0.8s						
GHO	**Glory Hole Cre**	**36.09**	**43**	P	**P**	**06 19 21.4**	**-1.2**
GHO				IAmb	IAmb	06 19 37.4	
	comp=Z,5.1nm,0.7s						
ILAR	**Eielson Array**	**37.05**	**38**	P	**P**	**06 19 31.6**	**+0.9**
	comp=Z,0.2nm,0.7s,baz=260,slow=8.1,SNR=2.7						
INK	**Inuvik**	**42.27**	**32**	P	**P**	**06 20 14.4**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=284,slow=9.2,SNR=3.2						
INK	**Inuvik**	**42.27**	**32**	IAmb	IAmb	06 20 27.6	
	comp=Z,2.0nm,1.2s						
MKAR	**Makanchi Array**	**47.97**	**299**	P	**P**	**06 20 59.9**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=72,slow=5.2,SNR=3.8						
YKA	**Yellowknife Ar**	**51.46**	**36**	P	**P**	**06 21 25.2**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=294,slow=6.5,SNR=5.4						
NVAR	**Mina Array Bea**	**62.43**	**62**	P	**P**	**06 22 44.7**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=305,slow=6.5,SNR=2.5						
PDAR	**Pinedale Array**	**64.92**	**54**	P	**P**	**06 23 01.4**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=284,slow=3.6,SNR=1.7						
FINES	**FINESS Array B**	**65.28**	**335**	P	**P**	**06 23 02.8**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=45,slow=8.4,SNR=4.7						
ULM	**Lac du Bonnet**	**66.97**	**41**	P	**P**	**06 23 12.2**	**-1.3**
	comp=Z,2.2nm,0.5s,baz=333,slow=4.5,SNR=2.2						
ASAR	**Alice Springs**	**71.36**	**199**	P	**P**	**06 23 40.7**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=22,slow=5.6,SNR=7.5						
AKASG	**Malin Array Be**	**72.78**	**327**	P	**P**	**06 23 50.2**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=34,slow=6.4,SNR=2.4						
TXAR	**Lajitas Array**	**77.52**	**61**	P	**P**	**06 24 17.7**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=272,slow=3.6,SNR=6.3						

*IDC **21** 06:21:31.2±0.8, 45°.50N×153°.80E, h0km, mb3.6/10, mb1 3.8/13, mb1mx3.6/42, mbtmp3.6/13, ML2.9/3, Error ellipse: s-maj=25.5km s-min=18.5km az=132.0*
*MOS **21** 06:21:35.6±1.6, 45°.62N×153°.64E, h45km, mb3.9/5, Error ellipse: s-maj=13.3km s-min=9.9km az=56.2*
*SKHL **21** 06:21:36.3±0.6, 45°.45N×153°.75E, h57km±4km, mb4.3/3*

ISC 21 06:21:37.7±0.8, 45°.52N±0°.10×153°.67E±0°.08, h50km, n40, σ1§57/41, mb3.6/12, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**4.10**	**268**	*i* P	**Pn**	**06 22 37.7**	**0.0**
KUR				AMB	AMB	06 22 40.0	
	30nm,0.5s						
KUR				AMB	AMB	06 22 40.0	
	30nm,0.5s						
KUR				*i* S	**Sn**	**06 23 23.4**	**-1.0**
KUR				A	A	06 23 25.0	
	70nm,0.4s						
KUR				A	A	06 23 25.0	
	60nm,0.4s						
KUR	**Kuril'sk**	**4.10**	**268**	*e*PN	**Pn**	**06 22 37.7**	**0.0**
KUR				*i* S	**Sn**	**06 23 23.1**	**-1.3**
KUR				pmax	pmax		
	comp=N,28nm,0.3s						
KUR				pmax	pmax		
	comp=Z,59nm,0.3s						
KUR				pmax	pmax		
	comp=E,27nm,0.2s						
KUR				smax	smax		
	comp=N,72nm,0.3s						
KUR				smax	smax		
	comp=E,59nm,0.4s						
SKR	**Severo-Kuril's**	**5.42**	**17**	*e*P	**Pn**	**06 22 56.0**	**+0.2**
SKR				AMB	AMB	06 22 59.0	
	comp=E,20nm,0.8s						
SKR				*e*S	**Sn**	**06 23 56.3**	**-0.5**
SKR				A	A	06 23 58.9	
	comp=E,30nm,0.5s						
SKR				A	A	06 23 58.9	
	comp=E,40nm,0.5s						
SKR	**Severo-Kuril's**	**5.42**	**17**	*i* PN	**Pn**	**06 22 51.9**	**-3.9**
GRPR	**Tuman**	**5.83**	**258**	*e*P	**Pn**	**06 23 00.8**	**-0.7**
GRPR				AMB	AMB	06 23 05.0	
	comp=E,30nm,0.4s						
GRPR				*i* S	**Sn**	**06 24 04.1**	**-2.8**
GRPR				A	A	06 24 08.0	
	comp=E,60nm,0.3s						
GRPR				A	A	06 24 08.0	
	comp=E,60nm,0.3s						
GRPR	**Tuman**	**5.83**	**258**	*e*PN	**Pn**	**06 23 00.8**	**-0.7**
GRPR				pmax	pmax		
	comp=E,42nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,55nm,0.2s						
NMR	**Nemuro--Hokkai**	**6.08**	**252**	*e*P	**Pn**	**06 23 02.5**	**-2.4**
NMR	**Nemuro--Hokkai**	**6.08**	**252**	*e*PN	**Pn**	**06 23 02.3**	**-2.6**
RUSJ	**Misakicho**	**6.16**	**260**	*e*PN	**Pn**	**06 23 06.7**	**+0.7**
PAU	**Pauzhetka**	**6.30**	**18**	*e*P	**Pn**	**06 23 08.9**	**+1.0**
YSS	**Yuzh-Sakhalins**	**7.70**	**285**	*e*P	**Pn**	**06 23 28.2**	**+1.1**
PETK	**Petropavlovsk-**	**8.04**	**18**	Pn	**Pn**	**06 23 27.7**	**-4.0**
	comp=Z,0.9nm,0.3s,baz=188,slow=14,SNR=6.8						
ERM	**Erimo**	**8.38**	**249**	*i* PN	**Pn**	**06 23 36.5**	**+0.1**
KLR	**Kul'dur**	**15.29**	**292**	Pn	**Pn**	**06 25 09.2**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=103,slow=18,SNR=1.5						
USRK	**Ussuriysk Ar.**	**15.43**	**273**	Pn	**Pn**	**06 25 11.3**	**-0.6**
	baz=72,slow=13,SNR=2.5						
BMKR	**Bomnak**	**18.30**	**309**	*e*P	**Pn**	**06 25 49.0**	**+1.4**
KROS	**Kirovskiy**	**19.25**	**307**	*e*P	**Pn**	**06 26 00.5**	**+1.5**
BILL	**Bilibino**	**23.51**	**12**	*e*P	**P**	**06 26 43.0**	**+0.3**
BILL	**Bilibino**	**23.51**	**12**	*i* P	**P**	**06 26 43.0**	**+0.3**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TIXI	**Tiksi**	**28.75**	**344**	*i* P	**P**	**06 27 28.9**	**-1.1**
H11S1	**WAKE ISLAND Hy**	**29.03**	**154**	T	T	06 58 00.6	
	baz=341,slow=76,SNR=4.1						
H11S3	**WAKE ISLAND Hy**	**29.04**	**154**	T	T	06 58 01.4	
	baz=341,slow=76,SNR=4.2						
H11S2	**WAKE ISLAND Hy**	**29.05**	**154**	T	T	06 58 02.0	
	baz=341,slow=76,SNR=3.7						
ILAR	**Eielson Array**	**37.28**	**38**	P	**P**	**06 28 44.8**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=256,slow=7.3,SNR=1.8						
INK	**Inuvik**	**42.48**	**32**	P	**P**	**06 29 27.2**	**-0.2**
	comp=Z,1.2nm,1.0s,baz=262,slow=6.0,SNR=3.1						
MKAR	**Makanchi Array**	**47.86**	**299**	P	**P**	**06 30 11.9**	**+1.6**
	comp=Z,0.6nm,0.7s,baz=64,slow=8.5,SNR=5.2						
MKAR	**Makanchi Array**	**47.86**	**299**	*e*P	**P**	**06 30 12.7**	**+2.4**
MKAR	**Makanchi Array**	**47.86**	**299**	*e*P	**P**	**06 30 12.7**	**+2.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**48.38**	**305**	*e*P	**P**	**06 30 15.5**	**+1.3**
KURK	**Kurchatov**	**48.38**	**305**	P	**P**	**06 30 15.5**	**+1.3**
KURBB	**Kurchatov Arra**	**48.47**	**305**	P	**P**	**06 30 15.5**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=70,slow=8.7,SNR=4.3						
YKA	**Yellowknife Ar**	**51.68**	**36**	P	**P**	**06 30 39.1**	**+0.1**
	comp=Z,0.4nm,0.9s,baz=302,slow=7.7,SNR=4.4						
PDAR	**Pinedale Array**	**65.16**	**54**	P	**P**	**06 32 13.8**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=243,slow=5.0,SNR=2.3						
FINES	**FINESS Array B**	**65.32**	**335**	P	**P**	**06 32 14.7**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=18,slow=8.6,SNR=4.1						
FINES	**FINESS Array B**	**65.32**	**335**	*e*P	**P**	**06 32 16.1**	**+2.1**
OBN	**Obninsk**	**66.54**	**326**	*e*P	**P**	**06 32 23.5**	**+1.6**
OBN	**Obninsk**	**66.54**	**326**	*i* P	**P**	**06 32 23.5**	**+1.6**
OBN				*i*		06 32 51.9	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.5s						
WRA	**Warramunga Arr**	**67.48**	**200**	P	**P**	**06 32 28.6**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=16,slow=6.7,SNR=5.5						
ASAR	**Alice Springs**	**71.17**	**199**	P	**P**	**06 32 52.0**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=17,slow=5.5,SNR=9.9						
TXAR	**Lajitas Array**	**77.76**	**61**	P	**P**	**06 33 29.7**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=303,slow=4.7,SNR=6.6						

*IDC **21** 06:35:13.4±1.3, 3°.05N×128°.06E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.5/44, mbtmp3.7/5, ML3.7/1, MS2.9/2, Ms1 2.9/2, ms1mx2.4/45, Error ellipse: s-maj=89.4km s-min=19.9km az=66.0*
*NEIC **21** 06:35:18.1±0.9, 3°.20N±0°.10×128°.50E±0°.05, h35km±13km, mb4.3/5, Error ellipse: s-maj=14.9km s-min=5.6km az=163.0*

ISC 21 06:35:18.6±0.9, 3°.11N±0°.08×128°.4E±0°.1, h35km, n14, σ1§21/14, 1D, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.53**	**203**	Pn	**Pn**	**06 35 58.1**	**+0.8**
DDMP	**Don Marcelino,**	**3.98**	**318**	*e*P	**Pn**	**06 36 16.2**	**-0.5**
DDMP				*e*S	Sn	06 37 14.7	+12
SIJI	**Sorong**	**4.90**	**144**	Pn	**Pn**	**06 36 29.1**	**-0.8**
	2.6nm,0.3s,baz=316,slow=15,SNR=4.2						
SIJI				Sn	**Sn**	**06 37 24.9**	**-0.5**
	1.8nm,0.3s,baz=352,slow=24,SNR=8.7						
SIJI				LR	LR	06 38 36.5	
	comp=Z,107nm,19.4s,baz=251,slow=40						
KCP	**Kidapawan**	**5.07**	**320**	⇓*i* P	**Pn**	**06 36 35.3**	**+3.1**
KCP				*i* S	Sn	06 37 38.5	+8.8
MTN	**Manton Dam**	**16.09**	**170**	P	**P**	**06 39 06.0**	**+0.8**
MTN				IAmb	IAmb	06 39 14.1	
	comp=Z,27nm,1.4s						
FITZ	**Fitzroy Crossi**	**21.25**	**187**	LR	LR	06 48 56.8	
	comp=Z,34nm,19.0s,baz=351,slow=39						
WRA	**Warramunga Arr**	**23.65**	**166**	P	**P**	**06 40 27.5**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=344,slow=11,SNR=10						
WB2	**Warramunga Arr**	**23.65**	**166**	P	**P**	**06 40 27.2**	**+0.2**
ASAR	**Alice Springs**	**27.16**	**169**	P	**P**	**06 40 58.1**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=354,slow=8.4,SNR=2.4						
SONM	**Songino Array**	**48.42**	**340**	P	**P**	**06 43 56.5**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=152,slow=7.6,SNR=3.6						
MK31	**Makanchi Array**	**59.00**	**325**	P	**P**	**06 45 14.6**	**-0.3**
MK31				IAmb	IAmb	06 45 15.2	
	comp=Z,1.7nm,0.7s						
MKAR	**Makanchi Array**	**59.00**	**325**	P	**P**	**06 45 14.5**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=120,slow=8.5,SNR=29						
MAKZ	**Makanchi**	**59.19**	**325**	P	**P**	**06 45 15.5**	**-0.7**
MAKZ				IAmb	IAmb	06 45 16.6	
	comp=Z,2.8nm,0.7s						
KURK	**Kurchatov**	**63.14**	**327**	P	**P**	**06 45 41.7**	**-1.2**

IDC 21 06:35:44.8±3.4, 53°.47N×87°.54E, h0km, mb1 2.8/2, mb1mx2.7/52, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=32.9km s-min=16.6km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.68**	**288**	*i*		06 46 11.7	
	baz=105,slow=312,SNR=3.5						
ZALV	**Zalesovo Beam**	**1.68**	**287**	Pg	Pn	06 36 14.3	-1.1
	0.8nm,0.3s,baz=106,slow=15,SNR=9.5						
ZALV				Lg	Lg	06 36 38.8	
	1.0nm,0.3s,baz=108,slow=29,SNR=5.9						
ZALV				Rg	Rg	06 36 47.6	
	0.7nm,0.3s,baz=108,slow=28,SNR=3.7						
KURBB	**Kurchatov Arra**	**6.25**	**246**	Pn	Pn	06 37 18.9	+0.7
	0.1nm,0.3s,baz=62,slow=14,SNR=3.1						
MKAR	**Makanchi Array**	**7.49**	**209**	Pn	Pn	06 37 36.5	+1.3
	0.1nm,0.3s,baz=30,slow=14,SNR=4.6						

IDC 21 06:49:36.2±2.8, 7°.03S×154°.33E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/31, mbtmp3.5/3, MS3.0/1, Ms1 3.0/1, ms1mx2.3/20, Error ellipse: s-maj=194.3km s-min=30.5km az=130.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.49**	**251**	LR	LR	06 53 59.7	
	comp=Z,97nm,18.4s,baz=292,slow=35						
WRA	**Warramunga Arr**	**23.26**	**235**	P	P	06 54 46.3	+0.7
	1.1nm,1.0s,baz=56,slow=8.9,SNR=3.7						
ASAR	**Alice Springs**	**25.66**	**228**	P	P	06 55 07.1	-0.9
	0.6nm,0.6s,baz=60,slow=8.8,SNR=9.7						
ILAR	**Eielson Array**	**83.64**	**22**	P	P	07 02 06.8	+0.4
	0.2nm,0.5s,baz=243,slow=4.9,SNR=4.4						
TORD	**Torodi Ar. Bea**	**152.40**	**285**	PKPbc	PKPbc	07 09 35.4	0.0
	0.4nm,0.9s,baz=93,slow=1.0,SNR=2.6						

*MEX **21** 06:56:54.5±0.3, 31°.10N×115°.85W, h13km±2km, MD3.4*
*ECX **21** 06:56:54.2±0.8, 31°.34N×115°.68W, h12km±4km, MD2.0, ML2.3*

ISC 21 06:56:52.9±1.0, 31°.37N±0°.05×115°.68W±0°.04, h14km±13km, n10, σ0§40/20, 1C-3D, Baja California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPIG	**San Pedro Mart**	**0.37**	**151**	*e*P	**Pg**	**06 57 00.7**	**0.0**
SPIG				*e*S	**Sg**	**06 57 06.1**	**+0.2**
SPIG	**San Pedro Mart**	**0.37**	**151**	*i* P	**Pg**	**06 57 01.1**	**+0.5**
SPIG				*i* S	**Sg**	**06 57 05.9**	**+0.1**
SPX	**San Pedro Mart**	**0.38**	**152**	⇓*e*P	**Pg**	**06 57 01.1**	**+0.4**
SPX				*e*S	**Sg**	**06 57 06.0**	**-0.1**
SPX				⇑*e*		06 57 06.7	
SPX				IAML		06 57 06.7	
	comp=N,186nm,0.1s						
SPX				⇓*e*		06 57 07.2	
SPX				IAML		06 57 07.2	
	comp=E,181nm,0.1s						
SPX	**San Pedro Mart**	**0.38**	**152**	*e*P	**Pg**	**06 57 00.8**	**0.0**
SPX				*i* S	**

ANAR	**Anarak**	**1.75**	**299**	*e*Pg		**Pb**	**07 00 23.5**	**-0.3**
TKDS	**Koohdasht(Taba**	**1.84**	**46**	*e*Pn		**Pb**	**07 00 24.4**	**-0.9**
TKDS				*e*			07 00 53.0	
TNSJ	**Nastanj**	**1.85**	**29**	*e*Pn		**Pb**	**07 00 24.9**	**-0.6**
TNSJ				*e*			07 00 58.3	
TABS	**Tabas**	**1.86**	**45**	*e*Pn		**Pb**	**07 00 24.4**	**-1.3**
TABS				*e*Sg		**Sg**	**07 00 50.1**	**-1.2**
TABS				IAML			07 00 57.7	
	comp=N,196nm,0.6s							
KHGB	**Koh Gabri**	**2.11**	**158**	*e*Pn		**Pb**	**07 00 29.8**	**-0.3**
KHGB				*e*			07 01 01.6	
TVBK	**TV Kerman**	**2.57**	**156**	*e*Pn		**Pb**	**07 00 36.8**	**-1.1**
TVBK				*e*			07 01 21.9	
IRAM	**Ramesheh**	**2.74**	**260**	*e*Pn		**Pn**	**07 00 37.6**	**+1.9**
ITEG	**Tejag**	**2.76**	**78**	*e*Pn		**Pn**	**07 00 37.4**	**+1.4**
ITEG				*e*			07 01 28.0	
IZEF	**Zefreh**	**2.77**	**282**	*e*Pn		**Pn**	**07 00 38.0**	**+1.8**
IZEF				*e*			07 01 21.5	
NGRK	**Negar Kerman**	**2.87**	**159**	*e*Pn		**Pn**	**07 00 40.5**	**+2.8**
IKOO	**Kooshah**	**2.93**	**87**	*e*Pn		**Pn**	**07 00 40.1**	**+1.7**
CHMN	**Cheshme madani**	**3.00**	**145**	*e*Pn		**Pn**	**07 00 41.1**	**+1.6**
BSRN	**Basiran**	**3.06**	**96**	*e*Pn		**Pn**	**07 00 41.3**	**+1.2**
IMON	**Monand**	**3.58**	**75**	*e*Pn		**Pn**	**07 00 49.3**	**+2.0**
IMON				*e*			07 01 02.1	
KLNJ	**Kolanjah**	**3.62**	**250**	*e*Pn		**Pn**	**07 00 50.2**	**+2.2**
IDAH	**Dahanechah**	**3.67**	**83**	*e*Pn		**Pn**	**07 00 51.1**	**+2.5**
IDAH				*e*			07 01 06.7	
NHDN	**Nehbandan**	**3.95**	**103**	*e*Pn		**Pn**	**07 00 53.1**	**+0.8**
NHDN				*e*			07 02 00.9	
GHVR	**GHOM**	**4.15**	**302**	*e*Pn		**Pn**	**07 00 56.6**	**+1.7**
SHRT	**Shahrakht**	**4.20**	**71**	*e*Pn		**Pn**	**07 00 57.0**	**+1.3**
SHRT				IAML			07 01 52.0	
	comp=E,24nm,0.3s							
ZHSF	**Zahedan**	**5.25**	**120**	*e*Pn		**Pn**	**07 01 11.8**	**+1.6**

ISK 21 07:03:50.1, 39°.80N×26°.12E, h11km, ML1.7/6, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
EZN	**Ezine**	**0.16**	**79**	PG	Pg		07 03 54.2	+0.5
EZN				SG	Sg		07 03 56.9	+0.6
GADA	**Gvkgeada**	**0.43**	**337**	PG	Pg		07 03 58.9	+0.3
GADA				SG	Sb		07 04 05.5	-0.7
SIGR	**SIGRI**	**0.62**	**200**	PG	Pb		07 04 02.6	-0.3
SIGR				SG	Sb		07 04 11.6	+0.1
GELI	**Tayfur-Gelibol**	**0.66**	**24**	PG	Pb		07 04 03.3	-0.3
ALN	**Alexandroupoli**	**1.10**	**357**	PN	Pn		07 04 11.6	+0.2
ALN				SN	Sn		07 04 27.3	+0.7
MRMT	**Marmara Adasi**	**1.39**	**54**	PN	Pn		07 04 15.6	+0.2

ATH 21 07:04:39.3, 38°.69N×24°.55E, h14km±5km, ML1.6/2, Error ellipse: s-maj=5.7km s-min=1.0km az=46.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
SKY	**Skiros Island**	**0.19**	**1**	P	Pg		07 04 43.7	-0.1
SKY				S	Sg		07 04 47.1	+0.3
SKY				AML	AML		07 04 47.4	
	comp=N,1386μm,0.2s							
SKY				AML	AML		07 04 48.3	
	comp=E,1522μm,0.2s							
KYMI	**Kymi, Euboea I**	**0.35**	**262**	P	Pg		07 04 46.1	-0.4
KYMI				S	Sg		07 04 51.7	+0.4
KYMI				AML	AML		07 04 52.7	
	comp=E,116μm,0.1s							
KYMI				AML	AML		07 04 53.0	
	comp=N,102μm,0.2s							
KARY	**Karystos**	**0.66**	**187**	P	Pg		07 04 52.3	+0.1
KARY				S	Sb		07 05 01.4	-0.2
AOS	**Alonnisos**	**0.71**	**313**	P	Pg		07 04 53.1	0.0
AOS				S	Sb		07 05 03.1	0.0
MRKA	**Markates**	**0.75**	**272**	P	Pg		07 04 53.7	-0.2
MRKA				S	Sb		07 05 04.4	+0.1
DION	**Dionisos Attik**	**0.77**	**219**	P	Pg		07 04 53.6	-0.7
DION				S	Sg		07 05 04.6	+0.1
SKIA	**Skiathos**	**0.97**	**300**	P	Pb		07 04 57.4	-0.5

*IDC **21** 07:10:29.2±1.1, 1°.49S×134°.97E, h0km, mb3.7/5, mb1 3.9/8, mb1mx3.7/32, mbtmp3.7/8, ML3.6/3, MS3.0/4, Ms1 3.1/4, ms1mx2.6/44, Error ellipse: s-maj=41.1km s-min=20.9km az=84.0*

ISC 21 07:10:34.3±1.1, 1°.16S±0°.1×134°.9E±0°.1, h35km, n12, σ0s40/10, mb3.7/5, MS3.2/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
SIJI	**Sorong**	**3.72**	**281**	Pn		**Pn**	**07 11 29.5**	**+0.2**
	2.4nm,0.3s,baz=164,slow=22,SNR=2.7							
SIJI				Sn		**Sn**	**07 12 11.8**	**-0.2**
	1.3nm,0.3s,baz=87,slow=19,SNR=1.6							
SIJI				LR	LR		07 12 53.8	
	comp=Z,155nm,18.1s,baz=338,slow=38							
WRA	**Warramunga Arr**	**18.28**	**182**	P		**P**	**07 14 44.8**	**-0.5**
	0.2nm,0.3s,baz=0.4,slow=12,SNR=16							
FITZ	**Fitzroy Crossi**	**18.79**	**208**	P		**P**	**07 14 50.7**	**-0.2**
	0.3nm,0.3s,baz=39,slow=13,SNR=9.9							
ASAR	**Alice Springs**	**22.00**	**182**	P		**P**	**07 15 25.8**	**+0.1**
	5.3nm,0.8s,baz=8.8,slow=12,SNR=41							
KSRS	**Korea Array**	**39.36**	**351**	LR	LR		07 33 04.7	
	comp=Z,33nm,19.5s,baz=185,slow=34							
CMAR	**Chiang Mai Arr**	**40.60**	**301**	LR	LR		07 35 51.8	
	comp=Z,12nm,18.7s,baz=100,slow=38							
PETK	**Petropavlovsk-**	**57.72**	**16**	LR	LR		07 44 23.7	
	comp=Z,21nm,19.6s,baz=59,slow=35							
MKAR	**Makanchi Array**	**66.60**	**323**	P		**P**	**07 21 20.9**	**-0.3**
	0.3nm,0.6s,baz=116,slow=8.2,SNR=3.8							
ZALV	**Zalesovo Beam**	**69.07**	**331**	P		**P**	**07 21 36.1**	**-0.4**
	0.5nm,0.5s,baz=129,slow=6.5,SNR=1.4							
KURBB	**Kurchatov Arra**	**70.64**	**326**	P		**P**	**07 21 46.7**	**+0.5**
	0.3nm,0.8s,baz=108,slow=5.3,SNR=1.7							
ILAR	**Eielson Array**	**86.37**	**25**	P		**P**	**07 23 12.6**	**-0.1**
	0.4nm,0.8s,baz=254,slow=5.0,SNR=4.5							
CPUP	**Villa Florida**	**149.85**	**159**	PKPbc		**PKiKP**	**07 30 23.1**	**+0.5**
	1.5nm,0.9s,baz=270,slow=2.0,SNR=3.3							

IDC 21 07:23:06.3±1.8, 0°.47N×126°.08E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/53, mbtmp3.4/4, Error ellipse: s-maj=176.9km s-min=23.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
WRA	**Warramunga Arr**	**21.84**	**159**	P	P		07 27 59.5	-1.0
	1.1nm,0.8s,baz=337,slow=11,SNR=7.8							
ASAR	**Alice Springs**	**25.17**	**163**	P	P		07 28 34.4	+0.8
	0.2nm,0.3s,baz=344,slow=10,SNR=6.4							
MKAR	**Makanchi Array**	**59.88**	**327**	P	P		07 33 14.3	+0.4
	0.3nm,0.5s,baz=119,slow=8.3,SNR=3.1							
KURBB	**Kurchatov Arra**	**64.14**	**329**	P	P		07 33 42.0	-0.5
	0.1nm,0.4s,baz=119,slow=7.6,SNR=1.8							

*IDC **21** 07:25:31.4±1.8, 39°.65N×53°.82E, h0km, mb3.8/8, mb1 4.0/14, mb1mx3.7/62, mbtmp3.9/14, ML3.5/6, MS2.6/4, Ms1 2.6/4, ms1mx2.2/43, Error ellipse: s-maj=31.5km s-min=12.9km az=10.0*
*THR **21** 07:25:32.8±0.4, 39°.88N×53°.96E, h15km, ML3.7*
*TEH **21** 07:25:34.8, 39°.67N×53°.99E, h10km, ML3.9*
*NNC **21** 07:25:39.4±3.5, 40°.20N×55°.13E, h0km, mb4.2, Error ellipse: s-maj=49.9km s-min=9.3km az=69.0*

ISC 21 07:25:33.5±0.7, 39°.89N±0°.06×54°.08E±0°.05, h10km, n56, σ1s66/54, mb3.8/6, 3C-4D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
IMND	**Minoodasht**	**2.83**	**158**	*e*Pn		**Pn**	**07 26 19.9**	**+1.1**
IGLO	**Ghaloghah**	**3.39**	**183**	*e*Pn		**Pn**	**07 26 26.6**	**-0.1**
IGLO				*e*			07 26 29.1	
BJRD	**Bojnurd**	**3.40**	**129**	*e*Pn		**Pn**	**07 26 28.3**	**+1.5**
GEYT	**Alibeck**	**3.71**	**121**	Pn		**Pn**	**07 26 32.0**	**+1.0**
	12nm,0.3s,baz=301,slow=16,SNR=75							
GEYT				Sn		**Sn**	**07 27 11.9**	**-2.8**
	8.3nm,0.3s,baz=318,slow=19,SNR=5.3							
GEYT				Lg	Lg		07 27 35.6	
	5.1nm,0.3s,baz=302,slow=46,SNR=2.2							
GYA0B	**ALIBECK ARRAY**	**3.71**	**121**	⇓Pn		**Pn**	**07 26 31.7**	**+0.8**
GYA0B				⇑Sn		**Sn**	**07 27 11.6**	**-3.2**
GYA0B				⇓Lg	Lg		07 27 25.4	
IALA	**Alasht**	**3.93**	**195**	*e*Pn		**Pn**	**07 26 34.6**	**+0.4**
ISHM	**Shahmirzad**	**4.13**	**189**	*e*Pn		**Pn**	**07 26 38.4**	**+1.5**
ISFR	**Sfrayin**	**4.18**	**131**	*e*Pn		**Pn**	**07 26 39.2**	**+1.5**
ISFR				*e*			07 27 29.9	
SHRO	**Shahrood**	**4.18**	**158**	*e*Pn		**Pn**	**07 26 38.6**	**+1.0**
PQL	**Pirkuli**	**4.28**	**284**	*e*Pn		Pn	07 26 44.2	+5.3
IEMG	**Emamgholi**	**4.35**	**123**	*e*Pn		**Pn**	**07 26 41.1**	**+1.1**
IEMG				*e*			07 27 41.1	
IFIR	**Firoozkooh**	**4.37**	**194**	*e*Pn		**Pn**	**07 26 41.6**	**+1.4**
IANJ	**Anjilo**	**4.42**	**182**	*e*Pn		**Pn**	**07 26 43.3**	**+2.4**
IANJ				*e*			07 26 46.0	
GLBA	**Clilabad**	**4.44**	**263**	*e*Pn		**Pn**	**07 26 42.5**	**+1.6**
SBZV	**Sabzevar**	**4.47**	**140**	*e*Pn		**Pn**	**07 26 42.8**	**+1.2**
ILAS	**Lasjerd**	**4.59**	**191**	*e*Pn		**Pn**	**07 26 44.6**	**+1.4**
IDMV	**Damavand**	**4.60**	**201**	*e*Pn		**Pn**	**07 26 44.0**	**+0.6**
IDMV				*e*			07 34 20.1	
LRK	**Lerik**	**4.62**	**256**	*e*Pn		**Pn**	**07 26 41.8**	**-1.8**
YRD	**Yardimli**	**4.62**	**260**	*e*Pn		**Pn**	**07 26 42.1**	**-1.5**
IGZV	**Ghazvin**	**4.64**	**222**	*e*Pn		**Pn**	**07 26 43.3**	**-0.5**
IKRD	**Kardeh**	**4.67**	**130**	*e*Pn		**Pb**	**07 26 54.0**	**-1.7**
XNQ	**Khinaliq**	**4.70**	**288**	*e*Pn		**Pn**	**07 26 49.1**	**+4.4**
THKV	**Tehran--Karaj**	**4.71**	**213**	IAML			07 27 41.9	
	comp=E,50nm,0.5s							
QBL	**Gabala**	**4.88**	**284**	*e*Pn		**Pn**	**07 26 51.2**	**+4.3**
GRMI	**Germi**	**4.91**	**259**	*e*Pn		**Pn**	**07 26 47.3**	**-0.2**
IAKL	**Akhelmad**	**4.94**	**130**	*e*Pn		**Pn**	**07 26 49.6**	**+1.6**
IAKL				*e*			07 27 52.6	
IPAY	**Payeh**	**5.18**	**130**	*e*Pn		**Pn**	**07 26 52.5**	**+1.2**
IPAY				*e*			07 27 56.9	
IVRN	**Varamin**	**5.23**	**202**	*e*Pn		**Pn**	**07 26 52.6**	**+0.7**
ZNJK	**Zanjan**	**5.32**	**235**	*e*Pn		**Pn**	**07 26 52.7**	**-0.6**
ZNJK				IAML			07 27 52.4	
	comp=N,34nm,0.1s							
IRAZ	**Razeghan**	**5.56**	**218**	*e*Pn		**Pn**	**07 26 56.6**	**+0.1**
ZKT	**Zaqatala**	**5.89**	**290**	*e*Pn		Pn	07 27 06.6	+5.7
TNSJ	**Nastanj**	**6.26**	**160**	*e*Pn		**Pn**	**07 27 07.6**	**+1.6**
JRKH	**Jarkhoshk**	**6.36**	**127**	*e*Pn		**Pn**	**07 27 08.2**	**+0.8**
GDB	**GEDABAY**	**6.42**	**280**	*e*Pn		**Pn**	**07 27 10.1**	**+1.9**
TABS	**Tabas**	**6.69**	**158**	*e*Pn		**Pn**	**07 27 13.4**	**+1.5**
ANAR	**Anarak**	**6.70**	**182**	*e*Pn		**Pn**	**07 27 12.5**	**+0.5**
TKDS	**Koohdasht(Taba**	**6.73**	**158**	*e*Pn		**Pn**	**07 27 14.1**	**+1.7**
TKDS				*e*			07 27 15.0	
TPRV	**Parvadeh(Tabas**	**7.17**	**162**	*e*Pn		**Pn**	**07 27 19.9**	**+1.4**
SHRT	**Shahrakht**	**7.98**	**139**	*e*Pn		**Pn**	**07 27 31.1**	**+1.5**
KBZ	**Khabaz**	**9.18**	**298**	Pn		**Pn**	**07 27 46.5**	**+0.5**
	comp=N,0.4nm,0.3s,baz=135,slow=4.3,SNR=2.8							
KBZ				Sn		**Sn**	**07 29 25.8**	**-3.5**
	comp=N,0.7nm,0.3s,baz=167,slow=8.7,SNR=2.4							
AB31	**Akbulak array**	**10.25**	**22**	⇓Pn		**Pn**	**07 28 00.7**	**+0.1**
	comp=N,2.5nm,0.3s,baz=199,slow=12,SNR=12							
AB31				⇑Sn		Sn	07 29 50.9	-4.6
	comp=N,2.0nm,0.3s,baz=190,slow=24,SNR=6.0							
AKTO	**Aktyubinsk**	**10.90**	**13**	Pn		**Pn**	**07 28 10.1**	**+0.6**
	comp=N,0.7nm,0.3s,baz=187,slow=7.2,SNR=6.1							
AKTO				Sn		Sn	07 30 06.2	-5.2
	comp=N,1.9nm,0.3s,baz=87,slow=16,SNR=7.4							
AKTO				LR		LR	07 33 27.8	
	comp=N,35nm,18.2s,baz=170,slow=43							
AKTO	**Aktyubinsk**	**10.90**	**13**	⇑Pn		**Pn**	**07 28 09.9**	**+0.4**
	comp=N,1.1nm,0.3s							
AKTO				⇓Sn		Sn	07 30 08.1	-3.4
	comp=N,7.8nm,0.6s							
AAK	**Ala-Archa**	**15.60**	**73**	Pn		**Pn**	**07 29 13.6**	**+0.1**
	comp=N,0.1nm,0.3s,baz=205,slow=14,SNR=4.0							
AAK				LR		LR	07 36 18.5	
	comp=N,25nm,19.9s,baz=261,slow=41							
ARU	**Arti**	**16.81**	**9**	Pn		**Pn**	**07 29 27.6**	**-1.2**
	comp=N,0.0nm,0.3s,baz=175,slow=12,SNR=1.4							
BVAR	**Borovoye Array**	**17.23**	**35**	Pn		**Pn**	**07 29 34.1**	**0.0**
	comp=N,0.6nm,0.3s,baz=220,slow=8.9,SNR=4.5							
OBN	**Obninsk**	**19.20**	**328**	LR		LR	07 38 50.7	
	comp=N,10nm,20.9s,baz=52,slow=41							
KURBB	**Kurchatov Arra**	**20.19**	**50**	P		**P**	**07 30 10.3**	**+2.2**
	comp=N,0.8nm,0.7s,baz=256,slow=12,SNR=2.5							
AKASG	**Malin Array Be**	**20.45**	**310**	P		**P**	**07 30 10.4**	**-0.6**
	comp=N,3.4nm,0.4s,baz=106,slow=9.3,SNR=9.5							
MKAR	**Makanchi Array**	**21.57**	**62**	P		**P**	**07 30 25.4**	**+2.2**
	comp=N,1.0nm,0.6s,baz=253,slow=15,SNR=2.3							
ZALV	**Zalesovo Beam**	**25.02**	**46**	P		**P**	**07 30 58.1**	**+0.6**
	comp=N,1.3nm,0.5s,baz=259,slow=12,SNR=2.7							
FINES	**FINESS Array B**	**27.55**	**331**	P		**P**	**07 31 19.1**	**-1.0**
	comp=N,1.4nm,0.8s,baz=19,slow=8.8,SNR=2.2							
VRAC	**Vranov**	**28.05**	**302**	LR		LR	07 43 57.0	
	comp=N,14nm,18.0s,baz=104,slow=40							
ARCES	**ARCESS Array B**	**33.32**	**342**	P		**P**	**07 32 11.5**	**+0.4**
	comp=N,2.4nm,0.9s,baz=126,slow=6.2,SNR=4.6							
SPITS	**Spitsbergen Ar**	**41.36**	**349**	P		**P**	**07 33 20.3**	**+1.1**
	comp=N,1.9nm,0.4s,baz=139,slow=11,SNR=9.1							
ILAR	**Eielson Array**	**74.38**	**9**	P		**P**	**07 37 10.9**	**-0.1**
	comp=N,0.3nm,0.7s,baz=347,slow=7.9,SNR=4.7							

WEL 21 07:39:33.7±0.6, 32°S±9°×17°9E±2°.0, h459km±14km, M4.0/15, mB4.2/6, ML4.9/15, MLv4.6/15, Mw(mB)3.3/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
MXZ	**Matakaoa Point**	**5.24**	**187**	P	P		07 40 59.5	-1.1
MXZ				S	S		07 42 10.9	-0.8
WMGZ	**Waiomatatini S**	**5.48**	**186**	P	P		07 41 03.0	0.0
WMGZ				S	S		07 42 16.7	+0.7
HAZ	**Te Kaha**	**5.50**	**191**	P	P		07 41 03.3	+0.1
HAZ				S	S		07 42 16.2	-0.2
PKGZ	**Pakihiroa**	**5.59**	**189**	P	P		07 41 03.6	-0.5
PKGZ				S	S		07 42 18.4	+0.3
PUZ	**Puketiti**	**5.75**	**187**	P	P		07 41 04.8	-0.9
PUZ				S	S		07 42 19.4	-1.6
TWGZ	**Tauwhareparae**	**5.88**	**189**	P	P		07 41 08.3	+1.2
TWGZ				S	S		07 42 26.0	+2.6
MWZ	**Matawai**	**6.11**	**192**	P	P		07 41 08.8	-0.5
URZ	**Urewera**	**6.12**	**195**	P	P		07 41 08.5	-0.9
URZ				S	S		07 42 27.1	-0.6
TKGZ	**Te Karaka**	**6.16**	**189**	P	P		07 41 29.1	+19
TKGZ				S	S		07 42 48.4	+20
CNGZ	**Carnagh Statio**	**6.16**	**187**	P	P		07 41 10.5	+0.6
CNGZ				S	S		07 42 31.0	+2.5
RAGZ	**Rawiri**	**6.28**	**192**	P	P		07 41 11.4	+0.2
RAGZ				S	S		07 42 33.8	+2.9
MUGZ	**Murupara**	**6.41**	**197**	P	P		07 41 11.8	-0.5
MUGZ				S	S		07 42 33.2	+0.1
RIGZ	**Rimuhau**	**6.43**	**190**	P	P		07 41 12.1	-0.6
RIGZ				S	S		07 42 33.5	-0.2
RTZ	**Ruatahuna**	**6.49**	**195**	P	P		07 41 13.5	+0.2
RTZ				S	S		07 42 36.1	+1.3
SNGZ	**Shannon Statio**	**6.58**	**192**	P	P		07 41 14.6	+0.5
SNGZ				S	S		07 42 37.2	+0.8
PRGZ	**Paritu Road**	**6.63**	**189**	P	P		07 41 15.9	+1.3
PRGZ				S	S		07 42 36.0	-1.4
RAHZ	**Arahi**	**6.75**	**194**	P	P		07 41 16.6	+0.6
RAHZ				S	S		07 42 41.5	+1.8
KNZ	**Kokohu**	**6.76**	**190**	P	P		07 41 15.6	-0.3
KNZ				S	S		07 42 38.9	-0.8
MHGZ	**Mahia Peninsul**	**6.85**	**188**	P	P		07 41 17.6	+0.7
MHGZ				S	S		07 42 44.5	+2.9
WHHZ	**Waihua**	**6.88**	**192**	P	P		07 41 17.5	+0.3
WHHZ				S	S		07 42 43.3	+1.1
NMHZ	**Naumai**	**6.99**	**195**	P	P		07 41 18.9	+0.4
NMHZ				S	S		07 42 45.5	+1.2
ARHZ	**Aropaoanui**	**7.11**	**194**	P	P		07 41 20.5	+0.9
ARHZ				S	S		07 42 46.1	-0.4
BKZ	**Black Stump Fm**	**7.13**	**197**	P	P		07 41 18.4	-1.4
BKZ				S	S		07 42 47.8	+0.9
PXZ	**Pawanui**	**7.88**	**193**	P	P		07 41 27.1	-0.6
PXZ				S	S		07 42 59.4	-1.9

*JMA **21** 07:39:47.5, 23°.73N×121°.55E, h10km±2km, M2.7*
*ASIES **21** 07:39:48.4, 23°.78N×121°.39E, h19km, MW2.9*
*TAP **21** 07:39:48.7, 23°.77N×121°.43E, h15km, ML3.5, C*

ISC 21 07:39:48.5±0.8, 23°.76N±0°.01×121°.45E±0°.02, h16km±4km, n112, σ0s78/212, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
ESL	**Shilin**	**0.06**	**340**	*i* P		**Pg**	**07 39 51.5**	**-0.1**
	baz=21							
ESL				*i* S		**Sg**	**07 39 53.5**	**-0.1**
	baz=21							
EGFH	**Guangfu**	**0.10**	**195**	*i* P		**Pb**	**07 39 52.1**	**+0.2**
	baz=179							
EGFH				S		**Sg**	**07 39 54.2**	**+0.1**
	baz=179							
HWA	**Hwalien**	**0.26**	**33**	*i* P		**Pb**	**07 39 55.1**	**+0.4**
	baz=36							
HWA				*i* S		**Sb**	**07 40 00.1**	**+1.2**
	baz=36							
HGSD	**Ruisui**	**0.27**	**186**	*i* P		**Pb**	**07 39 54.9**	**-0.1**
	baz=185							
HGSD				*e*S		**Sb**	**07 40 00.0**	**+0.8**
	baz=185							
EHY	**Hungye**	**0.28**	**205**	P		**Pg**	**07 39 54.3**	**-0.3**
	baz=198							
EHY				S		**Sg**	**07 39 58.9**	**+0.1**
	baz=198							
VWDT	**VWDT**	**0.29**	**269**	P		**Pb**	**07 39 54.8**	**-0.4**
	baz=260							
VWDT				S		**Sb**	**07 39 58.8**	**-1.0**
	baz=260							
OWD	**Renai**	**0.32**	**307**	*i* P		**Pb**	**07 39 55.1**	**-0.8**
	baz=308							
OWD				*i* S		**Sg**	**07 39 59.2**	**-0.7**
	baz=308							
TWD	**Chiawan**	**0.34**	**22**	*e*P		**Pg**	**07 39 55.7**	**+0.1**
	baz=29							
TWD				S		**Sb**	**07 40 01.0**	**-0.4**
	baz=29							
CHGB	**Renai**	**0.39**	**319**	P		**Pb**	**07 39 56.6**	**-0.6**
	baz=329							
CHGB				S		**Sb**	**07 40 02.2**	**-0.9**
	baz=329							
YULB	**Yu-li**	**0.40**	**201**	P		**Pg**	**07 39 56.3**	**-0.3**
	baz=190							
YULB				S		**Sb**	**07 40 02.5**	**-0.4**
	baz=190							
WHF	**Hehuan Shan**	**0.42**	**336**	*i* P		**Pg**	**07 39 56.8**	**-0.4**
	baz=340							
WHF				*i* S		**Sg**	**07 40 02.3**	**-0.8**
	baz=340							
NACB	**Ninganchiao**	**0.43**	**17**	P		**Pg**	**07 39 56.8**	**-0.5**
	baz=22							
NACB				S		**Sg**	**07 40 03.0**	**-0.2**
	baz=22							
TWF1	**Yuli**	**0.43**	**200**	P		**Pg**	**07 39 57.0**	**-0.3**
	baz=194							
TWF1				*e*S		**Sb**	**07 40 04.5**	**+0.5**
	baz=194							
ETLH	**Xiulin Townshi**	**0.44**	**3**	*i* P		**Pg**	**07 39 57.2**	**-0.4**
	baz=8.0							
ETLH				S		**Sg**	**07 40 03.2**	**-0.4**
	baz=8.0							
SSLB	**Suanglung**	**0.46**	**273**	*e*P		**Pg**	**07 39 57.2**	**-0.5**
	baz=272							
SSLB				*e*S		**Sg**	**07 40 03.0**	**-1.0**
	baz=272							
SMLT	**Sun Moon Lake**	**0.52**	**284**	P		**Pb**	**07 39 58.6**	**-0.7**
	baz=283							
SMLT				S		**Sb**	**07 40 06.0**	**-0.7**
	baz=283							
TWT	**Tachien**	**0.55**	**333**	P		**Pb**	**07 39 59.3**	**-0.6**
	baz=333							
TWT				S		**Sb**	**07 40 07.8**	**+0.2**
	baz=333							
DPDB	**Guoxing**	**0.55**	**299**	P		**Pb**	**07 39 59.3**	**-0.5**
	baz=307							
DPDB				S		**Sb**	**07 40 06.9**	**-0.7**
	baz=307							
WHYT	**Xinyi Township**	**0.55**	**263**	*i* P		**Pb**	**07 39 59.5**	**-0.3**
	baz=256							
WHYT				*e*S		**Sb**	**07 40 06.5**	**-1.0**
	baz=256							
TDCB	**Techi**	**0.56**	**331**	P		**Pb**	**07 39 59.6**	**-0.3**
	baz=333							
TDCB				*e*S		**Sb**	**07 40 07.6**	**-0.2**
	baz=333							
TYC	**Yuchr**	**0.56**	**285**	P		**Pb**	**07 39 59.3**	**-0.7**
	baz=284							
TYC				*e*S		**Sb**	**07 40 07.2**	**-0.5**
	baz=284							
FULB	**Fuli**	**0.58**	**195**	P		**Pb**	**07 40 00.2**	**-0.1**
	baz=199							
CHKT	**Chengkung**	**0.66**	**187**	P		**Pg**	**07 40 01.2**	**-0.3**
	baz=171							
CHKT				S		**Sb**	**07 40 11.9**	**+1.3**
	baz=171							
NNSB	**Datong**	**0.67**	**354**	*i* P		**Pb**	**07 40 01.4**	**-0.4**
	baz=4.0							
NNSB				*e*S		**Sg**	**07 40 10.2**	**-0.4**
	baz=4.0							
NNSH	**Datong**	**0.67**	**354**	*i* P		**Pg**	**07 40 01.4**	**-0.3**
	baz=1.0							
NNSH				S		**Sg**	**07 40 10.1**	**-0.

CHN2	**Minshiung** baz=254	**0.93**	**256**	P	**Pn**	07 40 08.0	+1.2	
CHN2	baz=254			S	**Sn**	07 40 20.8	+1.1	
WTP	**Ta-pu** baz=239	**0.93**	**237**	P	**Pn**	07 40 07.2	+0.3	
WTP	baz=239			S	**Sn**	07 40 20.2	+0.4	
WDJ	**Dajia District** baz=309	**0.95**	**308**	P	**Pn**	07 40 07.5	+0.4	
WDJ	baz=309			S	**Sn**	07 40 22.7	+2.5	
NSTT	**Nanjuang** baz=336	**0.96**	**335**	P	**Pn**	07 40 07.1	-0.2	
NSTT	baz=336			S	**Sn**	07 40 20.6	0.0	
LIOB	**Emei** baz=337	**0.97**	**336**	*eP*	**Pn**	07 40 07.4	0.0	
LIOB	baz=337			S	**Sn**	07 40 20.8	0.0	
PTSB	**Yuanli** baz=316	**0.97**	**315**	*eP*	**Pn**	07 40 08.2	+0.8	
PTSB	baz=316			S	**Sn**	07 40 22.3	+1.5	
CHY	**Chiayi** baz=253	**0.98**	**255**	P	**Pn**	07 40 07.2	-0.3	
CHY	baz=253			*eS*	**Sn**	07 40 21.8	+0.8	
NMLH	**Miaoli** baz=323	**0.98**	**322**	P	**Pn**	07 40 08.2	+0.6	
NMLH	baz=323			*eS*	**Sn**	07 40 22.8	+1.6	
EOS1	**EOS1** baz=28	**1.00**	**38**	P	**Pb**	07 40 07.4	+0.1	
EOS1	baz=28			*eS*	**Sn**	07 40 23.6	+2.2	
TWG	**Pinlang** baz=184	**1.00**	**201**	*eP*	**Pg**	07 40 07.8	-0.1	
TWG	baz=184			*eS*	**Sn**	07 40 21.8	+0.3	
TWGBT	**Beinan** baz=184	**1.00**	**200**	*eP*	**Pg**	07 40 07.7	-0.2	
TWGBT	baz=184			S	**Sn**	07 40 21.4	-0.2	
RLNB	**Erlin** baz=277	**1.01**	**278**	P	**Pn**	07 40 08.2	+0.2	
RLNB	baz=277			S	**Sn**	07 40 22.4	+0.6	
NWLT	**Wulai** baz=15	**1.01**	**2**	P	**Pg**	07 40 07.8	-0.4	
NWLT	baz=15			S	**Sb**	07 40 20.5	-0.2	
TWK	**Hsinying** baz=239	**1.01**	**241**	*eP*	**Pn**	07 40 08.6	+0.5	
TWK	baz=239			S	**Sn**	07 40 22.8	+0.8	
CHN1	**Nanshi** baz=234	**1.03**	**236**	*eP*	**Pn**	07 40 08.7	+0.5	
CHN1	baz=234			S	**Sn**	07 40 23.4	+1.1	
SNST	**Tainan City** baz=237	**1.03**	**239**	*eP*	**Pn**	07 40 08.3	0.0	
SNST	baz=237			*eS*	**Sn**	07 40 23.4	+1.0	
TWH	**Lutao** baz=177	**1.05**	**179**	*eP*	**Pb**	07 40 06.2	-2.0	
TWH	baz=177			S	**Sb**	07 40 21.2	-0.4	
SGST	**Jiashian** baz=221	**1.05**	**230**	P	**Pg**	07 40 08.5	-0.3	
SGST	baz=221			*eS*	**Sn**	07 40 23.6	+0.8	
SLGT	**Liugui** baz=222	**1.07**	**224**	P	**Pg**	07 40 09.2	+0.1	
SLGT	baz=222			S	**Sn**	07 40 24.2	+1.0	
WTCT	**Ta-ch'eng** baz=274	**1.08**	**276**	*eP*	**Pn**	07 40 08.4	-0.5	
WTCT	baz=274			*eS*	**Sn**	07 40 24.2	+0.7	
WLTB	**Daxi** baz=360	**1.10**	**350**	*eP*	**Pg**	07 40 11.0	+1.2	
WLTB	baz=360			*eS*	**Sn**	07 40 24.4	+0.3	
SBCB	**Hsinchu** baz=339	**1.11**	**337**	*eP*	**Pn**	07 40 09.2	-0.2	
SBCB	baz=339			*eS*	**Sn**	07 40 25.4	+1.1	
HSN	**Hsinchu** baz=341	**1.13**	**337**	S	**Sn**	07 40 27.6	+2.9	
WSF	**Szhu** baz=263	**1.14**	**264**	*eS*	**Sg**	07 40 26.8	+1.5	
NTC	**Toucheng** baz=20	**1.14**	**17**	*eP*	**Pb**	07 40 09.9	+0.1	
NTC	baz=20			*eS*	**Sn**	07 40 25.2	+0.1	
NHDH	**Xindian Distri** baz=13	**1.20**	**3**	P	**Pg**	07 40 11.8	+0.1	
NHDH	baz=13			*eS*	**Sg**	07 40 27.1	-0.2	
TATO	**Taipei** baz=12	**1.21**	**1**	*eP*	**Pg**	07 40 11.3	-0.5	
TATO	baz=12			*eS*	**Sg**	07 40 27.9	+0.2	
CHN8	**Yiju** baz=249	**1.21**	**250**	S	**Sg**	07 40 28.5	+0.7	
TWA	**Mucha** baz=8.0	**1.22**	**6**	*eP*	**Pn**	07 40 10.8	0.0	
TWA	baz=8.0			*eS*	**Sg**	07 40 28.3	+0.3	
NCUH	**Zhongli** baz=350	**1.23**	**349**	P	**Pg**	07 40 11.9	-0.3	
NCUH	baz=350			S	**Sg**	07 40 31.6	+3.4	
NCU	**National Centr** baz=351	**1.23**	**349**	S	**Sg**	07 40 30.4	+2.2	
ECL	**Taimali** baz=188	**1.25**	**202**	P	**Pb**	07 40 11.6	0.0	
ECL	baz=188			S	**Sg**	07 40 28.5	-0.4	
TIPB	**Shuangxi** baz=18	**1.25**	**16**	P	**Pb**	07 40 11.7	-0.1	
TIPB	baz=18			*eS*	**Sg**	07 40 28.8	-0.3	
SSD	**Sandimen** baz=206	**1.26**	**217**	*eP*	**Pb**	07 40 11.9	0.0	
SSD	baz=206			S	**Sg**	07 40 29.2	-0.1	
TAP1	**Taipei** baz=12	**1.27**	**3**	*eS*	**Sg**	07 40 29.5	-0.2	
TWM1	**Shoushan** baz=224	**1.33**	**226**	*eP*	**Pg**	07 40 14.9	+0.8	
TWM1	baz=224			*eS*	**Sg**	07 40 33.7	+2.2	
TWB1	**Santiao Chiao** baz=24	**1.33**	**21**	*eP*	**Pb**	07 40 13.0	-0.1	
TWB1	baz=24			*eS*	**Sb**	07 40 30.6	+0.7	
TWS1	**Kuangyinshan** baz=8.0	**1.33**	**359**	*eP*	**Pn**	07 40 12.6	+0.1	
TWS1	baz=8.0			*eS*	**Sg**	07 40 31.5	-0.2	
NWF	**Wu-fen Shan** baz=26	**1.34**	**13**	*eP*	**Pg**	07 40 13.9	-0.4	
NWF	baz=26			*eS*	**Sb**	07 40 30.6	+0.4	
WFSB	**Wu-fen Shan** baz=15	**1.34**	**13**	*eP*	**Pb**	07 40 13.1	-0.1	
WFSB	baz=15			*eS*	**Sg**	07 40 30.9	-0.9	
MASBT	**Mashibuluo** baz=212	**1.37**	**214**	P	**Pb**	07 40 13.9	+0.2	
MASBT	baz=212			*eS*	**Sg**	07 40 33.6	+0.8	
YM01	**YM01** baz=7.0	**1.38**	**4**	*eP*	**Pn**	07 40 13.4	+0.3	
YM01	baz=7.0			*eS*	**Sg**	07 40 32.2	-1.0	
YM04	**YM04** baz=23	**1.39**	**3**	P	**Pb**	07 40 14.2	+0.1	
YM04	baz=23			*eS*	**Sb**	07 40 32.1	+0.5	
YM10	**YM10** baz=6.0	**1.39**	**4**	*eP*	**Pb**	07 40 14.0	-0.1	
YM10	baz=6.0			*eS*	**Sg**	07 40 32.4	-1.1	
NTST	**Danshui** baz=14	**1.40**	**360**	*eP*	**Pg**	07 40 14.6	-0.8	
NTST	baz=14			*eS*	**Sg**	07 40 34.5	+0.9	
YM11	**YM11** baz=7.0	**1.40**	**4**	*eP*	**Pb**	07 40 14.0	-0.3	
YM11	baz=7.0			*eS*	**Sg**	07 40 32.7	-1.2	
YM03	**YM03** baz=21	**1.41**	**3**	P	**Pg**	07 40 15.2	-0.5	
YM03	baz=21			*eS*	**Sg**	07 40 33.0	-1.2	
ANP	**Anpu** baz=19	**1.42**	**2**	*eP*	**Pn**	07 40 13.9	+0.2	
ANP	baz=19			*eS*	**Sb**	07 40 32.8	+0.3	
EAST	**Anshuo** baz=189	**1.48**	**202**	*eP*	**Pn**	07 40 14.2	-0.3	
EAST	baz=189			*eS*	**Sn**	07 40 33.6	+0.1	
JYNG	**Yonagunijimaku**	**1.53**	**63**	P	**Pn**	07 40 14.7	-0.3	
SCZT	**Fangliau** baz=201	**1.58**	**209**	*eP*	**Pn**	07 40 16.4	+0.6	
SCZT	baz=201			*eS*	**Sb**	07 40 38.0	+0.9	
YOJ	**Yonaguni jima**	**1.58**	**64**	P	**Pn**	07 40 15.5	-0.3	
WDGT	**Dungji** baz=253	**1.72**	**253**	*eP*	**Pn**	07 40 16.9	-0.8	
WDGT	baz=253			S	**Sb**	07 40 40.4	-0.7	
PHUB	**P'eng-hu** baz=245	**1.74**	**262**	*eP*	**Pb**	07 40 19.0	-1.1	
PHUB	baz=245			*eS*	**Sb**	07 40 41.9	+0.1	
PNG	**Penghu** baz=262	**1.75**	**264**	P	**Pn**	07 40 18.5	+0.4	
PNG	baz=262			S	**Sb**	07 40 41.9	-0.1	
VCHM	**Qimei** baz=253	**1.94**	**254**	*eP*	**Pn**	07 40 19.9	-0.8	
VCHM	baz=253			*eS*	**Sb**	07 40 46.7	-0.7	
PCYT	**Pengchaiyu** baz=20	**1.94**	**17**	*eP*	**Pn**	07 40 21.2	+0.4	
PCYT	baz=20			*eS*	**Sn**	07 40 45.6	+0.8	
IRIF	**Iriomote-Funau**	**2.16**	**74**	P	**Pn**	07 40 23.6	-0.1	
HATJ	**Hateruma jima**	**2.17**	**82**	*eS*	**Sn**	07 40 49.4	-1.1	
VWUC	**VWUC** baz=303	**2.20**	**304**	*eP*	**Pn**	07 40 24.2	-0.1	
PTTC	**Pingtan** baz=320	**2.31**	**319**	*eP*	**Pn**	07 40 27.3	+1.4	
JKRS	**Kuro-shima**	**2.38**	**78**	P	**Pn**	07 40 27.4	+0.5	
JKRS				*eS*	**Sn**	07 40 56.2	+0.5	
PTMZ	**Houxiangcun** baz=300	**2.48**	**301**	*eP*	**Pn**	07 40 29.4	+1.2	
PTMZ	baz=300			*eS*	**Sn**	07 40 57.8	-0.3	
JIJ	**Ishigaki jima**	**2.53**	**76**	P	**Pn**	07 40 28.5	-0.4	
JIJ				S	**Sn**	07 40 58.0	-1.3	
JISG	**Ishigakijimahi**	**2.73**	**72**	P	**Pn**	07 40 30.9	-0.8	
JISG				*eS*	**Sn**	07 41 03.4	-1.0	
MATB	**Ma-tsu** baz=330	**2.75**	**330**	*eP*	**Pn**	07 40 33.1	+1.3	
MATB	baz=330			*eS*	**Sn**	07 41 05.7	+1.0	
JTJ	**Tarama**	**3.09**	**73**	P	**Pn**	07 40 36.8	+0.2	
JTJ				*eS*	**Sn**	07 41 13.3	+0.1	

*KRAR **21** 07:46:22.9±0.0,53.°79N×88.°22E,M2.3,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*NNC **21** 07:46:23.4±2.5,53.°62N×88.°12E,h0km,mb3.3,mpv2.9, Error ellipse: s-maj=19.2km s-min=10.4km az=60.0, Suspected Mining explosion.*

IDC 21 07:46:22.3±2.9,53.°79N×88.°19E,h0km,mb1 3.0/3, mb1mx2.9/38,mbtmp3.0/3,ML2.5/3,12C-2D,Error ellipse: s-maj=23.9km s-min=17.2km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
I46RU	**ZALESOVO INFRA** baz=91,slow=313,SNR=5.6	**2.00**	**276**	*i*		07 58 50.0	
ZAA0	**Zalesovo Array** 1.8nm,0.6s	**2.00**	**276**	⇑Pn	Pn	07 46 56.9	-0.4
ZAA0	4.1nm,0.8s			⇑Sn	Sb	07 47 25.4	+0.5
ZALV	**Zalesovo Beam** 2.4nm,0.3s,baz=91,slow=16,SNR=22	**2.00**	**276**	Pn	Pn	07 46 57.0	-0.3
ZALV	6.9nm,0.3s,baz=96,slow=25,SNR=22			Lg	Lg	07 47 25.0	
KURK	**Kurchatov** 1.3nm,0.7s	**6.63**	**246**	⇑Pn	Pn	07 48 01.3	+0.3
KURK	1.1nm,0.7s			⇑Sn	Sn	07 49 16.1	-1.1
KURK	8.4nm,1.3s			⇑Lg	Lg	07 49 48.4	
KURBB	**Kurchatov Arra** 0.2nm,0.3s,baz=62,slow=14,SNR=13	**6.73**	**246**	Pn	Pn	07 48 02.8	+0.6
KURBB	0.1nm,0.3s,baz=62,slow=26,SNR=4.0			Sn	Sn	07 49 19.8	+0.3
KURBB	0.1nm,0.3s,baz=61,slow=32,SNR=10			Lg	Lg	07 49 55.0	
KURBB	**Kurchatov Arra** 3.2nm,0.8s	**6.73**	**246**	⇑Pn	Pn	07 48 02.0	-0.2
KURBB	5.8nm,0.9s			⇓Sn	Sn	07 49 17.0	-2.6
KURBB	3.9nm,0.8s			⇑Lg	Lg	07 49 51.9	
MK31	**Makanchi Array** 0.1nm,0.4s,baz=29,slow=13,SNR=8.3	**7.96**	**211**	⇑Pn	Pn	07 48 20.3	+1.2
MK31	0.5nm,0.6s,baz=255,slow=46,SNR=4.1			⇑Sn	Sn	07 49 48.1	-1.7
MK31	0.5nm,0.6s,baz=34,slow=30,SNR=4.2			⇑Lg	Lg	07 50 29.6	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=28,slow=13,SNR=6.0	**7.96**	**211**	Pn	Pn	07 48 20.0	+0.9
MKAR	0.1nm,0.3s,baz=29,slow=26,SNR=3.5			Sn	Sn	07 49 50.3	+0.4
MKAR	0.1nm,0.3s,baz=30,slow=27,SNR=6.2			Lg	Lg	07 50 31.1	
MAKZ	**Makanchi** 1.0nm,0.7s	**8.04**	**212**	⇑Pn	Pn	07 48 20.2	-0.1
MAKZ	1.0nm,0.9s			⇑Sn	Sn	07 49 50.6	-1.3
MAKZ	3.0nm,1.0s			⇓Lg	Lg	07 50 32.7	

VIE 21 07:52:24.0±0.8,47.°54N×14.°91E,h0km,mb1.1/2,ml1.2/3, Error ellipse: s-maj=8.2km s-min=3.7km az=24.0 2 km ESE of Eisenerz Mining explosion.,Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
ARSA	**Arzberg** 3.9nm,0.2s	**0.51**	**124**	Pg	Pg	07 52 33.3	-0.4
MOA	**Molln** 0.7nm,0.1s	**0.54**	**306**	*e*Pg	Pg	07 52 35.0	+0.7
CONA	**Conrad Observa** 1.1nm,0.2s	**0.75**	**58**	*e*Pg	Pg	07 52 39.1	+0.6
CONA	2.8nm,0.2s			Sg	Sb	07 52 49.9	-1.1
KRUC	**Moravsky**	**1.82**	**32**	*e*PN	Pn	07 52 56.6	0.0
KRUC				*e*SG	Sn	07 53 20.6	+0.2

*HEL **21** 07:53:59.4±0.2,57.°65N×21.°60E,h0km,ML1.8,Explosion*
*EST **21** 07:53:59.7±0.2,57.°66N×21.°60E,h0km,ML1.8(HEL), Explosion*
*UPP **21** 07:54:02.1±1.2,57.°74N×21.°43E,h0km,ML2.8,Suspected explosion*
*LVSN **21** 07:54:03.9±5.4,57.°61N×21.°89E,h0km±57km,ML1.8*

ISC 21 07:54:00.0±1.0,57.°70N±0.°04×21.°71E±0.°04,h0km,n31, σ0s85/44,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.32**	**103**	*e*P	**Pg**	**07 54 06.3**	**+0.1**
SLIT	**Slitere, Latvi**	**0.32**	**103**	*e*P	**Pg**	**07 54 06.6**	**+0.4**
SLIT	comp=N,515nm,0.5s			AML	AML	07 54 24.1	
SLIT	comp=E,565nm,0.8s			AML	AML	07 54 33.6	
SLIT				AML	AML	07 54 37.9	
	comp=Z,328nm,0.5s						
SLIT	**Slitere, Latvi**	**0.32**	**103**	*e*P	**Pg**	**07 54 06.6**	**+0.4**
SLIT				*e*S	**Sg**	**07 54 11.2**	**+0.8**
MTSE	**Matsula**	**1.51**	**47**	*e*P	**Pn**	**07 54 27.7**	**-0.5**
MTSE				*e*S	**Sn**	**07 54 50.8**	**+2.2**
MTSE	**Matsula**	**1.51**	**47**	*e*P	**Pn**	**07 54 27.9**	**-0.4**
MTSE				*e*S	**Sg**	**07 54 48.4**	**-0.1**
GOTU	**Gotland**	**1.68**	**271**	P	**Pn**	**07 54 29.9**	**-0.8**
GOTU				S	**Sn**	**07 54 52.9**	**0.0**
PBUR	**Paburge**	**1.69**	**176**	*e*P	**Pn**	**07 54 29.7**	**-1.1**
PBUR	**Paburge**	**1.69**	**176**	*e*P	**Pn**	**07 54 30.3**	**-0.5**
PBUR				*e*S	**Sn**	**07 54 53.3**	**+0.3**
NYNU	**Nynaeshamn**	**2.35**	**305**	P	**Pn**	**07 54 40.4**	**+0.6**
NRTU	**Norrtaelje**	**2.55**	**322**	P	**Pn**	**07 54 43.9**	**+1.3**
BYXU	**Byxelkrok** baz=258	**2.57**	**263**	P	**Pn**	**07 54 43.3**	**+0.4**
AAL	**Aland**	**2.64**	**341**	P	**Pn**	**07 54 43.9**	**+0.1**
AAL	**Aland**	**2.64**	**341**	*e*P	**Pn**	**07 54 43.8**	**+0.1**
AAL				*e*S	**Sn**	**07 55 16.2**	**-0.2**
ASPU	**Aespoe**	**2.77**	**266**	P	**Pn**	**07 54 46.2**	**+0.6**
VSTU	**Vaestervik**	**2.78**	**271**	P	**Pn**	**07 54 46.5**	**+0.8**
VSU	**Vasula**	**2.78**	**72**	*e*SB	**Sb**	**07 55 24.3**	**-0.7**
ARBE	**Arbavere**	**2.84**	**50**	*e*SB	**Sb**	**07 55 27.1**	**+0.4**
MEF	**Metsahovi**	**2.88**	**28**	*e*S	**Sb**	**07 55 26.0**	**-2.0**
MEF	comp=E,2.6nm,0.2s			AML	AML	07 55 33.1	
MEF	comp=Z,2.7nm,0.4s			AML	AML	07 55 38.7	
MEF	comp=N,2.9nm,0.4s			AML	AML	07 55 45.4	
MEF	**Metsahovi**	**2.88**	**28**	*e*P	**Pn**	**07 54 47.2**	**+0.1**
MEF				*e*S	**Sn**	**07 55 22.7**	**+0.3**
MEF				MSG		07 55 30.2	
RAF	comp=Z,2.9nm,0.1s			*e*S	**Sn**	**07 55 32.9**	**-0.6**
RAF				MSG		07 55 52.3	
IIGN	**Ignalina**	**3.44**	**131**	*e*P	Pn	07 54 49.3	-5.4
PVF	**Pernaja**	**3.57**	**35**	*e*P	**Pn**	**07 54 58.0**	**+1.5**
PVF				*e*S	**Sn**	**07 55 39.6**	**+0.3**
VJF	**Virojoki**	**4.14**	**44**	*e*P	**Pn**	**07 55 05.3**	**+0.9**
VJF				*e*S	**Sn**	**07 55 53.0**	**-0.5**
FIA0	**FINESS Array S**	**4.36**	**29**	*e*P	**Pn**	**07 55 07.8**	**+0.3**
FIA0				*e*S	**Sn**	**07 55 58.0**	**-0.9**
FIA1	**FINESS Array S**	**4.36**	**29**	*e*P	**Pn**	**07 55 07.8**	**+0.3**
FIA1				*e*S	**Sn**	**07 55 58.0**	**-0.9**
FIA1				MSG		07 56 02.9	
KEF	comp=Z,1.1nm,0.1s **Keuruu**	**4.75**	**18**	*e*P	**Pn**	**07 55 13.8**	**+1.0**
KEF				*e*S	**Sn**	**07 56 07.8**	**-0.7**
KAF	**Kangasniemi**	**4.99**	**26**	*e*P	**Pn**	**07 55 16.2**	**+0.1**
KAF				*e*S	**Sn**	**07 56 12.7**	**-1.7**
VAF	**Ylistaro**	**5.38**	**5**	*e*P	**Pn**	**07 55 21.7**	**+0.3**
VAF				*e*S	**Sn**	**07 56 22.5**	**-1.5**

TAP 21 08:01:37.3,23.°70N×121.°45E,h13km,ML1.4,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
EGFH	**Guangfu** baz=223	**0.04**	**219**	P	Pg	08 01 40.0	+0.3
EGFH	baz=223			S	Sg	08 01 41.5	+0.1
ESL	**Shilin** baz=354	**0.12**	**350**	*i* P	Pg	08 01 40.6	+0.1
ESL	baz=354			*i* S	Sg	08 01 42.6	-0.2
HGSD	**Ruisui** baz=195	**0.21**	**188**	*e*P	Pb	08 01 43.4	+0.4
HGSD	baz=195			*e*S	Sb	08 01 48.1	+1.4
EHY	**Hungye** baz=217	**0.23**	**212**	*i* P	Pg	08 01 42.3	+0.1
EHY	baz=217			*i* S	Sg	08 01 45.6	+0.1
VWDT	**VWDT** baz=281	**0.29**	**281**	P	Pg	08 01 43.7	+0.4
VWDT	baz=281			S	Sg	08 01 47.7	+0.4
YULB	**Yu-li** baz=214	**0.34**	**205**	*e*P	Pg	08 01 44.2	+0.1
YULB	baz=214			*e*S	Sb	08 01 49.9	-0.6
OWD	**Renai** baz=315	**0.36**	**315**	P	Pg	08 01 44.6	0.0
OWD	baz=315			*e*S	Sg	08 01 48.6	-0.9
SSLB	**Suanglung** baz=290	**0.47**	**281**	*e*S	Sg	08 01 51.5	-1.3
WHF	**Hehuan Shan** baz=339	**0.48**	**339**	P	Pg	08 01 46.6	-0.2
WHF	baz=339			S	Sg	08 01 52.9	-0.4
NACB	**Ninganchiao** baz=4.0	**0.49**	**15**	*e*S	Sg	08 01 53.5	0.0
ETLH	**Xiulin Townshi**	**0.51**	**3**	*e*P	Pg	08 01 46.9	-0.4
ETLH				S	Sg	08 01 54.0	0.0
NNSB	**Datong** baz=360	**0.73**	**355**	P	Pb	08 01 51.8	-0.2
NNSB	baz=360			S	Sb	08 02 01.8	-0.1
NNSH	**Datong** baz=359	**0.73**	**355**	*e*S	Sb	08 02 01.7	-0.2
NNS	**Nan Shan** baz=360	**0.74**	**354**	*e*P	Pg	08 01 51.5	-0.3
NNS	baz=360			*e*S	Sg	08 02 00.3	-1.2

JMA 21 08:02:26.1±0.3,24.°54N×122.°13E,h62km,M1.5,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.75**	**97**	P	Pn	08 02 41.0	0.0
JYNG				*e*S	Sn	08 02 52.4	+0.4
YOJ	**Yonaguni jima**	**0.81**	**95**	P	Pn	08 02 42.2	+0.5
YOJ				S	Sn	08 02 53.2	-0.1
IRIF	**Iriomote-Funau**	**1.47**	**98**	*e*S	Sn	08 03 09.8	+1.0
JIJ	**Ishigaki jima**	**1.84**	**95**	*e*S	Sn	08 03 17.5	-0.2
JISG	**Ishigakijimahi**	**1.99**	**88**	S	Sn	08 03 21.9	+0.7

*IDC **21** 08:08:43.3±2.9,53.°60N×87.°90E,h0km,mb1 2.9/2, mb1mx2.8/47,mbtmp2.9/2,ML2.5/2,Error ellipse: s-maj=24.7km s-min=17.6km az=50.0*
*NNC **21** 08:08:43.5±2.7,53.°44N×87.°80E,h0km,mb3.1,mpv2.8, Error ellipse: s-maj=23.6km s-min=10.0km az=62.0, Suspected Mining explosion.*
*KRAR **21** 08:08:46.6±0.0,53.°70N×88.°00E,M1.9,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

ISC 21 08:08:39.4±2.1,52.°28N±0.°06×87.°0E±0.°1,h0km,n9, σ2s14/12,6C-6D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
ZAA0	**Zalesovo Array** 0.4nm,0.6s	**2.12**	**323**	⇓Pn	**Pn**	**08 09 16.1**	**0.0**
ZAA0	2.8nm,0.8s			⇓Sn	**Sn**	**08 09 41.5**	**-1.6**
ZALV	**Zalesovo Beam** 1.8nm,0.3s,baz=98,slow=14,SNR=11	**2.12**	**323**	Pn	**Pn**	**08 09 15.9**	**-0.2**
ZALV	2.3nm,0.3s,baz=98,slow=23,SNR=7.9			Lg	Lg	08 09 42.2	
I46RU	**ZALESOVO INFRA** baz=98,slow=308,SNR=2.5	**2.12**	**323**	*i*		08 19 40.0	
KURK	**Kurchatov** 1.0nm,0.9s	**5.45**	**257**	⇓Pn	**Pb**	**08 10 18.0**	**+2.5**
KURK	1.7nm,0.8s			⇓Lg	Lg	08 12 02.0	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=61,slow=14,SNR=5.2	**5.54**	**256**	Pn	**Pb**	**08 10 20.4**	**+3.5**
KURBB	0.1nm,0.3s,baz=74,slow=38,SNR=4.6			Sn	**Sg**	**08 11 35.5**	**-1.7**
KURBB	0.1nm,0.3s,baz=62,slow=33,SNR=6.8			Lg	Lg	08 12 06.0	
KURBB	**Kurchatov Arra** 1.1nm,0.7s	**5.54**	**256**	⇑Pn	**Pb**	**08 10 19.2**	**+2.2**
KURBB				⇑Lg	Lg	08 12 04.3	

3.2nm,0.7s
MK31 Makanchi Array 6.28 211 ⇓Pn **Pg 08 10 38.2 -1.5**
0.5nm,0.7s,baz=30,slow=13,SNR=8.3
MK31 ⇓Sn **Sg 08 12 02.1 +1.0**
0.7nm,0.8s
MK31 ⇑Lg Lg 08 12 45.3
0.9nm,0.7s,baz=30,slow=30,SNR=3.7
MKAR Makanchi Array 6.28 211 Pn **Pg 08 10 38.0 -1.8**
0.1nm,0.3s,baz=28,slow=13,SNR=6.6
MKAR Lg Lg 08 12 44.1
0.1nm,0.3s,baz=37,slow=28,SNR=6.1
MAKZ Makanchi 6.37 213 ⇑Pn **Pb 08 10 33.0 +1.9**
1.0nm,0.9s
MAKZ ⇑Sn **Sg 08 12 02.6 -1.4**
0.3nm,0.7s
MAKZ ⇑Lg Lg 08 12 46.6
0.9nm,0.8s

*KRAR **21** 08:15:35.7±0.1,53.7°N×88.0°E,M2.1,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
IDC 21 08:15:35.0±3.1,53.64N×88.10E,h0km,mb1 2.6/2, mb1mx2.6/62,mbtmp2.6/2,ML2.3/2,Error ellipse: s-maj=25.9km s-min=19.1km az=52.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.97**	**280**	*i*		08 27 32.7	
	baz=94,slow=307,SNR=10						
ZALV	**Zalesovo Beam**	**1.97**	**280**	Pn	Pn	08 16 09.9	+0.3
	0.9nm,0.3s,baz=100,slow=14,SNR=8.2						
ZALV				Lg	Lg	08 16 36.8	
	2.4nm,0.3s,baz=100,slow=24,SNR=11						
KURBB	**Kurchatov Arra**	**6.62**	**247**	Pn	Pn	08 17 14.3	+0.9
	0.0nm,0.3s,baz=61,slow=14,SNR=3.6						
KURBB				Sn	Sn	08 18 29.0	-0.6
	0.0nm,0.3s,baz=62,slow=24,SNR=1.5						
KURBB				Lg	Lg	08 19 05.6	
	0.0nm,0.3s,baz=63,slow=30,SNR=6.7						
MKAR	**Makanchi Array**	**7.80**	**211**	Pn	Pn	08 17 30.4	+0.8
	0.1nm,0.3s,baz=32,slow=12,SNR=2.3						
MKAR				Lg	Lg	08 19 42.4	
	0.1nm,0.3s,baz=28,slow=31,SNR=3.1						

*THR **21** 08:17:09.2±0.3,29.9°N×50.9°E,h22km±11km,ML3.1*
*TEH **21** 08:17:15.2,29.68N×50.88E,h12km,ML3.1*
ISC 21 08:17:11.2±2.6,29.4N±0.1×50.7E±0.1,h10km,n13, σ1°28/12,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHI	**Shiraz**	**1.62**	**79**	*e*Pg	**Pb**	**08 17 42.1**	**+0.9**
SHI				*e*		08 17 45.4	
SHI				*e*Sg	**Sg**	**08 18 02.4**	**-0.8**
KLNJ	**Kolanjah**	**1.82**	**25**	*e*Pg	**Pb**	**08 17 43.0**	**-1.9**
KLNJ				*e*		08 18 09.3	
IRAM	**Ramesheh**	**2.85**	**30**	*e*Pn	**Pn**	**08 17 57.5**	**+0.6**
IRAM				*e*		08 18 03.4	
JHBN	**Jahan bin**	**2.87**	**360**	*e*Pn	**Pn**	**08 17 58.4**	**+1.1**
ROKH	**ROKH**	**3.00**	**6**	*e*Pn	**Pn**	**08 18 00.2**	**+1.2**
IGAR	**Gharneh**	**3.25**	**21**	*e*Pn	**Pn**	**08 18 02.8**	**+0.3**
IPIR	**Pirpir**	**3.32**	**3**	*e*Pn	**Pn**	**08 18 04.4**	**+0.9**
IZEF	**Zefreh**	**3.80**	**21**	*e*Pn	**Pn**	**08 18 10.9**	**+0.9**
IZEF				*e*		08 18 11.8	
IMEH	**Mehriz**	**3.95**	**58**	*e*Pn	**Pn**	**08 18 14.2**	**+2.1**
IMEH				*e*		08 18 29.5	
ANAR	**Anarak**	**4.62**	**33**	*e*Pn	**Pn**	**08 18 21.5**	**+0.2**
BNDS	**Bandar-Abbas**	**5.21**	**111**	*e*Pn	**Pn**	**08 18 28.5**	**-0.8**
KRBR	**Kerman**	**5.32**	**82**	*e*Pn	Pn	08 18 26.0	-5.0
SNGE	**Sanandaj**	**6.38**	**335**	*e*P	Pn	08 18 39.1	-6.3

*IDC **21** 08:18:21.8±6.3,36.30N×72.57E,h132km±68km,mb3.4/3, mb1 3.3/5,mb1mx3.0/61,mbtmp3.6/5,MS3.4/1,Ms1 3.4/1, ms1mx2.2/30,Error ellipse: s-maj=97.4km s-min=47.7km az=103.0*
*NNC **21** 08:18:30.2±6.5,37.23N×71.31E,h220km±99km,mb2.7, mpv3.6,Error ellipse: s-maj=63.1km s-min=37.5km az=15.0*
ISC 21 08:18:25.9±0.9,36.74N±0.07×71.8E±0.1,h142km,n12, σ2°36/16,mb3.6/3,5C-2D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**5.37**	**142**	*e*P	**Pn**	**08 19 43.5**	**-0.6**
THN				*e*S	**Sn**	**08 20 44.0**	**-1.1**
AAK	**Ala-Archa**	**6.24**	**19**	P	**Pn**	**08 19 56.8**	**+1.0**
	1.7nm,0.3s,baz=174,slow=7.9,SNR=11						
AAK				S	**Sn**	**08 21 06.7**	**+0.6**
	0.9nm,0.3s,baz=310,slow=22,SNR=7.1						
AAK	**Ala-Archa**	**6.24**	**19**	⇑P	**Pn**	**08 19 56.5**	**+0.7**
	2.5nm,0.4s						
AAK				S	**Sn**	**08 21 06.8**	**+0.6**
	3.4nm,0.6s						
KK31	**Karatay Array**	**6.43**	**351**	⇓P	**Pn**	**08 19 56.6**	**-1.7**
	5.8nm,0.4s,baz=184,slow=13,SNR=37						
KK31				⇓S	**Sn**	**08 21 06.2**	**-4.3**
	2.6nm,0.3s,baz=173,slow=21,SNR=7.5						
TKM2	**Tokmak 2**	**6.83**	**24**	⇑P	**Pn**	**08 20 04.6**	**+0.9**
	1.6nm,0.5s						
TKM2				⇑S	**Sn**	**08 21 19.9**	**-0.3**
	1.8nm,0.8s						
MKAR	**Makanchi Array**	**12.72**	**35**	P	**Pn**	**08 21 18.0**	**-3.6**
	0.1nm,0.3s,baz=203,slow=11,SNR=1.6						
KURBB	**Kurchatov Arra**	**14.69**	**17**	P	**P**	**08 21 50.5**	**+1.4**
	0.0nm,0.3s,baz=207,slow=11,SNR=2.3						
AB31	**Akbulak array**	**15.20**	**329**	⇑P	**Pn**	**08 21 49.3**	**-3.7**
	2.0nm,0.3s,baz=141,slow=12,SNR=28						
AB31				⇑S	Sn	08 24 25.4	-16
	1.5nm,0.3s,baz=150,slow=22,SNR=6.4						
FINES	**FINESS Array B**	**37.65**	**326**	P	**P**	**08 25 29.8**	**+3.0**
	0.8nm,0.6s,baz=107,slow=12,SNR=3.6						
ARCES	**ARCESS Array B**	**41.17**	**337**	P	**P**	**08 25 58.8**	**+2.8**
	2.6nm,0.9s,baz=106,slow=9.6,SNR=1.8						
MJAR	**Matsushiro Arr**	**52.26**	**69**	LR	LR	08 50 06.2	
	comp=Z,36nm,19.5s,baz=110,slow=37						
TORD	**Torodi Ar. Bea**	**66.37**	**269**	P	**P**	**08 28 60.0**	**+0.2**
	0.2nm,0.4s,baz=53,slow=6.6,SNR=6.0						

*IDC **21** 08:21:53.8±0.4,8.65S×125.27E,h0km,mb4.6/21, mb1 4.7/23,mb1mx4.6/39,mbtmp4.6/23,ML4.4/2,MS3.6/17, Ms1 3.6/17,ms1mx3.3/40,Error ellipse: s-maj=17.5km s-min=12.0km az=80.0*
*NEIC **21** 08:21:54.1±2.8,8.79S±0.05×125.37E±0.05,h10km±1km, mb4.9/39,Error ellipse: s-maj=9.6km s-min=8.4km az=310.0*
*DJA **21** 08:21:56.3±0.4,9°S±1°×12°5E±°,h12km±3km,M4.5/47, mb4.8/47,mB5.1/21,MLv4.8/18,Mw(mB)4.5/21*
*KLM **21** 08:22:00.0,9.12S×125.50E,h52km,mb4.8*
ISC 21 08:21:58.2±0.3,8.96S±0.04×125.35E±0.04,h35km,n171, σ2°17/173,mb4.8/47,MS3.8/15,2C-2D,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.33**	**233**	P	**Pn**	**08 22 23.6**	**+3.2**
SOEI	**Soe**	**1.33**	**233**		**Pn**	**08 22 21.6**	**+1.2**
BATI	**Baumata**	**2.08**	**233**	Pn	**Pn**	**08 22 33.6**	**+3.0**
	76nm,0.3s,baz=82,slow=1.2,SNR=30						
BATI				LR	LR	08 23 00.7	
	comp=Z,607nm,21.0s,baz=78,slow=30						
BATI	**Baumata**	**2.08**	**233**	P	**Pn**	**08 22 34.0**	**+3.4**
BATI				S	**Sn**	**08 22 57.6**	**+2.3**
MMRI	**Maumere**	**3.10**	**276**	P	**Pn**	**08 22 43.8**	**-0.8**
MMRI				S	**Sn**	**08 23 21.3**	**+0.9**
MMRI	**Maumere**	**3.10**	**276**		**Pn**	**08 22 44.0**	**-0.6**
EDFI	**Ende, Flores**	**3.62**	**273**	P	**Pn**	**08 22 50.4**	**-1.5**
EDFI				S	**Sn**	**08 23 36.4**	**+2.8**
BASI	**Baing, Sumba**	**4.87**	**255**	P	**Pn**	**08 23 10.3**	**+1.3**
WBSI	**Waikabubak, Su**	**5.92**	**263**	P	**Pn**	**08 23 25.0**	**+1.5**
	0.6nm2µm204nm,0.9s						
NLAI	**Namlea**	**5.94**	**17**	P	**Pn**	**08 23 27.1**	**+3.4**
	0.3nm116nm,0.8s						
NLAI				S	**Sn**	**08 24 34.7**	**+4.2**
	0.3nm116nm,0.8s						
AAI	**Ambon**	**5.95**	**29**	P	**Pn**	**08 23 25.3**	**+1.5**
	0.7nm2µm208nm,1.0s						
SAUI	**Saumlaki**	**5.96**	**81**	P	Pn	08 23 31.0	+7.0
BKSI	**Bulukumba**	**6.32**	**304**	P	**Pn**	**08 23 32.2**	**+3.3**
	0.3nm1µm110nm,1.2s						
MSAI	**Masohi**	**6.61**	**33**	P	**Pn**	**08 23 35.8**	**+2.9**
	0.1nm40nm,1.1s						
KAPI	**Kappang**	**6.80**	**305**	Pn	**Pn**	**08 23 39.5**	**+4.0**
	1.6nm,0.3s,baz=148,slow=8.4,SNR=16						
KAPI				LR	LR	08 26 15.5	
	comp=Z,686nm,19.3s,baz=108,slow=40						
MTN	**Manton Dam**	**6.87**	**125**		**Pn**	**08 23 37.7**	**+1.3**
SANI	**Sanana**	**6.89**	**5**	P	**Pn**	**08 23 35.4**	**-1.4**
	0.3nm1µm90nm,0.9s						
BNSI	**Bone**	**6.90**	**311**	P	**Pn**	**08 23 37.9**	**+1.0**
	0.4nm1µm112nm,1.0s						
SPSI	**Sidrap Palu**	**7.44**	**311**	P	**Pn**	**08 23 45.5**	**+1.2**
	0.2nm711nm58nm,0.8s						
KNRA	**Kununurra**	**7.46**	**154**		**Pn**	**08 23 45.2**	**+0.6**
PLAI	**Plampang**	**7.49**	**270**	P	**Pn**	**08 23 47.0**	**+2.0**
	0.9nm3µm239nm,0.8s						
TTSI	**Tana Toraja**	**8.05**	**317**	P	**Pn**	**08 23 51.1**	**-1.5**
	3µm83nm,0.8s						
LUWI	**Luwuk**	**8.27**	**342**	P	**Pn**	**08 23 54.3**	**-1.4**
	3µm131nm,1.1s						
LUWI	**Luwuk**	**8.27**	**342**		**Pn**	**08 23 54.9**	**-0.9**
LBMI	**Labuha**	**8.54**	**15**	P	**Pn**	**08 24 00.8**	**+1.4**
	3µm60nm,0.6s						
FITZ	**Fitzroy Crossi**	**9.09**	**178**	Pn	**Pn**	**08 24 06.7**	**-0.3**
	4.6nm,0.3s,baz=7.2,slow=9.7,SNR=51						
FITZ				Sn	**Sn**	**08 25 44.4**	**-3.8**
	4.3nm,0.3s,baz=125,slow=8.8,SNR=6.9						
FITZ				LR	LR	08 28 29.7	
	comp=Z,105nm,19.0s,baz=3.5,slow=42						
FITZ	**Fitzroy Crossi**	**9.09**	**178**		**Pn**	**08 24 06.9**	**-0.1**
FAKI	**Fak Fak**	**9.11**	**49**	P	**Pn**	**08 24 07.0**	**-0.2**
	841nm68nm,1.0s						
FAKI	**Fak Fak**	**9.11**	**49**		**Pn**	**08 24 07.8**	**+0.5**
TNTI	**Ternate**	**9.87**	**12**	P	**Pn**	**08 24 20.0**	**+2.3**
	29nm,0.8s						
SIJI	**Sorong**	**9.96**	**37**	Pn	**Pn**	**08 24 22.6**	**+3.7**
	2.4nm,0.3s,baz=253,slow=6.6,SNR=10						
MPSI	**Mapaga**	**10.71**	**329**	P	**Pn**	**08 24 28.7**	**-0.5**
	27nm,0.9s						
JAGI	**Jajag, Banyuwa**	**11.08**	**272**	P	**Pn**	**08 24 35.1**	**+0.8**
	33nm,0.7s						
JAGI	**Jajag, Banyuwa**	**11.08**	**272**	Pn	**Pn**	**08 24 32.5**	**-1.8**
KMMI	**Kalianget**	**11.43**	**279**	P	**Pn**	**08 24 42.1**	**+3.0**
	49nm,1.8s						
RKPI	**Ransiki, Papua**	**11.48**	**50**	P	Pn	08 24 34.7	-5.1
PSA00	**Pilbara Seismi**	**13.62**	**202**		**Pn**	**08 25 08.7**	**-0.2**
WB0	**Warramunga Arr**	**13.86**	**142**	Pn	**Pn**	**08 25 09.3**	**-2.9**
WRA	**Warramunga Arr**	**13.96**	**142**	Pn	**Pn**	**08 25 10.3**	**-3.3**
	2.0nm,0.3s,baz=316,slow=13,SNR=70						
WRA				Sn	**Sn**	**08 27 41.2**	**-6.2**
	1.9nm,0.3s,baz=327,slow=22,SNR=8.5						
WRA				LR	LR	08 31 54.1	
	comp=Z,316nm,18.5s,baz=320,slow=42						
WRAB	**Tennant Creek**	**13.96**	**142**		**Pn**	**08 25 10.5**	**-3.1**
WB2	**Warramunga Arr**	**13.96**	**142**	Pn	**Pn**	**08 25 10.6**	**-3.1**
WR0	**Warramunga Arr**	**14.09**	**142**	Pn	**Pn**	**08 25 12.2**	**-3.2**
UGM	**Wanagama**	**14.71**	**273**	P	**P**	**08 25 27.2**	**-2.3**
SMRI	**Semarang**	**14.89**	**276**	Pn	**Pn**	**08 25 25.4**	**-0.9**
SMPI	**Sarmi**	**14.98**	**63**	P	**Pn**	**08 25 24.0**	**-3.5**
KCP	**Kirdapawan**	**15.86**	**359**	⇑*i*P	**P**	**08 25 44.2**	**+1.8**
GENI	**Genyem**	**16.03**	**68**	P	**Pn**	**08 25 42.5**	**+1.4**
	164nm,0.7s						
JAY	**Jayapura**	**16.55**	**68**	Pn	**Pn**	**08 25 47.0**	**-0.8**
	2.0nm,0.3s,baz=263,slow=5.9,SNR=14						
JAY	**Jayapura**	**16.55**	**68**	P	**Pn**	**08 25 48.6**	**+0.8**
	378nm33nm,0.9s						
AS31	**Alice Springs**	**16.76**	**152**		**Pn**	**08 25 48.1**	**-2.3**
ASAR	**Alice Springs**	**16.76**	**152**	P	**Pn**	**08 25 48.0**	**-2.4**
	0.7nm,0.3s,baz=323,slow=11,SNR=58						
ASAR				S	**Sn**	**08 28 46.2**	**-9.4**
	0.2nm,0.3s,baz=318,slow=20,SNR=12						
ASAR				LR	LR	08 33 48.0	
	comp=Z,218nm,20.0s,baz=326,slow=42						
SBUM	**Sibu**	**17.31**	**310**	Pn	**Pn**	**08 25 53.5**	**-3.8**
SBUM	**Sibu**	**17.31**	**310**	P	**P**	**08 26 01.0**	**+2.6**
CISI	**Cisompet, Garu**	**17.41**	**273**	P	**Pn**	**08 25 56.5**	**-2.1**
	67nm,0.8s						
CISI	**Cisompet, Garu**	**17.41**	**273**	P	**Pn**	**08 25 55.5**	**-3.1**
CISI				IAmb	IAmb	08 26 04.7	
	comp=Z,51nm,0.5s						
LEM	**Lembang**	**17.69**	**276**	LR	LR	08 33 13.9	
	comp=Z,360nm,20.5s,baz=129,slow=39						
CNJI	**Cibinong**	**18.11**	**274**	P	**Pn**	**08 26 05.3**	**-1.9**
	comp=Z,144nm,1.2s						
COEN	**Coen**	**18.16**	**108**	P	**Pn**	**08 26 07.1**	**-0.6**
KSM	**Kuching**	**18.22**	**304**	P	**P**	**08 26 06.9**	**-1.6**
KSM	**Kuching**	**18.22**	**304**	P	**Pn**	**08 26 11.0**	**+2.5**
DBJI	**Dramaga**	**18.59**	**276**	P	**P**	**08 26 10.4**	**-2.1**
	comp=Z,127nm,1.4s						
PMG	**Port Moresby**	**21.53**	**93**	P	**P**	**08 26 46.3**	**+1.8**
	comp=Z,8.4nm,0.5s,baz=258,slow=9.3,SNR=1.3						
PMG				LR	LR	08 36 15.7	
	comp=Z,165nm,18.5s,baz=256,slow=40						
PMG	**Port Moresby**	**21.53**	**93**	P	**P**	**08 26 45.0**	**+0.5**
PMG				IAmb	IAmb	08 26 55.3	
	comp=Z,41nm,0.8s						
MORW	**Morawa**	**21.84**	**202**	P	**P**	**08 26 48.1**	**+0.4**
FORT	**Forrest**	**21.86**	**174**	P	**P**	**08 26 50.2**	**+2.3**
FORT				IAmb	IAmb	08 27 07.2	
	comp=Z,36nm,0.9s						
CTA	**Charters Tower**	**23.03**	**121**	P	**P**	**08 27 00.4**	**-0.1**
	comp=Z,7.8nm,1.0s,baz=25,slow=8.5,SNR=3.5						
CTAO	**Charters Tower**	**23.03**	**121**	P	**P**	**08 27 03.5**	**+3.1**
CTAO				IAmb	IAmb	08 27 12.1	
	comp=Z,31nm,1.1s						
MYKOM	**Kota Tinggi**	**23.94**	**295**	P	**P**	**08 27 10.1**	**+0.8**
MYKOM				IAmb	IAmb	08 27 12.7	
	comp=Z,48nm,1.3s						
MYKOM	**Kota Tinggi**	**23.94**	**295**	P	**P**	**08 27 11.0**	**+1.7**
NWAO	**Narrogin (SRO)**	**25.01**	**196**	P	**P**	**08 27 20.4**	**+1.5**
	comp=Z,15nm,0.8s,baz=28,slow=11,SNR=8.0						
NWAO	**Narrogin (SRO)**	**25.01**	**196**	P	**P**	**08 27 20.8**	**+1.9**
NWAO				IAmb	IAmb	08 27 29.3	
	comp=Z,25nm,1.0s						
NWAO	**Narrogin (SRO)**	**25.01**	**196**	IAmb	IAmb	08 27 29.3	
	comp=Z,20nm,1.0s						
KRVT	**Keravat (AS076**	**26.89**	**82**	LR	LR	08 39 57.4	
	comp=Z,100nm,19.1s,baz=245,slow=40						
STKA	**Stephens Creek**	**27.34**	**149**	P	**P**	**08 27 41.7**	**+1.7**
	comp=Z,7.0nm,0.9s,baz=324,slow=8.4,SNR=12						
STKA				LR	LR	08 40 19.4	
	comp=Z,246nm,18.6s,baz=342,slow=40						
STKA	**Stephens Creek**	**27.34**	**149**	P	**P**	**08 27 42.0**	**+2.0**
IPM	**Ipoh**	**27.68**	**298**	P	**P**	**08 27 45.0**	**+1.8**
KULM	**Kulim**	**28.40**	**299**	P	**P**	**08 27 52.0**	**+2.4**
RPSI	**Rantau Prapat**	**28.77**	**293**	P	**P**	**08 27 51.6**	**-1.4**
PSI	**Prapat**	**28.82**	**293**	P	**P**	**08 27 51.3**	**-2.2**
	comp=Z,7.8nm,0.7s,baz=179,slow=6.1,SNR=5.9						
PSI				LR	LR	08 41 38.3	
	comp=Z,293nm,18.1s,baz=93,slow=41						
KCSI	**Kotacane, Aceh**	**30.16**	**293**	P	**P**	**08 28 02.0**	**-3.3**
HNR	**Honiara**	**34.15**	**94**	LR	LR	08 43 29.4	
	comp=Z,85nm,20.2s,baz=271,slow=38						
CMAR	**Chiang Mai Arr**	**37.70**	**316**	P	**P**	**08 29 09.2**	**-1.4**
	comp=Z,14nm,0.3s,baz=140,slow=6.3,SNR=9.4						
CMAR				LR	LR	08 46 50.8	
	comp=Z,76nm,19.7s,baz=198,slow=40						
GYA	**Guiyang**	**39.61**	**333**	⇑*i*P	**P**	**08 29 26.6**	**0.0**
GYA				pP	pP	08 29 35.4	-1.7
GYA				PP	**PP**	**08 31 02.8**	**+4.7**
GYA				SS	SS	08 38 17.6	-6.0
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,110nm,4.6s						
GYA				LR	LR		
	comp=N,210nm,13.0s						
GYA				LR	LR		
	comp=E,240nm,13.3s						
GYA				LR	LR		
	comp=Z,280nm,15.0s						
KMI	**Kunming**	**40.41**	**327**	P	**P**	**08 29 34.3**	**+0.9**
KMI				pP	pP	08 29 42.0	-1.9
KMI				pmax	pmax		
	comp=Z,26nm,1.1s						
KMI				LR	LR		
	comp=Z,150nm,16.8s						
WHN	**Wuhan**	**40.67**	**345**	P	**P**	**08 29 38.4**	**+3.2**
NJ2	**Nanjing**	**41.25**	**352**	*e*P	**P**	**08 29 40.8**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
DZM	**Mont Dzumac**	**41.54**	**113**	LR	LR	08 48 00.8	
	comp=Z,135nm,18.8s,baz=294,slow=38						
ENH	**Enshi**	**41.88**	**339**	P	**P**	**08 29 43.5**	**-1.7**
ENH				IAmb	IAmb	08 29 48.5	
	comp=Z,10nm,0.6s						
CD2	**Chengdu**	**44.72**	**333**	P	**P**	**08 30 06.8**	**-1.4**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
KSRS	**Korea Array**	**46.23**	**3**	P	**P**	**08 30 19.5**	**-0.4**
	comp=Z,8.9nm,1.0s,baz=178,slow=9.0,SNR=19						
MAJO	**Matsushiro**	**46.84**	**14**	P	**P**	**08 30 22.9**	**-1.9**
MAT	**Matsushiro**	**46.84**	**14**	P	**P**	**08 30 23.1**	**-1.7**
MJAR	**Matsushiro Arr**	**46.84**	**14**	P	**P**	**08 30 23.3**	**-1.5**
	comp=Z,38nm,1.1s,baz=192,slow=8.3,SNR=30						
MJB9	**Matsu-Tunnel**	**46.84**	**14**	P	**P**	**08 30 23.3**	**-1.5**
SHL	**Shillong**	**47.31**	**317**	P	**P**	**08 30 27.3**	**-1.6**
SHL				IAmb	IAmb	08 30 31.2	
	comp=Z,6.7nm,0.7s						
LZH	**Lanzhou**	**49.17**	**337**	*e*P	**P**	**08 30 42.6**	**-0.4**
LZH				pP	pP	08 30 52.5	-1.1
LZH				sP	sP	08 30 56.8	-1.0
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
LZH				pmax	pmax		
	comp=Z,110nm,4.9s						
LSA	**Lhasa**	**50.60**	**321**	P	**P**	**08 30 54.9**	**+0.5**
LSA				IAmb	IAmb	08 30 56.0	
	comp=Z,13nm,0.7s						
HHC	**Hu-ho-hao-te**	**51.16**	**347**	*e*P	**P**	**08 30 56.8**	**-1.2**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,59nm,5.6s						
USA0B	**Ussuriysk Arra**	**53.24**	**6**	P	**P**	**08 31 12.7**	**-0.6**
USA0B				IAmb	IAmb	08 31 15.4	
	comp=Z,8.5nm,0.8s						
USRK	**Ussuriysk Ar.**	**53.24**	**6**	P	**P**	**08 31 12.1**	**-1.1**
	comp=Z,561nm,0.5s,baz=188,slow=7.3,SNR=1.3						
MDJ	**Mudanjiang**	**53.46**	**4**	IAmb	IAmb	08 31 17.8	
	comp=Z,19nm,1.0s						
GTA	**Gaotai**	**53.64**	**335**	P	**P**	**08 31 15.8**	**-0.6**
GTA				pP	pP	08 31 23.0	-4.1
GTA				sP	sP	08 31 27.6	-3.7
GTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,65nm,5.5s						
GTA				LR	LR		
	comp=N,66nm,18.1s						
GTA				LR	LR		
	comp=E,200nm,20.0s						
GTA				LR	LR		
	comp=Z,63nm,17.8s						
KLR	**Kul'dur**	**58.21**	**5**	P	**P**	**08 31 47.9**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=243,slow=5.6,SNR=5.0						
ULN	**Ulaanbaatar**	**58.85**	**346**	P	**P**	**08 31 51.9**	**-1.5**
ULN				IAmb	IAmb	08 31 55.4	
	comp=Z,10nm,0.8s						
SONM	**Songino Array**	**58.98**	**345**	P	**P**	**08 31 53.5**	**-0.9**
	comp=Z,5.5nm,0.8s,baz=162,slow=8.3,SNR=21						
WMQ	**Urumqi**	**62.65**	**330**	*e*P	**P**	**08 32 18.5**	**-0.8**
WMQ				pP	pP	08 32 25.9	-4.3
WMQ				pmax	pmax		
	comp=Z,77nm,4.7s						
WMQ				LR	LR		
	comp=N,2µm,29.3s						
WMQ				LR	LR		
	comp=E,2µm,29.0s						
WMQ				LR	LR		
	comp=Z,2µm,29.0s						
NIL	**Nilore**	**65.11**	**313**	P	**P**	**08 32 33.7**	**-2.0**
KSH	**Kashi**	**66.45**	**320**	P	**P**	**08 32 43.8**	**-0.5**
KSH				sP	pP	08 32 56.6	+1.3
KSH				PcP	**PP**	**08 35 15.8**	**+4.7**
KSH				S	**S**	**08 41 28.0**	**-4.5**
KSH				ScS	**SKSac**	**08 42 33.1**	**-5.3**
KSH	**Kashi**	**66.45**	**320**	SS	SS	08 45 44.5	-5.5
KSH				pmax	pmax		
	comp=Z,44nm,1.0s						
KSH				pmax	pmax		
	comp=Z,100nm,4.2s						
KSH				LR	LR		
	comp=N,110nm,9.7s						
KSH				LR	LR		
	comp=E,150nm,5.1s						
KSH				LR	LR		
	comp=Z,110nm,6.0s						
TARG	**Taragay, Kyrgy**	**66.63**	**323**	P	**P**	**08 32 43.1**	**-2.7**
MK31	**Makanchi Array**	**67.44**	**329**	P	**P**	**08 32 49.2**	**-1.1**
MK31				IAmb	IAmb	08 32 50.2	
	comp=Z,7.2nm,0.8s						
MKAR	**Makanchi Array**	**67.44**	**329**	P	**P**	**08 32 49.5**	**-0.9**
	comp=Z,7.1nm,0.7s,baz=131,slow=7.6,SNR=59						
MAKZ	**Makanchi**	**67.61**	**329**	P	**P**	**08 32 50.0**	**-1.4**
MAKZ				IAmb	IAmb	08 32 51.1	
	comp=Z,5.9nm,0.8s						
PEA0B	**Petropavlovsk-**	**67.68**	**20**	P	**P**	**08 32 51.9**	**+0.3**
PETK	**Petropavlovsk-**	**67.68**	**20**	P	**P**	**08 32 50.9**	**-0.8**
	comp=Z,12nm,1.0s,baz=188,slow=5.9,SNR=12						
KZA	**Kyzart**	**68.38**	**322**	P	**P**	**08 32 56.7**	**-0.1**
	SNR=6.9						
KBL	**Kabul**	**68.58**	**312**	P	**P**	**08 32 56.4**	**-1.6**
TKM2	**Tokmak 2**	**68.66**	**323**	P	**P**	**08 32 57.8**	**-0.6**
	SNR=6.1						
KBK	**Karagaybulak**	**68.89**	**322**	P	**P**	**08 33 00.1**	**+0.4**
	SNR=5.9						
UCH	**Uchtor**	**68.91**	**322**	P	**P**	**08 32 59.9**	**-0.3**
	SNR=13						
AAK	**Ala-Archa**	**69.16**	**322**	P	**P**	**08 33 01.1**	**-0.3**
	comp=Z,10nm,0.8s,baz=115,slow=4.1,SNR=19						
AAK				LR	LR	09 06 08.7	
	comp=Z,37nm,20.2s,baz=123,slow=39						
AAK	**Ala-Archa**

comp=Z,0.4nm,0.7s,baz=231,slow=6.4,SNR=4.7
ILAR PKKPbc **PKKPbc** 08 52 09.1 -0.1
comp=Z,0.5nm,0.9s,baz=130,slow=1.4,SNR=4.4
YKA Yellowknife Ar 111.51 26 PKKPbc PKKPbc 08 51 24.7 -0.8
comp=Z,0.4nm,0.8s,baz=106,slow=3.9,SNR=7.5
PDAR Pinedale Array 121.52 45 PKP **PKiKP** 08 40 49.6 +0.9
comp=Z,0.3nm,0.6s,baz=29,slow=3.4,SNR=3.8
TORD Torodi Ar. Bea 124.64 280 PKP **PKiKP** 08 40 55.5 +0.1
comp=Z,1.1nm,0.7s,baz=84,slow=1.8,SNR=5.9
PLCA Paso Flores 128.43 165 PKP **PKiKP** 08 41 04.4 +2.0
comp=Z,1.8nm,0.9s,baz=167,slow=2.5,SNR=5.3
TXAR Lajitas Array 129.88 59 PKP **PKiKP** 08 41 06.1 +0.5
comp=Z,0.3nm,0.8s,baz=358,slow=3.8,SNR=4.2
CFA Coronel Fontan 137.62 163 PKP **PKiKP** 08 41 21.1 -0.2
comp=Z,2.5nm,0.8s,baz=246,slow=5.7,SNR=6.2
GO02 Mina Guanaco 143.09 157 **PKPdf** 08 41 29.1 -0.6
CPUP Villa Florida 144.83 176 PKPbc **PKPdf** 08 41 33.8 +1.5
comp=Z,6.9nm,0.8s,baz=185,slow=4.2,SNR=18
CPUP Villa Florida 144.83 176 **PKPdf** 08 41 31.9 -0.4
Z56A Williston 145.43 42 **PKPbc** 08 41 30.5 -2.5
255A Hazlehurst 145.52 45 PKPbc **PKPab** 08 41 33.6 0.0
LVC Limon Verde 145.66 156 PKPbc **PKiKP** 08 41 37.8 -0.5
comp=Z,3.8nm,0.7s,baz=239,slow=5.2,SNR=4.4
GO01 Chusmiza 148.15 153 PKPbc **PKiKP** 08 41 43.3 -0.3
MATN Matagalpa 149.05 80 PKPbc **PKPbc** 08 41 43.0 -0.9
NNA Nana 149.67 133 PKPbc **PKiKP** 08 41 47.4 +1.0
comp=Z,5.1nm,0.4s,baz=219,slow=5.6,SNR=4.9
ACON Acoyapa 149.84 82 PKPbc **PKPbc** 08 41 45.1 -0.6
JTS Las Juntas de 150.10 85 PKPbc **PKPbc** 08 41 46.6 +0.2
LPAZ La Paz 151.59 152 PKPbc **PKiKP** 08 41 53.4 +2.4
comp=Z,4.7nm,0.9s,baz=132,slow=2.5,SNR=14
LPAZ La Paz 151.59 152 PKPbc **PKiKP** 08 41 51.2 +0.2
SIV San Ignacio 154.41 166 PKP **PKPdf** 08 41 50.7 +3.0
comp=Z,0.9nm,0.8s,baz=198,slow=8.6,SNR=3.9
SIV PKPbc **PKPbc** 08 41 58.4 +2.4
comp=Z,1.2nm,0.8s,baz=224,slow=5.1,SNR=4.7
SIV PKPab **PKPab** 08 42 11.6 +1.6
comp=Z,2.7nm,0.8s,baz=205,slow=4.4,SNR=8.6

IDC 21 08:37:44.8±3.4, 54°43N×87°75E, h0km, mb1 2.9/2, mb1mx2.8/38, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=28.9km s-min=22.6km az=31.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.79**	**256**	*i*			08 46 50.0	
	baz=77,slon=317,SNR=2.4							
ZALV	**Zalesovo Beam**	**1.79**	**256**	Pn		Pn	08 38 15.5	-1.4
	1.1nm,0.3s,baz=74,slow=15,SNR=11							
ZALV				Lg		Lg	08 38 42.4	
	1.8nm,0.3s,baz=73,slow=24,SNR=5.7							
KURBB	**Kurchatov Arra**	**6.79**	**240**	Pn		Pn	08 39 24.9	-0.7
	0.0nm,0.3s,baz=58,slow=13,SNR=1.9							
KURBB				Lg		Lg	08 41 21.7	
	0.1nm,0.3s,baz=65,slow=31,SNR=5.3							
MKAR	**Makanchi Array**	**8.39**	**207**	Pn		Pn	08 39 50.0	+2.4
	0.1nm,0.3s,baz=27,slow=18,SNR=2.3							
MKAR				Lg		Lg	08 42 10.5	
	0.0nm,0.3s,baz=27,slow=31,SNR=2.3							

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*VAO **21** 09:00:52.5±0.7,30.4°S×71.2°W,h30km±6km,mb5.5*
*GUC **21** 09:00:53.2±0.7,30.4°S×71.3°W,h46km±3km,ML5.6*
*MOS **21** 09:00:54.0±1.0,30.2°S×71.1°W,h52km,mb5.4/45,Error ellipse: s-maj=12.3km s-min=5.7km az=97.7*
*IDC **21** 09:00:54.7±0.6,30.4°S×71.4°W,h51km±4km,mb5.0/18, mb1 5.1/21,mb1mx5.0/23,mbtmp5.2/21,MS4.3/8, Ms1 4.2/8,ms1mx4.0/18,Error ellipse: s-maj=12.8km s-min=8.1km az=45.0*
*SJA **21** 09:00:54.0±0.8,30.6°S×71.4°W,h65km±15km,ML4.9, MW5.1*
*NEIC **21** 09:00:55.0±1.5,30.4°S±0.2°×71.2°W±0.2°,h52km±3km, Error ellipse: s-maj=8.6km s-min=1.4km az=109.0*
*NEIC **21** 09:00:55.4,30.4°S×71.2°W,h53km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}4.06; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$-3.87; $M_{r\theta}$0.56; $M_{r\phi}$0.46; $M_{\theta\phi}$-2.04; Fault plane solution: $M_0$4.53000×10^{16} NP1:ϕ_s356.50000°, δ31.26000°,λ96.23000°. NP2:ϕ_s169.23000°,δ58.95000°, λ86.23000°. Principal axes: T 4.5998, Plg76.0000°, Azm68.0000°; N -0.1513, Plg3.0000°, Azm171.0000°; P -4.4484, Plg14.0000°, Azm262.0000°;*
*NEIC **21** 09:00:58,30.4°S×71.4°W,h60km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}4.97; $M_{\theta\theta}$-0.39; $M_{r\phi}$-4.58; $M_{r\theta}$0.73; $M_{\theta\phi}$ 1.21; $M_{\phi r}$-0.58; Fault plane solution: $M_0$5.03000×10^{16} NP1:ϕ_s159.00000°, δ50.00000°,λ82.00000°. NP2:ϕ_s351.00000°,δ41.00000°, λ99.00000°. Principal axes: T 5.0894, Plg83.0000°, Azm20.0000°; N -0.1232, Plg6.0000°, Azm164.0000°; P -4.9663, Plg4.0000°, Azm254.0000°;*
*GCMT **21** 09:00:58.2±0.2,30.6°S±0.01°×71.5°W±0.02,h50km, MW5.1/105,Moment Tensor Solution. s83,c101; s105,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.76±.16; $M_{\theta\theta}$-0.04±.11; $M_{\phi\phi}$-5.72±.12; $M_{r\theta}$0.66±.08; $M_{\theta\phi}$1.10±.08; $M_{\phi r}$-2.63±.13; Best double couple: $M_0$6.44100×10^{16} NP1:ϕ_s351.00000°,δ33.00000°, λ93.00000°. NP2:ϕ_s168.00000°,δ57.00000°,λ88.00000°. Principal axes: T 6.3610, Plg77.0000°, Azm72.0000°; N 0.1660, Plg1.0000°, Azm169.0000°; P -6.5220, Plg12.0000°, Azm259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 09:00:53.4±0.4, 30.4°S±0.02×71.6°W±0.04, h41km±3km, h41km:pP-P,n1335,σ1.2s28/1338,mb5.4/248,MS5.0/75, 25C-16D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GO04	**Tololo Observa**	**0.56**	**61**	↑*iP*		**Pn**	**09 01 06.4**	**+1.1**
GO04				*i* S		**Sn**	**09 01 15.2**	**+1.6**
GO04				IAML			09 01 17.9	
	comp=E,499μm,0.5s							
GO04	**Tololo Observa**	**0.56**	**61**			**Pn**	**09 01 06.8**	**+1.5**
GO04						**Sn**	**09 01 15.5**	**+2.0**
CO03	**El Pedregal**	**0.70**	**124**	↓*iP*		**Pn**	**09 01 07.9**	**+0.9**
CO03				*i* S		**Sn**	**09 01 18.1**	**+1.4**
CO03				IAML			09 01 19.4	
	comp=N,222μm,0.5s							
CO03	**El Pedregal**	**0.70**	**124**			**Pn**	**09 01 08.2**	**+1.2**
CO02	**Combarbal**	**0.82**	**158**	↑*eP*		**Pn**	**09 01 09.6**	**+1.0**
CO02				*i* S		**Sn**	**09 01 21.3**	**+1.6**
CO02	**Combarbal**	**0.82**	**158**			**Pn**	**09 01 09.9**	**+1.3**
CO02						**Sn**	**09 01 21.6**	**+1.9**
CO01	**Juntas del Tor**	**1.19**	**67**	*eP*		**Pn**	**09 01 15.1**	**+1.2**
CO01				*i* S		**Sn**	**09 01 31.3**	**+2.3**
CO01				IAML			09 01 32.8	
	comp=N,113μm,0.4s							
CO01	**Juntas del Tor**	**1.19**	**67**			**Pn**	**09 01 15.8**	**+1.9**
LCO	**Las Campanas**	**1.54**	**22**	↓*iP*		**Pn**	**09 01 20.2**	**+1.5**
LCO				*i* S		**Sn**	**09 01 39.0**	**+1.4**
LCO	**Las Campanas**	**1.54**	**22**	P		**Pn**	**09 01 20.3**	**+1.6**
LCO	**Las Campanas**	**1.54**	**22**			**Pn**	**09 01 20.3**	**+1.6**
LCO	**Las Campanas**	**1.54**	**22**	IPZ		**Pn**	**09 01 20.3**	**+1.6**
LCO				*eP*		**Pn**	**09 01 20.3**	**+1.6**
LCO				*eS*		**Sn**	**09 01 39.4**	**+1.7**
CO04	**Los Peladeros**	**1.63**	**168**	↓*eP*		**Pn**	**09 01 21.6**	**+1.7**
CO04				*i* S		**Sn**	**09 01 41.1**	**+1.4**
CO04				IAML			09 01 46.6	
	comp=E,83μm,0.7s							
CO04	**Los Peladeros**	**1.63**	**168**			**Pn**	**09 01 21.7**	**+1.9**
CO04				Sn		**Sn**	**09 01 41.5**	**+1.7**
AROD	**Rodeo**	**1.66**	**81**	*i* P		**Pn**	**09 01 23.8**	**+3.5**
AC05	**El Transito**	**1.86**	**31**	↓*iP*		**Pn**	**09 01 24.5**	**+1.5**
AC05				*i* S		**Sn**	**09 01 49.0**	**+3.6**
AC05				IAML			09 01 55.7	
	comp=N,47μm,0.7s							
AC05	**El Transito**	**1.86**	**31**			**Pn**	**09 01 25.2**	**+2.2**
ACDV	**Cuesta del Vie**	**1.96**	**82**	*eP*		**Pn**	**09 01 28.0**	**+3.7**
ACDV				IAML			09 02 07.2	
	comp=Z,11μm,0.5s							
RTLS	**Leoncito**	**2.23**	**128**	*i* P		**Pn**	**09 01 31.9**	**+3.7**
RTLS				IAML			09 02 06.5	
	comp=Z,6μm,0.6s							
AC04	**Llanos de Chal**	**2.25**	**6**	↑*iP*		**Pn**	**09 01 29.5**	**+1.3**
AC04				*i* S		**Sn**	**09 01 57.8**	**+3.1**
AC04				IAML			09 02 09.6	
	comp=E,20μm,0.8s							
AC04	**Llanos de Chal**	**2.25**	**6**			**Pn**	**09 01 30.1**	**+1.9**
VA03	**San Esteban**	**2.41**	**164**	↓*iP*		**Pn**	**09 01 32.6**	**+2.1**
VA03				*i* S		**Sn**	**09 02 03.5**	**+4.6**
VA03				IAML			09 02 05.8	
	comp=E,36μm,0.4s							
VA03	**San Esteban**	**2.41**	**164**			**Pn**	**09 01 33.1**	**+2.6**
ROCH	**El Roble**	**2.54**	**173**	↓*eP*		**Pn**	**09 01 34.6**	**+2.3**
ROCH				*eS*		**Sn**	**09 02 07.0**	**+4.9**
ROCH				IAML			09 02 17.7	
	comp=E,28μm,0.1s							
ROC1	**El Roble**	**2.54**	**173**			**Pn**	**09 01 33.3**	**+0.9**
RTLL	**Cerro Villicun**	**2.63**	**110**	*i* P		**Pn**	**09 01 36.7**	**+3.2**
RTLL				IAML			09 02 27.5	
	comp=Z,10μm,0.8s							
PEL	**Peldehue**	**2.75**	**168**	↓*iP*		**Pn**	**09 01 37.3**	**+2.2**
PEL				*i* S		**Sn**	**09 02 11.3**	**+4.2**
PEL				IAML			09 02 21.6	
	comp=N,16μm,0.5s							
PEL	**Peldehue**	**2.75**	**168**	P		**Pn**	**09 01 36.8**	**+1.7**
PEL	**Peldehue**	**2.75**	**168**			**Pn**	**09 01 36.8**	**+1.7**
RTCV	**Cerro Valdivia**	**2.80**	**121**	*i* P		**Pn**	**09 01 39.6**	**+3.8**
RTCV				IAML			09 02 32.1	
	comp=Z,3μm,1.5s							
MT02	**Curacav**	**2.81**	**176**	↑*iP*		**Pn**	**09 01 37.5**	**+1.6**
MT02				*i* S		**Sn**	**09 02 12.4**	**+3.8**
MT02				IAML			09 02 19.6	
	comp=E,11μm,0.1s							
MT02	**Curacav**	**2.81**	**176**			**Pn**	**09 01 37.7**	**+1.8**
CFA	**Coronel Fontan**	**2.92**	**114**	P		**Pn**	**09 01 40.3**	**+2.9**
	comp=E,2μm,0.3s,baz=308,slow=9.7,SNR=3078							
CFA					S	**Sn**	**09 02 18.2**	**+6.9**
	comp=E,761nm,0.3s,baz=84,slow=20,SNR=13							
MT05	**Renca**	**2.98**	**170**			**Pn**	**09 01 40.7**	**+2.4**
GO03	**Copiap**	**3.01**	**19**	↑*iP*		**Pn**	**09 01 40.5**	**+1.9**
GO03				*eS*		**Sn**	**09 02 16.6**	**+3.1**
GO03				IAML			09 02 28.3	
	comp=N,24μm,0.6s							
GO03	**Copiap**	**3.01**	**19**			**Pn**	**09 01 40.6**	**+1.9**
GO03	**Copiap**	**3.01**	**19**	*i* P		**Pn**	**09 01 40.6**	**+1.9**
FCH	**Farellones**	**3.01**	**163**	↓*iP*		**Pn**	**09 01 41.7**	**+2.8**
FCH				IAML			09 02 27.6	
	comp=E,18μm,0.4s							
CLCH	**Cerro Calan**	**3.02**	**167**	*eP*		**Pn**	**09 01 41.2**	**+2.3**
CLCH				*i* S		**Sn**	**09 02 18.1**	**+4.2**
ASAL	**Salagasta**	**3.04**	**135**	*i* P		**Pn**	**09 01 43.3**	**+4.3**
ASAL				IAML			09 02 52.9	
	comp=Z,2μm,1.0s							
MT03	**Universidad Ad**	**3.12**	**167**	↓*iP*		**Pn**	**09 01 42.6**	**+2.4**
MT03				*i* S		**Sn**	**09 02 20.7**	**+4.3**
MT03				IAML			09 02 29.7	
	comp=E,28μm,0.4s							
ARCO	**CERRO ARCO**	**3.16**	**140**	*i* P		Pn	09 01 45.6	+4.8
ARCO				*eS*		Sn	09 02 28.3	+11
UTNM	**Universidad Te**	**3.25**	**139**	*i* P		**Pn**	**09 01 46.2**	**+4.3**
UTNM				IAML			09 02 45.2	
	comp=Z,5μm,1.5s							
AAGR	**Agrelo**	**3.40**	**141**	*i* P		Pn	09 01 48.9	+4.8
AAGR				IAML			09 03 06.3	
	comp=Z,2μm,2.9s							
MT01	**Popeta**	**3.41**	**178**	↑*eP*		**Pn**	**09 01 45.6**	**+1.5**
MT01				*i* S		**Sn**	**09 02 27.2**	**+3.9**
MT01				IAML			09 02 40.9	
	comp=E,11μm,0.4s							
MT01	**Popeta**	**3.41**	**178**			**Pn**	**09 01 45.9**	**+1.8**
ACAN	**Cantantal**	**4.01**	**118**	*i* P		**Pn**	**09 01 55.9**	**+3.5**
ACAN				IAML			09 03 02.8	
	comp=Z,2μm,0.8s							
AC02	**Maricunga**	**4.10**	**29**			**Pn**	**09 01 56.2**	**+2.1**
AC01	**Pan de Azucar**	**4.33**	**9**			**Pn**	**09 01 56.6**	**-0.3**
BO02	**Sierra Bellavi**	**4.36**	**174**			**Pn**	**09 01 58.8**	**+1.6**
GO05	**Huala**	**4.58**	**186**			**Pn**	**09 02 00.1**	**-0.1**
COIS	**El Sosneado**	**4.88**	**163**	*i* P		**Pn**	**09 02 08.4**	**+4.0**
CYA	**Choya**	**5.24**	**69**	*i* P		**Pn**	**09 02 11.6**	**+2.2**
PUMA	**Malargue**	**5.29**	**163**	*i* P		**Pn**	**09 02 13.5**	**+3.6**
GO02	**Mina Guanaco**	**5.49**	**17**			**Pn**	**09 02 12.9**	**-0.1**
EDS3	**Malargue**	**5.56**	**163**	*i* P		**Pn**	**09 02 17.5**	**+3.7**
PB14	**IPOC Station P**	**5.86**	**9**			**Pn**	**09 02 16.2**	**-1.9**
BI02	**San Fabin de**	**6.20**	**179**			**Pn**	**09 02 23.6**	**+1.1**
PB10	**IPOC Station P**	**6.94**	**6**			**Pn**	**09 02 32.3**	**-0.4**
H03N1	**Juan Fernandez**	**7.08**	**243**	T		T	09 09 35.9	
	baz=70,slow=72,SNR=3375							
H03N3	**Juan Fernandez**	**7.09**	**243**	T		T	09 09 48.6	
	baz=70,slow=72,SNR=1997							
H03N2	**Juan Fernandez**	**7.09**	**243**	T		T	09 09 36.9	
	baz=70,slow=72,SNR=2859							
PB15	**IPOC Station P**	**7.41**	**14**			**Pn**	**09 02 38.0**	**-1.2**
PB06	**IPOC Station P**	**7.87**	**12**			**Pn**	**09 02 43.3**	**-2.3**
LVC	**Limon Verde**	**8.11**	**16**	P		**Pn**	**09 02 47.4**	**-1.6**
	comp=Z,8.8nm,0.3s,baz=197,slow=8.7,SNR=36							
LVC					S	**Sn**	**09 04 21.1**	**+1.5**
	comp=Z,24nm,0.3s,baz=272,slow=12,SNR=5.0							
LVC	**Limon Verde**	**8.11**	**16**	*eP*		**Pn**	**09 02 47.1**	**-1.9**
LC01	**Cunco**	**8.44**	**183**			**Pn**	**09 02 53.4**	**+0.2**
PATCX	**Punta Patache**	**9.65**	**7**			**Pn**	**09 03 08.8**	**-1.0**
PLCA	**Paso Flores**	**10.29**	**177**	P		**Pn**	**09 03 19.2**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=349,slow=17,SNR=18							
PLCA					S	**Sn**	**09 05 13.4**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=43,slow=14,SNR=2.0							
PLCA					LR	LR	09 07 48.2	
	comp=Z,1μm,21.0s,baz=344,slow=40							
PLCA	**Paso Flores**	**10.29**	**177**			**Pn**	**09 03 19.0**	**+0.5**
PLCA	**Paso Flores**	**10.29**	**177**	*eP*		**Pn**	**09 03 19.0**	**+0.5**
PB08	**IPOC Station P**	**10.45**	**12**			**Pn**	**09 03 21.9**	**+0.7**
PB11	**IPOC Station P**	**10.75**	**9**			**Pn**	**09 03 24.2**	**-0.8**
GO01	**Chusmiza**	**10.91**	**11**			**Pn**	**09 03 25.7**	**-1.8**
PB12	**IPOC Station P**	**11.82**	**5**			**Pn**	**09 03 38.4**	**-1.2**
LPA	**La Plata**	**12.16**	**115**	*eP*		**Pn**	**09 03 39.6**	**-4.4**
LPA				PPP		PPP	09 03 57.0	
LPA				S		**Sn**	**09 05 49.9**	**-8.3**
LPA				SSS		SSS	09 06 22.8	
LPA				SCS		**ScS**	**09 16 41.2**	**+10**
LPA				PKIKP		**PKiKP**	**09 17 23.5**	**-0.1**
LPA				SKIKP			09 20 50.9	
PB16	**IPOC Station P**	**12.18**	**8**			**Pn**	**09 03 44.3**	**-0.6**
CPUP	**Villa Florida**	**13.02**	**75**	P		**Pn**	**09 03 52.6**	**-3.1**
	comp=Z,2.3nm,0.3s,baz=257,slow=12,SNR=30							
CPUP					S	**Sn**	**09 06 17.4**	**-1.9**
	comp=Z,3.0nm,0.3s,baz=236,slow=16,SNR=1.0							
CPUP	**Villa Florida**	**13.02**	**75**	P		**Pn**	**09 03 54.3**	**-1.5**
CPUP							09 06 17.4	
CPUP	**Villa Florida**	**13.02**	**75**			**Pn**	**09 03 54.3**	**-1.5**
LPAZ	**La Paz**	**14.40**	**13**	P		**Pn**	**09 04 17.4**	**+2.2**
	comp=Z,8.7nm,0.3s,baz=185,slow=8.0,SNR=221							
LPAZ					S	**Sn**	**09 06 60.0**	**+6.0**
	comp=Z,0.1nm,0.3s,baz=55,slow=13,SNR=1.0							
LPAZ	**La Paz**	**14.40**	**13**			**Pn**	**09 04 17.6**	**+2.3**
CPSB	**Cacapava Do Su**	**15.46**	**94**	*eP*		**Pn**	**09 04 26.8**	**-1.9**
CPSB				*eS*		**Sn**	**09 07 17.1**	**-1.8**
ITAB	**Concordia**	**17.15**	**84**	*eP*		**Pn**	**09 04 48.1**	**-2.0**
SIV	**San Ignacio**	**17.20**	**36**	P		**Pn**	**09 04 49.1**	**-1.7**
	comp=Z,0.8nm,0.3s,baz=227,slow=9.3,SNR=38							
CNLB	**Canela**	**17.82**	**92**	*eP*		**Pn**	**09 04 57.2**	**-1.3**
PTGB	**Pitanga**	**18.03**	**76**	*eP*		**Pn**	**09 05 00.4**	**-0.6**
TRCB	**Terra Rica**	**18.38**	**70**	*eP*		**P**	**09 05 04.3**	**-0.7**
PTLB	**Pontes e Lacer**	**18.67**	**40**	*eP*		**P**	**09 05 07.7**	**-0.4**
NNA	**Nana**	**19.06**	**343**	P		**Pn**	**09 05 13.6**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=192,slow=15,SNR=8.9							
NNA	**Nana**	**19.06**	**343**	*ceP*		**Pn**	**09 05 13.4**	**-0.1**
NNA					pmax	pmax		
	comp=Z,37nm,0.7s							
NNA	**Nana**	**19.06**	**343**	P		**P**	**09 05 12.2**	**-0.2**
PCMB	**Pacaembu**	**20.07**	**69**	*eP*		**P**	**09 05 23.5**	**0.0**
VILB	**Vilhena**	**20.24**	**33**	*eP*		**P**	**09 05 25.3**	**0.0**
SALV	**Santo Antonio**	**20.39**	**48**	*eP*		**P**	**09 05 26.6**	**-0.2**
TIJ01	**Guaruva-PR**	**20.40**	**81**	*eS*		**S**	**09 09 12.8**	**-0.8**
C2SB	**Chapadao do Su**	**20.43**	**60**	*eP*		**P**	**09 05 26.6**	**-0.8**
FRTB	**Fartura**	**20.67**	**75**	*eP*		**P**	**09 05 29.3**	**-0.7**
GO09	**Cerro Castillo**	**20.82**	**182**	P		Pn	09 05 33.1	-0.8
PET01	**Itanhaem-SP**	**22.23**	**80**	*eP*		**P**	**09 05 45.5**	**-1.2**
SPB	**Sao Paulo**	**22.36**	**78**	P		**P**	**09 05 47.0**	**-1.0**
SPB					IAmb	IAmb	09 05 51.4	
	comp=Z,148nm,1.2s							
SPB	**Sao Paulo**	**22.36**	**78**	*eP*		**P**	**09 05 46.8**	**-1.3**
SPB				*eS*		**S**	**09 09 51.4**	**0.0**
GO10	**Punta Arenas**	**22.69**	**180**	P		**P**	**09 05 51.7**	**+0.3**
GO10					IAmb	IAmb	09 05 56.2	
	comp=Z,101nm,1.1s							
SAML	**Samuel**	**22.71**	**21**	P		**P**	**09 05 51.6**	**-0.3**
SAML					pmax	pmax		
	comp=Z,63nm,0.8s							
SAML	**Samuel**	**22.71**	**21**	P		**P**	**09 05 51.6**	**-0.3**
SAML					IAmb	IAmb	09 05 53.5	
	comp=Z,63nm,0.8s							
VAO	**Valinhos**	**22.99**	**77**	*eP*		**P**	**09 05 53.4**	**-1.4**
VAO					*eS*	**S**	**09 10 02.7**	**+0.3**
ARAG	**Araguaiana, MT**	**23.16**	**55**	*eP*		**P**	**09 05 54.5**	**-2.0**
ARAG					*eS*	**S**	**09 10 05.7**	**+0.6**
EFI	**East Falkland**	**23.39**	**159**	*ceP*		**P**	**09 05 58.4**	**+0.1**
EFI					pmax	pmax		
	comp=Z,45nm,0.8s							
EFI	**East Falkland**	**23.39**	**159**	P		**P**	**09 05 57.9**	**-0.5**
EFI					IAmb	IAmb	09 06 11.7	
	comp=Z,70nm,0.8s							
PARB	**Paraibuna**	**23.99**	**79**	*eP*		**P**	**09 06 03.1**	**-1.3**
ATAH	**Atahualpa**	**24.11**	**343**	P		**P**	**09 06 06.5**	**+0.6**
	comp=Z,5.3nm,0.6s,baz=47,slow=18,SNR=1.7							
CLDB	**Colider**	**24.26**	**40**	*eP*		**P**	**09 06 04.5**	**-2.4**
IPMB	**Ipameri, GO**	**24.43**	**65**	*eP*		**P**	**09 06 07.7**	**-0.8**
USHA	**Ushuaia**	**24.46**	**176**	P		**P**	**09 06 09.1**	**+0.8**
	comp=Z,85nm,0.8s,baz=272,slow=10,SNR=17							
MAN01	**Angra dos Reis**	**25.58**	**79**	*eP*		**P**	**09 06 18.2**	**-0.7**
BSCB	**Bom Sucesso**	**25.68**	**75**	*eP*		**P**	**09 06 18.9**	**-0.9**
BDFB	**Brasilia**	**25.98**	**61**	P		**P**	**09 06 22.1**	**-0.4**
	comp=Z,156nm,0.7s,baz=234,slow=8.0,SNR=215							
BDFB					LR	LR	09 17 43.0	
	comp=Z,1μm,19.9s,baz=245,slow=39							
BDFB	**Brasilia**	**25.98**	**61**	P		**P**	**09 06 22.0**	**-0.5**
VAS01	**Vassouras-RJ**	**26.25**	**79**	*eP*		**P**	**09 06 24.6**	**-0.4**
NPGB	**Novo Progresso**	**27.70**	**36**	*eP*		**P**	**09 06 36.6**	**-1.4**
MC01	**Montes Claros**	**28.52**	**68**	*eP*		**P**	**09 06 44.5**	**-0.8**
MACA	**Manacapuru-AM**	**28.96**	**22**	*eP*		**P**	**09 06 48.9**	**-0.2**
JANB	**Januaria**	**29.17**	**64**	*eP*		**P**	**09 06 50.5**	**-0.5**
SJMB	**Sao Joao De Ma**	**29.74**	**74**	*eP*		**P**	**09 06 55.5**	**-0.5**
BSFB	**Barra de Sao F**	**29.96**	**74**	*eP*		**P**	**09 06 57.3**	**-0.7**
PTLC	**Puerto Leguiza**	**30.62**	**353**	*eP*		**P**	**09 07 02.6**	**-1.3**
SMTB	**Santa Maria do**	**30.89**	**51**	*eP*		**P**	**09 07 06.3**	**0.0**
PTGA	**Pitinga**	**31.47**	**22**	P		**P**	**09 07 11.2**	**-0.2**
PTGA					IAmb	IAmb	09 07 12.2	
	comp=Z,72nm,0.9s							
PTGA	**Pitinga**	**31.47**	**22**	*eP*		**P**	**09 07 11.2**	**-0.2**
PRPB	**Parauapebas**	**31.52**	**44**	*eP*		**P**	**09 07 10.6**	**-1.1**
MACC	**Macarena, Meta**	**32.50**	**355**	*eP*		**P**	**09 07 21.5**	**+1.1**
GARC	**Garzon, Huila**	**32.69**	**352**	*eP*		**P**	**09 07 24.6**	**+2.3**
MALB	**Monte Alegre**	**32.73**	**33**	*eP*		**P**	**09 07 21.3**	**-1.2**
BBAC	**Balboa, Cauca**	**32.77**	**349**	*eP*		**P**	**09 07 25.0**	**+2.1**
SOTA	**Rioblanco**	**32.78**	**350**	*eP*		**P**	**09 07 25.9**	**+2.5**
PCON	**Cinco Dias**	**32.94**	**351**	*eP*		**P**	**09 07 27.9**	**+3.0**
BETC	**Betania**	**33.17**	**353**	*eP*		**P**	**09 07 29.2**	**+3.0**
GDU01	**Guandu, BA**	**33.67**	**67**	*eP*		**P**	**09 07 29.8**	**-0.9**
PRAC	**Prado**	**34.13**	**354**	*eP*		**P**	**09 07 37.1**	**+2.4**
ORTC	**Ortega, Tolima**	**34.36**	**353**	*eP*		**P**	**09 07 39.4**	**+2.8**
YOTC	**Yotoco, Valle**	**34.57**	**351**	*eP*		**P**	**09 07 39.1**	**+0.6**
PMSA	**Palmer Station**	**34.65**	**174**	P		**P**	**09 07 39.6**	**+1.1**
	comp=Z,18nm,0.7s,baz=232,slow=20,SNR=1.5							
CHIC	**Chingaza**	**34.95**	**356**	*eP*		**P**	**09 07 43.7**	**+1.6**
ANIL	**Santa Ana**	**34.95**	**353**	*eP*		**P**	**09 07 44.0**	**+1.9**
ROSC	**El Rosal**	**35.20**	**355**	P		**P**	**09 07 45.5**	**+1.2**
	comp=Z,30nm,0.5s,baz=42,slow=23,SNR=15							
ROSC	**El Rosal**	**35.20**	**355**	*eP*		**P**	**09 07 47.2**	**+3.0**
ROSC	**El Rosal**	**35.20**	**355**	IAmb		IAmb	09 07 50.1	
	comp=Z,73nm,1.1s							
RREF	**El Recreo**	**35.35**	**353**	*eP*

baz=172
157A Early Branch 63.44 351 P P 09 11 18.2 -0.8
baz=171
154A Montrose 63.70 349 P P 09 11 20.1 -0.5
154A IAmb IAmb 09 11 21.6
comp=Z,43nm,1.0s
NHSC New Hope 63.76 352 P P 09 11 21.4 +0.4
baz=172,SNR=5.3
NHSC New Hope 63.76 352 P P 09 11 21.2 +0.2
Z59A Georgetown, SC 63.78 353 P P 09 11 20.8 -0.4
baz=172
Z58A St. Stephen 63.94 352 P P 09 11 22.7 +0.5
baz=172
Z57A Bowman 64.01 351 P P 09 11 22.5 -0.2
baz=171,SNR=7.2
152A Waverly Hall 64.03 347 P P 09 11 22.5 -0.4
152A IAmb IAmb 09 11 23.6
comp=Z,15nm,0.8s
Z56A Williston 64.13 351 P P 09 11 23.5 +0.1
baz=170
Z56A Williston 64.13 351 P P 09 11 23.5 +0.1
Z56A IAmb IAmb 09 11 24.7
comp=Z,32nm,0.7s
735A Kenedy 64.14 334 P P 09 11 23.9 +0.3
344A Westbrook Farm 64.25 342 P P 09 11 25.0 +0.7
344A IAmb IAmb 09 11 40.0
comp=Z,48nm,1.0s
833A Chaparral WMA, 64.28 333 P P 09 11 25.9 +1.3
baz=153,SNR=6.1
HKT Hockley 64.42 337 P P 09 11 26.7 +1.3
HKT pmax pmax
comp=Z,39nm,1.5s
HKT Hockley 64.42 337 P P 09 11 26.7 +1.3
HKT IAmb IAmb 09 11 42.4
comp=Z,39nm,1.5s
Y60A Bolivia 64.43 354 P P 09 11 25.6 +0.2
baz=173
Y59A Loris 64.48 353 P P 09 11 26.6 +0.9
baz=173
Y58A Scranton 64.49 352 P P 09 11 26.1 +0.4
baz=172
GOGA Godfrey 64.54 349 P P 09 11 26.2 +0.1
GOGA pmax pmax
comp=Z,9.0nm,0.9s
GOGA Godfrey 64.54 349 P P 09 11 25.7 -0.4
baz=168,SNR=6.8
GOGA Godfrey 64.54 349 P P 09 11 26.2 +0.1
Y56A Pelion 64.58 351 P P 09 11 26.7 +0.3
baz=170
342A Flagon Creek P 64.63 340 P P 09 11 27.8 +1.0
342A IAmb IAmb 09 11 42.7
comp=Z,46nm,0.9s
Y57A Sumter 64.68 352 P P 09 11 27.1 +0.1
baz=171
Y57A Sumter 64.68 352 P P 09 11 27.1 +0.1
Y57A IAmb IAmb 09 11 28.4
comp=Z,39nm,1.1s
Y55A Saluda 64.80 350 P P 09 11 27.2 -0.6
baz=170,SNR=7.1
Z50A Ashland 64.84 347 P P 09 11 27.6 -0.6
baz=166,SNR=16
Z50A Ashland 64.84 347 P P 09 11 28.1 0.0
Z50A IAmb IAmb 09 11 29.0
comp=Z,25nm,0.8s
LRAL Lakeview Retre 64.85 346 P P 09 11 28.0 -0.2
baz=165,SNR=7.2
LRAL Lakeview Retre 64.85 346 P P 09 11 28.1 0.0
VBMS Vicksburg 64.92 342 P P 09 11 29.4 +0.8
baz=162,SNR=6.0
146A Union 64.94 344 P P 09 11 29.5 +0.7
146A IAmb IAmb 09 11 30.9
comp=Z,28nm,0.9s
X60A Albert Glenn T 64.98 354 P P 09 11 29.5 +0.5
baz=174,SNR=5.9
X59A McDuffie Farm, 65.03 353 P P 09 11 29.3 0.0
baz=173
Y52A Lilburn 65.08 348 P P 09 11 29.3 -0.4
baz=168,SNR=11
Y52A Lilburn 65.08 348 P P 09 11 29.8 +0.1
Y52A IAmb IAmb 09 11 30.2
comp=Z,19nm,0.9s
X57A Johnson Farm, 65.09 352 P P 09 11 29.4 -0.3
baz=172
X58A Rowland 65.09 353 P P 09 11 30.2 +0.5
baz=172
X58A Rowland 65.09 353 P P 09 11 29.8 +0.1
X58A IAmb IAmb 09 11 31.7
comp=Z,44nm,0.9s
HODGE Hodges 65.15 350 P P 09 11 30.2 +0.1
X56A White Oak 65.23 351 P P 09 11 30.8 +0.2
baz=171
Z47A Carrollton 65.25 345 P P 09 11 31.1 +0.3
Z47A IAmb IAmb 09 11 32.0
comp=Z,31nm,0.9s
X55A Gracelyn & Ava 65.29 351 P P 09 11 31.0 0.0
baz=170,SNR=8.5
BIRD Birdtown, Kers 65.31 352 P P 09 11 31.1 -0.1
BIRD IAmb IAmb 09 11 32.5
comp=Z,31nm,1.3s
W60A Pink Hill 65.42 354 P P 09 11 32.4 +0.6
baz=174
X54A Belton 65.48 350 P P 09 11 32.4 +0.2
baz=170,SNR=7.1
W61A Ground Anchor 65.49 355 P P 09 11 33.3 +1.0
baz=175
Y49A Blount Mountai 65.52 346 P P 09 11 32.3 -0.3
W58A Raeford 65.54 353 P P 09 11 33.0 +0.4
baz=172,SNR=18
W59A Clinton 65.61 354 P P 09 11 33.6 +0.6
baz=173
CNNC Cliffs of the 65.63 354 P P 09 11 33.6 +0.4
baz=174
PAULI Pauline 65.66 351 P P 09 11 33.9 +0.5
PAULI IAmb IAmb 09 11 34.9
comp=Z,44nm,1.3s
NATX Nacogdoches 65.70 338 P P 09 11 35.1 +1.4
baz=158
NATX Nacogdoches 65.70 338 P P 09 11 34.2 +0.5
NATX IAmb IAmb 09 11 49.4
comp=Z,36nm,0.9s
W57A Gilead 65.75 352 P P 09 11 34.0 0.0
baz=172,SNR=12
W57A Gilead 65.75 352 P P 09 11 34.2 +0.2
W57A IAmb IAmb 09 11 35.3
comp=Z,42nm,1.1s
435B Jarrell 65.80 335 P P 09 11 35.2 +0.8
baz=155
W56A Indian Trail 65.81 352 P P 09 11 34.1 -0.2
baz=171,SNR=9.9
HPIG 65.81 327 P P 09 11 35.6 +0.7
HPIG IAmb IAmb 09 11 37.2
comp=Z,23nm,1.0s
X51A Calhoun 65.91 348 P P 09 11 35.4 +0.4
KMSC Kings Mountain 65.91 351 P P 09 11 34.9 -0.1
baz=171,SNR=9.5
KMSC Kings Mountain 65.91 351 P P 09 11 35.2 +0.1
KMSC IAmb IAmb 09 11 36.3
comp=Z,35nm,1.2s
W54A Cherokee Point 65.98 350 P P 09 11 35.9 +0.4
baz=170,SNR=13
BG3 Lake Jocassee 66.00 350 P P 09 11 35.8 +0.2
BG3 IAmb IAmb 09 11 37.1
comp=Z,36nm,1.4s
FPAL Fort Paine 66.02 347 P P 09 11 35.4 -0.4
FPAL IAmb IAmb 09 11 36.8
comp=Z,34nm,1.3s
V61A Roper 66.07 355 P P 09 11 37.0 +1.1
baz=175
V60A Jim Taylor Roa 66.09 355 P P 09 11 36.8 +0.6
baz=174,SNR=6.2
V60A Jim Taylor Roa 66.09 355 P P 09 11 36.8 +0.6
V60A IAmb IAmb 09 11 38.1
comp=Z,42nm,0.8s
V59A Middlesex 66.18 354 P P 09 11 37.3 +0.6
baz=174,SNR=15
X48A Hartselle 66.23 346 P P 09 11 37.3 +0.3
X48A IAmb IAmb 09 11 38.3
comp=Z,36nm,0.8s
Y45A Yeager Farm, C 66.23 344 P P 09 11 37.9 +0.8
W52A Murphy 66.26 349 P P 09 11 37.7 +0.4
W52A IAmb IAmb 09 11 38.7
comp=Z,33nm,1.1s
V58A Windy Hill, Pi 66.29 353 P P 09 11 37.4 0.0
baz=173,SNR=14
V58A Windy Hill, Pi 66.29 353 P P 09 11 37.7 +0.2
V58A IAmb IAmb 09 11 38.7
comp=Z,51nm,1.1s

JCT Junction City 66.36 333 P P 09 11 39.2 +1.2
JCT pmax pmax
comp=Z,25nm,0.7s
JCT Junction City 66.36 333 P P 09 11 38.7 +0.7
baz=153,SNR=18
JCT Junction City 66.36 333 P P 09 11 39.2 +1.2
JCT IAmb IAmb 09 11 39.7
comp=Z,25nm,0.7s
V57A Coltrane Farms 66.46 353 P P 09 11 38.3 -0.2
baz=172,SNR=5.3
V56A Mocksville 66.46 352 P P 09 11 38.9 +0.3
baz=171,SNR=15
Z41A Richland Creek 66.53 340 P P 09 11 39.8 +0.8
baz=160
V55A Taylorsville 66.60 351 P P 09 11 39.5 +0.1
baz=171,SNR=17
V55A Taylorsville 66.60 351 P P 09 11 39.5 +0.1
V55A IAmb IAmb 09 11 40.8
comp=Z,45nm,1.1s
U61A Possum Corner 66.60 356 P P 09 11 40.4 +1.1
baz=175
W50A Signal Mountai 66.61 348 P P 09 11 39.8 +0.2
W50A IAmb IAmb 09 11 40.4
comp=Z,24nm,0.8s
V54A Nebo 66.62 351 P P 09 11 39.7 +0.1
baz=170,SNR=18
V53A Saluda 66.64 350 P P 09 11 39.7 0.0
V53A IAmb IAmb 09 11 41.0
comp=Z,51nm,1.2s
CPCT Cooper Cave 66.71 348 P P 09 11 40.3 +0.2
CPCT IAmb IAmb 09 11 41.4
comp=Z,60nm,1.2s
U59A Littleton 66.72 354 P P 09 11 40.6 +0.5
baz=174,SNR=19
U59A Littleton 66.72 354 P P 09 11 41.0 +0.8
SWET Sewanee 66.74 347 P P 09 11 40.6 +0.2
SWET IAmb IAmb 09 11 41.1
comp=Z,28nm,0.8s
TKL Tuckaleechee C 66.78 349 P P 09 11 40.4 -0.2
TKL pmax pmax
comp=Z,49nm,1.2s
TKL Tuckaleechee C 66.78 349 P P 09 11 40.4 -0.2
TKL IAmb IAmb 09 11 41.6
comp=Z,49nm,1.1s
U60A Pendleton 66.79 355 P P 09 11 41.4 +0.8
baz=174
OXF Oxford 66.82 344 P P 09 11 40.9 +0.1
OXF pmax pmax
comp=Z,59nm,1.0s
OXF Oxford 66.82 344 P P 09 11 40.6 -0.3
baz=163,SNR=8.5
OXF Oxford 66.82 344 P P 09 11 40.9 +0.1
U58A Oxford 66.83 354 P P 09 11 41.2 +0.3
baz=173,SNR=10
WHTX Lake Whitney, 66.85 336 P P 09 11 41.9 +0.8
baz=156
WHTX Lake Whitney, 66.85 336 P P 09 11 42.0 +0.8
WHTX IAmb IAmb 09 11 56.4
comp=Z,30nm,0.8s
CCAR Cane Creek 66.86 342 P P 09 11 42.0 +0.9
CCAR IAmb IAmb 09 11 44.5
comp=Z,42nm,1.1s
V52A Sevierville 66.93 349 P P 09 11 41.4 -0.2
TXAR Lajitas Array 66.95 330 P P 09 11 42.8 +0.9
comp=Z,9.0nm,0.7s,baz=152,slow=8.0,SNR=120
TXAR pP pP 09 11 56.3 +2.3
comp=Z,3.5nm,0.7s,baz=142,slow=8.9,SNR=7.9
TXAR LR LR 09 36 57.2
comp=Z,130nm,18.4s,baz=0.0,slow=32
TXAR PKP2bc 09 40 11.4
comp=Z,0.8nm,1.0s,baz=343,slow=1.3,SNR=5.2
TX31 Lajitas Ar. Si 66.95 330 P P 09 11 42.6 +0.7
TX31 IAmb IAmb 09 11 43.6
comp=Z,28nm,0.7s
TX32 Lajitas Array 66.95 330 P P 09 11 42.7 +0.8
U57A Blanch 66.95 353 P P 09 11 41.7 +0.1
baz=172,SNR=9.7
PLAL Pickwick Lake 66.96 345 P P 09 11 41.5 -0.2
PLAL IAmb IAmb 09 12 01.1
comp=Z,20nm,1.0s
U56A King 66.98 352 P P 09 11 42.2 +0.3
baz=172,SNR=6.9
U56A King 66.98 352 P P 09 11 42.5 +0.6
U56A IAmb IAmb 09 11 43.5
comp=Z,49nm,1.1s
WLAR White Oak Lake 67.02 340 P P 09 11 42.6 +0.5
WLAR IAmb IAmb 09 11 58.0
comp=Z,57nm,1.3s
V51A Loudon 67.02 349 P P 09 11 42.1 0.0
V51A IAmb IAmb 09 11 43.2
comp=Z,33nm,1.0s
X43A Marvell 67.19 343 P P 09 11 44.0 +0.8
baz=162
U55A TA2, Sparta 67.22 352 P P 09 11 43.3 -0.1
baz=171,SNR=10
TAOE Nuku Hiva Isla 67.30 273 *e*LR LR 09 32 09.7
comp=Z,335nm,30.7s
T59A Double "B" Far 67.32 355 P P 09 11 44.6 +0.7
baz=174,SNR=21
T59A Double "B" Far 67.32 355 P P 09 11 44.8 +0.8
U54A Nelsons Funny 67.33 351 P P 09 11 43.9 -0.3
baz=170,SNR=18
U54A Nelsons Funny 67.33 351 P P 09 11 44.2 0.0
T58A Grand View Acr 67.38 354 P P 09 11 44.8 +0.5
baz=173,SNR=27
W45A Hickory Valley 67.38 344 P P 09 11 44.9 +0.5
W45A IAmb IAmb 09 12 04.0
comp=Z,61nm,1.3s
T60A Surry 67.42 355 P P 09 11 45.1 +0.5
baz=175
V48A Smith Brothers 67.42 346 P P 09 11 44.9 +0.2
T57A Hurt 67.50 353 P P 09 11 45.4 +0.3
baz=173,SNR=7.5
T57A Hurt 67.50 353 P P 09 11 45.6 +0.5
T57A IAmb IAmb 09 11 46.6
comp=Z,23nm,1.0s
T56A Rocky Mt 67.61 353 P P 09 11 46.5 +0.7
baz=172,SNR=17
TZTN Tazewell 67.61 349 P P 09 11 45.5 -0.3
baz=169,SNR=6.6
TZTN Tazewell 67.61 349 P P 09 11 45.4 -0.5
TZTN IAmb IAmb 09 11 46.9
comp=Z,42nm,1.4s
CLTN Cedars of Leba 67.67 347 P P 09 11 46.5 +0.3
CLTN IAmb IAmb 09 11 47.5
comp=Z,70nm,1.4s
VNDA Vanda 67.69 191 P P 09 11 47.2 +1.3
comp=Z,6.5nm,0.9s,baz=132,slow=5.9,SNR=32
VNDA PKPPKP P'P'df 09 40 03.7 -9.3
comp=Z,1.2nm,0.9s,baz=300,slow=7.3,SNR=5.2
VNDA Vanda 67.69 191 P P 09 11 46.5 +0.6
X40A Basin Creek Fa 67.69 341 P P 09 11 46.2 -0.1
baz=160
T55A Pulaski 67.79 352 P P 09 11 47.5 +0.5
baz=171,SNR=9.7
UALR University of 67.82 341 P P 09 11 47.3 +0.1
T54A Tazewell 67.83 351 P P 09 11 47.0 -0.3
baz=170,SNR=14
BLA Blacksburg 67.84 352 P P 09 11 47.6 +0.3
BLA pmax pmax
comp=Z,13nm,0.8s
BLA Blacksburg 67.84 352 P P 09 11 47.6 +0.3
baz=172,SNR=6.2
BLA Blacksburg 67.84 352 P P 09 11 47.6 +0.3
T53A Wise 67.89 350 P P 09 11 47.4 -0.3
baz=170,SNR=10.0
S61A Accomac 67.89 356 P P 09 11 49.1 +1.5
baz=176
MIAR Mount Ida 67.96 340 P P 09 11 47.9 -0.2
MIAR pmax pmax
comp=Z,18nm,1.0s
MIAR Mount Ida 67.96 340 P P 09 11 48.4 +0.3
baz=159,SNR=8.6
MIAR Mount Ida 67.96 340 P P 09 11 47.9 -0.2
U49A Red Boiling Sp 67.97 348 P P 09 11 48.1 0.0
U49A IAmb IAmb 09 11 49.2
comp=Z,34nm,1.2s
S60A Water View 67.98 355 P P 09 11 49.2 +1.1
baz=175
S58A Poland Farm, P 67.99 354 P P 09 11 48.8 +0.7
baz=174,SNR=12
S58A Poland Farm, P 67.99 354 P P 09 11 49.2 +1.0
Z35A Perchaven, San 68.00 337 P P 09 11 49.1 +0.8
WVT Waverly 68.01 346 P P 09 11 48.4 +0.1
WVT pmax pmax
comp=Z,36nm,0.9s

WVT Waverly 68.01 346 P P 09 11 48.2 -0.1
baz=165
WVT Waverly 68.01 346 P P 09 11 48.4 +0.1
WVT IAmb IAmb 09 11 50.3
comp=Z,36nm,0.8s
S59A Mechanicsville 68.08 355 P P 09 11 49.6 +0.9
baz=174,SNR=16
W41B Gary Mavity, V 68.17 342 P P 09 11 49.7 +0.3
baz=161,SNR=12
S56A Natural Bridge 68.20 353 P P 09 11 49.8 +0.3
baz=172,SNR=8.3
ABTX Abilene, Hawle 68.21 334 P P 09 11 50.5 +0.8
baz=154,SNR=11
ABTX Abilene, Hawle 68.21 334 P P 09 11 50.7 +1.0
ABTX IAmb IAmb 09 12 05.1
comp=Z,35nm,0.9s
S57A Dark Hollow, R 68.22 354 P P 09 11 50.1 +0.5
baz=173,SNR=9.8
S57A Dark Hollow, R 68.22 354 P P 09 11 50.3 +0.7
S57A IAmb IAmb 09 11 51.4
comp=Z,38nm,0.9s
WHAR Wooly Hollow 68.29 342 P P 09 11 50.6 +0.5
WHAR IAmb IAmb 09 11 52.8
comp=Z,19nm,1.0s
T50A Nancy 68.29 348 P P 09 11 49.9 -0.3
R58B Mineral 68.33 354 P P 09 11 51.3 +1.0
baz=174,SNR=25
R58B Mineral 68.33 354 P P 09 11 51.4 +1.1
GNAR Gosnell 68.35 344 P P 09 11 51.0 +0.5
S55A Lewisburg 68.40 352 P P 09 11 51.2 +0.4
baz=172,SNR=18
R59A King George, V 68.50 355 P P 09 11 52.6 +1.2
baz=175,SNR=9.3
S53A Williamson 68.52 351 P P 09 11 51.3 -0.3
baz=170,SNR=6.5
R61A Willards 68.52 357 P P 09 11 52.9 +1.5
baz=176
CBN Corbin Frederi 68.53 355 P P 09 11 52.4 +0.9
baz=174
S54A Dingess, Beckl 68.53 352 P P 09 11 51.2 -0.4
baz=171,SNR=11
S54A Dingess, Beckl 68.53 352 P P 09 11 51.6 0.0
S54A IAmb IAmb 09 11 52.6
comp=Z,46nm,1.1s
R60A Leonardtown, M 68.53 356 P P 09 11 53.0 +1.5
baz=175
X37A Clayton 68.54 339 P P 09 11 52.5 +0.8
W39A Magazine 68.62 340 P P 09 11 53.0 +0.8
baz=159,SNR=22
W39A Magazine 68.62 340 P P 09 11 53.3 +1.1
W39A IAmb IAmb 09 11 54.4
comp=Z,40nm,0.9s
R58A Rapidan 68.67 354 P P 09 11 53.2 +0.8
baz=174,SNR=14
T47A Sharon Grove 68.69 347 P P 09 11 52.5 -0.1
T47A IAmb IAmb 09 11 53.8
comp=Z,52nm,1.0s
S51A Beattyville 68.69 350 P P 09 11 52.5 0.0
S51A IAmb IAmb 09 11 53.6
comp=Z,33nm,0.9s
HICK Hickman 68.71 345 P P 09 11 53.0 +0.3
R57A Stanardsville 68.72 354 P P 09 11 53.7 +1.0
baz=173,SNR=27
LCAR Lake Charles 68.73 343 P P 09 11 53.0 +0.2
LCAR IAmb IAmb 09 11 55.0
comp=Z,26nm,0.7s
TBI Tubuai 68.75 255 *e*LR LR 09 32 49.9
comp=Z,398nm,28.5s
TBI Tubuai 68.75 255 *e*T T 10 26 34.2
comp=Z,16nm,0.2s
FCAR Ozark Folk Cen 68.81 342 P P 09 11 53.6 +0.3
R55A Marlinton 68.86 353 P P 09 11 54.4 +0.6
baz=172,SNR=15
R55A Marlinton 68.86 353 P P 09 11 54.1 +0.4
R55A IAmb IAmb 09 11 55.7
comp=Z,40nm,0.9s
R54A Victor 68.86 352 P P 09 11 53.7 0.0
baz=171,SNR=13
HENM Henderson Moun 68.94 344 P P 09 11 55.1 +1.0
PARMO Parma 68.95 344 P P 09 11 54.8 +0.6
SYO Syowa Base 68.96 159 jP P 09 11 52.0 -1.9
SYO Syowa Base 68.96 159 jpP pP 09 12 03.4 -2.8
SYO Syowa Base 68.96 159 jsP sP 09 12 07.2 -3.8
T45A Paducah 69.04 345 P P 09 11 55.0 +0.3
Q61A Milford 69.07 357 P P 09 11 56.4 +1.6
baz=176
Q59A Harwood 69.13 356 P P 09 11 56.5 +1.3
baz=175
R53A Hurricane 69.13 351 P P 09 11 55.2 -0.2
baz=170,SNR=6.1
R53A Hurricane 69.13 351 P P 09 11 55.1 -0.2
R53A IAmb IAmb 09 11 56.3
comp=Z,21nm,0.8s
Q60A Greensboro 69.22 356 P P 09 11 57.2 +1.4
baz=176
PBMO Poplar Bluff 69.22 344 P P 09 11 56.2 +0.3
PBMO IAmb IAmb 09 12 10.5
comp=Z,27nm,0.8s
Q58A Fox Den Farm, 69.28 355 P P 09 11 57.0 +0.8
baz=174,SNR=7.7
Q57A Strasburg 69.44 354 P P 09 11 58.4 +1.2
baz=174,SNR=22
R50A Paris 69.44 349 P P 09 11 57.0 -0.1
U40A Yellville 69.45 342 P P 09 11 57.5 +0.2
baz=160,SNR=20
U40A Yellville 69.45 342 P P 09 11 57.6 +0.2
U40A IAmb IAmb 09 11 58.7
comp=Z,19nm,0.9s
Q56A Snyder Ridge, 69.52 354 P P 09 11 58.8 +1.1
baz=173,SNR=11
Q56A Snyder Ridge, 69.52 354 P P 09 11 58.2 +0.5
Q56A IAmb IAmb 09 11 59.8
comp=Z,28nm,0.9s
Q55A Buckhannon 69.56 353 P P 09 11 58.7 +0.7
baz=172,SNR=14
R49A Shelbyville 69.59 348 P P 09 11 57.2 -1.0
Q53A Leroy 69.60 352 P P 09 11 58.2 0.0
baz=171,SNR=7.8
Q54A Coxs Mills 69.64 352 P P 09 11 58.1 -0.3
baz=171,SNR=12
Q54A Coxs Mills 69.64 352 P P 09 11 58.0 -0.4
Q54A IAmb IAmb 09 11 59.2
comp=Z,20nm,0.8s
HHAR Hobbs 69.68 341 P P 09 11 59.2 +0.4
HHAR IAmb IAmb 09 12 00.1
comp=Z,29nm,0.8s
SDMD Soldier's Deli 69.69 355 P P 09 12 00.1 +1.4
SDMD IAmb IAmb 09 12 00.9
comp=Z,29nm,1.2s
GDL2 Guadalupe Moun 69.72 331 P P 09 12 00.4 +1.2
MNTX Cornudas Mount 69.73 329 P P 09 11 59.1 0.0
baz=149,SNR=48
MNTX Cornudas Mount 69.73 329 P P 09 11 59.2 0.0
MNTX IAmb IAmb 09 12 00.1
comp=Z,16nm,0.8s
WCI Wyandotte Cave 69.73 348 P P 09 11 58.6 -0.4
WCI pmax pmax
comp=Z,36nm,1.1s
WCI Wyandotte Cave 69.73 348 P P 09 11 58.4 -0.6
baz=166
WCI Wyandotte Cave 69.73 348 P P 09 11 58.6 -0.4
WCI IAmb IAmb 09 11 59.7
comp=Z,36nm,1.1s
USIN University of 69.74 346 P P 09 11 58.9 -0.1
Q52A Bidwell 69.80 351 P P 09 11 59.3 -0.1
baz=170,SNR=14
P58A Pank, Wackersv 69.80 355 P P 09 12 00.3 +1.0
baz=174,SNR=23
WMOK Wichita Mounta 69.80 336 P P 09 11 59.1 -0.5
WMOK pmax pmax
comp=Z,11nm,1.1s
WMOK Wichita Mounta 69.80 336 P P 09 11 59.5 -0.1
baz=155,SNR=14
WMOK Wichita Mounta 69.80 336 P P 09 11 59.1 -0.5
S44A Carbondale 69.82 345 P P 09 11 59.7 +0.1
S44A IAmb IAmb 09 12 14.1
comp=Z,37nm,0.8s
SIUC Southern Illin 69.83 345 P P 09 11 59.9 +0.3
P61A Hammonton 69.84 357 P P 09 12 00.9 +1.3
baz=177
P57A Homestead Farm 69.85 355 P P 09 12 00.8 +1.2
baz=174,SNR=24
P57A Homestead Farm 69.85 355 P P 09 12 01.0 +1.3
P59A Jarrettsville 69.86 356 P P 09 12 00.8 +1.1
baz=175,SNR=36
TUL1 Leonard 69.89 339 P P 09 12 00.2 +0.2

baz=158,SNR=20
TUL1 Leonard 69.89 339 P **P** 09 12 00.3 +0.2
TUL1 lAmb lAmb 09 12 14.7
comp=Z,40nm,0.8s
P56A Dayton Farm, R 69.94 354 P **P** 09 12 01.3 +1.0
baz=173,SNR=20
MEH Mehetia 69.94 261 *e*T T 10 28 04.7
comp=Z,27nm,0.3s
U38A Gravette 69.96 340 P **P** 09 12 00.7 +0.2
Q51A Peebles 70.01 350 P **P** 09 12 00.6 -0.2
baz=169,SNR=19
Q51A Peebles 70.01 350 P **P** 09 12 00.5 -0.3
Q51A lAmb lAmb 09 12 01.8
comp=Z,41nm,0.9s
P60A Greenville 70.01 356 P **P** 09 12 01.4 +0.7
baz=176,SNR=7.4
P60A Greenville 70.01 356 P **P** 09 12 01.6 +1.0
P60A lAmb lAmb 09 12 02.7
comp=Z,33nm,0.9s
P55A Reedsville 70.04 353 P **P** 09 12 01.3 +0.4
baz=172,SNR=14
MGMO Mountain Grove 70.04 342 P **P** 09 12 01.1 +0.1
PSUB Penn St. - Bra 70.12 357 P **P** 09 12 02.2 +0.8
HSIG 70.15 324 P **P** 09 12 02.8 +1.0
MCWV Mont Chateau 70.19 353 P **P** 09 12 02.2 +0.4
baz=172,SNR=11
MCWV Mont Chateau 70.19 353 P **P** 09 12 02.4 +0.6
P53A Whipple 70.20 352 P **P** 09 12 01.8 0.0
baz=171,SNR=11
P53A Whipple 70.20 352 P **P** 09 12 02.0 +0.1
P53A lAmb lAmb 09 12 03.1
comp=Z,38nm,1.1s
P54A Burton 70.21 353 P **P** 09 12 02.1 +0.1
baz=172,SNR=38
MVL Millersville 70.24 356 P **P** 09 12 03.0 +1.0
MVL lAmb lAmb 09 12 04.4
comp=Z,44nm,1.1s
O61A Allentown 70.25 357 P **P** 09 12 03.0 +0.9
baz=177,SNR=5.9
O58A Lewisberry 70.40 355 P **P** 09 12 04.2 +1.1
baz=175,SNR=15
P51A Williamsport 70.42 350 P **P** 09 12 02.9 -0.3
baz=169,SNR=8.7
P51A Williamsport 70.42 350 P **P** 09 12 03.1 -0.1
P51A lAmb lAmb 09 12 04.0
comp=Z,50nm,0.9s
P52A Corning 70.44 351 P **P** 09 12 03.1 -0.2
baz=170,SNR=16
PAGS Pennsylvania G 70.49 356 P **P** 09 12 04.2 +0.6
PAGS lAmb lAmb 09 12 05.6
comp=Z,36nm,0.8s
O60A Telford 70.51 357 P **P** 09 12 04.9 +1.2
baz=176,SNR=12
O57A Amberson 70.54 355 P **P** 09 12 05.0 +1.1
baz=174,SNR=20
O59A Robesonia 70.54 356 P **P** 09 12 05.2 +1.2
baz=176,SNR=18
OLIL Olney 70.57 346 P **P** 09 12 03.6 -0.5
OLIL lAmb lAmb 09 12 04.9
comp=Z,40nm,0.9s
MSTX Muleshoe 70.60 333 P **P** 09 12 04.9 +0.3
baz=152,SNR=38
MSTX Muleshoe 70.60 333 P **P** 09 12 05.2 +0.6
MSTX lAmb lAmb 09 12 06.1
comp=Z,46nm,0.8s
CCM Cathedral Cave 70.64 343 P **P** 09 12 04.9 +0.4
CCM pmax pmax
comp=Z,85nm,1.5s
CCM Cathedral Cave 70.64 343 P **P** 09 12 05.0 +0.4
baz=162
CCM Cathedral Cave 70.64 343 P **P** 09 12 04.9 +0.4
P50A Jamestown 70.65 350 P **P** 09 12 04.3 -0.4
baz=169,SNR=12
O56A Blue Knob Stat 70.67 354 P **P** 09 12 05.6 +0.8
baz=173,SNR=12
O56A Blue Knob Stat 70.67 354 P **P** 09 12 05.4 +0.6
O56A lAmb lAmb 09 12 06.8
comp=Z,30nm,1.1s
O55A Ligonier 70.68 354 P **P** 09 12 05.5 +0.7
baz=173,SNR=6.4
BLO Bloomington 70.69 348 P **P** 09 12 04.6 -0.3
BLO pmax pmax
comp=Z,27nm,0.7s
BLO Bloomington 70.69 348 P **P** 09 12 04.5 -0.3
BLO lAmb lAmb 09 12 05.9
comp=Z,27nm,0.7s
P49A Miami Univ. Ec 70.72 349 P **P** 09 12 04.4 -0.7
baz=168,SNR=11
O54A Avella 70.77 353 P **P** 09 12 05.0 -0.4
baz=172,SNR=6.3
O54A Avella 70.77 353 P **P** 09 12 05.6 +0.3
P48A Milroy 70.77 349 P **P** 09 12 05.1 -0.3
P48A lAmb lAmb 09 12 05.8
comp=Z,46nm,0.9s
LUPA Lehigh Univers 70.78 357 P **P** 09 12 07.0 +1.7
BRNJ Basking Ridge 70.83 357 P **P** 09 12 06.9 +1.3
O52A Adamsville 70.88 352 P **P** 09 12 05.6 -0.3
baz=170,SNR=10
O52A Adamsville 70.88 352 P **P** 09 12 06.2 +0.3
O52A lAmb lAmb 09 12 06.9
comp=Z,38nm,0.9s
N61A South Mountain 70.89 358 P **P** 09 12 07.1 +1.0
baz=177,SNR=9.6
O53A New Philadelph 70.93 352 P **P** 09 12 06.2 -0.1
baz=171,SNR=5.8
Q44A Meyer Farm, Va 70.93 346 P **P** 09 12 05.8 -0.5
Q44A lAmb lAmb 09 12 07.1
comp=Z,34nm,1.1s
SLM Saint Louis 70.95 344 P **P** 09 12 06.6 +0.2
SLM pmax pmax
comp=Z,81nm,1.3s
SLM Saint Louis 70.95 344 P **P** 09 12 06.6 +0.2
SSPA Standing Stone 70.98 355 P **P** 09 12 07.5 +0.9
baz=174
SSPA Standing Stone 70.98 355 P **P** 09 12 07.3 +0.7
SSPA lAmb lAmb 09 12 08.5
comp=Z,32nm,0.9s
AMTX Amarillo 70.99 334 P **P** 09 12 07.4 +0.5
baz=153
AMTX Amarillo 70.99 334 P **P** 09 12 07.5 +0.7
AMTX lAmb lAmb 09 12 08.7
comp=Z,39nm,1.1s
TVO Taravao 70.99 260 *e*T T 10 29 23.8
comp=Z,1.1nm,0.3s
O51A Pataskala 71.01 351 P **P** 09 12 06.4 -0.4
baz=170,SNR=11
T35A Sooner Cattle 71.04 339 P **P** 09 12 07.4 +0.4
T35A lAmb lAmb 09 12 08.8
comp=Z,34nm,1.1s
N60A Cedar Hill Far 71.04 357 P **P** 09 12 08.1 +1.1
baz=177,SNR=31
N62A Caumsett State 71.05 358 P **P** 09 12 08.1 +1.1
baz=178,SNR=5.2
N57A Milroy 71.08 355 P **P** 09 12 07.8 +0.7
baz=174,SNR=21
N58A Sunbury 71.10 356 P **P** 09 12 08.2 +0.9
baz=175,SNR=18
N58A Sunbury 71.10 356 P **P** 09 12 08.0 +0.7
N58A lAmb lAmb 09 12 09.4
comp=Z,43nm,0.9s
R40A Maddies Statio 71.11 343 P **P** 09 12 07.7 +0.3
R40A lAmb lAmb 09 12 08.8
comp=Z,42nm,0.8s
N59A State Game Lan 71.12 356 P **P** 09 12 08.8 +1.4
baz=176,SNR=24
N59A State Game Lan 71.12 356 P **P** 09 12 08.9 +1.4
PAL Palisades 71.13 358 P **P** 09 12 08.3 +0.9
PAL pmax pmax
comp=Z,33nm,1.2s
PAL Palisades 71.13 358 P **P** 09 12 08.2 +0.7
baz=178,SNR=5.9
PAL Palisades 71.13 358 P **P** 09 12 08.3 +0.9
PAL lAmb lAmb 09 12 09.4
comp=Z,33nm,1.1s
ACSO Alum Creek Sta 71.14 351 P **P** 09 12 07.5 -0.1
baz=169,SNR=15
ACSO Alum Creek Sta 71.14 351 P **P** 09 12 07.6 0.0
O50A Cable 71.15 350 P **P** 09 12 07.4 -0.2
baz=169,SNR=12
TIAR Tiarei 71.17 260 *e*T T 10 29 37.1
comp=Z,7.9nm,0.2s
N55A Marion Center 71.22 354 P **P** 09 12 08.7 +0.6
baz=173,SNR=23
319A Douglas 71.25 326 P **P** 09 12 10.3 +1.7
319A lAmb lAmb 09 12 11.3
comp=Z,18nm,0.8s

P46A Rosedale 71.25 347 P **P** 09 12 07.8 -0.4
N56A West Decatur 71.30 354 P **P** 09 12 09.1 +0.6
baz=174,SNR=9.3
O49A Covington 71.30 350 P **P** 09 12 08.2 -0.4
PAE Paea 71.33 260 *e*T T 10 29 48.5
comp=Z,1.5nm,0.3s
M66A Nantucket 71.36 1 P **P** 09 12 11.1 +2.3
baz=181
PPT2 Papeete2 71.36 260 *e*LR LR 09 33 56.6
comp=Z,454nm,24.5s
PPT2 Papeete2 71.36 260 *e*T T 10 29 50.1
comp=Z,1.3nm,0.2s
U32A Winter Ranch, 71.36 337 P **P** 09 12 09.7 +0.6
U32A lAmb lAmb 09 12 10.7
comp=Z,32nm,0.8s
PPT Papeete 71.37 260 LR LR 09 36 29.7
comp=Z,75nm,18.2s,baz=126,slow=30
YLE Yale 71.42 359 P **P** 09 12 10.7 +1.6
M61A Granite Spring 71.43 358 P **P** 09 12 10.1 +0.8
baz=178,SNR=9.7
N53A Lisbon 71.44 352 P **P** 09 12 09.5 +0.1
baz=171
N53A Lisbon 71.44 352 P **P** 09 12 09.5 +0.1
N53A lAmb lAmb 09 12 10.8
comp=Z,28nm,1.1s
M60A Port Jervis 71.48 357 P **P** 09 12 10.8 +1.2
baz=177,SNR=21
M63A Gales Ferry 71.50 359 P **P** 09 12 10.6 +1.0
baz=179
N54A Moraine State 71.50 353 P **P** 09 12 10.0 +0.3
baz=172,SNR=9.6
N54A Moraine State 71.50 353 P **P** 09 12 10.4 +0.6
N54A lAmb lAmb 09 12 11.3
comp=Z,42nm,0.9s
O48A Farmland 71.50 349 P **P** 09 12 09.1 -0.7
baz=168,SNR=8.9
121A Cookes Peak, D 71.51 328 P **P** 09 12 12.0 +1.8
baz=147,SNR=16
121A Cookes Peak, D 71.51 328 P **P** 09 12 12.1 +1.8
121A lAmb lAmb 09 12 13.1
comp=Z,27nm,0.9s
M62A Hamden 71.54 359 P **P** 09 12 11.2 +1.3
baz=179,SNR=15
N52A McGinn's Farm, 71.54 352 P **P** 09 12 09.8 -0.2
baz=171
M58A Price's Panora 71.62 356 P **P** 09 12 11.3 +0.9
baz=175,SNR=16
M57A Sunshine Farm, 71.62 355 P **P** 09 12 11.2 +0.8
baz=175,SNR=13
M57A Sunshine Farm, 71.62 355 P **P** 09 12 11.4 +0.9
M57A lAmb lAmb 09 12 12.5
comp=Z,51nm,1.2s
M64A Tiverton 71.64 0 P **P** 09 12 11.2 +0.7
baz=180
N50A Nevada 71.70 351 P **P** 09 12 10.8 -0.1
baz=169,SNR=12
M59A Waymart 71.73 357 P **P** 09 12 12.2 +1.1
baz=176,SNR=28
N51A Ashland 71.74 351 P **P** 09 12 10.8 -0.3
baz=170
N51A Ashland 71.74 351 P **P** 09 12 11.4 +0.3
N51A lAmb lAmb 09 12 12.0
comp=Z,53nm,1.1s
P43A Skaggs, Pawnee 71.75 345 P **P** 09 12 11.3 +0.1
P43A lAmb lAmb 09 12 12.3
comp=Z,67nm,1.2s
KSPA Keystone Colle 71.76 357 P **P** 09 12 11.8 +0.6
KSPA lAmb lAmb 09 12 13.3
comp=Z,35nm,1.1s
KSCT Kent School, K 71.84 358 P **P** 09 12 12.9 +1.2
KSCT lAmb lAmb 09 12 13.4
comp=Z,24nm,0.7s
M56A Emporium 71.85 355 P **P** 09 12 12.3 +0.4
baz=174,SNR=18
M56A Emporium 71.85 355 P **P** 09 12 12.6 +0.7
M56A lAmb lAmb 09 12 13.5
comp=Z,66nm,1.1s
M55A Ridgway 71.88 354 P **P** 09 12 12.6 +0.6
baz=173,SNR=28
M55A Ridgway 71.88 354 P **P** 09 12 12.3 +0.3
L63A North Scituate 71.95 360 P **P** 09 12 13.4 +1.0
baz=180,SNR=16
SFIN Lafayette 71.96 347 P **P** 09 12 11.7 -0.8
baz=166
SFIN Lafayette 71.96 347 P **P** 09 12 11.7 -0.8
SFIN lAmb lAmb 09 12 12.9
comp=Z,24nm,0.9s
N49A Columbus Grove 72.00 350 P **P** 09 12 12.8 +0.1
BRYW Bryant College 72.01 360 P **P** 09 12 14.4 +1.7
M54A Oil Creek Stat 72.01 353 P **P** 09 12 12.9 +0.1
baz=172,SNR=6.6
O44A Mansfield 72.02 346 P **P** 09 12 12.7 -0.2
O44A lAmb lAmb 09 12 13.4
comp=Z,50nm,1.2s
L64A Middleborough 72.03 0 P **P** 09 12 13.9 +1.1
baz=180,SNR=7.2
M53A WI Miller and 72.04 353 P **P** 09 12 12.7 -0.3
baz=172
N48A Decatur 72.07 349 P **P** 09 12 12.6 -0.5
baz=168,SNR=12
M51A Elyria 72.12 351 P **P** 09 12 13.3 -0.1
baz=170,SNR=5.9
L60A Shokan 72.12 358 P **P** 09 12 14.7 +1.2
baz=177,SNR=14
N47A Urbana 72.20 349 P **P** 09 12 13.4 -0.5
N47A lAmb lAmb 09 12 14.4
comp=Z,60nm,0.9s
M52A Chesterland 72.22 352 P **P** 09 12 14.0 0.0
baz=171
P40A Paris 72.23 343 P **P** 09 12 14.5 +0.4
L58A Harry Jones Me 72.25 356 P **P** 09 12 15.3 +1.1
baz=176,SNR=24
L57A Andrews Acres 72.27 356 P **P** 09 12 15.1 +0.8
baz=175,SNR=9.5
M50A Fremont 72.30 351 P **P** 09 12 14.9 +0.4
L61A Hillsdale 1, H 72.31 358 P **P** 09 12 15.5 +1.0
baz=178,SNR=7.4
L59A Walton 72.36 357 P **P** 09 12 16.0 +1.1
baz=177,SNR=23
L59A Walton 72.36 357 P **P** 09 12 16.1 +1.1
BNM Barren Site 72.36 330 P **P** 09 12 16.9 +1.5
QUA2 Belchertown 72.37 359 P **P** 09 12 15.2 +0.3
QUA2 lAmb lAmb 09 12 17.0
comp=Z,46nm,1.1s
BINY Binghamton 72.41 356 P **P** 09 12 16.0 +0.8
baz=176,SNR=9.8
BINY Binghamton 72.41 356 P **P** 09 12 16.1 +1.0
BINY lAmb lAmb 09 12 17.1
comp=Z,40nm,0.9s
L56A Greenwood 72.45 355 P **P** 09 12 16.2 +0.8
baz=174,SNR=33
L56A Greenwood 72.45 355 P **P** 09 12 16.2 +0.8
WES Weston 72.47 0 P **P** 09 12 15.7 +0.2
WES pmax pmax
comp=Z,26nm,0.9s
WES Weston 72.47 0 P **P** 09 12 15.7 +0.2
WES lAmb lAmb 09 12 16.5
comp=Z,26nm,0.9s
M49A Liberty Center 72.51 350 P **P** 09 12 15.5 -0.2
baz=169,SNR=10
L53A Girard 72.51 353 P **P** 09 12 15.9 +0.1
baz=172
L61B Northampton 72.55 359 P **P** 09 12 16.9 +1.0
baz=179
L55A Hinsdale 72.56 354 P **P** 09 12 16.9 +0.8
baz=174,SNR=30
HDIL Hopedale 72.58 346 P **P** 09 12 15.9 -0.2
baz=164,SNR=7.5
HDIL Hopedale 72.58 346 P **P** 09 12 16.1 -0.1
HDIL lAmb lAmb 09 12 17.2
comp=Z,53nm,1.1s
HRV Adam Dziewonsk 72.59 360 P **P** 09 12 17.4 +1.2
HRV pmax pmax
comp=Z,44nm,0.8s
HRV Adam Dziewonsk 72.59 360 P **P** 09 12 17.5 +1.3
baz=180
HRV Adam Dziewonsk 72.59 360 P **P** 09 12 17.4 +1.2
HRV lAmb lAmb 09 12 18.5
comp=Z,44nm,0.8s
M48A Edgerton 72.63 350 P **P** 09 12 16.1 -0.4
baz=168,SNR=8.4
M48A Edgerton 72.63 350 P **P** 09 12 16.4 -0.1
ERPA Erie 72.64 353 P **P** 09 12 16.5 -0.1
baz=172
ERPA Erie 72.64 353 P **P** 09 12 17.0 +0.5
ERPA lAmb lAmb 09 12 17.8
comp=Z,57nm,0.9s

M47A Cromwell 72.65 349 P **P** 09 12 16.0 -0.7
baz=167
L54A Sinclairville 72.69 354 P **P** 09 12 17.4 +0.5
baz=173,SNR=16
P38A Dawn 72.70 342 P **P** 09 12 17.1 +0.1
P38A lAmb lAmb 09 12 18.1
comp=Z,24nm,0.8s
K60A Five Rivers En 72.74 358 P **P** 09 12 18.4 +1.4
baz=178,SNR=9.2
TUC Tucson 72.74 326 P **P** 09 12 18.7 +1.2
TUC pmax pmax
comp=Z,20nm,1.5s
TUC Tucson 72.74 326 P **P** 09 12 18.2 +0.7
baz=145
TUC Tucson 72.74 326 P **P** 09 12 18.7 +1.2
K62A Royalston 72.76 359 P **P** 09 12 18.5 +1.3
baz=179,SNR=8.8
K62A Royalston 72.76 359 P **P** 09 12 18.3 +1.1
K62A lAmb lAmb 09 12 19.7
comp=Z,59nm,1.3s
K63A Dunstable 72.78 360 P **P** 09 12 18.4 +1.1
baz=180
K61A Williamstown 72.78 359 P **P** 09 12 18.6 +1.2
baz=178,SNR=12
WVNY West Valley, N 72.80 354 P **P** 09 12 18.4 +0.9
TRY Troy 72.85 358 P **P** 09 12 19.2 +1.5
L50A Kingsville 72.90 351 P **P** 09 12 17.5 -0.5
baz=170
K59A Cooperstown 72.93 357 P **P** 09 12 19.2 +0.9
baz=177,SNR=25
K58A Earlville 72.96 357 P **P** 09 12 19.2 +0.7
baz=176,SNR=29
K58A Earlville 72.96 357 P **P** 09 12 19.1 +0.7
ANMO Albuquerque 72.97 330 *ce*P **P** 09 12 20.0 +1.1
ANMO pmax pmax
comp=Z,6.0nm,0.8s
ANMO Albuquerque 72.97 330 P **P** 09 12 20.1 +1.1
baz=149
ANMO Albuquerque 72.97 330 P **P** 09 12 20.3 +1.4
K57A Scipio Center 72.97 356 P **P** 09 12 18.8 +0.3
baz=175,SNR=12
K56A Middlesex 72.99 355 P **P** 09 12 19.1 +0.4
baz=175,SNR=14
K54A Basiliko Farm, 73.01 354 P **P** 09 12 19.3 +0.6
baz=173,SNR=14
L48A N Adams 73.03 350 P **P** 09 12 18.5 -0.3
baz=168,SNR=12
N41A Harden Midland 73.06 345 P **P** 09 12 19.0 -0.1
N41A lAmb lAmb 09 12 20.1
comp=Z,71nm,1.1s
K55A Perry 73.08 355 P **P** 09 12 19.7 +0.6
baz=174,SNR=20
KSU1 Kansas State U 73.08 340 P **P** 09 12 19.0 -0.2
baz=157
KSU1 Kansas State U 73.08 340 P **P** 09 12 19.4 +0.2
R32A Long Quarter, 73.11 338 P **P** 09 12 20.3 +0.8
R32A lAmb lAmb 09 12 34.8
comp=Z,23nm,0.8s
M44A Midewin, Midew 73.12 347 P **P** 09 12 19.0 -0.3
M44A lAmb lAmb 09 12 20.1
comp=Z,49nm,1.0s
LIC Lamto 73.12 72 *e*P **P** 09 12 19.0 -1.1
comp=Z,109nm,0.7s
AAM Ann Arbor 73.27 351 P **P** 09 12 20.4 +0.2
baz=169
J62A Henniker 73.31 360 P **P** 09 12 22.1 +1.6
baz=180,SNR=15
J60A Lant Hill Farm 73.36 358 P **P** 09 12 21.8 +1.1
baz=178,SNR=5.4
TIC Toumodi 73.36 72 *e*P **P** 09 12 20.6 -0.9
J63A Strafford 73.37 0 P **P** 09 12 22.1 +1.3
baz=180
K52A Tillsonburg 73.37 353 P **P** 09 12 20.8 0.0
baz=172,SNR=5.2
L46A Eue Claire 73.40 348 P **P** 09 12 20.7 -0.4
baz=167
L46A Eue Claire 73.40 348 P **P** 09 12 20.5 -0.5
L46A lAmb lAmb 09 12 21.4
comp=Z,44nm,0.9s
K51A Iona Station 73.41 352 P **P** 09 12 20.9 -0.1
baz=171
KIC Kosan Boka 73.43 72 *e*P **P** 09 12 20.5 -1.4
comp=Z,216nm,1.0s
J61A Chester 73.44 359 P **P** 09 12 22.7 +1.5
baz=179,SNR=14
214A Organ Pipe Nat 73.46 324 P **P** 09 12 23.4 +1.7
baz=144
214A Organ Pipe Nat 73.46 324 P **P** 09 12 23.4 +1.7
ACCN Adirondack Com 73.50 358 P **P** 09 12 22.7 +1.1
ACCN lAmb lAmb 09 12 23.2
comp=Z,31nm,0.8s
DBIC Dimbokro 73.51 72 P **P** 09 12 22.2 -0.1
comp=Z,51nm,0.6s,baz=211,slow=6.4,SNR=62
DBIC LR LR 09 42 29.0
comp=Z,272nm,19.3s,baz=205,slow=34
DBIC Dimbokro 73.51 72 P **P** 09 12 22.2 -0.1
DBIC pmax pmax
comp=Z,65nm,0.8s
DBIC Dimbokro 73.51 72 P **P** 09 12 22.2 -0.1
J58A Remsen 73.53 357 P **P** 09 12 22.3 +0.5
baz=176,SNR=7.9
J58A Remsen 73.53 357 P **P** 09 12 22.3 +0.5
J56A Wolcott 73.54 356 P **P** 09 12 22.1 +0.3
baz=175,SNR=25
J56A Wolcott 73.54 356 P **P** 09 12 22.0 +0.3
J56A lAmb lAmb 09 12 23.1
comp=Z,59nm,0.9s
MEDO Medina 73.54 355 P **P** 09 12 22.0 +0.2
MEDO lAmb lAmb 09 12 23.3
comp=Z,40nm,1.1s
J55A Hilton 73.59 355 P **P** 09 12 22.3 +0.3
baz=174,SNR=8.1
J55A Hilton 73.59 355 P **P** 09 12 22.6 +0.5
J55A lAmb lAmb 09 12 23.6
comp=Z,40nm,1.1s
K50A Casco 73.59 351 P **P** 09 12 21.9 -0.2
baz=170,SNR=7.5
K50A Casco 73.59 351 P **P** 09 12 22.0 -0.1
J59A Piesco 73.61 358 P **P** 09 12 23.0 +0.8
baz=177,SNR=19
J59A Piesco 73.61 358 P **P** 09 12 23.0 +0.8
J59A lAmb lAmb 09 12 24.1
comp=Z,59nm,1.1s
J57A Williamstown 73.62 356 P **P** 09 12 22.8 +0.5
baz=176,SNR=23
J57A Williamstown 73.62 356 P **P** 09 12 22.9 +0.6
J57A lAmb lAmb 09 12 23.9
comp=Z,58nm,0.9s
J54A Appleton 73.66 354 P **P** 09 12 22.8 +0.4
baz=173,SNR=5.9
J54A Appleton 73.66 354 P **P** 09 12 22.9 +0.4
J54A lAmb lAmb 09 12 23.9
comp=Z,39nm,0.8s
K49A Clarkson 73.72 351 P **P** 09 12 22.2 -0.7
baz=169
N38A Joes South For 73.72 343 P **P** 09 12 23.2 +0.3
N38A lAmb lAmb 09 12 37.6
comp=Z,38nm,0.8s
HNH Hanover 73.80 359 P **P** 09 12 24.5 +1.2
HNH lAmb lAmb 09 12 25.9
comp=Z,50nm,0.8s
J52A Paris 73.80 353 P **P** 09 12 23.5 +0.1
baz=172,SNR=11
CBKS Cedar Bluff 73.81 337 P **P** 09 12 24.5 +0.9
CBKS pmax pmax
comp=Z,42nm,0.9s
CBKS Cedar Bluff 73.81 337 P **P** 09 12 24.5 +0.9
baz=155,SNR=11
CBKS Cedar Bluff 73.81 337 P **P** 09 12 24.5 +0.9
CBKS lAmb lAmb 09 12 39.0
comp=Z,42nm,0.8s
K48A Perry 73.83 350 P **P** 09 12 23.1 -0.4
baz=169,SNR=9.6
K47A Vermontville 73.83 350 P **P** 09 12 23.0 -0.5
baz=168,SNR=12
I58A Old Forge 73.85 357 P **P** 09 12 24.3 +0.6
baz=177,SNR=23
L44A Lake County Fo 73.86 347 P **P** 09 12 23.1 -0.6
baz=165
L44A Lake County Fo 73.86 347 P **P** 09 12 23.6 0.0
L44A lAmb lAmb 09 12 24.6
comp=Z,52nm,0.9s
I59A Olmsteadville 73.92 358 P **P** 09 12 24.7 +0.6
baz=178,SNR=14
I60A Shoreham 73.95 359 P **P** 09 12 25.3 +1.1
baz=178,SNR=22
I62A Tamworth 73.96 0 P **P** 09 12 25.5 +1.2

baz=180,SNR=7.6
I62A Tamworth 73.96 0 P P 09 12 26.1 +1.8
I62A IAmb IAmb 09 12 26.7
comp=Z,26nm,0.8s
K46A Dorr 73.97 349 P P 09 12 23.5 -0.8
baz=167,SNR=6.9
T25A Trinidad 74.02 333 P P 09 12 26.7 +1.6
baz=151,SNR=46
I61A Oroboro, Fairl 74.02 359 P P 09 12 25.9 +1.3
baz=179,SNR=10
I64A Boothbay 74.02 1 P P 09 12 26.1 +1.6
baz=182,SNR=9.7
L42A Oliver, Polo 74.04 346 P P 09 12 25.0 +0.2
L42A IAmb IAmb 09 12 25.8
comp=Z,35nm,1.1s
NCB Newcomb 74.10 358 P P 09 12 25.8 +0.7
I57A Carthage 74.13 357 P P 09 12 25.9 +0.7
baz=176,SNR=18
I63A Otisfield 74.14 1 P P 09 12 27.0 +1.7
baz=181,SNR=18
I63A Otisfield 74.14 1 P P 09 12 27.1 +1.7
X18A Snowflake 74.17 328 P P 09 12 27.7 +1.7
PECO Prince Edward 74.20 356 P P 09 12 26.2 +0.5
PECO IAmb IAmb 09 12 27.1
comp=Z,41nm,0.9s
J49A Marlette 74.24 351 P P 09 12 25.3 -0.6
baz=169
J48A Bridge Port 74.27 351 P P 09 12 25.8 -0.2
baz=169,SNR=13
J48A Bridge Port 74.27 351 P P 09 12 25.9 -0.2
I53A Kortright Cn E 74.29 354 P P 09 12 26.7 +0.5
baz=173
LBNH Lisbon 74.33 360 P P 09 12 27.7 +1.3
LBNH pmax pmax
comp=Z,43nm,0.8s
LBNH Lisbon 74.33 360 P P 09 12 27.7 +1.3
baz=179,SNR=16
LBNH Lisbon 74.33 360 P P 09 12 27.7 +1.3
LBNH IAmb IAmb 09 12 28.7
comp=Z,43nm,0.8s
J47A Sunmer 74.36 350 P P 09 12 26.2 -0.4
baz=168,SNR=12
J47A Sunmer 74.36 350 P P 09 12 26.4 -0.2
J47A IAmb IAmb 09 12 27.3
comp=Z,39nm,0.8s
I51A Listowel 74.42 353 P P 09 12 27.0 +0.1
baz=171,SNR=18
N35A Tabor 74.43 341 P P 09 12 27.2 +0.1
L40A Anamosa 74.44 345 P P 09 12 26.8 -0.3
K43A Burlington 74.45 347 P P 09 12 27.5 +0.4
K43A IAmb IAmb 09 12 28.2
comp=Z,35nm,1.0s
I55A Frankford 74.53 355 P P 09 12 27.9 +0.4
baz=174,SNR=24
H58A Gabriels 74.55 358 P P 09 12 28.4 +0.7
baz=177,SNR=21
W18A Petrified Fore 74.56 328 P P 09 12 29.8 +1.6
baz=146,SNR=5.3
W18A Petrified Fore 74.56 328 P P 09 12 29.9 +1.6
I52A Shelburne 74.59 353 P P 09 12 28.3 +0.3
baz=172
H61A Lyndonville 74.62 360 P P 09 12 29.6 +1.5
baz=179,SNR=38
H60A Morristown 74.66 359 P P 09 12 29.3 +1.0
baz=179,SNR=6.0
H62A Milan 74.66 0 P P 09 12 29.5 +1.3
baz=180,SNR=6.0
H62A Milan 74.66 0 P P 09 12 29.6 +1.3
WVL Waterville 74.67 1 P P 09 12 29.8 +1.5
WVL IAmb IAmb 09 12 30.8
comp=Z,31nm,0.9s
H64A Troy 74.75 2 P P 09 12 30.0 +1.2
baz=182,SNR=6.3
H63A New Sharon 74.76 1 P P 09 12 30.6 +1.7
baz=181,SNR=12
H59A Cadyville 74.76 358 P P 09 12 29.8 +0.9
baz=178,SNR=19
LONY Lake Ozonia 74.76 358 P P 09 12 29.6 +0.7
baz=177,SNR=24
LONY Lake Ozonia 74.76 358 P P 09 12 29.6 +0.7
LONY IAmb IAmb 09 12 30.7
comp=Z,41nm,0.9s
SCIA State Center 74.77 343 P P 09 12 29.3 +0.3
baz=161,SNR=6.0
SCIA State Center 74.77 343 P P 09 12 29.2 +0.3
SCIA IAmb IAmb 09 12 31.3
comp=Z,72nm,1.4s
I49A Point Hope 74.77 351 P P 09 12 28.6 -0.3
baz=170,SNR=5.5
I49A Point Hope 74.77 351 P P 09 12 28.6 -0.3
I49A IAmb IAmb 09 12 29.1
comp=Z,36nm,0.8s
X16A Lo Mia Camp, P 74.78 327 P P 09 12 31.2 +1.7
J45A Montague 74.80 349 P P 09 12 28.3 -0.9
baz=167
H56A Elgin 74.81 356 P P 09 12 29.8 +0.6
baz=176,SNR=28
DELO Deloro Mine 74.82 355 P P 09 12 29.5 +0.2
H55A Tweed 74.83 356 P P 09 12 29.7 +0.4
baz=175
H65A Eastbrook 74.84 2 P P 09 12 30.6 +1.3
baz=183,SNR=19
EMMW East Machias 74.88 3 P P 09 12 30.7 +1.2
FRNY Flat Rock 74.95 358 P P 09 12 30.8 +0.9
H53A Bobcaygeon 74.95 355 P P 09 12 30.4 +0.4
baz=174,SNR=22
H66A Whiting 74.96 3 P P 09 12 31.5 +1.5
baz=184,SNR=17
SDCO Great Sand Dun 74.97 333 P P 09 12 32.1 +1.4
baz=150,SNR=28
SDCO Great Sand Dun 74.97 333 P P 09 12 32.0 +1.4
KSCO Kaye Shedlock' 74.99 335 P P 09 12 31.8 +1.3
baz=152,SNR=5.8
KSCO Kaye Shedlock' 74.99 335 P P 09 12 32.0 +1.5
KSCO IAmb IAmb 09 12 32.5
comp=Z,25nm,0.8s
JFWS Jewell Farm 75.04 346 P P 09 12 30.9 +0.4
JFWS pmax pmax
comp=Z,43nm,1.2s
JFWS Jewell Farm 75.04 346 P P 09 12 30.8 +0.2
baz=163,SNR=9.6
JFWS Jewell Farm 75.04 346 P P 09 12 30.9 +0.4
JFWS IAmb IAmb 09 12 31.9
comp=Z,43nm,1.1s
I47A Gladwin 75.08 350 P P 09 12 30.2 -0.5
baz=168,SNR=9.3
I47A Gladwin 75.08 350 P P 09 12 30.6 -0.1
I47A IAmb IAmb 09 12 31.4
comp=Z,52nm,0.8s
I48A Sherman Twp 75.13 351 P P 09 12 30.8 -0.2
baz=169,SNR=8.6
H52A Wyevale 75.13 354 P P 09 12 31.3 +0.2
baz=172,SNR=19
I46A Reed City 75.14 350 P P 09 12 30.3 -0.8
baz=167,SNR=7.3
Y14A Wickenburg 75.15 325 P P 09 12 32.2 +0.8
G59A Clarenceville 75.19 359 P P 09 12 32.0 +0.7
baz=178,SNR=5.9
G60A Masonville 75.19 359 P P 09 12 33.6 +2.2
baz=179,SNR=11
SADO Sadowa 75.19 354 P P 09 12 31.6 +0.2
SADO IAmb IAmb 09 12 32.6
comp=Z,56nm,1.1s
G63A Kingsbury 75.22 1 P P 09 12 32.7 +1.2
baz=182,SNR=18
G57A Newington 75.26 357 P P 09 12 32.4 +0.6
baz=177,SNR=30
G58A Ormstown 75.28 358 P P 09 12 32.6 +0.8
baz=178
PLVO Plevna 75.31 356 P P 09 12 32.7 +0.7
PLVO IAmb IAmb 09 12 33.7
comp=Z,46nm,1.2s
G62A West of Eustis 75.31 1 P P 09 12 33.6 +1.5
baz=181,SNR=39
G62A West of Eustis 75.31 1 P P 09 12 33.4 +1.3
GGN Saint George 75.32 3 P P 09 12 33.5 +1.5
GGN IAmb IAmb 09 12 34.5
comp=Z,51nm,0.9s
K38A Parkersburg 75.36 344 P P 09 12 32.1 -0.3
K38A IAmb IAmb 09 12 33.4
comp=Z,40nm,1.2s
GLA Glamis 75.36 323 P P 09 12 34.5 +1.8
baz=142
I45A Fountain 75.36 349 P P 09 12 31.7 -0.7
baz=167
G65A Princeton 75.37 3 P P 09 12 33.7 +1.4
baz=183,SNR=12
G65A Princeton 75.37 3 P P 09 12 33.3 +0.9
G65A IAmb IAmb 09 12 34.7
comp=Z,36nm,0.8s
G61A St-Isidore-de- 75.37 360 P P 09 12 33.8 +1.4
baz=180,SNR=13
PKME Peaks-Kenny Pk 75.38 2 P P 09 12 33.6 +1.2
baz=182
PKME Peaks-Kenny Pk 75.38 2 P P 09 12 33.3 +0.9
PKME IAmb IAmb 09 12 34.6
comp=Z,43nm,0.9s
G64A Maxfield 75.38 2 P P 09 12 33.5 +1.1
baz=182,SNR=14
G55A Calabogie 75.50 356 P P 09 12 33.4 +0.3
baz=175,SNR=16
G53A Haliburton 75.50 355 P P 09 12 33.7 +0.5
baz=174,SNR=31
S22A 4UR Ranch, Cre 75.51 332 P P 09 12 35.3 +1.5
baz=149
H48A Harrisville 75.58 351 P P 09 12 33.6 0.0
baz=169,SNR=7.7
H48A Harrisville 75.58 351 P P 09 12 33.6 0.0
H47A Mio 75.60 351 P P 09 12 33.4 -0.3
baz=169
ORIO Orleans, Innes 75.63 357 P P 09 12 34.2 +0.4
baz=176,SNR=8.1
ORIO Orleans, Innes 75.63 357 P P 09 12 34.4 +0.6
WUAZ Wupatki 75.64 327 P P 09 12 36.2 +1.8
baz=145,SNR=17
WUAZ Wupatki 75.64 327 P P 09 12 36.2 +1.8
WUAZ IAmb IAmb 09 12 37.4
comp=Z,25nm,0.9s
L34A Svendsen Farm, 75.66 341 P P 09 12 34.3 +0.1
L34A IAmb IAmb 09 12 38.6
comp=Z,37nm,0.7s
BGNE Belgrade 75.66 340 P P 09 12 34.8 +0.7
baz=156,SNR=8.4
BGNE Belgrade 75.66 340 P P 09 12 34.9 +0.7
H46A Fife Lake 75.69 350 P P 09 12 33.8 -0.4
baz=168
I42A Draeger Farm, 75.70 347 P P 09 12 34.6 +0.3
IKP In-Ko-Pah, Jac 75.72 322 P P 09 12 36.5 +1.7
baz=141
G54A Lake Saint Pet 75.73 355 P P 09 12 34.9 +0.4
baz=174,SNR=17
MVCO Mesa Verde 75.76 330 P P 09 12 36.5 +1.4
baz=148,SNR=16
MVCO Mesa Verde 75.76 330 P P 09 12 36.6 +1.4
Y12C Blythe 75.76 324 P P 09 12 36.6 +1.7
baz=143,SNR=8.4
Y12C Blythe 75.76 324 P P 09 12 36.5 +1.7
SWSC Sam W. Stewart 75.78 323 P P 09 12 36.1 +1.0
baz=142
F63A Nahmakanta, Br 75.82 2 P P 09 12 36.3 +1.3
baz=182,SNR=9.1
F63A Nahmakanta, Br 75.82 2 P P 09 12 35.9 +0.9
F63A IAmb IAmb 09 12 37.3
comp=Z,30nm,0.9s
GLMI Grayling 75.88 350 P P 09 12 35.0 -0.3
baz=168
GLMI Grayling 75.88 350 P P 09 12 35.3 0.0
GLMI IAmb IAmb 09 12 36.2
comp=Z,52nm,0.9s
Q24A Divide 75.89 333 P P 09 12 37.5 +1.5
baz=150
H45A Beulah 75.90 349 P P 09 12 34.9 -0.6
baz=167,SNR=5.9
F57A Harrington 75.96 358 P P 09 12 35.8 0.0
baz=177
F58A St-Lin Laurent 75.99 358 P P 09 12 36.0 +0.2
baz=178
F64A Sherman 76.00 2 P P 09 12 37.3 +1.4
baz=183,SNR=26
F64A Sherman 76.00 2 P P 09 12 37.4 +1.4
PDMCI Parker Dam,Lak 76.00 325 P P 09 12 36.1 -0.1
baz=143
GBN Guysborough 76.02 7 P P 09 12 36.1 0.0
GBN IAmb IAmb 09 12 38.3
comp=Z,32nm,0.8s
H43A Windswept, Lux 76.05 348 P P 09 12 36.4 +0.1
H43A IAmb IAmb 09 12 37.4
comp=Z,38nm,0.8s
I40A Norwalk 76.05 346 P P 09 12 36.4 +0.1
I40A IAmb IAmb 09 12 37.6
comp=Z,32nm,1.1s
SUR Sutherland 76.05 119 P P 09 12 38.6 +1.5
F55A Otter Lake 76.06 356 P P 09 12 36.6 +0.4
baz=176,SNR=11
F60A Warwick 76.06 360 P P 09 12 36.9 +0.6
baz=179,SNR=12
F61A St Evariste 76.06 0 P P 09 12 36.9 +0.6
baz=180,SNR=6.8
MONP2 Monument Peak 76.07 322 P P 09 12 38.7 +1.7
baz=141
G47A Hillman 76.11 351 P P 09 12 36.7 0.0
baz=169,SNR=13
BC3 Big Chuckawall 76.16 323 P P 09 12 39.0 +1.6
baz=142,SNR=15
LMN Caledonia Moun 76.17 5 P P 09 12 37.9 +1.0
F52A Sundridge 76.22 354 P P 09 12 37.5 +0.2
baz=173,SNR=15
G45A Suttons Bay 76.25 350 P P 09 12 37.1 -0.3
baz=167,SNR=7.3
G45A Suttons Bay 76.25 350 P P 09 12 37.4 0.0
G45A IAmb IAmb 09 12 38.2
comp=Z,28nm,0.8s
ALGO Algonquin Park 76.28 355 P P 09 12 37.7 +0.1
baz=174,SNR=28
TRQ Mont Tremblant 76.36 358 P P 09 12 38.5 +0.4
IRM Iron Mountain 76.40 324 P P 09 12 40.2 +1.6
baz=142,SNR=9.8
G46A Petoskey 76.40 350 P P 09 12 37.9 -0.3
baz=168
F51A Arnstein 76.41 354 P P 09 12 38.4 +0.1
baz=172,SNR=17
MAW Mawson 76.42 164 P P 09 12 38.6 +0.3
comp=Z,51nm,0.8s,baz=206,slow=6.6,SNR=67
MAW LR LR 09 47 04.7
comp=Z,278nm,20.2s,baz=236,slow=36
MAW Mawson 76.42 164 P P 09 12 38.4 +0.2
E60A Ste Agathe de 76.46 360 P P 09 12 39.4 +0.8
baz=180,SNR=27
F49A Sandfield 76.47 352 P P 09 12 38.5 -0.1
baz=170,SNR=26
E58A La Victoria 76.48 359 P P 09 12 39.3 +0.6
baz=178,SNR=15
OGNE Ogallala 76.50 337 P P 09 12 40.1 +1.0
baz=153
W13A Hualapai Mount 76.51 325 P P 09 12 41.3 +1.8
E61A Lac Etchemin 76.52 1 P P 09 12 40.1 +1.2
baz=181,SNR=11
E57A Chemin Saint G 76.54 358 P P 09 12 39.5 +0.4
baz=178,SNR=12
E63A Oxbow 76.56 2 P P 09 12 40.4 +1.3
baz=183,SNR=22
E63A Oxbow 76.56 2 P P 09 12 40.4 +1.3
PV01 Paradox Valley 76.57 331 P P 09 12 40.9 +1.2
E64A Bridgewater 76.57 3 P P 09 12 40.4 +1.2
baz=183,SNR=14
E59A St Maurice 76.57 359 P P 09 12 40.2 +1.1
baz=179
F48A Evansville 76.60 352 P P 09 12 39.4 +0.1
baz=170,SNR=29
NEE2 Needles Airpor 76.61 325 P P 09 12 40.8 +1.1
baz=143
PFO Pinyon Flats O 76.65 323 P P 09 12 41.9 +1.8
PFO pmax pmax
comp=Z,15nm,1.0s
PFO Pinyon Flats O 76.65 323 P P 09 12 42.1 +1.9
baz=141,SNR=5.6
PFO Pinyon Flats O 76.65 323 P P 09 12 41.9 +1.8
E52A Mattawa 76.66 355 P P 09 12 39.7 0.0
baz=174,SNR=5.7
E55A Montcerf-Lytto 76.66 357 P P 09 12 39.9 +0.3
baz=176,SNR=6.6
E53A Dumoine, Ponti 76.68 356 P P 09 12 40.1 +0.3
baz=174,SNR=12
PV13 Radium Mtn., P 76.69 330 P P 09 12 41.6 +1.2
PV13 IAmb IAmb 09 12 42.9
comp=Z,20nm,0.9s
PV02 Paradox Valley 76.70 331 P P 09 12 41.7 +1.2
E54A Lac Daplat, Po 76.70 356 P P 09 12 40.2 +0.3
baz=175,SNR=24
E56A St. Veronique 76.70 357 P P 09 12 40.4 +0.5
baz=177,SNR=42
PV15 Paradox Valley 76.70 331 P P 09 12 41.8 +1.3
BELC Belle Mtn. Jos 76.71 323 P P 09 12 42.1 +1.6
baz=142,SNR=6.3
E62A Clayton Lake 76.72 1 P P 09 12 41.5 +1.4
baz=182,SNR=48
E62A Clayton Lake 76.72 1 P P 09 12 41.5 +1.4
PV05 Paradox Valley 76.75 330 P P 09 12 41.3 +0.6
ISCO Idaho Springs 76.79 334 P P 09 12 42.5 +1.5
ISCO pmax pmax
comp=Z,10.0nm,0.8s
ISCO Idaho Springs 76.79 334 P P 09 12 42.3 +1.3
baz=150,SNR=22
ISCO Idaho Springs 76.79 334 P P 09 12 42.5 +1.5
I37A Lemond, Waseca 76.80 344 P P 09 12 40.8 +0.3
PV18 Skein Mesa, Pa 76.80 330 P P 09 12 42.3 +1.3
U15A North Rim 76.81 327 IAmb IAmb 09 12 44.1
comp=Z,19nm,0.8s
PQI Presque Isle 76.82 2 P P 09 12 41.9 +1.3
PV12 Saucer Basin, 76.82 331 P P 09 12 42.4 +1.2
PV11 David Mesa, Pa 76.83 331 P P 09 12 42.4 +1.3
F45A CMU Biological 76.85 350 P P 09 12 40.7 -0.1
baz=168,SNR=6.7
PV07 Paradox Valley 76.86 331 P P 09 12 42.6 +1.3
PV16 Nyswonger Mesa 76.86 331 P P 09 12 42.3 +1.0
PV20 West Nyswonger 76.91 330 P P 09 12 42.3 +0.7
PV04 Paradox Valley 76.93 331 P P 09 12 43.0 +1.3
K31A O'Neill 76.95 340 P P 09 12 42.5 +1.0
E51A G1948 Merrick 76.97 354 P P 09 12 41.7 +0.2
baz=173,SNR=27
E50A Wahnapitae 76.98 353 P P 09 12 41.6 +0.1
baz=172,SNR=21
PV22 Blue Mesa, Par 77.00 331 P P 09 12 43.4 +1.3
D60A Saint Jean D'O 77.00 0 P P 09 12 42.7 +1.1
baz=180,SNR=9.3
PV23 Carpenter Ridg 77.02 331 P P 09 12 42.8 +0.5
MURC Murrieta 77.03 322 P P 09 12 43.9 +1.8
baz=141,SNR=9.3
D59A Saint-Raymond 77.09 360 P P 09 12 42.9 +0.8
baz=180
D57A Chemin Vers le 77.14 358 P P 09 12 43.2 +0.8
baz=178,SNR=27
GMRC Granite Mounta 77.15 324 P P 09 12 44.7 +1.8
baz=142,SNR=16
D63A Stockholm 77.18 2 P P 09 12 43.9 +1.3
baz=183,SNR=28
E48A Lockeyer 77.19 352 P P 09 12 42.9 +0.2
baz=170,SNR=28
D55A Sainte-Anne-du 77.19 357 P P 09 12 43.0 +0.3
baz=176,SNR=40
D58A Chemin du LacG 77.19 359 P P 09 12 43.6 +0.9
baz=179,SNR=50
D56A ZEC Mazanza, M 77.20 358 P P 09 12 43.1 +0.3
baz=177,SNR=19
D62A Allapoint, All 77.20 2 P P 09 12 43.9 +1.2
baz=182,SNR=52
D62A Allapoint, All 77.20 2 P P 09 12 43.8 +1.2
G40A Rib Lake 77.28 346 P P 09 12 43.2 0.0
D61A St Aubert, Com 77.30 1 P P 09 12 44.5 +1.2
baz=181,SNR=7.9
E47A Iron Bridge 77.30 352 P P 09 12 43.4 +0.1
baz=170,SNR=41
E46A Sault Ste Mari 77.35 351 P P 09 12 43.7 +0.1
ECSD EROS Data Cent 77.36 342 P P 09 12 44.1 +0.3
baz=158,SNR=83
ECSD EROS Data Cent 77.36 342 P P 09 12 44.1 +0.3
D53A Lac Vacive, Po 77.38 356 P P 09 12 44.1 +0.4
baz=174,SNR=40
D53A Lac Vacive, Po 77.38 356 P P 09 12 44.1 +0.4
D53A IAmb IAmb 09 12 45.0
comp=Z,45nm,0.8s
D54A Lac Fusel, La 77.39 356 P P 09 12 43.6 -0.2
baz=175,SNR=26
LATQ La Tuque 77.48 359 P P 09 12 44.9 +0.6
baz=179,SNR=13
BATG Bathurst New B 77.51 4 P P 09 12 45.8 +1.3
D51A Lot 18 Range I 77.52 354 P P 09 12 44.7 +0.2
baz=173
HEC Hector,Ludlow 77.53 323 P P 09 12 46.9 +1.9
baz=141,SNR=6.2
D50A G1974 Best Tow 77.63 354 P P 09 12 45.4 +0.2
baz=172,SNR=17
PKCU Pink Cliffs 77.65 328 P P 09 12 47.6 +1.7
LCMT Little Creek M 77.73 327 P P 09 12 47.5 +1.3
E43A Lone Tree Farm 77.76 349 P P 09 12 46.2 +0.3
E43A IAmb IAmb 09 12 47.2
comp=Z,36nm,0.9s
BFSC Mount Baldy Ra 77.77 322 P P 09 12 47.9 +1.5
baz=140,SNR=6.6
TUQ Turquoise Moun 77.80 324 P P 09 12 48.1 +1.6
baz=142,SNR=9.7
SPMN Marine on St. 77.80 345 P P 09 12 45.8 -0.3
baz=161,SNR=10.0
SPMN Marine on St. 77.80 345 P P 09 12 46.0 -0.1
SPMN IAmb IAmb 09 12 47.0
comp=Z,22nm,0.7s
D46A Sault St. Mari 77.83 351 P P 09 12 46.0 -0.3
baz=169,SNR=13
D48A Paudash Townsh 77.83 353 P P 09 12 46.2 -0.1
baz=171,SNR=16
D47A Chapleau 77.87 352 P P 09 12 46.2 -0.3
baz=170,SNR=14
N23A Red Feather La 77.87 334 P P 09 12 48.3 +1.3
baz=150,SNR=12
COWI Conover 77.87 347 P P 09 12 46.8 +0.2
COWI IAmb IAmb 09 12 48.0
comp=Z,23nm,0.9s
D49A Beulah Townshi 77.88 353 P P 09 12 46.7 +0.2
baz=171,SNR=25
RRX Edison Barstow 77.91 323 P P 09 12 48.9 +1.8
baz=141
MWC Mount Wilson 77.97 322 P P 09 12 48.8 +1.2
MWC pmax pmax
comp=Z,18nm,0.8s
MWC Mount Wilson 77.97 322 P P 09 12 48.8 +1.2
MWC IAmb IAmb 09 12 50.2
comp=Z,18nm,0.8s
PASC Pasadena Art C 77.99 322 P P 09 12 49.1 +1.6
PHWY Pilot Hill 78.04 334 P P 09 12 49.0 +1.1
PHWY IAmb IAmb 09 12 49.7
comp=Z,18nm,0.7s
MTPU Mount Pierson 78.08 328 P P 09 12 49.1 +0.8
O20A White River Ci 78.12 332 P P 09 12 49.7 +1.4
baz=148,SNR=15
O20A White River Ci 78.12 332 P P 09 12 49.4 +1.1
O20A IAmb IAmb 09 12 50.9
comp=Z,35nm,1.2s
SZCU Shurtz Canyon 78.13 327 P P 09 12 49.8 +1.4
DECC Green Verdugo 78.14 322 P P 09 12 50.1 +1.8
baz=140
GSC Goldstone, Bar 78.14 323 P P 09 12 50.0 +1.6
baz=141,SNR=9.9
SRU San Rafael Swe 78.22 330 P P 09 12 50.0 +1.1
SRU pmax pmax
comp=Z,18nm,0.9s
SRU San Rafael Swe 78.22 330 P P 09 12 50.0 +1.1
SHPR Sheep Range 78.25 325 P P 09 12 50.8 +1.7
SHOC Shoshone, Teco 78.33 324 P P 09 12 50.8 +1.4
baz=142
Q16A Castle Valley 78.34 329 P P 09 12 50.9 +1.3
VLDQ Val d'Or 78.39 356 P P 09 12 50.0 +0.7
EDW2 Edwards Air Fo 78.43 322 P P 09 12 51.3 +1.3
baz=140,SNR=10
MSU Marysvale 78.46 328 P P 09 12 51.7 +1.5
MSU Marysvale 78.46 328 P P 09 12 51.7 +1.5
F36A Milaca 78.57 344 P P 09 12 50.2 -0.1
F36A IAmb IAmb 09 12 51.3
comp=Z,32nm,0.9s
P17A Butcher Ranch, 78.61 330 P P 09 12 51.4 +0.4
OSI Osito Audit: C 78.62 322 P P 09 12 52.4 +1.4
baz=140
OSI Osito Audit: C 78.62 322 P P 09 12 52.3 +1.3
OSI IAmb IAmb 09 12 53.6
comp=Z,32nm,0.9s
TMUT Trail Mountain 78.67 330 P P 09 12 52.7 +1.2
SUSD Miller 78.67 340 P P 09 12 51.4 +0.3
baz=156
SUSD Miller 78.67 340 P P 09 12 50.9 -0.2
SUSD IAmb IAmb 09 12 52.3
comp=Z,41nm,0.9s
D41A Chassel 78.69 348 P P 09 12 51.5 +0.5
LRMC Laurel Mtn Rad 78.73 323 P P 09 12 53.2 +1.5
baz=140,SNR=6.1
E38A The Farm, Brul 78.84 346 P P 09 12 51.5 -0.4
RDMU Red Mountain 79.03 331 P P 09 12 54.5 +1.2
RWWY Rawlins 79.04 333 P P 09 12 53.7 +0.3
RWWY IAmb IAmb 09 12 54.8
comp=Z,48nm,1.1s
FURC Furnace Creek, 79.07 324 P P 09 12 55.1 +1.7
baz=141,SNR=22

MPMC	Manual Prospec	79.08	323	P		P	09 12 54.9	+1.3
	baz=141,SNR=14							
TPNV	Topopah Spring	79.14	325	P		P	09 12 55.8	+1.8
TPNV				pmax		pmax		
	comp=Z,16nm,0.7s							
TPNV	Topopah Spring	79.14	325	P		P	09 12 55.8	+1.8
	baz=142,SNR=26							
TPNV	Topopah Spring	79.14	325	P		P	09 12 55.8	+1.8
F33A	5 Mile Ranch,	79.23	343	P		P	09 12 54.0	0.0
PSUT	Pine Spring	79.25	327	P		P	09 12 56.2	+1.7
ISA	Isabella, Lake	79.28	323	P		P	09 12 56.5	+1.8
ISA	Isabella, Lake	79.28	323	P		P	09 12 56.5	+1.8
	baz=140,SNR=17							
ISA	Isabella, Lake	79.28	323	P		P	09 12 56.5	+1.8
ISA				IAmb		IAmb	09 12 57.5	
	comp=Z,23nm,0.8s							
LSQQ	Lebel-sur-Quev	79.31	356	P		P	09 12 54.5	+0.2
	baz=175							
PKM	Mcpherson Peak	79.41	321	P		P	09 12 57.4	+1.8
	baz=139,SNR=11							
NLU	North Lily Min	79.59	329	P		P	09 12 57.4	+1.0
K22A	Casper	79.60	334	P		P	09 12 57.6	+1.2
	baz=150,SNR=16							
K22A	Casper	79.60	334	P		P	09 12 57.6	+1.2
K22A				IAmb		IAmb	09 12 58.8	
	comp=Z,77nm,1.4s							
TSUM	Tsumeb	79.64	106	P		P	09 12 57.6	+0.4
CWC	Cottonwood Cre	79.67	323	P		P	09 12 58.7	+1.8
	baz=140							
GRAC	Grapevine Rang	79.74	324	P		P	09 12 58.8	+1.7
	baz=141,SNR=10							
VES	Vestal, Richgr	79.74	322	P		P	09 12 58.6	+1.6
	baz=140,SNR=21							
SMMC	Simmler	79.83	321	P		P	09 12 59.5	+1.9
	baz=139,SNR=7.4							
JLU	Jordanelle	79.85	330	P		P	09 12 59.0	+1.2
R11A	Troy Canyon, C	79.92	326	P		P	09 12 59.9	+1.7
	baz=142,SNR=22							
R11A	Troy Canyon, C	79.92	326	P		P	09 12 59.8	+1.7
RSSD	Black Hills	80.00	337	P		P	09 12 59.5	+1.0
RSSD				pmax		pmax		
	comp=Z,25nm,1.1s							
RSSD	Black Hills	80.00	337	P		P	09 12 59.3	+0.8
	baz=152							
RSSD	Black Hills	80.00	337	P		P	09 12 59.5	+1.0
RSSD				IAmb		IAmb	09 13 00.5	
	comp=Z,25nm,1.1s							
MATQ	Matagami	80.04	356	P		P	09 12 58.3	0.0
	baz=174,SNR=25							
CHGQ	Chibougamau	80.05	358	P		P	09 12 58.6	+0.3
	baz=177,SNR=21							
CTU	Camp Tracy	80.06	330	P		P	09 12 59.9	+1.1
EYMN	Ely	80.10	346	P		P	09 12 58.5	-0.2
	baz=162,SNR=10							
EYMN	Ely	80.10	346	P		P	09 12 58.5	-0.2
EYMN				IAmb		IAmb	09 12 59.8	
	comp=Z,27nm,1.0s							
DUG	Dugway, Tooele	80.12	329	P		P	09 13 00.5	+1.3
DUG				pmax		pmax		
	comp=Z,12nm,0.9s							
DUG	Dugway, Tooele	80.12	329	P		P	09 13 00.5	+1.3
	baz=145,SNR=19							
DUG	Dugway, Tooele	80.12	329	P		P	09 13 00.5	+1.3
TIN	Tinemaha, Big	80.22	324	P		P	09 13 01.5	+1.7
	baz=140,SNR=7.3							
TCUT	Toone Canyon	80.26	330	P		P	09 13 00.9	+0.8
PAGB	Antelope Grade	80.28	322	P		P	09 13 01.6	+1.6
PAGB				IAmb		IAmb	09 13 02.9	
	comp=Z,22nm,0.8s							
DRLN	Deer Lake	80.30	9	P		P	09 13 00.0	+0.3
HWUT	Hardware Ranch	80.73	331	P		P	09 13 03.1	+0.6
HWUT				IAmb		IAmb	09 13 04.2	
	comp=Z,26nm,0.8s							
BGU	Big Grassy Mou	80.81	329	P		P	09 13 03.5	+0.7
SPUT	South Promonto	80.86	330	P		P	09 13 03.6	+0.4
BW06	Boulder Array	80.87	333	P		P	09 13 03.6	+0.3
	baz=147,SNR=13							
BW06	Boulder Array	80.87	333	P		P	09 13 03.6	+0.3
PD31	Pinedale Array	80.87	333	P		P	09 13 03.6	+0.3
PDAR	Pinedale Array	80.87	333	P		P	09 13 03.6	+0.3
	comp=Z,3.4nm,0.6s,baz=134,slow=7.8,SNR=42							
PDAR				PKKPbc		PKKPbc	09 31 39.8	-3.4
	comp=Z,0.5nm,0.5s,baz=180,slow=1.6,SNR=6.2							
B35A	Bob, Littlefor	80.97	345	P		P	09 13 03.4	+0.1
B35A				IAmb		IAmb	09 13 04.3	
	comp=Z,33nm,0.8s							
MLAC	Mammoth, Mammo	80.97	324	P		P	09 13 05.6	+1.7
	baz=140							
OMMB	Old Mammoth Mi	81.05	324	P		P	09 13 05.7	+1.2
MDPB	Devils Postpil	81.10	324	P		P	09 13 05.8	+1.2
E28A	Huff	81.12	340	P		P	09 13 04.8	+0.5
BOSA	Boshof	81.22	118	P		P	09 13 05.3	-0.2
	comp=Z,81nm,0.8s,baz=242,slow=4.3,SNR=101							
BOSA				LR		LR	09 47 30.0	
	comp=Z,124nm,18.0s,baz=238,slow=34							
BOSA	Boshof	81.22	118	P		P	09 13 05.3	-0.2
BOSA				pmax		pmax		
	comp=Z,77nm,0.8s							
BOSA	Boshof	81.22	118	P		P	09 13 05.3	-0.2
NV11	Mina Array St	81.24	325	P		P	09 13 06.5	+1.3
NVAR	Mina Array Bea	81.32	325	P		P	09 13 06.7	+1.0
	comp=Z,8.3nm,0.8s,baz=156,slow=6.6,SNR=46							
NVAR				pP		pP	09 13 20.4	+2.2
	comp=Z,4.5nm,0.8s,baz=143,slow=5.7,SNR=7.5							
HVU	Hansel Valley	81.39	330	P		P	09 13 06.3	+0.3
HVU				pmax		pmax		
	comp=Z,21nm,0.8s							
HVU	Hansel Valley	81.39	330	P		P	09 13 06.2	+0.3
AGMN	Agassiz Nation	81.41	344	P		P	09 13 05.8	+0.2
	baz=159,SNR=31							
AGMN	Agassiz Nation	81.41	344	P		P	09 13 05.8	+0.2
AGMN				IAmb		IAmb	09 13 06.9	
	comp=Z,35nm,0.8s							
AHID	Auburn Hatcher	81.49	332	P		P	09 13 07.0	+0.5
RYN	Ryan	81.58	325	P		P	09 13 07.8	+0.8
ELK	Elko	81.66	328	P		P	09 13 08.3	+0.8
ELK				pmax		pmax		
	comp=Z,16nm,0.9s							
ELK	Elko	81.66	328	P		P	09 13 08.3	+0.8
KVN	Kaiserville	81.69	325	P		P	09 13 08.7	+1.0
KVN				pmax		pmax		
	comp=Z,13nm,0.9s							
KVN	Kaiserville	81.69	325	P		P	09 13 08.7	+1.0
REDW	Red Top Meadow	81.89	332	P		P	09 13 09.3	+0.6
SNOW	Snow King Moun	81.93	332	P		P	09 13 09.2	+0.3
WAKR	Walker	81.95	324	P		P	09 13 10.7	+1.7
MDND	Maddock	81.97	341	P		P	09 13 09.3	+0.6
	baz=156,SNR=8.9							
MDND	Maddock	81.97	341	P		P	09 13 09.1	+0.5
TPAW	Teton Pass	82.03	332	P		P	09 13 09.6	+0.2
CMB	Columbia Colle	82.08	323	P		P	09 13 10.5	+0.9
CMB				pmax		pmax		
	comp=Z,5.0nm,0.8s							
CMB	Columbia Colle	82.08	323	P		P	09 13 10.4	+0.9
FXWY	Fox Creek	82.19	332	P		P	09 13 10.6	+0.4
IMW	Indian Meadow	82.37	332	P		P	09 13 11.8	+0.6
FLWY	Flagg Ranch	82.43	333	P		P	09 13 12.2	+0.8
TOC5	Torodi Ar. Sit	82.43	70	IAMs_20		IAMs_20	09 46 31.5	
	comp=Z,467nm,20.0s							
TOB4	Torodi Ar. Sit	82.45	70	IAMs_20		IAMs_20	09 46 31.8	
	comp=Z,421nm,21.0s							
TOC4	Torodi Ar. Sit	82.45	70	IAMs_20		IAMs_20	09 46 54.9	
	comp=Z,400nm,20.0s							
TOA3	Torodi Ar. Sit	82.46	70	IAMs_20		IAMs_20	09 46 32.1	
	comp=Z,409nm,21.0s							
TOA0	Torodi Ar. Sit	82.46	70	P		P	09 13 11.7	-0.3
TOA0				IAMs_20		IAMs_20	09 46 32.2	
	comp=Z,420nm,21.0s							
TORD	Torodi Ar. Bea	82.46	70	P		P	09 13 11.7	-0.3
	comp=Z,77nm,0.8s,baz=277,slow=5.5,SNR=527							
TOB3	Torodi Ar. Sit	82.46	70	IAMs_20		IAMs_20	09 46 41.3	
	comp=Z,426nm,22.0s							
PNTR	Pine Nut	82.47	324	P		P	09 13 13.3	+1.5
PNTR				IAmb		IAmb	09 13 14.5	
	comp=Z,39nm,0.8s							
TOC3	Torodi Ar. Sit	82.48	70	IAMs_20		IAMs_20	09 46 32.6	
	comp=Z,434nm,22.0s							
TOC2	Torodi Ar. Sit	82.49	70	IAMs_20		IAMs_20	09 46 55.9	
	comp=Z,387nm,20.0s							
H17A	Grant Village	82.64	333	P		P	09 13 13.5	+0.9
VCNR	Virginia City	82.66	324	P		P	09 13 13.6	+0.9
RUBR	Rubicon Trail	82.73	324	P		P	09 13 13.7	+0.6
RUBR				IAmb		IAmb	09 13 18.7	
	comp=Z,27nm,0.9s							
RLMT	Red Lodge	82.74	334	P		P	09 13 13.8	+0.7
	baz=148,SNR=15							
RLMT	Red Lodge	82.74	334	P		P	09 13 13.7	+0.6
YMP	Mirror Lake Pl	82.76	333	P		P	09 13 14.7	+1.4
PAHR	Pah Rah Range	82.83	325	P		P	09 13 14.9	+1.4
PAHR				IAmb		IAmb	09 13 16.2	
	comp=Z,28nm,1.0s							
YNE	Yellowstone No	82.93	333	P		P	09 13 14.7	+0.7
LAO	LASA Array	82.99	337	P		P	09 13 14.6	+0.6
	baz=150,SNR=23							
LAO	LASA Array	82.99	337	P		P	09 13 14.7	+0.6
LAO				IAmb		IAmb	09 13 15.7	
	comp=Z,48nm,1.2s							
YMR	Madison River	83.02	333	P		P	09 13 15.9	+1.4
AFDM	Forest Hills D	83.07	323	P		P	09 13 15.4	+0.8
YHH	Holmes Hill	83.08	333	P		P	09 13 15.9	+1.0
YHB	Horse Butte	83.18	333	P		P	09 13 16.1	+0.8
ULM	Lac du Bonnet	83.23	344	P		P	09 13 15.0	-0.1
	comp=Z,40nm,0.8s,baz=166,slow=5.9,SNR=35							
ULM	Lac du Bonnet	83.23	344	P		P	09 13 15.0	-0.1
ULM				pmax		pmax		
	comp=Z,49nm,0.9s							
ULM	Lac du Bonnet	83.23	344	P		P	09 13 14.9	-0.1
YHL	Hebgen Lake	83.26	333	P		P	09 13 16.6	+0.7
LBTB	Lobatse	83.28	115	P		P	09 13 15.9	-0.4
LBTB				pmax		pmax		
	comp=Z,117nm,0.8s							
LBTB	Lobatse	83.28	115	P		P	09 13 15.9	-0.4
BEKR	Beckworth	83.44	324	P		P	09 13 17.7	+0.9
BEKR				IAmb		IAmb	09 13 19.1	
	comp=Z,16nm,0.9s							
GCMT	Greycliff	83.46	334	P		P	09 13 17.2	+0.5
CASY	Casey	83.57	181	P		P	09 13 17.5	+0.6
CASY				IAmb		IAmb	09 13 18.4	
	comp=Z,27nm,1.1s							
ORV	Oroville	83.79	323	P		P	09 13 19.6	+1.3
ORV				pmax		pmax		
	comp=Z,28nm,1.1s							
ORV	Oroville	83.79	323	P		P	09 13 19.6	+1.3
ORV				IAmb		IAmb	09 13 20.9	
	comp=Z,28nm,1.1s							
DGMT	Dagmar	83.88	339	P		P	09 13 19.6	+1.0
	baz=152,SNR=69							
DGMT	Dagmar	83.88	339	P		P	09 13 19.6	+1.0
MCMT	McKenzie Canyo	83.91	332	P		P	09 13 20.2	+1.1
MFID	Camas Ranch	84.04	329	P		P	09 13 20.5	+0.9
O03E	Paynes Creek	84.50	324	P		P	09 13 22.0	+0.1
	baz=138							
WVOR	Wild Horse Val	84.56	327	P		P	09 13 23.4	+1.1
WVOR				pmax		pmax		
	comp=Z,9.0nm,1.1s							
WVOR	Wild Horse Val	84.56	327	P		P	09 13 23.4	+1.1
LRM	Limekiln Ridge	84.56	333	P		P	09 13 23.6	+1.2
MOD	Modoc Plateau	84.95	326	P		P	09 13 25.4	+1.0
MOD				IAmb		IAmb	09 13 26.4	
	comp=Z,14nm,0.8s							
SCHQ	Schefferville	85.02	3	P		P	09 13 24.0	-0.1
	comp=Z,52nm,1.1s,baz=164,slow=3.9,SNR=28							
SCHQ	Schefferville	85.02	3	P		P	09 13 23.9	-0.2
TTIG	Tnine Tigouga,	85.17	50	P		P	09 13 28.0	+2.3
	SNR=6.9							
J08A	Circle Bar Ran	85.20	328	P		P	09 13 26.7	+1.2
EGMT	Eagleton	85.37	335	P		P	09 13 26.2	0.0
	baz=148,SNR=11							
EGMT	Eagleton	85.37	335	P		P	09 13 26.2	0.0
EGMT				IAmb		IAmb	09 13 27.4	
	comp=Z,19nm,1.1s							
N02D	Trinity Center	85.46	324	P		P	09 13 27.0	+0.2
	baz=138							
M04C	Macdoel	85.62	325	P		P	09 13 28.5	+0.8
	baz=138,SNR=7.3							
BMO	Blue Mountains	85.83	329	P		P	09 13 28.9	+0.3
BMO				pmax		pmax		
	comp=Z,4.0nm,0.9s							
BMO	Blue Mountains	85.83	329	P		P	09 13 28.9	+0.3
K05A	Summer Lake	85.86	326	P		P	09 13 28.8	-0.1
K05A				IAmb		IAmb	09 13 31.4	
	comp=Z,29nm,0.9s							
OUK	Oukaimeden	85.97	50	P		P	09 13 32.0	+2.1
	SNR=5.8							
MSO	Missoula	85.98	332	P		P	09 13 30.1	+0.9
	baz=144							
MSO	Missoula	85.98	332	P		P	09 13 30.2	+0.9
YBH	Yreka Blue Hor	86.02	324	P		P	09 13 29.9	+0.3
YBH				pmax		pmax		
	comp=Z,10.0nm,0.9s							
YBH	Yreka Blue Hor	86.02	324	P		P	09 13 29.9	+0.3
L04D	Klamath Falls	86.18	325	P		P	09 13 30.9	+0.5
	baz=138							
K04D	Chiloquin, OR	86.21	325	P		P	09 13 30.7	+0.2
	baz=138							
I07A	Izee	86.23	327	P		P	09 13 31.4	+0.8
I07A				IAmb		IAmb	09 13 32.9	
	comp=Z,16nm,1.0s							
OXZ	Oxford	86.41	221	IAMs_20		IAMs_20	09 40 55.0	
	comp=Z,1µm,18.0s							
J05D	Fort Rock, OR	86.45	326	P		P	09 13 32.8	+1.0
	baz=139,SNR=6.6							
OUZM	OUZ	86.52	51	P		P	09 13 34.0	+1.6
	SNR=13							
F10A	Beach Ranch, E	86.67	330	P		P	09 13 32.9	+0.2
PINE	Pine Mountain	86.69	326	P		P	09 13 34.3	+1.4
PINE				IAmb		IAmb	09 13 35.4	
	comp=Z,27nm,0.8s							
RPZ	Rata Peaks	86.72	220	LR		LR	09 42 34.0	
	comp=Z,84nm,19.1s,baz=134,slow=29							
ZGR	Zagora	86.81	52	P		P	09 13 35.0	+1.2
	SNR=23							
J04D	Umpqua Nationa	86.84	325	P		P	09 13 34.6	+0.9
	baz=138							
JTMT	Jette	86.86	333	P		P	09 13 33.8	+0.2
JTMT				IAmb		IAmb	09 13 35.2	
	comp=Z,14nm,0.7s							
G08A	Pilot Rock	86.91	329	P		P	09 13 34.7	+0.8
K02D	Willamette Mer	87.21	324	P		P	09 13 36.4	+1.0
	baz=137							
TZRR	Tazzarine	87.25	52	P		P	09 13 37.4	+1.5
	SNR=14							
I05D	Terrebonne, OR	87.29	327	P		P	09 13 36.9	+1.3
	baz=139,SNR=9.6							
I04A	Tendick Farm,	87.40	326	P		P	09 13 36.5	+0.3
	baz=138							
G06A	Carlson Farm,	87.63	328	P		P	09 13 38.2	+0.9
WALA	Waterton Lakes	87.78	334	P		P	09 13 38.5	+0.6
WALA				IAmb		IAmb	09 13 39.6	
	comp=Z,28nm,0.9s							
H04A	Detroit Lake	87.95	326	P		P	09 13 39.3	+0.5
H04A				IAmb		IAmb	09 13 40.2	
	comp=Z,20nm,0.8s							
G05D	Wamic, OR	87.95	327	P		P	09 13 39.4	+0.6
	baz=139							
HAWA	Hanford	88.01	329	P		P	09 13 40.0	+1.0
HAWA				IAmb		IAmb	09 13 40.4	
	comp=Z,13nm,0.9s							
H04D	Lebanon	88.09	326	P		P	09 13 39.7	+0.3
	baz=138							
D08A	Wollman Farm,	88.25	330	P		P	09 13 40.5	+0.3
NEW	Newport	88.43	331	P		P	09 13 40.3	-0.7
NEW				pmax		pmax		
	comp=Z,10.0nm,1.3s							
NEW	Newport	88.43	331	P		P	09 13 41.0	0.0
	baz=142							
NEW	Newport	88.43	331	P		P	09 13 40.3	-0.7
F05D	White Salmon	88.50	328	P		P	09 13 42.3	+1.0
	baz=139							
C09A	Chrisman Ranch	88.55	330	P		P	09 13 41.4	-0.1
C09A				IAmb		IAmb	09 13 44.4	
	comp=Z,9.5nm,0.8s							
FFC	Flin Flon	88.83	343	P		P	09 13 42.4	-0.2
FFC				pmax		pmax		
	comp=Z,20nm,1.0s							
FFC	Flin Flon	88.83	343	P		P	09 13 42.4	-0.2
FFC				IAmb		IAmb	09 13 43.5	
	comp=Z,20nm,0.9s							
F04A	Amboy	88.98	327	P		P	09 13 43.6	+0.1
LTY	Liberty	89.18	329	P		P	09 13 44.5	0.0
LTY				IAmb		IAmb	09 13 45.4	
	comp=Z,8.7nm,0.8s							
LON	Longmire	89.31	328	P		P	09 13 45.0	-0.2
LON				pmax		pmax		
	comp=Z,9.0nm,0.8s							
LON	Longmire	89.31	328	P		P	09 13 45.0	-0.2
LON				IAmb		IAmb	09 13 46.3	
	comp=Z,8.9nm,0.8s							
F04D	Rainier, OR	89.37	327	P		P	09 13 46.4	+1.0
	baz=137							
B08A	Colville Reser	89.43	330	P		P	09 13 45.5	-0.2
E04D	Cinebar	89.52	327	P		P	09 13 46.6	+0.6
	baz=138							
D05A	Enumclaw	89.72	328	P		P	09 13 47.5	+0.5
D05A				IAmb		IAmb	09 13 48.5	
	comp=Z,18nm,0.8s							
E03A	Lebam	89.97	327	P		P	09 13 48.8	+0.7
E03A				IAmb		IAmb	09 14 04.8	
	comp=Z,29nm,1.1s							
D04E	Lakebay	90.07	328	P		P	09 13 49.6	+1.0
	baz=138							
LSZ	Lusaka	90.36	108	P		P	09 13 51.4	+0.4
LSZ				pmax		pmax		
	comp=Z,36nm,1.2s							
LSZ	Lusaka	90.36	108	P		P	09 13 51.4	+0.4
LSZ				IAmb		IAmb	09 13 53.3	
	comp=Z,36nm,1.2s							
D03D	Eldon	90.48	328	P		P	09 13 51.5	+1.0
	baz=137							
B06A	Marblemount	90.49	329	P		P	09 13 50.4	-0.1
B06A				IAmb		IAmb	09 13 51.2	
	comp=Z,15nm,0.9s							
B05A	Bryant	90.57	329	P		P	09 13 50.6	-0.4
	baz=138							
TAM	Tamanrasset	90.77	64	P		P	09 13 52.4	-0.3
TAM				pmax		pmax		
	comp=Z,15nm,0.9s							
TAM				MLR		MLR		
	comp=Z,300nm,20.0s							
TAM	Tamanrasset	90.77	64	P		P	09 13 52.4	-0.3
TAM				IAmb		IAmb	09 13 53.9	
	comp=Z,15nm,0.9s							
TAM				IAMs_20		IAMs_20	09 54 30.4	
	comp=Z,260nm,20.0s							
FCC	Fort Churchill	90.87	348	P		P	09 13 52.4	+0.4
FCC				pmax		pmax		
	comp=Z,47nm,1.0s							
FCC	Fort Churchill	90.87	348	P		P	09 13 52.4	+0.4
FCC				IAMs_20		IAMs_20	09 51 12.3	
	comp=Z,947nm,20.0s							
IVI	Ivigtut	93.26	11	P		P	09 14 03.6	+0.6
ESDC	Sonseca Array	93.70	46	P		P	09 14 05.3	-0.4
	comp=Z,4.0nm,0.9s,baz=242,slow=4.4,SNR=11							
YKA	Yellowknife Ar	98.89	341	P		P	09 14 28.1	-0.5
	comp=Z,3.6nm,0.7s,baz=138,slow=4.8,SNR=117							
YKA				pP		pP	09 14 41.8	+0.5
	comp=Z,1.9nm,0.9s,baz=136,slow=5.6,SNR=4.9							
YKA				PKiKP		PKiKP	09 18 59.1	-0.1
	comp=Z,0.6nm,0.9s,baz=143,slow=2.1,SNR=4.9							
YKA				PKKPbc		PKKPbc	09 30 53.8	-3.8
	comp=Z,0.2nm,0.5s,baz=325,slow=3.6,SNR=6.3							
KEST	Kesra	100.35	55	IAMs_20		IAMs_20	10 04 59.1	
	comp=Z,555nm,22.0s							
SSB	Saint Sauveur	102.04	44	IAMs_20		IAMs_20	09 57 34.6	
	comp=Z,414nm,22.0s							
VSL	Villasalto	102.23	51	IAMs_20		IAMs_20	10 10 49.9	
	comp=Z,390nm,18.0s							
BNI	Bardonecchia	103.23	45	IAMs_20		IAMs_20	10 03 19.0	
	comp=Z,505nm,20.0s							
DZM	Mont Dzumac	103.79	234	eLR		LR	09 49 00.4	
	comp=Z,425nm,24.1s							
WDD	Wied Dalam	104.10	57	IAMs_20		IAMs_20	10 08 11.3	
	comp=Z,536nm,20.0s							
SENIN	Lac Senin/Sane	104.25	44	IAMs_20		IAMs_20	10 11 12.1	
	comp=Z,492nm,20.0s							
VLC	Villacollemand	105.12	48	IAMs_20		IAMs_20	10 09 50.2	
	comp=Z,840nm,19.0s							
WLF	Walferdange	105.19	41	IAMs_20		IAMs_20	10 12 40.7	
	comp=Z,603nm,18.0s							
PRMA	PARMA	105.35	47	IAMs_20		IAMs_20	10 08 02.4	
	comp=Z,779nm,19.0s							
OSSC	Osservatorio P	105.38	48	IAMs_20		IAMs_20	10 07 53.0	
	comp=Z,419nm,20.0s							
TUE	Stuetta	105.55	45	IAMs_20		IAMs_20	10 11 48.4	
	comp=Z,687nm,18.0s							
BFO	Black Forest	105.81	43	IAMs_20		IAMs_20	10 11 03.2	
	comp=Z,513nm,19.0s							
SALO	Salr	105.88	46	IAMs_20		IAMs_20	10 10 24.3	
	comp=Z,498nm,22.0s							
CEL	Celeste	106.16	55	IAMs_20		IAMs_20	10 10 55.0	
	comp=Z,418nm,21.0s							
FUORN	Ofenpass-Fuorn	106.18	45	IAMs_20		IAMs_20	10 10 24.1	
	comp=Z,693nm,21.0s							
PAOL	Paolisi	106.46	52	IAMs_20		IAMs_20	10 11 22.8	
	comp=Z,643nm,19.0s							
CTI	Castel Tesino	106.78	46	IAMs_20		IAMs_20	10 06 56.0	
	comp=Z,296nm,21.0s							
TIP	Timpagrande	107.17	54	IAMs_20		IAMs_20	10 00 28.7	
	comp=Z,615nm,22.0s							
GRA1	Grafenberg Arr	108.12	43	IAMs_20		IAMs_20	10 10 09.4	
	comp=Z,800nm,21.0s							
EPYK	Eagle Plains	108.44	337	P		PKiKP	09 19 16.3	-0.4
	baz=124							
GERES	GERESS Array B	109.23	44	PKiKP		PKiKP	09 19 18.4	-0.4
	comp=Z,1.6nm,0.7s,baz=222,slow=1.8,SNR=11							
KHC	Kasperske Hory	109.28	44	IAMs_20		IAMs_20	10 09 09.1	
	comp=Z,302nm,19.0s							
CLL	Collm	109.83	42	ePdif		Pdif	09 15 16.0	-1.6
CLL				ePP		PP	09 19 52.0	-0.8
CLL				esPP			09 20 09.0	
CLL				ePS		PS	09 29 22.0	+0.5
CLL				ePPS		PPS	09 30 30.0	
CLL				eSS		SS	09 34 56.0	-18
CLL				e			09 38 42.0	
CLL				eSSSS			09 42 42.0	
CLL	Collm	109.83	42	eP		Pdif	09 15 16.0	-1.6
CLL				e			09 19 52.0	
CLL	Collm	109.83	42	IAMs_20		IAMs_20	10 10 22.7	
	comp=Z,832nm,19.0s							
KNK	Knik Glacier	110.44	330	IAMs_20		IAMs_20	09 51 36.7	
	comp=Z,242nm,19.0s							
STKA	Stephens Creek	110.58	210	PKKPbc		PKKPbc	09 30 19.9	-1.1
	comp=Z,0.5nm,0.5s,baz=276,slow=1.6,

WR7	**Warramunga Arr**	**124.06**	**210**		IAMs_20	IAMs_20	10 07 31.7			
	comp=Z,388nm,21.0s									
WB1	**Warramunga Ar.**	**124.11**	**210**		IAMs_20	IAMs_20	10 03 27.0			
	comp=Z,422nm,18.0s									
WC4	**Warramunga Arr**	**124.11**	**210**		IAMs_20	IAMs_20	10 22 33.1			
	comp=Z,259nm,22.0s									
WB2	**Warramunga Arr**	**124.13**	**210**			**PKPdf**	**09 19 46.6**	**-1.5**		
WRA	**Warramunga Arr**	**124.13**	**210**		PKP	**PKPdf**	**09 19 46.8**	**-1.4**		
	comp=Z,6.6nm,0.6s,baz=160,slow=1.7,SNR=90									
WRA					PKKPbc	**PKKPbc**	**09 29 32.2**	**-0.4**		
	comp=Z,3.4nm,0.6s,baz=336,slow=4.4,SNR=39									
WRAB	**Tennant Creek**	**124.14**	**210**	*c*	*i* PKIKP	**PKPdf**	**09 19 47.1**	**-1.1**		
WRAB					pmax	pmax				
	comp=Z,15nm,1.7s									
WRAB	**Tennant Creek**	**124.14**	**210**			**PKPdf**	**09 19 46.0**	**-2.2**		
WC2	**Warramunga Arr**	**124.14**	**210**		IAMs_20	IAMs_20	10 17 33.6			
	comp=Z,214nm,20.0s									
WB4	**Warramunga Arr**	**124.16**	**210**		IAMs_20	IAMs_20	10 13 57.2			
	comp=Z,439nm,21.0s									
WB6	**Warramunga Arr**	**124.20**	**210**		IAMs_20	IAMs_20	10 23 54.3			
	comp=Z,205nm,18.0s									
WB9	**Warramunga Arr**	**124.25**	**210**		IAMs_20	IAMs_20	10 12 54.6			
	comp=Z,180nm,18.0s									
WB0	**Warramunga Arr**	**124.26**	**210**			**PKPdf**	**09 19 46.8**	**-1.7**		
OBN	**Obninsk**	**124.43**	**42**	*i*	PKIKP	**PKPdf**	**09 19 46.1**	**-1.4**		
OBN					pmax	pmax				
	comp=Z,17nm,1.1s									
SOC	**Sochi**	**124.89**	**56**	*i*	PKIKP	**PKPdf**	**09 19 48.1**	**-0.7**		
SOC				*e*			09 21 39.1			
SOC				*e*	PPP	PPP	09 24 16.2			
SOC				*e*			09 26 50.6			
SOC				*e*	PS	**PS**	**09 31 30.9**	**-7.2**		
SOC				*e*	SSS	SSS	09 43 00.6			
SOC					pmax	pmax				
	comp=Z,15nm,0.8s									
LPSR	**Galich'ya Gora**	**125.61**	**45**	*e*	PKIKP	**PKPdf**	**09 19 49.5**	**-0.3**		
LPSR					pmax	pmax				
	comp=Z,30nm,0.9s									
VSR	**Storozhevoye**	**125.62**	**46**	*e*	PKIKP	**PKPdf**	**09 19 47.3**	**-2.6**		
VSR					pmax	pmax				
	comp=Z,10.0nm,1.0s									
VORD	**Divnogorie**	**125.68**	**47**	*e*	PKIKP	**PKPdf**	**09 19 47.7**	**-2.3**		
VORD					pmax	pmax				
	comp=Z,10.0nm,0.7s									
KLMR	**Klimovskoe**	**126.18**	**35**	*e*	PKIKP	**PKPdf**	**09 19 49.8**	**-0.9**		
KLMR					pmax	pmax				
	comp=Z,25nm,0.8s									
KLMR	**Klimovskoe**	**126.18**	**35**	*e*	PKPdf	**PKPdf**	**09 19 49.8**	**-0.9**		
KLMR					AMP		09 19 51.2			
	comp=Z,25nm,0.8s									
H11S2	**WAKE ISLAND Hyl**	**126.33**	**271**		T	T	11 38 40.9			
	baz=115,slow=75,SNR=1499									
H11S1	**WAKE ISLAND Hyl**	**126.34**	**271**		T	T	11 38 41.7			
	baz=115,slow=75,SNR=842									
H11S3	**WAKE ISLAND Hyl**	**126.35**	**271**		T	T	11 38 42.2			
	baz=115,slow=75,SNR=743									
H11N3	**WAKE ISLAND Hyl**	**126.65**	**273**		T	T	11 39 14.4			
	baz=117,slow=75,SNR=19									
H11N1	**WAKE ISLAND Hyl**	**126.67**	**273**		T	T	11 39 24.3			
	baz=117,slow=75,SNR=8.8									
H11N2	**WAKE ISLAND Hyl**	**126.67**	**273**		T	T	11 39 22.7			
	baz=117,slow=75,SNR=65									
KIV	**Kislovodsk**	**127.08**	**56**	*i*	PKIKP	**PKPdf**	**09 19 50.6**	**-2.5**		
KIV					pmax	pmax				
	comp=Z,5.0nm,0.8s									
PSAA1	**Pilbara Seismi**	**127.17**	**193**		IAMs_20	IAMs_20	10 14 01.5			
	comp=Z,615nm,20.0s									
PSA00	**Pilbara Seismi**	**127.17**	**193**			**PKPdf**	**09 19 53.1**	**-0.9**		
KBZ	**Khabaz**	**127.19**	**56**		PKP	**PKPdf**	**09 19 52.7**	**-0.4**		
	comp=Z,4.8nm,0.8s,baz=256,slow=2.2,SNR=4.4									
VRH	**Novokhopyorsk**	**127.22**	**47**	*e*	PKIKP	**PKPdf**	**09 19 52.4**	**-0.6**		
VRH					pmax	pmax				
	comp=Z,10.0nm,0.4s									
FITZ	**Fitzroy Crossi**	**129.04**	**201**		PKP	**PKPdf**	**09 19 56.6**	**-0.9**		
	comp=Z,7.7nm,0.8s,baz=178,slow=4.9,SNR=12									
FITZ	**Fitzroy Crossi**	**129.04**	**201**			**PKPdf**	**09 19 57.2**	**-0.4**		
BILL	**Bilibino**	**129.87**	**336**	*c*	*i* PKIKP	**PKiKP**	**09 19 57.8**	**-0.5**		
BILL				*i*			09 20 12.0			
BILL				*i*			09 20 18.0			
BILL					pmax	pmax				
	comp=Z,13nm,1.0s									
BILL	**Bilibino**	**129.87**	**336**			**PKiKP**	**09 19 58.3**	**0.0**		
ARU	**Arti**	**136.65**	**38**	*i*	PKIKP	**PKPdf**	**09 20 10.9**	**+0.2**		
ARU							09 22 52.2			
ARU	**Arti**	**136.65**	**38**			**PKPdf**	**09 20 10.8**	**+0.2**		
SEY	**Seymchan**	**137.20**	**332**	*i*	PKIKP	**PKPdf**	**09 20 12.1**	**+0.6**		
TIXI	**Tiksi**	**137.30**	**351**	*c*	*i* PKIKP	**PKPdf**	**09 20 10.6**	**-0.8**		
TIXI					pmax	pmax				
	comp=Z,9.0nm,0.8s									
GEYT	**Alibeck**	**137.97**	**66**		PKhKP	PKPpre	09 20 09.3			
	comp=Z,2.4nm,0.5s,baz=238,slow=8.5,SNR=5.3									
PEA0B	**Petropavlovsk-**	**138.02**	**317**	*c*	*i* PKIKP	**PKiKP**	**09 20 14.7**	**-0.6**		
PETK	**Petropavlovsk-**	**138.02**	**317**		PKhKP	PKPpre	09 20 03.6			
	comp=Z,2.5nm,0.8s,baz=115,slow=4.2,SNR=2.4									
PETK					PKP	**PKPdf**	**09 20 13.3**	**0.0**		
	comp=Z,8.9nm,0.9s,baz=133,slow=6.5,SNR=12									
AB31	**Akbulak array**	**138.97**	**49**		PKIKP	**PKPdf**	**09 20 13.6**	**-1.5**		
NRIK	**Noril'sk**	**139.23**	**11**		PKP	**PKPdf**	**09 20 15.1**	**+0.1**		
	comp=Z,4.6nm,1.0s,baz=69,slow=4.8,SNR=4.1									
MA2	**Magadan**	**139.46**	**328**		IAMs_20	IAMs_20	10 19 31.8			
	comp=Z,358nm,20.0s									
BNSI	**Bone**	**143.65**	**200**		PKP	PKPbc	09 20 22.8	+0.7		
SPSI	**Sidrap Palu**	**144.16**	**199**		PKP	PKPbc	09 20 23.2	-0.5		
SPSI					PKP	**PKPab**	**09 20 23.4**	**+0.2**		
BRVK	**Borovoye**	**144.17**	**40**	*c*	*i* PKIKP	**PKPdf**	**09 20 23.2**	**-1.1**		
BRVK					pmax	pmax				
	comp=Z,39nm,1.0s									
BRVK	**Borovoye**	**144.17**	**40**			**PKPdf**	**09 20 23.2**	**-1.1**		
LBMI	**Labuha**	**144.25**	**214**		PKP	**PKPab**	**09 20 21.9**	**-1.7**		
LBMI					PKP	**sPKPdf**	**09 20 43.3**	**-0.1**		
LWLI	**Liwa**	**144.47**	**172**		PKP	PKPbc	09 20 24.4	-0.3		
LWLI					PKP	**PKPdf**	**09 20 25.3**	**-1.0**		
MDSI	**Maura Dua**	**145.00**	**172**		PKP	**PKPab**	**09 20 24.9**	**-1.4**		
MDSI					PKP	**PKPab**	**09 20 24.9**	**-1.4**		
TTSI	**Tana Toraja**	**145.03**	**200**		PKP	**PKPbc**	**09 20 22.7**	**-3.7**		
TTSI					PKP	**PKPab**	**09 20 26.2**	**-0.2**		
YAK	**Yakutsk**	**145.55**	**343**	*e*	PKIKP	**PKPbc**	**09 20 26.5**	**-0.1**		
YAK				*e*			09 20 40.2			
YAK					pmax	pmax				
	comp=Z,118nm,0.7s									
YAK					pmax	pmax				
	comp=E,15nm,0.9s									
YAK					pmax	pmax				
	comp=N,36nm,1.1s									
YAK	**Yakutsk**	**145.55**	**343**			**PKPab**	**09 20 26.8**	**-0.1**		
LHSI	**Lahat**	**145.57**	**171**		PKP	**PKPdf**	**09 20 25.4**	**-2.6**		
LHSI					PKP	**PKPab**	**09 20 28.6**	**+0.2**		
POO	**Poona**	**146.32**	**103**	*e*	P	**PKPbc**	**09 20 30.0**	**-0.4**		
KBL	**Kabul**	**146.50**	**72**		PKIKP	**PKPdf**	**09 20 28.5**	**-0.7**		
KBL	**Kabul**	**146.50**	**72**			**PKPdf**	**09 20 28.5**	**-0.7**		
TAS	**Tashkent**	**146.58**	**60**		PKP2	**PKPbc**	**09 20 30.2**	**-0.3**		
TAS	**Tashkent**	**146.58**	**60**			**PKPbc**	**09 20 30.2**	**-0.3**		
PMBI	**Palembang**	**146.61**	**173**		PKP	PKiKP	09 20 44.4	+10		
CHGR	**Chuyangaron**	**146.67**	**65**			**PKPbc**	**09 20 29.9**	**-1.0**		
KK31	**Karatay Array**	**147.23**	**57**	*i*	PKIKP	**PKPdf**	**09 20 30.3**	**+0.3**		
KK31	**Karatay Array**	**147.23**	**57**			**PKPdf**	**09 20 30.3**	**+0.3**		
KK31					PKPbc	**PKPbc**	**09 20 32.2**	**-0.1**		
KKAR	**Karatay Array**	**147.23**	**57**		PKIKP	**PKPdf**	**09 20 30.3**	**+0.3**		
KKAR							09 20 32.4			
KKAR	**Karatay Array**	**147.23**	**57**			**PKPdf**	**09 20 30.3**	**+0.3**		
KKAR					PKPbc	**PKPbc**	**09 20 32.4**	**+0.1**		
BKB	**Balikpapan**	**147.50**	**196**		IAMs_20	IAMs_20	10 30 49.4			
	comp=Z,364nm,20.0s									
TYV	**Tymovskoe**	**147.53**	**319**	*e*	PKP2	**PKPbc**	**09 20 32.6**	**-0.2**		
TYV					pmax	pmax				
	comp=Z,51nm,1.1s									
GAR	**Garm**	**147.56**	**64**			**PKPbc**	**09 20 31.8**	**-1.7**		
YUK	**Yuzh-Kuril'sk**	**147.70**	**305**	*i*	PKIKP	**PKPdf**	**09 20 30.3**	**-0.3**		
YUK							09 23 57.6			
YUK					SS	SS	09 42 56.5	-5.9		
YUK					MLR	MLR				
	comp=Z,1μm,14.0s									
YUK					MLR	MLR				
	comp=N,954nm,12.0s									
YUK					MLR	MLR				
	comp=E,1μm,12.0s									
PDSI	**Padang**	**147.86**	**164**		PKP	**PKPbc**	**09 20 33.3**	**-1.5**		
PDSI					PKP	**PKPdf**	**09 20 34.0**	**+2.1**		
MPSI	**Mapaga**	**148.20**	**202**		PKP	**PKPbc**	**09 20 34.3**	**-1.4**		
MPSI					PKP	**PKiKP**	**09 20 35.1**	**-2.3**		
YSS	**Yuzh-Sakhalins**	**148.99**	**312**	*c*	*i* PKP2	**PKPbc**	**09 20 36.7**	**0.0**		
YSS					pmax	pmax				
	comp=Z,80μm,0.9s									
YSS	**Yuzh-Sakhalins**	**148.99**	**312**			**PKPbc**	**09 20 36.6**	**-0.1**		
GSI	**Gunungsitoli**	**149.17**	**158**		PKP	**PKPbc**	**09 20 36.7**	**-1.5**		
GSI					PKP	**PKiKP**	**09 20 38.4**	**-1.1**		
GSI	**Gunungsitoli**	**149.17**	**158**			**PKPbc**	**09 20 38.2**	**-0.1**		
MNSI	**Mandailing Nat**	**149.28**	**162**		PKP	**PKPbc**	**09 20 37.0**	**-1.4**		
MNSI					PKP	**PKPbc**	**09 20 37.1**	**-1.4**		
ARSB	**Arslanbob**	**149.34**	**59**		PKIKP	**PKPdf**	**09 20 35.2**	**+1.6**		
ARSB							09 20 38.7			
ARSB	**Arslanbob**	**149.34**	**59**			**PKPdf**	**09 20 35.1**	**+1.6**		
ARSB					PKPbc	**PKiKP**	**09 20 38.7**	**-0.5**		
EKS2	**Erkin-Say**	**149.67**	**57**		P	**PKiKP**	**09 20 39.5**	**-0.2**		
	SNR=31									
HYB	**Hyderabad**	**149.70**	**108**	*i*	PKP	**PKPdf**	**09 20 33.0**	**-1.7**		
AML	**Almayashu**	**149.72**	**58**		P	**PKiKP**	**09 20 39.6**	**-0.6**		
	SNR=16									
KURK	**Kurchatov**	**149.83**	**39**			**PKPdf**	**09 20 34.2**	**+0.3**		
KURK					PKPbc	**PKiKP**	**09 20 39.1**	**-0.6**		
NIL	**Nilore**	**149.93**	**75**		PKHKP	PKPpre	09 20 34.6			
NIL	**Nilore**	**149.93**	**75**			**PKPdf**	**09 20 34.5**	**-0.1**		
NIL					PKPbc	**PKPbc**	**09 20 39.1**	**-0.5**		
ERM	**Erimo**	**150.05**	**302**		PKIKP	**PKiKP**	**09 20 40.7**	**+0.3**		
ERM	**Erimo**	**150.05**	**302**		PKPdf	**PKPdf**	**09 20 34.2**	**-0.3**		
ERM						**PKiKP**	**09 20 40.7**	**+0.3**		
USP	**Ospenovka**	**150.05**	**55**		P	**PKiKP**	**09 20 40.0**	**-0.4**		
	SNR=21									
AAK	**Ala-Archa**	**150.19**	**56**		P	**PKiKP**	**09 20 40.9**	**0.0**		
	SNR=38									
AAK	**Ala-Archa**	**150.19**	**56**	*c*	*i* PKHKP	PKPpre	09 20 35.9			
AAK					pmax	pmax				
	comp=Z,39nm,0.7s									
AAK	**Ala-Archa**	**150.19**	**56**			**PKPdf**	**09 20 35.7**	**+0.8**		
AAK					PKPbc	**PKiKP**	**09 20 41.0**	**+0.1**		
AAK					PKPab	**PKPab**	**09 20 47.0**	**+0.8**		
CHMS	**Chumysh**	**150.29**	**56**		P	**PKiKP**	**09 20 40.6**	**-0.3**		
	SNR=18									
UCH	**Uchtor**	**150.29**	**57**		P	**PKiKP**	**09 20 41.5**	**0.0**		
	SNR=35									
KBK	**Karagaybulak**	**150.51**	**56**		P	**PKiKP**	**09 20 41.5**	**-0.1**		
	SNR=14									
KZA	**Kyzart**	**150.86**	**57**		P	**PKiKP**	**09 20 42.9**	**+0.2**		
	SNR=14									
ZAA0	**Zalesovo Array**	**150.89**	**29**			**PKPdf**	**09 20 35.3**	**-0.1**		
ZAA0					PKPbc	**PKiKP**	**09 20 41.3**	**-0.4**		
ZALV	**Zalesovo Beam**	**150.89**	**29**		PKP	**PKPdf**	**09 20 35.2**	**-0.2**		
	comp=Z,8.1nm,0.7s,baz=278,slow=2.9,SNR=21									
ZALV					PKPbc	**PKiKP**	**09 20 41.3**	**-0.4**		
	comp=Z,162nm,0.5s,baz=301,slow=3.4,SNR=198									
ZALV					pPKPbc	**pPKPbc**	**09 20 54.5**	**+0.5**		
	comp=Z,33nm,0.6s,baz=294,slow=3.5,SNR=5.8									
RPSI	**Rantau Prapat**	**150.91**	**160**		PKPdf	**PKPdf**	**09 20 35.4**	**-1.3**		
RPSI						**PKPbc**	**09 20 41.0**	**-1.4**		
TKM2	**Tokmak 2**	**150.91**	**55**		P	**PKiKP**	**09 20 42.1**	**-0.4**		
	SNR=18									
PSI	**Prapat**	**151.01**	**160**		PKIKP	**PKPdf**	**09 20 35.4**	**-1.6**		
MYKOM	**Kota Tinggi**	**151.14**	**170**		IAMs_20	IAMs_20	10 21 16.3			
	comp=Z,430nm,18.0s									
KSM	**Kuching**	**151.14**	**183**			**PKPbc**	**09 20 42.0**	**-1.0**		
KSM						**pPKPdf**	**09 20 50.7**	**+0.6**		
KSM					IAMs_20	IAMs_20	10 23 21.4			
	comp=Z,210nm,20.0s									
KCSI	**Kotacane, Aceh**	**151.32**	**157**		PKP	**PKPbc**	**09 20 41.7**	**-1.7**		
KCSI					PKP	**PKiKP**	**09 20 41.9**	**-2.0**		
DAV	**Davao City (W)**	**151.83**	**218**		IAMs_20	IAMs_20	10 33 13.5			
	comp=Z,480nm,21.0s									
KSH	**Kashi**	**151.87**	**62**		PKPbc	**PKPbc**	**09 20 43.8**	**-0.3**		
KSH					pPKP	PKPab	09 20 52.4	-0.9		
KSH					PKS	**PKSdf**	**09 24 14.5**	**+2.3**		
KSH					PP	**PP**	**09 24 32.3**	**+6.9**		
SBUM	**Sibu**	**151.95**	**188**			**PKPbc**	**09 20 44.3**	**-0.5**		
SBUM					IAMs_20	IAMs_20	10 31 32.0			
	comp=Z,139nm,18.0s									
KDJ	**Kajisay**	**152.25**	**56**		PKIKP	**PKPdf**	**09 20 37.8**	**-0.3**		
KDJ	**Kajisay**	**152.25**	**56**			**PKPdf**	**09 20 37.8**	**-0.3**		
KDJ					PKPbc	**PKiKP**	**09 20 45.2**	**+0.1**		
KDJ					PKPab	**sPKPdf**	**09 20 55.6**	**-0.1**		
BOD	**Bodaibo**	**152.38**	**354**	*e*	PKIKP	**PKPbc**	**09 20 42.9**	**-1.5**		
BOD					pmax	pmax				
	comp=Z,53nm,0.9s									
TARG	**Taragay, Kyrgy**	**152.80**	**57**			**PKiKP**	**09 20 46.6**	**0.0**		
TARG					PKPab	**sPKPdf**	**09 20 57.6**	**+0.6**		
PRZ	**Przheval'sk**	**153.02**	**55**		PKIKP	**PKiKP**	**09 20 47.8**	**+1.0**		
PRZ							09 20 59.4			
PRZ	**Przheval'sk**	**153.02**	**55**		PKPbc	**PKiKP**	**09 20 47.8**	**+1.0**		
PRZ						**pPKPbc**	**09 20 59.4**	**-0.2**		
ZEA	**Zeya**	**153.10**	**335**	*e*	PKIKP	**PKPdf**	**09 20 38.1**	**-0.6**		
ZEA					pmax	pmax				
	comp=Z,12nm,1.0s									
IPM	**Ipoh**	**153.19**	**163**			**PKPbc**	**09 20 46.2**	**-1.4**		
MAKZ	**Makanchi**	**153.71**	**44**		PKIKP	**PKPdf**	**09 20 38.3**	**-1.6**		
MAKZ	**Makanchi**	**153.71**	**44**			**PKPdf**	**09 20 39.0**	**-0.9**		
MAKZ					PKPbc	**PKiKP**	**09 20 47.5**	**-0.3**		
MAKZ					PKPab	**pPKPbc**	**09 21 01.2**	**+0.4**		
KULM	**Kulim**	**153.87**	**162**			**PKPbc**	**09 20 47.8**	**-1.3**		
KULM					PKPab	**PKPab**	**09 21 01.5**	**-0.6**		
MK31	**Makanchi Array**	**153.90**	**44**		PKIKP	**PKPdf**	**09 20 39.7**	**-0.5**		
MK31							09 21 01.9			
MK31	**Makanchi Array**	**153.90**	**44**			**PKPdf**	**09 20 39.6**	**-0.5**		
MK31					PKPbc	**PKPbc**	**09 20 47.8**	**-0.4**		
MK31					PKPab	**pPKPbc**	**09 21 01.9**	**+0.6**		
MKAR	**Makanchi Array**	**153.90**	**44**		PKP	**PKPdf**	**09 20 39.4**	**-0.8**		
	comp=Z,3.2nm,0.8s,baz=322,slow=1.5,SNR=22									
MKAR					PKPbc	**PKPbc**	**09 20 47.6**	**-0.6**		
	comp=Z,13nm,0.7s,baz=312,slow=2.0,SNR=61									
MKAR					PKPab	**pPKPbc**	**09 21 01.5**	**+0.3**		
	comp=Z,21nm,0.8s,baz=296,slow=3.9,SNR=20									
KLR	**Kul'dur**	**154.35**	**324**	*c*	*i* PKIKP	**PKPdf**	**09 20 40.5**	**-0.2**		
MJAR	**Matsushiro Arr**	**154.66**	**292**		PKPbc	**PKPbc**	**09 20 49.5**	**-0.6**		
	comp=Z,2.0nm,0.5s,baz=117,slow=2.8,SNR=4.3									
MJAR					PKPab	**PKPab**	**09 21 05.5**	**+0.4**		
	comp=Z,9.3nm,0.7s,baz=87,slow=3.9,SNR=14									
MAJO	**Matsushiro**	**154.66**	**292**		PKP2	**PKPab**	**09 21 06.1**	**+1.0**		
MAJO							10 20 40.5			
MAJO	**Matsushiro**	**154.66**	**292**			**PKPdf**	**09 20 40.5**	**-1.1**		
MAJO						**PKPab**	**09 21 06.1**	**+1.0**		
MJB9	**Matsu-Tunnel**	**154.66**	**292**			**PKPab**	**09 21 06.0**	**+0.9**		
KKM	**Kota Kinabalu**	**154.70**	**198**		IAMs_20	IAMs_20	10 28 23.5			
	comp=Z,372nm,20.0s									
USRK	**Ussuriysk Ar.**	**157.01**	**313**		PKP	**PKPdf**	**09 20 43.9**	**-0.5**		
	comp=Z,0.8nm,0.7s,baz=96,slow=1.4,SNR=2.8									
USRK					PKPbc	**pPKPdf**	**09 20 54.6**	**-2.9**		
	comp=Z,2.1nm,0.8s,baz=66,slow=4.6,SNR=5.3									
USRK					PKPab	**PKPab**	**09 21 15.3**	**+0.6**		
	comp=Z,1.5nm,0.8s,baz=42,slow=2.3,SNR=2.7									
MOY	**Mondy**	**158.06**	**13**	*e*	PKP2	**PKPab**	**09 21 19.7**	**+0.5**		
MOY					pmax	pmax				
	comp=Z,19nm,1.7s									
TLY	**Talaya**	**158.47**	**8**	*e*	PKP2	**PKPab**	**09 21 21.4**	**+0.6**		
TLY					pmax	pmax				
	comp=Z,31nm,0.8s									
TLY	**Talaya**	**158.47**	**8**		PKPdf	**PKPdf**	**09 20 45.5**	**-0.5**		
TLY						**PKPab**	**09 21 22.7**	**+1.9**		
WMQ	**Urumqi**	**158.70**	**45**	*e*	PKP	**PKPdf**	**09 20 45.8**	**-0.8**		
WMQ					LR	LR				
	comp=Z,890nm,29.2s									
ZAK	**Zakamensk**	**159.68**	**10**	*e*	PKIKP	**PKPdf**	**09 20 46.3**	**-1.3**		
ZAK					pmax	pmax				
	comp=Z,2.0nm,1.1s									
SONM	**Songino Array**	**162.55**	**5**		PKP	**PKPdf**	**09 20 50.2**	**-0.5**		
	comp=Z,1.8nm,0.8s,baz=300,slow=1.1,SNR=8.1									
SONM					PKPab	**PKPab**	**09 21 39.3**	**+0.5**		
	comp=Z,9.7nm,0.9s,baz=328,slow=4.1,SNR=19									
SONM					PP	**PP**	**09 25 22.4**	**-0.3**		
	comp=Z,5.4nm,1.1s,baz=339,slow=5.0,SNR=14									
KSRS	**Korea Array**	**162.56**	**299**		PKP	**PKPdf**	**09 20 50.3**	**-0.6**		
	comp=Z,1.8nm,0.9s,baz=349,slow=0.9,SNR=6.6									
KSRS					PKPab	**PKPab**	**09 21 40.5**	**+1.3**		
	comp=Z,1.6nm,0.8s,baz=94,slow=4.2,SNR=5.6									
ULN	**Ulaanbaatar**	**162.56**	**4**		PKIKP	**PKPdf**	**09 20 50.5**	**-0.3**		
ULN	**Ulaanbaatar**	**162.56**	**4**		PKPdf	**PKPdf**	**09 20 50.5**	**-0.3**		
ULN						**PKPab**	**09 21 40.3**	**+1.3**		
LSA	**Lhasa**	**164.84**	**88**		PKIKP	**PKPdf**	**09 20 54.1**	**+0.2**		
LSA	**Lhasa**	**164.84**	**88**		PKPdf	**PKPdf**	**09 20 54.0**	**+0.2**		
LSA						**PKPab**	**09 21 50.3**	**+0.1**		
CMAR	**Chiang Mai Arr**	**165.16**	**141**		PKP	**PKPdf**	**09 20 52.6**	**-1.2**		
	comp=Z,1.2nm,0.3s,baz=258,slow=2.7,SNR=6.7									
CMAR					PKPab	**PKPab**	**09 21 49.2**	**-1.8**		
	comp=Z,1.9nm,0.6s,baz=229,slow=5.2,SNR=7.1									
CMAR					PP	**PP**	**09 25 40.5**	**+3.5**		
	comp=Z,1.6nm,0.8s,baz=235,slow=4.8,SNR=4.7									
CHTO	**Chiang Mai**	**165.46**	**141**		PKP2	**PKPab**	**09 21 51.2**	**-1.1**		
CHTO	**Chiang Mai**	**165.46**	**141**			**PKPab**	**09 21 51.2**	**-1.1**		
GTA	**Gaotai**	**168.50**	**37**		PKP	**PKPdf**	**09 20 56.4**	**+0.5**		
GTA					pPKP	pPKPdf	09 21 11.5	+2.5		
GTA					sPKP		09 21 18.1			
GTA					PKPab	**PKPab**	**09 22 05.8**	**+0.4**		
GTA					PP	**PP**	**09 25 51.8**	**-2.5**		
GTA					LR	LR				
	comp=Z,110nm,20.3s									
GTA					LR	LR				
	comp=Z,220nm,20.3s									
GTA					LR	LR				
	comp=Z,150nm,21.3s									
HHC	**Hu-ho-hao-te**	**169.35**	**348**	*e*	PKP	**PKPdf**	**09 20 57.6**	**+1.2**		
HHC					PP	**PP**	**09 25 59.4**	**+1.5**		
HHC					SS	SS	09 46 55.1	+4.7		
HHC					AMB	AMB				
	comp=Z,33nm,7.5s									
HHC					LR	LR				
	comp=Z,310nm,20.8s									
HHC					LR	LR				
	comp=Z,95nm,21.1s									
HHC					LR	LR				
	comp=Z,190nm,19.0s									
NJ2	**Nanjing**	**171.11**	**283**	*e*	PKP	**PKPdf**	**09 20 59.3**	**+1.8**		
LZH	**Lanzhou**	**173.09**	**34**	*e*	PKP	**PKPdf**	**09 21 01.3**	**+2.8**		
LZH					pPKP	sPKPdf	09 21 15.5	-0.7		
LZH					PKPab	**PKPab**	**09 22 27.4**	**+1.5**		
LZH					LR	LR				
	comp=Z,150nm,17.0s									
LZH					LR	LR				
	comp=Z,170nm,17.2s									
LZH					LR	LR				
	comp=Z,200nm,19.4s									
WHN	**Wuhan**	**175.07**	**273**		PKP	**PKPdf**	**09 20 58.5**	**-0.6**		
GYA	**Guiyang**	**175.66**	**156**	*e*	PKPbc	PKPdf	09 20 49.0	-11		
GYA					PKPab	**PKPab**	**09 22 39.4**	**+2.0**		
GYA					PKS		09 24 30.3			
GYA					PP	**PP**	**09 26 31.8**	**+2.6**		
GYA					AMB	AMB				
	comp=Z,130nm,8.2s									
CD2	**Chengdu**	**175.77**	**82**		PKP

KHMZ	Khomeyn	4.20	350	*e*Pn	Pn	09 47 34.9	+2.1		
KHMZ	Khomeyn	4.20	350	*e*Pn	Pn	09 47 34.9	+2.1		
YZKH	Yazd	4.25	48	*e*Pn	Pn	09 47 35.2	+1.9		
YZKH	Yazd	4.25	48	*e*Pn	Pn	09 47 35.2	+1.9		
ANAR	Anarak	4.34	34	*e*Pn	Pn	09 47 35.9	+1.2		
IKMR	Kamar-syah	4.44	332	*e*Pn	Pn	09 47 37.2	+1.3		
IBAF	Bafgh	4.52	63	*e*Pn	Pn	09 47 39.0	+1.8		
IBAF				*e*		09 49 07.5			
IKFM	Kafar-mosalman	4.68	328	*e*Pn	Pn	09 47 40.9	+1.8		
IDOB	Doab	4.76	332	*e*Pn	Pn	09 47 43.2	+2.7		
SLWS		4.78	182	*e*Pn	Pn	09 47 43.8	+3.2		
GHVR	GHOM	4.88	4	*e*Pn	Pn	09 47 44.1	+2.1		
GHVR				*e*Sg	Sg	09 49 00.6	-5.2		
GHVR	GHOM	4.88	4	*e*Pn	Pn	09 47 44.1	+2.1		
KHGB	Koh Gabri	4.94	80	*e*Pn	Pn	09 47 44.8	+1.8		
JRN	Qarnain Island	4.96	159	*e*Pn	Pn	09 47 45.6	+2.5		
HSAM	Samen	4.98	338	*e*Pn	Pn	09 47 45.1	+1.5		
ASAO	Ashtian	4.99	352	*e*Pn	Pn	09 47 45.8	+2.2		
ASAO	Ashtian	4.99	352	*e*Pn	Pn	09 47 45.8	+2.2		
NGRK	Negar Kerman	5.12	88	*e*Pn	Pn	09 47 47.4	+1.9		
NGRK				*e*		09 48 50.8			
TVBK	TV Kerman	5.15	84	*e*Pn	Pn	09 47 48.2	+2.3		
TVBK				*e*		09 49 32.2			
BNDS	Bandar-Abbas comp=E,2µm,0.4s	5.17	114	IAML		09 48 44.9			
BNDS				IAML		09 48 53.5			
	comp=N,1µm,0.3s								
GENO	Geno	5.17	114	*e*Pn	Pn	09 47 46.1	+0.1		
GENO				*e*		09 48 51.3			
IQOM	Qom	5.23	2	*e*Pn	Pn	09 47 48.2	+1.2		
IKOM	Komasi	5.38	329	*e*Pn	Pn	09 47 50.7	+1.8		
HAGD	Aghdareh	5.41	345	*e*Pn	Pn	09 47 50.9	+1.5		
IVRN	Varamin	5.43	8	*e*Pn	Pn	09 47 50.9	+1.3		
IBND	Bandar-abas	5.44	112	*e*Pn	Pn	09 47 50.7	+1.1		
BTHS		5.53	180	*e*Pn	Pn	09 47 53.2	+2.4		
SLWR	Sila	5.56	172	*e*Pn	Pn	09 47 53.5	+2.3		
KCHF	Cheshme Sefid,	5.68	326	*e*Pn	Pn	09 47 53.9	+0.8		
KER	Kermanshah	5.72	327	*e*Pn	Pn	09 47 55.4	+1.8		
CHMN	Cheshme madani	5.82	86	*e*Pn	Pn	09 47 57.4	+2.2		
IHSB	Hasanabad	5.83	3	*e*Pn	Pn	09 47 56.4	+1.3		
IRAZ	Razeghan	5.84	353	*e*Pn	Pn	09 47 57.2	+1.9		
SHME	Shamm SNR=14	5.87	126	*i* P	Pn	09 47 56.2	+0.7		
SHME				S	Sn	09 49 01.4	-1.1		
SHME	Shamm	5.87	126	*e*Pn	Pn	09 47 56.3	+0.7		
UMQ	Umm Al-Quwin	5.89	132	P	Pn	09 47 54.9	-0.9		
UMQ	Umm Al-Quwin	5.89	132	*e*Pn	Pn	09 47 57.8	+2.0		
GHWR	Ruwais	5.89	162	*e*Pn	Pn	09 47 58.1	+2.2		
IGHG	Ghaleghazi	5.96	323	*e*Pn	Pn	09 47 58.0	+1.0		
IVIS	Veis	5.97	326	*e*Pn	Pn	09 47 57.3	+0.2		
ILAS	Lasjerd	6.04	17	*e*Pn	Pn	09 48 00.0	+2.0		
IDMV	Damavand	6.05	9	*e*Pn	Pn	09 47 59.3	+1.1		
TPRV	Parvadeh(Tabas	6.05	54	*e*Pn	Pn	09 47 59.9	+1.8		
BANOM	Banah SNR=134	6.05	126	*i* P	Pn	09 47 58.4	+0.4		
BANOM				S	Sn	09 49 06.4	-0.9		
BANOM	Banah SNR=38	6.05	126	P	Pn	09 47 58.6	+0.5		
BANOM				S	Sn	09 49 07.1	-0.1		
	SNR=12								
BANOM	Banah	6.05	126	*e*Pn	Pn	09 47 58.5	+0.4		
IMHD	Mahdasht	6.07	359	*e*Pn	Pn	09 47 59.7	+1.3		
QABG	Abgarm-Qazvin	6.19	350	*e*Pn	Pn	09 48 00.6	+0.5		
AJN	Ajban SNR=18	6.22	143	*i* P	Pn	09 48 02.3	+1.9		
AJN	Ajban SNR=18	6.22	143	P	Pn	09 48 03.0	+2.7		
AJN				S	Sn	09 49 11.5	+0.2		
	SNR=11								
IFIR	Firoozkooh	6.24	14	*e*Pn	Pn	09 48 02.7	+1.9		
ILIN	Lien	6.25	329	*e*Pn	Pn	09 48 02.5	+1.6		
NAZ	Nazwa, Dubai SNR=28	6.27	136	*i* P	Pn	09 48 02.2	+1.1		
NAZ	Nazwa, Dubai SNR=52	6.27	136	P	Pn	09 48 02.6	+1.5		
NAZ				S	Sn	09 49 12.0	-0.6		
	SNR=20								
NAZ	Nazwa, Dubai	6.27	136	*e*Pn	Pn	09 48 02.5	+1.4		
MSFE	Esma-Masafi SNR=27	6.33	131	*i* P	Pn	09 48 02.4	+0.5		
MSFE	Esma-Masafi	6.33	131	*e*Pn	Pn	09 48 02.4	+0.5		
IDHR	Dehrash	6.34	324	*e*Pn	Pn	09 48 02.5	+0.3		
ASUD	Al Ashush, Dub SNR=7.0	6.36	140	S	Sn	09 49 16.1	+1.5		
IANJ	Anjilo	6.40	23	*e*Pn	Pn	09 48 04.4	+1.4		
FAQ	Al Faqa, Dubai SNR=12	6.42	138	*i* P	Pn	09 48 03.8	+0.8		
FAQ	Al Faqa, Dubai SNR=12	6.42	138	P	Pn	09 48 05.1	+2.0		
FAQ				S	Sn	09 49 15.3	-0.7		
	SNR=8.3								
FAQ	Al Faqa, Dubai	6.42	138	*e*Pn	Pn	09 48 04.9	+1.9		
MDH	Madha SNR=12	6.46	130	*i* P	Pn	09 48 04.1	+0.5		
MDH	Madha SNR=12	6.46	130	P	Pn	09 48 04.8	+1.1		
MDH	Madha	6.46	130	*e*Pn	Pn	09 48 04.5	+0.9		
ISHM	Shahmirzad	6.52	18	*e*Pn	Pn	09 48 06.3	+1.5		
TNSJ	Nastanj	6.55	47	*e*Pn	Pn	09 48 06.6	+1.6		
UOSS	Minazif SNR=48	6.64	133	*i* P	Pn	09 48 06.3	+0.2		
UOSS	Minazif	6.64	133	P	Pn	09 48 06.9	+0.8		
UOSS	Minazif	6.64	133	*e*Pn	Pn	09 48 06.6	+0.4		
UOSS	Minazif	6.64	133		Pn	09 48 06.2	0.0		
UOSS				Sn	Sn	09 49 18.6	-3.1		
IALA	Alasht	6.67	14	*e*Pn	Pn	09 48 07.9	+1.1		
TKDS	Koohdasht(Taba	6.68	52	*e*Pn	Pn	09 48 08.2	+1.5		
HATD	Hatta, Dubai SNR=11	6.68	134	*i* P	Pn	09 48 07.9	+1.1		
HATD	Hatta, Dubai SNR=64	6.68	134	P	Pn	09 48 08.0	+1.3		
HATD				S	Sn	09 49 21.8	-0.9		
HATD	Hatta, Dubai	6.68	134	*e*Pn	Pn	09 48 07.8	+1.1		
TABS	Tabas	6.70	51	*e*Pn	Pn	09 48 08.9	+1.9		
TABS	Tabas	6.70	51	*e*Pn	Pn	09 48 08.9	+1.9		
ASHO	Ashiyiah SNR=23	6.74	135	*i* P	Pn	09 48 08.3	+0.8		
ASHO	Ashiyiah SNR=43	6.74	135	P	Pn	09 48 09.8	+2.2		
ASHO	Ashiyiah	6.74	135	*e*Pn	Pn	09 48 08.5	+1.0		
IPRN	Peran	6.74	10	*e*Pn	Pn	09 48 09.5	+1.9		
IGZV	Ghazvin	6.79	356	*e*Pn	Pn	09 48 10.2	+1.8		
QALM	Alamut, Qazvin	6.82	359	*e*Pn	Pn	09 48 10.4	+1.6		
MZR	Muzera SNR=96	6.98	160	*i* P	Pn	09 48 12.7	+1.9		
MZR	Muzera SNR=347	6.98	160	P	Pn	09 48 13.1	+2.3		
MZR	Muzera	6.98	160	*e*Pn	Pn	09 48 13.1	+2.3		
ALNE	Al Ain SNR=33	7.04	140	*i* P	Pn	09 48 12.8	+1.1		
ALNE	Al Ain	7.04	140	*e*Pn	Pn	09 48 13.4	+1.8		
IGLO	Ghaloghah	7.33	19	*e*Pn	Pn	09 48 17.8	+2.1		
SOHO	SOHO SNR=70	7.44	136	P	Pn	09 48 18.0	+0.9		
SOHO				S	Sn	09 49 41.0	-0.2		
	SNR=12								
SOHO	SOHO	7.44	136	*e*Pn	Pn	09 48 17.7	+0.6		
BSRN	Basiran	7.50	70	*e*Pn	Pn	09 48 19.9	+1.9		
BSRN	Basiran	7.50	70	*e*Pn	Pn	09 48 19.9	+1.9		
ITEG	Tejag	7.52	62	*e*Pn	Pn	09 48 19.6	+1.3		
RAYN	Ar Rayn	7.71	220	P	Pn	09 48 20.1	-0.8		
RAYN	Ar Rayn	7.71	220			09 48 20.1	-0.8		
UMZA	Um Al Zommool	7.87	150	*e*Pn	Pn	09 48 24.0	+1.0		
ARQ	Araqi SNR=118	8.04	140	P	Pn	09 48 26.5	+1.1		
NHDN	Nehbandan	8.13	75	*e*Pn	Pn	09 48 28.6	+1.8		
HOQ	Hoqain SNR=16	8.32	135	P	Pn	09 48 30.2	+0.9		
IDAH	Dahanechah	8.33	66	*e*Pn	Pn	09 48 31.9	+2.3		
MAHB	Mahabad	8.35	330	*e*Pn	Pn	09 48 30.4	+0.7		
ISRB	Sarab	8.62	343	*e*Pn	Pn	09 48 35.6	+2.1		
ZHSF	Zahedan	8.64	87	*e*P	Pn	09 48 35.6	+1.9		
ZHSF				*e*Sg	Sn	09 50 54.5	+43		
ZHSF	Zahedan	8.64	87	*e*Pn	Pn	09 48 35.6	+1.9		
BIDO	Bidbid SNR=8.9	8.89	131	P	Pn	09 48 37.7	+0.8		
BIDO				S	Sn	09 50 18.0	+1.1		
	SNR=6.1								
BIDO	Bidbid	8.89	131	*e*Pn	Pn	09 48 37.4	+0.4		
BSY	Bisya SNR=68	8.89	139	P	Pn	09 48 38.3	+1.2		
IAZR	Azarshahr	9.02	335	*e*Pn	Pn	09 48 40.4	+1.4		
SMDO	Samad	9.17	134	P	Pn	09 48 41.3	+0.4		
	SNR=30								
IHSH	Hashtrud	9.18	342	*e*Pn	Pn	09 48 30.4	-11		
IHRS	Heris	9.26	341	*e*Pn	Pn	09 48 43.0	+0.8		
WSAR	Wadi Sarin comp=N,4.9nm,0.3s,baz=319,slow=8.8,SNR=37	9.41	130	Pn	Pn	09 48 43.0	-1.2		
WSAR				Sn	Sn	09 50 23.1	-6.8		
	comp=N,12nm,0.3s,baz=178,slow=20,SNR=9.0								
WSAR				LR	LR	09 53 05.3			
	comp=N,3µm,20.7s,baz=332,slow=42								
WSAR	Wadi Sarin SNR=9.4	9.41	130	P	Pn	09 48 44.0	-0.2		
ISFR	Sfrayin	9.54	37	*e*Pn	Pn	09 48 47.9	+1.8		
IKRD	Kardeh	9.61	40	*e*Pn	Pn	09 48 57.1	+10		
IAKL	Akhelmad	9.63	41	*e*Pn	Pn	09 48 48.5	+1.2		
IPAY	Payeh	9.66	43	*e*Pn	Pn	09 48 49.7	+1.9		
JMDO	Jabal Madar SNR=18	9.71	136	P	Pn	09 48 49.5	+1.2		
WBK	Wadi Bani Khal SNR=16	10.08	132	P	Pn	09 48 52.6	-0.7		
IEMG	Emamgholi	10.15	38	*e*Pn	Pn	09 48 56.1	+1.5		
JRKH	Jarkhoshk	10.17	49	*e*Pn	Pn	09 48 56.9	+2.3		
GEYT	Alibeck comp=N,4.5nm,0.3s,baz=221,slow=13,SNR=135	10.27	34	Pn	Pn	09 48 56.0	+0.1		
GEYT				Lg	Lg	09 51 55.6			
	comp=N,0.3nm,0.3s,baz=221,slow=26,SNR=0.9								
GYA0B	ALIBECK ARRAY	10.27	34		Pn	09 48 56.6	+0.7		
SIRT	Sirnak	10.55	321	*e*P	Pn	09 48 58.5	-1.3		
MHTO	MHTO SNR=51	10.72	142	P	Pn	09 49 02.7	+0.6		
HRA	Herat	10.78	61		Pn	09 49 03.1	0.0		
AKDM	Akdamar-Van	10.88	325	*e*P	Pn	09 49 04.2	-0.2		
VANB	Van	10.90	327	*e*P	Pn	09 49 04.4	-0.2		
CLDR	Caldiran	11.11	331	*e*P	Pn	09 49 08.2	+0.6		
GURO	Guroymak-BITLI	11.54	323	*e*P	Pn	09 49 11.9	-1.4		
MAZI	Mazidag	11.69	315	*e*P	Pn	09 49 14.8	-0.7		
AGRB	Hanur-Agry	11.87	329	*e*P	Pn	09 49 20.7	+2.8		
WHFO	Wadi Hawf SNR=62	11.93	166	P	Pn	09 49 17.7	-1.0		
AKT	Akhty	12.12	349	*e*P	Pn	09 49 23.6	+2.2		
AKT				*e*S	Sn	09 51 43.1	+6.7		
AKT				pmax	pmax				
	comp=Z,33nm,1.3s								
AKT				smax	smax				
	comp=N,11nm,0.6s								
AKT				smax	smax				
	comp=E,10.0nm,0.8s								
ASF	Jabal al Asfar comp=E,6.8nm,0.3s,baz=43,slow=4.6,SNR=30	12.26	286	Pn	Pn	09 49 22.1	-1.1		
ASF				Sn	Sn	09 51 30.5	-9.2		
	comp=E,2.1nm,0.3s,baz=38,slow=12,SNR=2.9								
ASF				Lg	Lg	09 53 07.2			
	comp=E,1.5nm,0.3s,baz=182,slow=16,SNR=2.5								
ASF				LR	LR	09 55 14.7			
	comp=E,2µm,19.1s,baz=53,slow=43								
VRTB	Varto-Mus	12.29	323	*e*P	Pn	09 49 21.6	-2.1		
SHAO	Shalim SNR=42	12.32	158	*i* P	Pn	09 49 23.7	-0.3		
SHAO	Shalim SNR=42	12.32	158	P	Pn	09 49 24.2	+0.2		
ABTO	Aybut SNR=40	12.39	169	P	Pn	09 49 24.7	-0.4		
DMTO	DMTO SNR=30	12.40	162	P	Pn	09 49 24.5	-0.6		
RBK	Rabkut SNR=26	12.42	165	P	Pn	09 49 25.0	-0.5		
BNGB	Bingl	12.58	321	*e*P	Pn	09 49 26.4	-1.2		
KARS	Kars	12.71	332	*e*P	Pn	09 49 31.5	+2.2		
URFA	Urfa	12.72	311	*e*P	Pn	09 49 28.7	-0.8		
KOPR	Koprukoy-ERZUR	12.73	327	*e*P	Pn	09 49 32.4	+2.7		
SENK	Senkaya-Erzuru	12.96	330	*e*P	Pn	09 49 34.1	+1.3		
SVRC	Sivrice-ELAZID	12.97	316	*e*P	Pn	09 49 31.4	-1.6		
YEDI	Yedisu-Bingol	12.97	322	*e*P	Pn	09 49 32.6	-0.4		
TBLG	Delisi	13.08	339	*e*P	Pn	09 49 33.1	-1.2		
TBLG	Delisi	13.08	339	P	Pn	09 49 36.3	+1.9		
TBLG	Delisi	13.08	339		Pn	09 49 36.3	+1.9		
KARJ	KARJ	13.21	280	Pn	Pn	09 49 38.0	+1.8		
AKH	Akhalkalaki	13.22	335	⇑P	Pn	09 49 38.9	+2.6		
AKH	Akhalkalaki	13.22	335	*e*P	Pn	09 49 38.7	+2.4		
AKH	Akhalkalaki	13.22	335	P	Pn	09 49 38.1	+1.8		
AKH	Akhalkalaki	13.22	335		Pn	09 49 38.1	+1.8		
PTK	Pertek	13.25	317	*e*P	Pn	09 49 35.4	-1.4		
SHMJ	Saham	13.29	287	Pn	Pn	09 49 37.0	-0.3		
GHAJ	Ghor Haditha	13.30	281	Pn	Pn	09 49 38.1	+0.8		
NATI	Neve Ativ	13.41	290	Pn	Pn	09 49 39.6	+0.7		
HMDT	Nahal Hemdat	13.42	285	Pn	Pn	09 49 39.3	+0.3		
GEM	Giv'at Ha'Em	13.46	289	Pn	Pn	09 49 40.3	+0.7		
MALT	Malatya	13.48	313	*e*P	Pn	09 49 40.6	+0.8		
MMLI	Mount Malkishu	13.54	286	*e*P	Pn	09 49 43.2	+2.6		
MMLI	Mount Malkishu	13.54	286	Pn	Pn	09 49 39.7	-0.9		
MAK	Makhachkala	13.61	349	*e*P	Pn	09 49 40.3	-1.1		
MAK				*e*S	Sn	09 52 11.9	-0.4		
MAK				pmax	pmax				
	comp=Z,715nm,1.4s								
MAK				MLR	MLR				
	comp=Z,3µm,9.0s								
ZFRI	Zfri	13.61	278	Pn	Pn	09 49 42.2	+0.7		
MMA0B	Mount Meron ar	13.64	288	Pn	Pn	09 49 43.0	+0.9		
MMAI	Mount Meron Ar comp=Z,3.7nm,0.3s,baz=92,slow=16,SNR=13	13.64	288	Pn	Pn	09 49 39.9	-2.1		
MMAI				Sn	Sn	09 52 06.3	-7.1		
	comp=Z,3.5nm,0.3s,baz=114,slow=35,SNR=2.7								
MMAI				Lg	Lg	09 53 42.1			
	baz=115,slow=30,SNR=2.8								
MMAI				LR	LR	09 56 10.0			
	comp=Z,2µm,20.4s,baz=105,slow=42								
GAZ	Gaziantep	13.66	307		Pn	09 49 42.8	+0.5		
YTIR	Yattir	13.69	281	Pn	Pn	09 49 42.8	+0.1		
HRFI	Mount Harif	13.74	276	*e*P	Pn	09 49 41.6	-1.8		
PRNI	Paran	13.76	277	Pn	Pn	09 49 44.5	+0.8		
BLGI	Bet Lehem HaGe	13.77	287	Pn	Pn	09 49 44.5	+0.8		
EIL	Elat comp=Z,1.0nm,0.3s,baz=3.1,slow=4.0,SNR=8.7	13.83	274	Pn	Pn	09 49 44.6	0.0		
EIL				Sn	Sn	09 52 16.6	-1.5		
	comp=Z,3.0nm,0.3s,baz=293,slow=16,SNR=2.9								
EIL				Lg	Lg	09 53 56.4			
	baz=0.0,slow=6.9,SNR=3.5								
EIL				LR	LR	09 55 35.5			
	comp=Z,1µm,20.2s,baz=94,slow=39								
EIL	Elat	13.83	274	Pn	Pn	09 49 44.7	+0.1		
OFRI	`Ofer	13.93	287	Pn	Pn	09 49 46.8	+0.9		
YAYL	Yayladag	13.96	301	*e*P	Pn	09 49 46.8	+0.4		
BCA	Borcka	14.00	330	⇑P	Pn	09 49 48.9	+2.1		
BCA	Borcka	14.00	330	*e*P	Pn	09 49 47.6	+0.8		
KRMI	Paran Flat	14.01	276	Pn	Pn	09 49 47.1	0.0		
ARPR	Arapgir-MALATY	14.01	316	*e*P	Pn	09 49 47.3	+0.1		
TAHT	Tahtakopru-Hat	14.04	303	*e*P	Pn	09 49 42.7	-4.7		
BATM	Batumi	14.10	331	*e*P	Pn	09 49 49.4	+1.2		
CHOM	Cayeli-Rize	14.11	327	*e*P	Pn	09 49 48.5	+0.1		
DARE	Darende-Malaty	14.23	312	*e*P	Pn	09 49 50.1	0.0		
ONI	Oni	14.27	337	*e*P	Pn	09 49 52.0	+1.4		
KZIT	Kziot	14.29	279	Pn	Pn	09 49 51.9	+1.1		
KTUT	Trabzon	14.51	324	*e*P	Pn	09 49 52.4	-1.5		
CEYT	Ceyhan	14.62	304	*e*P	Pn	09 49 57.1	+1.7		
YURE	YUREGIR	14.63	303	*e*P	P	09 50 01.7	-0.1		
KOZT	Kozan	14.78	306	*e*P	Pn	09 49 57.4	-0.2		
SARI	SarD1z-Kayseri	14.84	310	*e*P	Pn	09 49 58.4	-0.1		
ESPY	Espiye-Giresun	15.00	322	*e*P	Pn	09 50 00.9	+0.3		
NCK	Nalchik	15.04	339	*i* P	Pn	09 50 02.3	+1.3		
NEY	Neytrino	15.10	337	*i* P	Pn	09 50 02.6	+0.6		
KARA	Karaisali	15.23	304	*e*P	Pn	09 50 03.8	+0.2		
EREN	Erenkoy	15.25	297	*e*P	Pn	09 50 03.8	-0.1		
SVSK	Karacayir	15.33	316	*e*P	Pn	09 50 05.3	+0.4		
BNN	Bunyan	15.45	311	*e*P	Pn	09 50 03.9	-2.7		
CMRD	Camardi-Nigde	15.46	306	*e*P	Pn	09 50 07.9	+1.3		
MERS	Mersin	15.46	302	*e*P	Pn	09 50 07.1	+0.5		
KBZ	Khabaz comp=Z,1.0nm,0.3s,baz=142,slow=7.2,SNR=58	15.47	338	Pn	Pn	09 50 08.8	+2.2		
KBZ				Sn	Sn	09 53 00.2	+2.5		
	comp=Z,0.2nm,0.3s,baz=1.8,slow=22,SNR=1.0								
KBZ				LR	LR	09 55 39.8			
	comp=Z,1µm,20.7s,baz=156,slow=36								
KBZ	Khabaz	15.47	338	*ce*P	Pn	09 50 07.9	+1.3		
KIZK	Mersin	15.59	300	*e*P	Pn	09 50 07.9	-0.4		
KIV	Kislovodsk	15.74	338	⇑P	P	09 50 13.0	-1.2		
KIV	Kislovodsk SNR=49	15.74	338	*i* P	Pn	09 50 10.9	+0.6		
KIV	Kislovodsk	15.74	338	*e*P	Pn	09 50 11.7	+1.4		
KIV	Kislovodsk	15.74	338	*c* iP	Pn	09 50 11.6	+1.3		
KIV				*i* S	Sn	09 53 11.4	+6.9		
KIV				pmax	pmax				
	comp=Z,158nm,1.0s								
KIV				MLR	MLR				
	comp=Z,1µm,15.0s								
KIV	Kislovodsk	15.74	338		Pn	09 50 11.9	+1.7		
CSS	Mathiatis	15.75	294	*e*P	Pn	09 50 08.9	-1.5		
CSS	Mathiatis	15.75	294	Pn	Pn	09 50 09.2	-1.2		
CSS	Mathiatis	15.75	294		Pn	09 50 10.8	+0.4		
TOKT	Tokat	15.85	316	*e*P	Pn	09 50 08.2	-3.5		
IKL	Isikli	15.86	299	*e*P	Pn	09 50 09.9	-1.8		
KEBE	Keben-Mersin	15.91	300	*e*P	Pn	09 50 11.6	-0.8		
AKKU	Akkuyu-Mersin	15.93	299	*e*P	Pn	09 50 10.8	-1.9		
DAMY	Dhamar SNR=28	16.10	203	P	Pn	09 50 14.4	-0.9		
DAMY	Dhamar	16.10	203		Pn	09 50 13.1	-2.2		
DAMY				IAmb	IAmb	09 50 25.7			
	comp=Z,100nm,0.7s								
LEF	Lefka	16.14	295	⇓P	P	09 50 21.5	+2.9		
LEF	Lefka	16.14	295	*e*P	Pn	09 50 14.8	-0.6		
KBL	Kabul SNR=28	16.18	68	P	P	09 50 18.7	-0.6		
KBL	Kabul	16.18	68	P	Pn	09 50 15.6	-0.5		
KBL				pmax	pmax				
	comp=Z,48nm,1.2s								
KBL	Kabul	16.18	68		Pn	09 50 15.6	-0.5		
YOZ	Yozgat	16.22	312	*e*P	Pn	09 50 15.9	-0.6		
BERE	Bereket-Mersin	16.24	299	*e*P	Pn	09 50 16.7	-0.1		
TEKE	Tekeli-Mersin	16.26	298	*e*P	Pn	09 50 15.9	-1.0		
YESY	Yesilyurt	16.40	304	*e*P	Pn	09 50 17.1	-1.7		
SOC	Sochi	16.55	330	*c* iP	Pn	09 50 20.1	-0.5		
SOC				*e*		09 53 24.1			
SOC				pmax	pmax				
	comp=Z,98nm,0.9s								
SOC				MLR	MLR				
	comp=Z,3µm,10.0s								
GOF	Gofitskoye	16.62	340	⇑*e*P	Pn	09 50 22.4	+1.0		
GOF				pmax	pmax				
	comp=Z,179nm,1.1s								
KVT	Kavak	16.62	318	*e*P	Pn	09 50 21.6	+0.1		
SULT	Sultanhani-AKS	16.74	305	*e*P	Pn	09 50 23.3	+0.2		
GAZI	Gazipasa	16.90	298	*e*P	Pn	09 50 24.3	-0.8		
CORM	Corum	16.96	313	*e*P	Pn	09 50 25.6	-0.3		
SERE	Sereflikochisa	17.04	308	*e*P	P	09 50 27.9	-0.8		
CHBY	Cihanbeyli	17.35	306	*e*P	Pn	09 50 28.9	-1.8		
BR131	Keskin Array S SNR=18	17.37	310	P	P	09 50 33.3	+1.0		
BR131	Keskin Array S	17.37	310	P	Pn	09 50 31.5	+0.5		
BR131				pmax	pmax				
	comp=Z,21nm,0.8s								
BR131	Keskin Array S	17.37	310	P	Pn	09 50 31.5	+0.5		
BRTR	Keskin Array B	17.37	310	P	P	09 50 31.8	-0.6		
	comp=Z,1.2nm,0.3s,baz=133,slow=12,SNR=34								
BRTR				S	Sn	09 53 44.6	+0.5		
	baz=125,slow=12,SNR=1.6								
BRTR	Keskin Array B	17.37	310	*e*P	Pn	09 50 28.4	-2.6		
BRTR	Keskin Array B	17.37	310	*i* P	Pn	09 50 31.3	+0.3		
BRTR				pmax	pmax				
	comp=Z,17nm,0.8s								
DIKM	Dikmen	17.44	318	⇓P	P	09 50 32.6	-0.4		
DIKM	Dikmen	17.44	318	*e*P	Pn	09 50 29.7	-2.1		
KONT	Konya--Tatoy	17.46	303	*e*P	Pn	09 50 29.7	-2.4		
KULU	Kulu	17.47	307	*e*P	Pn	09 50 32.5	+0.2		
LADK	Ladik-KONYA	17.56	304	*e*P	Pn	09 50 32.3	-1.1		
SOCY	Socotra	17.57	170	P

KK31 IAmb IAmb 09 51 14.1
comp=Z,78nm,0.9s
KKAR Karatay Array 20.73 44 P **P** **09 51 09.1 +0.1**
KKAR pmax pmax
comp=Z,78nm,1.0s
KKAR Karatay Array 20.73 44 P **P** **09 51 09.1 +0.1**
KKAR IAmb IAmb 09 51 14.1
comp=Z,78nm,0.9s
SILT Sile 20.73 309 *e*P **P** **09 51 08.7 -0.3**
KARP Karpathos 20.81 293 *e*P P 09 51 02.1 -7.8
KARP Karpathos 20.81 293 P **P** **09 51 09.5 -0.4**
KARP IAmb IAmb 09 51 21.8
comp=Z,84nm,0.8s
ABKAR Akbulak array 20.82 17 P **P** **09 51 10.5 +0.6**
ABKAR IAmb IAmb 09 51 29.6
comp=Z,58nm,0.8s
ARMT Armutlu 21.01 307 *e*P **P** **09 51 12.2 +0.2**
KAVV Kandilli-Istan 21.08 309 *e*P **P** **09 51 14.3 +1.5**
ISK Istanbul-Kandi 21.08 309 *e*P **P** **09 51 12.4 -0.4**
DZA Taraz 21.11 46 *e*P **P** **09 51 13.1 -0.1**
DZA Taraz 21.11 46 *e*P **P** **09 51 13.1 -0.1**
DESE Dese 21.15 212 *e*P **P** **09 51 15.7 +1.6**
DESE eS Sn 09 55 20.7 +4.7
KLYT Kilyos 21.18 309 *e*P **P** **09 51 13.4 -0.4**
GCAM G?zelcaml? 21.22 299 *e*P **P** **09 51 17.1 +2.8**
KCTX Karacabey (Bur 21.24 306 *e*P **P** **09 51 15.0 +0.5**
BALB Balikesir 21.34 304 *e*P **P** **09 51 15.2 -0.4**
ARSB Arslanbob 21.43 51 P **P** **09 51 16.9 +0.2**
ARSB pmax pmax
comp=Z,169nm,1.0s
ARSB Arslanbob 21.43 51 P **P** **09 51 16.9 +0.2**
THN Thein Dam 21.48 76 *ex* **P** **09 51 20.0 +2.8**
THN *ex* **S** **09 55 17.0 +1.9**
AKTO Aktyubinsk 21.50 13 P **P** **09 51 17.4 +0.1**
comp=Z,31nm,0.6s,baz=201,slow=10,SNR=64
AKTO S **S** **09 55 08.2 -7.0**
comp=Z,5.5nm,1.0s,baz=178,slow=18,SNR=1.7
AKTO LR LR 10 01 04.6
comp=Z,970nm,20.1s,baz=197,slow=41
CTKS Kestanelik-??a 21.53 309 *e*P **P** **09 51 17.6 0.0**
BLCB Balcova 21.56 300 *e*P **P** **09 51 17.3 -0.6**
SLVT Silivri 21.73 308 *e*P **P** **09 51 19.9 +0.1**
CTYL Yalikoy Yolu 21.79 309 *e*P **P** **09 51 20.0 -0.3**
DKL Dikili 21.86 302 *e*P **P** **09 51 21.5 +0.3**
URLA Izmir 21.89 300 *e*P **P** **09 51 22.1 +0.6**
MRMT Marmara Adasi 21.91 306 *e*P **P** **09 51 21.4 -0.3**
KRBG Karabiga-Canak 22.04 306 *e*P **P** **09 51 22.4 -0.6**
BHK Bhakra 22.09 79 *ex* **P** **09 51 29.8 +6.1**
RKY Sarkoy-Tekirda 22.23 306 *e*P **P** **09 51 23.7 -1.5**
AML Almayashu 22.26 50 P **P** **09 51 26.6 +0.7**
SNR=41
SANT Santorini 22.31 294 ⇑P **P** **09 51 26.7 +0.6**
SANT Santorini 22.31 294 P **P** **09 51 26.3 +0.2**
EKS2 Erkin-Say 22.56 48 P **P** **09 51 31.7 +2.9**
SNR=34
IDI Anoyia 22.60 291 P **P** **09 51 29.4 +0.1**
comp=Z,61nm,0.8s,baz=90,slow=9.7,SNR=14
IDI Anoyia 22.60 291 ⇓P **P** **09 51 29.8 +0.6**
IDI Anoyia 22.60 291 *e*P **P** **09 51 30.0 +0.7**
IDI Anoyia 22.60 291 P **P** **09 51 29.9 +0.6**
IDI IAmb IAmb 09 51 34.3
comp=Z,90nm,0.9s
VRH Novokhopyorsk 22.64 345 *e*P **P** **09 51 28.3 -1.1**
VRH eS **S** **09 55 31.1 -5.6**
VRH pmax pmax
comp=Z,250nm,0.7s
VRH smax smax
comp=E,590nm,1.2s
VRH MLR MLR
comp=Z,1μm,17.0s
ERIK Erikli-Kesan 22.69 306 *e*P **P** **09 51 32.2 +2.1**
MANR Mangalia 22.71 315 ⇓P **P** **09 51 32.0 +1.8**
EFOR EFORIE 22.82 315 ⇑P **P** **09 51 32.5 +1.1**
UCH Uchtor 22.85 50 P **P** **09 51 34.4 +2.2**
SNR=38
KSH Kashi 22.87 58 P **P** **09 51 28.4 -3.7**
KSH sP pP 09 51 36.0 -0.3
KSH PP **PnPn** **09 51 54.9 -1.6**
KSH S S 09 55 29.3 -12
KSH SS **SnSn** **09 56 11.8 -0.7**
KSH pmax pmax
comp=Z,170nm,0.9s
KSH pmax pmax
comp=Z,1μm,6.5s
KSH LR LR
comp=Z,890nm,6.7s
KSH LR LR
comp=Z,2μm,9.3s
KSH LR LR
comp=Z,3μm,9.5s
PSN Preselentsi 22.89 314 *i*P P 09 51 43.8 +12
EDRB Edirne 22.99 309 *e*P **P** **09 51 32.6 -0.6**
MFTR Murfatlar 23.00 315 ⇑P **P** **09 51 33.9 +0.6**
AAK Ala-Archa 23.02 49 P **P** **09 51 34.2 +0.6**
comp=Z,24nm,0.9s,baz=215,slow=8.4,SNR=36
AAK PcP **PcP** **09 55 22.5 -0.5**
comp=Z,7.0nm,0.7s,baz=167,slow=3.2,SNR=3.7
AAK S **S** **09 55 49.9 +5.9**
comp=Z,3.6nm,0.9s,baz=349,slow=17,SNR=1.3
AAK ScP **ScP** **09 58 58.3 -2.2**
comp=Z,6.5nm,1.0s,baz=206,slow=6.8,SNR=4.4
AAK LR LR 10 01 42.2
comp=Z,2μm,21.1s,baz=246,slow=40
AAK Ala-Archa 23.02 49 P **P** **09 51 37.4 +3.8**
SNR=20
AAK Ala-Archa 23.02 49 P **P** **09 51 32.9 -0.8**
AAK Ala-Archa 23.02 49 P **P** **09 51 34.1 +0.4**
NDI New Delhi 23.03 86 *e*P **P** **09 51 38.5 +4.8**
VORD Divnogorie 23.04 341 *e*P **P** **09 51 31.8 -1.8**
VORD eS **S** **09 55 37.7 -6.1**
VORD pmax pmax
comp=Z,100nm,0.8s
VORD smax smax
comp=N,40nm,3.2s
JURR Jurilovca 23.04 317 ⇑P **P** **09 51 33.0 -0.7**
ALN Alexandroupoli 23.11 306 *e*P **P** **09 51 32.5 -1.9**
ALN Alexandroupoli 23.11 306 P **P** **09 51 32.9 -1.4**
ALN pmax pmax
comp=Z,18nm,0.8s
ALN Alexandroupoli 23.11 306 P **P** **09 51 32.9 -1.4**
PRD Provadia 23.16 312 *i*P **P** **09 51 36.5 +1.7**
TIRR Tirgusor 23.16 316 ⇑P **P** **09 51 35.1 +0.3**
TIRR Tirgusor 23.16 316 ⇑P **P** **09 51 35.1 +0.3**
TIRR Tirgusor 23.16 316 P **P** **09 51 34.0 -0.8**
TIRR pmax pmax
comp=Z,118nm,0.8s
TIRR Tirgusor 23.16 316 P **P** **09 51 34.0 -0.8**
NEF NEVSHA 23.27 312 *i*P **P** **09 51 38.4 +2.4**
KZA Kyzart 23.28 51 P **P** **09 51 37.9 +1.3**
SNR=15
VSR Storozhevoye 23.30 341 *e*P **P** **09 51 34.1 -2.1**
VSR eS **S** **09 55 43.4 -4.7**
VSR pmax pmax
comp=Z,100nm,1.2s
VSR smax smax
comp=N,530nm,1.1s
VSR MLR MLR
comp=Z,1μm,16.0s
USP Ospenovka 23.31 48 P **P** **09 51 37.6 +1.1**
SNR=12
TLCR 23.32 318 ⇑P **P** **09 51 37.4 +0.9**
KBK Karagaybulak 23.33 50 P **P** **09 51 39.4 +2.5**
SNR=9.2
CHMS Chumysh 23.35 49 P **P** **09 51 37.8 +0.9**
SNR=5.6
IMMV Iera Moni Meta 23.36 291 *e*P **P** **09 51 36.2 -0.8**
JMB Yambol 23.36 310 *i*P **P** **09 51 38.5 +1.6**
AAE Adis Abeba 23.39 211 *i*P **P** **09 51 39.4 +1.7**
AAE *i*Sg **S** **09 55 59.1 +8.4**
AAE Adis Abeba 23.39 211 *i*P **P** **09 51 39.4 +1.7**
AAE *i*Sg **S** **09 55 59.1 +8.4**
TOPG Topolog 23.40 317 ⇑P **P** **09 51 36.9 -0.4**
TLBR Topalu 23.42 316 ⇑P **P** **09 51 38.3 +0.8**
SGDS Sogindy 23.48 47 ⇑*i*P **P** **09 51 38.6 +0.3**
comp=Z,225nm,3.0s
SGDS eS **S** **09 55 56.5 +5.1**
SGDS LR LR 10 02 23.1
comp=Z,943nm,9.4s
FURI Furi 23.55 211 *e*P **P** **09 51 40.1 +0.8**
FURI *i*S **S** **09 56 02.5 +9.2**
FURI Furi 23.55 211 *e*P **P** **09 51 40.1 +0.8**
FURI *i*S **S** **09 56 02.5 +9.2**
RDO Rodhopi 23.55 306 *e*P **P** **09 51 38.4 -0.5**
HARR Harsova 23.57 316 ⇓P **P** **09 51 39.3 +0.3**

POO Poona 23.67 113 *e*P **P** **09 51 42.0 +1.8**
CFR Carcaliu 23.71 317 ⇓P **P** **09 51 40.4 +0.1**
KDZ Kurdzhali 23.83 307 *e*P **P** **09 51 41.2 -0.3**
TKM2 Tokmak 2 23.87 49 P **P** **09 51 43.1 +0.9**
SNR=9.2
RAZG Razgrad 23.90 312 ⇑P **P** **09 51 42.5 +0.3**
BTLS Baital 23.92 44 ⇑*i*P **P** **09 51 43.1 +0.7**
comp=Z,104nm,2.1s
BTLS eS **S** **09 56 03.2 +5.0**
BTLS eLR LR 10 02 13.2
comp=Z,627nm,8.9s
BTLS Baital 23.92 44*c i*P **P** **09 51 43.0 +0.7**
BTLS pmax pmax
comp=Z,104nm,2.1s
BTLS MLR MLR
comp=Z,627nm,9.0s
SZH Strazhica 24.14 311 *i* P **P** **09 51 44.3 -0.1**
KIS Kishinev 24.38 322 *e*P **P** **09 51 46.0 -0.6**
comp=Z,250nm,1.4s
KIS Kishinev 24.38 322 *e*PcP **PcP** **09 55 18.0 -7.6**
KIS eS **S** **09 56 03.0 -2.5**
comp=Z,1μm,8.0s
KIS eSS **SnSn** **09 57 00.0 +11**
KIS eLi 09 58 45.0
KIS eLQ LQ 10 01 48.0
KIS LRM MLR 10 04 32.0
comp=Z,1μm,16.0s
KIS Kishinev 24.38 322 *e*P **P** **09 51 46.0 -0.6**
KIS *e* 09 51 52.0
KIS *e* 09 51 58.0
KIS *e* 09 52 18.0
KIS eS **S** **09 56 03.0 -2.5**
KIS eSS **SnSn** **09 57 00.0 +11**
KIS pmax pmax
comp=Z,250nm,1.4s
KIS pmax pmax
comp=Z,700nm,8.0s
KIS smax smax
comp=N,1μm,8.0s
KIS MLR MLR
comp=Z,1μm,16.0s
PLD Plovdiv 24.49 308 *i* P **P** **09 51 48.5 +0.9**
PLD Plovdiv 24.49 308 *e*P **P** **09 51 47.6 0.0**
PETR Petresti 24.54 317 ⇓P **P** **09 51 49.1 +1.0**
LPSR Galich'ya Gora 24.61 342 *e*P **P** **09 51 47.7 -0.9**
LPSR eS **S** **09 56 10.1 +1.0**
LPSR pmax pmax
comp=Z,70nm,0.9s
LPSR smax smax
comp=N,640nm,2.5s
LPSR MLR MLR
comp=Z,960nm,17.0s
KDJ Kajisay 24.62 52 P **P** **09 51 51.1 +2.0**
KDJ pmax pmax
comp=Z,25nm,1.0s
KDJ Kajisay 24.62 52 P **P** **09 51 51.1 +2.0**
ODBI Odobesti 24.67 317 ⇑P **P** **09 51 49.1 -0.1**
VASR Vaslui 24.73 320 ⇑P **P** **09 51 51.4 +1.6**
BISRR Bisoca 24.76 317 ⇓P P 09 51 57.6 +7.5
KUU Kurty 24.79 48 ⇑*i*P **P** **09 51 50.7 +0.4**
comp=Z,51nm,1.0s
KUU eS **S** **09 56 18.2 +5.9**
KUU eLR LR 10 02 47.1
comp=Z,2μm,9.9s
KUU Kurty 24.79 48*c i*P **P** **09 51 50.6 +0.3**
KUU pmax pmax
comp=Z,51nm,1.0s
KUU MLR MLR
comp=Z,2μm,10.0s
AAA Alma-Ata 24.87 50 *e*P **P** **09 51 52.8 +1.6**
AAA eLR LR 10 02 26.8
comp=Z,1μm,13.4s
AAA Alma-Ata 24.87 50 *e*P **P** **09 51 52.2 +1.0**
AAA pmax pmax
comp=Z,600nm,8.5s
AAA MLR MLR
comp=Z,2μm,13.0s
SECR 24.89 315 ⇑P **P** **09 51 52.1 +0.9**
TARG Taragay, Kyrgy 24.91 54 P **P** **09 51 51.6 -0.4**
TARG IAmb IAmb 09 52 06.2
comp=Z,29nm,0.9s
VRI Vrincioaia 24.91 317 ⇓P **P** **09 51 53.1 +1.6**
VRI Vrincioaia 24.91 317 *e*P **P** **09 51 52.1 +0.6**
MDOK Medeo 24.94 50 *i*P **P** **09 51 52.4 +0.5**
MDOK eS **S** **09 56 22.3 +7.3**
MDOK eLR LR 10 02 29.7
comp=Z,2μm,15.8s
MDOK Medeo 24.94 50 *i*P **P** **09 51 52.4 +0.5**
MDOK MLR MLR
comp=Z,2μm,16.0s
PLOR Plostina 24.95 317 ⇓P **P** **09 51 53.8 +1.9**
MMB Musomiste 24.99 306 *i*P **P** **09 51 52.3 +0.1**
PGB Panagyurishte 25.03 308 *i*P **P** **09 51 53.8 +1.2**
PLVB Pleven 25.06 310 ⇓P **P** **09 51 53.6 +0.8**
HORT Hortiatis 25.12 303 *e*P **P** **09 51 53.9 +0.4**
MLR Muntele Rosu 25.19 316 P **P** **09 51 54.9 +0.8**
comp=Z,46nm,0.9s,baz=29,slow=2.7,SNR=52
MLR LR LR 10 04 17.1
comp=Z,2μm,19.5s,baz=130,slow=42
MLR Muntele Rosu 25.19 316 ⇓P **P** **09 51 57.1 +3.1**
MLR Muntele Rosu 25.19 316 P **P** **09 51 55.4 +1.3**
CHKK Chushkaly 25.19 48 *e*P **P** **09 51 54.8 +0.7**
CHKK Chushkaly 25.19 48 *e*P **P** **09 51 54.7 +0.7**
ITM Ithomi 25.24 295 *e*P **P** **09 51 56.8 +2.3**
ITM Ithomi 25.24 295 P **P** **09 51 54.3 -0.2**
AGG Agios Georgios 25.28 299 *e*P **P** **09 51 55.9 +1.0**
AGG Agios Georgios 25.28 299 P **P** **09 51 55.2 +0.3**
AGG pmax pmax
comp=Z,55nm,1.1s
AGG Agios Georgios 25.28 299 P **P** **09 51 55.2 +0.3**
AGG IAmb IAmb 09 51 58.0
comp=Z,55nm,1.1s
TESR Tescani 25.31 319 ⇓P **P** **09 51 55.8 +0.8**
HUMR Humele 25.32 313 ⇑P **P** **09 51 57.1 +2.0**
SORM Soroca 25.33 323 ⇓P **P** **09 51 54.6 -0.6**
LIT Litokhoron 25.43 302 P **P** **09 51 56.6 +0.4**
LIT pmax pmax
comp=Z,21nm,0.7s
LIT Litokhoron 25.43 302 P **P** **09 51 56.6 +0.4**
KNT Kendrikon 25.44 305 *e*P **P** **09 51 56.5 +0.3**
OZUR 25.59 317 ⇓P **P** **09 51 59.0 +1.4**
PRZ Przheval'sk 25.59 52 P **P** **09 51 59.2 +1.3**
PRZ pmax pmax
comp=Z,35nm,0.7s
PRZ Przheval'sk 25.59 52 P **P** **09 51 59.2 +1.3**
PRZ IAmb IAmb 09 52 11.2
comp=Z,35nm,0.7s
MTUR Matau 25.60 315 ⇓P **P** **09 51 59.6 +1.9**
MPEP Malo Peshtene 25.63 310 *i*P **P** **09 51 59.5 +1.5**
VTS Vitosha 25.69 308 ⇑P **P** **09 52 00.5 +1.8**
VTS Vitosha 25.69 308 *i*P **P** **09 51 59.2 +0.5**
VTS Vitosha 25.69 308 P **P** **09 51 59.0 +0.3**
VTS pmax pmax
comp=Z,25nm,1.1s
VTS Vitosha 25.69 308 P **P** **09 51 59.0 +0.3**
VAY Valandovo 25.72 305 *i*P **P** **09 51 60.0 +1.2**
VAY Valandovo 25.72 305 *i*P **P** **09 51 60.0 +1.2**
DOPR Dopca 25.77 316 ⇑P **P** **09 51 59.8 +0.6**
SATY Saty 25.81 51 ⇑*i*P **P** **09 52 00.5 +0.7**
comp=Z,22nm,1.4s
SATY eS **S** **09 56 36.9 +8.1**
SATY eLR LR 10 03 34.6
comp=Z,680nm,12.9s
SATY Saty 25.81 51*c i*P **P** **09 52 00.5 +0.7**
SATY pmax pmax
comp=Z,22nm,1.4s
SATY MLR MLR
comp=Z,680nm,13.0s
BIZ Bicaz 25.86 319 ⇓P **P** **09 52 01.2 +1.2**
ARR Arges 25.93 315 ⇑P **P** **09 52 01.5 +0.7**
PRAR RASCA 26.02 320 ⇓P **P** **09 52 03.1 +1.6**
STIP Stip 26.11 305 *i*P **P** **09 52 01.7 -0.7**
STIP Stip 26.11 305 *i*P **P** **09 52 01.7 -0.7**
BRZS Berezniki 26.20 33 ⇑*i*P **P** **09 52 04.0 +0.9**
comp=Z,51nm,1.1s
BRZS eLR LR 10 03 18.1
comp=Z,1μm,10.6s
BRZS Berezniki 26.20 33*c i*P **P** **09 52 04.0 +0.9**
BRZS pmax pmax
comp=Z,51nm,1.1s
BRZS MLR MLR
comp=Z,1μm,11.0s
UZB Uzynbulak 26.26 51 ⇑*i*P **P** **09 52 04.7 +0.7**
comp=Z,36nm,1.3s

UZB eS **S** **09 56 43.3 +7.3**
UZB eLR LR 10 03 50.2
comp=Z,616nm,10.4s
UZB Uzynbulak 26.26 51*c i*P **P** **09 52 04.6 +0.7**
UZB pmax pmax
comp=Z,36nm,1.3s
UZB MLR MLR
comp=Z,616nm,10.0s
FNA Florina 26.43 303 *e*P **P** **09 52 04.7 -0.6**
FNA Florina 26.43 303 P **P** **09 52 06.3 +1.0**
FNA pmax pmax
comp=Z,32nm,0.9s
FNA Florina 26.43 303 P **P** **09 52 06.3 +1.0**
FNA IAmb IAmb 09 52 09.0
comp=Z,32nm,0.9s
LOT Lotru 26.51 314 ⇓P **P** **09 52 07.7 +1.7**
SRE Strehaia 26.52 312 ⇑P **P** **09 52 08.3 +2.3**
SHLS Shalkode 26.57 52 ⇑*i*P **P** **09 52 09.7 +3.0**
comp=Z,19nm,0.9s
SHLS eLR LR 10 04 00.7
comp=Z,1μm,14.8s
SHLS Shalkode 26.57 52*c i*P **P** **09 52 09.6 +3.0**
SHLS pmax pmax
comp=Z,19nm,0.9s
SHLS MLR MLR
comp=Z,1μm,15.0s
TDK Taldyqorghan 26.60 47 eLR LR 10 04 38.8
comp=Z,2μm,8.4s
AKASG Malin Array Be 26.61 328 P **P** **09 52 05.9 -0.8**
comp=Z,21nm,0.5s,baz=133,slow=8.8,SNR=118
AKASG S **S** **09 56 46.8 +5.8**
comp=Z,4.2nm,0.8s,baz=130,slow=19,SNR=4.7
AKASG ScP **ScP** **09 59 07.2 -3.0**
comp=Z,2.2nm,0.7s,baz=92,slow=2.2,SNR=2.0
AKBB Malin Array Si 26.61 328*ce*P **P** **09 52 06.2 -0.5**
AKBB Malin Array Si 26.61 328 P **P** **09 52 06.0 -0.7**
AKBB IAmb IAmb 09 52 07.5
comp=Z,60nm,0.8s
SKO Skopje 26.73 305 *i*P **P** **09 52 09.0 +1.1**
SKO Skopje 26.73 305 *i*P **P** **09 52 09.0 +1.1**
BURAR Bucovina Array 26.73 319 ⇑P **P** **09 52 09.6 +1.6**
BUR08 Bucovina Ar. S 26.76 319 P **P** **09 52 09.1 +0.8**
BUR08 IAmb IAmb 09 52 26.3
comp=Z,25nm,0.8s
OHR Ohrid 26.94 303 *i*P **P** **09 52 10.9 +1.0**
OHR Ohrid 26.94 303 *i*P **P** **09 52 10.9 +1.0**
ARCR ARCALIA 26.95 318 ⇓P **P** **09 52 11.6 +1.7**
GZR Gura Zlata 27.11 313 ⇑P **P** **09 52 12.3 +0.9**
HERR Herculane 27.12 312 ⇑P **P** **09 52 12.9 +1.5**
DEV Deva 27.25 314 ⇓P P 09 52 27.6 +15
ARU Arti 27.37 9 P **P** **09 52 14.0 +0.5**
comp=Z,1.6nm,0.2s,baz=195,slow=11,SNR=16
ARU LR LR 10 04 44.0
comp=Z,923nm,21.7s,baz=181,slow=40
ARU Arti 27.37 9*d i*P **P** **09 52 14.8 +1.3**
ARU 09 53 00.1
ARU PPP PPP 09 53 07.0
ARU S **S** **09 56 57.1 +4.3**
ARU SS **SnSn** **09 58 11.6 +10**
ARU pmax pmax
comp=Z,32nm,1.1s
ARU MLR MLR
comp=Z,1μm,16.0s
ARU Arti 27.37 9 P **P** **09 52 13.4 -0.1**
BRVK Borovoye 27.43 26*ce*P **P** **09 52 15.1 +1.0**
BRVK pmax pmax
comp=Z,61nm,1.7s
BRVK Borovoye 27.43 26 P **P** **09 52 15.2 +1.0**
BRVK IAmb IAmb 09 52 16.5
comp=Z,29nm,0.8s
BVAR Borovoye Array 27.45 26 P **P** **09 52 15.0 +0.7**
comp=Z,30nm,0.7s,baz=219,slow=6.9,SNR=150
BVAR PcP **PcP** **09 55 30.0 -2.6**
comp=Z,5.9nm,0.7s,baz=183,slow=2.8,SNR=6.8
BVAR ScP **ScP** **09 59 10.5 -2.2**
comp=Z,3.1nm,0.9s,baz=197,slow=4.5,SNR=4.0
BVAR Borovoye Array 27.45 26 P **P** **09 52 15.0 +0.7**
OBN Obninsk 27.49 342 LR LR 10 03 55.5
comp=Z,206nm,20.5s,baz=161,slow=38
OBN Obninsk 27.49 342 ⇑*i*P **P** **09 52 15.1 +0.6**
OBN *i* 09 52 59.7
OBN pmax pmax
comp=Z,115nm,1.7s
OBN MLR MLR
comp=Z,716nm,17.0s
OBN Obninsk 27.49 342 P **P** **09 52 14.7 +0.2**
MDVR Moldovita 27.54 311 ⇓P **P** **09 52 16.3 +1.1**
TIR Tirane 27.68 303 ⇓P **P** **09 52 18.1 +1.6**
TIR Tirane 27.68 303 P **P** **09 52 16.9 +0.4**
TIR pmax pmax
comp=Z,49nm,0.8s
TIR Tirane 27.68 303 P **P** **09 52 16.9 +0.4**
TIR IAmb IAmb 09 52 33.9
comp=Z,49nm,0.8s
MOS Moscow 27.78 344 *e*P **P** **09 52 16.2 -0.9**
MOS *e* 09 53 26.6
MOS MLR MLR
comp=Z,700nm,16.0s
DRGR 27.79 316 ⇓P **P** **09 52 19.1 +1.6**
BZS Buzias 27.94 313 ⇑P **P** **09 52 19.3 +0.6**
HYB Hyderabad 28.07 109 *i*P **P** **09 52 20.0 -0.2**
SVE Sverdlovsk 28.08 11 *e*P **P** **09 52 20.8 +1.0**
SVE eS **S** **09 57 08.8 +4.8**
SVE pmax pmax
comp=Z,47nm,1.2s
SVE MLR MLR
comp=Z,2μm,12.0s
PYUN Piuthan 28.14 85 *e*P **P** **09 52 21.3 +0.3**
comp=Z,176nm,0.5s
SIRR Siria 28.19 314 ⇑P **P** **09 52 22.1 +1.0**
PDG Podgorica 28.41 305 ⇑P **P** **09 52 23.1 +0.1**
PDG Podgorica 28.41 305 P **P** **09 52 22.8 -0.1**
DIVS Divibare 28.43 309 P **P** **09 52 23.6 +0.4**
TRPA Tarpa 28.54 318 ⇑P **P** **09 52 25.6 +1.6**
KOLN Koldanda 28.74 86 *e*P **P** **09 52 26.4 +0.1**
comp=Z,36nm,0.4s
DANN Dangsing 28.77 84 *e*P **P** **09 52 27.1 +0.5**
comp=Z,224nm,0.8s
UZH Uzhgorod 28.94 319 *e*P **P** **09 52 27.0 -0.6**
UZH *e* 09 52 39.4
UZH *e* 09 53 14.7
UZH *e* 09 55 37.0
UZH eS **S** **09 57 14.0 -3.7**
UZH *e*SSS SSS 09 59 08.2
UZH MLR MLR
comp=N,220nm,16.0s
UZH MLR MLR
comp=E,230nm,16.0s
UZH MLR MLR
comp=Z,80nm,16.0s
KIRV Kirov 29.00 358 P **P** **09 52 28.4 +0.4**
comp=Z,48nm,0.6s,baz=164,slow=3.2,SNR=20
KURBB Kurchatov Arra 29.53 37 P **P** **09 52 33.7 +0.8**
comp=Z,40nm,0.9s,baz=237,slow=9.2,SNR=205
KURBB PcP **PcP** **09 55 36.6 -1.1**
comp=Z,4.7nm,0.8s,baz=230,slow=2.8,SNR=5.4
KURBB ScP **ScP** **09 59 17.0 -2.2**
comp=Z,3.1nm,1.1s,baz=241,slow=3.9,SNR=6.0
KURBB Kurchatov Arra 29.53 37 P **P** **09 52 31.6 -1.2**
TIP Timpagrande 29.57 298 ⇑P **P** **09 52 34.0 +0.6**
TIP Timpagrande 29.57 298 P **P** **09 52 33.8 +0.4**
TIP IAmb IAmb 09 52 39.7
comp=Z,44nm,1.4s
GKN Gorkha 29.59 85 *e*P **P** **09 52 33.6 -0.2**
comp=Z,57nm,0.5s
MAKZ Makanchi 29.63 46 P **P** **09 52 32.4 -1.4**
MAKZ Makanchi 29.63 46 P **P** **09 52 34.6 +0.8**
KURK Kurchatov 29.63 37*ce*P **P** **09 52 34.9 +1.2**
KURK pmax pmax
comp=Z,81nm,1.0s
KURK Kurchatov 29.63 37 P **P** **09 52 34.8 +1.1**
MK31 Makanchi Array 29.82 46 *i*P **P** **09 52 35.6 +0.1**
MK31 Makanchi Array 29.82 46 P **P** **09 52 36.1 +0.7**
MKAR Makanchi Array 29.82 46 P **P** **09 52 35.9 +0.4**
comp=Z,7.0nm,0.7s,baz=234,slow=7.3,SNR=59
MKAR PcP **PcP** **09 55 36.4 -2.2**
comp=Z,3.8nm,0.7s,baz=243,slow=1.1,SNR=4.8
MKAR ScP **ScP** **09 59 17.8 -2.5**
comp=Z,2.7nm,1.0s,baz=264,slow=4.9,SNR=4.7
MKAR LR LR 10 05 22.7
comp=Z,1μm,20.9s,baz=240,slow=38
LODK Lodwar 29.89 212 P **P** **09 52 39.2 +2.8**
SNR=8.7
KECS Kecovo 29.91 318 *e*P **P** **09 52 37.3 +1.1**
KECS pmax pmax

comp=Z,11nm,0.6s
KECS Kecovo 29.91 318 *e*P **P** **09 52 37.3 +1.1**
PSZ Piszkesteto 30.00 316 P **P** **09 52 37.1 -0.1**
PSZ pmax pmax
comp=Z,9.0nm,1.0s
PSZ Piszkesteto 30.00 316 P **P** **09 52 37.1 -0.1**
DMN Daman 30.08 85 *e*P **P** **09 52 38.1 -0.1**
comp=Z,110nm,0.6s
SEM Semipalatinsk 30.33 38 *e*P **P** **09 52 39.4 -0.8**
SEM Semipalatinsk 30.33 38 *e*P **P** **09 52 39.3 -0.8**
PKIN Phulchoki 30.34 85 *e*P **P** **09 52 40.2 -0.3**
comp=Z,65nm,0.5s
PKI Pulchoki 30.35 85 *e*P **P** **09 52 40.3 -0.4**
comp=Z,162nm,0.9s
NACGM Naroch 30.64 332 *e*P **P** **09 52 42.0 -0.5**
NACGM *e*S **S** **09 57 47.0 +2.8**
NACGM *e*SS SnSn 09 58 52.0 -30
NACGM *e*LQ LQ 10 03 16.0
NACGM *e*LR LR 10 05 48.0
NACGM LRM MLR 10 09 42.0
comp=Z,14nm,16.0s
GUN Gumba 30.69 84 *e*P **P** **09 52 43.7 0.0**
comp=Z,69nm,0.5s
SGRT San Giovanni R 30.78 303 P **P** **09 52 44.0 -0.1**
LANS Liptovska Anna 30.82 318 *e*P **P** **09 52 45.9 +1.6**
LANS pmax pmax
comp=Z,31nm,1.3s
LANS Liptovska Anna 30.82 318 *e*P **P** **09 52 45.9 +1.6**
JIRN Jiri 31.01 85 *e*P **P** **09 52 46.7 +0.1**
comp=Z,113nm,0.6s
OJC Ojcow 31.14 320 *e*P **P** **09 52 48.0 +0.9**
OJC *e*S **S** **09 57 50.8 -1.5**
OJC Ojcow 31.14 320 P **P** **09 52 47.4 +0.3**
OJC pmax pmax
comp=Z,43nm,0.9s
OJC Ojcow 31.14 320 P **P** **09 52 47.4 +0.3**
OJC lAmb lAmb 09 52 48.7
comp=Z,43nm,0.9s
IIGN Ignalina 31.18 333 *e*P **P** **09 52 47.7 +0.4**
VAE Valguarnera 31.23 294 P **P** **09 52 48.8 +0.7**
comp=Z,9.4nm,0.4s,baz=332,slow=10,SNR=1.2
ISAL Salakas 31.38 333 *e*P **P** **09 52 48.9 -0.2**
IZAR Zarasai 31.46 333 *e*P **P** **09 52 49.8 0.0**
RAMN Ramite 31.52 86 *e*P **P** **09 52 49.9 -1.0**
comp=Z,53nm,0.7s
PAOL Paolisi 31.52 301 P **P** **09 52 50.9 +0.3**
PAOL lAmb lAmb 09 52 55.4
comp=Z,22nm,1.0s
SUW Suwalki 31.58 328 *e*P **P** **09 52 51.1 +0.2**
SUW Suwalki 31.58 328 P **P** **09 52 50.3 -0.6**
SUW pmax pmax
comp=Z,97nm,0.9s
SUW Suwalki 31.58 328 P **P** **09 52 50.3 -0.6**
ZSN Zaisan 31.70 46 *e*P **P** **09 52 51.7 -0.4**
ZSN *e*LR LR 10 07 07.8
comp=Z,540nm,9.3s
ZSN Zaisan 31.70 46 *e*P **P** **09 52 51.6 -0.4**
ZSN MLR MLR
comp=Z,540nm,9.0s
JAVC Velka Javorina 31.75 317 *e*P **P** **09 52 53.5 +1.0**
SMOL Smolenice 31.75 316 *e*P **P** **09 52 53.4 +0.9**
SMOL pmax pmax
comp=Z,8.0nm,1.2s
SMOL Smolenice 31.75 316 *e*P **P** **09 52 53.4 +0.9**
OKC Ostrava-Krasne 31.90 319 *e*P **P** **09 52 54.8 +1.1**
OKC MLR MLR
comp=Z,900nm,12.8s
OKC Ostrava-Krasne 31.90 319 *e*P **P** **09 52 54.8 +1.1**
OKC AMS AMS 10 08 00.0
comp=Z,900nm,12.8s
BOJS Bojanci 32.08 310 *i*P **P** **09 52 55.9 +0.6**
BOJS *e*S **S** **09 58 06.2 -0.7**
KLMR Klimovskoe 32.16 350 *e*P **P** **09 52 53.9 -2.0**
KLMR pmax pmax
comp=Z,129nm,1.2s
KLMR Klimovskoe 32.16 350 *e*P **P** **09 52 54.0 -2.0**
KLMR AMP 09 52 56.4
comp=Z,129nm,1.2s
KLMR LQ LQ 10 03 03.8
KLMR LQ LQ 10 03 03.8
KLMR LR LR 10 04 44.7
INTR Introdacqua 32.18 303 P **P** **09 52 57.4 +1.0**
INTR lAmb lAmb 09 53 01.7
comp=Z,20nm,0.9s
PABE Paberze 32.22 331 *e*P **P** **09 52 56.6 +0.2**
MORC Moravsky Berou 32.22 318 *e*P **P** **09 52 56.9 +0.3**
MORC Moravsky Berou 32.22 318 ⇓P **P** **09 52 57.5 +0.8**
MORC Moravsky Berou 32.22 318 P **P** **09 52 56.9 +0.3**
MORC pmax pmax
comp=Z,37nm,1.2s
MORC Moravsky Berou 32.22 318 P **P** **09 52 56.9 +0.3**
MORC lAmb lAmb 09 52 58.1
comp=Z,37nm,1.2s
ARSA Arzberg 32.46 313 *e*P **P** **09 52 59.2 +0.5**
comp=Z,11nm,1.3s
WMQ Urumqi 32.48 54 *e*P **P** **09 53 00.6 +1.6**
WMQ sP sP 09 53 08.3 +3.0
WMQ PP **PnPn** **09 54 08.3 +2.2**
WMQ S **S** **09 58 15.0 +1.5**
WMQ pmax pmax
comp=Z,15nm,0.7s
WMQ pmax pmax
comp=Z,42nm,5.7s
WMQ LR LR
comp=Z,1μm,14.5s
WMQ LR LR
comp=Z,2μm,21.9s
CONA Conrad Observa 32.49 314 *e*P **P** **09 52 59.1 0.0**
comp=Z,16nm,1.4s,SNR=8.0
VRAC Vranov 32.58 317 *e*P **P** **09 53 00.6 +0.9**
VRAC Vranov 32.58 317 ⇑P **P** **09 53 01.2 +1.5**
SOKA Soboth 32.58 312 *e*P **P** **09 53 00.2 +0.3**
comp=Z,7.3nm,1.0s
KRUC Moravsky 32.60 316 *e*P **P** **09 53 00.1 +0.2**
LJU Ljubljana 32.72 310 *e*P **P** **09 53 02.0 +1.0**
OBKA Obir 32.85 311 *e*P **P** **09 53 02.9 +0.7**
comp=Z,12nm,1.3s
NRCA Norcia 32.91 304 P **P** **09 53 03.3 +0.5**
NRCA lAmb lAmb 09 53 10.1
comp=Z,27nm,1.0s
DPC Dobruska-Polom 33.18 318 *e*P **P** **09 53 05.0 0.0**
DPC Dobruska-Polom 33.18 318 *e*P **P** **09 53 05.0 0.0**
KMBO Kilima Mbogo 33.20 205 P **P** **09 53 06.5 +0.8**
comp=Z,1.2nm,0.4s,baz=353,slow=9.5,SNR=4.9
KMBO LR LR 10 07 22.3
comp=Z,1μm,21.6s,baz=60,slow=38
TREC Trest 33.24 316 AMS AMS 10 10 00.0
comp=Z,900nm,14.6s
VSU Vasula 33.30 337 *e*P **P** **09 53 05.7 -0.1**
CADS Cadrg 33.30 310 *i*P **P** **09 53 05.9 -0.2**
CADS *e*S **S** **09 58 24.7 -1.4**
OSTC Ostas 33.33 319 *e*P **P** **09 53 06.9 +0.6**
OSTC AMS AMS 10 09 00.0
comp=Z,900nm,16.0s
KSP Ksiaz 33.41 319 *e*P **P** **09 53 07.7 +0.7**
MURB Monte Urbino 33.42 305 P **P** **09 53 08.7 +1.4**
UPC Upice 33.43 319 *e*P **P** **09 53 07.6 +0.5**
UPC MLR MLR
comp=Z,1μm,15.7s
UPC Upice 33.43 319 *e*P **P** **09 53 07.6 +0.5**
UPC AMS AMS 10 08 50.0
comp=Z,1μm,15.7s
CHVC Chvalec 33.44 319 *e*P **P** **09 53 07.9 +0.7**
CHVC AMS AMS 10 08 50.0
comp=Z,900nm,16.6s
MOA Molln 33.46 313 *e*P **P** **09 53 07.9 +0.4**
comp=Z,14nm,0.9s,SNR=9.1
MYKA Terra Mystica 33.48 311 *e*pP **P** **09 53 09.3 +1.6**
comp=Z,6.4nm,0.8s
KBA Koelnbreinsper 33.81 312 *e*P **P** **09 53 10.6 -0.1**
comp=Z,22nm,1.0s,SNR=15
GOPC GO Pecny, Ondr 33.90 317 *e*P **P** **09 53 12.1 +0.8**
GOPC *e*S **S** **09 58 31.0 -4.3**
GOPC MLR MLR
comp=Z,1μm,16.9s
GOPC GO Pecny, Ondr 33.90 317 *e*P **P** **09 53 12.1 +0.8**
GOPC *e*S **S** **09 58 31.0 -4.3**
GOPC AMS AMS 10 10 10.0
comp=Z,1μm,16.9s
KIBK Kibwezi 34.04 203 P **P** **09 53 15.3 +2.4**
SNR=7.4
GKP Gorka Klasztor 34.05 324 *e*P **P** **09 53 13.2 +0.7**
PRU Pruhonice 34.07 317 *e*P **P** **09 53 13.7 +1.0**
PRU *e*S **S** **09 58 33.2 -4.7**
PRU MLR MLR
comp=Z,1μm,17.2s
PRU Pruhonice 34.07 317 *e*P **P** **09 53 13.7 +1.0**
PRU *e*S **S** **09 58 33.2 -4.7**
PRU AMS AMS 10 10 20.0
comp=Z,1μm,17.2s
DGZ Jazzator, Alta 34.12 44*c i*P **P** **09 53 13.9 +0.5**
DGZ pmax pmax
comp=Z,11nm,1.0s
GEC2 GERESS Array S 34.16 315 P **P** **09 53 12.8 -0.8**
GERES GERESS Array B 34.16 315 P **P** **09 53 13.4 -0.2**
comp=Z,3.9nm,0.8s,baz=114,slow=8.9,SNR=12
GERES PcP **PcP** **09 55 50.0 -0.5**
comp=Z,1.0nm,0.6s,baz=103,slow=3.1,SNR=2.1
GERES ScP **ScP** **09 59 34.3 -0.8**
comp=Z,2.3nm,1.0s,baz=169,slow=2.7,SNR=6.6
GERES LR LR 10 09 32.2
comp=Z,602nm,19.7s,baz=116,slow=40
ABTA Abfaltersbach 34.26 311 *e*P **P** **09 53 14.7 +0.1**
comp=Z,16nm,1.3s,SNR=6.2
PVCC Panska Ves 34.27 318 AMS AMS 10 09 30.0
comp=Z,700nm,16.0s
PBCC Pribram 34.28 316 *e*P **P** **09 53 15.0 +0.4**
KHC Kasperske Hory 34.34 315*ce*P **P** **09 53 15.8 +0.7**
KHC pmax pmax
comp=Z,54nm,2.5s
KHC Kasperske Hory 34.34 315 *e*P **P** **09 53 15.7 +0.7**
KHC *ex* x 09 53 30.5
KHC *e*S **S** **09 58 35.9 -6.2**
KHC AMS AMS 10 11 20.0
comp=Z,700nm,14.9s
KHC Kasperske Hory 34.34 315 P **P** **09 53 14.4 -0.7**
SLIT Slitere, Latvi 34.34 333 *e*P **P** **09 53 14.6 -0.2**
RJOB Jochberg 34.37 313 *e*P **P** **09 53 14.9 -0.5**
comp=Z,14nm,1.2s,baz=112,slow=8.7
ZAA0 Zalesovo Array 34.58 36 P **P** **09 53 17.6 +0.5**
ZALV Zalesovo Beam 34.58 36 P **P** **09 53 17.4 +0.3**
comp=Z,67nm,0.9s,baz=246,slow=8.9,SNR=171
ZALV LR LR 10 09 13.2
comp=Z,2μm,18.2s,baz=235,slow=40
CTI Castel Tesino 34.65 309 P **P** **09 53 18.1 +0.2**
CTI pmax pmax
comp=Z,13nm,1.1s
CTI Castel Tesino 34.65 309 P **P** **09 53 18.1 +0.2**
ZCCA Zocca 34.73 306 P **P** **09 53 20.3 +1.7**
WET Wettzell 34.77 315 *e*P **P** **09 53 17.9 -0.9**
comp=Z,11nm,1.1s,baz=112,slow=8.7
BRG Berggiesshubel 34.78 318 ⇓*i*P **P** **09 53 19.1 +0.3**
comp=Z,24nm,1.4s
BRG S **S** **09 58 43.0 -5.7**
comp=N,579nm,18.0s
comp=E,513nm,14.3s
comp=Z,504nm,19.1s
BRG Berggiesshubel 34.78 318 *e*P **P** **09 53 18.0 -0.8**
comp=Z,24nm,1.4s,baz=112,slow=8.7
WTTA Wattenberg 34.98 311 *e*P **P** **09 53 20.2 -0.7**
comp=Z,30nm,1.0s,SNR=12
WATA Walderalm 35.04 311 *e*P **P** **09 53 20.5 -0.8**
comp=Z,13nm,0.6s,SNR=7.2
VLC Villacollemand 35.11 306 P **P** **09 53 22.4 +0.5**
VLC lAmb lAmb 09 53 27.2
comp=Z,21nm,0.9s
FBE Freiberg 35.14 318 *e*P **P** **09 53 21.6 -0.3**
comp=Z,12nm,1.0s,baz=112,slow=8.7
SQTA Sankt Quirin 35.25 311 *e*P **P** **09 53 22.3 -0.8**
comp=Z,13nm,0.5s,SNR=7.9
KEST Kesra 35.28 291 P **P** **09 53 24.4 +1.0**
comp=Z,16nm,0.9s,baz=346,slow=5.9,SNR=11
KEST Kesra 35.28 291 P **P** **09 53 25.4 +2.0**
KEST lAmb lAmb 09 53 30.4
comp=Z,21nm,1.0s
MOTA Moosalm 35.35 311 *e*P **P** **09 53 23.2 -0.8**
comp=Z,13nm,0.7s,SNR=9.0
ROTZ Rotzenmuhle 35.40 316 *e*P **P** **09 53 23.3 -0.9**
comp=Z,71nm,1.9s,baz=112,slow=8.7
NKC Novy Kostel 35.42 316 *e*P **P** **09 53 24.9 +0.5**
NKC MLR MLR
comp=Z,900nm,15.2s
NKC Novy Kostel 35.42 316 *e*P **P** **09 53 24.9 +0.5**
NKC AMS AMS 10 12 30.0
comp=Z,900nm,15.2s
FUR Furstenfeldbru 35.47 313 *e*P **P** **09 53 24.2 -0.7**
comp=Z,77nm,1.3s,baz=112,slow=8.7
TANN Tannenbergstha 35.47 317 *e*P **P** **09 53 24.6 -0.3**
comp=Z,18nm,1.2s,baz=112,slow=8.7
WERN Wernitzgruen 35.48 317 *e*P **P** **09 53 25.0 +0.1**
comp=Z,21nm,1.2s,baz=112,slow=8.7
CLL Collm 35.49 318 *i*P **P** **09 53 26.4 +1.4**
comp=Z,44nm,1.2s
CLL *e* 09 54 29.0
CLL *e*PPP PPP 09 54 57.0
CLL *e*(S) **S** **09 58 59.0 -0.7**
CLL Collm 35.49 318 *e*P **P** **09 53 26.1 +1.2**
comp=Z,44nm,1.2s,baz=112,slow=8.7
CLL Collm 35.49 318 P **P** **09 53 25.3 +0.3**
CLL pmax pmax
comp=Z,27nm,0.9s
CLL Collm 35.49 318 P **P** **09 53 25.3 +0.3**
CLL lAmb lAmb 09 53 28.4
comp=Z,27nm,0.9s
FETA Feichten 35.51 311 *e*P **P** **09 53 25.2 -0.2**
comp=Z,27nm,1.1s,SNR=12
TMCR Tamitsa 35.53 350 *e*P **P** **09 53 24.9 -0.2**
TMCR pmax pmax
comp=Z,48nm,0.6s
MANZ Manzenberg 35.53 316 *e*P **P** **09 53 25.4 0.0**
comp=Z,16nm,1.4s,baz=112,slow=8.7
RUE Ruedersdorf 35.53 321 *e*P **P** **09 53 26.1 +0.8**
RUE Ruedersdorf 35.53 321 *e*P **P** **09 53 25.4 +0.1**
baz=112,slow=8.7
RETA Reutte 35.61 311 *e*P **P** **09 53 25.4 -0.8**
comp=Z,8.5nm,0.8s
MBAR Mbarara 35.65 216 P **P** **09 53 27.5 +0.7**
comp=Z,20nm,0.7s,baz=39,slow=9.9,SNR=24
MBAR Mbarara 35.65 216 P **P** **09 53 25.9 -0.9**
MBAR pmax pmax
comp=Z,31nm,0.9s
MBAR Mbarara 35.65 216 P **P** **09 53 25.9 -0.9**
MBAR lAmb lAmb 09 53 32.9
comp=Z,31nm,0.9s
FUORN Ofenpass-Fuorn 35.72 310 P **P** **09 53 26.0 -1.3**
FIA1 FINESS Array S 35.81 340 P **P** **09 53 27.1 -0.4**
FIA1 lAmb lAmb 09 53 28.3
comp=Z,27nm,1.3s
FINES FINESS Array B 35.81 340 P **P** **09 53 26.2 -1.4**
comp=Z,7.1nm,0.6s,baz=145,slow=9.9,SNR=48
FINES PcP **PcP** **09 55 54.3 -0.6**
comp=Z,4.8nm,0.8s,baz=132,slow=2.1,SNR=1.5
FINES LR LR 10 10 13.5
comp=Z,933nm,20.3s,baz=138,slow=40
FINES FINESS Array B 35.81 340 *i*P **P** **09 53 26.7 -0.9**
FINES pmax pmax
comp=Z,7.0nm,0.6s
GRA1 Grafenberg Arr 35.98 315 P **P** **09 53 29.9 +0.7**
GRA1 lAmb lAmb 09 53 30.3
comp=Z,26nm,1.0s
GRF Grafenberg Arr 35.98 315 *e*P **P** **09 53 29.1 -0.1**
comp=Z,22nm,0.9s,baz=112,slow=8.7
GRF Grafenberg Arr 35.98 315 P **P** **09 53 29.9 +0.7**
GRF pmax pmax
comp=Z,26nm,1.0s
MOX Moxa 36.06 317 *e*P **P** **09 53 29.7 -0.1**
comp=Z,16nm,1.4s,baz=112,slow=8.7
UBR Ueberruh 36.09 312 *e*P **P** **09 53 29.7 -0.5**
comp=Z,41nm,1.2s,baz=112,slow=8.7
UBR *e*S **S** **09 59 04.0 -5.1**
DAVA Damuels 36.14 311 *e*P **P** **09 53 29.8 -1.0**
comp=Z,22nm,0.5s,SNR=14
BSD Bornholm Skovb 36.16 325⇑*i*P **P** **09 53 29.2 -1.5**
BSD pmax pmax
comp=Z,72nm,0.7s
BSD Bornholm Skovb 36.16 325⇑*i*P **P** **09 53 29.2 -1.5**
comp=Z,72nm,0.7s
NEUB Neuenburg 36.17 318 *e*P **P** **09 53 30.6 -0.2**
comp=Z,22nm,0.8s,baz=112,slow=8.7
TUE Stuetta 36.30 309 P **P** **09 53 32.1 -0.1**
SHL Shillong 36.45 86 P **P** **09 53 32.3 -1.5**
SHL pmax pmax
comp=Z,21nm,0.9s
SHL Shillong 36.45 86 P **P** **09 53 32.2 -1.5**
SHL lAmb lAmb 09 53 37.8
comp=Z,21nm,0.9s
RGN Rugen 36.70 324 *e*P **P** **09 53 36.5 +1.3**
RGN Rugen 36.70 324 *e*P **P** **09 53 35.9 +0.7**
comp=Z,167nm,1.3s,baz=112,slow=8.7
RGN Rugen 36.70 324 P **P** **09 53 36.1 +0.9**
UBBA Unterbreizbach 37.08 317 *e*P **P** **09 53 39.1 +0.6**
comp=Z,44nm,1.8s,baz=112,slow=8.7
BRDH Bariadhala 37.12 91 P **P** **09 53 38.7 -0.5**
comp=Z,13μm,0.8s,baz=199,slow=0.0,SNR=2.4
CLZ Clausthal 37.21 318 *e*P **P** **09 53 40.4 +0.7**
comp=Z,84nm,1.4s,baz=112,slow=8.7
CLZ *e*S **S** **09 59 26.1 0.0**
NRDL Niedersach Rie 37.60 319 *e*P **P** **09 53 44.1 +1.3**
comp=Z,114nm,1.1s,baz=112,slow=8.7
SENIN Lac Senin/Sane 37.66 309 P **P** **09 53 42.7 -1.2**
TNS Taunus Mts 37.84 315 *e*P **P** **09 53 44.9 -0.2**
comp=Z,11nm,1.0s,baz=112,slow=8.7
BNI Bardonecchia 37.87 306 P **P** **09 53 45.5 0.0**
BNI Bardonecchia 37.87 306 P **P** **09 53 45.5 0.0**
BNI lAmb lAmb 09 53 47.3
comp=Z,31nm,0.9s
BSEG Bad Segeberg 38.03 321 *e*P **P** **09 53 46.9 +0.4**
comp=Z,52nm,1.1s,baz=112,slow=8.7
RETH Rethem/Aller, 38.11 319 *e*P **P** **09 53 48.0 +0.8**
comp=Z,97nm,1.2s,baz=112,slow=8.7
ECH Echery 38.14 312 P **P** **09 53 47.1 -0.5**
ECH pmax pmax
comp=Z,13nm,0.9s
ECH Echery 38.14 312 P **P** **09 53 47.1 -0.5**
IBBN Ibbenburen 38.89 318 *e*P **P** **09 53 55.0 +1.2**
comp=Z,47nm,0.8s,baz=112,slow=8.7
BUG Bochum--Univer 38.91 317 *e*P **P** **09 53 54.7 +0.7**
comp=Z,24nm,1.0s,baz=112,slow=8.7
WLF Walferdange 39.12 314 P **P** **09 53 56.0 +0.3**
WLF Walferdange 39.12 314 *e*P **P** **09 53 55.0 -0.8**
comp=Z,23nm,1.0s,baz=112,slow=8.7
WLF Walferdange 39.12 314 P **P** **09 53 56.1 +0.3**
WLF pmax pmax
comp=Z,18nm,0.9s
WLF Walferdange 39.12 314 P **P** **09 53 56.1 +0.3**
APA Apatity 39.41 350⇓*i*P **P** **09 53 56.9 -1.0**
APA *i* 09 56 11.0
APA *i*S **S** **09 59 57.0 -1.8**
APA pmax pmax
comp=Z,21nm,0.9s
APA MLR MLR
comp=Z,1μm,17.0s
LVZ Lovozero 39.52 350*ce*P **P** **09 53 59.8 +0.8**
LVZ pmax pmax
comp=Z,36nm,1.0s
LVZ Lovozero 39.52 350 P **P** **09 53 58.4 -0.5**
LVZ lAmb lAmb 09 54 00.1
comp=Z,47nm,0.9s
MUD Monsted U'grnd 39.66 325 *i*P **P** **09 54 00.8 +0.7**
MUD pmax pmax
comp=Z,44nm,1.0s
MUD Monsted U'grnd 39.66 325 *i*P **P** **09 54 00.8 +0.7**
comp=Z,44nm,1.0s
GOET G??ttrup 39.88 326 *i*P **P** **09 54 01.2 -0.8**
comp=Z,34nm,0.7s
DOU Dourbes 40.21 314 P **P** **09 54 05.1 +0.3**
NC602 NORSAR Array S 40.62 331 P **P** **09 54 07.2 -0.9**
NC602 NORSAR Array S 40.62 331 *e*P **P** **09 54 07.0 -1.0**
NC405 NORSAR Array S 40.75 332 P **P** **09 54 08.1 -1.1**
NC405 lAmb lAmb 09 54 09.6
comp=Z,48nm,0.8s
HOMB Homborsund 40.77 327 *e*P **P** **09 54 09.3 0.0**
NB201 NORSAR Array S 40.89 332 P **P** **09 54 09.4 -1.0**
NB201 lAmb lAmb 09 54 11.8
comp=Z,72nm,1.3s
KONO Kongsberg 40.90 329*ce*P **P** **09 54 10.5 +0.1**
KONO pmax pmax
comp=Z,34nm,1.3s
KONO Kongsberg 40.90 329 P **P** **09 54 09.9 -0.5**
KONO Kongsberg 40.90 329 *e*P **P** **09 54 09.7 -0.7**
NB2 NORSAR Subarra 40.91 332 P **P** **09 54 09.2 -1.4**
comp=Z,24nm,0.9s,baz=122,slow=8.6
NB2 NORSAR Subarra 40.91 332 P **P** **09 54 09.2 -1.4**
baz=122,slow=8.6
NOA NORSAR Array B 40.91 332 P **P** **09 54 09.0 -1.6**
comp=Z,8.6nm,0.7s,baz=122,slow=8.3,SNR=36
NOA PP **PP** **09 55 45.5 +0.6**
comp=Z,2.0nm,0.8s,baz=137,slow=10.0,SNR=3.9
NOA LR LR 10 12 48.6
comp=Z,658nm,20.2s,baz=125,slow=39
NOA NORSAR Array B 40.91 332 P **P** **09 54 09.0 -1.6**
NAO01 NORSAR Array S 40.95 331 P **P** **09 54 10.3 -0.5**
NAO01 lAmb lAmb 09 54 11.2
comp=Z,46nm,1.1s
NC303 NORSAR Array S 40.95 332 P **P** **09 54 10.3 -0.5**
NC303 lAmb lAmb 09 54 10.6
comp=Z,47nm,1.2s
TAM Tamanrasset 41.03 271 P **P** **09 54 13.9 +1.7**
TAM pmax pmax
comp=Z,48nm,1.3s
TAM Tamanrasset 41.03 271 P **P** **09 54 13.8 +1.7**
TAM lAmb lAmb 09 54 18.4
comp=Z,48nm,1.3s
GTA Gaotai 41.09 63 *e*P **P** **09 54 13.4 +1.0**
GTA pP sP 09 54 18.6 -0.1
GTA sP pP 09 54 22.1 +5.2
GTA ScP **ScP** **10 00 01.6 +0.3**
GTA PcS **PcS** **10 00 04.1 +1.0**
GTA S **S** **10 00 26.4 +1.5**
GTA sS sS 10 00 34.5 +2.0
GTA pmax pmax
comp=Z,42nm,1.1s
GTA pmax pmax
comp=Z,270nm,7.3s
GTA LR LR
comp=Z,1μm,14.6s
GTA LR LR
comp=Z,1μm,15.6s
GTA LR LR
comp=Z,2μm,15.2s
NBO00 NORSAR Array S 41.09 332 P **P** **09 54 11.5 -0.5**
NBO00 lAmb lAmb 09 54 16.7
comp=Z,50nm,1.2s
NC204 NORSAR Array S 41.23 332 P **P** **09 54 12.8 -0.4**
NC204 lAmb lAmb 09 54 13.4
comp=Z,27nm,0.8s
SNART Snartemo 41.42 327 *e*P **P** **09 54 14.9 +0.2**
SKAR Skarsla 41.97 330 *e*P **P** **09 54 19.2 0.0**
BLS5 Blasjo 42.23 328 *e*P **P** **09 54 22.2 +0.8**
DOMB Dombas 42.32 332 *e*P **P** **09 54 23.2 +1.1**
ODD1 Odda 42.36 329 *e*P **P** **09 54 24.1 +1.7**
KEV Kevo 42.44 348 P **P** **09 54 23.6 +0.7**
KEV pmax pmax
comp=Z,55nm,1.3s
KEV Kevo 42.44 348 P **P** **09 54 23.6 +0.7**
KEV lAmb lAmb 09 54 34.1
comp=Z,55nm,1.3s
ARCES ARCESS Array B 42.54 347 P **P** **09 54 23.9 +0.2**
comp=Z,19nm,1.1s,baz=171,slow=7.3,SNR=19
ARCES PP **PP** **09 56 02.4 +0.2**
comp=Z,18nm,1.1s,baz=148,slow=7.1,SNR=6.5
ARCES LR LR 10 14 49.0
comp=Z,836nm,19.3s,baz=146,slow=40
KTK1 Kautokeino 42.57 346 *e*P **P** **09 54 23.9 -0.1**
KMY Karmoy 42.71 327 *e*P **P** **09 54 25.9 +0.7**
MOY Mondy 42.94 45 *e*P **P** **09 54 28.8 +1.5**
MOY pmax pmax
comp=Z,59nm,2.5s
HYA Hoyanger 43.11 330 *e*P **P** **09 54 29.5 +1.1**
BER Bergen 43.15 329 *e*P **P** **09 54 29.0 +0.2**
AKN Aaknes 43.23 332 *e*P **P** **09 54 30.1 +0.7**
ASK Askoy 43.25 329 *e*P **P** **09 54 30.1 +0.6**
SUE Sulen 43.59 330 *e*P **P** **09 54 32.5 -0.5**
FOO Floro 43.79 330 *e*P **P** **09 54 34.4 +0.5**
HAMF Hammerfest 43.81 347 *e*P **P** **09 54 34.8 +0.9**
TRO Tromso 44.02 345 *e*P **P** **09 54 35.7 0.0**
WOL Wolverton 44.07 315 *e*P **P** **09 54 35.9 -0.4**
WOL lAmb lAmb 09 54 36.8
comp=Z,39nm,0.7s
ZAK Zakamensk 44.15 47 *e*P **P** **09 54 36.6 -0.5**
ZAK *e* 09 56 19.1
ZAK pmax pmax
comp=Z,9.0nm,1.3s
ZAK pmax pmax
comp=Z,8.0nm,1.4s
GDLE Glaisdale, N Y 44.41 319 *e*P **P** **09 54 38.5 -0.4**
GDLE lAmb lAmb 09 54 42.3
comp=Z,63nm,0.8s
LZH Lanzhou 44.54 67 *e*P **P** **09 54 41.8 +1.3**
LZH pP sP 09 54 48.5 +1.7
LZH PP **PcP** **09 56 22.8 -0.8**
LZH S **S** **10 01 15.0 -0.7**
LZH sS sS 10 01 25.0 +1.7
LZH pmax pmax
comp=Z,53nm,1.1s

LZH pmax pmax
comp=Z,340nm,4.9s
LZH LR LR
comp=Z,1μm,13.0s
LZH LR LR
comp=Z,1μm,14.1s
LZH LR LR
comp=Z,1μm,16.3s
TLY Talaya 44.57 45*c i*P **P** **09 54 41.6 +1.3**
TLY *e*S **S** **10 01 19.3 +3.8**
TLY pmax pmax
comp=Z,46nm,1.3s
TLY MLR MLR
comp=Z,3μm,12.0s
LBWR Ladybower, Pea 44.73 317 *e*P **P** **09 54 41.4 -0.2**
LBWR IAmb IAmb 09 54 45.7
comp=Z,22nm,0.8s
CHTO Chiang Mai 44.88 93 P **P** **09 54 42.3 -0.9**
CHTO pmax pmax
comp=Z,11nm,1.1s
CHTO Chiang Mai 44.88 93 P **P** **09 54 42.3 -0.9**
NRIK Noril'sk 44.99 17 P **P** **09 54 43.5 0.0**
comp=Z,17nm,1.0s,baz=223,slow=6.4,SNR=29
NRIK LR LR 10 17 06.1
comp=Z,2μm,20.0s,baz=230,slow=41
CMAR Chiang Mai Arr 45.02 93 P **P** **09 54 43.3 -1.0**
comp=Z,2.1nm,0.6s,baz=285,slow=8.4,SNR=11
CMAR PcP **PcP** **09 56 24.7 -0.6**
comp=Z,3.0nm,0.6s,baz=291,slow=5.9,SNR=5.0
CMAR ScP **ScP** **10 00 16.7 -0.7**
comp=Z,0.8nm,0.4s,baz=292,slow=3.0,SNR=4.7
CMAR LR LR 10 16 00.1
comp=Z,397nm,18.8s,baz=325,slow=39
IRK Irkutsk 45.03 44 *e*P **P** **09 54 41.0 -3.0**
IRK pmax pmax
comp=Z,68nm,2.2s
MONM Monmouth 45.12 315 *e*P **P** **09 54 43.8 -0.9**
MONM IAmb IAmb 09 54 44.6
comp=Z,19nm,0.8s
MCH1 Michaelchurch 45.26 315 *e*P **P** **09 54 44.9 -0.9**
MCH1 IAmb IAmb 09 54 49.4
comp=Z,28nm,0.8s
HLM1 Long Mynd 45.27 316 *e*P **P** **09 54 45.2 -0.7**
CD2 Chengdu 45.36 74 P **P** **09 54 46.3 -0.7**
CD2 pP pP 09 54 48.8 -2.7
CD2 PP **PP** **09 56 31.5 -1.5**
CD2 S **S** **10 01 26.8 -0.8**
CD2 pmax pmax
comp=Z,20nm,0.8s
CD2 pmax pmax
comp=Z,290nm,7.3s
CD2 LR LR
comp=Z,3μm,27.3s
CD2 LR LR
comp=Z,1μm,19.6s
CD2 LR LR
comp=Z,2μm,16.9s
ESDC Sonseca Array 45.59 298 P **P** **09 54 49.0 +0.3**
comp=Z,1.2nm,0.5s,baz=70,slow=7.8,SNR=7.8
ESDC PcP **PcP** **09 56 27.2 +0.1**
comp=Z,1.7nm,0.6s,baz=52,slow=3.1,SNR=3.0
ESY Stoneypath 45.73 321 *e*P **P** **09 54 49.3 -0.2**
ESK Eskdalemuir 45.94 320 *e*P **P** **09 54 50.7 -0.4**
ESK Eskdalemuir 45.94 320 P **P** **09 54 51.4 +0.3**
ESK pmax pmax
comp=Z,36nm,1.1s
ESK Eskdalemuir 45.94 320 P **P** **09 54 51.4 +0.3**
ESK IAmb IAmb 09 54 52.0
comp=Z,36nm,1.1s
EBL Broad Law 45.94 321 *e*P **P** **09 54 51.0 -0.2**
SONM Songino Array 45.96 51 P **P** **09 54 51.5 -0.1**
comp=Z,5.5nm,0.9s,baz=271,slow=9.0,SNR=33
SONM PcP **PcP** **09 56 28.4 +0.1**
comp=Z,2.0nm,0.8s,baz=212,slow=2.8,SNR=4.1
SONM LR LR 10 16 49.7
comp=Z,1μm,19.8s,baz=265,slow=40
KMI Kunming 45.99 83 P **P** **09 54 51.0 -1.2**
KMI pP pP 09 54 56.5 -0.3
KMI sP sP 09 54 57.9 -0.7
KMI PP **PP** **09 56 38.5 -1.5**
KMI S **S** **10 01 37.8 +0.7**
KMI pmax pmax
comp=Z,21nm,1.4s
KMI pmax pmax
comp=Z,200nm,4.7s
KMI LR LR
comp=Z,800nm,17.6s
KMI LR LR
comp=Z,400nm,16.6s
KMI LR LR
comp=Z,640nm,20.2s
LRW Lerwick 46.09 327 *e*P **P** **09 54 51.6 -0.5**
LRW IAmb IAmb 09 54 53.2
comp=Z,42nm,0.6s
EDU Dundee 46.09 322 *e*P **P** **09 54 51.5 -0.8**
WPS Cemaes, Angles 46.37 317 *e*P **P** **09 54 54.8 +0.3**
WPS IAmb IAmb 09 54 59.4
comp=Z,34nm,0.9s
ULN Ulaanbaatar 46.41 51*ce*P **P** **09 54 55.8 +0.7**
ULN pmax pmax
comp=Z,21nm,1.0s
ULN Ulaanbaatar 46.41 51 P **P** **09 54 55.5 +0.4**
ULN IAmb IAmb 09 54 57.1
comp=Z,21nm,1.1s
MCD Coleburn Disti 46.45 323 *e*P **P** **09 54 55.2 +0.1**
ELO Logie Almond 46.45 321 *e*P **P** **09 54 55.0 -0.2**
INVG Invergeldie, C 46.62 321 *e*P **P** **09 54 55.8 -0.7**
INVG IAmb IAmb 09 55 00.3
comp=Z,100nm,0.8s
MLA1 Latheron 46.67 324 *e*P **P** **09 54 56.8 -0.1**
MDT Midelt 47.09 289 P **P** **09 55 01.0 +0.4**
comp=Z,9.0nm,0.9s,baz=112,slow=11,SNR=8.7
LAWE Loch Awe, Argy 47.33 321 *e*P **P** **09 55 00.5 -1.5**
LAWE IAmb IAmb 09 55 02.9
comp=Z,66nm,1.1s
KAC Achnashellach 47.51 323 *e*P **P** **09 55 03.0 -0.3**
PBRG Braganca 47.52 301 *e*P **P** **09 55 04.5 +0.7**
comp=Z,29nm,0.6s
KPL Plockton 47.66 322 *e*P **P** **09 55 04.7 +0.2**
MVO Moncorvo 47.79 300 *e*P **P** **09 55 05.6 -0.3**
comp=Z,31nm,1.0s
OPO Ambohidratompo 48.02 185 P **P** **09 55 08.9 +1.0**
comp=Z,4.8nm,0.8s,baz=25,slow=7.1,SNR=4.5
TOA0 Torodi Ar. Sit 48.25 261 P **P** **09 55 10.4 +0.7**
TOA0 IAmb IAmb 09 55 14.7
comp=Z,30nm,1.1s
TORD Torodi Ar. Bea 48.25 261 P **P** **09 55 10.2 +0.5**
comp=Z,11nm,0.5s,baz=55,slow=7.4,SNR=59
TORD ScP **ScP** **10 00 28.6 -2.4**
comp=Z,4.5nm,1.1s,baz=65,slow=3.7,SNR=5.4
TORD LR LR 10 17 39.0
comp=Z,1μm,18.2s,baz=45,slow=39
PMRV Marv??o 48.25 298 *e*P **P** **09 55 09.8 +0.3**
comp=Z,45nm,1.7s
PCBR Castelo Branco 48.27 299 *e*P **P** **09 55 10.1 +0.6**
comp=Z,55nm,1.4s
PVIS Viseu 48.49 300 *e*P **P** **09 55 12.5 +1.2**
comp=Z,41nm,2.2s
PGAV Gavieira, Arco 48.65 301 *e*P **P** **09 55 13.1 +0.5**
comp=Z,85nm,1.6s
PBEJ Beja 48.81 296 *e*P **P** **09 55 14.5 +0.8**
comp=Z,44nm,1.7s
GYA Guiyang 48.97 79⇓*i*P **P** **09 55 14.8 -0.5**
GYA PP **PP** **09 57 09.3 +0.6**
GYA ScP **ScP** **10 00 34.0 0.0**
GYA S **S** **10 02 18.8 -0.5**
GYA SS **SS** **10 05 44.5 -5.6**
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=Z,310nm,16.0s
GYA LR LR
comp=Z,440nm,16.3s
GYA LR LR
comp=Z,380nm,17.0s
XAN Xi'an 48.98 69 P **P** **09 55 15.3 +0.1**
XAN pP sP 09 55 23.3 +1.7
XAN pmax pmax
comp=Z,23nm,1.0s
XAN Xi'an 48.98 69 P **P** **09 55 14.8 -0.4**
XAN pmax pmax
comp=Z,20nm,0.7s
XAN Xi'an 48.98 69 P **P** **09 55 14.8 -0.4**
XAN IAmb IAmb 09 55 25.1
comp=Z,20nm,0.7s
PNCL Nicolau / Gran 49.31 296 *e*P **P** **09 55 19.2 +1.6**
LSZ Lusaka 49.69 209 P **P** **09 55 22.4 +1.7**
comp=Z,24nm,0.9s,baz=32,slow=7.9,SNR=31
LSZ Lusaka 49.69 209 P **P** **09 55 22.8 +2.1**
LSZ IAmb IAmb 09 55 26.8
comp=Z,37nm,1.0s
HHC Hu-ho-hao-te 49.95 60 *e*P **P** **09 55 18.9 -3.7**
HHC pP pP 09 55 24.6 -2.6
HHC S **S** **10 02 30.3 -2.4**
HHC sS sS 10 02 40.6 +0.3
HHC pmax pmax
comp=Z,15nm,0.8s
HHC pmax pmax
comp=Z,110nm,4.8s
HHC LR LR
comp=Z,360nm,14.5s
HHC LR LR
comp=Z,490nm,16.2s
HHC LR LR
comp=Z,470nm,16.2s
ENH Enshi 50.31 74 P **P** **09 55 24.3 -1.0**
ENH IAmb IAmb 09 55 41.6
comp=Z,29nm,1.5s
SPA0 Spitsbergen Ar 51.03 351 P **P** **09 55 30.1 0.0**
SPA0 Spitsbergen Ar 51.03 351 *e*P **P** **09 55 30.1 0.0**
TIY Taiyuan 51.09 64 *e*P **P** **09 55 30.6 -0.6**
TIY PP **PP** **09 57 31.8 +4.1**
TIY S S 10 02 57.6 +9.0
TIY LR LR
comp=Z,400nm,8.7s
TIY LR LR
comp=Z,190nm,9.3s
TIY LR LR
comp=Z,310nm,26.1s
BOD Bodaibo 51.27 38⇓*i*P **P** **09 55 32.4 +0.3**
BOD pmax pmax
comp=Z,117nm,1.3s
GSI Gunungsitoli 52.55 114 P **P** **09 55 41.7 -0.6**
GSI IAmb IAmb 09 55 50.0
comp=Z,21nm,0.9s
PSI Prapat 52.76 111 P **P** **09 55 42.6 -1.3**
PSI pmax pmax
comp=Z,9.0nm,0.8s
RPSI Rantau Prapat 52.82 111 P **P** **09 55 42.6 -1.6**
BJI Beijing 53.55 60 P **P** **09 55 49.5 +0.2**
BJI PP **PP** **09 57 50.6 +0.8**
BJI S **S** **10 03 28.9 +6.9**
BJI SS **SKiKP** **10 07 03.8 -0.7**
BJI pmax pmax
comp=Z,12nm,1.2s
BJI pmax pmax
comp=Z,150nm,11.7s
BJI LR LR
comp=Z,780nm,17.6s
BJI LR LR
comp=Z,650nm,17.6s
BJI LR LR
comp=Z,680nm,27.9s
MATP Matopo 54.20 206 P **P** **09 55 55.0 +0.7**
comp=Z,26nm,0.9s,baz=27,slow=7.9,SNR=26
WHN Wuhan 54.28 72⇓P **P** **09 55 55.0 +0.2**
WHN S **S** **10 03 40.0 +7.9**
WHN LR LR
comp=Z,2μm,15.3s
WHN LR LR
comp=Z,1μm,15.8s
WHN LR LR
comp=Z,2μm,16.7s
QIZ Qiongzhong 54.29 87 P **P** **09 55 53.6 -1.4**
QIZ S **S** **10 03 31.5 -1.0**
QIZ LR LR
comp=Z,340nm,14.5s
QIZ LR LR
comp=Z,320nm,16.6s
QIZ LR LR
comp=Z,430nm,12.5s
HIA Hailar 54.78 48 P **P** **09 55 59.1 +1.0**
HIA pmax pmax
comp=Z,27nm,1.0s
HIA Hailar 54.78 48 P **P** **09 55 59.1 +1.0**
HIA IAmb IAmb 09 56 00.0
comp=Z,27nm,1.0s
TIA Tai'an 55.08 65 P **P** **09 56 00.8 +0.3**
TIA S **S** **10 03 45.4 +2.7**
TIA pmax pmax
comp=Z,25nm,1.0s
TIA pmax pmax
comp=Z,220nm,6.9s
TIA LR LR
comp=Z,670nm,16.7s
TIA LR LR
comp=Z,490nm,16.9s
TIA LR LR
comp=Z,550nm,22.7s
BKNI Bangkinang 55.91 112 P **P** **09 56 05.9 -0.8**
BORG Borgarnes 56.07 331 LR LR 10 21 30.5
comp=Z,324nm,19.6s,baz=98,slow=38
DAG Danmarks Havn 56.74 345 *i* P **P** **09 56 11.0 -0.8**
DAG pmax pmax
comp=Z,11nm,0.9s
DAG Danmarks Havn 56.74 345 *i* P **P** **09 56 11.0 -0.8**
comp=Z,11nm,0.9s
DBIC Dimbokro 57.04 258 P **P** **09 56 15.0 +0.3**
comp=Z,36nm,0.8s,baz=36,slow=7.4,SNR=42
DBIC LR LR 10 22 35.6
comp=Z,1μm,18.5s,baz=38,slow=38
DBIC Dimbokro 57.04 258 P **P** **09 56 15.3 +0.5**
KIC Kosan Boka 57.10 258 *e*P **P** **09 56 15.9 +0.7**
comp=Z,76nm,1.0s
TIC Toumodi 57.19 258 *e*P **P** **09 56 16.7 +0.8**
LIC Lamto 57.41 258 *e*P **P** **09 56 18.0 +0.6**
comp=Z,194nm,1.1s
NJ2 Nanjing 57.55 69 *e*P **P** **09 56 16.8 -1.4**
NJ2 pmax pmax
comp=Z,13nm,0.7s
NJ2 LR LR
comp=Z,570nm,12.8s
NJ2 LR LR
comp=Z,850nm,15.2s
NJ2 LR LR
comp=Z,1μm,16.1s
NOR Nord 57.66 351⇑*i*P **P** **09 56 17.8 -0.4**
NOR pmax pmax
comp=Z,11nm,0.8s
NOR Nord 57.66 351⇑*i*P **P** **09 56 17.8 -0.4**
comp=Z,11nm,0.8s
DL2 Dalian 57.92 60 P **P** **09 56 19.8 -0.9**
DL2 S **S** **10 04 23.8 +3.5**
DL2 pmax pmax
comp=Z,24nm,1.1s
DL2 pmax pmax
comp=Z,190nm,7.4s
DL2 LR LR
comp=Z,410nm,20.4s
DL2 LR LR
comp=Z,300nm,14.7s
DL2 LR LR
comp=Z,660nm,28.1s
TSUM Tsumeb 58.16 218 P **P** **09 56 22.3 -0.4**
TSUM IAmb IAmb 09 56 28.3
comp=Z,14nm,1.1s
TIXI Tiksi 58.44 21*ce*P **P** **09 56 23.6 -0.2**
TIXI pmax pmax
comp=Z,42nm,2.5s
TIXI Tiksi 58.44 21 P **P** **09 56 23.6 -0.2**
TIXI IAmb IAmb 09 56 29.7
comp=Z,12nm,0.8s
ZEA Zeya 58.87 42 *e*P **P** **09 56 28.0 +0.9**
ZEA pmax pmax
comp=E,24nm,1.0s
ZEA pmax pmax
comp=Z,46nm,1.0s
ZEA pmax pmax
comp=Z,300nm,7.0s
ZEA MLR MLR
comp=Z,2μm,14.0s
ZEA MLR MLR
comp=N,600nm,13.0s
ZEA MLR MLR
comp=E,1μm,13.0s
YAK Yakutsk 59.14 33 *e*P **P** **09 56 28.8 0.0**
YAK *e**PP **sP** **09 56 36.4 +1.2**
YAK *e*S **S** **10 04 36.1 +0.6**
YAK *e**SS **sS** **10 04 42.7 -0.6**
YAK pmax pmax
comp=Z,36nm,0.8s
YAK pmax pmax
comp=N,7.0nm,0.9s
YAK pmax pmax
comp=E,15nm,1.1s
YAK smax smax
comp=E,42nm,2.1s
YAK smax smax
comp=N,26nm,2.4s
YAK MLR MLR
comp=Z,537nm,16.0s
YAK MLR MLR
comp=N,266nm,16.0s
YAK MLR MLR
comp=E,341nm,18.0s
YAK Yakutsk 59.14 33 P **P** **09 56 29.1 +0.3**
LBTB Lobatse 59.47 207 P **P** **09 56 32.7 +1.1**
LBTB pmax pmax
comp=Z,51nm,0.9s
LBTB Lobatse 59.47 207 P **P** **09 56 32.7 +1.1**
CN2 Changchun 59.57 54 *e*P **P** **09 56 32.3 +0.2**
CN2 *e*S **S** **10 04 40.5 -1.1**
CN2 SS **SS** **10 08 37.8 +1.1**
CN2 pmax pmax
comp=Z,20nm,1.1s
CN2 pmax pmax
comp=Z,220nm,8.1s
CN2 LR LR
comp=Z,600nm,17.0s
CN2 LR LR
comp=Z,1μm,17.0s
CN2 LR LR
comp=Z,2μm,16.0s
MDSI Maura Dua 61.29 114 P **P** **09 56 40.0 -4.2**
comp=Z,16nm,0.9s
SUMG Summit 61.85 340 P **P** **09 56 48.0 +0.4**
SUMG pmax pmax
comp=Z,26nm,0.8s
SUMG Summit 61.85 340 P **P** **09 56 48.0 +0.4**
SUMG Summit 61.85 340⇑*i*P **P** **09 56 48.1 +0.4**
comp=Z,72nm,0.9s
KLR Kul'dur 62.52 47*ce*P **P** **09 56 51.9 -0.2**
BOSA Boshof 62.84 205 P **P** **09 56 54.8 +0.4**
comp=Z,17nm,0.8s,baz=19,slow=6.6,SNR=25
BOSA LR LR 10 26 04.7
comp=Z,1μm,18.7s,baz=40,slow=38
BOSA Boshof 62.84 205 P **P** **09 56 55.5 +1.1**
BOSA IAmb IAmb 09 56 59.8
comp=Z,20nm,0.8s
KS19 Wonju Array Si 63.03 60 P **P** **09 56 56.2 +0.6**
KS19 IAmb IAmb 09 56 56.6
comp=Z,19nm,1.1s
KSRS Korea Array 63.09 60 P **P** **09 56 55.0 -0.9**
comp=Z,5.7nm,0.6s,baz=279,slow=7.2,SNR=28
KSRS LR LR 10 27 52.2
comp=Z,677nm,19.1s,baz=286,slow=39
MSHR Mys Shultsa 63.92 54*ce*P **P** **09 57 01.7 +0.3**
MSHR pmax pmax
comp=Z,18nm,1.0s
USA0B Ussuriysk Arra 64.03 52 P **P** **09 57 01.3 -0.8**
USA0B pmax pmax
comp=Z,14nm,1.1s
USA0B Ussuriysk Arra 64.03 52 P **P** **09 57 01.3 -0.8**
USA0B IAmb IAmb 09 57 08.0
comp=Z,14nm,1.1s
USRK Ussuriysk Ar. 64.03 52 P **P** **09 57 00.8 -1.3**
comp=Z,123nm,0.2s,baz=282,slow=8.1,SNR=1.9
USRK LR LR 10 26 53.9
comp=Z,628nm,19.7s,baz=274,slow=38
SBUM Sibu 64.03 103 P **P** **09 57 01.4 -1.2**
JNU Nakatsue 66.81 64 P **P** **09 57 19.9 -0.5**
comp=Z,7.9nm,0.8s,baz=63,slow=2.9,SNR=2.6
JNU Nakatsue 66.81 64 IAmb IAmb 09 57 36.6
comp=Z,18nm,1.0s
NKL Nikolayevsk 66.81 41 *e*P **P** **09 57 17.7 -2.2**
NKL *e* 09 59 48.3
NKL *e*S **S** **10 06 14.2 +2.5**
NKL pmax pmax
comp=Z,21nm,1.1s
NKL pmax pmax
comp=N,5.0nm,1.0s
NKL pmax pmax
comp=E,2.0nm,0.8s
SFJD Kangerlussuaq 67.43 335⇑*i*P **P** **09 57 23.1 -0.6**
SFJD Kangerlussuaq 67.43 335⇑*i*P **P** **09 57 23.1 -0.6**
TULEG Thule 67.87 347 P **P** **09 57 26.3 0.0**
IVI Ivigtut 68.67 329 P **P** **09 57 30.9 -0.6**
IVI IAmb IAmb 09 57 40.7
comp=Z,8.6nm,0.8s
TYV Tymovskoe 68.73 43 *e*P P 09 57 26.4 -5.7
TYV pmax pmax
comp=Z,9.0nm,1.6s
SEY Seymchan 69.06 29 *i* P **P** **09 57 34.4 +0.4**
MA2 Magadan 69.72 32*ce*P **P** **09 57 39.4 +1.3**
MA2 pmax pmax
comp=Z,31nm,1.0s
MA2 Magadan 69.72 32 **P** **09 57 38.8 +0.8**
MA2 Magadan 69.72 32 P **P** **09 57 38.3 +0.2**
MA2 IAmb IAmb 09 57 39.8
comp=Z,39nm,0.9s
YSS Yuzh-Sakhalins 70.23 47*c i*P **P** **09 57 41.2 -0.3**
YSS *e**SP **pP** **09 57 46.9 +0.7**
YSS *e* 10 00 17.8
YSS *e*S **S** **10 06 52.8 +0.1**
YSS *e*SS **SS** **10 11 22.0 -0.3**
YSS *e*SSS SSS 10 14 24.3
YSS pmax pmax
comp=Z,40nm,0.9s
YSS MLR MLR
comp=Z,1μm,19.0s
YSS MLR MLR
comp=E,1μm,17.0s
YSS Yuzh-Sakhalins 70.23 47 P **P** **09 57 40.8 -0.6**
MJB9 Matsu-Tunnel 71.11 58 P **P** **09 57 46.5 -0.5**
MAT Matsushiro 71.11 58 P **P** **09 57 46.0 -1.1**
MJAR Matsushiro Arr 71.11 58 P **P** **09 57 46.2 -0.8**
comp=E,5.1nm,1.0s,baz=286,slow=7.1,SNR=6.6
MJAR LR LR 10 31 30.2
comp=E,346nm,18.8s,baz=275,slow=38
ASAJ Asahikawa 71.23 49 P **P** **09 57 47.6 +0.1**
comp=E,8.2nm,0.7s,baz=313,slow=6.5,SNR=7.2
JKA Kamikawa-asahi 71.23 49 P **P** **09 57 47.6 0.0**
BILL Bilibino 71.66 21*ce*P **P** **09 57 50.4 +0.6**
BILL *i* 09 57 58.4
BILL *e* 09 58 08.3
BILL *i* S **S** **10 07 01.5 -7.1**
BILL pmax pmax
comp=Z,40nm,1.0s
BILL MLR MLR
comp=Z,864nm,15.0s
BILL Bilibino 71.66 21 P **P** **09 57 50.7 +0.9**
DAV Davao City (W) 73.27 91⇑*i*P **P** **09 58 00.3 0.0**
PEA0B Petropavlovsk- 76.12 36*ce*P **P** **09 58 16.4 +0.2**
PEA0B Petropavlovsk- 76.12 36 P **P** **09 58 15.9 -0.2**
PEA0B IAmb IAmb 09 58 16.2
comp=Z,28nm,1.2s
PETK Petropavlovsk- 76.12 36 P **P** **09 58 15.3 -0.9**
comp=Z,7.8nm,0.9s,baz=169,slow=1.5,SNR=14
PETK LR LR 10 34 58.7
comp=Z,468nm,19.3s,baz=321,slow=38
PET Petropavlovsk 76.66 36 *e*P **P** **09 58 18.4 -0.8**
PET *e*S **S** **10 08 02.1 -3.1**
PET pmax pmax
comp=Z,100nm,12.0s
PET MLR MLR
comp=Z,800nm,19.0s
A36M Sachs Harbour 78.66 359 P **P** **09 58 30.1 +0.1**
baz=3.4
RDOG Red Dog Mine 79.44 12 P **P** **09 58 34.6 +0.1**
RDOG IAmb IAmb 09 58 35.9
comp=Z,32nm,1.3s
SCHQ Schefferville 80.41 329 P **P** **09 58 39.5 -0.3**
comp=Z,8.8nm,0.7s,baz=60,slow=6.9,SNR=11
SCHQ Schefferville 80.41 329 P **P** **09 58 39.3 -0.6**
SCHQ IAmb IAmb 09 58 41.2
comp=Z,20nm,1.1s
TOLK Toolik Lake Re 80.90 7 P **P** **09 58 43.3 +0.9**
baz=342
TOLK Toolik Lake Re 80.90 7 P **P** **09 58 43.2 +0.9**
C36M Paulatuk 81.28 358 P **P** **09 58 43.8 -0.3**
baz=4.5
C36M Paulatuk 81.28 358 P **P** **09 58 43.9 -0.3**
C36M IAmb IAmb 09 58 45.0
comp=Z,21nm,0.9s
SIJI Sorong 82.09 96 P **P** **09 58 47.3 -2.2**
comp=Z,2.8nm,0.5s,baz=314,slow=8.3,SNR=6.3

COLD	**Coldfoot**	**82.17**	**8**	P	**P**	**09 58 49.6**	**+0.6**
COLD				IAmb	IAmb	09 59 01.0	
	comp=Z,15nm,1.1s						
INK	**Inuvik**	**82.34**	**2**	P	**P**	**09 58 49.5**	**-0.3**
	comp=Z,8.9nm,0.9s,baz=349,slow=6.0,SNR=8.5						
INK	**Inuvik**	**82.34**	**2**	P	**P**	**09 58 49.5**	**-0.3**
INK				pmax	pmax		
	comp=Z,14nm,1.2s						
INK	**Inuvik**	**82.34**	**2**	IAmb	IAmb	09 58 50.6	
	comp=Z,14nm,1.1s						
FYU	**Fort Yukon**	**83.36**	**6**	P	**P**	**09 58 55.6**	**+0.5**
EPYK	**Eagle Plains**	**84.16**	**3**	P	**P**	**09 58 59.5**	**+0.1**
EPYK				IAmb	IAmb	09 59 00.7	
	comp=Z,16nm,1.0s						
MLY	**Manley**	**84.19**	**9**	P	**P**	**09 58 59.9**	**+0.3**
MLY				IAmb	IAmb	09 59 01.6	
	comp=Z,21nm,1.2s						
PRP	**Porcupine Dome**	**84.35**	**7**	P	**P**	**09 59 01.2**	**+0.8**
PRP				IAmb	IAmb	09 59 07.3	
	comp=Z,9.4nm,0.8s						
POKR	**Poker Plat Res**	**84.53**	**8**	P	**P**	**09 59 02.0**	**+0.8**
	baz=344						
MDM	**Murphy Dome**	**84.59**	**8**	P	**P**	**09 59 02.0**	**+0.5**
TCOL	**CIGO, UAF Yank**	**84.71**	**8**	P	**P**	**09 59 02.3**	**+0.2**
	baz=344						
COLA	**College**	**84.71**	**8**	P	**P**	**09 59 01.9**	**-0.1**
COLA				pmax	pmax		
	comp=Z,26nm,1.2s						
COLA	**College**	**84.71**	**8**	P	**P**	**09 59 01.9**	**-0.1**
COLA				IAmb	IAmb	09 59 03.7	
	comp=Z,26nm,1.1s						
BATG	**Bathurst New B**	**84.75**	**322**	P	**P**	**09 59 02.8**	**+0.1**
BATG				IAmb	IAmb	09 59 04.7	
	comp=Z,30nm,1.4s						
NEA	**Nenana**	**84.85**	**8**	P	**P**	**09 59 03.3**	**+0.5**
NEA				IAmb	IAmb	09 59 03.3	
	comp=Z,13nm,1.4s						
IL31		**84.92**	**8**	P	**P**	**09 59 03.1**	**0.0**
IL31				IAmb	IAmb	09 59 04.2	
	comp=Z,7.0nm,0.8s						
ILAR	**Eielson Array**	**84.92**	**8**	P	**P**	**09 59 02.7**	**-0.5**
	comp=Z,5.8nm,0.7s,baz=325,slow=4.1,SNR=58						
ILAR				PP	**PP**	**10 02 18.4**	**-0.6**
	comp=Z,2.0nm,1.0s,baz=346,slow=7.8,SNR=4.1						
ILAR				LR	LR	10 43 50.6	
	comp=Z,243nm,18.9s,baz=38,slow=40						
CCB	**Clear Creek Bu**	**84.94**	**8**	P	**P**	**09 59 02.9**	**-0.3**
BPAW	**Bear Paw Mtn.**	**85.04**	**9**	P	**P**	**09 59 04.0**	**+0.1**
WRH	**Wood River Hil**	**85.07**	**8**	P	**P**	**09 59 04.0**	**+0.1**
WRH				IAmb	IAmb	09 59 05.0	
	comp=Z,17nm,1.4s						
HDA	**Harding Lake**	**85.27**	**8**	P	**P**	**09 59 04.3**	**-0.6**
	baz=344						
HDA	**Harding Lake**	**85.27**	**8**	P	**P**	**09 59 04.3**	**-0.6**
HDA				IAmb	IAmb	09 59 09.5	
	comp=Z,9.1nm,0.7s						
TTA	**Tatalina**	**85.33**	**12**	P	**P**	**09 59 05.3**	**0.0**
TTA				pmax	pmax		
	comp=Z,35nm,1.4s						
TTA	**Tatalina**	**85.33**	**12**	P	**P**	**09 59 05.3**	**0.0**
EGAK	**Eagle**	**85.47**	**5**	P	**P**	**09 59 06.3**	**+0.4**
KTH	**Kantishna Hill**	**85.57**	**10**	P	**P**	**09 59 06.1**	**-0.4**
KTH				IAmb	IAmb	09 59 08.6	
	comp=Z,26nm,1.0s						
MCK	**McKinley**	**85.67**	**9**	P	**P**	**09 59 06.9**	**-0.1**
MCK				pmax	pmax		
	comp=Z,38nm,0.9s						
MCK	**McKinley**	**85.67**	**9**	P	**P**	**09 59 06.9**	**-0.1**
TRF	**Thorofare Moun**	**85.76**	**9**	P	**P**	**09 59 07.7**	**+0.1**
TRF				IAmb	IAmb	09 59 19.1	
	comp=Z,22nm,1.0s						
RND	**Reindeer**	**86.00**	**9**	P	**P**	**09 59 08.2**	**-0.4**
RND				pmax	pmax		
	comp=Z,33nm,1.1s						
RND	**Reindeer**	**86.00**	**9**	P	**P**	**09 59 08.2**	**-0.4**
PPLA	**Purkeypile**	**86.00**	**10**	P	**P**	**09 59 09.2**	**+0.4**
PPLA				IAmb	IAmb	09 59 11.1	
	comp=Z,16nm,0.8s						
SCRK	**Sand Creek**	**86.01**	**7**	P	**P**	**09 59 09.5**	**+0.7**
RIDG	**Independent Ri**	**86.15**	**7**	P	**P**	**09 59 09.4**	**0.0**
RIDG				IAmb	IAmb	09 59 10.9	
	comp=Z,33nm,1.4s						
FITZ	**Fitzroy Crossi**	**86.24**	**113**	P	**P**	**09 59 10.1**	**-0.3**
	comp=Z,7.3nm,0.7s,baz=288,slow=3.7,SNR=15						
FITZ	**Fitzroy Crossi**	**86.24**	**113**	P	**P**	**09 59 09.9**	**-0.5**
FITZ				IAmb	IAmb	09 59 11.0	
	comp=Z,13nm,1.0s						
DAWY	**Dawson**	**86.30**	**4**	P	**P**	**09 59 10.4**	**+0.3**
DOT	**Dot Lake**	**86.32**	**7**	P	**P**	**09 59 10.1**	**-0.1**
D62A	**Allapoint, All**	**86.44**	**324**	P	**P**	**09 59 11.4**	**+0.4**
	baz=49						
D62A	**Allapoint, All**	**86.44**	**324**	P	**P**	**09 59 11.2**	**+0.1**
DHY	**Denali Highway**	**86.51**	**8**	P	**P**	**09 59 11.3**	**0.0**
DHY				IAmb	IAmb	09 59 12.4	
	comp=Z,17nm,0.9s						
CUT	**Chulitna**	**86.76**	**10**	P	**P**	**09 59 12.5**	**+0.2**
	baz=342						
PAX	**Paxson**	**86.83**	**7**	P	**P**	**09 59 12.7**	**-0.1**
PAX				pmax	pmax		
	comp=Z,13nm,1.4s						
PAX	**Paxson**	**86.83**	**7**	P	**P**	**09 59 12.7**	**-0.1**
PAX				IAmb	IAmb	09 59 13.5	
	comp=Z,13nm,1.4s						
MENT	**Mentasta**	**87.05**	**7**	P	**P**	**09 59 14.8**	**+1.1**
MENT				IAmb	IAmb	09 59 16.0	
	comp=Z,17nm,0.9s						
CHGQ	**Chibougamau**	**87.13**	**328**	P	**P**	**09 59 14.3**	**-0.1**
	baz=45						
FCC	**Fort Churchill**	**87.26**	**343**	P	**P**	**09 59 15.1**	**+0.4**
FCC				pmax	pmax		
	comp=Z,15nm,0.9s						
FCC	**Fort Churchill**	**87.26**	**343**	P	**P**	**09 59 15.1**	**+0.4**
FCC				IAmb	IAmb	09 59 16.8	
	comp=Z,15nm,0.9s						
YKA	**Yellowknife Ar**	**87.49**	**353**	P	**P**	**09 59 15.8**	**0.0**
	comp=Z,8.2nm,0.7s,baz=16,slow=5.1,SNR=140						
GHO	**Glory Hole Cre**	**87.56**	**9**	P	**P**	**09 59 17.1**	**+0.8**
SML	**Sawmill**	**87.61**	**9**	P	**P**	**09 59 17.0**	**+0.5**
PMR	**Palmer**	**87.70**	**9**	P	**P**	**09 59 17.1**	**+0.2**
PMR				pmax	pmax		
	comp=Z,31nm,1.2s						
PMR	**Palmer**	**87.70**	**9**	P	**P**	**09 59 17.1**	**+0.2**
SCM	**Sheep Creek Mo**	**87.71**	**9**	P	**P**	**09 59 17.7**	**+0.6**
SCM				pmax	pmax		
	comp=Z,15nm,0.8s						
SCM	**Sheep Creek Mo**	**87.71**	**9**	P	**P**	**09 59 17.7**	**+0.6**
SCM				IAmb	IAmb	09 59 23.5	
	comp=Z,15nm,0.8s						
KNK	**Knik Glacier**	**87.97**	**9**	P	**P**	**09 59 17.9**	**-0.3**
RC01	**Rabbit Creek A**	**88.09**	**10**	P	**P**	**09 59 18.4**	**-0.4**
E60A	**Ste Agathe de**	**88.15**	**324**	P	**P**	**09 59 19.5**	**+0.2**
	baz=47						
RSO	**Redoubt South**	**88.20**	**11**	P	**P**	**09 59 20.0**	**+0.4**
G62A	**West of Eustis**	**88.45**	**323**	P	**P**	**09 59 22.1**	**+1.3**
	baz=48						
MCARA	**McCarthy VSAT**	**88.64**	**7**	P	**P**	**09 59 21.5**	**+0.2**
MCARA				IAmb	IAmb	09 59 24.7	
	comp=Z,12nm,1.1s						
MATQ	**Matagami**	**88.71**	**329**	P	**P**	**09 59 22.1**	**+0.2**
	baz=43						
VRDI	**Verde Repeater**	**88.75**	**7**	P	**P**	**09 59 21.9**	**-0.2**
D57A	**Chemin Vers le**	**88.92**	**326**	P	**P**	**09 59 23.2**	**+0.2**
	baz=46						
BALM	**Baldy**	**89.05**	**6**	P	**P**	**09 59 23.6**	**+0.1**
BALM				IAmb	IAmb	09 59 25.7	
	comp=Z,24nm,1.3s						
E58A	**La Victoria**	**89.07**	**325**	P	**P**	**09 59 24.0**	**+0.3**
	baz=46						
SEW	**Seward**	**89.08**	**10**	P	**P**	**09 59 23.0**	**-0.4**
SEW				IAmb	IAmb	09 59 25.0	
	comp=Z,24nm,1.4s						
BARN	**Barnard Glacie**	**89.09**	**6**	P	**P**	**09 59 24.2**	**+0.5**
BARN				IAmb	IAmb	09 59 26.0	
	comp=Z,19nm,1.3s						
BRLK	**Bradley Lake**	**89.17**	**11**	P	**P**	**09 59 23.2**	**-0.7**
BRLK				IAmb	IAmb	09 59 24.4	
	comp=Z,26nm,1.4s						
F59A	**Saint Guilaume**	**89.18**	**324**	P	**P**	**09 59 24.8**	**+0.6**
	baz=46						
CTGM	**Chitina Glacie**	**89.22**	**6**	P	**P**	**09 59 25.5**	**+1.2**
CTGM				IAmb	IAmb	09 59 26.5	
	comp=Z,21nm,1.2s						
D56A	**ZEC Mazanza, M**	**89.33**	**326**	P	**P**	**09 59 25.0**	**+0.1**
	baz=45						
HYT	**Haines Junctio**	**89.65**	**4**	P	**P**	**09 59 27.1**	**+0.9**
D55A	**Sainte-Anne-du**	**89.69**	**327**	P	**P**	**09 59 26.7**	**+0.1**
	baz=44						
E56A	**St. Veronique**	**89.82**	**326**	P	**P**	**09 59 27.5**	**+0.3**
	baz=45						
WHY	**Whitehorse**	**89.95**	**3**	P	**P**	**09 59 27.7**	**0.0**
E55A	**Montcerf-Lytto**	**90.38**	**326**	P	**P**	**09 59 30.8**	**+1.0**
	baz=44						
KDAK	**Kodiak Island**	**90.75**	**12**	P	**P**	**09 59 31.3**	**0.0**
	baz=0.4,slow=3.4						
KDAK	**Kodiak Island**	**90.75**	**12**	P	**P**	**09 59 31.3**	**0.0**
KDAK				pmax	pmax		
	comp=Z,19nm,0.9s						
KDAK	**Kodiak Island**	**90.75**	**12**	IAmb	IAmb	09 59 32.9	
	comp=Z,19nm,0.8s						
OHAK	**Old Harbor**	**91.14**	**13**	P	**P**	**09 59 34.4**	**+1.3**
OHAK				IAmb	IAmb	09 59 34.6	
	comp=Z,15nm,1.0s						
G55A	**Calabogie**	**91.56**	**326**	P	**P**	**09 59 35.8**	**+0.5**
	baz=44						
ALGO	**Algonquin Park**	**91.69**	**327**	P	**P**	**09 59 36.2**	**+0.3**
	baz=43						
PLVO	**Plevna**	**91.89**	**326**	P	**P**	**09 59 36.9**	**0.0**
PLVO				IAmb	IAmb	09 59 39.7	
	comp=Z,10.0nm,1.1s						
G54A	**Lake Saint Pet**	**92.12**	**327**	P	**P**	**09 59 38.2**	**+0.3**
	baz=43						
DLBC	**Dease Lake**	**92.30**	**0**	P	**P**	**09 59 37.9**	**-0.7**
	comp=Z,2.3nm,0.8s,baz=351,slow=6.3,SNR=3.5						
DLBC	**Dease Lake**	**92.30**	**0**	P	**P**	**09 59 38.2**	**-0.4**
F52A	**Sundridge**	**92.41**	**328**	P	**P**	**09 59 39.9**	**+0.7**
	baz=42						
D48A	**Paudash Townsh**	**92.49**	**330**	P	**P**	**09 59 40.2**	**+0.6**
	baz=40						
J57A	**Williamstown**	**92.53**	**324**	P	**P**	**09 59 40.8**	**+1.0**
	baz=44						
DELO	**Deloro Mine**	**92.54**	**326**	P	**P**	**09 59 40.3**	**+0.5**
DELO				IAmb	IAmb	09 59 40.9	
	comp=Z,8.3nm,1.0s						
G53A	**Haliburton**	**92.58**	**327**	P	**P**	**09 59 39.7**	**-0.4**
	baz=42						
F51A	**Arnstein**	**92.58**	**328**	P	**P**	**09 59 40.1**	**+0.1**
	baz=41						
PECO	**Prince Edward**	**92.65**	**325**	P	**P**	**09 59 40.1**	**-0.2**
PECO				IAmb	IAmb	09 59 41.5	
	comp=Z,9.6nm,1.1s						
FFC	**Flin Flon**	**92.82**	**345**	P	**P**	**09 59 41.6**	**+0.7**
FFC				pmax	pmax		
	comp=Z,17nm,1.2s						
FFC	**Flin Flon**	**92.82**	**345**	P	**P**	**09 59 41.6**	**+0.7**
FFC				IAmb	IAmb	09 59 42.5	
	comp=Z,17nm,1.2s						
H53A	**Bobcaygeon**	**92.96**	**326**	P	**P**	**09 59 42.0**	**+0.2**
	baz=42						
J56A	**Wolcott**	**93.06**	**325**	P	**P**	**09 59 43.4**	**+1.1**
	baz=44						
D47A	**Chapleau**	**93.14**	**330**	P	**P**	**09 59 43.0**	**+0.4**
	baz=39						
E48A	**Lockeyer**	**93.18**	**330**	P	**P**	**09 59 43.8**	**+1.0**
	baz=40						
F49A	**Sandfield**	**93.67**	**329**	P	**P**	**09 59 45.4**	**+0.3**
	baz=40						
E47A	**Iron Bridge**	**93.68**	**330**	P	**P**	**09 59 45.2**	**+0.1**
	baz=39						
E46A	**Sault Ste Mari**	**94.19**	**331**	P	**P**	**09 59 47.2**	**-0.2**
E46A				IAmb	IAmb	09 59 53.0	
	comp=Z,7.1nm,0.8s						
WRA	**Warramunga Arr**	**94.22**	**110**	P	**P**	**09 59 47.0**	**-1.0**
	comp=Z,1.6nm,0.9s,baz=313,slow=4.1,SNR=5.8						
WRA				PKKPbc	**PKKPdf**	**10 16 47.4**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=112,slow=2.8,SNR=6.0						
WRA	**Warramunga Arr**	**94.22**	**110**	P	**P**	**09 59 47.0**	**-1.0**
L55A	**Hinsdale**	**94.66**	**325**	P	**P**	**09 59 50.3**	**+0.6**
	baz=42						
ULM	**Lac du Bonnet**	**95.20**	**339**	P	**P**	**09 59 51.2**	**-0.7**
	comp=Z,2.1nm,0.5s,baz=33,slow=3.8,SNR=2.0						
ULM	**Lac du Bonnet**	**95.20**	**339**	P	**P**	**09 59 51.3**	**-0.7**
N57A	**Milroy**	**95.25**	**323**	P	**P**	**09 59 52.8**	**+0.4**
	baz=43						
ASAR	**Alice Springs**	**95.71**	**114**	P	**P**	**09 59 53.5**	**-1.3**
	comp=Z,1.8nm,0.8s,baz=306,slow=4.4,SNR=14						
ASAR				PKiKP	**PKiKP**	**10 04 34.4**	**-0.1**
	comp=Z,0.9nm,1.0s,baz=298,slow=2.0,SNR=3.3						
ASAR				PKKPbc	**PKKPbc**	**10 16 44.6**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=124,slow=3.0,SNR=3.3						
G40A	**Rib Lake**	**97.49**	**333**	P	**P**	**10 00 02.5**	**0.0**
G40A				IAmb	IAmb	10 00 07.8	
	comp=Z,4.7nm,0.9s						
S57A	**Dark Hollow, R**	**98.18**	**322**	P	**P**	**10 00 05.3**	**-0.4**
SYO	**Syowa Base**	**98.66**	**184**⇑	*e*Pdiff	Pdif	10 00 07.8	+0.9
SYO	**Syowa Base**	**98.66**	**184**⇑	*e*pPdiff	Pdif	10 00 11.0	+4.1
DGMT	**Dagmar**	**99.13**	**343**	P	**Pdif**	**10 00 11.0**	**+1.1**
NEW	**Newport**	**101.75**	**352**	P	**Pdif**	**10 00 20.7**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=74,slow=4.9,SNR=4.7						
TXAR	**Lajitas Array**	**116.55**	**335**	PKP	**PKPdf**	**10 05 11.6**	**-1.4**
	comp=Z,0.8nm,1.1s,baz=64,slow=4.2,SNR=2.6						
SIV	**San Ignacio**	**116.57**	**266**	PKP	**PKPdf**	**10 05 12.7**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=268,slow=8.4,SNR=4.1						
QSPA	**South Pole Qui**	**119.44**	**180**		**PKPdf**	**10 05 16.7**	**-0.5**
LPAZ	**La Paz**	**122.84**	**269**	PKP	**PKPdf**	**10 05 25.4**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=30,slow=6.3,SNR=4.4						
LPAZ	**La Paz**	**122.84**	**269**	PKIKP	**PKPdf**	**10 05 24.2**	**-1.8**
LPAZ	**La Paz**	**122.84**	**269**		**PKPdf**	**10 05 24.2**	**-1.8**
CFA	**Coronel Fontan**	**128.14**	**251**	PKP	**PKPdf**	**10 05 35.0**	**0.0**
	comp=Z,3.9nm,0.8s,baz=15,slow=1.2,SNR=7.2						
BO02	**Sierra Bellavi**	**130.93**	**248**		**PKPdf**	**10 05 38.7**	**-1.5**
PLCA	**Paso Flores**	**131.63**	**240**	PKP	**PKPdf**	**10 05 41.1**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=0.4,slow=9.8,SNR=1.8						

UCR 21 09:50:13.5±1.4, 9.64N×84.78W, h10km±7km, MD4.0, 1C-6D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SRA1	**San Ramn**	**0.53**	**33**	⇓*i*P		Pg	09 50 23.9	0.0
SRA1				*e*S		Sg	09 50 31.8	+0.9
JTS	**Las Juntas de**	**0.67**	**345**	*e*P		Pg	09 50 25.4	-1.1
LCR2	**La Lucha 2**	**0.77**	**82**	*e*P		Pg	09 50 27.1	-1.2
LCR2				*e*S		Sg	09 50 37.7	-0.7
SJS	**Escuela Geolog**	**0.77**	**67**	*e*P		Pg	09 50 27.6	-0.9
CASO	**Castillo**	**0.79**	**3**	*i* P		Pg	09 50 28.5	-0.3
ARE1	**Arenal 1**	**0.82**	**4**	⇓*i*P		Pg	09 50 29.2	-0.1
ARE1				*e*S		Sb	09 50 40.6	-0.4
FORC	**Fortuna**	**0.83**	**7**	*i* P		Pg	09 50 29.3	-0.2
FORC				*i* S		Sb	09 50 41.1	-0.2
CEDE	**Laguna Cedeo**	**0.85**	**5**	*i* P		Pg	09 50 29.7	-0.2
CEDE				⇓*i*P		Pb	09 50 29.7	-0.6
CEDE				*e*S		Sb	09 50 41.5	-0.3
PLVR	**Palo Verde**	**0.91**	**321**	⇓*i*P		Pg	09 50 30.1	-0.9
PLVR				*e*S		Sg	09 50 42.7	-0.2
GUAI	**GUAI**	**0.96**	**311**	*i* P		Pg	09 50 31.1	-0.9
ACAL	**Aguas Claras**	**1.02**	**346**	*i* P		Pg	09 50 32.2	-1.0
CVTR	**Volcan Turrial**	**1.07**	**69**	⇓*i*P		Pg	09 50 34.2	0.0
CVTR				*e*S		Sn	09 50 49.8	-0.3
PTEN	**Parque Tenorio**	**1.09**	**349**	*i* P		Pg	09 50 33.3	-1.2
COLC	**Colonia**	**1.10**	**338**	*i* P		Pb	09 50 33.5	-1.3
COLC				*i* S		Sn	09 50 49.9	-0.6
HORNC	**Hornillas**	**1.14**	**340**	*i* P		Pb	09 50 33.8	-1.6
HORNC				*i* S		Sg	09 50 49.9	-0.4
GUAB	**Guayabo de Bag**	**1.15**	**337**	*i* P		Pb	09 50 33.9	-1.7
LIM1	**Limonal**	**1.15**	**336**	*i* P		Pb	09 50 33.9	-1.7
EDLM	**Las Mercedes**	**1.22**	**107**	*e*P		Pn	09 50 34.9	-1.8
EDLM				*e*S		Sb	09 50 52.1	-0.6
LAPC	**Finca la Perla**	**1.30**	**330**	*i* P		Pn	09 50 36.2	-1.6
GB1A	**Borinquen Arri**	**1.32**	**332**	*e*P		Pn	09 50 36.4	-1.8
EDBA	**Buenos Aires**	**1.55**	**108**	*e*P		Pn	09 50 41.2	-0.1
EDBA				*e*S		Sb	09 51 02.0	-0.2
DRK0	**Durika**	**1.56**	**104**	⇑*i*P		Pn	09 50 39.7	-1.7
EDSV	**San Vito**	**1.96**	**114**	*e*P		Pn	09 50 46.1	-0.8
ESPN	**Las Esperanzas**	**2.58**	**10**	⇓*i*P		Pn	09 50 55.8	+0.4

*GCMT **21** 10:06:13.8±0.1, 17°.25N±0°.01×95°.00W±0°.01, h125km, MW5.8/165, Moment Tensor Solution. s165,c328; s162,c474; Duration: 1s9 Moment tensor: Scale 10^{17} Nm; Mrr=3.03±.04; Mθθ=0.55±.05; Mϕϕ=2.48±.05; Mrθ=3.00±.03; Mrϕ=-2.50±.04; Mθr=-3.01±.03; Best double couple: M=5.59400×10^{17} NP1:ϕs=160.00000°,δ22.00000°, λ=-67.00000°. NP2:ϕs=316.00000°,δ70.00000°, λ=-99.00000°. Principal axes: T 6.1210, Plg25.0000°, Azm53.0000°; N -1.0520, Plg8.0000°, Azm319.0000°; P -5.0680, Plg64.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*IDC **21** 10:06:14.0±0.2, 17°.13N×94°.88W, h118km±1km, mb5.3/45, mb1 5.4/50, mb1mx5.4/51, mbtmp5.7/50, MS4.6/28, Ms1 4.6/28, ms1mx4.5/41 Error ellipse: s-maj=8.9km s-min=5.6km az=68.0*

*MOS **21** 10:06:13.0±1.0, 17°.19N×94°.89W, h119km, mb5.9/58, Error ellipse: s-maj=6.6km s-min=4.3km az=95.4*

*BJI **21** 10:06:14.0±0.0, 17°.20N×94°.90W, h124km, mB5.3/20*

*NEIC **21** 10:06:14.4±2.3, 17°.17N±0°.05×94°.99W±0°.04, h123km±3km, Error ellipse: s-maj=7.9km s-min=6.1km az=189.0*

*NEIC **21** 10:06:15, 17°.24N×94°.99W, h122km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr=2.97; Mθθ0.38; Mϕϕ2.59; Mrθ3.20; Mϕθ-2.31; Mϕr-3.03; Fault plane solution: M=5.71000×10^{17} NP1:ϕs315.00000°, δ71.00000°,λ=-101.00000°. NP2:ϕs167.00000°, δ22.00000°,λ=-60.00000°. Principal axes: T 6.0944, Plg26.0000°, Azm54.0000°; N -0.8708, Plg11.0000°, Azm319.0000°; P -5.2236, Plg62.0000°, Azm208.0000°;*

*BGR **21** 10:06:15.1±0.0, 17°.20N×94°.38W, h114km±1km, mb6.0, mB_BB6.4*

*NEIC **21** 10:06:15.3, 17°.18N×94°.93W, h114km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr=3.54; Mθθ1.53; Mϕϕ2.02; Mrθ2.64; Mϕθ-2.16; Mϕr-2.03; Fault plane solution: M=5.02000×10^{17} NP1:ϕs146.90000°, δ24.90000°,λ=-75.35000°. NP2:ϕs310.83000°,δ65.96000°, λ=-96.70000°. Principal axes: T 5.1806, Plg21.0000°, Azm46.0000°; N -0.3337, Plg6.0000°, Azm314.0000°; P -4.8469, Plg68.0000°, Azm208.0000°;*

*MEX **21** 10:06:15.8±1.6, 17°.12N×95°.07W, h120km±9km, MD5.8*

*NEIC **21** 10:06:16, 17°.09N×94°.81W, h130km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr=2.77; Mθθ0.13; Mϕϕ2.64; Mrθ3.54; Mϕθ-1.59; Mϕr-3.45; Fault plane solution: M=5.85000×10^{17} NP1:ϕs317.00000°, δ75.00000°,λ=-101.00000°. NP2:ϕs175.00000°, δ19.00000°,λ=-53.00000°. Principal axes: T 5.9950, Plg29.0000°, Azm56.0000°; N -0.2958, Plg11.0000°, Azm320.0000°; P -5.6992, Plg59.0000°, Azm211.0000°;*

*NEIC **21** 10:06:32.2, 18°.13N×94°.66W, h157km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr=2.45; Mθθ1.18; Mϕϕ1.27; Mrθ1.81; Mϕθ-2.10; Mϕr-2.32; Fault plane solution: M=4.13000×10^{17} NP1:ϕs126.84000°, δ22.74000°,λ=-103.40000°. NP2:ϕs321.32000°, δ67.91000°,λ=-84.45000°. Principal axes: T 4.5555, Plg23.0000°, Azm47.0000°; N -0.8501, Plg5.0000°, Azm139.0000°; P -3.7054, Plg67.0000°, Azm241.0000°;*

*UCR **21** 10:06:37.8±3.3, 16°.69N×92°.82W, h20km±660km, ML4.4, mb5.8(NEIC)*

*GCG **21** 10:06:42.1±0.3, 16°.33N×92°.91W, h120km±55km, MD5.5*

*SNET **21** 10:06:42.5±1.4, 16°.52N×92°.84W, h35km±999km, ML4.9*

ISC 21 10:06:13.8±0.2, 17°.11N±0°.03×94°.99W±0°.03, h123km±1km, h123km:pP-P,n1743,σ1s35/1697, mb5.9/480, 98C-28D, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CMIG	**Matias Romero**	**0.10**	**99**	P		**Pn**	**10 06 30.5**	**-0.1**
	36μm,0.3s,baz=228,slow=7.1							
CMIG				S		**Sn**	**10 06 42.8**	**-0.5**
	32μm,0.3s,baz=253,slow=24,SNR=124							
CMIG	**Matias Romero**	**0.10**	**99**	*e*P		**Pn**	**10 06 30.9**	**+0.3**
CMIG				*e*S		**Sn**	**10 06 43.0**	**-0.3**
CMIG	**Matias Romero**	**0.10**	**99**			**Pn**	**10 06 30.9**	**+0.3**
CMIG						**Sn**	**10 06 43.0**	**-0.3**
TUIG	**Tuzandepetl**	**1.07**	**30**	*e*P		**Pn**	**10 06 38.1**	**+1.3**
TUIG				*e*S		**Sn**	**10 06 54.6**	**+0.4**
TUIG	**Tuzandepetl**	**1.07**	**30**			**Pn**	**10 06 38.1**	**+1.3**
TUIG						**Sn**	**10 06 54.6**	**+0.4**
OXBJ	**Oaxaca**	**1.66**	**269**	*e*P		**Pn**	**10 06 43.0**	**-0.6**
OXBJ				*e*S		**Sn**	**10 07 04.5**	**-1.7**
OXBJ	**Oaxaca**	**1.66**	**269**			**Pn**	**10 06 43.0**	**-0.6**
OXBJ						**Sn**	**10 07 04.5**	**-1.7**
VHO	**Vista Hermosa**	**1.67**	**269**	*e*P		**Pn**	**10 06 46.5**	**+1.3**
TGIG		**1.81**	**100**	*e*P		**Pn**	**10 06 46.5**	**+1.3**
TGIG				*e*S		**Sn**	**10 07 09.7**	**+0.5**
TGIG		**1.81**	**100**			**Pn**	**10 06 46.5**	**+1.3**
TGIG						**Sn**	**10 07 09.7**	**+0.5**
TGBT	**Tuxtla Gutierr**	**1.84**	**100**	*e*P		**Pn**	**10 06 47.0**	**+1.5**
TGBT				*e*S		**Sn**	**10 07 10.4**	**+0.7**
TGBT	**Tuxtla Gutierr**	**1.84**	**100**			**Pn**	**10 06 47.0**	**+1.5**
TGBT						**Sn**	**10 07 10.4**	**+0.7**
PCIG		**2.19**	**129**	*e*P		**Pn**	**10 06 50.9**	**+1.0**
PCIG				*e*S		**Sn**	**10 07 16.5**	**-1.0**
PCIG		**2.19**	**129**			**Pn**	**10 06 50.9**	**+1.0**
PCIG						**Sn**	**10 07 16.5**	**-1.0**
TOIG	**Toxpalan**	**2.21**	**297**	*e*P		**Pn**	**10 06 50.6**	**+0.3**
TOIG				*e*S		**Sn**	**10 07

comp=Z,929nm,0.8s
OPAM Oficina de Pla 6.52 120 *e*P Pn 10 07 48.9 +1.5
OPAM IAML 10 08 37.9
comp=Z,929nm,0.8s
LALI Alcalda de L 6.54 123 *e*P Pn 10 07 49.4 +1.8
LALI Alcalda de L 6.54 123 *e*P Pn 10 07 49.4 +1.8
UON La Union 6.57 279 *e*P Pn 10 07 48.3 +0.3
LFRS El Faro 6.68 120 *e*P Pn 10 07 51.2 +1.6
LFRS El Faro 6.68 120 *e*P Pn 10 07 51.2 +1.6
COEG Centro de Oper 6.83 120⇑*e*P Pn 10 07 53.4 +1.7
COEG IAML 10 08 34.5
comp=Z,2µm,0.5s
COEG Centro de Oper 6.83 120⇑*e*P Pn 10 07 53.4 +1.7
COEG IAML 10 08 34.5
comp=Z,2µm,0.5s
TEIG Tepich 7.08 63 P Pn 10 07 53.7 -1.1
comp=Z,416nm,0.3s,baz=240,slow=0.0,SNR=361
TEIG S Sn 10 09 12.3 -1.5
TEIG LR LR 10 11 04.3
comp=Z,11µm,19.1s,baz=252,slow=42
TEIG Tepich 7.08 63 *e*P Pn 10 07 54.0 -0.8
TEIG *e*S Sn 10 09 09.9 -3.9
TEIG Tepich 7.08 63 Pn 10 07 53.9 -0.9
TEIG Sn Sn 10 09 12.7 -1.1
COEB Comit de Eme 7.19 119 *e*P Pn 10 07 58.1 +1.6
COEB IAML 10 08 46.1
comp=Z,652nm,0.6s
COEB Comit de Eme 7.19 119 *e*P Pn 10 07 58.1 +1.6
COEB IAML 10 08 46.1
comp=Z,652nm,0.6s
ALJI Alcalda de J 7.24 120 *e*P Pn 10 07 59.2 +2.1
ALJI Alcalda de J 7.24 120 *e*P Pn 10 07 59.2 +2.1
FAGO Alcalda de S 7.45 116 *e*P Pn 10 08 00.7 +0.8
FAGO Alcalda de S 7.45 116 *e*P Pn 10 08 00.7 +0.8
JUCU Jucuarįn 7.55 120⇑*e*P Pn 10 08 02.9 +1.6
JUCU IAML 10 08 38.9
comp=Z,758nm,0.8s
JUCU Jucuarįn 7.55 120⇑*e*P Pn 10 08 02.9 +1.6
JUCU IAML 10 08 38.9
comp=Z,758nm,0.8s
LCND La Caada 7.82 118⇑*e*P Pn 10 08 06.4 +1.5
LCND La Caada 7.82 118⇑*e*P Pn 10 08 06.4 +1.5
TGUH Tegucigalpa,Un 8.03 111 Pn Pn 10 08 08.4 +0.6
MATN Matagalpa 9.69 114 Pn 10 08 31.0 +0.8
KVTX Kingsville 10.73 346 Pn 10 08 45.2 +1.1
ACON Acoyapa 10.78 117 *e*P Pn 10 08 45.6 +0.7
ACON Acoyapa 10.78 117 Pn 10 08 44.4 -0.5
GBS3 Finca Las Img 11.18 123 *e*P Pn 10 08 50.6 +0.3
GB1A Borinquen Arri 11.21 123 *e*P Pn 10 08 51.1 +0.5
LAPC Finca la Perla 11.21 123 *e*P Pn 10 08 50.9 +0.3
BUEV Buena Vista 11.21 123 *e*P Pn 10 08 51.6 +1.0
BUAI Buenos Aires 11.23 122⇑*e*P Pn 10 08 50.7 -0.2
GPS1 Guardaparques 11.27 123 *e*P Pn 10 08 52.9 +1.4
GPS3 Bodega del ICE 11.27 123⇑*e*P Pn 10 08 52.4 +0.9
LIM1 Limonal 11.39 123 *e*P Pn 10 08 53.7 +0.6
GUAB Guayabo de Bag 11.41 123 *e*P Pn 10 08 54.4 +1.2
ESPN Las Esperanzas 11.43 114⇑*e*P Pn 10 08 53.9 +0.4
ESPN Las Esperanzas 11.43 114 Pn 10 08 53.6 +0.1
GUAI GUAI 11.44 125⇑*e*P Pn 10 08 54.9 +1.3
HORNC Hornillas 11.44 122 *e*P Pn 10 08 54.7 +0.9
COLC Colonia 11.45 123⇓*e*P Pn 10 08 54.5 +0.7
PLVR Palo Verde 11.52 124⇓*e*P Pn 10 08 55.8 +0.9
PTEN Parque Tenorio 11.60 122⇑*e*P Pn 10 08 55.5 -0.3
ACAL Aguas Claras 11.60 122 *e*P Pn 10 08 56.5 +0.6
JTS Las Juntas de 11.87 124 P Pn 10 08 59.3 0.0
comp=Z,68nm,0.3s,baz=26,slow=15,SNR=243
JTS Las Juntas de 11.87 124 *e*P Pn 10 08 59.1 -0.2
JTS Las Juntas de 11.87 124*c i*P Pn 10 08 59.5 +0.2
JTS Las Juntas de 11.87 124⇑*e*P Pn 10 08 59.1 -0.2
833A Chaparral WMA, 11.88 341 P Pn 10 09 00.0 +0.7
baz=159,SNR=292
CEDE Laguna Cedeo 11.96 122 *e*P Pn 10 09 00.1 -0.4
CEDE ⇑*e*P P 10 09 00.5 -7.7
ARE1 Arenal 1 11.96 122⇑*e*P Pn 10 09 00.7 +0.2
CASO Castillo 11.96 122 *e*P Pn 10 09 01.2 +0.6
735A Kenedy 11.98 348 Pn 10 09 01.0 +0.3
FORC Fortuna 11.99 122 *e*P Pn 10 09 01.4 +0.4
SRA1 San Ramn 12.37 123 *e*P Pn 10 09 05.9 0.0
HDC Heredia 12.71 122 Pn 10 09 10.6 +0.3
SJS Escuela Geolog 12.79 122 *e*P Pn 10 09 12.4 +0.9
HKT Hockley 12.81 357 P Pn 10 09 10.9 -0.5
HKT Hockley 12.81 357 Pn 10 09 10.9 -0.5
LCR2 La Lucha 2 12.95 123 *e*P Pn 10 09 13.2 -0.4
CVTR Volcan Turrial 12.98 121 *e*P Pn 10 09 13.6 -0.7
EDDO Dominical 13.34 124 *e*P Pn 10 09 18.7 +0.2
545A Edgard 13.52 17 Pn 10 09 20.4 -0.2
EDLM Las Mercedes 13.55 124 *e*P Pn 10 09 21.9 +0.8
435B Jarrell 13.82 351 P Pn 10 09 24.5 0.0
baz=169,SNR=498
DRK0 Durika 13.83 123 *e*P Pn 10 09 25.1 +0.1
EDBA Buenos Aires 13.86 123 *e*P Pn 10 09 25.5 +0.3
HPIG 13.91 317 Pn 10 09 26.9 +1.0
JCT Junction City 14.02 343 P Pn 10 09 27.1 0.0
JCT Junction City 14.02 343 P Pn 10 09 27.5 +0.4
baz=160,SNR=210
JCT Junction City 14.02 343 Pn 10 09 27.1 0.0
PTJ1 Puerto Jimnez 14.22 125 *e*P Pn 10 09 31.0 +1.3
EDSV San Vito 14.31 124⇓*i*P Pn 10 09 32.2 +1.2
TXAR Lajitas Array 14.54 328 P P 10 09 35.6 -1.3
comp=Z,1.7nm,0.3s,baz=149,slow=13,SNR=192
TXAR P3KPbc 10 44 57.8
comp=Z,0.0nm,0.3s,baz=322,slow=5.7,SNR=1.1
BRU2 Volcan 14.55 123⇑*e*P Pn 10 09 33.5 -0.5
NATX Nacogdoches 14.59 1 P Pn 10 09 34.1 -0.3
baz=181,SNR=159
NATX S Sn 10 12 07.2 -8.5
baz=181
CBCY The Bluff, Cay 14.69 77 Pn 10 09 35.8 +0.2
WHTX Lake Whitney, 14.99 352 P Pn 10 09 39.6 +0.3
baz=171,SNR=1000
WHTX Lake Whitney, 14.99 352 Pn 10 09 39.4 +0.1
VBMS Vicksburg 15.58 14 P Pn 10 09 46.3 -0.4
baz=196,SNR=102
VBMS Vicksburg 15.58 14 Pn 10 09 46.0 -0.7
VBMS IAmb IAmb 10 10 03.3
comp=Z,1µm,0.8s
143A Socs Landing, 15.86 11 Pn 10 09 50.0 -0.2
451A Vernon 15.87 30 Pn 10 09 50.6 +0.3
451A IAmb IAmb 10 10 06.3
comp=Z,2µm,1.4s
LPIG La Paz 15.94 298 P P 10 09 53.1 +0.7
comp=Z,2.1nm,0.3s,baz=85,slow=0.8,SNR=32
LPIG LR LR 10 16 28.8
comp=Z,1µm,18.2s,baz=114,slow=38
ABTX Abilene, Hawle 16.01 346 P P 10 09 53.5 +0.3
baz=163,SNR=676
ABTX Abilene, Hawle 16.01 346 P 10 09 53.5 +0.3
Z38A Mt. Pleasant 16.09 0 P 10 09 54.4 +0.5
Z41A Richland Creek 16.20 7 P Pn 10 09 54.6 +0.2
baz=187,SNR=1000
553A Crawfordville 16.20 35 Pn 10 09 54.7 +0.3
553A IAmb IAmb 10 10 00.3
comp=Z,861nm,0.8s
Z35A Perchaven, San 16.29 353 P 10 09 56.5 +0.4
MBJ Montego Bay 16.36 83 *i*P P 10 09 57.1 0.0
146A Union 16.37 18 Pn 10 09 56.0 -0.4
146A IAmb IAmb 10 10 00.9
comp=Z,1µm,0.8s
MCJ Malvern 16.52 85⇓*i*P P 10 09 58.7 -0.2
WLAR White Oak Lake 16.60 5 P P 10 10 00.3 +0.7
DWPF Disney Wildern 16.61 46 P Pn 10 09 58.8 -0.6
baz=232
DWPF Disney Wildern 16.61 46 Pn 10 09 59.3 -0.2
MTDJ Mount Denham 16.67 84 *e*P Pn 10 09 59.8 -0.5
MTDJ Mount Denham 16.67 84 Pn 10 10 00.1 -0.2
MTDJ IAmb IAmb 10 10 08.1
comp=Z,509nm,1.0s
656A Willston 16.71 41 Pn 10 09 59.9 -0.8
656A IAmb IAmb 10 10 05.2
comp=Z,749nm,0.8s
BCIP Isla Barro Col 16.72 116 *e*P Pn 10 09 58.4 -2.4
BCIP Isla Barro Col 16.72 116 P Pn 10 10 00.0 -0.9
BCIP pmax pmax
comp=Z,116nm,0.9s
BCIP Isla Barro Col 16.72 116 *e*P Pn 10 09 58.9 -2.0
BCIP Isla Barro Col 16.72 116 Pn 10 09 60.0 -0.9
060A Indiantown 16.76 51 P 10 10 01.8 +0.4
250A Grady 16.78 26 Pn 10 10 01.4 -0.1
352A Blakely 16.98 31 P P 10 10 03.8 0.0
CCAR Cane Creek 16.99 9 P Pn 10 10 05.0 +1.1
UPA Univ. de Panam 17.07 116 *e*P P 10 10 02.4 -2.5
CLNB Carlsbad 17.11 334 P Pn 10 10 07.3 +1.7
Z47A Carrollton 17.19 20 P P 10 10 06.2 +0.1

GDL2 Guadalupe Moun 17.26 332 P Pn 10 10 09.4 +1.9
MNTX Cornudas Mount 17.32 329 P Pn 10 10 08.5 +0.4
baz=144,SNR=197
STH Stony Hill 17.36 84⇓*i*P P 10 10 07.7 -0.4
HOJ Hope 17.41 84 *i* P P 10 10 08.9 +0.3
MIAR Mount Ida 17.41 4 P Pn 10 10 09.7 +0.6
baz=184,SNR=1000
X40A Basin Creek Fa 17.42 6 P Pn 10 10 09.6 +0.4
baz=187,SNR=834
X40A Basin Creek Fa 17.42 6 P Pn 10 10 09.6 +0.4
X40A IAmb IAmb 10 10 13.5
comp=Z,2µm,1.4s
LRAL Lakeview Retre 17.42 23 P P 10 10 08.8 +0.2
baz=206,SNR=523
LRAL Lakeview Retre 17.42 23 IAmb IAmb 10 10 17.8
comp=Z,2µm,1.2s
TIGA Tifton 17.63 34 P P 10 10 10.7 -0.2
baz=218,SNR=82
TIGA Tifton 17.63 34 IAmb IAmb 10 10 22.3
comp=Z,522nm,0.7s
X43A Marvell 17.73 11 P Pn 10 10 13.4 +0.5
baz=193,SNR=449
WMOK Wichita Mounta 17.89 350 P Pn 10 10 14.8 -0.1
baz=168,SNR=703
WMOK Wichita Mounta 17.89 350 IAmb IAmb 10 10 19.2
comp=Z,464nm,0.8s
456A Hilliard 17.98 39 P P 10 10 14.7 -0.2
456A IAmb IAmb 10 10 25.2
comp=Z,692nm,0.8s
Z50A Ashland 18.03 25 P P 10 10 15.7 +0.3
baz=209,SNR=575
OXF Oxford 18.04 15 P P 10 10 15.2 -0.2
baz=197,SNR=189
W39A Magazine 18.05 3 P Pn 10 10 17.2 +0.5
baz=184,SNR=1000
152A Waverly Hall 18.06 29 IAmb IAmb 10 10 18.1
comp=Z,588nm,0.7s
W41B Gary Mavity, V 18.16 7 P Pn 10 10 18.2 +0.1
baz=188,SNR=1000
MSTX Muleshoe 18.19 339 P Pn 10 10 18.2 -0.4
baz=155,SNR=300
MSTX Muleshoe 18.19 339 IAmb IAmb 10 10 22.3
comp=Z,1µm,1.3s
PAYG Puerto Ayora 18.27 165 *e*P Pn 10 10 20.4 +0.9
PAYG Puerto Ayora 18.27 165 P Pn 10 10 20.3 +0.8
Y49A Blount Mountai 18.37 23 IAmb IAmb 10 10 21.6
comp=Z,2µm,1.4s
MET Memphis--Engin 18.50 13 P P 10 10 20.0 -0.5
MET IAmb IAmb 10 10 28.4
comp=Z,1µm,0.7s
ADOK Arcadia Dam 18.59 354 P Pn 10 10 23.0 -0.2
255A Hazlehurst 18.61 35 P P 10 10 20.5 -1.1
255A IAmb IAmb 10 10 32.8
comp=Z,959nm,0.9s
X48A Hartselle 18.68 21 IAmb IAmb 10 10 26.1
comp=Z,884nm,0.8s
AMTX Amarillo 18.69 343 P Pn 10 10 24.1 -0.4
baz=159
W45A Hickory Valley 18.71 15 IAmb IAmb 10 10 26.7
comp=Z,1µm,0.9s
TUL1 Leonard 18.74 358 P P 10 10 23.5 +0.4
baz=177,SNR=1000
HBAR Harrisburg 18.77 11 P Pn 10 10 24.4 -0.9
154A Montrose 18.80 33 IAmb IAmb 10 10 38.1
comp=Z,1µm,0.9s
PLAL Pickwick Lake 18.84 18 IAmb IAmb 10 10 27.3
comp=Z,737nm,0.7s
HSIG 18.85 312 P Pn 10 10 25.6 -0.7
HSIG IAmb IAmb 10 10 27.7
comp=Z,592nm,1.5s
LPAR Lepanto 18.89 12 P P 10 10 25.1 +0.5
GTBY Guantanamo Bay 19.05 78 *e*P P 10 10 25.0 -1.6
GTBY Guantanamo Bay 19.05 78 P P 10 10 25.0 -1.6
GTBY IAmb IAmb 10 10 30.8
comp=Z,552nm,0.8s
CAPC Capurgana 19.13 114 *e*P P 10 10 25.2 -2.3
121A Cookes Peak, D 19.23 325 P Pn 10 10 30.9 0.0
baz=140,SNR=97
319A Douglas 19.25 320 P Pn 10 10 30.5 -0.6
GOGA Godfrey 19.27 30 P P 10 10 28.4 -0.4
baz=215,SNR=316
GOGA Godfrey 19.27 30 IAmb IAmb 10 10 31.4
comp=Z,578nm,0.8s
U40A Yellville 19.27 5 P Pn 10 10 30.0 -1.1
baz=186,SNR=1000
FPAL Fort Paine 19.28 24 P P 10 10 28.6 -0.4
GNAR Gosnell 19.30 12 P P 10 10 29.4 +0.3
Y52A Lilburn 19.36 28 P P 10 10 29.9 +0.1
baz=213,SNR=1000
HALT Halls 19.39 14 P P 10 10 29.6 -0.5
PEBM Pemiscott Bayo 19.47 13 P P 10 10 31.3 +0.3
257A Skidaway Islan 19.47 38 P P 10 10 30.2 -0.9
257A IAmb IAmb 10 10 39.9
comp=Z,532nm,0.9s
U32A Winter Ranch, 19.52 350 P P 10 10 32.6 +1.0
LNXT Lenox 19.54 13 P P 10 10 31.8 0.0
GLAT Glass 19.75 14 P P 10 10 34.0 0.0
PENMO Penman 19.84 13 P P 10 10 35.1 0.0
LCBC Los crdobas, 19.89 112 *e*P Pn 10 10 39.3 +0.7
V48A Smith Brothers 19.93 20 IAmb IAmb 10 10 37.5
comp=Z,1µm,0.9s
W50A Signal Mountai 19.98 24 P P 10 10 35.9 -0.7
WVT Waverly 19.98 17 P P 10 10 35.5 -1.1
WVT pmax pmax
comp=Z,761nm,0.6s
WVT Waverly 19.98 17 P P 10 10 35.8 -0.8
baz=200
WVT Waverly 19.98 17 P P 10 10 35.5 -1.1
WVT IAmb IAmb 10 10 40.9
comp=Z,761nm,0.6s
157A Early Branch 20.00 37 P P 10 10 36.4 -0.3
baz=222,SNR=70
Y22D IRIS PASSCAL I 20.00 330 P Pn 10 10 39.3 -0.6
baz=144,SNR=22
PBMO Poplar Bluff 20.01 11 P P 10 10 36.9 +0.1
LENM Lemitar 20.11 330 P Pn 10 10 39.8 -1.2
HENM Henderson Moun 20.13 13 P P 10 10 38.0 -0.1
Z56A Williston 20.28 35 P P 10 10 39.0 -0.8
baz=220,SNR=161
Z56A Williston 20.28 35 P P 10 10 39.0 -0.8
CLTN Cedars of Leba 20.41 20 P P 10 10 40.6 -0.6
W52A Murphy 20.45 27 P P 10 10 41.5 -0.1
Y55A Saluda 20.49 33 P P 10 10 40.7 -1.3
baz=218,SNR=364
158A Hollywood 20.51 38 P P 10 10 41.5 -0.7
baz=224,SNR=16
ANMO Albuquerque 20.51 332 P P 10 10 44.1 +1.6
comp=Z,196nm,0.6s,baz=141,slow=12,SNR=242
ANMO Albuquerque 20.51 332*ce*P P 10 10 44.1 +1.6
ANMO pmax pmax
comp=Z,58nm,0.8s
ANMO Albuquerque 20.51 332 P Pn 10 10 44.3 -1.6
baz=147
ANMO Albuquerque 20.51 332 P P 10 10 44.0 +1.6
ANMO IAmb IAmb 10 10 48.9
comp=Z,206nm,0.7s
CPCT Cooper Cave 20.51 25 P P 10 10 41.3 -0.9
CPCT IAmb IAmb 10 10 45.8
comp=Z,724nm,0.6s
HODGE Hodges 20.52 31 P P 10 10 41.6 -0.7
HODGE IAmb IAmb 10 10 44.2
comp=Z,950nm,0.7s
SJCC San Jacinto, C 20.54 108 *e*P P 10 10 41.7 -1.1
Z57A Bowman 20.62 36 P P 10 10 42.4 -1.0
baz=222,SNR=123
Y56A Pelion 20.67 34 P P 10 10 42.1 -1.8
baz=220,SNR=7.0
X54A Belton 20.71 31 P P 10 10 43.8 -0.6
baz=216,SNR=450
NHSC New Hope 20.78 37 P P 10 10 44.3 -0.8
baz=223,SNR=36
NHSC New Hope 20.78 37 IAmb IAmb 10 10 49.4
comp=Z,657nm,0.9s
BG3 Lake Jocassee 20.81 29 P P 10 10 45.3 -0.2
TUC Tucson 20.82 320 P P 10 10 47.5 +1.8
TUC pmax pmax
comp=Z,282nm,1.0s
TUC Tucson 20.82 320 P Pn 10 10 47.8 -1.6
baz=133
TUC Tucson 20.82 320 P P 10 10 47.5 +1.8
TUC IAmb IAmb 10 10 52.1
comp=Z,282nm,1.0s
V51A Loudon 20.89 25 P P 10 10 45.3 -0.9
DBBC Dabeiba 20.90 116 *e*P P 10 10 45.8 -0.8
SMRC Santa Marta, M 20.97 104 *e*P P 10 10 46.4 -1.0
TKL Tuckaleechee C 21.00 26 P P 10 10 47.3 -0.1

comp=Z,626nm,0.7s,baz=196,slow=9.6,SNR=348
TKL Tuckaleechee C 21.00 26 P P 10 10 47.4 -0.1
TKL pmax pmax
comp=Z,2µm,0.8s
TKL Tuckaleechee C 21.00 26 P P 10 10 47.4 -0.1
X55A Gracelyn & Ava 21.02 32 P P 10 10 47.1 -0.6
baz=218,SNR=292
PIZC Pizarro, Choco 21.06 123 *e*P P 10 10 49.6 +1.3
S44A Carbondale 21.12 13 P P 10 10 49.0 +0.3
CCM Cathedral Cave 21.13 8 P P 10 10 48.9 +0.1
CCM pmax pmax
comp=Z,2µm,0.8s
CCM Cathedral Cave 21.13 8 P P 10 10 48.6 -0.2
baz=190
CCM Cathedral Cave 21.13 8 P P 10 10 48.9 +0.1
UREC San Jos de Ur 21.13 114 *e*P P 10 10 46.6 -2.5
SIUC Southern Illin 21.15 13 P P 10 10 49.1 0.0
Z58A St. Stephen 21.16 37 P P 10 10 48.4 -0.8
baz=224,SNR=29
PAULI Pauline 21.21 31 P P 10 10 49.4 -0.3
PAULI IAmb IAmb 10 10 51.8
comp=Z,850nm,0.7s
V52A Sevierville 21.23 26 P P 10 10 49.2 -0.8
V52A IAmb IAmb 10 10 55.6
comp=Z,834nm,0.8s
R40A Maddies Statio 21.24 6 P P 10 10 50.3 +0.3
W54A Cherokee Point 21.24 30 P P 10 10 49.8 -0.3
baz=216,SNR=1000
Y57A Sumter 21.33 35 P P 10 10 49.8 -1.2
baz=221,SNR=43
Y57A Sumter 21.33 35 P P 10 10 49.8 -1.2
Y57A IAmb IAmb 10 10 52.4
comp=Z,1µm,1.4s
X56A White Oak 21.35 33 P P 10 10 50.2 -1.1
baz=219,SNR=215
ARGC Ariguani, Magd 21.40 107 *e*P P 10 10 52.3 +0.3
Z59A Georgetown, SC 21.41 38 P P 10 10 50.4 -1.5
baz=225,SNR=9.1
V53A Saluda 21.43 28 P P 10 10 51.7 -0.4
V53A IAmb IAmb 10 10 54.2
comp=Z,665nm,0.7s
R32A Long Quarter, 21.49 352 P P 10 10 53.1 +0.4
T25A Trinidad 21.62 339 P P 10 10 56.7 +2.4
baz=155,SNR=410
Y58A Scranton 21.66 37 P P 10 10 52.9 -1.6
baz=223,SNR=43
CBOC Ciudad Bolivar 21.66 119 *e*P P 10 10 54.0 -1.0
KMSC Kings Mountain 21.70 32 P P 10 10 54.0 -1.0
baz=217,SNR=525
KMSC Kings Mountain 21.70 32 P P 10 10 54.7 -0.3
KMSC IAmb IAmb 10 10 56.1
comp=Z,1µm,0.8s
USIN University of 21.75 16 P P 10 10 54.7 -0.8
BIRD Birdtown, Kers 21.77 34 P P 10 10 54.8 -0.8
BIRD IAmb IAmb 10 10 57.1
comp=Z,258nm,1.0s
T50A Nancy 21.77 22 P P 10 10 54.4 -1.3
T50A IAmb IAmb 10 10 57.5
comp=Z,713nm,0.8s
X57A Johnson Farm, 21.83 35 P P 10 10 55.1 -1.2
baz=221,SNR=48
ZARC Zaragoza, Cauc 21.84 113 *e*P P 10 10 53.7 -2.9
SLM Saint Louis 21.85 10 P P 10 10 56.2 -0.3
SLM pmax pmax
comp=Z,5µm,1.3s
SLM Saint Louis 21.85 10 P P 10 10 56.2 -0.3
TZTN Tazewell 21.85 25 P P 10 10 55.5 -1.0
baz=210,SNR=351
TZTN Tazewell 21.85 25 P P 10 10 55.7 -0.8
TZTN IAmb IAmb 10 10 57.2
comp=Z,839nm,0.8s
214A Organ Pipe Nat 21.90 316 P P 10 10 58.7 +1.6
baz=128,SNR=27
214A Organ Pipe Nat 21.90 316 P P 10 10 58.4 +1.3
HELC Santa Helena 21.90 117 *e*P P 10 10 56.3 -1.4
V54A Nebo 21.91 29 P P 10 10 56.6 -0.6
baz=215,SNR=558
X18A Snowflake 21.92 325 P P 10 10 59.4 +1.9
KSU1 Kansas State U 21.96 357 P P 10 10 57.0 -0.7
baz=176,SNR=174
KSU1 Kansas State U 21.96 357 P P 10 10 57.3 -0.4
KSU1 IAmb IAmb 10 11 13.4
comp=Z,728nm,0.8s
PLMC San Jos del P 21.97 121 *e*P P 10 10 56.6 -1.5
SMLC San Martn de 21.97 109 *e*P P 10 10 55.3 -2.7
CBKS Cedar Bluff 22.02 350 P P 10 10 58.7 +0.4
baz=168,SNR=300
CBKS Cedar Bluff 22.02 350 IAmb IAmb 10 11 03.2
comp=Z,1µm,0.9s
W56A Indian Trail 22.08 33 P P 10 10 57.7 -1.3
baz=219,SNR=201
Y59A Loris 22.17 38 P P 10 10 57.9 -2.0
baz=224,SNR=17
W18A Petrified Fore 22.25 327 P P 10 11 02.7 +1.8
baz=140,SNR=22
X58A Rowland 22.32 36 P P 10 10 59.7 -1.6
baz=223,SNR=15
X58A Rowland 22.32 36 IAmb IAmb 10 11 03.2
comp=Z,594nm,0.9s
V55A Taylorsville 22.33 31 P P 10 11 00.5 -0.9
baz=217,SNR=994
V55A Taylorsville 22.33 31 P P 10 11 00.9 -0.5
WCI Wyandotte Cave 22.38 18 P P 10 11 01.1 -0.9
WCI pmax pmax
comp=Z,2µm,0.7s
WCI Wyandotte Cave 22.38 18 P P 10 11 01.1 -0.9
baz=202
WCI Wyandotte Cave 22.38 18 P P 10 11 01.1 -0.9
W57A Gilead 22.40 34 P P 10 11 00.6 -1.6
baz=220,SNR=370
W57A Gilead 22.40 34 P P 10 11 01.1 -1.1
W57A IAmb IAmb 10 11 04.0
comp=Z,810nm,0.8s
YOTC Yotoco, Valle 22.46 123 *e*P P 10 11 02.5 -0.5
P38A Dawn 22.47 3 P P 10 11 02.2 -0.6
P38A IAmb IAmb 10 11 04.4
comp=Z,902nm,0.8s
P40A Paris 22.49 6 P P 10 11 02.1 -0.9
SDCO Great Sand Dun 22.55 338 P P 10 11 06.0 +2.1
baz=153,SNR=492
SDCO Great Sand Dun 22.55 338 IAmb IAmb 10 11 07.3
comp=Z,415nm,1.2s
GUY2C Guyana, Caldas 22.55 119 *e*P P 10 11 03.7 -0.7
Y60A Bolivia 22.57 39 P P 10 11 01.8 -2.1
baz=226,SNR=7.3
Y60A Bolivia 22.57 39 P P 10 11 02.8 -1.1
Y60A IAmb IAmb 10 11 06.6
comp=Z,242nm,0.8s
U54A Nelsons Funny 22.58 29 P P 10 11 03.0 -1.1
baz=214,SNR=639
U54A Nelsons Funny 22.58 29 P P 10 11 03.4 -0.6
SDDR Presa de Saban 22.61 82 P P 10 11 05.0 +0.5
SDDR IAmb IAmb 10 11 07.2
comp=Z,427nm,0.8s
PTBC PUERTO BERRIO, 22.64 115 *e*P P 10 11 01.8 -3.0
V56A Mocksville 22.65 32 P P 10 11 03.1 -1.6
baz=218,SNR=247
T53A Wise 22.65 27 P P 10 11 03.3 -1.4
baz=212,SNR=246
X16A Lo Mia Camp, P 22.68 323 P P 10 11 06.9 +1.8
W58A Raeford 22.72 35 P P 10 11 03.7 -1.6
baz=222,SNR=176
RREF El Recreo 22.74 120 *e*P P 10 11 06.5 0.0
X59A McDuffie Farm, 22.75 37 P P 10 11 03.5 -2.0
baz=224,SNR=16
KSCO Kaye Shedlock' 22.82 345 P P 10 11 07.1 +0.6
baz=161,SNR=199
KSCO Kaye Shedlock' 22.82 345 IAmb IAmb 10 11 09.8
comp=Z,632nm,0.9s
OCAC Ocana 22.88 110 *e*P P 10 11 05.3 -1.9
URIC Uribia, Colomb 22.90 100 *e*P P 10 11 05.4 -1.8
URIC Uribia, Colomb 22.90 100 P P 10 11 07.4 +0.2
GRTK Grand Turk 22.93 75 IAmb IAmb 10 11 09.1
comp=Z,289nm,0.7s
ANIL Santa Ana 22.93 121 *e*P P 10 11 08.4 +0.5
U55A TA2, Sparta 22.93 30 P P 10 11 06.6 -0.8
baz=216,SNR=891
TOLC Tolima 22.94 121 *e*P P 10 11 08.5 +0.5
P43A Skaggs, Pawnee 22.95 11 P P 10 11 07.5 +0.1
BBAC Balboa, Cauca 23.00 129 *e*P P 10 11 10.9 +2.5
BRRC Barranca, Sant 23.03 113 *e*P P 10 11 05.5 -2.9
S22A 4UR Ranch, Cre 23.05 335 P P 10 11 10.8 +2.0
baz=150,SNR=126
R50A Paris 23.07 22 P P 10 11 08.0 -0.7
V57A Coltrane Farms 23.08 33 P P 10 11 07.4 -1.4

baz=220,SNR=273
X60A Albert Glenn T 23.11 38 P P 10 11 07.2 -1.8
baz=225,SNR=30
U56A King 23.13 31 P P 10 11 08.3 -0.9
baz=218,SNR=239
U56A King 23.13 31 P P 10 11 08.6 -0.6
U56A IAmb IAmb 10 11 11.0
comp=Z,839nm,0.7s
T54A Tazewell 23.14 28 P P 10 11 08.2 -1.1
baz=214,SNR=446
SC01 Santiago de lo 23.15 81 P P 10 11 09.4 -0.2
SC01 IAmb IAmb 10 11 12.6
comp=Z,1μm,1.4s
BLO Bloomington 23.19 17 P P 10 11 09.6 -0.2
BLO pmax pmax
comp=Z,3μm,1.1s
BLO Bloomington 23.19 17 P P 10 11 09.6 -0.2
W59A Clinton 23.27 36 P P 10 11 09.0 -1.5
baz=223,SNR=9.1
MVCO Mesa Verde 23.31 332 P P 10 11 12.8 +1.7
baz=146,SNR=287
MVCO Mesa Verde 23.31 332 P P 10 11 12.9 +1.7
MVCO IAmb IAmb 10 11 18.8
comp=Z,213nm,0.8s
CMBC Cumbal 23.31 132 *eP* **P 10 11 15.1 +3.5**
V58A Windy Hill, Pi 23.36 34 P P 10 11 09.7 -1.6
baz=221,SNR=309
V58A Windy Hill, Pi 23.36 34 P P 10 11 10.6 -0.7
V58A IAmb IAmb 10 11 13.4
comp=Z,620nm,0.8s
ORTC Ortega, Tolima 23.39 122 *eP* **P 10 11 12.4 +0.5**
SOTA Rioblanco 23.40 128 *eP* **P 10 11 14.5 +2.0**
S53A Williamson 23.41 26 P P 10 11 10.6 -1.2
baz=212,SNR=64
SPBC San Pablo de B 23.42 117 *eP* **P 10 11 10.5 -1.7**
P46A Rosedale 23.43 15 P P 10 11 12.1 +0.2
WUAZ Wupatki 23.43 325 P P 10 11 13.9 +1.7
baz=137,SNR=113
WUAZ Wupatki 23.43 325 P P 10 11 14.2 +2.0
WUAZ IAmb IAmb 10 11 22.1
comp=Z,252nm,1.0s
PCON Cinco Dias 23.44 127 *eP* **P 10 11 15.4 +2.5**
GCUF Volcan Galeras 23.46 130 *eP* **P 10 11 16.7 +3.7**
BANI BANI 23.49 83 P P 10 11 13.7 +0.9
CRUC La Cruz 23.52 129 *eP* **P 10 11 15.9 +2.5**
Q24A Divide 23.52 340 P P 10 11 14.7 +1.6
baz=155,SNR=51
T55A Pulaski 23.55 29 P P 10 11 12.0 -1.1
baz=216,SNR=461
W60A Pink Hill 23.60 37 P P 10 11 11.7 -1.8
baz=225,SNR=41
CNNC Cliffs of the 23.63 37 P P 10 11 12.0 -1.7
baz=224,SNR=34
ROSC El Rosal 23.63 119 P P 10 11 15.3 +0.8
comp=Z,42nm,0.6s,baz=325,slow=9.1,SNR=26
ROSC El Rosal 23.63 119 *eP* **P 10 11 15.4 +0.9**
ROSC El Rosal 23.63 119 P P 10 11 15.4 +0.9
N33A J Bar K, Exete 23.65 355 P P 10 11 15.0 +1.1
O44A Mansfield 23.65 13 P P 10 11 13.9 0.0
U57A Blanch 23.72 33 P P 10 11 13.4 -1.2
baz=220,SNR=183
PRAC Prado 23.79 122 *eP* **P 10 11 16.0 +0.5**
BLA Blacksburg 23.80 30 P P 10 11 14.3 -1.0
baz=216,SNR=348
V59A Middlesex 23.81 35 P P 10 11 13.6 -1.8
baz=223,SNR=151
PAMC Pamplona, Colo 23.82 111 *eP* **P 10 11 14.8 -1.4**
T56A Rocky Mt 23.84 31 P P 10 11 14.6 -1.1
baz=218,SNR=367
S54A Dingess, Beckl 23.87 28 P P 10 11 14.7 -1.3
baz=214,SNR=189
S54A Dingess, Beckl 23.87 28 IAmb IAmb 10 11 17.2
comp=Z,801nm,1.0s
HDIL Hopedale 23.88 11 P P 10 11 15.6 -0.4
baz=193,SNR=506
SDD Santo Domingo 23.91 83 P P 10 11 17.9 +1.5
SDD IAmb IAmb 10 11 19.5
comp=Z,931nm,1.1s
GLA Glamis 23.91 315 P P 10 11 18.1 +1.7
baz=127,SNR=76
GLA Glamis 23.91 315 IAmb IAmb 10 11 21.4
comp=Z,482nm,1.2s
BETC Betania 23.96 125 *eP* **P 10 11 19.2 +2.1**
R53A Hurricane 24.04 26 P P 10 11 16.4 -1.0
baz=212,SNR=378
P49A Miami Univ. Ec 24.07 20 P P 10 11 16.3 -1.4
baz=204,SNR=1000
Q51A Peebles 24.09 23 P P 10 11 16.8 -1.1
baz=208,SNR=568
PV01 Paradox Valley 24.11 333 IAmb IAmb 10 11 23.1
comp=Z,235nm,0.8s
U58A Oxford 24.11 34 P P 10 11 16.4 -1.7
baz=221,SNR=144
W61A Ground Anchor 24.11 38 P P 10 11 17.2 -0.9
baz=226,SNR=10
Y12C Blythe 24.14 317 P P 10 11 19.7 +1.3
baz=128,SNR=25
RUSC La Rusia 24.15 115 *eP* **P 10 11 18.2 -1.1**
SFIN Lafayette 24.18 15 P P 10 11 17.7 -0.9
baz=198,SNR=675
T57A Hurt 24.20 32 P P 10 11 17.7 -1.2
baz=219,SNR=298
T57A Hurt 24.20 32 IAmb IAmb 10 11 20.5
comp=Z,409nm,0.7s
S55A Lewisburg 24.21 29 P P 10 11 17.8 -1.2
baz=216,SNR=256
GARC Garzon, Huila 24.23 126 *eP* **P 10 11 21.8 +2.1**
PV13 Radium Mtn., P 24.23 333 IAmb IAmb 10 11 28.1
comp=Z,328nm,0.9s
PV02 Paradox Valley 24.24 333 IAmb IAmb 10 11 28.2
comp=Z,392nm,1.1s
CHIC Chingaza 24.24 118 *eP* **P 10 11 20.6 +0.6**
PV15 Paradox Valley 24.24 333 IAmb IAmb 10 11 27.8
comp=Z,511nm,1.2s
PDMCI Parker Dam,Lak 24.24 319 P P 10 11 20.8 +1.5
baz=130,SNR=39
PV05 Paradox Valley 24.29 332 IAmb IAmb 10 11 28.6
comp=Z,342nm,0.7s
R54A Victor 24.32 28 P P 10 11 19.0 -1.0
baz=214,SNR=426
PV03 Paradox Valley 24.33 333 IAmb IAmb 10 11 28.9
comp=Z,262nm,0.8s
PV18 Skein Mesa, Pa 24.35 333 IAmb IAmb 10 11 29.1
comp=Z,376nm,0.7s
PV12 Saucer Basin, 24.36 333 IAmb IAmb 10 11 30.3
comp=Z,1μm,1.4s
V60A Jim Taylor Roa 24.36 37 P P 10 11 18.7 -1.7
baz=225,SNR=42
BGNE Belgrade 24.37 354 P P 10 11 21.2 +0.7
baz=172,SNR=188
PV11 David Mesa, Pa 24.37 333 IAmb IAmb 10 11 30.8
comp=Z,542nm,1.1s
PV07 Paradox Valley 24.39 333 IAmb IAmb 10 11 29.9
comp=Z,312nm,1.1s
PV16 Nyswonger Mesa 24.40 333 IAmb IAmb 10 11 29.7
comp=Z,317nm,0.9s
DR12 Loma Pena Alta 24.41 82 P P 10 11 20.6 -0.5
ISCO Idaho Springs 24.43 340 P P 10 11 23.1 +1.8
baz=155,SNR=208
P50A Jamestown 24.44 21 P P 10 11 19.9 -1.2
baz=206,SNR=1000
Q52A Bidwell 24.45 25 P P 10 11 20.3 -0.8
baz=210,SNR=654
PV20 West Nyswonger 24.45 333 P P 10 11 22.9 +1.5
PV20 IAmb IAmb 10 11 30.8
comp=Z,227nm,0.9s
PV04 Paradox Valley 24.47 333 IAmb IAmb 10 11 30.4
comp=Z,441nm,0.9s
PUAC Puerto Asis, P 24.48 130 *eP* **P 10 11 24.5 +2.8**
U59A Littleton 24.49 35 P P 10 11 19.7 -1.9
baz=223,SNR=60
U59A Littleton 24.49 35 P P 10 11 19.9 -1.6
U59A IAmb IAmb 10 11 23.4
comp=Z,171nm,0.8s
PV10 Paradox Valley 24.51 333 P P 10 11 23.1 +1.0
PV10 IAmb IAmb 10 11 30.7
comp=Z,420nm,1.0s
SWSC Sam W. Stewart 24.51 314 P P 10 11 23.7 +1.9
baz=125,SNR=23
OGNE Ogallala 24.52 347 P P 10 11 23.4 +1.5
baz=163,SNR=469
T58A Grand View Acr 24.53 33 P P 10 11 20.4 -1.5
baz=221,SNR=244
PV22 Blue Mesa, Par 24.53 333 IAmb IAmb 10 11 31.0
comp=Z,316nm,0.7s
VILC Villavicencio, 24.55 119 *eP* **P 10 11 23.3 +0.8**
IKP In-Ko-Pah, Jac 24.56 313 P P 10 11 24.4 +2.0
baz=124,SNR=44
PV23 Carpenter Ridg 24.56 333 IAmb IAmb 10 11 31.3
comp=Z,380nm,0.9s
S56A Natural Bridge 24.58 30 P P 10 11 21.1 -1.3
baz=218,SNR=136
O48A Farmland 24.59 18 P P 10 11 21.3 -1.1
baz=203,SNR=1000
P51A Williamsport 24.59 23 P P 10 11 21.3 -1.2
baz=208,SNR=367
W13A Hualapai Mount 24.60 320 P P 10 11 24.6 +1.7
Q53A Leroy 24.66 26 P P 10 11 22.2 -0.9
baz=212,SNR=410
BC3 Big Chuckawall 24.69 316 P P 10 11 25.3 +1.7
baz=127,SNR=112
SCIA State Center 24.76 3 P P 10 11 23.9 -0.1
baz=184,SNR=810
V61A Roper 24.78 38 P P 10 11 23.0 -1.2
baz=226,SNR=20
IRM Iron Mountain 24.79 317 P P 10 11 26.1 +1.7
baz=128,SNR=50
R55A Marlinton 24.80 29 P P 10 11 23.6 -0.9
baz=216,SNR=351
R55A Marlinton 24.80 29 IAmb IAmb 10 11 27.4
comp=Z,772nm,0.8s
NEE2 Needles Airpor 24.84 319 P P 10 11 26.1 +1.3
baz=130
MONP2 Monument Peak 24.91 313 P P 10 11 27.4 +1.6
baz=124,SNR=55
U60A Pendleton 24.93 36 P P 10 11 23.9 -1.6
baz=224,SNR=90
S57A Dark Hollow, R 24.94 31 P P 10 11 24.3 -1.3
baz=219,SNR=69
S57A Dark Hollow, R 24.94 31 IAmb IAmb 10 11 26.3
comp=Z,284nm,0.8s
BAR Barrett 24.97 312 P P 10 11 27.1 +1.0
O50A Cable 24.99 21 P P 10 11 25.0 -1.1
baz=206,SNR=727
V62A Hyde County Ai 24.99 39 P P 10 11 25.5 -0.7
baz=227
V62A Hyde County Ai 24.99 39 P P 10 11 26.7 +0.6
V62A IAmb IAmb 10 11 28.0
comp=Z,792nm,1.2s
TAMC Tame, Arauca 25.03 112 *eP* **P 10 11 25.6 -1.1**
Q54A Coxs Mills 25.06 27 P P 10 11 25.7 -1.0
baz=213,SNR=192
T59A Double "B" Far 25.07 34 P P 10 11 25.2 -1.7
baz=222,SNR=90
T59A Double "B" Far 25.07 34 IAmb IAmb 10 11 28.2
comp=Z,410nm,1.2s
SDV Santo Domingo 25.07 106 P P 10 11 26.5 -0.8
comp=Z,310nm,0.7s,baz=294,slow=3.2,SNR=275
SDV Santo Domingo 25.07 106 *eP* **P 10 11 26.4 -0.9**
SDV Santo Domingo 25.07 106 P P 10 11 26.4 -0.8
SDV IAmb IAmb 10 11 30.7
comp=Z,323nm,0.7s
SDV Santo Domingo 25.07 106 *eP* **P 10 11 26.4 -0.9**
P52A Corning 25.08 24 P P 10 11 25.7 -1.2
baz=210,SNR=350
N48A Decatur 25.18 18 P P 10 11 26.6 -1.2
baz=203,SNR=587
U61A Possum Corner 25.23 37 P P 10 11 27.0 -1.3
baz=225,SNR=15
P53A Whipple 25.25 25 P P 10 11 27.8 -0.6
baz=212,SNR=358
P53A Whipple 25.25 25 IAmb IAmb 10 11 31.8
comp=Z,878nm,0.8s
BELC Belle Mtn. Jos 25.26 316 P P 10 11 30.6 +1.8
baz=126,SNR=41
ACSO Alum Creek Sta 25.29 22 P P 10 11 27.7 -1.1
baz=208,SNR=244
S58A Poland Farm, P 25.29 33 P P 10 11 27.2 -1.6
baz=221,SNR=52
S58A Poland Farm, P 25.29 33 IAmb IAmb 10 11 29.1
comp=Z,213nm,1.0s
XPFO Pion Flat 25.34 314 P P 10 11 31.2 +1.7
O51A Pataskala 25.35 23 P P 10 11 27.9 -1.4
baz=208,SNR=184
PFO Pinyon Flats O 25.35 314 P P 10 11 31.6 +2.1
comp=Z,59nm,1.0s,baz=118,slow=7.7,SNR=37
PFO PcP **PcP 10 14 59.8 +0.7**
comp=Z,5.3nm,0.8s,baz=123,slow=4.9,SNR=2.0
PFO LR LR 10 23 13.5
comp=Z,1μm,18.5s,baz=134,slow=40
PFO Pinyon Flats O 25.35 314 *d iP* **P 10 11 31.1 +1.6**
PFO pmax pmax
comp=Z,225nm,1.3s
PFO Pinyon Flats O 25.35 314 P P 10 11 31.3 +1.8
baz=125,SNR=27
PFO Pinyon Flats O 25.35 314 P P 10 11 31.1 +1.6
PKCU Pink Cliffs 25.36 326 P P 10 11 32.1 +2.2
109C Camp Elliot, M 25.39 312 P P 10 11 31.4 +1.6
baz=123,SNR=19
Q55A Buckhannon 25.40 28 P P 10 11 28.8 -1.0
baz=215,SNR=271
M47A Cromwell 25.48 17 P P 10 11 29.3 -1.2
baz=208,SNR=46
N49A Columbus Grove 25.50 19 P P 10 11 29.6 -1.1
GMRC Granite Mounta 25.52 318 P P 10 11 33.0 +1.9
baz=128,SNR=56
N23A Red Feather La 25.52 340 P P 10 11 32.6 +1.4
baz=155,SNR=104
MACC Macarena, Meta 25.55 123 *eP* **P 10 11 32.6 +1.2**
R57A Stanardsville 25.57 31 P P 10 11 30.1 -1.3
baz=219,SNR=77
O52A Adamsville 25.61 24 P P 10 11 30.5 -1.2
baz=210,SNR=177
R58B Mineral 25.64 32 P P 10 11 30.4 -1.6
baz=220,SNR=68
R58B Mineral 25.64 32 P P 10 11 30.6 -1.4
R58B IAmb IAmb 10 11 32.3
comp=Z,341nm,1.3s
T60A Surry 25.64 35 P P 10 11 30.5 -1.5
baz=224,SNR=11
T60A Surry 25.64 35 P P 10 11 30.7 -1.3
T60A IAmb IAmb 10 11 33.3
comp=Z,403nm,0.8s
O20A White River Ci 25.67 336 P P 10 11 34.3 +1.9
baz=150,SNR=49
O20A White River Ci 25.67 336 IAmb IAmb 10 11 42.9
comp=Z,412nm,1.4s
N50A Nevada 25.70 21 P P 10 11 31.2 -1.4
baz=207,SNR=106
L44A Lake County Fo 25.71 12 P P 10 11 32.1 -0.4
baz=196,SNR=97
L44A Lake County Fo 25.71 12 P P 10 11 32.2 -0.3
P54A Burton 25.72 26 P P 10 11 31.9 -0.8
baz=213,SNR=224
MTPU Mount Pierson 25.75 327 P P 10 11 35.2 +1.8
SRU San Rafael Swe 25.78 331 P P 10 11 34.5 +1.1
SRU pmax pmax
comp=Z,126nm,1.0s
SRU San Rafael Swe 25.78 331 P P 10 11 34.5 +1.1
S59A Mechanicsville 25.80 34 P P 10 11 32.3 -1.1
baz=222,SNR=11
PTGC Puerto Gaitan, 25.82 117 *eP* **P 10 11 32.8 -1.0**
R58A Rapidan 25.83 32 P P 10 11 32.6 -1.2
baz=220,SNR=126
Q56A Snyder Ridge, 25.84 29 P P 10 11 33.4 -0.5
baz=216,SNR=138
Q56A Snyder Ridge, 25.84 29 P P 10 11 33.2 -0.6
Q56A IAmb IAmb 10 11 35.0
comp=Z,376nm,0.9s
MURC Murrieta 25.85 314 P P 10 11 36.0 +2.0
baz=124,SNR=30
M48A Edgerton 25.85 18 P P 10 11 32.6 -1.2
baz=203,SNR=28
M48A Edgerton 25.85 18 P P 10 11 32.3 -1.5
M48A IAmb IAmb 10 11 38.0
comp=Z,684nm,0.8s
SZCU Shurtz Canyon 25.89 326 P P 10 11 36.3 +1.8
L46A Eue Claire 25.92 15 P P 10 11 33.2 -1.2
baz=199,SNR=52
L46A Eue Claire 25.92 15 IAmb IAmb 10 11 34.7
comp=Z,595nm,0.8s
Q16A Castle Valley 25.93 330 P P 10 11 36.5 +1.7
P55A Reedsville 25.93 28 P P 10 11 33.6 -1.1
baz=215,SNR=34
O53A New Philadelph 25.97 25 P P 10 11 34.0 -0.9
baz=211,SNR=224
HEC Hector,Ludlow 25.98 317 P P 10 11 37.3 +2.1
baz=127,SNR=20
BBRC Big Bear Solar 26.04 315 P P 10 11 38.1 +2.2
baz=125
JFWS Jewell Farm 26.04 8 P P 10 11 35.4 -0.1
baz=190,SNR=1000
MCWV Mont Chateau 26.05 27 P P 10 11 34.1 -1.5
baz=214,SNR=61
PTLC Puerto Leguiza 26.05 128 *eP* **P 10 11 40.8 +4.9**
M49A Liberty Center 26.07 19 P P 10 11 34.5 -1.3
baz=204,SNR=435
CBN Corbin Frederi 26.09 33 P P 10 11 34.9 -1.1
baz=221,SNR=13
TUQ Turquoise Moun 26.09 318 P P 10 11 38.0 +1.8
baz=129,SNR=33
S60A Water View 26.10 35 P P 10 11 35.3 -0.8
baz=223,SNR=25
N51A Ashland 26.11 22 P P 10 11 34.6 -1.6
baz=208,SNR=66
N51A Ashland 26.11 22 IAmb IAmb 10 11 40.6
comp=Z,381nm,0.8s
Q57A Strasburg 26.20 30 P P 10 11 36.2 -0.9
baz=218,SNR=68
R59A King George, V 26.21 33 P P 10 11 36.4 -0.7
baz=222,SNR=29
TMUT Trail Mountain 26.24 331 P P 10 11 39.1 +1.3
O54A Avella 26.25 26 P P 10 11 36.2 -1.3
baz=213,SNR=128
O54A Avella 26.25 26 P P 10 11 36.3 -1.2
O54A IAmb IAmb 10 11 39.9
comp=Z,332nm,0.7s
N52A McGinn's Farm, 26.27 23 P P 10 11 36.1 -1.5
baz=210,SNR=48
M50A Fremont 26.30 21 P P 10 11 36.5 -1.5
L48A N Adams 26.36 18 P P 10 11 37.0 -1.4
baz=203,SNR=347
P56A Dayton Farm, R 26.38 29 P P 10 11 37.6 -1.0
baz=217,SNR=66
RRX Edison Barstow 26.45 316 P P 10 11 41.5 +2.2
baz=126
SCI2 San Clemente I 26.47 311 P P 10 11 41.3 +1.8
baz=121
Q58A Fox Den Farm, 26.49 31 P P 10 11 38.5 -1.2
baz=220,SNR=52
BFSC Mount Baldy Ra 26.52 314 P P 10 11 41.7 +1.6
baz=124,SNR=23
M51A Elyria 26.54 22 P P 10 11 38.5 -1.6
baz=208,SNR=51
R60A Leonardtown, M 26.55 34 P P 10 11 39.3 -0.8
baz=222
AGPR Aguadilla, PR 26.57 83 IAmb IAmb 10 11 54.6
comp=Z,274nm,1.4s
RDMU Red Mountain 26.57 335 P P 10 11 41.7 +1.1
GSC Goldstone, Bar 26.57 317 P P 10 11 42.0 +1.4
GSC pmax pmax
comp=Z,22nm,1.0s
GSC Goldstone, Bar 26.57 317 P P 10 11 42.1 +1.6
baz=127,SNR=19
GSC Goldstone, Bar 26.57 317 P P 10 11 42.0 +1.4
ECSD EROS Data Cent 26.58 357 P P 10 11 40.2 -0.2
baz=176,SNR=497
ECSD EROS Data Cent 26.58 357 IAmb IAmb 10 11 42.8
comp=Z,369nm,0.8s
N53A Lisbon 26.59 24 P P 10 11 39.7 -0.8
baz=211,SNR=257
CIS Catalina Islan 26.59 312 P P 10 11 42.1 +1.4
baz=122,SNR=13
SHOC Shoshone, Teco 26.61 319 P P 10 11 42.3 +1.6
baz=129,SNR=14
S61A Accomac 26.62 36 P P 10 11 40.1 -0.6
baz=225,SNR=5.3
RWWY Rawlins 26.66 339 IAmb IAmb 10 11 43.8
comp=Z,166nm,1.0s
FMP Fort Macarthur 26.67 313 P P 10 11 43.4 +2.0
baz=122
K46A Dorr 26.68 15 P P 10 11 39.7 -1.5
baz=200,SNR=81
O55A Ligonier 26.73 27 P P 10 11 40.6 -1.3
baz=215,SNR=90
P57A Homestead Farm 26.75 30 P P 10 11 41.4 -0.5
baz=218,SNR=92
P57A Homestead Farm 26.75 30 IAmb IAmb 10 11 43.1
comp=Z,399nm,1.1s
ELOV Elorza 26.85 109 *eP* **P 10 11 42.0 -1.2**
K47A Vermontville 26.87 16 P P 10 11 41.6 -1.3
baz=201,SNR=562
AAM Ann Arbor 26.92 19 P P 10 11 42.2 -1.2
AAM pmax pmax
comp=Z,369nm,0.7s
AAM Ann Arbor 26.92 19 P P 10 11 42.1 -1.2
baz=204,SNR=48
AAM Ann Arbor 26.92 19 P P 10 11 42.2 -1.2
AAM IAmb IAmb 10 11 44.5
comp=Z,369nm,0.7s
Q59A Harwood 26.95 33 P P 10 11 42.8 -1.0
baz=221,SNR=14
L50A Kingsville 26.95 20 P P 10 11 42.3 -1.4
baz=206,SNR=78
DECC Green Verdugo 27.00 314 P P 10 11 46.4 +2.1
baz=123,SNR=12
M52A Chesterland 27.02 23 P P 10 11 43.0 -1.3
baz=210,SNR=46
M52A Chesterland 27.02 23 IAmb IAmb 10 11 47.1
comp=Z,85nm,0.8s
N54A Moraine State 27.07 26 P P 10 11 43.9 -0.9
baz=213,SNR=130
N54A Moraine State 27.07 26 IAmb IAmb 10 11 45.6
comp=Z,1μm,1.4s
P58A Pank, Wackersv 27.10 31 P P 10 11 44.1 -1.0
baz=220,SNR=49
O56A Blue Knob Stat 27.11 28 P P 10 11 44.1 -1.1
baz=216,SNR=79
O56A Blue Knob Stat 27.11 28 IAmb IAmb 10 11 45.9
comp=Z,311nm,1.1s
EDW2 Edwards Air Fo 27.11 315 P P 10 11 46.8 +1.5
baz=125,SNR=18
ICMP Isla Caja de M 27.14 84 IAmb IAmb 10 11 46.1
comp=Z,110nm,0.4s
I42A Draeger Farm, 27.19 10 IAmb IAmb 10 11 47.9
comp=Z,637nm,0.8s
M53A WI Miller and 27.20 24 P P 10 11 44.8 -1.1
baz=211,SNR=119
K48A Perry 27.24 18 P P 10 11 44.6 -1.7
baz=203,SNR=76
J45A Montague 27.24 14 P P 10 11 45.2 -1.1
baz=198,SNR=27
J45A Montague 27.24 14 P P 10 11 45.3 -1.1
J45A IAmb IAmb 10 11 46.7
comp=Z,608nm,0.8s
LRMC Laurel Mtn Rad 27.25 317 P P 10 11 48.5 +1.8
baz=126,SNR=22
TPNV Topopah Spring 27.26 321 P P 10 11 49.0 +2.2
baz=131,SNR=35
R61A Willards 27.27 35 P P 10 11 45.9 -0.6
baz=224
R61A Willards 27.27 35 P P 10 11 45.9 -0.6
R61A IAmb IAmb 10 11 48.4
comp=Z,354nm,1.4s
R61A **pP 10 12 14.6 +1.5**
SDMD Soldier's Deli 27.27 32 P P 10 11 45.2 -1.4
SDMD pP **pP 10 12 14.3 +1.2**
K22A Casper 27.30 341 P P 10 11 48.5 +1.5
baz=155,SNR=72
K22A Casper 27.30 341 P P 10 11 48.6 +1.5
K22A IAmb IAmb 10 11 56.9
comp=Z,280nm,1.3s
FURC Furnace Creek, 27.33 319 P P 10 11 49.0 +1.8
baz=129,SNR=38
N55A Marion Center 27.34 27 P P 10 11 46.0 -1.2
baz=215,SNR=57
JLU Jordanelle 27.40 332 P P 10 11 49.2 +1.2
K49A Clarkson 27.42 19 P P 10 11 46.5 -1.4
baz=204,SNR=48
J47A Sunmer 27.44 16 P P 10 11 46.7 -1.4
baz=201,SNR=35
SUSD Miller 27.46 354 P P 10 11 48.6 +0.4
baz=172,SNR=80
SUSD Miller 27.46 354 P P 10 11 48.5 +0.2
OSI Osito Audit: C 27.46 314 P P 10 11 50.2 +1.7
baz=123
MPMC Manual Prospec 27.48 318 P P 10 11 50.3 +1.5
baz=127,SNR=72
Q60A Greensboro 27.48 34 P P 10 11 47.6 -0.8
baz=223,SNR=10.0
Q60A Greensboro 27.48 34 P P 10 11 47.3 -1.2
Q60A IAmb IAmb 10 11 49.9
comp=Z,276nm,0.8s
SJG San Juan 27.49 84 P P 10 11 47.6 -1.2
comp=Z,148nm,0.6s,baz=262,slow=6.8,SNR=54
SJG San Juan 27.49 84 *eP* **P 10 11 47.4 -1.4**
SJG San Juan 27.49 84 P P 10 11 47.5 -1.2
SJG IAmb IAmb 10 11 48.5
comp=Z,137nm,0.7s
O57A Amberson 27.50 30 P P 10 11 47.4 -1.3
baz=218,SNR=37

GCPR	Guaynabo City	27.55	83	IAmb	IAmb	10 11 51.6		
	comp=Z,162nm,0.9s							
ALLY	Alegheny Colle	27.58	24	P	P	**10 11 48.1**	**-1.3**	
ALLY				IAmb	IAmb	10 11 50.0		
	comp=Z,530nm,0.8s							
CTU	Camp Tracy	27.61	332	P	P	**10 11 51.4**	**+1.5**	
P59A	Jarrettsville	27.62	32	P	P	**10 11 48.4**	**-1.3**	
	baz=221,SNR=37							
M54A	Oil Creek Stat	27.66	25	P	P	**10 11 49.0**	**-1.1**	
	baz=213,SNR=70							
M54A	Oil Creek Stat	27.66	25	IAmb	IAmb	10 11 51.9		
	comp=Z,343nm,0.8s							
Q61A	Milford	27.67	34	P	P	**10 11 49.2**	**-0.9**	
	baz=224							
K50A	Casco	27.67	20	P	P	**10 11 48.5**	**-1.6**	
	baz=206,SNR=65							
K50A	Casco	27.67	20	P	P	**10 11 48.4**	**-1.7**	
DUG	Dugway, Tooele	27.71	330	P	P	**10 11 52.3**	**+1.5**	
DUG				pmax	pmax			
	comp=Z,24nm,0.7s							
DUG	Dugway, Tooele	27.71	330	P	P	**10 11 52.5**	**+1.7**	
	baz=141							
DUG	Dugway, Tooele	27.71	330	P	P	**10 11 52.3**	**+1.5**	
SSPA	Standing Stone	27.72	29	P	P	**10 11 49.3**	**-1.3**	
SSPA				IAmb	IAmb	10 11 51.2		
	comp=Z,341nm,1.1s							
N56A	West Decatur	27.76	28	P	P	**10 11 49.5**	**-1.4**	
	baz=216,SNR=30							
SCZ2	Santa Cruz Isl	27.77	312	P	P	**10 11 52.7**	**+1.5**	
	baz=121							
O58A	Lewisberry	27.77	31	P	P	**10 11 49.7**	**-1.4**	
	baz=219,SNR=37							
J48A	Bridge Port	27.79	18	P	P	**10 11 49.4**	**-1.8**	
	baz=203,SNR=40							
J48A	Bridge Port	27.79	18	P	P	**10 11 49.3**	**-1.9**	
L53A	Girard	27.80	24	P	P	**10 11 50.3**	**-1.0**	
	baz=211,SNR=125							
R11A	Troy Canyon, C	27.81	324	P	P	**10 11 53.5**	**+1.8**	
	baz=134,SNR=30							
R11A	Troy Canyon, C	27.81	324	P	P	**10 11 53.2**	**+1.5**	
ARVC	Arvin	27.82	315	P	P	**10 11 53.6**	**+2.1**	
	baz=124,SNR=22							
I45A	Fountain	27.85	14	P	P	**10 11 50.8**	**-0.8**	
	baz=198,SNR=95							
ISA	Isabella, Lake	27.88	316	P	P	**10 11 54.1**	**+1.9**	
ISA				pmax	pmax			
	comp=Z,117nm,1.5s							
ISA	Isabella, Lake	27.88	316	P	P	**10 11 54.2**	**+2.0**	
	baz=125,SNR=21							
ISA	Isabella, Lake	27.88	316	P	P	**10 11 54.1**	**+1.9**	
I46A	Reed City	27.94	15	P	P	**10 11 51.4**	**-1.1**	
	baz=200,SNR=91							
PAGS	Pennsylvania G	27.95	31	IAmb	IAmb	10 11 52.9		
	comp=Z,155nm,1.0s							
MVL	Millersville	27.96	32	IAmb	IAmb	10 11 53.4		
	comp=Z,222nm,0.9s							
N57A	Milroy	27.97	29	P	P	**10 11 51.2**	**-1.6**	
	baz=218,SNR=40							
GRAC	Grapevine Rang	27.98	319	P	P	**10 11 55.5**	**+2.4**	
	baz=129,SNR=44							
RSSD	Black Hills	28.00	346	P	P	**10 11 55.0**	**+1.7**	
RSSD				pmax	pmax			
	comp=Z,38nm,0.9s							
RSSD	Black Hills	28.00	346	P	P	**10 11 54.5**	**+1.2**	
	baz=161							
RSSD	Black Hills	28.00	346	P	P	**10 11 55.0**	**+1.7**	
M55A	Ridgway	28.00	27	P	P	**10 11 51.8**	**-1.3**	
	baz=214,SNR=76							
M55A	Ridgway	28.00	27	IAmb	IAmb	10 11 53.6		
	comp=Z,306nm,1.1s							
K51A	Iona Station	28.00	21	P	P	**10 11 51.2**	**-1.8**	
	baz=208,SNR=28							
J49A	Marlette	28.04	19	P	P	**10 11 51.4**	**-2.0**	
	baz=204,SNR=127							
ERPA	Erie	28.04	24	P	P	**10 11 52.3**	**-1.2**	
	baz=212,SNR=101							
SBC	Santa Barbara	28.06	313	P	P	**10 11 55.0**	**+1.3**	
	baz=122							
CWC	Cottonwood Cre	28.09	318	P	P	**10 11 55.7**	**+1.6**	
	baz=127							
SPMN	Marine on St.	28.09	3	P	P	**10 11 53.5**	**-0.3**	
	baz=184,SNR=524							
P60A	Greenville	28.18	33	P	P	**10 11 53.2**	**-1.5**	
	baz=222,SNR=25							
P60A	Greenville	28.18	33	IAmb	IAmb	10 11 54.9		
	comp=Z,294nm,1.4s							
I47A	Gladwin	28.25	16	P	P	**10 11 54.0**	**-1.3**	
	baz=201,SNR=88							
M56A	Emporium	28.27	27	P	P	**10 11 54.1**	**-1.4**	
	baz=216,SNR=111							
M56A	Emporium	28.27	27	IAmb	IAmb	10 11 59.4		
	comp=Z,246nm,0.7s							
O59A	Robesonia	28.28	31	P	P	**10 11 54.5**	**-1.1**	
	baz=220							
CUPR	Culebra, Puert	28.31	83	IAmb	IAmb	10 11 56.2		
	comp=Z,191nm,0.9s							
K52A	Tillsonburg	28.34	22	P	P	**10 11 54.6**	**-1.5**	
	baz=210,SNR=108							
G40A	Rib Lake	28.36	7	IAmb	IAmb	10 11 57.4		
	comp=Z,369nm,0.8s							
PKM	Mcpherson Peak	28.36	313	P	P	**10 11 58.5**	**+1.8**	
	baz=122,SNR=15							
VES	Vestal, Richgr	28.39	316	P	P	**10 11 58.9**	**+2.2**	
	baz=125,SNR=64							
L54A	Sinclairville	28.41	25	P	P	**10 11 55.7**	**-1.1**	
	baz=213,SNR=132							
SPUT	South Promonto	28.42	332	P	P	**10 11 58.4**	**+1.4**	
N58A	Sunbury	28.43	30	P	P	**10 11 55.3**	**-1.6**	
	baz=219,SNR=55							
N58A	Sunbury	28.43	30	IAmb	IAmb	10 11 57.1		
	comp=Z,149nm,0.9s							
BW06	Boulder Array	28.44	337	P	P	**10 11 58.2**	**+0.9**	
	baz=150,SNR=26							
PDAR	Pinedale Array	28.44	337	P	P	**10 11 58.2**	**+1.0**	
	comp=Z,11nm,0.8s,baz=140,slow=9.7,SNR=76							
PDAR				PKiKP	**PKiKP**	**10 22 40.5**	**-1.0**	
	comp=Z,1.7nm,0.7s,baz=146,slow=1.8,SNR=3.7							
PDAR				P3KPbc		10 44 08.8		
	comp=Z,0.2nm,0.5s,baz=20,slow=3.0,SNR=1.9							
H45A	Beulah	28.45	13	P	P	**10 11 55.8**	**-1.2**	
	baz=198,SNR=60							
P61A	Hammonton	28.53	34	P	P	**10 11 56.1**	**-1.7**	
	baz=224							
TIN	Tinemaha, Big	28.55	319	P	P	**10 12 00.3**	**+2.0**	
	baz=128							
H46A	Fife Lake	28.56	15	P	P	**10 11 56.6**	**-1.4**	
	baz=200,SNR=16							
STVI	Saint Thomas	28.62	83	P	P	**10 11 57.6**	**-1.2**	
STVI				IAmb	IAmb	10 11 59.7		
	comp=Z,294nm,0.6s							
M57A	Sunshine Farm,	28.62	29	P	P	**10 11 57.4**	**-1.2**	
	baz=218,SNR=43							
M57A	Sunshine Farm,	28.62	29	IAmb	IAmb	10 11 59.1		
	comp=Z,148nm,0.9s							
I48A	Sherman Twp	28.63	17	P	P	**10 11 57.2**	**-1.4**	
	baz=203,SNR=75							
I49A	Point Hope	28.66	18	P	P	**10 11 56.8**	**-2.1**	
	baz=205,SNR=47							
I49A	Point Hope	28.66	18	IAmb	IAmb	10 11 58.5		
	comp=Z,291nm,0.7s							
F33A	5 Mile Ranch,	28.67	358	IAmb	IAmb	10 12 01.0		
	comp=Z,342nm,1.5s							
O60A	Telford	28.68	32	P	P	**10 11 57.9**	**-1.1**	
	baz=222,SNR=24							
F36A	Milaca	28.70	2	IAmb	IAmb	10 12 00.3		
	comp=Z,462nm,0.8s							
SMMC	Simmler	28.72	314	P	P	**10 12 01.7**	**+2.1**	
	baz=123,SNR=11							
L55A	Hinsdale	28.73	26	P	P	**10 11 58.5**	**-1.1**	
	baz=214,SNR=167							
J52A	Paris	28.82	22	P	P	**10 11 58.8**	**-1.6**	
	baz=210,SNR=67							
CDVI	St. Croix	28.83	84	IAmb	IAmb	10 12 01.9		
	comp=Z,227nm,0.8s							
WVNY	West Valley, N	28.84	26	IAmb	IAmb	10 12 01.3		
	comp=Z,434nm,0.9s							
VOG	Valley Oaks Go	28.86	316	P	P	**10 12 02.7**	**+1.9**	
	baz=125							
H47A	Mio	28.87	16	P	P	**10 11 59.8**	**-1.0**	
	baz=202,SNR=265							
G45A	Suttons Bay	28.93	14	P	P	**10 12 00.5**	**-0.8**	
	baz=198,SNR=71							
G45A	Suttons Bay	28.93	14	IAmb	IAmb	10 12 08.4		
	comp=Z,404nm,0.6s							
N59A	State Game Lan	28.95	31	P	P	**10 12 00.5**	**-1.0**	
	baz=220,SNR=65							
N59A	State Game Lan	28.95	31	IAmb	IAmb	10 12 02.1		
	comp=Z,182nm,0.8s							
O61A	Allentown	28.96	34	P	P	**10 12 00.2**	**-1.3**	
	baz=224							
M58A	Price's Panora	28.96	30	P	P	**10 12 00.4**	**-1.3**	
	baz=219,SNR=120							
K54A	Basiliko Farm,	28.98	25	P	P	**10 12 00.6**	**-1.2**	
	baz=214,SNR=100							
GLMI	Grayling	28.98	15	P	P	**10 12 00.8**	**-0.9**	
	baz=201,SNR=114							
L56A	Greenwood	29.07	27	P	P	**10 12 01.2**	**-1.4**	
	baz=216,SNR=66							
L56A	Greenwood	29.07	27	IAmb	IAmb	10 12 03.0		
	comp=Z,176nm,0.8s							
PAGB	Antelope Grade	29.12	314	P	P	**10 12 05.0**	**+1.9**	
I51A	Listowel	29.12	21	P	P	**10 12 01.5**	**-1.5**	
	baz=208,SNR=252							
ATAH	Atahualpa	29.14	144	P	P	**10 12 06.9**	**+3.0**	
	comp=Z,123nm,0.8s,baz=335,slow=6.2,SNR=49							
H48A	Harrisville	29.21	17	P	P	**10 12 02.5**	**-1.3**	
	baz=203,SNR=54							
H48A	Harrisville	29.21	17	IAmb	IAmb	10 12 05.2		
	comp=Z,327nm,0.7s							
N60A	Cedar Hill Far	29.24	32	P	P	**10 12 03.1**	**-1.0**	
	baz=222,SNR=48							
L57A	Andrews Acres	29.27	28	P	P	**10 12 03.0**	**-1.4**	
	baz=217,SNR=108							
MLAC	Mammoth, Mammo	29.29	319	P	P	**10 12 07.3**	**+2.4**	
	baz=128,SNR=10.0							
COWI	Conover	29.32	8	P	P	**10 12 04.2**	**-0.5**	
K55A	Perry	29.33	26	P	P	**10 12 03.7**	**-1.2**	
	baz=214,SNR=118							
ELK	Elko	29.34	328	P	P	**10 12 07.2**	**+2.0**	
	comp=Z,23nm,0.8s,baz=139,slow=6.6,SNR=92							
ELK				PcP	**PcP**	**10 15 09.5**	**+0.8**	
	comp=Z,18nm,0.8s,baz=153,slow=3.4,SNR=5.8							
ELK				pPcP		10 15 42.2		
	comp=Z,6.5nm,0.6s,baz=125,slow=2.6,SNR=4.2							
ELK				ScP	**ScP**	**10 18 39.8**	**+0.5**	
	comp=Z,4.9nm,0.9s,baz=107,slow=7.1,SNR=3.8							
ELK				pScP		10 19 37.6		
	comp=Z,5.8nm,1.1s,baz=139,slow=6.1,SNR=4.9							
ELK	Elko	29.34	328	P	P	**10 12 07.1**	**+1.8**	
BRNJ	Basking Ridge	29.38	33	IAmb	IAmb	10 12 05.7		
	comp=Z,171nm,0.7s							
G46A	Petoskey	29.38	15	P	P	**10 12 04.2**	**-1.1**	
	baz=200,SNR=101							
MMNY	Mt. Morris Dam	29.40	26	IAmb	IAmb	10 12 06.6		
	comp=Z,538nm,0.9s							
KSPA	Keystone Colle	29.43	30	IAmb	IAmb	10 12 06.1		
	comp=Z,138nm,1.2s							
REDW	Red Top Meadow	29.44	336	IAmb	IAmb	10 12 14.8		
	comp=Z,131nm,0.8s							
NVAR	Mina Array Bea	29.46	321	P	P	**10 12 08.8**	**+2.5**	
	comp=Z,73nm,0.8s,baz=132,slow=8.9,SNR=349							
NVAR				PcP	**PcP**	**10 15 10.2**	**+1.1**	
	comp=Z,14nm,0.8s,baz=133,slow=2.6,SNR=4.6							
NVAR				pPcP		10 15 43.0		
	comp=Z,12nm,0.9s,baz=148,slow=2.5,SNR=3.7							
NVAR				ScP	**ScP**	**10 18 41.1**	**+1.4**	
	comp=Z,6.5nm,1.0s,baz=142,slow=4.3,SNR=5.0							
NVAR				pScP		10 19 38.4		
	comp=Z,7.9nm,1.1s,baz=129,slow=4.4,SNR=6.0							
NVAR				PKiKP	**PKiKP**	**10 22 42.7**	**+0.4**	
	comp=Z,0.5nm,0.6s,baz=160,slow=2.9,SNR=2.3							
NVAR				LR	LR	10 26 27.6		
	comp=Z,935nm,19.0s,baz=136,slow=41							
NVAR				P3KPbc		10 44 06.0		
	comp=Z,0.6nm,0.7s,baz=304,slow=4.9,SNR=1.5							
SNOW	Snow King Moun	29.48	336	IAmb	IAmb	10 12 09.6		
	comp=Z,216nm,0.7s							
G47A	Hillman	29.50	16	P	P	**10 12 05.1**	**-1.2**	
	baz=202,SNR=117							
J54A	Appleton	29.55	25	P	P	**10 12 05.4**	**-1.4**	
	baz=213,SNR=35							
J54A	Appleton	29.55	25	P	P	**10 12 05.4**	**-1.4**	
J54A				IAmb	IAmb	10 12 07.2		
	comp=Z,328nm,1.0s							
E38A	The Farm, Brul	29.55	5	P	P	**10 12 06.4**	**-0.4**	
N61A	South Mountain	29.57	33	P	P	**10 12 05.5**	**-1.5**	
	baz=223,SNR=9.6							
F45A	CMU Biological	29.57	14	P	P	**10 12 05.9**	**-1.0**	
	baz=198,SNR=110							
TPAW	Teton Pass	29.58	336	IAmb	IAmb	10 12 17.4		
	comp=Z,137nm,1.1s							
M59A	Waymart	29.59	31	P	P	**10 12 05.9**	**-1.2**	
	baz=220,SNR=61							
K56A	Middlesex	29.62	27	P	P	**10 12 06.3**	**-1.2**	
	baz=216,SNR=114							
I52A	Shelburne	29.65	22	P	P	**10 12 06.4**	**-1.3**	
	baz=210,SNR=10							
I53A	Kortright Cn E	29.65	23	P	P	**10 12 06.2**	**-1.4**	
	baz=211,SNR=16							
RYN	Ryan	29.72	321	P	P	**10 12 10.5**	**+1.9**	
PMPB	Monarch Peak	29.76	315	P	P	**10 12 10.1**	**+1.3**	
PMPB				IAmb	IAmb	10 12 12.8		
	comp=Z,149nm,0.9s							
L58A	Harry Jones Me	29.77	29	P	P	**10 12 07.7**	**-1.1**	
	baz=219,SNR=74							
M60A	Port Jervis	29.82	32	P	P	**10 12 07.7**	**-1.5**	
	baz=222,SNR=64							
BINY	Binghamton	29.83	29	P	P	**10 12 08.3**	**-1.0**	
	baz=219,SNR=84							
BINY	Binghamton	29.83	29	IAmb	IAmb	10 12 09.8		
	comp=Z,292nm,0.9s							
J55A	Hilton	29.88	26	P	P	**10 12 08.2**	**-1.4**	
	baz=214,SNR=60							
J55A	Hilton	29.88	26	IAmb	IAmb	10 12 12.4		
	comp=Z,248nm,0.8s							
PAL	Palisades	29.95	33	P	P	**10 12 08.6**	**-1.8**	
	baz=223,SNR=28							
PAL	Palisades	29.95	33	IAmb	IAmb	10 12 10.4		
	comp=Z,354nm,1.4s							
D32A	Dogwood Acres,	29.99	357	IAmb	IAmb	10 12 12.0		
	comp=Z,164nm,0.6s							
K57A	Scipio Center	30.00	28	P	P	**10 12 09.5**	**-1.4**	
	baz=217,SNR=88							
N62A	Caumsett State	30.13	34	P	P	**10 12 09.9**	**-2.1**	
	baz=224,SNR=6.7							
H17A	Grant Village	30.21	337	P	P	**10 12 14.7**	**+1.8**	
	baz=149,SNR=31							
M61A	Granite Spring	30.25	33	P	P	**10 12 11.5**	**-1.5**	
	baz=223,SNR=51							
H52A	Wyvale	30.25	22	P	P	**10 12 11.5**	**-1.4**	
	baz=210,SNR=152							
L59A	Walton	30.27	30	P	P	**10 12 12.2**	**-1.0**	
	baz=220,SNR=106							
L59A	Walton	30.27	30	IAmb	IAmb	10 12 13.8		
	comp=Z,367nm,0.8s							
L59A				pP	pP	10 12 40.9	+0.8	
SABA	Saba	30.28	84	IAmb	IAmb	10 12 13.2		
	comp=Z,242nm,0.8s							
J56A	Wolcott	30.29	27	P	P	**10 12 12.1**	**-1.2**	
	baz=216,SNR=166							
J56A	Wolcott	30.29	27	IAmb	IAmb	10 12 13.8		
	comp=Z,476nm,1.0s							
RLMT	Red Lodge	30.39	340	P	P	**10 12 16.0**	**+1.5**	
	baz=152,SNR=81							
SMRT	St. Maarten	30.42	83	*e*P	P	**10 12 13.1**	**-1.7**	
K58A	Earlville	30.42	29	P	P	**10 12 13.4**	**-1.1**	
	baz=219,SNR=130							
K58A	Earlville	30.42	29	IAmb	IAmb	10 12 15.0		
	comp=Z,341nm,0.9s							
F48A	Evansville	30.44	17	P	P	**10 12 13.4**	**-1.2**	
	baz=204,SNR=107							
SAO	San Andreas Ge	30.49	315	P	P	**10 12 16.3**	**+1.1**	
SAO				pmax	pmax			
	comp=Z,26nm,0.8s							
SAO	San Andreas Ge	30.49	315	P	P	**10 12 16.3**	**+1.1**	
E46A	Sault Ste Mari	30.50	15	IAmb	IAmb	10 12 16.5		
	comp=Z,201nm,0.8s							
CMB	Columbia Colle	30.51	318	P	P	**10 12 16.8**	**+1.4**	
CMB				pmax	pmax			
	comp=Z,85nm,1.4s							
CMB	Columbia Colle	30.51	318	P	P	**10 12 16.8**	**+1.4**	
L60A	Shokan	30.52	31	P	P	**10 12 14.2**	**-1.2**	
	baz=222,SNR=46							
YNR	Norris Junctio	30.53	338	P	P	**10 12 17.8**	**+2.1**	
F49A	Sandfield	30.55	18	P	P	**10 12 14.0**	**-1.6**	
	baz=205,SNR=93							
SADO	Sadowa	30.63	22	P	P	**10 12 14.7**	**-1.6**	
	comp=Z,352nm,0.6s,baz=238,slow=8.8,SNR=296							
SADO				LR	LR	10 26 01.6		
	comp=Z,452nm,20.9s,baz=217,slow=39							
YHH	Holmes Hill	30.65	338	P	P	**10 12 18.9**	**+2.0**	
H53A	Bobcaygeon	30.67	23	P	P	**10 12 15.7**	**-1.0**	
	baz=212,SNR=807							
N63A	Mattituck	30.68	35	P	P	**10 12 14.8**	**-2.0**	
	baz=226							
YLE	Yale	30.69	34	IAmb	IAmb	10 12 17.6		
	comp=Z,127nm,0.9s							
KSCT	Kent School, K	30.70	33	IAmb	IAmb	10 12 17.2		
	comp=Z,608nm,1.5s							
I55A	Frankford	30.72	25	P	P	**10 12 15.8**	**-1.3**	
	baz=214,SNR=381							
PECO	Prince Edward	30.77	26	IAmb	IAmb	10 12 18.2		
	comp=Z,401nm,0.7s							
J57A	Williamstown	30.77	28	P	P	**10 12 16.2**	**-1.4**	
	baz=217,SNR=193							
J57A	Williamstown	30.77	28	IAmb	IAmb	10 12 17.9		
	comp=Z,438nm,0.8s							
SKI	Saint Kitts	30.78	85	*e*P	P	**10 12 17.1**	**-1.0**	
SKI	Saint Kitts	30.78	85	P	P	**10 12 16.9**	**-1.1**	
SKI				pmax	pmax			
	comp=Z,412nm,1.0s							
SKI	Saint Kitts	30.78	85	P	P	**10 12 16.9**	**-1.1**	
SKI				IAmb	IAmb	10 12 18.4		
	comp=Z,412nm,1.0s							
M62A	Hamden	30.80	34	P	P	**10 12 16.1**	**-1.8**	
	baz=224,SNR=25							
K59A	Cooperstown	30.80	30	P	P	**10 12 16.6**	**-1.4**	
	baz=220,SNR=58							
E47A	Iron Bridge	30.84	16	P	P	**10 12 17.4**	**-0.7**	
	baz=202,SNR=362							
EYMN	Ely	30.89	5	P	P	**10 12 17.6**	**-0.9**	
	baz=186,SNR=228							
EYMN	Ely	30.89	5	IAmb	IAmb	10 12 19.4		
	comp=Z,350nm,0.7s							
MDND	Maddock	30.89	354	P	P	**10 12 19.1**	**+0.5**	
	baz=171,SNR=222							
LAO	LASA Array	30.93	345	P	P	**10 12 19.8**	**+0.7**	
	baz=159,SNR=72							
LAO	LASA Array	30.93	345	IAmb	IAmb	10 12 21.3		
	comp=Z,146nm,1.2s							
L61A	Hillsdale 1, H	31.00	32	P	P	**10 12 18.4**	**-1.3**	
	baz=223,SNR=42							
D46A	Sault St. Mari	31.05	15	P	P	**10 12 19.4**	**-0.6**	
	baz=200,SNR=152							
J58A	Remsen	31.06	28	P	P	**10 12 18.8**	**-1.3**	
	baz=218,SNR=83							
J58A	Remsen	31.06	28	IAmb	IAmb	10 12 20.4		
	comp=Z,189nm,0.8s							
AGMN	Agassiz Nation	31.12	359	P	P	**10 12 20.5**	**-0.1**	
	baz=178,SNR=941							
G53A	Haliburton	31.12	23	P	P	**10 12 19.1**	**-1.6**	
	baz=211,SNR=428							
K60A	Five Rivers En	31.15	31	P	P	**10 12 19.8**	**-1.1**	
	baz=222,SNR=14							
E48A	Lockeyer	31.17	17	P	P	**10 12 20.0**	**-1.0**	
	baz=204,SNR=136							
H55A	Tweed	31.20	25	P	P	**10 12 20.0**	**-1.3**	
	baz=214							
M63A	Gales Ferry	31.23	34	P	P	**10 12 20.4**	**-1.2**	
	baz=226,SNR=37							
BBSR	BB Station	31.29	55	P	P	**10 12 23.3**	**+1.1**	
BBSR				IAmb	IAmb	10 12 25.0		
	comp=Z,126nm,1.1s							
I57A	Carthage	31.34	27	P	P	**10 12 21.2**	**-1.4**	
	baz=217,SNR=61							
L62A	Suffield	31.34	33	P	P	**10 12 20.9**	**-1.7**	
	baz=224,SNR=9.5							
TRY	Troy	31.34	31	IAmb	IAmb	10 12 23.3		
	comp=Z,198nm,0.9s							
F51A	Arnstein	31.36	20	P	P	**10 12 20.9**	**-1.9**	
	baz=208,SNR=193							
D47A	Chapleau	31.44	16	P	P	**10 12 22.7**	**-0.8**	
	baz=202,SNR=336							
F52A	Sundridge	31.45	21	P	P	**10 12 22.0**	**-1.5**	
	baz=210,SNR=385							
I58A	Old Forge	31.45	28	P	P	**10 12 22.2**	**-1.5**	
	baz=219,SNR=278							
K61A	Williamstown	31.50	31	P	P	**10 12 23.3**	**-0.7**	
	baz=222,SNR=146							
J59A	Piesco	31.50	29	P	P	**10 12 22.6**	**-1.3**	
	baz=220,SNR=92							
J59A	Piesco	31.50	29	IAmb	IAmb	10 12 25.2		
	comp=Z,213nm,0.9s							
E50A	Wahnapitae	31.54	19	P	P	**10 12 22.5**	**-1.7**	
	baz=207,SNR=162							
G54A	Lake Saint Pet	31.55	23	P	P	**10 12 23.1**	**-1.4**	
	baz=212,SNR=430							
BEKR	Beckworth	31.61	321	P	P	**10 12 27.1**	**+1.9**	
H56A	Elgin	31.61	26	P	P	**10 12 23.6**	**-1.3**	
	baz=216,SNR=206							
L61B	Northampton	31.63	32	P	P	**10 12 23.6**	**-1.6**	
	baz=224							
PLVO	Plevna	31.64	25	IAmb	IAmb	10 12 25.5		
	comp=Z,396nm,0.9s							
ANWB	Willy Bob	31.67	84	*e*P	P	**10 12 22.4**	**-3.3**	
QUA2	Belchertown	31.68	33	IAmb	IAmb	10 12 25.5		
	comp=Z,306nm,1.3s							
L63A	North Scituate	31.78	34	P	P	**10 12 24.7**	**-1.7**	
	baz=226,SNR=9.7							
M64A	Tiverton	31.78	35	P	P	**10 12 25.0**	**-1.5**	
	baz=227,SNR=16							
ACCN	Adirondack Com	31.83	30	IAmb	IAmb	10 12 27.3		
	comp=Z,205nm,1.1s							
J60A	Lant Hill Farm	31.85	31	P	P	**10 12 26.0**	**-1.1**	
	baz=222,SNR=54							
D48A	Paudash Townsh	31.90	17	P	P	**10 12 26.2**	**-1.2**	
	baz=204,SNR=442							
G55A	Calabogie	31.96	25	P	P	**10 12 26.7**	**-1.3**	
	baz=214,SNR=144							
NCB	Newcomb	32.02	29	IAmb	IAmb	10 12 28.9		
	comp=Z,251nm,0.9s							
K62A	Royalston	32.02	33	P	P	**10 12 26.8**	**-1.7**	
	baz=224,SNR=16							
K62A	Royalston	32.02	33	P	P	**10 12 26.6**	**-1.9**	
E51A	G1948 Merrick	32.04	20	P	P	**10 12 27.2**	**-1.4**	
	baz=209,SNR=388							
ALGO	Algonquin Park	32.04	23	P	P	**10 12 27.1**	**-1.5**	
	baz=212,SNR=320							
I59A	Olmsteadville	32.05	29	P	P	**10 12 27.0**	**-1.8**	
	baz=220,SNR=52							
M65A	Busby, Falmout	32.10	36	P	P	**10 12 27.8**	**-1.5**	
	baz=228							
E52A	Mattawa	32.11	22	P	P	**10 12 27.5**	**-1.8**	
	baz=210,SNR=92							
D49A	Beulah Townshi	32.12	18	P	P	**10 12 28.1**	**-1.3**	
	baz=205,SNR=260							
DGMT	Dagmar	32.17	348	P	P	**10 12 30.7**	**+0.9**	
	baz=163,SNR=108							
DGMT	Dagmar	32.17	348	IAmb	IAmb

L65A Cape Cod Natio 32.74 35 P **P** 10 12 33.7 -1.2
baz=228
SVB Belmont 32.75 92 IAmb IAmb 10 12 34.6
comp=Z,280nm,0.9s
E54A Lac Daplat, Po 32.77 23 P **P** 10 12 33.8 -1.2
baz=213,SNR=600
H59A Cadyville 32.78 29 P **P** 10 12 33.9 -1.3
baz=220,SNR=72
J08A Circle Bar Ran 32.89 328 IAmb IAmb 10 12 45.8
comp=Z,195nm,0.7s
I61A Oroboro, Fairl 32.95 31 P **P** 10 12 35.8 -0.8
baz=223,SNR=72
FRNY Flat Rock 32.97 28 IAmb IAmb 10 12 37.3
comp=Z,261nm,0.9s
G58A Ormstown 33.01 28 P **P** 10 12 35.9 -1.2
baz=219,SNR=20
J63A Strafford 33.05 33 P **P** 10 12 36.1 -1.4
baz=225,SNR=27
ULM Lac du Bonnet 33.07 359 P **P** 10 12 36.8 -0.8
comp=Z,253nm,0.7s,baz=179,slow=9.4,SNR=209
ULM LR LR 10 30 38.8
comp=Z,442nm,18.5s,baz=164,slow=44
ULM Lac du Bonnet 33.07 359 IAmb IAmb 10 12 38.4
comp=Z,341nm,0.8s
D53A Lac Vacive, Po 33.13 22 P **P** 10 12 37.3 -0.8
baz=211,SNR=544
EGMT Eagleton 33.13 342 P **P** 10 12 39.7 +1.4
baz=153,SNR=118
EGMT Eagleton 33.13 342 IAmb IAmb 10 12 41.1
comp=Z,344nm,1.4s
H60A Morristown 33.18 30 P **P** 10 12 37.3 -1.3
baz=221,SNR=28
E55A Montcerf-Lytto 33.21 24 P **P** 10 12 37.6 -1.3
baz=214,SNR=71
LBNH Lisbon 33.31 31 P **P** 10 12 39.0 -0.8
baz=223,SNR=58
LBNH Lisbon 33.31 31 IAmb IAmb 10 12 40.7
comp=Z,285nm,1.1s
I62A Tamworth 33.34 32 P **P** 10 12 38.8 -1.2
baz=224,SNR=68
I62A Tamworth 33.34 32 IAmb IAmb 10 12 40.8
comp=Z,389nm,1.3s
I62A pP pP 10 13 07.9 +0.9
G59A Clarenceville 33.34 29 P **P** 10 12 39.0 -1.0
baz=220,SNR=143
BMO Blue Mountains 33.41 331 P **P** 10 12 41.1 +0.3
BMO pmax pmax
comp=Z,11nm,0.8s
BMO Blue Mountains 33.41 331 P **P** 10 12 41.1 +0.3
H61A Lyndonville 33.53 30 P **P** 10 12 41.0 -0.7
baz=223,SNR=50
MSO Missoula 33.53 336 P **P** 10 12 42.7 +0.8
baz=146,SNR=46
D54A Lac Fusel, La 33.57 23 P **P** 10 12 40.9 -1.1
baz=213,SNR=449
F58A St-Lin Laurent 33.67 27 P **P** 10 12 41.6 -1.3
baz=218,SNR=5.5
M04C Macdoel 33.68 322 P **P** 10 12 44.5 +1.3
baz=129,SNR=25
E56A St. Veronique 33.70 25 P **P** 10 12 42.2 -0.9
baz=216,SNR=435
G60A Masonville 33.75 29 P **P** 10 12 42.7 -1.0
baz=221,SNR=114
I63A Otisfield 33.85 32 P **P** 10 12 43.2 -1.2
baz=225,SNR=54
I63A Otisfield 33.85 32 IAmb IAmb 10 12 45.0
comp=Z,390nm,1.4s
KMRM Mail Ridge 33.88 319 IAmb IAmb 10 12 48.5
comp=Z,100nm,1.0s
D55A Sainte-Anne-du 33.91 24 P **P** 10 12 43.8 -1.1
baz=215,SNR=751
H62A Milan 33.93 31 P **P** 10 12 44.2 -1.0
baz=224,SNR=44
H62A Milan 33.93 31 IAmb IAmb 10 12 45.8
comp=Z,153nm,1.1s
E57A Chemin Saint G 33.96 26 P **P** 10 12 44.4 -1.0
baz=217,SNR=199
NNA Nana 34.02 147 P **P** 10 12 47.4 +1.2
comp=Z,47nm,1.0s,baz=327,slow=9.9,SNR=13
NNA LR LR 10 24 58.8
comp=Z,816nm,19.8s,baz=322,slow=33
NNA Nana 34.02 147 *deP* **P** 10 12 47.4 +1.2
NNA pmax pmax
comp=Z,258nm,1.5s
NNA Nana 34.02 147 P **P** 10 12 47.5 +1.3
NNA IAmb IAmb 10 12 49.2
comp=Z,186nm,1.4s
F59A Saint Guilaume 34.12 28 P **P** 10 12 45.6 -1.1
baz=220,SNR=18
YBH Yreka Blue Hor 34.16 322 P **P** 10 12 47.1 -0.2
comp=Z,12nm,0.6s,baz=118,slow=5.0,SNR=34
YBH PcP **PcP** 10 15 21.5 -0.1
comp=Z,11nm,0.8s,baz=68,slow=5.6,SNR=3.9
YBH LR LR 10 27 06.0
comp=Z,508nm,20.9s,baz=156,slow=37
K04D Chiloquin, OR 34.16 324 P **P** 10 12 47.4 +0.1
baz=130
D56A ZEC Mazanza, M 34.22 25 P **P** 10 12 46.5 -1.1
baz=216,SNR=482
L04D Klamath Falls 34.22 323 P **P** 10 12 48.4 +0.5
baz=129,SNR=13
F10A Beach Ranch, E 34.23 332 IAmb IAmb 10 12 50.5
comp=Z,122nm,0.9s
I64A Boothbay 34.25 33 P **P** 10 12 46.4 -1.5
baz=227,SNR=14
G61A St-Isidore-de- 34.27 30 P **P** 10 12 47.4 -0.7
baz=222,SNR=70
KHMM Horse Mountain 34.27 320 IAmb IAmb 10 12 52.1
comp=Z,87nm,1.0s
E58A La Victoria 34.30 27 P **P** 10 12 47.2 -1.1
baz=219,SNR=167
J05D Fort Rock, OR 34.30 325 P **P** 10 12 49.1 +0.5
baz=131,SNR=9.1
D57A Chemin Vers le 34.55 26 P **P** 10 12 49.5 -1.0
baz=217,SNR=285
H63A New Sharon 34.56 32 P **P** 10 12 49.6 -1.0
baz=225,SNR=11
F60A Warwick 34.58 29 P **P** 10 12 49.5 -1.3
baz=221,SNR=120
WVL Waterville 34.68 33 IAmb IAmb 10 12 52.1
comp=Z,99nm,1.0s
G62A West of Eustis 34.71 31 P **P** 10 12 51.2 -0.7
baz=224,SNR=151
E59A St. Maurice 34.72 28 P **P** 10 12 51.1 -0.8
baz=220,SNR=7.3
J04D Umpqua Nationa 34.76 324 P **P** 10 12 53.2 +0.7
baz=130,SNR=21
H64A Troy 34.96 33 P **P** 10 12 53.0 -1.1
baz=226,SNR=36
D58A Chemin du LacG 35.03 27 P **P** 10 12 53.7 -1.0
baz=219,SNR=247
F61A St Evariste 35.03 30 P **P** 10 12 53.6 -1.0
baz=222,SNR=55
I05D Terrebonne, OR 35.06 326 P **P** 10 12 55.9 +0.9
baz=132,SNR=20
LSQQ Lebel-sur-Quev 35.07 21 P **P** 10 12 54.0 -0.9
baz=211
G63A Kingsbury 35.09 32 P **P** 10 12 54.1 -1.0
baz=225,SNR=36
E60A Ste Agathe de 35.11 29 P **P** 10 12 54.3 -1.0
baz=222,SNR=163
I04A Tendick Farm, 35.28 325 P **P** 10 12 57.7 +0.8
baz=130,SNR=8.1
LATQ La Tuque 35.30 26 P **P** 10 12 55.8 -1.0
baz=219,SNR=135
K02D Willamette Mer 35.31 322 P **P** 10 12 58.7 +1.6
baz=127
D59A Saint-Raymond 35.42 28 P **P** 10 12 57.1 -0.8
baz=220,SNR=49
MATQ Matagami 35.46 19 P **P** 10 12 57.3 -1.0
baz=209,SNR=1000
H65A Eastbrook 35.51 34 P **P** 10 12 57.2 -1.5
baz=228,SNR=58
E61A Lac Etchemin 35.61 30 P **P** 10 12 58.6 -0.9
baz=223,SNR=53
G64A Maxfield 35.62 32 P **P** 10 12 58.3 -1.4
baz=226,SNR=48
G05D Wamic, OR 35.67 327 P **P** 10 13 01.2 +1.1
baz=133,SNR=5.2
H04A Detroit Lake 35.74 326 P **P** 10 13 01.5 +0.7
I03D Drain, OR 35.75 324 P **P** 10 13 01.5 +0.8
baz=129
J01E Myrtle Point 35.75 323 P **P** 10 13 02.4 +1.6
baz=128,SNR=8.8
F63A Nahmakanta, Br 35.76 32 P **P** 10 12 59.5 -1.3
baz=226,SNR=27
F63A Nahmakanta, Br 35.76 32 IAmb IAmb 10 13 01.2
comp=Z,75nm,0.9s

D60A Saint Jean D'O 35.76 29 P **P** 10 12 59.7 -1.1
baz=222,SNR=58
EMMW East Machias 35.94 34 IAmb IAmb 10 13 03.4
comp=Z,165nm,1.0s
H04D Lebanon 35.94 325 P **P** 10 13 02.9 +0.5
baz=131,SNR=11
NEW Newport 35.96 335 P **P** 10 13 02.9 +0.3
comp=Z,33nm,0.6s,baz=150,slow=8.4,SNR=62
NEW LR LR 10 30 58.0
comp=Z,855nm,18.2s,baz=146,slow=41
NEW Newport 35.96 335 P **P** 10 13 02.8 +0.2
baz=142,SNR=37
H66A Whiting 36.07 34 P **P** 10 13 02.1 -1.3
baz=229,SNR=55
F05D White Salmon 36.18 328 P **P** 10 13 06.3 +1.8
baz=134,SNR=8.8
E62A Clayton Lake 36.20 30 P **P** 10 13 03.9 -0.8
baz=224,SNR=87
E62A Clayton Lake 36.20 30 IAmb IAmb 10 13 05.5
comp=Z,257nm,1.0s
G65A Princeton 36.21 33 P **P** 10 13 03.5 -1.1
baz=228,SNR=91
G65A Princeton 36.21 33 IAmb IAmb 10 13 05.7
comp=Z,266nm,0.9s
F64A Sherman 36.25 32 P **P** 10 13 03.6 -1.4
baz=226,SNR=55
F64A Sherman 36.25 32 IAmb IAmb 10 13 05.5
comp=Z,213nm,1.2s
I02D Swisshome 36.28 324 P **P** 10 13 06.9 +1.6
baz=129
COR Corvallis 36.28 325 P **P** 10 13 07.0 +1.7
COR pmax pmax
comp=Z,112nm,1.2s
COR Corvallis 36.28 325 P **P** 10 13 07.0 +1.7
COR IAmb IAmb 10 13 09.0
comp=Z,112nm,1.2s
D61A St Aubert, Com 36.31 29 P **P** 10 13 04.7 -0.9
baz=222,SNR=122
GGN Saint George 36.54 34 IAmb IAmb 10 13 08.3
comp=Z,165nm,0.8s
E63A Oxbow 36.60 31 P **P** 10 13 06.9 -1.1
baz=226,SNR=159
E63A Oxbow 36.60 31 IAmb IAmb 10 13 08.7
comp=Z,377nm,0.9s
G03D McMinnville, O 36.67 326 P **P** 10 13 09.4 +0.8
baz=131,SNR=11
CHGQ Chibougamau 36.70 22 P **P** 10 13 07.6 -1.2
baz=214,SNR=416
D62A Allapoint, All 36.76 30 P **P** 10 13 08.5 -0.8
baz=224,SNR=225
E64A Bridgewater 36.89 32 P **P** 10 13 09.4 -1.0
baz=226,SNR=72
PQI Presque Isle 36.97 31 IAmb IAmb 10 13 11.7
comp=Z,202nm,0.9s
F04D Rainier, OR 37.11 327 P **P** 10 13 13.2 +0.9
baz=132
D63A Stockholm 37.19 31 P **P** 10 13 11.9 -1.1
baz=226,SNR=155
E04D Cinebar 37.20 328 P **P** 10 13 13.9 +0.8
baz=133
F03A Seaside 37.30 327 IAmb IAmb 10 13 24.0
comp=Z,148nm,1.3s
D05A Enumclaw 37.35 329 P **P** 10 13 15.3 +1.0
E03A Lebam 37.70 327 P **P** 10 13 18.4 +1.1
E03A IAmb IAmb 10 13 27.4
comp=Z,75nm,0.8s
D04E Lakebay 37.73 329 P **P** 10 13 18.3 +0.8
baz=133
FFC Flin Flon 37.93 353 P **P** 10 13 19.4 +0.3
FFC pmax pmax
comp=Z,786nm,1.5s
FFC Flin Flon 37.93 353 P **P** 10 13 19.4 +0.3
LMN Caledonia Moun 38.11 35 IAmb IAmb 10 13 21.5
comp=Z,120nm,0.8s
D03D Eldon 38.13 329 P **P** 10 13 20.5 -0.4
baz=133,SNR=12
B05A Bryant 38.16 330 P **P** 10 13 20.6 -0.6
baz=135,SNR=8.0
BATG Bathurst New B 38.37 32 IAmb IAmb 10 13 23.4
comp=Z,267nm,0.9s
A04D Lummi Island 38.77 331 P **P** 10 13 26.7 +0.5
baz=135
PTGA Pitinga 38.79 114 LR LR 10 30 03.5
comp=Z,1μm,20.6s,baz=301,slow=37
PTGA Pitinga 38.79 114 P **P** 10 13 25.8 -1.0
PTGA Pitinga 38.79 114 *eP* **P** 10 13 25.6 -1.2
PGC Sidney 39.08 330 P **P** 10 13 29.4 +0.6
GBN Guysborough 39.70 37 P **P** 10 13 32.4 -1.5
GBN IAmb IAmb 10 13 35.0
comp=Z,145nm,0.8s
LLLB Lillooet 39.76 333 P **P** 10 13 35.1 +0.6
SAML Samuel 40.73 127 P **P** 10 13 41.9 -0.9
SAML pmax pmax
comp=Z,96nm,1.0s
SAML Samuel 40.73 127 P **P** 10 13 41.9 -0.9
SAML IAmb IAmb 10 13 43.8
comp=Z,96nm,0.9s
SAML Samuel 40.73 127 *eP* **P** 10 13 41.9 -0.9
FCC Fort Churchill 41.60 1 IAmb IAmb 10 13 51.0
comp=Z,218nm,0.9s
LPAZ La Paz 42.45 140 P **P** 10 13 58.3 +0.8
comp=Z,149nm,0.7s,baz=331,slow=5.9,SNR=204
LPAZ LR LR 10 29 23.7
comp=Z,616nm,20.4s,baz=319,slow=33
LPAZ La Paz 42.45 140 IAmb IAmb 10 14 03.4
comp=Z,157nm,0.8s
PB12 IPOC Station P 42.99 145 P **P** 10 14 01.5 +0.3
PB12 IAmb IAmb 10 14 09.3
comp=Z,244nm,1.3s
MDP Montagnes des 43.12 101 PP PP 10 15 43.9 -1.1
comp=Z,19nm,0.9s,baz=298,slow=13,SNR=2.0
PB16 IPOC Station P 43.23 143 IAmb IAmb 10 14 12.2
comp=Z,236nm,0.7s
SCHQ Schefferville 43.42 23 P **P** 10 14 03.0 -1.3
comp=Z,381nm,0.8s,baz=225,slow=6.8,SNR=255
SCHQ PP **PP** 10 15 48.0 +0.4
comp=Z,65nm,0.8s,baz=213,slow=14,SNR=3.0
SCHQ Schefferville 43.42 23 IAmb IAmb 10 14 04.5
comp=Z,379nm,0.8s
BBB Bella Bella 43.66 331 P **P** 10 14 06.7 +0.6
comp=Z,12nm,0.8s,baz=176,slow=5.9,SNR=4.3
PSGCX Pisagua 43.90 145 IAmb IAmb 10 14 16.3
comp=Z,149nm,0.8s
DRLN Deer Lake 44.10 35 P **P** 10 14 07.9 -1.8
DRLN IAmb IAmb 10 14 09.7
comp=Z,558nm,1.5s
PB11 IPOC Station P 44.29 145 IAmb IAmb 10 14 19.9
comp=Z,309nm,0.9s
GO01 Chusmiza 44.47 144 IAmb IAmb 10 14 21.8
comp=Z,210nm,0.8s
TA01 Diego Aracena 44.66 146 IAmb IAmb 10 14 22.6
comp=Z,170nm,0.8s
PB08 IPOC Station P 44.87 145 IAmb IAmb 10 14 24.8
comp=Z,158nm,0.8s
PATCX Punta Patache 44.88 146 IAmb IAmb 10 14 25.2
comp=Z,240nm,1.3s
PB01 IPOC Station P 45.42 146 IAmb IAmb 10 14 28.6
comp=Z,137nm,0.9s
PB07 IPOC Station P 45.76 147 IAmb IAmb 10 14 31.8
comp=Z,181nm,0.7s
RPN Rapa Nui 46.12 198 P **P** 10 14 27.3 +1.4
comp=Z,197nm,1.0s,baz=1.4,slow=6.6,SNR=6.2
RPN Rapa Nui 46.12 198 P **P** 10 14 28.7 +2.8
RPN pmax pmax
comp=Z,427nm,1.2s
RPN Rapa Nui 46.12 198 P **P** 10 14 28.7 +2.8
RPN IAmb IAmb 10 14 29.0
comp=Z,427nm,1.1s
PB04 IPOC Station P 46.12 147 P **P** 10 14 27.4 +1.1
PB04 IAmb IAmb 10 14 28.9
comp=Z,324nm,1.5s
PB06 IPOC Station P 46.73 147 IAmb IAmb 10 14 39.4
comp=Z,158nm,0.8s
SIV San Ignacio 46.90 133 P **P** 10 14 32.1 -0.1
comp=Z,243nm,0.7s,baz=310,slow=8.0,SNR=238
LVC Limon Verde 47.00 146 P **P** 10 14 34.8 +1.5
LVC pmax pmax
comp=Z,119nm,0.8s
LVC Limon Verde 47.00 146 P **P** 10 14 34.8 +1.5
LVC IAmb IAmb 10 14 42.0
comp=Z,119nm,0.8s
YKA Yellowknife Ar 47.38 348 P **P** 10 14 35.5 +0.3
comp=Z,136nm,0.7s,baz=151,slow=7.6,SNR=1235
YKA pP **pP** 10 15 03.1 -0.5
comp=Z,108nm,0.7s,baz=151,slow=7.8,SNR=8.3
YKA PP **PP** 10 16 29.6 +2.2
comp=Z,28nm,0.9s,baz=146,slow=9.7,SNR=4.1

YKA P4KPbc 10 52 14.6
comp=Z,0.4nm,0.6s,baz=144,slow=4.5,SNR=11
CLDB Colider 47.68 123 *eP* **P** 10 14 35.8 -2.5
PB14 IPOC Station P 47.91 149 IAmb IAmb 10 14 42.7
comp=Z,244nm,1.3s
DLBC Dease Lake 48.66 336 P **P** 10 14 47.2 +1.9
comp=Z,55nm,1.1s,baz=141,slow=6.1,SNR=50
DLBC Dease Lake 48.66 336 IAmb IAmb 10 14 49.5
comp=Z,138nm,1.4s
GO02 Mina Guanaco 48.76 149 IAmb IAmb 10 14 56.4
comp=Z,200nm,1.1s
FRB Frobisher Bay 50.01 15 P **P** 10 14 55.0 -0.3
comp=Z,375nm,0.7s,baz=222,slow=8.7,SNR=364
FRB PP **PP** 10 16 51.0 -0.4
comp=Z,131nm,1.1s,baz=221,slow=9.3,SNR=3.6
FRB Frobisher Bay 50.01 15 P **P** 10 14 55.0 -0.3
GO03 Copiap 50.50 151 P **P** 10 15 00.6 +1.0
GO03 IAmb IAmb 10 15 02.2
comp=Z,132nm,1.4s
AC04 Llanos de Chal 50.64 152 P **P** 10 15 01.4 +0.8
AC05 El Transito 51.54 152 IAmb IAmb 10 15 09.7
comp=Z,88nm,0.8s
TAOE Nuku Hiva Isla 51.56 243 *e*LR LR 10 30 06.6
comp=Z,3μm,35.8s
GO04 Tololo Observa 52.46 153 IAmb IAmb 10 15 16.4
comp=Z,90nm,0.8s
CO03 El Pedregal 53.09 154 IAmb IAmb 10 15 21.2
comp=Z,187nm,0.9s
CO02 Combarbal 53.28 154 IAmb IAmb 10 15 22.6
comp=Z,218nm,0.9s
SMTB Santa Maria do 53.49 115 *eP* **P** 10 15 21.5 -0.4
ARAG Araguaiana, MT 53.62 125 *eP* **P** 10 15 23.2 +0.4
AQDB Aquidauana 53.68 133 *eP* **P** 10 15 22.4 -0.7
ROSB Rosrio 53.97 107 *eP* **P** 10 15 24.6 -0.9
CO04 Los Peladeros 54.02 155 IAmb IAmb 10 15 28.1
comp=Z,191nm,0.9s
C2SB Chapadao do Su 54.67 129 *eP* **P** 10 15 30.1 -0.3
CFA Coronel Fontan 54.82 152 P **P** 10 15 32.4 +1.1
comp=Z,105nm,0.7s,baz=333,slow=8.0
VA03 San Esteban 54.82 155 IAmb IAmb 10 15 34.0
comp=Z,296nm,1.0s
MT02 Curacav 55.02 156 P **P** 10 15 33.1 +0.4
MT02 IAmb IAmb 10 15 36.0
comp=Z,100nm,1.0s
IVI Ivigtut 55.06 26 IAmb IAmb 10 15 33.6
comp=Z,318nm,0.9s
PEL Peldehue 55.10 155 IAmb IAmb 10 15 35.6
comp=Z,184nm,1.0s
C36M Palatuk 55.26 348 P **P** 10 15 33.7 -0.2
baz=146,SNR=7.1
MT01 Popeta 55.51 156 IAmb IAmb 10 15 37.4
comp=Z,50nm,0.8s
MCARA McCarthy VSAT 55.66 334 IAmb IAmb 10 15 43.3
comp=Z,63nm,0.9s
RKT Rikitea 55.91 226 *eP* **P** 10 15 39.6 +0.4
comp=Z,150nm,1.1s
RKT *ep*P **pP** 10 16 08.0 -0.6
comp=Z,110nm,1.1s
RKT *es*P **sP** 10 16 22.7 +0.5
comp=Z,237nm,1.1s
RKT *e*S **S** 10 23 15.7 -2.0
comp=Z,3μm,39.0s
RKT *e*LR LR 10 32 06.8
comp=Z,2μm,39.5s
NRS Narsarsuaq 56.19 26⇑ *i*P **P** 10 15 39.9 -0.7
NRS *i* 10 16 09.0
NRS pmax pmax
comp=Z,580nm,0.8s
NRS Narsarsuaq 56.19 26⇑ *i*P **P** 10 15 39.9 -0.7
comp=Z,579nm,0.8s
NRS *i* 10 16 09.0
GO05 Huala 56.27 157 IAmb IAmb 10 15 43.5
comp=Z,154nm,0.9s
EPYK Eagle Plains 56.27 341 P **P** 10 15 41.8 +0.5
baz=130,SNR=28
BO02 Sierra Bellavi 56.51 156 IAmb IAmb 10 15 45.6
comp=Z,102nm,0.8s
CPUP Villa Florida 56.60 139 P **P** 10 15 43.0 -1.0
comp=Z,32nm,0.7s,baz=326,slow=7.6,SNR=47
CPUP pP **pP** 10 16 13.2 -0.4
comp=Z,57nm,0.8s,baz=324,slow=9.8,SNR=7.8
CPUP Villa Florida 56.60 139 IAmb IAmb 10 15 48.8
comp=Z,110nm,0.8s
BDFB Brasilia 56.61 122 P **P** 10 15 45.4 +0.9
comp=Z,66nm,0.8s,baz=296,slow=7.7,SNR=70
BDFB LR LR 10 40 24.6
comp=Z,537nm,21.5s,baz=303,slow=36
BDFB Brasilia 56.61 122 IAmb IAmb 10 15 47.2
comp=Z,112nm,1.0s
INK Inuvik 56.67 344 P **P** 10 15 44.5 +0.6
comp=Z,88nm,0.8s,baz=126,slow=7.3,SNR=298
INK pP **pP** 10 16 14.2 +0.9
comp=Z,110nm,0.9s,baz=128,slow=9.1,SNR=8.2
INK Inuvik 56.67 344 IAmb IAmb 10 15 46.0
comp=Z,106nm,0.8s
HIN Hinchinbrook I 56.69 332 IAmb IAmb 10 15 51.9
comp=Z,99nm,1.1s
FID Port Fidalgo 56.83 333 P **P** 10 15 47.0 +1.7
FID IAmb IAmb 10 15 52.3
comp=Z,82nm,1.2s
PUH Pauahi 57.00 282 P **P** 10 15 47.9 +0.6
BYL Byron's Ledge 57.03 282 P **P** 10 15 48.1 +0.6
SBLHI Steaming Bluff 57.04 282 P **P** 10 15 48.1 +0.6
UWB Uwekahuna B 57.05 282 P **P** 10 15 48.5 +0.9
UWE Uwekahuna 57.06 282 P **P** 10 15 48.6 +0.9
SDHHI Sand Hill 57.07 282 P **P** 10 15 49.0 +1.3
WRMHI West Rim 57.07 282 P **P** 10 15 49.3 +1.6
ITRB Iturama 57.09 128 *eP* **P** 10 15 47.5 -0.2
MLH Mauna Loa 57.14 282 P **P** 10 15 49.0 +0.6
HMH Humu'ula Sheep 57.22 283 P **P** 10 15 49.5 +0.5
POHA Pohakuloa 57.24 283 P **P** 10 15 49.8 +0.7
MLOA Mauna Loa Obse 57.31 283 IAmb IAmb 10 15 52.1
comp=Z,264nm,0.8s
TRCB Terra Rica 57.34 132 *eP* **P** 10 15 48.9 -0.6
KHU Kahuku 57.39 282 P **P** 10 15 50.3 +0.2
KHU pmax pmax
comp=Z,345nm,1.4s
KHU Kahuku 57.39 282 P **P** 10 15 50.3 +0.2
KHU IAmb IAmb 10 15 53.2
comp=Z,345nm,1.4s
PAX Paxson 57.45 335 IAmb IAmb 10 15 56.5
comp=Z,52nm,0.8s
SFJD Kangerlussuaq 57.48 19 P **P** 10 15 48.9 -0.8
comp=Z,63nm,0.6s,baz=226,slow=4.3,SNR=38
SFJD pP **pP** 10 16 18.8 -0.3
comp=Z,48nm,1.1s,baz=214,slow=8.5,SNR=2.9
SFJD Kangerlussuaq 57.48 19⇑ *i*P **P** 10 15 49.0 -0.7
SFJD *i* 10 16 18.6
SFJD Kangerlussuaq 57.48 19 P **P** 10 15 48.9 -0.7
SFJD IAmb IAmb 10 15 50.6
comp=Z,256nm,1.4s
SFJD Kangerlussuaq 57.48 19⇑ *i*P **P** 10 15 49.0 -0.7
SFJD *i* 10 16 18.6
HUH Hualalai 57.53 283 P **P** 10 15 51.3 +0.2
HUH IAmb IAmb 10 16 00.1
comp=Z,197nm,0.7s
PCMB Pacaembu 57.58 130 *eP* **P** 10 15 51.0 -0.1
RIDG Independent Ri 57.58 336 IAmb IAmb 10 15 57.6
comp=Z,85nm,1.1s
RES Resolute Bay 57.59 0 P **P** 10 15 50.0 -0.3
comp=Z,32nm,0.6s,baz=185,slow=10,SNR=132
RES pP **pP** 10 16 20.2 +0.5
comp=Z,49nm,0.9s,baz=185,slow=8.9,SNR=6.1
RES Resolute Bay 57.59 0 IAmb IAmb 10 15 51.1
comp=Z,51nm,0.8s
KHLU Kahalu`u 57.60 283 P **P** 10 15 51.0 -0.5
KHLU IAmb IAmb 10 15 53.4
comp=Z,110nm,0.8s
A36M Sachs Harbour 57.67 349 P **P** 10 15 51.2 +0.3
baz=145,SNR=67
SCM Sheep Creek Mo 57.69 334 P **P** 10 15 52.4 +1.1
SCM pmax pmax
comp=Z,33nm,0.9s
SCM Sheep Creek Mo 57.69 334 P **P** 10 15 52.4 +1.1
IPMB Ipameri, GO 57.75 125 *eP* **P** 10 15 52.5 +0.1
BI02 San Fabin de 57.98 158 IAmb IAmb 10 15 55.8
comp=Z,134nm,1.1s
RC01 Rabbit Creek A 58.42 332 P **P** 10 15 57.2 +0.9
BRLK Bradley Lake 58.44 331 IAmb IAmb 10 16 04.2
comp=Z,84nm,1.1s
KDAK Kodiak Island 58.58 328 P **P** 10 15 58.6 +1.1
comp=Z,19nm,0.7s,baz=121,slow=3.3,SNR=51
KDAK Kodiak Island 58.58 328 P **P** 10 15 58.5 +1.1
HDA Harding Lake 58.72 336 P **P** 10 15 58.6 +0.3
baz=118,SNR=34
ILULI Ilulissat 58.73 17⇑ *i*P **P** 10 15 57.5 -0.8

ILULI *i* 10 16 27.1
ILULI pmax pmax
comp=Z,47nm,0.7s
ILULI Ilulissat 58.73 17⇑ *i*P **P 10 15 57.5 -0.8**
comp=Z,47nm,0.7s
ILULI *i* 10 16 27.1
OHAK Old Harbor 58.76 327 IAmb IAmb 10 16 02.4
comp=Z,54nm,1.0s
IL31 58.87 337 IAmb IAmb 10 16 05.8
comp=Z,70nm,1.2s
ILAR Eielson Array 58.87 337 P **P 10 15 59.9 +0.5**
comp=Z,17nm,0.9s,baz=116,slow=6.6,SNR=119
ILAR pP **pP 10 16 29.7 +0.8**
comp=Z,65nm,1.1s,baz=120,slow=4.9,SNR=8.6
ILAR PP **PP 10 18 13.4 +2.7**
comp=Z,7.3nm,0.8s,baz=117,slow=6.4,SNR=1.8
ILAR PKP2bc 10 45 39.4
comp=Z,2.1nm,1.1s,baz=279,slow=2.6,SNR=8.6
PTGB Pitanga 58.98 134 *e*P **P 10 15 59.7 -1.1**
RND Reindeer 59.01 335 IAmb IAmb 10 16 08.2
comp=Z,174nm,1.2s
H07S1 FLORES T-PHASE 59.19 54 *e*P **P 10 16 02.0 -0.1**
POKR Poker Plat Res 59.24 337 P **P 10 16 02.4 +0.5**
baz=118,SNR=9.1
COLA College 59.28 337 *i* P **P 10 16 02.6 +0.4**
COLA pmax pmax
comp=Z,29nm,0.8s
COLA College 59.28 337 P **P 10 16 02.6 +0.4**
BB19B Bebedouro 59.28 128 *e*P **P 10 16 02.6 -0.3**
TCOL CIGO, UAF Yank 59.28 337 P **P 10 16 02.3 +0.1**
baz=117,SNR=20
KIP Kipapa 59.32 285 *ce*P **P 10 16 05.3 +2.1**
KIP pmax pmax
comp=Z,176nm,1.0s
KIP Kipapa 59.32 285 P **P 10 16 04.6 +1.4**
KIP IAmb IAmb 10 16 05.8
comp=Z,235nm,1.0s
JANB Januaria 59.34 120 *e*P **P 10 16 04.0 +0.6**
ITQB Itaqui 59.43 141 *e*P **P 10 16 03.0 -0.6**
BWN Browne 59.59 336 IAmb IAmb 10 16 10.6
comp=Z,209nm,1.0s
TRF Thorofare Moun 59.62 335 IAmb IAmb 10 16 11.7
comp=Z,124nm,0.7s
FRTB Fartura 59.88 131 *e*P **P 10 16 06.8 -0.2**
KTH Kantishna Hill 59.92 335 IAmb IAmb 10 16 13.8
comp=Z,62nm,0.8s
BPAW Bear Paw Mtn. 60.17 335 IAmb IAmb 10 16 15.3
comp=Z,55nm,0.8s
PPLA Purkeypile 60.19 334 IAmb IAmb 10 16 16.2
comp=Z,104nm,1.5s
MLY Manley 60.45 336 IAmb IAmb 10 16 16.8
comp=Z,58nm,0.9s
MC01 Montes Claros 60.48 121 *e*P **P 10 16 11.8 +0.6**
ITAB Concordia 60.59 136 *e*P **P 10 16 11.3 -0.4**
KEKH Kekaha 60.81 286 IAmb IAmb 10 16 15.9
comp=Z,229nm,0.9s
RCLB Rio Claro- Sao 60.82 129 *e*P **P 10 16 13.4 -0.1**
TULEG Thule 60.97 7 P **P 10 16 13.8 +0.2**
TULEG IAmb IAmb 10 16 15.4
comp=Z,155nm,1.0s
KULLO Kullorsuaq 61.06 11⇑ *i*P **P 10 16 14.1 0.0**
KULLO *i* 10 16 44.5
KULLO pmax pmax
comp=Z,300nm,1.1s
KULLO Kullorsuaq 61.06 11⇑ *i*P **P 10 16 14.1 0.0**
comp=Z,298nm,1.1s
KULLO *i* 10 16 44.5
VAH Vaihoa 61.07 241 *e*P **P 10 16 16.2 +1.1**
VAH *ep*P **pP 10 16 44.5 -0.7**
comp=Z,142nm,1.1s
CALA Caldeira 61.12 55 *e*P **P 10 16 16.7 +1.4**
comp=Z,941nm,1.4s
PCED Cedros 61.12 55 *e*P **P 10 16 15.9 +0.7**
comp=Z,710nm,1.3s
HOR Horta 61.17 55 *e*P **P 10 16 16.6 +1.0**
comp=Z,691nm,1.1s
PMOR Pomariorio Ree 61.17 242 *e*P **P 10 16 16.9 +1.1**
PMOR *ep*P **pP 10 16 45.2 -0.7**
comp=Z,256nm,1.3s
CHGN Chignik 61.24 325 IAmb IAmb 10 16 17.6
comp=Z,70nm,0.7s
PCAN Candelaria 61.29 55 *e*P **P 10 16 17.1 +0.7**
comp=Z,651nm,0.9s
ROSA Rosais 61.48 55 *e*P **P 10 16 18.6 +0.9**
comp=Z,492nm,1.1s
TIJ01 Guaruva-PR 61.51 132 *e*P **P 10 16 17.7 -0.4**
VAO Valinhos 61.59 129 *e*P **P 10 16 18.5 -0.1**
SPB Sao Paulo 61.59 130 IAmb IAmb 10 16 22.3
comp=Z,75nm,0.9s
SPB Sao Paulo 61.59 130 *e*P **P 10 16 18.4 -0.1**
PMAN Manadas 61.60 55 *e*P **P 10 16 19.0 +0.6**
comp=Z,536nm,1.1s
SRBC Serra Branca 61.64 55 *e*P **P 10 16 19.5 +0.8**
comp=Z,1μm,1.7s
TOLK Toolik Lake Re 61.64 340 P **P 10 16 19.0 +0.7**
baz=118,SNR=45
PGRA Graciosa 61.68 55 *e*P **P 10 16 18.9 -0.1**
comp=Z,834nm,1.3s
PLCA Paso Flores 61.86 159 P **P 10 16 20.6 +0.5**
comp=Z,164nm,0.9s,baz=330,slow=7.9,SNR=335
PLCA LR LR 10 38 19.8
comp=Z,386nm,18.9s,baz=352,slow=31
PLCA PKP2bc 10 45 36.4
comp=Z,1.0nm,0.7s,baz=140,slow=8.0,SNR=3.0
PLCA Paso Flores 61.86 159 IAmb IAmb 10 16 22.2
comp=Z,201nm,0.9s
PLCA Paso Flores 61.86 159 *e*P **P 10 16 19.0 -1.1**
CPSB Cacapava Do Su 61.89 139 *e*P **P 10 16 19.5 -0.9**
BSCB Bom Sucesso 62.12 126 *e*P **P 10 16 22.4 +0.2**
PET01 Itanhaem-SP 62.12 130 *e*P **P 10 16 22.4 +0.3**
SDPT Sand Point 62.19 324 P **P 10 16 22.3 +0.2**
SDPT IAmb IAmb 10 16 24.6
comp=Z,144nm,1.1s
ADH Angra Heroismo 62.27 55 *e*P **P 10 16 23.7 +0.8**
comp=Z,590nm,1.8s
RCBR Riachuelo 62.66 106 P **P 10 16 26.7 +0.8**
comp=Z,388nm,0.8s,baz=285,slow=5.5,SNR=129
RCBR Riachuelo 62.66 106 P **P 10 16 26.2 +0.3**
RCBR Riachuelo 62.66 106 *e*P **P 10 16 26.8 +0.9**
GDU01 Guandu, BA 62.70 116 *e*P **P 10 16 26.5 +0.4**
PLTB Pedras Altas 62.74 141 *e*P **P 10 16 25.5 -0.5**
MEH Mehetia 62.75 239 *e*P **P 10 16 27.2 +0.8**
MEH *ep*P **pP 10 16 55.9 -0.7**
comp=Z,45nm,1.4s
PARB Paraibuna 62.79 128 *e*P **P 10 16 27.3 +0.7**
CNLB Canela 62.80 137 *e*P **P 10 16 26.2 -0.4**
PSET Sete Cidades 63.47 56 *e*P **P 10 16 31.6 +0.6**
comp=Z,693nm,1.5s
ESAR Angra dos Reis 63.50 127 *e*P **P 10 16 31.5 +0.3**
PDA Ponta Delgada 63.52 56 *e*P **P 10 16 32.1 +0.9**
comp=Z,630nm,1.5s
CMLA Cha da Macela 63.63 56 *e*P **P 10 16 33.6 +1.6**
comp=Z,1μm,0.7s
CMLA Cha da Macela 63.63 56 P **P 10 16 33.4 +1.4**
CMLA pmax pmax
comp=Z,632nm,0.8s
CMLA Cha da Macela 63.63 56 P **P 10 16 33.4 +1.4**
TIAR Tiarei 63.64 240 *e*P **P 10 16 33.2 +0.9**
TIAR *ep*P **pP 10 17 01.9 -0.6**
comp=Z,20nm,0.9s
TVO Taravao 63.68 240 *e*P **P 10 16 33.0 +0.4**
TVO *ep*P **pP 10 17 02.1 -0.7**
comp=Z,43nm,1.2s
SJMB Sao Joao De Ma 63.76 121 *e*P **P 10 16 33.9 +0.8**
MAN01 Angra dos Reis 63.77 127 *e*P **P 10 16 33.2 +0.1**
FALS False Pass 63.78 323 IAmb IAmb 10 16 34.7
comp=Z,160nm,0.8s
PPT Papeete 63.84 240 P **P 10 16 34.4 +0.8**
comp=Z,49nm,0.8s,baz=272,slow=4.5,SNR=6.6
PPTF Pamatai, Papee 63.84 240 IAmb IAmb 10 16 51.4
comp=Z,80nm,1.0s
PPT2 Papeete2 63.85 240 *e*P **P 10 16 34.4 +0.7**
PPT2 *e*S **S 10 24 56.9 -2.8**
comp=Z,916nm,28.8s
PPT2 Papeete2 63.85 240 *e*LR LR 10 35 48.0
comp=Z,3μm,34.2s
VAS01 Vassouras-RJ 63.85 126 *e*P **P 10 16 34.1 +0.5**
PAE Paea 63.89 240 *e*P **P 10 16 34.5 +0.6**
BART Pico Bartolome 63.91 56 *e*P **P 10 16 35.0 +1.1**
comp=Z,2μm,1.1s
PSMA Santa Maria 63.97 57 *e*P **P 10 16 34.6 +0.4**
comp=Z,723nm,1.3s
PSMN Pico do Norte, 64.02 57 *e*P **P 10 16 34.4 -0.1**
comp=Z,466nm,1.6s
SUMG Summit 64.05 16⇑ *i*P **P 10 16 34.5 0.0**
SUMG *i* 10 17 04.1
comp=Z,74nm,0.9s
SUMG Summit 64.05 16⇑ *i*P **P 10 16 34.5 0.0**
SUMG *i* 10 17 04.1
BSFB Barra de Sao F 64.10 121 *e*P **P 10 16 36.2 +0.9**
NAN01 Guarapari, ES 64.20 120 *e*P **P 10 16 36.3 +0.4**
RIB01 Linhares ES 64.71 122 *e*P **P 10 16 39.8 +0.6**
UNV Unalaska Valle 65.47 322 P **P 10 16 43.5 -0.1**
UNV IAmb IAmb 10 16 46.1
comp=Z,190nm,1.2s
TBI Tubuai 66.70 235 *e*P **P 10 16 52.3 +0.4**
comp=Z,452nm,1.3s
TBI *e*S **S 10 25 32.0 -2.2**
comp=Z,479nm,30.2s
TBI Tubuai 66.70 235 *e*LR LR 10 37 07.8
comp=Z,1μm,38.5s
NIKH Nikolski High 66.83 321 P **P 10 16 51.9 -0.4**
NIKH IAmb IAmb 10 16 53.6
comp=Z,90nm,0.8s
BORG Borgarnes 67.70 26 P **P 10 16 58.3 +0.8**
comp=Z,52nm,0.8s,baz=249,slow=4.2,SNR=16
BORG Borgarnes 67.70 26 P **P 10 16 58.6 +1.1**
BORG pmax pmax
comp=Z,101nm,1.1s
BORG Borgarnes 67.70 26 P **P 10 16 58.6 +1.1**
BORG IAmb IAmb 10 17 01.2
comp=Z,101nm,1.1s
SCO Scoresbysund 68.34 20 *i* P **P 10 17 01.8 +0.4**
SCO *i* 10 17 32.2
SCO pmax pmax
comp=Z,55nm,0.8s
SCO Scoresbysund 68.34 20 IAmb IAmb 10 17 05.6
comp=Z,56nm,0.8s
SCO Scoresbysund 68.34 20 *i* P **P 10 17 01.8 +0.4**
comp=Z,55nm,0.8s
SCO *i* 10 17 32.2
ATKA Atka Island 70.09 320 P **P 10 17 12.0 -0.5**
ATKA IAmb IAmb 10 17 13.7
comp=Z,110nm,0.8s
DAG Danmarks Havn 70.33 14⇑ *i*P **P 10 17 13.0 -0.6**
DAG *i* 10 17 42.7
DAG pmax pmax
comp=Z,180nm,0.9s
DAG Danmarks Havn 70.33 14⇑ *i*P **P 10 17 13.0 -0.6**
comp=Z,184nm,0.9s
DAG *i* 10 17 42.7
PMOZ Porto Moniz, M 70.85 61 *e*P **P 10 17 18.6 +0.9**
comp=Z,605nm,2.2s
PMOZ *e*S **S 10 26 26.2 +2.8**
PMOZ Porto Moniz, M 70.85 61 P **P 10 17 18.3 +0.5**
GO09 Cerro Castillo 70.92 165 P **P 10 17 19.1 +1.6**
GO09 IAmb IAmb 10 17 20.5
comp=Z,143nm,1.3s
PMAR Madeira 71.10 61 *e*P **P 10 17 20.8 +1.4**
comp=Z,384nm,1.1s
NOR Nord 71.48 9⇑ *i*P **P 10 17 20.8 +0.3**
NOR *i* 10 17 50.7
NOR pmax pmax
comp=Z,90nm,0.7s
NOR Nord 71.48 9⇑ *i*P **P 10 17 20.8 +0.3**
comp=Z,90nm,0.7s
NOR *i* 10 17 50.7
PMPST Porto Santo, M 71.53 60 *e*P **P 10 17 22.6 +0.9**
comp=Z,437nm,1.4s
PMPST *e*S **S 10 26 36.9 +5.9**
PMPS Porto Santo 71.53 60 *e*P **P 10 17 22.7 +1.0**
comp=Z,537nm,1.4s
ADK Adak 71.64 320 P **P 10 17 21.8 -0.1**
ADK pmax pmax
comp=Z,155nm,0.9s
ADK Adak 71.64 320 P **P 10 17 21.8 -0.1**
ADK IAmb IAmb 10 17 23.8
comp=Z,155nm,0.9s
JMIC Jan Mayen 72.82 20 *e*P **P 10 17 28.8 +0.2**
GO10 Punta Arenas 72.96 165 IAmb IAmb 10 17 33.2
comp=Z,147nm,1.0s
RAR Rarotonga 74.04 241 P **P 10 17 38.0 +1.4**
comp=Z,71nm,0.7s,baz=174,slow=4.7,SNR=11
RAR Rarotonga 74.04 241 P **P 10 17 38.0 +1.4**
RAR pmax pmax
comp=Z,66nm,0.8s
RAR Rarotonga 74.04 241 P **P 10 17 38.0 +1.4**
LEWI Lewis, Hebride 74.66 33 *e*P **P 10 17 39.7 +0.1**
LEWI IAmb IAmb 10 17 40.6
comp=Z,605nm,1.7s
KPL Plockton 75.42 34 *e*P **P 10 17 43.9 -0.1**
KPL IAmb IAmb 10 17 45.2
comp=Z,284nm,0.7s
CLGH Cloghs, Cushen 75.52 36 *e*P **P 10 17 44.4 -0.2**
KAC Achnashellach 75.59 34 *e*P **P 10 17 45.1 +0.2**
EFI East Falkland 75.68 157 *ce*P **P 10 17 46.6 +1.2**
EFI pmax pmax
comp=Z,56nm,0.9s
LAWE Loch Awe, Argy 75.73 35 *e*P **P 10 17 46.1 +0.3**
LAWE IAmb IAmb 10 17 47.4
comp=Z,146nm,0.7s
GMM Mts of Mourne 75.75 37 *e*P **P 10 17 45.8 -0.2**
MDO Dochfour 76.10 34 *e*P **P 10 17 47.5 -0.3**
PMAFR Mafra 76.18 53 *e*P **P 10 17 49.1 +0.4**
comp=Z,929nm,1.4s
PMAFR *e*S **S 10 27 20.6 -2.3**
PGBU Glenifferbraes 76.31 36 *e*P **P 10 17 49.5 +0.4**
PGBU IAmb IAmb 10 17 50.7
comp=Z,174nm,0.7s
LIS Lisbon 76.33 53 *e*P **P 10 17 50.1 +0.5**
LIS AMb AMB 10 17 53.3
comp=Z,1μm,1.0s
LIS Lisbon 76.33 53 *e*P **P 10 17 50.0 +0.5**
LIS pmax pmax
comp=Z,278nm,1.0s
LIS Lisbon 76.33 53 *e*P **P 10 17 50.2 +0.7**
comp=Z,1μm,1.3s
EAB Aberfoyle 76.33 35 *e*P **P 10 17 48.9 -0.3**
GAL1 Galloway 76.36 37 *e*P **P 10 17 49.3 0.0**
PGAV Gavieira, Arco 76.37 50 *e*P **P 10 17 48.8 -1.1**
comp=Z,507nm,2.2s
INVG Invergeldie, C 76.45 35 *e*P **P 10 17 49.4 -0.4**
INVG IAmb IAmb 10 17 51.9
comp=Z,140nm,0.7s
MLA1 Latheron 76.47 33 *e*P **P 10 17 50.1 +0.2**
MLA1 IAmb IAmb 10 17 52.1
comp=Z,127nm,0.9s
KBS Kingsbay 76.53 11 *ce*P **P 10 17 52.1 +2.2**
KBS pmax pmax
comp=Z,261nm,0.9s
KBS Kingsbay 76.53 11 *e*P **P 10 17 52.2 +2.2**
IOMK Kirk Michael 76.55 37 *e*P **P 10 17 50.3 -0.1**
PCAS Casmilo, Conde 76.56 52 *e*P **P 10 17 52.1 +1.2**
comp=Z,2μm,1.4s
PCAS *e*S **S 10 27 25.4 -1.7**
PCAB Cabril 76.60 50 *e*P **P 10 17 51.5 +0.4**
comp=Z,646nm,1.8s
COI Coimbra 76.60 52 *e*P **P 10 17 51.9 +0.9**
comp=Z,1μm,1.7s
COI *e*S **S 10 27 26.6 -0.8**
MCD Coleburn Disti 76.66 34 *e*P **P 10 17 51.1 +0.1**
TANT Tantan 76.70 64 P **P 10 17 54.1 +2.2**
SNR=9.2
WPS Cemaes, Angles 76.75 38 *e*P **P 10 17 51.4 -0.2**
WPS IAmb IAmb 10 17 52.9
comp=Z,91nm,0.8s
RSBS Rosebush, Pemb 76.87 39 *e*P **P 10 17 52.1 -0.2**
RSBS IAmb IAmb 10 17 53.5
comp=Z,400nm,1.4s
PTEO Sao Teotonio 76.88 55 *e*P **P 10 17 54.4 +1.7**
comp=Z,1μm,1.5s
PFVI Vila Bisbo 76.88 55 P **P 10 17 54.8 +2.1**
SNR=16
PFVI Vila Bisbo 76.88 55 *e*P **P 10 17 53.4 +0.7**
comp=Z,1μm,1.3s
PFVI *e*S **S 10 27 33.0 +2.3**
PVIS Viseu 76.89 51 *e*P **P 10 17 53.0 +0.3**
comp=Z,852nm,1.5s
PVRL Vila Real 76.91 51 *e*P **P 10 17 53.8 +1.0**
comp=Z,600nm,1.5s
PNCL Nicolau / Gran 76.92 54 *e*P **P 10 17 53.4 +0.5**
comp=Z,516nm,1.0s
PNCL *e*S **S 10 27 31.9 +0.9**
PMTG Montargil 76.96 53 *e*P **P 10 17 53.3 +0.2**
comp=Z,849nm,1.8s
PMTG *e*S **S 10 27 32.3 +0.8**
WAL1 Walls 76.97 31 *e*P **P 10 17 53.0 +0.3**
EDU Dundee 76.99 35 *e*P **P 10 17 53.2 +0.3**
MORF Marmelete 76.99 55 *e*P **P 10 17 53.8 +0.5**
MORF AMb AMB 10 17 56.7
comp=Z,567nm,1.3s
MORF *e*S **S 10 27 31.9 -0.1**
MORF Marmelete 76.99 55 *e*P **P 10 17 53.8 +0.5**
MORF *e*S **S 10 27 31.8 -0.1**
MORF pmax pmax
comp=Z,567nm,1.3s
MORF Marmelete 76.99 55 *e*P **P 10 17 54.0 +0.7**
comp=Z,571nm,1.3s
MORF *e*S **S 10 27 33.4 +1.5**
EBL Broad Law 77.12 35 *e*P **P 10 17 53.5 -0.1**
ESK Eskdalemuir 77.12 36 *e*P **P 10 17 53.4 -0.3**
ESK IAmb IAmb 10 17 54.8
comp=Z,194nm,0.7s
ESK Eskdalemuir 77.12 36 P **P 10 17 53.5 -0.1**
ESK pmax pmax
comp=Z,201nm,0.7s
ESK Eskdalemuir 77.12 36 P **P 10 17 53.5 -0.1**
ESK IAmb IAmb 10 17 55.0
comp=Z,201nm,0.7s
MTE Manteigas 77.21 51 *e*P **P 10 17 54.9 +0.3**
comp=Z,1μm,1.5s
MTE *e*S **S 10 27 33.7 -0.6**
MESJ Messejana 77.21 54 *e*P **P 10 17 54.9 +0.4**
MESJ AMb AMB 10 17 58.6
comp=Z,589nm,1.6s
MESJ *e*S **S 10 27 34.1 -0.2**
MESJ Messejana 77.21 54 *e*P **P 10 17 54.9 +0.4**
MESJ *e*S **S 10 27 34.0 -0.2**
MESJ pmax pmax
comp=Z,589nm,1.6s
MESJ Messejana 77.21 54 *e*P **P 10 17 55.0 +0.4**
comp=Z,588nm,1.7s
HTL Hartland 77.22 40 *e*P **P 10 17 54.0 -0.3**
HTL IAmb IAmb 10 17 55.8
comp=Z,508nm,1.6s
ESY Stoneypath 77.33 35 *e*P **P 10 17 54.8 0.0**
PCBR Castelo Branco 77.38 52 *e*P **P 10 17 55.9 +0.5**
comp=Z,1μm,1.2s
PCVE Castro Verde 77.40 54 *e*P **P 10 17 56.4 +0.8**
comp=Z,712nm,1.4s
EAH EAH 77.41 61 P **P 10 17 58.0 +2.2**
SNR=11
MVO Moncorvo 77.44 51 *e*P **P 10 17 56.3 +0.5**
comp=Z,849nm,1.5s
MVO *e*S **S 10 27 35.0 -1.7**
PBEJ Beja 77.45 54 *e*P **P 10 17 57.3 +1.4**
comp=Z,622nm,1.6s
PESTR Estremoz 77.49 53 P **P 10 17 57.6 +1.6**
SNR=50
PESTR Estremoz 77.49 53 *e*S **S 10 27 39.0 +1.8**
PESTR Estremoz 77.49 53 IAmb IAmb 10 17 58.2
comp=Z,216nm,1.0s
BILL Bilibino 77.52 338 *d*P **P 10 17 56.2 +0.6**
BILL *i* 10 18 00.9
BILL *i* *PP **pP 10 18 26.6 0.0**
BILL *i* SS SS 10 32 33.8 -3.6
BILL pmax pmax
comp=Z,27nm,0.8s
BILL Bilibino 77.52 338 P **P 10 17 56.3 +0.6**
PBRG Braganca 77.52 50 *e*P **P 10 17 56.9 +0.7**
comp=Z,691nm,1.6s
PMRV Marv??o 77.53 52 *e*P **P 10 17 56.6 +0.3**
comp=Z,889nm,1.7s
PMRV *e*S **S 10 27 37.6 0.0**
PBDV Barranco-do-Ve 77.56 55 *e*P **P 10 17 57.6 +1.1**
comp=Z,828nm,1.5s
PBDV *e*S **S 10 27 44.0 +5.9**
FOEL Foel Wylfa 77.61 38 *e*P **P 10 17 56.2 -0.2**
FOEL IAmb IAmb 10 17 57.5
comp=Z,505nm,1.7s
SPA0 Spitsbergen Ar 77.63 11 IAmb IAmb 10 17 59.1
comp=Z,236nm,1.4s
SPA0 Spitsbergen Ar 77.63 11 *e*P **P 10 17 57.3 +1.1**
PVAQ Vaqueiros 77.69 55 P **P 10 17 58.5 +1.3**
SNR=5.7
PVAQ Vaqueiros 77.69 55 *e*P **P 10 17 57.9 +0.7**
comp=Z,766nm,1.5s
PVAQ *e*S **S 10 27 40.2 +0.8**
PVAQ Vaqueiros 77.69 55 IAmb IAmb 10 17 59.8
comp=Z,478nm,1.1s
HLM1 Long Mynd 77.88 39 *e*P **P 10 17 57.6 -0.4**
HLM1 IAmb IAmb 10 17 59.3
comp=Z,745nm,1.6s
MCH1 Michaelchurch 77.92 39 *e*P **P 10 17 57.7 -0.4**
MCH1 IAmb IAmb 10 17 59.4
comp=Z,501nm,1.7s
HSPB Hornsund (broa 77.94 13 *ep*P **pP 10 18 31.5 +2.6**
HSPB *e*PP **PP 10 20 52.5 -2.5**
HSPB Hornsund (broa 77.94 13 *e*P **P 10 17 59.5 +1.7**
MONM Monmouth 78.07 39 *e*P **P 10 17 59.0 0.0**
MONM IAmb IAmb 10 18 00.4
comp=Z,843nm,1.6s
KNTN Kanton 78.16 263 P **P 10 18 01.2 +1.1**
KNTN IAmb IAmb 10 18 02.5
comp=Z,168nm,1.1s
HPK Haverah Park 78.31 37 *e*P **P 10 18 00.7 +0.4**
LBWR Ladybower, Pea 78.37 38 *e*P **P 10 18 01.1 +0.4**
LBWR IAmb IAmb 10 18 02.5
comp=Z,775nm,1.4s
LBWR IAML 10 18 02.5
comp=Z,757nm,1.4s
STRD Stroud 78.47 39 *e*P **P 10 18 01.3 +0.1**
STRD IAmb IAmb 10 18 02.7
comp=Z,1μm,1.7s
SRHM Skhour des Reh 78.62 59 P **P 10 18 04.0 +1.4**
SNR=32
GDLE Glaisdale, N Y 78.66 36 *e*P **P 10 18 02.6 +0.5**
GDLE IAmb IAmb 10 18 03.6
comp=Z,140nm,0.7s
SWN1 Swindon 78.75 40 *e*P **P 10 18 02.5 -0.2**
SWN1 IAmb IAmb 10 18 04.5
comp=Z,1μm,1.5s
CWF Charnwood Fore 78.77 38 *e*P **P 10 18 02.9 +0.1**
CWF IAmb IAmb 10 18 04.4
comp=Z,429nm,1.5s
AVE Averroes 78.83 59 P **P 10 18 05.0 +1.4**
SNR=5.4
AVE Averroes 78.83 59⇑ *i*P **P 10 18 04.1 +0.5**
OUK Oukaimeden 78.94 61 P **P 10 18 06.0 +1.4**
SNR=42
SFS San Fernando 79.08 55⇑ *i*P **P 10 18 06.3 +1.5**
LMK Market Rasen 79.17 37 *e*P **P 10 18 05.3 +0.4**
LMK IAmb IAmb 10 18 06.8
comp=Z,2μm,2.2s
ZHG ZHG 79.43 58 P **P 10 18 08.0 +1.1**
SNR=23
HORN Hornachuelos 79.50 54 P **P 10 18 08.0 +0.9**
SNR=9.5
RSA Sarsar 79.75 57 P **P 10 18 11.0 +2.4**
SNR=16
PAB San Pablo 79.80 52 P **P 10 18 09.7 +0.9**
PAB pmax pmax
comp=Z,846nm,1.4s
PAB San Pablo 79.80 52 P **P 10 18 09.7 +0.9**
FOO Floro 79.80 29 *e*P **P 10 18 09.3 +1.1**
BJO1 Bjornoya 79.80 14 *e*P **P 10 18 09.3 +1.3**
SUE Sulen 79.82 29 *e*P **P 10 18 09.7 +1.4**
CEU Ceuta 79.87 56⇑ *i*P **P 10 18 10.6 +1.5**
WACR West Acre 79.91 38 *e*P **P 10 18 09.3 +0.3**
WACR IAmb IAmb 10 18 10.6
comp=Z,329nm,0.9s
OUZM OUZ 79.93 61 P **P 10 18 11.0 +1.2**
SNR=79
ESDC Sonseca Array 80.05 52 P **P 10 18 10.8 +0.6**
comp=Z,244nm,1.1s,baz=293,slow=4.6,SNR=209
ESDC PKKPbc **PKKPbc 10 36 54.0 -0.3**
comp=Z,1.2nm,0.8s,baz=68,slow=1.2,SNR=5.7
ESDC LR LR 10 52 37.6
comp=Z,593nm,18.0s,baz=275,slow=35
ASK Askoy 80.20 30 *e*P **P 10 18 10.6 +0.2**
BER Bergen 80.29 30 *e*P **P 10 18 12.0 +1.1**
SICH Sidi Chahed 80.34 57 P **P 10 18 14.0 +2.2**
SNR=9.1
EMAL Malaga-Limoner 80.40 55⇑ *i*P **P 10 18 13.1 +1.1**
UCM Universidad Co 80.44 51⇑ *i*P **P 10 18 13.2 +1.0**
HYA Hoyanger 80.45 29 *e*P **P 10 18 13.1 +1.4**
AKN Aaknes 80.50 28 *e*P **P 10 18 13.2 +1.2**
KMY Karmoy 80.60 31 *e*P **P 10 18 13.3 +0.7**
MOL Molde 80.62 27 *e*P **P 10 18 13.0 +0.4**
IFR Ifrane 80.64 58⇑ *i*P **P 10 18 14.2 +0.7**
CZD Col de Zad 80.83 58 P **P 10 18 17.0 +2.3**
SNR=44
PVLZ Peæn de 80.89 56⇑ *i*P **P 10 18 14.1 -0.5**
TZRR Tazzarine 80.95 61 P **P 10 18 17.0 +1.8**
SNR=27

LOF Lofoten 80.95 21 *e*P **P 10 18 15.9 +1.7**
ODD1 Odda 81.05 30 *e*P **P 10 18 17.1 +2.1**
ZGR Zagora 81.08 61 P **P 10 18 18.0 +2.1**
SNR=16
BLS5 Blasjo 81.13 30 *e*P **P 10 18 17.1 +1.7**
PALE Palemas 81.17 56 P **P 10 18 18.0 +1.8**
SNR=17
GOLM Goulmima 81.23 60 P **P 10 18 19.0 +2.3**
SNR=9.1
MDT Midelt 81.24 58 P **P 10 18 18.7 +2.1**
SNR=11
AKLM AKL 81.41 57 P **P 10 18 19.0 +1.5**
SNR=49
DOMB Dombas 81.46 28 *e*P **P 10 18 18.8 +1.6**
SESP Santiago Espad 81.51 53 P **P 10 18 19.9 +1.8**
SNR=18
SKAR Skarslia 81.59 29 *e*P **P 10 18 19.4 +1.6**
STEI Steigen 81.62 21 *e*P **P 10 18 19.1 +1.3**
NSS Namsos 81.78 25 *e*P **P 10 18 19.9 +1.2**
SNART Snartemo 81.85 31 *e*P **P 10 18 20.6 +1.5**
ARF Arif 81.91 60 P **P 10 18 22.0 +1.8**
SNR=17
GOG Mont Gurugu 81.91 56 P **P 10 18 22.4 +2.2**
SNR=7.6
MELI Melilla 81.94 56⇑ *i*P **P 10 18 19.9 -0.2**
TRO Tromso 82.06 19 *e*P **P 10 18 22.2 +2.1**
MOR8 Moi Rana 82.07 23 *e*P **P 10 18 22.0 +1.8**
CLF Chambon-Foret 82.20 42 IAmb IAmb 10 18 23.6
comp=Z,331nm,0.9s
TAF Taforalt 82.48 56 P **P 10 18 25.0 +1.9**
SNR=15
NC204 NORSAR Array S 82.50 28 IAmb IAmb 10 18 24.7
comp=Z,101nm,0.9s
HOMB Homborsund 82.51 31 *e*P **P 10 18 24.3 +1.7**
KONO Kongsberg 82.56 30 *ce*P **P 10 18 24.2 +1.4**
KONO pmax pmax
comp=Z,68nm,0.9s
KONO Kongsberg 82.56 30 P **P 10 18 24.4 +1.6**
KONO IAmb IAmb 10 18 25.7
comp=Z,96nm,1.0s
KONO Kongsberg 82.56 30 *e*P **P 10 18 23.5 +0.7**
NBO00 NORSAR Array S 82.59 28 IAmb IAmb 10 18 25.4
comp=Z,174nm,0.9s
NAO01 NORSAR Array S 82.71 28 IAmb IAmb 10 18 26.1
comp=Z,209nm,1.1s
NC303 NORSAR Array S 82.79 28 IAmb IAmb 10 18 26.2
comp=Z,124nm,1.0s
NB2 NORSAR Subarra 82.79 28 P **P 10 18 25.6 +1.5**
comp=Z,472nm,1.7s,baz=292,slow=5.3
NB2 NORSAR Subarra 82.79 28 P **P 10 18 25.6 +1.5**
baz=292,slow=5.3
NOA NORSAR Array B 82.79 28 P **P 10 18 25.2 +1.1**
comp=Z,33nm,0.7s,baz=294,slow=5.2,SNR=120
NOA pP **pP 10 18 54.9 -0.6**
comp=Z,17nm,0.8s,baz=292,slow=5.2,SNR=3.5
NOA LR LR 10 56 46.5
comp=Z,201nm,19.0s,baz=290,slow=37
NB201 NORSAR Array S 82.82 28 IAmb IAmb 10 18 26.6
comp=Z,170nm,0.9s
CART Cartagena 82.83 53 IAmb IAmb 10 18 27.0
comp=Z,149nm,1.0s
HAMF Hammerfest 82.96 17 *e*P **P 10 18 26.1 +1.4**
NC405 NORSAR Array S 82.99 28 IAmb IAmb 10 18 28.1
comp=Z,418nm,1.3s
NC602 NORSAR Array S 83.05 28 *e*P **P 10 18 27.2 +1.8**
TDRA Tendrara 83.27 58 P **P 10 18 29.0 +1.6**
SNR=53
GOET G??ttrup 83.31 32⇓ *i*P **P 10 18 29.0 +2.2**
comp=Z,288nm,1.1s
MUD Monsted U'grnd 83.50 33⇑ *i*P **P 10 18 29.0 +1.3**
MUD pmax pmax
comp=Z,110nm,1.1s
MUD Monsted U'grnd 83.50 33⇑ *i*P **P 10 18 29.0 +1.3**
comp=Z,109nm,1.1s
HLG Helgoland 83.61 35 *e*P **P 10 18 29.4 +1.1**
comp=Z,306nm,1.1s,baz=292,slow=5.0
KTK1 Kautokeino 83.70 19 *e*P **P 10 18 30.2 +1.7**
ARCES ARCESS Array B 84.09 18 P **P 10 18 31.3 +0.7**
comp=Z,112nm,0.7s,baz=296,slow=4.2,SNR=275
ARCES pP **pP 10 19 01.5 -0.5**
comp=Z,47nm,0.7s,baz=305,slow=4.3,SNR=5.6
ARCES PP **PP 10 21 40.9 -4.8**
comp=Z,44nm,0.9s,baz=309,slow=5.5,SNR=6.2
ARCES PKKPbc **PKKPbc 10 36 43.3 -2.9**
comp=Z,2.2nm,0.7s,baz=122,slow=1.9,SNR=7.0
ARCES LR LR 10 57 36.1
comp=Z,605nm,19.9s,baz=310,slow=37
ARE0 ARCESS Array S 84.09 18 *e*P **P 10 18 31.8 +1.2**
WLF Walferdange 84.14 40 *e*P **P 10 18 32.1 +1.0**
comp=Z,385nm,1.4s,baz=292,slow=5.0
WLF *e*pP **pP 10 19 01.4 -1.1**
WLF Walferdange 84.14 40 IAmb IAmb 10 18 34.0
comp=Z,370nm,1.4s
IBBN Ibbenburen 84.19 37 *e*P **P 10 18 32.1 +0.8**
comp=Z,296nm,1.0s,baz=292,slow=5.0
BUG Bochum--Univer 84.21 38 *e*P **P 10 18 32.1 +0.6**
comp=Z,336nm,1.6s,baz=292,slow=5.0
SKMB Sankelmark Bun 84.27 34 *e*P **P 10 18 33.1 +1.4**
comp=Z,414nm,1.2s,baz=292,slow=5.0
SKMB *e*PP **PP 10 21 44.8 -2.7**
baz=294,slow=8.0
SKMB *e*pPP 10 22 14.6
KEV Kevo 84.39 17 P **P 10 18 32.6 +0.6**
KEV pmax pmax
comp=Z,91nm,0.7s
KEV Kevo 84.39 17 P **P 10 18 32.6 +0.6**
KEV IAmb IAmb 10 18 34.3
comp=Z,91nm,0.7s
AHRW Bad Neuenahr-A 84.40 39 *e*P **P 10 18 33.4 +0.9**
comp=Z,309nm,1.0s,baz=292,slow=5.0
AHRW *e*S **S 10 28 47.8 -0.6**
SSB Saint Sauveur 84.53 44 IAmb IAmb 10 18 34.9
comp=Z,63nm,0.8s
SEY Seymchan 84.74 335 *i* P **P 10 18 35.2 +1.3**
EANR 'Ain N'Sour 84.92 54 P **P 10 18 36.6 +1.1**
RETH Rethem/Aller, 84.95 36 *e*P **P 10 18 36.3 +1.2**
comp=Z,319nm,1.0s,baz=292,slow=5.0
PMSA Palmer Station 84.99 167 *e*P **P 10 18 34.5 -0.3**
BSEG Bad Segeberg 85.04 35 *e*P **P 10 18 36.5 +0.9**
comp=Z,289nm,0.9s,baz=292,slow=5.0
BSEG *e*PP **PP 10 21 51.5 -2.3**
baz=294,slow=8.0
BSEG *e*pPP 10 22 19.7
BSEG *e*S **S 10 28 57.7 +3.2**
ECHA Ech Chlef 85.06 54 P **P 10 18 37.1 +1.0**
EBNR Beni Rached 85.15 54 P **P 10 18 38.5 +1.9**
ETRT Tiaret 85.24 55 P **P 10 18 39.5 +2.3**
ECH Echery 85.25 41 IAmb IAmb 10 18 38.9
comp=Z,168nm,1.0s
TNS Taunus Mts 85.33 39 *e*P **P 10 18 37.8 +0.6**
comp=Z,338nm,0.9s,baz=292,slow=5.0
TNS *e*pP **pP 10 19 07.4 -1.4**
TNS *e*S **S 10 28 59.3 +1.5**
NRDL Niedersach Rie 85.46 36 *e*P **P 10 18 38.7 +1.0**
comp=Z,170nm,1.0s,baz=292,slow=5.0
NRDL *e*PP **PP 10 21 54.3 -2.9**
baz=294,slow=8.0
NRDL *e*pPP 10 22 22.6
NRDL *e*S **S 10 29 03.3 +4.6**
GTTG Gottingen 85.74 37 *e*P **P 10 18 40.0 +0.9**
comp=Z,177nm,1.1s,baz=292,slow=5.0
CLZ Clausthal 85.86 37 *e*P **P 10 18 40.9 +1.1**
comp=Z,172nm,1.2s,baz=292,slow=5.0
CLZ *e*pPP 10 22 26.0
ASSE Asse, Remlinge 85.92 37 *e*P **P 10 18 41.0 +1.1**
comp=Z,208nm,1.1s,baz=292,slow=5.0
ASSE *e*PP **PP 10 21 57.5 -3.4**
baz=294,slow=8.0
BFO Black Forest 85.94 41 *e*P **P 10 18 40.3 0.0**
comp=Z,105nm,1.0s,baz=292,slow=5.0
BFO Black Forest 85.94 41 P **P 10 18 39.9 -0.4**
BFO pmax pmax
comp=Z,83nm,0.9s
BFO Black Forest 85.94 41 P **P 10 18 39.9 -0.4**
BFO IAmb IAmb 10 18 42.1
comp=Z,83nm,0.9s
SENIN Lac Senin/Sane 85.99 43 IAmb IAmb 10 18 45.3
comp=Z,166nm,0.8s
BNI Bardonecchia 86.03 44 IAmb IAmb 10 18 43.8
comp=Z,176nm,1.1s
UBBA Unterbreizbach 86.04 38 *e*P **P 10 18 41.5 +1.0**
comp=Z,216nm,1.7s,baz=292,slow=5.0
UBBA *e*PP **PP 10 21 58.6 -3.3**
baz=294,slow=8.0
UBBA *e*pPP 10 22 27.0
RGN Rugen 86.41 34 *e*P **P 10 18 43.3 +0.9**
comp=Z,97nm,1.1s,baz=292,slow=5.0
RGN Rugen 86.41 34 IAmb IAmb 10 18 48.5
comp=Z,102nm,1.1s
PEA0B Petropavlovsk- 86.47 325 *ce*P **P 10 18 43.1 +0.4**
PEA0B Petropavlovsk- 86.47 325 IAmb IAmb 10 18 51.3
comp=Z,102nm,1.4s
PETK Petropavlovsk- 86.47 325 P **P 10 18 43.6 +0.9**
comp=Z,18nm,1.1s,baz=81,slow=10,SNR=16
PETK pP **pP 10 19 14.0 -0.3**
comp=Z,11nm,0.9s,baz=340,slow=8.1,SNR=4.5
TIXI Tiksi 86.63 347 *ce*P **P 10 18 41.4 -1.7**
TIXI pmax pmax
comp=Z,9.0nm,0.9s
TIXI Tiksi 86.63 347 P **P 10 18 42.7 -0.4**
HOPE Hope Point 86.78 150 P **P 10 18 44.7 +0.8**
HOPE pmax pmax
comp=Z,164nm,0.8s
HOPE Hope Point 86.78 150 P **P 10 18 44.7 +0.8**
HOPE IAmb IAmb 10 18 54.1
comp=Z,164nm,0.8s
NEUB Neuenburg 86.92 37 *e*P **P 10 18 45.8 +0.9**
comp=Z,161nm,1.4s,baz=292,slow=5.0
BSD Bornholm Skovb 87.00 33⇑ *i*P **P 10 18 44.7 -0.5**
BSD pmax pmax
comp=Z,65nm,1.4s
BSD Bornholm Skovb 87.00 33⇑ *i*P **P 10 18 44.7 -0.5**
comp=Z,65nm,1.4s
MA2 Magadan 87.03 332 *ce*P **P 10 18 46.0 +0.7**
MA2 pmax pmax
comp=Z,40nm,0.9s
MA2 Magadan 87.03 332 P **P 10 18 46.5 +1.2**
MOX Moxa 87.05 38 *e*P **P 10 18 46.4 +0.8**
comp=Z,70nm,1.1s,baz=292,slow=5.0
MOX *e*S **S 10 29 15.2 +0.9**
GRA1 Grafenberg Arr 87.19 39 P **P 10 18 47.2 +0.9**
GRA1 IAmb IAmb 10 18 52.0
comp=Z,128nm,1.3s
GRF Grafenberg Arr 87.19 39 *e*P **P 10 18 47.4 +1.1**
comp=Z,149nm,1.4s,baz=292,slow=5.0
GRF *e*pP **pP 10 19 16.8 -1.1**
GRF *e*PP **PP 10 22 08.5 -2.8**
baz=294,slow=8.0
GRF *e*S **S 10 29 16.4 +0.7**
GRF Grafenberg Arr 87.19 39 P **P 10 18 47.2 +0.9**
GRF pmax pmax
comp=Z,129nm,1.3s
TUE Stuetta 87.27 42 IAmb IAmb 10 18 51.7
comp=Z,98nm,0.9s
UBR Ueberruh 87.29 41 *e*P **P 10 18 47.5 +0.6**
comp=Z,142nm,1.1s,baz=292,slow=5.0
UBR *e*pPP 10 22 38.1
UBR *e*S **S 10 29 18.0 +1.1**
DAVA Damuels 87.30 41 *i* P **P 10 18 47.5 +0.5**
comp=Z,108nm,1.1s,SNR=59
PLN Plauen 87.43 38 *e*P **P 10 18 48.3 +0.9**
comp=Z,71nm,1.0s,baz=292,slow=5.0
PLN *e*S **S 10 29 19.6 +1.6**
DAVOX Davos/Dischmat 87.49 42 LR LR 10 58 52.2
comp=Z,382nm,18.0s,baz=262,slow=36
CLL Collm 87.58 37 *i* P **P 10 18 49.9 +1.8**
comp=Z,30nm,0.9s
CLL *e*pP **pP 10 19 21.0 +1.3**
CLL *i* 10 19 26.1
CLL *e*sP **sP 10 19 33.0 +0.2**
CLL *e*PP **PP 10 22 13.0 -1.4**
CLL *e*pPP 10 22 42.0
CLL *e*SKSac **SKSac 10 29 04.0 -0.6**
CLL *e*S **ScS 10 29 27.0 +1.3**
CLL *e*sS **sS 10 30 18.0 +4.1**
CLL *e*SS **SS 10 35 06.0 -1.0**
CLL *e*SS 10 36 00.0
CLL *e*SSS SSS 10 38 36.0
CLL *e*SSSS 10 42 00.0
CLL Collm 87.58 37 *e*P **P 10 18 49.9 +1.8**
comp=Z,33nm,0.9s,baz=292,slow=5.0
CLL *e*S **S 10 29 21.2 +1.9**
CLL Collm 87.58 37 *i* P **P 10 18 49.9 +1.8**
CLL *e**PP **pP 10 19 21.0 +1.3**
CLL *e**SP **sP 10 19 33.0 +0.2**
CLL *e* 10 29 04.0
CLL *e*S **ScS 10 29 27.0 +1.3**
CLL *e*pmax pmax
comp=Z,30nm,0.9s
GUNZ Gunzen 87.58 38 *e*P **P 10 18 49.2 +1.0**
comp=Z,66nm,0.9s,baz=292,slow=5.0
APA Apatity 87.59 18⇓ *i*P **P 10 18 46.4 -1.4**
APA *i **PP **sP 10 19 31.0 -1.5**
APA pmax pmax
comp=Z,14nm,1.0s
APA MLR MLR
comp=Z,800nm,20.0s
MANZ Manzenberg 87.60 38 *e*P **P 10 18 49.2 +0.9**
comp=Z,47nm,1.2s,baz=292,slow=5.0
MANZ *e*pP **pP 10 19 18.6 -1.3**
MANZ *e*S **S 10 29 21.2 +1.5**
TANN Tannenbergstha 87.64 38 *e*P **P 10 18 49.5 +1.0**
comp=Z,154nm,1.1s,baz=292,slow=5.0
TANN *e*S **S 10 29 22.8 +2.7**
WERN Wernitzgruen 87.64 38 *e*P **P 10 18 49.6 +1.1**
comp=Z,84nm,1.0s,baz=292,slow=5.0
WERN *e*pPP 10 22 43.2
NKC Novy Kostel 87.70 38 *e*P **P 10 18 49.9 +1.2**
NKC Novy Kostel 87.70 38 *e*P **P 10 18 49.9 +1.2**
LVZ Lovozero 87.72 17 *ce*P **P 10 18 48.3 -0.2**
LVZ pmax pmax
comp=Z,70nm,1.0s
LVZ Lovozero 87.72 17 P **P 10 18 49.0 +0.5**
LVZ IAmb IAmb 10 18 49.7
comp=Z,60nm,1.0s
ROTZ Rotzenmuhle 87.75 38 *e*P **P 10 18 50.1 +1.1**
comp=Z,37nm,1.0s,baz=292,slow=5.0
ROTZ *e*PP **PP 10 22 13.2 -2.6**
baz=294,slow=8.0
ROTZ *e*S **S 10 29 22.8 +1.7**
RETA Reutte 87.78 41 *e*P **P 10 18 49.9 +0.7**
comp=Z,115nm,0.9s,SNR=38
FUORN Ofenpass-Fuorn 87.80 42 P **P 10 18 50.2 +0.7**
FUORN IAmb IAmb 10 18 54.8
comp=Z,97nm,0.9s
FUR Furstenfeldbru 87.83 40 *e*P **P 10 18 50.1 +0.7**
comp=Z,85nm,1.0s,baz=292,slow=5.0
FETA Feichten 87.94 41 *i* P **P 10 18 50.8 +0.7**
comp=Z,31nm,0.6s,SNR=29
FBE Freiberg 87.94 37 *e*P **P 10 18 51.2 +1.4**
comp=Z,70nm,1.4s,baz=292,slow=5.0
FBE *e*pPP 10 22 45.1
TIC Toumodi 88.04 84 *e*PKP1 **P 10 18 51.5 +0.5**
MOTA Moosalm 88.05 41 *i* P **P 10 18 50.9 +0.3**
comp=Z,39nm,0.7s,SNR=51
LIC Lamto 88.16 84 *e*PKP1 **P 10 18 52.2 +0.7**
comp=Z,393nm,0.7s
SQTA Sankt Quirin 88.16 41 *e*P **P 10 18 50.8 -0.3**
comp=Z,17nm,0.6s,SNR=28
MSSA Maissana 88.19 44 P **P 10 18 50.7 -0.5**
MSSA IAmb IAmb 10 18 55.6
comp=Z,79nm,1.0s
DBIC Dimbokro 88.19 84 P **P 10 18 52.2 +0.5**
comp=Z,277nm,0.8s,baz=273,slow=4.2,SNR=286
DBIC PKKPbc **PKKPbc 10 36 35.6 +0.9**
comp=Z,4.1nm,0.6s,baz=96,slow=3.2,SNR=10.0
DBIC LR LR 10 52 43.9
comp=Z,213nm,22.0s,baz=258,slow=32
BRG Berggiesshubel 88.30 37 *i* P **P 10 18 52.2 +0.7**
comp=Z,60nm,0.9s
BRG *e*pP **pP 10 19 25.4 +2.1**
comp=Z,11nm,1.1s
BRG *e*sP **sP 10 19 37.1 +0.8**
comp=Z,22nm,1.4s
BRG *i* PP **PP 10 22 18.6 -1.6**
comp=Z,72nm,1.8s
BRG SKS **SKSac 10 29 06.0 -3.0**
BRG S **S 10 29 24.0 -2.2**
BRG SS **SS 10 35 11.0 -6.5**
comp=N,138nm,17.3s
comp=E,317nm,16.8s
comp=Z,475nm,14.7s
BRG Berggiesshubel 88.30 37 *e*P **P 10 18 52.8 +1.3**
comp=Z,58nm,0.9s,baz=292,slow=5.0
BRG *e*pP **pP 10 19 22.1 -1.1**
BRG *e*PP **PP 10 22 16.5 -3.6**
baz=294,slow=8.0
BRG *e*S **S 10 29 27.2 +1.0**
WATA Walderalm 88.34 41 *i* P **P 10 18 52.4 +0.4**
comp=Z,74nm,1.2s,SNR=24
SALO Salr 88.35 43 IAmb IAmb 10 18 54.2
comp=Z,126nm,0.8s
DFRA Djebel Bou Aff 88.39 52 P **P 10 18 53.3 +0.9**
KIC Kosan Boka 88.39 84 *e*PKP1 **P 10 18 52.4 -0.2**
comp=Z,894nm,0.8s
WET Wettzell 88.41 39 *e*P **P 10 18 53.5 +1.4**
comp=Z,60nm,0.8s,baz=292,slow=5.0
WET *e*PP **PP 10 22 18.3 -2.8**
baz=294,slow=8.0
WET *e*S **S 10 29 27.2 -0.2**
WTTA Wattenberg 88.41 41 *e*P **P 10 18 52.7 +0.3**
comp=Z,90nm,1.7s,SNR=25
PVCC Panska Ves 88.81 37 *e*P **P 10 18 55.3 +1.4**
PVCC *e* 10 29 12.2
PVCC MLR MLR
comp=Z,600nm,21.6s
PVCC Panska Ves 88.81 37 *e*P **P 10 18 55.3 +1.4**
PVCC *e*SKS **SKSac 10 29 12.2 +0.2**
PVCC AMS AMS 10 58 00.0
comp=Z,600nm,21.6s
VLC Villacollemand 88.83 44 P **P 10 18 53.0 -1.2**
KHC Kasperske Hory 88.83 39 *e*P **P 10 18 55.1 +1.0**
KHC *e* 10 19 26.0
KHC *e* 10 29 13.0
KHC MLR MLR
comp=Z,700nm,21.1s
KHC Kasperske Hory 88.83 39 *e*P **P 10 18 55.1 +1.0**
KHC *e*pP **pP 10 19 26.0 +0.2**
KHC *e*SKS **SKSac 10 29 13.0 +0.7**
KHC AMS AMS 10 57 30.0
comp=Z,700nm,21.1s
PBCC Pribram 88.84 38 *e*P **P 10 18 55.4 +1.3**
FIA1 FINESS Array S 88.89 24 IAmb IAmb 10 18 55.4
comp=Z,67nm,1.1s
FINES FINESS Array B 88.89 24 P **P 10 18 54.0 -0.1**
comp=Z,30nm,0.8s,baz=327,slow=3.2,SNR=77
FINES PKKPbc **PKKPbc 10 36 32.3 -2.1**
comp=Z,1.5nm,0.7s,baz=113,slow=4.4,SNR=5.5
FINES LR LR 10 59 11.2
comp=Z,285nm,21.0s,baz=301,slow=36
FINES FINESS Array B 88.89 24 P **P 10 18 54.0 -0.1**
RJOB Jochberg 88.94 40 *e*P **P 10 18 55.5 +0.8**
comp=Z,47nm,1.1s,baz=292,slow=5.0
RJOB *e*pP **pP 10 19 24.9 -1.5**
RJOB *e*S **S 10 29 33.9 +1.5**
CASM Ain Smara 88.95 52 P **P 10 18 55.1 +0.2**
GEC2 GERESS Array S 89.02 39 *e*P **P 10 18 56.3 +1.2**
comp=Z,45nm,0.9s,baz=292,slow=5.0
GEC2 *e*S **S 10 29 33.5 +0.3**
GEC2 GERESS Array S 89.02 39 P **P 10 18 55.3 +0.2**
GERES GERESS Array B 89.02 39 P **P 10 18 55.7 +0.6**
comp=Z,27nm,0.8s,baz=322,slow=4.1,SNR=136
GERES PP **PP 10 22 24.9 -1.2**
comp=Z,3.0nm,0.7s,baz=305,slow=6.4,SNR=4.1
GERES PKKPbc **PKKPbc 10 36 31.9 -2.0**
comp=Z,1.7nm,0.8s,baz=158,slow=1.4,SNR=8.5
GERES LR LR 10 59 38.6
comp=Z,569nm,18.6s,baz=281,slow=36
PRU Pruhonice 89.03 37 *e*P **P 10 18 55.9 +0.9**
PRU *e* 10 29 13.2
PRU MLR MLR
comp=Z,500nm,18.4s
PRU Pruhonice 89.03 37 *e*P **P 10 18 55.9 +0.9**
PRU *e*SKS **SKSac 10 29 13.2 -0.1**
PRU AMS AMS 10 59 50.0
comp=Z,500nm,18.4s
CAEH 'Ain El Ouahch 89.04 52 P **P 10 18 56.4 +1.1**
GKP Gorka Klasztor 89.06 34 *e*P **P 10 18 56.0 +1.0**
CKFL Kef-Lekhel 89.07 52 P **P 10 18 56.3 +0.7**
ZCCA Zocca 89.14 44 IAmb IAmb 10 18 58.1
comp=Z,136nm,0.7s
ABTA Abfaltersbach 89.17 41 *i* P **P 10 18 56.2 +0.4**
comp=Z,34nm,0.9s,SNR=26
GOPC GO Pecny, Ondr 89.20 37 *e*P **P 10 18 57.0 +1.2**
GOPC *e* 10 29 14.9
GOPC MLR MLR
comp=Z,500nm,17.0s
GOPC GO Pecny, Ondr 89.20 37 *e*P **P 10 18 57.0 +1.2**
GOPC *e*SKS **SKSac 10 29 14.9 +0.4**
GOPC AMS AMS 11 00 20.0
comp=Z,500nm,17.0s
SLIT Slitere, Latvi 89.39 29 *e*P **P 10 18 56.4 0.0**
STAL STALIGIAL 89.49 41 P **P 10 18 57.4 +0.1**
CMAH Djebel Manchou 89.52 52 P **P 10 18 57.2 -0.4**
KBA Koelnbreinsper 89.55 40 *i* P **P 10 18 58.1 +0.4**
comp=Z,27nm,0.7s,SNR=32
CHVC Chvalec 89.63 37 *e*P **P 10 18 58.5 +0.7**
CHVC AMS AMS 11 00 00.0
comp=Z,500nm,22.2s
OSSC Osservatorio P 89.65 44 P **P 10 18 57.4 -0.6**
OSSC IAmb IAmb 10 18 58.8
comp=Z,39nm,0.8s
UPC Upice 89.65 37 *e*P **P 10 18 59.1 +1.3**
UPC *e* 10 29 15.9
UPC MLR MLR
comp=Z,600nm,23.0s
UPC Upice 89.65 37 *e*P **P 10 18 59.1 +1.3**
UPC *e*SKS **SKSac 10 29 15.9 -1.1**
UPC AMS AMS 10 57 40.0
comp=Z,600nm,23.0s
KSP Ksiaz 89.65 36 *e*P **P 10 18 58.8 +1.0**
KSP *e*PP **PP 10 22 28.0 -2.9**
KSP *e*SKS **SKSac 10 29 17.8 +0.8**
CASP Castiglione de 89.68 45 P **P 10 18 58.0 -0.2**
OSTC Ostas 89.74 36 *e*P **P 10 18 59.3 +1.0**
OSTC *e*SKS **SKSac 10 29 18.1 +0.5**
OSTC AMS AMS 10 58 00.0
comp=Z,600nm,22.1s
MOA Molln 89.79 39 *e*P **P 10 18 58.9 +0.3**
comp=Z,37nm,0.7s,SNR=32
VSL Villasalto 89.91 49 IAmb IAmb 10 19 02.1
comp=Z,112nm,1.1s
MYKA Terra Mystica 89.92 41 *i* P **P 10 18 59.3 0.0**
comp=Z,14nm,0.7s,SNR=13
PBUR Paburge 90.06 30 *e*P **P 10 19 00.2 +0.6**
CADS Cadrg 90.15 41 *i* P **P 10 19 00.6 +0.3**
CADS *e*PP **PP 10 22 32.9 -2.1**
CADS *e*SKSac **SKSac 10 29 21.2 +1.0**
CADS *e*S **ScS 10 29 48.0 +0.6**
KRUC Moravsky 90.52 38 *e*P **P 10 19 02.7 +0.8**
KRUC Moravsky 90.52 38 *e*S **SKSac 10 29 22.4 +0.3**
VRAC Vranov 90.53 37 LR LR 10 59 48.4
comp=Z,411nm,18.9s,baz=286,slow=36
VRAC Vranov 90.53 37 *e*P **P 10 19 03.0 +1.0**
VRAC Vranov 90.53 37 *e*S **SKSac 10 29 19.7 -2.4**
VRAC Vranov 90.53 37⇑ P **P 10 19 03.2 +1.2**
VRAC Vranov 90.53 37⇑ P **P 10 19 03.2 +1.2**
OBKA Obir 90.54 41 *i* P **P 10 19 02.1 -0.1**
comp=Z,45nm,0.7s,SNR=35
MURB Monte Urbino 90.60 44 P **P 10 19 02.0 -0.5**
MURB IAmb IAmb 10 19 05.6
comp=Z,47nm,0.8s
CONA Conrad Observa 90.72 39 *i* P **P 10 19 03.7 +0.7**
comp=Z,23nm,0.7s,SNR=27
LJU Ljubljana 90.73 41 *i* P **P 10 19 04.0 +1.0**
LJU *e* 10 19 25.8
LJU *e*pP **pP 10 19 34.3 -0.5**
LJU *e*PP **PP 10 22 37.7 -1.9**
LJU *e*SKSac **SKSac 10 29 23.9 +0.5**
LJU *i* S **ScS 10 29 52.9 +0.8**
LJU Ljubljana 90.73 41⇑ *i*P **P 10 19 03.5 +0.5**
SOKA Soboth 90.77 40 *i* P **P 10 19 03.2 -0.1**
comp=Z,22nm,0.8s,SNR=44
CEY Cerknica 90.80 41⇑ *i*P **P 10 19 04.1 +0.8**
ARSA Arzberg 90.82 40 *i* P **P 10 19 03.6 +0.2**
comp=Z,28nm,0.7s,SNR=15
PERS Pernice 90.84 40 *i* P **P 10 19 03.5 0.0**
MORC Moravsky Berou 90.86 37 *e*P **P 10 19 04.5 +0.9**
MORC Moravsky Berou 90.86 37 *e*S **SKSac 10 29 23.7 -0.4**
MORC Moravsky Berou 90.86 37⇓ P **P 10 19 04.9 +1.3**
MORC Moravsky Berou 90.86 37⇓ P **P 10 19 04.9 +1.3**
MORC Moravsky Berou 90.86 37 P **P 10 19 04.0 +0.4**
MORC IAmb IAmb 10 19 05.8
comp=Z,51nm,0.9s
VSU Vasula 90.89 27 *e*P **P 10 19 03.5 +0.1**
RIY Rijeka 91.01 42⇑ *i*P **P 10 19 04.8 +0.5**
OKC Ostrava-Krasne 91.17 37 *e*P **P 10 19 06.4 +1.5**
OKC *e* 10 29 27.0
OKC MLR MLR
comp=Z,500nm,22.7s
OKC Ostrava-Krasne 91.17 37 *e*P **P 10 19 06.4 +1.5**
OKC *e*SKS **SKSac 10 29 27.0 +1.2**
OKC AMS AMS 11 01 50.0
comp=Z,500nm,22.7s
KEST Kesra 91.30 52 P **P 10 19 06.6 +0.7**
comp=Z,20nm,0.7s,baz=94,slow=0.3,SNR=16

KEST LR LR 10 58 07.5
comp=Z,349nm,18.6s,baz=222,slow=34
KEST Kesra 91.30 52 P **P 10 19 06.6 +0.7**
PABE Paberze 91.32 30 *e*P **P 10 19 06.0 +0.5**
TMCR Tamitsa 91.32 19 *e*P **P 10 19 04.9 -0.4**
TMCR pmax pmax
comp=Z,30nm,0.9s
ZST Bratislava 91.34 38 *e*P **P 10 19 06.2 +0.5**
ZST pmax pmax
comp=Z,136nm,1.4s
ZST Bratislava 91.34 38 *e*P **P 10 19 06.2 +0.5**
ZST Bratislava 91.34 38 *e*S **SKSac 10 29 23.3 -3.5**
MODS Modra-Piesok 91.36 38 *e*P **P 10 19 06.6 +0.7**
MODS pmax pmax
comp=Z,102nm,1.3s
MODS Modra-Piesok 91.36 38 *e*P **P 10 19 06.6 +0.7**
MODS Modra-Piesok 91.36 38 *e*S **SKSac 10 29 31.4 +4.5**
JAVC Velka Javorina 91.36 38 *e*P **P 10 19 07.9 +2.0**
JAVC Velka Javorina 91.36 38 *e*S **SKSac 10 29 26.9 -0.1**
SMOL Smolenice 91.38 38 *e*P **P 10 19 07.9 +1.9**
SMOL pmax pmax
comp=Z,29nm,1.0s
SMOL Smolenice 91.38 38 *e*P **P 10 19 07.9 +1.9**
CRES Cresnjev 91.41 41⇑*i*P **P 10 19 06.8 +0.7**
BOJS Bojanci 91.42 41 *i* P **P 10 19 06.9 +0.7**
OZLJ Ozalj 91.51 41 *i* P **P 10 19 07.2 +0.6**
AQU L'Aquila 91.57 45⇑*i*P **P 10 19 07.2 +0.2**
AQU L'Aquila 91.57 45 P **P 10 19 07.3 +0.2**
AQU pmax pmax
comp=Z,28nm,0.9s
AQU L'Aquila 91.57 45 P **P 10 19 07.3 +0.3**
NVLJ Novalja 91.59 42 *i* P **P 10 19 07.7 +0.8**
KOGS Kog 91.62 40 *i* P **P 10 19 07.6 +0.5**
BEL Belsk 91.65 34 *e*P **P 10 19 08.1 +1.0**
BEL *e*PP **PP 10 22 45.9 -0.7**
SUW Suwalki 91.74 31 *e*P **P 10 19 07.5 0.0**
SUW *e*PP **PP 10 22 45.8 -1.5**
SUW Suwalki 91.74 31 P **P 10 19 06.9 -0.6**
SUW pmax pmax
comp=Z,138nm,1.0s
SUW Suwalki 91.74 31 P **P 10 19 06.9 -0.6**
SUW IAmb IAmb 10 19 08.5
comp=Z,138nm,1.0s
OJC Ojcow 91.92 36 *e*P **P 10 19 09.2 +0.8**
OJC *e*PP **PP 10 22 44.2 -4.6**
OJC *e*SKS **SKSac 10 29 29.8 -0.2**
OJC Ojcow 91.92 36 P **P 10 19 08.5 +0.1**
OJC pmax pmax
comp=Z,51nm,0.8s
OJC Ojcow 91.92 36 P **P 10 19 08.4 +0.1**
OJC IAmb IAmb 10 19 10.3
comp=Z,51nm,0.8s
DUGI Dugi Otok 91.96 43 *i* P **P 10 19 09.5 +0.8**
INTR Introdacqua 92.05 45 P **P 10 19 08.8 -0.4**
INTR IAmb IAmb 10 19 10.8
comp=Z,40nm,1.0s
VYHS Vyhne 92.22 38 *e*P **P 10 19 11.2 +1.4**
VYHS pmax pmax
comp=Z,49nm,1.1s
VYHS Vyhne 92.22 38 *e*P **P 10 19 11.1 +1.3**
IZAR Zarasai 92.25 29 *e*P **P 10 19 10.2 +0.4**
LANS Liptovska Anna 92.26 37 *e*P **P 10 19 12.3 +2.2**
LANS pmax pmax
comp=Z,25nm,1.0s
LANS Liptovska Anna 92.26 37 *e*P **P 10 19 12.3 +2.2**
ISAL Salakas 92.29 29 *e*P **P 10 19 10.3 +0.3**
MSVF Nonsavu 92.31 252 P **P 10 19 12.3 +1.5**
MSVF pmax pmax
comp=Z,113nm,1.1s
MSVF Nonsavu 92.31 252 P **P 10 19 12.3 +1.5**
MSVF IAmb IAmb 10 19 15.5
comp=Z,113nm,1.1s
MOSL Moslavina 92.31 41 *i* P **P 10 19 11.3 +0.9**
TOA0 Torodi Ar. Sit 92.42 76 IAmb IAmb 10 19 13.8
comp=Z,60nm,1.4s
TORD Torodi Ar. Bea 92.42 76 P **P 10 19 11.4 0.0**
comp=Z,20nm,0.6s,baz=293,slow=4.2,SNR=71
TORD PKKP **PKKPbc 10 36 24.4 +0.2**
comp=Z,5.0nm,0.8s,baz=96,slow=1.9,SNR=19
TORD PKKPab PKKPab 10 36 58.1
comp=Z,2.2nm,0.9s,baz=97,slow=1.5,SNR=5.3
TORD PKPPKP **P'P'df 10 44 33.6 -3.5**
comp=Z,1.4nm,0.8s,baz=150,slow=0.6,SNR=6.0
TORD LR LR 10 57 25.2
comp=Z,573nm,20.2s,baz=340,slow=33
MORI Morici 92.44 43 *i* P **P 10 19 11.6 +0.7**
IIGN Ignalina 92.47 29 *e*P **P 10 19 10.8 0.0**
ZIRJ Zirje 92.49 43 *i* P **P 10 19 11.7 +0.5**
NIE Niedzica 92.60 36 *e*P **P 10 19 13.3 +1.7**
NIE *e*PP **PP 10 22 53.1 -1.1**
NIE *e*SKS **SKSac 10 29 33.7 -0.2**
TAM Tamanrasset 92.77 65 P **P 10 19 13.9 +0.8**
TAM pmax pmax
comp=Z,69nm,1.0s
TAM Tamanrasset 92.77 65 P **P 10 19 13.9 +0.8**
TAM IAmb IAmb 10 19 17.2
comp=Z,69nm,1.0s
KIJV Kijevo 92.83 42 *i* P **P 10 19 13.9 +1.1**
PAOL Paolisi 92.92 46 IAmb IAmb 10 19 14.9
comp=Z,44nm,1.3s
BLY Banja Luka 92.98 41⇑*i*P **P 10 19 14.3 +0.9**
PSZ Piszkesteto 93.11 38⇑P **P 10 19 16.5 +2.4**
PSZ Piszkesteto 93.11 38⇑P **P 10 19 16.5 +2.4**
PSZ Piszkesteto 93.11 38 IAmb IAmb 10 19 17.0
comp=Z,75nm,1.3s
KECS Kecovo 93.17 37 *e*P **P 10 19 16.1 +1.9**
KECS pmax pmax
comp=Z,26nm,0.9s
KECS Kecovo 93.17 37 *e*P **P 10 19 16.1 +1.9**
MORH Mrgy, Hungar 93.20 40 *e*P **P 10 19 14.4 0.0**
CORL Corleone 93.36 49 P **P 10 19 15.9 +0.5**
CORL IAmb IAmb 10 19 23.5
comp=Z,37nm,0.7s
SGRT San Giovanni R 93.40 45 P **P 10 19 15.2 -0.3**
SGRT IAmb IAmb 10 19 17.0
comp=Z,53nm,0.9s
RICI Ricice 93.53 42 *i* P **P 10 19 16.8 +0.8**
MAKA Makarska 93.55 43 *i* P **P 10 19 16.7 +0.7**
YAK Yakutsk 93.60 341 LR LR 11 05 54.1
comp=Z,138nm,18.9s,baz=41,slow=38
YAK Yakutsk 93.60 341⇑*e*P **P 10 19 16.9 +1.0**
YAK pmax pmax
comp=Z,23nm,0.9s
MICGM Minsk 93.74 29 *e* **P 10 19 15.0 -1.7**
MICGM *e* 10 22 55.0
MNK Minsk 93.74 29 *e*P **P 10 19 15.0 -1.7**
NRIK Noril'sk 93.77 359 P **P 10 19 16.5 0.0**
comp=Z,5.1nm,0.9s,baz=14,slow=4.2,SNR=6.8
NRIK pP **pP 10 19 48.0 -0.3**
comp=Z,16nm,1.0s,baz=42,slow=3.3,SNR=6.7
NRIK PP **PP 10 23 03.0 +0.4**
comp=Z,7.8nm,0.9s,baz=32,slow=3.6,SNR=4.5
NRIK PKKP **PKKPdf 10 36 18.9 -0.7**
comp=Z,1.9nm,0.4s,baz=183,slow=4.6,SNR=3.8
NRIK LR LR 11 08 26.6
comp=Z,453nm,18.2s,baz=348,slow=40
UZH Uzhgorod 94.13 36*d*/P **P 10 19 20.0 +1.4**
UZH *e**PP **pP 10 19 46.9 -3.5**
UZH *e*SP **sP 10 19 59.0 -4.4**
UZH *e*PPP PPP 10 25 12.7
UZH *e* 10 29 38.0
UZH *e*S **S 10 30 18.4 -0.6**
UZH *e*PS PS 10 31 40.2 -9.3
UZH *e*SSS SSS 10 40 19.2
STON Ston 94.18 43⇑*i*P **P 10 19 19.2 +0.3**
STON Ston 94.18 43 *i* P **P 10 19 19.4 +0.4**
KLMR Klimovskoe 94.20 20 *e*P **P 10 19 17.3 -1.3**
KLMR pmax pmax
comp=Z,58nm,1.0s
KLMR Klimovskoe 94.20 20 *e*P **P 10 19 17.3 -1.3**
KLMR AMP 10 19 19.5
comp=Z,58nm,1.0s
KLMR *e*PP **PP 10 23 01.6 -4.6**
VAE Valguarnera 94.33 49 LR LR 11 02 08.0
comp=Z,684nm,18.3s,baz=336,slow=36
HAPS Han Pijesak,Bl 94.41 41 *e*P **P 10 19 21.0 +0.8**
FRGS Fruska Gora 94.43 40⇑*i*P **P 10 19 20.9 +0.8**
LVV L'vov 94.46 35 *e*P **P 10 19 20.1 0.0**
TRPA Tarpa 94.53 37⇑P **P 10 19 21.7 +1.3**
MATE Matera 94.54 45⇓P **P 10 19 21.7 +1.1**
BRY Bratogost 94.71 43 *e*P **P 10 19 22.3 +0.7**
BBLS Lazići 94.81 41⇑*i*P **P 10 19 22.5 +0.6**
UPM Unac-Piva 94.81 42⇑*i*P **P 10 19 23.0 +0.9**

HCY Herceg Novi 94.90 43 *e*P **P 10 19 23.0 +0.7**
RUDO Rudo 94.90 42 *e*P **P 10 19 22.5 +0.2**
SIRR Siria 94.99 38⇑P **P 10 19 24.0 +1.4**
DIVS Divibare 95.06 41⇑*i*P **P 10 19 23.7 +0.6**
DIVS Divibare 95.06 41 IAmb IAmb 10 19 25.5
comp=Z,38nm,1.0s
TIP Timpagrande 95.25 46⇑P **P 10 19 24.3 +0.3**
TIP Timpagrande 95.25 46 P **P 10 19 23.4 -0.6**
TIP IAmb IAmb 10 19 27.4
comp=Z,73nm,1.4s
BZS Buzias 95.30 39⇑P **P 10 19 25.2 +1.2**
BZS Buzias 95.30 39⇑P **P 10 19 25.2 +1.2**
DRGR 95.34 38⇓P **P 10 19 24.7 +0.5**
DRGR 95.34 38⇓P **P 10 19 24.7 +0.5**
PDG Podgorica 95.40 43⇑P **P 10 19 25.8 +1.3**
PDG Podgorica 95.40 43⇑*i*P **P 10 19 25.2 +0.7**
PDG Podgorica 95.40 43 P **P 10 19 25.1 +0.5**
PDG IAmb IAmb 10 19 26.8
comp=Z,31nm,1.0s
DRME Dracevica, Mon 95.47 43⇑*i*P **P 10 19 25.7 +0.8**
CJR Cluj-Napoca 95.89 37⇓P **P 10 19 26.7 -0.1**
CJR Cluj-Napoca 95.89 37⇓P **P 10 19 26.7 -0.1**
GZR Gura Zlata 96.11 39⇓P **P 10 19 28.6 +0.8**
GZR Gura Zlata 96.11 39⇓P **P 10 19 28.6 +0.8**
HERR Herculane 96.16 39⇓P **P 10 19 29.0 +1.1**
BUR08 Bucovina Ar. S 96.30 36 P **P 10 19 28.8 +0.1**
TIR Tirane 96.33 43⇑P **P 10 19 31.0 +2.2**
TIR Tirane 96.33 43 P **P 10 19 30.3 +1.5**
TIR pmax pmax
comp=Z,38nm,1.0s
TIR Tirane 96.33 43 P **P 10 19 30.3 +1.5**
TIR IAmb IAmb 10 19 31.4
comp=Z,38nm,1.0s
BURAR Bucovina Array 96.33 36⇑P **P 10 19 30.1 +1.3**
BURAR Bucovina Array 96.33 36⇑P **P 10 19 30.1 +1.3**
AKASG Malin Array Be 96.68 32 P **P 10 19 29.4 -0.8**
comp=Z,6.1nm,0.6s,baz=305,slow=3.7,SNR=28
AKASG PP **PP 10 23 24.2 -1.5**
comp=Z,14nm,0.9s,baz=305,slow=7.1,SNR=6.8
AKASG LR LR 11 04 55.9
comp=Z,308nm,18.5s,baz=310,slow=36
AKASG Malin Array Be 96.68 32 *i* P **P 10 19 29.5 -0.6**
AKASG pmax pmax
comp=Z,10.0nm,0.8s
AKBB Malin Array Si 96.68 32*c*e P **P 10 19 29.8 -0.3**
AKBB Malin Array Si 96.68 32 P **P 10 19 29.4 -0.7**
SRE Strehaia 96.75 39⇑P **P 10 19 32.8 +2.1**
SRE Strehaia 96.75 39⇑P **P 10 19 32.8 +2.1**
PRAR RASCA 97.04 36⇑P Pdif 10 19 32.6 +0.6
MOS Moscow 97.19 25 *e*P **P 10 19 31.3 -1.0**
MOS *e* 10 20 05.8
MOS *e* 10 23 27.6
OBN Obninsk 97.19 26 LR LR 11 05 06.7
comp=Z,90nm,19.4s,baz=332,slow=36
OBN Obninsk 97.19 26*c* i P **P 10 19 32.3 0.0**
OBN *i* *PP **pP 10 20 06.2 +2.0**
OBN *i* 10 23 26.9
OBN pmax pmax
comp=Z,59nm,1.1s
BIZ Bicaz 97.21 36⇑P Pdif 10 19 33.9 +1.2
ARR Arges 97.23 38⇓P Pdif 10 19 34.0 +1.1
FNA Florina 97.60 43 P Pdif 10 19 35.2 +0.5
FNA pmax pmax
comp=Z,30nm,0.9s
FNA Florina 97.60 43 P Pdif 10 19 35.1 +0.5
FNA IAmb IAmb 10 19 36.6
comp=Z,30nm,0.9s
VTS Vitosha 97.85 41⇓P Pdif 10 19 37.1 +1.3
VTS Vitosha 97.85 41⇓P Pdif 10 19 37.1 +1.2
VTS Vitosha 97.85 41 P **P 10 19 35.8 0.0**
YSS Yuzh-Sakhalins 97.86 324 *e*P **P 10 19 35.5 0.0**
YSS *e* 10 20 09.4
YSS pmax pmax
comp=Z,20nm,0.8s
MLR Muntele Rosu 97.93 38⇓P Pdif 10 19 37.3 +1.2
MLR Muntele Rosu 97.93 38⇓P Pdif 10 19 37.3 +1.2
MLR Muntele Rosu 97.93 38 P **P 10 19 35.9 -0.2**
MLR IAmb IAmb 10 19 38.0
comp=Z,28nm,1.0s
VRI Vrincioaia 98.17 37⇑P **P 10 19 36.3 -0.7**
VRI Vrincioaia 98.17 37⇑P **P 10 19 36.3 -0.7**
PLVB Pleven 98.30 40⇑P Pdif 10 19 38.1 +0.4
LIT Litokhoron 98.68 44 P Pdif 10 19 39.7 +0.3
LIT pmax pmax
comp=Z,16nm,0.8s
LIT Litokhoron 98.68 44 P Pdif 10 19 39.7 +0.2
LIT IAmb IAmb 10 19 43.8
comp=Z,16nm,0.8s
KIS Kishinev 98.69 35 *e*SKS **SKSac 10 30 04.0 -2.0**
KIS Kishinev 98.69 35 *e*PS PS 10 32 26.0 -13
KIS *e*L L 10 52 00.0
KIS LRM MLR 11 10 42.0
comp=Z,600nm,18.0s
KIRV Kirov 99.11 18 *e*P **Pdif 10 19 41.0 +0.2**
CFR Carcaliu 99.38 37⇑P **Pdif 10 19 42.5 +0.1**
CFR Carcaliu 99.38 37⇑P **Pdif 10 19 42.5 +0.1**
TOPG Topolog 99.69 37⇓P **Pdif 10 19 45.0 +1.2**
LPSR Galich'ya Gora 99.96 26 *e*P **Pdif 10 19 44.6 -0.2**
LPSR pmax pmax
comp=Z,60nm,0.9s
TIRR Tirgusor 99.96 37⇑P **Pdif 10 19 46.1 +1.1**
TIRR Tirgusor 99.96 37⇑P **Pdif 10 19 46.1 +1.1**
TIRR Tirgusor 99.96 37⇑P **Pdif 10 19 46.1 +1.1**
VSR Storozhevoye 101.05 27 *e*P **Pdif 10 19 49.4 -0.3**
VSR pmax pmax
comp=Z,40nm,1.2s
KLR Kul'dur 102.06 331 *e*P **Pdif 10 19 54.9 +0.7**
KLR pmax pmax
comp=Z,2.0nm,1.6s
VRH Novokhopyorsk 102.16 26 *e*P **Pdif 10 19 55.5 +0.9**
VRH pmax pmax
comp=Z,90nm,1.8s
DZM Mont Dzumac 103.97 251 *e*LR LR 10 54 23.5
comp=Z,763nm,38.9s
BRTR Keskin Array B 105.92 39 Pdiff **Pdif 10 20 12.1 +0.2**
comp=Z,0.7nm,0.5s,baz=191,slow=1.3,SNR=3.9
BRTR PP **PP 10 24 32.5 -3.2**
comp=Z,8.2nm,0.8s,baz=312,slow=6.0,SNR=15
BRTR PKKPbc **PKKPbc 10 35 46.2 -1.2**
comp=Z,3.7nm,0.8s,baz=116,slow=5.6,SNR=6.1
MJAR Matsushiro Arr 106.74 318 PKKPab PKKPab 10 36 02.7 +1.0
comp=Z,4.5nm,0.8s,baz=228,slow=4.8,SNR=7.9
KBZ Khabaz 108.23 31 PKIKP **PKiKP 10 24 28.9 +1.3**
comp=Z,2.6nm,0.6s,baz=355,slow=6.3,SNR=3.6
KBZ PP **PP 10 24 54.3 +2.2**
comp=Z,16nm,1.0s,baz=302,slow=12,SNR=6.3
KBZ PKKPbc **PKKPbc 10 35 38.8 -1.4**
comp=Z,3.6nm,0.7s,baz=90,slow=1.6,SNR=3.7
KBZ PKKP **PKKPdf 10 35 53.3 +0.1**
comp=Z,8.2nm,0.8s,baz=117,slow=2.3,SNR=6.1
ZALV Zalesovo Beam 109.24 0 PKiKP **PKiKP 10 24 30.6 +1.4**
comp=Z,3.0nm,0.7s,baz=347,slow=6.1,SNR=4.5
ZALV PP **PP 10 24 56.2 -2.6**
comp=Z,3.7nm,0.7s,baz=352,slow=9.0,SNR=7.1
ZALV PKKPbc **PKKPbc 10 35 33.5 -4.0**
comp=Z,2.5nm,0.7s,baz=180,slow=5.8,SNR=7.4
VNDA Vanda 109.43 193 PKiKP **PKiKP 10 24 29.3 +0.4**
comp=Z,1.5nm,0.8s,baz=24,slow=1.5,SNR=12
MAK Makhachkala 111.00 29 *e*P **Pdif 10 20 31.3 -2.8**
MAK *i* 10 24 31.7
MAK *e* 10 25 06.1
MAK *e* 10 25 11.0
MAK *e*PPP PPP 10 27 32.0
MAK *e* 10 31 01.1
MAK *e*SS SS 10 40 35.8 +2.5
MAK *e*SSS SSS 10 44 42.8
MAK pmax pmax
comp=Z,214nm,1.4s
MMAI Mount Meron Ar 111.23 43 PKKPbc PKKPbc 10 35 30.6 +0.3
comp=Z,2.3nm,0.5s,baz=90,slow=2.9,SNR=4.1
NVL N'lazarevskaya 111.56 160 *i* PKIKP PKiKP 10 24 52.2 +19
NVL pmax pmax
comp=Z,7.0nm,0.6s
KURBB Kurchatov Arra 112.33 4 PKKPbc PKKPbc 10 35 24.6 -2.7
comp=Z,7.4nm,0.8s,baz=189,slow=3.0,SNR=41
KSRS Korea Array 112.36 324 PKiKP **PKiKP 10 24 35.4 -0.2**
comp=Z,4.2nm,0.6s,baz=13,slow=1.5,SNR=22
KSRS PKKPbc **PKKPbc 10 35 24.8 -1.9**
comp=Z,0.4nm,0.4s,baz=224,slow=7.6,SNR=4.4
SONM Songino Array 112.58 345 PKiKP **PKiKP 10 24 35.2 -0.8**
comp=Z,2.0nm,0.9s,baz=48,slow=0.3,SNR=4.5
SONM PP **PP 10 25 24.5 +1.4**
comp=Z,4.9nm,1.0s,baz=15,slow=6.2,SNR=7.7
SONM PKKPbc **PKKPbc 10 35 23.4 -3.2**
comp=Z,3.9nm,0.8s,baz=200,slow=3.6,SNR=13
MKAR Makanchi Array 116.35 2 PKP **PKPdf 10 24 41.7 -1.4**
comp=Z,1.3nm,0.6s,baz=7.6,slow=2.5,SNR=5.8
MKAR PP **PP 10 25 48.9 -0.6**
comp=Z,4.5nm,0.8s,baz=15,slow=5.0,SNR=3.8
MKAR PKKPbc **PKKPbc 10 35 11.1 -2.6**
comp=Z,2.9nm,0.8s,baz=165,slow=2.9,SNR=15
HHC Hu-ho-hao-te 117.29 338 *e*PKP **PKiKP 10 24 48.1 +2.9**
HHC LR LR
comp=Z,210nm,17.9s
HHC LR LR
comp=Z,170nm,16.2s
HHC LR LR
comp=Z,170nm,17.0s
WMQ Urumqi 119.32 358 *e*PKP **PKiKP 10 24 49.3 +0.3**
WMQ PP **PP 10 26 13.4 +3.3**
WMQ SKS **SKSdf 10 31 46.8 -3.1**
WMQ AMB AMB
comp=Z,160nm,4.3s
WMQ LR LR
comp=Z,580nm,23.1s
WMQ LR LR
comp=Z,640nm,14.5s
WMQ LR LR
comp=Z,700nm,25.9s
GEYT Alibeck 119.70 24 PKP **PKPdf 10 24 49.8 0.0**
comp=Z,2.7nm,0.7s,baz=328,slow=5.3,SNR=4.6
GEYT pPKP **pPKPdf 10 25 22.0 -1.0**
comp=Z,4.3nm,0.9s,baz=238,slow=7.9,SNR=2.9
GEYT PP **PP 10 26 13.3 +0.2**
comp=Z,3.8nm,0.8s,baz=292,slow=4.5,SNR=6.0
GEYT PKKPbc **PKKPbc 10 35 01.1 -0.3**
comp=Z,4.3nm,0.7s,baz=197,slow=4.5,SNR=3.7
AAK Ala-Archa 119.77 9*c* i PKIKP **PKiKP 10 24 50.2 +0.2**
AAK pmax pmax
comp=Z,3.0nm,1.3s
AAK Ala-Archa 119.77 9 **PKiKP 10 24 50.2 +0.2**
KDJ Kajisay 120.62 7 PKIKP **PKPdf 10 24 51.2 -0.5**
KDJ Kajisay 120.62 7 **PKPdf 10 24 51.2 -0.5**
SYO Syowa Base 120.97 163⇓*e*Pdiff **Pdif 10 21 20.4 +2.7**
SYO Syowa Base 120.97 163⇑*e*pPKPdf pPKPdf 10 25 24.6 +0.3
SYO Syowa Base 120.97 163⇑*e*PP PP 10 26 21.8 0.0
TARG Taragay, Kyrgy 121.08 6 **PKiKP 10 24 53.0 0.0**
NJ2 Nanjing 121.34 326 *e*PKP **PKPdf 10 24 53.0 0.0**
GTA Gaotai 122.10 346 *e*PKP **PKPdf 10 24 53.9 -0.6**
GTA PP **PP 10 26 29.9 +0.6**
GTA AMB AMB
comp=Z,150nm,6.8s
GTA LR LR
comp=Z,220nm,21.9s
GTA LR LR
comp=Z,230nm,21.3s
GTA LR LR
comp=Z,210nm,19.0s
CTAO Charters Tower 122.16 257 PKIKP **PKPdf 10 24 54.8 -0.1**
CTAO Charters Tower 122.16 257 **PKPdf 10 24 54.8 -0.1**
GAR Garm 122.52 14 **PKiKP 10 24 55.8 +0.3**
CHGR Chuyangaron 122.57 15 **PKPdf 10 24 55.5 +0.1**
KSH Kashi 123.04 8 PKP **PKPdf 10 24 51.3 -5.0**
KSH PKS 10 28 30.5
KSH SKKS 10 33 16.9
KSH AMB AMB
comp=Z,320nm,5.0s
KSH LR LR
comp=Z,150nm,7.5s
KSH LR LR
comp=Z,290nm,7.4s
KSH LR LR
comp=Z,360nm,7.2s
TOO Toolangi 123.50 236 PKIKP **PKPdf 10 24 56.7 -0.3**
TOO Toolangi 123.50 236 **PKPdf 10 24 56.7 -0.3**
COEN Coen 124.05 264 **PKPdf 10 24 58.7 +0.1**
LZH Lanzhou 124.17 342 *e*PKP **PKiKP 10 25 02.5 +3.6**
LZH sPKP 10 25 41.5
LZH SS SS 10 43 20.1 -4.0
LZH AMB AMB
comp=Z,280nm,6.5s
BOSA Boshof 124.25 113 PKP **PKPdf 10 24 58.4 -0.4**
comp=Z,15nm,0.7s,baz=292,slow=2.1,SNR=24
BOSA pPKP **pPKPdf 10 25 31.2 -0.8**
comp=Z,17nm,0.8s,baz=272,slow=1.8,SNR=5.4
XAN Xi'an 124.27 336 PKP **PKPdf 10 24 58.1 -0.6**
XAN Xi'an 124.27 336 PKIKP **PKPdf 10 24 58.4 -0.3**
XAN Xi'an 124.27 336 **PKPdf 10 24 58.4 -0.3**
WHN Wuhan 124.85 329 PKP **PKiKP 10 25 00.0 -0.1**
WHN LR LR
comp=Z,970nm,18.2s
LSZ Lusaka 125.56 97 PKIKP **PKiKP 10 25 02.3 +0.3**
LSZ Lusaka 125.56 97 **PKiKP 10 25 02.3 +0.3**
STKA Stephens Creek 126.99 243 PKP **PKPdf 10 25 03.8 -0.1**
comp=Z,64nm,0.8s,baz=94,slow=3.0,SNR=130
STKA pPKP **pPKPdf 10 25 36.1 -1.0**
comp=Z,15nm,0.8s,baz=46,slow=2.7,SNR=4.4
MAW Mawson 127.55 170 PKP **PKPdf 10 25 04.0 +0.3**
comp=Z,31nm,0.9s,baz=221,slow=3.7,SNR=37
MAW Mawson 127.55 170 PKIKP **PKPdf 10 25 04.0 +0.3**
CASY Casey 128.06 193 **PKPdf 10 25 06.0 +0.2**
CD2 Chengdu 128.97 339 Pdif **PKPdf 10 21 51.5 -2.9**
KMBO Kilima Mbogo 130.42 76 SKPbc **SKPbc 10 28 24.4 +0.9**
comp=Z,1.3nm,0.5s,baz=310,slow=4.7,SNR=8.2
FAKI Fak Fak 131.55 282 **PKiKP 10 25 14.2 +0.2**
GYA Guiyang 131.86 334 Pdif **Pdif 10 22 05.3 -2.1**
GYA PKP **PKPdf 10 25 12.0 -1.4**
GYA sPKP 10 26 01.4
GYA PP **PP 10 27 37.8 +3.8**
GYA AMB AMB
comp=Z,140nm,8.4s
WSAR Wadi Sarin 132.32 34 PKP **PKPdf 10 25 14.6 +0.3**
comp=Z,3.4nm,0.8s,baz=250,slow=3.3,SNR=2.1
WSAR pPKP **pPKPdf 10 25 46.8 -0.7**
comp=Z,3.9nm,0.5s,baz=344,slow=1.1,SNR=3.7
WSAR SKPbc **SKPab 10 28 30.7 -0.3**
comp=Z,1.6nm,0.5s,baz=289,slow=3.9,SNR=3.5
WRAB Tennant Creek 133.26 259*c* i PKIKP **PKiKP 10 25 16.8 -0.5**
WRAB pmax pmax
comp=Z,108nm,1.7s
WRA Warramunga Arr 133.28 259 PKP **PKPdf 10 25 15.9 -0.1**
comp=Z,26nm,0.6s,baz=77,slow=1.9,SNR=55
WRA pPKP **pPKPdf 10 25 48.6 -0.7**
comp=Z,6.0nm,0.7s,baz=86,slow=1.9,SNR=2.8
WRA PP **PP 10 27 44.5 -0.3**
comp=Z,4.1nm,1.0s,baz=79,slow=6.2,SNR=7.0
WRA SKPbc **SKPab 10 28 34.4 -0.8**
comp=Z,11nm,1.2s,baz=83,slow=4.3,SNR=5.3
WRA SKKPbc **SKKPbc 10 37 47.1 -3.5**
comp=Z,6.3nm,0.9s,baz=276,slow=2.4,SNR=10
ASAR Alice Springs 133.88 253 PKP **PKPdf 10 25 16.4 -0.8**
comp=Z,16nm,0.8s,baz=95,slow=1.9,SNR=25
ASAR SKPbc **SKPbc 10 28 35.8 +0.7**
comp=Z,4.3nm,1.0s,baz=102,slow=2.9,SNR=2.4
ASAR SKKPbc **SKKPbc 10 37 45.0 -3.6**
comp=Z,5.7nm,1.0s,baz=263,slow=2.6,SNR=5.4
SOEI Soe 141.19 276 **PKiKP 10 25 32.5 -1.2**
CMAR Chiang Mai Arr 142.10 338 PKhKP PKPpre 10 25 27.1
comp=Z,5.7nm,0.8s,baz=333,slow=3.8,SNR=7.1
SRSP Sriramsagar 143.59 11 *e*PKPdf PKPab 10 25 31.9 +0.2
RPR Rampur 143.82 9 *e*PKPdf PKPbc 10 25 33.0 -0.3
OPO Ambohidratompo 144.00 98 PKP **PKPdf 10 25 35.5 -0.3**
comp=Z,35nm,0.9s,baz=249,slow=3.7,SNR=7.9
ABPO Ambohimpanom 144.07 99 PKIKP **PKPdf 10 25 35.3 -0.7**
ABPO Ambohimpanom 144.07 99 **PKPdf 10 25 35.3 -0.7**
KLRI Killari 144.08 14 *e*PKPdf **PKPab 10 25 33.7 +0.1**
BKB Balikpapan 144.91 293 **PKPdf 10 25 38.4 +0.9**
HYBB Hyderabad (bro 145.11 11 *e*PKPbc **PKPbc 10 25 36.4 -0.9**
HYB Hyderabad 145.11 11 *i* PKP **PKPbc 10 25 35.0 -2.4**
PVM Polavaram 145.70 6 *e*PKPdf **PKPdf 10 25 38.6 0.0**
NJS Nagarjunasagar 146.08 10 *e*PKPdf **PKPdf 10 25 38.6 -0.7**
SRLM Srisailam 146.46 11 *e*PKPbc **PKPdf 10 25 40.1 +0.1**
SBUM Sibu 146.86 303 **PKPdf 10 25 41.4 +0.7**
PSA00 Pilbara Seismi 146.88 257 **PKPdf 10 25 41.4 +0.9**
ADKI Addanki 146.88 9 *e*PKPdf **PKPdf 10 25 40.2 -0.5**
NWAO Narrogin (SRO) 146.99 235 PKIKP **PKPbc 10 25 41.7 -0.9**
NWAO Narrogin (SRO) 146.99 235 **PKPbc 10 25 41.5 -1.1**
NWAO Narrogin (SRO) 146.99 235 **PKPbc 10 25 41.6 -0.9**
MBWA Marble Bar 147.00 257 **PKPbc 10 25 41.9 -1.0**
URV Uravakonda 147.24 14 *e*PKPbc **PKPbc 10 25 42.9 -0.9**
SKHT Srikalahasti 148.91 10 *e*PKPbc **PKPbc 10 25 47.9 -0.1**
KSM Kuching 148.97 304 **PKPdf 10 25 44.7 +0.5**
PBA Port Blair 150.42 345 PKiKP 10 25 52.2 -0.4
GIRL Giralia 152.00 254 **PKiKP 10 25 56.3 +0.7**
GIRL PKPab **PKPab 10 26 07.0 +1.9**
KULM Kulim 152.91 324 **PKPdf 10 25 50.0 -0.3**
KULM PKPbc **PKiKP 10 25 57.8 +0.1**
KULM PKPab **PKPab 10 26 10.4 +1.5**

IPM	**Ipoh**	**153.35**	**322**			**PKPdf**	**10 25 51.0**	**+0.1**
IPM						**PKPbc**	**10 25 58.5**	**-0.1**
IPM				PKPab		**PKPab**	**10 26 11.9**	**+1.0**
PSI	**Prapat**	**155.92**	**324**	PKP		**PKPdf**	**10 25 54.9**	**+0.2**
	comp=Z,8.1nm,0.6s,baz=181,slow=2.5,SNR=9.2							
PSI				PKPab		**PKPab**	**10 26 21.9**	**0.0**
	comp=Z,40nm,0.9s,baz=360,slow=1.8,SNR=12							
PSI				pPKPab		**pPKPab**	**10 26 52.9**	**-1.2**
	comp=Z,89nm,1.0s,baz=360,slow=1.7,SNR=7.0							
RPSI	**Rantau Prapat**	**156.01**	**324**	PKPdf		**PKPdf**	**10 25 54.9**	**+0.3**
RPSI						**PKPab**	**10 26 22.0**	**-0.1**
GSI	**Gunungsitoli**	**157.91**	**325**			**PKPdf**	**10 25 58.1**	**+1.1**
GSI						**PKPab**	**10 26 30.1**	**-0.3**

*KRNET **21** 10:27:57.1±0.1,40°.43N×77°.57E,mb3.2*
*SOME **21** 10:28:00.8,40°.63N×77°.53E,h5km*
*NNC **21** 10:28:01.2±1.0,40°.57N×77°.54E,h0km,mb3.9,mpv3.6,*
Error ellipse: s-maj=7.0km s-min=4.7km az=172.0
ISC 21 10:28:02.1±1.3**,40°.63N**±0°.07×**77°.45E**±0°.03**,h10km,n51,**
σ1§81/75,9C-9D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.51**	**352**	⇑*i*	*i*P	**Pb**	**10 28 29.4**	**-0.9**
	baz=51							
KDJ				⇑*i*	*i*S	**Sg**	**10 28 52.5**	**+1.8**
	baz=51							
PRZ	**Przheval'sk**	**1.98**	**21**	⇓*i*	*i*P	**Pb**	**10 28 36.4**	**-2.0**
	baz=17							
PRZ				⇓*i*	*i*S	**Sb**	**10 29 04.2**	**+1.0**
	baz=17							
ANVS	**Anan'yevo**	**2.16**	**4**	⇓*i*	*i*P	**Pb**	**10 28 39.1**	**-2.2**
	baz=2.0							
ANVS				⇓*i*	*i*S	**Sg**	**10 29 10.0**	**-1.4**
	baz=2.0							
BOOM	**Boomskoye usch**	**2.18**	**329**	⇓*i*	*i*P	**Pb**	**10 28 39.5**	**-2.2**
	baz=30							
BOOM				⇓*i*	*i*S	**Sb**	**10 29 10.5**	**+1.7**
	baz=30							
IZV	**Izvestkoviy**	**2.48**	**346**	*e*P		**Pb**	**10 28 47.5**	**+0.7**
	7.4nm,0.1s							
IZV				*e*S		**Sg**	**10 29 21.1**	**-0.8**
	89nm,0.4s							
IZV	**Izvestkoviy**	**2.48**	**346**	Pg		**Pb**	**10 28 47.5**	**+0.7**
	7.4nm,0.1s							
IZV				Lg		Lg	10 29 21.1	
	89nm,0.4s							
SATY	**Saty**	**2.53**	**16**	*e*P		**Pg**	**10 28 48.4**	**-2.2**
	13nm,0.2s							
SATY				*e*S		**Sg**	**10 29 22.9**	**-0.4**
	57nm,0.4s							
SATY	**Saty**	**2.53**	**16**	Pg		**Pg**	**10 28 48.4**	**-2.2**
	13nm,0.2s							
SATY				Lg		Lg	10 29 22.9	
	57nm,0.4s							
MDOK	**Medeo**	**2.55**	**353**	*e*P		**Pg**	**10 28 49.4**	**-1.6**
	9.9nm,0.2s							
MDOK				*e*S		**Sg**	**10 29 24.6**	**+0.7**
	110nm,0.5s							
MDOK	**Medeo**	**2.55**	**353**	Pg		**Pb**	**10 28 48.0**	**0.0**
	25nm,0.6s							
MDOK				Lg		Lg	10 29 24.7	
	173nm,0.6s							
MDOK	**Medeo**	**2.55**	**353**	Pg		**Pg**	**10 28 49.4**	**-1.6**
	9.9nm,0.2s							
MDOK				Lg		Lg	10 29 24.6	
	110nm,0.5s							
KNDC	**Almaty**	**2.61**	**352**	⇓Pg		**Pg**	**10 28 50.4**	**-1.7**
	19nm,0.3s							
KNDC				⇓Lg		Lg	10 29 26.9	
	120nm,0.5s							
MTBS	**Maitube**	**2.61**	**343**	*e*P		**Pg**	**10 28 51.2**	**-0.9**
	4.5nm,0.1s							
MTBS				*e*S		**Sg**	**10 29 27.9**	**+1.9**
	35nm,0.3s							
MTBS	**Maitube**	**2.61**	**343**	Pg		**Pg**	**10 28 51.2**	**-0.9**
	4.5nm,0.1s							
MTBS				Lg		Lg	10 29 27.9	
	35nm,0.3s							
KOTS	**Kotyrbulak**	**2.61**	**355**	*e*P		**Pg**	**10 28 51.3**	**-0.9**
	16nm,0.2s							
KOTS				*e*S		**Sg**	**10 29 27.5**	**+1.5**
	72nm,0.3s							
KOTS	**Kotyrbulak**	**2.61**	**355**	Pg		**Pg**	**10 28 51.3**	**-0.9**
	16nm,0.2s							
KOTS				Lg		Lg	10 29 27.5	
	258nm,0.5s							
KST	**Kastek**	**2.66**	**336**	*e*P		**Pg**	**10 28 52.0**	**-0.9**
	5.8nm,0.1s							
KST				*e*S		**Sg**	**10 29 29.0**	**+1.6**
	53nm,0.6s							
KST	**Kastek**	**2.66**	**336**	Pg		**Pg**	**10 28 52.0**	**-0.9**
	5.8nm,0.1s							
KST				Lg		Lg	10 29 29.0	
	53nm,0.6s							
TKM2	**Tokmak 2**	**2.68**	**329**	⇑Pg		**Pb**	**10 28 50.8**	**+0.6**
	8.8nm,0.7s							
TKM2				⇓Lg		Lg	10 29 29.2	
	23nm,0.5s							
UZB	**Uzynbulak**	**2.77**	**24**	*e*P		**Pg**	**10 28 53.0**	**-2.2**
	5.2nm,0.2s							
UZB				*e*S		**Sg**	**10 29 30.8**	**-0.4**
	33nm,0.3s							
UZB	**Uzynbulak**	**2.77**	**24**	Pg		**Pg**	**10 28 53.0**	**-2.2**
	5.2nm,0.2s							
UZB				Lg		Lg	10 29 30.8	
	33nm,0.3s							
DGS	**Degeres**	**2.90**	**335**	*e*P		**Pg**	**10 28 56.0**	**-1.6**
	5.8nm,0.2s							
DGS				*e*S		**Sg**	**10 29 35.7**	**+0.7**
	44nm,0.4s							
DGS	**Degeres**	**2.90**	**335**	Pg		**Pg**	**10 28 56.0**	**-1.6**
	5.8nm,0.2s							
DGS				Lg		Lg	10 29 35.7	
	44nm,0.4s							
KURS	**Kuram**	**2.91**	**10**	*e*P		**Pg**	**10 28 55.9**	**-1.8**
	7.6nm,0.4s							
KURS				*e*S		**Sg**	**10 29 35.7**	**+0.4**
	36nm,0.3s							
KURS	**Kuram**	**2.91**	**10**	Pg		**Pg**	**10 28 55.9**	**-1.8**
	7.6nm,0.4s							
KURS				Lg		Lg	10 29 35.7	
	36nm,0.3s							
SHLS	**Shalkode**	**2.94**	**30**	*e*P		**Pg**	**10 28 58.5**	**+0.1**
	8.3nm,0.2s							
SHLS				*e*S		**Sg**	**10 29 40.2**	**+3.8**
	64nm,0.4s							
SHLS	**Shalkode**	**2.94**	**30**	Pg		**Pg**	**10 28 58.5**	**+0.1**
	8.3nm,0.2s							
SHLS				Lg		Lg	10 29 40.2	
	64nm,0.4s							
AAK	**Ala-Archa**	**2.99**	**313**	Pg		**Pb**	**10 28 55.9**	**+0.4**
	9.4nm,0.4s							
AAK				Lg		Lg	10 29 36.8	
	28nm,0.6s							
PDGK	**Podgornoye**	**3.10**	**29**	Pg		**Pb**	**10 28 57.8**	**+0.5**
	2.4nm,0.3s							
PDGK				Lg		Lg	10 29 39.2	
	19nm,0.8s							
KTBS	**Karatobe**	**3.13**	**350**	*e*P		**Pg**	**10 29 00.0**	**-2.1**
	5.1nm,0.2s							
KTBS				*e*S		**Sg**	**10 29 42.5**	**-0.2**
	80nm,0.3s							
KTBS	**Karatobe**	**3.13**	**350**	Pg		**Pg**	**10 29 00.0**	**-2.1**
	5.1nm,0.2s							
KTBS				Lg		Lg	10 29 42.5	
	80nm,0.3s							
CHKK	**Chushkaly**	**3.24**	**354**	*e*P		**Pg**	**10 29 02.0**	**-2.1**
	10nm,0.2s							
CHKK				*e*S		**Sg**	**10 29 45.9**	**-0.2**
	42nm,0.2s							
KRBS	**Karabastau**	**3.34**	**337**	*e*P		**Pg**	**10 29 03.9**	**-2.0**
	3.2nm,0.2s							
KRBS				*e*S		**Sg**	**10 29 49.3**	**+0.1**
	18nm,0.4s							
KRBS	**Karabastau**	**3.34**	**337**	Pg		**Pg**	**10 29 03.9**	**-2.0**
	3.2nm,0.2s							
KRBS				Lg		Lg	10 29 49.3	
	18nm,0.4s							
KUU	**Kurty**	**3.36**	**346**	*e*P		**Pg**	**10 29 04.0**	**-2.4**
	1.7nm,0.1s							
KUU				*e*S		**Sg**	**10 29 49.5**	**-0.5**
	13nm,0.3s							
KUU	**Kurty**	**3.36**	**346**	Pg		**Pg**	**10 29 04.0**	**-2.4**
	1.7nm,0.1s							
KUU				Lg		Lg	10 29 49.5	
	13nm,0.3s							

ARSB	**Arslanbob**	**3.45**	**283**	⇑*i*	*i*P	**Pn**	**10 28 55.8**	**-0.3**
	baz=86							
ARSB				⇑*i*	*i*S	**Sn**	**10 29 39.4**	**+2.3**
	baz=86							
SGDS	**Sogindy**	**3.52**	**324**	Pg		**Pg**	**10 29 07.5**	**-2.0**
	12nm,0.3s							
SGDS				Lg		Lg	10 29 55.3	
	13nm,0.4s							
KTMS	**Ketmen**	**3.55**	**37**	*e*P		**Pb**	**10 29 04.5**	**-0.5**
	0.2nm,0.0s							
KTMS				*e*S		**Sb**	**10 29 50.1**	**+2.0**
	21nm,0.3s							
KTMS	**Ketmen**	**3.55**	**37**	Pg		**Pb**	**10 29 03.8**	**-1.2**
	0.4nm,0.1s							
KTMS				Lg		Lg	10 29 49.0	
	23nm,0.4s							
ARXS	**Arharly**	**3.59**	**4**	*e*P		**Pg**	**10 29 08.1**	**-2.7**
	3.1nm,0.1s							
ARXS				*e*S		**Sg**	**10 29 56.4**	**-1.0**
	38nm,0.3s							
ARXS	**Arharly**	**3.59**	**4**	Pg		**Pg**	**10 29 08.1**	**-2.7**
	3.1nm,0.1s							
ARXS				Lg		Lg	10 29 56.4	
	38nm,0.3s							
MRKS	**Merke**	**3.81**	**305**	*e*P		**Pg**	**10 29 12.2**	**-2.7**
	3.0nm,0.2s							
MRKS				*e*S		**Sg**	**10 30 03.8**	**-0.4**
	8.4nm,0.3s							
MRKS	**Merke**	**3.81**	**305**	Pg		**Pg**	**10 29 12.2**	**-2.7**
	3.0nm,0.2s							
MRKS				Lg		Lg	10 30 03.8	
	8.4nm,0.3s							
DJR	**Jarkent**	**4.08**	**24**	*e*P		**Pb**	**10 29 16.0**	**+1.9**
	2.8nm,0.2s							
DJR				*e*S		**Sg**	**10 30 10.1**	**-3.0**
	9.2nm,0.3s							
DJR	**Jarkent**	**4.08**	**24**	Pg		**Pb**	**10 29 16.0**	**+1.9**
	2.8nm,0.2s							
DJR				Lg		Lg	10 30 10.1	
	9.2nm,0.3s							
KAPS	**Kapalarasan**	**4.86**	**16**	*e*P		**Pg**	**10 29 31.7**	**-3.4**
	0.6nm,0.2s							
KAPS				*e*S		**Sg**	**10 30 36.8**	**-1.1**
	5.8nm,0.3s							
KAPS	**Kapalarasan**	**4.86**	**16**	Pg		**Pg**	**10 29 31.7**	**-3.4**
	0.6nm,0.2s							
KAPS				Lg		Lg	10 30 36.8	
	5.8nm,0.3s							
KK31	**Karatay Array**	**5.74**	**298**	⇑Pg		**Pg**	**10 29 49.1**	**-2.9**
	0.9nm,0.6s,baz=110,slow=16,SNR=4.0							
KK31				⇑Lg		Lg	10 31 02.1	
	2.2nm,0.8s,baz=115,slow=26,SNR=3.6							
KDZE	**Karadeniz Ereo**	**34.43**	**287**	⇑P		**P**	**10 34 48.5**	**-1.2**
MLR	**Muntele Rosu**	**37.41**	**295**	⇑P		**P**	**10 35 18.6**	**+3.3**

*IDC **21** 10:29:47.3±0.6,29°.61N×50°.89E,h0km,mb4.2/25,*
mb1 4.3/33,mb1mx4.2/51,mbtmp4.2/33,ML3.9/7,MS3.8/1,
Ms1 3.8/1,ms1mx2.9/56,Error ellipse: s-maj=14.8km
s-min=12.0km az=137.0
*NEIC **21** 10:29:48.5±1.5,29°.56N±0°.07×50°.92E±0°.08,h10km±1km,*
Error ellipse: s-maj=11.7km s-min=11.4km az=173.0
*TEH **21** 10:29:49.5,29°.59N×50°.88E,h13km,ML4.5*
*DSN **21** 10:29:54.8±1.2,29°.49N×51°.32E,h15km,ML5.2/7,Error*
ellipse: s-maj=33.2km s-min=8.3km az=34.0
ISC 21 10:29:48.5±0.4**,29°.55N**±0°.05×**50°.90E**±0°.04**,h10**km**,n167,**
σ1§69/175,mb4.4/47,2C-4D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHI	**Shiraz**	**1.41**	**86**	*e*Pg		**Pg**	**10 30 17.1**	**+1.5**
SHI				*e*			10 30 41.9	
KLNJ	**Kolanjah**	**1.57**	**22**	*e*Pg		**Pb**	**10 30 17.9**	**0.0**
KLNJ				*e*			10 30 42.7	
IBRJ	**Brojen**	**2.37**	**7**	*e*Pn		**Pn**	**10 30 29.2**	**+1.5**
JHRM	**Jahrom**	**2.57**	**113**	*e*Pn		**Pn**	**10 30 33.5**	**+3.2**
IRAM	**Ramesheh**	**2.59**	**29**	*e*Pn		**Pn**	**10 30 32.8**	**+2.1**
IRAM				*e*			10 31 15.2	
AHWZ	**Ahwaz**	**2.63**	**313**	*e*Pn		**Pn**	**10 30 33.1**	**+2.1**
JHBN	**Jahan bin**	**2.68**	**356**	*e*Pn		**Pn**	**10 30 33.9**	**+1.9**
ROKH	**ROKH**	**2.79**	**2**	*e*Pn		**Pn**	**10 30 35.5**	**+2.1**
IGAR	**Gharneh**	**3.01**	**19**	*e*Pn		**Pn**	**10 30 39.3**	**+2.9**
IPIR	**Pirpir**	**3.12**	**360**	*e*Pn		**Pn**	**10 30 40.2**	**+2.1**
IZEF	**Zefreh**	**3.55**	**20**	*e*Pn		**Pn**	**10 30 45.6**	**+1.6**
IMEH	**Mehriz**	**3.69**	**59**	*e*Pn		**Pn**	**10 30 48.3**	**+2.4**
IKLH	**Kolahrood**	**3.80**	**9**	*e*Pn		**Pn**	**10 30 49.3**	**+1.9**
ICHK	**Chekchek**	**4.04**	**47**	*e*Pn		**Pn**	**10 30 53.7**	**+3.1**
ANAR	**Anarak**	**4.36**	**33**	*e*Pn		**Pn**	**10 30 56.7**	**+1.7**
BMDN	**Meydan**	**4.47**	**337**	*e*Pn		**Pn**	**10 30 58.3**	**+1.8**
IKMR	**Kamar-syah**	**4.50**	**332**	*e*Pn		**Pn**	**10 30 58.2**	**+1.5**
IBAF	**Bafgh**	**4.51**	**62**	*e*Pn		**Pn**	**10 30 59.3**	**+2.2**
IKFM	**Kafar-mosalman**	**4.74**	**327**	*e*Pn		**Pn**	**10 31 02.4**	**+2.4**
JRN	**Qarnain Island**	**4.91**	**159**	*e*Pn		**Pn**	**10 31 06.1**	**+3.7**
KHGB	**Koh Gabri**	**4.91**	**79**	*e*Pn		**Pn**	**10 31 05.1**	**+2.5**
KHGB				*e*			10 32 07.8	
HSAM	**Samen**	**5.04**	**338**	*e*Pn		**Pn**	**10 31 05.6**	**+1.2**
NGRK	**Negar Kerman**	**5.08**	**88**	*e*Pn		**Pn**	**10 31 07.7**	**+2.6**
GENO	**Geno**	**5.12**	**114**	*e*Pn		**Pn**	**10 31 08.5**	**+3.1**
IQOM	**Qom**	**5.28**	**2**	*e*Pn		**Pn**	**10 31 09.0**	**+1.3**
IBND	**Bandar-abas**	**5.39**	**112**	*e*Pn		**Pn**	**10 31 11.8**	**+2.8**
HAGD	**Aghdareh**	**5.46**	**345**	*e*Pn		**Pn**	**10 31 12.9**	**+2.7**
IVRN	**Varamin**	**5.47**	**7**	*e*Pn		**Pn**	**10 31 11.9**	**+1.7**
SLWR	**Sila**	**5.51**	**172**	*e*Pn		**Pn**	**10 31 13.8**	**+3.2**
CHMN	**Cheshme madani**	**5.79**	**85**	*e*Pn		**Pn**	**10 31 17.4**	**+2.6**
SHME	**Shamm**	**5.81**	**126**	*i* P		**Pn**	**10 31 14.6**	**-0.2**
	SNR=6.0							
SHME				S		**Sn**	**10 32 20.0**	**-1.5**
SHME	**Shamm**	**5.81**	**126**	*e*Pn		**Pn**	**10 31 16.4**	**+1.6**
IHSB	**Hasanabad**	**5.88**	**3**	*e*Pn		**Pn**	**10 31 17.4**	**+1.6**
IRAZ	**Razeghan**	**5.89**	**352**	*e*Pn		**Pn**	**10 31 17.5**	**+1.4**
BANOM	**Banah**	**6.00**	**126**	*e*P		**Pn**	**10 31 17.6**	**+0.2**
	SNR=8.6							
BANOM				S		**Sn**	**10 32 24.8**	**-1.4**
BANOM	**Banah**	**6.00**	**126**	*e*Pn		**Pn**	**10 31 19.7**	**+2.3**
IVIS	**Veis**	**6.03**	**326**	*e*Pn		**Pn**	**10 31 20.1**	**+2.2**
TPRV	**Parvadeh(Tabas**	**6.04**	**54**	*e*Pn		**Pn**	**10 31 20.2**	**+2.1**
ILAS	**Lasjerd**	**6.07**	**16**	*e*Pn		**Pn**	**10 31 20.3**	**+1.8**
IDMV	**Damavand**	**6.08**	**9**	*e*Pn		**Pn**	**10 31 20.2**	**+1.4**
AJN	**Ajban**	**6.16**	**143**	*e*Pn		**Pn**	**10 31 23.8**	**+4.2**
NAZ	**Nazwa, Dubai**	**6.22**	**136**	*i* P		**Pn**	**10 31 23.0**	**+2.6**
	SNR=12							
NAZ	**Nazwa, Dubai**	**6.22**	**136**	*e*Pn		**Pn**	**10 31 23.1**	**+2.7**
QABG	**Abgarm-Qazvin**	**6.24**	**350**	*e*Pn		**Pn**	**10 31 21.5**	**+0.7**
MSFE	**Esma-Masafi**	**6.27**	**131**	*i* P		**Pn**	**10 31 21.7**	**+0.6**
	SNR=8.8							
MSFE	**Esma-Masafi**	**6.27**	**131**	*e*Pn		**Pn**	**10 31 22.9**	**+1.8**
IFIR	**Firoozkooh**	**6.27**	**14**	*e*Pn		**Pn**	**10 31 22.5**	**+1.2**
IDHR	**Dehrash**	**6.40**	**324**	*e*Pn		**Pn**	**10 31 24.9**	**+1.8**
MDH	**Madha**	**6.40**	**130**	*i* P		**Pn**	**10 31 25.0**	**+2.1**
	SNR=7.2							
MDH	**Madha**	**6.40**	**130**	*e*Pn		**Pn**	**10 31 24.2**	**+1.3**
IANJ	**Anjilo**	**6.42**	**23**	*e*Pn		**Pn**	**10 31 25.0**	**+1.6**
ISHM	**Shahmirzad**	**6.55**	**17**	*e*Pn		**Pn**	**10 31 26.8**	**+1.5**
TNSJ	**Nastanj**	**6.56**	**46**	*e*Pn		**Pn**	**10 31 27.1**	**+2.0**
UOSS	**Minazif**	**6.58**	**133**	*e*P		**Pn**	**10 31 26.5**	**+1.1**
	SNR=5.1							
UOSS	**Minazif**	**6.58**	**133**	*e*Pn		**Pn**	**10 31 26.7**	**+1.3**
UOSS	**Minazif**	**6.58**	**133**			**Pn**	**10 31 24.6**	**-0.8**
UOSS					Sn	**Sn**	**10 32 37.9**	**-2.8**
HATD	**Hatta, Dubai**	**6.62**	**134**	P		**Pn**	**10 31 28.4**	**+2.4**
HATD				S		**Sn**	**10 32 40.1**	**-1.5**
HATD	**Hatta, Dubai**	**6.62**	**134**	*e*Pn		**Pn**	**10 31 28.8**	**+2.8**
TKDS	**Koohdasht(Taba**	**6.68**	**51**	*e*Pn		**Pn**	**10 31 28.6**	**+1.8**
ASHO	**Ashiyiah**	**6.68**	**135**	*i* P		**Pn**	**10 31 28.0**	**+1.2**
	SNR=18							
ASHO	**Ashiyiah**	**6.68**	**135**	*e*Pn		**Pn**	**10 31 28.8**	**+2.0**
IALA	**Alasht**	**6.71**	**13**	*e*Pn		**Pn**	**10 31 29.2**	**+1.8**
IPRN	**Peran**	**6.78**	**10**	*e*Pn		**Pn**	**10 31 30.4**	**+2.2**
IGZV	**Ghazvin**	**6.84**	**355**	*e*Pn		**Pn**	**10 31 30.9**	**+1.8**
QALM	**Alamut, Qazvin**	**6.86**	**358**	*e*Pn		**Pn**	**10 31 31.0**	**+1.5**
ALNE	**Al Ain**	**6.98**	**140**	*i* P		**Pn**	**10 31 33.3**	**+2.3**
	SNR=7.5							
ALNE	**Al Ain**	**6.98**	**140**	*e*Pn		**Pn**	**10 31 33.7**	**+2.8**
IGLO	**Ghaloghah**	**7.35**	**19**	*e*Pn		**Pn**	**10 31 37.9**	**+1.7**
RAYN	**Ar Rayn**	**7.71**	**220**			**Pn**	**10 31 41.9**	**+1.0**
UMZA	**Um Al Zommool**	**7.81**	**150**	*e*Pn		**Pn**	**10 31 44.0**	**+1.7**
NHDN	**Nehbandan**	**8.11**	**75**	*e*Pn		**Pn**	**10 31 50.1**	**+3.6**
SBZV	**Sabzevar**	**8.84**	**38**	*e*Pn		**Pn**	**10 31 57.4**	**+0.8**
WSAR	**Wadi Sarin**	**9.36**	**130**	Pn		**Pn**	**10 32 03.9**	**+0.4**
	2.3nm,0.3s,baz=319,slow=12,SNR=14							
WSAR				Sn		**Sn**	**10 33 42.1**	**-6.7**
	3.8nm,0.3s,baz=304,slow=23,SNR=9.3							
ISFR	**Sfrayin**	**9.55**	**37**	*e*Pn		**Pn**	**10 32 08.0**	**+1.6**

IKRD	**Kardeh**	**9.62**	**40**	*e*Pn		Pn	10 32 17.4	+10
IAKL	**Akhelmad**	**9.63**	**41**	*e*Pn		**Pn**	**10 32 09.6**	**+2.1**
GEYT	**Alibeck**	**10.29**	**34**	Pn		**Pn**	**10 32 15.8**	**-0.5**
	0.7nm,0.3s,baz=224,slow=12,SNR=27							
GEYT				LR		LR	10 37 01.5	
	comp=Z,463nm,18.2s,baz=20,slow=42							
GYA0B	**ALIBECK ARRAY**	**10.29**	**34**			**Pn**	**10 32 15.5**	**-0.7**
HRA	**Herat**	**10.77**	**61**	Pn		**Pn**	**10 32 24.6**	**+1.6**
ASF	**Jabal al Asfar**	**12.31**	**286**	Pn		**Pn**	**10 32 44.2**	**+0.2**
	0.5nm,0.3s,baz=71,slow=5.2,SNR=2.3							
ASF				Sn		**Sn**	**10 34 57.5**	**-3.8**
	0.3nm,0.3s,baz=44,slow=21,SNR=1.3							
ASF				Lg		Lg	10 36 29.8	
	0.5nm,0.3s,baz=200,slow=23,SNR=1.8							
MMAI	**Mount Meron Ar**	**13.69**	**289**	Pn		**Pn**	**10 33 03.2**	**+0.4**
	baz=102,slow=18,SNR=2.1							
MMAI				Lg		Lg	10 37 10.6	
	baz=108,slow=28,SNR=2.0							
EIL	**Elat**	**13.88**	**274**	Pn		**Pn**	**10 33 04.5**	**-0.8**
	0.6nm,0.3s,baz=110,slow=15,SNR=1.8							
EIL				Lg		Lg	10 37 16.8	
	0.4nm,0.3s,baz=37,slow=21,SNR=2.2							
KBZ	**Khabaz**	**15.52**	**338**	Pn		**Pn**	**10 33 27.7**	**+0.3**
	0.2nm,0.3s,baz=148,slow=9.1,SNR=8.0							
KIV	**Kislovodsk**	**15.79**	**338**			**Pn**	**10 33 30.4**	**-0.7**
KIV				IAmb		IAmb	10 33 37.6	
	comp=Z,48nm,1.1s							
DAMY	**Dhamar**	**16.07**	**203**	Pn		**Pn**	**10 33 33.7**	**-1.3**
KBL	**Kabul**	**16.16**	**67**	Pn		**Pn**	**10 33 34.8**	**-1.3**
BRTR	**Keskin Array B**	**17.43**	**310**	P		**Pn**	**10 33 52.1**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=129,slow=11,SNR=3.9							
BR131	**Keskin Array S**	**17.43**	**310**	Pn		**Pn**	**10 33 51.6**	**-0.3**
SOCY	**Socotra**	**17.52**	**170**	Pn		Pn	10 33 46.4	-6.6
SOCY				IAmb		IAmb	10 34 02.5	
	comp=Z,37nm,1.4s							
CHGR	**Chuyangaron**	**17.62**	**54**			**Pn**	**10 33 53.9**	**-0.2**
GAR	**Garm**	**18.58**	**54**	P		**P**	**10 34 05.3**	**-0.5**
ATD	**Arta Tunnel**	**19.44**	**204**	P		**P**	**10 34 16.9**	**+1.6**
	comp=Z,1.0nm,0.3s,baz=29,slow=3.4,SNR=4.0							
NIL	**Nilore**	**19.47**	**72**	P		**P**	**10 34 15.4**	**-0.1**
KK31	**Karatay Array**	**20.73**	**44**	P		**P**	**10 34 29.9**	**+0.7**
KKAR	**Karatay Array**	**20.73**	**44**	P		**P**	**10 34 29.7**	**+0.5**
AKTO	**Aktyubinsk**	**21.54**	**12**	P		**P**	**10 34 37.5**	**-0.2**
	comp=Z,8.9nm,0.6s,baz=208,slow=12,SNR=16							
KSH	**Kashi**	**22.86**	**58**	P		**P**	**10 34 49.4**	**-2.8**
KSH				sP		pP	10 34 54.8	-0.3
KSH				PP		**PnPn**	**10 35 12.8**	**-3.6**
KSH				S		S	10 38 51.4	-10
KSH				SS		Sn	10 39 02.0	-15
KSH				pmax		pmax		
	comp=Z,35nm,0.6s							
KSH				pmax		pmax		
	comp=Z,380nm,4.2s							
KSH				LR		LR		
	comp=N,120nm,8.6s							
KSH				LR		LR		
	comp=E,480nm,7.6s							
KSH				LR		LR		
	comp=Z,440nm,7.9s							
AAK	**Ala-Archa**	**23.02**	**49**	P		**P**	**10 34 54.1**	**+0.3**
	comp=Z,5.0nm,0.8s,baz=252,slow=6.4,SNR=3.3							
AAK	**Ala-Archa**	**23.02**	**49**	P		**P**	**10 34 53.5**	**-0.3**
AAK				IAmb		IAmb	10 35 01.3	
	comp=Z,10nm,0.9s							
TIRR	**Tirgusor**	**23.21**	**316**	⇑P		**P**	**10 34 57.0**	**+1.4**
TIRR	**Tirgusor**	**23.21**	**316**	P		**P**	**10 34 56.2**	**+0.6**
TIRR				IAmb		IAmb	10 35 02.6	
	comp=Z,9.3nm,0.7s							
TOPG	**Topolog**	**23.46**	**317**	⇓P		**P**	**10 34 59.7**	**+1.7**
TARG	**Taragay, Kyrgy**	**24.91**	**54**	P		**P**	**10 35 11.8**	**-0.3**
TARG				IAmb		IAmb	10 35 15.2	
	comp=Z,14nm,1.4s							
MLR	**Muntele Rosu**	**25.25**	**316**	P		**P**	**10 35 15.5**	**+0.7**
	comp=Z,7.1nm,0.8s,baz=123,slow=2.7,SN

comp=Z,3.3nm,0.9s,baz=342,slow=7.6,SNR=3.8
CMAR Chiang Mai Arr 44.98 93 P **P 10 38 04.4 +0.1**
comp=Z,0.6nm,0.5s,baz=279,slow=7.1,SNR=1.3
NRIK Noril'sk 45.02 17 P **P 10 38 03.5 -0.4**
comp=Z,4.6nm,1.0s,baz=153,slow=4.8,SNR=3.7
CD2 Chengdu 45.33 74 P **P 10 38 04.6 -2.4**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
SONM Songino Array 45.96 51 P **P 10 38 12.3 +0.5**
comp=Z,1.1nm,0.9s,baz=289,slow=4.5,SNR=4.2
TOA0 Torodi Ar. Sit 48.28 261 P **P 10 38 29.8 -0.4**
TOA0 IAmb IAmb 10 38 44.1
comp=Z,4.9nm,0.9s
TORD Torodi Ar. Bea 48.28 261 P **P 10 38 30.4 +0.2**
comp=Z,2.9nm,0.8s,baz=60,slow=6.2,SNR=16
XAN Xi'an 48.96 69 P **P 10 38 34.7 -0.6**
XAN IAmb IAmb 10 38 35.9
comp=Z,5.9nm,1.0s
HHC Hu-ho-hao-te 49.94 60 *e*P **P 10 38 42.9 +0.1**
HHC pmax pmax
comp=Z,11nm,0.8s
HHC pmax pmax
comp=Z,36nm,4.7s
DBIC Dimbokro 57.06 258 P **P 10 39 36.0 +0.8**
comp=Z,5.0nm,0.8s,baz=24,slow=6.7,SNR=5.8
DBIC Dimbokro 57.06 258 P **P 10 39 36.1 +0.9**
DBIC IAmb IAmb 10 39 38.7
comp=Z,5.4nm,0.8s
NJ2 Nanjing 57.53 69 *e*P **P 10 39 37.4 -0.9**
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
TIXI Tiksi 58.47 21 P **P 10 39 44.6 +0.3**
TIXI IAmb IAmb 10 40 01.3
comp=Z,3.6nm,1.1s
SUMG Summit 61.91 340 P **P 10 40 08.2 -0.1**
BOSA Boshof 62.82 205 P **P 10 40 14.9 +0.4**
comp=Z,3.5nm,0.8s,baz=55,slow=7.0,SNR=4.2
KSRS Korea Array 63.08 60 P **P 10 40 15.8 -0.4**
comp=Z,1.2nm,0.7s,baz=282,slow=5.8,SNR=4.2
USA0B Ussuriysk Arra 64.03 52 P **P 10 40 20.2 -2.2**
BILL Bilibino 71.69 21 P **P 10 41 11.0 +0.8**
IL31 84.96 8 P **P 10 42 22.5 -1.1**
IL31 IAmb IAmb 10 42 24.4
comp=Z,1.9nm,0.8s
ILAR Eielson Array 84.96 8 P **P 10 42 22.7 -1.0**
comp=Z,1.3nm,0.7s,baz=326,slow=3.7,SNR=16
BPAW Bear Paw Mtn. 85.08 9 P **P 10 42 23.7 -0.6**
EGAK Eagle 85.51 5 P **P 10 42 26.5 +0.1**
MCK McKinley 85.71 9 P **P 10 42 27.6 +0.2**
RND Reindeer 86.04 9 P **P 10 42 28.6 -0.6**
SCRK Sand Creek 86.05 7 P **P 10 42 30.0 +0.8**
DAWY Dawson 86.34 5 P **P 10 42 30.6 0.0**
DAWY IAmb IAmb 10 42 32.2
comp=Z,4.9nm,1.0s
DOT Dot Lake 86.36 7 P **P 10 42 30.6 -0.1**
DHY Denali Highway 86.55 8 P **P 10 42 31.6 -0.1**
MENT Mentasta 87.09 7 P **P 10 42 34.8 +0.6**
MENT IAmb IAmb 10 42 48.2
comp=Z,2.9nm,0.8s
YKA Yellowknife Ar 87.54 353 P **P 10 42 36.7 +0.4**
comp=Z,2.1nm,0.8s,baz=14,slow=4.9,SNR=25
WRA Warramunga Arr 94.17 110 P **P 10 43 08.5 +0.5**
comp=Z,0.3nm,0.8s,baz=316,slow=4.5,SNR=1.5
ASAR Alice Springs 95.66 114 P **P 10 43 13.4 -1.3**
comp=Z,0.3nm,0.7s,baz=306,slow=4.5,SNR=2.9

*IDC **21** 10:35:21.3±1.4,29.6°N×50.8°E,h0km,mb3.8/10, mb1 3.8/13,mb1mx3.7/43,mbtmp3.8/13,ML3.4/3,MS3.3/1, Ms1 3.3/1,ms1mx2.8/62,Error ellipse: s-maj=31.3km s-min=22.5km az=160.0*
*TEH **21** 10:35:23.3,29.6°N×50.8°E,h7km,ML3.8*
ISC 21 10:35:23.7±0.9,**29.4°N**±0.1°×**50.8°E**±0.1°,**h24km,n31,**
σ1°63/32,mb3.8/10,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHI	**Shiraz**	**1.46**	**82**	*e*Pg	**Pn**	**10 35 51.1**	**+2.4**
SHI				*e*		10 36 15.8	
KLNJ	**Kolanjah**	**1.68**	**22**	*e*Pg	**Pn**	**10 35 52.2**	**+0.3**
KLNJ				*e*		10 36 17.1	
IBRJ	**Brojen**	**2.47**	**8**	*e*Pn	**Pn**	**10 36 03.9**	**+1.1**
IRAM	**Ramesheh**	**2.69**	**29**	*e*		10 36 13.0	
IRAM				*e*Pn	**Pn**	**10 36 06.9**	**+1.2**
JHBN	**Jahan bin**	**2.77**	**357**	*e*		10 36 55.6	
JHBN				*e*Pn	**Pn**	**10 36 08.0**	**+1.1**
ROKH	**ROKH**	**2.89**	**3**	*e*Pn	**Pn**	**10 36 09.6**	**+1.2**
IGAR	**Gharneh**	**3.11**	**19**	*e*Pn	**Pn**	**10 36 12.8**	**+1.3**
IPIR	**Pirpir**	**3.22**	**1**	*e*Pn	**Pn**	**10 36 13.6**	**+0.5**
ISAD	**Sadrabad**	**3.46**	**44**	*e*Pn	**Pn**	**10 36 18.3**	**+2.0**
IZEF	**Zefreh**	**3.66**	**20**	*e*Pn	**Pn**	**10 36 20.0**	**+1.0**
IKLH	**Kolahrood**	**3.90**	**9**	*e*Pn	**Pn**	**10 36 23.6**	**+1.2**
ANAR	**Anarak**	**4.46**	**33**	*e*Pn	**Pn**	**10 36 31.0**	**+1.0**
KHGB	**Koh Gabri**	**4.97**	**78**	*e*Pn	**Pn**	**10 36 39.9**	**+2.9**
NGRK	**Negar Kerman**	**5.12**	**86**	*e*Pn	**Pn**	**10 36 42.5**	**+3.2**
NGRK				*e*		10 36 47.1	
IQOM	**Qom**	**5.38**	**2**	*e*Pn	**Pn**	**10 36 42.7**	**0.0**
IVRN	**Varamin**	**5.58**	**7**	*e*Pn	**Pn**	**10 36 45.3**	**+0.1**
IRAZ	**Razeghan**	**5.99**	**353**	*e*Pn	**Pn**	**10 36 52.6**	**+1.6**
IANJ	**Anjilo**	**6.53**	**23**	*e*Pn	**Pn**	**10 36 59.1**	**+0.6**
WSAR	**Wadi Sarin**	**9.32**	**130**	Pn	**Pn**	**10 37 37.6**	**+0.9**
WSAR	0.2nm,0.3s,baz=128,slow=20,SNR=1.3			Sn	**Sn**	**10 39 15.8**	**-4.9**
WSAR	0.3nm,0.3s,baz=341,slow=15,SNR=1.2			LR	LR	10 42 03.2	
GEYT	comp=Z,168nm,18.2s,baz=106,slow=42 **Alibeck**	**10.39**	**34**	Pn	**Pn**	**10 37 50.4**	**-0.9**
BRTR	0.6nm,0.3s,baz=216,slow=14,SNR=3.4 **Keskin Array B**	**17.46**	**310**	P	**P**	**10 39 25.7**	**-1.2**
AKTO	0.1nm,0.3s,baz=123,slow=12,SNR=2.1 **Aktyubinsk**	**21.64**	**12**	P	**P**	**10 40 11.5**	**-0.7**
AKASG	2.0nm,0.5s,baz=196,slow=13,SNR=7.3 **Malin Array Be**	**26.73**	**329**	P	**P**	**10 40 59.6**	**-1.6**
BVAR	0.4nm,0.3s,baz=137,slow=9.2,SNR=2.5 **Borovoye Array**	**27.58**	**26**	P	**P**	**10 41 08.6**	**-0.2**
KURBB	1.7nm,0.5s,baz=211,slow=7.3,SNR=7.0 **Kurchatov Arra**	**29.64**	**37**	P	**P**	**10 41 27.4**	**+0.3**
MKAR	1.4nm,0.9s,baz=236,slow=9.3,SNR=4.9 **Makanchi Array**	**29.92**	**46**	P	**P**	**10 41 29.8**	**+0.1**
ZALV	0.2nm,0.5s,baz=227,slow=5.5,SNR=2.0 **Zalesovo Beam**	**34.70**	**35**	P	**P**	**10 42 11.9**	**+0.5**
FINES	1.9nm,0.6s,baz=236,slow=10,SNR=7.5 **FINESS Array B**	**35.95**	**340**	P	**P**	**10 42 21.2**	**-0.9**
TORD	0.7nm,0.7s,baz=146,slow=14,SNR=2.7 **Torodi Ar. Bea**	**48.23**	**261**	P	**P**	**10 44 04.8**	**+2.0**
ILAR	0.9nm,0.8s,baz=59,slow=7.5,SNR=5.8 **Eielson Array**	**85.07**	**8**	P	**P**	**10 47 57.2**	**+0.1**
YKA	0.2nm,0.6s,baz=325,slow=4.8,SNR=2.3 **Yellowknife Ar**	**87.63**	**353**	P	**P**	**10 48 10.1**	**+0.4**
	0.3nm,0.6s,baz=19,slow=5.1,SNR=6.3						

*IDC **21** 10:36:19.0±1.8,29.7°N×50.8°E,h0km,mb3.9/10, mb1 4.0/12,mb1mx3.7/41,mbtmp3.9/12,ML3.5/1,Error ellipse: s-maj=54.6km s-min=18.1km az=150.0*
ISC 21 10:36:22.6±1.7,**29.7°N**±0.3°×**50.8°E**±0.2°,**h24km,n12,**
σ0°24/12,mb3.8/10,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEYT	**Alibeck**	**10.19**	**35**	Pn	**Pn**	**10 38 47.7**	**+0.2**
EIL	baz=234,slow=13,SNR=4.1 **Elat**	**13.80**	**274**	Pn	**Pn**	**10 39 36.9**	**+0.2**
AKTO	0.2nm,0.3s,baz=10,slow=13,SNR=1.1 **Aktyubinsk**	**21.40**	**13**	P	**P**	**10 41 08.7**	**+0.2**
AAK	1.8nm,0.6s,baz=176,slow=13,SNR=2.0 **Ala-Archa**	**22.97**	**49**	P	**P**	**10 41 25.2**	**-0.2**
AKASG	0.9nm,0.3s,baz=209,slow=10,SNR=1.7 **Malin Array Be**	**26.50**	**328**	P	**P**	**10 41 57.5**	**-0.4**
BVAR	1.5nm,0.7s,baz=132,slow=8.9,SNR=4.4 **Borovoye Array**	**27.36**	**26**	P	**P**	**10 42 05.7**	**-0.1**
KURBB	1.3nm,0.5s,baz=216,slow=7.3,SNR=4.9 **Kurchatov Arra**	**29.46**	**37**	P	**P**	**10 42 24.5**	**+0.1**
MKAR	1.8nm,0.9s,baz=236,slow=9.2,SNR=6.9 **Makanchi Array**	**29.76**	**46**	P	**P**	**10 42 27.5**	**+0.3**
ZALV	0.6nm,0.9s,baz=241,slow=5.6,SNR=2.4 **Zalesovo Beam**	**34.50**	**36**	P	**P**	**10 43 08.7**	**0.0**
TORD	1.6nm,0.6s,baz=241,slow=10.0,SNR=5.4 **Torodi Ar. Bea**	**48.24**	**261**	P	**P**	**10 45 01.8**	**0.0**
DBIC	1.1nm,0.9s,baz=51,slow=8.9,SNR=4.7 **Dimbokro**	**57.03**	**258**	P	**P**	**10 46 07.0**	**+0.1**
YKA	4.4nm,1.0s,baz=54,slow=2.7,SNR=4.0 **Yellowknife Ar**	**87.37**	**353**	P	**P**	**10 49 07.1**	**-0.3**
	0.3nm,0.6s,baz=15,slow=5.4,SNR=5.6						

*IDC **21** 10:44:00.7±1.6,29.6°N×50.8°E,h0km,mb3.6/7, mb1 3.7/9,mb1mx3.5/45,mbtmp3.7/9,ML3.4/2,MS4.2/2, Ms1 4.2/2,ms1mx3.1/52,Error ellipse: s-maj=34.8km s-min=25.5km az=157.0*
*TEH **21** 10:44:02.7,29.5°N×50.8°E,h16km,ML3.8*
ISC 21 10:44:04.0±0.9,**29.5°N**±0.0°×**50.9°E**±0.0°,**h24km,n46,**
σ1°47/45,mb3.6/7,2C,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHI	**Shiraz**	**1.41**	**84**	*e*Pg	**Pb**	**10 44 30.9**	**+1.1**
SHI				*e*		10 44 55.0	
KLNJ	**Kolanjah**	**1.61**	**22**	*e*Pg	**Pn**	**10 44 31.6**	**+0.3**
KLNJ				*e*		10 44 56.3	
IBRJ	**Brojen**	**2.41**	**7**	*e*Pn	**Pn**	**10 44 43.1**	**+0.9**
IRAM	**Ramesheh**	**2.62**	**29**	*e*Pn	**Pn**	**10 44 46.2**	**+1.1**
IRAM				*e*		10 44 52.2	
JHBN	**Jahan bin**	**2.72**	**356**	*e*Pn	**Pn**	**10 44 47.2**	**+0.7**
JHBN				*e*		10 45 32.1	
ROKH	**ROKH**	**2.83**	**2**	*e*Pn	**Pn**	**10 44 48.9**	**+1.0**
ROKH				*e*		10 45 35.0	
IGAR	**Gharneh**	**3.05**	**19**	*e*Pn	**Pn**	**10 44 52.0**	**+1.1**
IPIR	**Pirpir**	**3.16**	**360**	*e*Pn	**Pn**	**10 44 52.7**	**+0.1**
IZEF	**Zefreh**	**3.59**	**20**	*e*Pn	**Pn**	**10 44 59.5**	**+1.1**
IZEF				*e*		10 45 00.5	
IKLH	**Kolahrood**	**3.84**	**9**	*e*Pn	**Pn**	**10 45 02.5**	**+0.6**
ANAR	**Anarak**	**4.39**	**33**	*e*Pn	**Pn**	**10 45 10.0**	**+0.7**
IBAF	**Bafgh**	**4.53**	**62**	*e*Pn	**Pn**	**10 45 12.9**	**+1.7**
KHGB	**Koh Gabri**	**4.92**	**79**	*e*Pn	**Pn**	**10 45 14.9**	**+2.0**
HSAM	**Samen**	**5.08**	**338**	*e*Pn	**Pn**	**10 45 19.1**	**+0.2**
NGRK	**Negar Kerman**	**5.08**	**87**	*e*Pn	**Pn**	**10 45 21.7**	**+2.7**
NGRK				*e*		10 46 25.6	
HAGD	**Aghdareh**	**5.50**	**345**	*e*Pn	**Pn**	**10 45 25.6**	**+0.9**
IVRN	**Varamin**	**5.51**	**7**	*e*Pn	**Pn**	**10 45 24.4**	**-0.3**
SHME	**Shamm**	**5.78**	**125**	*e*Pn	**Pn**	**10 45 28.5**	**+0.1**
CHMN	**Cheshme madani**	**5.79**	**85**	*e*Pn	**Pn**	**10 45 30.5**	**+1.8**
CHMN				*e*		10 46 46.7	
BANOM	**Banah**	**5.97**	**125**	*e*Pn	**Pn**	**10 45 32.4**	**+1.4**
TPRV	**Parvadeh(Tabas**	**6.07**	**53**	*e*Pn	**Pn**	**10 45 33.5**	**+1.2**
IDMV	**Damavand**	**6.12**	**9**	*e*Pn	**Pn**	**10 45 33.2**	**-0.1**
MSFE	**Esma-Masafi**	**6.24**	**130**	*e*Pn	**Pn**	**10 45 35.5**	**+0.8**
MDH	**Madha**	**6.37**	**130**	*e*Pn	**Pn**	**10 45 38.0**	**+1.6**
IANJ	**Anjilo**	**6.46**	**22**	*e*Pn	**Pn**	**10 45 37.8**	**-0.1**
UOSS	**Minazif**	**6.55**	**133**	*e*Pn	**Pn**	**10 45 42.1**	**+3.1**
TNSJ	**Nastanj**	**6.58**	**46**	*e*Pn	**Pn**	**10 45 40.5**	**+1.1**
ISHM	**Shahmirzad**	**6.59**	**17**	*e*Pn	**Pn**	**10 45 40.4**	**+0.7**
ASHO	**Ashiyiah**	**6.65**	**135**	*e*Pn	**Pn**	**10 45 42.8**	**+2.5**
TKDS	**Koohdasht(Taba**	**6.70**	**51**	*e*Pn	**Pn**	**10 45 41.7**	**+0.7**
IALA	**Alasht**	**6.75**	**13**	*e*Pn	**Pn**	**10 45 42.3**	**+0.5**
IPRN	**Peran**	**6.82**	**10**	*e*Pn	**Pn**	**10 45 43.9**	**+1.2**
SOHO	**SOHO**	**7.35**	**135**	*e*Pn	**Pn**	**10 45 52.6**	**+2.8**
WSAR	**Wadi Sarin**	**9.33**	**130**	Pn	**Pn**	**10 46 17.2**	**+0.2**
WSAR	0.2nm,0.3s,baz=257,slow=12,SNR=1.7			Sn	**Sn**	**10 47 56.4**	**-4.8**
GEYT	0.7nm,0.3s,baz=3.0,slow=16,SNR=2.5 **Alibeck**	**10.32**	**34**	Pn	**Pn**	**10 46 29.7**	**-0.9**
AB31	0.6nm,0.3s,baz=217,slow=17,SNR=7.8 **Akbulak array**	**20.89**	**17**	⇑Pn	**P**	**10 48 43.0**	**-1.4**
AKTO	1.5nm,0.3s,baz=206,slow=8.9,SNR=17 **Aktyubinsk**	**21.58**	**12**	P	**P**	**10 48 50.6**	**-1.2**
AKTO	1.6nm,0.6s,baz=179,slow=12,SNR=5.0 **Aktyubinsk**	**21.58**	**12**	⇑Pn	**P**	**10 48 51.5**	**-0.3**
IDI	2.4nm,0.8s **Anoyia**	**22.67**	**291**	LR	LR	11 01 21.4	
AAK	comp=Z,226nm,18.0s,baz=260,slow=46 **Ala-Archa**	**23.04**	**49**	P	**P**	**10 49 08.4**	**+0.7**
AKASG	0.7nm,0.3s,baz=158,slow=2.8,SNR=1.7 **Malin Array Be**	**26.70**	**328**	P	**P**	**10 49 39.9**	**-1.3**
MKAR	0.4nm,0.3s,baz=133,slow=9.0,SNR=1.7 **Makanchi Array**	**29.85**	**46**	P	**P**	**10 50 10.0**	**+0.6**
ZALV	0.3nm,0.6s,baz=230,slow=6.8,SNR=2.3 **Zalesovo Beam**	**34.63**	**35**	P	**P**	**10 50 51.1**	**0.0**
TORD	1.9nm,0.7s,baz=240,slow=8.4,SNR=5.7 **Torodi Ar. Bea**	**48.28**	**261**	P	**P**	**10 52 43.8**	**+0.4**
JHJ	0.4nm,0.6s,baz=61,slow=7.2,SNR=2.6 **Hachijo jima 2**	**73.69**	**61**	LR	LR	11 31 29.3	
YKA	comp=Z,324nm,21.7s,baz=102,slow=39 **Yellowknife Ar**	**87.58**	**353**	P	**P**	**10 56 49.4**	**-0.3**
	0.5nm,1.0s,baz=18,slow=4.4,SNR=4.8						

*MOS **21** 10:51:26.9±0.9,29.6°N×50.8°E,h23km,mb5.1/72, MS4.4/16,Error ellipse: s-maj=5.5km s-min=3.5km az=108.4*
*NEIC **21** 10:51:26.5±1.6,29.5°N±0.0°×50.8°E±0.0°,h10km±1km, Error ellipse: s-maj=11.6km s-min=10.5km az=140.0*
*TEH **21** 10:51:27.7,29.6°N×50.8°E,h15km,ML5.1*
*GCMT **21** 10:51:28.7±0.3,29.5°N±0.0°×50.8°E±0.0°,h19km±1km, MW5.0/79,Moment Tensor Solution. s22,c23; s79,c94; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.62±.28; Mθθ-2.80±.19; Mφφ-0.81±.17; Mrθ1.72±.39; Mrφ1.55±.12; Mθφ0.57±.44; Best double couple: M=4.04900×10^16 NP1:φs315.00000°,δ38.00000°,λ118.00000°. NP2: φs101.00000°,δ57.00000°,λ70.00000°. Principal axes: T 4.2320, Plg71.0000°, Azm325.0000°; N -0.3660, Plg17.0000°, Azm112.0000°; P -3.8660, Plg10.0000°, Azm205.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*GII **21** 10:51:28.4±0.0,29.7°N×47.4°E,h10km*
*IDC **21** 10:51:29.5±4.8,29.6°N×50.8°E,h26km±32km,mb4.5/45, mb1 4.5/52,mb1mx4.4/64,mbtmp4.6/52,ML4.3/7,MS4.3/21, Ms1 4.3/21,ms1mx4.0/48,Error ellipse: s-maj=12.2km s-min=9.0km az=161.0*
*DSN **21** 10:51:29.8±0.8,29.7°N×51.1°E,h15km,mb5.9/1,ML5.4/7, Error ellipse: s-maj=22.6km s-min=6.4km az=45.0*
*BGR **21** 10:51:50.0±0.0,29.9°N×47.4°E,h33km,mb5.1*
ISC 21 10:51:27.4±0.8,**29.5°N**±0.0°×**50.8°E**±0.0°,**h14**km±4km,
n718,σ1°46/751,mb5.0/208,MS4.4/45,62C-6D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHI	**Shiraz**	**1.46**	**87**	*e*Pg	**Pg**	**10 51 54.9**	**-0.5**
SHI				*e*Sg	**Sg**	**10 52 15.6**	**+1.2**
SHI				*e*		10 52 23.1	
KLNJ	**Kolanjah**	**1.56**	**24**	*e*Pg	**Pb**	**10 51 56.1**	**-0.1**
KLNJ				*e*		10 52 21.9	
IBRJ	**Brojen**	**2.34**	**9**	*e*Pn	**Pb**	**10 52 07.4**	**-2.1**
AHWZ	**Ahwaz**	**2.57**	**313**	*e*Pn	**Pn**	**10 52 10.3**	**+1.7**
IRAM	**Ramesheh**	**2.58**	**31**	*e*Pn	**Pb**	**10 52 11.5**	**-2.1**
IRAM				*e*		10 52 17.7	
JHRM	**Jahrom**	**2.63**	**114**	*e*Pn	**Pn**	**10 52 11.9**	**+2.5**
JHRM				*e*		10 53 06.8	
JHBN	**Jahan bin**	**2.64**	**357**	*e*Pn	**Pb**	**10 52 12.0**	**-2.6**
JHBN				*e*		10 52 60.0	
ROKH	**ROKH**	**2.76**	**3**	*e*Pn	**Pb**	**10 52 13.5**	**-3.0**
ROKH				*e*		10 53 03.7	
IPIR	**Pirpir**	**3.09**	**1**	*e*Pn	**Pn**	**10 52 18.1**	**+2.1**
IZEF	**Zefreh**	**3.54**	**21**	*e*Pn	**Pn**	**10 52 24.0**	**+1.9**
IKLH	**Kolahrood**	**3.77**	**9**	*e*Pn	**Pn**	**10 52 27.6**	**+2.2**
ANAR	**Anarak**	**4.36**	**34**	*e*Pn	**Pn**	**10 52 34.9**	**+1.6**
BMDN	**Meydan**	**4.42**	**338**	*e*Pn	**Pn**	**10 52 35.4**	**+1.2**
IKMR	**Kamar-syah**	**4.45**	**332**	*e*Pn	**Pn**	**10 52 35.5**	**+1.2**
IKFM	**Kafar-mosalman**	**4.69**	**328**	*e*Pn	**Pn**	**10 52 38.8**	**+1.2**
IDOB	**Doab**	**4.76**	**332**	*e*Pn	**Pn**	**10 52 39.3**	**+0.4**
KHGB	**Koh Gabri**	**4.95**	**79**	*e*Pn	**Pn**	**10 52 43.6**	**+2.1**
JRN	**Qarnain Island**	**4.96**	**158**	*e*Pn	**Pn**	**10 52 44.8**	**+3.4**
HSAM	**Samen**	**4.99**	**338**	*e*Pn	**Pn**	**10 52 43.1**	**+1.0**
NGRK	**Negar Kerman**	**5.13**	**88**	*e*Pn	**Pn**	**10 52 46.4**	**+2.3**
NGRK				*e*		10 53 51.0	
TVBK	**TV Kerman**	**5.16**	**84**	*e*Pn	**Pn**	**10 52 46.3**	**+1.8**
GENO	**Geno**	**5.17**	**114**	*e*Pn	**Pn**	**10 52 46.5**	**+2.0**
GENO				*e*		10 53 50.3	
IQOM	**Qom**	**5.25**	**2**	*e*Pn	**Pn**	**10 52 47.0**	**+1.4**
IKOM	**Komasi**	**5.38**	**329**	*e*Pn	**Pn**	**10 52 48.2**	**+0.9**
HAGD	**Aghdareh**	**5.42**	**345**	*e*Pn	**Pn**	**10 52 49.9**	**+2.0**
IVRN	**Varamin**	**5.45**	**8**	*e*Pn	**Pn**	**10 52 49.9**	**+1.8**
IBND	**Bandar-abas**	**5.45**	**112**	*e*Pn	**Pn**	**10 52 49.6**	**+1.5**
IBZA	**Bozab**	**5.49**	**333**	*e*Pn	**Pn**	**10 52 49.7**	**+0.8**
SLWR	**Sila**	**5.55**	**172**	*e*Pn	**Pn**	**10 52 52.7**	**+3.2**
KCHF	**Cheshme Sefid,**	**5.68**	**326**	*e*Pn	**Pn**	**10 52 52.5**	**+1.0**
IALM	**Almabolaq**	**5.73**	**337**	*e*Pn	**Pn**	**10 52 53.1**	**+0.9**
KER	**Kermanshah**	**5.73**	**328**	*e*Pn	**Pn**	**10 52 53.1**	**+1.0**
CHMN	**Cheshme madani**	**5.83**	**86**	*e*Pn	**Pn**	**10 52 56.5**	**+2.8**
IHSB	**Hasanabad**	**5.85**	**3**	*e*Pn	**Pn**	**10 52 55.3**	**+1.6**
IRAZ	**Razeghan**	**5.85**	**353**	*e*Pn	**Pn**	**10 52 55.2**	**+1.3**

SHME	**Shamm**	**5.87**	**126**	*i* P	**Pn**	**10 52 54.4**	**+0.5**
SHME	SNR=7.0			S	**Sn**	**10 54 00.0**	**-1.0**
SHME	**Shamm**	**5.87**	**126**	*e*Pn	**Pn**	**10 52 55.8**	**+1.9**
GHWR	**Ruwais**	**5.89**	**162**	*e*Pn	**Pn**	**10 52 57.2**	**+3.1**
IGHG	**Ghaleghazi**	**5.96**	**324**	*e*Pn	**Pn**	**10 52 56.3**	**+0.9**
IVIS	**Veis**	**5.98**	**327**	*e*Pn	**Pn**	**10 52 56.1**	**+0.6**
ILAS	**Lasjerd**	**6.05**	**17**	*e*Pn	**Pn**	**10 52 58.8**	**+2.2**
BANOM	**Banah**	**6.06**	**126**	*i* P	**Pn**	**10 52 57.2**	**+0.7**
BANOM	SNR=45			S	**Sn**	**10 54 03.8**	**-1.9**
BANOM	**Banah**	**6.06**	**126**	*e*Pn	**Pn**	**10 52 57.8**	**+1.3**
IDMV	**Damavand**	**6.06**	**9**	*e*Pn	**Pn**	**10 52 58.0**	**+1.2**
TPRV	**Parvadeh(Tabas**	**6.07**	**54**	*e*Pn	**Pn**	**10 52 58.5**	**+1.8**
IMHD	**Mahdasht**	**6.08**	**359**	*e*Pn	**Pn**	**10 52 58.3**	**+1.4**
QABG	**Abgarm-Qazvin**	**6.20**	**350**	*e*Pn	**Pn**	**10 52 59.0**	**+0.4**
AJN	**Ajban**	**6.22**	**143**	*e*Pn	**Pn**	**10 53 02.2**	**+3.5**
IFIR	**Firoozkooh**	**6.25**	**14**	*e*Pn	**Pn**	**10 53 01.0**	**+1.6**
ILIN	**Lien**	**6.25**	**329**	*e*Pn	**Pn**	**10 53 00.8**	**+1.5**
NAZ	**Nazwa, Dubai**	**6.27**	**136**	*i* P	**Pn**	**10 53 01.3**	**+1.9**
NAZ	SNR=15 **Nazwa, Dubai**	**6.27**	**136**	*e*Pn	**Pn**	**10 53 01.8**	**+2.3**
MSFE	**Esma-Masafi**	**6.33**	**130**	*i* P	**Pn**	**10 53 01.1**	**+0.8**
MSFE	SNR=9.6 **Esma-Masafi**	**6.33**	**130**	*e*Pn	**Pn**	**10 53 01.8**	**+1.6**
IDHR	**Dehrash**	**6.34**	**325**	*e*Pn	**Pn**	**10 53 01.4**	**+0.8**
IANJ	**Anjilo**	**6.41**	**23**	*e*Pn	**Pn**	**10 53 02.7**	**+1.1**
FAQ	**Al Faqa, Dubai**	**6.41**	**138**	*e*Pn	**Pn**	**10 53 04.3**	**+2.9**
MDH	**Madha**	**6.46**	**130**	*i* P	**Pn**	**10 53 03.4**	**+1.4**
MDH	SNR=10.0 **Madha**	**6.46**	**130**	*e*Pn	**Pn**	**10 53 03.8**	**+1.8**
TNSJ	**Nastanj**	**6.57**	**47**	*e*Pn	**Pn**	**10 53 05.3**	**+1.7**
UOSS	**Minazif**	**6.64**	**133**	*i* P	**Pn**	**10 53 05.6**	**+1.0**
UOSS	SNR=12 **Minazif**	**6.64**	**133**	*e*Pn	**Pn**	**10 53 06.5**	**+1.9**
UOSS	**Minazif**	**6.64**	**133**		**Pn**	**10 53 05.7**	**+1.2**
UOSS				Sn	**Sn**	**10 54 17.2**	**-2.9**
HATD	**Hatta, Dubai**	**6.68**	**134**	*i* P	**Pn**	**10 53 06.6**	**+1.5**
HATD	SNR=11 **Hatta, Dubai**	**6.68**	**134**	*e*Pn	**Pn**	**10 53 07.5**	**+2.4**
IALA	**Alasht**	**6.69**	**14**	*e*Pn	**Pn**	**10 53 07.5**	**+2.1**
TKDS	**Koohdasht(Taba**	**6.70**	**52**	*e*Pn	**Pn**	**10 53 06.8**	**+1.5**
ASHO	**Ashiyiah**	**6.74**	**135**	*i* P	**Pn**	**10 53 07.2**	**+1.3**
ASHO	SNR=27 **Ashiyiah**	**6.74**	**135**	*e*Pn	**Pn**	**10 53 07.3**	**+1.3**
IPRN	**Peran**	**6.76**	**10**	*e*Pn	**Pn**	**10 53 09.0**	**+2.8**
IGZV	**Ghazvin**	**6.80**	**356**	*e*Pn	**Pn**	**10 53 08.2**	**+1.3**
QALM	**Alamut, Qazvin**	**6.83**	**359**	*e*Pn	**Pn**	**10 53 09.1**	**+1.8**
ALNE	**Al Ain**	**7.04**	**140**	*i* P	**Pn**	**10 53 11.7**	**+1.7**
ALNE	SNR=14 **Al Ain**	**7.04**	**140**	*e*Pn	**Pn**	**10 53 12.3**	**+2.3**
IGLO	**Ghaloghah**	**7.34**	**19**	*e*Pn	**Pn**	**10 53 16.2**	**+1.9**
SOHO	**SOHO**	**7.44**	**136**	*e*Pn	**Pn**	**10 53 16.5**	**+1.1**
ITEG	**Tejag**	**7.53**	**62**	*e*Pn	**Pn**	**10 53 18.5**	**+1.6**
RAYN	**Ar Rayn**	**7.70**	**220**		**Pn**	**10 53 19.5**	**+0.4**
RAYN				Sn	**Sn**	**10 54 44.1**	**-2.0**
UMZA	**Um Al Zommool**	**7.87**	**149**	*e*Pn	**Pn**	**10 53 23.0**	**+1.7**
NHDN	**Nehbandan**	**8.15**	**75**	*e*Pn	**Pn**	**10 53 27.9**	**+2.6**
IMND	**Minoodasht**	**8.55**	**25**	*e*Pn	**Pn**	**10 53 32.0**	**+1.3**
ISRB	**Sarab**	**8.63**	**343**	*e*Pn	**Pn**	**10 53 33.4**	**+1.4**
SBZV	**Sabzevar**	**8.85**	**38**	*e*Pn	**Pn**	**10 53 36.0**	**+1.0**
BIDO	**Bidbid**	**8.89**	**131**	*e*Pn	**Pn**	**10 53 36.0**	**+0.6**
IAZR	**Azarshahr**	**9.03**	**335**	*e*Pn	**Pn**	**10 53 38.1**	**+0.6**
WSAR	**Wadi Sarin**	**9.42**	**130**	Pn	**Pn**	**10 53 42.7**	**+0.1**
WSAR	1.5nm,0.3s,baz=316,sl

KBZ pmax pmax
comp=Z,67nm,1.0s
KIZK Mersin 15.59 301 *e*P **Pn 10 55 06.3 -0.4**
CSS Mathiatis 15.75 294 *e*P **Pn 10 55 08.6 -0.1**
CSS Mathiatis 15.75 294 Pn **Pn 10 55 08.9 +0.2**
CSS Mathiatis 15.75 294 **Pn 10 55 09.0 +0.2**
CSS IAmb IAmb 10 55 11.0
comp=Z,84nm,1.2s
KIV Kislovodsk 15.75 338 ⇑P **Pn 10 55 10.5 +1.7**
KIV Kislovodsk 15.75 338 *i* P **Pn 10 55 10.6 +1.7**
SNR=45
KIV Kislovodsk 15.75 338 *e*P **P 10 55 10.6 -2.1**
KIV Kislovodsk 15.75 338*c i*P **Pn 10 55 10.4 +1.7**
KIV *i* S **Sn 10 57 53.3 -10**
KIV pmax pmax
comp=Z,264nm,1.1s
KIV MLR MLR
comp=Z,542nm,15.0s
KIV Kislovodsk 15.75 338 **Pn 10 55 10.5 +1.7**
IKL Isikli 15.85 299 *e*P **Pn 10 55 09.5 -0.5**
TOKT Tokat 15.86 316 *e*P **Pn 10 55 09.9 -0.2**
KEBE Keben-Mersin 15.90 300 *e*P **Pn 10 55 10.7 -0.1**
DAMY Dhamar 16.09 203 **Pn 10 55 11.7 -1.8**
LEF Lefka 16.14 295 ⇑P **Pn 10 55 14.7 +1.0**
LEF Lefka 16.14 295 *e*P **Pn 10 55 14.4 +0.7**
KBL Kabul 16.20 68 P **Pn 10 55 13.8 -0.9**
KBL pmax pmax
comp=Z,44nm,1.4s
KBL Kabul 16.20 68 **Pn 10 55 13.8 -0.9**
YOZ Yozgat 16.22 312 *e*P **Pn 10 55 13.9 -1.0**
BERE Bereket-Mersin 16.24 299 *e*P **Pn 10 55 14.9 -0.3**
TEKE Tekeli-Mersin 16.26 298 *e*P **Pn 10 55 14.5 -0.7**
SOC Sochi 16.56 331*c i*P **Pn 10 55 18.0 -1.0**
SOC *e* 10 58 23.3
SOC pmax pmax
comp=Z,78nm,0.8s
SOC MLR MLR
comp=Z,1μm,11.0s
KVT Kavak 16.62 318 *e*P **Pn 10 55 20.5 +0.6**
GOF Gofitskoye 16.63 340⇑ *e*P **P 10 55 21.2 -1.1**
GOF pmax pmax
comp=Z,194nm,1.2s
SULT Sultanhani-AKS 16.74 305 *e*P **Pn 10 55 22.2 +0.8**
GAZI Gazipasa 16.90 298 *e*P **P 10 55 26.3 +0.9**
CORM Corum 16.96 313 *e*P **Pn 10 55 24.3 0.0**
SERE Sereflikochisa 17.04 308 *e*P **Pn 10 55 25.7 +0.4**
BR131 Keskin Array S 17.37 310 P **Pn 10 55 29.5 +0.1**
BR131 pmax pmax
comp=Z,22nm,0.9s
BR131 Keskin Array S 17.37 310 P **Pn 10 55 29.5 +0.1**
BRTR Keskin Array B 17.37 310 P **Pn 10 55 28.8 -0.7**
comp=Z,0.8nm,0.3s,baz=130,slow=12,SNR=32
BRTR Keskin Array B 17.37 310 *e*P **Pn 10 55 29.2 -0.2**
BRTR Keskin Array B 17.37 310 *i* P **Pn 10 55 29.7 +0.3**
BRTR pmax pmax
comp=Z,16nm,0.8s
DIKM Dikmen 17.44 318 ⇑P **P 10 55 32.7 +1.3**
DIKM Dikmen 17.44 318 *e*P **Pn 10 55 30.2 0.0**
KONT Konya--Tatoy 17.46 303 *e*P **Pn 10 55 30.0 -0.5**
KULU Kulu 17.47 307 *e*P **Pn 10 55 30.9 +0.2**
SOCY Socotra 17.56 170 **Pn 10 55 28.5 -3.3**
LADK Ladik-KONYA 17.56 304 *e*P **P 10 55 32.5 -0.3**
AFSR Afar-Bala (An 17.61 309 *e*P **Pn 10 55 32.2 -0.2**
CHGR Chuyangaron 17.64 54 P **Pn 10 55 31.3 -1.4**
BR231 Keskin MP Arra 18.00 309 P **Pn 10 55 37.5 +0.2**
ANTO Ankara 18.00 310 P **Pn 10 55 36.4 -0.8**
ANTO pmax pmax
comp=Z,48nm,1.0s
ANTO Ankara 18.00 310 P **Pn 10 55 36.4 -0.8**
ILGA Ilgaz 18.02 314 P **P 10 55 38.1 0.0**
LOD Lodumlu 18.04 310 *e*P **Pn 10 55 37.8 +0.2**
THW Thamme Wali 18.16 75 P **Pn 10 55 39.2 0.0**
KIZT Kizilcal 18.19 306 *e*P **P 10 55 41.6 +1.9**
ANN Anapa 18.53 329 *i* P **P 10 55 43.2 -0.1**
ANN *i* S **S 10 59 13.5 -0.7**
ANN pmax pmax
comp=Z,47nm,0.9s
ANN MLR MLR
comp=Z,587nm,11.0s
GAR Garm 18.60 55 P **P 10 55 43.6 -0.7**
KORT Korkueli 18.64 299 *e*P **Pn 10 55 48.0 +3.0**
AUSIV SIVRIHISAR 18.66 307 *e*P **Pn 10 55 45.6 +0.3**
SVRH Sivrihisar-ESK 18.68 307 *e*P **Pn 10 55 45.5 0.0**
ISP Isparta 18.77 301 *e*P **Pn 10 55 46.9 +0.3**
ISP Isparta 18.77 301 P **P 10 55 45.6 -0.6**
ISP pmax pmax
comp=Z,29nm,1.0s
ISP Isparta 18.77 301 P **P 10 55 45.6 -0.6**
ELL Elmali 18.90 298 P **P 10 55 47.5 -0.1**
ELL pmax pmax
comp=Z,177nm,1.1s
ELL Elmali 18.90 298 P **P 10 55 47.5 -0.1**
ELL IAmb IAmb 10 55 54.1
comp=Z,177nm,1.1s
CIFT Cifteler, Eski 18.96 306 *e*P **Pn 10 55 49.4 +0.5**
YUVA Yuva-Kibriscik 19.00 310 *e*P **Pn 10 55 49.7 +0.3**
SHUT Suhut-Afyon 19.01 303 *e*P **Pn 10 55 50.4 +0.9**
TAS Tashkent 19.01 47 P **Pn 10 55 49.1 -0.4**
TAS pmax pmax
comp=Z,133nm,1.0s
TAS Tashkent 19.01 47 P **Pn 10 55 49.0 -0.4**
TAS IAmb IAmb 10 55 56.6
comp=Z,132nm,1.0s
MDUB Mudurnu 19.37 309 *e*P **Pn 10 55 53.7 -0.1**
MDUB Mudurnu 19.37 309 P **Pn 10 55 53.6 -0.2**
ATD Arta Tunnel 19.45 204 P **P 10 55 54.9 +1.3**
baz=48,slow=8.4,SNR=6.9
ATD S **S 10 59 36.5 +3.2**
comp=Z,0.9nm,0.3s,baz=200,slow=22,SNR=1.4
ATD LR LR 11 04 04.2
comp=Z,1μm,20.0s,baz=1.0,slow=39
NIL Nilore 19.50 72 P **P 10 55 54.5 +0.4**
NIL pmax pmax
comp=Z,26nm,0.8s
NIL Nilore 19.50 72 P **P 10 55 54.5 +0.4**
FETY Fethiye 19.51 297 *e*P **P 10 55 53.3 -0.9**
SRCK Saricakaya, Es 19.56 308 *e*P **Pn 10 55 55.7 -0.3**
DALY Dalyan (Mula) 19.89 297 *e*P **Pn 10 56 00.1 +0.2**
TVSB Tavsanli 20.14 305 *e*P **P 10 56 01.9 +0.8**
CAVI Cavuskoy 20.17 307 *e*P Pn 10 56 02.4 -0.9
SIM Simferopol' 20.24 324 *e*P **P 10 56 02.9 +0.8**
SIM pmax pmax
comp=Z,40nm,1.0s
YER Yerkesik 20.26 298 *e*P Pn 10 56 06.7 +2.3
ADVT Abdulvahap 20.34 308 *e*P Pn 10 56 04.3 -0.9
SIMA Simav-Kutahya 20.34 304 *e*P **P 10 56 04.4 +1.1**
KULA Kula-Manisa 20.38 302 *e*P **P 10 56 04.6 +0.8**
MANT Manisa 20.45 302 P **P 10 56 05.4 +0.7**
HRT Hereke 20.56 309 *e*P **P 10 56 06.3 +0.7**
YLV Yalova 20.65 308 *e*P **P 10 56 07.3 +0.7**
SILT Sile 20.73 310 *e*P **P 10 56 03.7 -3.6**
KK31 Karatay Array 20.74 44 *i* P **P 10 56 08.1 +0.6**
KK31 Karatay Array 20.74 44 P **P 10 56 07.8 +0.3**
KK31 IAmb IAmb 10 56 12.9
comp=Z,47nm,1.1s
KKAR Karatay Array 20.74 44 P **P 10 56 08.1 +0.5**
KKAR pmax pmax
comp=Z,47nm,1.1s
KKAR Karatay Array 20.74 44 P **P 10 56 08.1 +0.5**
KKAR IAmb IAmb 10 56 12.9
comp=Z,47nm,1.1s
KARP Karpathos 20.80 293 P **P 10 56 09.0 +0.7**
KARP IAmb IAmb 10 56 16.2
comp=Z,78nm,0.9s
ISK Istanbul-Kandi 21.08 309 *e*P **P 10 56 10.8 -0.4**
DESE Dese 21.14 212 *e*P **P 10 56 12.7 +0.4**
DESE *e*PS **PcP 11 00 13.7 -4.6**
GCAM G?zelcaml? 21.22 299 *e*P **P 10 56 15.9 +3.3**
KCTX Karacabey (Bur 21.24 306 *e*P **P 10 56 13.5 +0.6**
BALB Balikesir 21.34 304 *e*P **P 10 56 14.7 +0.7**
AKTO Aktyubinsk 21.52 13 P **P 10 56 16.0 +0.2**
comp=Z,19nm,0.6s,baz=200,slow=11,SNR=50
AKTO S **S 11 00 10.5 -3.3**
comp=Z,0.7nm,0.3s,baz=350,slow=19,SNR=1.1
AKTO LR LR 11 06 12.2
comp=Z,419nm,21.5s,baz=297,slow=41
SLVT Silivri 21.73 308 *e*P **P 10 56 17.8 -0.4**
MRMT Marmara Adasi 21.90 306 *e*P **P 10 56 20.5 +0.4**
SANT Santorini 22.31 294 P **P 10 56 23.5 -0.9**
IDI Anoyia 22.60 291 P **P 10 56 28.8 +1.2**
comp=Z,34nm,0.9s,baz=100,slow=10,SNR=15
IDI Anoyia 22.60 291 ⇑P **P 10 56 28.4 +0.8**
IDI Anoyia 22.60 291 P **P 10 56 28.5 +1.0**

IDI IAmb IAmb 10 56 46.6
comp=Z,42nm,0.8s
VRH Novokhopyorsk 22.65 345 *e*P **P 10 56 27.0 -0.8**
VRH *e*S **S 11 00 30.4 -4.9**
VRH pmax pmax
comp=Z,260nm,1.0s
VRH smax smax
comp=N,550nm,1.3s
MANR Mangalia 22.71 315 ⇑P **P 10 56 28.3 -0.3**
EFOR EFORIE 22.82 315 ⇑P **P 10 56 30.0 +0.2**
KSH Kashi 22.88 58 P **P 10 56 27.6 -3.0**
KSH sP sP 10 56 36.6 -0.1
KSH PP **PnPn 10 56 52.8 -2.3**
KSH S S 11 00 28.3 -12
KSH SS **SnSn 11 01 09.0 -2.2**
KSH pmax pmax
comp=N,260nm,1.6s
KSH pmax pmax
comp=N,370nm,4.9s
KSH LR LR
comp=N,860nm,7.6s
KSH LR LR
comp=N,2μm,8.0s
KSH LR LR
comp=N,3μm,11.2s
PSN Preselentsi 22.89 314 *i* P **P 10 56 32.9 +2.4**
AAK Ala-Archa 23.03 49 P **P 10 56 33.2 +1.0**
comp=N,7.6nm,0.8s,baz=221,slow=11,SNR=26
AAK Ala-Archa 23.03 49*ce*P **P 10 56 33.3 +1.1**
AAK pmax pmax
comp=Z,37nm,1.7s
AAK Ala-Archa 23.03 49 P **P 10 56 33.8 +1.6**
NDI New Delhi 23.04 86 *e*P **P 10 56 30.0 -2.2**
VORD Divnogorie 23.05 341 *e*P **P 10 56 30.1 -1.9**
VORD *e*S **S 11 00 37.8 -4.5**
VORD pmax pmax
comp=Z,60nm,0.7s
VORD smax smax
comp=N,370nm,1.0s
ALN Alexandroupoli 23.11 306 P **P 10 56 32.7 0.0**
ALN pmax pmax
comp=Z,23nm,1.1s
ALN Alexandroupoli 23.11 306 P **P 10 56 32.7 0.0**
PRD Provadia 23.16 312 *i* P **P 10 56 35.2 +2.0**
TIRR Tirgusor 23.16 316 ⇑P **P 10 56 33.5 +0.3**
TIRR Tirgusor 23.16 316 ⇑P **P 10 56 33.5 +0.3**
TIRR Tirgusor 23.16 316 P **P 10 56 32.3 -0.9**
TIRR pmax pmax
comp=Z,77nm,0.9s
TIRR Tirgusor 23.16 316 P **P 10 56 32.3 -0.9**
NEF NEVSHA 23.27 312 *i* P **P 10 56 36.1 +1.7**
VSR Storozhevoye 23.31 341 *e*P **P 10 56 33.4 -1.3**
VSR *e*S **S 11 00 42.0 -4.6**
VSR pmax pmax
comp=Z,80nm,1.1s
VSR smax smax
comp=N,540nm,1.1s
ICOR Ion Corvin 23.35 315 ⇑P **P 10 56 37.0 +1.8**
TOPG Topolog 23.40 317 ⇑P **P 10 56 36.1 +0.4**
HARR Harsova 23.57 316 ⇑P **P 10 56 38.2 +0.9**
CFR Carcaliu 23.71 317 ⇓P **P 10 56 38.7 0.0**
RAZG Razgrad 23.90 312 ⇑P **P 10 56 41.0 +0.4**
SZH Strazhica 24.14 311 *i* P **P 10 56 43.3 +0.5**
RZN Rozhen 24.33 307 *i* P **P 10 56 45.3 +0.5**
KIS Kishinev 24.38 322 *e*P **P 10 56 45.0 0.0**
comp=N,180nm,8.0s
KIS *e*S **S 11 01 05.0 +1.0**
comp=N,600nm,8.0s
KIS *e*SS **SnSn 11 01 58.0 +10**
KIS *e*L L 11 03 42.0
KIS LRM MLR 11 08 36.0
comp=N,500nm,14.0s
KIS Kishinev 24.38 322 *e*P **P 10 56 45.0 0.0**
KIS *i* 10 56 51.0
KIS *e*S **S 11 01 05.0 +1.0**
KIS *e*SS **SnSn 11 01 58.0 +10**
KIS pmax pmax
comp=Z,180nm,1.6s
KIS smax smax
comp=N,600nm,8.0s
KIS MLR MLR
comp=Z,500nm,14.0s
LPSR Galich'ya Gora 24.62 342 *e*P **P 10 56 46.4 -0.7**
LPSR *e*S **S 11 01 08.0 +0.3**
LPSR pmax pmax
comp=Z,110nm,1.2s
LPSR smax smax
comp=E,470nm,1.4s
GHRR 24.62 318 ⇑P **P 10 56 48.3 +1.1**
KDJ Kajisay 24.64 52 P **P 10 56 47.1 -0.5**
KDJ pmax pmax
comp=Z,16nm,1.3s
KDJ Kajisay 24.64 52 P **P 10 56 47.1 -0.5**
VASR Vaslui 24.74 320 ⇑P **P 10 56 49.3 +1.1**
SECR 24.89 315 ⇑P **P 10 56 50.4 +0.8**
VRI Vrincioaia 24.92 317 ⇑P **P 10 56 51.3 +1.4**
TARG Taragay, Kyrgy 24.93 54 P **P 10 56 48.9 -1.5**
MMB Musomiste 24.98 306 *i* P **P 10 56 51.2 +0.6**
PGB Panagyurishte 25.03 308 *i* P **P 10 56 52.1 +1.1**
PLVB Pleven 25.05 310 ⇑P **P 10 56 53.1 +2.0**
MLR Muntele Rosu 25.19 316 P **P 10 56 54.3 +1.9**
comp=Z,48nm,1.0s,baz=53,slow=1.3,SNR=52
MLR Muntele Rosu 25.19 316 ⇓P **P 10 56 54.4 +1.9**
MLR Muntele Rosu 25.19 316 P **P 10 56 54.4 +1.9**
MLR IAmb IAmb 10 56 57.1
comp=Z,52nm,0.9s
ITM Ithomi 25.24 295 P **P 10 56 54.0 +1.2**
ITM IAmb IAmb 10 57 04.2
comp=Z,39nm,1.3s
AGG Agios Georgios 25.28 299 P **P 10 56 53.2 0.0**
AGG pmax pmax
comp=Z,52nm,1.0s
AGG Agios Georgios 25.28 299 P **P 10 56 53.2 0.0**
AGG IAmb IAmb 10 56 55.9
comp=Z,52nm,1.0s
TESR Tescani 25.31 319 ⇑P **P 10 56 54.6 +1.2**
HUMR Humele 25.32 313 ⇑P **P 10 56 55.5 +2.0**
SORM Soroca 25.34 323 ⇑P **P 10 56 53.4 -0.2**
LIT Litokhoron 25.43 302 P **P 10 56 54.7 +0.2**
LIT pmax pmax
comp=Z,31nm,0.9s
LIT Litokhoron 25.43 302 P **P 10 56 54.7 +0.2**
LIT IAmb IAmb 10 56 57.3
comp=Z,31nm,0.9s
MTUR Matau 25.60 315 ⇑P **P 10 56 58.5 +2.3**
PRZ Przheval'sk 25.61 52 P **P 10 56 58.5 +2.1**
PRZ pmax pmax
comp=Z,50nm,1.5s
PRZ Przheval'sk 25.61 52 P **P 10 56 58.5 +2.1**
PRZ IAmb IAmb 10 56 59.7
comp=Z,50nm,1.4s
MPEP Malo Peshtene 25.63 310 *i* P **P 10 56 57.8 +1.5**
VTS Vitosha 25.69 308 ⇑P **P 10 56 58.3 +1.2**
VTS Vitosha 25.69 308 *i* P **P 10 56 58.0 +0.9**
VTS Vitosha 25.69 308 P **P 10 56 58.3 +1.2**
VTS pmax pmax
comp=Z,15nm,1.0s
VTS Vitosha 25.69 308 P **P 10 56 58.3 +1.2**
VAY Valandovo 25.72 305 *i* P **P 10 56 58.2 +1.0**
VAY Valandovo 25.72 305 *i* P **P 10 56 58.2 +1.0**
DOPR Dopca 25.77 316 ⇑P **P 10 56 58.9 +1.3**
BIZ Bicaz 25.86 319 ⇑P **P 10 56 59.0 +0.6**
ARR Arges 25.93 315 ⇑P **P 10 57 00.3 +1.1**
PRAR RASCA 26.03 320 ⇓P **P 10 57 00.7 +0.8**
STIP Stip 26.11 305 *i* P **P 10 57 00.5 -0.2**
STIP Stip 26.11 305 *i* P **P 10 57 00.5 -0.2**
FNA Florina 26.43 303 P **P 10 57 04.3 +0.6**
FNA pmax pmax
comp=Z,32nm,0.9s
FNA Florina 26.43 303 P **P 10 57 04.3 +0.6**
FNA IAmb IAmb 10 57 07.4
comp=Z,32nm,0.9s
LOT Lotru 26.51 314 ⇑P **P 10 57 05.5 +1.1**
SRE Strehaia 26.52 312 ⇓P **P 10 57 05.0 +0.7**
AKASG Malin Array Be 26.61 328 P **P 10 57 04.6 -0.5**
comp=Z,32nm,0.8s,baz=133,slow=8.8,SNR=122
AKASG S **S 11 01 36.5 -2.9**
comp=Z,0.5nm,0.5s,baz=131,slow=20,SNR=1.5
AKASG Malin Array Be 26.61 328 *i* P **P 10 57 04.9 -0.2**
AKASG pmax pmax
comp=Z,32nm,0.8s
AKBB Malin Array Si 26.61 328*ce*P **P 10 57 04.7 -0.4**
AKBB Malin Array Si 26.61 328 P **P 10 57 04.9 -0.2**
SKO Skopje 26.73 306 *i* P **P 10 57 04.9 +1.4**
SKO Skopje 26.73 306 *i* P **P 10 57 07.7 +1.4**
BURAR Bucovina Array 26.74 319 ⇑P **P 10 57 07.8 +1.4**
BUR08 Bucovina Ar. S 26.76 319 P **P 10 57 07.6 +0.9**
BUR08 IAmb IAmb 10 57 24.1
comp=Z,21nm,0.9s
OHR Ohrid 26.94 303 *i* P **P 10 57 09.3 +1.1**
OHR Ohrid 26.94 303 *i* P **P 10 57 09.3 +1.1**
ARCR ARCALIA 26.95 318 ⇑P **P 10 57 09.8 +1.5**
GZR Gura Zlata 27.11 313 ⇑P **P 10 57 10.7 +1.0**
HERR Herculane 27.12 312 ⇑P **P 10 57 11.4 +1.6**
ARU Arti 27.38 9 P **P 10 57 12.6 +0.6**
comp=Z,0.9nm,0.3s,baz=186,slow=8.9,SNR=14
ARU Arti 27.38 9*c i*P **P 10 57 12.7 +0.7**
ARU 10 57 56.8
ARU PPP PPP 10 58 07.1
ARU 11 00 31.1
ARU S **S 11 01 56.0 +4.6**
ARU SS **SnSn 11 03 10.7 +10**
ARU pmax pmax
comp=Z,29nm,1.4s
ARU MLR MLR
comp=Z,763nm,16.0s
ARU Arti 27.38 9 P **P 10 57 12.7 +0.7**
ARU IAmb IAmb 10 57 25.4
comp=Z,35nm,1.2s
BRVK Borovoye 27.45 26*ce*P **P 10 57 14.2 +1.5**
BRVK pmax pmax
comp=Z,29nm,1.7s
BRVK Borovoye 27.45 26 P **P 10 57 11.9 -0.8**
BVAR Borovoye Array 27.46 26 P **P 10 57 13.7 +0.9**
comp=Z,11nm,0.6s,baz=218,slow=7.0,SNR=64
BVAR PcP **PcP 11 00 31.5 +0.5**
comp=Z,1.5nm,0.5s,baz=230,slow=3.6,SNR=2.7
OBN Obninsk 27.50 342 P **P 10 57 12.0 -1.0**
comp=Z,8.4nm,0.4s,baz=86,slow=1.8,SNR=4.9
OBN Obninsk 27.50 342 *i* P **P 10 57 11.7 -1.3**
OBN pmax pmax
comp=Z,35nm,1.0s
OBN Obninsk 27.50 342 P **P 10 57 13.1 +0.1**
MDVR Moldovita 27.54 311 ⇑P **P 10 57 14.5 +0.9**
TIR Tirane 27.68 303 ⇑P **P 10 57 17.0 +2.2**
TIR Tirane 27.68 303 P **P 10 57 14.4 -0.5**
TIR pmax pmax
comp=Z,40nm,0.9s
TIR Tirane 27.68 303 P **P 10 57 14.4 -0.5**
TIR IAmb IAmb 10 57 19.9
comp=Z,40nm,0.9s
DRGR 27.79 316 ⇑P **P 10 57 17.1 +1.3**
MOS Moscow 27.79 344 *e*P **P 10 57 15.9 +0.3**
MOS *e* 10 58 14.7
MOS pmax pmax
comp=Z,78nm,1.1s
SVE Sverdlovsk 28.09 11 *e*P **P 10 57 19.5 +1.2**
SVE MLR MLR
comp=Z,895nm,16.0s
SIRR Siria 28.19 314 ⇑P **P 10 57 21.3 +1.8**
PDG Podgorica 28.41 305 ⇑P **P 10 57 21.6 +0.3**
PDG Podgorica 28.41 305 P **P 10 57 19.6 -1.7**
DIVS Divibare 28.43 309 P **P 10 57 20.2 -1.4**
DIVS IAmb IAmb 10 57 27.1
comp=Z,23nm,1.4s
TRPA Tarpa 28.54 318 ⇓P **P 10 57 23.6 +1.2**
KOLN Koldanda 28.75 86 *e*P **P 10 57 25.2 +0.4**
comp=Z,12nm,0.4s
DANN Dangsing 28.78 84 *e*P **P 10 57 26.0 +0.9**
comp=Z,69nm,0.8s
UZH Uzhgorod 28.94 319*ce*P **P 10 57 26.3 +0.3**
UZH *e* 10 57 37.3
UZH *e*S **S 11 02 13.4 -2.7**
UZH *e*SS **SnSn 11 03 37.5 -1.3**
UZH *e*SSS SSS 11 03 57.5
KIRV Kirov 29.01 358 P **P 10 57 25.2 -1.2**
comp=Z,25nm,0.7s,baz=160,slow=5.5,SNR=10
KURBB Kurchatov Arra 29.55 37 P **P 10 57 32.9 +1.5**
comp=Z,18nm,0.9s,baz=238,slow=9.3,SNR=63
KURBB PcP **PcP 11 00 36.2 0.0**
comp=Z,0.6nm,0.6s,baz=232,slow=3.4,SNR=4.1
TIP Timpagrande 29.57 298 ⇑P **P 10 57 31.9 +0.2**
TIP Timpagrande 29.57 298 P **P 10 57 32.1 +0.4**
TIP IAmb IAmb 10 57 34.8
comp=Z,28nm,1.3s
GKN Gorkha 29.60 85 *e*P **P 10 57 32.7 +0.4**
comp=Z,23nm,0.4s
MAKZ Makanchi 29.64 46 P **P 10 57 33.1 +0.8**
MAKZ pmax pmax
comp=Z,14nm,1.3s
MAKZ Makanchi 29.64 46 P **P 10 57 33.0 +0.8**
KURK Kurchatov 29.65 37*ce*P **P 10 57 34.0 +1.8**
KURK pmax pmax
comp=Z,39nm,1.0s
KURK Kurchatov 29.65 37 P **P 10 57 34.0 +1.8**
KURK IAmb IAmb 10 57 35.2
comp=Z,38nm,1.1s
MK31 Makanchi Array 29.84 46 P **P 10 57 34.1 +0.1**
MK31 pmax pmax
comp=Z,4.0nm,1.0s
MK31 Makanchi Array 29.84 46 P **P 10 57 34.0 +0.1**
MKAR Makanchi Array 29.84 46 P **P 10 57 34.1 +0.1**
comp=Z,2.0nm,0.6s,baz=238,slow=8.3,SNR=24
MKAR PcP **PcP 11 00 37.3 +0.3**
comp=Z,1.1nm,0.6s,baz=236,slow=2.4,SNR=2.6
MKAR LR LR 11 11 11.4
comp=Z,1μm,18.0s,baz=316,slow=40
KECS Kecovo 29.91 318 *e*P **P 10 57 35.9 +1.3**
KECS pmax pmax
comp=Z,9.0nm,0.9s
KECS Kecovo 29.91 318 *e*P **P 10 57 35.9 +1.3**
PSZ Piszkesteto 30.00 316 P **P 10 57 34.8 -0.8**
PSZ pmax pmax
comp=Z,7.0nm,1.0s
PSZ Piszkesteto 30.00 316 P **P 10 57 34.8 -0.8**
DMN Daman 30.09 85 *e*P **P 10 57 37.2 +0.5**
comp=Z,26nm,0.5s
KKN Kakani 30.20 85 *e*P **P 10 57 38.1 +0.4**
comp=Z,0.8nm,0.4s
PKIN Phulchoki 30.35 85 *e*P **P 10 57 39.3 +0.3**
comp=Z,32nm,0.6s
PKI Pulchoki 30.36 85 *e*P **P 10 57 39.3 +0.1**
comp=Z,143nm,1.3s
GUN Gumba 30.70 84 *e*P **P 10 57 42.8 +0.6**
comp=Z,44nm,0.6s
LANS Liptovska Anna 30.82 318 *e*P **P 10 57 44.1 +1.4**
LANS pmax pmax
comp=Z,22nm,1.2s
LANS Liptovska Anna 30.82 318 *e*P **P 10 57 44.1 +1.4**
VYHS Vyhne 30.89 317 *e*P **P 10 57 44.1 +0.8**
VYHS pmax pmax
comp=Z,9.0nm,1.1s
VYHS Vyhne 30.89 317 *e*P **P 10 57 44.1 +0.8**
JIRN Jiri 31.02 85 *e*P **P 10 57 45.3 +0.2**
comp=Z,30nm,0.6s
OJC Ojcow 31.14 320 *e*P **P 10 57 46.1 +0.6**
OJC Ojcow 31.14 320 P **P 10 57 45.5 0.0**
OJC pmax pmax
comp=Z,34nm,0.9s
OJC Ojcow 31.14 320 P **P 10 57 45.5 0.0**
IIGN Ignalina 31.19 333 *e*P **P 10 57 46.5 +0.7**
VAE Valguarnera 31.22 294 P **P 10 57 46.6 +0.2**
comp=Z,14nm,0.4s,baz=226,slow=20,SNR=1.4
ISAL Salakas 31.38 333 *e*P **P 10 57 48.2 +0.7**
PAOL Paolisi 31.52 301 P **P 10 57 48.5 -0.4**
PAOL IAmb IAmb 10 57 51.2
comp=Z,33nm,1.3s
RAMN Ramite 31.53 86 *e*P **P 10 57 49.0 -0.4**
comp=Z,23nm,0.7s
SUW Suwalki 31.58 328 *e*P **P 10 57 49.1 -0.1**
SUW Suwalki 31.58 328 P **P 10 57 48.9 -0.4**
SUW pmax pmax
comp=Z,96nm,1.0s
SUW Suwalki 31.58 328 P **P 10 57 48.9 -0.4**
JAVC Velka Javorina 31.75 317 *e*P **P 10 57 52.2 +1.3**
SMOL Smolenice 31.75 316 *e*P **P 10 57 51.8 +0.9**
SMOL pmax pmax
comp=Z,9.0nm,1.1s
SMOL Smolenice 31.75 316 *e*P **P 10 57 51.8 +0.9**
MODS Modra-Piesok 31.79 316 *e*P **P 10 57 51.2 0.0**
MODS Modra-Piesok 31.79 316 *e*P **P 10 57 51.2 0.0**
OKC Ostrava-Krasne 31.90 319 AMS AMS 11 13 00.0
comp=Z,400nm,11.6s
BOJS Bojanci 32.07 310 *i* P **P 10 57 54.4 +0.7**
CORL Corleone 32.13 295 P **P 10 57 54.5 +0.1**
KLMR Klimovskoe 32.17 350 *e*P **P 10 57 52.7 -1.7**
KLMR pmax pmax
comp=Z,82nm,1.1s

KLMR Klimovskoe 32.17 350 *e*P **P** **10 57 52.7 -1.7**
KLMR AMP 10 57 54.9
comp=Z,82nm,1.1s
INTR Introdacqua 32.18 303 P **P** **10 57 54.2 -0.6**
INTR IAmb IAmb 10 58 00.7
comp=Z,12nm,0.7s
PABE Paberze 32.22 331 *e*P **P** **10 57 55.2 +0.4**
MORC Moravsky Berou 32.22 318 *e*P **P** **10 57 55.0 0.0**
MORC Moravsky Berou 32.22 318 ⇑P **P** **10 57 55.6 +0.5**
MORC Moravsky Berou 32.22 318 P **P** **10 57 54.5 -0.6**
MORC pmax pmax
comp=Z,29nm,1.2s
MORC Moravsky Berou 32.22 318 P **P** **10 57 54.5 -0.6**
MORC IAmb IAmb 10 57 56.6
comp=Z,30nm,1.2s
CONA Conrad Observa 32.49 314 *e*P **P** **10 57 57.6 +0.2**
comp=Z,14nm,1.5s
WMQ Urumqi 32.50 54 *e*P P 10 58 02.4 +4.8
WMQ pP sP 10 58 05.6 +1.8
WMQ sP pP 10 58 09.5 +7.5
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ pmax pmax
comp=Z,110nm,5.1s
WMQ LR LR
comp=Z,580nm,21.5s
WMQ LR LR
comp=Z,620nm,13.9s
WMQ LR LR
comp=Z,710nm,26.1s
VRAC Vranov 32.58 317 P **P** **10 57 58.5 +0.4**
comp=Z,11nm,0.9s,baz=113,slow=8.0,SNR=16
VRAC Vranov 32.58 317 *e*P **P** **10 57 58.0 -0.1**
KRUC Moravsky 32.60 316 *e*P **P** **10 57 58.4 +0.1**
LJU Ljubljana 32.72 310 *i*P **P** **10 58 00.4 +1.0**
NRCA Norcia 32.91 304 P **P** **10 58 00.8 -0.3**
NRCA IAmb IAmb 10 58 03.4
comp=Z,14nm,0.8s
KMBO Kilima Mbogo 33.19 205 LR LR 11 12 21.8
comp=Z,642nm,20.7s,baz=282,slow=38
VSU Vasula 33.30 337 *e*P **P** **10 58 03.9 -0.4**
OSTC Ostas 33.33 319 *e*P **P** **10 58 05.3 +0.6**
OSTC AMS AMS 11 15 20.0
comp=Z,400nm,14.5s
KSP Ksiaz 33.41 319 *e*P **P** **10 58 05.8 +0.4**
MURB Monte Urbino 33.42 305 P **P** **10 58 06.0 +0.4**
UPC Upice 33.43 319 *e*P **P** **10 58 06.0 +0.5**
UPC MLR MLR
comp=Z,300nm,16.4s
UPC Upice 33.43 319 *e*P **P** **10 58 06.0 +0.5**
UPC AMS AMS 11 15 50.0
comp=Z,300nm,16.4s
CHVC Chvalec 33.44 319 *e*P **P** **10 58 06.2 +0.6**
MOA Molln 33.46 313 *e*P **P** **10 58 06.4 +0.5**
comp=Z,13nm,1.0s,SNR=7.3
MYKA Terra Mystica 33.48 311 *e*P **P** **10 58 07.5 +1.4**
comp=Z,2.0nm,0.5s
KBA Koelnbreinsper 33.81 312 *e*P **P** **10 58 09.7 +0.7**
comp=Z,22nm,1.4s,SNR=10
GOPC GO Pecny, Ondr 33.90 317 *e*P **P** **10 58 10.2 +0.5**
GOPC MLR MLR
comp=Z,400nm,18.4s
GOPC GO Pecny, Ondr 33.90 317 *e*P **P** **10 58 10.2 +0.5**
GOPC AMS AMS 11 14 50.0
comp=Z,400nm,18.4s
STAL STALIGIAL 33.99 310 P **P** **10 58 10.0 -0.6**
STAL IAmb IAmb 10 58 11.7
comp=Z,24nm,1.3s
PRU Pruhonice 34.08 317 AMS AMS 11 15 20.0
comp=Z,500nm,15.9s
DGZ Jazzator, Alta 34.14 44 *i*P **P** **10 58 13.3 +1.4**
DGZ pmax pmax
comp=Z,16nm,1.6s
GEC2 GERESS Array S 34.16 315 *e*P **P** **10 58 11.6 -0.5**
comp=Z,6.0nm,1.1s,baz=112,slow=8.7
GEC2 GERESS Array S 34.16 315 P **P** **10 58 11.3 -0.8**
GERES GERESS Array B 34.16 315 P **P** **10 58 10.3 -1.7**
comp=Z,0.7nm,0.4s,baz=116,slow=7.6,SNR=11
GERES PcP **PcP** **11 00 48.1 -0.8**
comp=Z,0.4nm,0.2s,baz=102,slow=4.1,SNR=1.7
ABTA Abfaltersbach 34.26 311 *e*P **P** **10 58 13.2 +0.3**
comp=Z,16nm,1.4s
PVCC Panska Ves 34.27 318 AMS AMS 11 16 20.0
comp=Z,400nm,12.2s
KHC Kasperske Hory 34.34 315 *ce*P **P** **10 58 13.8 +0.3**
KHC pmax pmax
comp=Z,35nm,1.3s
KHC Kasperske Hory 34.34 315 *e*P **P** **10 58 13.9 +0.4**
KHC *ex* x 10 58 43.5
KHC AMS AMS 11 16 20.0
comp=Z,400nm,13.8s
KHC Kasperske Hory 34.34 315 P **P** **10 58 12.1 -1.4**
SLIT Slitere, Latvi 34.34 333 *e*P **P** **10 58 12.7 -0.6**
RJOB Jochberg 34.37 313 *e*P **P** **10 58 12.2 -1.5**
comp=Z,9.7nm,1.1s,baz=112,slow=8.7
CASP Castiglione de 34.53 303 P **P** **10 58 15.7 +0.4**
CASP IAmb IAmb 10 58 16.6
comp=Z,16nm,1.1s
ZAA0 Zalesovo Array 34.60 36 P **P** **10 58 16.3 +0.7**
ZALV Zalesovo Beam 34.60 36 P **P** **10 58 15.5 -0.1**
comp=Z,29nm,1.0s,baz=246,slow=9.3,SNR=40
ZALV LR LR 11 14 30.3
comp=Z,440nm,19.2s,baz=312,slow=40
ZALV Zalesovo Beam 34.60 36 *i*P **P** **10 58 16.6 +1.0**
ZALV pmax pmax
comp=Z,29nm,0.9s
CTI Castel Tesino 34.65 309 P **P** **10 58 16.6 +0.3**
CTI pmax pmax
comp=Z,21nm,1.3s
CTI Castel Tesino 34.65 309 P **P** **10 58 16.6 +0.3**
CTI IAmb IAmb 10 58 17.8
comp=Z,21nm,1.3s
ZCCA Zocca 34.73 306 P **P** **10 58 17.8 +0.8**
WET Wettzell 34.77 315 *e*P **P** **10 58 16.5 -0.8**
comp=Z,8.1nm,1.1s,baz=112,slow=8.7
BRG Berggiesshubel 34.78 318 *i*P **P** **10 58 17.2 0.0**
comp=Z,17nm,1.2s
BRG Berggiesshubel 34.78 318 *e*P **P** **10 58 17.0 -0.2**
comp=Z,17nm,1.2s,baz=112,slow=8.7
WTTA Wattenberg 34.98 311 *e*P **P** **10 58 19.3 +0.1**
comp=Z,7.9nm,0.7s,SNR=7.8
WATA Walderalm 35.04 311 *e*P **P** **10 58 19.5 -0.2**
comp=Z,27nm,1.2s,SNR=6.8
VLC Villacollemand 35.11 306 P **P** **10 58 19.7 -0.5**
VLC IAmb IAmb 10 58 34.3
comp=Z,15nm,0.9s
FBE Freiberg 35.14 318 *e*P **P** **10 58 20.6 +0.3**
comp=Z,42nm,1.9s,baz=112,slow=8.7
SQTA Sankt Quirin 35.25 311 *e*P **P** **10 58 21.2 -0.2**
comp=Z,12nm,0.6s,SNR=5.7
KEST Kesra 35.27 291 P **P** **10 58 22.2 +0.4**
comp=Z,9.8nm,0.9s,baz=142,slow=2.7,SNR=4.9
KEST Kesra 35.27 291 P **P** **10 58 21.4 -0.4**
KEST IAmb IAmb 10 58 30.2
comp=Z,21nm,1.1s
VSL Villasalto 35.29 298 P **P** **10 58 22.0 +0.2**
VSL IAmb IAmb 10 58 24.6
comp=Z,26nm,1.0s
MOTA Moosalm 35.35 311 *e*P **P** **10 58 22.0 -0.4**
comp=Z,5.5nm,0.3s
ROTZ Rotzenmuhle 35.40 316 *e*P **P** **10 58 23.0 +0.4**
comp=Z,41nm,1.7s,baz=112,slow=8.7
NKC Novy Kostel 35.42 317 AMS AMS 11 17 30.0
comp=Z,400nm,15.8s
FUR Furstenfeldbru 35.47 313 *e*P **P** **10 58 22.8 -0.5**
comp=Z,47nm,0.9s,baz=112,slow=8.7
WERN Wernitzgruen 35.48 317 *e*P **P** **10 58 23.6 +0.3**
comp=Z,15nm,1.1s,baz=112,slow=8.7
CLL Collm 35.49 318 *e*P **P** **10 58 24.3 +1.0**
comp=Z,38nm,1.2s,baz=112,slow=8.7
CLL Collm 35.49 318 P **P** **10 58 22.5 -0.9**
CLL pmax pmax
comp=Z,35nm,1.2s
CLL Collm 35.49 318 P **P** **10 58 22.5 -0.9**
CLL IAmb IAmb 10 58 26.4
comp=Z,35nm,1.2s
FETA Feichten 35.51 311 *e*P **P** **10 58 23.7 -0.1**
comp=Z,24nm,1.4s,SNR=12
GUNZ Gunzen 35.53 317 *e*P **P** **10 58 24.2 +0.4**
comp=Z,18nm,1.7s,baz=112,slow=8.7
RUE Ruedersdorf 35.54 321 *e*P **P** **10 58 23.6 0.0**
comp=Z,68nm,0.9s,baz=112,slow=8.7
TMCR Tamitsa 35.54 350 *e*P **P** **10 58 23.4 -0.2**
TMCR pmax pmax
comp=Z,45nm,1.0s
RETA Reutte 35.61 311 *e*P **P** **10 58 23.3 -1.2**
comp=Z,7.0nm,0.9s
MBAR Mbarara 35.63 216 P **P** **10 58 26.9 +1.8**
comp=Z,6.0nm,0.6s,baz=55,slow=8.2,SNR=6.6
PLN Plauen 35.68 317 *e*P **P** **10 58 24.8 -0.2**
comp=Z,7.9nm,1.4s,baz=112,slow=8.7
FUORN Ofenpass-Fuorn 35.72 310 P **P** **10 58 23.9 -1.8**
FIA1 FINESS Array S 35.82 340 P **P** **10 58 25.2 -0.9**
FIA1 IAmb IAmb 10 58 26.8
comp=Z,22nm,1.4s
FINES FINESS Array B 35.82 340 P **P** **10 58 25.0 -1.1**
comp=Z,3.3nm,0.6s,baz=144,slow=8.7,SNR=15
FINES FINESS Array B 35.82 340 *i*P **P** **10 58 25.3 -0.7**
FINES pmax pmax
comp=Z,3.0nm,0.6s
GRA1 Grafenberg Arr 35.98 315 P **P** **10 58 27.5 -0.1**
GRA1 IAmb IAmb 10 58 28.9
comp=Z,20nm,1.0s
GRF Grafenberg Arr 35.98 315 *e*P **P** **10 58 27.6 0.0**
baz=112,slow=8.7
GRF Grafenberg Arr 35.98 315 P **P** **10 58 27.5 0.0**
GRF pmax pmax
comp=Z,20nm,1.0s
DAVOX Davos/Dischmat 36.01 310 P **P** **10 58 28.1 0.0**
comp=Z,2.1nm,0.4s,baz=85,slow=5.0,SNR=4.8
MOX Moxa 36.06 317 *e*P **P** **10 58 28.2 -0.1**
comp=Z,17nm,1.5s,baz=112,slow=8.7
UBR Ueberruh 36.09 312 *e*P **P** **10 58 27.7 -0.9**
baz=112,slow=8.7
DAVA Damuels 36.14 311 *e*P **P** **10 58 28.9 -0.3**
comp=Z,19nm,0.8s,SNR=12
BSD Bornholm Skovb 36.17 325 ⇑*i*P **P** **10 58 27.9 -1.2**
BSD pmax pmax
comp=Z,56nm,0.8s
BSD Bornholm Skovb 36.17 325 ⇑*i*P **P** **10 58 27.9 -1.2**
comp=Z,56nm,0.8s
NEUB Neuenburg 36.17 318 *e*P **P** **10 58 29.2 +0.1**
comp=Z,96nm,2.2s,baz=112,slow=8.7
TUE Stuetta 36.30 309 P **P** **10 58 30.0 -0.6**
SHL Shillong 36.47 86 P **P** **10 58 31.4 -0.8**
SHL pmax pmax
comp=Z,19nm,1.1s
SHL Shillong 36.47 86 P **P** **10 58 31.4 -0.8**
SHL IAmb IAmb 10 58 31.6
comp=Z,19nm,1.1s
RGN Rugen 36.70 324 *e*P **P** **10 58 34.2 +0.6**
comp=Z,122nm,1.2s,baz=112,slow=8.7
RGN Rugen 36.70 324 P **P** **10 58 33.8 +0.1**
ASSE Asse, Remlinge 37.15 319 *e*P **P** **10 58 37.7 +0.3**
comp=Z,22nm,1.2s,baz=112,slow=8.7
CLZ Clausthal 37.22 318 *e*P **P** **10 58 38.6 +0.4**
comp=Z,68nm,1.4s,baz=112,slow=8.7
GTTG Gottingen 37.35 318 *e*P **P** **10 58 39.7 +0.5**
comp=Z,33nm,1.4s,baz=112,slow=8.7
NRDL Niedersach Rie 37.60 319 *e*P **P** **10 58 42.4 +1.2**
comp=Z,110nm,1.2s,baz=112,slow=8.7
SENIN Lac Senin/Sane 37.66 309 P **P** **10 58 41.8 -0.5**
BNI Bardonecchia 37.87 306 P **P** **10 58 43.2 -0.7**
BNI pmax pmax
comp=Z,31nm,1.1s
BNI Bardonecchia 37.87 306 P **P** **10 58 43.2 -0.7**
BNI IAmb IAmb 10 58 45.9
comp=Z,31nm,1.1s
BSEG Bad Segeberg 38.03 321 *e*P **P** **10 58 45.5 +0.5**
comp=Z,56nm,1.2s,baz=112,slow=8.7
RETH Rethem/Aller, 38.12 319 *e*P **P** **10 58 46.7 +1.1**
comp=Z,85nm,1.2s,baz=112,slow=8.7
ECH Echery 38.14 312 P **P** **10 58 45.5 -0.5**
ECH pmax pmax
comp=Z,11nm,0.9s
ECH Echery 38.14 312 P **P** **10 58 45.5 -0.5**
SKMB Sankelmark Bun 38.82 322 *e*P **P** **10 58 54.4 +2.9**
baz=112,slow=8.7
IBBN Ibbenburen 38.89 318 *e*P **P** **10 58 53.3 +1.1**
comp=Z,70nm,1.2s,baz=112,slow=8.7
BUG Bochum--Univer 38.91 317 *e*P **P** **10 58 53.6 +1.3**
comp=Z,24nm,1.2s,baz=112,slow=8.7
WLF Walferdange 39.12 314 *e*P **P** **10 58 53.3 -0.9**
comp=Z,16nm,1.1s,baz=112,slow=8.7
WLF Walferdange 39.12 314 P **P** **10 58 53.9 -0.3**
WLF pmax pmax
comp=Z,10.0nm,0.8s
WLF Walferdange 39.12 314 P **P** **10 58 53.9 -0.3**
APA Apatity 39.42 350 ⇓*i*P **P** **10 58 56.0 -0.4**
APA pmax pmax
comp=Z,12nm,1.0s
APA MLR MLR
comp=Z,400nm,14.0s
LVZ Lovozero 39.53 350 *ce*P **P** **10 58 57.3 -0.1**
LVZ pmax pmax
comp=Z,83nm,2.5s
LVZ Lovozero 39.53 350 P **P** **10 58 57.9 +0.5**
LVZ IAmb IAmb 10 58 58.6
comp=Z,47nm,1.0s
MUD Monsted U'grnd 39.66 325 *i*P **P** **10 58 59.6 +1.0**
MUD pmax pmax
comp=Z,42nm,1.0s
MUD Monsted U'grnd 39.66 325 *i*P **P** **10 58 59.6 +1.0**
comp=Z,42nm,1.0s
OSL Oslo 40.55 330 *e*P **P** **10 59 06.0 +0.1**
NC602 NORSAR Array S 40.62 331 P **P** **10 59 06.1 -0.4**
NC602 IAmb IAmb 10 59 06.3
comp=Z,26nm,1.1s
NC602 NORSAR Array S 40.62 331 *e*P **P** **10 59 06.1 -0.4**
NC405 NORSAR Array S 40.75 332 P **P** **10 59 06.5 -1.1**
HOMB Hombersund 40.77 327 *e*P **P** **10 59 07.5 -0.2**
NB201 NORSAR Array S 40.89 332 P **P** **10 59 08.2 -0.6**
NB201 NORSAR Array S 40.89 332 *e*P **P** **10 59 08.0 -0.8**
KONO Kongsberg 40.91 329 *ce*P **P** **10 59 08.9 +0.1**
KONO pmax pmax
comp=Z,29nm,1.3s
KONO Kongsberg 40.91 329 P **P** **10 59 08.2 -0.7**
KONO IAmb IAmb 10 59 10.4
comp=Z,22nm,1.0s
KONO Kongsberg 40.91 329 *e*P **P** **10 59 08.1 -0.8**
NB2 NORSAR Subarra 40.92 332 P **P** **10 59 07.9 -1.1**
comp=Z,17nm,0.9s,baz=122,slow=8.6
NB2 NORSAR Subarra 40.92 332 P **P** **10 59 07.9 -1.1**
baz=122,slow=8.6
NOA NORSAR Array B 40.92 332 P **P** **10 59 07.8 -1.3**
comp=Z,9.5nm,0.9s,baz=122,slow=8.3,SNR=21
NOA PP **PP** **11 00 42.6 -0.6**
comp=Z,3.3nm,0.9s,baz=118,slow=10,SNR=5.9
NOA LR LR 11 17 46.9
comp=Z,326nm,20.1s,baz=105,slow=39
NAO01 NORSAR Array S 40.95 331 P **P** **10 59 08.4 -0.9**
NAO01 IAmb IAmb 10 59 09.7
comp=Z,37nm,1.1s
NC303 NORSAR Array S 40.95 332 P **P** **10 59 08.3 -1.0**
NC303 IAmb IAmb 10 59 09.8
comp=Z,38nm,1.1s
TAM Tamanrasset 41.02 271 P **P** **10 59 09.8 -0.7**
TAM pmax pmax
comp=Z,32nm,1.3s
TAM Tamanrasset 41.02 271 P **P** **10 59 09.8 -0.7**
TAM IAmb IAmb 10 59 17.1
comp=Z,32nm,1.3s
GTA Gaotai 41.10 63 ⇑P **P** **10 59 12.3 +1.4**
GTA pP sP 10 59 16.6 -0.7
GTA sP pP 10 59 19.5 +4.0
GTA ScP **ScP** **11 05 00.3 +0.5**
GTA S **S** **11 05 25.3 +1.8**
GTA pmax pmax
comp=Z,18nm,1.2s
GTA pmax pmax
comp=Z,200nm,7.4s
GTA LR LR
comp=Z,450nm,15.2s
GTA LR LR
comp=Z,610nm,16.8s
GTA LR LR
comp=Z,750nm,14.3s
NC204 NORSAR Array S 41.23 332 P **P** **10 59 10.2 -1.4**
NC204 IAmb IAmb 10 59 11.5
comp=Z,25nm,0.9s
SKAR Skarslia 41.97 330 *e*P **P** **10 59 17.7 0.0**
SKAR *e*P **P** **10 59 18.3 +0.6**
BLS5 Blasjo 42.23 328 *e*P **P** **10 59 20.4 +0.7**
DOMB Dombas 42.32 332 *e*P **P** **10 59 20.7 +0.2**
ODD1 Odda 42.37 329 *e*P **P** **10 59 22.0 +1.1**
ARCES ARCESS Array B 42.55 347 P **P** **10 59 20.4 -1.8**
comp=Z,9.0nm,1.1s,baz=76,slow=1.5,SNR=10
ARCES PP **PP** **11 00 56.2 -4.4**
comp=Z,12nm,1.1s,baz=148,slow=10,SNR=4.7
ARCES LR LR 11 19 46.4
comp=Z,286nm,19.1s,baz=139,slow=40
ARE0 ARCESS Array S 42.55 347 *e*P **P** **10 59 23.1 +0.9**
KTK1 Kautokeino 42.58 346 *e*P **P** **10 59 22.6 +0.2**
NSS Namsos 42.60 336 *e*P **P** **10 59 22.5 -0.1**
MOR8 Moi Rana 42.80 339 *e*P **P** **10 59 23.9 -0.4**
MOY Mondy 42.95 45 *e*P **P** **10 59 27.4 +1.5**
MOY pmax pmax
comp=Z,36nm,1.9s
BER Bergen 43.15 329 *e*P **P** **10 59 27.8 +0.7**
MOL Molde 43.20 332 *e*P **P** **10 59 28.3 +0.8**
AKN Aaknes 43.24 332 *e*P **P** **10 59 28.0 +0.1**
ASK Askoy 43.26 329 *e*P **P** **10 59 27.8 -0.2**
KONS Konsvik 43.42 339 *e*P **P** **10 59 29.8 +0.6**
STEI Steigen 43.74 341 *e*P **P** **10 59 32.1 +0.3**
FOO Floro 43.80 330 *e*P **P** **10 59 32.8 +0.4**
HAMF Hammerfest 43.82 347 *e*P **P** **10 59 33.4 +1.0**
TRO Tromso 44.03 345 *e*P **P** **10 59 34.3 +0.3**
ZAK Zakamensk 44.17 47 *e*P **P** **10 59 36.3 +0.6**
ZAK *e* 11 01 19.4
ZAK pmax pmax
comp=Z,5.0nm,1.5s
ZAK pmax pmax
comp=Z,5.0nm,1.8s
GDLE Glaisdale, N Y 44.41 319 *e*P **P** **10 59 37.6 +0.3**
GDLE IAmb IAmb 10 59 37.9
comp=Z,40nm,0.8s
LZH Lanzhou 44.55 67 *e*P **P** **10 59 40.4 +1.4**
LZH pP pP 10 59 44.3 +0.8
LZH sP sP 10 59 47.8 +2.5
LZH pmax pmax
comp=Z,28nm,1.3s
LZH pmax pmax
comp=Z,120nm,6.5s
LZH LR LR
comp=Z,520nm,14.6s
LZH LR LR
comp=Z,540nm,13.0s
LZH LR LR
comp=Z,570nm,14.9s
TLY Talaya 44.58 45 P **P** **10 59 38.6 -0.3**
comp=Z,5.2nm,0.5s,baz=353,slow=2.1,SNR=3.5
TLY Talaya 44.58 45 *i*P **P** **10 59 40.3 +1.5**
TLY pmax pmax
comp=Z,10.0nm,1.1s
TLY MLR MLR
comp=Z,1μm,16.0s
NRIK Noril'sk 45.00 17 P **P** **10 59 41.6 -0.3**
comp=Z,6.7nm,0.9s,baz=223,slow=8.8,SNR=15
NRIK LR LR 11 22 04.1
comp=Z,606nm,20.1s,baz=266,slow=41
CMAR Chiang Mai Arr 45.03 93 P **P** **10 59 42.5 -0.3**
comp=Z,0.9nm,0.4s,baz=292,slow=9.2,SNR=5.3
IRK Irkutsk 45.05 44 *e*P **P** **10 59 39.4 -3.1**
IRK pmax pmax
comp=Z,41nm,1.3s
MCH1 Michaelchurch 45.26 315 *e*P **P** **10 59 43.9 -0.3**
MCH1 IAmb IAmb 10 59 44.2
comp=Z,16nm,0.8s
CD2 Chengdu 45.37 74 P **P** **10 59 44.6 -0.9**
CD2 pmax pmax
comp=Z,20nm,0.6s
FOEL Foel Wylfa 45.52 317 *e*P **P** **10 59 46.2 -0.1**
FOEL IAmb IAmb 10 59 46.9
comp=Z,29nm,1.0s
ESDC Sonseca Array 45.59 298 P **P** **10 59 46.9 -0.2**
comp=Z,5.0nm,1.2s,baz=83,slow=6.8,SNR=8.4
ESY Stoneypath 45.74 321 *e*P **P** **10 59 48.1 +0.2**
DRUM Mains of Drumt 45.89 322 *e*P **P** **10 59 49.0 -0.1**
DRUM IAmb IAmb 10 59 50.5
comp=Z,79nm,1.1s
EBL Broad Law 45.94 321 *e*P **P** **10 59 49.8 +0.2**
SONM Songino Array 45.98 51 P **P** **10 59 50.4 +0.3**
comp=Z,1.2nm,0.5s,baz=273,slow=8.7,SNR=15
SONM PcP **PcP** **11 01 26.8 +0.1**
comp=Z,1.5nm,0.8s,baz=250,slow=4.3,SNR=4.2
KMI Kunming 46.00 83 P **P** **10 59 52.8 +2.1**
KMI pmax pmax
comp=Z,15nm,1.2s
EDI Edinburgh 46.05 321 *e*P **P** **10 59 50.4 0.0**
EDI IAmb IAmb 10 59 51.8
comp=Z,50nm,1.1s
LRW Lerwick 46.09 327 *e*P **P** **10 59 49.9 -0.7**
LRW IAmb IAmb 10 59 50.2
comp=Z,504nm,2.1s
RSBS Rosebush, Pemb 46.33 315 *e*P **P** **10 59 52.5 -0.2**
RSBS IAmb IAmb 10 59 53.6
comp=Z,25nm,1.2s
ULN Ulaanbaatar 46.42 51 *ce*P **P** **10 59 54.8 +1.2**
ULN pmax pmax
comp=Z,11nm,1.0s
ULN Ulaanbaatar 46.42 51 P **P** **10 59 54.6 +0.9**
ULN IAmb IAmb 10 59 55.9
comp=Z,11nm,1.1s
MCD Coleburn Disti 46.45 323 *e*P **P** **10 59 53.5 0.0**
ELO Logie Almond 46.45 321 *e*P **P** **10 59 53.0 -0.5**
INVG Invergeldie, C 46.62 321 *e*P **P** **10 59 54.2 -0.6**
INVG IAmb IAmb 10 59 55.5
comp=Z,57nm,0.9s
EAB Aberfoyle 46.74 321 *e*P **P** **10 59 55.6 -0.2**
LAWE Loch Awe, Argy 47.33 321 *e*P **P** **11 00 00.5 +0.1**
LAWE IAmb IAmb 11 00 05.3
comp=Z,46nm,1.0s
KAC Achnashellach 47.51 323 *e*P **P** **11 00 01.5 -0.3**
PBRG Braganca 47.52 301 *e*P **P** **11 00 03.3 +1.1**
comp=Z,48nm,1.7s
CLGH Cloghs, Cushen 47.54 319 *e*P **P** **11 00 02.1 +0.1**
MVO Moncorvo 47.79 300 *e*P **P** **11 00 05.4 +1.1**
comp=Z,22nm,1.3s
TOA0 Torodi Ar. Sit 48.24 261 P **P** **11 00 08.7 +0.7**
TOA0 IAmb IAmb 11 00 13.4
comp=Z,24nm,1.1s
TORD Torodi Ar. Bea 48.24 261 P **P** **11 00 08.7 +0.7**
comp=Z,20nm,1.1s,baz=55,slow=8.3,SNR=30
TORD LR LR 11 22 17.1
comp=Z,349nm,18.9s,baz=340,slow=38
PCBR Castelo Branco 48.27 299 *e*P **P** **11 00 09.3 +1.4**
SLVN Son La 48.27 87 P **P** **11 00 07.7 -0.5**
SLVN IAmb IAmb 11 00 09.4
comp=Z,16nm,1.5s
PVRL Vila Real 48.30 301 *e*P **P** **11 00 09.8 +1.6**
comp=Z,47nm,1.4s
PVIS Viseu 48.49 300 *e*P **P** **11 00 11.1 +1.4**
comp=Z,58nm,1.6s
COI Coimbra 48.94 299 P **P** **11 00 13.2 +0.2**
COI pmax pmax
comp=Z,41nm,1.1s
COI Coimbra 48.94 299 P **P** **11 00 13.2 +0.2**
XAN Xi'an 48.99 69 P **P** **11 00 13.8 +0.1**
XAN pP sP 11 00 23.3 +3.2
XAN pmax pmax
comp=Z,13nm,0.8s
XAN Xi'an 48.99 69 P **P** **11 00 13.3 -0.4**
XAN pmax pmax
comp=Z,9.0nm,0.7s
XAN Xi'an 48.99 69 P **P** **11 00 13.3 -0.4**
XAN IAmb IAmb 11 00 14.2
comp=Z,9.2nm,0.7s
LSZ Lusaka 49.67 209 P **P** **11 00 19.1 +0.1**
LSZ pmax pmax
comp=Z,21nm,1.3s
LSZ Lusaka 49.67 209 P **P** **11 00 19.1 +0.1**
LSZ IAmb IAmb 11 00 25.7
comp=Z,22nm,1.2s
HHC Hu-ho-hao-te 49.97 60 *e*P **P** **11 00 21.9 +0.8**
HHC sP sP 11 00 28.3 +0.8
HHC S **S** **11 07 33.8 +2.5**
HHC pmax pmax
comp=Z,10.0nm,0.7s
HHC pmax pmax
comp=Z,81nm,6.5s
HHC LR LR
comp=Z,210nm,13.6s
HHC LR LR
comp=Z,180nm,13.4s
HHC LR LR
comp=Z,140nm,12.9s
SPA0 Spitsbergen Ar 51.04 351 P **P** **11 00 29.0 +0.5**
SPA0 Spitsbergen Ar 51.04 351 *e*P **P** **11 00 29.2 +0.6**
SPITS Spitsbergen Ar 51.04 351 P **P** **11 00 29.0 +0.5**
comp=Z,20nm,0.8s,baz=152,slow=11,SNR=2.8
BOD Bodaibo 51.29 38 *e*P **P** **11 00 30.8 +0.2**
BOD pmax pmax
comp=Z,65nm,1.2s
PSI Prapat 52.77 111 P **P** **11 00 42.4 0.0**
PSI pmax pmax
comp=Z,14nm,1.2s
RPSI Rantau Prapat 52.83 111 P **P** **11 00 42.4 -0.2**

RPSI IAmb IAmb 11 00 55.3
comp=Z,14nm,1.2s
IPM Ipoh 53.55 108 P **P** **11 00 46.9 -1.1**
TIA Tai'an 55.09 65 P **P** **11 00 59.8 +0.8**
TIA pmax pmax
comp=Z,12nm,0.9s
DAG Danmarks Havn 56.75 345 *i* P **P** **11 01 09.0 -1.2**
DAG pmax pmax
comp=Z,6.0nm,0.8s
DAG Danmarks Havn 56.75 345 *i* P **P** **11 01 09.0 -1.2**
comp=Z,6.2nm,0.8s
DBIC Dimbokro 57.02 258 P **P** **11 01 13.7 +0.6**
comp=Z,12nm,0.8s,baz=22,slow=7.4,SNR=10
DBIC LR LR 11 27 34.2
comp=Z,545nm,18.1s,baz=38,slow=38
KIC Kosan Boka 57.09 258 *eP* **P** **11 01 16.4 +2.9**
comp=Z,70nm,1.3s
TIC Toumodi 57.18 258 *eP* **P** **11 01 16.5 +2.3**
LIC Lamto 57.40 258 *eP* **P** **11 01 18.2 +2.5**
comp=Z,62nm,0.9s
NJ2 Nanjing 57.56 69 *eP* **P** **11 01 16.1 -0.6**
NJ2 pmax pmax
comp=Z,14nm,0.7s
NOR Nord 57.67 351⇑ *iP* **P** **11 01 16.6 -0.1**
NOR pmax pmax
comp=Z,12nm,1.0s
NOR Nord 57.67 351⇑ *iP* **P** **11 01 16.6 -0.1**
comp=Z,12nm,1.0s
TIXI Tiksi 58.45 21 P **P** **11 01 22.0 -0.3**
comp=Z,4.3nm,0.8s,baz=278,slow=5.8,SNR=12
TIXI Tiksi 58.45 21 *ceP* **P** **11 01 22.3 +0.1**
TIXI pmax pmax
comp=Z,5.0nm,1.0s
TIXI MLR MLR
comp=Z,457nm,17.0s
TIXI Tiksi 58.45 21 P **P** **11 01 22.4 +0.1**
TIXI IAmb IAmb 11 01 23.2
comp=Z,15nm,1.4s
ZEA Zeya 58.89 42 *eP* **P** **11 01 27.1 +1.5**
ZEA pmax pmax
comp=Z,15nm,1.0s
ZEA MLR MLR
comp=Z,700nm,16.0s
ZEA MLR MLR
comp=E,400nm,15.0s
YAK Yakutsk 59.16 33 P **P** **11 01 27.4 +0.1**
comp=E,9.5nm,0.4s,baz=240,slow=1.7,SNR=4.9
YAK Yakutsk 59.16 33 *eP* **P** **11 01 27.4 +0.1**
YAK *e**PP **pP** **11 01 32.1 +0.1**
YAK *e* 11 03 39.4
YAK *e*S **S** **11 09 34.6 +0.6**
YAK *e**SS **pS** **11 09 39.9 +0.1**
YAK pmax pmax
comp=Z,21nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,11nm,1.1s
YAK pmax pmax
comp=Z,79nm,3.0s
YAK pmax pmax
comp=N,63nm,3.4s
YAK pmax pmax
comp=E,27nm,3.2s
YAK smax smax
comp=E,23nm,2.7s
YAK smax smax
comp=N,20nm,2.3s
YAK MLR MLR
comp=Z,275nm,17.0s
YAK MLR MLR
comp=N,76nm,18.0s
YAK MLR MLR
comp=E,160nm,17.0s
YAK Yakutsk 59.16 33 IAmb IAmb 11 01 28.0
comp=Z,25nm,0.5s
CN2 Changchun 59.59 54 *eP* **P** **11 01 30.8 +0.2**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 LR LR
comp=Z,280nm,14.0s
CN2 LR LR
comp=Z,460nm,14.0s
CN2 LR LR
comp=Z,650nm,17.0s
SUMG Summit 61.86 340 *i* P **P** **11 01 46.0 -0.1**
SUMG Summit 61.86 340 P **P** **11 01 45.4 -0.7**
SUMG Summit 61.86 340 *i* P **P** **11 01 46.0 -0.1**
KLR Kul'dur 62.54 47 P **P** **11 01 50.3 -0.2**
comp=Z,3.3nm,0.8s,baz=286,slow=6.1,SNR=10
KLR Kul'dur 62.54 47 *ceP* **P** **11 01 50.4 -0.1**
KLR pmax pmax
comp=Z,14nm,1.4s
KLR MLR MLR
comp=Z,946nm,16.0s
BOSA Boshof 62.83 205 P **P** **11 01 54.1 +1.4**
comp=Z,5.2nm,0.8s,baz=62,slow=5.7,SNR=6.5
BOSA LR LR 11 30 44.4
comp=Z,460nm,19.1s,baz=4,slow=37
BOSA Boshof 62.83 205 P **P** **11 01 53.4 +0.7**
BOSA IAmb IAmb 11 01 58.3
comp=Z,21nm,1.4s
KSM Kuching 62.94 105 P **P** **11 01 53.4 -0.4**
KSRS Korea Array 63.10 60 P **P** **11 01 54.1 -0.4**
comp=Z,2.3nm,0.6s,baz=278,slow=7.0,SNR=13
KSRS LR LR 11 32 50.7
comp=Z,302nm,18.7s,baz=328,slow=39
MSHR Mys Shultsa 63.94 54 *ceP* **P** **11 01 59.9 0.0**
MSHR pmax pmax
comp=Z,24nm,1.2s
MSHR MLR MLR
comp=Z,212nm,17.0s
USRK Ussuriysk Ar. 64.04 52 P **P** **11 01 60.0 -0.6**
comp=Z,1.1nm,0.5s,baz=340,slow=5.1,SNR=4.4
USRK LR LR 11 31 53.0
comp=Z,194nm,19.8s,baz=268,slow=38
USRK Ussuriysk Ar. 64.04 52 P **P** **11 02 00.0 -0.6**
JNU Nakatsue 66.82 64 P **P** **11 02 19.6 +0.8**
comp=Z,4.1nm,0.8s,baz=50,slow=15,SNR=1.4
SFJD Kangerlussuaq 67.44 335 P **P** **11 02 22.1 0.0**
SFJD pmax pmax
comp=Z,15nm,1.2s
SFJD Kangerlussuaq 67.44 335 P **P** **11 02 22.1 0.0**
SFJD IAmb IAmb 11 02 23.2
comp=Z,15nm,1.1s
TULEG Thule 67.88 347 P **P** **11 02 21.7 -3.1**
TYV Tymovskoe 68.75 43 *eP* **P** **11 02 31.5 +0.9**
TYV pmax pmax
comp=Z,12nm,1.3s
SEY Seymchan 69.08 29 P **P** **11 02 32.2 -0.2**
comp=Z,21nm,0.9s,baz=280,slow=7.2,SNR=26
SEY Seymchan 69.08 29 *i* P **P** **11 02 33.6 +1.2**
MA2 Magadan 69.73 32 *ceP* **P** **11 02 36.9 +0.3**
MA2 pmax pmax
comp=Z,13nm,1.0s
MA2 MLR MLR
comp=Z,228nm,15.0s
YSS Yuzh-Sakhalins 70.25 47 *eP* **P** **11 02 39.9 0.0**
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=Z,600nm,16.0s
YSS MLR MLR
comp=N,200nm,13.0s
YSS MLR MLR
comp=E,400nm,13.0s
MJAR Matsushiro Arr 71.13 58 P **P** **11 02 45.7 +0.1**
comp=E,2.5nm,0.9s,baz=286,slow=9.0,SNR=4.9
MJAR LR LR 11 36 29.4
comp=E,162nm,18.0s,baz=260,slow=38
BILL Bilibino 71.67 21 *c iP* **P** **11 02 49.0 +0.8**
BILL *i* 11 02 55.4
BILL *i* 11 03 06.6
BILL *i* 11 05 27.4
BILL pmax pmax
comp=Z,23nm,1.0s
BILL MLR MLR
comp=Z,404nm,15.0s
BILL Bilibino 71.67 21 P **P** **11 02 48.6 +0.4**
BILL IAmb IAmb 11 02 50.7
comp=Z,24nm,1.1s
RES Resolute Bay 73.61 351 P **P** **11 02 59.7 +0.1**
RES pmax pmax
comp=Z,6.0nm,1.2s
RES Resolute Bay 73.61 351 P **P** **11 02 59.7 +0.1**
PETK Petropavlovsk- 76.14 36 P **P** **11 03 13.2 -1.5**
comp=Z,9.1nm,1.1s,baz=48,slow=2.2,SNR=7.2
PETK LR LR 11 39 56.5
comp=Z,225nm,18.8s,baz=244,slow=38
A36M Sachs Harbour 78.67 359 P **P** **11 03 28.9 +0.4**
baz=3.5
SCHQ Schefferville 80.41 329 P **P** **11 03 38.0 -0.3**
comp=Z,5.2nm,0.6s,baz=33,slow=7.7,SNR=6.5
SCHQ LR LR 11 40 08.0
comp=Z,90nm,20.3s,baz=174,slow=36
SCHQ Schefferville 80.41 329 P **P** **11 03 36.2 -2.1**
SCHQ IAmb IAmb 11 03 39.9
comp=Z,17nm,1.1s
TOLK Toolik Lake Re 80.91 7 P **P** **11 03 42.0 +1.2**
baz=342
TOLK Toolik Lake Re 80.91 7 P **P** **11 03 41.5 +0.8**
TOLK IAmb IAmb 11 03 43.3
comp=Z,21nm,1.1s
C36M Paulatuk 81.29 358 P **P** **11 03 42.8 +0.2**
baz=4.5
INK Inuvik 82.35 2 P **P** **11 03 48.3 0.0**
comp=Z,4.9nm,1.0s,baz=2.7,slow=9.4,SNR=10
INK Inuvik 82.35 2 P **P** **11 03 48.0 -0.2**
INK IAmb IAmb 11 03 49.2
comp=Z,8.3nm,1.1s
FYU Fort Yukon 83.37 6 P **P** **11 03 53.5 0.0**
FYU IAmb IAmb 11 03 56.3
comp=Z,20nm,1.2s
EPYK Eagle Plains 84.17 3 P **P** **11 03 58.2 +0.4**
baz=353
EPYK Eagle Plains 84.17 3 P **P** **11 03 57.8 0.0**
EPYK IAmb IAmb 11 03 59.4
comp=Z,18nm,1.4s
MLY Manley 84.21 9 P **P** **11 03 58.6 +0.6**
MLY IAmb IAmb 11 04 00.3
comp=Z,14nm,1.3s
PRP Porcupine Dome 84.36 7 P **P** **11 03 59.2 +0.3**
PRP IAmb IAmb 11 04 01.4
comp=Z,6.1nm,1.0s
POKR Poker Plat Res 84.54 8 P **P** **11 04 00.8 +1.1**
baz=344
MDM Murphy Dome 84.60 8 P **P** **11 04 00.4 +0.4**
MDM IAmb IAmb 11 04 02.1
comp=Z,17nm,1.2s
TCOL CIGO, UAF Yank 84.72 8 P **P** **11 04 01.0 +0.5**
baz=344
COLA College 84.73 8 P **P** **11 04 00.1 -0.4**
COLA pmax pmax
comp=Z,9.0nm,1.0s
COLA College 84.73 8 P **P** **11 04 00.1 -0.4**
COLA IAmb IAmb 11 04 01.8
comp=Z,8.8nm,0.9s
BATG Bathurst New B 84.76 322 P **P** **11 04 01.4 +0.3**
NEA Nenana 84.86 8 P **P** **11 04 01.9 +0.6**
IL31 84.94 8 P **P** **11 04 01.7 +0.1**
ILAR Eielson Array 84.94 8 P **P** **11 04 01.6 -0.1**
comp=Z,2.0nm,0.7s,baz=329,slow=3.8,SNR=20
ILAR PP **PP** **11 07 17.7 +0.2**
comp=Z,2.0nm,1.1s,baz=337,slow=7.3,SNR=5.8
ILAR LR LR 11 49 28.8
comp=Z,75nm,18.2s,baz=336,slow=41
CCB Clear Creek Bu 84.95 8 P **P** **11 04 01.3 -0.3**
CCB IAmb IAmb 11 04 02.2
comp=Z,6.7nm,1.2s
BPAW Bear Paw Mtn. 85.06 9 P **P** **11 04 01.7 -0.6**
WRH Wood River Hil 85.08 8 P **P** **11 04 02.5 +0.2**
HDA Harding Lake 85.28 8 P **P** **11 04 03.0 -0.3**
baz=345
HDA Harding Lake 85.28 8 P **P** **11 04 02.8 -0.5**
TTA Tatalina 85.34 12 P **P** **11 04 04.5 +0.7**
TTA pmax pmax
comp=Z,18nm,1.3s
TTA Tatalina 85.34 12 P **P** **11 04 04.5 +0.7**
TTA IAmb IAmb 11 04 06.8
comp=Z,18nm,1.3s
EGAK Eagle 85.48 5 P **P** **11 04 04.9 +0.6**
KTH Kantishna Hill 85.58 10 P **P** **11 04 05.3 +0.3**
MCK McKinley 85.69 9 P **P** **11 04 05.6 +0.1**
MCK pmax pmax
comp=Z,37nm,1.2s
MCK McKinley 85.69 9 P **P** **11 04 05.5 +0.1**
TRF Thorofare Moun 85.77 9 P **P** **11 04 05.8 -0.2**
TRF IAmb IAmb 11 04 17.8
comp=Z,14nm,1.0s
RND Reindeer 86.01 9 P **P** **11 04 06.5 -0.6**
RND pmax pmax
comp=Z,16nm,1.0s
RND Reindeer 86.01 9 P **P** **11 04 06.5 -0.6**
RND IAmb IAmb 11 04 08.1
comp=Z,16nm,1.0s
PPLA Purkeypile 86.02 10 P **P** **11 04 07.0 -0.2**
PPLA IAmb IAmb 11 04 08.7
comp=Z,16nm,1.3s
SCRK Sand Creek 86.02 6 P **P** **11 04 08.0 +0.8**
RIDG Independent Ri 86.16 7 P **P** **11 04 07.5 -0.4**
RIDG IAmb IAmb 11 04 09.6
comp=Z,16nm,1.3s
DAWY Dawson 86.32 4 P **P** **11 04 08.8 +0.2**
DOT Dot Lake 86.33 7 P **P** **11 04 09.3 +0.6**
DHY Denali Highway 86.52 8 P **P** **11 04 09.5 -0.2**
DHY IAmb IAmb 11 04 11.0
comp=Z,17nm,1.2s
PAX Paxson 86.85 7 P **P** **11 04 11.4 +0.1**
PAX pmax pmax
comp=Z,10.0nm,1.4s
PAX Paxson 86.85 7 P **P** **11 04 11.4 +0.1**
PAX IAmb IAmb 11 04 12.3
comp=Z,9.8nm,1.4s
MENT Mentasta 87.06 7 P **P** **11 04 13.5 +1.3**
MENT IAmb IAmb 11 04 14.7
comp=Z,18nm,1.3s
YKA Yellowknife Ar 87.50 353 P **P** **11 04 14.5 +0.2**
comp=Z,8.1nm,1.0s,baz=15,slow=4.9,SNR=76
YKA PKKPbc **PKKPbc** **11 22 04.5 +0.4**
comp=Z,0.1nm,0.3s,baz=224,slow=3.5,SNR=3.6
YKA LR LR 11 49 51.6
comp=Z,96nm,18.3s,baz=0.0,slow=40
GHO Glory Hole Cre 87.57 9 P **P** **11 04 15.4 +0.7**
SML Sawmill 87.62 9 P **P** **11 04 15.0 0.0**
PMR Palmer 87.71 9 P **P** **11 04 16.0 +0.7**
PMR pmax pmax
comp=Z,22nm,1.3s
PMR Palmer 87.71 9 P **P** **11 04 16.0 +0.7**
KNK Knik Glacier 87.98 9 P **P** **11 04 17.3 +0.6**
KNK IAmb IAmb 11 04 30.7
comp=Z,11nm,1.2s
RC01 Rabbit Creek A 88.11 10 P **P** **11 04 17.6 +0.4**
MCARA McCarthy VSAT 88.66 7 P **P** **11 04 21.0 +1.2**
MCARA IAmb IAmb 11 04 23.9
comp=Z,11nm,1.3s
CTGM Chitina Glacie 89.23 6 P **P** **11 04 24.1 +1.4**
CTGM IAmb IAmb 11 04 25.2
comp=Z,13nm,1.2s
HYT Haines Junctio 89.66 4 P **P** **11 04 25.9 +1.2**
D55A Sainte-Anne-du 89.70 327 P **P** **11 04 25.6 +0.6**
baz=44
YAH Yahtse 89.79 6 P **P** **11 04 26.2 +0.8**
KDAK Kodiak Island 90.77 12 P **P** **11 04 29.3 -0.4**
comp=Z,9.1nm,1.0s,baz=253,slow=2.2,SNR=8.1
KDAK Kodiak Island 90.77 12 P **P** **11 04 30.3 +0.6**
KDAK pmax pmax
comp=Z,15nm,1.2s
KDAK Kodiak Island 90.77 12 P **P** **11 04 30.3 +0.6**
KDAK IAmb IAmb 11 04 33.8
comp=Z,14nm,1.1s
F52A Sundridge 92.41 328 P **P** **11 04 38.4 +0.8**
baz=42
E50A Wahnapitae 92.59 329 P **P** **11 04 39.4 +1.0**
baz=41
FFC Flin Flon 92.83 345 P **P** **11 04 39.2 -0.2**
FFC pmax pmax
comp=Z,14nm,1.3s
FFC Flin Flon 92.83 345 P **P** **11 04 39.2 -0.2**
D47A Chapleau 93.14 330 P **P** **11 04 42.0 +1.0**
baz=39
E48A Lockeyer 93.18 330 P **P** **11 04 41.6 +0.5**
baz=40
F49A Sandfield 93.68 329 P **P** **11 04 43.9 +0.5**
baz=40
WRA Warramunga Arr 94.23 110 P **P** **11 04 45.4 -1.0**
comp=Z,1.2nm,1.1s,baz=315,slow=4.3,SNR=4.1
WRA PKKPbc **PKKPbc** **11 21 47.9 +1.2**
comp=Z,0.5nm,0.9s,baz=113,slow=2.8,SNR=6.5
ULM Lac du Bonnet 95.21 339 LR LR 11 48 22.9
comp=Z,72nm,19.1s,baz=36,slow=36
ASAR Alice Springs 95.72 114 P **P** **11 04 51.6 -1.5**
comp=Z,0.8nm,1.0s,baz=304,slow=4.6,SNR=8.5
ASAR PKiKP **PKiKP** **11 09 33.8 +0.9**
comp=Z,0.4nm,0.9s,baz=300,slow=1.4,SNR=4.4
TXAR Lajitas Array 116.56 335 PKP PKPdf **11 10 10.8 -0.7**
comp=Z,0.1nm,0.7s,baz=129,slow=1.3,SNR=1.9
TXAR PP **PP** **11 11 16.0 -1.3**
comp=Z,0.5nm,1.0s,baz=342,slow=4.7,SNR=2.6

IDC 21 11:13:18.7±2.0, 12°.11N×144°.22E, h0km, mb3.4/4, mb1 3.8/4, mb1mx3.4/42, mbtmp3.4/4, Error ellipse: s-maj=200.9km s-min=28.3km az=114.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**33.30**	**197**	P	P	11 19 57.8	-0.5
	0.4nm,0.6s,baz=21,slow=9.4,SNR=4.9						
ASAR	**Alice Springs**	**36.96**	**196**	P	P	11 20 30.1	+0.2
	0.2nm,0.7s,baz=19,slow=9.2,SNR=5.1						
YKA	**Yellowknife Ar**	**84.46**	**27**	P	P	11 25 52.3	-0.9
	0.1nm,0.5s,baz=286,slow=4.7,SNR=4.4						
NVAR	**Mina Array Bea**	**88.34**	**51**	P	P	11 26 14.1	+1.0
	0.2nm,0.5s,baz=258,slow=4.5,SNR=2.4						

*SNET **21** 11:18:25.5±1.1, 13°.16N×89°.62W, h40km±18km, ML3.1*
*GCG **21** 11:18:27.0±0.7, 13°.52N×89°.43W, h19km±6km, MD3.8*

ISC 21 11:18:26.0±2.1, 13°.2N±0°.1×89°.57W±0°.05, h27km±15km, n19, σ0°.64/25, 8D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.40**	**36**	⇓ *iP*	**Pn**	**11 18 35.8**	**-0.2**
LALI				*eS*	**Sn**	**11 18 42.8**	**0.0**
BOQS	**Boqueron**	**0.63**	**26**	⇓ *iP*	**Pb**	**11 18 39.0**	**+0.3**
UEES	**Universidad Ev**	**0.64**	**30**	⇓ *iP*	**Pb**	**11 18 38.8**	**+0.1**
OPAM	**Oficina de Pla**	**0.65**	**33**	*eP*	**Pb**	**11 18 39.0**	**+0.1**
OPAM				IAML		11 18 53.4	
	comp=Z,1μm,0.3s						
CEVE	**Cerro Verde**	**0.66**	**355**	⇓ *iP*	**Pb**	**11 18 39.1**	**-0.1**
CEVE				*eS*	**Sn**	**11 18 51.0**	**+1.4**
LFRS	**El Faro**	**0.67**	**47**	⇓ *iP*	**Pb**	**11 18 39.4**	**+0.2**
LFRS				*eS*	**Sn**	**11 18 49.7**	**+0.2**
SBLS	**San Blas**	**0.67**	**355**	⇓ *eP*	**Pb**	**11 18 39.2**	**-0.2**
SBLS				*eS*	**Sn**	**11 18 49.6**	**-0.2**
RTR	**El Retiro**	**0.73**	**354**	*eP*	**Pn**	**11 18 40.1**	**-0.7**
LBRS	**Las Brisas**	**0.77**	**42**	*i P*	**Pn**	**11 18 41.0**	**-0.1**
COEG	**Centro de Oper**	**0.81**	**56**	⇓ *iP*	**Pn**	**11 18 41.3**	**-0.4**
COEG				IAML		11 18 54.7	
	comp=Z,792nm,0.2s						
COEB	**Comit de Eme**	**1.06**	**72**	*eP*	**Pn**	**11 18 44.8**	**-0.4**
COEB				IAML		11 18 59.7	
	comp=Z,281nm,0.3s						
TECA	**Tecapa**	**1.09**	**72**	*eP*	**Pn**	**11 18 45.2**	**-0.4**
MTO3	**Montecristo**	**1.24**	**9**	*i P*	**Pn**	**11 18 47.5**	**-0.4**
IXG	**Ixpaco**	**1.31**	**320**	*eP*	**Pn**	**11 18 48.0**	**-0.8**
IXG				*eS*	**Sn**	**11 19 05.3**	**-0.2**
IXG	**Ixpaco**	**1.31**	**320**	*eP*	**Pn**	**11 18 47.0**	**-1.8**
ESQI	**Esquipulas**	**1.41**	**9**	⇓ *iP*	**Pn**	**11 18 49.9**	**-0.1**
LCND	**La Caada**	**1.64**	**85**	*eP*	**Pn**	**11 18 52.8**	**-0.3**
FUG	**Fuego 3**	**1.78**	**316**	*eP*	**Pn**	**11 18 55.8**	**+0.6**
FUG				*eS*	**Sn**	**11 19 17.3**	**+0.3**
STG3	**Santiaguito 3,**	**2.48**	**309**	*eP*	**Pn**	**11 19 05.7**	**+0.9**

IDC 21 11:38:25.8±2.5, 3°.34N×128°.12E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/34, mbtmp3.2/3, Error ellipse: s-maj=186.4km s-min=26.3km az=68.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.93**	**165**	P	P	11 43 41.2	-0.5
	0.2nm,0.6s,baz=346,slow=11,SNR=7.2						
ASAR	**Alice Springs**	**27.43**	**168**	P	P	11 44 14.4	+0.9
	0.2nm,0.9s,baz=341,slow=11,SNR=1.2						
MKAR	**Makanchi Array**	**58.67**	**325**	P	P	11 48 24.8	-0.3
	0.5nm,0.5s,baz=120,slow=7.3,SNR=6.5						

*THR **21** 11:38:49.1±3.9, 29°.87N×50°.48E, h14km±38km, ML3.8*
*IDC **21** 11:38:54.6±1.5, 29°.59N×50°.82E, h0km, mb3.7/4, mb1 3.8/6, mb1mx3.4/35, mbtmp3.7/6, ML3.3/2, Error ellipse: s-maj=34.2km s-min=30.4km az=159.0*
*TEH **21** 11:38:59.2, 29°.69N×50°.88E, h18km, ML3.6*

ISC 21 11:38:58.0±0.9, 29°.40N±0°.08×50°.83E±0°.07, h24km, n28, σ1°.67/26, mb3.7/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHI	**Shiraz**	**1.49**	**80**	*e*Pg	**Pb**	**11 39 26.0**	**+0.9**
SHI				*e*Sg	**Sb**	**11 39 46.5**	**+2.8**
SHI				*e*		11 39 52.6	
KLNJ	**Kolanjah**	**1.74**	**22**	*e*Pg	**Pn**	**11 39 26.6**	**-0.4**
KLNJ				*e*		11 39 51.8	
IBRJ	**Brojen**	**2.53**	**8**	*e*Pn	**Pn**	**11 39 38.1**	**+0.3**
IRAM	**Ramesheh**	**2.75**	**29**	*e*Pn	**Pn**	**11 39 39.6**	**-1.2**
IRAM				*e*		11 39 47.3	
JHBN	**Jahan bin**	**2.83**	**357**	*e*Pn	**Pn**	**11 39 41.7**	**-0.2**
JHBN				*e*		11 40 30.4	
ROKH	**ROKH**	**2.94**	**3**	*e*Pn	**Pn**	**11 39 43.6**	**+0.1**
IGAR	**Gharneh**	**3.17**	**19**	*e*Pn	**Pn**	**11 39 47.2**	**+0.6**
IPIR	**Pirpir**	**3.28**	**1**	*e*Pn	**Pn**	**11 39 47.8**	**-0.3**
IZEF	**Zefreh**	**3.72**	**20**	*e*Pn	**Pn**	**11 39 53.9**	**-0.2**
IMEH	**Mehriz**	**3.83**	**58**	*e*Pn	**Pn**	**11 39 57.3**	**+1.7**
KHMZ	**Khomeyn**	**4.39**	**351**	*e*Pn	Pn	11 39 50.5	-13
YZKH	**Yazd**	**4.40**	**46**	*e*Pn	**Pn**	**11 40 00.8**	**-2.6**
ANAR	**Anarak**	**4.52**	**33**	*e*Pn	**Pn**	**11 40 05.2**	**+0.1**
GHVR	**GHOM**	**5.08**	**4**	*e*Pn	Pn	11 40 00.5	-12
GHVR				*e*Sg	**Sn**	**11 41 09.9**	**-0.8**
BNDS	**Bandar-Abbas**	**5.11**	**112**	IAML		11 41 13.6	
	comp=E,30nm,0.2s						
BNDS				IAML		11 41 16.3	
	comp=N,26nm,0.6s						
NGRK	**Negar Kerman**	**5.15**	**86**	*e*Pn	**Pn**	**11 40 16.6**	**+2.6**
NGRK				*e*		11 41 19.0	
ASAO	**Ashtian**	**5.18**	**353**	*e*P	Pn	11 40 02.2	-12
IVRN	**Varamin**	**5.63**	**8**	*e*Pn	**Pn**	**11 40 19.2**	**-1.1**
TPRV	**Parvadeh(Tabas**	**6.19**	**53**	*e*Pn	**Pn**	**11 40 28.5**	**+0.6**
TNSJ	**Nastanj**	**6.71**	**46**	*e*Pn	**Pn**	**11 40 35.3**	**+0.2**
TABS	**Tabas**	**6.84**	**50**	*e*Pn	Pn	11 40 31.0	-6.0
ZHSF	**Zahedan**	**8.67**	**86**	*e*P	**Pn**	**11 40 59.6**	**-2.5**
WSAR	**Wadi Sarin**	**9.31**	**129**	Pn	**Pn**	**11 41 11.6**	**+0.9**
	comp=N,0.2nm,0.3s,baz=170,slow=8.0,SNR=1.4						
WSAR				Sn	**Sn**	**11 42 50.2**	**-4.4**
	comp=N,0.3nm,0.3s,baz=108,slow=22,SNR=2.1						
GEYT	**Alibeck**	**10.45**	**34**	Pn	**Pn**	**11 41 24.2**	**-2.1**
	comp=N,0.4nm,0.3s,baz=218,slow=11,SNR=4.4						
AKASG	**Malin Array Be**	**26.77**	**329**	P	**P**	**11 44 34.5**	**-1.2**
	comp=N,0.3nm,0.3s,baz=138,slow=8.8,SNR=1.5						
TORD	**Torodi Ar. Bea**	**48.19**	**261**	P	**P**	**11 47 36.8**	**0.0**
	comp=N,0.6nm,0.6s,baz=60,slow=8.1,SNR=5.9						
DBIC	**Dimbokro**	**56.97**	**258**	P	**P**	**11 48 43.0**	**+1.1**
	comp=N,1.7nm,0.5s,baz=39,slow=7.1,SNR=4.5						
YKA	**Yellowknife Ar**	**87.68**	**353**	P	**P**	**11 51 43.6**	**-0.7**
	comp=N,0.2nm,0.7s,baz=14,slow=5.8,SNR=5.2						

*DRS **21** 11:55:09.6±0.0, 42°.98N×45°.35E, h10km*
*NORS **21** 11:55:13.9±0.0, 42°.98N×45°.59E, h20km, MPVA3.9*
*MOS **21** 11:55:13.6±0.0, 43°.04N×45°.59E, h13km, MPVA3.8*
*TIF **21** 11:55:14.8, 43°.09N×45°.40E, h6km±3km*

ISC 21 11:55:14.8±1.0, 43°.02N±0°.03×45°.57E±0°.02, h16km±9km, n42, σ1°.16/79, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMGR	**Komgaron**	**0.52**	**274**	*e*Pg	**Pb**	**11 55 25.6**	**-0.1**
KMGR				*e*Sg	**Sn**	**11 55 35.1**	**-1.1**
BTLR	**Botlikh**	**0.59**	**126**	*e*Pg	**Pn**	**11 55 26.9**	**0.0**
BTLR				*e*Sg	**Sn**	**11 55 36.5**	**-1.6**
VLKR	**Vladikavkaz**	**0.66**	**273**	*e*Pg	**Pn**	**11 55 28.3**	**-1.2**
VLKR				*e*Sg	**Sn**	**11 55 39.4**	**-0.2**
DLMR	**Dylym**	**0.78**	**86**	*e*Pg	**Pb**	**11 55 29.0**	**-1.0**
DLMR				*e*Sg	**Sn**	**11 55 42.0**	**-0.5**
BTKR	**Batakoyurt**	**0.83**	**295**	*e*Pg	**Pn**	**11 55 32.3**	**+0.4**
BTKR				*e*Sg	**Sn**	**11 55 44.7**	**+0.8**
DBC	**Dubki**	**0.92**	**90**	*e*Pg	**Pn**	**11 55 33.4**	**+0.2**
DBC				*e*Sg	**Sn**	**11 55 45.8**	**-0.3**
TRKR	**Terskaya**	**0.93**	**319**	*e*Pg	**Pn**	**11 55 33.8**	**+0.5**
TRKR				*e*Sg	**Sn**	**11 55 47.0**	**+0.7**
UNCR	**Uncukul**	**0.95**	**108**	*e*Pg	**Pn**	**11 55 33.0**	**-0.5**
UNCR				*e*Sg	**Sn**	**11 55 47.0**	**+0.2**

ARNR	**Ardon**	**0.96**	**280**	*e*Pg	**Pn**	**11 55 34.2**	**+0.6**
ARNR				*e*Sg	**Sn**	**11 55 47.6**	**+0.6**
LACR	**Lac**	**0.96**	**259**	*e*Pg	**Pg**	**11 55 32.7**	**-0.7**
LACR				*e*Sg	**Sn**	**11 55 46.8**	**-0.3**
XNZR	**Khunzakh**	**0.96**	**119**	*e*Pg	**Pn**	**11 55 34.5**	**+0.7**
XNZR				*e*Sg	**Sn**	**11 55 47.8**	**+0.6**
GUDG	**Gudauri**	**0.98**	**236**	P	**Pb**	**11 55 33.1**	**-0.5**
GUDG				S	**Sb**	**11 55 46.6**	**+0.3**
GUDG	**Gudauri**	**0.98**	**236**	*e*Pg	**Pb**	**11 55 33.1**	**-0.5**
GUDG				*e*Sg	**Sb**	**11 55 46.6**	**+0.3**
KRNR	**Karanay**	**1.00**	**101**	*e*Pg	**Pn**	**11 55 34.0**	**-0.3**
KRNR				*e*Sg	**Sn**	**11 55 49.0**	**+0.9**
KORR	**Kora**	**1.10**	**274**	*e*Pg	**Pg**	**11 55 36.5**	**+0.3**
KORR				*e*Sg	**Sn**	**11 55 53.1**	**+2.5**
ARKR	**Arakani**	**1.13**	**111**	*e*Pg	**Pg**	**11 55 37.0**	**+0.4**
ARKR				*i* Sg	**Sn**	**11 55 54.0**	**+2.8**
BUJR	**Buynaksk**	**1.15**	**99**	*e*Pg	**Pg**	**11 55 39.3**	**+2.3**
BUJR				*e*Sg	**Sn**	**11 55 55.1**	**+3.5**
STDR	**Stavd-Durt**	**1.16**	**288**	*e*Pg	**Pg**	**11 55 37.0**	**-0.2**
STDR				*e*Sg	**Sn**	**11 55 54.0**	**+2.1**
PRTR	**Priterechnaya**	**1.19**	**308**	*e*Pg	**Pg**	**11 55 37.7**	**-0.2**
PRTR				*e*Sg	**Sg**	**11 55 55.0**	**+1.6**
LGD	**Lagodekhi**	**1.28**	**157**	P	**Pg**	**11 55 39.2**	**-0.4**
LGD	**Lagodekhi**	**1.28**	**157**	*i* Pg	**Pg**	**11 55 39.2**	**-0.4**
LGD				*e*Sg	**Sg**	**11 55 56.1**	**-0.2**
LSNR	**Lesken**	**1.30**	**282**	*e*Pg	**Pg**	**11 55 39.5**	**-0.4**
LSNR				*e*Sg	**Sg**	**11 55 58.4**	**+1.4**
MAK	**Makhachkala**	**1.42**	**92**	*e*Pg	**Pg**	**11 55 40.5**	**-1.6**
MAK				*e*Sg	**Sg**	**11 56 00.6**	**-0.1**
TBLG	**Delisi**	**1.43**	**206**	P	**Pg**	**11 55 41.9**	**-0.4**
TBLG				S	**Sg**	**11 56 03.0**	**+2.0**
TBLG	**Delisi**	**1.43**	**206**	*e*Pg	**Pg**	**11 55 41.9**	**-0.4**
TBLG				*e*Sg	**Sg**	**11 56 03.0**	**+2.0**
KMKR	**Kumukh**	**1.44**	**128**	*e*Pg	**Pg**	**11 55 42.0**	**-0.5**
KMKR				*e*Sg	**Sg**	**11 56 01.7**	**+0.5**
DIGR	**Digorskoe uzhe**	**1.47**	**266**	*e*Pg	**Pb**	**11 55 41.1**	**-0.8**
DGRG	**David-gareji**	**1.57**	**185**	P	**Pg**	**11 55 45.8**	**+0.7**
DGRG	**David-gareji**	**1.57**	**185**	*e*Pg	**Pg**	**11 55 45.8**	**+0.7**
DGRG				*e*Sg	**Sg**	**11 56 05.7**	**+0.1**
ONI	**Oni**	**1.62**	**255**	P	**Pb**	**11 55 44.5**	**+0.2**
ONI				S	**Sb**	**11 56 05.0**	**+0.5**
ONI	**Oni**	**1.62**	**255**	*e*Pg	**Pb**	**11 55 44.6**	**+0.2**
ONI				*e*Sg	**Sg**	**11 56 05.6**	**-1.4**
DDFL	**Dedoflistskaro**	**1.62**	**165**	P	**Pg**	**11 55 48.0**	**+2.0**
URKR	**Urkarakh**	**1.75**	**119**	*e*Pg	**Pb**	**11 55 45.6**	**-0.9**
URKR				*e*Sg	**Sb**	**11 56 07.1**	**-1.1**
BKRG	**Bakuriani**	**1.97**	**231**	P	**Pb**	**11 55 50.1**	**-0.4**
BKRG				S	**Sg**	**11 56 16.8**	**-1.6**
BKRG	**Bakuriani**	**1.97**	**231**	*e*Pg	**Pb**	**11 55 50.1**	**-0.4**
BKRG				*e*Sg	**Sg**	**11 56 16.8**	**-1.6**
TKB	**Tkibuli**	**2.02**	**252**	P	**Pg**	**11 55 52.5**	**-1.0**
TKB				S	**Sg**	**11 56 20.1**	**+0.5**
TKB	**Tkibuli**	**2.02**	**252**	*e*Pg	**Pg**	**11 55 52.5**	**-1.0**
TKB				*e*Sg	**Sg**	**11 56 20.1**	**+0.5**
NEY	**Neytrino**	**2.10**	**277**	*e*Pg	**Pn**	**11 55 50.5**	**+1.0**
NEY				*e*Sg	**Sb**	**11 56 17.0**	**-1.5**
AKT	**Akhty**	**2.22**	**133**	*e*Pg	**Pb**	**11 55 53.4**	**-1.3**
AKT				*e*Sg	**Sn**	**11 56 18.5**	**+0.3**
DRN	**Derbent**	**2.27**	**115**	*e*Pn	**Pb**	**11 55 52.8**	**-2.6**
DRN				*e*Sn	**Sb**	**11 56 21.8**	**-1.2**
KIV0	**Kislovodsk Arr**	**2.29**	**295**	*e*Pn	**Pn**	**11 55 51.7**	**-0.4**
KSMR	**Kasumkent**	**2.37**	**126**	*e*Pn	**Pg**	**11 56 02.0**	**+1.8**
KSMR				*e*Sn	**Sg**	**11 56 32.0**	**+1.1**

*NNC **21** 11:56:27.5±1.3,41°.89N×72°.04E, h0km, mb2.9, mpv2.9, Error ellipse: s-maj=13.3km s-min=4.7km az=1.0*
*KRNET **21** 11:56:27.4±0.1,41°.79N×72°.22E, h14km, mb2.6*
*SOME **21** 11:56:27.0,41°.83N×72°.05E, h10km*
ISC 21 11:56:26.5±1.2,**41°.71N**±0°.05×**72°.09E**±0°.02,**h18**km±5km, **n20**,σ1°**35**/37,**15C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.13**	**313**	⇑*i*P	**Pg**	**11 56 30.9**	**+0.3**
ARK	baz=68			⇑*i*S	**Sg**	**11 56 33.7**	**+0.3**
ARSB	**Arslanbob**	**0.78**	**120**	⇓*i*P	**Pb**	**11 56 41.6**	**+0.1**
ARSB	baz=29			⇓*i*S	**Sb**	**11 56 51.6**	**-0.2**
AML	**Almayashu**	**1.27**	**70**	⇑*i*P	**Pn**	**11 56 49.3**	**-0.4**
AML	baz=72			⇑*i*S	**Sb**	**11 57 05.2**	**-1.1**
MRKS	**Merke**	**1.34**	**39**	*e*P	**Pb**	**11 56 51.1**	**+0.1**
MRKS	2.0nm,0.1s			*e*S	**Sb**	**11 57 08.7**	**+0.8**
MRKS	**Merke**	**1.34**	**39**	P	**Pb**	**11 56 51.1**	**+0.1**
MRKS	2.0nm,0.1s			S	**Sb**	**11 57 08.7**	**+0.8**
EKS2	**Erkin-Say**	**1.57**	**52**	⇑*i*P	**Pn**	**11 56 54.6**	**+0.9**
EKS2	baz=52			⇑*i*S	**Sn**	**11 57 14.1**	**+0.4**
IUG	**Iuzhnay**	**1.59**	**287**	*e*P	**Pb**	**11 56 55.3**	**-0.2**
IUG	3.8nm,0.1s			*e*S	**Sb**	**11 57 15.8**	**+0.5**
IUG	**Iuzhnay**	**1.59**	**287**	P	**Pb**	**11 56 55.3**	**-0.2**
IUG	3.8nm,0.1s			S	**Sb**	**11 57 15.8**	**+0.5**
KK31	**Karatay Array**	**1.82**	**321**	⇑P	**Pn**	**11 56 57.2**	**+0.3**
KK31	1.8nm,0.3s,baz=135,slow=15,SNR=14			⇑S	**Sn**	**11 57 20.3**	**+0.8**
UCH	**Uchtor**	**1.88**	**73**	⇑*i*P	**Pb**	**11 57 00.2**	**-0.4**
UCH	baz=75			⇑*i*S	**Sb**	**11 57 24.1**	**+0.1**
AAK	**Ala-Archa**	**2.02**	**62**	⇑Pn	**Pb**	**11 57 02.7**	**0.0**
AAK	3.1nm,0.8s			⇑Sn	**Sb**	**11 57 29.3**	**+1.8**
BRLS	**Boroldav**	**2.13**	**309**	*e*P	**Pb**	**11 57 03.4**	**-1.1**
BRLS	2.6nm,0.1s			*e*S	**Sb**	**11 57 29.6**	**-1.0**
BRLS	**Boroldav**	**2.13**	**309**	Pg	**Pb**	**11 57 03.4**	**-1.1**
BRLS	2.6nm,0.1s			Lg	Lg	11 57 29.6	
CHMS	**Chumysh**	**2.36**	**56**	⇓*i*P	**Pb**	**11 57 07.1**	**-1.4**
CHMS	baz=56			⇓*i*S	**Sb**	**11 57 35.7**	**-1.5**
USP	**Ospenovka**	**2.37**	**48**	⇓*i*P	**Pb**	**11 57 07.3**	**-1.3**
USP	baz=48			⇓*i*S	**Sb**	**11 57 36.1**	**-1.4**
KZA	**Kyzart**	**2.39**	**80**	⇑*e*P	**Pb**	**11 57 08.0**	**-1.2**
KZA	baz=82			⇑*i*S	**Sb**	**11 57 37.8**	**-0.7**
TKM2	**Tokmak 2**	**2.87**	**64**	⇓Pg	**Pb**	**11 57 15.2**	**-2.1**
TKM2	0.8nm,0.5s			⇑Lg	Lg	11 57 55.7	
DGS	**Degeres**	**3.13**	**59**	*e*P	**Pb**	**11 57 23.6**	**+2.0**
DGS	1.2nm,0.2s			*e*S	**Sg**	**11 58 04.2**	**-2.7**
DGS	**Degeres**	**3.13**	**59**	Pg	**Pb**	**11 57 23.6**	**+2.0**
DGS	1.2nm,0.2s			Lg	Lg	11 58 04.2	
KST	**Kastek**	**3.17**	**64**	*e*P	**Pb**	**11 57 23.8**	**+1.5**
KST	1.8nm,0.2s			*e*S	**Sb**	**11 58 04.6**	**+4.0**
	4.0nm,0.3s						

*UPP **21** 12:02:00.9±2.0,57°.66N×22°.30E, h0km, ML2.5, Suspected explosion*
*HEL **21** 12:02:03.6±0.2,57°.78N×22°.00E, h0km, ML2.3, Explosion*
*EST **21** 12:02:03.2±0.1,57°.76N×21°.98E, h0km, ML2.3(HEL), Explosion*
*NAO **21** 12:02:03.0±1.8,57°.78N×22°.06E, ML2.3*
*BER **21** 12:02:03.1±4.6,57°.69N×22°.03E, h0km, ML2.3(NAO),*

Suspected explosion
*IDC **21** 12:02:04.0±2.8,57°.83N×22°.05E, h0km, mb1 3.2/3, mb1mx3.0/39, mbtmp3.1/3, ML2.4/3, Error ellipse: s-maj=27.6km s-min=11.6km az=164.0*
*LVSN **21** 12:02:07.3±7.7,57°.64N×22°.11E, h0km±39km, ML2.6*
ISC 21 12:02:02.2±0.8,**57.78N**±0°.02×**21.93E**±0°.02,**h0**km,**n60**, σ1°**43**/93,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.24**	**127**	*e*P	**Pg**	**12 02 06.9**	**0.0**
SLIT				*e*S	**Sg**	**12 02 10.4**	**+0.5**
SLIT	comp=Z,14μm,0.1s			IAML		12 02 11.0	
SLIT	**Slitere, Latvi**	**0.24**	**127**	*e*P	**Pg**	**12 02 06.9**	**0.0**
SLIT				*e*S	**Sg**	**12 02 09.6**	**-0.4**
SLIT	comp=E,11μm,0.6s			AML	AML	12 02 20.8	
SLIT	comp=Z,9μm,0.5s			AML	AML	12 02 21.0	
SLIT	comp=N,12μm,0.8s			AML	AML	12 02 21.1	
SLIT	**Slitere, Latvi**	**0.24**	**127**	*i* P	**Pg**	**12 02 06.9**	**0.0**
SLIT				*e*S	**Sg**	**12 02 09.7**	**-0.3**
MTSE	**Matsula**	**1.37**	**46**	*e*S	**Sn**	**12 02 48.9**	**+1.6**
MTSE	**Matsula**	**1.37**	**46**	*e*P	**Pg**	**12 02 27.6**	**-0.8**
MTSE				*e*S	**Sg**	**12 02 44.8**	**-1.3**
PBUR	**Paburge**	**1.76**	**180**	*e*P	**Pn**	**12 02 33.5**	**-0.3**
PBUR				IAML		12 03 01.2	
PBUR	comp=Z,87nm,0.1s						
PBUR	**Paburge**	**1.76**	**180**	*e*P	**Pn**	**12 02 33.5**	**-0.3**
PBUR				*e*S	**Sb**	**12 02 57.7**	**-0.1**
GOTU	**Gotland**	**1.80**	**268**	P	**Pn**	**12 02 35.5**	**+1.0**
GOTU				S	**Sg**	**12 03 01.5**	**+1.5**
NYNU	**Nynaeshamn**	**2.41**	**302**	P	**Pn**	**12 02 44.4**	**+1.7**
PABE	**Paberze**	**2.54**	**153**	*e*P	**Pn**	**12 02 45.8**	**+1.2**
PABE				*e*S	**Sn**	**12 03 17.4**	**+1.2**
PABE				IAML		12 03 19.6	
PABE	comp=Z,21nm,0.2s						
PABE	**Paberze**	**2.54**	**153**	*e*P	**Pn**	**12 02 46.0**	**+1.4**
PABE				*e*S	**Sn**	**12 03 17.6**	**+1.5**
NRTU	**Norrtaelje**	**2.57**	**319**	P	**Pn**	**12 02 46.6**	**+1.7**
AAL	**Aland**	**2.61**	**338**	P	**Pn**	**12 02 46.3**	**+0.8**
AAL	**Aland**	**2.61**	**338**	*e*P	**Pn**	**12 02 46.3**	**+0.8**
AAL				*e*S	**Sn**	**12 03 18.8**	**+1.0**
VSU	**Vasula**	**2.64**	**73**	Pn	**Pn**	**12 02 46.5**	**+0.5**
VSU				Pg	**Pb**	**12 02 48.7**	**-1.5**
VSU				Lg	Lg	12 03 23.1	
VSU	**Vasula**	**2.64**	**73**	*e*P	**Pn**	**12 02 46.9**	**+0.9**
VSU				*e*S	**Sb**	**12 03 23.5**	**+0.3**
VSU				IAML		12 03 25.0	
VSU	comp=Z,189nm,0.1s						
VSU	**Vasula**	**2.64**	**73**	AML	AML	12 02 49.0	
VSU	comp=Z,166nm,0.1s			AML	AML	12 02 49.5	
VSU	comp=E,197nm,0.2s						
VSU				*e*S	**Sb**	**12 03 23.7**	**+0.5**
VSU				AML	AML	12 03 24.8	
VSU	comp=N,178nm,0.2s						
VSU	**Vasula**	**2.64**	**73**	*e*P	**Pn**	**12 02 46.7**	**+0.7**
VSU				*e*S	**Sn**	**12 03 18.8**	**+0.2**
VSU	**Vasula**	**2.64**	**73**	Pn	**Pn**	**12 02 46.5**	**+0.5**
VSU				Pg	**Pb**	**12 02 48.7**	**-1.5**
VSU				Sg	**Sb**	**12 03 23.1**	**-0.1**
ARBE	**Arbavere**	**2.70**	**50**	*e*P	**Pn**	**12 02 48.2**	**+1.5**
ARBE				*e*S	**Sn**	**12 03 20.4**	**+0.3**
BYXU	**Byxelkrok**	**2.70**	**262**	P	**Pn**	**12 02 48.2**	**+1.5**
MEF	**Metsahovi**	**2.76**	**27**	*e*P	**Pn**	**12 02 51.0**	**+3.4**
MEF				*e*S	**Sb**	**12 03 28.2**	**+1.6**
MEF				AML	AML	12 03 29.3	
MEF	comp=N,15nm,0.1s			AML	AML	12 03 29.4	
MEF	comp=E,18nm,0.2s			AML	AML	12 03 30.4	
MEF	comp=Z,16nm,0.2s						
MEF	**Metsahovi**	**2.76**	**27**	*e*P	**Pn**	**12 02 49.1**	**+1.5**
MEF				*e*S	**Sn**	**12 03 22.0**	**+0.4**
MEF				MSG		12 03 29.1	
MEF	comp=Z,18nm,0.1s						
VIKU	**Vikbolandet**	**2.87**	**287**	P	**Pn**	**12 02 51.2**	**+2.1**
ASPU	**Aespoe**	**2.89**	**265**	P	**Pn**	**12 02 51.6**	**+2.2**
VSTU	**Vaestervik**	**2.90**	**270**	P	**Pn**	**12 02 51.2**	**+1.8**
UPP	**Uppsala**	**3.06**	**315**	P	**Pn**	**12 02 53.8**	**+2.1**
IZAR	**Zarasai**	**3.13**	**129**	*e*P	**Pn**	**12 02 54.7**	**+2.1**
IZAR				IAML		12 03 43.6	
IZAR	comp=Z,14nm,0.5s						
FLYU	**Flymyra**	**3.15**	**320**	P	**Pn**	**12 02 55.0**	**+2.0**
FIBU	**Brunna**	**3.19**	**314**	P	**Pn**	**12 02 55.4**	**+1.9**
OSKU	**Oskarshamn**	**3.20**	**262**	P	**Pn**	**12 02 54.8**	**+1.2**
ISAL	**Salakas**	**3.20**	**132**	*e*P	**Pn**	**12 02 55.2**	**+1.5**
RAF	**Rauma**	**3.26**	**359**	*e*P	**Pn**	**12 02 57.5**	**+3.1**
RAF				AML	AML	12 03 06.0	
RAF	comp=N,12nm,0.2s						
RAF				*e*S	**Sb**	**12 03 43.3**	**+2.4**
RAF				AML	AML	12 03 50.8	
RAF	comp=E,17nm,0.5s						
RAF	comp=Z,8.7nm,0.5s			AML	AML	12 03 52.8	
RAF	**Rauma**	**3.26**	**359**	*e*P	**Pn**	**12 02 56.1**	**+1.7**
RAF				*e*S	**Sn**	**12 03 34.2**	**+0.4**
RAF				MSG		12 03 52.6	
BACU	**Backbrunna**	**3.26**	**312**	P	**Pn**	**12 02 56.4**	**+1.9**
IIGN	**Ignalina**	**3.40**	**134**	*e*P	**Pn**	**12 02 57.1**	**+0.7**
IIGN				IAML		12 03 48.5	
IIGN	comp=Z,6.5nm,0.2s						
PVF	**Pernaja**	**3.44**	**34**	*e*P	**Pn**	**12 02 57.6**	**+0.7**
PVF				*e*S	**Sn**	**12 03 38.1**	**-0.2**
PVF				MSG		12 03 50.3	
PVF	comp=Z,3.6nm,0.1s						
IGGU	**Iggoen**	**3.90**	**325**	P	**Pn**	**12 03 05.1**	**+1.8**
VJF	**Virojoki**	**4.01**	**44**	*e*P	**Pn**	**12 03 05.8**	**+1.1**
VJF				*e*S	**Sn**	**12 03 51.0**	**-1.3**
VJF				MSG		12 04 09.4	
VJF	comp=Z,6.5nm,0.1s						
NRAU	**Nora**	**4.02**	**299**	P	**Pn**	**12 03 06.7**	**+1.8**
FALU	**Falun**	**4.16**	**314**	P	**Pn**	**12 03 08.2**	**+1.4**
FIA0	**FINESS Array S**	**4.24**	**28**	Pn	**Pn**	**12 03 09.7**	**+1.8**
FIA0	baz=201,slow=12			Sn	**Sn**	**12 03 59.5**	**+1.5**
FIA0	baz=214,slow=22			Lg	Lg	12 04 15.6	
FIA0	baz=211,slow=28						
FIA0	**FINESS Array S**	**4.24**	**28**	*e*P	**Pn**	**12 03 09.4**	**+1.5**
FIA0				*e*S	**Sn**	**12 03 57.2**	**-0.8**
FIA0				MSG		12 04 17.9	
FIA0	comp=Z,4.6nm,0.2s						
FIA0	**FINESS Array S**	**4.24**	**28**	Pn	**Pn**	**12 03 09.7**	**+1.8**
FIA0	baz=201,slow=12			Sn	**Sn**	**12 03 59.5**	**+1.5**
FIA0	baz=214,slow=22			Sg	**Sg**	**12 04 15.6**	**-2.6**
FIA0	baz=211,slow=28						
FINES	**FINESS Array B**	**4.24**	**28**	Pn	**Pn**	**12 03 09.8**	**+1.8**
FINES	comp=Z,0.4nm,0.3s,baz=208,slow=12,SNR=21			Sn	**Sn**	**12 03 59.8**	**+1.8**
FINES	comp=Z,0.4nm,0.3s,baz=214,slow=18,SNR=3.3			Lg	Lg	12 04 14.2	
FINES	comp=Z,1.9nm,0.3s,baz=208,slow=26,SNR=14						
FIA1	**FINESS Array S**	**4.24**	**28**	*e*P	**Pn**	**12 03 09.4**	**+1.5**
FIA1				*e*S	**Sn**	**12 03 57.2**	**-0.9**
KEF	**Keuruu**	**4.65**	**17**	*e*P	**Pn**	**12 03 15.1**	**+1.6**
KEF				*e*S	**Sn**	**12 04 07.7**	**-0.4**
HFS	**Hagfors**	**4.87**	**302**	Pn	**Pn**	**12 03 17.9**	**+1.3**
HFS	baz=103,slow=12			Sn	**Sn**	**12 04 14.7**	**+1.1**
HFS	baz=103,slow=37			Lg	Lg	12 04 36.8	
HFS	baz=115,slow=37						
HFS	**Hagfors**	**4.87**	**302**	Pn	**Pn**	**12 03 17.9**	**+1.3**
HFS	baz=103,slow=12			Sn	**Sn**	**12 04 14.7**	**+1.1**
HFS	baz=103,slow=37			Sg	**Sg**	**12 04 36.8**	**-1.8**
HFS	baz=115,slow=37						
KAF	**Kangasniemi**	**4.87**	**25**	*e*P	**Pn**	**12 03 17.6**	**+1.0**
KAF				*e*S	**Sn**	**12 04 12.2**	**-1.5**
NRA0	**NORESS Array S**	**6.10**	**303**	Pn	**Pn**	**12 03 33.6**	**+0.2**
NRA0	baz=98,slow=12			Sn	**Sn**	**12 04 42.1**	**-1.6**
NRA0				Lg	Lg	12 05 14.4	
NRA0	baz=124,slow=28			Sn	**Sn**	**12 04 42.1**	**-1.6**
NRA0				Sg	**Sg**	**12 05 14.4**	**-3.4**
NB2	**NORSAR Subarra**	**6.37**	**305**	Pn	**Pn**	**12 03 37.9**	**+0.6**
NB2	baz=123,slow=14 **NORSAR Subarra**	**6.37**	**305**	Pn	**Pn**	**12 03 37.9**	**+0.6**
NOA	baz=123,slow=14 **NORSAR Array B**	**6.37**	**305**	Pn	**Pn**	**12 03 37.1**	**-0.2**
NOA	comp=Z,0.0nm,0.3s,baz=75,slow=6.4,SNR=6.8			Sn	**Sn**	**12 04 50.8**	**+0.1**
NOA	comp=Z,0.0nm,0.3s,baz=273,slow=15,SNR=1.3			Lg	Lg	12 05 22.7	
HOMB	**Homborsund**	**7.15**	**280**	Pn	**Pn**	**12 03 46.7**	**-1.1**
HOMB	**Homborsund**	**7.15**	**280**	Pn	**Pn**	**12 03 46.7**	**-1.1**
ARA0	**ARCESS Array S**	**11.91**	**6**	Pn	Pn	12 04 49.3	-3.6
ARA0	baz=180,slow=16 **ARCESS Array S**	**11.91**	**6**	Pn	Pn	12 04 49.3	-3.6
ARCES	baz=180,slow=16 **ARCESS Array B**	**11.91**	**6**	Pn	Pn	12 04 49.3	-3.6
	comp=Z,0.1nm,0.3s,baz=183,slow=14,SNR=5.5						

*ISU **21** 12:13:23.0,41°.00N×73°.50E, h5km*
*SOME **21** 12:13:24.2,41°.05N×73°.65E, h15km*
*NNC **21** 12:13:24.1±1.1,41°.06N×73°.59E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=8.5km s-min=4.3km az=169.0*
*KRNET **21** 12:13:25.3±0.1,41°.10N×73°.62E, h19km, mb3.6*
*KNET **21** 12:13:26.2±0.4,41°.19N×73°.74E, h2km±1km, ml3.1, Error ellipse: s-maj=2.6km s-min=1.9km az=44.0*
ISC 21 12:13:24.3±1.2,**41°.10N**±0°.03×**73°.62E**±0°.02,**h4**km±10km, **n78**,σ1°**57**/136,**38C-21D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.53**	**295**	⇑*i*P	**Pb**	**12 13 35.5**	**-0.8**
ARSB	baz=95			⇑*i*S	**Sb**	**12 13 43.7**	**-0.6**
ARSB	**Arslanbob**	**0.53**	**295**	*e*P	**Pg**	**12 13 34.9**	**+0.5**
ARSB				*e*S	**Sb**	**12 13 43.5**	**-0.8**
ANR	**Andizhan**	**1.01**	**250**	*e*P	**Pn**	**12 13 44.9**	**-0.4**
ANR				*e*S	**Sn**	**12 13 58.9**	**-1.2**
AML	**Almayashu**	**1.03**	**3**	⇓*i*P	**Pg**	**12 13 44.5**	**+0.4**
AML	baz=3.0			⇓*i*S	**Sb**	**12 13 58.6**	**-0.4**
AML	**Almayashu**	**1.03**	**3**	P	**Pg**	**12 13 44.4**	**+0.4**
AML	131nm,0.2s,SNR=203			⇓S	**Sb**	**12 13 58.9**	**-0.1**
UCH	509nm,0.2s **Uchtor**	**1.31**	**31**	⇑*i*P	**Pn**	**12 13 49.4**	**-0.5**
UCH	baz=30			⇑*i*S	**Sn**	**12 14 07.2**	**-0.8**
UCH	**Uchtor**	**1.31**	**31**	P	**Pn**	**12 13 49.4**	**-0.5**
UCH	38nm,0.2s,SNR=75			⇑S	**Sn**	**12 14 07.7**	**-0.4**
ARK	366nm,0.4s **Arkit**	**1.42**	**300**	⇑*i*P	**Pb**	**12 13 51.2**	**-0.3**
ARK	baz=99			⇑*i*S	**Sg**	**12 14 10.8**	**+0.7**
ARK	baz=99 **Arkit**	**1.42**	**300**	*i* P	**Pn**	**12 13 50.7**	**-0.4**
ARK				*i* S	**Sg**	**12 14 11.2**	**+1.1**
FRG	**Fergana**	**1.44**	**256**	*i* P	**Pg**	**12 13 52.5**	**+0.7**
FRG				*i* S	**Sg**	**12 14 14.5**	**+4.1**
EKS2	**Erkin-Say**	**1.56**	**4**	⇓*e*P	**Pb**	**12 13 54.0**	**+0.1**
EKS2	baz=4.0			⇓*i*S	**Sg**	**12 14 14.8**	**+0.3**
EKS2	baz=4.0 **Erkin-Say**	**1.56**	**4**	⇓P	**Pb**	**12 13 54.1**	**+0.2**
	38nm,0.2s,SNR=43						
KZA	**Kyzart**	**1.57**	**51**	⇑*i*P	**Pb**	**12 13 54.1**	**0.0**
KZA	baz=51			⇑*i*S	**Sg**	**12 14 15.1**	**+0.5**
KZA	baz=51 **Kyzart**	**1.57**	**51**	⇑P	**Pb**	**12 13 53.8**	**-0.3**
KZA	27nm,0.2s,SNR=29			⇑S	**Sg**	**12 14 15.4**	**+0.8**
MRKS	153nm,0.5s **Merke**	**1.67**	**350**	*e*P	**Pb**	**12 13 55.9**	**+0.2**
MRKS	162nm,0.2s			*e*S	**Sg**	**12 14 19.0**	**+1.1**
MRKS	269nm,0.4s **Merke**	**1.67**	**350**	P	**Pb**	**12 13 55.9**	**+0.2**
MRKS	162nm,0.4s			S	**Sg**	**12 14 18.7**	**+0.8**
AAK	269nm,0.4s **Ala-Archa**	**1.67**	**23**	⇑*e*P	**Pb**	**12 13 55.6**	**-0.1**
AAK	baz=23			⇑*i*S	**Sg**	**12 14 18.0**	**+0.1**
AAK	baz=23 **Ala-Archa**	**1.67**	**23**	⇓P	**Pb**	**12 13 55.8**	**+0.1**
AAK	60nm,0.4s,SNR=51			⇓S	**Sg**	**12 14 19.4**	**+1.5**
AAK	163nm,0.3s **Ala-Archa**	**1.67**	**23**	⇑P	**Pg**	**12 13 56.2**	**-0.1**
AAK	28nm,0.5s			⇑S	**Sg**	**12 14 19.1**	**+1.1**
CHMI	95nm,0.5s **Chimion**	**1.80**	**243**	*e*P	**Pn**	**12 13 55.5**	**-0.6**
CHMI				*e*S	**Sg**	**12 14 21.5**	**-0.5**
KBK	**Karagaybulak**	**1.84**	**32**	⇓*e*P	**Pb**	**12 13 59.0**	**+0.3**
KBK	baz=32			⇓*i*S	**Sg**	**12 14 23.5**	**-0.1**
KBK	baz=32 **Karagaybulak**	**1.84**	**32**	⇑P	**Pb**	**12 13 59.1**	**+0.4**
KBK	64nm,0.4s,SNR=33			⇑S	**Sg**	**12 14 24.6**	**+1.0**
FRU1	224nm,0.2s **Bishkek**	**1.87**	**24**	⇑*e*P	**Pb**	**12 13 59.1**	**+0.1**
FRU1	baz=23			⇑*i*S	**Sg**	**12 14 23.9**	**-0.4**
CHMS	baz=23 **Chumysh**	**2.08**	**24**	⇓*i*P	**Pb**	**12 14 02.0**	**-0.6**
CHMS	baz=24			⇓*i*S	**Sb**	**12 14 28.8**	**+0.1**
CHMS	**Chumysh**	**2.08**	**24**	⇓P	**Pb**	**12 14 03.1**	**+0.5**
CHMS	25nm,0.2s,SNR=30			⇓S	**Sg**	**12 14 30.9**	**0.0**
BOOM	147nm,0.5s **Boomskoye usch**	**2.22**	**51**	⇑*e*P	**Pb**	**12 14 04.2**	**-1.0**
BOOM	baz=51			⇑*i*S	**Sb**	**12 14 32.6**	**-0.5**
USP	baz=51 **Ospenovka**	**2.26**	**17**	⇑*e*P	**Pb**	**12 14 04.5**	**-1.2**
USP	baz=16			⇑*i*S	**Sb**	**12 14 33.4**	**-0.7**
USP	baz=16 **Ospenovka**	**2.26**	**17**	⇑P	**Pb**	**12 14 05.8**	**0.0**
USP	34nm,0.3s,SNR=18			⇑S	**Sg**	**12 14 36.5**	**-0.5**
ULHL	82nm,0.4s **Ulahol**	**2.27**	**59**	⇑*i*P	**Pb**	**12 14 04.9**	**-1.2**
ULHL	baz=59			⇑*i*S	**Sb**	**12 14 33.9**	**-0.7**
ULHL	baz=59 **Ulahol**	**2.27**	**59**	⇑P	**Pb**	**12 14 06.0**	**-0.1**
ULHL	11nm,0.1s,SNR=7.9			⇑S	**Sg**	**12 14 37.3**	**-0.1**
TKM2	116nm,0.3s **Tokmak 2**	**2.34**	**38**	⇓*e*P	**Pb**	**12 14 05.9**	**-1.3**
T

DZA					Lg		Lg	12 14 43.5	
	641nm,0.4s								
KST	**Kastek**	**2.61**	**41**	*e*P		**Pb**		**12 14 12.7**	**+0.9**
KST	18nm,0.2s			*e*S		**Sg**		**12 14 47.8**	**-0.4**
	88nm,0.3s								
KST	**Kastek**	**2.61**	**41**	Pg		**Pb**		**12 14 12.5**	**+0.7**
KST	11nm,0.4s			Lg		Lg		12 14 45.7	
	78nm,0.9s								
DGS	**Degeres**	**2.67**	**36**	*e*P		**Pb**		**12 14 13.9**	**+1.1**
DGS	34nm,0.4s			*e*S		**Sg**		**12 14 49.9**	**-0.2**
	88nm,0.4s								
DGS	**Degeres**	**2.67**	**36**	Pg		**Pg**		**12 14 14.2**	**-1.3**
DGS	15nm,0.6s			Lg		Lg		12 14 49.2	
	91nm,0.7s								
CHRV	**Charvak**	**2.81**	**282**	*e*P		**Pg**		**12 14 18.0**	**-0.1**
CHRV				*e*S		**Sb**		**12 14 46.7**	**-3.2**
KDJ	**Kajisay**	**2.86**	**68**	⇑*i*P		**Pb**		**12 14 13.0**	**-3.1**
KDJ	baz=68			⇑*i*S		**Sb**		**12 14 48.5**	**-3.0**
	baz=68								
IUG	**Iuzhnay**	**2.88**	**292**	*e*P		**Pb**		**12 14 17.4**	**+1.0**
IUG	11nm,0.2s			*e*S		**Sg**		**12 14 56.0**	**-0.9**
	216nm,0.3s								
IUG	**Iuzhnay**	**2.88**	**292**	Pg		**Pb**		**12 14 16.8**	**+0.4**
IUG	12nm,0.4s			Lg		Lg		12 14 54.6	
	199nm,0.4s								
MTBS	**Maitube**	**2.91**	**45**	*e*P		**Pb**		**12 14 17.8**	**+1.0**
MTBS	10nm,0.2s			*e*S		**Sg**		**12 14 56.6**	**-1.2**
	51nm,0.3s								
MTBS	**Maitube**	**2.91**	**45**	Pg		**Pb**		**12 14 18.2**	**+1.3**
MTBS	8.1nm,0.4s			Lg		Lg		12 14 56.1	
	72nm,0.6s								
IZV	**Izvestkoviy**	**2.95**	**48**	*e*P		**Pb**		**12 14 17.0**	**-0.6**
IZV	19nm,0.4s			*e*S		**Sb**		**12 14 55.2**	**+1.1**
	74nm,0.3s								
IZV	**Izvestkoviy**	**2.95**	**48**	Pg		**Pb**		**12 14 17.0**	**-0.6**
IZV	19nm,0.6s			Lg		Lg		12 14 54.8	
	78nm,0.5s								
KRBS	**Karabastau**	**3.01**	**30**	*e*P		**Pb**		**12 14 19.5**	**+1.0**
KRBS	9.1nm,0.3s			*e*S		**Sg**		**12 14 59.6**	**-1.3**
	27nm,0.6s								
KRBS	**Karabastau**	**3.01**	**30**	Pg		**Pb**		**12 14 20.1**	**+1.6**
KRBS	19nm,0.5s			Lg		Lg		12 14 59.3	
	23nm,0.7s								
KK31	**Karatay Array**	**3.06**	**312**	⇓Pg		**Pb**		**12 14 20.1**	**+0.8**
KK31	14nm,0.3s,baz=128,slow=16,SNR=5.4			⇑Lg		Lg		12 14 59.7	
	56nm,0.4s,baz=130,slow=26,SNR=18								
TARG	**Taragay, Kyrgy**	**3.21**	**77**	⇑*i*P		**Pn**		**12 14 18.0**	**+2.1**
TARG	baz=77			⇑*i*S		**Sn**		**12 14 56.1**	**+1.2**
	baz=77								
AAA	**Alma-Ata**	**3.23**	**48**	*e*P		**Pg**		**12 14 25.0**	**-1.2**
AAA	9.3nm,0.0s			*e*S		**Sg**		**12 15 08.5**	**+0.4**
	32nm,0.1s								
MDOK	**Medeo**	**3.28**	**50**	*e*P		**Pb**		**12 14 25.1**	**+1.9**
MDOK	6.3nm,0.2s			*e*S		**Sg**		**12 15 09.2**	**-0.4**
	64nm,0.5s								
MDOK	**Medeo**	**3.28**	**50**	Pg		**Pb**		**12 14 24.3**	**+1.1**
MDOK	24nm,0.8s			Lg		Lg		12 15 08.4	
	77nm,0.8s								
MDOK	**Medeo**	**3.28**	**50**	Pg		**Pg**		**12 14 25.6**	**-1.5**
MDOK	6.7nm,0.7s			Lg		Lg		12 15 08.9	
	81nm,0.8s								
GAR	**Garm**	**3.29**	**231**	⇓*i*P		**Pn**		**12 14 18.7**	**+2.0**
GAR	baz=31			⇓*i*S		**Sn**		**12 14 58.3**	**+1.9**
	baz=31								
KOTS	**Kotyrbulak**	**3.36**	**49**	*e*P		**Pg**		**12 14 27.0**	**-1.7**
KOTS	19nm,0.2s			*e*S		**Sg**		**12 15 12.3**	**+0.1**
	58nm,0.5s								
KOTS	**Kotyrbulak**	**3.36**	**49**	Pg		**Pb**		**12 14 26.4**	**+1.9**
KOTS	19nm,0.5s			Lg		Lg		12 15 10.2	
	221nm,0.5s								
BRLS	**Boroldaу**	**3.41**	**306**	*e*P		**Pb**		**12 14 26.4**	**+1.1**
BRLS	13nm,0.2s			*e*S		**Sg**		**12 15 11.2**	**-2.6**
	16nm,0.5s								
BRLS	**Boroldaу**	**3.41**	**306**	Pg		**Pb**		**12 14 26.6**	**+1.2**
BRLS	0.2nm,0.1s			Lg		Lg		12 15 10.3	
	69nm,0.5s								
KUU	**Kurty**	**3.44**	**35**	*e*P		**Pb**		**12 14 27.3**	**+1.5**
KUU	8.1nm,0.2s			*e*S		**Sg**		**12 15 13.0**	**-1.7**
	50nm,0.3s								
KUU	**Kurty**	**3.44**	**35**	Pg		**Pb**		**12 14 28.0**	**+2.2**
KUU	2.8nm,0.3s			Lg		Lg		12 15 12.9	
	67nm,0.7s								
ANVS	**Anan'yevo**	**3.46**	**60**	⇑*i*P		**Pn**		**12 14 21.4**	**+2.3**
ANVS	baz=59			⇑*i*S		**Sn**		**12 15 02.4**	**+1.8**
	baz=59								
KTBS	**Karatobe**	**3.46**	**40**	*e*P		**Pb**		**12 14 28.1**	**+1.9**
KTBS	4.4nm,0.2s			*e*S		**Sg**		**12 15 14.2**	**-1.1**
	82nm,0.5s								
KTBS	**Karatobe**	**3.46**	**40**	Pg		**Pb**		**12 14 28.0**	**+1.8**
KTBS	4.1nm,0.3s			Lg		Lg		12 15 13.4	
	104nm,0.7s								
CHKK	**Chushkaly**	**3.71**	**41**	*e*P		**Pb**		**12 14 32.6**	**+2.2**
CHKK	1.2nm,0.1s			*e*S		**Sg**		**12 15 21.7**	**-1.9**
	40nm,0.2s								
SATY	**Saty**	**4.07**	**60**	*e*P		**Pb**		**12 14 39.1**	**+2.5**
SATY	1.4nm,0.1s			*e*S		**Sg**		**12 15 33.0**	**-1.9**
	36nm,0.2s								
SATY	**Saty**	**4.07**	**60**	Pg		**Pb**		**12 14 38.9**	**+2.3**
SATY	2.6nm,0.3s			Lg		Lg		12 15 32.3	
	37nm,1.1s								
KURS	**Kuram**	**4.13**	**53**	*e*P		**Pb**		**12 14 40.3**	**+2.7**
KURS	1.4nm,0.2s			*e*S		**Sg**		**12 15 35.2**	**-1.9**
	22nm,0.8s								
KURS	**Kuram**	**4.13**	**53**	Pg		**Pg**		**12 14 41.1**	**-2.4**
KURS	3.1nm,0.6s			Lg		Lg		12 15 35.9	
	18nm,1.1s								
ZHN	**Zhinishke**	**4.13**	**58**	*e*P		**Pg**		**12 14 40.8**	**-2.8**
ZHN	2.5nm,0.1s			*e*S		**Sg**		**12 15 35.8**	**-1.3**
	9.6nm,0.1s								
ARXS	**Arharly**	**4.39**	**44**	*e*P		**Pb**		**12 14 44.6**	**+2.5**
ARXS	4.9nm,0.2s			*e*S		**Sg**		**12 15 42.5**	**-2.9**
	40nm,0.5s								
UZB	**Uzynbulak**	**4.51**	**61**	*e*P		**Pb**		**12 14 46.4**	**+2.3**
UZB	1.9nm,0.3s			*e*S		**Sg**		**12 15 45.5**	**-3.6**
	28nm,0.3s								
SHLS	**Shalkode**	**4.81**	**63**	*e*P		**Pg**		**12 14 57.7**	**+1.3**
SHLS	13nm,0.2s			*e*S		**Sg**		**12 16 04.8**	**+6.1**
	42nm,0.6s								
PDGK	**Podgornoye**	**4.90**	**61**	Pg		**Pb**		**12 14 53.7**	**+3.0**
PDGK	0.2nm,0.1s			Lg		Lg		12 15 57.4	
	14nm,0.7s								
DJR	**Jarkent**	**5.58**	**53**	*e*P		**Pb**		**12 15 05.8**	**+3.6**
DJR	0.7nm,0.2s			*e*S		**Sg**		**12 16 18.7**	**-4.7**
	25nm,0.6s								

*MDD **21** 12:14:51.4±1.9,37.°07N×13.°45W,h84km±109km,mb3.5/7,*
Error ellipse: s-maj=19.0km s-min=17.7km az=18.0,

PRXIMO
*IGIL **21** 12:14:51.6,37.°06N×13.°53W,h31km,ML2.6*
*INMG **21** 12:14:53.6±0.8,37.°00N×13.°52W,h10km,ML2.6, Error*
ellipse: s-maj=5.2km s-min=4.3km az=66.0
ISC 21 12:14:50.2±3.6,**37.2N**±0.1×**13.2W**±0.2,**h10**km,**n45,**
σ1971/77,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.49**	**90**	P			**Pn**	**12 15 45.5**	**+1.1**
	2.0nm,0.1s,SNR=6.5								
PFVI				S			**Sn**	**12 16 24.5**	**-1.3**
	43nm,1.2s,SNR=7.9								
PFVI	**Vila Bisbo**	**3.49**	**90**	*e*Sn			**Sn**	**12 16 24.5**	**-1.3**
PFVI				A			A	12 16 26.6	
	10nm,0.2s								
PMAFR	**Mafra**	**3.53**	**60**	P			**Pn**	**12 15 47.1**	**+2.0**
	5.4nm,0.2s,SNR=7.9								
PMAFR				S			**Sn**	**12 16 27.9**	**+1.1**
	37nm,0.8s,SNR=6.0								
PMAFR	**Mafra**	**3.53**	**60**	*e*Pn			**Pn**	**12 15 47.5**	**+2.5**
PMAFR				*e*Sn			**Sn**	**12 16 27.8**	**+1.0**
PMAFR				A			A	12 16 32.5	
	20nm,0.2s								
PTEO	**Sao Teotonio**	**3.57**	**84**	P			**Pn**	**12 15 47.3**	**+1.7**
PTEO				S			**Sn**	**12 16 27.0**	**-0.9**
	3.7nm,0.3s								
PTEO	**Sao Teotonio**	**3.57**	**84**	*e*Pn			**Pn**	**12 15 47.3**	**+1.7**
PTEO				*e*Sn			**Sn**	**12 16 27.0**	**-0.9**
PTEO				A			A	12 16 32.0	
	7.3nm,0.3s								
MORF	**Marmelete**	**3.62**	**88**	*e*S			**Sn**	**12 16 27.9**	**-1.3**
MORF				AML			AML	12 16 31.3	
	comp=N,19nm,0.2s								
MORF	**Marmelete**	**3.62**	**88**	P			**Pn**	**12 15 49.1**	**+2.7**
MORF				S			**Sn**	**12 16 28.0**	**-1.3**
	comp=N,13nm,0.4s								
MORF	**Marmelete**	**3.62**	**88**	*e*Pn			**Pn**	**12 15 49.1**	**+2.7**
MORF				*e*Sn			**Sn**	**12 16 28.0**	**-1.3**
MORF				A			A	12 16 37.4	
	comp=N,13nm,0.4s								
PNCL	**Nicolau / Gran**	**3.80**	**75**	P			**Pn**	**12 15 50.4**	**+1.6**
PNCL				S			**Sn**	**12 16 33.0**	**-0.5**
	comp=N,7.3nm,0.1s								
PNCL	**Nicolau / Gran**	**3.80**	**75**	*e*Pn			**Pn**	**12 15 50.4**	**+1.6**
PNCL				*e*Sn			**Sn**	**12 16 33.0**	**-0.5**
PNCL				A			A	12 16 38.8	
	comp=N,7.3nm,0.1s								
MESJ	**Messejana**	**4.00**	**80**	*e*P			**Pn**	**12 15 52.7**	**+1.3**
MESJ				*e*S			**Sn**	**12 16 37.3**	**-1.0**
MESJ				AML			AML	12 16 40.7	
	comp=N,8.6nm,0.2s								
MESJ	**Messejana**	**4.00**	**80**	P			**Pn**	**12 15 53.1**	**+1.6**
MESJ				S			**Sn**	**12 16 37.7**	**-0.7**
	comp=N,5.1nm,0.1s								
MESJ	**Messejana**	**4.00**	**80**	*e*Pn			**Pn**	**12 15 53.1**	**+1.6**
MESJ				*e*Sn			**Sn**	**12 16 37.7**	**-0.7**
MESJ				A			A	12 16 45.4	
	comp=N,5.1nm,0.1s								
PCVE	**Castro Verde**	**4.12**	**83**	P			**Pn**	**12 15 54.6**	**+1.4**
PCVE				S			**Sn**	**12 16 40.5**	**-0.9**
	comp=N,4.2nm,0.1s								
PCVE	**Castro Verde**	**4.12**	**83**	*e*Pn			**Pn**	**12 15 54.6**	**+1.4**
PCVE				*e*Sn			**Sn**	**12 16 40.5**	**-0.9**
PCVE				A			A	12 16 46.4	
	comp=N,4.2nm,0.1s								
PBDV	**Barranco-do-Ve**	**4.20**	**88**	P			**Pn**	**12 15 55.1**	**+0.8**
PBDV				S			**Sn**	**12 16 42.9**	**-0.5**
	comp=N,6.0nm,0.3s								
PBDV	**Barranco-do-Ve**	**4.20**	**88**	*e*Pn			**Pn**	**12 15 55.1**	**+0.8**
PBDV				*e*Sn			**Sn**	**12 16 42.9**	**-0.5**
PBDV				A			A	12 16 49.6	
	comp=N,6.0nm,0.3s								
PBEJ	**Beja**	**4.30**	**78**	S			**Sn**	**12 16 46.9**	**+1.0**
	comp=N,1.9nm,0.1s								
PBEJ	**Beja**	**4.30**	**78**	*e*Sn			**Sn**	**12 16 46.9**	**+1.0**
PBEJ				A			A	12 16 49.5	
	comp=N,3.8nm,0.1s								
PVAQ	**Vaqueiros**	**4.37**	**86**	P			**Pn**	**12 15 57.7**	**+1.1**
PVAQ				S			**Sn**	**12 16 45.5**	**-2.0**
	comp=N,7.2nm,0.1s								
PVAQ	**Vaqueiros**	**4.37**	**86**	*e*Pn			**Pn**	**12 15 57.7**	**+1.1**
PVAQ				*e*Sn			**Sn**	**12 16 45.5**	**-2.0**
PVAQ				A			A	12 16 51.4	
	comp=N,7.2nm,0.1s								
EGRO	**El Granado**	**4.56**	**85**	P			**Pn**	**12 15 59.2**	**0.0**
	comp=N,1.6nm,0.2s								
EGRO				S			**Sn**	**12 16 51.4**	**-0.8**
	comp=N,4.1nm,0.3s,SNR=4.9								
PCAS	**Casmilo, Conde**	**4.62**	**51**	P			**Pn**	**12 16 02.6**	**+2.5**
PCAS	**Casmilo, Conde**	**4.62**	**51**	*e*Pn			**Pn**	**12 16 02.6**	**+2.5**
PESTR	**Estremoz**	**4.71**	**68**	*e*Sn			**Sn**	**12 16 56.1**	**+0.1**
PMRV	**Marv??o**	**5.06**	**63**	P			**Pn**	**12 16 08.1**	**+2.0**
PMRV				S			**Sn**	**12 17 04.5**	**0.0**
	comp=N,3.4nm,0.2s								
PMRV	**Marv??o**	**5.06**	**63**	*e*Pn			**Pn**	**12 16 08.1**	**+2.0**
PMRV				*e*Sn			**Sn**	**12 17 04.5**	**0.0**
PMRV				A			A	12 17 06.5	
	comp=N,3.4nm,0.2s								
EBAD	**Badajoz**	**5.11**	**71**	P			**Pn**	**12 16 08.1**	**+1.3**
	comp=N,1.4nm,0.1s,SNR=7.3								
EBAD				S			**Sn**	**12 17 03.7**	**-2.1**
	comp=N,5.7nm,0.8s								
PCBR	**Castelo Branco**	**5.18**	**58**	P			**Pn**	**12 16 10.0**	**+2.3**
PCBR	**Castelo Branco**	**5.18**	**58**	*e*Pn			**Pn**	**12 16 10.0**	**+2.3**
EMIN	**Mina Concepcio**	**5.21**	**82**	P			**Pn**	**12 16 09.2**	**+1.1**
	comp=N,0.6nm,0.2s,SNR=9.6								
EMIN				S			**Sn**	**12 17 06.7**	**-1.6**
	comp=N,23nm,1.1s								
ESPR	**Espera**	**5.88**	**91**	S			**Sn**	**12 17 22.5**	**-2.2**
	comp=N,9.4nm,2.2s,SNR=7.9								
PGAV	**Gavieira, Arco**	**6.06**	**37**	P			**Pn**	**12 16 21.9**	**+2.0**
PGAV				S			**Sn**	**12 17 28.3**	**-1.0**
	comp=N,5.9nm,0.6s								
PGAV	**Gavieira, Arco**	**6.06**	**37**	*e*Pn			**Pn**	**12 16 21.9**	**+2.0**
PGAV				*e*Sn			**Sn**	**12 17 28.3**	**-1.0**
PGAV				A			A	12 17 42.3	
	comp=N,5.9nm,0.6s								
ELOB	**Lobios**	**6.09**	**39**	P			**Pn**	**12 16 21.0**	**+0.7**
	comp=N,0.6nm,0.1s,SNR=7.9								
ELOB				S			**Sn**	**12 17 27.7**	**-2.4**
	comp=N,4.1nm,1.0s,SNR=7.9								
MVO	**Moncorvo**	**6.18**	**49**	P			**Pn**	**12 16 22.5**	**+0.9**
	comp=N,1.1nm,0.2s,SNR=7.9								
MVO				S			**Sn**	**12 17 31.2**	**-1.2**
	comp=N,9.8nm,9.3s,SNR=7.9								
ECAB	**El Cabril**	**6.22**	**80**	P			**Pn**	**12 16 22.7**	**+0.6**
	comp=N,0.4nm,0.1s,SNR=7.9								
ECAB				S			**Sn**	**12 17 31.6**	**-1.7**
	comp=N,2.0nm,1.4s,SNR=5.9								
EMAZ	**Mazaricos**	**6.55**	**28**	P			**Pn**	**12 16 27.2**	**+0.6**
	comp=N,1.8nm,0.1s,SNR=7.9								
EMAZ				S			**Sn**	**12 17 35.8**	**-5.6**
	comp=N,8.3nm,6.5s,SNR=7.9								
PBRG	**Braganca**	**6.75**	**46**	P			**Pn**	**12 16 31.4**	**+2.0**
PBRG	**Braganca**	**6.75**	**46**	*e*Pn			**Pn**	**12 16 31.4**	**+2.0**
ECAL	**Calabor**	**6.85**	**45**	P			**Pn**	**12 16 30.9**	**+0.2**
	comp=N,2.5nm,0.3s,SNR=7.9								
ECAL				S			**Sn**	**12 17 46.8**	**-1.9**
	comp=N,5.6nm,1.5s,SNR=7.9								
EADA	**Adamuz**	**6.89**	**80**	P			**Pn**	**12 16 31.0**	**-0.3**
	comp=N,0.2nm,0.1s,SNR=4.0								
EADA				S			**Sn**	**12 17 47.9**	**-2.0**
	comp=N,14nm,4.6s,SNR=7.9								
PAB	**San Pablo**	**7.32**	**69**	P			**Pn**	**12 16 38.6**	**+1.4**
	comp=N,0.3nm,0.2s,SNR=7.9								
PAB				S			**Sn**	**12 17 57.6**	**-2.7**
	comp=N,1.4nm,1.0s,SNR=7.9								
EQES	**Quesada**	**8.06**	**83**	S			**Sn**	**12 18 15.2**	**-3.5**
	comp=N,4.1nm,2.0s,SNR=4.0								

*TAP **21** 12:17:05.8,24.°87N×122.°21E,h8km,ML3.0,C*
*JMA **21** 12:17:06.7,24.°74N×122.°19E,h3km,M2.5*
ISC 21 12:17:04.2±1.3,**24.89N**±0.02×**122.30E**±0.03,**h7**km±9km,
n76,σ0.94/137,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.31**	**293**	*i* P			**Pb**	**12 17 11.4**	**-0.7**
	baz=304								
TWB1				*i* S			**Sg**	**12 17 14.8**	**+0.3**
	baz=304								
EGS		**0.34**	**263**	P			**Pb**	**12 17 11.4**	**-1.2**
	baz=265								
EGS				S			**Sg**	**12 17 15.6**	**+0.3**
	baz=265								
EOS1	**EOS1**	**0.37**	**205**	P			**Pb**	**12 17 13.0**	**-0.1**
	baz=207								
EOS1				*e*S			**Sb**	**12 17 19.3**	**+0.3**
	baz=207								
NTC	**Toucheng**	**0.43**	**266**	P			**Pb**	**12 17 12.9**	**-1.2**
	baz=268								
TIPB	**Shuangxi**	**0.44**	**281**	*e*P			**Pb**	**12 17 13.6**	**-0.7**
	baz=286								
TIPB				*e*S			**Sg**	**12 17 18.9**	**+0.2**
	baz=286								
TWC	**Suao**	**0.50**	**236**	P			**Pg**	**12 17 13.6**	**-0.2**
	baz=234								
TWC				*e*S			**Sg**	**12 17 19.5**	**-0.8**
	baz=234								
NWF	**Wu-fen Shan**	**0.51**	**291**	*e*S			**Sb**	**12 17 22.6**	**-0.5**
	baz=296								
WFSB	**Wu-fen Shan**	**0.51**	**291**	*e*P			**Pn**	**12 17 15.2**	**-2.7**
	baz=296								
WFSB				*e*S			**Sg**	**12 17 21.6**	**+0.9**
	baz=296								
ILA	**Ilan**	**0.52**	**257**	S			**Sg**	**12 17 22.1**	**+1.1**
	baz=249								
TWE	**Neicheng**	**0.60**	**254**	P			**Pg**	**12 17 15.7**	**-0.1**
	baz=247								
TWE				S			**Sg**	**12 17 23.9**	**+0.3**
	baz=247								
TWA	**Mucha**	**0.66**	**278**	P			**Pn**	**12 17 19.2**	**-0.8**
	baz=281								
TWA				S			**Sg**	**12 17 27.1**	**+1.5**
	baz=281								
ENA	**Nanau**	**0.69**	**228**	P			**Pg**	**12 17 17.1**	**-0.3**
	baz=226								
ENA				*e*S			**Sg**	**12 17 26.4**	**+0.1**
	baz=226								
NHDH	**Xindian Distri**	**0.71**	**276**	*e*P			**Pn**	**12 17 19.4**	**-1.3**
	baz=279								
NHDH				*e*S			**Sg**	**12 17 28.4**	**+1.2**
	baz=279								
ENTT	**Nioudou**	**0.71**	**250**	P			**Pb**	**12 17 18.2**	**-0.7**
	baz=250								
ENTT				*e*S			**Sg**	**12 17 27.7**	**+0.5**
	baz=250								
YM01	**YM01**	**0.71**	**291**	*e*P			**Pn**	**12 17 19.6**	**-1.2**
	baz=294								
YM01				S			**Sb**	**12 17 29.3**	**+0.3**
	baz=294								
YM08	**YM08**	**0.71**	**295**	*e*P			**Pn**	**12 17 19.3**	**-1.4**
	baz=298								
YM08				S			**Sb**	**12 17 28.7**	**-0.3**
	baz=298								
YM11	**YM11**	**0.72**	**293**	*e*P			**Pn**	**12 17 19.6**	**-1.2**
	baz=296								
YM10	**YM10**	**0.72**	**292**	*e*P			**Pn**	**12 17 19.8**	**-1.1**
	baz=295								
YM10				*e*S			**Sb**	**12 17 29.2**	**-0.1**
	baz=295								
JYNG	**Yonagunijimaku**	**0.73**	**126**	P			**Pn**	**12 17 21.1**	**+0.2**
JYNG				S			**Sn**	**12 17 31.7**	**-0.5**
NWLT	**Wulai**	**0.73**	**262**	*e*P			**Pn**	**12 17 19.4**	**-1.6**
	baz=263								
NWLT				*e*S			**Sg**	**12 17 28.7**	**+0.7**
	baz=263								
YM04	**YM04**	**0.74**	**291**	*e*P			**Pn**	**12 17 19.9**	**-1.3**
	baz=294								
YM04				*e*S			**Sg**	**12 17 28.1**	**-0.2**
	baz=294								
TATO	**Taipei**	**0.74**	**277**	*e*P			**Pn**	**12 17 20.5**	**-0.6**
	baz=279								
TATO				*e*S			**Sg**	**12 17 29.8**	**+1.5**
	baz=279								
TWY	**Chenhua**	**0.75**	**301**	P			**Pn**	**12 17 20.5**	**-0.6**
	baz=305								
TWY				S			**Sb**	**12 17 30.0**	**+0.1**
	baz=305								
YM03	**YM03**	**0.75**	**293**	*e*P			**Pn**	**12 17 20.5**	**-0.8**
	baz=296								
PCYT	**Pengchaiyu**	**0.77**	**344**	P			**Pn**	**12 17 21.6**	**+0.1**
	baz=339								
PCYT				*e*S			**Sn**	**12 17 33.4**	**+0.1**
	baz=339								
ANP	**Anpu**	**0.77**	**293**	*e*P			**Pn**	**12 17 20.0**	**-1.6**
	baz=296								
NDT	**Datong Townshi**	**0.77**	**249**	P			**Pn**	**12 17 20.0**	**-1.5**
	baz=250								
NDT				S			**Sg**	**12 17 30.3**	**+1.2**
	baz=250								
YOJ	**Yonaguni jima**	**0.77**	**123**	*e*P			Pn	12 17 22.1	+0.6
	baz=120								
YOJ				*e*S			**Sn**	**12 17 33.8**	**+0.5**
	baz=120								
YOJ	**Yonaguni jima**	**0.77**	**123**	P			**Pn**	**12 17 21.9**	**+0.4**
YOJ				*e*S			**Sn**	**12 17 32.9**	**-0.4**
NTST	**Danshui**	**0.82**	**290**	P			**Pn**	**12 17 22.6**	**+0.4**
	baz=292								
NTST				S			**Sb**	**12 17 32.9**	**+0.8**
	baz=292								
YHNB	**Yeheng**	**0.87**	**256**	*e*P			**Pb**	**12 17 21.0**	**-0.7**
	baz=250								
YHNB				*e*S			**Sg**	**12 17 31.8**	**-0.5**
	baz=250								
NSK	**Sanguang**	**0.88**	**257**	P			**Pb**	**12 17 21.1**	**-0.8**
	baz=252								
NSK				*e*S			**Sg**	**12 17 33.2**	**+0.5**
	baz=252								
NNSB	**Datong**	**0.95**	**242**	P			**Pb**	**12 17 22.4**	**-0.7**
	baz=248								
NNSB				*e*S			**Sg**	**12 17 35.3**	**+0.4**
	baz=248								
NNSH	**Datong**	**0.95**	**242**	P			**Pg**	**12 17 22.3**	**-0.3**
	baz=248								
NNSH				S			**Sg**	**12 17 35.2**	**+0.2**
	baz=248								
NNS	**Nan Shan**	**0.95**	**242**	P			**Pn**	**12 17 23.7**	**-0.4**
	baz=232								
NNS				S			**Sg**	**12 17 36.0**	**+1.0**
	baz=232								
NACB	**Ninganchiao**	**0.96**	**222**	*e*P			**Pg**	**12 17 22.2**	**-0.4**
	baz=223								
NACB				*e*S			**Sg**	**12 17 33.9**	**-1.2**
	baz=223								
ETLH	**Xiulin Townshi**	**1.01**	**228**	P			**Pn**	**12 17 23.6**	**-1.3**
	baz=229								
ETLH				*e*S			**Sg**	**12 17 36.4**	**-0.3**
	baz=229								
TWD	**Chiawan**	**1.03**	**219**	P			**Pg**	**12 17 23.5**	**-0.4**
	baz=220								
TWD				*e*S			**Sg**	**12 17 37.2**	**-0.1**
	baz=220								
WHF	**Hehuan Shan**	**1.20**	**232**	P			**Pg**	**12 17 27.1**	**-0.2**
	baz=234								
WHF				S			**Sb**	**12

	baz=267							
NSY				*e*S		**Sb**	**12 17 52.6**	**+1.6**
	baz=267							
DPDB	**Guoxing**	**1.51**	**236**	*e*P		**Pg**	**12 17 33.5**	**+0.3**
	baz=240							
DPDB				*e*S		**Sb**	**12 17 53.5**	**+1.5**
	baz=240							
PTSB	**Yuanli**	**1.52**	**254**	*e*P		**Pg**	**12 17 33.2**	**-0.1**
	baz=273							
PTSB				*e*S		**Sb**	**12 17 54.0**	**+1.9**
	baz=273							
HATJ	**Hateruma jima**	**1.60**	**121**	P		Pg	12 17 37.1	+2.2
HGSD	**Ruisui**	**1.60**	**210**	*e*P		**Pg**	**12 17 34.5**	**-0.5**
	baz=199							
HGSD				*e*S		**Sb**	**12 17 55.5**	**+0.9**
	baz=199							
WDJ	**Dajia District**	**1.60**	**251**	*e*P		**Pg**	**12 17 35.3**	**+0.3**
	baz=254							
WDJ				*e*S		**Sb**	**12 17 56.3**	**+1.7**
	baz=254							
SMLT	**Sun Moon Lake**	**1.62**	**232**	P		**Pg**	**12 17 36.0**	**+0.6**
	baz=236							
SMLT				*e*S		**Sb**	**12 17 56.0**	**+0.7**
	baz=236							
EHY	**Hungye**	**1.64**	**213**	*e*P		**Pb**	**12 17 34.4**	**-0.4**
	baz=216							
EHY				*e*S		**Sb**	**12 17 56.3**	**+0.6**
	baz=216							
TYC	**Yuchr**	**1.64**	**234**	P		**Pg**	**12 17 35.8**	**+0.1**
	baz=237							
TYC				*e*S		**Sb**	**12 17 56.3**	**+0.6**
	baz=237							
SSLB	**Suanglung**	**1.65**	**229**	*e*P		**Pg**	**12 17 35.3**	**-0.5**
	baz=232							
SSLB				*e*S		**Sn**	**12 17 56.3**	**+1.3**
	baz=232							
YULB	**Yu-li**	**1.75**	**212**	*e*P		**Pb**	**12 17 35.5**	**-1.1**
	baz=215							
YULB				S		**Sn**	**12 17 58.1**	**+0.6**
	baz=215							
JIJ	**Ishigaki jima**	**1.75**	**107**	P		Pg	12 17 38.8	+0.9
WHYT	**Xinyi Township**	**1.77**	**228**	P		**Pg**	**12 17 37.7**	**-0.5**
	baz=227							
WHYT				*e*S		**Sb**	**12 18 00.0**	**+0.4**
	baz=227							
TWF1	**Yuli**	**1.78**	**211**	P		**Pb**	**12 17 36.8**	**-0.4**
	baz=215							
TWF1				*e*S		**Sn**	**12 17 59.2**	**+0.9**
	baz=215							
WJS	**Zhushan**	**1.78**	**234**	*e*P		**Pg**	**12 17 38.9**	**+0.4**
	baz=237							
WJS				*e*S		**Sg**	**12 18 02.6**	**+1.0**
	baz=237							
FULB	**Fuli**	**1.92**	**209**	P		**Pg**	**12 17 39.5**	**-1.5**
	baz=228							
FULB				*e*S		**Sb**	**12 18 04.7**	**+1.0**
	baz=228							
CHN5	**Tsauling**	**1.96**	**229**	P		**Pg**	**12 17 40.8**	**-1.0**
	baz=232							
CHN5				S		**Sb**	**12 18 07.6**	**+2.6**
	baz=232							
WGK	**Gukeng**	**1.99**	**233**	*e*S		**Sb**	**12 18 07.9**	**+2.3**
	baz=236							
WDLH	**Douliu**	**2.00**	**234**	*e*P		**Pb**	**12 17 41.0**	**0.0**
	baz=236							
WDLH				*e*S		**Sb**	**12 18 07.7**	**+1.7**
	baz=236							
ELDTW	**Lidau**	**2.06**	**215**	*e*P		**Pb**	**12 17 39.7**	**-2.3**
	baz=202							
CHN4	**Tsaushan**	**2.19**	**226**	P		**Pb**	**12 17 44.2**	**+0.1**
	baz=229							
CHN4				*e*S		**Sb**	**12 18 13.1**	**+1.7**
	baz=229							
TPUB	**Ta-pu**	**2.20**	**224**	*e*P		**Pb**	**12 17 43.7**	**-0.6**
	baz=211							
TPUB				*e*S		**Sb**	**12 18 12.4**	**+0.7**
	baz=211							
WTP	**Ta-pu**	**2.25**	**224**	*e*P		**Pb**	**12 17 45.1**	**0.0**
	baz=210							
WTP				*e*S		**Sb**	**12 18 13.9**	**+0.7**
	baz=210							
TWH	**Lutao**	**2.29**	**199**	*e*P		**Pn**	**12 17 42.1**	**-0.3**
	baz=204							
TWH				*e*S		**Sn**	**12 18 11.4**	**+0.5**
	baz=204							
TWK	**Hsinying**	**2.31**	**226**	P		**Pb**	**12 17 45.8**	**-0.5**
	baz=229							
TWK				*e*S		**Sb**	**12 18 16.3**	**+1.2**
	baz=229							
SNST	**Tainan City**	**2.34**	**225**	*e*P		**Pb**	**12 17 46.6**	**-0.1**
	baz=228							
SNST				S		**Sb**	**12 18 17.6**	**+1.8**
	baz=228							
CHN1	**Nanshi**	**2.34**	**224**	*e*P		**Pb**	**12 17 46.5**	**-0.4**
	baz=227							
CHN1				*e*S		**Sb**	**12 18 17.1**	**+1.1**
	baz=227							
SLGT	**Liugui**	**2.42**	**219**	*e*P		**Pb**	**12 17 47.7**	**-0.3**
	baz=223							
SLGT				S		**Sb**	**12 18 18.2**	**+0.2**
	baz=223							

*IDC **21** 12:19:39.1±1.2,24°.59S×176°.14W,h0km,mb4.1/9, mb1 4.3/9,mb1mx4.0/39,mbtmp4.1/9,Error ellipse: s-maj=35.6km s-min=26.5km az=136.0*
*NEIC **21** 12:19:39.6±1.2,24°.6S±0°.2×175°.54W±0°.04,h35km±2km, mb4.6/10,Error ellipse: s-maj=27.8km s-min=5.8km az=172.0*

ISC 21 12:19:41.6±0.6,24°.5S±0°.1×175°.6W±0°.1,h35km,n28, σ1ş96/25,mb4.5/14,South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**7.51**	**45**	Pn	**Pn**	**12 21 27.7**	**-1.0**
MSVF	**Nonsavu**	**8.99**	**317**		Pn	12 21 53.9	+4.8
AFI	**Afiamalu**	**11.12**	**19**	Pn	**Pn**	**12 22 17.6**	**-0.6**
RAR	**Rarotonga**	**14.91**	**80**	Pn	**Pn**	**12 23 07.9**	**-2.0**
CTA	**Charters Tower**	**35.53**	**269**	P	**P**	**12 26 33.0**	**-2.5**
	1.3nm,0.3s,baz=93,slow=10,SNR=6.7						
CTAO	**Charters Tower**	**35.53**	**269**	P	**P**	**12 26 34.1**	**-1.4**
ASAR	**Alice Springs**	**45.94**	**260**	P	**P**	**12 27 59.4**	**-2.0**
	1.2nm,0.7s,baz=102,slow=7.8,SNR=10						
WR0	**Warramunga Arr**	**46.22**	**265**	P	**P**	**12 28 01.7**	**-1.9**
WR0				IAmb	IAmb	12 28 06.3	
	comp=Z,7.6nm,1.4s						
WB2	**Warramunga Arr**	**46.40**	**265**	P	**P**	**12 28 02.9**	**-2.1**
WB0	**Warramunga Arr**	**46.41**	**265**	P	**P**	**12 28 02.7**	**-2.3**
WRA	**Warramunga Arr**	**46.41**	**265**	P	**P**	**12 28 02.6**	**-2.5**
	comp=Z,1.9nm,0.8s,baz=99,slow=6.9,SNR=18						
FORT	**Forrest**	**49.91**	**250**	P	**P**	**12 28 29.4**	**-2.6**
KNRA	**Kununurra**	**52.74**	**269**	P	**P**	**12 28 51.7**	**-1.6**
KNRA				IAmb	IAmb	12 28 53.7	
	comp=Z,13nm,1.2s						
VNDA	**Vanda**	**54.17**	**186**	P	P	12 29 05.1	+2.2
	comp=Z,0.8nm,0.9s,baz=357,slow=6.1,SNR=4.9						
MORW	**Morawa**	**60.47**	**249**	P	**P**	**12 29 47.6**	**-0.6**
MORW				IAmb	IAmb	12 29 55.4	
	comp=Z,11nm,1.4s						
QSPA	**South Pole Qui**	**65.59**	**180**	P	**P**	**12 30 23.8**	**+2.1**
QSPA				IAmb	IAmb	12 30 24.4	
	comp=Z,7.4nm,1.0s						
PETK	**Petropavlovsk-**	**80.71**	**344**	P	**P**	**12 31 52.8**	**+2.1**
	comp=Z,4.4nm,0.8s,baz=146,slow=8.3,SNR=9.8						
KSRS	**Korea Array**	**81.36**	**318**	P	**P**	**12 31 57.2**	**+2.6**
	comp=Z,0.4nm,0.6s,baz=138,slow=5.7,SNR=4.6						
NVAR	**Mina Array Bea**	**82.42**	**42**	P	P	12 32 04.9	+4.4
	comp=Z,0.6nm,0.8s,baz=223,slow=9.6,SNR=4.6						
USRK	**Ussuriysk Ar.**	**83.52**	**325**	P	**P**	**12 32 08.7**	**+3.0**
	comp=Z,6.9nm,0.9s,baz=119,slow=3.0,SNR=9.8						
SNAA	**Sanae**	**83.96**	**178**	P	**P**	**12 32 08.5**	**+0.7**
SNAA	**Sanae**	**83.96**	**178**	P	**P**	**12 32 08.8**	**+1.0**
SNAA				IAmb	IAmb	12 32 15.8	
	comp=Z,5.0nm,1.3s						
VNA3	**Neumayer Olymp**	**84.01**	**175**	P	**P**	**12 32 08.6**	**+0.6**
VNA2	**Neumayer--Watz**	**84.48**	**176**	P	**P**	**12 32 11.5**	**+1.2**
VNA1	**Neumayer--Stat**	**84.69**	**176**	P	**P**	**12 32 12.7**	**+1.4**
TCUT	**Toone Canyon**	**88.28**	**43**	P	**P**	**12 32 28.6**	**-1.0**
CMAR	**Chiang Mai Arr**	**93.55**	**289**	P	**P**	**12 32 57.1**	**+2.7**
	comp=Z,1.3nm,0.7s,baz=151,slow=2.5,SNR=7.7						
BRTR	**Keskin Array B**	**151.15**	**309**	PKPbc	**PKiKP**	**12 39 32.5**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=179,slow=2.4,SNR=3.6						

*DDA **21** 12:28:03.1,38°.87N×38°.63E,h7km±1km,ML2.0*
*ATA **21** 12:28:05.6±3.8,39°.14N×38°.86E,h7km±584km,ML1.2, MW5.0*

ISC 21 12:28:02.6±1.1,38°.88N±0°.04×38°.66E±0°.04,h26km±11km, n8,σ1ş19/16,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMA	**Kemaliye**	**0.41**	**341**	*e*P	**Pb**	**12 28 11.5**	**+0.1**
KEMA				*e*S	**Sb**	**12 28 17.6**	**+0.1**
KEMA				IAML		12 28 18.3	
	comp=Z,20nm,0.2s						
KEMA	**Kemaliye**	**0.41**	**341**	*i* P	**Pb**	**12 28 11.5**	**+0.1**
KEMA				*i* S	**Sb**	**12 28 17.6**	**+0.1**
KEMA				IAML		12 28 18.0	
	comp=E,153nm,0.2s						
ELZG	**Elazig**	**0.46**	**147**	*i* P	**Pb**	**12 28 12.6**	**+0.3**
ELZG				*i* S	**Sb**	**12 28 19.4**	**+0.5**
ELZG				IAML		12 28 21.0	
	comp=E,82nm,0.4s						
HEKM	**Malatya_Hekimh**	**0.55**	**270**	*i* P	**Pb**	**12 28 13.9**	**+0.1**
HEKM				*i* S	**Sn**	**12 28 23.0**	**-0.3**
TNCL	**Tunceli-Merkez**	**0.72**	**71**	*e*P	**Pn**	**12 28 17.6**	**+0.3**
TNCL				*e*S	**Sb**	**12 28 23.3**	**-3.0**
TNCL				IAML		12 28 30.1	
	comp=Z,16nm,0.1s						
TNCL	**Tunceli-Merkez**	**0.72**	**71**	*i* P	**Pn**	**12 28 17.6**	**+0.3**
TNCL				*i* S	**Sn**	**12 28 28.3**	**+0.7**
AKCD	**Akcadag**	**0.82**	**225**	*i* P	**Pb**	**12 28 18.7**	**+0.3**
AKCD				*i* S	**Sn**	**12 28 29.6**	**-0.5**
AKCD				IAML		12 28 31.0	
	comp=E,61nm,0.4s						
AKCD				IAML		12 28 33.0	
	comp=N,58nm,0.4s						
KELT	**Kelkit**	**1.34**	**20**	*e*P	**Pb**	**12 28 29.1**	**+1.8**
KELT				*e*S	**Sn**	**12 28 41.2**	**-1.9**
KELT				IAML		12 28 53.4	
	comp=Z,4.9nm,0.8s						

*IDC **21** 12:30:09.5±0.8,8°.29S×149°.46E,h0km,mb3.9/11, mb1 4.2/16,mb1mx3.9/50,mbtmp4.0/16,ML4.3/4,MS3.2/2, Ms1 3.2/2,ms1mx2.9/23,Error ellipse: s-maj=22.6km s-min=14.7km az=121.0*

ISC 21 12:30:11.2±0.7,8°.30S±0°.10×149°.4E±0°.1,h10km,n19, σ0ş97/20,mb3.8/13,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.42**	**243**	Pn	**Pb**	**12 30 53.6**	**-1.3**
	58nm,0.3s,baz=58,slow=5.4,SNR=53						
KRVT	**Keravat (AS076**	**4.78**	**34**	Pn	**Pn**	**12 31 23.1**	**-0.2**
	12nm,0.3s,baz=174,slow=4.2,SNR=6.7						
KRVT				Sn	**Sn**	**12 32 19.4**	**+0.6**
	28nm,0.3s,baz=360,slow=23,SNR=8.7						
JAY	**Jayapura**	**10.35**	**303**	Pn	**Pn**	**12 32 39.8**	**0.0**
	1.5nm,0.3s,baz=177,slow=20,SNR=7.2						
JAY				LR	LR	12 37 28.7	
	comp=Z,183nm,20.7s,baz=99,slow=42						
WRA	**Warramunga Arr**	**18.57**	**230**	P	**Pn**	**12 34 29.4**	**+0.7**
	0.7nm,0.3s,baz=58,slow=9.3,SNR=45						
SIJI	**Sorong**	**19.46**	**291**	P	**Pn**	**12 34 39.0**	**-0.6**
	2.4nm,0.3s,baz=74,slow=8.1,SNR=11						
SIJI				LR	LR	12 43 33.7	
	comp=Z,56nm,19.8s,baz=62,slow=41						
ASAR	**Alice Springs**	**21.27**	**222**	P	**P**	**12 34 58.9**	**+1.0**
	0.8nm,0.4s,baz=59,slow=9.1,SNR=21						
STKA	**Stephens Creek**	**24.54**	**196**	P	**P**	**12 35 32.0**	**+0.9**
	1.2nm,0.7s,baz=352,slow=22,SNR=2.6						
FITZ	**Fitzroy Crossi**	**25.02**	**245**	P	**P**	**12 35 35.3**	**-0.3**
	14nm,0.7s,baz=54,slow=8.2,SNR=58						
BATI	**Baumata**	**25.42**	**264**	P	**P**	**12 35 40.4**	**+1.1**
	25nm,0.5s,baz=52,slow=3.5,SNR=6.0						
KSRS	**Korea Array**	**49.74**	**338**	P	**P**	**12 39 04.5**	**+0.8**
	0.7nm,0.6s,baz=160,slow=8.0,SNR=2.9						
CMAR	**Chiang Mai Arr**	**56.39**	**299**	P	**P**	**12 39 53.8**	**+0.6**
	0.4nm,0.4s,baz=116,slow=6.1,SNR=4.0						
PETK	**Petropavlovsk-**	**61.58**	**6**	P	**P**	**12 40 29.0**	**+0.4**
	1.8nm,0.7s,baz=134,slow=6.4,SNR=7.6						
SONM	**Songino Array**	**67.54**	**330**	P	**P**	**12 41 09.2**	**+1.4**
	0.9nm,0.6s,baz=147,slow=4.9,SNR=5.0						
VNDA	**Vanda**	**69.50**	**177**	P	**P**	**12 41 19.9**	**+0.4**
	1.7nm,0.5s,baz=334,slow=7.4,SNR=15						
MKAR	**Makanchi Array**	**80.75**	**320**	P	**P**	**12 42 24.6**	**-0.3**
	0.2nm,0.6s,baz=92,slow=6.9,SNR=2.3						
KSH	**Kashi**	**82.64**	**312**	P	**P**	**12 42 34.8**	**-0.4**
KSH				pP	PcP	12 42 54.0	+14
KSH				pmax	pmax		
	comp=Z,20nm,1.0s						
KSH				pmax	pmax		
	comp=Z,84nm,3.9s						
ILAR	**Eielson Array**	**86.68**	**23**	P	**P**	**12 42 52.6**	**-2.2**
	comp=Z,0.5nm,0.7s,baz=256,slow=5.1,SNR=6.7						
NVAR	**Mina Array Bea**	**96.93**	**52**	P	**P**	**12 43 42.9**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=256,slow=6.0,SNR=3.6						
TORD	**Torodi Ar. Bea**	**147.87**	**281**	PKPbc	**PKPbc**	**12 49 56.6**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=313,slow=0.6,SNR=3.5						

*IDC **21** 12:31:23.3±0.9,41°.84S×84°.78E,h0km,mb3.9/8, mb1 4.1/8,mb1mx3.8/42,mbtmp3.9/8,MS3.7/8,Ms1 3.6/8, ms1mx3.3/28,Error ellipse: s-maj=34.3km s-min=23.3km az=103.0*
*NEIC **21** 12:31:24.8±1.4,41°.8S±0°.1×84°.8E±0°.2,h10km±1km, mb4.5/14,Error ellipse: s-maj=31.8km s-min=21.5km az=293.0*

ISC 21 12:31:24.5±0.7,41°.8S±0°.1×84°.8E±0°.2,h10km,n34, σ0ş46/24,mb4.4/15,MS3.6/8,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**23.98**	**83**	T	T	13 01 26.2	
	baz=244,slow=74,SNR=187						
H01W3	**Cape Leeuwin H**	**23.98**	**83**	T	T	13 01 24.0	
	baz=244,slow=74,SNR=192						
H01W1	**Cape Leeuwin H**	**23.99**	**83**	T	T	13 01 22.2	
	baz=244,slow=74,SNR=221						
NWAO	**Narrogin (SRO)**	**27.17**	**82**	LR	LR	12 45 21.0	
	comp=Z,124nm,21.1s,baz=252,slow=31						
MAW	**Mawson**	**28.44**	**197**	LR	LR	12 45 59.2	
	comp=Z,67nm,19.8s,baz=56,slow=31						
PSAC3	**Pilbara Seismi**	**35.65**	**67**	P	**P**	**12 38 22.3**	**-0.5**
PSAC3				IAmb	IAmb	12 38 40.3	
	comp=Z,9.4nm,1.3s						
PSAB3	**Pilbara Seismi**	**35.69**	**67**	P	**P**	**12 38 23.4**	**+0.3**
PSAB3				IAmb	IAmb	12 38 36.4	
	comp=Z,12nm,1.4s						
H08S2	**Diego Garcia H**	**35.72**	**339**	T	T	13 16 01.1	
	baz=165,slow=76,SNR=577						
PSAB2	**Pilbara Seismi**	**35.72**	**67**	P	**P**	**12 38 24.1**	**+0.7**
H08S1	**Diego Garcia H**	**35.72**	**339**	T	T	13 16 00.2	
	baz=165,slow=76,SNR=459						
H08S3	**Diego Garcia H**	**35.74**	**339**	T	T	13 16 01.3	
	baz=165,slow=76,SNR=853						
BBOO	**Buckleboo**	**41.26**	**95**	P	**P**	**12 39 10.2**	**+0.4**
BBOO				IAmb	IAmb	12 39 13.3	
	comp=Z,19nm,1.5s						
GSI	**Gunungsitoli**	**44.46**	**18**	P	**P**	**12 39 35.0**	**-0.8**
ASAR	**Alice Springs**	**44.49**	**82**	P	**P**	**12 39 36.3**	**+0.1**
	comp=Z,1.3nm,0.9s,baz=229,slow=7.1,SNR=9.3						
ASAR				PcP	**PP**	**12 41 20.3**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=256,slow=1.8,SNR=4.6						
ASAR				LR	LR	12 56 08.3	
	comp=Z,184nm,19.5s,baz=217,slow=33						
AS31	**Alice Springs**	**44.49**	**82**	P	**P**	**12 39 35.7**	**-0.5**
STKA	**Stephens Creek**	**45.82**	**97**	LR	LR	12 55 10.2	
	comp=Z,65nm,19.9s,baz=207,slow=31						
VNDA	**Vanda**	**46.80**	**163**	P	**P**	**12 39 53.7**	**0.0**
	comp=Z,0.5nm,0.6s,baz=281,slow=9.1,SNR=5.9						
VNDA				LR	LR	12 57 23.2	
	comp=Z,89nm,20.8s,baz=290,slow=33						
WRA	**Warramunga Arr**	**47.07**	**78**	P	**P**	**12 39 56.1**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=230,slow=7.8,SNR=5.2						
QSPA	**South Pole Qui**	**48.34**	**180**	P	**P**	**12 40 06.0**	**-0.1**
QSPA				IAmb	IAmb	12 40 08.6	
	comp=Z,2.7nm,0.8s						
BOSA	**Boshof**	**49.45**	**265**	LR	LR	12 57 32.0	
	comp=Z,78nm,19.1s,baz=131,slow=32						
MTN	**Manton Dam**	**49.48**	**68**	P	**P**	**12 40 14.5**	**-0.7**
SNAA	**Sanae**	**50.21**	**204**	P	**P**	**12 40 19.9**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=124,slow=13,SNR=8.4						
SNAA	**Sanae**	**50.21**	**204**	P	**P**	**12 40 20.0**	**-0.1**
PBKT	**Sadao Pong**	**59.99**	**18**	P	**P**	**12 41 31.0**	**-0.2**
CMAR	**Chiang Mai Arr**	**61.38**	**15**	P	**P**	**12 41 40.8**	**+0.1**
	comp=Z,2.9nm,1.0s,baz=211,slow=7.5,SNR=7.7						
CMAR				LR	LR	13 06 33.8	
	comp=Z,37nm,18.0s,baz=190,slow=34						
KK31	**Karatay Array**	**85.50**	**350**	P	**P**	**12 44 02.7**	**+0.5**
KK31				IAmb	IAmb	12 44 05.5	
	comp=Z,4.6nm,1.1s						
KKAR	**Karatay Array**	**85.50**	**350**	P	**P**	**12 44 02.7**	**+0.5**
KKAR				IAmb	IAmb	12 44 05.5	
	comp=Z,4.6nm,1.1s						
MKAR	**Makanchi Array**	**88.25**	**358**	P	**P**	**12 44 15.8**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=156,slow=6.5,SNR=4.9						
MAKZ	**Makanchi**	**88.27**	**358**	P	**P**	**12 44 16.2**	**+0.6**
MAKZ				IAmb	IAmb	12 44 18.2	
	comp=Z,1.7nm,0.9s						
SONM	**Songino Array**	**91.30**	**14**	P	**P**	**12 44 29.8**	**0.0**
	comp=Z,0.4nm,0.4s,baz=204,slow=3.2,SNR=2.4						
KURBB	**Kurchatov Arra**	**92.21**	**356**	P	**P**	**12 44 34.2**	**+0.3**
	comp=Z,0.4nm,0.2s,baz=180,slow=3.4,SNR=4.7						
DBIC	**Dimbokro**	**94.10**	**275**	LR	LR	13 20 42.6	
	comp=Z,42nm,20.8s,baz=56,slow=31						
INK	**Inuvik**	**146.59**	**25**	PKPbc	**PKPab**	**12 51 06.6**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=24,slow=1.8,SNR=6.6						
INK	**Inuvik**	**146.59**	**25**	PKPdf	**PKPbc**	**12 51 04.7**	**-0.3**

*KRSC **21** 12:44:21.6±1.8,51°.18N×158°.42E,h42km±25km,ML5.0, FELT [III] at lighthouse Krugliy; [II] at Viluchinsk.*
*MOS **21** 12:44:24.9±0.8,51°.31N×158°.03E,h63km,mb4.7/22,Error ellipse: s-maj=9.3km s-min=3.3km az=78.9*
*NEIC **21** 12:44:26.1±1.3,51°.35N±0°.05×158°.1E±0°.1,h55km±5km, mb4.5/67,Error ellipse: s-maj=11.5km s-min=7.5km az=91.0*
*IDC **21** 12:44:28.2±2.4,51°.47N×157°.96E,h74km±21km,mb3.9/18, mb1 4.1/19,mb1mx3.9/46,mbtmp4.2/19,MS3.3/11, Ms1 3.3/11,ms1mx3.1/41,Error ellipse: s-maj=19.4km s-min=10.0km az=144.0*

ISC 21 12:44:24.4±0.8,51°.19N±0°.05×158°.32E±0°.04,h48km±7km, n229,σ1ş51/254,mb4.5/63,MS3.1/7,9C,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**0.99**	**287**	*e*P	**Pn**	**12 44 41.1**	**-0.7**
PAU	**Pauzhetka**	**0.99**	**287**	PN	**Pn**	**12 44 41.1**	**-0.7**
ASAK	**Asacha**	**1.22**	**348**	*i* P	**Pn**	**12 44 44.2**	**-0.9**
ASAK				*e*S	**Sn**	**12 44 58.9**	**-1.6**
ASAK	**Asacha**	**1.22**	**348**	PN	**Pn**	**12 44 44.2**	**-0.9**
ASAK				S	**Sn**	**12 44 58.9**	**-1.6**
RUS	**Russkaya**	**1.25**	**5**	*e*P	**Pn**	**12 44 43.9**	**-1.4**
RUS				*e*S	**Sn**	**12 44 58.3**	**-2.7**
RUS	**Russkaya**	**1.25**	**5**	PN	**Pn**	**12 44 43.9**	**-1.4**
RUS				S	**Sn**	**12 44 58.3**	**-2.7**
MTVR	**Mutnovka**	**1.29**	**356**	*e*P	**Pn**	**12 44 45.4**	**-0.7**
MTVR	**Mutnovka**	**1.29**	**356**	PN	**Pn**	**12 44 45.4**	**-0.7**
GRL	**Gorelyy**	**1.37**	**354**	*i* P	**Pn**	**12 44 46.7**	**-0.5**
GRL				*e*S	**Sn**	**12 45 03.2**	**-1.0**
GRL	**Gorelyy**	**1.37**	**354**	PN	**Pn**	**12 44 46.7**	**-0.5**
GRL				S	**Sn**	**12 45 03.2**	**-1.0**
MIPR	**Malaya Ipel'ka**	**1.46**	**319**	*e*P	**Pn**	**12 44 48.1**	**-0.1**
MIPR				*e*S	**Sn**	**12 45 06.6**	**+0.5**
MIPR	**Malaya Ipel'ka**	**1.46**	**319**	PN	**Pn**	**12 44 48.1**	**-0.1**
MIPR				S	**Sn**	**12 45 06.6**	**+0.5**
SKR	**Severo-Kuril's**	**1.49**	**251**	*e*P	**Pn**	**12 44 48.2**	**-0.4**
SKR				*e*S	**Sn**	**12 45 06.4**	**-0.4**
SKR	**Severo-Kuril's**	**1.49**	**251**	PN	**Pn**	**12 44 48.2**	**-0.4**
SKR				S	**Sn**	**12 45 06.4**	**-0.4**
KRMR	**Karymshinskiy**	**1.64**	**356**	*e*P	**Pn**	**12 44 51.8**	**+1.0**
KRMR				*e*S	**Sn**	**12 45 12.7**	**+2.0**
KRMR	**Karymshinskiy**	**1.64**	**356**	PN	**Pn**	**12 44 51.8**	**+1.0**
KRMR				S	**Sn**	**12 45 12.7**	**+2.0**
ALID	**Alaid**	**1.78**	**261**	*e*P	**Pn**	**12 44 52.7**	**-0.1**
ALID				*e*S	**Sn**	**12 45 13.6**	**-0.7**
ALID	**Alaid**	**1.78**	**261**	PN	**Pn**	**12 44 52.7**	**-0.1**
ALID				S	**Sn**	**12 45 13.6**	**-0.7**
PET	**Petropavlovsk**	**1.84**	**6**	*e*P	**Pn**	**12 44 52.9**	**-0.6**
PET				*e*S	**Sn**	**12 45 14.3**	**-1.3**
PET	**Petropavlovsk**	**1.84**	**6**	PN	**Pn**	**12 44 52.9**	**-0.6**
PET				S	**Sn**	**12 45 14.3**	**-1.3**
PET	**Petropavlovsk**	**1.84**	**6**		**Pn**	**12 44 52.6**	**-0.9**
PET				Sn	**Sn**	**12 45 15.2**	**-0.4**
DALK	**Dalny**	**1.86**	**8**	*e*P	**Pn**	**12 44 53.3**	**-0.4**
DALK				*e*S	**Sn**	**12 45 14.5**	**-1.5**
DALK	**Dalny**	**1.86**	**8**	PN	**Pn**	**12 44 53.3**	**-0.4**
DALK				S	**Sn**	**12 45 14.5**	**-1.5**
APC	**Apacha**	**1.88**	**338**	*e*P	**Pn**	**12 44 54.0**	**0.0**
APC				*e*S	**Sn**	**12 45 16.7**	**+0.3**
APC	**Apacha**	**1.88**	**338**	PN	**Pn**	**12 44 54.0**	**0.0**
APC				S	**Sn**	**12 45 16.7**	**+0.3**
PEA0B	**Petropavlovsk-**	**1.96**	**349**	*ce*PN	**Pn**	**12 44 55.1**	**0.0**
PEA0B	**Petropavlovsk-**	**1.96**	**349**		**Pn**	**12 44 55.6**	**+0.6**
PETK	**Petropavlovsk-**	**1.96**	**349**	P	**Pn**	**12 44 55.4**	**+0.3**
	52nm,0.3s,baz=157,slow=15,SNR=907						
PETK				S	**Sn**	**12 45 19.6**	**+1.2**
	75nm,0.3s,baz=179,slow=18,SNR=12						
AVH	**Avacha**	**2.09**	**7**	*e*P	**Pn**	**12 44 57.3**	**+0.3**
AVH	**Avacha**	**2.09**	**7**	PN	**Pn**	**12 44 57.3**	**+0.3**
SMAR	**Somma**	**2.09**	**8**	*e*

comp=N,17nm,0.6s
KUR MLR MLR
comp=Z,225nm,18.0s
SMY Shemya 9.86 75 PN **Pn 12 46 43.7 +0.4**
SMY Shemya 9.86 75 **Pn 12 46 43.7 +0.4**
TYV Tymovskoe 9.88 274 *e*PN **Pn 12 46 42.6 -1.0**
TYV *e*S **Sn 12 48 32.6 -0.4**
TYV pmax pmax
comp=Z,10.0nm,1.3s
TYV smax smax
comp=E,8.0nm,1.5s
YUK Yuzh-Kuril'sk 11.04 234 PN **Pn 12 47 01.4 +2.0**
YUK pmax pmax
comp=Z,91nm,0.6s
YUK pmax pmax
comp=N,43nm,0.4s
YUK pmax pmax
comp=E,34nm,0.3s
YSS Yuzh-Sakhalins 11.05 253 *e*PN **Pn 12 47 03.2 +3.5**
YSS pmax pmax
comp=Z,20nm,0.7s
YSS MLR MLR
comp=Z,200nm,18.0s
YSS Yuzh-Sakhalins 11.05 253 **Pn 12 47 00.4 +0.7**
NMR Nemuro--Hokkai 11.58 232 *e*PN **Pn 12 47 05.1 -1.8**
SEY Seymchan 12.20 347 *i* PN **Pn 12 47 12.9 -2.3**
JKA Kamikawa-asahi 12.73 242 **Pn 12 47 22.3 -0.3**
ASAJ Asahikawa 12.73 242 P **Pn 12 47 22.3 -0.3**
comp=Z,0.6nm,0.3s,baz=56,slow=16,SNR=6.1
ASAJ LR LR 12 51 55.6
comp=Z,117nm,18.5s,baz=23,slow=35
KLR Kul'dur 17.09 274 LR LR 12 55 35.2
comp=Z,114nm,18.8s,baz=122,slow=40
KLR Kul'dur 17.09 274 *ce*P **Pn 12 48 16.6 -3.1**
KLR pmax pmax
comp=Z,11nm,1.2s
BILL Bilibino 17.34 10 *i* P **P 12 48 23.4 -0.1**
BILL pmax pmax
comp=Z,1.0nm,0.8s
BILL MLR MLR
comp=Z,84nm,21.0s
YAK Yakutsk 18.95 316 LR LR 12 55 60.0
comp=Z,79nm,21.3s,baz=92,slow=37
YAK Yakutsk 18.95 316 *i* P **P 12 48 39.3 -1.9**
YAK pmax pmax
comp=Z,5.0nm,0.5s
YAK Yakutsk 18.95 316 pP 12 48 50.2 -2.0
USRK Ussuriysk Ar. 18.99 259 P **P 12 48 40.2 -1.5**
baz=65,slow=11,SNR=5.9
USRK LR LR 12 55 50.1
comp=Z,99nm,21.1s,baz=22,slow=36
MSHR Mys Shultsa 20.37 256 *i* P **P 12 48 57.8 +1.0**
MSHR pmax pmax
comp=Z,20nm,1.5s
MAJO Matsushiro 20.51 232 P **P 12 48 59.9 +1.5**
MAJO pmax pmax
comp=Z,23nm,1.0s
MAJO Matsushiro 20.51 232 P **P 12 48 59.9 +1.5**
MAJO IAmb IAmb 12 49 02.5
comp=Z,23nm,0.9s
MJAR Matsushiro Arr 20.51 232 P **P 12 49 00.1 +1.7**
comp=Z,6nm,0.5s,baz=30,slow=7.5,SNR=17
MJB9 Matsu-Tunnel 20.51 232 P **P 12 48 59.9 +1.4**
MAT Matsushiro 20.51 232 P **P 12 48 59.3 +0.9**
INU Inuyama 22.05 232 P **P 12 49 15.8 +1.0**
TIXI Tiksi 24.39 338 P **P 12 49 36.0 -1.7**
comp=Z,1.6nm,0.5s,baz=123,slow=11,SNR=7.6
TIXI LR LR 13 00 34.4
comp=Z,54nm,18.1s,baz=163,slow=40
TIXI Tiksi 24.39 338 *ce*P **P 12 49 36.4 -1.3**
TIXI pmax pmax
comp=Z,3.0nm,1.1s
TIXI Tiksi 24.39 338 P **P 12 49 36.6 -1.1**
CNBA Chernabura Isl 25.30 65 P **P 12 49 47.0 +0.9**
KSRS Korea Array 25.50 249 P **P 12 49 49.1 +1.0**
comp=Z,3.9nm,0.8s,baz=45,slow=9.2,SNR=16
KSRS LR LR 12 58 48.7
comp=Z,66nm,20.2s,baz=55,slow=34
TTA Tatalina 26.84 46 P **P 12 50 00.9 +0.9**
TTA pmax pmax
comp=Z,8.0nm,1.2s
TTA Tatalina 26.84 46 P **P 12 50 00.9 +0.9**
JNU Nakatsue 26.96 239 P **P 12 50 02.1 +0.8**
comp=Z,10nm,0.8s,baz=192,slow=5.3,SNR=5.4
OHAK Old Harbor 28.42 59 P **P 12 50 14.4 +0.3**
OHAK IAmb IAmb 12 50 18.1
comp=Z,12nm,1.2s
KDAK Kodiak Island 28.72 57 P **P 12 50 18.0 +1.3**
comp=Z,2.1nm,0.5s,baz=260,slow=7.7,SNR=10
KDAK Kodiak Island 28.72 57 P **P 12 50 18.0 +1.3**
BPAW Bear Paw Mtn. 29.15 44 P **P 12 50 21.4 +0.8**
KTH Kantishna Hill 29.17 45 P **P 12 50 21.8 +1.0**
CNPM China Poot 29.20 54 P **P 12 50 21.7 +0.6**
CNPM IAmb IAmb 12 50 22.9
comp=Z,9.3nm,0.8s
MLY Manley 29.30 42 P **P 12 50 22.9 +0.9**
BRLK Bradley Lake 29.35 53 P **P 12 50 22.6 +0.3**
BRLK IAmb IAmb 12 50 25.9
comp=Z,6.7nm,0.8s
TRF Thorofare Moun 29.45 46 P **P 12 50 24.3 +0.9**
NEA Nenana 30.00 43 P **P 12 50 28.6 +0.6**
NEA IAmb IAmb 12 50 30.1
comp=Z,4.3nm,0.6s
SEW Seward 30.03 52 P **P 12 50 28.4 +0.1**
SEW IAmb IAmb 12 50 28.9
comp=Z,11nm,1.0s
RND Reindeer 30.10 46 P **P 12 50 29.1 +0.1**
RND pmax pmax
comp=Z,9.0nm,1.0s
RND Reindeer 30.10 46 P **P 12 50 29.1 +0.1**
RND IAmb IAmb 12 50 31.7
comp=Z,8.5nm,1.0s
TOLK Toolik Lake Re 30.14 35 P **P 12 50 29.8 +0.5**
KNK Knik Glacier 30.39 50 P **P 12 50 32.6 +1.1**
SML Sawmill 30.42 49 P **P 12 50 33.0 +1.2**
WRH Wood River Hil 30.42 44 P **P 12 50 32.9 +1.1**
WRH IAmb IAmb 12 50 33.3
comp=Z,8.2nm,1.2s
COLA College 30.53 43 P **P 12 50 33.6 +0.9**
COLA pmax pmax
comp=Z,8.0nm,0.6s
COLA College 30.53 43 P **P 12 50 33.6 +0.9**
COLA IAmb IAmb 12 50 34.0
comp=Z,8.2nm,0.6s
CCB Clear Creek Bu 30.55 43 P **P 12 50 33.2 +0.4**
DHY Denali Highway 30.78 46 P **P 12 50 35.5 +0.4**
DHY IAmb IAmb 12 50 37.6
comp=Z,12nm,1.4s
SCM Sheep Creek Mo 30.89 49 P **P 12 50 36.7 +0.7**
SCM S **S 12 55 34.1 -2.4**
SCM pmax pmax
comp=Z,15nm,0.8s
SCM Sheep Creek Mo 30.89 49 P **P 12 50 36.7 +0.7**
SCM **S 12 55 34.1 -2.4**
HDA Harding Lake 30.92 44 P **P 12 50 36.7 +0.5**
HDA IAmb IAmb 12 50 37.1
comp=Z,6.3nm,0.5s
IL31 30.94 43 P **P 12 50 36.9 +0.6**
ILAR Eielson Array 30.94 43 P **P 12 50 36.1 -0.2**
comp=Z,2.2nm,0.7s,baz=259,slow=7.5,SNR=42
ILAR LR LR 13 04 46.4
comp=Z,38nm,18.9s,baz=244,slow=39
PRP Porcupine Dome 31.51 41 P **P 12 50 42.5 +1.0**
PRP IAmb IAmb 12 50 42.9
comp=Z,7.4nm,0.7s
FYU Fort Yukon 31.63 39 P **P 12 50 43.6 +1.3**
FYU IAmb IAmb 12 50 44.2
comp=Z,8.7nm,0.7s
RIDG Independent Ri 31.87 45 P **P 12 50 44.7 +0.1**
RIDG IAmb IAmb 12 51 01.6
comp=Z,5.7nm,1.0s
H11N2 WAKE ISLAND Hy 32.12 165 T T 13 25 16.9
baz=350,slow=76,SNR=1085
H11N3 WAKE ISLAND Hy 32.13 165 T T 13 25 18.6
baz=350,slow=76,SNR=854
H11N1 WAKE ISLAND Hy 32.13 165 T T 13 25 18.2
baz=350,slow=76,SNR=870
DOT Dot Lake 32.23 45 P **P 12 50 47.5 -0.2**
SCRK Sand Creek 32.23 44 P **P 12 50 48.3 +0.4**
VRDI Verde Repeater 32.81 49 P **P 12 50 54.0 +1.0**
VRDI IAmb IAmb 12 50 55.3
comp=Z,9.3nm,1.4s
H11S1 WAKE ISLAND Hy 33.28 165 T T 13 26 21.2
baz=350,slow=76,SNR=184
H11S3 WAKE ISLAND Hy 33.30 165 T T 13 26 22.2
baz=350,slow=76,SNR=215
H11S2 WAKE ISLAND Hy 33.30 165 T T 13 26 15.6
baz=350,slow=76,SNR=169
SONM Songino Array 33.30 285 PcP **PcP 12 53 38.4 0.0**
comp=Z,0.4nm,0.3s,baz=64,slow=3.4,SNR=5.5
SONM LR LR 13 05 51.1
comp=Z,92nm,18.1s,baz=64,slow=39
EGAK Eagle 33.39 43 P **P 12 50 57.6 -0.2**
EGAK IAmb IAmb 12 50 58.2
comp=Z,5.5nm,0.8s
BARN Barnard Glacie 33.69 49 P **P 12 51 02.3 +1.6**
CTGM Chitina Glacie 33.87 50 P **P 12 51 03.7 +1.5**
CTGM IAmb IAmb 12 51 05.8
comp=Z,7.4nm,0.8s
DAWY Dawson 34.24 44 P **P 12 51 06.0 +0.7**
DAWY IAmb IAmb 12 51 06.5
comp=Z,6.5nm,1.4s
HYT Haines Junctio 35.72 49 P **P 12 51 20.0 +1.8**
HYT IAmb IAmb 12 51 22.8
comp=Z,5.4nm,0.8s
INK Inuvik 36.04 36 P **P 12 51 21.4 +0.8**
comp=Z,3.9nm,0.5s,baz=283,slow=6.7,SNR=19
INK Inuvik 36.04 36 P **P 12 51 21.4 +0.8**
INK IAmb IAmb 12 51 21.9
comp=Z,4.4nm,0.6s
WHY Whitehorse 37.01 49 P **P 12 51 31.3 +2.2**
DLBC Dease Lake 40.07 51 P **P 12 51 57.6 +2.8**
DLBC IAmb IAmb 12 51 58.3
comp=Z,6.6nm,1.1s
YKA Yellowknife Ar 45.31 41 P **P 12 52 37.7 +0.7**
comp=Z,2.3nm,0.6s,baz=298,slow=7.3,SNR=35
KURK Kurchatov 47.82 302 *ce*P **P 12 52 55.2 -1.6**
KURK pmax pmax
comp=Z,3.0nm,0.6s
KURK Kurchatov 47.82 302 P **P 12 52 55.5 -1.3**
MK31 Makanchi Array 48.00 296 P **P 12 52 56.4 -1.9**
MK31 pmax pmax
comp=Z,2.0nm,1.2s
MK31 Makanchi Array 48.00 296 P **P 12 52 56.4 -1.9**
MKAR Makanchi Array 48.01 296 P **P 12 52 56.0 -2.3**
comp=Z,0.6nm,0.4s,baz=57,slow=6.5,SNR=14
SPA0 Spitsbergen Ar 48.83 350 P **P 12 53 03.9 -0.3**
BRVK Borovoye 50.75 309 *i* P **P 12 53 17.0 -2.2**
BRVK pmax pmax
comp=Z,1.0nm,0.9s
SLVN Son La 51.50 256 P **P 12 53 25.6 +0.3**
SLVN IAmb IAmb 12 53 27.0
comp=Z,7.0nm,1.0s
BMO Blue Mountains 53.83 61 P **P 12 53 43.6 +1.4**
BMO pmax pmax
comp=Z,2.0nm,0.6s
BMO Blue Mountains 53.83 61 P **P 12 53 43.6 +1.4**
MOD Modoc Plateau 54.01 66 P **P 12 53 45.1 +1.4**
ARU Arti 54.06 317 *i* P **P 12 53 43.3 -0.3**
ARU pmax pmax
comp=Z,2.0nm,0.3s
WVOR Wild Horse Val 54.62 64 P **P 12 53 49.2 +1.1**
WVOR pmax pmax
comp=Z,9.0nm,1.5s
WVOR Wild Horse Val 54.62 64 P **P 12 53 49.2 +1.1**
WVOR IAmb IAmb 12 53 51.7
comp=Z,9.4nm,1.4s
ARCES ARCESS Array B 54.75 342 LR LR 13 23 38.0
comp=Z,21nm,18.3s,baz=291,slow=43
ORV Oroville 54.83 69 P **P 12 53 50.9 +1.4**
ORV pmax pmax
comp=Z,4.0nm,0.9s
ORV Oroville 54.83 69 P **P 12 53 50.9 +1.4**
ORV IAmb IAmb 12 53 52.1
comp=Z,4.1nm,0.9s
AAK Ala-Archa 54.94 296 *ce*P **P 12 53 50.5 +0.1**
AAK pmax pmax
comp=Z,1.0nm,1.3s
BEKR Beckworth 55.30 68 P **P 12 53 55.1 +2.1**
BEKR IAmb IAmb 12 53 55.8
comp=Z,4.6nm,0.9s
LRM Limekiln Ridge 55.84 58 P **P 12 53 58.3 +1.4**
KSH Kashi 56.13 293 P **P 12 54 02.3 +3.4**
KSH pmax pmax
comp=Z,120nm,2.0s
KSH pmax pmax
comp=Z,140nm,5.0s
BOZ Bozeman (W) 56.42 57 P **P 12 54 01.9 +0.9**
BOZ pmax pmax
comp=Z,3.0nm,0.8s
BOZ Bozeman (W) 56.42 57 P **P 12 54 01.9 +0.9**
BOZ IAmb IAmb 12 54 03.3
comp=Z,3.0nm,0.8s
CHTO Chiang Mai 56.45 258 P **P 12 54 02.1 +0.8**
CHTO pmax pmax
comp=Z,10.0nm,0.8s
CHTO Chiang Mai 56.45 258 P **P 12 54 02.1 +0.8**
CMAR Chiang Mai Ar 56.72 258 P **P 12 54 02.4 +1.1**
comp=Z,5.2nm,0.8s,baz=29,slow=6.8,SNR=20
CMAR LR LR 13 18 55.2
comp=Z,17nm,19.2s,baz=70,slow=37
CMAR Chiang Mai Arr 56.72 258 *ce*P **P 12 54 04.3 +1.1**
CMAR pmax pmax
comp=Z,6.0nm,0.8s
KVN Kaiserville 57.15 67 P **P 12 54 08.2 +1.9**
KVN pmax pmax
comp=Z,6.0nm,1.4s
KVN Kaiserville 57.15 67 P **P 12 54 08.2 +1.9**
KVN IAmb IAmb 12 54 09.8
comp=Z,6.3nm,1.4s
YHL Hebgen Lake 57.15 58 P **P 12 54 07.9 +1.6**
YHH Holmes Hill 57.37 58 P **P 12 54 09.2 +1.3**
NVAR Mina Array Bea 57.45 68 P **P 12 54 10.6 +2.2**
comp=Z,0.9nm,0.6s,baz=299,slow=7.6,SNR=12
PD31 Pinedale Array 59.42 59 P **P 12 54 23.6 +1.5**
PD31 IAmb IAmb 12 54 25.4
comp=Z,2.8nm,0.8s
PDAR Pinedale Array 59.42 59 P **P 12 54 23.9 +1.7**
comp=Z,2.4nm,0.8s,baz=317,slow=2.3,SNR=22
RSSD Black Hills 61.38 54 P **P 12 54 36.5 +1.0**
RSSD *PP **pP 12 54 48.8 +0.2**
RSSD pmax pmax
comp=Z,5.0nm,0.6s
RSSD Black Hills 61.38 54 P **P 12 54 36.5 +1.0**
RSSD pP **pP 12 54 48.8 +0.2**
SRU San Rafael Swe 61.42 62 P **P 12 54 37.0 +1.3**
SRU pmax pmax
comp=Z,4.0nm,0.8s
SRU San Rafael Swe 61.42 62 P **P 12 54 37.0 +1.3**
FINES FINESS Array B 61.42 336 P **P 12 54 33.3 -1.9**
comp=Z,0.5nm,0.3s,baz=43,slow=8.0,SNR=8.0
FINES FINESS Array B 61.42 336 *ce*P **P 12 54 33.7 -1.4**
FINES pmax pmax
comp=Z,1.0nm,0.3s
RWWY Rawlins 61.43 58 P **P 12 54 36.6 +0.7**
RWWY IAmb IAmb 12 54 36.9
comp=Z,2.3nm,0.6s
PV22 Blue Mesa, Par 62.78 62 P **P 12 54 46.4 +1.5**
PV22 IAmb IAmb 12 55 00.1
comp=Z,3.3nm,0.9s
PV18 Skein Mesa, Pa 62.92 62 P **P 12 54 46.7 +0.8**
PV18 IAmb IAmb 12 54 49.4
comp=Z,4.0nm,0.9s
PV05 Paradox Valley 62.94 62 P **P 12 54 46.4 +0.4**
ISCO Idaho Springs 63.62 59 P **P 12 54 52.5 +1.9**
ISCO pmax pmax
comp=Z,3.0nm,1.1s
ISCO Idaho Springs 63.62 59 P **P 12 54 52.5 +1.9**
ISCO IAmb IAmb 12 54 53.5
comp=Z,3.2nm,1.1s
NB2 NORSAR Subarra 65.05 343 P **P 12 54 58.0 -1.3**
comp=Z,4.6nm,1.0s,baz=23,slow=6.9
NOA NORSAR Array B 65.05 343 P **P 12 54 57.9 -1.3**
comp=Z,1.3nm,0.8s,baz=21,slow=6.8,SNR=4.3
NOA LR LR 13 29 01.3
comp=Z,13nm,18.0s,baz=75,slow=41
KIV Kislovodsk 70.06 316 *i* P **P 12 55 30.8 -0.4**
KIV *i* 12 55 55.3
KIV *i* 12 58 04.6
KIV pmax pmax
comp=Z,4.0nm,0.8s
TX31 Lajitas Ar. Si 72.41 65 P **P 12 55 46.7 +1.1**
TX32 Lajitas Array 72.41 65 P **P 12 55 46.8 +1.2**
TXAR Lajitas Array 72.41 65 P **P 12 55 46.9 +1.3**
comp=Z,3.1nm,0.7s,baz=291,slow=3.5,SNR=15
CLL Collm 73.73 338 *eP* **P 12 55 53.0 +0.1**
CLL Collm 73.73 338 *eP* **P 12 55 53.0 +0.1**
WRAB Tennant Creek 73.89 203 *ce*P **P 12 55 57.0 +2.9**
WRAB pmax pmax
comp=Z,17nm,2.5s
WRA Warramunga Arr 73.90 203 P **P 12 55 55.0 +0.8**
comp=Z,1.9nm,0.6s,baz=18,slow=6.0,SNR=15
GERES GERESS Array B 75.84 337 P **P 12 56 04.4 -0.9**
comp=Z,0.9nm,0.6s,baz=1.5,slow=9.9,SNR=4.9
ASAR Alice Springs 77.58 203 P **P 12 56 17.1 +1.9**
comp=Z,1.9nm,0.6s,baz=15,slow=5.5,SNR=37
NRCA Norcia 81.58 335 P **P 12 56 36.8 -0.1**
NRCA IAmb IAmb 12 56 37.7
comp=Z,7.6nm,0.9s
RAYN Ar Rayn 85.16 302 P **P 12 56 53.9 -1.6**
RAYN pmax pmax
comp=Z,6.0nm,0.8s
RAYN Ar Rayn 85.16 302 P **P 12 56 53.9 -1.6**
DGAR Diego Garcia 93.13 262 *ce*P **P 12 57 32.4 -0.9**
DGAR pmax pmax
comp=Z,37nm,1.3s
H03N2 Juan Fernandez 135.31 89 T T 15 34 01.6
baz=314,slow=77,SNR=976
H03N1 Juan Fernandez 135.32 89 T T 15 34 10.5
baz=314,slow=77,SNR=1130
H03N3 Juan Fernandez 135.32 89 T T 15 34 03.0
baz=314,slow=77,SNR=1009
PLCA Paso Flores 145.06 92 PKPbc **PKPbc 13 03 56.1 +0.8**
comp=Z,1.1nm,0.8s,baz=333,slow=4.3,SNR=3.5

IDC 21 12:53:09.0±3.0, 30.14S×177.64W, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.5/23, mbtmp3.6/2, Error ellipse: s-maj=62.6km s-min=24.6km az=98.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.91**	**344**	Pn	Pn	12 53 30.5	+1.3
	109nm,0.3s,baz=86,slow=19,SNR=1.8						
RAO				Sn	Sn	12 53 42.2	-0.8
	530nm,0.3s,baz=45,slow=20,SNR=12						
ASAR	**Alice Springs**	**43.44**	**266**	P	P	13 01 13.7	-0.3
	1.3nm,0.4s,baz=104,slow=7.5,SNR=4.5						
WRA	**Warramunga Arr**	**44.40**	**272**	P	P	13 01 21.8	0.0
	0.8nm,0.7s,baz=110,slow=8.1,SNR=23						
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	PKPbc	13 12 45.5	-1.3
	0.8nm,0.5s,baz=60,slow=4.6,SNR=7.1						

*IDC **21** 13:02:17.7±4.6, 24.31S×179.81W, h516km±55km, mb3.3/4, mb1 3.5/6, mb1mx3.1/23, mbtmp4.3/6, Error ellipse: s-maj=44.4km s-min=28.5km az=1.0*
*NEIC **21** 13:02:18.1±1.7, 24.4S±0.1×179.9W±0.1, h518km±11km, mb4.5/24, Error ellipse: s-maj=19.3km s-min=16.7km az=132.0*

ISC 21 13:02:17.5±0.7, 24.36S±0.09×179.89W±0.10, h505km, n39, σ1s16/40, mb4.4/15, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.87**	**343**	P	P	13 04 02.5	-0.3
NIUE	**Niue**	**10.64**	**62**	P	P	13 04 42.9	+1.1
OUZ	**Omahuta**	**12.21**	**206**	P	P	13 05 01.2	+3.2
DZM	**Mont Dzumac**	**12.78**	**278**	P	P	13 05 06.4	+1.9
	0.4nm,0.3s,baz=209,slow=20,SNR=6.1						
URZ	**Urewera**	**14.09**	**190**	P	P	13 05 17.9	0.0
	1.1nm,0.3s,baz=278,slow=3.7,SNR=9.4						
URZ				S	S	13 07 44.8	-1.9
	0.2nm,0.3s,baz=208,slow=21,SNR=2.6						
BKZ	**Black Stump Fm**	**15.07**	**191**	P	P	13 05 28.2	-0.1
BFZ	**Birch Farm**	**16.59**	**190**	P	P	13 05 42.9	-1.1
QRZ	**Quartz Range**	**17.60**	**199**	P	P	13 05 53.8	0.0
NNZ	**Nelson**	**17.73**	**197**	P	P	13 05 55.2	+0.3
THZ	**Tophouse**	**18.36**	**197**	P	P	13 05 59.9	-0.9
LTZ	**Lake Taylor**	**19.48**	**198**	P	P	13 06 09.9	-1.1
LTZ				IAmb	IAmb	13 06 28.6	
	comp=Z,45nm,1.3s						
EIDS	**Eidsvold**	**26.34**	**262**	P	P	13 07 13.8	+1.2
EIDS				IAmb	IAmb	13 07 53.2	
	comp=Z,32nm,1.8s						
CTAO	**Charters Tower**	**31.58**	**271**	P	P	13 07 58.9	+0.5
CTAO				IAmb	IAmb	13 07 59.4	
	comp=Z,12nm,0.5s						
TOO	**Toolangi**	**32.29**	**238**	P	P	13 08 05.1	+0.9
TOO				IAmb	IAmb	13 08 41.7	
	comp=Z,26nm,1.8s						
MTSU	**Mount Surprise**	**33.87**	**274**	P	P	13 08 14.2	-3.6
	baz=34,SNR=12						
STKA	**Stephens Creek**	**34.65**	**249**	P	P	13 08 24.9	+0.7
	baz=35,SNR=5.7						
STKA	**Stephens Creek**	**34.65**	**249**	P	P	13 08 24.9	+0.7
	comp=Z,1.8nm,0.5s,baz=89,slow=10,SNR=9.7						
STKA	**Stephens Creek**	**34.65**	**249**	P	P	13 08 24.7	+0.5
COEN	**Coen**	**36.29**	**280**	P	P	13 08 38.3	+0.3
COEN				IAmb	IAmb	13 09 20.8	
	comp=Z,31nm,1.4s						
BBOO	**Buckleboo**	**39.36**	**247**	P	P	13 09 02.7	-0.2
	baz=40,SNR=9.3						
BBOO	**Buckleboo**	**39.36**	**247**	P	P	13 09 02.6	-0.4
BBOO				IAmb	IAmb	13 09 30.1	
	comp=Z,40nm,1.8s						
ASAR	**Alice Springs**	**42.06**	**261**	P	P	13 09 24.6	-0.1
	comp=Z,1.5nm,0.6s,baz=93,slow=7.3,SNR=28						
WR0	**Warramunga Arr**	**42.29**	**267**	P	P	13 09 25.7	-0.8
WB2	**Warramunga Arr**	**42.47**	**267**	P	P	13 09 27.1	-0.8
WB2				IAmb	IAmb	13 09 27.9	
	comp=Z,4.4nm,0.5s						
WRAB	**Tennant Creek**	**42.47**	**267**	P	P	13 09 26.9	-1.0
WB0	**Warramunga Arr**	**42.48**	**267**	P	P	13 09 27.1	-0.9
WRA	**Warramunga Arr**	**42.48**	**267**	P	P	13 09 27.3	-0.7
	comp=Z,3.9nm,0.5s,baz=98,slow=8.2,SNR=58						
FORT	**Forrest**	**46.25**	**250**	P	P	13 09 56.1	-0.9
FORT				IAmb	IAmb	13 10 17.5	
	comp=Z,19nm,1.1s						
WRKA	**Warakurna**	**46.84**	**258**	P	P	13 10 01.3	-0.3
	baz=47,SNR=7.3						
MTN	**Manton Dam**	**47.59**	**275**	P	P	13 10 06.3	-1.1
MTN				IAmb	IAmb	13 10 34.1	
	comp=Z,16nm,1.2s						
KNRA	**Kununurra**	**48.79**	**270**	P	P	13 10 16.2	-0.1
	baz=49,SNR=12						
KNRA	**Kununurra**	**48.79**	**270**	P	P	13 10 15.9	-0.4
FITZ	**Fitzroy Crossi**	**50.90**	**266**	P	P	13 10 32.0	+0.2
	baz=51,SNR=8.8						
FITZ	**Fitzroy Crossi**	**50.90**	**266**	P	P	13 10 31.9	+0.1
MORW	**Morawa**	**56.81**	**250**	P	P	13 11 13.2	-0.5
MORW				IAmb	IAmb	13 11 32.3	
	comp=Z,34nm,1.8s						
QSPA	**South Pole Qui**	**65.72**	**180**	P	P	13 12 13.4	+1.8
QSPA				IAmb	IAmb	13 13 11.2	
	comp=Z,15nm,1.8s						
YULB	**Yu-li**	**74.22**	**305**	P	P	13 13 01.9	-0.8
YULB				IAmb	IAmb	13 14 57.2	
	comp=Z,18nm,1.3s						
COR	**Corvallis**	**85.88**	**37**	P	P	13 14 03.5	+0.2
TXAR	**Lajitas Array**	**90.59**	**58**	P	P	13 14 24.8	-1.1
	comp=Z,0.6nm,0.7s,baz=210,slow=5.2,SNR=5.3						

*IDC **21** 13:25:18.7±0.8, 29.56N×50.82E, h0km, mb4.0/20, mb1 4.1/26, mb1mx4.0/45, mbtmp4.0/26, ML3.8/6, MS3.5/14, Ms1 3.5/14, ms1mx3.4/30, Error ellipse: s-maj=19.8km s-min=13.8km az=175.0*
*NEIC **21** 13:25:20.4±1.4, 29.55N±0.08×50.85E±0.08, h10km±1km, Error ellipse: s-maj=13.1km s-min=11.9km az=179.0*
*TEH **21** 13:25:21.0, 29.57N×50.88E, h14km, ML4.6*
*THR **21** 13:25:22.1±0.3, 29.65N×50.90E, h18km±2km, ML4.7*
*DSN **21** 13:25:26.2±1.8, 29.29N×51.12E, h15km, ML5.3/7, Error ellipse: s-maj=48.4km s-min=11.3km az=28.0*
*OMAN **21** 13:25:28.6±0.8, 29.32N×51.41E, h10km±25km, ml4.8/1, Error ellipse: s-maj=27.1km s-min=7.4km az=178.0*

ISC 21 13:25:22.1±0.4, 29.50N±0.05×50.91E±0.04, h24km, n169, σ1s76/180, mb4.1/31, MS3.7/13, 3C-1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHI	**Shiraz**	**1.41**	**84**	*e*Pg	Pb	13 25 48.7	+1.0
SHI				*e*Sg	Sb	13 26 08.1	+2.8
SHI				*e*		13 26 12.5	
KLNJ	**Kolanjah**	**1.61**	**21**	*e*Pg	Pn	13 25 49.7	+0.3
KLNJ				*e*		13 26 16.8	
IBRJ	**Brojen**	**2.42**	**7**	*e*Pn	Pn	13 26 01.6	+1.2
JHRM	**Jahrom**	**2.54**	**112**	*e*Pn	Pb	13 26 04.9	-2.1
IRAM	**Ramesheh**	**2.63**	**29**	*e*Pn	Pn	13 26 04.6	+1.4
JHBN	**Jahan bin**	**2.73**	**356**	*e*Pn	Pn	13 26 05.7	+1.0
ROKH	**ROKH**	**2.84**	**2**	*e*Pn	Pn	13 26 07.0	+0.9
IGAR	**Gharneh**	**3.05**	**18**	*e*Pn	Pn	13 26 10.2	+1.1

IPIR	Pirpir	3.17	360	*e*Pn		Pn		13 26 11.5	+0.7
IZEF	Zefreh	3.59	19	*e*Pn		Pn		13 26 18.0	+1.4
IMEH	Mehriz	3.71	59	*e*Pn		Pn		13 26 20.6	+2.5
IKLH	Kolahrood	3.85	8	*e*Pn		Pn		13 26 21.4	+1.4
ICHK	Chekchek	4.06	47	*e*Pn		Pn		13 26 24.9	+1.9
YZKH	Yazd	4.28	47	*e*Pn		Pn		13 26 27.5	+1.7
YZKH	Yazd	4.28	47	*e*Pn		Pn		13 26 27.5	+1.7
KHMZ	Khomeyn	4.30	349	*e*Pn		Pn		13 26 27.0	+0.8
KHMZ	Khomeyn	4.30	349	*e*Pn		Pn		13 26 27.0	+0.8
ANAR	Anarak	4.40	33	*e*Pn		Pn		13 26 28.4	+0.9
BMDN	Meydan	4.52	337	*e*Pn		Pn		13 26 29.8	+0.6
IKFM	Kafar-mosalman	4.79	328	*e*Pn		Pn		13 26 33.8	+1.1
JRN	Qarnain Island	4.86	159	*e*Pn		Pn		13 26 37.2	+3.5
KHGB	Koh Gabri	4.91	78	*e*Pn		Pn		13 26 36.3	+1.7
GHVR	GHOM	4.97	4	*e*Pn		Pn		13 26 36.2	+0.8
GHVR				*e*Sg		Sb		13 27 51.6	+3.7
GHVR	GHOM	4.97	4	*e*Pn		Pn		13 26 36.2	+0.8
NGRK	Negar Kerman	5.07	87	*e*Pn		Pn		13 26 39.3	+2.3
NGRK				*e*				13 27 49.3	
BNDS	Bandar-Abbas	5.08	113	IAML				13 27 36.0	
	comp=E,345nm,0.5s								
ASAO	Ashtian	5.09	352	*e*Pn		Pn		13 26 37.8	+0.7
ASAO	Ashtian	5.09	352	*e*Pn		Pn		13 26 37.8	+0.7
GENO	Geno	5.09	113	*e*Pn		Pn		13 26 38.2	+1.2
GENO				*e*				13 27 43.3	
HSAM	Samen	5.09	338	*e*Pn		Pn		13 26 37.0	-0.1
TVBK	TV Kerman	5.11	83	*e*Pn		Pn		13 26 39.6	+2.1
TVBK				*e*				13 27 50.4	
IQOM	Qom	5.33	1	*e*Pn		Pn		13 26 40.6	+0.2
IBND	Bandar-abas	5.36	111	*e*Pn		Pn		13 26 43.4	+2.8
SLWR	Sila	5.46	172	*e*Pn		Pn		13 26 45.8	+3.9
IKOM	Komasi	5.48	329	*e*Pn		Pn		13 26 43.3	+0.9
HAGD	Aghdareh	5.51	345	*e*Pn		Pn		13 26 43.9	+1.0
IVRN	Varamin	5.52	7	*e*Pn		Pn		13 26 43.4	+0.5
SHME	Shamm	5.77	125	P		Pn		13 26 46.8	+0.6
SHME				S		Sn		13 27 52.8	+1.0
SHME	Shamm	5.77	125	*e*Pn		Pn		13 26 46.9	+0.6
CHMN	Cheshme madani	5.78	85	*e*Pn		Pn		13 26 48.6	+1.9
CHMN				*e*				13 28 06.8	
KCHF	Cheshme Sefid,	5.78	326	*e*Pn		Pn		13 26 48.4	+1.8
IRAZ	Razeghan	5.94	352	*e*Pn		Pn		13 26 48.7	-0.1
BANOM	Banah	5.96	125	*i* P		Pn		13 26 50.2	+1.3
	SNR=24								
BANOM				S		Sn		13 27 57.0	+0.5
BANOM	Banah	5.96	125	P		Pn		13 26 50.5	+1.6
BANOM	Banah	5.96	125	*e*Pn		Pn		13 26 51.2	+2.3
IGHG	Ghaleghazi	6.06	324	*e*Pn		Pn		13 26 51.0	+0.5
TPRV	Parvadeh(Tabas	6.07	53	*e*Pn		Pn		13 26 51.7	+1.3
ILAS	Lasjerd	6.11	16	*e*Pn		Pn		13 26 51.6	+0.4
AJN	Ajban	6.12	143	*i* P		Pn		13 26 53.5	+2.5
	SNR=7.4								
AJN	Ajban	6.12	143	*e*Pn		Pn		13 26 53.9	+2.9
IDMV	Damavand	6.13	9	*e*Pn		Pn		13 26 51.7	+0.3
NAZ	Nazwa, Dubai	6.17	136	*i* P		Pn		13 26 54.0	+2.2
	SNR=7.9								
NAZ	Nazwa, Dubai	6.17	136	P		Pn		13 26 54.3	+2.5
NAZ				S		Sn		13 28 02.4	+0.8
NAZ	Nazwa, Dubai	6.17	136	*e*Pn		Pn		13 26 54.1	+2.3
MSFE	Esma-Masafi	6.23	130	*i* P		Pn		13 26 53.7	+1.1
	SNR=7.7								
MSFE				S		Sn		13 28 01.1	-1.9
MSFE	Esma-Masafi	6.23	130	*e*Pn		Pn		13 26 54.6	+2.0
FAQ	Al Faqa, Dubai	6.31	138	P		Pn		13 26 57.5	+3.8
FAQ				S		Sn		13 28 06.1	+1.0
FAQ	Al Faqa, Dubai	6.31	138	*e*Pn		Pn		13 26 55.5	+1.8
MDH	Madha	6.36	130	P		Pn		13 26 56.5	+2.2
MDH				S		Sn		13 28 05.2	-1.1
MDH	Madha	6.36	130	*e*Pn		Pn		13 26 56.2	+1.8
IDHR	Dehrash	6.45	325	*e*Pn		Pn		13 26 56.4	+0.7
IANJ	Anjilo	6.47	22	*e*Pn		Pn		13 26 56.4	+0.4
UOSS	Minazif	6.54	133	*i* P		Pn		13 26 58.3	+1.4
	SNR=6.1								
UOSS	Minazif	6.54	133	P		Pn		13 26 58.3	+1.4
UOSS				S		Sn		13 28 10.1	-0.7
UOSS	Minazif	6.54	133	*e*Pn		Pn		13 26 59.2	+2.3
UOSS	Minazif	6.54	133			Pn		13 26 57.6	+0.7
HATD	Hatta, Dubai	6.58	134	P		Pn		13 26 58.0	+0.6
HATD	Hatta, Dubai	6.58	134	*e*Pn		Pn		13 27 00.3	+2.9
TNSJ	Nastanj	6.58	46	*e*Pn		Pn		13 26 58.0	+0.5
ASHO	Ashiyiah	6.64	135	*i* P		Pn		13 26 59.9	+1.7
	SNR=19								
ASHO	Ashiyiah	6.64	135	P		Pn		13 27 00.3	+2.1
	SNR=19								
ASHO				S		Sn		13 28 12.8	-0.4
ASHO	Ashiyiah	6.64	135	*e*Pn		Pn		13 27 00.1	+1.9
TKDS	Koohdasht(Taba	6.70	51	*e*Pn		Pn		13 26 59.5	+0.4
TABS	Tabas	6.72	50	*e*Pn		Pn		13 27 01.2	+1.8
TABS	Tabas	6.72	50	*e*Pn		Pn		13 27 01.2	+1.8
IALA	Alasht	6.75	13	*e*Pn		Pn		13 27 01.1	+1.1
IPRN	Peran	6.83	10	*e*Pn		Pn		13 27 02.3	+1.4
IGZV	Ghazvin	6.89	355	*e*Pn		Pn		13 27 02.2	+0.4
QALM	Alamut, Qazvin	6.91	358	*e*Pn		Pn		13 27 02.5	+0.3
ALNE	Al Ain	6.94	140	*i* P		Pn		13 27 04.5	+2.2
	SNR=16								
ALNE	Al Ain	6.94	140	*e*Pn		Pn		13 27 04.9	+2.6
SOHO	SOHO	7.34	135	*e*Pn		Pn		13 27 10.8	+3.1
IGLO	Ghaloghah	7.40	19	*e*Pn		Pn		13 27 10.5	+1.7
BSRN	Basiran	7.49	69	*e*Pn		Pn		13 27 12.2	+2.3
BSRN	Basiran	7.49	69	*e*Pn		Pn		13 27 12.2	+2.3
ITEG	Tejag	7.52	61	*e*Pn		Pn		13 27 11.6	+1.2
RAYN	Ar Rayn	7.67	220	Pn		Pn		13 27 12.6	+0.2
UMZA	Um Al Zommool	7.76	150	*e*Pn		Pn		13 27 15.8	+2.2
ARQ	Araqi	7.94	139	P		Pn		13 27 17.8	+1.8
	SNR=28								
ARQ				S		Sn		13 28 44.2	-1.0
NHDN	Nehbandan	8.11	74	*e*Pn		Pn		13 27 21.3	+2.8
HOQ	Hoqain	8.22	134	P		Pn		13 27 21.7	+1.8
ZHSF	Zahedan	8.60	87	*e*P		Pn		13 27 28.3	+3.1
ZHSF	Zahedan	8.60	87	*e*Pn		Pn		13 27 28.3	+3.1
BSY	Bisya	8.79	139	P		Pn		13 27 29.4	+1.7
	SNR=7.5								
SBZV	Sabzevar	8.88	38	*e*Pn		Pn		13 27 29.7	+0.6
SMDO	Samad	9.07	133	P		Pn		13 27 33.2	+1.6
	SNR=13								
WSAR	Wadi Sarin	9.32	130	Pn		Pn		13 27 35.8	+0.9
	comp=E,1.0nm,0.3s,baz=332,slow=6,9,SNR=9.9								
WSAR				Sn		Sn		13 29 16.5	-2.6
	comp=E,5.1nm,0.3s,baz=126,slow=21,SNR=9.8								
WSAR				LR		LR		13 31 56.2	
	comp=E,254nm,20.5s,baz=336,slow=42								
WSAR	Wadi Sarin	9.32	130	P		Pn		13 27 35.8	+0.9
	SNR=7.8								
WBK	Wadi Bani Khal	9.98	132	P		Pn		13 27 45.9	+1.9
GEYT	Alibeck	10.32	34	Pn		Pn		13 27 48.9	+0.2
	comp=E,0.5nm,0.3s,baz=219,slow=12,SNR=11								
GYA0B	ALIBECK ARRAY	10.32	34			Pn		13 27 49.4	+0.7
MHTO	MHTO	10.61	141	P		Pn		13 27 54.1	+1.4
HRA	Herat	10.79	60	Pn		Pn		13 27 53.1	-2.1
ASF	Jabal al Asfar	12.33	286	Pn		Pn		13 28 14.3	-1.9
	comp=E,0.9nm,0.3s,baz=15,slow=5.3,SNR=7.2								
MMAI	Mount Meron Ar	13.72	289	Pn		Pn		13 28 33.7	-1.5
	comp=E,0.6nm,0.3s,baz=109,slow=17,SNR=2.4								
KBZ	Khabaz	15.57	338	Pn		Pn		13 28 59.3	-0.7
	comp=E,0.2nm,0.3s,baz=142,slow=12,SNR=2.1								
KBZ				LR		LR		13 34 32.3	
	comp=E,96nm,18.8s,baz=172,slow=36								
CSS	Mathiatis	15.83	295	Pn		Pn		13 29 03.1	-0.3
CSS				IAmb		IAmb		13 29 08.3	
	comp=z,22nm,1.4s								
KIV	Kislovodsk	15.85	338	P		P		13 29 07.0	-0.2
DAMY	Dhamar	16.03	203	Pn		Pn		13 29 06.7	+0.3
DAMY				IAmb		IAmb		13 29 47.4	
	comp=Z,26nm,1.1s								
KBL	Kabul	16.18	67	P		P		13 29 12.8	+1.8
BRTR	Keskin Array B	17.47	310	P		Pn		13 29 23.3	-0.9
	comp=Z,0.4nm,0.3s,baz=130,slow=13,SNR=5.3								
BR131	Keskin Array S	17.47	310	P		P		13 29 25.2	-0.1
CHGR	Chuyangaron	17.64	54	P		P		13 29 27.3	+0.2
CHGR				IAmb		IAmb		13 30 02.0	
	comp=Z,24nm,1.3s								
GAR	Garm	18.60	54	P		P		13 29 37.8	0.0
GAR				IAmb		IAmb		13 29 51.9	
	comp=Z,21nm,1.2s								
NIL	Nilore	19.47	72	P		Pn		13 29 48.4	-0.1
NIL				IAmb		IAmb		13 29 50.2	
	comp=Z,37nm,1.4s								
KK31	Karatay Array	20.76	44	P		P		13 30 01.7	+0.5
KKAR	Karatay Array	20.76	44	P		P		13 30 01.6	+0.4
AKTO	Aktyubinsk	21.59	12	P		P		13 30 09.6	-0.3
	comp=Z,3.7nm,0.4s,baz=167,slow=11,SNR=12								
IDI	Anoyia	22.68	291	P		P		13 30 21.5	-0.4
	comp=Z,10nm,0.9s,baz=268,slow=17,SNR=2.7								
IDI	Anoyia	22.68	291	P		P		13 30 21.6	-0.4
KSH	Kashi	22.88	57	P		P		13 30 20.9	-3.1
KSH				pP		pP		13 30 23.0	-7.8
KSH				sP		sP		13 30 25.6	-8.2
KSH				PP		PnPn		13 30 48.4	-0.3
KSH				S		S		13 34 22.3	-10
KSH				SS		SnSn		13 34 59.8	-4.4
KSH				pmax		pmax			
	comp=Z,35nm,1.3s								
KSH				pmax		pmax			
	comp=Z,81nm,3.8s								
KSH				LR		LR			
	comp=N,350nm,5.1s								
KSH				LR		LR			
	comp=E,160nm,5.6s								
KSH				LR		LR			
	comp=Z,340nm,5.8s								
AAK	Ala-Archa	23.04	49	P		P		13 30 27.0	+1.2
	comp=Z,1.3nm,0.3s,baz=212,slow=8.3,SNR=8.2								
AAK	Ala-Archa	23.04	49	P		P		13 30 26.1	+0.3
AAK				IAmb		IAmb		13 30 54.1	
	comp=Z,24nm,1.8s								
MLR	Muntele Rosu	25.29	316	P		P		13 30 45.9	-0.8
	comp=Z,1.8nm,0.7s,baz=68,slow=13,SNR=2.8								
MLR	Muntele Rosu	25.29	316	⇑P		P		13 30 50.0	+3.3
MLR	Muntele Rosu	25.29	316	P		P		13 30 46.6	-0.1
MLR				IAmb		IAmb		13 31 13.5	
	comp=Z,10nm,1.0s								
TESR	Tescani	25.41	319	⇑P		P		13 30 47.3	-0.4
BIZ	Bicaz	25.96	319	⇑P		P		13 30 54.0	+1.3
ARR	Arges	26.03	315	⇓P		P		13 30 55.4	+2.0
AKASG	Malin Array Be	26.71	328	P		P		13 30 58.1	-1.3
	comp=Z,1.1nm,0.3s,baz=132,slow=8.9,SNR=11								
AKBB	Malin Array Si	26.71	328	P		P		13 30 58.5	-0.9
AKBB				IAmb		IAmb		13 31 00.7	
	comp=Z,20nm,1.6s								
BUR08	Bucovina Ar. S	26.86	320	P		P		13 31 00.2	-0.7
BUR08				IAmb		IAmb		13 31 15.4	
	comp=Z,5.8nm,1.1s								
BVAR	Borovoye Array	27.51	26	P		P		13 31 07.5	+0.9
	comp=Z,2.6nm,0.6s,baz=224,slow=7.4,SNR=14								
BVAR				PcP		PcP		13 34 24.8	+0.5
	comp=Z,0.7nm,0.3s,baz=189,slow=3.8,SNR=6.2								
KURBB	Kurchatov Arra	29.58	37	P		P		13 31 26.1	+1.2
	comp=Z,3.9nm,1.0s,baz=238,slow=9.1,SNR=16								
KURK	Kurchatov	29.68	37	P		P		13 31 26.4	+0.6
KURK				IAmb		IAmb		13 31 28.3	
	comp=Z,6.2nm,1.1s								
MKAR	Makanchi Array	29.85	46	P		P		13 31 28.6	+1.1
	comp=Z,1.0nm,1.1s,baz=250,slow=7.1,SNR=4.5								
MKAR				LR		LR		13 44 55.3	
	comp=Z,129nm,18.1s,baz=256,slow=39								
LANS	Liptovska Anna	30.92	318	*e*P		P		13 31 37.7	+0.8
KLMR	Klimovskoe	32.27	350	*e*		P		13 31 46.3	-2.2
KLMR				AMP				13 31 52.7	
	comp=Z,12nm,1.3s								
WMQ	Urumqi	32.50	54	*e*P		P		13 31 53.0	+2.1
WMQ				pmax		pmax			
	comp=Z,16nm,0.7s								
WMQ				pmax		pmax			
	comp=Z,70nm,4.1s								
KMBO	Kilima Mbogo	33.14	206	LR		LR		13 46 13.9	
	comp=Z,98nm,20.1s,baz=94,slow=38								
ZAA0	Zalesovo Array	34.63	35	P		P		13 32 09.5	+0.3
ZAA0				IAmb		IAmb		13 32 10.8	
	comp=Z,5.5nm,0.9s								
ZALV	Zalesovo Beam	34.63	35	P		P		13 32 08.9	-0.3
	comp=Z,3.4nm,0.7s,baz=253,slow=10,SNR=10.0								
ZALV				LR		LR		13 48 23.7	
	comp=Z,35nm,18.9s,baz=257,slow=40								
CLL	Collm	35.59	319	*e*P		P		13 32 18.0	+0.4
CLL				*e*				13 32 27.0	
FINES	FINESS Array B	35.92	340	P		P		13 32 19.1	-1.1
	comp=Z,0.9nm,0.4s,baz=147,slow=13,SNR=9.1								
BSD	Bornholm Skovb	36.27	325	*i* P		P		13 32 21.7	-1.6
NB2	NORSAR Subarra	41.02	332	P		P		13 33 01.6	-1.6
	comp=Z,0.7nm,0.5s,baz=124,slow=8.6								
NOA	NORSAR Array B	41.02	332	P		P		13 33 01.5	-1.6
	comp=Z,0.5nm,0.5s,baz=122,slow=8.3,SNR=4.6								
NOA				LR		LR		13 51 40.9	
	comp=Z,40nm,19.8s,baz=110,slow=39								
GTA	Gaotai	41.09	63	*e*P		P		13 33 05.8	+1.7
GTA				pP		pP		13 33 10.5	-1.0
GTA				sP		sP		13 33 14.0	-0.4
GTA				pmax		pmax			
	comp=Z,6.0nm,1.2s								
GTA				pmax		pmax			
	comp=Z,58nm,5.9s								
GTA				LR		LR			
	comp=N,90nm,17.8s								
GTA				LR		LR			
	comp=E,150nm,16.8s								
GTA				LR		LR			
	comp=Z,150nm,14.6s								
ARCES	ARCESS Array B	42.64	347	P		P		13 33 15.8	-0.5
	comp=Z,1.8nm,0.9s,baz=167,slow=8.0,SNR=5.5								
NRIK	Noril'sk	45.07	17	LR		LR		13 55 57.9	
	comp=Z,90nm,19.5s,baz=312,slow=41								
CD2	Chengdu	45.34	74	P		P		13 33 37.8	-0.7
CD2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
SONM	Songino Array	45.98	51	P		P		13 33 43.6	+0.1
	comp=Z,0.3nm,0.5s,baz=270,slow=10,SNR=4.4								
SONM				LR		LR		13 54 09.6	
	comp=Z,84nm,19.2s,baz=265,slow=38								
TOA0	Torodi Ar. Sit	48.28	261	P		P		13 34 01.8	+0.1
TOA0				IAmb		IAmb		13 34 07.6	
	comp=Z,8.5nm,1.2s								
TORD	Torodi Ar. Bea	48.28	261	P		P		13 34 02.2	+0.6
	comp=Z,1.4nm,0.5s,baz=51,slow=8.4,SNR=8.9								
TORD				LR		LR		13 57 01.5	
	comp=Z,68nm,18.8s,baz=85,slow=40								
HHC	Hu-ho-hao-te	49.96	60	*e*P		P		13 34 11.8	-2.5
HHC				pmax		pmax			
	comp=Z,14nm,0.9s								
HHC				pmax		pmax			
	comp=Z,36nm,5.6s								
SPA0	Spitsbergen Ar	51.13	351	P		P		13 34 22.5	0.0
DBIC	Dimbokro	57.06	258	P		P		13 35 07.5	+0.9
	comp=Z,2.1nm,0.5s,baz=15,slow=8.1,SNR=4.8								
DBIC				LR		LR		14 01 28.2	
	comp=Z,71nm,19.3s,baz=37,slow=38								
DBIC	Dimbokro	57.06	258	P		P		13 35 07.4	+0.8
KSRS	Kona Array	63.09	60	P		P		13 35 49.0	+1.3
	comp=Z,0.7nm,0.6s,baz=285,slow=6.5,SNR=4.5								
KSRS				LR		LR		14 06 31.9	
	comp=Z,36nm,18.2s,baz=309,slow=39								
USRK	Ussuriysk Ar.	64.05	52	LR		LR		14 05 45.4	
	comp=Z,49nm,21.2s,baz=227,slow=38								
BILL	Bilibino	71.73	21	P		P		13 36 42.5	+0.7
BILL				IAmb		IAmb		13 36 52.2	
	comp=Z,11nm,1.5s								
PETK	Petropavlovsk-	76.17	36	LR		LR		14 12 57.5	
	comp=Z,32nm,20.1s,baz=239,slow=38								
ILAR	Eielson Array	85.01	8	P		P		13 37 55.0	-0.3
	comp=Z,0.5nm,0.6s,baz=327,slow=4.6,SNR=6.7								
BPAW	Bear Paw Mtn.	85.13	9	P		P		13 37 56.0	+0.2
SCRK	Sand Creek	86.09	7	P		P		13 38 01.3	+0.5
DOT	Dot Lake	86.41	7	P		P		13 38 01.9	-0.4
YKA	Yellowknife Ar	87.59	353	P		P		13 38 08.0	+0.1
	comp=Z,0.5nm,0.6s,baz=15,slow=4.8,SNR=13								
YKA				LR		LR		14 22 54.8	
	comp=Z,33nm,18.5s,baz=0.0,slow=40								
WRA	Warramunga Arr	94.15	110	P		P		13 38 38.3	-0.9
	comp=Z,0.5nm,0.9s,baz=315,slow=4.0,SNR=2.5								
ASAR	Alice Springs	95.63	114	P		P		13 38 44.8	-1.1
	comp=Z,0.4nm,0.8s,baz=297,slow=4.4,SNR=4.6								

*IDC **21** 13:32:24.5±0.5, 15°.34S×173°.67W, h0km, mb4.6/19, mb1 4.8/19, mb1mx4.5/44, mbtmp4.6/19, MS3.4/9, Ms1 3.4/9, ms1mx3.1/23, Error ellipse: s-maj=24.0km s-min=12.9km az=135.0*

*BJI **21** 13:32:33.0±0.0, 15°.40S×173°.70W, h73km, mB5.1/8, mb4.9/12, Ms4.7/2*

*NEIC **21** 13:32:33.5±0.8, 15°.43S±0°.08×173°.7W±0°.1, h69km±5km, mb4.7/131, Error ellipse: s-maj=15.3km s-min=11.0km az=105.0*

ISC 21 13:32:30.7±0.3, 15°.48S±0°.06×173°.64W±0°.06, h42km, n244, σ1§01/230, mb4.7/78, MS3.6/10, 8C-6D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h	m	s	Res ISC
AFI	Afiamalu	2.39	49			Pn	13	33	11.2	+3.8

NIUE	Niue	5.04	136			Pn		13 33 48.4		+4.6
KNTN	Kanton	12.76	9			Pn		13 35 33.0		+3.3
RAR	Rarotonga	14.35	115	Pn		Pn		13 35 53.6		+2.4
	1.9nm,0.3s,baz=147,slow=1.1,SNR=2.1									
RAR				Sn		Sn		13 38 22.6		-6.5
	baz=34,slow=18,SNR=1.4									
RAR	Rarotonga	14.35	115	P		P		13 35 56.2		-1.2
DZM	Mont Dzumac	19.95	248	*e*P		Pn		13 37 07.0		+5.6
	161nm,1.4s									
DZM				*e*LR		LR		13 41 51.5		
	comp=Z,293nm,32.2s									
DZM	Mont Dzumac	19.95	248	LR		LR		13 43 41.9		
	comp=Z,194nm,18.1s,baz=49,slow=34									
DZM	Mont Dzumac	19.95	248	P		P		13 36 58.3		-1.1
DZM				IAmb		IAmb		13 37 09.2		
	comp=Z,70nm,1.2s									
PAE	Paea	23.16	99	*e*T		T		14 00 57.9		
	comp=Z,1.7nm,0.3s									
PPT2	Papeete2	23.16	99	*e*LR		LR		13 42 37.6		
	comp=Z,326nm,33.0s									
PPT2	Papeete2	23.16	99	*e*T		T		14 00 58.5		
	comp=Z,1.8nm,0.3s									
TIAR	Tiarei	23.38	98	*e*T		T		14 01 13.4		
	comp=Z,1.4nm,0.3s									
XMAS	Kiritimati	23.66	44	P		P		13 37 39.3		+0.9
TBI	Tubuai	24.09	113	*e*T		T		14 02 17.6		
	comp=Z,4.7nm,0.2s									
URZ	Urewera	24.12	198	P		P		13 37 42.5		0.0
	comp=Z,14nm,0.3s,baz=264,slow=3.6,SNR=36									
URZ	Urewera	24.12	198	P		P		13 37 44.0		+1.5
URZ				IAmb		IAmb		13 37 50.9		
	comp=Z,32nm,1.2s									
HIZ	Hauiti	25.09	202	P		P		13 37 52.6		+1.3
BKZ	Black Stump Fm	25.14	198	P		P		13 37 52.3		+0.4
BKZ				IAmb		IAmb		13 38 41.8		
	comp=Z,75nm,1.7s									
HNR	Honiara	26.46	280	LR		LR		13 47 28.1		
	comp=Z,44nm,20.1s,baz=150,slow=34									
TUWZ	Tuamarina	28.00	200	P		P		13 38 18.0		+0.4
THZ	Tophouse	28.66	201	P		P		13 38 24.0		+0.5
LTZ	Lake Taylor	29.78	201	P		P		13 38 34.2		+0.8
FOZ	Fox Glacier	31.32	203	P		P		13 38 47.5		+0.5
WKZ	Wanaka	32.73	203	P		P		13 38 58.6		-0.7
TAOE	Nuku Hiva Isla	33.37	83	*e*LR		LR		13 47 33.9		
	comp=Z,203nm,31.6s									
TAOE	Nuku Hiva Isla	33.37	83	*e*T		T		14 13 29.0		
	comp=Z,37nm,0.2s									
ARMA	Armidale	35.10	239	P		P		13 39 20.0		-0.3
RKT	Rikitea	37.20	108	*e*T		T		14 18 37.4		
	comp=Z,2.9nm,0.3s									
WAKE	Wake Island	39.61	330	P		P		13 39 59.1		+0.8
COEN	Coen	41.74	266	P		P		13 40 16.9		+0.8
TOO	Toolangi	42.23	231	P		P		13 40 19.5		-0.4
TOO				IAmb		IAmb		13 40 20.9		
	comp=Z,14nm,1.1s									
STKA	Stephens Creek	43.79	240	P		P		13 40 32.4		-0.2
	comp=Z,10nm,0.8s,baz=70,slow=7.6,SNR=23									
STKA				LR		LR		13 57 15.9		
	comp=Z,39nm,18.2s,baz=24,slow=34									
STKA	Stephens Creek	43.79	240	P		P		13 40 31.9		-0.7
BBOO	Buckleboo	48.57	240	P		P		13 41 09.6		-0.6
BBOO				IAmb		IAmb		13 41 10.5		
	comp=Z,12nm,0.9s									
WR0	Warramunga Arr	49.41	257	P		P		13 41 15.9		-0.9
WR0				IAmb		IAmb		13 41 17.5		
	comp=Z,13nm,1.3s									
WB0	Warramunga Arr	49.56	257	P		P		13 41 17.1		-0.7
WB2	War

comp=Z,7.9nm,1.1s
NV11 Mina Array Sit 74.64 42 P P 13 44 06.1 +0.2
NV11 IAmb IAmb 13 44 07.3
comp=Z,13nm,1.1s
113A Mohawk Valley, 74.64 49 P P 13 44 05.7 -0.2
214A Organ Pipe Nat 74.94 50 P P 13 44 07.8 +0.1
KVN Kaiserville 75.03 42 P P 13 44 08.0 -0.2
KVN IAmb IAmb 13 44 09.4
comp=Z,8.2nm,0.9s
KDAK Kodiak Island 75.04 11 P P 13 44 07.4 -0.2
TPNV Topopah Spring 75.08 44 P P 13 44 08.4 -0.1
MOD Modoc Plateau 75.33 38 P P 13 44 09.6 -0.2
MOD IAmb IAmb 13 44 11.1
comp=Z,10nm,0.8s
K05A Summer Lake 75.48 37 P P 13 44 11.2 +0.4
K05A IAmb IAmb 13 44 12.3
comp=Z,15nm,1.1s
SHPR Sheep Range 75.58 45 P P 13 44 11.4 0.0
W13A Hualapai Mount 75.74 47 P P 13 44 12.3 -0.1
Y14A Wickenburg 75.78 48 P P 13 44 12.5 0.0
Y14A IAmb IAmb 13 44 13.7
comp=Z,6.6nm,0.9s
KSRS Korea Array 76.05 316 P P 13 44 13.5 -0.3
comp=Z,0.7nm,0.7s,baz=120,slow=6.3,SNR=2.7
PINE Pine Mountain 76.10 36 P P 13 44 14.6 +0.4
PINE IAmb IAmb 13 44 15.9
comp=Z,11nm,1.0s
R11A Troy Canyon, C 76.28 43 P P 13 44 15.2 -0.2
TUC Tucson 76.62 51 P P 13 44 17.6 +0.3
TUC IAmb IAmb 13 44 19.0
comp=Z,8.0nm,1.0s
WVOR Wild Horse Val 76.64 39 P P 13 44 17.2 -0.1
WVOR IAmb IAmb 13 44 18.5
comp=Z,9.3nm,1.0s
KSM Kuching 76.96 275 P P 13 44 19.2 -0.4
KSM IAmb IAmb 13 44 21.3
comp=Z,7.2nm,0.9s
I07A Izee 77.10 37 P P 13 44 19.7 -0.1
X16A Lo Mia Camp, P 77.14 49 P P 13 44 20.9 +0.6
X16A IAmb IAmb 13 44 22.1
comp=Z,7.4nm,1.1s
J08A Circle Bar Ran 77.28 38 P P 13 44 20.9 +0.1
J08A IAmb IAmb 13 44 22.0
comp=Z,9.6nm,1.2s
319A Douglas 77.33 52 P P 13 44 21.4 0.0
319A IAmb IAmb 13 44 22.9
comp=Z,9.8nm,0.9s
CCUT Cedar City 77.35 45 P P 13 44 21.8 +0.2
KNB Kanab 77.45 46 P P 13 44 22.3 +0.2
RSO Redoubt South 77.52 10 P P 13 44 21.0 -0.9
U15A North Rim 77.52 46 P P 13 44 22.8 +0.3
U15A IAmb IAmb 13 44 24.5
comp=Z,16nm,1.4s
PSUT Pine Spring 77.53 44 P P 13 44 22.4 0.0
SZCU Shurtz Canyon 77.56 45 P P 13 44 23.0 +0.3
WUAZ Wupatki 77.72 48 P P 13 44 23.3 -0.2
WUAZ IAmb IAmb 13 44 26.1
comp=Z,9.9nm,1.4s
ELK Elko 77.80 41 P P 13 44 23.7 -0.2
comp=Z,3.6nm,0.8s,baz=250,slow=5.8,SNR=13
ELK Elko 77.80 41 P P 13 44 23.8 -0.2
G08A Pilot Rock 78.13 36 P P 13 44 24.3 -1.2
G08A IAmb IAmb 13 44 26.6
comp=Z,8.2nm,1.2s
MSU Marysvale 78.65 45 P P 13 44 28.6 -0.1
BMO Blue Mountains 78.83 37 P P 13 44 28.6 -0.7
MFID Camas Ranch 78.89 39 P P 13 44 29.4 -0.4
GLI Glacier Island 79.01 13 P P 13 44 29.0 -0.8
GLI IAmb IAmb 13 44 30.1
comp=Z,9.7nm,0.8s
DUG Dugway, Tooele 79.08 43 P P 13 44 30.7 -0.2
KNK Knik Glacier 79.21 12 P P 13 44 30.4 -0.5
KNK IAmb IAmb 13 45 26.8
comp=Z,11nm,1.2s
PMR Palmer 79.24 12 P P 13 44 30.5 -0.6
TTA Tatalina 79.36 8 P P 13 44 32.0 +0.2
GHO Glory Hole Cre 79.45 12 P P 13 44 31.8 -0.5
GHO IAmb IAmb 13 44 32.8
comp=Z,11nm,0.8s
F10A Beach Ranch, E 79.52 36 P P 13 44 32.5 -0.7
SCM Sheep Creek Mo 79.82 12 P P 13 44 33.8 -0.6
SCM IAmb IAmb 13 44 34.8
comp=Z,9.3nm,0.7s
NJ2 Nanjing 80.02 307 *eP* **P 13 44 36.3 +0.3**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
SRU San Rafael Swe 80.06 45 P P 13 44 36.0 -0.4
BALM Baldy 80.25 15 P P 13 44 36.4 -0.3
GLB Gilahina Butte 80.25 14 P P 13 44 36.2 -0.5
BARN Barnard Glacie 80.44 15 P P 13 44 37.6 -0.3
BARN IAmb IAmb 13 44 38.7
comp=Z,8.0nm,1.0s
MNTX Cornudas Mount 80.46 53 P P 13 44 38.5 +0.1
MNTX IAmb IAmb 13 44 39.8
comp=Z,10nm,1.4s
TCUT Toone Canyon 80.47 43 P P 13 44 38.8 +0.2
BNM Barren Site 80.56 51 P P 13 44 39.5 +0.3
KTH Kantishna Hill 80.73 10 P P 13 44 37.9 -1.3
PV10 Paradox Valley 80.73 46 P P 13 44 39.7 -0.3
TRF Thorofare Moun 80.74 10 P P 13 44 38.0 -1.4
TRF IAmb IAmb 13 44 39.3
comp=Z,5.7nm,0.7s
TX31 Lajitas Ar. Si 80.85 56 P P 13 44 40.4 -0.3
TX32 Lajitas Array 80.85 56 P P 13 44 40.8 +0.1
TXAR Lajitas Array 80.85 56 P P 13 44 40.9 +0.2
comp=Z,3.3nm,1.0s,baz=217,slow=6.1,SNR=15
TXAR LR LR 14 12 03.1
comp=Z,28nm,21.6s,baz=0.0,slow=29
RND Reindeer 80.96 11 P P 13 44 39.7 -0.7
RND IAmb IAmb 13 44 41.1
comp=Z,7.4nm,0.7s
ANMO Albuquerque 81.03 50 P P 13 44 41.3 -0.4
comp=Z,1.5nm,0.8s,baz=296,slow=4.5,SNR=5.2
ANMO Albuquerque 81.03 50 P P 13 44 41.2 -0.4
MCK McKinley 81.24 11 P P 13 44 41.2 -0.6
MCK IAmb IAmb 13 44 42.2
comp=Z,11nm,0.8s
HYT Haines Junctio 81.35 17 P P 13 44 42.5 -0.2
MCMT McKenzie Canyo 81.46 39 P P 13 44 43.4 -0.4
MENT Mentasta 81.58 13 P P 13 44 43.5 -0.3
REDW Red Top Meadow 81.95 41 P P 13 44 45.7 -0.6
RIDG Independent Ri 82.05 12 P P 13 44 45.6 -0.6
WRH Wood River Hil 82.07 11 P P 13 44 45.3 -0.9
DOT Dot Lake 82.13 13 P P 13 44 46.0 -0.5
DOT IAmb IAmb 13 44 47.2
comp=Z,7.1nm,0.8s
MLY Manley 82.13 10 P P 13 44 45.6 -1.0
LRM Limekiln Ridge 82.22 38 P P 13 44 46.9 -0.9
HDA Harding Lake 82.23 11 P P 13 44 46.1 -0.9
HDA IAmb IAmb 13 44 47.4
comp=Z,7.7nm,0.9s
CCB Clear Creek Bu 82.28 11 P P 13 44 46.2 -1.0
CCB IAmb IAmb 13 44 47.5
comp=Z,9.6nm,0.8s
YHB Horse Butte 82.43 40 P P 13 44 49.2 +0.3
SCRK Sand Creek 82.44 13 P P 13 44 47.8 -0.5
SCRK IAmb IAmb 13 44 49.0
comp=Z,5.9nm,0.9s
BW06 Boulder Array 82.48 42 P P 13 44 48.4 -0.8
PD31 Pinedale Array 82.48 42 P P 13 44 48.4 -0.7
PDAR Pinedale Array 82.48 42 P P 13 44 48.8 -0.4
comp=Z,2.8nm,0.8s,baz=221,slow=3.2,SNR=24
PDAR LR LR 14 20 07.3
comp=Z,28nm,18.1s,baz=154,slow=35
COLA College 82.48 11 P P 13 44 47.2 -1.1
YHL Hebgen Lake 82.49 40 P P 13 44 49.2 0.0
IL31 82.56 11 P P 13 44 47.8 -0.9
ILAR Eielson Array 82.56 11 P P 13 44 48.0 -0.8
comp=Z,2.1nm,0.5s,baz=232,slow=6.2,SNR=53
H17A Grant Village 82.64 40 P P 13 44 50.1 +0.1
YHH Holmes Hill 82.66 40 P P 13 44 50.0 -0.2
MSTX Muleshoe 83.39 52 P P 13 44 53.3 -0.7
RWWY Rawlins 83.51 44 P P 13 44 53.4 -1.1
RWWY IAmb IAmb 13 44 54.1
comp=Z,9.3nm,0.9s
DAWY Dawson 83.55 14 P P 13 44 53.7 -0.3
DAWY IAmb IAmb 13 44 55.0
comp=Z,9.0nm,1.1s
EGAK Eagle 83.75 13 P P 13 44 54.4 -0.5
RLMT Red Lodge 83.80 40 P P 13 44 55.2 -0.7
RLMT IAmb IAmb 13 44 57.5
comp=Z,6.3nm,1.1s
GCMT Greycliff 83.89 39 P P 13 44 56.1 -0.1
ABTX Abilene, Hawle 85.30 54 P P 13 45 03.6 +0.1

TOLK Toolik Lake Re 85.66 9 P P 13 45 04.6 +0.2
TOLK IAmb IAmb 13 45 05.7
comp=Z,5.8nm,1.1s
MAW Mawson 87.64 199 P P 13 45 13.9 -0.4
comp=Z,6.8nm,1.0s,baz=154,slow=7.8,SNR=5.6
MAW Mawson 87.64 199 P P 13 45 14.3 0.0
INK Inuvik 88.40 14 P P 13 45 16.6 -1.0
comp=Z,2.4nm,0.8s,baz=207,slow=6.6,SNR=8.6
INK Inuvik 88.40 14 IAmb IAmb 13 45 18.1
comp=Z,3.3nm,0.9s
HHC Hu-ho-hao-te 88.91 313 *e*P **P 13 45 20.3 -0.6**
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,89nm,4.9s
YKA Yellowknife Ar 90.26 23 P P 13 45 25.3 -1.3
comp=Z,1.9nm,0.9s,baz=233,slow=4.2,SNR=25
CD2 Chengdu 91.65 301 P P 13 45 32.1 -1.8
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CMAR Chiang Mai Arr 92.42 288 P P 13 45 37.9 +0.3
comp=Z,1.4nm,0.6s,baz=102,slow=2.7,SNR=7.3
CMAR LR LR 14 27 45.2
comp=Z,6.8nm,18.0s,baz=260,slow=36
VNA3 Neumayer Olymp 92.80 175 P P 13 45 38.9 +0.5
SNAA Sanae 92.84 177 P P 13 45 38.7 +0.1
VNA2 Neumayer--Watz 93.30 176 P P 13 45 41.4 +0.7
baz=184,slow=2.9
VNA1 Neumayer--Stat 93.50 175 P P 13 45 42.6 +1.0
ULM Lac du Bonnet 94.14 39 LR LR 14 24 55.0
comp=Z,26nm,18.2s,baz=281,slow=34
MKAR Makanchi Array 110.71 315 PKiKP **PKiKP 13 50 57.0 -2.0**
comp=Z,0.2nm,0.5s,baz=105,slow=0.5,SNR=3.0
ARCES ARCESS Array B 124.65 352 PKP **PKPdf 13 51 24.1 -1.0**
comp=Z,1.5nm,0.5s,baz=48,slow=1.8,SNR=11
FINES FINESS Array B 131.97 347 PKP **PKPdf 13 51 37.5 -1.6**
comp=Z,0.6nm,0.5s,baz=21,slow=2.7,SNR=6.2
CLL Collm 143.86 353 *e*PKPdf **PKPdf 13 52 00.0 -1.3**
BURAR Bucovina Array 144.35 338 ⇑P PKPbc 13 52 00.9 +0.1
MORC Moravsky Berou 144.60 347 *e*PKP **PKPab 13 52 00.4 -0.9**
MORC Moravsky Berou 144.60 347 ⇑P **PKPdf 13 52 01.5 -1.2**
LANS Liptovska Anna 144.74 345 *e*PKP **PKPdf 13 52 02.7 -0.3**
PRU Pruhonice 144.94 351 *e*PKP **PKPdf 13 52 03.2 0.0**
MEM Membach 144.96 0 PKPdf PKPbc 13 52 02.1 -0.4
GOPC GO Pecny, Ondr 144.97 350 *e*PKP PKPbc 13 52 02.2 -0.4
BSTI Sart Tilman 144.98 1 PKPdf PKPbc 13 52 01.9 -0.6
SNF Seneffe 145.02 2 PKPdf PKPbc 13 52 02.1 -0.6
CFR Carcaliu 145.16 333 ⇑P **PKPdf 13 52 03.5 -0.3**
VRI Vrincioaia 145.21 335 ⇑P **PKPdf 13 52 03.4 -0.4**
VRAC Vranov 145.24 348 *e*PKP **PKPab 13 52 03.0 -0.6**
VRAC Vranov 145.24 348 ⇓P **PKPdf 13 52 03.4 -0.4**
PLOR Plostina 145.26 335 ⇓P **PKPdf 13 52 03.4 -0.6**
TOPG Topolog 145.28 332 ⇓P **PKPdf 13 52 03.9 0.0**
KMBO Kilima Mbogo 145.29 244 PKPbc **PKPdf 13 52 06.7 +1.5**
comp=Z,6.2nm,1.0s,baz=79,slow=1.7,SNR=5.8
KMBO Kilima Mbogo 145.29 244 PKPbc 13 52 03.7 -1.4
JAVC Velka Javorina 145.44 347 *e*PKP **PKPab 13 52 04.8 +0.4**
DOU Dourbes 145.44 2 PKPdf **PKPbc 13 52 03.5 -0.6**
VYHS Vyhne 145.51 345 *e*PKP **PKPab 13 52 04.3 -0.3**
KRUC Moravsky 145.51 348 *e*PKP **PKPbc 13 52 03.6 -0.8**
TIRR Tirgusor 145.59 332 ⇑P **PKPab 13 52 04.3 -0.7**
TIRR Tirgusor 145.59 332 PKPdf 13 52 03.8 -0.7
GRF Grafenberg Arr 145.65 354 *e*PKP **PKPab 13 52 04.9 -0.2**
baz=8.4,slow=3.0
MLR Muntele Rosu 145.84 335 ⇑P **PKPdf 13 52 04.5 -0.6**
MLR Muntele Rosu 145.84 335 PKPab 13 52 05.3 -0.8
WLF Walferdange 145.90 0 PKPdf **PKPdf 13 52 04.5 -0.4**
KHC Kasperske Hory 145.92 352 *e*PKP **PKPbc 13 52 05.2 -0.5**
KHC Kasperske Hory 145.92 352 PKPdf 13 52 04.1 -0.9
DRGR 145.93 340 ⇓P **PKPbc 13 52 05.3 -0.5**
MODS Modra-Piesok 145.98 347 *e*PKP **PKPab 13 52 05.6 -0.8**
BRTR Keskin Array B 146.07 321 PKPbc **PKPab 13 52 06.2 -1.0**
comp=Z,4.0nm,0.7s,baz=123,slow=1.3,SNR=15
GERES GERESS Array B 146.18 351 PKPbc **PKPbc 13 52 06.1 -0.5**
comp=Z,1.0nm,0.4s,baz=46,slow=3.9,SNR=12
VOIR 146.24 336 ⇑P **PKPab 13 52 07.0 -0.5**
ARR Arges 146.46 336 ⇓P **PKPab 13 52 08.2 -0.2**
CONA Conrad Observa 146.70 348 *i* PKPab **PKPab 13 52 08.0 -1.2**
comp=Z,3.6nm,0.6s
MOA Molln 147.06 350 *i* PKPab **PKPbc 13 52 08.7 -0.4**
comp=Z,2.8nm,0.5s
GZR Gura Zlata 147.12 338 ⇓P **PKiKP 13 52 11.1 -0.7**
BFO Black Forest 147.20 358 PKPbc 13 52 08.9 -0.5
ARSA Arzberg 147.41 348 *e*PKPab **PKPbc 13 52 09.6 -0.4**
comp=Z,3.3nm,0.7s
RETA Reutte 147.87 354 *i* PKPab **PKPbc 13 52 11.5 +0.1**
comp=Z,2.8nm,0.7s
WATA Walderalm 147.94 353 *e*PKiKP **PKPbc 13 52 11.2 -0.4**
comp=Z,4.5nm,0.6s
KBA Koelnbreinsper 147.96 351 *i* PKPbc **PKPbc 13 52 10.9 -0.8**
comp=Z,2.2nm,0.5s
MOTA Moosalm 147.98 354 *i* PKiKP **PKPbc 13 52 11.3 -0.4**
comp=Z,5.2nm,0.7s
WTTA Wattenberg 148.00 353 *i* PKiKP **PKPbc 13 52 11.3 -0.6**
comp=Z,3.9nm,0.4s
MDVR Moldovita 148.03 339 ⇑P **PKPab 13 52 13.8 -0.7**
SOKA Soboth 148.06 349 *i* PKPbc **PKPbc 13 52 11.0 -0.9**
comp=Z,5.2nm,0.9s
SQTA Sankt Quirin 148.09 354 *e*PKPbc **PKPbc 13 52 10.5 -1.5**
comp=Z,4.9nm,0.8s
DAVA Damuels 148.15 355 *i* PKiKP **PKPbc 13 52 11.7 -0.5**
comp=Z,4.8nm,0.8s
OBKA Obir 148.31 349 *e*PKiKP **PKPbc 13 52 12.3 -0.2**
comp=Z,2.4nm,0.6s
FETA Feichten 148.34 354 *i* PKiKP **PKPbc 13 52 12.7 0.0**
comp=Z,7.3nm,1.2s
MYKA Terra Mystica 148.35 350 *i* PKPbc **PKPbc 13 52 11.5 -1.2**
comp=Z,2.2nm,0.5s
ABTA Abfaltersbach 148.40 352 *i* PKPbc **PKPbc 13 52 11.9 -0.9**
comp=Z,11nm,1.0s
CRNS Crni Vrh 148.78 349 *i* PKPbc **PKPbc 13 52 12.4 -1.3**
FUORN Ofenpass-Fuorn 148.78 355 PKPbc 13 52 13.5 -0.5
STAL STALIGIAL 148.85 351 PKPbc 13 52 13.2 -0.7
GBAS Gorenja Brezov 148.88 349 *i* PKPbc **PKPbc 13 52 12.9 -1.1**
TUE Stuetta 149.00 356 PKPbc 13 52 14.1 -0.4
SENIN Lac Senin/Sane 149.20 359 PKPbc **PKPbc 13 52 14.4 -0.6**

*IDC **21** 13:49:25.2±4.3,21.°17S×178.°70W,h601km±53km, mb3.1/10,mb1 3.4/11,mb1mx3.1/28,mbtmp4.1/11,Error ellipse: s-maj=33.8km s-min=21.0km az=170.0*
*NEIC **21** 13:49:25.8±1.2,21.°1S±0.°1×178.°8W±0.°2,h608km±8km, mb4.4/18,Error ellipse: s-maj=22.7km s-min=18.9km az=129.0*
ISC 21 13:49:23.7±0.7,**21.°1S**±0.°1×**178.°7W**±0.°1,**h579**km,**n33,**
σ0**96**/33,**mb4.1**/18,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.58**	**317**	P	**P**	**13 50 54.9**	**+2.8**
MXZ	**Matakaoa Point**	**16.59**	**188**	P	**P**	**13 52 47.0**	**-0.1**
URZ	**Urewera**	**17.46**	**191**	P	**P**	**13 52 54.5**	**-0.6**
0.8nm,0.3s,baz=258,slow=2.6,SNR=6.9							
BKZ	**Black Stump Fm**	**18.45**	**192**	P	**P**	**13 53 04.0**	**-0.2**
THZ	**Tophouse**	**21.77**	**197**	P	**P**	**13 53 35.4**	**+1.2**
CTA	**Charters Tower**	**32.81**	**265**	P	**P**	**13 55 11.0**	**+0.4**
33nm,1.3s,baz=94,slow=8.6,SNR=6.2							
CTAO	**Charters Tower**	**32.81**	**265**	P	**P**	**13 55 10.8**	**+0.2**
CTAO				IAmb	IAmb	13 55 52.3	
comp=Z,21nm,1.3s							
BBOO	**Buckleboo**	**41.71**	**244**	P	**P**	**13 56 22.8**	**-0.2**
WR0	**Warramunga Arr**	**43.71**	**263**	P	**P**	**13 56 38.0**	**-0.7**
WR0				IAmb	IAmb	13 58 12.7	
comp=Z,24nm,1.8s							
AS31	**Alice Springs**	**43.77**	**257**	P	**P**	**13 56 39.1**	**-0.1**
ASAR	**Alice Springs**	**43.77**	**257**	P	**P**	**13 56 39.1**	**-0.1**
comp=Z,3.5nm,0.7s,baz=93,slow=7.7,SNR=64							
ASAR				PcP	**PcP**	**13 58 12.3**	**-0.6**
comp=Z,0.7nm,0.6s,baz=100,slow=3.7,SNR=10							
WB0	**Warramunga Arr**	**43.88**	**263**	P	**P**	**13 56 39.5**	**-0.6**
WB2	**Warramunga Arr**	**43.88**	**263**	P	**P**	**13 56 39.4**	**-0.7**
WB2				IAmb	IAmb	13 57 43.2	
comp=Z,16nm,1.6s							
WRA	**Warramunga Arr**	**43.90**	**263**	P	**P**	**13 56 39.6**	**-0.6**
comp=Z,1.2nm,0.3s,baz=97,slow=7.5,SNR=45							
FORT	**Forrest**	**48.47**	**247**	P	**P**	**13 57 14.1**	**-0.5**
FORT				IAmb	IAmb	13 58 47.0	
comp=Z,17nm,1.0s							
MTN	**Manton Dam**	**48.55**	**271**	P	**P**	**13 57 14.5**	**-0.9**
MTN				IAmb	IAmb	13 57 32.4	
comp=Z,26nm,1.4s							
KNRA	**Kununurra**	**49.99**	**267**	P	**P**	**13 57 25.5**	**-0.5**
KNRA				IAmb	IAmb	13 57 25.9	
comp=Z,9.5nm,1.1s							

FITZ Fitzroy Crossi 52.33 263 P P 13 57 42.7 -0.1
comp=Z,1.1nm,0.5s,baz=107,slow=2.6,SNR=11
FITZ Fitzroy Crossi 52.33 263 P P 13 57 41.9 -0.9
FITZ IAmb IAmb 13 59 33.2
comp=Z,20nm,1.9s
PSA00 Pilbara Seismi 56.92 257 P P 13 58 14.3 -0.6
PSA00 IAmb IAmb 13 58 42.8
comp=Z,27nm,1.8s
MORW Morawa 59.01 248 P P 13 58 28.4 -0.6
MORW IAmb IAmb 14 00 31.1
comp=Z,51nm,2.0s
QSPA South Pole Qui 68.95 180 P P 13 59 32.6 +1.2
QSPA IAmb IAmb 14 00 12.6
comp=Z,24nm,1.9s
KSM Kuching 72.88 278 P P 13 59 55.0 -0.2
PETK Petropavlovsk- 76.72 346 P P 14 00 14.9 -0.8
comp=Z,1.0nm,0.6s,baz=138,slow=7.0,SNR=5.5
NVAR Mina Array Bea 81.91 44 P P 14 00 44.3 +0.6
comp=Z,0.5nm,0.7s,baz=227,slow=7.7,SNR=5.6
TRF Thorofare Moun 87.19 12 P P 14 01 07.0 -1.7
TXAR Lajitas Array 87.92 58 P P 14 01 14.0 +1.1
comp=Z,0.2nm,0.5s,baz=244,slow=7.9,SNR=4.8
ILAR Eielson Array 89.06 13 P P 14 01 15.8 -1.5
comp=Z,0.5nm,0.7s,baz=226,slow=5.2,SNR=4.9
CMAR Chiang Mai Arr 89.73 290 P P 14 01 22.6 +1.1
comp=Z,0.9nm,0.8s,baz=123,slow=2.4,SNR=5.5
PDAR Pinedale Array 89.84 43 P P 14 01 21.9 +0.2
comp=Z,0.4nm,0.6s,baz=251,slow=4.5,SNR=4.4
ARCES ARCESS Array B 129.42 349 PKP **PKPdf 14 07 25.1 -1.3**
comp=Z,3.1nm,1.1s,baz=32,slow=7.1,SNR=4.4
AKASG Malin Array Be 143.25 330 PKP PKPab 14 07 48.8 -1.7
comp=Z,3.6nm,0.6s,baz=44,slow=4.2,SNR=11
GERES GERESS Array B 150.62 343 PKPbc **PKPbc 14 08 09.9 -1.0**
comp=Z,1.1nm,0.7s,baz=93,slow=2.7,SNR=5.4

*IDC **21** 14:11:06.5±8.0,18.°04S×174.°05W,h0km,mb3.6/3, mb1 4.0/3,mb1mx3.6/29,mbtmp3.6/3,Error ellipse: s-maj=348.8km s-min=38.7km az=141.0*
*NEIC **21** 14:11:33.7±1.5,17.°4S±0.°1×174.°7W±0.°1,h219km±4km, mb4.2/17,Error ellipse: s-maj=16.5km s-min=13.5km az=142.0*
ISC 21 14:11:32.2±0.7,**17.°5S**±0.°1×**174.°8W**±0.°1,**h200**km,**n21,**
σ1**8**04/21,**mb4.0**/10,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.54**	**40**		**Pn**	**14 12 41.9**	**+1.0**
NIUE	**Niue**	**4.87**	**110**	Pn	**Pn**	**14 12 45.2**	**+0.3**
BKZ	**Black Stump Fm**	**22.94**	**198**	P	**P**	**14 16 19.4**	**+0.3**
QRZ	**Quartz Range**	**25.75**	**203**	P	**P**	**14 16 45.3**	**+0.9**
THZ	**Tophouse**	**26.44**	**201**	P	**P**	**14 16 51.8**	**+1.2**
LTZ	**Lake Taylor**	**27.56**	**201**	P	**P**	**14 17 00.3**	**-0.3**
OXZ	**Oxford**	**28.12**	**201**	P	**P**	**14 17 05.2**	**-0.3**
ARMA	**Armidale**	**33.19**	**241**	P	**P**	**14 17 51.3**	**+1.0**
ARMA				IAmb	IAmb	14 18 13.6	
comp=Z,7.7nm,1.2s							
BBOO	**Buckleboo**	**46.67**	**241**	P	**P**	**14 19 41.3**	**+0.3**
BBOO				IAmb	IAmb	14 20 04.2	
comp=Z,14nm,1.4s							
WB0	**Warramunga Arr**	**48.10**	**259**	P	**P**	**14 19 52.2**	**0.0**
WB2	**Warramunga Arr**	**48.12**	**259**	P	**P**	**14 19 51.6**	**-0.8**
WB2				IAmb	IAmb	14 20 01.4	
comp=Z,6.9nm,1.3s							
WRA	**Warramunga Arr**	**48.13**	**259**	P	**P**	**14 19 52.4**	**-0.1**
comp=Z,0.3nm,0.5s,baz=98,slow=6.8,SNR=11							
AS31	**Alice Springs**	**48.26**	**254**	P	**P**	**14 19 54.0**	**+0.6**
ASAR	**Alice Springs**	**48.26**	**254**	P	**P**	**14 19 53.9**	**+0.5**
comp=Z,1.5nm,0.5s,baz=89,slow=9.2,SNR=38							
FORT	**Forrest**	**53.34**	**244**	P	**P**	**14 20 33.0**	**+1.8**
FORT				IAmb	IAmb	14 20 54.0	
comp=Z,12nm,1.0s							
NWAO	**Narrogin (SRO)**	**62.49**	**242**	P	**P**	**14 21 33.9**	**-0.8**
MORW	**Morawa**	**63.84**	**246**	P	**P**	**14 21 44.4**	**+0.7**
MORW				IAmb	IAmb	14 21 47.1	
comp=Z,7.8nm,1.4s							
QSPA	**South Pole Qui**	**72.60**	**180**	P	**P**	**14 22 37.5**	**0.0**
QSPA				IAmb	IAmb	14 22 56.2	
comp=Z,2.8nm,1.3s							
UGM	**Wanagama**	**73.14**	**267**	P	**P**	**14 22 39.1**	**-2.4**
PAGB	**Antelope Grade**	**73.88**	**44**	P	**P**	**14 22 43.8**	**-1.6**
PAGB				IAmb	IAmb	14 23 05.4	
comp=Z,13nm,1.2s							
ILAR	**Eielson Array**	**84.70**	**12**	P	**P**	**14 23 44.1**	**+1.0**
comp=Z,0.1nm,0.5s,baz=223,slow=6.4,SNR=4.7							

*IDC **21** 14:47:47.8±0.7,36.°33N×70.°72E,h0km,mb4.4/21, mb1 4.6/27,mb1mx4.4/43,mbtmp4.5/27,ML4.6/5,MS3.1/17, Ms1 3.1/17,ms1mx2.9/51,Error ellipse: s-maj=14.7km s-min=12.4km az=19.0*
*BJI **21** 14:47:55.7±0.0,36.°63N×70.°67E,h69km,mB4.7/26, mb4.6/36,ML4.7/4,Ms4.1/9,Ms7 3.8/9*
*MOS **21** 14:47:56.4±1.1,36.°70N×70.°80E,h68km,mb4.7/32,Error ellipse: s-maj=7.2km s-min=4.8km az=101.7*
*NEIC **21** 14:47:58±1.5,36.°67N±0.°06×70.°73E±0.°09,h69km±6km, mb4.7/76,Error ellipse: s-maj=10.5km s-min=8.3km az=69.0*
*NNC **21** 14:47:59.7±3.5,36.°93N×70.°23E,h106km±43km,mb4.3, mpv4.9,Error ellipse: s-maj=32.3km s-min=16.6km az=160.0*
ISC 21 14:47:59.9±0.3,**36.°69N**±0.°03×**70.°82E**±0.°04,**h100**km,**n246,**
σ2**9**11/235,**mb4.5**/83,**29C-16D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.59**	**215**	PN	**Pn**	**14 48 38.6**	**-1.8**
KBL	**Kabul**	**2.59**	**215**		**Pn**	**14 48 38.6**	**-1.8**
CHCP	**Chirah Chowk**	**3.63**	**146**	P	**Pn**	**14 48 53.8**	**-0.3**
NIL	**Nilore**	**3.63**	**146**	PN	**Pn**	**14 48 53.6**	**-0.5**
NIL	**Nilore**	**3.63**	**146**		**Pn**	**14 48 53.6**	**-0.5**
THW	**Thamme Wali**	**3.96**	**169**	P	**Pn**	**14 48 56.6**	**-2.0**
TAS	**Tashkent**	**4.78**	**346**	PN	**Pn**	**14 49 08.0**	**-1.6**
TAS	**Tashkent**	**4.78**	**346**	Pn	**Pn**	**14 49 08.0**	**-1.6**
KSH	**Kashi**	**4.95**	**54**	P	**Pn**	**14 49 09.3**	**-2.7**
KSH				S	**Sn**	**14 50 01.8**	**-6.2**
KSH				smax	smax		
comp=N,2μm,0.4s							
KSH				smax	smax		
comp=E,1μm,0.6s							
SARP	**Sargodha**	**5.00**	**162**	P	**Pn**	**14 49 09.8**	**-2.8**
THN	**Thein Dam**	**5.86**	**135**	*e*P	**Pn**	**14 49 24.0**	**-0.3**
THN				*e*S	**Sn**	**14 50 27.5**	**-2.6**
AML	**Almayashu**	**5.87**	**21**	P	**Pn**	**14 49 25.2**	**+0.5**
SNR=112							
UCH	**Uchtor**	**6.22**	**26**	P	**Pn**	**14 49 30.1**	**+0.5**
SNR=171							
DHRM	**DHARAMSHALA**	**6.33**	**133**	*e*P	**Pn**	**14 49 29.7**	**-1.2**
DHRM				*e*S	**Sn**	**14 50 38.5**	**-3.4**
DHRM				IAML		14 50 42.5	
comp=N,778nm,0.4s							
DHRM				IAML		14 50 42.7	
comp=E,1μm,0.4s							
KZA	**Kyzart**	**6.38**	**31**	P	**Pn**	**14 49 32.2**	**+0.6**
SNR=108							
EKS2	**Erkin-Say**	**6.38**	**20**	P	**Pn**	**14 49 31.9**	**+0.5**
SNR=72							
KK31	**Karatay Array**	**6.41**	**358**	⇓P	**Pn**	**14 49 30.6**	**-1.2**
comp=E,38nm,0.4s,baz=181,slow=14,SNR=369							
KK31				⇓S	**Sn**	**14 50 39.3**	**-4.1**
comp=E,36nm,0.3s,baz=188,slow=24,SNR=8.1							
KK31	**Karatay Array**	**6.41**	**358**	*e*PN	**Pn**	**14 49 30.5**	**-1.2**
KK31	**Karatay Array**	**6.41**	**358**		**Pn**	**14 49 30.5**	**-1.2**
AAK	**Ala-Archa**	**6.58**	**24**	Pn	**Pn**	**14 49 34.6**	**+0.5**
comp=E,17nm,0.3s,baz=196,slow=9.1,SNR=183							
AAK				Sn	**Sn**	**14 50 50.0**	**+2.2**
comp=E,13nm,0.3s,baz=180,slow=17,SNR=4.4							
AAK				Lg	Lg	14 51 28.4	
comp=E,14nm,0.3s,baz=100,slow=22,SNR=6.9							
AAK				LR	LR	14 52 01.1	
comp=E,66nm,21.9s,baz=199,slow=36							
AAK	**Ala-Archa**

SNR=38
TKM2 Tokmak 2 7.23 29 P **Pn** 14 49 43.7 +0.7
SNR=141
TKM2 Tokmak 2 7.23 29 ⇓P **Pn** 14 49 43.1 +0.2
comp=E,67nm,0.5s
TKM2 ⇓S **Sn** 14 51 03.0 -0.5
comp=E,44nm,0.8s
HRA Herat 7.36 254 Pn **Pn** 14 49 40.8 -4.1
MDOK Medeo 8.04 35 ⇑P **Pn** 14 49 54.0 0.0
comp=E,33nm,0.6s
DDI Dehra Dun 8.76 134 *e*P **Pn** 14 50 01.7 -2.2
DDI *e*S **Sn** 14 51 34.6 -6.3
DDI IAML 14 51 39.4
comp=N,322nm,0.3s
DDI IAML 14 51 39.8
comp=E,288nm,0.5s
NDI New Delhi 9.63 144 *e*P Pn 14 50 06.5 -9.1
NDI *e*S Sn 14 51 50.5 -11
GEYT Alibeck 10.20 281 Pn Pn 14 50 15.8 -7.4
comp=E,5.8nm,0.3s,baz=120,slow=12,SNR=42
GEYT Sn Sn 14 52 02.0 -14
comp=E,14nm,0.3s,baz=92,slow=13,SNR=4.8
GEYT LR LR 14 55 13.4
comp=E,48nm,19.1s,baz=215,slow=44
GYA0B ALIBECK ARRAY 10.20 281 ⇓P Pn 14 50 16.3 -7.0
GYA0B ⇓S Sn 14 52 02.0 -14
GYA0B ALIBECK ARRAY 10.20 281 Pn 14 50 16.2 -7.0
MAKZ Makanchi 13.08 36 ⇑P **Pn** 14 50 58.7 -3.1
comp=E,9.4nm,0.7s
MAKZ Makanchi 13.08 36 P **Pn** 14 50 59.5 -2.3
MAKZ Makanchi 13.08 36 **Pn** 14 50 59.5 -2.3
MK31 Makanchi Array 13.22 37 P **Pn** 14 51 02.2 -1.3
comp=E,4.9nm,0.5s,baz=215,slow=9.0,SNR=58
MK31 Makanchi Array 13.22 37 P **Pn** 14 51 01.6 -2.0
MK31 Makanchi Array 13.22 37 **Pn** 14 51 01.6 -2.0
MKAR Makanchi Array 13.22 37 Pn **Pn** 14 51 02.4 -1.2
comp=E,1.1nm,0.3s,baz=221,slow=15,SNR=51
MKAR LR LR 14 56 38.9
comp=E,79nm,21.1s,baz=224,slow=39
MKAR Makanchi Array 13.22 37 *i* P **Pn** 14 51 02.4 -1.2
MKAR pmax pmax
comp=Z,9.0nm,0.7s
DANN Dangsing 13.71 124 *e*P **Pn** 14 51 06.2 -4.2
comp=Z,46nm,0.3s
KOLN Koldanda 13.99 126 *e*P **Pn** 14 51 09.4 -4.5
comp=Z,36nm,0.4s
GKN Gorkha 14.53 123 *e*P **Pn** 14 51 16.9 -3.9
comp=Z,62nm,0.4s
BHPL Bhopal 14.57 155 *e*P Pn 14 51 14.8 -6.3
BHPL *e*S Sn 14 53 48.1 -14
WMQ Urumqi 14.71 56 *e*P **Pn** 14 51 23.4 +0.5
WMQ pmax pmax
comp=Z,22nm,0.9s
WMQ pmax pmax
comp=Z,64nm,3.7s
WMQ LR LR
comp=Z,320nm,29.3s
WMQ LR LR
comp=Z,840nm,28.9s
WMQ LR LR
comp=Z,560nm,29.2s
AB31 Akbulak array 14.85 331 ⇑P **Pn** 14 51 20.7 -3.8
comp=Z,7.5nm,0.3s,baz=161,slow=12,SNR=385
AB31 ⇓S Sn 14 53 56.2 -12
comp=Z,7.9nm,0.5s
AB31 Akbulak array 14.85 331 P Pn 14 51 19.5 -5.0
KURBB Kurchatov Arra 14.99 19 Pn **Pn** 14 51 23.4 -2.9
comp=Z,0.1nm,0.3s,baz=208,slow=12,SNR=12
KURBB Kurchatov Arra 14.99 19 ⇓P **Pn** 14 51 22.7 -3.6
comp=Z,15nm,0.6s
KURBB Kurchatov Arra 14.99 19 P **Pn** 14 51 22.6 -3.6
KURK Kurchatov 15.10 19 ⇓P **Pn** 14 51 23.6 -4.0
comp=Z,12nm,0.8s
KURK Kurchatov 15.10 19 *ce*P **Pn** 14 51 25.4 -2.2
KURK pmax pmax
comp=Z,4.0nm,1.3s
KURK Kurchatov 15.10 19 P **P** 14 51 30.7 +0.2
DMN Daman 15.10 123 *e*P **Pn** 14 51 24.6 -3.5
comp=Z,18nm,0.4s
PKIN Phulchoki 15.32 122 *e*P **Pn** 14 51 27.3 -3.6
comp=Z,42nm,0.4s
PKI Pulchoki 15.33 122 *e*P **Pn** 14 51 27.3 -3.8
comp=Z,27nm,0.5s
GUN Gumba 15.44 120 *e*P **Pn** 14 51 28.6 -3.9
comp=Z,27nm,0.4s
JIRN Jiri 15.81 120 *e*P **Pn** 14 51 33.3 -3.9
comp=Z,86nm,0.4s
BVAR Borovoye Array 16.34 359 Pn **Pn** 14 51 40.4 -2.7
comp=Z,2.1nm,0.3s,baz=171,slow=12,SNR=69
BRVK Borovoye 16.37 359 ⇓P **Pn** 14 51 40.5 -3.0
comp=Z,16nm,0.8s
BRVK Borovoye 16.37 359 *ce*P **Pn** 14 51 41.9 -1.6
BRVK pmax pmax
comp=Z,23nm,1.0s
BRVK Borovoye 16.37 359 **Pn** 14 51 41.6 -1.9
RAMN Ramite 16.54 121 *e*P **Pn** 14 51 42.7 -3.4
comp=Z,29nm,0.4s
AKTO Aktyubinsk 16.54 330 Pn **Pn** 14 51 43.4 -2.3
comp=Z,5.9nm,0.3s,baz=134,slow=13,SNR=89
AKTO LR LR 14 58 34.9
comp=Z,66nm,20.8s,baz=141,slow=38
AKTO Aktyubinsk 16.54 330 ⇓P **Pn** 14 51 43.3 -2.3
comp=Z,56nm,0.8s
AKTO ⇑S Sn 14 54 36.5 -13
comp=Z,55nm,1.2s
AKTO Aktyubinsk 16.54 330 P **Pn** 14 51 43.1 -2.6
TAPN Taplejung 17.06 118 *e*P **Pn** 14 51 50.1 -2.5
comp=Z,33nm,0.4s
DGZ Jazzator, Alta 17.72 38 *e*P **P** 14 51 58.4 -1.2
DGZ pmax pmax
comp=Z,19nm,0.5s
LSA Lhasa 18.37 106 P **Pn** 14 52 07.8 -0.7
LSA Lhasa 18.37 106 P **Pn** 14 52 06.8 -1.7
LSA pmax pmax
comp=Z,11nm,0.6s
LSA Lhasa 18.37 106 P **Pn** 14 52 06.8 -1.7
AKT Akhty 18.53 292 *e*P **Pn** 14 52 07.9 -2.1
AKT *e*S **Sn** 14 55 34.8 -2.4
AKT pmax pmax
comp=Z,9.0nm,0.6s
ZAA0 Zalesovo Array 19.80 25 ⇓P **Pn** 14 52 22.3 -2.3
comp=Z,3.1nm,0.6s
ZAA0 Zalesovo Array 19.80 25 P **Pn** 14 52 22.5 -2.2
ZAA0 IAmb IAmb 14 52 24.8
comp=Z,28nm,0.9s
ZALV Zalesovo Beam 19.80 25 P **Pn** 14 52 22.8 -1.8
comp=Z,25nm,0.4s,baz=216,slow=11,SNR=102
ZALV LR LR 15 00 40.5
comp=Z,35nm,19.3s,baz=186,slow=38
TBLG Delisi 20.79 292 P Pn 14 52 32.7 -3.6
TBLG pmax pmax
comp=Z,17nm,0.6s
TBLG Delisi 20.79 292 P Pn 14 52 32.6 -3.7
TBLG IAmb IAmb 14 52 34.4
comp=Z,16nm,0.6s
SVE Sverdlovsk 21.27 344 ⇓*e*P **P** 14 52 39.0 +1.1
SVE pmax pmax
comp=Z,23nm,0.8s
ARU Arti 21.41 341 P **P** 14 52 40.5 +1.2
comp=Z,5.7nm,0.6s,baz=172,slow=7.7,SNR=21
ARU LR LR 15 01 53.8
comp=Z,148nm,20.6s,baz=158,slow=39
ARU Arti 21.41 341 *c i* P **P** 14 52 40.3 +0.9
ARU 14 53 01.4
ARU S **S** 14 56 34.5 +3.5
ARU SS **SnSn** 14 57 03.0 -0.1
ARU pmax pmax
comp=Z,23nm,0.8s
ARU Arti 21.41 341 P **P** 14 52 39.6 +0.3
ARU IAmb IAmb 14 52 44.2
comp=Z,24nm,0.9s
ZEI Tsey 21.53 295 *e*P **P** 14 52 36.5 -4.5
ZEI pmax pmax
comp=Z,12nm,0.9s
AKH Akhalkalaki 21.70 291 P **P** 14 52 42.8 0.0
AKH pmax pmax
comp=Z,19nm,0.8s
AKH Akhalkalaki 21.70 291 P **P** 14 52 42.8 0.0
AKH IAmb IAmb 14 52 45.1
comp=Z,19nm,0.8s
KBZ Khabaz 22.39 297 P **P** 14 52 49.1 -0.7
comp=Z,16nm,0.8s,baz=108,slow=10,SNR=16
KBZ LR LR 15 03 37.0
comp=Z,36nm,19.7s,baz=90,slow=42
KBZ Khabaz 22.39 297 *ce*P **P** 14 52 49.3 -0.5
KBZ pmax pmax
comp=Z,7.0nm,0.7s
NEY Neytrino 22.44 296 *i* P **P** 14 52 51.3 +0.6
NEY pmax pmax
comp=Z,3.0nm,0.8s
KIV Kislovodsk 22.57 297 *ce*P **P** 14 52 50.7 -1.2
KIV *i* 14 53 17.4
KIV pmax pmax
comp=Z,21nm,1.0s
KIV MLR MLR
comp=Z,37nm,16.0s
KIV Kislovodsk 22.57 297 P **P** 14 52 51.1 -0.8
KIV IAmb IAmb 14 53 09.1
comp=Z,18nm,0.6s
GTA Gaotai 22.95 74 P **P** 14 52 58.1 +2.3
GTA pP pP 14 53 12.8 -4.2
GTA sP sP 14 53 20.1 -10
GTA pmax pmax
comp=Z,13nm,1.1s
KIRV Kirov 26.00 334 P **P** 14 53 24.9 +1.8
comp=Z,19nm,0.6s,baz=310,slow=17,SNR=6.2
KIRV LR LR 15 05 51.8
comp=Z,23nm,18.0s,baz=32,slow=41
MOY Mondy 26.07 45 *e*P **P** 14 53 29.6 +5.6
MOY pmax pmax
comp=Z,11nm,1.0s
LZH Lanzhou 26.52 81 *e*P **P** 14 53 30.6 +2.3
LZH pP pP 14 53 48.1 -3.7
LZH sP sP 14 53 57.3 -6.7
LZH pmax pmax
comp=Z,26nm,1.0s
VSR Storozhevoye 26.77 313 *e*P **P** 14 53 29.4 -0.7
VSR pmax pmax
comp=Z,9.0nm,1.0s
ZAK Zakamensk 26.98 49 *e*P **P** 14 53 33.8 +1.7
ZAK pmax pmax
comp=Z,5.0nm,0.9s
LPSR Galich'ya Gora 27.41 316 *e*P **P** 14 53 37.5 +1.6
LPSR pmax pmax
comp=Z,20nm,0.6s
TLY Talaya 27.61 47 LR LR 15 04 50.3
comp=Z,29nm,20.5s,baz=258,slow=37
CD2 Chengdu 27.89 92 P **P** 14 53 40.3 -0.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s
SONM Songino Array 28.35 56 P **P** 14 53 46.8 +2.4
comp=Z,4.2nm,0.5s,baz=267,slow=8.7,SNR=15
SONM LR LR 15 06 40.7
comp=Z,88nm,21.7s,baz=264,slow=40
ULN Ulaanbaatar 28.79 56 *ce*P **P** 14 53 50.8 +2.4
ULN pmax pmax
comp=Z,3.0nm,0.8s
ULN Ulaanbaatar 28.79 56 P **P** 14 53 50.2 +1.8
BR131 Keskin Array S 29.24 287 P **P** 14 53 53.2 +0.8
BR131 pmax pmax
comp=Z,3.0nm,0.6s
BR131 Keskin Array S 29.24 287 P **P** 14 53 53.2 +0.8
BRTR Keskin Array B 29.24 287 P **P** 14 53 53.6 +1.2
comp=Z,2.1nm,0.7s,baz=113,slow=8.5,SNR=6.8
BRTR LR LR 15 06 49.8
comp=Z,15nm,21.1s,baz=68,slow=39
KMI Kunming 29.58 104 P P 14 53 49.6 -6.1
KMI pmax pmax
comp=Z,16nm,1.2s
OBN Obninsk 29.70 319 *i* P **P** 14 53 57.3 +1.2
OBN *i* 14 54 52.2
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN MLR MLR
comp=Z,38nm,14.0s
CMAR Chiang Mai Arr 30.67 119 P **P** 14 54 05.0 -0.1
comp=Z,1.9nm,0.8s,baz=301,slow=9.1,SNR=9.8
CMAR LR LR 15 08 21.2
comp=Z,28nm,21.3s,baz=305,slow=40
CMAR Chiang Mai Arr 30.67 119 P **P** 14 54 05.0 -0.1
KLMR Klimovskoe 31.24 331 *e*P P 14 54 04.4 -5.2
KLMR pmax pmax
comp=Z,11nm,1.4s
KLMR Klimovskoe 31.24 331 *e*P P 14 54 04.5 -5.2
KLMR AMP 14 54 15.3
comp=Z,11nm,1.4s
HHC Hu-ho-hao-te 31.83 70 *e*P **P** 14 54 18.8 +3.6
HHC pmax pmax
comp=Z,10.0nm,0.9s
HHC pmax pmax
comp=Z,49nm,6.6s
ELL Elmali 32.62 283 P **P** 14 54 21.9 -0.3
ELL pmax pmax
comp=Z,87nm,1.6s
ELL Elmali 32.62 283 P **P** 14 54 21.9 -0.3
AKASG Malin Array Be 32.71 309 P **P** 14 54 23.5 +0.8
comp=Z,4.7nm,0.6s,baz=82,slow=7.1,SNR=19
AKBB Malin Array Si 32.71 309 *ce*P **P** 14 54 23.7 +1.0
SORM Soroca 32.98 304 ⇑P **P** 14 54 25.8 +0.8
SORM Soroca 32.98 304 ⇑P **P** 14 54 25.8 +0.8
PBKT Sadao Pong 33.37 119 P **P** 14 54 31.2 +2.5
PBKT IAmb IAmb 14 54 32.1
comp=Z,16nm,1.3s
NRIK Noril'sk 33.97 11 P **P** 14 54 36.0 +2.7
comp=Z,2.5nm,0.5s,baz=216,slow=7.5,SNR=4.2
VRI Vrincioaia 34.01 300 ⇑P **P** 14 54 36.4 +2.4
VRI Vrincioaia 34.01 300 ⇑P **P** 14 54 36.4 +2.4
PLOR Plostina 34.06 300 ⇑P P 14 54 37.1 +2.5
PLOR Plostina 34.06 300 ⇑P P 14 54 37.1 +2.6
MLR Muntele Rosu 34.56 299 ⇑P P 14 54 41.9 +3.0
MLR Muntele Rosu 34.56 299 ⇑P P 14 54 41.9 +3.0
MLR Muntele Rosu 34.56 299 P **P** 14 54 41.2 +2.3
MLR IAmb IAmb 14 54 42.6
comp=Z,9.9nm,0.8s
DOPR Dopca 34.94 300 ⇓P **P** 14 54 44.0 +1.9
VOIR 35.19 299 ⇑P **P** 14 54 46.2 +1.9
VOIR 35.19 299 ⇑P **P** 14 54 46.2 +1.9
ARR Arges 35.49 299 ⇓P **P** 14 54 48.8 +2.0
LOT Lotru 36.09 299 ⇑P P 14 54 54.5 +2.5
VTS Vitosha 36.72 294 P **P** 14 54 59.1 +1.6
VTS pmax pmax
comp=Z,2.0nm,0.8s
VTS Vitosha 36.72 294 P **P** 14 54 59.1 +1.6
DRGR 36.77 301 ⇑P **P** 14 55 00.1 +2.3
DRGR 36.77 301 ⇑P **P** 14 55 00.1 +2.3
TRPA Tarpa 36.87 304 ⇑P **P** 14 55 00.8 +2.4
IDI Anoyia 36.92 282 LR LR 15 14 26.4
comp=Z,13nm,18.2s,baz=231,slow=43
FIA1 FINESS Array S 37.24 326 P **P** 14 55 02.9 +1.4
FIA1 IAmb IAmb 14 55 23.4
comp=Z,12nm,1.2s
FINES FINESS Array B 37.24 326 P **P** 14 55 03.1 +1.6
comp=Z,2.2nm,0.5s,baz=115,slow=10,SNR=20
FINES LR LR 15 11 00.9
comp=Z,50nm,18.6s,baz=97,slow=37
VYHS Vyhne 39.33 304 *e*P P 14 55 22.0 +2.9
VYHS Vyhne 39.33 304 *e*P P 14 55 22.0 +2.9
NJ2 Nanjing 39.59 82 *e*P **P** 14 55 23.1 +1.6
NJ2 pmax pmax
comp=Z,13nm,0.6s
MORC Moravsky Berou 40.13 306 ⇑P **P** 14 55 28.0 +2.2
MORC Moravsky Berou 40.13 306 P **P** 14 55 27.4 +1.6
MORC pmax pmax
comp=Z,4.0nm,1.0s
MORC Moravsky Berou 40.13 306 P **P** 14 55 27.4 +1.6
ARCES ARCESS Array B 40.91 338 P **P** 14 55 34.0 +2.1
comp=Z,6.2nm,0.8s,baz=112,slow=8.0,SNR=19
ARE0 ARCESS Array S 40.91 338 P **P** 14 55 34.5 +2.6
BRG Berggiesshubel 42.39 308 *e*P **P** 14 55 45.7 +1.5
comp=Z,7.8nm,1.1s
BRG *e*pP **pP** 14 56 03.1 -4.8
comp=Z,3.5nm,0.7s
GERES GERESS Array B 42.70 305 P **P** 14 55 46.5 -0.3
comp=Z,0.5nm,0.5s,baz=94,slow=6.8,SNR=5.4
CLL Collm 42.96 309 *e*P **P** 14 55 49.0 +0.2
comp=Z,4.0nm,0.9s
CLL Collm 42.96 309 *e*P **P** 14 55 49.0 +0.2
CLL pmax pmax
comp=Z,4.0nm,0.9s
STAL STALIGIAL 43.69 301 P **P** 14 55 55.6 +0.8
YAK Yakutsk 43.90 36 *e*P **P** 14 55 58.1 +2.0
YAK pmax pmax
comp=Z,14nm,0.7s
YAK Yakutsk 43.90 36 P **P** 14 55 57.9 +1.8
NC405 NORSAR Array S 43.91 323 P **P** 14 55 57.4 +1.1
NC602 NORSAR Array S 43.95 323 P **P** 14 55 57.2 +0.6
NC303 NORSAR Array S 44.08 323 P **P** 14 55 59.0 +1.4
NB201 NORSAR Array S 44.10 323 P **P** 14 55 59.0 +1.2
NB2 NORSAR Subarra 44.14 323 P **P** 14 55 59.3 +1.1
comp=Z,2.7nm,0.5s,baz=97,slow=7.9
NOA NORSAR Array B 44.14 323 P **P** 14 55 59.4 +1.1
comp=Z,4.7nm,0.6s,baz=97,slow=7.9,SNR=22
NOA LR LR 15 17 41.7
comp=Z,26nm,18.9s,baz=105,slow=40
NAO01 NORSAR Array S 44.28 323 P **P** 14 56 00.5 +1.2
NBO00 NORSAR Array S 44.35 323 P **P** 14 56 00.6 +0.8
MURB Monte Urbino 44.37 297 P **P** 14 56 01.5 +1.2
NC204 NORSAR Array S 44.38 323 P **P** 14 56 01.1 +1.0
CTI Castel Tesino 44.45 301 P **P** 14 56 01.7 +0.7
CTI pmax pmax
comp=Z,4.0nm,0.6s
CTI Castel Tesino 44.45 301 P **P** 14 56 01.7 +0.7
KONO Kongsberg 44.85 321 P **P** 14 56 04.6 +0.9
KONO pmax pmax
comp=Z,26nm,1.4s
KONO Kongsberg 44.85 321 P **P** 14 56 04.6 +0.9
KONO IAmb IAmb 14 57 16.2
comp=Z,26nm,1.4s
KSRS Korea Array 44.95 71 P **P** 14 56 05.4 +0.5
comp=Z,0.8nm,0.5s,baz=281,slow=5.5,SNR=4.8
KSRS LR LR 15 17 36.5
comp=Z,34nm,19.9s,baz=353,slow=40
KLR Kul'dur 45.15 54 *i* P **P** 14 56 08.1 +1.8
KLR pmax pmax
comp=Z,1.0nm,0.5s
CLTB Caltabellotta 45.30 289 P **P** 14 56 08.3 +0.5
TIXI Tiksi 45.65 22 *ce*P **P** 14 56 12.1 +2.2
TIXI pmax pmax
comp=Z,10.0nm,0.8s
TIXI Tiksi 45.65 22 P **P** 14 56 11.7 +1.8
TIXI IAmb IAmb 14 56 12.9
comp=Z,12nm,1.0s
SENIN Lac Senin/Sane 47.36 303 P **P** 14 56 24.5 +0.6
SENIN IAmb IAmb 14 56 25.6
comp=Z,6.0nm,0.8s
NOR Nord 53.59 349 *i* P **P** 14 57 12.0 +2.0
NOR Nord 53.59 349 *i* P **P** 14 57 12.0 +2.0
SEY Seymchan 54.34 34 *i* P **P** 14 57 17.9 +2.2
DAG Danmarks Havn 54.51 344 *i* P **P** 14 57 19.0 +2.3
DAG pmax pmax
comp=Z,1.0nm,0.5s
DAG Danmarks Havn 54.51 344 *i* P **P** 14 57 19.0 +2.3
comp=Z,1.0nm,0.5s
BILL Bilibino 58.50 26 *i* P **P** 14 57 47.2 +2.1
BILL *i* 14 58 38.5
BILL pmax pmax
comp=Z,5.0nm,0.8s
BILL Bilibino 58.50 26 P **P** 14 57 47.6 +2.5
BILL IAmb IAmb 14 57 48.9
comp=Z,5.6nm,0.8s
SUMG Summit 60.83 341 *i* P P 14 58 04.7 +3.1
SUMG pmax pmax
comp=Z,16nm,1.0s
SUMG Summit 60.83 341 *i* P P 14 58 04.7 +3.1
comp=Z,16nm,1.0s
TORD Torodi Ar. Bea 65.58 268 P **P** 14 58 32.6 -0.7
comp=Z,2.5nm,0.8s,baz=40,slow=5.3,SNR=12
TOLK Toolik Lake Re 70.77 15 P **P** 14 59 07.2 +2.2
TOLK IAmb IAmb 14 59 09.6
comp=Z,6.2nm,0.6s
COLD Coldfoot 71.83 16 P **P** 14 59 13.9 +2.6
FYU Fort Yukon 73.42 14 P **P** 14 59 23.0 +2.3
FYU IAmb IAmb 14 59 34.8
comp=Z,20nm,1.5s
MLY Manley 73.54 17 P **P** 14 59 23.6 +2.1
C36M Paulatuk 73.70 5 P **P** 14 59 24.2 +1.9
INK Inuvik 73.74 9 P **P** 14 59 25.4 +2.9
comp=Z,2.8nm,0.5s,baz=350,slow=8.2,SNR=17
INK Inuvik 73.74 9 P **P** 14 59 24.9 +2.4
INK pmax pmax
comp=Z,7.0nm,1.1s
INK Inuvik 73.74 9 P **P** 14 59 24.9 +2.4
INK IAmb IAmb 14 59 28.9
comp=Z,6.6nm,1.1s
PSAD1 Pilbara Seismi 74.05 133 P **P** 14 59 26.0 +1.1
PSAD1 IAmb IAmb 15 00 09.0
comp=Z,26nm,1.9s
PSAC1 Pilbara Seismi 74.10 133 P **P** 14 59 25.6 +0.4
PSAB3 Pilbara Seismi 74.17 133 P **P** 14 59 26.5 +0.8
PSAB3 IAmb IAmb 15 01 31.4
comp=Z,18nm,1.6s
PSAC2 Pilbara Seismi 74.17 133 P **P** 14 59 26.6 +0.9
PSAC2 IAmb IAmb 15 00 57.7
comp=Z,24nm,1.7s
PSAD2 Pilbara Seismi 74.25 133 P **P** 14 59 27.1 +0.9
BPAW Bear Paw Mtn. 74.26 18 P **P** 14 59 27.5 +1.8
BPAW IAmb IAmb 14 59 28.7
comp=Z,4.8nm,0.9s
NEA Nenana 74.31 17 P **P** 14 59 28.0 +2.1
COLA College 74.33 16 P **P** 14 59 28.8 +2.8
COLA pmax pmax
comp=Z,18nm,1.2s
COLA College 74.33 16 P **P** 14 59 28.8 +2.8
CCB Clear Creek Bu 74.54 16 P **P** 14 59 30.2 +3.0
IL31 74.64 16 P **P** 14 59 29.4 +1.6
ILAR Eielson Array 74.64 16 P **P** 14 59 29.9 +2.0
comp=Z,2.6nm,0.9s,baz=322,slow=4.6,SNR=23
KTH Kantishna Hill 74.73 18 P **P** 14 59 31.0 +2.5
KTH IAmb IAmb 14 59 32.1
comp=Z,9.5nm,0.9s
PPLA Purkeypile 74.95 19 P **P** 14 59 32.0 +2.2
TRF Thorofare Moun 74.97 18 P P 14 59 33.2 +3.2
TRF IAmb IAmb 14 59 41.8
comp=Z,6.5nm,1.2s
MCK McKinley 75.06 17 P **P** 14 59 32.0 +1.7
MCK pmax pmax
comp=Z,10.0nm,1.4s
MCK McKinley 75.06 17 P **P** 14 59 32.0 +1.7
MCK IAmb IAmb 14 59 33.7
comp=Z,10nm,1.4s
FITZ Fitzroy Crossi 75.12 126 P **P** 14 59 32.1 +0.8
FITZ IAmb IAmb 15 01 58.9
comp=Z,26nm,2.0s
RND Reindeer 75.36 17 P **P** 14 59 33.8 +1.7
RND pmax pmax
comp=Z,3.0nm,0.8s
RND Reindeer 75.36 17 P **P** 14 59 33.8 +1.7
KNRA Kununurra 75.45 122 P **P** 14 59 34.2 +1.1
KNRA IAmb IAmb 14 59 37.8
comp=Z,16nm,1.2s
EGAK Eagle 75.80 14 P **P** 14 59 36.5 +2.0
SCRK Sand Creek 75.95 15 P **P** 14 59 37.3 +1.8
RIDG Independent Ri 75.98 16 P **P** 14 59 37.3 +1.7
RIDG IAmb IAmb 15 01 00.1
comp=Z,7.2nm,1.2s
DHY Denali Highway 75.99 17 P **P** 14 59 37.8 +2.0
DHY IAmb IAmb 14 59 39.1
comp=Z,4.9nm,0.7s
DOT Dot Lake 76.22 15 P **P** 14 59 39.1 +2.1
PAX Paxson 76.52 16 P **P** 14 59 40.5 +1.8
PAX pmax pmax
comp=Z,4.0nm,0.7s
PAX Paxson 76.52 16 P **P** 14 59 40.5 +1.8
PAX IAmb IAmb 14 59 43.0
comp=Z,4.3nm,0.7s
GHO Glory Hole Cre 76.73 18 P **P** 14 59 41.7 +1.8
GHO IAmb IAmb 14 59 49.7
comp=Z,8.2nm,0.9s
DAWY Dawson 76.77 13 P **P** 14 59 42.2 +2.2
SML Sawmill 76.85 18 P **P** 14 59 42.4 +1.8
SML IAmb IAmb 14 59 43.5
comp=Z,9.8nm,0.8s
SCM Sheep Creek Mo 77.07 18 P **P** 14 59 43.6 +1.8
SCM pmax pmax
comp=Z,24nm,1.5s
SCM Sheep Creek Mo 77.07 18 P **P** 14 59 43.6 +1.8
RC01 Rabbit Creek A 77.10 19 P **P** 14 59 43.6 +1.7
RC01 IAmb IAmb 15 00 08.2
comp=Z,7.0nm,1.0s
KNK Knik Glacier 77.15 18 P **P** 14 59 44.4 +2.2
KNK IAmb IAmb 15 00 21.0
comp=Z,10nm,0.8s
BRLK Bradley Lake 77.91 20 P **P** 14 59 47.6 +1.2
BRLK IAmb IAmb 14 59 49.1
comp=Z,7.9nm,1.0s
GLI Glacier Island 77.95 18 P **P** 14 59 48.5 +1.9
GLI IAmb IAmb 15 01 33.2
comp=Z,13nm,1.0s
BALM Baldy 78.92 16 P **P** 14 59 54.5 +2.4
BALM IAmb IAmb 14 59 57.5
comp=Z,5.7nm,0.8s
RAGM Ragged Mountai 78.97 17 P **P** 14 59 55.0 +2.7
KDAK Kodiak Island 79.08 22 P **P** 14 59 55.2 +2.4
comp=Z,7.8nm,0.7s,baz=330,slow=6.1,SNR=13
KDAK Kodiak Island 79.08 22 P **P** 14 59 55.0 +2.2
KDAK pmax pmax

	comp=Z,8.0nm,0.7s								
KDAK	**Kodiak Island**	**79.08**	**22**	P	**P**	**14 59 55.0**	**+2.2**		
KDAK				IAmb	IAmb	14 59 56.1			
	comp=Z,7.8nm,0.7s								
CNBA	**Chernabura Isl**	**79.12**	**27**	P	**P**	**14 59 54.5**	**+1.4**		
CTGM	**Chitina Glacie**	**79.20**	**15**	P	**P**	**14 59 56.2**	**+2.5**		
CTGM				IAmb	IAmb	15 02 27.0			
	comp=Z,4.3nm,0.8s								
HYT	**Haines Junctio**	**80.10**	**14**	P	**P**	**15 00 01.4**	**+2.9**		
HYT				IAmb	IAmb	15 00 03.8			
	comp=Z,5.2nm,0.9s								
YKA	**Yellowknife Ar**	**81.06**	**3**	P	**P**	**15 00 05.8**	**+2.3**		
	comp=Z,2.7nm,0.8s,baz=353,slow=5.1,SNR=42								
WRA	**Warramunga Arr**	**82.22**	**122**	P	**P**	**15 00 10.2**	**0.0**		
	comp=Z,2.8nm,0.6s,baz=322,slow=5.1,SNR=25								
WRA				LR	LR	15 45 25.2			
	comp=Z,38nm,18.4s,baz=175,slow=42								
WRAB	**Tennant Creek**	**82.22**	**122**	*ce*P	**P**	**15 00 11.3**	**+1.2**		
WRAB				pmax	pmax				
	comp=Z,16nm,2.5s								
WB2	**Warramunga Arr**	**82.22**	**122**	P	**P**	**15 00 10.2**	**+0.1**		
WB2				IAmb	IAmb	15 00 11.0			
	comp=Z,11nm,1.1s								
AS31	**Alice Springs**	**84.48**	**125**	P	**P**	**15 00 21.8**	**+0.1**		
ASAR	**Alice Springs**	**84.48**	**125**	P	**P**	**15 00 22.1**	**+0.3**		
	comp=Z,3.1nm,0.6s,baz=310,slow=4.8,SNR=55								

IDC ***21*** *15:02:43.9±1.7,0°.11N×16°.87W,h0km,mb4.1/3,mb1 4.2/4, mb1mx3.7/59,mbtmp4.2/4,ML4.3/1,MS3.3/4,Ms1 3.2/4, ms1mx2.9/34,Error ellipse: s-maj=42.9km s-min=39.8km az=112.0*

NEIC ***21*** *15:02:46.3±0.6,0°.10N±0°.08×16°.8W±0°.2,h16km±6km, mb4.6/3,Error ellipse: s-maj=22.5km s-min=10.6km az=98.0*

ISC 21 15:02:46.0±1.0,0°.2N±0°.1×16°.7W±0°.1,h13km,n19, σ2ⓢ49/13,mb4.0/4,North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**8.24**	**164**	T	T	15 13 03.8	
	baz=341						
H10N3	**ASCENSION HYDR**	**8.25**	**165**	T	T	15 12 58.2	
	baz=341,slow=74						
H10N1	**ASCENSION HYDR**	**8.26**	**164**	T	T	15 12 59.0	
	baz=341,slow=74						
ASCN	**Ascension**	**8.38**	**164**	Pn	**Pn**	**15 04 46.7**	**-0.5**
LIC	**Lamto**	**13.12**	**62**	*e*P	**Pn**	**15 05 55.2**	**+2.9**
	3.3nm,0.2s						
TIC	**Toumodi**	**13.32**	**61**	*e*P	**Pn**	**15 05 57.9**	**+2.9**
KIC	**Kosan Boka**	**13.44**	**62**	*e*P	**Pn**	**15 05 58.2**	**+1.6**
	5.1nm,0.6s						
DBIC	**Dimbokro**	**13.48**	**61**	Pn	**Pn**	**15 05 58.2**	**+1.1**
	1.6nm,0.3s,baz=235,slow=15,SNR=15						
DBIC				Sn	**Sn**	**15 08 21.4**	**-5.5**
	0.4nm,0.3s,baz=121,slow=6.7,SNR=1.9						
DBIC				LR	LR	15 10 16.0	
	comp=Z,130nm,21.2s,baz=214,slow=33						
DBIC	**Dimbokro**	**13.48**	**61**		**Pn**	**15 05 57.9**	**+0.8**
RCBR	**Riachuelo**	**20.06**	**252**	P	**P**	**15 07 17.5**	**-1.8**
RCBR				IAmb	IAmb	15 07 59.6	
	comp=Z,51nm,1.4s						
TOA0	**Torodi Ar. Sit**	**22.34**	**54**	P	**P**	**15 07 45.4**	**+1.5**
TOA0				IAmb	IAmb	15 07 50.6	
	comp=Z,6.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**22.34**	**54**	P	**P**	**15 07 45.4**	**+1.5**
	comp=Z,5.5nm,0.9s,baz=243,slow=9.5,SNR=16						
TORD				LR	LR	15 15 45.1	
	comp=Z,100nm,19.9s,baz=170,slow=35						
BDFB	**Brasilia**	**34.67**	**242**	LR	LR	15 22 11.1	
	comp=Z,18nm,20.8s,baz=281,slow=34						
KEST	**Kesra**	**42.90**	**32**	LR	LR	15 29 36.3	
	comp=Z,84nm,20.1s,baz=294,slow=38						
BOSA	**Boshof**	**49.28**	**129**	P	**P**	**15 11 36.0**	**+1.0**
	comp=Z,3.9nm,0.8s,baz=300,slow=5.4,SNR=5.3						
BOSA	**Boshof**	**49.28**	**129**	IAmb	IAmb	15 11 49.2	
	comp=Z,32nm,1.6s						
YKA	**Yellowknife Ar**	**93.51**	**333**	P	**P**	**15 16 01.5**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=86,slow=5.3,SNR=6.4						
ASAR	**Alice Springs**	**143.13**	**131**	PKhKP	PKPpre	15 22 16.7	
	comp=Z,0.6nm,0.4s,baz=228,slow=2.6,SNR=25						
WRA	**Warramunga Arr**	**145.50**	**126**	PKPbc	**PKPdf**	**15 22 23.9**	**-1.1**
	comp=Z,1.8nm,0.9s,baz=245,slow=2.7,SNR=8.6						

OTT ***21*** *15:05:27.8±0.9,51°.03N×101°.75W,h1km,MN2.9/5,20km northeast from Langenburg, Sk Mining induced.*

IDC ***21*** *15:05:28.9±1.2,50°.67N×101°.77W,h0km,mb1 3.4/3, mb1mx3.1/54,mbtmp3.1/3,ML2.2/2,Error ellipse: s-maj=18.9km s-min=9.6km az=169.0*

ISC 21 15:05:21.8±0.9,51°.18N±0°.09×101°.83W±0°.06,h0km,n14, σ2ⓢ68/21,Manitoba

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULM	**Lac du Bonnet**	**3.90**	**102**	Pn	**Pb**	**15 06 28.1**	**-3.2**
	0.4nm,0.3s,baz=290,slow=11,SNR=1.5						
ULM				Pg	**Pg**	**15 06 36.2**	**-0.2**
	3.1nm,0.3s,baz=282,slow=14,SNR=9.2						
ULM				Lg	Lg	15 07 25.5	
	4.4nm,0.3s,baz=350,slow=8.8,SNR=14						
ULM	**Lac du Bonnet**	**3.90**	**102**	PN	**Pb**	**15 06 27.9**	**-3.4**
ULM				SN	**Sn**	**15 07 12.6**	**+3.3**
ULM				Trac		15 07 30.9	
	comp=Z,26nm,0.5s						
EPLO	**Experimental L**	**5.39**	**103**	PN	**Pn**	**15 06 46.7**	**+3.3**
EPLO				SN	**Sn**	**15 07 47.5**	**+1.3**
EPLO				Trac		15 08 20.7	
	comp=Z,12nm,0.4s						
SOLO	**Sioux Lookout**	**6.31**	**97**	PN	**Pn**	**15 06 59.6**	**+3.5**
SOLO				SN	**Sn**	**15 08 09.2**	**+0.3**
SOLO				LG	Lg	15 08 46.3	
SOLO				Trac		15 08 48.7	
	comp=Z,4.6nm,0.3s						
ATKO	**Atikokan Iron**	**7.00**	**106**	PN	**Pn**	**15 07 08.3**	**+2.8**
ATKO				SN	**Sn**	**15 08 24.2**	**-1.6**
ATKO				Trac		15 09 02.5	
	comp=Z,1.9nm,0.2s						
PKLO	**Pickle Lake**	**7.20**	**83**	PN	**Pn**	**15 07 12.9**	**+4.7**
PKLO				SN	**Sn**	**15 08 29.5**	**-1.1**
PKLO				LG	Lg	15 09 13.6	
PKLO				Trac		15 09 17.6	
	comp=Z,8.1nm,0.5s						
EYMN	**Ely**	**7.46**	**112**	PN	**Pn**	**15 07 14.9**	**+3.1**
EYMN				SN	**Sn**	**15 08 33.9**	**-3.1**
WALA	**Waterton Lakes**	**8.05**	**259**	SN	**Sn**	**15 08 51.2**	**-0.7**
TBO	**Thunder Bay**	**8.41**	**103**	SN	**Sn**	**15 08 58.9**	**-1.5**
FCC	**Fort Churchill**	**8.80**	**27**	SN	**Sn**	**15 09 10.4**	**+0.6**
GTO	**Geraldton**	**9.59**	**93**	SN	**Sn**	**15 09 26.5**	**-3.0**
PDAR	**Pinedale Array**	**9.93**	**215**	Pn	**Pn**	**15 07 47.1**	**+1.2**
	0.3nm,0.3s,baz=53,slow=17,SNR=8.1						
PDAR				Lg	Lg	15 10 20.2	
	0.1nm,0.3s,baz=44,slow=35,SNR=3.2						
VIMO	**Victor Mine**	**11.27**	**75**	SN	**Sn**	**15 10 11.2**	**+0.8**
YKA	**Yellowknife Ar**	**13.29**	**333**	Pn	**P**	**15 08 39.5**	**-2.1**
	0.1nm,0.3s,baz=138,slow=13,SNR=4.8						

GCG ***21*** *15:08:56.6±0.6,13°.63N×92°.81W,h32km±340km,MD4.9*

INET ***21*** *15:09:03.1,13°.75N×92°.35W,h15km,ML4.8*

UCR ***21*** *15:09:04.6±1.1,13°.84N×92°.22W,h26km±9km,ML4.4, mb4.9(NEIC)*

SNET ***21*** *15:09:05.0±1.0,13°.84N×92°.20W,h28km±8km,ML4.7*

GCMT ***21*** *15:09:06.3±0.2,13°.93N±0°.01×92°.40W±0°.02,h20km, MW5.0/99,Moment Tensor Solution. s64,c87; s99,c144; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.72±.15; Mθθ-2.61±.09; Mφφ-1.11±.10; Mrθ1.85±.15; Mrφ1.34±.06; Mθφ-1.38±.18; Best double couple: M₀4.24000×10¹⁶ NP1:ϕ₁298.00000°,δ29.00000°,λ.85.00000°. NP2: ϕ₂124.00000°,δ61.00000°,λ.93.00000°. Principal axes: T 4.4080, Plg73.0000°, Azm41.0000°; N -0.3360, Plg3.0000°, Azm302.0000°; P -4.0720, Plg16.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MEX ***21*** *15:09:06.7±0.9,13°.96N×92°.37W,h28km±60km,MD5.0*

NEIC ***21*** *15:09:06.3±2.2,13°.97N±0°.06×92°.12W±0°.06,h45km±5km, mb4.9/231,Md5.0/13(MEX),Error ellipse: s-maj=11.2km s-min=6.5km az=224.0*

IDC ***21*** *15:09:13.8±1.8,14°.37N×91°.67W,h94km±15km,mb4.1/23, mb1 4.3/27,mb1mx4.1/53,mbtmp4.5/27,MS4.2/18,*

Ms1 4.2/18,ms1mx4.1/27,Error ellipse: s-maj=23.8km s-min=9.2km az=52.0

ISC 21 15:09:05.7±1.2,13°.96N±0°.06×92°.28W±0°.05,h44km±10km, n632,σ1ⓢ43/631,mb4.8/117,MS4.3/19,2C,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.80**	**45**	*e*P	**Pn**	**15 09 20.1**	**-0.5**
RTAL				*e*S	**Sn**	**15 09 32.5**	**+1.0**
THIG		**0.95**	**1**	*i* P	**Pn**	**15 09 22.1**	**-0.5**
THIG				*e*S	**Sn**	**15 09 32.9**	**-2.0**
THIG		**0.95**	**1**		**Pn**	**15 09 22.1**	**-0.5**
THIG					**Sn**	**15 09 32.9**	**-2.0**
STG3	**Santiaguito 3,**	**1.02**	**42**	*e*P	**Pn**	**15 09 23.5**	**-0.2**
FUG	**Fuego 3**	**1.48**	**70**	*i* P	**Pn**	**15 09 29.9**	**-0.1**
HUEH	**Huehuetenango**	**1.55**	**29**	*e*P	**Pn**	**15 09 31.8**	**+0.7**
HUEH				IAML		15 09 58.4	
	comp=Z,8μm,0.7s						
PCG	**Pacaya**	**1.68**	**75**	*e*P	**Pn**	**15 09 33.1**	**+0.3**
IXG	**Ixpaco**	**1.79**	**83**	*i* P	**Pn**	**15 09 33.5**	**-0.8**
PCIG		**1.96**	**332**	*e*P	**Pn**	**15 09 35.6**	**-0.9**
PCIG				*i* S	**Sn**	**15 09 57.7**	**-2.2**
PCIG		**1.96**	**332**		**Pn**	**15 09 35.6**	**-0.9**
PCIG					**Sn**	**15 09 57.7**	**-2.2**
NBG	**Las Nubes**	**1.98**	**71**	*i* P	**Pn**	**15 09 38.6**	**+1.6**
NBG				*e*S	**Sn**	**15 10 09.0**	**+8.3**
APG	**El Apazote**	**2.04**	**59**	P	**Pn**	**15 09 38.9**	**+1.1**
	comp=Z,164nm,0.3s,baz=204,slow=9.9,SNR=1196						
CCIG	**Comitan**	**2.32**	**3**	*e*P	**Pn**	**15 09 42.0**	**+0.4**
CCIG				*i* S	**Sn**	**15 10 08.2**	**-0.7**
CCIG	**Comitan**	**2.32**	**3**		**Pn**	**15 09 43.5**	**+2.0**
CCIG	**Comitan**	**2.32**	**3**		**Sn**	**15 10 08.2**	**-0.7**
RTR	**El Retiro**	**2.56**	**91**	*e*P	**Pn**	**15 09 44.1**	**-0.7**
RTR	**El Retiro**	**2.56**	**91**	*e*P	**Pn**	**15 09 44.1**	**-0.7**
CEVE	**Cerro Verde**	**2.58**	**93**	*e*P	**Pn**	**15 09 43.8**	**-1.4**
CEVE				IAML		15 10 24.9	
	comp=Z,8μm,0.6s						
CEVE	**Cerro Verde**	**2.58**	**93**	*e*P	**Pn**	**15 09 43.8**	**-1.4**
CEVE				IAML		15 10 24.9	
	comp=Z,8μm,0.6s						
SBLS	**San Blas**	**2.58**	**92**	*e*P	**Pn**	**15 09 44.7**	**-0.5**
SBLS	**San Blas**	**2.58**	**92**	*e*P	**Pn**	**15 09 44.7**	**-0.5**
MRL	**Marmol**	**2.75**	**66**	*e*P	**Pn**	**15 09 48.0**	**+0.5**
MRL	**Marmol**	**2.75**	**66**	*e*P	**Pn**	**15 09 49.2**	**+1.6**
MRL				*e*S	**Sn**	**15 10 27.8**	**+8.1**
MRL	**Marmol**	**2.75**	**66**	*e*P	**Pn**	**15 09 48.0**	**+0.5**
MTO3	**Montecristo**	**2.86**	**81**	*e*P	**Pn**	**15 09 48.7**	**-0.4**
MTO3	**Montecristo**	**2.86**	**81**	*e*P	**Pn**	**15 09 48.7**	**-0.4**
ESQI	**Esquipulas**	**2.91**	**78**	*e*P	**Pn**	**15 09 49.0**	**-0.7**
LALI	**Alcalda de L**	**2.91**	**99**	*e*P	**Pn**	**15 09 48.3**	**-1.3**
LALI				IAML		15 10 39.3	
	comp=Z,1μm,0.6s						
LALI	**Alcalda de L**	**2.91**	**99**	*e*P	**Pn**	**15 09 48.3**	**-1.3**
LALI				IAML		15 10 39.3	
	comp=Z,1μm,0.6s						
BOQS	**Boqueron**	**2.92**	**94**	*e*P	**Pn**	**15 09 49.4**	**-0.5**
BOQS				*e*S	**Sn**	**15 10 24.0**	**+0.1**
BOQS	**Boqueron**	**2.92**	**94**	*e*P	**Pn**	**15 09 49.4**	**-0.5**
BOQS				*e*S	**Sn**	**15 10 24.0**	**+0.1**
TGIG		**2.92**	**344**	*e*P	**Pn**	**15 09 51.1**	**+1.3**
TGIG		**2.92**	**344**		**Pn**	**15 09 51.1**	**+1.3**
SNET	**Serv Nac Est T**	**2.97**	**95**		**Pn**	**15 09 49.8**	**-0.7**
OPAM	**Oficina de Pla**	**3.00**	**94**	*e*P	**Pn**	**15 09 50.8**	**-0.1**
OPAM	**Oficina de Pla**	**3.00**	**94**	*e*P	**Pn**	**15 09 50.8**	**-0.1**
LFRS	**El Faro**	**3.14**	**96**	*e*P	**Pn**	**15 09 51.9**	**-0.9**
LFRS	**El Faro**	**3.14**	**96**	*e*P	**Pn**	**15 09 51.9**	**-0.9**
LBRS	**Las Brisas**	**3.15**	**94**	*e*P	**Pn**	**15 09 52.2**	**-0.7**
LBRS				*e*S	**Sn**	**15 10 28.5**	**-0.8**
LBRS	**Las Brisas**	**3.15**	**94**	*e*P	**Pn**	**15 09 52.2**	**-0.7**
LBRS				*e*S	**Sn**	**15 10 28.5**	**-0.8**
LLGN	**La Laguna**	**3.24**	**86**	*e*P	**Pn**	**15 09 53.3**	**-0.9**
LLGN				IAML		15 10 36.7	
	comp=Z,864nm,0.7s						
LLGN	**La Laguna**	**3.24**	**86**	*e*P	**Pn**	**15 09 53.3**	**-0.9**
LLGN				IAML		15 10 36.7	
	comp=Z,864nm,0.7s						
COEG	**Centro de Oper**	**3.32**	**95**	*e*P	**Pn**	**15 09 54.6**	**-0.6**
COEG				IAML		15 10 54.7	
	comp=Z,2μm,0.5s						
COEG	**Centro de Oper**	**3.32**	**95**	*e*P	**Pn**	**15 09 54.6**	**-0.6**
COEG				IAML		15 10 54.7	
	comp=Z,2μm,0.5s						
PETF	**Flores**	**3.75**	**38**	*e*P	**Pn**	**15 10 02.5**	**+1.4**
CMIG	**Matias Romero**	**4.00**	**321**	P	**Pn**	**15 10 05.1**	**+0.5**
	comp=Z,7.7nm,0.3s,baz=132,slow=11,SNR=54						
CMIG				S	Sn	15 10 59.3	+9.0
	comp=Z,37nm,0.3s,baz=61,slow=19,SNR=8.1						
LCND	**La Caada**	**4.31**	**98**	*e*P	**Pn**	**15 10 07.8**	**-1.0**
LCND				IAML		15 11 16.8	
	comp=Z,1μm,0.6s						
LCND	**La Caada**	**4.31**	**98**	*e*P	**Pn**	**15 10 07.8**	**-1.0**
LCND				IAML		15 11 16.8	
	comp=Z,1μm,0.6s						
CNCH	**Conchagua**	**4.37**	**98**	*e*P	**Pn**	**15 10 08.8**	**-0.9**
CNCH				IAML		15 11 16.3	
	comp=Z,3μm,0.6s						
CNCH	**Conchagua**	**4.37**	**98**	*e*P	**Pn**	**15 10 08.8**	**-0.9**
CNCH				IAML		15 11 16.3	
	comp=Z,3μm,0.6s						
CSGN	**Cosiguina Volc**	**4.69**	**101**		**Pn**	**15 10 13.8**	**-0.4**
CRIN	**San Cristobal**	**5.24**	**103**		**Pn**	**15 10 21.5**	**-0.1**
MATN	**Matagalpa**	**6.26**	**99**		**Pn**	**15 10 34.2**	**-1.5**
TLIG	**Tlapa**	**7.04**	**301**		**Pn**	**15 10 48.5**	**+2.2**
ACON	**Acoyapa**	**7.20**	**105**		**Pn**	**15 10 46.8**	**-1.7**
TEIG	**Tepich**	**7.32**	**31**	P	**Pn**	**15 10 50.3**	**+0.2**
TEIG	**Tepich**	**7.32**	**31**		**Pn**	**15 10 50.6**	**+0.6**
JTS	**Las Juntas de**	**8.04**	**116**	P	**Pn**	**15 11 02.0**	**+2.0**
	comp=Z,3.0nm,0.3s,baz=341,slow=7.3,SNR=10						
JTS				S	**Sn**	**15 12 28.8**	**-0.8**
	comp=Z,2.2nm,0.3s,baz=37,slow=20,SNR=1.1						
JTS	**Las Juntas de**	**8.04**	**116**		**Pn**	**15 11 00.4**	**+0.4**
MOIG	**Morelia**	**10.25**	**305**		Pn	15 11 35.1	+4.5
BCIP	**Isla Barro Col**	**13.08**	**110**		**Pn**	**15 12 08.6**	**-0.5**
MTDJ	**Mount Denham**	**14.79**	**71**	P	**P**	**15 12 35.9**	**-1.4**
833A	**Chaparral WMA,**	**15.75**	**336**	P	Pn	**15 12 46.0**	**+1.4**
	baz=153						
SJCC	**San Jacinto, C**	**17.21**	**102**	*e*P	**Pn**	**15 13 01.9**	**-1.1**
DBBC	**Dabeiba**	**17.23**	**112**	*e*P	**P**	**15 13 04.8**	**+0.4**
DWPF	**Disney Wildern**	**17.33**	**34**	P	**Pn**	**15 13 04.0**	**-0.4**
	baz=217						
435B	**Jarrell**	**17.45**	**345**	P	**P**	**15 13 06.6**	**0.0**
	baz=162						
UREC	**San Jos de Ur**	**17.56**	**109**	*e*P	**P**	**15 13 08.9**	**+0.9**
553A	**Crawfordville**	**17.70**	**23**	P	**P**	**15 13 10.0**	**+0.5**
553A				IAmb	IAmb	15 13 17.7	
	comp=Z,122nm,1.2s						
JCT	**Junction City**	**17.85**	**338**	P	**P**	**15 13 11.8**	**+0.7**
	baz=155						
NATX	**Nacogdoches**	**17.86**	**353**	P	**Pn**	**15 13 11.0**	**+0.2**
	baz=172						
NATX	**Nacogdoches**	**17.86**	**353**	P	**P**	**15 13 13.0**	**+1.9**
NATX				IAmb	IAmb	15 13 15.6	
	comp=Z,149nm,1.6s						
CBOC	**Ciudad Bolivar**	**17.92**	**115**	*e*P	**P**	**15 13 12.0**	**-0.1**
HPIG		**17.98**	**318**	P	**P**	**15 13 15.3**	**+2.5**
VBMS	**Vicksburg**	**18.25**	**5**	P	**P**	**15 13 15.5**	**+0.1**
	baz=185						
SMLC	**San Martn de**	**18.56**	**104**	*e*P	**P**	**15 13 15.6**	**-3.5**
WHTX	**Lake Whitney,**	**18.57**	**346**	P	**Pn**	**15 13 19.8**	**+0.2**
	baz=164						
WHTX	**Lake Whitney,**	**18.57**	**346**	P	**Pn**	**15 13 21.3**	**+1.8**
YOTC	**Yotoco, Valle**	**18.58**	**121**	*e*P	**Pn**	**15 13 20.6**	**+0.6**
TXAR	**Lajitas Array**	**18.59**	**327**	P	**Pn**	**15 13 23.5**	**+3.6**
	comp=Z,0.3nm,0.3s,baz=150,slow=10,SNR=48						
TXAR				LR	LR	15 21 44.0	
	comp=Z,369nm,18.4s,baz=0.0,slow=40						
TX31	**Lajitas Ar. Si**	**18.59**	**327**	P	**Pn**	**15 13 22.7**	**+2.8**
TX31				IAmb	IAmb	15 13 35.1	
	comp=Z,116nm,1.2s						
TX32	**Lajitas Array**	**18.59**	**327**	P	**Pn**	**15 13 22.9**	**+3.0**
GUY2C	**Guyana, Caldas**	**18.78**	**116**	*e*P	**P**	**15 13 21.2**	**-0.8**
RREF	**El Recreo**	**18.96**	**117**	*e*P	**Pn**	**15 13 28.8**	**+3.8**
BBAC	**Balboa, Cauca**	**19.01**	**127**	*e*P	**Pn**	**15 13 25.7**	**+0.5**
PTBC	**PUERTO BERRIO,**	**19.01**	**111**	*e*P	**P**	**15 13 23.7**	**-0.3**
NORC	**Norcasia**	**19.06**	**114**	*e*P	**Pn**	**15 13 25.3**	**-0.4**
ANIL	**Santa Ana**	**19.11**	**118**	*e*P	**Pn**	**15 13 27.5**	**+0.9**
POPC	**Popayan, Colom**	**19.14**	**125**	*e*P	**Pn**	**15 13 27.5**	**+0.7**
TIGA	**Tifton**	**19.14**	**23**	P	**P**	**15 13 25.5**	**+0.2**
	baz=206						
Z41A	**Richland Creek**	**19.22**	**359**	P	**P**	**15 13 26.6**	**+0.5**
	baz=178						
Z38A	**Mt. Pleasant**	**19.38**	**353**	P	**Pn**	**15 13 29.7**	**+0.5**
SOTA	**Rioblanco**	**19.44**	**126**	*e*P	**Pn**	**15 13 32.4**	**+1.7**
PCON	**Cinco Dias**	**19.49**	**125**	*e*P	**Pn**	**15 13 31.6**	**+0.4**
Z47A	**Carrollton**	**19.54**	**11**	P	**P**	**15 13 30.3**	**+0.7**
Z47A				IAmb	IAmb	15 13 34.0	
	comp=Z,51nm,0.7s						
ORTC	**Ortega, Tolima**	**19.55**	**119**	*e*P	**P**	**15 13 27.6**	**-2.3**
LRAL	**Lakeview Retre**	**19.59**	**13**	P	**P**	**15 13 30.2**	**0.0**
	baz=195,SNR=8.9						
LRAL	**Lakeview Retre**	**19.59**	**13**		**Pn**	**15 13 32.5**	**+0.7**
LRAL				IAmb	IAmb	15 13 36.7	
	comp=Z,71nm,1.4s						
WLAR	**White Oak Lake**	**19.66**	**358**	P	**P**	**15 13 31.1**	**+0.3**
SPBC	**San Pablo de B**	**19.73**	**113**	*e*P	**Pn**	**15 13 33.1**	**-0.6**
ABTX	**Abilene, Hawle**	**19.76**	**341**	P	**P**	**15 13 32.5**	**+0.5**
	baz=158						
ABTX	**Abilene, Hawle**	**19.76**	**341**	P	**Pn**	**15 13 34.0**	**+0.2**
ABTX				IAmb	IAmb	15 13 39.3	
	comp=Z,66nm,1.4s						
LPIG	**La Paz**	**19.79**	**303**	LR	LR	15 21 30.2	
	comp=Z,713nm,18.9s,baz=130,slow=37						
Z35A	**Perchaven, San**	**19.81**	**348**	P	**Pn**	**15 13 34.3**	**-0.1**
Z35A				IAmb	IAmb	15 13 41.7	
	comp=Z,51nm,1.1s						
152A	**Waverly Hall**	**19.86**	**19**	P	**P**	**15 13 33.6**	**+0.4**
152A				IAmb	IAmb	15 13 42.5	
	comp=Z,54nm,1.4s						
ROSC	**El Rosal**	**19.88**	**115**	P	**Pn**	**15 13 35.1**	**-0.7**
	comp=Z,1.5nm,0.3s,baz=112,slow=1.4,SNR=21						
ROSC				LR	LR	15 22 36.3	
	comp=Z,371nm,20.3s,baz=307,slow=41						
ROSC	**El Rosal**	**19.88**	**115**	*e*P	**Pn**	**15 13 37.0**	**+1.2**
ROSC	**El Rosal**	**19.88**	**115**		**Pn**	**15 13 35.0**	**-0.8**
ROSC				IAmb	IAmb	15 13 38.1	
	comp=Z,75nm,0.9s						
PRAC	**Prado**	**19.95**	**119**	*e*P	**Pn**	**15 13 35.5**	**-0.8**
Y45A	**Yeager Farm, C**	**19.98**	**7**	P	**P**	**15 13 35.4**	**+1.0**
Y45A				IAmb	IAmb	15 13 58.3	
	comp=Z,83nm,1.1s						
255A	**Hazlehurst**	**20.01**	**25**	P	**P**	**15 13 35.4**	**+0.6**
Z50A	**Ashland**	**20.06**	**16**	P	**P**	**15 13 36.0**	**+0.6**
	baz=198,SNR=12						
Z50A	**Ashland**	**20.06**	**16**	P	**P**	**15 13 35.8**	**+0.4**
PAMC	**Pamplona, Colo**	**20.32**	**107**	*e*P	**P**	**15 13 39.5**	**+0.7**
154A	**Montrose**	**20.37**	**23**	P	**P**	**15 13 38.8**	**+0.1**
X40A	**Basin Creek Fa**	**20.45**	**359**	P	**P**	**15 13 39.3**	**-0.2**
	baz=178						
X40A	**Basin Creek Fa**	**20.45**	**359**	P	**P**	**15 13 40.7**	**+1.2**
CHIC	**Chingaza**	**20.50**	**115**	*e*P	Pn	15 13 43.0	-0.1
Y49A	**Blount Mountai**	**20.52**	**14**	P	**P**	**15 13 41.2**	**+0.9**
Y49A				IAmb	IAmb	15 13 44.0	
	comp=Z,72nm,1.6s						
RUSC	**La Rusia**	**20.52**	**111**	*e*P	**P**	**15 13 41.6**	**+0.6**
RUSC	**La Rusia**	**20.52**	**111**	P	**P**	**15 13 39.9**	**-1.0**
MIAR	**Mount Ida**	**20.53**	**357**	P	**P**	**15 13 40.0**	**-0.3**
	baz=176						
MIAR	**Mount Ida**	**20.53**	**357**	P	Pn	15 13 42.2	-0.7
MIAR				IAmb	IAmb	15 14 03.4	
	comp=Z,52nm,1.2s						
OXF	**Oxford**	**20.63**	**7**	P	**P**	**15 13 40.3**	**-1.1**
	baz=188						
UALR	**University of**	**20.73**	**360**	P	**P**	**15 13 42.8**	**+0.3**
UALR				IAmb	IAmb	15 14 05.0	
	comp=Z,63nm,1.1s						
X37A	**Clayton**	**20.73**	**353**	P	**P**	**15 13 43.8**	**+1.2**
X37A				IAmb	IAmb	15 13 52.3	
	comp=Z,52nm,1.1s						
X48A	**Hartselle**	**20.95**	**12**	P	**P**	**15 13 44.7**	**-0.2**
GOGA	**Godfrey**	**20.96**	**21**	P	**P**	**15 13 44.6**	**-0.4**
	baz=204						
GOGA	**Godfrey**	**20.96**	**21**	P	**P**	**15 13 44.5**	**-0.6**
GOGA				IAmb	IAmb	15 14 41.7	
	comp=Z,67nm,1.1s						
CLNB	**Carlsbad**	**21.09**	**332**	P	**P**	**15 13 48.8**	**+2.3**
W41B	**Gary Mavity, V**	**21.13**	**0**	P	**P**	**15 13 45.6**	**-1.2**
	baz=180						
Y52A	**Lilburn**	**21.18**	**19**	P	**P**	**15 13 45.9**	**-1.5**
	baz=202						
Y52A	**Lilburn**	**21.18**	**19**	P

U49A Red Boiling Sp 23.20 13 P P 15 14 07.1 -1.6
U49A IAmb IAmb 15 14 11.2
comp=Z,31nm,0.9s
V53A Saluda 23.24 20 P P 15 14 08.3 -0.9
V53A IAmb IAmb 15 14 40.0
comp=Z,54nm,1.2s
121A Cookes Peak, D 23.29 325 P P 15 14 10.0 +0.1
baz=139,SNR=12
KMSC Kings Mountain 23.29 23 P P 15 14 08.9 -0.7
baz=207
KMSC Kings Mountain 23.29 23 P P 15 14 09.1 -0.5
KMSC IAmb IAmb 15 14 32.8
comp=Z,54nm,1.4s
319A Douglas 23.33 321 P P 15 14 11.5 +1.3
319A IAmb IAmb 15 14 15.2
comp=Z,81nm,1.6s
T47A Sharon Grove 23.40 10 P P 15 14 09.3 -1.3
T47A IAmb IAmb 15 14 11.0
comp=Z,29nm,0.9s
W56A Indian Trail 23.58 25 P P 15 14 11.6 -0.8
baz=209
X58A Rowland 23.61 27 P P 15 14 11.4 -1.3
baz=212
V54A Nebo 23.63 21 P P 15 14 12.1 -0.8
baz=205
S44A Carbondale 23.79 6 P P 15 14 13.4 -0.9
TZTN Tazewell 23.81 18 P P 15 14 13.9 -0.7
baz=201,SNR=6.4
TZTN Tazewell 23.81 18 P P 15 14 13.2 -1.4
SIUC Southern Illin 23.82 6 P P 15 14 13.5 -1.1
W57A Gilead 23.84 26 P P 15 14 13.6 -1.2
baz=210,SNR=6.1
W57A Gilead 23.84 26 P P 15 14 13.2 -1.5
T50A Nancy 23.91 15 P P 15 14 13.8 -1.6
BNM Barren Site 23.95 330 P P 15 14 17.8 +1.7
V55A Taylorsville 23.96 23 P P 15 14 14.8 -1.1
baz=207
V55A Taylorsville 23.96 23 P P 15 14 13.9 -2.1
V55A IAmb IAmb 15 14 39.0
comp=Z,43nm,1.1s
X59A McDuffie Farm, 23.96 29 P P 15 14 14.7 -1.3
baz=214
CCM Cathedral Cave 24.02 2 P P 15 14 14.8 -1.6
baz=182
CCM Cathedral Cave 24.02 2 P P 15 14 15.6 -0.9
Y22D IRIS PASSCAL I 24.03 329 P P 15 14 16.8 +0.1
baz=143
W58A Raeford 24.05 27 P P 15 14 15.8 -0.9
baz=212,SNR=5.2
V56A Mocksville 24.20 24 P P 15 14 16.7 -1.4
baz=208
R40A Maddies Statio 24.24 0 P P 15 14 17.9 -0.5
USIN University of 24.26 9 P P 15 14 18.4 -0.2
U54A Nelsons Funny 24.34 21 P P 15 14 18.3 -1.3
baz=205
U54A Nelsons Funny 24.34 21 P P 15 14 18.8 -0.8
U54A IAmb IAmb 15 14 56.8
comp=Z,37nm,1.1s
ANMO Albuquerque 24.51 331 P P 15 14 23.1 +1.9
comp=Z,5.3nm,0.6s,baz=150,slow=11,SNR=17
ANMO Albuquerque 24.51 331 P P 15 14 21.0 -0.2
baz=145
ANMO Albuquerque 24.51 331 P P 15 14 22.2 +1.0
T53A Wise 24.53 19 P P 15 14 19.4 -1.8
baz=203
V57A Coltrane Farms 24.56 25 P P 15 14 20.2 -1.2
baz=210,SNR=5.7
U55A TA2, Sparta 24.60 22 P P 15 14 20.5 -1.4
baz=207
U56A King 24.72 23 P P 15 14 21.7 -1.1
baz=208
WCI Wyandotte Cave 24.75 11 P P 15 14 21.4 -1.7
baz=194
WCI Wyandotte Cave 24.75 11 P P 15 14 22.1 -1.1
WCI IAmb IAmb 15 14 25.7
comp=Z,27nm,0.8s
V58A Windy Hill, Pi 24.76 26 P P 15 14 21.8 -1.4
baz=211
S51A Beattyville 24.82 17 P P 15 14 22.7 -1.1
S51A IAmb IAmb 15 14 41.2
comp=Z,24nm,0.9s
TUC Tucson 24.90 320 P P 15 14 25.5 +0.9
baz=133
T54A Tazewell 24.92 21 P P 15 14 23.2 -1.5
baz=205
OLIL Olney 24.96 8 P P 15 14 24.7 -0.3
OLIL IAmb IAmb 15 14 27.8
comp=Z,42nm,0.9s
Q44A Meyer Farm, Va 25.02 6 P P 15 14 25.5 0.0
Q44A IAmb IAmb 15 14 57.8
comp=Z,34nm,1.1s
R32A Long Quarter, 25.03 348 P P 15 14 26.6 +0.9
ATAH Atahualpa 25.08 146 P P 15 14 30.1 +3.4
comp=Z,6.5nm,0.6s,baz=350,slow=7.7,SNR=4.5
V59A Middlesex 25.12 28 P P 15 14 25.9 -0.5
baz=213
U57A Blanch 25.21 25 P P 15 14 26.3 -1.0
baz=210,SNR=5.9
R50A Paris 25.23 15 P P 15 14 26.9 -0.6
R50A IAmb IAmb 15 14 59.8
comp=Z,70nm,1.8s
T55A Pulaski 25.25 22 P P 15 14 27.0 -0.7
baz=206
KSU1 Kansas State U 25.34 352 P P 15 14 27.8 -0.6
baz=170
T56A Rocky Mt 25.45 23 P P 15 14 27.9 -1.6
baz=208
BLA Blacksburg 25.46 22 P P 15 14 28.3 -1.4
baz=207
T25A Trinidad 25.50 337 P P 15 14 30.3 +0.1
baz=152,SNR=12
U58A Oxford 25.51 26 P P 15 14 28.4 -1.6
baz=212
V60A Jim Taylor Roa 25.57 29 P P 15 14 29.2 -1.4
baz=215
CBKS Cedar Bluff 25.62 346 P P 15 14 30.8 -0.3
baz=163
S54A Dingess, Beckl 25.67 20 P P 15 14 30.0 -1.6
baz=205
T57A Hurt 25.73 25 P P 15 14 30.6 -1.4
baz=210
U59A Littleton 25.81 28 P P 15 14 31.6 -1.1
baz=214
V61A Roper 25.92 30 P P 15 14 32.7 -1.0
baz=216
S55A Lewisburg 25.93 22 P P 15 14 32.2 -1.6
baz=206
R53A Hurricane 25.95 19 P P 15 14 32.6 -1.4
baz=203
P46A Rosedale 25.95 9 P P 15 14 33.8 -0.2
P46A IAmb IAmb 15 14 35.6
comp=Z,25nm,0.6s
214A Organ Pipe Nat 25.96 317 P P 15 14 33.3 -1.0
baz=129
T58A Grand View Acr 25.98 26 P P 15 14 33.0 -1.3
baz=211
X18A Snowflake 25.98 325 P P 15 14 35.4 +0.8
P48A Milroy 26.11 12 P P 15 14 34.2 -1.3
P48A IAmb IAmb 15 14 35.1
comp=Z,26nm,1.1s
R54A Victor 26.12 21 P P 15 14 33.6 -2.0
baz=205
Q51A Peebles 26.19 16 P P 15 14 34.6 -1.6
baz=200
Q51A Peebles 26.19 16 P P 15 14 34.4 -1.8
Q51A IAmb IAmb 15 15 21.7
comp=Z,22nm,0.8s
S56A Natural Bridge 26.19 23 P P 15 14 34.6 -1.7
baz=208
W18A Petrified Fore 26.30 326 P P 15 14 36.9 -0.6
baz=139
P49A Miami Univ. Ec 26.34 13 P P 15 14 36.1 -1.3
baz=196
U61A Possum Corner 26.42 30 P P 15 14 36.2 -2.0
baz=216
T59A Double "B" Far 26.43 27 P P 15 14 36.6 -1.7
baz=213
Q52A Bidwell 26.43 18 P P 15 14 37.4 -1.0
baz=202
SDCO Great Sand Dun 26.45 336 P P 15 14 39.3 +0.4
baz=150,SNR=9.0
SDCO Great Sand Dun 26.45 336 P P 15 14 39.8 +0.9
S57A Dark Hollow, R 26.51 24 P P 15 14 37.6 -1.4
baz=210
R55A Marlinton 26.52 22 P P 15 14 37.4 -1.9
baz=207
Q53A Leroy 26.56 19 P P 15 14 38.7 -0.9
baz=204
KSCO Kaye Shedlock' 26.58 342 P P 15 14 39.8 -0.1
baz=157
P50A Jamestown 26.62 15 P P 15 14 38.5 -1.6
baz=198
HDIL Hopedale 26.63 5 P P 15 14 39.7 -0.4
baz=186
P51A Williamsport 26.69 16 P P 15 14 39.7 -1.0
baz=200
SFIN Lafayette 26.71 9 P P 15 14 39.8 -1.1
baz=191
SFIN Lafayette 26.71 9 P P 15 14 39.4 -1.4
S58A Poland Farm, P 26.75 26 P P 15 14 40.3 -0.9
baz=212
Q54A Coxs Mills 26.90 20 P P 15 14 41.3 -1.2
baz=205
Q54A Coxs Mills 26.90 20 P P 15 14 41.4 -1.2
T60A Surry 26.93 28 P P 15 14 41.1 -1.8
baz=215
O48A Farmland 26.94 12 P P 15 14 41.4 -1.5
baz=195
S22A 4UR Ranch, Cre 27.00 334 P P 15 14 43.0 -0.8
baz=147,SNR=13
P52A Corning 27.09 17 P P 15 14 43.1 -1.2
baz=202
113A Mohawk Valley, 27.10 317 P P 15 14 44.1 -0.3
R58B Mineral 27.12 26 P P 15 14 43.1 -1.4
baz=212
R57A Stanardsville 27.14 24 P P 15 14 43.6 -1.2
baz=210
Q55A Buckhannon 27.17 21 P P 15 14 43.1 -2.0
baz=206
O50A Cable 27.18 15 P P 15 14 43.8 -1.3
baz=198
P53A Whipple 27.18 19 P P 15 14 44.1 -1.0
baz=203
S59A Mechanicsville 27.20 27 P P 15 14 44.0 -1.3
baz=213
MVCO Mesa Verde 27.31 331 P P 15 14 48.3 +1.8
baz=144,SNR=7.8
MVCO Mesa Verde 27.31 331 P P 15 14 49.3 +2.7
MVCO IAmb IAmb 15 14 53.5
comp=Z,42nm,1.1s
R58A Rapidan 27.35 25 P P 15 14 45.0 -1.6
baz=211
Q24A Divide 27.38 338 P P 15 14 46.9 -0.4
baz=152
S60A Water View 27.43 28 P P 15 14 46.5 -0.9
baz=214
O51A Pataskala 27.44 16 P P 15 14 46.5 -0.9
baz=200
WUAZ Wupatki 27.50 325 P P 15 14 48.5 +0.4
baz=136
WUAZ Wupatki 27.50 325 P P 15 14 50.4 +2.2
Q56A Snyder Ridge, 27.53 22 P P 15 14 47.6 -0.7
baz=208
N48A Decatur 27.54 12 P P 15 14 46.7 -1.6
baz=195
P54A Burton 27.58 20 P P 15 14 47.8 -0.9
baz=205
O52A Adamsville 27.62 17 P P 15 14 46.8 -2.2
baz=202
Q57A Strasburg 27.82 24 P P 15 14 50.0 -0.9
baz=210
S61A Accomac 27.87 29 P P 15 14 50.1 -1.2
baz=216
O53A New Philadelph 27.93 18 P P 15 14 50.3 -1.5
baz=203
Q58A Fox Den Farm, 28.03 25 P P 15 14 51.3 -1.4
baz=211
L42A Oliver, Polo 28.04 4 P P 15 14 52.2 -0.5
L42A IAmb IAmb 15 15 14.6
comp=Z,21nm,1.1s
PV01 Paradox Valley 28.09 332 P P 15 14 54.7 +1.2
PV01 IAmb IAmb 15 14 58.6
comp=Z,60nm,1.7s
O54A Avella 28.14 20 P P 15 14 52.2 -1.4
baz=205
OGNE Ogallala 28.21 344 P P 15 14 54.0 -0.4
baz=159
PV15 Paradox Valley 28.22 332 P P 15 14 57.0 +2.3
PV15 IAmb IAmb 15 15 06.0
comp=Z,35nm,1.3s
PV13 Radium Mtn., P 28.22 332 P P 15 14 57.0 +2.3
PV02 Paradox Valley 28.22 332 P P 15 14 56.8 +2.0
PV05 Paradox Valley 28.29 331 P P 15 14 56.9 +1.6
ISCO Idaho Springs 28.29 338 P P 15 14 56.2 +0.8
baz=152
PV03 Paradox Valley 28.31 332 P P 15 14 57.4 +1.9
PV03 IAmb IAmb 15 15 00.2
comp=Z,46nm,1.3s
PDMCI Parker Dam,Lak 28.32 319 P P 15 14 56.6 +1.3
baz=130
PV18 Skein Mesa, Pa 28.34 332 P P 15 14 58.0 +2.3
PV12 Saucer Basin, 28.34 332 P P 15 14 58.5 +2.7
P57A Homestead Farm 28.36 24 P P 15 14 55.1 -0.5
baz=210
PV07 Paradox Valley 28.37 332 P P 15 14 58.0 +2.0
PV07 IAmb IAmb 15 15 00.8
comp=Z,33nm,1.2s
PV17 East Wray Mesa 28.39 332 P P 15 14 58.0 +1.8
PV17 IAmb IAmb 15 15 02.9
comp=Z,49nm,1.2s
PV16 Nyswonger Mesa 28.39 332 P P 15 14 58.0 +1.8
PV19 Morning Glory 28.42 332 P P 15 14 58.2 +1.8
PV19 IAmb IAmb 15 15 01.1
comp=Z,56nm,1.6s
PV20 West Nyswonger 28.44 332 P P 15 14 58.1 +1.5
PV20 IAmb IAmb 15 15 03.4
comp=Z,31nm,1.2s
PV04 Paradox Valley 28.45 332 P P 15 14 58.4 +1.7
PV04 IAmb IAmb 15 15 07.6
comp=Z,47nm,1.2s
PV10 Paradox Valley 28.50 332 P P 15 14 58.8 +1.6
PV22 Blue Mesa, Par 28.51 332 P P 15 14 58.9 +1.7
PV22 IAmb IAmb 15 15 01.9
comp=Z,38nm,1.4s
PV23 Carpenter Ridg 28.55 332 P P 15 14 59.5 +1.8
PV23 IAmb IAmb 15 15 02.2
comp=Z,24nm,1.0s
N53A Lisbon 28.56 18 P P 15 14 55.7 -1.7
baz=203
SWSC Sam W. Stewart 28.57 315 P P 15 14 58.1 +0.5
baz=126
BC3 Big Chuckawall 28.76 317 P P 15 14 59.9 +0.5
baz=127
IRM Iron Mountain 28.87 318 P P 15 15 00.4 +0.1
baz=128
N54A Monroe State 28.97 19 P P 15 15 00.1 -0.9
baz=205
O57A Amberson 29.14 23 P P 15 15 01.3 -1.3
baz=210
N55A Marion Center 29.14 21 P P 15 15 01.7 -0.9
baz=207
KNB Kanab 29.39 325 P P 15 15 07.9 +2.9
SSPA Standing Stone 29.41 23 P P 15 15 03.8 -1.1
baz=209
GMRC Granite Mounta 29.59 319 P P 15 15 07.0 +0.2
baz=129
SRU San Rafael Swe 29.78 331 P P 15 15 10.7 +2.2
M55A Ridgway 29.83 21 P P 15 15 08.0 -0.6
baz=207
Q16A Castle Valley 29.95 330 P P 15 15 11.7 +1.7
CCUT Cedar City 30.07 325 P P 15 15 12.6 +1.5
P17A Butcher Ranch, 30.17 331 P P 15 15 13.6 +1.6
TMUT Trail Mountain 30.26 330 P P 15 15 14.0 +1.1
M57A Sunshine Farm, 30.30 23 P P 15 15 12.3 -0.6
baz=210
M57A Sunshine Farm, 30.30 23 P P 15 15 12.2 -0.6
L54A Sinclairville 30.33 19 P P 15 15 12.8 -0.3
baz=205
RWWY Rawlins 30.53 338 P P 15 15 15.6 +0.5
M58A Price's Panora 30.59 24 P P 15 15 14.4 -1.0
baz=211
N60A Cedar Hill Far 30.73 26 P P 15 15 15.4 -1.1
baz=214
L56A Greenwood 30.84 22 P P 15 15 16.5 -1.1
baz=208
K54A Basiliko Farm, 30.87 20 P P 15 15 16.7 -1.2
baz=206
J52A Paris 30.90 17 P P 15 15 16.9 -1.2
baz=202
I49A Point Hope 30.96 13 P P 15 15 17.6 -1.0
baz=198
L57A Andrews Acres 30.98 23 P P 15 15 17.7 -1.1
baz=210
PSUT Pine Spring 31.05 326 P P 15 15 20.2 +0.4
M59A Waymart 31.14 25 P P 15 15 19.2 -1.1
baz=213
EDW2 Edwards Air Fo 31.18 316 P P 15 15 21.1 +0.4
baz=126
K55A Perry 31.18 20 P P 15 15 19.3 -1.3
baz=207
I51A Listowel 31.27 16 P P 15 15 20.2 -1.2
baz=201
M60A Port Jervis 31.30 26 P P 15 15 20.5 -1.2
baz=214
LRMC Laurel Mtn Rad 31.32 318 P P 15 15 23.4 +1.3
baz=127
TPNV Topopah Spring 31.34 321 P P 15 15 23.8 +1.5
baz=131
PAL Palisades 31.35 27 P P 15 15 20.1 -2.0
L58A Harry Jones Me 31.40 24 P P 15 15 21.8 -0.7
baz=211
FURC Furnace Creek, 31.41 320 P P 15 15 23.8 +1.2
baz=129
BINY Binghamton 31.48 24 P P 15 15 22.4 -0.9
baz=211
BINY Binghamton 31.48 24 P P 15 15 21.3 -2.0
BINY IAmb IAmb 15 15 23.6
comp=Z,26nm,1.4s
OSI Osito Audit: C 31.52 315 P P 15 15 24.7 +0.9
baz=124
MPMC Manual Prospec 31.55 319 P P 15 15 25.6 +1.5
baz=128,SNR=5.6
RSSD Black Hills 31.70 344 P P 15 15 25.8 +0.4
baz=158
RSSD Black Hills 31.70 344 P P 15 15 25.8 +0.4
K57A Scipio Center 31.74 22 P P 15 15 24.4 -1.1
baz=210
DUG Dugway, Tooele 31.74 329 P P 15 15 25.5 -0.2
baz=140
DUG Dugway, Tooele 31.74 329 P P 15 15 27.5 +1.8
TCUT Toone Canyon 31.79 332 P P 15 15 28.5 +2.2
L59A Walton 31.85 25 P P 15 15 25.9 -0.6
baz=213
R11A Troy Canyon, C 31.88 324 P P 15 15 28.0 +0.9
baz=133,SNR=7.0
L60A Shokan 32.02 26 P P 15 15 26.9 -1.1
baz=214
GRAC Grapevine Rang 32.05 320 P P 15 15 29.0 +0.6
baz=129
J56A Wolcott 32.09 21 P P 15 15 27.9 -0.6
baz=209
J56A Wolcott 32.09 21 P P 15 15 27.8 -0.7
J56A IAmb IAmb 15 15 28.6
comp=Z,13nm,0.8s
K58A Earlville 32.09 23 P P 15 15 27.5 -1.1
baz=211
K58A Earlville 32.09 23 P P 15 15 27.1 -1.5
K58A IAmb IAmb 15 15 32.4
comp=Z,13nm,0.8s
KSCT Kent School, K 32.12 27 P P 15 15 28.0 -0.8
M62A Hamden 32.16 28 P P 15 15 27.8 -1.4
baz=217
PDAR Pinedale Array 32.35 336 P P 15 15 33.2 +2.1
comp=Z,2.0nm,1.0s,baz=157,slow=7.9,SNR=10.0
PDAR PcP PcP 15 18 21.8 +3.5
comp=Z,1.4nm,0.8s,baz=141,slow=3.8,SNR=4.0
PDAR LR LR 15 30 40.1
comp=Z,333nm,18.6s,baz=154,slow=40
BW06 Boulder Array 32.35 336 P P 15 15 31.7 +0.6
baz=147
BW06 Boulder Array 32.35 336 P P 15 15 32.5 +1.3
BGU Big Grassy Mou 32.40 330 P P 15 15 32.3 +0.8
J57A Williamstown 32.52 22 P P 15 15 30.7 -1.6
baz=210
M63A Gales Ferry 32.52 29 P P 15 15 31.4 -0.9
baz=218
TIN Tinemaha, Big 32.63 320 P P 15 15 33.1 -0.4
baz=128
I55A Frankford 32.64 20 P P 15 15 32.2 -1.1
baz=207
H53A Bobcaygeon 32.67 18 P P 15 15 32.3 -1.4
baz=205,SNR=5.7
SADO Sadowa 32.68 17 P P 15 15 31.6 -2.1
comp=Z,3.2nm,0.5s,baz=224,slow=9.9,SNR=4.8
SADO Sadowa 32.68 17 P P 15 15 31.8 -1.9
J58A Remsen 32.74 23 P P 15 15 33.2 -1.1
baz=211
F48A Evansville 32.80 13 P P 15 15 33.0 -1.7
baz=197
F49A Sandfield 32.87 13 P P 15 15 33.6 -1.7
baz=198
DELO Deloro Mine 32.92 19 P P 15 15 34.2 -1.6
AHID Auburn Hatcher 32.98 334 P P 15 15 38.0 +1.4
AHID IAmb IAmb 15 15 40.4
comp=Z,27nm,1.5s
K61A Williamstown 32.98 26 P P 15 15 34.9 -1.5
baz=215
L61B Northampton 33.06 27 P P 15 15 35.8 -1.2
baz=216
H55A Tweed 33.10 20 P P 15 15 35.1 -2.2
baz=207
J59A Piesco 33.13 24 P P 15 15 36.0 -1.7
baz=212
I58A Old Forge 33.14 23 P P 15 15 36.6 -1.1
baz=212
G53A Haliburton 33.16 18 P P 15 15 35.6 -2.2
baz=204
E47A Iron Bridge 33.27 11 P P 15 15 36.6 -2.2
baz=196
E28A Huff 33.28 349 P P 15 15 39.3 +0.4
E28A IAmb IAmb 15 15 46.3
comp=Z,12nm,0.9s
REDW Red Top Meadow 33.37 335 P P 15 15 41.5 +1.5
ELK Elko 33.38 327 P P 15 15 43.3 +3.1
comp=Z,7.1nm,0.9s,baz=149,slow=7.3,SNR=12
ELK PcP PcP 15 18 23.4 +2.2
comp=Z,1.4nm,0.9s,baz=144,slow=1.8,SNR=3.6
ELK Elko 33.38 327 P P 15 15 43.0 +2.8
J60A Lant Hill Farm 33.39 25 P P 15 15 38.4 -1.5
baz=214
SNOW Snow King Moun 33.41 335 P P 15 15 42.4 +1.9
K62A Royalston 33.43 27 P P 15 15 39.3 -1.0
baz=217
NV11 Mina Array Sit 33.45 322 P P 15 15 44.1 +3.4
NV11 IAmb IAmb 15 15 49.0
comp=Z,15nm,1.1s
TPAW Teton Pass 33.52 335 P P 15 15 43.5 +2.2
TPAW IAmb IAmb 15 15 57.9
comp=Z,25nm,1.2s
MDPB Devils Postpil 33.52 320 P P 15 15 44.0 +2.5
F51A Arnstein 33.54 16 P P 15 15 40.5 -0.7
baz=202
NVAR Mina Array Bea 33.54 321 P P 15 15 45.7 +4.1
comp=Z,9.8nm,0.9s,baz=137,slow=8.3,SNR=33
NVAR PcP PcP 15 18 25.6 +4.0
comp=Z,1.2nm,0.7s,baz=143,slow=3.2,SNR=5.0
NVAR LR LR 15 31 17.5
comp=Z,768nm,18.1s,baz=139,slow=40
D46A Sault St. Mari 33.55 10 P P 15 15 39.6 -1.7
baz=194
G54A Lake Saint Pet 33.57 18 P P 15 15 39.7 -1.7
baz=205
F52A Sundridge 33.57 16 P P 15 15 39.7 -1.7
baz=203
NCB Newcomb 33.67 24 P P 15 15 40.3 -2.1
FXWY Fox Creek 33.67 335 P P 15 15 44.6 +1.9
FXWY IAmb IAmb 15 15 46.6
comp=Z,19nm,1.6s
K63A Dunstable 33.77 28 P P 15 15 41.8 -1.4
baz=218
E50A Wahnapitae 33.79 14 P P 15 15 41.6 -1.7
baz=200
RYN Ryan 33.80 321 P P 15 15 45.8 +2.1
KVN Kaiserville 33.81 322 P P 15 15 46.1 +2.2
KVN IAmb IAmb 15 15 52.2
comp=Z,14nm,1.1s
J61A Chester 33.84 26 P P 15 15 42.6 -1.2
baz=216
IMW Indian Meadow 33.85 335 P P 15 15 45.9 +1.7
G55A Calabogie 33.87 20 P P 15 15 43.0 -1.1
baz=208
D47A Chapleau 33.88 11 P P 15 15 42.4 -1.8
baz=196
EYMN Ely 33.90 1 P P 15 15 42.4 -1.8
baz=181
I60A Shoreham 33.94 25 P P 15 15 43.6 -1.0
baz=214
H58A Gabriels 34.06 23 P P 15 15 44.6 -1.1
baz=212
J62A Henniker 34.06 27 P P 15 15 43.5 -2.3
baz=217

LONY Lake Ozonia 34.08 23 P **P** 15 15 44.8 -1.1
baz=211
LONY Lake Ozonia 34.08 23 P **P** 15 15 44.5 -1.4
LONY IAmb IAmb 15 16 08.9
comp=Z,16nm,1.3s
ALGO Algonquin Park 34.08 18 P **P** 15 15 44.2 -1.7
baz=205
H17A Grant Village 34.12 336 P **P** 15 15 46.2 -0.4
baz=147
E51A G1948 Merrick 34.21 16 P **P** 15 15 44.7 -2.3
baz=202,SNR=6.0
RLMT Red Lodge 34.25 338 P **P** 15 15 47.6 0.0
baz=150
RLMT Red Lodge 34.25 338 P **P** 15 15 47.8 +0.2
D48A Paudash Townsh 34.26 13 P **P** 15 15 45.5 -2.0
baz=198
WAKR Walker 34.28 321 P **P** 15 15 48.7 +0.7
WAKR IAmb IAmb 15 15 53.5
comp=Z,23nm,1.6s
G57A Newington 34.34 22 P **P** 15 15 46.4 -1.7
baz=210
J63A Strafford 34.44 28 P **P** 15 15 48.0 -0.9
baz=218
H59A Cadyville 34.44 24 P **P** 15 15 47.7 -1.4
baz=213
D49A Beulah Townshi 34.45 13 P **P** 15 15 46.8 -2.3
baz=199
I61A Oroboro, Fairl 34.46 26 P **P** 15 15 47.8 -1.4
baz=216
F55A Otter Lake 34.51 20 P **P** 15 15 47.5 -2.1
baz=208
SAO San Andreas Ge 34.56 316 P **P** 15 15 51.0 +0.8
SAO IAmb IAmb 15 16 20.5
comp=Z,23nm,1.3s
E53A Dumoine, Ponti 34.58 18 P **P** 15 15 48.5 -1.7
baz=205
D50A G1974 Best Tow 34.71 15 P **P** 15 15 50.0 -1.2
baz=201
YHL Hebgen Lake 34.74 336 P **P** 15 15 53.6 +1.6
PNTR Pine Nut 34.74 321 P **P** 15 15 53.9 +1.9
PNTR IAmb IAmb 15 16 02.4
comp=Z,8.8nm,0.9s
H60A Morristown 34.77 25 P **P** 15 15 50.8 -1.1
baz=214
E54A Lac Daplat, Po 34.77 18 P **P** 15 15 50.2 -1.7
baz=206
I62A Tamworth 34.79 27 P **P** 15 15 50.7 -1.4
baz=217
LBNH Lisbon 34.83 26 P **P** 15 15 50.9 -1.5
baz=216
PAHR Pah Rah Range 35.00 322 P **P** 15 15 54.6 +0.5
PAHR IAmb IAmb 15 15 59.2
comp=Z,14nm,1.4s
H61A Lyndonville 35.06 26 P **P** 15 15 53.4 -1.1
baz=216
PTGA Pitinga 35.17 112 P **P** 15 15 54.9 -0.8
D53A Lac Vacive, Po 35.20 17 P **P** 15 15 54.0 -1.6
baz=205
D53A Lac Vacive, Po 35.20 17 P **P** 15 15 53.9 -1.7
D53A IAmb IAmb 15 15 55.6
comp=Z,17nm,1.4s
I63A Otisfield 35.26 27 P **P** 15 15 55.2 -1.0
baz=218
G60A Masonville 35.36 25 P **P** 15 15 55.9 -1.1
baz=215
MCMT McKenzie Canyo 35.40 334 P **P** 15 16 00.5 +2.9
H62A Milan 35.42 26 P **P** 15 15 56.2 -1.4
baz=217
E56A St. Veronique 35.57 21 P **P** 15 15 57.0 -1.7
baz=209
D54A Lac Fusel, La 35.58 18 P **P** 15 15 57.6 -1.2
baz=206
MFID Camas Ranch 35.64 330 P **P** 15 16 02.0 +2.5
MFID IAmb IAmb 15 16 05.1
comp=Z,22nm,1.4s
BEKR Beckworth 35.68 322 P **P** 15 16 00.6 +0.6
BEKR IAmb IAmb 15 16 08.5
comp=Z,11nm,1.2s
E57A Chemin Saint G 35.77 22 P **P** 15 15 59.2 -1.2
baz=211
DGMT Dagmar 35.80 346 P **P** 15 16 01.0 +0.3
baz=160
DGMT Dagmar 35.80 346 P **P** 15 16 01.6 +0.8
DGMT IAmb IAmb 15 16 03.0
comp=Z,17nm,1.3s
D55A Sainte-Anne-du 35.84 20 P **P** 15 15 59.8 -1.2
baz=208
LRM Limekiln Ridge 36.04 336 P **P** 15 16 03.2 +0.1
D56A ZEC Mazanza, M 36.10 20 P **P** 15 16 02.3 -1.0
baz=209
G62A West of Eustis 36.21 26 P **P** 15 16 03.3 -0.9
baz=217
G62A West of Eustis 36.21 26 P **P** 15 16 02.9 -1.3
G62A IAmb IAmb 15 16 23.0
comp=Z,18nm,1.2s
VLDQ Val d'Or 36.21 17 P **P** 15 16 02.6 -1.5
F60A Warwick 36.22 24 P **P** 15 16 03.0 -1.4
baz=214
ULM Lac du Bonnet 36.31 356 LR LR 15 34 23.4
comp=Z,275nm,18.6s,baz=190,slow=42
H64A Troy 36.34 28 P **P** 15 16 04.4 -1.0
baz=220
D57A Chemin Vers le 36.38 21 P **P** 15 16 04.5 -1.2
baz=211
WVOR Wild Horse Val 36.38 326 P **P** 15 16 06.9 +1.0
WVOR IAmb IAmb 15 16 18.4
comp=Z,25nm,1.5s
F61A St Evariste 36.62 25 P **P** 15 16 05.1 -2.7
baz=216
E60A Ste Agathe de 36.75 24 P **P** 15 16 08.3 -0.6
baz=215
SAML Samuel 36.76 127 P **P** 15 16 07.3 -2.0
SAML IAmb IAmb 15 16 09.3
comp=Z,20nm,1.6s
PKME Peaks-Kenny Pk 36.79 27 P **P** 15 16 07.6 -1.5
baz=219
D58A Chemin du LacG 36.81 22 P **P** 15 16 08.3 -1.0
baz=212
H65A Eastbrook 36.83 29 P **P** 15 16 08.1 -1.4
baz=221
J08A Circle Bar Ran 36.93 328 P **P** 15 16 11.8 +1.2
EGMT Eagleton 36.94 340 P **P** 15 16 10.4 -0.1
baz=151,SNR=6.3
EGMT Eagleton 36.94 340 P **P** 15 16 11.1 +0.6
EGMT IAmb IAmb 15 16 13.7
comp=Z,35nm,1.6s
MOD Modoc Plateau 36.94 324 P **P** 15 16 11.5 +0.7
MOD IAmb IAmb 15 16 14.9
comp=Z,18nm,1.5s
G64A Maxfield 37.02 28 P **P** 15 16 09.6 -1.5
baz=220,SNR=6.3
LSQQ Lebel-sur-Quev 37.20 17 P **P** 15 16 11.6 -1.0
baz=205
F63A Nahmakanta, Br 37.21 27 P **P** 15 16 11.7 -1.0
baz=219
F63A Nahmakanta, Br 37.21 27 P **P** 15 16 11.1 -1.7
H66A Whiting 37.34 30 P **P** 15 16 12.5 -1.4
baz=222
BMO Blue Mountains 37.42 330 P **P** 15 16 15.0 +0.3
BMO IAmb IAmb 15 16 18.1
comp=Z,19nm,1.4s
MSO Missoula 37.46 335 P **P** 15 16 15.4 +0.4
baz=144,SNR=5.0
MSO Missoula 37.46 335 P **P** 15 16 15.9 +0.9
MSO IAmb IAmb 15 16 18.5
comp=Z,23nm,1.4s
G65A Princeton 37.53 29 P **P** 15 16 14.3 -1.2
baz=221,SNR=9.7
G65A Princeton 37.53 29 P **P** 15 16 14.1 -1.3
MATQ Matagami 37.66 16 P **P** 15 16 14.9 -1.6
baz=203,SNR=6.0
F64A Sherman 37.67 28 P **P** 15 16 15.6 -1.0
baz=220
E62A Clayton Lake 37.75 26 P **P** 15 16 16.7 -0.6
baz=218
GGN Saint George 37.81 30 P **P** 15 16 16.6 -1.2
GGN IAmb IAmb 15 16 19.6
comp=Z,30nm,1.4s
D61A St Aubert, Com 37.94 25 P **P** 15 16 17.9 -1.0
baz=216
I07A Izee 37.97 328 P **P** 15 16 20.4 +1.0
E63A Oxbow 38.07 27 P **P** 15 16 18.9 -1.1
baz=219
E63A Oxbow 38.07 27 P **P** 15 16 18.8 -1.2
E63A IAmb IAmb 15 16 48.6
comp=Z,37nm,1.6s
M02C Callahan 38.12 322 P **P** 15 16 20.8 +0.2
baz=127
F10A Beach Ranch, E 38.22 332 P **P** 15 16 23.0 +1.6
F10A IAmb IAmb 15 16 38.8
comp=Z,18nm,0.9s
D62A Allapoint, All 38.31 26 P **P** 15 16 21.1 -0.9
baz=218
E64A Bridgewater 38.33 27 P **P** 15 16 21.1 -1.1
baz=220
JTMT Jette 38.34 336 P **P** 15 16 23.6 +1.1
JTMT IAmb IAmb 15 16 25.9
comp=Z,27nm,1.5s
LPAZ La Paz 38.37 141 P **P** 15 16 27.2 +3.6
comp=Z,1.6nm,0.7s,baz=330,slow=13,SNR=5.0
PINE Pine Mountain 38.54 326 P **P** 15 16 24.7 +0.4
D63A Stockholm 38.68 27 P **P** 15 16 24.1 -1.1
baz=219
J04D Umpqua Nationa 38.83 325 P **P** 15 16 27.3 +0.6
baz=130
LMN Caledonia Moun 39.34 31 P **P** 15 16 29.3 -1.3
LMN IAmb IAmb 15 16 30.5
comp=Z,30nm,1.2s
I04A Tendick Farm, 39.35 325 P **P** 15 16 31.7 +0.9
baz=130
HAWA Hanford 39.62 330 P **P** 15 16 33.6 +0.7
MNMC Minye Minye 39.75 145 P **P** 15 16 33.7 -1.0
MNMC IAmb IAmb 15 16 51.4
comp=Z,18nm,1.1s
BATG Bathurst New B 39.77 28 P **P** 15 16 33.7 -0.6
H04A Detroit Lake 39.80 326 P **P** 15 16 35.8 +1.2
H04A IAmb IAmb 15 16 38.4
comp=Z,24nm,1.2s
D08A Wollman Farm, 39.81 331 P **P** 15 16 36.0 +1.4
I03D Drain, OR 39.81 324 P **P** 15 16 35.9 +1.3
baz=128
J01E Myrtle Point 39.82 323 P **P** 15 16 35.3 +0.6
baz=127
NEW Newport 39.92 334 P **P** 15 16 36.8 +1.3
comp=Z,2.1nm,0.4s,baz=156,slow=13,SNR=6.3
NEW Newport 39.92 334 IAmb IAmb 15 16 38.6
comp=Z,13nm,1.2s
H04D Lebanon 40.00 326 P **P** 15 16 36.4 +0.3
baz=130
C09A Chrisman Ranch 40.06 333 P **P** 15 16 38.2 +1.5
LTY Liberty 40.78 330 P **P** 15 16 44.1 +1.4
LTY IAmb IAmb 15 16 46.9
comp=Z,53nm,1.8s
B08A Colville Reser 40.95 332 P **P** 15 16 45.3 +1.2
B06A Marblemount 42.06 331 P **P** 15 16 53.9 +0.9
B06A IAmb IAmb 15 16 58.7
comp=Z,23nm,1.1s
D03D Eldon 42.16 329 P **P** 15 16 54.6 +0.7
baz=132
B05A Bryant 42.17 330 P **P** 15 16 54.8 +0.9
baz=134
SIV San Ignacio 42.86 133 P **P** 15 17 00.2 +0.2
comp=Z,6.9nm,0.9s,baz=315,slow=9.7,SNR=23
LLLB Lillooet 43.73 333 P **P** 15 17 07.0 +0.3
LLLB IAmb IAmb 15 17 14.6
comp=Z,26nm,1.2s
FCC Fort Churchill 44.75 359 P **P** 15 17 14.3 -0.1
DRLN Deer Lake 45.29 32 P **P** 15 17 16.7 -2.3
SCHQ Schefferville 45.36 20 P **P** 15 17 17.2 -2.3
SCHQ IAmb IAmb 15 17 18.2
comp=Z,27nm,1.7s
YKA Yellowknife Ar 51.01 347 P **P** 15 18 03.6 +0.7
comp=Z,7.6nm,0.8s,baz=145,slow=8.1,SNR=67
YKA PcP **PcP** 15 19 20.1 +1.6
comp=Z,2.6nm,0.9s,baz=141,slow=3.9,SNR=7.1
YKA LR LR 15 44 08.9
comp=Z,217nm,19.3s,baz=0.0,slow=41
FRB Frobisher Bay 52.42 13 P **P** 15 18 11.6 -1.8
comp=Z,2.2nm,0.5s,baz=228,slow=7.9,SNR=5.4
CPUP Villa Florida 52.52 140 LR LR 15 42 08.5
comp=Z,271nm,18.1s,baz=16,slow=38
CPUP Villa Florida 52.52 140 P **P** 15 18 12.7 -2.1
CPUP IAmb IAmb 15 18 25.0
comp=Z,15nm,1.6s
DLBC Dease Lake 52.58 336 P **P** 15 18 17.1 +2.3
comp=Z,16nm,1.0s,baz=152,slow=4.8,SNR=15
TAOE Nuku Hiva Isla 52.63 247 *e*S **S** 15 25 41.0 +0.4
comp=Z,188nm,23.9s
TAOE *e*LR LR 15 33 24.0
comp=Z,317nm,25.9s
TAOE Nuku Hiva Isla 52.63 247 *e*T T 16 14 47.4
comp=Z,15nm,0.2s
BDFB Brasilia 52.73 122 LR LR 15 41 27.0
comp=Z,232nm,19.9s,baz=303,slow=37
BDFB Brasilia 52.73 122 P **P** 15 18 13.4 -3.1
RKT Rikitea 55.71 229 *e*T T 16 18 36.3
comp=Z,4.4nm,0.3s
WHY Whitehorse 55.91 336 P **P** 15 18 39.5 +0.4
WHY IAmb IAmb 15 18 42.9
comp=Z,22nm,1.7s
HYT Haines Junctio 57.05 336 P **P** 15 18 47.0 -0.2
HYT IAmb IAmb 15 18 52.0
comp=Z,22nm,1.6s
PLCA Paso Flores 58.02 161 LR LR 15 39 09.4
comp=Z,319nm,18.1s,baz=357,slow=31
YAH Yahtse 58.56 334 P **P** 15 18 57.9 -0.1
YAH IAmb IAmb 15 19 02.0
comp=Z,11nm,1.0s
C36M Paulatuk 58.88 347 P **P** 15 18 59.9 +0.2
baz=143
MCARA McCarthy VSAT 59.62 334 P **P** 15 19 06.0 +1.1
MCARA IAmb IAmb 15 19 33.9
comp=Z,12nm,1.0s
DAWY Dawson 59.62 338 P **P** 15 19 05.1 +0.1
DAWY IAmb IAmb 15 19 07.8
comp=Z,23nm,1.9s
VRDI Verde Repeater 59.72 334 P **P** 15 19 07.0 +1.1
VRDI IAmb IAmb 15 19 13.0
comp=Z,6.5nm,0.9s
RAGM Ragged Mountai 59.85 333 P **P** 15 19 08.4 +1.8
GLB Gilahina Butte 59.98 334 P **P** 15 19 09.2 +1.7
GLB IAmb IAmb 15 19 11.0
comp=Z,9.3nm,1.0s
EPYK Eagle Plains 60.08 341 P **P** 15 19 08.3 +0.2
baz=128,SNR=6.1
EPYK Eagle Plains 60.08 341 P **P** 15 19 09.3 +1.2
EPYK IAmb IAmb 15 20 04.8
comp=Z,14nm,1.3s
INK Inuvik 60.41 344 P **P** 15 19 11.5 +1.3
comp=Z,16nm,1.1s,baz=117,slow=7.3,SNR=21
INK Inuvik 60.41 344 P **P** 15 19 11.2 +1.0
EGAK Eagle 60.65 338 P **P** 15 19 12.6 +0.6
MENT Mentasta 60.67 336 P **P** 15 19 12.7 +0.5
MENT IAmb IAmb 15 19 16.0
comp=Z,19nm,1.7s
RES Resolute Bay 60.74 359 P **P** 15 19 11.6 -0.8
comp=Z,0.8nm,0.5s,baz=182,slow=8.2,SNR=6.2
RES Resolute Bay 60.74 359 P **P** 15 19 12.3 -0.1
DOT Dot Lake 61.15 336 P **P** 15 19 17.4 +2.0
A36M Sachs Harbour 61.24 349 P **P** 15 19 15.6 -0.2
baz=143
SCRK Sand Creek 61.28 337 P **P** 15 19 17.9 +1.4
PAX Paxson 61.38 335 P **P** 15 19 18.5 +1.4
RIDG Independent Ri 61.50 336 P **P** 15 19 19.5 +1.6
SCM Sheep Creek Mo 61.65 334 P **P** 15 19 20.9 +2.0
SEW Seward 61.90 331 P **P** 15 19 22.3 +1.8
KNK Knik Glacier 61.97 333 P **P** 15 19 22.0 +1.0
KNK IAmb IAmb 15 19 24.4
comp=Z,12nm,1.0s
SML Sawmill 62.07 334 P **P** 15 19 22.7 +1.0
GHO Glory Hole Cre 62.31 333 P **P** 15 19 24.9 +1.6
RC01 Rabbit Creek A 62.41 332 P **P** 15 19 25.4 +1.5
BRLK Bradley Lake 62.44 331 P **P** 15 19 25.9 +1.8
CNPM China Poot 62.53 331 P **P** 15 19 27.0 +2.3
KDAK Kodiak Island 62.61 328 P **P** 15 19 27.0 +1.7
comp=Z,3.4nm,0.6s,baz=141,slow=4.7,SNR=9.5
PRP Porcupine Dome 62.62 338 P **P** 15 19 27.0 +1.6
HDA Harding Lake 62.63 336 P **P** 15 19 25.8 +0.4
baz=117,SNR=14
HDA Harding Lake 62.63 336 P **P** 15 19 26.2 +0.9
IL31 62.77 337 P **P** 15 19 27.4 +1.1
ILAR Eielson Array 62.77 337 P **P** 15 19 27.9 +1.6
comp=Z,10.0nm,1.0s,baz=130,slow=3.6,SNR=50
ILAR LR LR 15 49 16.9
comp=Z,206nm,19.2s,baz=135,slow=38
RND Reindeer 62.95 335 P **P** 15 19 29.3 +1.7
FYU Fort Yukon 63.03 339 P **P** 15 19 29.4 +1.5
CCB Clear Creek Bu 63.07 337 P **P** 15 19 28.6 +0.4
CCB IAmb IAmb 15 19 31.1
comp=Z,19nm,1.7s
MCK McKinley 63.12 335 P **P** 15 19 29.4 +0.8
MCK IAmb IAmb 15 19 38.6
comp=Z,7.0nm,0.8s
POKR Poker Plat Res 63.14 337 P **P** 15 19 28.9 +0.2
baz=117,SNR=6.6
NEA Nenana 63.53 336 P **P** 15 19 32.1 +0.8
RSO Redoubt South 63.56 331 P **P** 15 19 33.6 +1.8
TRF Thorofare Moun 63.56 335 P **P** 15 19 33.4 +1.6
KTH Kantishna Hill 63.87 335 P **P** 15 19 34.9 +1.3
KTH IAmb IAmb 15 19 39.1
comp=Z,10nm,1.0s
BPAW Bear Paw Mtn. 64.10 335 P **P** 15 19 36.3 +1.2
BPAW IAmb IAmb 15 19 39.2
comp=Z,18nm,1.4s
PPLA Purkeypile 64.15 334 P **P** 15 19 36.8 +1.2
PPLA IAmb IAmb 15 20 05.5
comp=Z,9.2nm,1.0s
MLY Manley 64.37 336 P **P** 15 19 37.9 +1.0
PPT Papeete 64.63 243 LR LR 15 41 50.5
comp=Z,190nm,19.5s,baz=92,slow=30
PPT2 Papeete2 64.64 243 *e*LR LR 15 38 34.6
comp=Z,366nm,26.5s
COLD Coldfoot 65.07 339 P **P** 15 19 42.9 +1.6
COLD IAmb IAmb 15 19 45.6
comp=Z,20nm,1.4s
TOLK Toolik Lake Re 65.47 340 P **P** 15 19 43.4 -0.6
baz=116,SNR=7.1
TOLK Toolik Lake Re 65.47 340 P **P** 15 19 45.5 +1.6
TOLK IAmb IAmb 15 19 51.5
comp=Z,17nm,1.2s
TTA Tatalina 65.82 333 P **P** 15 19 47.0 +0.7
TBI Tubuai 67.10 237 *e*LR LR 15 39 58.5
comp=Z,417nm,26.8s
DAG Danmarks Havn 72.77 13 *i* P **P** 15 20 27.6 -1.4
comp=Z,3.0nm,0.7s
ESDC Sonseca Array 79.95 52 P **P** 15 21 08.8 -1.7
comp=Z,1.9nm,0.9s,baz=288,slow=4.7,SNR=6.7
ESDC LR LR 15 51 47.3
comp=Z,136nm,21.2s,baz=275,slow=32
BILL Bilibino 81.40 338 P **P** 15 21 19.0 +1.4
NOA NORSAR Array B 84.31 28 P **P** 15 21 32.7 -0.2
comp=Z,1.7nm,0.9s,baz=290,slow=5.2,SNR=3.7
NOA LR LR 15 59 59.7
comp=Z,95nm,18.8s,baz=280,slow=36
DBIC Dimbokro 85.93 84 P **P** 15 21 41.9 +0.1
comp=Z,4.8nm,1.0s,baz=303,slow=7.1,SNR=4.5
DBIC LR LR 15 55 23.7
comp=Z,87nm,21.1s,baz=258,slow=32
DBIC Dimbokro 85.93 84 IAmb IAmb 15 21 42.7
comp=Z,7.6nm,0.9s
ARCES ARCESS Array B 86.26 18 P **P** 15 21 42.2 -0.2
comp=Z,1.3nm,0.6s,baz=305,slow=4.3,SNR=7.5
ARCES LR LR 15 59 29.6
comp=Z,243nm,21.7s,baz=309,slow=35
CLL Collm 88.51 37 *e*P **P** 15 21 50.0 -3.6
CLL LmV 16 07 00.0
comp=Z,100nm,20.8s
GERES GERESS Array B 89.81 39 P **P** 15 21 58.6 -1.2
comp=Z,0.5nm,0.7s,baz=335,slow=5.9,SNR=3.5
TIXI Tiksi 90.25 348 P **P** 15 22 01.6 +0.4
TORD Torodi Ar. Bea 90.65 76 LR LR 15 59 58.7
comp=Z,101nm,20.7s,baz=310,slow=34
FINES FINESS Array B 90.65 25 LR LR 16 03 50.7
comp=Z,69nm,18.8s,baz=322,slow=36
DZM Mont Dzumac 105.41 251 *e*LR LR 15 57 59.1
comp=Z,137nm,25.9s
MKAR Makanchi Array 119.34 4 PKP **PKiKP** 15 27 50.9 +0.4
comp=Z,0.5nm,0.8s,baz=70,slow=1.4,SNR=3.7
LBTB Lobatse 120.84 111 PKP **PKiKP** 15 27 56.8 +2.7
comp=Z,1.3nm,0.5s,baz=309,slow=20,SNR=2.1
HHC Hu-ho-hao-te 121.17 339 *e*P **PKiKP** 15 27 54.8 +0.4
WMQ Urumqi 122.50 0 *e*P **PKPdf** 15 27 56.0 -0.7
WMQ pmax pmax
comp=Z,100nm,3.7s
NJ2 Nanjing 125.39 327 *e*P **PKPdf** 15 28 00.8 -1.6
NJ2 pmax pmax
comp=Z,11nm,0.7s
KSH Kashi 125.69 11 PKP **PKPdf** 15 28 03.5 +0.5
KSH sPKP 15 28 18.6
CD2 Chengdu 132.80 341 Pdif **Pdif** 15 25 10.3 -2.3
WRA Warramunga Arr 135.12 256 PKP **PKiKP** 15 28 23.2 +0.5
comp=Z,1.1nm,1.1s,baz=92,slow=3.0,SNR=4.8
ASAR Alice Springs 135.40 250 PKP **PKPdf** 15 28 22.7 +1.1
comp=Z,0.3nm,0.8s,baz=92,slow=3.0,SNR=2.6
CHTO Chiang Mai 145.61 341 **PKPdf** 15 28 40.1 0.0
CMAR Chiang Mai Arr 145.94 341 PKPbc **PKPab** 15 28 42.9 +1.0
comp=Z,21nm,1.0s,baz=343,slow=4.2,SNR=64
PBKT Sadao Pong 146.97 336 **PKPdf** 15 28 42.7 +0.3

TAP 21 15:10:17.7, 23.75N×121.43E, h14km, ML1.9, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
ESL	**Shilin**	**0.06**	**6**	*i* P		Pg	15 10 21.4	+1.0
ESL	baz=13			*i* S		Sg	15 10 23.0	+0.8
EGFH	**Guangfu**	**0.08**	**179**	P		Pg	15 10 21.3	+0.8
EGFH	baz=179			S		Sg	15 10 23.1	+0.6
HGSD	**Ruisui**	**0.26**	**180**	P		Pb	15 10 24.4	+0.2
HGSD	baz=180			*e*S		Sb	15 10 27.7	-0.8
VWDT	**VWDT**	**0.26**	**270**	P		Pb	15 10 24.9	+0.7
VWDT	baz=270			S		Sb	15 10 28.5	-0.1
EHY	**Hungye**	**0.26**	**201**	P		Pb	15 10 23.9	-0.4
EHY	baz=199			S		Sg	15 10 27.4	+0.4
HWA	**Hwalien**	**0.28**	**36**	*e*P		Pb	15 10 25.0	+0.5
OWD	**Renai**	**0.30**	**311**	*e*S		Sb	15 10 29.9	0.0
TWD	**Chiawan**	**0.36**	**26**	P		Pb	15 10 26.7	+0.8
TWD	baz=26			S		Sb	15 10 31.0	-0.5
YULB	**Yu-li**	**0.38**	**198**	P		Pb	15 10 25.8	-0.4
YULB	baz=198			S		Sg	15 10 31.2	+0.7
CHGB	**Renai**	**0.38**	**323**	P		Pb	15 10 26.9	+0.5
CHGB	baz=322			S		Sb	15 10 31.6	-0.8
TWF1	**Yuli**	**0.42**	**197**	P		Pb	15 10 26.6	-0.3
TWF1	baz=195			S		Sb	15 10 33.1	0.0
WHF	**Hehuan Shan**	**0.42**	**339**	*e*P		Pb	15 10 27.2	+0.1
SSLB	**Suanglung**	**0.43**	**275**	*e*P		Pb	15 10 27.2	+0.1
SSLB	baz=274			S		Sb	15 10 33.1	-0.5
SMLT	**Sun Moon Lake**	**0.50**	**285**	*e*P		Pb	15 10 29.0	+0.7
SMLT	baz=285			*e*S		Sb	15 10 36.2	+0.7
WHYT	**Xinyi Township**	**0.53**	**264**	*e*P		Pb	15 10 29.3	+0.5
WHYT	baz=263			*e*S		Sb	15 10 36.4	+0.1
DPDB	**Guoxing**	**0.54**	**302**	*e*P		Pb	15 10 29.6	+0.7
DPDB	baz=301			*e*S		Sb	15 10 37.0	+0.4
TYC	**Yuchr**	**0.54**	**286**	*e*P		Pn	15 10 30.0	-1.0
TYC	baz=286			*e*S		Sb	15 10 37.5	+0.8
TDCB	**Techi**	**0.56**	**334**	*e*P		Pb	15 10 30.2	+0.9
TDCB	baz=333			*e*S		Sb	15 10 36.9	-0.3
FULB	**Fuli**	**0.56**	**192**	*e*P		Pn	15 10 30.6	-0.8
FULB	baz=192			*e*S		Sn	15 10 39.4	-1.1
WJS	**Zhushan**	**0.64**	**276**	*e*S		Sn	15 10 43.2	+0.7
CHKT	**Chengkung**	**0.65**	**185**	*e*S		Sb	15 10 40.4	+0.6
NNSB	**Datong**	**0.67**	**357**	*e*S		Sb	15 10 40.8	+0.2
NNSH	**Datong**	**0.67**	**357**	*e*P		Pb	15 10 31.6	+0.3

	baz=356							
NNSH				*e*S		Sb	15 10 40.8	+0.2
	baz=356							
ELDTW	**Lidau**	**0.68**	**214**	*e*S		Sb	15 10 40.4	-0.2
	baz=213							
NNS	**Nan Shan**	**0.69**	**356**	*e*P		Pb	15 10 32.2	+0.7
	baz=356							
NNS				*e*S		Sb	15 10 41.2	+0.3
	baz=356							
CHN5	**Tsauling**	**0.70**	**257**	*e*P		Pb	15 10 32.1	+0.3
	baz=257							
CHN5				*e*S		Sb	15 10 42.4	+1.0
	baz=257							
WGK	**Gukeng**	**0.80**	**265**	*e*S		Sb	15 10 44.6	+0.6
	baz=265							
WDLH	**Douliu**	**0.82**	**266**	*e*S		Sb	15 10 45.3	+0.7
	baz=265							
NDT	**Datong Townshi**	**0.85**	**5**	*e*P		Pg	15 10 34.2	0.0
	baz=5.0							
NDT				*e*S		Sb	15 10 46.5	+0.9
	baz=5.0							
TPUB	**Ta-pu**	**0.86**	**239**	*e*P		Pb	15 10 34.6	+0.1
	baz=238							
TPUB				*e*S		Sn	15 10 46.9	-0.9
	baz=238							
CHN4	**Tsaushan**	**0.86**	**243**	*e*P		Pn	15 10 36.7	+1.2
	baz=242							
CHN4				*e*S		Sn	15 10 48.3	+0.4
	baz=242							
ENTT	**Nioudou**	**0.89**	**8**	*e*S		Sn	15 10 47.8	-0.8
	baz=8.0							
WTP	**Ta-pu**	**0.90**	**236**	*e*P		Pn	15 10 37.1	+1.1
	baz=235							
WTP				*e*S		Sb	15 10 47.9	+0.9
	baz=235							
YHNB	**Yeheng**	**0.91**	**357**	*e*S		Sb	15 10 48.2	+0.7
	baz=357							
NSK	**Sanguang**	**0.92**	**356**	*e*P		Pb	15 10 35.9	+0.4
	baz=356							
NSK				*e*S		Sb	15 10 47.9	+0.3
	baz=356							
TWC	**Suao**	**0.94**	**24**	*e*S		Sg	15 10 48.1	+0.1
	baz=24							
TWK	**Hsinying**	**0.99**	**241**	*e*P		Pn	15 10 37.7	+0.4
	baz=240							
TWK				*e*S		Sn	15 10 51.1	0.0
	baz=240							
CHN1	**Nanshi**	**1.00**	**236**	*e*P		Pn	15 10 37.8	+0.4
	baz=235							
CHN1				*e*S		Sn	15 10 53.0	+1.7
	baz=235							
SNST	**Tainan City**	**1.00**	**238**	*e*P		Pg	15 10 37.0	-0.1
	baz=238							
SNST				*e*S		Sn	15 10 51.0	-0.3
	baz=238							
NWLT	**Wulai**	**1.02**	**4**	*e*S		Sg	15 10 51.1	+0.3
	baz=3.0							
SLGT	**Liugui**	**1.04**	**224**	*e*P		Pn	15 10 38.9	+1.0
	baz=223							
SLGT				*e*S		Sn	15 10 53.7	+1.4
	baz=223							

TAP 21 15:10:20.4,24.45N×121.88E,h13km±1km,ML2.2,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ENA	**Nanau**	**0.13**	**259**	P		Pg	15 10 23.8	+0.1
	baz=258							
ENA				S		Sg	15 10 26.2	+0.2
	baz=258							
TWC	**Suao**	**0.16**	**349**	*i* P		Pg	15 10 23.9	-0.2
	baz=352							
TWC				*i* S		Sg	15 10 26.2	-0.5
	baz=352							
EOS1	**EOS1**	**0.24**	**67**	P		Pg	15 10 25.6	+0.1
	baz=66							
EOS1				S		Sg	15 10 29.8	+0.8
	baz=66							
TWE	**Neicheng**	**0.33**	**324**	P		Pg	15 10 27.1	0.0
	baz=325							
TWE				S		Sg	15 10 31.6	0.0
	baz=325							
ILA	**Ilan**	**0.34**	**339**	*e*P		Pg	15 10 25.5	-1.6
	baz=339							
ILA				*e*S		Sg	15 10 31.2	-0.5
	baz=339							
ENTT	**Nioudou**	**0.34**	**303**	*i* P		Pg	15 10 27.5	+0.2
	baz=303							
ENTT				S		Sg	15 10 32.4	+0.4
	baz=303							
NDT	**Datong Townshi**	**0.37**	**294**	P		Pg	15 10 28.1	+0.3
	baz=293							
NDT				S		Sg	15 10 32.9	+0.1
	baz=293							
NACB	**Ninganchiao**	**0.38**	**223**	P		Pg	15 10 27.7	-0.3
	baz=20							
NACB				S		Sg	15 10 33.3	+0.2
	baz=20							
NACB	**Ninganchiao**	**0.38**	**223**	P		Pg	15 10 27.4	-0.6
	baz=223							
NACB				S		Sg	15 10 33.3	+0.2
	baz=223							
NTC	**Toucheng**	**0.40**	**353**	*e*P		Pg	15 10 28.1	-0.4
	baz=353							
NTC				*e*S		Sg	15 10 33.0	-0.9
	baz=353							
ETLH	**Xiulin Townshi**	**0.44**	**236**	P		Pg	15 10 27.7	-1.4
	baz=6.0							
ETLH				S		Sg	15 10 33.9	-1.1
	baz=6.0							
ETLH	**Xiulin Townshi**	**0.44**	**236**	P		Pg	15 10 27.8	-1.3
	baz=236							
ETLH				S		Sg	15 10 34.0	-1.0
	baz=236							
NNSB	**Datong**	**0.46**	**267**	P		Pg	15 10 29.5	+0.1
	baz=267							
NNSB				S		Sg	15 10 35.7	+0.2
	baz=267							
NNSH	**Datong**	**0.46**	**267**	P		Pg	15 10 29.3	-0.1
	baz=267							
NNSH				S		Sg	15 10 35.7	+0.2
	baz=267							
NNS	**Nan Shan**	**0.46**	**269**	P		Pg	15 10 29.6	+0.1
	baz=268							
NNS				S		Sg	15 10 35.9	+0.1
	baz=268							
NWLT	**Wulai**	**0.47**	**313**	P		Pg	15 10 29.8	+0.1
	baz=313							
NWLT				S		Sg	15 10 35.6	-0.4
	baz=313							
YHNB	**Yeheng**	**0.51**	**295**	*e*P		Pg	15 10 30.6	+0.2
	baz=295							
YHNB				*e*S		Sg	15 10 37.4	+0.2
	baz=295							
TIPB	**Shuangxi**	**0.52**	**354**	P		Pg	15 10 30.5	-0.1
	baz=354							
TIPB				S		Sg	15 10 36.8	-0.7
	baz=354							
NSK	**Sanguang**	**0.53**	**295**	*e*P		Pg	15 10 30.8	0.0
	baz=295							
NSK				*e*S		Sg	15 10 38.2	+0.5
	baz=295							
HWA	**Hwalien**	**0.54**	**208**	P		Pg	15 10 29.6	-1.3
	baz=207							
HWA				*e*S		Sg	15 10 36.9	-1.0
	baz=207							
HWA	**Hwalien**	**0.54**	**208**	*e*S		Pg	15 10 29.6	-1.2
	baz=37							
TWB1	**Santiao Chiao**	**0.56**	**10**	*e*P		Pb	15 10 32.5	+0.4
	baz=10.0							
TWB1				*e*S		Sg	15 10 38.5	-0.4
	baz=10.0							
NHDH	**Xindian Distri**	**0.60**	**328**	*e*S		Sg	15 10 40.2	0.0
	baz=327							
NWF	**Wu-fen Shan**	**0.62**	**352**	*e*P		Pg	15 10 32.9	+0.3
	baz=351							
NWF				*e*S		Sg	15 10 40.7	-0.1
	baz=351							
WFSB	**Wu-fen Shan**	**0.62**	**352**	*e*P		Pb	15 10 32.9	-0.3
	baz=351							
WFSB				*e*S		Sg	15 10 40.7	-0.1
	baz=351							
TATO	**Taipei**	**0.63**	**326**	*e*P		Pg	15 10 32.8	+0.1
	baz=325							
TATO				*e*S		Sg	15 10 41.1	0.0
	baz=325							
WHF	**Hehuan Shan**	**0.64**	**242**	*e*P		Pg	15 10 32.4	-0.5
	baz=241							
WHF				*e*S		Sg	15 10 41.6	+0.1
	baz=241							
WHF	**Hehuan Shan**	**0.64**	**242**	*e*S		Pg	15 10 32.9	0.0
	baz=340							
TDCB	**Techi**	**0.69**	**253**	*e*S		Sg	15 10 42.8	-0.1
	baz=253							
YM01	**YM01**	**0.75**	**338**	*e*S		Sg	15 10 44.3	-0.4
	baz=337							
YM10	**YM10**	**0.76**	**337**	*e*P		Pg	15 10 35.2	+0.2
	baz=337							
YM10				*e*S		Sg	15 10 44.9	-0.2
	baz=337							
YM11	**YM11**	**0.76**	**339**	*e*P		Pb	15 10 35.4	-0.2
	baz=338							
YM11				*e*S		Sg	15 10 44.9	-0.4
	baz=338							
YM04	**YM04**	**0.77**	**336**	*e*P		Pg	15 10 34.6	-0.6
	baz=335							
YM04				*e*S		Sb	15 10 46.0	0.0
	baz=335							
YM08	**YM08**	**0.78**	**340**	*e*S		Sb	15 10 47.0	+0.6
	baz=340							

*IDC **21** 15:16:55.4±8.5, 11.11S×166.79E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.6/33, mbtmp3.8/4, Error ellipse: s-maj=232.2km s-min=48.8km az=121.0*
*NEIC **21** 15:17:05.7±0.9, 11.1S±0.2×166.6E±0.3, h73km±15km, mb4.7/11, Error ellipse: s-maj=40.5km s-min=31.6km az=67.0*
ISC 21 15:17:14.4±2.0, 11.2S±0.2×166.5E±0.3, h146km, n15, σ0.69/15, mb4.6/11, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WR0	**Warramunga Arr**	**31.94**	**250**	P		**P**	**15 23 26.1**	**-0.5**
WR0				IAmb		IAmb	15 24 31.7	
	comp=Z,22nm,2.0s							
WB0	**Warramunga Arr**	**32.04**	**251**	P		**P**	**15 23 26.8**	**-0.7**
WB0				IAmb		IAmb	15 24 24.3	
	comp=Z,14nm,1.5s							
WRAB	**Tennant Creek**	**32.11**	**250**	P		**P**	**15 23 27.6**	**-0.5**
WRAB				IAmb		IAmb	15 23 27.9	
	comp=Z,21nm,1.6s							
WB2	**Warramunga Arr**	**32.11**	**250**	P		**P**	**15 23 27.7**	**-0.4**
WRA	**Warramunga Arr**	**32.12**	**250**	P		**P**	**15 23 27.0**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=83,slow=8.4,SNR=5.3							
ASAR	**Alice Springs**	**33.38**	**244**	P		**P**	**15 23 38.4**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=67,slow=9.8,SNR=7.0							
BBOO	**Buckleboo**	**35.26**	**228**	P		**P**	**15 23 55.5**	**+0.3**
BBOO				IAmb		IAmb	15 24 13.4	
	comp=Z,21nm,1.4s							
KNRA	**Kununurra**	**36.94**	**259**	P		**P**	**15 24 09.4**	**-0.2**
KNRA				IAmb		IAmb	15 25 22.9	
	comp=Z,16nm,1.2s							
FITZ	**Fitzroy Crossi**	**40.05**	**255**	P		**P**	**15 24 35.8**	**+0.2**
FORT	**Forrest**	**40.55**	**235**	P		**P**	**15 24 40.1**	**+0.5**
FORT				IAmb		IAmb	15 26 06.8	
	comp=Z,16nm,1.1s							
NWAO	**Narrogin (SRO)**	**49.98**	**236**	P		**P**	**15 25 53.9**	**0.0**
MORW	**Morawa**	**50.19**	**242**	P		**P**	**15 25 55.3**	**-0.2**
VNDA	**Vanda**	**66.33**	**181**	P		**P**	**15 27 46.8**	**0.0**
VNDA				IAmb		IAmb	15 29 11.7	
	comp=Z,13nm,2.0s							
CMAR	**Chiang Mai Arr**	**72.87**	**293**	P		**P**	**15 28 29.0**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=116,slow=4.6,SNR=5.5							
MKAR	**Makanchi Array**	**94.16**	**317**	P		**P**	**15 30 15.8**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=104,slow=5.7,SNR=6.0							

*JMA **21** 15:51:57.1±0.2, 23.98N×122.44E, h19km±4km, M2.1*
*TAP **21** 15:51:57.6, 24.07N×122.45E, h30km, ML2.6, D*
ISC 21 15:51:54.6±1.1, 24.00N±0.02×122.43E±0.02, h6km±10km, n82, σ1.908/146, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EOS1	**EOS1**	**0.61**	**334**	P		**Pn**	**15 52 09.2**	**-0.5**
	baz=323							
EOS1				S		**Sn**	**15 52 17.5**	**-2.3**
	baz=323							
JYNG	**Yonagunijimaku**	**0.65**	**47**	P		**Pn**	**15 52 09.7**	**-0.6**
JYNG				S		**Sb**	**15 52 17.9**	**+0.2**
YOJ	**Yonaguni jima**	**0.70**	**49**	P		**Pn**	**15 52 10.4**	**-0.6**
	baz=52							
YOJ				S		**Sb**	**15 52 19.5**	**+0.3**
	baz=52							
YOJ	**Yonaguni jima**	**0.70**	**49**	P		**Pn**	**15 52 10.7**	**-0.3**
YOJ				*e*S		**Sb**	**15 52 19.5**	**+0.3**
ENA	**Nanau**	**0.76**	**304**	*e*P		**Pn**	**15 52 11.5**	**-0.3**
	baz=299							
ENA				*e*S		**Sn**	**15 52 21.7**	**-1.8**
	baz=299							
TWD	**Chiawan**	**0.76**	**276**	*e*S		**Sn**	**15 52 22.4**	**-1.2**
	baz=270							
NACB	**Ninganchiao**	**0.78**	**283**	*e*P		**Pn**	**15 52 12.3**	**+0.2**
	baz=262							
NACB				*e*S		**Sb**	**15 52 21.3**	**-0.1**
	baz=262							
TWC	**Suao**	**0.80**	**319**	P		**Pn**	**15 52 11.8**	**-0.6**
	baz=315							
TWC				S		**Sn**	**15 52 22.6**	**-2.0**
	baz=315							
ETLH	**Xiulin Townshi**	**0.89**	**283**	*e*P		**Pn**	**15 52 13.7**	**0.0**
	baz=266							
ETLH				*e*S		**Sn**	**15 52 25.7**	**-1.2**
	baz=266							
EGFH	**Guangfu**	**0.97**	**250**	*e*S		**Sn**	**15 52 28.3**	**-0.5**
	baz=246							
ILA	**Ilan**	**0.98**	**321**	*e*P		**Pn**	**15 52 14.5**	**-0.4**
	baz=311							
ILA				*e*S		**Sn**	**15 52 27.6**	**-1.5**
	baz=311							
TWE	**Neicheng**	**0.99**	**316**	*e*P		**Pn**	**15 52 15.9**	**+0.9**
	baz=312							
TWE				*e*S		**Sn**	**15 52 28.7**	**-0.7**
	baz=312							
NTC	**Toucheng**	**1.01**	**328**	P		**Pn**	**15 52 16.0**	**+0.8**
	baz=324							
NTC				*e*S		**Sn**	**15 52 28.6**	**-1.1**
	baz=324							
ENTT	**Nioudou**	**1.01**	**309**	*e*P		**Pn**	**15 52 16.6**	**+1.4**
	baz=291							
ENTT				*e*S		**Sn**	**15 52 29.6**	**-0.2**
	baz=291							
NDT	**Datong Townshi**	**1.02**	**306**	*e*P		**Pn**	**15 52 16.3**	**+0.8**
	baz=289							
NDT				*e*S		**Sn**	**15 52 30.6**	**+0.5**
	baz=289							
NNSB	**Datong**	**1.04**	**294**	*e*P		**Pn**	**15 52 16.2**	**+0.4**
	baz=290							
NNSB				*e*S		**Sn**	**15 52 30.5**	**-0.3**
	baz=290							
NNSH	**Datong**	**1.04**	**294**	*e*P		**Pn**	**15 52 16.5**	**+0.6**
	baz=279							
NNSH				*e*S		**Sn**	**15 52 30.2**	**-0.6**
	baz=279							
HGSD	**Ruisui**	**1.05**	**241**	*e*P		**Pn**	**15 52 15.7**	**-0.1**
	baz=238							
HGSD				*e*S		**Sn**	**15 52 32.5**	**+1.7**
	baz=238							
NNS	**Nan Shan**	**1.05**	**295**	*e*P		**Pn**	**15 52 16.6**	**+0.6**
	baz=290							
NNS				*e*S		**Sn**	**15 52 30.8**	**-0.3**
	baz=290							
WHF	**Hehuan Shan**	**1.07**	**278**	*e*P		**Pn**	**15 52 17.4**	**+0.9**
	baz=261							
WHF				*e*S		**Sn**	**15 52 31.7**	**-0.2**
	baz=261							
TWB1	**Santiao Chiao**	**1.08**	**338**	*e*P		**Pn**	**15 52 16.4**	**+0.2**
	baz=352							
TWB1				*e*S		**Sn**	**15 52 30.0**	**-1.4**
	baz=352							
TIPB	**Shuangxi**	**1.11**	**331**	P		**Pn**	**15 52 17.5**	**+0.9**
	baz=327							
TIPB				S		**Sn**	**15 52 31.6**	**-0.7**
	baz=327							
EHY	**Hungye**	**1.12**	**244**	*e*P		**Pn**	**15 52 16.9**	**0.0**
	baz=254							
EHY				*e*S		**Sn**	**15 52 31.9**	**-0.7**
	baz=254							
NWLT	**Wulai**	**1.14**	**313**	*e*P		**Pn**	**15 52 18.8**	**+1.6**
	baz=309							
NWLT				*e*S		**Sn**	**15 52 33.4**	**+0.3**
	baz=309							
OWD	**Renai**	**1.14**	**268**	*e*S		**Sn**	**15 52 33.6**	**+0.3**
	baz=264							
CHGB	**Renai**	**1.15**	**273**	*e*P		**Pn**	**15 52 18.7**	**+1.4**
	baz=258							
CHGB				*e*S		**Sn**	**15 52 33.2**	**-0.2**
	baz=258							
YHNB	**Yeheng**	**1.17**	**305**	*e*P		**Pn**	**15 52 18.6**	**+1.1**
	baz=290							
YHNB				*e*S		**Sn**	**15 52 33.9**	**+0.1**
	baz=290							
TWT	**Tachien**	**1.17**	**283**	*e*S		**Sn**	**15 52 35.3**	**+1.3**
	baz=267							
NSK	**Sanguang**	**1.18**	**305**	*e*P		**Pn**	**15 52 18.7**	**+1.0**
	baz=289							
NSK				*e*S		**Sn**	**15 52 33.5**	**-0.6**
	baz=289							
TDCB	**Techi**	**1.18**	**282**	*e*P		**Pn**	**15 52 18.9**	**+1.1**
	baz=267							
TDCB				*e*S		**Sn**	**15 52 34.3**	**0.0**
	baz=267							
YULB	**Yu-li**	**1.20**	**240**	*e*P		**Pn**	**15 52 18.3**	**+0.4**
	baz=251							
YULB				*e*S		**Sb**	**15 52 32.8**	**-0.6**
	baz=251							
VWDT	**VWDT**	**1.20**	**258**	*e*P		**Pn**	**15 52 18.5**	**+0.6**
	baz=254							
VWDT				*e*S		**Sn**	**15 52 34.1**	**-0.4**
	baz=254							
NWF	**Wu-fen Shan**	**1.22**	**331**	*e*P		**Pn**	**15 52 18.9**	**+0.7**
	baz=328							
NWF				*e*S		**Sb**	**15 52 33.2**	**-0.8**
	baz=328							
WFSB	**Wu-fen Shan**	**1.22**	**331**	*e*P		**Pn**	**15 52 18.6**	**+0.5**
	baz=328							
WFSB				*e*S		**Sn**	**15 52 33.5**	**-1.4**
	baz=328							
TWF1	**Yuli**	**1.22**	**238**	P		**Pn**	**15 52 18.6**	**+0.4**
	baz=224							
TWF1				*e*S		**Sn**	**15 52 34.4**	**-0.6**
	baz=224							
IRIF	**Iriomote-Funau**	**1.24**	**74**	P		**Pn**	**15 52 20.0**	**+1.6**
IRIF				*e*S		**Sn**	**15 52 36.0**	**+0.6**
NHDH	**Xindian Distri**	**1.26**	**320**	*e*P		**Pn**	**15 52 20.4**	**+1.7**
	baz=332							
NHDH				*e*S		**Sn**	**15 52 35.8**	**-0.1**
	baz=332							
HATJ	**Hateruma jima**	**1.26**	**87**	P		**Pb**	**15 52 19.5**	**+0.7**
HATJ				*e*S		**Sn**	**15 52 36.6**	**+0.6**
TATO	**Taipei**	**1.29**	**319**	*e*P		**Pn**	**15 52 21.1**	**+2.0**
	baz=315							
TATO				*e*S		**Sn**	**15 52 37.8**	**+1.1**
	baz=315							
FULB	**Fuli**	**1.31**	**233**	*e*P		**Pb**	**15 52 19.5**	**-0.1**
	baz=219							
FULB				*e*S		**Sb**	**15 52 36.3**	**-0.4**
	baz=219							
CHKT	**Chengkung**	**1.32**	**227**	*e*S		**Sg**	**15 52 35.7**	**-1.5**
	baz=225							
DPDB	**Guoxing**	**1.37**	**272**	*e*P		**Pb**	**15 52 23.8**	**+3.1**
	baz=268							
DPDB				*e*S		**Sn**	**15 52 39.6**	**+0.8**
	baz=268							
WHP	**Taichung City**	**1.38**	**282**	*e*P		**Pb**	**15 52 23.3**	**+2.5**
	baz=267							
WHP				*e*S		**Sn**	**15 52 41.9**	**+2.9**
	baz=267							
YM10	**YM10**	**1.39**	**326**	*e*P		**Pb**	**15 52 20.8**	**-0.3**
	baz=322							
YM11	**YM11**	**1.39**	**326**	*e*P		**Pb**	**15 52 21.9**	**+0.9**
	baz=323							
YM11				*e*S		**Sn**	**15 52 38.9**	**-0.5**
	baz=323							
YM04	**YM04**	**1.40**	**325**	*e*P		**Pg**	**15 52 22.1**	**+0.6**
	baz=322							
YM04				*e*S		**Sg**	**15 52 37.5**	**-2.2**
	baz=322							
TYC	**Yuchr**	**1.44**	**266**	*e*S		**Sn**	**15 52 43.4**	**+3.1**
	baz=263							
JKRS	**Kuro-shima**	**1.47**	**80**	P		**Pg**	**15 52 23.4**	**+0.7**
JKRS				*e*S		**Sg**	**15 52 41.7**	**0.0**
WHYT	**Xinyi Township**	**1.47**	**258**	*e*P		**Pg**	**15 52 23.9**	**+1.0**
	baz=244							
WHYT				*e*S		**Sg**	**15 52 45.2**	**+3.3**
	baz=244							
ELDTW	**Lidau**	**1.52**	**238**	*e*P		**Pg**	**15 52 23.1**	**-0.8**
	baz=235							
ELDTW				*e*S		**Sg**	**15 52 44.5**	**+0.8**
	baz=235							
TWH	**Lutao**	**1.55**	**214**	*e*P		**Pn**	**15 52 22.7**	**-0.1**
	baz=211							
TWH				*e*S		**Sn**	**15 52 41.9**	**-1.3**
	baz=211							
WJS	**Zhushan**	**1.56**	**264**	*e*S		**Sg**	**15 52 46.7**	**+1.8**
	baz=260							
WNT	**Mingjian**	**1.60**	**266**	*e*S		**Sg**	**15 52 46.1**	**+0.1**
	baz=262							
TCU	**Taichung**	**1.61**	**276**	*e*S		**Sg**	**15 52 46.5**	**+0.3**
	baz=271							
JIJ	**Ishigaki jima**	**1.61**	**77**	P		**Pb**	**15 52 24.4**	**-0.3**
JIJ				S		**Sn**	**15 52 44.6**	**0.0**
CHN5	**Tsauling**	**1.65**	**256**	*e*P		**Pg**	**15 52 26.9**	**+0.7**
	baz=243							
CHN5				*e*S		**Sg**	**15 52 48.2**	**+0.6**
	baz=243							
PCYT	**Pengchaiyu**	**1.65**	**349**	*e*P		**Pn**	**15 52 22.8**	**-1.3**
	baz=348							
TWGBT	**Beinan**	**1.71**	**227**	*e*P		**Pn**	**15 52 24.8**	**-0.1**
	baz=236							
TWGBT				*e*S		**Sn**	**15 52 46.0**	**-1.1**
	baz=236							
TTN	**Taitung**	**1.71**	**224**	*e*S		**Sb**	**15 52 47.8**	**-0.4**
	baz=221							
TWG	**Pinlang**	**1.71**	**227**	*e*P		**Pn**	**15 52 24.9**	**0.0**
	baz=236							
TWG				*e*S		**Sn**	**15 52 46.0**	**-1.1**
	baz=236							
WDLH	**Douliu**	**1.76**	**260**	*e*S		**Sg**	**15 52 50.2**	**-0.9**
	baz=256							
TPUB	**Ta-pu**	**1.79**	**247**	*e*P		**Pg**	**15 52 28.6**	**-0.3**
	baz=244							
TPUB				*e*S		**Sg**	**15 52 50.9**	**-1.2**
	baz=244							
CHN4	**Tsaushan**	**1.80**	**249**	*e*P		**Pg**	**15 52 29.9**	**+0.8**
	baz=246							
CHN4				*e*S		**Sg**	**15 52 52.4**	**-0.1**
	baz=246							
JISG	**Ishigakijimahi**	**1.82**	**71**	P		**Pn**	**15 52 27.1**	**+0.8**
JISG				*e*S		**Sn**	**15 52 49.1**	**-0.6**
WTP	**Ta-pu**	**1.82**	**246**	*e*P		**Pg**	**15 52 28.9**	**-0.7**
	baz=243							
WTP				*e*S		**Sb**	**15 52 51.6**	**+0.1**
	baz=243							
RLNB	**Erlin**	**1.89**	**267**	*e*S		**Sg**	**15 52 54.9**	**-0.6**
	baz=276							
SLGT	**Liugui**	**1.92**	**239**	*e*P		**Pg**	**15 52 30.5**	**-0.8**
	baz=228							
SLGT				*e*S		**Sb**	**15 52 54.4**	**+0.2**
	baz=228							
CHN1	**Nanshi**	**1.92**	**245**	*e*P		**Pg**	**15 52 30.4**	**-1.1**
	baz=242							
CHN1				*e*S		**Sb**	**15 52 54.5**	**+0.2**
	baz=242							
TWK	**Hsinying**	**1.92**	**248**	*e*P		**Pg**	**15 52 30.6**	**-0.9**
	baz=244							
TWK				*e*S		**Sb**	**15 52 54.6**	**+0.2**
	baz=244							
SNST	**Tainan City**	**1.93**	**247**	*e*P		**Pg**	**15 52 31.1**	**-0.6**
	baz=243							
SNST				*e*S		**Sb**	**15 52 54.5**	**-0.1**
	baz=243							
WTCT	**Ta-ch'eng**	**1.97**	**266**	*e*S		**Sg**	**15 52 55.6**	**-2.2**
	baz=276							
SSD	**Sandimen**	**2.07**	**233**	*e*S		**Sb**	**15 52 58.5**	**0.0**
	baz=225							
LAY	**Lan-yu**	**2.11**	**203**	*e*P		**Pn**	**15 52 31.2**	**+0.8**
	baz=201							
LAY				*e*S		**Sb**	**15 52 58.9**	**-0.9**
	baz=201							
MASBT	**Mashibuluo**	**2.15**	**230**	*e*P		**Pb**	**15 52 32.3**	**-1.7**
	baz=223							
MASBT				*e*S		**Sb**	**15 53 00.5**	**-0.4**
	baz=223							
EAST	**Anshuo**	**2.17**	**222**	*e*P		**Pb**	**15 52 33.9**	**-0.4**

baz=217
PHUB P'eng-hu 2.66 260 *e*P **Pb 15 52 40.2 -2.4**
baz=271
PHUB *e*S **Sn 15 53 11.8 +1.4**
baz=271
PNG Penghu 2.67 261 *e*P **Pb 15 52 40.4 -2.3**
baz=258
PNG *e*S **Sn 15 53 11.2 +0.6**
baz=258
VCHM Qimei 2.86 255 *e*S **Sn 15 53 16.9 +1.5**
baz=252
VWUC VWUC 2.88 291 *e*P **Pn 15 52 41.6 +0.6**
baz=286
VWUC *e*S **Sn 15 53 15.7 -0.4**
baz=286
PTMZ Houxiangcun 3.18 290 *e*P **Pn 15 52 45.4 +0.3**
baz=285
PTMZ *e*S **Sn 15 53 22.3 -1.1**
baz=285
XPSS Dashiqiu 3.55 326 *e*P **Pn 15 52 50.6 +0.5**
baz=322

*KRNET **21** 15:54:49.1±0.1,41˚.06N×69˚.07E,mb2.6*
*SOME **21** 15:54:49.6,40˚.88N×69˚.57E,h0km*
*ISU **21** 15:54:51.0,41˚.20N×69˚.10E,h10km*
ISC 21 15:54:49.8±2.2**,41˚.00N**±0˚.06×**69˚.1E**±0˚.1**, h0**km±13km**, n13,** σ1§**58**/24**, 5C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TAS	**Tashkent**	**0.35**	**23**	⇓*i*P		**Pg**	**15 54 55.4**	**-1.1**
	baz=32							
TAS				⇓*i*S		**Sg**	**15 55 00.1**	**-0.9**
	baz=32							
TAS	**Tashkent**	**0.35**	**23**	*e*P		**Pg**	**15 54 56.6**	**+0.1**
TAS				*e*S		**Sg**	**15 55 00.8**	**-0.2**
IUG	**luzhnay**	**1.33**	**31**	*e*P		**Pb**	**15 55 15.3**	**-0.4**
	12nm,0.1s							
IUG				*e*S		**Sg**	**15 55 33.5**	**+0.8**
	84nm,0.2s							
CHM	**Chimkent**	**1.36**	**15**	*e*P		**Pg**	**15 55 17.2**	**+1.3**
	22nm,0.1s							
CHM				*e*S		**Sg**	**15 55 36.6**	**+3.0**
	134nm,0.1s							
BTK	**Batken**	**1.60**	**125**	⇑*i*P		**Pn**	**15 55 19.6**	**+0.1**
	baz=26							
BTK				⇑*i*S		**Sg**	**15 55 42.0**	**+0.7**
	baz=26							
ARK	**Arkit**	**2.28**	**69**	⇑*i*P		**Pn**	**15 55 29.4**	**+0.5**
	baz=71							
ARK				⇑*i*S		**Sb**	**15 55 58.3**	**-2.5**
	baz=71							
ARK	**Arkit**	**2.28**	**69**	*e*P		**Pb**	**15 55 30.0**	**-2.0**
ARK				*e*S		**Sn**	**15 55 58.0**	**+0.2**
KK31	**Karatay Array**	**2.34**	**26**	Pn		**Pb**	**15 55 30.8**	**-2.1**
	2.1nm,0.5s,baz=205,slow=16,SNR=28							
KK31				⇓Sn		**Sb**	**15 56 00.2**	**-2.2**
	12nm,0.5s,baz=204,slow=27,SNR=19							
ANR	**Andizhan**	**2.47**	**95**	eS		**Sg**	**15 56 07.9**	**-1.3**
ARSB	**Arslanbob**	**2.94**	**82**	⇓*i*P		**Pn**	**15 55 38.4**	**+0.6**
	baz=84							
ARSB				⇓*i*S		**Sn**	**15 56 14.6**	**+0.7**
	baz=84							
MRKS	**Merke**	**3.53**	**59**	*e*P		**Pb**	**15 55 52.0**	**-1.2**
	1.0nm,0.1s							
MRKS				*e*S		**Sb**	**15 56 36.1**	**-0.5**
	8.6nm,0.2s							
TKM2	**Tokmak 2**	**5.20**	**66**	⇑Pg		**Pb**	**15 56 22.4**	**+0.7**
	2.6nm,0.6s							
TKM2				⇓Lg		Lg	15 57 33.2	
	3.5nm,0.7s							
KST	**Kastek**	**5.49**	**66**	*e*P		**Pb**	**15 56 27.2**	**+0.5**
	0.8nm,0.1s							
KST				*e*S		**Sb**	**15 57 36.5**	**+3.4**
	5.7nm,0.3s							

*IDC **21** 16:21:47.6±0.4,18˚.12N×88˚.06E,h0km,mb5.3/44, mb1 5.3/45,mb1mx5.3/46,mbtmp5.2/45,ML5.4/2,MS5.2/36, Ms1 5.2/36,ms1mx5.1/44,Error ellipse: s-maj=11.2km s-min=9.2km az=37.0*
*MOS **21** 16:21:52.0±0.9,18˚.12N×88˚.03E,h44km,mb5.8/63, MS5.4/69,Error ellipse: s-maj=5.2km s-min=3.2km az=112.2*
*BJI **21** 16:21:53.2±0.0,18˚.35N×88˚.15E,h34km,mB5.8/66, mb5.6/91,Ms5.7/99,Ms7 5.5/91*
*NEIC **21** 16:21:54.4±1.3,18˚.20N±0˚.07×88˚.04E±0˚.08,h47km±3km, mb5.7/250,Ms_20 5.6/634,Mwb6.0/44,Mww6.0, Mwc6.1(GCMT),Error ellipse: s-maj=11.2km s-min=9.7km az=78.0*
*NEIC **21** 16:21:54.1,18˚.20N×88˚.02E,h47km,Moment Tension Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.04; $M_{\theta\theta}$-1.24; $M_{\phi\phi}$ 1.20; $M_{r\theta}$0.11; $M_{\theta\phi}$0.22; $M_{\phi r}$0.18; Fault plane solution: $M_0$1.25000×10^{18} NP1:ϕ_s319.75000°, δ80.50000°,λ176.67000°. NP2:ϕ_s50.30000°,δ86.72000°, λ9.52000°. Principal axes: T 1.2446, Plg9.0000°, Azm275.0000°; N 0.0181, Plg80.0000°, Azm69.0000°; P -1.2627, Plg4.0000°, Azm185.0000°;*
*NDI **21** 16:21:54.4±3.1,18˚.25N×88˚.09E,h34km±24km,mb5.7, ML5.8,mb5.7(NEIC)*
*SOME **21** 16:21:55.5±0.0,18˚.46N×88˚.05E,h27km,mb5.9/12*
*GCMT **21** 16:21:56.4±0.1,18˚.10N×88˚.09E,h58km,MW6.1/159, Moment Tensor Solution. s154,c329; s159,c519; Duration: 2≌7 Moment tensor: Scale 10^{18}Nm; M_{rr}0.00±.01; $M_{\theta\theta}$-1.60±.01; $M_{\phi\phi}$ 1.60±.01; $M_{r\theta}$0.12±.01; $M_{\theta\phi}$0.42±.01; $M_{\phi r}$0.18±.01; Best double couple: $M_0$1.66800×10^{18} NP1:ϕ_s322.00000°,δ83.00000°, λ178.00000°. NP2:ϕ_s52.00000°,δ88.00000°,λ7.00000°. Principal axes: T 1.6760, Plg7.0000°, Azm277.0000°; N -0.0150, Plg82.0000°, Azm70.0000°; P -1.6590, Plg3.0000°, Azm187.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*BGR **21** 16:21:56.5±0.0,19˚.08N×88˚.22E,h33km,mb5.4,Ms5.3*
*NEIC **21** 16:21:57,18˚.08N×88˚.07E,h60km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.01; $M_{\theta\theta}$-1.64; $M_{\phi\phi}$ 1.63; $M_{r\theta}$0.12; $M_{\theta\phi}$0.48; $M_{\phi r}$0.18; Fault plane solution: $M_0$1.72000×10^{18} NP1:ϕ_s53.00000°, δ88.00000°,λ7.00000°. NP2:ϕ_s323.00000°,δ83.00000°, λ178.00000°. Principal axes: T 1.7201, Plg6.0000°, Azm278.0000°; N -0.0073, Plg83.0000°, Azm72.0000°; P -1.7128, Plg3.0000°, Azm188.0000°;*
*NEIC **21** 16:22:01,18˚.20N×87˚.92E,h60km,Moment Tension Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.12; $M_{\theta\theta}$-1.01; $M_{\phi\phi}$ 1.14; $M_{r\theta}$-0.05; $M_{\theta\phi}$0.21; $M_{\phi r}$-0.03; Fault plane solution: $M_0$1.10000×10^{18} NP1:ϕ_s50.00000°, δ89.00000°,λ-3.00000°. NP2:ϕ_s140.00000°,δ87.00000°, λ-179.00000°. Principal axes: T 1.1575, Plg2.0000°, Azm95.0000°; N -0.1229, Plg87.0000°, Azm216.0000°; P -1.0346, Plg3.0000°, Azm5.0000°;*
ISC 21 16:21:54.2±0.3**,18˚.24N**±0˚.03×**88˚.07E**±0˚.02**, h45**km±2km**, h45**km**:pP-P, n1534,** σ1§**87**/1503**, mb5.6**/346**, MS5.5**/433**, 91C-69D, Bay of Bengal**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
BWNR	**Bhubaneshwar**	**2.96**	**314**	*e*P		**Pn**	**16 22 39.6**	**+0.9**
BWNR				*e*S		**Sn**	**16 23 10.3**	**-2.6**
BWNR				IAML			16 25 36.1	
	comp=N,7μm,0.5s							
BRDH	**Bariadhala**	**5.54**	**37**	Pn		**Pn**	**16 23 13.6**	**-0.6**
	comp=N,807nm,0.3s,baz=31,slow=0.0,SNR=13							
BRDH				Sn		**Sn**	**16 24 15.0**	**-1.7**
	comp=N,5μm,0.3s,baz=337,slow=23,SNR=42							
BOK	**Bokaro**	**5.89**	**340**	*e*P		**Pn**	**16 23 19.1**	**+0.1**
BOK				IAML			16 24 24.4	
	comp=N,11μm,0.7s							
BOK				IAML			16 24 26.1	
	comp=E,20μm,0.7s							
PVM	**Polavaram**	**6.22**	**262**	*e*P		**Pn**	**16 23 23.6**	**+0.1**
PVM				*e*			16 24 28.2	
PVM				IVMsBB			16 24 32.5	
	comp=Z,16μm,3.2s							
DGPR	**DIGLIPUR**	**6.88**	**136**	*e*P		**Pn**	**16 23 32.0**	**-0.6**
DGPR				*e*S		**Sn**	**16 24 43.0**	**-6.6**
PBA	**Port Blair**	**7.96**	**145**			Pn	16 23 46.7	-0.6
ADKI	**Addanki**	**8.10**	**254**	*e*P		**Pn**	**16 23 48.2**	**-1.1**
ADKI				*e*			16 25 10.3	
ADKI				IVMs_BB	IVMs_BB		16 25 17.8	
	comp=Z,28μm,3.6s							
SHL	**Shillong**	**8.11**	**25**	*ex*		**Pn**	**16 23 45.1**	**-4.4**
SHL				*i* x	x		16 23 47.4	
SHL				*e*S		**Sn**	**16 25 12.6**	**-7.4**
SHL				IAML			16 25 17.2	
	comp=E,9μm,0.3s							
SHL				IAML			16 25 18.1	
	comp=N,8μm,0.3s							
SHL	**Shillong**	**8.11**	**25**	P		**Pn**	**16 23 45.4**	**-4.2**
	SNR=114							
SHL	**Shillong**	**8.11**	**25**	P		Pn	16 23 44.7	-4.8
SHL	**Shillong**	**8.11**	**25**			Pn	16 23 44.7	-4.9
RPR	**Rampur**	**8.34**	**276**	*e*P		**Pn**	**16 23 52.6**	**0.0**
RPR				*e*			16 25 18.1	
RPR				IVMs_BB	IVMs_BB		16 26 08.6	
	comp=Z,18μm,3.5s							
NJS	**Nagarjunasagar**	**8.53**	**260**	*e*P		**Pn**	**16 23 54.2**	**-1.0**
NJS				*e*			16 25 22.5	
NJS				IVMsBB			16 26 01.3	
	comp=Z,9μm,4.1s							
ODAN	**Odare**	**8.60**	**356**	*e*Pn		**Pn**	**16 23 56.1**	**-0.3**
ODAN				*e*Sn		**Sn**	**16 25 27.3**	**-4.9**
	comp=Z,9μm,0.3s							
NGP	**Nagpur**	**8.97**	**290**	*e*P		**Pn**	**16 24 01.9**	**+0.6**
NGP				*e*S		**Sn**	**16 25 32.8**	**-8.2**
NGP				IAML			16 25 55.8	
	comp=N,7μm,0.5s							
NGP				IAML			16 25 55.9	
	comp=E,5μm,0.7s							
JBP	**Jabalpur**	**9.01**	**304**	⇑*e*P		**Pn**	**16 24 02.9**	**+1.1**
JBP				*e*S		**Sn**	**16 25 35.6**	**-6.4**
SRLM	**Srisailam**	**9.02**	**258**	*e*P		**Pn**	**16 24 00.7**	**-1.3**
SRLM				*e*			16 25 32.7	
SRLM				IVMsBB			16 25 49.3	
	comp=Z,15μm,3.4s							
TAPN	**Taplejung**	**9.07**	**358**	*e*Pn		**Pn**	**16 24 02.4**	**-0.5**
TAPN				*e*Sn		**Sn**	**16 25 38.2**	**-5.7**
	comp=Z,19μm,0.8s							
HYB	**Hyderabad**	**9.10**	**266**	*i* P		**Pn**	**16 24 02.0**	**-1.0**
	comp=Z,162nm,0.8s							
HYB				*e*S		**Sn**	**16 25 44.0**	**-0.2**
HYB	**Hyderabad**	**9.10**	**266**	*e*P		**Pn**	**16 24 02.2**	**-0.8**
HYB				*e*S		**Sn**	**16 25 35.8**	**-8.4**
HYBB	**Hyderabad (bro**	**9.10**	**266**	*e*P		**Pn**	**16 24 02.1**	**-1.0**
HYBB				*e*			16 25 35.7	
HYBB				IVMsBB			16 26 56.6	
	comp=Z,10μm,2.9s							
MDRS	**Chennai**	**9.12**	**237**	*e*P		**Pn**	**16 24 01.0**	**-2.3**
MDRS				IAML			16 25 39.0	
	comp=N,9μm,0.5s							
MDRS				*e*S		**Sn**	**16 25 39.0**	**-5.6**
MDRS				IAML			16 25 39.4	
	comp=E,4μm,0.1s							
SKHT	**Srikalahasti**	**9.20**	**242**	*e*P		**Pn**	**16 24 00.4**	**-4.0**
SKHT				*e*			16 25 35.0	
SKHT				IVMs_BB	IVMs_BB		16 25 41.7	
	comp=Z,13μm,4.3s							
SRSP	**Sriramsagar**	**9.24**	**276**	*e*P		**Pn**	**16 24 04.4**	**-0.6**
SRSP				*e*			16 25 40.8	
SRSP				IVMs_BB	IVMs_BB		16 26 54.8	
	comp=Z,9μm,3.5s							
PKI	**Pulchoki**	**9.60**	**346**	*e*Pn		**Pn**	**16 24 10.7**	**+0.5**
PKI				*e*Sn		**Sn**	**16 25 52.1**	**-4.8**
	comp=Z,14μm,0.7s							
DMN	**Daman**	**9.71**	**344**	*e*Pn		**Pn**	**16 24 12.4**	**+0.7**
GUN	**Gumba**	**9.83**	**349**	*e*Pn		**Pn**	**16 24 13.3**	**-0.1**
GUN				*e*Sn		**Sn**	**16 25 57.9**	**-4.7**
	comp=Z,48μm,1.0s							
KKN	**Kakani**	**9.84**	**345**	*e*Pn		**Pn**	**16 24 13.6**	**+0.2**
GKN	**Gorkha**	**10.21**	**343**	*e*Pn		**Pn**	**16 24 18.9**	**+0.5**
GKN				*e*Sn		**Sn**	**16 26 06.9**	**-4.8**
CM31	**Chiang Mai Arr**	**10.33**	**87**			**Pn**	**16 24 19.4**	**-0.5**
CMAR	**Chiang Mai Arr**	**10.33**	**87**	Pn		**Pn**	**16 24 20.2**	**+0.3**
	comp=Z,13nm,0.3s,baz=265,slow=14,SNR=209							
CMAR				Sn		**Sn**	**16 26 07.1**	**-7.4**
	comp=Z,52nm,0.3s,baz=272,slow=18,SNR=7.9							
CMAR				LR	LR		16 29 58.5	
	comp=Z,6μm,19.2s,baz=323,slow=47							
CMAR	**Chiang Mai Arr**	**10.33**	**87**	*i* P		**Pn**	**16 24 20.2**	**+0.3**
CMAR				pmax	pmax			
	comp=Z,349nm,0.9s							
CHTO	**Chiang Mai**	**10.34**	**85**	P		**Pn**	**16 24 19.1**	**-0.9**
CHTO	**Chiang Mai**	**10.34**	**85**			**Pn**	**16 24 19.1**	**-0.9**
KOLN	**Koldanda**	**10.34**	**337**	*e*Pn		**Pn**	**16 24 20.4**	**+0.3**
KOLN				*e*Sn		**Sn**	**16 26 08.7**	**-6.0**
	comp=Z,63μm,0.8s							
DANN	**Dangsing**	**10.81**	**339**	*e*Pn		**Pn**	**16 24 26.9**	**+0.2**
URV	**Uravakonda**	**10.86**	**254**	*e*P		**Pn**	**16 24 25.5**	**-1.7**
URV				*e*			16 26 15.9	
URV				IVMs_BB	IVMs_BB		16 26 35.9	
	comp=Z,18μm,4.1s							
PYUN	**Piuthan**	**10.87**	**336**	*e*Pn		**Pn**	**16 24 26.9**	**-0.5**
PYUN				*e*Sn		**Sn**	**16 26 21.4**	**-6.3**
	comp=Z,51μm,0.8s							
KLRI	**Killari**	**10.90**	**271**	*e*P		**Pn**	**16 24 26.5**	**-1.2**
KLRI				*e*			16 26 17.3	
KLRI				IVMsBB			16 27 38.0	
	comp=Z,11μm,3.4s							
BHPL	**Bhopal**	**11.13**	**298**	*e*P		**Pn**	**16 24 30.8**	**-0.1**
BHPL				*i* x	x		16 24 33.0	
BHPL				*e*S		**Sn**	**16 26 25.3**	**-8.6**
BHPL				IAML			16 26 31.4	
	comp=N,15μm,0.6s							
BHPL				IAML			16 26 32.0	
	comp=E,10μm,0.4s							
LSA	**Lhasa**	**11.75**	**13**	P		**Pn**	**16 24 38.8**	**-0.9**
LSA				pmax	pmax			
	comp=E,280nm,0.6s							
LSA	**Lhasa**	**11.75**	**13**	*i* P		**Pn**	**16 24 38.9**	**-0.9**
	SNR=708							
LSA	**Lhasa**	**11.75**	**13**	P		**Pn**	**16 24 37.7**	**-2.0**
LSA	**Lhasa**	**11.75**	**13**			**Pn**	**16 24 37.7**	**-2.0**
PBKT	**Sadao Pong**	**12.43**	**96**			**Pn**	**16 24 48.4**	**-0.2**
POO	**Poona**	**13.50**	**273**	*ex*		**Pn**	**16 25 02.0**	**-1.3**
	comp=E,100nm,1.0s							
POO				*ex*	x		16 25 12.0	
POO				*ex*	x		16 25 19.0	
POO				*i* x	x		16 27 18.0	
POO				*ex*	x		16 27 44.0	
SLVN	**Son La**	**15.22**	**76**			**Pn**	**16 25 27.2**	**+0.9**
SLVN				IAmb	IAmb		16 25 30.2	
	comp=Z,913nm,1.5s							
KMI	**Kunming**	**15.26**	**61**	P		**P**	**16 25 29.8**	**-1.3**
KMI				S		**Sn**	**16 28 10.3**	**-4.6**
KMI				sS	S		16 28 23.6	-6.3
KMI				SS		**SnSn**	**16 28 27.8**	**-0.2**
KMI				pmax	pmax			
	comp=Z,910nm,1.2s							
KMI				pmax	pmax			
	comp=Z,5μm,4.3s							
KMI				LR	LR			
	comp=Z,28μm,12.8s							
KMI				LR	LR			
	comp=Z,13μm,13.2s							
KMI				LR	LR			
	comp=Z,16μm,15.1s							
KMI	**Kunming**	**15.26**	**61**	P		**P**	**16 25 29.4**	**-1.7**
KMI				pmax	pmax			
	comp=Z,1μm,1.2s							
KMI	**Kunming**	**15.26**	**61**	P		**P**	**16 25 29.4**	**-1.7**
LHMI	**Lhok Sumawe**	**15.57**	**145**	P		**Pn**	**16 25 29.4**	**-1.4**
	comp=Z,9μmcomp=Z,11μmcomp=Z,923nm,0.8s							
LHMI	**Lhok Sumawe**	**15.57**	**145**			**Pn**	**16 25 29.2**	**-1.7**
MLSI	**Meulaboh, Aceh**	**16.11**	**149**	P		**Pn**	**16 25 33.3**	**-4.3**
	comp=Z,6μmcomp=Z,474nm,1.0s							
TPTI		**17.36**	**148**	P		**Pn**	**16 25 53.8**	**+0.5**
	comp=Z,695nmcomp=Z,39nm,0.8s							
KCSI	**Kotacane, Aceh**	**17.45**	**146**	P		**Pn**	**16 25 50.0**	**-4.4**
	comp=Z,7μmcomp=Z,2μmcomp=Z,246nm,1.1s							
SNSI	**Sinabang, Aceh**	**17.70**	**152**	P		**P**	**16 25 58.4**	**+0.5**
	comp=Z,6μmcomp=Z,413nm,0.8s							
KULM	**Kulim**	**17.80**	**135**	P		**Pn**	**16 25 58.7**	**-0.1**
KULM	**Kulim**	**17.80**	**135**	P		**Pn**	**16 25 59.0**	**+0.2**
IPM	**Ipoh**	**18.65**	**136**	P		**P**	**16 26 07.9**	**-0.5**
IPM	**Ipoh**	**18.65**	**136**	P		**P**	**16 26 08.0**	**-0.4**
PSI	**Prapat**	**18.67**	**144**	P		**P**	**16 26 07.8**	**-1.1**
	comp=Z,1.6nm,0.3s,baz=360,slow=9.3,SNR=20							
PSI	**Prapat**	**18.67**	**144**	P		**P**	**16 26 07.8**	**-1.1**
PSI				pmax	pmax			
	comp=Z,148nm,1.0s							
RPSI	**Rantau Prapat**	**18.76**	**144**	P		**P**	**16 26 10.1**	**+0.4**
RPSI	**Rantau Prapat**	**18.76**	**144**	P		**P**	**16 26 07.8**	**-1.9**
CD2	**Chengdu**	**19.02**	**46**	⇓*i*P		**P**	**16 26 12.1**	**-0.3**
CD2				pP	pP		16 26 23.3	+0.7
CD2				sP	sP		16 26 29.0	+1.0
CD2				S		**Sn**	**16 29 44.8**	**-0.9**
CD2				pmax	pmax			
	comp=Z,170nm,1.0s							
CD2				pmax	pmax			
	comp=Z,4μm,6.5s							
CD2				LR	LR			
	comp=Z,39μm,34.4s							
CD2				LR	LR			
	comp=Z,41μm,35.6s							
CD2				LR	LR			
	comp=Z,15μm,22.0s							
GYA	**Guiyang**	**19.03**	**61**	⇓*i*P		**Pn**	**16 26 13.4**	**-0.4**
GYA				pP	pwP		16 26 25.8	+0.1
GYA				sP	sP		16 26 31.4	+3.1
GYA				PP	pP		16 26 35.0	+12
GYA				S		**Sn**	**16 29 37.9**	**-8.3**
GYA				sS	sS		16 29 58.5	-4.2
GYA				SS		**SnSn**	**16 30 09.0**	**+8.3**
GYA				pmax	pmax			
	comp=Z,170nm,0.9s							
GYA				pmax	pmax			
	comp=Z,4μm,5.7s							
GYA				LR	LR			
	comp=Z,17μm,12.0s							
GYA				LR	LR			
	comp=Z,9μm,13.5s							
GYA				LR	LR			
	comp=Z,9μm,14.3s							
GSI	**Gunungsitoli**	**19.25**	**150**	P		**Pn**	**16 26 17.2**	**+0.9**
	comp=Z,48μmcomp=Z,30μmcomp=Z,2μm,1.4s							
GSI	**Gunungsitoli**	**19.25**	**150**	P		**Pn**	**16 26 16.4**	**+0.1**
GSI				IAmb	IAmb		16 26 45.5	
	comp=Z,520nm,1.1s							
SARP	**Sargodha**	**19.46**	**317**	P		**Pn**	**16 26 18.3**	**-0.4**
CHCP	**Chirah Chowk**	**20.28**	**322**	P		Pn	16 26 28.2	-0.3
NIL	**Nilore**	**20.28**	**322**	P		**P**	**16 26 27.2**	**+1.0**
NIL				pmax	pmax			
	comp=Z,1μm,0.8s							
NIL	**Nilore**	**20.28**	**322**	P		**P**	**16 26 27.2**	**+1.0**
THW	**Thamme Wali**	**20.62**	**318**	P		Pn	16 26 32.0	-0.5
QIZ	**Qiongzhong**	**20.65**	**84**	P		**P**	**16 26 30.5**	**+0.2**
QIZ				S		**S**	**16 30 18.9**	**+0.2**
QIZ				pmax	pmax			
	comp=Z,37nm,1.2s							
QIZ				pmax	pmax			
	comp=Z,4μm,9.3s							
QIZ				LR	LR			
	comp=Z,2μm,8.3s							
QIZ				LR	LR			
	comp=Z,6μm,15.3s							
QIZ				LR	LR			
	comp=Z,6μm,14.3s							
QIZ	**Qiongzhong**	**20.65**	**84**	P		**P**	**16 26 30.4**	**+0.2**
DLV	**T Lat**	**20.68**	**105**	P		**P**	**16 26 31.9**	**+1.1**
MNSI	**Mandailing Nat**	**20.70**	**146**	P		**P**	**16 26 29.9**	**-0.9**
	comp=Z,4μmcomp=Z,590nm,0.9s							
PBSI	**Pulau Batu**	**20.77**	**150**	P		Pn	16 26 34.2	-0.1
	comp=Z,13μmcomp=Z,13μmcomp=Z,611nm,1.6s							
BKNI	**Bangkinang**	**21.90**	**143**	P		**P**	**16 26 43.1**	**-0.5**
	comp=Z,5μmcomp=Z,5μmcomp=Z,618nm,1.1s							
BKNI	**Bangkinang**	**21.90**	**143**	P		**P**	**16 26 43.4**	**-0.2**
SISI	**Saibi**	**22.27**	**150**	P		**P**	**16 26 50.0**	**+2.4**
	comp=Z,3μmcomp=Z,338nm,1.1s							
MYKOM	**Kota Tinggi**	**22.52**	**135**	P		**P**	**16 26 50.4**	**+0.1**
MYKOM	**Kota Tinggi**	**22.52**	**135**	P		**P**	**16 26 51.0**	**+0.7**
LZH	**Lanzhou**	**22.59**	**35**	*e*P		**P**	**16 26 52.3**	**+1.1**
LZH				pP	pwP		16 27 02.8	-1.4
LZH				S	S		16 30 51.4	-4.5
LZH				SS		**SnSn**	**16 31 31.8**	**+3.7**
LZH				pmax	pmax			
	comp=Z,430nm,1.4s							
LZH				pmax	pmax			
	comp=Z,3μm,5.4s							
LZH				LR	LR			
	comp=Z,8μm,15.0s							
LZH				LR	LR			
	comp=Z,10μm,13.0s							
LZH				LR	LR			
	comp=Z,10μm,15.7s							
PDSI	**Padang**	**22.61**	**146**	P		**P**	**16 26 50.5**	**-0.8**
	comp=Z,3μmcomp=Z,4μmcomp=Z,370nm,1.1s							
ENH	**Enshi**	**22.86**	**54**	P		**P**	**16 26 53.5**	**-0.5**
SDSI	**Sungai Dareh**	**23.15**	**144**	P		**P**	**16 26 55.5**	**-1.3**
	comp=Z,3μmcomp=Z,306nm,1.0s							
GTA	**Gaotai**	**23.43**	**23**	⇓P		**P**	**16 27 00.1**	**+0.6**
GTA				pP	pP		16 27 10.0	-0.3
GTA				sP	sP		16 27 14.6	-0.9
GTA				S		**S**	**16 31 11.9**	**+2.2**
GTA				pmax	pmax			
	comp=Z,240nm,1.4s							
GTA				pmax	pmax			
	comp=Z,3μm,5.8s							
GTA				LR	LR			
	comp=Z,6μm,12.1s							
GTA				LR	LR			
	comp=Z,16μm,12.7s							
GTA				LR	LR			
	comp=Z,6μm,11.1s							
KBL	**Kabul**	**23.47**	**317**	P		**P**	**16 27 00.9**	**+0.8**
KBL				pmax	pmax			
	comp=Z,739nm,1.0s							
KBL	**Kabul**	**23.47**	**317**	P		**P**	**16 27 00.9**	**+0.8**
TPRI	**Tanjung Pinang**	**23.62**	**135**	P		**P**	**16 27 02.5**	**+1.2**
	comp=Z,5μmcomp=Z,363nm,0.9s							
KSH	**Kashi**	**23.65**	**336**	P		**P**	**16 27 01.0**	**-0.6**
KSH				pP	pP		16 27 10.0	-2.5
KSH				PP	sP		16 27 36.3	+19
KSH				S		**S**	**16 31 07.3**	**-6.0**
KSH				pmax	pmax			
	comp=Z,800nm,1.1s							
KSH				pmax	pmax			
	comp=Z,3μm,4.9s							
KSH				LR	LR			
	comp=Z,10μm,7.4s							
KSH				LR	LR			
	comp=Z,8μm,10.8s							
KSH				LR	LR			
	comp=Z,11μm,10.5s							
PPSI	**Pulau Pagai**	**23.96**	**149**	P		**P**	**16 27 06.4**	**+1.9**
	comp=Z,9μmcomp=Z,765nm,1.5s							
GZH	**Guangzhou**	**24.12**	**74**	P		**P**	**16 27 10.6**	**+4.6**
GZH				S		**S**	**16 31 27.3**	**+6.4**
GZH				pmax	pmax			
	comp=Z,3μm,2.9s							
GZH				LR	LR			
	comp=Z,5μm,11.8s							
GZH				LR	LR			
	comp=Z,9μm,13.0s							
KRJI	**Kerinci**	**24.13**	**145**	P		**P**	**16 27 07.1**	**+0.9**
	comp=Z,8μmcomp=Z,29μmcomp=Z,2μm,1.0s							
XAN	**Xi'an**	**24.38**	**46**	P		**P**	**16 27 08.8**	**+0.5**
XAN				pP	pP		16 27 13.0	-6.6
XAN

WMQ LR LR
comp=Z,7μm,17.1s
WMQ LR LR
comp=Z,7μm,17.1s
WMQ LR LR
comp=Z,12μm,23.1s
WMQ Urumqi 25.50 359 P **P** **16 27 20.3 +1.9**
WMQ pmax pmax
comp=Z,751nm,1.0s
WMQ Urumqi 25.50 359 P **P** **16 27 20.3 +1.9**
PRZ Przheval'sk 25.53 343 P **P** **16 27 21.0 +2.2**
PRZ pmax pmax
comp=Z,2μm,1.3s
PRZ Przheval'sk 25.53 343 P **P** **16 27 21.0 +2.2**
KDJ Kajisay 25.56 341 P **P** **16 27 20.8 +1.7**
KDJ pmax pmax
comp=Z,641nm,1.1s
KDJ Kajisay 25.56 341 P **P** **16 27 20.8 +1.7**
GAR Garm 25.80 327 P **P** **16 27 21.9 +0.6**
SHLS Shalkode 25.89 345⇓*i* P **P** **16 27 23.2 +1.2**
comp=Z,304nm,0.8s
SHLS *e*S **S** **16 31 58.8 +10**
SHLS Shalkode 25.89 345*d i* P **P** **16 27 23.1 +1.2**
SHLS pmax pmax
comp=Z,304nm,0.8s
ULHL Ulahol 25.96 340 P **P** **16 27 25.1 +2.3**
SNR=28
UZB Uzynbulak 25.98 345⇓*i* P **P** **16 27 24.8 +1.9**
comp=Z,126nm,1.0s
UZB *e*S **S** **16 31 54.7 +4.2**
UZB Uzynbulak 25.98 345*d i* P **P** **16 27 24.8 +1.9**
UZB *e*S **S** **16 31 54.7 +4.2**
UZB pmax pmax
comp=Z,126nm,1.0s
SATY Saty 26.06 344⇓*i* P **P** **16 27 25.5 +1.9**
comp=Z,118nm,1.2s
SATY *e*S S 16 32 04.0 +12
SATY Saty 26.06 344*d i* P **P** **16 27 25.5 +1.9**
SATY pmax pmax
comp=Z,118nm,1.2s
KZA Kyzart 26.15 338 P **P** **16 27 26.9 +2.1**
SNR=81
ZHN Zhinishke 26.15 344 *e*S **S** 16 32 05.1 +12
CHGR Chuyangaron 26.17 325 P **P** **16 27 24.4 -0.1**
MDOK Medeo 26.54 342 *i* P **P** **16 27 30.0 +2.0**
comp=Z,4μm,1.8s
MDOK *e*S **S** **16 32 00.6 +1.3**
MDOK Medeo 26.54 342 *i* P **P** **16 27 29.9 +2.0**
MDOK *e*S **S** **16 32 00.5 +1.3**
MDOK pmax pmax
comp=Z,4μm,1.8s
UCH Uchtor 26.55 337 P **P** **16 27 29.9 +1.5**
SNR=75
AAA Alma-Ata 26.62 342⇓*i* P **P** **16 27 30.5 +2.0**
comp=Z,297nm,0.8s
AAA Alma-Ata 26.62 342*d i* P **P** **16 27 30.5 +2.0**
AAA pmax pmax
comp=Z,297nm,0.8s
MTBS Maitube 26.70 341 *e*P **P** **16 27 30.5 +1.3**
MTBS Maitube 26.70 341 *e*P **P** **16 27 30.5 +1.3**
LHSI Lahat 26.70 144 P **P** **16 27 30.8 +1.4**
comp=Z,4μmcomp=Z,228nm,1.6s
KBK Karagaybulak 26.77 338 P **P** **16 27 32.4 +2.4**
SNR=64
TKM2 Tokmak 2 26.78 339 P **P** **16 27 31.6 +1.4**
SNR=53
TKM2 Tokmak 2 26.78 339 P **P** **16 27 31.2 +1.1**
AML Almayashu 26.78 336 P **P** **16 27 32.0 +1.6**
SNR=119
WHN Wuhan 26.82 58⇓*i* P **P** **16 27 31.0 +0.7**
WHN sP **sP** **16 27 49.5 +2.8**
WHN PP **PnPn** **16 28 15.5 +2.0**
WHN S **S** **16 32 02.8 -0.8**
WHN pmax pmax
comp=Z,580nm,1.2s
WHN LR LR
comp=Z,26μm,14.5s
WHN LR LR
comp=Z,16μm,16.3s
WHN LR LR
comp=Z,19μm,17.9s
MNAI Manna 26.83 145 P **P** **16 27 33.7 +3.1**
comp=Z,4μmcomp=Z,10μmcomp=Z,714nm,1.1s
MNAI Manna 26.83 145 P **P** **16 27 30.8 +0.2**
AAK Ala-Archa 26.91 338 P **P** **16 27 32.7 +1.4**
comp=Z,25nm,0.8s,baz=148,slow=6.3,SNR=75
AAK S **S** **16 32 12.3 +7.1**
comp=Z,132nm,1.1s,baz=217,slow=20,SNR=2.7
AAK LR LR 16 39 28.4
comp=Z,13μm,21.5s,baz=142,slow=39
AAK Ala-Archa 26.91 338 *i* P **P** **16 27 32.4 +1.1**
SNR=62
AAK Ala-Archa 26.91 338*ce*P **P** **16 27 33.3 +1.9**
AAK pmax pmax
comp=Z,174nm,1.7s
AAK Ala-Archa 26.91 338 P **P** **16 27 33.2 +1.9**
FRU1 Bishkek 27.02 338 P **P** **16 27 34.0 +1.9**
FRU1 pmax pmax
comp=Z,988nm,1.2s
FRU1 Bishkek 27.02 338 P **P** **16 27 34.0 +1.9**
CHMS Chumysh 27.14 338 P **P** **16 27 34.6 +1.4**
SNR=25
EKS2 Erkin-Say 27.20 337 P **P** **16 27 35.5 +1.7**
SNR=44
KUU Kurty 27.42 341⇓*i* P **P** **16 27 36.6 +1.0**
comp=Z,209nm,1.7s
KUU *e*S **S** **16 32 13.0 +0.2**
KUU Kurty 27.42 341*d i* P **P** **16 27 36.6 +1.0**
KUU *e*S **S** **16 32 13.0 +0.2**
KUU pmax pmax
comp=Z,209nm,1.7s
USP Ospenovka 27.46 338 P **P** **16 27 37.4 +1.3**
SNR=29
KSM Kuching 27.46 125 P **P** **16 27 36.9 +0.6**
KSM Kuching 27.46 125 P **P** **16 27 38.0 +1.7**
SGDS Sogindy 27.58 339⇓*i* P **P** **16 27 38.5 +1.4**
comp=Z,154nm,1.9s
SGDS *e*S **S** **16 32 17.6 +2.1**
WBK Wadi Bani Khal 27.59 284 P **P** **16 27 40.3 +2.9**
SNR=18
WBK P **P** **16 27 40.3 +2.9**
SNR=18
WBK P **P** **16 27 40.3 +2.9**
SNR=18
MDSI Maura Dua 27.61 143 P **P** **16 27 34.8 -2.8**
comp=Z,3μmcomp=Z,747nmcomp=Z,33nm,1.0s
TDK Taldyqorghan 27.88 345 *e*P **P** **16 27 40.5 +0.7**
TDK *e*S **S** **16 32 23.8 +3.7**
TDK Taldyqorghan 27.88 345 *e*P **P** **16 27 40.4 +0.7**
TDK *e*S **S** **16 32 23.8 +3.7**
WSAR Wadi Sarin 27.95 285 P **P** **16 27 41.5 +0.9**
comp=Z,13nm,0.6s,baz=137,slow=5.7,SNR=26
WSAR Wadi Sarin 27.95 285 P **P** **16 27 43.0 +2.4**
SNR=8.3
LWLI Liwa 27.98 144 P **P** **16 27 42.1 +1.1**
comp=Z,3μmcomp=Z,321nm,0.7s
HRA Herat 28.07 310 P **P** **16 27 41.2 -0.6**
TAS Tashkent 28.07 329 P **P** **16 27 42.4 +0.9**
TAS pmax pmax
comp=Z,773nm,0.9s
TAS Tashkent 28.07 329 P **P** **16 27 42.4 +0.9**
JBG Jabagly 28.34 332 *e*P **P** **16 27 46.1 +2.1**
JBG pmax pmax
comp=Z,112nm,1.3s
IUG Iuzhnay 28.35 331 *e*P **P** **16 27 45.6 +1.4**
IUG Iuzhnay 28.35 331 *e*P **P** **16 27 45.5 +1.4**
JMDO Jabal Madar 28.37 283 P **P** **16 27 46.8 +2.4**
SNR=12
JMDO P **P** **16 27 46.8 +2.4**
SNR=12
JMDO P **P** **16 27 46.8 +2.4**
SNR=12
DZA Taraz 28.38 334 *e*P **P** **16 27 44.5 +0.2**
DZA Taraz 28.38 334 *e*P **P** **16 27 44.4 +0.2**
SBUM Sibu 28.41 121 P **P** **16 27 45.0 +0.2**
SBUM Sibu 28.41 121 P **P** **16 27 47.0 +2.3**
BIDO Bidbid 28.43 286 P **P** **16 27 47.4 +2.5**
SNR=13
BIDO P **P** **16 27 47.4 +2.5**
SNR=13
SMDO Samad 28.46 285 P **P** **16 27 47.9 +2.6**
SNR=24
SMDO P **P** **16 27 47.9 +2.6**
SNR=24
SMDO P **P** **16 27 47.9 +2.6**
CHM Chimkent 28.69 331 *e*P **P** **16 27 48.2 +1.2**
CHM *e*S **S** **16 32 35.7 +2.8**
CHM Chimkent 28.69 331 *e*P **P** **16 27 48.1 +1.2**
CHM *e*S **S** **16 32 35.6 +2.8**
TIY Taiyuan 28.83 43 *e*P **P** **16 27 49.0 +0.6**
TIY pP **pP** **16 28 00.9 +1.2**
TIY S **S** **16 32 35.4 +0.1**
TIY pmax pmax
comp=Z,180nm,0.7s
TIY LR LR
comp=Z,4μm,9.1s
TIY LR LR
comp=Z,4μm,9.1s
TIY LR LR
comp=Z,5μm,14.0s
MK31 Makanchi Array 28.87 352 P **P** **16 27 49.4 +0.8**
MK31 pmax pmax
comp=Z,144nm,0.9s
MK31 Makanchi Array 28.87 352 P **P** **16 27 49.4 +0.8**
MK31 IAmb IAmb 16 28 17.1
comp=Z,144nm,0.9s
MKAR Makanchi Array 28.87 352 P **P** **16 27 49.6 +1.1**
comp=Z,90nm,0.7s,baz=172,slow=9.1,SNR=446
MKAR LR LR 16 40 55.0
comp=Z,10μm,21.8s,baz=166,slow=40
KK31 Karatay Array 28.90 333 *i* P **P** **16 27 49.8 +1.0**
KK31 Karatay Array 28.90 333 P **P** **16 27 49.8 +1.0**
KKAR Karatay Array 28.90 333 P **P** **16 27 50.0 +1.1**
KKAR pmax pmax
comp=Z,346nm,1.2s
KKAR Karatay Array 28.90 333 P **P** **16 27 50.0 +1.1**
KKAR IAmb IAmb 16 28 53.1
comp=Z,346nm,1.2s
MAKZ Makanchi 28.93 351 P **P** **16 27 49.2 +0.1**
MAKZ pmax pmax
comp=Z,166nm,1.1s
MAKZ Makanchi 28.93 351 P **P** **16 27 49.2 +0.1**
MAKZ IAmb IAmb 16 28 54.6
comp=Z,166nm,1.1s
QZH Quanzhou 29.11 71⇑*i* P **P** **16 27 52.5 +1.6**
QZH sP **sP** **16 28 10.9 +3.5**
QZH S **S** **16 32 41.8 +1.9**
QZH pmax pmax
comp=Z,1μm,12.3s
QZH LR LR
comp=Z,3μm,12.3s
QZH LR LR
comp=Z,5μm,15.3s
QZH LR LR
comp=Z,6μm,15.2s
BRLS Borolday 29.14 332 *e*S **S** **16 32 41.8 +1.8**
BTLS Baital 29.18 339 *e*P **P** **16 27 52.5 +1.2**
comp=Z,102nm,2.2s
BTLS *e*S **S** **16 32 40.9 +0.4**
BTLS Baital 29.18 339 *e*P **P** **16 27 52.4 +1.2**
BTLS *e*S **S** **16 32 40.9 +0.4**
BTLS pmax pmax
comp=Z,102nm,2.2s
HOQ Hoqain 29.18 286 P **P** **16 27 54.0 +2.4**
SNR=14
HOQ P **P** **16 27 54.0 +2.4**
SNR=14
BSY Bisya 29.23 284 P **P** **16 27 54.6 +2.6**
SNR=17
BSY P **P** **16 27 54.6 +2.6**
SNR=17
ZSN Zaisan 29.25 356⇓*i* P **P** **16 27 53.8 +1.9**
comp=Z,240nm,2.8s
ZSN *e*S S 16 33 03.5 +22
ZSN Zaisan 29.25 356*d i* P **P** **16 27 53.8 +1.9**
ZSN pmax pmax
comp=Z,240nm,2.8s
DGAR Diego Garcia 29.79 212 P **P** **16 27 57.1 +0.2**
DGAR pmax pmax
comp=Z,124nm,1.1s
DGAR MLR MLR
comp=Z,8μm,21.0s
DGAR Diego Garcia 29.79 212 P **P** **16 27 57.1 +0.2**
DGAR IAmb IAmb 16 29 01.8
comp=Z,124nm,1.1s
ARQ Araqi 29.89 285 P **P** **16 28 01.0 +3.1**
SNR=10
ARQ P **P** **16 28 01.0 +3.1**
SNR=10
SOHO SOHO 29.94 287 P **P** **16 28 00.4 +2.1**
SNR=8.9
SOHO P **P** **16 28 00.4 +2.1**
SNR=8.9
KKM Kota Kinabalu 30.01 110 P **P** **16 28 00.6 +1.5**
KKM IAmb IAmb 16 28 20.6
comp=Z,81nm,0.9s
HHC Hu-ho-hao-te 30.25 37 *e*P **P** **16 28 02.9 +2.0**
HHC pP pP 16 28 12.8 +0.5
HHC sP sP 16 28 21.6 +4.2
HHC S **S** **16 32 59.8 +2.2**
HHC pmax pmax
comp=Z,31nm,0.9s
HHC pmax pmax
comp=Z,310nm,6.3s
HHC LR LR
comp=Z,4μm,15.9s
HHC LR LR
comp=Z,5μm,17.7s
HHC LR LR
comp=Z,3μm,17.0s
MDH Madha 30.27 289 *i* P **P** **16 28 02.0 +0.8**
SNR=12
MDH Madha 30.27 289 P **P** **16 28 02.7 +1.5**
SNR=6.5
MDH P **P** **16 28 02.7 +1.5**
SNR=6.5
UOSS Minazif 30.32 288 *i* P **P** **16 28 02.4 +0.8**
SNR=7.5
UOSS Minazif 30.32 288 P **P** **16 28 01.9 +0.2**
BANOM Banah 30.35 290 *i* P **P** **16 28 03.3 +1.4**
SNR=13
BANOM Banah 30.35 290 P **P** **16 28 04.1 +2.1**
SNR=8.8
BANOM P **P** **16 28 04.1 +2.1**
SNR=8.8
BANOM P **P** **16 28 04.1 +2.1**
SNR=8.8
BATP Bataraza 30.36 104 *e*P **P** **16 28 01.6 -0.4**
HATD Hatta, Dubai 30.37 288 *i* P **P** **16 28 05.4 +3.3**
SNR=23
HATD Hatta, Dubai 30.37 288 P **P** **16 28 05.6 +3.5**
SNR=18
HATD P **P** **16 28 05.6 +3.5**
SNR=18
MSFE Esma-Masafi 30.41 289 *i* P **P** **16 28 05.2 +2.7**
SNR=27
ASHO Ashiyiah 30.42 288 *i* P **P** **16 28 05.4 +2.8**
SNR=103
ASHO Ashiyiah 30.42 288 P **P** **16 28 05.7 +3.2**
SNR=32
SHME Shamm 30.51 290 *i* P **P** **16 28 05.9 +2.5**
SNR=22
ALNE Al Ain 30.64 287 *i* P **P** **16 28 07.1 +2.6**
SNR=21
NAZ Nazwa, Dubai 30.81 288 *i* P **P** **16 28 08.3 +2.4**
SNR=8.6
NAZ Nazwa, Dubai 30.81 288 P **P** **16 28 09.1 +3.1**
SNR=8.0
NAZ P **P** **16 28 09.1 +3.1**
SNR=8.0
NAZ P **P** **16 28 09.1 +3.1**
SNR=8.0
SZP Santa 30.81 86 P **P** **16 28 05.8 -0.3**
SZP IAmb IAmb 16 28 33.9
comp=Z,78nm,0.7s
TPUB Ta-pu 30.82 75 P **P** **16 28 06.9 +0.8**
TPUB IAmb IAmb 16 28 09.6
comp=Z,75nm,0.9s
FAQ Al Faqa, Dubai 30.85 288 *i* P **P** **16 28 08.7 +2.4**
SNR=5.8
NJ2 Nanjing 30.95 58 *e*P **P** **16 28 08.0 +0.9**
NJ2 pP **pP** **16 28 16.8 -1.7**
NJ2 sP **sP** **16 28 22.8 -0.8**
NJ2 S **S** **16 33 06.8 -1.8**
NJ2 sS **sS** **16 33 25.6 -2.0**
NJ2 pmax pmax
comp=Z,140nm,1.0s
NJ2 pmax pmax
comp=Z,540nm,4.0s
NJ2 LR LR
comp=Z,15μm,19.7s
NJ2 LR LR
comp=Z,6μm,24.7s
NJ2 LR LR
comp=Z,8μm,24.3s
ENPP El Nido 31.09 99 *e*P **P** **16 28 08.5 -0.1**
SSLB Suanglung 31.15 74 P **P** **16 28 10.5 +1.5**
SMPP San Manuel, Pa 31.20 89 *e*P **P** **16 28 08.7 -0.8**
TWG Pinlang 31.21 76 P **P** **16 28 10.6 +1.1**
LUBP Lubang 31.23 94 *e*P **P** **16 28 10.7 +0.9**
TIA Tai'an 31.26 49 P **P** **16 28 10.8 +1.0**
TIA S **S** **16 33 13.4 0.0**
TIA pmax pmax
comp=Z,170nm,0.8s
TIA LR LR
comp=Z,4μm,12.8s
TIA LR LR
comp=Z,2μm,9.2s
TIA LR LR
comp=Z,6μm,11.4s
AJN Ajban 31.38 287 *i* P **P** **16 28 12.6 +1.7**
SNR=10
AJN Ajban 31.38 287 P **P** **16 28 13.8 +2.8**
SNR=13
AJN P **P** **16 28 13.8 +2.8**
SNR=13
AJN P **P** **16 28 13.8 +2.8**
SNR=13
DGZ Jazzator, Alta 31.39 359*d i* P **P** **16 28 12.4 +1.5**
DGZ pmax pmax
comp=Z,101nm,0.9s
YULB Yu-li 31.44 75 P **P** **16 28 13.6 +2.1**
YULB IAmb IAmb 16 28 15.8
comp=Z,101nm,0.9s
APYP Conner 31.52 85 *e*P **P** **16 28 13.3 +1.0**
PGP Puerto Galera 31.95 94⇑*e*P **P** **16 28 17.8 +1.7**
BALP Baler 32.12 89 *e*P **P** **16 28 18.8 +1.3**
CAUP Cauayan 32.18 87 *e*P **P** **16 28 18.4 +0.3**
CISI Cisompet, Garu 32.20 141 P P 16 28 35.0 +17
CISI Cisompet, Garu 32.20 141 P **P** **16 28 18.5 +0.2**
CISI IAmb IAmb 16 28 37.1
comp=Z,53nm,0.7s
RBK Rabkut 32.21 274 P P 16 28 24.1 +5.7
SNR=6.2
RBK P P 16 28 24.1 +5.7
SNR=6.2
RBK P P 16 28 24.1 +5.7
SNR=6.2
SJMP San Jose 32.36 95 *e*P **P** **16 28 20.9 +1.3**
ASHT Ashkhabad 32.51 313 IAMs_20 IAMs_20 16 43 23.5
comp=Z,11μm,20.0s
BJT Baijiatuau 32.53 42 P **P** **16 28 21.8 +0.8**
BJT pmax pmax
comp=Z,82nm,1.1s
BJT MLR MLR
comp=Z,3μm,21.0s
BJT Baijiatuau 32.53 42 P **P** **16 28 21.8 +0.8**
BJT IAmb IAmb 16 28 23.9
comp=Z,82nm,1.1s
BJI Beijing 32.55 42 P **P** **16 28 22.8 +1.7**
BJI pP **pP** **16 28 31.8 -0.6**
BJI sP **sP** **16 28 37.6 0.0**
BJI S **S** **16 33 34.9 +1.5**
BJI pmax pmax
comp=Z,70nm,1.0s
BJI pmax pmax
comp=Z,420nm,5.3s
BJI LR LR
comp=Z,5μm,28.0s
BJI LR LR
comp=Z,5μm,28.7s
BJI LR LR
comp=Z,4μm,32.7s
WHFO Wadi Hawf 32.58 275 P **P** **16 28 24.0 +2.4**
SNR=11
WHFO P **P** **16 28 24.0 +2.4**
SNR=11
WHFO P **P** **16 28 24.0 +2.4**
SNR=11
SSE Sheshan 32.58 61 P **P** **16 28 22.6 +1.2**
SSE S **S** **16 33 35.0 +1.0**
SSE pmax pmax
comp=Z,56nm,0.9s
SSE LR LR
comp=Z,5μm,13.0s
SSE LR LR
comp=Z,2μm,11.5s
SSE Sheshan 32.58 61 P **P** **16 28 22.0 +0.6**
GEYT Alibeck 32.69 313 P **P** **16 28 23.5 +1.1**
comp=Z,93nm,0.8s,baz=146,slow=9.0,SNR=148
GEYT LR LR 16 43 48.4
comp=Z,10μm,18.5s,baz=130,slow=40
GYA0B ALIBECK ARRAY 32.69 313 P **P** **16 28 23.2 +0.9**
GYA0B IAmb IAmb 16 28 25.1
comp=Z,100nm,0.8s
GYA0B IAMs_20 IAMs_20 16 43 27.2
comp=Z,10μm,20.0s
SEM Semipalatinsk 32.70 351 *i* P **P** **16 28 22.9 +0.4**
comp=Z,48nm,0.8s
SEM Semipalatinsk 32.70 351 *i* P **P** **16 28 22.9 +0.4**
SEM pmax pmax
comp=Z,48nm,0.8s
YOJ Yonaguni jima 33.07 73 P **P** **16 28 27.0 +1.2**
YOJ pmax pmax
comp=Z,178nm,1.1s
YOJ MLR MLR
comp=Z,4μm,21.0s
YOJ Yonaguni jima 33.07 73 P **P** **16 28 27.0 +1.2**
YOJ IAmb IAmb 16 28 28.6
comp=Z,178nm,1.1s
ABTO Aybut 33.09 274 P **P** **16 28 29.0 +2.9**
SNR=12
ABTO P **P** **16 28 29.0 +2.9**
SNR=12
SONM Songino Array 33.10 23 P **P** **16 28 27.8 +1.8**
comp=Z,83nm,0.6s,baz=206,slow=10,SNR=155
SONM LR LR 16 44 53.1
comp=Z,8μm,21.1s,baz=208,slow=42
KURBB Kurchatov Arra 33.19 349 P **P** **16 28 27.5 +1.0**
KURK Kurchatov 33.27 349*ce*P **P** **16 28 28.2 +1.0**
KURK pmax pmax
comp=Z,264nm,0.8s
KURK Kurchatov 33.27 349 P **P** **16 28 27.8 +0.7**
KURK Kurchatov 33.27 349 IAMs_20 IAMs_20 16 43 60.0
comp=Z,10μm,18.0s
UWJI Ujung Watu 33.32 135 P **P** **16 28 31.5 +3.5**
comp=Z,2μmcomp=Z,263nm,0.7s
ULN Ulaanbaatar 33.37 23*ce*P **P** **16 28 29.6 +1.3**
ULN pmax pmax
comp=Z,155nm,1.0s
ULN Ulaanbaatar 33.37 23 P **P** **16 28 29.1 +0.7**
SOCY Socotra 33.39 265 P **P** **16 28 28.6 -0.2**
SOCY IAmb IAmb 16 29 37.5
comp=Z,118nm,1.3s
SMRI Semarang 33.45 137 P **P** **16 28 32.7 +3.5**
comp=Z,188nm,0.9s
SMRI Semarang 33.45 137 P **P** **16 28 29.6 +0.4**
BRZS Berezniki 33.99 342⇓*i* P **P** **16 28 34.8 +1.2**
comp=Z,114nm,1.5s
BRZS *e*S **S** **16 33 56.5 +1.0**
BRZS Berezniki 33.99 342*d i* P **P** **16 28 34.7 +1.2**
BRZS *e*S **S** **16 33 56.5 +1.0**
BRZS pmax pmax
comp=Z,114nm,1.5s
RCP Roxas 34.12 96⇑*e*P **P** **16 28 36.4 +1.3**
SMKI Samarinda 34.15 120 P **P** **16 28 37.4 +2.2**
comp=Z,5μmcomp=Z,390nm,1.2s
GUIM Jordan 34.23 98 *e*P **P** **16 28 36.8 +0.7**
ZAK Zakamensk 34.30 17 *e*P **P** **16 28 37.8 +1.5**
ZAK pmax pmax
comp=Z,40nm,1.4s
ZAK pmax pmax
comp=Z,45nm,1.2s
CNOP Candoni, Negro 34.52 99 *e*P **P** **16 28 38.3 -0.2**
GRJI Gresik 34.72 134 P **P** **16 28 41.7 +1.6**
comp=Z,1μmcomp=Z,173nm,0.8s
MOY Mondy 34.89 14 *e*P **P** **16 28 43.6 +2.2**
MOY pmax pmax
comp=Z,107nm,2.1s
PVCP Virac 34.97 92 *e*P **P** **16 28 39.8 -2.6**
TLY Talaya 35.57 17*d i* P **P** **16 28 49.6 +2.5**
TLY *e* 16 30 11.6
TLY *e*S **S** **16 34 18.8 -1.0**
TLY MLR MLR
comp=Z,27μm,24.0s
TLY Talaya 35.57 17 P **P** **16 28 48.9 +1.8**

TLY IAmb IAmb 16 30 05.6
comp=Z,115nm,1.9s
TLY IAMs_20 IAMs_20 16 45 07.3
comp=Z,11μm,22.0s
DL2 Dalian 35.66 48 P **P** **16 28 49.4 +1.4**
DL2 S **S** **16 34 20.4 -1.0**
DL2 pmax pmax
comp=Z,160nm,0.9s
DL2 pmax pmax
comp=Z,560nm,3.6s
DL2 LR LR
comp=Z,4μm,23.4s
DL2 LR LR
comp=Z,4μm,24.1s
DL2 LR LR
comp=Z,4μm,26.9s
CNP Catarman 35.70 94 *e*P **P** **16 28 48.7 0.0**
ZAA0 Zalesovo Array 35.73 357 P **P** **16 28 49.2 +0.8**
ZAA0 IAmb IAmb 16 29 10.8
comp=Z,117nm,0.9s
ZAA0 IAMs_20 IAMs_20 16 45 24.2
comp=Z,9μm,21.0s
ZALV Zalesovo Beam 35.73 357 P **P** **16 28 49.4 +1.0**
comp=Z,73nm,0.6s,baz=184,slow=9.1,SNR=250
ZALV LR LR 16 45 34.4
comp=Z,9μm,21.5s,baz=182,slow=40
PAGZ Pagadian 35.85 102 *e*P **P** **16 28 50.4 +0.4**
MPSI Mapaga 35.98 116 P **P** **16 28 52.5 +1.5**
comp=Z,5μmcomp=Z,2μmcomp=Z,154nm,1.1s
IRK Irkutsk 36.24 17 *e*P **P** **16 28 52.8 -0.1**
IRK pmax pmax
comp=Z,135nm,1.8s
MSLP Maasin 36.51 98 *e*P **P** **16 28 56.6 +1.0**
CGP Cagayan de Oro 36.88 100⇓*e*P **P** **16 28 59.5 +0.8**
CTBH Cotabato--PC H 36.88 103⇑*i*P **P** **16 29 00.1 +1.4**
JAGI Jajag, Banyuwa 36.98 134 P P 16 29 15.4 +16
JAGI Jajag, Banyuwa 36.98 134 P **P** **16 29 00.3 +0.8**
JAGI IAmb IAmb 16 29 16.2
comp=Z,98nm,0.9s
BRVK Borovoye 37.41 342*ce*P **P** **16 29 03.5 +0.7**
BRVK pmax pmax
comp=Z,37nm,0.8s
BRVK Borovoye 37.41 342 P **P** **16 29 03.3 +0.5**
BRVK IAmb IAmb 16 30 09.4
comp=Z,222nm,1.5s
KCP Kidapawan 37.73 102⇑*i*P **P** **16 29 08.0 +1.9**
TTSI Tana Toraja 37.76 121 P **P** **16 29 07.8 +1.6**
comp=Z,2μmcomp=Z,125nm,1.1s
JOW Kunigami 37.98 70 P **P** **16 29 09.0 +1.0**
comp=Z,6.2nm,0.6s,baz=187,slow=11,SNR=20
JOW Kunigami 37.98 70 P **P** **16 29 08.8 +0.8**
JOW IAmb IAmb 16 29 10.6
comp=Z,186nm,1.5s
DAV Davao City (W) 38.17 102⇓*i*P P 16 29 15.2 +5.5
SPSI Sidrap Palu 38.25 122 P **P** **16 29 13.1 +2.8**
comp=Z,4μmcomp=Z,1μmcomp=Z,80nm,0.9s
SNY Shenyang 38.29 44⇓P **P** **16 29 11.3 +0.9**
SNY S **S** **16 35 01.9 +0.5**
SNY pmax pmax
comp=Z,120nm,1.2s
SNY LR LR
comp=Z,3μm,13.5s
SNY LR LR
comp=Z,3μm,22.1s
SNY LR LR
comp=Z,4μm,20.8s
AB31 Akbulak array 38.35 330 *i*P **P** **16 29 06.3 -4.5**
INCN Inchon 38.77 52 P **P** **16 29 14.1 -0.4**
INCN pmax pmax
comp=Z,70nm,0.8s
INCN Inchon 38.77 52 P **P** **16 29 14.1 -0.4**
INCN IAmb IAmb 16 29 15.5
comp=Z,70nm,0.8s
KAPI Kappang 38.86 123 P **P** **16 29 15.5 0.0**
KAPI pmax pmax
comp=Z,36nm,0.8s
KAPI Kappang 38.86 123 P **P** **16 29 15.5 0.0**
TJN Taejon 38.99 54*ce*P **P** **16 29 16.3 0.0**
LUWI Luwuk 39.15 116 P **P** **16 29 19.2 +1.3**
comp=Z,4μmcomp=Z,4μmcomp=Z,520nm,1.1s
LUWI Luwuk 39.15 116 P **P** **16 29 18.3 +0.4**
CIT Chita 39.22 25 *e*P **P** **16 29 18.8 +0.7**
CIT *e* 16 29 34.8
CIT *e* 16 31 27.5
CIT *e* 16 38 33.5
CIT pmax pmax
comp=Z,113nm,2.2s
BKSI Bulukumba 39.34 124 P **P** **16 29 21.7 +2.2**
comp=Z,1μmcomp=Z,91nm,0.9s
MSEY Mahe Island 39.38 238 P **P** **16 29 18.2 -1.6**
KMSI Cibinong 39.40 112 P **P** **16 29 21.5 +1.5**
comp=Z,3μmcomp=Z,382nm,0.8s
KS19 Wonju Array Si 39.71 53 P **P** **16 29 21.9 -0.4**
KSRS Korea Array 39.74 53 P **P** **16 29 22.3 -0.2**
comp=Z,21nm,0.7s,baz=245,slow=8.6,SNR=126
KSRS PP **PP** **16 30 54.0 -0.4**
comp=Z,9.8nm,0.9s,baz=244,slow=12,SNR=4.5
KSRS LR LR 16 49 05.3
comp=Z,3μm,19.7s,baz=246,slow=41
AKTO Aktyubinsk 40.07 330 P **P** **16 29 25.7 +0.6**
comp=Z,37nm,0.8s,baz=136,slow=8.6,SNR=110
AKTO Aktyubinsk 40.07 330 P **P** **16 29 24.4 -0.7**
HIA Hailar 40.10 32*di*P **P** **16 29 26.7 +1.2**
HIA pmax pmax
comp=Z,108nm,1.1s
HIA Hailar 40.10 32 P **P** **16 29 26.5 +1.1**
HIA IAmb IAmb 16 29 31.5
comp=Z,91nm,0.8s
CN2 Changchun 40.41 43 *e*P **P** **16 29 28.6 +0.5**
CN2 *e*S **S** **16 35 32.8 -0.5**
CN2 SS **SS** **16 38 30.1 -3.5**
CN2 pmax pmax
comp=Z,60nm,1.1s
CN2 pmax pmax
comp=Z,490nm,10.5s
CN2 LR LR
comp=Z,4μm,21.0s
CN2 LR LR
comp=Z,3μm,21.0s
CN2 LR LR
comp=Z,3μm,16.0s
JNU Nakatsue 41.04 60 P **P** **16 29 33.9 +0.4**
AKT Akhty 41.44 313 *e*P **P** **16 29 38.0 +1.3**
AKT *e* 16 31 15.7
AKT *e* 16 31 34.4
AKT pmax pmax
comp=Z,118nm,0.7s
DAMY Dhamar 41.98 272 P **P** **16 29 44.0 +2.4**
SNR=29
DAMY Dhamar 41.98 272 P **P** **16 29 42.7 +1.0**
DAMY IAmb IAmb 16 30 02.8
comp=Z,163nm,1.1s
DAMY IAMs_20 IAMs_20 16 45 25.1
comp=Z,8μm,20.0s
MAK Makhachkala 42.16 315 *e*P **P** **16 29 40.3 -2.0**
MAK *e* 16 31 18.0
MAK *e*S **S** **16 35 59.8 +0.7**
MAK pmax pmax
comp=Z,212nm,1.0s
MAK MLR MLR
comp=Z,2μm,12.0s
TNTI Ternate 42.31 110 P **P** **16 29 45.3 +1.3**
comp=Z,2μmcomp=Z,652nmcomp=Z,50nm,1.1s
SANI Sanana 42.42 114 P **P** **16 29 44.2 -0.7**
comp=Z,1μmcomp=Z,91nm,1.0s
EDFI Ende, Flores 42.67 126 P **P** **16 29 47.7 +0.7**
comp=Z,513nmcomp=Z,46nm,0.8s
BASI Baing, Sumba 42.77 129 P P 16 30 04.3 +17
MMRI Maumere 43.02 126 P P 16 30 05.8 +16
LBMI Labuha 43.07 112 P **P** **16 29 49.0 -1.1**
comp=Z,1μmcomp=Z,99nm,1.0s
CUKT Cukurca 43.21 305 *e*P **P** **16 29 52.3 +1.1**
TASB TASBURUN-IGDIR 43.45 309 *e*P **P** **16 29 55.3 +2.3**
CLDR Caldiran 43.46 308 *e*P **P** **16 29 55.5 +2.2**
MDJ Mudanjiang 43.46 44 P **P** **16 29 53.8 +0.9**
MDJ pP pwP 16 30 05.9 -1.6
MDJ sP sP 16 30 11.4 +1.8
MDJ S **S** **16 36 20.1 +1.9**
MDJ sS sS 16 36 40.6 +2.9
MDJ ScS **ScS** **16 39 49.4 +0.6**
MDJ pmax pmax
comp=Z,66nm,1.0s
MDJ pmax pmax
comp=Z,180nm,4.3s
MDJ LR LR
comp=Z,4μm,14.3s
MDJ LR LR
comp=Z,2μm,15.7s
MDJ LR LR
comp=Z,3μm,24.2s
MDJ Mudanjiang 43.46 44 P **P** **16 29 52.8 -0.1**
TBLG Delisi 43.63 312 P **P** **16 29 55.4 +1.0**
TBLG pmax pmax
comp=Z,131nm,0.9s
TBLG Delisi 43.63 312 P **P** **16 29 55.4 +1.0**
TBLG IAmb IAmb 16 31 03.5
comp=Z,131nm,0.9s
SVE Sverdlovsk 43.65 338*c i*P **P** **16 29 55.8 +1.6**
SVE *e*S **S** **16 36 20.7 +0.1**
SVE pmax pmax
comp=Z,121nm,0.9s
SVE MLR MLR
comp=Z,7μm,17.0s
VANB Van 43.71 307 *e*P **P** **16 29 56.4 +1.2**
MSHR Mys Shultsa 43.75 47*ce*P **P** **16 29 56.3 +1.0**
MSHR pmax pmax
comp=Z,144nm,0.9s
BOD Bodaibo 43.93 20 *e*P **P** **16 29 57.5 +1.0**
BOD pmax pmax
comp=Z,89nm,1.3s
AKDM Akdamar-Van 43.95 307 *e*P **P** **16 29 59.1 +1.9**
NLAI Namlea 43.98 115 P **P** **16 29 59.2 +1.8**
comp=Z,1μmcomp=Z,84nm,0.9s
ARU Arti 44.09 337 P **P** **16 29 58.6 +0.9**
comp=Z,27nm,0.7s,baz=141,slow=3.8,SNR=94
ARU Arti 44.09 337*di*P **P** **16 29 58.7 +0.9**
ARU 16 31 41.1
ARU PPP PPP 16 32 15.8
ARU S **S** **16 36 32.0 +4.9**
ARU SS **SS** **16 39 40.6 -5.0**
ARU SSS SSS 16 40 39.8
ARU pmax pmax
comp=Z,79nm,0.8s
ARU MLR MLR
comp=Z,6μm,17.0s
ARU Arti 44.09 337 P **P** **16 29 58.2 +0.4**
ARU IAmb IAmb 16 31 06.4
comp=Z,167nm,1.2s
ARU IAMs_20 IAMs_20 16 49 49.2
comp=Z,6μm,22.0s
SIRT Sirnak 44.18 305 *e*P **P** **16 30 00.0 +1.1**
AGRB Hanur-Agry 44.26 308 *e*P **P** **16 30 02.0 +2.3**
AKH Akhalkalaki 44.42 311⇓P **P** **16 30 03.6 +2.7**
AKH Akhalkalaki 44.42 311 P **P** **16 30 02.5 +1.6**
AKH pmax pmax
comp=Z,86nm,1.0s
AKH Akhalkalaki 44.42 311 P **P** **16 30 02.5 +1.6**
AKH IAmb IAmb 16 30 04.2
comp=Z,86nm,1.0s
VLA Vladivostok 44.44 46 *i*P **P** **16 30 01.4 +0.6**
VLA pmax pmax
comp=Z,85nm,0.9s
VLA MLR MLR
comp=Z,3μm,15.0s
KARS Kars 44.49 310 *e*P **P** **16 30 04.1 +2.7**
ZEI Tsey 44.57 313 *e*P **P** **16 30 01.7 -0.4**
ZEI pmax pmax
comp=Z,84nm,0.9s
GURO Guroymak-BITLI 44.73 307 *e*P **P** **16 30 05.6 +2.2**
USA0B Ussuriysk Arra 44.89 45 P **P** **16 30 04.9 +0.6**
USA0B pmax pmax
comp=Z,39nm,1.1s
USA0B Ussuriysk Arra 44.89 45 P **P** **16 30 04.9 +0.6**
USRK Ussuriysk Ar. 44.89 45 P **P** **16 30 04.5 +0.2**
comp=Z,18nm,0.8s,baz=253,slow=7.1,SNR=27
USRK LR LR 16 53 08.1
comp=Z,3μm,19.2s,baz=235,slow=42
SENK Senkaya-Erzuru 45.00 310 *e*P **P** **16 30 07.9 +2.3**
NCK Nalchik 45.01 314 *i*P **P** **16 30 05.6 +0.2**
NCK pmax pmax
comp=Z,20nm,0.8s
AAI Ambon 45.15 115 P **P** **16 30 08.0 +1.2**
comp=Z,4μmcomp=Z,1μmcomp=Z,88nm,0.8s
KOPR Koprukoy-ERZUR 45.22 309 *e*P **P** **16 30 09.8 +2.5**
SVAN Silvan-Diyarba 45.28 306 *e*P **P** **16 30 09.4 +1.8**
SOEI Soe 45.29 125 P **P** **16 30 12.1 +4.1**
comp=Z,1μmcomp=Z,122nm,0.7s
SOEI Soe 45.29 125 P **P** **16 30 07.3 -0.7**
SOEI IAmb IAmb 16 30 35.4
comp=Z,103nm,0.9s
VRTB Varto-Mus 45.31 307 *e*P **P** **16 30 10.6 +2.6**
NEY Neytrino 45.53 313 *i*P **P** **16 30 11.0 +1.3**
NEY pmax pmax
comp=Z,10.0nm,0.7s
KBZ Khabaz 45.57 314 P **P** **16 30 10.6 +0.9**
comp=Z,25nm,0.8s,baz=135,slow=8.8,SNR=30
KBZ Khabaz 45.57 314*ce*P **P** **16 30 10.6 +0.9**
KBZ pmax pmax
comp=Z,6.0nm,0.6s
MSAI Masohi 45.61 114 P **P** **16 30 11.2 +0.7**
comp=Z,453nmcomp=Z,59nm,1.0s
KARO Karlova-Bingo 45.65 307 *e*P **P** **16 30 12.8 +2.1**
MAZI Mazidag 45.72 305 *e*P **P** **16 30 12.4 +1.2**
BATM Batumi 45.77 311⇑P **P** **16 30 13.4 +2.0**
BCA Borcka 45.77 311⇓P **P** **16 30 13.2 +1.7**
BCA Borcka 45.77 311 *e*P **P** **16 30 12.9 +1.4**
KIV Kislovodsk 45.79 314⇓P **P** **16 30 13.1 +1.5**
KIV Kislovodsk 45.79 314 *i*P **P** **16 30 12.5 +1.0**
SNR=35
KIV Kislovodsk 45.79 314*c i*P **P** **16 30 12.6 +1.0**
KIV *i* 16 30 21.8
KIV *i*S **S** **16 36 49.5 -2.8**
KIV pmax pmax
comp=Z,119nm,0.8s
KIV MLR MLR
comp=Z,2μm,18.0s
KIV Kislovodsk 45.79 314 P **P** **16 30 12.2 +0.6**
KIV IAmb IAmb 16 30 16.1
comp=Z,108nm,0.8s
BNGB Bingl 45.86 307 *e*P **P** **16 30 13.9 +1.6**
GOF Gofitskoye 45.92 316⇑*e*P **P** **16 30 13.1 +0.5**
GOF pmax pmax
comp=Z,49nm,0.9s
DYBB Diyarbakir 46.05 305 *e*P **P** **16 30 14.7 +0.9**
YEDI Yedisu-Bingol 46.06 308 *e*P **P** **16 30 15.9 +2.0**
CHOM Cayeli-Rize 46.31 310 *e*P **P** **16 30 17.4 +1.8**
INU Inuyama 46.42 58 P **P** **16 30 16.6 +0.1**
ZEA Zeya 46.54 31 *e*P **P** **16 30 18.9 +1.7**
ZEA *e* 16 32 12.0
ZEA *e* 16 33 00.5
ZEA *e*S **S** **16 37 00.5 -2.0**
ZEA *e*SS **ScS** **16 40 07.0 -1.2**
ZEA pmax pmax
comp=N,77nm,1.0s
ZEA pmax pmax
comp=E,94nm,1.2s
ZEA pmax pmax
comp=Z,110nm,1.2s
ZEA pmax pmax
comp=Z,600nm,6.0s
ZEA pmax pmax
comp=E,200nm,7.0s
ZEA pmax pmax
comp=E,400nm,8.0s
ZEA pmax pmax
comp=Z,1μm,8.0s
ZEA pmax pmax
comp=N,500nm,7.0s
ZEA smax smax
comp=E,2μm,10.0s
ZEA smax smax
comp=N,1μm,8.0s
ZEA MLR MLR
comp=E,5μm,20.0s
ZEA MLR MLR
comp=Z,7μm,20.0s
ZEA MLR MLR
comp=N,2μm,17.0s
KLR Kul'dur 46.73 38*ce*P **P** **16 30 19.6 +0.8**
KLR pmax pmax
comp=Z,93nm,1.2s
KLR MLR MLR
comp=Z,2μm,12.0s
SVRC Sivrice-ELAZID 46.78 306 *e*P **P** **16 30 20.9 +1.3**
PTK Pertek 46.82 307 *e*P **P** **16 30 20.6 +0.7**
URFA Urfa 46.99 304 *e*P **P** **16 30 22.6 +1.5**
KTUT Trabzon 47.01 309⇓P **P** **16 30 23.0 +2.0**
KTUT Trabzon 47.01 309 *e*P **P** **16 30 21.7 +0.6**
BNDI Bandanaira 47.04 115 P P 16 30 36.4 +15
DESE Dese 47.27 268 *e*P **P** **16 30 26.7 +2.8**
MALT Malatya 47.45 306 *e*P **P** **16 30 26.3 +1.6**
MJB9 Matsu-Tunnel 47.55 57 P **P** **16 30 25.2 -0.2**
MAJO Matsushiro 47.55 57 P **P** **16 30 25.3 -0.2**
MAJO pmax pmax
comp=Z,39nm,0.9s
MAJO Matsushiro 47.55 57 P **P** **16 30 25.2 -0.2**
MAT Matsushiro 47.55 57 P **P** **16 30 25.2 -0.2**
MJAR Matsushiro Arr 47.55 57 P **P** **16 30 25.8 +0.4**
comp=Z,23nm,0.9s,baz=275,slow=8.9,SNR=43
MJAR LR LR 16 54 36.0
comp=Z,2μm,18.1s,baz=275,slow=41
SOC Sochi 47.72 313*c i*P **P** **16 30 26.5 -0.1**
SOC *e* 16 32 17.6
SOC *e*S **S** **16 37 19.5 -0.2**
SOC *e*SSS SSS 16 41 53.2
SOC pmax pmax
comp=Z,64nm,0.8s
SOC MLR MLR
comp=Z,2μm,13.0s
ESPY Espiye-Giresun 47.76 309 *e*P **P** **16 30 28.5 +1.5**
ASF Jabal al Asfar 47.91 297 P **P** **16 30 29.7 +1.3**
comp=Z,22nm,0.8s,baz=55,slow=5.2,SNR=21
GIRL Giralia 48.02 147 P **P** **16 30 30.3 +1.2**
GAZ Gaziantep 48.21 304 *e*P **P** **16 30 32.1 +1.5**
GAZ Gaziantep 48.21 304 P **P** **16 30 31.2 +0.6**
GAZ IAmb IAmb 16 30 33.5
comp=Z,73nm,0.8s
GAZ IAMs_20 IAMs_20 16 52 56.0
comp=Z,5μm,22.0s
DARE Darende-Malaty 48.22 306 *e*P **P** **16 30 32.3 +1.6**
TEY Ternei 48.27 45⇑*e*P **P** **16 30 27.6 -3.2**
TEY *e*S **S** **16 37 21.5 -5.9**
TEY pmax pmax
comp=E,10.0nm,1.3s
TEY pmax pmax
comp=Z,20nm,1.3s
TEY MLR MLR
comp=E,4μm,13.0s
TEY MLR MLR
comp=N,4μm,19.0s
TEY MLR MLR
comp=Z,3μm,14.0s
FAKI Fak Fak 48.33 111 P **P** **16 30 31.7 0.0**
comp=Z,3μmcomp=Z,1μmcomp=Z,139nm,1.0s
FAKI Fak Fak 48.33 111 P **P** **16 30 31.4 -0.2**
FAKI IAmb IAmb 16 30 50.0
comp=Z,96nm,0.9s
KMRS Kahramanmaras 48.50 304 *e*P **P** **16 30 34.1 +1.3**
AAE Adis Abeba 48.65 266 *e*P **P** **16 30 38.4 +3.9**
AAE *i*S **S** **16 37 42.2 +8.1**
AAE Adis Abeba 48.65 266 *e*P **P** **16 30 38.4 +3.9**
FURI Furi 48.77 266 *i*P P 16 30 40.3 +4.9
FURI *i*S **S** **16 37 43.6 +7.8**
FURI Furi 48.77 266 *i*P P 16 30 40.3 +4.9
SVSK Karacayir 48.84 307 *e*P **P** **16 30 37.1 +1.8**
TAHT Tahtakopru-Hat 48.91 303 *e*P **P** **16 30 37.4 +1.5**
YAYL Yayladag 48.94 302 *e*P **P** **16 30 38.1 +1.9**
SARI SarD1z-Kayseri 49.02 305 *e*P **P** **16 30 38.2 +1.3**
VRH Novokhopyorsk 49.11 323 *e*P **P** **16 30 37.3 +0.1**
VRH *e*S **S** **16 37 35.1 -3.9**
VRH pmax pmax
comp=Z,160nm,0.9s
VRH smax smax
comp=E,1μm,8.2s
VRH MLR MLR
comp=Z,3μm,14.0s
KIRV Kirov 49.17 334 P **P** **16 30 37.8 +0.3**
comp=Z,76nm,0.7s,baz=109,slow=3.5,SNR=34
MMAI Mount Meron Ar 49.23 298 P **P** **16 30 38.5 0.0**
comp=Z,9.5nm,0.8s,baz=87,slow=6.8,SNR=8.3
MMAI LR LR 16 54 29.5
comp=Z,4μm,19.8s,baz=125,slow=40
TOKT Tokat 49.26 308 *e*P **P** **16 30 40.0 +1.4**
CEYT Ceyhan 49.34 303 *e*P **P** **16 30 41.0 +1.8**
KOZT Kozan 49.34 304 *e*P **P** **16 30 40.4 +1.2**
YURE YUREGIR 49.41 303 *e*P **P** **16 30 42.2 +2.4**
EIL Elat 49.48 294 P **P** **16 30 41.0 +0.6**
comp=Z,45nm,0.6s,baz=55,slow=4.1,SNR=9.0
EIL LR LR 16 53 13.6
comp=Z,3μm,20.0s,baz=66,slow=38
BNN Bunyan 49.53 306 *e*P **P** **16 30 41.2 +0.4**
ANN Anapa 49.63 314 *e*P **P** **16 30 40.6 -0.7**
ANN *e*PPP PPP 16 33 28.6
ANN *e*S **S** **16 37 45.2 -1.3**
ANN *e*SSS SSS 16 42 50.5
ANN pmax pmax
comp=Z,80nm,1.0s
ANN MLR MLR
comp=Z,3μm,14.0s
KVT Kavak 49.77 309 *e*P **P** **16 30 43.9 +1.4**
KARA Karaisali 49.93 304 *e*P **P** **16 30 44.9 +1.2**
YOZ Yozgat 50.06 307 *e*P **P** **16 30 44.8 0.0**
GRNR Gornyy 50.11 38⇓*i*P **P** **16 30 46.1 +1.3**
GRNR pmax pmax
comp=Z,70nm,1.1s
GRNR MLR MLR
comp=Z,5μm,18.0s
MERS Mersin 50.30 303 *e*P **P** **16 30 47.6 +1.0**
PSA00 Pilbara Seismi 50.34 140 P **P** **16 30 46.4 -0.5**
PSA00 IAmb IAmb 16 31 04.9
comp=Z,36nm,0.7s
VORD Divnogorie 50.42 322 *e*P **P** **16 30 46.3 -0.8**
VORD *e*S **S** **16 37 52.2 -5.2**
VORD pmax pmax
comp=Z,70nm,0.8s
VORD smax smax
comp=N,710nm,7.0s
EREN Erenkoy 50.45 301 *e*P **P** **16 30 47.8 +0.2**
DIKM Dikmen 50.47 309⇑P **P** **16 30 49.6 +1.9**
DIKM Dikmen 50.47 309 *e*P **P** **16 30 48.1 +0.5**
KIZK Mersin 50.56 302 *e*P **P** **16 30 49.0 +0.6**
VSR Storozhevoye 50.59 322 *e*P **P** **16 30 48.1 -0.3**
VSR *e*S **S** **16 37 53.2 -6.5**
VSR pmax pmax
comp=Z,40nm,0.6s
VSR smax smax
comp=E,380nm,7.4s
VSR MLR MLR
comp=Z,4μm,16.0s
CORM Corum 50.67 307 *e*P **P** **16 30 50.5 +1.1**
SILI Silifke-Mersin 50.73 302 *e*P **P** **16 30 50.4 +0.7**
KEBE Keben-Mersin 50.90 302 *e*P **P** **16 30 51.9 +0.8**
IKL Isikli 50.91 302 *e*P **P** **16 30 51.2 +0.2**
AKKU Akkuyu-Mersin 51.01 302 *e*P **P** **16 30 51.4 -0.4**
YESY Yesilyurt 51.02 304 *e*P **P** **16 30 52.9 +0.8**
CSS Mathiatis 51.09 300 P **P** **16 30 52.4 -0.1**
CSS IAmb IAmb 16 32 08.4
comp=Z,96nm,1.2s
NRIK Noril'sk 51.09 360 P **P** **16 30 52.6 +0.8**
comp=Z,42nm,0.6s,baz=162,slow=5.6,SNR=76
NRIK LR LR 16 55 50.4
comp=Z,5μm,20.1s,baz=186,slow=40
YAYX Yaylak 51.12 306 *e*P **P** **16 30 52.5 -0.2**
SULT Sultanhani-AKS 51.25 305 *e*P **P** **16 30 54.9 +1.2**
LPSR Galich'ya Gora 51.26 324 *e*P **P** **16 30 53.4 0.0**
LPSR *e*S **S** **16 38 04.6 -4.3**
LPSR pmax pmax
comp=Z,80nm,0.8s
LPSR smax smax
comp=N,2μm,8.6s
LPSR MLR MLR
comp=Z,3μm,16.0s
BERE Bereket-Mersin 51.29 302 *e*P **P** **16 30 54.9 +0.8**
SERE Sereflikochisa 51.31 306 *e*P **P** **16 30 54.9 +0.7**
TEKE Tekeli-Mersin 51.36 302 *e*P **P** **16 30 54.4 0.0**
BR131 Keskin Array S 51.36 307 P **P** **16 30 54.8 +0.2**
SNR=26
BR131 Keskin Array S 51.36 307*c i*P **P** **16 30 53.9 -0.7**
BR131 Keskin Array S 51.36 307 P **P** **16 30 53.9 -0.7**
BR131 IAmb IAmb 16 32 04.3
comp=Z,43nm,0.8s
BRTR Keskin Array B 51.36 307 P **P** **16 30 54.5 -0.1**
comp=Z,35nm,0.8s,baz=119,slow=7.6,SNR=136
BRTR LR LR 16 56 58.9
comp=Z,3μm,20.4s,baz=80,slow=41
BRTR Keskin Array B 51.36 307 *i*P **P** **16 30 54.5 -0.1**
BRTR pmax pmax
comp=Z,36nm,0.8s
BZK Bozkurt 51.45 309⇓P **P** **16 30 56.3 +1.3**
BZK Bozkurt 51.45 309 *e*P **P** **16 30 56.0 +1.0**
LEF Lefka 51.46 301⇑P **P** **16 30 56.1 +0.9**
LEF Lefka 51.46 301 *e*P **P** **16 30 55.7 +0.5**
ILGA Ilgaz 51.50 308 P **P** **16 30 55.8 +0.1**
ILGA IAmb IAmb 16 32 10.4

comp=Z,109nm,1.2s
CANT Cankiri 51.51 308 *e*P **P** **16 30 56.6 +1.0**
FITZ Fitzroy Crossi 51.66 132 P **P** **16 30 56.8 0.0**
AFSR Afar-Bala (An 51.76 306 *e*P **P** **16 30 57.9 +0.4**
CHBY Cihanbeyli 51.79 305 *e*P **P** **16 30 57.2 -0.5**
SIM Simferopol' 51.96 313*c i*P **P** **16 30 59.2 +0.4**
SIM *i* S **S** **16 38 17.3 -1.5**
SIM pmax pmax
comp=Z,80nm,0.8s
GAZI Gazipasa 52.01 302 *e*P **P** **16 30 58.9 -0.4**
ANTO Ankara 52.02 307 ⇓P **P** **16 31 00.1 +0.6**
ANTO Ankara 52.02 307 P **P** **16 30 59.3 -0.1**
ANTO pmax pmax
comp=Z,84nm,1.1s
ANTO Ankara 52.02 307 P **P** **16 30 59.3 -0.1**
ANTO IAmb IAmb 16 32 43.1
comp=Z,84nm,1.1s
BR231 Keskin MP Arra 52.03 307 P **P** **16 30 59.7 +0.1**
BR231 IAmb IAmb 16 32 00.9
comp=Z,58nm,0.9s
LOD Lodumlu 52.05 307 *e*P **P** **16 31 00.0 +0.4**
KONT Konya--Tatoy 52.13 304 *e*P **P** **16 31 00.9 +0.7**
LADK Ladik-KONYA 52.15 304 *e*P **P** **16 31 00.5 0.0**
ERM Erimo 52.21 51 P **P** **16 31 01.5 +0.8**
ERM Erimo 52.21 51 P **P** **16 31 01.4 +0.8**
ERM IAmb IAmb 16 31 05.5
comp=Z,96nm,1.1s
KURC Kurucasile-Bar 52.35 309 *e*P **P** **16 31 02.1 +0.4**
KNRA Kununurra 52.37 128 P **P** **16 31 01.8 -0.3**
KNRA IAmb IAmb 16 31 20.1
comp=Z,58nm,0.6s
YAK Yakutsk 52.46 23*d i*P **P** **16 31 02.4 +0.2**
YAK *e**PP **pP** **16 31 13.9 -0.2**
YAK *e* 16 33 02.1
YAK *e*S **S** **16 38 24.6 -0.4**
YAK *e*SS **SS** **16 42 09.8 +6.6**
YAK pmax pmax
comp=Z,72nm,0.9s
YAK pmax pmax
comp=N,38nm,1.1s
YAK pmax pmax
comp=E,33nm,1.0s
YAK pmax pmax
comp=Z,65nm,1.3s
YAK pmax pmax
comp=N,111nm,1.6s
YAK pmax pmax
comp=E,35nm,1.6s
YAK smax smax
comp=N,246nm,2.0s
YAK smax smax
comp=E,489nm,3.6s
YAK MLR MLR
comp=Z,6μm,19.0s
YAK MLR MLR
comp=N,3μm,17.0s
YAK MLR MLR
comp=E,3μm,19.0s
YAK Yakutsk 52.46 23 P **P** **16 31 02.0 -0.1**
YAK IAmb IAmb 16 31 04.3
comp=Z,58nm,0.7s
YAK IAMs_20 IAMs_20 16 56 26.6
comp=Z,7μm,22.0s
MTN Manton Dam 52.52 123 P **P** **16 31 03.3 -0.1**
KIZT Kizilcal 52.60 305 *e*P **P** **16 31 03.4 -0.4**
YSS Yuzh-Sakhalins 52.92 44*ke*P **P** **16 31 07.0 +1.2**
YSS *e**PP **pP** **16 31 18.1 +0.3**
YSS *e**SP **sP** **16 31 23.2 +0.4**
YSS *e* 16 32 16.3
YSS *e* 16 33 10.1
YSS *e*PPP PPP 16 34 21.1
YSS *e*S **S** **16 38 32.7 +0.9**
YSS *e*PS **PKiKP** **16 38 46.9 -5.6**
YSS *e*SS **SS** **16 42 11.0 -0.1**
YSS pmax pmax
comp=Z,90nm,1.1s
YSS pmax pmax
comp=Z,400nm,2.7s
YSS MLR MLR
comp=Z,2μm,14.0s
YSS MLR MLR
comp=N,3μm,15.0s
YSS MLR MLR
comp=E,1μm,14.0s
YSS Yuzh-Sakhalins 52.92 44 P **P** **16 31 06.5 +0.7**
YSS IAmb IAmb 16 31 08.1
comp=Z,131nm,1.1s
SVRH Sivrihisar-ESK 52.94 306 *e*P **P** **16 31 05.7 -0.6**
MOS Moscow 53.21 327 *e*P **P** **16 31 07.8 0.0**
MOS *e* 16 31 28.4
MOS *e* 16 33 06.5
MOS *e*S **S** **16 38 31.3 -4.2**
MOS *e*SS **SS** **16 42 10.1 -5.2**
MOS pmax pmax
comp=Z,109nm,1.4s
MOS MLR MLR
comp=Z,3μm,16.0s
CIFT Cifteler, Eski 53.29 306 *e*P **P** **16 31 08.9 +0.1**
KIBK Kibwezi 53.31 253 P **P** **16 31 10.2 +0.9**
SNR=7.4
MDUB Mudurnu 53.31 307 *e*P **P** **16 31 09.3 +0.3**
MDUB Mudurnu 53.31 307 P **P** **16 31 08.7 -0.3**
NKL Nikolayevsk 53.42 37 *e*P **P** **16 31 09.0 -0.4**
NKL *e* 16 32 19.7
NKL *e* 16 33 12.5
NKL *e*S **S** **16 38 45.1 +6.7**
NKL pmax pmax
comp=Z,66nm,1.3s
NKL pmax pmax
comp=N,5.0nm,0.7s
NKL pmax pmax
comp=E,2.0nm,1.1s
NKL pmax pmax
comp=Z,128nm,3.4s
OBN Obninsk 53.52 326 P **P** **16 31 10.4 +0.4**
comp=Z,9.9nm,0.3s,baz=180,slow=4.0,SNR=3.7
OBN LR LR 16 58 19.5
comp=Z,791nm,18.9s,baz=132,slow=41
OBN Obninsk 53.52 326 *i*P **P** **16 31 09.9 -0.2**
OBN *i* 16 31 27.4
OBN *i* 16 33 12.0
OBN *i*S **S** **16 38 32.3 -7.3**
OBN pmax pmax
comp=Z,65nm,0.9s
OBN MLR MLR
comp=Z,3μm,18.0s
OBN Obninsk 53.52 326 P **P** **16 31 10.1 +0.1**
OBN IAMs_20 IAMs_20 16 58 15.4
comp=Z,4μm,19.0s
KMBO Kilima Mbogo 53.54 254 P **P** **16 31 12.2 +1.0**
comp=Z,14nm,1.1s,baz=50,slow=9.9,SNR=16
KMBO LR LR 16 51 31.4
comp=Z,3μm,21.9s,baz=63,slow=33
KMBO Kilima Mbogo 53.54 254 *i*P **P** **16 31 07.3 -3.8**
KMBO *i*S **S** **16 38 39.1 -2.5**
KMBO Kilima Mbogo 53.54 254 *i*P **P** **16 31 11.1 0.0**
SNR=13
KMBO Kilima Mbogo 53.54 254 P **P** **16 31 10.5 -0.7**
KMBO pmax pmax
comp=Z,31nm,1.3s
KMBO MLR MLR
comp=Z,4μm,22.0s
KMBO Kilima Mbogo 53.54 254 *i*S **S** **16 38 39.1 -2.5**
KMBO *i*P **P** **16 31 07.3 -3.8**
KMBO Kilima Mbogo 53.54 254 P **P** **16 31 10.5 -0.7**
SHUT Suhut-Afyon 53.61 305 *e*P **P** **16 31 11.1 -0.1**
LODK Lodwar 53.61 261 P **P** **16 31 13.2 +1.7**
SNR=29
KORT Korkueli 53.64 303 *e*P **P** **16 31 12.7 +1.2**
SRCK Saricakaya, Es 53.70 307 *e*P **P** **16 31 11.7 0.0**
SMPI Sarmi 53.73 107 P P 16 31 17.4 +5.1
comp=Z,2μmcomp=Z,794nmcomp=Z,25nm,0.8s
TYV Tymovskoe 53.87 40 *e*P **P** **16 31 14.6 +1.9**
TYV *e* 16 38 50.7
TYV pmax pmax
comp=Z,47nm,1.2s
TYV MLR MLR
comp=Z,3μm,18.0s
ELL Elmali 53.98 302 *e*P **P** **16 31 14.1 +0.1**
ELL Elmali 53.98 302 P **P** **16 31 13.9 -0.1**
ELL pmax pmax
comp=Z,525nm,0.8s
ELL MLR MLR
comp=Z,11μm,20.0s
ELL Elmali 53.98 302 P **P** **16 31 13.9 -0.1**

AKAS Kas 54.20 302 *e*P **P** **16 31 16.7 +1.1**
MORW Morawa 54.24 150 P **P** **16 31 15.6 -0.1**
MORW IAmb IAmb 16 31 17.2
comp=Z,43nm,1.0s
ADVT Abdulvahap 54.42 307 *e*P **P** **16 31 16.4 -0.5**
YUK Yuzh-Kuril'sk 54.49 49 *e*P **P** **16 31 17.7 +0.3**
YUK *e*S **S** **16 38 46.2 -7.0**
YUK *e*SS **SKiKP** **16 42 29.6 +6.3**
YUK pmax pmax
comp=N,302nm,1.0s
YUK pmax pmax
comp=Z,359nm,1.0s
YUK pmax pmax
comp=Z,422nm,1.1s
HRT Hereke 54.51 307 *e*P **P** **16 31 17.5 -0.2**
TVSB Tavsanli 54.53 306 *e*P **P** **16 31 17.4 -0.5**
SILT Sile 54.57 308 *e*P **P** **16 31 18.1 +0.1**
ABPO Ambohimpanom 54.59 229 IAMs_20 IAMs_20 16 50 09.8
comp=Z,4μm,21.0s
KLMR Klimovskoe 54.60 333 *e*P **P** **16 31 17.4 -0.5**
KLMR *e*S **S** **16 38 53.6 -0.5**
KLMR *e*SS **SS** **16 42 37.2 +0.2**
KLMR pmax pmax
comp=Z,60nm,0.9s
KLMR MLR MLR
comp=Z,2μm,13.0s
KLMR Klimovskoe 54.60 333 *e*P **P** **16 31 17.4 -0.5**
KLMR AMP 16 31 19.0
comp=Z,60nm,0.9s
KLMR *e*S **S** **16 38 53.7 -0.4**
KLMR *e*S **S** **16 38 53.7 -0.4**
KLMR *e*SS **SS** **16 42 37.3 +0.2**
KLMR *e*SS **SS** **16 42 37.3 +0.2**
KLMR LQ LQ 16 50 27.0
KLMR LQ LQ 16 50 27.0
KLMR LR LR 16 54 24.9
KLMR AMP 17 00 24.5
comp=Z,2μm,12.9s
FETY Fethiye 54.63 302 *e*P **P** **16 31 16.7 -1.9**
YLV Yalova 54.71 307 *e*P **P** **16 31 18.8 -0.3**
DALY Dalyan (Mula) 54.99 302 *e*P **P** **16 31 21.0 -0.1**
KAVV Kandilli-Istan 54.99 308 *e*P **P** **16 31 19.1 -2.0**
ISK Istanbul-Kandi 54.99 308 *e*P **P** **16 31 19.7 -1.4**
KLYT Kilyos 55.03 308 *e*P **P** **16 31 20.8 -0.5**
TURN Turunc 55.03 303 *e*P **P** **16 31 22.9 +1.5**
KULA Kula-Manisa 55.08 305 *e*P **P** **16 31 20.5 -1.4**
MANT Manisa 55.16 305 P **P** **16 31 22.0 -0.6**
CTKS Kestanelik-??a 55.43 308 *e*P **P** **16 31 22.7 -1.5**
KCTX Karacabey (Bur 55.45 307 *e*P **P** **16 31 23.5 -1.0**
JURR Jurilovca 55.59 312 ⇑P **P** **16 31 25.8 +0.5**
CTYL Yalikoy Yolu 55.61 308 *e*P **P** **16 31 24.9 -0.6**
SLVT Silivri 55.65 308 *e*P **P** **16 31 26.5 +0.7**
AYDB Zeytinkoy-Aydi 55.65 304 *e*P **P** **16 31 25.1 -1.0**
TSCT Constanta Port 55.66 311 ⇑P **P** **16 31 26.8 +1.0**
EFOR EFORIE 55.67 311 ⇓P **P** **16 31 26.6 +0.7**
TLCR 55.70 313 ⇓P **P** **16 31 26.7 +0.6**
JAY Jayapura 55.76 106 P **P** **16 31 30.2 +3.1**
comp=Z,432nmcomp=Z,23nm,1.0s
MFTR Murfatlar 55.83 311 ⇑P **P** **16 31 28.0 +0.9**
EDC Edincik 55.83 307 *e*P **P** **16 31 26.5 -0.7**
TIRR Tirgusor 55.87 312 ⇓P **P** **16 31 27.9 +0.5**
TIRR Tirgusor 55.87 312 *i*P **P** **16 31 27.5 +0.1**
TIRR Tirgusor 55.87 312 P **P** **16 31 27.1 -0.2**
TIRR pmax pmax
comp=Z,111nm,0.9s
TIRR MLR MLR
comp=Z,4μm,21.0s
TIRR Tirgusor 55.87 312 P **P** **16 31 27.1 -0.2**
TIRR IAMs_20 IAMs_20 16 58 48.8
comp=Z,4μm,21.0s
PSN Preselentsi 55.94 311 *i*P **P** **16 31 28.3 +0.5**
TOPG Topolog 55.96 312 ⇓P **P** **16 31 28.5 +0.6**
MILM Milestii Mici 55.97 315 ⇓P **P** **16 31 28.5 +0.5**
KIS Kishinev 55.98 315⇑*i*P **P** **16 31 28.0 -0.1**
comp=Z,230nm,1.0s
KIS Kishinev 55.98 315 *i* PcP PcP 16 32 18.0 -8.1
KIS Kishinev 55.98 315 *e*PP PP 16 33 28.0 -5.2
KIS *e*S **S** **16 39 11.0 -2.1**
comp=Z,3μm,13.0s
KIS *i* ScS **ScS** **16 41 08.0 -5.6**
KIS *e*SS SS 16 42 48.0 -11
KIS *e*LQ LQ 16 49 57.0
KIS *e*LR LR 16 53 00.0
comp=Z,2μm,20.0s
KIS *e*SSS SSS 16 54 00.0
KIS Kishinev 55.98 315⇑*i*P **P** **16 31 28.0 -0.1**
KIS *i* 16 31 45.0
KIS *e* 16 33 28.0
KIS *e*S **S** **16 39 11.0 -2.1**
KIS *i* 16 41 08.0
KIS pmax pmax
comp=Z,230nm,1.0s
KIS smax smax
comp=N,3μm,13.0s
KIS MLR MLR
comp=Z,2μm,20.0s
MRMT Marmara Adasi 56.06 307 *e*P **P** **16 31 27.9 -1.0**
KUR Kuril'sk 56.09 47 *e*P **P** **16 31 29.5 +0.6**
KUR *e*S **S** **16 39 11.5 -3.0**
KUR *e*SS **SS** **16 43 06.1 +5.0**
KUR *e*SSS SSS 16 45 17.7
KUR pmax pmax
comp=Z,340nm,3.7s
KUR MLR MLR
comp=Z,1μm,18.0s
KUR MLR MLR
comp=N,999nm,15.0s
KUR MLR MLR
comp=E,611nm,15.0s
TLBR Topalu 56.15 312 ⇓P **P** **16 31 29.9 +0.6**
KARP Karpathos 56.16 301 P **P** **16 31 29.6 0.0**
CFR Carcaliu 56.17 313 ⇑P **P** **16 31 30.0 +0.5**
PHSR Pinarhisar 56.20 308 *e*P **P** **16 31 29.6 -0.2**
HARR Harsova 56.25 312 ⇑P **P** **16 31 30.5 +0.5**
ICOR Ion Corvin 56.27 311 ⇓P **P** **16 31 31.2 +1.0**
LEOM Leova 56.28 314 ⇓P **P** **16 31 31.1 +0.9**
AKASG Malin Array Be 56.44 319 P **P** **16 31 30.5 -0.8**
comp=E,10nm,0.5s,baz=102,slow=5.7,SNR=35
AKASG LR LR 16 57 30.1
comp=E,2μm,19.6s,baz=85,slow=38
AKBB Malin Array Si 56.44 319 P **P** **16 31 30.7 -0.6**
AKBB pmax pmax
comp=Z,120nm,1.4s
AKBB Malin Array Si 56.44 319 P **P** **16 31 30.7 -0.6**
AKBB IAmb IAmb 16 32 34.5
comp=Z,120nm,1.4s
PRD Provadia 56.45 310 *i*P **P** **16 31 31.4 -0.1**
VARL Varlezi 56.47 313 ⇑P **P** **16 31 32.9 +1.3**
SORM Soroca 56.49 316 ⇓P **P** **16 31 32.0 +0.3**
NEF NEVSHA 56.55 310 *i*P **P** **16 31 32.4 +0.2**
VASR Vaslui 56.62 314 ⇑P **P** **16 31 33.5 +0.9**
LPK Lapseki 56.68 307 *e*P **P** **16 31 31.9 -1.3**
URLA Izmir 56.69 304 *e*P **P** **16 31 33.8 +0.4**
GHRR 56.80 313 ⇓P **P** **16 31 35.6 +1.7**
TMCR Tamitsa 56.83 336 *e*P **P** **16 31 32.9 -0.9**
TMCR *e*S **S** **16 39 23.2 -0.5**
TMCR pmax pmax
comp=Z,71nm,0.9s
IAS Iasi 56.86 315 ⇓P **P** **16 31 35.4 +1.1**
GELI Tayfur-Gelibol 56.90 307 *e*P **P** **16 31 33.9 -0.8**
JMB Yambol 56.97 309 *i*P **P** **16 31 35.8 +0.6**
EZN Ezine 56.98 306 P **P** **16 31 35.0 -0.3**
ODBI Odobesti 57.00 313 ⇑P **P** **16 31 36.9 +1.5**
LEHL Lehliu 57.01 312 ⇑P **P** **16 31 36.5 +1.1**
CHOS Chios island 57.12 304 P **P** **16 31 36.8 +0.4**
RAZG Razgrad 57.13 310 ⇓P **P** **16 31 37.0 +0.7**
ENEZ Enez 57.16 307 P **P** **16 31 36.7 +0.1**
ENEZ Enez 57.16 307 *e*P **P** **16 31 36.5 -0.1**
BISRR Bisoca 57.21 313 ⇓P **P** **16 31 39.1 +2.1**
VRI Vrincioaia 57.24 313 ⇑P **P** **16 31 38.7 +1.5**
ALN Alexandroupoli 57.25 307 P **P** **16 31 37.0 -0.3**
ALN Alexandroupoli 57.25 307 P **P** **16 31 36.9 -0.3**
ALN pmax pmax
comp=Z,36nm,1.0s
ALN MLR MLR
comp=Z,800nm,22.0s
ALN Alexandroupoli 57.25 307 P **P** **16 31 36.9 -0.3**
ISR Istrita 57.28 312 ⇑P **P** **16 31 38.9 +1.4**
PLOR Plostina 57.29 313 ⇑P **P** **16 31 39.3 +1.8**
TESR Tescani 57.38 314 ⇑P **P** **16 31 39.1 +1.0**
SULR 57.43 312 ⇓P **P** **16 31 40.2 +1.8**
SZH Strazhica 57.52 310 *i*P **P** **16 31 38.9 -0.2**

SANT Santorini 57.55 302 ⇓P **P** **16 31 38.8 -0.6**
SANT Santorini 57.55 302 P **P** **16 31 38.3 -1.1**
SGRR Singureni 57.58 311 ⇑P **P** **16 31 41.0 +1.5**
SECR 57.60 312 ⇓P **P** **16 31 41.6 +2.0**
SMTH Samothraki Isl 57.62 307 P **P** **16 31 39.2 -0.7**
RDO Rodhopi 57.65 308 P **P** **16 31 39.7 -0.3**
MLR Muntele Rosu 57.74 313 P **P** **16 31 42.2 +1.4**
comp=Z,150nm,0.8s,baz=68,slow=2.0,SNR=163
MLR Muntele Rosu 57.74 313 ⇓P **P** **16 31 42.7 +1.9**
MLR Muntele Rosu 57.74 313 P **P** **16 31 41.7 +0.9**
MLR pmax pmax
comp=Z,163nm,0.8s
MLR MLR
comp=Z,5μm,22.0s
MLR Muntele Rosu 57.74 313 P **P** **16 31 41.7 +0.9**
MLR IAMs_20 IAMs_20 16 59 50.2
comp=Z,5μm,22.0s
KDZ Kurdzhali 57.78 308 *i*P **P** **16 31 41.0 +0.1**
PRAR RASCA 57.78 315 ⇓P **P** **16 31 41.6 +0.7**
BIZ Bicaz 57.81 314 ⇑P **P** **16 31 42.3 +1.2**
OZUR 57.92 313 ⇑P **P** **16 31 42.8 +0.8**
ZIMR 57.97 310 ⇑P **P** **16 31 43.1 +0.9**
IDI Anoyia 58.01 301 P **P** **16 31 43.0 +0.2**
comp=Z,64nm,0.8s,baz=92,slow=7.0,SNR=23
IDI LR LR 17 01 35.7
comp=Z,1μm,21.7s,baz=94,slow=41
NWAO Narrogin (SRO) 58.02 151 P **P** **16 31 41.5 -1.1**
NWAO pmax pmax
comp=Z,26nm,1.0s
NWAO MLR MLR
comp=Z,2μm,21.0s
NWAO Narrogin (SRO) 58.02 151 P **P** **16 31 41.5 -1.1**
NWAO Narrogin (SRO) 58.02 151 P **P** **16 31 41.5 -1.1**
NWAO IAmb IAmb 16 31 58.8
comp=Z,26nm,0.9s
NWAO IAMs_20 IAMs_20 16 55 37.5
comp=Z,2μm,21.0s
MICGM Minsk 58.11 323 *e*P **P** **16 31 42.0 -1.0**
MICGM *e*PcP **PcP** **16 32 40.0 +5.7**
MICGM *e*PP **PP** **16 33 58.0 +6.1**
MICGM *e*PPP PPP 16 35 22.0
MICGM *e*S **S** **16 39 36.0 -4.8**
MICGM *e*PS **PnS** **16 40 08.0 +11**
MICGM *e*SS **SS** **16 43 36.0 +3.5**
MICGM *e*SSS SSS 16 45 02.0
MICGM *e*LR LR 16 52 40.0
MNK Minsk 58.11 323 *e*P **P** **16 31 42.0 -1.0**
MNK *e* 16 32 40.0
MNK *e* 16 33 58.0
MNK *e*PPP PPP 16 35 22.0
MNK *e*S **S** **16 39 36.0 -4.8**
MNK *e*PS **PnS** **16 40 08.0 +11**
MNK *e*SS **SS** **16 43 36.0 +3.5**
DOPR Dopca 58.18 313 ⇓P **P** **16 31 44.8 +1.1**
THAS Thassos island 58.24 307 P **P** **16 31 43.7 -0.5**
RZN Rozhen 58.30 308 *i*P **P** **16 31 44.5 -0.3**
HUMR Humele 58.32 311 ⇑P **P** **16 31 45.3 +0.6**
MTUR Matau 58.33 312 ⇓P **P** **16 31 45.9 +1.0**
PUL Pulkovo 58.33 330*ce*P **P** **16 31 46.0 +1.6**
PUL pmax pmax
comp=Z,141nm,0.5s
PLD Plovdiv 58.34 309 *i*P **P** **16 31 44.8 0.0**
KAVA Kavala 58.42 307 P **P** **16 31 45.3 -0.1**
TIXI Tiksi 58.47 14*de*P **P** **16 31 44.8 -0.4**
TIXI pmax pmax
comp=Z,76nm,1.0s
TIXI MLR MLR
comp=Z,4μm,17.0s
TIXI Tiksi 58.47 14 P **P** **16 31 44.6 -0.6**
TIXI IAmb IAmb 16 31 46.3
comp=Z,91nm,1.2s
PLVB Pleven 58.49 310 ⇑P **P** **16 31 46.6 +0.7**
BURAR Bucovina Array 58.50 315 ⇑P **P** **16 31 47.2 +1.2**
BUR08 Bucovina Ar. S 58.51 315 P **P** **16 31 46.7 +0.6**
BUR08 IAmb IAmb 16 32 49.9
comp=Z,77nm,1.2s
VAM Vamos 58.57 301 P **P** **16 31 46.6 0.0**
ARR Arges 58.65 312 ⇑P **P** **16 31 47.5 +0.5**
IMMV Iera Moni Meta 58.75 301 P **P** **16 31 46.9 -0.9**
PGB Panagyurishte 58.76 309 *i*P **P** **16 31 48.8 +0.9**
NACGM Naroch 58.82 324 *e*P **P** **16 31 48.0 +0.1**
NACGM *e*P **P** **16 31 48.0 +0.1**
NACGM PM 16 31 49.0
comp=Z,0.3nm,1.0s
NACGM *e*PcP **PcP** **16 32 30.0 -7.1**
NACGM *e*PP PP 16 34 22.0 +24
NACGM *e*PPP PPP 16 35 44.0
NACGM *e*S **S** **16 39 46.0 -4.1**
NACGM *e*PS **PnS** **16 40 18.0 +11**
NACGM *e*SS **SS** **16 43 50.0 +6.3**
NACGM *e*SSS SSS 16 46 18.0
NACGM *e*LQ LQ 16 51 10.0
NACGM LQM 16 54 16.0
comp=N,58nm,30.0s
MDB Medias 58.90 313 ⇑P **P** **16 31 49.8 +1.1**
PAIG Paliouri 59.01 306 P **P** **16 31 49.5 -0.1**
ARCR ARCALIA 59.02 314 ⇑P **P** **16 31 51.2 +1.7**
MMB Musomiste 59.04 308 *i*P **P** **16 31 49.2 -0.6**
WB0 Warramunga Arr 59.10 127 P **P** **16 31 50.1 -0.3**
SRS Serrai 59.12 307 P **P** **16 31 49.7 -0.6**
SKIA Skiathos 59.16 305 P **P** **16 31 50.0 -0.6**
WRA Warramunga Arr 59.17 128 P **P** **16 31 50.8 -0.1**
comp=N,21nm,0.8s,baz=317,slow=6.9,SNR=62
WRA PKP2bc **P'P'bc** **17 01 32.9 +0.2**
comp=N,2.0nm,0.9s,baz=132,slow=2.0,SNR=7.9
WRAB Tennant Creek 59.17 128*ce*P **P** **16 31 51.8 +0.9**
WRAB pmax pmax
comp=Z,108nm,1.3s
WRAB Tennant Creek 59.17 128 P **P** **16 31 50.9 0.0**
WB2 Warramunga Arr 59.18 128 P **P** **16 31 50.9 0.0**
IIGN Ignalina 59.23 324 *e*P **P** **16 31 51.1 +0.3**
LOT Lotru 59.26 312 ⇑P **P** **16 31 51.7 +0.4**
SOH Sokhos 59.29 307 P **P** **16 31 51.0 -0.5**
ANKY Antikythira Is 59.30 301 P **P** **16 31 51.0 -0.6**
IZAR Zarasai 59.31 325 *e*P **P** **16 31 51.7 +0.4**
DID Didima 59.33 303 P **P** **16 31 49.8 -2.1**
WR0 Warramunga Arr 59.33 128 P **P** **16 31 51.0 -1.0**
WR0 IAmb IAmb 16 32 11.0
comp=Z,88nm,0.9s
ISAL Salakas 59.34 324 *e*P **P** **16 31 51.7 +0.2**
MBAR Mbarara 59.35 258*ce*P **P** **16 31 53.0 +0.5**
MBAR pmax pmax
comp=Z,73nm,1.0s
MBAR Mbarara 59.35 258 P **P** **16 31 52.1 -0.3**
MBAR IAmb IAmb 16 31 54.4
comp=Z,64nm,1.0s
MBAR IAMs_20 IAMs_20 16 55 54.3
comp=Z,6μm,21.0s
XOR Xorichti 59.38 305 P **P** **16 31 50.4 -1.8**
VTS Vitosha 59.45 309 ⇑P **P** **16 31 53.1 +0.3**
VTS Vitosha 59.45 309 *i*P **P** **16 31 52.7 -0.1**
VTS Vitosha 59.45 309 P **P** **16 31 52.4 -0.4**
VTS pmax pmax
comp=Z,33nm,1.1s
VTS Vitosha 59.45 309 P **P** **16 31 52.4 -0.4**
HORT Hortiatis 59.48 307 P **P** **16 31 51.8 -1.1**
LKR Lokris 59.52 305 P **P** **16 31 50.8 -2.3**
KKB Krupnik 59.53 308 *i*P **P** **16 31 52.5 -0.7**
LVV L'vov 59.56 318 *e*P **P** **16 31 52.6 -0.6**
LVV *e* 16 32 37.8
LVV *i*S **S** **16 39 54.6 -5.3**
LVV *e* 16 40 14.9
LVV MLR MLR
comp=E,2μm,17.0s
LVV MLR MLR
comp=N,1μm,16.0s
LVV MLR MLR
comp=Z,1μm,17.0s
VLI Veliai 59.58 302 P **P** **16 31 50.7 -2.8**
THE Thessaloniki 59.58 307 P **P** **16 31 52.5 -1.0**
SRE Strehaia 59.60 311 ⇑P **P** **16 31 55.1 +1.5**
KNT Kendrikon 59.65 307 P **P** **16 31 53.4 -0.5**
BMR Baia Mare 59.66 315 ⇓P **P** **16 31 55.4 +1.5**
VSU Vasula 59.71 328 *e*P **P** **16 31 54.0 0.0**
PUNG Punghina 59.77 311 ⇑P **P** **16 31 56.2 +1.5**
LVZ Lovozero 59.84 339*ce*P **P** **16 31 55.9 +1.0**
LVZ pmax pmax
comp=Z,47nm,0.8s
LVZ MLR MLR
comp=Z,4μm,13.0s
LVZ Lovozero 59.84 339 P **P** **16 31 54.8 -0.1**
LVZ IAmb IAmb 16 31 56.3
comp=Z,60nm,0.9s

VAY	**Valandovo**	**59.90 308**	⇑	*i*	P	**P**	**16 31 55.2**	**-0.5**
VAY				*i*	S	**S**	**16 40 02.8**	**-1.7**
VAY	**Valandovo**	**59.90 308**	⇑	*i*	P	**P**	**16 31 55.2**	**-0.5**
VAY				*i*	S	**S**	**16 40 02.8**	**-1.7**
DEV	**Deva**	**59.90 313**	⇓	*i*	P	**P**	**16 31 57.2**	**+1.6**
LIT	**Litokhoron**	**59.93 306**			P	**P**	**16 31 54.7**	**-1.2**
LIT	**Litokhoron**	**59.93 306**			P	**P**	**16 31 54.8**	**-1.2**
LIT					pmax	pmax		
	comp=Z,40nm,0.8s							
LIT					MLR	MLR		
	comp=Z,2µm,21.0s							
LIT	**Litokhoron**	**59.93 306**			P	**P**	**16 31 54.8**	**-1.2**
LIT					IAmb	IAmb	16 32 55.9	
	comp=Z,40nm,0.8s							
GZR	**Gura Zlata**	**59.95 312**	⇑		P	**P**	**16 31 56.3**	**+0.3**
VLX	**Vlachokerasia**	**60.01 303**			P	**P**	**16 31 55.0**	**-1.7**
AGG	**Agios Georgios**	**60.04 305**			P	**P**	**16 31 55.1**	**-1.6**
AGG					pmax	pmax		
	comp=Z,54nm,1.1s							
AGG					MLR	MLR		
	comp=Z,3µm,22.0s							
AGG	**Agios Georgios**	**60.04 305**			P	**P**	**16 31 55.1**	**-1.6**
AGG					IAmb	IAmb	16 32 57.8	
	comp=Z,54nm,1.1s							
DRGR		**60.11 314**	⇓	*i*	P	**P**	**16 31 58.4**	**+1.2**
DRGR		**60.11 314**		*i*	P	**P**	**16 31 57.8**	**+0.7**
APA	**Apatity**	**60.12 339**	⇓	*i*	P	**P**	**16 31 56.5**	**-0.2**
APA				*i*			16 32 39.0	
APA				*i*			16 34 06.0	
APA				*i*	PPP	PPP	16 35 40.0	
APA				*i*	S	**S**	**16 40 05.0**	**-1.4**
APA				*i*	PS		16 40 28.0	
APA				*i*			16 41 42.0	
APA				*i*	SSS	SSS	16 46 39.0	
APA					pmax	pmax		
	comp=Z,27nm,0.8s							
APA					MLR	MLR		
	comp=Z,7µm,21.0s							
HERR	**Herculane**	**60.17 312**	⇓		P	**P**	**16 31 58.0**	**+0.5**
KLV	**Kalavryta, Ach**	**60.19 304**			P	**P**	**16 31 55.9**	**-1.9**
KALE	**Kalithea**	**60.19 304**			P	**P**	**16 31 55.5**	**-2.3**
THL	**Klokotos Trika**	**60.29 306**			P	**P**	**16 31 56.3**	**-2.1**
TRPA	**Tarpa**	**60.35 315**	⇓		P	**P**	**16 31 59.9**	**+1.3**
ITM	**Ithomi**	**60.38 303**			P	**P**	**16 31 57.7**	**-1.4**
ITM	**Ithomi**	**60.38 303**			P	**P**	**16 31 57.2**	**-1.9**
PABE	**Paberze**	**60.52 324**		*e*	P	**P**	**16 31 59.4**	**-0.2**
PYL	**PYLOS**	**60.53 303**			P	**P**	**16 31 58.1**	**-2.0**
DRO	**Drossia**	**60.54 304**			P	**P**	**16 31 59.1**	**-1.0**
AMT	**Artemida-Makis**	**60.55 303**			P	**P**	**16 31 58.9**	**-1.3**
UZH	**Uzhgorod**	**60.56 316**		*d*	*i* P	**P**	**16 32 01.0**	**+1.0**
UZH					*i*		16 32 18.4	
UZH					*e*		16 32 47.3	
UZH					*e*		16 34 13.1	
UZH					*e* PPP	PPP	16 35 39.0	
UZH					*e*S	**S**	**16 40 11.6**	**-1.1**
UZH					*e*PS	**PnS**	**16 40 27.4**	**-3.6**
UZH					*e*		16 41 41.8	
UZH					MLR	MLR		
	comp=N,270nm,18.0s							
UZH					MLR	MLR		
	comp=E,410nm,18.0s							
UZH					MLR	MLR		
	comp=Z,120nm,18.0s							
MDVR	**Moldovita**	**60.67 312**	⇑		P	**P**	**16 32 01.8**	**+0.9**
MA2	**Magadan**	**60.68 31**		*ce*	P	**P**	**16 32 01.0**	**+0.3**
MA2					pmax	pmax		
	comp=Z,53nm,1.0s							
MA2					MLR	MLR		
	comp=Z,4µm,22.0s							
MA2	**Magadan**	**60.68 31**			P	**P**	**16 31 60.0**	**-0.7**
MA2					IAmb	IAmb	16 32 21.3	
	comp=Z,53nm,0.8s							
SUW	**Suwalki**	**60.71 322**		*e*S		**S**	**16 40 11.5**	**-2.9**
SUW					LMZ	LR	17 00 24.3	
	comp=Z,4.4nm,24.1s							
SUW	**Suwalki**	**60.71 322**			P	**P**	**16 32 00.4**	**-0.6**
SUW					pmax	pmax		
	comp=Z,383nm,1.2s							
SUW					MLR	MLR		
	comp=Z,3µm,18.0s							
SUW	**Suwalki**	**60.71 322**			P	**P**	**16 32 00.4**	**-0.6**
SUW					IAMs_20	IAMs_20	16 53 28.6	
	comp=Z,3µm,18.0s							
SKO	**Skopje**	**60.76 308**		*i*	P	**P**	**16 31 57.5**	**-4.0**
SKO				*i*	S	**S**	**16 40 12.2**	**-3.4**
SKO	**Skopje**	**60.76 308**		*i*	P	**P**	**16 31 57.5**	**-4.0**
SKO				*i*	S	**S**	**16 40 12.2**	**-3.4**
BZS	**Buzias**	**60.78 313**	⇓		P	**P**	**16 32 02.6**	**+1.0**
FNA	**Florina**	**60.79 307**			P	**P**	**16 32 00.7**	**-1.1**
FNA	**Florina**	**60.79 307**			P	**P**	**16 32 00.5**	**-1.4**
FNA					pmax	pmax		
	comp=Z,127nm,1.2s							
FNA					MLR	MLR		
	comp=Z,2µm,20.0s							
FNA	**Florina**	**60.79 307**			P	**P**	**16 32 00.5**	**-1.4**
SIRR	**Siria**	**60.79 313**	⇑		P	**P**	**16 32 03.1**	**+1.4**
FIA1	**FINESS Array S**	**60.84 331**			P	**P**	**16 32 01.6**	**0.0**
FIA1					IAmb	IAmb	16 33 07.5	
	comp=Z,75nm,0.8s							
FINES	**FINESS Array B**	**60.84 331**			P	**P**	**16 32 01.9**	**+0.2**
	comp=Z,77nm,0.8s,baz=114,slow=6.7,SNR=210							
FINES					LR	LR	16 59 53.7	
	comp=Z,2µm,19.3s,baz=112,slow=38							
BANR	**Banloc**	**61.11 312**	⇑		P	**P**	**16 32 04.5**	**+0.7**
AS31	**Alice Springs**	**61.13 131**			P	**P**	**16 32 04.4**	**+0.1**
ASAR	**Alice Springs**	**61.13 131**			P	**P**	**16 32 04.5**	**+0.2**
	comp=Z,17nm,0.4s,baz=309,slow=6.3,SNR=280							
ASAR					LR	LR	17 00 55.9	
	comp=Z,916nm,20.6s,baz=302,slow=38							
ASAR					PKP2bc	**P'P'bc**	**17 01 27.1**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=119,slow=3.1,SNR=8.2							
OHR	**Ohrid**	**61.23 307**		*i*	P		16 31 59.9	-4.9
OHR				*i*	S	**S**	**16 40 17.5**	**-4.2**
OHR	**Ohrid**	**61.23 307**		*i*	P		16 31 59.9	-4.9
OHR				*i*	S	**S**	**16 40 17.5**	**-4.2**
KFL	**Anninata**	**61.26 304**			P	**P**	**16 32 03.9**	**-1.1**
VLS	**Valsamata**	**61.42 304**			P	**P**	**16 32 04.5**	**-1.6**
IGT	**Igoumenitsa**	**61.59 306**			P	**P**	**16 32 04.3**	**-2.9**
KECS	**Kecovo**	**61.74 316**		*e*	P	**P**	**16 32 08.8**	**+0.7**
KECS					pmax	pmax		
	comp=Z,9.0nm,0.8s							
KECS	**Kecovo**	**61.74 316**		*e*	P	**P**	**16 32 08.8**	**+0.7**
PBUR	**Paburge**	**61.75 324**		*e*	P	**P**	**16 32 07.9**	**0.0**
SLIT	**Slitere, Latvi**	**61.83 326**		*e*	P	**P**	**16 32 07.5**	**-0.9**
BEL	**Belsk**	**61.85 320**		*e*	P	**P**	**16 32 09.1**	**+0.4**
BEL				*e*	S	**S**	**16 40 28.5**	**-0.5**
BEL					LMZ	LR	17 02 54.8	
	comp=Z,3.0nm,21.3s							
DIVS	**Divibare**	**61.87 311**	⇑	*i*	P	**P**	**16 32 09.2**	**+0.1**
DIVS	**Divibare**	**61.87 311**			P	**P**	**16 32 08.8**	**-0.3**
DIVS					IAmb	IAmb	16 32 30.3	
	comp=Z,51nm,1.0s							
NIE	**Niedzica**	**61.94 317**		*e*	P	**P**	**16 32 10.6**	**+1.2**
NIE				*e*	S	**S**	**16 40 31.0**	**+0.7**
NIE					LMZ	LR	17 00 42.5	
	comp=Z,1.7nm,20.4s							
FRGS	**Fruska Gora**	**62.03 312**	⇑	*i*	P	**P**	**16 32 10.3**	**+0.2**
FORT	**Forrest**	**62.08 141**			P	**P**	**16 32 10.3**	**-0.2**
FORT					IAmb	IAmb	16 32 30.7	
	comp=Z,58nm,0.7s							
PSZ	**Piszkesteto**	**62.10 315**	⇓		P	**P**	**16 32 11.5**	**+0.9**
PSZ	**Piszkesteto**	**62.10 315**			P	**P**	**16 32 11.0**	**+0.4**
PSZ					pmax	pmax		
	comp=Z,80nm,1.0s							
PSZ	**Piszkesteto**	**62.10 315**			P	**P**	**16 32 11.0**	**+0.4**
PSZ					IAmb	IAmb	16 33 16.1	
	comp=Z,80nm,1.0s							
TEKS	**Tekeris**	**62.22 311**		*e*	P	**P**	**16 32 11.7**	**+0.3**
SKR	**Severo-Kuril's**	**62.22 42**		*e*	P	**P**	**16 32 07.1**	**-4.1**
SKR				*e*	S	**S**	**16 40 29.1**	**-4.6**
SKR					pmax	pmax		
	comp=Z,300nm,3.6s							
SKR					pmax	pmax		
	comp=Z,100nm,7.9s							
SKR					MLR	MLR		
	comp=Z,2µm,18.0s							
SKR					MLR	MLR		
	comp=Z,2µm,17.0s							
SEY	**Seymchan**	**62.28 28**		*e*	P	**P**	**16 32 11.5**	**+0.1**
BBLS	**Lazići**	**62.29 310**	⇑	*i*	P	**P**	**16 32 12.5**	**+0.6**
OJC	**Ojcow**	**62.32 318**		*e*	P	**P**	**16 32 12.1**	**+0.1**
OJC				*e*	S	**S**	**16 40 34.0**	**-1.0**
OJC					LMZ	LR	16 57 50.9	
	comp=Z,2.9nm,29.5s							
OJC	**Ojcow**	**62.32 318**			P	**P**	**16 32 12.0**	**+0.1**
OJC					pmax	pmax		
	comp=Z,40nm,1.0s							
OJC	**Ojcow**	**62.32 318**			P	**P**	**16 32 12.0**	**+0.1**
OJC					IAmb	IAmb	16 33 16.8	
	comp=Z,40nm,1.0s							
PDG	**Podgorica**	**62.39 309**	⇓		P	**P**	**16 32 12.1**	**-0.4**
PDG	**Podgorica**	**62.39 309**	⇑	*i*	P	**P**	**16 32 11.7**	**-0.8**
PDG	**Podgorica**	**62.39 309**			P	**P**	**16 32 11.6**	**-0.8**
PDG					IAmb	IAmb	16 33 13.6	
	comp=Z,40nm,1.0s							
DRME	**Dracevica, Mon**	**62.44 309**	⇑	*i*	P	**P**	**16 32 12.0**	**-0.9**
LANS	**Liptovska Anna**	**62.46 316**		*e*	P	**P**	**16 32 13.8**	**+0.9**
LANS	**Liptovska Anna**	**62.46 316**		*e*	P	**P**	**16 32 13.8**	**+0.9**
HAPS	**Han Pijesak,Bl**	**62.62 311**	⇑	*i*	P	**P**	**16 32 14.0**	**-0.2**
UPM	**Unac-Piva**	**62.65 310**	⇑	*i*	P	**P**	**16 32 13.9**	**-0.6**
VYHS	**Vyhne**	**62.84 316**		*e*	P	**P**	**16 32 15.6**	**+0.2**
VYHS					pmax	pmax		
	comp=Z,16nm,0.9s							
VYHS	**Vyhne**	**62.84 316**		*e*	P	**P**	**16 32 15.6**	**+0.2**
VYHS				*e*	S	**S**	**16 40 42.9**	**+1.3**
VYHS				*e*	L		17 04 51.2	
MORH	**Mrgy, Hungar**	**62.88 313**	⇑	*i*	P	**P**	**16 32 15.7**	**0.0**
BRY	**Bratogost**	**62.92 309**	⇑	*i*	P	**P**	**16 32 15.7**	**-0.5**
HCY	**Herceg Novi**	**62.95 309**	⇑	*i*	P	**P**	**16 32 15.6**	**-0.7**
SCTE	**Santa Cesarea**	**63.02 306**				**P**	**16 32 16.2**	**-0.5**
SCTE					IAmb	IAmb	16 33 17.3	
	comp=Z,59nm,1.0s							
COEN	**Coen**	**63.05 117**			P	**P**	**16 32 17.4**	**+0.1**
TREB	**Trebinje**	**63.06 309**	⇑	*i*	P	**P**	**16 32 16.2**	**-0.8**
KEV	**Kevo**	**63.14 340**			P	**P**	**16 32 17.5**	**+0.5**
KEV					pmax	pmax		
	comp=Z,39nm,0.8s							
KEV					MLR	MLR		
	comp=Z,6µm,19.0s							
KEV	**Kevo**	**63.14 340**			P	**P**	**16 32 17.5**	**+0.5**
KEV					IAmb	IAmb	16 32 19.1	
	comp=Z,39nm,0.8s							
DBRK	**Dubrovnik**	**63.21 309**		*i*	P	**P**	**16 32 17.5**	**-0.5**
OKC	**Ostrava-Krasne**	**63.36 317**		*e*	P	**P**	**16 32 18.9**	**+0.1**
OKC				*e*	S	**S**	**16 40 47.2**	**-0.8**
OKC					MLR	MLR		
	comp=Z,1µm,17.2s							
OKC	**Ostrava-Krasne**	**63.36 317**		*e*	P	**P**	**16 32 18.9**	**+0.1**
OKC				*e*	S	**S**	**16 40 47.2**	**-0.8**
OKC					AMS	AMS	17 03 00.0	
	comp=Z,1µm,17.2s							
PEA0B	**Petropavlovsk-**	**63.41 39**		*ce*	P	**P**	**16 32 19.9**	**+0.8**
PEA0B	**Petropavlovsk-**	**63.41 39**			P	**P**	**16 32 19.2**	**+0.1**
PEA0B					IAmb	IAmb	16 32 33.6	
	comp=Z,45nm,1.2s							
PETK	**Petropavlovsk-**	**63.41 39**			P	**P**	**16 32 18.9**	**-0.3**
	comp=Z,9.4nm,0.9s,baz=204,slow=3.3,SNR=14							
PETK					LR	LR	17 05 45.3	
	comp=Z,2µm,19.1s,baz=266,slow=42							
STON	**Ston**	**63.53 309**	⇑	*i*	P	**P**	**16 32 19.3**	**-0.8**
STON	**Ston**	**63.53 309**		*i*	P	**P**	**16 32 19.7**	**-0.3**
ARCES	**ARCESS Array B**	**63.56 340**			P	**P**	**16 32 20.7**	**+0.9**
	comp=Z,49nm,0.7s,baz=96,slow=7.2,SNR=114							
ARCES					LR	LR	17 00 27.6	
	comp=Z,4µm,21.6s,baz=116,slow=36							
ARE0	**ARCESS Array S**	**63.56 340**			P	**P**	**16 32 20.7**	**+0.9**
ARE0	**ARCESS Array S**	**63.56 340**		*e*	P	**P**	**16 32 20.1**	**+0.3**
ARE0					IVmB_BB		16 32 23.9	
	comp=Z,1µm,2.1s							
ARE0				*e*	PP	**PP**	**16 34 41.6**	**+1.8**
ARE0				*e*	S	**S**	**16 40 51.9**	**+2.0**
ARE0					IVMs_BB	IVMs_BB	17 00 32.2	
	comp=Z,2µm,15.0s							
JAVC	**Velka Javorina**	**63.63 316**		*e*	P	**P**	**16 32 21.7**	**+1.0**
JAVC				*e*	S	**S**	**16 40 52.8**	**+1.3**
MORC	**Moravsky Berou**	**63.75 317**		*e*	P	**P**	**16 32 22.0**	**+0.5**
MORC				*e*	S	**S**	**16 40 52.1**	**-0.9**
MORC	**Moravsky Berou**	**63.75 317**	⇑		P	**P**	**16 32 22.2**	**+0.8**
MORC	**Moravsky Berou**	**63.75 317**			P	**P**	**16 32 21.8**	**+0.3**
MORC					pmax	pmax		
	comp=Z,72nm,1.2s							
MORC	**Moravsky Berou**	**63.75 317**			P	**P**	**16 32 21.8**	**+0.3**
MORC					IAmb	IAmb	16 33 27.1	
	comp=Z,72nm,1.2s							
MODS	**Modra-Piesok**	**63.87 315**		*e*	P	**P**	**16 32 21.6**	**-0.7**
MODS					pmax	pmax		
	comp=Z,17nm,1.0s							
MODS	**Modra-Piesok**	**63.87 315**		*e*	P	**P**	**16 32 21.6**	**-0.7**
MODS				*e*	S	**S**	**16 40 56.5**	**+2.0**
MODS				*e*	L		16 57 38.9	
BLY	**Banja Luka**	**63.89 311**	⇑	*i*	P	**P**	**16 32 22.8**	**+0.4**
RICI	**Ricice**	**63.94 310**			P	**P**	**16 32 22.2**	**-0.6**
MGRS	**Mrkonjic Grad**	**63.96 311**	⇑	*i*	P	**P**	**16 32 23.3**	**+0.3**
PET	**Petropavlovsk**	**63.98 39**		*e*	P	**P**	**16 32 21.8**	**-1.0**
PET				*e*	*SP	**sP**	**16 32 40.7**	**+0.7**
PET				*e*	S	**S**	**16 40 53.0**	**-2.5**
PET					pmax	pmax		
	comp=Z,200nm,7.9s							
PET					pmax	pmax		
	comp=Z,26nm,0.8s							
PET					pmax	pmax		
	comp=Z,200nm,12.3s							
PET					MLR	MLR		
	comp=Z,2µm,17.0s							
PET					MLR	MLR		
	comp=Z,3µm,18.0s							
PET	**Petropavlovsk**	**63.98 39**			P	**P**	**16 32 23.0**	**+0.2**
ZST	**Bratislava**	**63.98 315**		*e*	P	**P**	**16 32 22.5**	**-0.5**
ZST					pmax	pmax		
	comp=Z,28nm,1.2s							
ZST	**Bratislava**	**63.98 315**		*e*	P	**P**	**16 32 22.5**	**-0.5**
ZST				*e*	S	**S**	**16 40 53.3**	**-2.5**
MAKA	**Makarska**	**64.03 310**		*i*	P	**P**	**16 32 22.1**	**-1.2**
GKP	**Gorka Klasztor**	**64.14 321**		*e*	P	**P**	**16 32 23.8**	**-0.1**
GKP				*e*	S	**S**	**16 40 55.5**	**-2.0**
GKP					LMZ	LR	17 03 06.7	
	comp=Z,5.1nm,25.1s							
KTK1	**Kautokeino**	**64.16 339**		*e*	P	**P**	**16 32 24.4**	**+0.6**
KTK1				*e*	S	**S**	**16 40 57.5**	**+0.2**
BEHE	**Becsehely**	**64.18 313**	⇑	*i*	P	**P**	**16 32 28.2**	**+3.9**
MOSL	**Moslavina**	**64.19 312**		*i*	P	**P**	**16 32 23.6**	**-0.8**
MATE	**Matera**	**64.34 307**	⇑		P	**P**	**16 32 25.2**	**-0.2**
VRAC	**Vranov**	**64.35 316**			P	**P**	**16 32 25.4**	**0.0**
	comp=Z,5.2nm,0.6s,baz=108,slow=6.4,SNR=6.5							
VRAC	**Vranov**	**64.35 316**		*e*	P	**P**	**16 32 25.4**	**0.0**
VRAC				*e*	S	**S**	**16 40 55.2**	**-5.2**
TIP	**Timpagrande**	**64.37 305**	⇑		P	**P**	**16 32 25.7**	**-0.1**
TIP	**Timpagrande**	**64.37 305**			P	**P**	**16 32 25.4**	**-0.4**
TIP					IAmb	IAmb	16 33 38.5	
	comp=Z,68nm,1.3s							
KALN	**Kalnik**	**64.40 313**		*i*	P	**P**	**16 32 25.8**	**0.0**
KIJV	**Kijevo**	**64.46 311**		*i*	P	**P**	**16 32 25.4**	**-0.8**
PMG	**Port Moresby**	**64.46 110**			P	**P**	**16 32 26.6**	**0.0**
PMG					pmax	pmax		
	comp=Z,40nm,0.9s							
PMG	**Port Moresby**	**64.46 110**			P	**P**	**16 32 26.6**	**0.0**
PMG					IAmb	IAmb	16 32 46.1	
	comp=Z,40nm,0.9s							
KRUC	**Moravsky**	**64.47 316**		*e*	P	**P**	**16 32 26.3**	**+0.1**
KRUC				*e*	S	**S**	**16 40 59.0**	**-2.9**
HAMF	**Hammerfest**	**64.51 341**		*e*	P	**P**	**16 32 26.9**	**+0.9**
HAMF					IVmB_BB		16 32 27.9	
	comp=Z,1µm,0.9s							
HAMF				*e*	S	**S**	**16 41 02.0**	**+0.4**
HAMF					IVMs_BB	IVMs_BB	17 01 03.8	
	comp=Z,3µm,14.9s							
KOGS	**Kog**	**64.54 313**		*i*	P	**P**	**16 32 27.2**	**+0.5**
KOGS				*e*	S	**S**	**16 41 03.5**	**+0.7**
KSP	**Ksiaz**	**64.59 318**		*e*	P	**P**	**16 32 27.6**	**+0.7**
KSP				*e*	S	**S**	**16 41 02.0**	**-1.3**
KSP					LMZ	LR	16 58 43.4	
	comp=Z,2.7nm,26.3s							
OSTC	**Ostas**	**64.63 318**		*e*	P	**P**	**16 32 27.9**	**+0.7**
OSTC				*e*	S	**S**	**16 41 03.9**	**+0.1**
CHVC	**Chvalec**	**64.73 318**		*e*	P	**P**	**16 32 28.6**	**+0.7**
CHVC					AMS	AMS	17 03 30.0	
	comp=Z,2µm,18.9s							
UPC	**Upice**	**64.76 318**		*e*	P	**P**	**16 32 28.9**	**+0.9**
UPC				*e*	S	**S**	**16 41 06.3**	**+0.9**
UPC	**Upice**	**64.76 318**		*e*	P	**P**	**16 32 28.9**	**+0.9**
UPC				*e*	S	**S**	**16 41 06.3**	**+0.9**
CONA	**Conrad Observa**	**64.81 315**		*i*	P	**P**	**16 32 29.0**	**+0.4**
	comp=Z,13nm,0.9s,SNR=8.5							
UDBI	**Udbina**	**64.91 311**		*i*	P	**P**	**16 32 28.4**	**-0.8**
MORI	**Morici**	**64.97 310**		*i*	P	**P**	**16 32 28.2**	**-1.2**
SGRT	**San Giovanni R**	**65.02 308**			P	**P**	**16 32 29.1**	**-0.8**
SGRT					IAmb	IAmb	16 32 33.0	
	comp=Z,90nm,0.8s							
ZIRJ	**Zirje**	**65.02 310**		*i*	P	**P**	**16 32 28.9**	**-0.9**
ARSA	**Arzberg**	**65.04 314**		*i*	P	**P**	**16 32 30.5**	**+0.6**
	comp=Z,15nm,0.9s,SNR=7.8							
TREC	**Trest**	**65.07 316**		*e*	S	**S**	**16 41 09.1**	**-0.2**
TREC					AMS	AMS	17 04 10.0	
	comp=Z,2µm,17.6s							
OZLJ	**Ozalj**	**65.09 312**		*i*	P	**P**	**16 32 30.1**	**-0.1**
CRES	**Cresnjev**	**65.10 313**	⇑	*i*	P	**P**	**16 32 30.5**	**+0.2**
CEL	**Celeste**	**65.11 304**			P	**P**	**16 32 30.4**	**-0.2**
BOJS	**Bojanci**	**65.25 312**		*i*	P	**P**	**16 32 31.5**	**+0.2**
PERS	**Pernice**	**65.32 314**		*i*	P	**P**	**16 32 32.2**	**+0.4**
PERS				*e*	S	**S**	**16 41 12.7**	**+0.2**
PERS				*e*			16 41 29.6	
PERS				*e*			16 41 44.6	
PERS				*e*			16 41 57.5	
SOKA	**Soboth**	**65.38 314**		*i*	P	**P**	**16 32 32.7**	**+0.5**
	comp=Z,19nm,1.1s,SNR=13							
DUGI	**Dugi Otok**	**65.43 311**		*i*	P	**P**	**16 32 31.5**	**-1.0**
GOPC	**GO Pecny, Ondr**	**65.53 317**		*e*	P	**P**	**16 32 33.6**	**+0.5**
GOPC				*e*	S	**S**	**16 41 16.3**	**+1.4**
GOPC					MLR	MLR		
	comp=Z,2µm,16.2s							
GOPC	**GO Pecny, Ondr**	**65.53 317**		*e*	P	**P**	**16 32 33.6**	**+0.5**
GOPC				*e*	S	**S**	**16 41 16.3**	**+1.4**
GOPC					AMS	AMS	17 07 50.0	
	comp=Z,2µm,16.2s							
NVLJ	**Novalja**	**65.54 311**		*i*	P	**P**	**16 32 31.9**	**-1.3**
BSD	**Bornholm Skovb**	**65.61 323**		*i*	P	**P**	**16 32 32.5**	**-0.9**
BSD					pmax	pmax		
	comp=Z,37nm,0.7s							
BSD	**Bornholm Skovb**	**65.61 323**		*i*	P	**P**	**16 32 32.5**	**-0.9**
	comp=Z,36nm,0.7s							
PVCC	**Panska Ves**	**65.68 318**		*e*	P	**P**	**16 32 35.0**	**+1.0**
PVCC					MLR	MLR		
	comp=Z,2µm,18.9s							
PVCC	**Panska Ves**	**65.68 318**		*e*	P	**P**	**16 32 35.0**	**+1.0**
PVCC					AMS	AMS	17 05 20.0	
	comp=Z,2µm,18.9s							
PRU	**Pruhonice**	**65.69 317**		*e*	P	**P**	**16 32 34.6**	**+0.5**
PRU				*e*	S	**S**	**16 41 13.8**	**-3.0**
PRU					MLR	MLR		
	comp=Z,2µm,21.8s							
PRU	**Pruhonice**	**65.69 317**		*e*	P	**P**	**16 32 34.6**	**+0.5**
PRU				*e*	S	**S**	**16 41 13.8**	**-3.0**
PRU					AMS	AMS	17 04 20.0	
	comp=Z,2µm,21.8s							
OBKA	**Obir**	**65.72 313**		*i*	P	**P**	**16 32 35.1**	**+0.6**
	comp=Z,32nm,1.1s,SNR=12							
LJU	**Ljubljana**	**65.74 313**		*i*	P	**P**	**16 32 35.0**	**+0.5**
LJU				*e*	S	**S**	**16 41 17.4**	**-0.1**
LJU				*e*			16 41 33.4	
LJU				*e*			16 41 49.0	
LJU				*e*			16 42 02.0	
LJU	**Ljubljana**	**65.74 313**	⇑	*i*	P	**P**	**16 32 35.0**	**+0.5**
PRA	**Prague**	**65.76 317**			AMS	AMS	17 04 00.0	
	comp=Z,1µm,18.3s							
TRO	**Tromso**	**65.80 339**		*e*	P	**P**	**16 32 34.5**	**+0.1**
TRO				*e*	S	**S**	**16 41 17.1**	**-0.3**
TRO					IVMs_BB	IVMs_BB	17 03 16.9	
	comp=Z,2µm,14.9s							
CEY	**Cerknica**	**65.82 313**	⇑	*i*	P	**P**	**16 32 35.1**	**+0.1**
MOA	**Molln**	**65.89 315**		*i*	P	**P**	**16 32 35.5**	**+0.1**
	comp=Z,23nm,1.0s,SNR=12							
PAOL	**Paolisi**	**65.94 307**			P	**P**	**16 32 35.2**	**-0.7**
PBCC	**Pribram**	**66.05 317**		*e*	P	**P**	**16 32 36.8**	**+0.4**
PBCC				*e*	P	**P**	**16 32 36.8**	**+0.4**
PBCC				*ex*	x		16 32 57.0	
BRG	**Berggiesshubel**	**66.08 318**		*e*	P	**P**	**16 32 37.0**	**+0.5**
	comp=Z,19nm,0.8s							
BRG					S	**S**	**16 41 16.0**	**-5.5**
BRG					SS	**SS**	**16 45 30.0**	**-7.3**
	comp=N,6µm,24.7s							
	comp=E,3µm,22.4s							
	comp=Z,6µm,24.7s							
BRG	**Berggiesshubel**	**66.08 318**		*e*	P	**P**	**16 32 37.1**	**+0.5**
	comp=Z,19nm,0.9s,baz=88,slow=6.2							
BRG				*e*	S	**S**	**16 41 19.0**	**-2.5**
RUE	**Ruedersdorf**	**66.20 320**		*e*	P	**P**	**16 32 37.7**	**+0.4**
	comp=Z,56nm,0.9s,baz=88,slow=6.2							
RUE				*e*	S	**S**	**16 41 20.0**	**-2.8**
HOPEN	**Hopen**	**66.20 347**		*e*	P	**P**	**16 32 38.1**	**+1.3**
HOPEN				*e*	S	**S**	**16 41 24.9**	**+2.7**
HOPEN					IVMs_BB	IVMs_BB	17 02 30.1	
	comp=Z,2µm,13.5s							
GEC2	**GERESS Array S**	**66.25 316**		*e

STEI eS S 16 41 32.0 +2.5
MOR8 Moi Rana 66.85 335 IVmB_BB 16 32 41.9
comp=Z,686nm,0.8s
MOR8 eS S **16 41 28.5 -1.9**
MOR8 IVMs_BB IVMs_BB 16 58 45.3
comp=Z,1µm,9.9s
RJOB Jochberg 66.88 315 eS S **16 41 28.5 -3.0**
RABL Rabaul 66.95 103 P P **16 32 43.2 +0.4**
BJO1 Bjornoya 66.99 344 eP P **16 32 42.9 +1.0**
BJO1 esP pwP **16 32 57.7 +0.6**
BJO1 eS S **16 41 34.6 +2.9**
BJO1 IVMs_BB IVMs_BB 16 53 52.0
comp=Z,2µm,3.6s
STAL STALIGIAL 67.00 313 P P **16 32 42.0 -0.5**
TANN Tannenbergstha 67.03 318 eP P **16 32 43.0 +0.3**
comp=Z,22nm,0.9s,baz=88,slow=6.2
TANN eS S **16 41 31.7 -1.5**
NKC Novy Kostel 67.04 318 eP P **16 32 43.5 +0.8**
NKC Novy Kostel 67.04 318 eP P **16 32 43.5 +0.8**
WERN Wernitzgruen 67.08 318 eP P **16 32 43.7 +0.7**
comp=Z,9.9nm,0.7s,baz=88,slow=6.2
ABTA Abfaltersbach 67.11 314 *i* P P **16 32 42.7 -0.6**
comp=Z,10nm,0.6s,SNR=8.5
GUNZ Gunzen 67.11 318 eP P **16 32 43.8 +0.6**
comp=Z,16nm,1.0s,baz=88,slow=6.2
CORL Corleone 67.17 304 P P **16 32 43.2 -0.7**
ROTZ Rotzenmuhle 67.21 317 eP P **16 32 44.6 +0.8**
comp=Z,28nm,0.9s,baz=88,slow=6.2
ROTZ eS S **16 41 34.6 -0.6**
PLN Plauen 67.22 318 eP P **16 32 44.2 +0.4**
comp=Z,16nm,0.9s,baz=88,slow=6.2
PLN eS S **16 41 34.4 -0.9**
MANZ Manzenberg 67.26 317 eP P **16 32 45.0 +0.8**
comp=Z,28nm,0.9s,baz=88,slow=6.2
MANZ eS S **16 41 37.2 +1.3**
CLTB Caltabellotta 67.28 304 P P **16 32 44.1 -0.5**
CLTB IAmb IAmb 16 34 00.6
comp=Z,127nm,1.6s
MURB Monte Urbino 67.31 310 P P **16 32 44.8 +0.2**
KONS Konsvik 67.42 335 eP P **16 32 45.2 +0.4**
KONS e 16 41 40.6
STOK Stokkvaagen 67.44 335 eP P **16 32 45.7 +0.8**
STOK eS S **16 41 37.7 +0.3**
NEUB Neuenburg 67.45 319 eP P **16 32 45.3 +0.1**
comp=Z,25nm,0.8s,baz=88,slow=6.2
NEUB eS S **16 41 36.6 -1.4**
LOF Lofoten 67.45 337 eP P **16 32 44.8 -0.1**
LOF IVmBBB 16 32 46.9
comp=Z,729nm,1.2s
LOF esP pwP **16 33 00.5 +0.2**
LOF ePP PP **16 35 14.2 +0.5**
LOF eS S **16 41 35.5 -1.9**
LOF IVMs_BB IVMs_BB 16 57 38.0
comp=Z,1µm,15.5s
MOX Moxa 67.56 318 eP P **16 32 46.2 +0.2**
comp=Z,17nm,0.8s,baz=88,slow=6.2
MOX eS S **16 41 36.8 -2.6**
NC405 NORSAR Array S 67.61 329 P P **16 32 45.8 -0.3**
NC602 NORSAR Array S 67.68 329 P P **16 32 46.0 -0.5**
NC602 NORSAR Array S 67.68 329 eP P **16 32 46.1 -0.5**
NC602 IVmB_BB 16 32 54.6
comp=Z,902nm,4.5s
NC602 eS S **16 41 39.5 -1.0**
NC602 IVMs_BB IVMs_BB 17 01 45.4
comp=Z,1µm,8.1s
WTTA Wattenberg 67.69 314 *i* P P **16 32 46.5 -0.5**
comp=Z,18nm,0.8s,SNR=8.2
NSS Namsos 67.71 333 eP P **16 32 46.5 -0.2**
NSS IVmB_BB 16 32 46.7
comp=Z,382nm,0.7s
NSS eS S **16 41 39.0 -1.7**
NSS IVMs_BB IVMs_BB 16 58 14.4
comp=Z,2µm,6.7s
WATA Walderalm 67.72 314 *i* P P **16 32 46.5 -0.7**
comp=Z,24nm,0.9s,SNR=7.9
LSZ Lusaka 67.74 244 P P **16 32 48.0 +0.2**
LSZ pmax pmax
comp=Z,61nm,1.2s
LSZ Lusaka 67.74 244 P P **16 32 48.0 +0.2**
LSZ IAmb IAmb 16 32 49.5
comp=Z,61nm,1.2s
CTI Castel Tesino 67.75 313 P P **16 32 47.3 -0.1**
CTI pmax pmax
comp=Z,68nm,0.9s
CTI MLR MLR
comp=Z,1µm,21.0s
CTI Castel Tesino 67.75 313 P P **16 32 47.2 -0.1**
CTI IAmb IAmb 16 33 52.1
comp=Z,68nm,0.9s
NC303 NORSAR Array S 67.78 329 P P **16 32 46.8 -0.4**
NB201 NORSAR Array S 67.81 329 P P **16 32 47.0 -0.4**
NB201 IAmb IAmb 16 33 55.8
comp=Z,124nm,1.2s
GRF Grafenberg Arr 67.85 317 eP P **16 32 48.5 +0.7**
comp=Z,34nm,1.1s,baz=88,slow=6.2
GRF eS S **16 41 41.7 -1.2**
GRF eL L 17 07 21.1
comp=Z,2µm,19.4s
NB2 NORSAR Subarra 67.85 329 P P **16 32 47.2 -0.5**
comp=Z,20nm,0.6s,baz=92,slow=6.5
NB2 NORSAR Subarra 67.85 329 P P **16 32 47.2 -0.5**
baz=92,slow=6.5
NOA NORSAR Array B 67.85 329 P P **16 32 47.2 -0.5**
comp=Z,37nm,0.8s,baz=92,slow=6.2,SNR=108
NOA LR LR 17 05 19.6
comp=Z,3µm,20.1s,baz=115,slow=38
FUR Furstenfeldbru 67.88 315 eS S **16 41 43.1 -0.3**
SQTA Sankt Quirin 67.98 314 *i* P P **16 32 48.2 -0.6**
comp=Z,26nm,0.6s,SNR=14
NAO01 NORSAR Array S 68.00 329 P P **16 32 48.0 -0.6**
MOTA Moosalm 68.04 314 *i* P P **16 32 48.5 -0.8**
comp=Z,23nm,0.7s,SNR=13
OSL Oslo 68.06 328 eP P **16 32 49.3 +0.4**
OSL eS S **16 41 45.9 +1.0**
NBO00 NORSAR Array S 68.06 329 P P **16 32 48.3 -0.6**
NBO00 IAmb IAmb 16 33 57.4
comp=Z,98nm,1.1s
NC204 NORSAR Array S 68.08 329 P P **16 32 48.6 -0.5**
ASSE Asse, Remlinge 68.11 320 eS S **16 41 43.1 -2.6**
OSSC Osservatorio P 68.22 310 P P **16 32 49.1 -1.2**
RETA Reutte 68.27 315 *i* P P **16 32 50.1 -0.4**
comp=Z,29nm,0.8s,SNR=11
BSEG Bad Segeberg 68.28 322 eP P **16 32 50.9 +0.5**
comp=Z,61nm,0.8s,baz=88,slow=6.2
BSEG eS S **16 41 45.7 -2.0**
CLZ Clausthal 68.30 319 eP P **16 32 50.8 +0.1**
comp=Z,23nm,0.7s,baz=88,slow=6.2
CLZ eS S **16 41 45.3 -3.0**
FETA Feichten 68.32 314 *i* P P **16 32 50.6 -0.4**
comp=Z,11nm,0.6s,SNR=6.9
ZCCA Zocca 68.34 311 P P **16 32 50.5 -0.5**
ZCCA IAmb IAmb 16 34 18.4
comp=Z,184nm,1.6s
TBLU Trondheim 68.39 332 eP P **16 32 50.4 -0.5**
TBLU ePP PP **16 35 18.6 -3.4**
TBLU eS S **16 41 46.7 -2.1**
TBLU IVMs_BB IVMs_BB 17 04 28.3
comp=Z,2µm,12.9s
BBOO Buckleboo 68.42 138 P P **16 32 51.4 -0.2**
HSPB Hornsund (broa 68.43 347 eP P **16 32 52.0 +1.0**
HSPB LMZ LR 17 02 05.0
comp=Z,4.2nm,28.4s
HSPB Hornsund (broa 68.43 347 eP P **16 32 52.0 +1.0**
HSPB IVmB_BB 16 32 58.0
comp=Z,864nm,3.9s
HSPB epP pP **16 33 02.3 -1.0**
HSPB IVMs_BB IVMs_BB 16 42 09.5
comp=Z,1µm,3.6s
NRDL Niedersach Rie 68.44 320 eP P **16 32 52.1 +0.7**
comp=Z,26nm,1.0s,baz=88,slow=6.2
NRDL eS S **16 41 48.9 -0.8**
SPA0 Spitsbergen Ar 68.53 348 P P **16 32 52.7 +1.0**
SPA0 IAmb IAmb 16 33 12.0
comp=Z,92nm,1.1s
SPA0 Spitsbergen Ar 68.53 348 eP P **16 32 52.6 +1.0**
SPA0 eS S **16 41 51.8 +1.7**
SPA0 IVMs_BB IVMs_BB 17 04 03.9
comp=Z,2µm,23.0s
SPITS Spitsbergen Ar 68.53 348 P P **16 32 50.9 -0.7**
comp=Z,29nm,0.8s,baz=102,slow=7.8,SNR=17
CASP Castiglione de 68.56 310 P P **16 32 52.0 -0.4**
SALO Salr 68.56 313 P P **16 32 52.7 +0.3**
GTTG Gottingen 68.57 319 eP P **16 32 52.3 +0.1**
comp=Z,41nm,0.9s,baz=88,slow=6.2
GTTG eS S **16 41 48.9 -2.5**

UBBA Unterbreizbach 68.58 318 eS S **16 41 49.9 -1.5**
KONO Kongsberg 68.62 328 P P **16 32 52.6 +0.1**
KONO pmax pmax
comp=Z,80nm,1.2s
KONO MLR MLR
comp=Z,4µm,19.0s
KONO Kongsberg 68.62 328 P P **16 32 52.5 +0.1**
KONO IAmb IAmb 16 33 53.8
comp=Z,80nm,1.2s
KONO Kongsberg 68.62 328 IAMs_20 IAMs_20 17 02 12.7
comp=Z,4µm,19.0s
KONO Kongsberg 68.62 328 eP P **16 32 52.5 0.0**
KONO IVmB_BB 16 32 57.2
comp=Z,888nm,4.5s
KONO ePP PP **16 35 24.6 +0.5**
KONO eS S **16 41 51.6 -0.1**
FUORN Ofenpass-Fuorn 68.67 314 P P **16 32 53.0 -0.3**
UBR Ueberruh 68.69 315 eP P **16 32 53.0 -0.3**
comp=Z,19nm,0.8s,baz=88,slow=6.2
SKMB Sankelmark Bun 68.77 322 eS S **16 41 53.8 +0.3**
BILL Bilibino 68.82 23 *ce*P P **16 32 54.7 +1.2**
BILL pmax pmax
comp=Z,67nm,1.0s
BILL MLR MLR
comp=Z,2µm,13.0s
BILL Bilibino 68.82 23 P P **16 32 54.1 +0.6**
BILL IAmb IAmb 16 33 15.6
comp=Z,46nm,0.8s
GOET G??ttrup 68.83 325 *i* P P **16 32 52.3 -1.5**
comp=Z,98nm,0.9s
MUD Monsted U'grnd 68.87 324 *i* P P **16 32 54.7 +0.7**
MUD pmax pmax
comp=Z,33nm,0.7s
MUD Monsted U'grnd 68.87 324 *i* P P **16 32 54.7 +0.7**
comp=Z,33nm,0.7s
DAVA Damuels 68.88 314 *i* P P **16 32 54.3 -0.2**
comp=Z,34nm,0.7s,SNR=18
RETH Rethem/Aller, 68.89 320 eP P **16 32 54.2 0.0**
comp=Z,16nm,0.8s,baz=88,slow=6.2
DOMB Dombas 68.91 330 eP P **16 32 54.4 +0.1**
DOMB IVmB_BB 16 32 54.4
comp=Z,427nm,1.3s
DOMB ePP PP **16 35 27.4 +0.9**
DOMB eS S **16 41 55.8 +0.6**
DOMB IVMs_BB IVMs_BB 16 59 33.7
comp=Z,1µm,4.3s
DAVOX Davos/Dischmat 68.92 314 P P **16 32 54.3 -0.5**
comp=Z,11nm,0.6s,baz=120,slow=6.3,SNR=17
PATS Pohnpei 69.16 90 P P **16 32 56.4 -0.2**
HOMB Homborsund 69.20 326 eP P **16 32 55.9 -0.2**
HOMB IVmB_BB 16 33 09.7
comp=Z,974nm,2.3s
HOMB ePP PP **16 35 29.8 +0.8**
HOMB eS S **16 41 57.6 -0.9**
HOMB IVMs_BB IVMs_BB 17 06 32.8
comp=Z,2µm,10.9s
SKAR Skarslia 69.27 329 eP P **16 32 57.8 +1.3**
SKAR eS S **16 42 01.8 +2.3**
TUE Stuetta 69.31 314 P P **16 32 56.6 -0.6**
TUE IAmb IAmb 16 33 54.1
comp=Z,205nm,1.9s
MSSA Maissana 69.39 311 P P **16 32 56.5 -1.1**
MSSA IAmb IAmb 16 33 55.5
comp=Z,157nm,1.5s
KBS Kingsbay 69.56 348 P P **16 32 58.7 +0.8**
KBS pmax pmax
comp=Z,41nm,1.0s
KBS MLR MLR
comp=Z,4µm,20.0s
KBS Kingsbay 69.56 348 P P **16 32 58.7 +0.8**
KBS Kingsbay 69.56 348 IAMs_20 IAMs_20 17 06 29.1
comp=Z,4µm,20.0s
KBS Kingsbay 69.56 348 eP P **16 32 59.9 +2.0**
KBS esP **sP** **16 33 14.5 -0.7**
KBS eS S **16 42 05.5 +3.3**
TNS Taunus Mts 69.61 318 eP P **16 32 58.8 0.0**
comp=Z,27nm,0.9s,baz=88,slow=6.2
TNS eS S **16 42 02.7 -1.1**
MOL Molde 69.62 331 eP P **16 32 59.0 +0.5**
MOL esP pwP **16 33 14.5 +0.6**
MOL eS S **16 42 04.4 +1.0**
MOL IVMs_BB IVMs_BB 17 07 37.8
comp=Z,1µm,12.0s
HLG Helgoland 69.70 322 eS S **16 42 03.1 -1.4**
BFO Black Forest 69.83 316 eS S **16 42 04.9 -1.6**
BFO Black Forest 69.83 316 P P **16 32 59.8 -0.5**
BFO pmax pmax
comp=Z,45nm,1.5s
BFO Black Forest 69.83 316 P P **16 32 59.8 -0.5**
AKN Aaknes 69.88 330 eP P **16 33 01.0 +0.8**
AKN eS S **16 42 09.2 +2.6**
AKN IVMs_BB IVMs_BB 17 06 19.7
comp=Z,2µm,12.9s
SNART Snartemo 69.88 326 eP P **16 33 00.4 +0.2**
SNART eS S **16 42 08.7 +2.1**
IBBN Ibbenburen 69.89 320 eP P **16 33 00.8 +0.4**
comp=Z,40nm,0.7s,baz=88,slow=6.2
IBBN eS S **16 42 06.1 -0.8**
VSL Villasalto 70.04 306 P P **16 33 01.3 -0.4**
VSL IAmb IAmb 16 34 07.3
comp=Z,61nm,1.0s
ODD1 Odda 70.12 328 eP P **16 33 02.1 +0.3**
ODD1 eS S **16 42 10.8 +1.4**
BLS5 Blasjo 70.23 327 IVmB_BB 16 33 02.5
comp=Z,2µm,3.0s
BLS5 eP P **16 33 02.9 +0.5**
BLS5 eS S **16 42 12.6 +1.9**
BLS5 IVMs_BB IVMs_BB 16 43 01.0
comp=Z,1µm,3.6s
BUG Bochum--Univer 70.26 319 eP P **16 33 02.9 +0.2**
comp=Z,40nm,0.7s,baz=88,slow=6.2
BUG eS S **16 42 10.2 -1.0**
HYA Hoyanger 70.29 329 eP P **16 33 03.5 +0.8**
AHRW Bad Neuenahr-A 70.46 318 eS S **16 42 13.0 -0.6**
KEST Kesra 70.60 302 P P **16 33 04.9 -0.3**
comp=Z,33nm,0.8s,baz=294,slow=2.0,SNR=25
KEST LR LR 17 08 25.2
comp=Z,1µm,20.6s,baz=40,slow=40
KEST Kesra 70.60 302 P P **16 33 05.0 -0.3**
ECH Echery 70.62 316 P P **16 33 04.6 -0.5**
ECH pmax pmax
comp=Z,26nm,1.1s
ECH Echery 70.62 316 P P **16 33 04.6 -0.5**
SENN Lac Senin/Sane 70.73 314 P P **16 33 05.7 -0.3**
SENIN IAmb IAmb 16 34 18.2
comp=Z,121nm,0.9s
BER Bergen 70.75 329 eP P **16 33 02.5 -3.0**
BER IVmB_BB 16 33 04.3
comp=Z,2µm,4.0s
BER eS S **16 42 15.8 -0.8**
BER IVMs_BB IVMs_BB 17 06 21.2
comp=Z,3µm,3.6s
ASK Askoy 70.81 329 eP P **16 33 06.6 +0.7**
ASK eS S **16 42 19.4 +2.0**
FOO Floro 70.82 330 eP P **16 33 05.4 -0.5**
FOO IVmB_BB 16 33 10.1
comp=Z,2µm,2.9s
FOO eS S **16 42 17.7 +0.3**
FOO IVMs_BB IVMs_BB 17 05 06.6
comp=Z,1µm,3.9s
KMY Karmoy 70.86 327 eP P **16 33 06.7 +0.5**
KMY eS S **16 42 18.2 +0.3**
SUE Sulen 70.99 329 eP P **16 33 07.0 +0.1**
SUE IVmB_BB 16 33 18.8
comp=Z,3µm,3.4s
SUE eS S **16 42 19.5 +0.1**
SUE IVMs_BB IVMs_BB 17 03 45.2
comp=Z,3µm,3.7s
WLF Walferdange 71.13 317 eP P **16 33 08.8 +0.7**
comp=Z,24nm,0.8s,baz=88,slow=6.2
WLF eS S **16 42 21.5 0.0**
WLF Walferdange 71.13 317 P P **16 33 08.6 +0.5**
WLF pmax pmax
comp=Z,70nm,1.1s
WLF MLR MLR
comp=Z,2µm,20.0s
WLF Walferdange 71.13 317 P P **16 33 08.6 +0.5**
WLF IAmb IAmb 16 34 15.8
comp=Z,70nm,1.1s
BNI Bardonecchia 71.32 312 P P **16 33 08.9 -0.6**
BNI pmax pmax
comp=Z,148nm,1.7s
BNI MLR MLR
comp=Z,800nm,18.0s
BNI Bardonecchia 71.32 312 P P **16 33 08.9 -0.6**
BNI IAmb IAmb 16 34 21.2
comp=Z,148nm,1.7s
STKA Stephens Creek 71.51 134 P P **16 33 09.8 -0.8**
comp=Z,7.0nm,0.7s,baz=308,slow=6.7,SNR=20
STKA LR LR 17 06 11.2
comp=Z,1µm,22.0s,baz=300,slow=37
STKA Stephens Creek 71.51 134 P P **16 33 10.1 -0.5**
CLF Chambon-Foret 73.90 316 P P **16 33 24.5 -0.1**
CLF IAmb IAmb 16 34 32.0
comp=Z,95nm,1.1s
LRW Lerwick 74.00 329 eP P **16 33 25.1 +0.2**
WACR West Acre 74.17 321 eP P **16 33 26.3 +0.2**
WACR IAmb IAmb 16 33 27.9
comp=Z,215nm,0.8s
WAL1 Walls 74.20 329 eP P **16 33 26.2 +0.1**
NOR Nord 74.21 352 *ij*P P **16 33 26.1 +0.3**
NOR pmax pmax
comp=Z,13nm,0.9s
NOR Nord 74.21 352 *ij*P P **16 33 26.1 +0.3**
comp=Z,12nm,0.9s
LBTB Lobatse 74.47 237 P P **16 33 28.3 0.0**
LBTB pmax pmax
comp=Z,56nm,1.2s
LBTB Lobatse 74.47 237 P P **16 33 28.3 0.0**
LMK Market Rasen 74.61 322 eP P **16 33 29.6 +1.0**
LMK IAmb IAmb 16 33 31.1
comp=Z,119nm,0.9s
GDLE Glaisdale, N Y 74.73 323 eP P **16 33 29.2 -0.1**
GDLE IAmb IAmb 16 33 31.0
comp=Z,36nm,0.6s
JMIC Jan Mayen 75.03 340 eP P **16 33 28.5 -2.2**
JMIC eS S **16 43 07.3 +2.3**
JMIC IVMs_BB IVMs_BB 17 06 39.9
comp=Z,912nm,20.6s
EIDS Eidsvold 75.08 123 P P **16 33 31.9 +0.2**
HPK Haverah Park 75.28 322 eP P **16 33 32.8 +0.3**
MLA1 Latheron 75.42 327 eP P **16 33 32.6 -0.5**
LBWR Ladybower, Pea 75.45 322 eP P **16 33 33.6 +0.2**
LBWR IAmb IAmb 16 33 35.3
comp=Z,68nm,0.9s
ESY Stoneypath 75.48 324 eP P **16 33 33.6 0.0**
MCD Coleburn Disti 75.50 326 eP P **16 33 34.1 +0.4**
WOL Wolverton 75.55 320 eP P **16 33 34.1 +0.1**
WOL IAmb IAmb 16 33 35.9
comp=Z,75nm,0.8s
EBL Broad Law 75.74 324 eP P **16 33 35.4 +0.3**
EDI Edinburgh 75.79 325 eP P **16 33 35.5 +0.2**
EDI IAmb IAmb 16 33 37.2
comp=Z,52nm,0.8s
EKA Eskdalemuir Ar 75.89 324 P P **16 33 36.0 0.0**
comp=Z,21nm,0.6s,baz=90,slow=6.8,SNR=73
EKA Eskdalemuir Ar 75.89 324 P P **16 33 36.0 0.0**
ESK Eskdalemuir 75.92 324 eP P **16 33 36.4 +0.3**
ESK IAmb IAmb 16 33 37.1
comp=Z,40nm,1.0s
ESK Eskdalemuir 75.92 324 P P **16 33 36.0 -0.1**
ESK pmax pmax
comp=Z,72nm,1.2s
ESK MLR MLR
comp=Z,3µm,18.0s
ESK Eskdalemuir 75.92 324 P P **16 33 36.0 -0.1**
ESK IAmb IAmb 16 34 45.3
comp=Z,72nm,1.2s
ESK IAMs_20 IAMs_20 17 08 34.9
comp=Z,3µm,18.0s
ELO Logie Almond 75.97 325 eP P **16 33 36.3 -0.1**
HNR Honiara 76.06 105 LR LR 17 03 57.9
comp=Z,340nm,21.4s,baz=274,slow=33
MDO Dochfour 76.12 326 eP P **16 33 37.0 -0.2**
DAG Danmarks Havn 76.13 347 *i* P P **16 33 36.8 -0.1**
DAG Danmarks Havn 76.13 347 *i* P P **16 33 36.8 -0.1**
HLM1 Long Mynd 76.31 321 eP P **16 33 38.6 +0.2**
HLM1 IAmb IAmb 16 33 40.2
comp=Z,20nm,0.8s
FOEL Foel Wylfa 76.42 321 eP P **16 33 39.5 +0.5**
FOEL IAmb IAmb 16 33 41.1
comp=Z,42nm,0.6s
TAM Tamanrasset 76.49 290 P P **16 33 39.3 -0.8**
TAM pmax pmax
comp=Z,66nm,1.5s
TAM MLR MLR
comp=Z,3µm,19.0s
TAM Tamanrasset 76.49 290 P P **16 33 39.3 -0.8**
TAM IAMs_20 IAMs_20 17 10 35.9
comp=Z,3µm,19.0s
BOSA Boshof 76.49 234 P P **16 33 39.9 0.0**
comp=Z,22nm,0.8s,baz=68,slow=5.2,SNR=41
BOSA LR LR 17 03 39.4
comp=Z,2µm,21.9s,baz=66,slow=33
BOSA Boshof 76.49 234 P P **16 33 39.7 -0.2**
BOSA pmax pmax
comp=Z,41nm,0.9s
BOSA Boshof 76.49 234 P P **16 33 39.7 -0.2**
KAC Achnashellach 76.60 326 eP P **16 33 39.9 0.0**
GAL1 Galloway 76.86 324 eP P **16 33 41.7 +0.2**
GAL1 IAmb IAmb 16 33 43.4
comp=Z,31nm,0.7s
LAWE Loch Awe, Argy 76.93 325 eP P **16 33 41.4 -0.4**
TOO Toolangi 77.43 137 P P **16 33 45.8 +0.9**
TOO pmax pmax
comp=Z,45nm,0.8s
TOO MLR MLR
comp=Z,2µm,20.0s
TOO Toolangi 77.43 137 P P **16 33 45.8 +0.9**
TOO IAmb IAmb 16 34 05.0
comp=Z,45nm,0.8s
GMM Mts of Mourne 77.71 323 eP P **16 33 46.5 +0.3**
ARMA Armidale 77.95 128 P P **16 33 48.7 +0.7**
CART Cartagena 78.39 306 eP P **16 33 50.2 -0.1**
CART eS S **16 43 39.8 -3.1**
CAN Canberra 78.55 133 P P **16 33 51.6 +0.4**
CAN pmax pmax
comp=Z,24nm,0.8s
CAN MLR MLR
comp=Z,2µm,21.0s
CAN Canberra 78.55 133 P P **16 33 51.6 +0.4**
TSUM Tsumeb 78.56 245 P P **16 33 51.9 +0.2**
TSUM Tsumeb 78.56 245 IAMs_20 IAMs_20 17 02 14.2
comp=Z,2µm,22.0s
UCM Universidad Co 79.41 309 eP P 16 33 46.8 -9.1
UCM eS S **16 43 48.0 -5.8**
SCO Scoresbysund 79.42 341 IAMs_20 IAMs_20 17 10 14.7
comp=Z,3µm,21.0s
ESDC Sonseca Array 80.10 308 P P **16 33 59.8 0.0**
comp=Z,15nm,0.8s,baz=55,slow=5.3,SNR=60
ESDC LR LR 17 15 11.4
comp=Z,718nm,18.9s,baz=100,slow=40
RDOG Red Dog Mine 80.11 21 P P **16 34 00.1 +1.0**
RDOG IAMs_20 IAMs_20 17 14 52.6
comp=Z,3µm,22.0s
PAB San Pablo 80.42 308 P P **16 34 01.5 0.0**
PAB pmax pmax
comp=Z,171nm,1.9s
PAB MLR MLR
comp=Z,1µm,22.0s
PAB San Pablo 80.42 308 P P **16 34 01.5 0.0**
PAB IAmb IAmb 16 35 10.0
comp=Z,171nm,1.9s
MELI Melilla 80.48 304 eP P **16 33 57.3 -4.4**
MELI eS S **16 44 05.7 +0.6**
EMAL Malaga-Limoner 81.25 306 *ij*P P **16 34 05.8 0.0**
EMAL eS S **16 44 07.2 -5.9**
PVLZ Peæn de 81.59 304 *i* P P **16 34 10.8 +3.2**
PVLZ *i* S S **16 44 13.7 -2.9**
BORG Borgarnes 81.62 336 IAMs_20 IAMs_20 17 11 30.2
comp=Z,3µm,21.0s
SUR Sutherland 81.66 232 P P **16 34 08.5 +0.3**
SUR IAmb IAmb 16 34 29.8
comp=Z,58nm,1.1s
MVO Moncorvo 81.94 311 eP P **16 34 10.1 +0.6**
comp=Z,61nm,2.3s
MVO Moncorvo 81.94 311 eS S **16 44 21.3 +1.1**
MVO Moncorvo 81.94 311 eLR LR 17 01 59.7
comp=Z,1µm,20.0s
CEU Ceuta 82.22 305 eP P 16 34 16.9 +6.0
CEU eS S **16 44 20.1 -3.0**
MTE Manteigas 82.53 310 eP P **16 34 13.8 +1.2**
comp=Z,96nm,1.3s
MTE Manteigas 82.53 310 eS S **16 44 27.9 +1.5**
MTE Manteigas 82.53 310 eLR LR 17 03 05.0
comp=Z,668nm,20.0s
MTE Manteigas 82.53 310 P P **16 34 12.8 +0.2**
MTE IAmb IAmb 16 35 32.1
comp=Z,97nm,1.3s
TOC2 Torodi Ar. Sit 82.57 281 IAMs_20 IAMs_20 17 11 51.4

comp=Z,2µm,21.0s
TOC3 Torodi Ar. Sit 82.57 281 IAMs_20 IAMs_20 17 11 51.6
comp=Z,2µm,21.0s
TOC1 Torodi Ar. Sit 82.58 281 IAMs_20 IAMs_20 17 11 51.8
comp=Z,3µm,21.0s
PGAV Gavieira, Arco 82.58 312 *e*S **S** **16 44 23.9 -3.0**
PGAV Gavieira, Arco 82.58 312 *e*LR LR 17 02 10.5
comp=Z,808nm,18.0s
TOB3 Torodi Ar. Sit 82.59 281 IAMs_20 IAMs_20 17 11 52.0
comp=Z,2µm,22.0s
TOA2 Torodi Ar. Sit 82.59 281 IAMs_20 IAMs_20 17 11 52.0
comp=Z,3µm,22.0s
TOB1 Torodi Ar. Sit 82.59 281 IAMs_20 IAMs_20 17 11 52.0
comp=Z,2µm,22.0s
TOA0 Torodi Ar. Sit 82.59 281 P **P** **16 34 12.6 -0.6**
TOA0 IAMs_20 IAMs_20 17 11 53.1
comp=Z,2µm,21.0s
TORD Torodi Ar. Bea 82.59 281 P **P** **16 34 12.8 -0.4**
comp=Z,17nm,0.9s,baz=74,slow=4.6,SNR=66
TORD LR LR 17 12 59.9
comp=Z,2µm,20.6s,baz=95,slow=37
TOA3 Torodi Ar. Sit 82.59 281 IAMs_20 IAMs_20 17 11 51.2
comp=Z,2µm,22.0s
TOC4 Torodi Ar. Sit 82.59 281 IAMs_20 IAMs_20 17 11 51.2
comp=Z,2µm,21.0s
TOC7 Torodi Ar. Sit 82.60 281 IAMs_20 IAMs_20 17 11 51.4
comp=Z,2µm,21.0s
TOB5 Torodi Ar. Sit 82.60 281 IAMs_20 IAMs_20 17 11 52.4
comp=Z,3µm,21.0s
TOB4 Torodi Ar. Sit 82.61 281 IAMs_20 IAMs_20 17 11 52.5
comp=Z,2µm,21.0s
TOC5 Torodi Ar. Sit 82.62 281 IAMs_20 IAMs_20 17 11 52.7
comp=Z,3µm,21.0s
PCBR Castelo Branco 82.65 309 *e*P **P** **16 34 14.0 +0.9**
comp=Z,68nm,1.6s
PVIS Viseu 82.69 310 *e*P **P** **16 34 13.9 +0.5**
PMRV Marv??o 82.72 309 *e*P **P** **16 34 14.5 +1.0**
comp=Z,50nm,1.9s
PMRV Marv??o 82.72 309 *e*S **S** **16 44 22.6 -5.5**
PMRV Marv??o 82.72 309 *e*LR LR 17 03 18.4
comp=Z,1µm,20.0s
IFR Ifrane 82.72 303 *i* P **P** **16 34 10.4 -3.4**
IFR *i* S **S** **16 44 29.7 +1.0**
SUMG Summit 82.75 346 P **P** **16 34 13.7 +0.2**
SUMG pmax pmax
comp=Z,109nm,1.1s
SUMG MLR MLR
comp=Z,2µm,22.0s
SUMG Summit 82.75 346 P **P** **16 34 13.7 +0.2**
SUMG IAmb IAmb 16 35 28.9
comp=Z,109nm,1.1s
SUMG Summit 82.75 346 *i* P **P** **16 34 14.6 +1.1**
comp=Z,70nm,0.9s
PESTR Estremoz 83.03 308 *e*S **S** **16 44 29.8 -1.6**
PCAS Casmilo, Conde 83.34 310 *e*S **S** **16 44 28.4 -6.0**
PMTG Montargil 83.44 309 *e*P **P** **16 34 17.0 -0.2**
PMTG Montargil 83.44 309 *e*S **S** **16 44 36.4 +0.9**
PBEJ Beja 83.49 308 *e*P **P** **16 34 17.3 -0.2**
comp=Z,72nm,1.3s
PVAQ Vaqueiros 83.57 307 *e*P **P** **16 34 19.0 +1.1**
comp=Z,141nm,1.5s
PVAQ Vaqueiros 83.57 307 *e*S **S** **16 44 30.9 -6.0**
PVAQ Vaqueiros 83.57 307 *e*LR LR 17 05 45.0
comp=Z,888nm,20.0s
PCVE Castro Verde 83.75 307 *e*S **S** **16 44 33.9 -4.7**
PBDV Barranco-do-Ve 83.78 307 *e*S **S** **16 44 39.6 +0.5**
MESJ Messejana 83.82 308 *e*P **P** **16 34 18.9 -0.3**
MESJ *e*SKSac **SKSac** **16 44 37.0 -1.8**
MESJ AMS AMS 17 12 40.6
comp=N,943nm,18.3s
MESJ Messejana 83.82 308 *e*P **P** **16 34 18.8 -0.3**
MESJ *e* 16 44 36.9
MESJ Messejana 83.82 308 *e*P **P** **16 34 19.5 +0.3**
PNCL Nicolau / Gran 83.97 308 *e*P **P** **16 34 21.6 +1.7**
PNCL Nicolau / Gran 83.97 308 *e*S **S** **16 44 42.7 +1.9**
TOLK Toolik Lake Re 84.08 18 P **P** **16 34 21.1 +1.1**
baz=306
TOLK Toolik Lake Re 84.08 18 P **P** **16 34 20.7 +0.8**
TOLK IAMs_20 IAMs_20 17 17 52.5
comp=Z,2µm,19.0s
PMAFR Mafra 84.26 309 *e*S S 16 44 34.5 -9.2
MORF Marmelete 84.31 307 *e*P **P** **16 34 21.2 -0.6**
MORF *e*SKSac **SKSac** **16 44 40.3 -1.8**
MORF AMS AMS 17 13 07.4
comp=N,983nm,21.8s
MORF Marmelete 84.31 307 *e*P **P** **16 34 21.2 -0.6**
MORF *e* 16 44 40.2
MORF Marmelete 84.31 307 *e*S **S** **16 44 41.5 -2.9**
TULEG Thule 84.40 355 P **P** **16 34 21.3 0.0**
TULEG IAMs_20 IAMs_20 17 17 45.2
comp=Z,2µm,21.0s
PFVI Vila Bisbo 84.50 307 *e*S **S** **16 44 46.3 +0.2**
AVE Averroes 84.61 303 *e*P P 16 34 14.7 -8.6
AVE *e*S **S** **16 44 47.5 +0.1**
COLD Coldfoot 84.72 19 IAMs_20 IAMs_20 17 11 52.5
comp=Z,2µm,22.0s
TTA Tatalina 85.03 24 P **P** **16 34 25.7 +0.7**
TTA Tatalina 85.03 24 P **P** **16 34 25.6 +0.7**
CASY Casey 85.94 171 IAMs_20 IAMs_20 17 06 09.5
comp=Z,2µm,20.0s
BPAW Bear Paw Mtn. 86.28 22 P **P** **16 34 31.2 +0.2**
BPAW IAmb IAmb 16 34 53.5
comp=Z,111nm,1.6s
DZM Mont Dzumac 86.48 114 *e*S **S** **16 45 09.6 +3.4**
comp=Z,1µm,28.6s
DZM *e*SS **SS** **16 50 48.8 +1.1**
comp=Z,2µm,39.1s
DZM Mont Dzumac 86.48 114 *e*LR LR 17 02 12.3
comp=Z,2µm,25.4s
DZM Mont Dzumac 86.48 114 LR LR 17 15 38.7
comp=Z,378nm,19.6s,baz=278,slow=37
PPLA Purkeypile 86.53 23 P **P** **16 34 32.9 +0.4**
PPLA IAmb IAmb 16 34 36.7
comp=Z,26nm,0.6s
PPLA IAMs_20 IAMs_20 17 18 00.5
comp=Z,3µm,22.0s
KTH Kantishna Hill 86.62 23 P **P** **16 34 33.1 +0.3**
NEA Nenana 86.67 21 P **P** **16 34 32.7 -0.2**
NEA IAmb IAmb 16 34 35.9
comp=Z,29nm,0.6s
FYU Fort Yukon 86.68 19 P **P** **16 34 33.6 +0.8**
FYU IAmb IAmb 16 35 47.2
comp=Z,96nm,1.3s
FYU IAMs_20 IAMs_20 17 19 54.1
comp=Z,3µm,20.0s
MDM Murphy Dome 86.73 21 P **P** **16 34 33.4 +0.2**
MDM IAmb IAmb 16 34 36.0
comp=Z,40nm,0.8s
POKR Poker Plat Res 86.90 20 P **P** **16 34 34.5 +0.5**
baz=308
COLA College 86.91 21 P **P** **16 34 34.0 0.0**
COLA pmax pmax
comp=Z,28nm,1.0s
COLA MLR MLR
comp=Z,2µm,20.0s
COLA College 86.91 21 P **P** **16 34 34.0 0.0**
COLA IAmb IAmb 16 36 00.3
comp=Z,28nm,1.0s
COLA College 86.91 21 IAMs_20 IAMs_20 17 18 31.3
comp=Z,2µm,20.0s
CCB Clear Creek Bu 87.06 21 P **P** **16 34 34.2 -0.6**
CCB IAMs_20 IAMs_20 17 18 35.5
comp=Z,3µm,20.0s
WRH Wood River Hil 87.08 21 P **P** **16 34 34.4 -0.5**
WRH IAMs_20 IAMs_20 17 18 35.8
comp=Z,2µm,19.0s
A36M Sachs Harbour 87.22 10 P **P** **16 34 35.8 +0.5**
baz=329
PRP Porcupine Dome 87.26 20 P **P** **16 34 35.5 -0.5**
PRP IAmb IAmb 16 34 58.3
comp=Z,37nm,0.9s
PRP IAMs_20 IAMs_20 17 19 55.7
comp=Z,2µm,20.0s
RES Resolute Bay 87.27 1 P **P** **16 34 35.6 0.0**
RES pmax pmax
comp=Z,27nm,1.1s
RES MLR MLR
comp=Z,1µm,22.0s
RES Resolute Bay 87.27 1 P **P** **16 34 35.6 0.0**
IL31 87.30 21 P **P** **16 34 35.1 -0.8**
ILAR Eielson Array 87.30 21 P **P** **16 34 35.1 -0.8**
comp=Z,15nm,0.9s,baz=295,slow=4.0,SNR=62
ILAR LR LR 17 17 46.9
comp=Z,2µm,21.5s,baz=308,slow=38
CHGN Chignik 87.31 31 P **P** **16 34 34.8 -1.3**
CHGN IAmb IAmb 16 34 59.0
comp=Z,48nm,1.1s
CNBA Chernabura Isl 87.44 32 P **P** **16 34 36.0 -0.8**
CNBA IAmb IAmb 16 35 01.1
comp=Z,53nm,1.4s
RND Reindeer 87.46 22 P **P** **16 34 35.8 -1.0**
RND pmax pmax
comp=Z,28nm,1.0s
RND MLR MLR
comp=Z,3µm,20.0s
RND Reindeer 87.46 22 P **P** **16 34 35.8 -1.0**
RND IAmb IAmb 16 34 38.5
comp=Z,28nm,1.0s
RND IAMs_20 IAMs_20 17 18 45.8
comp=Z,3µm,20.0s
HDA Harding Lake 87.50 21 P **P** **16 34 36.1 -0.8**
baz=309
HDA Harding Lake 87.50 21 P **P** **16 34 35.8 -1.1**
HDA IAMs_20 IAMs_20 17 18 58.1
comp=Z,2µm,20.0s
CUT Chulitna 87.54 23 P **P** **16 34 38.2 +1.1**
baz=306
MAW Mawson 87.58 189 P **P** **16 34 36.8 -0.1**
comp=Z,6.3nm,1.1s,baz=40,slow=7.9,SNR=5.1
MAW LR LR 17 06 16.1
comp=Z,2µm,21.2s,baz=19,slow=30
MAW Mawson 87.58 189 P **P** **16 34 37.4 +0.4**
RSO Redoubt South 87.67 26 P **P** **16 34 38.2 +0.2**
ILULI Ilulissat 88.06 346 IAMs_20 IAMs_20 17 20 22.7
comp=Z,2µm,22.0s
DHY Denali Highway 88.19 22 P **P** **16 34 40.1 -0.3**
DHY IAMs_20 IAMs_20 17 19 19.4
comp=Z,3µm,21.0s
GHO Glory Hole Cre 88.42 24 P **P** **16 34 41.6 +0.1**
GHO IAmb IAmb 16 34 49.6
comp=Z,23nm,0.8s
PMR Palmer 88.45 24 P **P** **16 34 41.6 +0.1**
PMR pmax pmax
comp=Z,36nm,0.8s
PMR Palmer 88.45 24 P **P** **16 34 41.6 +0.1**
PMR IAmb IAmb 16 35 03.4
comp=Z,36nm,0.8s
RC01 Rabbit Creek A 88.52 24 P **P** **16 34 42.0 +0.1**
RC01 IAmb IAmb 16 34 44.7
comp=Z,49nm,0.9s
INK Inuvik 88.59 14 P **P** **16 34 41.9 -0.1**
INK pmax pmax
comp=Z,35nm,1.0s
INK MLR MLR
comp=Z,2µm,22.0s
INK Inuvik 88.59 14 P **P** **16 34 41.9 -0.1**
INK IAmb IAmb 16 34 44.1
comp=Z,35nm,0.9s
INK IAMs_20 IAMs_20 17 20 08.6
comp=Z,2µm,22.0s
SML Sawmill 88.62 23 P **P** **16 34 42.3 -0.1**
SML IAMs_20 IAMs_20 17 21 17.5
comp=Z,3µm,21.0s
RIDG Independent Ri 88.64 21 P **P** **16 34 42.0 -0.4**
RIDG IAmb IAmb 16 34 45.3
comp=Z,26nm,0.7s
RIDG IAMs_20 IAMs_20 17 19 55.1
comp=Z,2µm,22.0s
SCRK Sand Creek 88.77 20 P **P** **16 34 43.1 0.0**
SCRK IAmb IAmb 16 34 45.8
comp=Z,43nm,0.8s
SCRK IAMs_20 IAMs_20 17 18 45.7
comp=Z,3µm,22.0s
KNK Knik Glacier 88.82 24 P **P** **16 34 43.6 +0.3**
KNK IAmb IAmb 16 34 45.9
comp=Z,37nm,0.7s
CNPM China Poot 88.83 26 P **P** **16 34 43.5 +0.2**
CNPM IAmb IAmb 16 35 07.8
comp=Z,39nm,0.8s
CNPM IAMs_20 IAMs_20 17 19 38.6
comp=Z,3µm,22.0s
BRLK Bradley Lake 88.84 26 P **P** **16 34 43.3 -0.1**
BRLK IAMs_20 IAMs_20 17 20 00.7
comp=Z,2µm,21.0s
PAX Paxson 88.93 22 P **P** **16 34 44.1 +0.2**
PAX pmax pmax
comp=Z,17nm,0.8s
PAX MLR MLR
comp=Z,3µm,20.0s
PAX Paxson 88.93 22 P **P** **16 34 44.0 +0.2**
PAX IAmb IAmb 16 34 47.4
comp=Z,17nm,0.8s
DOT Dot Lake 88.97 21 P **P** **16 34 43.9 -0.1**
DOT IAmb IAmb 16 34 46.3
comp=Z,20nm,0.8s
DOT IAMs_20 IAMs_20 17 19 55.7
comp=Z,2µm,21.0s
SCM Sheep Creek Mo 88.98 23 P **P** **16 34 44.6 +0.5**
SCM pmax pmax
comp=Z,48nm,0.7s
SCM MLR MLR
comp=Z,2µm,22.0s
SCM Sheep Creek Mo 88.98 23 P **P** **16 34 44.6 +0.5**
SCM IAMs_20 IAMs_20 17 18 29.4
comp=Z,2µm,22.0s
EGAK Eagle 89.13 19 P **P** **16 34 44.7 +0.1**
SEW Seward 89.22 25 P **P** **16 34 45.1 +0.1**
SEW IAmb IAmb 16 35 07.1
comp=Z,30nm,0.8s
OHAK Old Harbor 89.24 29 P **P** **16 34 45.4 +0.1**
KDAK Kodiak Island 89.25 28 P **P** **16 34 45.9 +0.6**
KDAK pmax pmax
comp=Z,89nm,1.1s
KDAK MLR MLR
comp=Z,2µm,22.0s
KDAK Kodiak Island 89.25 28 P **P** **16 34 45.9 +0.6**
KDAK Kodiak Island 89.25 28 IAMs_20 IAMs_20 17 17 18.6
comp=Z,2µm,22.0s
EPYK Eagle Plains 89.27 16 P **P** **16 34 45.3 -0.1**
baz=318
EPYK Eagle Plains 89.27 16 P **P** **16 34 45.2 -0.1**
EPYK IAmb IAmb 16 34 47.4
comp=Z,26nm,0.7s
HARP HAARP 89.41 22 IAMs_20 IAMs_20 17 20 38.6
comp=Z,2µm,20.0s
MENT Mentasta 89.56 21 P **P** **16 34 47.0 +0.3**
GLI Glacier Island 89.67 24 P **P** **16 34 47.5 +0.3**
GLI IAmb IAmb 16 35 09.3
comp=Z,32nm,0.8s
SFJD Kangerlussuaq 89.68 345 *i* P **P** **16 34 46.0 -1.1**
SFJD Kangerlussuaq 89.68 345 P **P** **16 34 47.5 +0.3**
SFJD IAmb IAmb 16 35 08.8
comp=Z,64nm,1.1s
SFJD Kangerlussuaq 89.68 345 IAMs_20 IAMs_20 17 21 05.0
comp=Z,2µm,19.0s
SFJD Kangerlussuaq 89.68 345 *i* P **P** **16 34 46.0 -1.1**
C36M Paulatuk 89.69 11 P **P** **16 34 46.8 -0.3**
baz=330
C36M Paulatuk 89.69 11 P **P** **16 34 46.9 -0.3**
C36M IAmb IAmb 16 34 48.5
comp=Z,42nm,1.0s
FID Port Fidalgo 89.98 24 P **P** **16 34 49.4 +0.7**
FID IAmb IAmb 16 35 11.1
comp=Z,34nm,0.7s
DAWY Dawson 90.18 19 P **P** **16 34 49.5 -0.1**
DAWY IAmb IAmb 16 34 52.4
comp=Z,22nm,0.9s
HIN Hinchinbrook I 90.20 24 P **P** **16 34 50.1 +0.3**
EYAK Cordova Ski Ar 90.39 24 P **P** **16 34 50.9 +0.3**
EYAK IAmb IAmb 16 35 13.3
comp=Z,22nm,0.8s
GLB Gilahina Butte 90.52 22 P **P** **16 34 51.6 +0.4**
GLB IAmb IAmb 16 35 13.9
comp=Z,17nm,0.9s
GLB IAMs_20 IAMs_20 17 21 03.0
comp=Z,2µm,21.0s
KIC Kosan Boka 90.69 277 *e*PKP2 **P** **16 34 52.5 -0.4**
comp=Z,52nm,1.2s
DBIC Dimbokro 90.70 277 P **P** **16 34 52.6 -0.4**
comp=Z,8.6nm,0.7s,baz=62,slow=6.2,SNR=8.1
DBIC LR LR 17 16 20.5
comp=Z,985nm,21.0s,baz=36,slow=36
DBIC Dimbokro 90.70 277 P **P** **16 34 52.5 -0.4**
DBIC pmax pmax
comp=Z,22nm,0.9s
DBIC Dimbokro 90.70 277 P **P** **16 34 52.5 -0.4**
DBIC IAmb IAmb 16 37 15.2
comp=Z,22nm,0.8s
VRDI Verde Repeater 90.79 22 P **P** **16 34 53.5 +0.8**
VRDI IAmb IAmb 16 34 55.6
comp=Z,20nm,0.8s
VRDI IAMs_20 IAMs_20 17 21 21.2
comp=Z,2µm,20.0s
MCARA McCarthy VSAT 90.84 22 P **P** **16 34 53.4 +0.7**
MCARA IAMs_20 IAMs_20 17 21 33.5
comp=Z,2µm,20.0s
TIC Toumodi 90.86 277 *e*PKP2 **P** **16 34 53.2 -0.5**
RAGM Ragged Mountai 90.90 23 P **P** **16 34 53.6 +0.6**
RAGM IAmb IAmb 16 34 58.8
comp=Z,34nm,0.9s
LIC Lamto 91.00 277 *e*PKP2 **P** **16 34 53.9 -0.4**
comp=Z,58nm,1.1s
BALM Baldy 91.32 22 P **P** **16 34 55.2 +0.1**
BALM IAmb IAmb 16 36 15.5
comp=Z,16nm,0.9s
BALM IAMs_20 IAMs_20 17 21 30.1
comp=Z,2µm,20.0s
BARN Barnard Glacie 91.55 22 P **P** **16 34 56.5 +0.3**
BARN IAmb IAmb 16 35 19.3
comp=Z,22nm,0.9s
PMPST Porto Santo, M 91.69 306 *e*S **S** **16 45 58.1 +3.5**
CTGM Chitina Glacie 91.73 22 P **P** **16 34 57.4 +0.4**
CTGM IAmb IAmb 16 35 02.9
comp=Z,27nm,0.9s
YAH Yahtse 92.00 22 P **P** **16 34 59.3 +1.0**
YAH IAmb IAmb 16 35 21.6
comp=Z,27nm,1.0s
YAH IAMs_20 IAMs_20 17 21 50.0
comp=Z,2µm,19.0s
PMOZ Porto Moniz, M 92.45 306 *e*S **S** **16 46 08.9 +7.1**
NRS Narsarsuaq 92.58 339 IAMs_20 IAMs_20 17 17 33.7
comp=Z,2µm,22.0s
PCA Pinnacle 92.72 22 IAMs_20 IAMs_20 17 22 15.1
comp=Z,3µm,20.0s
SYO Syowa Base 93.62 196 *e*P **P** **16 35 05.0 -0.1**
SYO Syowa Base 93.62 196 *e*sP sP 16 35 25.0 +2.3
WHY Whitehorse 94.12 20 P **P** **16 35 08.1 +0.1**
WHY IAMs_20 IAMs_20 17 21 44.0
comp=Z,2µm,22.0s
SKAG Skagway 94.89 21 P **P** **16 35 11.1 -0.2**
SKAG IAmb IAmb 16 35 34.4
comp=Z,24nm,0.8s
JIS Juneau Island 96.11 21 P **P** **16 35 17.2 +0.3**
JIS IAmb IAmb 16 35 20.8
comp=Z,25nm,1.0s
DLBC Dease Lake 97.40 19 P Pdif 16 35 23.8 +0.9
RPZ Rata Peaks 97.48 133 LR LR 17 24 50.4
comp=Z,250nm,18.1s,baz=280,slow=39
YKA Yellowknife Ar 97.56 10 P Pdif 16 35 23.8 +0.3
comp=Z,9.9nm,0.9s,baz=338,slow=4.5,SNR=75
YKA LR LR 17 27 43.4
comp=Z,627nm,18.2s,baz=0.0,slow=40
WRAK Wrangell Islan 98.25 21 IAMs_20 IAMs_20 17 25 20.2
comp=Z,2µm,20.0s
BFZ Birch Farm 100.32 129 IAMs_20 IAMs_20 17 19 23.1
comp=Z,2µm,20.0s
URZ Urewera 100.33 127 IAMs_20 IAMs_20 17 15 09.8
comp=Z,1µm,22.0s
NVL N'lazarevskaya 102.62 199 *e*P **Pdif** **16 35 40.2 -5.4**
NVL *e*S **SKSac** **16 46 17.1 -4.0**
NVL pmax pmax
comp=Z,6.0nm,0.7s
FFC Flin Flon 106.82 6 IAMs_20 IAMs_20 17 26 25.2
comp=Z,2µm,22.0s
SNAA Sanae 107.45 199 IAMs_20 IAMs_20 17 19 27.7
comp=Z,1µm,21.0s
B06A Marblemount 108.50 20 IAMs_20 IAMs_20 17 33 07.3
comp=Z,1µm,20.0s
B08A Colville Reser 109.33 19 IAMs_20 IAMs_20 17 31 28.1
comp=Z,2µm,22.0s
E03A Lebam 109.47 23 IAMs_20 IAMs_20 17 30 51.3
comp=Z,1µm,22.0s
LON Longmire 109.92 21 IAMs_20 IAMs_20 17 32 13.0
comp=Z,2µm,21.0s
NEW Newport 110.07 18 IAMs_20 IAMs_20 17 32 03.7
comp=Z,2µm,20.0s
D08A Wollman Farm, 110.61 19 IAMs_20 IAMs_20 17 31 28.1
comp=Z,1µm,22.0s
GBN Guysborough 110.89 338 IAMs_20 IAMs_20 17 34 34.9
comp=Z,1µm,22.0s
HAWA Hanford 111.00 20 IAMs_20 IAMs_20 17 33 52.5
comp=Z,1µm,20.0s
E08A Dider Farm, El 111.07 20 IAMs_20 IAMs_20 17 33 51.2
comp=Z,1µm,19.0s
COR Corvallis 111.23 24 IAMs_20 IAMs_20 17 36 39.9
comp=Z,1µm,20.0s
F07A Phinny Hill Vi 111.31 21 IAMs_20 IAMs_20 17 32 36.5
comp=Z,1µm,18.0s
JTMT Jette 111.32 16 IAMs_20 IAMs_20 17 32 39.7
comp=Z,2µm,22.0s
H04A Detroit Lake 111.57 23 IAMs_20 IAMs_20 17 31 33.7
comp=Z,1µm,22.0s
ULM Lac du Bonnet 111.72 3 IAMs_20 IAMs_20 17 33 15.7
comp=Z,2µm,22.0s
D62A Allapoint, All 111.79 343 IAMs_20 IAMs_20 17 32 13.7
comp=Z,1µm,22.0s
PQI Presque Isle 111.88 342 IAMs_20 IAMs_20 17 32 56.0
comp=Z,2µm,21.0s
EGMT Eagleton 112.14 13 IAMs_20 IAMs_20 17 36 52.0
comp=Z,2µm,21.0s
E63A Oxbow 112.22 343 IAMs_20 IAMs_20 17 33 04.0
comp=Z,2µm,21.0s
MSO Missoula 112.26 16 IAMs_20 IAMs_20 17 36 09.5
comp=Z,1µm,19.0s
DGMT Dagmar 112.70 9 IAMs_20 IAMs_20 17 37 26.6
comp=Z,2µm,20.0s
F64A Sherman 112.71 342 IAMs_20 IAMs_20 17 33 20.0
comp=Z,2µm,20.0s
I07A Izee 113.05 21 IAMs_20 IAMs_20 17 34 01.6
comp=Z,1µm,20.0s
F63A Nahmakanta, Br 113.07 343 IAMs_20 IAMs_20 17 33 48.5
comp=Z,2µm,20.0s
G65A Princeton 113.08 342 IAMs_20 IAMs_20 17 34 40.8
comp=Z,2µm,21.0s
BMO Blue Mountains 113.09 19 IAMs_20 IAMs_20 17 33 15.6
comp=Z,2µm,22.0s
EMMW East Machias 113.49 341 IAMs_20 IAMs_20 17 28 53.8
comp=Z,2µm,22.0s
PKME Peaks-Kenny Pk 113.53 343 IAMs_20 IAMs_20 17 32 54.6
comp=Z,2µm,22.0s
B35A Bob, Littlefor 113.69 1 IAMs_20 IAMs_20 17 36 41.6
comp=Z,1µm,21.0s
D53A Lac Vacive, Po 113.73 349 IAMs_20 IAMs_20 17 34 18.8
comp=Z,1µm,21.0s
E56A St. Veronique 113.74 347 P **PKiKP** **16 40 27.7 -0.2**
baz=18
DLMT Dillon 113.97 16 IAMs_20 IAMs_20 17 35 17.8
comp=Z,2µm,21.0s
BOZ Bozeman (W) 114.00 15 IAMs_20 IAMs_20 17 36 34.2
comp=Z,1µm,22.0s
J08A Circle Bar Ran 114.03 21 IAMs_20 IAMs_20 17 34 42.8
comp=Z,1µm,22.0s
EYMN Ely 114.12 360 IAMs_20 IAMs_20 17 30 20.0
comp=Z,1µm,22.0s
WVL Waterville 114.27 343 IAMs_20 IAMs_20 17 36 48.3
comp=Z,2µm,22.0s
H62A Milan 114.67 344 IAMs_20 IAMs_20 17 35 20.9
comp=Z,2µm,22.0s
D32A Dogwood Acres, 114.77 4 IAMs_20 IAMs_20 17 36 22.3
comp=Z,1µm,20.0s
WVOR Wild Horse Val 114.80 21 IAMs_20 IAMs_20 17 34 58.0
comp=Z,2µm,22.0s
MFID Camas Ranch 114.84 19 IAMs_20 IAMs_20 17 32 46.0
comp=Z,1µm,22.0s
D41A Chassel 114.93 357 IAMs_20 IAMs_20 17 36 22.6
comp=Z,2µm,20.0s
I63A Otisfield 115.00 343 IAMs_20 IAMs_20 17 31 09.6
comp=Z,1µm,22.0s
FRNY Flat Rock 115.04 346 IAMs_20 IAMs_20 17 35 37.4
comp=Z,2µm,22.0s
LBNH Lisbon 115.19 344 IAMs_20 IAMs_20 17 35 50.4
comp=Z,1µm,21.0s
VT1 Waterbury 115.31 345 IAMs_20 IAMs_20 17 36 22.9
comp=Z,1µm,22.0s
I62A Tamworth 115.37 344 IAMs_20 IAMs_20 17 35 50.4
comp=Z,2µm,21.0s
E38A The Farm, Brul 115.46 360 IAMs_20 IAMs_20 17 35 41.5
comp=Z,1µm,20.0s
LONY Lake Ozonia 115.47 346 IAMs_20 IAMs_20 17 35 03.9
comp=Z,1µm,21.0s
E43A Lone Tree Farm 115.53 356 IAMs_20 IAMs_20 17 37 01.4
comp=Z,1µm,22.0s
FLWY Flagg Ranch 115.65 15 IAMs_20 IAMs_20 17 36 49.0
comp=Z,1µm,20.0s
IMW Indian Meadow 115.76 15 IAMs_20 IAMs_20 17 38 06.1
comp=Z,2µm,22.0s
HNH Hanover 115.78 344 IAMs_20 IAMs_20 17 36 38.1
comp=Z,1µm,21.0s
COWI Conover 115.92 358 IAMs_20 IAMs_20 17 34 40.5
comp=Z,2µm,22.0s

NCB	Newcomb	116.00	346	IAMs_20	IAMs_20	17 34 59.9				
	comp=Z,1µm,21.0s									
F33A	5 Mile Ranch,	116.10	3	IAMs_20	IAMs_20	17 36 06.6				
	comp=Z,2µm,22.0s									
TPAW	Teton Pass	116.14	15	IAMs_20	IAMs_20	17 36 40.1				
	comp=Z,2µm,21.0s									
F36A	Milaca	116.19	1	IAMs_20	IAMs_20	17 39 04.8				
	comp=Z,1µm,21.0s									
DELO	Deloro Mine	116.19	349	IAMs_20	IAMs_20	17 32 18.9				
	comp=Z,2µm,20.0s									
ACCN	Adirondack Com	116.42	345	IAMs_20	IAMs_20	17 34 29.2				
	comp=Z,1µm,21.0s									
J59A	Piesco	116.55	346	IAMs_20	IAMs_20	17 35 15.4				
	comp=Z,2µm,21.0s									
K62A	Royalston	116.74	344	IAMs_20	IAMs_20	17 36 30.5				
	comp=Z,1µm,22.0s									
WES	Weston	116.75	343	IAMs_20	IAMs_20	17 35 25.8				
	comp=Z,1µm,19.0s									
G40A	Rib Lake	116.78	359	IAMs_20	IAMs_20	17 37 05.3				
	comp=Z,1µm,19.0s									
AHID	Auburn Hatcher	116.78	16	IAMs_20	IAMs_20	17 38 16.1				
	comp=Z,2µm,22.0s									
J58A	Remsen	116.82	346	IAMs_20	IAMs_20	17 35 55.7				
	comp=Z,1µm,22.0s									
H48A	Harrisville	116.87	353	IAMs_20	IAMs_20	17 38 01.9				
	comp=Z,1µm,19.0s									
J57A	Williamstown	116.93	347	IAMs_20	IAMs_20	17 31 51.5				
	comp=Z,2µm,22.0s									
TRY	Troy	117.04	345	IAMs_20	IAMs_20	17 37 21.5				
	comp=Z,2µm,22.0s									
QUA2	Belchertown	117.13	344	IAMs_20	IAMs_20	17 35 54.8				
	comp=Z,1µm,21.0s									
BW06	Boulder Array	117.16	15	IAMs_20	IAMs_20	17 39 36.1				
	comp=Z,2µm,21.0s									
PDAR	Pinedale Array	117.16	15	PKP	PKPdf	16 40 34.1	-0.9			
	comp=Z,0.7nm,0.7s,baz=61,slow=2.0,SNR=6.7									
J56A	Wolcott	117.24	348	IAMs_20	IAMs_20	17 33 30.6				
	comp=Z,1µm,21.0s									
BRYW	Bryant College	117.24	343	IAMs_20	IAMs_20	17 36 51.9				
	comp=Z,1µm,21.0s									
SUSD	Miller	117.29	6	IAMs_20	IAMs_20	17 40 35.1				
	comp=Z,1µm,20.0s									
M65A	Busby, Falmout	117.32	342	IAMs_20	IAMs_20	17 38 27.9				
	comp=Z,2µm,21.0s									
PNTR	Pine Nut	117.37	24	IAMs_20	IAMs_20	17 39 22.2				
	comp=Z,1µm,21.0s									
J55A	Hilton	117.44	348	IAMs_20	IAMs_20	17 38 12.9				
	comp=Z,2µm,22.0s									
ELK	Elko	117.44	20	IAMs_20	IAMs_20	17 36 16.0				
	comp=Z,1µm,21.0s									
K58A	Earlville	117.47	347	IAMs_20	IAMs_20	17 36 12.9				
	comp=Z,1µm,22.0s									
I49A	Point Hope	117.56	353	IAMs_20	IAMs_20	17 32 51.2				
	comp=Z,1µm,22.0s									
I45A	Fountain	117.81	355	IAMs_20	IAMs_20	17 38 33.6				
	comp=Z,1µm,19.0s									
L59A	Walton	117.88	346	IAMs_20	IAMs_20	17 36 04.7				
	comp=Z,1µm,20.0s									
K22A	Casper	117.94	12	IAMs_20	IAMs_20	17 37 43.5				
	comp=Z,1µm,20.0s									
KSCT	Kent School, K	117.94	344	IAMs_20	IAMs_20	17 38 01.3				
	comp=Z,2µm,22.0s									
CMB	Columbia Colle	117.97	25	IAMs_20	IAMs_20	17 34 10.2				
	comp=Z,1µm,22.0s									
MMNY	Mt. Morris Dam	117.97	348	IAMs_20	IAMs_20	17 34 22.0				
	comp=Z,1µm,22.0s									
I37A	Lemond, Waseca	118.04	1	IAMs_20	IAMs_20	17 39 41.7				
	comp=Z,2µm,22.0s									
BINY	Binghamton	118.08	347	IAMs_20	IAMs_20	17 35 12.1				
	comp=Z,2µm,22.0s									
I40A	Norwalk	118.16	359	IAMs_20	IAMs_20	17 35 06.0				
	comp=Z,2µm,22.0s									
ECSD	EROS Data Cent	118.18	4	IAMs_20	IAMs_20	17 41 47.6				
	comp=Z,1µm,20.0s									
J48A	Bridge Port	118.31	353	IAMs_20	IAMs_20	17 38 20.9				
	comp=Z,1µm,20.0s									
J45A	Montague	118.42	355	IAMs_20	IAMs_20	17 38 49.8				
	comp=Z,2µm,20.0s									
NVAR	Mina Array Bea	118.44	23	PKP	PKiKP	16 40 38.0	+0.4			
	comp=Z,1.4nm,0.7s,baz=299,slow=1.1,SNR=8.0									
L56A	Greenwood	118.48	348	IAMs_20	IAMs_20	17 39 26.4				
	comp=Z,1µm,21.0s									
NV11	Mina Array Sit	118.49	23	IAMs_20	IAMs_20	17 35 14.9				
	comp=Z,1µm,21.0s									
KSPA	Keystone Colle	118.65	346	IAMs_20	IAMs_20	17 37 00.0				
	comp=Z,2µm,20.0s									
K50A	Casco	118.69	352	IAMs_20	IAMs_20	17 38 02.9				
	comp=Z,1µm,22.0s									
DUG	Dugway, Tooele	118.70	18	IAMs_20	IAMs_20	17 36 35.0				
	comp=Z,1µm,22.0s									
RWWY	Rawlins	118.72	13	IAMs_20	IAMs_20	17 38 56.2				
	comp=Z,2µm,22.0s									
PAL	Palisades	118.72	345	IAMs_20	IAMs_20	17 38 33.1				
	comp=Z,1µm,20.0s									
ODNJ	Ogdensburg	118.83	345	IAMs_20	IAMs_20	17 36 59.7				
	comp=Z,1µm,21.0s									
OMMB	Old Mammoth Mi	118.88	24	IAMs_20	IAMs_20	17 35 30.3				
	comp=Z,1µm,22.0s									
ERPA	Erie	118.94	350	IAMs_20	IAMs_20	17 37 04.6				
	comp=Z,1µm,22.0s									
K31A	O'Neill	119.12	6	IAMs_20	IAMs_20	17 39 40.4				
	comp=Z,2µm,22.0s									
M57A	Sunshine Farm,	119.16	347	IAMs_20	IAMs_20	17 36 34.4				
	comp=Z,993nm,20.0s									
BRNJ	Basking Ridge	119.19	345	IAMs_20	IAMs_20	17 36 48.1				
	comp=Z,1µm,20.0s									
M56A	Emporium	119.23	348	IAMs_20	IAMs_20	17 39 46.3				
	comp=Z,2µm,22.0s									
N59A	State Game Lan	119.26	346	IAMs_20	IAMs_20	17 36 49.2				
	comp=Z,2µm,22.0s									
AAM	Ann Arbor	119.28	353	IAMs_20	IAMs_20	17 34 11.6				
	comp=Z,1µm,21.0s									
M55A	Ridgway	119.35	349	IAMs_20	IAMs_20	17 39 19.6				
	comp=Z,2µm,21.0s									
ALLY	Alegheny Colle	119.42	350	IAMs_20	IAMs_20	17 37 27.4				
	comp=Z,1µm,20.0s									
PHWY	Pilot Hill	119.45	12	IAMs_20	IAMs_20	17 38 19.4				
	comp=Z,2µm,22.0s									
R11A	Troy Canyon, C	119.49	21	P	PKiKP	16 40 41.4	+1.8			
	baz=334									
R11A	Troy Canyon, C	119.49	21	IAMs_20	IAMs_20	17 38 18.2				
	comp=Z,1µm,22.0s									
N58A	Sunbury	119.55	347	IAMs_20	IAMs_20	17 37 48.7				
	comp=Z,2µm,22.0s									
PSUT	Pine Spring	119.90	20		PKPdf	16 40 40.3	-0.1			
L34A	Svendsen Farm,	119.96	4	IAMs_20	IAMs_20	17 40 02.6				
	comp=Z,2µm,22.0s									
O20A	White River Ci	119.97	14	IAMs_20	IAMs_20	17 39 36.4				
	comp=Z,2µm,20.0s									
SSPA	Standing Stone	119.99	348	IAMs_20	IAMs_20	17 38 33.0				
	comp=Z,1µm,21.0s									
PAGB	Antelope Grade	119.99	26	IAMs_20	IAMs_20	17 41 40.9				
	comp=Z,1µm,20.0s									
L40A	Anamosa	120.00	359	IAMs_20	IAMs_20	17 38 31.6				
	comp=Z,2µm,20.0s									
L42A	Oliver, Polo	120.02	358	IAMs_20	IAMs_20	17 38 09.3				
	comp=Z,2µm,20.0s									
M50A	Fremont	120.09	352	IAMs_20	IAMs_20	17 35 33.0				
	comp=Z,1µm,22.0s									
PSUB	Penn St. - Bra	120.12	345	IAMs_20	IAMs_20	17 37 28.1				
	comp=Z,1µm,21.0s									
P61A	Hammonton	120.20	345	IAMs_20	IAMs_20	17 39 19.2				
	comp=Z,954nm,20.0s									
N53A	Lisbon	120.36	350	P	PKPdf	16 40 40.9	0.0			
	baz=12									
N53A	Lisbon	120.36	350		PKPdf	16 40 40.4	-0.5			
N53A				IAMs_20	IAMs_20	17 40 14.1				
	comp=Z,1µm,21.0s									
BGNE	Belgrade	120.38	5	IAMs_20	IAMs_20	17 39 55.7				
	comp=Z,2µm,22.0s									
N51A	Ashland	120.48	352	IAMs_20	IAMs_20	17 34 42.3				
	comp=Z,2µm,21.0s									
TPNV	Topopah Spring	120.50	23	IAMs_20	IAMs_20	17 38 48.2				
	comp=Z,1µm,21.0s									
ISA	Isabella, Lake	120.78	25	IAMs_20	IAMs_20	17 34 55.7				
	comp=Z,1µm,21.0s									
Q60A	Greensboro	121.10	345	IAMs_20	IAMs_20	17 38 38.9				
	comp=Z,1µm,20.0s									
N35A	Tabor	121.10	3	IAMs_20	IAMs_20	17 38 46.9				
	comp=Z,1µm,22.0s									
P57A	Homestead Farm	121.12	347	IAMs_20	IAMs_20	17 39 36.4				
	comp=Z,1µm,21.0s									
ACSO	Alum Creek Sta	121.23	352	IAMs_20	IAMs_20	17 35 06.3				
	comp=Z,1µm,20.0s									
SHPR	Sheep Range	121.29	22	IAMs_20	IAMs_20	17 38 52.0				
	comp=Z,1µm,22.0s									
MCWV	Mont Chateau	121.31	349	IAMs_20	IAMs_20	17 34 55.3				
	comp=Z,1µm,22.0s									
O50A	Cable	121.40	353	P	PKPdf	16 40 42.6	-0.3			
	baz=9.3									
SFIN	Lafayette	121.51	356	IAMs_20	IAMs_20	17 37 03.6				
	comp=Z,1µm,21.0s									
R61A	Willards	121.61	345	IAMs_20	IAMs_20	17 38 48.5				
	comp=Z,1µm,20.0s									
P53A	Whipple	121.73	350	IAMs_20	IAMs_20	17 40 37.6				
	comp=Z,1µm,20.0s									
GSC	Goldstone, Bar	121.75	24	IAMs_20	IAMs_20	17 41 02.4				
	comp=Z,1µm,22.0s									
P51A	Williamsport	121.98	352	IAMs_20	IAMs_20	17 35 17.1				
	comp=Z,1µm,22.0s									
CBN	Corbin Frederi	122.21	346	IAMs_20	IAMs_20	17 37 00.3				
	comp=Z,2µm,22.0s									
S61A	Accomac	122.31	345	IAMs_20	IAMs_20	17 39 19.0				
	comp=Z,2µm,22.0s									
U15A	North Rim	122.32	19	IAMs_20	IAMs_20	17 38 45.0				
	comp=Z,1µm,21.0s									
P40A	Paris	122.53	0		PKPdf	16 40 44.5	-0.6			
P40A				IAMs_20	IAMs_20	17 38 13.7				
	comp=Z,1µm,20.0s									
R58B	Mineral	122.55	347	IAMs_20	IAMs_20	17 33 26.4				
	comp=Z,1µm,22.0s									
BLO	Bloomington	122.67	355	IAMs_20	IAMs_20	17 39 40.2				
	comp=Z,946nm,20.0s									
MVCO	Mesa Verde	122.68	16	IAMs_20	IAMs_20	17 43 40.2				
	comp=Z,1µm,20.0s									
R55A	Marlinton	122.69	349	IAMs_20	IAMs_20	17 36 01.6				
	comp=Z,2µm,22.0s									
KSU1	Kansas State U	122.79	4	IAMs_20	IAMs_20	17 39 44.7				
	comp=Z,1µm,20.0s									
S58A	Poland Farm, P	122.93	347		PKPdf	16 40 45.3	-0.6			
S58A				IAMs_20	IAMs_20	17 36 35.3				
	comp=Z,1µm,22.0s									
S57A	Dark Hollow, R	122.97	348	IAMs_20	IAMs_20	17 42 28.4				
	comp=Z,1µm,22.0s									
OLIL	Olney	123.21	356	IAMs_20	IAMs_20	17 40 07.7				
	comp=Z,1µm,19.0s									
R50A	Paris	123.33	353	IAMs_20	IAMs_20	17 36 28.7				
	comp=Z,1µm,20.0s									
T59A	Double "B" Far	123.43	346	IAMs_20	IAMs_20	17 40 17.3				
	comp=Z,1µm,21.0s									
WUAZ	Wupatki	123.45	19	IAMs_20	IAMs_20	17 35 48.8				
	comp=Z,1µm,22.0s									
WCI	Wyandotte Cave	123.58	355	IAMs_20	IAMs_20	17 37 19.4				
	comp=Z,2µm,22.0s									
T58A	Grand View Acr	123.67	347	P	PKPdf	16 40 47.2	-0.1			
	baz=15									
T25A	Trinidad	123.68	12	P	PKiKP	16 40 48.2	+0.2			
	baz=346									
R40A	Maddies Statio	123.77	0		PKPdf	16 40 46.4	-1.1			
R40A				IAMs_20	IAMs_20	17 40 56.4				
	comp=Z,2µm,22.0s									
T57A	Hurt	123.77	348	IAMs_20	IAMs_20	17 44 50.5				
	comp=Z,1µm,22.0s									
U61A	Possum Corner	123.78	345	IAMs_20	IAMs_20	17 39 38.9				
	comp=Z,1µm,21.0s									
BLA	Blacksburg	123.79	349	IAMs_20	IAMs_20	17 40 13.0				
	comp=Z,1µm,20.0s									
S51A	Beattyville	123.87	352	IAMs_20	IAMs_20	17 39 52.0				
	comp=Z,1µm,21.0s									
T56A	Rocky Mt	123.89	349	P	PKPdf	16 40 47.8	0.0			
	baz=14									
USIN	University of	123.95	356	IAMs_20	IAMs_20	17 41 48.2				
	comp=Z,1µm,21.0s									
Y12C	Blythe	123.99	23	IAMs_20	IAMs_20	17 40 51.5				
	comp=Z,1µm,22.0s									
RCBR	Riachuelo	124.03	275	IAMs_20	IAMs_20	17 31 27.6				
	comp=Z,1µm,22.0s									
U59A	Littleton	124.08	346	IAMs_20	IAMs_20	17 38 53.8				
	comp=Z,1µm,21.0s									
U58A	Oxford	124.21	347	P	PKPdf	16 40 48.5	+0.1			
	baz=15									
S44A	Carbondale	124.31	357	IAMs_20	IAMs_20	17 42 22.7				
	comp=Z,1µm,21.0s									
V61A	Roper	124.33	345	IAMs_20	IAMs_20	17 41 01.4				
	comp=Z,1µm,21.0s									
Y14A	Wickenburg	124.36	21	IAMs_20	IAMs_20	17 39 50.1				
	comp=Z,962nm,21.0s									
X16A	Lo Mia Camp, P	124.44	20	IAMs_20	IAMs_20	17 39 00.1				
	comp=Z,2µm,22.0s									
GLA	Glamis	124.50	23	IAMs_20	IAMs_20	17 41 20.9				
	comp=Z,1µm,21.0s									
V60A	Jim Taylor Roa	124.52	346	IAMs_20	IAMs_20	17 40 05.4				
	comp=Z,1µm,21.0s									
U56A	King	124.62	349	IAMs_20	IAMs_20	17 39 31.0				
	comp=Z,1µm,21.0s									
T50A	Nancy	124.63	353	IAMs_20	IAMs_20	17 42 26.2				
	comp=Z,1µm,20.0s									
U54A	Nelsons Funny	124.70	350	IAMs_20	IAMs_20	17 37 35.2				
	comp=Z,1µm,21.0s									
X18A	Snowflake	124.79	18	IAMs_20	IAMs_20	17 42 32.4				
	comp=Z,1µm,22.0s									
MGMO	Mountain Grove	124.90	0		PKPdf	16 40 49.2	-0.6			
MGMO				IAMs_20	IAMs_20	17 39 09.4				
	comp=Z,2µm,22.0s									
V58A	Windy Hill, Pi	124.91	347	IAMs_20	IAMs_20	17 42 51.6				
	comp=Z,2µm,21.0s									
T45A	Paducah	124.95	357	IAMs_20	IAMs_20	17 40 59.8				
	comp=Z,1µm,22.0s									
T35A	Sooner Cattle	124.97	4	IAMs_20	IAMs_20	17 37 43.3				
	comp=Z,1µm,21.0s									
CNNC	Cliffs of the	125.17	346	IAMs_20	IAMs_20	17 38 25.6				
	comp=Z,2µm,22.0s									
U49A	Red Boiling Sp	125.23	354	IAMs_20	IAMs_20	17 42 26.2				
	comp=Z,2µm,20.0s									
HENM	Henderson Moun	125.29	358	IAMs_20	IAMs_20	17 43 44.7				
	comp=Z,2µm,20.0s									
ANMO	Albuquerque	125.34	15	IAMs_20	IAMs_20	17 38 05.5				
	comp=Z,2µm,22.0s									
PPT2	Papeete2	125.35	99	ePP	PP	16 42 44.7	+2.6			
	comp=Z,265nm,25.2s									
PPT2	Papeete2	125.35	99	eSS	SS	16 59 42.2	+4.4			
	comp=Z,837nm,24.0s									
PPT2	Papeete2	125.35	99	eLR	LR	17 20 10.6				
	comp=Z,2µm,24.8s									
V54A	Nebo	125.45	350	P	PKPdf	16 40 50.2	-0.6			
	baz=12									
HICK	Hickman	125.46	357	IAMs_20	IAMs_20	17 40 28.0				
	comp=Z,1µm,20.0s									
V53A	Saluda	125.69	351		PKPdf	16 40 50.8	-0.5			
U40A	Yellville	125.69	1	P	PKPdf	16 40 51.2	0.0			
	baz=359									
U40A	Yellville	125.69	1		PKPdf	16 40 51.0	-0.3			
W57A	Gilead	125.70	348	IAMs_20	IAMs_20	17 40 05.7				
	comp=Z,2µm,22.0s									
CLTN	Cedars of Leba	125.70	354	IAMs_20	IAMs_20	17 43 56.6				
	comp=Z,1µm,22.0s									
GLAT	Glass	125.73	357	IAMs_20	IAMs_20	17 40 35.3				
	comp=Z,1µm,20.0s									
WVT	Waverly	125.79	356	PKiKP	PKPdf	16 40 51.2	-0.2			
WVT				MLR	MLR					
	comp=Z,2µm,22.0s									
WVT	Waverly	125.79	356	P	PKPdf	16 40 51.3	-0.2			
	baz=4.8									
WVT	Waverly	125.79	356		PKPdf	16 40 51.2	-0.2			
LCAR	Lake Charles	125.98	359		PKPdf	16 40 51.3	-0.5			
TUL1	Leonard	126.02	4	IAMs_20	IAMs_20	17 38 26.1				
	comp=Z,2µm,22.0s									
BNM	Barren Site	126.05	15		PKPdf	16 40 52.1	-0.2			
Y22D	IRIS PASSCAL I	126.05	15	IAMs_20	IAMs_20	17 39 25.5				
	comp=Z,2µm,22.0s									
HALT	Halls	126.09	357	IAMs_20	IAMs_20	17 40 45.8				
	comp=Z,1µm,20.0s									
V48A	Smith Brothers	126.10	355	IAMs_20	IAMs_20	17 46 45.0				
	comp=Z,1µm,22.0s									
CPCT	Cooper Cave	126.14	353		PKPdf	16 40 51.8	-0.4			
X58A	Rowland	126.15	347	IAMs_20	IAMs_20	17 44 00.5				
	comp=Z,1µm,22.0s									
FCAR	Ozark Folk Cen	126.17	0		PKPdf	16 40 51.2	-1.0			
TBI	Tubuai	126.27	106	ePP	PP	16 42 53.6	+5.6			
	comp=Z,238nm,26.0s									
TBI	Tubuai	126.27	106	eSS	SS	16 59 46.5	-2.4			
	comp=Z,531nm,36.2s									
TBI	Tubuai	126.27	106	eLR	LR	17 20 39.2				
	comp=Z,2µm,29.0s									
BIRD	Birdtown, Kers	126.29	348	IAMs_20	IAMs_20	17 43 56.1				
	comp=Z,1µm,20.0s									
OKCFA	Oklahoma City	126.38	6	IAMs_20	IAMs_20	17 43 51.7				
	comp=Z,1µm,21.0s									
Y60A	Bolivia	126.43	346	IAMs_20	IAMs_20	17 40 57.9				
	comp=Z,1µm,21.0s									
W50A	Signal Mountai	126.48	353	IAMs_20	IAMs_20	17 38 25.2				
	comp=Z,1µm,21.0s									
Y59A	Loris	126.59	346	IAMs_20	IAMs_20	17 43 56.9				
	comp=Z,1µm,21.0s									
W39A	Magazine	126.83	2	IAMs_20	IAMs_20	17 45 07.5				
	comp=Z,1µm,19.0s									
Y58A	Scranton	126.84	347	IAMs_20	IAMs_20	17 43 32.9				
	comp=Z,997nm,22.0s									
Y57A	Sumter	126.88	348	IAMs_20	IAMs_20	17 45 55.9				
	comp=Z,1µm,22.0s									
MET	Memphis--Engin	126.90	358	IAMs_20	IAMs_20	17 42 13.2				
	comp=Z,2µm,22.0s									
X51A	Calhoun	127.06	353	IAMs_20	IAMs_20	17 37 04.4				
	comp=Z,1µm,22.0s									
121A	Cookes Peak, D	127.28	17	IAMs_20	IAMs_20	17 46 28.2				
	comp=Z,2µm,21.0s									
X37A	Clayton	127.36	4	IAMs_20	IAMs_20	17 43 23.6				
	comp=Z,1µm,20.0s									
MIAR	Mount Ida	127.48	2	PKiKP	PKPdf	16 40 53.7	-1.0			
MIAR				MLR	MLR					
	comp=Z,1µm,20.0s									
MIAR	Mount Ida	127.48	2	P	PKiKP	16 40 55.2	-0.1			
	baz=358									
MIAR	Mount Ida	127.48	2		PKPdf	16 40 53.7	-1.0			
MIAR				IAMs_20	IAMs_20	17 45 43.8				
	comp=Z,1µm,20.0s									
OXF	Oxford	127.49	357	IAMs_20	IAMs_20	17 41 44.8				
	comp=Z,1µm,20.0s									
X40A	Basin Creek Fa	127.56	1	IAMs_20	IAMs_20	17 44 53.7				
	comp=Z,1µm,20.0s									
NHSC	New Hope	127.72	348	IAMs_20	IAMs_20	17 46 21.1				
	comp=Z,1µm,21.0s									
Z56A	Williston	127.74	349	IAMs_20	IAMs_20	17 43 29.2				
	comp=Z,907nm,19.0s									
Y49A	Blount Mountai	127.93	354	IAMs_20	IAMs_20	17 42 31.4				
	comp=Z,1µm,22.0s									
319A	Douglas	127.93	19	IAMs_20	IAMs_20	17 47 18.5				
	comp=Z,1µm,19.0s									
GOGA	Godfrey	128.01	351	IAMs_20	IAMs_20	17 38 52.6				
	comp=Z,1µm,22.0s									
CCAR	Cane Creek	128.13	360	IAMs_20	IAMs_20	17 44 59.0				
	comp=Z,2µm,22.0s									
EPT	El Paso	128.35	16	IAMs_20	IAMs_20	17 42 13.3				
	comp=Z,1µm,21.0s									
WLAR	White Oak Lake	128.35	1	IAMs_20	IAMs_20	17 41 13.7				
	comp=Z,1µm,22.0s									
MNTX	Cornudas Mount	128.70	15	P	PKiKP	16 40 58.0	+0.2			
	baz=344									
MNTX	Cornudas Mount	128.70	15		PKPdf	16 40 56.7	-0.5			
MNTX				IAMs_20	IAMs_20	17 43 46.5				
	comp=Z,2µm,22.0s									
Z47A	Carrollton	128.72	356	IAMs_20	IAMs_20	17 47 34.4				
	comp=Z,1µm,22.0s									
154A	Montrose	128.73	350	IAMs_20	IAMs_20	17 43 14.9				
	comp=Z,906nm,20.0s									
LRAL	Lakeview Retre	128.80	355	IAMs_20	IAMs_20	17 42 16.5				
	comp=Z,1µm,22.0s									
ABTX	Abilene, Hawle	128.89	8	IAMs_20	IAMs_20	17 47 21.2				
	comp=Z,1µm,20.0s									
257A	Skidaway Islan	128.99	348	IAMs_20	IAMs_20	17 43 55.6				
	comp=Z,1µm,22.0s									
WHTX	Lake Whitney,	129.78	6	IAMs_20	IAMs_20	17 47 10.6				
	comp=Z,1µm,20.0s									
456A	Hilliard	130.39	349	IAMs_20	IAMs_20	17 46 27.8				
	comp=Z,1µm,20.0s									
JCT	Junction City	130.97	9	IAMs_20	IAMs_20	17 46 43.4				
	comp=Z,1µm,22.0s									
TXAR	Lajitas Array	131.37	14	PKhKP	PKPpre	16 40 58.1				
	comp=Z,0.3nm,0.4s,baz=58,slow=47,SNR=2.9									
TXAR				PKP	PKiKP

YOTC	Yotooco, Valle	153.09	324	*e*P	PKPdf	16 41 39.3	-1.4
PCON	Cinco Dias	154.47	322	*e*P	PKPbc	16 41 51.6	0.0
CFA	Coronel Fontan	154.79	234	PKP	PKPdf	16 41 42.5	0.0
	comp=Z,3.4nm,0.7s,baz=322,slow=3.3,SNR=6.3						
CFA				PKPbc	PKPbc	16 41 50.9	-0.2
	comp=Z,4.9nm,0.8s,baz=146,slow=3.9,SNR=6.6						
CFA				PKPab	PKPab	16 42 05.4	-0.9
	comp=Z,16nm,0.9s,baz=115,slow=3.7,SNR=8.9						
BBAC	Balboa, Cauca	155.21	323	*e*P	PKPab	16 42 09.2	+0.6
CO03	El Pedregal	157.01	233		PKPab	16 42 15.0	-0.9
LPAZ	La Paz	157.19	271	PKP	PKPdf	16 41 46.7	-0.1
	comp=Z,1.0nm,0.4s,baz=274,slow=3.9,SNR=5.3						
LPAZ				PKPab	PKPab	16 42 16.5	-1.2
	comp=Z,5.8nm,0.8s,baz=91,slow=2.4,SNR=10						
LPAZ	La Paz	157.19	271		PKPab	16 42 15.9	-1.8
LPAZ	La Paz	157.19	271	*e*P	PKPdf	16 41 47.7	+1.0
LVC	Limon Verde	158.00	255	PKP2	PKPab	16 42 20.9	+0.1
LVC	Limon Verde	158.00	255	PKPab	PKPab	16 42 20.9	+0.1
PB01	IPOC Station P	158.68	259		PKPab	16 42 22.4	-1.0

*KRNET **21** 16:32:31.1±0.1, 40.18N×75.51E, mb4.3*
ISC 21 16:32:31.2±1.6, 40.13N±0.06×75.49E±0.05, h6km±16km, n23, σ1°35/36, 10C-14D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**0.71**	**148**	Pg	**Pg**	**16 32 45.1**	**+0.2**
KSH				Sg	**Sn**	**16 32 58.4**	**-1.0**
KSH				smax	smax		
	comp=N,4μm,0.3s						
KSH				smax	smax		
	comp=E,4μm,0.6s						
KSH	**Kashi**	**0.71**	**148**	⇓*i*P	**Pg**	**16 32 45.3**	**+0.4**
	baz=54						
KSH				⇓*i*S	**Sg**	**16 32 55.0**	**+0.8**
	baz=54						
KZA	**Kyzart**	**1.96**	**355**	P	**Pn**	**16 33 06.0**	**+0.6**
	SNR=45						
ULHL	**Ulahol**	**2.19**	**15**	⇑*i*P	**Pn**	**16 33 09.2**	**+0.7**
	baz=15						
ULHL				⇑*e*S	**Sb**	**16 33 37.5**	**-1.5**
	baz=15						
ULHL	**Ulahol**	**2.19**	**15**	P	**Pn**	**16 33 08.5**	**0.0**
	SNR=45						
UCH	**Uchtor**	**2.23**	**341**	*e*P	**Pn**	**16 33 10.6**	**+1.4**
	baz=40						
UCH				*i* S	**Sb**	**16 33 39.0**	**-1.2**
	baz=40						
UCH	**Uchtor**	**2.23**	**341**	P	**Pn**	**16 33 09.4**	**+0.3**
	SNR=15						
ARSB	**Arslanbob**	**2.25**	**303**	⇑*i*P	**Pb**	**16 33 11.2**	**-1.2**
	baz=2.0						
ARSB				⇑*e*S	**Sb**	**16 33 39.7**	**-0.9**
	baz=2.0						
KDJ	**Kajisay**	**2.37**	**32**	⇓*i*P	**Pn**	**16 33 12.2**	**+1.3**
	baz=33						
KDJ				⇓*i*S	**Sb**	**16 33 41.9**	**-2.3**
	baz=33						
TARG	**Taragay, Kyrgy**	**2.38**	**47**	⇓*e*P	**Pn**	**16 33 12.3**	**+1.1**
	baz=47						
TARG				⇓*i*S	**Sb**	**16 33 42.2**	**-2.2**
	baz=47						
BOOM	**Boomskoye usch**	**2.39**	**8**	⇓*i*P	**Pn**	**16 33 12.3**	**+1.2**
	baz=8.0						
BOOM				⇓*i*S	**Sb**	**16 33 42.4**	**-2.1**
	baz=8.0						
AML	**Almayashu**	**2.42**	**326**	⇑*i*P	**Pn**	**16 33 13.3**	**+1.5**
	baz=25						
AML				⇑*e*S	**Sb**	**16 33 43.6**	**-2.1**
	baz=25						
AML	**Almayashu**	**2.42**	**326**	P	**Pn**	**16 33 12.4**	**+0.6**
	SNR=17						
KBK	**Karagaybulak**	**2.56**	**351**	⇑*e*P	**Pn**	**16 33 14.9**	**+1.4**
	baz=50						
KBK				⇑*i*S	**Sn**	**16 33 46.5**	**+1.4**
	baz=50						
KBK	**Karagaybulak**	**2.56**	**351**	P	**Pn**	**16 33 14.2**	**+0.6**
	SNR=5.7						
FRU1	**Bishkek**	**2.76**	**347**	⇑*e*P	**Pn**	**16 33 17.5**	**+1.4**
	baz=46						
FRU1				⇑*i*S	**Sn**	**16 33 51.3**	**+1.5**
	baz=46						
TKM2	**Tokmak 2**	**2.79**	**2**	⇓*i*P	**Pn**	**16 33 18.4**	**+1.7**
	baz=1.0						
TKM2				⇓*i*S	**Sn**	**16 33 52.1**	**+1.2**
	baz=1.0						
TKM2	**Tokmak 2**	**2.79**	**2**	P	**Pn**	**16 33 16.6**	**-0.2**
	SNR=8.0						
EKS2	**Erkin-Say**	**2.84**	**334**	P	**Pn**	**16 33 18.8**	**+1.5**
	SNR=8.7						
ANVS	**Anan'yevo**	**3.12**	**31**	⇓*i*P	**Pn**	**16 33 22.4**	**+1.2**
	baz=31						
ANVS				⇓*i*S	**Sn**	**16 33 59.7**	**+0.8**
	baz=31						
PRZ	**Przheval'sk**	**3.22**	**42**	⇓*i*P	**Pn**	**16 33 23.9**	**+1.4**
	baz=43						
PRZ				⇓*i*S	**Sn**	**16 34 02.7**	**+1.4**
	baz=43						
USP	**Ospenovka**	**3.23**	**347**	P	**Pn**	**16 33 23.0**	**+0.5**
	SNR=6.9						
WMQ	**Urumqi**	**9.81**	**64**	*e*P	Pn	16 34 46.6	-6.3
WMQ				smax	smax		
	comp=N,51nm,1.3s						
WMQ				smax	smax		
	comp=E,55nm,1.9s						

*IDC **21** 16:46:53.3±14.0, 24.36S×177.71W, h249km±118km, mb3.1/3, mb1 3.4/4, mb1mx3.1/27, mbtmp3.9/4, Error ellipse: s-maj=97.4km s-min=48.1km az=51.0*
*NEIC **21** 16:46:56.5±2.0, 24.4S±0.2×177.8W±0.3, h279km±29km, mb4.0/8, Error ellipse: s-maj=47.1km s-min=30.0km az=71.0*
ISC 21 16:46:53.2±3.0, 24.4S±0.1×177.7W±0.4, h250km, n14, σ0°93/17, mb3.9/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.48**	**197**	P	**Pn**	**16 50 07.8**	**+0.8**
	0.4nm,0.3s,baz=94,slow=24,SNR=2.2						
URZ				S	**S**	**16 52 46.2**	**-1.0**
	0.3nm,0.3s,baz=235,slow=17,SNR=2.1						
DZM	**Mont Dzumac**	**14.79**	**276**	P	**P**	**16 50 11.2**	**+0.3**
CTAO	**Charters Tower**	**33.60**	**270**	P	**P**	**16 53 10.8**	**+0.4**
STKA	**Stephens Creek**	**36.51**	**249**	P	**P**	**16 53 35.9**	**+0.9**
	0.5nm,0.4s,baz=105,slow=12,SNR=2.6						
AS31	**Alice Springs**	**44.05**	**261**	P	**P**	**16 54 37.0**	**+0.2**
ASAR	**Alice Springs**	**44.05**	**261**	P	**P**	**16 54 37.1**	**+0.3**
	0.5nm,0.4s,baz=92,slow=8.0,SNR=32						
ASAR				PcP	**PcP**	**16 56 17.8**	**+0.2**
	0.4nm,0.9s,baz=113,slow=3.9,SNR=1.7						
WR0	**Warramunga Arr**	**44.30**	**266**	P	**P**	**16 54 38.3**	**-0.5**
WB2	**Warramunga Arr**	**44.48**	**266**	P	**P**	**16 54 39.9**	**-0.4**
WB2				IAmb	IAmb	16 54 54.1	
	comp=Z,6.9nm,1.2s						
WRAB	**Tennant Creek**	**44.48**	**266**	P	**P**	**16 54 39.5**	**-0.8**
WRAB				IAmb	IAmb	16 54 45.8	
	comp=Z,10nm,1.3s						
WB0	**Warramunga Arr**	**44.49**	**266**	P	**P**	**16 54 38.9**	**-1.5**
WB0				IAmb	IAmb	16 55 47.1	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**44.49**	**266**	P	**P**	**16 54 39.4**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=104,slow=8.4,SNR=15						
WRA				PcP	**PcP**	**16 56 18.5**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=96,slow=3.4,SNR=2.4						
MTN	**Manton Dam**	**49.62**	**274**	P	**P**	**16 55 18.2**	**-1.6**
KNRA	**Kununurra**	**50.81**	**269**	P	**P**	**16 55 28.2**	**-0.6**
KNRA				IAmb	IAmb	16 56 31.5	
	comp=Z,11nm,1.3s						
FITZ	**Fitzroy Crossi**	**52.91**	**265**	P	**P**	**16 55 42.9**	**-1.3**

*ISK **21** 16:54:30.7, 37.38N×26.98E, h15km, ML3.7/24*
*DDA **21** 16:54:30.3, 37.37N×26.95E, h16km±1km, MW3.6*
*ATH **21** 16:54:30.1, 37.39N×26.95E, h30km±2km, ML3.5/3, Error ellipse: s-maj=3.3km s-min=1.3km az=37.0*
*THE **21** 16:54:31.2, 37.37N×26.97E, h8km±1km, ML3.4/5, Error ellipse: s-maj=1.3km s-min=0.5km az=69.0*
ISC 21 16:54:30.3±1.0, 37.35N±0.02×26.90E±0.02, h13km±8km, n69, σ1°04/100, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.36**	**352**	P	**Pb**	**16 54 38.1**	**-0.5**
SMG				S	**Sb**	**16 54 43.9**	**-0.3**
	13μm,0.3s						
SMG	**Samos**	**0.36**	**352**	P	**Pb**	**16 54 38.1**	**-0.5**
SMG				S	**Sb**	**16 54 43.1**	**-1.1**
SMG				AML	AML	16 54 44.4	
	comp=N,24761μm,0.3s						
SMG				AML	AML	16 54 44.6	
	comp=E,26528μm,0.3s						
BODT	**Bodrum**	**0.43**	**131**	P	**Pg**	**16 54 39.1**	**+0.1**
BODT				S	**Sg**	**16 54 45.2**	**+0.5**
BODT	**Bodrum**	**0.43**	**131**	PG	**Pg**	**16 54 39.0**	**+0.1**
BODT				SG	**Sg**	**16 54 45.3**	**+0.5**
GCAM	**G?zelcaml?**	**0.44**	**37**	PG	**Pb**	**16 54 39.2**	**-0.7**
GCAM				SG	**Sg**	**16 54 45.3**	**+0.5**
GCAM	**G?zelcaml?**	**0.44**	**37**	*i* P	**Pg**	**16 54 38.7**	**-0.3**
GCAM				*i* S	**Sg**	**16 54 44.9**	**+0.1**
GCAM				IAML		16 54 46.0	
	comp=N,7μm,0.3s						
GCAM				IAML		16 54 46.0	
	comp=E,6μm,0.2s						
BDRM	**Kayabasi**	**0.52**	**123**	*i* P	**Pg**	**16 54 40.4**	**0.0**
BDRM				*i* S	**Sg**	**16 54 47.8**	**+0.4**
BDRM				IAML		16 54 49.0	
	comp=N,4μm,0.7s						
BDRM				IAML		16 54 49.0	
	comp=E,3μm,1.0s						
KOSK	**Kos Island**	**0.60**	**174**	PG	**Pb**	**16 54 43.4**	**+0.8**
DGB	**zmir**	**0.70**	**359**	*i* P	**Pb**	**16 54 43.8**	**-0.6**
DGB				*i* S	**Sb**	**16 54 53.6**	**-0.3**
DGB				IAML		16 54 57.0	
	comp=E,2μm,0.8s						
DGB				IAML		16 54 57.0	
	comp=N,1μm,0.6s						
NISR	**Nisiros**	**0.76**	**166**	P	**Pn**	**16 54 46.4**	**-0.3**
NISR	**Nisiros**	**0.76**	**166**	P	**Pn**	**16 54 46.6**	**-0.1**
DAT	**Datca**	**0.82**	**139**	P	**Pg**	**16 54 46.3**	**0.0**
DAT				S	**Sb**	**16 54 58.6**	**+1.0**
DAT	**Datca**	**0.82**	**139**	PG	**Pg**	**16 54 46.4**	**+0.2**
DAT	**Datca**	**0.82**	**139**	*i* P	**Pg**	**16 54 46.2**	**0.0**
DAT				*i* S	**Sb**	**16 54 57.9**	**+0.3**
DAT				IAML		16 55 03.0	
	comp=N,428nm,0.3s						
DAT				IAML		16 55 03.0	
	comp=E,484nm,0.6s						
AMGA	**Amorgos Island**	**0.96**	**238**	P	**Pn**	**16 54 49.9**	**+0.5**
AMGA				S	**Sn**	**16 55 04.6**	**+1.6**
	comp=E,5μm,0.6s						
AMGA	**Amorgos Island**	**0.96**	**238**	P	**Pn**	**16 54 50.0**	**+0.5**
AMGA				S	**Sn**	**16 55 03.2**	**+0.2**
AMGA				AML	AML	16 55 06.3	
	comp=N,9243μm,0.6s						
AMGA				AML	AML	16 55 06.5	
	comp=E,8845μm,0.7s						
AYDB	**Zeytinkoy-Aydi**	**0.98**	**53**	PG	**Pg**	**16 54 48.3**	**-1.0**
URLA	**Izmir**	**1.04**	**347**	PG	**Pn**	**16 54 50.7**	**+0.1**
URLA	**Izmir**	**1.04**	**347**	*i* P	**Pn**	**16 54 51.0**	**+0.4**
URLA				*i* S	**Sn**	**16 55 06.4**	**+1.5**
URLA				IAML		16 55 09.0	
	comp=N,560nm,1.0s						
URLA				IAML		16 55 12.0	
	comp=E,424nm,0.4s						
BLCB	**Balcova**	**1.04**	**6**	P	**Pn**	**16 54 50.2**	**-0.4**
BLCB				S	**Sn**	**16 55 04.1**	**-0.8**
BLCB	**Balcova**	**1.04**	**6**	PG	**Pn**	**16 54 50.2**	**-0.4**
YER	**Yerkesik**	**1.12**	**101**	P	**Pb**	**16 54 51.2**	**-0.4**
YER				S	**Sb**	**16 55 06.3**	**+0.2**
YER	**Yerkesik**	**1.12**	**101**	PG	**Pb**	**16 54 51.2**	**-0.4**
APE	**Apeiranthos**	**1.13**	**256**	P	**Pn**	**16 54 52.8**	**+0.9**
APE				S	**Sn**	**16 55 09.2**	**+1.9**
APE	**Apeiranthos**	**1.13**	**256**	P	**Pn**	**16 54 52.6**	**+0.8**
APE				S	**Sn**	**16 55 08.4**	**+1.1**
APE	**Apeiranthos**	**1.13**	**256**	PN	**Pn**	**16 54 52.8**	**+0.9**
MRSB	**Marmaris-Mugla**	**1.21**	**121**	PN	**Pb**	**16 54 53.5**	**+0.4**
CHOS	**Chios island**	**1.23**	**327**	P	**Pg**	**16 54 53.6**	**-0.5**
CHOS				S	**Sn**	**16 55 10.4**	**+0.5**
	comp=E,675nm,0.4s						
CHOS	**Chios island**	**1.23**	**327**	P	**Pg**	**16 54 53.5**	**-0.5**
CHOS				S	**Sn**	**16 55 09.3**	**-0.5**
CHOS				AML	AML	16 55 14.9	
	comp=E,1460μm,0.3s						
CHOS				AML	AML	16 55 15.4	
	comp=N,1308μm,0.5s						
CHOS	**Chios island**	**1.23**	**327**	PN	**Pg**	**16 54 54.5**	**+0.5**
KRBN	**Karaburun**	**1.27**	**348**	PN	**Pg**	**16 54 54.7**	**0.0**
IOSP	**Ios island**	**1.44**	**245**	P	**Pg**	**16 54 57.0**	**-0.9**
IOSP				S	**Sg**	**16 55 16.2**	**-0.3**
	comp=N,1μm,0.5s						
IOSP	**Ios island**	**1.44**	**245**	P	**Pg**	**16 54 56.9**	**-1.0**
TURN	**Turunc**	**1.44**	**109**	PN	**Pn**	**16 54 53.1**	**-3.0**
TURN	**Turunc**	**1.44**	**109**	*i* P	**Pn**	**16 54 54.2**	**-1.9**
TURN				*i* S	**Sn**	**16 55 10.5**	**-4.3**
TURN				IAML		16 55 13.0	
	comp=N,746nm,0.5s						
TURN				IAML		16 55 15.0	
	comp=E,755nm,0.7s						
THR8	**Santorini-Mono**	**1.48**	**231**	P	**Pg**	**16 54 57.5**	**-1.2**
DALY	**Dalyan (Mula)**	**1.50**	**110**	PN	**Pn**	**16 54 57.5**	**+0.7**
DALY	**Dalyan (Mula)**	**1.50**	**110**	*i* P	**Pg**	**16 54 59.1**	**+0.1**
DALY				*i* S	**Sg**	**16 55 18.5**	**-0.1**
DALY				IAML		16 55 24.0	
	comp=N,857nm,0.8s						
DALY				IAML		16 55 26.0	
	comp=E,407nm,0.9s						
ARG	**Arkhangelos**	**1.50**	**139**	P	**Pn**	**16 54 57.6**	**+0.7**
ARG				S	**Sn**	**16 55 17.1**	**+0.8**
	comp=E,805nm,0.9s						
ARG	**Arkhangelos**	**1.50**	**139**	P	**Pn**	**16 54 57.1**	**+0.2**
ARG	**Arkhangelos**	**1.50**	**139**	PN	**Pn**	**16 54 57.5**	**+0.7**
THT2	**Imerovigli**	**1.50**	**233**	PN	**Pg**	**16 54 59.0**	**-0.1**
SNT1	**Gialos, Santor**	**1.51**	**232**	P	**Pn**	**16 54 56.8**	**-0.1**
SNT1				S	**Sg**	**16 55 18.6**	**-0.2**
SANT	**Santorini**	**1.52**	**230**	PN	**Pg**	**16 54 59.2**	**-0.2**
THR3	**Thira Island,**	**1.53**	**232**	P	**Pg**	**16 54 58.2**	**-1.4**
THR3	**Thira Island,**	**1.53**	**232**	P	**Pb**	**16 54 57.8**	**-0.7**
THR6	**Thira Island,**	**1.56**	**231**	P	**Pg**	**16 54 58.8**	**-1.5**
GOMA	**Golmarmara-Man**	**1.57**	**30**	PN	**Pn**	**16 54 58.4**	**+0.5**
TAVA	**DENIZLI_Tavas**	**1.60**	**85**	*i* P	**Pb**	**16 54 59.7**	**-0.1**
TAVA				*i* S	**Sb**	**16 55 21.1**	**+1.0**
TAVA				IAML		16 55 30.0	
	comp=E,146nm,0.6s						
TAVA				IAML		16 55 32.0	
	comp=N,124nm,1.0s						
AKS	**Akhisar**	**1.69**	**25**	PN	**Pn**	**16 55 00.0**	**+0.5**
DKL	**Dikili**	**1.72**	**0**	PN	**Pn**	**16 55 00.2**	**+0.3**
MANT	**Manisa**	**1.73**	**48**	*i* P	**Pg**	**16 55 03.2**	**-0.4**
MANT				IAML		16 55 32.0	
	comp=E,139nm,0.6s						
MANT				IAML		16 55 35.0	
	comp=N,178nm,0.9s						
KULA	**Kula-Manisa**	**1.81**	**50**	PN	**Pn**	**16 55 01.9**	**+0.6**
KARP	**Karpathos**	**1.81**	**173**	P	**Pn**	**16 55 00.9**	**-0.3**
KARP	**Karpathos**	**1.81**	**173**	PN	**Pb**	**16 55 02.8**	**-0.5**
FETY	**Fethiye**	**1.89**	**112**	PN	**Pn**	**16 55 02.9**	**+0.7**
FETY	**Fethiye**	**1.89**	**112**	*i* P	**Pb**	**16 55 04.1**	**-0.5**
FETY				*i* S	**Sb**	**16 55 29.8**	**+1.7**
FETY				IAML		16 55 33.0	
	comp=E,157nm,0.5s						
FETY				IAML		16 55 33.0	
	comp=N,127nm,1.0s						
AYVA	**Ayvalik**	**1.96**	**355**	*i* P	**Pg**	**16 55 07.1**	**-0.8**
AYVA				*i* S	**Sg**	**16 55 35.5**	**+2.1**
AYVA				IAML		16 55 41.0	
	comp=E,148nm,1.0s						
AYVA				IAML		16 55 47.0	
	comp=N,227nm,0.8s						
SIGR	**SIGRI**	**2.03**	**336**	P	**Pn**	**16 55 04.7**	**+0.5**
KHAL	**Karahalli**	**2.29**	**63**	*i* P	**Pn**	**16 55 08.2**	**+0.4**
KHAL				IAML		16 55 48.0	
	comp=E,77nm,0.5s						
KHAL				IAML		16 55 49.0	
	comp=N,147nm,0.6s						
ZKR	**Zakros**	**2.30**	**194**	PN	**Pb**	**16 55 10.0**	**-1.6**
BAYC	**CANAKKALE_Bayr**	**2.40**	**353**	*i* P	**Pn**	**16 55 09.6**	**+0.3**
BAYC				IAML		16 55 54.0	
	comp=N,40nm,0.9s						
BAYC				IAML		16 55 56.0	
	comp=E,86nm,0.6s						
AKAS	**Kas**	**2.44**	**116**	PN	**Pn**	**16 55 10.8**	**+0.8**
BALY	**Balya**	**2.45**	**13**	*i* P	**Pg**	**16 55 16.5**	**-0.8**
BALY				*i* S	**Sg**	**16 55 48.6**	**-0.4**
ELL	**Elmali**	**2.48**	**103**	PN	**Pn**	**16 55 11.3**	**+0.8**
EZN	**Ezine**	**2.51**	**350**	P	**Pn**	**16 55 11.7**	**+0.9**
DURS	**Dursunbey**	**2.56**	**28**	*i* P	**Pg**	**16 55 19.4**	**0.0**
DURS				*i* S	**Sg**	**16 55 52.5**	**-0.1**
GDZ	**Gediz**	**2.67**	**49**	*i* P	**Pg**	**16 55 20.7**	**-0.8**
GDZ				*i* S	**Sg**	**16 56 00.4**	**+4.3**
AKUM	**Antalya-Kumluc**	**2.94**	**109**	*i* P	**Pb**	**16 55 20.9**	**-1.7**
AKUM				*i* S	**Sb**	**16 55 57.3**	**-1.2**

*NEIC **21** 17:08:16.1±2.0, 24.8S±0.1×180.0W±0.1, h499km±8km, mb4.7/22, Error ellipse: s-maj=19.6km s-min=16.3km az=136.0*
*IDC **21** 17:08:17.5±2.7, 24.79S×179.83E, h500km±28km, mb3.4/6, mb1 3.6/8, mb1mx3.3/23, mbtmp4.3/8, Error ellipse: s-maj=24.1km s-min=23.0km az=150.0*
ISC 21 17:08:16.4±0.5, 24.70S±0.07×179.95W±0.09, h501km, n60, σ1°37/58, mb4.2/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**7.17**	**345**	P	**P**	**17 10 07.2**	**+2.6**
DZM	**Mont Dzumac**	**12.76**	**279**	P	**P**	**17 11 03.8**	**+0.6**
	0.3nm,0.3s,baz=70,slow=17,SNR=1.8						
DZM	**Mont Dzumac**	**12.76**	**279**	P	**P**	**17 11 03.6**	**+0.5**
AFI	**Afiamalu**	**13.21**	**37**	P	**P**	**17 11 04.7**	**-3.2**
LIRZ	**Lichensteins R**	**13.63**	**192**	P	**P**	17 11 31.4	+19
URZ	**Urewera**	**13.75**	**190**	P	**P**	**17 11 13.1**	**-0.2**
	2.7nm,0.3s,baz=293,slow=1.6,SNR=18						
URZ				S	**S**	**17 13 38.2**	**-0.9**
	0.5nm,0.3s,baz=194,slow=22,SNR=7.3						
TKGZ	**Te Karaka**	**13.83**	**187**	P	P	17 11 38.1	+24
HIZ	**Hauiti**	**14.46**	**197**	P	P	17 11 25.7	+5.0
NMHZ	**Naumai**	**14.62**	**190**	P	P	17 11 36.7	+14
BKZ	**Black Stump Fm**	**14.74**	**191**	P	**P**	**17 11 24.5**	**+0.8**
BKZ	**Black Stump Fm**	**14.74**	**191**	P	**P**	**17 11 20.4**	**-3.2**
MCHZ	**McNeill Hill**	**14.97**	**190**	P	**P**	**17 11 26.9**	**+0.8**
KWHZ	**Kaweka Forest**	**15.00**	**191**	P	**P**	**17 11 28.7**	**+2.3**
BHHZ	**Black Hill Sta**	**15.13**	**192**	P	**P**	**17 11 27.1**	**-0.6**
PKE	**Pukeiti**	**15.34**	**198**	P	**P**	**17 11 29.9**	**0.0**
TSZ	**Takapari Road**	**15.70**	**192**	P	**P**	**17 11 34.3**	**+0.6**
ANWZ	**Angora Road**	**16.00**	**190**	P	**P**	**17 11 37.7**	**+0.9**
FUNA	**Funafuti**	**16.10**	**357**	P	**P**	**17 11 34.8**	**-3.4**
BFZ	**Birch Farm**	**16.26**	**190**	P	**P**	**17 11 39.2**	**-0.2**
MRZ	**Mangatainoka R**	**16.35**	**192**	P	**P**	**17 11 37.8**	**-2.7**
HOWZ	**Holdsworth Sta**	**16.59**	**192**	P	**P**	**17 11 42.8**	**-0.2**
QRZ	**Quartz Range**	**17.27**	**200**	P	**P**	**17 11 49.5**	**-0.2**
QRZ	**Quartz Range**	**17.27**	**200**	P	**P**	**17 11 48.8**	**-0.9**
PLWZ	**Palliser**	**17.29**	**192**	P	**P**	**17 11 49.1**	**-0.9**
NNZ	**Nelson**	**17.39**	**197**	P	**P**	**17 11 51.2**	**+0.3**
NNZ	**Nelson**	**17.39**	**197**	P	**P**	**17 11 49.2**	**-1.6**
TUWZ	**Tuamarina**	**17.45**	**195**	P	**P**	**17 11 49.4**	**-2.0**
THZ	**Tophouse**	**18.03**	**197**	P	**P**	**17 11 55.6**	**-1.2**
KHZ	**Kahutara**	**18.48**	**195**	P	**P**	**17 11 58.9**	**-1.9**
KHZ				IAmb	IAmb	17 12 47.1	
	comp=Z,93nm,1.6s						
RAR	**Rarotonga**	**18.90**	**83**	P	**P**	**17 12 03.9**	**-1.1**
RAR				IAmb	IAmb	17 12 09.0	
	comp=Z,34nm,1.0s						
LTZ	**Lake Taylor**	**19.15**	**198**	P	**P**	**17 12 05.6**	**-1.4**
LTZ				IAmb	IAmb	17 12 35.4	
	comp=Z,109nm,1.9s						
OXZ	**Oxford**	**19.71**	**198**	P	**P**	**17 12 11.6**	**-0.6**
OXZ				IAmb	IAmb	17 12 49.6	
	comp=Z,68nm,1.6s						
RPZ	**Rata Peaks**	**20.35**	**199**	P	**P**	**17 12 17.0**	**-1.0**
	comp=Z,7.9nm,0.5s,baz=52,slow=2.8,SNR=2.1						
RPZ	**Rata Peaks**	**20.35**	**199**	P	**P**	**17 12 17.1**	**-0.8**
RPZ				IAmb	IAmb	17 13 01.8	
	comp=Z,77nm,1.4s						
CTAO	**Charters Tower**	**31.53**	**272**	P	**P**	**17 13 57.5**	**+0.5**
CTAO				IAmb	IAmb	17 15 24.4	
	comp=Z,53nm,1.6s						
STKA	**Stephens Creek**	**34.47**	**249**	P	**P**	**17 14 22.0**	**+0.2**
	comp=Z,2.1nm,0.4s,baz=93,slow=11,SNR=8.9						
STKA	**Stephens Creek**	**34.47**	**249**	P	**P**	**17 14 22.0**	**+0.2**
BBOO	**Buckleboo**	**39.18**	**248**	P	**P**	**17 14 59.7**	**-0.9**
BBOO				IAmb	IAmb	17 15 04.4	
	comp=Z,30nm,1.6s						
AS31	**Alice Springs**	**41.95**	**261**	P	**P**	**17 15 22.7**	**-0.3**
ASAR	**Alice Springs**	**41.95**	**261**	P	**P**	**17 15 22.7**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=98,slow=7.3,SNR=81						
WR0	**Warramunga Arr**	**42.21**	**267**	P	**P**	**17 15 24.1**	**-0.9**
WR0				IAmb	IAmb	17 16 05.0	
	comp=Z,14nm,1.6s						
WB2	**Warramunga Arr**	**42.39**	**267**	P	**P**	**17 15 25.5**	**-0.9**
WB2				IAmb	IAmb	17 15 26.1	
	comp=Z,4.8nm,0.5s						
WB0	**Warramunga Arr**	**42.40**	**267**	P	**P**	**17 15 25.4**	**-1.1**
WRA	**Warramunga Arr**	**42.40**	**267**	P	**P**	**17 15 25.2**	**-1.3**
	comp=Z,3.1nm,0.5s,baz=99,slow=7.3,SNR=70						
WRA				ScP	**ScP**	**17 20 12.0**	**+0.8**
	comp=Z,0.6nm,1.0s,baz=99,slow=4.1,SNR=4.8						
FORT	**Forrest**	**46.08**	**250**	P	**P**	**17 15 53.0**	**-1.9**
FORT				IAmb	IAmb	17 16 06.7	
	comp=Z,18nm,1.1s						
KNRA	**Kununurra**	**48.73**	**270**	P	**P**	**17 16 14.7**	**-0.3**
HMH	**Humu'ula Sheep**	**50.06**	**31**	P	**P**	**17 16 25.7**	**+0.6**
FITZ	**Fitzroy Crossi**	**50.81**	**266**	P	**P**	**17 16 29.2**	**-1.1**
FITZ				IAmb	IAmb	17 16 50.1	

*MEX **21** 17:25:57.4±0.8, 16°.61N×100°.50W, h5km±7km, MD4.0*
ISC 21 17:25:57.5±1.9, **16°.6N**±0°.1×**100°.45W**±0°.10, **h22**km±8km, **n14**, σ0°**92**/**21**, **mb3.1**/3, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.45**	**23**	*eP*			**Pb**	**17 26 06.1**	**-0.5**
CAIG				*eS*			**Sb**	**17 26 13.9**	**+1.1**
ACP2	**Acapulco**	**0.59**	**66**	*eP*			**Pb**	**17 26 08.6**	**-0.6**
ACP2				*eS*			**Sb**	**17 26 17.6**	**+0.4**
CRIG	**Cruz Grande**	**1.27**	**85**	*eP*			**Pn**	**17 26 18.9**	**-1.0**
CRIG				*i* S			**Sn**	**17 26 34.9**	**-1.4**
MEIG	**Mezcala**	**1.51**	**32**	*eP*			**Pn**	**17 26 22.8**	**-0.6**
MEIG				*i* S			**Sn**	**17 26 42.9**	**+0.6**
ARIG	**Puente Sto Nin**	**1.64**	**3**	*eP*			**Pn**	**17 26 23.7**	**-1.3**
ARIG				*i* S			**Sn**	**17 26 45.4**	**-0.1**
PLIG	**Platanillo**	**1.97**	**27**	*i* P			**Pn**	**17 26 28.8**	**-0.8**
PLIG				*i* S			**Sn**	**17 26 52.7**	**-1.0**
TLIG	**Tlapa**	**2.02**	**63**	*eP*			**Pn**	**17 26 29.8**	**-0.6**
PNIG	**Pinotepa**	**2.24**	**96**	*eP*			**Pn**	**17 26 32.8**	**-0.6**
FTIG	**Fresnillo de T**	**2.55**	**60**	*eP*			**Pn**	**17 26 37.9**	**+0.2**
TXIG	**Tlaxiaco**	**2.64**	**76**	*eP*			**Pn**	**17 26 39.6**	**+0.6**
TXIG				*eS*			**Sn**	**17 27 10.9**	**+0.4**
HLIG	**Huajuapan de L**	**2.79**	**64**	*eP*			**Pn**	**17 26 41.7**	**+0.6**
NVAR	**Mina Array Bea**	**26.77**	**328**	P			**P**	**17 31 38.0**	**+1.9**
	0.3nm,0.6s,baz=149,slow=13,SNR=2.8								
PDAR	**Pinedale Array**	**27.18**	**345**	P			**P**	**17 31 40.3**	**+0.5**
	0.3nm,0.7s,baz=162,slow=9.0,SNR=4.2								
YKA	**Yellowknife Ar**	**46.88**	**351**	P			**P**	**17 34 25.7**	**-0.1**
	0.4nm,0.8s,baz=161,slow=7.4,SNR=5.5								

*NEIC **21** 17:27:46.1±1.0, 25°.22S±0°.09×179°.9E±0°.1, h501km, n24, σ0°94/26, mb4.2/14, South of Fiji Islands*

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.64**	**347**	P			**P**	**17 29 39.0**	**+0.6**
DZM	**Mont Dzumac**	**12.70**	**282**	P			**P**	**17 30 33.5**	**+1.9**
	0.4nm,0.3s,baz=62,slow=22,SNR=3.9								
DZM	**Mont Dzumac**	**12.70**	**282**	P			**P**	**17 30 32.4**	**+0.8**
URZ	**Urewera**	**13.21**	**190**	P			**P**	**17 30 38.6**	**+2.0**
	0.4nm,0.3s,baz=90,slow=3.0,SNR=1.2								
URZ				S			**S**	**17 32 57.2**	**-0.6**
	0.3nm,0.3s,baz=28,slow=17,SNR=1.8								
LTZ	**Lake Taylor**	**18.61**	**198**	P			**P**	**17 31 30.8**	**-0.4**
CTA	**Charters Tower**	**31.39**	**272**	P			**P**	**17 33 25.7**	**+0.8**
	5.5nm,0.4s,baz=97,slow=11,SNR=30								
CTAO	**Charters Tower**	**31.39**	**272**	P			**P**	**17 33 25.3**	**+0.4**
KRVT	**Keravat (AS076**	**33.87**	**303**	P			**P**	**17 33 45.3**	**-0.7**
	12nm,0.5s,baz=9.9,slow=4.2,SNR=6.8								
STKA	**Stephens Creek**	**34.15**	**250**	P			**P**	**17 33 48.2**	**+0.1**
	1.0nm,0.5s,baz=88,slow=9.5,SNR=4.3								
STKA	**Stephens Creek**	**34.15**	**250**	P			**P**	**17 33 48.2**	**+0.1**
AS31	**Alice Springs**	**41.72**	**262**	P			**P**	**17 34 49.9**	**-0.3**
ASAR	**Alice Springs**	**41.72**	**262**	P			**P**	**17 34 50.1**	**-0.1**
	1.2nm,0.3s,baz=94,slow=6.9,SNR=103								
ASAR				S			**S**	**17 40 29.1**	**-1.7**
	0.3nm,0.6s,baz=97,slow=14,SNR=6.4								
WR0	**Warramunga Arr**	**42.03**	**268**	P			**P**	**17 34 51.7**	**-1.0**
WR0					IAmb		IAmb	17 34 52.4	
	comp=Z,8.9nm,1.3s								
WB2	**Warramunga Arr**	**42.21**	**268**	P			**P**	**17 34 53.5**	**-0.6**
WB2					IAmb		IAmb	17 35 31.5	
	comp=Z,17nm,1.6s								
WB0	**Warramunga Arr**	**42.22**	**268**	P			**P**	**17 34 53.5**	**-0.7**
WB0					IAmb		IAmb	17 34 54.2	
	comp=Z,4.3nm,0.6s								
WRA	**Warramunga Arr**	**42.22**	**268**	P			**P**	**17 34 53.5**	**-0.7**
	comp=Z,2.8nm,0.4s,baz=103,slow=7.6,SNR=21								
MTN	**Manton Dam**	**47.45**	**276**	P			**P**	**17 35 34.6**	**+0.1**
MTN					IAmb		IAmb	17 35 52.7	
	comp=Z,19nm,1.5s								
KNRA	**Kununurra**	**48.58**	**271**	P			**P**	**17 35 42.9**	**0.0**
KNRA					IAmb		IAmb	17 35 43.6	
	comp=Z,17nm,1.1s								
FITZ	**Fitzroy Crossi**	**50.63**	**267**	P			**P**	**17 35 57.9**	**-0.2**
	comp=Z,1.8nm,0.5s,baz=113,slow=6.9,SNR=13								
FITZ	**Fitzroy Crossi**	**50.63**	**267**	P			**P**	**17 35 58.0**	**-0.1**
SIJI	**Sorong**	**52.75**	**290**	P			**P**	**17 36 13.2**	**-0.3**
	comp=Z,5.4nm,0.4s,baz=92,slow=9.8,SNR=5.9								
MORW	**Morawa**	**56.33**	**251**	P			**P**	**17 36 37.8**	**-0.7**
MORW					IAmb		IAmb	17 37 11.9	
	comp=Z,30nm,1.9s								
TXAR	**Lajitas Array**	**91.22**	**58**	P			**P**	**17 39 55.4**	**-1.7**
	comp=Z,0.3nm,0.6s,baz=209,slow=5.2,SNR=3.9								
BWN	**Browne**	**92.27**	**13**	P			**P**	**17 40 01.9**	**+1.0**

*IDC **21** 17:44:36.3±2.1, 5°.37S×145°.40E, h0km, mb3.6/4, mb1 3.7/6, mb1mx3.5/34, mbtmp3.6/6, ML2.7/2, Error ellipse: s-maj=46.7km s-min=25.8km az=76.0*
ISC 21 17:44:45.5±1.7, **5°.5S**±0°.1×**145°.5E**±0°.2, **h86**km, **n6**, σ2**9**/**24**/7, **mb3.5**/4, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.23**	**157**	Pn			**Pn**	**17 45 45.0**	**-2.6**
	3.8nm,0.3s,baz=14,slow=5.9,SNR=16								
PMG					Sn		**Sn**	**17 46 39.1**	**+3.3**
	1.4nm,0.3s,baz=292,slow=19,SNR=2.4								
WRA	**Warramunga Arr**	**17.99**	**216**	P			**Pn**	**17 48 50.5**	**+0.5**
	0.1nm,0.3s,baz=40,slow=12,SNR=7.6								
ASAR	**Alice Springs**	**21.23**	**211**	P			**P**	**17 49 23.6**	**-1.0**
	0.2nm,0.4s,baz=41,slow=8.5,SNR=2.1								
FITZ	**Fitzroy Crossi**	**23.07**	**235**	P			**P**	**17 49 44.2**	**+0.2**
	1.5nm,0.6s,baz=46,slow=10,SNR=3.1								
STKA	**Stephens Creek**	**26.49**	**187**	P			**P**	**17 50 15.1**	**+0.2**
	1.4nm,0.8s,baz=8.7,slow=13,SNR=3.5								
SONM	**Songino Array**	**63.24**	**332**	P			**P**	**17 55 06.0**	**+0.9**
	0.8nm,0.5s,baz=142,slow=12,SNR=2.2								

*IDC **21** 18:03:50.0±19.0, 20°.13S×178°.40W, h628km±154km, mb3.3/5, mb1 3.5/6, mb1mx2.9/38, mbtmp4.4/6, Error ellipse: s-maj=191.5km s-min=89.1km az=71.0*
*NEIC **21** 18:03:50.8±0.5, 20°.2S±0°.4×178°.4W±0°.3, h649km±19km, mb4.3/16, Error ellipse: s-maj=62.4km s-min=22.2km az=143.0*
ISC 21 18:03:50.9±1.7, **20°.2S**±0°.4×**178°.4W**±0°.3, **h650**km, **n26**, σ0**48**/**26**, **mb4.3**/12, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.87**	**46**	P			**P**	**18 06 00.2**	**0.0**
DZM	**Mont Dzumac**	**14.30**	**260**	P			**P**	**18 06 51.5**	**+0.5**
	0.7nm,0.3s,baz=144,slow=22,SNR=11								
DZM	**Mont Dzumac**	**14.30**	**260**	P			**P**	**18 06 50.1**	**-0.8**
EIDS	**Eidsvold**	**28.61**	**254**	P			**P**	**18 08 57.9**	**-0.4**
CTA	**Charters Tower**	**33.19**	**264**	P			**P**	**18 09 37.1**	**-0.1**
	4.7nm,0.4s,baz=86,slow=9.1,SNR=6.2								
CTAO	**Charters Tower**	**33.19**	**264**	P			**P**	**18 09 37.1**	**-0.1**
STKA	**Stephens Creek**	**37.62**	**244**	P			**P**	**18 10 13.6**	**+0.1**
	1.2nm,0.4s,baz=88,slow=12,SNR=9.7								
STKA	**Stephens Creek**	**37.62**	**244**	P			**P**	**18 10 13.7**	**+0.3**
BBOO	**Buckleboo**	**42.38**	**243**	P			**P**	**18 10 50.9**	**-0.2**
WR0	**Warramunga Arr**	**44.12**	**262**	P			**P**	**18 11 04.2**	**-0.5**
WR0					IAmb		IAmb	18 12 44.6	
	comp=Z,27nm,2.0s								
AS31	**Alice Springs**	**44.26**	**256**	P			**P**	**18 11 05.5**	**-0.2**
ASAR	**Alice Springs**	**44.26**	**256**	P			**P**	**18 11 06.0**	**+0.2**
	comp=Z,6.6nm,0.8s,baz=96,slow=7.8,SNR=106								
ASAR				PcP			**PcP**	**18 12 36.0**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=106,slow=3.9,SNR=5.9								
WB0	**Warramunga Arr**	**44.29**	**262**	P			**P**	**18 11 05.6**	**-0.3**
WB0					IAmb		IAmb	18 11 06.1	
	comp=Z,5.5nm,0.8s								
WB2	**Warramunga Arr**	**44.30**	**262**	P			**P**	**18 11 05.9**	**-0.2**
WB2					IAmb		IAmb	18 11 09.9	
	comp=Z,20nm,1.6s								
WRAB	**Tennant Creek**	**44.30**	**262**	P			**P**	**18 11 05.5**	**-0.5**
WRAB					IAmb		IAmb	18 11 29.7	
	comp=Z,27nm,1.8s								
WRA	**Warramunga Arr**	**44.31**	**262**	P			**P**	**18 11 05.8**	**-0.3**
	comp=Z,2.1nm,0.3s,baz=97,slow=6.9,SNR=125								
MTN	**Manton Dam**	**48.82**	**270**	P			**P**	**18 11 39.8**	**-0.2**
FORT	**Forrest**	**49.11**	**246**	P			**P**	**18 11 41.6**	**-0.2**
FORT					IAmb		IAmb	18 12 42.2	
	comp=Z,14nm,1.0s								
KNRA	**Kununurra**	**50.34**	**266**	P			**P**	**18 11 51.0**	**0.0**
KNRA					IAmb		IAmb	18 12 48.1	
	comp=Z,44nm,2.0s								
FITZ	**Fitzroy Crossi**	**52.73**	**262**	P			**P**	**18 12 08.7**	**+0.7**
	comp=Z,1.6nm,0.4s,baz=99,slow=4.7,SNR=18								
FITZ	**Fitzroy Crossi**	**52.73**	**262**	P			**P**	**18 12 08.3**	**+0.2**
FITZ					IAmb		IAmb	18 13 15.2	
	comp=Z,8.1nm,1.4s								
SOEI	**Soe**	**56.15**	**272**	P			**P**	**18 12 33.5**	**+1.4**
SOEI					IAmb		IAmb	18 12 44.6	
	comp=Z,32nm,1.2s								
PSA00	**Pilbara Seismi**	**57.41**	**257**	P			**P**	**18 12 40.2**	**-0.2**
KSM	**Kuching**	**73.03**	**278**	P			**P**	**18 14 17.4**	**-0.2**
RSO	**Redoubt South**	**83.01**	**12**	P			**P**	**18 15 09.6**	**-0.2**
TUC	**Tucson**	**83.06**	**52**				pP	18 17 27.2	+1.8

IDC 21 18:09:31.1±1.7, **2°.53S**×**138°.37E**, **h0**km, **mb3.2**/2, **mb1 3.5**/4, **mb1mx3.2**/38, **mbtmp3.3**/4, **ML3.2**/2, **Error ellipse: s-maj=31.3km s-min=27.4km az=159.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.33**	**90**	Pn			Pn	18 10 10.9	0.0
	2.3nm,0.3s,baz=271,slow=12,SNR=5.9								
JAY				Sn			Sb	18 10 42.4	-1.2
	1.5nm,0.3s,baz=142,slow=19,SNR=2.0								
WRA	**Warramunga Arr**	**17.75**	**193**	P			Pn	18 13 39.8	-0.1
	0.1nm,0.3s,baz=16,slow=12,SNR=4.8								
ASAR	**Alice Springs**	**21.45**	**191**	P			P	18 14 20.9	-0.4
	0.7nm,0.7s,baz=26,slow=9.5,SNR=8.8								
MKAR	**Makanchi Array**	**69.44**	**322**	P			P	18 20 41.4	+0.2
	0.2nm,0.6s,baz=91,slow=12,SNR=2.3								

*BJI **21** 18:14:23.3±0.0, 3°.34S×128°.59E, h39km, mB5.1/56, mb5.0/71, Ms4.7/63, Ms7 4.4/59*
*MOS **21** 18:14:24.9±1.0, 2°.86S×128°.03E, h17km, mb5.3/25, MS4.5/6, Error ellipse: s-maj=7.9km s-min=4.6km az=113.2*
*KLM **21** 18:14:24.0, 3°.09S×128°.38E, h10km, mb5.6*
*IDC **21** 18:14:26.2±1.6, 2°.90S×127°.95E, h15km±9km, mb4.9/36, mb1 4.9/41, mb1mx4.9/51, mbtmp5.0/41, ML5.1/6, MS4.5/30, Ms1 4.5/30, ms1mx4.4/40, Error ellipse: s-maj=12.3km s-min=8.0km az=63.0*
*NEIC **21** 18:14:27.3±2.0, 2°.91S±0°.06×127°.98E±0°.06, h22km±3km, mb5.3/149, Error ellipse: s-maj=8.2km s-min=8.1km az=78.0*
*GCMT **21** 18:14:28.3±0.3, 2°.63S±0°.02×128°.09E±0°.03, h16km±1km, MW5.3/63, Moment Tensor Solution. s46,c49; s63,c71; Duration: 1s1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.98±.06; $M_{\theta\theta}$-0.75±.04; $M_{\phi\phi}$-0.23±.04; $M_{r\theta}$-0.29±.10; $M_{\theta\phi}$0.37±.02; $M_{\phi r}$0.72±.13; Best double couple: $M_0$1.22600×10^{17} NP1:ϕ_s102.00000°, δ31.00000°, λ56.00000°. NP2:ϕ_s320.00000°, δ64.00000°, λ109.00000°. Principal axes: T 1.3240, Plg66.0000°, Azm263.0000°; N -0.1980, Plg17.0000°, Azm131.0000°; P -1.1270, Plg17.0000°, Azm36.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **21** 18:14:29.8±0.2, 3°.3S×127°.8E±°, h39km±2km, M5.2/94, mB5.7/72, mb5.5/94, MLv5.5/18, Mw(mB)5.2/72, Mwp5.3/13*
ISC 21 18:14:29.5±0.2, **2°.93S**±0°.03×**128°.05E**±0°.03, **h39**km±2km, **n610**, σ1**39**/666, **mb5.2**/152, **MS4.5**/47, **30C-19D, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.77**	**169**	P			**Pn**	**18 14 43.6**	**-0.3**
AAI				S			**Sn**	**18 14 56.7**	**+2.4**
MSAI	**Masohi**	**0.98**	**115**	P			**Pn**	**18 14 48.1**	**+1.4**
NLAI	**Namlea**	**0.99**	**252**	P			**Pn**	**18 14 46.9**	**0.0**
NLAI				S			**Sn**	**18 15 02.5**	**+2.7**
LBMI	**Labuha**	**2.34**	**347**	P			**Pn**	**18 15 04.1**	**-1.4**
LBMI				S			**Sn**	**18 15 32.0**	**-1.0**
BNDI	**Bandanaira**	**2.44**	**131**	P			**Pn**	**18 15 09.2**	**+2.3**
TNTI	**Ternate**	**3.74**	**350**	P			**Pn**	**18 15 24.0**	**-0.7**
TNTI	**Ternate**	**3.74**	**350**				**Pn**	**18 15 24.2**	**-0.5**
SIJI	**Sorong**	**3.81**	**58**	Pn			**Pn**	**18 15 25.3**	**-0.5**
	246nm,0.3s,baz=243,slow=8.9,SNR=967								
SIJI					Sn		**Sn**	**18 16 10.8**	**+1.3**
	172nm,0.3s,baz=76,slow=21,SNR=37								
SIJI					LR		LR	18 17 32.3	
	comp=Z,13µm,20.0s,baz=319,slow=48								
FAKI	**Fak Fak**	**4.20**	**90**	P			**Pn**	**18 15 30.8**	**-0.3**
FAKI	**Fak Fak**	**4.20**	**90**				**Pn**	**18 15 31.1**	**+0.1**
KMSI	**Cibinong**	**5.35**	**311**	P			**Pn**	**18 15 45.2**	**-1.7**
	26nm615nm13µm1µm,0.7s								
LUWI	**Luwuk**	**5.59**	**289**	P			**Pn**	**18 15 49.3**	**-0.9**
	9.4nm17µm2µm,0.8s								
LUWI	**Luwuk**	**5.59**	**289**				**Pn**	**18 15 49.3**	**-0.9**
SAUI	**Saumlaki**	**5.98**	**147**	P			Pn	18 16 00.3	+4.8
	7.7nm8µm22µm2µm,0.9s								
SAUI	**Saumlaki**	**5.98**	**147**				**Pn**	**18 15 58.1**	**+2.6**
RKPI	**Ransiki, Papua**	**6.29**	**77**	P			**Pn**	**18 15 59.4**	**-0.4**
	25nm15µm2µm,0.7s								
SOEI	**Soe**	**7.75**	**209**	P			Pn	18 16 25.6	+5.6
	5.4nm10µm15µm1µm,0.8s								
SOEI	**Soe**	**7.75**	**209**				**Pn**	**18 16 21.8**	**+1.8**
BNSI	**Bone**	**8.06**	**259**	P			**Pn**	**18 16 26.6**	**+2.5**
	3µm206nm,0.9s								
MMRI	**Maumere**	**8.09**	**225**	P			**Pn**	**18 16 28.4**	**+3.8**
	7µm5µm391nm,1.0s								
MMRI	**Maumere**	**8.09**	**225**				**Pn**	**18 16 25.6**	**+1.0**
TTSI	**Tana Toraja**	**8.21**	**269**	P			**Pn**	**18 16 28.6**	**+2.4**
	4µm3µm281nm,0.9s								
BKSI	**Bulukumba**	**8.25**	**253**	P			**Pn**	**18 16 29.3**	**+2.6**
	8µm565nm,0.9s								
SRPI	**Serui, Papua**	**8.26**	**83**	P			**Pn**	**18 16 26.0**	**-0.8**
	19nm1.4nm,0.5s								
SPSI	**Sidrap Palu**	**8.32**	**263**	P			**Pn**	**18 16 30.5**	**+2.8**
	5µm338nm,0.6s								
BATI	**Baumata**	**8.44**	**211**	Pn			Pn	18 16 34.0	+4.6
	26nm,0.3s,baz=84,slow=0.8,SNR=52								
BATI					LR		LR	18 19 54.9	
	comp=Z,8µm,19.4s,baz=22,slow=39								
BATI	**Baumata**	**8.44**	**211**	P			Pn	18 16 34.5	+5.1
	3µm4µm255nm,0.7s								
KAPI	**Kappang**	**8.53**	**256**	Pn			**Pn**	**18 16 32.6**	**+2.0**
	8.1nm,0.3s,baz=75,slow=7.7,SNR=44								
KAPI					LR		LR	18 20 17.6	
	comp=Z,8µm,18.4s,baz=70,slow=42								
EDFI	**Ende, Flores**	**8.57**	**227**	P			Pn	**18 16 34.9**	**+3.7**
	5µm3µm177nm,0.7s								
MPSI	**Mapaga**	**8.77**	**292**	P			Pn	18 16 33.6	-0.2
	4µm288nm,0.7s								
DDMP	**Don Marcelino,**	**9.27**	**345**	*eP*			**Pn**	**18 16 38.5**	**-2.2**
SKMP	**Bagumbayan, Su**	**10.01**	**340**	*eP*			**Pn**	**18 16 49.6**	**-1.3**
DAV	**Davao City (W)**	**10.23**	**346**	Pn			**Pn**	**18 16 51.9**	**-2.0**
	13nm,0.3s,baz=238,slow=19,SNR=1.1								
DAV					LR		LR	18 21 04.1	
	comp=Z,1µm,20.5s,baz=56,slow=39								
DAV	**Davao City (W)**	**10.23**	**346**	*eP*			**Pn**	**18 16 56.0**	**+2.1**
KCP	**Kidapawan**	**10.30**	**343**	*iP*			**Pn**	**18 16 54.4**	**-0.5**
MTN	**Manton Dam**	**10.32**	**163**	P			**Pn**	**18 16 57.4**	**+2.4**
	baz=10,SNR=177								
MTN	**Manton Dam**	**10.32**	**163**				**Pn**	**18 16 57.2**	**+2.1**
BASI	**Baing, Sumba**	**10.37**	**225**	P			**Pn**	**18 16 58.8**	**+3.1**
	4µm6µm514nm,1.4s								
KDU	**Kakadu**	**10.64**	**156**	P			**Pn**	**18 17 00.7**	**+1.2**
	baz=10,SNR=168								
SMPI	**Sarmi**	**10.70**	**85**	P			**Pn**	**18 16 59.9**	**-0.4**
	3µm170nm,0.9s								
CTBH	**Cotabato--PC H**	**10.77**	**339**	*eP*			**Pn**	**18 16 58.9**	**-2.4**
WBSI	**Waikabubak, Su**	**10.88**	**232**	P			**Pn**	**18 17 05.3**	**+2.5**
	3µm398nm,1.1s								
SMKI	**Samarinda**	**11.11**	**283**	P			**Pn**	**18 17 07.6**	**+1.7**
	10µm589nm,1.1s								
BKB	**Balikpapan**	**11.26**	**278**	P			**Pn**	**18 17 10.2**	**+2.2**
	9µm1µm,0.9s								
BKB	**Balikpapan**	**11.26**	**278**				**Pn**	**18 17 08.2**	**+0.1**
PAGZ	**Pagadian**	**11.67**	**337**	*eP*			**Pn**	**18 17 10.7**	**-2.9**
PLAI	**Plampang**	**11.77**	**240**	P			**Pn**	**18 17 18.4**	**+3.4**
	4µm312nm,0.8s								
KBKI	**Kotabaru**	**11.87**	**268**	P			**Pn**	**18 17 18.1**	**+1.8**
	423nm56nm,1.0s								
GENI	**Genyem**	**12.11**	**89**	P			**Pn**	**18 17 20.1**	**+0.4**
	4µm9µm889nm,1.2s								
JAY	**Jayapura**	**12.65**	**88**	Pn			**Pn**	**18 17 26.3**	**-0.8**
	2.4nm,0.3s,baz=259,slow=8.5,SNR=23								
JAY	**Jayapura**	**12.65**	**88**	P			**Pn**	**18 17 25.9**	**-1.2**
	1µm70nm,1.1s								
KNRA	**Kununurra**	**12.69**	**177**	P			**Pn**	**18 17 29.3**	**+1.8**
	baz=13,SNR=271								
KNRA	**Kununurra**	**12.69**	**177**				**Pn**	**18 17 28.6**	**+1.1**
DNP	**Denpasar**	**13.98**	**245**	P			**Pn**	**18 17 47.0**	**+1.8**
	331nm,0.9s								
OCLP	**Ormoc**	**14.30**	**346**	*eP*			**Pn**	**18 17 49.0**	**-0.5**
GUIM	**Jordan**	**14.52**	**338**	*eP*			**Pn**	**18 17 49.0**	**-3.5**
KMMI	**Kalianget**	**14.61**	**253**	P			**Pn**	**18 18 01.6**	**+2.2**
KKM	**Kota Kinabalu**	**14.80**	**307**	P			**Pn**	**18 17 56.2**	**-0.1**
JAGI	**Jajag, Banyuwa**	**14.88**	**248**	P			**Pn**	**18 17 57.8**	**+0.5**
	5µm4µm301nm,1.2s								
JAGI	**Jajag, Banyuwa**	**14.88**	**248**	P			**Pn**	**18 17 58.1**	**+0.8**
FITZ	**Fitzroy Crossi**	**15.26**	**189**	P			**Pn**	**18 18 02.0**	**-0.3**
	baz=15,SNR=219								
FITZ	**Fitzroy Crossi**	**15.26**	**189**	Pn			**Pn**	**18 18 01.8**	**-0.6**
	1.0nm,0.3s,baz=17,slow=10,SNR=73								
FITZ					LR		LR	18 24 17.5	
	comp=Z,3µm,21.8s,baz=16,slow=39								
FITZ	**Fitzroy Crossi**	**15.26**	**189**	P			**Pn**	**18 18 01.1**	**-1.2**
FITZ					IAmb		IAmb	18 18 09.3	
	comp=Z,87nm,0.7s								
RCP	**Roxas**	**15.33**	**340**	*eP*			**Pn**	**18 18 00.5**	**-2.7**
CNP	**Catarman**	**15.70**	**348**	*eP*			**Pn**	**18 18 05.6**	**-2.5**
GRJI	**Gresik**	**16.00**	**255**	P			**Pn**	**18 18 14.0**	**+2.1**
	comp=Z,3µmcomp=Z,508nm,0.8s								
SBUM	**Sibu**	**16.70**	**289**	P			**Pn**	**18 18 21.5**	**+0.8**
SBUM	**Sibu**	**16.70**	**289**	P			**P**	**18 18 23.0**	**+0.3**
SJMP	**San Jose**	**16.77**	**336**	*eP*			**Pn**	**18 18 18.3**	**-3.2**
PVCP	**Virac**	**16.86**	**347**	*eP*			**Pn**	**18 18 17.9**	**-4.9**
BOAC	**Boac**	**17.40**	**339**	*eP*			**Pn**	**18 18 28.8**	**-0.8**
WOJI	**Wonogiri, Jawa**	**17.73**	**253**	P			**Pn**	**18 18 34.0**	**+0.5**
	comp=Z,3µmcomp=Z,6µmcomp=Z,423nm,1.2s								
PGP	**Puerto Galera**	**17.77**	**337**	*eP*			**Pn**	**18 18 31.8**	**-2.4**
WB0	**Warramunga Arr**	**17.85**	**160**	P			**Pn**	**18 18 33.6**	**-1.4**
WB0					IAmb		IAmb	18 18 35.5	
	comp=Z,175nm,0.7s								
WB5	**Warramunga Arr**	**17.94**	**160**	P			**Pn**	**18 18 35.3**	**-0.9**
	baz=18								
WRAB	**Tennant Creek**	**17.99**	**160**	*de*			**Pn**	**18 18 36.0**	**-0.7**
WRAB					pmax		pmax		
	comp=Z,208nm,1.0s								
WRAB	**Tennant Creek**	**17.99**	**160**	P			**Pn**	**18 18 36.0**	**-0.7**
WRAB					IAmb		IAmb	18 18 40.1	
	comp=Z,150nm,0.7s								
WRA	**Warramunga Arr**	**17.99**	**160**	P			**Pn**	**18 18 35.6**	**-1.2**
	comp=Z,18nm,0.3s,baz=342,slow=12,SNR=252								
WRA					S		**Sn**	**18 21 55.4**	**-1.2**
	comp=Z,2.6nm,0.3s,baz=342,slow=17,SNR=3.1								
WRA					LR		LR	18 26 08.6	
	comp=Z,3µm,18.5s,baz=340,slow=39								
WRA					ScP		**ScP**	**18 26 44.2**	**+0.9**
	baz=339,slow=2.7,SNR=4.8								
WB2	**Warramunga Arr**	**18.00**	**160**	P			**Pn**	**18 18 35.9**	**-0.9**
WB2					IAmb		IAmb	18 18 51.0	
	comp=Z,260nm,1.1s								
SMRI	**Semarang**	**18.01**	**256**	P			**P**	**18 18 38.7**	**+1.5**
	comp=Z,10µmcomp=Z,626nm,1.1s								
SMRI	**Semarang**	**18.01**	**256**	P			**Pn**	**18 18 38.1**	**+1.1**
WR0	**Warramunga Arr**	**18.08**	**160**	P			**Pn**	**18 18 36.5**	**-1.3**
WR0					IAmb		IAmb	18 18 38.1	
	comp=Z,114nm,0.6s								
LQP	**Lukban**	**18.12**	**339**	*eP*			**Pn**	**18 18 35.8**	**-2.7**
UGM	**Wanagama**	**18.13

	comp=Z,71nm,1.0s								
MYKOM	**Kota Tinggi**	**24.64**	**281**	P	**P**	**18**	**19**	**48.0**	**+1.3**
MNAI	**Manna**	**25.08**	**266**	P	**P**	**18**	**19**	**50.2**	**-0.5**
MEEK	**Meekatharra**	**25.25**	**200**	P	**P**	**18**	**19**	**50.3**	**-1.8**
	baz=25,SNR=159								
MASI	**Maura Aman, Be**	**25.77**	**269**	P	**P**	**18**	**19**	**57.9**	**+0.9**
	comp=Z,4µmcomp=Z,386nm,1.1s								
TWG	**Pinlang**	**26.48**	**345**	P	**P**	**18**	**20**	**01.9**	**-1.3**
TWG				IAmb	IAmb	18	20	27.3	
	comp=Z,115nm,1.0s								
SDSI	**Sungai Dareh**	**26.67**	**274**	P	**P**	**18**	**20**	**05.7**	**+0.5**
	comp=Z,1µmcomp=Z,95nm,1.3s								
YULB	**Yu-li**	**26.97**	**346**	P	**P**	**18**	**20**	**07.8**	**+0.1**
TPUB	**Ta-pu**	**27.05**	**345**	P	**P**	**18**	**20**	**06.3**	**-2.1**
TPUB				IAmb	IAmb	18	20	17.1	
	comp=Z,108nm,1.4s								
BKNI	**Bangkinang**	**27.19**	**276**	P	**P**	**18**	**20**	**10.8**	**+1.0**
	comp=Z,1µmcomp=Z,171nm,1.0s								
BKNI	**Bangkinang**	**27.19**	**276**	P	**P**	**18**	**20**	**08.7**	**-1.1**
SSLB	**Suanglung**	**27.44**	**346**	P	**P**	**18**	**20**	**11.0**	**-0.9**
PDSI	**Padang**	**27.64**	**274**	P	**P**	**18**	**20**	**13.6**	**-0.3**
	comp=Z,1µmcomp=Z,103nm,1.0s								
YOJ	**Yonaguni jima**	**27.66**	**350**	P	**P**	**18**	**20**	**11.6**	**-2.2**
YOJ				pmax	pmax				
	comp=Z,74nm,1.1s								
YOJ	**Yonaguni jima**	**27.66**	**350**	P	**P**	**18**	**20**	**11.6**	**-2.2**
YOJ				IAmb	IAmb	18	20	26.5	
	comp=Z,74nm,1.1s								
FORT	**Forrest**	**27.70**	**180**	P	**P**	**18**	**20**	**12.4**	**-1.7**
	baz=28,SNR=26								
FORT	**Forrest**	**27.70**	**180**	P	**P**	**18**	**20**	**12.0**	**-2.2**
IPM	**Ipoh**	**27.98**	**285**	P	**P**	**18**	**20**	**16.3**	**-0.6**
IPM				IAmb	IAmb	18	20	22.8	
	comp=Z,69nm,1.3s								
IPM	**Ipoh**	**27.98**	**285**	P	**P**	**18**	**20**	**18.0**	**+1.1**
QLP	**Quilpie**	**28.18**	**148**	P	**P**	**18**	**20**	**17.9**	**-0.6**
	baz=28,SNR=5.2								
YHNB	**Yeheng**	**28.19**	**347**	P	**P**	**18**	**20**	**18.1**	**-0.5**
YHNB				IAmb	IAmb	18	21	13.8	
	comp=Z,181nm,1.8s								
QIZ	**Qiongzhong**	**28.23**	**321**	P	**P**	**18**	**20**	**19.5**	**+0.5**
QIZ				S	**S**	**18**	**25**	**04.3**	**+1.9**
QIZ				LR	LR				
	comp=Z,570nm,16.5s								
QIZ				LR	LR				
	comp=Z,290nm,9.7s								
QIZ				LR	LR				
	comp=Z,460nm,13.6s								
MORW	**Morawa**	**28.39**	**203**	P	**P**	**18**	**20**	**18.3**	**-2.0**
	baz=28,SNR=17								
MORW	**Morawa**	**28.39**	**203**	P	**P**	**18**	**20**	**19.9**	**-0.4**
HKPS	**Hong Kong Po S**	**28.50**	**332**	P	**P**	**18**	**20**	**20.2**	**-1.2**
KULM	**Kulim**	**28.56**	**287**	P	**P**	**18**	**20**	**21.2**	**-0.8**
KULM	**Kulim**	**28.56**	**287**	P	**P**	**18**	**20**	**23.0**	**+1.0**
MNSI	**Mandailing Nat**	**28.69**	**277**	P	**P**	**18**	**20**	**23.2**	**0.0**
	comp=Z,2µmcomp=Z,178nm,0.8s								
KNMB	**Chin-men Tao**	**28.80**	**342**	P	**P**	**18**	**20**	**21.2**	**-2.7**
KNMB				IAmb	IAmb	18	21	09.9	
	comp=Z,47nm,0.8s								
KMBL	**Kambalda**	**28.88**	**191**	P	**P**	**18**	**20**	**23.0**	**-1.6**
	baz=29,SNR=27								
SISI	**Saibi**	**28.98**	**273**	P	**P**	**18**	**20**	**26.0**	**+0.2**
	comp=Z,130nm,1.0s								
QZH	**Quanzhou**	**29.18**	**342**	*e*P	**P**	**18**	**20**	**30.9**	**+3.5**
QZH				S	**S**	**18**	**25**	**18.4**	**+1.1**
QZH				LR	LR				
	comp=Z,360nm,18.5s								
QZH				LR	LR				
	comp=Z,330nm,14.7s								
QZH				LR	LR				
	comp=Z,450nm,18.0s								
BLDU	**Balliduu**	**29.55**	**200**	P	**P**	**18**	**20**	**28.7**	**-1.9**
	baz=30,SNR=37								
JOW	**Kunigami**	**29.59**	**0**	P	**P**	**18**	**20**	**30.9**	**-0.1**
	comp=Z,5.3nm,1.0s,baz=175,slow=12,SNR=9.1								
JOW	**Kunigami**	**29.59**	**0**	P	**P**	**18**	**20**	**29.7**	**-1.3**
JOW				IAmb	IAmb	18	20	31.9	
	comp=Z,53nm,1.2s								
RPSI	**Rantau Prapat**	**29.64**	**281**	P	**P**	**18**	**20**	**31.0**	**-0.6**
RPSI				IAmb	IAmb	18	20	48.3	
	comp=Z,44nm,0.9s								
PSI	**Prapat**	**29.66**	**281**	P	**P**	**18**	**20**	**31.4**	**-0.6**
	comp=Z,28nm,0.7s,baz=4.6,slow=0.3,SNR=42								
PSI				LR	LR	18	33	59.6	
	comp=Z,1µm,20.1s,baz=90,slow=40								
PSI	**Prapat**	**29.66**	**281**	P	**P**	**18**	**20**	**31.0**	**-1.0**
PSI				pmax	pmax				
	comp=Z,44nm,0.9s								
KLBR	**Kellerberrin**	**30.12**	**198**	P	**P**	**18**	**20**	**33.8**	**-1.8**
	baz=30,SNR=56								
BBOO	**Buckleboo**	**30.66**	**167**	P	**P**	**18**	**20**	**39.0**	**-1.4**
	baz=31,SNR=107								
BBOO	**Buckleboo**	**30.66**	**167**	P	**P**	**18**	**20**	**38.8**	**-1.6**
BBOO				IAmb	IAmb	18	20	40.7	
	comp=Z,48nm,0.7s								
RMQ	**Roma**	**30.71**	**142**	P	**P**	**18**	**20**	**39.7**	**-1.3**
	baz=31,SNR=7.0								
GSI	**Gunungsitoli**	**30.75**	**277**	P	**P**	**18**	**20**	**41.3**	**-0.2**
	comp=Z,414nm,0.8s								
GSI	**Gunungsitoli**	**30.75**	**277**	P	**P**	**18**	**20**	**40.1**	**-1.3**
KCSI	**Kotacane, Aceh**	**30.93**	**282**	P	**P**	**18**	**20**	**43.8**	**+0.7**
	comp=Z,23nm,0.8s								
MUN	**Mundaring**	**30.97**	**200**	P	**P**	**18**	**20**	**41.1**	**-2.1**
	baz=31,SNR=24								
EIDS	**Eidsvold**	**31.45**	**137**	P	**P**	**18**	**20**	**49.6**	**+2.1**
STKA	**Stephens Creek**	**31.50**	**158**	P	**P**	**18**	**20**	**46.8**	**-1.1**
	baz=32,SNR=81								
STKA	**Stephens Creek**	**31.50**	**158**	P	**P**	**18**	**20**	**46.9**	**-0.9**
	comp=Z,62nm,0.8s,baz=326,slow=9.2,SNR=126								
STKA				LR	LR	18	34	35.7	
	comp=Z,2µm,19.7s,baz=337,slow=38								
STKA	**Stephens Creek**	**31.50**	**158**	P	**P**	**18**	**20**	**46.5**	**-1.3**
NWAO	**Narrogin (SRO)**	**31.52**	**198**	P	**P**	**18**	**20**	**46.4**	**-1.6**
	baz=32,SNR=23								
NWAO	**Narrogin (SRO)**	**31.52**	**198**	P	**P**	**18**	**20**	**46.6**	**-1.4**
NWAO				P	**P**	**18**	**20**	**46.6**	**-1.4**
NWAO	**Narrogin (SRO)**	**31.52**	**198**	P	**P**	**18**	**20**	**46.1**	**-1.9**
NWAO				pmax	pmax				
	comp=Z,43nm,0.7s								
NWAO	**Narrogin (SRO)**	**31.52**	**198**	P	**P**	**18**	**20**	**46.1**	**-1.9**
NWAO				IAmb	IAmb	18	20	47.3	
	comp=Z,43nm,0.7s								
NWAO	**Narrogin (SRO)**	**31.52**	**198**	P	**P**	**18**	**20**	**45.7**	**-2.3**
NWAO				IAmb	IAmb	18	20	47.3	
	comp=Z,34nm,0.7s								
PATS	**Pohnpei**	**31.73**	**72**	P	**P**	**18**	**20**	**50.3**	**+0.2**
HTT	**Hallett**	**32.01**	**163**	P	**P**	**18**	**20**	**51.3**	**-1.0**
	baz=32,SNR=22								
LHMI	**Lhok Sumawe**	**32.10**	**285**	P	**P**	**18**	**20**	**52.1**	**-1.3**
MLSI	**Meulaboh, Aceh**	**32.41**	**283**	P	**P**	**18**	**20**	**56.1**	**0.0**
	comp=Z,178nm,1.0s								
JCJ	**Chichijima**	**32.82**	**24**	LR	LR	18	32	14.8	
	comp=Z,660nm,19.9s,baz=210,slow=32								
CMSA	**Cobar Meteorol**	**32.96**	**152**	P	**P**	**18**	**20**	**59.6**	**-1.1**
	baz=33,SNR=54								
PBKT	**Sadao Pong**	**33.03**	**307**	P	**P**	**18**	**21**	**01.6**	**+0.2**
PBKT				IAmb	IAmb	18	21	12.6	
	comp=Z,47nm,1.8s								
SLVN	**Son La**	**33.76**	**317**	P	**P**	**18**	**21**	**08.3**	**+0.4**
ARMA	**Armidale**	**35.29**	**143**	P	**P**	**18**	**21**	**20.2**	**-0.8**
	baz=35,SNR=26								
ARMA	**Armidale**	**35.29**	**143**	P	**P**	**18**	**21**	**20.3**	**-0.8**
ARMA				IAmb	IAmb	18	21	23.4	
	comp=Z,29nm,0.8s								
CM31	**Chiang Mai Arr**	**35.67**	**308**	P	**P**	**18**	**21**	**22.4**	**-2.0**
CMAR	**Chiang Mai Arr**	**35.67**	**308**	P	**P**	**18**	**21**	**24.6**	**+0.2**
	comp=Z,4.9nm,0.8s,baz=137,slow=7.4,SNR=42								
CMAR				PcP	**PcP**	**18**	**23**	**53.9**	**+1.5**
	comp=Z,4.9nm,0.8s,baz=162,slow=2.6,SNR=10								
CMAR				ScP	**ScP**	**18**	**27**	**39.4**	**+3.9**
	comp=Z,1.7nm,0.9s,baz=153,slow=3.0,SNR=5.0								
CMAR				LR	LR	18	38	40.8	
	comp=Z,380nm,19.7s,baz=115,slow=41								
WHN	**Wuhan**	**35.76**	**340**	⇓*i*P	**P**	**18**	**21**	**25.6**	**+0.7**
WHN				pP	**pP**	**18**	**21**	**33.6**	**-1.4**
WHN				sP	**pwP**	**18**	**21**	**37.8**	**-0.6**
WHN				S	**S**	**18**	**27**	**04.0**	**+4.5**
WHN				pmax	pmax				
	comp=Z,190nm,1.5s								
WHN				LR	LR				
	comp=Z,680nm,11.6s								
WHN				LR	LR				
	comp=Z,520nm,14.8s								
WHN				LR	LR				
	comp=Z,1µm,19.1s								
GYA	**Guiyang**	**35.79**	**326**	⇑*i*P	**P**	**18**	**21**	**26.5**	**+1.2**
GYA				pP	**sP**	18	21	37.6	-1.5
GYA				PP	**PP**	**18**	**22**	**49.5**	**+2.3**
GYA				S	**S**	**18**	**27**	**02.0**	**+1.7**
GYA				sS	sS	18	27	19.6	+0.9
GYA				pmax	pmax				
	comp=Z,30nm,0.8s								
GYA				pmax	pmax				
	comp=Z,130nm,4.8s								
GYA				LR	LR				
	comp=Z,510nm,16.0s								
GYA				LR	LR				
	comp=Z,540nm,16.3s								
GYA				LR	LR				
	comp=Z,480nm,17.0s								
NJ2	**Nanjing**	**35.87**	**347**	*e*P	**P**	**18**	**21**	**27.0**	**+1.3**
NJ2				pmax	pmax				
	comp=Z,10.0nm,0.6s								
CHTO	**Chiang Mai**	**35.87**	**308**	P	**P**	**18**	**21**	**27.5**	**+1.5**
CHTO				P	**P**	**18**	**21**	**27.5**	**+1.5**
CHTO	**Chiang Mai**	**35.87**	**308**	P	**P**	**18**	**21**	**26.6**	**+0.6**
CHTO				pmax	pmax				
	comp=Z,44nm,1.4s								
CHTO	**Chiang Mai**	**35.87**	**308**	P	**P**	**18**	**21**	**26.6**	**+0.6**
CHTO				IAmb	IAmb	18	21	38.7	
	comp=Z,44nm,1.4s								
JNU	**Nakatsue**	**35.95**	**4**	P	**P**	**18**	**21**	**25.3**	**-1.3**
	comp=Z,52nm,1.2s,baz=219,slow=3.6,SNR=6.5								
JNU				LR	LR	18	37	09.1	
	comp=Z,773nm,18.6s,baz=166,slow=38								
JNU	**Nakatsue**	**35.95**	**4**	P	**P**	**18**	**21**	**24.6**	**-1.9**
ARPS	**Mount Arapiles**	**36.00**	**161**	P	**P**	**18**	**21**	**26.5**	**-0.4**
	baz=36,SNR=48								
YNG	**Young**	**36.52**	**151**	P	**P**	**18**	**21**	**31.6**	**+0.2**
	baz=36,SNR=25								
MGCD	**Mangrove Creek**	**37.06**	**147**	P	**P**	**18**	**21**	**36.1**	**+0.1**
	baz=37,SNR=11								
KMI	**Kunming**	**37.15**	**320**	P	**P**	**18**	**21**	**40.3**	**+3.2**
KMI				pP	pP	18	21	48.8	+1.5
KMI				sP	sP	18	21	52.8	+2.0
KMI				S	**S**	**18**	**27**	**25.1**	**+3.7**
KMI				pmax	pmax				
	comp=Z,14nm,0.6s								
KMI				pmax	pmax				
	comp=Z,55nm,3.1s								
KMI				LR	LR				
	comp=Z,380nm,21.5s								
KMI				LR	LR				
	comp=Z,340nm,22.6s								
KMI				LR	LR				
	comp=Z,450nm,17.7s								
ENH	**Enshi**	**37.47**	**333**	P	**P**	**18**	**21**	**38.7**	**-0.8**
ENH				IAmb	IAmb	18	22	02.6	
	comp=Z,40nm,1.2s								
JHJ	**Hachijo jima 2**	**37.53**	**16**	LR	LR	18	34	48.3	
	comp=Z,809nm,20.7s,baz=130,slow=33								
CAN	**Canberra**	**37.64**	**151**	P	**P**	**18**	**21**	**41.1**	**+0.2**
CAN				pmax	pmax				
	comp=Z,48nm,0.6s								
CAN	**Canberra**	**37.64**	**151**	P	**P**	**18**	**21**	**41.1**	**+0.2**
CAN				IAmb	IAmb	18	21	43.8	
	comp=Z,48nm,0.6s								
CNB	**Canberra Magne**	**37.81**	**151**	P	**P**	**18**	**21**	**42.1**	**-0.3**
	baz=38,SNR=14								
TOO	**Toolangi**	**38.02**	**157**	P	**P**	**18**	**21**	**44.7**	**+0.7**
	baz=38,SNR=40								
TOO	**Toolangi**	**38.02**	**157**	P	**P**	**18**	**21**	**45.1**	**+1.0**
TOO				pmax	pmax				
	comp=Z,38nm,0.7s								
TOO	**Toolangi**	**38.02**	**157**	P	**P**	**18**	**21**	**45.1**	**+1.0**
TOO				IAmb	IAmb	18	21	46.2	
	comp=Z,38nm,0.7s								
INU	**Inuyama**	**38.99**	**12**	P	**P**	**18**	**21**	**51.9**	**-0.3**
TJN	**Taejon**	**39.11**	**359**	*ce*P	**P**	**18**	**21**	**53.0**	**-0.1**
MILA	**Mila**	**39.12**	**153**	P	**P**	**18**	**21**	**54.8**	**+1.4**
	baz=39,SNR=5.1								
KSRS	**Korea Array**	**40.18**	**360**	P	**P**	**18**	**22**	**01.8**	**-0.2**
	comp=Z,12nm,0.9s,baz=179,slow=10,SNR=45								
KSRS				PcP	**PcP**	**18**	**24**	**06.5**	**+0.7**
	comp=Z,2.8nm,0.9s,baz=194,slow=3.8,SNR=4.7								
KSRS				ScP	**ScP**	**18**	**27**	**54.7**	**+2.6**
	comp=Z,4.7nm,1.1s,baz=181,slow=3.8,SNR=8.9								
KS19	**Wonju Array Si**	**40.22**	**360**	P	**P**	**18**	**22**	**01.4**	**-1.0**
INCN	**Inchon**	**40.23**	**358**	P	**P**	**18**	**22**	**01.5**	**-1.0**
INCN				pmax	pmax				
	comp=Z,49nm,1.4s								
INCN	**Inchon**	**40.23**	**358**	P	**P**	**18**	**22**	**01.5**	**-1.0**
TIA	**Tai'an**	**40.25**	**346**	P	**P**	**18**	**22**	**01.8**	**-0.9**
TIA				pmax	pmax				
	comp=Z,5.0nm,0.7s								
MAJO	**Matsushiro**	**40.40**	**13**	P	**P**	**18**	**22**	**02.8**	**-1.1**
MAJO				pmax	pmax				
	comp=Z,16nm,0.8s								
MAJO	**Matsushiro**	**40.40**	**13**	P	**P**	**18**	**22**	**02.8**	**-1.1**
MAT	**Matsushiro**	**40.40**	**13**	P	**P**	**18**	**22**	**01.9**	**-2.0**
MJAR	**Matsushiro Arr**	**40.40**	**13**	P	**P**	**18**	**22**	**02.1**	**-1.8**
	comp=Z,2.8nm,0.7s,baz=180,slow=8.7,SNR=11								
MJAR				ScP	**ScP**	**18**	**27**	**55.8**	**+2.8**
	comp=Z,3.4nm,1.0s,baz=180,slow=5.0,SNR=4.9								
MJAR				LR	LR	18	38	43.8	
	comp=Z,590nm,19.0s,baz=185,slow=36								
MJB9	**Matsu-Tunnel**	**40.40**	**13**	P	**P**	**18**	**22**	**02.7**	**-1.2**
CD2	**Chengdu**	**40.84**	**327**	P	**P**	**18**	**22**	**08.6**	**+0.9**
CD2				S	**S**	**18**	**28**	**19.1**	**+2.6**
CD2				sS	sS	18	28	35.1	+0.3
CD2				SS	**SS**	**18**	**31**	**21.5**	**+2.6**
CD2				ScS	**ScS**	**18**	**32**	**09.1**	**-0.9**
CD2				pmax	pmax				
	comp=Z,40nm,0.5s								
CD2				pmax	pmax				
	comp=Z,160nm,5.5s								
CD2				LR	LR				
	comp=Z,720nm,20.6s								
CD2				LR	LR				
	comp=Z,980nm,22.6s								
CD2				LR	LR				
	comp=Z,770nm,16.9s								
XAN	**Xi'an**	**40.95**	**335**	P	**P**	**18**	**22**	**08.1**	**-0.4**
XAN				S	**S**	**18**	**28**	**15.9**	**-2.1**
XAN				pmax	pmax				
	comp=Z,18nm,1.4s								
XAN				pmax	pmax				
	comp=Z,32nm,3.5s								
XAN				LR	LR				
	comp=Z,390nm,17.6s								
XAN				LR	LR				
	comp=Z,240nm,18.6s								
XAN				LR	LR				
	comp=Z,280nm,14.7s								
XAN	**Xi'an**	**40.95**	**335**	P	**P**	**18**	**22**	**07.7**	**-0.8**
XAN				pmax	pmax				
	comp=Z,38nm,1.2s								
XAN	**Xi'an**	**40.95**	**335**	P	**P**	**18**	**22**	**07.7**	**-0.8**
DZM	**Mont Dzumac**	**41.84**	**120**	*e*P	**P**	**18**	**22**	**16.6**	**+0.4**
	comp=Z,91nm,1.1s								
DZM				*e*S	**S**	**18**	**28**	**31.4**	**-0.3**
	comp=Z,641nm,27.8s								
DZM				*e*LQ	LQ	18	32	05.2	
	comp=Z,1µm,31.3s								
DZM				*e*LR	LR	18	34	01.5	
	comp=Z,674nm,25.2s								
DZM	**Mont Dzumac**	**41.84**	**120**	P	**P**	**18**	**22**	**16.5**	**+0.4**
	comp=Z,25nm,0.6s,baz=289,slow=7.8,SNR=18								
DZM	**Mont Dzumac**	**41.84**	**120**	P	**P**	**18**	**22**	**16.5**	**+0.3**
DZM				IAmb	IAmb	18	22	21.1	
	comp=Z,29nm,0.7s								
MOO	**Moorlands**	**42.91**	**159**	P	**P**	**18**	**22**	**25.6**	**+1.2**
	baz=43,SNR=4.4								
TAU	**Tasmania Unive**	**43.36**	**159**	P	**P**	**18**	**22**	**28.7**	**+0.7**
TAU				pmax	pmax				
	comp=Z,300nm,2.0s								
TAU	**Tasmania Unive**	**43.36**	**159**	P	**P**	**18**	**22**	**28.7**	**+0.7**
WAKE	**Wake Island**	**43.90**	**58**	P	**P**	**18**	**22**	**33.5**	**+0.8**
BJI	**Beijing**	**44.12**	**347**	P	**P**	**18**	**22**	**34.1**	**-0.1**
BJI				S	**S**	**18**	**29**	**02.5**	**-1.9**
BJI				pmax	pmax				
	comp=Z,14nm,1.1s								
BJI				LR	LR				
	comp=Z,220nm,20.0s								
BJI				LR	LR				
	comp=Z,340nm,18.8s								
LZH	**Lanzhou**	**44.92**	**332**	*e*P	**P**	**18**	**22**	**41.9**	**+1.1**
LZH				pP	pP	18	22	49.6	-2.0
LZH				sP	sP	18	22	55.8	+0.8
LZH				S	**S**	**18**	**29**	**16.4**	**0.0**
LZH				SS	**SS**	**18**	**32**	**37.3**	**-1.7**
LZH				pmax	pmax				
	comp=Z,33nm,1.3s								
LZH				pmax	pmax				
	comp=Z,140nm,4.3s								
LZH				LR	LR				
	comp=Z,430nm,13.2s								
LZH				LR	LR				
	comp=Z,520nm,13.2s								
LZH				LR	LR				
	comp=Z,650nm,14.6s								
SHL	**Shillong**	**45.05**	**311**	P	**P**	**18**	**22**	**42.8**	**+0.8**
SHL	**Shillong**	**45.05**	**311**	P	**P**	**18**	**22**	**42.3**	**+0.2**
SHL				pmax	pmax				
	comp=Z,42nm,0.7s								
SHL	**Shillong**	**45.05**	**311**	P	**P**	**18**	**22**	**42.3**	**+0.2**
SHL				IAmb	IAmb	18	22	43.8	
	comp=Z,42nm,0.7s								
TARA	**Tarawa**	**45.06**	**85**	P	**P**	**18**	**22**	**44.1**	**+1.9**
MSHR	**Mys Shultsa**	**45.38**	**3**	*ce*P	**P**	**18**	**22**	**44.4**	**+0.3**
MSHR				pmax	pmax				
	comp=Z,26nm,1.1s								
HHC	**Hu-ho-hao-te**	**46.10**	**343**	*e*P	**P**	**18**	**22**	**50.9**	**+0.9**
HHC				sP	pwP	18	23	03.5	-0.4
HHC				PP	**PP**	**18**	**24**	**34.1**	**-4.6**
HHC				S	**S**	**18**	**29**	**33.3**	**+0.1**
HHC				SS	**SS**	**18**	**32**	**53.3**	**-5.5**
HHC				pmax	pmax				
	comp=Z,14nm,0.9s								
HHC				pmax	pmax				
	comp=Z,130nm,5.0s								
HHC				LR	LR				
	comp=Z,280nm,14.1s								
HHC				LR	LR				
	comp=Z,190nm,15.1s								
HHC				LR	LR				
	comp=Z,200nm,17.9s								
USA0B	**Ussuriysk Arra**	**47.05**	**4**	P	**P**	**18**	**22**	**56.5**	**-0.7**
USA0B				pmax	pmax				
	comp=Z,67nm,1.5s								
USA0B	**Ussuriysk Arra**	**47.05**	**4**	P	**P**	**18**	**22**	**56.5**	**-0.7**
USA0B				IAmb	IAmb	18	22	58.6	
	comp=Z,67nm,1.5s								
USRK	**Ussuriysk Ar.**	**47.05**	**4**	P	**P**	**18**	**22**	**57.1**	**-0.1**
	comp=Z,10nm,0.5s,baz=178,slow=7.7,SNR=45								
USRK				LR	LR	18	43	05.4	
	comp=Z,704nm,19.0s,baz=167,slow=37								
MDJ	**Mudanjiang**	**47.35**	**2**	P	**P**	**18**	**22**	**59.8**	**+0.2**
MDJ				pP	pP	18	23	09.8	-0.4
MDJ				sP	sP	18	23	14.1	+0.4
MDJ				S	**S**	**18**	**29**	**54.8**	**+4.1**
MDJ				sS	sS	18	30	11.9	+2.6
MDJ				ScS	**ScS**	**18**	**32**	**50.3**	**-0.1**
MDJ				pmax	pmax				
	comp=Z,43nm,1.1s								
MDJ				pmax	pmax				
	comp=Z,290nm,3.3s								
MDJ				LR	LR				
	comp=Z,340nm,22.8s								
MDJ				LR	LR				
	comp=Z,200nm,21.4s								
MDJ				LR	LR				
	comp=Z,970nm,19.0s								
MDJ	**Mudanjiang**	**47.35**	**2**	P	**P**	**18**	**22**	**59.5**	**-0.1**
MDJ				IAmb	IAmb	18	23	01.0	
	comp=Z,44nm,1.1s								
LSA	**Lhasa**	**47.94**	**315**	P	**P**	**18**	**23**	**06.6**	**+1.6**
LSA				pmax	pmax				
	comp=Z,150nm,0.7s								
LSA	**Lhasa**	**47.94**	**315**	P	**P**	**18**	**23**	**06.8**	**+1.8**
LSA				P	**P**	**18**	**23**	**06.8**	**+1.8**
LSA	**Lhasa**	**47.94**	**315**	P	**P**	**18**	**23**	**06.4**	**+1.4**
LSA				pmax	pmax				
	comp=Z,40nm,0.8s								
LSA	**Lhasa**	**47.94**	**315**	P	**P**	**18**	**23**	**06.4**	**+1.4**
LSA				IAmb	IAmb	18	23	08.4	
	comp=Z,40nm,0.8s								
TEY	**Ternei**	**48.36**	**8**	⇑*e*P	**P**	**18**	**23**	**09.2**	**+1.8**
TEY				pmax	pmax				
	comp=Z,10.0nm,1.7s								
ASAJ	**Asahikawa**	**48.62**	**14**	LR	LR	18	42	45.3	
	comp=Z,426nm,19.9s,baz=194,slow=35								
ODAN	**Odare**	**49.15**	**310**	*e*P	**P**	**18**	**23**	**14.8**	**+0.7**
	comp=Z,78nm,0.8s								
TAPN	**Taplejung**	**49.16**	**310**	*e*P	**P**	**18**	**23**	**14.9**	**+0.7**
	comp=Z,87nm,0.9s								
GTA	**Gaotai**	**49.49**	**331**	⇑P	**P**	**18**	**23**	**16.9**	**+0.6**
GTA				pP	pP	18	23	26.6	-0.5
GTA				sP	sP	18	23	30.0	-0.5
GTA				S	**S**	**18**	**30**	**23.0**	**+1.6**
GTA				pmax	pmax				
	comp=Z,10.0nm,1.3s								
GTA				pmax	pmax				
	comp=Z,69nm,5.8s								
GTA				LR	LR				
	comp=Z,220nm,15.2s								
GTA				LR	LR				
	comp=Z,250nm,17.8s								
GTA				LR	LR				
	comp=Z,260nm,18.1s								
RAMN	**Ramite**	**49.81**	**309**	*e*P	**P**	**18**	**23**	**20.1**	**+1.0**
	comp=Z,131nm,0.7s								
JIRN	**Jiri**	**50.48**	**310**	*e*P	**P**	**18**	**23**	**25.0**	**+0.7**
	comp=Z,76nm,0.8s								
GUN	**Gumba**	**50.84**	**310**	*e*P	**P**	**18**	**23**	**27.6**	**+0.5**
	comp=Z

BHW Baring Head 56.81 139 P **P** **18 24 09.2 -0.9**
BKZ Black Stump Fm 56.85 136 P **P** **18 24 10.2 -0.3**
URZ Urewera 56.88 135 P **P** **18 24 09.9 -0.7**
URZ IAmb IAmb 18 24 13.2
comp=Z,33nm,1.0s
ZAK Zakamensk 57.21 341 *e*P **P** **18 24 12.2 -0.6**
ZAK pmax pmax
comp=Z,6.0nm,1.3s
TLY Talaya 58.23 342 *i* P **P** **18 24 20.6 +0.8**
TLY pmax pmax
comp=Z,7.0nm,0.9s
WMQ Urumqi 58.94 327 P **P** **18 24 26.8 +1.8**
WMQ sP sP 18 24 39.3 -0.4
WMQ S **S** **18 32 28.5 -0.1**
WMQ sS sS 18 32 45.9 -0.3
WMQ SS **SS** **18 36 22.6 -0.4**
WMQ pmax pmax
comp=Z,36nm,1.1s
WMQ LR LR
comp=Z,380nm,20.7s
WMQ LR LR
comp=Z,200nm,23.7s
WMQ LR LR
comp=Z,240nm,26.7s
MOY Mondy 59.05 341 *e*P **P** **18 24 26.4 +0.7**
MOY pmax pmax
comp=Z,28nm,2.7s
PEA0B Petropavlovsk- 61.13 20 *ce*P **P** **18 24 40.5 +0.7**
PEA0B Petropavlovsk- 61.13 20 P **P** **18 24 40.9 +1.1**
PETK Petropavlovsk- 61.13 20 P **P** **18 24 39.9 +0.1**
comp=Z,23nm,1.0s,baz=198,slow=4.4,SNR=28
PETK LR LR 18 51 45.2
comp=Z,67nm,20.4s,baz=228,slow=37
PET Petropavlovsk 61.39 21 *e*P **P** **18 24 42.4 +0.9**
PET *e*S **S** **18 33 00.8 +1.3**
PET *e*SS **SS** **18 37 05.8 +4.9**
PET pmax pmax
comp=Z,59nm,1.0s
PET pmax pmax
comp=Z,100nm,12.0s
PET Petropavlovsk 61.39 21 P **P** **18 24 42.6 +1.1**
BOD Bodaibo 61.60 352 *e*P **P** **18 24 42.7 -0.1**
BOD pmax pmax
comp=Z,31nm,1.3s
DGZ Jazzator, Alta 63.02 332 *i* P **P** **18 24 52.8 +0.1**
DGZ pmax pmax
comp=Z,12nm,1.1s
NIL Nilore 63.11 310 P **P** **18 24 52.7 -0.8**
NIL pmax pmax
comp=Z,13nm,0.8s
NIL Nilore 63.11 310 P **P** **18 24 52.7 -0.8**
NIL IAmb IAmb 18 25 12.9
comp=Z,13nm,0.8s
KSH Kashi 63.72 317 P **P** **18 24 58.9 +1.3**
KSH pP pP 18 25 07.3 -1.2
KSH PP **PP** **18 27 21.8 +3.7**
KSH S **S** **18 33 27.5 -2.2**
KSH ScS **ScS** **18 34 49.3 +0.9**
KSH SS **SS** **18 37 40.8 +2.6**
KSH pmax pmax
comp=Z,35nm,1.0s
KSH pmax pmax
comp=Z,73nm,4.4s
KSH LR LR
comp=Z,260nm,6.3s
KSH LR LR
comp=Z,180nm,5.0s
KSH LR LR
comp=Z,410nm,6.5s
MK31 Makanchi Array 63.77 327 *e*P **P** **18 24 57.1 -0.5**
MK31 Makanchi Array 63.77 327 P **P** **18 24 57.6 0.0**
MK31 IAmb IAmb 18 24 59.5
comp=Z,18nm,0.8s
MKAR Makanchi Array 63.77 327 P **P** **18 24 57.5 -0.1**
comp=Z,20nm,0.8s,baz=125,slow=7.3,SNR=138
MKAR PKP2bc 18 53 59.9
comp=Z,0.9nm,1.0s,baz=318,slow=1.6,SNR=5.2
MKAR Makanchi Array 63.77 327 *i* P **P** **18 24 57.7 +0.1**
MKAR pmax pmax
comp=Z,20nm,0.8s
MAKZ Makanchi 63.95 327 P **P** **18 24 58.0 -0.8**
MAKZ Makanchi 63.95 327 P **P** **18 24 58.7 -0.1**
MAKZ IAmb IAmb 18 25 00.6
comp=Z,19nm,0.9s
CASY Casey 64.42 188 P **P** **18 25 00.6 -0.9**
CASY IAmb IAmb 18 25 01.5
comp=Z,22nm,0.8s
YAK Yakutsk 64.79 1 P **P** **18 25 03.9 0.0**
comp=Z,24nm,0.7s,baz=169,slow=0.7,SNR=28
YAK Yakutsk 64.79 1 *d i*P **P** **18 25 03.9 0.0**
YAK *e**PP **pP** **18 25 12.2 -2.9**
YAK *e* 18 25 38.5
YAK *e* 18 27 29.5
YAK *e*S **S** **18 33 40.2 -1.5**
YAK *e**SS **sS** **18 34 03.2 +4.2**
YAK *e* 18 34 53.5
YAK *e*SS **SS** **18 37 55.2 +1.6**
YAK pmax pmax
comp=Z,45nm,0.8s
YAK pmax pmax
comp=N,25nm,1.0s
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK pmax pmax
comp=Z,35nm,2.6s
YAK pmax pmax
comp=N,42nm,2.3s
YAK pmax pmax
comp=E,26nm,2.2s
YAK smax smax
comp=E,130nm,3.2s
YAK smax smax
comp=N,143nm,3.8s
YAK MLR MLR
comp=Z,299nm,18.0s
YAK MLR MLR
comp=N,239nm,16.0s
YAK MLR MLR
comp=E,47nm,15.0s
YAK Yakutsk 64.79 1 P **P** **18 25 04.1 +0.2**
MA2 Magadan 64.84 13 *ce*P **P** **18 25 05.4 +1.1**
MA2 pmax pmax
comp=Z,30nm,1.2s
KZA Kyzart 65.44 319 P **P** **18 25 09.9 +0.9**
SNR=7.3
TKM2 Tokmak 2 65.62 320 P **P** **18 25 10.5 +0.4**
SNR=9.4
UCH Uchtor 65.99 319 P **P** **18 25 13.8 +1.1**
SNR=13
AAK Ala-Archa 66.20 320 P **P** **18 25 13.5 -0.1**
comp=Z,8.9nm,0.9s,baz=128,slow=3.9,SNR=21
AAK Ala-Archa 66.20 320
SNR=8.2
AAK Ala-Archa 66.20 320 *ce*P **P** **18 25 14.1 +0.5**
AAK pmax pmax
comp=Z,14nm,1.0s
AML Almayashu 66.48 319 P **P** **18 25 16.1 +0.3**
SNR=14
USP Ospenovka 66.50 320 P **P** **18 25 16.0 +0.6**
SNR=16
EKS2 Erkin-Say 66.67 319 P **P** **18 25 17.7 +1.1**
SNR=11
KBL Kabul 66.67 310 P **P** **18 25 16.6 -0.3**
KBL pmax pmax
comp=Z,11nm,0.8s
KBL Kabul 66.67 310 P **P** **18 25 16.6 -0.3**
ZAA0 Zalesovo Array 67.09 334 P **P** **18 25 18.1 -0.8**
ZALV Zalesovo Beam 67.09 334 P **P** **18 25 18.1 -0.8**
comp=Z,5.7nm,0.8s,baz=119,slow=5.4,SNR=24
ZALV PKP2bc **P'P'bc** **18 53 47.5 -0.5**
comp=Z,1.3nm,0.7s,baz=270,slow=3.0,SNR=7.5
GAR Garm 67.44 314 P **P** **18 25 20.9 -0.7**
BTK Batken 67.52 316 P **P** **18 25 21.8 -0.2**
BTK Batken 67.52 316 P **P** **18 25 21.8 -0.2**
KURBB Kurchatov Arra 68.04 329 P **P** **18 25 24.9 -0.1**
comp=Z,27nm,0.8s,baz=130,slow=5.6,SNR=173
KURBB Kurchatov Arra 68.04 329 P **P** **18 25 23.8 -1.1**
KURK Kurchatov 68.05 329 *ce*P **P** **18 25 25.1 +0.1**
KURK pmax pmax
comp=Z,70nm,1.0s
KURK Kurchatov 68.05 329 P **P** **18 25 24.9 -0.1**
CHGR Chuyangaron 68.13 314 P **P** **18 25 25.4 -0.5**
CHGR IAmb IAmb 18 25 42.4
comp=Z,22nm,0.8s
SEY Seymchan 68.21 12 *i* P **P** **18 25 25.8 0.0**

KK31 Karatay Array 69.02 319 P **P** **18 25 31.0 -0.3**
KK31 pmax pmax
comp=Z,21nm,1.2s
KK31 Karatay Array 69.02 319 P **P** **18 25 30.9 -0.3**
KK31 IAmb IAmb 18 25 41.3
comp=Z,21nm,1.2s
KKAR Karatay Array 69.02 319 P **P** **18 25 31.0 -0.3**
KKAR pmax pmax
comp=Z,21nm,1.2s
KKAR Karatay Array 69.02 319 P **P** **18 25 30.9 -0.3**
KKAR IAmb IAmb 18 25 41.3
comp=Z,21nm,1.2s
WBK Wadi Bani Khal 71.93 295 P **P** **18 25 49.4 -0.1**
HRA Herat 71.94 307 P **P** **18 25 48.2 -1.3**
RAR Rarotonga 72.34 111 LR LR 18 56 36.3
comp=Z,124nm,21.4s,baz=284,slow=35
WSAR Wadi Sarin 72.36 295 P **P** **18 25 51.4 -0.6**
comp=Z,11nm,0.9s,baz=130,slow=6.7,SNR=8.9
WSAR Wadi Sarin 72.36 295 P **P** **18 25 52.0 +0.1**
SNR=5.5
MHTO MHTO 72.55 293 P **P** **18 25 52.0 -1.1**
MHTO P **P** **18 25 52.0 -1.1**
MHTO P **P** **18 25 52.1 -1.1**
MHTO P **P** **18 25 52.1 -1.1**
JMDO Jabal Madar 72.67 294 P **P** **18 25 53.1 -0.7**
JMDO P **P** **18 25 53.1 -0.7**
SMDO Samad 72.85 295 P **P** **18 25 54.9 -0.1**
SNR=8.3
SMDO P **P** **18 25 54.9 -0.1**
SNR=8.3
ATKA Atka Island 73.27 33 P **P** **18 25 57.1 +0.4**
BSY Bisya 73.56 295 P **P** **18 25 58.6 -0.5**
BSY P **P** **18 25 58.6 -0.5**
BVAR Borovoye Array 73.60 328 P **P** **18 25 58.5 -0.3**
comp=Z,14nm,0.9s,baz=131,slow=6.7,SNR=67
HOQ Hoqain 73.61 295 P **P** **18 25 59.5 +0.1**
HOQ P **P** **18 25 59.5 +0.1**
BRVK Borovoye 73.67 328 *ce*P **P** **18 25 59.1 0.0**
BRVK pmax pmax
comp=Z,23nm,1.0s
BRVK Borovoye 73.67 328 P **P** **18 25 58.6 -0.6**
BRVK IAmb IAmb 18 26 00.8
comp=Z,21nm,0.9s
ARQ Araqi 74.28 295 P **P** **18 26 03.1 -0.2**
ARQ P **P** **18 26 03.1 -0.2**
SOHO SOHO 74.41 296 P **P** **18 26 03.7 -0.4**
SOHO P **P** **18 26 03.7 -0.4**
TIXI Tiksi 74.44 0 *ce*P **P** **18 26 02.8 -0.4**
TIXI pmax pmax
comp=Z,33nm,1.3s
TIXI Tiksi 74.44 0 P **P** **18 26 02.8 -0.4**
TIXI IAmb IAmb 18 26 04.7
comp=Z,37nm,1.3s
UOSS Minazif 74.85 297 P **P** **18 26 06.1 -0.5**
HATD Hatta, Dubai 74.90 297 P **P** **18 26 06.9 +0.1**
ASHO Ashiyiah 74.94 296 P **P** **18 26 07.1 0.0**
BANOM Banah 74.95 298 P **P** **18 26 07.6 +0.4**
SOCY Socotra 75.07 283 P **P** **18 26 06.9 -1.2**
SOCY IAmb IAmb 18 26 08.1
comp=Z,30nm,0.9s
BILL Bilibino 75.64 14 *d i*P **P** **18 26 10.2 0.0**
BILL *i* 18 26 26.4
BILL pmax pmax
comp=Z,6.0nm,1.2s
BILL MLR MLR
comp=Z,317nm,18.0s
WHFO Wadi Hawf 75.98 289 P **P** **18 26 12.2 -1.1**
SNR=7.2
WHFO P **P** **18 26 12.2 -1.1**
SNR=7.2
GEYT Alibeck 76.11 310 P **P** **18 26 12.7 -0.9**
comp=Z,5.0nm,0.9s,baz=170,slow=4.2,SNR=9.6
GEYT LR LR 19 06 55.0
comp=Z,153nm,19.2s,baz=85,slow=41
GYA0B ALIBECK ARRAY 76.11 310 P **P** **18 26 14.0 +0.3**
VNDA Vanda 76.70 173 P **P** **18 26 15.1 -1.1**
comp=Z,10nm,0.9s,baz=316,slow=6.5,SNR=56
VNDA LR LR 19 00 56.5
comp=Z,467nm,18.5s,baz=338,slow=36
VNDA Vanda 76.70 173 P **P** **18 26 15.0 -1.1**
NRIK Noril'sk 77.17 346 P **P** **18 26 18.3 -0.6**
comp=Z,14nm,0.8s,baz=136,slow=5.3,SNR=22
NRIK LR LR 19 04 43.5
comp=Z,335nm,18.1s,baz=118,slow=39
MAW Mawson 78.02 201 P **P** **18 26 22.7 -1.0**
baz=78,SNR=14
MAW Mawson 78.02 201 P **P** **18 26 22.6 -1.0**
comp=Z,12nm,0.6s,baz=92,slow=5.0,SNR=32
MAW LR LR 18 57 06.3
comp=Z,305nm,21.9s,baz=70,slow=33
MAW Mawson 78.02 201 P **P** **18 26 22.5 -1.1**
AKTO Aktyubinsk 79.68 322 P **P** **18 26 31.6 -1.5**
SVE Sverdlovsk 80.30 329 *e*P **P** **18 26 36.3 0.0**
SVE pmax pmax
comp=Z,27nm,1.5s
ARU Arti 81.24 328 *d i*P **P** **18 26 41.3 0.0**
ARU S **S** **18 36 50.0 +1.2**
ARU SS **SS** **18 42 01.5 -3.4**
ARU pmax pmax
comp=Z,13nm,1.1s
ARU Arti 81.24 328 P **P** **18 26 41.0 -0.4**
PPT2 Papeete2 81.86 107 *e*S **S** **18 26 54.5 -2.4**
comp=Z,8µm,33.0s
PPT2 Papeete2 81.86 107 *e*LR LR 18 52 33.0
comp=Z,278nm,23.8s
PPT Papeete 81.86 107 LR LR 19 00 29.0
comp=Z,114nm,21.5s,baz=318,slow=34
TBI Tubuai 81.96 113 *e*LR LR 18 52 30.5
comp=Z,314nm,30.2s
DAMY Dhamar 84.59 285 P **P** **18 27 01.8 +1.8**
DAMY IAmb IAmb 18 27 02.5
comp=Z,26nm,0.9s
RDOG Red Dog Mine 85.00 21 P **P** **18 27 03.1 +2.6**
RDOG IAmb IAmb 18 27 16.2
comp=Z,22nm,1.2s
MAK Makhachkala 85.06 313 *e*P **P** **18 26 59.8 -1.6**
MAK *e* 18 37 20.8
MAK pmax pmax
comp=Z,149nm,1.3s
TTA Tatalina 86.22 26 P **P** **18 27 08.2 +1.4**
TTA Tatalina 86.22 26 P **P** **18 27 08.2 +1.4**
OHAK Old Harbor 86.32 32 P **P** **18 27 08.5 +1.2**
KIRV Kirov 86.56 329 P **P** **18 27 08.1 -0.3**
comp=Z,20nm,0.7s,baz=288,slow=4.4,SNR=8.6
SYO Syowa Base 86.73 201 ‖ *e*X **P** **18 27 06.4 -2.7**
SYO Syowa Base 86.73 201 ‖ *e*PcP **PcP** **18 27 13.0 +1.6**
SYO Syowa Base 86.73 201 ‖ *i*pP pP 18 27 17.0 -4.1
KDAK Kodiak Island 86.80 32 P **P** **18 27 10.1 +0.5**
KDAK pmax pmax
comp=Z,41nm,1.3s
KDAK Kodiak Island 86.80 32 P **P** **18 27 10.1 +0.5**
TBLG Delisi 86.93 312 P **P** **18 27 11.2 +0.5**
TBLG Delisi 86.93 312 P **P** **18 27 11.2 +0.5**
RSO Redoubt South 87.21 29 P **P** **18 27 12.2 +0.4**
ZEI Tsey 87.67 313 *e*P **P** **18 27 13.9 -0.6**
ZEI pmax pmax
comp=Z,14nm,0.9s
CNPM China Poot 87.80 30 P **P** **18 27 14.7 +0.3**
CNPM IAmb IAmb 18 27 25.3
comp=Z,30nm,1.1s
AKH Akhalkalaki 87.83 311 ‖ P **P** **18 27 17.0 +1.7**
AKH Akhalkalaki 87.83 311 P **P** **18 27 16.7 +1.5**
AKH pmax pmax
comp=Z,31nm,1.2s
AKH Akhalkalaki 87.83 311 P **P** **18 27 16.7 +1.5**
AKH IAmb IAmb 18 27 35.5
comp=Z,31nm,1.2s
BRLK Bradley Lake 88.01 30 P **P** **18 27 15.8 +0.3**
BRLK IAmb IAmb 18 27 29.8
comp=Z,28nm,1.1s
KBZ Khabaz 88.49 314 P **P** **18 27 18.1 0.0**
comp=Z,4.6nm,0.9s,baz=181,slow=3.0,SNR=6.5
KBZ Khabaz 88.49 314 *ce*P **P** **18 27 18.5 +0.4**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KTH Kantishna Hill 88.61 26 P **P** **18 27 18.1 -0.2**
BPAW Bear Paw Mtn. 88.67 26 P **P** **18 27 19.1 +0.6**
KIV Kislovodsk 88.67 314 *i* P **P** **18 27 17.8 -1.2**
KIV *i* 18 30 43.9
KIV pmax pmax
comp=Z,5.0nm,0.9s
RC01 Rabbit Creek A 88.78 29 P **P** **18 27 18.9 -0.1**
TRF Thorofare Moun 88.87 26 P **P** **18 27 19.2 -0.5**
BATM Batumi 89.19 312 ⇑ P **P** **18 27 21.2 -0.3**

BATM Batumi 89.19 312 ⇑ P **P** **18 27 21.2 -0.3**
BCA Borcka 89.23 311 ⇓ P **P** **18 27 22.4 +0.8**
GHO Glory Hole Cre 89.26 28 P **P** **18 27 21.6 +0.2**
BWN Browne 89.34 26 P **P** **18 27 21.9 +0.3**
KNK Knik Glacier 89.43 29 P **P** **18 27 22.6 +0.5**
KNK IAmb IAmb 18 27 33.9
comp=Z,23nm,0.9s
COLD Coldfoot 89.48 23 P **P** **18 27 23.2 +0.9**
RND Reindeer 89.50 27 P **P** **18 27 22.1 -0.4**
RND pmax pmax
comp=Z,14nm,1.0s
RND Reindeer 89.50 27 P **P** **18 27 22.1 -0.4**
RND IAmb IAmb 18 27 32.7
comp=Z,14nm,1.0s
MCK McKinley 89.51 26 P **P** **18 27 22.3 -0.2**
MCK pmax pmax
comp=Z,14nm,1.0s
MCK McKinley 89.51 26 P **P** **18 27 22.3 -0.2**
MCK IAmb IAmb 18 27 47.8
comp=Z,14nm,1.0s
SML Sawmill 89.54 28 P **P** **18 27 22.7 0.0**
SML IAmb IAmb 18 27 33.2
comp=Z,18nm,1.0s
TOLK Toolik Lake Re 89.93 21 P **P** **18 27 25.9 +1.5**
baz=262
TOLK Toolik Lake Re 89.93 21 P **P** **18 27 25.2 +0.8**
WRH Wood River Hil 89.97 26 P **P** **18 27 24.2 -0.3**
SCM Sheep Creek Mo 90.02 28 P **P** **18 27 24.6 -0.4**
SCM pmax pmax
comp=Z,21nm,1.1s
SCM Sheep Creek Mo 90.02 28 P **P** **18 27 24.6 -0.4**
SCM IAmb IAmb 18 27 36.3
comp=Z,21nm,1.1s
CCB Clear Creek Bu 90.11 25 P **P** **18 27 24.8 -0.4**
DHY Denali Highway 90.13 27 P **P** **18 27 26.0 +0.5**
HDA Harding Lake 90.45 26 P **P** **18 27 26.2 -0.7**
baz=264
HDA Harding Lake 90.45 26 P **P** **18 27 26.2 -0.7**
HDA IAmb IAmb 18 27 37.4
comp=Z,10nm,0.9s
IL31 90.52 25 P **P** **18 27 26.7 -0.3**
ILAR Eielson Array 90.52 25 P **P** **18 27 26.1 -1.0**
comp=Z,1.5nm,0.7s,baz=272,slow=4.3,SNR=17
ILAR PP **PP** **18 30 57.5 -4.6**
comp=Z,0.8nm,1.0s,baz=270,slow=8.0,SNR=4.4
ILAR PKKP **PKKPdf** **18 44 54.9 +1.5**
comp=Z,1.7nm,0.7s,baz=40,slow=2.1,SNR=17
ILAR LR LR 19 08 36.0
comp=Z,109nm,18.3s,baz=261,slow=36
KMBO Kilima Mbogo 90.73 269 LR LR 19 04 00.6
comp=Z,492nm,21.1s,baz=96,slow=33
KMBO Kilima Mbogo 90.73 269 P **P** **18 27 30.7 +1.1**
KMBO pmax pmax
comp=Z,23nm,1.2s
KMBO Kilima Mbogo 90.73 269 P **P** **18 27 30.6 +1.1**
KMBO IAmb IAmb 18 27 31.9
comp=Z,23nm,1.2s
PAX Paxson 90.98 27 P **P** **18 27 30.1 +0.7**
PAX pmax pmax
comp=Z,28nm,1.6s
PAX Paxson 90.98 27 P **P** **18 27 30.1 +0.7**
PAX IAmb IAmb 18 27 40.2
comp=Z,28nm,1.6s
RIDG Independent Ri 91.32 26 P **P** **18 27 30.9 0.0**
RIDG IAmb IAmb 18 27 41.2
comp=Z,12nm,1.0s
TAOE Nuku Hiva Isla 91.34 99 *e*LR LR 18 56 52.8
comp=Z,460nm,24.1s
GLB Gilahina Butte 91.66 29 P **P** **18 27 33.3 +0.8**
GLB IAmb IAmb 18 27 44.2
comp=Z,11nm,1.0s
DOT Dot Lake 91.66 26 P **P** **18 27 32.6 +0.1**
SCRK Sand Creek 91.71 26 P **P** **18 27 33.5 +0.6**
KLMR Klimovskoe 91.81 331 *e*P **P** **18 27 31.5 -1.7**
KLMR pmax pmax
comp=Z,15nm,1.2s
KLMR Klimovskoe 91.81 331 *e*P **P** **18 27 31.5 -1.7**
KLMR AMP 18 27 41.9
comp=Z,15nm,1.2s
VRDI Verde Repeater 91.82 29 P **P** **18 27 34.1 +0.6**
VRDI IAmb IAmb 18 27 49.2
comp=Z,9.1nm,1.1s
MCARA McCarthy VSAT 92.03 29 P **P** **18 27 33.9 -0.3**
MCARA IAmb IAmb 18 27 55.8
comp=Z,9.3nm,0.9s
BALM Baldy 92.35 29 P **P** **18 27 36.7 +0.8**
BALM IAmb IAmb 18 27 55.2
comp=Z,20nm,1.3s
GAZ Gaziantep 92.41 307 P **P** **18 27 36.2 -0.5**
GAZ IAmb IAmb 18 27 38.2
comp=Z,9.7nm,0.7s
ANN Anapa 92.48 315 *e*P **P** **18 27 35.4 -1.2**
ANN pmax pmax
comp=Z,55nm,1.1s
ASF Jabal al Asfar 92.51 302 P **P** **18 27 36.5 -0.7**
comp=Z,6.3nm,0.8s,baz=48,slow=2.9,SNR=8.1
YAH Yahtse 92.63 30 P **P** **18 27 38.4 +1.1**
YAH IAmb IAmb 18 29 10.8
comp=Z,19nm,1.0s
BARN Barnard Glacie 92.68 29 P **P** **18 27 38.3 +0.8**
CTGM Chitina Glacie 92.84 29 P **P** **18 27 39.5 +1.4**
EGAK Eagle 92.97 25 P **P** **18 27 39.1 +0.7**
EGAK IAmb IAmb 18 27 49.1
comp=Z,16nm,1.1s
OBN Obninsk 93.23 325 *i* P **P** **18 27 38.7 -1.1**
OBN pmax pmax
comp=Z,7.0nm,0.8s
DAWY Dawson 93.74 26 P **P** **18 27 42.7 +0.6**
DAWY IAmb IAmb 18 27 53.9
comp=Z,20nm,1.1s
APA Apatity 94.47 337 ⇓ *i*P **P** **18 27 44.2 -1.1**
APA pmax pmax
comp=Z,7.0nm,1.0s
APA MLR MLR
comp=Z,200nm,23.0s
HYT Haines Junctio 94.72 29 P **P** **18 27 47.2 +0.5**
HYT IAmb IAmb 18 27 58.7
comp=Z,12nm,1.0s
EPYK Eagle Plains 94.77 24 P **P** **18 27 47.7 +0.9**
baz=274
EPYK Eagle Plains 94.77 24 P **P** **18 27 47.2 +0.5**
BRTR Keskin Array B 95.25 309 P **P** **18 27 48.6 -1.1**
comp=Z,2.7nm,0.9s,baz=134,slow=5.3,SNR=8.6
BRTR LR LR 19 18 44.5
comp=Z,47nm,18.9s,baz=80,slow=40
INK Inuvik 95.83 22 P **P** **18 27 50.8 -0.7**
comp=Z,2.8nm,0.8s,baz=284,slow=7.2,SNR=6.8
INK PKKPbc **PKKPbc** **18 44 40.7 -2.8**
comp=Z,3.9nm,0.6s,baz=67,slow=3.5,SNR=13
INK Inuvik 95.83 22 P **P** **18 27 51.5 0.0**
INK IAmb IAmb 18 28 01.6
comp=Z,14nm,1.4s
WHY Whitehorse 96.01 29 P **P** **18 27 52.5 -0.1**
WHY IAmb IAmb 18 28 04.0
comp=Z,11nm,1.1s
ARCES ARCESS Array B 97.11 340 P **P** **18 27 56.4 -0.9**
comp=Z,5.4nm,0.9s,baz=38,slow=6.1,SNR=8.3
ARCES LR LR 19 18 34.1
comp=Z,175nm,18.5s,baz=100,slow=40
MBAR Mbarara 97.27 269 *ce*P Pdif 18 28 00.3 +0.7
MBAR pmax pmax
comp=Z,10.0nm,1.7s
A36M Sachs Harbour 97.91 18 P Pdif 18 28 01.9 +1.0
baz=285
FINES FINESS Array B 98.28 332 P **P** **18 28 01.5 -1.2**
comp=Z,1.0nm,0.7s,baz=41,slow=4.4,SNR=4.4
LSZ Lusaka 98.73 254 P **P** **18 28 04.9 -1.0**
LSZ pmax pmax
comp=Z,15nm,0.8s
LSZ Lusaka 98.73 254 P **P** **18 28 04.9 -1.0**
TOPG Topolog 98.91 315 ⇓ P **P** **18 28 05.8 -0.1**
CFR Carcaliu 99.06 315 ⇑ P **Pdif** **18 28 06.6 0.0**
CFR Carcaliu 99.06 315 ⇑ P **Pdif** **18 28 06.6 0.0**
SNAA Sanae 99.13 194 P **Pdif** **18 28 06.0 -0.4**
SNAA Sanae 99.13 194 P **Pdif** **18 28 06.2 -0.3**
SNAA pmax pmax
comp=Z,4.0nm,0.8s
SNAA Sanae 99.13 194 P **Pdif** **18 28 06.2 -0.3**
BOSA Boshof 99.80 240 P **Pdif** **18 28 09.6 -0.8**
comp=Z,4.5nm,1.0s,baz=161,slow=7.1,SNR=5.1
BOSA LR LR 19 12 12.2
comp=Z,201nm,18.3s,baz=134,slow=35
TESR Tescani 99.96 317 ⇓ P **Pdif** **18 28 10.7 +0.1**
VRI Vrincioaia 99.98 316 ⇑ P **Pdif** **18 28 11.0 +0.3**
VRI Vrincioaia 99.98 316 ⇑ P **Pdif** **18 28 11.0 +0.3**

PLOR	Plostina	100.03	316	⇑P		Pdif	18 28 11.2 +0.2
PLOR	Plostina	100.03	316	⇑P		Pdif	18 28 11.2 +0.2
BIZ	Bicaz	100.28	317	⇑P		Pdif	18 28 12.3 +0.3
MLR	Muntele Rosu	100.56	316	⇓P		Pdif	18 28 13.5 0.0
MLR	Muntele Rosu	100.56	316	⇓P		Pdif	18 28 13.5 0.0
MLR	Muntele Rosu	100.56	316			Pdif	18 28 13.0 -0.4
VNA2	Neumayer--Watz	100.72	194	P		Pdif	18 28 13.2 -0.3
	baz=135,slow=4.2						
BURAR	Bucovina Array	100.80	318	⇑P		Pdif	18 28 15.3 +0.9
BURAR	Bucovina Array	100.80	318	⇑P		Pdif	18 28 15.3 +0.9
BUR08	Bucovina Ar. S	100.81	318			Pdif	18 28 14.7 +0.2
DOPR	Dopca	100.89	316	⇑P		Pdif	18 28 15.3 +0.5
VNA3	Neumayer Olymp	101.01	193	P		Pdif	18 28 14.2 -0.6
LOT	Lotru	102.09	316	⇑P		Pdif	18 28 19.2 -1.0
UZH	Uzhgorod	102.58	319	*eP*		Pdif	18 28 23.0 +0.8
YKA	Yellowknife Ar	104.95	25	Pdiff		Pdif	18 28 33.5 +1.1
	comp=Z,0.2nm,0.6s,baz=294,slow=4.1,SNR=6.3						
YKA				PKiKP		PKiKP	18 32 46.6 -0.5
	comp=Z,0.6nm,0.8s,baz=288,slow=1.0,SNR=8.4						
YKA				PKKPbc		PKKPbc	18 44 14.2 -3.0
	comp=Z,2.2nm,0.7s,baz=109,slow=3.1,SNR=34						
NOA	NORSAR Array B	105.29	333	Pdiff		Pdif	18 28 33.1 -0.9
	comp=Z,0.7nm,0.8s,baz=69,slow=4.5,SNR=3.3						
CLL	Collm	107.75	323	*eP*		PP	18 33 14.0 +0.4
CLL				Lm		MLR	19 30 00.0
	comp=Z,200nm,18.6s						
GERES	GERESS Array B	108.06	321	PKiKP		PKiKP	18 32 53.4 -0.1
	comp=Z,0.7nm,0.7s,baz=82,slow=2.8,SNR=4.7						
PDAR	Pinedale Array	115.36	43	PKP		PKPdf	18 33 08.7 +0.9
	comp=Z,0.6nm,0.7s,baz=288,slow=0.9,SNR=5.6						
PDAR				PKKPbc		PKKPbc	18 43 41.2 -1.9
	comp=Z,0.8nm,0.7s,baz=125,slow=5.3,SNR=5.5						
PDAR				PKKPab		PKKPab	18 43 45.9 -1.7
	comp=Z,0.8nm,0.7s,baz=116,slow=6.0,SNR=8.5						
ANMO	Albuquerque	120.35	51	P		PKiKP	18 33 19.2 +1.6
	baz=290						
T25A	Trinidad	121.12	48	P		PKiKP	18 33 20.5 +1.4
	baz=292						
MNTX	Cornudas Mount	122.26	54	P		PKiKP	18 33 22.6 +1.4
	baz=289						
MNTX	Cornudas Mount	122.26	54			PKiKP	18 33 22.4 +1.2
ECSD	EROS Data Cent	123.36	38	P		PKiKP	18 33 23.5 +0.5
	baz=303						
ECSD	EROS Data Cent	123.36	38			PKiKP	18 33 23.0 0.0
F36A	Milaca	123.95	34			PKiKP	18 33 24.4 +0.3
TXAR	Lajitas Array	124.41	56	PKP		PKiKP	18 33 26.2 +0.6
	comp=Z,2.1nm,0.9s,baz=277,slow=2.1,SNR=12						
TXAR				PKKPbc		PKKPab	18 43 08.8 +0.4
	comp=Z,0.6nm,0.7s,baz=126,slow=6.6,SNR=5.4						
TOA0	Torodi Ar. Sit	126.02	284			PKPdf	18 33 28.8 +0.2
TORD	Torodi Ar. Bea	126.02	284	PKP		PKPdf	18 33 29.0 +0.4
	comp=Z,5.3nm,0.8s,baz=53,slow=2.0,SNR=26						
G40A	Rib Lake	126.14	33			PKiKP	18 33 28.7 +0.3
SCHQ	Schefferville	126.86	11	PKP		PKPdf	18 33 29.4 +0.3
	comp=Z,4.4nm,0.7s,baz=254,slow=11,SNR=4.6						
SCHQ	Schefferville	126.86	11			PKiKP	18 33 30.1 +0.5
JCT	Junction City	127.17	53	PKiKP		PKiKP	18 33 32.1 +1.1
JCT	Junction City	127.17	53	P		PKiKP	18 33 32.1 +1.1
	baz=292						
JCT	Junction City	127.17	53			PKiKP	18 33 32.1 +1.1
E47A	Iron Bridge	128.79	27	P		PKiKP	18 33 34.7 +1.0
	baz=318						
E48A	Lockeyer	129.28	27	P		PKiKP	18 33 35.6 +0.9
	baz=320						
LSQQ	Lebel-sur-Quev	129.31	21	P		PKiKP	18 33 35.2 +0.5
	baz=327						
CHGQ	Chibougamau	129.46	19	P		PKiKP	18 33 35.8 +0.8
	baz=331						
U40A	Yellville	129.74	43	P		PKiKP	18 33 35.9 -0.1
	baz=302						
U40A	Yellville	129.74	43			PKiKP	18 33 36.2 +0.3
E50A	Wahnapitae	129.95	26	P		PKiKP	18 33 37.1 +1.1
	baz=321						
E51A	G1948 Merrick	130.40	25	P		PKiKP	18 33 37.4 +0.5
	baz=323						
F51A	Arnstein	130.69	26	P		PKiKP	18 33 38.7 +1.2
	baz=322						
DBIC	Dimbokro	132.94	276	PKP		PKPdf	18 33 42.5 +0.7
	comp=Z,5.7nm,0.9s,baz=66,slow=4.4,SNR=4.6						
DBIC				SKPbc		SKPab	18 37 08.0 -0.3
	comp=Z,8.3nm,0.9s,baz=120,slow=3.0,SNR=6.2						
PLCA	Paso Flores	133.34	161	PKP		PKiKP	18 33 43.1 -0.1
	comp=Z,6.7nm,0.7s,baz=185,slow=1.8,SNR=17						
PLCA				SKPbc		SKPab	18 37 09.8 +0.6
	comp=Z,20nm,1.1s,baz=191,slow=5.1,SNR=13						
PLCA	Paso Flores	133.34	161			PKiKP	18 33 43.3 +0.1
PLCA	Paso Flores	133.34	161	*eP*		PKiKP	18 33 43.4 +0.2
E61A	Lac Etchemin	133.75	18	P		PKiKP	18 33 43.6 -0.1
	baz=334						
E62A	Clayton Lake	133.87	17	P		PKiKP	18 33 44.2 +0.2
	baz=335						
LC01	Cunco	134.50	158			PKPdf	18 33 44.9 +0.8
M55A	Ridgway	134.70	28	P		PKiKP	18 33 46.4 +0.6
	baz=321						
J58A	Remsen	134.71	24	P		PKiKP	18 33 46.2 +0.4
	baz=326						
J58A	Remsen	134.71	24			PKiKP	18 33 45.8 0.0
L56A	Greenwood	134.73	27	P		PKiKP	18 33 46.1 +0.2
	baz=323						
L56A	Greenwood	134.73	27			PKiKP	18 33 46.1 +0.2
J59A	Piesco	134.94	23	P		PKiKP	18 33 46.1 -0.1
	baz=327						
J59A	Piesco	134.94	23			PKiKP	18 33 45.8 -0.5
K58A	Earlville	135.06	25	P		PKiKP	18 33 46.5 0.0
	baz=326						
CMIG	Matias Romero	135.58	69	PKP		PKPdf	18 33 47.4 +0.8
	comp=Z,3.5nm,1.0s,baz=32,slow=3.5,SNR=4.8						
LRAL	Lakeview Retre	135.59	44			PKiKP	18 33 47.9 +0.1
SSPA	Standing Stone	135.76	28	P		PKiKP	18 33 48.0 +0.1
	baz=321						
TKL	Tuckaleechee C	136.10	38	PKP		PKPdf	18 33 47.2 +0.1
	comp=Z,4.9nm,0.9s,baz=180,slow=1.0						
BI02	San Fabin de	136.69	157			PKPdf	18 33 49.2 +0.9
APG	El Apazote	140.20	70	PKP		PKPdf	18 33 56.0 +0.5
	comp=Z,5.0nm,0.8s,baz=33,slow=16,SNR=4.3						
VA03	San Esteban	140.37	155			PKPdf	18 33 55.7 +0.5
CO03	El Pedregal	141.97	153			PKPpre	18 33 53.0
AC05	El Transito	143.85	152			PKPbc	18 33 59.5 +0.3
GO03	Copiap	144.91	151			PKPdf	18 34 03.4 0.0
MATN	Matagalpa	144.97	72			PKPdf	18 34 04.4 +0.6
PLTB	Pedras Altas	145.47	178	*eP*		PKPbc	18 34 04.6 +0.5
AC01	Pan de Azucar	145.93	149			PKPbc	18 34 06.0 +0.3
AC02	Maricunga	146.08	152			PKPab	18 34 08.0 +0.6
JTS	Las Juntas de	146.44	76	PKPbc		PKPab	18 34 08.6 +0.1
	comp=Z,10nm,0.3s,baz=16,slow=4.1,SNR=20						
JTS	Las Juntas de	146.44	76	PKP2		PKPab	18 34 08.3 -0.3
JTS	Las Juntas de	146.44	76			PKPab	18 34 08.3 -0.3
GO02	Mina Guanaco	147.25	150			PKPbc	18 34 09.4 -0.6
PB14	IPOC Station P	147.27	148			PKPbc	18 34 09.7 -0.3
PB15	IPOC Station P	148.91	148			PKPdf	18 34 12.6 +2.2
PB04	IPOC Station P	149.24	146			PKPdf	18 34 13.1 +2.2
PB06	IPOC Station P	149.26	147			PKPbc	18 34 16.1 +0.9
LVC	Limon Verde	149.70	148	PKHKP		PKPdf	18 34 14.0 +2.2
LVC	Limon Verde	149.70	148			PKPdf	18 34 14.0 +2.2
PB07	IPOC Station P	149.87	145			PKPdf	18 34 12.9 +1.0
ITAB	Concordia	150.01	180	*eP*		PKPbc	18 34 17.4 +0.7
PATCX	Punta Patache	150.42	144			PKPbc	18 34 18.2 +0.3
CPUP	Villa Florida	150.45	170	PKP		PKPdf	18 34 13.4 +1.0
	comp=Z,22nm,1.1s,baz=124,slow=1.2,SNR=36						
CPUP				PKPbc		PKPbc	18 34 18.3 +0.5
	comp=Z,40nm,0.9s,baz=186,slow=1.4,SNR=61						
CPUP				PKPab		PKPab	18 34 24.5 +0.4
	comp=Z,20nm,0.9s,baz=205,slow=3.3,SNR=14						
CPUP	Villa Florida	150.45	170			PKPbc	18 34 18.1 +0.4
TA01	Diego Aracena	150.59	143			PKiKP	18 34 19.0 0.0
PB01	IPOC Station P	150.63	145			PKiKP	18 34 19.3 +0.2
NNA	Nana	151.16	121	PKPbc		PKiKP	18 34 21.4 +1.0
	comp=Z,66nm,0.9s,baz=266,slow=5.0,SNR=23						
NNA	Nana	151.16	121	PKiKP		PKiKP	18 34 20.9 +0.5
NNA	Nana	151.16	121			PKiKP	18 34 20.9 +0.5
PSGCX	Pisagua	151.37	142			PKPbc	18 34 20.4 +0.2
PB11	IPOC Station P	151.53	143			PKPdf	18 34 14.7 +0.2
PB11				PKPbc		PKPbc	18 34 21.2 +0.5
PB08	IPOC Station P	151.53	144			PKPdf	18 34 16.1 +1.4
PB08				PKPbc		PKiKP	18 34 22.0 +0.6
ATAH	Atahualpa	151.78	111	PKPbc		PKiKP	18 34 23.1 +1.0
	comp=Z,23nm,0.8s,baz=186,slow=10,SNR=11						
GO01	Chusmiza	151.87	144			PKPdf	18 34 17.0 +1.6
GO01				PKPbc		PKiKP	18 34 22.6 +0.4
PB12	IPOC Station P	151.97	140			PKPbc	18 34 21.4 -0.2
MNMC	Minye Minye	152.04	142			PKPdf	18 34 16.9 +1.4
MNMC				PKPbc		PKiKP	18 34 23.3 +1.0
PTGB	Pitanga	152.52	180	*eP*		PKiKP	18 34 23.3 +0.4
PB16	IPOC Station P	152.70	141			PKPdf	18 34 17.9 +1.1
PB16				PKPbc		PKiKP	18 34 25.0 +0.9
LPAZ	La Paz	155.10	141	PKP		PKPdf	18 34 21.2 +0.9
	comp=Z,4.9nm,1.0s,baz=45,slow=6.2,SNR=9.5						
LPAZ				PKPab		sPKPbc	18 34 46.2 +0.3
	comp=Z,8.0nm,0.8s,baz=177,slow=3.5,SNR=8.8						
PUAC	Puerto Asis, P	155.28	95	*eP*		PKPdf	18 34 28.1 +8.2
SOTA	Rioblanco	155.36	91	*eP*		PKPab	18 34 35.6 -10
CBOC	Ciudad Bolivar	155.84	82	*eP*		PKPdf	18 34 26.7 +5.9
SJCC	San Jacinto, C	155.92	72	*eP*		PKPdf	18 34 24.4 +3.7
GUY2C	Guyana, Caldas	156.54	84	*eP*		PKPdf	18 34 26.3 +4.2
RREF	El Recreo	156.58	84	*eP*		PKPdf	18 34 34.0 +12
NORC	Norcasia	157.00	83	*eP*		PKPab	18 34 45.8 -6.7
ROSC	El Rosal	157.61	84	PKPab		PKPab	18 34 56.5 +1.0
	comp=Z,19nm,0.8s,baz=350,slow=8.0,SNR=4.0						
CHIC	Chingaza	158.21	85	*eP*		PKPdf	18 34 23.1 -1.0
BARC	Barichara	158.54	79	*eP*		PKPdf	18 34 29.9 +5.6
RUSC	La Rusia	158.73	81	*eP*		PKPdf	18 34 24.8 -0.1
PAMC	Pamplona, Colo	158.88	77	*eP*		PKPab	18 34 56.8 -4.3
SIV	San Ignacio	159.15	155	PKPab		PKPab	18 35 01.6 +0.2
	comp=Z,17nm,0.6s,baz=229,slow=7.2,SNR=13						
SDV	Santo Domingo	160.51	72	PKP		PKPdf	18 34 27.1 +0.7
	comp=Z,5.3nm,0.7s,baz=265,slow=2.0,SNR=6.4						
SDV				PKPab		PKPab	18 35 08.0 +0.2
	comp=Z,8.3nm,0.8s,baz=244,slow=2.4,SNR=4.8						
SDV	Santo Domingo	160.51	72	*eP*		PKPdf	18 34 27.2 +0.7
SDV	Santo Domingo	160.51	72			PKPdf	18 34 27.0 +0.5
BDFB	Brasilia	161.14	192	PKP		PKPdf	18 34 27.6 +0.6
	comp=Z,3.0nm,0.4s,baz=101,slow=5.3,SNR=4.0						
BDFB				PKPab		PKPab	18 35 09.3 -0.8
	comp=Z,6.7nm,0.7s,baz=163,slow=1.9,SNR=7.7						
BDFB	Brasilia	161.14	192			PKPab	18 35 09.6 -0.5
VILB	Vilhena	162.23	153	*eP*		PKPdf	18 34 29.9 +1.8
SAML	Samuel	163.74	137	PKP2		PKPab	18 35 21.5 -0.1
SAML	Samuel	163.74	137			PKPdf	18 34 30.6 +1.1
SAML						PKPab	18 35 21.5 -0.1

PRE **21** *18:36:24.5±0.7, 15.˚93S×29.˚58E, h5km, ML3.5*
LSZ **21** *18:36:38.6±0.3, 16.˚91S×29.˚07E, h10km, MD2.9*
ISC 21 18:36:20.3±2.5, 15.˚6S±0.˚1×30.˚0E±0.˚1, h10km, n14, σ1s99/21, 2D, Zambia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**1.76**	**280**	⇓	*i*	P	**Pn**	**18 36 52.2**	**+1.2**
LSZ					*i*	S	**Sb**	**18 37 14.6**	**-0.4**
LSZ	**Lusaka**	**1.76**	**280**		*e*	P	**Pb**	**18 36 52.5**	**-0.2**
LSZ					AML		AML	18 37 22.1	
	comp=Z,3µm,0.3s								
LSZ	**Lusaka**	**1.76**	**280**		*i*	P	**Pn**	**18 36 51.7**	**+0.7**
LSZ					*i*	S	**Sb**	**18 37 14.4**	**-0.6**
LSZ	**Lusaka**	**1.76**	**280**	⇓	*i*	P	**Pn**	**18 36 52.2**	**+1.2**
LSZ					*i*	S	**Sb**	**18 37 14.6**	**-0.4**
ITZ	**Itezhi-Tezhi**	**3.83**	**267**		*e*	P	**Pn**	**18 37 20.6**	**+1.2**
ITZ					*i*			18 37 20.6	
	baz=176,slow=28								
ITZ					*e*	S	**Sn**	**18 38 04.4**	**-0.2**
ITZ	**Itezhi-Tezhi**	**3.83**	**267**		*i*	P	**Pb**	**18 37 28.3**	**+0.2**
ITZ					*i*			18 37 29.0	
	baz=112,slow=11								
ITZ					*i*	S	**Sn**	**18 38 04.6**	**0.0**
MATP	**Matopo**	**5.02**	**196**		*i*	P	**Pn**	**18 37 36.8**	**+0.9**
MATP					*i*	S	**Sn**	**18 38 33.7**	**-0.4**
MATP	**Matopo**	**5.02**	**196**		*i*	P	**Pn**	**18 37 40.2**	**+4.3**
MATP					*i*	S	**Sg**	**18 39 02.1**	**+0.4**
MATP	**Matopo**	**5.02**	**196**		*i*	P	**Pn**	**18 37 36.8**	**+0.9**
MATP					*i*	S	**Sn**	**18 38 33.7**	**-0.4**
KSMZ	**Kasama**	**5.51**	**13**		*i*	P	Pn	18 37 39.9	-2.7
KSMZ					*i*	S	Sn	18 38 37.6	-8.5
KSMZ	**Kasama**	**5.51**	**13**		*i*	P	Pn	18 37 39.9	-2.7
KSMZ					*i*			18 37 40.1	
	baz=220,slow=1.7								
KSMZ					*i*	S	Sn	18 38 37.6	-8.5
KSMZ	**Kasama**	**5.51**	**13**		*i*	P	Pn	18 37 40.0	-2.7
KSMZ					*i*			18 37 40.7	
	baz=35,slow=1.1								
KSMZ					*i*	S	Sn	18 38 37.3	-8.9
MSNA	**Messina**	**6.73**	**180**		*e*	P	**Pn**	**18 38 01.7**	**+2.5**
MSNA					*e*	S	**Sn**	**18 39 12.3**	**-3.8**
MSNA					AML		AML	18 39 55.5	
	comp=Z,23nm,0.4s								
MOPA	**Mopani**	**8.01**	**171**		*e*	P	**Pn**	**18 38 18.4**	**+1.6**
MOPA					*e*	S	**Sn**	**18 39 42.7**	**-4.8**
MOPA					AML		AML	18 40 33.8	
	comp=Z,24nm,0.7s								

TAP **21** *18:46:03.6, 24.˚83N×122.˚50E, h127km±1km, ML2.6, D*
JMA **21** *18:46:03.7±0.2, 24.˚72N×122.˚44E, h132km±2km, M1.9*
ISC 21 18:46:04.6±1.8, 24.˚81N±0.˚07×122.˚46E±0.˚03, h123km±11km, n43, σ0s63/76, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.40**	**230**		*e*	P	**Pn**	**18 46 22.3**	**+0.1**
EOS1						*e*	**Sn**	**18 46 37.4**	**+1.9**
	baz=230								
JYNG	**Yonagunijimaku**	**0.57**	**129**			P	**Pn**	**18 46 23.4**	**+0.1**
JYNG						*e*	**Sn**	**18 46 38.0**	**+0.6**
TWC	**Suao**	**0.59**	**251**		*e*	P	**Pn**	**18 46 22.7**	**-0.7**
TWC						*e*	**Sn**	**18 46 37.4**	**-0.2**
	baz=249								
TIPB	**Shuangxi**	**0.60**	**286**		*e*	P	**Pn**	**18 46 23.5**	**0.0**
TIPB						*e*	**Sn**	**18 46 37.7**	**-0.1**
	baz=283								
YOJ	**Yonaguni jima**	**0.61**	**124**		*e*	P	**Pn**	**18 46 23.1**	**-0.5**
YOJ						*e*	**Sn**	**18 46 37.0**	**-0.8**
	baz=127								
YOJ	**Yonaguni jima**	**0.61**	**124**		*e*	S	**Sn**	**18 46 38.5**	**+0.6**
ENA	**Nanau**	**0.76**	**240**		*e*	P	**Pn**	**18 46 24.9**	**+0.2**
	baz=239								
ENA						*e*	**Sn**	**18 46 40.3**	**+0.5**
	baz=239								
ENTT	**Nioudou**	**0.83**	**259**		*e*	P	**Pn**	**18 46 25.6**	**+0.3**
ENTT						*e*	**Sn**	**18 46 41.6**	**+0.6**
	baz=257								
NWLT	**Wulai**	**0.87**	**268**		*e*	P	**Pn**	**18 46 25.0**	**-0.7**
NWLT						*e*	**Sn**	**18 46 41.6**	**0.0**
	baz=266								
YM01	**YM01**	**0.87**	**293**		*e*	P	**Pn**	**18 46 25.5**	**-0.2**
YM01						*e*	**Sn**	**18 46 41.4**	**-0.4**
	baz=290								
YM11	**YM11**	**0.88**	**294**		*e*	P	**Pn**	**18 46 25.6**	**-0.2**
	baz=291								
NDT	**Datong Townshi**	**0.88**	**257**		*e*	P	**Pn**	**18 46 26.4**	**+0.6**
NDT						*e*	**Sn**	**18 46 42.8**	**+1.0**
	baz=255								
YM10	**YM10**	**0.89**	**293**		*e*	P	**Pn**	**18 46 25.3**	**-0.5**
YM10						*e*	**Sn**	**18 46 41.9**	**0.0**
	baz=290								
YM04	**YM04**	**0.91**	**293**		*e*	P	**Pn**	**18 46 25.5**	**-0.5**
YM04						*e*	**Sn**	**18 46 41.3**	**-0.9**
	baz=290								
YHNB	**Yeheng**	**0.99**	**262**		*e*	P	**Pn**	**18 46 26.7**	**-0.2**
YHNB						*e*	**Sn**	**18 46 43.7**	**0.0**
	baz=261								
NACB	**Ninganchiao**	**1.01**	**231**		*e*	P	**Pn**	**18 46 26.6**	**-0.3**
NACB						*e*	**Sn**	**18 46 44.0**	**+0.1**
	baz=231								
NSK	**Sanguang**	**1.01**	**263**		*e*	P	**Pn**	**18 46 26.9**	**-0.1**
NSK						*e*	**Sn**	**18 46 43.6**	**-0.4**
	baz=261								
NNSB	**Datong**	**1.05**	**249**		*e*	P	**Pn**	**18 46 27.7**	**+0.2**
NNSB						*e*	**Sn**	**18 46 44.7**	**-0.1**
	baz=248								
NNSH	**Datong**	**1.05**	**249**		*e*	P	**Pn**	**18 46 27.6**	**+0.2**
NNSH						*e*	**Sn**	**18 46 44.5**	**-0.3**
	baz=248								
NNS	**Nan Shan**	**1.05**	**250**		*e*	P	**Pn**	**18 46 27.8**	**+0.3**
	baz=248								
NNS						*e*	**Sn**	**18 46 45.4**	**+0.5**
	baz=248								
TWD	**Chiawan**	**1.07**	**228**		*e*	P	**Pn**	**18 46 27.3**	**-0.3**
	baz=227								
ETLH	**Xiulin Townshi**	**1.07**	**236**			P	**Pn**	**18 46 27.5**	**-0.1**
ETLH						*e*	**Sn**	**18 46 44.6**	**-0.6**
	baz=236								
IRIF	**Iriomote-Funau**	**1.25**	**112**			P	**Pn**	**18 46 29.1**	**-0.3**
IRIF						S	**Sn**	**18 46 48.1**	**-0.1**
WHF	**Hehuan Shan**	**1.27**	**239**		*e*	P	**Pn**	**18 46 29.9**	**-0.2**
WHF						*e*	**Sn**	**18 46 49.3**	**-0.2**
	baz=238								
TDCB	**Techi**	**1.31**	**245**		*e*	P	**Pn**	**18 46 30.2**	**+0.1**
TDCB						*e*	**Sn**	**18 46 48.9**	**-0.8**
	baz=244								
CHGB	**Renai**	**1.39**	**238**			P	**Pn**	**18 46 31.8**	**+0.6**
	baz=237								
EGFH	**Guangfu**	**1.47**	**220**		*e*	P	**Pn**	**18 46 31.2**	**-0.7**
EGFH						*e*	**Sn**	**18 46 51.5**	**-1.2**
	baz=220								
WHP	**Taichung City**	**1.48**	**249**		*e*	P	**Pn**	**18 46 32.4**	**+0.4**
WHP						*e*	**Sn**	**18 46 52.5**	**-0.3**
	baz=248								
JKRS	**Kuro-shima**	**1.52**	**112**			P	**Pn**	**18 46 32.7**	**+0.3**
JKRS						*e*	**Sn**	**18 46 54.2**	**+0.6**
DPDB	**Guoxing**	**1.59**	**241**		*e*	P	**Pn**	**18 46 34.3**	**+1.0**
DPDB						*e*	**Sn**	**18 46 57.2**	**+1.9**
	baz=241								
JIJ	**Ishigaki jima**	**1.60**	**106**			P	**Pn**	**18 46 33.2**	**-0.1**
JIJ						S	**Sn**	**18 46 54.5**	**-0.7**
VWDT	**VWDT**	**1.60**	**229**		*e*	P	**Pn**	**18 46 33.1**	**-0.2**
	baz=229								
HGSD	**Ruisui**	**1.61**	**216**		*e*	P	**Pn**	**18 46 33.4**	**-0.2**
HGSD						*e*	**Sn**	**18 46 54.9**	**-0.7**
	baz=216								
EHY	**Hungye**	**1.66**	**219**		*e*	P	**Pn**	**18 46 33.1**	**-1.0**
	baz=218								
SMLT	**Sun Moon Lake**	**1.69**	**237**		*e*	P	**Pn**	**18 46 35.1**	**+0.5**
SMLT						*e*	**Sn**	**18 46 56.9**	**-0.6**
	baz=236								
JISG	**Ishigakijimahi**	**1.70**	**97**			P	**Pn**	**18 46 34.2**	**-0.3**
JISG						S	**Sn**	**18 46 57.8**	**+0.5**
SSLB	**Suanglung**	**1.71**	**234**		*e*	P	**Pn**	**18 46 35.7**	**+1.1**
	baz=233								
TYC	**Yuchr**	**1.71**	**239**		*e*	P	**Pn**	**18 46 35.7**	**+1.0**
TYC						*e*	**Sn**	**18 46 58.4**	**+0.7**
	baz=238								
YULB	**Yu-li**	**1.76**	**217**		*e*	P	**Pn**	**18 46 34.1**	**-1.2**
	baz=217								
TWF1	**Yuli**	**1.80**	**216**		*e*	P	**Pn**	**18 46 34.9**	**-0.8**
	baz=216								
WHYT	**Xinyi Township**	**1.84**	**233**		*e*	P	**Pn**	**18 46 36.4**	**+0.2**
WHYT						*e*	**Sn**	**18 47 01.4**	**+1.1**
	baz=233								
FULB	**Fuli**	**1.92**	**214**		*e*	P	**Pn**	**18 46 37.1**	**-0.2**
	baz=214								
JTJ	**Tarama**	**2.05**	**94**			P	**Pn**	**18 46 38.7**	**0.0**
JTJ						*e*	**Sn**	**18 47 05.4**	**+0.5**

TAP **21** *19:05:06.8, 24.˚79N×122.˚28E, h11km, ML3.1, C*
JMA **21** *19:05:07.5±0.1, 24.˚79N×122.˚30E, h42km±3km, M2.4*
ISC 21 19:05:06.6±1.0, 24.˚81N±0.˚02×122.˚31E±0.˚02, h15km±7km, n76, σ0s59/122, 1C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.31**	**212**	⇑	*i*	P	**Pg**	**19 05 13.2**	**+0.2**
EOS1					*e*	S	**Sg**	**19 05 17.9**	**+0.6**
	baz=221								
TWB1	**Santiao Chiao**	**0.35**	**304**			P	**Pb**	**19 05 14.4**	**-0.1**
TWB1						S	**Sg**	**19 05 19.1**	**+0.4**
	baz=310								
NTC	**Toucheng**	**0.44**	**276**		*e*	P	**Pg**	**19 05 15.4**	**+0.1**
NTC					*e*	S	**Sg**	**19 05 21.0**	**-0.2**
	baz=279								
TWC	**Suao**	**0.46**	**244**			P	**Pg**	**19 05 15.1**	**-0.8**
TWC					*e*	S	**Sg**	**19 05 21.9**	**-0.1**
	baz=255								
TIPB	**Shuangxi**	**0.47**	**290**	⇓	*i*	P	**Pb**	**19 05 16.5**	**-0.1**
TIPB					*e*	S	**Sg**	**19 05 21.4**	**-0.8**
	baz=294								
ILA	**Ilan**	**0.51**	**265**		*e*	S	**Sb**	**19 05 25.4**	**+0.9**
	baz=268								
NWF	**Wu-fen Shan**	**0.54**	**299**		*e*	P	**Pn**	**19 05 19.3**	**-0.6**
NWF					*e*	S	**Sb**	**19 05 27.0**	**+1.4**
	baz=294				

TAP				*e*S		**Sn**	19 05 33.6	-0.4
	baz=290							
TATO	**Taipei**	**0.76**	**283**	*e*P		**Pn**	19 05 22.9	+0.1
	baz=274							
TATO				*e*S		**Sn**	19 05 33.3	-0.8
	baz=274							
YM04	**YM04**	**0.78**	**296**	*e*P		**Pn**	19 05 23.0	-0.1
	baz=298							
YM04				*e*S		**Sb**	19 05 33.0	+0.7
	baz=298							
YM03	**YM03**	**0.79**	**298**	*e*P		**Pn**	19 05 23.2	-0.1
	baz=300							
TWY	**Chenhua**	**0.79**	**306**	*e*P		**Pn**	19 05 23.4	+0.2
	baz=308							
TWY				*e*S		**Sn**	19 05 34.0	-0.7
	baz=308							
ANP	**Anpu**	**0.81**	**298**	*e*P		**Pn**	19 05 23.3	-0.3
	baz=300							
ANP				*e*S		**Sg**	19 05 32.9	0.0
	baz=300							
PCYT	**Pengchaiyu**	**0.84**	**345**	*e*P		**Pg**	19 05 21.9	-1.1
	baz=359							
NTST	**Danshui**	**0.85**	**295**	*e*P		**Pn**	19 05 24.6	+0.5
	baz=297							
TWS1	**Kuangyinshan**	**0.86**	**290**	*e*P		**Pb**	19 05 23.8	+0.6
	baz=292							
TWS1				*e*S		**Sn**	19 05 36.7	+0.3
	baz=292							
YHNB	**Yeheng**	**0.86**	**261**	*e*P		**Pg**	19 05 22.8	-0.5
	baz=256							
YHNB				*e*S		**Sb**	19 05 34.6	0.0
	baz=256							
NSK	**Sanguang**	**0.87**	**261**	*e*P		**Pg**	19 05 23.0	-0.5
	baz=257							
NSK				*e*S		**Sg**	19 05 33.8	-1.3
	baz=257							
NACB	**Ninganchiao**	**0.91**	**226**	*e*P		**Pb**	19 05 23.4	-0.7
	baz=234							
NACB				*e*S		**Sg**	19 05 35.6	-0.5
	baz=234							
NNSB	**Datong**	**0.92**	**246**	*e*P		**Pg**	19 05 23.5	-1.0
	baz=246							
NNSB				*e*S		**Sb**	19 05 36.7	+0.2
	baz=246							
NNSH	**Datong**	**0.92**	**246**	*e*P		**Pb**	19 05 24.6	+0.2
	baz=238							
NNSH				*e*S		**Sg**	19 05 36.5	-0.1
	baz=238							
NNS	**Nan Shan**	**0.93**	**247**	*e*P		**Pg**	19 05 24.1	-0.4
	baz=238							
NNS				*e*S		**Sb**	19 05 36.9	+0.3
	baz=238							
ETLH	**Xiulin Townshi**	**0.96**	**232**	*e*P		**Pb**	19 05 24.7	-0.3
	baz=238							
ETLH				*e*S		**Sb**	19 05 36.5	-1.1
	baz=238							
TWD	**Chiawan**	**0.97**	**222**	*e*P		**Pg**	19 05 25.6	+0.2
	baz=229							
TWD				*e*S		**Sb**	19 05 37.9	0.0
	baz=229							
WHF	**Hehuan Shan**	**1.16**	**235**	*e*P		**Pb**	19 05 28.6	0.0
	baz=235							
WHF				*e*S		**Sb**	19 05 43.4	-0.2
	baz=235							
TWT	**Tachien**	**1.17**	**242**	*e*P		**Pg**	19 05 29.8	+0.6
	baz=242							
TDCB	**Techi**	**1.18**	**242**	*e*P		**Pn**	19 05 28.8	0.0
	baz=235							
TDCB				*e*S		**Sb**	19 05 43.7	-0.4
	baz=235							
NSTT	**Nanjuang**	**1.20**	**262**	*e*P		**Pg**	19 05 30.8	+1.1
	baz=263							
NSTT				*e*S		**Sg**	19 05 46.5	+1.1
	baz=263							
ESL	**Shilin**	**1.27**	**219**	*e*P		**Pg**	19 05 31.1	-0.1
	baz=224							
ESL				*e*S		**Sg**	19 05 48.2	+0.5
	baz=224							
CHGB	**Renai**	**1.27**	**234**	*e*P		**Pg**	19 05 31.1	-0.1
	baz=235							
CHGB				*e*S		**Sn**	19 05 47.0	0.0
	baz=235							
WHP	**Taichung City**	**1.35**	**247**	*e*P		**Pb**	19 05 32.1	+0.5
	baz=248							
IRIF	**Iriomote-Funau**	**1.38**	**110**	P		**Pn**	19 05 30.9	-0.4
IRIF				*e*S		**Sn**	19 05 48.3	-1.0
EGFH	**Guangfu**	**1.39**	**215**	*e*P		**Pg**	19 05 33.0	-0.4
	baz=196							
NMLH	**Miaoli**	**1.41**	**259**	*e*P		**Pg**	19 05 33.8	+0.1
	baz=260							
NMLH				*e*S		**Sg**	19 05 52.8	+0.8
	baz=260							
NSY	**Sanyi**	**1.46**	**255**	*e*P		**Pb**	19 05 33.9	+0.4
	baz=277							
TWQ1	**Liyutan**	**1.47**	**252**	*e*P		**Pg**	19 05 35.9	+1.0
	baz=253							
TWQ1				*e*S		**Sg**	19 05 54.7	+0.7
	baz=253							
DPDB	**Guoxing**	**1.48**	**239**	*e*P		**Pg**	19 05 34.9	-0.1
	baz=238							
VWDT	**VWDT**	**1.50**	**226**	*e*P		**Pg**	19 05 35.2	-0.2
	baz=232							
VWDT				*e*S		**Sb**	19 05 53.8	+0.9
	baz=232							
HGSD	**Ruisui**	**1.54**	**212**	*e*P		**Pb**	19 05 34.8	0.0
	baz=195							
EHY	**Hungye**	**1.58**	**215**	*e*P		**Pb**	19 05 35.1	-0.4
	baz=212							
SMLT	**Sun Moon Lake**	**1.58**	**235**	*e*P		**Pb**	19 05 36.3	+0.7
	baz=244							
SSLB	**Suanglung**	**1.60**	**231**	*e*P		**Pb**	19 05 35.5	-0.4
	baz=229							
TYC	**Yuchr**	**1.60**	**236**	*e*P		**Pg**	19 05 36.9	-0.5
	baz=235							
JKRS	**Kuro-shima**	**1.65**	**110**	P		**Pn**	19 05 35.3	+0.2
JKRS				*e*S		**Sn**	19 05 55.5	-0.5
YULB	**Yu-li**	**1.69**	**213**	*e*P		**Pn**	19 05 35.6	0.0
	baz=210							
TWF1	**Yuli**	**1.72**	**213**	*e*P		**Pn**	19 05 36.4	+0.4
	baz=209							
JIJ	**Ishigaki jima**	**1.73**	**105**	P		**Pn**	19 05 35.9	-0.2
WHYT	**Xinyi Township**	**1.73**	**230**	*e*P		**Pb**	19 05 39.0	+0.9
	baz=211							
WJS	**Zhushan**	**1.75**	**236**	*e*P		**Pg**	19 05 40.7	+0.6
	baz=236							
JISG	**Ishigakijimahi**	**1.84**	**97**	P		**Pn**	19 05 37.9	+0.3
FULB	**Fuli**	**1.85**	**210**	*e*P		**Pb**	19 05 39.6	-0.6
	baz=192							
CHN5	**Tsauling**	**1.92**	**231**	*e*P		**Pg**	19 05 42.9	-0.5
	baz=230							
ELDTW	**Lidau**	**2.00**	**216**	*e*P		**Pn**	19 05 41.5	+1.6
	baz=199							
CHN4	**Tsaushan**	**2.14**	**227**	*e*P		**Pb**	19 05 45.5	+0.5
	baz=207							
TPUB	**Ta-pu**	**2.15**	**226**	*e*P		**Pb**	19 05 44.4	-0.9
	baz=206							
WTP	**Ta-pu**	**2.20**	**225**	*e*P		**Pb**	19 05 46.2	+0.1
	baz=206							
TWK	**Hsinying**	**2.27**	**228**	*e*P		**Pb**	19 05 47.5	+0.3
	baz=225							
CHN1	**Nanshi**	**2.29**	**226**	*e*P		**Pb**	19 05 48.3	+0.6
	baz=224							
SLGT	**Liugui**	**2.36**	**220**	*e*P		**Pb**	19 05 48.9	0.0
	baz=201							

*IDC **21** 19:21:44.4±1.2,20°.00S×70°.61W,h0km,mb3.9/4, mb1 4.1/6,mb1mx3.9/26,mbtmp4.0/6,ML3.9/1,MS2.4/1, Ms1 2.5/1,ms1mx2.3/32,Error ellipse: s-maj=36.5km s-min=22.4km az=85.0*

*NEIC **21** 19:21:46.3±2.1,20°.20S±0°.04×70°.88W±0°.07,h19km±5km, Error ellipse: s-maj=9.2km s-min=6.0km az=94.0*

*GUC **21** 19:21:48.7±0.6,20°.15S×70°.77W,h28km±2km,ML3.7*

ISC 21 19:21:45.4±1.2,20°.15S±0°.02×70°.85W±0°.05,h19km±3km, n58,σ1s18/65,mb4.1/4,9C-6D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TA02	**Huaiquique**	**0.69**	**100**	⇓*i*P		**Pg**	**19 21 59.1**	**+0.1**
TA02				*i* S		**Sg**	**19 22 07.9**	**-0.4**
TA02				IAML			19 22 11.3	
	comp=E,12μm,0.1s							
TA01	**Diego Aracena**	**0.76**	**124**	⇓*i*P		**Pg**	**19 22 00.4**	**+0.1**
TA01				*i* S		**Sg**	**19 22 10.1**	**-0.3**
TA01				IAML			19 22 12.7	
	comp=E,7μm,0.3s							
TA01	**Diego Aracena**	**0.76**	**124**			**Pg**	**19 22 00.4**	**+0.1**
PSGC	**Pisagua**	**0.88**	**52**	⇓*i*P		**Pg**	**19 22 02.5**	**-0.1**
PSGC				*i* S		**Sg**	**19 22 13.5**	**-0.7**
PSGC				IAML			19 22 17.9	
	comp=E,3μm,0.5s							
PSGCX	**Pisagua**	**0.88**	**52**	Pn		**Pg**	**19 22 02.4**	**-0.2**
PATCX	**Punta Patache**	**0.94**	**136**			**Pb**	**19 22 03.2**	**+0.1**
PB11	**IPOC Station P**	**1.19**	**71**	⇓*i*P		**Pb**	**19 22 07.3**	**-0.1**
PB11				*i* S		**Sg**	**19 22 22.2**	**-1.9**
PB11				IAML			19 22 26.5	
	comp=E,3μm,0.6s							
PB11	**IPOC Station P**	**1.19**	**71**	Pn		**Pb**	**19 22 07.1**	**-0.4**
PB02	**IPOC Station P**	**1.47**	**143**	⇑*i*P		**Pb**	**19 22 12.0**	**-0.2**
PB02				*e*S		**Sb**	**19 22 30.8**	**+0.2**
MNMC	**Minye Minye**	**1.56**	**50**	Pn		**Pb**	**19 22 13.8**	**0.0**
PB01	**IPOC Station P**	**1.56**	**125**	⇑*i*P		**Pb**	**19 22 13.3**	**-0.4**
PB01				*i* S		**Sb**	**19 22 32.8**	**-0.3**
PB01				IAML			19 22 37.9	
	comp=E,2μm,0.3s							
PB01	**IPOC Station P**	**1.56**	**125**	Pn		**Pb**	**19 22 13.3**	**-0.4**
PB08	**IPOC Station P**	**1.60**	**90**	⇓*i*P		**Pb**	**19 22 14.0**	**-0.5**
PB08				*i* S		**Sb**	**19 22 34.2**	**-0.3**
PB08	**IPOC Station P**	**1.60**	**90**	Pn		**Pb**	**19 22 13.8**	**-0.7**
PB12	**IPOC Station P**	**1.60**	**18**	⇓*i*P		**Pb**	**19 22 14.7**	**+0.2**
PB12				*i* S		**Sb**	**19 22 34.8**	**+0.5**
PB12				IAML			19 22 42.1	
	comp=E,2μm,0.5s							
PB12	**IPOC Station P**	**1.60**	**18**			**Pb**	**19 22 14.6**	**+0.2**
GO01	**Chusmiza**	**1.63**	**73**	⇑*i*P		**Pb**	**19 22 14.8**	**-0.4**
GO01				*i* S		**Sb**	**19 22 35.2**	**-0.3**
GO01	**Chusmiza**	**1.63**	**73**	Pn		**Pb**	**19 22 14.7**	**-0.5**
PB07	**IPOC Station P**	**1.81**	**150**	⇑*i*P		**Pn**	**19 22 16.7**	**+0.9**
PB07				*i* S		**Sb**	**19 22 41.5**	**+0.9**
PB07				IAML			19 22 52.0	
	comp=E,899nm,0.4s							
PB07	**IPOC Station P**	**1.81**	**150**	Pn		**Pn**	**19 22 16.5**	**+0.7**
AP01	**Chacalluta**	**1.83**	**15**	Pn		**Pb**	**19 22 18.1**	**-0.1**
PB03	**IPOC Station P**	**2.15**	**152**	⇑*i*P		**Pn**	**19 22 21.6**	**+1.1**
PB03				*i* S		**Sb**	**19 22 48.5**	**-1.7**
PB16	**IPOC Station P**	**2.21**	**35**	⇑*i*P		**Pb**	**19 22 24.6**	**-0.3**
PB16				*i* S		**Sb**	**19 22 52.1**	**-0.1**
PB16				IAML			19 22 58.9	
	comp=N,1μm,0.5s							
PB16	**IPOC Station P**	**2.21**	**35**	Pn		**Pb**	**19 22 24.6**	**-0.4**
PB09	**IPOC Station P**	**2.23**	**138**	⇑*i*P		**Pb**	**19 22 23.7**	**-1.4**
PB09				*i* S		**Sb**	**19 22 52.4**	**-0.1**
PB09	**IPOC Station P**	**2.23**	**138**	Pn		**Pb**	**19 22 23.6**	**-1.5**
PB04	**IPOC Station P**	**2.27**	**163**	⇑*i*P		**Pn**	**19 22 22.6**	**+0.6**
PB04				*i* S		**Sb**	**19 22 52.2**	**-1.5**
PB04	**IPOC Station P**	**2.27**	**163**			**Pn**	**19 22 22.6**	**+0.6**
PB05	**IPOC Station P**	**2.76**	**167**	⇑*i*P		**Pn**	**19 22 28.9**	**+0.2**
PB05				*i* S		**Sn**	**19 23 02.1**	**+0.4**
PB05				IAML			19 23 23.4	
	comp=N,434nm,0.8s							
PB06	**IPOC Station P**	**2.81**	**155**			**Pn**	**19 22 30.1**	**+0.6**
LVC	**Limon Verde**	**3.05**	**144**	Pn		**Pn**	**19 22 35.4**	**+2.5**
	comp=N,16nm,0.3s,baz=356,slow=9.1,SNR=32							
LVC				Sn		**Sn**	**19 23 10.6**	**+1.6**
	comp=N,20nm,0.3s,baz=98,slow=21,SNR=6.9							
LVC				Lg		Lg	19 23 16.6	
	comp=N,86nm,0.3s,baz=68,slow=21,SNR=9.4							
LVC	**Limon Verde**	**3.05**	**144**			**Pn**	**19 22 34.8**	**+1.9**
PB15	**IPOC Station P**	**3.31**	**157**			**Pn**	**19 22 36.6**	**+0.3**
PB10	**IPOC Station P**	**3.36**	**175**	*e*P		**Pn**	**19 22 37.0**	**+0.1**
PB10				*i* S		**Sn**	**19 23 13.3**	**-3.0**
PB10				IAML			19 23 19.6	
	comp=N,110nm,0.5s							
PB10	**IPOC Station P**	**3.36**	**175**			**Pn**	**19 22 37.0**	**+0.1**
LPAZ	**La Paz**	**4.63**	**34**	Pn		**Pb**	**19 23 02.6**	**-3.8**
	comp=N,1.6nm,0.3s,baz=218,slow=4.7,SNR=20							
LPAZ				LR		LR	19 24 28.6	
	comp=N,46nm,21.8s,baz=289,slow=38							
LPAZ	**La Paz**	**4.63**	**34**			**Pb**	**19 23 02.3**	**-4.0**
GO02	**Mina Guanaco**	**5.13**	**167**			**Pn**	**19 23 01.8**	**+0.3**
AC01	**Pan de Azucar**	**5.98**	**178**	Pn		**Pn**	**19 23 12.3**	**-0.6**
SIV	**San Ignacio**	**10.18**	**68**	Pn		**Pn**	**19 24 10.4**	**-0.2**
H03N1	**Juan Fernandez**	**15.06**	**207**	T		T	19 40 50.4	
	baz=33,slow=72,SNR=89							
H03N2	**Juan Fernandez**	**15.07**	**207**	T		T	19 40 50.3	
	baz=33,slow=72,SNR=86							
H03N3	**Juan Fernandez**	**15.08**	**207**	T		T	19 40 49.3	
	baz=33,slow=72,SNR=73							
PLCA	**Paso Flores**	**20.52**	**179**	P		Pn	19 26 26.8	+1.9
	comp=N,1.8nm,0.7s,baz=345,slow=8.7,SNR=4.7							
PLCA	**Paso Flores**	**20.52**	**179**	P		**P**	**19 26 23.3**	**+0.7**
PLCA				IAmb		IAmb	19 26 30.2	
	comp=Z,3.6nm,0.9s							
PTGA	**Pitinga**	**22.04**	**30**	P		**P**	**19 26 38.5**	**-0.6**
	comp=Z,1.9nm,0.4s,baz=214,slow=14,SNR=5.4							
PTGA	**Pitinga**	**22.04**	**30**	P		**P**	**19 26 38.8**	**-0.2**
PTGA				IAmb		IAmb	19 26 44.2	
	comp=Z,5.1nm,1.1s							
LL01	**San Ignacio de**	**22.20**	**183**	P		**P**	**19 26 39.3**	**-1.2**
LL01				IAmb		IAmb	19 26 59.6	
	comp=Z,17nm,1.0s							
TORD	**Torodi Ar. Bea**	**78.63**	**71**	P		**P**	**19 33 45.9**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=258,slow=5.1,SNR=11							
YKA	**Yellowknife Ar**	**89.32**	**341**	P		**P**	**19 34 42.0**	**+2.1**
	comp=Z,0.6nm,0.6s,baz=132,slow=5.0,SNR=15							
H11S2	**WAKE ISLAND Hyl**	**25.89**	**279**	T		T	22 00 06.3	
	baz=101,slow=74,SNR=38							
H11S1	**WAKE ISLAND Hyl**	**25.90**	**279**	T		T	22 00 17.7	
	baz=101,slow=74,SNR=27							
H11S3	**WAKE ISLAND Hyl**	**25.91**	**279**	T		T	22 00 22.8	
	baz=101,slow=74,SNR=27							
H11N3	**WAKE ISLAND Hyl**	**25.94**	**280**	T		T	22 00 10.7	
	baz=172,slow=74,SNR=12							
H11N2	**WAKE ISLAND Hyl**	**25.96**	**280**	T		T	22 00 20.7	
	baz=102,slow=74,SNR=14							
H11N1	**WAKE ISLAND Hyl**	**25.96**	**280**	T		T	21 59 33.7	
	SNR=11							
ASAR	**Alice Springs**	**130.21**	**210**	PKP		**PKPdf**	**19 40 56.4**	**+1.4**
	comp=Z,0.5nm,1.1s,baz=130,slow=2.1,SNR=1.5							
MKAR	**Makanchi Array**	**145.56**	**33**	PKPbc		**PKPab**	**19 41 24.4**	**+1.6**
	comp=Z,1.6nm,0.7s,baz=322,slow=3.6,SNR=17							

*TAP **21** 19:28:00.0,24°.80N×122°.29E,h7km,ML2.9,C*

*JMA **21** 19:28:00.8±0.1,24°.67N×122°.26E,h0km,M2.5*

ISC 21 19:28:00.7±1.0,24°.78N±0°.02×122°.31E±0°.02,h11km±8km, n87,σ0s85/141,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EOS1	**EOS1**	**0.28**	**216**	*e*P		**Pg**	**19 28 06.6**	**+0.1**
	baz=221							
EOS1				*e*S		**Sb**	**19 28 12.9**	**+0.4**
	baz=221							
TWB1	**Santiao Chiao**	**0.37**	**308**	P		**Pg**	**19 28 07.9**	**-0.3**
	baz=307							
TWB1				*e*S		**Sg**	**19 28 12.8**	**-0.4**
	baz=307							
NTC	**Toucheng**	**0.45**	**280**	*e*S		**Sg**	**19 28 16.4**	**+1.0**
	baz=277							
TWC	**Suao**	**0.46**	**248**	P		**Pg**	**19 28 08.5**	**-1.2**
	baz=253							
TWC				*e*S		**Sg**	**19 28 16.4**	**+0.7**
	baz=253							
TIPB	**Shuangxi**	**0.48**	**294**	*e*P		**Pg**	**19 28 09.8**	**-0.4**
	baz=291							
TIPB				*e*S		**Sg**	**19 28 17.4**	**+0.8**
	baz=291							
NWF	**Wu-fen Shan**	**0.56**	**301**	P		**Pb**	**19 28 13.1**	**+0.4**
	baz=299							
WFSB	**Wu-fen Shan**	**0.56**	**301**	*e*P		**Pb**	**19 28 12.9**	**+0.3**
	baz=288							
TWE	**Neicheng**	**0.59**	**265**	P		**Pg**	**19 28 11.1**	**-1.1**
	baz=251							
TWE				S		**Sg**	**19 28 21.0**	**+0.9**
	baz=251							
ENA	**Nanau**	**0.63**	**236**	*e*P		**Pg**	**19 28 12.8**	**-0.2**
	baz=233							
ENA				*e*S		**Sg**	**19 28 20.8**	**-0.4**
	baz=233							
JYNG	**Yonagunijimaku**	**0.66**	**119**	P		**Pg**	**19 28 13.9**	**+0.4**
JYNG				*e*S		**Sb**	**19 28 23.8**	**+0.4**
TWA	**Mucha**	**0.69**	**287**	*e*P		**Pb**	**19 28 15.3**	**+0.4**
	baz=271							
TWA				*e*S		**Sb**	**19 28 24.7**	**+0.3**
	baz=271							
ENTT	**Nioudou**	**0.69**	**259**	P		**Pg**	**19 28 14.1**	**0.0**
	baz=256							
ENTT				S		**Sg**	**19 28 23.8**	**+0.5**
	baz=256							
YOJ	**Yonaguni jima**	**0.71**	**116**	*e*P		**Pb**	**19 28 14.9**	**-0.2**
	baz=117							
YOJ				*e*S		**Sn**	**19 28 26.3**	**-1.2**
	baz=117							
YOJ	**Yonaguni jima**	**0.71**	**116**	P		**Pb**	**19 28 15.2**	**+0.1**
YOJ				S		**Sb**	**19 28 24.8**	**0.0**
NWLT	**Wulai**	**0.74**	**270**	*e*P		**Pg**	**19 28 14.4**	**-0.6**
	baz=268							
NWLT				*e*S		**Sg**	**19 28 23.3**	**-1.4**
	baz=268							
NHDH	**Xindian Distri**	**0.74**	**285**	*e*P		**Pb**	**19 28 16.1**	**+0.5**
	baz=274							
NHDH				*e*S		**Sb**	**19 28 26.3**	**+0.6**
	baz=274							
NDT	**Datong Townshi**	**0.75**	**257**	*e*P		**Pg**	**19 28 14.8**	**-0.5**
	baz=254							
NDT				*e*S		**Sg**	**19 28 24.9**	**-0.2**
	baz=254							
TAP1	**Taipei**	**0.76**	**290**	*e*P		**Pb**	**19 28 16.6**	**+0.6**
	baz=288							
TAP1				*e*S		**Sn**	**19 28 27.7**	**-1.2**
	baz=288							
YM01	**YM01**	**0.77**	**299**	*e*P		**Pg**	**19 28 16.0**	**+0.4**
	baz=297							
YM08	**YM08**	**0.77**	**302**	*e*P		**Pg**	**19 28 15.9**	**+0.2**
	baz=300							
TATO	**Taipei**	**0.78**	**285**	*e*P		**Pb**	**19 28 16.4**	**+0.2**
	baz=283							
TATO				*e*S		**Sb**	**19 28 26.9**	**+0.2**
	baz=283							
TAP	**Taipei**	**0.78**	**290**	*e*P		**Pb**	**19 28 16.6**	**+0.4**
	baz=288							
TAP				*e*S		**Sb**	**19 28 27.8**	**+1.0**
	baz=288							
YM10	**YM10**	**0.78**	**299**	*e*P		**Pb**	**19 28 16.4**	**+0.1**
	baz=297							
YM04	**YM04**	**0.80**	**298**	*e*P		**Pg**	**19 28 16.5**	**+0.4**
	baz=296							
YM04				*e*S		**Sb**	**19 28 27.7**	**+0.2**
	baz=296							
YM03	**YM03**	**0.81**	**300**	*e*P		**Pg**	**19 28 16.7**	**+0.3**
	baz=298							
TWY	**Chenhua**	**0.81**	**308**	*e*P		**Pg**	**19 28 16.9**	**+0.4**
	baz=306							
TWY				*e*S		**Sn**	**19 28 29.1**	**-1.2**
	baz=306							
ANP	**Anpu**	**0.83**	**300**	*e*P		**Pg**	**19 28 16.6**	**-0.1**
	baz=298							
YHNB	**Yeheng**	**0.86**	**263**	*e*P		**Pg**	**19 28 16.2**	**-1.2**
	baz=253							
YHNB				*e*S		**Sg**	**19 28 28.4**	**-0.2**
	baz=253							
NTST	**Danshui**	**0.87**	**296**	*e*P		**Pb**	**19 28 18.2**	**+0.3**
	baz=294							
TWS1	**Kuangyinshan**	**0.87**	**292**	*e*P		**Pb**	**19 28 18.3**	**+0.4**
	baz=290							
TWS1				*e*S		**Sn**	**19 28 30.7**	**-1.0**
	baz=290							
NSK	**Sanguang**	**0.88**	**263**	*e*P		**Pg**	**19 28 16.8**	**-0.9**
	baz=254							
NSK				*e*S		**Sg**	**19 28 27.6**	**-1.5**
	baz=254							
NACB	**Ninganchiao**	**0.89**	**228**	*e*P		**Pb**	**19 28 16.9**	**-1.3**
	baz=235							
NACB				*e*S		**Sg**	**19 28 28.7**	**-0.8**
	baz=235							
NNSB	**Datong**	**0.92**	**248**	*e*P		**Pb**	**19 28 17.1**	**-1.6**
	baz=235							
NNSB				*e*S		**Sg**	**19 28 30.0**	**-0.4**
	baz=235							
NNSH	**Datong**	**0.92**	**248**	*e*P		**Pb**	**19 28 18.2**	**-0.5**
	baz=235							
NNSH				*e*S		**Sg**	**19 28 30.0**	**-0.4**
	baz=235							
NNS	**Nan Shan**	**0.92**	**249**	*e*P		**Pn**	**19 28 19.3**	**-0.4**
	baz=235							
NNS				*e*S		**Sg**	**19 28 30.4**	**-0.2**
	baz=235							
ETLH	**Xiulin Townshi**	**0.95**	**233**	*e*P		**Pb**	**19 28 18.5**	**-0.7**
	baz=231							
ETLH				*e*S		**Sb**	**19 28 30.4**	**-1.4**
	baz=231							
TWD	**Chiawan**	**0.95**	**223**	*e*P		**Pb**	**19 28 18.6**	**-0.7**
	baz=230							
TWD				*e*S		**Sb**	**19 28 31.4**	**-0.5**
	baz=230							
WHF	**Hehuan Shan**	**1.15**	**237**	*e*P		**Pb**	**19 28 21.8**	**-1.0**
	baz=234							
WHF				*e*S		**Sb**	**19 28 37.3**	**-0.6**
	baz=234							
TWT	**Tachien**	**1.16**	**243**	*e*P		**Pg**	**19 28 23.5**	**+0.4**
	baz=233							
TWT				*e*S		**Sn**	**19 28 39.1**	**+0.1**
	baz=233							
TDCB	**Techi**	**1.18**	**244**	*e*P		**Pn**	**19 28 22.4**	**-0.8**
	baz=233							
TDCB				*e*S		**Sb**	**19 28 38.2**	**-0.2**
	baz=233							
NSTT	**Nanjuang**	**1.20**	**263**	*e*P		**Pg**	**19 28 24.6**	**+0.7**
	baz=261							
NSTT				*e*S		**Sg**	**19 28 40.1**	**+0.6**
	baz=261							
ESL	**Shilin**	**1.25**	**220**	*e*P		**Pb**	**19 28 24.4**	**0.0**
	baz=196							
ESL				*e*S		**Sg**	**19 28 42.1**	**+1.0**
	baz=196							
CHGB	**Renai**	**1.26**	**236**	*e*P		**Pn**	**19 28 24.5**	**0.0**
	baz=233							
CHGB				*e*S		**Sb**	**19 28 40.6**	**-0.4**
	baz=233							
WHP	**Taichung City**	**1.34**	**248**	*e*P		**Pn**	**19 28 25.7**	**+0.2**
	baz=246							
WHP				*e*S		**Sn**	**19 28 43.2**	**-0.2**
	baz=246							
IRIF	**Iriomote-Funau**	**1.36**	**109**	P		**Pg**	**19 28 27.0**	**+0.1**
IRIF				*e*S		**Sg**	**19 28 45.4**	**+0.8**
EGFH	**Guangfu**	**1.37**	**216**	*e*S		**Sg**	**19 28 46.3**	**+1.5**
	baz=193				

WJS				*e*S		**Sg**	**19 28 57.2**	**+0.8**
	baz=236							
JISG	**Ishigakijimahi**	**1.83**	**96**	P		**Pn**	**19 28 31.1**	**-1.0**
FULB	**Fuli**	**1.83**	**211**	*e*P		**Pn**	**19 28 32.3**	**+0.2**
	baz=191							
CHN5	**Tsauling**	**1.90**	**232**	*e*P		**Pb**	**19 28 35.7**	**+0.2**
	baz=231							
CHN5				*e*S		**Sg**	**19 29 03.1**	**+1.2**
	baz=231							
WDLH	**Douliu**	**1.95**	**237**	*e*P		**Pg**	**19 28 38.2**	**+0.1**
	baz=233							
ELDTW	**Lidau**	**1.98**	**217**	*e*P		**Pb**	**19 28 36.2**	**-0.6**
	baz=198							
CHN4	**Tsaushan**	**2.12**	**228**	*e*P		**Pb**	**19 28 40.0**	**+0.9**
	baz=225							
CHN4				*e*S		**Sg**	**19 29 08.6**	**-0.3**
	baz=225							
TPUB	**Ta-pu**	**2.13**	**227**	*e*S		**Sg**	**19 29 07.8**	**-1.4**
	baz=205							
CHY	**Chiayi**	**2.15**	**234**	*e*S		**Sg**	**19 29 08.2**	**-1.6**
	baz=253							
WTP	**Ta-pu**	**2.18**	**226**	*e*P		**Pb**	**19 28 40.3**	**+0.1**
	baz=203							
WTP				*e*S		**Sb**	**19 29 09.0**	**+1.7**
	baz=203							
TWH	**Lutao**	**2.20**	**201**	*e*S		**Sn**	**19 29 03.9**	**-0.5**
	baz=196							
WSF	**Szhu**	**2.22**	**240**	*e*S		**Sb**	**19 29 10.4**	**+2.0**
	baz=241							
TWK	**Hsinying**	**2.25**	**228**	*e*P		**Pb**	**19 28 40.8**	**-0.6**
	baz=205							
TWK				*e*S		**Sg**	**19 29 12.2**	**-0.8**
	baz=205							
SNST	**Tainan City**	**2.27**	**227**	*e*S		**Sb**	**19 29 11.2**	**+1.2**
	baz=204							
CHN1	**Nanshi**	**2.28**	**226**	*e*P		**Pb**	**19 28 41.2**	**-0.7**
	baz=223							
CHN1				*e*S		**Sg**	**19 29 12.6**	**-1.4**
	baz=223							
SGST	**Jiashian**	**2.32**	**224**	*e*S		**Sb**	**19 29 12.3**	**+1.1**
	baz=203							
SLGT	**Liugui**	**2.34**	**221**	*e*P		**Pb**	**19 28 42.4**	**-0.6**
	baz=201							
SLGT				*e*S		**Sb**	**19 29 12.6**	**+0.7**
	baz=201							
MATB	**Ma-tsu**	**2.54**	**303**	*e*P		**Pn**	**19 28 40.7**	**-1.2**
	baz=299							
SSD	**Sandimen**	**2.54**	**218**	*e*P		**Pb**	**19 28 45.3**	**-1.1**
	baz=197							
SSD				*e*S		**Sb**	**19 29 18.1**	**+0.3**
	baz=197							
VWUC	**VWUC**	**2.61**	**275**	*e*P		**Pn**	**19 28 42.0**	**-0.8**
	baz=273							
MASBT	**Mashibuluo**	**2.65**	**216**	*e*P		**Pn**	**19 28 44.7**	**+1.3**
	baz=196							
MASBT				*e*S		**Sb**	**19 29 19.6**	**-1.1**
	baz=196							
EAST	**Anshuo**	**2.74**	**210**	*e*P		**Pn**	**19 28 46.1**	**+1.5**
	baz=194							
PHUB	**P'eng-hu**	**2.80**	**244**	*e*S		**Sn**	**19 29 22.0**	**+2.7**
	baz=244							
PTMZ	**Houxiangcun**	**2.91**	**276**	*e*P		**Pn**	**19 28 46.6**	**-0.4**
	baz=274							

IDC 21 19:29:55.0±1.7, 3°37S×129°09E, h0km, mb2.9/2, mb1 3.2/4, mb1mx3.1/36, mbtmp3.0/4, ML2.9/2, Error ellipse: s-maj=49.9km s-min=27.7km az=86.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.31**	**41**	Pn	Pn	19 30 47.7	-0.4
	0.8nm,0.3s,baz=259,slow=23,SNR=8.6						
SIJI					Sn	19 31 19.1	-9.1
	0.3nm,0.3s,baz=135,slow=23,SNR=1.3						
WRA	**Warramunga Arr**	**17.25**	**163**	P	Pn	19 33 58.3	+0.7
	0.1nm,0.3s,baz=341,slow=12,SNR=4.8						
ASAR	**Alice Springs**	**20.70**	**167**	P	P	19 34 36.4	-0.7
	0.2nm,0.3s,baz=345,slow=12,SNR=6.7						
MKAR	**Makanchi Array**	**64.72**	**326**	P	P	19 40 35.6	+0.4
	0.1nm,0.4s,baz=123,slow=7.1,SNR=1.9						

IDC 21 19:42:37.2±2.4, 5°00N×126°85E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.2/48, mbtmp3.5/3, MS3.9/1, Ms1 3.9/1, ms1mx2.6/25, Error ellipse: s-maj=189.1km s-min=26.8km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.86**	**164**	P	P	19 48 11.0	+0.3
	0.7nm,0.8s,baz=344,slow=10,SNR=3.0						
ASAR	**Alice Springs**	**29.31**	**167**	P	P	19 48 41.5	-0.3
	0.1nm,0.4s,baz=345,slow=7.1,SNR=4.7						
CTA	**Charters Tower**	**31.39**	**143**	LR	LR	20 04 09.1	
	comp=Z,223nm,18.8s,baz=242,slow=41						
MKAR	**Makanchi Array**	**56.59**	**325**	P	P	19 52 21.8	-0.1
	0.3nm,0.4s,baz=119,slow=7.4,SNR=8.1						

*DJA **21** 19:50:03.2±0.2, 3°S±2°×12°8E±°, h10km, M4.1/11, mB4.7/1, mb4.7/2, MLv3.8/11, Mw(mB)4.0/1*
*IDC **21** 19:50:10.8±1.9, 2°91S×128°47E, h99km±21km, mb3.4/3, mb1 3.7/7, mb1mx3.3/46, mbtmp3.9/7, Error ellipse: s-maj=18.8km s-min=11.2km az=80.0*
ISC 21 19:50:04.7±0.8, 2°85S±0°04×128°03E±0°05, h38km, n16, σ1s72/21, mb3.7/3, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**0.84**	**169**	P	**Pn**	**19 50 20.4**	**+0.3**
AAI				S	**Sn**	**19 50 33.7**	**+2.3**
NLAI	**Namlea**	**1.01**	**248**	P	**Pn**	**19 50 22.9**	**+0.6**
NLAI				S	**Sn**	**19 50 37.7**	**+2.4**
MSAI	**Masohi**	**1.02**	**119**	P	**Pn**	**19 50 23.9**	**+1.4**
LBMI	**Labuha**	**2.26**	**346**	P	**Pn**	**19 50 39.8**	**+0.2**
LBMI				S	**Sn**	**19 51 07.9**	**+1.6**
BNDI	**Bandanaira**	**2.50**	**132**	P	**Pn**	**19 50 45.5**	**+2.7**
SIJI	**Sorong**	**3.78**	**59**	P	**Pn**	**19 51 01.2**	**+0.7**
	24nm,0.3s,baz=184,slow=23,SNR=87						
SIJI				S	**Sn**	**19 51 43.7**	**-0.2**
	6.7nm,0.3s,baz=36,slow=22,SNR=17						
FAKI	**Fak Fak**	**4.21**	**91**	P	**Pn**	**19 51 07.3**	**+0.9**
KMSI	**Cibinong**	**5.29**	**310**	P	**Pn**	**19 51 22.0**	**+0.8**
	0.7nm55nm,0.6s						
LUWI	**Luwuk**	**5.56**	**289**	P	**Pn**	**19 51 26.0**	**+1.1**
KAPI	**Kappang**	**8.54**	**255**	P	Pn	19 52 19.0	+13
	1.2nm,0.3s,baz=92,slow=13,SNR=3.6						
FITZ	**Fitzroy Crossi**	**15.33**	**189**	P	**P**	**19 53 42.5**	**-0.2**
	0.3nm,0.3s,baz=28,slow=12,SNR=11						
WRA	**Warramunga Arr**	**18.07**	**161**	P	**P**	**19 54 11.8**	**-1.3**
	0.7nm,0.3s,baz=341,slow=12,SNR=39						
WRA				S	**Sn**	**19 57 30.6**	**-3.0**
	0.1nm,0.3s,baz=339,slow=22,SNR=2.8						
ASAR	**Alice Springs**	**21.46**	**165**	P	**P**	**19 54 49.8**	**-0.2**
	3.5nm,0.4s,baz=343,slow=11,SNR=80						
ASAR				S	**S**	**19 58 43.1**	**-3.1**
	1.1nm,1.0s,baz=342,slow=20,SNR=7.8						
SDSI	**Sungai Dareh**	**26.66**	**274**	P	**P**	**19 55 38.0**	**-2.3**
MKAR	**Makanchi Array**	**63.70**	**327**	P	**P**	**20 00 33.3**	**+0.8**
	0.5nm,0.7s,baz=116,slow=8.2,SNR=4.8						
KURBB	**Kurchatov Arra**	**67.97**	**328**	P	**P**	**20 01 00.6**	**+0.8**
	0.4nm,0.6s,baz=129,slow=5.9,SNR=5.8						

IDC 21 19:54:58.6±80.0, 19°18S×167°38E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.5/35, mbtmp3.8/3, MS3.3/3, Ms1 3.3/3, ms1mx2.8/22, Error ellipse: s-maj=1337.0km s-min=121.9km az=74.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**24.65**	**174**	LR	LR	20 09 41.1	
	comp=Z,145nm,18.3s,baz=11,slow=36						
STKA	**Stephens Creek**	**26.40**	**236**	P	P	20 00 36.6	-0.4
	3.8nm,1.1s,baz=50,slow=7.4,SNR=3.8						
WRA	**Warramunga Arr**	**31.12**	**263**	P	P	20 01 19.5	+0.4
	0.8nm,0.9s,baz=92,slow=9.1,SNR=2.9						
ASAR	**Alice Springs**	**31.44**	**256**	P	P	20 01 21.9	0.0
	0.5nm,0.7s,baz=81,slow=9.4,SNR=8.0						
MJAR	**Matsushiro Arr**	**61.90**	**334**	LR	LR	20 33 39.8	
	comp=Z,111nm,18.4s,baz=255,slow=38						
KSRS	**Korea Array**	**67.48**	**327**	LR	LR	20 35 13.2	
	comp=Z,178nm,18.0s,baz=147,slow=36						

ROM 21 20:16:59.2±0.1, 42°833N±0°004×13°10E±0°01, h10km, ML1.2/3, Error ellipse: s-maj=0.9km s-min=0.4km az=89.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.01**	**89**	P	Pg	20 17 01.5	+0.5
NRCA				S	Sg	20 17 02.8	+0.5
FEMA	**Monte Fema**	**0.13**	**346**	P	Pg	20 17 03.0	+0.7
FEMA				S	Sg	20 17 05.3	+0.7
FDMO	**Fiordimonte**	**0.20**	**358**	P	Pg	20 17 04.0	+0.6
FDMO				S	Sg	20 17 07.2	+0.8
CESI	**CESI - Serrava**	**0.22**	**321**	P	Pg	20 17 04.5	+0.7
CESI				S	Sg	20 17 08.1	+1.2
LNSS	**Leonessa**	**0.23**	**190**	P	Pg	20 17 04.6	+0.7
LNSS				S	Sg	20 17 08.3	+1.1
CSP1	**Cessapalombo**	**0.27**	**17**	P	Pg	20 17 05.2	+0.5
CSP1				S	Sg	20 17 09.5	+1.1
ASSB	**Assisi San Ben**	**0.38**	**303**	P	Pg	20 17 07.3	+0.5
ASSB				S	Sb	20 17 13.2	-0.9
ASSB				AML	AML		
	comp=E,64μm,0.2s						
ASSB				AML	AML		
	comp=N,41μm,0.2s						
SNTG	**Esanatoglia**	**0.44**	**345**	P	Pb	20 17 08.5	-0.5
SNTG				S	Sg	20 17 14.3	+0.8
SNTG				AML	AML		
	comp=E,12μm,0.8s						
SNTG				AML	AML		
	comp=N,13μm,1.2s						
ATCC	**AVT- Casa Cast**	**0.48**	**317**	P	Pb	20 17 09.4	-0.5
ATCC				S	Sb	20 17 17.0	-0.1
EL6	**Elcito**	**0.50**	**1**	P	Pg	20 17 09.4	+0.6
EL6				S	Sb	20 17 16.8	-0.6
CING	**Cingoli**	**0.55**	**8**	P	Pb	20 17 10.7	-0.2
CING				S	Sb	20 17 18.5	-0.4
GUMA	**Gualdo di Mace**	**0.66**	**69**	P	Pg	20 17 04.9	-7.0
GUMA				AML	AML		
	comp=N,110μm,1.1s						
GUMA				AML	AML		
	comp=N,110μm,1.1s						
GUMA				AML	AML		
	comp=E,124μm,1.1s						
APEC	**Apecchio**	**0.88**	**326**	S	Sn	20 17 31.0	+0.5
MNTV	**Mantova**	**2.85**	**325**	P	Pn	20 17 40.3	-4.4
CDRU	**Civita di Ruta**	**2.87**	**144**	P	Pn	20 17 41.9	-3.2
LTRZ	**Laterza**	**3.57**	**127**	P	Pn	20 17 45.5	-9.2
EUCT	**Pavia**	**3.71**	**311**	P	Pn	20 17 56.0	-0.6

*RSPR **21** 20:17:16.9, 18°71N×68°60W, h99km±1km, MD3.1/6*
*NEIC **21** 20:17:17.0±2.0, 18°8N±0°2×68°53W±0°06, h86km±7km, Error ellipse: s-maj=23.3km s-min=7.0km az=190.0*
ISC 21 20:17:11.4±1.0, 19°39N±0°08×68°44W±0°06, h10km, n23, σ0s97/24, 6C-1D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.88**	**177**	⇓*e*P	**Pn**	**20 17 30.5**	**+0.7**
PCDR	**Punta Cana, DR**	**0.88**	**177**	*e*S	**Sn**	**20 17 41.8**	**-0.8**
PCDR	**Punta Cana, DR**	**0.88**	**177**		**Pn**	**20 17 30.4**	**+0.6**
DR12	**Loma Pena Alta**	**1.08**	**236**	Pn	**Pn**	**20 17 34.2**	**+1.5**
IDE	**Isla Desecheo**	**1.35**	**137**	⇑*e*P	**Pg**	**20 17 38.1**	**+0.7**
IDE	**Isla Desecheo**	**1.35**	**137**	*e*S	**Sb**	**20 17 54.4**	**+0.1**
IDE	**Isla Desecheo**	**1.35**	**137**		**Pg**	**20 17 38.1**	**+0.7**
IDE					**Sb**	**20 17 54.4**	**+0.1**
AGPR	**Aguadilla, PR**	**1.56**	**126**	⇑*e*P	**Pg**	**20 17 41.8**	**+0.5**
AGPR	**Aguadilla, PR**	**1.56**	**126**		**Pg**	**20 17 42.2**	**+0.9**
LSP	**Las Mesas**	**1.76**	**133**	⇑*e*P	**Pn**	**20 17 42.9**	**+0.9**
LSP	**Las Mesas**	**1.76**	**133**	*e*S	**Sn**	**20 18 03.1**	**-1.5**
LSP	**Las Mesas**	**1.76**	**133**		**Pn**	**20 17 42.9**	**+0.9**
LSP					**Sn**	**20 18 03.1**	**-1.5**
CRPR	**Cabo Rojo, PR**	**1.87**	**137**	⇑*e*P	**Pn**	**20 17 43.6**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.87**	**137**		**Pn**	**20 17 42.8**	**-0.7**
AOPR	**Arecibo Observ**	**1.90**	**123**	⇑*e*P	**Pb**	**20 17 46.8**	**+0.5**
AOPR	**Arecibo Observ**	**1.90**	**123**	*e*S	**Sn**	**20 18 09.0**	**+1.0**
AOPR	**Arecibo Observ**	**1.90**	**123**	Pn	**Pn**	**20 17 45.1**	**+1.1**
MLPR	**Magueyes Islan**	**1.94**	**137**	⇑*e*P	**Pn**	**20 17 44.7**	**+0.3**
MLPR	**Magueyes Islan**	**1.94**	**137**		**Pn**	**20 17 43.4**	**-1.0**
CSGN	**Cosiguina Volc**	**19.43**	**254**		**P**	**20 21 36.6**	**-1.6**
V55A	**Taylorsville**	**19.89**	**328**	P	**P**	**20 21 43.6**	**+0.5**
V53A	**Saluda**	**20.59**	**325**	P	Pn	20 21 53.2	+0.3
WRH	**Wood River Hil**	**68.23**	**333**	P	**P**	**20 28 10.9**	**-1.1**

ROM 21 20:17:27.2±0.1, 38°729N±0°006×15°68E±0°03, h159km, ML1.8/1, Error ellipse: s-maj=2.3km s-min=0.3km az=86.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOPP	**Joppolo**	**0.20**	**127**	P	Pn	20 17 48.8	+0.1
JOPP				S	Sn	20 18 04.7	-0.3
PLAC	**Placanica**	**0.66**	**115**	P	Pn	20 17 50.8	+0.3
PLAC				S	Sn	20 18 07.8	-0.4
CAR1	**CAROLEI**	**0.67**	**38**	P	Pn	20 17 50.7	+0.1
MPAZ	**Palizzi**	**0.82**	**162**	P	Pn	20 17 51.9	+0.3
MPAZ				AML	AML		
	comp=N,20μm,1.0s						
MPAZ				AML	AML		
	comp=E,22μm,0.9s						
CET2	**Cetraro**	**0.83**	**15**	P	Pn	20 17 52.0	+0.4
CET2				AML	AML		
	comp=E,48μm,0.6s						
CET2				AML	AML		
	comp=N,82μm,0.2s						
CET2				AML	AML		
	comp=N,82μm,0.2s						
CET2				AML	AML		
	comp=E,48μm,0.6s						
CET2	**Cetraro**	**0.83**	**15**	P	Pn	20 17 51.9	+0.3
CET2				S	Sn	20 18 10.0	-0.4
CELI	**Celico**	**0.93**	**43**	P	Pn	20 17 53.7	+1.3
T0702	**Acquaformosa (**	**1.04**	**17**	P	Pn	20 17 53.7	+0.5

*DDA **21** 20:21:58.8, 39°21N×44°23E, h7km±4km, ML1.4*
*ATA **21** 20:22:03.2±3.0, 39°56N×43°51E, h10km±69km, ML0.8, MW2.9*
ISC 21 20:22:00.8±1.1, 39°30N±0°04×43°88E±0°07, h17km±8km, n9, σ2s45/13, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLDR	**Calderan**	**0.16**	**169**	*i* P	**Pg**	**20 22 04.2**	**-1.3**
CLDR				*i* S	**Sg**	**20 22 08.8**	**+0.3**
CLDR				IAML		20 22 13.0	
	comp=E,89nm,0.4s						
CLDR				IAML		20 22 14.0	
	comp=N,100nm,0.7s						
DYDN	**Diyadin**	**0.28**	**329**	*e*P	**Pg**	**20 22 05.4**	**-1.8**
DYDN				IAML		20 22 09.6	
	comp=Z,79nm,0.5s						
DYDN				*e*S	**Sg**	**20 22 11.0**	**-0.5**
DYDN	**Diyadin**	**0.28**	**329**	*i* P	**Pg**	**20 22 04.8**	**-2.3**
DYDN				*i* S	**Sg**	**20 22 17.3**	**+5.8**
DYDN				IAML		20 22 21.0	
	comp=E,212nm,0.5s						
DYDN				IAML		20 22 21.0	
	comp=N,162nm,0.6s						
VMUR	**Van-Muradiye**	**0.39**	**217**	*i* P	**Pg**	**20 22 09.4**	**+0.4**
IGDI	**IGDIR**	**0.58**	**15**	*e*P	**Pb**	**20 22 12.9**	**+0.2**
IGDI				*e*S	**Sb**	**20 22 23.0**	**+2.4**
IGDI				IAML		20 22 23.7	
	comp=Z,1.8nm,0.9s						
IGDI	**IGDIR**	**0.58**	**15**	*i* P	**Pb**	**20 22 12.7**	**0.0**
IGDI				*i* S	**Sg**	**20 22 21.2**	**+0.8**
IGDI				IAML		20 22 26.0	
	comp=N,12nm,0.8s						
IGDI				IAML		20 22 30.0	
	comp=E,15nm,0.6s						
TUTA	**Tutak**	**0.83**	**277**	*e*P	**Pg**	**20 22 15.6**	**-1.5**
TUTA				*e*S	Sg	20 22 23.7	-4.5
TUTA				IAML		20 22 24.8	
	comp=Z,9.9nm,0.1s						
EATA	**Eleskirt**	**1.21**	**298**	*e*P	**Pn**	**20 22 21.9**	**-1.2**
EATA				*e*S	Sn	20 22 32.2	-7.1
EATA				IAML		20 22 42.6	
	comp=Z,1.6nm,0.2s						
HOMI	**Horasan**	**1.69**	**297**	*e*P	Pn	20 22 25.5	-4.3
HOMI				*e*S	Sn	20 22 39.6	-12

*IDC **21** 20:29:27.1±1.9, 7°00S×129°47E, h184km±24km, mb3.1/1, mb1 3.7/6, mb1mx3.2/34, mbtmp4.2/6, Error ellipse: s-maj=33.4km s-min=18.7km az=96.0*
*NEIC **21** 20:29:27.9±3.2, 6°97S±0°08×129°4E±0°1, h201km±14km, mb4.2/3, Error ellipse: s-maj=14.7km s-min=11.2km az=82.0*
ISC 21 20:29:26.4±0.8, 7°00S±0°06×129°43E±0°08, h200km, n19, σ2s76/23, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.09**	**118**	Pn	**Pn**	**20 30 09.3**	**+3.4**
FAKI	**Fak Fak**	**4.93**	**35**		**Pn**	**20 30 40.1**	**+0.1**
SOEI	**Soe**	**5.80**	**241**		**Pn**	**20 30 52.8**	**+1.6**
MTN	**Manton Dam**	**6.04**	**164**	Pn	**Pn**	**20 30 55.7**	**+1.5**
SIJI	**Sorong**	**6.36**	**17**	P	**Pn**	**20 30 58.8**	**+0.3**
	1.8nm,0.3s,baz=106,slow=11,SNR=49						
SIJI				S	**Sn**	**20 32 05.6**	**-5.7**
	1.6nm,0.3s,baz=334,slow=22,SNR=6.7						
BATI	**Baumata**	**6.53**	**240**	P	**Pn**	**20 31 02.2**	**+1.5**
	22nm,0.3s,baz=285,slow=2.8,SNR=32						
BATI				S	**Sn**	**20 32 11.0**	**-4.3**
	7.3nm,0.3s,baz=123,slow=19,SNR=3.3						
KNRA	**Kununurra**	**8.65**	**184**		**Pn**	**20 31 28.9**	**+0.8**
FITZ	**Fitzroy Crossi**	**11.63**	**198**	P	**Pn**	**20 32 07.3**	**+0.6**
	0.5nm,0.3s,baz=21,slow=9.6,SNR=22						
FITZ				S	Sn	20 34 07.5	-8.9
	0.4nm,0.3s,baz=116,slow=15,SNR=2.3						
FITZ	**Fitzroy Crossi**	**11.63**	**198**	P	**Pn**	**20 32 08.1**	**+1.4**
WB0	**Warramunga Arr**	**13.57**	**160**	P	**Pn**	**20 32 30.1**	**-1.1**
WRAB	**Tennant Creek**	**13.71**	**160**	Pn	**Pn**	**20 32 33.3**	**+0.4**
WRA	**Warramunga Arr**	**13.72**	**160**	P	**Pn**	**20 32 32.5**	**-0.5**
	0.4nm,0.3s,baz=341,slow=12,SNR=30						
WRA				S	**S**	**20 34 58.8**	**-7.0**
	0.6nm,0.3s,baz=331,slow=25,SNR=6.8						
WB2	**Warramunga Arr**	**13.72**	**160**	P	**Pn**	**20 32 33.0**	**0.0**
WR0	**Warramunga Arr**	**13.80**	**159**	Pn	**Pn**	**20 32 34.6**	**+0.6**
COEN	**Coen**	**15.17**	**118**	P	**P**	**20 32 54.0**	**+2.7**
COEN				IAmb	IAmb	20 33 06.9	
	comp=Z,18nm,1.2s						
AS31	**Alice Springs**	**17.12**	**166**	P	**Pn**	**20 33 16.2**	**+2.0**
AS31				IAmb	IAmb	20 33 18.2	
	comp=Z,5.0nm,0.6s						
ASAR	**Alice Springs**	**17.12**	**166**	P	**Pn**	**20 33 15.9**	**+1.7**
	comp=Z,2.8nm,0.3s,baz=342,slow=10.0,SNR=189						
ASAR				S	**S**	**20 36 18.3**	**-2.5**
	comp=Z,0.0nm,0.3s,baz=330,slow=17,SNR=2.8						
PSA00	**Pilbara Seismi**	**17.20**	**212**	P	**Pn**	**20 33 16.2**	**+1.1**
PSA00				IAmb	IAmb	20 33 16.7	
	comp=Z,4.4nm,0.5s						
MKAR	**Makanchi Array**	**67.92**	**327**	P	**P**	**20 40 06.0**	**+2.4**
	comp=Z,0.2nm,0.4s,baz=113,slow=8.4,SNR=7.4						

*DDA **21** 20:32:25.1, 38°38N×45°03E, h7km±2km, MW3.6*
*ISK **21** 20:32:27.9, 38°39N×44°70E, h5km, ML3.5/15*
*TEH **21** 20:32:27.8, 38°36N×44°69E, h6km, ML3.1*
*NSSP **21** 20:32:28.0, 38°38N×44°72E, h10km, Ms3.3*
ISC 21 20:32:28.6±1.1, 38°37N±0°02×44°69E±0°02, h3km±11km, n65, σ1s68/84, 7C-5D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISHB	**Shabestar**	**0.74**	**96**	*e*Pg	**Pg**	**20 32 41.6**	**-1.2**
YOVA	**Hakkari_Yksek**	**0.84**	**202**	*i* P	**Pg**	**20 32 43.6**	**-1.1**
YOVA				*i* S	**Sb**	**20 32 56.7**	**-0.9**
YOVA				IAML		20 32 58.0	
	comp=N,986nm,0.7s						
YOVA				IAML		20 33 00.0	
	comp=E,2μm,0.8s						
YOVA	**Hakkari_Yksek**	**0.84**	**202**	*e*Pg	**Pg**	**20 32 43.6**	**-1.1**
IMRD	**Marand**	**0.87**	**66**	*e*Pg	**Pg**	**20 32 44.3**	**-1.0**
IMRD				*e*		20 33 09.5	
CLDR	**Calderan**	**0.98**	**322**	PG	**Pg**	**20 32 45.9**	**-1.5**
CLDR				SG	**Sb**	**20 33 00.7**	**-1.1**
CLDR	**Calderan**	**0.98**	**322**	*i* P	**Pg**	**20 32 45.8**	**-1.7**
CLDR				*i* S	**Sb**	**20 33 01.6**	**-0.2**
CLDR				IAML		20 33 09.0	
	comp=E,386nm,0.4s						
CLDR				IAML		20 33 10.0	
	comp=N,428nm,0.7s						
CLDR	**Calderan**	**0.98**	**322**	*e*Pg	**Pg**	**20 32 45.9**	**-1.5**
MAKU	**Maku**	**0.99**	**360**	*e*Pg	**Pg**	**20 32 46.6**	**-1.0**
TVAN	**Van**	**1.02**	**280**	*i* P	**Pg**	**20 32 48.2**	**-0.8**
TVAN				*i* S	**Sn**	**20 33 05.6**	**+0.7**
TVAN				IAML		20 33 23.0	
	comp=N,927nm,1.0s						
TVAN				IAML		20 33 24.0	
	comp=E,723nm,0.7s						
TVAN	**Van**	**1.02**	**280**	*e*Pg	**Pg**	**20 32 48.1**	**-0.8**
NAX	**Nakhchivan**	**1.02**	**38**	*e*Pg	**Pb**	**20 32 47.6**	**-1.4**
VANB	**Van**	**1.04**	**283**	PG	**Pg**	**20 32 48.1**	**-0.5**
VANB	**Van**	**1.04**	**283**	*e*Pg	**Pg**	**20 32 48.2**	**-0.4**
VMUR	**Van-Muradiye**	**1.07**	**306**	*i* P	**Pg**	**20 32 47.6**	**-1.6**
VMUR				*i* S	**Sn**	**20 33 08.0**	**+1.9**
VMUR				IAML		20 33 18.0	
	comp=E,387nm,0.5s						
VMUR				IAML		20 33 18.0	
	comp=N,414nm,0.7s						
VMUR	**Van-Muradiye**	**1.07**	**306**	*e*Pg	**Pg**	**20 32 47.5**	**-1.6**
HAKT	**HAKKARI**	**1.12**	**224**	*i* P	**Pg**	**20 32 48.8**	**-1.2**
HAKT				*i* S	**Sn**	**20 33 06.8**	**-0.5**
HAKT				IAML		20 33 09.0	
	comp=E,506nm,0.5s						
HAKT				IAML		20 33 09.0	
	comp=N,414nm,0.4s						
HAKT	**HAKKARI**	**1.12**	**224**	*e*Pg	**Pg**	**20 32 48.8**	**-1.2**
ITBZ	**Tabriz**	**1.16**	**96**	*e*Pg	**Pb**	**20 32 49.6**	**-1.2**
ORD	**Ordubad**	**1.17**	**61**	*e*Pg	**Pb**	**20 32 50.0**	**-1.5**
IAZR	**Azarshahr**	**1.23**	**123**	*e*Pg	**Pg**	**20 32 50.5**	**-1.7**
SBZ	**Shahbuz**	**1.23**	**33**	*e*Pg	**Pb**	**20 32 51.1**	**-1.5**
GEVA	**Gevas**	**1.28**	**268**	*i* P	**Pn**	**20 32 52.2**	**-1.4**
GEV

KAPZ				⇓*i*S		**Sg**	**20 33 29.9**	**-1.5**
ARUZ	**Aruch**	**1.97**	**347**	⇓*i*P		**Pg**	**20 33 05.0**	**-1.4**
ARUZ				⇓*i*S		**Sg**	**20 33 31.5**	**-0.4**
SIRT	**Sirnak**	**1.98**	**245**	PN		**Pn**	**20 33 03.2**	**+0.2**
SIRN	**Sirnak**	**2.00**	**245**	*i* P		**Pb**	**20 33 05.9**	**+0.3**
SIRN				*i* S		**Sg**	**20 33 31.8**	**-0.9**
SIRN				IAML			20 33 39.0	
	comp=E,504nm,1.1s							
SIRN				IAML			20 33 41.0	
	comp=N,424nm,0.7s							
BLIS	**Bitlis-Merkez**	**2.02**	**272**	*i* P		**Pg**	**20 33 07.4**	**+0.1**
IHSH	**Hashtrud**	**2.03**	**91**	*e*			20 33 44.2	
IHSH				*e*Pn		**Pg**	**20 33 09.2**	**+1.7**
GURO	**Guroymak-BITLI**	**2.09**	**276**	PN		**Pn**	**20 33 04.7**	**+0.1**
SRTM	**Siirt_Merkez**	**2.21**	**261**	*i* P		**Pb**	**20 33 08.3**	**-0.9**
SRTM				*i* S		**Sg**	**20 33 43.4**	**+3.8**
ISRB	**Sarab**	**2.41**	**102**	*e*Pn		**Pb**	**20 33 10.3**	**-2.5**
ISRB				*e*			20 33 18.6	
MUSM	**Mu-Merkez**	**2.51**	**279**	*i* P		**Pb**	**20 33 14.4**	**0.0**
GRMI	**Germi**	**2.55**	**79**	*e*Pn		**Pb**	**20 33 11.6**	**-3.5**
KARS	**Kars**	**2.58**	**332**	PN		**Pn**	**20 33 11.1**	**-0.2**
VRTB	**Varto-Mus**	**2.65**	**288**	PN		**Pn**	**20 33 12.3**	**0.0**
KOPR	**Koprukoy-ERZUR**	**2.73**	**307**	PN		**Pn**	**20 33 13.7**	**+0.2**
SVAN	**Silvan-Diyarba**	**2.75**	**267**	PN		**Pn**	**20 33 14.2**	**+0.5**
SENK	**Senkaya-Erzuru**	**2.84**	**321**	PN		**Pn**	**20 33 15.1**	**+0.1**
MAZI	**Mazidag**	**3.47**	**256**	PN		**Pn**	**20 33 24.5**	**+0.9**
ZNJK	**Zanjan**	**3.60**	**117**	*e*Pn		**Pn**	**20 33 26.4**	**+0.9**
DYBB	**Diyarbakir**	**3.61**	**265**	PN		**Pn**	**20 33 26.4**	**+1.0**
ILIN	**Lien**	**3.90**	**151**	*e*Pn		**Pn**	**20 33 31.1**	**+1.5**
IDHR	**Dehrash**	**3.91**	**159**	*e*Pn		**Pn**	**20 33 31.2**	**+1.5**
QABG	**Abgarm-Qazvin**	**4.73**	**123**	*e*Pn		**Pn**	**20 33 40.6**	**-0.4**

ATA ***21*** *20:41:29.3±5.1, 40.°17N×41.°88E, h124*$^{km}_{\pm 72}$*, ML2.0, MW2.7*

DDA 21 20:41:16.7, 38.°31N×44.°62E, h7$^{km}_{\pm 2}$**, ML1.8, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BASK	**Baskale_VAN**	**0.55**	**242**	*i* P	Pg	20 41 27.4	+0.1
YOVA	**Hakkari_Yksek**	**0.76**	**200**	*i* P	Pg	20 41 31.4	-0.1
YOVA				*i* S	Sb	20 41 42.9	-0.2
YOVA				IAML		20 41 45.0	
	comp=N,40nm,0.5s						
YOVA				IAML		20 41 48.0	
	comp=E,48nm,0.8s						
CLDR	**Caldiran**	**1.00**	**327**	*i* P	Pg	20 41 33.7	-2.2
CLDR				*i* S	Sb	20 41 50.0	0.0
CLDR				IAML		20 41 52.0	
	comp=E,27nm,0.4s						
CLDR				IAML		20 41 53.0	
	comp=N,23nm,0.4s						
HAKT	**HAKKARI**	**1.04**	**224**	*i* P	Pb	20 41 37.3	+0.1
HAKT				*i* S	Sn	20 41 54.8	+2.0
HAKT				IAML		20 41 56.0	
	comp=E,24nm,0.5s						
HAKT				IAML		20 41 57.0	
	comp=N,25nm,0.4s						
TUTA	**Tutak**	**1.78**	**308**	*e*P	Pb	20 41 50.0	+0.1
TUTA				*e*S	Sg	20 42 13.9	-0.1
TUTA				IAML		20 42 14.1	
	comp=Z,5.6nm,0.1s						
SIRN	**Sirnak**	**1.92**	**246**	*i* P	Pg	20 41 54.0	+0.5
DIGO	**Kars**	**2.31**	**336**	*e*P	Pb	20 41 57.4	-1.6
DIGO				*e*S	Sn	20 42 12.7	-12

IDC ***21*** *20:51:58.9±0.9, 10.°76S×12.°83W, h0*^{km}*, mb4.3/17, mb1 4.4/17, mb1mx4.1/47, mbtmp4.3/17, MS3.6/19, Ms1 3.6/19, ms1mx3.5/24, Error ellipse: s-maj=24.5km s-min=19.8km az=166.0*

NEIC ***21*** *20:51:58.2±1.2, 11.°2S±0.°1×13.°0W±0.°2, h10*$^{km}_{\pm 1}$*km, mb4.7/14, Error ellipse: s-maj=28.5km s-min=20.9km az=134.0*

ISC 21 20:51:59.0±0.5, 11.°0S±0.°1×13.°0W±0.°1, h10^{km}**, n66, σ1§47/51, mb4.6/30, MS3.6/18, 10C-3D, Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**2.61**	**321**	T	T	20 55 42.0	
	baz=146,slow=74,SNR=195						
H10S3	**ASCENSION HYDR**	**2.62**	**321**	T	T	20 55 44.2	
	baz=74,slow=74,SNR=240						
H10N1	**ASCENSION HYDR**	**3.47**	**335**	T	T	20 57 02.5	
	SNR=4.1						
H10N3	**ASCENSION HYDR**	**3.49**	**335**	T	T	20 57 02.5	
	SNR=6.4						
H10N2	**ASCENSION HYDR**	**3.49**	**335**	T	T	20 57 05.7	
	SNR=3.9						
DBIC	**Dimbokro**	**19.35**	**25**	LR	LR	21 02 12.9	
	comp=Z,82nm,19.4s,baz=185,slow=32						
TOA0	**Torodi Ar. Sit**	**28.09**	**32**	P	**P**	**20 57 51.3**	**+0.2**
TOA0				IAmb	IAmb	20 57 52.1	
	comp=Z,14nm,1.1s						
TORD	**Torodi Ar. Bea**	**28.09**	**32**	P	**P**	**20 57 50.8**	**-0.4**
	comp=Z,11nm,1.0s,baz=217,slow=9.1,SNR=31						
TORD				LR	LR	21 07 28.8	
	comp=Z,129nm,21.2s,baz=230,slow=34						
TSUM	**Tsumeb**	**30.59**	**109**	P	**P**	**20 58 16.0**	**+2.5**
	comp=Z,1.8nm,0.4s,baz=351,slow=9.0,SNR=4.2						
TSUM				LR	LR	21 07 47.7	
	comp=Z,256nm,21.6s,baz=304,slow=31						
BDFB	**Brasilia**	**34.35**	**258**	P	**P**	**20 58 50.6**	**+4.1**
	comp=Z,3.6nm,0.6s,baz=54,slow=10,SNR=4.9						
BDFB				LR	LR	21 09 53.1	
	comp=Z,206nm,20.3s,baz=119,slow=31						
BOSA	**Boshof**	**39.80**	**122**	LR	LR	21 12 36.0	
	comp=Z,196nm,20.7s,baz=306,slow=31						
LSZ	**Lusaka**	**40.29**	**101**	P	**P**	**20 59 36.4**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=233,slow=6.3,SNR=3.3						
MATP	**Matopo**	**40.93**	**108**	P	**P**	**20 59 42.4**	**+0.2**
	comp=Z,6.8nm,1.1s,baz=259,slow=12,SNR=5.3						
CPUP	**Villa Florida**	**44.43**	**244**	LR	LR	21 15 36.4	
	comp=Z,134nm,20.3s,baz=79,slow=32						
KEST	**Kesra**	**51.07**	**23**	P	**P**	**21 01 02.5**	**+0.8**
	comp=Z,2.3nm,0.8s,baz=183,slow=7.5,SNR=3.5						
ESDC	**Sonseca Array**	**51.13**	**9**	LR	LR	21 21 54.2	
	comp=Z,36nm,19.8s,baz=290,slow=35						
LPAZ	**La Paz**	**53.70**	**258**	P	**P**	**21 01 25.8**	**+3.4**
	comp=Z,1.3nm,0.8s,baz=82,slow=12,SNR=3.9						
LPAZ				LR	LR	21 22 45.2	
	comp=Z,57nm,20.5s,baz=74,slow=34						
LPAZ	**La Paz**	**53.70**	**258**	P	**P**	**21 01 21.6**	**-0.8**
H05S1	**Guadeloupe/Mar**	**53.73**	**297**	T	T	21 59 40.2	
	SNR=4.9						
CO01	**Juntas del Tor**	**56.14**	**241**	P	**P**	**21 01 38.8**	**-0.6**
PLCA	**Paso Flores**	**58.41**	**229**	LR	LR	21 23 28.0	
	comp=Z,43nm,21.1s,baz=90,slow=32						
SNAA	**Sanae**	**60.93**	**176**	P	**P**	**21 02 07.9**	**-4.0**
SQTA	**Sankt Quirin**	**61.87**	**18**	*i* P	**P**	**21 02 18.9**	**+0.3**
	comp=Z,5.2nm,0.9s						
MOTA	**Moosalm**	**61.95**	**18**	*i* P	**P**	**21 02 18.0**	**-1.2**
	comp=Z,6.5nm,1.5s						
OBKA	**Obir**	**62.36**	**21**	*i* pP	P	21 02 26.9	+5.0
	comp=Z,1.5nm,0.7s						
DIVS	**Divibare**	**62.51**	**26**	P	**P**	**21 02 24.0**	**+1.1**
SOKA	**Soboth**	**62.68**	**21**	*i* P	**P**	**21 02 25.3**	**+1.3**
	comp=Z,5.4nm,1.1s						
URIC	**Uribia, Colomb**	**62.80**	**289**	P	**P**	**21 02 21.4**	**-3.9**
VTS	**Vitosha**	**62.84**	**29**	⇑P	**P**	**21 02 27.1**	**+1.9**
VTS	**Vitosha**	**62.84**	**29**	P	**P**	**21 02 25.4**	**+0.2**
VTS				IAmb	IAmb	21 02 27.2	
	comp=Z,7.5nm,1.4s						
ROSC	**El Rosal**	**63.02**	**281**	LR	LR	21 29 34.4	
	comp=Z,103nm,18.5s,baz=50,slow=36						
ARSA	**Arzberg**	**63.34**	**21**	*i* P	**P**	**21 02 27.7**	**-0.6**
	comp=Z,6.4nm,1.4s						
MOA	**Molln**	**63.42**	**20**	*i* P	**P**	**21 02 28.7**	**-0.1**
	comp=Z,4.0nm,1.0s						
MDVR	**Moldovita**	**63.80**	**27**	⇑P	**P**	**21 02 31.8**	**+0.4**
CONA	**Conrad Observa**	**64.04**	**21**	*i* P	**P**	**21 02 33.1**	**+0.1**
	comp=Z,6.7nm,1.2s						
GEC2	**GERESS Array S**	**64.10**	**19**	P	**P**	**21 02 33.4**	**+0.1**
GEC2				IAmb	IAmb	21 02 33.9	
	comp=Z,11nm,1.4s						
GERES	**GERESS Array B**	**64.10**	**19**	P	**P**	**21 02 32.7**	**-0.6**
	comp=Z,1.8nm,0.9s,baz=218,slow=6.3,SNR=11						
GERES				LR	LR	21 30 31.4	
	comp=Z,40nm,20.3s,baz=284,slow=36						
HERR	**Herculane**	**64.19**	**27**	⇑P	**P**	**21 02 34.1**	**+0.1**
KHC	**Kasperske Hory**	**64.31**	**19**	P	**P**	**21 02 34.8**	**+0.1**
BZS	**Buzias**	**64.42**	**26**	⇑P	**P**	**21 02 36.5**	**+1.1**
SIRR	**Siria**	**64.95**	**26**	⇑P	**P**	**21 02 38.8**	**-0.1**
LOT	**Lotru**	**65.24**	**28**	⇓P	**P**	**21 02 41.8**	**+0.8**
VRAC	**Vranov**	**65.47**	**21**	P	**P**	**21 02 41.2**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=268,slow=2.0,SNR=3.3						
MORC	**Moravsky Berou**	**66.20**	**21**	⇑P	**P**	**21 02 44.1**	**-2.8**
MORC	**Moravsky Berou**	**66.20**	**21**	⇑P	**P**	**21 02 44.1**	**-2.8**
MORC	**Moravsky Berou**	**66.20**	**21**	P	**P**	**21 02 46.4**	**-0.5**
MORC				IAmb	IAmb	21 02 48.6	
	comp=Z,8.1nm,1.3s						
MLR	**Muntele Rosu**	**66.29**	**29**	P	**P**	**21 02 46.8**	**-0.9**
	comp=Z,9.7nm,1.2s,baz=189,slow=1.6,SNR=9.7						
MLR	**Muntele Rosu**	**66.29**	**29**	⇑P	**P**	**21 02 47.8**	**0.0**
MLR	**Muntele Rosu**	**66.29**	**29**	P	**P**	**21 02 47.8**	**0.0**
BRTR	**Keskin Array B**	**66.48**	**38**	P	**P**	**21 02 48.9**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=197,slow=4.5,SNR=1.9						
BRTR				LR	LR	21 32 25.0	
	comp=Z,18nm,19.0s,baz=204,slow=37						
RAYN	**Ar Rayn**	**66.71**	**58**	P	**P**	**21 02 50.6**	**-0.1**
RAYN				IAmb	IAmb	21 02 59.4	
	comp=Z,5.3nm,1.1s						
SYO	**Syowa Base**	**66.92**	**162**	⇓*e*pP	**P**	**21 02 52.0**	**+0.8**
VRI	**Vrincioaia**	**66.94**	**29**	⇑P	**P**	**21 02 51.2**	**-0.6**
CFR	**Carcaliu**	**67.12**	**30**	⇓P	**P**	**21 02 53.1**	**+0.3**
SORM	**Soroca**	**69.35**	**28**	⇑P	**P**	**21 03 05.1**	**-1.6**
AKASG	**Malin Array Be**	**71.59**	**27**	P	**P**	**21 03 19.9**	**-0.5**
	comp=Z,9.3nm,1.0s,baz=224,slow=6.6,SNR=28						
AKASG				LR	LR	21 35 58.1	
	comp=Z,30nm,18.9s,baz=45,slow=37						
AKBB	**Malin Array Si**	**71.59**	**27**	P	**P**	**21 03 20.1**	**-0.4**
NOA	**NORSAR Array B**	**74.34**	**12**	P	**P**	**21 03 36.6**	**0.0**
	comp=Z,0.6nm,0.8s,baz=200,slow=6.6,SNR=2.4						
NOA				LR	LR	21 37 39.4	
	comp=Z,9.9nm,18.5s,baz=275,slow=37						
KIV	**Kislovodsk**	**74.43**	**38**	P	**P**	**21 03 37.3**	**-0.3**
KIV				IAmb	IAmb	21 03 39.6	
	comp=Z,10nm,1.2s						
MAW	**Mawson**	**74.50**	**157**	LR	LR	21 28 39.9	
	comp=Z,49nm,18.8s,baz=238,slow=30						
FINES	**FINESS Array B**	**78.48**	**18**	P	**P**	**21 04 00.2**	**+0.3**
	comp=Z,5.5nm,1.0s,baz=182,slow=5.7,SNR=9.7						
GEYT	**Alibeck**	**82.24**	**49**	P	**P**	**21 04 20.0**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=296,slow=11,SNR=4.1						
GEYT				LR	LR	21 40 12.0	
	comp=Z,30nm,21.9s,baz=185,slow=35						
ARCES	**ARCESS Array B**	**84.69**	**13**	P	**P**	**21 04 32.5**	**-0.2**
	comp=Z,2.8nm,0.9s,baz=316,slow=3.3,SNR=3.7						
ARCES				LR	LR	21 43 34.1	
	comp=Z,18nm,18.4s,baz=274,slow=37						
SUMG	**Summit**	**85.06**	**353**	P	**P**	**21 04 36.7**	**+1.7**
SUMG				IAmb	IAmb	21 04 44.6	
	comp=Z,6.4nm,1.0s						
ULM	**Lac du Bonnet**	**93.86**	**320**	LR	LR	21 40 50.2	
	comp=Z,63nm,19.6s,baz=87,slow=31						
TXAR	**Lajitas Array**	**95.88**	**299**	P	**P**	**21 05 26.2**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=106,slow=6.7,SNR=1.7						
TXAR				LR	LR	21 52 00.3	
	comp=Z,11nm,18.1s,baz=0.0,slow=38						

MOS ***21*** *20:58:02.6±0.0, 42.°95N×46.°01E, h63*$^{km}_{\pm 3}$*, MPVA4.1*

NORS ***21*** *20:58:02.9±0.0, 42.°92N×46.°01E, h49*^{km}*, MPVA4.2*

TIF ***21*** *20:58:02.4, 42.°98N×46.°01E, h40*$^{km}_{\pm 3}$

DRS ***21*** *20:58:03.7±0.0, 43.°24N×45.°60E, h29*^{km}

DDA ***21*** *20:58:03.7, 42.°85N×45.°81E, h7*$^{km}_{\pm 4}$*, ML1.9*

ISC 21 20:58:02.0±0.9, 42.°99N±0.°03×46.°06E±0.°02, h78$^{km}_{\pm 6}$**, n97, σ2§06/177, 8C-6D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.35**	**160**	*i* Pg	**Pn**	**20 58 14.7**	**+0.2**
BTLR				*e*Sg	**Sn**	**20 58 23.1**	**-0.5**
BTLR	**Botlikh**	**0.35**	**160**	⇓*e*P	**Pn**	**20 58 14.7**	**+0.2**
BTLR				*e*		20 58 22.9	
BTLR				pmax	pmax		
	comp=Z,117nm,0.3s						
BTLR				smax	smax		
	comp=N,755nm,0.3s						
DLMR	**Dylym**	**0.43**	**79**	*i* Pg	**Pn**	**20 58 17.0**	**+2.0**
DLMR				*e*Sg	**Sn**	**20 58 26.0**	**+1.5**
DLMR	**Dylym**	**0.43**	**79**	*i* P	**Pn**	**20 58 17.0**	**+2.0**
DLMR				*e*S	**Sn**	**20 58 26.0**	**+1.5**
DLMR				pmax	pmax		
	comp=Z,121nm,0.1s						
DBC	**Dubki**	**0.57**	**87**	*i* Pg	**Pn**	**20 58 17.1**	**+0.8**
DBC				*e*Sg	**Sn**	**20 58 27.7**	**+0.9**
DBC	**Dubki**	**0.57**	**87**	*e*P	**Pn**	**20 58 17.1**	**+0.8**
DBC				*e*S	**Sn**	**20 58 27.5**	**+0.7**
DBC				pmax	pmax		
	comp=Z,311nm,0.3s						
UNCR	**Uncukul**	**0.61**	**117**	*e*Pg	**Pn**	**20 58 17.0**	**+0.4**
UNCR				*e*Sg	**Sn**	**20 58 27.5**	**+0.1**
UNCR	**Uncukul**	**0.61**	**117**	*e*P	**Pn**	**20 58 17.0**	**+0.4**
UNCR				*e*S	**Sn**	**20 58 27.5**	**+0.1**
UNCR				pmax	pmax		
	comp=Z,41nm,0.3s						
XNZR	**Khunzakh**	**0.65**	**133**	*e*Pg	**Pn**	**20 58 18.1**	**+0.8**
XNZR				*e*Sg	**Sn**	**20 58 28.6**	**+0.2**
XNZR	**Khunzakh**	**0.65**	**133**	*e*P	**Pn**	**20 58 18.1**	**+0.8**
XNZR				*e*S	**Sn**	**20 58 28.6**	**+0.2**
BUJR	**Buynaksk**	**0.79**	**102**	*e*Pg	**Pn**	**20 58 19.8**	**+1.2**
BUJR				*e*Sg	**Sn**	**20 58 33.0**	**+2.2**
BUJR	**Buynaksk**	**0.79**	**102**	⇑*i*P	**Pn**	**20 58 19.7**	**+1.2**
BUJR				*e*		20 58 32.7	
BUJR				pmax	pmax		
	comp=Z,97nm,0.3s						
BUJR				smax	smax		
	comp=N,895nm,0.6s						
ARKR	**Arakani**	**0.79**	**119**	*i* Pg	**Pn**	**20 58 20.0**	**+1.4**
ARKR				*i* Sg	**Sn**	**20 58 32.5**	**+1.7**
ARKR	**Arakani**	**0.79**	**119**	*i* P	**Pn**	**20 58 20.0**	**+1.4**
ARKR				*i* S	**Sn**	**20 58 32.5**	**+1.7**
ARKR				pmax	pmax		
	comp=Z,58nm,0.1s						
KMGR	**Komgaron**	**0.88**	**275**	*e*Pg	**Pn**	**20 58 21.4**	**+1.8**
KMGR				*e*Sg	**Sn**	**20 58 35.9**	**+3.3**
KMGR	**Komgaron**	**0.88**	**275**	*e*P	**Pn**	**20 58 21.4**	**+1.8**
KMGR				*e*S	**Sn**	**20 58 36.9**	**+4.3**
VLKR	**Vladikavkaz**	**1.02**	**274**	*e*Pg	**Pn**	**20 58 23.0**	**+1.8**
VLKR				*e*Sg	**Sn**	**20 58 37.1**	**+1.6**
VLKR	**Vladikavkaz**	**1.02**	**274**	*e*P	**Pn**	**20 58 23.0**	**+1.8**
VLKR				*e*S	**Sn**	**20 58 38.4**	**+2.9**
MAK	**Makhachkala**	**1.06**	**91**	*e*Pg	**Pn**	**20 58 24.4**	**+2.8**
MAK				*e*Sg	**Sn**	**20 58 39.5**	**+3.1**
MAK	**Makhachkala**	**1.06**	**91**	*e*P	**Pn**	**20 58 23.0**	**+1.4**
MAK				*e*		20 58 39.3	
MAK				pmax	pmax		
	comp=Z,97nm,0.2s						
MAK				smax	smax		
	comp=E,611nm,0.3s						
MAK				smax	smax		
	comp=E,646nm,0.4s						
KMKR	**Kumukh**	**1.15**	**138**	*i* Pg	**Pn**	**20 58 24.5**	**+1.5**
KMKR				*e*Sg	**Sn**	**20 58 40.0**	**+1.3**
KMKR	**Kumukh**	**1.15**	**138**	⇑*i*P	**Pn**	**20 58 24.5**	**+1.5**
KMKR				*e*S	**Sn**	**20 58 40.0**	**+1.3**
KMKR				pmax	pmax		
	comp=Z,59nm,0.2s						
LGD	**Lagodekhi**	**1.16**	**173**	P	**Pn**	**20 58 23.7**	**+0.7**
LGD				S	**Sn**	**20 58 39.7**	**+1.1**
LGD	**Lagodekhi**	**1.16**	**173**	*e*Pg	**Pn**	**20 58 23.7**	**+0.7**
LGD				*e*Sg	**Sn**	**20 58 39.7**	**+1.1**
LGD	**Lagodekhi**	**1.16**	**173**	*e*P	**Pn**	**20 58 23.6**	**+0.7**
LGD				*e*S	**Sn**	**20 58 39.7**	**+1.1**
BTKR	**Batakoyurt**	**1.17**	**290**	*i* Pg	**Pn**	**20 58 25.3**	**+2.2**
BTKR				*e*Sg	**Sn**	**20 58 41.0**	**+2.0**
BTKR	**Batakoyurt**	**1.17**	**290**	⇑*i*P	**Pn**	**20 58 25.5**	**+2.4**
BTKR				*e*S	**Sn**	**20 58 43.3**	**+4.4**
TRKR	**Terskaya**	**1.22**	**308**	*i* Pg	**Pn**	**20 58 25.8**	**+2.2**
TRKR				*e*Sg	**Sn**	**20 58 42.8**	**+3.1**
TRKR	**Terskaya**	**1.22**	**308**	⇑*i*P	**Pn**	**20 58 25.8**	**+2.2**
TRKR				*e*S	**Sn**	**20 58 43.7**	**+3.9**
GUDG	**Gudauri**	**1.28**	**246**	P	**Pn**	**20 58 25.9**	**+1.3**
GUDG				S	**Sn**	**20 58 42.2**	**+0.6**
GUDG	**Gudauri**	**1.28**	**246**	*e*Pg	**Pn**	**20 58 25.9**	**+1.3**
GUDG				*e*Sg	**Sn**	**20 58 43.6**	**+2.0**
GUDG	**Gudauri**	**1.28**	**246**	*e*P	**Pn**	**20 58 25.9**	**+1.3**
SGKR	**Sergokala**	**1.29**	**114**	*e*Pg	**Pn**	**20 58 26.0**	**+1.4**
SGKR				*e*Sg	**Sn**	**20 58 45.0**	**+3.5**
SGKR	**Sergokala**	**1.29**	**114**	*e*P	**Pn**	**20 58 26.0**	**+1.4**
SGKR				*e*S	**Sn**	**20 58 45.0**	**+3.5**
LACR	**Lac**	**1.30**	**263**	*i* Pg	**Pn**	**20 58 25.1**	**+0.2**
LACR				*e*Sg	**Sn**	**20 58 41.9**	**-0.1**
LACR	**Lac**	**1.30**	**263**	⇑*i*P	**Pn**	**20 58 25.1**	**+0.2**
LACR				*e*S	**Sn**	**20 58 41.9**	**-0.1**
ARNR	**Ardon**	**1.31**	**279**	*e*Pg	Pn	20 58 40.9	+16
ARNR				*e*Sg	Sn	20 58 58.9	+17
URKR	**Urkarakh**	**1.42**	**125**	*e*Pg	**Pn**	**20 58 28.2**	**+1.8**
URKR				*e*Sg	**Sn**	**20 58 47.3**	**+2.5**
URKR	**Urkarakh**	**1.42**	**125**	⇓*e*P	**Pn**	**20 58 28.2**	**+1.8**
URKR				*e*		20 58 48.6	
URKR				pmax	pmax		
	comp=Z,42nm,0.3s						
URKR				smax	smax		
	comp=N,146nm,0.4s						
KORR	**Kora**	**1.46**	**274**	*e*Pg	**Pn**	**20 58 28.3**	**+1.5**
KORR				*e*Sg	**Sn**	**20 58 47.5**	**+2.0**
KORR	**Kora**	**1.46**	**274**	*e*P	**Pn**	**20 58 28.3**	**+1.5**
KORR				*e*S	**Sn**	**20 58 47.5**	**+2.0**
PRTR	**Priterechnaya**	**1.50**	**301**	*i* Pg	**Pn**	**20 58 29.3**	**+2.0**
PRTR				*e*Sg	**Sn**	**20 58 50.1**	**+3.7**
PRTR	**Priterechnaya**	**1.50**	**301**	⇓*i*P	**Pn**	**20 58 29.3**	**+2.0**
PRTR				*e*S	**Sn**	**20 58 50.1**	**+3.7**
STDR	**Stavd-Durt**	**1.51**	**285**	*e*Pg	**Pn**	**20 58 29.5**	**+2.1**
STDR				*e*Sg	**Sn**	**20 58 49.4**	**+2.9**
STDR	**Stavd-Durt**	**1.51**	**285**	*e*P	**Pn**	**20 58 29.5**	**+2.1**
STDR				*e*S	**Sn**	**20 58 50.2**	**+3.7**
SEAG	**Tbilisi Sea**	**1.54**	**218**	P	**Pn**	**20 58 28.9**	**+1.1**
SEAG				S	**Sn**	**20 58 48.5**	**+1.3**
SEAG	**Tbilisi Sea**	**1.54**	**218**	*e*P	**Pn**	**20 58 28.9**	**+1.1**
SEAG				*e*S	**Sn**	**20 58 48.5**	**+1.3**
DDFL	**Dedoflistskaro**	**1.54**	**178**	P	**Pn**	**20 58 30.2**	**+2.2**
DDFL				S	**Sn**	**20 58 52.7**	**+5.2**
DDFL	**Dedoflistskaro**	**1.54**	**178**	*i* P	**Pn**	**20 58 30.1**	**+2.2**
DDFL				*i* S	**Sn**	**20 58 53.1**	**+5.7**
DDFL	**Dedoflistskaro**	**1.54**	**178**	*e*P	**Pn**	**20 58 30.1**	**+2.2**
DDFL				*e*S	**Sn**	**20 58 52.6**	**+5.2**
TBLG	**Delisi**	**1.59**	**218**	P	**Pn**	**20 58 30.1**	**+1.5**
TBLG				S	**Sn**	**20 58 49.0**	**+0.5**
TBLG	**Delisi**	**1.59**	**218**	*e*Pg	**Pn**	**20 58 30.1**	**+1.5**
TBLG				*e*Sg	**Sn**	**20 58 49.0**	**+0.5**
TBLG	**Delisi**	**1.59**	**218**	*i* P	**Pn**	**20 58 30.1**	**+1.5**
TBLG				*i* S	**Sn**	**20 58 49.4**	**+0.8**
TBLG				IAML		20 58 51.0	
	comp=N,21nm,0.3s						
TBLG				IAML		20 58 52.0	
	comp=E,33nm,0.2s						
TBLG	**Delisi**	**1.59**	**218**	*e*P	**Pn**	**20 58 30.0**	**+1.5**
TBLG				*e*S	**Sn**	**20 58 49.0**	**+0.5**
ZEI	**Tsey**	**1.60**	**264**	*e*Pg	**Pn**	**20 58 29.2**	**+0.5**
ZEI				*e*Sg	**Sn**	**20 58 48.5**	**-0.4**
ZEI	**Tsey**	**1.60**	**264**	*e*P	**Pn**	**20 58 29.2**	**+0.5**
ZEI				*e*S	**Sn**	**20 58 48.5**	**-0.4**
BTNK	**Botanikuri**	**1.61**	**216**	P	**Pn**	**20 58 30.0**	**+1.3**
BTNK	**Botanikuri**	**1.61**	**216**	*e*Pg	**Pn**	**20 58 30.0**	**+1.3**
BTNK	**Botanikuri**	**1.61**	**216**	*i* P	**Pn**	**20 58 30.6**	**+1.9**
BTNK	**Botanikuri**	**1.61**	**216**	*e*P	**Pn**	**20 58 29.9**	**+1.3**
DGRG	**David-gareji**	**1.62**	**199**	P	**Pn**	**20 58 30.1**	**+1.1**
DGRG				S	**Sn**	**20 58 51.1**	**+1.9**
DGRG	**David-gareji**	**1.62**	**199**	*e*Pg	**Pn**	**20 58 30.0**	**+1.1**
DGRG				*e*Sg	**Sn**	**20 58 50.7**	**+1.5**
DGRG	**David-gareji**	**1.62**	**199**	*i* P	**Pn**	**20 58 31.9**	**+3.0**
DGRG				*i* S	**Sn**	**20 58 51.1**	**+1.9**
DGRG				IAML		20 58 55.0	
	comp=N,17nm,0.4s						
DGRG				IAML		20 58 55.0	
	comp=E,14nm,0.3s						
DGRG	**David-gareji**	**1.62**	**199**	*e*P	**Pn**	**20 58 30.0**	**+1.1**
DGRG				*e*S	**Sn**	**20 58 51.1**	**+1.9**
LSNR	**Lesken**	**1.66**	**281**	*e*Pg	**Pn**	**20 58 31.0**	**+1.6**
LSNR				*e*Sg	**Sn**	**

HUIG				*e*S		**Sn**	**21 02 51.1**	**+0.8**
HUIG	**Huatulco**	**2.19**	**213**			**Pn**	**21 02 21.5**	**+0.3**
HUIG						**Sn**	**21 02 51.1**	**+0.8**
YOIG	**Yosondua**	**2.66**	**254**	*e*P		**Pn**	**21 02 27.4**	**+0.2**
YOIG				*i* S		**Sn**	**21 03 00.5**	**-0.4**
PEIG	**Puerto Escondi**	**2.71**	**234**	*i* P		**Pn**	**21 02 27.2**	**-0.3**
PEIG				*i* S		**Sn**	**21 03 02.3**	**+0.7**
CCIG	**Comitan**	**2.94**	**117**	Pn		**Pn**	**21 02 30.5**	**0.0**
CCIG				Sn		**Sn**	**21 03 07.6**	**+0.7**
PNIG	**Pinotepa**	**3.34**	**249**	*e*P		**Pn**	**21 02 34.3**	**-1.1**
PNIG				*e*S		**Sn**	**21 03 14.3**	**-1.5**
PNIG	**Pinotepa**	**3.34**	**249**			**Pn**	**21 02 34.3**	**-1.1**
PNIG						**Sn**	**21 03 14.3**	**-1.5**
TLIG	**Tlapa**	**3.52**	**270**			**Pn**	**21 02 39.1**	**+1.3**
TLIG				Sn		**Sn**	**21 03 19.3**	**-0.7**

IDC 21 21:38:30.3±3.0, 23°.93N×92°.08E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/29, mbtmp3.3/3, MS3.4/1, Ms1 3.4/1, ms1mx2.4/31, Error ellipse: s-maj=108.9km s-min=31.7km az=69.0, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**22.03**	**162**	LR	LR	21 53 19.9	
	comp=Z,96nm,18.1s,baz=98,slow=40						
MKAR	**Makanchi Array**	**24.13**	**343**	P	P	21 43 47.8	-0.1
	0.1nm,0.4s,baz=168,slow=7.4,SNR=2.4						
SONM	**Songino Array**	**26.43**	**22**	P	P	21 44 09.0	0.0
	0.5nm,0.4s,baz=188,slow=7.3,SNR=1.3						
WRA	**Warramunga Arr**	**59.98**	**133**	P	P	21 48 38.9	0.0
	0.6nm,1.1s,baz=321,slow=7.5,SNR=5.2						

*ATH **21** 22:04:58.6, 41°.57N×19°.56E, h26km±1km, ML2.4/7, Error ellipse: s-maj=6.4km s-min=1.9km az=177.0*
*PDG **21** 22:04:59.6±0.2, 41°.60N×19°.71E, h20km, ML2.3/13, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*
*THE **21** 22:04:59.4, 41°.67N×19°.64E, h7km, ML2.4/3, Error ellipse: s-maj=1.4km s-min=0.7km az=126.0*
*BEO **21** 22:05:00.5±0.3, 41°.66N×19°.82E, h10km±2km, ML2.2/14*
*SKO **21** 22:05:00.7, 41°.57N×19°.71E, h21km*
*RHSSO **21** 22:05:01.3±0.8, 41°.64N×19°.69E, h20km±3km, ML2.5/8*

ISC 21 22:05:00.2±0.9, 41°.62N±0°.02×19°.73E±0°.02, h18km±6km, n103, σ1s17/167, 13C-10D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.29**	**159**	*e*Pg		**Pg**	**22 05 06.1**	**-0.3**
TIR				*e*Sg		**Sg**	**22 05 11.8**	**+1.0**
TIR	**Tirane**	**0.29**	**159**	P		**Pg**	**22 05 06.2**	**-0.3**
TIR				S		**Sg**	**22 05 11.8**	**+1.0**
	575nm,0.3s							
TIR	**Tirane**	**0.29**	**159**	*i* PG		**Pg**	**22 05 06.2**	**-0.3**
TIR				*i* SG		**Sg**	**22 05 10.8**	**0.0**
TIR	**Tirane**	**0.29**	**159**	P		**Pg**	**22 05 06.1**	**-0.3**
TIR				S		**Sg**	**22 05 11.7**	**+1.0**
TIR				AML	AML	22 05 13.5		
	comp=N,3380μm,0.2s							
TIR				AML	AML	22 05 15.6		
	comp=E,2456μm,0.4s							
TIR	**Tirane**	**0.29**	**159**	⇑P		**Pg**	**22 05 06.3**	**-0.3**
PUK	**Puka**	**0.44**	**16**	*i* PG		**Pb**	**22 05 09.1**	**-0.5**
PUK				*i* SG		**Sb**	**22 05 16.6**	**+0.6**
ULC	**Ulcinj**	**0.50**	**314**	⇓*i*Pg		**Pg**	**22 05 10.1**	**-0.2**
ULC				*i* Sg		**Sg**	**22 05 18.2**	**+1.2**
PHP	**Peshkopia**	**0.54**	**83**	P		**Pg**	**22 05 10.3**	**-0.7**
PHP				S		**Sb**	**22 05 19.6**	**+0.9**
PHP	**Peshkopia**	**0.54**	**83**	*i* PG		**Pg**	**22 05 10.2**	**-0.7**
PHP				*i* SG		**Sb**	**22 05 18.6**	**-0.1**
DRME	**Dracevica, Mon**	**0.70**	**325**	*e*Pg		**Pg**	**22 05 13.2**	**-0.7**
DRME				*e*Sg		**Sb**	**22 05 24.3**	**+1.1**
DRME	**Dracevica, Mon**	**0.70**	**325**	⇓*i*Pg		**Pg**	**22 05 13.1**	**-0.8**
DRME				*i* Sg		**Sb**	**22 05 24.5**	**+1.3**
BCI	**Bajram Curri**	**0.79**	**19**	*i* PG		**Pb**	**22 05 15.1**	**-0.5**
BCI				*i* SG		**Sn**	**22 05 27.1**	**-0.9**
PDG	**Podgorica**	**0.89**	**337**	*e*Pg		**Pg**	**22 05 17.6**	**+0.1**
PDG				*e*Sg		**Sb**	**22 05 29.9**	**+1.3**
PDG	**Podgorica**	**0.89**	**337**	*e*Pg		**Pg**	**22 05 17.1**	**-0.4**
PDG				*e*Sg		**Sb**	**22 05 29.4**	**+0.8**
TTG	**Podgorica**	**0.89**	**337**	⇓*i*Pg		**Pg**	**22 05 16.2**	**-1.3**
TTG				*i* Sg		**Sb**	**22 05 30.5**	**+1.9**
BUM	**Brajici-Budva**	**0.92**	**318**	⇑*i*Pg		**Pg**	**22 05 17.0**	**-1.2**
BUM				*i* Sg		**Sb**	**22 05 32.0**	**+2.2**
OHR	**Ohrid**	**0.95**	**122**	⇓*i*Pg		**Pg**	**22 05 17.8**	**-0.9**
OHR				*i* Sg		**Sb**	**22 05 31.6**	**+1.0**
OHR				*e*Lg		Lg	22 05 34.2	
	comp=N,94nm,0.6s							
OHR	**Ohrid**	**0.95**	**122**	⇓*i*Pg		**Pg**	**22 05 17.8**	**-0.9**
OHR				*i* Sg		**Sb**	**22 05 31.6**	**+1.0**
OHR				*e*Lg		Lg	22 05 34.2	
	comp=N,94nm,0.6s							
PVY	**Plav**	**0.99**	**10**	⇑*i*Pg		**Pg**	**22 05 18.6**	**-0.9**
PVY				*i* Sg		**Sn**	**22 05 34.5**	**+1.4**
CEME	**Cevo**	**1.11**	**327**	⇑*i*Pg		**Pb**	**22 05 20.6**	**-0.3**
CEME				*i* Sg		**Sn**	**22 05 38.1**	**+2.3**
VLO	**Vlora**	**1.16**	**189**	P		**Pn**	**22 05 21.8**	**+0.2**
VLO	**Vlora**	**1.16**	**189**	*i* PG		**Pn**	**22 05 21.3**	**-0.3**
VLO				*i* SG		**Sb**	**22 05 37.5**	**+1.0**
HCY	**Herceg Novi**	**1.24**	**313**	*e*Pg		**Pn**	**22 05 22.9**	**+0.2**
HCY				*e*Sg		**Sb**	**22 05 40.0**	**+1.3**
HCY	**Herceg Novi**	**1.24**	**313**	⇓*i*Pg		**Pn**	**22 05 22.7**	**0.0**
HCY				*i* Sg		**Sg**	**22 05 41.2**	**+0.9**
KOME	**Kolasin**	**1.24**	**353**	⇑*i*Pg		**Pb**	**22 05 23.0**	**-0.2**
KOME				*i* Sg		**Sn**	**22 05 42.0**	**+2.8**
IVA	**Berane**	**1.26**	**6**	⇑*i*Pg		**Pb**	**22 05 23.5**	**0.0**
IVA				*i* Sg		**Sn**	**22 05 42.9**	**+3.2**
NKME	**Niksic**	**1.28**	**334**	⇑*i*Pg		**Pn**	**22 05 23.8**	**+0.4**
NKME				*i* Sg		**Sn**	**22 05 43.0**	**+2.8**
NKY	**Niksic**	**1.31**	**336**	⇑*i*Pg		**Pn**	**22 05 24.4**	**+0.6**
NKY				*i* Sg		**Sg**	**22 05 42.9**	**+0.1**
SKO	**Skopje**	**1.33**	**74**	*e*Pg		**Pb**	**22 05 24.2**	**-0.5**
SKO				*e*Sg		**Sb**	**22 05 40.4**	**-1.0**
SKO	**Skopje**	**1.33**	**74**	*i* Pg		**Pg**	**22 05 24.9**	**-0.9**
SKO				*i* Sg		**Sn**	**22 05 44.0**	**+2.8**
SKO				*e*Lg		Lg	22 05 46.3	
	comp=N,8.9nm,0.5s							
SKO	**Skopje**	**1.33**	**74**	*i* Pg		**Pg**	**22 05 24.9**	**-0.9**
SKO				*i* Sg		**Sn**	**22 05 44.0**	**+2.8**
SKO				*e*Lg		Lg	22 05 46.3	
	comp=N,8.9nm,0.5s							
TPE	**Tepelena**	**1.34**	**171**	P		**Pn**	**22 05 24.4**	**+0.4**
TPE				S		**Sn**	**22 05 44.0**	**+2.6**
	comp=N,202nm,0.7s							
TPE	**Tepelena**	**1.34**	**171**	*i* PN		**Pn**	**22 05 24.4**	**+0.4**
TPE				*i* SN		**Sb**	**22 05 43.3**	**+1.7**
FNA	**Florina**	**1.50**	**123**	P		**Pn**	**22 05 27.1**	**+0.8**
FNA				S		**Sg**	**22 05 48.4**	**-0.2**
	comp=N,120nm,0.3s							
FNA	**Florina**	**1.50**	**123**	P		**Pn**	**22 05 27.0**	**+0.7**
FNA				S		**Sg**	**22 05 47.6**	**-0.9**
FNA				AML	AML	22 05 49.6		
	comp=E,204μm,0.3s							
FNA				AML	AML	22 05 51.6		
	comp=N,288μm,0.4s							
TREB	**Trebinje**	**1.50**	**318**	*e*Pg		**Pn**	**22 05 26.5**	**+0.2**
TREB				*e*Sg		**Sn**	**22 05 47.8**	**+2.3**
TREB	**Trebinje**	**1.50**	**318**	*e*Pg		**Pn**	**22 05 27.4**	**+1.1**
TREB				*e*Sg		**Sn**	**22 05 47.3**	**+1.8**
BRY	**Bratogost**	**1.56**	**326**	*e*Pg		**Pn**	**22 05 28.6**	**+1.4**
BRY				*e*Sg		**Sb**	**22 05 49.8**	**+1.7**
BRY	**Bratogost**	**1.56**	**326**	⇑*i*Pg		**Pn**	**22 05 27.2**	**0.0**
BRY				*i* Sg		**Sn**	**22 05 48.7**	**+1.6**
NEST	**Nestorio**	**1.56**	**140**	P		**Pn**	**22 05 28.5**	**+1.3**
NEST	**Nestorio**	**1.56**	**140**	P		**Pn**	**22 05 28.4**	**+1.1**
NEST				AML	AML	22 05 52.2		
	comp=E,152μm,0.3s							
NEST				AML	AML	22 05 52.6		
	comp=N,101μm,0.5s							
DBRK	**Dubrovnik**	**1.58**	**312**	*i* Pn		**Pn**	**22 05 27.4**	**+0.1**
DBRK				Sn		**Sn**	**22 05 49.6**	**+2.3**
SJES	**Sjenica**	**1.65**	**6**	*e*Pg		**Pb**	**22 05 30.6**	**+0.3**
SJES				*e*Sg		**Sb**	**22 05 51.4**	**+0.6**
UPM	**Unac-Piva**	**1.70**	**339**	*e*Pn		**Pn**	**22 05 30.0**	**+0.8**
UPM				*e*Sn		**Sn**	**22 05 50.7**	**+0.1**
UPM	**Unac-Piva**	**1.70**	**339**	⇓*i*Pn		**Pn**	**22 05 29.5**	**+0.3**
UPM				*i* Sn		**Sb**	**22 05 53.2**	**+1.0**
PLE	**Pljevlja**	**1.73**	**352**	⇓*i*Pn		**Pn**	**22 05 30.1**	**+0.5**
PLE				*i* Sn		**Sb**	**22 05 53.9**	**+0.9**
SRN	**Sarande**	**1.75**	**173**	*i* PN		**Pn**	**22 05 29.2**	**-0.5**
SRN				*i* SN		**Sn**	**22 05 54.8**	**+3.3**
PENT	**Pentalofos**	**1.78**	**143**	P		**Pn**	**22 05 31.7**	**+1.5**
SCTE	**Santa Cesarea**	**1.81**	**212**	P		**Pn**	**22 05 28.6**	**-2.0**
SCTE				AML	AML	22 05 59.5		
	comp=E,81μm,0.3s							
SCTE				AML	AML	22 06 01.4		
	comp=N,72μm,0.4s							
KEK	**Kerkira**	**1.90**	**178**	P		**Pn**	**22 05 31.0**	**-0.8**
KEK				AML	AML	22 05 58.8		
	comp=N,93μm,0.5s							
KEK				AML	AML	22 06 05.3		
	comp=E,146μm,0.2s							
SELS	**Selova**	**1.91**	**32**	*e*Pg		**Pn**	**22 05 32.4**	**+0.5**
SELS				*e*Sg		**Sb**	**22 05 57.5**	**-0.5**
CGL1	**Ceglie Messapi**	**1.95**	**241**	*e*Pn		**Pn**	**22 05 35.0**	**+2.5**
STON	**Ston**	**1.96**	**310**	*e*Pn		**Pn**	**22 05 32.7**	**+0.1**
STON				*e*Sn		**Sn**	**22 05 56.5**	**-0.2**
STON	**Ston**	**1.96**	**310**	*e*Pn		**Pn**	**22 05 32.7**	**+0.1**
STON				Sn		**Sn**	**22 05 55.7**	**-1.0**
BARS	**Barje**	**1.96**	**52**	*e*Pn		**Pn**	**22 05 33.6**	**+1.0**
BARS				*e*Sn		**Sn**	**22 05 56.7**	**-0.1**
IVAS	**Ivanjica**	**1.98**	**9**	*e*Pn		**Pn**	**22 05 33.3**	**+0.3**
IVAS				*e*Sn		**Sn**	**22 05 57.1**	**-0.4**
KZN	**Kozani**	**2.03**	**130**	P		**Pn**	**22 05 34.1**	**+0.5**
KPRO	**Kipourio**	**2.07**	**143**	P		**Pn**	**22 05 35.4**	**+1.2**
KPRO	**Kipourio**	**2.07**	**143**	P		**Pn**	**22 05 36.2**	**+2.0**
IGT	**Igoumenitsa**	**2.13**	**167**	P		**Pn**	**22 05 35.2**	**+0.2**
IGT	**Igoumenitsa**	**2.13**	**167**	P		**Pn**	**22 05 34.7**	**-0.2**
IGT				AML	AML	22 06 16.8		
	comp=E,96μm,0.5s							
IGT				AML	AML	22 06 19.2		
	comp=N,99μm,0.5s							
VAY	**Valandovo**	**2.16**	**97**	*e*Pn		**Pn**	**22 05 35.4**	**+0.1**
VAY	**Valandovo**	**2.16**	**97**	*i* Pn		**Pn**	**22 05 35.7**	**+0.4**
VAY				*i* Sn		**Sn**	**22 06 01.3**	**-0.3**
VAY				*e*Lg		Lg	22 06 03.6	
	comp=E,24nm,0.9s							
VAY	**Valandovo**	**2.16**	**97**	*i* Pn		**Sn**	**22 05 35.7**	**+0.4**
VAY				*i* Sn		**Sn**	**22 06 01.3**	**-0.3**
VAY				*e*Lg		Lg	22 06 03.6	
	comp=E,24nm,0.9s							
NOCI	**Noci**	**2.17**	**248**	P		**Pn**	**22 05 34.0**	**-1.6**
NOCI				AML	AML	22 06 16.3		
	comp=E,113μm,0.4s							
NOCI				AML	AML	22 06 20.3		
	comp=N,109μm,0.3s							
BAI	**Bari**	**2.20**	**258**	*e*Pn		**Pn**	**22 05 34.4**	**-1.5**
BOSS	**Bosilegrad**	**2.23**	**66**	*e*Pn		**Pn**	**22 05 36.5**	**+0.1**
BOSS				*e*Sn		**Sn**	**22 06 02.9**	**-0.6**
BBLS	**Lazići**	**2.26**	**354**	*e*Pn		**Pn**	**22 05 38.1**	**+1.3**
BBLS				*e*Sn		**Sn**	**22 06 06.1**	**+1.8**
BBLS	**Lazići**	**2.26**	**354**	*e*Pn		**Pn**	**22 05 37.9**	**+1.1**
BBLS				*e*Sn		**Sn**	**22 06 04.3**	**0.0**
SG1	**Sgolgore (BA)**	**2.43**	**252**	*e*Pn		**Pn**	**22 05 37.3**	**-1.7**
KNT	**Kendrikon**	**2.43**	**100**	P		**Pn**	**22 05 39.5**	**+0.4**
MATE	**Matera**	**2.48**	**248**	⇑P		**Pn**	**22 05 38.5**	**-1.2**
DIVS	**Divibare**	**2.49**	**4**	*e*Pn		**Pn**	**22 05 39.8**	**-0.2**
DIVS				*e*Sn		**Sn**	**22 06 10.0**	**+0.1**
DIVS	**Divibare**	**2.49**	**4**	*e*Pn		**Pn**	**22 05 40.4**	**+0.4**
DIVS				*e*Sn		**Sn**	**22 06 10.1**	**+0.1**
LIT	**Litokhoron**	**2.59**	**125**	P		**Pn**	**22 05 41.9**	**+0.6**
MAKA	**Makarska**	**2.61**	**311**	*e*Pn		**Pn**	**22 05 41.1**	**-0.4**
MAKA				Sn		**Sn**	**22 06 11.9**	**-0.8**
TRUS	**Trudelj**	**2.65**	**11**	*e*Pn		**Pn**	**22 05 42.5**	**+0.4**
RICI	**Ricice**	**2.68**	**315**	*i* Pn		**Pn**	**22 05 42.8**	**+0.3**
RICI				Sn		**Sn**	**22 06 15.3**	**+0.7**
THL	**Klokotos Trika**	**2.69**	**139**	P		**Pn**	**22 05 42.8**	**+0.2**
ZAPS	**Zavoj**	**2.71**	**51**	*e*Pn		**Pn**	**22 05 44.9**	**+1.9**
ZAPS				*e*Sn		**Sn**	**22 06 16.1**	**+0.6**
VTS	**Vitosha**	**2.80**	**68**	*e*Pn		**Pn**	**22 05 44.0**	**-0.2**
VTS				*e*Sn		**Sn**	**22 06 15.9**	**-1.7**
VTS	**Vitosha**	**2.80**	**68**	⇑P		Pn	22 05 37.4	-6.8
ZAGS	**Zajecar**	**2.87**	**39**	*e*Pn		**Pn**	**22 05 44.6**	**-0.5**
ZAGS				*e*Sn		**Sn**	**22 06 17.7**	**-1.5**
LKD2	**Lefkada island**	**2.91**	**166**	P		**Pn**	**22 05 44.8**	**-1.0**
LKD2	**Lefkada island**	**2.91**	**166**	P		**Pn**	**22 05 44.8**	**-1.0**
PLG	**Polygyros**	**3.08**	**113**	P		**Pn**	**22 05 48.7**	**+0.7**
EVR	**Evrytania**	**3.13**	**149**	P		**Pn**	**22 05 49.6**	**+0.8**
MAKR	**Makrakomi, Fth**	**3.19**	**144**	P		**Pn**	**22 05 50.0**	**+0.5**
FSK	**Fiskardo**	**3.22**	**168**	P		**Pn**	**22 05 48.2**	**-1.7**
AGG	**Agios Georgios**	**3.27**	**142**	P		**Pn**	**22 05 50.9**	**+0.2**
TIP	**Timpagrande**	**3.33**	**224**	P		**Pn**	**22 05 49.5**	**-2.0**
TIP	**Timpagrande**	**3.33**	**224**	⇓P		**Pn**	**22 05 49.8**	**-1.6**
KIJV	**Kijevo**	**3.42**	**315**	*e*Pn		**Pn**	**22 05 52.7**	**+0.1**
KIJV				Sn		**Sn**	**22 06 32.5**	**-0.2**
MDVR	**Moldovita**	**3.48**	**24**	⇑P		**Pn**	**22 05 52.6**	**-1.0**
VLS	**Valsamata**	**3.50**	**169**	P		**Pn**	**22 05 52.0**	**-1.7**
FRGS	**Fruska Gora**	**3.54**	**1**	*e*Pn		**Pn**	**22 05 55.3**	**+1.0**
FRGS				*e*Sn		**Sn**	**22 06 34.9**	**-0.9**
ZIRJ	**Zirje**	**3.63**	**305**	*e*Pn		**Pn**	**22 05 55.2**	**-0.4**
ZIRJ				Sn		**Sn**	**22 06 37.0**	**-1.1**
DUGI	**Dugi Otok**	**4.17**	**306**	*i* Pn		**Pn**	**22 06 02.6**	**-0.4**
DUGI				Sn		**Sn**	**22 06 49.8**	**-1.6**
BZS	**Buzias**	**4.23**	**18**	⇑P		**Pn**	**22 06 04.1**	**+0.3**
NVLJ	**Novalja**	**4.62**	**311**	*e*Pn		**Pn**	**22 06 08.6**	**-0.5**
NVLJ				Sn		**Sn**	**22 07 00.5**	**-1.8**
ELND	**Elena**	**4.75**	**72**	⇓P		Pn	22 05 57.5	-13
CRES	**Cresnjev**	**5.22**	**325**	*e*Pn		**Pn**	**22 06 17.6**	**+0.2**
CEY	**Cerknica**	**5.63**	**319**	*e*Pn		**Pn**	**22 06 22.9**	**-0.2**
CEY				*e*Sn		**Sn**	**22 07 24.7**	**-2.7**

*IDC **21** 22:24:48.5±1.2, 24°.37N×121°.02E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.5/46, mbtmp3.8/5, ML2.9/1, MS3.1/4, Ms1 3.1/4, ms1mx2.6/43, Error ellipse: s-maj=70.4km s-min=20.4km az=70.0*
*TAP **21** 22:24:48.9, 24°.81N×122°.29E, h9km, ML3.8, C*
*NEIC **21** 22:24:50.1±1.8, 24°.73N±0°.04×122°.25E±0°.02, h13km±6km, mb4.2/4, Error ellipse: s-maj=6.3km s-min=2.1km az=178.0*
*JMA **21** 22:24:50.1±0.1, 24°.76N×122°.29E, h23km, M3.0*

ISC 21 22:24:49.7±1.0, 24°.77N±0°.02×122°.30E±0°.02, h11km±7km, n125, σ0s83/219, mb4.1/6, MS3.0/3, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.26**	**216**	P		**Pg**	**22 24 55.3**	**+0.2**
	baz=218							
EOS1				S		**Sb**	**22 25 01.3**	**+0.5**
	baz=218							
TWB1	**Santiao Chiao**	**0.37**	**311**	P		**Pg**	**22 24 56.5**	**-0.5**
	baz=307							
TWB1				S		**Sg**	**22 25 01.4**	**-0.6**
	baz=307							
NTC	**Toucheng**	**0.43**	**282**	*e*P		**Pg**	**22 24 57.5**	**-0.7**
	baz=276							
NTC				S		**Sg**	**22 25 04.8**	**+0.8**
	baz=276							
TWC	**Suao**	**0.44**	**249**	*e*P		**Pg**	**22 24 57.1**	**-1.1**
	baz=252							
TWC				*e*S		**Sb**	**22 25 05.4**	**-0.4**
	baz=252							
TIPB	**Shuangxi**	**0.47**	**296**	P		**Pg**	**22 24 58.4**	**-0.6**
	baz=291							
TIPB				*e*S		**Sg**	**22 25 05.7**	**+0.4**
	baz=291							
ILA	**Ilan**	**0.50**	**270**	*e*P		**Pg**	**22 24 59.3**	**-0.1**
	baz=253							
ILA				*e*S		**Sb**	**22 25 08.4**	**+0.7**
	baz=253							
NWF	**Wu-fen Shan**	**0.56**	**303**	*e*P		**Pg**	**22 25 01.2**	**+0.6**
	baz=299							
NWF				*e*S		**Sb**	**22 25 09.4**	**-0.2**
	baz=299							
WFSB	**Wu-fen Shan**	**0.56**	**303**	*e*P		**Pg**	**22 25 00.8**	**+0.2**
	baz=299							
TWE	**Neicheng**	**0.57**	**266**	P		**Pg**	**22 24 59.8**	**-1.1**
	baz=253							
TWE				S		**Sb**	**22 25 09.7**	**-0.1**
	baz=253							
ENA	**Nanau**	**0.61**	**237**	*e*P		**Pg**	**22 25 01.2**	**-0.3**
	baz=232							
ENA				*e*S		**Sg**	**22 25 10.2**	**+0.7**
	baz=232							
JYNG	**Yonagunijimaku**	**0.67**	**118**	P		**Pg**	**22 25 02.6**	**0.0**
JYNG				S		**Sb**	**22 25 13.4**	**+0.9**
ENTT	**Nioudou**	**0.68**	**260**	P		**Pg**	**22 25 02.4**	**-0.4**
	baz=255							
ENTT				S		**Sg**	**22 25 12.1**	**+0.4**
	baz=255							
YOJ	**Yonaguni jima**	**0.72**	**115**	P		**Pg**	**22 25 03.6**	**0.0**
	baz=117							
YOJ				S		**Sb**	**22 25 14.0**	**0.0**
	baz=117							
YOJ	**Yonaguni jima**	**0.72**	**115**	P		**Pg**	**22 25 03.5**	**0.0**
YOJ				*e*S		**Sb**	**22 25 14.6**	**+0.7**
YOJ	**Yonaguni jima**	**0.72**	**115**			**Pg**	**22 25 03.8**	**+0.2**
NWLT	**Wulai**	**0.72**	**271**	*e*P		**Pg**	**22 25 03.2**	**-0.5**
	baz=267							
NWLT				*e*S		**Sg**	**22 25 13.5**	**+0.3**
	baz=267							
NHDH	**Xindian Distri**	**0.73**	**286**	*e*P		**Pb**	**22 25 04.5**	**+0.2**
	baz=274							
NHDH				S		**Sb**	**22 25 14.9**	**+0.6**
	baz=274							
NDT	**Datong Townshi**	**0.73**	**257**	P		**Pg**	**22 25 03.4**	**-0.4**
	baz=253							
NDT				S		**Sb**	**22 25 14.3**	**-0.1**
	baz=253							
TAP1	**Taipei**	**0.75**	**291**	P		**Pb**	**22 25 05.3**	**+0.6**
	baz=287							
TAP1				S		**Sb**	**22 25 16.2**	**+1.2**
	baz=287							
YM01	**YM01**	**0.76**	**300**	P		**Pg**	**22 25 04.9**	**+0.5**
	baz=297							
YM01				S		**Sb**	**22 25 15.1**	**-0.2**
	baz=297							
TATO	**Taipei**	**0.76**	**286**	P		**Pb**	**22 25 05.1**	**+0.2**
	baz=282							
TATO				S		**Sb**	**22 25 15.4**	**+0.1**
	baz=282							
TATO	**Taipei**	**0.76**	**286**			**Pg**	**22 25 04.3**	**-0.1**
TATO					Sg	**Sn**	**22 25 16.7**	**-1.1**
TAP	**Taipei**	**0.77**	**291**	*e*P		**Pg**	**22 25 04.2**	**-0.3**
	baz=287							
TAP				S		**Sb**	**22 25 15.6**	**+0.2**
	baz=287							
YM08	**YM08**	**0.77**	**303**	*e*P		**Pg**	**22 25 04.4**	**-0.1**
	baz=300							
YM08				*e*S		**Sb**	**22 25 15.4**	**0.0**
	baz=300							
YM11	**YM11**	**0.77**	**301**	*e*P		**Pg**	**22 25 04.8**	**+0.3**
	baz=298							
YM11				*e*S		**Sb**	**22 25 16.1**	**+0.6**
	baz=298							
YM10	**YM10**	**0.77**	**300**	P		**Pg**	**22 25 05.0**	**+0.4**
	baz=297							
YM10				S		**Sg**	**22 25 15.3**	**+0.6**
	baz=297							
YM04	**YM04**	**0.79**	**299**	P		**Pg**	**22 25 05.1**	**+0.1**
	baz=296							
YM04				*e*S		**Sb**	**22 25 16.3**	**+0.1**
	baz=296							
YM03	**YM03**	**0.80**	**301**	*e*P		**Pg**	**22 25 05.7**	**+0.5**
	baz=298							
YM03				*e*S		**Sb**	**22 25 17.0**	**+0.5**
	baz=298							
TWY	**Chenhua**	**0.81**	**309**	P		**Pg**	**22 25 05.5**	**+0.2**
	baz=306							
TWY				S		**Sb**	**22 25 17.6**	**+0.9**
	baz=306							
ANP	**Anpu**	**0.82**	**301**	*e*P		**Pg**	**22 25 05.7**	**+0.1**
	baz=298							
ANP				*e*S		**Sb**	**22 25 17.0**	**-0.1**
	baz=298							
YHNB	**Yeheng**	**0.84**	**264**	*e*P		**Pg**	**22 25 05.3**	**-0.7**
	baz=253							
YHNB				S		**Sg**	**22 25 16.6**	**-0.5**
	baz=253							
YHNB	**Yeheng**	**0.84**	**264**			**Pg**	**22 25 04.5**	**-1.5**
NSK	**Sanguang**	**0.86**	**264**	*e*P		**Pg**	**22 25 05.3**	**-0.9**
	baz=261							
NSK				*e*S		**Sg**	**22 25 16.9**	**-0.5**
	baz=261							
TWS1	**Kuangyinshan**	**0.86**	**293**	P		**Pb**	**22 25 06.8**	**+0.2**
	baz=290							
TWS1				S		**Sb**	**22 25 19.3**	**+1.0**
	baz=290							
NACB	**Ninganchiao**	**0.87**	**228**	P		**Pg**	**22 25 06.2**	**-0.3**
	baz=233							
NACB				*e*S		**Sg**	**22 25 17.9**	**+0.1**
	baz=233							
NACB	**Ninganchiao**	**0.87**	**228**			**Pg**	**22 25 05.3**	**-1.1**
PCYT	**Pengchaiyu**	**0.89**	**347**	*e*P		**Pg**	**22 25 05.2**	**-1.6**
	baz=348							
PCYT		

PTSB	**Yuanli**	**1.48 258**	*eP*	**Pb**	**22 25 17.8**	**+0.6**		
	baz=275							
PTSB			*eS*	**Sg**	**22 25 39.1**	**+1.6**		
	baz=275							
HGSD	**Ruisui**	**1.50 212**	*eP*	**Pb**	**22 25 17.4**	**-0.1**		
	baz=193							
HGSD			*eS*	**Sg**	**22 25 38.4**	**+0.5**		
	baz=193							
EHY	**Hungye**	**1.54 216**	*eP*	**Pb**	**22 25 17.9**	**-0.3**		
	baz=192							
EHY			*eS*	**Sg**	**22 25 39.8**	**+0.6**		
	baz=192							
HATJ	**Hateruma jima**	**1.54 117**	P	**Pn**	**22 25 16.1**	**-1.0**		
SMLT	**Sun Moon Lake**	**1.55 236**	*eP*	**Pg**	**22 25 19.2**	**-0.1**		
	baz=234							
SMLT			S	**Sg**	**22 25 39.7**	**+0.2**		
	baz=234							
WDJ	**Dajia District**	**1.56 255**	*eP*	**Pb**	**22 25 18.9**	**+0.3**		
	baz=272							
WDJ			*eS*	**Sg**	**22 25 41.5**	**+1.4**		
	baz=272							
SSLB	**Suanglung**	**1.56 232**	*eP*	**Pb**	**22 25 18.2**	**-0.5**		
	baz=239							
SSLB			S	**Sb**	**22 25 38.9**	**+0.4**		
	baz=239							
SSLB	**Suanglung**	**1.56 232**		**Pn**	**22 25 17.6**	**+0.3**		
TYC	**Yuchr**	**1.57 237**	*eP*	**Pg**	**22 25 19.6**	**-0.2**		
	baz=236							
TYC			*eS*	**Sg**	**22 25 39.4**	**-0.7**		
	baz=236							
TCU	**Taichung**	**1.60 248**	*eP*	**Pg**	**22 25 20.7**	**+0.3**		
	baz=247							
TCU			*eS*	**Sg**	**22 25 42.2**	**+1.0**		
	baz=247							
YULB	**Yu-li**	**1.64 214**	*eP*	**Pn**	**22 25 18.6**	**+0.1**		
	baz=210							
YULB			*eS*	**Sg**	**22 25 41.7**	**-0.8**		
	baz=210							
YULB	**Yu-li**	**1.64 214**		**Pn**	**22 25 18.4**	**-0.1**		
JKRS	**Kuro-shima**	**1.65 108**	P	**Pn**	**22 25 17.4**	**-1.1**		
JKRS			*eS*	**Sn**	**22 25 38.4**	**-1.2**		
TWF1	**Yuli**	**1.68 213**	*eP*	**Pn**	**22 25 18.7**	**-0.2**		
	baz=231							
TWF1			*eS*	**Sg**	**22 25 42.8**	**-0.9**		
	baz=231							
WHYT	**Xinyi Township**	**1.69 231**	*eP*	**Pb**	**22 25 21.5**	**+0.6**		
	baz=243							
WHYT			*eS*	**Sg**	**22 25 44.3**	**+0.2**		
	baz=243							
WJS	**Zhushan**	**1.71 237**	*eP*	**Pb**	**22 25 21.7**	**+0.6**		
	baz=238							
WJS			*eS*	**Sg**	**22 25 46.5**	**+1.8**		
	baz=238							
WNT	**Mingjian**	**1.72 239**	*eP*	**Pb**	**22 25 21.5**	**+0.3**		
	baz=261							
WNT			*eS*	**Sg**	**22 25 45.1**	**+0.2**		
	baz=261							
WCHH	**Zhanghua**	**1.73 247**	*eS*	**Sg**	**22 25 44.3**	**-0.8**		
	baz=247							
JIJ	**Ishigaki jima**	**1.73 103**	P	**Pn**	**22 25 19.0**	**-0.6**		
FULB	**Fuli**	**1.81 211**	*eP*	**Pn**	**22 25 20.0**	**-0.7**		
	baz=189							
FULB			*eS*	**Sb**	**22 25 44.7**	**-0.8**		
	baz=189							
JISG	**Ishigakijimahi**	**1.84 95**	P	**Pb**	**22 25 23.2**	**-0.1**		
CHKT	**Chengkung**	**1.86 207**	*eP*	**Pn**	**22 25 20.9**	**-0.5**		
	baz=188							
CHKT			*eS*	**Sn**	**22 25 44.3**	**-0.6**		
	baz=188							
CHN5	**Tsauling**	**1.88 232**	*eP*	**Pb**	**22 25 23.3**	**-0.7**		
	baz=233							
CHN5			*eS*	**Sg**	**22 25 49.1**	**-1.1**		
	baz=233							
WGK	**Gukeng**	**1.91 236**	*eP*	**Pb**	**22 25 24.1**	**-0.5**		
	baz=237							
WGK			*eS*	**Sg**	**22 25 50.9**	**-0.3**		
	baz=237							
WDLH	**Douliu**	**1.93 237**	*eP*	**Pb**	**22 25 23.9**	**-1.0**		
	baz=237							
WDLH			*eS*	**Sg**	**22 25 50.4**	**-1.4**		
	baz=237							
ELDTW	**Lidau**	**1.96 217**	*eP*	**Pn**	**22 25 23.3**	**+0.4**		
	baz=198							
ELDTW			*eS*	**Sn**	**22 25 47.6**	**+0.2**		
	baz=198							
RLNB	**Erlin**	**1.97 244**	*eS*	**Sb**	**22 25 50.4**	**+0.3**		
	baz=247							
CHN4	**Tsaushan**	**2.10 228**	*eP*	**Pb**	**22 25 26.9**	**-0.8**		
	baz=229							
CHN4			*eS*	**Sg**	**22 25 56.0**	**-1.2**		
	baz=229							
TPUB	**Ta-pu**	**2.11 227**	*eP*	**Pn**	**22 25 26.4**	**+1.5**		
	baz=205							
TPUB			*eS*	**Sb**	**22 25 54.9**	**+0.8**		
	baz=205							
TPUB	**Ta-pu**	**2.11 227**		**Pb**	**22 25 28.2**	**+0.2**		
CHY	**Chiayi**	**2.13 234**	*eP*	**Pb**	**22 25 27.0**	**-1.2**		
	baz=255							
CHY			*eS*	**Sb**	**22 25 54.9**	**+0.4**		
	baz=255							
STYT	**Tauyuan**	**2.13 222**	*eP*	**Pn**	**22 25 26.4**	**+1.3**		
	baz=203							
STYT			*eS*	**Sb**	**22 25 55.3**	**+0.6**		
	baz=203							
WTP	**Ta-pu**	**2.16 226**	*eP*	**Pb**	**22 25 27.6**	**-1.1**		
	baz=203							
WTP			*eS*	**Sb**	**22 25 56.8**	**+1.3**		
	baz=203							
TWH	**Lutao**	**2.18 200**	*eP*	**Pn**	**22 25 25.1**	**-0.7**		
	baz=196							
TWH			*eS*	**Sn**	**22 25 52.1**	**-0.6**		
	baz=196							
TWK	**Hsinying**	**2.23 228**	*eP*	**Pb**	**22 25 28.8**	**-1.2**		
	baz=229							
TWK			*eS*	**Sb**	**22 25 58.9**	**+1.4**		
	baz=229							
TWGBT	**Beinan**	**2.24 210**	*eP*	**Pn**	**22 25 26.5**	**-0.1**		
	baz=206							
TWGBT			*eS*	**Sn**	**22 25 54.1**	**-0.1**		
	baz=206							
TWG	**Pinlang**	**2.24 210**	*eP*	**Pn**	**22 25 27.5**	**+0.9**		
	baz=205							
TWG	**Pinlang**	**2.24 210**		**Pn**	**22 25 26.9**	**+0.3**		
SNST	**Tainan City**	**2.25 227**	*eP*	**Pb**	**22 25 28.7**	**-1.6**		
	baz=228							
SNST			*eS*	**Sb**	**22 25 59.0**	**+0.8**		
	baz=228							
CHN1	**Nanshi**	**2.26 226**	*eP*	**Pb**	**22 25 28.9**	**-1.5**		
	baz=227							
CHN1			*eS*	**Sb**	**22 25 59.3**	**+0.9**		
	baz=227							
SGST	**Jiashian**	**2.29 223**	*eP*	**Pb**	**22 25 29.6**	**-1.5**		
	baz=202							
SGST			*eS*	**Sb**	**22 25 59.9**	**+0.5**		
	baz=202							
SLGT	**Liugui**	**2.32 221**	*eP*	**Pb**	**22 25 29.9**	**-1.6**		
	baz=200							
SLGT			*eS*	**Sb**	**22 26 00.7**	**+0.5**		
	baz=200							
CHN8	**Yiju**	**2.37 234**	*eS*	**Sb**	**22 26 01.4**	**-0.2**		
	baz=254							
PTTC	**Pingtan**	**2.40 288**	*eP*	**Pn**	**22 25 27.6**	**-1.3**		
	baz=285							
PTTC			*eS*	**Sn**	**22 25 57.5**	**-0.8**		
	baz=285							
ECL	**Taimali**	**2.48 210**	*eP*	**Pn**	**22 25 30.4**	**+0.4**		
	baz=205							
ECL			*eS*	**Sn**	**22 26 00.2**	**-0.1**		
	baz=205							
SSD	**Sandimen**	**2.52 218**	*eP*	**Pn**	**22 25 32.0**	**+1.4**		
	baz=197							
SSD			*eS*	**Sb**	**22 26 04.3**	**-1.7**		
	baz=197							
MATB	**Ma-tsu**	**2.54 304**	*eP*	**Pn**	**22 25 29.7**	**-1.0**		
	baz=299							
MATB			*eS*	**Sn**	**22 26 00.8**	**-0.8**		
	baz=299							
MASBT	**Mashibuluo**	**2.63 216**	*eP*	**Pn**	**22 25 33.9**	**+1.9**		
	baz=196							
MASBT			*eS*	**Sb**	**22 26 06.9**	**-2.2**		
	baz=196							
EAST	**Anshuo**	**2.72 210**	*eP*	**Pn**	**22 25 33.6**	**+0.4**		
	baz=193							
EAST			*eS*	**Sn**	**22 26 06.2**	**+0.1**		
	baz=193							
JMJ	**Miyako jima 2**	**2.72 88**	*eP*	**Pn**	**22 25 34.3**	**+1.0**		
	baz=105							
JMJ			*eS*	**Sn**	**22 26 07.7**	**+1.4**		
	baz=105							
SSPT	**Xinbi**	**2.77 215**	*eP*	**Pn**	**22 25 36.5**	**+2.5**		
	baz=196							
SSPT			*eS*	**Sn**	**22 26 09.6**	**+2.2**		
	baz=196							
PNG	**Penghu**	**2.77 245**	*eP*	**Pn**	**22 25 33.4**	**-0.6**		
	baz=248							
PNG			*eS*	**Sn**	**22 26 08.3**	**+0.9**		
	baz=248							
PHUB	**P'eng-hu**	**2.78 244**	*eP*	**Pn**	**22 25 34.6**	**+0.5**		
	baz=247							
PHUB			*eS*	**Sn**	**22 26 08.2**	**+0.5**		
	baz=247							
WDGT	**Dungji**	**2.84 239**	*eP*	**Pn**	**22 25 36.0**	**+1.1**		
	baz=243							
WDGT			*eS*	**Sn**	**22 26 10.8**	**+1.8**		
	baz=243							
KSRS	**Korea Array**	**13.53 19**	Pn	**P**	**22 28 11.9**	**+1.3**		
	0.1nm,0.3s,baz=190,slow=12,SNR=7.9							
KSRS			LR	LR	22 33 09.3			
	comp=Z,21nm,19.5s,baz=185,slow=35							
CM31	**Chiang Mai Arr**	**22.59 258**	P	**P**	**22 29 51.0**	**+0.8**		
CM31			IAmb	IAmb	22 29 52.3			
	comp=Z,5.5nm,0.9s							
ASAJ	**Asahikawa**	**25.43 36**	LR	LR	22 41 48.9			
	comp=Z,35nm,18.8s,baz=286,slow=39							
KLR	**Kul'dur**	**25.52 14**	LR	LR	22 40 27.6			
	comp=Z,40nm,18.6s,baz=118,slow=36							
SONM	**Songino Array**	**26.25 335**	P	**P**	**22 30 25.0**	**+0.2**		
	comp=Z,1.7nm,0.8s,baz=151,slow=11,SNR=8.7							
MKAR	**Makanchi Array**	**38.64 315**	P	P	22 32 08.2	-4.8		
	comp=Z,0.2nm,0.5s,baz=115,slow=9.7,SNR=2.6							
WB0	**Warramunga Arr**	**45.80 164**	P	**P**	**22 33 11.2**	**-0.4**		
WB0			IAmb	IAmb	22 33 13.6			
	comp=Z,4.2nm,0.9s							
WRA	**Warramunga Arr**	**45.96 164**	P	**P**	**22 33 12.5**	**-0.3**		
	comp=Z,4.8nm,0.7s,baz=346,slow=8.7,SNR=45							
WB2	**Warramunga Arr**	**45.96 164**	P	**P**	**22 33 12.9**	**0.0**		
WR0	**Warramunga Arr**	**46.02 164**	P	**P**	**22 33 13.2**	**-0.1**		
WR0			PcP	**PcP**	**22 34 46.7**	**-3.2**		
ASAR	**Alice Springs**	**49.44 166**	P	**P**	**22 33 40.2**	**+0.3**		
	comp=Z,1.7nm,0.7s,baz=346,slow=7.0,SNR=19							
NEW	**Newport**	**89.95 35**	LR	LR	23 18 57.2			
	comp=Z,38nm,20.4s,baz=194,slow=36							

*NEIC **21** 22:29:59.5±1.6, 8.°88S±0.°06×74.°42W±0.°03, h132km±5km, Error ellipse: s-maj=9.3km s-min=3.5km az=194.0*
*IDC **21** 22:30:00.2±0.4, 8.°97S×74.°54W, h142km±3km, mb4.1/25, mb1 4.2/32, mb1mx4.1/46, mbtmp4.5/32, MS3.5/2, Ms1 3.5/2, ms1mx2.7/39, Error ellipse: s-maj=9.1km s-min=7.6km az=53.0*
*VAO **21** 22:30:00.3±0.5, 8.°92S×74.°53W, h145km±1km, mb4.9*
*ARE **21** 22:30:01±1.6, 8.°92S±0.°06×74.°52W±0.°06, h143km±5km, ML4.8, mb4.6/91(NEIC), Error ellipse: s-maj=9.4km s-min=8.4km az=45.0*

ISC 21 22:30:00.3±0.4, 8.°89S±0.°04×74.°43W±0.°04, h141km±3km, h141km:pP-P,n385,σ1§26/398, mb4.6/69, 1C, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.89**	**217**	P		**Pn**	**22 30 58.0**	**-0.9**
	38nm,0.3s,baz=24,slow=9.8,SNR=54							
NNA				S		**Sn**	**22 31 40.4**	**-4.0**
	355nm,0.3s,baz=221,slow=14,SNR=25							
ATAH	**Atahualpa**	**4.29**	**294**	P		**Pn**	**22 31 03.8**	**-0.8**
	58nm,0.3s,baz=77,slow=5.1,SNR=287							
ATAH				S		**Sn**	**22 31 51.0**	**-3.3**
	55nm,0.3s,baz=135,slow=19,SNR=21							
PTLC	**Puerto Leguiza**	**9.01**	**358**	*eP*		Pn	22 32 00.5	-6.8
LPAZ	**La Paz**	**9.59**	**141**	P		**Pn**	**22 32 16.1**	**+0.6**
	1.1nm,0.3s,baz=326,slow=10,SNR=21							
LPAZ				S		**Sn**	**22 34 04.0**	**+1.9**
	0.7nm,0.3s,baz=178,slow=20,SNR=0.9							
LPAZ	**La Paz**	**9.59**	**141**			**Pn**	**22 32 16.9**	**+1.4**
LPAZ	**La Paz**	**9.59**	**141**	*eP*		**Pn**	**22 32 15.4**	**-0.2**
PUAC	**Puerto Asis, P**	**9.61**	**347**	*eP*		**Pn**	**22 32 13.1**	**-2.3**
GCUF	**Volcan Galeras**	**10.46**	**344**	*eP*		**Pn**	**22 32 25.4**	**-1.7**
PB12	**IPOC Station P**	**10.46**	**158**	Pn		**Pn**	**22 32 27.0**	**+0.3**
PB16	**IPOC Station P**	**10.54**	**154**			**Pn**	**22 32 29.8**	**+1.6**
CRUC	**La Cruz**	**10.68**	**346**	*eP*		**Pn**	**22 32 28.8**	**-1.2**
MACC	**Macarena, Meta**	**10.97**	**3**	*eP*		**Pn**	**22 32 31.2**	**-2.3**
GARC	**Garzon, Huila**	**11.05**	**354**	*eP*		**Pn**	**22 32 34.2**	**-0.5**
SAML	**Samuel**	**11.12**	**91**			**Pn**	**22 32 34.2**	**-1.2**
SAML						**Sn**	**22 34 34.9**	**-3.2**
SOTA	**Rioblanco**	**11.16**	**349**	*eP*		**Pn**	**22 32 36.4**	**0.0**
BBAC	**Balboa, Cauca**	**11.19**	**345**	*eP*		**Pn**	**22 32 35.9**	**-0.6**
MNMC	**Minye Minye**	**11.21**	**156**	Pn		**Pn**	**22 32 34.2**	**-2.6**
PCON	**Cinco Dias**	**11.31**	**350**	*eP*		**Pn**	**22 32 37.1**	**-1.3**
PSGCX	**Pisagua**	**11.44**	**159**	Pn		**Pn**	**22 32 37.5**	**-2.1**
PB11	**IPOC Station P**	**11.76**	**157**	Pn		**Pn**	**22 32 42.6**	**-1.3**
GO01	**Chusmiza**	**11.86**	**155**			**Pn**	**22 32 46.2**	**+0.7**
PB08	**IPOC Station P**	**12.30**	**156**	Pn		**Pn**	**22 32 51.7**	**+0.6**
PRAC	**Prado**	**12.53**	**358**	*eP*		**Pn**	**22 32 55.7**	**+1.9**
ORTC	**Ortega, Tolima**	**12.74**	**356**	*eP*		**Pn**	**22 32 56.9**	**+0.3**
YOTC	**Yotoco, Valle**	**12.93**	**351**	*eP*		**Pn**	**22 32 59.5**	**+0.5**
VILC	**Villavicencio,**	**12.93**	**3**	*eP*		**Pn**	**22 33 00.1**	**+1.0**
ANIL	**Santa Ana**	**13.32**	**356**	*eP*		**P**	**22 33 08.9**	**+0.1**
CHIC	**Chingaza**	**13.44**	**3**	*eP*		**Pn**	**22 33 06.9**	**+0.9**
PB07	**IPOC Station P**	**13.50**	**162**	Pn		**Pn**	**22 33 06.3**	**-0.1**
ROSC	**El Rosal**	**13.64**	**0**	P		**Pn**	**22 33 08.9**	**+0.5**
	2.3nm,0.3s,baz=356,slow=22,SNR=2.0							
RREF	**El Recreo**	**13.73**	**356**	*eP*		**P**	**22 33 13.6**	**-0.1**
PB09	**IPOC Station P**	**13.78**	**159**	P		**P**	**22 33 12.1**	**-1.6**
GUY2C	**Guyana, Caldas**	**14.05**	**356**	*eP*		**P**	**22 33 15.7**	**-1.5**
NORC	**Norcasia**	**14.36**	**358**	*eP*		**Pn**	**22 33 17.6**	**+0.4**
SPBC	**San Pablo de B**	**14.45**	**1**	*eP*		**P**	**22 33 20.4**	**-0.7**
VILB	**Vilhena**	**14.55**	**107**	*eP*		**Pn**	**22 33 20.4**	**+0.8**
LVC	**Limon Verde**	**14.64**	**159**	P		**P**	**22 33 22.6**	**-1.0**
	0.4nm,0.3s,baz=314,slow=8.1,SNR=4.8							
LVC	**Limon Verde**	**14.64**	**159**			**Pn**	**22 33 21.7**	**+0.6**
LVC	**Limon Verde**	**14.64**	**159**	*eP*		**Pn**	**22 33 22.0**	**+0.9**
CBOC	**Ciudad Bolivar**	**14.74**	**354**	*eP*		**P**	**22 33 25.9**	**+1.5**
RUSC	**La Rusia**	**14.74**	**5**	*eP*		**P**	**22 33 25.3**	**+0.4**
RUSC	**La Rusia**	**14.74**	**5**	P		**Pn**	**22 33 23.1**	**+1.3**
MACA	**Manacapuru-AM**	**14.80**	**68**	*eP*		**P**	**22 33 24.5**	**-0.6**
SIV	**San Ignacio**	**14.83**	**120**	P		**Pn**	**22 33 24.2**	**+1.0**
	8.6nm,0.3s,baz=305,slow=11,SNR=110							
SIV				S		**Sn**	**22 36 03.0**	**-4.8**
	1.9nm,0.3s,baz=297,slow=22,SNR=3.3							
PTBC	**PUERTO BERRIO,**	**15.32**	**360**	*eP*		**Pn**	**22 33 28.2**	**-1.1**
BARC	**Barichara**	**15.43**	**5**	*eP*		**P**	**22 33 32.8**	**+0.6**
PAMC	**Pamplona, Colo**	**16.21**	**6**	*eP*		**P**	**22 33 42.9**	**+1.7**
ZARC	**Zaragoza, Cauc**	**16.28**	**358**	*eP*		**P**	**22 33 42.0**	**+0.6**
PTLB	**Pontes e Lacer**	**16.31**	**115**	*eP*		**P**	**22 33 42.0**	**+0.3**
PTGA	**Pitinga**	**16.53**	**61**	P		**P**	**22 33 45.3**	**+1.2**
	15nm,0.3s,baz=237,slow=15,SNR=57							
PTGA				S		**Sn**	**22 36 38.8**	**-10**
	1.6nm,0.3s,baz=341,slow=22,SNR=2.8							
PTGA	**Pitinga**	**16.53**	**61**	P		**P**	**22 33 45.4**	**+1.3**
PTGA	**Pitinga**	**16.53**	**61**	*eP*		**P**	**22 33 45.4**	**+1.3**
UREC	**San Jos de Ur**	**16.56**	**356**	*eP*		**Pn**	**22 33 43.5**	**-0.9**
GO02	**Mina Guanaco**	**16.83**	**165**	P		**Pn**	**22 33 48.1**	**+0.2**
OCAC	**Ocana**	**17.05**	**4**	*eP*		P	22 33 40.7	-9.3
SMLC	**San Martn de**	**17.57**	**1**	*eP*		**P**	**22 33 54.6**	**-1.0**
SDV	**Santo Domingo**	**18.06**	**12**	P		**Pn**	**22 34 02.3**	**-0.3**
	5.3nm,0.3s,baz=184,slow=6.7,SNR=15							
SDV	**Santo Domingo**	**18.06**	**12**	*eP*		**P**	**22 34 01.1**	**0.0**
SDV	**Santo Domingo**	**18.06**	**12**	P		**Pn**	**22 34 02.4**	**-0.3**
SDV	**Santo Domingo**	**18.06**	**12**	*eP*		**P**	**22 34 02.0**	**+0.9**
SDV				eS		**S**	**22 37 20.9**	**-0.3**
CLDB	**Colider**	**18.47**	**98**	*eP*		**P**	**22 34 05.6**	**+0.2**
CLDB				*epP*		**pP**	**22 34 31.0**	**+0.7**
CLDB				eS		**S**	**22 37 29.5**	**+0.4**
SJCC	**San Jacinto, C**	**18.67**	**358**	*eP*		**P**	**22 34 08.4**	**+0.7**
BCIP	**Isla Barro Col**	**18.72**	**343**	P		**P**	**22 34 08.2**	**0.0**
BCIP				IAmb		IAmb	22 34 17.5	
	comp=Z,72nm,1.4s							
NPGB	**Novo Progresso**	**18.98**	**86**	*eP*		**P**	**22 34 11.7**	**+0.7**
NPGB				*epP*		**pP**	**22 34 36.8**	**+0.8**
ITTB	**Itaituba**	**19.11**	**78**	*eP*		**Pn**	**22 34 14.3**	**-0.5**
SALV	**Santo Antonio**	**19.58**	**113**	*eP*		**Pn**	**22 34 20.2**	**0.0**
SMRC	**Santa Marta, M**	**19.92**	**1**	*eP*		**P**	**22 34 20.5**	**-0.6**
AC05	**El Transito**	**20.23**	**169**	P		Pn	22 34 26.4	-1.5
URIC	**Uribia, Colomb**	**20.60**	**7**	*eP*		**P**	**22 34 25.7**	**-2.7**
URIC	**Uribia, Colomb**	**20.60**	**7**	P		**P**	**22 34 26.8**	**-1.6**
MALB	**Monte Alegre**	**21.25**	**72**	*eP*		**P**	**22 34 36.3**	**+0.8**
PCRV	**Puerto La Cruz**	**21.30**	**27**	P		**P**	**22 34 36.7**	**+0.7**
	comp=Z,15nm,0.4s,baz=168,slow=2.7,SNR=8.0							
JTS	**Las Juntas de**	**21.74**	**331**	P		**P**	**22 34 41.4**	**+0.7**
	comp=Z,5.8nm,0.7s,baz=169,slow=2.1,SNR=4.9							

CO03	**El Pedregal**	**22.12 171**	P		**P**		**22 34 43.7**	**-0.9**
ARAG	**Araguaiana, MT**	**23.11 109**	*eP*		**P**		**22 34 54.4**	**+0.4**
ARAG			*epP*		**pP**		**22 35 23.9**	**+2.9**
C2SB	**Chapadao do Su**	**23.13 117**	*eP*		**P**		**22 34 56.2**	**+2.0**
ACON	**Acoyapa**	**23.31 333**	P		**P**		**22 34 54.4**	**-1.4**
ACON			IAmb		IAmb		22 34 58.5	
	comp=Z,17nm,0.9s							
CFA	**Coronel Fontan**	**23.33 167**	P		**P**		**22 34 55.5**	**-0.5**
	comp=Z,7.7nm,1.0s,baz=332,slow=8.5,SNR=7.7							
CPUP	**Villa Florida**	**23.75 139**	P		**P**		**22 34 59.4**	**-0.4**
	comp=Z,9.4nm,0.8s,baz=323,slow=10.0,SNR=22							
CPUP	**Villa Florida**	**23.75 139**	P		**P**		**22 34 59.3**	**-0.5**
PRPB	**Parauapebas**	**24.55 85**	*eP*		**P**		**22 35 07.6**	**+0.4**
PRPB			*epP*		**pP**		**22 35 38.0**	**+1.5**
TRCB	**Terra Rica**	**25.07 126**	*eP*		**P**		**22 35 11.8**	**0.0**
TRCB			*epP*		**pP**		**22 35 43.2**	**+1.6**
PCMB	**Pacaembu**	**25.64 122**	*eP*		**P**		**22 35 16.6**	**-0.4**
PCMB			*epP*		**pP**		**22 35 45.5**	**-1.3**
MDP	**Montagnes des**	**25.79 58**	P		**P**		**22 35 18.4**	**0.0**
	comp=Z,28nm,1.2s,baz=124,slow=3.1,SNR=2.7							
MCLT	**Moule a Chique**	**26.14 31**	P		**P**		**22 35 22.5**	**+1.0**
PTGB	**Pitanga**	**26.51 129**	*eP*		**P**		**22 35 24.6**	**-0.3**
PTGB			*epP*		**pP**		**22 35 54.9**	**+0.2**
BDFB	**Brasilia**	**26.66 107**	P		**P**		**22 35 26.2**	**-0.1**
	comp=Z,5.5nm,0.5s,baz=282,slow=12,SNR=8.8							
BDFB			LR		LR		22 47 16.0	
	comp=Z,65nm,18.0s,baz=249,slow=39							
BDFB	**Brasilia**	**26.66 107**	P		**P**		**22 35 26.8**	**+0.5**
BDFB			IAmb		IAmb		22 35 30.0	
	comp=Z,27nm,1.4s							
IPMB	**Ipameri, GO**	**27.03 112**	*eP*		**P**		**22 35 28.7**	**-0.9**
IPMB			*epP*		**pP**		**22 36 00.3**	**+0.9**
MLPR	**Magueyes Islan**	**27.66 15**	P		**P**		**22 35 36.2**	**+1.1**
CRPR	**Cabo Rojo, PR**	**27.68 15**	P		**P**		**22 35 36.2**	**+1.0**
CRPR			IAmb		IAmb		22 35 38.0	
	comp=Z,19nm,0.8s							
FRTB	**Fartura**	**27.82 124**	*eP*		**P**		**22 35 35.9**	**-0.6**
OBIP	**Obispado Ponce**	**27.85 16**	P		**P**		**22 35 37.5**	**+0.8**
ITAB	**Concordia**	**27.89 134**	*eP*		**P**		**22 35 37.7**	**+0.6**
ITAB			*epP*		**pP**		**22 36 08.7**	**+1.7**
DR12	**Loma Pena Alta**	**27.95 10**	P		**P**		**22 35 38.8**	**+1.2**
SJG	**San Juan**	**28.05 17**	P		**P**		**22 35 38.6**	**+0.1**
	comp=Z,21nm,0.4s,baz=153,slow=10,SNR=9.2							
AOPR	**Arecibo Observ**	**28.10 16**	P		**P**		**22 35 39.7**	**+0.7**
AGPR	**Aguadilla, PR**	**28.12 15**	P		**P**		**22 35 39.4**	**+0.2**
GCPR	**Guaynabo City**	**28.25 17**	P		**P**		**22 35 41.2**	**+0.9**
CBYP	**Canovanas**	**28.28 17**	P		**P**		**22 35 41.0**	**+0.3**
CUPR	**Culebra, Puert**	**28.49 18**	P		**P**		**22 35 41.5**	**-0.9**
APG	**El Apazote**	**28.56 326**	P		**P**		**22 35 44.7**	**+1.3**
	comp=Z,12nm,0.7s,baz=172,slow=5.6,SNR=9.7							
STVI	**Saint Thomas**	**28.64 19**	P		**P**		**22 35 43.3**	**-0.4**
ANWB	**Willy Bob**	**29.20 25**	P		**P**		**22 35 47.5**	**-1.2**
SPB	**Sao Paulo**	**29.68 123**	*eP*		**P**		**22 35 52.2**	**-0.8**
SPB			*epP*		**pP**		**22 36 23.1**	**-0.1**
PLTB	**Pedras Altas**	**29.88 143**	*eP*		**P**		**22 35 54.7**	**+0.1**
PLTB			*epP*		**pP**		**22 36 24.0**	**-0.8**
LC01	**Cunco**	**29.97 176**	P		**P**		**22 35 56.6**	**+1.2**
JANB	**Januaria**	**30.08 105**	*eP*		**P**		**22 35 56.6**	**0.0**
JANB			*epP*		**pP**		**22 36 28.4**	**+1.6**
PET01	**Itanhaem-SP**	**30.11 124**	*eP*		**P**		**22 35 56.0**	**-0.7**
ROSB	**Rosrio**	**30.71 81**	*eP*		**P**		**22 36 02.2**	**-0.1**
ROSB			*epP*		**pP**		**22 36 33.2**	**+0.8**
BSCB	**Bom Sucesso**	**31.02 116**	*eP*		**P**		**22 36 04.5**	**-0.4**
BSCB			*epP*		**pP**		**22 36 34.5**	**-0.6**
TEIG	**Tepich**	**31.98 335**	P		**P**		**22 36 13.4**	**+0.3**
	comp=Z,24nm,0.9s,baz=139,slow=9.4,SNR=4.8							
MAN01	**Angra dos Reis**	**32.34 119**	*eP*		**P**		**22 36 16.8**	**+0.3**
MAN01			*epP*		**pP**		**22 36 44.7**	**-2.1**
CMIG	**Matias Romero**	**32.79

baz=176
O60A Telford 48.96 359 P **P** 22 38 33.1 +0.8
baz=179
FNO Franklin 48.97 335 P **P** 22 38 33.0 +0.5
O55A Ligonier 49.05 355 P **P** 22 38 33.0 -0.1
baz=174
WMOK Wichita Mounta 49.13 333 P **P** 22 38 34.0 +0.2
baz=148
O52A Adamsville 49.23 353 P **P** 22 38 35.9 +1.5
baz=170
N59A State Game Lan 49.57 359 P **P** 22 38 38.6 +1.6
baz=178
N53A Lisbon 49.80 354 P **P** 22 38 40.6 +2.0
baz=172
N54A Moraine State 49.86 354 P **P** 22 38 41.6 +2.5
baz=173
O48A Farmland 49.89 349 P **P** 22 38 40.1 +0.7
baz=166
M57A Sunshine Farm, 50.03 357 P **P** 22 38 41.4 +1.0
baz=177
M58A Price's Panora 50.04 358 P **P** 22 38 41.1 +0.6
baz=177
MNTX Cornudas Mount 50.05 325 P **P** 22 38 40.3 -0.4
baz=139
MNTX Cornudas Mount 50.05 325 P **P** 22 38 40.9 +0.2
MNTX IAmb IAmb 22 38 42.4
comp=Z,12nm,1.4s
N50A Nevada 50.06 351 P **P** 22 38 41.5 +0.9
baz=169
M59A Waymart 50.19 359 P **P** 22 38 42.9 +1.4
baz=179
M56A Emporium 50.24 356 P **P** 22 38 43.9 +1.9
baz=175
M55A Ridgway 50.26 356 P **P** 22 38 44.9 +2.7
baz=174
M54A Oil Creek Stat 50.38 355 P **P** 22 38 45.5 +2.5
baz=173
M53A WI Miller and 50.40 354 P **P** 22 38 44.5 +1.2
baz=172
N48A Decatur 50.45 350 P **P** 22 38 45.2 +1.6
baz=166
AMTX Amarillo 50.59 331 P **P** 22 38 44.5 -0.4
baz=144
N47A Urbana 50.59 349 P **P** 22 38 44.1 -0.6
N47A IAmb IAmb 22 38 56.9
comp=Z,11nm,0.5s
L57A Andrews Acres 50.69 358 P **P** 22 38 47.0 +1.6
baz=177
L58A Harry Jones Me 50.70 359 P **P** 22 38 46.5 +1.1
baz=178
L59A Walton 50.83 359 P **P** 22 38 48.0 +1.5
baz=179
L61A Hillsdale 1, H 50.84 1 P **P** 22 38 48.1 +1.7
baz=181
L56A Greenwood 50.85 357 P **P** 22 38 47.4 +0.8
baz=176,SNR=5.8
BINY Binghamton 50.85 359 P **P** 22 38 47.3 +0.7
baz=178
BINY Binghamton 50.85 359 IAmb IAmb 22 38 56.4
comp=Z,11nm,0.9s
L53A Girard 50.87 354 P **P** 22 38 47.6 +0.9
baz=173
M49A Liberty Center 50.87 351 P **P** 22 38 48.2 +1.5
baz=168
L55A Hinsdale 50.95 356 P **P** 22 38 49.0 +1.6
baz=175
ERPA Erie 51.01 355 P **P** 22 38 50.2 +2.5
baz=173
L54A Sinclairville 51.07 355 P **P** 22 38 51.4 +3.2
baz=174
K56A Middlesex 51.40 357 P **P** 22 38 52.3 +1.6
baz=176
K57A Scipio Center 51.40 358 P **P** 22 38 51.2 +0.6
baz=177
K58A Earlville 51.41 359 P **P** 22 38 51.9 +1.2
baz=178
K58A Earlville 51.41 359 IAmb IAmb 22 39 00.4
comp=Z,9.5nm,0.8s
K59A Cooperstown 51.41 360 P **P** 22 38 52.3 +1.5
baz=180
J60A Lant Hill Farm 51.89 1 P **P** 22 38 57.3 +3.1
baz=181
J56A Wolcott 51.96 358 P **P** 22 38 54.6 -0.2
baz=177
J58A Remsen 52.00 359 P **P** 22 38 56.6 +1.5
baz=179
KSU1 Kansas State U 52.00 338 P **P** 22 38 55.4 +0.2
KSU1 IAmb IAmb 22 38 55.8
comp=Z,8.0nm,0.9s
J61A Chester 52.01 2 P **P** 22 38 56.4 +1.2
baz=182
121A Cookes Peak, D 52.04 324 P **P** 22 38 56.1 +0.3
baz=137
121A Cookes Peak, D 52.04 324 IAmb IAmb 22 38 57.8
comp=Z,10nm,0.9s
J57A Williamstown 52.06 359 P **P** 22 38 56.6 +1.1
baz=178
J57A Williamstown 52.06 359 IAmb IAmb 22 39 04.5
comp=Z,9.4nm,0.7s
J59A Piesco 52.10 360 P **P** 22 38 57.6 +1.8
baz=180
319A Douglas 52.11 322 IAmb IAmb 22 38 58.2
comp=Z,20nm,0.9s
J52A Paris 52.17 354 P **P** 22 38 58.7 +2.2
baz=172
K48A Perry 52.19 351 P **P** 22 38 58.7 +2.2
baz=168
R32A Long Quarter, 52.23 336 P **P** 22 38 56.9 0.0
R32A IAmb IAmb 22 38 58.1
comp=Z,18nm,1.1s
I58A Old Forge 52.33 360 P **P** 22 38 58.8 +1.2
baz=179
I59A Olmsteadville 52.43 1 P **P** 22 39 00.0 +1.7
baz=181
I60A Shoreham 52.49 1 P **P** 22 39 01.4 +2.8
baz=182
I61A Oroboro, Fairl 52.61 2 P **P** 22 39 01.0 +1.4
baz=183
I63A Otisfield 52.80 3 P **P** 22 39 01.7 +0.8
baz=185
I55A Frankford 52.93 357 P **P** 22 39 03.7 +1.8
baz=176
H58A Gabriels 53.05 0 P **P** 22 39 03.5 +0.7
baz=180
ANMO Albuquerque 53.08 327 P **P** 22 39 03.8 +0.4
comp=Z,3.6nm,1.0s,baz=149,slow=12,SNR=6.2
ANMO Albuquerque 53.08 327 P **P** 22 39 03.8 +0.4
baz=139
ANMO Albuquerque 53.08 327 P **P** 22 39 02.9 -0.5
H61A Lyndonville 53.22 2 P **P** 22 39 05.4 +1.4
baz=183
H60A Morristown 53.22 2 P **P** 22 39 03.1 -0.9
baz=182
H55A Tweed 53.24 358 P **P** 22 39 05.0 +0.8
baz=177
H56A Elgin 53.25 358 P **P** 22 39 04.7 +0.5
baz=178
LONY Lake Ozonia 53.26 360 P **P** 22 39 05.6 +1.3
baz=180
H62A Milan 53.29 3 P **P** 22 39 05.1 +0.6
baz=184
H53A Bobcaygeon 53.34 356 P **P** 22 39 07.0 +2.1
baz=175
H65A Eastbrook 53.62 5 P **P** 22 39 07.8 +0.9
baz=188
TUC Tucson 53.68 321 P **P** 22 39 07.9 +0.2
baz=134
TUC Tucson 53.68 321 P **P** 22 39 08.5 +0.8
TUC IAmb IAmb 22 39 09.1
comp=Z,6.1nm,0.9s
T25A Trinidad 53.72 330 P **P** 22 39 08.6 +0.6
baz=142
G57A Newington 53.74 360 P **P** 22 39 08.3 +0.5
baz=179
H66A Whiting 53.81 6 P **P** 22 39 08.8 +0.5
baz=189
G53A Haliburton 53.89 356 P **P** 22 39 09.5 +0.6
baz=175
G63A Kingsbury 53.92 4 P **P** 22 39 10.2 +1.0
baz=186
G55A Calabogie 53.93 358 P **P** 22 39 10.7 +1.5
baz=177
G62A West of Eustis 53.97 3 P **P** 22 39 11.1 +1.7
baz=185
G61A St-Isidore-de- 53.98 3 P **P** 22 39 10.7 +1.1
baz=184
G64A Maxfield 54.13 5 P **P** 22 39 11.2 +0.6
baz=187
G54A Lake Saint Pet 54.13 357 P **P** 22 39 11.4 +0.7
baz=176,SNR=5.2
G65A Princeton 54.19 6 P **P** 22 39 12.0 +0.9
baz=188
F63A Nahmakanta, Br 54.55 5 P **P** 22 39 14.1 +0.4
baz=186
BGNE Belgrade 54.59 338 P **P** 22 39 14.5 +0.4
baz=151
F52A Sundridge 54.61 356 P **P** 22 39 15.0 +0.9
baz=174
F60A Warwick 54.65 2 P **P** 22 39 14.9 +0.6
baz=183
F61A St Evariste 54.70 3 P **P** 22 39 14.1 -0.7
baz=184
214A Organ Pipe Nat 54.71 320 P **P** 22 39 15.8 +0.6
baz=132
214A Organ Pipe Nat 54.71 320 P **P** 22 39 15.4 +0.2
X18A Snowflake 54.73 324 IAmb IAmb 22 39 17.2
comp=Z,9.1nm,0.9s
SDCO Great Sand Dun 54.73 330 P **P** 22 39 16.2 +0.7
baz=142
SDCO Great Sand Dun 54.73 330 IAmb IAmb 22 39 17.1
comp=Z,8.4nm,0.9s
F64A Sherman 54.77 5 P **P** 22 39 16.5 +1.2
baz=187
F49A Sandfield 54.83 353 P **P** 22 39 17.1 +1.5
baz=171
F48A Evansville 54.96 353 P **P** 22 39 17.4 +0.8
baz=170
E58A La Victoria 55.02 1 P **P** 22 39 17.3 +0.3
baz=181
W18A Petrified Fore 55.02 325 P **P** 22 39 16.2 -1.4
baz=136
E57A Chemin Saint G 55.05 0 P **P** 22 39 17.8 +0.5
baz=180
E54A Lac Daplat, Po 55.12 358 P **P** 22 39 18.5 +0.7
baz=177
E61A Lac Etchemin 55.18 3 P **P** 22 39 19.2 +1.0
baz=185
E56A St. Veronique 55.18 359 P **P** 22 39 18.3 +0.1
baz=179
F45A CMU Biological 55.23 351 P **P** 22 39 17.7 -0.8
baz=167
E51A G1948 Merrick 55.35 356 P **P** 22 39 22.1 +2.6
baz=174
S22A 4UR Ranch, Cre 55.40 329 P **P** 22 39 17.8 -2.5
baz=140
E62A Clayton Lake 55.43 4 P **P** 22 39 20.6 +0.6
baz=186
Q24A Divide 55.52 331 P **P** 22 39 21.4 +0.2
baz=142
X16A Lo Mia Camp, P 55.53 323 IAmb IAmb 22 39 23.0
comp=Z,7.9nm,0.8s
D60A Saint Jean D'O 55.64 3 P **P** 22 39 23.7 +2.3
baz=184
E47A Iron Bridge 55.66 353 P **P** 22 39 23.1 +1.5
baz=170
D55A Sainte-Anne-du 55.66 359 P **P** 22 39 21.5 -0.1
baz=179
D56A ZEC Mazanza, M 55.69 360 P **P** 22 39 22.0 +0.2
baz=180
D58A Chemin du LacG 55.75 1 P **P** 22 39 22.8 +0.5
baz=182
D53A Lacivie, Po 55.79 357 P **P** 22 39 23.7 +1.2
baz=176
D54A Lac Fusel, La 55.82 358 P **P** 22 39 22.9 +0.1
baz=177
D62A Allapoint, All 55.92 4 P **P** 22 39 23.4 -0.1
baz=186
D63A Stockholm 55.96 5 P **P** 22 39 23.8 +0.1
baz=188
LATQ La Tuque 56.04 1 P **P** 22 39 24.9 +0.6
baz=182
ECSD EROS Data Cent 56.11 341 P **P** 22 39 25.1 +0.1
baz=153
D48A Paudash Townsh 56.20 354 P **P** 22 39 25.6 +0.2
baz=171
WUAZ Wupatki 56.25 324 P **P** 22 39 26.5 +0.2
baz=135
ISCO Idaho Springs 56.40 331 P **P** 22 39 27.3 -0.1
baz=142
PV15 Paradox Valley 56.70 328 IAmb IAmb 22 39 31.4
comp=Z,11nm,1.0s
Y12C Blythe 56.98 320 P **P** 22 39 30.4 -0.8
baz=131
PDMCI Parker Dam,Lak 57.10 321 P **P** 22 39 32.1 +0.1
baz=131
U15A North Rim 57.42 324 IAmb IAmb 22 39 36.6
comp=Z,6.5nm,0.9s
W13A Hualapai Mount 57.47 322 IAmb IAmb 22 39 37.0
comp=Z,10nm,1.2s
IRM Iron Mountain 57.63 320 P **P** 22 39 36.2 +0.3
baz=130,SNR=9.3
O20A White River Ci 57.93 330 P **P** 22 39 38.4 +0.3
baz=140
GMRC Granite Mounta 58.36 320 P **P** 22 39 40.8 -0.2
baz=130,SNR=5.0
MATQ Matagami 58.46 358 P **P** 22 39 40.8 -0.5
baz=176
CHGQ Chibougamau 58.55 0 P **P** 22 39 42.1 +0.2
baz=180
K22A Casper 59.07 333 P **P** 22 39 45.9 +0.1
baz=142
SHPR Sheep Range 59.17 322 IAmb IAmb 22 39 48.5
comp=Z,6.7nm,1.2s
RSSD Black Hills 59.18 336 P **P** 22 39 47.5 +0.9
baz=146
RSSD Black Hills 59.18 336 P **P** 22 39 45.9 -0.7
RSSD IAmb IAmb 22 39 48.2
comp=Z,9.3nm,1.3s
GSC Goldstone, Bar 59.41 320 P **P** 22 39 48.3 0.0
baz=130
DRLN Deer Lake 59.77 13 P **P** 22 39 50.8 +0.5
EDW2 Edwards Air Fo 59.91 319 P **P** 22 39 51.6 -0.1
baz=128
SNCC San Nicolas Is 59.94 317 P **P** 22 39 51.5 -0.3
baz=126
TPNV Topopah Spring 60.12 322 P **P** 22 39 53.9 +0.8
baz=131,SNR=12
TPNV Topopah Spring 60.12 322 P **P** 22 39 53.3 +0.1
TPNV IAmb IAmb 22 39 55.7
comp=Z,6.8nm,0.8s
FURC Furnace Creek, 60.19 321 P **P** 22 39 53.3 -0.1
baz=130
MPMC Manual Prospec 60.32 320 P **P** 22 39 55.1 +0.5
baz=129
DUG Dugway, Tooele 60.35 327 P **P** 22 39 55.9 +1.2
baz=135
DUG Dugway, Tooele 60.35 327 P **P** 22 39 55.8 +1.1
DUG IAmb IAmb 22 39 56.5
comp=Z,7.9nm,1.0s
BW06 Boulder Array 60.57 331 P **P** 22 39 55.7 -0.5
baz=139
BW06 Boulder Array 60.57 331 P **P** 22 39 56.2 0.0
PD31 Pinedale Array 60.57 331 P **P** 22 39 55.6 -0.6
PDAR Pinedale Array 60.57 331 P **P** 22 39 56.0 -0.1
comp=Z,0.9nm,0.7s,baz=134,slow=8.5,SNR=11
PDAR pP **pP** 22 40 30.1 +0.3
comp=Z,1.8nm,0.8s,baz=153,slow=7.6,SNR=6.0
R11A Troy Canyon, C 60.65 324 P **P** 22 39 57.2 +0.4
baz=132,SNR=9.0
R11A Troy Canyon, C 60.65 324 IAmb IAmb 22 39 58.7
comp=Z,5.4nm,1.1s
ISA Isabella, Lake 60.70 320 P **P** 22 39 57.3 +0.3
baz=128
CWC Cottonwood Cre 60.93 320 P **P** 22 39 58.9 +0.2
baz=129
IMW Indian Meadow 62.09 331 P **P** 22 40 06.6 +0.2
RLMT Red Lodge 62.23 333 P **P** 22 40 07.5 +0.2
OMMB Old Mammoth Mi 62.24 321 IAmb IAmb 22 40 09.2
comp=Z,6.8nm,0.9s
MDPB Devils Postpil 62.30 321 IAmb IAmb 22 40 09.5
comp=Z,4.6nm,0.8s
NVAR Mina Array Bea 62.32 322 P **P** 22 40 08.6 +0.5
comp=Z,1.4nm,0.7s,baz=146,slow=7.3,SNR=9.1
NVAR pP **pP** 22 40 42.8 +1.0
comp=Z,1.2nm,0.8s,baz=131,slow=7.1,SNR=2.7
PAHR Pah Rah Range 63.78 323 IAmb IAmb 22 40 19.5
comp=Z,5.2nm,0.9s
SCHQ Schaefferville 63.80 5 P **P** 22 40 17.1 0.0
comp=Z,2.9nm,0.8s,baz=196,slow=5.3,SNR=5.3
MFID Camas Ranch 64.21 328 IAmb IAmb 22 40 22.0
comp=Z,8.2nm,0.8s
EGMT Eagleton 64.69 335 P **P** 22 40 22.5 -0.7
baz=141
EGMT Eagleton 64.69 335 IAmb IAmb 22 40 41.9
comp=Z,12nm,1.4s
ORV Oroville 64.97 321 IAmb IAmb 22 40 27.2
comp=Z,8.7nm,0.9s
O03E Paynes Creek 65.60 322 P **P** 22 40 28.0 -1.2
baz=127
MSO Missoula 65.67 331 P **P** 22 40 29.6 -0.1
baz=136
MSO Missoula 65.67 331 IAmb IAmb 22 40 48.4
comp=Z,4.9nm,0.8s
MOD Modoc Plateau 65.70 324 IAmb IAmb 22 40 31.3
comp=Z,6.2nm,0.9s
O02D Mt. Diablo Mer 66.14 321 P **P** 22 40 31.7 -1.0
baz=126
M04C Macdoel 66.53 323 P **P** 22 40 34.1 -1.1
baz=128
I07A Izee 66.64 326 IAmb IAmb 22 40 37.6
comp=Z,6.1nm,0.9s
M02C Callahan 66.90 322 P **P** 22 40 35.7 -1.8
baz=127
K04D Chiloquin, OR 66.99 324 P **P** 22 40 36.0 -2.1
baz=128
YBH Yreka Blue Hor 67.02 323 P **P** 22 40 36.6 -1.6
comp=Z,2.4nm,0.8s,baz=90,slow=4.7,SNR=4.7
J05D Fort Rock, OR 67.10 325 P **P** 22 40 37.7 -1.1
baz=129
I04A Tendick Farm, 68.09 325 P **P** 22 40 43.6 -1.3
baz=128
K02D Willamette Mer 68.16 323 P **P** 22 40 44.6 -0.8
baz=126
LIC Lamto 70.79 80 *e*P **P** 22 41 01.8 -0.2
comp=Z,14nm,0.4s
TIC Toumodi 70.88 80 *e*P **P** 22 41 02.3 -0.3
DBIC Dimbokro 71.05 80 P **P** 22 41 03.9 +0.4
comp=Z,32nm,0.6s,baz=241,slow=5.5,SNR=52
DBIC Dimbokro 71.05 80 P **P** 22 41 04.0 +0.4
KIC Kosan Boka 71.10 80 *e*P **P** 22 41 03.7 -0.2
comp=Z,42nm,0.5s
FRB Frobisher Bay 72.56 3 P **P** 22 41 11.3 -0.2
comp=Z,3.3nm,0.5s,baz=187,slow=6.3,SNR=9.3
VNA3 Neumayer Olymp 73.65 162 P **P** 22 41 19.0 +1.0
VNA1 Neumayer--Stat 73.87 161 P **P** 22 41 20.6 +1.3
VNA2 Neumayer--Watz 74.24 162 P **P** 22 41 22.4 +1.0
baz=294,slow=6.6
SNAA Sanae 75.86 162 P **P** 22 41 31.6 +0.9
SNAA Sanae 75.86 162 P **P** 22 41 31.7 +0.9
YKA Yellowknife Ar 77.60 342 P **P** 22 41 40.0 -0.5
comp=Z,0.3nm,0.3s,baz=137,slow=6.2,SNR=12
YKA pP **pP** 22 42 16.1 +0.5
comp=Z,4.5nm,0.5s,baz=139,slow=6.1,SNR=14
TOA0 Torodi Ar. Sit 78.69 75 P **P** 22 41 47.6 0.0
TOA0 IAmb IAmb 22 41 48.4
comp=Z,16nm,0.8s
TORD Torodi Ar. Bea 78.69 75 P **P** 22 41 47.2 -0.3
comp=Z,14nm,0.5s,baz=256,slow=4.2,SNR=246
TORD pP **pP** 22 42 22.4 -0.3
comp=Z,2.9nm,0.6s,baz=281,slow=6.0,SNR=2.3
TORD LR LR 23 17 04.0
comp=Z,41nm,18.5s,baz=250,slow=36
DLBC Dease Lake 80.61 334 P **P** 22 41 57.2 +0.1
comp=Z,0.6nm,0.3s,baz=225,slow=26,SNR=1.4
DLBC pP **pP** 22 42 33.5 +1.1
comp=Z,2.8nm,0.5s,baz=149,slow=3.0,SNR=4.2
ESDC Sonseca Array 80.95 47 P **P** 22 41 59.5 +0.2
comp=Z,4.5nm,0.9s,baz=254,slow=6.1,SNR=14
ESDC pP **pP** 22 42 35.4 +0.7
comp=Z,1.8nm,0.9s,baz=247,slow=7.0,SNR=3.2
QSPA South Pole Qui 81.23 180 P **P** 22 42 01.6 +1.3
TAM Tamanrasset 84.27 66 P **P** 22 42 18.3 +1.4
TAM IAmb IAmb 22 42 19.1
comp=Z,7.7nm,0.8s
SUMG Summit 84.57 10 P **P** 22 42 18.4 +0.6
SUMG IAmb IAmb 22 42 19.3
comp=Z,10nm,0.8s
SUMG Summit 84.57 10 ⇑ *i*P **P** 22 42 18.3 +0.6
comp=Z,28nm,0.9s
INK Inuvik 87.35 341 P **P** 22 42 30.9 +0.1
comp=Z,0.9nm,0.8s,baz=104,slow=18,SNR=3.9
INK pP **pP** 22 43 07.3 +0.6
comp=Z,3.8nm,0.7s,baz=66,slow=1.8,SNR=7.4
VNDA Vanda 88.25 190 P **P** 22 42 35.4 +0.3
comp=Z,1.1nm,0.8s,baz=120,slow=3.3,SNR=9.5
TSUM Tsumeb 89.01 109 P **P** 22 42 40.5 +0.4
BMRD Maredsous 89.94 39 P **P** 22 42 40.6 -2.9
IL31 90.63 336 P **P** 22 42 47.2 +0.9
ILAR Eielson Array 90.63 336 P **P** 22 42 46.3 -0.1
comp=Z,0.2nm,0.5s,baz=76,slow=3.8,SNR=2.6
ILAR pP **pP** 22 43 21.6 -0.7
comp=Z,3.3nm,0.9s,baz=150,slow=3.5,SNR=13
POKR Poker Flat Res 90.96 336 P **P** 22 42 45.5 -2.5
baz=109
DAG Danmarks Havn 91.22 11 *i*P **P** 22 42 48.9 0.0
comp=Z,3.0nm,1.0s
BPAW Bear Paw Mtn. 92.12 335 P **P** 22 42 53.6 +0.2
BPAW IAmb IAmb 22 43 11.5
comp=Z,2.7nm,0.9s
NB2 NORSAR Subarra 95.60 29 P **P** 22 43 10.3 +0.9
comp=Z,1.2nm,0.7s,baz=262,slow=4.6
NOA NORSAR Array B 95.60 29 P **P** 22 43 10.0 +0.6
comp=Z,1.6nm,0.7s,baz=259,slow=4.5,SNR=5.8
STKA Stephens Creek 126.81 219 PKP **PKPdf** 22 48 47.5 -0.3
comp=Z,2.1nm,0.8s,baz=40,slow=5.5,SNR=5.2
ZAA0 Zalesovo Array 132.07 16 **PKiKP** 22 48 58.0 -0.2
ZALV Zalesovo Beam 132.07 16 PKP **PKPdf** 22 48 57.5 +0.4
comp=Z,2.3nm,0.6s,baz=259,slow=2.3,SNR=12
ZALV pPKP **pPKPdf** 22 49 35.9 +1.1
comp=Z,2.3nm,0.5s,baz=298,slow=3.2,SNR=5.5
MKAR Makanchi Array 137.32 24 PKP **PKPdf** 22 49 07.2 0.0
comp=Z,1.1nm,0.7s,baz=341,slow=2.3,SNR=9.8
MKAR pPKP **pPKPdf** 22 49 45.9 +1.0
comp=Z,2.2nm,0.9s,baz=321,slow=2.1,SNR=6.4
MKAR SKP **SKPbc** 22 52 27.8 +0.2
comp=Z,0.6nm,0.9s,baz=336,slow=2.7,SNR=3.7
ASAR Alice Springs 137.41 220 PKhKP PKPpre 22 48 54.7
comp=Z,0.5nm,0.9s,baz=73,slow=4.3,SNR=4.5
ASAR PKP **PKPdf** 22 49 08.1 0.0
comp=Z,1.1nm,0.7s,baz=132,slow=2.0,SNR=9.7
ASAR pPKP pPKPdf 22 49 44.6 -1.2
comp=Z,1.1nm,0.9s,baz=122,slow=1.8,SNR=4.4
MJAR Matsushiro Arr 139.56 318 SKP **SKPdf** 22 52 31.5 -1.9
comp=Z,3.3nm,1.1s,baz=132,slow=1.9,SNR=4.3
KSH Kashi 139.63 36 PKP **PKPdf** 22 49 11.0 -0.8
KSH sPKP 22 50 07.8
WRA Warramunga Arr 139.71 224 PKP **PKPdf** 22 49 12.4 0.0
comp=Z,1.5nm,0.6s,baz=131,slow=1.8,SNR=5.4
KSRS Korea Array 145.10 328 PKPbc **PKPdf** 22 49 21.3 -0.1
comp=Z,4.1nm,0.8s,baz=48,slow=3.2,SNR=16
KSRS pPKPbc pPKPbc 22 49 58.3 -0.1
comp=Z,0.6nm,0.3s,baz=336,slow=2.7,SNR=1.8
FITZ Fitzroy Crossi 146.66 216 **PKPbc** 22 49 26.4 +0.1
GTA Gaotai 149.17 9 PKPbc **PKiKP** 22 49 33.5 -0.3
LZH Lanzhou 152.88 3 *e*PKPbc **PKPdf** 22 49 29.8 -4.3
LZH pPKP pPKPdf 22 50 03.9 -8.0
LZH sPKP 22 50 18.9
CD2 Chengdu 158.02 4 PKP **PKPdf** 22 49 39.8 -1.3
CMAR Chiang Mai Arr 168.52 33 PKP **PKPdf** 22 49 51.6 +0.4
comp=Z,0.6nm,0.8s,baz=278,slow=19,SNR=2.0
CMAR PKPab **PKPab** 22 51 01.9 +0.7
comp=Z,1.2nm,0.8s,baz=314,slow=5.1,SNR=5.3

INET ***21*** *23:00:59.5, 12°.38N×86°.49W, h8km, ML4.2*
UCR 21 23:01:00.4±2.4, 12°.37N×86°.41W, h6km±12km, MW4.6, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**0.32**	**295**	*e*P		Pb	23 01 08.4	-0.1
MASN	**Masaya**	**0.45**	**147**	*e*P		Pg	23 01 09.4	+0.3
MASN				eS		Sg	23 01 16.3	+1.3
CRIN	**San Cristobal**	**0.71**	**298**	*e*P		Pg	23 01 12.3	-1.8
MATN	**Matagalpa**	**0.73**	**40**	*e*P		Pg	23 01 14.5	0.0
MATN				eS		Sg	23 01 25.4	0.6
ACON	**Acoyapa**	**1.27**	**108**	*e*P		Pn	23 01 22.9	-1.8
ACON				eS		Sg	23 01 41.1	-0.1
CSGN	**Cosiguina Volc**	**1.28**	**298**	*e*P		Pn	23 01 23.1	-1.8
GB1A	**Borinquen Arri**	**1.83**	**147**	*e*P		Pn	23 01 32.2	-0.3
GB1A				eS		Sb	23 01 57.0	-0.5
BUEV	**Buena Vista**	**1.84**	**148**	*e*P		Pn	23 01 32.3	-0.4
ESPN	**Las Esperanzas**	**2.06**	**95**	*e*P		Pn	23 01 35.7	0.0
PLVR	**Palo Verde**	**2.26**	**153**	*e*P		Pn	23 01 37.9	-0.6
PLVR				eS		Sn	23 02 07.6	+0.8
JTS	**Las Juntas de**	**2.51**	**145**	*e*P		Pn	23 01 41.0	-0.8
ARE1	**Arenal 1**	**2.51**	**139**	*e*P		Pn	23 01 43.7	+1.8
LCR2	**La Lucha 2**	**3.52**	**138**	*e*P		Pn	23 01 56.9	+1.0

IDC ***21*** *23:01:58.8±2.7, 6°.99S×125°.33E, h508km±37km, mb3.0/3,*

mb1 3.2/7, mb1mx2.8/36, mbtmp4.0/7, Error ellipse: s-maj=83.9km s-min=18.0km az=57.0
ISC 21 23:01:59.1±1.2, **7.1S**±0.1×**125.4E**±0.2, **h511**km, **n7, σ1§26/9, mb3.4/3, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.54**	**208**	**P**	**P**	**23 03 15.8**	**+0.9**
	19nm,0.3s,baz=352,slow=2.8,SNR=10.0						
BATI				S	**S**	23 04 16.4	-0.1
	5.5nm,0.3s,baz=232,slow=16,SNR=2.3						
FITZ	**Fitzroy Crossi**	**10.98**	**179**	**P**	**P**	**23 04 27.4**	**+0.5**
	1.6nm,0.3s,baz=357,slow=7.7,SNR=101						
FITZ				S	**S**	23 06 26.2	-2.3
	0.1nm,0.3s,baz=92,slow=19,SNR=2.1						
WRA	**Warramunga Arr**	**15.50**	**147**	P	**P**	**23 05 13.9**	**-0.5**
	0.6nm,0.3s,baz=327,slow=10,SNR=42						
ASAR	**Alice Springs**	**18.45**	**154**	P	**P**	**23 05 44.1**	**+1.0**
	0.5nm,0.3s,baz=330,slow=7.8,SNR=55						
STKA	**Stephens Creek**	**28.98**	**151**	P	**P**	**23 07 17.6**	**+0.7**
	0.8nm,0.3s,baz=335,slow=10.0,SNR=4.0						
MKAR	**Makanchi Array**	**65.82**	**329**	P	**P**	**23 11 53.1**	**-0.4**
	0.3nm,0.4s,baz=125,slow=8.1,SNR=5.6						
ZALV	**Zalesovo Beam**	**69.67**	**336**	P	**P**	**23 12 15.7**	**-1.1**
	0.4nm,0.4s,baz=132,slow=4.2,SNR=2.2						

*NEIC **21** 23:19:07.7±1.0, 35.91N±0.01×97.28W±0.05, h7km±5km, mb_Lg3.0/92, Error ellipse: s-maj=5.7km s-min=1.5km az=97.0*
*ANF **21** 23:19:07.8±0.5, 35.81N×97.20W, h0km, ML3.9/8, Error ellipse: s-maj=7.3km s-min=2.5km az=158.0*
*CERI **21** 23:19:07.0, 35.91N×97.28W, h7km*
ISC 21 23:19:07.7±1.0, **35.91N**±0.03×**97.30W**±0.03, **h13**km±8km, **n80, σ1§14/66, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.27**	**193**	Pg	**Pg**	**23 19 13.0**	**-0.3**
OK005	**Luther M Schoo**	**0.27**	**161**	Pg	**Pg**	**23 19 12.6**	**-0.8**
OK005				Sg	**Sg**	23 19 16.4	-0.7
OK001	**Jones High Sch**	**0.35**	**179**	Pg	**Pg**	**23 19 14.5**	**-0.3**
OK001				Sg	**Sg**	23 19 19.4	-0.1
OKCFA	**Oklahoma City**	**0.51**	**194**		**Pg**	**23 19 17.5**	**-0.2**
OKCSW	**OKLAHOMA CITY**	**0.52**	**193**		**Pg**	**23 19 17.6**	**-0.2**
FNO	**Franklin**	**0.66**	**187**		**Pg**	**23 19 20.5**	**0.0**
W35A	**Tecumseh**	**0.83**	**155**	Pg	**Pg**	**23 19 22.5**	**-1.2**
T35A	**Sooner Cattle**	**1.19**	**32**		**Pb**	**23 19 29.4**	**-0.6**
T35A					**Sn**	23 19 46.1	+0.1
TUL1	**Leonard**	**1.22**	**90**	P	**Pn**	**23 19 29.1**	**-1.3**
	baz=270						
TUL1				S	**Sb**	**23 19 45.7**	**-0.7**
	baz=270						
X34A	**Smith Ranch, M**	**1.38**	**199**		**Pb**	**23 19 33.4**	**+0.1**
U32A	**Winter Ranch,**	**1.46**	**289**		**Pb**	**23 19 34.6**	**0.0**
WMOK	**Wichita Mounta**	**1.69**	**226**	P	**Pb**	**23 19 38.4**	**-0.1**
	baz=46						
WMOK				S	**Sb**	**23 20 01.3**	**+1.6**
	baz=46						
WMOK	**Wichita Mounta**	**1.69**	**226**		**Pb**	**23 19 38.4**	**-0.1**
WMOK				IAmb_Lg		23 20 03.9	
	comp=Z,75nm,0.8s						
X37A	**Clayton**	**2.06**	**129**		**Pn**	**23 19 42.9**	**+1.0**
U38A	**Gravette**	**2.42**	**77**		**Pn**	**23 19 47.9**	**+1.1**
Z35A	**Perchaven, San**	**2.57**	**179**		**Pn**	**23 19 50.2**	**+1.2**
HHAR	**Hobbs**	**2.75**	**81**	Pn	**Pn**	**23 19 52.4**	**+1.0**
R32A	**Long Quarter,**	**2.75**	**336**		**Pn**	**23 19 53.4**	**+1.9**
W39A	**Magazine**	**2.95**	**103**	P	**Pn**	**23 19 55.0**	**+0.8**
	baz=285						
W39A				S	**Sn**	**23 20 31.1**	**+1.6**
	baz=285						
W39A	**Magazine**	**2.95**	**103**		**Pn**	**23 19 54.6**	**+0.4**
W39A				IAmb_Lg		23 20 47.8	
	comp=Z,66nm,0.8s						
KSU1	**Kansas State U**	**3.23**	**10**	Pn	**Pn**	**23 19 57.5**	**-0.5**
KSU1					**Pb**	**23 20 06.9**	**+2.1**
KSU1				IAmb_Lg		23 20 54.8	
	comp=Z,43nm,0.8s						
Z38A	**Mt. Pleasant**	**3.26**	**144**	Pn	**Pn**	**23 19 58.5**	**+0.1**
MIAR	**Mount Ida**	**3.34**	**113**	P	**Pn**	**23 20 00.6**	**+1.1**
	baz=295						
MIAR	**Mount Ida**	**3.34**	**113**		**Pn**	**23 20 00.8**	**+1.3**
MIAR				IAmb_Lg		23 21 00.3	
	comp=Z,39nm,0.8s						
U40A	**Yellville**	**3.62**	**82**	P	**Pn**	**23 20 04.0**	**+0.5**
	baz=264						
U40A	**Yellville**	**3.62**	**82**		**Pn**	**23 20 04.0**	**+0.5**
AMTX	**Amarillo**	**3.72**	**255**		**Pn**	**23 20 05.6**	**+0.7**
AMTX				IAmb_Lg		23 21 11.7	
	comp=Z,48nm,0.8s						
ABTX	**Abilene, Hawle**	**3.81**	**211**		**Pn**	**23 20 06.7**	**+0.7**
WHTX	**Lake Whitney,**	**3.91**	**182**	Sb	**Sb**	**23 21 06.4**	**+2.7**
	baz=2.0						
WHTX	**Lake Whitney,**	**3.91**	**182**	Pn	**Pn**	**23 20 05.9**	**-1.5**
X40A	**Basin Creek Fa**	**3.92**	**110**	Pn	**Pn**	**23 20 08.4**	**+0.9**
X40A				Pg	**Pb**	**23 20 18.4**	**+1.7**
237A	**Washetta, Mont**	**4.09**	**162**	Pn	**Pn**	**23 20 09.7**	**-0.2**
WLAR	**White Oak Lake**	**4.10**	**122**	Pn	**Pn**	**23 20 09.5**	**-0.4**
WHAR	**Wooly Hollow**	**4.13**	**97**		**Pn**	**23 20 11.1**	**+0.7**
WHAR				Sn	**Sn**	**23 20 59.0**	**+0.5**
WHAR				IAmb_Lg		23 21 25.8	
	comp=Z,30nm,0.9s						
W41B	**Gary Mavity, V**	**4.18**	**99**	P	**Pn**	**23 20 11.8**	**+0.7**
	baz=282						
W41B				S	**Sn**	**23 20 59.9**	**0.0**
	baz=282						
FCAR	**Ozark Folk Cen**	**4.20**	**89**	Pn	**Pn**	**23 20 11.8**	**+0.5**
FCAR				IAmb_Lg		23 21 22.6	
	comp=Z,32nm,0.8s						
UALR	**University of**	**4.21**	**104**	Pn	**Pn**	**23 20 12.0**	**+0.5**
UALR				IAmb_Lg		23 21 27.8	
	comp=Z,29nm,0.7s						
MGMO	**Mountain Grove**	**4.24**	**71**	Pn	**Pn**	**23 20 12.8**	**+0.9**
MGMO				IAmb_Lg		23 21 24.7	
	comp=Z,35nm,0.7s						
Z41A	**Richland Creek**	**4.56**	**124**	S	**Sn**	**23 21 08.6**	**-0.5**
	baz=307						
R40A	**Maddies Statio**	**4.67**	**58**		**Pn**	**23 20 18.6**	**+0.8**
R40A				Sn	**Sn**	**23 21 12.3**	**+0.4**
R40A				IAmb_Lg		23 21 38.5	
	comp=Z,27nm,1.0s						
P38A	**Dawn**	**4.76**	**38**	Pn	**Pn**	**23 20 19.9**	**+0.9**
P38A				IAmb_Lg		23 21 51.5	
	comp=Z,26nm,0.8s						
LCAR	**Lake Charles**	**4.99**	**86**	Pn	**Pn**	**23 20 22.4**	**+0.3**
LCAR				IAmb_Lg		23 21 45.6	
	comp=Z,42nm,0.8s						
N35A	**Tabor**	**5.11**	**14**	Pn	**Pn**	**23 20 24.6**	**+0.7**
T42A	**Van Buren**	**5.12**	**76**	IAmb_Lg		23 21 53.8	
	comp=Z,33nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.25**	**308**		**Pn**	**23 20 26.8**	**+0.9**
KSCO				IAmb_Lg		23 22 08.7	
	comp=Z,19nm,0.8s						
CCM	**Cathedral Cave**	**5.30**	**64**		**Pn**	**23 20 27.2**	**+0.7**
CCM					**Sn**	**23 21 27.3**	**-0.1**
CCM				IAmb_Lg		23 21 58.4	
	comp=Z,26nm,0.7s						
P40A	**Paris**	**5.51**	**47**	IAmb_Lg		23 22 13.4	
	comp=Z,22nm,0.8s						
JCT	**Junction City**	**5.81**	**202**	Pn	**Pn**	**23 20 35.0**	**+1.5**
JCT				IAmb_Lg		23 22 21.5	
	comp=Z,34nm,0.7s						
N38A	**Joes South For**	**5.83**	**32**	Pn	**Pn**	**23 20 34.9**	**+1.2**
L34A	**Svendsen Farm,**	**6.09**	**6**	IAmb_Lg		23 22 23.0	
	comp=Z,26nm,0.8s						
OGNE	**Ogallala**	**6.25**	**325**	IAmb_Lg		23 22 28.6	
	comp=Z,22nm,0.7s						
SLM	**Saint Louis**	**6.25**	**62**	IAmb_Lg		23 22 25.2	
	comp=Z,32nm,0.7s						
OXF	**Oxford**	**6.61**	**100**	IAmb_Lg		23 22 45.1	
	comp=Z,21nm,0.8s						
SCIA	**State Center**	**6.78**	**27**	IAmb_Lg		23 22 44.8	
	comp=Z,21nm,0.8s						
N41A	**Harden Midland**	**6.97**	**45**	Pn	**Pn**	**23 20 50.2**	**+0.8**
344A	**Westbrook Farm**	**7.05**	**127**	IAmb_Lg		23 22 47.6	
	comp=Z,23nm,0.8s						
PLAL	**Pickwick Lake**	**7.58**	**94**	IAmb_Lg		23 23 13.3	
	comp=Z,14nm,0.9s						
K38A	**Parkersburg**	**7.59**	**26**	IAmb_Lg		23 23 20.0	
	comp=Z,17nm,0.8s						
ISCO	**Idaho Springs**	**7.64**	**303**	Pn	**Pn**	**23 20 59.1**	**+0.2**
ISCO					**Sn**	**23 22 20.6**	**-4.8**
WVT	**Waverly**	**7.68**	**86**	IAmb_Lg		23 23 11.4	
	comp=Z,10.0nm,0.9s						
L40A	**Anamosa**	**7.75**	**36**	Pn	**Pn**	**23 21 01.7**	**+1.5**
L40A				IAmb_Lg		23 23 18.9	
	comp=Z,21nm,1.1s						
HDIL	**Hopedale**	**7.82**	**51**	Pn	**Pn**	**23 21 01.4**	**+0.3**
HDIL				Sn	**Sn**	**23 22 27.9**	**-1.5**
ECSD	**EROS Data Cent**	**7.83**	**4**	Pn	**Pn**	**23 21 01.8**	**+0.5**
OLIL	**Olney**	**7.85**	**66**	IAmb_Lg		23 23 32.9	
	comp=Z,22nm,0.8s						
O44A	**Mansfield**	**8.15**	**56**	IAmb_Lg		23 23 27.8	
	comp=Z,15nm,0.7s						
T47A	**Sharon Grove**	**8.29**	**80**	IAmb_Lg		23 23 47.3	
	comp=Z,19nm,0.9s						
L42A	**Oliver, Polo**	**8.50**	**42**	IAmb_Lg		23 23 37.8	
	comp=Z,12nm,0.7s						
V48A	**Smith Brothers**	**8.51**	**88**	IAmb_Lg		23 23 39.9	
	comp=Z,17nm,1.2s						
X48A	**Hartselle**	**8.52**	**97**	IAmb_Lg		23 23 37.8	
	comp=Z,13nm,1.0s						
I37A	**Lemond, Waseca**	**8.63**	**19**	IAmb_Lg		23 23 48.4	
	comp=Z,16nm,0.8s						
P46A	**Rosedale**	**8.81**	**62**	IAmb_Lg		23 23 51.6	
	comp=Z,19nm,0.7s						
JFWS	**Jewell Farm**	**8.87**	**36**	IAmb_Lg		23 23 51.9	
	comp=Z,13nm,0.7s						
WCI	**Wyandotte Cave**	**9.10**	**72**	IAmb_Lg		23 24 03.8	
	comp=Z,16nm,0.7s						
Y49A	**Blount Mountai**	**9.18**	**100**	IAmb_Lg		23 24 03.2	
	comp=Z,14nm,1.1s						
SFIN	**Lafayette**	**9.19**	**58**	IAmb_Lg		23 24 02.0	
	comp=Z,12nm,0.7s						
121A	**Cookes Peak, D**	**9.31**	**252**	IAmb_Lg		23 24 12.1	
	comp=Z,9.5nm,1.3s						
I40A	**Norwalk**	**9.48**	**31**	IAmb_Lg		23 24 07.7	
	comp=Z,12nm,1.0s						
W50A	**Signal Mountai**	**9.79**	**91**	IAmb_Lg		23 24 24.2	
	comp=Z,11nm,0.8s						
SPMN	**Marine on St.**	**9.91**	**19**	IAmb_Lg		23 24 23.9	
	comp=Z,9.2nm,0.9s						
F33A	**5 Mile Ranch,**	**9.95**	**4**	IAmb_Lg		23 24 21.0	
	comp=Z,12nm,1.1s						

*DDA **21** 23:26:58.2, 37.24N×36.35E, h13km±3km, ML3.2*
*ISK **21** 23:26:58.1, 37.29N×36.34E, h3km, ML3.1/18*
*ATA **21** 23:27:32.2±5.1, 38.95N×37.70E, h24km±57km, ML2.8, MW4.7*
ISC 21 23:26:58.6±0.9, **37.28N**±0.02×**36.36E**±0.02, **h16**km±7km, **n50, σ1§87/66, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMA	**Osmaniye**	**0.27**	**112**	*i* P	**Pg**	**23 27 03.9**	**-0.6**
KAMA				*i* S	**Sg**	**23 27 07.6**	**-0.8**
ANDN	**Andirin**	**0.30**	**358**	*i* P	**Pb**	**23 27 04.8**	**-0.8**
ANDN				*i* S	**Sb**	**23 27 10.6**	**+0.3**
AYKD	**Aykdinkavak**	**0.38**	**70**	*i* P	**Pg**	**23 27 06.4**	**0.0**
AYKD				*i* S	**Sg**	**23 27 12.0**	**+0.3**
AYKD				IAML		23 27 13.0	
	comp=E,2μm,0.4s						
HCB	**Kahramanmara**	**0.44**	**82**	*i* P	**Pb**	**23 27 07.8**	**-0.2**
HCB				*i* S	**Sb**	**23 27 14.3**	**-0.1**
KOZT	**Kozan**	**0.47**	**295**	PG	**Pg**	**23 27 07.5**	**-0.5**
KMRS	**Kahramanmaras**	**0.48**	**63**	PG	**Pb**	**23 27 08.4**	**-0.4**
KMRS				SG	**Sb**	**23 27 15.1**	**-0.6**
CEYT	**Ceyhan**	**0.56**	**241**	PG	**Pb**	**23 27 09.5**	**-0.5**
KHMN	**Narli-Kahraman**	**0.65**	**80**	PG	**Pb**	**23 27 11.6**	**+0.1**
GAZ	**Gaziantep**	**0.69**	**99**	PG	**Pb**	**23 27 12.6**	**+0.3**
SAIM	**ADANA**	**0.73**	**342**	*i* P	**Pb**	**23 27 12.5**	**-0.5**
YURE	**YUREGIR**	**0.74**	**232**	PG	**Pb**	**23 27 12.8**	**-0.3**
YURE	**YUREGIR**	**0.74**	**232**	*i* P	**Pg**	**23 27 12.4**	**-0.6**
TAHT	**Tahtakopru-Hat**	**0.92**	**189**	PG	**Pb**	**23 27 16.4**	**+0.3**
TAHT				SG	**Sn**	**23 27 30.1**	**+0.4**
GZT	**Gaziantep**	**0.96**	**85**	*i* P	**Pn**	**23 27 18.4**	**+0.8**
GZT				*i* S	**Sn**	**23 27 32.8**	**+1.7**
GZT				IAML		23 27 35.0	
	comp=E,596nm,0.5s						
KARA	**Karaisali**	**1.04**	**269**	PG	**Pn**	**23 27 18.6**	**+0.1**
KRTS	**Karatas**	**1.06**	**228**	PG	**Pn**	**23 27 19.0**	**+0.2**
SARI	**SarD1z-Kayseri**	**1.12**	**2**	PN	**Pn**	**23 27 19.9**	**+0.1**
YAHY	**KAYSERI_Yahyal**	**1.13**	**316**	*i* P	**Pb**	**23 27 19.4**	**-0.5**
YAHY				*i* S	**Sn**	**23 27 40.0**	**+4.8**
CMRD	**Camardi-Nigde**	**1.15**	**290**	PN	**Pg**	**23 27 20.3**	**-0.6**
ELBS	**KAHRAMANMARAS**	**1.21**	**30**	*i* P	**Pg**	**23 27 22.0**	**+0.1**
ELBS				*i* S	**Sn**	**23 27 42.2**	**+5.2**
ELBS				IAML		23 27 51.0	
	comp=E,365nm,0.5s						
YAYL	**Yayladag**	**1.26**	**189**	PN	**Pg**	**23 27 22.7**	**-0.3**
YAYL	**Yayladag**	**1.26**	**189**	*i* P	**Pb**	**23 27 22.1**	**0.0**
YAYL				*i* S	**Sg**	**23 27 40.0**	**+0.5**
YAYL				IAML		23 27 41.0	
	comp=N,749nm,0.5s						
DED	**Mersin**	**1.29**	**256**	*i* P	**Pn**	**23 27 21.3**	**-0.6**
DED				*i* S	**Sg**	**23 27 41.5**	**+1.3**
MERS	**Mersin**	**1.53**	**255**	PN	**Pb**	**23 27 26.7**	**+0.1**
ATAB	**Bozova**	**1.55**	**83**	*i* P	**Pb**	**23 27 27.4**	**+0.4**
DARE	**Darende-Malaty**	**1.56**	**34**	PN	**Pb**	**23 27 27.5**	**+0.4**
CUGUR	**Gurin_SVAS**	**1.61**	**26**	*i* P	**Pg**	**23 27 28.8**	**-0.8**
BNN	**Bunyan**	**1.62**	**346**	PN	**Pb**	**23 27 28.1**	**-0.1**
KERG	**Konya-Eregli**	**1.79**	**275**	*i* P	**Pb**	**23 27 30.9**	**-0.1**
KERG				*i* S	**Sg**	**23 27 55.7**	**-0.4**
SURC	**SANLIURFA_SURC**	**1.85**	**102**	*i* P	**Pg**	**23 27 34.2**	**+0.2**
AVNS	**Nevsehir-Avano**	**1.93**	**322**	*i* P	**Pb**	**23 27 33.0**	**-0.5**
MALT	**Malatya**	**1.93**	**57**	PN	**Pb**	**23 27 32.8**	**-0.7**
KIZK	**Mersin**	**1.95**	**246**	PN	**Pb**	**23 27 32.7**	**-1.0**
CUALT	**Altinyayla-SIV**	**2.01**	**9**	*i* P	**Pb**	**23 27 35.4**	**+0.5**
CUALT				*i* S	**Sg**	**23 28 06.2**	**+2.9**
CUALT				IAML		23 28 07.0	
	comp=E,144nm,0.6s						
HEKM	**Malatya_Hekimh**	**2.03**	**38**	*i* P	**Pb**	**23 27 34.3**	**-1.0**
SANL	**SANLIURFA_Merk**	**2.10**	**92**	*i* P	**Pg**	**23 27 39.1**	**+0.2**
CUSAR	**Sarkisla-SIVAS**	**2.13**	**358**	*i* P	**Pg**	**23 27 38.9**	**-0.6**
YESY	**Yesilyurt**	**2.14**	**284**	PN	**Pb**	**23 27 35.4**	**-1.6**
CUKAN	**kangal_SIVAS**	**2.21**	**23**	*i* P	**Pg**	**23 27 39.3**	**-1.7**
KEBE	**Keben-Mersin**	**2.28**	**249**	PN	**Pb**	**23 27 37.4**	**-2.0**
IKL	**Isikli**	**2.39**	**245**	PN	**Pn**	**23 27 38.9**	**+1.9**
SULT	**Sultanhani-AKS**	**2.43**	**293**	PN	**Pn**	**23 27 39.6**	**+1.8**
KRMN	**Karaman**	**2.47**	**268**	PN	**Pb**	**23 27 40.3**	**-2.4**
TEVE	**Tevekalti-Mers**	**2.49**	**251**	PN	**Pn**	**23 27 40.4**	**+1.9**
KEMA	**Kemaliye**	**2.60**	**40**	*eP*	**Pb**	**23 27 46.3**	**+1.4**
YAYX	**Yaylak**	**2.60**	**310**	PN	**Pn**	**23 27 42.0**	**+1.9**
REFA	**Refahiye_ERZN**	**2.83**	**41**	*eP*	Pg	23 27 59.1	+6.2
REFA				*eS*	**Sn**	**23 28 13.8**	**-3.4**
REFA				IAML		23 28 15.7	
	comp=Z,6.8nm,0.4s						
TNCL	**Tunceli-Merkez**	**3.10**	**53**	*eP*	**Pg**	**23 27 55.9**	**-2.1**
TNCL				*eS*	**Sn**	**23 28 22.4**	**-1.4**
TNCL				IAML		23 28 43.2	
	comp=Z,24nm,0.8s						
KOPT	**Kop Dagi**	**4.24**	**49**	*eP*	**Pb**	**23 28 15.1**	**+2.2**
KOPT				IAML		23 28 38.6	
	comp=Z,4.7nm,0.5s						
KOPT				*eS*	**Sn**	**23 28 44.1**	**-7.9**
KRIK	**Erzurum-spir**	**4.69**	**48**	*eP*	**Pb**	**23 28 21.5**	**+0.9**
KRIK				*eS*	**Sn**	**23 28 58.2**	**-5.0**
KRIK				IAML		23 29 12.7	
	comp=Z,264nm,3.6s						

*NIED **21** 23:33:00, 24.90N×124.80E, h8km, Mw3.6 Best double couple: M₀2.64000×10¹⁴ NP1:φs343.00000°, δ51.00000°, λ-90.00000°. NP2:φs163.00000°, δ39.00000°, λ-90.00000°.*
JMA 21 23:33:49.5±0.1, **24.86N**×**124.75E, h6**km±2km, **M3.5, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	**Tarama**	**0.22**	**191**	P	Pg	23 33 54.2	+0.3
JTJ				S	Sg	23 33 57.0	+0.2
JIRB	**Irabujima**	**0.39**	**95**	P	Pg	23 33 57.0	0.0
JIRB				*eS*	Sg	23 34 02.4	+0.3
JIKM	**Ikemajima**	**0.46**	**82**	P	Pg	23 33 58.5	+0.2
JIKM				*eS*	Sg	23 34 04.5	+0.2
JISG	**Ishigakijimahi**	**0.48**	**236**	P	Pg	23 33 59.0	+0.2
JISG				S	Sg	23 34 05.9	+0.8
JMJ2	**Miyako jima3**	**0.54**	**103**	P	Pg	23 34 00.0	+0.1
JMJ2				S	Sg	23 34 07.7	+0.8
JOGS	**Gusukube**	**0.60**	**99**	P	Pg	23 34 01.2	+0.1
JOGS				*eS*	Sb	23 34 10.2	-1.1
JIJ	**Ishigaki jima**	**0.74**	**228**	P	Pg	23 34 03.6	-0.2
JIJ				S	Sg	23 34 13.5	+0.1
JKRS	**Kuro-shima**	**0.92**	**228**	P	Pg	23 34 07.1	0.0
JKRS				S	Sb	23 34 20.1	-0.1
IRIF	**Iriomote-Funau**	**1.07**	**241**	P	Pg	23 34 09.5	-0.5
IRIF				S	Sb	23 34 24.3	-0.2
HATJ	**Hateruma jima**	**1.18**	**227**	P	Pg	23 34 11.7	-0.4
HATJ				*eS*	Sb	23 34 27.5	-0.2

*NEIC **21** 23:37:35.4±2.8, 19.72N±0.07×66.61W±0.04, h22km±16km, Error ellipse: s-maj=11.3km s-min=5.2km az=199.0*
*RSPR **21** 23:37:38.8, 19.66N×66.65W, h36km±10km, MD3.1/13*
ISC 21 23:37:33.4±1.2, **19.70N**±0.05×**66.58W**±0.04, **h19**km, **n46, σ1§11/58, 8C-6D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**1.21**	**178**	*eP*	**Pg**	**23 37 57.6**	**+0.7**
EMPR	**Esperanza - Ma**	**1.21**	**178**		**Pg**	**23 37 57.6**	**+0.7**
AGPR	**Aguadilla, PR**	**1.32**	**203**	*eP*	**Pg**	**23 37 58.5**	**-0.5**
AGPR	**Aguadilla, PR**	**1.32**	**203**	*eS*	**Sn**	**23 38 13.2**	**-0.8**
AGPR	**Aguadilla, PR**	**1.32**	**203**		**Pg**	**23 37 58.5**	**-0.5**
AGPR					**Sn**	**23 38 13.2**	**-0.8**
AOPR	**Arecibo Observ**	**1.35**	**187**	*eP*	**Pg**	**23 37 59.3**	**-0.3**
AOPR	**Arecibo Observ**	**1.35**	**187**	*eP*	**Pg**	**23 37 59.5**	**-0.1**
AOPR	**Arecibo Observ**	**1.35**	**187**	*eS*	**Sb**	**23 38 15.4**	**+0.3**
AOPR	**Arecibo Observ**	**1.35**	**187**		**Pg**	**23 37 59.5**	**-0.1**
AOPR					**Sb**	**23 38 15.4**	**+0.3**
UUPR	**Utuado, UPR, P**	**1.44**	**185**		**Pg**	**23 38 00.8**	**-0.5**
GCPR	**Guaynabo City**	**1.46**	**161**	*eP*	**Pg**	**23 38 01.3**	**-0.2**
GCPR	**Guaynabo City**	**1.46**	**161**	*eS*	**Sg**	**23 38 18.8**	**-1.7**
GCPR	**Guaynabo City**	**1.46**	**161**		**Pg**	**23 38 01.3**	**-0.2**
GCPR					**Sg**	**23 38 18.8**	**-1.7**
MPR	**Mayaguez**	**1.57**	**200**		**Pb**	**23 38 02.1**	**+0.2**
CBYP	**Canovanas**	**1.57**	**154**	*eS*	**Sg**	**23 38 22.3**	**-1.9**
CBYP	**Canovanas**	**1.57**	**154**	*eP*	**Pg**	**23 38 03.1**	**-0.7**
CBYP	**Canovanas**	**1.57**	**154**		**Pg**	**23 38 03.1**	**-0.7**
CBYP					**Sg**	**23 38 22.3**	**-1.9**
LSP	**Las Mesas**	**1.59**	**198**	*eP*	**Pb**	**23 38 02.5**	**+0.3**
LSP	**Las Mesas**	**1.59**	**198**	*eS*	**Sb**	**23 38 21.0**	**-0.8**
LSP	**Las Mesas**	**1.59**	**198**		**Pb**	**23 38 02.5**	**+0.3**
LSP					**Sb**	**23 38 21.0**	**-0.8**
SJG	**San Juan**	**1.63**	**166**		**Pg**	**23 38 04.5**	**-0.3**
OBIP	**Obispado Ponce**	**1.64**	**181**	*eS*	**Sb**	**23 38 22.9**	**-0.6**
OBIP	**Obispado Ponce**	**1.64**	**181**	*eP*	**Pb**	**23 38 03.4**	**+0.2**
OBIP	**Obispado Ponce**	**1.64**	**181**		**Pb**	**23 38 03.4**	**+0.2**
OBIP					**Sb**	**23 38 22.9**	**-0.6**
GBPR	**Guanica, Bosqu**	**1.73**	**190**	*eS*	**Sb**	**23 38 25.1**	**-1.0**
GBPR	**Guanica, Bosqu**	**1.73**	**190**	*eP*	**Pb**	**23 38 05.0**	**+0.3**
GBPR	**Guanica, Bosqu**	**1.73**	**190**		**Pb**	**23 38 05.0**	**+0.3**
GBPR					**Sb**	**23 38 25.1**	**-1.0**
CRPR	**Cabo Rojo, PR**	**1.75**	**197**	*eS*	**Sb**	**23 38 25.4**	**-1.2**
CRPR	**Cabo Rojo, PR**	**1.75**	**197**	*eP*	**Pb**	**23 38 04.9**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.75**	**197**		**Pb**	**23 38 04.9**	**-0.1**
CRPR					**Sb**	**23 38 25.4**	**-1.2**
MLPR	**Magueyes Islan**	**1.77**	**195**	*eS*	**Sn**	**23 38 25.6**	**+0.5**
MLPR	**Magueyes Islan**	**1.77**	**195**	*eP*	**Pb**	**23 38 05.2**	**-0.1**
MLPR	**Magueyes Islan**	**1.77**	**195**		**Pb**	**23 38 05.2**	**-0.1**
MLPR					**Sn**	**23 38 25.6**	**+0.5**
IGPR	**InterUniversit**	**1.78**	**165**	*eP*	**Pb**	**23 38 05.7**	**+0.3**
IGPR	**InterUniversit**	**1.78**	**165**		**Pg**	**23 38 07.1**	**-0.5**
CUPR	**Culebra, Puert**	**1.84**	**138**	*eP*	**Pb**	**23 38 06.4**	**-0.2**
CUPR	**Culebra, Puert**	**1.84**	**138**		**Sn**	**23 38 27.4**	**+0.6**
CUPR	**Culebra, Puert**	**1.84**	**138**		**Pb**	**23 38 06.4**	**-0.2**
MTP	**Monte Pirata**	**1.86**	**148**	Pn	**Pb**	**23 38 06.7**	**-0.1**
STVI	**Saint Thomas**	**2.04**	**131**	Pn	**Pb**	**23 38 09.6**	**-0.2**
STVI					**Sb**	**23 38 32.8**	**-1.9**
PCDR	**Punta Cana, DR**	**2.07**	**236**	*eS*	**Sn**	**23 38 32.8**	**+0.4**
PCDR	**Punta Cana, DR**	**2.07**	**236**	*eP*	**Pb**	**23 38 09.8**	**-0.6**
PCDR	**Punta Cana, DR**	**2.07**	**236**		**Pb**	**23 38 09.8**	**-0.6**
PCDR					**Sn**	**23 38

PSAB2				IAmb	IAmb	23 41 46.5	
	comp=Z,20nm,0.7s						
PSA00	**Pilbara Seismi**	**17.35**	**213**	P	**Pn**	**23 41 46.0**	**+1.2**
PSA00				IAmb	IAmb	23 41 46.7	
	comp=Z,21nm,0.7s						
PSAA3	**Pilbara Seismi**	**17.35**	**213**		**Pn**	**23 41 45.3**	**+0.6**
SBUM	**Sibu**	**19.90**	**298**	P	**P**	**23 42 13.5**	**+1.9**
SBUM				IAmb	IAmb	23 42 14.7	
	comp=Z,9.3nm,0.7s						
GIRL	**Giralia**	**21.57**	**222**	P	**P**	**23 42 32.0**	**+2.7**
CISI	**Cisompet, Garu**	**21.79**	**267**	P	**P**	**23 42 28.5**	**-3.4**
FORT	**Forrest**	**23.68**	**184**	P	**P**	**23 42 52.4**	**+2.9**
MORW	**Morawa**	**25.47**	**209**	P	**P**	**23 43 04.4**	**-1.4**
BBOO	**Buckleboo**	**26.31**	**168**	P	**P**	**23 43 16.3**	**+3.0**
STKA	**Stephens Creek**	**27.07**	**157**	P	**P**	**23 43 22.8**	**+2.7**
	comp=Z,1.8nm,0.4s,baz=335,slow=9.6,SNR=11						
STKA	**Stephens Creek**	**27.07**	**157**	IAmb	IAmb	23 43 23.5	
	comp=Z,0.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**39.58**	**310**	P	**P**	**23 45 08.2**	**-0.3**
	comp=Z,1.8nm,0.4s,baz=135,slow=7.2,SNR=10						
TAPN	**Taplejung**	**53.14**	**312**	*eP*	**P**	**23 46 54.3**	**-0.2**
	comp=Z,7.2nm,0.4s						
RAMN	**Ramite**	**53.75**	**311**	*eP*	**P**	**23 46 59.0**	**+0.1**
	comp=Z,11nm,0.4s						
JIRN	**Jiri**	**54.44**	**311**	*eP*	**P**	**23 47 03.6**	**-0.4**
	comp=Z,5.2nm,0.3s						
GUN	**Gumba**	**54.81**	**311**	*eP*	**P**	**23 47 06.4**	**-0.3**
	comp=Z,9.6nm,0.5s						
PKI	**Pulchoki**	**54.98**	**311**	*eP*	**P**	**23 47 08.3**	**+0.4**
	comp=Z,5.2nm,0.4s						
PKIN	**Phulchoki**	**54.99**	**311**	*eP*	**P**	**23 47 08.3**	**+0.4**
GKN	**Gorkha**	**55.79**	**311**	*eP*	**P**	**23 47 13.2**	**-0.2**
	comp=Z,13nm,0.2s						
KOLN	**Koldanda**	**56.45**	**310**	*eP*	**P**	**23 47 18.1**	**-0.1**
	comp=Z,5.5nm,0.3s						
ULN	**Ulaanbaatar**	**58.23**	**342**	P	**P**	**23 47 29.9**	**-0.3**
ULN				IAmb	IAmb	23 47 32.1	
	comp=Z,3.9nm,0.7s						
SONM	**Songino Array**	**58.40**	**342**	P	**P**	**23 47 32.4**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=179,slow=7.7,SNR=5.5						
PETK	**Petropavlovsk-**	**64.42**	**18**	P	**P**	**23 48 12.8**	**+1.3**
	comp=Z,1.1nm,0.6s,baz=196,slow=8.4,SNR=2.5						
MK31	**Makanchi Array**	**68.13**	**327**	P	**P**	**23 48 36.0**	**+0.7**
MK31				IAmb	IAmb	23 48 37.1	
	comp=Z,3.5nm,0.5s						
MKAR	**Makanchi Array**	**68.13**	**327**	P	**P**	**23 48 36.0**	**+0.6**
	comp=Z,4.9nm,0.4s,baz=116,slow=8.1,SNR=108						
MAKZ	**Makanchi**	**68.31**	**327**	P	**P**	**23 48 37.0**	**+0.5**
AAK	**Ala-Archa**	**70.42**	**320**	P	**P**	**23 48 51.1**	**+1.4**
	comp=Z,1.7nm,0.4s,baz=98,slow=6.7,SNR=4.4						
ZAA0	**Zalesovo Array**	**71.51**	**334**	P	**P**	**23 48 55.8**	**0.0**
ZALV	**Zalesovo Beam**	**71.51**	**334**	P	**P**	**23 48 55.7**	**-0.1**
	comp=Z,1.5nm,0.3s,baz=128,slow=4.9,SNR=12						
KURK	**Kurchatov**	**72.43**	**329**	P	**P**	**23 49 01.3**	**0.0**
KURK				IAmb	IAmb	23 49 02.8	
	comp=Z,4.3nm,0.8s						
VNDA	**Vanda**	**72.44**	**173**	P	**P**	**23 49 02.6**	**+1.6**
	comp=Z,0.4nm,0.5s,baz=335,slow=6.9,SNR=5.7						
BVAR	**Borovoye Array**	**77.97**	**328**	P	**P**	**23 49 33.4**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=111,slow=6.5,SNR=11						
AKTO	**Aktyubinsk**	**83.96**	**322**	P	**P**	**23 50 05.6**	**+0.8**
	comp=Z,1.4nm,0.4s,baz=107,slow=9.9,SNR=5.6						
ILAR	**Eielson Array**	**93.47**	**25**	P	**P**	**23 50 49.2**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=322,slow=19,SNR=1.9						
PDAR	**Pinedale Array**	**117.07**	**45**	PKP	**PKiKP**	**23 56 20.8**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=242,slow=3.2,SNR=3.7						
TORD	**Torodi Ar. Bea**	**128.60**	**281**	PKP	**PKiKP**	**23 56 43.2**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=55,slow=2.8,SNR=10						
CPUP	**Villa Florida**	**146.13**	**169**	PKPbc	**PKPab**	**23 57 16.6**	**+1.0**
	comp=Z,4.6nm,0.7s,baz=170,slow=2.1,SNR=13						
LPAZ	**La Paz**	**150.83**	**143**	PKPbc	**PKiKP**	**23 57 30.9**	**+2.3**
	comp=Z,2.8nm,0.4s,baz=14,slow=2.5,SNR=27						

*HEL **21** 23:48:01.5±0.1,67.83N×20.18E,h0km,ML1.7, ML1.9(UPP), Explosion*
*UPP **21** 23:48:01.0±0.1,67.83N×20.19E,h0km,ML2.2, Explosion*
ISC 21 23:48:01.2±1.1,67.83N±0.03×20.24E±0.05,h0km,n22, σ1§04/30,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**16**	P	**Pg**	**23 48 03.9**	**+0.1**
KUA				S	**Sg**	**23 48 05.7**	**+0.2**
KUA	**Kurravaara**	**0.13**	**16**	*i* P	**Pg**	**23 48 03.9**	**+0.1**
KUA				*i* S	**Sg**	**23 48 05.7**	**+0.2**
KOVU	**Salmi**	**0.40**	**356**	P	**Pg**	**23 48 08.5**	**-0.3**
KOVU	**Salmi**	**0.40**	**356**	*i* P	**Pg**	**23 48 08.5**	**-0.3**
LANU	**Lannavaara**	**0.70**	**71**	P	**Pg**	**23 48 14.5**	**-0.1**
LANU	**Lannavaara**	**0.70**	**71**	*e*P	**Pg**	**23 48 14.4**	**-0.1**
	baz=261						
LANU				*e*S	**Sg**	**23 48 23.9**	**+0.4**
DUNU	**Dundret**	**0.72**	**170**	P	**Pg**	**23 48 14.8**	**-0.2**
DUNU	**Dundret**	**0.72**	**170**	*i* P	**Pg**	**23 48 14.8**	**-0.2**
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*PN	**Pn**	**23 48 25.2**	**0.0**
KIF				MSG		23 48 38.9	
	comp=Z,7.4nm,0.2s						
KIF				*e*SB	**Sg**	**23 48 39.9**	**+0.2**
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*P	**Pb**	**23 48 24.5**	**-0.2**
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*P	**Sg**	**23 48 39.8**	**+0.1**
PAJU	**Pajala**	**1.37**	**125**	P	**Pg**	**23 48 26.4**	**-1.1**
PAJU	**Pajala**	**1.37**	**125**	*e*P	**Pg**	**23 48 26.4**	**-1.1**
HEF	**Hetta**	**1.41**	**64**	*e*PG	**Pn**	**23 48 27.1**	**-0.9**
	baz=244						
HEF				MSG		23 48 44.8	
	comp=Z,4.5nm,0.2s						
HEF				*e*SN	**Sn**	**23 48 49.8**	**+2.5**
HEF	**Hetta**	**1.41**	**64**	*e*P	**Pn**	**23 48 27.3**	**-0.7**
HEF	**Hetta**	**1.41**	**64**	*e*P	**Sg**	**23 48 45.9**	**-0.4**
ERTU	**Ertsjaerv**	**1.49**	**148**	P	**Pn**	**23 48 28.4**	**-0.7**
ERTU	**Ertsjaerv**	**1.49**	**148**	*e*PG	**Pn**	**23 48 28.4**	**-0.7**
	baz=318						
ERTU				*e*SB	**Sg**	**23 48 48.8**	**-0.1**
TOF	**Tornio**	**2.38**	**136**	*e*PB	**Pn**	**23 48 42.9**	**+1.5**
	baz=312						
TOF				MSG		23 49 11.8	
	comp=Z,3.1nm,0.2s						
TOF				*e*SG	**Sb**	**23 49 15.7**	**+1.0**
SGF	**Sodankyl**	**2.44**	**96**	*e*SG	**Sg**	**23 49 18.9**	**-0.5**
RNF	**Rovaniemi**	**2.56**	**116**	*e*PB	**Pn**	**23 48 45.9**	**+2.1**
	baz=303						
RNF				*e*SG	**Sb**	**23 49 20.4**	**+0.6**
ARE0	**ARCESS Array S**	**2.58**	**46**	*e*S	**Sn**	**23 49 13.1**	**-3.0**

*IDC **21** 23:50:17.7±2.4,0.09S×124.22E,h44km±22km,mb4.2/17, mb1 4.3/19,mb1mx4.0/45,mbtmp4.4/19,ML4.2/2,MS3.2/10, Ms1 3.2/10,ms1mx2.9/35,Error ellipse: s-maj=18.7km s-min=9.9km az=68.0*
*BJI **21** 23:50:18.7±0.0,0.06S×124.89E,h64km,mB4.8/11, mb4.8/15*
*DJA **21** 23:50:20.9±0.2,0°S±2°×12°4E±°,h62km±3km,M4.7/26, mb4.8/26,mB5.1/12,MLv5.0/18,Mw(mB)4.5/12*
*NEIC **21** 23:50:21.1±2.6,0.17S±0.07S×124.38E±0.06,h87km±4km, mb4.4/21,Error ellipse: s-maj=10.8km s-min=8.0km az=154.0*
ISC 21 23:50:20.2±0.4,0.06S±0.05×124.36E±0.04,h73km,n71, σ1§41/76,mb4.4/26,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.73**	**329**	P	**Pn**	**23 50 34.9**	**-0.8**
LUWI	**Luwuk**	**1.86**	**238**	P	**Pn**	**23 50 50.7**	**+0.6**
LUWI				S	**Sn**	**23 51 13.9**	**+1.0**
LUWI	**Luwuk**	**1.86**	**238**		**Pn**	**23 50 50.7**	**+0.6**
TNTI	**Ternate**	**3.12**	**75**	P	**Pn**	**23 51 07.8**	**+0.7**
TNTI				S	**Sn**	**23 51 44.2**	**+0.9**
TNTI	**Ternate**	**3.12**	**75**		**Pn**	**23 51 08.3**	**+1.2**
TNTI				Sn	**Sn**	**23 51 43.9**	**+0.5**
LBMI	**Labuha**	**3.20**	**100**	P	**Pn**	**23 51 07.8**	**-0.4**
LBMI				S	**Sn**	**23 51 44.6**	**-0.6**
NLAI	**Namlea**	**4.18**	**139**	P	**Pn**	**23 51 20.9**	**-0.8**
MPSI	**Mapaga**	**4.48**	**275**	P	**Pn**	**23 51 25.0**	**-0.6**
AAI	**Ambon**	**5.26**	**133**	P	**Pn**	**23 51 37.1**	**+0.7**
	1.3nm5μm247nm,0.9s						
TTSI	**Tana Toraja**	**5.42**	**237**	P	**Pn**	**23 51 39.5**	**+0.9**
	2.6nm6μm554nm,0.6s						
MSAI	**Masohi**	**5.62**	**126**	P	**Pn**	**23 51 41.5**	**+0.2**
	0.7nm2μm163nm,0.9s						
SPSI	**Sidrap Palu**	**6.01**	**230**	P	**Pn**	**23 51 47.5**	**+0.9**
	1.3nm4μm286nm,0.5s						
BNSI	**Bone**	**6.05**	**224**	P	**Pn**	**23 51 47.9**	**+0.7**
	1.0nm2μm202nm,0.8s						

BKSI	**Bulukumba**	**6.73**	**219**	P	**Pn**	**23 51 57.8**	**+1.4**
	0.5nm944nm43nm,0.5s						
KAPI	**Kappang**	**6.74**	**223**	P	**Pn**	**23 51 56.7**	**+0.2**
	16nm,0.3s,baz=44,slow=7.5,SNR=41						
KAPI				S	**Sn**	**23 53 11.1**	**-0.8**
	9.2nm,0.3s,baz=233,slow=23,SNR=8.4						
KAPI				LR	LR	23 55 00.3	
	comp=Z,177nm,20.9s,baz=76,slow=43						
KAPI	**Kappang**	**6.74**	**223**		**Pn**	**23 51 57.4**	**+0.8**
KAPI					**Sn**	**23 53 12.4**	**+0.5**
SIJI	**Sorong**	**6.96**	**97**	P	**Pn**	**23 52 00.8**	**+1.3**
	5.4nm,0.3s,baz=295,slow=9.0,SNR=17						
SIJI				S	**Sn**	**23 53 18.6**	**+1.3**
	0.2nm,0.3s,baz=204,slow=23,SNR=1.2						
BNDI	**Bandanaira**	**7.10**	**129**	P	**Pn**	**23 52 02.2**	**+0.7**
	1.9nm444nm,0.9s						
SMKI	**Samarinda**	**7.16**	**267**	P	Pn	23 52 13.4	+11
DAV	**Davao City (W)**	**7.18**	**10**	LR	LR	23 55 02.1	
	comp=Z,242nm,20.8s,baz=178,slow=39						
BKB	**Balikpapan**	**7.56**	**261**	P	**Pn**	**23 52 09.4**	**+1.6**
	0.6nm3μm145nm,0.6s						
BKB	**Balikpapan**	**7.56**	**261**		**Pn**	**23 52 09.2**	**+1.5**
FAKI	**Fak Fak**	**8.38**	**110**	P	**Pn**	**23 52 18.0**	**-1.1**
	612nm61nm,0.7s						
FAKI	**Fak Fak**	**8.38**	**110**		**Pn**	**23 52 17.9**	**-1.1**
FAKI					**Sn**	**23 53 48.3**	**-4.0**
KBKI	**Kotabaru**	**8.80**	**248**	P	Pn	23 52 34.5	+10
KKM	**Kota Kinabalu**	**10.14**	**307**		**Pn**	**23 52 45.6**	**+2.4**
SBUM	**Sibu**	**12.39**	**282**		**Pn**	**23 53 13.8**	**+0.1**
KSM	**Kuching**	**14.13**	**276**		**P**	**23 53 40.0**	**-2.4**
KNRA	**Kununurra**	**16.12**	**165**		**Pn**	**23 54 01.1**	**-1.4**
KNRA				IAmb	IAmb	23 54 06.0	
	comp=Z,30nm,0.8s						
FITZ	**Fitzroy Crossi**	**17.97**	**176**	P	**P**	**23 54 23.6**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=8.1,slow=5.3,SNR=15						
FITZ	**Fitzroy Crossi**	**17.97**	**176**	P	**P**	**23 54 22.5**	**-2.4**
LEM	**Lembang**	**18.00**	**248**	LR	LR	00 01 53.9	
	comp=Z,161nm,19.9s,baz=24,slow=39						
LEM	**Lembang**	**18.00**	**248**	P	**Pn**	**23 54 27.9**	**+2.0**
	comp=Z,22nm,1.0s						
DLV	**T Lat**	**19.76**	**308**	P	**P**	**23 54 45.0**	**+0.3**
DLV				IAmb	IAmb	23 54 51.9	
	comp=Z,32nm,0.9s						
MYKOM	**Kota Tinggi**	**20.59**	**275**	P	**P**	**23 54 52.8**	**-0.7**
PSA00	**Pilbara Seismi**	**21.83**	**191**	P	**P**	**23 55 07.0**	**+0.2**
WB0	**Warramunga Arr**	**21.92**	**154**	P	**P**	**23 55 06.3**	**-1.4**
WB0				IAmb	IAmb	23 55 12.4	
	comp=Z,27nm,0.8s						
WRAB	**Tennant Creek**	**22.05**	**154**	P	**P**	**23 55 08.3**	**-0.8**
WRA	**Warramunga Arr**	**22.05**	**154**	P	**P**	**23 55 07.8**	**-1.3**
	comp=Z,12nm,0.8s,baz=334,slow=11,SNR=35						
WB2	**Warramunga Arr**	**22.06**	**154**	P	**P**	**23 55 07.9**	**-1.3**
WR0	**Warramunga Arr**	**22.15**	**154**	IAmb	IAmb	23 55 15.3	
	comp=Z,22nm,0.8s						
IPM	**Ipoh**	**23.74**	**281**	P	**P**	**23 55 25.5**	**-0.6**
IPM				IAmb	IAmb	23 55 27.9	
	comp=Z,10.0nm,0.7s						
KULM	**Kulim**	**24.26**	**283**	P	**P**	**23 55 30.6**	**-0.2**
KULM				IAmb	IAmb	23 55 33.8	
	comp=Z,7.9nm,0.9s						
ASAR	**Alice Springs**	**25.23**	**159**	P	**P**	**23 55 39.5**	**-0.1**
	comp=Z,16nm,1.1s,baz=333,slow=7.5,SNR=58						
ASAR				PcP	**PcP**	**23 59 12.7**	**+1.1**
	comp=Z,0.5nm,0.4s,baz=349,slow=2.1,SNR=4.7						
ASAR				S	**S**	**00 00 03.9**	**+3.9**
	comp=Z,1.5nm,1.1s,baz=344,slow=19,SNR=5.2						
ASAR				LR	LR	00 05 58.2	
	comp=Z,34nm,18.7s,baz=342,slow=37						
RPSI	**Rantau Prapat**	**25.57**	**276**	P	**P**	**23 55 42.8**	**0.0**
RPSI				IAmb	IAmb	23 55 45.0	
	comp=Z,7.6nm,0.8s						
RPSI	**Rantau Prapat**	**25.57**	**276**	P	**P**	**23 55 42.6**	**-0.1**
PSI	**Prapat**	**25.58**	**277**	P	**P**	**23 55 42.6**	**-0.4**
	comp=Z,5.2nm,0.6s,baz=182,slow=2.0,SNR=6.0						
PSI				LR	LR	00 05 34.6	
	comp=Z,94nm,19.6s,baz=264,slow=36						
GSI	**Gunungsitoli**	**26.81**	**273**	P	**P**	**23 55 51.6**	**-2.4**
PBKT	**Sadao Pong**	**28.37**	**307**	P	**P**	**23 56 06.9**	**-0.8**
PBKT				IAmb	IAmb	23 56 10.1	
	comp=Z,8.6nm,1.4s						
CMAR	**Chiang Mai Arr**	**31.02**	**308**	P	**P**	**23 56 30.6**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=132,slow=8.2,SNR=5.8						
CMAR				LR	LR	00 09 18.9	
	comp=Z,37nm,19.9s,baz=163,slow=37						
STKA	**Stephens Creek**	**35.60**	**154**	P	**P**	**23 57 11.3**	**+0.4**
	comp=Z,2.7nm,0.6s,baz=326,slow=9.4,SNR=9.7						
KSRS	**Korea Array**	**37.47**	**5**	P	**P**	**23 57 28.0**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=186,slow=10,SNR=4.5						
KSRS				LR	LR	00 14 54.7	
	comp=Z,11nm,18.3s,baz=206,slow=39						
MJAR	**Matsushiro Arr**	**38.62**	**18**	P	**P**	**23 57 36.9**	**+0.5**
	comp=Z,12nm,0.7s,baz=194,slow=9.3,SNR=19						
MJAR				LR	LR	00 13 58.1	
	comp=Z,8.1nm,19.9s,baz=220,slow=37						
MJB9	**Matsu-Tunnel**	**38.62**	**18**	P	**P**	**23 57 36.8**	**+0.3**
USRK	**Ussuriysk Ar.**	**44.59**	**8**	P	**P**	**23 58 26.5**	**+1.4**
	comp=Z,5.2nm,0.6s,baz=194,slow=6.8,SNR=14						
ASAJ	**Asahikawa**	**46.89**	**18**	P	**P**	**23 58 44.8**	**+1.5**
	comp=Z,6.5nm,0.5s,baz=221,slow=4.7,SNR=5.2						
JKA	**Kamikawa-asahi**	**46.89**	**18**	P	**P**	**23 58 44.8**	**+1.5**
SONM	**Songino Array**	**50.19**	**344**	P	**P**	**23 59 09.1**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=163,slow=8.7,SNR=5.9						
MK31	**Makanchi Array**	**59.38**	**328**	P	**P**	**00 00 14.7**	**-0.4**
MK31				IAmb	IAmb	00 00 15.4	
	comp=Z,1.5nm,0.8s						
MKAR	**Makanchi Array**	**59.38**	**328**	P	**P**	**00 00 14.8**	**-0.3**
	comp=Z,1.5nm,0.3s,baz=128,slow=8.1,SNR=30						
MKAR				LR	LR	00 26 25.8	
	comp=Z,28nm,21.4s,baz=114,slow=36						
PETK	**Petropavlovsk-**	**59.81**	**23**	P	**P**	**00 00 18.8**	**+0.9**
	comp=Z,3.6nm,0.6s,baz=189,slow=7.6,SNR=8.7						
ZALV	**Zalesovo Beam**	**62.93**	**335**	P	**P**	**00 00 37.9**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=138,slow=4.5,SNR=7.2						
KURK	**Kurchatov**	**63.71**	**329**	P	**P**	**00 00 43.6**	**-0.4**
KURK				IAmb	IAmb	00 00 44.3	
	comp=Z,4.9nm,0.5s						
TIXI	**Tiksi**	**71.65**	**2**	P	**P**	**00 01 33.7**	**+0.1**
TIXI				IAmb	IAmb	00 01 35.3	
	comp=Z,5.5nm,0.9s						
TIXI				PP	**PP**	**00 04 07.9**	**-5.6**
NRIK	**Noril'sk**	**73.54**	**347**	P	**P**	**00 01 45.4**	**+0.5**
	comp=Z,3.8nm,0.6s,baz=129,slow=7.4,SNR=12						
RAYN	**Ar Rayn**	**79.80**	**294**	P	**P**	**00 02 19.8**	**-1.5**
VNDA	**Vanda**	**80.01**	**172**	P	**P**	**00 02 22.4**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=283,slow=6.0,SNR=2.0						
KMBO	**Kilima Mbogo**	**87.10**	**269**	P	**P**	**00 03 00.7**	**+1.5**
	comp=Z,1.3nm,0.7s,baz=45,slow=7.7,SNR=4.7						
ARCES	**ARCESS Array B**	**93.15**	**340**	P	**P**	**00 03 25.6**	**-0.4**
	comp=Z,2.9nm,1.0s,baz=45,slow=29,SNR=2.1						
BOSA	**Boshof**	**97.97**	**241**	LR	LR	00 43 19.3	
	comp=Z,38nm,20.3s,baz=174,slow=32						
TORD	**Torodi Ar. Bea**	**121.73**	**285**	PKP	**PKiKP**	**00 09 07.2**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=79,slow=1.8,SNR=5.4						

*ECX **21** 23:58:22.8±0.6,31.49N×114.35W,h1km±5km,MD3.1, ML3.3*
*MEX **21** 23:58:26.0±0.8,30.79N×114.31W,h10km,MD3.8*
ISC 21 23:58:21.8±1.1,31.46N±0.06×114.34W±0.03, h12km±15km,n13,σ0§87/21,1C-1D,Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFX	**San Felipe**	**0.61**	**226**	*e*P	**Pg**	**23 58 33.7**	**0.0**
SFX				*e*S	**Sg**	**23 58 42.1**	**+0.4**
PIX	**Pinacate**	**0.75**	**82**	*e*P	**Pg**	**23 58 36.5**	**+0.1**
PIX				*e*S	**Sg**	**23 58 47.3**	**+1.0**
SPIG	**San Pedro Mart**	**1.05**	**247**	*e*P	**Pg**	**23 58 41.7**	**-0.4**
SPIG				*e*S	**Sg**	**23 58 56.3**	**+0.4**
SPIG	**San Pedro Mart**	**1.05**	**247**	*e*P	**Pg**	**23 58 42.2**	**+0.1**
SPIG				*i* S	**Sg**	**23 58 56.3**	**+0.4**
SPX	**San Pedro Mart**	**1.06**	**247**	*e*P	**Pg**	**23 58 41.8**	**-0.4**
SPX				*e*S	**Sg**	**23 58 56.4**	**+0.3**
SPX				IAML		23 58 57.0	
	comp=E,428nm,0.6s						
SPX				⇓*e*		23 58 58.2	
SPX				IAML		23 58 58.2	
	comp=N,494nm,0.4s						
SPX	**San Pedro Mart**	**1.06**	**247**	*e*P	**Pg**	**23 58 42.7**	**+0.5**
SPX				*e*S	**Sg**	**23 58 56.1**	**+0.1**
MBIG	**Mexicali**	**1.20**	**322**	*e*P	Pn	23 58 53.1	+8.8
VTX	**Valle De La Tr**	**1.24**	**267**	*e*P	**Pg**	**23 58 44.3**	**-1.4**
VTX				*e*S	**Sg**	**23 59 01.5**	**-0.4**
214A	**Organ Pipe Nat**	**1.39**	**69**	*e*P	**Pn**	**23 58 47.0**	**-0.1**
ESJX	**Sierra Juarez**	**1.48**	**292**	*e*P	**Pn**	**23 58 48.5**	**+0.1**
ESJX				*e*S	**Sg**	**23 59 08.5**	**-1.0**
CBX	**Cerro Bola**	**2.16**	**294**	*e*P	**Pn**	**23 58 59.3**	**+1.6**
CBX				IAML		23 59 43.1	
	comp=E,217nm,0.7s						
CBX				⇑*e*		23 59 43.1	
CBX	**Cerro Bola**	**2.16**	**294**	*e*P	**Pg**	**23 59 03.1**	**0.0**
CBX				*i* S	**Sg**	**23 59 33.2**	**+2.0**
TUC	**Tucson**	**3.14**	**73**	*e*P	**Pb**	**23 59 16.6**	**-1.0**

*KRSC **21** 23:59:10.8±2.5,54.42N×153.55E,h653km±37km,ML4.1*
*MOS **21** 23:59:12.9±0.7,54.46N×153.79E,h644km,mb3.8/2,Error ellipse: s-maj=14.6km s-min=12.3km az=114.7*
*IDC **21** 23:59:14.6±1.1,54.46N×153.32E,h614km±14km, mb2.9/12,mb1 3.2/16,mb1mx2.9/39,mbtmp4.0/16,Error ellipse: s-maj=16.4km s-min=12.2km az=157.0*
ISC 21 23:59:14.2±0.6,54.57N±0.08×153.36E±0.07,h600km,n77, σ1§67/104,mb3.5/12,Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PEA0B	**Petropavlovsk-**	**2.96**	**118**	*i* P	**P**	**00 00 34.0**	**+1.0**
PETK	**Petropavlovsk-**	**2.96**	**118**	P	**P**	**00 00 33.9**	**+0.8**
	0.7nm,0.3s,baz=79,slow=5.4,SNR=8.2						
MIPR	**Malaya Ipel'ka**	**3.07**	**137**	P	**P**	**00 00 33.9**	**+0.2**
MIPR	**Malaya Ipel'ka**	**3.07**	**137**	P	**P**	**00 00 33.9**	**+0.2**
KRMR	**Karymshinskiy**	**3.33**	**120**	*e*P	**P**	**00 00 37.0**	**+1.8**
KRMR				*e*S	**S**	**00 01 45.0**	**+3.7**
KRMR	**Karymshinskiy**	**3.33**	**120**	P	**P**	**00 00 37.0**	**+1.8**
KRMR				S	**S**	**00 01 45.0**	**+3.7**
KRX	**Arik**	**3.35**	**109**	*e*P	**P**	**00 00 36.5**	**+1.0**
KRX				*e*S	**S**	**00 01 44.6**	**+2.7**
KRX	**Arik**	**3.35**	**109**	P	**P**	**00 00 36.5**	**+1.0**
KRX				S	**S**	**00 01 44.6**	**+2.7**
KOK	**Koryaka**	**3.37**	**110**	*e*P	**P**	**00 00 36.8**	**+1.3**
KOK	**Koryaka**	**3.37**	**110**	P	**P**	**00 00 36.8**	**+1.3**
KRER	**Koryakskii**	**3.43**	**109**	*e*P	**P**	**00 00 37.3**	**+1.3**
KRER	**Koryakskii**	**3.43**	**109**	P	**P**	**00 00 37.3**	**+1.3**
AVH	**Avacha**	**3.44**	**110**	*e*P	**P**	**00 00 37.2**	**+1.3**
AVH				*e*S	**S**	**00 01 46.7**	**+3.9**
AVH	**Avacha**	**3.44**	**110**	P	**P**	**00 00 37.2**	**+1.3**
AVH				S	**S**	**00 01 46.7**	**+3.9**
GRL	**Gorelyy**	**3.46**	**124**	*e*P	**P**	**00 00 38.0**	**+1.8**
GRL	**Gorelyy**	**3.46**	**124**	P	**P**	**00 00 38.0**	**+1.8**
SMAR	**Somma**	**3.47**	**110**	*e*P	**P**	**00 00 37.2**	**+0.9**
SMAR				*e*S	**S**	**00 01 46.5**	**+3.1**
SMAR	**Somma**	**3.47**	**110**	P	**P**	**00 00 37.2**	**+0.9**
SMAR				S	**S**	**00 01 46.5**	**+3.1**
ASAK	**Asacha**	**3.49**	**127**	*e*P	**P**	**00 00 36.1**	**-0.2**
ASAK	**Asacha**	**3.49**	**127**	P	**P**	**00 00 36.1**	**-0.2**
PET	**Petropavlovsk**	**3.50**	**114**	*e*P	**P**	**00 00 37.6**	**+1.4**
PET	**Petropavlovsk**	**3.50**	**114**	P	**P**	**00 00 37.5**	**+1.4**
SDLR	**Sedlovina**	**3.51**	**109**	*e*P	**P**	**00 00 37.1**	**+0.6**
SDLR	**Sedlovina**	**3.51**	**109**	P	**P**	**00 00 37.1**	**+0.6**
DALK	**Dalny**	**3.55**	**114**	*e*P	**P**	**00 00 36.5**	**0.0**
DALK				*e*S	**S**	**00 01 42.8**	**-1.0**
DALK	**Dalny**	**3.55**	**114**	P	**P**	**00 00 36.5**	**0.0**
DALK				S	**S**	**00 01 42.8**	**-1.0**
MTVR	**Mutnovka**	**3.56**	**124**	*e*P	**P**	**00 00 36.8**	**0.0**
MTVR				*e*S	**S**	**00 01 44.8**	**+0.5**
MTVR	**Mutnovka**	**3.56**	**124**	P	**P**	**00

2.2nm,0.3s,baz=352,slow=2.7,SNR=7.3
URZ S **S** **00 21 40.4 -0.1**
0.5nm,0.3s,baz=351,slow=23,SNR=1.9
BKZ **Black Stump Fm** **15.17 190** P **P** **00 19 18.4 -3.1**
BKZ IAmb IAmb 00 19 25.0
comp=Z,10nm,1.0s
BKZ S **S** **00 21 58.9 -0.3**
QRZ **Quartz Range** **17.65 198** P **P** **00 19 45.6 0.0**
QRZ IAmb IAmb 00 19 46.6
comp=Z,20nm,0.8s
NNZ **Nelson** **17.78 196** P **P** **00 19 45.7 -1.1**
NNZ IAmb IAmb 00 19 47.1
comp=Z,30nm,1.1s
THZ **Tophouse** **18.42 196** P **P** **00 19 52.2 -0.4**
CTAO **Charters Tower** **31.28 271** P **P** **00 21 48.3 +1.4**
STKA **Stephens Creek** **34.42 249** P **P** **00 22 14.3 +0.9**
comp=Z,1.9nm,0.4s,baz=102,slow=12,SNR=10
STKA **Stephens Creek** **34.42 249** IAmb IAmb 00 22 14.8
comp=Z,0.8nm,0.7s
AS31 **Alice Springs** **41.79 261** P **P** **00 23 14.1 +0.5**
ASAR **Alice Springs** **41.79 261** P **P** **00 23 13.9 +0.4**
comp=Z,4.3nm,0.6s,baz=94,slow=7.2,SNR=59
ASAR ScP **ScP** **00 28 01.6 +3.9**
comp=Z,0.8nm,1.0s,baz=119,slow=3.8,SNR=4.1
WR0 **Warramunga Arr** **42.00 267** P **P** **00 23 14.3 -0.9**
WR0 IAmb IAmb 00 23 15.4
comp=Z,4.8nm,0.6s
WB2 **Warramunga Arr** **42.18 267** P **P** **00 23 16.6 0.0**
WB2 IAmb IAmb 00 23 16.9
comp=Z,10nm,0.5s
WB0 **Warramunga Arr** **42.18 267** P **P** **00 23 16.5 -0.1**
WB0 IAmb IAmb 00 23 17.2
comp=Z,14nm,0.7s
WRA **Warramunga Arr** **42.19 267** P **P** **00 23 16.6 -0.1**
comp=Z,8.2nm,0.5s,baz=98,slow=8.1,SNR=124
WRA ScP **ScP** **00 28 03.4 +4.0**
comp=Z,0.5nm,0.6s,baz=99,slow=3.8,SNR=6.4
JAY **Jayapura** **43.45 294** P **P** **00 23 26.7 0.0**
comp=Z,5.1nm,0.5s,baz=353,slow=0.5,SNR=5.9
FORT **Forrest** **46.02 250** P **P** **00 23 45.9 -0.2**
KNRA **Kununurra** **48.49 270** IAmb IAmb 00 24 06.5
comp=Z,19nm,1.1s
PETK **Petropavlovsk-** **79.35 347** P **P** **00 27 20.6 -0.1**
comp=Z,1.5nm,0.7s,baz=116,slow=6.6,SNR=3.1
SYO **Syowa Base** **82.67 193**⇑ *eP* **P** **00 27 36.9 -0.8**
NVAR **Mina Array Bea** **85.11 44** P **P** **00 27 50.9 +0.3**
comp=Z,0.3nm,0.6s,baz=249,slow=7.6,SNR=2.3
TXAR **Lajitas Array** **90.77 58** P **P** **00 28 17.5 +0.4**
comp=Z,0.5nm,0.7s,baz=220,slow=6.7,SNR=8.3
AKASG **Malin Array Be** **145.12 327** PKPbc **PKPdf** **00 34 47.0 -0.1**
comp=Z,0.4nm,0.3s,baz=36,slow=4.1,SNR=4.4
CLL **Collm** **151.09 343** *e*PKPbc **PKiKP** **00 35 04.0 +0.5**
TORD **Torodi Ar. Bea** **168.85 190** PKPab **PKPab** **00 36 32.0 +0.6**
comp=Z,0.3nm,0.7s,baz=144,slow=2.4,SNR=4.4

IDC 22 00:23:55.8±3.0, 32.87S×178.77W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.7/28, mbtmp3.7/3, ML3.5/1, Error ellipse: s-maj=69.5km s-min=36.5km az=115.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.34**	**211**	Pn	Pn	00 25 31.0	+0.5
	1.1nm,0.3s,baz=266,slow=5.4,SNR=6.5						
URZ				Sn	Sn	00 26 43.2	-0.3
	0.5nm,0.3s,baz=1.0,slow=8.9,SNR=2.6						
ASAR	**Alice Springs**	**42.38**	**270**	P	P	00 31 52.4	+0.3
	0.4nm,0.5s,baz=113,slow=7.1,SNR=4.8						
WRA	**Warramunga Arr**	**43.60**	**275**	P	P	00 32 01.5	-0.5
	0.4nm,0.3s,baz=116,slow=7.3,SNR=12						
FINES	**FINESS Array B**	**147.21**	**338**	PKPbc	PKPbc	00 43 39.4	-0.8
	0.0nm,100.0s,baz=49,slow=5.8,SNR=7.1						

IDC 22 00:24:48.8±2.3, 40.55N×123.01E, h0km, mb3.9/1, mb1 3.5/3, mb1mx3.2/40, mbtmp3.4/3, ML2.3/2, MS3.6/2, Ms1 3.5/2, ms1mx2.6/38, Error ellipse: s-maj=34.3km s-min=21.4km az=43.0, Northeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**4.92**	**127**	Pn	Pn	00 26 03.7	-0.3
	0.5nm,0.3s,baz=310,slow=14,SNR=2.7						
KSRS				Pg	Pb	00 26 17.3	+1.5
	0.8nm,0.3s,baz=304,slow=16,SNR=4.5						
KSRS				Lg	Lg	00 27 26.3	
	2.0nm,0.3s,baz=310,slow=30,SNR=10						
USRK	**Ussuriysk Ar.**	**7.59**	**58**	Pn	Pn	00 26 38.5	-2.1
	baz=242,slow=15,SNR=1.8						
USRK				Lg	Lg	00 28 51.0	
	baz=256,slow=30,SNR=2.7						
KRVT	**Keravat (AS076**	**51.96**	**142**	LR	LR	00 52 58.9	
	comp=Z,84nm,21.4s,baz=277,slow=32						
ARCES	**ARCESS Array B**	**55.17**	**335**	P	P	00 34 23.0	+0.4
	1.1nm,0.8s,baz=77,slow=5.6,SNR=1.3						
STKA	**Stephens Creek**	**74.09**	**164**	LR	LR	01 12 48.2	
	comp=Z,21nm,18.0s,baz=27,slow=39						

INET 22 00:27:38.0, 12.37N×86.48W, h6km, ML3.6, Nicaragua

IDC 22 00:39:52.9±3.7, 5.27S×151.48E, h0km, mb3.1/2, mb1 3.5/2, mb1mx3.3/19, mbtmp3.2/2, Error ellipse: s-maj=150.9km s-min=50.6km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.16**	**227**	P	P	00 44 51.7	+1.1
	0.4nm,0.5s,baz=53,slow=10,SNR=5.2						
ASAR	**Alice Springs**	**24.93**	**221**	P	P	00 45 16.8	-1.2
	0.4nm,0.6s,baz=53,slow=9.0,SNR=3.1						
TORD	**Torodi Ar. Bea**	**149.19**	**287**	PKPbc	PKPbc	00 59 44.2	-0.3
	0.5nm,0.6s,baz=69,slow=3.1,SNR=7.3						

IDC 22 00:49:37.2±2.1, 6.33S×147.81E, h61km±20km, mb3.8/7, mb1 4.0/11, mb1mx3.8/31, mbtmp4.1/11, MS3.0/2, Ms1 3.0/2, ms1mx2.5/24, Error ellipse: s-maj=26.6km s-min=14.5km az=108.0

ISC 22 00:49:36.1±0.7, 6.37S±0.08×147.7E±0.1, h50km, n16, σ3.912/17, mb4.1/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.07**	**191**	P	**Pn**	**00 50 25.1**	**+2.8**
	37nm,0.3s,baz=4.4,slow=7.3,SNR=21						
PMG				S	**Sn**	**00 50 59.8**	**+2.0**
	22nm,0.3s,baz=10,slow=12,SNR=3.8						
KRVT	**Keravat (AS076**	**4.74**	**65**	P	**Pn**	**00 50 45.2**	**+0.1**
	11nm,0.3s,baz=86,slow=3.6,SNR=2.3						
JAY	**Jayapura**	**7.98**	**298**	P	**Pn**	**00 51 32.8**	**+3.2**
	1.4nm,0.3s,baz=79,slow=6.9,SNR=5.5						
WRA	**Warramunga Arr**	**18.74**	**223**	P	**Pn**	**00 53 51.8**	**-0.1**
	1.0nm,0.3s,baz=52,slow=11,SNR=14						
WRA				S	**Sn**	**00 57 12.6**	**-8.3**
	0.1nm,0.3s,baz=45,slow=21,SNR=2.2						
ASAR	**Alice Springs**	**21.74**	**216**	P	**P**	**00 54 24.9**	**+1.4**
	5.6nm,0.6s,baz=55,slow=8.8,SNR=68						
ASAR				S	**S**	**00 58 15.9**	**-5.6**
	1.0nm,0.5s,baz=7.1,slow=12,SNR=12						
FITZ	**Fitzroy Crossi**	**24.50**	**240**	P	**P**	**00 54 51.9**	**+1.0**
	4.4nm,0.6s,baz=61,slow=7.9,SNR=26						
STKA	**Stephens Creek**	**26.02**	**192**	P	**P**	**00 55 06.1**	**+1.5**
	5.9nm,0.6s,baz=350,slow=8.1,SNR=18						
MJAR	**Matsushiro Arr**	**43.60**	**349**	LR	LR	01 14 59.8	
	comp=Z,16nm,18.9s,baz=250,slow=35						
KSRS	**Korea Array**	**47.35**	**338**	LR	LR	01 15 32.3	
	comp=Z,17nm,19.8s,baz=168,slow=33						
PETK	**Petropavlovsk-**	**59.85**	**7**	P	**P**	**00 59 36.7**	**+0.3**
	2.2nm,0.7s,baz=161,slow=9.2,SNR=4.2						
MKAR	**Makanchi Array**	**78.24**	**320**	P	**P**	**01 01 30.0**	**-0.7**
	0.5nm,0.8s,baz=101,slow=7.5,SNR=2.9						
ZALV	**Zalesovo Beam**	**79.71**	**328**	P	**P**	**01 01 36.9**	**-1.6**
	0.7nm,0.4s,baz=99,slow=6.4,SNR=2.4						
ILAR	**Eielson Array**	**85.53**	**23**	P	**P**	**01 02 06.5**	**-2.1**
	0.4nm,0.6s,baz=276,slow=4.3,SNR=3.5						
TORD	**Torodi Ar. Bea**	**145.88**	**284**	PKPbc	**PKPdf**	**01 09 10.9**	**+0.4**
	4.7nm,0.6s,baz=74,slow=4.4,SNR=63						
DBIC	**Dimbokro**	**152.76**	**272**	PKPbc	**PKPbc**	**01 09 28.1**	**-0.5**
	1.9nm,0.8s,baz=348,slow=8.0,SNR=1.4						
BDFB	**Brasilia**	**153.14**	**145**	PKPbc	**PKiKP**	**01 09 30.1**	**+0.4**
	1.6nm,0.4s,baz=283,slow=3.9,SNR=4.1						

TEH 22 01:07:55.4,29.66N×50.73E, h10km, ML3.6
IDC 22 01:07:57.2±1.6,29.63N×50.93E, h0km, mb3.5/4, mb1 3.6/6, mb1mx3.3/47, mbtmp3.5/6, ML3.2/2, MS2.6/1, Ms1 2.6/1, ms1mx2.2/27, Error ellipse: s-maj=43.2km s-min=29.4km az=145.0

ISC 22 01:07:58.8±1.1, 29.82N±0.08×50.84E±0.08, h10km, n21, σ1.887/20, mb3.5/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLNJ	**Kolanjah**	**1.35**	**28**	*e*Pg	**Pg**	**01 08 24.7**	**-0.1**
KLNJ				*e*		01 08 52.5	
SHI	**Shiraz**	**1.47**	**96**	*e*Pg	**Pb**	**01 08 24.6**	**-1.6**
SHI				*e*		01 08 50.9	
IRAM	**Ramesheh**	**2.39**	**33**	*e*Pn	**Pb**	**01 08 39.7**	**-2.3**
IRAM				*e*		01 08 48.4	
JHBN	**Jahan bin**	**2.41**	**357**	*e*Pn	**Pb**	**01 08 40.1**	**-2.4**
ROKH	**ROKH**	**2.53**	**4**	*e*Pn	**Pb**	**01 08 41.8**	**-2.6**
IGAR	**Gharneh**	**2.78**	**21**	*e*Pn	**Pn**	**01 08 45.3**	**+1.8**
IPIR	**Pirpir**	**2.86**	**1**	*e*Pn	**Pn**	**01 08 46.0**	**+1.3**
ISAD	**Sadrabad**	**3.22**	**49**	*e*Pn	**Pn**	**01 08 50.9**	**+1.2**
IZEF	**Zefreh**	**3.33**	**22**	*e*Pn	**Pn**	**01 08 52.6**	**+1.5**
IKLH	**Kolahrood**	**3.55**	**10**	*e*Pn	**Pn**	**01 08 55.8**	**+1.6**
IMEH	**Mehriz**	**3.61**	**63**	*e*Pn	**Pn**	**01 08 56.5**	**+1.5**
KHGB	**Koh Gabri**	**4.92**	**82**	*e*Pn	**Pn**	**01 09 14.1**	**+1.1**
TPRV	**Parvadeh(Tabas**	**5.94**	**56**	*e*Pn	**Pn**	**01 09 29.4**	**+2.6**
TKDS	**Koohdasht(Taba**	**6.56**	**53**	*e*Pn	**Pn**	**01 09 36.8**	**+1.4**
WSAR	**Wadi Sarin**	**9.57**	**131**	Pn	**Pn**	**01 10 13.5**	**-3.2**
	0.1nm,0.3s,baz=331,slow=10,SNR=1.1						
GEYT	**Alibeck**	**10.10**	**35**	Pn	**Pn**	**01 10 24.8**	**+0.9**
	0.4nm,0.3s,baz=205,slow=13,SNR=5.8						
EIL	**Elat**	**13.81**	**273**	LR	LR	01 17 18.7	
	comp=Z,24nm,20.1s,baz=302,slow=40						
KURBB	**Kurchatov Arra**	**29.36**	**37**	P	**P**	**01 14 01.8**	**0.0**
	0.2nm,0.5s,baz=236,slow=9.8,SNR=3.8						
ZALV	**Zalesovo Beam**	**34.41**	**36**	P	**P**	**01 14 48.1**	**+2.1**
	0.7nm,0.6s,baz=212,slow=5.1,SNR=3.9						
TORD	**Torodi Ar. Bea**	**48.27**	**261**	P	**P**	**01 16 40.8**	**+0.4**
	0.3nm,0.7s,baz=52,slow=8.3,SNR=1.7						
YKA	**Yellowknife Ar**	**87.27**	**353**	P	**P**	**01 20 45.9**	**+0.6**
	0.2nm,0.7s,baz=19,slow=5.6,SNR=3.6						

IDC 22 01:09:10.6±6.8, 29.98N×50.50E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.3/45, mbtmp3.6/5, ML3.8/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/28, Error ellipse: s-maj=279.2km s-min=29.2km az=146.0, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GEYT	**Alibeck**	**10.14**	**37**	Pn	Pn	01 11 39.3	+1.9
	0.7nm,0.3s,baz=211,slow=10.0,SNR=1.3						
KURBB	**Kurchatov Arra**	**29.41**	**38**	P	P	01 15 15.4	-0.1
	0.3nm,0.4s,baz=238,slow=8.9,SNR=4.5						
GERES	**GERESS Array B**	**33.67**	**314**	LR	LR	01 34 08.8	
	comp=Z,16nm,18.1s,baz=286,slow=44						
ZALV	**Zalesovo Beam**	**34.45**	**36**	P	P	01 15 59.3	-0.5
	1.1nm,0.8s,baz=236,slow=10,SNR=3.9						
TORD	**Torodi Ar. Bea**	**48.01**	**260**	P	P	01 17 51.9	+0.2
	0.8nm,1.1s,baz=54,slow=7.5,SNR=2.1						
YKA	**Yellowknife Ar**	**87.07**	**353**	P	P	01 21 57.5	-0.3
	0.2nm,0.8s,baz=22,slow=5.3,SNR=3.1						

IDC 22 01:09:25.6±1.1, 29.65N×50.78E, h0km, mb4.0/17, mb1 4.1/23, mb1mx3.9/50, mbtmp4.0/23, ML3.7/6, MS3.2/1, Ms1 3.2/1, ms1mx2.6/30, Error ellipse: s-maj=24.6km s-min=14.8km az=161.0
TEH 22 01:09:26.8, 29.68N×50.81E, h8km, ML4.2
NEIC 22 01:09:28.6±2.0, 29.51N±0.07×50.95E±0.09, h44km±5km, Error ellipse: s-maj=11.2km s-min=10.1km az=113.0
MOS 22 01:09:28.8±1.6, 29.58N×50.84E, h46km, mb4.3/12, Error ellipse: s-maj=8.6km s-min=5.0km az=101.0

ISC 22 01:09:28.5±0.5, 29.63N±0.06×50.80E±0.04, h24km, n155, σ1.877/165, mb4.2/32, MS3.1/3, 17C-12D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHI	**Shiraz**	**1.49**	**89**	*e*Pg	**Pb**	**01 09 55.6**	**0.0**
KLNJ	**Kolanjah**	**1.54**	**26**	*e*Pg	**Pn**	**01 09 55.1**	**+0.3**
KLNJ				*e*		01 10 20.5	
IBRJ	**Brojen**	**2.31**	**10**	*e*Pn	**Pn**	**01 10 06.9**	**+1.6**
IRAM	**Ramesheh**	**2.57**	**32**	*e*Pn	**Pn**	**01 10 10.2**	**+1.4**
IRAM				*e*		01 10 16.9	
IRAM	**Ramesheh**	**2.57**	**32**	Pn	**Pn**	**01 10 10.2**	**+1.4**
JHBN	**Jahan bin**	**2.60**	**357**	*e*Pn	**Pn**	**01 10 11.5**	**+2.2**
JHBN				*e*		01 10 59.0	
JHBN	**Jahan bin**	**2.60**	**357**	Pn	**Pn**	**01 10 10.4**	**+1.1**
ROKH	**ROKH**	**2.72**	**4**	*e*Pn	**Pn**	**01 10 12.8**	**+1.9**
ROKH				*e*		01 10 59.2	
ROKH	**ROKH**	**2.72**	**4**	Pn	**Pn**	**01 10 12.1**	**+1.2**
IGAR	**Gharneh**	**2.97**	**21**	*e*Pn	**Pn**	**01 10 16.1**	**+1.8**
IGAR	**Gharneh**	**2.97**	**21**	Pn	**Pn**	**01 10 16.0**	**+1.8**
IPIR	**Pirpir**	**3.05**	**1**	*e*Pn	**Pn**	**01 10 17.1**	**+1.6**
IPIR	**Pirpir**	**3.05**	**1**	Pn	**Pn**	**01 10 16.7**	**+1.2**
ISAD	**Sadrabad**	**3.37**	**47**	*e*Pn	**Pn**	**01 10 21.4**	**+1.3**
IZEF	**Zefreh**	**3.51**	**21**	*e*Pn	**Pn**	**01 10 23.6**	**+1.8**
IZEF	**Zefreh**	**3.51**	**21**	Pn	**Pn**	**01 10 23.6**	**+1.8**
IMEH	**Mehriz**	**3.73**	**61**	*e*Pn	**Pn**	**01 10 26.0**	**+1.2**
IKLH	**Kolahrood**	**3.74**	**10**	*e*Pn	**Pn**	**01 10 27.2**	**+2.2**
IKLH	**Kolahrood**	**3.74**	**10**	Pn	**Pn**	**01 10 27.0**	**+2.0**
ANAR	**Anarak**	**4.35**	**34**	*e*Pn	**Pn**	**01 10 34.6**	**+1.4**
IKMR	**Kamar-syah**	**4.40**	**333**	*e*Pn	**Pn**	**01 10 35.1**	**+1.4**
IDOB	**Doab**	**4.71**	**332**	*e*Pn	**Pn**	**01 10 41.3**	**+3.0**
IDOB	**Doab**	**4.71**	**332**	Pn	**Pn**	**01 10 39.6**	**+1.3**
HSAM	**Samen**	**4.94**	**338**	*e*Pn	**Pn**	**01 10 43.1**	**+1.7**
KHGB	**Koh Gabri**	**4.98**	**80**	*e*Pn	**Pn**	**01 10 44.4**	**+2.4**
NGRK	**Negar Kerman**	**5.16**	**88**	*e*Pn	**Pn**	**01 10 45.9**	**+1.3**
TVBK	**TV Kerman**	**5.19**	**85**	*e*Pn	**Pn**	**01 10 47.1**	**+2.1**
IQOM	**Qom**	**5.21**	**2**	*e*Pn	**Pn**	**01 10 46.1**	**+1.0**
IKOM	**Komasi**	**5.33**	**329**	*e*Pn	**Pn**	**01 10 49.2**	**+2.5**
HAGD	**Aghdareh**	**5.37**	**345**	*e*Pn	**Pn**	**01 10 49.1**	**+1.8**
IVRN	**Varamin**	**5.41**	**8**	*e*Pn	**Pn**	**01 10 49.2**	**+1.5**
IBZA	**Bozab**	**5.44**	**333**	*e*Pn	**Pn**	**01 10 49.3**	**+1.0**
KCHF	**Cheshme Sefid,**	**5.63**	**326**	*e*Pn	**Pn**	**01 10 52.6**	**+1.8**
IALM	**Almabolaq**	**5.68**	**338**	*e*Pn	**Pn**	**01 10 52.3**	**+0.7**
IHSB	**Hasanabad**	**5.81**	**4**	*e*Pn	**Pn**	**01 10 54.8**	**+1.6**
IRAZ	**Razeghan**	**5.81**	**353**	*e*Pn	**Pn**	**01 10 55.3**	**+2.0**
CHMN	**Cheshme madani**	**5.87**	**86**	*e*Pn	**Pn**	**01 10 56.1**	**+1.9**
ILAS	**Lasjerd**	**6.02**	**17**	*e*Pn	**Pn**	**01 10 56.3**	**0.0**
IDMV	**Damavand**	**6.03**	**10**	*e*Pn	**Pn**	**01 10 57.1**	**+0.7**
TPRV	**Parvadeh(Tabas**	**6.07**	**55**	*e*Pn	**Pn**	**01 10 57.7**	**+0.9**
QABG	**Abgarm-Qazvin**	**6.15**	**351**	*e*Pn	**Pn**	**01 10 59.1**	**+1.0**
ILIN	**Lien**	**6.20**	**329**	*e*Pn	**Pn**	**01 11 00.2**	**+1.5**
IFIR	**Firoozkooh**	**6.22**	**15**	*e*Pn	**Pn**	**01 10 59.7**	**+0.7**
IDHR	**Dehrash**	**6.29**	**325**	*e*Pn	**Pn**	**01 11 01.9**	**+1.9**
IANJ	**Anjilo**	**6.39**	**23**	*e*Pn	**Pn**	**01 11 02.8**	**+1.5**
ISHM	**Shahmirzad**	**6.51**	**18**	*e*Pn	**Pn**	**01 11 04.6**	**+1.6**
TNSJ	**Nastanj**	**6.57**	**47**	*e*Pn	**Pn**	**01 11 04.8**	**+1.1**
IALA	**Alasht**	**6.66**	**14**	*e*Pn	**Pn**	**01 11 06.5**	**+1.4**
UOSS	**Minazif**	**6.70**	**133**	Pn	**Pn**	**01 11 02.1**	**-3.3**
TKDS	**Koohdasht(Taba**	**6.70**	**52**	*e*Pn	**Pn**	**01 11 06.8**	**+1.3**
IPRN	**Peran**	**6.72**	**11**	*e*Pn	**Pn**	**01 11 07.3**	**+1.5**
QALM	**Alamut, Qazvin**	**6.79**	**359**	*e*Pn	**Pn**	**01 11 08.4**	**+1.6**
IGLO	**Ghaloghah**	**7.31**	**20**	*e*Pn	**Pn**	**01 11 15.9**	**+1.9**
RAYN	**Ar Rayn**	**7.71**	**219**	P	**Pn**	**01 11 19.5**	**+0.2**
RAYN	**Ar Rayn**	**7.71**	**219**		**Pn**	**01 11 19.4**	**+0.2**
IMND	**Minoodasht**	**8.53**	**26**	*e*Pn	**Pn**	**01 11 31.4**	**+1.0**
IHRS	**Heris**	**9.21**	**341**	*e*Pn	**Pn**	**01 11 41.3**	**+1.2**
WSAR	**Wadi Sarin**	**9.47**	**130**	Pn	**Pn**	**01 11 42.2**	**-1.2**
	0.3nm,0.3s,baz=279,slow=15,SNR=1.4						
GEYT	**Alibeck**	**10.28**	**34**	Pn	**Pn**	**01 11 56.1**	**+1.6**
	0.8nm,0.3s,baz=226,slow=12,SNR=9.5						
GYA0B	**ALIBECK ARRAY**	**10.24**		Pn	**Pn**	**01 11 52.6**	**-1.8**
AKT	**Akhty**	**12.09**	**349**	*i* P	**Pn**	**01 12 20.2**	**+0.9**
ASF	**Jabal al Asfar**	**12.21**	**286**	Pn	**Pn**	**01 12 21.2**	**+0.2**
	1.0nm,0.3s,baz=343,slow=1.7,SNR=14						
ASF				Sn	Sn	01 14 28.0	-8.4
	0.7nm,0.3s,baz=36,slow=13,SNR=3.0						
TBLG	**Delisi**	**13.04**	**339**	P	**Pn**	**01 12 31.9**	**-0.3**
TBLG	**Delisi**	**13.04**	**339**	Pn	**Pn**	**01 12 31.9**	**-0.3**
AKH	**Akhalkalaki**	**13.17**	**335**	P	**Pn**	**01 12 34.6**	**+0.4**
AKH	**Akhalkalaki**	**13.17**	**335**	Pn	**Pn**	**01 12 34.6**	**+0.4**
MMAI	**Mount Meron Ar**	**13.59**	**288**	Pn	**Pn**	**01 12 40.2**	**+0.4**
	0.7nm,0.3s,baz=99,slow=18,SNR=3.3						
MMAI				Sn	**Sn**	**01 15 04.9**	**-5.1**
	1.3nm,0.3s,baz=107,slow=29,SNR=2.9						
GAZ	**Gaziantep**	**13.61**	**307**	Pn	**Pn**	**01 12 39.5**	**-0.6**
ZEI	**Tsey**	**14.26**	**339**	*e*P	**Pn**	**01 12 50.7**	**+1.7**
ZEI				pmax	pmax		
	comp=Z,14nm,0.9s						
KBZ	**Khabaz**	**15.43**	**338**	Pn	**Pn**	**01 13 06.1**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=152,slow=7.3,SNR=7.4						
KBZ	**Khabaz**	**15.43**	**338**	*ce*P	**Pn**	**01 13 06.5**	**+2.1**
KIV	**Kislovodsk**	**15.70**	**338**	*ce*P	**Pn**	**01 13 08.6**	**+0.5**
KIV				*e*S	**S**	**01 16 10.6**	**-5.3**
KIV				pmax	pmax		
	comp=Z,41nm,1.0s						
KIV				MLR	MLR		
	comp=Z,59nm,16.0s						
KIV	**Kislovodsk**	**15.70**	**338**	Pn	**Pn**	**01 13 07.0**	**-1.1**
CSS	**Mathiatis**	**15.70**	**294**	Pn	**Pn**	**01 13 07.9**	**-0.2**
CSS				IAmb	IAmb	01 13 14.5	
	comp=Z,7.2nm,1.0s						
DAMY	**Dhamar**	**16.11**	**203**	Pn	**Pn**	**01 13 13.2**	**-0.5**
DAMY				IAmb	IAmb	01 13 26.8	
	comp=Z,24nm,1.4s						
KBL	**Kabul**	**16.21**	**68**	P	**Pn**	**01 13 12.7**	**-2.2**
KBL				pmax	pmax		
	comp=Z,11nm,1.5s						
KBL	**Kabul**	**16.21**	**68**	Pn	**Pn**	**01 13 12.7**	**-2.2**
SOC	**Sochi**	**16.51**	**331**	*e*P	**Pn**	**01 13 18.5**	**+0.2**
SOC				*e*		01 16 22.9	
SOC				pmax	pmax		
	comp=Z,14nm,0.9s						
SOC				MLR	MLR		
	comp=Z,102nm,9.0s						
GOF	**Gofitskoye**	**16.58**	**340**⇑	*e*P	**P**	**01 13 22.8**	**+1.2**
BR131	**Keskin Array S**	**17.32**	**310**	P	**Pn**	**01 13 28.4**	**-0.3**
BR131				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BR131	**Keskin Array S**	**17.32**	**310**	Pn	**Pn**	**01 13 28.4**	**-0.3**
BRTR	**Keskin Array B**	**17.32**	**310**	Pn	**Pn**	**01 13 29.9**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=270,slow=33,SNR=7.3						
ILGA	**Ilgaz**	**17.97**	**314**		**Pn**	**01 13 36.4**	**-0.5**
ILGA				IAmb	IAmb	01 13 39.7	
	comp=Z,12nm,1.2s						
GAR	**Garm**	**18.61**	**55**		**P**	**01 13 41.8**	**-2.4**
MDUB	**Mudurnu**	**19.31**	**309**	P	**P**	**01 13 51.7**	**-0.2**
BTK	**Batken**	**19.41**	**52**	P	**P**	**01 13 51.1**	**-1.8**
BTK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BTK	**Batken**	**19.41**	**52**	P	**P**	**01 13 51.1**	**-1.8**
BTK				IAmb	IAmb	01 13 59.2	
	comp=Z,5.1nm,0.6s						
NIL	**Nilore**	**19.52**	**72**	P	**P**	**01 13 52.4**	**-1.8**
NIL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NIL	**Nilore**	**19.52**	**72**	P	**P**	**01 13 52.4**	**-1.8**
MANT	**Manisa**	**20.40**	**302**	P	**P**	**01 14 03.0**	**-0.9**
KK31	**Karatay Array**	**20.74**	**44**	P	**P**	**01 14 05.8**	**-1.5**
KK31				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KK31	**Karatay Array**	**20.74**	**44**	P	**P**	**01 14 05.8**	**-1.5**
KK31				IAmb	IAmb	01 14 09.0	
	comp=Z,6.4nm,1.1s						
KKAR	**Karatay Array**	**20.74**	**44**	P	**P**	**01 14 05.5**	**-1.8**
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KKAR	**Karatay Array**	**20.74**	**44**	P	**P**	**01 14 05.5**	**-1.8**
KKAR				IAmb	IAmb	01 14 09.0	
	comp=Z,6.4nm,1.1s						
AKTO	**Aktyubinsk**	**21.49**	**13**	P	**P**	**01 14 14.7**	**-0.6**
	comp=Z,3.1nm,0.7s,baz=170,slow=7.8,SNR=8.3						
IDI	**Anoyia**	**22.55**	**291**	P	**P**	**01 14 28.0**	**+1.1**
	comp=Z,13nm,1.1s,baz=91,slow=13,SNR=2.5						
VRH	**Novokhoyorsk**	**22.60**	**345**	*e*P	**P**	**01 14 27.4**	**+0.2**
VRH				*e*S	**S**	**01 18 28.0**	**-5.3**
VRH				pmax	pmax		
	comp=Z,120nm,1.8s						
VRH				smax	smax		
	comp=N,60nm,1.4s						
KSH	**Kashi**	**22.89**	**58**	P	**P**	**01 14 31.1**	**+0.6**
KSH				PP	**PnPn**	**01 14 57.4**	**+2.2**
KSH				S	**S**	**01 18 34.0**	**-5.0**
KSH				SS	**SnSn**	**01 19

CLL	**Collm**	**35.44**	**318**	*e*P		**P**	**01 16 24.0**	**+1.4**
	comp=Z,3.0nm,0.9s							
CLL				*e*PPP		PPP	01 17 53.0	
CLL	**Collm**	**35.44**	**318**	*e*P		**P**	**01 16 24.0**	**+1.4**
CLL				pmax		pmax		
	comp=Z,3.0nm,0.9s							
TMCR	**Tamitsa**	**35.49**	**350**	*e*P		**P**	**01 16 22.4**	**-0.5**
TMCR				pmax		pmax		
	comp=Z,24nm,1.0s							
FINES	**FINESS Array B**	**35.77**	**340**	P		**P**	**01 16 24.4**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=145,slow=8.6,SNR=6.8							
FINES				LR		LR	01 32 52.3	
	comp=Z,38nm,20.9s,baz=110,slow=39							
NB2	**NORSAR Subarra**	**40.87**	**332**	P		**P**	**01 17 07.2**	**-1.1**
	comp=Z,3.1nm,1.0s,baz=123,slow=9.3							
NOA	**NORSAR Array B**	**40.87**	**332**	P		**P**	**01 17 07.5**	**-0.8**
	comp=Z,2.0nm,1.0s,baz=124,slow=8.5,SNR=3.6							
ARCES	**ARCESS Array B**	**42.50**	**347**	P		**P**	**01 17 22.8**	**+1.3**
	comp=Z,3.9nm,1.1s,baz=146,slow=8.7,SNR=1.1							
TLY	**Talaya**	**44.58**	**45**	*i* P		**P**	**01 17 39.1**	**+0.6**
TLY				pmax		pmax		
	comp=Z,2.0nm,1.0s							
NRIK	**Noril'sk**	**44.98**	**17**	*e*P		**P**	**01 17 43.3**	**+1.9**
NRIK				pmax		pmax		
	comp=Z,1.0nm,0.4s							
TORD	**Torodi Ar. Bea**	**48.21**	**261**	P		**P**	**01 18 08.1**	**+0.7**
	comp=Z,2.6nm,0.7s,baz=55,slow=8.0,SNR=13							
DBIC	**Dimbokro**	**57.00**	**258**	P		**P**	**01 19 13.4**	**+0.8**
	comp=Z,6.7nm,0.9s,baz=30,slow=7.4,SNR=6.2							
TIXI	**Tiksi**	**58.43**	**21**	*e*P		**P**	**01 19 22.2**	**+0.5**
TIXI				pmax		pmax		
	comp=Z,2.0nm,1.7s							
KLR	**Kul'dur**	**62.54**	**47**	*i* P		**P**	**01 19 50.1**	**-0.1**
KLR				pmax		pmax		
	comp=Z,2.0nm,1.1s							
BILL	**Bilibino**	**71.65**	**21**	*c*e*P*		**P**	**01 20 49.7**	**+2.0**
BILL				pmax		pmax		
	comp=Z,1.0nm,0.5s							
ILAR	**Eielson Array**	**84.90**	**8**	P		**P**	**01 22 01.6**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=330,slow=3.4,SNR=3.0							
YKA	**Yellowknife Ar**	**87.46**	**353**	P		**P**	**01 22 14.5**	**+0.8**
	comp=Z,2.0nm,1.1s,baz=14,slow=4.9,SNR=12							

WEL ***22*** *01:15:56.9±0.5,30.˚S±4.˚×17.˚8E±.˚, h33km, M4.8/12, mB5.2/10, ML5.1/8, MLv5.0/12, Mw(mB)4.6/10*
IDC ***22*** *01:15:59.7±6.9, 31.˚03S×179.˚70W, h405km±80km, mb3.1/3, mb1 3.4/4, mb1mx3.0/27, mbtmp4.1/4, Error ellipse: s-maj=77.9km s-min=34.9km az=7.0*
ISC 22 01:15:59.3±1.2, 30.96S±0.09×179.8W±0.2, h400km, n36, σ1§11/50, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.34**	**44**	P	Pn	01 16 49.6	-8.0
GLKZ				S	S	01 17 29.5	-15
RIZ	**Raoul Island**	**2.35**	**44**	P	Pn	01 16 48.1	-10
PKGZ	**Pakihiroa**	**7.13**	**194**	P	**Pn**	**01 17 44.3**	**-0.1**
PUZ	**Puketiti**	**7.27**	**192**	P	**Pn**	**01 17 45.5**	**-0.4**
PUZ				S	**S**	**01 19 12.3**	**-0.9**
RUGZ	**Raukumara Rang**	**7.29**	**196**	P	**P**	**01 17 46.4**	**-0.4**
RUGZ				S	**S**	**01 19 12.3**	**-1.4**
OPRZ	**Ohinepanea**	**7.50**	**203**	P	**P**	**01 17 50.4**	**+1.4**
MWZ	**Matawai**	**7.68**	**196**	P	**P**	**01 17 50.9**	**-0.1**
MWZ				S	**S**	**01 19 21.5**	**-0.1**
CNGZ	**Carnagh Statio**	**7.68**	**192**	P	**P**	**01 17 50.5**	**-0.5**
CNGZ				S	**S**	**01 19 25.4**	**+3.8**
URZ	**Urewera**	**7.72**	**199**	P	**P**	**01 17 51.2**	**-0.2**
	2.7nm,0.3s,baz=274,slow=4.2,SNR=43						
URZ				S	**S**	**01 19 21.7**	**-0.5**
	2.2nm,0.3s,baz=261,slow=23,SNR=10						
URZ	**Urewera**	**7.72**	**199**	P	**Pn**	**01 17 50.3**	**-0.6**
URZ				S	**S**	**01 19 21.8**	**-0.5**
RAGZ	**Rawiri**	**7.86**	**196**	P	**P**	**01 17 52.7**	**-0.4**
RIGZ	**Rimuhau**	**7.98**	**194**	P	**Pn**	**01 17 52.3**	**-1.7**
MUGZ	**Murupara**	**8.02**	**200**	P	**Pn**	**01 17 54.1**	**-0.2**
SNGZ	**Shannon Statio**	**8.15**	**196**	P	**Pn**	**01 17 55.5**	**-0.4**
SNGZ				S	**S**	**01 19 31.8**	**+0.3**
PRGZ	**Paritu Road**	**8.17**	**193**	P	**P**	**01 17 58.4**	**+1.9**
KNZ	**Kokohu**	**8.31**	**194**	P	**P**	**01 17 58.6**	**+0.7**
RAHZ	**Arahi**	**8.34**	**197**	P	**P**	**01 17 59.1**	**+0.8**
MTHZ	**Maungataniwha**	**8.34**	**198**	P	**Pn**	**01 17 57.6**	**-0.5**
MTHZ				S	**S**	**01 19 36.7**	**+1.2**
MHGZ	**Mahia Peninsul**	**8.39**	**192**	P	**P**	**01 18 00.0**	**+1.2**
MRHZ	**Matea Rd**	**8.45**	**201**	P	**P**	**01 18 00.3**	**+0.7**
ARHZ	**Aropaoanui**	**8.69**	**197**	P	**P**	**01 18 03.4**	**+1.2**
ARHZ				S	**S**	**01 19 44.2**	**+1.4**
BKZ	**Black Stump Fm**	**8.73**	**199**	P	**Pn**	**01 18 01.2**	**-1.4**
BKZ				S	**S**	**01 19 44.1**	**+0.3**
MCHZ	**McNeill Hill**	**8.94**	**198**	P	**P**	**01 18 06.5**	**+1.6**
WTVZ	**West Tongariro**	**8.97**	**204**	P	**P**	**01 18 06.5**	**+1.1**
KWHZ	**Kaweka Forest**	**8.99**	**199**	P	**P**	**01 18 06.0**	**+0.3**
KWHZ				S	**S**	**01 19 50.0**	**+0.6**
CKHZ	**Cape Kidnapper**	**9.05**	**196**	P	**P**	**01 18 07.6**	**+1.5**
CKHZ				S	**S**	**01 19 51.0**	**+0.7**
BHHZ	**Black Hill Sta**	**9.16**	**201**	P	**Pn**	**01 18 07.4**	**-0.1**
BHHZ				S	**S**	**01 19 51.4**	**-1.4**
KRHZ	**Kereru**	**9.21**	**199**	P	**P**	**01 18 07.3**	**-0.8**
KRHZ				S	**S**	**01 19 52.3**	**-1.6**
KAHZ	**Kahuranaki**	**9.22**	**196**	P	**P**	**01 18 07.7**	**-0.5**
KAHZ				S	**S**	**01 19 54.7**	**+0.6**
PNHZ	**Pukenui**	**9.51**	**199**	P	**P**	**01 18 10.6**	**-0.7**
PNHZ				S	**S**	**01 19 57.8**	**-2.2**
ASAR	**Alice Springs**	**41.55**	**268**	P	**P**	**01 23 10.7**	**+0.7**
	0.3nm,0.5s,baz=106,slow=6.8,SNR=2.9						
WRA	**Warramunga Arr**	**42.59**	**274**	P	**P**	**01 23 18.6**	**+0.3**
	1.1nm,0.4s,baz=112,slow=7.8,SNR=14						
PETK	**Petropavlovsk-**	**85.99**	**347**	P	**P**	**01 27 55.3**	**+0.1**
	1.5nm,0.7s,baz=112,slow=5.4,SNR=2.8						
FINES	**FINESS Array B**	**145.12**	**338**	PKPbc	**PKPdf**	**01 34 49.2**	**+0.1**
	4.2nm,0.6s,baz=53,slow=3.6,SNR=21						
NOA	**NORSAR Array B**	**149.05**	**350**	PKPbc	**PKPbc**	**01 34 58.8**	**-1.5**
	0.3nm,0.6s,baz=16,slow=4.3,SNR=3.4						
AKASG	**Malin Array Be**	**150.79**	**321**	PKPbc	**PKPbc**	**01 35 05.3**	**+0.6**
	0.5nm,0.5s,baz=51,slow=2.2,SNR=2.2						

IDC ***22*** *01:27:26.8±1.7, 35.˚06N×26.˚08E, h0km, mb3.4/3, mb1 3.5/3, mb1mx3.3/28, mbtmp3.4/3, Error ellipse: s-maj=64.3km s-min=29.1km az=152.0*
THE ***22*** *01:27:28.0, 34.˚89N×26.˚12E, h2km±1km, ML3.2/5, Error ellipse: s-maj=1.8km s-min=0.6km az=147.0*
ATH ***22*** *01:27:29.6, 35.˚02N×26.˚11E, h19km±1km, ML3.0/5, Error ellipse: s-maj=3.7km s-min=1.4km az=346.0*
ISK ***22*** *01:27:29.4, 34.˚92N×26.˚15E, h8km, ML3.3/12*
ISC 22 01:27:29.3±1.0, 34.95N±0.05×26.14E±0.03, h16km±6km, n47, σ1§08/59, mb3.3/3, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.18**	**20**	P	**Pg**	**01 27 33.4**	**-0.4**
ZKR				S	**Sg**	**01 27 37.1**	**+0.3**
	14μm,0.2s						
ZKR	**Zakros**	**0.18**	**20**	P	**Pg**	**01 27 33.4**	**-0.4**
ZKR				S	**Sg**	**01 27 37.0**	**+0.2**
ZKR	**Zakros**	**0.18**	**20**	PG	**Pg**	**01 27 33.3**	**-0.4**
ZKR				SG	**Sg**	**01 27 37.4**	**+0.6**
NPS	**Neapolis**	**0.54**	**306**	P	**Pg**	**01 27 39.4**	**-0.6**
NPS				S	**Sb**	**01 27 48.2**	**+0.4**
	3μm,0.3s						
NPS	**Neapolis**	**0.54**	**306**	P	**Pg**	**01 27 39.4**	**-0.6**
LAST	**Lasithi**	**0.58**	**292**	P	**Pg**	**01 27 39.7**	**-1.2**
LAST				S	**Sb**	**01 27 49.0**	**-0.3**
	2μm,0.5s						
LAST	**Lasithi**	**0.58**	**292**	P	**Pg**	**01 27 39.8**	**-1.1**
LAST				S	**Sg**	**01 27 48.2**	**-0.5**
LAST				AML	AML	01 27 49.6	
	comp=N,3409μm,0.3s						
LAST				AML	AML	01 27 50.2	
	comp=E,5362μm,0.5s						
HRKL	**Herakleio**	**0.93**	**293**	PG	**Pb**	**01 27 47.4**	**+0.4**
HRKL				SG	**Sn**	**01 28 01.3**	**+0.7**
KARP	**Karpathos**	**1.03**	**54**	P	**Pg**	**01 27 48.1**	**-1.1**
KARP	**Karpathos**	**1.03**	**54**	PG	**Pn**	**01 27 49.4**	**+0.4**
IDI	**Anoyia**	**1.08**	**289**	P	**Pg**	**01 27 48.4**	**-1.9**
IDI				S	**Sn**	**01 28 04.7**	**+0.2**
	comp=E,482nm,0.3s						
IDI	**Anoyia**	**1.08**	**289**	P	**Pg**	**01 27 49.1**	**-1.2**
IDI				S	**Sb**	**01 28 03.9**	**+0.3**
IDI				AML	AML	01 28 07.0	
	comp=E,978μm,0.4s						
IDI				AML	AML	01 28 08.3	
	comp=N,926μm,0.3s						
IDI	**Anoyia**	**1.08**	**289**	PN	**Pn**	**01 27 50.5**	**+0.7**
IDI				SN	**Sn**	**01 28 06.1**	**+1.6**
SIVA	**Sivas**	**1.10**	**274**	P	**Pg**	**01 27 48.6**	**-1.9**
SIVA				S	**Sg**	**01 28 04.1**	**-0.8**
	comp=N,1μm,0.5s						
ANAF	**Anafi Island**	**1.44**	**348**	P	**Pg**	**01 27 56.0**	**-1.0**
ANAF				AML	AML	01 28 20.1	
	comp=N,3452μm,0.4s						
ANAF				AML	AML	01 28 20.4	
	comp=E,3011μm,0.3s						
SANT	**Santorini**	**1.52**	**339**	P	**Pg**	**01 27 57.1**	**-1.6**
SANT	**Santorini**	**1.52**	**339**	PN	**Pg**	**01 27 58.2**	**-0.5**
SANT				SN	**Sg**	**01 28 18.9**	**+0.3**
SAP1	**Santorini-Akro**	**1.53**	**337**	P	**Pg**	**01 27 57.5**	**-1.3**
THT2	**Imerovigli**	**1.60**	**339**	PN	**Pg**	**01 27 59.3**	**-0.7**
SAP3	**Santorini-Thir**	**1.62**	**337**	P	**Pb**	**01 27 58.1**	**-0.7**
VAM	**Vamos**	**1.66**	**287**	P	**Pn**	**01 27 58.8**	**+1.2**
VAM				AML	AML	01 28 30.7	
	comp=N,702μm,0.3s						
VAM				AML	AML	01 28 36.9	
	comp=E,627μm,0.4s						
GVD	**Gavdhos**	**1.69**	**267**	P	**Pb**	**01 28 00.5**	**+0.4**
GVD				AML	AML	01 28 38.4	
	comp=N,661μm,0.4s						
GVD				AML	AML	01 28 41.6	
	comp=E,714μm,0.5s						
GVD	**Gavdhos**	**1.69**	**267**	PN	**Pb**	**01 28 00.3**	**+0.3**
IMMV	**Iera Moni Meta**	**1.84**	**287**	P	**Pb**	**01 28 02.7**	**+0.2**
IMMV	**Iera Moni Meta**	**1.84**	**287**	PN	**Pb**	**01 28 02.8**	**+0.2**
AMGA	**Amorgos Island**	**1.89**	**354**	P	**Pn**	**01 28 01.5**	**+0.6**
IOSP	**Ios Island**	**1.90**	**339**	P	**Pn**	**01 28 02.0**	**+0.9**
KOSK	**Kos Island**	**1.92**	**20**	PN	**Pb**	**01 28 04.2**	**+0.2**
KNDR	**Palaiochora Ch**	**2.04**	**279**	PN	**Pb**	**01 28 05.6**	**-0.3**
RODP	**Rodopos**	**2.04**	**288**	PN	**Pb**	**01 28 05.6**	**-0.5**
ARG	**Arkhangelos**	**2.05**	**51**	P	**Pb**	**01 28 05.7**	**-0.5**
ARG	**Arkhangelos**	**2.05**	**51**	PN	**Pb**	**01 28 05.3**	**-0.9**
DAT	**Datca**	**2.13**	**33**	PN	**Pb**	**01 28 06.4**	**-1.1**
APE	**Apeiranthos**	**2.17**	**347**	P	**Pn**	**01 28 05.6**	**+0.8**
APE	**Apeiranthos**	**2.17**	**347**	PN	**Pb**	**01 28 07.4**	**-0.9**
BODT	**Bodrum**	**2.31**	**24**	PN	**Pb**	**01 28 09.2**	**-1.4**
ANKY	**Antikythira Is**	**2.50**	**292**	P	**Pn**	**01 28 11.5**	**+2.3**
DALY	**Dalyan (Mula)**	**2.76**	**47**	PN	**Pn**	**01 28 15.5**	**+2.6**
TURN	**Turunc**	**2.77**	**45**	PN	**Pn**	**01 28 12.1**	**-0.9**
YER	**Yerkesik**	**2.79**	**38**	PN	**Pn**	**01 28 16.2**	**+2.9**
SMG	**Samos**	**2.81**	**11**	P	**Pn**	**01 28 15.2**	**+1.6**
KSL	**Kastellorizon**	**3.05**	**66**	P	**Pn**	**01 28 18.2**	**+1.3**
VLI	**Veliai**	**3.15**	**305**	P	**Pn**	**01 28 19.4**	**+1.3**
PYL	**PYLOS**	**4.07**	**300**	P	**Pn**	**01 28 31.7**	**+0.9**
ESDC	**Sonseca Array**	**24.34**	**290**	P	**P**	**01 32 45.4**	**-1.1**
	comp=E,0.6nm,0.9s,baz=76,slow=8.1,SNR=2.2						
TORD	**Torodi Ar. Bea**	**30.98**	**232**	P	**P**	**01 33 46.1**	**+0.2**
	comp=E,0.5nm,0.5s,baz=35,slow=8.8,SNR=13						
MKAR	**Makanchi Array**	**43.22**	**56**	P	**P**	**01 35 29.4**	**-0.1**
	comp=E,0.4nm,0.7s,baz=272,slow=6.3,SNR=4.1						

IDC 22 01:35:26.1±51.0, 15.˚76S×173.˚78W, h0km, mb4.7/3, mb1 4.9/3, mb1mx3.8/26, mbtmp4.7/3, MS3.1/1, Ms1 3.1/1, ms1mx2.5/38, Error ellipse: s-maj=978.0km s-min=166.7km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**23.81**	**198**	LR	LR	01 48 35.2	
	comp=Z,46nm,19.0s,baz=43,slow=33						
STKA	**Stephens Creek**	**43.55**	**240**	P	P	01 43 32.5	+0.7
	1.2nm,0.3s,baz=78,slow=12,SNR=9.3						
WRA	**Warramunga Arr**	**49.41**	**257**	P	P	01 44 17.4	-0.7
	2.6nm,0.4s,baz=97,slow=7.1,SNR=65						
ASAR	**Alice Springs**	**49.66**	**252**	P	P	01 44 19.6	-0.3
	21nm,0.5s,baz=89,slow=8.0,SNR=306						

ANF ***22*** *01:47:14.9±0.2, 37.˚49N×78.˚05W, h7km±1km, ML4.0/115, Error ellipse: s-maj=1.2km s-min=0.9km az=126.0*
SLM ***22*** *01:47:16±1.8, 37.˚53N±0.03×78.˚07W±0.03, h10km±6km, Mwr3.1/5, Error ellipse: s-maj=4.9km s-min=3.1km az=157.0, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}5.22; $M_{\theta\theta}$0.76; $M_{\phi\phi}$-5.98; $M_{r\theta}$-2.00; $M_{\theta\phi}$0.04; $M_{\phi r}$-0.73;*
ISC 22 01:47:15.3±0.8, 37.˚51N±0.02×78.˚07W±0.02, h11km±5km, n245, σ0§73/267, Virginia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
S58A	**Poland Farm, P**	**0.10**	**8**	P	**Pg**	**01 47 18.4**	**+0.3**
	baz=190,SNR=1000						
S58A				S	**Sg**	**01 47 20.0**	**-0.1**
	baz=190						
S58A	**Poland Farm, P**	**0.10**	**8**	Pg	**Pg**	**01 47 18.4**	**+0.3**
S58A				Sg	**Sg**	**01 47 20.0**	**-0.1**
R58B	**Mineral**	**0.48**	**18**	P	**Pg**	**01 47 24.5**	**-0.2**
	baz=199,SNR=1000						
R58B				S	**Sg**	**01 47 30.6**	**-0.4**
	baz=199						
R58B	**Mineral**	**0.48**	**18**		**Pg**	**01 47 24.4**	**-0.2**
S59A	**Mechanicsville**	**0.66**	**68**	P	**Pg**	**01 47 28.4**	**+0.3**
	baz=250,SNR=158						
S59A				S	**Sg**	**01 47 36.9**	**0.0**
	baz=250						
T58A	**Grand View Acr**	**0.68**	**213**	P	**Pg**	**01 47 28.2**	**-0.2**
	baz=32,SNR=178						
T59A	**Double "B" Far**	**0.68**	**143**	P	**Pg**	**01 47 28.7**	**+0.3**
	baz=324,SNR=799						
T59A	**Double "B" Far**	**0.68**	**143**	Pg	**Pg**	**01 47 28.8**	**+0.4**
T59A				Sg	**Sg**	**01 47 37.8**	**+0.5**
S57A	**Dark Hollow, R**	**0.74**	**290**	P	**Pg**	**01 47 29.2**	**-0.5**
	baz=108,SNR=202						
S57A	**Dark Hollow, R**	**0.74**	**290**	Pg	**Pg**	**01 47 29.3**	**-0.5**
S57A				Sg	**Sg**	**01 47 40.1**	**+0.6**
R58A	**Rapidan**	**0.79**	**4**	P	**Pg**	**01 47 29.9**	**-0.7**
	baz=184,SNR=1000						
R58A				S	**Sg**	**01 47 40.3**	**-0.5**
	baz=184						
R57A	**Stanardsville**	**0.86**	**336**	P	**Pg**	**01 47 31.3**	**-0.6**
	baz=155,SNR=241						
R57A				S	**Sg**	**01 47 42.7**	**-0.5**
	baz=155						
CBN	**Corbin Frederi**	**0.89**	**38**	P	**Pg**	**01 47 32.0**	**-0.4**
	baz=219,SNR=89						
CBN				S	**Sg**	**01 47 43.9**	**0.0**
	baz=219						
CBN	**Corbin Frederi**	**0.89**	**38**	Pg	**Pg**	**01 47 32.0**	**-0.4**
CBN				Sg	**Sg**	**01 47 43.9**	**0.0**
R59A	**King George, V**	**1.02**	**47**	P	**Pg**	**01 47 34.7**	**-0.2**
	baz=229,SNR=114						
R59A				S	**Sb**	**01 47 48.5**	**+0.2**
	baz=229						
T57A	**Hurt**	**1.07**	**242**	P	**Pg**	**01 47 35.3**	**-0.6**
	baz=60,SNR=435						
T57A	**Hurt**	**1.07**	**242**		**Pg**	**01 47 35.4**	**-0.6**
T60A	**Surry**	**1.13**	**109**	P	**Pg**	**01 47 36.8**	**-0.1**
	baz=291,SNR=292						
T60A	**Surry**	**1.13**	**109**		**Pg**	**01 47 36.8**	**-0.1**
S60A	**Water View**	**1.14**	**80**	P	**Pg**	**01 47 37.1**	**-0.1**
	baz=262,SNR=416						
S60A				S	**Sg**	**01 47 51.8**	**-0.3**
	baz=262						
U59A	**Littleton**	**1.18**	**169**		**Pb**	**01 47 37.4**	**-0.2**
U58A	**Oxford**	**1.18**	**199**	P	**Pb**	**01 47 37.0**	**-0.6**
	baz=18,SNR=147						
S56A	**Natural Bridge**	**1.20**	**278**	P	**Pb**	**01 47 37.2**	**-0.9**
	baz=97,SNR=174						
S56A				S	**Sg**	**01 47 53.5**	**-0.5**
	baz=97						
U60A	**Pendleton**	**1.27**	**145**	P	**Pn**	**01 47 37.6**	**-1.3**
	baz=326						
R60A	**Leonardtown, M**	**1.40**	**57**	P	**Pn**	**01 47 41.0**	**+0.3**
	baz=238,SNR=74						
R60A				S	**Sn**	**01 47 59.7**	**+0.6**
	baz=238						
Q58A	**Fox Den Farm,**	**1.46**	**12**	P	**Pn**	**01 47 41.2**	**-0.4**
	baz=192,SNR=147						
Q58A				S	**Sb**	**01 48 01.5**	**+0.5**
	baz=192						
U57A	**Blanch**	**1.48**	**224**	P	**Pn**	**01 47 41.5**	**-0.3**
	baz=42,SNR=471						
U57A				S	**Sn**	**01 48 01.1**	**-0.1**
	baz=42						
Q57A	**Strasburg**	**1.55**	**350**	P	**Pn**	**01 47 43.1**	**+0.3**
	baz=170,SNR=189						
Q57A				S	**Sn**	**01 48 03.5**	**+0.7**
	baz=170						
T56A	**Rocky Mt**	**1.64**	**254**	P	**Pn**	**01 47 44.6**	**+0.6**
	baz=72,SNR=527						
V59A	**Middlesex**	**1.75**	**185**	P	**Pn**	**01 47 45.6**	**+0.1**
	baz=4.3,SNR=174						
Q59A	**Harwood**	**1.75**	**39**	P	**Pn**	**01 47 46.0**	**+0.5**
	baz=220						
U61A	**Possum Corner**	**1.75**	**132**	P	**Pn**	**01 47 45.8**	**+0.3**
	baz=313,SNR=52						
U61A	**Possum Corner**	**1.75**	**132**		**Pn**	**01 47 45.9**	**+0.3**
U61A				Sn	**Sn**	**01 48 08.2**	**+0.4**
Q56A	**Snyder Ridge,**	**1.76**	**330**	P	**Pn**	**01 47 46.5**	**+0.8**
	baz=150,SNR=165						
Q56A				S	**Sn**	**01 48 09.7**	**+1.5**
	baz=150						
Q56A	**Snyder Ridge,**	**1.76**	**330**		**Pn**	**01 47 46.7**	**+1.0**
R55A	**Marlinton**	**1.80**	**296**	P	**Pn**	**01 47 47.5**	**+1.2**
	baz=114,SNR=280						
R55A				S	**Sn**	**01 48 10.5**	**+1.4**
	baz=114						
R55A	**Marlinton**	**1.80**	**296**		**Pn**	**01 47 47.4**	**+1.1**
V60A	**Jim Taylor Roa**	**1.86**	**159**	P	**Pn**	**01 47 47.2**	**+0.2**
	baz=340						
V60A	**Jim Taylor Roa**	**1.86**	**159**		**Pn**	**01 47 47.0**	**0.0**
BLA	**Blacksburg**	**1.90**	**262**	P	**Pn**	**01 47 48.7**	**+1.1**
	baz=80,SNR=174						
BLA	**Blacksburg**	**1.90**	**262**		**Pn**	**01 47 48.5**	**+0.8**
V58A	**Windy Hill, Pi**	**1.91**	**206**	P	**Pn**	**01 47 47.6**	**-0.1**
	baz=26						
V58A	**Windy Hill, Pi**	**1.91**	**206**		**Pn**	**01 47 47.6**	**-0.1**
S61A	**Accomac**	**1.91**	**84**	P	**Pn**	**01 47 48.2**	**+0.5**
	baz=266,SNR=14						
S61A	**Accomac**	**1.91**	**84**	Pn	**Pn**	**01 47 48.9**	**+1.2**
S55A	**Lewisburg**	**1.95**	**278**	P	**Pn**	**01 47 49.6**	**+1.3**
	baz=96,SNR=237						
P57A	**Homestead Farm**	**1.97**	**1**	P	**Pn**	**01 47 48.7**	**+0.1**
	baz=181						
P57A	**Homestead Farm**	**1.97**	**1**	Pn	**Pn**	**01 47 48.5**	**0.0**
P58A	**Pank, Wackersv**	**2.06**	**17**	P	**Pn**	**01 47 49.6**	**-0.3**
	baz=197,SNR=65						
P56A	**Dayton Farm, R**	**2.08**	**343**	P	**Pn**	**01 47 51.1**	**+1.0**
	baz=163,SNR=70						
V61A	**Roper**	**2.09**	**145**	P	**Pn**	**01 47 50.3**	**+0.1**
	baz=326,SNR=12						
V61A	**Roper**	**2.09**	**145**		**Pn**	**01 47 50.5**	**+0.3**
V57A	**Coltrane Farms**	**2.12**	**221**	P	**Pn**	**01 47 50.2**	**-0.5**
	baz=39,SNR=40						
SDMD	**Soldier's Deli**	**2.13**	**27**	Pn	**Pn**	**01 47 51.0**	**+0.3**
Q55A	**Buckhannon**	**2.17**	**314**	P	**Pn**	**01 47 52.7**	**+1.3**
	baz=132						
U56A	**King**	**2.19**	**239**	P	**Pn**	**01 47 52.5**	**+0.9**
	baz=57						
U56A	**King**	**2.19**	**239**		**Pn**	**01 47 52.7**	**+1.1**
T55A	**Pulaski**	**2.20**	**261**	P	**Pn**	**01 47 52.4**	**+0.7**
	baz=78						
CNNC	**Cliffs of the**	**2.27**	**176**	P	**Pn**	**01 47 52.7**	**+0.1**
	baz=356						
CNNC	**Cliffs of the**	**2.27**	**176**	Pn	**Pn**	**01 47 52.9**	**+0.2**
Q60A	**Greensboro**	**2.30**	**49**	P	**Pn**	**01 47 53.5**	**+0.4**
	baz=231						
Q60A	**Greensboro**	**2.30**	**49**		**Pn**	**01 47 53.8**	**+0.8**
R61A	**Willards**	**2.31**	**68**	P	**Pn**	**01 47 53.5**	**+0.3**
	baz=250						
R61A	**Willards**	**2.31**	**68**	Pn	**Pn**	**01 47 53.8**	**+0.6**
W59A	**Clinton**	**2.36**	**187**	P	**Pn**	**01 47 53.9**	**0.0**
	baz=7.1,SNR=5.6						
R54A	**Victor**	**2.41**	**287**	P	**Pn**	**01 47 55.8**	**+1.2**
	baz=105						
P55A	**Reedsville**	**2.42**	**326**	P	**Pn**	**01 47 55.2**	**+0.3**
	baz=145,SNR=100						
P59A	**Jarrettsville**	**2.46**	**31**	P	**Pn**	**01 47 55.4**	**+0.1**
	baz=212,SNR=125						
W60A	**Pink Hill**	**2.47**	**173**	P	**Pn**	**01 47 55.1**	**-0.3**
	baz=354						
W61A	**Ground Anchor**	**2.49**	**159**	P	**Pn**	**01 47 55.7**	**+0.1**
	baz=340,SNR=6.8						
MCWV	**Mont Chateau**	**2.56**	**328**	P	**Pn**	**01 47 57.6**	**+1.0**
	baz=146						
MCWV	**Mont Chateau**	**2.56**	**328**		**Pn**	**01 47 58.0**	**+1.3**
Q61A	**Milford**	**2.56**	**57**	P	**Pn**	**01 47 57.5**	**+0.9**
	baz=239						
Q61A				S	**Sn**	**01 48 28.3**	**+0.6**
	baz=239						
V56A	**Mocksville**	**2.59**	**230**	P	**Pn**	**01 47 57.4**	**+0.4**
	baz=48,SNR=70						
V56A				S	**Sn**	**01 48 28.9**	**+0.4**
	baz=48						
U55A	**TA2, Sparta**	**2.59**	**248**	P	**Pn**	**01 47 57.6**	**+0.4**
	baz=66						
S54A	**Dingess, Beckl**	**2.59**	**277**	P	**Pn**	**01 47 58.4**	**+1.3**
	baz=95						
S54A	**Dingess, Beckl**	**2.

N54A	Moraine State	3.75	337	P	Pn	01 48 13.7	+0.6
	baz=156						
N54A	Moraine State	3.75	337	Pn	Pn	01 48 13.1	0.0
O61A	Allentown	3.77	46	P	Pn	01 48 13.2	-0.1
	baz=228,SNR=5.4						
P52A	Corning	3.83	305	P	Pn	01 48 14.6	+0.5
	baz=122						
Y58A	Scranton	3.83	200	P	Pn	01 48 13.7	-0.4
	baz=19,SNR=6.6						
Y58A	Scranton	3.83	200	Pn	Pn	01 48 13.6	-0.4
N59A	State Game Lan	3.84	27	P	Pn	01 48 15.1	+0.7
	baz=208						
N59A	State Game Lan	3.84	27	Pn	Pn	01 48 14.5	+0.2
X56A	White Oak	3.85	219	P	Pn	01 48 14.4	-0.1
	baz=37						
M57A	Sunshine Farm,	3.89	11	P	Pn	01 48 15.2	+0.3
	baz=191						
M57A	Sunshine Farm,	3.89	11	Pn	Pn	01 48 15.2	+0.3
O52A	Adamsville	3.93	313	P	Pn	01 48 16.4	+1.0
	baz=130						
O52A	Adamsville	3.93	313	Pn	Pn	01 48 15.8	+0.3
N53A	Lisbon	3.93	328	Pn	Pn	01 48 16.7	+1.2
Y57A	Sumter	3.96	209	P	Pn	01 48 15.6	-0.4
	baz=28						
Y57A	Sumter	3.96	209	Pn	Pn	01 48 15.6	-0.4
M56A	Emporium	3.97	359	Pn	Pn	01 48 18.4	+2.3
M55A	Ridgway	3.99	352	P	Pn	01 48 16.9	+0.5
	baz=172						
M55A	Ridgway	3.99	352	Pn	Pn	01 48 17.0	+0.7
PAULI	Pauline	4.05	230	Pn	Pn	01 48 17.1	-0.1
M58A	Price's Panora	4.05	17	P	Pn	01 48 17.6	+0.3
	baz=198						
N60A	Cedar Hill Far	4.07	34	P	Pn	01 48 18.1	+0.7
	baz=216						
BRNJ	Basking Ridge	4.18	40	Pn	Pn	01 48 19.0	+0.1
M54A	Oil Creek Stat	4.18	343	P	Pn	01 48 19.6	+0.7
	baz=162,SNR=16						
M54A	Oil Creek Stat	4.18	343	Pn	Pn	01 48 19.6	+0.7
X55A	Gracelyn & Ava	4.19	225	P	Pn	01 48 19.0	0.0
	baz=42						
V53A	Saluda	4.24	246	Pn	Pn	01 48 19.9	+0.1
P51A	Williamsport	4.38	298		Pn	01 48 23.5	+1.8
S51A	Beattyville	4.39	273		Pn	01 48 22.9	+1.0
Z58A	St. Stephen	4.40	199	P	Pn	01 48 21.2	-0.8
	baz=18,SNR=7.1						
M53A	WI Miller and	4.41	334	P	Pn	01 48 23.3	+1.2
	baz=152						
KSPA	Keystone Colle	4.42	23	Pn	Pn	01 48 22.5	+0.4
ODNJ	Ogdensburg	4.46	36	Pn	Pn	01 48 23.7	+0.9
TZTN	Tazewell	4.49	259	Pn	Pn	01 48 23.9	+0.7
M59A	Waymart	4.51	26	P	Pn	01 48 24.6	+1.0
	baz=208						
Y56A	Pelion	4.55	216	P	Pn	01 48 24.1	0.0
	baz=34						
X54A	Belton	4.57	231	P	Pn	01 48 24.6	+0.2
	baz=48						
L57A	Andrews Acres	4.58	11	P	Pn	01 48 24.7	+0.2
	baz=192,SNR=9.3						
L56A	Greenwood	4.64	5	P	Pn	01 48 26.0	+0.7
	baz=185						
L56A	Greenwood	4.64	5	Pn	Pn	01 48 25.8	+0.5
M60A	Port Jervis	4.65	34	P	Pn	01 48 25.5	+0.1
	baz=216,SNR=5.9						
BG3	Lake Jocassee	4.66	239	Pn	Pn	01 48 25.0	-0.6
ACSO	Alum Creek Sta	4.70	307	Pn	Pn	01 48 27.6	+1.5
Y55A	Saluda	4.71	222	P	Pn	01 48 26.1	-0.2
	baz=40,SNR=15						
HODGE	Hodges	4.72	227	Pn	Pn	01 48 26.3	-0.1
NHSC	New Hope	4.72	202	Pn	Pn	01 48 25.7	-0.7
Z57A	Bowman	4.72	208	P	Pn	01 48 25.6	-0.8
	baz=26						
V52A	Sevierville	4.75	251	Pn	Pn	01 48 26.5	-0.2
L53A	Girard	4.75	340	P	Pn	01 48 27.3	+0.5
	baz=158						
PAL	Palisades	4.75	41	Pn	Pn	01 48 27.4	+0.6
M52A	Chesterland	4.76	329	Pn	Pn	01 48 28.2	+1.3
N51A	Ashland	4.77	317	Pn	Pn	01 48 26.1	-1.0
L54A	Sinclairville	4.81	349	P	Pn	01 48 28.3	+0.6
	baz=168						
WVNY	West Valley, N	4.91	355	Pn	Pn	01 48 28.2	-0.7
RGRS	Roger Stewart	4.91	201	Pn	Pn	01 48 28.4	-0.6
BINY	Binghamton	4.95	18	P	Pn	01 48 30.1	+0.5
	baz=200						
BINY	Binghamton	4.95	18	Pn	Pn	01 48 29.0	-0.5
TKL	Tuckaleechee C	4.95	250	Pn	Pn	01 48 28.8	-0.8
Z56A	Williston	4.97	214	P	Pn	01 48 29.5	-0.3
	baz=32						
R50A	Paris	5.01	281	Pn	Pn	01 48 29.5	-0.8
M61A	Granite Spring	5.05	40	P	Pn	01 48 31.5	+0.7
	baz=223						
K56A	Middlesex	5.21	6	P	Pn	01 48 33.9	+0.7
	baz=186						
L59A	Walton	5.22	26	P	Pn	01 48 34.0	+0.7
	baz=208						
L59A	Walton	5.22	26	Pn	Pn	01 48 32.9	-0.4
V51A	Loudon	5.33	253	Pn	Pn	01 48 35.6	+0.9
K57A	Scipio Center	5.35	12	P	Pn	01 48 35.6	+0.6
	baz=193						
L60A	Shokan	5.37	32	P	Pn	01 48 35.5	+0.2
	baz=215,SNR=27						
157A	Early Branch	5.39	207	P	Pn	01 48 35.0	-0.5
	baz=25						
KSCT	Kent School, K	5.50	39	Pn	Pn	01 48 37.6	+0.6
K58A	Earlville	5.56	19	P	Pn	01 48 38.5	+0.5
	baz=200						
K58A	Earlville	5.56	19	Pn	Pn	01 48 37.9	-0.1
CPCT	Cooper Cave	5.59	250	Pn	Pn	01 48 38.4	0.0
M62A	Hamden	5.61	44	P	Pn	01 48 38.7	+0.2
	baz=227						
R49A	Shelbyville	5.67	280	Pn	Pn	01 48 38.8	-0.7
J54A	Appleton	5.77	356	Pn	Pn	01 48 40.1	-0.6
K59A	Cooperstown	5.81	24	P	Pn	01 48 41.8	+0.5
	baz=206						
L61A	Hillsdale 1, H	5.83	35	P	Pn	01 48 42.0	+0.5
	baz=218						
J56A	Wolcott	5.83	9	P	Pn	01 48 42.3	+0.7
	baz=190						
J56A	Wolcott	5.83	9	Pn	Pn	01 48 42.5	+0.8
N49A	Columbus Grove	5.84	308		Pn	01 48 42.8	+1.0
GOGA	Godfrey	6.01	229	P	Pn	01 48 43.6	-0.4
	baz=45,SNR=6.1						
GOGA	Godfrey	6.01	229	Pn	Pn	01 48 43.7	-0.4
M63A	Gales Ferry	6.07	48	P	Pn	01 48 44.9	0.0
	baz=232						
Y52A	Lilburn	6.08	235	Pn	Pn	01 48 45.4	+0.2
P48A	Milroy	6.09	291	Pn	Pn	01 48 45.9	+0.7
J57A	Williamstown	6.10	14	P	Pn	01 48 45.7	+0.4
	baz=196						
J57A	Williamstown	6.10	14	Pn	Pn	01 48 45.6	+0.4
J58A	Remsen	6.22	19	P	Pn	01 48 47.3	+0.3
	baz=201						
J58A	Remsen	6.22	19	Pn	Pn	01 48 47.2	+0.3
U49A	Red Boiling Sp	6.25	263		Pn	01 48 49.3	+1.9
W50A	Signal Mountai	6.28	251	Pn	Pn	01 48 49.3	+1.4
K61A	Williamstown	6.33	34	P	Pn	01 48 49.1	+0.6
	baz=217						
L61B	Northampton	6.44	38	P	Pn	01 48 49.9	0.0
	baz=222						
QUA2	Belchertown	6.48	41	Pn	Pn	01 48 51.8	+1.3
J59A	Piesco	6.54	23	P	Pn	01 48 51.6	+0.2
	baz=206						
J59A	Piesco	6.54	23	Pn	Pn	01 48 51.5	+0.2
WCI	Wyandotte Cave	6.55	279		Pn	01 48 51.9	+0.4
I58A	Old Forge	6.61	20	P	Pn	01 48 52.3	0.0
	baz=202,SNR=8.8						
L63A	North Scituate	6.61	47	P	Pn	01 48 52.4	+0.1
	baz=231						
255A	Hazlehurst	6.65	214	Pn	Pn	01 48 52.9	+0.1
I57A	Carthage	6.67	15	P	Pn	01 48 53.5	+0.3
	baz=197						
BRYW	Bryant College	6.69	47	Pn	Pn	01 48 52.8	-0.5
I55A	Frankford	6.71	2	P	Pn	01 48 53.9	+0.3
	baz=183						
J60A	Lant Hill Farm	6.74	30	P	Pn	01 48 54.3	+0.3
	baz=213						
SWET	Sewanee	6.75	253		Pn	01 48 54.4	+0.2
ACCN	Adirondack Com	6.76	28	Pn	Pn	01 48 54.0	-0.3
CLTN	Cedars of Leba	6.78	260	Pn	Pn	01 48 54.2	-0.5
FPAL	Fort Paine	6.79	246	Pn	Pn	01 48 54.8	-0.1
K62A	Royalston	6.82	39	Pn	Pn	01 48 52.8	-2.4
BLO	Bloomington	6.85	287		Pn	01 48 54.5	-1.1
HRV	Adam Dziewonsk	7.06	43	Pn	Pn	01 48 56.2	-2.3
WES	Weston	7.11	45	Pn	Pn	01 48 57.4	-1.8
J63A	Strafford	7.85	41	P	Pn	01 49 08.6	-0.7
	baz=225,SNR=8.7						
H59A	Cadyville	7.86	23	P	Pn	01 49 09.4	0.0
	baz=206						
FRNY	Flat Rock	8.06	23	Pn	Pn	01 49 10.8	-1.4
F51A	Arnstein	8.52	351	P	Pn	01 49 19.2	+0.7
	baz=170						
F49A	Sandfield	8.76	341	P	Pn	01 49 22.8	+1.0
	baz=159,SNR=6.8						
F48A	Evansville	8.98	339	P	Pn	01 49 24.7	-0.1
	baz=156						
I64A	Boothbay	9.05	42	P	Pn	01 49 26.5	+0.7
	baz=228						
E51A	G1948 Merrick	9.08	354	P	Pn	01 49 26.3	+0.2
	baz=173						

IDC 22 01:50:13.0±8.4, 23°.17S×177°.42W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.5/42, mbtmp3.7/2, Error ellipse: s-maj=356.9km s-min=62.0km az=148.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	44.49	259	P	P	01 58 27.1	+0.6
	0.9nm,0.9s,baz=97,slow=7.6,SNR=3.5						
WRA	Warramunga Arr	44.83	265	P	P	01 58 28.6	-0.6
	0.4nm,0.3s,baz=104,slow=8.4,SNR=18						
AKASG	Malin Array Be	145.59	330	PKPbc	PKPdf	02 09 52.3	-0.7
	0.7nm,0.5s,baz=39,slow=4.6,SNR=4.5						

IDC 22 01:52:11.0±6.8, 22°.40S×177°.92W, h446km±71km, mb3.4/12, mb1 3.6/12, mb1mx3.4/42, mbtmp4.2/12, Error ellipse: s-maj=33.5km s-min=24.5km az=138.0

ISC 22 01:51:56.6±0.9, 23°.1S±0°.2×176°.9W±0°.2, h350km, n21, σ2§30/21, mb3.9/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	34.35	268	P	P	01 58 11.9	0.0
	3.3nm,0.4s,baz=104,slow=12,SNR=2.6						
STKA	Stephens Creek	37.68	247	P	P	01 58 40.4	+0.6
	1.1nm,0.5s,baz=110,slow=17,SNR=3.1						
ASAR	Alice Springs	45.00	259	P	P	01 59 39.1	+0.4
	2.7nm,1.0s,baz=101,slow=7.5,SNR=6.9						
ASAR				PcP	PcP	02 01 15.9	+2.8
	0.9nm,0.6s,baz=115,slow=3.8,SNR=4.7						
WRA	Warramunga Arr	45.33	264	P	P	01 59 40.5	-0.8
	3.0nm,0.6s,baz=103,slow=8.2,SNR=16						
FITZ	Fitzroy Crossi	53.76	264	P	P	02 00 44.6	+0.3
	2.8nm,0.8s,baz=98,slow=5.4,SNR=5.9						
SIJI	Sorong	54.93	286	P	P	02 00 51.8	-1.0
	3.5nm,0.3s,baz=82,slow=8.9,SNR=4.1						
PETK	Petropavlovsk-	79.02	345	P	P	02 03 20.8	-1.4
	4.1nm,0.8s,baz=131,slow=8.1,SNR=7.2						
USRK	Ussuriysk Ar.	81.67	326	P	P	02 03 37.3	+1.0
	1.9nm,0.7s,baz=190,slow=3.5,SNR=4.9						
NVAR	Mina Array Bea	82.19	43	P	P	02 03 46.4	+6.9
	1.8nm,0.9s,baz=217,slow=5.7,SNR=7.6						
KLR	Kul'dur	85.26	329	P	P	02 03 53.2	-1.2
	0.8nm,0.5s,baz=62,slow=3.6,SNR=3.7						
SNAA	Sanae	85.42	178	P	P	02 03 50.8	-4.2
VNA3	Neumayer Olymp	85.51	176	P	P	02 03 52.2	-3.2
VNA2	Neumayer--Watz	85.97	177	P	P	02 03 55.5	-2.1
	baz=189,slow=4.4						
VNA1	Neumayer--Stat	86.19	176	P	P	02 03 55.4	-3.3
TXAR	Lajitas Array	87.58	57	P	P	02 04 14.3	+8.2
	1.2nm,0.8s,baz=210,slow=7.2,SNR=7.5						
ILAR	Eielson Array	90.59	12	P	P	02 04 20.0	+0.8
	0.2nm,0.6s,baz=216,slow=4.5,SNR=4.3						
AKASG	Malin Array Be	145.76	330	PKP	PKPbc	02 10 54.9	+0.2
	0.8nm,0.4s,baz=43,slow=4.3,SNR=6.5						
BRTR	Keskin Array B	149.31	310	PKPbc	PKiKP	02 11 06.2	+0.5
	1.6nm,0.8s,baz=160,slow=3.9,SNR=5.0						
BRG	Berggiesshubel	151.00	346	ePKP	PKPbc	02 11 08.2	0.0
	4.5nm,1.1s						
GERES	GERESS Array B	152.95	345	PKPbc	PKPbc	02 11 12.8	+0.1
	0.1nm,0.3s,baz=29,slow=2.2,SNR=1.6						
GERES				PKPab	PKPab	02 11 25.8	+0.4
	0.6nm,0.8s,baz=19,slow=6.2,SNR=3.6						
TORD	Torodi Ar. Bea	170.03	172	PKPab	PKPab	02 12 46.7	+6.0
	0.5nm,0.8s,baz=194,slow=2.7,SNR=2.3						

ATA 22 01:56:51.9±2.9, 38°.83N×43°.34E, h12km±101km, ML1.1, MW3.5

DDA 22 01:56:53.9, 38°.68N×43°.14E, h7km±2km, ML1.6

ISC 22 01:56:53.6±1.0, 38°.74N±0°.04×43°.22E±0°.06, h12km±11km, n7, σ1§53/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVAN	Van	0.26	145	eP	Pb	01 56 59.4	-1.0
TVAN				eS	Sb	01 57 04.1	-0.7
TVAN				IAML		01 57 05.0	
	comp=Z,26nm,0.3s						
TVAN	Van	0.26	145	i P	Pb	01 56 59.2	-1.2
TVAN				IAML	S	01 57 04.0	+1.2
	comp=N,117nm,0.5s						
TVAN				IAML	S	01 57 04.0	+1.2
	comp=E,125nm,0.3s						
TVAN				i S	S	01 57 04.0	+1.2
VMUR	Van-Muradiye	0.37	48	i P	Pb	01 57 02.1	-0.2
VMUR				i S	Sb	01 57 09.7	+1.5
VMUR				IAML		01 57 10.0	
	comp=E,23nm,0.3s						
ADCV	BITLIS_Adilcev	0.39	280	i P	Pg	01 57 01.4	-0.1
GEVA	Gevas	0.45	196	eP	Pg	01 57 01.5	-0.9
GEVA				IAML		01 57 13.0	
	comp=Z,8.1nm,0.8s						
GEVA				eS	Sb	01 57 13.5	+3.3
GEVA	Gevas	0.45	196	i P	Pg	01 57 01.7	-0.7
TUTA	Tutak	0.73	335	eP	Pb	01 57 07.6	-0.9
TUTA				IAML		01 57 11.6	
	comp=Z,5.8nm,0.2s						
TUTA				eS	Sg	01 57 16.4	-1.1

IDC 22 02:00:37.6±1.8, 12°.23N×125°.47E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/40, mbtmp3.8/5, MS2.8/3, Ms1 2.8/3, ms1mx2.4/45, Error ellipse: s-maj=136.2km s-min=22.1km az=69.0

NEIC 22 02:00:41.5±0.9, 12°.3N±0°.1×125°.5E±0°.1, h35km±2km, mb4.4/12, Error ellipse: s-maj=24.7km s-min=14.8km az=233.0

ISC 22 02:00:41.4±0.7, 12°.24N±0°.09×125°.38E±0°.08, h33km, n28, σ1§39/20, mb4.1/11, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCP	Roxas	2.66	256	eP	Pb	02 01 26.6	-1.8
RCP				eS	Sb	02 02 00.8	+0.1
TGY	Tagaytay City	4.70	294	LR	LR	02 04 02.1	
	comp=Z,190nm,21.8s,baz=109,slow=43						
DAV	Davao City (W)	5.14	178	LR	LR	02 04 31.9	
	comp=Z,154nm,20.0s,baz=320,slow=46						
KSM	Kuching	18.37	236	P	P	02 04 54.2	+0.7
SAUI	Saumlaki	20.93	163	P	P	02 05 20.2	-1.3
KSRS	Korea Array	25.21	5	LR	LR	02 16 47.9	
	comp=Z,10nm,18.1s,baz=155,slow=38						
FITZ	Fitzroy Crossi	30.14	179	P	P	02 06 49.8	+1.3
	baz=349,slow=6.9						
FITZ	Fitzroy Crossi	30.14	179	P	P	02 06 49.7	+1.3
FITZ				IAmb	IAmb	02 06 50.5	
	comp=Z,7.2nm,1.1s						
USA0B	Ussuriysk Arra	32.35	9	P	P	02 07 07.2	-0.5
WRA	Warramunga Arr	33.17	164	P	P	02 07 13.9	-1.2
	comp=Z,0.3nm,0.4s,baz=342,slow=8.2,SNR=4.7						
WB2	Warramunga Arr	33.18	164	P	P	02 07 15.5	+0.3
WB2				IAmb	IAmb	02 07 23.4	
	comp=Z,3.0nm,1.1s						
PSAA3	Pilbara Seismi	34.04	189	P	P	02 07 20.9	-1.7
PSAA3				IAmb	IAmb	02 07 37.6	
	comp=Z,5.6nm,1.0s						
LSA	Lhasa	36.19	304	P	P	02 07 42.1	+0.4
ASAR	Alice Springs	36.65	167	P	P	02 07 46.3	+1.2
	comp=Z,0.9nm,0.4s,baz=347,slow=7.7,SNR=15						
H11S3	WAKE ISLAND Hy	40.25	76	T	T	02 51 13.6	
	baz=268,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	40.26	76	T	T	02 51 14.4	
	baz=268,slow=75,SNR=13						
H11S2	WAKE ISLAND Hy	40.27	76	T	T	02 51 15.6	
	baz=268,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	40.52	74	T	T	02 51 27.7	
	baz=266,slow=75,SNR=99						
H11N2	WAKE ISLAND Hy	40.52	74	T	T	02 51 29.5	
	baz=266,slow=75,SNR=72						
H11N3	WAKE ISLAND Hy	40.53	74	T	T	02 51 28.7	
	baz=266,slow=75,SNR=80						
MORW	Morawa	42.04	192	P	P	02 08 30.1	+0.1
MORW				IAmb	IAmb	02 08 43.0	
	comp=Z,5.8nm,1.1s						
FORT	Forrest	42.85	177	P	P	02 08 36.5	0.0
FORT				IAmb	IAmb	02 08 39.3	
	comp=Z,13nm,0.9s						
BBOO	Buckleboo	45.94	167	P	P	02 09 02.4	+1.1
STKA	Stephens Creek	46.54	161	P	P	02 09 07.7	+1.7
	comp=Z,1.1nm,0.6s,baz=331,slow=11,SNR=3.5						
STKA	Stephens Creek	46.54	161	P	P	02 09 06.2	+0.3
PEA0B	Petropavlovsk-	48.24	26	P	P	02 09 16.3	-2.7
PEA0B				IAmb	IAmb	02 09 29.3	
	comp=Z,8.0nm,1.1s						
MKAR	Makanchi Array	49.94	322	P	P	02 09 34.4	+2.3
	comp=Z,0.7nm,0.8s,baz=113,slow=9.3,SNR=3.6						
FINES	FINESS Array B	83.75	332	P	P	02 13 08.1	+1.1
	comp=Z,1.1nm,0.8s,baz=100,slow=13,SNR=3.8						

IDC 22 02:21:58.3±8.9, 18°.08S×170°.16E, h230km±54km, mb3.5/3, mb1 3.6/4, mb1mx3.2/40, mbtmp4.0/4, MS3.5/1, Ms1 3.5/1, ms1mx2.7/30, Error ellipse: s-maj=117.7km s-min=79.1km az=115.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	5.29	221	P	Pn	02 23 17.2	0.0
	1.3nm,0.3s,baz=128,slow=19,SNR=11						
DZM				S	S	02 24 20.3	+0.5
	0.5nm,0.3s,baz=128,slow=21,SNR=1.3						
RPZ	Rata Peaks	25.57	179	LR	LR	02 35 01.6	
	comp=Z,110nm,19.4s,baz=182,slow=31						
STKA	Stephens Creek	29.21	236	P	P	02 27 38.8	+0.1
	1.2nm,0.6s,baz=349,slow=10,SNR=4.5						
WRA	Warramunga Arr	33.88	261	P	P	02 28 19.5	-0.2
	2.1nm,0.6s,baz=96,slow=7.6,SNR=18						
ASAR	Alice Springs	34.27	254	P	P	02 28 22.9	0.0
	3.9nm,0.4s,baz=82,slow=8.9,SNR=63						

IDC 22 02:39:58.6±0.5, 4°.30S×122°.80E, h0km, mb4.6/27, mb1 4.6/32, mb1mx4.6/42, mbtmp4.6/32, ML4.3/5, MS4.1/34, Ms1 4.1/34, ms1mx4.0/42, Error ellipse: s-maj=14.8km s-min=10.5km az=59.0

BJI 22 02:39:59.0±0.0, 4°.30S×122°.80E, h6km, mB4.9/18, mb4.8/21, Ms4.7/8, Ms7 4.4/7

GCMT 22 02:40:00.4±0.2, 4°.23S±0°.01×122°.84E±0°.01, h12km, MW5.0/111, Moment Tensor Solution. s53,c63; s111,c173; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-1.23±.09; Mθθ3.62±.06; Mϕϕ-2.40±.09; Mrθ2.00±.20; Mθϕ-0.70±.07; Mϕr0.13±.25; Best double couple: Ms3.51700×10¹⁶ NP1:ϕs144.00000°, δ59.00000°, λ-3.00000°. NP2:ϕs236.00000°, δ87.00000°, λ-149.00000°. Principal axes: T 4.3950, Plg19.0000°, Azm6.0000°; N -1.7660, Plg58.0000°, Azm241.0000°; P -2.6390, Plg24.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC 22 02:40:01.4±1.4, 4°.31S±0°.05×122°.86E±0°.03, h28km±5km, mb4.7/42 Error ellipse: s-maj=7.8km s-min=2.5km az=156.0

DJA 22 02:40:03.0±0.4, 4°S±2°×12°3E±°, h33km±5km, M4.7/39, mb4.9/39, mB5.2/19, MLv4.9/21, Mw(mB)4.7/19, Mwp5.0/4

ISC 22 02:40:03.1±0.3, 4°.33S±0°.04×122°.87E±0°.05, h33km, n151, σ1§67/150, mb4.7/44, MS4.1/28, 2C-2D, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNSI	Bone	2.75	268	P	Pn	02 40 43.4	-1.6
BKSI	Bulukumba	2.91	250	P	Pn	02 40 46.3	-0.8
SPSI	Sidrap Palu	3.11	277	P	Pn	02 40 48.9	-1.0
KAPI	Kappang	3.18	257	Pn	Pn	02 40 50.2	-0.7
	49nm,0.3s,baz=98,slow=5.9,SNR=101						
KAPI				Sn	Sn	02 41 29.2	+1.5
	64nm,0.3s,baz=325,slow=23,SNR=12						
KAPI				LR	LR	02 41 30.0	
	comp=Z,541nm,20.4s,baz=72,slow=29						
KAPI	Kappang	3.18	257		Pn	02 40 50.5	-0.4
KAPI					Sn	02 41 25.6	-2.0
LUWI	Luwuk	3.26	358	P	Pn	02 40 50.3	-1.7
LUWI	Luwuk	3.26	358		Pn	02 40 50.7	-1.3
LUWI				Sn	Sn	02 41 27.4	-2.3
TTSI	Tana Toraja	3.30	293	P	Pn	02 40 52.0	-0.5
SANI	Sanana	3.85	54	P	Pn	02 40 59.0	-1.1
MMRI	Maumere	4.33	188	P	Pn	02 41 06.9	+0.3
MMRI	Maumere	4.33	188		Pn	02 41 06.3	-0.3
NLAI	Namlea	4.36	76	P	Pn	02 41 08.5	+1.4
EDFI	Ende, Flores	4.55	195	P	Pn	02 41 09.3	-0.5
KMSI	Cibinong	4.99	13	P	Pn	02 41 15.8	0.0
AAI	Ambon	5.35	83	P	Pn	02 41 28.3	+7.6
MPSI	Mapaga	5.50	327	P	Pn	02 41 20.3	-2.5
	0.7nm4µm3µm187nm,0.5s						
SOEI	Soe	5.57	166	P	Pn	02 41 26.7	+2.9
	1.7nm4µm548nm,0.8s						
SOEI	Soe	5.57	166		Pn	02 41 24.0	+0.2
BATI	Baumata	5.89	172	Pn	Pn	02 41 32.5	+4.3
	37nm,0.3s,baz=332,slow=1.5,SNR=14						
BATI				LR	LR	02 44 28.8	
	comp=Z,4µm,19.3s,baz=5.5,slow=46						
BATI	Baumata	5.89	172	P	Pn	02 41 30.6	+2.4
	0.6nm2µm2µm209nm,0.9s						
LBMI	Labuha	5.90	52	P	Pn	02 41 29.4	+1.1
	0.7nm2µm206nm,0.9s						
MSAI	Masohi	6.13	81	P	Pn	02 41 33.1	+1.7
	0.1nm1µm28nm,0.4s						
BASI	Baing, Sumba	6.28	201	P	Pn	02 41 34.5	+1.0
	1.1nm4µm3µm362nm,1.1s						
WBSI	Waikabubak, Su	6.31	213	P	Pn	02 41 34.3	+0.4
	0.5nm2µm176nm,0.9s						
PLAI	Plampang	6.75	228	P	Pn	02 41 41.7	+1.7
	0.4nm1µm110nm,0.9s						
TNTI	Ternate	6.77	42	P	Pn	02 41 39.8	-0.5
	0.8

WB0					IAmb	IAmb	02 44 26.5	
	comp=Z,33nm,0.8s							
WRAB	**Tennant Creek**	**19.13**	**145**	P	**P**	**02 44 23.0**	**-0.6**	
WRAB					IAmb	IAmb	02 44 25.9	
	comp=Z,41nm,0.9s							
WRA	**Warramunga Arr**	**19.13**	**145**	P	**P**	**02 44 22.9**	**-0.7**	
	comp=Z,1.1nm,0.3s,baz=311,slow=10,SNR=48							
WRA				PcP	**PcP**	**02 48 47.9**	**+0.7**	
	comp=Z,0.1nm,0.3s,baz=328,slow=1.9,SNR=1.8							
WRA				LR	LR	02 52 27.4		
	comp=Z,599nm,18.4s,baz=315,slow=39							
WB2	**Warramunga Arr**	**19.14**	**145**	P	**P**	**02 44 22.5**	**-1.1**	
WB2					IAmb	IAmb	02 44 25.9	
	comp=Z,46nm,0.9s							
WR0	**Warramunga Arr**	**19.26**	**145**	P	**P**	**02 44 24.2**	**-0.7**	
WR0					IAmb	IAmb	02 44 28.0	
	comp=Z,38nm,1.1s							
SMPP	**San Manuel, Pa**	**20.46**	**354**	*e*P	**P**	**02 44 35.2**	**-2.9**	
RGRI	**Rengat**	**20.89**	**280**	P	Pn	02 44 58.5	+13	
SDSI	**Sungai Dareh**	**21.68**	**278**	P	**P**	**02 44 55.8**	**+4.5**	
AS31	**Alice Springs**	**21.98**	**152**	P	**P**	**02 44 52.7**	**-1.8**	
ASAR	**Alice Springs**	**21.98**	**152**	P	**P**	**02 44 55.5**	**+1.0**	
	comp=Z,18nm,0.8s,baz=345,slow=17,SNR=109							
ASAR				PcP	**PcP**	**02 48 53.1**	**+0.6**	
	comp=Z,3.0nm,0.7s,baz=339,slow=1.6,SNR=16							
ASAR				LR	LR	02 53 56.3		
	comp=Z,652nm,19.1s,baz=324,slow=38							
COEN	**Coen**	**22.19**	**117**	P	**P**	**02 44 55.9**	**-0.9**	
KULM	**Kulim**	**24.16**	**293**	P	**P**	**02 45 15.2**	**-1.3**	
PMG	**Port Moresby**	**24.63**	**103**	P	**P**	**02 45 22.8**	**+2.0**	
	comp=Z,6.5nm,0.5s,baz=317,slow=18,SNR=3.1							
PMG				LR	LR	02 58 16.8		
	comp=Z,298nm,18.3s,baz=258,slow=44							
PMG	**Port Moresby**	**24.63**	**103**	P	**P**	**02 45 19.4**	**-1.5**	
PMG				IAmb	IAmb	02 45 38.3		
	comp=Z,34nm,1.0s							
RPSI	**Rantau Prapat**	**24.92**	**286**	P	**P**	**02 45 22.4**	**-1.1**	
RPSI				IAmb	IAmb	02 45 29.0		
	comp=Z,24nm,1.0s							
PSI	**Prapat**	**24.95**	**286**	P	**P**	**02 45 23.4**	**-0.5**	
	comp=Z,14nm,0.8s,baz=180,slow=1.7,SNR=10							
PSI				LR	LR	02 56 51.3		
	comp=Z,1μm,19.2s,baz=90,slow=41							
MORW	**Morawa**	**25.45**	**194**	P	**P**	**02 45 27.1**	**-0.9**	
MORW				IAmb	IAmb	02 45 32.6		
	comp=Z,29nm,1.1s							
FORT	**Forrest**	**26.76**	**170**	P	**P**	**02 45 39.3**	**-0.7**	
FORT				IAmb	IAmb	02 45 45.6		
	comp=Z,17nm,0.9s							
CTA	**Charters Tower**	**27.64**	**126**	P	**P**	**02 45 49.2**	**+1.1**	
	comp=Z,4.9nm,0.8s,baz=285,slow=5.8,SNR=3.0							
NWAO	**Narrogin (SRO)**	**28.94**	**190**	LR	LR	02 58 56.3		
	comp=Z,609nm,18.9s,baz=358,slow=39							
KRVT	**Keravat (AS076**	**29.07**	**91**	P	**P**	**02 46 02.0**	**+1.2**	
	comp=Z,25nm,0.5s,baz=225,slow=20,SNR=2.0							
KRVT				LR	LR	02 59 14.8		
	comp=Z,213nm,18.3s,baz=290,slow=40							
BBOO	**Buckleboo**	**30.91**	**158**	P	**P**	**02 46 15.5**	**-1.3**	
BBOO				IAmb	IAmb	02 46 20.8		
	comp=Z,9.0nm,0.8s							
JOW	**Kunigami**	**31.41**	**9**	P	**P**	**02 46 21.9**	**+0.6**	
	comp=Z,1.4nm,0.7s,baz=169,slow=11,SNR=5.4							
JOW	**Kunigami**	**31.41**	**9**	P	**P**	**02 46 19.7**	**-1.6**	
JOW				IAmb	IAmb	02 46 24.8		
	comp=Z,8.8nm,0.7s							
STKA	**Stephens Creek**	**32.56**	**149**	P	**P**	**02 46 32.1**	**+0.7**	
	comp=Z,6.8nm,0.9s,baz=328,slow=9.5,SNR=11							
STKA				LR	LR	03 00 55.8		
	comp=Z,526nm,18.1s,baz=331,slow=39							
STKA	**Stephens Creek**	**32.56**	**149**	P	**P**	**02 46 30.3**	**-1.1**	
CMAR	**Chiang Mai Arr**	**32.69**	**315**	P	**P**	**02 46 33.3**	**+0.6**	
	comp=Z,7.0nm,0.7s,baz=141,slow=7.0,SNR=23							
CMAR				LR	LR	03 02 47.1		
	comp=Z,283nm,18.4s,baz=176,slow=42							
CHTO	**Chiang Mai**	**32.92**	**315**	P	**P**	**02 46 33.8**	**-1.0**	
CHTO				IAmb	IAmb	02 46 37.1		
	comp=Z,6.6nm,0.8s							
ENH	**Enshi**	**36.71**	**340**	P	**P**	**02 47 06.4**	**-0.9**	
ENH				IAmb	IAmb	02 47 10.0		
	comp=Z,16nm,1.0s							
ARMA	**Armidale**	**37.54**	**137**	P	**P**	**02 47 13.4**	**-1.1**	
ARMA				IAmb	IAmb	02 47 17.5		
	comp=Z,12nm,1.1s							
JNU	**Nakatsue**	**38.01**	**11**	P	**P**	**02 47 18.1**	**-0.2**	
	comp=Z,6.5nm,0.9s,baz=143,slow=7.5,SNR=4.1							
JNU				LR	LR	03 03 14.0		
	comp=Z,158nm,21.8s,baz=173,slow=37							
CAN	**Canberra**	**39.17**	**145**	P	**P**	**02 47 27.9**	**-0.2**	
XAN	**Xi'an**	**40.37**	**342**	P	**P**	**02 47 35.3**	**-2.7**	
XAN				IAmb	IAmb	02 47 37.9		
	comp=Z,10nm,0.8s							
KSRS	**Korea Array**	**41.83**	**6**	P	**P**	**02 47 50.8**	**+0.9**	
	comp=Z,5.6nm,0.9s,baz=179,slow=9.6,SNR=18							
KS19	**Wonju Array Si**	**41.87**	**6**	P	**P**	**02 47 48.2**	**-2.1**	
KS19				IAmb	IAmb	02 47 53.7		
	comp=Z,23nm,1.1s							
MJAR	**Matsushiro Arr**	**43.11**	**18**	P	**P**	**02 47 59.4**	**-0.9**	
	comp=Z,2.9nm,0.6s,baz=190,slow=8.0,SNR=6.6							
MJAR				LR	LR	03 06 59.6		
	comp=Z,118nm,20.1s,baz=210,slow=38							
ODAN	**Odare**	**46.23**	**314**	*e*P	**P**	**02 48 25.9**	**+0.2**	
	comp=Z,26nm,1.1s							
TAPN	**Taplejung**	**46.30**	**315**	*e*P	**P**	**02 48 26.3**	**0.0**	
	comp=Z,22nm,0.9s							
RAMN	**Ramite**	**46.85**	**314**	*e*P	**P**	**02 48 30.8**	**+0.2**	
	comp=Z,34nm,1.0s							
JIRN	**Jiri**	**47.56**	**314**	*e*P	**P**	**02 48 36.0**	**-0.3**	
	comp=Z,42nm,1.0s							
GUN	**Gumba**	**47.93**	**314**	*e*P	**P**	**02 48 39.1**	**0.0**	
	comp=Z,35nm,0.9s							
PKI	**Pulchoki**	**48.07**	**313**	*e*P	**P**	**02 48 40.5**	**+0.3**	
	comp=Z,15nm,0.9s							
GTA	**Gaotai**	**48.44**	**336**	*e*P	**P**	**02 48 43.1**	**+0.6**	
GTA				pP	pP	02 48 47.3	-5.2	
GTA				sP	sP	02 48 50.0	-6.4	
GTA				pmax	pmax			
	comp=Z,7.0nm,1.0s							
GTA				pmax	pmax			
	comp=Z,88nm,5.9s							
GTA				LR	LR			
	comp=Z,160nm,21.3s							
GTA				LR	LR			
	comp=Z,170nm,20.0s							
GTA				LR	LR			
	comp=Z,220nm,20.6s							
USA0B	**Ussuriysk Arra**	**49.00**	**9**	P	**P**	**02 48 45.5**	**-1.1**	
USRK	**Ussuriysk Ar.**	**49.00**	**9**	P	**P**	**02 48 46.7**	**+0.1**	
	comp=Z,10nm,0.8s,baz=141,slow=5.9,SNR=14							
USRK				LR	LR	03 10 21.5		
	comp=Z,130nm,20.7s,baz=179,slow=37							
MDJ	**Mudanjiang**	**49.09**	**6**	P	**P**	**02 48 47.0**	**-0.3**	
KOLN	**Koldanda**	**49.51**	**312**	*e*P	**P**	**02 48 50.8**	**-0.2**	
	comp=Z,39nm,0.8s							
DANN	**Dangsing**	**49.71**	**313**	*e*P	**P**	**02 48 52.1**	**-0.6**	
	comp=Z,69nm,0.8s							
PYUN	**Piuthan**	**50.14**	**312**	*e*P	**P**	**02 48 55.6**	**-0.2**	
	comp=Z,67nm,0.9s							
ULN	**Ulaanbaatar**	**53.80**	**347**	P	**P**	**02 49 22.3**	**-0.4**	
KLR	**Kul'dur**	**53.90**	**7**	P	**P**	**02 49 22.8**	**-0.4**	
	comp=Z,1.7nm,0.8s,baz=304,slow=1.7,SNR=4.8							
SONM	**Songino Array**	**53.92**	**346**	P	**P**	**02 49 23.8**	**+0.3**	
	comp=Z,9.6nm,0.9s,baz=163,slow=8.9,SNR=24							
SONM				LR	LR	03 14 29.8		
	comp=Z,238nm,19.1s,baz=169,slow=38							
TLY	**Talaya**	**58.16**	**346**	P	**P**	**02 49 54.5**	**+0.9**	
	comp=Z,8.4nm,0.8s,baz=206,slow=6.4,SNR=10							
TLY				LR	LR	03 17 16.7		
	comp=Z,154nm,18.8s,baz=150,slow=38							
TLY	**Talaya**	**58.16**	**346**	P	**P**	**02 49 52.3**	**-1.4**	
TLY				IAmb	IAmb	02 49 56.6		
	comp=Z,9.6nm,0.8s							
KSH	**Kashi**	**61.34**	**320**	P	**P**	**02 50 17.3**	**+1.4**	
KSH				sP	pP	02 50 25.3	-0.8	
KSH				PcP	**PcP**	**02 51 04.8**	**+6.7**	
KSH				S	**S**	**02 58 34.0**	**-0.5**	
KSH				SS	**SS**	**03 02 36.0**	**+0.4**	
KSH				pmax	pmax			
	comp=Z,18nm,0.6s							
KSH				pmax	pmax			
	comp=Z,50nm,4.6s							
KSH				LR	LR			
	comp=Z,140nm,9.9s							
KSH				LR	LR			
	comp=Z,120nm,8.8s							
KSH				LR	LR			
	comp=Z,340nm,7.4s							

MK31	**Makanchi Array**	**62.23**	**330**	P	**P**	**02 50 21.1**	**-0.5**	
MK31				IAmb	IAmb	02 50 23.9		
	comp=Z,7.0nm,0.8s							
MKAR	**Makanchi Array**	**62.23**	**330**	P	**P**	**02 50 21.6**	**-0.1**	
	comp=Z,7.7nm,0.7s,baz=130,slow=7.1,SNR=52							
MKAR				LR	LR	03 20 06.0		
	comp=Z,162nm,20.9s,baz=130,slow=39							
KBL	**Kabul**	**63.67**	**312**	P	**P**	**02 50 30.4**	**-1.3**	
AAK	**Ala-Archa**	**64.01**	**322**	P	**P**	**02 50 34.0**	**+0.2**	
	comp=Z,4.2nm,0.7s,baz=120,slow=4.7,SNR=9.7							
AAK	**Ala-Archa**	**64.01**	**322**	P	**P**	**02 50 32.8**	**-1.0**	
AAK				IAmb	IAmb	02 50 36.4		
	comp=Z,5.4nm,0.9s							
PETK	**Petropavlovsk-**	**64.30**	**22**	P	**P**	**02 50 36.4**	**+1.2**	
	comp=Z,1.3nm,0.6s,baz=172,slow=11,SNR=2.5							
PETK				LR	LR	03 18 08.2		
	comp=Z,55nm,21.8s,baz=239,slow=36							
GAR	**Garm**	**64.82**	**317**	P	**P**	**02 50 37.6**	**-1.4**	
CHGR	**Chuyangaron**	**65.45**	**316**	P	**P**	**02 50 40.5**	**-2.6**	
ZAA0	**Zalesovo Array**	**66.19**	**337**	P	**P**	**02 50 45.8**	**-1.6**	
ZALV	**Zalesovo Beam**	**66.19**	**337**	P	**P**	**02 50 46.7**	**-0.7**	
	comp=Z,21nm,0.9s,baz=134,slow=5.7,SNR=36							
ZALV				LR	LR	03 21 26.6		
	comp=Z,119nm,20.8s,baz=134,slow=38							
YAK	**Yakutsk**	**66.38**	**4**	LR	LR	03 20 35.3		
	comp=Z,84nm,21.9s,baz=180,slow=37							
KURBB	**Kurchatov Arra**	**66.64**	**331**	P	**P**	**02 50 50.2**	**-0.2**	
	comp=Z,12nm,1.0s,baz=141,slow=5.7,SNR=54							
KURK	**Kurchatov**	**66.66**	**331**	P	**P**	**02 50 49.0**	**-1.4**	
KK31	**Karatay Array**	**66.73**	**321**	P	**P**	**02 50 49.0**	**-2.2**	
KKAR	**Karatay Array**	**66.73**	**321**	P	**P**	**02 50 49.8**	**-1.4**	
MA2	**Magadan**	**67.42**	**15**	LR	LR	03 20 01.1		
	comp=Z,36nm,21.2s,baz=194,slow=36							
BRVK	**Borovoye**	**72.19**	**330**	P	**P**	**02 51 23.4**	**-1.2**	
BRVK				IAmb	IAmb	02 51 26.9		
	comp=Z,8.8nm,0.8s							
GEYT	**Alibeck**	**73.11**	**312**	P	**P**	**02 51 30.9**	**+0.3**	
	comp=Z,3.0nm,0.7s,baz=126,slow=2.0,SNR=5.4							
GEYT				LR	LR	03 28 52.9		
	comp=Z,96nm,20.3s,baz=175,slow=40							
MAW	**Mawson**	**74.91**	**200**	LR	LR	03 22 36.4		
	comp=Z,186nm,19.0s,baz=56,slow=34							
TIXI	**Tiksi**	**75.93**	**2**	P	**P**	**02 51 45.0**	**-1.2**	
VNDA	**Vanda**	**76.01**	**172**	P	**P**	**02 51 47.4**	**+0.8**	
	comp=Z,1.9nm,0.7s,baz=314,slow=7.0,SNR=16							
VNDA				LR	LR	03 23 24.9		
	comp=Z,208nm,21.7s,baz=328,slow=34							
VNDA	**Vanda**	**76.01**	**172**	P	**P**	**02 51 46.6**	**+0.1**	
NRIK	**Noril'sk**	**77.36**	**348**	P	**P**	**02 51 55.1**	**+0.9**	
	comp=Z,4.1nm,0.8s,baz=135,slow=8.5,SNR=5.1							
NRIK				LR	LR	03 29 20.6		
	comp=Z,152nm,19.1s,baz=162,slow=38							
SYO	**Syowa Base**	**83.57**	**201⇑**	*e*P	**P**	**02 52 28.0**	**+0.4**	
SYO	**Syowa Base**	**83.57**	**201⇑**	*e*PcP	**PcP**	**02 52 33.4**	**+1.6**	
AKH	**Akhalkalaki**	**84.90**	**312**	P	**P**	**02 52 34.2**	**-1.0**	
KMBO	**Kilima Mbogo**	**85.54**	**269**	P	**P**	**02 52 40.6**	**+1.5**	
	comp=Z,1.8nm,0.9s,baz=40,slow=12,SNR=3.8							
KMBO				LR	LR	03 27 07.6		
	comp=Z,126nm,21.1s,baz=94,slow=33							
KBZ	**Khabaz**	**85.74**	**314**	P	**P**	**02 52 40.0**	**+0.9**	
	comp=Z,6.3nm,0.8s,baz=118,slow=1.5,SNR=11							
KBZ				LR	LR	03 37 40.3		
	comp=Z,45nm,20.2s,baz=97,slow=40							
BRTR	**Keskin Array B**	**92.14**	**309**	P	**P**	**02 53 09.1**	**-0.6**	
	comp=Z,1.4nm,0.9s,baz=112,slow=3.9,SNR=3.9							
BRTR				LR	LR	03 43 20.0		
	comp=Z,33nm,19.2s,baz=90,slow=41							
RND	**Reindeer**	**93.06**	**27**	P	**P**	**02 53 12.3**	**-1.1**	
RND				IAmb	IAmb	02 53 24.2		
	comp=Z,4.4nm,1.2s							
ILAR	**Eielson Array**	**93.99**	**25**	P	**P**	**02 53 17.0**	**-0.5**	
	comp=Z,0.2nm,0.6s,baz=248,slow=4.8,SNR=2.5							
BOSA	**Boshof**	**94.61**	**241**	LR	LR	03 31 02.0		
	comp=Z,108nm,19.4s,baz=130,slow=32							
RIDG	**Independent Ri**	**94.86**	**26**	P	**P**	**02 53 20.0**	**-1.6**	
RIDG				IAmb	IAmb	02 53 25.9		
	comp=Z,4.4nm,1.0s							
AKASG	**Malin Array Be**	**95.63**	**320**	P	**P**	**02 53 24.1**	**-1.2**	
	comp=Z,0.2nm,0.3s,baz=76,slow=4.4,SNR=4.6							
AKASG				LR	LR	03 40 40.9		
	comp=Z,69nm,20.4s,baz=20,slow=38							
BARN	**Barnard Glacie**	**96.42**	**29**	P	**P**	**02 53 28.8**	**-0.1**	
BARN				IAmb	IAmb	02 53 30.9		
	comp=Z,3.4nm,0.7s							
FINES	**FINESS Array B**	**97.03**	**331**	LR	LR	03 40 50.8		
	comp=Z,57nm,19.6s,baz=100,slow=38							
TORD	**Torodi Ar. Bea**	**121.31**	**283**	PKP	**PKiKP**	**02 58 54.1**	**0.0**	
	comp=Z,1.6nm,0.7s,baz=90,slow=2.0,SNR=11							
AC05	**El Transito**	**144.69**	**160**		PKPbc	02 59 36.8	+0.6	
GO02	**Mina Guanaco**	**148.29**	**158**		**PKiKP**	**02 59 48.5**	**-0.4**	
CPUP	**Villa Florida**	**149.52**	**180**	PKPbc	**PKPbc**	**02 59 50.4**	**+0.5**	
	comp=Z,2.8nm,0.8s,baz=158,slow=2.3,SNR=6.0							
CPUP	**Villa Florida**	**149.52**	**180**		**PKPbc**	**02 59 49.5**	**-0.4**	

TUL ***22*** *02:46:10.3±1.2,35.78N±0.02×97.47W±0.04,h6km±6km, ML3.7, Mwr3.5/22(NEIC), Error ellipse: s-maj=4.8km s-min=2.0km az=83.0*

NEIC ***22*** *02:46:10.3,35.78N×97.47W,h7km, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr0.21; Mθθ1.58; Mϕϕ-1.79; Mrθ-0.26; Mθϕ1.35; Mϕr0.06; Fault plane solution: M₀2.18000×10¹⁴ NP1:φ₁295.89000°, δ87.37000°, λ7.24000°. NP2:φ₂205.55000°, δ82.77000°, λ177.35000°. Principal axes: T 2.0781, Plg7.0000°, Azm161.0000°; N 0.1948, Plg82.0000°, Azm316.0000°; P -2.2729, Plg3.0000°, Azm71.0000°;*

ANF ***22*** *02:46:11.9±0.7,35.78N×97.48W,h22km±6km,ML4.5/13, ML4.6/13 Error ellipse: s-maj=2.3km s-min=1.8km az=164.0*

IDC ***22*** *02:46:12.2±2.3,35.86N×97.84W,h0km,mb3.2/2, mb1 3.5/4,mb1mx3.3/52,mbtmp3.1/4,ML3.8/2, Error ellipse: s-maj=34.5km s-min=17.1km az=109.0*

ISC 22 02:46:10.9±0.8,35.75N±0.03×97.44W±0.03,h14km±5km, n101,σ1°09/125,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.11**	**151**		**Pg**	**02 46 13.9**	**-0.2**
ADOK				Sg	**Sg**	**02 46 16.7**	**+0.4**
OK009	**Oakdale Elemen**	**0.17**	**176**	Pg	**Pg**	**02 46 14.7**	**-0.2**
OK009				Sg	**Sg**	**02 46 18.0**	**+0.4**
OK005	**Luther M Schoo**	**0.22**	**116**	Pg	**Pb**	**02 46 15.9**	**-0.9**
OK005				Sg	**Sb**	**02 46 20.0**	**-0.7**
OK001	**Jones High Sch**	**0.23**	**147**	Pg	**Pb**	**02 46 15.6**	**-1.2**
OK001				Sg	**Sb**	**02 46 20.1**	**-0.7**
OKCFA	**Oklahoma City**	**0.34**	**182**		**Pb**	**02 46 17.6**	**-1.1**
OKCFA				Sg	**Sb**	**02 46 22.8**	**-1.2**
OKCSW	**OKLAHOMA CITY**	**0.35**	**180**		**Pb**	**02 46 17.8**	**-1.0**
OKCSW				Sg	**Sb**	**02 46 23.3**	**-0.9**
FNO	**Franklin**	**0.49**	**176**		**Pb**	**02 46 20.8**	**-0.6**
FNO				Sg	**Sb**	**02 46 28.3**	**-0.2**
W35A	**Tecumseh**	**0.76**	**142**		**Pb**	**02 46 25.3**	**-0.6**
W35A				Sg	**Sb**	**02 46 36.3**	**+0.3**
X34A	**Smith Ranch, M**	**1.19**	**196**		**Pn**	**02 46 33.2**	**0.0**
X34A				Sg	**Sn**	**02 46 49.5**	**+0.2**
TUL1	**Leonard**	**1.35**	**83**	P	**Pn**	**02 46 35.1**	**-0.2**
	baz=265,SNR=259						
TUL1				S	**Sn**	**02 46 54.1**	**+1.0**
	baz=265						
TUL1	**Leonard**	**1.35**	**83**		**Pn**	**02 46 35.2**	**-0.2**
U32A	**Winter Ranch,**	**1.41**	**297**		**Pn**	**02 46 35.4**	**-0.8**
WMOK	**Wichita Mounta**	**1.49**	**228**	P	**Pn**	**02 46 37.1**	**-0.3**
	baz=45,SNR=491						
WMOK				S	**Sg**	**02 46 56.9**	**-2.0**
	baz=45						
WMOK	**Wichita Mounta**	**1.49**	**228**		**Pb**	**02 46 37.3**	**-1.2**
X37A	**Clayton**	**2.05**	**124**		**Pn**	**02 46 45.6**	**+0.6**
Z35A	**Perchaven, San**	**2.42**	**176**		**Pn**	**02 46 50.6**	**+0.5**
U38A	**Gravette**	**2.57**	**74**		**Pn**	**02 46 53.3**	**+1.2**
R32A	**Long Quarter,**	**2.85**	**339**		**Pn**	**02 46 57.0**	**+0.9**
HHAR	**Hobbs**	**2.88**	**78**		**Pn**	**02 46 57.3**	**+0.8**
W39A	**Magazine**	**3.03**	**99**	P	**Pn**	**02 46 59.7**	**+1.2**
	baz=282,SNR=14						
W39A				S	**Sn**	**02 47 35.7**	**+1.0**
	baz=282						
W39A	**Magazine**	**3.03**	**99**		**Pn**	**02 46 59.5**	**+1.0**
Z38A	**Mt. Pleasant**	**3.21**	**140**	Pn	**Pn**	**02 47 01.8**	**+0.9**
MIAR	**Mount Ida**	**3.39**	**110**	P	**Pn**	**02 47 04.7**	**+1.3**
	baz=292,SNR=37						
MIAR				S	**Sn**	**02 47 44.9**	**+1.6**
	baz=292						
MIAR	**Mount Ida**	**3.39**	**110**		**Pn**	**02 47 04.0**	**+0.7**
KSU1	**Kansas State U**	**3.41**	**11**	P	**Pn**	**02 47 04.0**	**+0.3**
	baz=192						
CBKS	**Cedar Bluff**	**3.56**	**330**	P	**Pn**	**02 47 06.0**	**+0.2**
	baz=149,SNR=14						
CBKS	**Cedar Bluff**	**3.56**	**330**		**Pn**	**02 47 05.8**	**0.0**
ABTX	**Abilene, Hawle**	**3.62**	**211**	P	**Pn**	**02 47 06.5**	**0.0**
	baz=29,SNR=32						
ABTX				S	**Sn**	**02 47 50.7**	**+1.7**
	baz=29						
ABTX	**Abilene, Hawle**	**3.62**	**211**		**Pn**	**02 47 06.8**	**+0.2**
WHTX	**Lake Whitney,**	**3.75**	**180**	P	**Pn**	**02 47 08.8**	**+0.4**
	baz=360,SNR=23						
WHTX				Sb	**Sb**	**02 48 05.7**	**+3.4**
	baz=360						
WHTX	**Lake Whitney,**	**3.75**	**180**		**Pn**	**02 47 09.2**	**+0.8**
U40A	**Yellville**	**3.76**	**79**	P	**Pn**	**02 47 08.6**	**+0.1**
	baz=263,SNR=20						
U40A	**Yellville**	**3.76**	**79**		**Pn**	**02 47 09.0**	**+0.4**
237A	**Washetta, Mont**	**3.98**	**160**		**Pn**	**02 47 12.0**	**+0.5**
X40A	**Basin Creek Fa**	**3.98**	**107**	P	**Pn**	**02 47 12.8**	**+1.3**
	baz=290,SNR=9.0						
X40A				S	**Sn**	**02 47 59.3**	**+1.4**
	baz=290						
X40A	**Basin Creek Fa**	**3.98**	**107**		**Pn**	**02 47 12.2**	**+0.7**
WLAR	**White Oak Lake**	**4.12**	**119**		**Pn**	**02 47 14.0**	**+0.6**
WHAR	**Wooly Hollow**	**4.23**	**95**		**Pn**	**02 47 15.8**	**+0.9**
W41B	**Gary Mavity, V**	**4.28**	**96**	P	**Pn**	**02 47 16.3**	**+0.8**
	baz=280,SNR=12						
W41B				S	**Sn**	**02 48 05.9**	**+0.6**
	baz=280						
UALR	**University of**	**4.28**	**102**	Pn	**Pn**	**02 47 17.0**	**+1.4**
FCAR	**Ozark Folk Cen**	**4.32**	**87**		**Pn**	**02 47 16.8**	**+0.6**
MGMO	**Mountain Grove**	**4.40**	**70**		**Pn**	**02 47 17.7**	**+0.4**
Z41A	**Richland Creek**	**4.56**	**122**	P	**Pn**	**02 47 20.2**	**+0.6**
	baz=305						
Z41A				S	**Sn**	**02 48 12.9**	**+0.5**
	baz=305						
NATX	**Nacogdoches**	**4.61**	**149**	Pn	**Pn**	**02 47 20.8**	**+0.7**
R40A	**Maddies Statio**	**4.85**	**57**		**Pn**	**02 47 24.0**	**+0.5**
P38A	**Dawn**	**4.95**	**38**		**Pn**	**02 47 24.9**	**0.0**
435B	**Jarrell**	**4.96**	**181**	P	**Pn**	**02 47 25.5**	**+0.5**
	baz=0.9						
435B				S	**Sn**	**02 48 23.3**	**+1.2**
	baz=0.9						
CCAR	**Cane Creek**	**5.01**	**110**	Pn	**Pn**	**02 47 26.4**	**+0.8**
LCAR	**Lake Charles**	**5.11**	**85**		**Pn**	**02 47 26.5**	**-0.5**
KSCO	**Kaye Shedlock'**	**5.26**	**310**	Pn	**Pn**	**02 47 29.0**	**-0.2**
CCM	**Cathedral Cave**	**5.47**	**63**	P	**Pn**	**02 47 32.3**	**+0.3**
	baz=247						
X43A	**Marvell**	**5.51**	**101**	S	**Sn**	**02 48 36.6**	**+0.8**
	baz=285						
JCT	**Junction City**	**5.62**	**201**	P	**Pn**	**02 47 33.9**	**-0.2**
	baz=20,SNR=5.3						
JCT				S	**Sn**	**02 48 37.8**	**-0.8**
	baz=20						
BGNE	**Belgrade**	**5.67**	**355**	P	**Pn**	**02 47 33.8**	**-1.0**
	baz=174						
BGNE				S	**Sn**	**02 48 38.2**	**-1.6**
	baz=174						
BGNE	**Belgrade**	**5.67**	**355**	Pn	**Pn**	**02 47 33.6**	**-1.2**
P40A	**Paris**	**5.70**	**47**		**Pn**	**02 47 34.9**	**-0.3**
T25A	**Trinidad**	**5.79**	**286**	P	**Pn**	**02 47 35.7**	**-0.9**
	baz=102						
T25A				S	**Sn**	**02 48 42.1**	**-0.8**
	baz=102						
N38A	**Joes South For**	**6.02**	**32**	Pn	**Pn**	**02 47 39.4**	**-0.2**
L34A	**Svendsen Farm,**	**6.26**	**7**	Pn	**Pn**	**02 47 42.5**	**-0.3**
OGNE	**Ogallala**	**6.32**	**327**	P	**Pn**	**02 47 43.9**	**+0.2**
	baz=144						
OGNE				S	**Sn**	**02 48 52.9**	**-2.8**
	baz=144						
OGNE	**Ogallala**	**6.32**	**327**		**Pn**	**02 47 43.4**	**-0.4**
OXF	**Oxford**	**6.70**	**98**	P	**Pn**	**02 47 48.6**	**-0.2**
	baz=283						
OXF				S	**Sn**	**02 49 03.6**	**-1.3**
	baz=283						
OXF	**Oxford**	**6.70**	**98**		**Pn**	**02 47 49.6**	**+0.8**
VBMS	**Vicksburg**	**6.74**	**120**	S	**Sn**	**02 49 07.2**	**+1.1**
	baz=304						
GDL2	**Guadalupe Moun**	**6.75**	**240**	Pn	**Pn**	**02 47 48.3**	**-1.5

ASAJ	**Asahikawa**	**31.80**	**57**	LR	LR	03 08 15.4
	comp=Z,135nm,21.8s,baz=98,slow=39					
WRA	**Warramunga Arr**	**58.94**	**147**	P	**P**	**02 57 32.8 0.0**
	0.8nm,0.8s,baz=338,slow=7.5,SNR=8.1					
ASAR	**Alice Springs**	**62.00**	**150**	P	**P**	**02 57 53.4 -0.3**
	0.3nm,0.6s,baz=318,slow=5.0,SNR=2.1					
HFS	**Hagfors**	**63.32**	**326**	P	**P**	**02 58 01.8 -0.2**
	1.2nm,0.9s,baz=73,slow=5.0,SNR=1.8					
PDAR	**Pinedale Array**	**99.12**	**25**	LR	LR	03 51 20.1
	comp=Z,40nm,18.8s,baz=300,slow=39					

*IDC **22** 02:57:39.5±0.9, 35°.79N×0°.32E, h0km, mb3.6/9, mb1 3.8/13, mb1mx3.6/53, mbtmp3.6/13, ML3.8/4, MS2.9/3, Ms1 2.9/3, ms1mx2.4/46, Error ellipse: s-maj=21.7km s-min=18.1km az=130.0*

*NEIC **22** 02:57:40.4±1.8, 35°.74N±0°.07×0°.22E±0°.03, h11km±5km, mb4.0/1, ML4.1(ALG), Error ellipse: s-maj=10.8km s-min=3.0km az=194.0*

*CRAAG **22** 02:57:41.7, 35°.85N×0°.32E, Ml4.0*

*LDG **22** 02:57:42.3±0.2, 35°.69N×0°.31E, h10km, Ml3.1/13, Error ellipse: s-maj=5.6km s-min=3.5km az=163.0*

*MDD **22** 02:57:42.3±0.7, 35°.71N×0°.26E, h17km±11km, mb4.5/39, Error ellipse: s-maj=10.4km s-min=4.4km az=164.0, PRXIMO*

*INMG **22** 02:57:44.5±1.6, 35°.79N×0°.06E, h24km±20km, ML2.7, Error ellipse: s-maj=13.5km s-min=7.1km az=144.0*

ISC 22 02:57:40.5±1.5, 35°.88N±0°.04×0°.27E±0°.03, h7km±11km, n147, σ2s07/214, mb3.7/10, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
ODJA	**Bouhanifia**	**0.65**	**212**	P			**Pb**	**02 57 55.0**	**+0.9**
ODJA	**Bouhanifia**	**0.65**	**212**	P			**Pb**	**02 57 55.0**	**+0.9**
EANR	**'Ain N'Sour**	**0.68**	**84**	P			**Pb**	**02 57 55.1**	**+0.4**
EANR	**'Ain N'Sour**	**0.68**	**84**	P			**Pb**	**02 57 55.1**	**+0.4**
USTO	**Oran**	**0.68**	**258**	P			**Pb**	**02 57 56.1**	**+1.4**
USTO	**Oran**	**0.68**	**258**	P			**Pb**	**02 57 56.1**	**+1.4**
ECHF	**Ech Chlef**	**0.91**	**72**	P			**Pg**	**02 57 56.0**	**-2.0**
ECHA	**Ech Chlef**	**0.93**	**73**	P			**Pg**	**02 57 56.0**	**-2.4**
ETRT	**Tiaret**	**0.97**	**120**	P			**Pg**	**02 57 59.0**	**-0.2**
ETRT	**Tiaret**	**0.97**	**120**	P			**Pg**	**02 57 59.0**	**-0.2**
OTSS	**Djebel Tessala**	**1.05**	**236**	P			**Pb**	**02 58 00.1**	**-1.0**
OTSS	**Djebel Tessala**	**1.05**	**236**	P			**Pb**	**02 58 00.1**	**-1.0**
EBNR	**Beni Rached**	**1.10**	**68**	P			**Pb**	**02 58 02.0**	**+0.1**
CART	**Cartagena**	**1.99**	**329**	P			**Pn**	**02 58 14.3**	**-0.2**
CART				S			**Sn**	**02 58 36.7**	**-3.0**
CART	**Cartagena**	**1.99**	**329**	*e*P			**Pn**	**02 58 14.3**	**-0.2**
CART				*e*S			**Sn**	**02 58 36.7**	**-3.0**
CART				*e*Cod				02 59 52.0	
CART	**Cartagena**	**1.99**	**329**	Pn			**Pn**	**02 58 14.4**	**-0.1**
CART				Sn			**Sn**	**02 58 37.4**	**-2.3**
ENIJ	**Nijar**	**2.27**	**299**	P			**Pn**	**02 58 17.9**	**-0.6**
	38nm,0.4s,SNR=7.9								
ENIJ				S			**Sn**	**02 58 43.5**	**-3.3**
	63nm,0.3s,SNR=7.9								
ENIJ	**Nijar**	**2.27**	**299**				**Pn**	**02 58 17.9**	**-0.6**
ENIJ							**Sn**	**02 58 44.2**	**-2.7**
ETRV	**Los Montesinos**	**2.29**	**339**	P			**Pn**	**02 58 19.8**	**+1.1**
	110nm,0.5s,SNR=7.9								
ETRV				S			**Sn**	**02 58 47.7**	**+0.5**
	207nm,0.8s,SNR=7.9								
ETRV	**Los Montesinos**	**2.29**	**339**				**Pn**	**02 58 20.0**	**+1.3**
ETRV							**Sn**	**02 58 47.7**	**+0.5**
EMUR	**La Murta**	**2.30**	**329**	P			**Pn**	**02 58 19.7**	**+0.8**
	18nm,0.2s,SNR=31								
EMUR				S			**Sn**	**02 58 46.0**	**-1.6**
	62nm,0.7s,SNR=5.8								
EMUR	**La Murta**	**2.30**	**329**				**Pn**	**02 58 19.7**	**+0.8**
EMUR							**Sn**	**02 58 46.0**	**-1.6**
TLOR	**Lorca, Murcia**	**2.37**	**319**	P			**Pn**	**02 58 20.6**	**+0.8**
	295nm,0.2s,SNR=7.9								
TLOR				S			**Sn**	**02 58 46.7**	**-2.5**
	84nm,0.2s,SNR=7.9								
ADJB	**Djebel Djouab**	**2.58**	**83**	P			**Pn**	**02 58 22.5**	**-0.4**
ADJB	**Djebel Djouab**	**2.58**	**83**	P			**Pn**	**02 58 22.5**	**-0.4**
MELI	**Melilla**	**2.68**	**258**	*e*P			**Pn**	**02 58 24.1**	**+0.1**
MELI				*e*S			**Sn**	**02 58 51.8**	**-4.8**
EBER	**Berja**	**2.74**	**293**	P			**Pn**	**02 58 24.4**	**-0.7**
	32nm,0.2s,SNR=87								
EBER				S			**Sn**	**02 58 57.1**	**-1.5**
	26nm,0.3s								
EBER	**Berja**	**2.74**	**293**				**Pn**	**02 58 24.4**	**-0.7**
EBER							**Sn**	**02 58 57.8**	**-0.8**
EBEN2	**Beniarda presa**	**2.82**	**353**	P			**Pn**	**02 58 28.1**	**+2.1**
	36nm,0.3s,SNR=7.9								
EBEN2				S			**Sn**	**02 59 00.4**	**+0.1**
	31nm,0.3s,SNR=7.9								
EBEN2	**Beniarda presa**	**2.82**	**353**				**Pn**	**02 58 28.1**	**+2.1**
EBEN2							**Sn**	**02 59 00.4**	**+0.1**
AFON	**Font Roja**	**2.85**	**347**	P			**Pn**	**02 58 28.3**	**+1.7**
	52nm,0.5s,SNR=11								
AFON				S			**Sn**	**02 59 01.9**	**+0.6**
	58nm,0.5s,SNR=6.9								
AFON	**Font Roja**	**2.85**	**347**				**Pn**	**02 58 28.3**	**+1.7**
AFON							**Sn**	**02 59 01.9**	**+0.6**
AKET	**Djebel Ketaf**	**2.94**	**86**	P			**Pn**	**02 58 28.2**	**+0.4**
AKET	**Djebel Ketaf**	**2.94**	**86**	P			**Pn**	**02 58 28.2**	**+0.4**
GORA	**Gorafe**	**3.10**	**302**	P			**Pn**	**02 58 32.1**	**+2.1**
	57nm,0.3s,SNR=7.9								
GORA				S			**Sn**	**02 59 08.1**	**+0.7**
	22nm,0.4s,SNR=7.9								
GORA	**Gorafe**	**3.10**	**302**				**Pn**	**02 58 32.1**	**+2.1**
GORA							**Sn**	**02 59 08.1**	**+0.7**
ETOB	**Tobarra**	**3.12**	**333**	P			**Pn**	**02 58 32.1**	**+1.9**
	11nm,0.2s,SNR=87								
ETOB				S			**Sn**	**02 59 07.4**	**-0.3**
	51nm,0.4s,SNR=6.1								
ETOB	**Tobarra**	**3.12**	**333**				**Pn**	**02 58 32.1**	**+1.9**
ETOB							**Sn**	**02 59 08.9**	**+1.2**
SESP	**Santiago Espad**	**3.17**	**316**	P			**Pn**	**02 58 33.2**	**+2.1**
	72nm,0.3s,SNR=7.9								
SESP				S			**Sn**	**02 59 10.6**	**+1.3**
	142nm,0.5s,SNR=7.9								
SESP	**Santiago Espad**	**3.17**	**316**				**Pn**	**02 58 33.2**	**+2.1**
SESP							**Sn**	**02 59 10.6**	**+1.3**
EIBI	**Ibiza**	**3.26**	**15**	P			**Pn**	**02 58 34.3**	**+2.3**
	13nm,0.2s,SNR=36								
EIBI				S			**Sn**	**02 59 12.1**	**+1.0**
	20nm,0.3s,SNR=5.5								
EQUE	**Quentar**	**3.27**	**295**	P			**Pn**	**02 58 33.2**	**+0.9**
	67nm,0.5s,SNR=91								
EQUE				S			**Sn**	**02 59 09.9**	**-1.5**
	18nm,0.5s								
ELGU	**Los Guajares,**	**3.29**	**289**	P			**Pn**	**02 58 31.9**	**-0.7**
	15nm,0.2s,SNR=7.9								
ELGU				S			**Sn**	**02 59 09.7**	**-2.4**
	41nm,0.4s,SNR=7.9								
ELGU	**Los Guajares,**	**3.29**	**289**				**Pn**	**02 58 31.9**	**-0.7**
EQES	**Quesada**	**3.30**	**307**	P			**Pn**	**02 58 34.8**	**+2.1**
	37nm,0.2s,SNR=258								
EQES				S			**Sn**	**02 59 13.1**	**+0.9**
	59nm,0.4s,SNR=6.0								
EGOR	**Sierra Gorda,**	**3.74**	**290**	P			**Pn**	**02 58 39.7**	**+1.0**
	21nm,0.7s,SNR=7.9								
EMAL	**Malaga-Limoner**	**3.90**	**284**	*e*P			**Pn**	**02 58 40.4**	**-0.4**
EMAL				*e*S			**Sn**	**02 59 21.4**	**-5.3**
EMIJ	**Mijas**	**4.13**	**281**	P			**Pn**	**02 58 42.4**	**-1.7**
	7.1nm,0.4s,SNR=21								
EMIJ				S			**Sn**	**02 59 29.3**	**-3.4**
	5.2nm,0.5s								
SET	**Setif**	**4.17**	**84**	P			**Pn**	**02 58 44.0**	**-0.7**
SET	**Setif**	**4.17**	**84**	P			**Pn**	**02 58 44.0**	**-0.7**
ETOS	**Mallorca**	**4.37**	**27**	P			**Pn**	**02 58 48.6**	**+1.2**
	5.5nm,0.3s,SNR=18								
ETOS				S			**Sn**	**02 59 38.5**	**-0.2**
	7.2nm,0.3s,SNR=6.0								
ETOS	**Mallorca**	**4.37**	**27**				**Pn**	**02 58 49.2**	**+1.8**
EADA	**Adamuz**	**4.50**	**302**	P			**Pn**	**02 58 50.2**	**+1.0**
	8.5nm,0.5s,SNR=16								
EADA				S			**Sn**	**02 59 39.8**	**-1.9**
	8.3nm,0.6s,SNR=4.9								
EMOS	**Mosqueruela**	**4.52**	**353**	P			**Pn**	**02 58 51.9**	**+2.4**
	11nm,0.4s,SNR=26								
EMOS				S			**Sn**	**02 59 42.2**	**-0.1**
	16nm,0.7s								
IFR	**Ifrane**	**5.03**	**244**	*e*P			**Pn**	**02 58 55.8**	**-0.8**
IFR				*e*S			**Sn**	**02 59 50.6**	**-4.5**
ECAB	**El Cabril**	**5.05**	**297**	P			**Pn**	**02 58 57.2**	**+0.5**
	6.6nm,0.5s,SNR=17								
ECAB				S			**Sn**	**02 59 52.4**	**-3.0**
	7.4nm,0.6s								
ESDC	**Sonseca Array**	**5.06**	**320**	Pn			**Pn**	**02 58 58.0**	**+1.2**
	1.1nm,0.3s,baz=137,slow=13,SNR=20								
ESDC				Sn			**Sn**	**02 59 54.3**	**-1.3**
	1.3nm,0.3s,baz=134,slow=24,SNR=6.0								
ESDC	**Sonseca Array**	**5.06**	**320**	P			**Pn**	**02 58 57.2**	**+0.3**
	3.6nm,0.5s,baz=139,slow=13,SNR=19								
ESDC				S			**Sn**	**02 59 55.0**	**-0.5**
	8.2nm,0.6s,baz=137,slow=24,SNR=3.8								
MDT	**Midelt**	**5.06**	**234**	Pn			**Pn**	**02 58 56.0**	**-0.9**
	0.4nm,0.3s,baz=57,slow=13,SNR=15								
MDT				Sn			**Sn**	**02 59 55.9**	**+0.3**
	0.5nm,0.3s,baz=317,slow=23,SNR=1.3								
MDT				Lg			Lg	03 00 25.7	
	0.9nm,0.3s,baz=338,slow=9.5,SNR=3.6								
MDT				LR			LR	03 00 46.2	
	comp=Z,24nm,19.1s,baz=296,slow=37								
ERTA	**Horta de San J**	**5.07**	**1**	P			**Pn**	**02 58 59.2**	**+2.3**
	5.4nm,0.3s,SNR=9.5								
ERTA				S			**Sn**	**02 59 55.7**	**-0.1**
	28nm,0.9s								
PAB	**San Pablo**	**5.18**	**316**	P			**Pn**	**02 58 59.7**	**+1.2**
	6.1nm,0.3s,SNR=7.9								
PAB				S			**Sn**	**02 59 55.8**	**-2.7**
	6.1nm,0.5s,SNR=7.9								
PAB	**San Pablo**	**5.18**	**316**				**Pn**	**02 58 58.6**	**+0.1**
PAB							**Sn**	**02 59 57.1**	**-1.4**
UCM	**Universidad Co**	**5.22**	**329**	*e*P			**Pn**	**02 59 01.8**	**+2.8**
ETOR	**Torete**	**5.26**	**340**	P			**Pn**	**02 59 02.1**	**+2.5**
	4.8nm,0.4s,SNR=5.7								
ETOR				S			**Sn**	**03 00 00.3**	**-0.2**
	16nm,0.6s								
EPOB	**Poblet**	**5.50**	**6**	P			**Pn**	**02 59 05.0**	**+2.1**
	5.7nm,0.3s,SNR=12								
EPOB				S			**Sn**	**03 00 05.4**	**-1.1**
	54nm,1.5s								
EPOB	**Poblet**	**5.50**	**6**				**Pn**	**02 59 05.0**	**+2.1**
ESAC	**San Caprasio**	**5.86**	**355**	P			Pn	02 59 14.8	+6.9
	14nm,0.3s,SNR=6.3								
ESAC				S			**Sn**	**03 00 16.8**	**+1.4**
	SNR=7.9								
EMIN	**Mina Concepcio**	**5.88**	**291**	P			**Pn**	**02 59 07.4**	**-0.6**
	0.9nm,0.2s,SNR=8.1								
EMIN				S			**Sn**	**03 00 12.6**	**-3.1**
	54nm,1.7s								
GUD	**Guadarrama**	**5.89**	**325**	P			**Pn**	**02 59 10.5**	**+2.2**
	6.5nm,0.5s,SNR=7.9								
GUD				S			**Sn**	**03 00 14.9**	**-1.3**
	17nm,1.1s								
EMIR	**Miracle**	**6.11**	**9**	S			**Sn**	**03 00 22.7**	**+1.4**
	7.2nm,0.3s,SNR=7.9								
CFON	**Fontmartina**	**6.11**	**15**	P			**Pn**	**02 59 13.6**	**+2.2**
	5.1nm,0.3s,SNR=12								
CFON				S			**Sn**	**03 00 20.2**	**-1.4**
	88nm,1.5s								
EGRO	**El Granado**	**6.44**	**287**	P			**Pn**	**02 59 16.7**	**+0.9**
	2.6nm,0.3s,SNR=5.1								
EBAD	**Badajoz**	**6.47**	**298**	P			**Pn**	**02 59 17.4**	**+1.1**
	2.8nm,0.3s,SNR=14								
EBAD				S			**Sn**	**03 00 26.7**	**-3.6**
	50nm,1.7s								
CSOR	**Sort**	**6.52**	**6**	P			**Pn**	**02 59 20.1**	**+3.1**
	2.0nm,0.3s,SNR=6.3								
CSOR				S			**Sn**	**03 00 29.8**	**-1.9**
	0.9nm,0.4s,SNR=7.9								
CSOR	**Sort**	**6.52**	**6**				**Pn**	**02 59 20.1**	**+3.1**
EPLA	**Plasencia**	**6.53**	**312**	P			**Pn**	**02 59 17.6**	**+0.6**
	1.2nm,0.2s,SNR=7.9								
PVAQ	**Vaqueiros**	**6.60**	**286**	P			**Pn**	**02 59 17.8**	**-0.1**
PVAQ	**Vaqueiros**	**6.60**	**286**	*e*Pn			**Pn**	**02 59 17.8**	**-0.1**
PVAQ				*e*Sn			**Sn**	**03 00 29.6**	**-3.8**
PVAQ	**Vaqueiros**	**6.60**	**286**	Pn			**Pn**	**02 59 16.9**	**-1.0**
PVAQ				Sn			**Sn**	**03 00 29.7**	**-3.7**
CLLI	**Llivia**	**6.72**	**11**	P			**Pn**	**02 59 22.6**	**+2.8**
	0.6nm,0.2s,SNR=7.9								
CLLI				S			**Sn**	**03 00 33.8**	**-2.9**
	5.0nm,0.7s,SNR=7.9								
PBDV	**Barranco-do-Ve**	**6.74**	**284**	P			**Pn**	**02 59 20.2**	**+0.3**
PBDV	**Barranco-do-Ve**	**6.74**	**284**	*e*Pn			**Pn**	**02 59 20.2**	**+0.3**
PBEJ	**Beja**	**6.86**	**291**	P			**Pn**	**02 59 21.4**	**-0.1**
PBEJ	**Beja**	**6.86**	**291**	*e*Pn			**Pn**	**02 59 21.4**	**-0.1**
PMRV	**Marv??o**	**7.03**	**303**	P			**Pn**	**02 59 25.0**	**+1.1**
PMRV	**Marv??o**	**7.03**	**303**	*e*Pn			**Pn**	**02 59 25.0**	**+1.1**
PMRV				*e*Sn			**Sn**	**03 00 42.5**	**-1.7**
ETSF	**Etsaut**	**7.04**	**355**	*e*Pn			**Pn**	**02 59 26.0**	**+1.9**
ETSF				*e*Sn			**Sn**	**03 00 41.4**	**-3.0**
	0.7nm,0.2s								
ETSF	**Etsaut**	**7.04**	**355**	P			**Pn**	**02 59 26.0**	**+1.9**
MESJ	**Messejana**	**7.08**	**289**	P			**Pn**	**02 59 24.4**	**-0.2**
MESJ	**Messejana**	**7.08**	**289**	*e*Pn			**Pn**	**02 59 24.4**	**-0.2**
EORO	**Oroz-Betelu**	**7.11**	**351**	P			**Pn**	**02 59 28.3**	**+3.3**
	6.0nm,0.4s,SNR=10								
EPF	**Esparros**	**7.14**	**0**	*e*Pn			**Pn**	**02 59 27.6**	**+2.1**
EPF				*e*Sn			**Sn**	**03 00 44.0**	**-2.9**
	3.1nm,0.4s								
EPF	**Esparros**	**7.14**	**0**	P			**Pn**	**02 59 27.6**	**+2.1**
ATE	**Arette**	**7.24**	**354**	P			**Pn**	**02 59 29.4**	**+2.7**
	2.7nm,0.3s,SNR=7.9								
ATE				S			**Sn**	**03 00 47.0**	**-2.1**
	3.9nm,0.6s,SNR=7.9								
PCBR	**Castelo Branco**	**7.29**	**305**	P			**Pn**	**02 59 28.8**	**+1.4**
PCBR	**Castelo Branco**	**7.29**	**305**	*e*Pn			**Pn**	**02 59 28.8**	**+1.4**
PCBR				*e*Sn			**Sn**	**03 00 46.5**	**-4.0**
PCBR				A			A	03 00 54.5	
	4.8nm,0.5s								
SJPF	**Ste Jean**	**7.32**	**351**	*e*Pn			**Pn**	**02 59 31.4**	**+3.6**
SJPF				*e*Sn			**Sn**	**03 00 45.2**	**-5.9**
	1.2nm,0.3s								
SJPF	**Ste Jean**	**7.32**	**351**	P			**Pn**	**02 59 31.4**	**+3.6**
KEST	**Kesra**	**7.38**	**88**	Pn			**Pn**	**02 59 28.8**	**+0.1**
	0.7nm,0.3s,baz=234,slow=4.4,SNR=13								
KEST				Sn			**Sn**	**03 00 51.0**	**-1.7**
	0.2nm,0.3s,baz=322,slow=13,SNR=0.9								
KEST				LR			LR	03 02 42.0	
	comp=Z,55nm,18.8s,baz=294,slow=41								
KEST	**Kesra**	**7.38**	**88**				**Pn**	**02 59 27.8**	**-0.9**
KEST							**Sn**	**03 00 52.9**	**+0.1**
PNCL	**Nicolau / Gran**	**7.38**	**290**	P			**Pn**	**02 59 28.4**	**-0.3**
PNCL	**Nicolau / Gran**	**7.38**	**290**	*e*Pn			**Pn**	**02 59 28.4**	**-0.3**
PMTG	**Montargil**	**7.47**	**298**	P			**Pn**	**02 59 30.5**	**+0.7**
PMTG	**Montargil**	**7.47**	**298**	*e*Pn			**Pn**	**02 59 30.5**	**+0.7**
MTLF	**Montolieu**	**7.60**	**11**	*e*Pn			**Pn**	**02 59 34.0**	**+2.3**
MTLF				*e*Sn			**Sn**	**03 00 52.9**	**-5.2**
	1.2nm,0.3s								
MTLF	**Montolieu**	**7.60**	**11**	P			**Pn**	**02 59 34.0**	**+2.3**
ELAN	**Lanestosa**	**7.88**	**340**	P			**Pn**	**02 59 39.6**	**+4.1**
	2.8nm,0.3s,SNR=7.3								
ELAN				S			**Sn**	**03 01 03.3**	**-1.7**
	1.2nm,0.3s,SNR=7.9								
PVIS	**Viseu**	**8.03**	**309**	P			**Pn**	**02 59 39.4**	**+1.8**
PVIS	**Viseu**	**8.03**	**309**	*e*Pn			**Pn**	**02 59 39.4**	**+1.8**
VSL	**Villasalto**	**8.07**	**61**	Pn			**Pn**	**02 59 36.8**	**-1.4**
COI	**Coimbra**	**8.10**	**305**	Pn			**Pn**	**02 59 37.0**	**-1.5**
ECAL	**Calabor**	**8.15**	**320**	P			**Pn**	**02 59 40.6**	**+1.3**
	7.1nm,0.3s,SNR=7.9								
EARI	**Arriondas**	**8.53**	**332**	P			**Pn**	**02 59 48.2**	**+3.7**
	3.8nm,0.4s,SNR=7.1								
LASF	**Ste Croix**	**8.64**	**17**	*e*Pn			**Pn**	**02 59 47.8**	**+1.9**
LASF	**Ste Croix**	**8.64**	**17**	P			**Pn**	**02 59 47.8**	**+1.9**
LMR	**La Mourre**	**8.86**	**31**	*e*Pn			**Pn**	**02 59 50.8**	**+1.8**
LMR				*e*Sn			**Sn**	**03 01 25.5**	**-3.6**
	0.6nm,0.2s								
LMR	**La Mourre**	**8.86**	**31**	P			**Pn**	**02 59 50.8**	**+1.8**
SMRF	**Simiane la Rot**	**9.05**	**25**	*e*Pn			**Pn**	**02 59 51.8**	**+0.2**
SMRF				*e*Sn			**Sn**	**03 01 31.0**	**-2.8**
	0.3nm,0.2s								
SMRF	**Simiane la Rot**	**9.05**	**25**	P			**Pn**	**02 59 51.8**	**+0.2**
LFF	**La Frestale**	**9.06**	**2**	*e*Pn			**Pn**	**02 59 53.8**	**+2.1**
LFF				*e*Sn			**Sn**	**03 01 30.8**	**-3.1**
	4.5nm,0.5s								
LFF	**La Frestale**	**9.06**	**2**	P			**Pn**	**02 59 53.8**	**+2.1**
FRF	**La Foret Royal**	**9.11**	**31**	*e*Pn			**Pn**	**02 59 54.3**	**+2.0**
FRF				*e*Sn			**Sn**	**03 01 31.4**	**-3.7**
	1.1nm,0.2s								
FRF	**La Foret Royal**	**9.11**	**31**	P			**Pn**	**02 59 54.3**	**+2.0**
CAF	**Calviac**	**9.14**	**8**	*e*Pn			**Pn**	**02 59 54.7**	**+1.9**
CAF				*e*Sn			**Sn**	**03 01 31.5**	**-4.4**
	1.1nm,0.4s								
CAF	**Calviac**	**9.14**	**8**	P			**Pn**	**02 59 54.7**	**+1.9**
EZAM	**Zamans**	**9.37**	**315**	P			**Pn**	**02 59 57.9**	**+2.0**
	1.7nm,0.1s,SNR=7.9								
EPON	**Pontenova**	**9.38**	**325**	P			**Pn**	**02 59 58.2**	**+2.1**
	7.5nm,0.5s,SNR=9.9								
PGF	**Pioggiola**	**9.50**	**43**	*e*Pn			**Pn**	**02 59 59.5**	**+1.7**
PGF				*e*Sn			**Sn**	**03 01 40.2**	**-4.6**
	0.5nm,0.2s								
SBF	**Sospel**	**9.69**	**32**	*e*Pn			**Pn**	**03 00 02.2**	**+1.8**
SBF				*e*Sn			**Sn**	**03 01 45.1**	**-4.3**
	4.3nm,0.5s								
TCF	**Toulx Ste Croi**	**10.50**	**7**	*e*Pn			**Pn**	**03 00 13.5**	**+2.0**
QUIF	**Quistinic**	**12.30**	**349**	*e*Pn			**Pn**	**03 00 38.3**	**+2.4**
QUIF				*e*Sn			**Sn**	**03 02 46.5**	**-6.7**
	0.3nm,0.3s								
ROSF	**Rostrenen**	**12.72**	**349**	*e*Pn			**Pn**	**03 00 43.0**	**+1.2**
GERES	**GERESS Array B**	**16.29**	**33**	Pn			**P**	**03 01 34.1**	**+1.3**
	0.2nm,0.3s,baz=213,slow=12,SNR=10								
CLL	**Collm**	**17.93**	**27**	*e*sP			**P**	**03 01 56.0**	**+5.2**
CLL				*e*(PP)				03 02 00.0	
EKA	**Eskdalemuir Ar**	**19.60**	**354**	P			**Pn**	**03 02 11.6**	**+1.1**
	baz=159,slow=8.1,SNR=3.4								
MLR	**Muntele Rosu**	**21.63**	**56**	P			**P**	**03 02 33.3**	**+2.0**
	1.6nm,0.4s,baz=129,slow=11,SNR=3.5								
TOA0	**Torodi Ar. Sit**	**22.67**	**176**	P			**P**	**03 02 40.8**	**-1.8**
TOA0				IAmb			IAmb	03 02 43.3	
	comp=Z,5.9nm,1.0s								
TORD	**Torodi Ar. Bea**	**22.67**	**176**	P			**P**	**03 02 41.4**	**-1.1**
	comp=Z,5.0nm,1.0s,baz=353,slow=10,SNR=20								
AKASG	**Malin Array Be**	**25.55**	**46**	P			**P**	**03 03 09.3**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=244,slow=10,SNR=2.7								
HFS	**Hagfors**	**25.78**	**16**	P			**P**	**03 03 11.5**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=198,slow=7.6,SNR=5.4								
FINES	**FINESS Array B**	**30.34**	**24**	P			**P**	**03 03 52.2**	**-0.3**
	comp=Z,1.6nm,0.9s,baz=251,slow=4.3,SNR=3.5								
KURBB	**Kurchatov Arra**	**56.29**	**49**	P			**P**	**03 07 22.3**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=286,slow=7.8,SNR=4.2								
MKAR	**Makanchi Array**	**59.91**	**52**	P			**P**	**03 07 46.6**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=304,slow=6.4,SNR=2.1								
YKA	**Yellowknife Ar**	**69.01**	**333**	P			**P**	**03 08 46.4**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=54,slow=6.7,SNR=2.2								
ILAR	**Eielson Array**	**76.42**	**346**	P			**P**	**03 09 32.2**	**+1.9**
	comp=Z,0.3nm,0.8s,baz=345,slow=4.2,SNR=4.1								
TXAR	**Lajitas Array**	**83.48**	**301**	LR			LR	03 44 29.4	
	comp=Z,42nm,21.0s,baz=0.0,slow=34								
STKA	**Stephens Creek**	**147.79**	**94**	PKPbc			**PKPbc**	**03 17 26.0**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=305,slow=9.5,SNR=5.7								

*IDC **22** 03:23:09.9±1.2, 19°.33N×145°.09E, h0km, mb3.7/5, mb1 4.1/5, mb1mx3.5/46, mbtmp3.7/5, MS3.0/1, Ms1 3.0/1, ms1mx2.4/41, Error ellipse: s-maj=77.1km s-min=27.9km az=111.0*

ISC 22 03:23:14.7±1.0, 19°.4N±0°.2×144°.6E±0°.3, h35km, n7, σ1s48/6, mb3.7/5, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
TBP	**Tagbilaran**	**22.27**	**247**	*i* P			**P**	**03 28 07.5**	**-1.4**
KRVT	**Keravat (AS076**	**24.65**	**162**	LR			LR	03 38 03.4	
	comp=Z,33nm,19.2s

KLR	**Kul'dur**	**65.96**	**339**	LR	LR	04 06 53.1	
	comp=Z,33nm,19.9s,baz=135,slow=33						
VNDA	**Vanda**	**66.00**	**180**	P	**P**	**03 41 43.3**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=351,slow=7.8,SNR=9.4						
VNDA	**Vanda**	**66.00**	**180**	P	**P**	**03 41 42.6**	**+0.8**
CM31	**Chiang Mai Arr**	**68.64**	**295**	P	**P**	**03 41 58.0**	**-1.6**
CM31				IAmb	IAmb	03 42 02.9	
	comp=Z,6.4nm,1.0s						
CMAR	**Chiang Mai Arr**	**68.64**	**295**	P	**P**	**03 42 00.6**	**+1.0**
	comp=Z,2.2nm,0.5s,baz=126,slow=4.9,SNR=11						
CHTO	**Chiang Mai**	**68.77**	**295**	P	**P**	**03 41 59.5**	**-0.9**
CHTO				IAmb	IAmb	03 42 03.3	
	comp=Z,5.4nm,1.0s						
ULN	**Ulaanbaatar**	**76.36**	**326**	P	**P**	**03 42 43.4**	**-1.8**
ULN				IAmb	IAmb	03 42 47.7	
	comp=Z,2.5nm,0.7s						
SONM	**Songino Array**	**76.71**	**325**	P	**P**	**03 42 48.7**	**+1.6**
	comp=Z,2.8nm,0.6s,baz=136,slow=5.7,SNR=11						
KDAK	**Kodiak Island**	**78.53**	**23**	P	**P**	**03 42 57.5**	**+0.7**
	comp=Z,4.3nm,0.8s,baz=162,slow=3.2,SNR=3.0						
KDAK	**Kodiak Island**	**78.53**	**23**	P	**P**	**03 42 57.2**	**+0.4**
KDAK				IAmb	IAmb	03 43 00.9	
	comp=Z,4.9nm,0.8s						
RSO	**Redoubt South**	**80.35**	**21**	P	**P**	**03 43 06.1**	**-0.9**
SCM	**Sheep Creek Mo**	**83.22**	**22**	P	**P**	**03 43 21.4**	**-0.5**
SCM				IAmb	IAmb	03 43 25.4	
	comp=Z,6.0nm,0.7s						
MCK	**McKinley**	**83.90**	**20**	P	**P**	**03 43 25.4**	**+0.1**
MCK				IAmb	IAmb	03 43 27.3	
	comp=Z,7.5nm,0.9s						
DHY	**Denali Highway**	**84.00**	**21**	P	**P**	**03 43 26.8**	**+0.8**
DHY				IAmb	IAmb	03 43 34.3	
	comp=Z,2.3nm,0.8s						
WRH	**Wood River Hil**	**84.67**	**20**	P	**P**	**03 43 28.8**	**-0.3**
WRH				IAmb	IAmb	03 43 30.4	
	comp=Z,6.1nm,1.0s						
CCB	**Clear Creek Bu**	**84.88**	**19**	P	**P**	**03 43 29.5**	**-0.7**
CCB				IAmb	IAmb	03 43 32.1	
	comp=Z,2.7nm,0.9s						
HDA	**Harding Lake**	**85.01**	**20**	P	**P**	**03 43 30.9**	**+0.1**
ILAR	**Eielson Array**	**85.26**	**20**	P	**P**	**03 43 32.4**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=230,slow=6.1,SNR=14						
DOT	**Dot Lake**	**85.53**	**21**	P	**P**	**03 43 34.3**	**+0.8**
DOT				IAmb	IAmb	03 43 35.4	
	comp=Z,2.4nm,0.8s						
SCRK	**Sand Creek**	**85.75**	**21**	P	**P**	**03 43 35.2**	**+0.4**
EGAK	**Eagle**	**87.22**	**21**	P	**P**	**03 43 42.6**	**+0.9**
DAWY	**Dawson**	**87.46**	**22**	P	**P**	**03 43 43.0**	**-0.1**
DAWY				IAmb	IAmb	03 43 46.8	
	comp=Z,4.0nm,1.1s						
NVAR	**Mina Array Bea**	**89.40**	**51**	P	**P**	**03 43 54.5**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=234,slow=5.5,SNR=5.2						
MKAR	**Makanchi Array**	**91.13**	**318**	P	**P**	**03 44 01.1**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=99,slow=6.0,SNR=14						
ZALV	**Zalesovo Beam**	**91.60**	**325**	LR	LR	04 26 57.0	
	comp=Z,14nm,18.3s,baz=44,slow=37						
YKA	**Yellowknife Ar**	**97.23**	**28**	P	**P**	**03 44 28.0**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=255,slow=4.2,SNR=16						
ARCES	**ARCESS Array B**	**115.73**	**344**	PKP	**PKPdf**	**03 49 38.0**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=57,slow=4.5,SNR=4.8						
AKASG	**Malin Array Be**	**125.00**	**325**	PKP	**PKiKP**	**03 49 56.6**	**+0.4**
	comp=Z,0.3nm,0.2s,baz=64,slow=1.4,SNR=4.8						
NOA	**NORSAR Array B**	**126.02**	**343**	PKP	**PKiKP**	**03 49 57.9**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=35,slow=1.8,SNR=3.3						
GERES	**GERESS Array B**	**134.24**	**331**	PKP	**PKiKP**	**03 50 16.0**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=52,slow=3.8,SNR=4.5						
KEST	**Kesra**	**145.22**	**318**	PKPbc	**PKPdf**	**03 50 34.7**	**+0.7**
	comp=Z,4.6nm,1.0s,baz=34,slow=3.6,SNR=3.0						
ESDC	**Sonseca Array**	**149.18**	**338**	PKPbc	**PKPbc**	**03 50 43.6**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=343,slow=2.7,SNR=1.6						
TORD	**Torodi Ar. Bea**	**160.35**	**277**	PKP	**PKPdf**	**03 50 56.4**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=1.7,slow=2.2,SNR=4.6						
TORD				PKPab	**PKPab**	**03 51 38.6**	**+1.5**
	comp=Z,2.7nm,1.2s,baz=83,slow=3.8,SNR=5.1						

*JMA **22** 03:31:06.9±0.3,23.95N×122.51E,h14km±4km,M2.3*
*TAP **22** 03:31:07.6,23.98N×122.53E,h29km,ML2.9,D*

ISC 22 03:31:07.0±1.7,**23.94N**±0.02×**122.51E**±0.02,**h19**km±4km, **n66**,σ0°**61**/126,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.65**	**38**	P	**Pb**	**03 31 19.2**	**-0.4**
JYNG				*e*S	**Sb**	**03 31 27.0**	**-1.2**
YOJ	**Yonaguni jima**	**0.69**	**41**	P	**Pb**	**03 31 20.1**	**-0.3**
YOJ				*e*S	**Sb**	**03 31 28.5**	**-1.1**
EOS1	**EOS1**	**0.70**	**330**	P	**Pb**	**03 31 20.7**	**+0.1**
	baz=332						
EOS1				S	**Sn**	**03 31 31.4**	**-0.8**
	baz=332						
TWD	**Chiawan**	**0.85**	**280**	P	**Pb**	**03 31 22.9**	**-0.3**
	baz=276						
TWD				*i* S	**Sb**	**03 31 34.4**	**+0.2**
	baz=276						
ENA	**Nanau**	**0.86**	**305**	*i* P	**Pb**	**03 31 23.3**	**0.0**
	baz=302						
ENA				*i* S	**Sn**	**03 31 35.8**	**-0.3**
	baz=302						
NACB	**Ninganchiao**	**0.87**	**286**	P	**Pb**	**03 31 23.4**	**-0.2**
	baz=269						
NACB				S	**Sg**	**03 31 36.0**	**+0.3**
	baz=269						
TWC	**Suao**	**0.90**	**318**	*i* P	**Pb**	**03 31 23.6**	**-0.5**
	baz=315						
TWC				*i* S	**Sb**	**03 31 35.5**	**-0.2**
	baz=315						
ETLH	**Xiulin Townshi**	**0.98**	**286**	P	**Pb**	**03 31 25.1**	**-0.4**
	baz=270						
ETLH				S	**Sb**	**03 31 38.2**	**+0.2**
	baz=270						
EGFH	**Guangfu**	**1.03**	**255**	*e*P	**Pb**	**03 31 25.8**	**-0.4**
	baz=253						
EGFH				S	**Sb**	**03 31 39.5**	**+0.1**
	baz=253						
HGSD	**Ruisui**	**1.09**	**246**	P	**Pn**	**03 31 27.2**	**0.0**
	baz=244						
HGSD				S	**Sb**	**03 31 41.0**	**-0.2**
	baz=244						
TWE	**Neicheng**	**1.10**	**315**	P	**Pn**	**03 31 27.2**	**-0.1**
	baz=313						
TWE				S	**Sg**	**03 31 42.5**	**-0.3**
	baz=313						
NTC	**Toucheng**	**1.11**	**326**	*i* P	**Pb**	**03 31 27.8**	**+0.2**
	baz=324						
NTC				*i* S	**Sn**	**03 31 42.5**	**+0.3**
	baz=324						
ENTT	**Nioudou**	**1.11**	**309**	*i* P	**Pn**	**03 31 27.5**	**0.0**
	baz=293						
ENTT				S	**Sn**	**03 31 42.6**	**+0.2**
	baz=293						
NDT	**Datong Townshi**	**1.13**	**306**	*i* P	**Pb**	**03 31 28.1**	**+0.1**
	baz=290						
NDT				*i* S	**Sn**	**03 31 42.9**	**+0.1**
	baz=290						
NNSB	**Datong**	**1.14**	**296**	P	**Pn**	**03 31 28.0**	**-0.1**
	baz=280						
NNSB				S	**Sn**	**03 31 43.3**	**0.0**
	baz=280						
NNSH	**Datong**	**1.14**	**296**	*i* P	**Pn**	**03 31 27.9**	**-0.2**
	baz=281						
NNSH				S	**Sn**	**03 31 43.6**	**+0.3**
	baz=281						
NNS	**Nan Shan**	**1.16**	**296**	P	**Pn**	**03 31 27.4**	**-0.9**
	baz=281						
NNS				*e*S	**Sn**	**03 31 43.8**	**+0.1**
	baz=281						
WHF	**Hehuan Shan**	**1.16**	**280**	*i* P	**Pn**	**03 31 28.1**	**-0.5**
	baz=265						
WHF				S	**Sn**	**03 31 44.1**	**-0.1**
	baz=265						
EHY	**Hungye**	**1.17**	**249**	*i* P	**Pn**	**03 31 28.1**	**-0.3**
	baz=262						
EHY				S	**Sb**	**03 31 42.9**	**-0.6**
	baz=262						
IRIF	**Iriomote-Funau**	**1.18**	**70**	P	**Pb**	**03 31 28.9**	**+0.1**
IRIF				S	**Sn**	**03 31 44.0**	**0.0**
HATJ	**Hateruma jima**	**1.19**	**84**	P	**Pn**	**03 31 28.7**	**+0.1**
HATJ				S	**Sn**	**03 31 44.6**	**+0.4**
TIPB	**Shuangxi**	**1.21**	**329**	*i* P	**Pn**	**03 31 28.9**	**0.0**
	baz=327						
TIPB				*i* S	**Sn**	**03 31 44.7**	**-0.1**
	baz=327						
CHGB	**Renai**	**1.23**	**276**	P	**Pn**	**03 31 29.2**	**-0.2**
	baz=273						
CHGB				*e*S	**Sb**	**03 31 45.0**	**-0.4**
	baz=273						
YULB	**Yu-li**	**1.24**	**244**	P	**Pn**	**03 31 29.0**	**-0.3**
	baz=243						
YULB				S	**Sb**	**03 31 45.0**	**-0.4**
	baz=243						
NWLT	**Wulai**	**1.25**	**312**	*i* P	**Pb**	**03 31 29.9**	**-0.1**
	baz=297						
NWLT				S	**Sg**	**03 31 47.0**	**-0.5**
	baz=297						
TWF1	**Yuli**	**1.26**	**243**	*i* P	**Pn**	**03 31 29.4**	**-0.2**
	baz=241						
TWF1				S	**Sn**	**03 31 45.7**	**-0.3**
	baz=241						
YHNB	**Yeheng**	**1.27**	**305**	P	**Pn**	**03 31 30.1**	**+0.3**
	baz=290						
YHNB				S	**Sb**	**03 31 47.2**	**+0.9**
	baz=290						
VWDT	**VWDT**	**1.27**	**262**	P	**Pn**	**03 31 29.8**	**0.0**
	baz=260						
VWDT				*e*S	**Sn**	**03 31 45.7**	**-0.5**
	baz=260						
TDCB	**Techi**	**1.28**	**284**	*e*P	**Pn**	**03 31 30.3**	**+0.3**
	baz=271						
TDCB				*e*S	**Sb**	**03 31 46.9**	**+0.3**
	baz=271						
NSK	**Sanguang**	**1.29**	**305**	*i* P	**Pn**	**03 31 30.2**	**+0.2**
	baz=290						
NSK				*e*S	**Sb**	**03 31 47.0**	**+0.2**
	baz=290						
NWF	**Wu-fen Shan**	**1.31**	**330**	*e*P	**Pn**	**03 31 29.9**	**-0.5**
	baz=328						
NWF				*e*S	**Sb**	**03 31 47.9**	**+0.3**
	baz=328						
WFSB	**Wu-fen Shan**	**1.31**	**330**	*e*P	**Pn**	**03 31 29.8**	**-0.5**
	baz=328						
WFSB				S	**Sb**	**03 31 47.6**	**+0.1**
	baz=328						
FULB	**Fuli**	**1.34**	**237**	P	**Pn**	**03 31 30.8**	**+0.1**
	baz=224						
FULB				S	**Sb**	**03 31 48.5**	**+0.2**
	baz=224						
CHKT	**Chengkung**	**1.34**	**232**	*e*S	**Sn**	**03 31 46.0**	**-2.1**
	baz=219						
JKRS	**Kuro-shima**	**1.40**	**77**	P	**Pb**	**03 31 32.8**	**+0.3**
JKRS				*e*S	**Sb**	**03 31 51.0**	**+1.0**
SSLB	**Suanglung**	**1.44**	**264**	*e*P	**Pb**	**03 31 33.1**	**-0.1**
	baz=262						
SSLB				*e*S	**Sn**	**03 31 50.3**	**-0.1**
	baz=262						
DPDB	**Guoxing**	**1.46**	**274**	P	**Pb**	**03 31 33.1**	**-0.4**
	baz=264						
DPDB				*e*S	**Sn**	**03 31 51.3**	**+0.3**
	baz=264						
WHP	**Taichung City**	**1.47**	**284**	P	**Pb**	**03 31 34.5**	**+0.6**
	baz=270						
WHP				*e*S	**Sb**	**03 31 52.1**	**-0.1**
	baz=270						
SMLT	**Sun Moon Lake**	**1.48**	**268**	P	**Pn**	**03 31 33.1**	**+0.4**
	baz=266						
SMLT				S	**Sn**	**03 31 51.7**	**+0.1**
	baz=266						
YM01	**YM01**	**1.48**	**325**	P	**Pb**	**03 31 33.4**	**-0.5**
	baz=323						
YM01				*e*S	**Sn**	**03 31 51.9**	**+0.4**
	baz=323						
YM10	**YM10**	**1.49**	**325**	*e*P	**Pn**	**03 31 33.4**	**+0.5**
	baz=323						
YM10				*e*S	**Sn**	**03 31 52.1**	**+0.3**
	baz=323						
YM11	**YM11**	**1.49**	**325**	*e*P	**Pn**	**03 31 33.2**	**+0.3**
	baz=324						
YM11				*e*S	**Sn**	**03 31 51.5**	**-0.4**
	baz=324						
YM08	**YM08**	**1.50**	**326**	*e*P	**Pn**	**03 31 33.4**	**+0.4**
	baz=325						
YM08				*e*S	**Sn**	**03 31 51.8**	**-0.2**
	baz=325						
WHYT	**Xinyi Township**	**1.54**	**261**	P	**Pb**	**03 31 34.7**	**-0.3**
	baz=247						
WHYT				*e*S	**Sb**	**03 31 54.9**	**+0.8**
	baz=247						
JIJ	**Ishigaki jima**	**1.55**	**74**	P	**Pn**	**03 31 33.6**	**+0.1**
JIJ				*e*S	**Sb**	**03 31 54.0**	**-0.3**
TWH	**Lutao**	**1.55**	**218**	P	**Pn**	**03 31 33.2**	**-0.3**
	baz=216						
TWH				S	**Sn**	**03 31 51.6**	**-1.5**
	baz=216						
ELDTW	**Lidau**	**1.56**	**242**	*e*P	**Pn**	**03 31 34.7**	**+0.8**
	baz=240						
ELDTW				S	**Sn**	**03 31 52.4**	**-1.3**
	baz=240						
WJS	**Zhushan**	**1.64**	**266**	*e*S	**Sb**	**03 31 58.4**	**+1.5**
	baz=264						
TWQ1	**Liyutan**	**1.64**	**285**	*e*P	**Pn**	**03 31 35.6**	**+0.8**
	baz=282						
TWQ1				*e*S	**Sb**	**03 31 57.7**	**+0.7**
	baz=282						
WNT	**Mingjian**	**1.68**	**268**	*e*S	**Sb**	**03 31 59.2**	**+1.2**
	baz=266						
CHN5	**Tsauling**	**1.72**	**259**	P	**Pb**	**03 31 37.6**	**-0.4**
	baz=247						
CHN5				S	**Sb**	**03 31 59.6**	**+0.4**
	baz=247						
TWGBT	**Beinan**	**1.73**	**230**	*e*S	**Sn**	**03 31 56.4**	**-1.2**
	baz=220						
TWG	**Pinlang**	**1.73**	**230**	*e*S	**Sn**	**03 31 57.0**	**-0.6**
	baz=220						
JISG	**Ishigakijimahi**	**1.76**	**68**	P	**Pb**	**03 31 39.2**	**+0.5**
JISG				S	**Sb**	**03 32 00.4**	**-0.1**
WDLH	**Douliu**	**1.83**	**263**	*e*P	**Pb**	**03 31 39.4**	**-0.4**
	baz=261						
WDLH				S	**Sb**	**03 32 02.8**	**+0.5**
	baz=261						
TPUB	**Ta-pu**	**1.84**	**250**	*e*P	**Pb**	**03 31 39.4**	**-0.7**
	baz=238						
TPUB				S	**Sb**	**03 32 02.7**	**0.0**
	baz=238						
CHN4	**Tsaushan**	**1.86**	**252**	P	**Pb**	**03 31 40.2**	**-0.1**
	baz=251						
CHN4				*e*S	**Sb**	**03 32 03.6**	**+0.4**
	baz=251						
WTP	**Ta-pu**	**1.87**	**249**	*i* P	**Pn**	**03 31 39.4**	**+1.3**
	baz=238						
WTP				S	**Sb**	**03 32 04.0**	**+0.3**
	baz=238						
SLGT	**Liugui**	**1.96**	**242**	P	**Pn**	**03 31 40.1**	**+0.9**
	baz=233						
SLGT				*e*S	**Sb**	**03 32 05.3**	**-0.7**
	baz=233						
SGST	**Jiashian**	**1.97**	**245**	*e*S	**Sb**	**03 32 06.6**	**+0.3**
	baz=234						
CHN1	**Nanshi**	**1.97**	**248**	*i* P	**Pb**	**03 31 42.2**	**-0.1**
	baz=246						
CHN1				*i* S	**Sb**	**03 32 06.8**	**+0.3**
	baz=246						
JTJ	**Tarama**	**2.12**	**70**	P	**Pn**	**03 31 42.7**	**+1.3**
JTJ				S	**Sb**	**03 32 09.7**	**-0.9**
MASBT	**Mashibuluo**	**2.18**	**233**	*e*P	**Pn**	**03 31 43.5**	**+1.3**
	baz=225						
MASBT				*e*S	**Sn**	**03 32 10.0**	**+1.4**
	baz=225						
EAST	**Anshuo**	**2.18**	**225**	*e*P	**Pn**	**03 31 43.4**	**+1.1**
	baz=224						
EAST				*e*S	**Sn**	**03 32 08.5**	**-0.2**
	baz=224						
PHUB	**P'eng-hu**	**2.73**	**262**	*e*P	**Pn**	**03 31 51.0**	**+1.2**
	baz=259						
PHUB				S	**Sn**	**03 32 23.2**	**+0.9**
	baz=259						
PTMZ	**Houxiangcun**	**3.28**	**290**	*e*P	**Pn**	**03 31 57.4**	**0.0**
	baz=287						
PTMZ				*e*S	**Sn**	**03 32 35.1**	**-0.8**
	baz=287						

*NEIC **22** 03:34:35.8±1.4,17.75S±0.1×178.6W±0.1,h538km±9km, mb4.3/24,Error ellipse: s-maj=16.9km s-min=15.1km az=150.0*
*IDC **22** 03:34:37.7±7.0,17.37S×178.74W,h550km,86km,mb3.3/8, mb1 3.6/9,mb1mx3.2/32,mbtmp4.3/9,Error ellipse: s-maj=43.2km s-min=29.7km az=155.0*

ISC 22 03:34:36.2±0.6,**17.55S**±0.1×**178.60W**±0.09,**h547**km,**n40**, σ1°**26**/40,**mb4.3**/18,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.20**	**265**	P	**P**	**03 35 52.3**	**-0.1**
AFI	**Afiamalu**	**7.48**	**62**	P	**P**	**03 36 26.7**	**-2.2**
AFI				IAmb	IAmb	03 36 27.0	
	comp=Z,22nm,0.8s						
AFI	**Afiamalu**	**7.48**	**62**	P	**P**	**03 36 26.6**	**-2.3**
NIUE	**Niue**	**8.39**	**102**	P	**P**	**03 36 37.8**	**+0.1**
DZM	**Mont Dzumac**	**14.79**	**250**	P	**P**	**03 37 43.6**	**-0.1**
	comp=Z,1.3nm,0.3s,baz=118,slow=23,SNR=8.1						
DZM	**Mont Dzumac**	**14.79**	**250**	P	**P**	**03 37 43.3**	**-0.3**
OUZ	**Omahuta**	**18.96**	**200**	P	**P**	**03 38 17.3**	**-5.6**
OUZ				IAmb	IAmb	03 38 31.7	
	comp=Z,15nm,1.2s						
TUWZ	**Tuamarina**	**24.69**	**194**	P	**P**	**03 39 15.8**	**+1.7**
ARMA	**Armidale**	**29.98**	**239**	P	**P**	**03 40 01.9**	**+1.0**
ARMA				IAmb	IAmb	03 40 03.1	
	comp=Z,3.9nm,0.7s						
CTA	**Charters Tower**	**33.33**	**260**	P	**P**	**03 40 29.6**	**+0.1**
	comp=Z,6.2nm,0.7s,baz=97,slow=8.9,SNR=4.8						
CTAO	**Charters Tower**	**33.33**	**260**	P	**P**	**03 40 28.8**	**-0.6**
CTAO				IAmb	IAmb	03 40 33.6	
	comp=Z,7.7nm,0.9s						
COEN	**Coen**	**36.92**	**270**	P	**P**	**03 40 59.9**	**+0.6**
TOO	**Toolangi**	**37.28**	**230**	P	**P**	**03 41 02.1**	**+0.1**
TOO				IAmb	IAmb	03 41 15.8	
	comp=Z,8.1nm,1.0s						
STKA	**Stephens Creek**	**38.66**	**241**	P	**P**	**03 41 14.6**	**+1.2**
	comp=Z,4.3nm,0.4s,baz=86,slow=11,SNR=17						
STKA	**Stephens Creek**	**38.66**	**241**	P	**P**	**03 41 13.7**	**+0.4**
JAY	**Jayapura**	**42.62**	**286**	P	**P**	**03 41 45.9**	**+0.8**
	comp=Z,6.2nm,0.6s,baz=128,slow=5.7,SNR=4.7						
WRMHI	**West Rim**	**43.24**	**33**	P	**P**	**03 41 49.9**	**0.0**
BBOO	**Buckleboo**	**43.44**	**241**	P	**P**	**03 41 51.7**	**+0.5**
BBOO				IAmb	IAmb	03 41 52.8	
	comp=Z,12nm,0.9s						
WR0	**Warramunga Arr**	**44.33**	**259**	P	**P**	**03 41 57.7**	**-0.6**
WB0	**Warramunga Arr**	**44.49**	**259**	P	**P**	**03 41 59.0**	**-0.5**
WB0				IAmb	IAmb	03 42 00.1	
	comp=Z,12nm,1.1s						
WB2	**Warramunga Arr**	**44.51**	**259**	P	**P**	**03 41 59.4**	**-0.3**
WB2				IAmb	IAmb	03 42 00.3	
	comp=Z,6.8nm,0.6s						
WRA	**Warramunga Arr**	**44.52**	**259**	P	**P**	**03 41 59.4**	**-0.4**
	comp=Z,4.4nm,0.5s,baz=98,slow=6.8,SNR=82						
AS31	**Alice Springs**	**44.72**	**254**	P	**P**	**03 42 01.1**	**-0.2**
ASAR	**Alice Springs**	**44.72**	**254**	P	**P**	**03 42 01.6**	**+0.3**
	comp=Z,36nm,0.5s,baz=88,slow=8.1,SNR=459						
MTN	**Manton Dam**	**48.63**	**268**	P	**P**	**03 42 30.2**	**-0.6**
MTN				IAmb	IAmb	03 42 32.7	
	comp=Z,11nm,1.0s						
FORT	**Forrest**	**50.01**	**244**	P	**P**	**03 42 40.7**	**-0.1**
KNRA	**Kununurra**	**50.35**	**264**	P	**P**	**03 42 41.8**	**-1.6**
KNRA				IAmb	IAmb	03 42 44.7	
	comp=Z,7.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**52.91**	**260**	P	**P**	**03 43 02.5**	**+0.5**
PSA00	**Pilbara Seismi**	**57.83**	**255**	P	**P**	**03 43 35.2**	**-1.0**
PSA00				IAmb	IAmb	03 43 37.0	
	comp=Z,6.5nm,0.7s						
NWAO	**Narrogin (SRO)**	**59.24**	**242**	P	**P**	**03 43 45.8**	**+0.4**
NWAO				IAmb	IAmb	03 43 50.7	
	comp=Z,12nm,1.1s						
NWAO	**Narrogin (SRO)**	**59.24**	**242**	P	**P**	**03 43 46.0**	**+0.6**
NWAO				IAmb	IAmb	03 43 50.7	
	comp=Z,9.2nm,1.0s						
MORW	**Morawa**	**60.47**	**246**	P	**P**	**03 43 53.5**	**-0.2**
VNDA	**Vanda**	**60.83**	**185**	P	**P**	**03 43 55.5**	**+0.3**
GIRL	**Giralia**	**62.83**	**253**	P	**P**	**03 44 08.9**	**-0.3**
MJAR	**Matsushiro Arr**	**67.48**	**323**	P	**P**	**03 44 37.7**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=141,slow=7.9,SNR=2.0						
UGM	**Wanagama**	**69.48**	**268**	P	**P**	**03 44 50.9**	**+0.3**
QSPA	**South Pole Qui**	**72.55**	**180**	P	**P**	**03 45 08.1**	**+0.3**
NVAR	**Mina Array Bea**	**79.26**	**44**	P	**P**	**03 45 46.6**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=220,slow=6.9,SNR=2.3						
TXAR	**Lajitas Array**	**85.94**	**58**	P	**P**	**03 46 20.6**	**+1.6**
	comp=Z,0.5nm,0.8s,baz=218,slow=6.6,SNR=7.9						
PDAR	**Pinedale Array**	**87.19**	**44**	P	**P**	**03 46 25.5**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=205,slow=3.6,SNR=2.5						

*IDC **22** 03:54:59.7±0.8,55.84S×27.50W,h0km,mb4.2/6, mb1 4.3/7,mb1mx4.1/21,mbtmp4.2/7,ML4.7/1,Error ellipse: s-maj=36.8km s-min=19.1km az=74.0*
*NEIC **22** 03:55:14.1±1.6,56.0S±0.1×27.9W±0.2,h120km±5km, mb4.2/17,Error ellipse: s-maj=18.1km s-min=13.3km az=214.0*

ISC 22 03:55:13.1±0.7,**56.0S**±0.1×**27.9W**±0.1,**h112**km,**n34**, σ0°**87**/35,**mb4.2**/11,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.21**	**286**	Pn	**Pn**	**03 56 29.9**	**+1.3**
HOPE				Sn	**Sn**	**03 57 25.5**	**-2.0**
VNA1	**Neumayer--Stat**	**16.98**	**157**	P	**Pn**	**03 59 03.3**	**0.0**
VNA3	**Neumayer Olymp**	**17.16**	**160**	P	**P**	**03 59 04.6**	**-0.8**
VNA2	**Neumayer--Watz**	**17.37**	**157**	P	**P**	**03 59 07.6**	**-0.2**
	baz=312,slow=12						
SNAA	**Sanae**	**18.93**	**156**	P	**P**	**03 59 24.4**	**-0.5**
SNAA	**Sanae**	**18.93**	**156**	P	**P**	**03 59 24.4**	**-0.5**
	2.3nm,0.3s,baz=304,slow=11,SNR=92						
SNAA	**Sanae**	**18.93**	**156**	P	**P**	**03 59 24.5**	**-0.4**
SNAA				IAmb	IAmb	03 59 27.7	
	comp=Z,7.7nm,0.7s						
PMSA	**Palmer Station**	**19.60**	**229**	P	**P**	**03 59 32.6**	**+0.5**
GO09	**Cerro Castillo**	**26.39**	**262**	P	**P**	**04 00 38.6**	**-0.1**
QSPA	**South Pole Qui**	**34.23**	**180**	P	**P**	**04 01 48.7**	**+0.9**
	comp=Z,3.6nm,0.6s,baz=22,slow=3.0,SNR=58						
QSPA	**South Pole Qui**	**34.23**	**180**	P	**P**	**04 01 48.3**	**+0.5**
CPUP	**Villa Florida**	**36.48**	**312**	P	**P**	**04 02 07.5**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=162,slow=6.4,SNR=3.5						
CPUP	**Villa Florida**	**36.48**	**312**	P	**P**	**04 02 06.9**	**-0.3**
CO03	**El Pedregal**	**39.05**	**292**	P	**P**	**04 02 27.7**	**-1.2**
CO01	**Juntas del Tor**	**39.42**	**293**	P	**P**	**04 02 30.6**	**-1.7**
CO01				IAmb	IAmb	04 02 36.6	
	comp=Z,4.9nm,1.1s						
AC05	**El Transito**	**40.44**	**294**	P	**P**	**04 02 41.1**	**+0.7**
AC05				IAmb	IAmb	04 02 51.5	
	comp=Z,6.0nm,1.1s						
LVC	**Limon Verde**

MKAR	**Makanchi Array**	**22.39**	**333**	P	**P**	**04 02 53.2**	**-0.2**
	1.9nm,0.7s,baz=139,slow=13,SNR=10							
PSI	**Prapat**	**24.66**	**175**	LR	LR	04 12 49.2		
	comp=Z,43nm,19.9s,baz=270,slow=36							
KURBB	**Kurchatov Arra**	**26.95**	**334**	P	**P**	**04 03 36.9**	**+0.8**
	1.9nm,0.7s,baz=146,slow=10,SNR=14							
ASF	**Jabal al Asfar**	**51.62**	**291**	LR	LR	04 34 34.7		
	comp=Z,206nm,20.9s,baz=280,slow=43							
MMAI	**Mount Meron Ar**	**52.69**	**292**	LR	LR	04 32 23.5		
	comp=Z,22nm,19.8s,baz=225,slow=39							
AKASG	**Malin Array Be**	**55.26**	**314**	P	**P**	**04 07 27.3**	**-0.4**
	0.8nm,0.5s,baz=74,slow=6.8,SNR=4.5							
WRA	**Warramunga Arr**	**59.54**	**138**	P	**P**	**04 07 58.2**	**-0.1**
	1.4nm,0.4s,baz=327,slow=7.5,SNR=29							
ASAR	**Alice Springs**	**62.21**	**141**	P	**P**	**04 08 16.5**	**+0.1**
	0.4nm,0.4s,baz=324,slow=6.6,SNR=9.0							
ILAR	**Eielson Array**	**75.72**	**23**	P	**P**	**04 09 39.3**	**-0.4**
	0.3nm,0.5s,baz=299,slow=4.0,SNR=4.4							
DLBC	**Dease Lake**	**85.90**	**23**	LR	LR	04 51 57.0		
	comp=Z,58nm,19.5s,baz=152,slow=38							
TORD	**Torodi Ar. Bea**	**88.48**	**284**	P	**P**	**04 10 47.6**	**+0.2**
	0.4nm,0.7s,baz=64,slow=5.2,SNR=4.3							

*IDC **22** 04:42:49.5±7.3, 36.62N×76.50E±0.2×**76.5E**±0.2, **h86**km, **n8**, σ0**91**/7,*
mb3.7**/6, **Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**11.04**	**21**	P	**Pn**	**04 45 25.2**	**+0.2**
	0.1nm,0.3s,baz=203,slow=14,SNR=1.8						
AKASG	**Malin Array Be**	**36.37**	**308**	P	**P**	**04 49 45.2**	**-0.5**
	0.3nm,0.3s,baz=80,slow=7.8,SNR=4.0						
FINES	**FINESS Array B**	**39.92**	**325**	P	**P**	**04 50 14.3**	**-1.1**
	0.8nm,0.7s,baz=101,slow=10,SNR=4.3						
KSRS	**Korea Array**	**40.62**	**73**	P	**P**	**04 50 20.8**	**-0.7**
	1.1nm,0.6s,baz=286,slow=8.7,SNR=2.5						
ARCES	**ARCESS Array B**	**42.79**	**336**	P	**P**	**04 50 39.0**	**+0.2**
	2.1nm,0.9s,baz=102,slow=8.6,SNR=7.1						
KMBO	**Kilima Mbogo**	**52.33**	**233**	LR	LR	05 14 27.2	
	comp=Z,30nm,18.9s,baz=178,slow=36						
TORD	**Torodi Ar. Bea**	**70.17**	**272**	P	**P**	**04 53 54.4**	**+0.6**
	0.7nm,1.0s,baz=42,slow=6.4,SNR=4.6						
YKA	**Yellowknife Ar**	**80.83**	**5**	P	**P**	**04 54 55.0**	**+1.0**
	0.1nm,0.4s,baz=344,slow=5.4,SNR=4.4						

*IDC **22** 05:22:01.4±0.4, 35.86N×0.17E, h0km, mb4.5/44,*
mb1 4.6/52, mb1mx4.6/67, mbtmp4.5/52, ML4.5/8, MS4.1/20,
Ms1 4.1/20, ms1mx3.9/42, Error ellipse: s-maj=10.0km
s-min=8.8km az=151.0

*CRAAG **22** 05:22:01.3, 35.77N×0.26E, Ml5.2*

*NEIC **22** 05:22:02.7, 35.78N×0.25E, h5km, Moment Tensor*
Solution. Moment tensor: Scale 10^16^Nm; Mrr1.81;
Mθθ-1.28; Mφφ-0.53; Mrθ0.78; Mθφ-0.20; Mφr-0.06; Fault
plane solution: M0 1.80000×10^16^ NP1:φs253.00000°,
δ32.45000°, λ81.27000°. NP2:φs83.31000°, δ57.97000°,
λ95.51000°. Principal axes: T 1.9998, Plg76.0000°,
Azm10.0000°; N -0.5060, Plg5.0000°, Azm260.0000°; P
-1.4938, Plg13.0000°, Azm169.0000°;

*BJI **22** 05:22:02.0±0.0, 35.70N×0.20E, h10km, mB5.1/20,*
mb4.8/26, Ms5.3/15, Ms7 5.0/7

*NEIC **22** 05:22:02.7±1.8, 35.79N±0.04×0.24E±0.05, h10km±1km,*
mb4.9/225, Mwr4.8/15, ML5.2(ALG), Error ellipse:
s-maj=7.6km s-min=6.8km az=115.0

*MOS **22** 05:22:03.5±1.1, 35.81N×0.26E, h26km, mb5.1/69,*
MS4.2/12, Error ellipse: s-maj=6.1km s-min=3.4km
az=60.2

*GCMT **22** 05:22:03.7±0.2, 35.77N±0.01×0.36E±0.02, h12km,*
MW4.9/117, Moment Tensor Solution. s40,c49;
s117,c165; Duration: 0 Moment tensor: Scale 10^16^Nm;
Mrr2.98±.06; Mθθ-2.17±.06; Mφφ-0.80±.06; Mrθ-1.39±.22;
Mθφ-1.12±.05; Mφr0.58±.23; Best double couple:
M0 3.22900×10^16^ NP1:φs45.00000°, δ38.00000°,
λ62.00000°. NP2:φs259.00000°, δ57.00000°, λ110.00000°.
Principal axes: T 3.5010, Plg70.0000°, Azm216.0000°;
N -0.5420, Plg17.0000°, Azm68.0000°; P -2.9580,
Plg10.0000°, Azm335.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function

*LDG **22** 05:22:03.1±0.1, 35.61N×0.21E, h20km, Ml4.1/33 Error*
ellipse: s-maj=4.4km s-min=3.2km az=173.0

*MDD **22** 05:22:03.4±0.4, 35.70N×0.23E, h16km±6km, mb5.2/56,*
Error ellipse: s-maj=6.8km s-min=3.3km az=162.0,
PRXIMO

*INMG **22** 05:22:03.6±1.9, 35.76N×0.17E, h10km, ML3.9, Error*
ellipse: s-maj=5.0km s-min=3.3km az=133.0

*MED_RC **22** 05:22:03.0±0.4, 35.66N×0.18E, h10km, MW4.9/34,*
Moment Tensor Solution. Body waves: s5,c6;Mantle
waves: s34,c58; Duration: 1s1 Moment tensor: Scale
10^16^Nm; Mrr2.63±.05; Mθθ-2.12±.05; Mφφ-0.51±.05;
Mrθ-0.59±.23; Mθφ-1.02±.04; Mφr-1.28±.25; Best double
couple: M0 2.97000×10^16^ NP1:φs79.00000°, δ36.00000°,
λ116.00000°. NP2:φs228.00000°, δ58.00000°, λ73.00000°.
Principal axes: T 3.1000, Plg71.0000°, Azm98.0000°; N
-0.2500, Plg15.0000°, Azm237.0000°; P -2.8400,
Plg12.0000°, Azm330.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=40s.

*IGIL **22** 05:22:04.1, 35.72N×0.13E, h1km*

*CNRM **22** 05:22:07.7, 35.72N×0.47W, h0km*

***ISC 22 05:22:03.0**±0.6, **35.81N**±0.03×**0.25E**±0.02, **h12**km±3km,*
***n928**, σ1**90**/1108, **mb4.8**/172, **MS4.0**/32, **41C-21D**,*
Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OJBR	**Djebel Berber**	**0.24**	**161**	P	**Pg**	**05 22 07.0**	**-1.1**
OJBR	**Djebel Berber**	**0.24**	**161**	P	**Pg**	**05 22 07.0**	**-1.1**
ODJA	**Bouhanifia**	**0.58**	**214**	P	**Pg**	**05 22 14.0**	**-0.4**
ODJA	**Bouhanifia**	**0.58**	**214**	P	**Pg**	**05 22 14.0**	**-0.4**
USTO	**Oran**	**0.65**	**264**	P	**Pb**	**05 22 17.0**	**+0.7**
USTO	**Oran**	**0.65**	**264**	P	**Pb**	**05 22 17.0**	**+0.7**
EANR	**'Ain N'Sour**	**0.70**	**78**	P	**Pg**	**05 22 16.5**	**-0.3**
EANR	**'Ain N'Sour**	**0.70**	**78**	P	**Pg**	**05 22 16.5**	**-0.3**
ECHF	**Ech Chlef**	**0.95**	**68**	P	**Pb**	**05 22 17.0**	**-4.4**
ETRT	**Tiaret**	**0.95**	**116**	P	**Pb**	**05 22 20.0**	**-1.5**
ETRT	**Tiaret**	**0.95**	**116**	P	**Pb**	**05 22 20.0**	**-1.5**
ECHA	**Ech Chlef**	**0.97**	**69**	P	Pb	05 22 17.0	-4.7
OTSS	**Djebel Tessala**	**1.00**	**239**	P	**Pb**	**05 22 21.2**	**-1.1**
OTSS	**Djebel Tessala**	**1.00**	**239**	P	**Pb**	**05 22 21.2**	**-1.1**
EBNR	**Beni Rached**	**1.14**	**65**	P	**Pb**	**05 22 23.1**	**-1.6**
CART	**Cartagena**	**2.04**	**331**	P	**Pn**	**05 22 36.1**	**-1.0**
CART				S	**Sn**	**05 22 59.2**	**-3.2**
CART	**Cartagena**	**2.04**	**331**	⇑*i* P	**Pn**	**05 22 36.1**	**-1.0**
CART				*i* S	**Sn**	**05 22 59.2**	**-3.2**
CART	**Cartagena**	**2.04**	**331**		**Pn**	**05 22 36.5**	**-0.6**
CART				Sn	**Sn**	**05 22 59.2**	**-3.2**
EMHD	**Djebel Mahouad**	**2.23**	**79**	P	**Pn**	**05 22 40.0**	**+0.2**
EMHD	**Djebel Mahouad**	**2.23**	**79**	P	**Pn**	**05 22 40.0**	**+0.2**
ENIJ	**Nijar**	**2.30**	**301**	⇑P	**Pn**	**05 22 39.3**	**-1.4**
	82nm,0.2s,SNR=18						
ENIJ				S	**Sn**	**05 23 05.2**	**-3.6**
	4μm,0.5s,SNR=7.9						
ENIJ	**Nijar**	**2.30**	**301**	P	**Pn**	**05 22 39.3**	**-1.4**
ENIJ	**Nijar**	**2.30**	**301**		**Pn**	**05 22 39.3**	**-1.4**
ETRV	**Los Montesinos**	**2.35**	**340**	P	**Pn**	**05 22 40.8**	**-0.6**
	SNR=7.9						
ETRV				S	**Sn**	**05 23 08.7**	**-1.5**
	6μm,0.4s,SNR=7.9						
ETRV	**Los Montesinos**	**2.35**	**340**		**Pn**	**05 22 40.8**	**-0.6**
ETRV					**Sn**	**05 23 08.7**	**-1.5**
EMUR	**La Murta**	**2.35**	**330**	P	**Pn**	**05 22 40.7**	**-0.8**
	162nm,0.3s,SNR=205						
EMUR				S	**Sn**	**05 23 08.0**	**-2.4**
	1μm,0.4s,SNR=8.7						
EMUR	**La Murta**	**2.35**	**330**		**Pn**	**05 22 40.7**	**-0.8**
EMUR					**Sn**	**05 23 08.0**	**-2.4**
TLOR	**Lorca, Murcia**	**2.41**	**320**	P	**Pn**	**05 22 41.2**	**-1.1**
	4μm,0.2s,SNR=7.9						
TLOR				S	**Sn**	**05 23 08.7**	**-3.0**
	8μm,0.4s,SNR=7.9						
ABA	**Alger-Bouzarea**	**2.46**	**65**	P	**Pn**	**05 22 42.7**	**-0.2**
ABA	**Alger-Bouzarea**	**2.46**	**65**	P	**Pn**	**05 22 42.7**	**-0.2**
ADJB	**Djebel Djouab**	**2.61**	**81**	P	**Pn**	**05 22 44.1**	**-1.0**
ADJB	**Djebel Djouab**	**2.61**	**81**	P	**Pn**	**05 22 44.1**	**-1.0**
MELI	**Melilla**	**2.65**	**260**	P	**Pn**	**05 22 43.0**	**-2.4**
	137nm,0.3s,SNR=7.9						
MELI				S	**Sn**	**05 23 13.6**	**-3.8**
	523nm,0.4s,SNR=7.9						
MELI	**Melilla**	**2.65**	**260**	*e*P	**Pn**	**05 22 43.8**	**-1.6**
MELI				*e*S	**Sn**	**05 23 13.4**	**-4.0**
MELI	**Melilla**	**2.65**	**260**		**Pn**	**05 22 43.0**	**-2.4**
EMLI	**Melilla**	**2.66**	**260**		**Pn**	**05 22 44.0**	**-1.6**
EMEL	**Melilla**	**2.66**	**260**	P	**Pn**	**05 22 44.0**	**-1.6**
	133nm,0.1s,SNR=18						
EMEL				S	**Sn**	**05 23 13.7**	**-4.1**
	900nm,0.3s						
EALB	**Alboran**	**2.67**	**274**	P	**Pn**	**05 22 44.3**	**-1.4**
	119nm,0.3s,SNR=12						
EALB				S	**Sn**	**05 23 14.1**	**-3.9**
	1μm,0.6s,SNR=5.0						
EALB	**Alboran**	**2.67**	**274**		**Pn**	**05 22 44.3**	**-1.4**
GOG	**Mont Gurugu**	**2.71**	**258**	P	**Pn**	**05 22 44.4**	**-2.0**
JBK	**JBK**	**2.74**	**238**	P	**Pn**	**05 22 45.9**	**-1.0**
EBER	**Berja**	**2.76**	**294**	P	**Pn**	**05 22 46.0**	**-1.2**
	350nm,0.2s,SNR=499						
EBER				S	**Sn**	**05 23 18.9**	**-1.6**
	1μm,0.4s,SNR=4.8						
EBER	**Berja**	**2.76**	**294**		**Pn**	**05 22 46.0**	**-1.2**
EBER					**Sn**	**05 23 18.9**	**-1.6**
ABMS	**Boumerdes**	**2.77**	**69**	P	**Pn**	**05 22 47.0**	**-0.2**
ABMS	**Boumerdes**	**2.77**	**69**	P	**Pn**	**05 22 47.0**	**-0.2**
EBEN2	**Beniarda presa**	**2.88**	**353**	P	**Pn**	**05 22 48.7**	**0.0**
	145nm,0.3s,SNR=7.9						
EBEN2				S	**Sn**	**05 23 20.9**	**-2.5**
	2μm,0.6s,SNR=7.9						
EBEN2	**Beniarda presa**	**2.88**	**353**		**Pn**	**05 22 48.7**	**0.0**
EBEN2					**Sn**	**05 23 20.9**	**-2.5**
AFON	**Font Roja**	**2.92**	**348**	P	**Pn**	**05 22 49.5**	**+0.2**
	112nm,0.3s,SNR=84						
AFON				S	**Sn**	**05 23 25.1**	**+0.7**
	3μm,0.6s,SNR=7.9						
AFON	**Font Roja**	**2.92**	**348**		**Pn**	**05 22 49.5**	**+0.2**
AFON					**Sn**	**05 23 25.1**	**+0.7**
GORA	**Gorafe**	**3.13**	**303**	P	**Pn**	**05 22 53.3**	**+1.2**
	381nm,0.3s,SNR=7.9						
GORA				S	**Sn**	**05 23 30.6**	**+1.1**
	2μm,0.4s,SNR=7.9						
GORA	**Gorafe**	**3.13**	**303**		**Pn**	**05 22 53.3**	**+1.2**
GORA					**Sn**	**05 23 30.6**	**+1.1**
ETOB	**Tobarra**	**3.17**	**334**	P	**Pn**	**05 22 53.2**	**+0.4**
	206nm,0.3s,SNR=573						
ETOB				S	**Sn**	**05 23 29.1**	**-1.5**
	2μm,0.5s,SNR=8.6						
ETOB	**Tobarra**	**3.17**	**334**		**Pn**	**05 22 53.2**	**+0.4**
ETOB					**Sn**	**05 23 29.1**	**-1.5**
SESP	**Santiago Espad**	**3.21**	**317**	P	**Pn**	**05 22 54.6**	**+1.1**
	401nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**05 23 32.1**	**+0.4**
	3μm,0.3s,SNR=7.9						
SESP	**Santiago Espad**	**3.21**	**317**	P	**Pn**	**05 22 54.6**	**+1.1**
	SNR=494						
SESP	**Santiago Espad**	**3.21**	**317**	P	**Pn**	**05 22 54.6**	**+1.1**
	SNR=494						
SESP	**Santiago Espad**	**3.21**	**317**		**Pn**	**05 22 54.5**	**+1.1**
SESP					**Sn**	**05 23 32.1**	**+0.4**
ATAF	**Djebel Tarf**	**3.27**	**88**	P	**Pn**	**05 22 54.9**	**+0.7**
ATAF	**Djebel Tarf**	**3.27**	**88**	P	**Pn**	**05 22 54.9**	**+0.7**
EQUE	**Quentar**	**3.28**	**296**	⇑P	**Pn**	**05 22 54.5**	**+0.1**
	543nm,0.4s,SNR=18						
EQUE				S	**Sn**	**05 23 29.8**	**-3.5**
	724nm,0.7s						
ELGU	**Los Guajares,**	**3.30**	**290**	P	**Pn**	**05 22 52.8**	**-1.8**
	112nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**05 23 31.5**	**-2.3**
	817nm,0.5s,SNR=7.9						
ELGU	**Los Guajares,**	**3.30**	**290**		**Pn**	**05 22 52.8**	**-1.8**
ELGU					**Sn**	**05 23 31.5**	**-2.3**
EQES	**Quesada**	**3.33**	**308**	P	**Pn**	**05 22 56.0**	**+1.1**
	467nm,0.3s,SNR=365						
EQES				S	**Sn**	**05 23 34.5**	**+0.1**
	1μm,0.5s,SNR=6.8						
EQES	**Quesada**	**3.33**	**308**		**Pn**	**05 22 56.0**	**+1.1**
EQES					**Sn**	**05 23 34.5**	**+0.1**
EIBI	**Ibiza**	**3.33**	**15**	P	**Pn**	**05 22 54.9**	**+0.1**
	97nm,0.2s,SNR=63						
EIBI				S	**Sn**	**05 23 33.4**	**-0.9**
	418nm,0.3s,SNR=6.9						
EIBI	**Ibiza**	**3.33**	**15**		**Pn**	**05 22 54.9**	**+0.1**
EIBI					**Sn**	**05 23 33.4**	**-0.9**
TDRA	**Tendrara**	**3.34**	**215**	P	**Pn**	**05 22 54.6**	**-0.6**
TDRA				S	**Sg**	**05 23 50.4**	**0.0**
PALE	**Palemas**	**3.47**	**261**	P	**Pn**	**05 22 54.7**	**-2.1**
EGOR	**Sierra Gorda,**	**3.75**	**292**	P	**Pn**	**05 23 00.5**	**-0.2**
	59nm,0.3s,SNR=7.9						
EGOR				S	**Sn**	**05 23 43.2**	**-1.6**
	559nm,0.7s,SNR=7.9						
EGOR	**Sierra Gorda,**	**3.75**	**292**		**Pn**	**05 23 00.5**	**-0.2**
EGOR					**Sn**	**05 23 43.2**	**-1.6**
PVLZ	**Peæn de**	**3.77**	**262**	P	**Pn**	**05 23 00.5**	**-0.3**
PVLZ				S	**Sn**	**05 23 42.2**	**-2.9**
PVLZ	**Peæn de**	**3.77**	**262**	*e*P	**Pn**	**05 23 00.5**	**-0.3**
PVLZ				*e*S	**Sn**	**05 23 42.2**	**-2.9**
EMAL	**Malaga-Limoner**	**3.90**	**285**	*e*P	**Pn**	**05 23 01.0**	**-1.6**
EMAL				*e*S	**Sn**	**05 23 43.2**	**-5.1**
EMIJ	**Mijas**	**4.13**	**282**	P	**Pn**	**05 23 03.3**	**-2.6**
	36nm,0.2s,SNR=48						
EMIJ				S	**Sn**	**05 23 48.4**	**-5.7**
	158nm,0.3s,SNR=5.9						
EMIJ	**Mijas**	**4.13**	**282**		**Pn**	**05 23 03.3**	**-2.6**
SET	**Setif**	**4.19**	**83**	P	**Pn**	**05 23 07.0**	**+0.1**
SET	**Setif**	**4.19**	**83**	P	**Pn**	**05 23 07.0**	**+0.1**
ETOS	**Mallorca**	**4.44**	**26**	P	**Pn**	**05 23 09.0**	**-1.2**
	35nm,0.3s,SNR=76						
ETOS				S	**Sn**	**05 23 59.9**	**-1.9**
	184nm,0.4s						
ETOS	**Mallorca**	**4.44**	**26**		**Pn**	**05 23 09.0**	**-1.2**
ETOS					**Sn**	**05 23 59.9**	**-1.9**
REAL	**Reales**	**4.47**	**280**	P	**Pn**	**05 23 09.0**	**-1.7**
REAL	**Reales**	**4.47**	**280**	*e*P	**Pn**	**05 23 09.0**	**-1.7**
EADA	**Adamuz**	**4.52**	**303**	P	**Pn**	**05 23 10.9**	**-0.5**
	22nm,0.3s,SNR=58						
EADA				S	**Sn**	**05 24 00.0**	**-3.8**
	308nm,0.6s						
EADA	**Adamuz**	**4.52**	**303**		**Pn**	**05 23 10.9**	**-0.5**
CEU	**Ceuta**	**4.57**	**273**	P	**Pn**	**05 23 09.8**	**-2.1**
CEU				S	**Sn**	**05 23 58.8**	**-6.0**
CEU	**Ceuta**	**4.57**	**273**	*e*P	**Pn**	**05 23 09.8**	**-2.1**
CEU				*e*S	**Sn**	**05 23 58.8**	**-6.0**
ECEU	**Ceuta**	**4.57**	**273**	P	**Pn**	**05 23 10.1**	**-1.9**
	8.4nm,0.2s,SNR=6.0						
ECEU				S	**Sn**	**05 23 59.7**	**-5.2**
	36nm,0.3s,SNR=25						
ECEU	**Ceuta**	**4.57**	**273**		**Pn**	**05 23 10.1**	**-1.9**
SMIR	**Smir Dam**	**4.58**	**270**	P	**Pn**	**05 23 10.8**	**-1.3**
EMOS	**Mosqueruela**	**4.58**	**353**	P	**Pn**	**05 23 12.8**	**+0.6**
	272nm,0.6s,SNR=130						
EMOS				S	**Sn**	**05 24 04.2**	**-1.3**
	284nm,0.4s						
EMOS	**Mosqueruela**	**4.58**	**353**		**Pn**	**05 23 12.8**	**+0.6**
EMOS					**Sn**	**05 24 04.2**	**-1.3**
DFRA	**Djebel Bou Aff**	**4.61**	**79**	P	**Pn**	**05 23 12.4**	**-0.2**
DFRA	**Djebel Bou Aff**	**4.61**	**79**	P	**Pn**	**05 23 12.4**	**-0.2**
ALJ	**Aljibe**	**4.83**	**280**	P	**Pn**	**05 23 17.0**	**+1.5**
ALJ	**Aljibe**	**4.83**	**280**	*e*P	**Pn**	**05 23 17.0**	**+1.5**
HORN	**Hornachuelos**	**4.86**	**296**	P	**Pn**	**05 23 15.3**	**-0.7**
	SNR=54						
HORN				S	**Sn**	**05 24 08.6**	**-3.5**
HORN	**Hornachuelos**	**4.86**	**296**	P	**Pn**	**05 23 15.3**	**-0.7**
	SNR=54						
IFR	**Ifrane**	**4.99**	**244**	⇑*i* P	**Pn**	**05 23 17.4**	**-0.5**
IFR				*i*S	**Sn**	**05 24 16.1**	**+0.6**
CTEI	**Djebel Teioual**	**5.00**	**85**	P	**Pn**	**05 23 19.5**	**+1.5**
CTEI	**Djebel Teioual**	**5.00**	**85**	P	**Pn**	**05 23 19.5**	**+1.5**
MDT	**Midelt**	**5.01**	**235**	Pn	**Pn**	**05 23 17.4**	**-0.6**
	9.1nm,0.3s,baz=53,slow=9.8,SNR=154						
MDT				Pg	**Pb**	**05 23 31.7**	**+1.0**
	11nm,0.3s,baz=56,slow=16,SNR=9.2						
MDT				Sn	**Sn**	**05 24 15.7**	**-0.2**
	9.2nm,0.3s,baz=41,slow=19,SNR=4.7						
MDT				Lg	Lg	05 24 49.6	
	12nm,0.3s,baz=11,slow=19,SNR=4.1						
MDT	**Midelt**	**5.01**	**235**	P	**Pn**	**05 23 17.4**	**-0.6**
	SNR=156						
MDT				S	**Sb**	**05 24 25.0**	**-5.8**
ESPR	**Espera**	**5.04**	**284**	P	**Pn**	**05 23 19.4**	**+1.0**
	14nm,0.4s,SNR=18						
ESPR				S	**Sn**	**05 24 10.6**	**-5.9**
	59nm,0.4s						
ESPR	**Espera**	**5.04**	**284**		**Pn**	**05 23 19.4**	**+1.0**
RSA	**Sarsar**	**5.05**	**261**	P	**Pn**	**05 23 19.5**	**+1.0**
ECAB	**El Cabril**	**5.07**	**298**	P	**Pn**	**05 23 17.9**	**-1.0**
	25nm,0.3s,SNR=121						
ECAB				S	**Sn**	**05 24 14.4**	**-3.0**
	88nm,0.5s						
ECAB	**El Cabril**	**5.07**	**298**		**Pn**	**05 23 17.9**	**-1.0**
ECAB					**Sn**	**05 24 14.4**	**-3.0**
MD31	**MD31**	**5.08**	**236**	P	**Pn**	**05 23 18.2**	**-0.8**
CASM	**Ain Smara**	**5.08**	**83**	P	**Pn**	**05 23 19.0**	**0.0**
CASM	**Ain Smara**	**5.08**	**83**	P	**Pn**	**05 23 19.0**	**0.0**
ESDC	**Sonseca Array**	**5.10**	**320**	Pn	**Pn**	**05 23 19.4**	**+0.2**
	13nm,0.3s,baz=132,slow=13,SNR=170						
ESDC				Sn	**Sn**	**05 24 16.3**	**-1.8**
	21nm,0.3s,baz=138,slow=23,SNR=7.2						
ESDC				Lg	Lg	05 24 28.7	
	35nm,0.3s,baz=137,slow=29,SNR=5.5						
ESDC	**Sonseca Array**	**5.10**	**320**	P	**Pn**	**05 23 19.5**	**+0.2**
	68nm,0.4s,baz=138,slow=13,SNR=183						
ESDC				S	**Sn**	**05 24 17.8**	**-0.3**
	196nm,0.5s,baz=128,slow=22,SNR=6.1						
ERTA	**Horta de San J**	**5.14**	**1**	P	**Pn**	**05 23 19.1**	**-0.6**
	24nm,0.3s,SNR=44						
ERTA				S	**Sn**	**05 24 14.8**	**-4.2**
	182nm,0.5s						
ERTA	**Horta de San J**	**5.14**	**1**		**Pn**	**05 23 19.1**	**-0.6**
CZD	**Col de Zad**	**5.17**	**239**	P	**Pn**	**05 23 20.5**	**-0.1**
CZD				S	**Sb**	**05 24 30.1**	**-5.7**
PAB	**San Pablo**	**5.22**	**317**	P	**Pn**	**05 23 20.6**	**-0.2**
	60nm,0.3s,SNR=7.9						
PAB				S	**Sn**	**05 24 16.4**	**-4.5**
	138nm,0.4s,SNR=7.9						
PAB	**San Pablo**	**5.22**	**317**	P	**Pn**	**05 23 21.7**	**+0.8**
PAB						05 24 21.0	
PAB	**San Pablo**	**5.22**	**317**		**Pn**	**05 23 21.7**	**+0.8**
PAB				Sn	**Sn**	**05 24 21.0**	**+0.1**
SFS	**San Fernando**	**5.26**	**279**	S	**Sb**	**05 24 35.0**	**-3.1**
SFS	**San Fernando**	**5.26**	**279**	*e*S	**Sb**	**05 24 35.0**	**-3.1**
UCM	**Universidad Co**	**5.27**	**330**	*e*P	**Pn**	**05 23 23.4**	**+1.8**
UCM				*e*S	**Sn**	**05 24 21.9**	**-0.3**
CKFL	**Kef-Lekhel**	**5.27**	**82**	P	Pn	05 23 27.6	+5.9
CKFL	**Kef-Lekhel**	**5.27**	**82**	P	Pn	05 23 27.6	+5.9
ETOR	**Torete**	**5.32**	**341**	P	**Pn**	**05 23 24.2**	**+1.9**
	91nm,0.3s,SNR=41						
ETOR				S	**Sn**	**05 24 20.4**	**-3.1**
	366nm,0.5s						
CAEH	**'Ain El Ouahch**	**5.42**	**78**	P	**Pn**	**05 23 23.0**	**-0.6**
CAEH	**'Ain El Ouahch**	**5.42**	**78**	P	**Pn**	**05 23 23.0**	**-0.6**
EPOB	**Poblet**	**5.57**	**6**	P	**Pn**	**05 23 26.0**	**+0.3**
	34nm,0.3s,SNR=107						
EPOB				S	**Sn**	**05 24 23.8**	**-5.9**
	59nm,0.4s,SNR=7.9						
EPOB	**Poblet**	**5.57**	**6**		**Pn**	**05 23 26.0**	**+0.3**
ARF	**Arif**	**5.74**	**222**	P	**Pn**	**05 23 27.8**	**-0.3**
	SNR=13						
ARF				P	**Pn**	**05 23 27.9**	**-0.3**
ARF	**Arif**	**5.74**	**222**	P	**Pn**	**05 23 27.8**	**-0.3**
	SNR=13						
CMAH	**Djebel Manchou**	**5.85**	**80**	P	**Pn**	**05 23 28.5**	**-1.1**
CMAH	**Djebel Manchou**	**5.85**	**80**	P	**Pn**	**05 23 28.5**	**-1.1**
EMIN	**Mina Concepcio**	**5.89**	**291**	P	**Pn**	**05 23 28.1**	**-1.9**
	12nm,0.3s,SNR=63						
EMIN				S	**Sn**	**05 24 30.7**	**-6.7**
	52nm,0.6s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.89**	**291**		**Pn**	**05 23 28.1**	**-1.9**
ESAC	**San Caprasio**	**5.93**	**355**	P	**Pn**	**05 23 33.5**	**+2.8**
	48nm,0.3s,SNR=23						
ESAC				S	**Sn**	**05 24 38.0**	**-0.5**
	399nm,0.5s,SNR=7.9						
ESAC	**San Caprasio**	**5.93**	**355**		**Pn**	**05 23 33.5**	**+2.8**
ESAC					**Sn**	**05 24 38.0**	**-0.5**
GUD	**Guadarrama**	**5.94**	**326**	P	**Pn**	**05 23 31.2**	**+0.3**
	52nm,0.3s,SNR=170						
GUD				S	**Sn**	**05 24 37.0**	**-1.9**
	76nm,0.4s,SNR=6.6						
GUD	**Guadarrama**	**5.94**	**326**		**Pn**	**05 23 31.2**	**+0.3**
GUD					**Sn**	**05 24 37.0**	**-1.9**
GOLM	**Goulmima**	**5.96**	**228**	P	**Pn**	**05 23 31.2**	**0.0**
RTC	**Rabat Centre**	**6.12**	**255**	Pn	**Pn**	**05 23 32.0**	**-1.1**
EMIR	**Miracle**

PMRV Marv??o 7.06 303 P Pn 05 23 45.9 -0.2
PMRV S Sn 05 25 03.6 -2.6
66nm,0.7s
PMRV Marv??o 7.06 303 *e*Pn Pn 05 23 45.9 -0.2
PMRV *e*Sn Sn 05 25 03.6 -2.6
PMRV A A 05 25 47.3
66nm,0.7s
MESJ Messejana 7.09 289 *e*P Pn 05 23 45.2 -1.3
MESJ Messejana 7.09 289 P Pn 05 23 45.2 -1.3
MESJ S Sn 05 25 03.5 -3.4
29nm,0.7s
MESJ Messejana 7.09 289 *e*Pn Pn 05 23 45.6 -0.9
MESJ *e*Sn Sn 05 25 03.5 -3.4
MESJ A A 05 25 07.6
29nm,0.7s
EARA Aranguren 7.10 349 P Pn 05 23 49.0 +2.4
17nm,0.2s,SNR=7.9
EARA S Sn 05 25 06.2 -1.0
16nm,0.3s,SNR=7.9
EARA Aranguren 7.10 349 Pn 05 23 49.0 +2.4
EARA Sn 05 25 06.2 -1.0
ETSF Etsaut 7.11 355 *e*Pn Pn 05 23 47.8 +1.0
ETSF *e*Sn Sn 05 25 06.7 -0.8
92nm,0.8s
ETSF Etsaut 7.11 355 P Pn 05 23 47.8 +1.0
ETSF S Sn 05 25 06.7 -0.8
46nm,0.8s
EORO Oroz-Betelu 7.18 351 P Pn 05 23 49.9 +2.1
36nm,0.3s,SNR=66
EORO S Sn 05 25 06.5 -2.8
123nm,0.7s,SNR=7.9
EORO Oroz-Betelu 7.18 351 Pn 05 23 49.9 +2.1
EPF Esparros 7.21 1 *e*Pn Pn 05 23 48.9 +0.6
EPF *e*Sn Sn 05 25 09.9 -0.2
76nm,0.6s
EPF Esparros 7.21 1 P Pn 05 23 48.9 +0.6
EPF S Sn 05 25 09.9 -0.2
38nm,0.6s
ATE Arette 7.30 355 P Pn 05 23 51.4 +1.9
17nm,0.3s,SNR=7.9
ATE S Sn 05 25 11.2 -1.1
82nm,0.6s,SNR=7.9
ATE Arette 7.30 355 Pn 05 23 51.4 +1.9
ATE Sn 05 25 11.2 -1.1
MORF Marmelete 7.32 284 *e*P Pn 05 23 48.1 -1.6
MORF Marmelete 7.32 284 P Pn 05 23 48.1 -1.6
MORF S Sn 05 25 08.5 -4.2
23nm,0.4s
MORF Marmelete 7.32 284 *e*Pn Pn 05 23 49.7 0.0
MORF *e*Sn Sn 05 25 08.5 -4.2
MORF A A 05 25 13.8
23nm,0.4s
PCBR Castelo Branco 7.32 306 P Pn 05 23 49.8 +0.1
PCBR S Sn 05 25 09.8 -2.8
47nm,0.6s
PCBR Castelo Branco 7.32 306 *e*Pn Pn 05 23 49.8 +0.1
PCBR *e*Sn Sn 05 25 09.8 -2.8
PCBR A A 05 25 12.3
95nm,0.6s
SJPF Ste Jean 7.38 352 *e*Pn Pn 05 23 51.4 +0.8
SJPF *e*Sn Sn 05 25 12.7 -1.5
97nm,0.7s
SJPF Ste Jean 7.38 352 P Pn 05 23 51.4 +0.8
SJPF S Sn 05 25 12.7 -1.5
49nm,0.7s
PNCL Nicolau / Gran 7.39 291 P Pn 05 23 49.8 -0.9
PNCL Nicolau / Gran 7.39 291 *e*Pn Pn 05 23 49.8 -0.9
KEST Kesra 7.40 88 Pn Pn 05 23 51.6 +0.8
12nm,0.3s,baz=220,slow=4.7,SNR=62
KEST Sn Sn 05 25 11.8 -2.9
3.2nm,0.3s,baz=255,slow=20,SNR=0.7
KEST Kesra 7.40 88 Pn 05 23 51.8 +0.9
PTEO Sao Teotonio 7.42 286 P Pn 05 23 50.5 -0.5
PTEO S Sn 05 25 10.3 -4.7
31nm,0.7s
PTEO Sao Teotonio 7.42 286 *e*Pn Pn 05 23 50.5 -0.5
PTEO *e*Sn Sn 05 25 10.3 -4.7
PTEO A A 05 25 14.7
62nm,0.7s
PFVI Vila Bisbo 7.43 283 P Pn 05 23 50.2 -1.0
24nm,0.3s,SNR=19
PFVI S Sn 05 25 10.4 -5.0
65nm,0.5s,SNR=7.9
PFVI Vila Bisbo 7.43 283 P Pn 05 23 50.2 -1.0
SNR=17
PFVI Vila Bisbo 7.43 283 *e*Pn Pn 05 23 50.5 -0.7
PFVI *e*Sn Sn 05 25 10.9 -4.5
PFVI A A 05 25 26.2
44nm,0.6s
PFVI Vila Bisbo 7.43 283 Pn 05 23 51.0 -0.2
ZGR Zagora 7.52 223 P Pn 05 23 51.9 -0.6
ZGR S Sn 05 25 28.6 +11
EALK Alkurruntz 7.52 350 P Pn 05 23 54.9 +2.3
99nm,0.4s,SNR=36
EALK S Sn 05 25 14.8 -3.0
205nm,0.6s,SNR=7.9
EALK Alkurruntz 7.52 350 Pn 05 23 54.9 +2.3
SRHM Skhour des Reh 7.53 246 P Pn 05 23 50.9 -1.7
OUZM OUZ 7.63 232 P Pn 05 23 53.5 -0.6
MTE Manteigas 7.66 309 P Pn 05 23 55.0 +0.5
MTE Manteigas 7.66 309 *e*Pn Pn 05 23 55.0 +0.5
MTE Manteigas 7.66 309 Pn 05 23 55.4 +0.9
MTLF Montolieu 7.67 11 *e*Pn Pn 05 23 55.1 +0.6
MTLF *e*Sn Sn 05 25 19.1 -2.3
20nm,0.5s
MTLF Montolieu 7.67 11 P Pn 05 23 55.1 +0.6
MTLF S Sn 05 25 19.1 -2.3
9.9nm,0.5s
MVO Moncorvo 7.82 315 P Pn 05 23 56.8 +0.2
25nm,0.3s,SNR=30
MVO S Sn 05 25 19.9 -5.1
34nm,0.3s,SNR=7.9
MVO Moncorvo 7.82 315 *e*Pn Pn 05 23 57.5 +0.9
MVO Moncorvo 7.82 315 Pn 05 23 56.8 +0.2
ELAN Lanestosa 7.94 340 P Pn 05 23 59.6 +1.4
14nm,0.2s,SNR=53
ELAN S Sn 05 25 22.3 -5.6
92nm,0.7s,SNR=7.9
ELAN Lanestosa 7.94 340 Pn 05 23 59.6 +1.4
LIS Lisbon 8.04 294 *e*P Pn 05 23 57.7 -1.8
LIS Lisbon 8.04 294 P Pn 05 23 57.7 -1.8
PVIS Viseu 8.06 310 P Pn 05 24 00.6 +0.7
PVIS S Sn 05 25 27.1 -3.9
PVIS Viseu 8.06 310 *e*Pn Pn 05 24 00.6 +0.7
PVIS *e*Sn Sn 05 25 27.1 -3.9
PBRG Braganca 8.10 320 P Pn 05 24 01.3 +0.9
PBRG S Sn 05 25 28.4 -3.5
PBRG Braganca 8.10 320 *e*Pn Pn 05 24 01.3 +0.9
PBRG *e*Sn Sn 05 25 28.4 -3.5
PCAS Casmilo, Conde 8.11 304 P Pn 05 24 01.6 +1.1
PCAS S Sn 05 25 28.4 -3.6
35nm,0.5s
PCAS Casmilo, Conde 8.11 304 *e*Pn Pn 05 24 01.6 +1.1
PCAS *e*Sn Sn 05 25 28.4 -3.6
PCAS A A 05 25 31.2
35nm,0.5s
VSL Villasalto 8.12 60 Pn 05 23 59.1 -1.6
COI Coimbra 8.12 305 P Pn 05 24 01.6 +0.9
COI S Sn 05 25 28.8 -3.6
COI Coimbra 8.12 305 P Pn 05 24 00.6 -0.1
COI Coimbra 8.12 305 *e*Pn Pn 05 24 01.6 +0.9
COI *e*Sn Sn 05 25 28.8 -3.6
COI Coimbra 8.12 305 Pn 05 24 00.6 -0.1
OUK Oukaimeden 8.18 238 P Pn 05 24 00.7 -1.2
OUK S Sn 05 25 43.7 +9.3
ECAL Calabor 8.19 320 P Pn 05 24 02.0 +0.2
65nm,0.4s,SNR=31
ECAL S Sn 05 25 31.4 -2.9
55nm,0.5s,SNR=7.9
ECAL Calabor 8.19 320 Pn 05 24 02.0 +0.2
ECAL Sn 05 25 31.4 -2.9
PMAFR Mafra 8.21 295 P Pn 05 24 00.5 -1.4
36nm,0.3s,SNR=12
PMAFR S Sn 05 25 28.6 -6.0
84nm,0.4s,SNR=7.9
PMAFR Mafra 8.21 295 *e*Pn Pn 05 24 02.1 +0.2
PMAFR Mafra 8.21 295 Pn 05 24 00.5 -1.4
PVRL Vila Real 8.29 314 P Pn 05 24 04.0 +1.0
PVRL Vila Real 8.29 314 *e*Pn Pn 05 24 04.0 +1.0
EARI Arriondas 8.59 332 P Pn 05 24 08.3 +1.2
33nm,0.4s,SNR=64
EARI S Sn 05 25 34.2 -10
11nm,0.6s,SNR=7.9
EARI Arriondas 8.59 332 Pn 05 24 08.3 +1.2

LASF Ste Croix 8.71 17 *e*Pn Pn 05 24 09.4 +0.7
LASF *e*Sn Sn 05 25 41.8 -5.0
12nm,0.6s
LASF Ste Croix 8.71 17 P Pn 05 24 09.4 +0.7
LASF S Sn 05 25 41.8 -5.0
5.8nm,0.6s
PCAB Cabril 8.74 315 P Pn 05 24 10.0 +0.8
PCAB Cabril 8.74 315 *e*Pn Pn 05 24 10.0 +0.8
ELOB Lobios 8.86 316 P Pn 05 24 10.7 -0.2
13nm,0.4s,SNR=21
ELOB S Sn 05 25 43.1 -7.6
24nm,0.4s,SNR=7.9
ELOB Lobios 8.86 316 Pn 05 24 10.7 -0.2
LMR La Mourre 8.93 31 *e*Pn Pn 05 24 11.4 -0.4
LMR *e*Sn Sn 05 25 48.2 -4.0
9.8nm,0.4s
LMR La Mourre 8.93 31 P Pn 05 24 11.4 -0.4
LMR S Sn 05 25 48.2 -4.0
4.9nm,0.4s
TTIG Tnine Tigouga, 8.97 237 P Pn 05 24 12.1 -0.4
TTIG S Sn 05 26 03.5 +10
PGAV Gavieira, Arco 9.05 315 P Pn 05 24 14.1 +0.6
PGAV Gavieira, Arco 9.05 315 *e*Pn Pn 05 24 14.1 +0.6
SMRF Simiane la Rot 9.12 25 *e*P Pn 05 24 18.4 +4.0
SMRF *e*Sn Sn 05 25 53.6 -3.4
7.2nm,0.6s
SMRF Simiane la Rot 9.12 25 P Pn 05 24 18.4 +4.0
SMRF S Sn 05 25 53.6 -3.4
7.2nm,0.6s
LFF La Frestale 9.13 2 *e*Pn Pn 05 24 14.4 -0.1
LFF *e*Sn Sn 05 25 53.4 -3.7
42nm,0.4s
LFF La Frestale 9.13 2 P Pn 05 24 14.4 -0.1
LFF S Sn 05 25 53.4 -3.7
21nm,0.4s
FRF La Foret Royal 9.18 31 *e*Pn Pn 05 24 14.8 -0.3
FRF *e*Sn Sn 05 25 54.4 -3.8
21nm,0.5s
FRF La Foret Royal 9.18 31 P Pn 05 24 14.8 -0.3
FRF S Sn 05 25 54.4 -3.8
11nm,0.5s
EAH EAH 9.18 246 P Pn 05 24 14.0 -1.2
CAF Calviac 9.21 8 *e*Pn Pn 05 24 16.6 +1.0
CAF *e*Sn Sn 05 25 55.5 -3.7
29nm,0.6s
CAF Calviac 9.21 8 P Pn 05 24 16.6 +1.0
CAF S Sn 05 25 55.5 -3.7
15nm,0.6s
EZAM Zamans 9.41 315 P Pn 05 24 19.2 +0.9
12nm,0.3s,SNR=7.9
EZAM S Sn 05 25 59.9 -4.1
16nm,0.5s,SNR=7.9
EZAM Zamans 9.41 315 P Pn 05 24 19.2 +0.9
EZAM Zamans 9.41 315 Pn 05 24 19.2 +0.9
EPON Pontenova 9.43 325 P Pn 05 24 19.3 +0.7
67nm,0.3s,SNR=7.9
EPON S Sn 05 25 57.3 -7.2
16nm,0.3s,SNR=7.9
EPON Pontenova 9.43 325 Pn 05 24 19.3 +0.7
EAGO Agolada(Pontev 9.51 320 P Pn 05 24 20.4 +0.6
14nm,0.4s,SNR=7.9
EAGO S Sn 05 26 01.9 -4.6
23nm,0.4s,SNR=7.9
EAGO Agolada(Pontev 9.51 320 Pn 05 24 20.4 +0.6
RJF Les Rejaudoux 9.53 5 *e*Pn Pn 05 24 20.1 +0.1
RJF *e*Sn Sn 05 26 03.5 -3.6
28nm,0.6s
PGF Pioggiola 9.56 43 *e*Pn Pn 05 24 19.1 -1.4
PGF *e*Sn Sn 05 26 00.7 -7.1
10.0nm,0.5s
PGF *e*T T 05 32 17.7
VIVF Saint-Julien-l 9.64 19 *e*Pn Pn 05 24 21.5 -0.1
VIVF *e*Sn Sn 05 26 05.2 -4.6
1.5nm,0.2s
SBF Sospel 9.76 32 *e*Pn Pn 05 24 22.2 -0.9
SBF *e*Sn Sn 05 26 07.1 -5.5
26nm,0.8s
ORIF Oris-en-Rattie 10.06 24 *e*Pn Pn 05 24 27.9 +0.6
ORIF *e*Sn Sn 05 26 15.9 -4.2
12nm,0.6s
EMAZ Mazaricos 10.09 318 P Pn 05 24 28.6 +1.0
12nm,0.3s,SNR=7.9
EMAZ S Sn 05 26 14.0 -6.6
6.5nm,0.3s,SNR=7.9
EMAZ Mazaricos 10.09 318 Pn 05 24 28.6 +1.0
MBDF Montbardon 10.20 27 *e*Pn Pn 05 24 30.0 +0.7
MBDF *e*Sn Sn 05 26 18.2 -5.5
8.4nm,0.6s
CLTB Caltabellotta 10.56 77 Pn 05 24 33.8 -0.4
TCF Toulx Ste Croi 10.57 7 *e*Pn Pn 05 24 33.6 -0.7
TCF *e*Sn Sn 05 26 26.6 -6.0
13nm,0.5s
CORL Corleone 10.67 75 Pn 05 24 36.8 +1.1
CASP Castiglione de 10.78 46 Pn Pn 05 24 37.3 +0.2
MFF Saint Martin d 10.79 359 *e*Pn Pn 05 24 36.6 -0.6
MFF *e*Sn Sn 05 26 33.1 -4.7
12nm,0.6s
LPG La Plagne 10.86 25 *e*Pn Pn 05 24 38.6 +0.1
LPG *e*Sn Sn 05 26 34.1 -5.9
2.4nm,0.5s
LPL La Plagne 10.87 25 *e*Pn Pn 05 24 39.0 +0.5
LPL *e*Sn Sn 05 26 34.5 -5.6
1.6nm,0.4s
BGF Bois d'Agland 10.91 10 *e*Pn Pn 05 24 38.0 -0.9
MSSA Maissana 11.07 37 Pn Pn 05 24 42.1 +1.0
SMF Signal de Mont 11.16 13 *e*Pn Pn 05 24 42.4 +0.1
SMF *e*Sn Sn 05 26 41.8 -5.1
6.2nm,0.5s
AVF Avril sur Loir 11.22 11 *e*Pn Pn 05 24 43.1 +0.1
AVF *e*Sn Sn 05 26 43.6 -4.6
4.9nm,0.6s
OSSC Osservatorio P 11.45 44 Pn 05 24 47.4 +1.2
VAE Valguarnera 11.50 78 Pn Pn 05 24 48.5 +1.4
5.0nm,0.3s,baz=230,slow=9.7,SNR=5.4
VAE LR LR 05 29 31.9
comp=Z,295nm,20.5s,baz=296,slow=39
SSF Saint Saulge 11.50 11 *e*Pn Pn 05 24 46.4 -0.6
HYF Humbligny 11.59 8 *e*P Pn 05 24 52.2 +4.0
HYF *e*Sn Sn 05 26 53.3 -4.1
CABF La Chapelle 11.65 20 *e*Pn Pn 05 24 49.7 +0.6
LOR Lormes 11.76 12 *e*P Pn 05 24 56.6 +6.1
baz=191
ZCCA Zocca 11.84 41 Pn 05 24 52.5 +0.9
MURB Monte Urbino 12.04 48 Pn 05 24 56.2 +1.8
NRCA Norcia 12.18 51 Pn 05 24 57.6 +1.3
INTR Introdacqua 12.30 56 Pn 05 24 58.6 +0.6
QUIF Quistinic 12.36 349 *e*Pn Pn 05 24 58.2 -0.5
QUIF *e*Sn Sn 05 27 11.0 -5.2
12nm,0.5s
GRR Gorron 12.60 357 *e*Pn Pn 05 25 01.6 -0.3
GRR *e*Sn Sn 05 27 16.2 -5.8
12nm,0.6s
SGMF Saint Gilles 12.61 351 *e*Pn Pn 05 25 02.2 +0.1
SGMF *e*Sn Sn 05 27 16.6 -5.7
3.6nm,0.5s
TUE Stuetta 12.66 30 Pn 05 25 05.4 +2.4
LDF La Druitiere 12.78 359 *e*Pn Pn 05 25 04.0 -0.4
LDF *e*Sn Sn 05 27 21.1 -5.4
16nm,0.7s
ROSF Rostrenen 12.79 349 *e*Pn Pn 05 25 05.5 +1.0
ROSF *e*Sn Sn 05 27 19.9 -6.8
19nm,0.6s
SFTF Sexfontaines 12.88 15 *e*P Pn 05 25 10.6 +4.7
FLN La Foliniere 12.96 358 *e*Pn Pn 05 25 06.0 -0.8
baz=177
FLN *e*Sn Sn 05 27 25.2 -5.6
4.3nm,0.4s
HINF Hinteralfeld 12.96 20 *e*P Pn 05 25 11.3 +4.3
DAVOX Davos/Dischmat 13.12 30 Pn Pn 05 25 11.0 +1.7
0.7nm,0.3s,baz=218,slow=10,SNR=4.1
DAVOX LR LR 05 30 26.0
comp=Z,1µm,18.6s,baz=218,slow=38
MEZF Maizieres J'vi 13.17 14 *e*P Pn 05 25 14.3 +4.6
CTI Castel Tesino 13.36 37 P Pn 05 25 14.1 +1.7
CTI Castel Tesino 13.36 37 Pn 05 25 14.1 +1.7
ECH Echery 13.41 20 P P 05 25 18.1 -4.4
ECH Echery 13.41 20 P 05 25 18.1 -4.4
SGRT San Giovanni R 13.46 59 Pn 05 25 16.1 +2.3
DAVA Damuels 13.53 29 *i* P Pn 05 25 18.5 +3.7
60nm,1.3s,SNR=9.2
TIP Timpagrande 13.53 71 ⇓P Pn 05 25 18.5 +3.7
TIP Timpagrande 13.53 71 Pn 05 25 16.8 +2.0
FETA Feichten 13.67 32 *i* P P 05 25 21.6 -4.0
66nm,1.5s,SNR=22

TAM Tamanrasset 13.76 159 P Pn 05 25 15.7 -2.4
TAM Tamanrasset 13.76 159 Pn 05 25 15.7 -2.4
BFO Black Forest 13.87 23 P Pn 05 25 19.6 +0.4
BFO Black Forest 13.87 23 Pn 05 25 19.6 +0.4
DUGI Dugi Otok 13.99 50 *i* P Pn 05 25 20.8 -0.1
SQTA Sankt Quirin 14.03 32 *i* P P 05 25 25.8 -3.7
108nm,1.4s,SNR=24
STAL STALIGIAL 14.03 38 Pn 05 25 24.0 +2.4
RETA Reutte 14.05 31 *i* P Pn 05 25 25.1 +3.2
58nm,1.2s,SNR=9.8
MOTA Moosalm 14.08 32 *i* P Pn 05 25 25.7 +3.4
142nm,1.5s,SNR=22
NVLJ Novalja 14.17 47 *i* P Pn 05 25 23.2 -0.2
ZIRJ Zirje 14.19 52 *i* P Pn 05 25 25.5 +1.8
WTTA Wattenberg 14.25 33 *i* P P 05 25 29.2 -2.8
94nm,1.5s,SNR=22
ABTA Abfaltersbach 14.28 36 *i* P Pn 05 25 28.4 +3.4
44nm,1.4s,SNR=15
WATA Walderalm 14.28 33 *i* P Pn 05 25 28.7 +3.6
144nm,1.4s,SNR=12
MORI Morici 14.33 51 *i* P Pn 05 25 27.5 +1.9
WLF Walferdange 14.50 15 Pn Pn 05 25 26.7 -1.3
WLF sPn P 05 25 32.2 -2.4
WLF Walferdange 14.50 15 P Pn 05 25 24.1 -3.9
WLF Walferdange 14.50 15 Pn 05 25 24.1 -3.9
BAIF Baives 14.53 10 *e*P P 05 25 32.7 -2.2
CADS Cadrg 14.54 40 *e*Pn Pn 05 25 29.4 +0.9
DOU Dourbes 14.62 11 sPn P 05 25 33.8 -2.2
DOU Dourbes 14.62 11 P P 05 25 35.9 -0.1
DOU PnPn **PnPn** 05 25 37.7 +0.1
DOU pP Pn 05 25 38.4 +8.8
DOU sP 05 25 40.6
GIVF Givet 14.67 12 *e*P P 05 25 34.5 -1.9
UDBI Udbina 14.70 49 *i* P Pn 05 25 32.4 +1.7
MYKA Terra Mystica 14.76 39 *i* P Pn 05 25 33.8 +2.3
54nm,1.5s,SNR=23
KIJV Kijevo 14.84 52 *i* P Pn 05 25 31.0 -1.6
LJU Ljubljana 14.84 42 *e*Pn Pn 05 25 33.6 +1.0
BMRD Maredsous 14.85 11 sPn P 05 25 36.8 -1.7
BMRD PnPn **PnPn** 05 25 40.9 +0.2
KBA Koelnbreinsper 14.92 37 *i* P Pn 05 25 36.3 +2.5
51nm,1.2s,SNR=6.1
MAKA Makarska 14.92 55 *i* P Pn 05 25 33.4 -0.2
BOJS Bojanci 14.93 45 *e*Pn Pn 05 25 33.9 +0.2
SCTE Santa Cesarea 14.99 68 Pn Pn 05 25 34.4 -0.2
SCTE IAmb IAmb 05 25 41.7
comp=Z,33nm,0.8s
RICI Ricice 15.09 54 P Pn 05 25 35.7 -0.2
OZLJ Ozalj 15.11 45 *i* P Pn 05 25 36.9 +0.7
OBKA Obir 15.15 41 *i* P Pn 05 25 38.8 +2.0
comp=Z,108nm,1.4s,SNR=20
STON Ston 15.22 57 *i* P Pn 05 25 35.5 -2.1
MEM Membach 15.37 14 Pn Pn 05 25 37.1 -2.5
MEM pP P 05 25 46.3 +2.0
MEM PbPb **PbPb** 05 26 21.1 -9.1
DBRK Dubrovnik 15.45 58 *i* P Pn 05 25 33.0 -7.7
SOKA Soboth 15.51 41 *i* P Pn 05 25 43.4 +1.8
comp=Z,65nm,1.4s,SNR=35
PTJ Puntijarka 15.57 45 P Pn 05 25 42.4 +0.1
HCY Herceg Novi 15.62 59⇑ *i* P Pn 05 25 43.1 +0.2
BRY Bratogost 15.80 58⇑ *i* P Pn 05 25 46.2 +0.8
BUM Brajici-Budva 15.85 60⇑ *i* P Pn 05 25 45.8 -0.2
MOSL Moslavina 15.86 47 *i* P Pn 05 25 45.9 -0.2
MOA Molln 15.90 37 *e*Pn Pn 05 25 47.6 +1.0
comp=Z,54nm,1.3s,SNR=17
KEK Kerkira 15.94 70 P Pn 05 25 45.6 -1.5
CEME Cevo 15.95 59⇑ *i* P Pn 05 25 46.9 -0.3
KALN Kalnik 15.97 45 *i* P Pn 05 25 47.1 -0.4
ULC Ulcinj 16.00 62⇑ *i* P Pn 05 25 47.2 -0.7
GRA1 Grafenberg Arr 16.02 27 Pn 05 25 48.5 +0.5
GRA1 IAmb IAmb 05 25 56.6
comp=Z,63nm,1.0s
GRF Grafenberg Arr 16.02 27 *e*P P 05 25 52.1 +0.6
comp=Z,80nm,1.2s,baz=214,slow=12
GRF Grafenberg Arr 16.02 27 P Pn 05 25 48.5 +0.5
GRF pmax pmax
comp=Z,63nm,1.0s
DRME Dracevica, Mon 16.03 61⇑ *i* P Pn 05 25 48.2 +0.1
NKME Niksic 16.05 59⇓ *i* P Pn 05 25 49.3 +0.9
MACI Morro de la Ar 16.07 247 Pn Pn 05 25 47.7 -1.3
MACI IAmb IAmb 05 25 51.3
comp=Z,132nm,1.4s
NKY Niksic 16.09 59⇓ *i* P Pn 05 25 49.7 +0.6
ARSA Arzberg 16.14 40 *e*P P 05 25 52.2 -0.6
comp=Z,90nm,1.3s,SNR=24
PDG Podgorica 16.15 60 ⇓P Pn 05 25 51.2 +1.5
PDG Podgorica 16.15 60 Pn 05 25 49.4 -0.3
PDG IAmb IAmb 05 26 07.4
comp=Z,107nm,1.1s
TTG Podgorica 16.15 60⇑ *i* P Pn 05 25 49.3 -0.4
UPM Unac-Piva 16.16 57⇓ *i* P Pn 05 25 50.5 +0.4
TPE Tepelena 16.19 68 P Pn 05 25 50.3 0.0
TIR Tirane 16.30 64 ⇑P P 05 25 54.2 -0.4
TIR Tirane 16.30 64 P Pn 05 25 51.8 +0.2
TIR pmax pmax
comp=Z,77nm,1.2s
TIR Tirane 16.30 64 Pn 05 25 51.8 +0.2
TIR IAmb IAmb 05 26 07.7
comp=Z,77nm,1.2s
IGT Igoumenitsa 16.33 71 P Pn 05 25 48.9 -3.1
GEC2 GERESS Array S 16.36 33 Pn 05 25 52.6 +0.1
GERES GERESS Array B 16.36 33 Pn Pn 05 25 52.9 +0.5
comp=Z,1.3nm,0.3s,baz=214,slow=11,SNR=63
GERES LR LR 05 32 37.2
comp=Z,838nm,18.5s,baz=238,slow=39
FSK Fiskardo 16.41 75 P Pn 05 25 54.6 +1.5
KOME Kolasin 16.46 59⇑ *i* P Pn 05 25 53.8 0.0
LKD2 Lefkada island 16.51 74 P Pn 05 25 55.4 +1.0
KHC Kasperske Hory 16.52 32 *ce*P Pn 05 25 54.9 +0.5
KHC pmax pmax
comp=Z,134nm,1.7s
KHC Kasperske Hory 16.52 32 *e*P Pn 05 25 55.1 +0.7
KHC *ex* x 05 26 08.2
KHC *ex* x 05 26 20.0
KHC AMS AMS 05 33 10.0
comp=Z,1µm,11.9s
KHC Kasperske Hory 16.52 32 Pn 05 25 54.3 -0.1
PLE Pljevlja 16.54 57⇓ *i* P Pn 05 25 55.6 +0.8
PVY Plav 16.69 60⇓ *i* P P 05 26 00.4 +1.3
IVA Berane 16.73 59⇓ *i* P Pn 05 25 57.2 -0.1
CONA Conrad Observa 16.75 39 *e*Pn Pn 05 25 58.5 +1.0
comp=Z,71nm,1.5s,SNR=24
PHP Peshkopia 16.80 63 P P 05 25 59.4 -0.8
NKC Novy Kostel 16.92 28 *e*P P 05 26 08.1 +6.7
NKC *ex* x 05 26 13.0
NKC AMS AMS 05 32 20.0
comp=Z,900nm,16.0s
OHR Ohrid 16.93 66 *i* P Pn 05 26 00.4 +0.6
OHR Ohrid 16.93 66 *i* P Pn 05 26 00.4 +0.6
PENT Pentalofos 17.03 69 P P 05 26 03.1 +0.3
PBCC Pribram 17.11 32 *e*P P 05 26 05.3 +1.7
KPRO Kipourio 17.17 70 P P 05 26 04.8 +0.5
DIVS Divibare 17.22 55 Pn 05 26 02.9 -0.5
FNA Florina 17.30 67 P Pn 05 26 04.6 +0.2
FNA Florina 17.30 67 P Pn 05 26 04.5 +0.2
FNA pmax pmax
comp=Z,29nm,1.3s
FNA Florina 17.30 67 Pn 05 26 04.5 +0.1
DRO Drossia 17.30 77 P P 05 26 06.3 +0.5
EVR Evrytania 17.41 73 P P 05 26 08.0 +0.9
ITM Ithomi 17.48 79 P Pn 05 26 04.9 -1.7
TREC Trest 17.49 35 AMS AMS 05 33 30.0
comp=Z,1µm,14.4s
KZN Kozani 17.52 69 P Pn 05 26 07.9 +0.7
ZST Bratislava 17.56 40 *e*P P 05 26 09.9 +1.4
ZST pmax pmax
comp=Z,22nm,0.9s
ZST Bratislava 17.56 40 *e*P P 05 26 09.9 +1.4
PRU Pruhonice 17.57 32 *e*P P 05 26 09.9 +1.2
PRU MLR MLR
comp=Z,900nm,14.9s
PRU Pruhonice 17.57 32 *e*P P 05 26 09.9 +1.2
PRU AMS AMS 05 33 00.0
comp=Z,900nm,14.9s
SKO Skopje 17.59 63 *i* P Pn 05 26 08.0 +0.1
SKO Skopje 17.59 63 *i* P Pn 05 26 08.0 +0.1
PRA Prague 17.59 32 AMS AMS 05 33 00.0
comp=Z,500nm,14.9s
THL Klokotos Trika 17.62 71 P P 05 26 09.9 +0.6
GOPC GO Pecny, Ondr 17.62 32 *e*P P 05 26 09.2 -0.1
GOPC MLR MLR
comp=Z,900nm,15.1s
GOPC GO Pecny, Ondr 17.62 32 *e*P P 05 26 09.2 -0.1

GOPC AMS AMS 05 33 00.0
comp=Z,900nm,15.1s
KALE Kalithea 17.65 75 P **Pn 05 26 04.6 -4.1**
KLV Kalavryta, Ach 17.65 76 P **P 05 26 11.0 +1.3**
MODS Modra-Piesok 17.76 40 *e*P **P 05 26 11.7 +0.9**
MODS pmax pmax
comp=Z,47nm,1.3s
MODS Modra-Piesok 17.76 40 *e*P **P 05 26 11.6 +0.8**
KRUC Moravsky 17.77 37 *e*PN **Pn 05 26 10.5 +0.5**
AGG Agios Georgios 17.83 73 P **Pn 05 26 10.5 -0.4**
AGG Agios Georgios 17.83 73 P **Pn 05 26 11.0 +0.1**
AGG pmax pmax
comp=Z,43nm,1.1s
AGG Agios Georgios 17.83 73 P **Pn 05 26 11.0 +0.1**
PVCC Panska Ves 17.99 31 AMS AMS 05 33 30.0
comp=Z,1μm,14.6s
CLL Collm 18.00 27 *e*(P) **P 05 26 15.0 +1.7**
CLL *i* sP **sP 05 26 18.5 -0.1**
comp=Z,18nm,1.4s
CLL *i* PP **PnPn 05 26 23.0 -0.8**
CLL *e*PPP PPP 05 26 32.0
CLL *e*S **S 05 29 42.0 +2.6**
CLL Lmax 05 33 00.0
CLL Lm MLR 06 41 00.0
comp=N,600nm,21.6s
CLL Lm MLR 06 41 00.0
comp=E,300nm,21.2s
CLL Lm MLR 06 41 00.0
comp=Z,900nm,21.0s
CLL Collm 18.00 27 *e*P **P 05 26 15.0 +1.7**
SRO2 Moca 18.00 43 *e*P **P 05 26 14.7 +1.4**
SRO2 Moca 18.00 43 *e*P **P 05 26 14.7 +1.4**
BRG Berggiesshubel 18.01 29 *e*P **P 05 26 14.8 +1.4**
comp=Z,18nm,1.4s
BRG *e* 05 26 17.8
comp=Z,21nm,1.1s
BRG S **Sn 05 29 33.0 -0.6**
comp=N,1μm,11.6s
comp=E,1μm,11.0s
comp=Z,1μm,12.0s
VRAC Vranov 18.03 37 P **P 05 26 14.6 +0.9**
comp=Z,0.2nm,0.3s,baz=230,slow=12,SNR=18
VRAC LR LR 05 33 47.2
comp=Z,658nm,19.1s,baz=248,slow=39
VRAC Vranov 18.03 37 *e*PN **P 05 26 14.1 +0.4**
VRAC Vranov 18.03 37 ⇑P **P 05 26 15.1 +1.4**
LIT Litokhoron 18.04 70 P **Pn 05 26 13.4 -0.1**
LIT Litokhoron 18.04 70 P **Pn 05 26 13.0 -0.5**
LIT pmax pmax
comp=Z,66nm,1.3s
LIT Litokhoron 18.04 70 Pn 05 26 13.0 -0.5
AXAR Agios Charalam 18.07 74 P **Pn 05 26 14.1 +0.3**
JAVC Velka Javorina 18.27 39 *e*PN **P 05 26 17.6 +1.2**
VAY Valandovo 18.28 66 *i* P **Pn 05 26 15.8 -0.6**
VAY Valandovo 18.28 66 *i* P **Pn 05 26 15.8 -0.6**
LOUT Loutraki 18.30 76 P **Pn 05 26 15.5 -1.2**
THE Thessaloniki 18.47 68 P **P 05 26 18.0 -0.6**
KNT Kendrikon 18.50 66 P **Pn 05 26 19.4 +0.3**
DID Didima 18.52 78 P **Pn 05 26 19.5 +0.1**
UPC Upice 18.60 33 *e*P **Pn 05 26 23.3 +3.1**
UPC MLR MLR
comp=Z,900nm,14.4s
UPC Upice 18.60 33 *e*P **Pn 05 26 23.3 +3.1**
UPC *e*pP **sP 05 26 28.1 +2.9**
UPC AMS AMS 05 33 40.0
comp=Z,900nm,14.4s
MDVR Moldovita 18.62 55 ⇑P **Pn 05 26 21.3 +0.7**
DPC Dobruska-Polom 18.62 34 *e*P **Pn 05 26 22.9 +2.3**
DPC MLR MLR
comp=Z,600nm,13.1s
DPC Dobruska-Polom 18.62 34 *e*P **Pn 05 26 22.9 +2.3**
DPC *e*pP **sP 05 26 30.8 +5.3**
DPC AMS AMS 05 33 40.0
comp=Z,600nm,13.1s
VYHS Vyhne 18.66 42 *e*P **Pn 05 26 21.9 +0.9**
VYHS pmax pmax
comp=Z,46nm,1.4s
VYHS Vyhne 18.66 42 *e*P **Pn 05 26 21.9 +0.9**
CHVC Chvalec 18.67 33 *e*P **Pn 05 26 22.4 +1.2**
CHVC *ex* x 05 26 27.9
CHVC AMS AMS 05 33 50.0
comp=Z,800nm,16.2s
OSTC Ostas 18.72 33 *e*P **Pn 05 26 25.4 +3.7**
OSTC AMS AMS 05 33 40.0
comp=Z,700nm,15.1s
KKB Krupnik 18.76 64 *i* P **Pn 05 26 22.8 +0.5**
MORC Moravsky Berou 18.80 37 *e*PN **P 05 26 22.3 +0.1**
MORC Moravsky Berou 18.80 37 ⇑P **Pn 05 26 23.7 +1.0**
MORC Moravsky Berou 18.80 37 P **P 05 26 22.6 +0.4**
MORC pmax pmax
comp=Z,26nm,1.3s
MORC Moravsky Berou 18.80 37 P **P 05 26 22.6 +0.4**
BZS Buzias 18.88 52 ⇑P **Pn 05 26 24.6 +1.0**
PSZ Piszkesteto 18.92 44 ⇓P **Pn 05 26 25.4 +1.1**
PSZ Piszkesteto 18.92 44 P **Pn 05 26 25.1 +0.9**
PSZ pmax pmax
comp=Z,92nm,1.1s
PSZ Piszkesteto 18.92 44 P **Pn 05 26 25.1 +0.9**
PSZ IAmb IAmb 05 26 29.0
comp=Z,92nm,1.1s
SRS Serrai 19.01 67 P **P 05 26 24.3 -0.3**
VTS Vitosha 19.03 62 ⇑P **Pn 05 26 25.6 -0.1**
VTS Vitosha 19.03 62 *i* P **P 05 26 24.6 -0.4**
VTS Vitosha 19.03 62 P **P 05 26 25.2 +0.2**
VTS pmax pmax
comp=Z,71nm,1.5s
VTS Vitosha 19.03 62 P **P 05 26 25.1 +0.2**
AOS Alonnisos 19.04 73 P **P 05 26 22.4 -2.5**
HERR Herculane 19.12 55 ⇓P **P 05 26 26.2 +0.4**
OKC Ostrava-Krasne 19.14 37 *e*P **Pn 05 26 26.6 -0.1**
OKC MLR MLR
comp=Z,1μm,15.3s
OKC Ostrava-Krasne 19.14 37 *e*P **Pn 05 26 26.6 -0.1**
OKC AMS AMS 05 34 20.0
comp=Z,1μm,15.3s
SIRR Siria 19.18 50 ⇑P **Pn 05 26 28.4 +1.1**
MMB Musomiste 19.19 65 *i* P **P 05 26 26.9 +0.4**
LANS Liptovska Anna 19.39 41 *e*P **Pn 05 26 30.8 +1.0**
LANS pmax pmax
comp=Z,17nm,0.9s
LANS Liptovska Anna 19.39 41 *e*P **Pn 05 26 30.8 +1.0**
GZR Gura Zlata 19.55 54 ⇓P **Pn 05 26 31.4 -0.4**
KECS Kecovo 19.56 43 *e*P **Pn 05 26 32.4 +0.6**
KECS pmax pmax
comp=Z,29nm,1.2s
KECS Kecovo 19.56 43 *e*P **Pn 05 26 32.4 +0.6**
MPEP Malo Peshtene 19.57 60 *i* P **Pn 05 26 33.4 +1.4**
ESK Eskdalemuir 19.65 354 P **P 05 26 31.5 +0.1**
ESK pmax pmax
comp=Z,45nm,1.1s
ESK Eskdalemuir 19.65 354 P **P 05 26 31.5 +0.1**
ESK IAmb IAmb 05 26 37.0
comp=Z,45nm,1.1s
EKA Eskdalemuir Ar 19.67 354 P **P 05 26 32.2 +0.6**
baz=159,slow=9.5,SNR=28
EKA LR LR 05 34 49.0
comp=Z,1μm,19.3s,baz=215,slow=39
PGB Panagyurishte 19.69 63 *i* P **Pn 05 26 33.1 -0.4**
THAS Thassos island 19.79 69 P **P 05 26 31.3 -1.8**
RZN Rozhen 19.93 65 *i* P **Pn 05 26 36.8 +0.3**
NIE Niedzica 19.98 41 *e*P **Pn 05 26 37.7 +0.8**
NIE LMZ LR 05 36 42.9
comp=Z,0.4nm,11.8s
PLD Plovdiv 20.00 64 *i* P **P 05 26 35.9 +0.6**
IDI Anoyia 20.05 84 P **Pn 05 26 38.3 +0.5**
comp=Z,15nm,0.5s,baz=277,slow=14,SNR=5.5
IDI Anoyia 20.05 84 ⇓P **Pn 05 26 37.9 +0.1**
IDI Anoyia 20.05 84 P **Pn 05 26 37.3 -0.5**
IDI IAmb IAmb 05 26 52.9
comp=Z,64nm,1.1s
DRGR 20.06 50 ⇑P **P 05 26 36.7 +0.7**
DRGR 20.06 50 *i* P **Pn 05 26 37.6 -0.2**
PLVB Pleven 20.20 61 ⇑P **Pn 05 26 39.6 +0.1**
OJC Ojcow 20.20 38 *e*P **Pn 05 26 39.1 -0.4**
OJC LMZ LR 05 35 23.0
comp=Z,0.8nm,15.2s
OJC Ojcow 20.20 38 P **P 05 26 38.2 +0.7**
OJC pmax pmax
comp=Z,66nm,1.5s
OJC Ojcow 20.20 38 P **P 05 26 38.2 +0.7**
OJC IAmb IAmb 05 26 45.7
comp=Z,66nm,1.5s
LOT Lotru 20.22 54 ⇑P **P 05 26 38.7 +0.9**
KDZ Kurdzhali 20.45 66 *i* P **P 05 26 39.6 -0.6**

RDO Rodhopi 20.47 67 P **P 05 26 39.2 -1.3**
TRPA Tarpa 20.56 46 ⇓P **P 05 26 42.5 +1.1**
UZH Uzhgorod 20.66 45 *e*P **P 05 26 42.9 +0.4**
UZH *e* 05 26 55.9
UZH *e* 05 27 07.1
UZH *e*S **S 05 30 28.0 -5.0**
UZH MLR MLR
comp=N,140nm,13.0s
UZH MLR MLR
comp=E,130nm,13.0s
UZH MLR MLR
comp=Z,70nm,13.0s
HUMR Humele 20.75 58 ⇑P **P 05 26 44.2 +0.8**
ARR Arges 20.77 55 ⇑P **P 05 26 44.5 +0.8**
COPA Copaceanca 20.81 59 ⇓P **P 05 26 45.1 +1.0**
ALN Alexandroupoli 20.83 68 P **P 05 26 44.7 +0.4**
ALN pmax pmax
comp=Z,36nm,1.4s
ALN Alexandroupoli 20.83 68 P **P 05 26 44.7 +0.4**
ELND Elena 21.00 62 ⇑P **P 05 26 47.3 +1.1**
MTUR Matau 21.01 56 ⇑P **P 05 26 47.6 +1.2**
SZH Strazhica 21.11 62 *i* P **P 05 26 47.8 +0.4**
GKP Gorka Klasztor 21.15 29 *e*P **P 05 26 50.0 +2.3**
GKP LMZ LR 05 37 24.8
comp=Z,0.6nm,11.3s
DOPR Dopca 21.46 54 ⇑P **P 05 26 52.1 +0.9**
MUD Monsted U'grnd 21.52 14 *i* P **P 05 26 53.2 +1.6**
MUD pmax pmax
comp=Z,69nm,1.1s
MUD Monsted U'grnd 21.52 14 *i* P **P 05 26 53.2 +1.6**
comp=Z,69nm,1.1s
MLR Muntele Rosu 21.68 56 P **P 05 26 54.5 +0.9**
comp=Z,24nm,0.9s,baz=177,slow=3.2,SNR=25
MLR LR LR 05 34 34.2
comp=Z,414nm,19.9s,baz=286,slow=35
MLR Muntele Rosu 21.68 56 ⇑P **P 05 26 55.0 +1.3**
MLR Muntele Rosu 21.68 56 P **P 05 26 54.4 +0.7**
MLR pmax pmax
comp=Z,150nm,1.4s
MLR Muntele Rosu 21.68 56 P **P 05 26 54.4 +0.7**
BEL Belsk 21.71 36 *e*P **P 05 26 55.8 +2.2**
BEL LMZ LR 05 36 52.6
comp=Z,0.7nm,13.3s
BSD Bornholm Skovb 21.79 23 *i* P **P 05 26 56.8 +2.3**
BSD pmax pmax
comp=Z,49nm,0.9s
BSD Bornholm Skovb 21.79 23 *i* P **P 05 26 56.8 +2.3**
comp=Z,48nm,0.9s
KARP Karpathos 21.84 83 P **P 05 26 57.2 +1.9**
BURAR Bucovina Array 21.95 50 ⇑P **P 05 26 58.4 +1.9**
BUR08 Bucovina Ar. S 21.95 50 P **P 05 26 58.5 +1.9**
BUR08 IAmb IAmb 05 27 00.8
comp=Z,79nm,1.4s
BISRR Bisoca 22.21 56 ⇓P **P 05 27 01.2 +1.9**
LVV L'vov 22.24 44 *e*P **P 05 27 00.8 +1.3**
LVV *e* 05 27 30.8
LVV MLR MLR
comp=N,400nm,14.0s
LVV MLR MLR
comp=E,400nm,14.0s
LVV MLR MLR
comp=Z,400nm,14.0s
BIZ Bicaz 22.26 52 ⇑P **P 05 27 00.9 +1.2**
PLOR Plostina 22.26 55 ⇓P **P 05 27 00.8 +1.0**
VRI Vrincioaia 22.32 55 ⇓P **P 05 27 02.2 +1.8**
TESR Tescani 22.47 53 ⇑P **P 05 27 03.2 +1.2**
TOA0 Torodi Ar. Sit 22.60 176 P **P 05 27 03.4 -0.1**
SNR=14
TOA0 Torodi Ar. Sit 22.60 176 P **P 05 27 03.0 -0.5**
TORD Torodi Ar. Bea 22.60 176 P **P 05 27 02.7 -0.8**
comp=Z,26nm,0.8s,baz=353,slow=11,SNR=97
MANT Manisa 22.69 75 P **P 05 27 05.1 +0.5**
ELL Elmali 23.89 79 P **P 05 27 17.7 +1.1**
ELL pmax pmax
comp=Z,191nm,1.2s
ELL Elmali 23.89 79 P **P 05 27 17.7 +1.1**
KIS Kishinev 24.04 53 ⇓*i*P **P 05 27 17.0 -0.7**
comp=Z,180nm,1.6s
KIS *e*S **S 05 31 32.0 -2.5**
KIS *e*SS SnSn 05 32 50.0 +35
KIS *e*LQ LQ 05 35 00.0
KIS LRM MLR 05 38 00.0
comp=Z,600nm,16.0s
KIS Kishinev 24.04 53 ⇓*i*P **P 05 27 17.0 -0.7**
KIS *e*S **S 05 31 32.0 -2.5**
KIS pmax pmax
comp=Z,180nm,1.6s
KIS MLR MLR
comp=Z,600nm,16.0s
KIS MLR MLR
comp=N,300nm,17.0s
SUW Suwalki 24.21 34 P **P 05 27 20.4 +1.1**
SUW Suwalki 24.21 34 P **P 05 27 20.4 +1.1**
MDUB Mudurnu 24.71 70 P **P 05 27 24.7 +0.6**
AKASG Malin Array Be 25.61 45 P **P 05 27 30.6 -1.3**
comp=N,17nm,0.8s,baz=246,slow=10,SNR=16
AKASG LR LR 05 38 18.5
comp=N,208nm,18.8s,baz=255,slow=38
AKBB Malin Array Si 25.61 45 *ce*P **P 05 27 30.8 -1.2**
AKBB Malin Array Si 25.61 45 P **P 05 27 30.4 -1.5**
HFS Hagfors 25.85 15 P **P 05 27 32.8 -1.3**
comp=N,6.8nm,0.5s,baz=196,slow=10,SNR=26
HFS LR LR 05 38 10.9
comp=N,354nm,19.7s,baz=208,slow=38
NC602 NORSAR Array S 25.97 13 P **P 05 27 37.5 +2.3**
NB2 NORSAR Subarra 26.20 12 P **P 05 27 37.1 -0.2**
comp=Z,24nm,1.7s,baz=201,slow=9.3
NOA NORSAR Array B 26.20 12 P **P 05 27 35.9 -1.4**
comp=Z,0.8nm,0.6s,baz=216,slow=9.9,SNR=3.6
NOA PcP **PcP 05 31 04.4 +0.6**
comp=Z,1.2nm,0.9s,baz=196,slow=2.2,SNR=3.3
NOA LR LR 05 37 51.7
comp=Z,267nm,20.9s,baz=200,slow=36
NACGM Naroch 26.42 35 *e*P **P 05 27 39.0 -0.3**
NACGM *e*S **S 05 32 15.0 +2.6**
NACGM *e*LQ LQ 05 36 40.0
NACGM *e*LR LR 05 38 35.0
BRTR Keskin Array B 26.59 71 P **P 05 27 41.0 -0.2**
comp=Z,1.7nm,0.9s,baz=260,slow=7.4,SNR=4.3
BRTR Keskin Array B 26.59 71 P **P 05 27 41.0 -0.2**
ILGA Ilgaz 26.63 69 P **P 05 27 41.8 +0.2**
CSS Mathiatis 26.92 82 P **P 05 27 44.2 +0.2**
CSS IAmb IAmb 05 28 01.6
comp=Z,26nm,0.9s
SIM Simferopol' 27.20 60 P P 05 27 36.0 -10
KIZK Mersin 27.30 78 *e*P **P 05 27 48.4 +1.0**
CORM Corum 27.34 70 *e*P **P 05 27 43.8 -4.1**
EREN Erenkoy 27.48 81 *e*P **P 05 27 48.9 -0.1**
MERS Mersin 27.55 78 *e*P **P 05 27 49.9 +0.2**
YOZ Yozgat 27.89 72 *e*P **P 05 27 48.2 -4.7**
KARA Karaisali 27.91 77 *e*P **P 05 27 52.9 0.0**
BNN Bunyan 28.36 73 *e*P **P 05 27 57.5 +0.5**
KVT Kavak 28.39 68 *e*P **P 05 27 57.1 -0.1**
KOZT Kozan 28.49 76 *e*P **P 05 27 58.1 0.0**
VSU Vasula 28.61 29 *i* P **P 05 28 00.1 +1.3**
VSU pmax pmax
comp=Z,32nm,1.1s
TOKT Tokat 28.80 70 *e*P **P 05 28 02.5 +1.7**
SARI SarD1z-Kayseri 28.85 74 *e*P **P 05 28 02.1 +0.7**
YAYL Yayladag 28.94 79 *e*P **P 05 28 03.9 +1.7**
TAHT Tahtakopru-Hat 28.94 78 *e*P **P 05 28 03.8 +1.7**
MMAI Mount Meron Ar 29.04 85 P **P 05 28 04.8 +1.7**
comp=Z,4.6nm,0.4s,baz=263,slow=9.4,SNR=9.5
MMAI LR LR 05 42 07.9
comp=Z,20nm,21.7s,baz=330,slow=42
SVSK Karacayir 29.17 71 *e*P **P 05 28 03.5 -0.5**
KMRS Kahramanmaras 29.34 76 *e*P **P 05 28 05.9 +0.3**
DBIC Dimbokro 29.38 190 P **P 05 28 05.0 -1.0**
comp=Z,8.1nm,0.9s,baz=344,slow=9.4,SNR=6.5
DBIC LR LR 05 40 50.1
comp=Z,1μm,18.5s,baz=357,slow=38
DBIC Dimbokro 29.38 190 P **P 05 28 05.5 -0.5**
TIC Toumodi 29.43 191 *e*PKP1 **P 05 28 03.5 -3.0**
ANN Anapa 29.53 61 *e*P **P 05 28 05.2 -2.0**
ANN *e**PP **pP 05 28 08.5 -2.6**
ANN *e*S **S 05 32 59.7 -1.8**
ANN MLR MLR
comp=E,151nm,13.0s
ANN MLR MLR
comp=Z,447nm,15.0s
ANN MLR MLR
comp=N,297nm,13.0s
GAZ Gaziantep 29.63 76 *e*P **P 05 28 09.5 +1.2**
DARE Darende-Malaty 29.66 73 *e*P **P 05 28 08.7 +0.1**

KIC Kosan Boka 29.66 190 *e*PKP1 P 05 28 03.4 -5.2
comp=N,36nm,1.2s
EIL Elat 29.72 92 P **P 05 28 10.0 +1.0**
comp=N,12nm,0.7s,baz=300,slow=7.3,SNR=10
EIL LR LR 05 41 44.0
comp=N,128nm,19.1s,baz=280,slow=40
LIC Lamto 29.84 191 *e*PKP1 P 05 28 02.6 -7.5
comp=N,18nm,0.9s
FINES FINESS Array B 30.41 24 P **P 05 28 14.6 -0.2**
comp=N,4.9nm,0.6s,baz=218,slow=6.9,SNR=20
FINES LR LR 05 39 45.8
comp=N,160nm,19.6s,baz=221,slow=35
FIA1 FINESS Array S 30.41 24 P **P 05 28 15.0 +0.2**
FIA1 IAmb IAmb 05 28 23.4
comp=Z,30nm,1.2s
MALT Malatya 30.43 74 *e*P **P 05 28 17.3 +1.9**
ASF Jabal al Asfar 30.49 86 P **P 05 28 17.8 +1.8**
comp=Z,3.8nm,0.9s,baz=234,slow=6.2,SNR=14
SVRC Sivrice-ELAZID 31.11 73 *e*P **P 05 28 19.5 -1.9**
PTK Pertek 31.11 72 *e*P **P 05 28 21.4 -0.1**
SOC Sochi 31.11 63 *e*P **P 05 28 20.1 -1.1**
SOC *e* 05 29 21.5
SOC *e*S **S 05 33 26.6 +0.2**
SOC *e*SS **SnSn 05 35 10.7 +3.0**
SOC pmax pmax
comp=Z,15nm,0.8s
SOC MLR MLR
comp=Z,81nm,12.0s
OBN Obninsk 31.46 41 LR LR 05 41 49.9
comp=Z,108nm,19.6s,baz=228,slow=38
OBN Obninsk 31.46 41 *e*P **P 05 28 23.4 -0.6**
OBN *e* 05 29 24.7
OBN *e*S **S 05 33 35.1 +3.6**
OBN *e*SS **SnSn 05 35 13.5 -2.3**
OBN pmax pmax
comp=Z,16nm,1.2s
OBN MLR MLR
comp=Z,448nm,16.0s
VSR Storozhevoye 31.72 49 *e*P **P 05 28 25.1 -1.3**
VSR pmax pmax
comp=Z,30nm,1.7s
VSR MLR MLR
comp=Z,470nm,13.0s
VORD Divnogorie 31.74 49 *e*P **P 05 28 24.5 -2.1**
VORD pmax pmax
comp=Z,10.0nm,1.6s
LPSR Galich'ya Gora 31.94 46 *e*P **P 05 28 28.2 -0.1**
LPSR pmax pmax
comp=Z,30nm,0.9s
LPSR MLR MLR
comp=Z,530nm,15.0s
BNGB Bingl 32.09 72 *e*P **P 05 28 30.6 +0.6**
MAZI Mazidag 32.13 75 *e*P **P 05 28 30.9 +0.5**
MOS Moscow 32.25 40 *e*P **P 05 28 29.8 -1.3**
MOS *e* 05 29 41.8
KOPR Koprukoy-ERZUR 32.88 70 *e*P **P 05 28 37.3 +0.3**
KIV Kislovodsk 33.27 63 *e*P **P 05 28 36.7 -3.5**
KIV *i* 05 28 51.5
KIV *e* 05 29 47.2
KIV *i*S **S 05 34 04.9 +4.7**
KIV pmax pmax
comp=Z,3.0nm,0.8s
KIV MLR MLR
comp=Z,70nm,15.0s
VRH Novokhopyorsk 33.29 49 *e*P **P 05 28 40.1 -0.1**
VRH pmax pmax
comp=Z,30nm,0.8s
NEY Neytrino 33.30 64 *i* P **P 05 28 42.2 +1.5**
NEY pmax pmax
comp=Z,1.0nm,1.0s
KBZ Khabaz 33.42 63 P **P 05 28 41.7 +0.3**
comp=Z,4.5nm,0.8s,baz=266,slow=8.9,SNR=9.0
KBZ LR LR 05 44 23.8
comp=Z,93nm,18.1s,baz=277,slow=40
KBZ Khabaz 33.42 63 *ce*P **P 05 28 42.4 +1.0**
KBZ pmax pmax
comp=Z,11nm,1.1s
GOF Gofitskoye 33.52 61 ⇑*e*P **P 05 28 42.3 0.0**
GOF pmax pmax
comp=Z,72nm,0.8s
AGRB Hanur-Agry 33.80 71 *e*P **P 05 28 44.7 -0.3**
NCK Nalchik 33.93 63 *i* P **P 05 28 47.6 +1.6**
NCK pmax pmax
comp=Z,20nm,0.4s
AKDM Akdamar-Van 33.97 73 *e*P **P 05 28 47.5 +1.0**
AKH Akhalkalaki 33.98 67 P **P 05 28 46.8 +0.2**
AKH pmax pmax
comp=Z,10.0nm,1.0s
AKH Akhalkalaki 33.98 67 P **P 05 28 46.8 +0.2**
CUKT Cukurca 34.65 75 *e*P **P 05 28 53.3 +0.9**
TBLG Delisi 34.88 67 P **P 05 28 55.1 +0.9**
TBLG pmax pmax
comp=Z,30nm,1.4s
TBLG Delisi 34.88 67 P **P 05 28 55.0 +0.9**
TBLG IAmb IAmb 05 28 58.3
comp=Z,30nm,1.4s
KLMR Klimovskoe 35.31 32 *e*P **P 05 28 55.9 -1.7**
KLMR *e* 05 31 26.5
KLMR pmax pmax
comp=Z,74nm,1.3s
KLMR Klimovskoe 35.31 32 *e*P **P 05 28 55.9 -1.7**
KLMR AMP 05 29 01.2
comp=Z,74nm,1.3s
KLMR *e*PcP **PcP 05 31 26.5 -1.2**
KLMR LQ LQ 05 39 52.8
KLMR LQ LQ 05 39 52.8
KLMR LR LR 05 41 26.5
TMCR Tamitsa 36.38 27 *e*P **P 05 29 05.8 -0.9**
ARCES ARCESS Array B 36.50 15 P **P 05 29 07.7 0.0**
comp=Z,1.7nm,0.6s,baz=212,slow=8.1,SNR=13
ARCES PcP **PcP 05 31 31.0 -0.1**
comp=Z,1.0nm,0.6s,baz=225,slow=2.0,SNR=3.7
ARCES LR LR 05 44 37.9
comp=Z,242nm,20.5s,baz=228,slow=37
AKT Akhty 37.14 67 *e*P **P 05 29 14.0 +0.3**
AKT *e* 05 31 33.2
AKT pmax pmax
comp=Z,42nm,1.6s
KIRV Kirov 39.23 39 P **P 05 29 30.6 -0.3**
comp=Z,16nm,0.8s,baz=260,slow=6.7,SNR=9.5
IVI Ivigtut 39.57 325 P **P 05 29 33.6 0.0**
RAYN Ar Rayn 40.85 95 P **P 05 29 45.4 +0.5**
RAYN pmax pmax
comp=Z,9.0nm,1.3s
RAYN Ar Rayn 40.85 95 P **P 05 29 45.4 +0.5**
SUMG Summit 41.71 344 P **P 05 29 51.8 +0.1**
SUMG pmax pmax
comp=Z,9.0nm,0.9s
SUMG Summit 41.71 344 P **P 05 29 51.8 +0.1**
SUMG Summit 41.71 344 *i* P **P 05 29 54.6 +2.9**
DAG Danmarks Havn 41.93 354 *e*P **P 05 29 54.3 +1.3**
DAG Danmarks Havn 41.93 354 *i* P **P 05 29 54.3 +1.3**
SFJD Kangerlussuaq 42.50 333 P **P 05 29 56.9 -0.8**
comp=Z,6.7nm,0.9s,baz=144,slow=6.0,SNR=4.2
SFJD Kangerlussuaq 42.50 333 P **P 05 29 57.7 0.0**
SFJD IAmb IAmb 05 29 59.1
comp=Z,20nm,1.2s
AKTO Aktyubinsk 43.53 52 P **P 05 30 06.0 -0.3**
comp=Z,3.5nm,0.6s,baz=270,slow=7.9,SNR=13
AKTO Aktyubinsk 43.53 52 P **P 05 30 06.0 -0.3**
ARU Arti 43.82 43 P **P 05 30 08.3 -0.2**
comp=Z,1.5nm,0.3s,baz=260,slow=5.5,SNR=23
ARU Arti 43.82 43 *di*P **P 05 30 08.6 +0.1**
ARU 05 31 53.8
ARU S **S 05 36 40.9 +2.1**
ARU SS **SS 05 39 56.6 +2.1**
ARU pmax pmax
comp=Z,60nm,1.4s
ARU MLR MLR
comp=Z,288nm,14.0s
ARU Arti 43.82 43 P **P 05 30 08.5 0.0**
SVE Sverdlovsk 44.98 43 *e*P **P 05 30 19.1 +1.3**
SVE pmax pmax
comp=Z,50nm,1.7s
ATD Arta Tunnel 45.40 111 P **P 05 30 23.7 +1.9**
comp=Z,3.6nm,0.3s,baz=311,slow=9.3,SNR=6.4
GEYT Alibeck 45.70 69 P **P 05 30 24.1 +0.2**
comp=Z,7.9nm,1.1s,baz=262,slow=10.0,SNR=13
GYA0B ALIBECK ARRAY 45.70 69 P **P 05 30 24.4 +0.6**
GYA0B IAmb IAmb 05 30 26.3
comp=Z,20nm,1.1s
LODK Lodwar 45.71 127 P **P 05 30 24.8 +0.6**
SNR=7.9
MBAR Mbarara 46.03 135 P **P 05 30 27.3 +0.6**
comp=Z,2.6nm,0.3s,baz=322,slow=7.4,SNR=8.3

MBAR Mbarara 46.03 135 *ce* P **P** **05 30 28.2 +1.4**
MBAR pmax pmax
comp=Z,31nm,1.7s
MBAR Mbarara 46.03 135 P **P** **05 30 27.1 +0.4**
NAZ Nazwa, Dubai 48.44 87 P **P** **05 30 45.7 +0.3**
SNR=7.0
NAZ P **P** **05 30 45.7 +0.3**
SNR=7.0
MSFE Esma-Masafi 48.68 86 P **P** **05 30 47.6 +0.4**
SCHQ Schefferville 48.83 315 P **P** **05 30 47.2 -0.8**
comp=Z,4.5nm,0.6s,baz=93,slow=8.5,SNR=5.1
SCHQ LR LR 05 48 48.4
comp=Z,151nm,20.1s,baz=76,slow=33
SCHQ Schefferville 48.83 315 P **P** **05 30 47.5 -0.5**
SCHQ IAmb IAmb 05 30 49.0
comp=Z,11nm,1.1s
HATD Hatta, Dubai 48.89 87 P **P** **05 30 49.2 +0.3**
HATD Hatta, Dubai 48.89 87 P **P** **05 30 48.5 -0.3**
SNR=6.9
HATD P **P** **05 30 48.5 -0.3**
SNR=6.9
ASHO Ashiyiah 48.90 87 P **P** **05 30 48.6 -0.3**
ASHO P **P** **05 30 48.6 -0.3**
UOSS Minazif 48.90 87 *i* P **P** **05 30 48.2 -0.7**
SNR=5.3
UOSS Minazif 48.90 87 P **P** **05 30 48.4 -0.5**
UOSS Minazif 48.90 87 P **P** **05 30 48.1 -0.7**
HRA Herat 49.98 72 P **P** **05 30 57.9 +0.6**
ABTO Aybut 50.26 97 P **P** **05 31 00.2 +0.9**
KMBO Kilima Mbogo 50.38 129 P **P** **05 31 03.2 +2.7**
comp=Z,7.0nm,0.7s,baz=329,slow=8.0,SNR=13
KMBO LR LR 05 54 09.1
comp=Z,683nm,18.1s,baz=304,slow=38
KMBO Kilima Mbogo 50.38 129 *i* P **P** **05 31 02.7 +2.1**
SNR=7.5
KMBO Kilima Mbogo 50.38 129 P **P** **05 30 59.3 -1.2**
KMBO pmax pmax
comp=Z,25nm,1.3s
KMBO Kilima Mbogo 50.38 129 P **P** **05 30 59.3 -1.2**
KMBO IAmb IAmb 05 31 06.0
comp=Z,25nm,1.2s
BRVK Borovoye 50.80 47 *ce* P **P** **05 31 04.0 +1.0**
BRVK pmax pmax
comp=Z,30nm,1.7s
BRVK Borovoye 50.80 47 P **P** **05 31 03.7 +0.7**
BRVK IAmb IAmb 05 31 07.4
comp=Z,20nm,1.2s
BVAR Borovoye Array 50.87 47 P **P** **05 31 03.8 +0.2**
comp=Z,5.8nm,1.1s,baz=270,slow=4.4,SNR=12
G65A Princeton 51.03 303 P **P** **05 31 05.3 +0.5**
G65A IAmb IAmb 05 31 12.5
comp=Z,25nm,1.3s
CHGR Chuyangaron 53.74 65 P **P** **05 31 25.6 +0.4**
GAR Garm 54.48 64 P **P** **05 31 31.9 +1.3**
BTK Batken 54.48 63 P **P** **05 31 30.4 -0.1**
BTK pmax pmax
comp=Z,27nm,1.5s
BTK Batken 54.48 63 P **P** **05 31 30.4 -0.1**
KBL Kabul 55.15 70 P **P** **05 31 35.9 +0.3**
KBL pmax pmax
comp=Z,10.0nm,1.1s
KBL Kabul 55.15 70 P **P** **05 31 35.9 +0.3**
KBL IAmb IAmb 05 31 45.1
comp=Z,10nm,1.1s
ARSB Arslanbob 55.60 61 P **P** **05 31 38.3 -0.4**
ARSB pmax pmax
comp=Z,17nm,1.3s
ARSB Arslanbob 55.60 61 P **P** **05 31 38.3 -0.4**
ARSB IAmb IAmb 05 31 39.9
comp=Z,17nm,1.2s
NRIK Noril'sk 56.07 25 P **P** **05 31 43.1 +1.7**
comp=Z,6.8nm,1.1s,baz=256,slow=4.4,SNR=12
AAK Ala-Archa 56.22 59 P **P** **05 31 44.8 +1.6**
comp=Z,1.6nm,0.4s,baz=242,slow=6.3,SNR=6.6
AAK Ala-Archa 56.22 59 P **P** **05 31 43.7 +0.6**
AAK pmax pmax
comp=Z,13nm,1.3s
AAK Ala-Archa 56.22 59 P **P** **05 31 43.7 +0.6**
AAK IAmb IAmb 05 31 47.7
comp=Z,13nm,1.3s
KURBB Kurchatov Arra 56.34 49 P **P** **05 31 43.4 -0.3**
comp=Z,5.3nm,0.5s,baz=288,slow=7.8,SNR=45
KURK Kurchatov 56.37 48 P **P** **05 31 43.7 -0.1**
KURK P **P** **05 31 43.7 -0.1**
KURK Kurchatov 56.37 48 *ce* P **P** **05 31 44.0 +0.2**
KURK pmax pmax
comp=Z,32nm,1.7s
KURK Kurchatov 56.37 48 P **P** **05 31 43.9 0.0**
KURK IAmb IAmb 05 31 48.1
comp=Z,17nm,1.1s
TSUM Tsumeb 57.12 160 P **P** **05 31 49.8 +0.3**
TSUM IAmb IAmb 05 31 51.3
comp=Z,16nm,1.1s
RES Resolute Bay 57.17 342 P **P** **05 31 49.4 +0.2**
comp=Z,2.4nm,1.0s,baz=23,slow=3.9,SNR=6.4
RES LR LR 05 54 11.0
comp=Z,308nm,21.5s,baz=56,slow=34
RES Resolute Bay 57.17 342 P **P** **05 31 48.9 -0.2**
RES pmax pmax
comp=Z,6.0nm,1.2s
RES Resolute Bay 57.17 342 P **P** **05 31 48.9 -0.2**
D53A Lac Vacive, Po 57.23 307 P **P** **05 31 49.7 -0.4**
D53A IAmb IAmb 05 31 57.4
comp=Z,8.7nm,1.0s
LSZ Lusaka 57.28 147 P **P** **05 31 51.1 +0.4**
LSZ pmax pmax
comp=Z,26nm,1.4s
LSZ Lusaka 57.28 147 P **P** **05 31 51.1 +0.4**
KSH Kashi 58.38 62 P **P** **05 31 59.1 +0.7**
KSH sP sP 05 32 07.1 +3.1
KSH PP **PP** **05 34 08.8 +1.4**
KSH S **S** **05 39 56.9 -4.2**
KSH ScS **ScS** **05 41 41.0 -7.1**
KSH pmax pmax
comp=Z,54nm,1.1s
KSH pmax pmax
comp=Z,160nm,3.9s
KSH LR LR
comp=Z,270nm,6.2s
KSH LR LR
comp=Z,230nm,12.3s
NIL Nilore 58.70 69 P **P** **05 32 00.8 +0.2**
NIL pmax pmax
comp=Z,41nm,1.1s
NIL Nilore 58.70 69 P **P** **05 32 00.8 +0.2**
ZAA0 Zalesovo Array 58.98 43 P **P** **05 32 01.7 -0.4**
ZALV Zalesovo Beam 58.98 43 P **P** **05 32 02.2 +0.1**
comp=Z,1.7nm,0.6s,baz=282,slow=8.0,SNR=7.5
M56A Emporium 59.54 301 IAmb IAmb 05 32 10.5
comp=Z,12nm,1.2s
MAKZ Makanchi 59.76 52 P **P** **05 32 07.5 -0.2**
MAKZ pmax pmax
comp=Z,12nm,1.4s
MAKZ Makanchi 59.76 52 P **P** **05 32 07.5 -0.2**
MAKZ IAmb IAmb 05 32 09.6
comp=Z,12nm,1.4s
MK31 Makanchi Array 59.96 52 P **P** **05 32 07.8 -1.3**
MK31 pmax pmax
comp=Z,6.0nm,1.1s
MK31 Makanchi Array 59.96 52 P **P** **05 32 07.8 -1.3**
MKAR Makanchi Array 59.96 52 P **P** **05 32 08.6 -0.5**
comp=Z,2.5nm,0.5s,baz=288,slow=6.0,SNR=26
FCC Fort Churchill 62.28 324 P **P** **05 32 24.0 -0.5**
FCC pmax pmax
comp=Z,28nm,1.1s
FCC Fort Churchill 62.28 324 P **P** **05 32 24.0 -0.5**
P53A Whipple 62.59 300 P **P** **05 32 27.1 +0.2**
SMLA Simla 62.78 70 *eP* **P** **05 32 27.4 -0.9**
R53A Hurricane 63.48 299 P **P** **05 32 32.8 -0.1**
WMQ Urumqi 64.65 53 *eP* **P** **05 32 43.9 +3.3**
WMQ pP sP 05 32 48.8 +2.6
WMQ pmax pmax
comp=Z,8.0nm,0.7s
WMQ pmax pmax
comp=Z,67nm,3.7s
WMQ LR LR
comp=Z,290nm,21.7s
WMQ LR LR
comp=Z,200nm,16.9s
WMQ Urumqi 64.65 53 P **P** **05 32 42.0 +1.4**
WMQ pmax pmax
comp=Z,11nm,0.4s
WMQ Urumqi 64.65 53 P **P** **05 32 42.0 +1.4**
COWI Conover 64.89 310 P **P** **05 32 42.0 0.0**
COWI IAmb IAmb 05 32 54.4
comp=Z,8.0nm,1.1s
LBTB Lobatse 65.07 155 P **P** **05 32 43.8 +0.4**
LBTB pmax pmax
comp=Z,19nm,1.2s
LBTB Lobatse 65.07 155 P **P** **05 32 43.8 +0.4**
EYMN Ely 65.51 312 P **P** **05 32 45.4 -0.6**
EYMN IAmb IAmb 05 32 46.9
comp=Z,16nm,1.4s
E38A The Farm, Brul 66.15 311 P **P** **05 32 50.1 -0.1**
E38A IAmb IAmb 05 32 51.5
comp=Z,8.7nm,1.0s
BHPL Bhopal 66.77 77 *eP* **P** **05 32 54.4 -0.1**
TIXI Tiksi 66.93 16 P **P** **05 32 55.7 +1.0**
comp=Z,8.4nm,1.0s,baz=316,slow=5.0,SNR=18
TIXI Tiksi 66.93 16 *ce* P **P** **05 32 56.3 +1.6**
TIXI pmax pmax
comp=Z,21nm,1.7s
TIXI Tiksi 66.93 16 P **P** **05 32 55.8 +1.1**
ULM Lac du Bonnet 66.99 316 P **P** **05 32 54.9 -0.6**
comp=Z,2.5nm,0.5s,baz=73,slow=4.9,SNR=4.2
ULM Lac du Bonnet 66.99 316 P **P** **05 32 54.9 -0.6**
ULM pmax pmax
comp=Z,10.0nm,1.1s
ULM Lac du Bonnet 66.99 316 P **P** **05 32 54.9 -0.6**
ULM IAmb IAmb 05 33 01.8
comp=Z,9.9nm,1.1s
Y52A Lilburn 67.04 296 P **P** **05 32 57.2 +1.1**
Y52A IAmb IAmb 05 33 02.6
comp=Z,12nm,1.1s
O44A Mansfield 67.16 304 P **P** **05 32 56.4 -0.3**
O44A IAmb IAmb 05 32 56.8
comp=Z,5.8nm,0.8s
C36M Paulatuk 67.54 342 P **P** **05 32 59.7 +1.1**
C36M IAmb IAmb 05 33 01.4
comp=Z,13nm,1.2s
SPMN Marine on St. 67.57 310 P **P** **05 32 58.9 -0.4**
SPMN IAmb IAmb 05 33 05.9
comp=Z,4.3nm,0.8s
USIN University of 67.65 301 P **P** **05 32 59.2 -0.7**
AGMN Agassiz Nation 67.92 314 P **P** **05 33 00.9 -0.5**
AGMN IAmb IAmb 05 33 01.5
comp=Z,8.0nm,1.4s
FFC Flin Flon 68.00 322 P **P** **05 33 01.9 +0.1**
FFC pmax pmax
comp=Z,14nm,1.4s
FFC Flin Flon 68.00 322 P **P** **05 33 01.9 +0.1**
FFC IAmb IAmb 05 33 08.9
comp=Z,14nm,1.4s
L40A Anamosa 68.08 307 P **P** **05 33 02.1 -0.5**
BOSA Boshof 68.28 156 P **P** **05 33 04.0 +0.2**
comp=Z,14nm,1.0s,baz=321,slow=5.2,SNR=11
BOSA Boshof 68.28 156 P **P** **05 33 04.3 +0.5**
BDFB Brasilia 68.58 231 P **P** **05 33 06.6 +0.6**
comp=Z,5.9nm,0.9s,baz=41,slow=11,SNR=8.5
BDFB LR LR 06 01 04.2
comp=Z,155nm,19.4s,baz=357,slow=34
BDFB Brasilia 68.58 231 P **P** **05 33 06.7 +0.8**
MOY Mondy 68.82 41 *eP* **P** **05 33 08.5 +1.4**
MOY pmax pmax
comp=Z,18nm,1.9s
YKA Yellowknife Ar 69.07 333 P **P** **05 33 07.7 -0.6**
comp=Z,7.3nm,1.0s,baz=55,slow=6.5,SNR=50
SDV Santo Domingo 69.36 266 P **P** **05 33 11.7 +0.6**
SDV IAmb IAmb 05 33 13.0
comp=Z,11nm,1.0s
PLAL Pickwick Lake 69.39 299 P **P** **05 33 10.2 -0.6**
PLAL IAmb IAmb 05 33 12.9
comp=Z,7.7nm,1.0s
TLY Talaya 70.21 40 *i* P **P** **05 33 17.3 +1.7**
TLY pmax pmax
comp=Z,10.0nm,1.2s
INK Inuvik 70.63 343 P **P** **05 33 17.5 -0.2**
comp=Z,4.4nm,0.9s,baz=34,slow=7.4,SNR=11
INK Inuvik 70.63 343 P **P** **05 33 17.9 +0.2**
INK IAmb IAmb 05 33 19.3
comp=Z,9.0nm,1.1s
R40A Maddies Statio 70.65 304 P **P** **05 33 18.3 -0.2**
ZAK Zakamensk 70.72 41 *eP* **P** **05 33 19.5 +0.7**
ZAK pmax pmax
comp=Z,6.0nm,1.4s
P38A Dawn 70.81 305 P **P** **05 33 18.1 -1.4**
P38A IAmb IAmb 05 33 26.1
comp=Z,7.7nm,1.1s
Y45A Yeager Farm, C 71.00 298 P **P** **05 33 19.9 -0.8**
MGMO Mountain Grove 71.23 303 P **P** **05 33 21.4 -0.6**
MGMO IAmb IAmb 05 33 23.7
comp=Z,4.3nm,0.6s
E28A Huff 71.62 314 P **P** **05 33 23.9 -0.3**
E28A IAmb IAmb 05 33 31.2
comp=Z,9.9nm,0.9s
FCAR Ozark Folk Cen 71.78 301 P **P** **05 33 24.6 -0.8**
U40A Yellville 72.04 302 P **P** **05 33 26.2 -0.8**
WHAR Wooly Hollow 72.21 301 P **P** **05 33 27.3 -0.6**
WHAR IAmb IAmb 05 33 29.5
comp=Z,14nm,1.4s
K31A O'Neill 72.59 310 P **P** **05 33 29.3 -0.8**
K31A IAmb IAmb 05 33 29.7
comp=Z,11nm,1.1s
HHAR Hobbs 72.83 302 P **P** **05 33 31.5 -0.2**
HHAR IAmb IAmb 05 33 33.2
comp=Z,12nm,1.3s
EPYK Eagle Plains 72.93 343 P **P** **05 33 32.9 +1.1**
X40A Basin Creek Fa 73.01 300 P **P** **05 33 32.2 -0.5**
X40A IAmb IAmb 05 33 32.4
comp=Z,9.4nm,1.3s
KSU1 Kansas State U 73.12 306 P **P** **05 33 33.1 -0.2**
KSU1 IAmb IAmb 05 33 33.8
comp=Z,16nm,1.4s
W39A Magazine 73.30 301 P **P** **05 33 33.9 -0.5**
W39A IAmb IAmb 05 33 47.0
comp=Z,11nm,1.2s
MIAR Mount Ida 73.50 301 P **P** **05 33 35.5 -0.1**
MIAR pmax pmax
comp=Z,6.0nm,1.0s
MIAR Mount Ida 73.50 301 P **P** **05 33 35.5 -0.1**
SONM Songino Array 73.85 42 P **P** **05 33 38.4 +0.8**
comp=Z,3.3nm,1.0s,baz=319,slow=5.7,SNR=9.3
ULN Ulaanbaatar 74.19 42 *ce* P **P** **05 33 41.0 +1.4**
ULN pmax pmax
comp=Z,6.0nm,1.0s
ULN Ulaanbaatar 74.19 42 P **P** **05 33 40.8 +1.2**
T35A Sooner Cattle 74.23 304 P **P** **05 33 40.0 0.0**
T35A IAmb IAmb 05 33 40.8
comp=Z,9.6nm,0.8s
TUL1 Leonard 74.29 303 P **P** **05 33 40.0 -0.2**
YAK Yakutsk 74.32 22 *eP* **P** **05 33 42.3 +2.4**
YAK pmax pmax
comp=Z,19nm,1.3s
YAK pmax pmax
comp=N,12nm,1.1s
YAK pmax pmax
comp=E,12nm,1.5s
YAK Yakutsk 74.32 22 P **P** **05 33 40.9 +1.1**
ROSC El Rosal 74.67 265 P **P** **05 33 43.4 +0.1**
comp=E,6.6nm,0.9s,baz=165,slow=21,SNR=4.9
ROSC El Rosal 74.67 265 P **P** **05 33 42.3 -0.9**
ROSC IAmb IAmb 05 33 44.5
comp=Z,15nm,1.1s
LAO LASA Array 74.70 317 P **P** **05 33 42.4 -0.1**
LAO IAmb IAmb 05 33 51.3
comp=Z,12nm,1.1s
GTA Gaotai 74.71 52 P **P** **05 33 43.8 +1.0**
GTA pP pP 05 33 47.3 +0.4
GTA sP sP 05 33 49.6 +1.1
GTA pmax pmax
comp=Z,4.0nm,1.2s
GTA pmax pmax
comp=Z,39nm,4.5s
GTA LR LR
comp=Z,860nm,19.7s
GTA LR LR
comp=Z,450nm,19.4s
GTA LR LR
comp=Z,740nm,20.6s
X37A Clayton 74.72 302 P **P** **05 33 42.5 -0.2**
X37A IAmb IAmb 05 33 45.1
comp=Z,11nm,1.2s
R32A Long Quarter, 74.87 307 P **P** **05 33 43.9 +0.3**
R32A IAmb IAmb 05 33 44.5
comp=Z,11nm,0.8s
EGAK Eagle 75.28 344 P **P** **05 33 46.8 +1.3**
EGAK IAmb IAmb 05 33 50.2
comp=Z,16nm,1.1s
DAWY Dawson 75.47 343 P **P** **05 33 47.6 +1.0**
EGMT Eagleton 75.81 319 P **P** **05 33 49.1 +0.2**
EGMT IAmb IAmb 05 33 51.7
comp=Z,22nm,1.4s
BILL Bilibino 75.93 5 ‖ *eP* **P** **05 33 50.1 +1.0**
BILL *eS* **S** **05 43 35.8 +4.6**
BILL *eSS* **SS** **05 48 21.5 -0.9**
BILL pmax pmax
comp=Z,26nm,1.4s
BILL MLR MLR
comp=Z,434nm,19.0s
BILL Bilibino 75.93 5 P **P** **05 33 49.5 +0.4**
ILAR Eielson Array 76.49 346 P **P** **05 33 53.1 +0.7**
comp=Z,3.0nm,0.7s,baz=14,slow=4.4,SNR=19
SCRK Sand Creek 76.59 345 P **P** **05 33 55.3 +2.2**
SCRK IAmb IAmb 05 33 56.1
comp=Z,13nm,1.0s
Z35A Perchaven, San 76.72 301 P **P** **05 33 53.9 -0.3**
Z35A IAmb IAmb 05 33 55.1
comp=Z,11nm,0.8s
SHL Shillong 76.76 68 P **P** **05 33 54.1 -0.7**
SHL pmax pmax
comp=Z,55nm,1.5s
SHL Shillong 76.76 68 P **P** **05 33 54.1 -0.7**
DOT Dot Lake 76.90 344 P **P** **05 33 56.5 +1.8**
WRH Wood River Hil 76.99 346 P **P** **05 33 56.5 +1.3**
WALA Waterton Lakes 77.30 322 P **P** **05 33 57.6 +0.2**
WALA IAmb IAmb 05 34 05.6
comp=Z,8.3nm,1.1s
RLMT Red Lodge 77.34 317 P **P** **05 33 57.7 -0.1**
RLMT IAmb IAmb 05 34 02.0
comp=Z,11nm,1.4s
DLBC Dease Lake 77.35 336 P **P** **05 33 58.6 +1.2**
PHWY Pilot Hill 77.45 312 P **P** **05 33 58.2 -0.4**
HYT Haines Junctio 77.70 340 P **P** **05 34 00.6 +1.2**
MCK McKinley 77.82 347 P **P** **05 34 00.5 +0.7**
MCK pmax pmax
comp=Z,18nm,1.1s
MCK McKinley 77.82 347 P **P** **05 34 00.5 +0.7**
YNE Yellowstone No 77.82 317 P **P** **05 34 00.8 +0.3**
TRF Thorofare Moun 78.33 347 P **P** **05 34 03.6 +0.7**
KTH Kantishna Hill 78.35 347 P **P** **05 34 03.0 +0.2**
ISCO Idaho Springs 78.45 311 P **P** **05 34 03.7 -0.5**
ISCO pmax pmax
comp=Z,8.0nm,1.4s
ISCO Idaho Springs 78.45 311 P **P** **05 34 03.7 -0.5**
YHL Hebgen Lake 78.57 318 P **P** **05 34 04.4 -0.3**
CTGM Chitina Glacie 78.59 342 P **P** **05 34 03.9 -0.5**
MCARA McCarthy VSAT 78.64 343 P **P** **05 34 04.5 +0.1**
MSO Missoula 78.77 320 P **P** **05 34 05.3 -0.2**
GLB Gilahina Butte 78.78 343 P **P** **05 34 06.4 +1.1**
GLB IAmb IAmb 05 34 08.1
comp=Z,12nm,1.2s
BALM Baldy 78.78 342 P **P** **05 34 04.8 -0.5**
VRDI Verde Repeater 78.88 343 P **P** **05 34 07.9 +1.9**
VRDI IAmb IAmb 05 34 08.8
comp=Z,21nm,1.3s
BW06 Boulder Array 78.97 315 P **P** **05 34 06.5 -0.4**
PD31 Pinedale Array 78.97 315 P **P** **05 34 06.2 -0.7**
PDAR Pinedale Array 78.97 315 P **P** **05 34 06.9 0.0**
comp=Z,2.3nm,0.9s,baz=57,slow=6.0,SNR=15
DLMT Dillon 79.01 319 P **P** **05 34 07.5 +0.5**
DLMT IAmb IAmb 05 34 10.6
comp=Z,21nm,1.4s
PPLA Purkeypile 79.18 348 P **P** **05 34 08.3 +0.8**
SCM Sheep Creek Mo 79.21 345 P **P** **05 34 09.2 +1.5**
SCM pmax pmax
comp=Z,31nm,1.0s
SCM Sheep Creek Mo 79.21 345 P **P** **05 34 09.2 +1.5**
SNOW Snow King Moun 79.21 316 P **P** **05 34 07.8 -0.5**
LZH Lanzhou 79.23 53 *eP* **P** **05 34 10.0 +1.7**
LZH pP sP 05 34 14.6 +0.5
LZH sP PcP 05 34 17.5 +0.9
LZH pmax pmax
comp=Z,21nm,1.2s
FXWY Fox Creek 79.25 316 P **P** **05 34 08.1 -0.3**
TPAW Teton Pass 79.31 316 P **P** **05 34 09.2 +0.5**
REDW Red Top Meadow 79.33 316 P **P** **05 34 08.8 0.0**
SML Sawmill 79.44 345 P **P** **05 34 09.4 +0.5**
MCMT McKenzie Canyo 79.49 318 P **P** **05 34 09.3 -0.4**
GHO Glory Hole Cre 79.59 346 P **P** **05 34 10.2 +0.4**
GHO IAmb IAmb 05 34 12.2
comp=Z,11nm,1.0s
SDCO Great Sand Dun 79.62 309 P **P** **05 34 10.0 -0.6**
AHID Auburn Hatcher 79.85 316 P **P** **05 34 11.0 -0.7**
JCT Junction City 80.12 300 P **P** **05 34 13.4 +0.2**
JCT pmax pmax
comp=Z,5.0nm,0.4s
JCT Junction City 80.12 300 P **P** **05 34 13.4 +0.2**
JCT IAmb IAmb 05 34 13.9
comp=Z,4.8nm,0.4s
C09A Chrisman Ranch 80.30 323 P **P** **05 34 12.7 -1.0**
HIN Hinchinbrook I 80.32 344 P **P** **05 34 13.5 -0.2**
RDMU Red Mountain 80.36 313 P **P** **05 34 14.3 -0.2**
RC01 Rabbit Creek A 80.38 346 P **P** **05 34 15.2 +1.3**
RC01 IAmb IAmb 05 34 16.1
comp=Z,17nm,1.0s
B08A Colville Reser 80.42 324 P **P** **05 34 15.3 +0.9**
F10A Beach Ranch, E 81.03 321 P **P** **05 34 17.7 -0.1**
F10A IAmb IAmb 05 34 23.3
comp=Z,12nm,1.4s
HHC Hu-ho-hao-te 81.06 46 *eP* **P** **05 34 20.3 +2.2**
HHC pmax pmax
comp=Z,12nm,0.8s
HHC pmax pmax
comp=Z,140nm,8.1s
PV22 Blue Mesa, Par 81.17 311 P **P** **05 34 19.1 +0.3**
PV22 IAmb IAmb 05 34 20.4
comp=Z,8.5nm,1.1s
SEW Seward 81.22 345 P **P** **05 34 18.8 +0.4**
PV04 Paradox Valley 81.33 311 P **P** **05 34 20.0 +0.3**
PV04 IAmb IAmb 05 34 21.4
comp=Z,12nm,1.1s
PV03 Paradox Valley 81.39 311 P **P** **05 34 20.2 +0.3**
PV16 Nyswonger Mesa 81.39 311 P **P** **05 34 20.7 +0.7**
PV16 IAmb IAmb 05 34 21.7
comp=Z,11nm,1.0s
PV18 Skein Mesa, Pa 81.43 311 P **P** **05 34 20.9 +0.7**
PV18 IAmb IAmb 05 34 21.8
comp=Z,7.9nm,0.9s
PV17 East Wray Mesa 81.44 311 P **P** **05 34 20.7 +0.4**
PV17 IAmb IAmb 05 34 21.9
comp=Z,8.5nm,0.8s
JLU Jordanelle 81.44 314 P **P** **05 34 20.3 0.0**
RSO Redoubt South 81.54 347 P **P** **05 34 21.0 +0.7**
P17A Butcher Ranch, 81.75 313 P **P** **05 34 21.5 -0.3**
MVCO Mesa Verde 81.83 310 P **P** **05 34 21.1 -1.3**
BMO Blue Mountains 81.84 320 P **P** **05 34 21.9 -0.2**
BMO pmax pmax
comp=Z,14nm,1.5s
BMO Blue Mountains 81.84 320 P **P** **05 34 21.9 -0.2**
BMO IAmb IAmb 05 34 23.5
comp=Z,14nm,1.4s
SRU San Rafael Swe 81.85 313 P **P** **05 34 22.7 +0.3**
SRU pmax pmax
comp=Z,11nm,1.2s
SRU San Rafael Swe 81.85 313 P **P** **05 34 22.7 +0.3**
ANMO Albuquerque 81.94 307 *ce* P **P** **05 34 23.1 +0.2**
ANMO pmax pmax
comp=Z,3.0nm,1.0s
ANMO Albuquerque 81.94 307 P **P** **05 34 23.2 +0.2**
MFID Camas Ranch 82.03 319 P **P** **05 34 22.7 -0.4**
CNPM China Poot 82.12 346 P **P** **05 34 24.2 +1.0**
BGU Big Grassy Mou 82.14 315 P **P** **05 34 23.9 0.0**
TMUT Trail Mountain 82.14 313 P **P** **05 34 24.0 -0.1**
NLU North Lily Min 82.23 314 P **P** **05 34 23.5 -0.9**
CD2 Chengdu 82.27 57 P **P** **05 34 23.6 -0.9**
CD2 pmax pmax
comp=Z,20nm,0.5s
CPUP Villa Florida 82.29 230 P **P** **05 34 25.1 +0.7**
comp=Z,12nm,1.1s,baz=48,slow=4.5,SNR=9.1
CPUP Villa Florida 82.29 230 P **P** **05 34 24.3 -0.1**
CPUP pmax pmax
comp=Z,17nm,1.2s
CPUP Villa Florida 82.29 230 P **P** **05 34 24.3 -0.1**
Q16A Castle Valley 82.36 313 P **P** **05 34 24.9 -0.2**
DUG Dugway, Tooele 82.50 315 P **P** **05 34 25.3 -0.4**
DUG pmax pmax
comp=Z,9.0nm,1.5s
DUG Dugway, Tooele 82.50 315 P **P** **05 34 25.3 -0.4**
DUG IAmb IAmb 05 34 27.2
comp=Z,9.0nm,1.4s
LON Longmire 82.75 324 P **P** **05 34 27.5 +0.7**
LON pmax pmax
comp=Z,13nm,1.1s

LON	**Longmire**	**82.75**	**324**	P	**P**	**05 34 27.5**	**+0.7**
LON				IAmb	IAmb	05 34 29.6	
	comp=Z,13nm,1.1s						
LPAZ	**La Paz**	**82.80**	**244**	P	**P**	**05 34 28.9**	**+0.9**
	comp=Z,5.5nm,1.3s,baz=49,slow=7.4,SNR=8.5						
LPAZ	**La Paz**	**82.80**	**244**	P	**P**	**05 34 28.4**	**+0.3**
LPAZ				pmax	pmax		
	comp=Z,12nm,1.4s						
LPAZ	**La Paz**	**82.80**	**244**	P	**P**	**05 34 28.4**	**+0.3**
LPAZ				IAmb	IAmb	05 34 29.4	
	comp=Z,12nm,1.4s						
MSU	**Marysvale**	**83.23**	**313**	P	**P**	**05 34 30.2**	**+0.6**
MSU	**Marysvale**	**83.23**	**313**	P	**P**	**05 34 30.2**	**+0.6**
MNTX	**Cornudas Mount**	**83.23**	**304**	P	**P**	**05 34 29.9**	**+0.4**
J08A	**Circle Bar Ran**	**83.48**	**320**	P	**P**	**05 34 30.2**	**-0.4**
J08A				IAmb	IAmb	05 34 32.8	
	comp=Z,5.4nm,1.0s						
TX31	**Lajitas Ar. Si**	**83.50**	**301**	P	**P**	**05 34 31.7**	**+0.7**
TX31				IAmb	IAmb	05 34 33.2	
	comp=Z,5.5nm,0.8s						
TX32	**Lajitas Array**	**83.50**	**301**	P	**P**	**05 34 31.6**	**+0.5**
TXAR	**Lajitas Array**	**83.50**	**301**	P	**P**	**05 34 32.4**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=79,slow=6.5,SNR=13						
ELK	**Elko**	**83.51**	**316**	LR	LR	06 09 48.3	
	comp=Z,257nm,18.6s,baz=266,slow=34						
ELK	**Elko**	**83.51**	**316**	P	**P**	**05 34 31.4**	**+0.3**
ELK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ELK	**Elko**	**83.51**	**316**	P	**P**	**05 34 31.4**	**+0.3**
ELK				IAmb	IAmb	05 34 35.0	
	comp=Z,7.5nm,1.2s						
MTPU	**Mount Pierson**	**83.54**	**313**	P	**P**	**05 34 31.6**	**+0.2**
KDAK	**Kodiak Island**	**84.00**	**346**	P	**P**	**05 34 33.9**	**+1.0**
KDAK				pmax	pmax		
	comp=Z,65nm,1.2s						
KDAK	**Kodiak Island**	**84.00**	**346**	P	**P**	**05 34 33.9**	**+1.0**
PKCU	**Pink Cliffs**	**84.00**	**312**	P	**P**	**05 34 34.4**	**+0.7**
PSUT	**Pine Spring**	**84.20**	**314**	P	**P**	**05 34 34.9**	**+0.3**
WVOR	**Wild Horse Val**	**84.21**	**319**	P	**P**	**05 34 34.7**	**+0.2**
WVOR				pmax	pmax		
	comp=Z,14nm,1.3s						
WVOR	**Wild Horse Val**	**84.21**	**319**	P	**P**	**05 34 34.7**	**+0.2**
WVOR				IAmb	IAmb	05 34 37.0	
	comp=Z,14nm,1.3s						
121A	**Cookes Peak, D**	**84.31**	**306**	P	**P**	**05 34 36.8**	**+1.6**
SZCU	**Shurtz Canyon**	**84.37**	**313**	P	**P**	**05 34 36.3**	**+0.8**
H04A	**Detroit Lake**	**84.42**	**323**	P	**P**	**05 34 35.7**	**+0.4**
H04A				IAmb	IAmb	05 34 37.0	
	comp=Z,8.5nm,0.9s						
PINE	**Pine Mountain**	**84.44**	**322**	P	**P**	**05 34 35.3**	**-0.4**
PINE				IAmb	IAmb	05 34 49.6	
	comp=Z,6.6nm,1.0s						
CCUT	**Cedar City**	**84.56**	**313**	P	**P**	**05 34 35.8**	**-0.7**
U15A	**North Rim**	**84.66**	**312**	P	**P**	**05 34 37.2**	**+0.2**
U15A				IAmb	IAmb	05 34 38.6	
	comp=Z,6.2nm,1.0s						
OHAK	**Old Harbor**	**84.67**	**346**	P	**P**	**05 34 38.1**	**+1.9**
WUAZ	**Wupatki**	**84.69**	**310**	P	**P**	**05 34 37.8**	**+0.7**
LCMT	**Little Creek M**	**84.85**	**313**	P	**P**	**05 34 37.5**	**-0.3**
KLR	**Kul'dur**	**85.02**	**30** *i*	P	**P**	**05 34 40.6**	**+2.4**
KLR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KMI	**Kunming**	**85.03**	**63**	P	**P**	**05 34 39.8**	**+0.8**
KMI				pmax	pmax		
	comp=Z,18nm,2.0s						
PB16	**IPOC Station P**	**85.12**	**243**	P	**P**	**05 34 40.5**	**+0.7**
K05A	**Summer Lake**	**85.18**	**321**	P	**P**	**05 34 40.7**	**+1.3**
R11A	**Troy Canyon, C**	**85.33**	**315**	P	**P**	**05 34 41.1**	**+0.8**
X16A	**Lo Mia Camp, P**	**85.45**	**310**	P	**P**	**05 34 42.6**	**+1.7**
X16A				IAmb	IAmb	05 34 43.9	
	comp=Z,9.1nm,1.2s						
MOD	**Modoc Plateau**	**85.46**	**320**	P	**P**	**05 34 41.3**	**+0.5**
MOD				IAmb	IAmb	05 34 43.4	
	comp=Z,13nm,1.2s						
319A	**Douglas**	**86.02**	**306**	P	**P**	**05 34 44.2**	**+0.5**
319A				IAmb	IAmb	05 34 46.9	
	comp=Z,9.4nm,1.1s						
CMAR	**Chiang Mai Arr**	**86.18**	**70**	P	**P**	**05 34 44.5**	**0.0**
	comp=Z,15nm,0.4s,baz=312,slow=4.7,SNR=8.1						
KVN	**Kaiserville**	**86.28**	**317**	P	**P**	**05 34 45.9**	**+1.0**
KVN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KVN	**Kaiserville**	**86.28**	**317**	P	**P**	**05 34 45.9**	**+1.0**
SHPR	**Sheep Range**	**86.33**	**313**	P	**P**	**05 34 46.3**	**+1.1**
SHPR				IAmb	IAmb	05 34 47.9	
	comp=Z,8.6nm,1.2s						
TUC	**Tucson**	**86.40**	**308**	P	**P**	**05 34 46.5**	**+1.0**
TUC				pmax	pmax		
	comp=Z,13nm,1.5s						
TUC	**Tucson**	**86.40**	**308**	P	**P**	**05 34 46.5**	**+1.0**
TUC				IAmb	IAmb	05 34 48.2	
	comp=Z,13nm,1.4s						
PAHR	**Pah Rah Range**	**86.53**	**318**	P	**P**	**05 34 46.8**	**+0.7**
PAHR				IAmb	IAmb	05 34 48.7	
	comp=Z,10.0nm,1.2s						
NNA	**Nana**	**86.70**	**253**	P	**P**	**05 34 47.6**	**+0.5**
NNA				pmax	pmax		
	comp=Z,40nm,1.4s						
NNA	**Nana**	**86.70**	**253**	P	**P**	**05 34 47.6**	**+0.5**
RYN	**Ryan**	**86.81**	**317**	P	**P**	**05 34 48.4**	**+0.8**
NVAR	**Mina Array Bea**	**86.82**	**316**	P	**P**	**05 34 48.7**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=65,slow=5.0,SNR=6.5						
BEKR	**Beckworth**	**86.94**	**318**	P	**P**	**05 34 48.9**	**+0.7**
BEKR				IAmb	IAmb	05 35 07.5	
	comp=Z,3.5nm,0.5s						
YERR	**Yerington**	**86.95**	**317**	P	**P**	**05 34 48.4**	**+0.1**
WAKR	**Walker**	**87.40**	**317**	P	**P**	**05 34 52.2**	**+1.8**
WAKR				IAmb	IAmb	05 34 55.9	
	comp=Z,11nm,1.3s						
LVC	**Limon Verde**	**87.45**	**240**	P	**P**	**05 34 50.7**	**-0.3**
LVC				pmax	pmax		
	comp=Z,22nm,1.3s						
LVC	**Limon Verde**	**87.45**	**240**	P	**P**	**05 34 50.6**	**-0.3**
PB07	**IPOC Station P**	**87.57**	**241**	P	**P**	**05 34 51.9**	**+0.6**
ORV	**Oroville**	**87.78**	**319**	P	**P**	**05 34 52.4**	**+0.4**
ORV				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ORV	**Oroville**	**87.78**	**319**	P	**P**	**05 34 52.4**	**+0.4**
ORV				IAmb	IAmb	05 34 53.2	
	comp=Z,4.9nm,1.1s						
214A	**Organ Pipe Nat**	**87.93**	**308**	P	**P**	**05 34 53.2**	**+0.3**
214A				IAmb	IAmb	05 34 56.1	
	comp=Z,4.8nm,1.1s						
113A	**Mohawk Valley,**	**87.99**	**310**	P	**P**	**05 34 53.9**	**+0.8**
FALS	**False Pass**	**88.61**	**351**	P	**P**	**05 34 54.6**	**-1.0**
ISA	**Isabella, Lake**	**88.85**	**314**	P	**P**	**05 34 58.1**	**+0.9**
ISA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ISA	**Isabella, Lake**	**88.85**	**314**	P	**P**	**05 34 58.1**	**+0.9**
ISA				IAmb	IAmb	05 34 59.7	
	comp=Z,8.4nm,0.9s						
NJ2	**Nanjing**	**91.31**	**48** *eP*		**P**	**05 35 10.5**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
QSPA	**South Pole Qui**	**125.69**	**180**		**PKiKP**	**05 41 03.9**	**+0.1**
WRA	**Warramunga Arr**	**136.85**	**81**	PKP	**PKPdf**	**05 41 26.1**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=299,slow=2.8,SNR=5.4						
ASAR	**Alice Springs**	**138.33**	**86**	PKhKP	PKPpre	05 41 19.1	
	comp=Z,0.3nm,0.7s,baz=299,slow=1.9,SNR=3.2						
CTA	**Charters Tower**	**146.34**	**71**	PKPbc	**PKPab**	**05 41 44.9**	**0.0**
	comp=Z,7.4nm,0.7s,baz=305,slow=2.8,SNR=7.4						
STKA	**Stephens Creek**	**147.80**	**94**	PKPbc	**PKPbc**	**05 41 47.9**	**0.0**
	comp=Z,46nm,1.1s,baz=317,slow=3.6,SNR=46						
STKA	**Stephens Creek**	**147.80**	**94**		**PKPbc**	**05 41 48.2**	**+0.4**

IDC ***22*** *05:22:49.0±0.6, 11°.08S×161°.62E, h0km, mb4.6/29, mb1 4.7/33, mb1mx4.7/48, mbtmp4.6/33, ML4.4/3, MS4.9/28, Ms1 4.9/28, ms1mx4.8/30, Error ellipse: s-maj=16.1km s-min=12.3km az=100.0*

GCMT ***22*** *05:22:52.6±0.1, 11°.16S±0°.01×161°.57E±0°.01, h12km, MW5.4/156, Moment Tensor Solution. s130,c214; s156,c290; Duration: 1s2 Moment tensor: Scale 10¹⁷ Nm; Mrr0.38±.01; Mθθ0.29±.02; Mϕϕ-0.66±.01; Mrθ-0.01±.04; Mrϕ1.26±.01; Mθr-0.32±.03; Best double couple: Mo1.38700×10¹⁷ NP1:ϕs281.00000°,δ75.00000°, λ4.00000°. NP2:ϕs189.00000°,δ86.00000°,λ165.00000°. Principal axes: T 1.2030, Plg14.0000°, Azm144.0000°; N 0.3680, Plg74.0000°, Azm354.0000°; P -1.5710, Plg8.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***22*** *05:22:53.2±1.1, 11°.11S×161°.46E, h37km, mb5.2/38, MS5.0/12 Error ellipse: s-maj=7.9km s-min=7.3km az=116.8*

NEIC ***22*** *05:22:53, 11°.14S×161°.59E, h12km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.41; Mθθ0.30; Mϕϕ-0.71; Mrθ-0.26; Mθϕ1.31; Mϕr-0.14; Fault plane solution: Mo1.48000×10¹⁷ NP1:ϕs282.00000°, δ78.00000°,λ14.00000°. NP2:ϕs189.00000°,δ77.00000°, λ167.00000°. Principal axes: T 1.2937, Plg18.0000°, Azm146.0000°; N 0.3177, Plg72.0000°, Azm323.0000°; P -1.6114, Plg1.0000°, Azm55.0000°;*

NEIC ***22*** *05:22:54.6±1.3, 11°.16S±0°.07×161°.51E±0°.08, h36km±5km, mb5.1/113,Ms_20 5.2/657,Mwc5.4(GCMT) Error ellipse: s-maj=12.5km s-min=9.7km az=58.0*

ISC 22 05:22:53.6±0.3, 11°.18S±0°.04×161°.58E±0°.05, h28km, n618, σ1ŝ31/315, mb5.0/117, MS5.2/382, 6C-8D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.37**	**317**	Pn	**Pn**	**Pn**	**05 23 28.8**	**-1.8**
	86nm,0.3s,baz=161,slow=10.0,SNR=11							
HNR				Sn	**Sn**	**Sn**	**05 23 56.0**	**-2.6**
	244nm,0.3s,baz=135,slow=20,SNR=4.1							
HNR				LR	LR	LR	05 24 06.5	
	comp=Z,6μm,19.1s,baz=132,slow=33							
HNR				Lg	Lg	Lg	05 24 12.8	
	312nm,0.3s,baz=53,slow=20,SNR=9.7							
HNR	**Honiara**	**2.37**	**317**	P	**Pn**	**Pn**	**05 23 29.9**	**-0.7**
HNR	**Honiara**	**2.37**	**317**		**Pn**	**Pn**	**05 23 29.9**	**-0.7**
KRVT	**Keravat (AS076**	**11.67**	**305**	Pn	**Pn**	**Pn**	**05 25 36.5**	**-1.9**
	baz=57,slow=17,SNR=0.4							
KRVT				LR	LR	LR	05 30 00.0	
	comp=Z,4μm,20.1s,baz=132,slow=37							
DZM	**Mont Dzumac**	**11.79**	**157**	*e*Pn	**Pn**	**Pn**	**05 25 42.6**	**+2.5**
	35nm,0.6s							
DZM				*e*LQ	LQ	LQ	05 27 52.9	
	6μm,23.9s							
DZM				*e*LR	LR	LR	05 28 26.3	
	comp=Z,17μm,22.8s							
DZM	**Mont Dzumac**	**11.79**	**157**	Pn	**Pn**	**Pn**	**05 25 41.2**	**+1.1**
	1.3nm,0.3s,baz=16,slow=9.8,SNR=18							
DZM				Sn	**Sn**	**Sn**	**05 27 45.5**	**-5.3**
	0.6nm,0.3s,baz=317,slow=19,SNR=2.1							
DZM				LR	LR	LR	05 29 46.5	
	comp=Z,13μm,19.0s,baz=332,slow=35							
PMG	**Port Moresby**	**14.30**	**276**	Pn	**Pn**	**Pn**	**05 26 16.3**	**+2.0**
	0.9nm,0.3s,baz=16,slow=15,SNR=1.2							
PMG				LR	LR	LR	05 31 29.6	
	comp=Z,11μm,18.1s,baz=106,slow=36							
PMG	**Port Moresby**	**14.30**	**276**	*ie*P	**Pn**	**Pn**	**05 26 11.5**	**-2.8**
PMG	**Port Moresby**	**14.30**	**276**		**Pn**	**Pn**	**05 26 14.4**	**+0.1**
TARA	**Tarawa**	**16.80**	**43**		IAmb	**P**	**05 26 48.1**	**-1.0**
TARA						IAmb	05 27 01.5	
	comp=Z,271nm,1.2s							
CTA	**Charters Tower**	**17.20**	**237**	P	**P**	**P**	**05 26 53.6**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=72,slow=14,SNR=10							
CTA				LR	LR	LR	05 32 34.0	
	comp=Z,7μm,21.0s,baz=57,slow=34							
CTAO	**Charters Tower**	**17.20**	**237**	P	**P**	**P**	**05 26 52.8**	**-0.6**
CTAO				pmax	pmax			
	comp=Z,99nm,1.3s							
CTAO	**Charters Tower**	**17.20**	**237**	P	**P**	**P**	**05 26 52.8**	**-0.6**
MSVF	**Nonsavu**	**17.22**	**114**	P	**P**	**P**	**05 26 53.4**	**-0.3**
MSVF				pmax	pmax			
	comp=Z,144nm,1.5s							
MSVF	**Nonsavu**	**17.22**	**114**	P	**P**	**P**	**05 26 53.4**	**-0.3**
EIDS	**Eidsvold**	**17.26**	**214**	P	**P**	**P**	**05 26 53.8**	**-0.2**
	baz=17,SNR=8.4							
EIDS	**Eidsvold**	**17.26**	**214**	P	**Pn**	**Pn**	**05 26 52.7**	**-0.1**
EIDS				IAmb	IAmb	IAmb	05 26 58.9	
	comp=Z,202nm,1.4s							
MTSU	**Mount Surprise**	**18.07**	**245**	P	**P**	**P**	**05 27 05.7**	**+2.7**
	baz=18,SNR=5.5							
COEN	**Coen**	**18.17**	**259**	P	**P**	**P**	**05 27 07.5**	**+3.3**
	baz=18,SNR=15							
COEN	**Coen**	**18.17**	**259**	P	**Pn**	**Pn**	**05 27 03.2**	**-0.9**
RMQ	**Roma**	**19.44**	**217**	P	**Pn**	**Pn**	**05 27 20.6**	**+1.2**
	baz=20,SNR=11							
LHI	**Lord Howe Isla**	**20.38**	**186**	P	**P**	**P**	**05 27 28.6**	**+0.5**
ARMA	**Armidale**	**21.26**	**204**	P	**P**	**P**	**05 27 39.3**	**+1.4**
	baz=21,SNR=25							
ARMA	**Armidale**	**21.26**	**204**	P	**P**	**P**	**05 27 37.9**	**+0.1**
ARMA				IAmb	IAmb	IAmb	05 27 42.0	
	comp=Z,186nm,1.4s							
JAY	**Jayapura**	**22.42**	**291**	P	**P**	**P**	**05 27 50.0**	**-0.4**
	comp=Z,30nm,1.1s,baz=3.6,slow=1.6,SNR=8.4							
JAY				LR	LR	LR	05 36 34.5	
	comp=Z,3μm,21.5s,baz=81,slow=37							
JAY	**Jayapura**	**22.42**	**291**	P	**P**	**P**	**05 27 51.4**	**+1.0**
	comp=Z,1μmcomp=Z,37nm,1.9s							
QIS	**Mount Isa**	**23.07**	**243**	P	**P**	**P**	**05 27 57.8**	**+0.6**
	baz=23,SNR=7.1							
MGCD	**Mangrove Creek**	**23.94**	**202**	P	**P**	**P**	**05 28 06.9**	**+1.4**
	baz=24,SNR=8.5							
SMPI	**Sarmi**	**24.46**	**290**	P	**P**	**P**	**05 28 11.4**	**+1.0**
	comp=Z,3μmcomp=Z,166nm,1.4s							
CMSA	**Cobar Meteorol**	**25.02**	**214**	P	**P**	**P**	**05 28 16.1**	**+0.7**
	baz=25,SNR=7.7							
YNG	**Young**	**25.97**	**206**	P	**P**	**P**	**05 28 25.4**	**+1.4**
	baz=26,SNR=7.4							
RAO	**Raoul Island**	**26.25**	**136**	LR	LR	LR	05 37 24.5	
	comp=Z,2μm,18.1s,baz=318,slow=33							
OUZ	**Omahuta**	**26.31**	**157**	IAMs_20	IAMs_20	IAMs_20	05 37 15.8	
	comp=Z,7μm,19.0s							
CNB	**Canberra Magne**	**26.47**	**203**	P	**P**	**P**	**05 28 29.5**	**+1.0**
	baz=27,SNR=9.0							
CAN	**Canberra**	**26.61**	**203**	P	**P**	**P**	**05 28 30.1**	**+0.3**
CAN				pmax	pmax			
	comp=Z,58nm,1.5s							
CAN	**Canberra**	**26.61**	**203**	P	**P**	**P**	**05 28 30.1**	**+0.3**
WR0	**Warramunga Arr**	**27.43**	**248**	P	**P**	**P**	**05 28 37.0**	**-0.3**
WB0	**Warramunga Arr**	**27.52**	**249**	P	**P**	**P**	**05 28 37.5**	**-0.6**
WB0				IAmb	IAmb	IAmb	05 28 39.8	
	comp=Z,94nm,1.5s							
WRAB	**Tennant Creek**	**27.60**	**248**	*di*P	**P**	**P**	**05 28 39.1**	**+0.3**
WRAB				pmax	pmax			
	comp=Z,37nm,1.5s							
WRAB	**Tennant Creek**	**27.60**	**248**	P	**P**	**P**	**05 28 38.1**	**-0.7**
WRAB				IAmb	IAmb	IAmb	05 28 40.4	
	comp=Z,73nm,1.4s							
WB2	**Warramunga Arr**	**27.60**	**248**	P	**P**	**P**	**05 28 38.5**	**-0.3**
WB2				IAmb	IAmb	IAmb	05 28 40.5	
	comp=Z,80nm,1.5s							
WRA	**Warramunga Arr**	**27.61**	**248**	P	**P**	**P**	**05 28 38.6**	**-0.4**
	comp=Z,12nm,0.9s,baz=75,slow=8.8,SNR=33							
WRA				LR	LR	LR	05 39 16.1	
	comp=Z,10μm,19.5s,baz=75,slow=36							
STKA	**Stephens Creek**	**27.65**	**219**	P	**P**	**P**	**05 28 39.9**	**+0.8**
	baz=28,SNR=16							
STKA	**Stephens Creek**	**27.65**	**219**	P	**P**	**P**	**05 28 38.9**	**-0.2**
	comp=Z,20nm,1.1s,baz=30,slow=9.7,SNR=15							
STKA				LR	LR	LR	05 38 50.9	
	comp=Z,12μm,19.0s,baz=39,slow=35							
STKA	**Stephens Creek**	**27.65**	**219**	P	**P**	**P**	**05 28 38.8**	**-0.3**
STKA				pmax	pmax			
	comp=Z,11nm,1.4s							
STKA				MLR	MLR			
	comp=Z,3μm,19.0s							
STKA	**Stephens Creek**	**27.65**	**219**	P	**P**	**P**	**05 28 38.8**	**-0.3**
KDU	**Kakadu**	**28.51**	**264**	P	**P**	**P**	**05 28 47.1**	**+0.1**
	baz=29,SNR=11							
AS31	**Alice Springs**	**29.11**	**241**	P	**P**	**P**	**05 28 51.5**	**-0.8**
ASAR	**Alice Springs**	**29.11**	**241**	P	**P**	**P**	**05 28 51.2**	**-1.1**
	comp=Z,4.2nm,0.8s,baz=70,slow=9.1,SNR=24							
ASAR				LR	LR	LR	05 40 06.6	
	comp=Z,7μm,19.7s,baz=65,slow=36							
HIZ	**Hauiti**	**29.69**	**159**	IAMs_20	IAMs_20	IAMs_20	05 38 58.4	
	comp=Z,5μm,20.0s							
MTN	**Manton Dam**	**29.82**	**264**	P	**P**	**P**	**05 29 01.0**	**+2.4**
	baz=30,SNR=4.2							
MTN	**Manton Dam**	**29.82**	**264**	P	**P**	**P**	**05 28 58.0**	**-0.6**
TOO	**Toolangi**	**29.99**	**206**	P	**P**	**P**	**05 28 59.8**	**-0.1**
	baz=30,SNR=4.7							
TOO	**Toolangi**	**29.99**	**206**	P	**P**	**P**	**05 28 58.9**	**-1.0**
TOO				pmax	pmax			
	comp=Z,88nm,1.5s							
TOO				MLR	MLR			
	comp=Z,5μm,18.0s							
TOO	**Toolangi**	**29.99**	**206**	P	**P**	**P**	**05 28 58.9**	**-1.0**
TOO				IAMs_20	IAMs_20	IAMs_20	05 39 48.7	
	comp=Z,5μm,18.0s							
SAUI	**Saumlaki**	**30.02**	**273**	IAMs_20	IAMs_20	IAMs_20	05 41 58.2	
	comp=Z,5μm,18.0s							
URZ	**Urewera**	**30.34**	**155**	LR	LR	LR	05 39 56.0	
	comp=Z,4μm,18.4s,baz=330,slow=34							
URZ	**Urewera**	**30.34**	**155**	IAMs_20	IAMs_20	IAMs_20	05 39 36.5	
	comp=Z,5μm,18.0s							
HTT	**Hallett**	**30.36**	**220**	P	**P**	**P**	**05 29 03.6**	**+0.4**
	baz=30,SNR=5.8							
BKZ	**Black Stump Fm**	**30.87**	**157**	P	**P**	**P**	**05 29 08.8**	**+1.1**
BKZ				IAmb	IAmb	IAmb	05 29 17.1	
	comp=Z,36nm,1.3s							
BKZ				IAMs_20	IAMs_20	IAMs_20	05 39 28.7	
	comp=Z,6μm,21.0s							
ARPS	**Mount Arapiles**	**31.08**	**212**	P	**P**	**P**	**05 29 11.3**	**+1.8**
	baz=31,SNR=7.1							
SIJI	**Sorong**	**31.80**	**287**	LR	LR	LR	05 43 07.2	
	comp=Z,2μm,21.5s,baz=88,slow=38							
BBOO	**Buckleboo**	**31.83**	**223**	P	**P**	**P**	**05 29 16.2**	**0.0**
	baz=32,SNR=9.6							
BBOO	**Buckleboo**	**31.83**	**223**	P	**P**	**P**	**05 29 16.4**	**+0.3**
BBOO				IAmb	IAmb	IAmb	05 29 25.2	
	comp=Z,39nm,1.4s							
BBOO				IAMs_20	IAMs_20	IAMs_20	05 43 01.0	
	comp=Z,5μm,18.0s							
KNRA	**Kununurra**	**32.21**	**258**	P	**P**	**P**	**05 29 19.5**	**-0.1**
	baz=32,SNR=11							
KNRA	**Kununurra**	**32.21**	**258**	P	**P**	**P**	**05 29 19.8**	**+0.1**
MSWZ	**Moikau Station**	**32.43**	**161**	P	**P**	**P**	**05 29 21.7**	**+0.4**
PLWZ	**Palliser**	**32.57**	**161**	P	**P**	**P**	**05 29 21.5**	**-1.0**
KHZ	**Kahutara**	**32.82**	**164**	P	**P**	**P**	**05 29 25.3**	**+0.6**
KHZ				IAmb	IAmb	IAmb	05 29 29.5	
	comp=Z,38nm,1.2s							
KHZ				IAMs_20	IAMs_20	IAMs_20	05 40 34.1	
	comp=Z,4μm,20.0s							
LTZ	**Lake Taylor**	**32.83**	**165**	IAMs_20	IAMs_20	IAMs_20	05 41 30.3	
	comp=Z,4μm,18.0s							
FOZ	**Fox Glacier**	**33.02**	**169**	IAMs_20	IAMs_20	IAMs_20	05 41 53.0	
	comp=Z,3μm,18.0s							
RPZ	**Rata Peaks**	**33.44**	**167**	P	**P**	**P**	**05 29 30.9**	**+0.8**
	comp=Z,11nm,0.7s,baz=198,slow=5.0,SNR=3.1							
WRKA	**Warakurna**	**34.39**	**242**	P	**P**	**P**	**05 29 37.9**	**-0.8**
	baz=34,SNR=10							
MLZ	**Mavora Lakes**	**34.52**	**172**	IAMs_20	IAMs_20	IAMs_20	05 42 01.8	
	comp=Z,3μm,18.0s							
FITZ	**Fitzroy Crossi**	**35.40**	**255**	P	**P**	**P**	**05 29 46.8**	**-0.6**
	baz=36,SNR=6.0							
FITZ	**Fitzroy Crossi**	**35.40**	**255**	P	**P**	**P**	**05 29 46.9**	**-0.4**
	comp=Z,3.7nm,0.6s,baz=89,slow=8.1,SNR=23							
FITZ	**Fitzroy Crossi**	**35.40**	**255**	P	**P**	**P**	**05 29 46.7**	**-0.6**
FITZ				IAmb	IAmb	IAmb	05 29 50.8	
	comp=Z,33nm,1.5s							
FITZ				IAMs_20	IAMs_20	IAMs_20	05 44 31.0	
	comp=Z,5μm,19.0s							
FORT	**Forrest**	**36.66**	**233**	P	**P**	**P**	**05 29 58.3**	**+0.3**
	baz=37,SNR=16							
FORT	**Forrest**	**36.66**	**233**	P	**P**	**P**	**05 29 58.0**	**0.0**
FORT				IAMs_20	IAMs_20	IAMs_20	05 44 28.7	
	comp=Z,4μm,22.0s							
SOEI	**Soe**	**36.70**	**269**	P	**P**	**P**	**05 29 57.5**	**-1.2**
SOEI				IAmb	IAmb	IAmb	05 30 16.1	
	comp=Z,51nm,1.3s							
SOEI				IAMs_20	IAMs_20	IAMs_20	05 45 41.4	
	comp=Z,3μm,20.0s							
BATI	**Baumata**	**37.25**	**268**	P	**P**	**P**	**05 30 03.8**	**+0.5**
	comp=Z,34nm,0.5s,baz=185,slow=3.3,SNR=2.7							
MMRI	**Maumere**	**38.82**	**270**	P	**P**	**P**	**05 30 18.3**	**+1.8**
	comp=Z,5μmcomp=Z,35nm,0.7s							
EDFI	**Ende, Flores**	**39.34**	**270**	P	**P**	**P**	**05 30 21.0**	**0.0**
	comp=Z,607nmcomp=Z,14nm,1.6s							
LUWI	**Luwuk**	**39.82**	**282**	P	**P**	**P**	**05 30 26.1**	**+1.2**
	comp=Z,7μmcomp=Z,144nm,1.4s							
LUWI	**Luwuk**	**39.82**	**282**	P	**P**	**P**	**05 30 24.2**	**-0.7**
DAV	**Davao City (W)**	**40.15**	**295**	LR	LR	LR	05 46 59.9	
	comp=Z,311nm,19.9s,baz=100,slow=36							
DAV	**Davao City (W)**	**40.15**	**295**	*ie*P		P	**05 30 30.2**	**+2.6**
KCP	**Kidapawan**	**40.56**	**295**	*i*P		P	05 30 38.3	+7.3
PSAA3	**Pilbara Seismi**	**41.23**	**250**	P		P	**05 30 35.3**	**-1.2**
PSAB3	**Pilbara Seismi**	**41.23**	**250**	P		P	**05 30 34.3**	**-2.1**
PSA00	**Pilbara Seismi**	**41.23**	**250**	P		P	**05 30 36.7**	**+0.2**
MBWA	**Marble Bar**	**41.29**	**251**	P		P	**05 30 37.0**	**0.0**
MBWA				IAmb	IAmb	IAmb	05 30 37.7	
	comp=Z,25nm,0.6s		

QZH LR LR
comp=Z,810nm,17.3s
YUK Yuzh-Kuril'sk 56.78 346 *e*P **P** **05 32 31.6 -3.5**
YUK *e*S S 05 40 42.3 +16
YUK pmax pmax
comp=Z,402nm,1.1s
YUK pmax pmax
comp=N,248nm,1.0s
YUK pmax pmax
comp=E,377nm,1.0s
YUK pmax pmax
comp=Z,461nm,1.6s
YUK MLR MLR
comp=N,2µm,20.0s
YUK MLR MLR
comp=Z,2µm,20.0s
SSE Sheshan 57.17 319 P **P** **05 32 39.1 +0.9**
SSE pmax pmax
comp=Z,18nm,0.6s
SSE pmax pmax
comp=Z,140nm,3.7s
SSE LR LR
comp=Z,450nm,23.9s
SSE LR LR
comp=Z,710nm,18.6s
MDSI Maura Dua 57.18 272 P **P** **05 32 37.4 -1.2**
comp=Z,603nmcomp=Z,15nm,1.6s
TAOE Nuku Hiva Isla 57.36 93 *e*LR LR 05 49 19.9
comp=Z,2µm,27.8s
KUR Kuril'sk 57.50 349 *e*P P 05 32 46.3 +6.1
KUR 05 33 27.3
KUR *e*PPP PPP 05 36 08.3
KUR MLR MLR
comp=Z,804nm,14.0s
JKA Kamikawa-asahi 57.67 344 P **P** **05 32 40.3 -1.2**
ASAJ Asahikawa 57.68 344 P **P** **05 32 40.3 -1.2**
comp=Z,13nm,0.9s,baz=234,slow=19,SNR=2.6
KSRS Korea Array 57.77 329 P **P** **05 32 41.6 -0.6**
comp=Z,5.7nm,1.0s,baz=147,slow=7.4,SNR=21
KSRS LR LR 05 55 42.6
comp=Z,1µm,20.1s,baz=129,slow=34
KS19 Wonju Array Si 57.83 329 P **P** **05 32 42.6 -0.2**
KS19 IAmb IAmb 05 32 43.4
comp=Z,22nm,1.3s
INCN Inchon 58.46 328 P **P** **05 32 47.1 -0.1**
INCN pmax pmax
comp=Z,61nm,1.4s
INCN MLR MLR
comp=Z,1µm,19.0s
INCN Inchon 58.46 328 P **P** **05 32 47.1 -0.1**
QIZ Qiongzhong 59.17 300 P **P** **05 32 51.4 -1.0**
QIZ S **S** **05 40 57.6 -1.0**
QIZ LR LR
comp=Z,600nm,25.6s
QIZ LR LR
comp=Z,440nm,24.1s
QIZ LR LR
comp=Z,670nm,29.0s
NJ2 Nanjing 59.31 318 *e*P **P** **05 32 54.5 +1.4**
NJ2 S **S** **05 41 02.4 +2.4**
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
NJ2 LR LR
comp=Z,2µm,17.5s
NJ2 LR LR
comp=Z,860nm,16.1s
NJ2 LR LR
comp=Z,1µm,22.1s
YSS Yuzh-Sakhalins 60.27 345⇓ *e*P **P** **05 32 59.9 +0.5**
YSS *e* 05 33 17.5
YSS *e*PPP PPP 05 36 38.0
YSS *e*S **S** **05 41 10.5 -1.3**
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=Z,2µm,17.0s
YSS MLR MLR
comp=N,2µm,18.0s
YSS MLR MLR
comp=E,1µm,16.0s
BKNI Bangkinang 61.21 277 P **P** **05 33 05.3 -1.2**
USRK Ussuriysk Ar. 61.32 336 P **P** **05 33 06.1 -0.5**
comp=E,8.7nm,1.0s,baz=135,slow=6.5,SNR=13
USRK LR LR 05 57 23.4
comp=E,629nm,20.6s,baz=130,slow=34
USA0B Ussuriysk Arra 61.32 336 P **P** **05 33 06.2 -0.5**
USA0B pmax pmax
comp=Z,21nm,1.1s
USA0B Ussuriysk Arra 61.32 336 P **P** **05 33 06.2 -0.5**
USA0B IAmb IAmb 05 33 08.2
comp=Z,21nm,1.1s
USA0B IAMs_20 IAMs_20 05 57 43.8
comp=Z,1µm,18.0s
WHN Wuhan 61.48 314⇓ P P 05 33 14.4 +6.4
WHN S **S** **05 41 29.3 +1.5**
WHN LR LR
comp=Z,2µm,15.8s
WHN LR LR
comp=Z,2µm,16.5s
WHN LR LR
comp=Z,2µm,26.0s
DL2 Dalian 62.20 326 P **P** **05 33 14.0 +1.3**
DL2 S **S** **05 41 39.5 +2.9**
DL2 pmax pmax
comp=Z,16nm,0.9s
DL2 pmax pmax
comp=Z,280nm,5.5s
DL2 LR LR
comp=Z,890nm,19.0s
DL2 LR LR
comp=Z,880nm,17.9s
DL2 LR LR
comp=Z,1µm,20.1s
IPM Ipoh 62.22 281 P **P** **05 33 13.0 -0.4**
MDJ Mudanjiang 62.64 335 P **P** **05 33 15.2 -0.3**
MDJ IAmb IAmb 05 33 18.4
comp=Z,15nm,1.0s
MDJ IAMs_20 IAMs_20 05 56 53.8
comp=Z,1µm,21.0s
MNSI Mandailing Nat 62.74 277 P **P** **05 33 16.8 0.0**
comp=Z,40nm,0.9s
KULM Kulim 62.80 282 P **P** **05 33 16.3 -0.8**
KULM Kulim 62.80 282 P **P** **05 33 17.0 -0.2**
SNY Shenyang 63.26 329⇑ P **P** **05 33 20.0 +0.3**
SNY S **S** **05 41 53.4 +3.6**
SNY pmax pmax
comp=Z,190nm,9.4s
SNY LR LR
comp=Z,2µm,17.5s
SNY LR LR
comp=Z,670nm,16.1s
SNY LR LR
comp=Z,2µm,23.9s
RPSI Rantau Prapat 63.81 279 P **P** **05 33 25.5 +1.6**
RPSI Rantau Prapat 63.81 279 P **P** **05 33 23.1 -0.8**
RPSI IAmb IAmb 05 33 39.5
comp=Z,27nm,1.4s
PSI Prapat 63.84 279 P **P** **05 33 25.5 +1.2**
comp=Z,2.4nm,0.6s,baz=171,slow=0.6,SNR=5.6
PSI Prapat 63.84 279 P **P** **05 33 25.5 +1.2**
PSI pmax pmax
comp=Z,27nm,1.4s
TYV Tymovskoe 63.95 347 *e*P P 05 33 34.3 +10
TYV pmax pmax
comp=Z,12nm,1.0s
TYV pmax pmax
comp=Z,200nm,4.3s
PET Petropavlovsk 63.99 358 *e*P **P** **05 33 27.2 +2.9**
PET *e*S **S** **05 42 00.6 +2.1**
PET pmax pmax
comp=Z,100nm,12.8s
PETK Petropavlovsk- 64.12 357 P **P** **05 33 24.7 -0.4**
comp=Z,2.3nm,0.9s,baz=132,slow=8.0,SNR=3.6
CASY Casey 64.80 200 P **P** **05 33 28.9 -0.6**
GSI Gunungsitoli 64.81 277 P **P** **05 33 29.5 -1.0**
KCSI Kotacane, Aceh 65.13 279 P **P** **05 33 33.1 +0.5**
comp=Z,14nm,0.8s
GYA Guiyang 65.15 306 *e*P **P** **05 33 34.3 +1.7**
GYA pP sP 05 33 43.3 +1.1
GYA PP **PP** **05 36 00.8 +4.5**
GYA S **S** **05 42 13.6 -0.5**
GYA sS sS 05 42 28.0 +2.8
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.9s

SLVN Son La 65.19 300 P **P** **05 33 31.9 -1.0**
SLVN IAmb IAmb 05 33 50.0
comp=Z,20nm,1.3s
KLR Kul'dur 65.63 339 P **P** **05 33 34.9 -0.2**
comp=Z,3.3nm,0.9s,baz=146,slow=6.3,SNR=5.7
PBKT Sadao Pong 65.97 294 P **P** **05 33 37.8 0.0**
BJT Baijiatuao 66.07 323 P **P** **05 33 37.2 -0.9**
BJT pmax pmax
comp=Z,7.0nm,1.1s
BJT Baijiatuao 66.07 323 P **P** **05 33 37.2 -0.9**
BJT Baijiatuao 66.07 323 IAMs_20 IAMs_20 06 00 22.4
comp=Z,1µm,18.0s
BJI Beijing 66.08 323 P **P** **05 33 38.3 +0.2**
BJI pmax pmax
comp=Z,9.0nm,1.9s
BJI LR LR
comp=Z,790nm,19.1s
BJI LR LR
comp=Z,730nm,19.6s
VNDA Vanda 66.33 180 P **P** **05 33 40.0 +0.8**
comp=Z,5.9nm,0.8s,baz=337,slow=6.8,SNR=36
VNDA LR LR 05 58 04.4
comp=Z,675nm,19.9s,baz=2.0,slow=32
VNDA Vanda 66.33 180 P **P** **05 33 39.4 +0.2**
VNDA pmax pmax
comp=Z,48nm,1.5s
VNDA Vanda 66.33 180 P **P** **05 33 39.4 +0.2**
NKL Nikolayevsk 66.53 346 *e*P **P** **05 33 42.6 +1.9**
NKL *e* 05 34 15.4
NKL *e* 05 36 04.8
NKL *e*S **S** **05 42 32.1 +2.6**
NKL *e* 05 43 31.9
NKL pmax pmax
comp=Z,6.0nm,1.7s
NKL pmax pmax
comp=N,5.0nm,0.8s
NKL pmax pmax
comp=Z,54nm,3.8s
XAN Xi'an 67.24 314 P **P** **05 33 45.3 -0.5**
XAN S **S** **05 42 39.3 +0.2**
XAN pmax pmax
comp=Z,6.0nm,1.1s
XAN pmax pmax
comp=Z,110nm,5.1s
XAN LR LR
comp=Z,850nm,18.7s
XAN LR LR
comp=Z,740nm,17.9s
XAN LR LR
comp=Z,980nm,17.6s
XAN Xi'an 67.24 314 P **P** **05 33 45.3 -0.5**
XAN pmax pmax
comp=Z,8.0nm,1.0s
XAN MLR MLR
comp=Z,1µm,19.0s
XAN Xi'an 67.24 314 P **P** **05 33 45.2 -0.5**
XAN Xi'an 67.24 314 IAMs_20 IAMs_20 06 03 34.2
comp=Z,1µm,19.0s
KMI Kunming 67.73 303 P **P** **05 33 50.8 +1.5**
KMI pP pP 05 33 57.3 +1.3
KMI sP sP 05 34 00.9 +1.9
KMI S **S** **05 42 44.9 -0.8**
KMI sS sS 05 42 55.8 -1.1
KMI pmax pmax
comp=Z,12nm,0.7s
KMI pmax pmax
comp=Z,210nm,3.9s
KMI LR LR
comp=Z,580nm,16.7s
KMI LR LR
comp=Z,330nm,21.3s
KMI LR LR
comp=Z,490nm,20.3s
KMI Kunming 67.73 303 P **P** **05 33 48.7 -0.6**
KMI pmax pmax
comp=Z,35nm,1.3s
KMI Kunming 67.73 303 P **P** **05 33 48.7 -0.6**
CMAR Chiang Mai Arr 68.44 295 P **P** **05 33 53.9 +0.3**
comp=Z,14nm,0.4s,baz=111,slow=4.4,SNR=13
CMAR LR LR 06 05 44.9
comp=Z,139nm,18.0s,baz=139,slow=38
CHTO Chiang Mai 68.56 295 P **P** **05 33 52.6 -1.7**
CHTO pmax pmax
comp=Z,19nm,1.4s
CHTO Chiang Mai 68.56 295 P **P** **05 33 52.6 -1.7**
CHTO IAmb IAmb 05 34 08.5
comp=Z,19nm,1.4s
NIKH Nikolski High 68.73 19 P **P** **05 33 54.7 +0.1**
HHC Hu-ho-hao-te 69.34 322 *e*P **P** **05 33 59.3 +0.4**
HHC S **S** **05 43 00.4 -3.6**
HHC pmax pmax
comp=Z,6.0nm,0.9s
HHC pmax pmax
comp=Z,100nm,5.3s
HHC LR LR
comp=Z,380nm,15.3s
HHC LR LR
comp=Z,400nm,16.2s
HHC LR LR
comp=Z,500nm,17.9s
CD2 Chengdu 69.47 309 P **P** **05 33 59.4 -0.4**
CD2 S **S** **05 43 05.4 -0.4**
CD2 sS sS 05 43 19.5 +2.6
CD2 SS **SS** **05 47 33.9 0.0**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,80nm,5.7s
CD2 LR LR
comp=Z,1µm,14.8s
CD2 LR LR
comp=Z,1µm,18.2s
CD2 LR LR
comp=Z,1µm,21.4s
HIA Hailar 70.53 332 P **P** **05 34 05.9 0.0**
HIA pmax pmax
comp=Z,17nm,1.0s
HIA Hailar 70.53 332 P **P** **05 34 05.9 0.0**
HIA IAmb IAmb 05 34 21.7
comp=Z,17nm,1.0s
HIA Hailar 70.53 332 IAMs_20 IAMs_20 06 01 23.5
comp=Z,1µm,22.0s
ZEA Zeya 70.95 339 *e*P **P** **05 34 08.4 +0.1**
ZEA pmax pmax
comp=Z,21nm,1.2s
ZEA MLR MLR
comp=Z,1µm,16.0s
ZEA MLR MLR
comp=N,700nm,20.0s
LZH Lanzhou 71.86 314 *e*P **P** **05 34 13.3 -1.1**
LZH pP sP 05 34 24.1 0.0
LZH sP pwP 05 34 30.0 +1.1
LZH S **S** **05 43 35.8 +2.1**
LZH SKS **SKSac** **05 44 12.8 -3.9**
LZH SS **SS** **05 48 08.0 -2.7**
LZH pmax pmax
comp=N,19nm,1.0s
LZH pmax pmax
comp=N,150nm,6.5s
LZH LR LR
comp=N,600nm,11.9s
LZH LR LR
comp=N,550nm,15.2s
LZH LR LR
comp=N,680nm,15.7s
CNBA Chernabura Isl 73.43 22 IAMs_20 IAMs_20 05 59 54.7
comp=Z,1µm,20.0s
ULN Ulaanbaatar 76.05 326⇑ *e*P **P** **05 34 39.0 +0.3**
ULN pmax pmax
comp=Z,13nm,1.1s
ULN Ulaanbaatar 76.05 326 P **P** **05 34 38.7 0.0**
ULN IAmb IAmb 05 34 47.0
comp=Z,26nm,1.2s
GTA Gaotai 76.24 315 P **P** **05 34 40.5 +0.6**
GTA pP sP 05 34 49.3 -0.3
GTA sP pwP 05 34 53.3 -1.2
GTA S **S** **05 44 26.4 +3.6**
GTA SS **SS** **05 49 23.8 +6.5**
GTA pmax pmax
comp=Z,9.0nm,1.3s
GTA pmax pmax
comp=Z,80nm,5.2s
GTA LR LR
comp=Z,860nm,17.5s
GTA LR LR
comp=Z,580nm,20.6s

GTA LR LR
comp=Z,660nm,19.4s
SONM Songino Array 76.40 325 P **P** **05 34 40.6 0.0**
comp=Z,8.6nm,1.1s,baz=135,slow=5.4,SNR=12
SHL Shillong 77.00 300 P **P** **05 34 41.9 -2.7**
SHL pmax pmax
comp=Z,33nm,1.4s
SHL Shillong 77.00 300 P **P** **05 34 41.9 -2.7**
SHL IAmb IAmb 05 34 46.6
comp=Z,33nm,1.4s
YAK Yakutsk 77.12 345 *e*P **P** **05 34 43.6 -0.5**
YAK pmax pmax
comp=Z,20nm,1.0s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK Yakutsk 77.12 345 P **P** **05 34 43.0 -1.2**
YAK IAmb IAmb 05 34 51.3
comp=Z,24nm,0.8s
QSPA South Pole Qui 78.82 180 P **P** **05 34 54.5 +0.6**
QSPA South Pole Qui 78.82 180 IAMs_20 IAMs_20 06 10 42.5
comp=Z,781nm,18.0s
BILL Bilibino 79.08 2*c**e*P **P** **05 34 55.0 0.0**
BILL pmax pmax
comp=Z,15nm,1.1s
BILL Bilibino 79.08 2 P **P** **05 34 54.9 0.0**
BILL IAmb IAmb 05 35 07.6
comp=Z,15nm,0.9s
ZAK Zakamensk 79.50 326 *e*P **P** **05 34 57.0 -0.8**
ZAK pmax pmax
comp=Z,8.0nm,1.1s
HOM Homer 79.91 22 IAMs_20 IAMs_20 06 03 41.8
comp=Z,1µm,21.0s
CNPM China Poot 79.97 22 P **P** **05 35 00.5 +0.5**
CNPM IAmb IAmb 05 35 06.7
comp=Z,42nm,1.3s
CNPM IAMs_20 IAMs_20 06 03 21.5
comp=Z,1µm,22.0s
TLY Talaya 80.00 328 IAMs_20 IAMs_20 06 07 49.1
comp=Z,1µm,18.0s
RSO Redoubt South 80.07 21 P **P** **05 35 00.1 -0.6**
SEW Seward 81.03 22 IAMs_20 IAMs_20 06 03 52.5
comp=Z,920nm,22.0s
RC01 Rabbit Creek A 81.58 22 IAMs_20 IAMs_20 06 04 47.0
comp=Z,1µm,22.0s
PPLA Purkeypile 81.97 20 IAMs_20 IAMs_20 06 05 53.3
comp=Z,869nm,21.0s
PMR Palmer 82.13 21 P **P** **05 35 11.4 0.0**
PMR pmax pmax
comp=Z,33nm,1.5s
PMR Palmer 82.13 21 P **P** **05 35 11.4 0.0**
PMR IAmb IAmb 05 35 30.0
comp=Z,33nm,1.5s
PMR IAMs_20 IAMs_20 06 05 26.7
comp=Z,1µm,22.0s
KNK Knik Glacier 82.26 22 P **P** **05 35 12.6 +0.5**
KNK IAmb IAmb 05 35 17.4
comp=Z,10nm,0.6s
KNK IAMs_20 IAMs_20 06 03 29.0
comp=Z,955nm,22.0s
GHO Glory Hole Cre 82.33 21 IAMs_20 IAMs_20 06 05 44.7
comp=Z,1µm,21.0s
HIN Hinchinbrook I 82.34 23 IAMs_20 IAMs_20 06 06 13.3
comp=Z,911nm,21.0s
SML Sawmill 82.56 22 IAMs_20 IAMs_20 06 04 56.0
comp=Z,1µm,22.0s
EYAK Cordova Ski Ar 82.73 23 IAMs_20 IAMs_20 06 06 14.5
comp=Z,974nm,20.0s
KTH Kantishna Hill 82.84 19 IAMs_20 IAMs_20 06 08 24.3
comp=Z,1µm,20.0s
SCM Sheep Creek Mo 82.94 22 IAMs_20 IAMs_20 06 05 19.1
comp=Z,752nm,20.0s
TRF Thorofare Moun 82.98 20 IAMs_20 IAMs_20 06 06 50.9
comp=Z,1µm,20.0s
MAW Mawson 83.05 202 P **P** **05 35 16.1 0.0**
comp=Z,3.6nm,0.7s,baz=107,slow=4.6,SNR=4.9
MAW LR LR 06 09 35.2
comp=Z,367nm,18.3s,baz=69,slow=34
MAW Mawson 83.05 202 P **P** **05 35 17.6 +1.4**
MAW pmax pmax
comp=Z,7.0nm,1.5s
MAW Mawson 83.05 202 P **P** **05 35 17.6 +1.4**
BPAW Bear Paw Mtn. 83.20 19 P **P** **05 35 16.2 -0.7**
BPAW IAmb IAmb 05 35 32.3
comp=Z,18nm,1.4s
BPAW IAMs_20 IAMs_20 06 08 55.6
comp=Z,847nm,18.0s
RND Reindeer 83.43 20 P **P** **05 35 17.7 -0.5**
RND pmax pmax
comp=Z,26nm,1.3s
RND Reindeer 83.43 20 P **P** **05 35 17.7 -0.5**
RND IAmb IAmb 05 35 31.6
comp=Z,26nm,1.3s
MCK McKinley 83.62 20 P **P** **05 35 19.0 -0.2**
MCK pmax pmax
comp=Z,25nm,1.0s
MCK McKinley 83.62 20 P **P** **05 35 18.9 -0.2**
MCK IAMs_20 IAMs_20 06 06 53.8
comp=Z,730nm,20.0s
DHY Denali Highway 83.72 21 IAMs_20 IAMs_20 06 08 50.7
comp=Z,830nm,20.0s
BWN Browne 83.74 19 IAMs_20 IAMs_20 06 07 11.4
comp=Z,1µm,21.0s
MLY Manley 83.92 18 IAMs_20 IAMs_20 06 06 56.6
comp=Z,841nm,21.0s
GLB Gilahina Butte 84.02 23 P **P** **05 35 21.9 +0.6**
GLB IAmb IAmb 05 35 22.7
comp=Z,19nm,1.1s
GLB IAMs_20 IAMs_20 06 05 55.7
comp=Z,752nm,21.0s
VRDI Verde Repeater 84.04 23 P **P** **05 35 22.0 +0.5**
VRDI IAmb IAmb 05 35 39.2
comp=Z,30nm,1.5s
PAX Paxson 84.33 21 IAMs_20 IAMs_20 06 06 01.8
comp=Z,1µm,22.0s
BALM Baldy 84.36 24 P **P** **05 35 21.4 -1.7**
BALM IAmb IAmb 05 35 25.6
comp=Z,10nm,0.8s
WRH Wood River Hil 84.39 20 P **P** **05 35 22.6 -0.4**
WRH IAMs_20 IAMs_20 06 08 41.1
comp=Z,883nm,20.0s
CCB Clear Creek Bu 84.60 20 P **P** **05 35 23.0 -1.1**
CCB IAmb IAmb 05 35 33.8
comp=Z,7.3nm,0.6s
CCB IAMs_20 IAMs_20 06 07 02.6
comp=Z,827nm,20.0s
BARN Barnard Glacie 84.65 24 P **P** **05 35 24.3 -0.3**
BARN IAmb IAmb 05 35 26.5
comp=Z,20nm,1.0s
TCOL CIGO, UAF Yank 84.72 19 P **P** **05 35 24.4 -0.2**
baz=230
CTGM Chitina Glacie 84.73 24 P **P** **05 35 24.6 -0.4**
HDA Harding Lake 84.73 20 P **P** **05 35 24.7 0.0**
baz=231
HDA Harding Lake 84.73 20 P **P** **05 35 24.7 0.0**
HDA IAmb IAmb 05 35 42.6
comp=Z,18nm,1.0s
COLA College 84.73 19⇓ *i*P **P** **05 35 24.0 -0.7**
COLA pmax pmax
comp=Z,8.0nm,0.8s
COLA College 84.73 19 P **P** **05 35 24.6 -0.1**
COLA IAmb IAmb 05 35 36.1
comp=Z,17nm,1.1s
COLA College 84.73 19 IAMs_20 IAMs_20 06 07 51.0
comp=Z,742nm,20.0s
MENT Mentasta 84.95 22 P **P** **05 35 26.1 +0.2**
MENT IAmb IAmb 05 35 36.8
comp=Z,13nm,0.6s
ILAR Eielson Array 84.98 20 P **P** **05 35 24.8 -1.2**
comp=Z,2.1nm,0.7s,baz=248,slow=4.7,SNR=7.5
DHAK Deception Hill 85.03 27 IAMs_20 IAMs_20 06 05 44.5
comp=Z,772nm,20.0s
RIDG Independent Ri 85.03 21 P **P** **05 35 26.8 +0.5**
RIDG IAmb IAmb 05 35 46.2
comp=Z,17nm,1.0s
RIDG IAMs_20 IAMs_20 06 09 30.2
comp=Z,1µm,19.0s
DOT Dot Lake 85.25 21 P **P** **05 35 28.0 +0.6**
DOT IAMs_20 IAMs_20 06 07 03.0
comp=Z,1µm,21.0s
SIT Sitka 85.34 29 IAMs_20 IAMs_20 06 07 24.0
comp=Z,800nm,19.0s
SCRK Sand Creek 85.48 21 P **P** **05 35 28.1 -0.6**
SCRK IAmb IAmb 05 35 46.5
comp=Z,25nm,1.3s
SCRK IAMs_20 IAMs_20 06 09 42.0
comp=Z,986nm,19.0s

TIXI Tiksi 85.48 350 P **P** **05 35 27.5 -0.9**
comp=Z,0.9nm,0.4s,baz=332,slow=11,SNR=5.0
TIXI Tiksi 85.48 350↑ *e*P **P** **05 35 27.0 -1.3**
TIXI pmax pmax
comp=Z,9.0nm,1.4s
TIXI Tiksi 85.48 350 P **P** **05 35 27.1 -1.2**
COLD Coldfoot 85.58 17 IAMs_20 IAMs_20 06 09 39.5
comp=Z,806nm,18.0s
GDXM Geysers 85.98 49 IAMs_20 IAMs_20 06 08 25.6
comp=Z,806nm,19.0s
HYT Haines Junctio 86.23 25 IAMs_20 IAMs_20 06 07 28.2
comp=Z,1µm,20.0s
WMQ Urumqi 86.32 316 *e*P **P** **05 35 33.4 +0.2**
WMQ pP sP 05 35 44.8 +1.8
WMQ pmax pmax
comp=Z,50nm,3.7s
WMQ LR LR
comp=Z,600nm,16.3s
WMQ LR LR
comp=Z,260nm,15.1s
WMQ LR LR
comp=Z,720nm,21.1s
WMQ Urumqi 86.32 316 IAMs_20 IAMs_20 06 10 46.1
comp=Z,776nm,22.0s
JIS Juneau Island 86.36 28 IAMs_20 IAMs_20 06 14 34.0
comp=Z,824nm,18.0s
SAO San Andreas Ge 86.40 52 IAMs_20 IAMs_20 06 10 20.8
comp=Z,1µm,18.0s
O02D Mt. Diablo Mer 86.40 48 P **P** **05 35 35.4 +1.6**
baz=252
SKAG Skagway 86.50 27 IAMs_20 IAMs_20 06 05 43.4
comp=Z,1µm,21.0s
FYU Fort Yukon 86.64 19 IAMs_20 IAMs_20 06 11 22.6
comp=Z,753nm,20.0s
YBH Yreka Blue Hor 86.93 47 LR LR 06 07 24.9
comp=Z,240nm,21.9s,baz=274,slow=31
EGAK Eagle 86.94 21 P **P** **05 35 36.4 +0.7**
EGAK IAMs_20 IAMs_20 06 06 46.8
comp=Z,1µm,22.0s
SNCC San Nicolas Is 86.95 55 IAMs_20 IAMs_20 06 05 08.7
comp=Z,1µm,22.0s
BBB Bella Bella 87.03 35 IAMs_20 IAMs_20 06 10 13.3
comp=Z,787nm,18.0s
PAGB Antelope Grade 87.04 53 IAMs_20 IAMs_20 06 06 46.9
comp=Z,1µm,20.0s
DAWY Dawson 87.19 22 P **P** **05 35 37.7 +0.7**
DAWY IAMs_20 IAMs_20 06 10 01.4
comp=Z,755nm,20.0s
WHY Whitehorse 87.27 26 IAMs_20 IAMs_20 06 05 55.7
comp=Z,910nm,22.0s
AFDM Forest Hills D 87.38 50 P **P** **05 35 39.2 +0.7**
E03A Lebam 87.85 42 IAMs_20 IAMs_20 06 09 27.4
comp=Z,816nm,18.0s
NLWA Neilton Lookou 87.92 41 IAMs_20 IAMs_20 06 09 15.3
comp=Z,872nm,18.0s
PASC Pasadena Art C 88.27 55 IAMs_20 IAMs_20 06 05 36.5
comp=Z,1µm,22.0s
ISA Isabella, Lake 88.42 53 P **P** **05 35 43.9 +0.3**
ISA pmax pmax
comp=Z,4.0nm,1.0s
ISA Isabella, Lake 88.42 53 P **P** **05 35 43.9 +0.3**
MDPB Devils Postpil 88.46 51 P **P** **05 35 44.0 +0.1**
MDPB IAmb IAmb 05 35 53.5
comp=Z,15nm,1.3s
DLBC Dease Lake 88.50 29 IAMs_20 IAMs_20 06 10 01.5
comp=Z,1µm,19.0s
OMMB Old Mammoth Mi 88.51 51 IAMs_20 IAMs_20 06 10 34.7
comp=Z,741nm,19.0s
EDW2 Edwards Air Fo 88.60 54 P **P** **05 35 44.7 +0.3**
baz=256
YERR Yerington 88.69 50 IAMs_20 IAMs_20 06 15 58.4
comp=Z,605nm,18.0s
MOD Modoc Plateau 88.70 47 IAMs_20 IAMs_20 06 11 02.4
comp=Z,661nm,20.0s
109C Camp Elliot, M 88.82 56 IAMs_20 IAMs_20 06 06 11.4
comp=Z,1µm,22.0s
BAR Barrett 89.13 57 IAMs_20 IAMs_20 06 05 34.4
comp=Z,1µm,22.0s
RYN Ryan 89.14 50 P **P** **05 35 48.2 +1.2**
RYN IAmb IAmb 05 35 49.9
comp=Z,10nm,1.2s
NVAR Mina Array Bea 89.25 51 P **P** **05 35 47.8 +0.2**
comp=Z,1.8nm,0.7s,baz=237,slow=6.1,SNR=12
NVAR LR LR 06 09 21.5
comp=Z,385nm,19.8s,baz=280,slow=31
MPMC Manual Prospec 89.29 53 P **P** **05 35 49.0 +1.2**
baz=256
EPYK Eagle Plains 89.36 21 P **P** **05 35 48.0 +0.8**
baz=240
EPYK Eagle Plains 89.36 21 P **P** **05 35 47.8 +0.6**
EPYK IAmb IAmb 05 35 57.0
comp=Z,15nm,1.1s
EPYK IAMs_20 IAMs_20 06 10 14.6
comp=Z,845nm,20.0s
MONP2 Monument Peak 89.38 56 P **P** **05 35 49.9 +1.6**
baz=256
PFO Pinyon Flats O 89.52 56 P **P** **05 35 48.5 -0.3**
PFO pmax pmax
comp=Z,7.0nm,1.2s
PFO Pinyon Flats O 89.52 56 P **P** **05 35 48.5 -0.3**
PFO Pinyon Flats O 89.52 56 IAMs_20 IAMs_20 06 07 06.9
comp=Z,1µm,21.0s
XPFO Pion Flat 89.53 56 IAMs_20 IAMs_20 06 07 05.9
comp=Z,1µm,21.0s
KVN Kaiserville 89.57 50 P **P** **05 35 50.1 +1.1**
KVN pmax pmax
comp=Z,13nm,1.3s
KVN MLR MLR
comp=Z,400nm,19.0s
KVN Kaiserville 89.57 50 P **P** **05 35 50.1 +1.1**
KVN IAmb IAmb 05 35 51.7
comp=Z,13nm,1.3s
GRAC Grapevine Rang 89.62 52 P **P** **05 35 50.8 +1.7**
baz=256
GSC Goldstone, Bar 89.65 54 P **P** **05 35 50.4 +1.0**
baz=256
I07A Izee 89.86 45 P **P** **05 35 48.6 -1.6**
I07A IAmb IAmb 05 35 53.3
comp=Z,14nm,1.4s
FURC Furnace Creek, 89.88 53 P **P** **05 35 51.6 +1.4**
baz=256
SWSC Sam W. Stewart 89.90 57 P **P** **05 35 52.1 +1.6**
baz=257
BELC Belle Mtn. Jos 89.99 55 P **P** **05 35 52.4 +1.4**
baz=257
WVOR Wild Horse Val 90.04 47 P **P** **05 35 51.2 +0.1**
WVOR pmax pmax
comp=Z,42nm,1.5s
WVOR Wild Horse Val 90.04 47 P **P** **05 35 51.2 +0.1**
LLLB Lillooet 90.17 38 IAMs_20 IAMs_20 06 07 17.5
comp=Z,901nm,22.0s
SHOC Shoshone, Teco 90.21 54 P **P** **05 35 53.5 +1.7**
baz=256
BC3 Big Chuckawall 90.35 56 P **P** **05 35 55.0 +2.3**
baz=257
J08A Circle Bar Ran 90.39 46 P **P** **05 35 52.8 +0.1**
GMRC Granite Mounta 90.44 55 P **P** **05 35 54.1 +1.0**
baz=257
TPNV Topopah Spring 90.47 53 P **P** **05 35 52.9 -0.4**
TPNV pmax pmax
comp=Z,22nm,1.4s
TPNV Topopah Spring 90.47 53 P **P** **05 35 54.5 +1.2**
baz=256
TPNV Topopah Spring 90.47 53 P **P** **05 35 52.9 -0.4**
TPNV IAMs_20 IAMs_20 06 08 48.7
comp=Z,817nm,20.0s
G08A Pilot Rock 90.56 44 P **P** **05 35 54.1 +0.7**
G08A IAmb IAmb 05 36 11.5
comp=Z,18nm,1.4s
IRM Iron Mountain 90.71 55 P **P** **05 35 55.8 +1.5**
baz=257
GLA Glamis 90.72 57 IAMs_20 IAMs_20 06 10 28.7
comp=Z,843nm,20.0s
MKAR Makanchi Array 90.84 318 P **P** **05 35 53.6 -1.0**
comp=Z,1.3nm,0.6s,baz=93,slow=6.0,SNR=7.5
MKAR LR LR 06 14 41.2
comp=Z,320nm,21.6s,baz=86,slow=34
Y12C Blythe 91.12 56 IAMs_20 IAMs_20 06 07 22.3
comp=Z,877nm,22.0s
B08A Colville Reser 91.13 41 P **P** **05 35 55.1 -0.8**
B08A IAmb IAmb 05 35 57.1
comp=Z,8.2nm,1.1s
B08A IAMs_20 IAMs_20 06 09 18.0
comp=Z,658nm,20.0s
SHPR Sheep Range 91.22 53 P **P** **05 35 57.9 +1.2**
SHPR IAmb IAmb 05 35 58.9
comp=Z,9.7nm,1.2s

ZAA0 Zalesovo Array 91.29 325 IAMs_20 IAMs_20 06 15 49.7
comp=Z,656nm,20.0s
ZALV Zalesovo Beam 91.29 325 P **P** **05 35 55.5 -0.9**
comp=Z,0.6nm,0.3s,baz=88,slow=10,SNR=3.5
ZALV LR LR 06 16 01.4
comp=Z,569nm,20.8s,baz=106,slow=35
R11A Troy Canyon, C 91.31 51 P **P** **05 35 58.4 +1.3**
baz=257
R11A Troy Canyon, C 91.31 51 P **P** **05 35 58.3 +1.2**
R11A IAmb IAmb 05 36 07.4
comp=Z,9.1nm,1.1s
R11A IAMs_20 IAMs_20 06 14 32.7
comp=Z,655nm,18.0s
INK Inuvik 91.38 20 P **P** **05 35 56.5 0.0**
comp=Z,3.8nm,1.1s,baz=220,slow=9.2,SNR=4.6
INK Inuvik 91.38 20 P **P** **05 35 56.7 +0.2**
INK pmax pmax
comp=Z,19nm,1.5s
INK Inuvik 91.38 20 P **P** **05 35 56.7 +0.2**
INK IAMs_20 IAMs_20 06 11 51.0
comp=Z,980nm,20.0s
113A Mohawk Valley, 91.53 57 IAMs_20 IAMs_20 06 10 05.2
comp=Z,1µm,20.0s
BMO Blue Mountains 91.58 45 P **P** **05 35 57.2 -0.9**
BMO pmax pmax
comp=Z,18nm,1.4s
BMO Blue Mountains 91.58 45 P **P** **05 35 57.2 -0.9**
SRIG Santa Rosalia 91.71 63 IAMs_20 IAMs_20 06 07 59.2
comp=Z,761nm,21.0s
F10A Beech Ranch, E 91.91 44 P **P** **05 35 60.0 +0.3**
W13A Hualapai Mount 91.93 55 IAMs_20 IAMs_20 06 09 17.5
comp=Z,1µm,20.0s
ELK Elko 92.11 49 P **P** **05 36 02.2 +1.3**
ELK pmax pmax
comp=Z,13nm,1.4s
ELK Elko 92.11 49 P **P** **05 36 02.2 +1.3**
ELK IAmb IAmb 05 36 10.8
comp=Z,13nm,1.4s
MFID Camas Ranch 92.28 46 P **P** **05 36 02.2 +0.8**
MFID IAmb IAmb 05 36 11.4
comp=Z,7.9nm,1.1s
MFID IAMs_20 IAMs_20 06 13 57.0
comp=Z,594nm,19.0s
Y14A Wickenburg 92.40 56 IAMs_20 IAMs_20 06 08 24.0
comp=Z,927nm,22.0s
NEW Newport 92.53 41 P **P** **05 36 02.3 -0.1**
NEW pmax pmax
comp=Z,10.0nm,1.4s
NEW Newport 92.53 41 P **P** **05 36 02.9 +0.5**
baz=256
NEW Newport 92.53 41 P **P** **05 36 02.3 -0.1**
NEW IAmb IAmb 05 36 16.7
comp=Z,10nm,1.4s
LCMT Little Creek M 92.83 53 P **P** **05 36 05.4 +1.2**
CCUT Cedar City 92.85 52 P **P** **05 36 04.2 -0.2**
SZCU Shurtz Canyon 93.08 52 P **P** **05 36 06.5 +1.1**
HSIG 93.16 61 IAMs_20 IAMs_20 06 08 02.5
comp=Z,871nm,21.0s
U15A North Rim 93.47 54 IAMs_20 IAMs_20 06 09 05.1
comp=Z,995nm,22.0s
KSH Kashi 93.67 309 P **P** **05 36 07.8 -0.1**
KSH pP pwP 05 36 20.6 -1.9
KSH sP sP 05 36 22.6 +4.8
KSH pmax pmax
comp=Z,18nm,1.1s
KSH pmax pmax
comp=Z,130nm,4.8s
X16A Lo Mia Camp, P 93.77 56 IAMs_20 IAMs_20 06 09 59.1
comp=Z,868nm,20.0s
MTPU Mount Pierson 93.86 52 P **P** **05 36 09.6 +0.4**
TUC Tucson 93.91 58 IAMs_20 IAMs_20 06 09 04.2
comp=Z,854nm,22.0s
KURK Kurchatov 94.14 321 *de*P **P** **05 36 08.6 -1.1**
KURK pmax pmax
comp=Z,7.0nm,1.3s
KURK Kurchatov 94.14 321 P **P** **05 36 08.5 -1.1**
KURBB Kurchatov Arra 94.18 321 P **P** **05 36 08.4 -1.4**
comp=Z,1.7nm,1.1s,baz=116,slow=3.5,SNR=6.2
NRIK Noril'sk 94.83 340 LR LR 06 18 01.4
comp=Z,1µm,21.3s,baz=111,slow=35
C36M Paulatuk 94.95 20 P **P** **05 36 13.1 +0.2**
baz=252
C36M Paulatuk 94.95 20 P **P** **05 36 12.5 -0.4**
C36M IAmb IAmb 05 36 13.7
comp=Z,13nm,1.1s
X18A Snowflake 95.00 56 IAMs_20 IAMs_20 06 10 45.8
comp=Z,606nm,20.0s
319A Douglas 95.00 59 IAMs_20 IAMs_20 06 10 07.2
comp=Z,906nm,20.0s
W18A Petrified Fore 95.27 55 IAMs_20 IAMs_20 06 09 44.0
comp=Z,994nm,22.0s
FRU1 Bikeke 95.28 312 IAMs_20 IAMs_20 06 23 17.7
comp=Z,545nm,18.0s
AAK Ala-Archa 95.35 312 IAMs_20 IAMs_20 06 23 12.5
comp=Z,519nm,18.0s
A36M Sachs Harbour 95.44 17 P **P** **05 36 15.5 +0.4**
baz=251
PV12 Saucer Basin, 96.54 52 IAMs_20 IAMs_20 06 18 25.2
comp=Z,939nm,20.0s
MVCO Mesa Verde 96.60 53 IAMs_20 IAMs_20 06 11 50.0
comp=Z,1µm,20.0s
PDAR Pinedale Array 96.66 48 LR LR 06 14 24.9
comp=Z,224nm,20.0s,baz=308,slow=32
YKA Yellowknife Ar 96.98 28 P **P** **05 36 19.6 -2.7**
comp=Z,2.0nm,0.7s,baz=256,slow=4.4,SNR=20
YKA LR LR 06 14 02.5
comp=Z,430nm,21.0s,baz=0.0,slow=32
EGMT Eagleton 97.32 43 P Pdif 05 36 24.9 +0.4
baz=262
Y22D IRIS PASSSCAL I 97.40 57 IAMs_20 IAMs_20 06 10 57.4
comp=Z,994nm,21.0s
HPIG 97.41 64 IAMs_20 IAMs_20 06 10 54.3
comp=Z,979nm,20.0s
ANMO Albuquerque 97.90 56 IAMs_20 IAMs_20 06 13 59.7
comp=Z,599nm,20.0s
RWWY Rawlins 98.23 49 IAMs_20 IAMs_20 06 19 38.8
comp=Z,531nm,19.0s
SDCO Great Sand Dun 99.04 53 IAMs_20 IAMs_20 06 12 40.5
comp=Z,1µm,21.0s
ISCO Idaho Springs 99.20 51 IAMs_20 IAMs_20 06 13 13.6
comp=Z,911nm,21.0s
TXAR Lajitas Array 99.49 62 LR LR 06 12 37.5
comp=Z,591nm,21.9s,baz=0.0,slow=30
LAO LASA Array 99.54 44 **Pdif** **05 36 35.1 +0.8**
LAO IAmb IAmb 05 36 44.9
comp=Z,9.2nm,1.1s
BRVK Borovoye 99.61 322 IAMs_20 IAMs_20 06 22 14.9
comp=Z,515nm,19.0s
MSTX Muleshoe 100.80 57 IAMs_20 IAMs_20 06 12 31.6
comp=Z,760nm,22.0s
RSSD Black Hills 100.82 47 IAMs_20 IAMs_20 06 16 04.0
comp=Z,635nm,20.0s
AMTX Amarillo 101.79 57 IAMs_20 IAMs_20 06 15 40.8
comp=Z,670nm,19.0s
FFC Flin Flon 102.76 36 IAMs_20 IAMs_20 06 28 48.2
comp=Z,478nm,18.0s
ABTX Abilene, Hawle 103.28 59 IAMs_20 IAMs_20 06 15 12.4
comp=Z,886nm,20.0s
CBKS Cedar Bluff 103.65 53 IAMs_20 IAMs_20 06 16 01.6
comp=Z,768nm,21.0s
U32A Winter Ranch, 104.09 55 IAMs_20 IAMs_20 06 15 09.3
comp=Z,651nm,22.0s
WMOK Wichita Mounta 104.16 57 IAMs_20 IAMs_20 06 16 16.4
comp=Z,673nm,20.0s
R32A Long Quarter, 104.43 53 IAMs_20 IAMs_20 06 15 28.3
comp=Z,924nm,22.0s
WHTX Lake Whitney, 105.08 60 IAMs_20 IAMs_20 06 20 06.1
comp=Z,811nm,20.0s
OKCFA Oklahoma City 105.29 56 IAMs_20 IAMs_20 06 16 51.3
comp=Z,855nm,22.0s
Z35A Perchaven, San 105.34 58 IAMs_20 IAMs_20 06 16 27.8
comp=Z,755nm,21.0s
T35A Sooner Cattle 106.11 55 IAMs_20 IAMs_20 06 17 27.9
comp=Z,556nm,21.0s
HKT Hockley 106.34 62 IAMs_20 IAMs_20 06 17 43.5
comp=Z,723nm,20.0s
237A Washetta, Mont 106.48 60 IAMs_20 IAMs_20 06 17 01.1
comp=Z,839nm,20.0s
TUL1 Leonard 106.66 56 IAMs_20 IAMs_20 06 18 58.5
comp=Z,702nm,20.0s
N35A Tabor 106.87 51 IAMs_20 IAMs_20 06 20 10.5
comp=Z,764nm,20.0s
X37A Clayton 106.96 57 IAMs_20 IAMs_20 06 16 39.6
comp=Z,768nm,22.0s
Z38A Mt. Pleasant 107.23 59 IAMs_20 IAMs_20 06 19 19.9
comp=Z,545nm,20.0s
HHAR Hobbs 108.17 55 IAMs_20 IAMs_20 06 21 31.4
comp=Z,760nm,19.0s
F36A Milaca 108.31 45 IAMs_20 IAMs_20 06 32 37.0
comp=Z,473nm,18.0s
I37A Lemond, Waseca 108.48 47 IAMs_20 IAMs_20 06 22 02.7
comp=Z,535nm,20.0s
S39A Bolivar 108.67 54 IAMs_20 IAMs_20 06 18 15.5
comp=Z,673nm,22.0s
SCIA State Center 108.68 49 IAMs_20 IAMs_20 06 25 40.4
comp=Z,501nm,18.0s
WLAR White Oak Lake 108.81 58 IAMs_20 IAMs_20 06 18 59.6
comp=Z,585nm,21.0s
U40A Yellville 109.05 55 IAMs_20 IAMs_20 06 17 58.6
comp=Z,746nm,22.0s
X40A Basin Creek Fa 109.05 57 IAMs_20 IAMs_20 06 17 53.0
comp=Z,785nm,22.0s
342A Flagon Creek P 109.42 61 IAMs_20 IAMs_20 06 18 32.1
comp=Z,648nm,22.0s
R40A Maddies Statio 109.49 53 IAMs_20 IAMs_20 06 20 56.3
comp=Z,603nm,20.0s
WHAR Wooly Hollow 109.50 56 IAMs_20 IAMs_20 06 18 11.9
comp=Z,758nm,22.0s
MGMO Mountain Grove 109.51 55 IAMs_20 IAMs_20 06 18 03.9
comp=Z,688nm,22.0s
E38A The Farm, Brul 109.62 44 IAMs_20 IAMs_20 06 20 40.8
comp=Z,482nm,20.0s
FCAR Ozark Folk Cen 109.64 56 IAMs_20 IAMs_20 06 22 34.3
comp=Z,626nm,19.0s
CCAR Cane Creek 109.93 58 IAMs_20 IAMs_20 06 35 57.2
comp=Z,549nm,19.0s
L40A Anamosa 110.16 49 IAMs_20 IAMs_20 06 31 49.5
comp=Z,710nm,18.0s
CCM Cathedral Cave 110.31 54 IAMs_20 IAMs_20 06 19 48.8
comp=Z,648nm,21.0s
T42A Van Buren 110.45 55 IAMs_20 IAMs_20 06 18 44.8
comp=Z,869nm,22.0s
KBS Kingsbay 110.65 354 IAMs_20 IAMs_20 06 25 41.1
comp=Z,534nm,22.0s
G40A Rib Lake 110.68 46 IAMs_20 IAMs_20 06 33 47.7
comp=Z,475nm,19.0s
344A Westbrook Farm 110.79 61 IAMs_20 IAMs_20 06 20 09.2
comp=Z,758nm,19.0s
HBAR Harrisburg 110.83 56 IAMs_20 IAMs_20 06 19 48.1
comp=Z,626nm,19.0s
VBMS Vicksburg 110.97 60 IAMs_20 IAMs_20 06 20 43.1
comp=Z,632nm,20.0s
PBMO Poplar Bluff 110.99 55 IAMs_20 IAMs_20 06 23 39.1
comp=Z,587nm,20.0s
LPAR Lepanto 111.12 56 IAMs_20 IAMs_20 06 19 43.7
comp=Z,596nm,21.0s
L42A Oliver, Polo 111.32 49 IAMs_20 IAMs_20 06 26 27.2
comp=Z,630nm,19.0s
GNAR Gosnell 111.34 56 IAMs_20 IAMs_20 06 20 27.5
comp=Z,513nm,20.0s
MET Memphis–Engin 111.43 57 IAMs_20 IAMs_20 06 21 44.0
comp=Z,653nm,20.0s
PEBM Pemiscott Bayo 111.47 56 IAMs_20 IAMs_20 06 19 01.8
comp=Z,557nm,22.0s
PARMO Parma 111.54 55 IAMs_20 IAMs_20 06 23 53.6
comp=Z,676nm,19.0s
PVMO Portageville 111.59 55 IAMs_20 IAMs_20 06 23 27.0
comp=Z,553nm,19.0s
PENMO Penman 111.64 55 IAMs_20 IAMs_20 06 23 18.4
comp=Z,589nm,19.0s
I42A Draeger Farm, 111.72 47 IAMs_20 IAMs_20 06 33 45.4
comp=Z,434nm,18.0s
HENM Henderson Moun 111.76 55 IAMs_20 IAMs_20 06 24 37.5
comp=Z,652nm,19.0s
LNXT Lenox 111.77 56 IAMs_20 IAMs_20 06 19 09.7
comp=Z,605nm,21.0s
346A Big Creek Wild 111.87 61 IAMs_20 IAMs_20 06 20 40.9
comp=Z,691nm,22.0s
OXF Oxford 111.88 57 IAMs_20 IAMs_20 06 19 52.8
comp=Z,576nm,22.0s
S44A Carbondale 111.89 54 IAMs_20 IAMs_20 06 21 09.9
comp=Z,706nm,20.0s
HALT Halls 111.90 56 IAMs_20 IAMs_20 06 20 41.2
comp=Z,508nm,20.0s
GLAT Glass 111.93 55 IAMs_20 IAMs_20 06 27 30.9
comp=Z,472nm,18.0s
HICK Hickman 111.96 55 IAMs_20 IAMs_20 06 24 05.9
comp=Z,724nm,19.0s
Q44A Meyer Farm, Va 112.02 53 IAMs_20 IAMs_20 06 19 51.0
comp=Z,841nm,22.0s
W45A Hickory Valley 112.05 57 IAMs_20 IAMs_20 06 20 52.2
comp=Z,631nm,20.0s
K43A Burlington 112.25 48 IAMs_20 IAMs_20 06 22 11.7
comp=Z,540nm,20.0s
T45A Paducah 112.41 55 IAMs_20 IAMs_20 06 23 15.6
comp=Z,533nm,20.0s
H43A Windswept, Lux 112.47 46 IAMs_20 IAMs_20 06 24 56.4
comp=Z,659nm,19.0s
M44A Midewin, Midew 112.58 50 IAMs_20 IAMs_20 06 23 10.6
comp=Z,770nm,20.0s
L44A Lake County Fo 112.61 49 IAMs_20 IAMs_20 06 22 47.2
comp=Z,625nm,20.0s
OLIL Olney 112.74 53 IAMs_20 IAMs_20 06 23 08.2
comp=Z,438nm,20.0s
PLAL Pickwick Lake 112.96 57 IAMs_20 IAMs_20 06 20 04.5
comp=Z,586nm,20.0s
WVT Waverly 113.11 55 IAMs_20 IAMs_20 06 20 23.3
comp=Z,516nm,22.0s
USIN University of 113.13 53 IAMs_20 IAMs_20 06 21 48.7
comp=Z,814nm,21.0s
MT05 Renca 113.35 134 IAMs_20 IAMs_20 06 36 07.2
comp=Z,616nm,22.0s
J45A Montague 113.59 47 IAMs_20 IAMs_20 06 35 17.0
comp=Z,397nm,18.0s
I45A Fountain 113.62 47 IAMs_20 IAMs_20 06 26 38.8
comp=Z,452nm,20.0s
T47A Sharon Grove 113.64 55 IAMs_20 IAMs_20 06 25 36.3
comp=Z,542nm,19.0s
L46A Eue Claire 113.82 49 IAMs_20 IAMs_20 06 23 13.4
comp=Z,618nm,20.0s
X48A Hartselle 113.83 57 IAMs_20 IAMs_20 06 23 18.6
comp=Z,606nm,20.0s
G45A Suttons Bay 113.90 46 IAMs_20 IAMs_20 06 25 50.9
comp=Z,569nm,19.0s
BLO Bloomington 113.94 52 IAMs_20 IAMs_20 06 21 25.7
comp=Z,782nm,22.0s
V48A Smith Brothers 113.95 56 IAMs_20 IAMs_20 06 21 07.5
comp=Z,531nm,21.0s
MATN Matagalpa 114.14 81 IAMs_20 IAMs_20 06 17 38.4
comp=Z,552nm,22.0s
WCI Wyandotte Cave 114.19 53 IAMs_20 IAMs_20 06 22 52.7
comp=Z,686nm,20.0s
CLTN Cedars of Leba 114.32 55 IAMs_20 IAMs_20 06 20 49.4
comp=Z,559nm,22.0s
Y49A Blount Mountai 114.39 58 IAMs_20 IAMs_20 06 22 46.3
comp=Z,747nm,21.0s
250A Grady 114.58 60 IAMs_20 IAMs_20 06 22 16.7
comp=Z,514nm,22.0s
GLMI Grayling 114.66 46 IAMs_20 IAMs_20 06 26 32.1
comp=Z,510nm,19.0s
SWET Sewanee 114.70 56 IAMs_20 IAMs_20 06 20 43.6
comp=Z,566nm,22.0s
JTS Las Juntas de 114.76 84 IAMs_20 IAMs_20 06 19 09.9
comp=Z,684nm,20.0s
Z50A Ashland 114.82 59 IAMs_20 IAMs_20 06 26 14.9
comp=Z,576nm,19.0s
KEV Kevo 114.85 344 IAMs_20 IAMs_20 06 29 48.9
comp=Z,580nm,19.0s
I47A Gladwin 114.86 47 IAMs_20 IAMs_20 06 24 03.5
comp=Z,472nm,20.0s
FPAL Fort Paine 115.01 57 IAMs_20 IAMs_20 06 23 55.7
comp=Z,566nm,20.0s
R49A Shelbyville 115.07 53 IAMs_20 IAMs_20 06 24 29.8
comp=Z,731nm,20.0s
451A Vernon 115.07 61 IAMs_20 IAMs_20 06 23 39.8
comp=Z,499nm,21.0s
MAK Makhachkala 115.13 312 *e*P **Pdif** **05 37 40.0 -3.6**
MAK *i* 05 41 29.9
MAK *e* 05 42 30.2
MAK pmax pmax
comp=Z,181nm,1.1s
W50A Signal Mountai 115.21 56 IAMs_20 IAMs_20 06 21 56.0
comp=Z,589nm,21.0s
ARCES ARCESS Array B 115.40 344 PKP **PKiKP** **05 41 30.9 -1.3**
comp=Z,1.2nm,0.7s,baz=47,slow=1.7,SNR=1.7
Z51A Franklin 115.44 58 IAMs_20 IAMs_20 06 21 16.4
comp=Z,662nm,22.0s
T50A Nancy 115.45 54 IAMs_20 IAMs_20 06 22 37.1
comp=Z,658nm,22.0s
J48A Bridge Port 115.49 47 IAMs_20 IAMs_20 06 22 33.2
comp=Z,455nm,22.0s
H48A Harrisville 115.59 46 IAMs_20 IAMs_20 06 24 44.7
comp=Z,438nm,20.0s
X51A Calhoun 115.63 57 IAMs_20 IAMs_20 06 21 58.1
comp=Z,550nm,22.0s

AAM	**Ann Arbor**	115.73	48	IAMs_20	IAMs_20	06 29 48.8		
	comp=Z,567nm,18.0s							
R50A	**Paris**	115.73	53	IAMs_20	IAMs_20	06 24 49.3		
	comp=Z,678nm,20.0s							
CPCT	**Cooper Cave**	115.84	56	IAMs_20	IAMs_20	06 26 24.5		
	comp=Z,489nm,20.0s							
152A	**Waverly Hall**	115.86	59	IAMs_20	IAMs_20	06 22 45.5		
	comp=Z,807nm,22.0s							
V51A	**Loudon**	115.95	56	IAMs_20	IAMs_20	06 25 52.4		
	comp=Z,599nm,20.0s							
I49A	**Point Hope**	116.07	46	IAMs_20	IAMs_20	06 27 06.6		
	comp=Z,637nm,20.0s							
553A	**Crawfordville**	116.22	62	IAMs_20	IAMs_20	06 21 53.3		
	comp=Z,497nm,22.0s							
M50A	**Fremont**	116.32	49	IAMs_20	IAMs_20	06 25 55.4		
	comp=Z,632nm,20.0s							
Y52A	**Lilburn**	116.34	58	IAMs_20	IAMs_20	06 24 56.9		
	comp=Z,690nm,20.0s							
W52A	**Murphy**	116.35	56	IAMs_20	IAMs_20	06 24 46.2		
	comp=Z,459nm,20.0s							
S51A	**Beattyville**	116.38	54	IAMs_20	IAMs_20	06 28 31.5		
	comp=Z,533nm,20.0s							
K50A	**Casco**	116.41	48	IAMs_20	IAMs_20	06 30 14.7		
	comp=Z,596nm,20.0s							
TKL	**Tuckaleechee C**	116.43	56	IAMs_20	IAMs_20	06 25 48.1		
	comp=Z,555nm,20.0s							
TZTN	**Tazewell**	116.53	55	IAMs_20	IAMs_20	06 21 45.6		
	comp=Z,562nm,22.0s							
V52A	**Sevierville**	116.56	56	IAMs_20	IAMs_20	06 26 09.5		
	comp=Z,653nm,20.0s							
GOGA	**Godfrey**	116.86	58	IAMs_20	IAMs_20	06 25 03.0		
	comp=Z,735nm,20.0s							
V53A	**Saluda**	117.21	56	IAMs_20	IAMs_20	06 26 30.7		
	comp=Z,599nm,20.0s							
154A	**Montrose**	117.22	59	IAMs_20	IAMs_20	06 22 31.6		
	comp=Z,665nm,22.0s							
O52A	**Adamsville**	117.42	51	IAMs_20	IAMs_20	06 25 43.6		
	comp=Z,553nm,20.0s							
M52A	**Chesterland**	117.55	49	IAMs_20	IAMs_20	06 24 23.9		
	comp=Z,652nm,22.0s							
R53A	**Hurricane**	117.58	53	IAMs_20	IAMs_20	06 28 18.3		
	comp=Z,602nm,19.0s							
HODGE	**Hodges**	117.80	57	IAMs_20	IAMs_20	06 24 51.6		
	comp=Z,650nm,21.0s							
255A	**Hazlehurst**	117.81	60	IAMs_20	IAMs_20	06 25 09.0		
	comp=Z,573nm,20.0s							
656A	**Willston**	117.90	63	IAMs_20	IAMs_20	06 23 44.9		
	comp=Z,469nm,22.0s							
U54A	**Nelsons Funny**	117.91	55	IAMs_20	IAMs_20	06 24 01.3		
	comp=Z,646nm,21.0s							
PAULI	**Pauline**	118.11	57	IAMs_20	IAMs_20	06 24 42.6		
	comp=Z,517nm,22.0s							
S54A	**Dingess, Beckl**	118.15	53	IAMs_20	IAMs_20	06 26 52.5		
	comp=Z,496nm,21.0s							
KBZ	**Khabaz**	118.30	314	⇓*i*PKIKP	**PKiKP**	**05 41 38.8**	**+0.3**	
AKH	**Akhalkalaki**	118.32	311	IAMs_20	IAMs_20	06 36 15.6		
	comp=Z,454nm,20.0s							
ILULI	**Ilulissat**	118.35	13	IAMs_20	IAMs_20	06 28 20.0		
	comp=Z,445nm,22.0s							
ALLY	**Alegheny Colle**	118.42	49	IAMs_20	IAMs_20	06 24 41.0		
	comp=Z,796nm,22.0s							
KMSC	**Kings Mountain**	118.46	56	IAMs_20	IAMs_20	06 24 32.1		
	comp=Z,509nm,21.0s							
V55A	**Taylorsville**	118.48	55	IAMs_20	IAMs_20	06 28 07.3		
	comp=Z,631nm,20.0s							
SADO	**Sadowa**	118.49	45	IAMs_20	IAMs_20	06 28 06.5		
	comp=Z,597nm,20.0s							
O54A	**Avella**	118.51	50	IAMs_20	IAMs_20	06 29 18.5		
	comp=Z,648nm,19.0s							
VLDQ	**Val d'Or**	118.78	41	IAMs_20	IAMs_20	06 24 32.7		
	comp=Z,685nm,22.0s							
D53A	**Lac Vacive, Po**	118.90	42	IAMs_20	IAMs_20	06 27 22.8		
	comp=Z,526nm,20.0s							
DWPF	**Disney Wildern**	118.93	64	IAMs_20	IAMs_20	06 26 17.2		
	comp=Z,418nm,21.0s							
BLA	**Blacksburg**	118.94	54	IAMs_20	IAMs_20	06 26 55.3		
	comp=Z,468nm,20.0s							
MCWV	**Mont Chateau**	119.00	51	IAMs_20	IAMs_20	06 25 21.6		
	comp=Z,515nm,21.0s							
R55A	**Marlinton**	119.01	52	IAMs_20	IAMs_20	06 29 30.2		
	comp=Z,618nm,19.0s							
257A	**Skidaway Islan**	119.03	60	IAMs_20	IAMs_20	06 26 55.4		
	comp=Z,519nm,21.0s							
J54A	**Appleton**	119.18	47	IAMs_20	IAMs_20	06 36 54.9		
	comp=Z,530nm,18.0s							
BIRD	**Birdtown, Kers**	119.23	57	IAMs_20	IAMs_20	06 26 17.5		
	comp=Z,536nm,20.0s							
MEDO	**Medina**	119.34	47	IAMs_20	IAMs_20	06 34 27.0		
	comp=Z,546nm,18.0s							
WVNY	**West Valley, N**	119.39	48	IAMs_20	IAMs_20	06 27 38.7		
	comp=Z,614nm,20.0s							
W57A	**Gilead**	119.55	56	IAMs_20	IAMs_20	06 27 43.9		
	comp=Z,569nm,19.0s							
J55A	**Hilton**	119.77	46	IAMs_20	IAMs_20	06 26 15.4		
	comp=Z,512nm,21.0s							
MMNY	**Mt. Morris Dam**	119.83	47	IAMs_20	IAMs_20	06 26 45.0		
	comp=Z,510nm,20.0s							
PLVO	**Plevna**	119.85	44	IAMs_20	IAMs_20	06 37 24.4		
	comp=Z,437nm,18.0s							
T57A	**Hurt**	119.89	54	IAMs_20	IAMs_20	06 25 34.5		
	comp=Z,517nm,21.0s							
S57A	**Dark Hollow, R**	120.00	53	IAMs_20	IAMs_20	06 24 40.5		
	comp=Z,648nm,22.0s							
X58A	**Rowland**	120.16	57	IAMs_20	IAMs_20	06 27 45.1		
	comp=Z,609nm,20.0s							
V58A	**Windy Hill, Pi**	120.18	55	IAMs_20	IAMs_20	06 29 18.3		
	comp=Z,569nm,19.0s							
L56A	**Greenwood**	120.21	48	IAMs_20	IAMs_20	06 25 51.3		
	comp=Z,666nm,22.0s							
J56A	**Wolcott**	120.45	46	IAMs_20	IAMs_20	06 35 02.3		
	comp=Z,572nm,18.0s							
Y59A	**Loris**	120.62	57	IAMs_20	IAMs_20	06 27 28.2		
	comp=Z,734nm,21.0s							
S58A	**Poland Farm, P**	120.74	53	IAMs_20	IAMs_20	06 30 22.8		
	comp=Z,506nm,19.0s							
R58B	**Mineral**	120.81	52	IAMs_20	IAMs_20	06 25 28.7		
	comp=Z,765nm,22.0s							
N58A	**Sunbury**	121.12	49	IAMs_20	IAMs_20	06 29 39.4		
	comp=Z,601nm,20.0s							
U59A	**Littleton**	121.15	54	IAMs_20	IAMs_20	06 25 50.0		
	comp=Z,614nm,22.0s							
T59A	**Double "B" Far**	121.24	54	IAMs_20	IAMs_20	06 29 04.2		
	comp=Z,505nm,20.0s							
BINY	**Binghamton**	121.33	47	IAMs_20	IAMs_20	06 27 10.9		
	comp=Z,630nm,20.0s							
K58A	**Earlville**	121.44	47	IAMs_20	IAMs_20	06 34 04.5		
	comp=Z,599nm,19.0s							
V60A	**Jim Taylor Roa**	121.67	55	IAMs_20	IAMs_20	06 29 18.8		
	comp=Z,449nm,20.0s							
LONY	**Lake Ozonia**	121.67	44	IAMs_20	IAMs_20	06 37 29.5		
	comp=Z,357nm,18.0s							
N59A	**State Game Lan**	121.80	49	IAMs_20	IAMs_20	06 35 09.4		
	comp=Z,547nm,19.0s							
T60A	**Surry**	121.85	53	IAMs_20	IAMs_20	06 30 08.4		
	comp=Z,505nm,20.0s							
J59A	**Piesco**	122.06	45	IAMs_20	IAMs_20	06 29 53.8		
	comp=Z,469nm,20.0s							
NCB	**Newcomb**	122.11	45	IAMs_20	IAMs_20	06 27 58.1		
	comp=Z,496nm,22.0s							
BOSA	**Boshof**	122.15	226	PKP	**PKiKP**	**05 41 47.3**	**+0.5**	
	comp=Z,2.0nm,0.7s,baz=119,slow=3.2,SNR=2.4							
BOSA	**Boshof**	122.15	226	PKIKP	**PKPdf**	**05 41 45.5**	**-1.1**	
BOSA	**Boshof**	122.15	226		**PKPdf**	**05 41 45.5**	**-1.1**	
Q60A	**Greensboro**	122.17	51	IAMs_20	IAMs_20	06 26 45.6		
	comp=Z,672nm,20.0s							
V61A	**Roper**	122.22	55	IAMs_20	IAMs_20	06 30 03.2		
	comp=Z,565nm,20.0s							
U61A	**Possum Corner**	122.22	54	IAMs_20	IAMs_20	06 26 55.4		
	comp=Z,672nm,21.0s							
SCHQ	**Schefferville**	122.28	31	IAMs_20	IAMs_20	06 31 11.7		
	comp=Z,668nm,20.0s							
ODNJ	**Ogdensburg**	122.61	48	IAMs_20	IAMs_20	06 29 02.9		
	comp=Z,680nm,20.0s							
TRY	**Troy**	122.85	46	IAMs_20	IAMs_20	06 40 27.9		
	comp=Z,405nm,18.0s							
VT1	**Waterbury**	123.01	44	IAMs_20	IAMs_20	06 32 12.0		
	comp=Z,455nm,20.0s							
HNH	**Hanover**	123.53	45	IAMs_20	IAMs_20	06 29 00.6		
	comp=Z,642nm,21.0s							
LBNH	**Lisbon**	123.60	44	IAMs_20	IAMs_20	06 28 03.5		
	comp=Z,657nm,22.0s							
FURI	**Furi**	123.80	273	IAMs_20	IAMs_20	06 32 56.7		
	comp=Z,472nm,20.0s							
K62A	**Royalston**	123.88	46	IAMs_20	IAMs_20	06 41 40.1		
	comp=Z,391nm,18.0s							
H62A	**Milan**	124.02	43	IAMs_20	IAMs_20	06 38 23.4		
	comp=Z,503nm,18.0s							
I62A	**Tamworth**	124.12	44	IAMs_20	IAMs_20	06 29 41.4		
	comp=Z,548nm,21.0s							
G62A	**West of Eustis**	124.21	42	IAMs_20	IAMs_20	06 28 21.4		
	comp=Z,566nm,20.0s							
F62A	**Pittston Farm,**	124.34	41	IAMs_20	IAMs_20	06 36 42.7		
	comp=Z,499nm,19.0s							
HRV	**Adam Dziewonsk**	124.40	46	IAMs_20	IAMs_20	06 30 04.0		
	comp=Z,523nm,20.0s							
I63A	**Otisfield**	124.58	44	IAMs_20	IAMs_20	06 29 03.4		
	comp=Z,721nm,22.0s							
WES	**Weston**	124.61	46	IAMs_20	IAMs_20	06 35 36.4		
	comp=Z,540nm,20.0s							
F63A	**Nahmakanta, Br**	124.97	41	IAMs_20	IAMs_20	06 37 09.4		
	comp=Z,513nm,19.0s							
PKME	**Peaks-Kenny Pk**	125.01	42	IAMs_20	IAMs_20	06 29 56.5		
	comp=Z,514nm,20.0s							
WVL	**Waterville**	125.02	43	IAMs_20	IAMs_20	06 29 36.9		
	comp=Z,547nm,21.0s							
F64A	**Sherman**	125.40	41	IAMs_20	IAMs_20	06 30 33.6		
	comp=Z,627nm,20.0s							
IVI	**Ivigtut**	125.52	17	IAMs_20	IAMs_20	06 31 14.1		
	comp=Z,522nm,22.0s							
G65A	**Princeton**	126.17	41	IAMs_20	IAMs_20	06 30 59.0		
	comp=Z,647nm,21.0s							
NRS	**Narsarsuaq**	126.33	16	IAMs_20	IAMs_20	06 30 52.2		
	comp=Z,660nm,22.0s							
CPUP	**Villa Florida**	126.89	135	PKP	**PKPdf**	**05 41 55.4**	**-0.2**	
	comp=Z,4.2nm,1.1s,baz=285,slow=4.0,SNR=4.4							
CPUP	**Villa Florida**	126.89	135	PKIKP	**PKPdf**	**05 41 55.0**	**-0.6**	
CPUP	**Villa Florida**	126.89	135		**PKPdf**	**05 41 55.0**	**-0.6**	
SDDR	**Presa de Saban**	128.53	75	IAMs_20	IAMs_20	06 29 03.3		
	comp=Z,506nm,20.0s							
SDV	**Santo Domingo**	128.59	88		**PKPdf**	**05 41 58.8**	**-0.6**	
MLR	**Muntele Rosu**	129.08	321	IAMs_20	IAMs_20	06 43 26.4		
	comp=Z,520nm,20.0s							
MBAR	**Mbarara**	129.76	260	IAMs_20	IAMs_20	06 40 53.8		
	comp=Z,370nm,20.0s							
OKC	**Osawa-Krasne**	131.08	329	AMS	AMS	06 42 40.0		
	comp=Z,400nm,20.2s							
OSTC	**Ostas**	131.56	331	AMS	AMS	06 40 20.0		
	comp=Z,900nm,20.8s							
CHVC	**Chvalec**	131.61	331	AMS	AMS	06 39 40.0		
	comp=Z,900nm,20.5s							
DPC	**Dobruska-Polom**	131.64	331	AMS	AMS	06 40 20.0		
	comp=Z,600nm,15.8s							
UPC	**Upice**	131.69	331	AMS	AMS	06 40 30.0		
	comp=Z,900nm,20.4s							
VTS	**Vitosha**	132.15	319	IAMs_20	IAMs_20	06 44 29.0		
	comp=Z,538nm,20.0s							
PVCC	**Panska Ves**	132.35	332	AMS	AMS	06 43 20.0		
	comp=Z,800nm,22.9s							
GOPC	**GO Pecny, Ondr**	132.67	331	AMS	AMS	06 41 10.0		
	comp=Z,900nm,21.4s							
PRA	**Prague**	132.72	332	AMS	AMS	06 43 50.0		
	comp=Z,500nm,17.4s							
PRU	**Pruhonice**	132.73	331	AMS	AMS	06 43 00.0		
	comp=Z,900nm,20.9s							
TREC	**Trest**	132.75	330	AMS	AMS	06 42 10.0		
	comp=Z,600nm,20.4s							
DIVS	**Divibare**	133.44	322	IAMs_20	IAMs_20	06 46 22.6		
	comp=Z,467nm,20.0s							
NKC	**Novy Kostel**	133.52	333	AMS	AMS	06 42 10.0		
	comp=Z,800nm,19.9s							
KHC	**Kasperske Hory**	133.78	331	AMS	AMS	06 41 40.0		
	comp=Z,1nm,20.9s							
KHC	**Kasperske Hory**	133.78	331	IAMs_20	IAMs_20	06 41 57.9		
	comp=Z,424nm,20.0s							
PDG	**Podgorica**	134.79	320	IAMs_20	IAMs_20	06 45 10.5		
	comp=Z,378nm,20.0s							
TIR	**Tirane**	134.97	319	IAMs_20	IAMs_20	06 47 12.4		
	comp=Z,394nm,20.0s							
SMRT	**St. Maarten**	136.34	76	IAMs_20	IAMs_20	06 35 00.5		
	comp=Z,359nm,18.0s							
SCTE	**Santa Cesarea**	136.53	318	IAMs_20	IAMs_20	06 47 28.9		
	comp=Z,432nm,20.0s							
WLF	**Walferdange**	136.58	337	IAMs_20	IAMs_20	06 48 17.5		
	comp=Z,592nm,21.0s							
TIP	**Timpagrande**	138.12	318	IAMs_20	IAMs_20	06 50 27.1		
	comp=Z,443nm,20.0s							
AQU	**L'Aquila**	138.36	324	IAMs_20	IAMs_20	06 46 02.7		
	comp=Z,604nm,22.0s							
ZCCA	**Zocca**	138.38	328	IAMs_20	IAMs_20	06 24 27.8		
	comp=Z,293nm,19.0s							
PAOL	**Paisi**	138.47	322	IAMs_20	IAMs_20	06 50 01.0		
	comp=Z,531nm,22.0s							
OSSC	**Osservatorio P**	138.80	327	IAMs_20	IAMs_20	06 46 35.1		
	comp=Z,503nm,20.0s							
ESDC	**Sonseca Array**	148.85	338	PKPbc	**PKPbc**	**05 42 39.1**	**+0.1**	
	comp=Z,2.4nm,1.2s,baz=48,slow=1.9,SNR=4.6							
CART	**Cartagena**	149.40	332	IAMs_20	IAMs_20	06 39 03.3		
	comp=Z,424nm,20.0s							
TAM	**Tamanrasset**	154.40	300	IAMs_20	IAMs_20	06 59 48.9		
	comp=Z,396nm,20.0s							
TORD	**Torodi Ar. Bea**	160.24	278	PKPab	**PKPab**	**05 43 31.4**	**-0.6**	
	comp=Z,1.6nm,0.9s,baz=76,slow=3.9,SNR=4.1							

MDD ***22*** *05:26:38.5±2.8, 35.°50N×0.°33E, h10km, mb4.1/20, Error ellipse: s-maj=30.8km s-min=13.0km az=148.0, PRXIMO*

ISC 22 05:26:45.1±1.5, 36.°01N±0.°09×0.°07W±0.°06, h13km, n26,
σ1§18/29, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ECHF	**Ech Chlef**	1.15	82	P	**Pg**	**05 27 09.2**	**+1.9**
CART	**Cartagena**	1.74	335	*i* P	**Pn**	**05 27 14.4**	**-0.7**
CART				*e*S	**Sn**	**05 27 36.2**	**-0.9**
ENIJ	**Nijar**	1.97	300	P	**Pn**	**05 27 17.7**	**-0.6**
	5.2nm,0.2s,SNR=7.9						
EMUR	**La Murta**	2.06	333	P	**Pn**	**05 27 19.2**	**-0.2**
	8.0nm,0.3s,SNR=7.9						
TLOR	**Lorca, Murcia**	2.10	322	P	**Pn**	**05 27 21.2**	**+1.3**
	133nm,0.2s,SNR=7.9						
EBER	**Berja**	2.44	292	P	**Pn**	**05 27 24.7**	**-0.1**
	17nm,0.3s,SNR=8.0						
EBEN2	**Beniarda presa**	2.67	358	P	**Pn**	**05 27 27.1**	**-0.7**
	0.9nm,0.1s,SNR=7.9						
AFON	**Font Roja**	2.68	352	P	**Pn**	**05 27 27.9**	**-0.1**
	3.9nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	2.88	336	P	**Pn**	**05 27 31.9**	**+1.0**
	6.5nm,0.2s,SNR=14						
ETOB				S	**Sb**	**05 28 10.2**	**-1.5**
	8.1nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	2.89	318	P	**Pn**	**05 27 32.9**	**+1.9**
	13nm,0.2s,SNR=7.9						
SESP				S	**Sb**	**05 28 11.5**	**-0.5**
	49nm,0.2s,SNR=7.9						
EQUE	**Quentar**	2.96	295	P	**Pn**	**05 27 30.7**	**-1.3**
	22nm,0.4s,SNR=9.3						
ELGU	**Los Guajares,**	2.99	288	P	**Pn**	**05 27 32.0**	**-0.3**
	4.7nm,0.2s,SNR=7.9						
EQES	**Quesada**	3.00	308	P	**Pn**	**05 27 34.2**	**+1.7**
	25nm,0.4s,SNR=13						
EIBI	**Ibiza**	3.22	20	P	**Pn**	**05 27 33.6**	**-1.8**
	3.5nm,0.1s,SNR=7.9						
EGOR	**Sierra Gorda,**	3.43	290	P	**Pn**	**05 27 37.9**	**-0.5**
	3.3nm,0.4s,SNR=4.0						
ECHE	**Chera**	3.65	349	P	**Pn**	**05 27 41.0**	**-0.3**
	2.9nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	3.84	280	P	**Pn**	**05 27 41.8**	**-2.1**
	0.7nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	4.36	356	P	**Pn**	**05 27 51.7**	**+0.5**
	2.3nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	4.75	297	P	**Pn**	**05 27 56.7**	**+0.2**
	2.8nm,0.4s,SNR=7.9						
ESDC	**Sonseca Array**	4.78	321	P	**Pn**	**05 27 57.7**	**+0.7**
	0.8nm,0.3s,baz=140,slow=13,SNR=5.4						
PAB	**San Pablo**	4.89	317	P	**Pn**	**05 27 59.0**	**+0.5**
	1.6nm,0.4s,SNR=7.9						
EPOB	**Poblet**	5.41	9	P	**Pn**	**05 28 04.2**	**-1.4**
	2.6nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	5.58	290	P	**Pn**	**05 28 07.0**	**-0.7**
	0.4nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	5.63	326	P	**Pn**	**05 28 10.7**	**+2.0**
	1.2nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	6.07	18	P	**Pn**	**05 28 13.3**	**-1.3**
	2.2nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	6.17	298	P	**Pn**	**05 28 16.1**	**+0.2**
	0.3nm,0.1s,SNR=7.9						

MDD ***22*** *05:26:50.8±1.7, 35.°57N×0.°38E, h14km±37km, mb4.5/27, Error ellipse: s-maj=44.7km s-min=8.9km az=148.0, PRXIMO*

CRAAG ***22*** *05:26:51.2, 35.°78N×0.°15E, Ml3.8*

ISC 22 05:26:53.4±1.1, 35.°73N±0.°06×0.°29E±0.°04, h29km, n35,
σ1§09/50, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EANR	**'Ain N'Sour**	0.70	71	P	**Pn**	**05 27 07.5**	**+0.2**
EANR	**'Ain N'Sour**	0.70	71	P	**Pn**	**05 27 07.5**	**+0.2**
ETRT	**Tiaret**	0.89	112	P	**Pb**	**05 27 11.0**	**+0.7**
ETRT	**Tiaret**	0.89	112	P	**Pb**	**05 27 11.0**	**+0.7**
ECHA	**Ech Chlef**	0.97	64	P	**Pn**	**05 27 09.2**	**-1.8**
EBNR	**Beni Rached**	1.15	60	P	**Pn**	**05 27 14.0**	**+0.4**
CART	**Cartagena**	2.13	331	*i* P	**Pn**	**05 27 25.9**	**-1.1**
CART				*e*S	**Sn**	**05 27 47.7**	**-4.7**
ENIJ	**Nijar**	2.37	302	P	**Pn**	**05 27 30.0**	**-0.3**
	20nm,0.2s,SNR=7.9						
EMUR	**La Murta**	2.44	330	P	**Pn**	**05 27 30.6**	**-0.8**
	40nm,0.4s,SNR=7.6						
TLOR	**Lorca, Murcia**	2.50	321	P	**Pn**	**05 27 31.8**	**-0.2**
	137nm,0.2s,SNR=7.9						
EBER	**Berja**	2.82	295	P	**Pn**	**05 27 36.2**	**-0.4**
	84nm,0.3s,SNR=7.9						
EBER				S	**Sn**	**05 28 10.8**	**+1.0**
	29nm,0.4s,SNR=7.9						
EBEN2	**Beniarda presa**	2.97	353	P	**Pn**	**05 27 38.3**	**-0.3**
	38nm,0.5s,SNR=7.9						
EBEN2				S	**Sn**	**05 28 14.0**	**+0.7**
	2.4nm,0.2s,SNR=7.9						
AFON	**Font Roja**	3.01	348	P	**Pn**	**05 27 39.5**	**+0.4**
	17nm,0.3s,SNR=7.9						
AFON				S	**Sn**	**05 28 15.0**	**+0.7**
	116nm,0.7s,SNR=7.9						
GORA	**Gorafe**	3.20	304	P	**Pn**	**05 27 43.4**	**+1.6**
	77nm,0.4s,SNR=7.9						
GORA				S	**Sn**	**05 28 20.3**	**+1.3**
	24nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	3.26	334	P	**Pn**	**05 27 43.6**	**+0.9**
	24nm,0.2s,SNR=12						
ETOB				S	**Sn**	**05 28 21.6**	**+1.1**
	3.2nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	3.30	317	P	**Pn**	**05 27 43.8**	**+0.7**
	69nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**05 28 22.0**	**+0.5**
	61nm,0.3s,SNR=7.9						
EQUE	**Quentar**	3.35	297	P	**Pn**	**05 27 43.4**	**-0.4**
	88nm,0.4s,SNR=18						
EQUE				S	**Sn**	**05 28 23.1**	**+0.4**
	12nm,0.4s,SNR=7.9						
ELGU	**Los Guajares,**	3.36	291	P	**Pn**	**05 27 43.4**	**-0.6**
	18nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**05 28 22.3**	**-0.7**
	18nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	3.40	14	P	**Pn**	**05 27 44.6**	**+0.2**
	9.0nm,0.2s,SNR=6.7						
EIBI				S	**Sn**	**05 28 23.3**	**-0.6**
	12nm,0.3s,SNR=7.9						
EQES	**Quesada**	3.40	309	P	**Pn**	**05 27 44.5**	**-0.1**
	42nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**05 28 23.3**	**-0.8**
	9.5nm,0.3s,SNR=7.9						
EGOR	**Sierra Gorda,**	3.81	293	P	**Pn**	**05 27 50.6**	**+0.5**
	9.1nm,0.4s,SNR=7.9						
ECHE	**Chera**	3.98	346	P	**Pn**	**05 27 53.0**	**+0.5**
	9.4nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	4.18	283	P	**Pn**	**05 27 54.6**	**-0.6**
	3.0nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**05 28 41.3**	**-1.8**
	13nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	4.67	353	P	**Pn**	**05 28 02.4**	**+0.3**
	12nm,0.4s,SNR=7.9						
EMOS				S	**Sn**	**05 28 55.8**	**+0.4**
	6.5nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	5.14	299	P	**Pn**	**05 28 08.2**	**-0.2**
	5.2nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	5.19	321	P	**Pn**	**05 28 09.2**	**+0.2**
	4.1nm,0.5s,baz=135,slow=15,SNR=5.1						
ERTA	**Horta de San J**	5.22	0	P	**Pn**	**05 28 09.8**	**+0.2**
	0.5nm,0.1s,SNR=7.9						
ERTA				S	**Sn**	**05 29 07.5**	**-1.3**
	2.0nm,0.3s,SNR=7.9						
PAB	**San Pablo**	5.30	317	P	**Pn**	**05 28 10.7**	**+0.1**
	7.6nm,0.4s,SNR=7.9						

KOTS				*eS*	**Sg**	**05 31 16.8**	**+1.0**
	89nm,0.5s							
KOTS	**Kotyrbulak**	**2.69**	**358**	Pg	**Pb**	**05 30 36.8**	**-0.8**
	7.2nm,0.3s							
KOTS				Lg	Lg	05 31 16.8		
	23nm,0.3s							
KBK	**Karagaybulak**	**2.74**	**321**	⇑*iP*	**Pn**	**05 30 34.8**	**+1.4**
	baz=22							
KBK				⇑*iS*	**Sb**	**05 31 10.7**	**-1.3**
	baz=22							
UZB	**Uzynbulak**	**2.92**	**26**	*eP*	**Pg**	**05 30 42.9**	**-2.2**
	3.8nm,1.2s							
UZB				*eS*	**Sg**	**05 31 23.7**	**+0.8**
	6.1nm,0.5s							
UZB	**Uzynbulak**	**2.92**	**26**	Pg	**Pb**	**05 30 41.1**	**-0.3**
	3.4nm,1.0s							
UZB				Lg	Lg	05 31 23.5		
	6.1nm,0.5s							
DGS	**Degeres**	**2.92**	**338**	*eP*	**Pb**	**05 30 42.1**	**+0.7**
	3.7nm,0.5s							
DGS				*eS*	**Sg**	**05 31 22.8**	**-0.2**
	6.1nm,0.4s							
DGS	**Degeres**	**2.92**	**338**	Pg	**Pb**	**05 30 40.1**	**-1.3**
	2.3nm,0.4s							
DGS				Lg	Lg	05 31 22.1		
	5.3nm,0.5s							
AAK	**Ala-Archa**	**2.95**	**316**	⇑*eP*	**Pn**	**05 30 37.5**	**+1.2**
	baz=17							
AAK				⇑*iS*	**Sb**	**05 31 15.6**	**-2.6**
	baz=17							
AML	**Almayashu**	**3.12**	**302**	⇑*eP*	**Pn**	**05 30 39.6**	**+0.7**
	baz=4.0							
AML				⇑*iS*	**Sn**	**05 31 19.3**	**+2.8**
	baz=4.0							
KTBS	**Karatobe**	**3.20**	**352**	*eP*	**Pb**	**05 30 46.3**	**+0.2**
	2.8nm,0.5s							
KTBS				*eS*	**Sg**	**05 31 30.1**	**-1.9**
	8.4nm,0.3s							
KTBS	**Karatobe**	**3.20**	**352**	Pg	**Pb**	**05 30 44.1**	**-2.1**
	2.8nm,0.5s							
KTBS				Lg	Lg	05 31 28.8		
	8.2nm,0.3s							
PDGK	**Podgornoye**	**3.24**	**30**	Pg	**Pb**	**05 30 46.2**	**-0.7**
	1.6nm,0.9s							
PDGK				Lg	Lg	05 31 32.2		
	4.2nm,0.8s							
KUU	**Kurty**	**3.42**	**349**	Pg	**Pb**	**05 30 48.7**	**-1.2**
	1.0nm,0.2s							
KUU				Lg	Lg	05 31 36.7		
	1.8nm,0.1s							
ARXS	**Arharly**	**3.69**	**6**	*eP*	**Pb**	**05 30 56.0**	**+1.4**
	4.2nm,0.5s							
ARXS				*eS*	**Sg**	**05 31 46.0**	**-1.7**
	4.6nm,0.4s							
ARXS	**Arharly**	**3.69**	**6**	Pg	**Pb**	**05 30 54.0**	**-0.5**
	4.2nm,0.5s							
ARXS				Lg	Lg	05 31 46.0		
	3.3nm,0.5s							
MRKS	**Merke**	**3.74**	**307**	*eP*	**Pb**	**05 30 54.4**	**-1.1**
	3.5nm,0.7s							
MRKS				*eS*	**Sb**	**05 31 43.4**	**+2.4**
	2.6nm,0.3s							
MRKS	**Merke**	**3.74**	**307**	Pg	**Pn**	**05 30 48.3**	**+1.1**
	1.8nm,0.2s							
MRKS				Lg	Lg	05 31 36.0		
	1.5nm,0.6s							

KRSC 22 05:44:20.4±1.6, 50°42N×157°40E, h68km±26km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.86**	**288**	*eP*	Pn	05 44 38.2	+1.2
SKR				*eS*	Sn	05 44 50.4	+1.0
PAU	**Pauzhetka**	**1.11**	**341**	*eP*	Pn	05 44 42.2	+2.0
PAU				*eS*	Sn	05 44 57.6	+2.6
ALID	**Alaid**	**1.26**	**292**	*eP*	Pn	05 44 42.9	+0.6
ALID				*eS*	Sn	05 44 58.5	-0.2
ASAK	**Asacha**	**1.99**	**9**	*eP*	Pn	05 44 54.4	+2.4
ASAK				*eS*	Sn	05 45 18.4	+2.4
MTVR	**Mutnovka**	**2.12**	**13**	*eP*	Pn	05 44 56.2	+2.4
MTVR				*eS*	Sn	05 45 20.8	+1.5
RUS	**Russkaya**	**2.13**	**19**	*eP*	Pn	05 44 55.7	+1.9
RUS				*eS*	Sn	05 45 20.7	+1.1
GRL	**Gorelyy**	**2.18**	**11**	*eP*	Pn	05 44 57.3	+2.8
GRL				*eS*	Sn	05 45 23.6	+3.1
KRMR	**Karymshinskiy**	**2.46**	**10**	*eS*	Sn	05 45 30.6	+3.5
PET	**Petropavlovsk**	**2.72**	**16**	*eS*	Sn	05 45 36.1	+2.6
DALK	**Dalny**	**2.75**	**17**	*eP*	Pn	05 45 04.6	+2.5
DALK				*eS*	Sn	05 45 35.5	+1.3
AVH	**Avacha**	**2.97**	**16**	*eP*	Pn	05 45 08.7	+3.5
AVH				*eS*	Sn	05 45 43.7	+4.0
KOK	**Koryaka**	**2.98**	**14**	*eP*	Pn	05 45 08.8	+3.5
KOK				*eS*	Sn	05 45 44.6	+4.7
SMAR	**Somma**	**2.98**	**16**	*eP*	Pn	05 45 08.2	+2.7
SMAR				*eS*	Sn	05 45 43.9	+3.8
KRER	**Koryakskii**	**3.01**	**16**	*eP*	Pn	05 45 09.0	+3.1
KRER				*eS*	Sn	05 45 44.2	+3.4
SDLR	**Sedlovina**	**3.01**	**17**	*eP*	Pn	05 45 08.1	+2.3
KRX	**Arik**	**3.05**	**14**	*eP*	Pn	05 45 09.1	+2.8
KRX				*eS*	Sn	05 45 45.0	+3.4
SPN	**Mys Shipunski**	**3.14**	**30**	*eP*	Pn	05 45 10.4	+3.0
SPN				*eS*	Sn	05 45 44.6	+0.9
KZV	**Kizimen**	**5.02**	**19**	*eS*	Sn	05 46 33.1	+3.2
TUMR	**Tumrok**	**5.15**	**18**	*eP*	Pn	05 45 39.2	+4.2
KBTR	**Krutoberegovo**	**6.65**	**27**	*eP*	Pn	05 45 56.6	+1.3

IDC 22 06:05:52.4±2.8, 19°37S×169°53E, h237km±45km, mb3.5/4, mb1 3.7/5, mb1mx3.3/24, mbtmp4.0/5, Error ellipse: s-maj=135.4km s-min=27.5km az=147.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.95**	**227**	P	Pn	06 06 56.0	+0.9
	3.2nm,0.3s,baz=353,slow=23,SNR=30						
DZM				S	S	06 07 44.3	-0.4
	0.9nm,0.3s,baz=14,slow=21,SNR=1.4						
WRA	**Warramunga Arr**	**33.11**	**263**	P	P	06 12 05.6	-0.9
	0.7nm,0.6s,baz=98,slow=8.3,SNR=13						
ASAR	**Alice Springs**	**33.37**	**256**	P	P	06 12 09.4	+0.7
	5.3nm,0.4s,baz=82,slow=8.8,SNR=109						
PETK	**Petropavlovsk-**	**72.90**	**353**	P	P	06 16 55.4	+0.1
	0.9nm,0.6s,baz=129,slow=4.8,SNR=2.1						
ILAR	**Eielson Array**	**90.27**	**17**	P	P	06 18 25.4	-0.4
	0.2nm,0.5s,baz=232,slow=5.1,SNR=4.6						

*IDC **22** 06:13:37.4±10.0, 40°15N×141°43E, h0km, mb3.9/2, mb1 3.9/3, mb1mx3.4/27, mbtmp3.8/3, ML2.5/1, Error ellipse: s-maj=221.7km s-min=42.3km az=94.0*
*JMA **22** 06:13:38.7±0.1, 39°64N×142°11E, h48km±1km, M3.3 JMA Felt I J1.*
ISC 22 06:13:38.1±1.8, 39°68N±0°04×142°2E±0°1, h44km±10km, n22, σ1§48/25, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.32**	**251**	P	**Pn**	**06 13 47.0**	**+0.1**
MIYJ				S	**Sn**	**06 13 52.8**	**-0.2**
JTH	**Tanohata**	**0.37**	**314**	P	**Pn**	**06 13 48.2**	**+0.7**
JTH				S	**Sn**	**06 13 54.8**	**+0.8**
JKEN	**Kujiedanarisaw**	**0.65**	**324**	P	**Pn**	**06 13 51.4**	**+0.4**
JKEN				S	**Sn**	**06 14 00.6**	**+0.4**
OFUJ	**Ofunato**	**0.73**	**215**	P	**Pn**	**06 13 51.4**	**-0.7**
OFUJ				S	**Sn**	**06 14 00.6**	**-1.5**
JOM	**Ohasama**	**0.74**	**254**	P	**Pn**	**06 13 51.8**	**-0.4**
JOM				S	**Sn**	**06 14 01.3**	**-1.0**
JKZ	**Kuzumaki**	**0.74**	**294**	P	**Pn**	**06 13 52.4**	**+0.1**
JKZ				S	**Sn**	**06 14 01.9**	**-0.5**
JANG	**Nango**	**0.87**	**323**	P	**Pn**	**06 13 54.3**	**+0.3**
JANG				*eS*	**Sn**	**06 14 04.9**	**-0.7**
JMK	**Ichinoseki**	**1.06**	**227**	P	**Pn**	**06 13 56.1**	**-0.4**
JMK				S	**Sn**	**06 14 08.8**	**-1.2**
JRG	**Rokugo**	**1.25**	**257**	P	**Pn**	**06 13 58.6**	**-0.5**
JAH	**Hinai**	**1.31**	**293**	P	**Pn**	**06 14 00.1**	**+0.1**
JIO	**Ouri**	**1.40**	**209**	P	**Pn**	**06 14 00.7**	**-0.4**
JTM	**Tenmabayashi**	**1.41**	**322**	P	**Pn**	**06 14 01.8**	**+0.5**
MJAR	**Matsushiro Arr**	**4.45**	**226**	Pn	**Pn**	**06 14 45.7**	**+2.6**
	0.2nm,0.3s,baz=35,slow=14,SNR=14						
MAT	**Matsushiro**	**4.45**	**226**	P	**Pn**	**06 14 45.2**	**+2.1**
MAT				*eS*	**Sn**	**06 15 38.4**	**+4.9**
H11N2	**WAKE ISLAND Hy**	**29.08**	**126**	T	T	06 50 09.4	
	baz=318,slow=75,SNR=255						
H11N1	**WAKE ISLAND Hy**	**29.09**	**126**	T	T	06 50 12.8	
	baz=318,slow=75,SNR=199						
H11N3	**WAKE ISLAND Hy**	**29.10**	**126**	T	T	06 50 13.5	
	baz=318,slow=75,SNR=238						
H11S1	**WAKE ISLAND Hy**	**29.88**	**128**	T	T	06 51 10.4	
	baz=320,slow=76,SNR=23						
H11S3	**WAKE ISLAND Hy**	**29.88**	**128**	T	T	06 51 08.5	
	baz=320,slow=76,SNR=22						
H11S2	**WAKE ISLAND Hy**	**29.90**	**128**	T	T	06 51 11.4	
	baz=320,slow=76,SNR=21						
ZALV	**Zalesovo Beam**	**40.64**	**310**	P	**P**	**06 21 12.9**	**-0.7**
	1.3nm,0.4s,baz=89,slow=8.4,SNR=3.6						
MKAR	**Makanchi Array**	**43.29**	**300**	P	**P**	**06 21 34.1**	**-1.3**
	0.8nm,0.7s,baz=96,slow=7.2,SNR=5.7						

*CRAAG **22** 06:53:52.2, 35°75N×0°28E, Ml3.5*
*MJD **22** 06:53:54.1±0.6, 35°83N×0°16E, h0km, mb4.0/10, Error ellipse: s-maj=6.7km s-min=5.2km az=144.0, PRXIMO*
ISC 22 06:53:51.7±0.8, 35°76N±0°04×0°33E±0°03, h14km, n45, σ2§42/63, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKGL	**Djebel Kef Gue**	**0.38**	**42**	P	**Pb**	**06 54 02.4**	**+2.1**
OKGL	**Djebel Kef Gue**	**0.38**	**42**	P	**Pb**	**06 54 02.4**	**+2.1**
ODJA	**Bouhanifia**	**0.58**	**223**	P	**Pb**	**06 54 05.1**	**+1.5**
ODJA	**Bouhanifia**	**0.58**	**223**	P	**Pb**	**06 54 05.1**	**+1.5**
EANR	**'Ain N'Sour**	**0.66**	**73**	P	**Pn**	**06 54 07.7**	**+1.0**
EANR	**'Ain N'Sour**	**0.66**	**73**	P	**Pn**	**06 54 07.7**	**+1.0**
USTO	**Oran**	**0.71**	**268**	P	Pn	06 54 16.0	+8.6
USTO	**Oran**	**0.71**	**268**	P	Pn	06 54 16.0	+8.6
ETRT	**Tiaret**	**0.87**	**114**	P	**Pg**	**06 54 08.0**	**-0.7**
ETRT	**Tiaret**	**0.87**	**114**	P	**Pg**	**06 54 08.0**	**-0.7**
ECHF	**Ech Chlef**	**0.91**	**64**	P	**Pb**	**06 54 07.8**	**-1.6**
ECHA	**Ech Chlef**	**0.93**	**65**	P	**Pb**	**06 54 07.8**	**-1.8**
OTSS	**Djebel Tessala**	**1.03**	**243**	P	**Pb**	**06 54 12.4**	**+1.0**
OTSS	**Djebel Tessala**	**1.03**	**243**	P	**Pb**	**06 54 12.4**	**+1.0**
EBNR	**Beni Rached**	**1.11**	**61**	P	**Pb**	**06 54 13.8**	**+1.0**
ENIJ	**Nijar**	**2.38**	**301**	P	**Pn**	**06 54 30.6**	**+0.3**
	3.1nm,0.2s,SNR=7.9						
ENIJ				S	**Sn**	**06 54 55.8**	**-3.5**
	20nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**2.43**	**329**	P	**Pn**	**06 54 31.6**	**+0.6**
	1.6nm,0.1s,SNR=10						
EMUR				S	**Sn**	**06 54 57.4**	**-3.3**
	8.1nm,0.2s,SNR=6.5						
EALB	**Alboran**	**2.74**	**275**	S	**Sn**	**06 55 05.9**	**-2.1**
	22nm,0.2s,SNR=7.9						
GOG	**Mont Gurugu**	**2.76**	**260**	P	**Pn**	**06 54 34.0**	**-1.7**
JBK	**JBK**	**2.77**	**240**	P	**Pn**	**06 54 36.7**	**+0.9**
EBER	**Berja**	**2.84**	**295**	P	**Pn**	**06 54 36.7**	**-0.1**
	12nm,0.2s,SNR=35						
EBER				S	**Sn**	**06 55 04.9**	**-5.9**
	19nm,0.4s						
EBEN2	**Beniarda presa**	**2.94**	**352**	S	**Sn**	**06 55 12.2**	**-1.0**
	19nm,0.1s,SNR=4.0						
AFON	**Font Roja**	**2.98**	**347**	S	**Sn**	**06 55 16.6**	**+2.2**
	15nm,0.2s,SNR=4.0						
ETOB	**Tobarra**	**3.25**	**333**	P	**Pn**	**06 54 44.1**	**+1.7**
	5.7nm,0.2s,SNR=26						
ETOB				S	**Sn**	**06 55 19.9**	**-1.0**
	14nm,0.3s						
SESP	**Santiago Espad**	**3.29**	**317**	P	**Pn**	**06 54 45.4**	**+2.3**
	7.5nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**06 55 22.4**	**+0.3**
	35nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**3.29**	**317**	P	**Pn**	**06 54 46.4**	**+3.3**
SESP				S	**Sn**	**06 55 22.4**	**+0.3**
TDRA	**Tendrara**	**3.34**	**216**	P	**Pn**	**06 54 44.9**	**+1.2**
TDRA				S	**Sb**	**06 55 33.0**	**+1.7**
EQUE	**Quentar**	**3.36**	**297**	P	**Pn**	**06 54 45.7**	**+1.8**
	8.1nm,0.4s,SNR=23						
EQUE				S	**Sn**	**06 55 21.8**	**-1.9**
	1.9nm,0.2s						
EIBI	**Ibiza**	**3.36**	**14**	P	**Pn**	**06 54 45.5**	**+1.7**
	2.9nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	**06 55 21.9**	**-1.6**
	12nm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	**3.38**	**290**	P	**Pn**	**06 54 44.0**	**-0.1**
	4.2nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**06 55 21.5**	**-2.6**
	8.8nm,0.2s,SNR=7.9						
EQES	**Quesada**	**3.41**	**308**	P	**Pn**	**06 54 46.8**	**+2.3**
	5.8nm,0.2s,SNR=17						
EQES				S	**Sn**	**06 55 25.2**	**+0.3**
	10nm,0.2s						
AKLM	**AKL**	**3.65**	**251**	P	**Pn**	**06 54 49.2**	**+1.3**
EGOR	**Sierra Gorda,**	**3.82**	**292**	P	**Pn**	**06 54 52.0**	**+1.6**
	0.9nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**06 55 34.2**	**-0.9**
	4.1nm,0.3s,SNR=7.9						
ECHE	**Chera**	**3.96**	**345**	P	**Pn**	**06 54 53.8**	**+1.7**
	1.0nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**4.20**	**283**	P	**Pn**	**06 54 54.6**	**-0.8**
	0.7nm,0.1s,SNR=7.9						
EMIJ				S	**Sn**	**06 55 39.7**	**-4.6**
	5.9nm,0.3s,SNR=4.7						
ETOS	**Mallorca**	**4.46**	**25**	P	**Pn**	**06 55 00.3**	**+1.3**
	0.4nm,0.1s,SNR=7.9						
ETOS				S	**Sn**	**06 55 48.7**	**-2.0**
	0.7nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**4.61**	**303**	P	**Pn**	**06 55 03.9**	**+2.9**
	0.5nm,0.3s,SNR=7.9						
EADA				S	**Sn**	**06 55 49.1**	**-5.1**
	0.9nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.64**	**352**	P	**Pn**	**06 55 04.0**	**+2.4**
	0.6nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**06 55 52.8**	**-2.6**
	4.5nm,0.3s,SNR=7.9						
MDT	**Midelt**	**5.03**	**236**	P	**Pn**	**06 55 04.9**	**-2.0**
MDT				S	**Sn**	**06 56 12.3**	**+7.5**
MD31	**MD31**	**5.10**	**237**	P	**Pn**	**06 55 08.2**	**+0.3**
ESDC	**Sonseca Array**	**5.18**	**320**	P	**Pn**	**06 55 11.3**	**+2.4**
	1.9nm,0.3s,baz=142,slow=13,SNR=6.8						
ESDC				S	**Sn**	**06 56 05.7**	**-2.8**
	0.7nm,0.1s,baz=132,slow=23,SNR=4.3						
CZD	**Col de Zad**	**5.20**	**240**	P	**Pn**	**06 55 11.5**	**+2.0**
EPOB	**Poblet**	**5.62**	**6**	P	**Pn**	**06 55 16.9**	**+2.0**
	0.5nm,0.1s,SNR=7.9						
EPOB				S	**Sn**	**06 56 15.2**	**-4.1**
	1.3nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.97**	**292**	P	**Pn**	**06 55 18.1**	**-1.5**
	0.2nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**6.57**	**299**	P	**Pn**	**06 55 28.5**	**+0.6**
	0.8nm,0.3s,SNR=7.9						
EBAD				S	**Sn**	**06 56 38.0**	**-4.7**
	2.6nm,0.3s,SNR=7.9						

IDC 22 06:56:09.3±1.9, 11°48S×161°60E, h0km, mb3.7/3, mb1 4.0/5, mb1mx3.7/38, mbtmp3.8/5, ML3.5/2, Error ellipse: s-maj=39.1km s-min=24.3km az=65.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.61**	**321**	Pn	Pn	06 56 53.8	+1.0
	36nm,0.3s,baz=153,slow=6.8,SNR=6.5						
HNR				Sn	Sn	06 57 25.6	+0.5
	59nm,0.3s,baz=230,slow=9.3,SNR=5.5						
DZM	**Mont Dzumac**	**11.51**	**157**	Pn	Pn	06 58 55.7	+0.7
	0.1nm,0.3s,baz=337,slow=5.6,SNR=1.4						
DZM				Sn	Sn	07 01 05.9	+1.5
	0.1nm,0.3s,baz=278,slow=22,SNR=2.0						
WRA	**Warramunga Arr**	**27.53**	**249**	P	P	07 01 58.2	+0.2
	0.9nm,0.8s,baz=78,slow=9.8,SNR=4.0						
ASAR	**Alice Springs**	**28.99**	**242**	P	P	07 02 10.6	-0.5
	0.2nm,0.5s,baz=68,slow=10,SNR=4.7						
H11S2	**WAKE ISLAND Hy**	**30.20**	**10**	T	T	07 33 15.7	
	baz=188,slow=76,SNR=34						
H11S3	**WAKE ISLAND Hy**	**30.20**	**10**	T	T	07 33 15.9	
	baz=188,slow=76,SNR=16						
H11S1	**WAKE ISLAND Hy**	**30.22**	**10**	T	T	07 33 13.6	
	baz=188,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy**	**31.43**	**10**	T	T	07 34 46.3	
	baz=188,slow=76,SNR=13						
H11N3	**WAKE ISLAND Hy**	**31.44**	**10**	T	T	07 34 48.4	
	baz=188,slow=76,SNR=11						
H11N2	**WAKE ISLAND Hy**	**31.45**	**10**	T	T	07 34 48.0	
	baz=188,slow=76,SNR=9.1						
YKA	**Yellowknife Ar**	**97.23**	**28**	P	P	07 09 43.1	-0.6
	0.3nm,0.7s,baz=254,slow=4.4,SNR=2.5						

*IDC **22** 07:09:14.6±0.9, 11°14S×161°65E, h0km, mb3.9/11, mb1 4.1/14, mb1mx4.0/37, mbtmp3.9/14, ML3.7/3, MS3.9/11, Ms1 3.9/11, ms1mx3.6/26, Error ellipse: s-maj=23.8km s-min=19.1km az=93.0*
*NEIC **22** 07:09:16.6±1.9, 11°30S±0°09×161°5E±0°1, h10km±1km, mb4.6/23, Error ellipse: s-maj=22.1km s-min=13.8km az=64.0*
ISC 22 07:09:16.1±0.6, 11°28S±0°07×161°6E±0°1, h10km, n49, σ1§33/40, mb4.4/24, MS3.9/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.44**	**319**	Pn	**Pn**	**07 09 55.8**	**-0.1**
	16nm,0.3s,baz=170,slow=12,SNR=2.4						
HNR				Sn	**Sn**	**07 10 24.0**	**-1.8**
	86nm,0.3s,baz=90,slow=20,SNR=2.5						
HNR				LR	LR	07 10 43.4	
	comp=Z,944nm,19.6s,baz=102,slow=37						
HNR	**Honiara**	**2.44**	**319**		**Pn**	**07 09 56.2**	**+0.2**
DZM	**Mont Dzumac**	**11.70**	**157**	Pn	**Pn**	**07 12 04.7**	**+1.5**
	0.4nm,0.3s,baz=30,slow=5.9,SNR=9.5						
DZM				Sn	**Sn**	**07 14 10.0**	**-4.0**
	0.2nm,0.3s,baz=270,slow=20,SNR=1.3						
KRVT	**Keravat (AS076**	**11.72**	**305**	LR	LR	07 17 07.0	
	comp=Z,499nm,19.4s,baz=123,slow=40						
PMG	**Port Moresby**	**14.31**	**276**	LR	LR	07 18 11.3	
	comp=Z,776nm,18.1s,baz=120,slow=37						
CTA	**Charters Tower**	**17.15**	**237**	P	**P**	**07 13 17.8**	**+0.2**
	0.2nm,0.3s,baz=43,slow=17,SNR=1.8						
CTAO	**Charters Tower**	**17.15**	**237**		**Pn**	**07 13 16.5**	**+0.5**
EIDS	**Eidsvold**	**17.18**	**214**	Pn	**Pn**	**07 13 14.4**	**-2.0**
WR0	**Warramunga Arr**	**27.40**	**248**	P	**P**	**07 15 02.7**	**+0.6**
WB0	**Warramunga Arr**	**27.49**	**249**	P	**P**	**07 15 03.5**	**+0.7**
WB2	**Warramunga Arr**	**27.57**	**248**	P	**P**	**07 15 02.5**	**-1.0**
WB2				IAmb	IAmb	07 15 14.8	
	comp=Z,7.3nm,1.1s						
STKA	**Stephens Creek**	**27.57**	**219**	P	**P**	**07 15 04.1**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=78,slow=20,SNR=1.8						
STKA				LR	LR	07 25 49.5	
	comp=Z,696nm,19.3s,baz=32,slow=36						
WRA	**Warramunga Arr**	**27.58**	**248**	P	**P**	**07 15 03.6**	**-0.1**
	comp=Z,2.3nm,1.0s,baz=77,slow=11,SNR=6.2						
WRA				LR	LR	07 25 22.2	
	comp=Z,245nm,18.2s,baz=70,slow=35						
ASAR	**Alice Springs**	**29.07**	**241**	P	**P**	**07 15 18.0**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=71,slow=9.2,SNR=10						
ASAR				LR	LR	07 26 01.3	
	comp=Z,339nm,18.7s,baz=65,slow=34						
H11S2	**WAKE ISLAND Hy**	**30.01**	**10**	T	T	07 46 25.5	
	baz=188,slow=76,SNR=59						
H11S3	**WAKE ISLAND Hy**	**30.01**	**10**	T	T	07 46 24.8	
	baz=188,slow=76,SNR=52						
H11S1	**WAKE ISLAND Hy**	**30.03**	**10**	T	T	07 46 26.0	
	baz=188,slow=76,SNR=47						
H11N1	**WAKE ISLAND Hy**	**31.24**	**10**	T	T	07 47 57.8	
	baz=188,slow=76,SNR=39						
H11N3	**WAKE ISLAND Hy**	**31.25**	**10**	T	T	07 47 56.1	
	baz=188,slow=76,SNR=24						
H11N2	**WAKE ISLAND Hy**	**31.26**	**10**	T	T	07 47 57.8	
	baz=188,slow=76,SNR=18						
FITZ	**Fitzroy Crossi**	**35.37**	**255**		**P**	**07 16 11.3**	**-0.9**
FORT	**Forrest**	**36.60**	**233**	P	**P**	**07 16 22.6**	**0.0**
PPT	**Papeete**	**47.61**	**103**	LR	LR	07 34 22.0	
	comp=Z,162nm,19.0s,baz=98,slow=32						
KSRS	**Korea Array**	**57.85**	**329**	P	**P**	**07 19 08.7**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=149,slow=5.8,SNR=4.6						
USRK	**Ussuriysk Ar.**	**61.41**	**336**	LR	LR	07 43 50.6	
	comp=Z,69nm,20.5s,baz=152,slow=34						
PETK	**Petropavlovsk-**	**64.22**	**357**	LR	LR	07 42 13.4	
	comp=Z,44nm,20.0s,baz=243,slow=31						
VNDA	**Vanda**	**66.23**	**180**	P	**P**	**07 20 06.0**	**+2.2**
	comp=Z,0.7nm,0.8s,baz=334,slow=7.6,SNR=4.4						
VNDA				LR	LR	07 43 24.2	
	comp=Z,75nm,21.5s,baz=230,slow=31						
CMAR	**Chiang Mai Arr**	**68.48**	**295**	P	**P**	**07 20 20.1**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=108,slow=3.5,SNR=4.4						
SONM	**Songino Array**	**76.48**	**325**	P	**P**	**07 21 06.9**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=134,slow=6.2,SNR=4.4						
OHAK	**Old Harbor**	**77.68**	**23**	P	**P**	**07 21 13.6**	**+0.9**
OHAK				IAmb	IAmb	07 21 17.0	
	comp=Z,7.2nm,1.2s						
QSPA	**South Pole Qui**	**78.72**	**180**	P	**P**	**07 21 19.4**	**+0.7**
QSPA				IAmb	IAmb	07 21 36.2	
	comp=Z,12nm,1.3s						
RND	**Reindeer**	**83.52**	**20**	P	**P**	**07 21 44.1**	**+0.1**
RND				IAmb	IAmb	07 21 54.7	
	comp=Z,3.6nm,0.7s						
GLB	**Gilahina Butte**	**84.11**	**23**	P	**P**	**07 21 48.8**	**+1.7**
VRDI	**Verde Repeater**	**84.12**	**23**	P	**P**	**07 21 48.2**	**+0.9**
VRDI				IAmb	IAmb	07 21 57.9	
	comp=Z,2.9nm,0.8s						
BALM	**Baldy**	**84.45**	**24**	P	**P**	**07 21 48.8**	**0.0**
BALM				IAmb	IAmb	07 22 00.3	
	comp=Z,5.0nm,0.9s						
WRH	**Wood River Hil**	**84.48**	**20**	P	**P**	**07 21

WB0				IAmb	IAmb	07 20 25.1	
	comp=Z,6.6nm,1.2s						
WRAB	**Tennant Creek**	**23.79**	**232**	P	**P**	**07 20 24.7**	**+0.6**
WB2	**Warramunga Arr**	**23.79**	**232**	P	**P**	**07 20 24.4**	**+0.2**
WB2				IAmb	IAmb	07 20 29.3	
	comp=Z,6.7nm,1.2s						
WRA	**Warramunga Arr**	**23.80**	**232**	P	**P**	**07 20 25.0**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=54,slow=9.6,SNR=2.1						
WRA				PcP	**PcP**	**07 24 08.0**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=58,slow=2.2,SNR=6.9						
ASAR	**Alice Springs**	**26.34**	**225**	P	**P**	**07 20 47.4**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=58,slow=9.0,SNR=9.5						
ASAR				PcP	**PcP**	**07 24 13.7**	**+0.7**
	comp=Z,2.5nm,0.6s,baz=62,slow=2.6,SNR=22						
H11S3	**WAKE ISLAND Hy**	**27.09**	**27**	T	T	07 49 09.7	
	baz=208,slow=76,SNR=88						
H11S2	**WAKE ISLAND Hy**	**27.10**	**27**	T	T	07 49 10.0	
	baz=208,slow=76,SNR=75						
H11S1	**WAKE ISLAND Hy**	**27.11**	**27**	T	T	07 49 11.1	
	baz=208,slow=76,SNR=99						
STKA	**Stephens Creek**	**28.52**	**203**	P	**P**	**07 21 08.6**	**+1.7**
	comp=Z,1.4nm,0.9s,baz=20,slow=12,SNR=1.8						
STKA	**Stephens Creek**	**28.52**	**203**	P	**P**	**07 21 04.9**	**-1.9**
FITZ	**Fitzroy Crossi**	**30.32**	**244**	P	**P**	**07 21 22.7**	**-0.2**
FITZ				IAmb	IAmb	07 21 23.4	
	comp=Z,5.6nm,0.8s						
BKZ	**Black Stump Fm**	**39.02**	**152**	P	**P**	**07 22 38.1**	**+0.2**
KKM	**Kota Kinabalu**	**39.50**	**287**	P	**P**	**07 22 40.5**	**-1.7**
KKM				IAmb	IAmb	07 22 51.5	
	comp=Z,7.3nm,1.1s						
LTZ	**Lake Taylor**	**40.31**	**159**	P	**P**	**07 22 48.9**	**+0.3**
LTZ				IAmb	IAmb	07 23 01.5	
	comp=Z,5.8nm,0.8s						
RAR	**Rarotonga**	**47.31**	**114**	LR	LR	07 42 28.3	
	comp=Z,171nm,19.7s,baz=109,slow=35						
PETK	**Petropavlovsk-**	**58.67**	**3**	P	**P**	**07 25 08.0**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=182,slow=10,SNR=2.5						
CMAR	**Chiang Mai Arr**	**59.35**	**295**	P	**P**	**07 25 15.0**	**+1.3**
	comp=Z,5.3nm,0.8s,baz=115,slow=5.0,SNR=13						
SONM	**Songino Array**	**67.73**	**327**	LR	LR	07 55 00.5	
	comp=Z,50nm,20.7s,baz=94,slow=35						
VNDA	**Vanda**	**71.89**	**178**	P	**P**	**07 26 33.1**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=346,slow=4.2,SNR=4.0						
GLI	**Glacier Island**	**80.47**	**25**	P	**P**	**07 27 22.3**	**-0.3**
GLI				IAmb	IAmb	07 27 28.4	
	comp=Z,9.3nm,1.3s						
HIN	**Hinchinbrook I**	**80.49**	**26**	P	**P**	**07 27 22.7**	**0.0**
TRF	**Thorofare Moun**	**80.57**	**22**	P	**P**	**07 27 21.6**	**-1.6**
TRF				IAmb	IAmb	07 27 24.8	
	comp=Z,2.2nm,1.0s						
MKAR	**Makanchi Array**	**81.80**	**319**	P	**P**	**07 27 30.3**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=134,slow=6.9,SNR=3.6						
ILAR	**Eielson Array**	**82.54**	**22**	P	**P**	**07 27 32.0**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=244,slow=5.4,SNR=10						
QSPA	**South Pole Qui**	**84.27**	**180**	P	**P**	**07 27 43.4**	**+0.9**
MAW	**Mawson**	**85.21**	**203**	P	**P**	**07 27 46.8**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=60,slow=10,SNR=2.5						
MAW	**Mawson**	**85.21**	**203**	P	**P**	**07 27 46.8**	**-0.2**
MAW				IAmb	IAmb	07 27 56.5	
	comp=Z,1.8nm,1.2s						
NRIK	**Noril'sk**	**87.20**	**341**	LR	LR	08 04 51.6	
	comp=Z,84nm,20.6s,baz=52,slow=34						
YKA	**Yellowknife Ar**	**95.65**	**28**	P	**P**	**07 28 37.7**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=269,slow=3.8,SNR=5.0						
AKTO	**Aktyubinsk**	**98.19**	**320**	LR	LR	08 11 47.3	
	comp=Z,47nm,21.4s,baz=68,slow=35						
TORD	**Torodi Ar. Bea**	**151.73**	**287**	PKPbc	**PKPbc**	**07 35 05.6**	**-0.9**
	comp=Z,1.7nm,0.7s,baz=74,slow=2.2,SNR=10						

ASRS ***22*** *07:23:47.6,53.73N×91.01E,M2.5,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC 22 07:24:02.2±3.1,53.25N×90.16E,h0km,mb3.9,mpv3.6, 7C-1D,Error ellipse: s-maj=25.9km s-min=18.8km az=81.0,Suspected Mining explosion.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.26**	**285**	⇑Pn	Pn	07 24 55.2	+0.7
	3.7nm,0.8s						
ZAA0				⇑Lg	Lg	07 25 45.8	
	29nm,1.1s						
KURBB	**Kurchatov Arra**	**7.65**	**255**	⇑Pn	Pn	07 25 52.6	-2.2
	7.7nm,0.8s						
KURBB				⇑Sn	Sn	07 27 22.6	+0.4
	66nm,0.8s						
KURBB				⇑Lg	Lg	07 28 06.4	
	119nm,1.1s						
MK31	**Makanchi Array**	**8.21**	**221**	⇑Pn	Pn	07 26 01.9	-0.6
	3.2nm,0.8s,baz=33,slow=13,SNR=15						
MK31				⇓Sn	Sn	07 27 38.9	+3.0
	4.6nm,0.7s						
MK31				⇑Lg	Lg	07 28 22.5	
	19nm,1.0s,baz=33,slow=27,SNR=4.4						

IDC 22 07:32:34.4±1.1,11.29S×13.21W,h0km,mb4.0/5, mb1 4.0/5,mb1mx3.7/30,mbtmp4.0/5,MS3.4/5,Ms1 3.4/5, ms1mx3.0/24,Error ellipse: s-maj=51.6km s-min=25.4km az=116.0,Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**19.68**	**25**	LR	LR	07 42 34.2	
	comp=Z,88nm,18.1s,baz=204,slow=30						
TORD	**Torodi Ar. Bea**	**28.43**	**32**	P	P	07 38 31.1	+0.1
	2.8nm,0.9s,baz=219,slow=8.9,SNR=7.6						
TORD				LR	LR	07 47 37.2	
	comp=Z,47nm,21.9s,baz=345,slow=32						
BDFB	**Brasilia**	**34.10**	**259**	LR	LR	07 51 16.8	
	comp=Z,53nm,19.0s,baz=228,slow=33						
SIV	**San Ignacio**	**46.67**	**259**	P	P	07 41 05.3	0.0
	0.4nm,0.5s,baz=78,slow=9.3,SNR=1.7						
SNAA	**Sanae**	**60.68**	**176**	P	P	07 42 47.1	-0.1
	0.9nm,0.3s,baz=326,slow=6.9,SNR=7.7						
AKASG	**Malin Array Be**	**71.92**	**27**	P	P	07 43 59.9	+0.5
	0.4nm,0.4s,baz=227,slow=6.4,SNR=2.1						
FINES	**FINESS Array B**	**78.80**	**18**	P	P	07 44 38.4	-0.4
	2.0nm,0.8s,baz=217,slow=6.2,SNR=5.5						
FINES				LR	LR	08 18 50.1	
	comp=Z,29nm,21.7s,baz=60,slow=35						
SCHQ	**Schefferville**	**79.75**	**332**	LR	LR	08 15 01.0	
	comp=Z,37nm,18.5s,baz=44,slow=32						

IDC ***22*** *07:37:23.7±4.3, 17.08N×100.86W,h0km,mb3.2/3, mb1 3.6/4,mb1mx3.4/27,mbtmp3.2/4,ML3.2/1,Error ellipse: s-maj=143.6km s-min=57.0km az=82.0*
MEX ***22*** *07:37:29.3±0.6, 17.26N×101.56W,h5km,MD4.0*

ISC 22 07:37:29.0±1.2,17.32N±0.08×101.31W±0.06,h15km,n12, σ3802/13,mb3.1/3,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UON	**La Union**	**0.81**	**323**	*e*P	**Pb**	**07 37 42.3**	**-2.4**
UON				*e*S	**Sb**	**07 37 52.8**	**-2.7**
CAIG	**El Cayaco**	**1.03**	**105**	*e*PG	Pn	07 37 52.1	+3.1
CAIG				*e*S	**Sn**	**07 38 06.5**	**+3.3**
ARIG	**Puente Sto Nin**	**1.32**	**44**	*e*P	**Pg**	**07 37 54.4**	**-0.1**
ARIG				*i* S	**Sg**	**07 38 13.4**	**+1.7**
ACP2	**Acapulco**	**1.43**	**108**	*i* P	**Pg**	**07 37 56.2**	**-0.4**
ACP2				*e*S	**Sg**	**07 38 16.5**	**+1.3**
TLIG	**Tlapa**	**2.63**	**84**	*e*P	**Pb**	**07 38 13.9**	**-2.0**
TLIG				*i* S	**Sg**	**07 38 47.5**	**-6.1**
TXAR	**Lajitas Array**	**12.15**	**350**	Pn	**Pn**	**07 40 26.2**	**+4.5**
	0.0nm,0.3s,baz=163,slow=10,SNR=2.0						
TXAR				Lg	Lg	07 43 56.5	
	0.0nm,0.3s,baz=282,slow=37,SNR=3.2						
NVAR	**Mina Array Bea**	**25.76**	**328**	P	**P**	**07 42 59.8**	**+0.4**
	0.4nm,0.7s,baz=149,slow=11,SNR=3.5						
PDAR	**Pinedale Array**	**26.32**	**346**	P	**P**	**07 43 04.9**	**+0.4**
	0.3nm,0.6s,baz=146,slow=9.8,SNR=2.4						
YKA	**Yellowknife Ar**	**46.08**	**351**	P	**P**	**07 45 51.2**	**-0.9**
	0.1nm,0.5s,baz=157,slow=7.8,SNR=3.6						
H03N2	**Juan Fernandez**	**54.81**	**157**	T	T	08 46 19.6	
	baz=335,slow=77,SNR=9.3						
H03N1	**Juan Fernandez**	**54.82**	**157**	T	T	08 46 17.9	
	baz=335,slow=77,SNR=14						
H03N3	**Juan Fernandez**	**54.83**	**157**	T	T	08 46 21.3	
	baz=335,slow=77,SNR=6.7						

MAN 22 07:57:47.1,10.39N×126.05E,h12km,mb4.6,ML3.5, MS3.4,1C-2D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.82**	**222**	*e*P	Pg	07 58 02.7	-0.3
SCPH				*e*S	Sb	07 58 14.6	+0.3
MSLP	**Maasin**	**1.20**	**258**	*e*P	Pn	07 58 09.0	-0.7
MSLP				*e*S	Sb	07 58 22.2	-3.1
TBP	**Tagbilaran**	**2.27**	**252**	*e*P	Pn	07 58 25.7	+1.2
TBP				*i* S	Sn	07 58 52.8	+0.5
CGP	**Cagayan de Oro**	**2.34**	**215**	⇓*e*P	Pn	07 58 26.0	+0.5
CGP				*e*S	Sn	07 58 55.4	+1.2
BUKP	**Musuan**	**2.68**	**201**	*e*P	Pn	07 58 29.7	-0.5
BUKP				*e*S	Sn	07 59 04.7	+2.0
RCP	**Roxas**	**3.45**	**290**	⇑*e*P	Pn	07 58 42.5	+1.8
KCP	**Kidapawan**	**3.49**	**196**	⇓*i*P	Pn	07 58 42.3	+0.9
KCP				*i* S	Sn	07 59 18.6	-4.1

IDC 22 08:20:12.3±2.0,10.83S×161.34E,h0km,mb3.5/3, mb1 3.8/3,mb1mx3.5/24,mbtmp3.5/3,Error ellipse: s-maj=38.4km s-min=32.0km az=103.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.95**	**315**	Pn	Pn	08 20 46.5	-0.2
	27nm,0.3s,baz=216,slow=13,SNR=1.9						
HNR				Sn	Sb	08 21 14.1	+0.6
	44nm,0.3s,baz=170,slow=13,SNR=2.3						
WRA	**Warramunga Arr**	**27.53**	**248**	P	P	08 26 01.3	+0.3
	0.9nm,1.0s,baz=71,slow=9.3,SNR=4.8						
ASAR	**Alice Springs**	**29.07**	**240**	P	P	08 26 14.3	-0.5
	0.3nm,0.7s,baz=72,slow=9.1,SNR=5.0						
H11S2	**WAKE ISLAND Hy**	**29.61**	**10**	T	T	08 57 00.6	
	baz=188,slow=76,SNR=6.7						
H11S3	**WAKE ISLAND Hy**	**29.61**	**10**	T	T	08 57 01.5	
	baz=188,slow=76,SNR=4.2						
H11S1	**WAKE ISLAND Hy**	**29.63**	**10**	T	T	08 57 02.1	
	baz=188,slow=76,SNR=6.2						
ILAR	**Eielson Array**	**84.73**	**20**	P	P	08 32 48.0	0.0
	0.2nm,0.5s,baz=233,slow=5.4,SNR=4.6						

ISC 22 08:24:53.7±1.0,42.28N±0.04×27.85E±0.05,h10km,n27, σ0897/28,8C-2D,Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTYL	**Yalikoy Yolu**	**0.86**	**158**	*e*P	**Pn**	**08 25 12.9**	**+1.0**
EDRB	**Edirne**	**0.93**	**243**	*e*P	**Pn**	**08 25 12.6**	**-0.2**
SLVT	**Silivri**	**1.08**	**165**	*e*P	**Pn**	**08 25 16.9**	**+2.0**
CTKS	**Kestanelik-??a**	**1.15**	**155**	*e*P	**Pb**	**08 25 14.5**	**-1.1**
BGKT	**Bogazkoy**	**1.29**	**147**	*e*P	**Pn**	**08 25 18.8**	**+1.0**
KLYT	**Kilyos**	**1.35**	**139**	*e*P	**Pn**	**08 25 18.0**	**-0.7**
ISK	**Istanbul-Kandi**	**1.51**	**143**	*e*P	**Pn**	**08 25 20.8**	**0.0**
KAVV	**Kandilli-Istan**	**1.51**	**143**	*e*P	**Pn**	**08 25 21.0**	**+0.2**
ELND	**Elena**	**1.60**	**295**	⇑P	**Pb**	**08 25 22.9**	**-0.4**
ELND				⇑S	**Sg**	**08 25 44.7**	**-0.5**
RAZG	**Razgrad**	**1.62**	**323**	⇑P	**Pb**	**08 25 23.6**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.67**	**198**	*e*P	**Pg**	**08 25 27.1**	**+1.4**
MRMT	**Marmara Adasi**	**1.68**	**187**	*e*P	**Pg**	**08 25 25.9**	**-0.1**
SILT	**Sile**	**1.75**	**129**	*e*P	**Pn**	**08 25 22.6**	**-1.5**
ICOR	**Ion Corvin**	**1.84**	**359**	⇑P	**Pn**	**08 25 25.6**	**+0.3**
ARMT	**Armutlu**	**1.87**	**156**	*e*P	**Pn**	**08 25 27.7**	**+1.9**
ERIK	**Erikli-Kesan**	**1.89**	**213**	*e*P	**Pg**	**08 25 30.1**	**+0.1**
EDC	**Edincik**	**1.93**	**180**	*e*P	**Pg**	**08 25 30.7**	**0.0**
MFTR	**Murfatlar**	**1.95**	**12**	⇑P	**Pn**	**08 25 28.0**	**+1.2**
HRT	**Hereke**	**1.99**	**136**	*e*P	**Pn**	**08 25 27.6**	**+0.1**
ENEZ	**Enez**	**2.00**	**220**	*e*P	**Pg**	**08 25 30.8**	**-1.2**
LPK	**Lapseki**	**2.07**	**204**	*e*P	**Pb**	**08 25 31.8**	**+0.4**
GELI	**Tayfur-Gelibol**	**2.14**	**209**	*e*P	**Pg**	**08 25 33.8**	**-1.0**
TIRR	**Tirgusor**	**2.22**	**10**	⇑P	**Pn**	**08 25 31.7**	**+1.1**
TLBR	**Topalu**	**2.27**	**4**	⇓P	**Pn**	**08 25 32.2**	**+0.9**
HARR	**Harsova**	**2.41**	**1**	⇑P	**Pn**	**08 25 33.8**	**+0.6**
TOPG	**Topolog**	**2.63**	**8**	⇓P	**Pn**	**08 25 36.8**	**+0.6**
CFR	**Carcaliu**	**2.91**	**4**	⇑P	**Pn**	**08 25 40.5**	**+0.4**

HEL ***22*** *08:29:44.4±0.3,56.53N×21.05E,h0km,ML2.1, ML2.5(UPP),Explosion*
UPP ***22*** *08:29:49.0±1.0,56.74N×20.51E,h0km,ML2.7,Suspected explosion*

ISC 22 08:29:43.9±1.0,56.62N±0.05×20.96E±0.03,h0km,n49, σ179/62,Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PBUR	**Paburge**	**0.81**	**137**	*e*P	**Pb**	**08 30 00.8**	**+0.1**
SLIT	**Slitere, Latvi**	**1.25**	**35**	*e*P	**Pg**	**08 30 07.7**	**-0.4**
SLIT	**Slitere, Latvi**	**1.25**	**35**	*e*P	**Pg**	**08 30 07.7**	**-0.1**
SLIT				*e*S	**Sn**	**08 30 27.4**	**+1.4**
GOTU	**Gotland**	**1.69**	**310**	P	**Pn**	**08 30 14.8**	**+0.3**
GOTU				S	**Sn**	**08 30 35.0**	**-1.8**
GOTU	**Gotland**	**1.69**	**310**	*e*P	**Pn**	**08 30 14.8**	**+0.3**
PABE	**Paberze**	**2.02**	**122**	*e*P	**Pn**	**08 30 19.6**	**+0.4**
BYXU	**Byxelkrok**	**2.27**	**289**	P	**Pb**	**08 30 24.6**	**-1.0**
BYXU	**Byxelkrok**	**2.27**	**289**	*e*P	**Pb**	**08 30 24.6**	**-1.0**
ASPU	**Aespoe**	**2.52**	**290**	P	**Pn**	**08 30 27.7**	**+1.8**
ASPU	**Aespoe**	**2.52**	**290**	*e*P	**Pn**	**08 30 27.7**	**+1.8**
MTSE	**Matsula**	**2.60**	**35**	*e*P	**Pn**	**08 30 28.9**	**+1.8**
MTSE				*e*S	**Sn**	**08 31 00.8**	**+1.4**
VSTU	**Vaestervik**	**2.63**	**295**	P	**Pn**	**08 30 29.7**	**+2.2**
VSTU	**Vaestervik**	**2.63**	**295**	*e*P	**Pn**	**08 30 29.7**	**+2.2**
OSKU	**Oskarshamn**	**2.73**	**284**	P	**Pn**	**08 30 30.7**	**+1.8**
OSKU	**Oskarshamn**	**2.73**	**284**	*e*P	**Pn**	**08 30 30.7**	**+1.8**
NYNU	**Nynaeshamn**	**2.87**	**328**	P	**Pn**	**08 30 32.1**	**+1.3**
NYNU	**Nynaeshamn**	**2.87**	**328**	*e*P	**Pn**	**08 30 32.1**	**+1.3**
BLEU	**Blekinge**	**2.87**	**266**	P	**Pn**	**08 30 31.9**	**+1.1**
BLEU	**Blekinge**	**2.87**	**266**	*e*P	**Pn**	**08 30 31.9**	**+1.1**
VIKU	**Vikbolandet**	**2.97**	**311**	P	**Pn**	**08 30 34.4**	**+2.1**
VIKU	**Vikbolandet**	**2.97**	**311**	*e*P	**Pn**	**08 30 34.4**	**+2.1**
IIGN	**Ignalina**	**3.22**	**111**	*e*P	**Pn**	**08 30 37.6**	**+1.9**
NRTU	**Norrtaelje**	**3.31**	**339**	P	**Pn**	**08 30 39.4**	**+2.6**
NRTU	**Norrtaelje**	**3.31**	**339**	*e*P	**Pn**	**08 30 39.4**	**+2.6**
VXJU	**Vaexsjoe**	**3.33**	**278**	P	**Pn**	**08 30 38.5**	**+1.4**
VXJU	**Vaexsjoe**	**3.33**	**278**	*e*P	**Pn**	**08 30 38.5**	**+1.4**
LNKU	**Linkoeping**	**3.36**	**301**	P	**Pn**	**08 30 39.1**	**+1.5**
LNKU	**Linkoeping**	**3.36**	**301**	*e*P	**Pn**	**08 30 39.1**	**+1.5**
AAL	**Aland**	**3.61**	**352**	*e*P	**Pn**	**08 30 44.1**	**+3.2**
AAL				*e*S	**Sn**	**08 31 26.3**	**+2.2**
BSD	**Bornholm Skovb**	**3.72**	**249**	*i* P	**Pb**	**08 30 50.8**	**+0.3**
FIBU	**Brunna**	**3.80**	**331**	P	**Pn**	**08 30 45.7**	**+2.0**
DEL	**Delary**	**3.93**	**271**	P	**Pn**	**08 30 45.9**	**+0.6**
DEL	**Delary**	**3.93**	**271**	*e*P	**Pn**	**08 30 45.9**	**+0.6**
ASKU	**Askersund**	**4.00**	**307**	P	**Pn**	**08 30 47.8**	**+1.5**
ASKU	**Askersund**	**4.00**	**307**	*e*P	**Pn**	**08 30 47.8**	**+1.5**
GNOU	**Gnosjoe**	**4.00**	**283**	P	**Pn**	**08 30 47.9**	**+1.5**
GNOU	**Gnosjoe**	**4.00**	**283**	*e*P	**Pn**	**08 30 47.9**	**+1.5**
MEF	**Metsahovi**	**4.04**	**25**	*e*P	**Pn**	**08 30 49.1**	**+2.3**
MEF				*e*S	**Sn**	**08 31 35.2**	**+0.4**
MEF				MSG		08 31 52.9	
	comp=Z,3.4nm,0.2s						
PVF	**Pernaja**	**4.70**	**31**	*e*P	**Pn**	**08 30 59.2**	**+3.2**
PVF				*e*S	**Sn**	**08 31 50.0**	**-1.1**
PVF				MSG		08 32 15.2	
	comp=Z,2.5nm,0.2s						
ONAU	**Onsala**	**5.00**	**283**	P	**Pn**	**08 31 01.6**	**+1.5**
ONAU	**Onsala**	**5.00**	**283**	*e*P	**Pn**	**08 31 01.6**	**+1.5**
VJF	**Virojoki**	**5.23**	**39**	*e*P	**Pn**	**08 31 04.3**	**+1.1**
VJF				*e*S	**Sn**	**08 32 01.0**	**-3.9**
FIA0	**FINESS Array S**	**5.51**	**26**	*e*P	**Pn**	**08 31 08.0**	**+0.9**
FIA0				*e*S	**Sn**	**08 32 09.4**	**-1.7**
KEF	**Keuruu**	**5.91**	**18**	*e*P	**Pn**	**08 31 14.9**	**+2.3**
KEF				*e*S	**Sn**	**08 32 18.0**	**-3.0**
KAF	**Kangasniemi**	**6.15**	**24**	*e*P	**Pn**	**08 31 16.9**	**+1.1**
KAF				*e*S	**Sn**	**08 32 25.4**	**-1.4**
VAF	**Ylistaro**	**6.50**	**7**	*e*P	**Pn**	**08 31 21.5**	**+0.8**
VAF				*e*S	**Sn**	**08 32 34.9**	**-0.6**
SUF	**Sumiainen**	**6.66**	**21**	*e*P	**Pn**	**08 31 23.4**	**+0.5**
SUF				*e*S	**Sn**	**08 32 38.0**	**-1.3**
OUF	**Merijarvi**	**7.99**	**12**	*e*P	**Pn**	**08 31 41.4**	**+0.3**
JOF	**Joensuu**	**8.19**	**35**	*e*P	**Pn**	**08 31 43.0**	**-0.8**
JOF				*e*S	**Sn**	**08 33 11.6**	**-5.3**

IDC ***22*** *08:37:55.8±0.4,55.34S×28.22W,h0km,mb5.0/20, mb1 5.0/22,mb1mx5.0/25,mbtmp5.0/22,ML5.3/2,MS5.1/19, Ms1 5.1/19,ms1mx5.0/21,Error ellipse: s-maj=14.1km s-min=11.6km az=28.0*
NEIC ***22*** *08:37:56.6±1.5,55.40S±0.10×28.3W±0.1,h7km±1km, mb5.5/82,Ms_20 5.1/638,Mwb5.5/14,Mwc5.6(GCMT), Error ellipse: s-maj=16.1km s-min=11.6km az=178.0*
MOS ***22*** *08:37:58.2±1.3,55.52S×28.48W,h23km,mb5.6/17, MS5.0/11,Error ellipse: s-maj=18.4km s-min=10.8km az=114.9*
BJI ***22*** *08:37:58.0±0.0,55.50S×28.40W,h10km,mB5.5/26, Ms5.5/26,Ms7 5.2/26*
GCMT ***22*** *08:38:00.6±0.1,55.39S±0.01×28.12W±0.01,h15km, MW5.5/162,Moment Tensor Solution. s126,c207; s162,c300; Duration: 194 Moment tensor: Scale 1017 Nm; Mrr0.13±.03; Mθθ-1.46±.03; Mϕϕ1.33±.03; Mrθ-0.24±.06; Mθϕ1.99±.03; Mϕr0.91±.08; Best double couple: M☐2.60700×1017 NP1:ϕ☐73.00000°,δ69.00000°, λ2.00000°. NP2:ϕ☐342.00000°,δ88.00000°,λ159.00000°. Principal axes: T 2.5680, Plg16.0000°, Azm295.0000°; N 0.0750, Plg69.0000°, Azm157.0000°; P -2.6450, Plg13.0000°, Azm29.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***22*** *08:38:00.9,55.40S×28.29W,h7km,Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr0.10; Mθθ-1.00; Mθϕ0.90; Mrθ-0.44; Mϕϕ1.77; Mϕr0.97; Fault plane solution: M☐2.28000×1017 NP1:ϕ☐165.72000°, δ88.57000°,λ-152.52000°. NP2:ϕ☐74.97000°,δ62.53000°, λ-1.61000°. Principal axes: T 2.1562, Plg18.0000°, Azm297.0000°; N 0.2218, Plg62.0000°, Azm168.0000°; P -2.3780, Plg20.0000°, Azm34.0000°;*
NEIC ***22*** *08:38:01,55.41S×28.17W,h14km,Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr0.18; Mθθ-1.52; Mθϕ1.34; Mrθ0.13; Mϕϕ2.08; Mϕr0.80; Fault plane solution: M☐2.66000×1017 NP1:ϕ☐342.00000°, δ82.00000°,λ164.00000°. NP2:ϕ☐74.00000°,δ74.00000°, λ9.00000°. Principal axes: T 2.6718, Plg17.0000°, Azm297.0000°; N -0.0331, Plg72.0000°, Azm135.0000°; P -2.6387, Plg5.0000°, Azm29.0000°;*

ISC 22 08:37:58.9±0.4,55.42S±0.05×28.43W±0.05,h22km±3km, h23km:pP-P,n683,σ1929/438,mb5.5/56,MS5.1/355, 13C-5D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**4.79**	**280**	P	**Pn**	**08 39 08.6**	**-1.0**
HOPE	**Hope Point**	**4.79**	**280**		**Pn**	**08 39 08.6**	**-1.0**
VNA1	**Neumayer--Stat**	**17.64**	**158**	P	**P**	**08 42 03.7**	**0.0**
VNA3	**Neumayer Olymp**	**17.82**	**160**	P	**P**	**08 42 06.1**	**+0.4**
EFI	**East Falkland**	**17.93**	**270**	⇓*e*P	**Pn**	**08 42 06.8**	**+0.3**
EFI				pmax	pmax		
	comp=Z,51nm,1.1s						
EFI	**East Falkland**	**17.93**	**270**	Pn	**Pn**	**08 42 05.2**	**-1.3**
VNA2	**Neumayer--Watz**	**18.04**	**158**	P	**P**	**08 42 09.0**	**+0.9**
	baz=319,slow=12						
SNAA	**Sanae**	**19.60**	**156**	P	**P**	**08 42 25.0**	**-0.3**
SNAA	**Sanae**	**19.60**	**156**	P	**P**	**08 42 24.8**	**-0.4**
	comp=Z,19nm,0.3s,baz=300,slow=10,SNR=493						
SNAA				LR	LR	08 48 22.0	
	comp=Z,3μm,19.1s,baz=316,slow=32						
SNAA	**Sanae**	**19.60**	**156**	*c i*P	**P**	**08 42 24.7**	**-0.6**
SNAA	**Sanae**	**19.60**	**156**	P	**P**	**08 42 25.1**	**-0.2**
PMSA	**Palmer Station**	**19.79**	**227**	P	**Pn**	**08 42 30.7**	**+1.8**
	comp=Z,3.7nm,0.3s,baz=72,slow=9.0,SNR=7.1						
PMSA				LR	LR	08 48 37.7	
	comp=Z,5μm,20.0s,baz=78,slow=32						
PMSA	**Palmer Station**	**19.79**	**227**	P	**Pn**	**08 42 29.1**	**+0.2**
PMSA				IAmb	IAmb	08 42 39.8	
	comp=Z,284nm,1.0s						
PMSA	**Palmer Station**	**19.79**	**227**	*e*P	**Pn**	**08 42 32.5**	**+3.6**
MG01	**Puerto William**	**22.19**	**255**	P	**P**	**08 42 54.8**	**+1.6**
USHA	**Ushuaia**	**22.66**	**255**	P	**P**	**08 43 00.1**	**+1.8**
	comp=Z,29nm,0.9s,baz=134,slow=7.8,SNR=2.2						
NVL	**N'lazarevskaya**	**23.17**	**147**	*e*P	**P**	**08 43 01.8**	**-1.6**
NVL				*e*S	**S**	**08 47 10.5**	**-3.0**
NVL				pmax	pmax		
	comp=Z,50nm,1.1s						
NVL				MLR	MLR		
	comp=Z,2μm,15.0s						
GO10	**Punta Arenas**	**24.70**	**257**	P	**P**	**08 43 18.6**	**+0.5**
GO09	**Cerro Castillo**	**26.20**	**261**	P	**

SJMB Sao Joao De Ma 37.92 340 *e*P **P 08 45 14.7 +0.2**
CO02 Combarbal 38.43 291 P **P 08 45 19.2 +0.3**
CO02 IAMs_20 IAMs_20 08 58 49.8
comp=Z,3µm,21.0s
CO03 El Pedregal 38.55 292 P **P 08 45 20.5 +0.7**
CO03 IAmb IAmb 08 45 29.9
comp=Z,156nm,1.7s
CO01 Juntas del Tor 38.92 293 P **P 08 45 24.3 +1.2**
GO04 Tololo Observa 39.14 292 P **P 08 45 24.8 -0.1**
GO04 IAmb IAmb 08 45 34.7
comp=Z,99nm,1.2s
GO04 IAMs_20 IAMs_20 09 00 19.4
comp=Z,3µm,20.0s
AC05 El Transito 39.93 294 P **P 08 45 31.5 +0.1**
AC05 IAMs_20 IAMs_20 09 00 45.3
comp=Z,4µm,21.0s
IPMB Ipameri, GO 40.30 330 *e*P **P 08 45 35.2 +0.8**
AQDB Áquidauana 40.46 319 *e*P **P 08 45 36.1 +0.4**
AC04 Llanos de Chal 40.85 294 P **P 08 45 39.1 +0.2**
AC04 IAmb IAmb 08 45 49.7
comp=Z,144nm,1.1s
GO03 Copiap 40.91 295 P **P 08 45 40.1 +0.7**
GO03 IAmb IAmb 08 46 16.6
comp=Z,173nm,1.6s
C2SB Chapadao do Su 41.01 323 *e*P **P 08 45 41.8 +1.6**
C2SB *e*pP **pP 08 45 44.7 -1.0**
MAW Mawson 41.07 144 P **P 08 45 39.8 -0.4**
comp=Z,5.9nm,0.5s,baz=230,slow=9.0,SNR=6.7
MAW PcP **PcP 08 47 40.8 +1.4**
comp=Z,3.9nm,0.7s,baz=243,slow=4.5,SNR=1.9
MAW LR LR 09 00 08.2
comp=Z,2µm,21.9s,baz=254,slow=32
MAW Mawson 41.07 144 P **P 08 45 39.2 -1.0**
MAW pmax pmax
comp=Z,5.0nm,0.9s
MAW Mawson 41.07 144 P **P 08 45 39.2 -1.0**
SUR Sutherland 41.17 77 P **P 08 45 41.9 +0.2**
comp=Z,9.5nm,0.8s,baz=199,slow=9.6,SNR=9.5
SUR Sutherland 41.17 77 P **P 08 45 40.5 -1.2**
SUR IAmb IAmb 08 46 00.8
comp=Z,188nm,1.9s
JANB Januaria 42.11 337 *e*P **P 08 45 50.5 +1.1**
AC01 Pan de Azucar 42.28 296 P **P 08 45 51.2 +0.6**
AC01 IAmb IAmb 08 46 02.6
comp=Z,113nm,1.1s
BDFB Brasilia 42.47 331 P **P 08 45 53.0 +0.7**
comp=Z,8.7nm,0.7s,baz=146,slow=4.8,SNR=11
BDFB LR LR 09 02 10.9
comp=Z,2µm,18.2s,baz=158,slow=34
BDFB Brasilia 42.47 331 P **P 08 45 52.2 -0.1**
BDFB pmax pmax
comp=Z,110nm,1.9s
BDFB Brasilia 42.47 331 P **P 08 45 52.2 -0.1**
BDFB IAMs_20 IAMs_20 09 01 57.8
comp=Z,3µm,22.0s
GDU01 Guandu, BA 42.51 344 *e*P **P 08 45 52.1 -0.4**
GO02 Mina Guanaco 42.58 298 P **P 08 45 53.8 +0.4**
GO02 IAMs_20 IAMs_20 09 03 01.6
comp=Z,2µm,19.0s
ARAG Araguaiana, MT 43.53 326 *e*P **P 08 46 01.4 +0.7**
ARAG *e*pP **pP 08 46 05.1 -1.2**
PB15 IPOC Station P 44.15 300 P **P 08 46 05.1 -0.8**
PB15 IAMs_20 IAMs_20 09 02 27.0
comp=Z,2µm,20.0s
LVC Limon Verde 44.38 301 P **P 08 46 09.4 +1.5**
comp=Z,36nm,0.8s,baz=134,slow=1.8,SNR=24
LVC PcP **PcP 08 47 52.8 +1.2**
comp=Z,11nm,0.7s,baz=146,slow=10,SNR=2.2
LVC Limon Verde 44.38 301 P **P 08 46 09.0 +1.1**
LVC IAmb IAmb 08 46 12.4
comp=Z,57nm,1.1s
LVC PcP **PcP 08 47 53.4 +1.7**
LVC Limon Verde 44.38 301 IAMs_20 IAMs_20 09 03 41.0
comp=Z,2µm,20.0s
LVC Limon Verde 44.38 301 *e*P **P 08 46 09.4 +1.5**
LVC *e*pP **pP 08 46 12.6 -0.6**
PB06 IPOC Station P 44.62 300 P **P 08 46 08.8 -0.9**
PB06 IAMs_20 IAMs_20 09 02 40.5
comp=Z,2µm,21.0s
SALV Santo Antonio 44.66 321 *e*P **P 08 46 10.8 +1.0**
SALV *e*pP **pP 08 46 14.2 -1.1**
PB04 IPOC Station P 45.22 300 IAMs_20 IAMs_20 09 03 47.4
comp=Z,2µm,19.0s
PB07 IPOC Station P 45.60 301 P **P 08 46 17.6 +0.1**
PB01 IPOC Station P 45.98 301 P **P 08 46 21.2 +0.8**
PB01 IAmb IAmb 08 46 44.7
comp=Z,54nm,0.9s
PTLB Pontes e Lacer 46.36 317 *e*P **P 08 46 23.5 +0.3**
PTLB *e*pP **pP 08 46 27.3 -1.4**
PATCX Punta Patache 46.50 301 P **P 08 46 23.1 -1.3**
BOSA Boshof 46.51 78 P **P 08 46 23.7 -0.8**
comp=Z,14nm,0.7s,baz=203,slow=7.2,SNR=20
BOSA LR LR 09 01 54.3
comp=Z,4µm,19.3s,baz=218,slow=31
BOSA Boshof 46.51 78 P **P 08 46 24.4 -0.1**
PB08 IPOC Station P 46.59 302 P **P 08 46 26.7 +1.2**
PB08 IAmb IAmb 08 46 33.5
comp=Z,51nm,1.0s
GO01 Chusmiza 47.02 303 P **P 08 46 29.9 +0.9**
PB11 IPOC Station P 47.16 302 P **P 08 46 30.4 +0.7**
VNDA Vanda 47.16 183 P **P 08 46 30.4 +1.5**
comp=Z,19nm,0.7s,baz=187,slow=6.5,SNR=133
VNDA LR LR 09 04 27.9
comp=Z,1µm,19.1s,baz=165,slow=34
VNDA Vanda 47.16 183 P **P 08 46 30.2 +1.3**
VNDA pmax pmax
comp=Z,28nm,0.8s
VNDA Vanda 47.16 183 P **P 08 46 30.2 +1.3**
VNDA IAmb IAmb 08 46 39.9
comp=Z,28nm,0.8s
PSGCX Pisagua 47.52 302 P **P 08 46 32.8 +0.3**
PSGCX IAmb IAmb 08 48 13.2
comp=Z,109nm,1.8s
H10S2 ASCENSION HYDR 47.62 19 T T 09 38 33.2
baz=190,slow=74,SNR=52
H10S3 ASCENSION HYDR 47.62 19 T T 09 38 36.5
baz=30,slow=74,SNR=93
MNMC Minye Minye 47.67 303 P **P 08 46 35.0 +1.1**
PB16 IPOC Station P 48.31 303 P **P 08 46 39.6 +0.5**
PB16 IAMs_20 IAMs_20 09 04 53.5
comp=Z,2µm,22.0s
PB12 IPOC Station P 48.46 302 P **P 08 46 38.0 -1.8**
H10N1 ASCENSION HYDR 48.73 19 T T 09 40 00.2
baz=190,slow=75,SNR=46
H10N3 ASCENSION HYDR 48.73 19 T T 09 40 01.9
baz=190,slow=75,SNR=80
H10N2 ASCENSION HYDR 48.75 19 T T 09 40 01.8
baz=190,slow=75,SNR=71
VILB Vilhena 49.04 317 *e*P **P 08 46 44.5 +0.4**
CLDB Colider 49.36 323 *e*pP pP 08 46 50.8 -1.3
LPAZ La Paz 49.44 306 P **P 08 46 48.7 +0.8**
comp=Z,26nm,0.5s,baz=124,slow=5.4,SNR=77
LPAZ LR LR 09 06 08.1
comp=Z,770nm,20.4s,baz=156,slow=34
LPAZ La Paz 49.44 306 *e*P **P 08 46 48.4 +0.5**
LPAZ La Paz 49.44 306 P **P 08 46 48.8 +1.0**
LPAZ IAmb IAmb 08 46 58.6
comp=Z,53nm,0.8s
LPAZ La Paz 49.44 306 *e*P **P 08 46 48.9 +1.0**
LPAZ *e*S **S 08 53 56.2 +2.0**
LBTB Lobatse 49.51 75 P **P 08 46 47.9 +0.1**
comp=Z,13nm,0.7s,baz=223,slow=9.0,SNR=15
LBTB Lobatse 49.51 75 P **P 08 46 47.9 +0.1**
LBTB pmax pmax
comp=Z,60nm,1.3s
LBTB Lobatse 49.51 75 P **P 08 46 47.9 +0.1**
LBTB IAmb IAmb 08 47 10.1
comp=Z,60nm,1.2s
TSUM Tsumeb 50.00 63 P **P 08 46 51.0 -0.6**
comp=Z,5.8nm,0.8s,baz=191,slow=5.2,SNR=13
TSUM Tsumeb 50.00 63 P **P 08 46 49.5 -2.0**
TSUM IAmb IAmb 08 46 56.5
comp=Z,94nm,1.9s
PRPB Parauapebas 52.01 333 *e*P **P 08 47 07.8 +1.2**
NPGB Novo Progresso 52.80 326 *e*P **P 08 47 12.9 +0.5**
SAML Samuel 53.86 316 P **P 08 47 20.1 -0.1**
SAML pmax pmax
comp=Z,29nm,0.9s
SAML Samuel 53.86 316 P **P 08 47 20.1 -0.1**
SAML Samuel 53.86 316 IAMs_20 IAMs_20 09 08 00.7
comp=Z,2µm,22.0s
ROSB Rosrio 53.89 340 *e*P **P 08 47 20.4 +0.1**
ROSB *e*S **S 08 54 54.8 +0.6**
CASY Casey 54.73 161 P **P 08 47 26.5 +0.6**
CASY IAmb IAmb 08 47 32.9
comp=Z,33nm,0.8s
NNA Nana 57.33 300 P **P 08 47 44.6 -0.6**
NNA pmax pmax
comp=Z,72nm,1.6s
NNA Nana 57.33 300 P **P 08 47 44.6 -0.6**
NNA IAmb IAmb 08 47 47.3
comp=Z,72nm,1.6s
NNA Nana 57.33 300 IAMs_20 IAMs_20 09 09 16.3
comp=Z,1µm,21.0s
MALB Monte Alegre 57.37 329 *e*P **P 08 47 46.7 +1.4**
MALB *e*pP **pP 08 47 49.3 -1.7**
MACA Manacapuru-AM 58.24 321 *e*P **P 08 47 51.3 -0.1**
LSZ Lusaka 58.81 70 P **P 08 47 54.1 -1.6**
LSZ pmax pmax
comp=Z,44nm,1.5s
LSZ Lusaka 58.81 70 P **P 08 47 54.1 -1.6**
LSZ IAmb IAmb 08 48 09.5
comp=Z,44nm,1.4s
PTGA Pitinga 60.25 323 P **P 08 48 05.7 +0.3**
PTGA IAmb IAmb 08 48 11.2
comp=Z,65nm,1.9s
PTGA IAMs_20 IAMs_20 09 14 34.3
comp=Z,2µm,21.0s
PTGA Pitinga 60.25 323 *e*P **P 08 48 06.4 +1.0**
LIC Lamto 64.43 26 *e*P **P 08 48 33.8 +0.5**
comp=Z,109nm,1.2s
KIC Kosan Boka 64.63 26 *e*P **P 08 48 33.1 -1.5**
comp=Z,38nm,0.9s
TIC Toumodi 64.83 26 *e*P **P 08 48 35.1 -0.9**
DBIC Dimbokro 64.90 26 P **P 08 48 35.8 -0.6**
comp=Z,10nm,0.6s,baz=172,slow=7.5,SNR=14
DBIC LR LR 09 09 49.4
comp=Z,1µm,21.9s,baz=184,slow=30
DBIC Dimbokro 64.90 26 P **P 08 48 36.0 -0.4**
DBIC IAmb IAmb 08 48 37.2
comp=Z,35nm,1.3s
ABPO Ambohimpanom 66.44 90 P **P 08 48 45.5 -1.1**
ABPO pmax pmax
comp=Z,24nm,1.0s
ABPO Ambohimpanom 66.44 90 P **P 08 48 45.5 -1.1**
ABPO IAmb IAmb 08 48 50.5
comp=Z,24nm,0.9s
ABPO Ambohimpanom 66.44 90 IAMs_20 IAMs_20 09 14 33.9
comp=Z,2µm,18.0s
PTLC Puerto Leguiza 66.99 308 *e*P **P 08 48 49.5 -0.4**
MACC Macarena, Meta 68.32 310 *e*P **P 08 48 58.5 +0.1**
CUSE Cuicocha Este 68.76 305 *e*P P 08 49 07.4 +5.9
GCUF Volcan Galeras 69.08 306 *e*P **P 08 49 04.2 +0.6**
GARC Garzon, Huila 69.09 308 *e*P **P 08 49 03.0 -0.4**
CRUC La Cruz 69.20 307 *e*P **P 08 48 59.9 -4.2**
SOTA Rioblanco 69.54 307 *e*P **P 08 49 08.7 +2.2**
PCON Cinco Dias 69.62 308 *e*P **P 08 49 08.9 +1.9**
BBAC Balboa, Cauca 69.73 307 *e*P **P 08 49 07.2 -0.1**
VILC Villavicencio, 70.02 311 *e*P **P 08 49 08.5 -0.4**
PRAC Prado 70.18 310 *e*P **P 08 49 10.0 +0.2**
CHIC Chingaza 70.50 311 *e*P **P 08 49 12.1 -0.1**
ORTC Ortega, Tolima 70.51 309 *e*P **P 08 49 11.5 -0.3**
ROSC El Rosal 70.94 311 P **P 08 49 16.3 +1.4**
comp=Z,9.9nm,0.6s,baz=191,slow=7.3,SNR=6.1
ROSC LR LR 09 22 30.2
comp=Z,1µm,18.9s,baz=178,slow=38
ROSC El Rosal 70.94 311 P **P 08 49 14.8 0.0**
ROSC IAmb IAmb 08 49 50.3
comp=Z,78nm,1.6s
YOTC Yotoco, Valle 71.06 308 *e*P **P 08 49 13.2 -2.1**
RUSC La Rusia 71.36 312 *e*P **P 08 49 17.6 +0.1**
RUSC La Rusia 71.36 312 P **P 08 49 17.7 +0.2**
RREF El Recreo 71.44 310 *e*P **P 08 49 18.4 +0.2**
SPBC San Pablo de B 71.56 311 *e*P **P 08 49 16.4 -1.8**
GUY2C Guyana, Caldas 71.74 310 *e*P **P 08 49 19.4 -0.4**
NORC Norcasia 71.83 311 *e*P **P 08 49 18.8 -1.0**
PLMC San Jos del P 71.86 309 *e*P **P 08 49 19.8 -0.2**
MBAR Mbarara 72.50 64 *e*P **P 08 49 26.2 +2.2**
MBAR pmax pmax
comp=Z,32nm,1.7s
PAMC Pamplona, Colo 72.50 313 *e*P **P 08 49 23.3 -1.0**
PTBC PUERTO BERRIO, 72.52 311 *e*P **P 08 49 21.6 -2.3**
CBOC Ciudad Bolivar 72.59 310 *e*P **P 08 49 23.9 -0.6**
HELC Santa Helena 72.67 310 *e*P **P 08 49 23.1 -2.1**
GRGR Grenville 72.85 326 IAMs_20 IAMs_20 09 21 53.1
comp=Z,1µm,20.0s
TOA0 Torodi Ar. Sit 72.87 31 P **P 08 49 25.7 -0.2**
TOA0 IAmb IAmb 08 49 38.9
comp=Z,32nm,0.8s
TORD Torodi Ar. Bea 72.87 31 P **P 08 49 25.5 -0.4**
comp=Z,17nm,0.5s,baz=201,slow=6.2,SNR=182
TORD LR LR 09 14 30.4
comp=Z,3µm,21.6s,baz=200,slow=30
SDV Santo Domingo 73.07 316 *e*P **P 08 49 27.4 +0.1**
SDV Santo Domingo 73.07 316 P **P 08 49 28.0 +0.7**
SDV IAmb IAmb 08 49 31.2
comp=Z,48nm,1.0s
SDV Santo Domingo 73.07 316 *e*P **P 08 49 28.1 +0.7**
ZARC Zaragoza, Cauc 73.55 311 *e*P **P 08 49 27.5 -2.5**
UREC San Jos de Ur 74.07 311 *e*P **P 08 49 31.4 -1.6**
SMLC San Martn de 74.39 313 *e*P **P 08 49 33.2 -1.7**
SJCC San Jacinto, C 75.84 312 *e*P **P 08 49 41.0 -2.3**
MLZ Mavora Lakes 78.61 192 P **P 08 49 58.2 -0.4**
SMRT St. Maarten 78.86 327 P **P 08 50 00.4 +0.4**
SMRT IAmb IAmb 08 50 19.4
comp=Z,48nm,1.1s
MTP Monte Pirata 79.71 324 P **P 08 50 04.0 -0.6**
MTP IAmb IAmb 08 50 14.8
comp=Z,85nm,1.7s
STVI Saint Thomas 79.75 325 P **P 08 50 04.5 -0.4**
STVI IAmb IAmb 08 50 15.1
comp=Z,62nm,1.2s
CUPR Culebra, Puert 79.81 325 P **P 08 50 05.1 -0.1**
CUPR IAmb IAmb 08 50 15.6
comp=Z,68nm,1.2s
CBYP Canovanas 79.97 324 P **P 08 50 06.7 +0.5**
CBYP IAmb IAmb 08 50 16.2
comp=Z,54nm,1.2s
GCPR Guaynabo City 80.08 324 P **P 08 50 05.3 -1.4**
GCPR IAmb IAmb 08 50 16.4
comp=Z,82nm,1.4s
JTS Las Juntas de 80.58 304 *ce*P **P 08 50 10.3 +0.8**
JTS pmax pmax
comp=Z,81nm,1.9s
JTS Las Juntas de 80.58 304 P **P 08 50 09.5 0.0**
LTZ Lake Taylor 80.59 195 P **P 08 50 09.2 -0.1**
LTZ IAmb IAmb 08 50 22.2
comp=Z,134nm,1.8s
KHZ Kahutara 80.76 196 P **P 08 50 09.6 -0.6**
KHZ IAmb IAmb 08 50 24.9
comp=Z,68nm,1.4s
BSWZ Blackbirch Sta 81.39 197 P **P 08 50 14.1 +0.5**
THZ Tophouse 81.49 196 P **P 08 50 13.6 -0.6**
SNZO South Karori 81.64 197 P **P 08 50 14.8 0.0**
SNZO South Karori 81.64 197 IAMs_20 IAMs_20 09 19 46.4
comp=Z,1µm,22.0s
TUWZ Tuamarina 81.65 197 P **P 08 50 14.9 0.0**
DR12 Loma Pena Alta 81.67 321 P **P 08 50 14.9 -0.3**
NNZ Nelson 81.95 196 P **P 08 50 16.9 +0.4**
TAU Tasmania Unive 81.97 177 P **P 08 50 15.3 -1.3**
TAU pmax pmax
comp=Z,93nm,1.3s
TAU Tasmania Unive 81.97 177 P **P 08 50 15.3 -1.3**
ACON Acoyapa 82.14 304 P **P 08 50 18.1 +0.4**
QRZ Quartz Range 82.47 196 P **P 08 50 18.1 -1.2**
SDDR Presa de Saban 82.54 320 IAMs_20 IAMs_20 09 25 06.9
comp=Z,1µm,21.0s
MSEY Mahe Island 82.72 88 IAMs_20 IAMs_20 09 21 06.2
comp=Z,1µm,21.0s
SC01 Santiago de lo 82.74 320 IAMs_20 IAMs_20 09 23 21.3
comp=Z,1µm,22.0s
MATN Matagalpa 83.34 304 P **P 08 50 24.7 +0.6**
MATN IAmb IAmb 08 50 40.6
comp=Z,51nm,1.2s
BKZ Black Stump Fm 83.40 199 P **P 08 50 23.3 -0.9**
BKZ IAmb IAmb 08 52 34.8
comp=Z,54nm,1.5s
MTDJ Mount Denham 84.30 314 IAMs_20 IAMs_20 09 26 46.7
comp=Z,1µm,21.0s
GTBY Guantanamo Bay 84.86 317 IAMs_20 IAMs_20 09 26 23.4
comp=Z,1µm,22.0s
TBI Tubuai 86.92 232 *e*LR LR 09 18 13.0
comp=Z,2µm,25.2s,baz=156
MUN Mundaring 87.83 151 P **P 08 50 46.2 -0.1**
baz=88,SNR=4.2
ATD Arta Tunnel 89.07 68 LR LR 09 27 09.2
comp=Z,2µm,21.6s,baz=192,slow=33
DGAR Diego Garcia 90.08 103 *e*P **P 08 50 57.6 +0.5**
DGAR pmax pmax
comp=Z,88nm,1.1s
TEIG Tepich 90.77 306 P **P 08 51 00.7 +0.7**
HTT Hallett 90.84 169 P **P 08 51 00.8 +0.4**
baz=91,SNR=5.7
FORT Forrest 91.81 160 P **P 08 51 05.2 +0.3**
baz=92,SNR=21
FORT Forrest 91.81 160 P **P 08 51 04.9 0.0**
FORT IAMs_20 IAMs_20 09 27 46.5
comp=Z,872nm,18.0s
PPT2 Papeete2 91.97 235 *e*LR LR 09 20 28.1
comp=Z,1µm,25.0s
PPT Papeete 91.99 235 LR LR 09 22 23.2
comp=Z,295nm,20.9s,baz=131,slow=29
STKA Stephens Creek 92.63 172 P **P 08 51 08.3 -0.3**
comp=Z,2.3nm,0.6s,baz=212,slow=6.9,SNR=5.5
STKA LR LR 09 32 12.2
comp=Z,799nm,18.4s,baz=182,slow=35
STKA Stephens Creek 92.63 172 P **P 08 51 08.5 -0.2**
TLIG Tlapa 93.53 296 P **P 08 51 13.2 +0.2**
TLIG IAmb IAmb 08 51 24.2
comp=Z,25nm,1.1s
MEEK Meekatharra 93.54 151 P **P 08 51 12.8 -0.2**
baz=93,SNR=3.9
SOCY Socotra 95.67 77 IAMs_20 IAMs_20 09 29 52.0
comp=Z,955nm,20.0s
KEST Kesra 96.38 30 LR LR 09 29 17.7
comp=Z,2µm,21.7s,baz=164,slow=32
ESDC Sonseca Array 97.01 19 P **P 08 51 26.7 -1.5**
comp=Z,0.5nm,0.6s,baz=110,slow=8.9,SNR=3.5
ESDC LR LR 09 29 28.7
comp=Z,2µm,21.9s,baz=205,slow=32
WRKA Warakurna 97.43 159 P Pdif 08 51 31.1 +0.3
baz=97,SNR=13
257A Skidaway Islan 97.97 317 IAMs_20 IAMs_20 09 34 08.7
comp=Z,898nm,22.0s
255A Hazlehurst 98.50 316 IAMs_20 IAMs_20 09 38 19.7
comp=Z,663nm,18.0s
451A Vernon 98.68 313 IAMs_20 IAMs_20 09 40 44.7
comp=Z,645nm,18.0s
Y59A Loris 98.95 320 IAMs_20 IAMs_20 09 31 37.5
comp=Z,550nm,22.0s
MBWA Marble Bar 99.05 150 IAMs_20 IAMs_20 09 33 49.2
comp=Z,643nm,18.0s
154A Montrose 99.35 316 IAMs_20 IAMs_20 09 34 46.3
comp=Z,852nm,22.0s
ASAR Alice Springs 99.79 164 P **Pdif 08 51 40.2 -1.2**
comp=Z,2.7nm,0.9s,baz=183,slow=4.1,SNR=22
ASAR PP **PP 08 55 42.7 -2.2**
comp=Z,5.1nm,1.0s,baz=185,slow=7.9,SNR=11
ASAR PKKPbc **PKKPbc 09 08 00.3 +1.2**
comp=Z,0.9nm,0.8s,baz=14,slow=2.5,SNR=9.2
ASAR LR LR 09 32 57.1
comp=Z,1µm,21.6s,baz=190,slow=33
AS31 Alice Springs 99.80 164 **Pdif 08 51 41.6 +0.3**
250A Grady 100.08 313 IAMs_20 IAMs_20 09 41 00.8
comp=Z,617nm,18.0s
GOGA Godfrey 100.20 316 IAMs_20 IAMs_20 09 35 32.7
comp=Z,629nm,22.0s
HODGE Hodges 100.44 317 IAMs_20 IAMs_20 09 35 31.2
comp=Z,755nm,22.0s
RAYN Ar Rayn 100.44 64 IAMs_20 IAMs_20 09 38 03.4
comp=Z,801nm,19.0s
CEL Celeste 100.70 34 IAMs_20 IAMs_20 09 33 05.7
comp=Z,796nm,20.0s
PAULI Pauline 100.79 318 IAMs_20 IAMs_20 09 37 01.4
comp=Z,468nm,19.0s
Y52A Lilburn 100.83 316 IAMs_20 IAMs_20 09 36 04.5
comp=Z,642nm,22.0s
KMSC Kings Mountain 100.89 318 IAMs_20 IAMs_20 09 35 14.1
comp=Z,610nm,22.0s
U56A King 101.60 320 IAMs_20 IAMs_20 09 36 37.8
comp=Z,603nm,22.0s
X51A Calhoun 101.76 315 IAMs_20 IAMs_20 09 39 12.1
comp=Z,543nm,20.0s
DZM Mont Dzumac 101.78 194 *e*LR LR 09 25 09.7
comp=Z,2µm,24.2s
TIP Timpagrande 101.81 34 IAMs_20 IAMs_20 09 36 32.2
comp=Z,725nm,20.0s
146A Union 101.83 311 IAMs_20 IAMs_20 09 41 34.1
comp=Z,645nm,19.0s
W52A Murphy 101.85 316 IAMs_20 IAMs_20 09 35 41.5
comp=Z,708nm,22.0s
Z47A Carrollton 101.90 312 IAMs_20 IAMs_20 09 38 20.8
comp=Z,549nm,19.0s
V53A Saluda 101.92 317 IAMs_20 IAMs_20 09 36 15.4
comp=Z,707nm,22.0s
TKL Tuckaleechee C 102.29 317 IAMs_20 IAMs_20 09 37 59.0
comp=Z,552nm,20.0s
KARP Karpathos 102.29 44 IAMs_20 IAMs_20 09 36 02.7
comp=Z,770nm,21.0s
U54A Nelsons Funny 102.30 319 IAMs_20 IAMs_20 09 37 15.2
comp=Z,523nm,22.0s
SANT Santorini 102.35 42 IAMs_20 IAMs_20 09 40 57.5
comp=Z,436nm,18.0s
V52A Sevierville 102.38 317 IAMs_20 IAMs_20 09 37 16.4
comp=Z,533nm,21.0s
BLA Blacksburg 102.38 320 IAMs_20 IAMs_20 09 36 24.5
comp=Z,540nm,22.0s
CPCT Cooper Cave 102.40 316 IAMs_20 IAMs_20 09 35 59.0
comp=Z,734nm,21.0s
W50A Signal Mountai 102.50 315 IAMs_20 IAMs_20 09 42 44.6
comp=Z,434nm,18.0s
V51A Loudon 102.64 316 IAMs_20 IAMs_20 09 36 15.4
comp=Z,824nm,22.0s
SWET Sewanee 102.76 315 IAMs_20 IAMs_20 09 37 42.6
comp=Z,888nm,22.0s
PAOL Paolisi 102.82 32 IAMs_20 IAMs_20 09 34 11.9
comp=Z,753nm,20.0s
TZTN Tazewell 102.97 317 IAMs_20 IAMs_20 09 36 58.2
comp=Z,693nm,22.0s
M65A Busby, Falmout 103.07 329 IAMs_20 IAMs_20 09 36 49.4
comp=Z,648nm,20.0s
Y45A Yeager Farm, C 103.09 312 IAMs_20 IAMs_20 09 36 55.5
comp=Z,860nm,22.0s
BRNJ Basking Ridge 103.48 326 IAMs_20 IAMs_20 09 39 31.2
comp=Z,519nm,18.0s
WRA Warramunga Arr 103.51 163 Pdiff **Pdif 08 51 58.2 +0.3**
comp=Z,0.4nm,0.5s,baz=195,slow=4.1,SNR=5.9
WRA PP **PP 08 56 10.5 -2.4**
comp=Z,1.1nm,0.8s,baz=189,slow=6.0,SNR=4.0
WRA PKKPbc **PKKPbc 09 07 50.5 +2.1**
comp=Z,1.3nm,1.0s,baz=345,slow=3.1,SNR=8.1
FITZ Fitzroy Crossi 103.53 155 IAMs_20 IAMs_20 09 35 50.9
comp=Z,636nm,18.0s
V48A Smith Brothers 103.57 315 IAMs_20 IAMs_20 09 38 31.1
comp=Z,824nm,22.0s
OXF Oxford 103.59 312 IAMs_20 IAMs_20 09 39 23.7
comp=Z,597nm,20.0s
BRYW Bryant College 103.66 328 IAMs_20 IAMs_20 09 38 46.0
comp=Z,635nm,19.0s
CLTN Cedars of Leba 103.68 315 IAMs_20 IAMs_20 09 37 34.9
comp=Z,846nm,22.0s
U49A Red Boiling Sp 103.82 316 IAMs_20 IAMs_20 09 36 56.7
comp=Z,501nm,21.0s
ODNJ Ogdensburg 103.85 326 IAMs_20 IAMs_20 09 37 45.7
comp=Z,492nm,20.0s
T50A Nancy 103.89 317 IAMs_20 IAMs_20 09 42 44.5
comp=Z,472nm,19.0s
W45A Hickory Valley 104.05 313 IAMs_20 IAMs_20 09 43 32.8
comp=Z,593nm,19.0s
N59A State Game Lan 104.08 325 IAMs_20 IAMs_20 09 39 16.2
comp=Z,527nm,19.0s
CCAR Cane Creek 104.10 310 IAMs_20 IAMs_20 09 37 42.2
comp=Z,632nm,21.0s
HRV Adam Dziewonsk 104.21 329 IAMs_20 IAMs_20 09 39 09.4
comp=Z,655nm,20.0s
QUA2 Belchertown 104.24 328 IAMs_20 IAMs_20 09 39 32.3
comp=Z,607nm,20.0s
GBN Guysborough 104.28 337 IAMs_20 IAMs_20 09 37 38.0
comp=Z,668nm,19.0s
N58A Sunbury 104.32 324 IAMs_20 IAMs_20 09 42 38.6
comp=Z,503nm,19.0s
MET Memphis--Engin 104.33 312 IAMs_20 IAMs_20 09 39 55.4
comp=Z,595nm,19.0s
SSPA Standing Stone 104.53 323 IAMs_20 IAMs_20 09 38 21.3
comp=Z,478nm,20.0s
K62A Royalston 104.55 328 IAMs_20 IAMs_20 09 39 30.6
comp=Z,672nm,21.0s
P53A Whipple 104.75 320 IAMs_20 IAMs_20 09 37 09.1
comp=Z,547nm,22.0s
T47A Sharon Grove 104.77 315 IAMs_20 IAMs_20 09 39 38.7
comp=Z,512nm,20.0s
TIR Tirane 104.78 36 IAMs_20 IAMs_20 09 38 08.8
comp=Z,458nm,20.0s
LPAR Lepanto 104.90 312 IAMs_20 IAMs_20 09 38 42.3
comp=Z,547nm,21.0s
M57A Sunshine Farm, 104.91 324 IAMs_20 IAMs_20 09 42 46.1
comp=Z,591nm,19.0s

HPIG 104.93 296 IAMs_20 IAMs_20 09 39 27.6
comp=Z,584nm,18.0s
LNXT Lenox 104.98 313 IAMs_20 IAMs_20 09 43 50.5
comp=Z,749nm,18.0s
GLAT Glass 105.04 313 IAMs_20 IAMs_20 09 39 43.1
comp=Z,661nm,20.0s
GNAR Gosnell 105.09 312 IAMs_20 IAMs_20 09 44 13.3
comp=Z,760nm,19.0s
R49A Shelbyville 105.13 317 IAMs_20 IAMs_20 09 38 04.2
comp=Z,707nm,21.0s
HICK Hickman 105.25 313 IAMs_20 IAMs_20 09 39 25.6
comp=Z,839nm,22.0s
GGN Saint George 105.30 333 IAMs_20 IAMs_20 09 38 47.1
comp=Z,453nm,20.0s
BINY Binghamton 105.30 325 IAMs_20 IAMs_20 09 38 41.6
comp=Z,445nm,19.0s
I63A Otisfield 105.34 330 IAMs_20 IAMs_20 09 37 12.3
comp=Z,470nm,20.0s
I62A Tamworth 105.39 329 IAMs_20 IAMs_20 09 38 50.8
comp=Z,538nm,21.0s
LMN Caledonia Moun 105.47 335 IAMs_20 IAMs_20 09 37 48.7
comp=Z,524nm,19.0s
WHAR Wooly Hollow 105.49 310 IAMs_20 IAMs_20 09 44 48.9
comp=Z,501nm,18.0s
WCI Wyandotte Cave 105.51 316 IAMs_20 IAMs_20 09 43 45.4
comp=Z,503nm,19.0s
HNH Hanover 105.52 329 IAMs_20 IAMs_20 09 36 41.1
comp=Z,582nm,21.0s
PDG Podgorica 105.56 35 IAMs_20 IAMs_20 09 35 54.3
comp=Z,540nm,22.0s
G65A Princeton 105.57 332 IAMs_20 IAMs_20 09 40 36.3
comp=Z,455nm,19.0s
ISP Isparta 105.60 45 IAMs_20 IAMs_20 09 38 59.6
comp=Z,540nm,22.0s
ACCN Adirondack Com 105.64 327 IAMs_20 IAMs_20 09 39 25.5
comp=Z,525nm,20.0s
K58A Earlville 105.70 326 IAMs_20 IAMs_20 09 38 42.1
comp=Z,462nm,20.0s
L56A Greenwood 105.77 324 IAMs_20 IAMs_20 09 43 02.8
comp=Z,622nm,18.0s
USIN University of 105.83 315 IAMs_20 IAMs_20 09 44 54.4
comp=Z,459nm,18.0s
LBNH Lisbon 105.90 329 IAMs_20 IAMs_20 09 38 02.2
comp=Z,476nm,20.0s
FCAR Ozark Folk Cen 105.92 311 IAMs_20 IAMs_20 09 41 10.5
comp=Z,672nm,19.0s
W39A Magazine 106.06 309 IAMs_20 IAMs_20 09 41 34.2
comp=Z,411nm,18.0s
VT1 Waterbury 106.23 329 IAMs_20 IAMs_20 09 40 10.2
comp=Z,550nm,20.0s
P48A Milroy 106.24 317 IAMs_20 IAMs_20 09 37 57.6
comp=Z,503nm,22.0s
NCB Newcomb 106.35 327 IAMs_20 IAMs_20 09 38 20.1
comp=Z,473nm,20.0s
WVNY West Valley, N 106.36 324 IAMs_20 IAMs_20 09 40 27.5
comp=Z,681nm,21.0s
G62A West of Eustis 106.39 330 IAMs_20 IAMs_20 09 32 39.2
comp=Z,648nm,22.0s
J57A Williamstown 106.40 326 IAMs_20 IAMs_20 09 39 02.5
comp=Z,480nm,21.0s
TUE Stuetta 106.40 26 IAMs_20 IAMs_20 09 37 46.8
comp=Z,668nm,19.0s
MMNY Mt. Morris Dam 106.41 324 IAMs_20 IAMs_20 09 40 05.9
comp=Z,506nm,20.0s
O49A Covington 106.45 319 IAMs_20 IAMs_20 09 39 51.3
comp=Z,576nm,22.0s
U40A Yellville 106.63 311 IAMs_20 IAMs_20 09 41 34.2
comp=Z,571nm,20.0s
OLIL Olney 106.67 315 IAMs_20 IAMs_20 09 38 35.0
comp=Z,686nm,22.0s
FUORN Ofenpass-Fuorn 106.77 27 IAMs_20 IAMs_20 09 35 14.6
comp=Z,648nm,22.0s
J55A Hilton 106.86 325 IAMs_20 IAMs_20 09 40 50.7
comp=Z,439nm,20.0s
FRNY Flat Rock 106.94 328 IAMs_20 IAMs_20 09 40 42.6
comp=Z,486nm,20.0s
MEDO Medina 106.98 324 IAMs_20 IAMs_20 09 40 23.0
comp=Z,700nm,21.0s
N49A Columbus Grove 107.04 319 IAMs_20 IAMs_20 09 40 09.7
comp=Z,536nm,22.0s
LONY Lake Ozonia 107.04 327 IAMs_20 IAMs_20 09 38 39.5
comp=Z,513nm,21.0s
PQI Presque Isle 107.05 333 IAMs_20 IAMs_20 09 41 22.5
comp=Z,454nm,19.0s
MGMO Mountain Grove 107.05 311 IAMs_20 IAMs_20 09 39 59.4
comp=Z,779nm,22.0s
VTS Vitosha 107.06 37 IAMs_20 IAMs_20 09 36 06.9
comp=Z,473nm,21.0s
P46A Rosedale 107.07 316 IAMs_20 IAMs_20 09 39 38.6
comp=Z,778nm,22.0s
DRLN Deer Lake 107.11 341 IAMs_20 IAMs_20 09 32 11.8
comp=Z,488nm,21.0s
BATG Bathurst New B 107.11 334 IAMs_20 IAMs_20 09 40 50.1
comp=Z,516nm,20.0s
J54A Appleton 107.14 324 IAMs_20 IAMs_20 09 40 28.2
comp=Z,693nm,21.0s
Q44A Meyer Farm, Va 107.18 315 IAMs_20 IAMs_20 09 40 42.7
comp=Z,749nm,22.0s
PECO Prince Edward 107.19 325 IAMs_20 IAMs_20 09 36 13.4
comp=Z,460nm,21.0s
UOSS Minazif 107.23 71 IAMs_20 IAMs_20 09 39 17.3
comp=Z,777nm,20.0s
DIVS Divibare 107.29 34 IAMs_20 IAMs_20 09 39 42.2
comp=Z,440nm,19.0s
CCM Cathedral Cave 107.38 313 IAMs_20 IAMs_20 09 40 55.0
comp=Z,809nm,21.0s
CISI Cisompet, Garu 107.51 134 IAMs_20 IAMs_20 09 30 51.0
comp=Z,574nm,21.0s
TUL1 Leonard 107.55 308 IAMs_20 IAMs_20 09 42 29.7
comp=Z,404nm,18.0s
N47A Urbana 107.57 318 IAMs_20 IAMs_20 09 45 29.8
comp=Z,395nm,18.0s
SFIN Lafayette 107.68 317 IAMs_20 IAMs_20 09 45 41.8
comp=Z,534nm,20.0s
M48A Edgerton 107.72 319 IAMs_20 IAMs_20 09 40 39.9
comp=Z,530nm,21.0s
DELO Deloro Mine 107.91 325 IAMs_20 IAMs_20 09 36 44.5
comp=Z,521nm,21.0s
S39A Bolivar 107.96 311 IAMs_20 IAMs_20 09 42 20.3
comp=Z,541nm,21.0s
DBJI Dramaga 107.98 133 P PKiKP 08 56 26.0 +1.2
R40A Maddies Statio 108.01 312 IAMs_20 IAMs_20 09 46 11.7
comp=Z,698nm,19.0s
P43A Skaggs, Pawnee 108.01 315 IAMs_20 IAMs_20 09 40 45.7
comp=Z,772nm,22.0s
O44A Mansfield 108.03 316 IAMs_20 IAMs_20 09 40 12.0
comp=Z,543nm,19.0s
K50A Casco 108.08 321 IAMs_20 IAMs_20 09 39 52.2
comp=Z,532nm,20.0s
PLVO Plevna 108.20 326 IAMs_20 IAMs_20 09 38 07.2
comp=Z,470nm,20.0s
ANTO Ankara 108.26 45 IAMs_20 IAMs_20 09 40 48.8
comp=Z,604nm,21.0s
SADO Sadowa 108.63 324 IAMs_20 IAMs_20 09 40 47.7
comp=Z,479nm,20.0s
HDIL Hopedale 108.70 315 IAMs_20 IAMs_20 09 39 06.8
comp=Z,494nm,22.0s
MDSI Maura Dua 108.72 129 P Pdif 08 52 28.3 +7.2
M44A Midewin, Midew 108.91 317 IAMs_20 IAMs_20 09 41 20.4
comp=Z,507nm,20.0s
J48A Bridge Port 108.95 321 IAMs_20 IAMs_20 09 42 20.4
comp=Z,532nm,20.0s
EPT El Paso 109.28 298 IAMs_20 IAMs_20 09 37 59.6
comp=Z,530nm,20.0s
J47A Sunmer 109.28 320 IAMs_20 IAMs_20 09 41 42.0
comp=Z,459nm,21.0s
L44A Lake County Fo 109.54 317 IAMs_20 IAMs_20 09 46 22.9
comp=Z,462nm,18.0s
ILGA Ilgaz 109.64 45 IAMs_20 IAMs_20 09 41 14.3
comp=Z,487nm,21.0s
P38A Dawn 109.66 312 IAMs_20 IAMs_20 09 47 03.5
comp=Z,566nm,19.0s
I47A Gladwin 109.84 320 IAMs_20 IAMs_20 09 43 06.8
comp=Z,543nm,21.0s
GRA1 Grafenberg Arr 109.86 26 IAMs_20 IAMs_20 09 36 51.3
comp=Z,598nm,22.0s
KHC Kasperske Hory 109.95 28 eSP SP 09 06 28.0 +1.4
KHC AMS AMS 09 35 50.0
comp=Z,2μm,21.8s
KHC Kasperske Hory 109.95 28 IAMs_20 IAMs_20 09 36 33.8
comp=Z,656nm,22.0s
L42A Oliver, Polo 110.08 316 IAMs_20 IAMs_20 09 46 27.2
comp=Z,472nm,19.0s
K43A Burlington 110.15 317 IAMs_20 IAMs_20 09 47 09.1
comp=Z,419nm,20.0s
D53A Lac Vacive, Po 110.22 327 IAMs_20 IAMs_20 09 40 58.5
comp=Z,587nm,21.0s
319A Douglas 110.37 296 IAMs_20 IAMs_20 09 40 22.6
comp=Z,429nm,20.0s
I45A Fountain 110.49 319 IAMs_20 IAMs_20 09 42 25.0
comp=Z,491nm,21.0s
MLR Muntele Rosu 110.51 38 IAMs_20 IAMs_20 09 42 38.5
comp=Z,670nm,20.0s
121A Cookes Peak, D 110.53 298 IAMs_20 IAMs_20 09 40 26.8
comp=Z,551nm,20.0s
KSU1 Kansas State U 110.56 310 IAMs_20 IAMs_20 09 42 30.2
comp=Z,577nm,21.0s
GLMI Grayling 110.58 321 IAMs_20 IAMs_20 09 43 40.2
comp=Z,508nm,22.0s
TREC Trest 110.62 29 AMS AMS 09 37 20.0
comp=Z,1μm,21.5s
NKC Novy Kostel 110.67 27 AMS AMS 09 35 40.0
comp=Z,900nm,23.4s
PSZ Piszkesteto 110.67 32 IAMs_20 IAMs_20 09 38 37.6
comp=Z,472nm,21.0s
L40A Anamosa 110.75 315 IAMs_20 IAMs_20 09 42 32.1
comp=Z,507nm,20.0s
PRU Pruhonice 111.00 28 eSP SP 09 06 49.4 +13
PRU AMS AMS 09 37 10.0
comp=Z,1μm,20.1s
PRA Prague 111.04 28 AMS AMS 09 37 10.0
comp=Z,600nm,20.9s
VLDQ Val d'Or 111.06 327 IAMs_20 IAMs_20 09 41 16.0
comp=Z,634nm,20.0s
JFWS Jewell Farm 111.08 316 IAMs_20 IAMs_20 09 42 37.7
comp=Z,635nm,21.0s
G45A Suttons Bay 111.14 320 IAMs_20 IAMs_20 09 45 56.1
comp=Z,432nm,19.0s
Y22D IRIS PASSCAL I 111.33 299 IAMs_20 IAMs_20 09 41 24.9
comp=Z,665nm,18.0s
I42A Draeger Farm, 111.38 317 IAMs_20 IAMs_20 09 47 45.6
comp=Z,522nm,18.0s
PVCC Panska Ves 111.49 28 AMS AMS 09 37 10.0
comp=Z,900nm,23.9s
N35A Tabor 111.59 311 IAMs_20 IAMs_20 09 48 16.4
comp=Z,506nm,19.0s
MORC Moravsky Berou 111.64 30 IAMs_20 IAMs_20 09 40 56.2
comp=Z,722nm,19.0s
E46A Sault Ste Mari 111.79 322 IAMs_20 IAMs_20 09 43 58.4
comp=Z,517nm,20.0s
ANMO Albuquerque 111.80 300 ⇑ iPKiKP PKiKP 08 56 32.3 +0.8
ANMO Albuquerque 111.80 300 IAMs_20 IAMs_20 09 46 12.3
comp=Z,388nm,18.0s
CLL Collm 111.80 27 ePP PP 08 57 16.0 +1.6
CLL ePPPP 09 01 30.0
CLL eSKKSac SKKSac 09 04 18.0 +3.9
CLL ePS PS 09 06 47.0 +0.8
CLL ePPS PPS 09 07 51.0
CLL eSS SS 09 12 54.0 +4.6
CLL eSSSS 09 20 54.0
CLL Collm 111.80 27 IAMs_20 IAMs_20 09 40 38.5
comp=Z,566nm,18.0s
DPC Dobruska-Polom 111.81 29 eSP SP 09 07 10.7 +27
DPC AMS AMS 09 41 40.0
comp=Z,800nm,18.6s
OKC Ostrava-Krasne 111.86 30 AMS AMS 09 36 30.0
comp=Z,500nm,25.7s
UPC Upice 111.86 29 eSP SP 09 07 11.8 +28
UPC AMS AMS 09 37 20.0
comp=Z,800nm,22.9s
CHVC Chvalec 111.95 29 AMS AMS 09 37 20.0
comp=Z,1μm,23.5s
OSTC Ostas 111.97 29 eSP SP 09 07 11.6 +26
OSTC AMS AMS 09 37 00.0
comp=Z,700nm,15.7s
I40A Norwalk 112.04 316 IAMs_20 IAMs_20 09 43 17.2
comp=Z,549nm,21.0s
N33A J Bar K, Exete 112.27 310 IAMs_20 IAMs_20 09 42 42.5
comp=Z,642nm,22.0s
L34A Svendsen Farm, 112.81 311 IAMs_20 IAMs_20 09 43 44.8
comp=Z,656nm,22.0s
BGNE Belgrade 113.12 310 IAMs_20 IAMs_20 09 44 40.1
comp=Z,603nm,22.0s
KSCO Kaye Shedlock' 113.21 305 IAMs_20 IAMs_20 09 45 26.5
comp=Z,377nm,19.0s
X18A Snowflake 113.21 297 IAMs_20 IAMs_20 09 45 44.8
comp=Z,500nm,18.0s
I37A Lemond, Waseca 113.26 315 IAMs_20 IAMs_20 09 44 08.5
comp=Z,408nm,19.0s
SDCO Great Sand Dun 113.56 303 IAMs_20 IAMs_20 09 44 40.9
comp=Z,417nm,20.0s
W18A Petrified Fore 113.57 298 IAMs_20 IAMs_20 09 41 05.2
comp=Z,479nm,19.0s
X16A Lo Mia Camp, P 113.88 296 IAMs_20 IAMs_20 09 43 39.6
comp=Z,464nm,21.0s
SPMN Mane en St. 114.02 316 IAMs_20 IAMs_20 09 43 53.5
comp=Z,523nm,21.0s
MYKOM Kota Tinggi 114.13 126 IAMs_20 IAMs_20 09 37 06.6
comp=Z,413nm,19.0s
SCHQ Schefferville 114.31 337 IAMs_20 IAMs_20 09 36 09.3
comp=Z,443nm,21.0s
ECSD EROS Data Cent 114.36 312 P PKiKP 08 56 35.9 0.0
baz=144
K31A O'Neill 114.37 310 IAMs_20 IAMs_20 09 44 18.1
comp=Z,693nm,22.0s
OGNE Ogallala 114.48 307 IAMs_20 IAMs_20 09 45 20.2
comp=Z,400nm,20.0s
MVCO Mesa Verde 114.60 300 IAMs_20 IAMs_20 09 48 52.4
comp=Z,481nm,19.0s
E38A The Farm, Brul 114.67 317 IAMs_20 IAMs_20 09 50 51.8
comp=Z,416nm,18.0s
WUAZ Wupatki 114.71 297 IAMs_20 IAMs_20 09 43 28.4
comp=Z,364nm,18.0s
F36A Milaca 114.83 316 IAMs_20 IAMs_20 09 43 55.0
comp=Z,735nm,22.0s
NEY Neytrino 115.24 50 ⇓ iPKiKP PKiKP 08 56 37.8 0.0
PV01 Paradox Valley 115.36 301 IAMs_20 IAMs_20 09 47 06.4
comp=Z,582nm,20.0s
PV15 Paradox Valley 115.47 301 IAMs_20 IAMs_20 09 42 12.6
comp=Z,445nm,20.0s
PV13 Radium Mtn., P 115.50 301 IAMs_20 IAMs_20 09 48 48.2
comp=Z,524nm,19.0s
PV18 Skein Mesa, Pa 115.61 301 IAMs_20 IAMs_20 09 42 06.2
comp=Z,418nm,20.0s
KULM Kulim 115.67 121 IAMs_20 IAMs_20 09 37 06.5
comp=Z,655nm,20.0s
PV19 Morning Glory 115.69 301 IAMs_20 IAMs_20 09 41 58.4
comp=Z,706nm,22.0s
KBZ Khabaz 115.70 50 ⇑ iPKiKP PKiKP 08 56 39.2 +0.8
PV22 Blue Mesa, Par 115.77 301 IAMs_20 IAMs_20 09 46 10.5
comp=Z,505nm,20.0s
KIV Kislovodsk 115.79 49 ⇑ iPKiKP PKiKP 08 56 39.7 +1.0
KIV e 08 57 52.5
KIV ePS PKKPdf 09 07 28.9 -6.3
KIV eSS SS 09 13 36.8 -5.8
KIV pmax pmax
comp=Z,3.0nm,0.5s
U15A North Rim 115.89 297 IAMs_20 IAMs_20 09 47 11.6
comp=Z,408nm,20.0s
SUSD Miller 115.92 311 IAMs_20 IAMs_20 09 45 31.1
comp=Z,645nm,22.0s
AKT Akhty 116.08 54 i PKiKP PKiKP 08 56 39.8 +0.4
AKT e 08 57 51.5
AKT pmax pmax
comp=Z,10.0nm,1.0s
AKASG Malin Array Be 116.11 37 PKP PKPdf 08 56 37.4 -1.6
comp=Z,0.4nm,0.4s,baz=243,slow=1.6,SNR=5.7
AKBB Malin Array Si 116.11 37 IAMs_20 IAMs_20 09 42 19.6
comp=Z,744nm,21.0s
KNB Kanab 116.61 297 PKiKP PKiKP 08 56 41.2 +0.5
KNB Kanab 116.61 297 PKiKP 08 56 41.2 +0.5
O20A White River Ci 116.75 302 P PKiKP 08 56 41.2 +0.3
baz=141
O20A White River Ci 116.75 302 PKiKP 08 56 41.2 +0.3
O20A IAMs_20 IAMs_20 09 43 32.5
comp=Z,511nm,22.0s
BKB Balikpapan 116.79 140 IAMs_20 IAMs_20 09 44 21.6
comp=Z,526nm,18.0s
B35A Bob, Littlefor 116.95 317 IAMs_20 IAMs_20 09 51 16.1
comp=Z,490nm,18.0s
SRU San Rafael Swe 117.08 300 PKiKP PKiKP 08 56 41.6 +0.1
SRU San Rafael Swe 117.08 300 PKiKP 08 56 41.6 +0.1
MAK Makhachkala 117.14 53 eP Pdif 08 52 53.7 -4.0
MAK i 08 56 38.3
MAK e 09 03 26.8
MAK eSS SS 09 13 59.5 -0.5
MAK pmax pmax
comp=Z,223nm,1.1s
D32A Dogwood Acres, 117.27 314 IAMs_20 IAMs_20 09 48 31.7
comp=Z,497nm,20.0s
IVI Ivigtut 117.33 349 IAMs_20 IAMs_20 09 44 27.7
comp=Z,625nm,20.0s
SHPR Sheep Range 117.41 295 PKiKP PKiKP 08 56 42.6 +0.3
MSU Marysvale 117.44 299 PKiKP PKiKP 08 56 42.9 +0.6
MSU Marysvale 117.44 299 PKiKP 08 56 42.9 +0.6
RWWY Rawlins 117.47 304 PKPdf 08 56 40.2 -2.1
AGMN Agassiz Nation 117.74 316 PKiKP 08 56 42.4 +0.2
AGMN IAMs_20 IAMs_20 09 50 48.0
comp=Z,533nm,18.0s
HRA Herat 117.87 69 IAMs_20 IAMs_20 09 46 01.0
comp=Z,497nm,19.0s
K22A Casper 117.89 305 IAMs_20 IAMs_20 09 53 05.5
comp=Z,363nm,18.0s
RSSD Black Hills 117.90 308 PKiKP PKiKP 08 56 43.2 +0.2
RSSD MLR MLR
comp=Z,700nm,22.0s
RSSD Black Hills 117.90 308 PKiKP 08 56 43.2 +0.2
RSSD Black Hills 117.90 308 IAMs_20 IAMs_20 09 45 20.5
comp=Z,674nm,22.0s
PSUT Pine Spring 118.30 297 PKiKP 08 56 44.2 +0.3
TPNV Topopah Spring 118.32 295 PKiKP PKiKP 08 56 44.4 +0.4
TPNV Topopah Spring 118.32 295 P PKiKP 08 56 45.2 +1.2
baz=140
TPNV Topopah Spring 118.32 295 PKiKP 08 56 44.4 +0.4
E28A Huff 118.36 312 IAMs_20 IAMs_20 09 47 57.5
comp=Z,469nm,21.0s
ISA Isabella, Lake 118.50 292 PKiKP PKPdf 08 56 43.2 -1.1
ISA Isabella, Lake 118.50 292 P PKiKP 08 56 46.0 +1.7
baz=140
ISA Isabella, Lake 118.50 292 PKPdf PKPdf 08 56 43.1 -1.1
ASHT Ashkhabad 118.56 64 IAMs_20 IAMs_20 09 43 51.2
comp=Z,539nm,21.0s
DUG Dugway, Tooele 119.04 299 PKiKP PKPdf 08 56 44.9 -0.3
DUG Dugway, Tooele 119.04 299 P PKiKP 08 56 45.8 +0.6
baz=140
DUG Dugway, Tooele 119.04 299 PKPdf 08 56 44.9 -0.3
ULM Lac du Bonnet 119.31 317 PP PP 08 58 05.2 -2.1
comp=Z,3.7nm,0.7s,baz=142,slow=5.6,SNR=3.3
ULM Lac du Bonnet 119.31 317 IAMs_20 IAMs_20 09 48 37.5
comp=Z,532nm,20.0s
BW06 Boulder Array 119.41 303 IAMs_20 IAMs_20 09 48 41.8
comp=Z,354nm,19.0s
PDAR Pinedale Array 119.41 303 PKP PKPdf 08 56 45.2 -0.8
comp=Z,0.5nm,0.5s,baz=154,slow=5.1,SNR=6.3
FAKI Fak Fak 119.72 158 IAMs_20 IAMs_20 09 55 18.0
comp=Z,455nm,18.0s
AHID Auburn Hatcher 120.15 302 PKiKP 08 56 47.7 +0.3
AHID IAMs_20 IAMs_20 09 57 36.3
comp=Z,417nm,20.0s
NB2 NORSAR Subarra 120.27 21 PKPdf PKiKP 08 56 47.1 +0.3
comp=Z,2.9nm,1.2s,baz=202,slow=1.9
NOA NORSAR Array B 120.27 21 PKP PKPdf 08 56 46.3 -0.4
comp=Z,1.3nm,0.8s,baz=206,slow=2.0,SNR=6.3
NV11 Mina Array Sit 120.42 294 PKiKP 08 56 49.1 +1.0
NVAR Mina Array Bea 120.50 294 PKP PKiKP 08 56 49.1 +0.9
comp=Z,1.2nm,0.6s,baz=159,slow=3.6,SNR=9.2
SNOW Snow King Moun 120.51 303 PKiKP 08 56 48.7 +0.5
TPAW Teton Pass 120.62 303 PKiKP 08 56 48.9 +0.5
ELK Elko 120.67 298 PKiKP PKiKP 08 56 49.5 +0.9
ELK MLR MLR
comp=Z,300nm,20.0s
ELK Elko 120.67 298 PKPdf PKiKP 08 56 49.5 +0.9
RYN Ryan 120.76 294 IAMs_20 IAMs_20 09 40 59.7
comp=Z,376nm,21.0s
FXWY Fox Creek 120.77 303 PKPdf 08 56 48.4 -0.1
LAO LASA Array 120.86 308 P PKiKP 08 56 48.8 +0.4
baz=140
LAO LASA Array 120.86 308 IAMs_20 IAMs_20 09 48 06.8
comp=Z,732nm,22.0s
IMW Indian Meadow 120.92 303 IAMs_20 IAMs_20 09 49 46.8
comp=Z,454nm,19.0s
FLWY Flagg Ranch 120.95 304 IAMs_20 IAMs_20 09 50 05.5
comp=Z,451nm,18.0s
RLMT Red Lodge 121.06 305 P PKiKP 08 56 49.6 +0.4
baz=139
RLMT Red Lodge 121.06 305 IAMs_20 IAMs_20 09 48 24.3
comp=Z,546nm,19.0s
DGMT Dagmar 121.33 311 P PKiKP 08 56 49.8 +0.5
baz=140
DGMT Dagmar 121.33 311 IAMs_20 IAMs_20 09 49 43.1
comp=Z,521nm,21.0s
KBL Kabul 121.67 74 IAMs_20 IAMs_20 09 51 41.5
comp=Z,409nm,20.0s
VSU Vasula 121.86 31 ⇑ iPKiKP PKiKP 08 56 50.1 +0.2
RUBR Rubicon Trail 121.93 294 IAMs_20 IAMs_20 09 46 54.6
comp=Z,352nm,19.0s
OBN Obninsk 122.28 38 ⇑ iPKiKP PKiKP 08 56 51.8 +1.0
OBN i PS PS 09 08 15.0 -6.0
OBN pmax pmax
comp=Z,7.0nm,0.9s
OBN MLR MLR
comp=Z,343nm,17.0s
BOZ Bozeman (W) 122.52 304 IAMs_20 IAMs_20 09 56 02.1
comp=Z,417nm,18.0s
MFID Camas Ranch 122.94 300 IAMs_20 IAMs_20 09 46 51.2
comp=Z,400nm,20.0s
NIL Nilore 123.33 78 IAMs_20 IAMs_20 09 46 00.8
comp=Z,481nm,20.0s
EGMT Eagleton 123.45 307 PKPdf 08 56 53.0 -0.3
EGMT IAMs_20 IAMs_20 09 50 30.4
comp=Z,657nm,22.0s
WVOR Wild Horse Val 123.63 297 PKiKP PKiKP 08 56 54.3 +0.1
WVOR MLR MLR
comp=Z,300nm,21.0s
WVOR Wild Horse Val 123.63 297 PKiKP 08 56 54.3 +0.1
O03E Paynes Creek 123.70 293 P PKiKP 08 56 54.8 +0.5
baz=137
MOD Modoc Plateau 124.09 296 PKiKP 08 56 56.2 +1.1
MOD IAMs_20 IAMs_20 09 55 22.9
comp=Z,324nm,19.0s
FINES FINESS Array B 124.16 28 PKP PKiKP 08 56 54.6 +0.2
comp=Z,9.5nm,0.7s,baz=171,slow=1.6,SNR=33
FIA1 FINESS Array S 124.16 28 PKiKP 08 56 54.5 +0.1
MSO Missoula 124.52 304 P PKiKP 08 56 55.9 +0.1
baz=136
MSO Missoula 124.52 304 IAMs_20 IAMs_20 09 51 40.8
comp=Z,600nm,21.0s
BMO Blue Mountains 124.72 300 IAMs_20 IAMs_20 09 47 57.2
comp=Z,438nm,20.0s
M04C Macdoel 124.80 295 P PKiKP 08 56 56.8 +0.3
baz=136
K05A Summer Lake 124.99 296 PKiKP 08 56 57.3 +0.3
FFC Flin Flon 125.14 317 PKiKP PKiKP 08 56 57.7 +1.1
FFC MLR MLR
comp=Z,400nm,20.0s
FFC Flin Flon 125.14 317 PKiKP 08 56 57.7 +1.1
FFC IAMs_20 IAMs_20 09 51 10.7
comp=Z,412nm,20.0s
I07A Izee 125.26 298 PKiKP 08 56 57.5 +0.2
JTMT Jette 125.34 304 PKiKP 08 56 58.2 +0.8
PBKT Sadao Pong 125.44 115 IAMs_20 IAMs_20 09 46 28.8
comp=Z,397nm,19.0s
F10A Beach Ranch, E 125.48 301 PKiKP 08 56 57.9 +0.2
F10A IAMs_20 IAMs_20 09 54 10.5
comp=Z,348nm,20.0s
J05D Fort Rock, OR 125.57 296 P PKiKP 08 56 59.0 +1.0
baz=136
GAR Garm 125.63 71 PKiKP 08 56 59.0 +0.7
SCO Scoresbysund 125.69 3 IAMs_20 IAMs_20 09 46 03.3
comp=Z,354nm,20.0s
PINE Pine Mountain 125.78 297 PKiKP 08 56 58.6 +0.2
G08A Pilot Rock 125.85 299 PKPdf PKiKP 08 56 59.3 +0.8
G08A IAMs_20 IAMs_20 09 48 43.2
comp=Z,571nm,21.0s
CMAR Chiang Mai Arr 125.95 111 PKP PKiKP 08 56 59.3 -0.1
comp=Z,3.4nm,0.8s,baz=226,slow=3.7,SNR=8.2
CHTO Chiang Mai 126.24 111 IAMs_20 IAMs_20 09 42 58.0
comp=Z,455nm,19.0s
E09A Wood Farm, Sta 126.31 301 IAMs_20 IAMs_20 09 54 15.5
comp=Z,434nm,19.0s
I05D Terrebonne, OR 126.37 297 P PKiKP 08 57 00.2 +0.7
baz=135
BTK Batken 126.66 71 PKiKP PKiKP 08 57 00.2 0.0
BTK MLR MLR
comp=Z,500nm,20.0s
BTK Batken 126.66 71 PKiKP 08 57 00.2 0.0
BTK IAMs_20 IAMs_20 09 51 34.7
comp=Z,521nm,20.0s
E08A Dider Farm, El 126.75 300 PKiKP 08 57 00.8 +0.8
E08A IAMs_20 IAMs_20 09 59 10.9
comp=Z,416nm,18.0s
F07A Phinny Hill Vi 126.76 299 IAMs_20 IAMs_20 09 50 44.2
comp=Z,459nm,19.0s
H04A Detroit Lake 127.04 297 IAMs_20 IAMs_20 09 54 50.8
comp=Z,368nm,22.0s
NEW Newport 127.05 303 IAMs_20 IAMs_20 09 57 49.9
comp=Z,496nm,20.0s
D08A Wollman Farm, 127.08 301 IAMs_20 IAMs_20 09 52 40.6
comp=Z,306nm,18.0s
KLMR Klimovskoe 127.71 35 ePKiKP PKPdf 08 57 00.4 -0.5
KLMR pmax pmax

	comp=Z,28nm,1.5s								
KLMR	**Klimovskoe**	**127.71**	**35**	*e*PKPdf	**PKPdf**	**08 57 00.4**	**-0.5**
KLMR				AMP		08 57 11.2	
	comp=Z,28nm,1.5s								
SUMG	**Summit**	**127.90**	**356**	*i* PKIKP	**PKiKP**	**08 57 02.0**	**-0.1**
SUMG				pmax	pmax		
	comp=Z,30nm,1.1s								
SUMG	**Summit**	**127.90**	**356**		**PKiKP**	**08 57 02.6**	**+0.5**
SUMG	**Summit**	**127.90**	**356**	*i* P	**PKiKP**	**08 57 02.0**	**-0.1**
	comp=Z,30nm,1.1s								
LTY	**Liberty**	**128.07**	**300**	IAMs_20	IAMs_20	09 50 11.9	
	comp=Z,415nm,20.0s								
B08A	**Colville Reser**	**128.18**	**302**	IAMs_20	IAMs_20	09 53 43.8	
	comp=Z,449nm,20.0s								
LON	**Longmire**	**128.29**	**299**	PKIKP	**PKiKP**	**08 57 03.5**	**+0.3**
LON				MLR	MLR		
	comp=Z,400nm,22.0s								
LON	**Longmire**	**128.29**	**299**		**PKiKP**	**08 57 03.5**	**+0.3**
LON				IAMs_20	IAMs_20	09 50 06.8	
	comp=Z,427nm,22.0s								
KK31	**Karatay Array**	**128.63**	**68**	PKIKP	**PKPdf**	**08 57 02.7**	**-0.6**
KK31	**Karatay Array**	**128.63**	**68**		**PKPdf**	**08 57 02.7**	**-0.6**
D05A	**Enumclaw**	**128.68**	**299**		**PKiKP**	**08 57 03.6**	**-0.3**
ARSB	**Arslanbob**	**128.71**	**71**	PKIKP	**PKiKP**	**08 57 04.8**	**+0.4**
ARSB	**Arslanbob**	**128.71**	**71**		**PKiKP**	**08 57 04.8**	**+0.4**
ARSB				IAMs_20	IAMs_20	09 48 09.1	
	comp=Z,502nm,21.0s								
E03A	**Lebam**	**129.03**	**298**	IAMs_20	IAMs_20	10 01 09.4	
	comp=Z,434nm,19.0s								
KSH	**Kashi**	**129.08**	**75**	PKP	**PKiKP**	**08 57 05.9**	**+0.8**
KSH				PP	**PP**	**08 59 17.3**	**+4.1**
KSH				SS	SS	09 16 25.5	-6.4
KSH				AMB	AMB		
	comp=Z,290nm,7.0s								
KSH				LR	LR		
	comp=Z,260nm,5.2s								
KSH				LR	LR		
	comp=Z,120nm,7.3s								
KSH				LR	LR		
	comp=Z,370nm,11.0s								
B06A	**Marblemount**	**129.34**	**301**	IAMs_20	IAMs_20	09 50 45.4	
	comp=Z,508nm,18.0s								
B05A	**Bryant**	**129.46**	**300**	P	**PKiKP**	**08 57 05.8**	**+0.4**
	baz=132								
TMCR	**Tamitsa**	**129.70**	**31**	*e*PKIKP	**PKiKP**	**08 57 05.3**	**-0.1**
TMCR				pmax	pmax		
	comp=Z,19nm,0.6s								
AAK	**Ala-Archa**	**130.44**	**71**	⇑*i*PKIKP	**PKiKP**	**08 57 08.2**	**+0.4**
AAK	**Ala-Archa**	**130.44**	**71**		**PKPdf**	**08 57 06.9**	**-0.1**
AAK	**Ala-Archa**	**130.44**	**71**	IAMs_20	IAMs_20	09 57 28.7	
	comp=Z,460nm,18.0s								
LSA	**Lhasa**	**130.53**	**95**	IAMs_20	IAMs_20	09 47 45.8	
	comp=Z,452nm,19.0s								
ARCES	**ARCESS Array B**	**130.62**	**22**	PKP	**PKiKP**	**08 57 06.6**	**-0.6**
	comp=Z,13nm,0.9s,baz=208,slow=2.3,SNR=19								
LLLB	**Lillooet**	**130.93**	**303**	IAMs_20	IAMs_20	09 54 43.4	
	comp=Z,600nm,21.0s								
SLVN	**Son La**	**130.93**	**114**	IAMs_20	IAMs_20	09 45 48.9	
	comp=Z,436nm,20.0s								
BOOM	**Boomskoye usch**	**131.12**	**72**	IAMs_20	IAMs_20	09 50 41.7	
	comp=Z,423nm,20.0s								
TARG	**Taragay, Kyrgy**	**131.62**	**74**	IAMs_20	IAMs_20	09 52 22.9	
	comp=Z,344nm,19.0s								
ARU	**Arti**	**131.80**	**48**	*i* PKIKP	**PKPdf**	**08 57 09.1**	**+0.3**
ARU	**Arti**	**131.80**	**48**		**PKPdf**	**08 57 08.7**	**-0.1**
QIZ	**Qiongzhong**	**131.97**	**122**	PKP	**PKiKP**	**08 57 10.9**	**-0.5**
QIZ				PP	**PP**	**08 59 32.8**	**+1.3**
QIZ				SS	SS	09 17 08.9	+2.4
QIZ				LR	LR		
	comp=Z,470nm,24.8s								
QIZ				LR	LR		
	comp=Z,410nm,21.2s								
QIZ				LR	LR		
	comp=Z,510nm,21.9s								
QIZ	**Qiongzhong**	**131.97**	**122**	IAMs_20	IAMs_20	09 44 59.6	
	comp=Z,569nm,21.0s								
DAG	**Danmarks Havn**	**132.08**	**3**	*i* PKIKP	**PKPdf**	**08 57 08.7**	**-0.1**
DAG				pmax	pmax		
	comp=Z,5.0nm,0.9s								
DAG	**Danmarks Havn**	**132.08**	**3**	*i* P	**PKPdf**	**08 57 08.7**	**-0.1**
	comp=Z,4.7nm,0.9s								
PRZ	**Przheval'sk**	**132.45**	**74**	IAMs_20	IAMs_20	09 53 13.8	
	comp=Z,530nm,22.0s								
SVE	**Sverdlovsk**	**132.94**	**49**	*e*PKIKP	**PKiKP**	**08 57 12.1**	**0.0**
KMI	**Kunming**	**133.40**	**110**	IAMs_20	IAMs_20	09 46 58.2	
	comp=Z,376nm,20.0s								
TULEG	**Thule**	**134.19**	**348**	IAMs_20	IAMs_20	09 53 53.2	
	comp=Z,507nm,19.0s								
BRVK	**Borovoye**	**135.01**	**58**	PKIKP	**PKiKP**	**08 57 15.6**	**-0.9**
BRVK				MLR	MLR		
	comp=Z,600nm,20.0s								
BRVK	**Borovoye**	**135.01**	**58**		**PKiKP**	**08 57 15.6**	**-0.9**
BRVK	**Borovoye**	**135.01**	**58**	IAMs_20	IAMs_20	09 57 17.5	
	comp=Z,554nm,20.0s								
YKA	**Yellowknife Ar**	**135.24**	**319**	PKP	**PKPdf**	**08 57 14.1**	**-1.0**
	comp=Z,7.7nm,0.8s,baz=125,slow=2.2,SNR=13								
YKA				PP	**PP**	**08 59 47.8**	**-4.4**
	comp=Z,2.8nm,1.0s,baz=123,slow=6.2,SNR=9.0								
YKA				SKPbc	**SKPbc**	**09 00 44.8**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=129,slow=4.7,SNR=6.6								
KBS	**Kingsbay**	**136.23**	**10**	IAMs_20	IAMs_20	09 53 55.3	
	comp=Z,419nm,19.0s								
GYA	**Guiyang**	**136.56**	**113**	*e*Pdif	**Pdif**	**08 54 24.8**	**+0.1**
GYA				PKP	**PKPdf**	**08 57 19.3**	**+0.4**
GYA				PP	**PP**	**09 00 05.5**	**+4.6**
GYA				AMB	AMB		
	comp=Z,140nm,7.9s								
NOR	**Nord**	**136.94**	**3**	*i* PKIKP	**PKPdf**	**08 57 18.4**	**+0.5**
NOR	**Nord**	**136.94**	**3**	*i* P	**PKPdf**	**08 57 18.4**	**+0.5**
RES	**Resolute Bay**	**137.02**	**339**	PKIKP	**PKiKP**	**08 57 19.1**	**-0.8**
RES	**Resolute Bay**	**137.02**	**339**		**PKiKP**	**08 57 19.1**	**-0.8**
RES				IAMs_20	IAMs_20	09 49 37.5	
	comp=Z,451nm,20.0s								
MAKZ	**Makanchi**	**137.19**	**71**	IAMs_20	IAMs_20	10 01 58.5	
	comp=Z,410nm,18.0s								
MK31	**Makanchi Array**	**137.35**	**72**	PKIKP	**PKPdf**	**08 57 16.8**	**-2.8**
MK31	**Makanchi Array**	**137.35**	**72**		**PKPdf**	**08 57 16.8**	**-2.8**
MKAR	**Makanchi Array**	**137.35**	**72**	PKhKP	PKPpre	08 57 12.6	
	comp=Z,1.4nm,0.8s,baz=254,slow=3.5,SNR=6.1								
MKAR				SKPbc	**SKPbc**	**09 00 50.7**	**-0.7**
	comp=Z,3.4nm,1.1s,baz=219,slow=1.8,SNR=4.8								
KURK	**Kurchatov**	**137.77**	**65**	PKIKP	**PKPdf**	**08 57 19.1**	**-1.1**
KURK				MLR	MLR		
	comp=Z,800nm,22.0s								
KURK	**Kurchatov**	**137.77**	**65**		**PKPdf**	**08 57 19.1**	**-1.1**
WMQ	**Urumqi**	**138.47**	**79**	*e*PKP	**PKiKP**	**08 57 22.9**	**-1.0**
WMQ				LR	LR		
	comp=Z,210nm,19.3s								
WMQ				LR	LR		
	comp=Z,190nm,23.7s								
WMQ				LR	LR		
	comp=Z,170nm,18.1s								
CD2	**Chengdu**	**138.51**	**106**	Pdif	**Pdif**	**08 54 33.3**	**+0.2**
KNMB	**Chin-men Tao**	**140.64**	**128**	IAMs_20	IAMs_20	09 57 46.9	
	comp=Z,463nm,19.0s								
ENH	**Enshi**	**141.09**	**113**	IAMs_20	IAMs_20	09 54 30.5	
	comp=Z,317nm,20.0s								
NACB	**Ninganchiao**	**141.78**	**132**	IAMs_20	IAMs_20	09 54 39.0	
	comp=Z,379nm,20.0s								
C36M	**Paulatuk**	**142.00**	**325**	IAMs_20	IAMs_20	10 06 37.0	
	comp=Z,347nm,19.0s								
SKAG	**Skagway**	**142.28**	**307**	IAMs_20	IAMs_20	10 00 19.4	
	comp=Z,308nm,19.0s								
GTA	**Gaotai**	**142.46**	**93**	PKP	**PKiKP**	**08 57 32.4**	**+0.1**
GTA				LR	LR		
	comp=Z,200nm,20.6s								
GTA				LR	LR		
	comp=Z,310nm,21.3s								
GTA				LR	LR		
	comp=Z,260nm,20.9s								
ZAA0	**Zalesovo Array**	**142.72**	**64**	IAMs_20	IAMs_20	10 02 53.7	
	comp=Z,455nm,21.0s								
ZALV	**Zalesovo Beam**	**142.72**	**64**	PKP	**PKPdf**	**08 57 26.6**	**-2.5**
	comp=Z,3.5nm,0.5s,baz=230,slow=3.2,SNR=15								
XAN	**Xi'an**	**143.71**	**108**	IAMs_20	IAMs_20	09 56 28.5	
	comp=Z,294nm,19.0s								
WHN	**Wuhan**	**143.81**	**118**	⇑PKP	**PKiKP**	**08 57 38.6**	**+3.4**
WHN				AMB	AMB		
	comp=Z,610nm,9.5s								
WHN				LR	LR		
	comp=Z,510nm,7.5s								
WHN				LR	LR		
	comp=Z,280nm,7.9s								
WHN				LR	LR		
	comp=Z,950nm,25.7s								
INK	**Inuvik**	**144.87**	**321**	PKIKP	**PKPdf**	**08 57 32.2**	**-0.2**
INK				IAMs_20	IAMs_20	10 08 52.1	
	comp=Z,443nm,18.0s								
EPYK	**Eagle Plains**	**145.49**	**318**	P	**PKPab**	**08 57 34.0**	**0.0**
	baz=107								
EPYK	**Eagle Plains**	**145.49**	**318**	IAMs_20	IAMs_20	10 02 35.6	
	comp=Z,480nm,20.0s								
CTGM	**Chitina Glacie**	**145.63**	**307**	IAMs_20	IAMs_20	10 05 05.1	
	comp=Z,356nm,19.0s								
DAWY	**Dawson**	**145.85**	**313**		**PKPbc**	**08 57 35.0**	**0.0**
MCARA	**McCarthy VSAT**	**146.54**	**307**	IAMs_20	IAMs_20	10 07 02.2	
	comp=Z,369nm,18.0s								
EGAK	**Eagle**	**146.79**	**314**	IAMs_20	IAMs_20	10 08 28.4	
	comp=Z,327nm,19.0s								
GLB	**Gilahina Butte**	**146.92**	**307**	IAMs_20	IAMs_20	10 05 29.2	
	comp=Z,384nm,19.0s								
NJ2	**Nanjing**	**147.27**	**122**	*e*PKPbc	**PKPdf**	**08 57 37.8**	**+0.2**
MENT	**Mentasta**	**147.35**	**310**	IAMs_20	IAMs_20	10 02 59.3	
	comp=Z,398nm,22.0s								
MID	**Middleton Isla**	**147.41**	**303**	IAMs_20	IAMs_20	09 58 27.3	
	comp=Z,424nm,18.0s								
SSE	**Sheshan**	**147.58**	**126**	PKPbc	**PKPbc**	**08 57 40.6**	**-0.2**
SSE				LR	LR		
	comp=Z,320nm,19.5s								
SSE				LR	LR		
	comp=Z,190nm,18.1s								
SSE				LR	LR		
	comp=Z,410nm,18.6s								
SCRK	**Sand Creek**	**147.76**	**312**		**PKiKP**	**08 57 41.4**	**-1.0**
FID	**Port Fidalgo**	**147.92**	**305**	IAMs_20	IAMs_20	10 04 14.0	
	comp=Z,440nm,20.0s								
PAX	**Paxson**	**148.13**	**310**	PKP2	**PKiKP**	**08 57 42.5**	**-0.7**
PAX	**Paxson**	**148.13**	**310**		**PKiKP**	**08 57 42.5**	**-0.7**
GLI	**Glacier Island**	**148.25**	**305**		**PKiKP**	**08 57 42.8**	**-0.6**
GLI				PKPab	**sPKPdf**	**08 57 46.9**	**+1.3**
GLI				IAMs_20	IAMs_20	10 10 39.4	
	comp=Z,394nm,20.0s								
SCM	**Sheep Creek Mo**	**148.64**	**307**	IAMs_20	IAMs_20	10 04 57.6	
	comp=Z,423nm,20.0s								
PRP	**Porcupine Dome**	**148.76**	**314**	IAMs_20	IAMs_20	10 05 07.4	
	comp=Z,441nm,21.0s								
FYU	**Fort Yukon**	**148.85**	**316**	IAMs_20	IAMs_20	10 02 41.6	
	comp=Z,406nm,22.0s								
NRIK	**Noril'sk**	**148.96**	**38**	PKPbc	**PKiKP**	**08 57 43.8**	**-0.8**
	comp=Z,15nm,0.8s,baz=299,slow=0.6,SNR=28								
DHY	**Denali Highway**	**148.99**	**309**		**PKPbc**	**08 57 44.3**	**+0.5**
DHY				IAMs_20	IAMs_20	10 05 11.8	
	comp=Z,455nm,21.0s								
KNK	**Knik Glacier**	**149.04**	**306**	IAMs_20	IAMs_20	10 12 39.2	
	comp=Z,397nm,20.0s								
HDA	**Harding Lake**	**149.12**	**312**	P	**PKiKP**	**08 57 45.0**	**-0.1**
	baz=102								
HDA	**Harding Lake**	**149.12**	**312**	IAMs_20	IAMs_20	10 04 29.0	
	comp=Z,264nm,20.0s								
IL31		**149.17**	**313**		**PKPdf**	**08 57 38.4**	**-1.3**
IL31				PKPbc	**PKiKP**	**08 57 44.6**	**-0.5**
IL31				PKPab	**pPKPbc**	**08 57 49.8**	**+0.4**
ILAR	**Eielson Array**	**149.17**	**313**	PKPbc	**PKPbc**	**08 57 44.4**	**+0.4**
	comp=Z,56nm,0.8s,baz=128,slow=2.0,SNR=234								
GHO	**Glory Hole Cre**	**149.35**	**307**		**PKiKP**	**08 57 45.3**	**-0.5**
GHO				PKPab	**pPKPbc**	**08 57 50.7**	**+0.7**
PMR	**Palmer**	**149.40**	**306**	PKP2	**PKiKP**	**08 57 45.3**	**-0.4**
PMR	**Palmer**	**149.40**	**306**		**PKiKP**	**08 57 45.3**	**-0.4**
PMR				PKPab	**pPKPbc**	**08 57 50.9**	**+0.9**
POKR	**Poker Plat Res**	**149.47**	**313**	P	**PKiKP**	**08 57 45.7**	**-0.1**
	baz=101								
CCB	**Clear Creek Bu**	**149.53**	**312**	PKPbc	**PKPbc**	**08 57 44.9**	**0.0**
CCB				PKPab	**pPKPbc**	**08 57 50.7**	**+0.4**
CCB				IAMs_20	IAMs_20	10 09 58.9	
	comp=Z,365nm,19.0s								
RC01	**Rabbit Creek A**	**149.54**	**305**		**PKiKP**	**08 57 46.0**	**-0.1**
RC01				PKPab	**pPKPbc**	**08 57 51.4**	**+1.0**
RC01				IAMs_20	IAMs_20	10 04 33.6	
	comp=Z,290nm,20.0s								
COLA	**College**	**149.60**	**313**	⇑*e*PKHKP	PKPpre	08 57 42.6	
COLA	**College**	**149.60**	**313**		**PKiKP**	**08 57 45.6**	**-0.3**
COLA				PKPab	**pPKPbc**	**08 57 52.4**	**+1.9**
TCOL	**CIGO, UAF Yank**	**149.60**	**313**	P	**PKiKP**	**08 57 45.5**	**-0.6**
	baz=101								
WRH	**Wood River Hil**	**149.62**	**312**		**PKPdf**	**08 57 38.5**	**-1.9**
WRH				PKPbc	**PKiKP**	**08 57 45.9**	**-0.2**
WRH				PKPab	**pPKPbc**	**08 57 51.8**	**+1.3**
WRH				IAMs_20	IAMs_20	10 07 43.2	
	comp=Z,376nm,22.0s								
BRLK	**Bradley Lake**	**149.70**	**302**	PKPdf	**PKPdf**	**08 57 40.6**	**-0.1**
BRLK					**PKiKP**	**08 57 46.2**	**-0.2**
BRLK				PKPab	**pPKPbc**	**08 57 52.8**	**+1.9**
TIA	**Tai'an**	**149.71**	**115**	PKPbc	**PKPbc**	**08 57 46.5**	**+0.3**
RND	**Reindeer**	**149.72**	**310**	PKP2	**PKPab**	**08 57 52.1**	**+1.2**
RND	**Reindeer**	**149.72**	**310**		**PKiKP**	**08 57 46.4**	**0.0**
RND				PKPab	**PKPab**	**08 57 52.1**	**+1.2**
RND				IAMs_20	IAMs_20	10 08 18.1	
	comp=Z,419nm,20.0s								
MDM	**Murphy Dome**	**149.77**	**313**		**PKPbc**	**08 57 45.0**	**-0.5**
MDM				PKPab	**pPKPbc**	**08 57 51.7**	**+0.7**
MCK	**McKinley**	**149.83**	**310**	IAMs_20	IAMs_20	10 07 08.8	
	comp=Z,381nm,19.0s								
KDAK	**Kodiak Island**	**149.91**	**298**	PKP2	**PKiKP**	**08 57 46.8**	**-0.1**
KDAK				MLR	MLR		
	comp=Z,500nm,20.0s								
KDAK	**Kodiak Island**	**149.91**	**298**		**PKiKP**	**08 57 46.8**	**-0.1**
KDAK				PKPab	**PKPab**	**08 57 52.0**	**+0.2**
HOM	**Homer**	**150.04**	**302**	IAMs_20	IAMs_20	10 05 31.0	
	comp=Z,329nm,18.0s								
NEA	**Nenana**	**150.06**	**312**	IAMs_20	IAMs_20	10 04 21.8	
	comp=Z,315nm,22.0s								
HHC	**Hu-ho-hao-te**	**150.06**	**102**	*e*PKPbc	**PKiKP**	**08 57 48.6**	**+0.7**
HHC				AMB	AMB		
	comp=Z,130nm,5.3s								
HHC				LR	LR		
	comp=Z,170nm,20.6s								
HHC				LR	LR		
	comp=Z,180nm,20.6s								
HHC				LR	LR		
	comp=Z,200nm,20.8s								
CUT	**Chulitna**	**150.12**	**307**	P	**PKiKP**	**08 57 47.3**	**+0.1**
	baz=103								
BWN	**Browne**	**150.15**	**311**	IAMs_20	IAMs_20	10 03 50.3	
	comp=Z,419nm,22.0s								
MOY	**Mondy**	**150.26**	**76**	*e*PKIKP	PKPdf	08 57 30.1	-12
MOY				pmax	pmax		
	comp=Z,120nm,2.7s								
TRF	**Thorofare Moun**	**150.36**	**309**	IAMs_20	IAMs_20	10 08 38.0	
	comp=Z,436nm,20.0s								
KTH	**Kantishna Hill**	**150.66**	**310**	IAMs_20	IAMs_20	10 06 21.9	
	comp=Z,462nm,20.0s								
TOLK	**Toolik Lake Re**	**150.75**	**320**	P	**PKiKP**	**08 57 48.4**	**0.0**
	baz=93								
TOLK	**Toolik Lake Re**	**150.75**	**320**	PKPbc	**PKiKP**	**08 57 48.7**	**+0.3**
TOLK				PKPab	**sPKPbc**	**08 57 57.4**	**+2.3**
TOLK				IAMs_20	IAMs_20	10 11 07.4	
	comp=Z,352nm,19.0s								
BPAW	**Bear Paw Mtn.**	**150.79**	**311**	PKPbc	**PKiKP**	**08 57 48.2**	**-0.3**
BPAW				PKPab	**PKPab**	**08 57 56.0**	**+0.7**
BPAW				IAMs_20	IAMs_20	10 07 14.2	
	comp=Z,287nm,20.0s								
RSO	**Redoubt South**	**150.80**	**303**		**PKiKP**	**08 57 48.9**	**0.0**
MLY	**Manley**	**150.84**	**313**		**PKPdf**	**08 57 43.7**	**+1.3**
MLY				IAMs_20	IAMs_20	10 09 07.3	
	comp=Z,417nm,20.0s								
ZAK	**Zakamensk**	**150.93**	**80**	*e*PKIKP	**PKiKP**	**08 57 49.3**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,35nm,1.2s								
PPLA	**Purkeypile**	**151.10**	**308**		**PKPbc**	**08 57 48.6**	**-0.3**
PPLA				PKPab	**sPKPbc**	**08 57 58.8**	**+2.6**
SONM	**Songino Array**	**151.39**	**86**	PKPbc	**PKPbc**	**08 57 49.9**	**-0.1**
	comp=Z,11nm,0.5s,baz=217,slow=3.8,SNR=29								
TLY	**Talaya**	**151.74**	**77**	*e*PKIKP	**PKiKP**	**08 57 51.5**	**+0.6**
TLY				pmax	pmax		
	comp=Z,47nm,1.3s								
TLY	**Talaya**	**151.74**	**77**		**PKiKP**	**08 57 50.7**	**-0.2**
TLY				PKPab	**PKPab**	**08 57 59.5**	**-0.1**
TLY				IAMs_20	IAMs_20	10 08 03.3	
	comp=Z,432nm,19.0s								
ULN	**Ulaanbaatar**	**151.78**	**87**		**PKPbc**	**08 57 50.7**	**-0.2**
ULN				PKPab	**PKPab**	**08 58 01.4**	**+1.4**
BJT	**Baijiatuan**	**152.02**	**109**	IAMs_20	IAMs_20	10 21 25.7	
	comp=Z,323nm,19.0s								
IRK	**Irkutsk**	**152.33**	**77**	*e*PKIKP	**PKPbc**	**08 57 50.3**	**-1.5**
IRK				pmax	pmax		
	comp=Z,54nm,2.3s								
CHGN	**Chignik**	**152.41**	**293**		**PKPbc**	**08 57 51.0**	**-0.7**
CHGN					**PKPab**	**08 58 03.4**	**+1.2**
CNBA	**Chernabura Isl**	**152.52**	**289**	PKPdf	**PKPdf**	**08 57 43.2**	**-1.9**
CNBA					**PKiKP**	**08 57 52.3**	**0.0**
CNBA					**PKPab**	**08 58 02.6**	**-0.1**
TTA	**Tatalina**	**152.83**	**307**	PKIKP	**PKPdf**	**08 57 45.4**	**-0.1**
TTA	**Tatalina**	**152.83**	**307**		**PKPdf**	**08 57 45.4**	**-0.1**
JNU	**Nakatsue**	**153.43**	**138**	PKPbc	**PKPbc**	**08 57 54.6**	**-0.3**
	comp=Z,8.5nm,0.8s,baz=23,slow=5.4,SNR=7.2								
JNU	**Nakatsue**	**153.43**	**138**		**PKPbc**	**08 57 54.8**	**-0.1**
RDOG	**Red Dog Mine**	**155.71**	**319**	IAMs_20	IAMs_20	10 08 13.6	
	comp=Z,386nm,21.0s								
KSRS	**Korea Array**	**155.94**	**128**	PKP	**PKPdf**	**08 57 49.8**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=237,slow=1.3,SNR=2.2								
KSRS				PKPab	**PKPab**	**08 58 18.4**	**+0.8**
	comp=Z,1.8nm,0.7s,baz=214,slow=3.0,SNR=5.4								
SNY	**Shenyang**	**157.24**	**115**	⇓PKP	**PKPdf**	**08 57 51.6**	**-0.5**
SNY				AMB	AMB		
	comp=Z,140nm,4.9s								
SNY				LR	LR		
	comp=Z,350nm,26.5s								
SNY				LR	LR		
	comp=Z,270nm,19.4s								
MJAR	**Matsushiro Arr**	**159.03**	**149**	PKPab	**PKPab**	**08 58 30.4**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=192,slow=5.8,SNR=4.2								
BOD	**Bodaibo**	**159.37**	**68**	*e*PKP2	**PKPab**	**08 58 33.4**	**+1.4**
BOD				pmax	pmax		
	comp=Z,50nm,1.6s								
BILL	**Bilibino**	**165.62**	**337**	*e*PKIKP	**PKPdf**	**08 57 57.9**	**-2.1**
BILL				*e*		09 04 54.9	
BILL				*e*SS	SS	09 23 29.6	+7.1
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s								
YSS	**Yuzh-Sakhalins**	**169.88**	**143**	⇓*e*PKIKP	**PKPdf**	**08 58 03.1**	**-0.5**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s								
YSS				pmax	pmax		
	comp=Z,300nm,6.3s								
NKL	**Nikolayevsk**	**173.23**	**105**	*e*PKIKP	**PKPdf**	**08 58 07.6**	**+2.6**
NKL				*e*S		09 03 20.9	
NKL				pmax	pmax		
	comp=N,4.0nm,1.1s								
NKL				pmax	pmax		
	comp=Z,5.0nm,1.1s								
NKL				pmax	pmax		
	comp=E,3.0nm,1.0s								
NKL				pmax	pmax		
	comp=Z,46nm,3.6s								
PET	**Petropavlovsk**	**175.20**	**243**	*i* PKIKP	**PKPdf**	**08 58 11.1**	**+5.4**
PET				*e*		09 03 40.3	
PET				*e*SS	SS	09 24 58.3	+0.2
PET				pmax	pmax		
	comp=Z,100nm,11.1s								

NEIC ***22*** *08:50:27.0±2.6, 19.°10N±0.°05×121.°36E±0.°08, h18km±4km, mb4.6/61, Error ellipse: s-maj=10.9km s-min=6.3km az=104.0*

BJI ***22*** *08:50:27.0±0.0, 19.°00N×121.°50E, h30km, mB4.8/33, mb4.5/38, ML4.3/1, Ms4.1/18, Ms7 3.8/18*

IDC ***22*** *08:50:28.8±2.7, 18.°97N×121.°46E, h28km±18km, mb4.1/20, mb1 4.2/22, mb1mx4.2/38, mbtmp4.3/22, ML3.9/2, MS3.6/8, Ms1 3.6/8, ms1mx3.3/46, Error ellipse: s-maj=19.2km s-min=13.4km az=74.0*

MAN ***22*** *08:50:28.6, 19.°11N×121.°39E, h19km, mb5.1, ML4.0, MS4.1*

ISC 22 08:50:28.1±0.8, 19°08N±0°03×121°33E±0°04, h23km±5km, n127,σ1°44/139, mb4.5/55, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
SGCP	**Mt. Cagua**	**1.08**	**141**	*e*P	**Pb**	**08 50 48.2**	**+0.1**
SGCP				*e*S	**Sn**	**08 51 03.5**	**+1.5**
APYP	**Conner**	**1.22**	**184**	*e*P	**Pb**	**08 50 50.2**	**-0.3**
APYP				*e*S	**Sn**	**08 51 07.1**	**+1.5**
SIPP	**Brgy, Tapao**	**1.42**	**216**	⇑*i*P	**Pb**	**08 50 54.5**	**+0.5**
SIPP				*e*S	Sb	08 51 27.1	+15
BBP	**Basco**	**1.48**	**24**	*e*P	**Pn**	**08 50 52.2**	**-1.1**
BBP				*e*S	**Sb**	**08 51 13.1**	**-0.1**
SZP	**Santa**	**1.74**	**209**		**Pn**	**08 50 56.9**	**0.0**
SZP				Sn	**Sn**	**08 51 18.7**	**+0.3**
CAUP	**Cauayan**	**2.18**	**168**	*e*P	**Pb**	**08 51 05.2**	**-1.6**
SMPP	**San Manuel, Pa**	**2.98**	**192**	*e*P	**Pn**	**08 51 15.6**	**+1.5**
SMPP				*e*S	**Sb**	**08 51 53.5**	**-3.1**
BOLP	**Bolinao**	**3.01**	**207**	*e*P	**Pn**	**08 51 17.1**	**+2.7**
BOLP				*e*S	**Sb**	**08 51 55.3**	**-2.0**
BALP	**Baler**	**3.33**	**176**	*e*P	**Pn**	**08

KULM	**Kulim**	**24.38**	**238**	P	**P**	**08 55 44.0**	**-0.9**
KULM				IAmb	IAmb	08 55 47.1		
	comp=Z,14nm,1.1s							
IPM	**Ipoh**	**24.57**	**236**	P	**P**	**08 55 46.0**	**-0.6**
IPM				IAmb	IAmb	08 55 48.1		
	comp=Z,14nm,0.6s							
USRK	**Ussuriysk Ar.**	**26.59**	**17**	P	**P**	**08 56 05.7**	**+1.2**
	comp=Z,2.3nm,0.7s,baz=198,slow=5.8,SNR=5.1							
GTA	**Gaotai**	**27.49**	**322**	*eP*	**P**	**08 56 14.4**	**+1.5**
GTA				pP	sP	08 56 23.5	+1.0	
GTA				sP	pP	08 56 27.8	+8.2	
GTA				pmax	pmax			
	comp=Z,4.0nm,1.2s							
GTA				pmax	pmax			
	comp=Z,35nm,4.4s							
GTA				LR	LR			
	comp=Z,120nm,15.2s							
GTA				LR	LR			
	comp=Z,140nm,15.2s							
GTA				LR	LR			
	comp=Z,150nm,16.2s							
SHL	**Shillong**	**27.96**	**289**	P	**P**	**08 56 16.4**	**-0.9**
SHL				IAmb	IAmb	08 56 20.4		
	comp=Z,15nm,0.9s							
JAY	**Jayapura**	**28.70**	**136**	LR	LR	09 05 34.0		
	comp=Z,110nm,21.9s,baz=310,slow=32							
SONM	**Songino Array**	**31.15**	**340**	P	**P**	**08 56 46.7**	**+1.4**
	comp=Z,2.9nm,0.7s,baz=160,slow=9.9,SNR=11							
KNRA	**Kununurra**	**35.31**	**168**	P	**P**	**08 57 20.3**	**-1.4**
KNRA				IAmb	IAmb	08 57 30.0		
	comp=Z,5.6nm,0.8s							
TLY	**Talaya**	**35.38**	**341**	P	**P**	**08 57 22.7**	**+0.7**
TLY				IAmb	IAmb	08 57 25.3		
	comp=Z,3.4nm,0.6s							
FITZ	**Fitzroy Crossi**	**37.19**	**173**	P	**P**	**08 57 38.4**	**+0.6**
WMQ	**Urumqi**	**37.42**	**319**	*eP*	**P**	**08 57 42.1**	**+2.5**
WMQ				sP	sP	08 57 56.1	+6.8	
WMQ				LR	LR			
	comp=Z,260nm,9.1s							
WMQ				LR	LR			
	comp=Z,32nm,9.3s							
PSA00	**Pilbara Seismi**	**40.43**	**182**	P	**P**	**08 58 04.7**	**-0.2**
WB0	**Warramunga Arr**	**40.68**	**161**	P	**P**	**08 58 04.7**	**-2.3**
WRAB	**Tennant Creek**	**40.82**	**161**	P	**P**	**08 58 05.9**	**-2.3**
WRA	**Warramunga AP**	**40.83**	**161**	P	**P**	**08 58 05.8**	**-2.4**
	comp=Z,1.1nm,0.4s,baz=341,slow=9.1,SNR=21							
WRA				PcP	**PcP**	**09 00 08.7**	**-0.3**	
	comp=Z,0.4nm,0.6s,baz=339,slow=3.5,SNR=2.4							
WRA				ScP	**ScP**	**09 03 54.7**	**-2.7**	
	comp=Z,0.5nm,0.8s,baz=338,slow=3.9,SNR=2.5							
WB2	**Warramunga Arr**	**40.83**	**161**	P	**P**	**08 58 05.8**	**-2.5**
WR0	**Warramunga Arr**	**40.91**	**161**	P	**P**	**08 58 06.5**	**-2.3**
MK31	**Makanchi Array**	**42.20**	**320**	P	**P**	**08 58 20.0**	**+0.7**
MK31				IAmb	IAmb	08 58 21.6		
	comp=Z,5.8nm,0.7s							
MKAR	**Makanchi Array**	**42.20**	**320**	P	**P**	**08 58 21.3**	**+2.0**
	comp=Z,6.5nm,0.6s,baz=115,slow=9.8,SNR=23							
MKAR				PcP	**PcP**	**09 00 13.9**	**+0.7**	
	comp=Z,1.3nm,0.7s,baz=101,slow=6.3,SNR=3.6							
H11S3	**WAKE ISLAND Hy**	**42.85**	**83**	T	T	09 44 19.9		
	baz=279,slow=75,SNR=119							
H11S1	**WAKE ISLAND Hy**	**42.86**	**83**	T	T	09 44 19.1		
	baz=279,slow=75,SNR=158							
H11S2	**WAKE ISLAND Hy**	**42.87**	**83**	T	T	09 44 19.7		
	baz=279,slow=75,SNR=101							
H11N1	**WAKE ISLAND Hy**	**42.88**	**81**	T	T	09 44 21.3		
	baz=277,slow=75,SNR=462							
H11N2	**WAKE ISLAND Hy**	**42.88**	**81**	T	T	09 44 20.5		
	baz=277,slow=75,SNR=200							
H11N3	**WAKE ISLAND Hy**	**42.90**	**81**	T	T	09 44 22.5		
	baz=277,slow=75,SNR=270							
KSH	**Kashi**	**43.95**	**308**	P	**P**	**08 58 38.3**	**+4.7**
KSH				sP	sP	08 58 54.0	+11	
KSH				PP	**PcP**	**09 00 23.5**	**+4.1**	
KSH				S	**S**	**09 05 09.6**	**+5.4**	
KSH				SS	**SS**	**09 08 21.1**	**0.0**	
KSH				pmax	pmax			
	comp=Z,51nm,1.0s							
KSH				pmax	pmax			
	comp=Z,190nm,4.2s							
KSH				LR	LR			
	comp=Z,350nm,9.8s							
KSH				LR	LR			
	comp=Z,250nm,7.2s							
KSH				LR	LR			
	comp=Z,210nm,11.2s							
PETK	**Petropavlovsk-**	**44.08**	**31**	P	**P**	**08 58 34.8**	**+0.4**
	comp=Z,3.5nm,0.8s,baz=216,slow=7.4,SNR=5.0							
AS31	**Alice Springs**	**44.23**	**163**	P	**P**	**08 58 35.2**	**-0.6**
ASAR	**Alice Springs**	**44.23**	**163**	P	**P**	**08 58 34.2**	**-1.6**
	comp=Z,0.7nm,0.3s,baz=343,slow=6.7,SNR=46							
ASAR				ScP	**ScP**	**09 04 09.9**	**-1.1**	
	comp=Z,0.7nm,0.9s,baz=332,slow=4.6,SNR=6.2							
ZALV	**Zalesovo Beam**	**44.65**	**330**	P	**P**	**08 58 39.8**	**+1.0**
	comp=Z,5.0nm,0.7s,baz=123,slow=8.3,SNR=5.8							
NIL	**Nilore**	**45.07**	**299**	P	**P**	**08 58 41.0**	**-1.6**
KURK	**Kurchatov**	**46.16**	**323**	P	**P**	**08 58 48.8**	**-2.1**
KURK				IAmb	IAmb	08 58 54.5		
	comp=Z,11nm,1.1s							
ARSB	**Arslanbob**	**46.59**	**309**	P	**P**	**08 58 54.4**	**-0.2**
GAR	**Garm**	**48.14**	**306**	P	**P**	**08 59 05.5**	**-1.2**
KK31	**Karatay Array**	**48.79**	**311**	P	**P**	**08 59 10.3**	**-1.2**
CHGR	**Chuyangaron**	**48.98**	**305**	P	**P**	**08 59 11.6**	**-1.6**
BRVK	**Borovoye**	**51.83**	**323**	P	**P**	**08 59 32.8**	**-1.6**
BRVK				IAmb	IAmb	08 59 37.0		
	comp=Z,6.8nm,0.8s							
TIXI	**Tiksi**	**52.76**	**3**	P	**P**	**08 59 40.4**	**-0.5**
TIXI				IAmb	IAmb	08 59 42.2		
	comp=Z,10nm,1.2s							
STKA	**Stephens Creek**	**54.27**	**159**	P	**P**	**08 59 52.8**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=29,slow=13,SNR=2.1							
STKA	**Stephens Creek**	**54.27**	**159**	P	**P**	**08 59 52.0**	**-0.5**
NRIK	**Noril'sk**	**54.35**	**346**	P	**P**	**08 59 53.6**	**+1.0**
	comp=Z,14nm,0.7s,baz=140,slow=4.9,SNR=5.8							
BILL	**Bilibino**	**56.43**	**19**	P	**P**	**09 00 06.7**	**-0.9**
BILL				IAmb	IAmb	09 00 24.1		
	comp=Z,6.1nm,0.9s							
GEYT	**Alibeck**	**57.59**	**303**	P	**P**	**09 00 18.7**	**+2.3**
	comp=Z,0.9nm,0.4s,baz=188,slow=4.5,SNR=5.9							
ARU	**Arti**	**59.30**	**325**	P	**P**	**09 00 27.9**	**0.0**
RDOG	**Red Dog Mine**	**67.13**	**23**	P	**P**	**09 01 20.0**	**+0.3**
RDOG				IAmb	IAmb	09 01 24.3		
	comp=Z,4.6nm,0.9s							
CNBA	**Chernabura Isl**	**68.36**	**38**	P	**P**	**09 01 26.8**	**-0.8**
KBZ	**Khabaz**	**68.82**	**310**	P	**P**	**09 01 31.1**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=151,slow=8.4,SNR=4.5							
CHGN	**Chignik**	**68.96**	**36**	P	**P**	**09 01 30.8**	**-0.5**
RAYN	**Ar Rayn**	**70.03**	**289**	P	**P**	**09 01 38.2**	**-0.5**
RSO	**Redoubt South**	**71.60**	**31**	P	**P**	**09 01 46.3**	**-1.4**
PPLA	**Purkeypile**	**71.61**	**29**	P	**P**	**09 01 47.0**	**-0.6**
PPLA				IAmb	IAmb	09 01 56.1		
	comp=Z,7.5nm,1.1s							
MLY	**Manley**	**72.01**	**26**	P	**P**	**09 01 50.6**	**+0.6**
MLY				IAmb	IAmb	09 01 52.9		
	comp=Z,7.5nm,0.9s							
CNPM	**China Poot**	**72.47**	**32**	P	**P**	**09 01 52.6**	**-0.1**
CNPM				IAmb	IAmb	09 01 55.8		
	comp=Z,6.6nm,1.2s							
BRLK	**Bradley Lake**	**72.61**	**32**	P	**P**	**09 01 53.3**	**-0.3**
BRLK				IAmb	IAmb	09 01 57.1		
	comp=Z,4.8nm,0.8s							
NEA	**Nenana**	**72.78**	**27**	P	**P**	**09 01 52.3**	**-2.2**
NEA				IAmb	IAmb	09 01 56.9		
	comp=Z,6.7nm,0.8s							
MCK	**McKinley**	**72.96**	**28**	P	**P**	**09 01 54.3**	**-1.3**
MCK				IAmb	IAmb	09 01 58.1		
	comp=Z,6.4nm,1.0s							
RC01	**Rabbit Creek A**	**72.98**	**31**	P	**P**	**09 01 55.1**	**-0.7**
RC01				IAmb	IAmb	09 01 59.9		
	comp=Z,4.2nm,1.0s							
RND	**Reindeer**	**73.05**	**28**	P	**P**	**09 01 56.0**	**-0.1**
WRH	**Wood River Hil**	**73.22**	**27**	P	**P**	**09 01 58.0**	**+1.0**
WRH				IAmb	IAmb	09 01 59.2		
	comp=Z,3.7nm,0.7s							
CCB	**Clear Creek Bu**	**73.31**	**27**	P	**P**	**09 01 58.0**	**+0.4**
SML	**Sawmill**	**73.54**	**30**	P	**P**	**09 01 56.6**	**-2.4**
SML				IAmb	IAmb	09 02 13.2		
	comp=Z,9.2nm,1.2s							
KNK	**Knik Glacier**	**73.54**	**30**	P	**P**	**09 01 58.1**	**-1.0**
ILAR	**Eielson Array**	**73.68**	**27**	P	**P**	**09 01 59.2**	**-0.5**
	comp=Z,1.6nm,0.9s,baz=278,slow=5.4,SNR=7.4							
HDA	**Harding Lake**	**73.72**	**27**	P	**P**	**09 01 58.6**	**-1.4**
HDA				IAmb	IAmb	09 02 01.1		
	comp=Z,7.1nm,1.3s							
DHY	**Denali Highway**	**73.76**	**28**	P	**P**	**09 02 00.8**	**+0.3**
DHY				IAmb	IAmb	09 02 18.3		
	comp=Z,6.9nm,1.4s							
SCM	**Sheep Creek Mo**	**74.00**	**30**	P	**P**	**09 02 02.0**	**+0.2**
PRP	**Porcupine Dome**	**74.11**	**26**	P	**P**	**09 02 01.0**	**-1.5**
ARCES	**ARCESS Array B**	**74.31**	**339**	P	**P**	**09 02 03.1**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=66,slow=6.8,SNR=7.5							
FIA1	**FINESS Array S**	**75.91**	**330**	P	**P**	**09 02 10.8**	**-1.9**
FIA1				IAmb	IAmb	09 02 14.4		
	comp=Z,5.3nm,0.8s							
FINES	**FINESS Array B**	**75.91**	**330**	P	**P**	**09 02 13.1**	**+0.3**
	comp=Z,4.0nm,0.7s,baz=59,slow=5.4,SNR=12							
EGAK	**Eagle**	**76.07**	**26**	P	**P**	**09 02 13.8**	**+0.2**
EGAK				IAmb	IAmb	09 02 16.8		
	comp=Z,7.9nm,1.2s							
AKASG	**Malin Array Be**	**76.78**	**319**	P	**P**	**09 02 17.2**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=61,slow=6.1,SNR=4.8							
DAWY	**Dawson**	**77.01**	**26**	P	**P**	**09 02 19.2**	**+0.2**
DAWY				IAmb	IAmb	09 02 21.6		
	comp=Z,3.2nm,0.8s							
ELL	**Elmali**	**79.94**	**305**	P	**P**	**09 02 35.3**	**-0.5**
WHY	**Whitehorse**	**80.10**	**29**	P	**P**	**09 02 35.2**	**-1.0**
WHY				IAmb	IAmb	09 02 38.8		
	comp=Z,6.4nm,1.1s							
BUR08	**Bucovina Ar. S**	**80.15**	**317**	P	**P**	**09 02 36.2**	**-0.5**
MLR	**Muntele Rosu**	**80.30**	**315**	LR	LR	09 42 59.5		
	comp=Z,642nm,20.1s,baz=234,slow=39							
MLR	**Muntele Rosu**	**80.30**	**315**	P	**P**	**09 02 35.6**	**-1.9**
MLR				IAmb	IAmb	09 02 39.1		
	comp=Z,5.2nm,0.8s							
C36M	**Paulatuk**	**80.55**	**19**	P	**P**	**09 02 37.8**	**-0.4**
C36M				IAmb	IAmb	09 02 54.7		
	comp=Z,7.9nm,1.4s							
NC405	**NORSAR Array S**	**82.53**	**333**	P	**P**	**09 02 48.3**	**-0.7**
NC303	**NORSAR Array S**	**82.64**	**333**	P	**P**	**09 02 48.8**	**-0.7**
NB2	**NORSAR Subarra**	**82.78**	**333**	P	**P**	**09 02 49.7**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=64,slow=5.3							
NOA	**NORSAR Array B**	**82.78**	**333**	P	**P**	**09 02 50.0**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=64,slow=5.1,SNR=8.9							
NOA				LR	LR	09 42 44.7		
	comp=Z,181nm,21.9s,baz=205,slow=38							
NC204	**NORSAR Array S**	**82.87**	**333**	P	**P**	**09 02 51.1**	**+0.4**
VTS	**Vitosha**	**83.05**	**313**	P	**P**	**09 02 52.0**	**-0.2**
VTS				IAmb	IAmb	09 02 53.9		
	comp=Z,6.9nm,1.1s							
LIT	**Litokhoron**	**84.43**	**310**	P	**P**	**09 02 58.7**	**-0.4**
LIT				IAmb	IAmb	09 03 01.5		
	comp=Z,6.3nm,1.2s							
GERES	**GERESS Array B**	**86.86**	**321**	P	**P**	**09 03 11.7**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=66,slow=1.6,SNR=4.4							
YKA	**Yellowknife Ar**	**87.60**	**23**	P	**P**	**09 03 15.0**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=314,slow=4.3,SNR=32							
MBAR	**Mbarara**	**90.76**	**270**	LR	LR	09 42 46.7		
	comp=Z,984nm,21.6s,baz=314,slow=34							
MATP	**Matopo**	**99.01**	**252**	LR	LR	09 44 31.3		
	comp=Z,486nm,21.3s,baz=133,slow=33							

ATA ***22*** *08:53:17.4±6.5, 38.67°N×43.20°E, h27km±24km, ML1.8, MW3.4*
ISK ***22*** *08:53:19.9, 38.64°N×43.15°E, h5km, ML2.1/5*
ISC 22 08:53:19.9±1.0, **38.67°N**±0.03°×**43.12°E**±0.03, **h10**km±10km, **n12**, σ1°**72**/**23**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.22**	**108**	PG	**Pg**	**08 53 25.2**	**+0.7**
VANB				SG	**Sg**	**08 53 29.1**	**+1.4**
TVAN	**Van**	**0.26**	**121**	*eP*	**Pg**	**08 53 25.0**	**-0.3**
TVAN				IAML		08 53 29.5	
	comp=Z,187nm,0.4s						
TVAN				*eS*	**Sg**	**08 53 29.7**	**+0.8**
AKDM	**Akdamar-Van**	**0.35**	**198**	PG	**Pg**	**08 53 27.2**	**+0.2**
AKDM				SG	**Sb**	**08 53 32.4**	**-1.7**
GEVA	**Gevas**	**0.36**	**188**	*eP*	**Pg**	**08 53 27.0**	**0.0**
GEVA				*eS*	**Sb**	**08 53 35.2**	**+1.0**
GEVA				IAML		08 53 36.8	
	comp=Z,120nm,0.6s						
TUTA	**Tutak**	**0.77**	**342**	*eP*	**Pb**	**08 53 36.0**	**+0.3**
TUTA				*eS*	**Sg**	**08 53 42.9**	**-2.1**
TUTA				*eS*	**Sb**	**08 53 43.2**	**-3.0**
TUTA				IAML		08 53 49.8	
	comp=Z,26nm,0.2s						
CLDR	**Caldiran**	**0.78**	**52**	PG	**Pb**	**08 53 35.6**	**-0.2**
CLDR				SG	**Sb**	**08 53 46.9**	**+0.3**
BLIS	**Bitlis-Merkez**	**0.83**	**253**	*eP*	**Pb**	**08 53 37.3**	**+0.8**
BLIS				*eS*	**Sb**	**08 53 48.8**	**+1.1**
BLIS				IAML		08 53 52.7	
	comp=Z,26nm,0.7s						
GURO	**Guroymak-BITLI**	**0.86**	**263**	PG	**Pb**	**08 53 37.5**	**+0.5**
GURO				SG	**Sb**	**08 53 50.2**	**+1.5**
AGRB	**Hanur-Agry**	**0.91**	**354**	PG	**Pb**	**08 53 38.7**	**+0.7**
BASK	**Baskale_VAN**	**0.93**	**131**	*eP*	Pg	08 53 31.2	-6.5
BASK				IAML		08 53 47.0	
	comp=Z,24nm,0.1s						
BASK				*eS*	**Sg**	**08 53 47.5**	**-2.3**
MUSM	**Mu-Merkez**	**1.26**	**273**	*eP*	**Pn**	**08 53 41.7**	**-2.0**
MUSM				IAML		08 53 51.2	
	comp=Z,3.6nm,0.3s						
MUSM				*eS*	**Sb**	**08 53 58.0**	**-2.2**
EATA	**Eleskirt**	**1.29**	**338**	*eP*	**Pg**	**08 53 46.0**	**+1.3**
EATA				*eS*	**Sn**	**08 54 05.6**	**+3.8**
EATA				IAML		08 54 06.7	
	comp=Z,1.9nm,0.1s						

NEIC ***22*** *08:54:53.7±1.4, 21.43°S±0.08°×66.9°W±0.2, h264km±11km, mb4.0/4, Error ellipse: s-maj=22.1km s-min=11.3km az=94.0*
IDC ***22*** *08:54:57.5±9.3, 20.53°S×65.07°W, h176km±67km, mb3.5/1, mb1 3.4/2, mb1mx3.0/22, mbtmp3.9/2, Error ellipse: s-maj=135.1km s-min=58.1km az=24.0*
ISC 22 08:54:52.8±0.8, **21.42°S**±0.07°×**66.8°W**±0.2, **h250**km, **n35**, σ1°**38**/**36**, **Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.28**	**238**	Pn	**Pn**	**08 55 39.7**	**+1.4**
PB01	**IPOC Station P**	**2.52**	**278**	Pn	**Pn**	**08 55 41.5**	**+1.0**
PB08	**IPOC Station P**	**2.53**	**300**	Pn	**Pn**	**08 55 42.2**	**+1.3**
GO01	**Chusmiza**	**2.83**	**307**	Pn	**Pn**	**08 55 45.1**	**+1.0**
PB06	**IPOC Station P**	**2.86**	**243**	Pn	**Pn**	**08 55 46.2**	**+2.2**
PB07	**IPOC Station P**	**2.88**	**263**	Pn	**Pn**	**08 55 45.3**	**+1.1**
PB15	**IPOC Station P**	**3.04**	**234**	Pn	**Pn**	**08 55 47.5**	**+1.5**
PB11	**IPOC Station P**	**3.13**	**301**	Pn	**Pn**	**08 55 47.9**	**+0.9**
PATCX	**Punta Patache**	**3.18**	**280**	Pn	**Pn**	**08 55 48.2**	**+0.9**
PB04	**IPOC Station P**	**3.23**	**253**	Pn	**Pn**	**08 55 49.5**	**+1.5**
TA01	**Diego Aracena**	**3.26**	**284**	Pn	**Pn**	**08 55 48.9**	**+0.8**
MNMC	**Minye Minye**	**3.46**	**311**	Pn	**Pn**	**08 55 51.9**	**+1.1**
PSGCX	**Pisagua**	**3.59**	**300**	Pn	**Pn**	**08 55 52.4**	**+0.3**
PB16	**IPOC Station P**	**3.98**	**320**	Pn	**Pn**	**08 55 58.7**	**+1.7**
PB10	**IPOC Station P**	**4.04**	**238**	Pn	**Pn**	**08 55 58.7**	**+1.6**
GO02	**Mina Guanaco**	**4.52**	**214**	Pn	**Pn**	**08 56 03.4**	**+0.3**
LPAZ	**La Paz**	**5.25**	**346**	P	**Pn**	**08 56 13.6**	**+1.2**
	1.3nm,0.3s,baz=158,slow=11,SNR=42						
LPAZ				S	**S**	**08 57 13.7**	**-2.1**
	baz=72,slow=8.4,SNR=1.6						
LPAZ	**La Paz**	**5.25**	**346**		**Pn**	**08 56 13.1**	**+0.7**
AC01	**Pan de Azucar**	**5.85**	**216**	Pn	**Pn**	**08 56 20.2**	**+1.2**
GO03	**Copiap**	**6.89**	**206**	Pn	**Pn**	**08 56 32.7**	**+0.5**
AC04	**Llanos de Chal**	**7.79**	**209**	Pn	**Pn**	**08 56 43.5**	**+0.1**
AC05	**El Transito**	**8.03**	**202**	Pn	**Pn**	**08 56 47.7**	**+1.2**
CO01	**Juntas del Tor**	**9.02**	**198**	Pn	**Pn**	**08 57 00.9**	**+1.6**
GO04	**Tololo Observa**	**9.43**	**202**	Pn	**Pn**	**08 57 04.5**	**+0.1**
CO03	**El Pedregal**	**10.01**	**200**	Pn	**Pn**	**08 57 12.7**	**+1.2**
CO02	**Combarbal**	**10.44**	**200**	Pn	**Pn**	**08 57 18.5**	**+1.4**
VA03	**San Esteban**	**11.78**	**196**	Pn	**Pn**	**08 57 33.7**	**-0.1**
MT02	**Curacav**	**12.40**	**197**	Pn	**Pn**	**08 57 41.5**	**+0.1**
BO02	**Sierra Bellavi**	**13.78**	**194**		**Pn**	**08 57 57.6**	**-0.7**
BI02	**San Fabin de**	**15.68**	**193**	P	**P**	**08 58 19.9**	**-0.2**
BI02				IAmb	IAmb	08 58 24.2	
	comp=Z,13nm,1.5s						
RUSC	**La Rusia**	**27.83**	**347**	P	**P**	**09 00 21.2**	**+1.3**
QSPA	**South Pole Qui**	**68.78**	**180**	P	**P**	**09 05 26.9**	**-2.9**
QSPA				IAmb	IAmb	09 05 32.2	
	comp=Z,0.5nm,1.1s						
TOA0	**Torodi Ar. Sit**	**75.49**	**69**	P	**P**	**09 06 12.1**	**+1.9**
TOA0				IAmb	IAmb	09 06 21.9	
	comp=Z,8.9nm,1.4s						
TORD	**Torodi Ar. Bea**	**75.49**	**69**	P	**P**	**09 06 12.3**	**+2.1**
	comp=Z,1.0nm,0.7s,baz=254,slow=5.4,SNR=11						
SONM	**Songino Array**	**153.08**	**10**	PKPbc	**PKPab**	**09 14 31.5**	**-1.7**
	comp=Z,2.1nm,0.4s,baz=325,slow=2.3,SNR=2.8						

ATA ***22*** *09:05:04.3±1.3, 40.13°N×37.83°E, h178km±34km, ML2.5, MW2.9*
DDA ***22*** *09:05:20.7, 39.09°N×37.33°E, h7km±5km, ML1.7*
ISK ***22*** *09:05:21.6, 39.00°N×37.35°E, h5km, ML2.1/8, Suspected Mining explosion.*
ISC 22 09:05:20.7±0.8, **39.10°N**±0.03°×**37.36°E**±0.02, **h0**km, **n18**, σ1°**62**/**28**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUKAN	**kangal_SIVAS**	**0.23**	**20**	*i* P	**Pg**	**09 05 26.0**	**+0.9**
CUKAN				*i* S	**Sg**	**09 05 31.9**	**+3.8**
CUGUR	**Gurin_SVAS**	**0.38**	**191**	*i* P	**Pg**	**09 05 27.8**	**-0.2**
CUGUR				*i* S	**Sg**	**09 05 34.5**	**+1.5**
CUGUR				IAML		09 05 37.0	
	comp=N,307nm,0.3s						
CUGUR				IAML		09 05 37.0	
	comp=E,335nm,0.3s						
CUALT	**Altinyayla-SIV**	**0.51**	**290**	*i* P	**Pg**	**09 05 27.8**	**-2.6**
CUALT				*i* S	**Sg**	**09 05 37.5**	**+0.5**
CUALT				IAML		09 05 42.0	
	comp=E,50nm,0.6s						
CUALT				IAML		09 05 42.0	
	comp=N,39nm,0.3s						
HEKM	**Malatya_Hekimh**	**0.51**	**115**	*i* P	**Pg**	**09 05 30.8**	**+0.2**
HEKM				*i* S	**Sb**	**09 05 40.0**	**-0.9**
HEKM				IAML		09 05 50.0	
	comp=N,37nm,0.5s						
HEKM				IAML		09 05 51.0	
	comp=E,32nm,0.6s						
DARE	**Darende-Malaty**	**0.54**	**170**	PG	**Pg**	**09 05 31.2**	**+0.2**
DARE				SG	**Sg**	**09 05 38.0**	**+0.1**
ARPR	**Arapgir-MALATY**	**0.76**	**90**	PG	**Pb**	**09 05 36.8**	**-0.1**
ARPR				SG	**Sn**	**09 05 49.7**	**-1.4**
ELBS	**KAHRAMANMARAS**	**0.80**	**193**	*i* P	**Pg**	**09 05 36.1**	**+0.1**
ELBS				*i* S	**Sg**	**09 05 46.8**	**+0.5**
ELBS				IAML		09 05 56.0	
	comp=E,42nm,1.0s						
ELBS				IAML		09 05 56.0	
	comp=N,65nm,0.8s						
SVSK	**Karacayir**	**0.86**	**341**	PG	**Pn**	**09 05 40.4**	**+0.3**
KEMA	**Kemaliye**	**0.89**	**79**	*eP*	Pg	09 05 32.0	-5.9
KEMA				*eS*	**Sn**	**09 05 54.5**	**+0.2**
KEMA				IAML		09 05 56.9	
	comp=Z,2.6nm,0.3s						
KEMA	**Kemaliye**	**0.89**	**79**	*i* S	**Sg**	**09 05 50.1**	**+0.6**
AKCD	**Akcadag**	**0.92**	**151**	*i* P	**Pg**	**09 05 38.8**	**+0.5**
AKCD				*i* S	**Sb**	**09 05 52.6**	**+0.3**
AKCD				IAML		09 05 57.0	
	comp=E,26nm,0.7s						
AKCD				IAML		09 06 01.0	
	comp=N,39nm,1.0s						
CUSAR	**Sarkisla-SIVAS**	**0.93**	**290**	*i* P	**Pg**	**09 05 37.9**	**-0.5**
CUSAR				*i* S	**Sb**	**09 05 52.7**	**0.0**
CUSAR				IAML		09 06 00.0	
	comp=N,14nm,0.6s						
SARI	**SarD1z-Kayseri**	**1.01**	**227**	PG	**Pg**	**09 05 40.4**	**+0.3**
SARI				SG	**Sb**	**09 05 54.6**	**-0.6**
REFA	**Refahiye_ERZN**	**1.13**	**74**	*eP*	Pg	09 05 31.7	-11
REFA				*eS*	**Sg**	**09 05 51.1**	**-5.9**
REFA				IAML		09 05 52.1	
	comp=Z,4.0nm,0.1s						
MALT	**Malatya**	**1.14**	**133**	PN	**Pn**	**09 05 44.1**	**0.0**
BNN	**Bunyan**	**1.21**	**259**	PN	**Pn**	**09 05 45.8**	**+0.8**
PTK	**Pertek**	**1.59**	**97**	PN	**Pg**	**09 05 52.3**	**+1.0**
YOZ	**Yozgat**	**1.67**	**289**	PN	**Pg**	**09 05 53.6**	**+0.8**

DSN ***22*** *09:25:55.0±1.0, 27.89°N×54.36E, h10km, ML4.2/6, Error ellipse: s-maj=19.5km s-min=6.2km az=39.0*
IDC ***22*** *09:26:00.8±0.7, 27.06°N×54.37E, h0km, mb3.9/17, mb1 4.0/18, mb1mx3.8/44, mbtmp3.9/18, ML3.9/1, Error ellipse: s-maj=17.5km s-min=15.1km az=172.0*
TEH ***22*** *09:26:02.5, 27.13°N×54.50E, h9km, ML3.8*
OMAN ***22*** *09:26:04.2±2.3, 27.53°N×54.88E, h23km±30km, ml3.8/11, ms2.9/1, Error ellipse: s-maj=27.2km s-min=9.9km az=155.0*
NEIC ***22*** *09:26:06.3±2.1, 27.1°N±0.1°×54.28E±0.03, h38km±9km, Error ellipse: s-maj=16.3km s-min=3.7km az=185.0*
ISC 22 09:26:03.9±0.5, **27.13°N**±0.04°×**54.37°E**±0.05, **h18**km, **n79**, σ1°**57**/**86**, **mb3.9**/**19**, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd

JMDO	**Jabal Madar**	**5.83**	**144**	P		**Pn**	**09 27 30.8**	**+1.3**
	SNR=16							
JMDO				S		**Sn**	**09 28 38.5**	**+2.5**
IZEF	**Zefreh**	**6.01**	**343**	*e*Pn		**Pn**	**09 27 30.9**	**-1.3**
ANAR	**Anarak**	**6.06**	**355**	*e*Pn		**Pn**	**09 27 33.4**	**+0.6**
WBK	**Wadi Bani Khal**	**6.14**	**136**	P		**Pn**	**09 27 33.6**	**-0.2**
	SNR=8.8							
NHDN	**Nehbandan**	**6.53**	**48**	*e*Pn		**Pn**	**09 27 39.8**	**+0.6**
TKDS	**Koohdasht(Taba**	**6.88**	**20**	*e*Pn		**Pn**	**09 27 44.3**	**+0.2**
MHTO	**MHTO**	**6.94**	**151**	P		**Pn**	**09 27 45.5**	**+0.6**
	SNR=27							
AFRZ	**Afriz**	**7.44**	**31**	*e*Pn		**Pn**	**09 27 53.1**	**+1.3**
IANJ	**Anjilo**	**8.32**	**357**	*e*Pn		**Pn**	**09 28 04.7**	**+0.8**
RAYN	**Ar Rayn**	**8.79**	**248**			**Pn**	**09 28 09.2**	**-1.1**
KK31	**Karatay Array**	**20.63**	**35**			Pn	09 30 43.8	-1.0
ARSB	**Arslanbob**	**20.85**	**42**			**P**	**09 30 45.9**	**+1.0**
ARSB				IAmb		IAmb	09 30 46.6	
	comp=Z,10nm,0.7s							
BRTR	**Keskin Array B**	**21.32**	**311**	P		**P**	**09 30 50.4**	**+0.4**
	comp=Z,2.4nm,0.6s,baz=130,slow=12,SNR=9.7							
AAK	**Ala-Archa**	**22.54**	**41**	P		**P**	**09 31 02.6**	**-0.4**
	comp=Z,2.0nm,0.6s,baz=229,slow=9.1,SNR=5.1							
IDI	**Anoyia**	**26.42**	**295**	P		**P**	**09 31 40.2**	**+0.4**
	comp=Z,3.5nm,0.4s,baz=80,slow=11,SNR=6.9							
IDI	**Anoyia**	**26.42**	**295**	P		**P**	**09 31 40.1**	**+0.4**
MKAR	**Makanchi Array**	**29.46**	**41**	P		**P**	**09 32 06.5**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=245,slow=6.1,SNR=4.6							
ZALV	**Zalesovo Beam**	**34.91**	**32**	P		**P**	**09 32 54.3**	**-0.1**
	comp=Z,2.0nm,0.5s,baz=248,slow=11,SNR=7.9							
FINES	**FINESS Array B**	**39.21**	**339**	P		**P**	**09 33 29.9**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=148,slow=11,SNR=2.1							
GTA	**Gaotai**	**39.53**	**60**	*e*P		**P**	**09 33 35.6**	**+1.6**
GTA				pP		pP	09 33 39.3	-0.5
GTA				sP		sP	09 33 41.8	-0.2
GTA				pmax		pmax		
	comp=Z,5.0nm,1.0s							
CMAR	**Chiang Mai Arr**	**41.81**	**92**	P		**P**	**09 33 54.1**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=294,slow=8.8,SNR=1.5							
SONM	**Songino Array**	**45.19**	**48**	P		**P**	**09 34 20.8**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=265,slow=7.3,SNR=3.7							
ARCES	**ARCESS Array B**	**45.64**	**346**	P		**P**	**09 34 23.9**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=150,slow=7.3,SNR=1.4							
ESDC	**Sonseca Array**	**49.50**	**300**	P		**P**	**09 34 53.1**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=68,slow=7.4,SNR=6.2							
TORD	**Torodi Ar. Bea**	**51.03**	**265**	P		**P**	**09 35 04.7**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=66,slow=7.8,SNR=16							
MATP	**Matopo**	**53.51**	**211**	P		**P**	**09 35 23.7**	**0.0**
	comp=Z,2.0nm,0.5s,baz=32,slow=10,SNR=5.4							
DBIC	**Dimbokro**	**59.65**	**261**	P		**P**	**09 36 06.7**	**-0.8**
	comp=Z,2.1nm,0.5s,baz=45,slow=6.6,SNR=6.2							
BOSA	**Boshof**	**62.07**	**209**	P		**P**	**09 36 23.0**	**-0.7**
	comp=Z,1.9nm,0.7s,baz=54,slow=2.7,SNR=4.0							
FITZ	**Fitzroy Crossi**	**82.41**	**115**	P		**P**	**09 38 25.0**	**-0.4**
FITZ				IAmb		IAmb	09 38 42.1	
	comp=Z,4.7nm,1.4s							
YKA	**Yellowknife Ar**	**90.25**	**355**	P		**P**	**09 39 03.4**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=13,slow=5.6,SNR=1.9							
WRA	**Warramunga Arr**	**90.44**	**112**	P		**P**	**09 39 03.8**	**-1.1**
	comp=Z,0.6nm,0.9s,baz=306,slow=4.1,SNR=2.6							
ASAR	**Alice Springs**	**91.87**	**116**	P		**P**	**09 39 09.8**	**-1.7**
	comp=Z,0.3nm,0.8s,baz=308,slow=4.6,SNR=2.0							

DJA ***22*** *10:01:20.2±1.0,4°N±6°×12°5E±°, h296km±7km, M3.9/7, mB4.5/1, mb3.7/2, MLv4.0/7, Mw(mB)3.7/1*

IDC ***22*** *10:01:25.2±5.8, 3°73N×124°35E, h412km±70km, mb3.1/6, mb1 3.2/6, mb1mx2.9/41, mbtmp3.9/6, Error ellipse: s-maj=75.9km s-min=15.8km az=65.0*

ISC 22 10:01:18.4±0.8,4°2N±0°1×125°6E±0°3, h350km, n10, σ1ᵍ93/13, mb3.4/6, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KCP	**Kidapawan**	**2.84**	**350**	⇓ *i* P		**Pn**	**10 02 16.0**	**-0.5**
KCP				*i* S		**S**	**10 03 00.6**	**-2.6**
TNTI	**Ternate**	**3.83**	**153**	P		**Pn**	**10 02 24.8**	**-0.9**
TNTI				S		**S**	**10 03 16.7**	**-3.3**
LBMI	**Labuha**	**5.16**	**158**	P		**Pn**	**10 02 38.9**	**-1.0**
	0.7nm906nm38nm,0.9s							
BATI	**Baumata**	**14.43**	**188**	P		**P**	**10 04 26.1**	**-0.9**
	7.7nm,0.3s,baz=305,slow=19,SNR=4.4							
FITZ	**Fitzroy Crossi**	**22.15**	**180**	P		**P**	**10 05 45.1**	**-1.0**
	1.8nm,0.5s,baz=5.3,slow=9.9,SNR=14							
WRA	**Warramunga Arr**	**25.47**	**161**	P		**P**	**10 06 17.4**	**+1.3**
	0.7nm,0.3s,baz=331,slow=11,SNR=30							
WRA				PcP		**PcP**	**10 09 37.1**	**-0.5**
	0.3nm,0.8s,baz=329,slow=2.1,SNR=1.7							
ASAR	**Alice Springs**	**28.85**	**164**	P		**P**	**10 06 47.5**	**+1.5**
	0.3nm,0.3s,baz=340,slow=7.3,SNR=11							
STKA	**Stephens Creek**	**38.97**	**158**	P		**P**	**10 08 15.2**	**+3.1**
	1.0nm,0.5s,baz=341,slow=8.4,SNR=4.5							
SONM	**Songino Array**	**46.51**	**342**	P		**P**	**10 09 13.2**	**+1.2**
	0.6nm,0.5s,baz=150,slow=6.1,SNR=2.0							
MKAR	**Makanchi Array**	**56.54**	**326**	P		**P**	**10 10 24.7**	**-0.8**
	1.3nm,0.3s,baz=122,slow=7.3,SNR=33							

IDC ***22*** *10:04:34.4±0.6, 1°.80N×89°.64E, h0km, mb4.5/28, mb1 4.6/30, mb1mx4.5/42, mbtmp4.5/30, ML3.9/2, MS3.6/5, Ms1 3.6/5, ms1mx3.3/43, Error ellipse: s-maj=21.8km s-min=12.7km az=35.0*

NEIC ***22*** *10:04:36.4±1.7, 1°.8N±0°.1×89°.62E±0°.08, h10km±1km, mb4.8/34, Error ellipse: s-maj=17.3km s-min=13.5km az=194.0*

ISC 22 10:04:36.6±0.5, 1°90N±0°08×89°71E±0°06, h10km, n137, σ1ᵍ77/136, mb4.7/54, MS3.8/4, 15C-4D, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**6.63**	**85**	P		**Pn**	**10 06 17.8**	**+3.7**
	1.0nm115nm,0.6s							
MLSI	**Meulaboh, Aceh**	**7.08**	**70**	P		**Pn**	**10 06 22.9**	**+2.5**
	0.7nm4μm164nm,0.7s							
GSI	**Gunungsitoli**	**7.88**	**94**	P		**Pn**	**10 06 34.0**	**+2.6**
	0.9nm128nm,0.5s							
GSI	**Gunungsitoli**	**7.88**	**94**	Pn		**Pn**	**10 06 32.5**	**+1.1**
GSI				Sn		**Sn**	**10 07 57.3**	**-3.5**
LHMI	**Lhok Sumawe**	**7.94**	**65**	Pn		**Pn**	**10 06 34.6**	**+2.4**
KCSI	**Kotacane, Aceh**	**8.21**	**78**	P		**Pn**	**10 06 38.8**	**+2.9**
	1μm83nm,0.7s							
PBSI	**Pulau Batu**	**8.78**	**103**	P		**Pn**	**10 06 46.2**	**+2.5**
	84nm,0.6s							
RPSI	**Rantau Prapat**	**9.24**	**85**			**Pn**	**10 06 49.3**	**-0.7**
RPSI						**Sn**	**10 08 28.1**	**-6.0**
RPSI	**Rantau Prapat**	**9.24**	**85**			**Pn**	**10 06 52.1**	**+2.2**
PSI	**Prapat**	**9.25**	**84**	Pn		**Pn**	**10 06 49.3**	**-0.9**
	1.1nm,0.3s,baz=171,slow=1.6,SNR=5.6							
PSI				Sn		**Sn**	**10 08 28.1**	**-6.5**
	0.7nm,0.3s,baz=180,slow=14,SNR=1.8							
PSI				LR		LR	10 10 43.3	
	comp=Z,454nm,18.9s,baz=272,slow=40							
SISI	**Saibi**	**9.91**	**109**	P		**Pn**	**10 07 01.3**	**+2.1**
	30nm,0.9s							
MNSI	**Mandailing Nat**	**9.93**	**96**	P		**Pn**	**10 07 02.3**	**+2.9**
KULM	**Kulim**	**11.43**	**73**			**Pn**	**10 07 21.3**	**+1.4**
IPM	**Ipoh**	**11.58**	**77**	Pn		**Pn**	**10 07 24.0**	**+1.9**
MDSI	**Maura Dua**	**15.79**	**114**	P		**P**	**10 08 22.1**	**-0.9**
	989nm7.5nm,0.7s							
PBKT	**Sadao Pong**	**18.32**	**37**	P		**P**	**10 08 53.2**	**+2.2**
CM31	**Chiang Mai Arr**	**18.78**	**28**			**Pn**	**10 08 58.5**	**+1.8**
CMAR	**Chiang Mai Arr**	**18.78**	**28**	P		**Pn**	**10 08 58.5**	**+1.8**
	0.1nm,0.3s,baz=219,slow=12,SNR=25							
CMAR				LR		LR	10 15 57.6	
	comp=Z,182nm,21.6s,baz=237,slow=36							
HYB	**Hyderabad**	**18.93**	**325**	*i* P		**Pn**	**10 08 59.0**	**+0.6**
HYB				*e*S		**Sn**	**10 12 29.0**	**-1.5**
CHTO	**Chiang Mai**	**19.09**	**28**	Pn		**Pn**	**10 09 02.3**	**+1.9**
H08S2	**Diego Garcia H**	**19.62**	**241**	T		T	10 29 16.1	
	baz=61,slow=76,SNR=127							
H08S3	**Diego Garcia H**	**19.62**	**241**	T		T	10 29 12.9	
	baz=61,slow=76,SNR=129							
H08S1	**Diego Carcia H**	**19.64**	**241**	T		T	10 29 09.7	
	baz=61,slow=76,SNR=121							
LEM	**Lembang**	**19.86**	**116**	LR		LR	10 16 36.5	
	comp=Z,152nm,19.2s,baz=186,slow=36							
DLV	**T Lat**	**21.12**	**61**	P		**P**	**10 09 23.1**	**+1.1**
DLV				IAmb		IAmb	10 09 25.6	
	comp=Z,56nm,0.9s							
SBUM	**Sibu**	**22.50**	**88**	P		**P**	**10 09 38.1**	**+1.6**
SLVN	**Son La**	**23.76**	**35**	P		**P**	**10 09 49.9**	**+0.4**
SLVN				IAmb		IAmb	10 09 52.9	
	comp=Z,30nm,0.9s							
ODAN	**Odare**	**24.92**	**355**	*e*P		**P**	**10 10 02.3**	**+2.0**
	comp=Z,29nm,0.6s							
RAMN	**Ramite**	**25.09**	**353**	*e*P		**P**	**10 10 04.4**	**+2.6**
	comp=Z,74nm,0.9s							
TAPN	**Taplejung**	**25.38**	**356**	*e*P		**P**	**10 10 06.5**	**+2.0**
	comp=Z,23nm,0.8s							
JIRN	**Jiri**	**25.84**	**353**	*e*P		**P**	**10 10 10.9**	**+2.1**
	comp=Z,85nm,0.9s							
PKI	**Pulchoki**	**25.86**	**351**	*e*P		**P**	**10 10 10.6**	**+1.7**
	comp=Z,21nm,0.7s							
PKIN	**Phulchoki**	**25.87**	**351**	*e*P		**P**	**10 10 10.7**	**+1.8**
	comp=Z,20nm,0.7s							
DMN	**Daman**	**25.95**	**351**	*e*P		**P**	**10 10 11.7**	**+2.1**
	comp=Z,50nm,1.0s							
KKN	**Kakani**	**26.09**	**351**	*e*P		**P**	**10 10 12.9**	**+2.0**
	comp=Z,47nm,0.8s							
KMI	**Kunming**	**26.29**	**27**	P		**P**	**10 10 15.9**	**+3.2**
KMI				pmax		pmax		
	comp=Z,26nm,1.0s							
KMI				pmax		pmax		
	comp=Z,62nm,4.4s							
KOLN	**Koldanda**	**26.39**	**348**	*e*P		**P**	**10 10 15.7**	**+2.2**
	comp=Z,21nm,0.7s							
KKM	**Kota Kinabalu**	**26.75**	**80**	P		**P**	**10 10 18.8**	**+1.9**
DANN	**Dangsing**	**26.91**	**348**	*e*P		**P**	**10 10 20.2**	**+1.8**
	comp=Z,26nm,0.7s							
LSA	**Lhasa**	**27.68**	**3**	P		**P**	**10 10 26.4**	**+0.9**
LSA				IAmb		IAmb	10 10 28.9	
	comp=Z,22nm,1.0s							
ENH	**Enshi**	**33.89**	**32**	P		**P**	**10 11 20.0**	**+0.2**
NIL	**Nilore**	**35.15**	**336**	P		**P**	**10 11 31.6**	**+1.0**
XAN	**Xi'an**	**36.67**	**27**	P		**P**	**10 11 43.8**	**+0.1**
XAN				pP		pwP	10 11 55.5	+5.7
XAN				pmax		pmax		
	comp=Z,20nm,0.8s							
XAN	**Xi'an**	**36.67**	**27**	P		**P**	**10 11 43.4**	**-0.3**
XAN				IAmb		IAmb	10 11 44.6	
	comp=Z,25nm,1.0s							
WHN	**Wuhan**	**36.83**	**37**	⇑ P		**P**	**10 11 46.8**	**+1.7**
NLAI	**Namlea**	**37.72**	**98**	P		**P**	**10 11 55.0**	**+2.2**
	comp=Z,12nm,1.1s							
GTA	**Gaotai**	**38.46**	**13**	⇑ P		**P**	**10 12 00.6**	**+1.7**
GTA				pP		pwP	10 12 04.3	-0.6
GTA				sP		sP	10 12 06.6	+4.6
GTA				pmax		pmax		
	comp=Z,34nm,1.0s							
GTA				pmax		pmax		
	comp=Z,70nm,4.7s							
GTA				LR		LR		
	comp=Z,95nm,18.7s							
GTA				LR		LR		
	comp=Z,140nm,19.0s							
KSH	**Kashi**	**39.48**	**343**	P		**P**	**10 12 06.9**	**-0.5**
KSH				pP		sP	10 12 11.4	+0.8
KSH				PP		**PnPn**	**10 13 41.9**	**+0.9**
KSH				S		**S**	**10 18 07.3**	**-2.4**
KSH				SS		**SS**	**10 20 54.8**	**-9.5**
KSH				ScS		**ScS**	**10 22 13.5**	**-2.9**
KSH				pmax		pmax		
	comp=Z,40nm,0.8s							
KSH				pmax		pmax		
	comp=Z,240nm,4.0s							
KSH				LR		LR		
	comp=Z,570nm,13.2s							
KSH				LR		LR		
	comp=Z,270nm,8.1s							
KSH				LR		LR		
	comp=Z,370nm,6.9s							
FITZ	**Fitzroy Crossi**	**40.57**	**121**	P		**P**	**10 12 14.8**	**-1.9**
	comp=Z,1.8nm,0.7s,baz=300,slow=7.8,SNR=7.7							
FITZ	**Fitzroy Crossi**	**40.57**	**121**	P		**P**	**10 12 16.5**	**-0.1**
GAR	**Garm**	**40.96**	**337**	P		**P**	**10 12 20.6**	**+1.0**
GAR				IAmb		IAmb	10 12 21.2	
	comp=Z,16nm,1.0s							
TARG	**Taragay, Kyrgy**	**41.08**	**346**	P		**P**	**10 12 22.8**	**+1.9**
TARG				IAmb		IAmb	10 12 23.5	
	comp=Z,16nm,0.9s							
ARSB	**Arslanbob**	**42.05**	**341**	IAmb		IAmb	10 12 31.1	
	comp=Z,14nm,0.8s							
FAKI	**Fak Fak**	**42.79**	**96**	P		**P**	**10 12 34.5**	**-0.4**
FAKI				IAmb		IAmb	10 12 35.4	
	comp=Z,14nm,0.8s							
H01W3	**Cape Leeuwin H**	**43.16**	**150**	T		T	10 58 25.3	
	baz=324,slow=75,SNR=56							
H01W2	**Cape Leeuwin H**	**43.17**	**150**	T		T	10 58 23.5	
	baz=324,slow=75,SNR=69							
H01W1	**Cape Leeuwin H**	**43.18**	**150**	T		T	10 58 18.6	
	baz=324,slow=75,SNR=64							
MK31	**Makanchi Array**	**45.19**	**353**	IAmb		IAmb	10 12 55.0	
	comp=Z,6.5nm,0.8s							
MKAR	**Makanchi Array**	**45.19**	**353**	P		**P**	**10 12 54.3**	**+0.6**
	comp=Z,7.0nm,0.7s,baz=168,slow=9.7,SNR=40							
GEYT	**Ailbeck**	**46.11**	**325**	P		**P**	**10 13 01.8**	**+0.6**
	comp=Z,4.0nm,0.6s,baz=155,slow=7.4,SNR=7.2							
RAYN	**Ar Rayn**	**47.88**	**300**	P		**P**	**10 13 14.0**	**-1.3**
RAYN				IAmb		IAmb	10 13 26.6	
	comp=Z,5.0nm,0.9s							
SONM	**Songino Array**	**47.98**	**15**	P		**P**	**10 13 17.2**	**+1.4**
	comp=Z,30nm,0.7s,baz=196,slow=9.0,SNR=110							
ULN	**Ulaanbaatar**	**48.19**	**16**	P		**P**	**10 13 18.1**	**+0.7**
ULN				IAmb		IAmb	10 13 19.4	
	comp=Z,9.1nm,0.9s							
WRA	**Warramunga Arr**	**48.85**	**119**	P		**P**	**10 13 23.3**	**+0.5**
	comp=Z,4.3nm,0.9s,baz=296,slow=8.5,SNR=18							
WRAB	**Tennant Creek**	**48.86**	**119**	P		**P**	**10 13 23.4**	**+0.6**
WRAB				IAmb		IAmb	10 13 24.4	
	comp=Z,13nm,1.2s							
WB2	**Warramunga Arr**	**48.86**	**119**	P		**P**	**10 13 23.4**	**+0.5**
WB2				IAmb		IAmb	10 13 24.5	
	comp=Z,9.7nm,1.2s							
WR0	**Warramunga Arr**	**49.03**	**119**	P		**P**	**10 13 24.6**	**+0.5**
WR0				IAmb		IAmb	10 13 37.2	
	comp=Z,8.3nm,1.0s							
KURK	**Kurchatov**	**49.54**	**351**	P		**P**	**10 13 27.8**	**+0.3**
KSRS	**Korea Array**	**49.84**	**40**	P		**P**	**10 13 29.9**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=225,slow=9.3,SNR=13							
ASAR	**Alice Springs**	**49.91**	**123**	P		**P**	**10 13 31.4**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=294,slow=7.5,SNR=13							
ZAA0	**Zalesovo Array**	**52.04**	**356**	IAmb		IAmb	10 13 47.3	
	comp=Z,27nm,1.2s							
ZALV	**Zalesovo Beam**	**52.04**	**356**	P		**P**	**10 13 46.3**	**0.0**
	comp=Z,10nm,0.6s,baz=181,slow=7.7,SNR=31							
BRVK	**Borovoye**	**53.48**	**346**	P		**P**	**10 13 56.8**	**-0.1**
USRK	**Ussurisk Ar.**	**56.31**	**36**	P		**P**	**10 14 17.2**	**-0.4**
	comp=Z,3.7nm,0.9s,baz=236,slow=5.7,SNR=5.1							
MJAR	**Matsushiro Arr**	**56.44**	**46**	P		**P**	**10 14 18.6**	**-0.2**
	comp=Z,4.2nm,0.8s,baz=233,slow=6.4,SNR=9.5							
KBZ	**Khabaz**	**58.77**	**322**	P		**P**	**10 14 35.0**	**0.0**
	comp=Z,8.5nm,0.9s,baz=126,slow=7.9,SNR=11							
KIV	**Kislovodsk**	**59.02**	**322**	P		**P**	**10 14 37.1**	**+0.2**
STKA	**Stephens Creek**	**59.50**	**129**	P		**P**	**10 14 39.2**	**-1.0**
	comp=Z,1.6nm,0.8s,baz=276,slow=7.7,SNR=4.1							
STKA	**Stephens Creek**	**59.50**	**129**	P		**P**	**10 14 39.4**	**-0.8**
ARU	**Arti**	**59.83**	**341**	P		**P**	**10 14 41.6**	**-0.5**
BRTR	**Keskin Array B**	**63.18**	**314**	P		**P**	**10 15 04.8**	**-0.4**
	comp=Z,3.4nm,0.6s,baz=130,slow=7.6,SNR=12							
BRTR				LR		LR	10 44 59.8	
	comp=Z,50nm,19.1s,baz=16,slow=38							
KIRV	**Kirov**	**64.70**	**338**	P		**P**	**10 15 14.3**	**-0.3**
	comp=Z,14nm,0.7s,baz=127,slow=12,SNR=3.9							
NRIK	**Noril'sk**	**67.34**	**359**	P		**P**	**10 15 30.2**	**-1.2**
	comp=Z,9.9nm,0.9s,baz=170,slow=5.4,SNR=11							
IDI	**Anoyia**	**68.48**	**307**	P		**P**	**10 15 39.1**	**-0.3**
TIRR	**Tirgusor**	**68.49**	**318**	⇓ P		**P**	**10 15 39.2**	**+0.1**
BOSA	**Boshof**	**68.70**	**238**	LR		LR	10 43 22.9	
	comp=Z,33nm,19.6s,baz=130,slow=34							
CFR	**Carcaliu**	**68.92**	**318**	⇑ P		**P**	**10 15 41.5**	**-0.4**
BISRR	**Bisoca**	**69.99**	**318**	⇓ P		**P**	**10 15 49.0**	**+0.4**
KLMR	**Klimovskoe**	**70.01**	**336**	*e*P		**P**	**10 15 46.7**	**-1.5**
KLMR				AMP			10 15 48.4	
	comp=Z,18nm,0.9s							
VRI	**Vrincioaia**	**70.08**	**319**	⇑ P		**P**	**10 15 49.7**	**+0.7**
PLOR	**Plostina**	**70.12**	**319**	⇑ P		**P**	**10 15 49.9**	**+0.6**
AKASG	**Malin Array Be**	**70.22**	**324**	P		**P**	**10 15 48.8**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=91,slow=4.7,SNR=13							
TESR	**Tescani**	**70.34**	**319**	⇑ P		**P**	**10 15 50.7**	**+0.1**
MLR	**Muntele Rosu**	**70.48**	**318**	⇑ P		**P**	**10 15 52.4**	**+0.7**
MLR	**Muntele Rosu**	**70.48**	**318**	P		**P**	**10 15 52.1**	**+0.4**
DOPR	**Dopca**	**71.00**	**318**	⇑ P		**P**	**10 15 54.0**	**-0.7**
ARR	**Arges**	**71.33**	**318**	⇑ P		**P**	**10 15 56.4**	**-0.3**
VTS	**Vitosha**	**71.54**	**314**	P		**P**	**10 15 57.0**	**-1.2**
VTS				IAmb		IAmb	10 15 58.5	
	comp=Z,6.2nm,0.8s							
BURAR	**Bucovina Array**	**71.62**	**320**	⇓ P		**P**	**10 15 59.2**	**+0.7**
BUR08	**Bucovina Ar. S**	**71.64**	**320**	P		**P**	**10 15 58.8**	**+0.2**
BUR08				IAmb		IAmb	10 16 00.0	
	comp=Z,7.6nm,0.8s							
GZR	**Gura Zlata**	**72.59**	**317**	⇑ P		**P**	**10 16 04.4**	**+0.1**
HERR	**Herculane**	**72.70**	**317**	⇑ P		**P**	**10 16 04.4**	**-0.5**
DRGR		**73.01**	**319**	⇑ P		**P**	**10 16 06.4**	**-0.4**
BZS	**Buzias**	**73.43**	**317**	⇓ P		**P**	**10 16 08.3**	**-0.9**
TRPA	**Tarpa**	**73.49**	**320**	⇑ P		**P**	**10 16 09.6**	**+0.2**
SIRR	**Siria**	**73.57**	**318**	⇑ P		**P**	**10 16 09.2**	**-0.9**
TIXI	**Tiksi**	**73.94**	**12**	P		**P**	**10 16 10.4**	**-1.3**
PDG	**Podgorica**	**74.36**	**314**	⇑ P		**P**	**10 16 12.9**	**-1.7**
PETK	**Petropavlovsk-**	**75.40**	**35**	P		**P**	**10 16 19.2**	**-1.4**
	comp=Z,1.1nm,0.6s,baz=212,slow=3.1,SNR=2.6							
FINES	**FINESS Array B**	**75.99**	**334**	P		**P**	**10 16 23.5**	**-0.2**
	comp=Z,5.5nm,0.7s,baz=133,slow=8.1,SNR=14							
DPC	**Dobruska-Polom**	**77.98**	**321**	*e*P		**P**	**10 16 35.8**	**+0.6**
DPC				*e*PCP		**PcP**	**10 16 47.3**	**+2.3**
GEC2	**GERESS Array S**	**79.38**	**319**	P		**P**	**10 16 43.1**	**+0.1**
GERES	**GERESS Array B**	**79.38**	**319**	P		**P**	**10 16 43.3**	**+0.3**
	comp=Z,7.7nm,0.8s,baz=104,slow=5.6,SNR=50							
ARCES	**ARCESS Array B**	**79.41**	**341**	P		**P**	**10 16 42.9**	**+0.3**
	comp=Z,6.0nm,0.8s,baz=97,slow=6.2,SNR=17							
KHC	**Kasperske Hory**	**79.51**	**320**	*e*P		**P**	**10 16 43.5**	**-0.2**
KHC				*e*PCP		**PcP**	**10 16 54.8**	**+3.2**
KHC	**Kasperske Hory**	**79.51**	**320**	P		**P**	**10 16 43.4**	**-0.2**
BRG	**Berggiesshubel**	**79.57**	**321**	*e*P		**P**	**10 16 44.4**	**+0.5**
	comp=Z,6.3nm,0.8s							
BRG				*e*			10 16 54.9	
	comp=Z,7.3nm,1.1s							
CLL	**Collm**	**80.22**	**322**	*e*P		**P**	**10 16 48.0**	**+0.6**
	comp=Z,6.0nm,0.9s							
CLL				LmV			10 51 00.0	
	comp=Z,200nm,21.1s							
CTI	**Castel Tesino**	**80.35**	**316**	P		**P**	**10 16 48.3**	**0.0**
CTI				IAmb		IAmb	10 16 49.0	
	comp=Z,7.8nm,0.9s							
MOTA	**Moosalm**	**80.89**	**318**	*e*P		**P**	**10 16 51.0**	**-0.3**
	comp=Z,9.8nm,1.1s							
KEST	**Kesra**	**81.07**	**306**	P		**P**	**10 16 52.6**	**+0.2**
	comp=Z,5.9nm,0.9s,baz=263,slow=2.9,SNR=4.8							
HFS	**Hagfors**	**81.41**	**331**	P		**P**	**10 16 53.3**	**-0.3**
	comp=Z,3.9nm,0.9s,baz=141,slow=7.6,SNR=3.9							
DAVOX	**Davos/Dischmat**	**81.66**	**317**	P		**P**	**10 16 54.4**	**-1.0**
	comp=Z,3.7nm,0.6s,baz=262,slow=6.9,SNR=5.1							
DAVA	**Damuels**	**81.71**	**317**	*i* P		**P**	**10 16 55.7**	**+0.1**
	comp=Z,1.1nm,0.8s							
NOA	**NORSAR Array B**	**82.78**	**331**	P		**P**	**10 17 00.4**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=199,slow=4.6,SNR=3.4							
SENIN	**Lac Senin/Sane**	**83.39**	**316**	P		**P**	**10 17 04.6**	**+0.1**
SPITS	**Spitsbergen Ar**	**84.77**	**349**	P		**P**	**10 17 10.6**	**-0.1**
	comp=Z,7.6nm,0.8s,baz=95,slow=7.6,SNR=8.4							
TORD	**Torodi Ar. Bea**	**87.64**	**283**	P		**P**	**10 17 24.5**	**-1.6**
	comp=Z,1.9nm,1.1s,baz=108,slow=4.0,SNR=5.5							
EKA	**Eskdalemuir Ar**	**90.09**	**325**	P		**P**	**10 17 35.9**	**-0.9**
	comp=Z,2.8nm,0.8s,baz=34,slow=24,SNR=3.8							
ESDC	**

*INET **22** 10:13:30.2, 12°.52N×87°.94W, h15km, ML3.8*
SNET 22 10:13:32.9±2.7, 12°.55N×87°.98W, h20km±19km, ML3.3, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JUCU	**Jucuarįn**	**0.75**	**340**	*e*P	Pb	10 13 46.8	-0.5
JUCU				*e*S	Sn	10 13 59.2	-0.1
JUCU				IAML		10 14 00.9	
	comp=Z,2µm,0.3s						
LCND	**La Caada**	**0.76**	**7**	*e*P	Pb	10 13 46.7	-0.8
LCND				*e*S	Sg	10 13 58.5	+0.4
ALJI	**Alcalda de J**	**0.96**	**324**	*e*P	Pb	10 13 50.2	-0.8
ALJI				*e*S	Sg	10 14 04.2	-0.3
ALJI				IAML		10 14 04.4	
	comp=Z,875nm,0.2s						
COEB	**Comit de Eme**	**1.08**	**331**	*e*P	Pb	10 13 51.8	-1.3
COEB				*e*S	Sb	10 14 07.1	+0.2
COEB				IAML		10 14 16.7	
	comp=Z,414nm,0.4s						
FAGO	**Alcalda de S**	**1.15**	**354**	*e*P	Pn	10 13 51.9	-2.0
FAGO				*e*S	Sn	10 14 09.0	-0.1
COEG	**Centro de Oper**	**1.38**	**321**	*e*P	Pg	10 13 59.5	-0.1
COEG				*e*S	Sn	10 14 14.8	-0.1
COEG				IAML		10 14 18.8	
	comp=Z,440nm,0.2s						

*IDC **22** 10:39:56.3±1.2, 44°.26N×149°.34E, h0km, mb3.4/4, mb1 3.6/6, mb1mx3.4/41, mbtmp3.4/6, ML2.9/2, Error ellipse: s-maj=50.8km s-min=24.1km az=125.0*
*JMA **22** 10:40:00.1±0.5, 44°.58N×149°.17E, h30km, M4.0*
*SKHL **22** 10:40:01.1±0.5, 44°.93N×148°.84E, h127km±5km, mb4.1/6, msh5.1/4*
ISC 22 10:40:01.3±0.9, 44°.49N±0°.06×149°.13E±0°.07, h42km, n44, σ1§99/55, mb3.5/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.17**	**310**	*i* P	**Pn**	**10 40 21.5**	**+0.3**
KUR				AMB	AMB	10 40 23.0	
	30nm,0.3s						
KUR				*i* S	**Sn**	**10 40 37.1**	**+1.2**
KUR				A	A	10 40 39.0	
	290nm,0.3s						
KUR				A	A	10 40 39.0	
	150nm,0.3s						
KUR	**Kuril'sk**	**1.17**	**310**	*i* P	**Pn**	**10 40 21.5**	**+0.3**
KUR				AMB	AMB	10 40 23.0	
	30nm,0.3s						
KUR				*i* S	**Sn**	**10 40 37.1**	**+1.2**
KUR				A	A	10 40 39.0	
	290nm,0.3s						
KUR				A	A	10 40 39.0	
	150nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.39**	**260**	*e*P	**Pn**	**10 40 39.2**	**+1.2**
YUK				AMB	AMB	10 40 40.0	
	20nm,0.2s						
YUK				*e*S	**Sn**	**10 41 07.4**	**+1.4**
YUK				A	A	10 41 15.2	
	370nm,0.7s						
YUK				A	A	10 41 15.2	
	110nm,0.7s						
YUK	**Yuzh-Kuril'sk**	**2.39**	**260**	*e*P	**Pn**	**10 40 39.2**	**+1.2**
YUK				AMB	AMB	10 40 40.0	
	20nm,0.2s						
YUK				*e*S	**Sn**	**10 41 07.4**	**+1.4**
YUK				A	A	10 41 15.2	
	370nm,0.7s						
YUK				A	A	10 41 15.2	
	110nm,0.7s						
LAGR	**Lagunnoye**	**2.44**	**261**	*e*P	**Pn**	**10 40 39.7**	**+1.1**
LAGR				*e*S	**Sn**	**10 41 09.0**	**+1.8**
LAGR	**Lagunnoye**	**2.44**	**261**	*e*P	**Pn**	**10 40 39.7**	**+1.1**
LAGR				*e*S	**Sn**	**10 41 09.0**	**+1.8**
GRPR	**Tuman**	**2.46**	**260**	*e*P	**Pn**	**10 40 40.2**	**+1.2**
GRPR				AMB	AMB	10 40 43.0	
	40nm,0.3s						
GRPR				*e*S	**Sn**	**10 41 09.4**	**+1.6**
GRPR				A	A	10 41 14.0	
	250nm,0.6s						
GRPR				A	A	10 41 14.0	
	130nm,0.6s						
GRPR	**Tuman**	**2.46**	**260**	*e*P	**Pn**	**10 40 40.2**	**+1.2**
GRPR				AMB	AMB	10 40 43.0	
	40nm,0.3s						
GRPR				*e*S	**Sn**	**10 41 09.4**	**+1.6**
GRPR				A	A	10 41 14.0	
	250nm,0.6s						
GRPR				A	A	10 41 14.0	
	130nm,0.6s						
NEM2	**Nemuro 2**	**2.69**	**246**	P	**Pn**	**10 40 41.1**	**-1.0**
NEM2				*e*S	**Sn**	**10 41 11.6**	**-1.9**
NMR	**Nemuro--Hokkai**	**2.70**	**247**	*e*P	**Pn**	**10 40 42.4**	**+0.2**
NMR				*e*S	**Sn**	**10 41 14.3**	**+0.6**
NMR	**Nemuro--Hokkai**	**2.70**	**247**	*e*P	**Pn**	**10 40 42.4**	**+0.2**
NMR				*e*S	**Sn**	**10 41 14.3**	**+0.6**
GLVR	**Golovnino**	**2.71**	**255**	*e*P	**Pn**	**10 40 43.0**	**+0.7**
GLVR				*e*S	**Sn**	**10 41 15.0**	**+1.2**
GLVR				A	A	10 41 25.0	
	250nm,0.8s						
GLVR				A	A	10 41 25.0	
	340nm,0.8s						
GLVR	**Golovnino**	**2.71**	**255**	*e*P	**Pn**	**10 40 43.0**	**+0.7**
GLVR				*e*S	**Sn**	**10 41 15.0**	**+1.2**
GLVR				A	A	10 41 25.0	
	250nm,0.8s						
GLVR				A	A	10 41 25.0	
	340nm,0.8s						
JRA	**Rausu**	**2.94**	**261**	P	**Pn**	**10 40 46.6**	**+1.2**
JAK	**Akkeshi**	**3.54**	**247**	P	**Pn**	**10 40 53.2**	**-0.6**
JAK				*e*S	**Sn**	**10 41 32.1**	**-2.3**
JTKR	**Abashiri--Toko**	**3.79**	**264**	P	**Pn**	**10 40 58.5**	**+1.3**
JAR	**Ashorobuto**	**4.05**	**255**	P	**Pn**	**10 41 02.1**	**+1.3**
JAR				*e*S	**Sn**	**10 41 47.3**	**+0.3**
JCH	**Churui**	**4.59**	**248**	P	**Pn**	**10 41 08.3**	**+0.1**
JCH				*e*S	**Sn**	**10 41 59.0**	**-1.3**
ASAJ	**Asahikawa**	**4.71**	**268**	Pn	**Pn**	**10 41 10.2**	**+0.5**
	0.5nm,0.3s,baz=94,slow=19,SNR=1.4						
JFR	**Furan**	**4.91**	**257**	P	**Pn**	**10 41 13.9**	**+1.3**
YSS	**Yuzh-Sakhalins**	**5.10**	**301**	*e*P	**Pn**	**10 41 10.6**	**-4.5**
YSS				AMB	AMB	10 41 11.2	
	10.0nm,0.6s						
YSS	**Yuzh-Sakhalins**	**5.10**	**301**	*e*P	**Pn**	**10 41 10.6**	**-4.5**
YSS				AMB	AMB	10 41 11.2	
	10.0nm,0.6s						
JNBK	**Urakawa-nobuka**	**5.15**	**247**	P	**Pn**	**10 41 14.8**	**-1.0**
JNBK				*e*S	**Sn**	**10 42 08.7**	**-5.2**
JBT2	**Biratori 2**	**5.20**	**253**	P	**Pn**	**10 41 15.4**	**-1.2**
JNB	**Noboribetsu**	**6.22**	**254**	P	**Pn**	**10 41 31.2**	**+0.6**
JKB	**Kayabe**	**6.47**	**249**	P	**Pn**	**10 41 33.4**	**-0.5**
JKB				*e*S	**Sn**	**10 42 41.7**	**-4.6**
JYM2	**Yakumo 2**	**6.82**	**253**	P	**Pn**	**10 41 39.2**	**+0.5**
JANG	**Nango**	**6.97**	**236**	*e*S	Sn	10 42 50.3	-8.6
JTM	**Tenmabayashi**	**7.00**	**241**	*e*S	**Sn**	**10 42 53.4**	**-6.2**
JOSM	**Okushiri--Mats**	**7.45**	**254**	P	**Pn**	**10 41 47.8**	**+0.5**
TYV	**Tymovskoe**	**7.73**	**328**	*e*P	Pn	10 41 45.0	-6.2
TYV				AMB	AMB	10 41 45.9	
	10.0nm,0.7s						
TYV	**Tymovskoe**	**7.73**	**328**	*e*P	Pn	10 41 45.0	-6.2
TYV				AMB	AMB	10 41 45.9	
	10.0nm,0.7s						
SKR	**Severo-Kuril's**	**7.79**	**35**	*e*P	**Pn**	**10 41 48.9**	**-3.1**
SKR				AMB	AMB	10 41 49.1	
	10.0nm,1.0s						
SKR	**Severo-Kuril's**	**7.79**	**35**	*e*P	**Pn**	**10 41 48.9**	**-3.1**
SKR				AMB	AMB	10 41 49.1	
	10.0nm,1.0s						
JRG	**Rokugo**	**8.12**	**234**	P	**Pn**	**10 41 55.6**	**-1.1**
JRG				*e*S	Sn	10 43 19.7	-7.4
PETK	**Petropavlovsk-**	**10.30**	**30**	Pn	**Pn**	**10 42 28.1**	**+1.7**
	0.2nm,0.3s,baz=211,slow=14,SNR=7.6						
YAK	**Yakutsk**	**20.92**	**334**	*e*P	P	10 44 28.0	-12
YAK	**Yakutsk**	**20.92**	**334**	*e*P	P	10 44 28.0	-12
ULN	**Ulaanbaatar**	**29.07**	**292**	*e*P	P	10 45 47.8	-10
ULN	**Ulaanbaatar**	**29.07**	**292**	*e*P	P	10 45 47.8	-10
YKA	**Yellowknife Ar**	**54.39**	**35**	P	**P**	**10 49 25.1**	**+1.6**
	0.3nm,0.6s,baz=303,slow=6.5,SNR=4.8						
WRA	**Warramunga Arr**	**65.53**	**195**	P	**P**	**10 50 40.4**	**0.0**
	0.3nm,0.6s,baz=16,slow=6.9,SNR=2.1						
ASAR	**Alice Springs**	**69.24**	**195**	P	**P**	**10 51 04.1**	**+0.3**
	0.4nm,0.8s,baz=8.4,slow=6.5,SNR=4.7						
TXAR	**Lajitas Array**	**81.05**	**58**	P	**P**	**10 52 12.8**	**+0.7**

0.1nm,0.6s,baz=299,slow=3.7,SNR=2.2

*IDC **22** 10:41:35.8±1.5, 13°.33N×143°.36E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.7/41, mbtmp3.8/5, Error ellipse: s-maj=149.2km s-min=21.9km az=112.0*
*NEIC **22** 10:41:52.2±0.4, 13°.1N±0°.2×143°.7E±0°.2, h133km±5km, mb4.2/9, Error ellipse: s-maj=28.6km s-min=17.4km az=126.0*
ISC 22 10:41:53.6±0.8, 13°.1N±0°.2×143°.8E±0°.2, h150km, n15, σ0§91/15, mb4.1/10, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.18**	**63**		**Pn**	**10 42 18.2**	**-1.8**
YULB	**Yu-li**	**23.68**	**299**	P	**P**	**10 46 50.8**	**-0.9**
WB0	**Warramunga Arr**	**33.90**	**196**	P	**P**	**10 48 22.0**	**-0.4**
WB0				IAmb	IAmb	10 48 25.0	
	comp=Z,7.2nm,1.3s						
WR0	**Warramunga Arr**	**34.05**	**196**	P	**P**	**10 48 23.6**	**-0.1**
WRAB	**Tennant Creek**	**34.07**	**196**	P	**P**	**10 48 23.7**	**-0.1**
WRAB				IAmb	IAmb	10 48 40.3	
	comp=Z,5.1nm,1.1s						
WB2	**Warramunga Arr**	**34.08**	**196**	P	**P**	**10 48 23.7**	**-0.2**
WB2				IAmb	IAmb	10 48 41.2	
	comp=Z,6.0nm,1.2s						
WRA	**Warramunga Arr**	**34.08**	**196**	P	**P**	**10 48 23.6**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=16,slow=9.6,SNR=28						
FITZ	**Fitzroy Crossi**	**35.76**	**210**	P	**P**	**10 48 37.9**	**-0.4**
FITZ				IAmb	IAmb	10 48 37.9	
	comp=Z,6.3nm,1.4s						
AS31	**Alice Springs**	**37.75**	**195**	P	**P**	**10 48 55.2**	**0.0**
ASAR	**Alice Springs**	**37.75**	**195**	P	**P**	**10 48 54.9**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=19,slow=13,SNR=49						
FORT	**Forrest**	**46.13**	**199**	P	**P**	**10 50 03.4**	**+0.4**
BBOO	**Buckleboo**	**46.20**	**189**	P	**P**	**10 50 03.7**	**+0.1**
BBOO				IAmb	IAmb	10 50 08.4	
	comp=Z,8.8nm,1.5s						
ILAR	**Eielson Array**	**69.50**	**25**	P	**P**	**10 52 45.8**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=247,slow=8.0,SNR=1.8						
YKA	**Yellowknife Ar**	**83.81**	**27**	P	**P**	**10 54 06.2**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=285,slow=5.0,SNR=6.8						
NVAR	**Mina Array Bea**	**88.07**	**51**	P	**P**	**10 54 29.9**	**+2.2**
	comp=Z,1.1nm,0.8s,baz=264,slow=5.9,SNR=10						

*UCR **22** 10:56:39.2±1.9, 7°.48N×82°.37W, h10km±21km, MW3.8*
*UPA **22** 10:56:40.9±1.6, 7°.49N×82°.37W, h28km±47km, MW4.1*
ISC 22 10:56:38.8±2.2, 7°.4N±0°.1×82°.42W±0°.07, h19km±4km, n12, σ1§10/21, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMAL	**Guarumal, Vera**	**1.23**	**74**	*e*P	**Pn**	**10 56 59.1**	**-1.8**
BCO2	**Palmira**	**1.30**	**355**	*e*P	**Pn**	**10 57 01.4**	**-0.6**
BCO2				*e*S	**Sb**	**10 57 17.5**	**-1.5**
BRU2	**Volcan**	**1.39**	**349**	*e*P	**Pn**	**10 57 03.9**	**+0.6**
BRU2				*e*S	**Sn**	**10 57 21.4**	**+0.1**
BRU2	**Volcan**	**1.39**	**349**	*e*P	**Pn**	**10 57 03.5**	**+0.2**
BRU2				*e*S	**Sb**	**10 57 22.0**	**+0.3**
BC3P	**Paso Ancho**	**1.40**	**352**	*e*P	**Pg**	**10 57 06.0**	**+0.1**
BC3P				*e*S	**Sg**	**10 57 23.3**	**-0.9**
PTJ1	**Puerto Jimnez**	**1.41**	**322**	*e*P	**Pb**	**10 57 04.4**	**0.0**
PTJ1				*e*S	**Sn**	**10 57 21.4**	**-0.1**
CACAO	**El Cacao, Vera**	**1.55**	**93**	*e*P	**Pn**	**10 57 05.2**	**-0.2**
CACAO				*e*S	**Sn**	**10 57 23.5**	**-1.5**
DRK0	**Durika**	**2.00**	**336**	*e*P	**Pn**	**10 57 12.7**	**+1.0**
AZU	**Azuero**	**2.16**	**80**	*e*P	**Pn**	**10 57 15.3**	**+1.6**
AZU				*e*S	**Sn**	**10 57 39.9**	**-0.2**
AZU	**Azuero**	**2.16**	**80**	*e*P	**Pn**	**10 57 14.4**	**+0.7**
AZU				*e*S	**Sn**	**10 57 40.3**	**+0.3**
BCIP	**Isla Barro Col**	**3.09**	**56**	*e*P	**Pn**	**10 57 28.6**	**+2.0**
BCIP				*e*S	**Sb**	**10 58 11.1**	**+0.6**
BCIP	**Isla Barro Col**	**3.09**	**56**	*e*P	**Pn**	**10 57 28.2**	**+1.7**

*IDC **22** 11:23:58.1±0.5, 16°.21S×172°.94W, h0km, mb4.5/19, mb1 4.7/19, mb1mx4.5/43, mbtmp4.5/19, MS4.0/17, Ms1 4.0/17, ms1mx3.7/37, Error ellipse: s-maj=23.7km s-min=13.1km az=141.0*
*BJI **22** 11:23:59.4±0.0, 16°.04S×172°.82W, h11km, mB5.4/12, mb5.1/17, Ms4.7/2*
*NEIC **22** 11:24:00.1±2.8, 16°.23S±0°.09×172°.66W±0°.08, h14km±3km, mb4.8/190, Error ellipse: s-maj=12.9km s-min=10.7km az=159.0*
ISC 22 11:24:02.0±0.3, 16°.18S±0°.07×172°.79W±0°.06, h26km, n352, σ1§09/259, mb4.8/105, MS4.0/21, 18C-3D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.46**	**24**	Pn	Pn	11 24 35.1	-5.4
NIUE	**Niue**	**3.97**	**137**	P	**Pn**	**11 24 59.7**	**-1.5**
	baz=3.9,SNR=40						
NIUE	**Niue**	**3.97**	**137**		**Pn**	**11 24 59.7**	**-1.5**
MSVF	**Nonsavu**	**8.90**	**259**	Pn	**Pn**	**11 26 11.5**	**+2.4**
RAR	**Rarotonga**	**13.31**	**114**	Pn	**Pn**	**11 27 06.3**	**-3.0**
	4.6nm,0.3s,baz=205,slow=5.3,SNR=6.6						
RAR				Sn	Sn	11 29 22.4	-14
	0.7nm,0.3s,baz=142,slow=12,SNR=2.2						
KNTN	**Kanton**	**13.36**	**5**	Pn	**Pn**	**11 27 06.8**	**-3.2**
DZM	**Mont Dzumac**	**20.47**	**250**	*e*P	Pn	11 28 40.8	+0.6
	71nm,1.1s						
DZM				*e*S	**S**	**11 32 25.6**	**-0.5**
	117nm,26.6s						
DZM				*e*LR	LR	11 33 28.5	
	comp=Z,1µm,25.5s						
DZM	**Mont Dzumac**	**20.47**	**250**	P	**P**	**11 28 36.8**	**-1.1**
	7.8nm,0.8s,baz=41,slow=17,SNR=2.8						
DZM	**Mont Dzumac**	**20.47**	**250**	P	**P**	**11 28 37.5**	**-0.5**
PPT	**Papeete**	**22.26**	**97**	LR	LR	11 35 06.3	
	comp=Z,264nm,19.9s,baz=274,slow=30						
PPT2	**Papeete2**	**22.26**	**97**	*e*LQ	LQ	11 33 15.4	
	703nm,25.8s						
PPT2				*e*LR	LR	11 34 14.0	
	comp=Z,474nm,24.2s						
PPT2	**Papeete2**	**22.26**	**97**	*e*T	T	11 51 49.0	
	8.5nm,0.4s						
TIAR	**Tiarei**	**22.48**	**97**	*e*T	T	11 52 03.9	
	5.4nm,0.3s						
OUZ	**Omahuta**	**22.54**	**210**	P	**P**	**11 28 56.7**	**-3.3**
OUZ				IAmb	IAmb	11 29 03.7	
	comp=Z,54nm,1.3s						
TVO	**Taravao**	**22.57**	**97**	*e*T	T	11 52 02.3	
	comp=Z,3.7nm,0.4s						
MXZ	**Matakaoa Point**	**22.71**	**199**	P	**P**	**11 29 00.3**	**-1.5**
TBI	**Tubuai**	**23.07**	**112**	*e*LR	LR	11 34 28.5	
	comp=Z,628nm,26.8s						
TBI	**Tubuai**	**23.07**	**112**	*e*T	T	11 52 57.8	
	comp=Z,17nm,0.3s						
URZ	**Urewera**	**23.73**	**200**	P	**P**	**11 29 10.8**	**-1.2**
	comp=Z,15nm,0.3s,baz=316,slow=4.1,SNR=45						
URZ	**Urewera**	**23.73**	**200**	P	**P**	**11 29 11.8**	**-0.2**
URZ				IAmb	IAmb	11 29 23.7	
	comp=Z,31nm,0.9s						
BKZ	**Black Stump Fm**	**24.75**	**200**	P	**P**	**11 29 22.0**	**+0.5**
HIZ	**Hauiti**	**24.76**	**204**	P	**P**	**11 29 21.6**	**0.0**
BFZ	**Birch Farm**	**26.20**	**199**	P	**P**	**11 29 34.8**	**+0.1**
MSWZ	**Moikau Station**	**27.19**	**200**	P	**P**	**11 29 43.0**	**-0.5**
SNZO	**South Karori**	**27.28**	**201**	P	**P**	**11 29 41.9**	**-2.4**
BHW	**Baring Head**	**27.31**	**201**	P	**P**	**11 29 43.7**	**-0.8**
PLWZ	**Palliser**	**27.32**	**200**	P	**P**	**11 29 43.2**	**-1.5**
HNR	**Honiara**	**27.40**	**281**	LR	LR	11 39 10.5	
	comp=Z,636nm,19.4s,baz=106,slow=34						
NNZ	**Nelson**	**27.67**	**203**	P	**P**	**11 29 48.5**	**+0.8**
BSWZ	**Blackbirch Sta**	**27.92**	**202**	P	**P**	**11 29 50.2**	**+0.1**
THZ	**Tophouse**	**28.32**	**203**	P	**P**	**11 29 53.0**	**-0.7**
THZ				IAmb	IAmb	11 30 02.6	
	comp=Z,27nm,1.0s						
KHZ	**Kahutara**	**28.66**	**201**	P	**P**	**11 29 58.3**	**+1.7**
LTZ	**Lake Taylor**	**29.44**	**203**	P	**P**	**11 30 04.7**	**+1.1**
OXZ	**Oxford**	**29.99**	**202**	P	**P**	**11 30 12.2**	**+1.7**
RPZ	**Rata Peaks**	**30.69**	**203**	P	**P**	**11 30 13.8**	**-0.9**
	comp=Z,7.5nm,0.8s,baz=45,slow=19,SNR=1.8						
FOZ	**Fox Glacier**	**31.03**	**205**	P	**P**	**11 30 18.1**	**+0.6**
WKZ	**Wanaka**	**32.42**	**204**	P	**P**	**11 30 30.6**	**+0.7**
TAOE	**Nuku Hiva Isla**	**32.65**	**81**	*e*LR	LR	11 38 46.0	
	comp=Z,222nm,21.8s						
TAOE	**Nuku Hiva Isla**	**32.65**	**81**	*e*T	T	12 04 36.7	
	comp=Z,102nm,0.3s						
WHZ	**Wether Hill Ro**	**33.73**	**205**	P	**P**	**11 30 40.6**	**-0.6**
ARMA	**Armidale**	**35.45**	**240**	P	**P**	**11 30 55.5**	**-1.0**
	baz=36,SNR=9.0						
ARMA	**Armidale**	**35.45**	**240**	P	**P**	**11 30 55.6**	**-1.0**
ARMA				IAmb	IAmb	11 30 56.2	
	comp=Z,8.5nm,0.6s						
RKT	**Rikitea**	**36.20**	**107**	*e*T	T	12 09 19.0	
	comp=Z,11nm,0.4s						
KRVT	**Keravat (AS076**	**36.50**	**285**	LR	LR	11 44 06.3	
	comp=Z,114nm,21.5s,baz=127,slow=33						
RMQ	**Roma**	**37.13**	**247**	P	**P**	**11 31 09.5**	**-1.3**
	baz=38,SNR=5.5						
CNB	**Canberra Magne**	**38.75**	**233**	P	**P**	**11 31 23.6**	**-0.8**
	baz=39,SNR=4.8						
CTA	**Charters Tower**	**39.05**	**258**	P	**P**	**11 31 25.2**	**-1.8**
	comp=Z,2.7nm,0.6s,baz=82,slow=13						
CMSA	**Cobar Meteorol**	**40.67**	**240**	P	**P**	**11 31 39.1**	**-1.2**
	baz=41,SNR=20						
H11N3	**WAKE ISLAND Hy**	**40.87**	**330**	T	T	12 15 04.9	
	baz=149,slow=76,SNR=19						
H11N1	**WAKE ISLAND Hy**	**40.88**	**330**	T	T	12 15 00.5	
	baz=149,slow=76,SNR=24						
H11N2	**WAKE ISLAND Hy**	**40.89**	**330**	T	T	12 15 06.2	
	baz=149,slow=76,SNR=21						
QLP	**Quilpie**	**41.17**	**248**	P	**P**	**11 31 42.7**	**-1.8**
	baz=42,SNR=5.5						
TOO	**Toolangi**	**42.44**	**232**	P	**P**	**11 31 54.0**	**-0.8**
	baz=43,SNR=6.4						
TOO	**Toolangi**	**42.44**	**232**	P	**P**	**11 31 54.0**	**-0.8**
TOO				IAmb	IAmb	11 32 09.6	
	comp=Z,30nm,1.4s						
COEN	**Coen**	**42.52**	**267**	P	**P**	**11 31 55.2**	**-0.5**
STKA	**Stephens Creek**	**44.16**	**241**	P	**P**	**11 32 07.9**	**-0.9**
	comp=Z,12nm,0.7s,baz=93,slow=10.0,SNR=38						
STKA				LR	LR	11 49 13.7	
	comp=Z,97nm,19.0s,baz=34,slow=34						
HTT	**Hallett**	**46.65**	**239**	P	**P**	**11 32 27.5**	**-1.0**
	baz=47,SNR=7.7						
JAY	**Jayapura**	**47.72**	**282**	P	**P**	**11 32 36.1**	**-0.9**
	comp=Z,7.7nm,0.7s,baz=20,slow=14,SNR=2.5						
BBOO	**Buckleboo**	**48.94**	**240**	P	**P**	**11 32 45.0**	**-1.2**
	baz=49,SNR=12						
BBOO	**Buckleboo**	**48.94**	**240**	IAmb	IAmb	11 32 45.9	
	comp=Z,10nm,0.8s						
WR0	**Warramunga Arr**	**50.05**	**257**	P	**P**	**11 32 54.1**	**-0.8**
WB0	**Warramunga Arr**	**50.21**	**258**	P	**P**	**11 32 55.1**	**-1.0**
WB2	**Warramunga Arr**	**50.23**	**257**	P	**P**	**11 32 54.5**	**-1.8**
WRA	**Warramunga Arr**	**50.24**	**257**	P	**P**	**11 32 53.9**	**-2.5**
	comp=Z,2.0nm,0.3s,baz=96,slow=6.7,SNR=60						
WRA				PcP	**PcP**	**11 34 16.1**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=95,slow=11,SNR=2.6						
WRA				LR	LR	11 52 47.8	
	comp=Z,292nm,19.8s,baz=340,slow=34						
ASAR	**Alice Springs**	**50.43**	**252**	P	**P**	**11 32 56.1**	**-1.7**
	comp=Z,18nm,0.7s,baz=88,slow=8.5,SNR=160						
KDU	**Kakadu**	**53.00**	**266**	P	**P**	**11 33 16.6**	**-0.4**
	baz=53,SNR=4.5						
WRKA	**Warakurna**	**55.49**	**251**	P	**P**	**11 33 33.6**	**-1.5**
	baz=56,SNR=13						
FORT	**Forrest**	**55.59**	**244**	P	**P**	**11 33 34.5**	**-1.2**
	baz=56,SNR=10						
KNRA	**Kununurra**	**56.03**	**262**	P	**P**	**11 33 38.0**	**-1.1**
	baz=56,SNR=6.1						
KNRA	**Kununurra**	**56.03**	**262**	IAmb	IAmb	11 33 51.0	
	comp=Z,11nm,0.8s						
FITZ	**Fitzroy Crossi**	**58.63**	**258**	P	**P**	**11 33 57.0**	**-0.3**
	baz=59,SNR=6.6						
FITZ	**Fitzroy Crossi**	**58.63**	**258**	P	**P**	**11 33 56.5**	**-0.8**
	comp=Z,1.6nm,0.5s,baz=93,slow=2.4,SNR=8.6						
FITZ				LR	LR	11 57 48.4	
	comp=Z,189nm,19.2s,baz=90,slow=35						
FITZ	**Fitzroy Crossi**	**58.63**	**258**	P	**P**	**11 33 56.1**	**-1.2**
JCJ	**Chichijima**	**61.31**	**314**	LR	LR	11 56 30.3	
	comp=Z,65nm,20.2s,baz=142,slow=32						
VNDA	**Vanda**	**62.67**	**186**	P	**P**	**11 34 26.9**	**+3.0**
	comp=Z,1.5nm,0.7s,baz=1.7,slow=6.7,SNR=15						
PSA00	**Pilbara Seismi**	**63.55**	**254**	P	**P**	**11 34 29.6**	**-1.1**
MEEK	**Meekatharra**	**64.07**	**248**	P	**P**	**11 34 33.4**	**-0.8**
	baz=64,SNR=5.6						
KLBR	**Kellerberrin**	**64.40**	**242**	P	**P**	**11 34 35.8**	**-0.4**
	baz=65,SNR=10						
NWAO	**Narrogin (SRO)**	**64.75**	**241**	P	**P**	**11 34 37.7**	**-0.8**
MUN	**Mundaring**	**65.68**	**242**	P	**P**	**11 34 45.0**	**+0.4**
	baz=66,SNR=4.5						
CASY	**Casey**	**69.95**	**205**	P	**P**	**11 35 10.7**	**-0.1**
SMMC	**Simmler**	**71.59**	**43**	P	**P**	**11 35 21.2**	**-0.1**
	baz=234						
PMPB	**Monarch Peak**	**71.60**	**42**	P	**P**	**11 35 22.8**	**+1.5**
ARVC	**Arvin**	**72.25**	**44**	P	**P**	**11 35 25.0**	**-0.2**
	baz=234						
VES	**Vestal, Richgr**	**72.50**	**43**	P	**P**	**11 35 27.0**	**+0.4**
	baz=234,SNR=6.1						
MURC	**Murrieta**	**72.50**	**46**	P	**P**	**11 35 27.4**	**+0.6**
	baz=236						
BFSC	**Mount Baldy Ra**	**72.54**	**45**	P	**P**	**11 35 27.6**	**+0.5**
	baz=236						
MONP2	**Monument Peak**	**72.66**	**47**	P	**P**	**11 35 28.1**	**+0.2**
	baz=237						
EDW2	**Edwards Air Fo**	**72.67**	**45**	P	**P**	**11 35 28.2**	**+0.4**
	baz=235,SNR=7.6						
IKP	**In-Ko-Pah, Jac**	**72.75**	**48**	P	**P**	**11 35 28.9**	**+0.7**
	baz=237						
ISA	**Isabella, Lake**	**72.80**	**44**

baz=230
L04D Klamath Falls 74.41 37 P P 11 35 39.1 +1.2
baz=230
SHOC Shoshone, Teco 74.41 45 P P 11 35 38.7 +0.8
baz=236
Y12C Blythe 74.46 47 P P 11 35 39.2 +1.0
baz=238
NVAR Mina Array Bea 74.51 42 P P 11 35 39.8 +1.0
comp=Z,7.3nm,0.6s,baz=228,slow=9.6,SNR=74
NVAR LR LR 12 01 19.4
comp=Z,153nm,19.7s,baz=200,slow=30
PAHR Pah Rah Range 74.59 40 IAmb IAmb 11 35 41.2
comp=Z,10nm,1.2s
NV11 Mina Array Sit 74.61 42 IAmb IAmb 11 35 41.2
comp=Z,25nm,1.5s
214A Organ Pipe Nat 74.76 50 P P 11 35 40.9 +0.9
baz=239
I02D Swisshome 74.78 34 P P 11 35 41.2 +1.5
baz=228
I03D Drain, OR 74.78 35 P P 11 35 41.0 +1.2
baz=229
TPNV Topopah Spring 75.01 44 P P 11 35 42.5 +1.0
baz=236,SNR=11
PDMCI Parker Dam,Lak 75.02 47 P P 11 35 42.0 +0.6
baz=238
J04D Umpqua Nationa 75.17 36 P P 11 35 43.7 +1.3
baz=230,SNR=5.5
I04A Tendick Farm, 75.36 35 P P 11 35 44.1 +0.9
baz=230
Y14A Wickenburg 75.63 48 P 11 35 46.4 +1.4
H04D Lebanon 75.65 34 P P 11 35 46.0 +1.1
baz=229,SNR=5.2
J05D Fort Rock, OR 75.69 36 P P 11 35 46.7 +1.4
baz=231,SNR=14
G03D McMinnville, O 75.82 34 P P 11 35 47.2 +1.4
baz=229
H04A Detroit Lake 76.05 35 IAmb IAmb 11 35 48.5
comp=Z,11nm,0.7s
R11A Troy Canyon, C 76.22 43 P P 11 35 49.3 +0.8
baz=236
I05D Terrebonne, OR 76.30 35 P P 11 35 49.7 +1.1
baz=230,SNR=5.5
TUC Tucson 76.43 50 P P 11 35 50.9 +1.2
baz=241
TUC Tucson 76.43 50 P P 11 35 51.1 +1.5
TUC IAmb IAmb 11 35 51.6
comp=Z,5.8nm,0.8s
F04D Rainier, OR 76.52 33 P P 11 35 51.3 +1.6
baz=229
WVOR Wild Horse Val 76.68 38 IAmb IAmb 11 35 52.5
comp=Z,7.3nm,0.9s
G05D Wamic, OR 76.89 35 P P 11 35 53.1 +1.2
baz=230
NLWA Neilton Lookou 76.95 32 IAmb IAmb 11 35 54.7
comp=Z,14nm,1.1s
X16A Lo Mia Camp, P 76.99 48 IAmb IAmb 11 35 55.4
comp=Z,6.7nm,0.8s
E04D Cinebar 77.06 33 P P 11 35 54.2 +1.4
baz=229,SNR=5.7
KSRS Korea Array 77.12 315 LR LR 12 03 41.5
comp=Z,32nm,22.0s,baz=160,slow=31
I07A Izee 77.17 36 IAmb IAmb 11 35 55.9
comp=Z,11nm,1.1s
F05D White Salmon 77.22 34 P P 11 35 54.8 +1.1
baz=230
J08A Circle Bar Ran 77.33 37 IAmb IAmb 11 35 56.7
comp=Z,13nm,1.2s
D04E Lakebay 77.37 32 P P 11 35 56.5 +2.0
baz=229
U15A North Rim 77.41 46 IAmb IAmb 11 35 57.5
comp=Z,6.6nm,0.9s
D03D Eldon 77.44 32 P P 11 35 56.2 +1.3
baz=228,SNR=5.0
LON Longmire 77.59 33 IAmb IAmb 11 35 57.0
comp=Z,4.8nm,0.7s
WUAZ Wupatki 77.59 47 P P 11 35 57.5 +1.3
baz=240
BRLK Bradley Lake 77.74 11 IAmb IAmb 11 36 10.9
comp=Z,8.7nm,1.0s
G08A Pilot Rock 78.22 36 IAmb IAmb 11 36 01.5
comp=Z,13nm,1.0s
A04D Lummi Island 78.41 31 P P 11 36 01.4 +1.2
baz=229
B05A Bryant 78.42 32 P P 11 36 01.4 +1.1
baz=229,SNR=6.9
W18A Petrified Fore 78.56 48 P P 11 36 02.3 +0.6
baz=241
HAWA Hanford 78.58 34 P P 11 36 02.6 +1.4
HAWA IAmb IAmb 11 36 03.3
comp=Z,12nm,0.9s
121A Cookes Peak, D 78.77 51 P P 11 36 04.3 +1.4
baz=242,SNR=6.9
121A Cookes Peak, D 78.77 51 IAmb IAmb 11 36 05.4
comp=Z,7.4nm,0.8s
BMO Blue Mountains 78.89 37 PcP 11 36 11.7 -0.1
DUG Dugway, Tooele 79.03 42 P P 11 36 04.9 +0.8
baz=238
DUG Dugway, Tooele 79.03 42 IAmb IAmb 11 36 18.1
comp=Z,8.4nm,1.1s
D08A Wollman Farm, 79.32 34 IAmb IAmb 11 36 07.4
comp=Z,13nm,1.0s
E09A Wood Farm, Sta 79.41 35 IAmb IAmb 11 36 19.5
comp=Z,11nm,1.0s
F10A Beach Ranch, E 79.60 36 IAmb IAmb 11 36 08.3
comp=Z,11nm,0.8s
B08A Colville Reser 79.90 33 IAmb IAmb 11 36 09.7
comp=Z,11nm,0.9s
TTA Tatalina 79.94 8 IAmb IAmb 11 36 22.7
comp=Z,11nm,1.1s
LLLB Lilooet 80.06 30 IAmb IAmb 11 36 10.9
comp=Z,8.8nm,0.8s
C09A Chrisman Ranch 80.12 34 IAmb IAmb 11 36 11.3
comp=Z,12nm,0.7s
MNTX Cornudas Mount 80.22 53 P P 11 36 11.6 +1.1
baz=244,SNR=14
SCM Sheep Creek Mo 80.33 12 IAmb IAmb 11 36 24.5
comp=Z,14nm,1.0s
MVCO Mesa Verde 80.44 47 P P 11 36 12.8 +0.9
baz=241
PV05 Paradox Valley 80.44 46 IAmb IAmb 11 36 14.6
comp=Z,9.2nm,0.8s
TX31 Lajitas Ar. Si 80.56 56 IAmb IAmb 11 36 14.4
comp=Z,9.0nm,0.8s
TXAR Lajitas Array 80.56 56 P P 11 36 13.9 +1.3
comp=Z,1.7nm,0.6s,baz=215,slow=7.7,SNR=16
TXAR LR LR 12 06 05.1
comp=Z,82nm,18.4s,baz=0.0,slow=31
PV10 Paradox Valley 80.63 46 IAmb IAmb 11 36 14.6
comp=Z,11nm,0.8s
PV17 East Wray Mesa 80.64 46 IAmb IAmb 11 36 14.4
comp=Z,7.1nm,0.7s
PV20 West Nyswonger 80.66 46 IAmb IAmb 11 36 15.1
comp=Z,7.9nm,0.8s
PV03 Paradox Valley 80.70 46 IAmb IAmb 11 36 27.6
comp=Z,12nm,1.3s
PV11 David Mesa, Pa 80.70 46 IAmb IAmb 11 36 27.7
comp=Z,9.5nm,0.9s
BALM Baldy 80.72 14 IAmb IAmb 11 36 26.9
comp=Z,10nm,1.1s
GLB Gilahina Butte 80.73 14 IAmb IAmb 11 36 21.7
comp=Z,20nm,1.4s
PV04 Paradox Valley 80.73 46 IAmb IAmb 11 36 15.5
comp=Z,8.1nm,0.8s
PV21 Cone Mtn., Par 80.76 45 IAmb IAmb 11 36 15.8
comp=Z,11nm,0.7s
PV01 Paradox Valley 80.83 46 IAmb IAmb 11 36 15.9
comp=Z,7.2nm,0.7s
ANMO Albuquerque 80.85 50 P P 11 36 15.2 +1.1
baz=243
ANMO Albuquerque 80.85 50 P P 11 36 15.4 +1.3
BARN Barnard Glacie 80.90 15 IAmb IAmb 11 36 27.6
comp=Z,13nm,1.1s
PV15 Paradox Valley 81.00 46 IAmb IAmb 11 36 16.8
comp=Z,6.9nm,0.7s
NEW Newport 81.02 34 P P 11 36 14.6 +0.1
baz=233
NJ2 Nanjing 81.10 307 *e*P P **11 36 16.9 +1.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
KTH Kantishna Hill 81.27 10 IAmb IAmb 11 36 16.7
comp=Z,11nm,1.2s
TRF Thorofare Moun 81.28 10 IAmb IAmb 11 36 32.3
comp=Z,8.8nm,0.9s
SKAG Skagway 81.29 18 IAmb IAmb 11 36 33.5
comp=Z,11nm,1.2s
RND Reindeer 81.49 11 IAmb IAmb 11 36 31.4
comp=Z,14nm,1.2s
HYT Haines Junctio 81.78 17 IAmb IAmb 11 36 32.7
comp=Z,11nm,1.2s
S22A 4UR Ranch, Cre 81.86 47 P P 11 36 21.0 +1.4
baz=242,SNR=18
MSO Missoula 81.95 36 P P 11 36 19.8 +0.2
baz=236
MSO Missoula 81.95 36 IAmb IAmb 11 36 20.9
comp=Z,15nm,1.4s
O20A White River Ci 82.02 44 P P 11 36 21.1 +0.8
baz=241
SNOW Snow King Moun 82.05 40 IAmb IAmb 11 36 22.5
comp=Z,9.7nm,1.1s
IMW Indian Meadow 82.16 40 IAmb IAmb 11 36 23.2
comp=Z,11nm,1.2s
BW06 Boulder Array 82.45 42 P P 11 36 22.6 +0.1
baz=240,SNR=8.8
BW06 Boulder Array 82.45 42 IAmb IAmb 11 36 23.9
comp=Z,7.5nm,0.9s
PD31 Pinedale Array 82.45 42 IAmb IAmb 11 36 23.9
comp=Z,6.7nm,0.9s
PDAR Pinedale Array 82.45 42 P P 11 36 23.1 +0.6
comp=Z,4.4nm,0.7s,baz=217,slow=3.5,SNR=36
PDAR LR LR 12 08 18.2
comp=Z,126nm,18.2s,baz=283,slow=32
RIDG Independent Ri 82.55 12 IAmb IAmb 11 36 36.3
comp=Z,9.2nm,1.0s
DOT Dot Lake 82.63 12 IAmb IAmb 11 36 36.2
comp=Z,4nm,1.0s
H17A Grant Village 82.64 40 P P 11 36 25.4 +2.0
baz=239,SNR=5.1
MLY Manley 82.69 9 IAmb IAmb 11 36 35.8
comp=Z,7.8nm,1.0s
HDA Harding Lake 82.75 11 P P 11 36 23.2 0.0
baz=205
HDA Harding Lake 82.75 11 IAmb IAmb 11 36 36.4
comp=Z,12nm,1.0s
SDCO Great Sand Dun 82.80 47 P P 11 36 25.1 +0.7
baz=243,SNR=12
SDCO Great Sand Dun 82.80 47 IAmb IAmb 11 36 26.5
comp=Z,7.9nm,1.2s
LKWY Lake 82.84 40 IAmb IAmb 11 36 27.8
comp=Z,10nm,0.9s
SCRK Sand Creek 82.94 12 IAmb IAmb 11 36 37.5
comp=Z,5.8nm,0.9s
TCOL CIGO, UAF Yank 83.01 10 P P 11 36 24.5 0.0
baz=204
COLA College 83.01 10 P P 11 36 24.6 +0.1
IL31 83.09 11 IAmb IAmb 11 36 39.0
comp=Z,6.4nm,1.0s
ILAR Eielson Array 83.09 11 P P 11 36 24.7 -0.3
comp=Z,2.2nm,0.7s,baz=226,slow=6.4,SNR=27
ILAR LR LR 12 12 37.3
comp=Z,41nm,18.0s,baz=154,slow=35
MSTX Muleshoe 83.17 52 P P 11 36 26.8 +0.6
baz=245,SNR=5.2
MSTX Muleshoe 83.17 52 IAmb IAmb 11 36 27.4
comp=Z,8.6nm,0.8s
POKR Poker Plat Res 83.31 11 P P 11 36 26.0 0.0
baz=204
T25A Trinidad 83.31 48 P P 11 36 27.7 +0.6
baz=244,SNR=6.2
Q24A Divide 83.59 47 P P 11 36 29.3 +0.8
baz=243
833A Chaparral WMA, 83.61 58 P P 11 36 29.0 +0.6
baz=248
ISCO Idaho Springs 83.65 46 P P 11 36 29.6 +0.8
baz=243,SNR=6.7
RLMT Red Lodge 83.81 40 P P 11 36 30.4 +1.0
baz=240,SNR=9.7
N23A Red Feather La 83.92 45 P P 11 36 31.0 +0.8
baz=242,SNR=7.1
DAWY Dawson 84.03 14 IAmb IAmb 11 36 44.0
comp=Z,11nm,1.1s
EGAK Eagle 84.24 13 IAmb IAmb 11 36 44.3
comp=Z,6.5nm,1.0s
K22A Casper 84.35 43 P P 11 36 32.6 +0.4
baz=242
AMTX Amarillo 84.37 51 P P 11 36 32.7 +0.4
baz=246
EGMT Eagleton 84.99 37 P P 11 36 35.5 +0.4
baz=239
EGMT Eagleton 84.99 37 IAmb IAmb 11 36 36.8
comp=Z,9.1nm,1.1s
ABTX Abilene, Hawle 85.04 54 P P 11 36 36.1 +0.5
baz=247
BILL Bilibino 85.35 352 P P 11 36 36.8 +0.4
BILL IAmb IAmb 11 36 37.7
comp=Z,8.6nm,1.0s
KSCO Kaye Shedlock' 85.39 47 P P 11 36 37.5 +0.1
baz=245
KSCO Kaye Shedlock' 85.39 47 IAmb IAmb 11 36 39.1
comp=Z,6.7nm,0.9s
TOLK Toolik Lake Re 86.22 8 P P 11 36 41.3 +0.6
baz=202
TOLK Toolik Lake Re 86.22 8 IAmb IAmb 11 36 54.3
comp=Z,11nm,1.3s
LAO LASA Array 86.43 39 P P 11 36 43.1 +0.8
baz=242
LAO LASA Array 86.43 39 IAmb IAmb 11 36 43.9
comp=Z,4.8nm,0.8s
WMOK Wichita Mounta 86.51 52 P P 11 36 42.8 -0.2
baz=248
WHTX Lake Whitney, 86.52 55 P P 11 36 43.4 +0.4
baz=248
EPYK Eagle Plains 86.58 14 P P 11 36 42.7 +0.2
baz=214
EPYK Eagle Plains 86.58 14 IAmb IAmb 11 36 55.8
comp=Z,9.8nm,1.1s
RSSD Black Hills 86.64 42 P P 11 36 43.1 -0.4
baz=244
RSSD Black Hills 86.64 42 P P 11 36 43.2 -0.3
RSSD IAmb IAmb 11 36 44.3
comp=Z,4.0nm,0.7s
MAW Mawson 87.25 198 P P 11 36 45.9 0.0
comp=Z,3.3nm,0.6s,baz=166,slow=12,SNR=2.4
PLCA Paso Flores 88.56 132 P P 11 36 54.8 +2.0
comp=Z,1.5nm,0.9s,baz=216,slow=8.9,SNR=1.9
PLCA LR LR 12 07 46.8
comp=Z,56nm,21.2s,baz=274,slow=30
INK Inuvik 88.88 14 P P 11 36 54.2 +0.8
comp=Z,2.7nm,1.1s,baz=247,slow=5.3
INK Inuvik 88.88 14 IAmb IAmb 11 37 07.0
comp=Z,4.8nm,1.0s
HHC Hu-ho-hao-te 89.98 313 *e*P P **11 36 59.8 +0.4**
HHC pmax pmax
comp=Z,14nm,0.8s
HHC pmax pmax
comp=Z,59nm,6.7s
YKA Yellowknife Ar 90.58 23 P P 11 37 01.9 +0.4
comp=Z,1.0nm,0.7s,baz=232,slow=4.3,SNR=17
YKA LR LR 12 10 58.3
comp=Z,60nm,20.4s,baz=0.0,slow=31
ECSD EROS Data Cent 91.39 45 P P 11 37 06.2 +0.4
baz=249
ECSD EROS Data Cent 91.39 45 IAmb IAmb 11 37 07.1
comp=Z,5.3nm,1.2s
U40A Yellville 91.60 53 P P 11 37 06.9 0.0
baz=251
W41B Gary Mavity, V 91.69 54 P P 11 37 07.7 +0.4
baz=251
C36M Paulatuk 91.95 15 P P 11 37 08.4 +0.7
baz=226
C36M Paulatuk 91.95 15 IAmb IAmb 11 37 09.8
comp=Z,8.2nm,1.4s
VNA3 Neumayer Olymp 92.03 175 P P 11 37 11.8 +3.5
VNA2 Neumayer--Watz 92.53 175 P P 11 37 12.7 +2.1
baz=198,slow=3.2
R40A Maddies Statio 92.66 51 IAmb IAmb 11 37 12.8
comp=Z,6.1nm,1.1s
CD2 Chengdu 92.71 301 P P 11 37 12.8 +0.5
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CCM Cathedral Cave 93.35 51 P P 11 37 15.2 +0.3
baz=252
CMAR Chiang Mai Arr 93.41 288 P P 11 37 15.8 +0.2
comp=Z,1.0nm,0.3s,baz=96,slow=2.4,SNR=7.3
LZH Lanzhou 94.16 306 *e*P P **11 37 17.5 -1.4**
LZH pP sP 11 37 27.6 -1.2
LZH sP pwP 11 37 33.3 +2.8
LZH pmax pmax
comp=Z,22nm,1.2s
ULM Lac du Bonnet 94.17 39 LR LR 12 12 40.3
comp=Z,154nm,21.4s,baz=275,slow=31
SPMN Marine on St. 94.46 44 P P 11 37 20.8 +0.9
baz=252
WVT Waverly 95.41 54 P P 11 37 24.6 +0.2
baz=254
JFWS Jewell Farm 95.52 47 P P 11 37 25.0 +0.2
baz=253
LPAZ La Paz 99.00 110 LR LR 12 12 53.9
comp=Z,53nm,21.9s,baz=285,slow=30
ROSC El Rosal 99.45 88 LR LR 12 15 29.7
comp=Z,34nm,18.8s,baz=218,slow=31
KURBB Kurchatov Arra 114.17 319 PKP **PKiKP 11 42 39.2 +0.2**
comp=Z,0.2nm,0.3s,baz=96,slow=2.0,SNR=4.1
KSH Kashi 116.41 306 PKP **PKiKP 11 42 46.4 +2.6**
ARCES ARCESS Array B 125.46 352 PKP **PKiKP 11 43 00.4 -0.1**
comp=Z,2.9nm,0.8s,baz=321,slow=1.7,SNR=4.5
FINES FINESS Array B 132.82 348 PKP **PKPdf 11 43 14.5 +0.1**
comp=Z,1.7nm,0.9s,baz=305,slow=4.9,SNR=3.7
CLL Collm 144.65 354 *e*PKiKP **PKiKP 11 43 39.0 -1.0**
CLL LmV 12 54 00.0
comp=Z,100nm,18.7s
DPC Dobruska-Polom 145.13 350 *e*PKP **PKPdf 11 43 37.6 +0.4**
DPC *ex* x 11 43 49.4
BURAR Bucovina Array 145.30 338 ⇑P **PKPdf 11 43 38.9 +1.3**
BIZ Bicaz 145.55 337 ⇑P **PKPab 11 43 39.3 +0.9**
LANS Liptovska Anna 145.63 346 *e*PKP **PKPab 11 43 40.2 +1.6**
BSTI Sart Tilman 145.66 2 PKPdf **PKPab 11 43 39.1 +0.5**
SNF Seneffe 145.67 3 PKPdf **PKPab 11 43 38.8 +0.2**
TRPA Tarpa 145.73 342 ⇑P **PKPab 11 43 38.7 -0.2**
PRU Pruhonice 145.76 352 *e*PKP **PKPab 11 43 39.3 +0.3**
PRU *ex* x 11 43 51.9
GOPC GO Pecny, Ondr 145.79 351 *e*PKP **PKPab 11 43 39.5 +0.3**
GOPC *ex* x 11 43 51.9
TLCR 145.85 332 ⇓P **PKPab 11 43 39.3 -0.2**
BMRD Maredsous 145.90 3 PKPdf **PKPbc 11 43 38.9 -0.2**
VRAC Vranov 146.08 349 *e*PKP **PKPab 11 43 40.4 +0.1**
PBCC Pribram 146.13 352 *e*PKP **PKPab 11 43 40.9 +0.5**
PBCC *ex* x 11 43 53.4
CFR Carcaliu 146.16 333 ⇓P **PKPab 11 43 40.9 +0.3**
VRI Vrincioaia 146.19 335 ⇑P **PKPab 11 43 40.8 0.0**
PLOR Plostina 146.24 335 ⇑P **PKPbc 11 43 40.5 +0.2**
TOPG Topolog 146.28 332 ⇑P **PKiKP 11 43 42.3 -1.3**
JAVC Velka Javorina 146.30 348 *e*PKP **PKiKP 11 43 42.3 -1.2**
KRUC Moravsky 146.36 349 *e*PKP **PKPab 11 43 40.9 -0.4**
VYHS Vyhne 146.39 346 *e*PKP **PKPab 11 43 41.9 +0.4**
GRF Grafenberg Arr 146.41 355 *e*PKP **PKPab 11 43 41.6 +0.1**
baz=7.4,slow=1.9
GRF *ep*PKP sPKPab 11 43 53.6 +2.1
WLF Walferdange 146.59 1 PKPdf **PKPab 11 43 41.6 -0.5**
HARR Harsova 146.63 333 ⇑P **PKPab 11 43 42.6 +0.1**
DOPR Dopca 146.63 337 ⇑P **PKPdf 11 43 34.2 -5.6**
KHC Kasperske Hory 146.73 352 *e*PKP **PKPab 11 43 42.2 -0.6**
KHC *ex* x 11 43 55.9
KHC *ex* x 11 44 06.0
MLR Muntele Rosu 146.81 336 ⇑P **PKPbc 11 43 42.3 +0.1**
MLR Muntele Rosu 146.81 336 PKPab 11 43 42.8 -0.5
MODS Modra-Piesok 146.84 348 *e*PKP **PKPab 11 43 42.6 -0.6**
DRGR 146.87 340 ⇑P **PKPbc 11 43 42.4 +0.3**
GERES GERESS Array B 146.99 352 PKPbc **PKPbc 11 43 42.5 0.0**
comp=Z,2.9nm,0.8s,baz=8.5,slow=2.7,SNR=18
BRTR Keskin Array B 147.13 321 PKPbc **PKPab 11 43 44.4 -0.5**
comp=Z,8.7nm,0.9s,baz=95,slow=2.6,SNR=29
ARR Arges 147.43 337 ⇓P **PKiKP 11 43 45.7 -0.2**
CONA Conrad Observa 147.54 349 *i* PKPab **PKPab 11 43 45.6 -0.5**
comp=Z,17nm,1.0s,SNR=8.8
ANTO Ankara 147.55 322 PKPab 11 43 45.9 -0.5
SIRR Siria 147.66 341 ⇑P **PKPbc 11 43 45.1 +0.8**
LOT Lotru 147.68 338 ⇑P **PKPbc 11 43 43.7 -0.8**
MOA Molln 147.88 351 *i* pPKPdf **PKiKP 11 43 46.0 -0.7**
comp=Z,11nm,1.4s
BFO Black Forest 147.92 359 PKiKP 11 43 46.0 -0.8
GZR Gura Zlata 148.07 339 ⇑P **PKPbc 11 43 45.8 +0.3**
ARSA Arzberg 148.26 349 *i* PKiKP **PKiKP 11 43 47.0 -0.6**
comp=Z,8.0nm,1.1s
BZS Buzias 148.26 341 ⇑P **PKPbc 11 43 45.9 0.0**
RETA Reutte 148.64 355 *i* PKiKP **PKiKP 11 43 48.4 -0.1**
comp=Z,8.6nm,1.2s
HERR Herculane 148.64 339 ⇑P **PKiKP 11 43 47.6 -0.8**
WATA Walderalm 148.72 354 *es*PKPdf **PKiKP 11 43 48.7 0.0**
comp=Z,3.7nm,0.5s
MOTA Moosalm 148.75 355 *e*PKiKP **PKiKP 11 43 48.1 -0.7**
comp=Z,14nm,1.0s
KBA Koelnbreinsper 148.77 352 *i* PKiKP **PKPbc 11 43 47.8 +0.4**
comp=Z,5.1nm,0.8s
WTTA Wattenberg 148.79 354 *i* PKiKP **PKiKP 11 43 48.4 -0.4**
comp=Z,8.0nm,0.6s
SQTA Sankt Quirin 148.87 355 *e*PKiKP **PKiKP 11 43 48.6 -0.4**
comp=Z,10nm,1.0s
SOKA Soboth 148.90 350 *i* pPKPdf **PKPbc 11 43 47.9 +0.3**
comp=Z,9.6nm,1.2s,SNR=5.2
DAVA Damuels 148.90 356 *i* PKiKP **PKiKP 11 43 48.3 -0.8**
comp=Z,7.5nm,0.8s
PLVB Pleven 149.09 335 ⇑P **PKiKP 11 43 48.8 -0.6**
FETA Feichten 149.11 355 *es*PKPdf **PKiKP 11 43 49.8 +0.3**
comp=Z,6.7nm,1.1s
MYKA Terra Mystica 149.17 351 *i* pPKPdf **PKPbc 11 43 47.9 -0.4**
comp=Z,4.2nm,0.7s
ABTA Abfaltersbach 149.20 353 *i* PKiKP **PKiKP 11 43 48.9 -0.7**
comp=Z,9.7nm,0.7s,SNR=5.6
CTI Castel Tesino 149.99 354 PKiKP 11 43 51.1 -0.2
VTS Vitosha 150.29 336 ⇑P **PKiKP 11 43 52.3 +0.2**
STIP Stip 151.48 336 *i* Pg **PKiKP 11 43 54.5 +0.1**
STIP Stip 151.48 336 *i* Pg **PKiKP 11 43 54.5 +0.1**
VAY Valandovo 151.65 335 *i* Pg **PKiKP 11 43 54.6 -0.1**
VAY Valandovo 151.65 335 *i* Pg **PKiKP 11 43 54.6 -0.1**
PDG Podgorica 151.87 341 ⇑P **PKiKP 11 43 55.1 0.0**
TORD Torodi Ar. Bea 173.87 119 PKP **PKPdf 11 44 09.9 -0.2**
comp=Z,1.4nm,0.7s,baz=339,slow=2.1,SNR=8.1
TORD PKPab **PKPab 11 45 39.6 -1.1**
comp=Z,2.1nm,0.9s,baz=272,slow=4.1,SNR=5.7

DJA 22 11:32:21.7±0.4, 2°S±14°×13°5E±°, h10km, M3.6/5, MLv3.6/5, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RKPI	**Ransiki, Papua**	**0.75**	**277**	P	Pg	11 32 35.8	-0.4
RKPI				S	Sb	11 32 47.4	+0.3
SRPI	**Serui, Papua**	**1.35**	**102**	P	Pn	11 32 45.8	-0.8
SRPI				S	Sb	11 33 04.3	-0.1
FAKI	**Fak Fak**	**2.97**	**244**	P	Pn	11 33 08.9	-0.1
FAKI				S	Sn	11 33 30.2	-15
SMPI	**Sarmi**	**3.81**	**96**	P	Pn	11 33 20.4	-0.1

*IDC **22** 11:32:45.0±5.4, 1°.61S×134°.78E, h27km±38km, mb3.7/8, mb1 3.9/12, mb1mx3.6/52, mbtmp3.9/12, ML3.7/4, MS3.1/3, Ms1 3.2/3, ms1mx2.8/35, Error ellipse: s-maj=25.4km s-min=15.9km az=63.0*

ISC 22 11:32:46.0±0.7, 1°.6S±0°.1×134°.77E±0°.09, h35km, n15, σ0°.93/14, mb3.8/8, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.59**	**282**	Pn	**Pn**	**11 33 39.1**	**-0.1**
	4.8nm,0.3s,baz=85,slow=24,SNR=17						
SIJI				Sn	**Sn**	**11 34 21.1**	**+0.8**
	5.7nm,0.3s,baz=311,slow=23,SNR=1.7						
SIJI				Lg	Lg	11 34 38.9	
	6.0nm,0.3s,baz=140,slow=23,SNR=2.3						
SIJI				LR	LR	11 34 43.9	
	comp=Z,92nm,20.9s,baz=90,slow=33						
JAY	**Jayapura**	**5.99**	**99**	Pn	**Pn**	**11 34 13.1**	**+0.8**
	0.4nm,0.3s,baz=74,slow=8.9,SNR=1.7						
WRA	**Warramunga Arr**	**18.21**	**181**	P	**P**	**11 36 54.2**	**-1.9**
	0.4nm,0.3s,baz=2.7,slow=12,SNR=9.6						
FITZ	**Fitzroy Crossi**	**18.66**	**208**	P	**Pn**	**11 37 01.6**	**0.0**
	0.5nm,0.3s,baz=28,slow=7.5,SNR=8.8						
ASAR	**Alice Springs**	**21.93**	**182**	P	**P**	**11 37 36.1**	**-0.4**
	4.5nm,0.6s,baz=7.4,slow=12,SNR=14						
HNR	**Honiara**	**26.21**	**108**	LR	LR	11 48 45.3	
	comp=Z,50nm,21.0s,baz=264,slow=37						
STKA	**Stephens Creek**	**30.77**	**169**	P	**P**	**11 38 59.5**	**+1.3**
	1.1nm,0.7s,baz=313,slow=11,SNR=3.2						
JNU	**Nakatsue**	**34.76**	**354**	P	**P**	**11 39 33.4**	**+0.3**
	5.2nm,0.9s,baz=121,slow=5.7,SNR=4.1						
KLR	**Kul'dur**	**50.72**	**357**	P	**P**	**11 41 42.2**	**0.0**
	0.9nm,0.6s,baz=162,slow=3.0,SNR=4.6						
MKAR	**Makanchi Array**	**66.56**	**324**	P	**P**	**11 43 33.1**	**+0.5**
	0.5nm,0.6s,baz=117,slow=8.0,SNR=2.6						
ZALV	**Zalesovo Beam**	**69.06**	**331**	P	**P**	**11 43 48.1**	**-0.1**
	0.3nm,0.4s,baz=120,slow=8.7,SNR=1.6						
KURBB	**Kurchatov Arra**	**70.61**	**326**	P	**P**	**11 43 58.2**	**+0.4**
	0.1nm,0.3s,baz=114,slow=6.5,SNR=2.3						
ILAR	**Eielson Array**	**86.50**	**25**	P	**P**	**11 45 23.5**	**-1.5**
	0.7nm,0.9s,baz=267,slow=4.5,SNR=4.7						
ARCES	**ARCESS Array B**	**98.19**	**340**	LR	LR	12 34 38.3	
	comp=Z,27nm,20.5s,baz=71,slow=38						
TORD	**Torodi Ar. Bea**	**132.18**	**286**	PKP	**PKiKP**	**11 51 57.7**	**-0.6**
	0.5nm,0.8s,baz=64,slow=3.4,SNR=2.4						

IDC ***22*** *11:38:47.6±0.9, 1°.52S×135°.00E, h0km, mb3.9/6, mb1 4.2/10, mb1mx3.8/48, mbtmp4.1/10, ML4.1/4, MS3.5/1, Ms1 3.5/1, ms1mx2.6/37, Error ellipse: s-maj=20.1km s-min=17.6km az=32.0*
DJA ***22*** *11:38:51.1±0.4, 2°.5±7°×13°.5E±°, h10km, M4.4/7, mb4.5/4, MLv4.3/7*
ISC 22 11:38:50.4±0.6, **1°.62S**±0°.09×**134°.96E**±0°.04, **h10**km, **n24,** σ**2**§**17**/**28**, **mb4.1**/**8**, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RKPI	**Ransiki, Papua**	**0.78**	**278**	P	**Pg**	**11 39 04.7**	**-0.8**
SRPI	**Serui, Papua**	**1.31**	**101**	P	**Pn**	**11 39 14.9**	**+0.1**
FAKI	**Fak Fak**	**3.00**	**244**	P	**Pn**	**11 39 37.9**	**-0.1**
SIJI	**Sorong**	**3.76**	**281**	Pn	**Pn**	**11 39 48.4**	**-0.2**
	6.7nm,0.3s,baz=115,slow=23,SNR=21						
SIJI				Pg	**Pb**	**11 39 56.8**	**-0.1**
	9.4nm,0.3s,baz=84,slow=13,SNR=9.8						
SIJI				Sn	**Sn**	**11 40 33.0**	**0.0**
	5.7nm,0.3s,baz=236,slow=22,SNR=2.1						
SIJI				Lg	Lg	11 40 47.5	
	11nm,0.3s,baz=354,slow=17,SNR=5.8						
SMPI	**Sarmi**	**3.77**	**96**	P	**Pn**	**11 39 51.2**	**+2.6**
BNDI	**Bandanaira**	**5.81**	**240**	P	**Pn**	**11 40 16.3**	**-0.4**
	1.4nm132nm,1.3s						
JAY	**Jayapura**	**5.81**	**99**	Pn	**Pn**	**11 40 17.3**	**+0.5**
	0.3nm,0.3s,baz=327,slow=12,SNR=1.7						
JAY				Sn	**Sn**	**11 41 25.8**	**+2.2**
	0.7nm,0.3s,baz=209,slow=19,SNR=1.5						
BNSI	**Bone**	**15.08**	**259**	P	**P**	**11 42 32.9**	**+3.9**
PCI	**Palu**	**15.13**	**272**	P	**P**	**11 42 30.2**	**+0.6**
TTSI	**Tana Toraja**	**15.19**	**264**	P	**P**	**11 42 35.3**	**+5.1**
SPSI	**Sidrap Palu**	**15.35**	**261**	P	**Pn**	**11 42 27.3**	**+0.1**
KRVT	**Keravat (AS076**	**17.26**	**99**	P	**Pn**	**11 42 48.1**	**-3.6**
	4.4nm,0.3s,baz=210,slow=20,SNR=3.0						
WRA	**Warramunga Arr**	**18.23**	**182**	P	**Pn**	**11 43 02.3**	**-1.4**
	0.4nm,0.3s,baz=3.1,slow=12,SNR=16						
FITZ	**Fitzroy Crossi**	**18.76**	**209**	P	**P**	**11 43 09.9**	**+0.1**
	0.5nm,0.3s,baz=42,slow=10,SNR=12						
ASAR	**Alice Springs**	**21.95**	**183**	P	**P**	**11 43 44.4**	**0.0**
	3.0nm,0.5s,baz=8.2,slow=11,SNR=39						
MJAR	**Matsushiro Arr**	**38.08**	**4**	LR	LR	11 58 59.9	
	comp=Z,75nm,21.3s,baz=120,slow=32						
KLR	**Kul'dur**	**50.77**	**356**	P	**P**	**11 47 50.2**	**0.0**
	1.1nm,0.7s,baz=145,slow=8.0,SNR=4.4						
GTA	**Gaotai**	**52.01**	**326**	*e*P	**P**	**11 48 01.3**	**+1.0**
GTA				pP	sP	11 48 08.3	+4.0
GTA				sP	pP	11 48 12.8	+10
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MKAR	**Makanchi Array**	**66.66**	**323**	P	**P**	**11 49 39.3**	**-2.2**
	comp=Z,1.2nm,0.7s,baz=115,slow=7.4,SNR=5.9						
KSH	**Kashi**	**67.62**	**314**	P	**P**	**11 49 49.4**	**+1.6**
KSH				sP	sP	11 49 59.0	+7.1
KSH				PP	**PP**	**11 52 21.4**	**+4.4**
KSH				S	**S**	**11 58 42.5**	**-2.7**
KSH				pmax	pmax		
	comp=Z,18nm,1.1s						
KSH				pmax	pmax		
	comp=Z,140nm,5.5s						
ZALV	**Zalesovo Beam**	**69.14**	**331**	P	**P**	**11 49 53.6**	**-3.2**
	comp=Z,1.4nm,0.8s,baz=83,slow=4.6,SNR=4.7						
KURBB	**Kurchatov Arra**	**70.70**	**326**	P	**P**	**11 50 05.2**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=118,slow=5.7,SNR=6.8						
ILAR	**Eielson Array**	**86.41**	**25**	P	**P**	**11 51 31.4**	**-1.5**
	comp=Z,1.1nm,0.9s,baz=255,slow=5.2,SNR=9.5						
TORD	**Torodi Ar. Bea**	**132.35**	**286**	PKP	**PKPdf**	**11 58 06.4**	**+0.4**
	comp=Z,0.8nm,1.0s,baz=172,slow=4.1,SNR=2.3						

WEL 22 11:39:24.6±0.5, **32°.9**S×**18°.0W**±2°.3, **h322**km±9km, **M4.3**/19, **mB4.6**/7, **MLv4.8**/19, **Mw(mB)3.8**/7, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.93**	**35**	S	S	11 41 06.9	+0.1
MXZ	**Matakaoa Point**	**6.05**	**194**	P	Pn	11 40 57.0	+2.0
MXZ				S	S	11 42 06.7	-1.4
WMGZ	**Waiomatatini S**	**6.28**	**193**	P	Pn	11 40 58.9	+1.2
HAZ	**Te Kaha**	**6.36**	**197**	P	Pn	11 40 59.6	+1.1
HAZ				S	S	11 42 18.0	+3.3
PKGZ	**Pakihiroa**	**6.42**	**195**	P	Pn	11 40 59.9	+0.6
PKGZ				S	S	11 42 14.4	-1.6
PUZ	**Puketiti**	**6.55**	**193**	P	Pn	11 41 01.5	+0.5
PUZ				S	S	11 42 20.3	+1.3
RUGZ	**Raukumara Rang**	**6.58**	**197**	P	Pn	11 41 01.1	-0.3
RUGZ				S	S	11 42 16.9	-2.9
CNGZ	**Carnagh Statio**	**6.96**	**193**	P	Pn	11 41 07.4	+1.6
MWZ	**Matawai**	**6.97**	**197**	P	Pn	11 41 04.9	-1.0
MWZ				S	S	11 42 28.9	+0.8
URZ	**Urewera**	**7.01**	**200**	P	Pn	11 41 05.3	-1.0
URZ				S	S	11 42 31.0	+2.1
RAGZ	**Rawiri**	**7.15**	**198**	P	Pn	11 41 09.0	+0.8
RAGZ				S	S	11 42 34.6	+2.5
RIGZ	**Rimuhau**	**7.27**	**195**	P	Pn	11 41 08.8	-0.7
RIGZ				S	S	11 42 34.9	+0.3
MUGZ	**Murupara**	**7.32**	**201**	P	Pn	11 41 09.3	-0.8
MUGZ				S	S	11 42 35.0	-0.7
RTZ	**Ruatahuna**	**7.38**	**200**	P	Pn	11 41 11.6	+0.7
SNGZ	**Shannon Statio**	**7.44**	**197**	P	Pn	11 41 12.3	+0.8
RAHZ	**Arahi**	**7.63**	**198**	P	Pn	11 41 14.2	+0.3
RAHZ				S	S	11 42 43.3	+0.7
MHGZ	**Mahia Peninsul**	**7.67**	**193**	P	Pn	11 41 15.4	+1.2
NMHZ	**Naumai**	**7.88**	**199**	P	Pn	11 41 17.1	+0.2
ARHZ	**Aropaoanui**	**7.98**	**198**	P	Pn	11 41 18.1	+0.1
BKZ	**Black Stump Fm**	**8.04**	**201**	P	Pn	11 41 17.7	-1.1
HIZ	**Hauiti**	**8.07**	**211**	P	Pn	11 41 21.2	+2.0
KRHZ	**Kereru**	**8.51**	**200**	P	Pn	11 41 21.9	-2.6
KAHZ	**Kahuranaki**	**8.51**	**197**	P	Pn	11 41 23.4	-1.1
PNHZ	**Pukenui**	**8.81**	**200**	P	Pn	11 41 25.7	-2.4

IDC 22 11:45:45.3±5.4, **25°.66S**×**176°.95E**, **h0**km, **mb3.6**/3, **mb1 3.9**/4, **mb1mx3.6**/40, **mbtmp3.8**/4, **ML4.3**/1, **Error ellipse: s-maj=105.9km s-min=31.5km az=74.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**12.57**	**179**	Pn	Pn	11 48 45.3	0.0
	1.7nm,0.3s,baz=285,slow=3.1,SNR=13						
URZ				Sn	Sn	11 51 05.7	-0.3
	1.4nm,0.3s,baz=280,slow=20,SNR=11						
STKA	**Stephens Creek**	**31.51**	**250**	P	P	11 52 10.2	+1.1
	0.4nm,0.3s,baz=76,slow=8.3,SNR=2.9						
KRVT	**Keravat (AS076**	**31.97**	**307**	P	P	11 52 13.8	+0.6
	17nm,0.3s,baz=189,slow=2.1,SNR=13						
ASAR	**Alice Springs**	**39.04**	**263**	P	P	11 53 13.4	-0.7
	0.3nm,0.4s,baz=93,slow=7.6,SNR=15						
WRA	**Warramunga Arr**	**39.56**	**269**	P	P	11 53 17.4	-1.0
	0.2nm,0.3s,baz=101,slow=8.7,SNR=1.6						

TAP ***22*** *12:03:60.0, 23°.75N×121°.44E, h14km, ML2.5, C*
JMA ***22*** *12:03:59.6±0.1, 23°.71N×121°.52E, h8km±4km*
ISC 22 12:03:59.9±0.8, **23°.73N**±0°.01×**121°.48E**±0°.02, **h14**km±5km, **n70**, σ0§**51**/128, **2C-3D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGFH	**Guangfu**	**0.08**	**216**	*i* P	**Pg**	**12 04 02.9**	**0.0**
	baz=190						
EGFH				*i* S	**Sg**	**12 04 04.9**	**+0.1**
	baz=190						
ESL	**Shilin**	**0.09**	**333**	⇑*i* P	**Pg**	**12 04 02.8**	**-0.2**
	baz=359						
ESL				*i* S	**Sg**	**12 04 04.6**	**-0.5**
	baz=359						
HGSD	**Ruisui**	**0.24**	**192**	⇑P	**Pb**	**12 04 05.8**	**-0.3**
	baz=188						
EHY	**Hungye**	**0.27**	**212**	⇓*i* P	**Pg**	**12 04 05.4**	**-0.3**
	baz=203						
EHY				*i* S	**Sg**	**12 04 09.0**	**-0.4**
	baz=203						
HWA	**Hwalien**	**0.27**	**26**	P	**Pb**	**12 04 06.8**	**+0.2**
	baz=25						
HWA				S	**Sb**	**12 04 11.0**	**-0.1**
	baz=25						
VWDT	**VWDT**	**0.31**	**274**	P	**Pg**	**12 04 06.3**	**-0.1**
	baz=271						
VWDT				S	**Sg**	**12 04 10.4**	**-0.3**
	baz=271						
OWD	**Renai**	**0.35**	**309**	*i* P	**Pg**	**12 04 06.9**	**-0.3**
	baz=310						
OWD				*i* S	**Sg**	**12 04 11.3**	**-0.8**
	baz=310						
TWD	**Chiawan**	**0.36**	**17**	*i* P	**Pb**	**12 04 07.8**	**-0.4**
	baz=17						
TWD				*i* S	**Sg**	**12 04 12.6**	**+0.3**
	baz=17						
YULB	**Yu-li**	**0.38**	**206**	P	**Pg**	**12 04 07.2**	**-0.3**
	baz=200						
YULB				S	**Sb**	**12 04 13.4**	**-0.8**
	baz=200						
TWF1	**Yuli**	**0.41**	**204**	*i* P	**Pg**	**12 04 08.0**	**-0.2**
	baz=204						
TWF1				*i* S	**Sg**	**12 04 14.1**	**+0.3**
	baz=204						
CHGB	**Renai**	**0.43**	**320**	⇓P	**Pg**	**12 04 08.5**	**-0.1**
	baz=329						
CHGB				S	**Sg**	**12 04 13.7**	**-0.7**
	baz=329						
NACB	**Ninganchiao**	**0.45**	**14**	P	**Pg**	**12 04 09.0**	**+0.1**
	baz=19						
NACB				S	**Sg**	**12 04 15.1**	**0.0**
	baz=19						
WHF	**Hehuan Shan**	**0.46**	**335**	⇓*i* P	**Pg**	**12 04 08.7**	**-0.5**
	baz=339						
WHF				S	**Sg**	**12 04 14.6**	**-0.8**
	baz=339						
ETLH	**Xiulin Townshi**	**0.47**	**0**	P	**Pg**	**12 04 09.2**	**-0.2**
	baz=5.0						
ETLH				S	**Sg**	**12 04 15.3**	**-0.4**
	baz=5.0						
SSLB	**Suanglung**	**0.48**	**277**	P	**Pg**	**12 04 09.1**	**-0.4**
	baz=275						
SSLB				S	**Sg**	**12 04 14.6**	**-1.5**
	baz=275						
YUS	**Yu-Shan**	**0.54**	**243**	P	**Pg**	**12 04 10.8**	**0.0**
	baz=239						
YUS				*e*S	**Sg**	**12 04 18.2**	**+0.2**
	baz=239						
SMLT	**Sun Moon Lake**	**0.55**	**286**	*i* P	**Pg**	**12 04 10.5**	**-0.3**
	baz=285						
SMLT				*i* S	**Sg**	**12 04 17.6**	**-0.5**
	baz=285						
FULB	**Fuli**	**0.56**	**198**	*i* P	**Pb**	**12 04 12.0**	**+0.5**
	baz=206						
FULB				*e*S	**Sb**	**12 04 19.1**	**-0.3**
	baz=206						
WHYT	**Xinyi Township**	**0.57**	**267**	P	**Pg**	**12 04 10.6**	**-0.7**
	baz=259						
WHYT				*i* S	**Sg**	**12 04 18.0**	**-0.8**
	baz=259						
DPDB	**Guoxing**	**0.59**	**301**	*i* P	**Pg**	**12 04 11.4**	**-0.1**
	baz=301						
DPDB				*i* S	**Sg**	**12 04 18.9**	**-0.5**
	baz=301						
TWT	**Tachien**	**0.59**	**332**	P	**Pg**	**12 04 11.3**	**-0.2**
	baz=333						
TWT				S	**Sg**	**12 04 19.0**	**-0.4**
	baz=333						
TDCB	**Techi**	**0.59**	**331**	P	**Pg**	**12 04 11.5**	**-0.2**
	baz=333						
TDCB				S	**Sg**	**12 04 19.1**	**-0.5**
	baz=333						
CHKT	**Chengkung**	**0.64**	**189**	*e*P	**Pb**	**12 04 12.9**	**+0.1**
	baz=185						
CHKT				*e*S	**Sb**	**12 04 22.9**	**+1.3**
	baz=185						
ELDTW	**Lidau**	**0.69**	**218**	*i* P	**Pg**	**12 04 12.8**	**-0.6**
	baz=207						
ELDTW				*i* S	**Sg**	**12 04 21.8**	**-0.7**
	baz=207						
WJS	**Zhushan**	**0.69**	**278**	P	**Pb**	**12 04 14.0**	**+0.2**
	baz=274						
WJS				*e*S	**Sb**	**12 04 23.9**	**+0.6**
	baz=274						
NNSB	**Datong**	**0.70**	**353**	P	**Pg**	**12 04 13.4**	**-0.2**
	baz=3.0						
NNSB				S	**Sg**	**12 04 22.2**	**-0.6**
	baz=3.0						
NNSH	**Datong**	**0.70**	**353**	*e*P	**Pg**	**12 04 13.5**	**-0.1**
	baz=2.0						
NNSH				*e*S	**Sg**	**12 04 22.1**	**-0.7**
	baz=2.0						
NNS	**Nan Shan**	**0.71**	**352**	*i* P	**Pg**	**12 04 13.7**	**-0.2**
	baz=3.0						
NNS				*i* S	**Sg**	**12 04 23.2**	**-0.1**
	baz=3.0						
WHP	**Taichung City**	**0.73**	**318**	*i* P	**Pg**	**12 04 14.2**	**0.0**
	baz=320						
WHP				*e*S	**Sg**	**12 04 23.5**	**-0.3**
	baz=320						
ENA	**Nanau**	**0.73**	**19**	*i* P	**Pg**	**12 04 13.9**	**-0.4**
	baz=23						
ENA				S	**Sg**	**12 04 23.9**	**0.0**
	baz=23						
WNT	**Mingjian**	**0.74**	**281**	P	**Pb**	**12 04 15.2**	**+0.5**
	baz=283						
WNT				S	**Sn**	**12 04 26.3**	**-0.8**
	baz=283						
CHN5	**Tsauling**	**0.75**	**260**	*i* P	**Pb**	**12 04 15.6**	**+0.9**
	baz=249						
CHN5				*i* S	**Sg**	**12 04 24.0**	**-0.3**
	baz=249						
TCU	**Taichung**	**0.84**	**300**	P	**Pn**	**12 04 17.2**	**-0.2**
	baz=299						
WDLH	**Douliu**	**0.86**	**267**	*e*P	**Pn**	**12 04 18.1**	**+0.4**
	baz=265						
WDLH				*e*S	**Sn**	**12 04 29.8**	**-0.3**
	baz=265						
NDT	**Datong Townshi**	**0.87**	**2**	*i* P	**Pb**	**12 04 17.0**	**+0.1**
	baz=5.0						
NDT				S	**Sg**	**12 04 27.5**	**-0.6**
	baz=5.0						
STYT	**Tauyuan**	**0.87**	**230**	*i* P	**Pb**	**12 04 17.1**	**+0.2**
	baz=226						
STYT				*i* S	**Sg**	**12 04 28.1**	**-0.2**
	baz=226						
TPUB	**Ta-pu**	**0.89**	**241**	P	**Pg**	**12 04 16.6**	**-0.6**
	baz=244						
TPUB				S	**Sb**	**12 04 29.2**	**+0.3**
	baz=244						
TWQ1	**Liyutan**	**0.89**	**314**	*i* P	**Pn**	**12 04 18.2**	**+0.1**
	baz=322						
TWQ1				S	**Sn**	**12 04 30.9**	**+0.1**
	baz=322						
CHN4	**Tsaushan**	**0.90**	**245**	*i* P	**Pn**	**12 04 18.0**	**-0.1**
	baz=242						
CHN4				*i* S	**Sb**	**12 04 29.9**	**+0.7**
	baz=242						
ENTT	**Nioudou**	**0.91**	**5**	*i* P	**Pb**	**12 04 17.6**	**+0.1**
	baz=9.0						
ENTT				S	**Sg**	**12 04 29.2**	**-0.2**
	baz=9.0						
WTP	**Ta-pu**	**0.93**	**239**	*i* P	**Pb**	**12 04 18.4**	**+0.5**
	baz=241						
WTP				S	**Sb**	**12 04 30.5**	**+0.4**
	baz=241						
TWC	**Suao**	**0.94**	**21**	P	**Pb**	**12 04 18.2**	**+0.3**
	baz=18						
TWC				S	**Sg**	**12 04 29.7**	**-0.6**
	baz=18						
YHNB	**Yeheng**	**0.94**	**354**	P	**Pg**	**12 04 18.0**	**-0.1**
	baz=357						
YHNB				S	**Sg**	**12 04 29.8**	**-0.7**
	baz=357						
NSY	**Sanyi**	**0.94**	**316**	P	**Pg**	**12 04 17.9**	**-0.4**
	baz=317						
NSY				S	**Sb**	**12 04 31.3**	**+0.7**
	baz=317						
NSK	**Sanguang**	**0.95**	**353**	*i* P	**Pg**	**12 04 18.1**	**-0.1**
	baz=357						
NSK				*i* S	**Sg**	**12 04 30.1**	**-0.6**
	baz=357						
TWG	**Pinlang**	**0.98**	**202**	P	**Pg**	**12 04 18.6**	**-0.3**
	baz=198						
TWG				*e*S	**Sg**	**12 04 31.3**	**-0.5**
	baz=198						
TWGBT	**Beinan**	**0.98**	**202**	P	**Pg**	**12 04 18.0**	**-0.9**
	baz=198						
TWGBT				*e*S	**Sg**	**12 04 30.9**	**-0.8**
	baz=198						
CHY	**Chiayi**	**0.99**	**257**	*e*P	**Pn**	**12 04 19.5**	**0.0**
	baz=254						
CHY				*e*S	**Sn**	**12 04 33.1**	**-0.3**
	baz=254						
NSTT	**Nanjuang**	**0.99**	**334**	*e*P	**Pn**	**12 04 20.1**	**+0.6**
	baz=336						
NSTT				*e*S	**Sb**	**12 04 32.4**	**+0.4**
	baz=336						
TWE	**Neicheng**	**1.00**	**10**	P	**Pn**	**12 04 19.5**	**-0.1**
	baz=25						
TWE				S	**Sb**	**12 04 32.6**	**+0.5**
	baz=25						
PTSB	**Yuanli**	**1.00**	**315**	*e*P	**Pn**	**12 04 20.5**	**+0.8**
	baz=316						
EOS1	**EOS1**	**1.01**	**36**	*e*P	**Pn**	**12 04 20.7**	**+1.0**
	baz=27						
NMLH	**Miaoli**	**1.02**	**322**	*e*P	**Pn**	**12 04 20.3**	**+0.4**
	baz=332						
TWK	**Hsinying**	**1.02**	**243**	P	**Pn**	**12 04 20.1**	**+0.2**
	baz=240						
TWK				S	**Sb**	**12 04 33.6**	**+0.8**
	baz=240						
CHN1	**Nanshi**	**1.03**	**238**	P	**Pn**	**12 04 20.9**	**+0.9**
	baz=235						
CHN1				S	**Sb**	**12 04 33.8**	**+0.8**
	baz=235						
SNST	**Tainan City**	**1.03**	**241**	*e*P	**Pn**	**12 04 20.1**	**0.0**
	baz=238						
SNST				*e*S	**Sn**	**12 04 34.3**	**0.0**
	baz=238						
RLNB	**Erlin**	**1.04**	**279**	*e*S	**Sn**	**12 04 35.1**	**+0.7**
	baz=278						
NWLT	**Wulai**	**1.04**	**1**	*e*P	**Pg**	**12 04 19.7**	**-0.3**
	baz=4.0						
NWLT				*e*S	**Sg**	**12 04 33.0**	**-0.7**
	baz=4.0						
SGST	**Jiashian**	**1.05**	**232**	*e*P	**Pn**	**12 04 20.5**	**+0.2**
	baz=229						
SGST				S	**Sn**	**12 04 34.5**	**-0.2**
	baz=229						
SLGT	**Liugui**	**1.06**	**226**	P	**Pg**	**12 04 20.3**	**-0.1**
	baz=213						
SLGT				*e*S	**Sb**	**12 04 34.5**	**+0.6**
	baz=213						
ECL	**Taimali**	**1.23**	**203**	*e*P	**Pn**	**12 04 22.8**	**0.0**
	baz=186						
TWA	**Mucha**	**1.25**	**4**	*e*S	**Sb**	**12 04 38.9**	**-0.4**
	baz=8.0						
SSD	**Sandimen**	**1.25**	**219**	*e*P	**Pn**	**12 04 22.4**	**-0.7**
	baz=215						
SSD				*e*S	**Sn**	**12 04 40.0**	**+0.2**
	baz=215						
NCU	**National Centr**	**1.26**	**348**	*e*S	**Sn**	**12 04 40.4**	**+0.4**
	baz=351						
TIPB	**Shuangxi**	**1.27**	**14**	*e*P	**Pn**	**12 04 22.4**	**-1.0**
	baz=17						
MASBT	**Mashibuluo**	**1.36**	**215**	*e*P	**Pg**	**12 04 25.6**	**-0.5**
	baz=212						
MASBT				*e*S	**Sn**	**12 04 43.1**	**+0.7**
	baz=212						
YM10	**YM10**	**1.42**	**3**	*e*P	**Pn**	**12 04 24.3**	**-1.1**
	baz=6.0						
YM10				*e*S	**Sn**	**12 04 44.4**	**+0.4**
	baz=6.0						
JYNG	**Yonaguni jima**	**1.52**	**62**	P	**Pn**	**12 04 27.4**	**+0.7**
YOJ	**Yonaguni jima**	**1.58**	**62**	P	**Pn**	**12 04 27.3**	**-0.2**
JIJ	**Ishigaki jima**	**2.52**	**75**	P	**Pn**	**12 04 40.6**	**+0.2**
JIJ				S	**Sn**	**12 05 11.3**	**+0.4**

HEL 22 12:17:45.5±1.0, **67°.67N**×**34°.14E**, **h0**km, **ML1.8, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRF	**Varrio**	**1.73**	**275**	PG	Pn	12 18 15.9	-0.9
	baz=83						
VRF				MSG		12 18 37.1	
	comp=Z,6.1nm,0.2s						
VRF				SN	Sn	12 18 38.5	-1.1
KU6	**Riekki**	**2.36**	**227**	PN	Pn	12 18 25.3	-0.1
	baz=47						
KU6				MSG		12 18 55.2	
	comp=Z,3.4nm,0.2s						
KU6				SG	Sb	12 18 57.9	-0.5
SGF	**Sodankyl**	**2.93**	**269**	PG	Pb	12 18 37.0	-1.6
ARE0	**ARCESS Array S**	**3.68**	**305**	PN	Pn	12 18 43.0	-0.5
	baz=121						
ARE0				SN	Sn	12 19 27.6	+0.1
HEF	**Hetta**	**4.01**	**285**	PG	Pb	12 18 56.1	-0.8
	baz=101						
HEF				SN	Sn	12 19 35.0	-0.6

BER 22 12:17:53.3±0.5, **66°.55N**×**13°.25E**, **h4**km±3km, **ML1.3, Confirmed Earthquake, Northern Norway**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOR8	**Moi Rana**	**0.61**	**128**	*e*P	Pg	12 18 04.6	-0.4
MOR8				*e*S	Sg	12 18 13.9	+0.9
MOR8				IAML		12 18 18.9	
	comp=Z,7.4nm,0.3s						
STEI	**Steigen**	**1.59**	**28**	*e*P	Pn	12 18 21.6	-0.5
STEI				*e*S	Sn	12 18 41.1	-1.9
STEI				IAML		12 19 11.9	
	comp=Z,3.7nm,0.7s						
LOF	**Lofoten**	**1.59**	**4**	*e*P	Pn	12 18 21.4	-0.7
LOF				*e*S	Sn	12 18 41.5	-1.6
LOF				IAML		12 18 44.7	
	comp=Z,49nm,1.4s						

VAO 22 12:17:58.5±0.2, **19°.56S**×**43°.41W**, **h0**km, **mb4.5, Brazil**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSCB	**Bom Sucesso**	**1.92**	**222**	*e*P	Pn	12 18 32.1	-0.5
BSCB				*e*S	Sn	12 18 57.8	+0.3
SJMB	**Sao Joao De Ma**	**2.27**	**68**	*e*P	Pn	12 18 37.5	+0.2
SJMB				*e*S	Sn	12 19 06.8	+0.8
BSFB	**Barra de Sao F**	**2.53**	**74**	*e*P	Pn	12 18 40.4	-0.5
BSFB				*e*S	Sn	12 19 13.2	+0.8
VAS01	**Vassouras-RJ**	**2.71**	**181**	*e*P	Pn	12 18 43.0	-0.3
VAS01				*e*S	Sn	12 19 17.6	+0.7
CAM01	**Campos-RJ**	**2.79**	**144**	*e*P	Pn	12 18 44.7	+0.3
CAM01				*e*S	Sn	12 19 15.8	-3.0
RIB01	**Linhares ES**	**2.86**	**86**	*e*P	Pn	12 18 46.4	+1.0
RIB01				*e*S	Sn	12 19 21.8	+1.3
MC01	**Montes Claros**	**2.88**	**350**	*e*P	Pn	12 18 45.5	-0.3
MC01				*e*S	Sn	12 19 21.2	0.0
MAN01	**Angra dos Reis**	**3.33**	**189**	*e*P	Pn	12 18 52.3	+0.3
MAN01				*e*S	Sn	12 19 33.3	+1.0
PARB	**Paraibuna**	**4.29**	**208**	*e*P	Pn	12 19 05.2	+0.1
PARB				*e*S	Sn	12 19 57.2	+1.3
JANB	**Januaria**	**4.56**	**349**	*e*P	Pn	12 19 08.2	-0.6
JANB				*e*S	Sn	12 20 03.1	+0.5
VAO	**Valinhos**	**4.77**	**223**	*e*P	Pn	12 19 11.7	0.0
VAO				*e*S	Sn	12 20 07.8	+0.1
IPMB	**Ipameri, GO**	**4.81**	**288**	*e*P	Pn	12 19 11.6	-0.7
IPMB				*e*S	Sn	12 20 08.8	-0.1
BB19B	**Bebedouro**	**5.03**	**252**	*e*P	Pn	12 19 15.3	0.0
BB19B				*e*S	Sn	12 20 14.6	+0.3
SPB	**Sao Paulo**	**5.49**	**222**	*e*S	Sn	12 20 26.1	+0.7
PET01	**Itanhaem-SP**	**5.92**	**217**	*e*P	Pn	12 19 27.6	+0.1
PET01				*e*S	Sn	12 20 37.0	+1.0
FRTB	**Fartura**	**6.86**	**236**	*e*S	Sn

URZ				S		**Sn**	**12 26 24.9**	**+1.2**
	1.8nm,0.3s,baz=12,slow=17,SNR=2.6							
MSVF	**Nonsavu**	**11.56**	**336**	Pn		Pn	12 24 34.1	+4.2
BKZ	**Black Stump Fm**	**12.03**	**205**	Pn		**Pn**	**12 24 36.5**	**+0.3**
HIZ	**Hauiti**	**12.17**	**212**	Pn		**Pn**	**12 24 38.9**	**+0.8**
BFZ	**Birch Farm**	**13.46**	**203**	Pn		**Pn**	**12 24 55.2**	**-0.5**
MSWZ	**Moikau Station**	**14.46**	**204**	Pn		**Pn**	**12 25 09.0**	**-0.2**
TUWZ	**Tuamarina**	**14.97**	**207**	Pn		**Pn**	**12 25 16.3**	**+0.4**
NNZ	**Nelson**	**15.03**	**209**	Pn		**Pn**	**12 25 15.9**	**-0.7**
BSWZ	**Blackbirch Sta**	**15.23**	**207**	Pn		**Pn**	**12 25 20.3**	**+1.0**
THZ	**Tophouse**	**15.68**	**209**	P		**P**	**12 25 26.6**	**-1.8**
THZ				IAmb		IAmb	12 25 36.5	
	comp=Z,20nm,1.0s							
KHZ	**Kahutara**	**15.96**	**206**	Pn		**Pn**	**12 25 27.6**	**-1.1**
DZM	**Mont Dzumac**	**16.26**	**289**	*e*LR		LR	12 29 37.9	
	comp=Z,205nm,25.0s							
DZM	**Mont Dzumac**	**16.26**	**289**	LR		LR	12 30 08.3	
	comp=Z,125nm,20.7s,baz=132,slow=31							
LTZ	**Lake Taylor**	**16.78**	**208**	Pn		**Pn**	**12 25 38.8**	**-0.3**
LTZ				IAmb		IAmb	12 25 39.5	
	comp=Z,54nm,1.5s							
RAR	**Rarotonga**	**17.17**	**69**	LR		LR	12 32 52.4	
	comp=Z,76nm,18.7s,baz=256,slow=39							
OXZ	**Oxford**	**17.32**	**208**	Pn		**Pn**	**12 25 45.2**	**-0.6**
OXZ				IAmb		IAmb	12 25 51.9	
	comp=Z,52nm,1.4s							
RPZ	**Rata Peaks**	**18.06**	**209**	LR		LR	12 32 37.8	
	comp=Z,260nm,20.2s,baz=60,slow=35							
TBI	**Tubuai**	**25.24**	**85**	*e*LR		LR	12 33 24.3	
	comp=Z,149nm,24.8s							
TBI	**Tubuai**	**25.24**	**85**	*e*T		T	12 52 51.7	
	comp=Z,13nm,0.3s							
PAE	**Paea**	**27.32**	**73**	*e*T		T	12 55 10.6	
	comp=Z,9.2nm,0.4s							
PPT2	**Papeete2**	**27.36**	**73**	*e*LR		LR	12 34 15.4	
	comp=Z,219nm,24.2s							
PPT2	**Papeete2**	**27.36**	**73**	*e*T		T	12 55 14.2	
	comp=Z,4.8nm,0.3s							
STKA	**Stephens Creek**	**35.84**	**254**	LR		LR	12 42 35.5	
	comp=Z,57nm,18.8s,baz=29,slow=35							
TAOE	**Nuku Hiva Isla**	**39.72**	**68**	*e*LR		LR	12 39 55.5	
	comp=Z,186nm,26.6s							
ASAR	**Alice Springs**	**44.15**	**264**	P		**P**	**12 29 52.9**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=97,slow=7.2,SNR=12							
ASAR				LR		LR	12 46 31.7	
	comp=Z,64nm,20.5s,baz=149,slow=34							
WRA	**Warramunga Arr**	**44.96**	**270**	P		**P**	**12 29 58.4**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=109,slow=6.3,SNR=16							
KAPI	**Kappang**	**64.16**	**279**	LR		LR	13 01 06.8	
	comp=Z,22nm,18.7s,baz=64,slow=37							
PETK	**Petropavlovsk-**	**84.11**	**345**	P		**P**	**12 34 11.9**	**-0.9**
	comp=Z,2.5nm,0.7s,baz=131,slow=6.8,SNR=3.8							
NVAR	**Mina Array Bea**	**86.17**	**42**	P		**P**	**12 34 24.9**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=224,slow=8.2,SNR=14							
TXAR	**Lajitas Array**	**90.56**	**57**	P		**P**	**12 34 46.4**	**+1.8**
	comp=Z,0.3nm,0.7s,baz=204,slow=2.7,SNR=3.9							
PDAR	**Pinedale Array**	**94.07**	**43**	P		**P**	**12 35 00.8**	**0.0**
	comp=Z,0.2nm,0.4s,baz=234,slow=5.0,SNR=4.2							
PDAR				LR		LR	13 10 07.3	
	comp=Z,27nm,20.0s,baz=236,slow=31							
ILAR	**Eielson Array**	**95.79**	**12**	P		**P**	**12 35 06.7**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=222,slow=5.2,SNR=2.7							
ARCES	**ARCESS Array B**	**136.82**	**349**	PKP		**PKiKP**	**12 41 04.8**	**-0.7**
	comp=Z,3.9nm,1.0s,baz=343,slow=3.8,SNR=6.7							
FINES	**FINESS Array B**	**143.56**	**342**	PKhKP		PKPpre	12 41 13.1	
	comp=Z,0.7nm,0.3s,baz=80,slow=3.4,SNR=11							
NB2	**NORSAR Subarra**	**146.90**	**353**	PKP		**PKPbc**	**12 41 23.2**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=10,slow=3.2							
NOA	**NORSAR Array B**	**146.90**	**353**	PKPbc		**PKPbc**	**12 41 23.9**	**0.0**
	comp=Z,2.1nm,0.6s,baz=13,slow=4.5,SNR=6.1							
AKASG	**Malin Array Be**	**150.21**	**326**	PKPbc		**PKPbc**	**12 41 32.5**	**-0.2**
	comp=Z,2.8nm,0.6s,baz=45,slow=3.2,SNR=10							
AKASG				PKPab		**PKPab**	**12 41 38.5**	**-0.4**
	comp=Z,2.8nm,0.7s,baz=44,slow=3.4,SNR=4.7							
BRTR	**Keskin Array B**	**152.36**	**302**	PKPab		**PKPab**	**12 41 49.0**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=125,slow=4.0,SNR=2.8							

*IDC **22** 12:50:28.5±0.9, 1°.59S×135°.01E, h0km, mb3.9/7, mb1 4.1/11, mb1mx3.9/39, mbtmp3.9/11, ML3.8/3, MS3.0/7, Ms1 3.0/7, ms1mx2.8/33, Error ellipse: s-maj=19.5km s-min=16.0km az=44.0*
*NEIC **22** 12:50:31.7±2.6, 1°.6S±0°.1×135°.08E±0°.08, h26km±4km, mb4.1/9, Error ellipse: s-maj=14.5km s-min=10.9km az=184.0*

ISC 22 12:50:29.4±0.7, **1°.67S**±0°.08×**134°.98E**±0°.07, **h10**km, **n28, σ2s54/25, mb4.0/9, MS3.1/4, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
FAKI	**Fak Fak**	**3.00**	**245**			**Pn**	**12 51 19.1**	**+2.0**
SIJI	**Sorong**	**3.79**	**282**	Pn		**Pn**	**12 51 29.0**	**+0.9**
	baz=105,slow=20							
SIJI				Pg		**Pg**	**12 51 39.3**	**-2.9**
	7.4nm,0.3s,baz=84,slow=17,SNR=8.9							
SIJI				Sn		**Sn**	**12 52 13.7**	**+0.9**
	12nm,0.3s,baz=90,slow=20,SNR=7.0							
SIJI				Lg		Lg	12 52 27.3	
	9.1nm,0.3s,baz=51,slow=21,SNR=6.2							
SIJI				LR		LR	12 53 32.9	
	comp=Z,156nm,19.2s,baz=172,slow=48							
JAY	**Jayapura**	**5.78**	**98**	Pn		**Pn**	**12 51 54.4**	**-1.1**
	0.3nm,0.3s,baz=243,slow=14,SNR=1.8							
MTN	**Manton Dam**	**11.74**	**199**	Pn		**Pn**	**12 53 20.6**	**+3.5**
DAV	**Davao City (W)**	**12.78**	**313**	LR		LR	12 57 54.1	
	comp=Z,36nm,21.6s,baz=127,slow=35							
PMG	**Port Moresby**	**14.35**	**123**	LR		LR	13 00 53.8	
	comp=Z,69nm,19.3s,baz=309,slow=44							
KNRA	**Kununurra**	**15.21**	**203**	Pn		**Pn**	**12 54 05.2**	**+0.7**
KNRA				IAmb		IAmb	12 54 19.9	
	comp=Z,14nm,0.7s							
RABL	**Rabaul**	**17.34**	**99**	Pn		**Pn**	**12 54 28.1**	**-3.7**
WB0	**Warramunga Arr**	**18.00**	**182**			**Pn**	**12 54 40.1**	**+0.2**
WB2	**Warramunga Arr**	**18.18**	**182**	P		**P**	**12 54 43.4**	**+1.0**
WB2				IAmb		IAmb	12 54 45.1	
	comp=Z,6.0nm,0.6s							
WRA	**Warramunga A**	**18.18**	**182**	P		**Pn**	**12 54 42.1**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=3,slow=12,SNR=53							
WR0	**Warramunga Arr**	**18.19**	**181**	P		**P**	**12 54 44.3**	**+1.8**
WR0				IAmb		IAmb	12 54 46.9	
	comp=Z,14nm,1.5s							
FITZ	**Fitzroy Crossi**	**18.73**	**209**	P		**Pn**	**12 54 48.9**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=39,slow=10,SNR=9.3							
FITZ				S		**Sn**	**12 58 09.8**	**-8.7**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=6.1,SNR=1.8							
FITZ	**Fitzroy Crossi**	**18.73**	**209**	P		**Pn**	**12 54 49.2**	**+0.4**
AS31	**Alice Springs**	**21.89**	**183**	P		**P**	**12 55 24.9**	**+2.1**
AS31				IAmb		IAmb	12 55 25.8	
	comp=Z,3.9nm,0.6s							
ASAR	**Alice Springs**	**21.90**	**183**	P		**P**	**12 55 25.0**	**+2.1**
	comp=Z,7.0nm,0.5s,baz=8.1,slow=12,SNR=229							
ASAR				LR		LR	13 04 57.6	
	comp=Z,79nm,18.6s,baz=0.0,slow=40							
HNR	**Honiara**	**26.00**	**108**	LR		LR	13 06 25.3	
	comp=Z,61nm,19.2s,baz=90,slow=37							
FORT	**Forrest**	**29.69**	**192**	P		**P**	**12 56 37.5**	**+1.8**
STKA	**Stephens Creek**	**30.69**	**169**	P		**P**	**12 56 46.3**	**+1.8**
	comp=Z,1.1nm,0.4s,baz=338,slow=12,SNR=4.2							
MJAR	**Matsushiro Arr**	**38.13**	**4**	P		**P**	**12 57 48.7**	**-0.2**
	comp=Z,1.7nm,0.9s,baz=245,slow=21,SNR=2.5							
KSRS	**Korea Array**	**39.47**	**351**	LR		LR	13 15 40.8	
	comp=Z,7.5nm,18.7s,baz=175,slow=38							
SONM	**Songino Array**	**55.25**	**337**	LR		LR	13 22 26.0	
	comp=Z,18nm,21.2s,baz=124,slow=35							
MKAR	**Makanchi Array**	**66.71**	**323**	P		**P**	**13 01 20.5**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=131,slow=4.0,SNR=2.2							
ZALV	**Zelesovo Beam**	**69.19**	**331**	P		**P**	**13 01 37.4**	**+1.2**
	comp=Z,0.3nm,0.2s,baz=101,slow=6.0,SNR=1.5							
KURK	**Kurchatov**	**70.75**	**326**	P		**P**	**13 01 47.1**	**+1.2**
KURK	**Kurchatov**	**70.75**	**326**	IAmb		IAmb	13 02 04.9	
	comp=Z,3.3nm,1.3s							
KURBB	**Kurchatov Arra**	**70.75**	**326**	P		**P**	**13 01 47.1**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=111,slow=5.1,SNR=4.2							
ILAR	**Eielson Array**	**86.44**	**25**	P		**P**	**13 03 11.5**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=255,slow=5.1,SNR=8.8							

RSNC 22 12:53:45.7±1.1, **3°.86N×71°.40W, h4**km±6km, **ML3.6, 1D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PTGC	**Puerto Gaitan,**	**0.81**	**295**	⇑*i*	Pg	Pg	12 53 59.1	-2.0
PTGC				*e*	S	Sg	12 54 10.8	-0.8
PTGC				*i*			12 54 14.7	
	comp=Z,930nm,0.4s							

GUVC	**San Jose del G**	**1.79**	**223**	*i*	Pg	Pn	12 54 15.6	-1.8
GUVC				*e*	S	Sn	12 54 39.7	-0.8
GUVC				*i*			12 54 44.6	
	comp=Z,1μm,0.2s							
VILC	**Villavicencio,**	**2.30**	**276**	*e*	P	Pn	12 54 23.9	-0.6
VILC				*e*	S	Sn	12 54 52.4	-0.9
VILC				*i*			12 55 06.9	
	comp=Z,616nm,0.5s							
CHIC	**Chingaza**	**2.45**	**288**	*e*	P	Pn	12 54 25.8	-1.0
CHIC				*e*	S	Sn	12 54 56.0	-1.4
CHIC				*i*			12 55 17.3	
	comp=Z,241nm,0.4s							
TAMC	**Tame, Arauca**	**2.59**	**351**	*e*	P	Pn	12 54 26.9	-1.5
TAMC				*e*	S	Sn	12 54 59.3	-1.2
TAMC				*i*			12 55 03.2	
	comp=Z,242nm,0.2s							
RUSC	**La Rusia**	**2.63**	**320**	*e*	P	Pn	12 54 28.3	-1.1
RUSC				*e*	S	Sn	12 55 02.1	+0.2
RUSC				*i*			12 55 11.7	
	comp=Z,119nm,0.4s							
MACC	**Macarena, Meta**	**2.97**	**235**	*e*	P	Pn	12 54 33.0	-0.7
MACC				*e*	S	Sn	12 55 11.6	+1.7
MACC				*i*			12 55 22.2	
	comp=Z,345nm,0.6s							
ROSC	**El Rosal**	**3.07**	**289**	*e*	P	Pn	12 54 37.0	+1.7
SPBC	**San Pablo de B**	**3.20**	**304**	*e*	P	Pb	12 54 40.6	-2.7
SPBC				*e*	S	Sb	12 55 20.8	-1.9
BARC	**Barichara**	**3.25**	**327**	*e*	P	Pn	12 54 35.8	-1.9
BARC				*i*			12 55 35.9	
	comp=Z,240nm,0.4s							
PRAC	**Prado**	**3.48**	**268**	*e*	P	Pn	12 54 40.8	+0.1
PAMC	**Pamplona, Colo**	**3.69**	**340**	*e*	P	Pn	12 54 42.7	-1.3
ORTC	**Ortega, Tolima**	**3.83**	**271**	*e*	P	Pn	12 54 45.0	-0.6
NORC	**Norcasia**	**3.85**	**296**	*e*	P	Pn	12 54 39.8	-6.0
TOLC	**Tolima**	**3.97**	**281**	*e*	P	Pn	12 54 47.1	-0.7
TOLC				*e*	S	Sn	12 55 34.6	-0.3
TOLC				*i*			12 55 56.9	
	comp=Z,39nm,0.6s							
ANIL	**Santa Ana**	**4.04**	**279**	*e*	P	Pn	12 54 47.6	-1.0
ANIL				*i*			12 56 03.8	
	comp=Z,245nm,0.4s							
PTBC	**PUERTO BERRIO,**	**4.04**	**311**	*e*	P	Pn	12 54 45.9	-2.5
RREF	**El Recreo**	**4.07**	**285**	*e*	P	Pn	12 54 50.1	+0.8
GUY2C	**Guyana, Caldas**	**4.18**	**289**	*e*	P	Pn	12 54 49.9	-0.8
BETC	**Betania**	**4.20**	**254**	*e*	P	Pn	12 54 50.1	-0.5
YOTC	**Yotoco, Valle**	**4.93**	**272**	*e*	P	Pn	12 54 59.1	-1.7
PTLC	**Puerto Leguiza**	**4.99**	**223**	*e*	P	Pn	12 54 59.7	-1.8
SDV	**Santo Domingo**	**5.05**	**9**	*e*	P	Pn	12 54 59.2	-3.3
PCON	**Cinco Dias**	**5.21**	**253**	*e*	P	Pn	12 55 04.9	-0.1
SOTA	**Rioblanco**	**5.47**	**252**	*e*	P	Pn	12 55 08.3	-0.2
SMLC	**San Martn de**	**5.58**	**332**	*e*	P	Pn	12 55 07.5	-2.1
UREC	**San Jos de Ur**	**5.64**	**313**	*e*	P	Pn	12 55 07.3	-3.2
PUAC	**Puerto Asis, P**	**6.12**	**238**	*e*	P	Pn	12 55 23.4	+6.4
SJCC	**San Jacinto, C**	**7.08**	**328**	*e*	P	Pn	12 55 27.0	-3.2

*IDC **22** 13:28:34.8±1.1, 4°.58S×125°.41E, h446km±14km, mb2.7/2, mb1 2.9/6, mb1mx2.7/42, mbtmp3.7/6, Error ellipse: s-maj=19.7km s-min=15.4km az=105.0*
*DJA **22** 13:28:35.0±0.5, 5°.5S×112°.6E±°, h449km±9km, M3.9/12, mb3.9/10, mB4.3/3, MLv3.9/12, Mw(mB)3.4/3*
ISC 22 13:28:34.8±0.8, **4°.64S**±0°.09×**125°.45E**±0°.09, **h441**km, **n23, σ1s14/26, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
NLAI	**Namlea**	**2.15**	**50**	P		**P**	**13 29 35.5**	**0.0**
SANI	**Sanana**	**2.63**	**12**	P		**P**	**13 29 38.5**	**0.0**
AAI	**Ambon**	**2.89**	**271**	P		**P**	**13 29 40.4**	**0.0**
MSAI	**Masohi**	**3.70**	**70**	P		**P**	**13 29 46.5**	**-0.3**
BNDI	**Bandanaira**	**4.44**	**89**	P		**P**	**13 29 53.7**	**+0.3**
LBMI	**Labuha**	**4.47**	**27**	P		**P**	**13 29 54.9**	**+1.1**
SOEI	**Soe**	**5.22**	**193**	P		**P**	**13 30 02.3**	**+1.3**
	0.2nm16nm,1.2s							
BNSI	**Bone**	**5.33**	**272**	P		**P**	**13 30 03.9**	**+1.8**
	0.3nm683nm77nm,0.7s							
BKSI	**Bulukumba**	**5.35**	**262**	P		**P**	**13 30 03.1**	**+0.8**
EDFI	**Ende, Flores**	**5.54**	**222**	P		**P**	**13 30 06.0**	**+1.8**
	0.0nm13nm,0.8s							
KAPI	**Kappang**	**5.69**	**266**	P		**P**	**13 30 05.8**	**+0.2**
	1.9nm,0.3s,baz=83,slow=6.3,SNR=6.1							
SPSI	**Sidrap Palu**	**5.71**	**277**	P		**P**	**13 30 07.0**	**+1.2**
BATI	**Baumata**	**5.81**	**198**	P		**P**	**13 30 07.8**	**+0.9**
	9.7nm,0.3s,baz=5.0,slow=0.8,SNR=9.3							
BATI				S		**S**	**13 31 22.9**	**+0.8**
	10nm,0.3s,baz=27,slow=22,SNR=11							
BATI	**Baumata**	**5.81**	**198**	P		**P**	**13 30 08.3**	**+1.4**
	0.1nm568nm23nm,0.6s							
TTSI	**Tana Toraja**	**5.84**	**286**	P		**P**	**13 30 09.9**	**+2.7**
	0.1nm18nm,0.7s							
SIJI	**Sorong**	**6.91**	**57**	P		**P**	**13 30 18.8**	**+0.2**
	1.8nm,0.3s,baz=276,slow=7.9,SNR=8.2							
SIJI				S		**S**	**13 31 44.4**	**+1.1**
	1.5nm,0.3s,baz=76,slow=22,SNR=6.7							
FAKI	**Fak Fak**	**6.99**	**76**	P		**P**	**13 30 19.9**	**+0.5**
	0.3nm550nm34nm,0.6s							
PLAI	**Plampang**	**8.68**	**241**	P		**P**	**13 30 38.2**	**+0.6**
	25nm,0.9s							
JAGI	**Jajag, Banyuwa**	**11.85**	**251**	P		**P**	**13 31 11.0**	**-1.3**
	3nm,1.2s							
WRA	**Warramunga Arr**	**17.50**	**151**	P		**P**	**13 32 12.7**	**-0.2**
	0.1nm,0.3s,baz=330,slow=10,SNR=4.8							
ASAR	**Alice Springs**	**20.60**	**157**	P		**P**	**13 32 43.0**	**+0.7**
	0.3nm,0.5s,baz=350,slow=15,SNR=13							
ASAR				PcP		**PcP**	**13 36 32.8**	**-1.0**
	0.1nm,0.3s,baz=356,slow=1.3,SNR=6.3							
MKAR	**Makanchi Array**	**63.82**	**328**	P		**P**	**13 38 21.3**	**-1.2**
	0.9nm,0.7s,baz=121,slow=8.4,SNR=6.8							
TORD	**Torodi Ar. Bea**	**123.90**	**283**	PKP		**PKiKP**	**13 46 42.3**	**-0.9**
	0.3nm,0.6s,baz=103,slow=2.5,SNR=1.8							

IDC 22 13:43:12.1±2.2, **3°.74N×123°.44E, h0**km, **mb3.2**/3, **mb1 3.4**/3, **mb1mx3.2**/39, **mbtmp3.2**/3, **Error ellipse: s-maj=255.3km s-min=29.7km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.86**	**156**	P	P	13 48 45.7	0.0
	0.2nm,0.4s,baz=334,slow=10,SNR=2.3						
ASAR	**Alice Springs**	**29.09**	**160**	P	P	13 49 14.6	0.0
	0.3nm,0.9s,baz=341,slow=7.4,SNR=5.4						
MKAR	**Makanchi Array**	**55.71**	**327**	P	P	13 52 50.4	-0.1
	0.3nm,0.8s,baz=139,slow=7.5,SNR=1.5						

*IDC **22** 13:44:15.8±0.7, 10°.29N×40°.88W, h0km, mb4.1/13, mb1 4.3/14, mb1mx4.0/40, mbtmp4.2/14, ML4.7/1, MS3.4/19, Ms1 3.4/19, ms1mx3.2/36, Error ellipse: s-maj=29.4km s-min=15.0km az=147.0*
*NEIC **22** 13:44:17.0±0.9, 10°.3N±0°.2×40°.95W±0°.07, h10km±1km, mb4.6/7, Error ellipse: s-maj=30.9km s-min=6.3km az=162.0*
ISC 22 13:44:18.2±0.6, **10°.3N**±0°.2×**41°.0W**±0°.1, **h17**km, **n35, σ0s97/17, mb4.3/14, MS3.4/17, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
MDP	**Montagnes des**	**12.69**	**247**	Pn		**Pn**	**13 47 17.5**	**-0.5**
	4.1nm,0.3s,baz=58,slow=16,SNR=20							
MDP				LR		LR	13 51 19.8	
	comp=Z,163nm,20.7s,baz=91,slow=33							
RCBR	**Riachuelo**	**16.80**	**162**	LR		LR	13 52 59.1	
	comp=Z,56nm,19.0s,baz=340,slow=31							
GRGR	**Grenville**	**20.39**	**277**	P		**P**	**13 48 52.3**	**-2.2**
PTGA	**Pitinga**	**21.87**	**241**	P		**P**	**13 49 10.7**	**+0.3**
	7.4nm,0.7s,baz=54,slow=11,SNR=14							
PTGA				LR		LR	13 56 54.0	
	comp=Z,132nm,21.5s,baz=52,slow=35							
PTGA	**Pitinga**	**21.87**	**241**	P		**P**	**13 49 10.5**	**0.0**
SJG	**San Juan**	**25.61**	**290**	LR		LR	13 58 02.7	
	comp=Z,71nm,21.6s,baz=106,slow=32							
BDFB	**Brasilia**	**26.72**	**195**	LR		LR	14 00 09.1	
	comp=Z,69nm,20.2s,baz=35,slow=36							
SDV	**Santo Domingo**	**29.30**	**270**	LR		LR	14 02 17.3	
	comp=Z,60nm,18.6s,baz=88,slow=37							
H10N3	**ASCENSION HYDR**	**31.91**	**123**	T		T	14 24 39.9	
	baz=304,slow=75,SNR=40							
H10N2	**ASCENSION HYDR**	**31.92**	**123**	T		T	14 24 39.8	
	baz=304,slow=75,SNR=44							
H10N1	**ASCENSION HYDR**	**31.93**	**123**	T		T	14 24 38.0	
	baz=304,slow=75,SNR=29							
SIV	**San Ignacio**	**32.86**	**218**	P		**P**	**13 50 52.8**	**+1.3**

	1.7nm,0.8s,baz=59,slow=10.0,SNR=6.6							
ROSC	**El Rosal**	**33.51**	**263**	LR		LR	14 05 00.9	
	comp=Z,168nm,18.4s,baz=123,slow=37							
DBIC	**Dimbokro**	**35.86**	**93**	P		**P**	**13 51 17.2**	**-0.3**
	3.8nm,0.6s,baz=270,slow=8.1,SNR=7.0							
DBIC				LR		LR	14 03 43.6	
	comp=Z,33nm,19.9s,baz=258,slow=33							
DBIC	**Dimbokro**	**35.86**	**93**	IAmb		IAmb	13 51 20.2	
	comp=Z,14nm,1.3s							
LPAZ	**La Paz**	**37.71**	**226**	P		**P**	**13 51 34.5**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=24,slow=5.9,SNR=3.9							
LPAZ				LR		LR	14 07 08.9	
	comp=Z,56nm,20.6s,baz=68,slow=36							
TOA0	**Torodi Ar. Sit**	**41.81**	**82**	P		**P**	**13 52 05.8**	**-1.7**
TOA0				IAmb		IAmb	13 52 07.6	
	comp=Z,7.5nm,0.7s							
TORD	**Torodi Ar. Bea**	**41.81**	**82**	P		**P**	**13 52 06.8**	**-0.6**
	comp=Z,6.6nm,0.7s,baz=278,slow=8.9,SNR=36							
TORD				LR		LR	14 08 47.7	
	comp=Z,46nm,18.1s,baz=270,slow=35							
ESDC	**Sonseca Array**	**43.97**	**42**	LR		LR	14 07 27.0	
	comp=Z,46nm,20.1s,baz=250,slow=32							
KEST	**Kesra**	**52.06**	**53**	P		**P**	**13 53 27.6**	**+0.2**
	comp=Z,5.4nm,0.8s,baz=181,slow=5.2,SNR=5.4							
KEST				LR		LR	14 14 36.0	
	comp=Z,36nm,19.1s,baz=316,slow=35							
KEST	**Kesra**	**52.06**	**53**	IAmb		IAmb	13 53 36.4	
	comp=Z,8.6nm,1.0s							
PLCA	**Paso Flores**	**57.68**	**206**	P		**P**	**13 54 07.9**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=22,slow=5.8,SNR=4.4							
PLCA	**Paso Flores**	**57.68**	**206**	IAmb		IAmb	13 54 08.6	
	comp=Z,6.2nm,1.1s							
NOA	**NORSAR Array B**	**63.31**	**25**	LR		LR	14 17 00.8	
	comp=Z,13nm,21.9s,baz=335,slow=31							
TSUM	**Tsumeb**	**64.70**	**117**	LR		LR	14 16 08.5	
	comp=Z,30nm,21.8s,baz=326,slow=30							
AKASG	**Malin Array Be**	**69.54**	**40**	P		**P**	**13 55 26.1**	**0.0**
	comp=Z,0.2nm,0.3s,baz=256,slow=7.6,SNR=1.5							
FINES	**FINESS Array B**	**70.09**	**28**	LR		LR	14 23 03.4	
	comp=Z,20nm,19.6s,baz=198,slow=33							
BRTR	**Keskin Array B**	**71.64**	**52**	P		**P**	**13 55 39.3**	**0.0**
	comp=Z,1.4nm,0.9s,baz=252,slow=7.7,SNR=4.2							
BRTR				LR		LR	14 26 41.7	
	comp=Z,6.0nm,18.9s,baz=328,slow=36							
MBAR	**Mbarara**	**72.10**	**94**	LR		LR	14 24 22.7	
	comp=Z,56nm,21.8s,baz=110,slow=33							
LSZ	**Lusaka**	**73.04**	**109**	LR		LR	14 20 12.3	
	comp=Z,28nm,19.4s,baz=162,slow=30							
YKA	**Yellowknife Ar**	**73.38**	**332**	P		**P**	**13 55 49.1**	**+0.1**
	comp=Z,0.3nm,0.9s,baz=106,slow=6.7,SNR=3.1							
BOSA	**Boshof**	**74.67**	**123**	P		**P**	**13 55 57.2**	**-0.1**
	comp=Z,4.0nm,1.0s,baz=287,slow=3.5,SNR=3.3							
BOSA				LR		LR	14 21 37.9	
	comp=Z,34nm,20.2s,baz=180,slow=30							
BOSA	**Boshof**	**74.67**	**123**	IAmb		IAmb	13 56 00.1	
	comp=Z,9.2nm,1.2s							
KBZ	**Khabaz**	**78.52**	**47**	P		**P**	**13 56 19.6**	**+0.8**
	comp=Z,2.4nm,0.7s,baz=90,slow=2.0,SNR=4.0							
ILAR	**Eielson Array**	**87.43**	**336**	P		**P**	**13 57 06.0**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=65,slow=4.3,SNR=3.2							

*KRNET **22** 13:49:41.6±0.1, 40°.73N×70°.67E, h20km, mb2.7*

PB01	**IPOC Station P**	**0.82**	**149**			**Pn**	**14 21 59.0**	**+0.2**
GO01	**Chusmiza**	**0.96**	**47**	⇑	*iP*	**Pn**	**14 22 01.6**	**+0.7**
GO01					*i* S	**Sn**	**14 22 15.0**	**+0.9**
GO01	**Chusmiza**	**0.96**	**47**			**Pn**	**14 22 01.6**	**+0.7**
PB02	**IPOC Station P**	**0.98**	**178**	⇑	*iP*	**Pn**	**14 22 01.8**	**+1.0**
PB02					*i* S	**Sn**	**14 22 15.5**	**+1.5**
PB02					IAML		14 22 17.5	
	comp=E,13μm,0.2s							
MNMC	**Minye Minye**	**1.24**	**15**	⇓	*iP*	**Pn**	**14 22 05.4**	**+1.0**
MNMC					*i* S	**Sn**	**14 22 22.1**	**+1.8**
MNMC					IAML		14 22 25.2	
	comp=E,7μm,0.3s							
MNMC	**Minye Minye**	**1.24**	**15**			**Pn**	**14 22 05.4**	**+1.0**
PB07	**IPOC Station P**	**1.39**	**178**	⇓	*iP*	**Pn**	**14 22 07.4**	**+1.2**
PB07					*i* S	**Sn**	**14 22 25.6**	**+1.9**
PB07					IAML		14 22 27.1	
	comp=E,5μm,0.4s							
PB07	**IPOC Station P**	**1.39**	**178**			**Pn**	**14 22 07.4**	**+1.2**
PB09	**IPOC Station P**	**1.59**	**156**	⇑	*iP*	**Pn**	**14 22 10.8**	**+1.8**
PB09					*i* S	**Sn**	**14 22 30.8**	**+2.0**
PB09					IAML		14 22 35.8	
	comp=E,6μm,0.3s							
PB09	**IPOC Station P**	**1.59**	**156**			**Pn**	**14 22 10.8**	**+1.8**
PB03	**IPOC Station P**	**1.72**	**174**	*i*	P	**Pn**	**14 22 11.8**	**+1.1**
PB03					*i* S	**Sn**	**14 22 33.2**	**+1.6**
PB03					IAML		14 22 37.4	
	comp=E,3μm,0.2s							
PB12	**IPOC Station P**	**1.75**	**348**	⇑	*iP*	**Pn**	**14 22 12.2**	**+1.2**
PB12					*i* S	**Sn**	**14 22 33.6**	**+1.3**
PB12					IAML		14 22 38.9	
	comp=E,2μm,0.4s							
PB12	**IPOC Station P**	**1.75**	**348**			**Pn**	**14 22 12.3**	**+1.2**
AP01	**Chacaluta**	**1.99**	**349**	*i*	S	**Sn**	**14 22 39.7**	**+1.7**
PB04	**IPOC Station P**	**2.00**	**186**	⇑	*eP*	**Pn**	**14 22 15.5**	**+1.0**
PB04					*i* S	**Sn**	**14 22 40.0**	**+1.5**
PB04					IAML		14 22 47.0	
	comp=E,3μm,0.4s							
PB04	**IPOC Station P**	**2.00**	**186**			**Pn**	**14 22 15.6**	**+1.0**
PB16	**IPOC Station P**	**2.03**	**12**	⇑	*iP*	**Pn**	**14 22 17.2**	**+1.9**
PB16					*i* S	**Sn**	**14 22 41.2**	**+1.3**
PB16					IAML		14 22 51.0	
	comp=E,998nm,0.4s							
PB16	**IPOC Station P**	**2.03**	**12**			**Pn**	**14 22 17.2**	**+1.9**
PB06	**IPOC Station P**	**2.39**	**172**	*eP*		**Pn**	**14 22 20.6**	**+0.8**
PB06					*i* S	**Sn**	**14 22 49.6**	**+1.6**
PB06					IAML		14 22 56.5	
	comp=E,1μm,0.5s							
PB06	**IPOC Station P**	**2.39**	**172**			**Pn**	**14 22 21.1**	**+1.3**
LVC	**Limon Verde**	**2.46**	**157**	P		**Pn**	**14 22 23.2**	**+2.2**
	comp=E,38nm,0.3s,baz=334,slow=8.7,SNR=102							
LVC					S	**Sn**	**14 22 52.7**	**+2.6**
	comp=E,120nm,0.3s,baz=238,slow=19,SNR=20							
LVC					LR	LR	14 23 31.9	
	comp=E,202nm,20.8s,baz=356,slow=45							
LVC	**Limon Verde**	**2.46**	**157**	⇑	*eP*	**Pn**	**14 22 23.1**	**+2.2**
LVC					*i* S	**Sn**	**14 22 51.9**	**+1.8**
PB05	**IPOC Station P**	**2.52**	**186**	*eP*		**Pn**	**14 22 22.7**	**+1.1**
PB05					*i* S	**Sn**	**14 22 52.5**	**+1.3**
PB05					IAML		14 23 05.2	
	comp=E,1μm,0.3s							
PB15	**IPOC Station P**	**2.89**	**171**	*eP*		**Pn**	**14 22 28.2**	**+1.5**
PB15					*i* S	**Sn**	**14 23 02.9**	**+2.4**
PB15	**IPOC Station P**	**2.89**	**171**	Pn		**Pn**	**14 22 27.9**	**+1.1**
PB10	**IPOC Station P**	**3.22**	**190**			**Pn**	**14 22 30.8**	**-0.2**
LPAZ	**La Paz**	**4.38**	**23**	P		**Pn**	**14 22 51.8**	**+4.3**
	comp=E,3.3nm,0.3s,baz=206,slow=6.3,SNR=54							
LPAZ	**La Paz**	**4.38**	**23**			**Pn**	**14 22 52.0**	**+4.6**
GO02	**Mina Guanaco**	**4.82**	**176**			**Pn**	**14 22 53.1**	**0.0**
AC01	**Pan de Azucar**	**5.82**	**186**	Pn		**Pn**	**14 23 05.4**	**-1.3**
SIV	**San Ignacio**	**9.47**	**64**	P		**Pn**	**14 23 56.3**	**-0.4**
	comp=E,7.9nm,0.3s,baz=263,slow=11,SNR=83							
PLCA	**Paso Flores**	**20.34**	**181**	P		**P**	**14 26 15.6**	**+1.2**
	comp=E,2.2nm,0.8s,baz=359,slow=10,SNR=4.4							
PLCA	**Paso Flores**	**20.34**	**181**	IAmb		IAmb	14 26 16.7	
	comp=Z,5.1nm,1.2s							
PTGA	**Pitinga**	**21.79**	**28**	P		**P**	**14 26 30.6**	**+0.6**
	comp=Z,3.1nm,0.5s,baz=199,slow=13,SNR=9.1							
PTGA	**Pitinga**	**21.79**	**28**	P		**P**	**14 26 28.7**	**-1.4**
PTGA				IAmb		IAmb	14 26 37.4	
	comp=Z,9.4nm,1.3s							
RUSC	**La Rusia**	**26.24**	**353**	P		**P**	**14 27 13.2**	**+0.1**
USHA	**Ushuaia**	**34.46**	**178**	P		**P**	**14 28 23.1**	**-1.6**
	comp=Z,24nm,0.7s,baz=11,slow=10,SNR=2.5							
T57A	**Hurt**	**57.70**	**351**	P		**P**	**14 31 28.2**	**+0.9**
T57A				IAmb		IAmb	14 31 29.2	
	comp=Z,17nm,0.9s							
DBIC	**Dimbokro**	**69.34**	**74**	P		**P**	**14 32 43.9**	**-0.8**
	comp=Z,2.1nm,0.7s,baz=252,slow=6.4,SNR=1.5							
TORD	**Torodi Ar. Bea**	**77.88**	**71**	P		**P**	**14 33 33.5**	**-1.4**
	comp=Z,2.0nm,0.6s,baz=255,slow=5.1,SNR=10							
YKA	**Yellowknife Ar**	**89.77**	**341**	P		**P**	**14 34 34.8**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=133,slow=4.9,SNR=25							
H11S2	**WAKE ISLAND Hy**	**126.77**	**278**	T		T	17 00 09.3	
	baz=102,slow=74,SNR=68							
H11S1	**WAKE ISLAND Hy**	**126.78**	**278**	T		T	17 00 13.5	
	baz=102,slow=74,SNR=67							
H11S3	**WAKE ISLAND Hy**	**126.78**	**278**	T		T	17 00 10.7	
	baz=102,slow=74,SNR=18							
H11N3	**WAKE ISLAND Hy**	**126.82**	**280**	T		T	17 00 14.5	
	baz=102,slow=75,SNR=37							
H11N2	**WAKE ISLAND Hy**	**126.83**	**280**	T		T	17 00 15.6	
	baz=102,slow=75,SNR=38							
H11N1	**WAKE ISLAND Hy**	**126.84**	**280**	T		T	17 00 17.2	
	baz=102,slow=75,SNR=39							
ASAR	**Alice Springs**	**130.48**	**209**	PKP		**PKPdf**	**14 40 47.5**	**-0.2**
	comp=Z,0.1nm,0.5s,baz=121,slow=1.7,SNR=4.8							
WRA	**Warramunga Arr**	**133.44**	**212**	PKP		**PKPdf**	**14 40 53.3**	**0.0**
	comp=Z,0.2nm,0.8s,baz=145,slow=1.7,SNR=1.0							
ZALV	**Zalesovo Beam**	**141.29**	**24**	PKP		**PKPdf**	**14 41 06.4**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=349,slow=3.0,SNR=3.5							
KSH	**Kashi**	**145.10**	**49**	PKP		**PKPbc**	**14 41 09.1**	**-4.5**
KSH				pPKP		pPKPab	14 41 28.0	-3.0
MKAR	**Makanchi Array**	**145.24**	**34**	PKPbc		**PKPbc**	**14 41 13.9**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=328,slow=3.1,SNR=4.5							
SONM	**Songino Array**	**152.41**	**5**	PKPbc		**PKPbc**	**14 41 32.8**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=327,slow=0.7,SNR=3.9							

*IDC **22** 15:05:44.6±0.7,9.17N×122.24E,h0km,mb3.9/12, mb1 4.0/13,mb1mx3.8/44,mbtmp3.9/13,ML4.4/1,MS3.1/4, Ms1 3.2/4,ms1mx2.8/34,Error ellipse: s-maj=28.1km s-min=14.1km az=74.0*

*MAN **22** 15:05:46.6,9.22N×122.10E,h28km,mb4.7,ML3.6,MS3.5*

*NEIC **22** 15:05:46.3±2.6,9.22N±0.06×122.1E±0.1,h12km±5km, mb4.3/7,Error ellipse: s-maj=18.9km s-min=8.5km az=92.0*

ISC 22 15:05:45.3±1.5,9.22N±0.03×122.11E±0.04,h7km±10km, n44,σ1s38/58,mb3.8/16,MS3.1/4,5C-4D,Negros

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
CNOP	**Candoni, Negro**	**0.81**	**41**	*eP*		**Pg**	**15 06 01.1**	**+0.3**
CNOP				*eS*		**Sg**	**15 06 11.3**	**0.0**
SNPH	**Sibulan**	**1.12**	**83**	⇑	*iP*	**Pb**	**15 06 06.4**	**-0.8**
SNPH				*i* S		**Sb**	**15 06 21.1**	**-0.9**
DCPH	**Dipolog City**	**1.38**	**117**	⇓	*eP*	**Pn**	**15 06 09.7**	**-1.4**
DCPH				*eS*		**Sb**	**15 06 26.8**	**-2.6**
GUIM	**Jordan**	**1.48**	**19**	*eP*		**Pn**	**15 06 11.6**	**-0.9**
GUIM				*eS*		**Sn**	**15 06 29.5**	**-2.6**
JAP	**San Jose, Anti**	**1.53**	**354**	⇓	*eP*	**Pn**	**15 06 12.9**	**-0.2**
TBP	**Tagbilaran**	**1.80**	**75**	*eP*		**Pn**	**15 06 16.1**	**-0.8**
TBP				*i* S		**Sn**	**15 06 39.0**	**-0.9**
PAGZ	**Pagadian**	**1.85**	**137**	*eP*		**Pn**	**15 06 17.6**	**0.0**
PAGZ				*eS*		**Sg**	**15 06 45.2**	**+0.3**
CUYO	**Cuyo Island**	**1.95**	**327**	*eP*		**Pn**	**15 06 18.8**	**-0.1**
LLP	**Lapu-Lapu**	**2.14**	**59**	⇑	*eP*	**Pn**	**15 06 21.4**	**-0.1**
LLP				*i* S		**Sn**	**15 06 47.7**	**-0.6**
ZCP	**Zamboanga City**	**2.27**	**181**	⇓	*iP*	**Pn**	**15 06 23.1**	**-0.2**
ZCP				*i* S		**Sn**	**15 06 49.3**	**-2.3**
RCP	**Roxas**	**2.41**	**15**	⇓	*eP*	**Pn**	**15 06 26.5**	**+1.2**
RCP				*eS*		**Sb**	**15 06 57.8**	**-1.4**
CGP	**Cagayan de Oro**	**2.67**	**106**	⇓	*eP*	**Pn**	**15 06 28.7**	**-0.1**
CGP				*eS*		**Sb**	**15 07 05.3**	**-1.2**
MSLP	**Maasin**	**2.87**	**71**	*eP*		**Pn**	**15 06 32.3**	**+0.8**
MSLP				*eS*		**Sn**	**15 07 07.2**	**+0.9**
CTBH	**Cotabato--PC H**	**2.90**	**133**	⇑	*eP*	**Pn**	**15 06 32.3**	**+0.3**
ENPP	**El Nido**	**3.30**	**307**	*eP*		**Pn**	**15 06 37.7**	**+0.2**
SJMP	**San Jose**	**3.37**	**343**	*eP*		**Pn**	**15 06 38.0**	**-0.4**
SJMP				*eS*		**Sn**	**15 07 14.4**	**-4.3**
KCP	**Kidapawan**	**3.68**	**126**	⇑	*iP*	**Pb**	**15 06 50.1**	**-0.6**
DAV	**Davao City (W)**	**4.05**	**122**	Pn		**Pn**	**15 06 48.7**	**+1.0**
CNP	**Catarman**	**4.13**	**37**	*eP*		**Pn**	**15 06 48.0**	**-0.9**
CNP				*eS*		**Sn**	**15 07 40.9**	**+3.4**
BOAC	**Boac**	**4.23**	**357**	*eP*		**Pn**	**15 06 49.7**	**-0.5**
BOAC				*eS*		**Sn**	**15 07 37.5**	**-2.4**
LUBP	**Lubang**	**4.85**	**338**	*eP*		**Pn**	**15 06 57.1**	**-1.7**
LUBP				*eS*		**Sn**	**15 07 55.3**	**+0.1**
BATI	**Baumata**	**19.36**	**175**	P		**P**	**15 10 12.3**	**+0.5**
	1.2nm,0.3s,baz=140,slow=7.9,SNR=2.3							
PSI	**Prapat**	**23.91**	**256**	P		**P**	**15 11 01.9**	**+1.7**
	13nm,0.8s,baz=358,slow=0.4,SNR=8.2							
RPSI	**Rantau Prapat**	**23.94**	**256**	P		**P**	**15 11 01.9**	**+1.5**
CMAR	**Chiang Mai Arr**	**24.27**	**295**	P		**P**	**15 11 04.9**	**+1.4**
	1.5nm,0.9s,baz=124,slow=7.7,SNR=10							
CMAR				LR		LR	15 20 32.0	
	comp=Z,55nm,18.4s,baz=158,slow=36							
FITZ	**Fitzroy Crossi**	**27.36**	**173**	P		**P**	**15 11 31.6**	**+0.2**
	2.0nm,1.0s,baz=338,slow=11,SNR=2.6							
KSRS	**Korea Array**	**28.60**	**10**	P		**P**	**15 11 44.3**	**+2.0**
	0.5nm,0.7s,baz=192,slow=11,SNR=2.1							
KSRS				LR		LR	15 24 22.0	
	comp=Z,32nm,19.0s,baz=178,slow=39							
WB0	**Warramunga Arr**	**31.24**	**157**	P		**P**	**15 12 03.3**	**-2.5**
WB0				IAmb		IAmb	15 12 41.7	
	comp=Z,11nm,1.6s							
WRA	**Warramunga Arr**	**31.38**	**157**	P		**P**	**15 12 06.2**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=340,slow=9.4,SNR=7.5							
WB2	**Warramunga Arr**	**31.38**	**157**	P		**P**	**15 12 05.4**	**-1.7**
WR0	**Warramunga Arr**	**31.47**	**157**	P		**P**	**15 12 07.8**	**-0.1**
WR0				IAmb		IAmb	15 12 38.7	
	comp=Z,4.0nm,1.1s							
AS31	**Alice Springs**	**34.66**	**161**	P		**P**	**15 12 35.4**	**-0.3**
AS31				IAmb		IAmb	15 12 49.4	
	comp=Z,1.1nm,0.8s							
ASAR	**Alice Springs**	**34.66**	**161**	P		**P**	**15 12 35.3**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=340,slow=6.6,SNR=23							
ASAR				PcP		**PcP**	**15 15 09.5**	**-0.5**
	comp=Z,0.9nm,1.2s,baz=339,slow=2.8,SNR=4.6							
USRK	**Ussuriysk Ar.**	**35.90**	**12**	P		**P**	**15 12 46.0**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=186,slow=8.7,SNR=4.0							
KLR	**Kul'dur**	**40.70**	**10**	LR		LR	15 32 03.2	
	comp=Z,24nm,18.4s,baz=142,slow=39							
SONM	**Songino Array**	**40.72**	**344**	P		**P**	**15 13 28.4**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=160,slow=6.0,SNR=1.7							
STKA	**Stephens Creek**	**44.91**	**156**	P		**P**	**15 14 00.2**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=336,slow=12,SNR=3.8							
STKA	**Stephens Creek**	**44.91**	**156**	P		**P**	**15 14 01.8**	**+0.8**
MK31	**Makanchi Array**	**50.46**	**325**	P		**P**	**15 14 44.3**	**+0.4**
MK31				IAmb		IAmb	15 15 02.7	
	comp=Z,4.4nm,1.4s							
MKAR	**Makanchi Array**	**50.46**	**325**	P		**P**	**15 14 45.1**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=135,slow=8.9,SNR=7.1							
TIXI	**Tiksi**	**62.52**	**2**	P		**P**	**15 16 09.2**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=172,slow=4.6,SNR=7.8							
TIXI	**Tiksi**	**62.52**	**2**	P		**P**	**15 16 07.5**	**-1.9**
TIXI				IAmb		IAmb	15 16 13.0	
	comp=Z,3.2nm,1.0s							
FINES	**FINESS Array B**	**84.85**	**331**	P		**P**	**15 18 20.8**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=99,slow=8.7,SNR=2.4							
NOA	**NORSAR Array B**	**91.85**	**333**	LR		LR	16 04 36.9	
	comp=Z,8.8nm,18.7s,baz=280,slow=38							

IDC 22 15:19:37.7±21.0,18.88S×177.99W,h0km,mb3.7/3, mb1 3.9/4,mb1mx3.5/31,mbtmp3.8/4,ML4.3/1,Error ellipse: s-maj=399.3km s-min=51.0km az=59.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
URZ	**Urewera**	**19.78**	**191**	P		P	15 24 09.6	+0.1
	0.8nm,0.3s,baz=333,slow=4.5,SNR=7.3							
STKA	**Stephens Creek**	**38.52**	**242**	P		P	15 27 01.7	-0.4
	0.4nm,0.3s,baz=92,slow=8.4,SNR=3.8							
WRA	**Warramunga Arr**	**44.85**	**260**	P		P	15 27 54.3	+0.1
	0.3nm,0.3s,baz=96,slow=7.3,SNR=13							
ASAR	**Alice Springs**	**44.92**	**255**	P		P	15 27 54.4	-0.3
	0.5nm,0.5s,baz=92,slow=8.3,SNR=19							

*NIED **22** 15:22:00,39.50N×142.40E,h44km,Mw3.9 Best double couple: M07.25000×10^14 NP1:φs35.00000°,δ87.00000°, λ174.00000°. NP2:φs126.00000°,δ84.00000°,λ3.00000°.*

*JMA **22** 15:22:51.0±0.1,39.54N×142.42E,h38km±1km,M4.0*

JMA Felt I J1.

*IDC **22** 15:22:52.9±2.9,39.58N×142.80E,h65km±25km,mb3.1/4, mb1 3.4/8,mb1mx3.1/42,mbtmp3.5/8,ML3.2/4,MS2.2/1, Ms1 2.2/1,ms1mx2.0/17,Error ellipse: s-maj=35.6km s-min=12.8km az=109.0*

ISC 22 15:22:51.8±1.4,39.57N±0.04×142.43E±0.10,h39km±4km, n26,σ1s95/32,mb3.4/4,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**0.47**	**271**	P		**Pn**	**15 23 01.2**	**-0.9**
MIYJ				S		**Sn**	**15 23 08.3**	**-1.0**
JTH	**Tanohata**	**0.57**	**310**	P		**Pn**	**15 23 02.7**	**-0.8**
JTH				S		**Sn**	**15 23 10.9**	**-0.9**
OFUJ	**Ofunato**	**0.77**	**231**	P		**Pn**	**15 23 04.9**	**-1.2**
OFUJ				*eS*		**Sn**	**15 23 14.8**	**-1.6**
JOM	**Ohasama**	**0.89**	**264**	P		**Pn**	**15 23 07.2**	**-0.5**
JOM				S		**Sn**	**15 23 18.1**	**-1.3**
JKZ	**Kuzumaki**	**0.94**	**296**	P		**Pn**	**15 23 08.4**	**-0.2**
JKZ				S		**Sn**	**15 23 20.4**	**-0.5**
JKMT	**Kesennumamotoy**	**1.06**	**225**	P		**Pn**	**15 23 09.0**	**-1.1**
JKMT				S		**Sn**	**15 23 22.2**	**-1.4**
JANG	**Nango**	**1.07**	**319**	P		**Pn**	**15 23 09.7**	**-0.5**
JANG				S		**Sn**	**15 23 23.3**	**-0.6**
JMK	**Ichinoseki**	**1.12**	**237**	P		**Pn**	**15 23 10.3**	**-0.7**
JMK				S		**Sn**	**15 23 24.3**	**-0.9**
JIO	**Ouri**	**1.40**	**217**	P		**Pn**	**15 23 13.7**	**-1.0**
JIO				S		**Sn**	**15 23 30.3**	**-1.6**
JRG	**Rokugo**	**1.40**	**263**	P		**Pn**	**15 23 14.8**	**0.0**
JRG				S		**Sn**	**15 23 34.6**	**+2.5**
JAH	**Hinai**	**1.51**	**295**	P		**Pn**	**15 23 16.7**	**+0.4**
JAH				S		**Sn**	**15 23 36.0**	**+1.2**
MJAR	**Matsushiro Arr**	**4.50**	**229**	P		**Pn**	**15 24 00.3**	**+2.9**
	0.3nm,0.3s,baz=41,slow=13,SNR=24							
MJAR				S		**Sn**	**15 24 55.8**	**+7.3**
	0.0nm,0.3s,baz=93,slow=22,SNR=1.4							
MAT	**Matsushiro**	**4.50**	**229**	P		**Pn**	**15 23 59.9**	**+2.5**
MAT				S		**Sn**	**15 24 50.7**	**+2.2**
ASAJ	**Asahikawa**	**4.54**	**1**	P		**Pn**	**15 23 59.0**	**+1.0**
	2.2nm,0.3s,baz=226,slow=10,SNR=20							
ASAJ				S		**Sn**	**15 24 51.1**	**+1.6**
	0.5nm,0.3s,baz=114,slow=20,SNR=1.3							
ASAJ				LR		LR	15 25 24.6	
	comp=Z,29nm,19.6s,baz=184,slow=33							
USRK	**Ussuriysk Ar.**	**9.06**	**304**	P		Pn	15 25 05.3	+5.5
	baz=105,slow=16,SNR=4.2							
KSRS	**Korea Array**	**11.56**	**264**	P		Pn	15 25 39.2	+5.0
	0.4nm,0.3s,baz=74,slow=14,SNR=7.9							
H11N2	**WAKE ISLAND Hy**	**28.88**	**126**	T		T	15 59 15.0	
	baz=318,slow=75,SNR=214							
H11N1	**WAKE ISLAND Hy**	**28.88**	**126**	T		T	15 59 15.9	
	baz=318,slow=75,SNR=277							
H11N3	**WAKE ISLAND Hy**	**28.89**	**126**	T		T	15 59 16.5	
	baz=318,slow=75,SNR=261							
H11S1	**WAKE ISLAND Hy**	**29.68**	**128**	T		T	16 00 21.1	
	baz=319,slow=76,SNR=45							
H11S3	**WAKE ISLAND Hy**	**29.68**	**128**	T		T	16 00 20.5	
	baz=319,slow=76,SNR=44							
H11S2	**WAKE ISLAND Hy**	**29.69**	**128**	T		T	16 00 22.4	
	baz=319,slow=76,SNR=26							
ZALV	**Zalesovo Beam**	**40.84**	**310**	P		**P**	**15 30 29.6**	**+0.1**
	0.6nm,0.5s,baz=94,slow=8.7,SNR=2.1							
MKAR	**Makanchi Array**	**43.50**	**300**	P		**P**	**15 30 51.1**	**-0.2**
	0.3nm,0.7s,baz=83,slow=11,SNR=2.2							
WRA	**Warramunga Arr**	**59.68**	**189**	P		**P**	**15 32 50.8**	**-1.5**
	0.3nm,0.5s,baz=6.9,slow=6.9,SNR=4.6							
ASAR	**Alice Springs**	**63.41**	**189**	P		**P**	**15 33 16.4**	**-1.0**
	0.2nm,0.7s,baz=10,slow=5.7,SNR=1.6							

*IDC **22** 15:38:51.0±1.8,6.95S×129.65E,h154km±16km,mb3.7/6, mb1 3.7/11,mb1mx3.5/30,mbtmp4.1/11,MS2.9/1, Ms1 2.9/1,ms1mx2.2/32,Error ellipse: s-maj=21.3km s-min=13.8km az=89.0*

*NEIC **22** 15:38:51.8±2.6,6.92S±0.09×129.57E±0.05,h159km±9km, mb4.1/12,Error ellipse: s-maj=13.7km s-min=5.9km az=197.0*

ISC 22 15:38:49.1±0.6,7.03S±0.05×129.75E±0.07,h139km,n33, σ2s71/38,mb3.9/11,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
FAKI	**Fak Fak**	**4.78**	**32**			**Sn**	**15 40 50.3**	**-4.0**
SIJI	**Sorong**	**6.30**	**14**	P		**Pn**	**15 40 20.9**	**+1.1**
	1.5nm,0.3s,baz=102,slow=23,SNR=34							
SIJI				S		**Sn**	**15 41 26.2**	**-4.5**
	4.6nm,0.3s,baz=237,slow=24,SNR=9.9							
BATI	**Baumata**	**6.79**	**242**	P		**Pn**	**15 40 29.2**	**+2.8**
	8.5nm,0.3s,baz=1.0,slow=1.7,SNR=11							
BATI				S		**Sn**	**15 41 42.9**	**+0.3**
	34nm,0.3s,baz=116,slow=3.4,SNR=9.2							
MMRI	**Maumere**	**7.61**	**257**	Pn		**Pn**	**15 40 41.2**	**+3.8**
FITZ	**Fitzroy Crossi**	**11.71**	**200**	P		**Pn**	**15 41 32.7**	**+0.7**
	0.4nm,0.3s,baz=32,slow=10,SNR=18							
FITZ				S		**Sn**	**15 43 35.8**	**-5.5**
	1.3nm,0.3s,baz=100,slow=11,SNR=13							
FITZ	**Fitzroy Crossi**	**11.71**	**200**			**Pn**	**15 41 32.6**	**+0.6**
FITZ						**Sn**	**15 43 33.6**	**-7.7**
WB0	**Warramunga Arr**	**13.45**	**161**			**Pn**	**15 41 55.1**	**+0.7**
WRAB	**Tennant Creek**	**13.59**	**161**	Pn		**Pn**	**15 41 57.0**	**+0.7**
WRA	**Warramunga Arr**	**13.59**	**161**	P		**Pn**	**15 41 57.0**	**+0.7**
	0.5nm,0.3s,baz=339,slow=13,SNR=37							
WRA				S		**Sn**	**15 44 21.5**	**-5.2**
	1.3nm,0.3s,baz=337,slow=23,SNR=8.9							
WB2	**Warramunga Arr**	**13.60**	**161**	Pn		**Pn**	**15 41 57.2**	**+0.8**
WR0	**Warramunga Arr**	**13.67**	**161**	Pn		**Pn**	**15 41 58.6**	**+1.2**
COEN	**Coen**	**14.89**	**119**			**P**	**15 42 15.6**	**+0.7**
JAGI	**Jajag, Banyuwa**	**15.52**	**264**	Pn		**Pn**	**15 42 18.7**	**-1.9**
AS31	**Alice Springs**	**17.02**	**167**	P		**Pn**	**15 42 42.2**	**+3.3**
ASAR	**Alice Springs**	**17.02**	**167**	P		**Pn**	**15 42 41.9**	**+3.0**
	0.5nm,0.3s,baz=347,slow=11,SNR=68							
ASAR				S		**S**	**15 45 46.3**	**-2.7**
	0.3nm,0.3s,baz=349,slow=24,SNR=6.7							
ASAR				ScP		**ScP**	**15 50 35.6**	**-2.9**
	0.0nm,0.3s,baz=358,slow=1.8,SNR=4.5							
PMG	**Port Moresby**	**17.39**	**99**	P		**Pn**	**15 42 47.6**	**+4.1**
PMG				IAmb		IAmb	15 43 15.3	
	comp=Z,31nm,1.2s							
SBUM	**Sibu**	**19.86**	**298**	P		**Pn**	**15 43 11.6**	**-1.0**
LEM	**Lembang**	**21.97**	**269**	LR		LR	15 53 01.1	
	comp=Z,30nm,18.9s,baz=216,slow=39							
RABL	**Rabaul**	**22.48**	**84**	P		P	15 43 45.8	+8.6
MNAI	**Manna**	**26.79**	**274**	P		**P**	**15 44 14.9**	**-1.5**
STKA	**Stephens Creek**	**27.09**	**157**	P		**P**	**15 44 20.4**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=325,slow=10,SNR=3.8							
STKA	**Stephens Creek**	**27.09**	**157**	P		**P**	**15 44 21.4**	**+2.5**
NWAO	**Narrogin (SRO)**	**28.27**	**203**	P		**P**	**15 44 31.2**	**+1.8**
	comp=Z,8.2nm,0.9s,baz=194,slow=4.2,SNR=1.7							
NWAO	**Narrogin (SRO)**	**28.27**	**203**	P		**P**	**15 44 30.6**	**+1.2**
CMAR	**Chiang Mai Arr**	**39.55**	**310**	P		**P**	**15 46 06.2**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=134,slow=6.8,SNR=8.1							
USRK	**Ussuriysk Ar.**	**51.03**	**2**	P		**P**	**15 47 36.8**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=185,slow=10.0,SNR=2.4					

TWE	**Neicheng**	**1.26 291**	P	**Pn**	**16 03 38.3**	**-0.3**
	baz=288						
TWE			*eS*	**Sn**	**16 03 53.1**	**-1.3**
	baz=288						
TWD	**Chiawan**	**1.27 261**	*eP*	**Pn**	**16 03 38.5**	**-0.2**
	baz=246						
TWD			*eS*	**Sn**	**16 03 54.1**	**-0.4**
	baz=246						
ENTT	**Nioudou**	**1.33 286**	*eP*	**Pn**	**16 03 40.0**	**+0.4**
	baz=290						
ENTT			*eS*	**Sn**	**16 03 54.7**	**-1.3**
	baz=290						
NWF	**Wu-fen Shan**	**1.34 306**	*eP*	**Pn**	**16 03 39.4**	**-0.4**
	baz=293						
WFSB	**Wu-fen Shan**	**1.34 306**	*eP*	**Pn**	**16 03 39.1**	**-0.6**
	baz=293						
ETLH	**Xiulin Townshi**	**1.36 267**	*eP*	**Pn**	**16 03 40.0**	**0.0**
	baz=265						
ETLH			*eS*	**Sn**	**16 03 56.7**	**-0.2**
	baz=265						
NDT	**Datong Townshi**	**1.36 284**	*eP*	**Pn**	**16 03 41.0**	**+0.9**
	baz=288						
NDT			*eS*	**Sn**	**16 03 57.4**	**+0.5**
	baz=288						
NWLT	**Wulai**	**1.42 291**	*eP*	**Pn**	**16 03 40.5**	**-0.4**
	baz=288						
NWLT			*eS*	**Sn**	**16 03 56.8**	**-1.6**
	baz=288						
TWA	**Mucha**	**1.44 299**	*eP*	**Pn**	**16 03 41.0**	**-0.1**
	baz=307						
TWA			*eS*	**Sn**	**16 03 57.4**	**-1.4**
	baz=307						
NNSB	**Datong**	**1.45 276**	*eP*	**Pn**	**16 03 42.1**	**+0.7**
	baz=274						
NNSH	**Datong**	**1.45 276**	*eP*	**Pn**	**16 03 41.3**	**0.0**
	baz=274						
NNS	**Nan Shan**	**1.46 277**	*eP*	**Pn**	**16 03 41.2**	**-0.3**
	baz=274						
ESL	**Shilin**	**1.48 252**	P	**Pn**	**16 03 41.4**	**-0.2**
	baz=249						
ESL			*eS*	**Sn**	**16 03 58.9**	**-0.8**
	baz=249						
YHNB	**Yeheng**	**1.50 285**	*eP*	**Pn**	**16 03 42.4**	**+0.4**
	baz=292						
NSK	**Sanguang**	**1.52 285**	*eP*	**Pn**	**16 03 43.6**	**+1.4**
	baz=292						
EGFH	**Guangfu**	**1.53 247**	*eP*	**Pn**	**16 03 42.5**	**+0.1**
	baz=245						
EGFH			*eS*	**Sn**	**16 04 00.4**	**-0.6**
	baz=245						
YM11	**YM11**	**1.54 305**	*eP*	**Pn**	**16 03 42.3**	**-0.3**
	baz=303						
YM10	**YM10**	**1.55 305**	*eP*	**Pn**	**16 03 41.9**	**-0.7**
	baz=302						
WHF	**Hehuan Shan**	**1.56 265**	P	**Pn**	**16 03 43.4**	**+0.3**
	baz=263						
YM04	**YM04**	**1.57 304**	*eP*	**Pn**	**16 03 42.4**	**-0.4**
	baz=302						
HGSD	**Ruisui**	**1.61 241**	P	**Pn**	**16 03 42.5**	**-1.0**
	baz=239						
HGSD			*eS*	**Sn**	**16 04 01.4**	**-1.7**
	baz=239						
JTJ	**Tarama**	**1.62 77**	P	**Pn**	**16 03 43.8**	**+0.2**
JTJ			S	**Sn**	**16 04 02.9**	**-0.4**
TDCB	**Techi**	**1.65 269**	*eP*	**Pn**	**16 03 44.7**	**+0.6**
	baz=258						
CHGB	**Renai**	**1.65 263**	P	**Pn**	**16 03 44.5**	**+0.3**
	baz=249						
CHGB			*eS*	**Sn**	**16 04 02.9**	**-1.5**
	baz=249						
EHY	**Hungye**	**1.69 243**	*eP*	**Pn**	**16 03 43.8**	**-0.7**
	baz=241						
EHY			*eS*	**Sn**	**16 04 02.7**	**-2.2**
	baz=241						
VWDT	**VWDT**	**1.75 253**	P	**Pn**	**16 03 45.7**	**+0.4**
	baz=242						
VWDT			*eS*	**Sn**	**16 04 04.9**	**-1.4**
	baz=242						
YULB	**Yu-li**	**1.77 240**	*eP*	**Pn**	**16 03 45.2**	**-0.4**
	baz=238						
YULB			*eS*	**Sn**	**16 04 04.9**	**-1.9**
	baz=238						
TWF1	**Yuli**	**1.79 239**	*eP*	**Pn**	**16 03 45.5**	**-0.4**
	baz=237						
TWF1			*eS*	**Sn**	**16 04 06.2**	**-1.1**
	baz=237						
NSTT	**Nanjuang**	**1.82 281**	*eP*	**Pn**	**16 03 48.5**	**+2.2**
	baz=280						
WHP	**Taichung City**	**1.84 270**	*eP*	**Pn**	**16 03 48.3**	**+1.6**
	baz=268						
WHP			*eS*	**Sn**	**16 04 10.3**	**+1.4**
	baz=268						
FULB	**Fuli**	**1.87 235**	P	**Pn**	**16 03 46.0**	**-1.0**
	baz=224						
FULB			*eS*	**Sn**	**16 04 08.3**	**-1.2**
	baz=224						
CHKT	**Chengkung**	**1.88 232**	*eP*	**Pn**	**16 03 46.4**	**-0.7**
	baz=220						
CHKT			*eS*	**Sn**	**16 04 06.8**	**-2.8**
	baz=220						
DPDB	**Guoxing**	**1.88 263**	*eP*	**Pn**	**16 03 47.6**	**+0.4**
	baz=252						
DPDB			*eS*	**Sn**	**16 04 10.1**	**+0.4**
	baz=252						
SSLB	**Suanglung**	**1.90 256**	*eP*	**Pn**	**16 03 48.0**	**+0.6**
	baz=253						
SSLB			*eS*	**Sn**	**16 04 08.9**	**-1.4**
	baz=253						
SMLT	**Sun Moon Lake**	**1.93 259**	*eP*	**Pn**	**16 03 48.6**	**+0.7**
	baz=248						
SMLT			*eS*	**Sn**	**16 04 12.3**	**+1.3**
	baz=248						
TYC	**Yuchr**	**1.96 259**	*eP*	**Pn**	**16 03 49.0**	**+0.8**
	baz=258						
TWQ1	**Liyutan**	**2.00 272**	*eP*	**Pn**	**16 03 49.3**	**+0.5**
	baz=271						
WHYT	**Xinyi Township**	**2.02 254**	*eP*	**Pn**	**16 03 50.1**	**+1.0**
	baz=244						
WHYT			*eS*	**Sn**	**16 04 14.1**	**+1.0**
	baz=244						
TWH	**Lutao**	**2.08 222**	*eP*	**Pn**	**16 03 48.6**	**-1.2**
	baz=219						
TWH			*eS*	**Sn**	**16 04 11.6**	**-2.9**
	baz=219						
JIRB	**Irabujima**	**2.08 74**	P	**Pn**	**16 03 50.4**	**+0.5**
JIRB			*eS*	**Sn**	**16 04 14.1**	**-0.5**
ELDTW	**Lidau**	**2.09 239**	*eP*	**Pn**	**16 03 49.6**	**-0.5**
	baz=237						
ELDTW			*eS*	**Sn**	**16 04 13.6**	**-1.4**
	baz=237						
WJS	**Zhushan**	**2.10 258**	*eP*	**Pn**	**16 03 51.9**	**+1.8**
	baz=256						
WJS			*eS*	**Sn**	**16 04 17.6**	**+2.6**
	baz=256						
WNT	**Mingjian**	**2.12 260**	*eP*	**Pn**	**16 03 52.1**	**+1.7**
	baz=258						
JMJ	**Miyako jima 2**	**2.19 75**	*eP*	**Pn**	**16 03 52.7**	**+1.4**
	baz=76						
CHN5	**Tsauling**	**2.20 253**	P	**Pn**	**16 03 53.4**	**+1.8**
	baz=243						
CHN5			*eS*	**Sn**	**16 04 19.0**	**+1.3**
	baz=243						
WCHH	**Zhanghua**	**2.21 265**	*eP*	**Pn**	**16 03 53.2**	**+1.6**
	baz=277						
TWGBT	**Beinan**	**2.26 230**	*eP*	**Pn**	**16 03 51.8**	**-0.6**
	baz=221						
TWGBT			*eS*	**Sn**	**16 04 17.2**	**-1.8**
	baz=221						
TWG	**Pinlang**	**2.26 231**	*eP*	**Pn**	**16 03 52.0**	**-0.4**
	baz=221						
TWG			*eS*	**Sn**	**16 04 17.3**	**-1.8**
	baz=221						
WGK	**Gukeng**	**2.28 255**	*eP*	**Pn**	**16 03 54.2**	**+1.7**
	baz=254						
WGK			*eS*	**Sn**	**16 04 22.0**	**+2.6**
	baz=254						
WDLH	**Douliu**	**2.30 256**	*eP*	**Pn**	**16 03 54.2**	**+1.4**
	baz=243						
WDLH			*eS*	**Sn**	**16 04 22.1**	**+2.2**
	baz=243						
STYT	**Tauyuan**	**2.31 242**	*eP*	**Pn**	**16 03 54.2**	**+1.1**
	baz=233						
STYT			*eS*	**Sn**	**16 04 20.6**	**+0.3**
	baz=233						
TPUB	**Ta-pu**	**2.35 246**	*eP*	**Pn**	**16 03 55.4**	**+1.8**
	baz=244						
TPUB			*eS*	**Sn**	**16 04 23.6**	**+2.3**
	baz=244						
CHN4	**Tsaushan**	**2.36 247**	*eP*	**Pn**	**16 03 55.8**	**+2.1**
	baz=246						
CHN4			*eS*	**Sn**	**16 04 24.2**	**+2.7**
	baz=246						
WTP	**Ta-pu**	**2.39 245**	*eP*	**Pn**	**16 03 55.9**	**+1.7**
	baz=243						
WTP			*eS*	**Sn**	**16 04 24.2**	**+2.0**
	baz=243						
RLNB	**Erlin**	**2.41 261**	*eP*	**Pn**	**16 03 56.0**	**+1.6**
	baz=259						
RLNB			*eS*	**Sn**	**16 04 26.1**	**+3.3**
	baz=259						
SLGT	**Liugui**	**2.48 239**	*eP*	**Pn**	**16 03 57.0**	**+1.5**
	baz=231						
SLGT			*eS*	**Sn**	**16 04 27.0**	**+2.5**
	baz=231						
TWK	**Hsinying**	**2.48 247**	*eP*	**Pn**	**16 03 57.8**	**+2.3**
	baz=245						
TWK			*eS*	**Sn**	**16 04 26.8**	**+2.1**
	baz=245						
CHN1	**Nanshi**	**2.49 245**	*eP*	**Pn**	**16 03 57.1**	**+1.6**
	baz=243						
CHN1			*eS*	**Sn**	**16 04 27.8**	**+3.2**
	baz=243						
SGST	**Jiashian**	**2.49 242**	*eP*	**Pn**	**16 03 55.8**	**+0.3**
	baz=240						
SGST			*eS*	**Sn**	**16 04 26.6**	**+1.9**
	baz=240						
ECL	**Taimali**	**2.49 228**	*eP*	**Pn**	**16 03 54.9**	**-0.7**
	baz=237						
SNST	**Tainan City**	**2.50 246**	*eP*	**Pn**	**16 03 57.8**	**+2.2**
	baz=244						
SNST			*eS*	**Sn**	**16 04 27.0**	**+2.2**
	baz=244						
LAY	**Lan-yu**	**2.58 211**	*eP*	**Pn**	**16 03 55.7**	**-1.1**
	baz=211						
SSD	**Sandimen**	**2.63 235**	*eP*	**Pn**	**16 03 58.3**	**+0.8**
	baz=229						
TAW	**Tawu**	**2.70 225**	*eP*	**Pn**	**16 03 57.5**	**-0.8**
	baz=232						
TAW			*eS*	**Sn**	**16 04 27.9**	**-1.9**
	baz=232						
MASBT	**Mashibuluo**	**2.71 233**	*eP*	**Pn**	**16 03 59.2**	**+0.7**
	baz=226						
EAST	**Anshuo**	**2.71 226**	*eP*	**Pn**	**16 03 57.9**	**-0.7**
	baz=226						
SSPT	**Xinbi**	**2.84 231**	*eP*	**Pn**	**16 04 02.7**	**+2.5**
	baz=227						
SCZT	**Fangliau**	**2.87 229**	*eP*	**Pn**	**16 04 01.9**	**+1.1**
	baz=223						
PTTC	**Pingtan**	**3.15 293**	*eP*	**Pn**	**16 04 04.9**	**+0.4**
	baz=281						
WDGT	**Dungji**	**3.19 252**	*eP*	**Pn**	**16 04 05.2**	**0.0**
	baz=252						
PHUB	**P'eng-hu**	**3.20 257**	*eP*	**Pn**	**16 04 04.9**	**-0.3**
	baz=256						
VWUC	**VWUC**	**3.28 283**	*eP*	**Pn**	**16 04 05.9**	**-0.5**
	baz=282						
VCHM	**Qimei**	**3.41 253**	*eP*	**Pn**	**16 04 08.7**	**+0.6**
	baz=253						
PTMZ	**Houxiangcun**	**3.58 283**	*eP*	**Pn**	**16 04 09.7**	**-0.7**
	baz=282						

IDC 22 16:18:29.1±2.3, 5°31S×140°67E, h0km, mb3.9/1, mb1 3.5/4, mb1mx3.3/33, mbtmp3.3/4, ML2.8/3, Error ellipse: s-maj=130.1km s-min=28.5km az=96.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.78**	**1**	Pn	Pn		16 19 14.8	-0.1
	0.4nm,0.3s,baz=245,slow=17,SNR=1.9							
JAY				Sn	Sb		16 19 55.1	+0.7
	0.5nm,0.3s,baz=250,slow=22,SNR=1.4							
WRA	**Warramunga Arr**	**15.79**	**202**	Pn	Pn		16 22 12.1	-0.9
	0.1nm,0.3s,baz=23,slow=12,SNR=2.3							
ASAR	**Alice Springs**	**19.38**	**199**	P	P		16 22 55.9	-0.8
	0.0nm,0.3s,baz=36,slow=10,SNR=10							
STKA	**Stephens Creek**	**26.44**	**178**	P	P		16 24 08.7	+0.9
	1.5nm,0.7s,baz=339,slow=10,SNR=3.2							

*IDC **22** 16:21:27.5±3.3, 2°.89N×92°.72E, h0km, mb3.9/4, mb1 4.0/6, mb1mx3.6/54, mbtmp3.8/6, ML3.2/2, Error ellipse: s-maj=70.0km s-min=31.4km az=16.0*

ISC 22 16:21:32.9±2.3, 3°.0N±0°.3×92°.7E±0°.1, h35km, n6, σ1s04/7, mb3.8/4, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.18**	**91**	Pn	Pn		**16 23 00.7**	**-1.1**
	0.8nm,0.3s,baz=360,slow=7.5,SNR=1.6							
PSI				Sn	Sn		16 24 12.8	+1.4
	2.2nm,0.3s,baz=180,slow=14,SNR=6.2							
CMAR	**Chiang Mai Arr**	**16.55**	**21**	Pn	Pn		16 25 21.7	-0.8
	0.0nm,0.3s,baz=217,slow=13,SNR=4.9							
MKAR	**Makanchi Array**	**44.59**	**350**	P	P		16 29 42.0	+0.3
	2.0nm,0.8s,baz=168,slow=8.8,SNR=10							
SONM	**Songino Array**	**46.23**	**13**	P	P		16 29 55.1	+0.3
	0.6nm,0.7s,baz=188,slow=9.0,SNR=3.9							
ZALV	**Zalesovo Beam**	**51.23**	**354**	P	P		16 30 33.3	+0.4
	1.7nm,0.5s,baz=182,slow=7.4,SNR=8.8							
GERES	**GERESS Array B**	**80.56**	**319**	P	P		16 33 42.1	+0.2
	0.4nm,0.6s,baz=97,slow=5.6,SNR=3.6							

*IDC **22** 16:22:08.4±0.6, 11°.50S×161°.71E, h0km, mb4.6/24, mb1 4.6/28, mb1mx4.5/50, mbtmp4.5/28, ML3.7/4, MS3.7/20, Ms1 3.8/20, ms1mx3.6/34, Error ellipse: s-maj=17.4km s-min=13.7km az=133.0*

*BJI **22** 16:22:09.6±0.0, 11°.03S×161°.86E, h13km, mB5.1/30, mb4.8/44, Ms4.8/4, Ms7 4.5/1*

*GCMT **22** 16:22:11.9±0.3, 11°.59S±0°.02×161°.69E±0°.04, h12km, MW4.7/82, Moment Tensor Solution. s17,c19; s82,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=1.52±.04; $M_{\theta\theta}$=1.13±.05; $M_{\phi\phi}$=0.39±.05; $M_{r\theta}$=-0.44±.19; $M_{\theta\phi}$=-0.49±.04; $M_{\phi r}$=-0.15±.26; Best double couple: M_0=1.51600×10^{16} NP1:ϕ_s306.00000°, δ39.00000°, λ-74.00000°. NP2: ϕ_s106.00000°, δ52.00000°, λ-103.00000°. Principal axes: T 1.4140, Plg7.0000°, Azm205.0000°; N 0.2060, Plg10.0000°, Azm114.0000°; P -1.6190, Plg78.0000°, Azm327.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **22** 16:22:13.9±1.3, 11°.51S±0°.06×161°.7E±0°.1, h35km±5km, mb4.9/80 Error ellipse: s-maj=16.1km s-min=4.7km az=60.0*

ISC 22 16:22:13.6±0.4, 11°.50S±0°.05×161°.72E±0°.07, h35km, n153, σ1s03/153, mb4.8/74, MS3.8/18, 1C-1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.69**	**320**	Pn	**Pn**		**16 22 53.4**	**-1.1**
	21nm,0.3s,baz=173,slow=7.6,SNR=16							
HNR				Sn	**Sn**		16 23 25.6	-0.3
	112nm,0.3s,baz=97,slow=16,SNR=7.1							
HNR	**Honiara**	**2.69**	**320**		**Pn**		16 22 52.8	-1.6
DZM	**Mont Dzumac**	**11.44**	**157**	*e*Pn	**Pn**		16 24 54.3	-0.5
	18nm,0.7s							
DZM				*e*LR	LR		16 27 30.5	
	comp=Z,975nm,27.4s							
DZM	**Mont Dzumac**	**11.44**	**157**	Pn	**Pn**		**16 24 54.3**	**-0.5**
	0.4nm,0.3s,baz=7.8,slow=11,SNR=23							
DZM				Sn	**Sn**		16 26 58.2	-3.2
	0.2nm,0.3s,baz=311,slow=19,SNR=1.1							
DZM				LR	LR		16 28 37.5	
	comp=Z,432nm,19.4s,baz=350,slow=34							
DZM	**Mont Dzumac**	**11.44**	**157**	Pn	**Pn**		**16 24 55.1**	**+0.4**
RABL	**Rabaul**	**11.92**	**307**	Pn	**Pn**		**16 24 57.6**	**-3.7**
KRVT	**Keravat (AS076**	**11.96**	**306**	Pn	**Pn**		**16 25 02.3**	**+0.5**
	0.5nm,0.3s,baz=73,slow=5.7,SNR=2.2							
KRVT				LR	LR		16 29 57.8	
	comp=Z,166nm,18.9s,baz=123,slow=39							
PMG	**Port Moresby**	**14.47**	**277**	Pn	**Pn**		**16 25 38.8**	**+2.8**
	0.2nm,0.3s,baz=181,slow=9.2,SNR=3.0							
PMG				LR	LR		16 31 10.0	
	comp=Z,246nm,19.7s,baz=117,slow=37							
PMG	**Port Moresby**	**14.47**	**277**	P	**P**		**16 25 39.3**	**-3.0**
MSVF	**Nonsavu**	**16.97**	**113**		**Pn**		**16 26 06.3**	**-2.2**
EIDS	**Eidsvold**	**17.07**	**215**	P	**Pn**		**16 26 09.6**	**-0.2**
CTA	**Charters Tower**	**17.14**	**238**	P	**Pn**		**16 26 10.4**	**-0.2**
	0.2nm,0.3s,baz=73,slow=11,SNR=1.6							

CTAO	**Charters Tower**	**17.14 238**		**Pn**	**16 26 08.6**	**-2.1**
COEN	**Coen**	**18.25 260**	P	**Pn**	**16 26 27.2**	**+2.9**
ARMA	**Armidale**	**21.02 205**	P	**P**	**16 26 55.9**	**+1.4**
JAY	**Jayapura**	**22.66 292**	P	**P**	**16 27 11.8**	**-0.4**
	16nm,0.8s,baz=34,slow=3.2,SNR=7.6					
JAY	**Jayapura**	**22.66 292**	P	**P**	**16 27 13.9**	**+1.7**
	218nm13nm,0.9s					
GENI	**Genyem**	**23.12 291**	P	**P**	**16 27 19.6**	**+2.7**
	30nm,1.0s					
SMPI	**Sarmi**	**24.70 291**	P	**P**	**16 27 32.6**	**+0.9**
	547nm62nm,1.0s					
CAN	**Canberra**	**26.38 204**	P	**P**	**16 27 48.1**	**+1.3**
WR0	**Warramunga Arr**	**27.44 249**	P	**P**	**16 27 56.3**	**-0.3**
STKA	**Stephens Creek**	**27.49 219**	P	**P**	**16 27 56.7**	**-0.1**
	2.2nm,0.7s,baz=22,slow=12,SNR=4.7					
STKA			LR	LR	16 38 26.0	
	comp=Z,754nm,19.6s,baz=34,slow=36					
STKA	**Stephens Creek**	**27.49 219**	P	**P**	**16 27 56.2**	**-0.5**
WB0	**Warramunga Arr**	**27.53 249**	P	**P**	**16 27 57.1**	**-0.3**
WRAB	**Tennant Creek**	**27.61 249**	P	**P**	**16 27 57.3**	**-0.7**
WB2	**Warramunga Arr**	**27.61 249**	P	**P**	**16 27 56.8**	**-1.2**
WRA	**Warramunga Arr**	**27.62 249**	P	**P**	**16 27 57.8**	**-0.3**
	7.9nm,0.9s,baz=80,slow=9.2,SNR=25					
WRA			LR	LR	16 38 25.3	
	comp=Z,460nm,21.2s,baz=75,slow=35					
AS31	**Alice Springs**	**29.07 242**	P	**P**	**16 28 09.7**	**-1.3**
ASAR	**Alice Springs**	**29.08 242**	P	**P**	**16 28 10.2**	**-0.8**
	2.3nm,0.8s,baz=69,slow=8.4,SNR=28					
ASAR			LR	LR	16 38 52.7	
	comp=Z,273nm,20.6s,baz=64,slow=34					
HIZ	**Hauiti**	**29.35 159**	P	**P**	**16 28 14.0**	**+0.8**
TOO	**Toolangi**	**29.76 207**	P	**P**	**16 28 17.3**	**+0.3**
TOO			IAmb	IAmb	16 28 26.9	
	comp=Z,12nm,0.8s					
URZ	**Urewera**	**29.99 155**	LR	LR	16 37 56.4	
	comp=Z,210nm,21.2s,baz=338,slow=32					
BBOO	**Buckleboo**	**31.69 224**	P	**P**	**16 28 33.4**	**-0.7**
BBOO			IAmb	IAmb	16 28 43.3	
	comp=Z,14nm,0.8s					
KNRA	**Kununurra**	**32.28 259**	P	**P**	**16 28 39.0**	**-0.3**
KNRA			IAmb	IAmb	16 28 41.8	
	comp=Z,25nm,0.9s					
OXZ	**Oxford**	**32.95 166**	P	**P**	**16 28 46.8**	**+1.8**
MQZ	**McQueen's Vall**	**33.46 166**	P	**P**	**16 28 50.2**	**+0.9**
FITZ	**Fitzroy Crossi**	**35.44 255**	P	**P**	**16 29 06.2**	**-0.7**
	comp=Z,9.0nm,1.0s,baz=83,slow=4.6,SNR=12					
FITZ	**Fitzroy Crossi**	**35.44 255**	P	**P**	**16 29 05.3**	**-1.6**
LBMI	**Labuha**	**35.64 285**	P	**P**	**16 29 10.8**	**+2.2**
	comp=Z,38nm,1.1s					
TNTI	**Ternate**	**36.24 287**	P	**P**	**16 29 12.3**	**-1.4**
TNTI			IAmb	IAmb	16 29 15.3	
	comp=Z,31nm,1.3s					
FORT	**Forrest**	**36.58 233**	P	**P**	**16 29 16.5**	**+0.1**
BATI	**Baumata**	**37.38 268**	P	**P**	**16 29 23.3**	**-0.2**
	comp=Z,25nm,0.8s,baz=134,slow=7.7,SNR=3.6					
LUWI	**Luwuk**	**40.02 282**	P	**P**	**16 29 45.7**	**+0.1**
KCP	**Kidapawan**	**40.81 295**	||/P	**P**	**16 29 53.6**	**+1.4**
APSI	**Ampana**	**41.13 282**	P	**P**	**16 29 57.3**	**+2.5**
	comp=Z,24nm,1.1s					
KAPI	**Kappang**	**41.99 275**	P	**P**	**16 30 01.9**	**+0.1**
	comp=Z,19nm,1.1s,baz=156,slow=9.5,SNR=4.8					
KAPI	**Kappang**	**41.99 275**	P	**P**	**16 30 02.0**	**+0.1**
KAPI			IAmb	IAmb	16 30 03.1	
	comp=Z,45nm,1.4s					
NWAO	**Narrogin (SRO)**	**45.95 235**	P	**P**	**16 30 32.6**	**-0.8**
	comp=Z,25nm,1.1s,baz=80,slow=12,SNR=3.9					
NWAO	**Narrogin (SRO)**	**45.95 235**	P	**P**	**16 30 32.4**	**-1.0**
NWAO	**Narrogin (SRO)**	**45.95 235**	P	**P**	**16 30 32.6**	**-0.8**
NWAO			IAmb	IAmb	16 30 44.7	
	comp=Z,79nm,1.6s					
MORW	**Morawa**	**45.95 241**	P	**P**	**16 30 33.3**	**-0.2**
PPT2	**Papeete2**	**47.43 103**	*e*LR	LR	16 44 16.3	
	comp=Z,162nm,24.5s					
KKM	**Kota Kinabalu**	**48.51 289**	P	**P**	**16 30 53.1**	**-0.6**
MJAR	**Matsushiro Arr**	**52.67 336**	P	**P**	**16 31 23.6**	**-0.9**
	comp=Z,1.9nm,0.9s,baz=163,slow=7.8,SNR=2.8					
MJAR			LR	LR	16 52 37.3	
	comp=Z,46nm,21.7s,baz=215,slow=35					
MAT	**Matsushiro**	**52.67 336**	P	**P**	**16 31 23.6**	**-1.0**
TPUB	**Ta-pu**	**53.03 311**	P	**P**	**16 31 26.9**	**-0.7**
JNU	**Nakatsue**	**53.23 328**	P	**P**	**16 31 28.5**	**-0.3**
	comp=Z,11nm,0.9s,baz=118,slow=7.7,SNR=7.7					
JNU	**Nakatsue**	**53.23 328**	P	**P**	**16 31 28.5**	**-0.3**
JNU			IAmb	IAmb	16 31 29.7	
	comp=Z,16nm,1.0s					
CISI	**Cisompet, Garu**	**53.24 269**	P	**P**	**16 31 28.6**	**-0.7**
KSRS	**Korea Array**	**58.11 329**	P	**P**	**16 32 03.6**	**-0.1**
	comp=Z,5.9nm,1.1s,baz=145,slow=7.2,SNR=18					
KSRS			LR	LR	16 55 42.5	
	comp=Z,54nm,20.2s,baz=136,slow=35					
NJ2	**Nanjing**	**59.64 318**	*e*P	**P**	**16 32 15.5**	**+1.1**
NJ2			pmax	pmax		
	comp=Z,12nm,0.6s					
USRK	**Ussuriysk Ar.**	**61.67 336**	P	**P**	**16 32 28.1**	**+0.1**
	comp=Z,3.5nm,0.7s,baz=171,slow=9.4,SNR=7.6					
USRK			LR	LR	16 55 52.6	
	comp=Z,53nm,21.9s,baz=164,slow=33					
PEA0B	**Petropavlovsk-**	**64.44 357**	P	**P**	**16 32 46.2**	**-0.1**
PETK	**Petropavlovsk-**	**64.44 357**	P	**P**	**16 32 46.3**	**0.0**
	comp=Z,3.7nm,0.8s,baz=161,slow=9.4,SNR=6.8					
CASY	**Casey**	**64.55 200**	P	**P**	**16 32 47.2**	**+0.3**
CASY			IAmb	IAmb	16 33 18.7	
	comp=Z,24nm,1.8s					
GSI	**Gunungsitoli**	**64.98 277**	P	**P**	**16 32 50.5**	**-0.1**
ENH	**Enshi**	**65.16 311**	P	**P**	**16 32 50.5**	**-1.1**
ENH			IAmb	IAmb	16 32 52.3	
	comp=Z,14nm,1.2s					
GYA	**Guiyang**	**65.44 306**	P	**P**	**16 32 54.3**	**+0.8**
GYA			pP	sP	16 33 06.0	-0.4
GYA			S	**S**	**16 41 36.3**	**+0.2**
GYA			pmax	pmax		
	comp=Z,10.0nm,0.8s					
GYA			pmax	pmax		
	comp=Z,110nm,4.9s					
SLVN	**Son La**	**65.47 300**	P	**P**	**16 32 53.4**	**-0.4**
SLVN			IAmb	IAmb	16 32 56.7	
	comp=Z,18nm,1.3s					
VNDA	**Vanda**	**66.01 180**	LR	LR	16 56 07.8	
	comp=Z,84nm,21.8s,baz=342,slow=31					
PBKT	**Sadao Pong**	**66.22 294**	P	**P**	**16 32 59.9**	**+1.4**
PBKT			IAmb	IAmb	16 33 02.5	
	comp=Z,8.9nm,0.8s					
XAN	**Xi'an**	**67.55 314**	P	**P**	**16 33 06.8**	**0.0**
XAN			pP	pP	16 33 15.5	-0.7
XAN			pmax	pmax		
	comp=Z,8.0nm,0.7s					
KMI	**Kunming**	**68.02 303**	P	**P**	**16 33 10.9**	**+0.8**
KMI			pP	pP	16 33 20.9	+1.5
KMI			sP	pwP	16 33 25.9	+0.4
KMI			pmax	pmax		
	comp=Z,27nm,1.0s					
CM31	**Chiang Mai Arr**	**68.69 295**	P	**P**	**

SONM				LR	LR	17 06 08.7		
	comp=Z,33nm,21.6s,baz=91,slow=34							
SHL	**Shillong**	**77.28**	**300**	P	**P**	**16 34 05.1**	**-0.1**	
YAK	**Yakutsk**	**77.46**	**345**	P	**P**	**16 34 05.6**	**+0.5**	
	comp=Z,4.7nm,0.3s,baz=184,slow=1.4,SNR=3.4							
YAK	**Yakutsk**	**77.46**	**345**	P	**P**	**16 34 04.3**	**-0.8**	
OHAK	**Old Harbor**	**77.83**	**23**	P	**P**	**16 34 06.8**	**-0.4**	
OHAK				IAmb	IAmb	16 34 09.1		
	comp=Z,16nm,1.0s							
KDAK	**Kodiak Island**	**78.50**	**23**	P	**P**	**16 34 11.5**	**+0.6**	
	comp=Z,8.1nm,0.9s,baz=189,slow=2.9,SNR=7.4							
KDAK	**Kodiak Island**	**78.50**	**23**	P	**P**	**16 34 11.5**	**+0.6**	
KDAK				IAmb	IAmb	16 34 12.7		
	comp=Z,12nm,1.0s							
QSPA	**South Pole Qui**	**78.50**	**180**	P	**P**	**16 34 11.8**	**+0.7**	
BILL	**Bilibino**	**79.40**	**2**	P	**P**	**16 34 15.8**	**+0.1**	
BILL				IAmb	IAmb	16 34 17.8		
	comp=Z,12nm,1.1s							
CNPM	**China Poot**	**80.21**	**22**	P	**P**	**16 34 21.4**	**+1.1**	
CNPM				IAmb	IAmb	16 34 33.7		
	comp=Z,10nm,0.8s							
RSO	**Redoubt South**	**80.32**	**21**	P	**P**	**16 34 20.9**	**-0.1**	
TTA	**Tatalina**	**81.04**	**18**	P	**P**	**16 34 25.8**	**+1.0**	
KTH	**Kantishna Hill**	**83.10**	**19**	P	**P**	**16 34 35.7**	**+0.2**	
KTH				IAmb	IAmb	16 34 36.2		
	comp=Z,8.3nm,0.9s							
BPAW	**Bear Paw Mtn.**	**83.45**	**19**	P	**P**	**16 34 37.5**	**+0.3**	
BPAW				IAmb	IAmb	16 34 47.6		
	comp=Z,15nm,1.7s							
RND	**Reindeer**	**83.68**	**20**	P	**P**	**16 34 39.4**	**+0.9**	
RND				IAmb	IAmb	16 34 48.3		
	comp=Z,6.2nm,0.8s							
MCK	**McKinley**	**83.87**	**20**	P	**P**	**16 34 40.3**	**+0.8**	
DHY	**Denali Highway**	**83.97**	**21**	P	**P**	**16 34 41.5**	**+1.3**	
DHY				IAmb	IAmb	16 34 43.0		
	comp=Z,16nm,1.6s							
MLY	**Manley**	**84.18**	**18**	P	**P**	**16 34 41.5**	**+0.5**	
MLY				IAmb	IAmb	16 34 42.6		
	comp=Z,6.1nm,0.8s							
GLB	**Gilahina Butte**	**84.26**	**23**	P	**P**	**16 34 41.5**	**0.0**	
GLB				IAmb	IAmb	16 34 43.5		
	comp=Z,9.2nm,1.0s							
WRH	**Wood River Hil**	**84.64**	**20**	P	**P**	**16 34 42.9**	**-0.3**	
WRH				IAmb	IAmb	16 34 45.1		
	comp=Z,6.3nm,0.8s							
CCB	**Clear Creek Bu**	**84.85**	**19**	P	**P**	**16 34 43.9**	**-0.4**	
CCB				IAmb	IAmb	16 34 45.9		
	comp=Z,4.8nm,0.8s							
HDA	**Harding Lake**	**84.98**	**20**	P	**P**	**16 34 45.1**	**+0.1**	
IL31		**85.23**	**20**	P	**P**	**16 34 45.8**	**-0.4**	
IL31				IAmb	IAmb	16 34 47.5		
	comp=Z,21nm,1.7s							
ILAR	**Eielson Array**	**85.23**	**20**	P	**P**	**16 34 46.1**	**-0.1**	
	comp=Z,3.1nm,0.9s,baz=243,slow=4.4,SNR=22							
ILAR				LR	LR	17 08 15.2		
	comp=Z,84nm,19.7s,baz=244,slow=32							
RIDG	**Independent Ri**	**85.28**	**21**	P	**P**	**16 34 47.0**	**+0.4**	
RIDG				IAmb	IAmb	16 35 15.9		
	comp=Z,8.4nm,1.0s							
DOT	**Dot Lake**	**85.50**	**21**	P	**P**	**16 34 48.2**	**+0.6**	
DOT				IAmb	IAmb	16 34 57.9		
	comp=Z,4.8nm,0.8s							
SCRK	**Sand Creek**	**85.72**	**21**	P	**P**	**16 34 49.3**	**+0.4**	
SCRK				IAmb	IAmb	16 34 50.5		
	comp=Z,6.9nm,1.0s							
WMQ	**Urumqi**	**86.64**	**316**	*e*P	**P**	**16 34 54.1**	**+0.3**	
TOLK	**Toolik Lake Re**	**86.98**	**16**	P	**P**	**16 34 55.3**	**+0.4**	
EGAK	**Eagle**	**87.19**	**21**	P	**P**	**16 34 56.7**	**+0.8**	
DAWY	**Dawson**	**87.44**	**22**	P	**P**	**16 34 57.9**	**+0.7**	
DAWY				IAmb	IAmb	16 34 59.9		
	comp=Z,12nm,1.2s							
AFDM	**Forest Hills D**	**87.49**	**50**	P	**P**	**16 34 58.6**	**+0.7**	
AFDM				IAmb	IAmb	16 35 09.3		
	comp=Z,5.1nm,1.0s							
NVAR	**Mina Array Bea**	**89.35**	**51**	P	**P**	**16 35 08.0**	**+0.9**	
	comp=Z,1.5nm,0.9s,baz=239,slow=6.8,SNR=9.9							
NVAR				LR	LR	17 07 35.1		
	comp=Z,76nm,20.1s,baz=261,slow=30							
NV11	**Mina Array Sit**	**89.47**	**51**	P	**P**	**16 35 08.7**	**+1.1**	
NV11				IAmb	IAmb	16 35 10.1		
	comp=Z,6.2nm,1.1s							
PFO	**Pinyon Flats O**	**89.59**	**56**	LR	LR	17 06 41.6		
	comp=Z,67nm,20.5s,baz=274,slow=30							
EPYK	**Eagle Plains**	**89.61**	**21**	P	**P**	**16 35 08.0**	**+0.6**	
KVN	**Kaiserville**	**89.67**	**50**	P	**P**	**16 35 08.9**	**+0.4**	
KVN				IAmb	IAmb	16 35 11.1		
	comp=Z,8.5nm,1.4s							
I07A	**Izee**	**89.99**	**45**	P	**P**	**16 35 10.6**	**+0.8**	
WVOR	**Wild Horse Val**	**90.16**	**47**	P	**P**	**16 35 11.4**	**+0.8**	
WVOR				IAmb	IAmb	16 35 28.9		
	comp=Z,11nm,1.2s							
SYO	**Syowa Base**	**90.17**	**198**⇑	*e*X	P	16 35 15.2	+5.2	
J08A	**Circle Bar Ran**	**90.52**	**46**	P	**P**	**16 35 13.1**	**+0.8**	
J08A				IAmb	IAmb	16 35 14.9		
	comp=Z,7.2nm,1.0s							
TPNV	**Topopah Spring**	**90.56**	**53**	P	**P**	**16 35 13.9**	**+1.2**	
TPNV				IAmb	IAmb	16 35 15.2		
	comp=Z,5.3nm,1.1s							
MK31	**Makanchi Array**	**91.17**	**318**	P	**P**	**16 35 14.6**	**-0.5**	
MKAR	**Makanchi Array**	**91.17**	**318**	P	**P**	**16 35 14.9**	**-0.1**	
	comp=Z,2.0nm,0.6s,baz=96,slow=6.1,SNR=20							
R11A	**Troy Canyon, C**	**91.40**	**51**	P	**P**	**16 35 17.4**	**+0.8**	
R11A				IAmb	IAmb	16 35 34.5		
	comp=Z,8.2nm,1.4s							
ZALV	**Zalesovo Beam**	**91.63**	**325**	P	**P**	**16 35 16.0**	**-1.0**	
	comp=Z,1.5nm,0.9s,baz=94,slow=4.5,SNR=4.9							
ZALV				LR	LR	17 16 04.3		
	comp=Z,25nm,21.0s,baz=71,slow=35							
INK	**Inuvik**	**91.63**	**20**	P	**P**	**16 35 17.1**	**+0.5**	
	comp=Z,1.9nm,1.1s,baz=208,slow=2.1,SNR=4.6							
INK	**Inuvik**	**91.63**	**20**	P	**P**	**16 35 16.9**	**+0.2**	
INK				IAmb	IAmb	16 35 18.3		
	comp=Z,4.6nm,1.1s							
BMO	**Blue Mountains**	**91.72**	**45**	P	**P**	**16 35 18.6**	**+0.9**	
BMO				IAmb	IAmb	16 35 20.0		
	comp=Z,3.8nm,1.1s							
ELK	**Elko**	**92.21**	**49**	P	**P**	**16 35 21.0**	**+0.6**	
ELK				IAmb	IAmb	16 35 23.0		
	comp=Z,4.9nm,1.2s							
KSH	**Kashi**	**93.97**	**309**	P	**P**	**16 35 31.6**	**+3.3**	
KSH				pP	sP	16 35 40.3	-1.1	
KSH				sP	pwP	16 35 43.8	-0.2	
KSH				pmax	pmax			
	comp=Z,7.0nm,1.0s							
KSH				pmax	pmax			
	comp=Z,130nm,6.1s							
KURK	**Kurchatov**	**94.47**	**321**	P	**P**	**16 35 28.5**	**-1.6**	
KURK				IAmb	IAmb	16 35 38.1		
	comp=Z,3.8nm,1.1s							
NRIK	**Noril'sk**	**95.18**	**340**	LR	LR	17 16 10.1		
	comp=Z,84nm,22.0s,baz=78,slow=34							
C36M	**Paulatuk**	**95.20**	**20**	P	**P**	**16 35 33.4**	**+0.3**	
C36M				IAmb	IAmb	16 35 34.4		
	comp=Z,6.6nm,0.9s							
PDAR	**Pinedale Array**	**96.78**	**48**	LR	LR	17 15 20.8		
	comp=Z,20nm,18.3s,baz=263,slow=33							
YKA	**Yellowknife Ar**	**97.20**	**28**	P	**P**	**16 35 42.2**	**-0.1**	
	comp=Z,1.8nm,0.7s,baz=255,slow=4.4,SNR=30							
YKA				LR	LR	17 14 51.1		
	comp=Z,34nm,20.4s,baz=0.0,slow=32							
ARCES	**ARCESS Array B**	**115.74**	**344**	PKP	**PKPdf**	**16 40 52.0**	**+0.2**	
	comp=Z,2.9nm,0.8s,baz=294,slow=2.9,SNR=4.0							
FINES	**FINESS Array B**	**120.69**	**337**	PKP	**PKiKP**	**16 41 01.9**	**+0.3**	
	comp=Z,2.1nm,1.0s,baz=225,slow=3.7,SNR=3.9							
AKASG	**Malin Array Be**	**125.02**	**325**	PKP	**PKPdf**	**16 41 10.1**	**-0.1**	
	comp=Z,2.9nm,0.8s,baz=62,slow=2.3,SNR=8.0							
NB2	**NORSAR Subarra**	**126.03**	**343**	PKPdf	**PKiKP**	**16 41 12.3**	**0.0**	
	comp=Z,1.7nm,0.7s,baz=42,slow=1.9							
NOA	**NORSAR Array B**	**126.03**	**343**	PKP	**PKPdf**	**16 41 12.0**	**+0.1**	
	comp=Z,1.4nm,0.8s,baz=35,slow=1.8,SNR=3.9							
CPUP	**Villa Florida**	**126.57**	**135**	PKP	**PKPdf**	**16 41 13.6**	**-0.4**	
	comp=Z,3.0nm,1.0s,baz=51,slow=4.2,SNR=3.2							
SDV	**Santo Domingo**	**128.47**	**88**	PKP	**PKPdf**	**16 41 18.3**	**+0.2**	
	comp=Z,2.3nm,0.4s,baz=312,slow=6.5,SNR=5.3							
BRG	**Berggiesshubel**	**132.74**	**333**	*e*PKP	**PKiKP**	**16 41 26.9**	**+0.9**	
	comp=Z,6.7nm,1.3s							
CLL	**Collm**	**132.84**	**334**	*e*(PKPdf)	**PKiKP**	**16 41 27.0**	**+0.8**	
	comp=Z,3.0nm,0.8s							
CLL				*e*pPKiKP	**pPKPdf**	**16 41 35.0**	**+0.3**	
CLL				*e*PP	**PP**	**16 43 50.0**	**+0.2**	
CLL				*e*		16 44 26.0		
GERES	**GERESS Array B**	**134.26**	**331**	PKP	**PKPdf**	**16 41 27.9**	**0.0**	
	comp=Z,0.6nm,0.7s,baz=5.7,slow=1.3,SNR=5.5							
KEST	**Kesra**	**145.26**	**319**	PKPbc	**PKPdf**	**16 41 48.4**	**+0.1**	
	comp=Z,9.7nm,0.9s,baz=318,slow=4.3,SNR=4.9							
KEST	**Kesra**	**145.26**	**319**		**PKPbc**	**16 41 48.0**	**+0.1**	
ESDC	**Sonseca Array**	**149.20**	**338**	PKPbc	**PKPbc**	**16 41 59.2**	**+0.3**	
	comp=Z,0.4nm,0.3s,baz=12,slow=1.4,SNR=5.1							
TOA0	**Torodi Ar. Sit**	**160.41**	**277**	PKPdf	**PKPdf**	**16 42 09.7**	**-1.0**	
TOA0					**PKPab**	**16 42 51.8**	**+0.1**	
TORD	**Torodi Ar. Bea**	**160.41**	**277**	PKP	**PKPdf**	**16 42 11.1**	**+0.5**	
	comp=Z,2.0nm,0.9s,baz=0.3,slow=1.8,SNR=8.5							
TORD				PKPab	**PKPab**	**16 42 52.1**	**+0.4**	
	comp=Z,4.8nm,1.1s,baz=58,slow=3.7,SNR=8.8							

BGS ***22*** *16:30:04.3±0.7, 49.°89N×1.°59E, h10km, ML2.2*
LDG ***22*** *16:30:05.9±0.1, 49.°94N×1.°57E, h5km, Md2.6/2, Ml2.6/25, Error ellipse: s-maj=1.9km s-min=1.2km az=177.0*

ISC 22 16:30:04.1±1.1, 49.°92N±0.°03×1.°56E±0.°02, h14km±9km, n39, σ0s97/78, France

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HMNX	**Herstmonceux**	**1.23**	**321**	*e*P		**Pn**		**16 30 26.6**	**-0.2**
HMNX				*e*S		**Sb**		**16 30 42.9**	**+0.1**
HMNX				IAML				16 30 45.7	
	comp=E,72nm,0.4s								
HMNX				IAML				16 30 46.6	
	comp=N,74nm,0.5s								
ELSH	**Elham, Standar**	**1.26**	**348**	*e*P		**Pn**		**16 30 27.1**	**-0.2**
ELSH				*e*S		**Sb**		**16 30 43.7**	**0.0**
ELSH				IAML				16 30 44.2	
	comp=E,33nm,0.3s								
ELSH				IAML				16 30 44.5	
	comp=N,26nm,0.2s								
BAIF	**Baives**	**1.71**	**84**	*e*Pn		**Pb**		**16 30 35.2**	**-0.1**
BAIF				*e*Sn		**Sn**		**16 30 55.9**	**+0.7**
BAIF				*e*Sg		**Sg**		**16 30 59.7**	**+0.5**
	comp=N,8.6nm,0.2s								
LDF	**La Druitiere**	**1.73**	**220**	*e*Pn		**Pb**		**16 30 35.2**	**-0.4**
LDF	**La Druitiere**	**1.73**	**220**	*e*Pg		**Pg**		**16 30 38.0**	**+0.8**
LDF				*e*Sn		**Sn**		**16 30 56.8**	**+1.2**
	comp=N,13nm,0.2s								
LDF				*e*Sg		**Sg**		**16 31 01.0**	**+1.3**
	comp=N,17nm,0.3s								
FLN	**La Foliniere**	**1.77**	**230**	*e*Pg		**Pg**		**16 30 38.1**	**+0.1**
	baz=40								
FLN				*e*Sg		**Sg**		**16 31 01.4**	**+0.4**
	comp=N,17nm,0.2s								
GIVF	**Givet**	**2.11**	**84**	*e*Pn		**Pn**		**16 30 40.4**	**+1.4**
GIVF	**Givet**	**2.11**	**84**	*e*Pg		**Pg**		**16 30 45.1**	**+0.5**
GIVF				*e*Sn		**Sn**		**16 31 05.6**	**+0.6**
	comp=N,2.5nm,0.2s								
GIVF				*e*Sg		**Sg**		**16 31 12.2**	**+0.3**
	comp=N,3.2nm,0.2s								
GRR	**Gorron**	**2.21**	**227**	*e*Pn		**Pn**		**16 30 42.0**	**+1.7**
GRR	**Gorron**	**2.21**	**227**	*e*Pg		**Pg**		**16 30 46.9**	**+0.5**
GRR				*e*Sn		**Sb**		**16 31 09.8**	**-1.2**
GRR				*e*Sg		**Sg**		**16 31 15.7**	**+0.6**
	comp=N,13nm,0.2s								
JDG	**Jersey Dam (Ga**	**2.46**	**254**	*e*S		**Sn**		**16 31 12.9**	**-0.6**
JDG				IAML				16 31 23.1	
	comp=E,9.1nm,0.4s								
JDG				IAML				16 31 25.5	
	comp=N,19nm,0.5s								
JRS	**Jersey**	**2.49**	**254**	*e*S		**Sn**		**16 31 12.6**	**-1.7**
JRS				IAML				16 31 27.3	
	comp=N,9.8nm,0.4s								
JRS				IAML				16 31 27.8	
	comp=E,8.4nm,0.2s								
MEZF	**Maizieres J'vi**	**2.69**	**121**	*e*Pn		**Pn**		**16 30 48.3**	**+1.3**
MEZF	**Maizieres J'vi**	**2.69**	**121**	*e*Pg		**Pg**		**16 30 55.6**	**-0.1**
	baz=301								
MEZF				*e*Sn		**Sn**		**16 31 19.2**	**-0.2**
MEZF				*e*Sg		**Sg**		**16 31 30.1**	**-0.5**
	comp=E,1.4nm,0.2s								
SFTF	**Sexfontaines**	**2.86**	**126**	*e*Pn		**Pn**		**16 30 50.5**	**+1.2**
SFTF	**Sexfontaines**	**2.86**	**126**	*e*Pg		**Pg**		**16 30 58.7**	**-0.2**
	baz=302								
SFTF				*e*Sn		**Sn**		**16 31 23.3**	**-0.2**
SFTF				*e*Sg		**Sg**		**16 31 35.8**	**-0.1**
	comp=E,2.9nm,0.2s								
LOR	**Lormes**	**3.06**	**149**	*e*Pn		**Pn**		**16 30 53.0**	**+0.9**
	baz=324								
LOR	**Lormes**	**3.06**	**149**	*e*Pg		**Pg**		**16 31 02.1**	**-0.6**
	baz=330								
LOR				*e*Sn		**Sn**		**16 31 28.7**	**+0.2**
LOR				*e*Sg		**Sg**		**16 31 41.5**	**-0.9**
	comp=E,2.3nm,0.2s,baz=331								
SSF	**Saint Saulge**	**3.14**	**155**	*e*Pn		**Pn**		**16 30 54.8**	**+1.6**
SSF	**Saint Saulge**	**3.14**	**155**	*e*Pg		**Pg**		**16 31 04.7**	**+0.4**
SSF				*e*Sn		**Sn**		**16 31 30.0**	**-0.5**
SSF				*e*Sg		**Sg**		**16 31 44.1**	**-0.8**
	comp=E,3.0nm,0.3s								
SGMF	**Saint Gilles**	**3.18**	**240**	*e*Pn		**Pn**		**16 30 55.1**	**+1.4**
SGMF				*e*Sn		**Sn**		**16 31 31.5**	**+0.1**
SGMF				*e*Sg		**Sg**		**16 31 45.8**	**-0.4**
	comp=E,1.6nm,0.2s								
AVF	**Avril sur Loir**	**3.35**	**158**	*e*Pg		**Pg**		**16 31 07.8**	**-0.5**
AVF				*e*Sg		**Sg**		**16 31 53.6**	**+1.9**
	comp=E,0.6nm,0.2s								
BGF	**Bois d'Agland**	**3.47**	**165**	*e*Pn		**Pn**		**16 30 59.0**	**+1.3**
BGF	**Bois d'Agland**	**3.47**	**165**	*e*Pg		**Pg**		**16 31 10.2**	**-0.4**
BGF				*e*Sn		**Sn**		**16 31 38.1**	**-0.6**
BGF				*e*Sg		**Sg**		**16 31 54.6**	**-1.0**
	comp=E,14nm,0.3s								
MFF	**Saint Martin d**	**3.51**	**200**	*e*Pn		**Pn**		**16 30 59.5**	**+1.2**
MFF	**Saint Martin d**	**3.51**	**200**	*e*Pg		**Pg**		**16 31 10.8**	**-0.6**
MFF				*e*Sn		**Sn**		**16 31 39.1**	**-0.5**
MFF				*e*Sg		**Sg**		**16 31 55.8**	**-1.0**
	comp=E,1.2nm,0.2s								
ROSF	**Rostrenen**	**3.55**	**245**	*e*Pn		**Pg**		**16 31 00.2**	**+1.4**
ROSF	**Rostrenen**	**3.55**	**245**	*e*Pg		**Pg**		**16 31 12.0**	**-0.1**
ROSF				*e*Sn		**Sn**		**16 31 40.2**	**-0.3**
ROSF				*e*Sg		**Sg**		**16 31 57.4**	**-0.6**
	comp=E,3.3nm,0.3s								
SMF	**Signal de Mont**	**3.62**	**154**	*e*Pn		**Pn**		**16 31 00.7**	**+1.0**
SMF	**Signal de Mont**	**3.62**	**154**	*e*Pg		**Pg**		**16 31 12.7**	**-0.6**
SMF				*e*Sn		**Sn**		**16 31 41.5**	**-0.7**
SMF				*e*Sg		**Sg**		**16 32 01.5**	**+1.4**
	comp=E,5.7nm,0.4s								
TCF	**Toulx Ste Croi**	**3.66**	**173**	*e*Pn		**Pn**		**16 31 03.1**	**+2.7**
TCF	**Toulx Ste Croi**	**3.66**	**173**	*e*Pg		**Pg**		**16 31 14.1**	**-0.1**
TCF				*e*Sn		**Sn**		**16 31 43.3**	**-0.1**
TCF				*e*Sg		**Sg**		**16 32 00.2**	**-1.4**
	comp=E,1.1nm,0.2s								
HAU	**Haudompre**	**3.69**	**119**	*e*Pn		**Pn**		**16 31 01.9**	**+1.2**
HAU	**Haudompre**	**3.69**	**119**	*e*Pg		**Pg**		**16 31 14.0**	**-0.8**
HAU				*e*Sn		**Sn**		**16 31 43.3**	**-0.7**
HAU				*e*Sg		**Sg**		**16 32 01.4**	**-1.1**
	comp=E,2.8nm,0.2s								
QUIF	**Quistinic**	**3.71**	**239**	*e*Pn		**Pn**		**16 31 01.9**	**+1.0**
QUIF	**Quistinic**	**3.71**	**239**	*e*Pg		**Pg**		**16 31 15.4**	**+0.3**
QUIF				*e*Sn		**Sn**		**16 31 43.9**	**-0.5**
QUIF				*e*Sg		**Sg**		**16 32 02.3**	**-0.8**
	comp=E,3.8nm,0.2s								
HINF	**Hinteralfeld**	**4.08**	**119**	*e*Pn		**Pn**		**16 31 07.3**	**+1.2**
HINF	**Hinteralfeld**	**4.08**	**119**	*e*Pg		**Pg**		**16 31 21.2**	**-1.0**
HINF				*e*Sn		**Sn**		**16 31 52.7**	**-0.9**
HINF				*e*Sg		**Sg**		**16 32 13.6**	**-1.4**
	comp=E,1.0nm,0.2s								
LFF	**La Frestale**	**5.02**	**187**	*e*Pg		**Pg**		**16 31 39.2**	**-0.9**
LFF				*e*Sg		**Sg**		**16 32 42.8**	**-2.2**
	comp=E,5.5nm,0.3s								

BEO ***22*** *16:31:27.2±0.5, 42.°41N×18.°43E, h0km, ML2.4/15*
RHSSO ***22*** *16:31:27.4±0.4, 42.°45N×18.°42E, h3km±1km, ML2.4/10*
PDG ***22*** *16:31:27.3±0.1, 42.°47N×18.°45E, h6km, MD2.9/3, ML2.3/12, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*

ISC 22 16:31:27.4±0.8, 42.°46N±0.°03×18.°44E±0.°02, h6km±5km, n55, σ0s85/106, 12C-7D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HCY	**Herceg Novi**	**0.04**	**107**⇑	*i* Pg		**Pg**		**16 31 28.7**	**-0.1**
HCY				*e*Sg		**Sg**		**16 31 29.7**	**0.0**
HCY	**Herceg Novi**	**0.04**	**107**⇑	*i* Pg		**Pg**		**16 31 28.7**	**-0.1**
HCY				*i* Sg		**Sg**		**16 31 29.7**	**0.0**
TREB	**Trebinje**	**0.27**	**346**	*e*Pg		**Pg**		**16 31 32.4**	**-0.2**
TREB				*e*Sg		**Sg**		**16 31 36.6**	**+0.4**
TREB	**Trebinje**	**0.27**	**346**⇑	*i* Pg		**Pg**		**16 31 32.4**	**-0.2**
TREB				*e*Sg		**Sg**		**16 31 36.5**	**+0.4**
DBRK	**Dubrovnik**	**0.30**	**314**	*i* Pg		**Pg**		**16 31 33.5**	**+0.2**
DBRK				Sg		**Sg**		**16 31 38.1**	**+0.9**
CEME	**Cevo**	**0.37**	**76**⇓	*i* Pg		**Pg**		**16 31 33.9**	**-0.7**
CEME				*i* Sg		**Sg**		**16 31 39.6**	**+0.2**
BUM	**Brajici-Budva**	**0.37**	**115**⇑	*i* Pg		**Pg**		**16 31 34.2**	**-0.5**
BUM				*i* Sg		**Sg**		**16 31 40.1**	**+0.5**
BRY	**Bratogost**	**0.45**	**10**⇓	*i* Pg		**Pg**		**16 31 35.3**	**-0.8**
BRY				*e*Sg		**Sg**		**16 31 42.1**	**+0.1**
BRY	**Bratogost**	**0.45**	**10**⇓	*i* Pg		**Pg**		**16 31 35.3**	**-0.8**
BRY				*i* Sg		**Sg**		**16 31 42.2**	**+0.2**
NKME	**Niksic**	**0.49**	**51**⇑	*i* Pg		**Pg**		**16 31 36.0**	**-0.9**
NKME				*e*Sg		**Sg**		**16 31 43.7**	**+0.4**
NKY	**Niksic**	**0.54**	**49**⇓	*i* Pg		**Pg**		**16 31 37.0**	**-0.9**
NKY				*i* Sg		**Sg**		**16 31 45.5**	**+0.5**
PDG	**Podgorica**	**0.61**	**93**	*e*Pg		**Pg**		**16 31 38.4**	**-0.7**
PDG				*e*Sg		**Sg**		**16 31 45.7**	**-1.3**
PDG	**Podgorica**	**0.61**	**93**⇑	*i* Pg		**Pg**		**16 31 38.3**	**-0.8**
PDG				*e*Sg		**Sg**		**16 31 47.4**	**+0.4**
TTG	**Podgorica**	**0.61**	**93**⇓	*i* Pg		**Pg**		**16 31 38.4**	**-0.7**
TTG				*i* Sg		**Sg**		**16 31 47.8**	**+0.8**
DRME	**Dracevica, Mon**	**0.62**	**116**⇑	*i* Pg		**Pg**		**16 31 38.9**	**-0.4**
DRME				*e*Sg		**Sg**		**16 31 48.3**	**+1.0**
DRME	**Dracevica, Mon**	**0.62**	**116**⇑	*i* Pg		**Pg**		**16 31 38.7**	**-0.6**
DRME				*i* Sg		**Sg**		**16 31 48.4**	**+1.1**
STON	**Ston**	**0.68**	**307**	*e*Pg		**Pg**		**16 31 39.4**	**-1.2**
STON				*e*Sg		**Sg**		**16 31 50.2**	**+0.8**
STON	**Ston**	**0.68**	**307**	*e*Pg		**Pg**		**16 31 39.6**	**-0.9**
STON				*e*Sg		**Sg**		**16 31 49.2**	**-0.2**
STON	**Ston**	**0.68**	**307**	*e*Pg		**Pg**		**16 31 39.4**	**-1.2**
STON				Sg		**Sg**		**16 31 50.1**	**+0.8**
ULC	**Ulcinj**	**0.78**	**129**⇑	*i* Pg		**Pg**		**16 31 41.6**	**-0.8**
ULC				*i* Sg		**Sb**		**16 31 53.9**	**-0.3**
UPM	**Unac-Piva**	**0.82**	**25**	*e*Pg		**Pg**		**16 31 42.1**	**-1.1**
UPM				*e*Sg		**Sg**		**16 31 54.3**	**+0.5**
UPM	**Unac-Piva**	**0.82**	**25**⇑	*i* Pg		**Pg**		**16 31 41.9**	**-1.3**
UPM				*i* Sg		**Sg**		**16 31 54.6**	**+0.8**
KOME	**Kolasin**	**0.89**	**63**⇓	*i* Pg		**Pg**		**16 31 43.5**	**-0.9**
KOME				*i* Sg		**Sb**		**16 31 57.2**	**-0.2**
PLE	**Pljevlja**	**1.12**	**38**⇓	*i* Pg		**Pg**		**16 31 47.8**	**-1.1**
PLE				*e*Sg		**Sb**		**16 32 04.9**	**+0.8**
PVY	**Plav**	**1.13**	**83**⇑	*i* Pg		**Pg**		**16 31 48.1**	**-1.1**
PVY				*i* Sg		**Sb**		**16 32 05.6**	**+1.0**
IVA	**Berane**	**1.15**	**69**⇑	*i* Pg		**Pg**		**16 31 48.2**	**-1.3**
IVA				*i* Sg		**Sn**		**16 32 06.4**	**+0.1**
MAKA	**Makarska**	**1.33**	**309**	*e*Pg		**Pb**		**16 31 52.8**	**0.0**
MAKA				Sg		**Sn**		**16 32 10.8**	**+0.2**
RUDO	**Rudo**	**1.34**	**30**	*e*Pg		**Pn**		**16 31 51.9**	**-0.9**
RUDO				*e*Sg		**Sb**		**16 32 10.9**	**+0.3**
SJES	**Sjenica**	**1.39**	**54**	*e*Pg		**Pn**		**16 31 53.1**	**-0.3**
SJES				*e*Sg		**Sn**		**16 32 12.5**	**+0.4**
RICI	**Ricice**	**1.41**	**318**	*e*Pg		**Pn**		**16 31 52.9**	**-0.8**
RICI				Sg		**Sn**		**16 32 13.6**	**+0.9**
BBLS	**Lazići**	**1.57**	**26**	*e*Pg		**Pb**		**16 31 56.9**	**-0.1**
BBLS				*e*

baz=313,slow=75,SNR=75
H11N1 WAKE ISLAND Hy 28.35 120 T T 17 07 23.3
baz=313,slow=75,SNR=80
H11N3 WAKE ISLAND Hy 28.36 120 T T 17 07 24.8
baz=313,slow=75,SNR=65
H11S1 WAKE ISLAND Hy 29.05 122 T T 17 08 22.9
baz=314,slow=76,SNR=60
H11S3 WAKE ISLAND Hy 29.05 122 T T 17 08 23.0
baz=314,slow=76,SNR=44
H11S2 WAKE ISLAND Hy 29.07 122 T T 17 08 24.2
baz=314,slow=76,SNR=38
ZALV Zalesovo Beam 41.75 312 P **P 16 39 25.2 -0.3**
1.5nm,0.6s,baz=95,slow=9.1,SNR=5.8
MK31 Makanchi Array 43.92 302 P **P 16 39 43.2 0.0**
MK31 IAmb IAmb 16 39 47.5
comp=Z,5.4nm,1.4s
MKAR Makanchi Array 43.92 302 P **P 16 39 43.0 -0.3**
comp=Z,1.0nm,0.7s,baz=88,slow=10,SNR=6.2
MAKZ Makanchi 44.13 302 P **P 16 39 43.9 -1.0**
MAKZ IAmb IAmb 16 40 03.9
comp=Z,6.5nm,1.2s
KURK Kurchatov 45.76 308 P **P 16 39 56.7 -1.0**
KDAK Kodiak Island 47.28 42 P **P 16 40 09.7 +0.1**
ILAR Eielson Array 49.65 32 P **P 16 40 27.5 -0.2**
comp=Z,0.7nm,0.8s,baz=271,slow=7.0,SNR=7.0
WRA Warramunga Arr 57.00 188 P **P 16 41 21.5 -0.7**
comp=Z,0.4nm,0.6s,baz=2.4,slow=7.4,SNR=5.1
ASAR Alice Springs 60.73 188 P **P 16 41 47.5 -0.5**
comp=Z,0.3nm,0.9s,baz=4.0,slow=16,SNR=1.6
YKA Yellowknife Arr 63.95 30 P **P 16 42 09.0 -0.2**
comp=Z,0.4nm,0.8s,baz=305,slow=6.0,SNR=5.9
FINES FINESS Array B 68.72 332 P **P 16 42 39.6 -0.1**
comp=Z,1.4nm,0.8s,baz=43,slow=10,SNR=2.3
ULM Lac du Bonnet 79.66 33 LR LR 17 19 14.4
comp=Z,34nm,20.1s,baz=254,slow=36
CLL Collm 81.00 330 *eP* **P 16 43 51.0 +0.2**
H03N2 Juan Fernandez 147.26 96 T T 19 36 09.8
baz=291,slow=76,SNR=6.1
H03N3 Juan Fernandez 147.28 96 T T 19 36 08.2
baz=291,slow=76,SNR=8.8
H03N1 Juan Fernandez 147.28 96 T T 19 36 09.7
baz=291,slow=76,SNR=9.0

*ECX **22** 16:32:13.3±0.5,31°.33N×115°.67W,h5km±2km,MD1.6, ML1.8*
*MEX **22** 16:32:13.1±0.4,31°.23N×115°.79W,h13km±2km,MD2.9*
ISC 22 16:32:11.0±1.4,**31°.37N**±0°.05×**115°.69W**±0°.05,**h22**km±6km, **n9,σ8°40/18,1C-2D,Baja California**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
SPIG	**San Pedro Mart**	**0.38**	**149**	*eP*		**Pb**	**16 32 19.3**	**+0.1**
SPIG				*eS*		**Sb**	**16 32 24.7**	**0.0**
SPIG	**San Pedro Mart**	**0.38**	**149**	*eP*		**Pb**	**16 32 19.7**	**+0.5**
SPIG				*eS*		**Sb**	**16 32 24.5**	**-0.3**
SPX	**San Pedro Mart**	**0.38**	**149**	*eP*		**Pb**	**16 32 19.7**	**+0.4**
SPX				*eS*		**Sb**	**16 32 24.6**	**-0.4**
SPX				IAML			16 32 25.7	
	comp=E,75nm,0.1s							
SPX				‖ *e*			16 32 25.7	
SPX				‖ *e*			16 32 25.9	
SPX				IAML			16 32 25.9	
	comp=N,80nm,0.1s							
SPX	**San Pedro Mart**	**0.38**	**149**	*eP*		**Pb**	**16 32 19.5**	**+0.1**
SPX				*eS*		**Sb**	**16 32 24.3**	**-0.7**
ECBX	**El Chinero**	**0.56**	**79**	*eP*		**Pn**	**16 32 23.3**	**-0.4**
ECBX				*eS*		**Sb**	**16 32 30.3**	**+0.6**
ESJX	**Sierra Juarez**	**0.67**	**341**	⇓ *eP*		**Pn**	**16 32 25.4**	**-0.1**
ESJX				*eS*		**Sn**	**16 32 34.9**	**-0.4**
SFX	**San Felipe**	**0.79**	**114**	*eP*		**Pn**	**16 32 26.8**	**-0.1**
SFX				*eS*		**Sb**	**16 32 36.7**	**+0.3**
SQX	**San Quintin**	**0.81**	**191**	*eP*		**Pn**	**16 32 26.9**	**-0.1**
SQX				*eS*		**Sb**	**16 32 37.4**	**+0.6**
CBX	**Cerro Bola**	**1.25**	**319**	*eP*		**Pn**	**16 32 33.3**	**-0.1**
CBX				*i* S		**Sb**	**16 32 49.9**	**0.0**

MAN 22 16:34:23.6,9°.23N×122°.14E,h100km,mb4.1,ML2.9, MS2.6,1C-1D,Negros

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**1.09**	**84**	⇓ *iP*		Pn	16 34 44.4	-0.7
SNPH				*i* S		Sn	16 34 59.3	-1.9
GUIM	**Jordan**	**1.46**	**18**	*eP*		Pn	16 34 49.7	+0.3
GUIM				*eS*		Sn	16 35 09.9	+0.9
TBP	**Tagbilaran**	**1.76**	**75**	*i* P		Pn	16 34 55.0	+1.9
PAGZ	**Pagadian**	**1.84**	**138**	*eP*		Pn	16 34 54.9	+0.8
PAGZ				*eS*		Sn	16 35 17.9	+0.5
CUYO	**Cuyo Island**	**1.96**	**326**	*eP*		Pn	16 34 56.3	+0.6
CUYO				*eS*		Sn	16 35 15.6	-4.5
RCP	**Roxas**	**2.39**	**14**	⇑ *eP*		Pn	16 35 08.3	+7.0
RCP				*eS*		Sn	16 35 33.1	+2.7
ENPP	**El Nido**	**3.32**	**307**	*eP*		Pn	16 35 14.8	+1.1

*SJA **22** 16:37:26.6±0.9,28°.41S×71°.29W,h32km±8km,ML3.5, MW3.9*
*NEIC **22** 16:37:29.1±2.5,28°.50S±0°.04×71°.2W±0°.1,h54km±2km, Error ellipse: s-maj=13.1km s-min=5.6km az=88.0*
*GUC **22** 16:37:29.7±0.7,28°.55S×71°.02W,h65km±3km,ML3.9*
*IDC **22** 16:37:31.4±3.9,28°.53S×71°.06W,h66km±29km,mb3.9/3, mb1 3.8/6,mb1mx3.5/34,mbtmp4.0/6,ML3.6/3,MS2.5/3, Ms1 2.5/3,ms1mx2.4/27,Error ellipse: s-maj=50.8km s-min=17.0km az=79.0*
ISC 22 16:37:28.8±0.9,**28°.52S**±0°.03×**71°.30W**±0°.07,**h54**km±7km, **n78,σ1°69/91,mb4.1/3,2C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.38**	**32**	⇓ *eP*		**Pn**	**16 37 40.8**	**+1.8**
AC04				*i* S		**Sn**	**16 37 48.6**	**+2.3**
AC04				IAML			16 37 49.9	
	comp=N,23μm,0.2s							
AC04	**Llanos de Chal**	**0.38**	**32**			**Pn**	**16 37 41.0**	**+2.0**
AC04					Sn	**Sn**	**16 37 48.6**	**+2.3**
LCO	**Las Campanas**	**0.72**	**133**	*eP*		**Pn**	**16 37 43.1**	**-0.2**
LCO				*i* S		**Sn**	**16 37 52.4**	**-1.3**
LCO	**Las Campanas**	**0.72**	**133**			**Pn**	**16 37 42.7**	**-0.6**
LCO					Sn	**Sn**	**16 37 52.3**	**-1.4**
LCO	**Las Campanas**	**0.72**	**133**	*i* P		**Pn**	**16 37 42.8**	**-0.4**
AC05	**El Transito**	**0.95**	**109**	⇑ *eP*		**Pn**	**16 37 45.2**	**-1.0**
AC05				*i* S		**Sn**	**16 37 56.5**	**-2.5**
AC05				IAML			16 37 57.2	
	comp=E,5μm,0.1s							
AC05	**El Transito**	**0.95**	**109**			**Pn**	**16 37 45.3**	**-1.0**
AC05					Sn	**Sn**	**16 37 56.5**	**-2.5**
GO03	**Copiap**	**1.32**	**46**	⇑ *iP*		**Pn**	**16 37 50.9**	**-0.1**
GO03				*i* S		**Sn**	**16 38 06.8**	**-0.9**
GO03				IAML			16 38 07.6	
	comp=N,4μm,0.4s							
GO03	**Copiap**	**1.32**	**46**			**Pn**	**16 37 50.8**	**-0.1**
GO03					Sn	**Sn**	**16 38 06.1**	**-1.6**
GO03	**Copiap**	**1.32**	**46**	*i* P		**Pn**	**16 37 51.0**	**-0.1**
GO03				*eS*		**Sn**	**16 38 06.6**	**-1.0**
GO04	**Tololo Observa**	**1.70**	**165**	*eP*		**Pn**	**16 37 57.6**	**+1.2**
GO04				*i* S		**Sn**	**16 38 18.9**	**+1.8**
GO04	**Tololo Observa**	**1.70**	**165**			**Pn**	**16 37 57.6**	**+1.2**
CO01	**Juntas del Tor**	**1.79**	**144**	*eP*		**Pn**	**16 37 58.6**	**+0.9**
CO01				*i* S		**Sn**	**16 38 19.2**	**-0.2**
CO01	**Juntas del Tor**	**1.79**	**144**			**Pn**	**16 37 58.5**	**+0.8**
CO01					Sn	**Sn**	**16 38 19.6**	**+0.2**
AROD	**Rodeo**	**2.29**	**136**	*i* P		**Pn**	**16 38 06.8**	**+2.3**
CO03	**El Pedregal**	**2.37**	**167**			**Pn**	**16 38 06.7**	**+1.3**
AC01	**Pan de Azucar**	**2.45**	**15**	*eP*		**Pn**	**16 38 07.0**	**+0.6**
AC01				*i* S		**Sn**	**16 38 39.1**	**+4.0**
AC01				IAML			16 38 48.7	
	comp=E,560nm,0.6s							
AC01	**Pan de Azucar**	**2.45**	**15**			**Pn**	**16 38 07.0**	**+0.6**
AC02	**Maricunga**	**2.56**	**49**	*eP*		**Pn**	**16 38 08.9**	**+0.6**
AC02				*i* S		**Sn**	**16 38 38.3**	**-0.2**
AC02				IAML			16 38 40.7	
	comp=E,667nm,0.1s							
AC02	**Maricunga**	**2.56**	**49**			**Pn**	**16 38 08.2**	**-0.1**
AGUA	**GUANDACOL**	**2.64**	**112**	*i* P		**Pn**	**16 38 11.8**	**+2.7**
AGUA				*eS*		**Sn**	**16 38 43.3**	**+3.2**
AGUA				IAML			16 38 44.4	
	comp=Z,268nm,0.4s							
CO02	**Combarbal**	**2.69**	**174**			**Pn**	**16 38 10.7**	**+1.0**
VCA	**Vinchina**	**2.73**	**95**	*i* P		**Pn**	**16 38 13.1**	**+2.8**
VCA				IAML			16 38 54.7	
	comp=Z,243nm,0.2s							
ACCO	**Cerro Coronel**	**2.83**	**137**	*i* P		**Pn**	**16 38 14.8**	**+2.8**
ACCO				IAML			16 39 14.3	
	comp=Z,169nm,0.3s							
GO02	**Mina Guanaco**	**3.68**	**25**			**Pn**	**16 38 23.9**	**+0.4**
RTLS	**Leoncito**	**3.70**	**153**	*i* P		**Pn**	**16 38 27.2**	**+3.5**
RTLS				IAML			16 39 32.4	
	comp=Z,46nm,1.3s							
RTLL	**Cerro Villicun**	**3.72**	**139**	*i* P		**Pn**	**16 38 25.7**	**+1.9**
CFA	**Coronel Fontan**	**4.06**	**140**	P		**Pn**	**16 38 30.1**	**+1.7**
	comp=Z,18nm,0.3s,baz=319,slow=12,SNR=169							
CFA					S	**Sn**	**16 39 14.5**	**-0.3**
	comp=Z,30nm,0.3s,baz=198,slow=20,SNR=15							
CFA					LR	LR	16 40 14.4	
	comp=Z,71nm,19.0s,baz=248,slow=42							
CFA	**Coronel Fontan**	**4.06**	**140**	*i* P		**Pn**	**16 38 30.3**	**+1.8**
CFA				IAML			16 39 47.0	
	comp=Z,42nm,0.5s							
RTCV	**Cerro Valdivia**	**4.10**	**145**	*i* P		**Pn**	**16 38 31.3**	**+2.3**
RTCV				IAML			16 39 44.4	
	comp=Z,52nm,1.1s							
VA03	**San Esteban**	**4.28**	**171**			**Pn**	**16 38 32.8**	**+1.3**
ROC1	**El Roble**	**4.45**	**177**			**Pn**	**16 38 35.2**	**+1.2**
ASAL	**Salagasta**	**4.58**	**153**	*i* P		**Pn**	**16 38 38.5**	**+2.9**
ASAL				IAML			16 39 57.3	
	comp=Z,45nm,0.7s							
PEL	**Peldehue**	**4.64**	**174**	Pn		**Pn**	**16 38 32.9**	**-3.5**
MT02	**Curacav**	**4.72**	**178**			**Pn**	**16 38 37.7**	**+0.2**
ARCO	**CERRO ARCO**	**4.76**	**155**	*i* P		**Pn**	**16 38 41.5**	**+3.3**
ARCO				IAML			16 40 08.1	
	comp=Z,50nm,0.8s							
CYA	**Choya**	**4.84**	**90**	*i* P		**Pn**	**16 38 39.3**	**+0.1**
CYA				*i* P		**Pn**	**16 38 39.3**	**+0.1**
CYA				IAML			16 40 08.7	
	comp=Z,18nm,0.7s							
AAGR	**Agrelo**	**5.02**	**156**	*i* P		**Pn**	**16 38 44.8**	**+3.0**
AAGR				IAML			16 40 17.1	
	comp=Z,43nm,1.5s							
PB10	**IPOC Station P**	**5.03**	**8**	Pn		**Pn**	**16 38 41.3**	**-0.5**
MT01	**Popeta**	**5.33**	**180**	Pn		**Pn**	**16 38 45.0**	**-0.8**
PB15	**IPOC Station P**	**5.54**	**18**			**Pn**	**16 38 46.1**	**-2.9**
PB15	**IPOC Station P**	**5.54**	**18**	*i* P		**Pn**	**16 38 49.3**	**+0.3**
PB05	**IPOC Station P**	**5.73**	**10**	*i* P		**Pn**	**16 38 50.0**	**-1.5**
PB05				IAML			16 40 32.6	
	comp=Z,41nm,0.6s							
PB06	**IPOC Station P**	**6.00**	**15**			**Pn**	**16 38 53.2**	**-2.1**
MRA	**San Martin**	**6.19**	**130**	*i* P		**Pn**	**16 38 57.7**	**0.0**
MRA				IAML			16 40 59.6	
	comp=Z,6.6nm,0.8s							
PB04	**IPOC Station P**	**6.25**	**10**	Pn		**Pn**	**16 38 58.6**	**-0.1**
BO02	**Sierra Bellavi**	**6.27**	**176**			**Pn**	**16 38 59.1**	**+0.3**
LVC	**Limon Verde**	**6.27**	**21**	P		**Pn**	**16 38 59.3**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=222,slow=12,SNR=7.6							
LVC					S	**Sn**	**16 40 07.5**	**-2.1**
	comp=Z,2.0nm,0.3s,baz=102,slow=20,SNR=1.6							
LVC					LR	LR	16 40 53.8	
	comp=Z,23nm,21.9s,baz=246,slow=33							
LVC	**Limon Verde**	**6.27**	**21**			**Pn**	**16 38 58.7**	**-0.4**
LVC	**Limon Verde**	**6.27**	**21**	*i* P		**Pn**	**16 38 59.0**	**-0.1**
LVC				IAML			16 40 49.4	
	comp=Z,35nm,0.5s							
GO05	**Huala**	**6.49**	**185**	Pn		**Pn**	**16 39 01.1**	**-0.7**
PB07	**IPOC Station P**	**6.89**	**11**			**Pn**	**16 39 04.1**	**-3.3**
PB09	**IPOC Station P**	**6.95**	**16**			**Pn**	**16 39 08.3**	**+0.1**
PB09	**IPOC Station P**	**6.95**	**16**	⇓ *iP*		**Pn**	**16 39 07.8**	**-0.5**
PB01	**IPOC Station P**	**7.63**	**13**			**Pn**	**16 39 14.8**	**-2.6**
BI02	**San Fabin de**	**8.12**	**180**	Pn		**Pn**	**16 39 23.8**	**-0.3**
H03N1	**Juan Fernandez**	**8.17**	**231**	T		T	16 48 08.0	
	baz=56,slow=72,SNR=226							
H03N2	**Juan Fernandez**	**8.18**	**231**	T		T	16 48 11.9	
	baz=56,slow=72,SNR=189							
H03N3	**Juan Fernandez**	**8.18**	**231**	T		T	16 48 10.4	
	baz=56,slow=72,SNR=206							
PB08	**IPOC Station P**	**8.57**	**14**	Pn		**Pn**	**16 39 30.4**	**-0.2**
PB11	**IPOC Station P**	**8.85**	**10**	Pn		**Pn**	**16 39 33.8**	**-0.5**
PSGCX	**Pisagua**	**8.95**	**7**	Pn		**Pn**	**16 39 32.5**	**-3.1**
GO01	**Chusmiza**	**9.02**	**13**	Pn		**Pn**	**16 39 32.9**	**-4.1**
PB16	**IPOC Station P**	**10.27**	**10**	Pn		**Pn**	**16 39 52.8**	**-1.3**
LPAZ	**La Paz**	**12.52**	**14**	LR		LR	16 46 14.3	
	comp=Z,29nm,18.8s,baz=164,slow=42							
SIV	**San Ignacio**	**15.64**	**39**	P		**P**	**16 41 07.8**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=217,slow=15,SNR=4.8							
VNA3	**Neumayer Olymp**	**54.22**	**159**	P		**P**	**16 46 48.6**	**0.0**
VNA2	**Neumayer--Watz**	**54.84**	**159**	P		**P**	**16 46 53.8**	**+0.7**
	baz=292,slow=8.5							
SNAA	**Sanae**	**56.44**	**159**	P		**P**	**16 47 05.2**	**+0.5**
SNAA	**Sanae**	**56.44**	**159**	P		**P**	**16 47 05.1**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=286,slow=6.7,SNR=35							
SNAA	**Sanae**	**56.44**	**159**	P		**P**	**16 47 05.2**	**+0.5**
TORD	**Torodi Ar. Bea**	**81.76**	**70**	P		**P**	**16 49 42.1**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=266,slow=5.0,SNR=5.5							
BOSA	**Boshof**	**82.07**	**118**	P		**P**	**16 49 43.6**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=210,slow=4.3,SNR=4.5							
SCHQ	**Schefferville**	**83.10**	**3**	LR		LR	17 27 41.3	
	comp=Z,68nm,19.4s,baz=280,slow=36							
ASAR	**Alice Springs**	**122.71**	**208**	PKP		**PKiKP**	**16 56 19.8**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=139,slow=1.7,SNR=1.6							
WRA	**Warramunga Arr**	**125.82**	**210**	PKP		**PKiKP**	**16 56 26.1**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=159,slow=1.7,SNR=6.6							
ZALV	**Zalesovo Beam**	**149.18**	**28**	PKPbc		**PKiKP**	**16 57 11.9**	**-0.1**
	comp=Z,3.1nm,0.5s,baz=292,slow=3.1,SNR=15							
MKAR	**Makanchi Array**	**152.46**	**41**	PKPbc		**PKiKP**	**16 57 19.6**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=305,slow=1.8,SNR=11							

*TAP **22** 16:38:16.4,24°.32N×122°.95E,h46km,ML2.7,D*
*JMA **22** 16:38:16.7±0.1,24°.29N×122°.97E,h46km±2km,M2.2*
ISC 22 16:38:16.8±1.2,**24°.26N**±0°.05×**122°.97E**±0°.03,**h43**km±8km, **n51,σ1°22/74,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.19**	**354**	P		**Pn**	**16 38 24.2**	**-0.1**
JYNG				S		**Sn**	**16 38 29.5**	**-0.1**
YOJ	**Yonaguni jima**	**0.21**	**11**	P		**Pn**	**16 38 24.4**	**0.0**
	baz=17							
YOJ				*i* S		**Sn**	**16 38 30.0**	**+0.2**
	baz=17							
YOJ	**Yonaguni jima**	**0.21**	**11**	P		**Pn**	**16 38 24.4**	**0.0**
YOJ				S		**Sn**	**16 38 29.8**	**0.0**
IRIF	**Iriomote-Funau**	**0.70**	**84**	P		**Pn**	**16 38 30.1**	**-0.2**
IRIF				S		**Sn**	**16 38 39.9**	**-0.1**
EOS1	**EOS1**	**0.82**	**291**	*eP*		**Pn**	**16 38 30.6**	**-1.2**
	baz=296							
EOS1				*eS*		**Sn**	**16 38 42.6**	**-0.2**
	baz=296							
JKRS	**Kuro-shima**	**0.95**	**91**	P		**Pn**	**16 38 34.2**	**+0.5**
JKRS				S		**Sn**	**16 38 47.0**	**+0.9**
JIJ	**Ishigaki jima**	**1.08**	**84**	P		**Pn**	**16 38 35.2**	**-0.3**
JIJ				S		**Sn**	**16 38 48.4**	**-0.8**
TWC	**Suao**	**1.08**	**289**	*eP*		**Pn**	**16 38 34.1**	**-1.3**
	baz=296							
TWC				*eS*		**Sn**	**16 38 47.6**	**-1.7**
	baz=296							
ENA	**Nanau**	**1.13**	**279**	*eP*		**Pn**	**16 38 35.7**	**-0.5**
	baz=285							
ENA				*eS*		**Sn**	**16 38 50.0**	**-0.6**
	baz=285							
NACB	**Ninganchiao**	**1.26**	**266**	*eP*		**Pn**	**16 38 35.7**	**-2.2**
	baz=250							
NACB				*eS*		**Sn**	**16 38 53.9**	**+0.3**
	baz=250							
TIPB	**Shuangxi**	**1.26**	**305**	*eP*		**Pn**	**16 38 37.0**	**-1.0**
	baz=312							
TIPB				*eS*		**Sn**	**16 38 52.0**	**-1.8**
	baz=312							
JISG	**Ishigakijimahi**	**1.27**	**75**	P		**Pn**	**16 38 38.1**	**0.0**
JISG				*eS*		**Sn**	**16 38 53.2**	**-0.7**
TWE	**Neicheng**	**1.27**	**292**	*eP*		**Pn**	**16 38 38.0**	**-0.1**
	baz=298							
TWE				*eS*		**Sn**	**16 38 52.6**	**-1.4**
	baz=298							
ENTT	**Nioudou**	**1.33**	**287**	*eP*		**Pn**	**16 38 39.6**	**+0.6**
	baz=292							
ETLH	**Xiulin Townshi**	**1.36**	**268**	*eP*		**Pn**	**16 38 39.3**	**-0.1**
	baz=266							
NDT	**Datong Townshi**	**1.37**	**285**	*eP*		**Pn**	**16 38 38.8**	**-0.7**
	baz=290							
NWLT	**Wulai**	**1.43**	**291**	*eP*		**Pn**	**16 38 40.3**	**0.0**
	baz=289							
NNSB	**Datong**	**1.46**	**277**	*eP*		**Pn**	**16 38 40.8**	**0.0**
	baz=275							
NNSH	**Datong**	**1.46**	**277**	*eP*		**Pn**	**16 38 41.8**	**+1.0**
	baz=275							
ESL	**Shilin**	**1.47**	**253**	*eP*		**Pn**	**16 38 40.0**	**-0.8**
	baz=241							
YHNB	**Yeheng**	**1.51**	**286**	*eP*		**Pn**	**16 38 40.7**	**-0.7**
	baz=293							
NSK	**Sanguang**	**1.52**	**286**	*eP*		**Pn**	**16 38 41.9**	**+0.2**
	baz=293							
NSK				*eS*		**Sn**	**16 39 00.8**	**+0.4**
	baz=293							
YM01	**YM01**	**1.55**	**305**	*eP*		**Pn**	**16 38 42.1**	**+0.1**
	baz=303							
WHF	**Hehuan Shan**	**1.56**	**266**	*eP*		**Pn**	**16 38 42.8**	**+0.4**
	baz=264							
HGSD	**Ruisui**	**1.61**	**242**	*eP*		**Pn**	**16 38 41.4**	**-1.3**
	baz=239							
HGSD				*eS*		**Sn**	**16 39 00.8**	**-1.4**
	baz=239							
JTJ	**Tarama**	**1.63**	**76**	*eS*		**Sn**	**16 39 02.6**	**-0.1**
CHGB	**Renai**	**1.65**	**264**	*eP*		**Pn**	**16 38 43.6**	**+0.1**
	baz=251							
OWD	**Renai**	**1.67**	**260**	*eP*		**Pn**	**16 38 42.2**	**-1.5**
	baz=258							
EHY	**Hungye**	**1.68**	**244**	*eP*		**Pn**	**16 38 43.3**	**-0.5**
	baz=242							
VWDT	**VWDT**	**1.74**	**254**	*eP*		**Pn**	**16 38 45.4**	**+0.8**
	baz=251							
VWDT				*eS*		**Sn**	**16 39 06.4**	**+0.8**
	baz=251							
YULB	**Yu-li**	**1.76**	**241**	*eP*		**Pn**	**16 38 44.5**	**-0.3**
	baz=238							
YULB				*eS*		**Sn**	**16 39 05.9**	**-0.1**
	baz=238							
TWF1	**Yuli**	**1.78**	**240**	*eP*		**Pn**	**16 38 45.2**	**+0.1**
	baz=237							
TWF1				*eS*		**Sn**	**16 39 06.6**	**+0.2**
	baz=237							
WHP	**Taichung City**	**1.85**	**271**	*eP*		**Pn**	**16 38 48.4**	**+2.3**
	baz=258							
WHP				*eS*		**Sn**	**16 39 10.6**	**+2.3**
	baz=258							
FULB	**Fuli**	**1.86**	**236**	*eP*		**Pn**	**16 38 45.3**	**-1.0**
	baz=223							
FULB				*eS*		**Sn**	**16 39 07.5**	**-1.1**
	baz=223							
CHKT	**Chengkung**	**1.87**	**232**	*eP*		**Pn**	**16 38 45.5**	**-0.8**
	baz=220							
CHKT				*eS*		**Sn**	**16 39 06.2**	**-2.4**
	baz=220							
DPDB	**Guoxing**	**1.88**	**264**	*eP*		**Pn**	**16 38 47.2**	**+0.7**
	baz=252							
DPDB				*eS*		**Sn**	**16 39 10.5**	**+1.5**
	baz=252							
WHYT	**Xinyi Township**	**2.01**	**254**	*eP*		**Pn**	**16 38 50.4**	**+2.0**
	baz=243							
WHYT				*eS*		**Sn**	**16 39 13.8**	**+1.4**
	baz=243							
TWH	**Lutao**	**2.06**	**222**	*eP*		**Pn**	**16 38 47.5**	**-1.4**
	baz=220							
ELDTW	**Lidau**	**2.08**	**240**	*eP*		**Pn**	**16 38 48.9**	**-0.4**
	baz=238							
CHN5	**Tsauling**	**2.20**	**253**	*eP*		**Pn**	**16 38 52.8**	**+1.9**
	baz=252							
TWGBT	**Beinan**	**2.25**	**231**	*eP*		**Pn**	**16 38 51.3**	**-0.3**
	baz=221							
TWG	**Pinlang**	**2.25**	**231**	*eP*		**Pn**	**16 38 51.1**	**-0.5**
	baz=221							
TPUB	**Ta-pu**	**2.34**	**246**	*eP*		**Pn**	**16 38 56.0**	**+3.1**
	baz=245							
CHN4	**Tsaushan**	**2.35**	**248**	*eP*		**Pn**	**16 38 55.1**	**+2.1**
	baz=247							
WTP	**Ta-pu**	**2.38**	**245**	*eP*		**Pn**	**16 38 54.9**	**+1.5**
	baz=244							
SLGT	**Liugui**	**2.47**	**240**	*eP*		**Pn**	**16 38 56.5**	**+1.9**
	baz=231							
TWK	**Hsinying**	**2.48**	**247**	*eP*		**Pn**	**16 38 57.3**	**+2.6**
	baz=246							
CHN1	**Nanshi**	**2.48**	**245**	*eP*		**Pn**	**16 38 57.1**	**+2.4**
	baz=244							
SSD	**Sandimen**	**2.62**	**235**	*eP*		**Pn**	**16 38 58.8**	**+2.1**
	baz=228							
EAST	**Anshuo**	**2.70**	**227**	*eP*		**Pn**	**16 38 56.5**	**-1.2**
	baz=225							
MASBT	**Mashibuluo**	**2.70**	**233**	*eP*		**Pn**	**16 38 58.1**	**+0.4**
	baz=225							

*ISK **22** 16:47:28.3,35°.32N×31°.32E,h5km,ML3.3/30*
*NIC **22** 16:47:28.4±0.0,35°.39N×31°.23E,h14km,Ml3.5/5*
*DDA **22** 16:47:29.9,35°.44N×31°.31E,h46km±3km,ML2.9*
ISC 22 16:47:31.6±1.3,**35°.37N**±0°.03×**31°.29E**±0°.03,**h49**km±33km, **n68,σ1°97/93,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.93**	**112**	P		**Pn**	**16 47 47.3**	**-1.1**
AKMS				S		**Sn**	**16 48 01.1**	**+0.5**
AKMS				AML	AML		16 48 05.6	
	6.8nm,0.6s							
AKMS				AML	AML		16 48 05.6	
	6.8nm,0.6s							
AKMS				AML	AML		16 48 06.8	
	5.4nm,0.4s							
AKMS				AML	AML		16 48 06.8	
	5.4nm,0.4s							
ALFC	**Alefka**	**1.09**	**101**	P		**Pn**	**16 47 50.0**	**-0.6**
ALFC				S		**Sn**	**16 48 05.3**	**+0.6**
AL

ASGA	**Asgata**	**1.71**	**109**	P	**Pn**	**16 47 58.5**	**-0.5**
ASGA				S	**Sn**	**16 48 22.2**	**+2.5**
ASGA				AML	AML	16 48 35.1	
	comp=N,1.1nm,0.9s						
ASGA				AML	AML	16 48 35.1	
	comp=N,1.1nm,0.9s						
ASGA				AML	AML	16 48 36.4	
	comp=N,1.3nm,0.8s						
ASGA				AML	AML	16 48 36.4	
	comp=N,1.3nm,0.8s						
CSS	**Mathiatis**	**1.72**	**103**	PN	**Pn**	**16 47 59.1**	**-0.1**
CSS	**Mathiatis**	**1.72**	**103**	P	**Pn**	**16 47 58.6**	**-0.6**
ELL	**Elmali**	**1.77**	**321**	PN	**Pn**	**16 48 01.1**	**+1.1**
KORT	**Korkueli**	**1.80**	**335**	PN	**Pn**	**16 48 01.3**	**+1.0**
KORT	**Korkueli**	**1.80**	**335**	*i* P	**Pn**	**16 47 59.0**	**-1.3**
KORT				*i* S	**Sn**	**16 48 28.8**	**+6.8**
KORT				IAML		16 48 43.0	
	comp=E,102nm,0.6s						
ERMK	**Ermenek**	**1.83**	**46**	*i* P	**Pn**	**16 48 03.2**	**+2.3**
ERMK				*i* S	**Sn**	**16 48 21.5**	**-1.5**
ERMK				IAML		16 48 33.0	
	comp=E,139nm,0.4s						
ERMK				IAML		16 48 33.0	
	comp=N,178nm,0.6s						
BERE	**Bereket-Mersin**	**1.85**	**58**	PN	**Pn**	**16 48 01.9**	**+0.8**
YORU	**Yoruktepe-Mers**	**1.90**	**65**	PN	**Pn**	**16 48 02.1**	**+0.6**
MVOU	**Mavrovouni**	**1.95**	**100**	P	**Pn**	**16 48 01.7**	**-0.6**
AKK1	**Akkuyu-Mersin**	**1.99**	**66**	PN	**Pn**	**16 48 03.3**	**+0.5**
AKK2	**Akkuyu-Mersin**	**2.00**	**67**	PN	**Pn**	**16 48 03.3**	**+0.5**
AKKU	**Akkuyu-Mersin**	**2.00**	**66**	PN	**Pn**	**16 48 03.7**	**+0.7**
GULN	**MERSIN_Gulnar**	**2.01**	**65**	*i* P	**Pn**	**16 48 03.4**	**+0.3**
GULN				*i* S	**Sn**	**16 48 23.6**	**-3.4**
TEVE	**Tevekalti-Mers**	**2.05**	**58**	PN	**Pn**	**16 48 04.4**	**+0.7**
SEYD	**Seydisehir-KON**	**2.08**	**12**	PN	**Pn**	**16 48 05.8**	**+1.6**
YESI	**Yesilovacik-Me**	**2.09**	**66**	PN	**Pn**	**16 48 05.0**	**+0.9**
TISA	**Tisan-Mersin**	**2.10**	**67**	PN	**Pn**	**16 48 04.8**	**+0.5**
IKL	**Isikli**	**2.14**	**65**	PN	**Pn**	**16 48 05.6**	**+0.8**
KARG	**Kargicak-Mersi**	**2.14**	**66**	PN	**Pn**	**16 48 05.6**	**+0.7**
FETY	**Fethiye**	**2.19**	**306**	PN	**Pn**	**16 48 06.7**	**+1.1**
FETY	**Fethiye**	**2.19**	**306**	*i* P	**Pn**	**16 48 04.8**	**-0.8**
FETY				*i* S	Sn	16 48 19.9	-12
KEBE	**Keben-Mersin**	**2.25**	**61**	PN	**Pn**	**16 48 07.3**	**+0.9**
EREN	**Erenkoy**	**2.36**	**85**	PN	**Pn**	**16 48 08.3**	**+0.4**
EREN	**Erenkoy**	**2.36**	**85**	*i* P	**Pn**	**16 48 08.6**	**+0.7**
EREN				*i* S	**Sn**	**16 48 32.1**	**-3.5**
EREN				IAML		16 48 47.0	
	comp=E,66nm,0.7s						
EREN				IAML		16 48 48.0	
	comp=N,57nm,0.8s						
SILI	**Silifke-Mersin**	**2.36**	**64**	PN	**Pn**	**16 48 08.7**	**+0.8**
SLFK	**Silifke-Mersin**	**2.39**	**64**	PN	**Pn**	**16 48 09.4**	**+1.1**
KRMN	**Karaman**	**2.41**	**41**	PN	**Pn**	**16 48 09.9**	**+1.2**
OSC2	**CSNet OBS 4**	**2.43**	**160**	P	**Pn**	**16 48 08.3**	**-0.4**
OSC2				S	**Sn**	**16 48 39.3**	**+2.1**
KMER	**Konya-Meram**	**2.55**	**20**	*i* P	**Pn**	**16 48 12.7**	**+2.1**
KMER				*i* S	**Sn**	**16 48 36.6**	**-3.9**
KMER				IAML		16 48 55.0	
	comp=E,76nm,0.9s						
KMER				IAML		16 48 55.0	
	comp=N,74nm,0.5s						
KIZK	**Mersin**	**2.57**	**64**	PN	**Pn**	**16 48 11.6**	**+0.8**
KIZK	**Mersin**	**2.57**	**64**	*i* P	**Pn**	**16 48 10.4**	**-0.4**
KIZK				*i* S	**Sn**	**16 48 35.0**	**-5.8**
KIZK				IAML		16 48 52.0	
	comp=N,52nm,0.8s						
DALY	**Dalyan (Mula)**	**2.58**	**305**	*i* P	**Pn**	**16 48 10.1**	**-0.7**
DALY				*i* S	Sn	16 48 27.0	-14
DALY				IAML		16 48 53.0	
	comp=N,52nm,1.7s						
TURN	**Turunc**	**2.64**	**305**	*i* P	**Pn**	**16 48 14.2**	**+2.5**
TURN				*i* S	**Sn**	**16 48 39.2**	**-3.3**
KONT	**Konya--Tatoy**	**2.71**	**18**	PN	**Pn**	**16 48 14.7**	**+1.9**
KONT	**Konya--Tatoy**	**2.71**	**18**	*i* P	Pn	16 48 17.4	+4.6
KONT				*i* S	**Sn**	**16 48 42.8**	**-1.6**
BASM	**Basmaki-Afyon**	**2.73**	**339**	PN	**Pn**	**16 48 14.7**	**+1.6**
DOGA	**KONYA_Doganhis**	**2.75**	**6**	*i* P	Pn	16 48 18.1	+4.8
DOGA				*i* S	**Sn**	**16 48 45.3**	**-0.2**
TAVA	**DENIZLI_Tavas**	**2.84**	**318**	*i* P	**Pn**	**16 48 14.3**	**-0.2**
TAVA				*i* S	Sn	16 48 26.0	-22
LADK	**Ladik-KONYA**	**2.96**	**17**	PN	**Pn**	**16 48 18.0**	**+1.8**
MERS	**Mersin**	**3.02**	**59**	PN	**Pn**	**16 48 18.5**	**+1.5**
KZIL	**AFYON_Kizioren**	**3.03**	**343**	*i* P	**Pn**	**16 48 17.9**	**+0.7**
KERG	**Konya-Eregli**	**3.07**	**47**	*i* P	**Pn**	**16 48 19.5**	**+1.8**
KERG				*i* S	Sn	16 48 45.8	-7.5
KERG				IAML		16 49 05.0	
	comp=E,55nm,0.7s						
KERG				IAML		16 49 12.0	
	comp=N,44nm,0.5s						
YESY	**Yesilyurt**	**3.12**	**39**	PN	**Pn**	**16 48 20.1**	**+1.7**
KDHN	**Kadinhani**	**3.22**	**12**	*i* P	**Pn**	**16 48 20.2**	**+0.5**
KDHN				*i* S	**Sn**	**16 48 55.0**	**-1.9**
KHAL	**Karahalli**	**3.33**	**335**	*i* P	**Pn**	**16 48 21.1**	**-0.2**
KHAL				*i* S	Sn	16 48 41.5	-18
KARP	**Karpathos**	**3.37**	**274**	P	**Pn**	**16 48 20.1**	**-1.7**
GULE	**Gulek**	**3.41**	**55**	*i* P	**Pn**	**16 48 24.6**	**+2.2**
GULE				*i* S	**Sn**	**16 49 00.6**	**-1.0**
GULE				IAML		16 49 22.0	
	comp=N,53nm,0.5s						
CHBY	**Cihanbeyli**	**3.46**	**21**	PN	**Pn**	**16 48 25.3**	**+2.3**
KRTS	**Karatas**	**3.53**	**69**	PN	**Pn**	**16 48 25.1**	**+1.2**
KIZT	**Kizilcal**	**3.54**	**8**	PN	**Pn**	**16 48 26.3**	**+2.1**
KARA	**Karaisali**	**3.58**	**57**	PN	**Pn**	**16 48 26.5**	**+1.8**
CMRD	**Camardi-Nigde**	**3.76**	**51**	PN	**Pn**	**16 48 28.9**	**+1.7**

*IDC **22** 16:55:03.7±2.5,23.97S×179.90E,h491km±24km, mb3.1/4, mb1 3.4/5, mb1mx3.0/40, mbtmp4.0/5, Error ellipse: s-maj=41.6km s-min=22.2km az=162.0*

ISC 22 16:55:06.7±1.0, 24°25.8'S±0.1'×179°39.9'E±0.2, h526km, n6, σ1°85/9, mb3.6/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.26**	**189**	P	**P**	**16 58 08.9**	**+0.3**
	0.4nm,0.3s,baz=350,slow=22,SNR=1.4						
URZ				S	**S**	**17 00 38.0**	**-0.6**
	0.2nm,0.3s,baz=90,slow=23,SNR=6.0						
ASAR	**Alice Springs**	**41.94**	**261**	P	**P**	**17 02 10.9**	**-0.6**
	0.8nm,0.5s,baz=96,slow=7.3,SNR=34						
ASAR				ScP	**ScP**	**17 06 58.0**	**+2.9**
	0.4nm,0.8s,baz=106,slow=4.9,SNR=7.4						
WRA	**Warramunga Arr**	**42.34**	**266**	P	**P**	**17 02 13.5**	**-1.1**
	2.1nm,0.5s,baz=103,slow=8.0,SNR=82						
WRA				ScP	**ScP**	**17 06 59.7**	**+3.0**
	0.4nm,0.8s,baz=101,slow=3.6,SNR=5.0						
NVAR	**Mina Array Bea**	**84.98**	**44**	P	**P**	**17 06 46.0**	**-0.7**
	0.4nm,0.7s,baz=225,slow=7.5,SNR=2.3						
TXAR	**Lajitas Array**	**90.61**	**58**	P	**P**	**17 07 13.3**	**+0.2**
	0.6nm,0.7s,baz=210,slow=7.2,SNR=5.7						
AKASG	**Malin Array Be**	**145.16**	**327**	PKP	**PKPdf**	**17 13 43.3**	**-0.6**
	0.4nm,0.4s,baz=42,slow=3.9,SNR=4.5						

*KRSC **22** 17:03:55.2±1.3,52.36N×159.64E,h41km±16km, ML4.3*
*MOS **22** 17:03:56.9±1.0,52.38N×159.55E,h44km, mb4.5/4, Error ellipse: s-maj=9.4km s-min=4.2km az=89.8*
*NEIC **22** 17:03:59.3±1.7,52.68N±0.10'×159.52E±0.10', h58km±4km, mb4.4/8, Error ellipse: s-maj=14.9km s-min=7.8km az=196.0*
*IDC **22** 17:04:00.0±2.2,52.65N×159.48E,h63km±17km, mb3.5/13, mb1 3.7/15, mb1mx3.5/51, mbtmp3.9/15, MS3.0/4, Ms1 3.0/4, ms1mx2.7/29, Error ellipse: s-maj=22.3km s-min=15.0km az=135.0*

ISC 22 17:03:56.9±1.1, 52°42.2N±0.04'×159°51.6E±0.04', h43km±10km, n122, σ2°07/147, mb3.8/19, MS3.1/3, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.61**	**272**	*e*P	**Pn**	**17 04 09.3**	**+0.1**
RUS				*e*S	**Sn**	**17 04 18.8**	**+0.9**
RUS	**Russkaya**	**0.61**	**272**	PN	**Pn**	**17 04 09.1**	**+0.1**
RUS				S	**Sn**	**17 04 18.3**	**+0.9**
SPN	**Mys Shipunski**	**0.75**	**25**	*e*P	**Pn**	**17 04 10.4**	**-0.7**
SPN				*e*S	**Sn**	**17 04 22.1**	**+0.7**
SPN	**Mys Shipunski**	**0.75**	**25**	PN	**Pn**	**17 04 10.4**	**-0.7**
SPN				S	**Sn**	**17 04 22.1**	**+0.7**
DALK	**Dalny**	**0.77**	**324**	*e*P	**Pn**	**17 04 11.4**	**+0.1**
DALK				*e*S	**Sn**	**17 04 22.3**	**+0.6**
DALK	**Dalny**	**0.77**	**324**	PN	**Pn**	**17 04 11.4**	**+0.1**
DALK				S	**Sn**	**17 04 22.3**	**+0.6**
PET	**Petropavlovsk**	**0.80**	**320**	*e*P	**Pn**	**17 04 11.9**	**+0.1**
PET				*e*S	**Sn**	**17 04 23.4**	**+0.9**
PET	**Petropavlovsk**	**0.80**	**320**	PN	**Pn**	**17 04 11.9**	**+0.1**
PET				S	**Sn**	**17 04 23.4**	**+0.9**
PET	**Petropavlovsk**	**0.80**	**320**		**Pn**	**17 04 11.8**	**0.0**
MTVR	**Mutnovka**	**0.81**	**275**	*e*P	**Pn**	**17 04 12.6**	**+0.5**
MTVR				*e*S	**Sn**	**17 04 24.3**	**+1.3**
MTVR	**Mutnovka**	**0.81**	**275**	PN	**Pn**	**17 04 12.6**	**+0.5**
MTVR				S	**Sn**	**17 04 24.3**	**+1.3**
GRL	**Gorelyy**	**0.89**	**280**	*i* P	**Pn**	**17 04 14.1**	**+1.0**
GRL				*e*S	**Sn**	**17 04 28.5**	**+3.7**
GRL	**Gorelyy**	**0.89**	**280**	PN	**Pn**	**17 04 14.1**	**+1.0**
GRL				S	**Sn**	**17 04 28.5**	**+3.7**
KRMR	**Karymshinskiy**	**0.94**	**297**	*e*P	**Pn**	**17 04 14.6**	**+1.0**
KRMR				*e*S	**Sn**	**17 04 28.1**	**+2.3**
KRMR	**Karymshinskiy**	**0.94**	**297**	PN	**Pn**	**17 04 14.6**	**+1.0**
KRMR				S	**Sn**	**17 04 28.1**	**+2.3**
SDLR	**Sedlovina**	**0.94**	**337**	*i* P	**Pn**	**17 04 13.9**	**+0.1**
SDLR				*e*S	**Sn**	**17 04 26.8**	**+0.6**
SDLR	**Sedlovina**	**0.94**	**337**	PN	**Pn**	**17 04 13.9**	**+0.1**
SDLR				S	**Sn**	**17 04 26.8**	**+0.6**
SMAR	**Somma**	**0.95**	**334**	*i* P	**Pn**	**17 04 14.1**	**+0.1**
SMAR				*e*S	**Sn**	**17 04 27.8**	**+1.3**
SMAR	**Somma**	**0.95**	**334**	PN	**Pn**	**17 04 14.1**	**+0.1**
SMAR				S	**Sn**	**17 04 27.8**	**+1.3**
AVH	**Avacha**	**0.97**	**332**	*i* P	**Pn**	**17 04 14.8**	**+0.6**
AVH				*e*S	**Sn**	**17 04 29.4**	**+2.6**
AVH	**Avacha**	**0.97**	**332**	PN	**Pn**	**17 04 14.8**	**+0.6**
AVH				S	**Sn**	**17 04 29.4**	**+2.6**
ASAK	**Asacha**	**0.98**	**269**	*i* P	**Pn**	**17 04 15.4**	**+1.1**
ASAK				*e*S	**Sn**	**17 04 29.3**	**+2.2**
ASAK	**Asacha**	**0.98**	**269**	PN	**Pn**	**17 04 15.4**	**+1.1**
ASAK				S	**Sn**	**17 04 29.3**	**+2.2**
KRER	**Koryakskii**	**1.00**	**333**	*i* P	**Pn**	**17 04 15.2**	**+0.5**
KRER				*e*S	**Sn**	**17 04 27.7**	**-0.1**
KRER	**Koryakskii**	**1.00**	**333**	PN	**Pn**	**17 04 15.2**	**+0.5**
KRER				S	**Sn**	**17 04 27.7**	**-0.1**
KOK	**Koryaka**	**1.02**	**329**	*i* P	**Pn**	**17 04 15.5**	**+0.6**
KOK	**Koryaka**	**1.02**	**329**	PN	**Pn**	**17 04 15.5**	**+0.6**
KRX	**Arik**	**1.08**	**332**	*i* P	**Pn**	**17 04 16.1**	**+0.4**
KRX				*e*S	**Sn**	**17 04 32.4**	**+2.8**
KRX	**Arik**	**1.08**	**332**	PN	**Pn**	**17 04 16.1**	**+0.4**
KRX				S	**Sn**	**17 04 32.4**	**+2.8**
PEA0B	**Petropavlovsk-**	**1.30**	**303**	PN	**Pn**	**17 04 19.6**	**+1.0**
PEA0B	**Petropavlovsk-**	**1.30**	**303**		**Pn**	**17 04 19.6**	**+1.0**
PETK	**Petropavlovsk-**	**1.30**	**303**	P	**Pn**	**17 04 19.5**	**+0.9**
	146nm,0.3s,baz=104,slow=18,SNR=1309						
PETK				S	**Sn**	**17 04 35.9**	**+1.2**
	126nm,0.3s,baz=121,slow=14,SNR=7.2						
KII	**Karymskiy**	**1.62**	**359**	*e*P	**Pn**	**17 04 25.3**	**+2.2**
KII				*e*S	**Sn**	**17 04 46.3**	**+3.4**
KII	**Karymskiy**	**1.62**	**359**	PN	**Pn**	**17 04 25.3**	**+2.2**
KII				S	**Sn**	**17 04 46.3**	**+3.4**
MIPR	**Malaya Ipel'ka**	**1.69**	**266**	*e*P	**Pn**	**17 04 26.6**	**+2.6**
MIPR				*e*S	**Sn**	**17 04 49.1**	**+4.7**
MIPR	**Malaya Ipel'ka**	**1.69**	**266**	PN	**Pn**	**17 04 26.6**	**+2.6**
MIPR				S	**Sn**	**17 04 49.1**	**+4.7**
PAU	**Pauzhetka**	**1.92**	**241**	*e*P	**Pn**	**17 04 28.8**	**+1.7**
PAU				*e*S	**Sn**	**17 04 53.2**	**+3.3**
PAU	**Pauzhetka**	**1.92**	**241**	PN	**Pn**	**17 04 28.8**	**+1.7**
PAU				S	**Sn**	**17 04 53.2**	**+3.3**
SKR	**Severo-Kuril's**	**2.73**	**232**	*e*P	**Pn**	**17 04 40.0**	**+1.7**
SKR				*e*S	**Sn**	**17 05 11.2**	**+1.2**
SKR	**Severo-Kuril's**	**2.73**	**232**	*e*PN	**Pn**	**17 04 39.9**	**+1.7**
SKR				*e*S	**Sn**	**17 05 09.1**	**-0.9**
SKR				pmax	pmax		
	comp=Z,15nm,0.4s						
SKR				smax	smax		
	comp=E,276nm,0.4s						
SKR				smax	smax		
	comp=N,185nm,0.5s						
KZV	**Kizimen**	**2.74**	**10**	*i* P	**Pn**	**17 04 41.0**	**+2.5**
KZV				*e*S	**Sn**	**17 05 14.0**	**+3.5**
KZV	**Kizimen**	**2.74**	**10**	PN	**Pn**	**17 04 41.0**	**+2.5**
KZV				S	**Sn**	**17 05 14.0**	**+3.5**
TUMD	**Tumrok D**	**2.84**	**10**	*e*P	**Pn**	**17 04 41.6**	**+1.8**
TUMD				*e*S	**Sn**	**17 05 15.8**	**+3.0**
TUMR	**Tumrok**	**2.90**	**7**	*i* P	**Pn**	**17 04 43.0**	**+2.4**
TUMR	**Tumrok**	**2.90**	**7**	PN	**Pn**	**17 04 41.6**	**+1.0**
TUMR				S	**Sn**	**17 05 15.8**	**+1.5**
ALID	**Alaid**	**2.91**	**239**	*e*P	**Pn**	**17 04 42.9**	**+2.1**
ALID	**Alaid**	**2.91**	**239**	PN	**Pn**	**17 04 42.9**	**+2.1**
KMNR	**Kamenistaya**	**3.38**	**7**	*i* P	**Pn**	**17 04 50.2**	**+3.0**
KMNR	**Kamenistaya**	**3.38**	**7**	PN	**Pn**	**17 04 50.2**	**+3.0**
ESO	**Esso**	**3.55**	**353**	*e*P	**Pn**	**17 04 52.2**	**+2.7**
ESO	**Esso**	**3.55**	**353**	PN	**Pn**	**17 04 52.2**	**+2.7**
KIRR	**Kirishev**	**3.58**	**8**	*e*P	**Pn**	**17 04 52.9**	**+2.9**
KIRR	**Kirishev**	**3.58**	**8**	PN	**Pn**	**17 04 52.9**	**+2.9**
KPT	**Kopyto**	**3.58**	**6**	*e*P	**Pn**	**17 04 52.8**	**+2.8**
KPT	**Kopyto**	**3.58**	**6**	PN	**Pn**	**17 04 52.8**	**+2.8**
BZGR	**Bezymyannyi-Gr**	**3.60**	**11**	*e*P	**Pn**	**17 04 53.6**	**+3.3**
BZGR	**Bezymyannyi-Gr**	**3.60**	**11**	PN	**Pn**	**17 04 53.6**	**+3.3**
BZWR	**Bezymyannyi-We**	**3.60**	**9**	*e*P	**Pn**	**17 04 53.6**	**+3.2**
BZWR	**Bezymyannyi-We**	**3.60**	**9**	PN	**Pn**	**17 04 53.6**	**+3.2**
KOZ	**Kozyrevsk**	**3.66**	**3**	*e*P	Pn	17 04 54.6	+3.7
KOZ	**Kozyrevsk**	**3.66**	**3**	PN	Pn	17 04 54.6	+3.7
LGNR	**Loginova**	**3.74**	**10**	*i* P	Pn	17 04 55.9	+3.6
LGNR	**Loginova**	**3.74**	**10**	PN	Pn	17 04 55.9	+3.6
CIRR	**Tsirk**	**3.78**	**11**	*e*P	**Pn**	**17 04 55.9**	**+3.2**
CIRR	**Tsirk**	**3.78**	**11**	PN	**Pn**	**17 04 55.9**	**+3.2**
KRSR	**Krestovskiy**	**3.86**	**9**	*e*P	**Pn**	**17 04 56.4**	**+2.6**
KRSR	**Krestovskiy**	**3.86**	**9**	PN	**Pn**	**17 04 56.4**	**+2.6**
SRDR	**Sredinnyy**	**3.91**	**2**	*e*P	**Pn**	**17 04 56.3**	**+1.8**
SRDR	**Sredinnyy**	**3.91**	**2**	PN	**Pn**	**17 04 56.3**	**+1.8**
KLY	**Klyuchi**	**3.96**	**9**	*e*P	Pn	17 04 59.0	+3.9
KLY				*e*S	**Sn**	**17 05 45.8**	**+5.5**
KLY	**Klyuchi**	**3.96**	**9**	PN	Pn	17 04 59.0	+3.9
KLY				S	**Sn**	**17 05 45.8**	**+5.5**
KBTR	**Krutoberegovo**	**4.27**	**26**	*i* P	**Pn**	**17 05 01.1**	**+1.8**
KBTR	**Krutoberegovo**	**4.27**	**26**	PN	**Pn**	**17 05 01.1**	**+1.8**
KBG	**Krutoberegovo**	**4.28**	**25**	PN	**Pn**	**17 05 01.1**	**+1.7**
KBG	**Krutoberegovo**	**4.28**	**25**	PN	**Pn**	**17 05 01.1**	**+1.7**
MA2	**Magadan**	**8.68**	**329**	LR	LR	17 10 01.1	
	comp=N,67nm,18.0s,baz=181,slow=43						
SMY	**Shemya**	**8.90**	**82**	PN	**Pn**	**17 06 04.3**	**+1.5**
SMY	**Shemya**	**8.90**	**82**	Pn	**Pn**	**17 06 04.3**	**+1.5**
JKA	**Kamikawa-asahi**	**13.96**	**240**		**P**	**17 07 16.1**	**-3.0**
ASAJ	**Asahikawa**	**13.96**	**240**	P	**P**	**17 07 16.1**	**-3.0**
	comp=N,0.2nm,0.3s,baz=267,slow=21,SNR=1.8						
YAK	**Yakutsk**	**18.63**	**313**	P	**Pn**	**17 08 12.1**	**+0.9**
	comp=N,0.1nm,0.3s,baz=259,slow=1.4,SNR=11						
YAK	**Yakutsk**	**18.63**	**313**	P	**Pn**	**17 08 10.4**	**-0.7**
YAK				IAmb	IAmb	17 08 13.3	
	comp=Z,17nm,0.7s						
MJAR	**Matsushiro Arr**	**21.84**	**232**	P	**P**	**17 08 49.1**	**+3.5**
	comp=Z,0.5nm,0.3s,baz=29,slow=10,SNR=4.4						
TIXI	**Tiksi**	**23.55**	**336**	P	**P**	**17 09 01.7**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI	**Tiksi**	**23.55**	**336**	P	**P**	**17 09 01.7**	**-1.2**
KSRS	**Korea Array**	**26.63**	**248**	P	**P**	**17 09 31.9**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=42,slow=9.7,SNR=4.6						
KSRS	**Korea Array**	**26.63**	**248**	P	**P**	**17 09 32.0**	**+0.7**
JNU	**Nakatsue**	**28.23**	**238**	P	**P**	**17 09 48.0**	**+2.3**
	comp=Z,2.0nm,0.7s,baz=21,slow=8.6,SNR=1.5						
JNU				LR	LR	17 21 39.2	
	comp=Z,27nm,19.2s,baz=60,slow=37						
ILAR	**Eielson Array**	**29.55**	**44**	P	**P**	**17 09 57.0**	**0.0**
	comp=Z,0.3nm,0.6s,baz=256,slow=6.5,SNR=5.7						
SCRK	**Sand Creek**	**30.85**	**46**	P	**P**	**17 10 08.2**	**-0.5**
SCRK				IAmb	IAmb	17 10 26.8	
	comp=Z,8.7nm,1.7s						
H11N2	**WAKE ISLAND Hy**	**33.13**	**167**	T	T	17 46 14.5	
	baz=352,slow=76,SNR=68						
H11N3	**WAKE ISLAND Hy**	**33.14**	**167**	T	T	17 46 22.1	
	baz=352,slow=76,SNR=59						
H11N1	**WAKE ISLAND Hy**	**33.14**	**167**	T	T	17 46 15.8	
	baz=352,slow=76,SNR=64						
SONM	**Songino Array**	**33.71**	**284**	PcP	**PcP**	**17 13 12.0**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=62,slow=3.4,SNR=2.5						
SONM				LR	LR	17 24 23.6	
	comp=Z,35nm,19.2s,baz=78,slow=36						
H11S1	**WAKE ISLAND Hy**	**34.30**	**168**	T	T	17 47 41.7	
	baz=352,slow=74						
H11S3	**WAKE ISLAND Hy**	**34.31**	**168**	T	T	17 47 46.7	
	baz=352,slow=74						
H11S2	**WAKE ISLAND Hy**	**34.32**	**168**	T	T	17 47 45.9	
	baz=352						
GTA	**Gaotai**	**42.33**	**277**	*e*P	**P**	**17 11 49.8**	**+3.2**
GTA				pP	pP	17 11 53.4	-4.3
GTA				sP	pwP	17 11 55.8	-5.1
GTA				pmax	pmax		
ZALV	**Zalesovo Beam**	**42.84**	**303**	PcP	**PcP**	**17 13 40.8**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=113,slow=3.4,SNR=2.3						
ZALV				LR	LR	17 31 00.9	
	comp=Z,21nm,18.9s,baz=34,slow=38						
YKA	**Yellowknife Ar**	**43.91**	**42**	P	**P**	**17 11 57.4**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=301,slow=7.6,SNR=7.8						
KURK	**Kurchatov**	**47.79**	**302**	P	**P**	**17 12 27.4**	**-2.2**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURK	**Kurchatov**	**47.79**	**302**	P	**P**	**17 12 27.4**	**-2.2**
KURK				IAmb	IAmb	17 12 28.6	
	comp=Z,2.3nm,1.0s						
MKAR	**Makanchi Array**	**48.13**	**296**	P	**P**	**17 12 30.9**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=41,slow=4.6,SNR=5.2						
FCC	**Fort Churchill**	**54.23**	**38**	P	**P**	**17 13 16.0**	**-1.8**
FCC				pmax	pmax		
	comp=Z,15nm,1.3s						
FCC	**Fort Churchill**	**54.23**	**38**	P	**P**	**17 13 16.0**	**-1.8**
FCC				IAmb	IAmb	17 14 02.3	
	comp=Z,15nm,1.3s						
SUMG	**Summit**	**54.68**	**7**	P	**P**	**17 13 20.2**	**-1.2**
SUMG				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SUMG	**Summit**	**54.68**	**7**	P	**P**	**17 13 20.2**	**-1.2**
SUMG				IAmb	IAmb	17 13 23.2	
	comp=Z,7.1nm,1.2s						
YNE	**Yellowstone No**	**56.40**	**58**	P	**P**	**17 13 33.3**	**-0.6**
CMAR	**Chiang Mai Arr**	**57.69**	**258**	P	**P**	**17 13 45.0**	**+1.9**
	comp=Z,0.7nm,0.8s,baz=29,slow=8.3,SNR=4.2						
FINES	**FINESS Array B**	**60.60**	**336**	P	**P**	**17 14 02.5**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=47,slow=8.0,SNR=9.0						
NC204	**NORSAR Array S**	**63.95**	**344**	P	**P**	**17 14 24.4**	**-0.8**
NB2	**NORSAR Subarra**	**64.09**	**343**	P	**P**	**17 14 25.6**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=21,slow=6.9						
NOA	**NORSAR Array B**	**64.09**	**343**	P	**P**	**17 14 25.2**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=14,slow=5.4,SNR=7.8						
AKASG	**Malin Array Be**	**69.01**	**329**	P	**P**	**17 14 56.4**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=31,slow=5.7,SNR=4.5						
TXAR	**Lajitas Array**	**71.24**	**66**	P	**P**	**17 15 12.6**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=284,slow=4.5,SNR=7.3						
KHC	**Kasperske Hory**	**74.77**	**338**	*e*P	**P**	**17 15 31.0**	**-1.1**
KHC	**Kasperske Hory**	**74.77**	**338**	*e*P	**P**	**17 15 31.0**	**-1.1**
GERES	**GERESS Array B**	**75.00**	**337**	P	**P**	**17 15 33.4**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=54,slow=6.8,SNR=4.5						
ASAR	**Alice Springs**	**78.99**	**204**	P	**P**	**17 15 58.2**	**+2.2**
	comp=Z,0.2nm,0.6s,baz=18,slow=5.9,SNR=7.9						
H03N2	**Juan Fernandez**	**134.56**	**89**	T	T	19 53 55.6	
	baz=314,slow=77,SNR=6.7						
H03N1	**Juan Fernandez**	**134.57**	**89**	T	T	19 53 53.6	
	baz=314,slow=77,SNR=8.4						
H03N3	**Juan Fernandez**	**134.57**	**89**	T	T	19 53 56.4	
	baz=314,slow=77,SNR=7.4						

**IDC 22 17:06:49.5±9.4, 33.93S×179.45W, h58km±88km, mb3.1/2, mb1 3.4/3, mb1mx3.2/34, mbtmp3.4/3, ML3

H11S2	**WAKE ISLAND Hy**	**30.46**	**130**	T	T	18 37 32.6	
	baz=322,slow=76,SNR=9.9						
ZALV	**Zalesovo Beam**	**40.07**	**309**	P	**P**	**18 06 16.1**	**-0.6**
	0.9nm,0.5s,baz=93,slow=9.4,SNR=5.8						
MKAR	**Makanchi Array**	**42.89**	**299**	P	**P**	**18 06 39.3**	**-0.6**
	0.8nm,0.5s,baz=84,slow=11,SNR=16						
KDAK	**Kodiak Island**	**43.85**	**44**	P	**P**	**18 06 47.2**	**-0.2**
	0.7nm,0.4s,baz=270,slow=12,SNR=1.5						
ILAR	**Eielson Array**	**45.95**	**34**	P	**P**	**18 07 04.7**	**+0.6**
	0.3nm,0.4s,baz=260,slow=5.4,SNR=4.5						
INK	**Inuvik**	**50.73**	**29**	P	**P**	**18 07 41.2**	**+0.5**
	0.7nm,0.4s,baz=289,slow=7.6,SNR=7.0						
RES	**Resolute Bay**	**58.80**	**15**	P	**P**	**18 08 38.8**	**-0.2**
	3.0nm,1.0s,baz=304,slow=3.6,SNR=1.8						
YKA	**Yellowknife Ar**	**60.21**	**31**	P	**P**	**18 08 48.7**	**-0.2**
	0.2nm,0.6s,baz=302,slow=5.8,SNR=2.8						
WRA	**Warramunga Arr**	**60.86**	**189**	P	**P**	**18 08 52.4**	**-1.4**
	0.2nm,0.7s,baz=13,slow=4.4,SNR=1.3						
WRA				pP	**pP**	**18 09 07.0**	**-0.4**
	0.4nm,0.6s,baz=5.8,slow=6.9,SNR=2.7						
ASAR	**Alice Springs**	**64.58**	**189**	P	**P**	**18 09 18.2**	**-0.4**
	0.4nm,1.0s,baz=2.6,slow=6.6,SNR=2.6						
ASAR				pP	**pP**	**18 09 33.5**	**+1.2**
	0.4nm,0.7s,baz=358,slow=5.1,SNR=4.1						
FINES	**FINESS Array B**	**65.89**	**332**	P	**P**	**18 09 26.7**	**+0.1**
	1.2nm,0.6s,baz=42,slow=8.8,SNR=10.0						

*PDG **22** 18:12:29.7±0.5,38.°09N×20.°28E,h14$^{km}_{\pm}$1^{km}, ML3.5/12, Error ellipse: s-maj=1.0km s-min=1.3km az=0.0*
*ATH **22** 18:12:30.1,38.°09N×20.°38E,h21^{km}, ML3.5/17, Error ellipse: s-maj=1.8km s-min=0.7km az=64.0*
*THE **22** 18:12:31.0,38.°12N×20.°40E,h16^{km}, ML3.7/4, Error ellipse: s-maj=0.8km s-min=0.3km az=253.0*
*IDC **22** 18:12:33.6±2.4,38.°17N×20.°41E,h40$^{km}_{\pm}$24^{km}, mb3.4/10, mb1 3.6/15,mb1mx3.5/40,mbtmp3.6/15,ML3.6/5,MS2.7/2, Ms1 2.7/2,ms1mx2.2/32, Error ellipse: s-maj=23.4km s-min=13.8km az=52.0*

ISC 22 18:12:30.5±0.7,38.°11N±0.°02×20.°36E±0.°03,h17$^{km}_{\pm}$2^{km}, n148,σ1§19/190,mb3.8/10,7C-13D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.10**	**355**	P	**Pg**	**18 12 34.5**	**+0.5**
KEF3				S	**Sg**	**18 12 37.3**	**+1.0**
LXRA	**Lixouri, Kepha**	**0.11**	**34**	P	**Pb**	**18 12 34.6**	**+0.3**
LXRA				S	**Sg**	**18 12 37.5**	**+1.0**
KEF2	**Argostoli. Kep**	**0.12**	**61**	P	**Pb**	**18 12 34.4**	**0.0**
KEF2				S	**Sb**	**18 12 36.9**	**0.0**
ARGA	**Argostoli. Kep**	**0.12**	**54**	P	**Pb**	**18 12 34.4**	**0.0**
ARGA				S	**Sb**	**18 12 37.1**	**+0.2**
ARG2	**Argostoli**	**0.12**	**56**	P	**Pb**	**18 12 34.5**	**0.0**
ARG2				S	**Sb**	**18 12 36.8**	**-0.3**
AGT1	**Agia Thekli**	**0.14**	**8**	P	**Pb**	**18 12 34.9**	**+0.1**
AGT1				S	**Sb**	**18 12 37.8**	**+0.1**
KEF4	**Livadi, Kephal**	**0.16**	**19**	P	**Pg**	**18 12 35.1**	**+0.3**
KEF4				S	**Sg**	**18 12 38.5**	**+1.0**
KEF1	**Kardakata, Kep**	**0.19**	**28**	P	**Pg**	**18 12 35.0**	**-0.2**
KEF1				S	**Sg**	**18 12 38.8**	**+0.4**
VLS	**Valsamata**	**0.20**	**69**	P	**Pg**	**18 12 35.1**	**-0.2**
VLS				S	**Sg**	**18 12 37.9**	**-0.6**
	61μm,0.1s						
VLS	**Valsamata**	**0.20**	**69**	P	**Pg**	**18 12 35.2**	**-0.2**
VLS				S	**Sg**	**18 12 38.4**	**-0.1**
VLS				AML	AML	18 12 38.7	
VLS				AML	AML	18 12 39.5	
VLMS	**Volimes, Zakyn**	**0.33**	**134**	P	**Pg**	**18 12 37.3**	**-0.3**
VLMS				S	**Sg**	**18 12 42.3**	**0.0**
VLMS				AML	AML	18 12 42.5	
	comp=E,35750μm,0.2s						
VLMS				AML	AML	18 12 48.6	
	comp=N,39857μm,0.3s						
KFL	**Anninata**	**0.34**	**90**	P	**Pg**	**18 12 37.3**	**-0.4**
KFL				S	**Sg**	**18 12 42.0**	**-0.5**
	comp=N,38μm,0.3s						
KFL	**Anninata**	**0.34**	**90**	P	**Pg**	**18 12 37.3**	**-0.4**
KFL				S	**Sg**	**18 12 42.7**	**+0.2**
KFL				AML	AML	18 12 45.2	
	comp=N,66218μm,0.3s						
KFL				AML	AML	18 12 45.4	
	comp=E,84363μm,0.3s						
VSK1	**VASILIKIADES**	**0.34**	**28**	P	**Pg**	**18 12 37.6**	**-0.1**
VSK1				S	**Sg**	**18 12 42.9**	**+0.3**
FSK	**Fiskardo**	**0.39**	**25**	P	**Pg**	**18 12 38.3**	**-0.2**
FSK				S	**Sg**	**18 12 43.8**	**-0.1**
	comp=E,14μm,0.3s						
FSK	**Fiskardo**	**0.39**	**25**	P	**Pg**	**18 12 38.3**	**-0.2**
FSK				S	**Sg**	**18 12 44.3**	**+0.4**
FSK				AML	AML	18 12 45.2	
	comp=N,22924μm,0.4s						
FSK				AML	AML	18 12 46.4	
	comp=E,32574μm,0.2s						
ZAK2	**Zakynthos**	**0.54**	**127**	P	**Pg**	**18 12 40.9**	**-0.3**
ZAK2				S	**Sg**	**18 12 49.1**	**+0.8**
EVGI	**Lefkada island**	**0.56**	**24**	P	**Pg**	**18 12 41.4**	**-0.4**
EVGI				S	**Sg**	**18 12 49.8**	**+0.5**
EVGI	**Lefkada island**	**0.56**	**24**	P	**Pg**	**18 12 41.3**	**-0.4**
EVGI				S	**Sg**	**18 12 50.1**	**+0.8**
KRI1	**kERI**	**0.57**	**141**	P	**Pg**	**18 12 41.3**	**-0.6**
KRI1				S	**Sg**	**18 12 50.3**	**+0.7**
MGNA	**Meganis**	**0.64**	**32**	P	**Pb**	**18 12 42.6**	**-0.8**
MGNA				S	**Sg**	**18 12 52.3**	**+0.5**
MGNA				AML	AML	18 12 55.2	
	comp=N,6086μm,0.3s						
MGNA				AML	AML	18 12 55.4	
	comp=E,6699μm,0.2s						
VTN	**Vitineika**	**0.68**	**106**	P	**Pb**	**18 12 42.7**	**-1.3**
AST1	**Astakos**	**0.72**	**53**	P	**Pb**	**18 12 44.0**	**-0.6**
AST1				S	**Sb**	**18 12 54.7**	**+0.5**
LKD2	**Lefkada island**	**0.72**	**19**	P	**Pb**	**18 12 44.7**	**0.0**
LKD2				S	**Sb**	**18 12 54.4**	**+0.1**
	comp=E,4μm,0.2s						
LKD2	**Lefkada island**	**0.72**	**19**	P	**Pb**	**18 12 44.1**	**-0.6**
LKD2				AML	AML	18 13 01.7	
	comp=E,7463μm,0.2s						
LKD2				AML	AML	18 13 02.4	
	comp=N,8220μm,0.2s						
RLS	**Riolos of Patr**	**0.88**	**93**	P	**Pb**	**18 12 46.6**	**-0.7**
RLS				S	**Sb**	**18 12 59.2**	**+0.5**
RLS	**Riolos of Patr**	**0.88**	**93**	P	**Pb**	**18 12 46.4**	**-0.9**
RLS				AML	AML	18 13 06.5	
	comp=N,3811μm,0.7s						
RLS				AML	AML	18 13 07.4	
	comp=E,3171μm,0.5s						
DRO	**Drossia**	**1.08**	**98**	P	**Pb**	**18 12 50.4**	**-0.4**
DRO	**Drossia**	**1.08**	**98**	P	**Pb**	**18 12 50.4**	**-0.4**
DRO				AML	AML	18 13 12.7	
	comp=E,7003μm,0.9s						
DRO				AML	AML	18 13 16.9	
	comp=N,5679μm,0.6s						
LAKA	**Lakka**	**1.28**	**84**	P	**Pn**	**18 12 53.5**	**-0.3**
LAKA	**Lakka**	**1.28**	**84**	P	**Pn**	**18 12 53.5**	**-0.3**
LAKA				AML	AML	18 13 18.1	
	comp=E,1396μm,0.6s						
LAKA				AML	AML	18 13 26.1	
	comp=N,2127μm,0.7s						
TRIZ	**Trizonia**	**1.37**	**79**	P	**Pn**	**18 12 54.9**	**-0.1**
TRIZ	**Trizonia**	**1.37**	**79**	P	**Pn**	**18 12 54.9**	**-0.1**
EVR	**Evrytania**	**1.40**	**54**	P	**Pb**	**18 12 56.5**	**+0.3**
KLV	**Kalavryta, Ach**	**1.42**	**92**	P	**Pn**	**18 12 56.0**	**+0.4**
KLV				AML	AML	18 13 30.0	
	comp=E,940μm,0.5s						
KLV				AML	AML	18 13 38.5	
	comp=N,1139μm,0.8s						
IGT	**Igoumenitsa**	**1.42**	**359**	P	**Pn**	**18 12 56.3**	**+0.6**
IGT	**Igoumenitsa**	**1.42**	**359**	P	**Pn**	**18 12 56.4**	**+0.8**
IGT				AML	AML	18 13 21.8	
	comp=N,1809μm,0.3s						
IGT				AML	AML	18 13 22.5	
	comp=E,2920μm,0.7s						
KALE	**Kalithea**	**1.43**	**78**	P	**Pn**	**18 12 55.6**	**-0.2**
KALE	**Kalithea**	**1.43**	**78**	P	**Pn**	**18 12 55.7**	**-0.1**
KALE				AML	AML	18 13 30.0	
	comp=E,1494μm,0.6s						
KALE				AML	AML	18 13 34.9	
	comp=N,2036μm,0.7s						
ITM	**Ithomi**	**1.55**	**126**	P	**Pn**	**18 12 58.1**	**+0.6**
ITM	**Ithomi**	**1.55**	**126**	P	**Pn**	**18 12 58.4**	**+1.0**
ITM	**Ithomi**	**1.55**	**126**	P	**Pn**	**18 12 58.6**	**+1.1**
ITM				S	**Sb**	**18 13 20.2**	**+2.0**
JAN	**Janina**	**1.59**	**14**	P	**Pb**	**18 13 00.5**	**+0.9**
JAN				AML	AML	18 13 30.6	
	comp=E,3149μm,0.5s						
JAN				AML	AML	18 13 34.7	
	comp=N,1830μm,0.5s						
PYL	**PYLOS**	**1.64**	**137**	P	**Pn**	**18 12 58.8**	**+0.2**
PYL	**PYLOS**	**1.64**	**137**	P	**Pn**	**18 12 58.9**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.66**	**56**	P	**Pb**	**18 13 00.9**	**+0.2**
MAKR				AML	AML	18 13 36.1	
	comp=N,2609μm,0.7s						
MAKR				AML	AML	18 13 37.9	
	comp=E,3384μm,0.4s						
KEK	**Kerkira**	**1.66**	**345**	P	**Pn**	**18 12 59.6**	**+0.6**
KASA	**Kassiopi**	**1.67**	**349**	P	**Pn**	**18 13 00.0**	**+1.0**
KASA				AML	AML	18 13 31.3	
	comp=E,2029μm,0.4s						
KASA				AML	AML	18 13 35.0	
	comp=N,1496μm,0.4s						
AGG	**Agios Georgios**	**1.79**	**59**	P	**Pb**	**18 13 03.1**	**+0.1**
AGG				AML	AML	18 13 36.3	
	comp=E,1333μm,0.8s						
AGG				AML	AML	18 13 38.5	
	comp=N,1473μm,0.5s						
AGG	**Agios Georgios**	**1.79**	**59**	P	**Pn**	**18 13 02.4**	**+1.6**
AXAR	**Agios Charalam**	**1.92**	**69**	P	**Pb**	**18 13 04.7**	**-0.5**
THL	**Klokotos Trika**	**1.95**	**41**	P	**Pb**	**18 13 05.2**	**-0.4**
PROD	**Prodromos**	**2.01**	**85**	P	**Pn**	**18 13 05.0**	**+1.2**
LOUT	**Loutraki**	**2.07**	**93**	P	**Pn**	**18 13 05.4**	**+0.9**
PENT	**Pentalofos**	**2.17**	**16**	P	**Pb**	**18 13 08.4**	**-1.1**
VIL2	**Platees**	**2.30**	**87**	P	**Pn**	**18 13 09.2**	**+1.5**
DID	**Didima**	**2.36**	**104**	P	**Pn**	**18 13 10.0**	**+1.4**
SKIA	**Skiathos**	**2.65**	**66**	P	**Pn**	**18 13 13.6**	**+1.0**
ATHU	**Athens Univers**	**2.71**	**92**	P	**Pn**	**18 13 14.2**	**+0.8**
FNA	**Florina**	**2.79**	**16**	P	**Pn**	**18 13 16.0**	**+1.6**
FNA	**Florina**	**2.79**	**16**	P	**Pn**	**18 13 15.6**	**+1.1**
OHR	**Ohrid**	**3.02**	**6**	⇓*i*Pn	**Pn**	**18 13 20.1**	**+2.4**
OHR				*i* Sg	**Sn**	**18 13 57.2**	**+3.7**
OHR	**Ohrid**	**3.02**	**6**	⇓*i*Pn	**Pn**	**18 13 20.1**	**+2.4**
OHR				*i* Sg	**Sn**	**18 13 57.2**	**+3.7**
ANKY	**Antikythira Is**	**3.25**	**133**	P	**Pn**	**18 13 22.6**	**+1.9**
HORT	**Hortiatis**	**3.27**	**40**	*e*P	**Pn**	**18 13 22.6**	**+1.5**
CGL1	**Ceglie Messapi**	**3.38**	**320**	⇓*i*Pn	**Pn**	**18 13 22.9**	**+0.3**
OUR	**Ouranopolis**	**3.59**	**51**	*e*P	**Pn**	**18 13 27.5**	**+2.1**
KNT	**Kendrikon**	**3.62**	**32**	*e*P	**Pn**	**18 13 27.5**	**+1.5**
VAY	**Valandovo**	**3.63**	**27**	*i* Pn	**Pn**	**18 13 26.9**	**+0.9**
VAY	**Valandovo**	**3.63**	**27**	*i* Pn	**Pn**	**18 13 26.9**	**+0.9**
RODP	**Rodopos**	**3.73**	**132**	*e*P	**Pn**	**18 13 29.1**	**+1.7**
STIP	**Stip**	**3.85**	**21**	⇓*i*Pn	**Pn**	**18 13 31.7**	**+2.7**
STIP	**Stip**	**3.85**	**21**	⇓*i*Pn	**Pn**	**18 13 31.7**	**+2.7**
KNDR	**Palaiochora Ch**	**3.92**	**136**	*e*P	**Pn**	**18 13 31.3**	**+1.3**
IMMV	**Iera Moni Meta**	**3.93**	**131**	*e*P	**Pn**	**18 13 31.7**	**+1.6**
SG1	**Sgolgore (BA)**	**3.94**	**315**	⇑*i*Pn	**Pn**	**18 13 31.1**	**+0.8**
ULC	**Ulcinj**	**3.94**	**348**	⇓*i*Pn	**Pn**	**18 13 30.7**	**+0.3**
ULC				*i* Sn	**Sn**	**18 14 17.3**	**+1.0**
SKO	**Skopje**	**3.95**	**12**	*i* Pn	**Pn**	**18 13 31.5**	**+1.1**
SKO	**Skopje**	**3.95**	**12**	*i* Pn	**Pn**	**18 13 31.5**	**+1.1**
BAI	**Bari**	**4.02**	**315**	P	**Pn**	**18 13 32.1**	**+0.7**
DRME	**Dracevica, Mon**	**4.17**	**348**	*e*Pn	**Pn**	**18 13 33.3**	**-0.2**
DRME	**Dracevica, Mon**	**4.17**	**348**	⇓*i*Pn	**Pn**	**18 13 33.9**	**+0.4**
DRME				*i* Sn	**Sn**	**18 14 22.8**	**+1.0**
APE	**Apeiranthos**	**4.24**	**103**	*e*P	**Pn**	**18 13 36.3**	**+1.9**
BUM	**Brajici-Budva**	**4.33**	**345**	⇑*i*Pn	**Pn**	**18 13 36.6**	**+0.8**
BUM				*i* Sn	**Sn**	**18 14 26.7**	**+0.8**
MMB	**Musomiste**	**4.34**	**36**	*e*P	**Pn**	**18 13 39.4**	**+3.6**
PDG	**Podgorica**	**4.40**	**349**	*e*Pn	**Pn**	**18 13 36.2**	**-0.3**
TTG	**Podgorica**	**4.40**	**349**	⇑*i*Pn	**Pn**	**18 13 37.6**	**+1.1**
TTG				*i* Sn	**Sn**	**18 14 28.3**	**+0.9**
GVD	**Gavdhos**	**4.43**	**136**	*e*P	**Pn**	**18 13 38.9**	**+1.8**
PVY	**Plav**	**4.49**	**356**	⇑*i*Pn	**Pn**	**18 13 39.0**	**+1.0**
PVY				*i* Sn	**Sn**	**18 14 30.6**	**+0.7**
CHOS	**Chios island**	**4.49**	**85**	*e*P	**Pn**	**18 13 40.4**	**+2.5**
HCY	**Herceg Novi**	**4.56**	**342**	*e*Pn	**Pn**	**18 13 36.9**	**-1.9**
HCY	**Herceg Novi**	**4.56**	**342**	⇑*i*Pn	**Pn**	**18 13 39.7**	**+0.9**
HCY				*i* Sn	**Sn**	**18 14 31.9**	**+0.4**
CEME	**Cevo**	**4.57**	**347**	⇓*i*Pn	**Pn**	**18 13 38.6**	**-0.4**
CEME				*i* Sn	**Sn**	**18 14 32.1**	**+0.4**
IDI	**Anoyia**	**4.60**	**126**	P	**Pn**	**18 13 40.3**	**+0.9**
	comp=N,0.7nm,0.3s,baz=272,slow=8.2,SNR=8.6						
IDI				S	**Sn**	**18 14 33.6**	**+1.1**
	comp=N,6.2nm,0.3s,baz=300,slow=22,SNR=19						
IDI	**Anoyia**	**4.60**	**126**	*e*P	**Pn**	**18 13 41.6**	**+2.2**
VAE	**Valguarnera**	**4.75**	**264**	S	**Sn**	**18 14 40.8**	**+4.5**
	comp=N,5.1nm,0.3s,baz=346,slow=23,SNR=6.7						
IVA	**Berane**	**4.77**	**356**	⇓*i*Pn	**Pn**	**18 13 42.8**	**+1.0**
IVA				*i* Sn	**Sn**	**18 14 37.3**	**+0.6**
NKME	**Niksic**	**4.78**	**347**	⇓*i*Pn	**Pn**	**18 13 42.2**	**+0.4**
NKME				*i* Sn	**Sn**	**18 14 37.1**	**+0.3**
KOME	**Kolasin**	**4.78**	**353**	⇓*i*Pn	**Pn**	**18 13 42.8**	**+0.9**
KOME				*i* Sn	**Sn**	**18 14 37.4**	**+0.4**
NKY	**Niksic**	**4.81**	**348**	⇑*i*Pn	**Pn**	**18 13 43.3**	**+0.9**
NKY				*i* Sn	**Sn**	**18 14 38.1**	**+0.3**
TREB	**Trebinje**	**4.85**	**342**	*e*Pn	**Pn**	**18 13 41.8**	**-1.0**
DBRK	**Dubrovnik**	**4.86**	**340**	*i* Pn	**Pn**	**18 13 42.3**	**-0.6**
DBRK				Sn	**Sn**	**18 14 36.6**	**-2.1**
RZN	**Rozhen**	**4.90**	**42**	*e*P	**Pn**	**18 13 46.2**	**+2.6**
BRY	**Bratogost**	**4.98**	**344**	*e*Pn	**Pn**	**18 13 44.1**	**-0.7**
BRY	**Bratogost**	**4.98**	**344**	⇓*i*Pn	**Pn**	**18 13 45.6**	**+0.8**
BRY				*i* Sn	**Sn**	**18 14 42.7**	**+0.6**
VTS	**Vitosha**	**5.01**	**25**	*e*P	**Pn**	**18 13 46.5**	**+1.4**
RDO	**Rodhopi**	**5.02**	**51**	*e*P	**Pn**	**18 13 47.4**	**+2.3**
STON	**Ston**	**5.17**	**338**	*e*Pn	**Pn**	**18 13 45.9**	**-1.2**
STON	**Ston**	**5.17**	**338**	*e*Pn	**Pn**	**18 13 46.5**	**-0.6**
ALN	**Alexandroupoli**	**5.21**	**56**	*e*P	**Pn**	**18 13 49.4**	**+1.8**
UPM	**Unac-Piva**	**5.21**	**348**	*e*Pn	**Pn**	**18 13 47.7**	**-0.2**
PLE	**Pljevlja**	**5.27**	**352**	⇓*i*Pn	**Pn**	**18 13 49.3**	**+0.7**
PLE				*i* Sn	**Sn**	**18 14 49.0**	**0.0**
RUDO	**Rudo**	**5.55**	**353**	*e*Pn	**Pn**	**18 13 51.7**	**-0.8**
MAKA	**Makarska**	**5.76**	**335**	*e*Pn	**Pn**	**18 13 55.0**	**-0.3**
MAKA				Sn	**Sn**	**18 14 58.5**	**-2.4**
BBLS	**Lazići**	**5.80**	**353**	*e*Pn	**Pn**	**18 13 57.5**	**+1.7**
RICI	**Ricice**	**5.91**	**337**	*e*Pn	**Pn**	**18 13 57.3**	**-0.1**
DIVS	**Divibare**	**5.99**	**357**	*e*Pn	**Pn**	**18 13 57.6**	**-0.9**
HAPS	**Han Pijesak,BI**	**6.07**	**350**	*e*Pn	**Pn**	**18 13 57.8**	**-1.8**
ZIRJ	**Zirje**	**6.59**	**329**	*e*Pn	**Pn**	**18 14 05.7**	**-1.0**
KIJV	**Kijevo**	**6.60**	**334**	*i* Pn	**Pn**	**18 14 07.3**	**+0.4**
SZH	**Strazhica**	**6.67**	**38**	*e*P	Pn	18 13 53.1	-15
MORI	**Morici**	**6.74**	**330**	*e*Pn	**Pn**	**18 14 08.8**	**+0.1**
FRGS	**Fruska Gora**	**7.05**	**357**	*e*Pn	**Pn**	**18 14 11.4**	**-1.7**
DUGI	**Dugi Otok**	**7.11**	**327**	*e*Pn	**Pn**	**18 14 13.5**	**-0.4**
NVLJ	**Novalja**	**7.66**	**329**	*e*Pn	**Pn**	**18 14 21.0**	**-0.2**
MORH	**Mrgy, Hungar**	**8.20**	**352**	*e*Pn	**Pn**	**18 14 25.7**	**-3.0**
MLR	**Muntele Rosu**	**8.47**	**28**	P	**Pn**	**18 14 34.4**	**+1.8**
	comp=N,0.4nm,0.3s,baz=287,slow=18,SNR=8.6						
MLR				LR	LR	18 18 52.9	
	comp=N,95nm,20.9s,baz=117,slow=45						
CRES	**Cresnjev**	**8.53**	**336**	*e*Pn	**Pn**	**18 14 31.6**	**-1.7**
CEY	**Cerknica**	**8.81**	**332**	*e*Pn	**Pn**	**18 14 37.2**	**+0.1**
SOKA	**Soboth**	**9.42**	**337**	*e*Pn	**Pn**	**18 14 44.5**	**-1.1**
	comp=N,1.7nm,0.4s						
OBKA	**Obir**	**9.43**	**335**	*e*Pn	**Pn**	**18 14 46.0**	**+0.3**
	comp=N,2.4nm,0.4s						
ARSA	**Arzberg**	**9.80**	**340**	*e*Pn	**Pn**	**18 14 50.7**	**0.0**
	comp=N,2.2nm,0.5s						
MYKA	**Terra Mystica**	**9.86**	**332**	*i* Pn	**Pn**	**18 14 53.7**	**+2.2**
VYHS	**Vyhne**	**10.44**	**354**	*e*PN	**Pn**	**18 14 59.5**	**+0.1**
MOA	**Molln**	**10.71**	**337**	*i* Pn	**Pn**	**18 15 04.6**	**+1.5**
	comp=N,1.7nm,0.3s						
GERES	**GERESS Array B**	**11.76**	**338**	P	**Pn**	**18 15 16.4**	**-1.2**
	comp=N,0.2nm,0.3s,baz=156,slow=14,SNR=3.2						
MMAI	**Mount Meron Ar**	**13.26**	**108**	P	**Pn**	**18 15 37.7**	**-0.4**
	comp=N,0.4nm,0.3s,baz=305,slow=13,SNR=2.1						
KBZ	**Khabaz**	**17.91**	**65**	P	**Pn**	**18 16 39.0**	**+0.3**
	comp=N,0.1nm,0.3s,baz=272,slow=8.6,SNR=2.7						
HFS	**Hagfors**	**22.45**	**351**	P	**P**	**18 17 28.6**	**+0.2**
	comp=N,2.7nm,0.6s,baz=162,slow=12,SNR=15						
EKA	**Eskdalemuir Ar**	**23.41**	**325**	P	**P**	**18 17 38.3**	**-0.2**
	comp=N,0.5nm,0.5s,baz=122,slow=9.3,SNR=1.3						
FINES	**FINESS Array B**	**23.63**	**7**	P	**P**	**18 17 40.5**	**0.0**
	comp=N,1.4nm,0.5s,baz=178,slow=6.9,SNR=11						
FINES				LR	LR	18 28 56.8	
	comp=N,12nm,18.8s,baz=244,slow=42						
NOA	**NORSAR Array B**	**23.66**	**349**	P	**P**	**18 17 40.0**	**-1.0**
	comp=N,0.2nm,0.5s,baz=157,slow=8.8,SNR=1.8						
TORD	**Torodi Ar. Bea**	**29.90**	**219**	P	**P**	**18 18 38.5**	**+1.0**
	comp=N,0.4nm,0.8s,baz=36,slow=12,SNR=1.6						
MKAR	**Makanchi Array**	**45.45**	**58**	P	**P**	**18 20 47.2**	**-1.3**
	comp=N,0.8nm,0.4s,baz=270,slow=7.8,SNR=18						
ZALV	**Zalesovo Beam**	**45.83**	**48**	P	**P**	**18 20 50.3**	**-1.1**
	comp=N,2.9nm,0.5s,baz=269,slow=8.8,SNR=14						
SONM	**Songino Array**	**60.60**	**50**	P	**P**	**18 22 39.5**	**-0.9**
	comp=N,0.4nm,0.4s,baz=290,slow=6.0,SNR=1.8						
YKA	**Yellowknife Ar**	**73.41**	**340**	P	**P**	**18 24 00.7**	**-0.7**
	comp=N,0.1nm,0.4s,baz=37,slow=5.5,SNR=1.9						
KSRS	**Korea Array**	**79.47**	**51**	P	**P**	**18 24 36.1**	**0.0**
	comp=N,0.4nm,0.4s,baz=318,slow=4.4,SNR=2.1						

*SOME **22** 18:40:10.0,40.°23N×77.°60E,h10^{km}*
*KRNET **22** 18:40:11.3±0.1,40.°29N×77.°54E,mb3.4*
*NNC **22** 18:40:11.5±1.0,40.°27N×77.°57E,h0^{km},mb4.0,mpv3.6, Error ellipse: s-maj=6.5km s-min=5.0km az=174.0*

ISC 22 18:40:14.1±1.9,40.°24N±0.°08×77.°54E±0.°04,h10^{km},n76, σ1§89/115,25C-12D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.92**	**350**	⇑*i*P	**Pn**	**18 40 46.0**	**-1.0**
	baz=52						
KDJ				⇑*i*S	**Sn**	**18 41 11.4**	**+0.2**
	baz=52						
ULHL	**Ulahol**	**2.26**	**333**	⇑*i*P	**Pn**	**18 40 51.3**	**-0.4**
	baz=34						
ULHL				⇑*i*S	**Sn**	**18 41 20.7**	**+0.9**
	baz=34						
ULHL	**Ulahol**	**2.26**	**333**	P	**Pn**	**18 40 51.8**	**+0.1**
	SNR=21						
PRZ	**Przheval'sk**	**2.31**	**14**	⇓*i*P	**Pn**	**18 40 52.7**	**+0.3**
	baz=16						
PRZ				⇓*i*S	**Sb**	**18 41 23.0**	**-1.6**
	baz=16						
ANVS	**Anan'yevo**	**2.54**	**0**	⇑*i*P	**Pn**	**18 40 55.5**	**0.0**
	baz=2.0						
ANVS				⇑*i*S	**Sn**	**18 41 27.7**	**+1.1**
	baz=2.0						
KZA	**Kyzart**	**2.57**	**316**	⇓*i*P	**Pn**	**18 40 55.3**	**-0.9**
	baz=17						
KZA				⇓*i*S	**Sn**	**18 41 27.8**	**+0.1**
	baz=17						
KZA	**Kyzart**	**2.57**	**316**	P	**Pn**	**18 40 57.0**	**+0.8**
	SNR=16						
BOOM	**Boomskoye usch**	**2.58**	**331**	⇑*e*P	**Pn**	**18 40 55.8**	**-0.3**
	baz=32						
BOOM				⇑*i*S	**Sn**	**18 41 28.3**	**+0.6**
	baz=32						
TNSS	**Tian-Shan**	**2.84**	**350**	*e*P	**Pb**	**18 41 03.2**	**-1.9**
	62nm,0.6s						
TNSS				*e*S	**Sb**	**18 41 42.2**	**+2.2**
	62nm,0.5s						
TNSS	**Tian-Shan**	**2.84**	**350**	Pg	**Pb**	**18 41 03.7**	**-1.4**
	53nm,0.6s						
TNSS				Lg	Lg	18 41 42.6	
	62nm,0.5s						
SATY	**Saty**	**2.87**	**11**	*e*P	**Pb**	**18 41 03.8**	**-1.7**
	22nm,0.5s						
SATY				*e*S	**Sb**	**18 41 42.7**	**+2.0**
	59nm,0.5s						
SATY	**Saty**	**2.87**	**11**	Pg	**Pb**	**18 41 04.0**	**-1.5**
	22nm,0.6s						
SATY				Lg	Lg	18 41 42.7	
	59nm,0.5s						
IZV	**Izvestkoviy**	**2.89**	**345**	*e*P	**Pb**	**18 41 03.8**	**-2.1**
	25nm,0.5s						
IZV				*e*S	**Sb**	**18 41 42.9**	**+1.4**
	107nm,0.6s						
IZV	**Izvestkoviy**

PDGK				Lg	Lg	18 41 58.4		
	20nm,0.6s							
CHMS	**Chumysh**	**3.50**	**323**	⇓*i*P	**Pn**	**18 41 08.1**	**-0.5**	
	baz=23							
CHMS				⇓*i*S	**Sn**	**18 41 49.8**	**-0.3**	
	baz=23							
CHMS	**Chumysh**	**3.50**	**323**	P	**Sb**	**18 42 00.4**	**+1.6**	
	SNR=8.8							
AML	**Almayashu**	**3.52**	**304**	⇑*i*P	**Pn**	**18 41 08.6**	**-0.7**	
	baz=4.0							
AML				⇑*i*S	**Sn**	**18 41 50.5**	**-0.7**	
	baz=4.0							
AML	**Almayashu**	**3.52**	**304**	P	**Pn**	**18 41 09.2**	**-0.1**	
	SNR=8.4							
KTBS	**Karatobe**	**3.54**	**349**	*e*P	**Pb**	**18 41 15.5**	**-1.3**	
	6.0nm,0.4s							
KTBS				*e*S	**Sb**	**18 42 02.8**	**+3.0**	
	33nm,0.6s							
KTBS	**Karatobe**	**3.54**	**349**	Pg	**Pb**	**18 41 15.5**	**-1.3**	
	6.0nm,0.4s							
KTBS				Lg	Lg	18 42 02.8		
	33nm,0.6s							
CHKK	**Chushkaly**	**3.64**	**353**	*e*P	**Pb**	**18 41 17.0**	**-1.5**	
	11nm,0.4s							
CHKK				*e*S	**Sb**	**18 42 05.3**	**+2.6**	
	48nm,0.6s							
CHKK	**Chushkaly**	**3.64**	**353**	Pg	**Pb**	**18 41 17.3**	**-1.2**	
CHKK				Lg	Lg	18 42 05.4		
ARSB	**Arslanbob**	**3.70**	**288**	⇑*i*P	**Pn**	**18 41 11.1**	**-0.3**	
	baz=88							
ARSB				⇑*i*S	**Sn**	**18 41 54.8**	**-0.3**	
	baz=88							
KRBS	**Karabastau**	**3.75**	**338**	*e*P	**Pb**	**18 41 18.3**	**-2.1**	
	6.3nm,0.5s							
KRBS				*e*S	**Sb**	**18 42 07.9**	**+2.1**	
	17nm,0.7s							
KRBS	**Karabastau**	**3.75**	**338**	Pg	**Pb**	**18 41 18.2**	**-2.1**	
	3.2nm,0.4s							
KRBS				Lg	Lg	18 42 07.9		
	17nm,0.5s							
KUU	**Kurty**	**3.77**	**346**	*e*P	**Pb**	**18 41 19.0**	**-1.8**	
	7.1nm,0.7s							
KUU				*e*S	**Sb**	**18 42 08.8**	**+2.2**	
	32nm,0.8s							
KUU	**Kurty**	**3.77**	**346**	Pg	**Pb**	**18 41 19.0**	**-1.8**	
	7.1nm,0.7s							
KUU				Lg	Lg	18 42 08.8		
	18nm,0.5s							
EKS2	**Erkin-Say**	**3.78**	**311**	⇓*e*P	**Pn**	**18 41 12.3**	**-0.2**	
	baz=11							
EKS2				⇓*i*S	**Sn**	**18 41 56.4**	**-0.7**	
	baz=11							
KTMS	**Ketmen**	**3.79**	**31**	*e*P	**Pb**	**18 41 19.2**	**-1.9**	
	0.5nm,0.1s							
KTMS				*e*S	**Sb**	**18 42 09.1**	**+2.0**	
	22nm,0.7s							
KTMS	**Ketmen**	**3.79**	**31**	Pg	**Pb**	**18 41 19.2**	**-1.9**	
	0.3nm,0.1s							
KTMS				Lg	Lg	18 42 09.1		
	22nm,0.7s							
USP	**Ospenovka**	**3.83**	**323**	P	**Pb**	**18 41 19.0**	**-2.7**	
	SNR=9.3							
MNBS	**Baschi**	**3.87**	**8**	*e*P	**Pb**	**18 41 22.2**	**-0.3**	
	5.2nm,0.4s							
MNBS				*e*S	**Sb**	**18 42 14.1**	**+4.6**	
	41nm,0.5s							
MNBS	**Baschi**	**3.87**	**8**	Pg	**Pb**	**18 41 22.2**	**-0.3**	
	5.0nm,0.5s							
MNBS				Lg	Lg	18 42 14.1		
	31nm,0.6s							
SGDS	**Sogindy**	**3.92**	**326**	Pg	**Pb**	**18 41 21.1**	**-2.1**	
	9.5nm,0.6s							
SGDS				Lg	Lg	18 42 12.8		
	24nm,0.6s							
ARXS	**Arharly**	**3.97**	**2**	*e*P	**Pb**	**18 41 23.5**	**-0.6**	
	16nm,0.6s							
ARXS				*e*S	**Sb**	**18 42 16.0**	**+3.8**	
	56nm,0.7s							
ARXS	**Arharly**	**3.97**	**2**	Pg	**Pb**	**18 41 23.5**	**-0.6**	
	16nm,0.6s							
ARXS				Lg	Lg	18 42 16.0		
	56nm,0.7s							
MRKS	**Merke**	**4.15**	**308**	*e*P	**Pb**	**18 41 25.7**	**-1.6**	
	5.6nm,0.5s							
MRKS				*e*S	**Sb**	**18 42 20.1**	**+2.5**	
	12nm,0.3s							
MRKS	**Merke**	**4.15**	**308**	Pg	**Pb**	**18 41 25.7**	**-1.6**	
	5.6nm,0.5s							
MRKS				Lg	Lg	18 42 20.1		
	12nm,0.3s							
DJR	**Jarkent**	**4.38**	**21**	*e*P	**Pb**	**18 41 31.1**	**-0.1**	
	3.9nm,0.5s							
DJR				*e*S	**Sb**	**18 42 29.1**	**+4.9**	
	9.1nm,0.4s							
DJR	**Jarkent**	**4.38**	**21**	Pg	**Pb**	**18 41 31.1**	**-0.1**	
	3.9nm,0.5s							
DJR				Lg	Lg	18 42 29.1		
	8.5nm,0.5s							
TDK	**Taldyqorghan**	**4.79**	**7**	*e*P	**Pb**	**18 41 38.0**	**-0.1**	
	15nm,0.1s							
TDK				*e*S	**Sb**	**18 42 40.8**	**+5.1**	
	39nm,0.6s							
KAPS	**Kapalarasan**	**5.19**	**13**	*e*P	**Pb**	**18 41 46.2**	**+1.2**	
	2.1nm,0.6s							
KAPS				*e*S	**Sg**	**18 42 55.0**	**-5.7**	
	7.9nm,0.5s							
BTLS	**Baital**	**5.48**	**332**	*e*P	**Pb**	**18 41 49.9**	**+0.1**	
	5.8nm,0.8s							
BTLS				*e*S	**Sb**	**18 43 01.3**	**+5.8**	
	14nm,0.7s							
BTLS	**Baital**	**5.48**	**332**	Pg	**Pb**	**18 41 49.9**	**+0.1**	
	5.8nm,0.8s							
BTLS				Lg	Lg	18 43 01.3		
	14nm,0.7s							
KK31	**Karatay Array**	**6.05**	**300**	⇑Pg	**Pb**	**18 42 02.6**	**+2.9**	
	2.2nm,0.7s,baz=119,slow=15,SNR=8.4							
KK31				⇑Lg	Lg	18 43 18.9		
	5.8nm,0.8s,baz=115,slow=28,SNR=4.7							
MK31	**Makanchi Array**	**7.37**	**26**	Pn	**Pn**	**18 41 58.5**	**-3.1**	
	1.2nm,0.8s,baz=186,slow=12,SNR=7.3							
MK31				⇑Sn	**Sn**	**18 43 27.8**	**+2.5**	
	1.5nm,0.8s							
MK31				⇑Lg	Lg	18 44 08.8		
	3.0nm,1.0s							
KURBB	**Kurchatov Arra**	**10.40**	**3**	⇑Lg	Lg	18 45 41.0		
	7.1nm,0.9s							

*IDC **22** 18:45:54.2±0.7, 4°.53S×133°.59E, h0km, mb4.0/9, mb1 4.3/16, mb1mx4.2/28, mbtmp4.2/16, ML4.3/6, MS3.4/16, Ms1 3.5/16, ms1mx3.3/36, Error ellipse: s-maj=23.0km s-min=13.6km az=63.0*

*DJA **22** 18:45:57.6±0.9, 5°.2S×13°.4E±°, h20km±7km, M4.7/22, mb4.8/22, mB5.2/11, MLv4.8/15, Mw(mB)4.6/11*

*NEIC **22** 18:45:57.4±1.8, 4°.61S±0°.06×133°.54E±0°.07, h26km±6km, mb4.5/35, Error ellipse: s-maj=10.8km s-min=7.4km az=64.0*

ISC 22 18:45:56.1±0.4, **4°.72S**±0°.04×**133°.61E**±0°.05, **h21**km, **n99,** σ**2s27**/101, **mb4.5**/30, **MS3.5**/14, **1C**, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**2.25**	**323**	P	**Pn**	**18 46 29.7**	**-2.4**
FAKI				S	**Sn**	**18 46 56.7**	**-2.5**
FAKI	**Fak Fak**	**2.25**	**323**		**Pn**	**18 46 29.9**	**-2.2**
RKPI	**Ransiki, Papua**	**3.24**	**10**	P	**Pn**	**18 46 44.7**	**-1.1**
RKPI				S	**Sn**	**18 47 22.6**	**-1.2**
BNDI	**Bandanaira**	**3.70**	**273**	P	**Pn**	**18 46 53.3**	**+1.2**
BNDI				S	**Sn**	**18 47 36.5**	**+1.5**
SRPI	**Serui, Papua**	**3.87**	**43**	P	**Pn**	**18 46 54.5**	**+0.1**
SIJI	**Sorong**	**4.49**	**329**	Pn	**Pn**	**18 47 00.6**	**-2.4**
	16nm,0.3s,baz=147,slow=6.9,SNR=50						
SIJI				Pg	**Pb**	**18 47 16.4**	**+2.2**
	13nm,0.3s,baz=210,slow=22,SNR=9.6						
SIJI				Sn	**Sn**	**18 47 46.7**	**-7.9**
	14nm,0.3s,baz=234,slow=22,SNR=1.3						
SIJI				Lg	Lg	18 48 12.8	
	12nm,0.3s,baz=337,slow=24,SNR=1.6						
MSAI	**Masohi**	**4.86**	**286**	P	**Pn**	**18 47 08.0**	**-0.1**
AAI	**Ambon**	**5.50**	**281**	P	**Pn**	**18 47 17.2**	**+0.4**
	1.3nm6μm288nm,0.6s						
SMPI	**Sarmi**	**5.77**	**62**	P	**Pn**	**18 47 22.8**	**+2.2**
NLAI	**Namlea**	**6.66**	**283**	P	**Pn**	**18 47 34.9**	**+2.1**
	0.9nm3μm179nm,0.5s						
NLAI				S	**Sn**	**18 48 48.6**	**+0.5**
	0.9nm3μm179nm,0.5s						

GENI	**Genyem**	**6.88**	**72**	P	**Pn**	**18 47 37.6**	**+1.7**	
	0.3nm88nm,0.6s							
LBMI	**Labuha**	**7.33**	**303**	P	**Pn**	**18 47 42.5**	**+0.5**	
	0.3nm1μm65nm,0.8s							
JAY	**Jayapura**	**7.42**	**73**	Pn	**Pn**	**18 47 43.9**	**+0.6**	
	2.0nm,0.3s,baz=237,slow=11,SNR=12							
JAY				Sn	**Sn**	**18 49 00.7**	**-6.1**	
	baz=103,slow=21,SNR=1.5							
JAY	**Jayapura**	**7.42**	**73**	P	**Pn**	**18 47 46.8**	**+3.5**	
	0.0nm11nm,0.9s							
SANI	**Sanana**	**8.05**	**289**	P	**Pn**	**18 47 50.0**	**-2.0**	
	0.2nm1μm43nm,0.5s							
MTN	**Manton Dam**	**8.43**	**197**		**Pn**	**18 47 59.7**	**+2.5**	
SOEI	**Soe**	**10.53**	**241**	P	**Pn**	**18 48 29.2**	**+3.2**	
	48nm,0.8s							
SOEI	**Soe**	**10.53**	**241**		**Pn**	**18 48 28.4**	**+2.4**	
KMSI	**Cibinong**	**10.96**	**298**	P	**Pn**	**18 48 31.1**	**-0.8**	
	629nm54nm,0.7s							
BATI	**Baumata**	**11.26**	**241**	Pn	**Pn**	**18 48 38.1**	**+2.1**	
	6.1nm,0.3s,baz=84,slow=3.0,SNR=11							
BATI				Sn	**Sn**	**18 50 39.4**	**-2.0**	
	1.7nm,0.3s,baz=164,slow=22,SNR=1.5							
BATI	**Baumata**	**11.26**	**241**	P	**Pn**	**18 48 40.5**	**+4.5**	
	25nm,0.5s							
LUWI	**Luwuk**	**11.42**	**288**	Pn	**Pn**	**18 48 35.6**	**-2.6**	
KNRA	**Kununurra**	**11.88**	**203**		**Pn**	**18 48 45.5**	**+1.1**	
MMRI	**Maumere**	**11.94**	**250**	Pn	**Pn**	**18 48 44.8**	**-0.5**	
APSI	**Ampana**	**12.53**	**287**	P	**Pn**	**18 48 54.3**	**+1.0**	
	440nm27nm,0.9s							
COEN	**Coen**	**13.16**	**135**	Pn	**Pn**	**18 49 00.3**	**-1.7**	
BKSI	**Bulukumba**	**13.45**	**267**	P	**P**	**18 49 13.4**	**-1.7**	
BNSI	**Bone**	**13.46**	**271**	P	**P**	**18 49 15.1**	**-0.1**	
KAPI	**Kappang**	**13.81**	**268**	Pn	**Pn**	**18 49 13.2**	**+2.4**	
	0.9nm,0.3s,baz=96,slow=7.5,SNR=1.6							
KAPI	**Kappang**	**13.81**	**268**	Pn	**Pn**	**18 49 08.4**	**-2.4**	
SPSI	**Sidrap Palu**	**13.82**	**273**	P	**Pn**	**18 49 12.3**	**+1.3**	
	18nm,0.8s							
DAV	**Davao City (W)**	**14.19**	**326**	LR	LR	18 55 37.1		
	comp=Z,136nm,18.5s,baz=164,slow=42							
PMG	**Port Moresby**	**14.23**	**110**	Pn	**Pn**	**18 49 19.1**	**+2.6**	
	0.3nm,0.3s,baz=282,slow=13,SNR=3.5							
KCP	**Kidapawan**	**14.43**	**324**	⇑*e*P	**Pn**	**18 49 15.6**	**-3.7**	
MPSI	**Mapaga**	**14.59**	**290**	P	**Pn**	**18 49 21.8**	**+0.3**	
WB0	**Warramunga Arr**	**14.97**	**177**		**Pn**	**18 49 25.6**	**-1.1**	
WB0				IAmb	IAmb	18 49 38.0		
	comp=Z,17nm,0.8s							
WRAB	**Tennant Creek**	**15.14**	**177**	P	**Pn**	**18 49 28.2**	**-0.6**	
WRA	**Warramunga Arr**	**15.14**	**177**	Pn	**Pn**	**18 49 28.5**	**-0.5**	
	comp=Z,1.9nm,0.3s,baz=6.9,slow=13,SNR=52							
WRA				Sn	**Sn**	**18 52 08.7**	**-7.5**	
	comp=Z,0.5nm,0.3s,baz=0.3,slow=23,SNR=5.0							
WRA				LR	LR	18 56 17.4		
	comp=Z,417nm,20.5s,baz=0.0,slow=41							
WB2	**Warramunga Arr**	**15.15**	**177**		**Pn**	**18 49 27.4**	**-1.6**	
WR0	**Warramunga Arr**	**15.17**	**177**		**Pn**	**18 49 28.2**	**-1.2**	
FITZ	**Fitzroy Crossi**	**15.41**	**210**	Pn	**Pn**	**18 49 32.2**	**-0.3**	
	comp=Z,1.8nm,0.3s,baz=37,slow=10,SNR=36							
FITZ				Sn	**Sn**	**18 52 15.7**	**-6.9**	
	comp=Z,2.2nm,0.3s,baz=168,slow=14,SNR=8.9							
FITZ	**Fitzroy Crossi**	**15.41**	**210**		**Pn**	**18 49 32.1**	**-0.3**	
KRVT	**Keravat (AS076**	**18.37**	**89**	LR	LR	18 57 15.0		
	comp=Z,120nm,21.7s,baz=264,slow=37							
AS31	**Alice Springs**	**18.84**	**179**	P	**Pn**	**18 50 15.9**	**+0.5**	
ASAR	**Alice Springs**	**18.84**	**179**	P	**Pn**	**18 50 16.7**	**+1.3**	
	comp=Z,1.8nm,0.3s,baz=3.3,slow=11,SNR=99							
ASAR				S	**Sn**	**18 53 41.0**	**-4.8**	
	comp=Z,0.2nm,0.3s,baz=3.7,slow=26,SNR=5.8							
ASAR				LR	LR	18 58 40.6		
	comp=Z,375nm,18.6s,baz=352,slow=40							
CTA	**Charters Tower**	**19.62**	**142**	P	**Pn**	**18 50 26.7**	**+1.8**	
	comp=Z,0.5nm,0.3s,baz=327,slow=12,SNR=6.3							
JAGI	**Jajag, Banyuwa**	**19.68**	**258**	P	**P**	**18 50 24.4**	**+0.3**	
JAGI				IAmb	IAmb	18 50 38.2		
	comp=Z,27nm,1.0s							
KKM	**Kota Kinabalu**	**20.39**	**301**	P	**P**	**18 50 30.9**	**-1.1**	
KKM				IAmb	IAmb	18 50 41.8		
	comp=Z,24nm,0.9s							
SJMP	**San Jose**	**21.11**	**324**	*e*P	**P**	**18 50 39.1**	**-0.4**	
PSAD1	**Pilbara Seismi**	**21.34**	**218**	P	**P**	**18 50 42.6**	**+0.6**	
PSAD1				IAmb	IAmb	18 50 54.0		
	comp=Z,17nm,0.8s							
PSAC2	**Pilbara Seismi**	**21.38**	**217**	P	**P**	**18 50 44.1**	**+1.7**	
PSAC2				IAmb	IAmb	18 51 02.8		
	comp=Z,16nm,0.8s							
PSAD2	**Pilbara Seismi**	**21.38**	**217**	P	**P**	**18 50 44.4**	**+1.9**	
PSAD2				IAmb	IAmb	18 50 54.4		
	comp=Z,13nm,0.8s							
PSAB2	**Pilbara Seismi**	**21.39**	**217**	P	**P**	**18 50 44.0**	**+1.3**	
PSAB2				IAmb	IAmb	18 50 54.5		
	comp=Z,16nm,0.7s							
PSAA2	**Pilbara Seismi**	**21.41**	**217**	P	**P**	**18 50 44.4**	**+1.6**	
PSAA2				IAmb	IAmb	18 50 54.7		
	comp=Z,15nm,0.7s							
PSAC1	**Pilbara Seismi**	**21.41**	**217**	P	**P**	**18 50 43.7**	**+0.9**	
PSAC1				IAmb	IAmb	18 51 00.4		
	comp=Z,14nm,0.7s							
PSAA3	**Pilbara Seismi**	**21.42**	**217**	P	**P**	**18 50 45.4**	**+2.5**	
PSAA3				IAmb	IAmb	18 50 58.7		
	comp=Z,15nm,0.8s							
PSA00	**Pilbara Seismi**	**21.42**	**217**	P	**P**	**18 50 43.5**	**+0.7**	
PSA00				IAmb	IAmb	18 50 54.8		
	comp=Z,13nm,0.7s							
PSAA1	**Pilbara Seismi**	**21.43**	**217**	P	**P**	**18 50 43.9**	**+0.9**	
PSAA1				IAmb	IAmb	18 50 54.9		
	comp=Z,12nm,0.7s							
PSAB3	**Pilbara Seismi**	**21.43**	**217**	P	**P**	**18 50 43.9**	**+0.9**	
PSAB3				IAmb	IAmb	18 50 59.2		
	comp=Z,14nm,0.9s							
PSAB1	**Pilbara Seismi**	**21.43**	**217**	P	**P**	**18 50 44.3**	**+1.3**	
PSAB1				IAmb	IAmb	18 50 54.5		
	comp=Z,15nm,0.9s							
PSAC3	**Pilbara Seismi**	**21.47**	**217**	P	**P**	**18 50 44.3**	**+0.9**	
BOAC	**Boac**	**21.51**	**327**	*e*P	**P**	**18 50 49.9**	**+6.0**	
PSAD3	**Pilbara Seismi**	**21.51**	**217**	P	**P**	**18 50 44.2**	**+0.3**	
SBUM	**Sibu**	**22.52**	**288**	P	**P**	**18 50 54.8**	**-0.1**	
TGY	**Tagaytay City**	**22.54**	**326**	LR	LR	19 01 16.9		
	comp=Z,53nm,18.5s,baz=187,slow=41							
KSM	**Kuching**	**24.08**	**284**	P	**P**	**18 51 10.4**	**0.0**	
CISI	**Cisompet, Garu**	**25.80**	**262**	P	**P**	**18 51 26.0**	**-0.1**	
LEM	**Lembang**	**25.94**	**264**	LR	LR	19 02 28.8		
	comp=Z,58nm,19.1s,baz=118,slow=38							
FORT	**Forrest**	**26.44**	**191**	P	**P**	**18 51 31.1**	**-0.5**	
STKA	**Stephens Creek**	**28.03**	**165**	P	**P**	**18 51 48.3**	**+2.4**	
	comp=Z,1.5nm,0.7s,baz=343,slow=13,SNR=3.1							
STKA				LR	LR	19 04 10.0		
	comp=Z,139nm,20.6s,baz=7.7,slow=39							
STKA	**Stephens Creek**	**28.03**	**165**	P	**P**	**18 51 44.4**	**-1.6**	
BBOO	**Buckleboo**	**28.04**	**176**	P	**P**	**18 51 45.8**	**-0.2**	
BBOO				IAmb	IAmb	18 51 51.1		
	comp=Z,9.6nm,1.1s							
ARMA	**Armidale**	**30.70**	**148**	P	**P**	**18 52 06.4**	**-3.4**	
ARMA				IAmb	IAmb	18 52 20.9		
	comp=Z,6.2nm,0.8s							
NWAO	**Narrogin (SRO)**	**31.96**	**207**	LR	LR	19 06 34.4		
	comp=Z,86nm,21.2s,baz=122,slow=39							
MNSI	**Mandailing Nat**	**34.43**	**278**	P	P	18 52 48.5	+5.9	
NJ2	**Nanjing**	**39.17**	**340**	*e*P	**P**	**18 53 21.8**	**-0.8**	
NJ2				pmax	pmax			
	comp=Z,13nm,0.5s							
CMAR	**Chiang Mai Arr**	**41.20**	**305**	P	**P**	**18 53 39.9**	**+0.1**	
	comp=Z,1.3nm,0.8s,baz=136,slow=7.0,SNR=11							
CMAR				LR	LR	19 15 32.7		
	comp=Z,9.4nm,18.0s,baz=190,slow=43							
MJAR	**Matsushiro Arr**	**41.27**	**6**	LR	LR	19 09 13.1		
	comp=Z,82nm,18.5s,baz=170,slow=34							
CHTO	**Chiang Mai**	**41.38**	**305**	P	**P**	**18 53 40.7**	**-0.5**	
KSRS	**Korea Array**	**42.29**	**353**	LR	LR	19 12 57.2		
	comp=Z,45nm,18.1s,baz=160,slow=39							
CD2	**Chengdu**	**45.48**	**323**	P	**P**	**18 54 13.6**	**-0.5**	
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
USRK	**Ussuriysk Ar.**	**48.72**	**358**	P	**P**	**18 54 39.2**	**+0.1**	
	comp=Z,3.1nm,0.6s,baz=186,slow=8.8,SNR=10.0							
HHC	**Hu-ho-hao-te**	**49.65**	**338**	*e*P	**P**	**18 54 46.3**	**-0.1**	
HHC				pmax	pmax			
	comp=Z,17nm,0.8s							
HHC				pmax	pmax			
	comp=Z,68nm,5.9s							
GTA	**Gaotai**	**53.85**	**328**	*e*P	**P**	**18 55 18.9**	**+1.0**	
GTA				pP	pwP	18 55 28.0	+0.8	
GTA				sP	sP	18 55 32.3	+6.1	
GTA				pmax	pmax			
	comp=Z,2.0nm,1.0s							
GTA				pmax	pmax			
	comp=Z,50nm,4.9s							
GTA				LR	LR			
	comp=N,59nm,15.9s							
GTA				LR	LR			
	comp=E,54nm,14.0s							
GTA				LR	LR			
	comp=Z,47nm,16.8s							
SONM	**Songino Array**	**57.54**	**339**	P	**P**	**18 55 44.4**	**+0.2**	
	comp=Z,0.3nm,0.4s,baz=153,slow=9.7,SNR=1.8							
SONM				LR	LR	19 19 30.0		
	comp=Z,17nm,20.5s,baz=86,slow=35							
PETK	**Petropavlovsk-**	**61.10**	**16**	P	**P**	**18 56 09.2**	**+0.6**	
	comp=Z,0.8nm,0.8s,baz=180,slow=8.5,SNR=1.5							
PETK				LR	LR	19 22 05.7		
	comp=Z,26nm,19.7s,baz=238,slow=36							
WMQ	**Urumqi**	**63.55**	**324**	*e*P	**P**	**18 56 25.9**	**+0.6**	
WMQ				pP	pwP	18 56 35.0	+0.7	
WMQ				pmax	pmax			
	comp=Z,7.0nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,35nm,3.7s							
WMQ				LR	LR			
	comp=N,92nm,29.0s							
WMQ				LR	LR			
	comp=E,170nm,28.8s							
WMQ				LR	LR			
	comp=Z,120nm,28.9s							
MK31	**Makanchi Array**	**68.37**	**325**	P	**P**	**18 56 56.4**	**+0.2**	
MKAR	**Makanchi Array**	**68.37**	**325**	P	**P**	**18 56 56.7**	**+0.5**	
	comp=Z,2.4nm,0.6s,baz=120,slow=7.6,SNR=19							
MAKZ	**Makanchi**	**68.56**	**325**	P	**P**	**18 56 57.6**	**+0.2**	
MAKZ				IAmb	IAmb	18 57 04.2		
	comp=Z,2.8nm,0.6s							
ZALV	**Zalesovo Beam**	**71.21**	**332**	P	**P**	**18 57 13.1**	**-0.3**	
	comp=Z,1.2nm,0.6s,baz=108,slow=6.1,SNR=6.1							
KURK	**Kurchatov**	**72.52**	**327**	P	**P**	**18 57 20.4**	**-1.0**	
KURK				IAmb	IAmb	18 57 36.3		
	comp=Z,7.4nm,1.4s							
VNDA	**Vanda**	**74.29**	**174**	P	**P**	**18 57 34.5**	**+3.1**	
	comp=Z,1.0nm,0.8s,baz=334,slow=5.1,SNR=5.7							
VNDA				LR	LR	19 28 29.7		
	comp=Z,44nm,21.2s,baz=353,slow=34							
BRVK	**Borovoye**	**78.18**	**327**	P	**P**	**18 57 53.0**	**-0.9**	
BRVK				IAmb	IAmb	18 58 00.5		
	comp=Z,3.8nm,1.0s							
NRIK	**Noril'sk**	**80.27**	**345**	LR	LR	19 35 54.4		
	comp=Z,46nm,19.0s,baz=176,slow=38							
KDAK	**Kodiak Island**	**85.42**	**31**	P	**P**	**18 58 32.7**	**+0.7**	
RND	**Reindeer**	**88.64**	**26**	P	**P**	**18 58 46.8**	**-0.8**	
ILAR	**Eielson Array**	**89.78**	**25**	P	**P**	**18 58 52.3**	**-0.6**	
	comp=Z,0.6nm,0.8s,baz=270,slow=4.6,SNR=5.4							
ILAR				LR	LR	19 34 30.7		
	comp=Z,23nm,21.7s,baz=228,slow=32							
LPAZ	**La Paz**	**150.03**	**135**	PKPbc	**PKiKP**	**19 05 50.1**	**+2.2**	
	comp=Z,0.9nm,0.8s,baz=297,slow=17,SNR=1.9							

MAN 22 18:50:45.2, 9°.28N×122°.12E, h22km, mb4.7, ML3.5, MS3.4, 2C, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNOP	**Candoni, Negro**	**0.74**	**43**	*e*P	Pb	18 50 59.1	-0.4
CNOP				*e*S	Sb	18 51 09.6	+0.4
SNPH	**Sibulan**	**1.10**	**87**	⇑*i*P	Pn	18 51 04.3	-1.0
SNPH				*i* S	Sb	18 51 19.4	-0.2
GUIM	**Jordan**	**1.41**	**19**	*e*P	Pn	18 51 10.0	+0.4
GUIM				*e*S	Sn	18 51 27.3	-0.2
TBP	**Tagbilaran**	**1.76**	**77**	*i* P	Pn	18 51 14.5	+0.1
TBP				*i* S	Sb	18 51 38.0	-0.6
CUYO	**Cuyo Island**	**1.90**	**325**	*e*P	Pn	18 51 16.1	-0.2
RCP	**Roxas**	**2.34**	**15**	⇑*e*P	Pb	18 51 24.8	-2.0
RCP				*e*S	Sn	18 51 51.6	+1.0
ENPP	**El Nido**	**3.27**	**306**	*e*P	Pn	18 51 35.9	+0.8

*NEIC **22** 19:04:57.0±1.8, 43°.81N±0°.03×105°.18W±0°.08, h0km±2km, ML3.2/54, Error ellipse: s-maj=10.7km s-min=3.0km az=68.0*

*IDC **22** 19:04:58.3±1.7, 43°.91N×105°.62W, h0km, mb1 3.6/4, mb1mx3.4/33, mbtmp3.3/4, ML3.3/4, Error ellipse: s-maj=44.8km s-min=9.5km az=147.0*

ISC 22 19:04:55.1±0.8, **43°.66N**±0°.04×**105°.02W**±0°.05, **h0**km, **n48,** σ**1s66**/47, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.85**	**57**		**Pb**	**19 05 12.7**	**-0.2**
K22A	**Casper**	**1.49**	**228**	Pn	**Pn**	**19 05 23.6**	**+0.2**
K22A				IAML		19 05 50.3	
	comp=E,371nm,0.3s						
K22A				IAML		19 05 50.8	
	comp=N,333nm,0.3s						
PHWY	**Pilot Hill**	**2.38**	**188**		**Pb**	**19 05 39.4**	**+0.3**
PHWY				IAML		19 06 17.8	
	comp=N,71nm,0.4s						
RWWY	**Rawlins**	**2.55**	**220**		**Pn

BGU	Big Grassy Mou	6.54	248			Pn	19 06 35.0	+2.3
Q16A	Castle Valley	6.62	226			Pn	19 06 35.8	+1.9
MTPU	Mount Pierson	7.81	226	Pn		Pn	19 06 50.8	+0.5
AGMN	Agassiz Nation	7.88	51			Pn	19 06 52.4	+1.4
ULM	Lac du Bonnet	9.08	40	Pn		Pn	19 07 10.1	+2.7
	comp=E,1.1nm,0.3s,baz=235,slow=11,SNR=3.7							
ULM				Pg			19 07 39.6	
	comp=E,0.4nm,0.3s,baz=222,slow=13,SNR=1.6							
ULM				Lg	Lg		19 09 40.3	
	comp=E,0.5nm,0.3s,baz=135,slow=19,SNR=1.8							
B35A	Bob, Littlefor	9.16	55			Pn	19 07 09.0	+0.5
FFC	Flin Flon	11.25	9			Pn	19 07 36.9	-0.2
NVAR	Mina Array Bea	11.30	247	Pn		Pn	19 07 40.7	+2.6
	comp=E,0.1nm,0.3s,baz=56,slow=11,SNR=3.2							
121A	Cookes Peak, D	11.32	192			Pn	19 07 43.0	+4.7
TX31	Lajitas Ar. Si	14.34	175			P	19 08 24.2	-2.6
YKA	Yellowknife Ar	19.68	347	P		Pn	19 09 26.2	-0.7
	comp=E,0.1nm,0.3s,baz=156,slow=13,SNR=4.2							

IDC 22 19:08:03.3±2.1, 22°76S×171°27E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.7/23, mbtmp3.6/5, ML3.1/1, Error ellipse: s-maj=103.6km s-min=28.7km az=169.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.52**	**278**	Pn	Pn	19 09 14.3	+1.2
	0.8nm,0.3s,baz=90,slow=19,SNR=15						
DZM				Sn	Sn	19 10 06.9	+0.5
	0.9nm,0.3s,baz=98,slow=18,SNR=2.3						
ASAR	**Alice Springs**	**34.29**	**261**	P	P	19 14 51.2	-0.4
	0.4nm,0.7s,baz=90,slow=10,SNR=8.4						
WRA	**Warramunga Ar**	**34.46**	**268**	P	P	19 14 51.8	-1.3
	0.5nm,0.8s,baz=96,slow=8.5,SNR=7.6						
CMAR	**Chiang Mai Arr**	**81.67**	**294**	P	P	19 20 25.4	+1.5
	0.6nm,0.7s,baz=139,slow=5.2,SNR=4.9						
NVAR	**Mina Array Bea**	**89.72**	**48**	P	P	19 21 03.3	-0.5
	0.4nm,0.4s,baz=240,slow=7.2,SNR=5.2						

*NEIC **22** 19:30:48.6±3.0, 10°.98S×161°.10E±0°.1, h30km±1km, mb4.8/35, Error ellipse: s-maj=16.8km s-min=11.6km az=51.0*

*IDC **22** 19:30:50.6±2.5, 11°.00S×161°.99E, h46km±23km, mb3.8/12, mb1 4.0/15, mb1mx3.9/29, mbtmp4.1/15, ML4.3/3, MS3.3/6, Ms1 3.3/6, ms1mx3.1/30, Error ellipse: s-maj=22.7km s-min=17.3km az=94.0*

ISC 22 19:30:49.7±0.5, 10°.98S±0°.07×162°.10E±0°.08, h36km, n63, σ1§36/58, mb4.4/31, MS3.7/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.62**	**306**	P	Pn	19 31 29.6	+0.1
	62nm,0.3s,baz=159,slow=10,SNR=16						
HNR				S	Sn	19 32 02.9	+2.8
	130nm,0.3s,baz=5.8,slow=20,SNR=12						
HNR				LR	LR	19 32 33.1	
	comp=Z,91nm,21.8s,baz=118,slow=40						
HNR	**Honiara**	**2.62**	**306**		Pn	19 31 29.2	-0.3
DZM	**Mont Dzumac**	**11.79**	**160**	P	Pn	19 33 37.0	+1.6
	1.0nm,0.3s,baz=26,slow=11,SNR=18						
DZM				S	Sn	19 35 43.1	-2.7
	0.3nm,0.3s,baz=312,slow=23,SNR=2.2						
DZM				LR	LR	19 37 34.6	
	comp=Z,208nm,20.1s,baz=330,slow=34						
DZM	**Mont Dzumac**	**11.79**	**160**		Pn	19 33 36.3	+0.9
KRVT	**Keravat (AS076**	**11.98**	**303**	P	Pn	19 33 36.9	-1.2
	4.3nm,0.3s,baz=277,slow=0.5,SNR=4.3						
KRVT				S	Sn	19 35 38.5	-12
	3.6nm,0.3s,baz=135,slow=18,SNR=1.7						
KRVT				LR	LR	19 37 55.0	
	comp=Z,63nm,21.5s,baz=87,slow=36						
CTA	**Charters Tower**	**17.74**	**237**	P	P	19 34 56.1	+1.6
	0.7nm,0.3s,baz=74,slow=13,SNR=14						
ARMA	**Armidale**	**21.66**	**205**	P	P	19 35 38.8	+1.6
ARMA				IAmb	IAmb	19 35 39.6	
	comp=Z,18nm,1.1s						
JAY	**Jayapura**	**22.84**	**290**	P	P	19 35 49.0	-1.0
	comp=Z,3.9nm,0.6s,baz=190,slow=6.2,SNR=5.7						
WR0	**Warramunga Arr**	**27.99**	**248**	P	P	19 36 36.1	-1.2
WB0	**Warramunga Arr**	**28.07**	**249**	P	P	19 36 37.1	-1.0
WB0				IAmb	IAmb	19 36 42.7	
	comp=Z,3.6nm,0.6s						
STKA	**Stephens Creek**	**28.13**	**219**	P	P	19 36 38.3	-0.1
	comp=Z,1.0nm,0.5s,baz=44,slow=9.7,SNR=5.9						
STKA				LR	LR	19 47 47.7	
	comp=Z,176nm,18.9s,baz=27,slow=36						
STKA	**Stephens Creek**	**28.13**	**219**		P	19 36 38.1	-0.4
WRAB	**Tennant Creek**	**28.16**	**248**	P	P	19 36 41.0	+2.1
WB2	**Warramunga Arr**	**28.16**	**248**	P	P	19 36 40.2	+1.4
WRA	**Warramunga Arr**	**28.17**	**248**	P	P	19 36 37.9	-1.1
	comp=Z,0.7nm,0.5s,baz=77,slow=9.0,SNR=21						
H11S2	**WAKE ISLAND Hy**	**29.63**	**9**	T	T	20 07 49.3	
	baz=188,slow=76,SNR=275						
H11S3	**WAKE ISLAND Hy**	**29.63**	**9**	T	T	20 07 48.9	
	baz=188,slow=76,SNR=193						
H11S1	**WAKE ISLAND Hy**	**29.65**	**9**	T	T	20 07 48.8	
	baz=188,slow=76,SNR=220						
ASAR	**Alice Springs**	**29.66**	**241**	P	P	19 36 50.8	-1.4
	comp=Z,0.4nm,0.4s,baz=64,slow=10.0,SNR=14						
ASAR				LR	LR	19 48 13.5	
	comp=Z,85nm,19.9s,baz=56,slow=35						
H11N1	**WAKE ISLAND Hy**	**30.86**	**9**	T	T	20 09 20.9	
	baz=188,slow=76,SNR=157						
H11N3	**WAKE ISLAND Hy**	**30.87**	**9**	T	T	20 09 21.4	
	baz=188,slow=76,SNR=164						
H11N2	**WAKE ISLAND Hy**	**30.88**	**9**	T	T	20 09 22.7	
	baz=188,slow=76,SNR=166						
TUWZ	**Tuamarina**	**32.07**	**163**	P	P	19 37 15.6	+2.4
BBOO	**Buckleboo**	**32.33**	**224**	P	P	19 37 15.4	-0.2
BBOO				IAmb	IAmb	19 37 16.2	
	comp=Z,8.0nm,0.7s						
MSWZ	**Moikau Station**	**32.45**	**161**	P	P	19 37 17.9	+1.4
KNRA	**Kununurra**	**32.75**	**258**	P	P	19 37 19.4	0.0
KNRA				IAmb	IAmb	19 37 23.3	
	comp=Z,9.5nm,0.5s						
FITZ	**Fitzroy Crossi**	**35.95**	**254**	P	P	19 37 46.1	-1.1
FITZ				IAmb	IAmb	19 37 50.6	
	comp=Z,3.9nm,0.6s						
JAGI	**Jajag, Banyuwa**	**47.29**	**269**	P	P	19 39 18.2	-1.9
JAGI				IAmb	IAmb	19 39 18.6	
	comp=Z,17nm,0.8s						
KKM	**Kota Kinabalu**	**48.70**	**288**	P	P	19 39 30.9	-0.3
KKM				IAmb	IAmb	19 39 35.2	
	comp=Z,7.6nm,1.0s						
SDHHI	**Sand Hill**	**51.70**	**55**	P	P	19 39 54.2	+0.5
WRMHI	**West Rim**	**51.70**	**54**	P	P	19 39 53.8	0.0
WRMHI				IAmb	IAmb	19 39 55.0	
	comp=Z,65nm,0.7s						
UWE	**Uwekahuna**	**51.71**	**54**	P	P	19 39 52.5	-1.4
RIM	**Rim**	**51.72**	**55**	P	P	19 39 52.6	-1.3
NPH	**North Pit**	**51.72**	**55**	P	P	19 39 53.1	-0.7
NPH				IAmb	IAmb	19 39 56.9	
	comp=Z,47nm,0.6s						
OBL	**Observatory Le**	**51.72**	**54**	P	P	19 39 53.3	-0.6
KKO	**Keanakako'i**	**51.72**	**55**	P	P	19 39 52.4	-1.5
UWB	**Uwekahuna B**	**51.73**	**54**	P	P	19 39 52.5	-1.5
UWB				IAmb	IAmb	19 39 55.0	
	comp=Z,63nm,1.0s						
BYL	**Byron's Ledge**	**51.73**	**55**	P	P	19 39 52.6	-1.4
SBLHI	**Steaming Bluff**	**51.74**	**54**	P	P	19 39 52.7	-1.3
HATHI	**Halema'uma'u T**	**51.74**	**55**	P	P	19 39 52.5	-1.5
PUH	**Pauahi**	**51.75**	**55**	P	P	19 39 53.7	-0.4
PUH				IAmb	IAmb	19 40 02.9	
	comp=Z,53nm,0.8s						
PETK	**Petropavlovsk-**	**63.94**	**357**	P	P	19 41 18.8	-0.2
	comp=Z,0.7nm,0.4s,baz=163,slow=10,SNR=3.8						
VNDA	**Vanda**	**66.53**	**180**	P	P	19 41 35.0	-0.5
	comp=Z,1.3nm,0.7s,baz=358,slow=5.4,SNR=9.2						
VNDA	**Vanda**	**66.53**	**180**	P	P	19 41 32.9	-2.6
CMAR	**Chiang Mai Arr**	**68.82**	**295**	P	P	19 41 50.7	-0.2
	comp=Z,0.5nm,0.4s,baz=123,slow=4.4,SNR=3.5						
SONM	**Songino Array**	**76.53**	**325**	P	P	19 42 36.9	+0.6
	comp=Z,0.8nm,0.6s,baz=149,slow=6.0,SNR=5.6						
YAK	**Yakutsk**	**77.06**	**345**	P	P	19 42 38.9	+0.2
YAK				IAmb	IAmb	19 42 53.7	
	comp=Z,18nm,0.4s						
BILL	**Bilibino**	**78.87**	**2**	P	P	19 42 49.6	+0.9
BILL				IAmb	IAmb	19 42 51.4	
	comp=Z,5.5nm,1.0s						
QSPA	**South Pole Qui**	**79.03**	**180**	P	P	19 42 51.0	+1.1
QSPA				IAmb	IAmb	19 42 58.9	
	comp=Z,3.1nm,1.1s						

WRH	**Wood River Hil**	**84.03**	**19**	P	P	19 43 17.2	+1.2
WRH				IAmb	IAmb	19 43 17.6	
	comp=Z,1.5nm,0.6s						
CCB	**Clear Creek Bu**	**84.23**	**19**	P	P	19 43 17.6	+0.5
CCB				IAmb	IAmb	19 43 19.8	
	comp=Z,2.3nm,0.7s						
HDA	**Harding Lake**	**84.36**	**20**	P	P	19 43 19.7	+1.9
HDA				IAmb	IAmb	19 43 21.1	
	comp=Z,4.8nm,0.6s						
IL31		**84.61**	**20**	P	P	19 43 19.9	+0.9
ILAR	**Eielson Array**	**84.61**	**20**	P	P	19 43 19.7	+0.6
	comp=Z,1.0nm,0.5s,baz=245,slow=5.2,SNR=12						
DOT	**Dot Lake**	**84.88**	**21**	P	P	19 43 21.9	+1.5
DOT				IAmb	IAmb	19 43 23.5	
	comp=Z,2.1nm,0.7s						
SCRK	**Sand Creek**	**85.10**	**21**	P	P	19 43 24.0	+2.3
SCRK				IAmb	IAmb	19 43 24.4	
	comp=Z,2.0nm,0.6s						
TIXI	**Tiksi**	**85.37**	**350**	P	P	19 43 22.7	0.0
TOLK	**Toolik Lake Re**	**86.38**	**16**	P	P	19 43 30.1	+2.2
NVAR	**Mina Array Bea**	**88.73**	**51**	P	P	19 43 39.0	-1.1
	comp=Z,0.6nm,0.7s,baz=234,slow=5.5,SNR=6.0						
INK	**Inuvik**	**91.02**	**20**	LR	LR	20 19 59.6	
	comp=Z,42nm,21.2s,baz=212,slow=32						
MKAR	**Makanchi Array**	**91.04**	**317**	P	P	19 43 48.0	-2.4
	comp=Z,0.3nm,0.5s,baz=90,slow=6.0,SNR=5.0						
YKA	**Yellowknife Ar**	**96.56**	**28**	P	P	19 44 15.7	+0.3
	comp=Z,0.3nm,0.4s,baz=256,slow=4.3,SNR=6.7						
ARCES	**ARCESS Array B**	**115.34**	**344**	PKP	**PKPdf**	19 49 27.3	+0.3
	comp=Z,3.2nm,0.9s,baz=79,slow=2.1,SNR=5.4						

*THR **22** 19:36:56.5±0.8, 32°.16N×55°.62E, h14km±9km, ML3.4*
*TEH **22** 19:36:56.5, 32°.09N×55°.58E, h14km, ML3.6*

ISC 22 19:36:56.7±0.9, 32°10N±0°.04×55°59E±0°.03, h10km, n30, σ1§29/30, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBAF	**Bafgh**	**0.51**	**183**	*e*Pg	**Pg**	19 37 06.1	-0.5
YZKH	**Yazd**	**0.90**	**289**	*e*Pg	**Pg**	19 37 13.5	-0.5
ICHK	**Chekchek**	**1.02**	**278**	*e*Pg	**Pg**	19 37 15.5	-0.8
ICHK				*e*		19 37 30.9	
IMEH	**Mehriz**	**1.09**	**230**	*e*Pg	**Pg**	19 37 17.1	-0.7
IMEH				*e*		19 37 34.1	
TPRV	**Parvadeh(Tabas**	**1.31**	**45**	*e*Pg	**Pg**	19 37 22.2	+0.4
TPRV				*e*		19 37 43.2	
ISAD	**Sadrabad**	**1.63**	**264**	*e*Pg	**Pb**	19 37 26.5	-0.6
ISAD				*e*		19 37 50.1	
KHGB	**Koh Gabri**	**1.88**	**156**	*e*Pn	**Pb**	19 37 30.7	-0.5
KHGB				*e*		19 38 00.4	
ANAR	**Anarak**	**1.91**	**305**	*e*Pn	**Pb**	19 37 31.0	-0.7
ANAR				*e*		19 37 59.9	
TKDS	**Koohdasht(Taba**	**1.98**	**40**	*e*Pn	**Pn**	19 37 31.0	+0.6
TKDS				*e*		19 38 03.4	
TABS	**Tabas**	**2.01**	**39**	*e*Pn	**Pn**	19 37 31.5	+0.8
TABS				*e*Sg	**Sb**	19 37 57.7	-0.8
TNSJ	**Nastanj**	**2.04**	**24**	*e*Pn	**Pn**	19 37 32.2	+0.9
TNSJ				*e*		19 38 08.3	
TVBK	**TV Kerman**	**2.33**	**154**	*e*Pn	**Pb**	19 37 38.2	-0.9
TVBK				*e*		19 38 17.3	
KRBR	**Kerman**	**2.34**	**154**	IAML		19 38 09.5	
	comp=N,173nm,0.6s						
KRBR				IAML		19 38 12.1	
	comp=E,150nm,0.6s						
NGRK	**Negar Kerman**	**2.64**	**158**	*e*Pn	**Pn**	19 37 41.4	+1.8
NGRK				*e*		19 38 26.2	
IRAM	**Ramesheh**	**2.75**	**265**	*e*Pn	**Pn**	19 37 42.1	+1.1
ITEG	**Tejag**	**2.78**	**73**	*e*Pn	**Pn**	19 37 42.5	+1.0
ITEG				*e*		19 38 29.7	
CHMN	**Cheshme madani**	**2.79**	**143**	*e*Pn	**Pb**	19 37 44.9	-1.9
CHMN				*e*		19 38 30.7	
IZEF	**Zefreh**	**2.87**	**287**	*e*Pn	**Pn**	19 37 44.3	+1.5
IKOO	**Kooshah**	**2.91**	**83**	*e*Pn	**Pn**	19 37 44.6	+1.3
IKOO				*e*		19 38 34.3	
BSRN	**Basiran**	**3.00**	**92**	*e*Pn	**Pn**	19 37 45.2	+0.8
IGAR	**Gharneh**	**3.02**	**277**	*e*Pn	**Pn**	19 37 46.5	+1.6
AFRZ	**Afriz**	**3.17**	**64**	*e*Pn	**Pn**	19 37 48.0	+1.2
KLNJ	**Kolanjah**	**3.58**	**253**	*e*Pn	**Pn**	19 37 55.5	+2.8
IKLH	**Kolahrood**	**3.60**	**291**	*e*Pn	**Pn**	19 37 52.9	+0.2
IMON	**Monand**	**3.60**	**71**	*e*Pn	**Pn**	19 37 54.5	+1.7
IMON				*e*		19 38 13.4	
IDAH	**Dahanechah**	**3.67**	**79**	*e*Pn	**Pn**	19 37 56.1	+2.3
IDAH				*e*		19 39 03.9	
NHDN	**Nehbandan**	**3.86**	**99**	*e*Pn	**Pn**	19 37 57.2	+0.9
SHRO	**Shahrood**	**3.90**	**5**	*e*Pn	**Pn**	19 37 57.8	+1.0
SHRT	**Shahrakht**	**4.24**	**67**	*e*Pn	**Pn**	19 38 02.7	+1.2
IVRN	**Varamin**	**4.33**	**313**	*e*Pn	**Pn**	19 38 03.9	+1.2

*IDC **22** 19:59:54.0±0.6, 2°.09N×96°.44E, h0km, mb4.4/27, mb1 4.5/29, mb1mx4.4/43, mbtmp4.4/29, ML4.4/2, MS4.1/26, Ms1 4.1/26, ms1mx4.0/48, Error ellipse: s-maj=18.4km s-min=10.8km az=41.0*

*BJI **22** 19:59:58.8±0.0, 2°.15N×96°.62E, h47km, mB4.9/54, mb4.9/65, Ms4.7/50, Ms7 4.5/47*

*DJA **22** 19:59:58.5±0.4, 2°N±2°×9°6E±°, h23km±3km, M4.7/33, mb4.9/33, mB5.2/21, MLv5.0/18, Mw(mB)4.6/21, Mwp5.1/1*

*KLM **22** 19:59:59.0, 2°.15N×96°.45E, h23km, mb4.8*

*NEIC **22** 20:00:01.6±2.0, 2°.17N±0°.07×96°.58E±0°.08, h61km±6km, mb4.8/90, Error ellipse: s-maj=13.4km s-min=8.4km az=60.0*

ISC 22 19:59:59.4±0.4, 2°10N±0°.04×96°46E±0°05, h39km±1km, n265, σ1§44/252, mb4.8/104, MS4.3/38, 4C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**0.34**	**336**	P	Pn	20 00 05.9	-2.0
SNSI				S	Sn	20 00 12.9	-1.5
GSI	**Gunungsitoli**	**1.36**	**125**	P	Pn	20 00 22.0	+0.1
GSI				S	Sn	20 00 39.7	+1.0
GSI	**Gunungsitoli**	**1.36**	**125**		Pn	20 00 21.8	-0.1
KCSI	**Kotacane, Aceh**	**1.93**	**43**	P	Pn	20 00 29.4	-0.2
KCSI				S	Sn	20 00 55.1	+2.5
MLSI	**Meulaboh, Aceh**	**2.15**	**358**	P	Pn	20 00 31.7	-1.1
MLSI				S	Sn	20 00 59.5	+1.2
RPSI	**Rantau Prapat**	**2.53**	**76**		Pn	20 00 38.1	+0.2
PSI	**Prapat**	**2.56**	**74**	Pn	Pn	20 00 38.4	0.0
	30nm,0.3s,baz=359,slow=4.1,SNR=128						
PSI				Sn	Sn	20 01 08.7	+0.4
	30nm,0.3s,baz=360,slow=17,SNR=5.9						
PSI				LR	LR	20 01 28.9	
	comp=Z,2μm,21.3s,baz=271,slow=37						
PBSI	**Pulau Batu**	**2.81**	**140**	P	Pn	20 00 43.0	+1.3
PBSI				S	Sn	20 01 12.6	-1.7
LHMI	**Lhok Sumawe**	**3.15**	**9**	P	Pn	20 00 46.6	+0.2
LHMI	**Lhok Sumawe**	**3.15**	**9**		Pn	20 00 46.4	0.0
MNSI	**Mandailing Nat**	**3.37**	**113**	P	Pn	20 00 49.7	+0.2
MNSI				S	Sn	20 01 29.4	+1.1
SISI	**Saibi**	**4.30**	**142**	P	Pn	20 01 03.1	+0.9
SISI				S	Sn	20 01 50.8	-0.3
BKNI	**Bangkinang**	**4.90**	**111**	P	Pn	20 01 12.6	+2.1
BKNI	**Bangkinang**	**4.90**	**111**	Pn	Pn	20 01 11.1	+0.6
PDSI	**Padang**	**4.99**	**127**	P	Pn	20 01 14.3	+2.5
	0.8nm3μm65nm,0.8s						
IPM	**Ipoh**	**5.13**	**62**		Pn	20 01 14.0	+0.2
IPM	**Ipoh**	**5.13**	**62**	P	Pn	20 01 14.0	+0.2
KULM	**Kulim**	**5.25**	**53**		Pn	20 01 15.1	-0.2
KULM	**Kulim**	**5.25**	**53**	P	Pn	20 01 15.0	-0.2
SDSI	**Sungai Dareh**	**5.80**	**121**	P	Pn	20 01 25.7	+2.7
	0.5nm1μm55nm,0.8s						
KRJI	**Kerinci**	**6.50**	**130**	P	Pn	20 01 34.9	+2.3
	3.3nm5μm527nm,0.9s						
MYKOM	**Kota Tinggi**	**7.39**	**92**		Pn	20 01 45.2	+0.5
MYKOM	**Kota Tinggi**	**7.39**	**92**	P	Pn	20 01 46.0	+1.3
TPRI	**Tanjung Pinang**	**8.14**	**98**	P	Pn	20 01 56.3	+1.2
	0.2nm817nm60nm,0.6s						
MNAI	**Manna**	**9.12**	**135**	P	Pn	20 02 08.9	+0.3
	169nm,0.7s						
MNAI	**Manna**	**9.12**	**135**	Pn	Pn	20 02 09.2	+0.6
LHSI	**Lahat**	**9.19**	**130**	P	Pn	20 02 11.1	+1.7
	925nm72nm,0.9s						
MDSI	**Maura Dua**	**10.11**	**130**	P	Pn	20 02 22.2	+0.2
	50nm,0.8s						
LWLI	**Liwa**	**10.37**	**133**	P	Pn	20 02 27.7	+2.0
	2μm123nm,0.7s						
KSM	**Kuching**	**13.85**	**92**		Pn	20 03 13.8	+0.5
KSM	**Kuching**	**13.85**	**92**	P	Pn	20 03 15.0	+1.7
LEM	**Lembang**	**14.23**	**129**	LR	LR	20 09 48.3	
	comp=Z,776nm,20.3s,baz=298,slow=42						

CISI	**Cisompet, Garu**	**14.84**	**130**			Pn	20 03 21.8	-4.9
PBKT	**Sadao Pong**	**15.05**	**17**			Pn	20 03 27.9	-1.5
DLV	**T Lat**	**15.42**	**50**			Pn	20 03 33.8	-0.7
DLV					IAmb	IAmb	20 03 39.9	
	comp=Z,54nm,1.0s							
SBUM	**Sibu**	**15.75**	**88**			Pn	20 03 37.0	-1.5
SBUM	**Sibu**	**15.75**	**88**	P		Pn	20 03 39.0	+0.5
CM31	**Chiang Mai Arr**	**16.44**	**8**	P		Pn	20 03 45.8	-1.5
CMAR	**Chiang Mai Arr**	**16.44**	**8**	Pn		Pn	20 03 46.5	-0.8
	comp=Z,1.0nm,0.3s,baz=203,slow=6.8,SNR=47							
CMAR				LR		LR	20 10 52.1	
	comp=Z,1μm,20.3s,baz=236,slow=40							
CMAR				ScP		**ScP**	**20 12 13.3**	**+3.3**
	comp=Z,0.0nm,0.3s,baz=221,slow=4.6,SNR=7.3							
CHTO	**Chiang Mai**	**16.79**	**8**			Pn	20 03 49.6	-2.1
KKM	**Kota Kinabalu**	**20.08**	**78**	P		P	20 04 29.4	-0.6
KKM				IAmb		IAmb	20 04 31.6	
	comp=Z,41nm,0.7s							
SLVN	**Son La**	**20.45**	**20**	P		P	20 04 32.9	-0.8
SLVN				IAmb		IAmb	20 04 37.4	
	comp=Z,48nm,1.0s							
BKB	**Balikpapan**	**20.70**	**99**	P		Pn	20 04 39.2	+0.2
	comp=Z,2μmcomp=Z,249nm,1.2s							
BKB	**Balikpapan**	**20.70**	**99**	P		P	20 04 36.7	+0.2
BWNR	**Bhubaneshwar**	**20.87**	**331**	*e*P		Pn	20 04 39.6	-1.2
QIZ	**Qiongzhong**	**21.33**	**37**	P		P	20 04 42.3	-0.9
QIZ				S		S	20 08 36.4	-1.7
QIZ				LR		LR		
	comp=Z,2μm,13.1s							
QIZ				LR		LR		
	comp=Z,2μm,12.7s							
QIZ				LR		LR		
	comp=Z,3μm,13.9s							
HYB	**Hyderabad**	**23.27**	**312**	*i* P		P	20 05 06.0	+2.3
HYB				*es*P		sP	20 05 26.5	+7.8
HYB	**Hyderabad**	**23.27**	**312**	*e*P		P	20 05 07.4	+3.6
HYB				IAmb		IAmb	20 05 15.1	
	comp=Z,7.6nm,0.7s							
MPSI	**Mapaga**	**23.49**	**94**	P		P	20 05 06.4	+0.5
	comp=Z,342nmcomp=Z,25nm,1.1s							
KOHI	**KOHIMA**	**23.60**	**355**	*e*P		P	20 05 04.2	-2.7
KOHI				IAmb		IAmb	20 05 10.6	
	comp=Z,21nm,0.5s							
KMI	**Kunming**	**23.68**	**14**	P		P	20 05 08.3	+0.5
KMI				pP		sP	20 05 22.4	-0.2
KMI				S		S	20 09 15.8	-4.6
KMI				pmax		pmax		
	comp=Z,18nm,1.1s							
KMI				pmax		pmax		
	comp=Z,250nm,4.3s							
KMI				LR		LR		
	comp=Z,410nm,17.5s							
KMI				LR		LR		
	comp=Z,710nm,17.4s							
KMI				LR		LR		
	comp=Z,840nm,15.5s							
KMI	**Kunming**	**23.68**	**14**	P		P	20 05 06.3	-1.5
KMI				IAmb		IAmb	20 05 17.5	
	comp=Z,32nm,1.0s							
SHL	**Shillong**	**23.75**	**350**	*e*P		P	20 05 06.1	-2.3
SHL				IAmb		IAmb	20 05 11.7	
SHL	**Shillong**	**23.75**	**350**	P		P	20 05 06.1	-2.3
SHL				IAmb		IAmb	20 05 08.8	
	comp=Z,57nm,1.1s							
BOK	**Bokaro**	**23.88**	**335**	*ex*		x	20 05 05.3	
BOK				*i* x		x	20 05 09.1	
BOK				eS		S	20 09 24.3	+1.2
TTSI	**Tana Toraja**	**23.90**	**102**	P		P	20 05 12.5	+2.7
SPSI	**Sidrap Palu**	**24.06**	**104**	P		P	20 05 20.2	+9.0
KAPI	**Kappang**	**24.32**	**107**	P		P	20 05 14.6	+1.0
	comp=Z,20nm,0.7s,baz=278,slow=7.6,SNR=10							
KAPI	**Kappang**	**24.32**	**107**	P		P	20 05 12.8	-0.8
KAPI				IAmb		IAmb	20 05 16.9	
	comp=Z,39nm,1.1s							
BNSI	**Bone**	**24.49**	**105**	P		P	20 05 17.9	+2.7
	comp=Z,761nmcomp=Z,34nm,1.8s							
BKSI	**Bulukumba**	**24.76**	**107**	P		P	20 05 19.2	+1.6
	comp=Z,503nmcomp=Z,39nm,1.0s							
APSI	**Ampana**	**25.36**	**97**	P		P	20 05 25.0	+1.9
	comp=Z,426nmcomp=Z,41nm,1.2s							
ZIRO	**ZIRO**	**25.41**	**355**	*e*P		P	20 05 22.2	-1.4
H08S2	**Diego Garcia H**	**25.80**	**248**	T		T	20 32 17.8	
	baz=69,slow=75							
H08S3	**Diego Garcia H**	**25.80**	**248**	T		T	20 32 09.5	
	baz=69,slow=75,SNR=3773							
H08S1	**Diego Carcia H**	**25.82**	**248**	T		T	20 32 19.2	
	baz=69,slow=75,SNR=4650							
ODAN	**Odare**	**26.11**	**341**	*e*P		P	20 05 30.8	+0.7
	comp=Z,77nm,0.6s							
GYA	**Guiyang**	**26.13**	**21**	⇑*i*P		P	20 05 29.4	-0.7
GYA				pP		sP	20 05 46.3	+1.4
GYA				PP		PnPn	20 06 15.5	+5.9
GYA				PcP		PcP	20 08 58.3	+1.3
GYA				S		S	20 09 56.3	-3.0
GYA

YULB IAmb IAmb 20 06 24.4
comp=Z,19nm,0.8s
PSAD1 Pilbara Seismi 32.72 137 P P 20 06 29.0 +0.5
PSAC1 Pilbara Seismi 32.76 137 P P 20 06 28.0 -0.9
PSAB1 Pilbara Seismi 32.79 137 P P 20 06 27.2 -2.0
PSAB1 IAmb IAmb 20 06 45.6
comp=Z,13nm,0.9s
PSAA2 Pilbara Seismi 32.80 137 P P 20 06 29.3 +0.1
PSAA1 Pilbara Seismi 32.80 137 P P 20 06 30.1 +0.9
PSAB2 Pilbara Seismi 32.81 137 P P 20 06 30.0 +0.7
PSAB2 IAmb IAmb 20 06 55.9
comp=Z,17nm,1.3s
PSA00 Pilbara Seismi 32.81 137 P P 20 06 29.8 +0.5
PSAA3 Pilbara Seismi 32.82 137 P P 20 06 29.6 +0.2
PSAB3 Pilbara Seismi 32.83 137 P P 20 06 29.6 +0.1
PSAC3 Pilbara Seismi 32.83 137 P P 20 06 29.6 0.0
PSAC2 Pilbara Seismi 32.84 137 P P 20 06 30.4 +0.9
PSAC2 IAmb IAmb 20 06 45.3
comp=Z,8.8nm,0.7s
PSAD2 Pilbara Seismi 32.92 137 P P 20 06 30.1 -0.2
PSAD2 IAmb IAmb 20 06 43.9
comp=Z,20nm,1.4s
XAN Xi'an 33.84 19 P P 20 06 37.3 -0.9
XAN PP **PnPn 20 07 53.0 +1.3**
XAN pmax pmax
comp=Z,58nm,0.8s
XAN pmax pmax
comp=Z,100nm,3.5s
XAN LR LR
comp=Z,720nm,14.0s
XAN LR LR
comp=Z,340nm,13.4s
XAN LR LR
comp=Z,1µm,13.4s
XAN Xi'an 33.84 19 P P 20 06 37.4 -0.9
LZH Lanzhou 34.50 11 eP P 20 06 43.6 -0.5
LZH pP sP 20 06 57.6 -1.7
LZH sP pP 20 07 04.0 +9.1
LZH *e*PP **PP 20 08 03.6 +0.8**
LZH pmax pmax
comp=Z,29nm,1.2s
LZH pmax pmax
comp=Z,110nm,4.9s
LZH LR LR
comp=Z,540nm,14.2s
LZH LR LR
comp=Z,480nm,14.6s
LZH LR LR
comp=Z,490nm,14.6s
FITZ Fitzroy Crossi 35.05 126 P P 20 06 48.6 -0.2
baz=35,SNR=13
FITZ Fitzroy Crossi 35.05 126 LR LR 20 22 20.7
comp=Z,178nm,21.6s,baz=312,slow=38
FITZ Fitzroy Crossi 35.05 126 P P 20 06 48.8 0.0
FITZ IAmb IAmb 20 06 49.6
comp=Z,12nm,0.9s
DHRM DHARAMSHALA 35.49 330 eP P 20 06 53.0 +0.3
DHRM IAmb IAmb 20 07 05.0
comp=Z,20nm,0.9s
KNRA Kununurra 36.49 120 P P 20 07 01.0 -0.2
baz=37,SNR=4.8
NJ2 Nanjing 36.50 33 eP P 20 07 01.8 +0.7
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 LR LR
comp=Z,590nm,9.7s
NJ2 LR LR
comp=Z,680nm,9.8s
NJ2 LR LR
comp=Z,1µm,13.1s
GTA Gaotai 37.26 4 ⇑P P 20 07 07.0 -0.6
GTA sS sS 20 13 15.3 +7.4
GTA pmax pmax
comp=Z,21nm,1.0s
GTA pmax pmax
comp=Z,94nm,5.6s
GTA LR LR
comp=Z,320nm,14.9s
GTA LR LR
comp=Z,350nm,15.6s
GTA LR LR
comp=Z,380nm,15.9s
MTN Manton Dam 37.48 114 P P 20 07 09.0 -0.6
baz=38,SNR=6.1
MTN Manton Dam 37.48 114 P P 20 07 07.6 -2.1
MTN IAmb IAmb 20 07 16.5
comp=Z,13nm,1.1s
NIL Nilore 38.17 328 P P 20 07 14.6 -0.7
KDU Kakadu 38.65 113 P P 20 07 18.8 -0.7
baz=39,SNR=4.6
TIA Tai'an 38.96 27 P P 20 07 20.8 -1.0
TIA pmax pmax
comp=Z,7.0nm,1.2s
TIA LR LR
comp=Z,530nm,13.9s
TIA LR LR
comp=Z,430nm,13.1s
TIA LR LR
comp=Z,940nm,12.6s
JOW Kunigami 39.18 48 P P 20 07 24.8 +0.9
comp=Z,2.2nm,0.6s,baz=186,slow=9.2,SNR=8.7
JOW Kunigami 39.18 48 P P 20 07 22.8 -1.0
JOW IAmb IAmb 20 07 30.8
comp=Z,15nm,1.1s
NWAO Narrogin (SRO) 39.99 152 LR LR 20 24 40.3
comp=Z,275nm,18.8s,baz=323,slow=37
H01W3 Cape Leeuwin H 40.35 157 T T 20 50 18.6
baz=333,slow=76,SNR=424
H01W2 Cape Leeuwin H 40.36 157 T T 20 50 19.4
baz=333,slow=76,SNR=563
H01W1 Cape Leeuwin H 40.37 157 T T 20 50 17.2
baz=333,slow=76,SNR=461
HHC Hu-ho-hao-te 40.92 18 eP P 20 07 38.8 +0.6
HHC pP pP 20 07 47.3 -1.8
HHC pmax pmax
comp=Z,11nm,0.9s
HHC pmax pmax
comp=Z,120nm,7.2s
HHC LR LR
comp=Z,460nm,15.3s
HHC LR LR
comp=Z,260nm,15.3s
HHC LR LR
comp=Z,390nm,14.5s
WRKA Warakurna 40.99 133 P P 20 07 39.8 +0.9
baz=41,SNR=8.2
KSH Kashi 41.66 336 P P 20 07 45.5 +1.2
KSH PP **PP 20 09 23.3 +2.2**
KSH S **S 20 13 57.3 -1.1**
KSH pmax pmax
comp=Z,26nm,1.2s
KSH pmax pmax
comp=Z,110nm,5.4s
KSH LR LR
comp=Z,130nm,4.4s
KSH LR LR
comp=Z,84nm,4.3s
KSH LR LR
comp=Z,240nm,6.7s
BJT Baijiatuau 41.77 23 P P 20 07 44.5 -0.5
BJI Beijing 41.79 23 P P 20 07 46.0 +0.8
BJI S **S 20 14 01.6 +1.5**
BJI pmax pmax
comp=Z,23nm,0.8s
BJI LR LR
comp=Z,330nm,14.9s
BJI LR LR
comp=Z,360nm,14.3s
BJI LR LR
comp=Z,250nm,26.1s
WMQ Urumqi 42.27 351 eP P 20 07 50.1 +1.0
WMQ pmax pmax
comp=Z,9.0nm,1.5s
WMQ pmax pmax
comp=Z,63nm,3.9s
WMQ LR LR
comp=Z,170nm,21.1s
WMQ LR LR
comp=Z,260nm,19.3s
WMQ LR LR
comp=Z,79nm,19.3s
WMQ Urumqi 42.27 351 P P 20 07 50.0 +0.9
SMPI Sarmi 42.43 95 P P 20 07 51.6 +0.8
comp=Z,29nm,1.1s
WB0 Warramunga Arr 43.10 122 P P 20 07 56.2 0.0
WB0 IAmb IAmb 20 07 57.5
comp=Z,11nm,0.7s
WRA Warramunga Arr 43.13 122 P P 20 07 56.8 +0.4
comp=Z,7.1nm,0.9s,baz=302,slow=8.9,SNR=74
WRA PcP **PcP 20 09 46.4 +0.5**
comp=Z,0.8nm,0.6s,baz=307,slow=2.9,SNR=2.0
WRAB Tennant Creek 43.14 122 P P 20 07 56.7 +0.2
WRAB IAmb IAmb 20 07 58.0
comp=Z,11nm,0.8s
WB2 Warramunga Arr 43.14 122 P P 20 07 56.7 +0.1
WR0 Warramunga Arr 43.31 122 P P 20 07 57.8 -0.1
WR0 IAmb IAmb 20 08 07.0
comp=Z,13nm,0.7s
GENI Genyem 43.94 96 P P 20 08 02.9 -0.1
comp=Z,1µmcomp=Z,62nm,1.0s
BTK Batken 44.38 332 P P 20 08 07.7 +1.5
ARSB Arslanbob 44.42 335 P P 20 08 07.9 +1.3
ARSB IAmb IAmb 20 08 09.0
comp=Z,25nm,0.9s
FORT Forrest 44.43 140 P P 20 08 07.3 +0.6
baz=45,SNR=15
FORT Forrest 44.43 140 P P 20 08 08.3 +1.6
JAY Jayapura 44.47 96 LR LR 20 29 40.9
comp=Z,441nm,19.2s,baz=299,slow=40
JAY Jayapura 44.47 96 P P 20 08 07.3 0.0
comp=Z,8.0nm,1.1s
AS31 Alice Springs 44.52 127 P P 20 08 08.1 +0.5
ASAR Alice Springs 44.52 127 P P 20 08 08.2 +0.6
comp=Z,2.6nm,0.6s,baz=301,slow=8.0,SNR=46
ASAR PcP **PcP 20 09 50.8 +0.2**
comp=Z,1.5nm,0.8s,baz=302,slow=4.2,SNR=4.7
ASAR ScP **ScP 20 13 43.2 +3.3**
comp=Z,0.5nm,0.8s,baz=267,slow=2.4,SNR=4.2
UCH Uchtor 44.54 337 P P 20 08 09.4 +1.5
SNR=16
JNU Nakatsue 44.63 42 P P 20 08 07.0 -1.3
JNU IAmb IAmb 20 08 17.4
comp=Z,16nm,1.0s
TKM2 Tokmak 2 44.72 338 P P 20 08 10.2 +1.1
SNR=6.7
KBK Karagaybulak 44.73 337 P P 20 08 11.4 +2.3
SNR=13
AML Almayashu 44.79 336 P P 20 08 11.1 +1.3
SNR=8.8
AAK Ala-Archa 44.89 337 LR LR 20 28 19.5
comp=Z,435nm,21.9s,baz=140,slow=38
AAK Ala-Archa 44.89 337 P P 20 08 11.5 +1.1
FRU1 Bishkek 44.99 337 P P 20 08 10.6 -0.4
FRU1 IAmb IAmb 20 08 15.0
comp=Z,23nm,1.4s
CHMS Chumysh 45.10 337 P P 20 08 13.3 +1.4
SNR=6.7
EKS2 Erkin-Say 45.20 336 P P 20 08 14.5 +1.8
SNR=8.5
USP Ospenovka 45.43 337 P P 20 08 15.9 +1.4
SNR=14
KS19 Wonju Array Si 45.54 35 P P 20 08 15.4 0.0
KS19 IAmb IAmb 20 08 16.2
comp=Z,18nm,0.9s
KSRS Korea Array 45.54 36 P P 20 08 15.2 -0.1
comp=Z,8.9nm,0.8s,baz=230,slow=9.2,SNR=48
KSRS LR LR 20 29 44.7
comp=Z,356nm,18.0s,baz=215,slow=39
TAS Tashkent 46.09 331 P P 20 08 17.4 -2.3
MK31 Makanchi Array 46.20 347 P P 20 08 20.3 -0.2
MKAR Makanchi Array 46.20 347 P P 20 08 20.8 +0.2
comp=Z,21nm,0.7s,baz=158,slow=8.4,SNR=172
MKAR LR LR 20 31 36.1
comp=Z,138nm,21.6s,baz=158,slow=41
MAKZ Makanchi 46.29 346 P P 20 08 20.8 -0.3
SONM Songino Array 46.36 9 P P 20 08 22.5 +0.6
comp=Z,11nm,1.1s,baz=190,slow=8.4,SNR=33
SONM PcP **PcP 20 09 57.8 +1.3**
comp=Z,1.6nm,0.6s,baz=194,slow=4.1,SNR=2.2
SONM LR LR 20 30 05.4
comp=Z,465nm,19.5s,baz=189,slow=39
ULN Ulaanbaatar 46.50 10 P P 20 08 22.2 -0.8
ULN IAmb IAmb 20 08 32.1
comp=Z,17nm,1.4s
KK31 Karatay Array 46.93 334 P P 20 08 26.5 +0.2
KK31 IAmb IAmb 20 08 31.3
comp=Z,9.4nm,0.9s
QIS Mount Isa 47.88 120 P P 20 08 33.4 -0.7
baz=48,SNR=3.9
GEYT Alibeck 50.06 320 P P 20 08 51.0 +0.5
comp=Z,6.2nm,0.7s,baz=149,slow=9.4,SNR=16
GEYT LR LR 20 31 51.9
comp=Z,175nm,21.4s,baz=185,slow=38
GYA0B ALIBECK ARRAY 50.06 320 P P 20 08 51.0 +0.5
GYA0B IAmb IAmb 20 09 00.8
comp=Z,12nm,0.8s
INU Inuyama 50.09 44 P P 20 08 48.8 -1.9
KURBB Kurchatov Arra 50.68 345 P P 20 08 55.4 +0.5
comp=Z,7.9nm,0.5s,baz=163,slow=7.0,SNR=110
KURK Kurchatov 50.74 345 P P 20 08 56.0 +0.6
KURK IAmb IAmb 20 08 56.6
comp=Z,13nm,0.8s
BBOO Buckleboo 51.03 136 P P 20 08 58.2 +0.4
BBOO IAmb IAmb 20 09 14.0
comp=Z,14nm,1.4s
HIA Hailar 51.04 19 P P 20 08 56.7 -0.9
HIA IAmb IAmb 20 08 58.4
comp=Z,10nm,1.0s
MDJ Mudanjiang 51.45 30 P P 20 09 01.6 +0.8
MDJ pmax pmax
comp=Z,9.0nm,0.9s
MDJ pmax pmax
comp=Z,96nm,5.3s
MDJ Mudanjiang 51.45 30 P P 20 09 00.7 -0.2
MDJ IAmb IAmb 20 09 10.3
comp=Z,14nm,1.3s
MAJO Matsushiro 51.53 43 P P 20 09 00.2 -1.4
MAJO IAmb IAmb 20 09 02.5
comp=Z,17nm,1.3s
MAT Matsushiro 51.53 43 P P 20 09 01.1 -0.5
MAT S **S 20 16 17.0 -2.6**
MJB9 Matsu-Tunnel 51.53 43 P P 20 08 59.8 -1.8
MJAR Matsushiro Arr 51.54 43 P P 20 09 02.3 +0.7
comp=Z,2.1nm,0.7s,baz=208,slow=7.1,SNR=6.8
PMG Port Moresby 51.78 104 P P 20 09 02.0 -1.8
USA0B Ussuriysk Arra 52.39 32 P P 20 09 06.4 -1.4
USRK Ussuriysk Ar. 52.39 32 P P 20 09 08.4 +0.6
comp=Z,6.3nm,0.9s,baz=214,slow=6.5,SNR=12
USRK LR LR 20 33 58.4
comp=Z,401nm,19.0s,baz=190,slow=39
ZAA0 Zalesovo Array 52.56 351 P P 20 09 08.9 +0.1
ZALV Zalesovo Beam 52.56 351 P P 20 09 09.5 +0.6
comp=Z,47nm,0.6s,baz=178,slow=7.1,SNR=222
ZALV LR LR 20 36 09.7
comp=Z,202nm,19.2s,baz=170,slow=41
HTT Hallett 53.37 135 P P 20 09 15.7 +0.3
baz=54,SNR=6.1
CTA Charters Tower 53.56 117 LR LR 20 36 08.2
comp=Z,223nm,18.3s,baz=248,slow=41
STKA Stephens Creek 54.50 132 P P 20 09 24.8 +1.3
baz=55,SNR=5.1
STKA Stephens Creek 54.50 132 P P 20 09 24.2 +0.7
comp=Z,5.1nm,0.8s,baz=323,slow=9.1,SNR=12
STKA LR LR 20 34 55.1
comp=Z,176nm,20.9s,baz=330,slow=38
STKA Stephens Creek 54.50 132 P P 20 09 24.2 +0.7
BVAR Borovoye Array 55.17 341 P P 20 09 28.1 +0.1
comp=Z,10nm,0.7s,baz=141,slow=8.7,SNR=90
BRVK Borovoye 55.23 341 P P 20 09 28.2 -0.2
BRVK IAmb IAmb 20 09 29.3
comp=Z,10.0nm,0.8s
CMSA Cobar Meteorol 57.43 130 P P 20 09 46.2 +1.7
baz=58,SNR=15
AKTO Aktyubinsk 58.10 332 P P 20 09 48.8 -0.1
comp=Z,3.6nm,0.7s,baz=129,slow=8.9,SNR=7.0
AKTO LR LR 20 37 18.8
comp=Z,105nm,20.7s,baz=140,slow=39
TBLG Delisi 60.83 318 P P 20 10 07.2 -0.7
AKH Akhalkalaki 61.53 317 P P 20 10 13.2 +0.3
AKH IAmb IAmb 20 10 23.3
comp=Z,8.0nm,0.9s
PATS Pohnpei 61.80 83 P P 20 10 14.1 -0.8
KBZ Khabaz 62.92 319 P P 20 10 22.8 +1.0
comp=Z,1.9nm,0.8s,baz=93,slow=8.1,SNR=4.4
GAZ Gaziantep 64.53 311 P P 20 10 33.2 +0.5
GAZ IAmb IAmb 20 10 43.7
comp=Z,8.2nm,0.8s
MBAR Mbarara 65.77 268 P P 20 10 40.9 -0.4
NRIK Noril'sk 67.39 357 P P 20 10 50.6 +0.2
comp=Z,2.1nm,0.5s,baz=176,slow=5.0,SNR=10
NRIK LR LR 20 44 40.2
comp=Z,140nm,20.9s,baz=175,slow=40
BRTR Keskin Array B 67.97 312 P P 20 10 54.5 -0.3
comp=Z,1.3nm,0.8s,baz=270,slow=33,SNR=4.7
BRTR LR LR 20 43 13.2
comp=Z,44nm,18.6s,baz=75,slow=38
ILGA Ilgaz 68.29 314 P P 20 10 56.7 -0.3
ILGA IAmb IAmb 20 11 07.7
comp=Z,9.6nm,1.0s
ELL Elmali 70.06 308 P P 20 11 09.2 +1.3
PETK Petropavlovsk- 71.40 34 P P 20 11 15.2 -0.3
comp=Z,1.7nm,0.7s,baz=194,slow=1.8,SNR=5.5
DZM Mont Dzumac 72.32 114 *e*LR LR 20 33 34.2
comp=Z,214nm,23.1s
TIXI Tiksi 72.44 10 P P 20 11 21.1 -0.2
comp=Z,2.1nm,0.6s,baz=231,slow=3.7,SNR=5.9
KLMR Klimovskoe 72.63 335 *e*P **P 20 11 21.5 -1.2**
KLMR AMP 20 11 32.9
comp=Z,38nm,1.4s
MAW Mawson 73.42 193 LR LR 20 41 42.2
comp=Z,51nm,18.3s,baz=28,slow=34
AKASG Malin Array Be 74.10 322 P P 20 11 31.3 -0.3
comp=Z,0.8nm,0.5s,baz=87,slow=5.0,SNR=5.8
AKBB Malin Array Si 74.10 322 P P 20 11 31.0 -0.5
AKBB IAmb IAmb 20 11 40.7
comp=Z,12nm,1.1s
BOSA Boshof 74.59 240 LR LR 20 41 12.4
comp=Z,99nm,18.7s,baz=56,slow=33
MLR Muntele Rosu 74.91 317 P P 20 11 37.1 +0.4
baz=126,slow=7.6
MLR Muntele Rosu 74.91 317 P P 20 11 37.0 +0.4
MLR IAmb IAmb 20 11 47.8
comp=Z,26nm,1.3s
BUR08 Bucovina Ar. S 75.89 319 P P 20 11 42.9 +0.8
BUR08 IAmb IAmb 20 11 53.6
comp=Z,14nm,1.4s
VTS Vitosha 76.27 313 P P 20 11 42.9 -1.5
IIGN Ignalina 77.13 327 *e*P P 20 11 58.6 +10
VSU Vasula 77.71 330 *e*P P 20 12 00.8 +8.9
PABE Paberze 78.41 326 *e*P P 20 12 04.6 +8.7
DIVS Divibare 78.83 314 P P 20 11 58.1 -0.6
FINES FINESS Array B 78.87 333 P P 20 11 58.9 +0.6
comp=Z,2.6nm,0.7s,baz=117,slow=6.6,SNR=12
FINES LR LR 20 50 49.2
comp=Z,157nm,21.8s,baz=110,slow=39
PDG Podgorica 79.15 313 P P 20 11 59.8 -0.5
PSZ Piszkesteto 79.45 318 P P 20 12 01.1 -0.8
PSZ IAmb IAmb 20 12 12.4
comp=Z,16nm,1.2s
PBUR Paburge 79.65 327 *e*P P 20 12 11.8 +9.1
VYHS Vyhne 80.24 319 *e*P P 20 12 15.8 +10
LTZ Lake Taylor 81.04 134 P P 20 12 09.0 -1.6
MORC Moravsky Berou 81.25 320 P P 20 12 12.1 +0.6
ARCES ARCESS Array B 81.45 340 P P 20 12 13.2 +1.1
comp=Z,1.5nm,0.6s,baz=95,slow=6.1,SNR=8.7
ARCES LR LR 20 51 16.6
comp=Z,124nm,20.7s,baz=113,slow=38
CONA Conrad Observa 82.15 318 *i* pP P 20 12 25.7 +9.4
comp=Z,3.9nm,1.3s
ARSA Arzberg 82.31 317 *i* P **P 20 12 18.4 +1.3**
comp=Z,9.2nm,1.6s
SOKA Soboth 82.59 317 *i* pP P 20 12 27.9 +9.2
comp=Z,12nm,1.2s
OBKA Obir 82.91 316 *i* pP P 20 12 29.9 +10
comp=Z,6.7nm,1.1s
MOA Molln 83.21 318 *i* pP P 20 12 31.5 +10
comp=Z,6.5nm,1.4s
AQU L'Aquila 83.46 312 P P 20 12 21.9 -1.4
AQU IAmb IAmb 20 12 33.9
comp=Z,13nm,1.0s
BRG Berggiesshubel 83.65 321 *e*P P 20 12 34.4 +10
comp=Z,10nm,1.3s
GEC2 GERESS Array S 83.66 319 P P 20 12 24.2 0.0
GEC2 IAmb IAmb 20 12 34.8
comp=Z,14nm,1.2s
GERES GERESS Array B 83.66 319 P P 20 12 25.4 +1.2
comp=Z,1.7nm,0.8s,baz=94,slow=4.4,SNR=15
KBA Koelnbreinsper 83.78 317 *i* pP P 20 12 34.0 +9.0
comp=Z,4.3nm,1.0s
URZ Urewera 83.95 129 LR LR 20 48 19.1
comp=Z,138nm,20.3s,baz=284,slow=35
ABTA Abfaltersbach 84.33 317 *i* pP P 20 12 37.1 +9.5
comp=Z,5.5nm,1.1s
CTI Castel Tesino 84.89 316 P P 20 12 30.1 -0.4
CTI IAmb IAmb 20 12 41.7
comp=Z,12nm,1.1s
WTTA Wattenberg 84.95 317 *i* pP P 20 12 40.2 +9.3
comp=Z,9.1nm,0.9s
SQTA Sankt Quirin 85.24 317 *i* pP P 20 12 40.8 +8.6
comp=Z,4.7nm,0.8s
MOTA Moosalm 85.32 317 *i* pP P 20 12 42.1 +9.4
comp=Z,8.1nm,1.0s
RETA Reutte 85.55 317 *i* pP P 20 12 43.5 +10
comp=Z,7.1nm,0.9s
FETA Feichten 85.56 317 *i* pP P 20 12 42.9 +9.0
comp=Z,9.0nm,1.2s
NB2 NORSAR Subarra 85.87 331 P P 20 12 43.6 +8.6
comp=Z,19nm,1.4s,baz=97,slow=5.3
NOA NORSAR Array B 85.87 331 P P 20 12 35.7 +0.7
comp=Z,1.6nm,1.1s,baz=95,slow=5.5,SNR=2.8
FUORN Ofenpass-Fuorn 85.87 316 P P 20 12 34.6 -1.0
FUORN IAmb IAmb 20 12 46.3
comp=Z,12nm,1.1s
DAVOX Davos/Dischmat 86.14 317 P P 20 12 38.0 +1.1
DAVA Damuels 86.15 317 *i* pP P 20 12 46.8 +10
comp=Z,8.2nm,0.8s
VNDA Vanda 86.84 169 P P 20 12 39.8 +0.4
comp=Z,0.6nm,0.9s,baz=293,slow=7.8,SNR=2.6
VNDA LR LR 20 47 47.9
comp=Z,92nm,18.4s,baz=324,slow=33
WLF Walferdange 88.62 319 P P 20 12 48.1 -0.4
GAMB Gambell 88.95 26 P P 20 12 48.7 -0.9
TORD Torodi Ar. Bea 94.17 283 P P 20 13 17.0 +2.1
comp=Z,1.0nm,1.1s,baz=131,slow=7.0,SNR=3.1
TORD LR LR 20 54 47.4
comp=Z,121nm,18.8s,baz=105,slow=35
BPAW Bear Paw Mtn. 97.80 24 P P 20 13 30.3 -0.2
BPAW IAmb IAmb 20 13 41.3
comp=Z,6.1nm,1.2s
YKA Yellowknife Ar 111.42 15 PP PP 20 19 11.3 +1.9
comp=Z,0.3nm,0.7s,baz=328,slow=6.4,SNR=5.6
YKA PKKPab **PKKPab 20 29 33.1 -1.8**
comp=Z,0.3nm,0.8s,baz=135,slow=3.8,SNR=4.0
TBI Tubuai 112.89 114 *e*LR LR 20 52 16.6
comp=Z,165nm,26.5s
PPT2 Papeete2 113.45 108 *e*LR LR 20 52 34.3
comp=Z,119nm,23.2s
PDAR Pinedale Array 129.55 25 PKP PKiKP 20 19 05.8 +0.2
comp=Z,0.4nm,0.6s,baz=338,slow=2.1,SNR=3.5
R11A Troy Canyon, C 130.06 33 PKPdf PKPdf 20 19 06.2 +0.3
R49A Shelbyville 139.78 2 PKPdf 20 19 20.9 -2.8
TXAR Lajitas Array 143.28 30 PKP PKPdf 20 19 31.4 +1.0
comp=Z,0.4nm,0.6s,baz=298,slow=1.9,SNR=4.5
152A Waverly Hall 145.40 2 PKPbc 20 19 30.9 -2.9

IDC ***22****20:14:41.7±4.5,21.90N±143.05E,h289km±45km,*
mb3.3/13,mb1 3.4/14,mb1mx3.1/59,mbtmp4.0/14,Error
ellipse: s-maj=31.4km s-min=13.1km az=74.0
ISC 22 20:14:42.6±0.9,21.9N±0.1×143.0E±0.2,h300km,n14,
σ0.883/14,mb3.5/12,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JNU	**Nakatsue**	**15.51**	**319**	P		P	**Pn**	**20 18 05.8**	**-1.3**
	0.5nm,0.3s,baz=198,slow=3.2,SNR=1.7								
KSRS	**Korea Array**	**20.27**	**323**	P		P	**P**	**20 18 56.2**	**+0.1**
	3.9nm,0.5s,baz=146,slow=9.0,SNR=26								
PMG	**Port Moresby**	**31.34**	**172**	P		P	**P**	**20 20 34.6**	**-1.3**
	15nm,0.9s,baz=329,slow=5.9,SNR=3.6								
SONM	**Songino Array**	**39.09**	**320**	P		P	**P**	**20 21 41.3**	**-0.2**
	0.6nm,0.4s,baz=132,slow=8.0,SNR=6.8								
WRA	**Warramunga Arr**	**42.39**	**192**	P		P	**P**	**20 22 09.4**	**+1.0**
	0.2nm,0.2s,baz=9.9,slow=7.9,SNR=20								
ZALV	**Zalesovo Beam**	**53.96**	**322**	P		P	**P**	**20 23 35.6**	**-0.3**
	1.1nm,0.5s,baz=117,slow=9.0,SNR=4.7								
MKAR	**Makanchi Array**	**54.45**	**313**	P		P	**P**	**20 23 39.7**	**+0.2**
	0.3nm,0.5s,baz=94,slow=8.0,SNR=6.6								
KURBB	**Kurchatov Arra**	**57.27**	**317**	P		P	**P**	**20 23 59.1**	**-0.2**
	0.8nm,0.6s,baz=92,slow=7.5,SNR=17								
ILAR	**Eielson Array**	**61.99**	**27**	P		P	**P**	**20 24 30.9**	**-0.2**
	0.3nm,0.7s,baz=252,slow=4.6,SNR=2.6								
BVAR	**Borovoye Array**	**62.42**	**319**	P		P	**P**	**20 24 34.8**	**+0.6**
	0.6nm,0.4s,baz=98,slow=7.7,SNR=9.2								
YKA	**Yellowknife Ar**	**76.41**	**28**	P		P	**P**	**20 25 59.5**	**+0.4**
	0.2nm,0.5s,baz=293,slow=5.5,SNR=3.9								
ARCES	**ARCESS Array B**	**78.71**	**341**	P		P	**P**	**20 26 11.7**	**+0.1**
	2.3nm,0.9s,baz=76,slow=8.4,SNR=5.6								

KBZ Khabaz 82.12 314 P **P** **20 26 31.6 +1.5**
1.7nm,0.8s,baz=143,slow=5.1,SNR=2.4
FINES FINESS Array B 82.95 334 P **P** **20 26 33.5 -0.6**
1.7nm,0.4s,baz=64,slow=4.9,SNR=26

NEIC ***22*** *20:17:21.9±2.3,9.7°11N±0.7°08×122.4E±0.1,h10km±1km, mb4.8/61, Error ellipse: s-maj=19.8km s-min=12.4km az=248.0*
BJI ***22*** *20:17:21.8±0.0,8.7°73N×122.7°40E,h40km,mB5.0/37, mb4.6/51,Ms4.5/35,Ms7 4.3/31*
MAN ***22*** *20:17:23.6,9.2°20N×122.7°06E,h57km,mb5.3,ML4.3,MS4.5*
MAN Intensit III - Basay Negros Oriental; Sipalay Negros Occidental; Intensity II - Dumaguete City; Tayasan Negros Oriental; Intensity I - Iloilo City.
KLM ***22*** *20:17:27.0,9.7°19N×122.7°35E,h44km,mb4.7*
DJA ***22*** *20:17:27.8±0.9,9.7°N±4.1×12.7°2E±5.1°,h36km±7km,M4.6/43, mb4.9/43,mB5.2/19,MLv4.7/1,Mw(mB)4.5/19,Mwp5.9/2*
IDC ***22*** *20:17:28.8±1.5,9.2°5N×122.3°3E,h59km±13km,mb4.1/34, mb1 4.2/38,mb1mx4.1/56,mbtmp4.4/38,MS3.9/19, Ms1 3.9/19,ms1mx3.7/43,Error ellipse: s-maj=14.5km s-min=7.9km az=71.0*
ISC 22 20:17:28.3±0.7,9.2°2N±0.0°3×122.1°2E±0.0°3,h52km±6km, n217,σ1°98/235,mb4.7/78,MS4.0/22,7C-5D,Negros

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**1.11**	**83**	*iP*		**Pn**		**20 17 43.5**	**-4.2**
SNPH				*i*	S		**Sn**	**20 17 59.4**	**-2.7**
DCPH	**Dipolog City**	**1.37**	**117**	*eP*		**Pn**		**20 17 46.7**	**-4.5**
DCPH				*e*	S		**Sn**	**20 18 03.9**	**-4.4**
JAP	**San Jose, Anti**	**1.53**	**354**	*iP*		**Pn**		**20 17 49.8**	**-3.6**
TBP	**Tagbilaran**	**1.79**	**75**	*i*	P	**Pn**		**20 17 53.6**	**-3.2**
TBP				*i*	S	**Sn**		**20 18 23.1**	**+4.7**
PAGZ	**Pagadian**	**1.85**	**137**	*eP*		**Pn**		**20 17 54.6**	**-3.0**
PAGZ				*eS*		**Sn**		**20 18 17.1**	**-2.8**
CUYO	**Cuyo Island**	**1.95**	**326**	*eP*		**Pn**		**20 17 56.1**	**-3.0**
CUYO				*eS*		**Sn**		**20 18 19.0**	**-3.4**
LLP	**Lapu-Lapu**	**2.13**	**59**	*iP*		**Pn**		**20 17 58.5**	**-2.9**
LLP				*i*	S	**Sn**		**20 18 24.6**	**-2.2**
ZCP	**Zamboanga City**	**2.27**	**181**	*iP*		**Pn**		**20 18 00.1**	**-3.3**
ZCP				*i*	S	**Sn**		**20 18 26.7**	**-3.5**
RCP	**Roxas**	**2.41**	**15**	*eP*		**Pn**		**20 18 03.5**	**-1.8**
RCP				*eS*		**Sn**		**20 18 33.0**	**-0.7**
KALP	**Kalibo**	**2.46**	**5**	*eP*		Pn		20 18 14.0	+8.0
CGP	**Cagayan de Oro**	**2.66**	**106**	*eP*		**Pn**		**20 18 06.5**	**-2.3**
CGP				*i*	S	**Sn**		**20 18 42.4**	**+2.6**
MSLP	**Maasin**	**2.85**	**71**	*eP*		**Pn**		**20 18 09.2**	**-2.3**
MSLP				*eS*		**Sn**		**20 18 45.1**	**+0.5**
CTBH	**Cotabato--PC H**	**2.89**	**133**	*eP*		**Pn**		**20 18 09.2**	**-2.8**
OCLP	**Ormoc**	**3.06**	**53**	*eP*		**Pn**		**20 18 11.3**	**-2.9**
OCLP				*eS*		**Sn**		**20 18 45.6**	**-4.0**
ENPP	**El Nido**	**3.31**	**307**	*eP*		**Pn**		**20 18 15.0**	**-2.6**
ENPP				*eS*		**Sn**		**20 18 51.5**	**-4.2**
BUSP	**Coron**	**3.35**	**326**	*eP*		**Pn**		**20 18 15.1**	**-3.1**
BUSP				*eS*		**Sn**		**20 18 52.9**	**-3.9**
SJMP	**San Jose**	**3.37**	**343**	*eP*		**Pn**		**20 18 15.7**	**-2.8**
SJMP				*eS*		**Sn**		**20 18 53.4**	**-3.9**
MMPH	**Masbate**	**3.46**	**25**	*eP*		Pn		20 18 24.5	+4.8
MMPH				*eS*		**Sn**		**20 19 01.7**	**+2.3**
KCP	**Kidapawan**	**3.67**	**126**	*iP*		**Pn**		**20 18 23.3**	**+0.6**
KCP				*i*	S	**Sn**		**20 19 08.0**	**+3.2**
DAV	**Davao City (W)**	**4.04**	**122**	P		**Pn**		**20 18 27.7**	**0.0**
	58nm,0.3s,baz=264,slow=5.4,SNR=1.7								
DAV				LR		LR		20 19 42.0	
	comp=Z,978nm,20.1s,baz=289,slow=34								
DAV	**Davao City (W)**	**4.04**	**122**	*eP*		**Pn**		**20 18 27.5**	**-0.2**
CNP	**Catarman**	**4.12**	**37**	*eP*		**Pn**		**20 18 26.4**	**-2.4**
CNP				*eS*		Sn		20 19 04.6	-11
BOAC	**Boac**	**4.22**	**356**	*eP*		**Pn**		**20 18 27.7**	**-2.5**
BOAC				*eS*		**Sn**		**20 19 15.9**	**-2.4**
BATP	**Bataraza**	**4.28**	**265**	*eP*		Pn		20 18 25.9	-5.1
BATP				*eS*		**Sn**		**20 19 15.6**	**-4.1**
LUBP	**Lubang**	**4.85**	**338**	*eP*		**Pn**		**20 18 36.6**	**-2.2**
LUBP				*eS*		**Sn**		**20 19 29.9**	**-3.8**
LQP	**Lukban**	**4.90**	**353**	*eP*		**Pn**		**20 18 41.6**	**+2.0**
TGY	**Tagaytay City**	**4.99**	**347**	P		**Pn**		**20 18 41.5**	**+0.6**
	42nm,0.3s,baz=119,slow=5.9,SNR=2.8								
TGY					S		**Sn**	**20 19 39.1**	**+1.8**
	39nm,0.3s,baz=339,slow=17,SNR=1.3								
TGY					LR	LR		20 20 26.3	
	comp=Z,421nm,19.9s,baz=150,slow=35								
KKM	**Kota Kinabalu**	**6.64**	**242**			**Pn**		**20 19 02.2**	**-1.3**
SPMM	**Sapulut**	**7.18**	**232**	P		**Pn**		**20 19 12.0**	**+1.2**
MPSI	**Mapaga**	**9.09**	**194**	P		**Pn**		**20 19 34.9**	**-2.1**
	18nm,0.7s								
APSI	**Ampana**	**10.07**	**183**	P		**Pn**		**20 19 52.0**	**+1.6**
	380nm21nm,0.9s								
LUWI	**Luwuk**	**10.21**	**176**	P		**Pn**		**20 19 55.0**	**+2.7**
	2µm94nm,1.0s								
LUWI	**Luwuk**	**10.21**	**176**			**Pn**		**20 19 49.7**	**-2.6**
LBMI	**Labuha**	**11.16**	**151**	P		**Pn**		**20 20 06.4**	**+1.1**
	1µm40nm,1.6s								
SANI	**Sanana**	**11.84**	**161**	P		**Pn**		**20 20 13.0**	**-1.6**
	826nm37nm,0.8s								
SBUM	**Sibu**	**11.92**	**236**			**Pn**		**20 20 15.2**	**-0.5**
SBUM	**Sibu**	**11.92**	**236**	P		**Pn**		**20 20 16.0**	**+0.4**
TTSI	**Tana Toraja**	**12.39**	**191**	P		**Pn**		**20 20 25.6**	**+3.5**
	18nm,1.0s								
SPSI	**Sidrap Palu**	**13.30**	**190**	P		**P**		**20 20 45.2**	**+2.5**
SIJI	**Sorong**	**13.54**	**137**	P		**Pn**		**20 20 35.6**	**-2.3**
	0.3nm,0.3s,baz=120,slow=20,SNR=1.8								
SIJI					LR	LR		20 25 53.6	
	comp=Z,499nm,21.5s,baz=320,slow=38								
BNSI	**Bone**	**13.67**	**189**	P		P		20 20 58.2	+11
TPUB	**Ta-pu**	**14.08**	**354**			**Pn**		**20 20 42.8**	**-2.3**
KAPI	**Kappang**	**14.33**	**190**	P		**Pn**		**20 20 49.5**	**+1.1**
	0.3nm,0.3s,baz=9.1,slow=7.8,SNR=3.7								
KAPI					LR	LR		20 26 23.2	
	comp=Z,502nm,19.5s,baz=12,slow=37								
SSLB	**Suanglung**	**14.53**	**356**	P		**P**		**20 20 56.1**	**-0.3**
QIZ	**Qiongzhong**	**15.38**	**311**	P		**Pn**		**20 21 00.8**	**-1.3**
QIZ				S		**Sn**		**20 23 55.0**	**+3.5**
QIZ				LR	LR				
	comp=N,1µm,15.0s								
QIZ				LR	LR				
	comp=E,550nm,18.4s								
QIZ				LR	LR				
	comp=Z,1µm,15.7s								
PLAI	**Plampang**	**18.44**	**194**	P		**Pn**		**20 21 43.9**	**+3.6**
	81nm,0.8s								
SOEI	**Soe**	**18.97**	**173**	P		**Pn**		**20 21 49.3**	**+2.6**
	84nm,0.9s								
SOEI	**Soe**	**18.97**	**173**	P		**P**		**20 21 45.0**	**-0.7**
SOEI				IAmb		IAmb		20 22 07.4	
	comp=Z,70nm,0.9s								
TPRI	**Tanjung Pinang**	**19.35**	**246**	P		Pn		20 22 05.0	+14
BATI	**Baumata**	**19.36**	**175**	P		**Pn**		**20 21 50.8**	**-0.5**
	comp=Z,2.9nm,0.3s,baz=237,slow=0.5,SNR=11								
BATI	**Baumata**	**19.36**	**175**	P		**Pn**		**20 21 50.7**	**-0.5**
	comp=Z,1µmcomp=Z,90nm,0.7s								
MYKOM	**Kota Tinggi**	**19.61**	**249**	P		**P**		**20 21 53.5**	**+1.0**
MYKOM				IAmb		IAmb		20 22 00.4	
	comp=Z,28nm,0.8s								
MYKOM	**Kota Tinggi**	**19.61**	**249**	P		**Pn**		**20 21 54.0**	**-0.3**
SMPI	**Sarmi**	**19.93**	**123**	P		**Pn**		**20 21 59.2**	**+1.1**
	comp=Z,24nm,1.1s								
WOJI	**Wonogiri, Jawa**	**20.28**	**214**	P		Pn		20 22 02.7	+0.5
	comp=Z,96nm,0.9s								
SLVN	**Son La**	**21.27**	**307**	P		**P**		**20 22 10.5**	**0.0**
IPM	**Ipoh**	**21.46**	**259**	P		**P**		**20 22 13.9**	**+1.3**
IPM	**Ipoh**	**21.46**	**259**	P		**P**		**20 22 16.0**	**+3.5**
GENI	**Genyem**	**21.48**	**122**	P		**P**		**20 22 19.2**	**+6.5**
LEM	**Lembang**	**21.51**	**223**	P		**P**		**20 22 15.1**	**+1.8**
	comp=Z,21nm,0.7s,baz=311,slow=19,SNR=3.4								
LEM					LR	LR		20 31 30.3	
	comp=Z,679nm,19.8s,baz=3.5,slow=39								
KULM	**Kulim**	**21.64**	**261**	P		**P**		**20 22 14.9**	**+0.4**
KULM	**Kulim**	**21.64**	**261**	P		**P**		**20 22 15.0**	**+0.4**
PBKT	**Sadao Pong**	**21.86**	**292**	P		**P**		**20 22 17.8**	**+1.1**
PBKT				IAmb		IAmb		20 22 21.3	
	comp=Z,19nm,0.7s								
JAY	**Jayapura**	**21.89**	**121**	P		**P**		**20 22 16.8**	**-0.4**
	comp=Z,4.8nm,0.8s,baz=15,slow=4.6,SNR=4.1								
CISI	**Cisompet, Garu**	**21.92**	**221**	P		**P**		**20 22 20.2**	**+2.7**
MDSI	**Maura Dua**	**22.47**	**233**	P		**P**		**20 22 25.0**	**+1.6**
	comp=Z,479nmcomp=Z,34nm,0.9s								
GYA	**Guiyang**	**22.55**	**321**	*eP*		**P**		**20 22 25.8**	**+1.5**
GYA				pP		pP		20 22 37.5	+2.3
GYA				PP		**PnPn**		**20 22 55.0**	**+5.5**
GYA				sS		Sn		20 26 45.8	+1.4
GYA				SS		**SnSn**		**20 27 11.8**	**+11**
GYA						pmax	pmax		
	comp=Z,10.0nm,0.7s								
GYA						pmax	pmax		
	comp=Z,110nm,4.3s								
GYA						LR	LR		
	comp=Z,390nm,15.8s								
GYA						LR	LR		
	comp=Z,410nm,15.6s								
GYA						LR	LR		
	comp=Z,450nm,16.0s								
LHSI	**Lahat**	**22.61**	**236**		P	**P**		**20 22 28.2**	**+3.3**
	comp=Z,1µmcomp=Z,59nm,0.9s								
BKNI	**Bangkinang**	**22.77**	**248**		P	**P**		**20 22 29.0**	**+2.5**
	comp=Z,1µmcomp=Z,100nm,0.8s								
BKNI	**Bangkinang**	**22.77**	**248**		P	**P**		**20 22 28.0**	**+1.5**
LWLI	**Liwa**	**22.89**	**233**		P	**P**		**20 22 30.7**	**+2.8**
	comp=Z,2µmcomp=Z,101nm,0.9s								
NJ2	**Nanjing**	**22.92**	**353**	*eP*		**P**		**20 22 27.9**	**-0.1**
NJ2						pmax	pmax		
	comp=Z,23nm,0.5s								
KRJI	**Kerinci**	**23.45**	**242**		P	**P**		**20 22 35.9**	**+2.5**
	comp=Z,4µmcomp=Z,154nm,2.0s								
MTN	**Manton Dam**	**23.68**	**158**		P	**P**		**20 22 34.4**	**-1.0**
	baz=24,SNR=3.4								
MTN	**Manton Dam**	**23.68**	**158**		P	**P**		**20 22 35.7**	**+0.3**
MTN						IAmb	IAmb	20 22 49.2	
	comp=Z,22nm,0.9s								
PDSI	**Padang**	**23.80**	**246**		P	**P**		**20 22 38.2**	**+1.6**
	comp=Z,656nmcomp=Z,57nm,1.0s								
PSI	**Prapat**	**23.92**	**256**		P	**P**		**20 22 39.1**	**+1.4**
	comp=Z,43nm,0.8s,baz=0.4,slow=2.9								
PSI						LR	LR	20 32 53.9	
	comp=Z,146nm,18.8s,baz=271,slow=38								
MNSI	**Mandailing Nat**	**23.94**	**251**		P	**P**		**20 22 39.0**	**+1.2**
	comp=Z,14µmcomp=Z,826nmcomp=Z,62nm,0.9s								
RPSI	**Rantau Prapat**	**23.95**	**256**		P	**P**		**20 22 38.9**	**+1.0**
RPSI	**Rantau Prapat**	**23.95**	**256**		P	**P**		**20 22 39.1**	**+1.2**
ENH	**Enshi**	**24.04**	**332**		P	**P**		**20 22 39.6**	**+0.9**
KDU	**Kakadu**	**24.07**	**155**		P	**P**		**20 22 38.7**	**-0.2**
	baz=24,SNR=6.1								
CM31	**Chiang Mai Arr**	**24.28**	**295**		P	**P**		**20 22 42.1**	**+1.2**
CMAR	**Chiang Mai Arr**	**24.28**	**295**		P	**P**		**20 22 42.0**	**+1.0**
	comp=Z,4.8nm,0.8s,baz=129,slow=8.5,SNR=40								
CMAR						PcP	**PcP**	**20 26 21.4**	**+1.3**
	comp=Z,1.2nm,0.8s,baz=132,slow=0.6,SNR=7.8								
CMAR						LR	LR	20 32 07.2	
	comp=Z,603nm,18.8s,baz=148,slow=36								
KMI	**Kunming**	**24.30**	**313**		P	**P**		**20 22 42.3**	**+1.0**
KMI					pP	pP		20 22 54.1	+0.7
KMI					S	**S**		**20 26 54.8**	**-2.2**
KMI						pmax	pmax		
	comp=Z,10.0nm,0.9s								
KMI						pmax	pmax		
	comp=Z,280nm,10.2s								
KMI						LR	LR		
	comp=Z,540nm,14.7s								
KMI						LR	LR		
	comp=Z,450nm,19.2s								
KMI						LR	LR		
	comp=Z,720nm,17.9s								
CHTO	**Chiang Mai**	**24.39**	**296**		P	**P**		**20 22 41.6**	**-0.4**
CHTO						IAmb	IAmb	20 22 52.8	
	comp=Z,47nm,1.7s								
KCSI	**Kotacane, Aceh**	**24.84**	**258**		P	**P**		**20 22 46.6**	**+0.5**
	comp=Z,666nmcomp=Z,82nm,0.8s								
JNU	**Nakatsue**	**25.13**	**18**		P	**P**		**20 22 47.0**	**-1.6**
	comp=Z,2.3nm,0.5s,baz=262,slow=4.7,SNR=4.9								
JNU						LR	LR	20 32 28.7	
	comp=Z,308nm,20.9s,baz=222,slow=36								
JNU	**Nakatsue**	**25.13**	**18**		IAmb	IAmb		20 23 03.1	
	comp=Z,17nm,1.1s								
SISI	**Saibi**	**25.22**	**247**		P	**P**		**20 22 51.2**	**+1.7**
	comp=Z,19µmcomp=Z,22nm,0.8s								
PBSI	**Pulau Batu**	**25.46**	**250**		P	**P**		**20 22 54.0**	**+2.3**
	comp=Z,131nm,0.9s								
KNRA	**Kununurra**	**25.59**	**165**		P	**P**		**20 22 53.6**	**+0.8**
	baz=26,SNR=6.8								
KNRA	**Kununurra**	**25.59**	**165**		P	**P**		**20 22 52.9**	**+0.1**
GSI	**Gunungsitoli**	**25.65**	**254**		P	**P**		**20 22 53.9**	**+0.5**
	comp=Z,359nm,0.8s								
GSI	**Gunungsitoli**	**25.65**	**254**		P	**P**		**20 22 53.7**	**+0.2**
JCJ	**Chichijima**	**26.00**	**44**		LR	LR		20 33 17.9	
	comp=Z,298nm,18.1s,baz=260,slow=37								
FITZ	**Fitzroy Crossi**	**27.36**	**173**		P	**P**		**20 23 08.4**	**-0.3**
	baz=28,SNR=5.1								
FITZ	**Fitzroy Crossi**	**27.36**	**173**		P	**P**		**20 23 07.9**	**-0.9**
	comp=Z,2.7nm,0.9s,baz=34,slow=6.3,SNR=5.2								
FITZ	**Fitzroy Crossi**	**27.36**	**173**		P	**P**		**20 23 08.1**	**-0.6**
CD2	**Chengdu**	**27.54**	**324**	*iP*		**P**		**20 23 10.5**	**+0.1**
CD2						pmax	pmax		
	comp=Z,20nm,0.6s								
KSRS	**Korea Array**	**28.60**	**10**		P	**P**		**20 23 19.1**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=186,slow=10.0,SNR=7.4								
JHJ	**Hachijo jima 2**	**28.84**	**32**		LR	LR		20 32 56.9	
	comp=Z,387nm,19.7s,baz=272,slow=32								
PSA00	**Pilbara Seismi**	**30.68**	**184**		P	**P**		**20 23 37.9**	**-0.3**
PSA00						IAmb	IAmb	20 23 49.0	
	comp=Z,16nm,0.8s								
MJAR	**Matsushiro Arr**	**30.88**	**26**		LR	LR		20 34 27.2	
	comp=Z,373nm,21.2s,baz=210,slow=33								
WB0	**Warramunga Arr**	**31.24**	**157**		P	**P**		**20 23 41.6**	**-1.6**
WRAB	**Tennant Creek**	**31.37**	**157**		P	**P**		**20 23 42.9**	**-1.5**
WRAB						IAmb	IAmb	20 23 44.6	
	comp=Z,22nm,1.4s								
WRA	**Warramunga Arr**	**31.38**	**158**		P	**P**		**20 23 43.1**	**-1.3**
	comp=Z,3.8nm,1.0s,baz=331,slow=11,SNR=21								
WRA						PcP	**PcP**	**20 26 35.4**	**-1.9**
	comp=Z,1.4nm,0.8s,baz=340,slow=2.9,SNR=5.1								
WRA						ScP	**ScP**	**20 30 17.2**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=342,slow=3.3,SNR=1.3								
WB2	**Warramunga Arr**	**31.38**	**157**		P	**P**		**20 23 43.1**	**-1.3**
WB2						IAmb	IAmb	20 23 45.4	
	comp=Z,11nm,1.0s								
WR0	**Warramunga Arr**	**31.47**	**157**		P	**P**		**20 23 44.4**	**-0.7**
WR0						IAmb	IAmb	20 23 55.7	
	comp=Z,29nm,1.6s								
LZH	**Lanzhou**	**31.50**	**331**	*eP*		**P**		**20 23 46.9**	**+1.4**
LZH					pP	pP		20 23 58.1	+0.4
LZH					sP	sP		20 24 04.0	+0.6
LZH						pmax	pmax		
	comp=Z,19nm,1.0s								
LZH						LR	LR		
	comp=Z,490nm,13.0s								
LZH						LR	LR		
	comp=Z,420nm,14.1s								
LZH						LR	LR		
	comp=Z,580nm,13.8s								
HHC	**Hu-ho-hao-te**	**32.87**	**345**	*eP*		**P**		**20 23 57.0**	**-0.4**
HHC						pmax	pmax		
	comp=Z,13nm,0.8s								
HHC						pmax	pmax		
	comp=Z,53nm,6.6s								
HHC						LR	LR		
	comp=Z,280nm,18.7s								
HHC						LR	LR		
	comp=Z,160nm,18.7s								
HHC						LR	LR		
	comp=Z,160nm,17.0s								
SHL	**Shillong**	**33.00**	**303**		P	**P**		**20 23 58.7**	**-0.1**
SHL						IAmb	IAmb	20 24 04.3	
	comp=Z,8.0nm,0.7s								
QIS	**Mount Isa**	**34.22**	**150**		P	**P**		**20 24 09.2**	**-0.1**
	baz=34,SNR=4.3								
WRKA	**Warakurna**	**34.57**	**170**		P	**P**		**20 24 11.9**	**-0.4**
	baz=35,SNR=11								
AS31	**Alice Springs**	**34.65**	**161**		P	**P**		**20 24 12.6**	**-0.4**
ASAR	**Alice Springs**	**34.65**	**161**		P	**P**		**20 24 12.5**	**-0.5**
	comp=Z,5.0nm,0.6s,baz=340,slow=7.2,SNR=120								
ASAR						PcP	**PcP**	**20 26 43.8**	**-2.6**
	comp=Z,2.0nm,0.7s,baz=339,slow=2.7,SNR=7.6								
ASAR						ScP	**ScP**	**20 30 25.4**	**-2.1**
	comp=Z,0.4nm,1.0s,baz=353,slow=5.6,SNR=1.9								
LSA	**Lhasa**	**35.41**	**309**		P	**P**		**20 24 20.8**	**+0.8**
MEEK	**Meekatharra**	**35.80**	**185**		P	**P**		**20 24 22.5**	**-0.3**
	baz=36,SNR=3.3								
MDJ	**Mudanjiang**	**35.86**	**9**		P	**P**		**20 24 23.0**	**-0.1**
MDJ					pP	pP		20 24 35.0	-0.6
MDJ					S	**S**		**20 29 56.4**	**-0.8**
MDJ					sS	sS		20 30 16.0	-2.2
MDJ						pmax	pmax		
	comp=Z,10.0nm,0.9s								
MDJ						pmax	pmax		
	comp=Z,70nm,4.2s								
MDJ						LR	LR		
	comp=Z,380nm,12.7s								
MDJ						LR	LR		
	comp=Z,460nm,14.1s								
MDJ						LR	LR		
	comp=Z,600nm,15.3s								
MDJ	**Mudanjiang**	**35.86**	**9**		P	**P**		**20 24 22.7**	**-0.4**
MDJ					IAmb	IAmb		20 24 28.8	
	comp=Z,14nm,0.9s								
USA0B	**Ussuriysk Arra**	**35.89**	**12**		P	**P**		**20 24 23.1**	**-0.2**
USA0B					IAmb	IAmb		20 24 40.8	
	comp=Z,25nm,1.3s								
USRK	**Ussuriysk Ar.**	**35.89**	**12**		P	**P**		**20 24 23.2**	**-0.2**
	comp=Z,7.1nm,0.8s,baz=196,slow=7.9,SNR=13								
GTA	**Gaotai**	**36.08**	**330**	*eP*		**P**		**20 24 26.5**	**+1.3**
GTA				pP		pP		20 24 34.5	-3.0
GTA				sP		pwP		20 24 39.0	-3.8
GTA						pmax	pmax		
	comp=Z,2.0nm,1.1s								
GTA						LR	LR		
	comp=Z,260nm,15.6s								
GTA						LR	LR		
	comp=Z,310nm,13.3s								
GTA						LR	LR		
	comp=Z,430nm,14.0s								
TAPN	**Taplejung**	**37.13**	**304**	*eP*		**P**		**20 24 35.5**	**+0.9**
	comp=Z,8.0nm,0.5s								
RAMN	**Ramite**	**37.91**	**302**	*eP*		**P**		**20 24 42.2**	**+1.2**
	comp=Z,8.4nm,0.5s								
JIRN	**Jiri**	**38.50**	**303**	*eP*		**P**		**20 24 47.2**	**+1.0**
	comp=Z,38nm,0.6s								
GUN	**Gumba**	**38.85**	**303**	*eP*		**P**		**20 24 50.1**	**+1.0**
	comp=Z,42nm,0.6s								
ASAJ	**Asahikawa**	**39.06**	**24**	P		**P**		**20 24 49.1**	**-1.1**
	comp=Z,3.4nm,0.8s,baz=219,slow=13,SNR=1.2								
JKA	**Kamikawa-asahi**	**39.06**	**24**	P		**P**		**20 24 49.1**	**-1.1**
PKI	**Pulchoki**	**39.12**	**303**	*eP*		**P**		**20 24 51.7**	**+0.4**
	comp=Z,14nm,0.5s								
PKIN	**Phulchoki**	**39.13**	**303**	*eP*		**P**		**20 24 51.8**	**+0.5**
	comp=Z,16nm,0.6s								
DMN	**Daman**	**39.38**	**303**	*eP*		**P**		**20 24 54.1**	**+0.7**
	comp=Z,28nm,1.0s								
GKN	**Gorkha**	**39.91**	**303**	*eP*		**P**		**20 24 58.2**	**+0.5**
	comp=Z,16nm,0.7s								
FORT	**Forrest**	**40.17**	**172**	P		**P**		**20 24 59.7**	**+0.2**
	baz=40,SNR=7.1								
FORT	**Forrest**	**40.17**	**172**	P		**P**		**20 24 59.4**	**-0.1**
KOLN	**Koldanda**	**40.69**	**302**	*eP*		**P**		**20 25 05.2**	**+1.0**
	comp=Z,35nm,0.6s								
SONM	**Songino Array**	**40.72**	**344**	P		**P**		**20 25 04.1**	**0.0**
	comp=Z,2.6nm,0.6s,baz=159,slow=7.7,SNR=13								
DANN	**Dangsing**	**40.75**	**303**	*eP*		**P**		**20 25 05.5**	**+0.7**
	comp=Z,21nm,0.6s								
PYUN	**Piuthan**	**41.31**	**302**	*eP*		**P**		**20 25 10.4**	**+1.1**
	comp=Z,41nm,0.8s								
BBOO	**Buckleboo**	**43.85**	**163**	P		**P**		**20 25 29.4**	**-0.2**
	baz=44,SNR=8.8								
BBOO	**Buckleboo**	**43.85**	**163**	P		**P**		**20 25 29.1**	**-0.4**
STKA	**Stephens Creek**	**44.91**	**156**	P		**P**		**20 25 37.9**	**-0.2**
	baz=45,SNR=17								
STKA	**Stephens Creek**	**44.91**	**156**	P		**P**		**20 25 38.0**	**0.0**
	comp=Z,7.5nm,0.8s,baz=334,slow=7.8,SNR=23								
STKA	**Stephens Creek**	**44.91**	**156**	P		**P**		**20 25 37.3**	**-0.7**
HTT	**Hallett**	**45.33**	**160**	P		**P**		**20 25 41.6**	**+0.2**
	baz=46,SNR=6.4								
WMQ	**Urumqi**	**45.63**	**325**	*eP*		**P**		**20 25 45.0**	**+1.3**
WMQ				pP		pP		20 25 57.6	+1.2
WMQ				sP		sP		20 26 02.5	+0.4
WMQ						pmax	pmax		
	comp=Z,8.0nm,0.9s								
WMQ						pmax	pmax		
	comp=Z,63nm,3.7s								
WMQ						LR	LR		
	comp=Z,250nm,14.1s								
WMQ						LR	LR		
	comp=Z,160nm,16.3s								
WMQ						LR	LR		
	comp=Z,210nm,23.3s								
WMQ	**Urumqi**	**45.63**	**325**		P	**P**		**20 25 44.4**	**+0.7**
WMQ					IAmb	IAmb		20 25 58.7	
	comp=Z,8.6nm,0.9s								
CMSA	**Cobar Meteorol**	**46.39**	**152**		P	**P**		**20 25 49.8**	**+0.2**
	baz=47,SNR=7.

comp=Z,0.7nm,0.8s,baz=251,slow=3.9,SNR=6.6
ILAR LR LR 21 08 16.8
HDA Harding Lake 82.17 26 P **P** **20 29 41.0 -2.4**
SCM Sheep Creek Mo 82.21 29 P **P** **20 29 42.3 -1.5**
SCM IAmb IAmb 20 29 52.0
comp=Z,8.8nm,0.8s
BRTR Keskin Array B 83.02 309 P **P** **20 29 49.1 +0.5**
comp=Z,3.6nm,0.8s,baz=99,slow=5.5,SNR=14
BRTR LR LR 21 11 03.2
comp=Z,43nm,20.1s,baz=22,slow=39
ARCES ARCESS Array B 83.74 339 P **P** **20 29 51.8 +0.3**
comp=Z,2.2nm,0.7s,baz=81,slow=7.5,SNR=8.1
CSS Mathiatis 83.80 304 P **P** **20 29 53.2 +0.7**
GLB Gilahina Butte 83.92 29 P **P** **20 29 52.1 -0.5**
AKASG Malin Array Be 84.77 320 P **P** **20 29 56.4 -0.6**
comp=Z,2.5nm,0.7s,baz=71,slow=4.1,SNR=6.7
FINES FINESS Array B 84.86 331 P **P** **20 29 57.0 -0.3**
comp=Z,4.4nm,0.7s,baz=50,slow=5.2,SNR=22
BARN Barnard Glacie 85.01 29 P **P** **20 29 57.7 -0.6**
BARN IAmb IAmb 20 30 04.8
comp=Z,7.0nm,0.9s
KMBO Kilima Mbogo 85.11 268 P **P** **20 30 03.3 +3.5**
comp=Z,6.7nm,0.9s,baz=42,slow=6.1,SNR=8.8
KMBO LR LR 21 07 48.1
comp=Z,45nm,18.0s,baz=93,slow=35
KMBO Kilima Mbogo 85.11 268 IAmb IAmb 20 30 03.8
comp=Z,6.4nm,0.9s
CTGM Chitina Glacie 85.19 29 P **P** **20 29 59.0 -0.1**
EPYK Eagle Plains 86.07 23 P **P** **20 30 02.8 -0.5**
INK Inuvik 86.75 21 P **P** **20 30 06.0 -0.5**
comp=Z,1.8nm,0.8s,baz=307,slow=3.5,SNR=6.9
INK Inuvik 86.75 21 P **P** **20 30 05.3 -1.2**
INK IAmb IAmb 20 30 15.6
comp=Z,5.9nm,1.2s
BUR08 Bucovina Ar. S 87.89 318 P **P** **20 30 11.1 -1.5**
VNDA Vanda 89.44 172 P **P** **20 30 18.5 -0.5**
comp=Z,2.4nm,0.9s,baz=301,slow=6.7,SNR=14
VNDA Vanda 89.44 172 P **P** **20 30 18.6 -0.3**
VNDA IAmb IAmb 20 30 30.8
comp=Z,4.0nm,0.9s
PPT Papeete 91.14 108 LR LR 21 09 58.3
comp=Z,58nm,19.2s,baz=7.5,slow=35
GERES GERESS Array B 94.97 321 P **P** **20 30 45.3 -0.1**
comp=Z,0.3nm,0.6s,baz=93,slow=2.7,SNR=4.1
YKA Yellowknife Ar 96.35 23 P **P** **20 30 49.9 -1.3**
comp=Z,0.5nm,0.6s,baz=301,slow=4.0,SNR=10
YKA PKKPbc **PKKPbc** **20 47 35.6 -3.2**
comp=Z,0.1nm,0.3s,baz=113,slow=1.6,SNR=3.7
TORD Torodi Ar. Bea 116.81 290 PKP **PKPdf** **20 36 07.8 -0.2**
comp=Z,1.6nm,0.7s,baz=51,slow=1.9,SNR=10
TXAR Lajitas Array 121.58 47 PKP **PKPdf** **20 36 16.4 -0.6**
comp=Z,0.4nm,0.8s,baz=333,slow=1.0,SNR=2.8
U40A Yellville 124.00 34 **PKPdf** **20 36 20.4 -0.9**
X48A Hartselle 128.52 31 **PKPdf** **20 36 28.1 -1.9**
Y49A Blount Mountai 129.31 31 **PKPdf** **20 36 30.7 -0.9**
CMIG Matias Romero 135.04 55 PKP **PKPdf** **20 36 42.4 -0.3**
comp=Z,2.4nm,0.8s,baz=343,slow=11,SNR=2.9
LL01 San Ignacio de 144.59 161 **PKPdf** **20 36 58.6 -0.7**
PLCA Paso Flores 146.66 162 PKPbc **PKPbc** **20 37 04.7 0.0**
comp=Z,8.5nm,0.8s,baz=199,slow=2.0,SNR=14
PLCA Paso Flores 146.66 162 **PKPdf** **20 37 00.9 -2.1**
LC01 Cunco 147.89 159 **PKPbc** **20 37 07.1 -1.0**
BI02 San Fabin de 150.09 158 **PKPbc** **20 37 13.5 -0.3**
BO02 Sierra Bellavi 151.93 157 **PKPbc** **20 37 15.9 -2.2**

IDC 22 20:27:37.0±7.2, 19°.14S×176°.58W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.5/34, mbtmp3.7/2, Error ellipse: s-maj=314.8km s-min=113.3km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.13**	**260**	P	P	20 36 03.7	+0.2
	0.4nm,0.3s,baz=96,slow=7.5,SNR=43						
ASAR	**Alice Springs**	**46.15**	**255**	P	P	20 36 03.2	-0.5
	1.0nm,0.9s,baz=97,slow=7.5,SNR=8.6						
AKASG	**Malin Array Be**	**142.44**	**333**	PKP	PKPdf	20 47 11.0	-0.6
	0.8nm,0.4s,baz=46,slow=4.4,SNR=4.4						

*JMA **22** 20:39:09.5, 23°.84N×121°.58E, h34km±1km, M2.9*
*TAP **22** 20:39:09.9, 23°.88N×121°.63E, h36km, ML3.2, C*
ISC 22 20:39:10.4±1.0, 23°.86N±0°.02×121°.60E±0°.02, h34km±2km, n102, σ0°76/196, 1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.12**	**3**	*eP*	**Pb**	**20 39 17.9**	**+1.3**
	baz=353						
HWA				*eS*	**Sb**	**20 39 20.7**	**+0.1**
	baz=353						
ESL	**Shilin**	**0.16**	**254**	⇓*iP*	**Pb**	**20 39 17.1**	**+0.3**
	baz=248						
ESL				*i* S	**Sb**	**20 39 21.7**	**+0.5**
	baz=248						
TWD	**Chiawan**	**0.22**	**360**	P	**Pb**	**20 39 17.8**	**+0.3**
	baz=354						
TWD				S	**Sb**	**20 39 23.1**	**+1.0**
	baz=354						
EGFH	**Guangfu**	**0.24**	**220**	*eP*	**Pb**	**20 39 17.7**	**0.0**
	baz=220						
EGFH				*eS*	**Sb**	**20 39 23.3**	**+0.8**
	baz=220						
NACB	**Ninganchiao**	**0.31**	**360**	*i* P	**Pb**	**20 39 18.2**	**-0.3**
	baz=354						
NACB				S	**Sb**	**20 39 24.0**	**0.0**
	baz=354						
ETLH	**Xiulin Townshi**	**0.36**	**343**	*i* P	**Pb**	**20 39 19.0**	**-0.2**
	baz=338						
ETLH				S	**Sb**	**20 39 24.8**	**-0.4**
	baz=338						
HGSD	**Ruisui**	**0.40**	**204**	P	**Pn**	**20 39 20.1**	**+0.2**
	baz=205						
HGSD				*eS*	**Sn**	**20 39 27.9**	**+1.9**
	baz=205						
OWD	**Renai**	**0.40**	**284**	*eP*	**Pn**	**20 39 20.1**	**+0.1**
	baz=280						
OWD				*eS*	**Sb**	**20 39 26.1**	**0.0**
	baz=280						
WHF	**Hehuan Shan**	**0.42**	**313**	P	**Pb**	**20 39 20.2**	**-0.1**
	baz=309						
WHF				*eS*	**Sb**	**20 39 26.9**	**-0.1**
	baz=309						
VWDT	**VWDT**	**0.43**	**256**	P	**Pn**	**20 39 20.5**	**+0.2**
	baz=254						
VWDT				*eS*	**Sn**	**20 39 27.5**	**+0.7**
	baz=254						
EHY	**Hungye**	**0.43**	**216**	*eP*	**Pb**	**20 39 19.3**	**-0.8**
	baz=215						
EHY				*eS*	**Sb**	**20 39 26.1**	**-0.7**
	baz=215						
CHGB	**Renai**	**0.44**	**298**	P	**Pn**	**20 39 20.7**	**+0.1**
	baz=293						
CHGB				*eS*	**Sb**	**20 39 27.5**	**+0.3**
	baz=293						
YULB	**Yu-li**	**0.54**	**211**	*eP*	**Pb**	**20 39 20.6**	**-1.1**
	baz=211						
YULB				*eS*	**Sb**	**20 39 28.5**	**-1.0**
	baz=211						
TDCB	**Techi**	**0.56**	**315**	*i* P	**Pb**	**20 39 22.4**	**+0.2**
	baz=311						
TDCB				S	**Sb**	**20 39 30.1**	**-0.2**
	baz=311						
TWF1	**Yuli**	**0.57**	**209**	P	**Pb**	**20 39 21.1**	**-1.2**
	baz=209						
ENA	**Nanau**	**0.58**	**13**	*eP*	**Pb**	**20 39 21.8**	**-0.7**
	baz=11						
SSLB	**Suanglung**	**0.59**	**263**	*eP*	**Pb**	**20 39 22.4**	**-0.2**
	baz=261						
SSLB				*eS*	**Sb**	**20 39 30.6**	**-0.4**
	baz=261						
NNSB	**Datong**	**0.60**	**341**	*eP*	**Pb**	**20 39 22.4**	**-0.5**
	baz=337						
NNSB				*eS*	**Sb**	**20 39 30.7**	**-0.6**
	baz=337						
NNSH	**Datong**	**0.60**	**341**	*eP*	**Pb**	**20 39 22.3**	**-0.6**
	baz=337						
NNSH				*eS*	**Sb**	**20 39 30.8**	**-0.5**
	baz=337						
NNS	**Nan Shan**	**0.61**	**341**	*eP*	**Pn**	**20 39 22.6**	**-0.2**
	baz=338						
NNS				*eS*	**Sb**	**20 39 31.1**	**-0.5**
	baz=338						
DPDB	**Guoxing**	**0.64**	**286**	*eP*	**Pn**	**20 39 23.4**	**+0.3**
	baz=283						
DPDB				*eS*	**Sn**	**20 39 32.9**	**+0.8**
	baz=283						
SMLT	**Sun Moon Lake**	**0.64**	**272**	*eP*	**Pn**	**20 39 23.3**	**+0.2**
	baz=270						
SMLT				*eS*	**Sb**	**20 39 32.4**	**+0.1**
	baz=270						
WHYT	**Xinyi Township**	**0.70**	**257**	*eP*	**Pn**	**20 39 24.4**	**+0.4**
	baz=255						
WHYT				*eS*	**Sn**	**20 39 34.9**	**+1.2**
	baz=255						
FULB	**Fuli**	**0.71**	**203**	*eP*	**Pn**	**20 39 23.7**	**-0.4**
	baz=204						
FULB				*eS*	**Sn**	**20 39 33.9**	**0.0**
	baz=204						
WHP	**Taichung City**	**0.73**	**305**	*eP*	**Pb**	**20 39 25.0**	**+0.2**
	baz=302						
WHP				*eS*	**Sn**	**20 39 34.8**	**+0.4**
	baz=302						
NDT	**Datong Townshi**	**0.74**	**354**	*eP*	**Pn**	**20 39 24.2**	**-0.4**
	baz=351						
NDT				*eS*	**Sn**	**20 39 33.6**	**-1.1**
	baz=351						
ENTT	**Nioudou**	**0.78**	**358**	*eP*	**Pn**	**20 39 24.6**	**-0.5**
	baz=356						
ENTT				*eS*	**Sn**	**20 39 34.8**	**-0.8**
	baz=356						
TWC	**Suao**	**0.78**	**17**	*eP*	**Pn**	**20 39 24.8**	**-0.3**
	baz=16						
TWC				*eS*	**Sn**	**20 39 35.9**	**+0.3**
	baz=16						
CHKT	**Chengkung**	**0.79**	**196**	*eP*	**Pn**	**20 39 25.0**	**-0.1**
	baz=196						
CHKT				*eS*	**Sn**	**20 39 35.8**	**+0.2**
	baz=196						
WJS	**Zhushan**	**0.80**	**268**	*eP*	**Pb**	**20 39 26.3**	**+0.3**
	baz=265						
WJS				*eS*	**Sb**	**20 39 37.4**	**+0.9**
	baz=265						
YHNB	**Yeheng**	**0.83**	**346**	*eP*	**Pn**	**20 39 25.8**	**0.0**
	baz=343						
YHNB				*eS*	**Sn**	**20 39 36.1**	**-0.8**
	baz=343						
WNT	**Mingjian**	**0.84**	**272**	*eP*	**Pb**	**20 39 26.9**	**+0.2**
	baz=269						
WNT				*eS*	**Sb**	**20 39 38.9**	**+1.3**
	baz=269						
EOS1	**EOS1**	**0.84**	**35**	*eP*	**Pb**	**20 39 26.9**	**+0.2**
	baz=34						
EOS1				*eS*	**Sb**	**20 39 39.3**	**+1.6**
	baz=34						
NSK	**Sanguang**	**0.84**	**345**	P	**Pn**	**20 39 25.9**	**-0.1**
	baz=343						
NSK				*eS*	**Sn**	**20 39 36.7**	**-0.5**
	baz=343						
ELDTW	**Lidau**	**0.85**	**219**	*eP*	**Pn**	**20 39 25.2**	**-0.9**
	baz=218						
ELDTW				*eS*	**Sn**	**20 39 36.8**	**-0.7**
	baz=218						
TWE	**Neicheng**	**0.86**	**4**	*eP*	**Pn**	**20 39 25.7**	**-0.4**
	baz=3.0						
TWE				*eS*	**Sn**	**20 39 36.9**	**-0.6**
	baz=3.0						
CHN5	**Tsauling**	**0.88**	**253**	*eP*	**Pb**	**20 39 27.3**	**-0.1**
	baz=252						
CHN5				*eS*	**Sb**	**20 39 39.6**	**+0.6**
	baz=252						
TCU	**Taichung**	**0.89**	**289**	*eP*	**Pb**	**20 39 27.9**	**+0.4**
	baz=287						
TCU				*eS*	**Sb**	**20 39 40.4**	**+1.3**
	baz=287						
NWLT	**Wulai**	**0.92**	**355**	*eP*	**Pn**	**20 39 26.9**	**-0.1**
	baz=352						
NWLT				*eS*	**Sn**	**20 39 38.6**	**-0.5**
	baz=352						
NSTT	**Nanjuang**	**0.94**	**325**	*eP*	**Pb**	**20 39 28.4**	**0.0**
	baz=323						
NSTT				*eS*	**Sn**	**20 39 40.4**	**+0.8**
	baz=323						
NSY	**Sanyi**	**0.94**	**306**	*eP*	**Pb**	**20 39 28.4**	**0.0**
	baz=304						
NSY				*eS*	**Sb**	**20 39 41.5**	**+0.8**
	baz=304						
WGK	**Gukeng**	**0.96**	**260**	*eP*	**Pb**	**20 39 28.4**	**-0.3**
	baz=258						
WGK				*eS*	**Sb**	**20 39 42.0**	**+0.8**
	baz=258						
WCHH	**Zhanghua**	**0.98**	**283**	*eP*	**Pb**	**20 39 29.0**	**+0.1**
	baz=281						
WCHH				*eS*	**Sb**	**20 39 42.1**	**+0.6**
	baz=281						
WDLH	**Douliu**	**0.98**	**260**	*eP*	**Pb**	**20 39 28.7**	**-0.4**
	baz=259						
WDLH				*eS*	**Sb**	**20 39 42.7**	**+0.9**
	baz=259						
NMLH	**Miaoli**	**1.00**	**313**	*eP*	**Pn**	**20 39 28.7**	**+0.7**
	baz=310						
NMLH				*eS*	**Sn**	**20 39 41.4**	**+0.4**
	baz=310						
WDJ	**Dajia District**	**1.00**	**299**	*eP*	**Pb**	**20 39 29.3**	**-0.1**
	baz=297						
WDJ				*eS*	**Sb**	**20 39 42.3**	**0.0**
	baz=297						
PTSB	**Yuanli**	**1.00**	**306**	*eP*	**Pn**	**20 39 28.9**	**+0.8**
	baz=303						
NTC	**Toucheng**	**1.01**	**12**	*eP*	**Pn**	**20 39 27.9**	**-0.4**
	baz=10.0						
NTC				*eS*	**Sn**	**20 39 41.3**	**0.0**
	baz=10.0						
STYT	**Tauyuan**	**1.04**	**228**	*eP*	**Pn**	**20 39 29.2**	**+0.6**
	baz=227						
STYT				*eS*	**Sn**	**20 39 42.8**	**+0.9**
	baz=227						
TPUB	**Ta-pu**	**1.05**	**238**	*eP*	**Pn**	**20 39 29.6**	**+0.9**
	baz=237						
TPUB				*eS*	**Sb**	**20 39 44.0**	**+0.4**
	baz=237						
CHN4	**Tsaushan**	**1.05**	**241**	*eP*	**Pb**	**20 39 29.9**	**-0.3**
	baz=240						
CHN4				*eS*	**Sb**	**20 39 44.4**	**+0.8**
	baz=240						
CHN2	**Minshiung**	**1.08**	**253**	*eP*	**Pn**	**20 39 29.4**	**+0.2**
	baz=251						
CHN2				*eS*	**Sb**	**20 39 45.5**	**+1.1**
	baz=251						
WTP	**Ta-pu**	**1.09**	**236**	*eP*	**Pn**	**20 39 30.3**	**+0.9**
	baz=235						
WTP				*eS*	**Sb**	**20 39 44.9**	**+0.1**
	baz=235						
NHDH	**Xindian Distri**	**1.10**	**357**	*eP*	**Pn**	**20 39 29.8**	**+0.3**
	baz=355						
NHDH				*eS*	**Sn**	**20 39 43.8**	**+0.3**
	baz=355						
TWA	**Mucha**	**1.12**	**359**	*eP*	**Pn**	**20 39 30.1**	**+0.4**
	baz=358						
TWA				*eS*	**Sn**	**20 39 44.0**	**+0.1**
	baz=358						
TIPB	**Shuangxi**	**1.13**	**11**	*eP*	**Pn**	**20 39 30.1**	**+0.2**
	baz=9.0						
TIPB				*eS*	**Sn**	**20 39 44.0**	**-0.2**
	baz=9.0						
CHY	**Chiayi**	**1.13**	**252**	*eP*	**Pb**	**20 39 31.7**	**+0.2**
	baz=250						
CHY				*eS*	**Sb**	**20 39 46.3**	**+0.3**
	baz=250						
RLNB	**Erlin**	**1.13**	**272**	*eP*	**Pb**	**20 39 31.0**	**-0.6**
	baz=270						
RLNB				*eS*	**Sb**	**20 39 46.8**	**+0.8**
	baz=270						
TWG	**Pinlang**	**1.14**	**205**	*eP*	**Pn**	**20 39 28.6**	**-1.4**
	baz=205						
TWG				*eS*	**Sn**	**20 39 42.4**	**-2.1**
	baz=205						
TWGBT	**Beinan**	**1.14**	**205**	*eP*	**Pn**	**20 39 28.6**	**-1.4**
	baz=205						
TWGBT				*eS*	**Sn**	**20 39 42.3**	**-2.1**
	baz=205						
TWH	**Lutao**	**1.15**	**186**	*eP*	**Pn**	**20 39 29.6**	**-0.4**
	baz=186						
TWH				*eS*	**Sn**	**20 39 44.7**	**+0.1**
	baz=186						
NCUH	**Zhongli**	**1.17**	**341**	*eP*	**Pn**	**20 39 31.1**	**+0.7**
	baz=339						
NCUH				*eS*	**Sb**	**20 39 47.1**	**+0.1**
	baz=339						
NCU	**National Centr**	**1.17**	**341**	*eP*	**Pn**	**20 39 30.9**	**+0.5**
	baz=340						
NCU				*eS*	**Sn**	**20 39 46.3**	**+1.1**
	baz=340						
TWK	**Hsinying**	**1.18**	**240**	*eP*	**Pn**	**20 39 31.3**	**+0.8**
	baz=239						
TWK				*eS*	**Sb**	**20 39 47.3**	**0.0**
	baz=239						
CHN1	**Nanshi**	**1.19**	**236**	*eP*	**Pn**	**20 39 31.7**	**+1.0**
	baz=235						
CHN1				*eS*	**Sb**	**20 39 48.0**	**+0.3**
	baz=235						
SNST	**Tainan City**	**1.19**	**238**	*eP*	**Pn**	**20 39 31.7**	**+1.0**
	baz=237						
SNST				*eS*	**Sb**	**20 39 48.0**	**+0.3**
	baz=237						
WTCT	**Ta-ch'eng**	**1.21**	**271**	*eP*	**Pb**	**20 39 32.1**	**-0.7**
	baz=269						
WTCT				*eS*	**Sb**	**20 39 48.5**	**+0.5**
	baz=269						
SGST	**Jiashian**	**1.21**	**231**	*eP*	**Pn**	**20 39 31.1**	**+0.1**
	baz=230						
SGST				*eS*	**Sn**	**20 39 47.4**	**+1.2**
	baz=230						
NWF	**Wu-fen Shan**	**1.22**	**8**	*eP*	**Pn**	**20 39 31.4**	**+0.2**
	baz=6.0						
WFSB	**Wu-fen Shan**	**1.22**	**8**	*eP*	**Pn**	**20 39 31.3**	**+0.2**
	baz=6.0						
WFSB				*eS*	**Sn**	**20 39 46.6**	**+0.2**
	baz=6.0						
SLGT	**Liugui**	**1.23**	**226**	*eP*	**Pb**	**20 39 32.5**	**-0.7**
	baz=225						
SLGT				*eS*	**Sb**	**20 39 49.0**	**+0.3**
	baz=225						
TWS1	**Kuangyinshan**	**1.25**	**353**	*eP*	**Pn**	**20 39 31.6**	**+0.2**
	baz=351						
TWS1				*eS*	**Sn**	**20 39 48.0**	**+0.9**
	baz=351						
WSF	**Szhu**	**1.28**	**260**	*eP*	**Pn**	**20 39 33.0**	**+1.1**
	baz=259						
WSF				*eS*	**Sb**	**20 39 50.5**	**+0.3**
	baz=259						
YM01	**YM01**	**1.28**	**359**	*eP*	**Pn**	**20 39 31.6**	**-0.4**
	baz=357						
YM01				*eS*	**Sn**	**20 39 48.0**	**0.0**
	baz=357						
YM04	**YM04**	**1.29**	**358**	*eP*	**Pn**	**20 39 31.8**	**-0.3**
	baz=356						
YM10	**YM10**	**1.29**	**359**	*eP*	**Pn**	**20 39 31.9**	**-0.2**
	baz=357						
YM10				*eS*	**Sn**	**20 39 48.1**	**-0.1**
	baz=357						
YM11	**YM11**	**1.30**	**359**	*eP*	**Pn**	**20 39 31.9**	**-0.4**
	baz=357						
YM11				*eS*	**Sn**	**20 39 48.5**	**0.0**
	baz=357						
YM03	**YM03**	**1.32**	**358**	*eP*	**Pn**	**20 39 31.8**	**-0.7**
	baz=356						
YM03				*eS*	**Sn**	**20 39 48.5**	**-0.4**
	baz=356						
YM08	**YM08**	**1.32**	**360**	*eP*	**Pn**	**20 39 32.0**	**-0.5**
	baz=358						
YM08				*eS*	**Sn**	**20 39 48.2**	**-0.8**
	baz=358						
ANP	**Anpu**	**1.32**	**357**	*eP*	**Pn**	**20 39 33.0**	**+0.4**
	baz=356						
ANP				*eS*	**Sn**	**20 39 49.8**	**+0.7**
	baz=356						
JYNG	**Yonagunijimaku**	**1.37**	**64**	P	**Pn**	**20 39 33.3**	**+0.2**
JYNG				*eS*	**Sn**	**20 39 50.6**	**+0.6**
CHN8	**Yiju**	**1.37**	**248**	*eP*	**Pn**	**20 39 34.0**	**+0.9**
	baz=247						
CHN8				*eS*	**Sb**	**20 39 52.5**	**-0.3**
	baz=247						
ECL	**Taimali**	**1.39**	**205**	*eP*	**Pn**	**20 39 33.4**	**0.0**
	baz=205						
ECL				*eS*	**Sn**	**20 39 47.6**	**-2.9**
	baz=205						
SSD	**Sandimen**	**1.42**	**219**	*eP*	**Pn**	**20 39 34.9**	**+1.0**
	baz=218						
SSD				*eS*	**Sb**	**20 39 53.5**	**-0.6**
	baz=218						
YOJ	**Yonaguni jima**	**1.42**	**65**	P	**Pn**	**20 39 34.4**	**+0.5**
YOJ				*eS*	**Sn**	**20 39 51.4**	**0.0**
MASBT	**Mashibuluo**	**1.52**	**216**	*eP*	**Pn**	**20 39 35.7**	**+0.5**
	baz=215						
MASBT				*eS*	**Sn**	**20 39 54.7**	**+0.8**
	baz=215						
EAST	**Anshuo**	**1.62**	**205**	*eP*	**Pn**	**20 39 37.9**	**+1.2**
	baz=205						
SCZT	**Fangliau**	**1.73**	**212**	*eP*	**Pn**	**20 39 39.4**	**+1.3**
	baz=211						
SCZT				*eS*	**Sn**	**20 40 01.2**	**+2.1**
	baz=211						
WDGT	**Dungji**	**1.88**	**252**	*eP*	**Pn**	**20 39 40.2**	**+0.1**
	baz=250						
WDGT				*eS*	**Sn**	**20 40 01.9**	**-0.7**
	baz=250						
PHUB	**P'eng-hu**	**1.89**	**260**	*eP*	**Pn**	**20 39 39.7**	**-0.5**
	baz=258						
PHUB				*eS*	**Sn**	**20 40 02.8**	**-0.1**
	baz=258						
PNG	**Penghu**	**1.89**	**262**	*eP*	**Pn**	**20 39 40.5**	**+0.1**
	baz=260						
PNG				*eS*	**Sn**	**20 40 03.4**	**+0.4**
	baz=260						
IRIF	**Iriomote-Funau**	**2.01**	**76**	P	**Pn**	**20 39 42.3**	**+0.4**
IRIF				S	**Sn**	**20 40 06.2**	**+0.4**
TWKBT	**Hengchun**	**2.04**	**201**	*eP*	**Pn**	**20 39 42.7**	**+0.3**
	baz=201						
TWKBT				*eS*	**Sn**	**20 40 07.3**	**+0.7**
	baz=201						
VCHM	**Qimei**	**2.09**	**252**	*eP*	**Pn**	**20 39 43.1**	**0.0**
	baz=251						
VCHM				*eS*	**Sn**	**20 40 07.1**	**-0.8**
	baz=251						
JKRS	**Kuro-shima**	**2.24**	**80**	P	**Pn**	**20 39 46.2**	**+1.1**
JKRS				*eS*	**Sn**	**20 40 13.0**	**+1.5**
VWUC	**VWUC**	**2.26**	**300**	*eP*	**Pn**	**20 39 44.9**	**-0.5**
	baz=299						
VWUC				*eS*	**Sn**	**20 40 09.9**	**-2.2**
	baz=299						
PTTC	**Pingtan**	**2.33**	**315**	*eP*	**Pn**	**20 39 45.7**	**-0.7**
	baz=313						
PTTC				*eS*	**Sn**	**20 40 11.9**	**-1.9**
	baz=313						
JIJ	**Ishigaki jima**	**2.38**	**77**	P	**Pn**	**20 39 47.2**	**+0.2**
JIJ				*eS*	**Sn**	**20 40 14.5**	**-0.5**
PTMZ	**Houxiangcun**	**2.55**	**298**	*eP*	**Pn**	**20 39 49.0**	**-0.3**
	baz=296						
PTMZ				*eS*	**Sn**	**20 40 16.8**	**-2.3**
	baz=296						
JISG	**Ishigakijimahi**	**2.58**	**73**	P	**Pn**	**20 39 49.9**	**+0.1**
JISG				*eS*	**Sn**	**20 40 19.1**	**-0.9**
JTJ	**Tarama**	**2.94**	**74**	*eS*	**Sn**	**20 40 28.8**	**0.0**
JIRB	**Irabujima**	**3.40**	**73**	S	**Sn**	**20 40 40.1**	**-0.1**

*GUC **22** 20:47:00.9±0.7, 36°.24S×71°.06W, h135km±4km, ML4.1*
*IDC **22** 20:47:01.9±2.4, 36°.20S×70°.69W, h118km±17km, mb4.0/6, mb1 3.9/9, mb1mx3.7/30, mbtmp4.3/9, Error ellipse: s-maj=72.2km s-min=13.1km az=106.0*
*SJA **22** 20:47:01.8±0.9, 36°.14S×71°.25W, h80km, ML3.4, MW3.7*
*NEIC **22** 20:47:01.3±1.2, 36°.17S±0°.06×71°.0W±0°.1, h127km±6km, mb4.4/7, ML4.0(GUC), Error ellipse: s-maj=16.4km s-min=7.5km az=104.0*
ISC 22 20:47:01.6±0.7, 36°.20S±0°.04×71°.08W±0°.05, h129km±6km, n64, σ0°95/78, mb4.3/7, 4C-6D, Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BI02	**San Fabin de**	**0.49**	**198**	⇑*iP*	**Pn**	**20 47 20.3**	**-0.2**
BI02				*i* S	**Sn**	**20 47 34.4**	**-0.6**
BI02	**San Fabin de**	**0.49**	**198**		**Pn**	**20 47 20.4**	**-0.2**
GO05	**Huala**	**1.37**	**330**	*i* P	**Pn**	**20 47 28.5**	**+0.3**
GO05				*i* S	**Sn**	**20 47 48.8**	**+0.3**
GO05	**Huala**	**1.37**	**330**		**Pn**	**20 47 28.5**	**+0.3**
GO05	**Huala**	**1.37**	**330**	*i* P	**Pn**	**20 47 28.7**	**+0.4**
GO05				*eS*	**Sn**	**20 47 49.3**	**+0.8**
BO02	**Sierra Bellavi**	**1.43**	**10**		**Pn**	**20 47 29.2**	**+0.3**
EDS3	**Malargue**	**1.43**	**73**	*i* P	**Pn**	**20 47 28.9**	**-0.1**
EDS3				*eS*	**Sn**	**20 47 51.2**	**+1.3**
PUMA	**Malargue**	**1.50**	**63**	*i* P	**Pn**	**20 47 30.1**	**+0.4**
COIS	**El Sosneado**	**1.63**	**49**	*i* P	**Pn**	**20 47 31.9**	**+0.8**
CANA	**Caviahue**	**1.69**	**179**	*i* P	**Pn**	**20 47 32.1**	**+0.2**
CANA				IAML		20 48 06.1	
	comp=Z,190nm,0.9s						
BI03	**Tigo**	**1.69**	**247**	⇑*iP*	**Pn**	**20 47 32.3**	**+0.5**
BI03				*i* S	**Sn**	**20 47 54.5**	**-0.4**

BI03	**Tigo**	**1.69**	**247**			**Pn**	**20 47 32.3**	**+0.5**
LAJA	**Laja**	**1.70**	**230**	⇓	*eP*	**Pn**	**20 47 31.6**	**-0.2**
LAJA					*i* S	**Sn**	**20 47 53.9**	**-1.0**
MORA	**Malargue**	**1.91**	**62**		*i* P	**Pn**	**20 47 34.1**	**-0.4**
LAMA	**Las Malvinas**	**1.98**	**51**		*i* P	**Pn**	**20 47 35.4**	**+0.1**
MT01	**Popeta**	**2.33**	**357**	⇓	*i* P	**Pn**	**20 47 39.4**	**-0.3**
MT01					*i* S	**Sn**	**20 48 09.3**	**+0.4**
MT01					IAML		20 48 14.6	
	comp=N,587nm,0.3s							
MT01	**Popeta**	**2.33**	**357**			**Pn**	**20 47 39.2**	**-0.4**
LMEL	**Las Melosas**	**2.45**	**17**	⇓	*i* P	**Pn**	**20 47 41.9**	**+0.6**
LMEL					*i* S	**Sn**	**20 48 12.3**	**+0.5**
LMEL					IAML		20 48 20.2	
	comp=E,480nm,0.5s							
MT03	**Universidad Ad**	**2.74**	**10**	⇓	*i* P	**Pn**	**20 47 44.8**	**-0.1**
MT03					*i* S	**Sn**	**20 48 18.6**	**+0.3**
MT03					IAML		20 48 23.2	
	comp=E,652nm,0.3s							
LC01	**Cunco**	**2.77**	**193**			**Pn**	**20 47 44.2**	**-0.9**
MT05	**Renca**	**2.81**	**6**			**Pn**	**20 47 45.6**	**-0.3**
CLCH	**Cerro Calan**	**2.83**	**9**	⇓	*i* P	**Pn**	**20 47 46.0**	**-0.1**
CLCH					*i* S	**Sn**	**20 48 20.6**	**+0.2**
CLCH					IAML		20 48 22.9	
	comp=N,820nm,0.5s							
MT02	**Curacav**	**2.93**	**359**	⇓	*i* P	**Pn**	**20 47 47.0**	**-0.4**
MT02					*i* S	**Sn**	**20 48 22.5**	**0.0**
MT02					IAML		20 48 23.5	
	comp=N,427nm,0.3s							
MT02	**Curacav**	**2.93**	**359**			**Pn**	**20 47 46.8**	**-0.6**
PEL	**Peldehue**	**3.06**	**6**	⇓	*i* P	**Pn**	**20 47 48.7**	**-0.4**
PEL					*i* S	**Sn**	**20 48 25.6**	**-0.1**
PEL					IAML		20 48 28.3	
	comp=N,391nm,0.5s							
PEL	**Peldehue**	**3.06**	**6**			**Pn**	**20 47 47.9**	**-1.2**
BI04	**Isla Mocha**	**3.14**	**224**		*i* S	**Sn**	**20 48 25.3**	**-2.0**
ROC1	**El Roble**	**3.21**	**1**			**Pn**	**20 47 50.8**	**-0.4**
ROC1	**El Roble**	**3.21**	**1**		*i* P	**Pn**	**20 47 50.9**	**-0.4**
ROCH	**El Roble**	**3.22**	**1**	⇑	*i* P	**Pn**	**20 47 50.6**	**-0.6**
ROCH					*i* S	**Sn**	**20 48 28.6**	**-1.0**
VA03	**San Esteban**	**3.46**	**7**		*eP*	**Pn**	**20 47 53.7**	**-0.6**
VA03					*i* S	**Sn**	**20 48 34.9**	**0.0**
VA03	**San Esteban**	**3.46**	**7**			**Pn**	**20 47 53.4**	**-0.9**
PLCA	**Paso Flores**	**4.55**	**175**		P	**Pn**	**20 48 07.8**	**-0.8**
	comp=N,2.9nm,0.3s,baz=338,slow=12,SNR=73							
PLCA	**Paso Flores**	**4.55**	**175**		Pn	**Pn**	**20 48 08.2**	**-0.5**
RTLS	**Leoncito**	**4.63**	**19**		*i* P	**Pn**	**20 48 10.4**	**+0.3**
RTLS					IAML		20 49 06.5	
	comp=Z,40nm,0.8s							
RTCV	**Cerro Valdivia**	**4.81**	**27**		*i* P	**Pn**	**20 48 11.3**	**-0.9**
RTCV					IAML		20 49 36.2	
	comp=Z,46nm,4.2s							
CO02	**Combarbal**	**4.98**	**1**			**Pn**	**20 48 13.2**	**-1.3**
CFA	**Coronel Fontan**	**5.16**	**28**		P	**Pn**	**20 48 15.7**	**-1.2**
	comp=Z,10nm,0.3s,baz=213,slow=13,SNR=50							
CFA					S	**Sn**	**20 49 12.6**	**-2.8**
	comp=Z,19nm,0.3s,baz=301,slow=20,SNR=52							
RTLL	**Cerro Villicun**	**5.32**	**25**		*i* P	**Pn**	**20 48 17.6**	**-1.5**
CO03	**El Pedregal**	**5.36**	**4**			**Pn**	**20 48 18.5**	**-1.1**
GO04	**Tololo Observa**	**6.01**	**2**			**Pn**	**20 48 27.1**	**-1.5**
LL01	**San Ignacio de**	**6.26**	**189**		Pn	**Pn**	**20 48 29.7**	**-1.8**
CO01	**Juntas del Tor**	**6.26**	**8**			**Pn**	**20 48 30.8**	**-1.1**
AC05	**El Transito**	**7.37**	**6**			**Pn**	**20 48 44.5**	**-2.3**
AC02	**Maricunga**	**9.48**	**11**		Pn	**Pn**	**20 49 13.5**	**-2.0**
CPUP	**Villa Florida**	**15.32**	**54**		P	**Pn**	**20 50 29.2**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=246,slow=10.0,SNR=1.8							
EFI	**East Falkland**	**18.05**	**153**		P	**P**	**20 51 02.0**	**-0.6**
LPAZ	**La Paz**	**20.00**	**8**		P	**Pn**	**20 51 29.5**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=163,slow=8.4,SNR=8.8							
LPAZ	**La Paz**	**20.00**	**8**		P	**Pn**	**20 51 29.8**	**+2.0**
SIV	**San Ignacio**	**22.01**	**26**		P	**P**	**20 51 44.7**	**-1.0**
	comp=Z,5.5nm,0.7s,baz=214,slow=9.1,SNR=27							
VNA3	**Neumayer Olymp**	**47.03**	**157**		P	**P**	**20 55 20.2**	**+0.7**
VNA2	**Neumayer--Watz**	**47.69**	**157**		P	**P**	**20 55 25.2**	**+0.6**
	baz=294,slow=8.3							
SNAA	**Sanae**	**49.26**	**157**		P	**P**	**20 55 37.1**	**+0.4**
SNAA	**Sanae**	**49.26**	**157**		P	**P**	**20 55 37.1**	**+0.4**
	comp=Z,3.0nm,0.8s,baz=279,slow=9.3,SNR=9.3							
SNAA	**Sanae**	**49.26**	**157**		P	**P**	**20 55 37.2**	**+0.5**
SNAA					IAmb	IAmb	20 55 38.0	
	comp=Z,5.0nm,1.0s							
QSPA	**South Pole Qui**	**54.04**	**180**		P	**P**	**20 56 14.0**	**+1.6**
	comp=Z,2.4nm,0.6s,baz=154,slow=5.9,SNR=21							
QSPA	**South Pole Qui**	**54.04**	**180**		P	**P**	**20 56 13.9**	**+1.5**
QSPA					IAmb	IAmb	20 56 16.5	
	comp=Z,5.7nm,1.4s							
DBIC	**Dimbokro**	**75.17**	**70**		P	**P**	**20 58 30.0**	**0.0**
	comp=Z,5.1nm,0.6s,baz=204,slow=8.3,SNR=12							
DBIC	**Dimbokro**	**75.17**	**70**		P	**P**	**20 58 29.9**	**-0.2**
DBIC					IAmb	IAmb	20 58 30.7	
	comp=Z,8.4nm,0.7s							
BOSA	**Boshof**	**78.37**	**117**		P	**P**	**20 58 47.6**	**-0.5**
	comp=Z,2.1nm,0.8s,baz=196,slow=5.5,SNR=1.6							
BOSA	**Boshof**	**78.37**	**117**		IAmb	IAmb	20 59 02.7	
	comp=Z,7.0nm,1.2s							
TOA0	**Torodi Ar. Sit**	**84.24**	**69**		P	**P**	**20 59 19.0**	**0.0**
TOA0					IAmb	IAmb	20 59 19.8	
	comp=Z,5.1nm,0.9s							
TORD	**Torodi Ar. Bea**	**84.24**	**69**		P	**P**	**20 59 18.9**	**-0.1**
	comp=Z,3.7nm,0.8s,baz=250,slow=5.0,SNR=20							
MKAR	**Makanchi Array**	**157.53**	**54**		PKPab	**PKPab**	**21 07 14.6**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=270,slow=3.7,SNR=5.2							

*IDC **22** 20:47:58.9±1.1, 4.°93S×102.°87E, h0km, mb4.0/12, mb1 4.1/12, mb1mx3.8/37, mbtmp4.0/12, MS3.0/1, Ms1 3.2/1, ms1mx2.4/35, Error ellipse: s-maj=48.7km s-min=14.6km az=53.0*
*NEIC **22** 20:48:05.6±0.8, 5.°05S±0.°09×102.°8E±0.°1, h56km±6km, mb4.5/8, Error ellipse: s-maj=18.5km s-min=9.6km az=60.0*
*DJA **22** 20:48:06.6±0.5, 5.°S±3.°×10.°3E±.°, h23km±4km, M4.1/10, mb4.2/2, MLv4.0/10*

ISC 22 20:48:06.7±0.7, 4.°98S±0.°09×103.°00E±0.°07, h59km, n41, σ1s01/40, mb4.0/15, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MNAI	**Manna**	**0.61**	**356**	P		**Pn**	**20 48 19.9**	**0.0**
MNAI				S		**Sn**	**20 48 28.9**	**-0.6**
MNAI	**Manna**	**0.61**	**356**	Pn		**Pn**	**20 48 19.9**	**0.0**
LWLI	**Liwa**	**1.06**	**92**	P		**Pn**	**20 48 25.9**	**+0.3**
LWLI				S		**Sn**	**20 48 39.8**	**+0.1**
LHSI	**Lahat**	**1.26**	**25**	P		**Pn**	**20 48 29.3**	**+1.1**
MDSI	**Maura Dua**	**1.28**	**68**	P		**Pn**	**20 48 29.1**	**+0.7**
MDSI				S		**Sn**	**20 48 45.9**	**+1.3**
MASI	**Maura Aman, Be**	**1.97**	**338**	P		**Pn**	**20 48 39.3**	**+1.4**
MASI				S		**Sn**	**20 49 03.9**	**+2.4**
BLSI	**Bandar Lampung**	**2.27**	**100**	P		Pn	20 48 52.9	+11
KRJI	**Kerinci**	**3.25**	**332**	P		**Pn**	**20 48 56.7**	**+1.3**
KRJI				S		**Sn**	**20 49 35.8**	**+2.9**
SISI	**Saibi**	**5.32**	**313**	P		**Pn**	**20 49 24.3**	**+0.6**
	0.1nm8.3nm,0.5s							
CISI	**Cisompet, Garu**	**5.43**	**118**	P		**Pn**	**20 49 25.3**	**0.0**
CISI	**Cisompet, Garu**	**5.43**	**118**	Pn		**Pn**	**20 49 25.6**	**+0.3**
GSI	**Gunungsitoli**	**8.26**	**319**	Pn		**Pn**	**20 50 02.1**	**-1.8**
JAGI	**Jajag, Banyuwa**	**11.61**	**108**	Pn		**Pn**	**20 50 50.2**	**+0.4**
CMAR	**Chiang Mai Arr**	**23.63**	**350**	P		**P**	**20 53 11.6**	**-1.1**
	0.9nm,0.5s,baz=183,slow=9.0,SNR=11							
CMAR				LR		LR	21 02 31.2	
	comp=Z,35nm,20.8s,baz=174,slow=37							
FITZ	**Fitzroy Crossi**	**25.69**	**122**	P		**P**	**20 53 31.9**	**+0.3**
	1.7nm,0.8s,baz=318,slow=9.1,SNR=6.6							
FITZ	**Fitzroy Crossi**	**25.69**	**122**	P		**P**	**20 53 31.7**	**+0.2**
FITZ				IAmb		IAmb	20 54 26.2	
	comp=Z,19nm,1.9s							
H08S2	**Diego Garcia H**	**30.43**	**263**	T		T	21 26 14.2	
	baz=86,slow=76,SNR=7.4							
H08S3	**Diego Garcia H**	**30.44**	**263**	T		T	21 26 03.6	
	baz=86,slow=76,SNR=5.1							
H08S1	**Diego Carcia H**	**30.45**	**263**	T		T	21 26 16.4	
	baz=86,slow=76,SNR=7.6							
H01W3	**Cape Leeuwin H**	**31.50**	**162**	T		T	21 28 00.4	
	baz=340,slow=76,SNR=5.3							
H01W2	**Cape Leeuwin H**	**31.51**	**162**	T		T	21 27 53.6	
	baz=340,slow=76,SNR=8.1							
H01W1	**Cape Leeuwin H**	**31.51**	**162**	T		T	21 28 07.6	
	baz=340,slow=76,SNR=5.2							
WRA	**Warramunga Arr**	**33.93**	**119**	P		**P**	**20 54 44.6**	**0.0**
	comp=Z,1.1nm,0.6s,baz=298,slow=9.1,SNR=20							
WB2	**Warramunga Arr**	**33.94**	**119**	P		**P**	**20 54 44.6**	**-0.1**
WB2				IAmb		IAmb	20 55 02.5	
	comp=Z,23nm,1.8s							
WR0	**Warramunga Arr**	**34.11**	**119**	P		**P**	**20 54 46.1**	**-0.1**
FORT	**Forrest**	**34.86**	**140**			**P**	**20 54 53.9**	**+1.5**
FORT				IAmb		IAmb	20 55 22.5	
	comp=Z,11nm,1.0s							
AS31	**Alice Springs**	**35.10**	**125**	P		**P**	**20 54 54.8**	**+0.1**
ASAR	**Alice Springs**	**35.10**	**125**	P		**P**	**20 54 55.5**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=299,slow=8.0,SNR=20							
ASAR				PcP		**PcP**	**20 57 26.4**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=319,slow=2.1,SNR=5.2							
STKA	**Stephens Creek**	**44.95**	**131**	P		**P**	**20 56 17.2**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=306,slow=10,SNR=5.0							
WSAR	**Wadi Sarin**	**51.59**	**305**	P		**P**	**20 57 06.0**	**-1.5**
	comp=Z,2.2nm,0.8s,baz=54,slow=1.5,SNR=1.7							
SONM	**Songino Array**	**52.67**	**3**	P		**P**	**20 57 15.3**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=182,slow=8.5,SNR=5.4							
MK31	**Makanchi Array**	**54.71**	**343**	P		**P**	**20 57 29.4**	**-0.6**
MKAR	**Makanchi Array**	**54.71**	**343**	P		**P**	**20 57 29.2**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=158,slow=7.8,SNR=13							
USRK	**Ussuriysk Ar.**	**55.47**	**25**	P		**P**	**20 57 34.9**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=217,slow=6.2,SNR=4.8							
ZAA0	**Zalesovo Array**	**60.66**	**348**	P		**P**	**20 58 11.0**	**-0.6**
ZAA0				IAmb		IAmb	20 58 11.8	
	comp=Z,1.4nm,0.8s							
ZALV	**Zalesovo Beam**	**60.66**	**348**	P		**P**	**20 58 10.8**	**-0.8**
	comp=Z,1.5nm,0.4s,baz=159,slow=5.6,SNR=10.0							
LTZ	**Lake Taylor**	**71.47**	**133**	P		**P**	**20 59 20.4**	**-0.9**
FINES	**FINESS Array B**	**88.12**	**332**	P		**P**	**21 00 50.8**	**0.0**
	comp=Z,0.8nm,0.5s,baz=106,slow=6.8,SNR=8.8							
ARCES	**ARCESS Array B**	**90.27**	**340**	P		**P**	**21 01 00.5**	**-0.2**
	comp=Z,1.8nm,0.9s,baz=97,slow=7.4,SNR=1.5							
TXAR	**Lajitas Array**	**145.03**	**43**	PKPbc		**PKPdf**	**21 07 38.2**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=257,slow=1.4,SNR=8.6							
U40A	**Yellville**	**145.54**	**23**			**PKPdf**	**21 07 38.0**	**-0.8**

*CRAAG **22** 21:05:56.2, 35.°73N×0.°26E, Ml2.5*
*MDD **22** 21:05:57.4±2.0, 35.°71N×0.°31E, h22km±22km, mb3.7/9, Error ellipse: s-maj=38.8km s-min=11.8km az=142.0, PRXIMO*

ISC 22 21:05:51.7±1.2, 35.°75N±0.°07×0.°25E±0.°05, h13km, n14, σ2s20/24, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OKGL	**Djebel Kef Gue**	**0.43**	**47**	P		**Pn**	**21 06 05.9**	**+2.2**
OKGL	**Djebel Kef Gue**	**0.43**	**47**	P		**Pn**	**21 06 05.9**	**+2.2**
ODJA	**Bouhanifia**	**0.53**	**218**	P		**Pg**	**21 06 01.0**	**-1.0**
ODJA	**Bouhanifia**	**0.53**	**218**	P		**Pg**	**21 06 01.0**	**-1.0**
ENIJ	**Nijar**	**2.33**	**302**	P		**Pb**	**21 06 33.8**	**+0.3**
	1.1nm,0.1s,SNR=7.9							
ENIJ				S		**Sn**	**21 06 58.8**	**+0.5**
	1.5nm,0.2s,SNR=7.9							
EMUR	**La Murta**	**2.41**	**331**	P		**Pb**	**21 06 34.3**	**-0.6**
	2.2nm,0.3s,SNR=5.8							
EMUR				S		**Sb**	**21 07 02.8**	**-1.8**
	6.3nm,0.6s							
EBER	**Berja**	**2.78**	**295**	P		**Pb**	**21 06 40.5**	**-0.9**
	3.2nm,0.1s,SNR=26							
EBER				S		**Sn**	**21 07 12.0**	**+2.3**
	9.2nm,0.7s							
ETOB	**Tobarra**	**3.23**	**334**	P		**Pb**	**21 06 47.3**	**-1.7**
	2.0nm,0.2s,SNR=22							
ETOB				S		**Sn**	**21 07 22.4**	**+1.8**
	115nm,1.9s							
SESP	**Santiago Espad**	**3.26**	**317**	P		**Pb**	**21 06 48.5**	**-1.0**
	7.3nm,0.2s,SNR=7.9							
SESP				S		**Sn**	**21 07 24.6**	**+3.1**
	0.8nm,0.1s,SNR=7.9							
EQUE	**Quentar**	**3.31**	**297**	P		**Pb**	**21 06 48.9**	**-1.4**
	3.4nm,0.4s,SNR=11							
EQUE				S		**Sb**	**21 07 26.9**	**-3.7**
	0.5nm,0.3s,SNR=7.9							
ELGU	**Los Guajares,**	**3.33**	**291**	P		**Pb**	**21 06 47.5**	**-3.0**
	4.5nm,0.3s,SNR=7.9							
ELGU				S		**Sn**	**21 07 26.2**	**+3.4**
	1.1nm,0.1s,SNR=7.9							
EQES	**Quesada**	**3.37**	**309**	P		**Pb**	**21 06 50.0**	**-1.3**
	2.4nm,0.1s,SNR=38							
EQES				S		**Sb**	**21 07 29.6**	**-2.5**
	0.5nm,0.1s,SNR=7.9							
EIBI	**Ibiza**	**3.39**	**15**	P		**Pb**	**21 06 49.3**	**-2.3**
	1.2nm,0.2s,SNR=7.9							
EIBI				S		**Sn**	**21 07 25.4**	**+1.1**
	0.7nm,0.2s,SNR=7.9							
EMIJ	**Mijas**	**4.14**	**283**	P		**Pn**	**21 06 57.6**	**+2.9**
	0.3nm,0.1s,SNR=7.9							
EMIJ				S		**Sn**	**21 07 45.0**	**+2.0**
	0.3nm,0.2s,SNR=7.9							

TAP 22 21:21:57.2, 24.°46N×121.°86E, h14km±1km, ML1.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ENA	**Nanau**	**0.12**	**252**	P		Pb	21 22 01.4	+0.1
	baz=250							
ENA				*eS*		Sb	21 22 03.9	0.0
	baz=250							
TWC	**Suao**	**0.14**	**355**	P		Pb	21 22 01.6	-0.2
	baz=358							
TWC				S		Sg	21 22 03.9	+0.4
	baz=358							
EOS1	**EOS1**	**0.26**	**71**	*eP*		Pb	21 22 03.1	-0.5
	baz=70							
EOS1				*eS*		Sb	21 22 07.6	-0.3
	baz=70							
TWE	**Neicheng**	**0.31**	**325**	*eP*		Pb	21 22 04.7	+0.1
	baz=326							
ENTT	**Nioudou**	**0.32**	**303**	P		Pb	21 22 05.2	+0.4
	baz=303							
ENTT				*eS*		Sb	21 22 09.6	-0.3
	baz=303							
NDT	**Datong Townshi**	**0.35**	**293**	*eP*		Pb	21 22 05.8	+0.6
	baz=293							
NDT				*eS*		Sb	21 22 10.4	-0.2
	baz=293							
NACB	**Ninganchiao**	**0.38**	**220**	*eP*		Pg	21 22 04.7	-0.2
	baz=220							
NACB				*eS*		Sb	21 22 11.1	-0.3
	baz=220							
ETLH	**Xiulin Townshi**	**0.43**	**234**	*eP*		Pb	21 22 06.8	+0.1
	baz=233							
ETLH				S		Sb	21 22 13.2	+0.1
	baz=233							
NNSB	**Datong**	**0.44**	**265**	P		Pb	21 22 07.1	+0.2
	baz=265							
NNSB				S		Sb	21 22 13.2	-0.2
	baz=265							
NNSH	**Datong**	**0.44**	**265**	*eP*		Pb	21 22 07.2	+0.3
	baz=265							
NNSH				*eS*		Sb	21 22 13.3	0.0
	baz=265							
NNS	**Nan Shan**	**0.45**	**267**	*eP*		Pn	21 22 08.6	-0.8
	baz=266							
NNS				*eS*		Sb	21 22 13.8	+0.2
	baz=266							
YHNB	**Yeheng**	**0.49**	**295**	*eP*		Pb	21 22 08.6	+0.9
	baz=294							
YHNB				*eS*		Sb	21 22 15.1	+0.3
	baz=294							

JMA 22 21:22:39.1, 24.°43N×123.°95E, h0km, M1.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JIJ	**Ishigaki jima**	**0.19**	**111**	P		Pg	21 22 43.1	+0.4
JIJ				S		Sg	21 22 45.8	+0.7
JKRS	**Kuro-shima**	**0.20**	**164**	P		Pg	21 22 43.4	+0.5
JKRS				S		Sg	21 22 46.2	+0.7
IRIF	**Iriomote-Funau**	**0.22**	**245**	P		Pg	21 22 43.9	+0.5
IRIF				S		Sg	21 22 47.5	+1.3
JISG	**Ishigakijimahi**	**0.36**	**64**	P		Pg	21 22 46.6	+0.5
JISG				S		Sg	21 22 52.4	+1.6
JTJ	**Tarama**	**0.72**	**73**	S		Sb	21 23 04.3	-0.6

*IDC **22** 21:37:13.0±3.7, 20.°93S×69.°57W, h0km, mb3.6/1, mb1 3.7/2, mb1mx3.5/20, mbtmp3.6/2, ML3.6/1, Error ellipse: s-maj=130.6km s-min=28.1km az=97.0*
*GUC **22** 21:37:18.0±0.4, 20.°15S×70.°40W, h34km±1km, ML3.5*

ISC 22 21:37:17.3±1.3, 20.°13S±0.°03×70.°36W±0.°07, h30km±10km, n17, σ0s99/30, 10D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TA02	**Huaiquique**	**0.26**	**122**	⇓	*iP*	**Pn**	**21 37 24.8**	**-0.3**
TA02					*i* S	**Sn**	**21 37 30.0**	**0.0**
TA02					IAML		21 37 30.4	
	comp=E,16μm,0.1s							
TA01	**Diego Aracena**	**0.46**	**158**		*i* P	**Pb**	**21 37 26.9**	**-0.3**
TA01					*i* S	**Sb**	**21 37 33.7**	**-0.2**
TA01					IAML		21 37 34.3	
	comp=E,6μm,0.3s							
PSGC	**Pisagua**	**0.58**	**23**	⇓	*i* P	**Pn**	**21 37 29.0**	**-0.5**
PSGC					*i* S	**Sn**	**21 37 37.6**	**-0.5**
PB11	**IPOC Station P**	**0.76**	**61**		*i* P	**Pn**	**21 37 32.1**	**0.0**
PB11					*i* S	**Sn**	**21 37 43.1**	**+0.5**
PB11					IAML		21 37 46.6	
	comp=N,3μm,0.2s							
PB08	**IPOC Station P**	**1.14**	**91**	⇓	*i* P	**Pn**	**21 37 38.3**	**+0.8**
PB08					*i* S	**Sn**	**21 37 53.9**	**+1.7**
GO01	**Chusmiza**	**1.19**	**67**	⇓	*i* P	**Pn**	**21 37 39.3**	**+1.0**
GO01					*i* S	**Sn**	**21 37 52.8**	**-0.9**
GO01					IAML		21 38 00.3	
	comp=N,2μm,0.2s							
PB01	**IPOC Station P**	**1.22**	**138**	⇓	*i* P	**Pn**	**21 37 38.6**	**+0.2**
PB01					*i* S	**Sn**	**21 37 54.9**	**+0.9**
PB01					IAML		21 37 58.2	
	comp=N,2μm,0.4s							
MNMC	**Minye Minye**	**1.23**	**36**	⇓	*i* P	**Pn**	**21 37 39.6**	**+0.9**
MNMC					*i* S	**Sb**	**21 37 56.7**	**+1.0**
MNMC					IAML		21 38 00.5	
	comp=E,2μm,0.2s							
PB02	**IPOC Station P**	**1.26**	**160**	⇓	*i* P	**Pn**	**21 37 38.9**	**0.0**
PB02					*i* S	**Sn**	**21 37 56.0**	**+1.0**
PB02					IAML		21 37 57.5	
	comp=E,3μm,0.5s							
PB12	**IPOC Station P**	**1.51**	**1**	⇓	*i* P	**Pn**	**21 37 42.9**	**+0.6**
PB12					*i* S	**Sn**	**21 38 02.5**	**+1.4**
PB12					IAML		21 38 06.6	
	comp=E,906nm,0.2s							
PB07	**IPOC Station P**	**1.65**	**164**	⇓	*i* P	**Pn**	**21 37 44.6**	**+0.2**
PB07					*i* S	**Sn**	**21 38 05.6**	**+1.0**
PB07					IAML		21 38 13.6	
	comp=E,703nm,0.5s							
PB09	**IPOC Station P**	**1.96**	**148**		*i* P	**Pn**	**21 37 50.6**	**+2.0**
PB09					*i* S	**Sb**	**21 38 16.0**	**-0.6**
PB09					IAML		21 38 19.5	
	comp=E,595nm,0.4s							
PB16	**IPOC Station P**	**1.96**	**24**		*i* P	**Pn**	**21 37 50.6**	**+1.6**
PB16					*i* S	**Sb**	**21 38 16.6**	**-0.4**
PB03	**IPOC Station P**	**1.99**	**163**	⇓	*i* P	**Pn**	**21 37 49.3**	**+0.3**
PB03					*i* S	**Sn**	**21 38 14.4**	**+1.4**
PB03					IAML		21 38 22.1	
	comp=E,377nm,0.4s							
LPAZ	**La Paz**	**4.37**	**29**		Pn	**Pn**	**21 38 28.8**	**+6.6**
	comp=E,1.4nm,0.3s,baz=235,slow=2.0,SNR=23							
LPAZ					Pg	Pb	21 38 40.6	+6.8
	comp=E,0.8nm,0.3s,baz=191,slow=7.4,SNR=7.5							
LPAZ					Lg	Lg	21 39 45.8	
	baz=115,slow=21,SNR=0.9							
TORD	**Torodi Ar. Bea**	**78.19**	**71**	P		**P**	**21 49 12.6**	**-1.8**
	comp=E,0.4nm,0.6s,baz=247,slow=5.1,SNR=5.2							
MKAR	**Makanchi Array**	**145.29**	**34**	PKPbc		**PKPbc**	**21 56 52.0**	**+0.2**
	comp=E,0.3nm,0.5s,baz=328,slow=3.3,SNR=3.9							

*IDC **22** 21:43:46.1±1.8, 2.°95N×126.°82E, h0km, mb3.3/5, mb1 3.5/5, mb1mx3.3/42, mbtmp3.4/5, Error ellipse: s-maj=122.4km s-min=21.6km az=70.0*

ISC 22 21:43:47.2±2.0, 3.°0N±0.°3×126.°8E±0.°9, h10km, n6, σ0s54/7, mb3.4/4, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KCP	**Kidapawan**	**4.31**	**336**	⇓	*eP*	**Pg**	**21 45 09.4**	**-0.4**
KCP					*i* S	**Sg**	**21 46 05.5**	**-0.1**
FITZ	**Fitzroy Crossi**	**21.04**	**183**		P	**P**	**21 48 31.3**	**-0.2**
	0.8nm,0.6s,baz=27,slow=9.0,SNR=1.7							
WRA	**Warramunga Arr**	**24.00**	**162**		P	**P**	**21 49 02.0**	**-0.3**
	0.6nm,0.5s,baz=341,slow=11,SNR=11							
ASAR	**Alice Springs**	**27.43**	**166**		P	**P**	**21 49 33.2**	**-0.2**
	0.2nm,0.3s,baz=345,slow=11,SNR=2.3							
MKAR	**Makanchi Array**	**58.18**	**325**		P	**P**	**21 53 41.9**	**+0.4**
	0.2nm,0.5s,baz=127,slow=9.5,SNR=2.5							

FINES	**FINESS Array B**	**92.63**	**332**	P		**P**	**21 57 07.7**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=75,slow=16,SNR=2.7							
TORD	**Torodi Ar. Bea**	**123.35**	**288**	PKP		**PKPdf**	**22 02 53.7**	**-0.1**
	comp=Z,0.8nm,1.2s,baz=59,slow=0.8,SNR=1.8							

*IDC **22** 21:46:33.2±1.9, 36°.94N×142°.04E, h0km, mb3.6/2, mb1 3.5/4, mb1mx3.2/59, mbtmp3.4/4, ML2.6/2, Error ellipse: s-maj=41.2km s-min=30.4km az=145.0*
*JMA **22** 21:46:35.6±0.3, 37°.01N×141°.89E, h45km±4km, M3.2*
ISC 22 21:46:35.3±1.3, 37°.06N±0°.05×141°.77E±0°.08, h19km, n24, σ1♀57/22, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.78**	**274**	P	**Pg**	**21 46 51.7**	**+1.2**
JFK	**Kawauchi**	**0.78**	**294**	P	**Pg**	**21 46 51.7**	**+1.2**
JFFD	**Fukushimafurud**	**0.96**	**272**	P	**Pg**	**21 46 54.1**	**+0.1**
JMST	**Minamisoumatoc**	**0.97**	**314**	P	**Pg**	**21 46 54.4**	**+0.3**
JMST				*e*S	**Sn**	**21 47 07.9**	**+0.9**
JHO	**Hitachi**	**1.06**	**245**	P	**Pg**	**21 46 55.0**	**-0.8**
JMM	**Marumori**	**1.12**	**317**	P	**Pg**	**21 46 56.6**	**-0.4**
JFT	**Otama**	**1.23**	**292**	P	**Pg**	**21 46 59.2**	**+0.1**
JIO	**Ouri**	**1.43**	**347**	P	**Pb**	**21 47 00.3**	**-1.1**
JIO				*e*S	**Sb**	**21 47 18.7**	**-0.5**
JOU	**Okura**	**1.57**	**327**	P	**Pg**	**21 47 04.0**	**-1.6**
JFY	**Yanaizu**	**1.68**	**283**	P	**Pg**	**21 47 06.3**	**-1.3**
JMK	**Ichinoseki**	**1.94**	**347**	P	**Pg**	**21 47 08.2**	**-1.8**
JAG	**Ashikaga**	**1.96**	**252**	P	**Pb**	**21 47 08.8**	**-1.6**
JYK	**Kaneyama**	**2.17**	**330**	P	**Pb**	**21 47 12.0**	**-1.8**
MJAR	**Matsushiro Arr**	**2.90**	**261**	Pn	**Pb**	**21 47 23.4**	**-3.0**
	0.4nm,0.3s,baz=88,slow=15,SNR=9.3						
MJAR				Sn	**Sb**	**21 48 02.2**	**+0.7**
	0.3nm,0.3s,baz=78,slow=8.9,SNR=5.8						
MAT	**Matsushiro**	**2.90**	**261**	P	**Pb**	**21 47 23.2**	**-3.2**
MAT				*e*S	**Sn**	**21 47 56.3**	**+1.5**
PETK	**Petropavlovsk-**	**19.53**	**30**	P	**Pn**	**21 51 02.5**	**-0.2**
	0.2nm,0.3s,baz=224,slow=12,SNR=1.8						
H11N2	**WAKE ISLAND Hy**	**27.92**	**121**	T	T	22 21 27.1	
	baz=314,slow=75,SNR=8.6						
H11N1	**WAKE ISLAND Hy**	**27.93**	**121**	T	T	22 21 27.9	
	baz=314,slow=75,SNR=8.8						
H11N3	**WAKE ISLAND Hy**	**27.94**	**121**	T	T	22 21 28.4	
	baz=314,slow=75,SNR=8.6						
H11S1	**WAKE ISLAND Hy**	**28.64**	**123**	T	T	22 22 21.0	
	baz=316,slow=76,SNR=5.9						
H11S3	**WAKE ISLAND Hy**	**28.64**	**123**	T	T	22 22 22.7	
	baz=316,slow=76,SNR=4.9						
H11S2	**WAKE ISLAND Hy**	**28.65**	**123**	T	T	22 22 15.7	
	baz=316,slow=76,SNR=5.9						
MKAR	**Makanchi Array**	**44.34**	**302**	P	**P**	**21 54 46.4**	**+2.3**
	0.2nm,0.7s,baz=82,slow=6.6,SNR=1.6						
FITZ	**Fitzroy Crossi**	**56.93**	**198**	P	**P**	**21 56 19.7**	**+0.5**
	0.6nm,0.3s,baz=32,slow=9.5,SNR=2.1						

*NNC **22** 21:47:48.5±0.3, 43°.21N×78°.53E, h0km, mb2.3, mpv2.6, Error ellipse: s-maj=4.1km s-min=1.7km az=175.0*
*KRNET **22** 21:47:53.0±0.1, 40°.47N×77°.11E, mb1.9*
SOME 22 21:47:49.4, 43°.20N×78°.53E, h5km, 6C-7D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**0.17**	**213**	⇓*i*P	Pg	21 47 52.6	-0.2
	16nm,0.1s						
SATY				⇓*i*S	Sg	21 47 55.0	0.0
	164nm,0.1s						
SATY	**Saty**	**0.17**	**213**	P	Pg	21 47 52.6	-0.2
	16nm,0.1s						
SATY				S	Sg	21 47 55.0	0.0
	164nm,0.1s						
UZB	**Uzynbulak**	**0.36**	**98**	⇓*e*P	Pg	21 47 55.8	-0.7
	2.0nm,0.0s						
UZB				⇓*i*S	Sg	21 48 00.1	-1.1
	11nm,0.1s						
UZB	**Uzynbulak**	**0.36**	**98**	P	Pg	21 47 55.8	-0.7
	2.0nm,0.0s						
UZB				S	Sg	21 48 00.1	-1.1
	11nm,0.1s						
PDGK	**Podgornoye**	**0.71**	**79**	P	Pg	21 48 02.5	-0.5
	0.4nm,0.1s						
PDGK				S	Sg	21 48 11.6	-0.7
	0.4nm,0.1s						
MDOK	**Medeo**	**1.09**	**269**	P	Pg	21 48 09.4	-0.9
	4.4nm,1.2s						
MDOK				⇑S	Sg	21 48 24.1	-0.2
	2.2nm,0.7s						
KNDC	**Almaty**	**1.15**	**271**	⇑P	Pg	21 48 10.3	-1.1
	6.8nm,0.6s						
KNDC				⇓S	Sg	21 48 26.1	-0.1
	4.6nm,0.3s						
KTBS	**Karatobe**	**1.44**	**291**	*e*P	Pn	21 48 16.0	-0.2
	0.2nm,0.2s						
KTBS				*e*S	Sb	21 48 34.9	-0.5
	1.0nm,0.3s						
KTBS	**Karatobe**	**1.44**	**291**	P	Pn	21 48 16.0	-0.2
	0.2nm,0.2s						
KTBS				S	Sb	21 48 34.9	-0.5
	1.0nm,0.3s						
DJR	**Jarkent**	**1.45**	**38**	*e*P	Pn	21 48 16.2	-0.2
	2.3nm,0.2s						
DJR				*e*S	Sb	21 48 35.7	-0.1
	3.4nm,0.4s						
DJR	**Jarkent**	**1.45**	**38**	P	Pn	21 48 16.3	-0.2
	2.3nm,0.2s						
DJR				S	Sb	21 48 35.7	-0.1
	3.4nm,0.4s						
TARG	**Taragay, Kyrgy**	**1.57**	**200**	⇓*i*P	Pn	21 48 18.0	-0.3
	baz=22						
TARG				⇓*i*S	Sn	21 48 36.2	-2.9
	baz=22						
ULHL	**Ulahol**	**1.94**	**241**	⇑*i*P	Pg	21 48 26.1	-0.5
	baz=40						
ULHL				⇑*i*S	Sb	21 48 50.5	+0.6
	baz=40						
KZA	**Kyzart**	**2.67**	**246**	⇑*i*P	Pn	21 48 29.9	-3.5
	baz=20						
KZA				⇑*i*S	Sn	21 48 56.3	-10
	baz=20						

IDC 22 21:51:36.1±1.2, 1°.65N×121°.71E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/39, mbtmp3.7/6, Error ellipse: s-maj=86.8km s-min=18.1km az=70.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.78**	**151**	P	P	21 56 59.9	+0.1
	1.0nm,0.3s,baz=336,slow=9.5,SNR=25						
ASAR	**Alice Springs**	**27.82**	**155**	P	P	21 57 28.0	+0.7
	0.3nm,0.4s,baz=348,slow=14,SNR=7.3						
STKA	**Stephens Creek**	**38.31**	**152**	P	P	21 58 57.8	-0.8
	1.6nm,0.5s,baz=325,slow=9.9,SNR=6.7						
USRK	**Ussuriysk Ar.**	**43.34**	**11**	P	P	21 59 39.7	-0.3
	0.9nm,0.4s,baz=198,slow=6.6,SNR=7.0						
SONM	**Songino Array**	**47.88**	**346**	P	P	22 00 16.5	+0.5
	0.5nm,0.6s,baz=165,slow=12,SNR=3.9						
MKAR	**Makanchi Array**	**56.54**	**328**	P	P	22 01 20.0	-0.4
	0.3nm,0.5s,baz=130,slow=8.1,SNR=4.7						

*ATH **22** 22:04:35.0, 36°.59N×27°.81E, h29km±1km, ML2.4/2, Error ellipse: s-maj=2.2km s-min=1.2km az=214.0*
*ISK **22** 22:04:35.3, 36°.57N×27°.78E, h6km, ML2.6/14*
*DDA **22** 22:04:36.2, 36°.71N×27°.81E, h7km±6km, ML2.4*
ISC 22 22:04:34.0±1.0, 36°.63N±0°.02×27°.86E±0°.02, h9km±9km, n36, σ2♀01/55, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAT	**Datca**	**0.25**	**295**	PG	**Pg**	**22 04 40.7**	**+1.6**
DAT	**Datca**	**0.25**	**295**	*i* P	**Pg**	**22 04 40.6**	**+1.5**
DAT				*i* S	**Sg**	**22 04 42.9**	**+0.3**
MRSB	**Marmaris-Mugla**	**0.29**	**72**	PG	**Pb**	**22 04 43.0**	**+1.7**
MRSB				SG	**Sb**	**22 04 48.2**	**+2.0**
ARG	**Arkhangelos**	**0.46**	**152**	P	**Pb**	**22 04 44.8**	**+0.5**
ARG				S	**Sb**	**22 04 51.5**	**+0.3**
ARG				AML	AML	22 04 53.7	
	comp=N,769μm,0.3s						
ARG				AML	AML	22 04 55.0	
	comp=E,870μm,0.3s						
ARG	**Arkhangelos**	**0.46**	**152**	PG	**Pb**	**22 04 44.6**	**+0.3**
BDRM	**Kayabasi**	**0.55**	**323**	*i* P	**Pb**	**22 04 46.5**	**+0.7**
BDRM				*i* P	**Pb**	**22 04 46.5**	**+0.7**
BDRM				*i* S	**Sg**	**22 04 51.9**	**-0.1**
BDRM				*i* S	**Sb**	**22 04 52.1**	**-1.8**
BDRM				IAML		22 04 57.0	
	comp=E,358nm,0.7s						
BDRM				IAML		22 04 57.0	
	comp=N,353nm,0.3s						
BDRM				IAML		22 04 57.0	
	comp=E,366nm,0.3s						
NISR	**Nisiros**	**0.59**	**269**	P	**Pb**	**22 04 46.6**	**+0.2**
NISR				S	**Sb**	**22 04 54.9**	**0.0**
YER	**Yerkesik**	**0.61**	**34**	PG	**Pn**	**22 04 49.3**	**+0.4**
BODT	**Bodrum**	**0.62**	**315**	PG	**Pb**	**22 04 47.4**	**+0.4**
BODT				SG	**Sb**	**22 04 56.6**	**+0.8**
TURN	**Turunc**	**0.65**	**67**	PG	**Pg**	**22 04 43.8**	**-2.7**
TURN				SG	**Sg**	**22 04 50.4**	**-4.6**
TURN	**Turunc**	**0.65**	**67**	*i* P	**Pg**	**22 04 43.7**	**-2.8**
TURN				*i* S	**Sg**	**22 04 47.8**	**-7.2**
TURN				IAML		22 04 51.0	
	comp=N,324nm,0.2s						
TURN				IAML		22 04 51.0	
	comp=E,324nm,0.2s						
DALY	**Dalyan (Mula)**	**0.67**	**73**	PG	**Pn**	**22 04 50.2**	**+0.6**
DALY	**Dalyan (Mula)**	**0.67**	**73**	*i* P	**Pn**	**22 04 50.0**	**+0.4**
DALY				*i* S	**Sb**	**22 04 57.7**	**+0.6**
KOSK	**Kos Island**	**0.72**	**280**	PG	**Pg**	**22 04 48.6**	**+0.7**
FETY	**Fethiye**	**0.98**	**89**	PG	**Pn**	**22 04 55.9**	**+1.9**
FETY	**Fethiye**	**0.98**	**89**	*i* P	**Pn**	**22 04 55.2**	**+1.2**
FETY				*i* S	**Sb**	**22 05 07.9**	**+1.6**
AYDN	**Tasoluk**	**1.03**	**1**	*i* P	**Pn**	**22 04 55.7**	**+1.0**
AYDN				*i* S	**Sg**	**22 05 06.7**	**-0.6**
GCAM	**G?zelcaml?**	**1.18**	**335**	PN	**Pn**	**22 04 58.9**	**+2.2**
GCAM	**G?zelcaml?**	**1.18**	**335**	*i* P	**Pg**	**22 04 56.8**	**+0.1**
GCAM				*i* S	**Sg**	**22 05 09.4**	**-2.7**
GCAM				IAML		22 05 18.0	
	comp=E,68nm,0.6s						
GCAM				IAML		22 05 21.0	
	comp=N,63nm,0.7s						
TAVA	**DENIZLI_Tavas**	**1.19**	**45**	*i* P	**Pn**	**22 04 59.4**	**+2.5**
TAVA				*i* S	**Sb**	**22 05 13.8**	**+1.5**
KARP	**Karpathos**	**1.22**	**208**	P	**Pg**	**22 04 57.2**	**-0.1**
KARP				S	**Sg**	**22 05 12.8**	**-0.4**
KARP	**Karpathos**	**1.22**	**208**	PN	**Pg**	**22 04 57.4**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.32**	**1**	PN	**Pb**	**22 05 01.6**	**+2.6**
SMG	**Samos**	**1.35**	**323**	P	**Pn**	**22 04 59.2**	**+0.1**
SMG				S	**Sn**	**22 05 18.1**	**+0.9**
SMG				AML	AML	22 05 22.4	
	comp=N,290μm,0.4s						
SMG				AML	AML	22 05 24.9	
	comp=E,394μm,0.4s						
AKAS	**Kas**	**1.46**	**105**	PN	**Pg**	**22 05 03.7**	**+1.7**
KSL	**Kastellorizon**	**1.47**	**108**	P	**Pg**	**22 05 03.0**	**+0.8**
GOLH	**Golhisar**	**1.49**	**65**	*i* P	**Pg**	**22 05 06.0**	**+3.3**
GOLH				*i* S	**Sg**	**22 05 24.0**	**+1.9**
GOLH				IAML		22 06 07.0	
	comp=E,102nm,2.4s						
AMGA	**Amorgos Island**	**1.59**	**278**	P	**Pn**	**22 05 03.0**	**+0.7**
DGB	**zmir**	**1.62**	**332**	*i* P	**Pn**	**22 05 02.7**	**0.0**
DGB				*i* S	**Sn**	**22 05 17.3**	**-6.4**
ELL	**Elmali**	**1.65**	**85**	PN	**Pg**	**22 05 06.3**	**+0.6**
BLCB	**Balcova**	**1.87**	**340**	PN	**Pb**	**22 05 09.1**	**+0.7**
APE	**Apeiranthos**	**1.92**	**284**	PN	**Pb**	**22 05 08.9**	**-0.3**
URLA	**Izmir**	**2.00**	**330**	PN	**Pb**	**22 05 10.8**	**+0.2**
NPS	**Neapolis**	**2.27**	**234**	P	**Pn**	**22 05 11.4**	**-0.3**
LAST	**Lasithi**	**2.42**	**234**	P	**Pn**	**22 05 14.6**	**+0.8**
IDI	**Anoyia**	**2.75**	**242**	P	**Pn**	**22 05 19.1**	**+0.7**

*IDC **22** 22:24:37.6±1.9, 5°.14S×150°.35E, h86km±29km, mb3.6/4, mb1 3.7/5, mb1mx3.3/30, mbtmp3.9/5, Error ellipse: s-maj=60.7km s-min=10.6km az=134.0*
ISC 22 22:24:38.0±1.0, 5°.2S±0°.2×150°.5E±0°.2, h100km, n7, σ0♀93/9, mb3.6/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.80**	**61**	P	**Pn**	**22 25 07.9**	**-0.1**
	17nm,0.3s,baz=297,slow=7.0,SNR=8.5						
KRVT				S	**Sn**	**22 25 31.3**	**+0.4**
	15nm,0.3s,baz=208,slow=20,SNR=4.7						
PMG	**Port Moresby**	**5.31**	**218**	P	**Pn**	**22 25 56.0**	**+1.0**
	2.4nm,0.3s,baz=24,slow=4.5,SNR=2.4						
PMG				S	**Sn**	**22 26 53.6**	**-1.4**
	4.0nm,0.3s,baz=98,slow=13,SNR=7.1						
WRA	**Warramunga Arr**	**21.47**	**226**	P	**P**	**22 29 18.4**	**-0.3**
	1.3nm,0.5s,baz=50,slow=10,SNR=25						
ASAR	**Alice Springs**	**24.33**	**219**	P	**P**	**22 29 47.0**	**+0.3**
	1.7nm,0.5s,baz=56,slow=8.6,SNR=23						
FITZ	**Fitzroy Crossi**	**27.43**	**240**	P	**P**	**22 30 15.4**	**+0.8**
	1.6nm,0.3s,baz=62,slow=7.9,SNR=11						
SONM	**Songino Array**	**65.42**	**329**	P	**P**	**22 35 10.3**	**0.0**
	0.3nm,0.5s,baz=141,slow=7.1,SNR=2.0						
TORD	**Torodi Ar. Bea**	**148.19**	**287**	PKPbc	**PKiKP**	**22 44 13.9**	**-1.2**
	0.2nm,0.5s,baz=87,slow=2.6,SNR=6.3						

IDC 22 22:31:29.0±2.8, 6°.59S×129°.82E, h134km±40km, mb3.0/1, mb1 3.2/5, mb1mx3.0/32, mbtmp3.5/5, Error ellipse: s-maj=73.7km s-min=21.4km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.86**	**14**	P	Pn	22 32 54.0	+0.2
	1.4nm,0.3s,baz=212,slow=24,SNR=16						
SIJI				S	Sn	22 33 54.2	-5.7
	1.1nm,0.3s,baz=18,slow=20,SNR=2.7						
FITZ	**Fitzroy Crossi**	**12.15**	**199**	P	Pn	22 34 18.2	+0.5
	0.3nm,0.3s,baz=29,slow=12,SNR=10						
FITZ				S	Sn	22 36 23.9	-7.9
	0.2nm,0.3s,baz=308,slow=19,SNR=1.9						
WRA	**Warramunga Arr**	**13.98**	**162**	P	Pn	22 34 39.8	-1.7
	0.3nm,0.3s,baz=353,slow=13,SNR=14						
WRA				S	Sn	22 37 09.7	-6.5
	0.2nm,0.3s,baz=344,slow=28,SNR=6.5						
ASAR	**Alice Springs**	**17.43**	**167**	P	Pn	22 35 24.1	0.0
	0.1nm,0.3s,baz=337,slow=9.1,SNR=4.7						
MKAR	**Makanchi Array**	**67.78**	**327**	P	P	22 42 12.5	0.0
	0.2nm,0.5s,baz=139,slow=7.0,SNR=1.6						

ISC 22 22:43:16.9±1.2, 49°.81N±0°.05×18°.52E±0°.05, h0km, n18, σ0♀79/30, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.24**	**277**	*e*PG	**Pg**	**22 43 22.1**	**+0.6**
OKC				*e*SG	**Sg**	**22 43 26.3**	**+1.7**
	comp=Z,26nm,0.4s						
MORC	**Moravsky Berou**	**0.63**	**267**	*e*PG	**Pg**	**22 43 29.4**	**+0.4**
MORC				*e*SG	**Sg**	**22 43 37.7**	**+0.5**
LANS	**Liptovska Anna**	**0.91**	**136**	*e*PG	**Pg**	**22 43 33.7**	**-0.5**
LANS				*e*SG	**Sg**	**22 43 47.1**	**+1.2**
LANS				*e*LG	Lg	22 43 51.4	
JAVC	**Velka Javorina**	**1.10**	**211**	*e*PG	**Pg**	**22 43 38.4**	**+0.4**
KRLC	**Kraliky**	**1.15**	**284**	*e*PG	**Pg**	**22 43 38.0**	**-1.0**
KRLC				*e*SG	**Sg**	**22 43 54.6**	**+0.7**
	comp=Z,11nm,0.2s						
VYHS	**Vyhne**	**1.33**	**171**	*e*SN	**Sg**	**22 43 59.8**	**+0.1**
VRAC	**Vranov**	**1.35**	**249**	*e*PG	**Pg**	**22 43 42.0**	**-0.7**
VRAC				*e*SG	**Sg**	**22 43 59.9**	**-0.3**
DPC	**Dobruska-Polom**	**1.51**	**292**	*e*PG	**Pn**	**22 43 44.6**	**-0.7**
DPC				*e*SG	**Sg**	**22 44 05.6**	**+0.1**
	comp=Z,27nm,1.5s						
KRUC	**Moravsky**	**1.57**	**242**	*e*PG	**Pn**	**22 43 45.8**	**-0.3**
KRUC				*e*SG	**Sn**	**22 44 07.1**	**0.0**
OSTC	**Ostas**	**1.66**	**298**	*e*PG	**Pn**	**22 43 47.1**	**-0.2**
OSTC				*e*SG	**Sg**	**22 44 10.1**	**0.0**
UPC	**Upice**	**1.76**	**294**	*e*PG	**Pn**	**22 43 48.9**	**+0.3**
UPC				*e*SG	**Sb**	**22 44 12.5**	**-0.1**
	comp=Z,5.5nm,0.5s						
CHVC	**Chvalec**	**1.76**	**297**	*e*PG	**Pn**	**22 43 48.7**	**0.0**
CHVC				*e*SG	**Sg**	**22 44 13.4**	**-0.2**
	comp=Z,2.9nm,0.4s						
GOPC	**GO Pecny, Ondr**	**2.42**	**274**	*e*PG	**Pb**	**22 44 01.2**	**0.0**
GOPC				*e*SG	**Sg**	**22 44 34.4**	**-0.1**
	comp=Z,6.1nm,0.9s						
PRU	**Pruhonice**	**2.58**	**276**	*e*SG	**Sg**	**22 44 39.2**	**-0.4**
PVCC	**Panska Ves**	**2.64**	**287**	*e*SG	**Sg**	**22 44 42.4**	**+0.8**
	comp=Z,5.4nm,0.4s						
BRG	**Berggiesshubel**	**3.12**	**292**	SG	**Sg**	**22 44 55.6**	**-1.4**
	1.3nm,0.5s						
KHC	**Kasperske Hory**	**3.29**	**260**	*e*PG	**Pb**	**22 44 16.3**	**+0.1**
KHC				*e*SG	**Sg**	**22 45 02.2**	**-0.4**
	comp=Z,1.9nm,0.4s						

CLL	**Collm**	**3.82**	**295**	*e*Sg		**Sg**	**22 45 22.0**	**+2.4**

*NNC **22** 23:14:44.9±0.6, 42°.94N×78°.25E, h0km, mb2.7, mpv2.6, Error ellipse: s-maj=5.5km s-min=2.0km az=171.0*
*SOME **22** 23:14:45.3, 42°.95N×78°.23E, h5km*
*KRNET **22** 23:14:45.4±0.1, 42°.95N×78°.24E, h18km, mb2.4*
ISC 22 23:14:45.1±1.1, 42°.95N±0°.02×78°.21E±0°.01, h1km±10km, n54, σ1♀26/105, 13C-24D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**0.18**	**54**	⇑*i*P	**Pg**	**23 14 48.7**	**0.0**
	9.8nm,0.1s						
SATY				*e*S	**Sg**	**23 14 50.9**	**-0.1**
	58nm,0.1s						
SATY	**Saty**	**0.18**	**54**	P	**Pg**	**23 14 48.7**	**0.0**
	9.8nm,0.1s						
SATY				S	**Sg**	**23 14 50.5**	**-0.5**
	58nm,0.1s						
ZHN	**Zhinishke**	**0.27**	**38**	*e*P	**Pg**	**23 14 50.4**	**0.0**
	3.8nm,0.1s						
ZHN				*e*S	**Sg**	**23 14 54.2**	**+0.3**
	45nm,0.1s						
ANVS	**Anan'yevo**	**0.43**	**247**	⇓*i*P	**Pg**	**23 14 54.3**	**+1.0**
	baz=49						
ANVS				⇓*i*S	**Sg**	**23 15 00.5**	**+1.6**
	baz=49						
PRZ	**Przheval'sk**	**0.49**	**163**	⇓*i*P	**Pg**	**23 14 55.2**	**+0.7**
	baz=65						
PRZ				⇓*i*S	**Sg**	**23 15 01.6**	**+0.8**
	baz=65						
KURS	**Kuram**	**0.54**	**357**	⇓*i*P	**Pg**	**23 14 55.8**	**+0.4**
	baz=54						
KURS				⇓*e*S	**Sg**	**23 15 02.8**	**+0.5**
	baz=54						
KURS	**Kuram**	**0.54**	**357**	⇓*i*P	**Pg**	**23 14 55.8**	**+0.4**
	2.9nm,0.1s						
KURS				*e*S	**Sg**	**23 15 03.2**	**+0.9**
	3.0nm,0.2s						
KURS	**Kuram**	**0.54**	**357**	P	**Pg**	**23 14 55.8**	**+0.4**
	2.9nm,0.1s						
KURS				S	**Sg**	**23 15 02.8**	**+0.5**
	3.0nm,0.2s						
UZB	**Uzynbulak**	**0.63**	**72**	⇑*i*P	**Pg**	**23 14 56.1**	**-1.0**
	5.3nm,0.1s						
UZB				*e*S	**Sg**	**23 15 04.5**	**-0.9**
	12nm,0.3s						
KOTS	**Kotyrbulak**	**0.85**	**290**	⇓*i*P	**Pb**	**23 15 02.4**	**-0.3**
	baz=89						
KOTS				⇓*i*S	**Sb**	**23 15 14.1**	**-0.6**
	baz=89						
KOTS	**Kotyrbulak**	**0.85**	**290**	⇓*i*P	**Pb**	**23 15 02.4**	**-0.3**
	2.5nm,0.1s						
KOTS				*e*S	**Sb**	**23 15 14.4**	**-0.3**
	3.9nm,0.2s						
KOTS	**Kotyrbulak**	**0.85**	**290**	P	**Pb**	**23 15 02.4**	**-0.3**
	2.5nm,0.1s						
KOTS				S	**Sb**	**23 15 14.1**	**-0.6**
	3.9nm,0.2s						
MDOK	**Medeo**	**0.87**	**284**	*e*P	**Pg**	**23 15 02.7**	**+0.8**
	baz=84						
MDOK				*e*S	**Sg**	**23 15 14.6**	**+1.4**
	baz=84						
MDOK	**Medeo**	**0.87**	**284**	*e*P	**Pg**	**23 15 02.6**	**+0.8**
	0.8nm,0.1s						
MDOK				*e*S	**Sg**	**23 15 14.5**	**+1.4**
	3.5nm,0.2s						
MDOK	**Medeo**	**0.87**	**284**	P	**Pg**	**23 15 02.5**	**+0.6**
	3.8nm,1.2s						
MDOK				⇓S	**Sb**	**23 15 14.8**	**-0.6**
	4.4nm,1.0s						
MDOK	**Medeo**	**0.87**	**284**	Pg	**Pg**	**23 15 02.7**	**+0.8**
	0.8nm,0.1s						
MDOK				Lg	Lg	23 15 14.5	
	3.5nm,0.2s						
SHLS	**Shalkode**	**0.94**	**77**	*e*P	**Pn**	**23 15 08.4**	**+2.8**
	baz=80						
SHLS				*e*S	**Sn**	**23 15 24.3**	**+4.5**
	baz=80						
SHLS	**Shalkode**	**0.94**	**77**	*e*P	**Pn**	**23 15 08.4**	**+2.8**
	0.9nm,0.1s						
SHLS				*e*S	**Sn**	**23 15 24.3**	**+4.5**
	1.6nm,0.1s						
SHLS	**Shalkode**	**0.94**	**77**	P	**Pn**	**23 15 08.4**	**+2.8**
	0.9nm,0.1s						
SHLS				S	**Sn**	**23 15 24.3**	**+4.5**
	1.6nm,0.1s						
KNDC	**Almaty**	**0.95**	**287**	⇓P	**Pg**	**23 15 03.7**	**+0.5**
	3.9nm,0.3s						
KNDC				⇑S	**Sb**	**23 15 17.4**	**0.0**
	9.0nm,0.7s						
PDGK	**Podgornoye**	**1.01**	**68**	P	**Pg**	**23 15 03.1**	**-1.4**
	0.6nm,0.1s						
PDGK				S	**Sg**	**23 15 15.0**	**-2.7**
	0.6nm,0.1s						
KDJ	**Kajisay**	**1.12**	**223**	⇑*i*P	**Pg**	**23 15 06.0**	**-0.5**
	baz=24						
KDJ				⇑*i*S	**Sg**	**23 15 21.4**	**+0.4**
	baz=24						
MNBS	**Baschi**	**1.14**	**7**	⇓*e*P	**Pg**	**23 15 07.2**	**+0.3**
	1.3nm,0.1s						
MNBS				⇑*i*S	**Sb**	**23 15 22.4**	**-0.5**
	9.9nm,0.2s						
MNBS	**Baschi**	**1.14**	**7**	P	**Pg**	**23 15 07.2**	**+0.3**
	1.3nm,0.1s						
MNBS				S	**Sb**	**23 15 22.4**	**-0.5**
	9.9nm,0.2s						
IZV	**Izvestkoviy**	**1.17**	**275**	*e*P	**Pg**	**23 15 08.4**	**+0.9**
	baz=75						
IZV				*e*S	**Sn**	**23 15 24.2**

KUU	**Kurty**	**1.65**	**305**	*e*P		**Pb**	**23 15 16.5**	**+0.1**
	0.5nm,0.1s							
KUU				*e*S		**Sg**	**23 15 38.2**	**+0.1**
	2.0nm,0.2s							
KUU	**Kurty**	**1.65**	**305**	P		**Pb**	**23 15 16.5**	**+0.1**
	0.5nm,0.1s							
KUU				S		**Sg**	**23 15 38.3**	**+0.1**
	2.0nm,0.2s							
BOOM	**Boomskoye usch**	**1.73**	**255**	⇓*i*P		**Pb**	**23 15 17.6**	**-0.2**
	baz=56							
BOOM				⇓*i*S		**Sg**	**23 15 40.8**	**+0.1**
	baz=56							
DJR	**Jarkent**	**1.80**	**39**	⇓*i*P		**Pb**	**23 15 18.1**	**-0.8**
	1.8nm,0.2s							
DJR				⇑*i*S		**Sb**	**23 15 41.1**	**-0.8**
	2.5nm,0.2s							
DJR	**Jarkent**	**1.80**	**39**	P		**Pb**	**23 15 18.1**	**-0.8**
	1.8nm,0.2s							
DJR				S		**Sb**	**23 15 41.1**	**-0.8**
	2.5nm,0.2s							
DGS	**Degeres**	**1.81**	**280**	*e*P		**Pb**	**23 15 19.5**	**+0.5**
	baz=80							
DGS				*e*S		**Sg**	**23 15 43.3**	**+0.2**
	baz=80							
DGS	**Degeres**	**1.81**	**280**	*e*P		**Pb**	**23 15 19.5**	**+0.5**
	0.6nm,0.2s							
DGS				*e*S		**Sg**	**23 15 43.3**	**+0.2**
	1.3nm,0.3s							
DGS	**Degeres**	**1.81**	**280**	P		**Pb**	**23 15 19.5**	**+0.5**
	0.6nm,0.2s							
DGS				S		**Sg**	**23 15 43.3**	**+0.2**
	1.3nm,0.3s							
TKM2	**Tokmak 2**	**1.92**	**270**	⇑*i*P		**Pb**	**23 15 20.4**	**-0.5**
	baz=70							
TKM2				⇑*i*S		**Sb**	**23 15 45.7**	**+0.3**
	baz=70							
KRBS	**Karabastau**	**1.99**	**293**	*e*P		**Pb**	**23 15 22.8**	**+0.7**
	0.3nm,0.1s							
KRBS				*e*S		**Sg**	**23 15 49.0**	**0.0**
	1.4nm,0.1s							
KRBS	**Karabastau**	**1.99**	**293**	Pg		**Pb**	**23 15 22.8**	**+0.7**
	0.3nm,0.1s							
KRBS				Lg		Lg	23 15 49.0	
	1.4nm,0.1s							
KZA	**Kyzart**	**2.35**	**249**	⇓*i*P		**Pb**	**23 15 26.8**	**-1.7**
	baz=49							
KZA				⇓*i*S		**Sb**	**23 15 56.6**	**-1.6**
	baz=49							
KBK	**Karagaybulak**	**2.42**	**264**	⇓*e*P		**Pb**	**23 15 27.3**	**-2.1**
	baz=64							
KBK				⇓*e*S		**Sb**	**23 15 57.8**	**-2.0**
	baz=64							
KAPS	**Kapalarasan**	**2.48**	**19**	*e*P		**Pb**	**23 15 30.1**	**-0.3**
	0.4nm,0.2s							
KAPS				*e*S		**Sb**	**23 16 01.9**	**+0.5**
	3.8nm,0.4s							
KAPS	**Kapalarasan**	**2.48**	**19**	Pg		**Pb**	**23 15 30.1**	**-0.3**
	0.4nm,0.2s							
KAPS				Lg		Lg	23 16 01.9	
	3.8nm,0.4s							

*IDC **22** 23:41:43.0±0.8, 67.96N×162.61W, h0km, mb3.8/13, mb1 4.0/15, mb1mx3.8/42, mbtmp3.8/15, ML3.7/2, MS3.0/4, Ms1 3.1/4, ms1mx2.6/36, Error ellipse: s-maj=23.3km s-min=15.5km az=35.0*
*NEIC **22** 23:41:43.7±1.4, 67.72N±0.07×162.5W±0.2, h14km±4km, Error ellipse: s-maj=10.5km s-min=7.1km az=143.0*
*AEIC **22** 23:41:43.7±1.9, 67.71N±0.03×162.6W±0.1, h21km±4km, ML3.7, Error ellipse: s-maj=5.9km s-min=4.5km az=63.0*

ISC 22 23:41:43.2±0.5, 67.76N±0.06×162.33W±0.05, h10km, n61, σ1s56/64, mb3.8/14, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**0.37**	**324**		**Pb**	**23 41 51.2**	**-0.7**
RDOG					**Sb**	**23 41 58.1**	**+0.4**
ANM	**Nome**	**3.44**	**203**		**Pn**	**23 42 36.1**	**-0.5**
ANM					**Sn**	**23 43 16.2**	**-1.2**
IM01	**Indian Mountai**	**3.83**	**113**		Lg	23 43 28.1	
IM05	**Indian Mountai**	**3.84**	**114**		**Pn**	**23 42 43.0**	**+0.8**
PS05	**TAPS Pump Stn5**	**4.62**	**96**		**Pn**	**23 42 55.0**	**+2.1**
COLD	**Coldfoot**	**4.69**	**91**		**Pn**	**23 42 56.4**	**+2.5**
TOLK	**Toolik Lake Re**	**4.84**	**74**		**Pn**	**23 42 58.4**	**+2.4**
MLY	**Manley**	**5.40**	**115**		**Pn**	**23 43 03.9**	**+0.2**
TTA	**Tatalina**	**5.52**	**148**		**Pn**	**23 43 05.9**	**+0.6**
GAMB	**Gambell**	**5.55**	**228**		**Pn**	**23 43 02.2**	**-3.6**
BPAW	**Bear Paw Mtn.**	**5.91**	**123**		**Pn**	**23 43 11.8**	**+1.1**
NEA	**Nenana**	**6.24**	**114**		**Pn**	**23 43 16.3**	**+1.1**
NEA	**Nenana**	**6.24**	**114**		**Sn**	**23 44 26.4**	**-0.1**
KTH	**Kantishna Hill**	**6.32**	**126**		**Pn**	**23 43 16.7**	**+0.3**
MDM	**Murphy Dome**	**6.32**	**110**		**Pn**	**23 43 18.1**	**+1.7**
PPLA	**Purkeypile**	**6.46**	**134**		**Pn**	**23 43 18.1**	**-0.3**
TCOL	**CIGO, UAF Yank**	**6.50**	**110**		**Pn**	**23 43 20.9**	**+2.2**
COLA	**College**	**6.50**	**110**		**Pn**	**23 43 19.0**	**+0.3**
COLA	**College**	**6.50**	**110**		**Pn**	**23 43 19.3**	**+0.6**
POKR	**Poker Plat Res**	**6.53**	**107**		**Pn**	**23 43 21.1**	**+2.0**
TRF	**Thorofare Moun**	**6.59**	**125**		**Pn**	**23 43 20.4**	**+0.3**
CCB	**Clear Creek Bu**	**6.65**	**111**		**Pn**	**23 43 21.3**	**+0.6**
WRH	**Wood River Hil**	**6.65**	**113**		**Pn**	**23 43 21.4**	**+0.7**
FYU	**Fort Yukon**	**6.76**	**92**		**Pn**	**23 43 23.6**	**+1.4**
MCK	**McKinley**	**6.83**	**120**		**Pn**	**23 43 23.8**	**+0.5**
ILAR	**Eielson Array**	**6.91**	**108**	Pn	**Pn**	**23 43 25.7**	**+1.4**
	8.5nm,0.3s,baz=303,slow=13,SNR=79						
ILAR				Sn	**Sn**	**23 44 40.7**	**-2.2**
	3.4nm,0.3s,baz=300,slow=24,SNR=11						
ILAR				LR	LR	23 46 39.4	
	comp=Z,42nm,19.3s,baz=338,slow=42						
PRP	**Porcupine Dome**	**7.04**	**101**		**Pn**	**23 43 28.0**	**+1.7**
RND	**Reindeer**	**7.08**	**122**		**Pn**	**23 43 28.1**	**+1.4**
HDA	**Harding Lake**	**7.09**	**111**		**Pn**	**23 43 27.5**	**+0.7**
SVW2	**Sparrevohn**	**7.29**	**153**		**Pn**	**23 43 29.9**	**+0.3**
WAT2	**Susitna Watana**	**7.48**	**123**		**Pn**	**23 43 34.2**	**+1.9**
SPNN	**North Nagishla**	**7.63**	**143**		**Pn**	**23 43 35.9**	**+1.5**
DHY	**Denali Highway**	**7.79**	**120**		**Pn**	**23 43 37.0**	**+0.4**
RIDG	**Independent Ri**	**8.23**	**111**		**Pn**	**23 43 43.2**	**+0.7**
GHO	**Glory Hole Cre**	**8.28**	**130**		**Pn**	**23 43 42.7**	**-0.5**
RSO	**Redoubt South**	**8.42**	**146**		**Pn**	**23 43 44.9**	**-0.4**
SML	**Sawmill**	**8.43**	**128**		**Pn**	**23 43 45.7**	**+0.5**
DOT	**Dot Lake**	**8.56**	**110**		**Pn**	**23 43 46.2**	**-0.9**
RC01	**Rabbit Creek A**	**8.61**	**135**	Pn	**Pn**	**23 43 47.4**	**-0.3**
KNK	**Knik Glacier**	**8.70**	**130**	Pn	**Pn**	**23 43 49.4**	**+0.5**
SCM	**Sheep Creek Mo**	**8.71**	**126**		**Pn**	**23 43 48.5**	**-0.6**
EPYK	**Eagle Plains**	**10.06**	**86**		**Pn**	**23 44 09.0**	**+1.5**
INK	**Inuvik**	**10.75**	**74**	Pn	**Pn**	**23 44 16.4**	**-0.5**
	0.7nm,0.3s,baz=283,slow=12,SNR=23						
INK				Sn	Sn	23 46 08.6	-8.5
	0.3nm,0.3s,baz=21,slow=14,SNR=2.4						
KDAK	**Kodiak Island**	**10.94**	**151**	Pn	**Pn**	**23 44 21.0**	**+1.5**
	0.2nm,0.3s,baz=358,slow=11,SNR=6.0						
KDAK				LR	LR	23 48 42.1	
	comp=Z,74nm,20.5s,baz=299,slow=38						
BILL	**Bilibino**	**11.76**	**286**		**Pn**	**23 44 29.8**	**-0.9**
C36M	**Paulatuk**	**13.93**	**66**		**Pn**	**23 44 58.4**	**-1.8**
YKA	**Yellowknife Ar**	**20.30**	**82**	P	**P**	**23 46 18.0**	**-0.7**
	1.7nm,0.6s,baz=304,slow=10,SNR=11						
RES	**Resolute Bay**	**21.52**	**42**	P	**P**	**23 46 31.4**	**-0.3**
	1.0nm,0.5s,baz=302,slow=14,SNR=1.1						
RES				S	**S**	**23 50 23.2**	**-6.7**
	2.1nm,0.9s,baz=218,slow=12,SNR=1.8						
PETK	**Petropavlovsk-**	**23.99**	**252**	P	**P**	**23 46 57.4**	**-0.1**
	2.7nm,0.9s,baz=96,slow=13,SNR=2.9						
NRIK	**Noril'sk**	**35.11**	**325**	P	**P**	**23 48 35.6**	**-0.4**
	1.5nm,0.6s,baz=69,slow=7.3,SNR=4.8						
NRIK				LR	LR	00 05 06.7	
	comp=Z,29nm,18.9s,baz=70,slow=40						
PDAR	**Pinedale Array**	**37.32**	**105**	P	**P**	**23 48 57.4**	**+1.9**
	0.6nm,0.6s,baz=345,slow=9.8,SNR=4.8						
SONM	**Songino Array**	**47.34**	**294**	P	**P**	**23 50 20.5**	**+3.7**
	0.2nm,0.5s,baz=24,slow=11,SNR=2.1						
ZALV	**Zalesovo Beam**	**48.82**	**314**	P	**P**	**23 50 27.6**	**-0.4**
	0.7nm,0.5s,baz=30,slow=6.0,SNR=5.2						
FINES	**FINESS Array B**	**50.95**	**355**	P	**P**	**23 50 44.7**	**+0.6**
	0.8nm,0.6s,baz=15,slow=6.0,SNR=7.0						
TXAR	**Lajitas Array**	**51.42**	**107**	P	**P**	**23 50 50.0**	**+1.9**
	1.9nm,0.8s,baz=333,slow=5.6,SNR=14						
MKAR	**Makanchi Array**	**55.96**	**311**	P	**P**	**23 51 20.6**	**-0.5**
	0.3nm,0.4s,baz=43,slow=7.2,SNR=7.1						
AKASG	**Malin Array Be**	**61.55**	**352**	P	**P**	**23 51 59.8**	**0.0**
	0.7nm,0.4s,baz=6.1,slow=6.2,SNR=2.4						
AAK	**Ala-Archa**	**61.95**	**316**	P	**P**	**23 52 03.2**	**+0.4**
	0.4nm,0.3s,baz=53,slow=5.1,SNR=2.0						
GERES	**GERESS Array B**	**63.69**	**3**	P	**P**	**23 52 15.0**	**+0.8**
	0.3nm,0.5s,baz=1.9,slow=5.9,SNR=4.7						
ESDC	**Sonseca Array**	**71.65**	**17**	P	**P**	**23 53 04.8**	**+0.2**
	0.5nm,0.6s,baz=351,slow=6.1,SNR=6.5						
CMAR	**Chiang Mai Arr**	**76.34**	**285**	P	**P**	**23 53 31.9**	**-0.3**
	0.6nm,0.3s,baz=0.8,slow=6.7,SNR=1.8						
CMAR				LR	LR	00 30 30.4	
	comp=Z,20nm,18.4s,baz=225,slow=38						

*IDC **22** 23:55:29.7±3.3, 37.95N×73.00E, h101km±26km, mb3.4/6, mb1 3.6/12, mb1mx3.3/45, mbtmp3.9/12, MS3.2/1, Ms1 3.2/1, ms1mx2.1/26, Error ellipse: s-maj=30.7km s-min=22.3km az=159.0*
*NEIC **22** 23:55:33.2±2.6, 38.26N±0.02×73.00E±0.08, h134km±8km, mb4.1/4, Error ellipse: s-maj=9.0km s-min=2.5km az=82.0*

ISC 22 23:55:31.6±0.5, 38.17N±0.04×73.13E±0.06, h127km, n54, σ2s15/61, mb3.5/7, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**2.61**	**317**		**Pn**	**23 56 14.7**	**+1.6**
BTK				Sn	**Sn**	**23 56 45.0**	**+0.1**
ARSB	**Arslanbob**	**3.16**	**358**		**Pn**	**23 56 21.0**	**+0.8**
ARSB				Sn	**Sn**	**23 56 57.6**	**-0.2**
AML	**Almayashu**	**3.98**	**6**	P	**Pn**	**23 56 33.2**	**+1.8**
	SNR=102						
UCH	**Uchtor**	**4.19**	**14**	P	**Pn**	**23 56 36.1**	**+1.9**
	SNR=26						
KZA	**Kyzart**	**4.23**	**22**	P	**Pn**	**23 56 36.6**	**+1.9**
	SNR=9.1						
TAS	**Tashkent**	**4.32**	**318**	Pn	**Pn**	**23 56 35.6**	**+0.1**
NIL	**Nilore**	**4.51**	**179**		Pn	23 56 41.1	+3.0
NIL					**Sn**	**23 57 33.9**	**+4.2**
EKS2	**Erkin-Say**	**4.52**	**6**	P	**Pn**	**23 56 40.6**	**+2.3**
	SNR=16						
AAK	**Ala-Archa**	**4.59**	**13**	P	**Pn**	**23 56 41.9**	**+2.7**
	3.6nm,0.3s,baz=174,slow=7.9,SNR=24						
AAK				S	**Sn**	**23 57 32.9**	**+1.2**
	6.7nm,0.3s,baz=312,slow=22,SNR=18						
AAK	**Ala-Archa**	**4.59**	**13**	P	**Pn**	**23 56 42.0**	**+2.8**
	SNR=13						
AAK	**Ala-Archa**	**4.59**	**13**		**Pn**	**23 56 41.8**	**+2.6**
ULHL	**Ulahol**	**4.72**	**29**	P	**Pn**	**23 56 44.0**	**+3.0**
	SNR=8.0						
FRU1	**Bishkek**	**4.78**	**13**	Pn	**Pn**	**23 56 43.6**	**+2.0**
BOOM	**Boomskoye usch**	**4.83**	**26**	Pn	**Pn**	**23 56 43.9**	**+1.6**
BOOM					Sn	23 57 32.0	-5.4
KBL	**Kabul**	**4.89**	**224**	Pn	**Pn**	**23 56 44.5**	**+1.1**
KBL					**Sn**	**23 57 40.3**	**+1.1**
CHMS	**Chumysh**	**4.98**	**14**	P	**Pn**	**23 56 47.2**	**+2.8**
	SNR=7.2						
TARG	**Taragay, Kyrgy**	**5.06**	**44**	Pn	**Pn**	**23 56 48.0**	**+2.3**
TKM2	**Tokmak 2**	**5.11**	**21**	P	**Pn**	**23 56 48.4**	**+2.2**
	SNR=7.1						
USP	**Ospenovka**	**5.20**	**11**	P	**Pn**	**23 56 49.4**	**+2.1**
	SNR=5.9						
KK31	**Karatay Array**	**5.32**	**339**		**Pn**	**23 56 50.0**	**+1.2**
KK31				Sn	**Sn**	**23 57 45.9**	**-3.2**
DHRM	**DHARAMSHALA**	**6.45**	**155**	*e*P	**Pn**	**23 57 06.0**	**+1.7**
DHRM				*e*S	**Sn**	**23 58 14.2**	**-2.4**
DHRM				IAML		23 58 18.9	
	comp=N,101nm,0.2s						
DHRM				IAML		23 58 19.8	
	comp=E,137nm,0.4s						
SMLA	**Simla**	**7.77**	**153**	*e*P	**Pn**	**23 57 23.1**	**+1.2**
SMLA				*e*S	**Sn**	**23 58 42.1**	**-6.1**
SMLA				IAML		23 58 49.7	
	comp=N,109nm,0.6s						
SMLA				IAML		23 58 50.7	
	comp=E,89nm,0.3s						
MAKZ	**Makanchi**	**10.82**	**34**		**Pn**	**23 58 04.3**	**+1.5**
MK31	**Makanchi Array**	**10.95**	**35**	Pn	**Pn**	**23 58 04.6**	**0.0**
MKAR	**Makanchi Array**	**10.95**	**35**	P	**Pn**	**23 58 06.2**	**+1.7**
	comp=E,0.1nm,0.3s,baz=210,slow=14,SNR=7.5						
GEYT	**Alibeck**	**11.84**	**273**	P	**Pn**	**23 58 13.5**	**-2.9**
	comp=E,1.0nm,0.3s,baz=112,slow=9.7,SNR=11						
GYA0B	**ALIBECK ARRAY**	**11.84**	**273**	Pn	**Pn**	**23 58 13.0**	**-3.4**
PYUN	**Piuthan**	**12.99**	**138**	*e*P	**Pn**	**23 58 29.6**	**-2.0**
	comp=E,31nm,0.3s						
KURBB	**Kurchatov Arra**	**13.04**	**15**	P	**Pn**	**23 58 30.0**	**-1.8**
	comp=E,0.1nm,0.3s,baz=208,slow=12,SNR=4.0						
DANN	**Dangsing**	**13.22**	**135**	*e*P	**Pn**	**23 58 32.8**	**-1.8**
	comp=E,11nm,0.2s						
KOLN	**Koldanda**	**13.58**	**137**	*e*P	**Pn**	**23 58 37.8**	**-1.4**
	comp=E,5.3nm,0.2s						
GKN	**Gorkha**	**13.98**	**133**	*e*P	**Pn**	**23 58 42.1**	**-2.2**
	comp=E,24nm,0.2s						
KKN	**Kakani**	**14.51**	**132**	*e*P	**Pn**	**23 58 49.2**	**-1.9**
PKIN	**Phulchoki**	**14.74**	**132**	*e*P	**Pn**	**23 58 53.0**	**-1.0**
	comp=E,5.7nm,0.2s						
PKI	**Pulchoki**	**14.75**	**132**	*e*P	**Pn**	**23 58 53.1**	**-1.2**
	comp=E,5.6nm,0.3s						
BVAR	**Borovoye Array**	**14.98**	**354**	P	**Pn**	**23 58 56.6**	**0.0**
	comp=E,0.3nm,0.3s,baz=158,slow=12,SNR=11						
BVAR				S	**Sn**	**00 01 37.2**	**-5.1**
	comp=E,0.1nm,0.3s,baz=164,slow=22,SNR=4.6						
BRVK	**Borovoye**	**15.03**	**353**	Pn	**Pn**	**23 58 57.1**	**0.0**
JIRN	**Jiri**	**15.15**	**130**	*e*P	**Pn**	**23 58 58.1**	**-1.2**
	comp=E,14nm,0.3s						
RAMN	**Ramite**	**15.92**	**131**	*e*P	**Pn**	**23 59 06.9**	**-1.8**
TAPN	**Taplejung**	**16.31**	**127**	*e*P	**Pn**	**23 59 12.9**	**-0.7**
	comp=E,10nm,0.5s						
AKTO	**Aktyubinsk**	**16.31**	**324**	P	**Pn**	**23 59 13.5**	**+0.4**
	comp=E,1.3nm,0.3s,baz=124,slow=11,SNR=19						
AKTO				S	Sn	00 02 01.9	-12
	comp=E,0.2nm,0.3s,baz=127,slow=15,SNR=1.9						
ODAN	**Odare**	**16.46**	**129**	*e*P	**P**	**23 59 15.5**	**-0.3**
ZAA0	**Zalesovo Array**	**17.71**	**23**	P	**P**	**23 59 29.6**	**+0.5**
ZALV	**Zalesovo Beam**	**17.71**	**23**	P	**P**	**23 59 30.4**	**+1.4**
	comp=E,0.6nm,0.3s,baz=221,slow=11,SNR=10						
ARU	**Arti**	**20.69**	**337**	P	**P**	**00 00 00.7**	**-0.6**
ARU				IAmb	IAmb	00 00 07.8	
	comp=Z,5.1nm,0.9s						
RAYN	**Ar Rayn**	**27.72**	**246**	P	**P**	**00 01 07.3**	**-0.8**
BUR08	**Bucovina Ar. S**	**35.85**	**301**	P	**P**	**00 02 17.3**	**-1.7**
BUR08				IAmb	IAmb	00 02 30.1	
	comp=Z,7.5nm,1.7s						
FINES	**FINESS Array B**	**37.09**	**324**	P	**P**	**00 02 30.8**	**+1.7**
	comp=Z,2.1nm,1.0s,baz=115,slow=8.6,SNR=9.1						
ARCES	**ARCESS Array B**	**40.28**	**336**	P	**P**	**00 02 57.6**	**+1.9**
	comp=Z,1.3nm,0.7s,baz=107,slow=7.9,SNR=6.8						
KMBO	**Kilima Mbogo**	**51.20**	**229**	LR	LR	00 27 02.9	
	comp=Z,24nm,18.2s,baz=90,slow=37						
TORD	**Torodi Ar. Bea**	**67.44**	**269**	P	**P**	**00 06 14.4**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=54,slow=6.0,SNR=7.9						
INK	**Inuvik**	**71.98**	**10**	P	**P**	**00 06 43.4**	**+2.6**
	comp=Z,0.4nm,0.5s,baz=25,slow=4.1,SNR=3.9						
YKA	**Yellowknife Ar**	**79.49**	**4**	P	**P**	**00 07 26.1**	**+2.5**
	comp=Z,0.3nm,0.5s,baz=354,slow=5.4,SNR=8.5						
WRA	**Warramunga Arr**	**81.46**	**124**	P	**P**	**00 07 35.5**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=326,slow=4.9,SNR=2.3						

ISC 23 00:19:04.5±1.0, 51.50N±0.04×16.26E±0.04, h0km, n22, σ1s06/47, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHVC	**Chvalec**	**0.92**	**188**	*e*PG	**Pg**	**00 19 22.8**	**+0.7**
CHVC				*e*SG	**Sg**	**00 19 34.4**	**+0.5**
	comp=Z,16nm,0.4s						
OSTC	**Ostas**	**0.94**	**182**	*e*PG	**Pg**	**00 19 23.4**	**+0.9**
OSTC				*e*SG	**Sg**	**00 19 34.9**	**+0.2**
	comp=Z,12nm,0.6s						
UPC	**Upice**	**1.00**	**189**	*e*PG	**Pg**	**00 19 24.1**	**+0.4**
UPC				*e*SG	**Sb**	**00 19 37.3**	**-1.1**
	comp=Z,52nm,0.4s						
DPC	**Dobruska-Polom**	**1.15**	**178**	*e*PG	**Pg**	**00 19 26.8**	**+0.3**
DPC				*e*SG	**Sg**	**00 19 41.0**	**-0.3**
	comp=Z,18nm,0.5s						
PVCC	**Panska Ves**	**1.44**	**228**	*e*PG	**Pg**	**00 19 32.5**	**+0.4**
PVCC				*e*SG	**Sb**	**00 19 51.0**	**-0.1**
	comp=Z,80nm,0.4s						
KRLC	**Kraliky**	**1.46**	**167**	*e*PG	**Pn**	**00 19 32.5**	**+0.3**
KRLC				*e*SG	**Sb**	**00 19 51.6**	**-0.1**
BRG	**Berggiesshubel**	**1.58**	**248**	PN	**Pn**	**00 19 34.7**	**+0.8**
BRG				PG	**Pb**	**00 19 35.3**	**+0.7**
BRG				SG	**Sn**	**00 19 55.2**	**+0.2**
	21nm,0.3s						
GOPC	**GO Pecny, Ondr**	**1.84**	**211**	*e*PG	**Pb**	**00 19 39.1**	**+0.1**
GOPC				*e*SG	**Sb**	**00 20 02.4**	**-0.2**
	comp=Z,11nm,0.6s						
PRU	**Pruhonice**	**1.86**	**217**	*e*PG	**Pb**	**00 19 39.3**	**-0.1**
PRU				*e*SG	**Sb**	**00 20 02.8**	**-0.4**
	comp=Z,10.0nm,0.3s						
MORC	**Moravsky Berou**	**1.91**	**154**	*e*PN	**Pn**	**00 19 38.5**	**+0.2**
MORC				*e*SG	**Sb**	**00 20 04.7**	**+0.2**
CLL	**Collm**	**2.05**	**266**	*e*Pg	**Pg**	**00 19 45.0**	**+1.3**
CLL				*e*Sg	**Sg**	**00 20 11.0**	**+0.7**
	comp=Z,8.0nm,0.6s						
OKC	**Ostrava-Krasne**	**2.05**	**143**	*e*PG	**Pg**	**00 19 44.1**	**+0.4**
OKC				*e*SG	**Sb**	**00 20 09.7**	**+1.1**
	comp=Z,9.9nm,0.7s						
VRAC	**Vranov**	**2.20**	**174**	*e*PN	**Pn**	**00 19 43.0**	**+0.7**
VRAC				*e*SG	**Sg**	**00 20 14.3**	**-0.8**
KRUC	**Moravsky**	**2.44**	**178**	*e*PN	**Pn**	**00 19 46.1**	**+0.6**
KRUC				*e*SG	**Sg**	**00 20 21.7**	**-1.1**
NKC	**Novy Kostel**	**2.73**	**244**	*e*PN	**Pn**	**00 19 50.2**	**+0.7**
NKC				*e*PG	**Pg**	**00 19 56.8**	**+0.1**
NKC				*e*SG	**Sg**	**00 20 32.1**	**+0.1**
	comp=Z,8.4nm,0.3s						
KHC	**Kasperske Hory**	**2.92**	**217**	*e*PN	**Pn**	**00 19 53.2**	**+0.9**
KHC				*e*PG	**Pb**	**00 19 58.7**	**+1.2**
KHC				*e*SN	**Sn**	**00 20 27.3**	**-0.8**
KHC				*e*SG	**Sg**	**00 20 36.8**	**-1.6**
	comp=Z,5.3nm,0.3s						
SMOL	**Smolenice**	**3.08**	**165**	*e*PG	**Pg**	**00 20 04.4**	**+0.9**
MODS	**Modra-Piesok**	**3.19**	**168**	*e*SG	**Sg**	**00 20 47.5**	**+0.5**
CONA	**Conrad Observa**	**3.58**	**184**	*i* Pn	**Pn**	**00 20 02.3**	**+1.0**
	comp=Z,0.6nm,0.4s						
CONA				*e*Sg	**Sg**	**00 20 58.5**	**-0.9**
	comp=Z,5.0nm,0.4s						
BSD	**Bornholm Skovb**	**3.71**	**348**	*i* P	**Pn**	**00 20 03.4**	**+0.4**
BSD				*i* S	**Sn**	**00 20 44.2**	**-3.3**
MOA	**Molln**	**3.87**	**200**	*i* Pn	**Pn**	**00 20 06.2**	**+0.9**
	comp=Z,0.6nm,0.3s						
MOA				*e*Pg	**Pg**	**00 20 18.3**	**-0.4**
	comp=Z,2.0nm,0.4s						
MOA				*i* Sn	**Sb**	**00 20 57.3**	**-3.8**
	comp=Z,1.2nm,0.3s						
MOA				*e*Sg	**Sg**	**00 21 07.0**	**-1.8**
	comp=Z,2.6nm,0.4s						
ARSA	**Arzberg**	**4.28**	**187**	*e*Sg	**Sg**	**00 21 21.8**	**0.0**
	comp=Z,1.4nm,0.3s						

*IDC **23** 00:24:37.3±1.3, 39.66S×174.66E, h277km±13km, mb3.3/2, mb1 3.7/4, mb1mx3.4/26, mbtmp4.2/4, Error ellipse: s-maj=26.6km s-min=17.1km az=132.0*
*WEL **23** 00:24:37.0, 39°S±5°×17°4E±°, h293km±6km, M3.6/23, MLv3.6/23, Error ellipse: s-maj=0.0km s-min=0.0km az=59.4*

ISC 23 00:24:38.2±0.8, 39.40S±0.06×174.43E±0.06, h277km±6km, n87, σ1s30/98, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LREZ	**Lake Rotokare**	**0.07**	**199**	P	**Pn**	**00 25 14.4**	**+0.9**
LREZ				S	**S**	**00 25 41.1**	**-0.3**
PREZ	**Palmer Road**	**0.22**	**284**	P	**Pn**	**00 25 14.5**	**+0.8**
MHEZ	**Mangahewa**	**0.33**	**345**	P	**Pn**	**00 25 14.6**	**+0.7**
MHEZ				S	**S**	**00 25 41.4**	**-0.7**
VRZ	**Vera Road**	**0.37**	**43**	P	**Pn**	**00 25 13.9**	**0.0**
VRZ				S	**S**	**00 25 40.6**	**-1.5**
PKE	**Pukeiti**	**0.40**	**300**	P	**Pn**	**00 25 14.8**	**+0.8**
NMEZ	**Namu Road**	**0.43**	**267**	P	**Pn**	**00 25 14.8**	**+0.8**
NMEZ				S	**S**	**00 25 41.5**	**-0.7**
WAZ	**Wanganui**	**0.56**	**130**	P	**Pn**	**00 25 15.9**	**+1.6**
WAZ				S	**S**	**00 25 42.6**	**-0.3**
PKVZ	**Pokaka**	**0.72**	**82**	P	**Pn**	**00 25 15.3**	**+0.4**
TWVZ	**Taurewa**	**0.85**	**68**	P	**Pn**	**00 25 12.0**	**-3.6**
TRVZ	**Turoa**	**0.87**	**84**	P	**Pn**	**00 25 16.3**	**+0.5**
TRVZ				S	**S**	**00 25 43.0**	**-2.5**
KRVZ	**Karewarewa**	**0.99**	**73**	P	**Pn**	**00 25 16.5**	**+0.2**
RATZ	**Rangitukua**	**1.17**	**64**	P	**Pn**	**00 25 17.2**	**+0.1**
BHHZ	**Black Hill Sta**	**1.27**	**95**	P	**Pn**	**00 25 16.8**	**-0.9**
BHHZ				S	**S**	**

MLv2.7/10,**Error ellipse: s-maj=0.0km s-min=0.0km az=95.3,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKZ	**Black Stump Fm**	**1.11**	**165**	P	Pn	00 29 18.7	0.0
MWZ	**Matawai**	**1.13**	**103**	P	Pn	00 29 18.9	0.0
SNGZ	**Shannon Statio**	**1.18**	**127**	P	Pn	00 29 19.9	+0.7
RUGZ	**Raukumara Rang**	**1.23**	**85**	P	Pn	00 29 18.6	-1.1
HAZ	**Te Kaha**	**1.35**	**76**	P	Pn	00 29 20.6	+0.2
MOVZ	**Moawhango**	**1.35**	**193**	P	Pn	00 29 20.5	-0.1
BHHZ	**Black Hill Sta**	**1.40**	**182**	P	Pn	00 29 24.0	+3.1
VRZ	**Vera Road**	**1.49**	**226**	P	Pn	00 29 22.6	+1.0
PKGZ	**Pakihiroa**	**1.55**	**83**	P	Pn	00 29 22.6	+0.3
WMGZ	**Waiomatatini S**	**1.82**	**82**	P	Pn	00 29 25.3	+0.7
PXZ	**Pawanui**	**2.02**	**164**	P	Pn	00 29 27.6	+1.1
MRZ	**Mangatainoka R**	**2.61**	**189**	P	Pn	00 29 33.0	+0.3
OGWZ	**Otaki Gorge**	**2.83**	**195**	P	Pn	00 29 35.2	+0.1
HOWZ	**Holdsworth Sta**	**2.85**	**189**	P	Pn	00 29 35.4	+0.2
KIW	**Kapiti Island**	**2.93**	**198**	P	Pn	00 29 36.4	+0.1
WEL	**Wellington**	**3.36**	**198**	P	Pn	00 29 41.5	+0.3
MSWZ	**Moikau Station**	**3.39**	**191**	P	Pn	00 29 41.6	-0.1
TCW	**Tory Channel**	**3.43**	**204**	P	Pn	00 29 42.0	-0.1
PLWZ	**Palliser**	**3.54**	**191**	P	Pn	00 29 43.3	-0.2
KHZ	**Kahutara**	**4.76**	**204**	P	Pn	00 29 58.3	0.0

IDC 23 00:41:43.4±3.0,**23°.98S**×**67°.35W**,**h0**km,**mb3.8**/2, **mb1 4.2**/3,**mb1mx3.8**/18,**mbtmp4.0**/3,**ML4.7**/1,**Error ellipse: s-maj=95.3km s-min=47.3km az=48.0, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**7.68**	**354**	Pn	Pn	00 43 37.8	+0.6
	5.8nm,0.3s,baz=204,slow=12,SNR=95						
TORD	**Torodi Ar. Bea**	**76.86**	**69**	P	P	00 53 37.4	-0.4
	0.5nm,0.5s,baz=256,slow=5.0,SNR=13						
YKA	**Yellowknife Ar**	**93.99**	**340**	P	P	00 55 01.6	-1.2
	0.2nm,0.7s,baz=129,slow=5.0,SNR=5.7						
MKAR	**Makanchi Array**	**146.71**	**39**	PKPbc	PKPab	01 01 28.0	-0.4
	0.8nm,0.7s,baz=298,slow=2.6,SNR=8.7						

*MOS **23** 01:21:26.2±0.0,41°.72N×45°.74E,h24km,MPVA3.1*
*DRS **23** 01:21:26.7±0.0,41°.71N×45°.80E,h12km*
*TIF **23** 01:21:26.5,41°.60N×45°.77E,h25km±1km*
*NORS **23** 01:21:27.2±0.0,41°.61N×45°.68E,h21km,MPVA3.1*
ISC 23 01:21:27.9±1.0,**41°.72N**±0°.04×**45°.75E**±0°.02,**h16**km±9km, **n22**,σ1°.**27**/44,**Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDFL	**Dedoflistskaro**	**0.39**	**134**	P	**Pn**	**01 21 38.3**	**-0.6**
DDFL				S	**Sb**	**01 21 48.0**	**+5.9**
LGD	**Lagodekhi**	**0.39**	**72**	P	**Pb**	**01 21 36.1**	**-0.3**
LGD				S	**Sb**	**01 21 42.5**	**+0.3**
LGD	**Lagodekhi**	**0.39**	**72**	*e*Pg	**Pb**	**01 21 36.1**	**-0.3**
LGD				*e*Sg	**Sb**	**01 21 42.5**	**+0.3**
SEAG	**Tbilisi Sea**	**0.71**	**274**	P	**Pg**	**01 21 41.4**	**-0.3**
SEAG				S	**Sg**	**01 21 51.7**	**+0.5**
BTNK	**Botanikuri**	**0.71**	**268**	P	**Pg**	**01 21 41.3**	**-0.6**
BTNK				S	**Sg**	**01 21 52.0**	**+0.8**
BTNK	**Botanikuri**	**0.71**	**268**	*e*Pg	**Pg**	**01 21 41.3**	**-0.6**
BTNK				*e*Sg	**Sg**	**01 21 52.0**	**+0.8**
TBLG	**Delisi**	**0.76**	**271**	P	**Pg**	**01 21 42.0**	**-0.7**
TBLG				S	**Sg**	**01 21 53.3**	**+0.6**
TBLG	**Delisi**	**0.76**	**271**	*e*Pg	**Pg**	**01 21 42.0**	**-0.7**
TBLG				*e*Sg	**Sg**	**01 21 53.3**	**+0.6**
BTLR	**Botlikh**	**1.01**	**20**	*e*Pg	**Pn**	**01 21 47.0**	**-0.5**
BTLR				*e*Sg	**Sn**	**01 22 00.7**	**-0.7**
KZRT	**Kazreti**	**1.07**	**252**	P	**Pb**	**01 21 46.4**	**-1.6**
KZRT				S	**Sb**	**01 22 01.1**	**-0.6**
KMKR	**Kumukh**	**1.09**	**67**	*e*Pg	**Pg**	**01 21 48.0**	**-1.0**
KMKR				*e*Sg	**Sn**	**01 22 03.0**	**-0.6**
XNZR	**Khunzakh**	**1.09**	**40**	*e*Pg	**Pb**	**01 21 47.8**	**-0.7**
XNZR				*e*Sg	**Sn**	**01 22 02.6**	**-0.9**
GNBR	**Gunib**	**1.13**	**53**	*e*Pg	**Pn**	**01 21 48.8**	**-0.3**
GNBR				*e*Sg	**Sn**	**01 22 04.3**	**0.0**
GUDG	**Gudauri**	**1.21**	**309**	P	**Pn**	**01 21 50.1**	**-0.2**
GUDG				S	**Sb**	**01 22 06.0**	**0.0**
GUDG	**Gudauri**	**1.21**	**309**	*e*Pg	**Pn**	**01 21 50.1**	**-0.2**
GUDG				*e*Sg	**Sn**	**01 22 06.8**	**+0.3**
KMGR	**Komgaron**	**1.49**	**334**	*e*Pg	**Pg**	**01 21 57.6**	**+1.0**
KMGR				*e*Sg	**Sg**	**01 22 19.1**	**+3.1**
AKT	**Akhty**	**1.50**	**98**	*e*Pg	**Pb**	**01 21 55.2**	**-0.3**
AKT				*e*Sg	**Sg**	**01 22 15.2**	**-1.2**
DBC	**Dubki**	**1.53**	**31**	*e*Pg	**Pg**	**01 21 56.3**	**-1.0**
DBC				*e*Sg	**Sg**	**01 22 18.6**	**+1.4**
LACR	**Lac**	**1.55**	**316**	*e*Pg	**Pn**	**01 21 55.4**	**+0.5**
LACR				*e*Sg	**Sb**	**01 22 16.4**	**+0.7**
BKRG	**Bakuriani**	**1.67**	**272**	P	**Pn**	**01 21 56.9**	**+0.3**
BKRG				S	**Sb**	**01 22 19.9**	**+0.8**
BKRG	**Bakuriani**	**1.67**	**272**	*e*Pg	**Pn**	**01 21 56.9**	**+0.3**
BKRG				*e*Sg	**Sb**	**01 22 19.9**	**+0.8**
ZEI	**Tsey**	**1.74**	**309**	*e*Pg	**Pb**	**01 21 59.6**	**0.0**
ZEI				*e*Sg	**Sg**	**01 22 22.6**	**-1.4**

*TAP **23** 01:29:42.6,24°.93N×122°.85E,h24km±1km,ML3.4,C*
*JMA **23** 01:29:42.4±0.2,24°.95N×122°.85E,h23km±3km,M2.8*
*IDC **23** 01:29:55.2±7.1,24°.81N×122°.62E,h118km±71km,mb3.1/4, mb1 3.3/5,mb1mx3.0/32,mbtmp3.5/5,MS3.1/9,Ms1 3.1/9, ms1mx3.0/17,Error ellipse: s-maj=52.5km s-min=22.2km az=73.0*
ISC 23 01:29:42.3±1.1,**24°.92N**±0°.04×**122°.83E**±0°.02,**h13**km±8km, **n67**,σ0°.**80**/81,**mb3.5**/4,**MS3.0**/5,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.48**	**167**	P	**Pg**	**01 29 52.3**	**+0.6**
JYNG				*e*S	**Sb**	**01 29 59.6**	**+0.1**
YOJ	**Yonaguni jima**	**0.48**	**160**	P	**Pg**	**01 29 52.5**	**+0.7**
	baz=162						
YOJ				*e*S	**Sg**	**01 29 58.6**	**+0.3**
	baz=162						
YOJ	**Yonaguni jima**	**0.48**	**160**	P	**Pg**	**01 29 52.4**	**+0.5**
YOJ				*e*S	**Sg**	**01 29 58.9**	**+0.6**
EOS1	**EOS1**	**0.73**	**240**	P	**Pg**	**01 29 57.0**	**+0.4**
	baz=232						
EOS1				*e*S	**Sb**	**01 30 07.2**	**+0.3**
	baz=232						
TWB1	**Santiao Chiao**	**0.77**	**277**	*e*P	**Pg**	**01 29 57.1**	**-0.2**
	baz=276						
TWB1				*e*S	**Sg**	**01 30 07.0**	**-0.3**
	baz=276						
EGS		**0.82**	**265**	*e*P	**Pg**	**01 29 57.9**	**-0.3**
	baz=264						
EGS				*e*S	**Sg**	**01 30 08.2**	**-0.7**
	baz=264						
TIPB	**Shuangxi**	**0.91**	**274**	*e*P	**Pb**	**01 29 59.4**	**-0.7**
	baz=272						
TIPB				*e*S	**Sb**	**01 30 11.3**	**-0.8**
	baz=272						
TWC	**Suao**	**0.94**	**251**	*e*P	**Pb**	**01 29 59.4**	**-1.2**
	baz=250						
NWF	**Wu-fen Shan**	**0.96**	**279**	*e*P	**Pb**	**01 30 00.5**	**-0.5**
	baz=278						
NWF				*e*S	**Sb**	**01 30 13.5**	**-0.1**
	baz=278						
WFSB	**Wu-fen Shan**	**0.96**	**279**	*e*P	**Pb**	**01 30 00.5**	**-0.4**
	baz=278						
WFSB				*e*S	**Sb**	**01 30 13.3**	**-0.2**
	baz=278						
PCYT	**Pengchaiyu**	**0.99**	**316**	*e*P	**Pb**	**01 30 01.2**	**-0.1**
	baz=315						
IRIF	**Iriomote-Funau**	**1.00**	**125**	P	**Pb**	**01 30 00.6**	**-1.0**
IRIF				S	**Sb**	**01 30 14.4**	**-0.4**
TWE	**Neicheng**	**1.07**	**260**	*e*P	**Pb**	**01 30 02.0**	**-0.8**
	baz=258						
ENA	**Nanau**	**1.10**	**244**	P	**Pb**	**01 30 02.3**	**-1.0**
	baz=243						
ENA				*e*S	**Sb**	**01 30 16.6**	**-1.0**
	baz=243						
YM08	**YM08**	**1.16**	**284**	*e*P	**Pn**	**01 30 03.5**	**-0.8**
	baz=282						
YM08				*e*S	**Sb**	**01 30 18.5**	**-0.6**
	baz=282						
YM01	**YM01**	**1.16**	**282**	*e*P	**Pn**	**01 30 03.8**	**-0.6**
	baz=280						
YM11	**YM11**	**1.16**	**283**	*e*S	**Sb**	**01 30 19.6**	**+0.1**
	baz=281						
YM10	**YM10**	**1.17**	**282**	*e*P	**Pn**	**01 30 03.9**	**-0.6**
	baz=281						
ENTT	**Nioudou**	**1.18**	**257**	*e*P	**Pn**	**01 30 04.3**	**-0.3**
	baz=266						
NWLT	**Wulai**	**1.21**	**264**	*e*P	**Pn**	**01 30 04.4**	**-0.6**
	baz=262						
HATJ	**Hateruma jima**	**1.23**	**134**	P	**Pn**	**01 30 04.6**	**-0.7**
HATJ				*e*S	**Sb**	**01 30 20.7**	**-0.7**
NDT	**Datong Townshi**	**1.24**	**256**	*e*P	**Pn**	**01 30 05.0**	**-0.3**
	baz=255						
NDT				*e*S	**Sb**	**01 30 20.8**	**-0.7**
	baz=255						
JKRS	**Kuro-shima**	**1.27**	**122**	P	**Pn**	**01 30 04.9**	**-0.9**
JKRS				*e*S	**Sb**	**01 30 21.1**	**-1.3**
JIJ	**Ishigaki jima**	**1.32**	**114**	P	**Pn**	**01 30 05.3**	**-1.2**
YHNB	**Yeheng**	**1.34**	**260**	*e*P	**Pn**	**01 30 06.6**	**-0.3**
	baz=246						
YHNB				*e*S	**Sn**	**01 30 23.1**	**-1.5**
	baz=246						
NACB	**Ninganchiao**	**1.34**	**237**	*e*P	**Pn**	**01 30 06.9**	**+0.1**
	baz=236						
NSK	**Sanguang**	**1.36**	**260**	*e*P	**Pn**	**01 30 06.9**	**-0.2**
	baz=269						
JISG	**Ishigakijimahi**	**1.39**	**103**	P	**Pn**	**01 30 06.6**	**-0.8**
TWD	**Chiawan**	**1.40**	**234**	*e*P	**Pn**	**01 30 07.2**	**-0.3**
	baz=233						
NNSB	**Datong**	**1.40**	**250**	*e*P	**Pn**	**01 30 07.5**	**-0.2**
	baz=260						
NNSB				*e*S	**Sn**	**01 30 24.6**	**-1.6**
	baz=260						
NNSH	**Datong**	**1.40**	**250**	*e*P	**Pn**	**01 30 07.5**	**-0.3**
	baz=249						
NNS	**Nan Shan**	**1.41**	**251**	*e*P	**Pn**	**01 30 08.1**	**+0.2**
	baz=249						
ETLH	**Xiulin Townshi**	**1.42**	**240**	*e*P	**Pn**	**01 30 08.5**	**+0.6**
	baz=224						
WHF	**Hehuan Shan**	**1.62**	**242**	P	**Pn**	**01 30 11.3**	**+0.3**
	baz=241						
TDCB	**Techi**	**1.66**	**247**	*e*P	**Pn**	**01 30 10.8**	**-0.5**
	baz=246						
LIOB	**Emei**	**1.67**	**261**	*e*S	**Sn**	**01 30 31.2**	**-1.4**
	baz=260						
CHGB	**Renai**	**1.73**	**241**	*e*P	**Pn**	**01 30 13.3**	**+0.9**
	baz=240						
CHGB				*e*S	**Sn**	**01 30 34.4**	**-0.1**
	baz=240						
WHP	**Taichung City**	**1.83**	**250**	*e*P	**Pn**	**01 30 14.4**	**+0.8**
	baz=236						
HGSD	**Ruisui**	**1.91**	**222**	*e*P	**Pn**	**01 30 14.4**	**-0.2**
	baz=210						
HGSD				*e*S	**Sn**	**01 30 38.5**	**-0.1**
	baz=210						
VWDT	**VWDT**	**1.93**	**233**	*e*P	**Pn**	**01 30 15.3**	**+0.5**
	baz=233						
VWDT				*e*S	**Sn**	**01 30 38.4**	**-0.6**
	baz=233						
EHY	**Hungye**	**1.97**	**225**	*e*P	**Pn**	**01 30 15.1**	**-0.3**
	baz=224						
SMLT	**Sun Moon Lake**	**2.04**	**240**	*e*P	**Pb**	**01 30 18.3**	**-1.0**
	baz=226						
TYC	**Yuchr**	**2.06**	**241**	*e*P	**Pn**	**01 30 17.3**	**+0.6**
	baz=226						
YULB	**Yu-li**	**2.06**	**223**	*e*P	**Pn**	**01 30 16.2**	**-0.6**
	baz=238						
YULB				*e*S	**Sn**	**01 30 41.3**	**-1.1**
	baz=238						
TWF1	**Yuli**	**2.09**	**222**	*e*P	**Pn**	**01 30 17.1**	**-0.1**
	baz=237						
TWF1				*e*S	**Sn**	**01 30 42.0**	**-1.1**
	baz=237						
FULB	**Fuli**	**2.21**	**220**	*e*P	**Pn**	**01 30 18.6**	**-0.2**
	baz=218						
YUS	**Yu-Shan**	**2.23**	**231**	*e*P	**Pn**	**01 30 19.1**	**-0.4**
	baz=230						
CHN5	**Tsauling**	**2.36**	**237**	*e*P	**Pn**	**01 30 22.9**	**+2.0**
	baz=236						
CHN4	**Tsaushan**	**2.57**	**233**	*e*P	**Pn**	**01 30 25.1**	**+1.4**
	baz=232						
TPUB	**Ta-pu**	**2.57**	**232**	*e*P	**Pn**	**01 30 25.1**	**+1.3**
	baz=219						
WTP	**Ta-pu**	**2.62**	**231**	*e*P	**Pn**	**01 30 24.8**	**+0.4**
	baz=218						
TWK	**Hsinying**	**2.70**	**233**	*e*P	**Pn**	**01 30 25.9**	**+0.4**
	baz=232						
MASBT	**Mashibuluo**	**3.05**	**222**	*e*P	**Pn**	**01 30 30.1**	**-0.2**
	baz=211						
EAST	**Anshuo**	**3.11**	**216**	*e*P	**Pn**	**01 30 29.6**	**-1.6**
	baz=214						
JNU	**Nakatsue**	**10.79**	**39**	LR	LR	01 38 07.2	
	comp=Z,55nm,18.7s,baz=228,slow=45						
KSRS	**Korea Array**	**13.23**	**18**	P	**P**	**01 33 00.8**	**+1.0**
	0.2nm,0.3s,baz=188,slow=12,SNR=9.0						
KSRS					LR	01 38 19.7	
	comp=Z,65nm,18.4s,baz=184,slow=38						
MJAR	**Matsushiro Arr**	**17.55**	**45**	LR	LR	01 40 39.2	
	comp=Z,51nm,19.5s,baz=130,slow=36						
DAV	**Davao City (W)**	**17.94**	**171**	LR	LR	01 40 34.1	
	comp=Z,38nm,20.0s,baz=339,slow=36						
USRK	**Ussuriysk Ar.**	**20.64**	**19**	LR	LR	01 43 58.3	
	comp=Z,58nm,18.2s,baz=20,slow=40						
CMAR	**Chiang Mai Arr**	**23.09**	**259**	LR	LR	01 45 01.8	
	comp=Z,50nm,18.5s,baz=110,slow=40						
ASAJ	**Asahikawa**	**25.03**	**35**	LR	LR	01 45 13.1	
	comp=Z,57nm,18.5s,baz=182,slow=36						
KAPI	**Kappang**	**29.90**	**186**	LR	LR	01 48 59.1	
	comp=Z,28nm,19.1s,baz=342,slow=38						
PETK	**Petropavlovsk-**	**38.43**	**34**	LR	LR	01 53 40.5	
	comp=Z,35nm,18.1s,baz=277,slow=37						
MKAR	**Makanchi Array**	**38.87**	**315**	P	**P**	**01 37 08.2**	**+0.7**
	0.6nm,0.8s,baz=111,slow=6.8,SNR=4.5						
WRA	**Warramunga Arr**	**45.98**	**165**	P	**P**	**01 38 05.0**	**-0.5**
	1.1nm,0.9s,baz=347,slow=6.9,SNR=7.7						
ASAR	**Alice Springs**	**49.48**	**167**	P	**P**	**01 38 34.6**	**+2.0**
	0.7nm,0.9s,baz=344,slow=6.9,SNR=4.8						
YKA	**Yellowknife Ar**	**81.71**	**23**	P	**P**	**01 42 01.0**	**+0.7**
	0.1nm,0.7s,baz=302,slow=4.8,SNR=1.5						

*IDC **23** 02:04:42.3±1.4,38°.76N×48°.58E,h0km,mb3.7/9, mb1 3.8/14,mb1mx3.6/43,mbtmp3.7/14,ML3.6/5,MS2.6/2, Ms1 2.7/2,ms1mx2.1/38,Error ellipse: s-maj=28.4km s-min=14.6km az=178.0*
*NEIC **23** 02:04:43.3±2.2,38°.8N±0°.1×48°.70E±0°.10,h10km±2km, mb4.0/5,Error ellipse: s-maj=19.9km s-min=12.8km az=190.0*
*AZER **23** 02:04:47.2,38°.90N×48°.58E,h20km,ML3.5*
*TEH **23** 02:04:48.3,38°.91N×48°.58E,h28km,ML3.6*
*THR **23** 02:04:49.3±0.7,38°.66N×48°.56E,h14km±9km,ML3.4*
*NNC **23** 02:05:33.2±6.7,39°.96N×54°.01E,h0km,mb4.2,Error ellipse: s-maj=85.7km s-min=25.1km az=69.0*
ISC 23 02:04:47.0±0.6,**38°.88N**±0°.02×**48°.67E**±0°.02,**h30**km,**n113**, σ1°.**65**/145,**mb3.6**/9,**4C-2D,Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKRN	**Lenkeran, Azer**	**0.19**	**154**	P	**Pn**	**02 04 54.9**	**+1.1**
	SNR=1811						
LKRN				S	**Sb**	**02 05 00.0**	**+2.8**
LKRN	**Lenkeran, Azer**	**0.19**	**154**	*e*Pg	**Pn**	**02 04 54.9**	**+1.1**
ASTR	**Astara**	**0.33**	**164**	P	**Pn**	**02 04 56.6**	**+0.7**
	SNR=1179						
ASTR				S	**Sn**	**02 05 03.0**	**+1.4**
ASTR	**Astara**	**0.33**	**164**	*e*Pg	**Pn**	**02 04 56.5**	**+0.7**
YRD	**Yardimli**	**0.34**	**276**	P	**Pb**	**02 04 55.7**	**+0.5**
	SNR=395						
YRD				S	**Sb**	**02 05 01.2**	**+0.5**
YRD	**Yardimli**	**0.34**	**276**	*e*Pg	**Pb**	**02 04 55.7**	**+0.5**
LRK	**Lerik**	**0.35**	**228**	P	**Pb**	**02 04 56.5**	**+1.2**
	SNR=293						
LRK				S	**Sn**	**02 05 02.9**	**+0.6**
LRK	**Lerik**	**0.35**	**228**	*e*Pg	**Pb**	**02 04 56.5**	**+1.2**
GLBA	**Clilabad**	**0.42**	**329**	P	**Pb**	**02 04 56.8**	**+0.6**
	SNR=237						
GLBA				S	**Sb**	**02 05 03.8**	**+1.3**
GLBA	**Clilabad**	**0.42**	**329**	*e*Pg	**Pb**	**02 04 56.8**	**+0.6**
GRMI	**Germi**	**0.61**	**263**	*e*Pg	**Pb**	**02 04 59.7**	**+0.3**
GRMI				*e*Sg	**Sb**	**02 05 08.0**	**+0.3**
SAAT	**Saatly**	**1.00**	**349**	P	**Pb**	**02 05 06.2**	**+0.5**
	SNR=9.3						
SAAT				S	**Sb**	**02 05 20.5**	**+2.0**
SAAT	**Saatly**	**1.00**	**349**	*e*Pg	**Pb**	**02 05 06.2**	**+0.5**
ALIB	**Äli-Bayra**	**1.11**	**13**	P	**Pb**	**02 05 09.3**	**+1.7**
	SNR=10						
ALIB				S	**Sb**	**02 05 22.1**	**+0.5**
ALIB	**Äli-Bayra**	**1.11**	**13**	*e*Pg	**Pb**	**02 05 09.2**	**+1.7**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QRD	**Qoradiz**	**1.20**	**299**	P	**Pn**	**02 05 08.3**	**+0.5**
	SNR=53						
QRD				S	**Sn**	**02 05 23.2**	**+0.2**
QRD	**Qoradiz**	**1.20**	**299**	*e*Pg	**Pn**	**02 05 08.2**	**+0.5**
BLQ	**Beylaqan**	**1.20**	**315**	P	**Pn**	**02 05 08.2**	**+0.4**
	SNR=28						
BLQ				S	**Sn**	**02 05 24.0**	**+0.9**
BLQ	**Beylaqan**	**1.20**	**315**	*e*Pg	**Pn**	**02 05 08.2**	**+0.4**
IHSH	**Hashtrud**	**1.24**	**243**	*e*Pn	Pb	02 05 20.4	+10
IHSH				*e*		02 05 30.6	
IHRS	**Heris**	**1.39**	**247**	*e*Pg	**Pn**	**02 05 12.3**	**+1.7**
IHRS				*e*		02 05 31.9	
KDMR	**Kurdemir**	**1.54**	**346**	P	**Pn**	**02 05 13.8**	**+1.3**
	SNR=3.0						
KDMR				S	**Sb**	**02 05 34.5**	**+0.6**
KDMR	**Kurdemir**	**1.54**	**346**	*e*Pg	**Pn**	**02 05 13.7**	**+1.3**
ZRD	**Zardab**	**1.59**	**332**	Pn	**Pn**	**02 05 14.6**	**+1.5**
	SNR=27						
ZRD				Sn	**Sb**	**02 05 36.8**	**+1.3**
ZRD	**Zardab**	**1.59**	**332**	*e*Pn	**Pn**	**02 05 14.9**	**+1.8**
GBS	**Qobustan**	**1.67**	**7**	Pn	**Pb**	**02 05 17.1**	**0.0**
	SNR=5.5						
GBS				Sn	**Sb**	**02 05 39.8**	**+2.1**
GBS	**Qobustan**	**1.67**	**7**	*e*Pn	**Pb**	**02 05 17.1**	**0.0**
AGDM	**Agdam**	**1.72**	**316**	Pn	**Pn**	**02 05 16.4**	**+1.4**
	SNR=34						
AGDM				Sn	**Sn**	**02 05 38.6**	**+2.6**
GOBA	**Gobu**	**1.73**	**28**	Pn	**Pb**	**02 05 18.2**	**+0.1**
GOBA				Sn	**Sb**	**02 05 40.2**	**+0.9**
GOBA	**Gobu**	**1.73**	**28**	*e*Pn	**Pb**	**02 05 18.1**	**+0.1**
BRDA	**Brd**	**1.80**	**321**	Pn	**Pn**	**02 05 18.4**	**+2.4**
	SNR=30						
BRDA				Sn	**Sb**	**02 05 42.4**	**+1.0**
BRDA	**Brd**	**1.80**	**321**	*e*Pn	**Pn**	**02 05 18.3**	**+2.4**
PQL	**Pirkuli**	**1.91**	**358**	Pn	**Pn**	**02 05 19.3**	**+1.6**
	SNR=28						
PQL				Sn	**Sb**	**02 05 45.7**	**+1.0**
PQL	**Pirkuli**	**1.91**	**358**	*e*Pn	**Pn**	**02 05 19.4**	**+1.8**
GALA	**Gala**	**1.91**	**36**	Pn	**Pb**	**02 05 21.2**	**0.0**
GALA				Sn	**Sb**	**02 05 47.1**	**+2.5**
GALA	**Gala**	**1.91**	**36**	*e*Pn	**Pb**	**02 05 21.1**	**0.0**
IML	**Ismayilli**	**1.95**	**349**	Pn	**Pn**	**02 05 19.6**	**+1.5**
	SNR=33						
IML				Sn	**Sb**	**02 05 45.0**	**-0.7**
IML	**Ismayilli**	**1.95**	**349**	*e*Pn	**Pn**	**02 05 20.1**	**+2.0**
NDR	**Nardaran**	**1.98**	**30**	Pn	**Pb**	**02 05 21.7**	**-0.7**
NDR				Sn	**Sb**	**02 05 49.4**	**+2.8**
NDR	**Nardaran**	**1.98**	**30**	*e*Pn	**Pb**	**02 05 21.6**	**-0.7**
ATGJ	**Altiaghaj**	**1.99**	**6**	Pn	**Pb**	**02 05 23.5**	**+0.9**
	SNR=6.4						
ATGJ				Sn	**Sb**	**02 05 47.0**	**0.0**
ATGJ	**Altiaghaj**	**1.99**	**6**	*e*Pn	**Pb**	**02 05 23.5**	**+0.9**
ORD	**Ordubad**	**2.09**	**272**	Pn	**Pn**	**02 05 22.0**	**+1.9**
	SNR=56						
ORD				Sn	**Sb**	**02 05 48.8**	**-1.0**
ORD	**Ordubad**	**2.09**	**272**	*e*Pn	**Pn**	**02 05 21.9**	**+1.9**
QBL	**Gabala**	**2.16**	**343**	Pn	**Pn**	**02 05 22.2**	**+1.2**
	SNR=7.0						
QBL				Sn	**Sn**	**02 05 48.9**	**+2.1**
QBL	**Gabala**	**2.16**	**343**	*e*Pn	**Pn**	**02 05 22.2**	**+1.2**
SIZA	**Siyzn**	**2.20**	**4**	Pn	**Pb**	**02 05 25.5**	**-0.7**
	SNR=15						
SIZA				Sn	**Sb**	**02 05 53.2**	**+0.2**
SIZA	**Siyzn**	**2.20**	**4**	*e*Pn	**Pb**	**02 05 25.3**	**-0.9**
ZNJK	**Zanjan**	**2.21**	**180**	*e*Pn	**Pn**	**02 05 24.5**	**+2.7**
ZNJK				*e*Sg	**Sb**	**02 05 52.2**	**-1.1**
MNGR	**Mingechevir, A**	**2.25**	**328**	Pn	**Pn**	**02 05 24.1**	**+1.9**
MNGR				Sn	**Sb**	**02 05 52.6**	**-1.7**
MNGR	**Mingechevir, A**	**2.25**	**328**	*e*Pn	**Pn**	**02 05 24.0**	**+1.9**
IMRD	**Marand**	**2.33**	**267**	*e*Pn	**Pn**	**02 05 26.2**	**+2.8**
IMRD				*e*		02 06 01.3	
XNQ	**Khinaliq**	**2.33**	**350**	Pn	**Pn**	**02 05 24.4**	**+0.9**
	SNR=17						
XNQ				Sn	**Sb**	**02 05 55.7**	**-1.1**
XNQ	**Khinaliq**	**2.33**	**350**	*e*Pn	**Pn**	**02 05 24.3**	**+0.9**
IAZR	**Azarshahr**	**2.43**	**241**	*e*Pn	**Pn**	**02 05 27.6**	**+2.6**
IAZR				*e*		02 06 16.0	
QUBA	**Quba, Azerbaij**	**2.48**	**357**	Pn	**Pn**	**02 05 27.3**	**+2.0**
	SNR=4.5						
QUBA				Sg	**Sb**	**02 06 04.3**	**+3.4**
SBZ	**Shahbuz**	**2.48**	**283**	Pn	**Pn**	**02 05 27.5**	**+2.1**
	SNR=32						
SBZ				Sn	**Sn**	**02 05 58.9**	**+4.1**
SBZ	**Shahbuz**	**2.48**	**283**	*e*Pn	**Pn**	**02 05 27.5**	**+2.1**
NAX	**Nakhchivan**	**2.49**	**278**	Pn	**Pn**	**02 05 27.9**	**+2.3**
	SNR=5.2						
NAX				Sn	**Sn**	**02 05 58.5**	**+3.5**
NAX	**Nakhchivan**	**2.49**	**278**	*e*Pn	**Pn**	**02 05 27.9**	**+2.3**
QUB	**Quba**	**2.51**	**355**	*e*Pn

comp=Z,14nm,1.9s
BVAR Borovoye Array 20.58 39 P **P 02 09 23.6 +0.4**
comp=Z,0.8nm,0.6s,baz=270,slow=8.9,SNR=7.4
KLMR Klimovskoe 22.73 348 *e* **P 02 09 47.7 +1.5**
KLMR AMP 02 09 49.1
comp=Z,13nm,0.9s
VYHS Vyhne 23.49 304 *e*P **P 02 09 55.2 +1.2**
KURBB Kurchatov Array 24.07 51 P **P 02 10 00.3 +0.8**
comp=Z,0.8nm,0.5s,baz=258,slow=9.4,SNR=5.5
KURK Kurchatov 24.15 51 P **P 02 10 00.3 +0.1**
KURK Kurchatov 24.15 51 IAmb IAmb 02 10 21.0
comp=Z,10.0nm,1.9s
MK31 Makanchi Array 25.74 61 P **P 02 10 15.3 +0.5**
MKAR Makanchi Array 25.74 61 P **P 02 10 15.6 +0.8**
comp=Z,1.4nm,0.7s,baz=262,slow=8.5,SNR=14
FINES FINESS Array B 26.56 336 P **P 02 10 23.1 +1.2**
comp=Z,0.3nm,0.4s,baz=141,slow=9.3,SNR=4.0
GERES GERESS Array B 26.89 303 P **P 02 10 25.4 +0.1**
comp=Z,0.5nm,0.4s,baz=101,slow=8.5,SNR=5.0
DAVOX Davos/Dischmat 29.28 298 P **P 02 10 46.3 -0.4**
comp=Z,1.7nm,0.5s
NOA NORSAR Array B 32.04 326 LR LR 02 24 54.9
comp=Z,10nm,18.3s,baz=290,slow=38
ARCES ARCESS Array B 33.12 345 P **P 02 11 19.9 -0.1**
comp=Z,3.9nm,1.1s,baz=149,slow=9.9,SNR=8.1
ESDC Sonseca Array 40.26 288 P **P 02 12 20.5 -0.7**
comp=Z,1.0nm,0.9s,baz=64,slow=8.6,SNR=5.3
TORD Torodi Ar. Bea 48.70 251 P **P 02 13 27.2 -1.5**
comp=Z,0.3nm,0.9s,baz=42,slow=8.5,SNR=1.6

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*KRSC **23** 02:08:56.0±1.2,53.˚54N×160.˚94E, h48km±18km, ML4.2*
*MOS **23** 02:08:57.9±0.5,53.˚53N×160.˚90E, h49km, mb4.5/2, Error ellipse: s-maj=8.6km s-min=4.3km az=79.3*
*NEIC **23** 02:09:00.9±1.1,53.˚6N±0.˚1×160.˚5E±0.˚2, h68km±9km, mb4.1/2, Error ellipse: s-maj=23.5km s-min=9.2km az=147.0*
*IDC **23** 02:09:02.6±2.6,53.˚67N×160.˚52E, h83km±26km, mb3.5/8, mb1 3.7/8, mb1mx3.3/45, mbtmp3.8/8, Error ellipse: s-maj=30.3km s-min=23.7km az=170.0*
ISC 23 02:08:58.6±1.1,53.˚57N±0.˚03×160.˚79E±0.˚05, h46km±11km, n107,σ1°42/163, mb4.0/9, 2D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.66**	**224**	*e*P		**Pn**	**02 09 11.6**	**-0.1**
SPN				*e*S		**Sn**	**02 09 20.9**	**-0.2**
SPN	**Mys Shipunski**	**0.66**	**224**	PN		**Pn**	**02 09 11.6**	**-0.1**
SPN				S		**Sn**	**02 09 20.9**	**-0.2**
KII	**Karymskiy**	**0.92**	**301**	*e*P		**Pn**	**02 09 14.9**	**-0.3**
KII				*e*S		**Sn**	**02 09 27.1**	**-0.3**
KII	**Karymskiy**	**0.92**	**301**	PN		**Pn**	**02 09 14.9**	**-0.3**
KII				S		**Sn**	**02 09 27.1**	**-0.3**
NLC	**Nalytchevo**	**0.96**	**246**	*e*P		**Pn**	**02 09 15.5**	**-0.1**
NLC				*e*S		**Sn**	**02 09 28.4**	**+0.3**
NLC	**Nalytchevo**	**0.96**	**246**	PN		**Pn**	**02 09 15.5**	**-0.1**
NLC				S		**Sn**	**02 09 28.4**	**+0.3**
SDLR	**Sedlovina**	**1.18**	**256**	*i* P		**Pn**	**02 09 19.2**	**+0.4**
SDLR				*e*S		**Sn**	**02 09 34.8**	**+1.1**
SDLR	**Sedlovina**	**1.18**	**256**	PN		**Pn**	**02 09 19.2**	**+0.4**
SDLR				S		**Sn**	**02 09 34.8**	**+1.1**
SMAR	**Somma**	**1.23**	**256**	*i* P		**Pn**	**02 09 19.9**	**+0.3**
SMAR				*e*S		**Sn**	**02 09 35.2**	**+0.1**
SMAR	**Somma**	**1.23**	**256**	PN		**Pn**	**02 09 19.9**	**+0.3**
SMAR				S		**Sn**	**02 09 35.2**	**+0.1**
UGLR	**Uglovaya**	**1.23**	**254**	*i* P		**Pn**	**02 09 20.1**	**+0.6**
UGLR				*e*S		**Sn**	**02 09 35.9**	**+0.9**
UGLR	**Uglovaya**	**1.23**	**254**	PN		**Pn**	**02 09 20.1**	**+0.6**
UGLR				S		**Sn**	**02 09 35.9**	**+0.9**
KRER	**Koryakskii**	**1.25**	**258**	*i* P		**Pn**	**02 09 20.5**	**+0.7**
KRER				*e*S		**Sn**	**02 09 37.0**	**+1.4**
KRER	**Koryakskii**	**1.25**	**258**	PN		**Pn**	**02 09 20.5**	**+0.7**
KRER				S		**Sn**	**02 09 37.0**	**+1.4**
AVH	**Avacha**	**1.27**	**257**	*i* P		**Pn**	**02 09 20.7**	**+0.8**
AVH				*e*S		**Sn**	**02 09 37.3**	**+1.5**
AVH	**Avacha**	**1.27**	**257**	PN		**Pn**	**02 09 20.7**	**+0.8**
AVH				S		**Sn**	**02 09 37.3**	**+1.5**
KRX	**Arik**	**1.30**	**261**	*i* P		**Pn**	**02 09 20.8**	**+0.4**
KRX				*e*S		**Sn**	**02 09 37.0**	**+0.3**
KRX	**Arik**	**1.30**	**261**	PN		**Pn**	**02 09 20.8**	**+0.4**
KRX				S		**Sn**	**02 09 37.0**	**+0.3**
KOK	**Koryaka**	**1.32**	**259**	*i* P		**Pn**	**02 09 21.2**	**+0.5**
KOK	**Koryaka**	**1.32**	**259**	PN		**Pn**	**02 09 21.2**	**+0.5**
DALK	**Dalny**	**1.34**	**247**	*e*P		**Pn**	**02 09 21.0**	**+0.2**
DALK				*e*S		**Sn**	**02 09 37.9**	**+0.5**
DALK	**Dalny**	**1.34**	**247**	PN		**Pn**	**02 09 21.0**	**+0.2**
DALK				S		**Sn**	**02 09 37.9**	**+0.5**
PET	**Petropavlovsk**	**1.40**	**248**	*i* P		**Pn**	**02 09 22.1**	**+0.5**
PET				*e*S		**Sn**	**02 09 39.3**	**+0.5**
PET	**Petropavlovsk**	**1.40**	**248**	*k i*PN		**Pn**	**02 09 21.9**	**+0.3**
PET				*e*S		**Sn**	**02 09 39.1**	**+0.3**
PET				pmax	pmax			
	comp=Z,221nm,0.4s							
PET				smax	smax			
	comp=E,600nm,0.5s							
PET				smax	smax			
	comp=E,589nm,0.3s							
PET				smax	smax			
	comp=N,500nm,0.6s							
PET				smax	smax			
	comp=N,562nm,0.4s							
PET	**Petropavlovsk**	**1.40**	**248**			**Pn**	**02 09 21.7**	**+0.1**
KZV	**Kizimen**	**1.57**	**350**	*i* P		**Pn**	**02 09 24.3**	**+0.1**
KZV				*e*S		**Sn**	**02 09 42.8**	**-0.6**
KZV	**Kizimen**	**1.57**	**350**	PN		**Pn**	**02 09 24.3**	**+0.1**
KZV				S		**Sn**	**02 09 42.8**	**-0.6**
TUMD	**Tumrok D**	**1.65**	**352**	*e*P		**Pn**	**02 09 24.9**	**-0.2**
TUMD				*e*S		**Sn**	**02 09 43.8**	**-1.3**
TUMR	**Tumrok**	**1.75**	**348**	*i* P		**Pn**	**02 09 27.3**	**+0.6**
TUMR				*e*S		**Sn**	**02 09 48.3**	**+0.5**
TUMR	**Tumrok**	**1.75**	**348**	PN		**Pn**	**02 09 27.3**	**+0.6**
TUMR				S		**Sn**	**02 09 48.3**	**+0.5**
KRMR	**Karymshinskiy**	**1.77**	**246**	*e*P		**Pn**	**02 09 27.2**	**+0.5**
KRMR				*e*S		**Sn**	**02 09 49.0**	**+1.1**
KRMR	**Karymshinskiy**	**1.77**	**246**	PN		**Pn**	**02 09 27.2**	**+0.5**
KRMR				S		**Sn**	**02 09 49.0**	**+1.1**
RUS	**Russkaya**	**1.79**	**231**	*i* P		**Pn**	**02 09 27.2**	**+0.2**
RUS				*e*S		**Sn**	**02 09 48.4**	**-0.1**
RUS	**Russkaya**	**1.79**	**231**	PN		**Pn**	**02 09 27.2**	**+0.2**
RUS				S		**Sn**	**02 09 48.4**	**-0.1**
PEA0B	**Petropavlovsk-**	**1.91**	**257**	PN		**Pn**	**02 09 29.3**	**+0.6**
PEA0B	**Petropavlovsk-**	**1.91**	**257**			**Pn**	**02 09 29.2**	**+0.6**
PETK	**Petropavlovsk-**	**1.91**	**257**	P		**Pn**	**02 09 29.7**	**+1.0**
	comp=N,33nm,0.3s,baz=88,slow=19,SNR=136							
PETK				S		**Sn**	**02 09 54.3**	**+2.8**
	comp=N,28nm,0.3s,baz=56,slow=4.3,SNR=9.3							
PETK				LR		LR	02 10 24.1	
	comp=N,93nm,20.5s,baz=60,slow=46							
MTVR	**Mutnovka**	**1.92**	**236**	*e*P		**Pn**	**02 09 29.7**	**+0.8**
MTVR				*e*S		**Sn**	**02 09 53.0**	**+1.1**
MTVR	**Mutnovka**	**1.92**	**236**	PN		**Pn**	**02 09 29.7**	**+0.8**
MTVR				S		**Sn**	**02 09 53.0**	**+1.1**
GRL	**Gorelyy**	**1.93**	**239**	*e*P		**Pn**	**02 09 30.2**	**+1.1**
GRL				*e*S		**Sn**	**02 09 55.5**	**+3.3**
GRL	**Gorelyy**	**1.93**	**239**	PN		**Pn**	**02 09 30.2**	**+1.1**
GRL				S		**Sn**	**02 09 55.5**	**+3.3**
ASAK	**Asacha**	**2.12**	**237**	*i* P		**Pn**	**02 09 32.9**	**+1.3**
ASAK				*e*S		**Sn**	**02 09 59.4**	**+2.7**
ASAK	**Asacha**	**2.12**	**237**	PN		**Pn**	**02 09 32.9**	**+1.3**
ASAK				S		**Sn**	**02 09 59.4**	**+2.7**
KMNR	**Kamenistaya**	**2.21**	**352**	*e*P		**Pn**	**02 09 33.9**	**+1.0**
KMNR				*e*S		**Sn**	**02 10 01.3**	**+2.3**
KMNR	**Kamenistaya**	**2.21**	**352**	PN		**Pn**	**02 09 33.9**	**+1.0**
KMNR				S		**Sn**	**02 10 01.3**	**+2.3**
BZGR	**Bezymyannyi-Gr**	**2.37**	**359**	*e*P		**Pn**	**02 09 36.4**	**+1.3**
BZGR				*e*S		**Sn**	**02 10 06.0**	**+3.0**
BZGR	**Bezymyannyi-Gr**	**2.37**	**359**	PN		**Pn**	**02 09 36.4**	**+1.3**
BZGR				S		**Sn**	**02 10 06.0**	**+3.0**
BZMR	**Bezymyannaya**	**2.37**	**356**	*e*S		**Sn**	**02 10 05.5**	**+2.4**
KIRR	**Kirishev**	**2.40**	**354**	*e*P		**Pn**	**02 09 36.8**	**+1.3**
KIRR				*e*S		**Sn**	**02 10 04.3**	**+0.6**
KIRR	**Kirishev**	**2.40**	**354**	PN		**Pn**	**02 09 36.8**	**+1.3**
KIRR				S		**Sn**	**02 10 04.3**	**+0.6**
BZWR	**Bezymyannyi-We**	**2.40**	**356**	*e*P		**Pn**	**02 09 37.1**	**+1.5**
BZWR				*e*S		**Sn**	**02 10 06.6**	**+2.8**
BZWR	**Bezymyannyi-We**	**2.40**	**356**	PN		**Pn**	**02 09 37.1**	**+1.5**
BZWR				S		**Sn**	**02 10 06.6**	**+2.8**
KPT	**Kopyto**	**2.42**	**352**	*e*P		**Pn**	**02 09 37.2**	**+1.4**
KPT	**Kopyto**	**2.42**	**352**	PN		**Pn**	**02 09 37.2**	**+1.4**
ZLN	**Zelenaya**	**2.45**	**0**	*e*P		**Pn**	**02 09 37.8**	**+1.6**
ZLN				*e*S		**Sn**	**02 10 08.2**	**+3.3**
ZLN	**Zelenaya**	**2.45**	**0**	PN		**Pn**	**02 09 37.8**	**+1.6**
ZLN				S		**Sn**	**02 10 08.2**	**+3.3**
LGNR	**Loginova**	**2.52**	**359**	*i* P		**Pn**	**02 09 39.4**	**+2.2**
LGNR				*e*S		**Sn**	**02 10 08.9**	**+2.1**
LGNR	**Loginova**	**2.52**	**359**	PN		**Pn**	**02 09 39.4**	**+2.2**
LGNR				S		**Sn**	**02 10 08.9**	**+2.1**
KOZ	**Kozyrevsk**	**2.55**	**348**	*e*P		**Pn**	**02 09 38.4**	**+1.0**
KOZ	**Kozyrevsk**	**2.55**	**348**	PN		**Pn**	**02 09 38.4**	**+1.0**
CIRR	**Tsirk**	**2.55**	**359**	*e*P		**Pn**	**02 09 38.7**	**+1.2**
CIRR	**Tsirk**	**2.55**	**359**	PN		**Pn**	**02 09 38.7**	**+1.2**
ESO	**Esso**	**2.65**	**334**	*e*P		**Pn**	**02 09 39.4**	**+0.6**
ESO	**Esso**	**2.65**	**334**	PN		**Pn**	**02 09 39.4**	**+0.6**
KRSR	**Krestovskiy**	**2.65**	**357**	*e*P		**Pn**	**02 09 40.1**	**+1.2**
KRSR				*e*S		**Sn**	**02 10 12.1**	**+2.2**
KRSR	**Krestovskiy**	**2.65**	**357**	PN		**Pn**	**02 09 40.1**	**+1.2**
KRSR				S		**Sn**	**02 10 12.1**	**+2.2**
KLY	**Klyuchi**	**2.75**	**358**	*e*P		**Pn**	**02 09 41.4**	**+1.3**
KLY				*e*S		**Sn**	**02 10 13.4**	**+1.4**
KLY	**Klyuchi**	**2.75**	**358**	PN		**Pn**	**02 09 41.4**	**+1.3**
KLY				S		**Sn**	**02 10 13.4**	**+1.4**
MIPR	**Malaya Ipel'ka**	**2.77**	**244**	*i* P		**Pn**	**02 09 42.7**	**+2.3**
MIPR	**Malaya Ipel'ka**	**2.77**	**244**	PN		**Pn**	**02 09 42.7**	**+2.3**
SRDR	**Sredinnyy**	**2.82**	**348**	*e*P		**Pn**	**02 09 41.6**	**+0.4**
SRDR	**Sredinnyy**	**2.82**	**348**	PN		**Pn**	**02 09 41.6**	**+0.4**
KBTR	**Krutoberegovo**	**2.89**	**23**	*i* P		**Pn**	**02 09 42.7**	**+0.6**
KBTR				*e*S		**Sn**	**02 10 15.1**	**-0.4**
KBTR	**Krutoberegovo**	**2.89**	**23**	PN		**Pn**	**02 09 42.7**	**+0.6**
KBTR				S		**Sn**	**02 10 15.1**	**-0.4**
KBG	**Krutoberegovo**	**2.91**	**22**	*e*P		**Pn**	**02 09 42.6**	**+0.3**
KBG				*e*S		**Sn**	**02 10 16.4**	**+0.5**
KBG	**Krutoberegovo**	**2.91**	**22**	PN		**Pn**	**02 09 42.6**	**+0.3**
KBG				S		**Sn**	**02 10 16.4**	**+0.5**
BDR	**Baidarnaya**	**3.01**	**4**	*e*P		**Pn**	**02 09 45.6**	**+1.8**
BDR				*e*S		**Sn**	**02 10 21.1**	**+2.4**
BDR	**Baidarnaya**	**3.01**	**4**	PN		**Pn**	**02 09 45.6**	**+1.8**
BDR				S		**Sn**	**02 10 21.1**	**+2.4**
SMKR	**Semkarok**	**3.04**	**7**	*e*P		**Pn**	**02 09 46.2**	**+2.0**
SMKR	**Semkarok**	**3.04**	**7**	PN		**Pn**	**02 09 46.2**	**+2.0**
SRKR	**Sorokina**	**3.10**	**4**	*e*P		**Pn**	**02 09 46.3**	**+1.3**
SRKR				*e*S		**Sn**	**02 10 23.1**	**+2.4**
SRKR	**Sorokina**	**3.10**	**4**	PN		**Pn**	**02 09 46.3**	**+1.3**
SRKR				S		**Sn**	**02 10 23.1**	**+2.4**
PAU	**Pauzhetka**	**3.22**	**231**	*e*P		**Pn**	**02 09 49.6**	**+3.0**
PAU	**Pauzhetka**	**3.22**	**231**	PN		**Pn**	**02 09 49.6**	**+3.0**
BKI	**Bering**	**3.44**	**60**	*e*P		**Pn**	**02 09 49.5**	**-0.1**
BKI				*e*S		Sn	02 10 25.2	-3.9
BKI	**Bering**	**3.44**	**60**	PN		**Pn**	**02 09 49.5**	**-0.1**
SKR	**Severo-Kuril's**	**4.08**	**227**	*e*S		**Sn**	**02 10 45.4**	**+0.5**
SKR	**Severo-Kuril's**	**4.08**	**227**	*e*PN		**Pn**	**02 10 01.4**	**+3.0**
SKR				*e*S		**Sn**	**02 10 47.1**	**+2.2**
SKR				smax	smax			
	comp=N,109nm,0.5s							
SKR				smax	smax			
	comp=E,130nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**34.11**	**170**	T		T	02 52 03.7	
	baz=353,slow=76,SNR=241							
H11N3	**WAKE ISLAND Hy**	**34.12**	**170**	T		T	02 52 04.5	
	baz=353,slow=76,SNR=210							
H11N1	**WAKE ISLAND Hy**	**34.12**	**170**	T		T	02 52 04.8	
	baz=353,slow=76,SNR=281							
H11S1	**WAKE ISLAND Hy**	**35.30**	**170**	T		T	02 53 29.8	
	baz=352,slow=76,SNR=17							
H11S3	**WAKE ISLAND Hy**	**35.31**	**170**	T		T	02 53 30.6	
	baz=352,slow=76,SNR=37							
H11S2	**WAKE ISLAND Hy**	**35.31**	**170**	T		T	02 53 29.8	
	baz=352,slow=76,SNR=16							
YKA	**Yellowknife Ar**	**42.52**	**43**	P		**P**	**02 16 49.7**	**+0.6**
	comp=E,0.2nm,0.5s,baz=300,slow=7.5,SNR=4.1							
KURK	**Kurchatov**	**47.84**	**302**	P		**P**	**02 17 29.6**	**-1.7**
KURK				pmax	pmax			
	comp=Z,3.0nm,1.3s							
KURK	**Kurchatov**	**47.84**	**302**	P		**P**	**02 17 29.6**	**-1.7**
KURK	**Kurchatov**	**47.84**	**302**	IAmb		IAmb	02 18 57.7	
	comp=Z,3.2nm,1.3s							
KURBB	**Kurchatov Arra**	**47.94**	**302**	P		**P**	**02 17 29.6**	**-2.5**
	comp=Z,0.5nm,0.3s,baz=58,slow=7.7,SNR=4.3							
ARCES	**ARCESS Array B**	**52.96**	**342**	P		**P**	**02 18 08.7**	**-1.1**
	comp=Z,2.5nm,0.9s,baz=45,slow=9.0,SNR=3.5							
ULM	**Lac du Bonnet**	**58.19**	**47**	P		**P**	**02 18 47.1**	**-0.4**
	comp=Z,1.5nm,0.4s,baz=333,slow=4.5,SNR=2.0							
ULM	**Lac du Bonnet**	**58.19**	**47**	P		**P**	**02 18 47.1**	**-0.4**
ULM				pmax	pmax			
	comp=Z,6.0nm,1.3s							
FINES	**FINESS Array B**	**59.84**	**337**	P		**P**	**02 18 58.1**	**-0.7**
	comp=Z,1.3nm,0.4s,baz=31,slow=7.2,SNR=14							
NB2	**NORSAR Subarra**	**63.20**	**344**	P		**P**	**02 19 20.4**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=22,slow=6.9							
NOA	**NORSAR Array B**	**63.20**	**344**	P		**P**	**02 19 20.5**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=20,slow=6.6,SNR=5.0							
TXAR	**Lajitas Array**	**70.06**	**68**	P		**P**	**02 20 07.1**	**+1.2**
	comp=Z,0.2nm,0.4s,baz=298,slow=4.9,SNR=6.5							
WRA	**Warramunga Arr**	**76.69**	**206**	P		**P**	**02 20 44.2**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=17,slow=6.1,SNR=1.4							

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*IDC **23** 03:01:47.9±0.6, 17.˚50S×178.˚64W, h540km±6km, mb4.0/23, mb1 4.2/25, mb1mx4.2/28, mbtmp4.9/25, Error ellipse: s-maj=11.0km s-min=8.2km az=139.0*
*NEIC **23** 03:01:47.8±1.4, 17.˚48S±0.˚10×178.˚7W±0.˚1, h539km±6km, mb4.5/192, Error ellipse: s-maj=15.0km s-min=13.7km az=145.0*
*BJI **23** 03:01:48.4±0.0, 16.˚94S×178.˚88W, h525km, mB4.8/16, mb4.6/24*
ISC 23 03:01:48.4±0.3, 17.˚52S±0.˚06×178.˚63W±0.˚05, h547km, n455,σ0°92/406, mb4.6/146, 22C-4D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**3.17**	**266**	P		**P**	**03 03 06.1**	**+1.6**
AFI	**Afiamalu**	**7.51**	**62**	P		**P**	**03 03 37.8**	**-3.6**
NIUE	**Niue**	**8.41**	**102**	P		**P**	**03 03 51.1**	**+0.9**
	baz=8.4,SNR=3.9							
NIUE	**Niue**	**8.41**	**102**	P		**P**	**03 03 46.6**	**-3.6**
FUNA	**Funafuti**	**9.19**	**346**	P		**P**	**03 03 57.1**	**-1.0**
DZM	**Mont Dzumac**	**14.76**	**250**	*e*P		**P**	**03 04 54.6**	**-1.0**
	188nm,0.8s							
DZM	**Mont Dzumac**	**14.76**	**250**	P		**P**	**03 04 54.7**	**-0.9**
	3.4nm,0.3s,baz=79,slow=15,SNR=36							
DZM	**Mont Dzumac**	**14.76**	**250**	P		**P**	**03 04 54.5**	**-1.1**
NFK	**Norfolk Island**	**16.83**	**225**	P		**P**	**03 05 18.0**	**+2.2**
	baz=17,SNR=7.7							
RAR	**Rarotonga**	**18.16**	**105**	P		**P**	**03 05 26.2**	**-1.8**
	1.8nm,0.3s,baz=270,slow=10,SNR=5.7							
RAR	**Rarotonga**	**18.16**	**105**	P		**P**	**03 05 27.8**	**-0.2**
OUZ	**Omahuta**	**18.94**	**200**	P		**P**	**03 05 37.3**	**+2.4**
TARA	**Tarawa**	**20.52**	**335**	P		**P**	**03 05 48.4**	**-1.1**
URZ	**Urewera**	**21.00**	**189**	P		**P**	**03 05 52.0**	**-1.5**
	16nm,0.6s,baz=293,slow=2.8,SNR=13							
URZ				S		**S**	**03 09 06.6**	**-5.1**
	11nm,0.7s,baz=39,slow=23,SNR=3.4							
URZ	**Urewera**	**21.00**	**189**	P		**P**	**03 05 52.9**	**-0.6**
BHW	**Baring Head**	**24.45**	**192**	P		**P**	**03 06 23.4**	**-0.9**
LHI	**Lord Howe Isla**	**24.55**	**231**	P		**P**	**03 06 27.0**	**+1.6**
	baz=25							
KHZ	**Kahutara**	**25.70**	**193**	P		**P**	**03 06 34.6**	**-0.7**
LTZ	**Lake Taylor**	**26.35**	**195**	P		**P**	**03 06 40.3**	**-0.8**
OXZ	**Oxford**	**26.91**	**195**			**P**	**03 06 44.8**	**-1.3**
RPZ	**Rata Peaks**	**27.53**	**196**	P		**P**	**03 06 50.1**	**-1.3**
	28nm,0.7s,baz=319,slow=1.4,SNR=9.0							
PAE	**Paea**	**27.68**	**95**	*e*P		**P**	**03 06 52.7**	**-0.4**
	10nm,0.7s							
PPT2	**Papeete2**	**27.69**	**95**	*e*P		**P**	**03 06 53.2**	**-0.1**
	80nm,0.9s							
PPT	**Papeete**	**27.69**	**95**	P		**P**	**03 06 52.8**	**-0.4**
	83nm,0.7s,baz=82,slow=4.3,SNR=9.2							
PPTF	**Pamatai, Papee**	**27.70**	**95**	P		**P**	**03 06 52.4**	**-0.9**
TBI	**Tubuai**	**27.91**	**107**	*e*P		**P**	**03 06 55.7**	**+0.7**
	94nm,0.8s							
TIAR	**Tiarei**	**27.91**	**95**	*e*P		**P**	**03 06 54.9**	**-0.2**
	15nm,0.8s							
TVO	**Taravao**	**27.98**	**95**	*e*P		**P**	**03 06 55.7**	**-0.1**
	20nm,0.7s							
MEH	**Mehetia**	**29.10**	**95**	*e*P		**P**	**03 07 05.2**	**-0.3**
	32nm,1.3s							
WKZ	**Wanaka**	**29.13**	**198**	P		**P**	**03 07 04.6**	**-0.8**
EIDS	**Eidsvold**	**29.20**	**249**	P		**P**	**03 07 06.0**	**-0.3**
	baz=29,SNR=31							
EIDS	**Eidsvold**	**29.20**	**249**	P		**P**	**03 07 06.0**	**-0.3**
MLZ	**Mavora Lakes**	**29.89**	**199**	P		**P**	**03 07 12.7**	**+0.7**
ARMA	**Armidale**	**29.96**	**239**	P		**P**	**03 07 13.9**	**+1.0**
	baz=30,SNR=90							
ARMA	**Armidale**	**29.96**	**239**	P		**P**	**03 07 13.5**	**+0.6**
MGCD	**Mangrove Creek**	**31.35**	**234**	P		**P**	**03 07 25.9**	**+1.3**
	baz=31,SNR=32							
RMQ	**Roma**	**31.45**	**248**	P		**P**	**03 07 26.3**	**+0.7**
	baz=32,SNR=13							
CTA	**Charters Tower**	**33.30**	**260**	P		**P**	**03 07 41.2**	**-0.2**
	54nm,0.7s,baz=89,slow=10,SNR=64							
CTA				ScP		**ScP**	**03 13 01.5**	**+1.3**
	10nm,1.0s,baz=39,slow=3.6,SNR=4.5							
CTAO	**Charters Tower**	**33.30**	**260**	P		**P**	**03 07 41.1**	**-0.3**
CNB	**Canberra Magne**	**33.50**	**232**	P		**P**	**03 07 44.1**	**+1.2**
	baz=34,SNR=68							
CAN	**Canberra**	**33.77**	**232**	P		**P**	**03 07 45.6**	**+0.4**
YNG	**Young**	**33.85**	**234**	P		**P**	**03 07 45.6**	**-0.2**
	baz=34,SNR=4.9							
PMG	**Port Moresby**	**34.19**	**279**	P		**P**	**03 07 48.8**	**-0.1**
	161nm,0.8s,baz=74,slow=6.5,SNR=35							
PMG	**Port Moresby**	**34.19**	**279**	P		**P**	**03 07 49.1**	**+0.2**
CMSA	**Cobar Meteorol**	**35.16**	**240**	P		**P**	**03 07 57.2**	**+0.4**
	baz=35,SNR=59							
MTSU	**Mount Surprise**	**35.24**	**263**	P		**P**	**03 07 57.5**	**-0.2**
	baz=35,SNR=36							
QLP	**Quilpie**	**35.48**	**249**	P		**P**	**03 07 59.5**	**0.0**
	baz=36,SNR=43							
COEN	**Coen**	**36.89**	**270**	P		**P**	**03 08 11.9**	**+0.5**
	baz=37,SNR=130							
COEN	**Coen**	**36.89**	**270**	P		**P**	**03 08 11.7**	**+0.3**
TOO	**Toolangi**	**37.25**	**230**	P		**P**	**03 08 15.0**	**+1.0**
	baz=37,SNR=57							
TOO	**Toolangi**	**37.25**	**230**	P		**P**	**03 08 14.5**	**+0.5**
MOO	**Moorlands**	**38.23**	**222**	P		**P**	**03 08 22.9**	**+1.0**
	baz=38,SNR=12							
TAU	**Tasmania Unive**	**38.39**	**221**	P		**P**	**03 08 23.0**	**-0.1**
STKA	**Stephens Creek**	**38.63**	**241**	P		**P**	**03 08 26.2**	**+0.9**
	baz=39,SNR=147							
STKA	**Stephens Creek**	**38.63**	**241**	P		**P**	**03 08 25.4**	**+0.1**
	95nm,0.7s,baz=90,slow=9.5,SNR=231							
STKA				ScP		**ScP**	**03 13 21.9**	**+2.1**
	3.4nm,0.7s,baz=84,slow=6.2,SNR=3.3							
STKA	**Stephens Creek**	**38.63**	**241**	P		**P**	**03 08 25.6**	**+0.3**
STKA				IAmb		IAmb	03 08 27.2	
	comp=Z,34nm,1.1s							
QIS	**Mount Isa**	**39.52**	**259**	P		**P**	**03 08 31.7**	**-0.9**
	baz=40,SNR=12							
ARPS	**Mount Arapiles**	**39.71**	**233**	P		**P**	**03 08 34.4**	**+0.5**
	baz=40,SNR=21							
HTT	**Hallett**	**41.16**	**239**	P		**P**	**03 08 46.2**	**+0.6**
	baz=41,SNR=113							
JAY	**Jayapura**	**42.60**	**286**	P		**P**	**03 08 57.6**	**+0.4**
	comp=Z,582nmcomp=Z,54nm,0.9s							
GENI	**Genyem**	**43.06**	**285**	P		**P**	**03 09 01.6**	**+0.9**
	comp=Z,5μmcomp=Z,366nm,0.7s							
BBOO	**Buckleboo**	**43.41**	**241**	P		**P**	**03 09 03.6**	**+0.4**
	baz=44,SNR=342							
BBOO	**Buckleboo**	**43.41**	**241**	P		**P**	**03 09 03.6**	**+0.4**
WR4	**Warramunga Arr**	**44.43**	**259**	P		**P**	**03 09 10.5**	**-0.8**
	baz=44							
WRAB	**Tennant Creek**	**44.49**	**259**	P		**P**	**03 09 10.7**	**-1.1**
WRA	**Warramunga Arr**	**44.50**	**259**	P		**P**	**03 09 10.6**	**-1.

	comp=Z,2µmcomp=Z,19nm,1.0s									
JAGI	**Jajag, Banyuwa**	65.84	268	P		P	03 11 39.1	-1.5		
	comp=Z,164nm,0.8s									
JAGI	**Jajag, Banyuwa**	65.84	268	P		P	03 11 39.2	-1.5		
CASY	**Casey**	66.40	205	P		P	03 11 43.8	+0.8		
CASY				IAmb		IAmb	03 11 44.8			
	comp=Z,39nm,1.1s									
MJAR	**Matsushiro Arr**	67.47	323	P		P	03 11 49.4	-0.8		
	comp=Z,7.0nm,0.5s,baz=143,slow=6.1,SNR=18									
MAJO	**Matsushiro**	67.47	323	P		P	03 11 49.7	-0.5		
MAJO				IAmb		IAmb	03 11 50.3			
	comp=Z,11nm,0.9s									
MAT	**Matsushiro**	67.47	323	P		P	03 11 49.5	-0.7		
MJB9	**Matsu-Tunnel**	67.48	323	P		P	03 11 49.9	-0.3		
MJB9				IAmb		IAmb	03 11 50.2			
	comp=Z,8.5nm,0.5s									
SPMM	**Sapulut**	67.73	283	P		P	03 11 51.0	-1.3		
KKM	**Kota Kinabalu**	68.44	284	P		P	03 11 56.1	-0.5		
WOJI	**Wonogiri, Jawa**	69.09	268	P		P	03 12 00.4	-0.1		
	comp=Z,77nm,1.0s									
SZP	**Santa**	69.34	297	P		P	03 12 00.7	-1.1		
UGM	**Wanagama**	69.45	268	P		P	03 12 02.6	-0.1		
	comp=Z,142nm,1.1s									
SMRI	**Semarang**	69.76	269	P		P	03 12 04.3	-0.2		
SBUM	**Sibu**	70.94	279	P		P	03 12 11.4	0.0		
SBUM	**Sibu**	70.94	279	P		P	03 12 11.0	-0.4		
NACB	**Ninganchiao**	71.53	304	P		P	03 12 14.6	-0.1		
NACB				IAmb		IAmb	03 12 15.0			
	comp=Z,45nm,1.2s									
CISI	**Cisompet, Garu**	72.13	268	P		P	03 12 17.7	-0.8		
	comp=Z,132nm,0.7s									
KSM	**Kuching**	72.43	277	P		P	03 12 20.9	+0.8		
KSM	**Kuching**	72.43	277	P		P	03 12 21.0	+0.8		
QSPA	**South Pole Qui**	72.53	180	P		P	03 12 21.3	+1.3		
QSPA				IAmb		IAmb	03 12 22.1			
	comp=Z,31nm,1.0s									
CNJI	**Cibinong**	72.85	268	P		P	03 12 21.8	-0.7		
	comp=Z,1µmcomp=Z,125nm,0.8s									
PETK	**Petropavlovsk-**	73.25	345	P		P	03 12 23.6	-0.3		
	comp=Z,1.2nm,0.6s,baz=131,slow=8.9,SNR=7.0									
DBJI	**Dramaga**	73.42	268	P		P	03 12 25.9	0.0		
	comp=Z,123nm,0.9s									
TNG	**Tangerang**	73.63	269	P		P	03 12 23.1	-3.9		
KSRS	**Korea Array**	74.27	318	P		P	03 12 30.3	+0.2		
	comp=Z,2.6nm,0.7s,baz=131,slow=6.0,SNR=9.8									
KASI	**Kota Agung**	75.86	269	P		P	03 12 38.7	-0.8		
	comp=Z,1µmcomp=Z,176nm,0.8s									
SCZ2	**Santa Cruz Isl**	76.00	47	P		P	03 12 40.5	+0.6		
	baz=237									
USRK	**Ussuriysk Ar.**	76.18	326	P		P	03 12 40.8	+0.3		
	comp=Z,2.2nm,0.7s,baz=109,slow=7.8,SNR=4.5									
SCI2	**San Clemente I**	76.24	49	P		P	03 12 41.8	+0.6		
	baz=236									
SAO	**San Andreas Ge**	76.29	44	IAmb		IAmb	03 12 43.0			
	comp=Z,12nm,0.8s									
PKM	**Mcpherson Peak**	76.36	46	P		P	03 12 42.8	+0.7		
	baz=237									
LWLI	**Liwa**	76.42	269	P		P	03 12 42.2	-0.6		
	comp=Z,109nm,0.6s									
MDSI	**Maura Dua**	76.46	270	P		P	03 12 41.5	-1.3		
	comp=Z,31nm,1.0s									
SMMC	**Simmler**	76.47	46	P		P	03 12 43.2	+0.8		
	baz=237									
CIS	**Catalina Islan**	76.55	48	P		P	03 12 43.1	+0.1		
	baz=238									
ARVC	**Arvin**	77.17	47	P		P	03 12 46.6	+0.4		
	baz=238									
MWC	**Mount Wilson**	77.23	48	IAmb		IAmb	03 12 48.0			
	comp=Z,15nm,0.7s									
VES	**Vestal, Richgr**	77.38	46	P		P	03 12 47.5	+0.2		
	baz=237,SNR=8.9									
O02D	**Mt. Diablo Mer**	77.39	41	P		P	03 12 48.4	+0.9		
	baz=234									
BFSC	**Mount Baldy Ra**	77.52	48	P		P	03 12 48.3	0.0		
	baz=239,SNR=7.2									
MURC	**Murrieta**	77.53	49	P		P	03 12 48.7	+0.5		
	baz=239									
NJ2	**Nanjing**	77.53	310	*e*P		P	03 12 48.9	+0.7		
NJ2				pmax		pmax				
	comp=Z,6.0nm,0.5s									
EDW2	**Edwards Air Fo**	77.62	47	P		P	03 12 49.2	+0.4		
	baz=238,SNR=16									
ISA	**Isabella, Lake**	77.70	46	P		P	03 12 49.9	+0.7		
	baz=238,SNR=13									
ISA	**Isabella, Lake**	77.70	46	IAmb		IAmb	03 12 50.8			
	comp=Z,16nm,0.9s									
MONP2	**Monument Peak**	77.72	50	P		P	03 12 50.3	+0.8		
	baz=240,SNR=13									
IKP	**In-Ko-Pah, Jac**	77.83	50	P		P	03 12 50.8	+0.9		
	baz=240,SNR=5.3									
N02D	**Trinity Center**	77.92	40	P		P	03 12 51.1	+0.8		
	baz=234									
PFO	**Pinyon Flats O**	78.06	49	P		P	03 12 51.6	+0.4		
	baz=240									
PFO	**Pinyon Flats O**	78.06	49	P		P	03 12 51.0	-0.2		
TPFO	**Pinon Flats**	78.06	49	P		P	03 12 51.7	+0.4		
	baz=240									
XPFO	**Pion Flat**	78.06	49	P		P	03 12 51.7	+0.4		
M02C	**Callahan**	78.07	39	P		P	03 12 52.1	+1.1		
	baz=234									
KDAK	**Kodiak Island**	78.08	14	P		P	03 12 50.2	-0.4		
	comp=Z,6.0nm,0.7s,baz=221,slow=0.6,SNR=11									
KDAK	**Kodiak Island**	78.08	14	P		P	03 12 50.0	-0.6		
O03E	**Paynes Creek**	78.08	41	P		P	03 12 51.2	+0.1		
	baz=235									
LRMC	**Laurel Mtn Rad**	78.15	47	P		P	03 12 52.1	+0.4		
	baz=238,SNR=8.4									
SWSC	**Sam W. Stewart**	78.20	50	P		P	03 12 52.4	+0.6		
	baz=240									
MDPB	**Devils Postpil**	78.35	44	IAmb		IAmb	03 12 54.3			
	comp=Z,14nm,0.9s									
YBH	**Yreka Blue Hor**	78.36	39	P		P	03 12 52.7	+0.1		
	comp=Z,6.2nm,0.7s,baz=155,slow=0.7,SNR=14									
K02D	**Willamette Mer**	78.36	38	P		P	03 12 53.1	+0.5		
	baz=233									
MLAC	**Mammoth, Mammo**	78.51	44	P		P	03 12 54.4	+0.7		
	baz=237									
WAKR	**Walker**	78.58	43	IAmb		IAmb	03 12 55.8			
	comp=Z,15nm,1.0s									
BELC	**Belle Mtn. Jos**	78.59	49	P		P	03 12 54.7	+0.6		
	baz=240,SNR=8.0									
MPMC	**Manual Prospec**	78.59	46	P		P	03 12 54.7	+0.6		
	baz=238,SNR=8.4									
MYKOM	**Kota Tinggi**	78.65	276	P		P	03 12 54.0	-0.7		
GSC	**Goldstone, Bar**	78.67	47	P		P	03 12 54.8	+0.3		
	baz=239									
HEC	**Hector,Ludlow**	78.76	48	P		P	03 12 55.3	+0.4		
	baz=239,SNR=9.3									
PNTR	**Pine Nut**	78.80	43	IAmb		IAmb	03 12 56.8			
	comp=Z,23nm,0.9s									
BC3	**Big Chuckawall**	78.81	49	P		P	03 12 55.9	+0.6		
	baz=240									
VCNR	**Virginia City**	78.88	43	P		P	03 12 55.5	-0.1		
L04D	**Klamath Falls**	78.89	39	P		P	03 12 55.8	+0.3		
	baz=234									
M04C	**Macdoel**	78.92	40	P		P	03 12 56.1	+0.5		
	baz=234									
GLA	**Glamis**	78.97	50	P		P	03 12 57.0	+1.0		
	baz=241									
GLA	**Glamis**	78.97	50	IAmb		IAmb	03 12 58.2			
	comp=Z,13nm,0.8s									
YERR	**Yerington**	78.98	43	IAmb		IAmb	03 12 57.5			
	comp=Z,14nm,0.6s									
I03D	**Drain, OR**	79.15	37	P		P	03 12 57.0	+0.4		
	baz=233									
GRAC	**Grapevine Rang**	79.16	46	P		P	03 12 57.9	+0.9		
	baz=238									
GMRC	**Granite Mounta**	79.22	48	P		P	03 12 57.9	+0.5		
	baz=240									
FURC	**Furnace Creek,**	79.23	46	P		P	03 12 57.9	+0.7		
	baz=239,SNR=6.9									
IRM	**Iron Mountain**	79.28	49	P		P	03 12 58.3	+0.7		
	baz=240									
NVAR	**Mina Array Bea**	79.29	44	P		P	03 12 58.3	+0.5		
	comp=Z,9.1nm,0.8s,baz=225,slow=9.2,SNR=72									
NVAR				pP		pP	03 14 53.5	-0.1		
	comp=Z,4.0nm,0.9s,baz=228,slow=9.0,SNR=13									
SHOC	**Shoshone, Teco**	79.35	47	P		P	03 12 58.2	+0.3		
	baz=239									
TUQ	**Turquoise Moun**	79.36	48	P		P	03 12 58.7	+0.5		
	baz=240									
Y12C	**Blythe**	79.53	50	P		P	03 12 59.5	+0.6		
	baz=241,SNR=7.4									
Y12C	**Blythe**	79.53	50	IAmb		IAmb	03 13 00.7			
	comp=Z,9.9nm,0.8s									
CN2	**Changchun**	79.59	322	*e*P		P	03 12 59.6	+0.7		
CN2				pmax		pmax				
	comp=Z,10.0nm,0.8s									
J04D	**Umpqua Nationa**	79.61	38	P		P	03 12 59.9	+0.6		
	baz=234,SNR=7.4									
I04A	**Tendick Farm,**	79.75	38	P		P	03 13 00.3	+0.4		
	baz=234									
KVN	**Kaiserville**	79.76	44	IAmb		IAmb	03 13 01.5			
	comp=Z,26nm,1.4s									
TPNV	**Topopah Spring**	79.90	46	P		P	03 13 01.6	+0.6		
	baz=239,SNR=11									
MOD	**Modoc Plateau**	79.92	40	IAmb		IAmb	03 13 02.3			
	comp=Z,9.1nm,0.7s									
214A	**Organ Pipe Nat**	79.94	52	P		P	03 13 02.2	+1.1		
	baz=242									
CNPM	**China Poot**	79.96	14	P		P	03 13 00.5	-0.1		
CNPM				IAmb		IAmb	03 13 26.9			
	comp=Z,18nm,1.3s									
K05A	**Summer Lake**	80.03	39	IAmb		IAmb	03 13 03.3			
	comp=Z,14nm,0.9s									
HSIG		80.04	55	P		P	03 13 01.7	0.0		
PDMCI	**Parker Dam,Lak**	80.08	49	P		P	03 13 02.3	+0.6		
	baz=241									
G03D	**McMinnville, O**	80.11	36	P		P	03 13 02.4	+0.7		
	baz=233									
SDSI	**Sungai Dareh**	80.13	272	P		P	03 13 02.3	-0.2		
J05D	**Fort Rock, OR**	80.15	39	P		P	03 13 02.8	+0.7		
	baz=235,SNR=19									
WHN	**Wuhan**	80.21	306	⇑P		P	03 13 03.6	+1.1		
H04A	**Detroit Lake**	80.41	37	IAmb		IAmb	03 13 04.1			
	comp=Z,35nm,1.8s									
RSO	**Redoubt South**	80.47	13			PcP	03 13 15.8	+7.4		
PINE	**Pine Mountain**	80.62	38	IAmb		IAmb	03 13 06.4			
	comp=Z,15nm,0.9s									
I05D	**Terrebonne, OR**	80.70	38	P		P	03 13 05.5	+0.6		
	baz=234									
E03A	**Lebam**	80.76	35	IAmb		IAmb	03 13 06.4			
	comp=Z,17nm,1.0s									
BKNI	**Bangkinang**	80.88	273	P		P	03 13 06.2	-0.1		
PDSI	**Padang**	81.06	272	P		P	03 13 06.9	-0.4		
R11A	**Troy Canyon, C**	81.07	45	P		P	03 13 07.2	+0.2		
	baz=239,SNR=8.0									
NLWA	**Neilton Lookou**	81.11	34	IAmb		IAmb	03 13 12.7			
	comp=Z,34nm,1.9s									
WVOR	**Wild Horse Val**	81.25	40	IAmb		IAmb	03 13 09.4			
	comp=Z,14nm,0.9s									
E04D	**Cinebar**	81.31	35	P		P	03 13 08.6	+0.8		
	baz=233									
D03D	**Eldon**	81.62	34	P		P	03 13 09.9	+0.6		
	baz=233									
TUC	**Tucson**	81.63	52	P		P	03 13 11.2	+1.2		
	baz=243									
TUC	**Tucson**	81.63	52	P		P	03 13 11.5	+1.5		
TUC				IAmb		IAmb	03 13 12.4			
	comp=Z,13nm,0.8s									
I07A	**Izee**	81.64	39	IAmb		IAmb	03 13 11.3			
	comp=Z,10nm,0.8s									
J08A	**Circle Bar Ran**	81.86	40	IAmb		IAmb	03 13 12.3			
	comp=Z,20nm,1.2s									
D05A	**Enumclaw**	82.01	35	P		P	03 13 12.1	+0.8		
D05A				IAmb		IAmb	03 13 13.2			
	comp=Z,25nm,1.2s									
X16A	**Lo Mia Camp, P**	82.10	50	IAmb		IAmb	03 13 14.6			
	comp=Z,15nm,0.8s									
GLI	**Glacier Island**	82.13	15	IAmb		IAmb	03 13 11.5			
	comp=Z,14nm,0.7s									
IPM	**Ipoh**	82.16	277	P		P	03 13 12.4	-0.6		
IPM	**Ipoh**	82.16	277	P		P	03 13 14.0	+1.0		
SISI	**Saibi**	82.24	271	P		P	03 13 14.2	+0.9		
	comp=Z,21nm,0.8s									
PSUT	**Pine Spring**	82.34	46	P		P	03 13 14.1	+0.6		
319A	**Douglas**	82.37	54	IAmb		IAmb	03 13 16.3			
	comp=Z,21nm,0.9s									
U15A	**North Rim**	82.42	48	IAmb		IAmb	03 13 16.2			
	comp=Z,20nm,0.8s									
GHO	**Glory Hole Cre**	82.48	14	IAmb		IAmb	03 13 13.6			
	comp=Z,11nm,0.6s									
A04D	**Lummi Island**	82.54	34	P		P	03 13 14.5	+0.5		
	baz=233									
B05A	**Bryant**	82.59	34	P		P	03 13 14.7	+0.4		
	baz=233									
WUAZ	**Wupatki**	82.65	49	P		P	03 13 16.0	+0.8		
	baz=242									
WUAZ	**Wupatki**	82.65	49	IAmb		IAmb	03 13 17.2			
	comp=Z,13nm,0.9s									
KULM	**Kulim**	82.77	278	P		P	03 13 16.4	+0.3		
KULM				IAmb		IAmb	03 13 17.6			
	comp=Z,20nm,1.0s									
KULM	**Kulim**	82.77	278	P		P	03 13 16.0	0.0		
WAX	**Waxell Ridge**	82.88	17	IAmb		IAmb	03 15 15.0			
	comp=Z,15nm,0.4s									
SCM	**Sheep Creek Mo**	82.91	14	IAmb		IAmb	03 15 28.6			
	comp=Z,16nm,0.6s									
HAWA	**Hanford**	82.92	37	P		P	03 13 16.2	+0.2		
HAWA				IAmb		IAmb	03 13 16.9			
	comp=Z,10.0nm,0.7s									
GLB	**Gilahina Butte**	83.45	16	IAmb		IAmb	03 13 18.6			
	comp=Z,8.5nm,0.6s									
BALM	**Baldy**	83.51	17	IAmb		IAmb	03 13 19.0			
	comp=Z,6.5nm,0.7s									
MFID	**Camas Ranch**	83.52	41	P		P	03 13 19.7	+0.4		
RPSI	**Rantau Prapat**	83.61	275	P		P	03 13 19.3	-0.9		
W18A	**Petrified Fore**	83.67	50	P		P	03 13 21.0	+0.8		
	baz=244									
W18A	**Petrified Fore**	83.67	50	IAmb		IAmb	03 16 41.4			
	comp=Z,7.5nm,0.8s									
TRF	**Thorofare Moun**	83.68	12	P		P	03 13 18.4	-1.2		
TRF				IAmb		IAmb	03 13 19.5			
	comp=Z,9.4nm,0.7s									
BARN	**Barnard Glacie**	83.72	17	IAmb		IAmb	03 13 20.5			
	comp=Z,8.6nm,0.9s									
DUG	**Dugway, Tooele**	83.85	45	P		P	03 13 21.3	+0.3		
	baz=241									
ENH	**Enshi**	83.88	304	P		P	03 13 22.1	+0.9		
ENH				IAmb		IAmb	03 13 22.9			
	comp=Z,36nm,1.1s									
RND	**Reindeer**	83.94	13	IAmb		IAmb	03 13 20.9			
	comp=Z,11nm,0.6s									
DHY	**Denali Highway**	83.98	14	IAmb		IAmb	03 13 21.1			
	comp=Z,22nm,1.8s									
121A	**Cookes Peak, D**	84.01	53	P		P	03 13 23.0	+1.0		
	baz=245									
121A	**Cookes Peak, D**	84.01	53	IAmb		IAmb	03 15 23.4			
	comp=Z,7.7nm,0.9s									
F10A	**Beach Ranch, E**	84.02	38	IAmb		IAmb	03 13 22.5			
	comp=Z,14nm,1.0s									
MAW	**Mawson**	84.15	200	P		P	03 13 22.8	+1.0		
	baz=84,SNR=16									
MAW	**Mawson**	84.15	200	P		P	03 13 22.8	+1.0		
	comp=Z,15nm,0.7s,baz=128,slow=6.1,SNR=24									
MAW	**Mawson**	84.15	200	P		P	03 13 22.7	+0.9		
MCK	**McKinley**	84.21	13	IAmb		IAmb	03 13 22.0			
	comp=Z,12nm,1.1s									
ZAIG	**Zacatecas**	84.43	64	P		P	03 13 25.3	+0.9		
ZAIG				IAmb		IAmb	03 13 27.3			
	comp=Z,7.2nm,0.8s									
GSI	**Gunungsitoli**	84.47	273	P		P	03 13 25.6	+1.1		
	comp=Z,439nm,0.7s									
GSI	**Gunungsitoli**	84.47	273	P		P	03 13 24.4	-0.1		
KCSI	**Kotacane, Aceh**	84.96	275	P		P	03 13 26.7	-0.1		
	comp=Z,35nm,0.8s									
WRH	**Wood River Hil**	85.04	13	IAmb		IAmb	03 13 25.9			
	comp=Z,15nm,1.4s									
SLVN	**Son La**	85.13	294	P		P	03 13 28.8	+1.2		
HDA	**Harding Lake**	85.23	13	P		P	03 13 25.9	-1.1		
	baz=210									
DOT	**Dot Lake**	85.25	15	IAmb		IAmb	03 13 27.3			
	comp=Z,5.7nm,0.7s									
CCB	**Clear Creek Bu**	85.25	13	P		P	03 13 26.1	-1.0		
CCB				IAmb		IAmb	03 13 27.2			
	comp=Z,13nm,1.5s									
TVZX	**PASSCAL Wareho**	85.31	52	P		P	03 13 26.9	-1.1		
	baz=245									
NEW	**Newport**	85.32	36	P		P	03 13 27.4	-0.4		
	baz=237									
PV05	**Paradox Valley**	85.44	48	IAmb		IAmb	03 15 30.3			
	comp=Z,13nm,1.3s									
MVCO	**Mesa Verde**	85.48	49	P		P	03 13 29.3	+0.1		
	baz=244									
MNTX	**Cornudas Mount**	85.53	55	P		P	03 13 29.9	+0.7		
	baz=246									
MNTX	**Cornudas Mount**	85.53	55	IAmb		IAmb	03 13 31.2			
	comp=Z,11nm,1.3s									
ILAR	**Eielson Array**	85.56	13	P		P	03 13 27.1	-1.4		
	comp=Z,1.6nm,0.4s,baz=224,slow=5.0,SNR=26									
ILAR				pP		pP	03 15 27.4	+0.7		
	comp=Z,1.2nm,0.9s,baz=232,slow=5.5,SNR=4.3									
POKR	**Poker Plat Res**	85.74	13	P		P	03 13 27.9	-1.5		
	baz=210									
XAN	**Xi'an**	85.86	307	P		P	03 13 31.2	+0.5		
XAN				IAmb		IAmb	03 13 32.6			
	comp=Z,22nm,1.0s									
TX32	**Lajitas Array**	85.97	58	IAmb		IAmb	03 13 34.1			
	comp=Z,14nm,0.9s									
TXAR	**Lajitas Array**	85.97	58	P		P	03 13 33.0	+1.5		
	comp=Z,9.1nm,0.8s,baz=218,slow=6.2,SNR=88									
TXAR				pP		pP	03 15 30.8	+1.2		
	comp=Z,1.0nm,1.1s,baz=224,slow=5.0,SNR=3.1									
ANMO	**Albuquerque**	86.02	52	P		P	03 13 32.1	+0.4		
	baz=246									
ANMO	**Albuquerque**	86.02	52	P		P	03 13 32.1	+0.4		
ANMO				IAmb		IAmb	03 15 34.9			
	comp=Z,14nm,1.5s									
MSO	**Missoula**	86.41	38	P		P	03 13 32.4	-0.7		
	baz=240									
MLSI	**Meulaboh, Aceh**	86.48	276	P		P	03 13 34.6	+0.5		
	comp=Z,120nm,0.9s									
DLMT	**Dillon**	86.50	40	IAmb		IAmb	03 13 35.1			
	comp=Z,6.0nm,0.8s									
TPAW	**Teton Pass**	86.64	42	IAmb		IAmb	03 13 36.2			
	comp=Z,7.0nm,0.8s									
SNOW	**Snow King Moun**	86.75	42	IAmb		IAmb	03 13 36.7			
	comp=Z,11nm,0.8s									
IMW	**Indian Meadow**	86.84	42	IAmb		IAmb	03 13 37.2			
	comp=Z,12nm,0.8s									
HHC	**Hu-ho-hao-te**	86.85	315	*e*P		P	03 13 35.6	+0.2		
HHC				pmax		pmax				
	comp=Z,17nm,0.8s									
HHC				pmax		pmax				
	comp=Z,58nm,4.5s									
S22A	**4UR Ranch, Cre**	86.91	49	P		P	03 13 36.6	+0.6		
	baz=245									
O20A	**White River Ci**	86.94	46	P		P	03 13 36.3	+0.4		
	baz=244									
O20A	**White River Ci**	86.94	46	IAmb		IAmb	03 13 37.2			
	comp=Z,14nm,1.4s									
BW06	**Boulder Array**	87.22	44	P		P	03 13 37.2	0.0		
	baz=243									
BW06	**Boulder Array**	87.22	44	IAmb		IAmb	03 13 38.0			
	comp=Z,13nm,1.3s									
PD31	**Pinedale Array**	87.22	44	IAmb		IAmb	03 13 38.0			
	comp=Z,13nm,1.4s									
PDAR	**Pinedale Array**	87.22	44	P		P	03 13 37.4	+0.2		
	comp=Z,3.4nm,0.5s,baz=221,slow=3.2,SNR=32									
PDAR				pP		pP	03 15 35.4	-0.5		
	comp=Z,1.3nm,1.0s,baz=242,slow=3.2,SNR=3.1									
H17A	**Grant Village**	87.30	42	P		P	03 13 39.4	+1.8		
	baz=242									
H17A	**Grant Village**	87.30	42	IAmb		IAmb	03 13 40.3			
	comp=Z,8.9nm,0.8s									
LKWY	**Lake**	87.49	42	IAmb		IAmb	03 13 41.3			
	comp=Z,6.0nm,0.7s									
SDCO	**Great Sand Dun**	87.87	49	P		P	03 13 40.2	-0.3		
	baz=246									
RWWY	**Rawlins**	88.31	45	IAmb		IAmb	03 13 42.5			
	comp=Z,13nm,1.3s									
T25A	**Trinidad**	88.42	50	P		P	03 13 43.1	+0.1		
	baz=247									
MSTX	**Muleshoe**	88.43	54	P		P	03 13 43.1	+0.2		
	baz=248									
MSTX	**Muleshoe**	88.43	54	IAmb		IAmb	03 13 44.0			
	comp=Z,6.5nm,0.7s									
RLMT	**Red Lodge**	88.46	42	P		P	03 13 43.8	+0.8		
	baz=243									
RLMT	**Red Lodge**	88.46	42	IAmb		IAmb	03 13 44.7			
	comp=Z,5.9nm,0.9s									
CMAR	**Chiang Mai Arr**	88.56	290	P		P	03 13 44.6	+0.9		
	comp=Z,7.0nm,0.9s,baz=111,slow=3.0,SNR=18									
Q24A	**Divide**	88.62	48	P		P	03 13 44.4	+0.5		
	baz=246									
ISCO	**Idaho Springs**	88.63	47	P		P	03 13 44.1	+0.1		
	baz=246									
CHTO	**Chiang Mai**	88.67	290	P		P	03 13 44.7	+0.5		
CHTO				IAmb		IAmb	03 13 45.6			
	comp=Z,6.2nm,0.7s									
CD2	**Chengdu**	88.68	303	P		P	03 13 43.5	-0.6		
CD2				pmax		pmax				
	comp=Z,10.0nm,0.5s									
N23A	**Red Feather La**	88.84	46	P		P	03 13 45.6	+0.7		
	baz=246									
833A	**Chaparral WMA,**	89.09	60	P		P	03 13 47.0	+1.1		
	baz=250									
K22A	**Casper**	89.18

baz=268
H66A Whiting 117.20 48 P PKiKP 03 19 32.5 +0.7
baz=272
ARCES ARCESS Array B 125.90 350 PKP PKPdf 03 19 47.0 -0.8
comp=Z,3.1nm,0.8s,baz=20,slow=3.2,SNR=4.1
GEYT Alibeck 126.65 304 PKP PKiKP 03 19 50.5 -0.2
comp=Z,3.1nm,0.8s,baz=242,slow=3.2,SNR=5.3
FINES FINESS Array B 132.76 344 PKP PKPdf 03 20 00.7 -0.2
comp=Z,1.0nm,0.7s,baz=45,slow=3.0,SNR=4.0
FINES SKPbc SKPbc 03 22 38.1 +0.7
comp=Z,1.9nm,0.7s,baz=29,slow=4.4,SNR=6.5
RAYN Ar Rayn 138.36 286 PKiKP 03 20 14.5 -0.4
ILGA Ilgaz 143.65 317 PKPdf 03 20 21.3 -0.5
VASR Vaslui 143.67 329 ⇓P PKPbc 03 20 20.6 +0.4
TLCR 144.13 326 ⇑P PKPbc 03 20 21.1 -0.6
VARL Varlezi 144.16 328 ⇑P PKPbc 03 20 21.9 +0.1
BURAR Bucovina Array 144.17 332 ⇑P PKPdf 03 20 22.4 +0.1
BIZ Bicaz 144.27 331 ⇑P PKPab 03 20 23.1 +0.6
TESR Tescani 144.32 330 ⇑P PKPdf 03 20 22.6 +0.1
BR131 Keskin Array S 144.36 315 PKPbc 03 20 22.2 -0.6
BRTR Keskin Array B 144.36 315 PKP PKPbc 03 20 22.7 -0.1
comp=Z,3.8nm,0.5s,baz=104,slow=3.5,SNR=28
CFR Carcaliu 144.50 327 ⇑P PKPdf 03 20 22.8 +0.1
TOPG Topolog 144.57 326 ⇑P PKPdf 03 20 21.5 -1.4
VRI Vrincioaia 144.74 329 ⇑P PKPbc 03 20 23.9 +0.3
PLOR Plostina 144.79 329 ⇑P PKPdf 03 20 23.6 +0.2
ANTO Ankara 144.86 316 ⇑P PKPbc 03 20 24.1 -0.1
ANTO Ankara 144.86 316 PKPbc 03 20 24.1 -0.2
TRPA Tarpa 144.91 335 ⇑P PKPbc 03 20 24.3 +0.3
HARR Harsova 144.93 326 ⇑P PKPbc 03 20 23.9 -0.3
OSTC Ostas 144.96 343 ePKP PKPbc 03 20 24.5 +0.3
CHVC Chvalec 144.97 344 ePKP PKPab 03 20 24.7 -0.4
CLL Collm 145.04 347 i PKPbc PKPbc 03 20 24.8 +0.5
comp=Z,16nm,1.2s
DPC Dobruska-Polom 145.12 343 ePKP PKPbc 03 20 25.1 +0.4
LANS Liptovska Anna 145.20 339 ePKP PKPab 03 20 26.2 +0.2
BRG Berggiesshubel 145.24 346 i PKP PKPbc 03 20 24.8 -0.1
comp=Z,6.0nm,0.9s
MORC Moravsky Berou 145.28 342 ePKP PKPbc 03 20 25.4 +0.2
MORC Moravsky Berou 145.28 342 PKPbc PKPbc 03 20 25.0 -0.2
DOPR Dopca 145.32 330 ⇑P PKPbc 03 20 25.5 +0.2
MLR Muntele Rosu 145.39 329 ⇑P PKPbc 03 20 25.4 -0.4
KECS Kecovo 145.41 337 ePKP PKPbc 03 20 26.1 +0.6
PVCC Panska Ves 145.41 345 ePKP PKPbc 03 20 25.8 +0.4
MDUB Mudurnu 145.58 318 PKPbc 03 20 26.6 +0.2
PRU Pruhonice 145.92 345 ePKP PKPbc 03 20 27.2 +0.3
GOPC GO Pecny, Ondr 145.92 344 ePKP PKPbc 03 20 26.4 -0.6
MBAR Mbarara 145.94 241 PKPbc 03 20 28.0 -0.2
VYHS Vyhne 145.98 339 ePKP PKPbc 03 20 27.5 +0.3
JAVC Velka Javorina 146.05 341 ePKP PKPab 03 20 28.7 -0.7
PSZ Piszkesteto 146.10 337 ⇑P PKPbc 03 20 27.5 -0.1
ARR Arges 146.12 330 ⇑P PKPbc 03 20 28.8 +1.0
KRUC Moravsky 146.26 342 ePKP PKPbc 03 20 28.0 +0.1
SIRR Siria 146.76 334 ⇑P PKPdf 03 20 27.7 +1.0
KHC Kasperske Hory 146.95 345 ePKP PKPbc 03 20 30.0 +0.2
KHC epPKP pPKPbc 03 22 42.8 +7.1
KHC Kasperske Hory 146.95 345 PKPbc 03 20 30.2 +0.3
GZR Gura Zlata 146.96 332 ⇓P PKPbc 03 20 29.8 -0.2
BMRD Maredsous 147.18 356 PKiKP PKPbc 03 20 31.1 +0.7
GERES GERESS Array B 147.18 345 PKPbc PKPbc 03 20 30.4 -0.1
comp=Z,2.2nm,0.6s,baz=29,slow=3.0,SNR=25
BZS Buzias 147.29 333 ⇑P PKPbc 03 20 30.5 -0.2
CONA Conrad Observa 147.43 342 i PKiKP PKPbc 03 20 31.7 +0.5
comp=Z,6.7nm,0.6s,SNR=9.0
HERR Herculane 147.51 332 ⇑P PKPbc 03 20 31.5 +0.1
WLF Walferdange 147.70 354 PKiKP PKPbc 03 20 31.7 -0.1
MOA Molln 147.96 344 i PKPbc PKPbc 03 20 32.5 +0.1
comp=Z,6.0nm,1.2s
ALN Alexandroupoli 148.48 323 P PKPab 03 20 38.8 -0.6
ALN Alexandroupoli 148.48 323 PKPbc 03 20 33.8 -0.1
ALN PKPab PKPab 03 20 38.7 -0.7
SOKA Soboth 148.80 342 i PKPbc PKPbc 03 20 34.1 -0.5
comp=Z,4.4nm,0.9s,SNR=4.8
VTS Vitosha 148.82 328 ⇑P PKPbc 03 20 34.3 -0.6
VTS Vitosha 148.82 328 PKPbc 03 20 35.1 +0.2
KBA Koelnbreinsper 148.91 344 i PKPbc PKPbc 03 20 34.8 -0.3
comp=Z,5.0nm,0.7s
FETY Fethiye 149.01 313 P PKPbc 03 20 33.2 -2.2
RETA Reutte 149.13 348 i PKiKP PKPbc 03 20 35.4 0.0
comp=Z,4.1nm,0.7s
WTTA Wattenberg 149.15 346 i PKiKP PKPbc 03 20 35.7 +0.1
comp=Z,9.0nm,0.7s,SNR=6.2
MOTA Moosalm 149.19 347 i PKPbc PKPbc 03 20 35.4 -0.3
comp=Z,7.0nm,1.1s,SNR=4.1
MYKA Terra Mystica 149.24 343 i PKPbc PKPbc 03 20 34.9 -0.8
comp=Z,5.2nm,0.6s
SQTA Sankt Quirin 149.29 347 i PKiKP PKPbc 03 20 35.9 0.0
comp=Z,5.8nm,0.6s,SNR=4.4
ABTA Abfaltersbach 149.43 345 i PKPbc PKPbc 03 20 35.5 -0.6
comp=Z,7.5nm,0.6s,SNR=6.7
DAVA Damuels 149.50 349 i PKPbc PKPbc 03 20 36.0 -0.4
comp=Z,4.9nm,0.8s
LJU Ljubljana 149.53 342 i PKPbc PKPbc 03 20 36.2 -0.1
FETA Feichten 149.58 347 i PKiKP PKPbc 03 20 36.7 +0.1
comp=Z,4.3nm,0.8s
VISS Visnje 149.65 341 i PKPbc PKPbc 03 20 36.4 -0.3
GBAS Gorenja Brezov 149.65 342 i PKPbc PKPbc 03 20 36.3 -0.3
STAL STALIGIAL 149.83 344 PKPbc 03 20 36.6 -0.4
BODT Bodrum 149.99 316 P PKPbc 03 20 37.2 -0.5
DAT Datca 149.99 315 P PKiKP 03 20 38.8 +0.3
CHOS Chios island 150.04 319 P PKPbc 03 20 35.7 -2.2
CTI Castel Tesino 150.30 345 PKPbc 03 20 38.0 -0.3
PDG Podgorica 150.86 332 ⇓P PKPbc 03 20 39.1 -0.4
FNA Florina 151.11 327 P PKPbc 03 20 39.6 -0.6
FNA Florina 151.11 327 PKPbc 03 20 39.5 -0.7
ATHU Athens Univers 151.70 321 P PKPbc 03 20 40.5 -1.1
AGG Agios Georgios 151.85 324 P PKPbc 03 20 40.9 -1.0
DID Didima 152.33 320 P PKPbc 03 20 41.4 -1.6
KRND KRANIDI 152.46 320 P PKPbc 03 20 42.2 -1.0
KLV Kalavryta, Ach 152.62 322 P PKPbc 03 20 43.2 -0.5
TORD Torodi Ar. Bea 175.64 184 PKP PKPdf 03 20 54.9 -1.8
comp=Z,0.9nm,0.8s,baz=28,slow=1.1,SNR=5.0
TORD PKPab PKPab 03 22 38.5 +0.3
comp=Z,1.2nm,0.8s,baz=203,slow=4.1,SNR=6.1
TORD PP PP 03 26 31.4 +1.5
comp=Z,1.2nm,1.1s,baz=160,slow=5.6,SNR=4.0

WEL 23 03:12:47.6,40°S±9″×17°3E±°,h12km,M3.5/19,ML3.8/19, MLv3.5/19,Error ellipse: s-maj=0.0km s-min=0.0km az=7.4,Off west coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NMEZ	**Namu Road**	**0.50**	**72**	P	Pb	03 12 58.2	-0.1
NMEZ				S	Sb	03 13 05.0	-0.6
NBEZ	**Newall Road No**	**0.56**	**57**	P	Pb	03 13 00.1	+0.9
NBEZ				S	Sb	03 13 08.3	+1.2
KHEZ	**Kahui Hut**	**0.64**	**65**	P	Pb	03 13 01.1	+0.3
KHEZ				S	Sb	03 13 09.7	-0.1
PKE	**Pukeiti**	**0.68**	**56**	P	Pn	03 13 02.3	-0.7
PKE				S	Sb	03 13 11.3	+0.7
PREZ	**Palmer Road**	**0.73**	**72**	P	Pb	03 13 02.3	+0.1
DREZ	**Durham Road**	**0.82**	**63**	P	Pn	03 13 04.5	-0.5
LREZ	**Lake Rotokare**	**0.89**	**83**	P	Pg	03 13 04.0	-0.7
MHEZ	**Mangahewa**	**0.96**	**59**	P	Pn	03 13 07.0	+0.2
VRZ	**Vera Road**	**1.24**	**69**	P	Pn	03 13 10.2	-0.6
DUWZ	**D'Urville Isla**	**1.33**	**158**	P	Pn	03 13 11.0	-1.0
WAZ	**Wanganui**	**1.34**	**98**	P	Pn	03 13 11.1	-1.0
QRZ	**Quartz Range**	**1.37**	**204**	P	Pg	03 13 14.0	+0.1
HIZ	**Hauiti**	**1.63**	**50**	P	Pn	03 13 16.5	+0.4
PKVZ	**Pokaka**	**1.64**	**81**	P	Pn	03 13 15.9	-0.4
NNZ	**Nelson**	**1.65**	**177**	P	Pn	03 13 16.5	+0.2
TWVZ	**Taurewa**	**1.76**	**74**	P	Pn	03 13 18.0	+0.1
TRVZ	**Turoa**	**1.79**	**82**	P	Pn	03 13 18.5	0.0
FWVZ	**Far West T-bar**	**1.80**	**81**	P	Pn	03 13 18.6	0.0
KIW	**Kapiti Island**	**1.80**	**136**	P	Pn	03 13 18.0	-0.5
TCW	**Tory Channel**	**1.81**	**155**	P	Pn	03 13 18.9	+0.3
NGZ	**Ngauruhoe**	**1.85**	**78**	P	Pn	03 13 19.8	+0.5
WTVZ	**West Tongariro**	**1.86**	**77**	P	Pn	03 13 19.5	+0.2
KRVZ	**Karewarewa**	**1.91**	**76**	P	Pn	03 13 20.4	+0.4
OGWZ	**Otaki Gorge**	**1.92**	**131**	P	Pn	03 13 20.1	+0.1
TUWZ	**Tuamarina**	**1.93**	**165**	P	Pn	03 13 21.4	+1.2
MOVZ	**Moawhango**	**1.93**	**86**	P	Pn	03 13 20.2	-0.2
KATZ	**Kakaramea**	**1.98**	**73**	P	Pn	03 13 21.6	+0.6
CAW	**Cannon Point**	**2.06**	**139**	P	Pn	03 13 22.8	+0.8
RATZ	**Rangitukua**	**2.07**	**71**	P	Pn	03 13 23.1	+0.9
MRZ	**Mangatainoka R**	**2.08**	**122**	P	Pn	03 13 23.2	+0.9
POWZ	**Post Office Ro**	**2.09**	**114**	P	Pn	03 13 23.7	+1.3
RITZ	**Rihia Road**	**2.10**	**74**	P	Pb	03 13 24.3	-1.3
WATZ	**Wairara**	**2.10**	**67**	P	Pn	03 13 23.3	+0.6
TSZ	**Takapari Road**	**2.13**	**104**	P	Pn	03 13 23.4	+0.4
BHHZ	**Black Hill Sta**	**2.17**	**89**	P	Pn	03 13 24.2	+0.7
HOWZ	**Holdsworth Sta**	**2.17**	**128**	P	Pn	03 13 24.0	+0.4
BSWZ	**Blackbirch Sta**	**2.19**	**168**	P	Pb	03 13 26.4	-0.7
THZ	**Tophouse**	**2.21**	**187**	P	Pb	03 13 25.8	-1.7
BHW	**Baring Head**	**2.21**	**147**	P	Pb	03 13 26.1	-1.3
PNHZ	**Pukenui**	**2.29**	**100**	P	Pn	03 13 26.3	+1.1
MSWZ	**Moikau Station**	**2.39**	**141**	P	Pn	03 13 27.1	+0.6
KRHZ	**Kereru**	**2.40**	**93**	P	Pn	03 13 28.3	+1.6
PLWZ	**Palliser**	**2.51**	**143**	P	Pn	03 13 30.1	+1.9
TMWZ	**Te Maipa**	**2.53**	**128**	P	Pb	03 13 30.8	-2.1
BKZ	**Black Stump Fm**	**2.54**	**82**	P	Pn	03 13 29.6	+1.0
TOZ	**Tahuroa Road**	**2.54**	**44**	P	Pn	03 13 29.8	+1.2
BFZ	**Birch Farm**	**2.54**	**117**	P	Pb	03 13 31.2	-1.9
MCHZ	**McNeill Hill**	**2.66**	**88**	P	Pb	03 13 36.2	+1.1
KHZ	**Kahutara**	**2.85**	**176**	P	Pb	03 13 36.1	-2.2
URZ	**Urewera**	**3.27**	**68**	P	Pn	03 13 41.0	+2.4
LTZ	**Lake Taylor**	**3.29**	**193**	P	Pn	03 13 42.5	+3.5
GVZ	**Greta Valley S**	**3.40**	**183**	P	Pn	03 13 44.0	+3.6
OUZ	**Omahuta**	**4.35**	**4**	P	Pn	03 13 57.2	+3.7
HHSZ	**Highcliff Hill**	**6.61**	**196**	P	Pn	03 14 26.5	+2.0

IDC 23 03:16:26.4±2.5,17°.14S×167°.65E,h0km,mb4.0/3, mb1 4.1/4,mb1mx3.6/34,mbtmp3.9/4,ML3.0/1,MS3.8/2, Ms1 3.8/2,ms1mx2.8/33,Error ellipse: s-maj=59.5km s-min=28.1km az=107.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.04**	**193**	Pn	Pn	03 17 44.5	+1.2
	0.6nm,0.3s,baz=120,slow=22,SNR=8.0						
DZM				Sn	Sn	03 18 40.4	-1.9
	0.7nm,0.3s,baz=115,slow=23,SNR=1.3						
URZ	**Urewera**	**22.62**	**160**	LR	LR	03 27 49.9	
	comp=Z,94nm,19.0s,baz=164,slow=30						
RAR	**Rarotonga**	**31.00**	**103**	LR	LR	03 32 15.9	
	comp=Z,510nm,21.4s,baz=267,slow=31						
WRA	**Warramunga Arr**	**31.68**	**260**	P	P	03 22 52.6	+0.8
	0.3nm,0.4s,baz=90,slow=8.2,SNR=7.1						
ASAR	**Alice Springs**	**32.23**	**253**	P	P	03 22 56.0	-0.8
	2.0nm,0.5s,baz=83,slow=9.0,SNR=20						
PETK	**Petropavlovsk-**	**70.48**	**354**	P	P	03 27 42.6	0.0
	1.6nm,0.8s,baz=177,slow=7.2,SNR=4.1						

ISK 23 03:19:05.5,37°.04N×27°.42E,h17km,ML2.0/9
DDA 23 03:19:05.3,37°.09N×27°.51E,h5km±3km,ML1.7,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.06**	**243**	i P	Pg	03 19 07.9	+1.2
BDRM				i P		03 19 08.0	
BDRM				i S	Sg	03 19 08.5	+0.7
BDRM				i S		03 19 08.6	
BDRM				IAML		03 19 10.0	
	comp=E,644nm,0.3s						
BDRM				IAML		03 19 10.0	
	comp=N,590nm,0.2s						
BDRM				IAML		03 19 10.0	
	comp=E,577nm,0.3s						
BODT	**Bodrum**	**0.16**	**259**	PG	Pg	03 19 09.4	+0.8
BODT				SG	Sg	03 19 11.9	+1.2
DAT	**Datca**	**0.37**	**172**	PG	Pg	03 19 12.7	+0.3
DAT				SG	Sg	03 19 18.3	+1.0
DAT	**Datca**	**0.37**	**172**	i P	Pg	03 19 12.7	+0.3
DAT				i S	Sg	03 19 16.0	-1.3
YER	**Yerkesik**	**0.62**	**86**	PG	Pb	03 19 19.7	+1.1
AYDN	**Tasoluk**	**0.64**	**27**	i P	Pb	03 19 19.6	+0.6
AYDN				i S	Sg	03 19 26.5	+0.6
GCAM	**G?zelcaml?**	**0.65**	**340**	PG	Pb	03 19 19.3	+0.2
GCAM	**G?zelcaml?**	**0.65**	**340**	i P	Pb	03 19 18.9	-0.1
GCAM				i S	Sb	03 19 27.3	-1.1
GCAM				IAML		03 19 33.0	
	comp=E,43nm,0.4s						
GCAM				IAML		03 19 36.0	
	comp=N,65nm,0.4s						
TURN	**Turunc**	**0.90**	**104**	PG	Pg	03 19 19.6	-3.0
TURN				SG	Sg	03 19 30.2	-4.1
TURN	**Turunc**	**0.90**	**104**	i P	Pg	03 19 18.8	-3.8
TURN				i S	Sg	03 19 28.1	-6.1
TURN				IAML		03 19 31.0	
	comp=N,34nm,0.6s						
TURN				IAML		03 19 33.0	
	comp=E,46nm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**0.90**	**19**	PG	Pn	03 19 25.1	+0.3
DALY	**Dalyan (Mula)**	**0.95**	**106**	PG	Pn	03 19 25.7	+0.3
ARG	**Arkhangelos**	**1.00**	**150**	PG	Pb	03 19 25.1	-0.1
FETY	**Fethiye**	**1.34**	**109**	PN	Pn	03 19 30.5	-0.2

IDC 23 03:21:07.0±1.8,17°.71S×178°.68W,h531km±21km, mb4.0/19,mb1 4.2/21,mb1mx3.9/35,mbtmp5.0/21,Error ellipse: s-maj=12.6km s-min=11.5km az=152.0
NEIC 23 03:21:07.9±1.2,17°.74S±0°.10×178°.7W±0°.1,h544km±6km, mb4.5/183,Error ellipse: s-maj=15.9km s-min=12.9km az=128.0
BGR 23 03:21:15.2±0.0,17°.04S×177°.09W,h600km
ISC 23 03:21:08.0±0.3,17°.73S±0°.06×178°.69W±0°.06,h547km, n329,σ1s02/282,mb4.5/104,15C-1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.11**	**269**	P	P	**03 22 26.3**	**+2.7**
AFI	**Afiamalu**	**7.66**	**61**	P	P	**03 23 00.9**	**-1.5**
NIUE	**Niue**	**8.42**	**101**	P	P	**03 23 10.3**	**+0.5**
FUNA	**Funafuti**	**9.38**	**347**	P	P	**03 23 19.5**	**-0.1**
RAO	**Raoul Island**	**11.49**	**177**	P	P	**03 23 40.1**	**-1.1**
	62nm,0.3s,baz=123,slow=23,SNR=2.3						
DZM	**Mont Dzumac**	**14.64**	**250**	eP	P	**03 24 13.2**	**-0.6**
	154nm,0.8s						
DZM	**Mont Dzumac**	**14.64**	**250**	P	P	**03 24 13.3**	**-0.6**
	3.6nm,0.3s,baz=81,slow=16,SNR=39						
KNTN	**Kanton**	**16.36**	**25**	P	P	**03 24 30.1**	**-1.0**
URZ	**Urewera**	**30.79**	**189**	P	P	**03 25 09.2**	**-1.9**
	7.6nm,0.5s,baz=323,slow=1.4,SNR=6.1						
URZ				S	S	**03 28 23.1**	**-4.8**
	10nm,0.8s,baz=171,slow=9.9,SNR=3.9						
PPT	**Papeete**	**27.73**	**94**	P	P	**03 26 13.4**	**+0.4**
	18nm,0.6s,baz=268,slow=20,SNR=2.1						
TBI	**Tubuai**	**27.90**	**106**	eP	P	**03 26 21.6**	**+7.1**
	231nm,1.1s						
EIDS	**Eidsvold**	**29.08**	**250**	P	P	**03 26 24.6**	**-0.2**
ARMA	**Armidale**	**29.80**	**239**	P	P	**03 26 31.4**	**+0.3**
KRVT	**Kevat (AS076**	**31.62**	**291**	P	P	**03 26 46.8**	**+0.1**
	78nm,0.7s,baz=10,slow=2.0,SNR=5.6						
CTA	**Charters Tower**	**33.22**	**260**	P	P	**03 27 00.2**	**-0.1**
	35nm,0.6s,baz=89,slow=9.9,SNR=44						
CTAO	**Charters Tower**	**33.22**	**260**	P	P	**03 27 00.1**	**-0.1**
CAN	**Canberra**	**33.60**	**232**	P	P	**03 27 03.6**	**+0.3**
PMG	**Port Moresby**	**34.17**	**279**	P	P	**03 27 09.0**	**+0.8**
	84nm,0.8s,baz=87,slow=5.7,SNR=25						
PMG	**Port Moresby**	**34.17**	**279**	P	P	**03 27 09.1**	**+0.8**
JOHN	**Johnston Islan**	**35.41**	**15**	P	P	**03 27 18.3**	**-0.2**
COEN	**Coen**	**36.84**	**270**	P	P	**03 27 30.6**	**+0.2**
TOO	**Toolangi**	**37.08**	**230**	P	P	**03 27 32.5**	**+0.4**
STKA	**Stephens Creek**	**38.49**	**241**	P	P	**03 27 44.5**	**+0.8**
	32nm,0.5s,baz=88,slow=9.6,SNR=108						
STKA	**Stephens Creek**	**38.49**	**241**	P	P	**03 27 44.2**	**+0.5**
STKA				IAmb	IAmb	03 27 45.4	
	comp=Z,18nm,1.1s						
JAY	**Jayapura**	**42.60**	**286**	P	P	**03 28 17.1**	**+0.4**
	comp=Z,411nmcomp=Z,40nm,0.8s						
GENI	**Genyem**	**43.06**	**286**	P	P	**03 28 21.4**	**+1.1**
	comp=Z,2μmcomp=Z,206nm,0.7s						
BBOO	**Buckleboo**	**43.26**	**241**	P	P	**03 28 21.5**	**-0.1**
KHLU	**Kahalu`u**	**43.32**	**32**	P	P	**03 28 22.0**	**-0.2**
HMH	**Hamu'ula Sheep**	**43.54**	**33**	P	P	**03 28 24.4**	**+0.3**
HPAH	**Hawaii Prepara**	**43.78**	**32**	P	P	**03 28 26.4**	**+0.7**
WRAB	**Tennant Creek**	**44.40**	**259**	P	P	**03 28 29.3**	**-1.3**
WRA	**Warramunga Arr**	**44.41**	**259**	P	P	**03 28 29.6**	**-1.1**
	comp=Z,21nm,0.5s,baz=99,slow=7.0,SNR=428						
ASAR	**Alice Springs**	**44.59**	**254**	P	P	**03 28 31.9**	**0.0**
	comp=Z,239nm,0.6s,baz=88,slow=8.3,SNR=2737						
ASAR				PcP	PcP	**03 30 03.0**	**-0.2**
	comp=Z,4.1nm,0.6s,baz=99,slow=3.3,SNR=4.6						
ASAR				ScP	ScP	**03 33 05.2**	**+1.8**
	comp=Z,2.1nm,0.8s,baz=96,slow=5.4,SNR=4.7						
SMPI	**Sarmi**	**44.64**	**286**	P	P	**03 28 32.6**	**+0.2**
	comp=Z,46nm,0.9s						
FORT	**Forrest**	**49.85**	**244**	P	P	**03 29 10.5**	**-0.8**
KNRA	**Kununurra**	**50.24**	**264**	P	P	**03 29 14.1**	**-0.4**
FAKI	**Fak Fak**	**50.28**	**281**	P	P	**03 29 14.6**	**-0.2**
FITZ	**Fitzroy Crossi**	**52.80**	**260**	P	P	**03 29 33.0**	**+0.1**
FITZ				IAmb	IAmb	03 29 33.5	
	comp=Z,12nm,0.7s						
SOEI	**Soe**	**55.81**	**270**	P	P	**03 29 55.1**	**+0.9**
	comp=Z,102nm,0.6s						
SOEI	**Soe**	**55.81**	**270**	P	P	**03 29 54.6**	**+0.4**
TNTI	**Ternate**	**56.16**	**283**	P	P	**03 29 57.0**	**+0.4**
SANI	**Sanana**	**56.45**	**280**	P	P	**03 29 57.7**	**-0.8**
	comp=Z,895nmcomp=Z,64nm,0.8s						
MBWA	**Marble Bar**	**57.86**	**256**	P	P	**03 30 07.5**	**-0.6**
MMRI	**Maumere**	**58.03**	**271**	P	P	**03 30 09.1**	**-0.2**
	comp=Z,14μmcomp=Z,78nm,0.6s						
LUWI	**Luwuk**	**59.82**	**279**	P	P	**03 30 21.4**	**+0.1**
VNDA	**Vanda**	**60.60**	**185**	P	P	**03 30 26.6**	**+1.2**
	comp=Z,1.2nm,0.6s,baz=346,slow=6.5,SNR=12						
VNDA	**Vanda**	**60.60**	**185**	P	P	**03 30 26.9**	**+1.5**
KCP	**Kidapawan**	**60.71**	**289**	⇑iP	P	**03 30 27.8**	**+0.5**
BNSI	**Bone**	**61.27**	**275**	P	P	**03 30 31.3**	**+0.5**
	comp=Z,34nm,1.2s						
KAPI	**Kappang**	**61.42**	**274**	P	P	**03 30 32.1**	**+0.3**
KAPI				IAmb	IAmb	03 31 01.4	
	comp=Z,16nm,0.6s						
SPSI	**Sidrap Palu**	**61.72**	**275**	P	P	**03 30 33.1**	**-0.7**
	comp=Z,29nm,0.8s						
TTSI	**Tana Toraja**	**61.95**	**276**	P	P	**03 30 35.2**	**-0.1**
PLAI	**Plampang**	**62.23**	**269**	P	P	**03 30 37.1**	**-0.1**
GIRL	**Giralia**	**62.69**	**253**	P	P	**03 30 40.6**	**+0.6**
JHJ	**Hachijo jima 2**	**64.27**	**322**	P	P	**03 30 49.5**	**-0.3**
	comp=Z,163nm,0.7s,baz=70,slow=14,SNR=1.9						
JAGI	**Jajag, Banyuwa**	**65.78**	**269**	P	P	**03 30 58.5**	**-1.3**
CASY	**Casey**	**66.19**	**205**	P	P	**03 31 01.5**	**+0.2**
CASY				IAmb	IAmb	03 31 02.4	
	comp=Z,15nm,1.1s						
MJAR	**Matsushiro Arr**	**67.61**	**323**	P	P	**03 31 10.5**	**0.0**
	comp=Z,1.5nm,0.5s,baz=153,slow=6.4,SNR=5.4						
MAT	**Matsushiro**	**67.61**	**323**	P	P	**03 31 10.5**	**0.0**
UGM	**Wanagama**	**69.39**	**268**	P	P	**03 31 21.7**	**-0.2**
SMRI	**Semarang**	**69.71**	**269**	P	P	**03 31 23.4**	**-0.3**
ATKA	**Atka Island**	**69.74**	**3**	P	P	**03 31 22.0**	**-0.9**
SBUM	**Sibu**	**70.92**	**279**	P	P	**03 31 32.0**	**+1.2**
JKA	**Kamikawa-asahi**	**70.99**	**332**	P	P	**03 31 31.6**	**+1.0**
ASAJ	**Asahikawa**	**70.99**	**332**	P	P	**03 31 31.6**	**+1.0**
	comp=Z,4.2nm,0.7s,baz=34,slow=33,SNR=1.7						
QSPA	**South Pole Qui**	**72.33**	**180**	P	P	**03 31 38.8**	**+0.5**
QSPA				IAmb	IAmb	03 31 39.8	
	comp=Z,12nm,0.8s						
KSM	**Kuching**	**72.40**	**277**	P	P	**03 31 39.3**	**-0.2**
KSM	**Kuching**	**72.40**	**277**	P	P	**03 31 40.0**	**+0.5**
PETK	**Petropavlovsk-**	**73.44**	**345**	P	P	**03 31 44.6**	**+0.1**
	comp=Z,9.1nm,0.7s,baz=138,slow=8.9,SNR=26						
SCZ2	**Santa Cruz Isl**	**76.18**	**47**	P	P	**03 32 01.5**	**+1.1**
	baz=237						
SAO	**San Andreas Ge**	**76.48**	**44**	P	P	**03 32 02.6**	**+0.7**
SAO				IAmb	IAmb	03 32 04.0	
	comp=Z,12nm,0.8s						
PKM	**Mcpherson Peak**	**76.54**	**46**	P	P	**03 32 03.6**	**+1.0**
	baz=237						
SMMC	**Simmler**	**76.65**	**46**	P	P	**03 32 04.0**	**+1.1**
	baz=237						
PAGB	**Antelope Grade**	**76.70**	**45**	P	P	**03 32 03.4**	**+0.2**
PAGB				IAmb	IAmb	03 32 06.5	
	comp=Z,31nm,1.6s						
ARVC	**Arvin**	**77.35**	**47**	P	P	**03 32 07.4**	**+0.7**
	baz=238						
MWC	**Mount Wilson**	**77.41**	**48**	IAmb	IAmb	03 32 08.8	
	comp=Z,14nm,0.8s						
VES	**Vestal, Richgr**	**77.56**	**46**	P	P	**03 32 08.2**	**+0.4**
	baz=237,SNR=5.4						
O02D	**Mt. Diablo Mer**	**77.59**	**41**	P	P	**03 32 09.4**	**+1.4**
	baz=234						
OHAK	**Old Harbor**	**77.62**	**14**	IAmb	IAmb	03 32 08.6	
	comp=Z,20nm,0.9s						
NJ2	**Nanjing**	**77.62**	**310**	eP	P	**03 32 08.1**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,19nm,0.5s						
MURC	**Murrieta**	**77.70**	**49**	P	P	**03 32 09.5**	**+0.8**
	baz=239						
BFSC	**Mount Baldy Ra**	**77.70**	**48**	P	P	**03 32 09.3**	**+0.5**
	baz=238						
EDW2	**Edwards Air Fo**	**77.80**	**47**	P	P	**03 32 10.1**	**+0.9**
	baz=238,SNR=12						
ISA	**Isabella, Lake**	**77.88**	**46**	P	P	**03 32 10.7**	**+1.1**
	baz=238,SNR=13						
ISA	**Isabella, Lake**	**77.88**	**46**	IAmb	IAmb	03 32 11.7	
	comp=Z,16nm,0.9s						
MONP2	**Monument Peak**	**77.90**	**50**	P	P	**03 32 11.1**	**+1.1**
	baz=240,SNR=11						
IKP	**In-Ko-Pah, Jac**	**78.00**	**50**	P	P	**03 32 11.6**	**+1.2**
	baz=240						
N02D	**Trinity Center**	**78.11**	**40**	P	P	**03 32 12.1**	**+1.3**
	baz=234						
PFO	**Pinyon Flats O**	**78.23**	**49**	P	P	**03 32 12.4**	**+0.7**
	baz=239						
M02C	**Callahan**	**78.26**	**39**	P	P	**03 32 13.0**	**+1.4**
	baz=234,SNR=5.3						
O03E	**Paynes Creek**	**78.27**	**41**	P	P	**03 32 12.3**	**+0.7**
	baz=234						
KDAK	**Kodiak Island**	**78.29**	**14**	P	P	**03 32 11.3**	**+0.1**
KDAK				IAmb	IAmb	03 32 13.1	
	comp=Z,19nm,0.9s						
SWSC	**Sam W. Stewart**	**78.38**	**50**	P	P	**03 32 13.4**	**+1.1**

K05A					IAmb	IAmb	03 32 24.2	
	comp=Z,24nm,1.0s							
PDMCI	**Parker Dam,Lak**	**80.25**	**49**	P	**P**		**03 32 23.3**	**+1.2**
	baz=241							
J05D	**Fort Rock, OR**	**80.34**	**39**	P	**P**		**03 32 23.8**	**+1.2**
	baz=234,SNR=16							
BRLK	**Bradley Lake**	**80.46**	**14**	IAmb	IAmb		03 32 23.3	
	comp=Z,15nm,0.7s							
H04A	**Detroit Lake**	**80.61**	**37**	IAmb	IAmb		03 32 24.6	
	comp=Z,9.3nm,0.6s							
SHPR	**Sheep Range**	**80.61**	**47**	P	**P**		**03 32 24.8**	**+0.6**
SVW2	**Sparrevohn**	**80.71**	**11**	IAmb	IAmb		03 32 41.4	
	comp=Z,8.2nm,0.6s							
PINE	**Pine Mountain**	**80.81**	**38**	IAmb	IAmb		03 32 27.3	
	comp=Z,19nm,0.9s							
BKNI	**Bangkinang**	**80.83**	**273**	P	**P**		**03 32 26.2**	**+0.5**
I05D	**Terrebonne, OR**	**80.89**	**38**	P	**P**		**03 32 26.3**	**+1.0**
	baz=234							
R11A	**Troy Canyon, C**	**81.25**	**45**	P	**P**		**03 32 28.1**	**+0.6**
	baz=239,SNR=6.5							
G05D	**Wamic, OR**	**81.44**	**37**	P	**P**		**03 32 28.8**	**+0.7**
	baz=234							
WVOR	**Wild Horse Val**	**81.44**	**40**	IAmb	IAmb		03 32 30.2	
	comp=Z,20nm,1.1s							
E04D	**Cinebar**	**81.51**	**35**	P	**P**		**03 32 29.3**	**+0.9**
	baz=233							
F05D	**White Salmon**	**81.73**	**36**	P	**P**		**03 32 30.4**	**+0.8**
	baz=234							
D04E	**Lakebay**	**81.77**	**35**	P	**P**		**03 32 31.1**	**+1.5**
	baz=233							
TUC	**Tucson**	**81.80**	**52**	P	**P**		**03 32 32.0**	**+1.7**
	baz=243							
TUC	**Tucson**	**81.80**	**52**	P	**P**		**03 32 32.4**	**+2.1**
TUC				IAmb	IAmb		03 32 33.1	
	comp=Z,11nm,1.0s							
D03D	**Eldon**	**81.82**	**34**	P	**P**		**03 32 30.8**	**+0.9**
	baz=233							
I07A	**Izee**	**81.83**	**39**	IAmb	IAmb		03 32 32.2	
	comp=Z,13nm,0.8s							
RC01	**Rabbit Creek A**	**81.91**	**14**	IAmb	IAmb		03 32 30.7	
	comp=Z,12nm,1.0s							
J08A	**Circle Bar Ran**	**82.05**	**40**	IAmb	IAmb		03 32 33.2	
	comp=Z,21nm,1.1s							
IPM	**Ipoh**	**82.14**	**277**	P	**P**		**03 32 32.3**	**0.0**
IPM	**Ipoh**	**82.14**	**277**	P	**P**		**03 32 33.0**	**+0.7**
D05A	**Enumclaw**	**82.20**	**35**	IAmb	IAmb		03 32 34.1	
	comp=Z,24nm,1.2s							
X16A	**Lo Mia Camp, P**	**82.27**	**50**	IAmb	IAmb		03 32 35.4	
	comp=Z,12nm,0.9s							
CCUT	**Cedar City**	**82.38**	**47**	P	**P**		**03 32 34.4**	**+1.1**
KNK	**Knik Glacier**	**82.49**	**14**	IAmb	IAmb		03 34 29.7	
	comp=Z,11nm,0.7s							
PMR	**Palmer**	**82.49**	**14**	IAmb	IAmb		03 32 32.9	
	comp=Z,8.0nm,0.7s							
319A	**Douglas**	**82.53**	**54**	IAmb	IAmb		03 32 36.9	
	comp=Z,11nm,0.8s							
U15A	**North Rim**	**82.59**	**48**	IAmb	IAmb		03 32 36.9	
	comp=Z,18nm,0.9s							
A04D	**Lummi Island**	**82.74**	**34**	P	**P**		**03 32 35.5**	**+1.0**
	baz=233							
KULM	**Kulim**	**82.75**	**278**	P	**P**		**03 32 36.0**	**+0.6**
B05A	**Bryant**	**82.79**	**34**	P	**P**		**03 32 35.5**	**+0.7**
	baz=233							
WUAZ	**Wupatki**	**82.83**	**49**	P	**P**		**03 32 36.7**	**+1.2**
	baz=242							
WUAZ	**Wupatki**	**82.83**	**49**	P	**P**		**03 32 36.1**	**+0.6**
WUAZ				IAmb	IAmb		03 32 37.9	
	comp=Z,11nm,1.0s							
G08A	**Pilot Rock**	**82.83**	**38**	IAmb	IAmb		03 32 37.0	
	comp=Z,13nm,1.1s							
WAX	**Waxell Ridge**	**83.10**	**17**	IAmb	IAmb		03 32 37.3	
	comp=Z,20nm,0.9s							
YAH	**Yahtse**	**83.34**	**18**	IAmb	IAmb		03 32 38.8	
	comp=Z,16nm,0.8s							
SEY	**Seymchan**	**83.54**	**347**	P	**P**		**03 32 38.2**	**0.0**
	comp=Z,11nm,0.6s,baz=144,slow=5.9,SNR=38							
HPIG		**83.56**	**59**	P	**P**		**03 32 39.7**	**+0.2**
BMO	**Blue Mountains**	**83.57**	**39**	P	**P**		**03 32 38.9**	**0.0**
RPSI	**Rantau Prapat**	**83.57**	**275**	P	**P**		**03 32 38.8**	**-0.8**
RPSI				IAmb	IAmb		03 32 40.2	
	comp=Z,16nm,0.8s							
VRDI	**Verde Repeater**	**83.58**	**16**	IAmb	IAmb		03 32 39.5	
	comp=Z,18nm,1.2s							
MFID	**Camas Ranch**	**83.71**	**41**	IAmb	IAmb		03 32 41.4	
	comp=Z,12nm,1.1s							
MCARA	**McCarthy VSAT**	**83.83**	**16**	IAmb	IAmb		03 32 40.7	
	comp=Z,12nm,1.0s							
KTH	**Kantishna Hill**	**83.86**	**12**	IAmb	IAmb		03 32 39.5	
	comp=Z,10nm,0.8s							
BARN	**Barnard Glacie**	**83.93**	**17**	IAmb	IAmb		03 32 41.5	
	comp=Z,12nm,0.8s							
MAW	**Mawson**	**83.94**	**200**	P	**P**		**03 32 40.6**	**+0.4**
	comp=Z,4.9nm,0.7s,baz=138,slow=6.1,SNR=7.6							
CTGM	**Chitina Glacie**	**83.95**	**17**	IAmb	IAmb		03 32 41.4	
	comp=Z,12nm,0.9s							
DUG	**Dugway, Tooele**	**84.04**	**45**	P	**P**		**03 32 41.9**	**+0.4**
	baz=241							
RND	**Reindeer**	**84.15**	**13**	P	**P**		**03 32 40.9**	**-0.5**
121A	**Cookes Peak, D**	**84.17**	**53**	P	**P**		**03 32 43.3**	**+1.0**
	baz=245							
DHY	**Denali Highway**	**84.19**	**14**	IAmb	IAmb		03 32 42.1	
	comp=Z,28nm,1.8s							
F10A	**Beach Ranch, E**	**84.22**	**38**	IAmb	IAmb		03 32 43.4	
	comp=Z,17nm,1.0s							
B08A	**Colville Reser**	**84.34**	**35**	IAmb	IAmb		03 32 43.4	
	comp=Z,8.7nm,0.8s							
MCK	**McKinley**	**84.42**	**13**	IAmb	IAmb		03 32 42.9	
	comp=Z,16nm,1.0s							
GSI	**Gunungsitoli**	**84.43**	**273**	P	**P**		**03 32 44.2**	**+0.5**
ZAIG	**Zacatecas**	**84.57**	**64**	P	**P**		**03 32 45.5**	**+0.9**
BWN	**Browne**	**84.70**	**12**	P	**P**		**03 32 43.3**	**-0.6**
RIDG	**Independent Ri**	**85.35**	**14**	IAmb	IAmb		03 32 47.7	
	comp=Z,8.5nm,0.9s							
HDA	**Harding Lake**	**85.44**	**13**	P	**P**		**03 32 46.6**	**-0.9**
	baz=210							
HDA	**Harding Lake**	**85.44**	**13**	IAmb	IAmb		03 32 47.8	
	comp=Z,8.1nm,0.9s							
DOT	**Dot Lake**	**85.46**	**15**	IAmb	IAmb		03 32 48.3	
	comp=Z,8.8nm,0.8s							
CCB	**Clear Creek Bu**	**85.47**	**13**	IAmb	IAmb		03 32 48.8	
	comp=Z,7.7nm,0.8s							
NEW	**Newport**	**85.52**	**36**	P	**P**		**03 32 47.7**	**-0.6**
	baz=237							
TCOL	**CIGO, UAF Yank**	**85.65**	**13**	P	**P**		**03 32 47.4**	**-1.0**
	baz=209							
COLA	**College**	**85.66**	**13**	P	**P**		**03 32 47.4**	**-1.1**
WHY	**Whitehorse**	**85.68**	**20**	IAmb	IAmb		03 32 49.7	
	comp=Z,7.6nm,0.9s							
MNTX	**Cornudas Mount**	**85.69**	**55**	P	**P**		**03 32 50.2**	**+0.7**
	baz=246							
ILAR	**Eielson Array**	**85.77**	**13**	P	**P**		**03 32 48.0**	**-1.0**
	comp=Z,2.9nm,0.5s,baz=226,slow=4.9,SNR=42							
XAN	**Xi'an**	**85.94**	**307**	P	**P**		**03 32 51.4**	**+0.7**
XAN				IAmb	IAmb		03 32 52.8	
	comp=Z,7.3nm,1.0s							
POKR	**Poker Flat Res**	**85.95**	**13**	P	**P**		**03 32 48.6**	**-1.3**
	baz=210							
TX32	**Lajitas Array**	**86.12**	**58**	P	**P**		**03 32 52.7**	**+1.0**
TX32				IAmb	IAmb		03 32 54.5	
	comp=Z,10nm,0.9s							
TXAR	**Lajitas Array**	**86.12**	**58**	P	**P**		**03 32 53.5**	**+1.8**
	comp=Z,6.2nm,0.8s,baz=218,slow=6.0,SNR=68							
ANMO	**Albuquerque**	**86.19**	**52**	P	**P**		**03 32 52.5**	**+0.5**
	baz=245							
ANMO	**Albuquerque**	**86.19**	**52**	P	**P**		**03 32 52.7**	**+0.7**
BILL	**Bilibino**	**86.23**	**354**	P	**P**		**03 32 51.2**	**+0.1**
BILL				IAmb	IAmb		03 32 52.1	
	comp=Z,6.1nm,0.8s							
MSO	**Missoula**	**86.61**	**38**	P	**P**		**03 32 53.3**	**-0.3**
	baz=240							
DLMT	**Dillon**	**86.69**	**40**	IAmb	IAmb		03 32 55.9	
	comp=Z,7.0nm,0.8s							
TPAW	**Teton Pass**	**86.83**	**42**	IAmb	IAmb		03 32 56.9	
	comp=Z,6.9nm,1.0s							
SNOW	**Snow King Moun**	**86.94**	**43**	IAmb	IAmb		03 32 57.5	
	comp=Z,15nm,1.1s							
HHC	**Hu-ho-hao-te**	**86.96**	**315**	*e*P	**P**		**03 32 53.1**	**-2.3**
HHC				pmax	pmax			
	comp=Z,11nm,1.0s							
HHC				pmax	pmax			
	comp=Z,32nm,3.9s							
IMW	**Indian Meadow**	**87.03**	**42**	IAmb	IAmb		03 32 57.9	
	comp=Z,11nm,0.8s							
S22A	**4UR Ranch, Cre**	**87.09**	**49**	P	**P**		**03 32 56.8**	**+0.5**
	baz=245							
EGAK	**Eagle**	**87.11**	**15**	P	**P**		**03 32 55.6**	**+0.2**
O20A	**White River Ci**	**87.12**	**46**	P	**P**		**03 32 56.6**	**+0.4**
	baz=244							
FLWY	**Flagg Ranch**	**87.27**	**42**	IAmb	IAmb		03 32 59.2	
	comp=Z,12nm,0.9s							
BW06	**Boulder Array**	**87.40**	**44**	P	**P**		**03 32 57.6**	**0.0**
	baz=243							
BW06	**Boulder Array**	**87.40**	**44**	P	**P**		**03 32 57.9**	**+0.3**
BW06				IAmb	IAmb		03 32 58.7	
	comp=Z,16nm,1.4s							
PD31	**Pinedale Array**	**87.40**	**44**	IAmb	IAmb		03 32 58.8	
	comp=Z,14nm,1.4s							
PDAR	**Pinedale Array**	**87.40**	**44**	P	**P**		**03 32 57.7**	**+0.1**
	comp=Z,2.9nm,0.5s,baz=221,slow=3.5,SNR=28							
PDAR				PP	**PP**		**03 36 29.0**	**-3.6**
	comp=Z,0.2nm,0.3s,baz=256,slow=6.0,SNR=5.1							
H17A	**Grant Village**	**87.49**	**42**	P	**P**		**03 32 59.9**	**+1.9**
	baz=242							
H17A	**Grant Village**	**87.49**	**42**	IAmb	IAmb		03 33 01.0	
	comp=Z,8.7nm,0.9s							
LKWY	**Lake**	**87.68**	**42**	IAmb	IAmb		03 33 02.1	
	comp=Z,6.4nm,0.8s							
WALA	**Waterton Lakes**	**87.75**	**37**	IAmb	IAmb		03 33 00.2	
	comp=Z,5.1nm,0.8s							
SDCO	**Great Sand Dun**	**88.05**	**49**	P	**P**		**03 33 01.1**	**+0.3**
	baz=246							
YNE	**Yellowstone No**	**88.13**	**41**	P	**P**		**03 33 02.1**	**+1.1**
CMAR	**Chiang Mai Arr**	**88.58**	**290**	P	**P**		**03 33 05.1**	**+1.8**
	comp=Z,16nm,0.5s,baz=113,slow=3.0,SNR=11							
T25A	**Trinidad**	**88.60**	**50**	P	**P**		**03 33 03.3**	**+0.1**
	baz=246							
MSTX	**Muleshoe**	**88.60**	**54**	P	**P**		**03 33 03.2**	**0.0**
	baz=248							
MSTX	**Muleshoe**	**88.60**	**54**	IAmb	IAmb		03 33 04.6	
	comp=Z,9.0nm,1.0s							
RLMT	**Red Lodge**	**88.65**	**42**	P	**P**		**03 33 04.1**	**+0.7**
	baz=243							
RLMT	**Red Lodge**	**88.65**	**42**	IAmb	IAmb		03 33 05.5	
	comp=Z,7.4nm,1.1s							
TOLK	**Toolik Lake Re**	**88.66**	**10**	P	**P**		**03 33 02.3**	**-0.3**
	baz=208							
CHTO	**Chiang Mai**	**88.69**	**290**	P	**P**		**03 33 04.2**	**+0.3**
CHTO				IAmb	IAmb		03 33 05.8	
	comp=Z,4.6nm,0.8s							
CD2	**Chengdu**	**88.75**	**303**	*e*P	**P**		**03 33 03.3**	**-0.6**
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
Q24A	**Divide**	**88.79**	**48**	P	**P**		**03 33 04.4**	**+0.1**
	baz=246							
ISCO	**Idaho Springs**	**88.81**	**47**	P	**P**		**03 33 05.2**	**+0.9**
	baz=246							
N23A	**Red Feather La**	**89.03**	**46**	P	**P**		**03 33 06.4**	**+1.1**
	baz=246							
SYO	**Syowa Base**	**89.27**	**193**	⇑*i*P	**P**		**03 33 02.4**	**-3.1**
K22A	**Casper**	**89.36**	**45**	P	**P**		**03 33 06.8**	**+0.2**
	baz=245							
EPYK	**Eagle Plains**	**89.50**	**16**	P	**P**		**03 33 06.3**	**-0.2**
	baz=247							
EPYK	**Eagle Plains**	**89.50**	**16**	IAmb	IAmb		03 33 07.3	
	comp=Z,5.2nm,0.8s							
JCT	**Junction City**	**89.66**	**58**	P	**P**		**03 33 08.5**	**+0.3**
	baz=249							
EGMT	**Eagleton**	**89.67**	**39**	P	**P**		**03 33 08.1**	**+0.3**
	baz=243							
AMTX	**Amarillo**	**89.78**	**53**	P	**P**		**03 33 08.9**	**+0.3**
	baz=248							
AMTX	**Amarillo**	**89.78**	**53**	P	**P**		**03 33 09.1**	**+0.4**
AMTX				IAmb	IAmb		03 33 09.9	
	comp=Z,7.0nm,1.1s							
ABTX	**Abilene, Hawle**	**90.54**	**56**	P	**P**		**03 33 12.8**	**+0.6**
	baz=249							
SNAA	**Sanae**	**90.78**	**179**	P	**P**		**03 33 12.1**	**-0.5**
VNA3	**Neumayer Olymp**	**90.94**	**176**	P	**P**		**03 33 13.0**	**-0.2**
LAO	**LASA Array**	**91.25**	**41**	P	**P**		**03 33 16.2**	**+1.1**
	baz=245							
VNA2	**Neumayer--Watz**	**91.37**	**177**	P	**P**		**03 33 15.3**	**0.0**
VNA1	**Neumayer--Stat**	**91.60**	**177**	P	**P**		**03 33 16.8**	**+0.5**
RSSD	**Black Hills**	**91.62**	**44**	P	**P**		**03 33 17.3**	**+0.2**
	baz=247							
RSSD	**Black Hills**	**91.62**	**44**	P	**P**		**03 33 17.3**	**+0.2**
RSSD				IAmb	IAmb		03 33 18.1	
	comp=Z,7.2nm,1.0s							
CBKS	**Cedar Bluff**	**92.65**	**50**	P	**P**		**03 33 22.1**	**+0.3**
	baz=249							
DGMT	**Dagmar**	**93.22**	**40**	P	**P**		**03 33 25.0**	**+0.9**
	baz=247							
YKA	**Yellowknife Ar**	**94.28**	**25**	P	**P**		**03 33 27.6**	**-0.9**
	comp=Z,2.1nm,0.8s,baz=238,slow=4.5,SNR=3.6							
YKA				PP	**PP**		**03 37 20.3**	**-4.9**
	comp=Z,0.8nm,1.1s,baz=238,slow=6.7,SNR=4.3							
TUL1	**Leonard**	**94.64**	**54**	P	**P**		**03 33 31.9**	**+1.1**
	baz=252							
BGNE	**Belgrade**	**94.67**	**48**	P	**P**		**03 33 30.9**	**0.0**
	baz=251							
C36M	**Paulatuk**	**95.00**	**17**	P	**P**		**03 33 31.1**	**-0.5**
	baz=231							
C36M	**Paulatuk**	**95.00**	**17**	IAmb	IAmb		03 33 32.7	
	comp=Z,4.2nm,1.1s							
KSU1	**Kansas State U**	**95.04**	**51**	P	**P**		**03 33 33.7**	**+1.1**
	baz=251							
ECSD	**EROS Data Cent**	**96.50**	**46**	P	**P**		**03 33 39.2**	**+0.2**
	baz=252							
ARCES	**ARCESS Array B**	**126.09**	**350**	PKP	**PKPdf**		**03 39 06.8**	**-0.9**
	comp=Z,3.0nm,0.9s,baz=48,slow=1.8,SNR=4.5							
FINES	**FINESS Array B**	**132.94**	**344**	SKPbc	**SKPbc**		**03 41 59.0**	**+1.4**
	comp=Z,2.9nm,0.8s,baz=122,slow=2.5,SNR=7.9							
BUR08	**Bucovina Ar. S**	**144.32**	**332**		**PKPdf**		**03 39 42.4**	**+0.3**
BURAR	**Bucovina Array**	**144.33**	**332**	⇑P	**PKPab**		**03 39 42.9**	**+0.6**
BIZ	**Bicaz**	**144.42**	**330**	⇑P	**PKPab**		**03 39 42.8**	**+0.3**
BRTR	**Keskin Array B**	**144.47**	**315**	PKP	PKPbc		03 39 43.0	+0.3
	comp=Z,1.1nm,0.6s,baz=109,slow=2.9,SNR=9.2							
RETH	**Rethem/Aller,**	**144.50**	**352**	*e*PKPbc	**PKPdf**		**03 39 42.1**	**+0.1**
	baz=13,slow=2.8							
NRDL	**Niedersach Rie**	**144.62**	**351**	*e*PKPbc	PKPbc		03 39 42.8	+0.4
	baz=13,slow=2.8							
TOPG	**Topolog**	**144.71**	**326**	⇑P	**PKPdf**		**03 39 39.8**	**-2.9**
PLOR	**Plostina**	**144.94**	**329**	⇑P	**PKPab**		**03 39 45.0**	**+0.4**
TRPA	**Tarpa**	**145.07**	**335**	⇑P	**PKPbc**		**03 39 44.0**	**0.0**
OSTC	**Ostas**	**145.14**	**343**	*e*PKP	**PKPbc**		**03 39 44.8**	**+0.6**
CHVC	**Chvalec**	**145.16**	**344**	*e*PKP	**PKPbc**		**03 39 44.7**	**+0.5**
CLL	**Collm**	**145.23**	**347**	⇑*i*PKPbc	**PKPab**		**03 39 45.3**	**-0.2**
	comp=Z,12nm,0.6s							
CLL	**Collm**	**145.23**	**347**	*e*PKPbc	**PKPab**		**03 39 45.5**	**0.0**
	baz=13,slow=2.8							
CLL	**Collm**	**145.23**	**347**	PKPbc	**PKPbc**		**03 39 45.0**	**+0.6**
DPC	**Dobruska-Polom**	**145.30**	**343**	*e*PKP	**PKPbc**		**03 39 45.2**	**+0.5**
LANS	**Liptovska Anna**	**145.38**	**339**	*e*PKP	**PKPab**		**03 39 46.4**	**+0.2**
KRLC	**Kraliky**	**145.42**	**342**	*e*PKP	**PKPbc**		**03 39 44.7**	**-0.3**
BRG	**Berggiesshubel**	**145.43**	**346**	*e*PKP	**PKPbc**		**03 39 45.2**	**+0.2**
	comp=Z,5.7nm,0.8s							
BRG	**Berggiesshubel**	**145.43**	**346**	*e*PKPbc	**PKPbc**		**03 39 45.2**	**+0.2**
	baz=13,slow=2.8							
DOPR	**Dopca**	**145.47**	**330**	⇑P	**PKPbc**		**03 39 46.1**	**+0.8**
FBE	**Freiberg**	**145.52**	**347**	*e*PKPbc	**PKPbc**		**03 39 45.9**	**+0.7**
	baz=13,slow=2.8							
MLR	**Muntele Rosu**	**145.54**	**329**	⇑P	**PKPbc**		**03 39 46.0**	**+0.3**
NEUB	**Neuenburg**	**145.57**	**348**	*e*PKPbc	**PKPbc**		**03 39 45.5**	**+0.1**
	baz=13,slow=2.8							
DRGR		**146.06**	**333**	⇓P	**PKPbc**		**03 39 46.9**	**-0.2**
PRU	**Pruhonice**	**146.10**	**345**	*e*PKP	**PKPbc**		**03 39 46.4**	**-0.5**
PRU				*ex*	x		03 39 49.4	
GOPC	**GO Pecny, Ondr**	**146.11**	**344**	*e*PKP	**PKPbc**		**03 39 47.2**	**+0.2**
VYHS	**Vyhne**	**146.16**	**339**	*e*PKP	**PKPbc**		**03 39 48.1**	**+0.9**
PLN	**Plauen**	**146.18**	**348**	*e*PKPbc	**PKPbc**		**03 39 47.6**	**+0.5**
	baz=13,slow=2.8							
MULD	**Muldenberg**	**146.20**	**347**	*e*PKPbc	**PKPbc**		**03 39 47.6**	**+0.3**
	baz=13,slow=2.8							
MULD				*e*PKPab	**PKPab**		**03 39 49.6**	**+0.1**
	baz=15,slow=4.0							
GUNZ	**Gunzen**	**146.26**	**347**	*e*PKPab	**PKiKP**		**03 39 49.9**	**+0.2**
	baz=15,slow=4.0							
ARR	**Arges**	**146.27**	**330**	⇑P	**PKPab**		**03 39 49.3**	**-0.6**
TRIB	**Obertriebel**	**146.31**	**347**	*e*PKPab	**PKPab**		**03 39 49.9**	**+0.1**
	baz=15,slow=4.0							
ROHR	**Rohrbach**	**146.39**	**347**	*e*PKPbc	**PKPbc**		**03 39 48.2**	**+0.4**
	baz=13,slow=2.8							
ROHR				*e*PKPab	**PKPab**		**03 39 50.6**	**+0.5**
	baz=15,slow=4.0							
SGRR	**Singureni**	**146.42**	**327**	⇑P	**PKPbc**		**03 39 47.6**	**-0.3**
MANZ	**Manzenberg**	**146.67**	**347**	*e*PKPbc	**PKPbc**		**03 39 48.6**	**+0.1**
	baz=13,slow=2.8							
ROTZ	**Rotzenmuhle**	**146.85**	**347**	*e*PKPbc	**PKPbc**		**03 39 49.3**	**+0.3**
	baz=13,slow=2.8							
ROTZ				*e*PKPab	**PKPab**		**03 39 52.4**	**+0.4**
	baz=15,slow=4.0							
LEF	**Lefka**	**147.03**	**308**	⇑P	**PKPbc**		**03 39 49.6**	**-0.3**
BSTI	**Sart Tilman**	**147.04**	**355**	PKiKP	**PKPbc**		**03 39 49.8**	**+0.4**
TNS	**Taunus Mts**	**147.08**	**352**	*e*PKPab	**PKPab**		**03 39 53.0**	**+0.1**
	baz=15,slow=4.0							
GRF	**Grafenberg Arr**	**147.13**	**348**	*e*PKPab	**PKPab**		**03 39 53.6**	**+0.5**
	baz=15,slow=4.0							
KHC	**Kasperske Hory**	**147.13**	**345**	*e*PKP	**PKPbc**		**03 39 50.0**	**+0.2**
KHC				*ex*	x		03 39 54.1	
KHC	**Kasperske Hory**	**147.13**	**345**		**PKPbc**		**03 39 49.6**	**-0.2**
WET	**Wettzell**	**147.29**	**346**	*e*PKPab	**PKPab**		**03 39 54.3**	**+0.5**
	baz=15,slow=4.0							
GERES	**GERESS Array B**	**147.37**	**345**	PKPbc	**PKPbc**		**03 39 50.6**	**+0.1**
	comp=Z,3.4nm,0.5s,baz=26,slow=3.1,SNR=34							
DOU	**Dourbes**	**147.60**	**356**	PKiKP	**PKPbc**		**03 39 51.0**	**+0.1**
CONA	**Conrad Observa**	**147.61**	**342**	*i* PKPbc	**PKPbc**		**03 39 51.4**	**+0.3**
	comp=Z,4.2nm,0.6s,SNR=6.7							
HERR	**Herculane**	**147.67**	**331**	⇑P	**PKPbc**		**03 39 50.8**	**-0.5**
WLF	**Walferdange**	**147.90**	**354**	PKiKP	**PKPbc**		**03 39 52.5**	**+0.8**
WLF	**Walferdange**	**147.90**	**354**	*e*PKPbc	**PKPbc**		**03 39 52.2**	**+0.5**
	baz=13,slow=2.8							
WLF				*e*PKPab	**PKPab**		**03 39 56.3**	**0.0**
	baz=15,slow=4.0							
WLF	**Walferdange**	**147.90**	**354**				**03 39 50.9**	**-0.8**
BFO	**Black Forest**	**148.94**	**351**	*e*PKPbc	**PKPbc**		**03 39 54.3**	**-0.1**
	baz=13,slow=2.8							
BFO				*e*PKPab	**PKPab**		**03 40 00.3**	**-0.3**
	baz=15,slow=4.0							
SOKA	**Soboth**	**148.98**	**342**	*i* PKPbc	**PKPbc**		**03 39 54.2**	**-0.4**
	comp=Z,1.5nm,0.5s							
KBA	**Koelnbreinsper**	**149.09**	**344**	*i* PKPbc	**PKPbc**		**03 39 54.5**	**-0.4**
	comp=Z,3.4nm,0.4s							
WATA	**Walderalm**	**149.29**	**346**	*i* PKPbc	**PKPbc**		**03 39 55.1**	**-0.3**
	comp=Z,5.1nm,0.5s							
RETA	**Reutte**	**149.32**	**347**	*i* PKPbc	**PKPbc**		**03 39 55.4**	**0.0**
	comp=Z,2.6nm,0.4s							
WTTA	**Wattenberg**	**149.34**	**346**	*i* PKiKP	**PKPbc**		**03 39 55.7**	**+0.1**
	comp=Z,7.8nm,0.5s							
DIVS	**Divibare**	**149.36**	**333**		**PKPbc**		**03 39 54.9**	**-0.7**
MYKA	**Terra Mystica**	**149.43**	**343**	*i* PKPbc	**PKPbc**		**03 39 55.0**	**-0.6**
	comp=Z,3.4nm,0.4s							
SQTA	**Sankt Quirin**	**149.48**	**347**	*i* PKiKP	**PKPbc**		**03 39 55.9**	**+0.1**
	comp=Z,4.7nm,0.5s							
ABTA	**Abfaltersbach**	**149.62**	**345**	*i* PKPbc	**PKPbc**		**03 39 55.5**	**-0.6**
	comp=Z,5.5nm,0.6s							
FETA	**Feichten**	**149.77**	**347**	*i* PKiKP	**PKPbc**		**03 39 56.6**	**+0.1**
	comp=Z,6.6nm,1.1s,SNR=4.4							
FUORN	**Ofenpass-Fuorn**	**150.25**	**348**		**PKPbc**		**03 39 58.0**	**+0.2**
PDG	**Podgorica**	**151.02**	**332**	⇑P	**PKPbc**		**03 39 58.9**	**-0.5**
FNA	**Florina**	**151.25**	**327**		**PKPbc**		**03 39 59.5**	**-0.5**
ESDC	**Sonseca Array**	**157.66**	**11**	PKPab	**PKPab**		**03 40 37.9**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=334,slow=4.2,SNR=6.2							
TORD	**Torodi Ar. Bea**	**175.43**	**185**	PKPab	**PKPab**		**03 41 56.0**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=166,slow=3.4,SNR=6.4							

CRAAG ***23*** *03:22:19.4,36.˚54N×3.˚17E,Ml2.8*
MDD ***23*** *03:22:23.3±1.1,36.˚69N×3.˚23E,h10km,mb3.6/5,Error ellipse: s-maj=17.8km s-min=5.3km az=9.0,PRXIMO*

ISC 23 03:22:20.1±1.0,36.˚51N±0.˚04×3.˚25E±0.˚04,h18km,n20,
σ2.˚92/27,Northern Algeria

Code	Station Name	Δ˚	AZ˚	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABMS	**Boumerdes**	**0.30**	**38**	P	**Pb**	**03 22 27.4**	**+0.4**
ABMS	**Boumerdes**	**0.30

MAT				*e*S		**Sn**	**03 50 16.5 +0.8**
MJB9	**Matsu-Tunnel**	**4.75**	**258**			**Pn**	**03 49 22.0 +0.1**
JKB	**Kayabe**	**4.76**	**333**	P		**Pn**	**03 49 21.8 -0.2**
JCH	**Churui**	**4.94**	**355**	P		**Pn**	**03 49 23.0 -1.5**
JHJ	**Hachijo jima 2**	**5.70**	**218**	Pn		**Pn**	**03 49 32.5 -2.4**
	11nm,0.3s,baz=268,slow=21,SNR=1.4						
JHJ				Sn		**Sn**	**03 50 33.2 -5.9**
	8.6nm,0.3s,baz=83,slow=14,SNR=2.0						
JTKR	**Abashiri--Toko**	**6.28**	**360**	P		**Pn**	**03 49 41.1 -1.7**
JTKR				*e*S		**Sn**	**03 50 46.6 -6.6**
JKA	**Kamikawa-asahi**	**6.50**	**351**			**Pn**	**03 49 46.0 +0.1**
ASAJ	**Asahikawa**	**6.50**	**351**	Pn		**Pn**	**03 49 46.0 +0.1**
	2.7nm,0.3s,baz=200,slow=13,SNR=9.9						
USRK	**Ussuriysk Ar.**	**11.15**	**309**	Pn		**Pn**	**03 50 51.2 +1.7**
	baz=116,slow=13,SNR=2.6						
KSRS	**Korea Array**	**12.74**	**274**	Pn		**Pn**	**03 51 14.4 +3.1**
	0.2nm,0.3s,baz=95,slow=14,SNR=4.4						
KSRS				LR		LR	03 55 33.9
	comp=Z,26nm,18.4s,baz=68,slow=34						
ZAA0	**Zalesovo Array**	**42.99**	**312**	P		**P**	**03 56 10.6 +2.2**
ZAA0				IAmb		IAmb	03 56 52.7
	comp=Z,6.4nm,1.5s						
ZALV	**Zalesovo Beam**	**42.99**	**312**	P		**P**	**03 56 10.7 +2.3**
	comp=Z,0.4nm,0.2s,baz=100,slow=6.3,SNR=1.2						
NRIK	**Noril'sk**	**43.54**	**335**	LR		LR	04 14 56.7
	comp=Z,25nm,18.4s,baz=179,slow=37						
SVW2	**Sparrevohn**	**43.76**	**38**	P		**P**	**03 56 12.7 -1.8**
KDAK	**Kodiak Island**	**45.25**	**42**	P		**P**	**03 56 26.2 -0.2**
	comp=Z,3.2nm,0.8s,baz=301,slow=7.6,SNR=4.5						
MK31	**Makanchi Array**	**45.50**	**302**	P		**P**	**03 56 29.8 +1.2**
MKAR	**Makanchi Array**	**45.50**	**302**	P		**P**	**03 56 29.9 +1.2**
	comp=Z,0.6nm,0.8s,baz=72,slow=12,SNR=4.4						
KURK	**Kurchatov**	**47.13**	**308**	P		**P**	**03 56 45.3 +4.0**
KURK				IAmb		IAmb	03 56 57.3
	comp=Z,3.0nm,0.8s						
IL31		**47.85**	**33**	P		**P**	**03 56 47.5 +0.9**
ILAR	**Eielson Array**	**47.85**	**33**	P		**P**	**03 56 47.6 +0.9**
	comp=Z,0.8nm,0.7s,baz=267,slow=6.6,SNR=12						
WRA	**Warramunga Arr**	**58.04**	**191**	P		**P**	**03 58 01.2 -1.0**
	comp=Z,2.5nm,0.5s,baz=10,slow=7.4,SNR=11						
ASAR	**Alice Springs**	**61.76**	**190**	P		**P**	**03 58 27.4 -0.4**
	comp=Z,0.7nm,0.5s,baz=10,slow=6.4,SNR=11						
YKA	**Yellowknife Ar**	**62.21**	**31**	P		**P**	**03 58 30.0 -0.3**
	comp=Z,0.1nm,0.6s,baz=298,slow=6.0,SNR=3.1						
FINES	**FINESS Array B**	**69.17**	**333**	P		**P**	**03 59 15.3 +0.1**
	comp=Z,1.2nm,0.9s,baz=17,slow=10,SNR=2.2						

NIED ***23*** *03:55:00.37˚.70N×143˚.90E,h5km,Mw3.6 Best double couple: M₀2.91000×10¹⁴ NP1:φ=233.00000°,δ=84.00000°, λ=-79.00000°. NP2:φ=353.00000°,δ=13.00000°, λ=-150.00000°.*

IDC ***23*** *03:55:23.3±1.3,37˚.72N×144˚.48E,h0km,mb3.4/4, mb1 3.7/6,mb1mx3.5/32,mbtmp3.5/6,ML3.3/2,Error ellipse: s-maj=37.8km s-min=24.7km az=95.0*

JMA ***23*** *03:55:29.4±0.2,37˚.68N×143˚.89E,h50km,M3.5*

ISC 23 03:55:28.4±1.1,37˚68N±0˚06×144˚10E±0˚07,h35km,n19, σ1940/30,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakibobu**	**2.17**	**288**	P	**Pn**	**03 56 02.0**	**0.0**
JIKH				S	**Sn**	**03 56 25.8**	**-1.9**
JIO	**Ouri**	**2.30**	**290**	P	**Pn**	**03 56 04.0**	**+0.2**
JIO				S	**Sn**	**03 56 29.7**	**-1.2**
JKMT	**Kesennumamotoy**	**2.35**	**299**	P	**Pn**	**03 56 04.7**	**+0.2**
JKMT				S	**Sn**	**03 56 31.4**	**-0.8**
OFUJ	**Ofunato**	**2.36**	**307**	P	**Pn**	**03 56 04.9**	**+0.2**
OFUJ				*e*S	**Sn**	**03 56 31.2**	**-1.3**
JMK	**Ichinoseki**	**2.59**	**300**	P	**Pn**	**03 56 08.3**	**+0.5**
JOM	**Ohasama**	**2.83**	**310**	P	**Pn**	**03 56 12.0**	**+0.9**
JOM				S	**Sn**	**03 56 43.7**	**-0.4**
JFT	**Otama**	**2.99**	**268**	P	**Pn**	**03 56 14.2**	**+0.9**
JFT				S	**Sn**	**03 56 46.7**	**-1.2**
JYK	**Kaneyama**	**3.19**	**294**	P	**Pn**	**03 56 17.2**	**+1.2**
JYK				*e*S	**Sn**	**03 56 52.8**	**0.0**
JANG	**Nango**	**3.36**	**324**	P	**Pn**	**03 56 19.9**	**+1.6**
JOT	**Ohata**	**4.38**	**328**	P	**Pn**	**03 56 34.5**	**+2.1**
JRY	**Ryogami san**	**4.48**	**250**	P	**Pn**	**03 56 33.8**	**-0.1**
JRY				S	**Sn**	**03 57 21.4**	**-3.4**
MJAR	**Matsushiro Arr**	**4.84**	**258**	Pn	**Pn**	**03 56 40.5**	**+1.7**
	0.2nm,0.3s,baz=87,slow=17,SNR=8.9						
MJAR				Sn	**Sn**	**03 57 33.1**	**-0.5**
	0.1nm,0.3s,baz=125,slow=17,SNR=4.8						
JCH	**Churui**	**4.96**	**354**	P	**Pn**	**03 56 41.2**	**+0.9**
JCH				*e*S	**Sn**	**03 57 34.4**	**-2.0**
JTKR	**Abashiri--Toko**	**6.29**	**359**	P	**Pn**	**03 56 59.4**	**+0.9**
JTKR				*e*S	**Sn**	**03 58 07.2**	**-1.9**
ASAJ	**Asahikawa**	**6.53**	**350**	Pn	**Pn**	**03 57 02.6**	**+0.7**
	1.4nm,0.3s,baz=206,slow=12,SNR=5.2						
MKAR	**Makanchi Array**	**45.59**	**302**	P	**P**	**04 03 46.4**	**+1.5**
	0.1nm,0.5s,baz=75,slow=6.3,SNR=2.1						
ILAR	**Eielson Array**	**47.80**	**33**	P	**P**	**04 03 59.7**	**-2.3**
	0.1nm,0.4s,baz=251,slow=5.6,SNR=1.6						
WRA	**Warramunga Arr**	**58.05**	**191**	P	**P**	**04 05 18.9**	**+0.9**
	1.0nm,0.5s,baz=8.9,slow=6.9,SNR=12						
ASAR	**Alice Springs**	**61.77**	**191**	P	**P**	**04 05 44.7**	**+1.2**
	0.4nm,0.6s,baz=8.6,slow=6.8,SNR=2.8						

NNC 23 04:31:49.1±3.1,37˚76N×70˚69E,h41km±113km,mb4.2, mpv3.4,3C-3D,Error ellipse: s-maj=55.1km s-min=22.2km az=98.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.34**	**359**	⇓P	Pn	04 33 06.2	0.0
	2.2nm,0.4s,baz=169,slow=13,SNR=13						
KK31				⇑S	Sn	04 34 07.1	+0.6
	7.8nm,0.4s,baz=174,slow=21,SNR=15						
AB31	**Akbulak array**	**13.87**	**329**	⇓P	Pn	04 35 02.5	-0.5
	3.8nm,0.3s,baz=133,slow=14,SNR=5.4						
AB31				⇓S	Sn	04 37 37.1	+1.7
	5.9nm,0.5s,baz=155,slow=22,SNR=4.7						
AKTO	**Aktyubinsk**	**15.57**	**328**	⇑P	Pn	04 35 25.8	+0.2
	1.5nm,0.5s						
AKTO				⇑S	Sn	04 38 16.0	-0.9
	1.6nm,0.9s						

ISC 23 04:36:49.6±1.3,49˚84N±0˚06×18˚44E±0˚05,h0km,n12, σ0968/20,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.19**	**270**	*e*PG	**Pg**	**04 36 54.1**	**+0.9**
OKC				*e*SG	**Sg**	**04 36 57.5**	**+1.8**
MORC	**Moravsky Berou**	**0.59**	**264**	*e*PG	**Pg**	**04 37 01.4**	**+0.6**
MORC				*e*SG	**Sg**	**04 37 09.1**	**+0.7**
LANS	**Liptovska Anna**	**0.96**	**136**	*e*PG	**Pg**	**04 37 08.2**	**+0.3**
LANS				*e*SG	**Sb**	**04 37 23.1**	**+0.8**
LANS				*e*LG	Lg	04 37 27.1	
KRLC	**Kraliky**	**1.10**	**283**	*e*PG	**Pg**	**04 37 10.1**	**-0.5**
KRLC				*e*SG	**Sb**	**04 37 26.4**	**0.0**
	comp=Z,10.0nm,0.6s						
VRAC	**Vranov**	**1.32**	**247**	*e*PG	**Pg**	**04 37 14.4**	**-0.4**
VRAC				*e*SG	**Sg**	**04 37 31.9**	**+0.1**
VYHS	**Vyhne**	**1.37**	**169**	*e*PG	**Pg**	**04 37 15.2**	**-0.6**
VYHS				*e*SG	**Sb**	**04 37 34.5**	**+0.4**
DPC	**Dobruska-Polom**	**1.46**	**291**	*e*PG	**Pn**	**04 37 16.6**	**-0.6**
DPC				*e*SG	**Sb**	**04 37 36.6**	**-0.1**
	comp=Z,2.5nm,0.2s						
KRUC	**Moravsky**	**1.55**	**241**	*e*PG	**Pn**	**04 37 18.2**	**-0.2**
KRUC				*e*SG	**Sn**	**04 37 38.7**	**-0.4**
OSTC	**Ostas**	**1.60**	**297**	*e*SG	**Sg**	**04 37 41.5**	**+0.5**
UPC	**Upice**	**1.70**	**294**	*e*SG	**Sg**	**04 37 44.3**	**+0.1**
CHVC	**Chvalec**	**1.71**	**297**	*e*SG	**Sg**	**04 37 44.3**	**-0.1**
KHC	**Kasperske Hory**	**3.25**	**259**	*e*SG	**Sg**	**04 38 33.2**	**-0.8**

IDC ***23*** *04:44:14.2±0.8,7˚78S×122˚99E,h267km±9km,mb3.7/7, mb1 3.9/12,mb1mx3.6/43,mbtmp4.4/12,Error ellipse: s-maj=30.9km s-min=11.5km az=67.0*

DJA ***23*** *04:44:15.5±0.2,8˚S±3˚×12˚3E±˚,h268km±3km,M4.2/13, mb4.4/12,mB4.8/5,MLv4.2/13,Mw(mB)4.1/5*

NEIC ***23*** *04:44:15.4±1.7,7˚82S±0˚10×123˚12E±0˚09,h280km±4km, mb4.2/13,Error ellipse: s-maj=17.3km s-min=9.1km az=221.0*

ISC 23 04:44:16.3±0.5,7˚92S±0˚06×123˚01E±0˚08,h300km,n55, σ2916/61,mb4.0/9,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**1.04**	**227**	P	**Pn**	**04 44 53.9**	**-3.0**
MMRI				S	**Sn**	**04 45 22.9**	**-6.3**
MMRI	**Maumere**	**1.04**	**227**		**Pn**	**04 44 54.2**	**-2.7**
SOEI	**Soe**	**2.21**	**146**	P	**Pn**	**04 45 02.2**	**-2.7**
SOEI				S	**S**	**04 45 38.7**	**-5.0**
SOEI	**Soe**	**2.21**	**146**		**Pn**	**04 45 01.7**	**-3.2**
BATI	**Baumata**	**2.36**	**164**	P	**Pn**	**04 45 04.3**	**-1.9**
	204nm,0.3s,baz=316,slow=0.9,SNR=76						
BATI				S	**S**	**04 45 40.8**	**-5.1**
	286nm,0.3s,baz=122,slow=22,SNR=8.8						
BATI	**Baumata**	**2.36**	**164**	P	**Pn**	**04 45 04.2**	**-1.9**
BATI				S	**S**	**04 45 41.2**	**-4.7**
BBSI	**Bau Bau**	**2.46**	**350**	P	**Pn**	**04 45 03.6**	**-3.4**
BASI	**Baing, Sumba**	**3.31**	**226**	P	**Pn**	**04 45 13.5**	**-1.7**
BKSI	**Bulukumba**	**3.86**	**312**	P	**Pn**	**04 45 18.2**	**-2.9**
WBSI	**Waikabubak, Su**	**3.96**	**244**	P	**Pn**	**04 45 20.3**	**-1.9**
KAPI	**Kappang**	**4.34**	**312**	P	**Pn**	**04 45 23.4**	**-3.0**
	6.4nm,0.3s,baz=143,slow=6.6,SNR=41						
KAPI	**Kappang**	**4.34**	**312**		**Pn**	**04 45 24.3**	**-2.1**
BNSI	**Bone**	**4.54**	**320**	P	**Pn**	**04 45 26.9**	**-1.7**
SPSI	**Sidrap Palu**	**5.08**	**320**	P	**Pn**	**04 45 32.7**	**-2.2**
	0.1nm25nm,0.8s						
PLAI	**Plampang**	**5.25**	**260**	P	**Pn**	**04 45 35.1**	**-1.8**
	1.0nm2µm28nm,0.5s						
TTSI	**Tana Toraja**	**5.79**	**327**	P	**Pn**	**04 45 42.2**	**-1.0**
MPSI	**Mapaga**	**8.77**	**339**	P	**Pn**	**04 46 18.9**	**-0.6**
	11nm,0.9s						
JAGI	**Jajag, Banyuwa**	**8.78**	**266**	P	**Pn**	**04 46 16.8**	**-2.8**
MTN	**Manton Dam**	**9.37**	**122**		**Pn**	**04 46 25.9**	**-0.9**
KNRA	**Kununurra**	**9.54**	**144**		**Pn**	**04 46 28.2**	**-0.7**
FITZ	**Fitzroy Crossi**	**10.43**	**166**	P	**Pn**	**04 46 39.8**	**0.0**
	0.6nm,0.3s,baz=357,slow=8.2,SNR=17						
FITZ				S	**S**	**04 48 35.8**	**-1.3**
	2.2nm,0.3s,baz=130,slow=5.6,SNR=9.7						
FITZ	**Fitzroy Crossi**	**10.43**	**166**		**Pn**	**04 46 39.5**	**-0.3**
UGM	**Wanagama**	**12.37**	**269**	P	**Pn**	**04 47 03.0**	**-0.5**
	69nm,2.1s						
PSA00	**Pilbara Seismi**	**13.91**	**192**		**Pn**	**04 47 23.3**	**+1.4**
SBUM	**Sibu**	**14.90**	**313**	P	**Pn**	**04 47 34.7**	**+1.0**
WB0	**Warramunga Arr**	**16.14**	**138**	P	**Pn**	**04 47 46.9**	**-1.2**
WB0				IAmb	IAmb	04 47 48.7	
	comp=Z,14nm,0.9s						
WRA	**Warramunga Arr**	**16.23**	**139**	P	**Pn**	**04 47 48.0**	**-1.2**
	comp=Z,6.2nm,0.3s,baz=318,slow=12,SNR=61						
WRA				S	**S**	**04 50 43.1**	**+1.3**
	baz=316,slow=20,SNR=6.4						
WRAB	**Tennant Creek**	**16.23**	**139**	P	**Pn**	**04 47 48.1**	**-1.1**
WB2	**Warramunga Arr**	**16.23**	**139**	P	**Pn**	**04 47 48.1**	**-1.2**
WR0	**Warramunga Arr**	**16.37**	**138**	P	**Pn**	**04 47 49.7**	**-1.2**
AS31	**Alice Springs**	**18.82**	**148**	P	**P**	**04 48 16.6**	**+1.7**
AS31				IAmb	IAmb	04 48 22.4	
	comp=Z,12nm,0.5s						
ASAR	**Alice Springs**	**18.82**	**148**	P	**P**	**04 48 16.9**	**+2.0**
	comp=Z,5.3nm,0.3s,baz=335,slow=14,SNR=376						
ASAR				S	**S**	**04 51 36.0**	**+3.1**
	baz=328,slow=22,SNR=6.0						
FORT	**Forrest**	**23.23**	**169**	P	**P**	**04 48 59.2**	**+1.7**
NWAO	**Narrogin (SRO)**	**25.45**	**191**	P	**P**	**04 49 19.2**	**+1.7**
	comp=Z,6.8nm,0.8s,baz=42,slow=8.9,SNR=6.5						
BBOO	**Buckleboo**	**27.57**	**156**	P	**P**	**04 49 38.1**	**+1.7**
STKA	**Stephens Creek**	**29.45**	**147**	P	**P**	**04 49 55.4**	**+2.4**
	comp=Z,6.5nm,0.4s,baz=318,slow=10.0,SNR=23						
STKA	**Stephens Creek**	**29.45**	**147**	P	**P**	**04 49 54.6**	**+1.6**
RAMN	**Ramite**	**49.47**	**316**	*e*P	**P**	**04 52 38.0**	**+0.7**
	comp=Z,15nm,0.5s						
HHC	**Hu-ho-hao-te**	**49.66**	**349**	*e*P	**P**	**04 52 39.0**	**+0.6**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,20nm,3.6s						
JIRN	**Jiri**	**50.20**	**316**	*e*P	**P**	**04 52 43.9**	**+1.0**
	comp=Z,7.1nm,0.3s						
GUN	**Gumba**	**50.57**	**316**	*e*P	**P**	**04 52 45.6**	**-0.1**
	comp=Z,10nm,0.5s						
PKI	**Pulchoki**	**50.68**	**316**	*e*P	**P**	**04 52 46.4**	**-0.1**
	comp=Z,7.8nm,0.5s						
PKIN	**Phulchoki**	**50.69**	**316**	*e*P	**P**	**04 52 47.4**	**+0.9**
	comp=Z,8.9nm,0.4s						
KOLN	**Koldanda**	**52.07**	**315**	*e*P	**P**	**04 52 56.7**	**+0.1**
DANN	**Dangsing**	**52.31**	**315**	*e*P	**P**	**04 52 58.5**	**+0.1**
	comp=Z,13nm,0.5s						
USRK	**Ussuriysk Ar.**	**52.51**	**8**	P	**P**	**04 52 58.8**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=194,slow=6.9,SNR=6.6						
SONM	**Songino Array**	**57.43**	**347**	P	**P**	**04 53 33.7**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=179,slow=5.8,SNR=2.3						
WMQ	**Urumqi**	**60.62**	**331**	*e*P	P	04 53 59.8	+3.7
MK31	**Makanchi Array**	**65.39**	**330**	P	**P**	**04 54 27.4**	**+0.1**
MKAR	**Makanchi Array**	**65.39**	**330**	P	**P**	**04 54 27.6**	**+0.4**
	comp=Z,1.5nm,0.5s,baz=132,slow=7.6,SNR=16						
KBL	**Kabul**	**66.19**	**313**	P	**P**	**04 54 33.8**	**+1.1**
AAK	**Ala-Archa**	**66.93**	**323**	P	**P**	**04 54 38.9**	**+1.7**
AAK				IAmb	IAmb	04 54 41.0	
	comp=Z,1.8nm,0.8s						
PETK	**Petropavlovsk-**	**67.55**	**22**	P	**P**	**04 54 41.2**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=189,slow=7.3,SNR=2.3						
ZALV	**Zalesovo Beam**	**69.53**	**337**	P	**P**	**04 54 52.7**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=130,slow=5.0,SNR=5.7						
TORD	**Torodi Ar. Bea**	**122.17**	**281**	PKP	**PKiKP**	**05 02 37.1**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=40,slow=2.7,SNR=4.6						

IDC ***23*** *05:02:24.7±8.2,36˚05N×70˚10E,h86km±72km,mb3.3/2, mb1 3.2/6,mb1mx3.0/61,mbtmp3.5/6,ML3.3/4,Error ellipse: s-maj=85.9km s-min=42.0km az=147.0*

NNC ***23*** *05:02:25.7±18.0,36˚16N×69.08E,h24km±574km,mb4.1, mpv3.8,Error ellipse: s-maj=538.7km s-min=56.4km az=167.0*

ISC 23 05:02:27.0±1.7,36˚2N±0˚1×69˚9E±0˚1,h100km,n9, σ2569/13,5C-1D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.90**	**4**	⇑P	**Pn**	**05 04 05.7**	**+0.3**
	2.1nm,0.3s,baz=184,slow=14,SNR=37						
KK31				⇑S	**Sn**	**05 05 27.5**	**+5.1**
	2.7nm,0.4s,baz=191,slow=29,SNR=9.0						
AAK	**Ala-Archa**	**7.33**	**28**	P	**Pn**	**05 04 10.6**	**-0.9**
	1.0nm,0.3s,baz=187,slow=8.9,SNR=9.4						
AAK				S	**Sn**	**05 05 32.6**	**-0.7**
	0.5nm,0.3s,baz=59,slow=22,SNR=3.7						
MKAR	**Makanchi Array**	**14.05**	**37**	P	**Pn**	**05 05 40.4**	**-1.1**
	0.0nm,0.3s,baz=224,slow=14,SNR=2.0						
AB31	**Akbulak array**	**14.93**	**334**	⇑P	**Pn**	**05 05 53.7**	**+1.1**
	2.7nm,0.3s,baz=150,slow=12,SNR=68						
AB31				⇑S	**Sn**	**05 08 35.4**	**-1.7**
	1.8nm,0.3s,baz=163,slow=23,SNR=7.7						
KURBB	**Kurchatov Arra**	**15.69**	**21**	P	**Pn**	**05 06 00.6**	**-1.7**
	0.0nm,0.3s,baz=212,slow=10.0,SNR=4.1						
AKTO	**Aktyubinsk**	**16.61**	**333**	P	**P**	**05 06 15.4**	**+1.1**
	0.4nm,0.3s,baz=140,slow=7.9,SNR=6.4						
AKTO	**Aktyubinsk**	**16.61**	**333**	⇓P	**Pn**	**05 06 14.7**	**+1.2**
	2.6nm,0.7s						
AKTO				⇑S	**Sn**	**05 09 11.8**	**-5.8**
	1.7nm,0.8s						
ZALV	**Zalesovo Beam**	**20.55**	**26**	P	**P**	**05 06 57.5**	**+0.2**
	3.0nm,0.5s,baz=219,slow=12,SNR=12						
TORD	**Torodi Ar. Bea**	**64.82**	**268**	P	**P**	**05 12 55.5**	**0.0**
	0.2nm,0.6s,baz=50,slow=6.4,SNR=2.5						

IDC ***23*** *05:02:37.0±0.7,4˚26N×125˚33E,h0km,mb4.1/12, mb1 4.3/13,mb1mx4.0/48,mbtmp4.1/13,ML4.6/1,MS3.1/10, Ms1 3.1/10,ms1mx2.8/45,Error ellipse: s-maj=31.8km s-min=14.0km az=77.0*

MAN ***23*** *05:02:37.8,4˚.04N×125˚.56E,h96km,mb5.2,ML4.2,MS4.4*

DJA ***23*** *05:02:40.3±1.2,5˚N±11˚×12˚5E±˚,h42km±7km,M4.5/11, mb4.6/11,mB5.0/4,MLv4.5/8,Mw(mB)4.3/4*

NEIC ***23*** *05:02:45.6±1.9,4˚27N±0˚05×125˚53E±0˚05,h59km±5km, mb4.5/25,Error ellipse: s-maj=7.9km s-min=7.2km az=48.0*

ISC 23 05:02:44.9±1.0,4˚28N±0˚03×125˚45E±0˚06,h50km±10km, n78,σ1984/81,mb4.4/30,MS3.2/6,1C-2D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.83**	**8**	*e*P	**Pn**	**05 03 11.9**	**-2.0**
DDMP				*e*S	**Sn**	**05 03 36.0**	**0.0**
SKMP	**Bagumbayan, Su**	**2.41**	**338**	*e*P	**Pn**	**05 03 19.2**	**-2.6**
SKMP				*e*S	**Sn**	**05 03 47.2**	**-2.9**
KCP	**Kidapawan**	**2.74**	**352**	*i*P	**Pn**	**05 03 25.3**	**-1.2**
KCP				*i* S	**Sn**	**05 03 59.8**	**+1.5**

MATI	**Mati**	**2.77**	**17**	*e*P	**Pn**	**05 03 22.9**	**-3.9**
MATI				*e*S	**Sn**	**05 03 55.0**	**-4.0**
DAV	**Davao City (W)**	**2.78**	**3**	Pn	**Pn**	**05 03 29.0**	**+2.1**
	46nm,0.3s,baz=278,slow=14,SNR=1.6						
DAV				Sn	**Sn**	**05 04 03.8**	**+4.6**
	83nm,0.3s,baz=260,slow=21,SNR=1.8						
DAV				LR	LR	05 04 05.4	
	comp=Z,74nm,20.1s,baz=342,slow=32						
DAV	**Davao City (W)**	**2.78**	**3**	⇑*e*P	**Pn**	**05 03 29.9**	**+3.0**
DAV	**Davao City (W)**	**2.78**	**3**		**Pn**	**05 03 28.6**	**+1.6**
DAV				Sn	**Sn**	**05 04 03.2**	**+4.0**
DMPH	**Davao City--Mi**	**2.79**	**1**	*e*P	**Pn**	**05 03 26.1**	**-1.0**
DMPH				*e*S	**Sn**	**05 03 59.7**	**+0.2**
CTBH	**Cotabato--PC H**	**3.16**	**338**	⇓*i*P	**Pn**	**05 03 31.0**	**-1.2**
BUKP	**Musuan**	**3.60**	**354**	*e*P	**Pn**	**05 03 37.9**	**-0.3**
BUKP				*e*S	**Sn**	**05 04 20.9**	**+1.4**
TNTI	**Ternate**	**3.97**	**151**	P	**Pn**	**05 03 43.0**	**-0.3**
TNTI	**Ternate**	**3.97**	**151**		**Pn**	**05 03 42.0**	**-1.3**
TNTI				Sn	**Sn**	**05 04 30.0**	**+1.4**
PAGZ	**Pagadian**	**4.10**	**330**	*e*P	Pn	05 03 41.2	-3.9
PAGZ				*e*S	**Sn**	**05 04 26.4**	**-5.5**
LUWI	**Luwuk**	**5.92**	**207**	P	**Pn**	**05 04 12.1**	**+2.0**
	0.5nm134nm,0.8s						
LUWI	**Luwuk**	**5.92**	**207**	Pn	**Pn**	**05 04 11.8**	**+1.7**
LUWI				Sn	**Sn**	**05 05 19.7**	**+2.9**
SANI	**Sanana**	**6.31**	**175**	P	**Pn**	**05 04 14.6**	**-0.8**
	0.1nm2µm18nm,0.7s						
MPSI	**Mapaga**	**6.79**	**235**	P	**Pn**	**05 04 22.3**	**+0.3**
	0.1nm21nm,0.9s						
SIJI	**Sorong**	**7.74**	**131**	Pn	**Pn**	**05 04 33.1**	**-1.9**
	7.9nm,0.3s,baz=4.2,slow=2.3,SNR=12						
SIJI				Sn	**Sn**	**05 06 01.6**	**+0.3**
	1.6nm,0.3s,baz=131,slow=19,SNR=4.1						
SIJI				LR	LR	05 07 58.5	
	comp=Z,136nm,20.4s,baz=300,slow=41						
KKM	**Kota Kinabalu**	**9.37**	**281**		**Pn**	**05 04 59.0**	**+1.5**
BKB	**Balikpapan**	**10.17**	**237**	Pn	**Pn**	**05 05 07.6**	**-0.7**
KAPI	**Kappang**	**10.85**	**212**	LR	LR	05 09 51.7	
	comp=Z,104nm,18.6s,baz=40,slow=40						
JAY	**Jayapura**	**16.67**	**114**	LR	LR	05 11 55.0	
	comp=Z,66nm,21.6s,baz=181,slow=33						
KNRA	**Kununurra**	**20.09**	**171**	P	**P**	**05 07 13.8**	**-0.7**
KNRA				IAmb	IAmb	05 07 15.0	
	comp=Z,24nm,0.7s						
LEM	**Lembang**	**20.95**	**238**	LR	LR	05 16 23.4	
	comp=Z,82nm,20.8s,baz=9.5,slow=40						
FITZ	**Fitzroy Crossi**	**22.23**	**180**	P	**P**	**05 07 35.6**	**-2.0**
	comp=Z,6.1nm,0.5s,baz=12,slow=8.8,SNR=31						
FITZ	**Fitzroy Crossi**	**22.23**	**180**	P	**P**	**05 07 36.9**	**-0.6**
FITZ				IAmb	IAmb	05 07 39.2	
	comp=Z,9.1nm,0.7s						
MDSI	**Maura Dua**	**22.97**	**248**	P	**P**	**05 07 43.5**	**-1.9**
	comp=Z,12nm,0.9s						
KULM	**Kulim**	**24.74**	**273**	P	**P**	**05 08 03.9**	**+2.0**
KULM				IAmb	IAmb	05 08 19.5	
	comp=Z,8.4nm,1.0s						
COEN	**Coen**	**25.25**	**136**	P	**P**	**05 08 06.1**	**-0.4**
WB0	**Warramunga Arr**	**25.46**	**160**	P	**P**	**05 08 07.3**	**-1.1**
PMG	**Port Moresby**	**25.55**	**122**	LR	LR	05 18 46.3	
	comp=Z,34nm,19.8s,baz=248,slow=38						
WRAB	**Tennant Creek**	**25.60**	**160**	P	**P**	**05 08 09.2**	**-0.5**
WRAB				IAmb	IAmb	05 08 10.8	
	comp=Z,21nm,0.8s						
WRA	**Warramunga Arr**	**25.60**	**160**	P	**P**	**05 08 08.0**	**-1.7**
	comp=Z,18nm,0.6s,baz=339,slow=10,SNR=36						
WB2	**Warramunga Arr**	**25.61**	**160**	P	**P**	**05 08 08.7**	**-1.1**
WB2				IAmb	IAmb	05 08 10.9

TXAR	**Lajitas Array**	**122.26**	**51**	PKP	**PKPdf**	**05 21 34.6**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=236,slow=1.8,SNR=5.0						
BI02	**San Fabin de**	**144.29**	**157**	PKPdf	**PKPdf**	**05 22 14.7**	**-1.4**
BO02	**Sierra Bellavi**	**146.11**	**156**	PKPbc	**PKPbc**	**05 22 19.9**	**-0.3**
MT02	**Curacav**	**147.27**	**154**	PKPbc	**PKPbc**	**05 22 23.4**	**0.0**
CO02	**Combarbal**	**149.06**	**152**	PKPbc	**PKiKP**	**05 22 29.6**	**-0.1**

*IDC **23** 05:09:39.2±6.3, 5.79N×123.85E, h520km±78km, mb3.0/5, mb1 3.2/5, mb1mx2.7/44, mbtmp4.0/5, Error ellipse: s-maj=126.3km s-min=18.6km az=62.0*
*NEIC **23** 05:09:39.1±2.0, 5.9N±0.1mi×124.0E±0.2mi, h528km±12km, mb4.2/19, Error ellipse: s-maj=26.8km s-min=16.3km az=69.0*

ISC 23 05:09:38.3±0.7, 5.86N±0.08×123.9E±0.1, h500km, n28, σ1s80/29, mb4.0/12, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**1.62**	**45**	⇓*i*	P		**P**	**05 10 43.2**	**+1.5**
DAV	**Davao City (W)**	**2.03**	**54**		P		**P**	**05 10 47.8**	**+4.2**
LUWI	**Luwuk**	**6.96**	**190**		P		**P**	**05 11 26.8**	**+2.7**
KKM	**Kota Kinabalu**	**7.67**	**272**		P		**P**	**05 11 33.9**	**+2.4**
DLV	**T Lat**	**16.40**	**293**		P		**P**	**05 13 05.9**	**+2.4**
DLV	comp=Z,31nm,1.5s				IAmb		IAmb	05 13 12.6	
TWG	**Pinlang**	**17.08**	**351**		P		**P**	**05 13 06.5**	**-3.6**
JAGI	**Jajag, Banyuwa**	**17.26**	**214**		P		**P**	**05 13 10.5**	**-1.4**
YULB	**Yu-li**	**17.61**	**352**		P		**P**	**05 13 12.3**	**-2.7**
YULB	comp=Z,5.5nm,0.9s				IAmb		IAmb	05 13 31.8	
TPUB	**Ta-pu**	**17.62**	**350**		P		**P**	**05 13 13.5**	**-1.7**
YOJ	**Yonaguni jima**	**18.51**	**357**		P		**P**	**05 13 25.0**	**+1.7**
MTN	**Manton Dam**	**19.92**	**159**		P		**P**	**05 13 35.4**	**-0.8**
MTN	comp=Z,27nm,1.4s				IAmb		IAmb	05 13 51.8	
FITZ	**Fitzroy Crossi**	**23.87**	**176**		P		**P**	**05 14 10.2**	**-1.6**
FITZ	comp=Z,1.7nm,1.1s,baz=0.0,slow=8.1,SNR=1.7 **Fitzroy Crossi**	**23.87**	**176**		P		**P**	**05 14 11.0**	**-0.8**
FITZ	comp=Z,8.2nm,1.4s				IAmb		IAmb	05 14 29.6	
WB0	**Warramunga Arr**	**27.47**	**158**		P		**P**	**05 14 42.4**	**-1.3**
WB0	comp=Z,7.0nm,1.3s				IAmb		IAmb	05 14 48.9	
WRAB	**Tennant Creek**	**27.61**	**158**		P		**P**	**05 14 44.0**	**-0.9**
WRAB	comp=Z,7.9nm,1.2s				IAmb		IAmb	05 15 01.7	
WRA	**Warramunga Arr**	**27.61**	**158**		P		**P**	**05 14 43.8**	**-1.2**
WB2	comp=Z,0.9nm,0.5s,baz=339,slow=9.6,SNR=11 **Warramunga Arr**	**27.62**	**158**		P		**P**	**05 14 43.9**	**-1.1**
WB2	comp=Z,7.6nm,1.2s				IAmb		IAmb	05 14 44.1	
WR0	**Warramunga Arr**	**27.70**	**158**		P		**P**	**05 14 44.7**	**-1.1**
WR0	comp=Z,6.5nm,1.3s				IAmb		IAmb	05 15 02.9	
AS31	**Alice Springs**	**30.92**	**162**		P		**P**	**05 15 13.8**	**0.0**
AS31	comp=Z,1.6nm,0.3s				IAmb		IAmb	05 15 14.6	
ASAR	**Alice Springs**	**30.92**	**162**		P		**P**	**05 15 13.8**	**+0.1**
ASAR	comp=Z,1.9nm,0.3s,baz=343,slow=7.1,SNR=24				PcP		**PcP**	**05 17 53.5**	**-1.8**
MORW	comp=Z,0.4nm,0.4s,baz=348,slow=2.6,SNR=4.2 **Morawa**	**35.55**	**192**		P		**P**	**05 15 53.0**	**+0.2**
MORW	comp=Z,12nm,1.1s				IAmb		IAmb	05 16 07.1	
BBOO	**Buckleboo**	**40.15**	**164**		P		**P**	**05 16 30.3**	**-0.1**
BBOO	comp=Z,3.8nm,1.1s				IAmb		IAmb	05 16 34.0	
STKA	**Stephens Creek**	**41.14**	**157**		P		**P**	**05 16 37.7**	**-0.6**
STKA	comp=Z,1.4nm,0.5s,baz=320,slow=8.2,SNR=4.7 **Stephens Creek**	**41.14**	**157**		P		**P**	**05 16 38.2**	**-0.1**
MK31	**Makanchi Array**	**54.23**	**326**		P		**P**	**05 18 15.9**	**-0.5**
MKAR	**Makanchi Array**	**54.23**	**326**		P		**P**	**05 18 16.0**	**-0.5**
MAKZ	comp=Z,0.6nm,0.4s,baz=121,slow=7.6,SNR=10 **Makanchi**	**54.41**	**326**		P		**P**	**05 18 16.4**	**-1.3**
KURK	**Kurchatov**	**58.46**	**328**		P		**P**	**05 18 44.6**	**-1.0**

RSNC 23 05:14:27.9±0.3, 3.83N×71.62W, h6km±3km, ML1.3, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PTGC	**Puerto Gaitan,**	**0.63**	**306**	*e*P		g	Pg	05 14 39.1	-1.1
PTGC				*e*S		g	Sg	05 14 48.0	-0.3
PTGC	comp=Z,9.9nm,0.2s			*i*				05 14 58.2	
GUVC	**San Jose del G**	**1.62**	**218**	*e*S			Sn	05 15 17.3	-1.2
CHIC	**Chingaza**	**2.25**	**291**	*e*S			Sn	05 15 33.6	-1.0
CHIC	comp=Z,1.8nm,0.2s			*i*				05 15 51.6	
RUSC	**La Rusia**	**2.52**	**325**	*e*S			Sn	05 15 40.5	-0.7
RUSC	comp=Z,0.8nm,0.4s			*i*				05 16 02.4	
MACC	**Macarena, Meta**	**2.78**	**233**	*e*P			Pn	05 15 14.8	+1.7
MACC				*e*S			Sn	05 15 48.9	+1.8

RSNC 23 05:14:59.9±1.0, 2.44N×75.43W, h0km±4km, ML0.9, 1C, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GARC	**Garzon, Huila**	**0.26**	**193**	⇑*i*	P	g	Pg	05 15 05.7	+0.8
GARC				*e*S		g	Sg	05 15 10.6	+2.2
PCON	**Cinco Dias**	**0.97**	**263**	*e*P		g	Pg	05 15 18.6	0.0
PCON				*e*S		g	Sg	05 15 32.1	+1.0
PCON	comp=Z,2.4nm,0.3s			*i*				05 15 34.4	
SOTA	**Rioblanco**	**1.21**	**255**	*e*P		g	Pg	05 15 21.6	-1.6
SOTA				*e*S		g	Sg	05 15 39.6	+0.7
SOTA	comp=Z,0.7nm,0.4s			*i*				05 15 40.5	
PRAC	**Prado**	**1.37**	**23**	*e*P		g	Pg	05 15 23.4	-2.9
PRAC				*e*S		g	Sg	05 15 42.9	-1.3
PRAC	comp=Z,1.3nm,0.5s			*i*				05 15 45.9	
ORTC	**Ortega, Tolima**	**1.47**	**7**	*e*P			Pn	05 15 25.7	-2.0
ORTC				*e*S			Sg	05 15 46.6	-0.5
ORTC	comp=Z,1.9nm,0.2s			*i*				05 15 48.0	
MACC	**Macarena, Meta**	**1.61**	**101**	*e*S			Sn	05 15 50.9	-0.3

*KRNET **23** 05:14:59.6±0.1, 41.61N×71.24E, h26km, mb2.9*
*SOME **23** 05:14:59.9, 41.58N×71.25E, h15km*

ISC 23 05:14:59.1±1.6, 41.62N±0.05×71.24E±0.03, h2km±12km, n14, σ1s56/28, 6C-8D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.57**	**71**	⇓*i*	P		**Pg**	**05 15 11.1**	**+1.1**
ARK	baz=73			⇓*e*	S		**Sb**	**05 15 19.5**	**-1.0**
IUG	**Iuzhnay**	**1.05**	**301**	*e*	P		**Pb**	**05 15 19.7**	**-0.3**
IUG	12nm,0.2s			*e*	S		**Sb**	**05 15 34.3**	**0.0**
ARSB	45nm,0.2s **Arslanbob**	**1.34**	**102**	⇓*i*	P		**Pn**	**05 15 23.9**	**-1.0**
ARSB	baz=2.0			⇓*i*	S		**Sb**	**05 15 42.0**	**-0.7**
BTK	baz=2.0 **Batken**	**1.59**	**192**	⇓*i*	P		**Pn**	**05 15 28.5**	**+0.2**
BTK	baz=92			⇓*i*	S		**Sb**	**05 15 49.5**	**-0.3**
BRLS	baz=92 **Borolday**	**1.76**	**324**	*e*	P		**Pn**	**05 15 30.7**	**+0.1**
BRLS	12nm,0.3s			*e*	S		Sn	05 15 53.3	-0.2
MRKS	54nm,0.4s **Merke**	**1.86**	**52**	*e*	P		**Pb**	**05 15 34.4**	**+0.6**
MRKS	9.2nm,0.2s			*e*	S		**Sg**	**05 15 59.2**	**+0.5**
AML	26nm,0.2s **Almayashu**	**1.90**	**74**	⇑*i*	P		**Pn**	**05 15 33.1**	**+0.2**
AML	baz=73			⇑*i*	S		**Sb**	**05 15 57.7**	**-1.4**
UCH	baz=73 **Uchtor**	**2.52**	**75**	⇑*i*	P		**Pn**	**05 15 41.9**	**+0.5**
UCH	baz=75			⇑*i*	S		**Sn**	**05 16 12.7**	**-0.2**
AAK	baz=75 **Ala-Archa**	**2.62**	**66**	⇑*e*	P		**Pn**	**05 15 42.9**	**+0.3**
AAK	baz=66			⇑*i*	S		**Sn**	**05 16 14.8**	**-0.3**
KZA	**Kyzart**	**3.03**	**80**	⇓*e*	P		**Pn**	**05 15 48.6**	**+0.2**
KZA	baz=80			⇓*i*	S		**Sn**	**05 16 25.0**	**-0.5**
DGS	baz=80 **Degeres**	**3.73**	**63**	*e*	P		**Pb**	**05 16 07.3**	**+1.7**
DGS	2.2nm,0.4s			*e*	S		**Sg**	**05 16 56.0**	**-2.7**
KST	12nm,0.5s **Kastek**	**3.78**	**66**	*e*	P		**Pb**	**05 16 08.6**	**+2.1**
KST	3.0nm,0.3s			*e*	S		**Sg**	**05 16 58.3**	**-2.2**
BTLS	19nm,0.5s **Baital**	**3.99**	**30**	*e*	P		**Pb**	**05 16 12.6**	**+2.6**
BTLS	0.8nm,0.2s			*e*	S		**Sg**	**05 17 04.9**	**-2.2**
KUU	4.5nm,0.5s **Kurty**	**4.39**	**57**	*e*	P		**Pb**	**05 16 19.6**	**+2.7**
KUU	1.1nm,0.3s			*e*	S		**Sg**	**05 17 16.4**	**-3.6**
	7.2nm,0.4s								

*IDC **23** 05:19:32.5±0.7, 28.28N×139.87E, h427km±9km, mb3.1/10, mb1 3.3/13, mb1mx3.0/36, mbtmp3.9/13, Error ellipse: s-maj=23.4km s-min=12.2km az=76.0*
*JMA **23** 05:19:32.1±0.3, 28.41N×140.39E, h457km±5km, M3.8*

ISC 23 05:19:32.4±0.7, 28.35N±0.08×139.8E±0.1, h421km, n22, σ1s34/28, mb3.5/10, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.42**	**120**		P		**P**	**05 20 33.8**	**+0.8**
CBIJ					S		**S**	**05 21 22.2**	**+0.2**
JCJ	**Chichijima**	**2.42**	**120**		P		**P**	**05 20 34.0**	**+1.0**
JCJ	28nm,0.3s,baz=272,slow=21,SNR=14				S		**S**	**05 21 22.5**	**+0.5**
JHH2	28nm,0.3s,baz=269,slow=23,SNR=12 **Haha-jima-NKT2**	**2.68**	**129**		P		**P**	**05 20 36.0**	**+1.2**
JHH2					S		**S**	**05 21 26.2**	**+0.8**
JHJ	**Hachijo jima 2**	**4.76**	**359**		P		**P**	**05 20 54.1**	**+1.3**
BSO1	18nm,0.3s,baz=15,slow=12,SNR=1.6 **Boso 1**	**6.36**	**8**		S		**S**	**05 22 28.2**	**+0.3**
BSO3	**Boso 3**	**6.46**	**5**		P		**P**	**05 21 11.8**	**+1.7**
JIE	**Ise**	**6.60**	**337**		P		**P**	**05 21 15.6**	**+3.3**
BSO4	**Boso 4**	**6.64**	**4**		P		**P**	**05 21 13.7**	**+1.1**
JAG	**Ashikaga**	**8.06**	**358**		P		**P**	**05 21 28.5**	**+0.3**
JAG					S		**S**	**05 23 00.3**	**-2.8**
JHO	**Hitachi**	**8.27**	**4**		P		**P**	**05 21 31.4**	**+1.0**
JHO					S		**S**	**05 23 05.7**	**-1.5**
MJAR	**Matsushiro Arr**	**8.29**	**351**		P		**P**	**05 21 33.3**	**+2.6**
JFK	0.1nm,0.3s,baz=171,slow=12,SNR=2.5 **Kawauchi**	**9.04**	**5**		P		**P**	**05 21 40.3**	**+1.4**
SONM	**Songino Array**	**32.38**	**316**		P		**P**	**05 25 25.9**	**+0.7**
MKAR	0.8nm,0.4s,baz=122,slow=6.8,SNR=5.1 **Makanchi Array**	**48.08**	**309**		P		**P**	**05 27 31.6**	**-0.2**
MKAR	0.6nm,0.4s,baz=87,slow=11,SNR=11				pP		**PcP**	**05 28 51.2**	**-0.7**
WRA	0.3nm,0.5s,baz=76,slow=10,SNR=4.1 **Warramunga Arr**	**48.30**	**187**		P		**P**	**05 27 32.9**	**-0.8**
KURBB	0.7nm,0.3s,baz=3.8,slow=7.6,SNR=24 **Kurchatov Arra**	**50.68**	**314**		P		**P**	**05 27 50.8**	**-0.3**
ASAR	1.3nm,0.3s,baz=91,slow=7.4,SNR=7.7 **Alice Springs**	**52.02**	**187**		P		**P**	**05 28 00.6**	**-0.7**
ARCES	0.3nm,0.4s,baz=1.9,slow=5.0,SNR=8.8 **ARCESS Array B**	**71.68**	**340**		P		**P**	**05 30 09.9**	**+0.3**
YKA	2.2nm,0.9s,baz=64,slow=8.5,SNR=7.4 **Yellowknife Ar**	**72.03**	**28**		P		**P**	**05 30 11.7**	**-0.1**
FINES	0.3nm,0.6s,baz=297,slow=5.6,SNR=8.4 **FINESS Array B**	**75.91**	**333**		P		**P**	**05 30 33.4**	**-0.6**
NVAR	0.9nm,0.3s,baz=67,slow=4.0,SNR=9.7 **Mina Array Bea**	**81.36**	**51**		P		**P**	**05 31 04.4**	**+0.2**
NOA	0.4nm,0.6s,baz=289,slow=6.6,SNR=3.0 **NORSAR Array B**	**81.67**	**337**		P		**P**	**05 31 03.9**	**-1.1**
	0.6nm,0.5s,baz=48,slow=5.0,SNR=2.2								

*IDC **23** 05:25:03.1±0.9, 57.38S×24.80W, h0km, mb4.0/6, mb1 4.1/7, mb1mx3.8/28, mbtmp3.9/7, ML3.8/1, MS3.4/2, Ms1 3.4/2, ms1mx2.9/18, Error ellipse: s-maj=34.1km s-min=20.2km az=67.0*
*NEIC **23** 05:25:09.0±1.7, 57.40S±0.07×24.7W±0.2, h35km±2km, mb4.5/15, Error ellipse: s-maj=17.8km s-min=11.2km az=80.0*

ISC 23 05:25:08.9±0.7, 57.4S±0.1×24.6W±0.1, h35km, n32, σ1s35/30, mb4.3/13, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.42**	**290**		Pn		**Pn**	**05 26 57.6**	**+3.0**
VNA1	**Neumayer--Stat**	**14.97**	**159**		P		**Pn**	**05 28 37.4**	**0.0**
VNA3	**Neumayer Olymp**	**15.20**	**162**		P		**Pn**	**05 28 39.3**	**-1.3**
VNA2	**Neumayer--Watz**	**15.36**	**159**		P		**Pn**	**05 28 41.4**	**-1.3**
SNAA	baz=321,slow=13 **Sanae**	**16.88**	**156**		P		**Pn**	**05 29 02.1**	**0.0**
SNAA	**Sanae**	**16.88**	**156**		Pn		**Pn**	**05 29 01.3**	**-0.8**
SNAA	0.3nm,0.3s,baz=316,slow=13,SNR=16				Sn		Sn	05 31 57.8	-11
SNAA	0.0nm,0.3s,baz=25,slow=12,SNR=2.2 **Sanae**	**16.88**	**156**				**Pn**	**05 29 01.3**	**-0.8**
EFI	**East Falkland**	**20.13**	**272**		P		**P**	**05 29 39.2**	**-0.3**
PMSA	**Palmer Station**	**20.15**	**232**		LR		LR	05 35 43.8	
QSPA	comp=Z,153nm,19.7s,baz=134,slow=32 **South Pole Qui**	**32.81**	**180**		P		**P**	**05 31 38.9**	**+0.3**
QSPA	2.1nm,0.8s,baz=280,slow=1.2,SNR=11 **South Pole Qui**	**32.81**	**180**		P		**P**	**05 31 39.8**	**+1.2**
QSPA					IAmb		IAmb	05 31 43.6	
PLCA	comp=Z,6.0nm,1.3s **Paso Flores**	**33.67**	**280**		LR		LR	05 43 35.6	
CPUP	comp=Z,52nm,18.8s,baz=166,slow=33 **Villa Florida**	**38.82**	**309**		P		**P**	**05 32 29.4**	**-0.8**
CPUP	comp=Z,0.9nm,0.5s,baz=154,slow=4.9,SNR=3.1 **Villa Florida**	**38.82**	**309**		P		**P**	**05 32 30.2**	**0.0**
CPUP					IAmb		IAmb	05 32 39.3	
CFA	comp=Z,8.9nm,1.2s **Coronel Fontan**	**39.44**	**292**		P		**P**	**05 32 31.6**	**-3.8**
CO02	comp=Z,1.2nm,0.8s,baz=162,slow=5.7,SNR=4.8 **Combarbal**	**41.16**	**289**		P		**P**	**05 32 48.3**	**-1.5**
CO01	**Juntas del Tor**	**41.69**	**291**		P		**P**	**05 32 53.3**	**-1.0**
CO01					IAmb		IAmb	05 33 00.1	
BOSA	comp=Z,10nm,1.5s **Boshof**	**44.96**	**72**		P		**P**	**05 33 22.1**	**+1.6**
BOSA					IAmb		IAmb	05 33 26.1	
VNDA	comp=Z,7.3nm,1.2s **Vanda**	**45.24**	**182**		P		**P**	**05 33 21.8**	**-0.2**
VNDA	comp=Z,0.9nm,0.8s,baz=191,slow=6.5,SNR=6.6 **Vanda**	**45.24**	**182**		P		**P**	**05 33 24.1**	**+2.0**
LVC	**Limon Verde**	**47.25**	**298**		P		**P**	**05 33 38.2**	**-0.7**
LVC					IAmb		IAmb	05 33 44.8	
PB04	comp=Z,5.4nm,1.0s **IPOC Station P**	**48.08**	**297**		P		**P**	**05 33 43.8**	**-1.3**
PB09	**IPOC Station P**	**48.10**	**299**		P		**P**	**05 33 44.7**	**-0.6**
PB09					IAmb		IAmb	05 33 46.7	
PB01	comp=Z,12nm,1.3s **IPOC Station P**	**48.87**	**299**		P		**P**	**05 33 50.1**	**-0.9**
PB01					IAmb		IAmb	05 34 00.4	
GO01	comp=Z,18nm,1.5s **Chusmiza**	**49.91**	**300**		P		**P**	**05 33 58.9**	**-0.6**
GO01					IAmb		IAmb	05 34 08.6	
LPAZ	comp=Z,7.3nm,1.2s **La Paz**	**52.36**	**303**		P		**P**	**05 34 16.7**	**-1.4**
LPAZ	comp=Z,1.8nm,0.7s,baz=163,slow=5.4,SNR=12 **La Paz**	**52.36**	**303**		P		**P**	**05 34 17.9**	**-0.2**
TOA0	**Torodi Ar. Sit**	**73.60**	**27**		P		**P**	**05 36 38.9**	**+0.6**
TOA0					IAmb		IAmb	05 36 41.9	
TORD	comp=Z,2.8nm,0.8s **Torodi Ar. Bea**	**73.60**	**27**		P		**P**	**05 36 38.2**	**-0.1**
YKA	comp=Z,1.5nm,0.7s,baz=197,slow=6.0,SNR=9.0 **Yellowknife Ar**	**138.18**	**316**		PKP		**PKPdf**	**05 44 27.9**	**-0.6**
SONM	comp=Z,0.5nm,0.7s,baz=116,slow=2.0,SNR=6.1 **Songino Array**	**149.35**	**87**		PKPbc		**PKPbc**	**05 44 51.8**	**-1.3**
ILAR	comp=Z,0.5nm,0.7s,baz=183,slow=2.5,SNR=2.1 **Eielson Array**	**152.13**	**309**		PKPbc		**PKPbc**	**05 44 58.4**	**-0.6**
	comp=Z,1.9nm,0.9s,baz=140,slow=2.6,SNR=16								

*TEH **23** 05:26:45.6, 29.58N×50.85E, h8km, ML3.6*
*THR **23** 05:26:48.4±0.4, 29.69N×50.92E, h14km±10km, ML3.3*

ISC 23 05:26:49.1±2.4, 29.6N±0.1×50.8E±0.1, h24km, n20, σ0s56/22, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SHI	**Shiraz**	**1.47**	**86**	*e*	P	g	Pn	**05 27 14.2**	**-0.1**
SHI				*e*	Sg		**Sb**	**05 27 34.7**	**+0.6**
SHI				*e*				05 27 39.9	
KLNJ	**Kolanjah**	**1.59**	**24**	*e*	P	g	Pn	**05 27 15.5**	**-0.6**
KLNJ				*e*				05 27 44.8	
IRAM	**Ramesheh**	**2.61**	**30**	*e*	Pn		**Pn**	**05 27 30.2**	**+0.1**
JHBN	**Jahan bin**	**2.67**	**357**	*e*	Pn		**Pn**	**05 27 31.3**	**+0.4**
JHBN				*e*				05 28 14.9	
ROKH	**ROKH**	**2.79**	**4**	*e*	Pn		**Pn**	**05 27 32.8**	**+0.4**
IGAR	**Gharneh**	**3.02**	**20**	*e*	Pn		**Pn**	**05 27 36.1**	**+0.4**
IPIR	**Pirpir**	**3.12**	**1**	*e*	Pn		**Pn**	**05 27 37.1**	**0.0**
ISAD	**Sadrabad**	**3.40**	**46**	*e*	Pn		**Pn**	**05 27 41.6**	**+0.7**
IZEF	**Zefreh**	**3.57**	**21**	*e*	Pn		**Pn**	**05 27 43.5**	**+0.3**
IMEH	**Mehriz**	**3.74**	**60**	*e*	Pn		**Pn**	**05 27 46.5**	**+0.9**
IKLH	**Kolahrood**	**3.81**	**9**	*e*	Pn		**Pn**	**05 27 46.9**	**+0.4**
ICHK	**Chekchek**	**4.08**	**48**	*e*	Pn		**Pn**	**05 27 50.9**	**+0.7**
KHMZ	**Khomeyn**	**4.24**	**350**	*e*	Pn		**Pn**	**05 27 52.9**	**+0.6**
YZKH	**Yazd**	**4.29**	**48**	*e*	Pn		**Pn**	**05 27 53.4**	**+0.4**
ANAR	**Anarak**	**4.39**	**34**	*e*	Pn		**Pn**	**05 27 53.9**	**-0.5**
KHGB	**Koh Gabri**	**4.97**	**79**	*e*	Pn		**Pn**	**05 28 02.4**	**0.0**
ASAO	**Ashtian**	**5.02**	**352**	*e*	Pn		**Pn**	**05 28 03.9**	**+0.7**
ASAO				*e*	S		**Sn**	**05 28 59.4**	**-1.3**
NGRK	**Negar Kerman**	**5.14**	**88**	*e*				**05 28 04.7**	**-0.2**
NGRK				*e*	Pn		**Pn**	**05 28 05.2**	**0.0**
GENO	**Geno**	**5.17**	**113**	*e*	Pn		**Pn**	**05 28 14.7**	**+0.1**
CHMN	**Cheshme madani**	**5.84**	**85**	*e*	Pn		**Pn**		

*TAP **23** 05:35:31.0, 24.76N×122.41E, h10km±1km, ML2.5, C*
*JMA **23** 05:35:31.4, 24.63N×122.43E, h34km±2km, M2.0*

ISC 23 05:35:30.2±1.1, 24.74N±0.05×122.42E±0.02, h19km±3km, n24, σ0s41/34, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.33**	**234**	*e*	P		**Pg**	**05 35 37.3**	**-0.1**
EOS1	baz=230			*e*	S		**Sb**	**05 35 42.5**	**0.0**
EGS	baz=230 **EGS**	**0.46**	**283**	*e*	P		**Pg**	**05 35 38.9**	**-0.7**
TWB1	baz=280 **Santiao Chiao**	**0.47**	**304**	*e*	P		**Pg**	**05 35 40.0**	**+0.1**
TWB1	baz=302				S		**Sg**	**05 35 46.1**	**-0.3**
TWC	baz=302 **Suao**	**0.54**	**256**	*e*	P		**Pb**	**05 35 41.2**	**+0.1**
TWC	baz=253			*e*	S		**Sb**	**05 35 48.7**	**+0.3**
JYNG	baz=253 **Yonagunijimaku**	**0.56**	**121**		P		**Pb**	**05 35 41.7**	**+0.3**
JYNG					S		**Sb**	**05 35 48.9**	**0.0**
TIPB	**Shuangxi**	**0.59**	**293**	*e*	P		**Pb**	**05 35 42.1**	**+0.2**
TIPB	baz=291			*e*	S		**Sb**	**05 35 49.7**	**-0.2**
YOJ	baz=291 **Yonaguni jima**	**0.60**	**118**	*e*	P		**Pg**	**05 35 42.6**	**+0.4**
YOJ	baz=118 **Yonaguni jima**	**0.60**	**118**		P		**Pg**	**05 35 42.5**	**+0.2**
YOJ					S		**Sg**	**05 35 50.5**	**+0.1**
TWE	**Neicheng**	**0.69**	**268**	*e*	P		**Pb**	**05 35 44.0**	**+0.3**
TWE	baz=266			*e*	S		**Sb**	**05 35 53.1**	**+0.3**
ENTT	baz=266 **Nioudou**	**0.79**	**263**	*e*	P		**Pg**	**05 35 46.2**	**+0.5**
NDT	baz=260 **Datong Townshi**	**0.84**	**261**	*e*	P		**Pb**	**05 35 46.6**	**+0.4**
NACB	baz=259 **Ninganchiao**	**0.94**	**233**	*e*	P		**Pb**	**05 35 47.8**	**-0.3**
YHNB	baz=231 **Yeheng**	**0.96**	**266**	*e*	P		**Pb**	**05 35 48.8**	**+0.5**
NNSB	baz=264 **Datong**	**1.00**	**252**	*e*	P		**Pn**	**05 35 49.5**	**+0.1**
NNSH	baz=250 **Datong**	**1.00**	**252**	*e*	P		**Pn**	**05 35 49.8**	**+0.4**
NNS	baz=250 **Nan Shan**	**1.00**	**253**	*e*	P		**Pb**	**05 35 49.4**	**+0.3**
WHF	baz=251 **Hehuan Shan**	**1.21**	**241**	*e*	P		**Pg**	**05 35 53.5**	**-0.3**
IRIF	baz=239 **Iriomote-Funau**	**1.26**	**109**		P		**Pn**	**05 35 52.6**	**-0.2**
IRIF					S		**Sb**	**05 36 09.1**	**-0.1**
CHGB	**Renai**	**1.33**	**239**	*e*	P		**Pn**	**05 35 54.4**	**+0.4**
JKRS	baz=238 **Kuro-shima**	**1.53**	**109**		P		**Pn**	**05 35 56.8**	**+0.2**
JKRS				*e*	S		**Sn**	**05 36 15.5**	**-0.5**
VWDT	**VWDT**	**1.53**	**230**	*e*	P		**Pb**	**05 35 58.7**	**+0.6**
HGSD	baz=229 **Ruisui**	**1.54**	**216**	*e*	P		**Pb**	**05 35 58.6**	**+0.3**
JIJ	baz=215 **Ishigaki jima**	**1.61**	**103**	*e*	S		**Sn**	**05 36 17.2**	**-0.8**
YULB	**Yu-li**	**1.69**	**218**	*e*	P		**Pb**	**05 35 60.0**	**-0.9**
YULB	baz=216			*e*	S		**Sb**	**05 36 22.2**	**+0.3**
	baz=216								

*IDC **23** 05:45:22.4±2.7, 44.28N×146.57E, h0km, mb3.7/4, mb1 3.9/6, mb1mx3.5/41, mbtmp3.6/6, ML3.1/2, Error ellipse: s-maj=92.1km s-min=30.6km az=157.0*
*SKHL **23** 05:45:38.6±0.5, 44.53N×149.02E, h70km±2km, mb4.2/4*
*JMA **23** 05:45:38.1±0.7, 44.66N×149.03E, h30km, M3.9*
*MOS **23** 05:45:38.0±1.2, 44.49N×148.99E, h58km, mb4.1/2, Error ellipse: s-maj=14.5km s-min=11.9km az=142.8*

ISC 23 05:45:39.3±1.6, 44.50N±0.06×148.97E±0.1, h54km±16km, n43, σ1s37/51, mb3.6/6, 2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.07**	**314**	*i*	P		**Pn**	**05 45 57.4**	**-0.7**
KUR	30nm,0.4s				AMB		AMB	05 45 58.2	
KUR	20nm,0.4s				AMB		AMB	05 45 58.2	
KUR	80nm,0.4s				AMB		AMB	05 45 58.2	
KUR				*i*	S		**Sn**	**05 46 12.0**	**0.0**
KUR	180nm,0.2s				A		A	05 46 13.3	
KUR	490nm,0.2s				A		A	05 46 13.3	
KUR	**Kuril'sk**	**1.07**	**314**	*d*	PN		**Pn**	**05 45 57.4**	**-0.7**
KUR				*e*	S		**Sn**	**05 46 12.0**	**0.0**
KUR	comp=Z,825nm,0.6s				pmax		pmax		
KUR	comp=N,323nm,0.5s				pmax		pmax		
KUR	comp=E

GRPR				*e*S	**Sn**	05 46 44.0	+0.9
GRPR				pmax	pmax		
	comp=Z,51nm,0.2s						
GRPR				pmax	pmax		
	comp=E,48nm,0.3s						
GRPR				smax	smax		
	comp=N,354nm,0.3s						
GRPR				smax	smax		
	comp=E,198nm,0.3s						
NEM2	**Nemuro 2**	**2.59**	**245**	P	**Pn**	05 46 18.6	-0.1
NEM2				*e*S	**Sn**	05 46 48.6	-0.4
GLVR	**Golovnino**	**2.60**	**254**	*e*S	**Sn**	05 46 51.0	+1.9
NMR	**Nemuro--Hokkai**	**2.60**	**245**	*i* P	**Pn**	05 46 18.6	-0.2
NMR				*i* S	**Sn**	05 46 48.2	-1.0
NMR	**Nemuro--Hokkai**	**2.60**	**245**	*d i* PN	**Pn**	05 46 18.6	-0.2
NMR				*i* S	**Sn**	05 46 48.2	-1.0
RUSJ	**Misakicho**	**2.70**	**263**	*e* PN	**Pn**	05 46 21.9	+1.7
RUSJ				*e*S	**Sn**	05 46 55.0	+3.3
JRA	**Rausu**	**2.82**	**260**	P	**Pn**	05 46 23.2	+1.3
JNK	**Nakash**	**3.19**	**255**	P	**Pn**	05 46 27.9	+0.9
JNK				*e*S	**Sn**	05 47 05.2	+1.3
JAK	**Akkeshi**	**3.44**	**246**	P	**Pn**	05 46 30.1	-0.3
JAK				*e*S	**Sn**	05 47 07.9	-1.9
JAR	**Ashorobuto**	**3.94**	**254**	P	**Pn**	05 46 39.1	+1.8
JOB	**Onbets**	**4.05**	**249**	P	**Pn**	05 46 39.8	+1.1
JCH	**Churui**	**4.49**	**247**	P	**Pn**	05 46 46.1	+1.4
ERM	**Erimo**	**4.92**	**242**	*i* PN	**Pn**	05 46 51.5	+0.9
YSS	**Yuzh-Sakhalins**	**4.99**	**302**	*e*P	**Pn**	05 46 52.0	+0.3
YSS				AMB	AMB	05 46 55.4	
	comp=E,30nm,0.5s						
YSS				*e*S	**Sn**	05 47 47.0	-1.0
YSS	**Yuzh-Sakhalins**	**4.99**	**302**	*e* PN	**Pn**	05 46 52.7	+1.0
YSS				*e*S	**Sn**	05 47 47.5	-0.5
YSS				pmax	pmax		
	comp=Z,30nm,0.3s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
JNBK	**Urakawa-nobuka**	**5.04**	**246**	P	**Pn**	05 46 52.3	0.0
JBT2	**Biratori 2**	**5.09**	**253**	P	**Pn**	05 46 54.4	+1.4
JKB	**Kayabe**	**6.36**	**249**	P	**Pn**	05 47 10.4	0.0
JKB				*e*S	**Sn**	05 48 19.1	-2.5
JOSM	**Okushiri--Mats**	**7.33**	**254**	P	**Pn**	05 47 24.4	+0.7
PETK	**Petropavlovsk-**	**10.36**	**31**	Pn	**Pn**	05 48 06.9	+1.8
	comp=Z,0.3nm,0.3s,baz=215,slow=14,SNR=4.7						
KLR	**Kul'dur**	**12.69**	**298**	*e*P	**Pn**	05 48 35.8	-1.1
KLR	**Kul'dur**	**12.69**	**298**	*i* PN	**Pn**	05 48 35.8	-1.1
KLR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BMKR	**Bomnak**	**16.51**	**315**	*e*P	**Pn**	05 49 24.1	-2.9
BILL	**Bilibino**	**25.29**	**15**	*e*P	**P**	05 51 02.4	+2.2
BILL				*e*		05 51 34.7	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.86**	**143**	T	T	06 22 30.5	
	baz=334,slow=76,SNR=62						
H11N1	**WAKE ISLAND Hy**	**28.88**	**143**	T	T	06 22 30.4	
	baz=334,slow=76,SNR=48						
H11N3	**WAKE ISLAND Hy**	**28.88**	**143**	T	T	06 22 32.0	
	baz=334,slow=76,SNR=41						
H11S1	**WAKE ISLAND Hy**	**29.87**	**145**	T	T	06 23 45.6	
	baz=334,slow=76,SNR=72						
H11S3	**WAKE ISLAND Hy**	**29.87**	**145**	T	T	06 23 40.2	
	baz=334,slow=76,SNR=36						
H11S2	**WAKE ISLAND Hy**	**29.89**	**145**	T	T	06 23 41.0	
	baz=334,slow=76,SNR=52						
ILAR	**Eielson Array**	**40.11**	**37**	P	**P**	05 53 08.0	-1.3
	comp=Z,0.5nm,0.7s,baz=271,slow=8.0,SNR=6.3						
ILAR	**Eielson Array**	**40.11**	**37**	P	**P**	05 53 08.0	-1.3
INK	**Inuvik**	**45.09**	**31**	P	**P**	05 53 48.8	-0.7
	comp=Z,0.6nm,0.4s,baz=264,slow=7.7,SNR=5.7						
MKAR	**Makanchi Array**	**45.40**	**298**	*i* P	P	05 54 00.2	+7.9
YKA	**Yellowknife Ar**	**54.45**	**35**	P	**P**	05 54 59.9	-0.7
	comp=Z,0.2nm,0.5s,baz=304,slow=7.0,SNR=7.2						
OBN	**Obninsk**	**65.48**	**324**	*e*P	**P**	05 56 18.6	+2.3
OBN				pmax	pmax		
	comp=Z,3.0nm,0.5s						
TXAR	**Lajitas Array**	**81.15**	**58**	P	**P**	05 57 48.0	-1.2
	comp=Z,0.5nm,0.6s,baz=308,slow=4.6,SNR=9.6						

MEX ***23*** *05:47:27.6±0.4, 13°.93N×92°.08W, h76km±48km, MD3.6*
GCG 23 05:47:28.0±0.5, 13°.90N×91°.95W, h35km±999km, MD3.7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.89**	**25**	*e*P	Pn	05 47 44.4	+0.2
STG3				*e*S	Sb	05 47 57.8	+0.7
THIG		**1.05**	**343**	*e*P	Pn	05 47 44.8	-1.5
THIG				*i* S	Sn	05 47 58.8	-0.9
FUG	**Fuego 3**	**1.21**	**63**	*e*P	Pn	05 47 46.2	-2.4
FUG				*e*S	Sb	05 48 05.4	-0.6
IXG	**Ixpaco**	**1.49**	**79**	*e*P	Pn	05 47 53.2	+0.7
IXG				*e*S	Sn	05 48 12.3	+1.4

MAN ***23*** *05:57:42.7, 8°.36N×126°.43E, h77km, mb5.1, ML4.0, MS4.1*
NEIC ***23*** *05:57:43.4±1.5, 8°.5N±0°.1×126°.4E±0°.2, h73km±3km, mb4.1/8, Error ellipse: s-maj=25.8km s-min=15.5km az=87.0*
IDC ***23*** *05:57:45.7±4.0, 8°.44N×126°.39E, h96km±38km, mb3.6/8, mb1 3.7/8, mb1mx3.4/44, mbtmp3.9/8, Error ellipse: s-maj=54.0km s-min=20.3km az=63.0*
ISC 23 05:57:43.6±1.1, 8°.39N±0°.04×126°.45E±0°.08, h76km±10km, n44, σ1°.933/55, mb4.0/11, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.00**	**305**	*e*P	**Pn**	05 58 01.6	-0.8
BUTP				*e*S	**Sn**	05 58 15.8	-0.7
MATI	**Mati**	**1.45**	**188**	*e*P	**Pn**	05 58 07.5	-0.7
MATI				*e*S	**Sn**	05 58 25.2	-1.5
BUKP	**Musuan**	**1.47**	**250**	*e*P	**Pn**	05 58 07.9	-0.5
BUKP				*e*S	**Sn**	05 58 26.6	0.5
DAV	**Davao City (W)**	**1.57**	**213**	P	**Pn**	05 58 12.0	+2.2
	80nm,0.3s,baz=54,slow=16,SNR=1.9						
DAV				S	**Sn**	05 58 33.4	+3.9
	76nm,0.3s,baz=294,slow=21,SNR=4.5						
DAV	**Davao City (W)**	**1.57**	**213**		**Pn**	05 58 12.2	+2.4
DMPH	**Davao City--Mi**	**1.60**	**216**	*e*P	**Pn**	05 58 10.6	+0.4
DMPH				*e*S	**Sn**	05 58 31.4	+1.1
SCPH	**Surigao**	**1.68**	**326**	*e*P	**Pn**	05 58 12.6	+1.5
SCPH				*e*S	**Sn**	05 58 32.2	+0.2
CGP	**Cagayan de Oro**	**1.74**	**272**	*i* P	**Pn**	05 58 11.8	-0.1
CGP				*i* S	**Sn**	05 58 33.6	+0.2
MSLP	**Maasin**	**2.34**	**318**	*e*P	**Pn**	05 58 15.8	-4.1
MSLP				*e*S	**Sn**	05 58 48.1	+0.3
DDMP	**Don Marcelino,**	**2.39**	**198**	*e*P	**Pn**	05 58 19.6	-1.0
DDMP				*e*S	**Sn**	05 58 46.1	-2.9
CTBH	**Cotabato--PC H**	**2.48**	**242**	*e*P	**Pn**	05 58 21.8	0.0
TBP	**Tagbilaran**	**2.86**	**297**	*i* P	**Pn**	05 58 27.4	+0.3
TBP				*i* S	**Sn**	05 59 00.4	-0.1
PAGZ	**Pagadian**	**3.09**	**260**	*e*P	**Pn**	05 58 28.8	-1.3
CNP	**Catarman**	**4.45**	**337**	*e*P	**Pn**	05 58 49.3	+0.5
CNP				*e*S	**Sn**	05 59 42.2	+2.9
RCP	**Roxas**	**4.82**	**311**	*e*P	**Pn**	05 58 54.8	+1.1
LUWI	**Luwuk**	**10.06**	**202**	Pn	Pn	06 00 11.2	+5.8
YHNB	**Yeheng**	**16.90**	**344**		**P**	**06 01 35.3**	**-1.0**
YHNB				IAmb	IAmb	06 01 45.2	
	comp=Z,52nm,1.5s						
COEN	**Coen**	**27.72**	**143**	P	**P**	06 03 24.3	-0.9
ASAR	**Alice Springs**	**32.69**	**167**	P	**P**	06 04 08.9	0.0
	comp=Z,1.8nm,0.8s,baz=347,slow=6.9,SNR=1.0						
TAPN	**Taplejung**	**41.17**	**302**	*e*P	**P**	06 05 22.3	+1.0
	comp=Z,22nm,0.4s						
ODAN	**Odare**	**41.28**	**301**	*e*P	**P**	06 05 22.9	+0.8
	comp=Z,30nm,0.6s						
RAMN	**Ramite**	**41.98**	**301**	*e*P	**P**	06 05 28.9	+1.1
	comp=Z,14nm,0.7s						
BBOO	**Buckleboo**	**41.98**	**168**	P	**P**	06 05 28.6	+1.2
JIRN	**Jiri**	**42.55**	**302**	*e*P	**P**	06 05 33.6	+1.0
	comp=Z,54nm,0.3s						
STKA	**Stephens Creek**	**42.58**	**161**	P	**P**	06 05 33.0	+0.7
	comp=Z,1.9nm,0.4s,baz=349,slow=12,SNR=4.7						
STKA	**Stephens Creek**	**42.58**	**161**	P	**P**	06 05 33.5	+1.2
GUN	**Gumba**	**42.89**	**302**	*e*P	**P**	06 05 36.2	+0.8
	comp=Z,28nm,0.4s						
PKI	**Pulchoki**	**43.18**	**302**	*e*P	**P**	06 05 37.9	+0.2
	comp=Z,11nm,0.5s						
PKIN	**Phulchoki**	**43.19**	**302**	*e*P	**P**	06 05 38.0	+0.3
	comp=Z,11nm,0.4s						
KKN	**Kakani**	**43.36**	**302**	*e*P	**P**	06 05 39.1	+0.1
	comp=Z,6.3nm,0.4s						
DMN	**Daman**	**43.45**	**302**	*e*P	**P**	06 05 40.3	+0.6
KOLN	**Koldanda**	**44.77**	**301**	*e*P	**P**	06 05 50.9	+0.6
	comp=Z,32nm,0.6s						
DANN	**Dangsing**	**44.81**	**302**	*e*P	**P**	06 05 50.9	+0.2
	comp=Z,38nm,0.5s						
PYUN	**Piuthan**	**45.38**	**301**	*e*P	**P**	06 05 55.7	+0.6
	comp=Z,23nm,0.5s						
MK31	**Makanchi Array**	**53.63**	**324**	P	**P**	06 06 57.9	+0.5
MKAR	**Makanchi Array**	**53.63**	**324**	P	**P**	06 06 56.6	-0.7
	comp=Z,0.3nm,0.4s,baz=114,slow=7.3,SNR=6.9						
MKAR				PcP	**PcP**	06 08 02.5	-0.4
	comp=Z,0.4nm,0.7s,baz=108,slow=4.0,SNR=3.8						
KURK	**Kurchatov**	**57.71**	**326**	P	**P**	06 07 26.5	0.0
KURK				IAmb	IAmb	06 07 29.4	
	comp=Z,2.0nm,1.1s						
KURBB	**Kurchatov Arra**	**57.71**	**326**	P	**P**	06 07 25.9	-0.6
	comp=Z,0.7nm,0.5s,baz=124,slow=7.6,SNR=7.8						
BVAR	**Borovoye Array**	**63.30**	**326**	P	**P**	06 08 04.0	-0.5
	comp=Z,0.7nm,0.4s,baz=151,slow=3.4,SNR=4.4						
RAYN	**Ar Rayn**	**78.44**	**292**	P	**P**	06 09 36.5	-0.4
RAYN				IAmb	IAmb	06 09 37.0	
	comp=Z,1.8nm,0.7s						
BPAW	**Bear Paw Mtn.**	**79.25**	**26**	P	**P**	06 09 42.3	+1.8
BPAW				IAmb	IAmb	06 09 45.0	
	comp=Z,1.2nm,0.9s						
ILAR	**Eielson Array**	**81.04**	**26**	P	**P**	06 09 49.8	-0.3
	comp=Z,0.4nm,0.7s,baz=258,slow=4.5,SNR=4.9						
FINES	**FINESS Array B**	**87.62**	**332**	P	**P**	06 10 22.0	-1.4
	comp=Z,0.5nm,0.5s,baz=117,slow=4.8,SNR=5.4						
YKA	**Yellowknife Ar**	**95.39**	**24**	P	**P**	06 10 59.5	0.0
	comp=Z,0.2nm,0.6s,baz=298,slow=4.1,SNR=3.8						

IDC ***23*** *05:58:10.6±3.5, 4°.09S×142°.28E, h37km±29km, mb3.8/8, mb1 4.2/13, mb1mx3.9/41, mbtmp4.3/13, ML4.3/3, MS3.1/8, Ms1 3.1/8, ms1mx2.9/27, Error ellipse: s-maj=29.1km s-min=15.8km az=76.0*
NEIC ***23*** *05:58:12.1±2.7, 4°.05S±0°.05×141°.98E±0°.05, h35km±1km, mb4.5/19, Error ellipse: s-maj=11.3km s-min=5.2km az=133.0*
DJA ***23*** *05:58:15.8±0.6, 4°.5S±5°×14°.2E±°, h66km±7km, M4.6/13, mb4.6/13, mB4.9/2, MLv4.6/4, Mw(mB)4.1/2*
ISC 23 05:58:12.6±0.6, 4°.18S±0°.06×141°.99E±0°.07, h35km, n52, σ1°.99/48, mb4.4/15, MS3.1/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.10**	**322**	Pn	**Pn**	05 58 45.5	+0.2
	30nm,0.3s,baz=159,slow=8.9,SNR=118						
JAY				Sn	**Sn**	05 59 11.4	+1.2
	108nm,0.3s,baz=297,slow=22,SNR=20						
JAY				LR	LR	05 59 50.6	
	comp=Z,260nm,20.8s,baz=204,slow=45						
JAY	**Jayapura**	**2.10**	**322**	P	**Pn**	05 58 46.4	+1.1
JAY				S	**Sn**	05 59 11.8	+1.6
GENI	**Genyem**	**2.41**	**311**	P	**Pn**	05 58 51.1	+1.5
GENI				S	**Sn**	05 59 19.7	+1.8
SMPI	**Sarmi**	**3.94**	**304**	P	Pn	05 59 13.9	+3.4
PMG	**Port Moresby**	**7.29**	**136**	Pn	Pn	05 59 52.5	-4.3
	2.5nm,0.3s,baz=326,slow=11,SNR=1.9						
PMG				LR	LR	06 02 45.5	
	comp=Z,89nm,21.0s,baz=226,slow=38						
PMG	**Port Moresby**	**7.29**	**136**		**Pn**	05 59 58.3	+1.5
COEN	**Coen**	**9.78**	**173**		**Pn**	06 00 33.0	+2.1
FAKI	**Fak Fak**	**9.81**	**277**	P	**Pn**	06 00 35.0	+3.8
	35nm,0.6s						
FAKI	**Fak Fak**	**9.81**	**277**		**Pn**	06 00 33.4	+2.2
SIJI	**Sorong**	**11.21**	**287**	Pn	**Pn**	06 00 51.9	+1.5
	1.9nm,0.3s,baz=71,slow=11,SNR=8.8						
MTN	**Manton Dam**	**13.76**	**231**		**Pn**	06 01 25.2	-0.1
TNTI	**Ternate**	**15.42**	**288**	P	**P**	06 01 49.7	-2.2
TNTI				IAmb	IAmb	06 01 50.7	
	comp=Z,47nm,1.1s						
WB0	**Warramunga Arr**	**17.17**	**205**		**Pn**	06 02 08.7	-1.2
WB0				IAmb	IAmb	06 02 14.9	
	comp=Z,26nm,0.8s						
WR0	**Warramunga Arr**	**17.28**	**204**		**Pn**	06 02 09.7	-1.6
KNRA	**Kununurra**	**17.31**	**228**	P	**Pn**	06 02 12.4	+0.8
KNRA				IAmb	IAmb	06 02 15.9	
	comp=Z,35nm,0.6s						
WRAB	**Tennant Creek**	**17.34**	**205**	P	**Pn**	06 02 10.7	-1.3
WRAB				IAmb	IAmb	06 02 15.3	
	comp=Z,28nm,0.7s						
WB2	**Warramunga Arr**	**17.35**	**205**	P	**Pn**	06 02 10.6	-1.5
WB2				IAmb	IAmb	06 02 15.5	
	comp=Z,27nm,0.7s						
WRA	**Warramunga Arr**	**17.35**	**205**	P	**Pn**	06 02 10.7	-1.5
	comp=Z,1.8nm,0.3s,baz=23,slow=12,SNR=35						
WRA				LR	LR	06 09 01.3	
	comp=Z,79nm,21.7s,baz=75,slow=37						
SOEI	**Soe**	**18.44**	**252**	P	**Pn**	06 02 28.2	+2.5
	comp=Z,68nm,1.0s						
SOEI	**Soe**	**18.44**	**252**	P	**Pn**	06 02 27.1	+1.4
BATI	**Baumata**	**19.14**	**251**	P	**Pn**	06 02 34.9	+0.9
	comp=Z,4.6nm,0.3s,baz=169,slow=2.8,SNR=5.5						
APSI	**Ampana**	**20.58**	**279**	P	Pn	06 02 50.5	-0.6
	comp=Z,515nmcomp=Z,43nm,1.2s						
AS31	**Alice Springs**	**20.88**	**201**	P	**P**	06 02 51.7	-0.2
AS31				IAmb	IAmb	06 02 54.7	
	comp=Z,12nm,0.8s						
ASAR	**Alice Springs**	**20.89**	**201**	P	**P**	06 02 51.9	0.0
	comp=Z,37nm,0.8s,baz=31,slow=9.6,SNR=191						
ASAR				S	**S**	06 06 38.9	-4.2
	comp=Z,1.8nm,0.8s,baz=18,slow=27,SNR=4.5						
ASAR				LR	LR	06 11 36.6	
	comp=Z,133nm,18.9s,baz=8.5,slow=38						
FITZ	**Fitzroy Crossi**	**21.15**	**228**	P	**P**	06 02 54.6	-0.2
	comp=Z,19nm,1.1s,baz=28,slow=8.7,SNR=15						
FITZ				S	**S**	06 06 43.0	-5.3
	comp=Z,6.1nm,0.7s,baz=111,slow=5.9,SNR=5.6						
FITZ	**Fitzroy Crossi**	**21.15**	**228**	P	**P**	06 02 55.4	+0.6
FITZ				IAmb	IAmb	06 03 00.5	
	comp=Z,19nm,0.9s						
BKSI	**Bulukumba**	**21.82**	**266**	P	**P**	06 03 04.3	+2.2
	comp=Z,30nm,1.3s						
BNSI	**Bone**	**21.83**	**269**	P	**P**	06 03 03.8	+1.7
	comp=Z,38nm,0.9s						
BASI	**Baing, Sumba**	**22.07**	**253**	P	**P**	06 03 06.7	+2.0
	comp=Z,107nm,1.1s						
TTSI	**Tana Toraja**	**22.16**	**272**	P	P	06 03 15.7	+10
EIDS	**Eidsvold**	**22.80**	**158**	P	**P**	06 03 14.0	+1.6
EIDS				IAmb	IAmb	06 03 16.3	
	comp=Z,14nm,0.9s						
WBSI	**Waikabubak, Su**	**23.08**	**255**	P	**P**	06 03 13.3	-2.1
	comp=Z,52nm,0.8s						
STKA	**Stephens Creek**	**27.55**	**181**	P	**P**	06 03 56.0	-0.2
	comp=Z,0.3nm,0.3s,baz=351,slow=13,SNR=1.9						
STKA				LR	LR	06 16 48.8	
	comp=Z,59nm,21.3s,baz=24,slow=40						
STKA	**Stephens Creek**	**27.55**	**181**	IAmb	IAmb	06 04 01.8	
	comp=Z,1.5nm,1.5s						
FORT	**Forrest**	**29.54**	**205**	P	**P**	06 04 15.4	+1.5
FORT				IAmb	IAmb	06 04 21.5	
	comp=Z,11nm,0.8s						
DZM	**Mont Dzumac**	**29.63**	**129**	P	**P**	06 04 17.0	+2.1
DZM				IAmb	IAmb	06 04 24.9	
	comp=Z,20nm,1.4s						
MORW	**Morawa**	**34.91**	**222**	P	**P**	06 05 01.1	0.0
MJAR	**Matsushiro Arr**	**40.67**	**355**	LR	LR	06 19 48.1	
	comp=Z,17nm,20.0s,baz=130,slow=32						
OUZ	**Omahuta**	**42.51**	**141**	P	**P**	06 06 06.1	+1.4
RPZ	**Rata Peaks**	**47.00**	**151**	LR	LR	06 25 21.0	
	comp=Z,33nm,21.8s,baz=222,slow=35						
CMAR	**Chiang Mai Arr**	**48.01**	**299**	LR	LR	06 28 22.0	
	comp=Z,10nm,19.4s,baz=186,slow=38						
SONM	**Songino Array**	**60.47**	**333**	P	**P**	06 08 17.7	-1.4
	comp=Z,0.3nm,0.5s,baz=160,slow=7.6,SNR=1.9						
MK31	**Makanchi Array**	**72.96**	**322**	P	**P**	06 09 36.4	-2.2
MKAR	**Makanchi Array**	**72.96**	**322**	P	**P**	06 09 37.5	-1.0
	comp=Z,1.1nm,0.7s,baz=104,slow=7.6,SNR=5.1						
MAKZ	**Makanchi**	**73.16**	**322**	P	**P**	06 09 38.4	-1.4
VNDA	**Vanda**	**74.05**	**176**	P	**P**	06 09 42.9	-1.6
	comp=Z,0.7nm,0.7s,baz=323,slow=6.9,SNR=4.0						
VNDA	**Vanda**	**74.05**	**176**	P	**P**	06 09 45.4	+1.0
ZALV	**Zalesovo Beam**	**74.86**	**329**	P	**P**	06 09 46.0	-3.5
	comp=Z,0.5nm,0.5s,baz=141,slow=9.3,SNR=1.9						
CCB	**Clear Creek Bu**	**85.41**	**24**	P	**P**	06 10 44.5	-1.6
CCB				IAmb	IAmb	06 10 59.8	
	comp=Z,2.8nm,0.8s						
ILAR	**Eielson Array**	**85.82**	**24**	P	**P**	06 10 44.5	-3.7
	comp=Z,0.6nm,0.6s,baz=254,slow=4.8,SNR=6.9						
LPAZ	**La Paz**	**143.93**	**125**	PKP	**PKPab**	06 17 43.1	-0.3
	comp=Z,0.9nm,0.6s,baz=282,slow=1.9,SNR=8.3						
LPAZ	**La Paz**	**143.93**	**125**		PKPbc	06 17 44.2	+0.3

IDC ***23*** *06:28:19.9±2.4, 4°.84S×102°.80E, h0km, mb4.0/8, mb1 4.2/8, mb1mx3.9/37, mbtmp4.0/8, Error ellipse: s-maj=112.8km s-min=16.7km az=57.0*
NEIC ***23*** *06:28:24.1±1.4, 5°.04S±0°.06×102°.5E±0°.1, h35km±1km, mb4.2/9, Error ellipse: s-maj=18.5km s-min=9.6km az=278.0*
DJA ***23*** *06:28:26.8±0.4, 5°S±2°×10°3E±°, h25km±4km, M4.0/9, MLv4.0/9*
ISC 23 06:28:27.5±1.3, 4°.94S±0°.09×102°.86E±0°.08, h53km±11km, n31, σ0°.89/38, mb4.2/13, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.58**	**9**	P	**Pn**	06 28 39.5	-0.5
MNAI				S	**Sn**	06 28 48.5	-0.4
MNAI	**Manna**	**0.58**	**9**		**Pn**	06 28 39.6	-0.3
MNAI				Sn	**Sn**	06 28 48.8	-0.1
LWLI	**Liwa**	**1.19**	**94**	P	**Pn**	06 28 48.0	0.0
LWLI				S	**Sn**	06 29 02.9	-0.4
LHSI	**Lahat**	**1.28**	**31**	P	**Pn**	06 28 49.7	+0.5
LHSI				S	**Sn**	06 29 06.7	+1.4
MDSI	**Maura Dua**	**1.38**	**71**	P	**Pn**	06 28 51.0	+0.5
MDSI				S	**Sn**	06 29 09.2	+1.5
KASI	**Kota Agung**	**1.73**	**110**	P	**Pn**	06 28 55.4	+0.2
KASI				S	**Sn**	06 29 15.7	-0.4
MASI	**Maura Aman, Be**	**1.89**	**341**	P	**Pn**	06 28 57.6	+0.1
BLSI	**Bandar Lampung**	**2.41**	**100**	P	Pn	06 29 17.0	+12
KRJI	**Kerinci**	**3.15**	**334**	P	**Pn**	06 29 15.8	+0.9
KRJI				S	**Sn**	06 29 52.6	+1.3
PPSI	**Pulau Pagai**	**3.58**	**307**	P	**Pn**	06 29 20.8	+0.3
CISI	**Cisompet, Garu**	**5.57**	**118**	Pn	**Pn**	06 29 48.3	+0.4
JAGI	**Jajag, Banyuwa**	**11.75**	**108**	Pn	**Pn**	06 31 13.2	+0.7
CMAR	**Chiang Mai Arr**	**23.57**	**351**	P	**P**	06 33 31.4	-2.1
	1.1nm,0.3s,baz=187,slow=7.8,SNR=4.2						
FITZ	**Fitzroy Crossi**	**25.82**	**122**	P	**P**	06 33 53.5	-0.6
	2.0nm,0.7s,baz=333,slow=9.3,SNR=3.2						
FITZ	**Fitzroy Crossi**	**25.82**	**122**	P	**P**	06 33 54.0	-0.1
FITZ				IAmb	IAmb	06 33 57.3	
	comp=Z,7.3nm,1.2s						
WB0	**Warramunga Arr**	**34.05**	**118**	P	**P**	06 35 07.3	+0.3
WB0				IAmb	IAmb	06 35 09.2	
	comp=Z,4.4nm,1.3s						
WRA	**Warramunga Arr**	**34.06**	**119**	P	**P**	06 35 06.9	-0.3
	comp=Z,1.1nm,0.4s,baz=312,slow=9.1,SNR=2.3						
WB2	**Warramunga Arr**	**34.08**	**119**	P	**P**	06 35 07.0	-0.2
WB2				IAmb	IAmb	06 35 09.0	
	comp=Z,3.6nm,1.1s						
WR0	**Warramunga Arr**	**34.25**	**119**	P	**P**	06 35 08.4	-0.3
WR0				IAmb	IAmb	06 35 09.6	
	comp=Z,2.7nm,1.1s						
AS31	**Alice Springs**	**35.23**	**125**	P	**P**	06 35 17.4	+0.2
ASAR	**Alice Springs**	**35.23**	**125**	P	**P**	06 35 17.2	0.0
	comp=Z,0.5nm,0.4s,baz=303,slow=8.3,SNR=11						
ASAR				PcP	**PcP**	06 37 47.4	0.0
	comp=Z,0.5nm,0.6s,baz=308,slow=2.3,SNR=6.1						
BBOO	**Buckleboo**	**41.56**	**136**	P	**P**	06 36 10.7	+0.4
STKA	**Stephens Creek**	**45.08**	**131**	P	**P**	06 36 39.1	+0.6
	comp=Z,1.6nm,0.5s,baz=316,slow=8.4,SNR=7.1						
STKA	**Stephens Creek**	**45.08**	**131**	P	**P**	06 36 39.2	+0.6
EIDS	**Eidsvold**	**50.43**	**119**	P	**P**	06 37 20.6	+0.4
KSH	**Kashi**	**50.72**	**333**	P	**P**	06 37 24.4	+2.2
KSH				pP	sP	06 37 37.5	-4.6
KSH				pmax	pmax		
	comp=Z,17nm,1.4s						
KSH				pmax	pmax		
	comp=Z,170nm,4.5s						
SONM	**Songino Array**	**52.64**	**3**	P	**P**	06 37 35.1	-1.3
	comp=Z,1.0nm,0.6s,baz=168,slow=8.3,SNR=5.5						
MK31	**Makanchi Array**	**54.64**	**343**	P	**P**	06 37 49.7	-1.2
MK31				IAmb	IAmb	06 37 49.8	
	comp=Z,1.1nm,0.6s						
MKAR	**Makanchi Array**	**54.64**	**343**	P	**P**	06 37 49.4	-1.6
	comp=Z,1.6nm,0.5s,baz=146,slow=8.4,SNR=21						
ZALV	**Zalesovo Beam**	**60.59**	**348**	P	**P**	06 38 31.2	-

QRZ	Quartz Range	6.09	41		Pn	07 02 02.0	-0.2	
BSWZ	Blackbirch Sta	6.14	54		Pn	07 02 03.4	+0.6	
NNZ	Nelson	6.21	48	Pn	Pn	07 02 04.5	+0.7	
CMWZ	Cape Campbell	6.31	56	Pn	Pn	07 02 06.5	+1.3	
TUWZ	Tuamarina	6.37	52		Pn	07 02 05.8	-0.2	
SNZO	South Karori	6.88	55	Pn	Pn	07 02 11.7	-1.2	
BHW	Baring Head	6.91	56		Pn	07 02 11.7	-1.7	
PLWZ	Palliser	7.04	59		Pn	07 02 13.5	-1.7	
MSWZ	Moikau Station	7.13	58		Pn	07 02 14.6	-1.8	
BFZ	Birch Farm	8.18	57		Pn	07 02 28.8	-1.9	
HIZ	Hauiti	9.01	42	Pn	Pn	07 02 41.8	-0.3	
BKZ	Black Stump Fm	9.34	50	Pn	Pn	07 02 46.4	-0.2	
URZ	Urewera	10.33	49	P	Pn	07 02 56.5	-3.6	
	3.7nm,0.3s,baz=249,slow=4.2,SNR=19							
URZ				S	Sn	07 04 44.7	-9.4	
	7.8nm,0.3s,baz=129,slow=21,SNR=17							
URZ				LR	LR	07 07 50.6		
	comp=Z,150nm,18.8s,baz=225,slow=42							
URZ	Urewera	10.33	49	Pn	Pn	07 02 59.3	-0.7	
OUZ	Omahuta	11.38	27		Pn	07 03 15.9	+1.6	
MXZ	Matakaoa Point	11.49	50	Pn	Pn	07 03 13.9	-1.9	
TAU	Tasmania Unive	14.53	273	Pn	Pn	07 03 56.8	+0.6	
CAN	Canberra	17.20	300	P	P	07 04 32.3	+1.9	
CAN				IAmb	IAmb	07 04 43.1		
	comp=Z,32nm,1.4s							
TOO	Toolangi	18.09	288	P	Pn	07 04 43.9	+3.2	
TOO				IAmb	IAmb	07 04 56.4		
	comp=Z,34nm,1.4s							
DZM	Mont Dzumac	23.42	358	P	P	07 05 37.6	+0.7	
	comp=Z,6.2nm,0.7s,baz=102,slow=21,SNR=3.9							
DZM	Mont Dzumac	23.42	358	P	P	07 05 39.6	+2.6	
EIDS	Eidsvold	23.96	322	P	P	07 05 43.3	+1.5	
EIDS				IAmb	IAmb	07 05 45.7		
	comp=Z,10.0nm,1.0s							
STKA	Stephens Creek	24.10	296	P	P	07 05 43.0	0.0	
	comp=Z,3.5nm,0.9s,baz=141,slow=12,SNR=6.7							
STKA	Stephens Creek	24.10	296	P	P	07 05 44.0	+1.1	
AS31	Alice Springs	34.69	298	P	P	07 07 18.1	+1.2	
ASAR	Alice Springs	34.69	298	P	P	07 07 16.5	-0.5	
	comp=Z,0.9nm,0.6s,baz=136,slow=6.0,SNR=9.0							
ASAR				pP	pP	07 07 32.1	-2.6	
	comp=Z,2.1nm,1.1s,baz=146,slow=9.7,SNR=4.8							
CASY	Casey	36.23	215	P	P	07 07 31.2	+1.6	
CASY				IAmb	IAmb	07 07 49.2		
	comp=Z,7.4nm,1.4s							
WR0	Warramunga Arr	37.09	303	P	P	07 07 37.3	-0.2	
WB2	Warramunga Arr	37.22	302	P	P	07 07 38.4	-0.2	
WRA	Warramunga Arr	37.22	302	P	P	07 07 38.2	-0.4	
	comp=Z,1.4nm,0.8s,baz=138,slow=8.0,SNR=7.4							
WRA				pP	pP	07 07 54.1	-3.0	
	comp=Z,3.7nm,1.1s,baz=137,slow=8.6,SNR=6.2							
WRAB	Tennant Creek	37.22	302	P	P	07 07 38.4	-0.2	
WB0	Warramunga Arr	37.33	303	P	P	07 07 39.2	-0.3	
WB0				IAmb	IAmb	07 07 56.4		
	comp=Z,3.7nm,0.9s							
FITZ	Fitzroy Crossi	43.99	295	LR	LR	07 25 42.2		
	comp=Z,32nm,18.1s,baz=138,slow=34							
FITZ	Fitzroy Crossi	43.99	295	P	P	07 08 34.6	+0.3	
FITZ				IAmb	IAmb	07 08 47.2		
	comp=Z,5.5nm,1.2s							
QSPA	South Pole Qui	44.59	180	P	P	07 08 39.9	+1.2	
	comp=Z,1.5nm,1.0s,baz=280,slow=1.0,SNR=7.1							
QSPA	South Pole Qui	44.59	180	P	P	07 08 40.6	+1.9	
QSPA				IAmb	IAmb	07 08 56.1		
	comp=Z,5.5nm,1.4s							
SNAA	Sanae	62.88	184	P	P	07 10 51.9	-0.1	
SNAA				IAmb	IAmb	07 11 06.8		
	comp=Z,5.1nm,1.4s							
HHC	Hu-ho-hao-te	99.38	321	*eP*	Pdif	07 14 08.6	+0.6	
HHC				pmax	pmax			
	comp=Z,7.0nm,0.9s							
HHC				pmax	pmax			
	comp=Z,53nm,4.5s							
KSH	Kashi	117.58	299	PKP	PKPdf	07 19 07.1	-4.1	
LMN	Caledonia Moun	144.18	70	PKPdf	PKPbc	07 19 59.1	-0.1	
TOA0	Torodi Ar. Sit	145.47	205		PKPdf	07 20 03.6	-0.3	
TORD	Torodi Ar. Bea	145.47	205	PKPbc	PKPdf	07 20 03.6	-0.3	
	comp=Z,3.2nm,0.6s,baz=141,slow=2.1,SNR=22							
TORD				pPKPbc	pPKPab	07 20 23.7	-2.6	
	comp=Z,2.5nm,0.7s,baz=165,slow=1.4,SNR=6.5							
BRTR	Keskin Array B	145.76	277	PKPbc	PKPbc	07 20 04.3	-0.2	
	comp=Z,0.9nm,0.5s,baz=110,slow=3.4,SNR=2.1							
BRTR				pPKPbc	pPKPdf	07 20 23.6	-2.8	
	comp=Z,1.3nm,0.8s,baz=132,slow=2.1,SNR=2.4							
ARCES	ARCESS Array B	149.32	335	PKPbc	PKPbc	07 20 12.3	-0.8	
	comp=Z,2.2nm,0.7s,baz=106,slow=4.3,SNR=8.3							
AKASG	Malin Array Be	151.80	296	PKPbc	PKPbc	07 20 19.4	-0.1	
	comp=Z,0.4nm,0.3s,baz=70,slow=2.7,SNR=4.2							
FIA1	FINESS Array S	152.49	319	PKPbc	PKiKP	07 20 21.0	+0.1	
FINES	FINESS Array B	152.49	319	PKPbc	PKPbc	07 20 20.1	-0.6	
	comp=Z,0.9nm,0.6s,baz=89,slow=7.8,SNR=5.1							

*ANF **23** 07:05:18.8±0.8, 62°.24N× 149°.08W, h75km±17km, ML3.7/4, Error ellipse: s-maj=23.5km s-min=6.4km az=118.0*
*NEIC **23** 07:05:20.9±1.3, 62°.34N±0°.01×148°.88W±0°.07, h42km±11km, Error ellipse: s-maj=4.8km s-min=1.6km az=88.0*
*AEIC **23** 07:05:21.4±1.3, 62°.34N±0°.02×148°.86W±0°.07, h40km±8km, ML3.3/131, Error ellipse: s-maj=4.9km s-min=2.8km az=88.0*

ISC 23 07:05:19.7±1.2, 62°.36N±0°.02×148°.87W±0°.03, h33km±6km, n120, σ1$37/135, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAT6	Susitna Watana	0.57	66		Pb	07 05 32.3	+0.8
WAT6					Sn	07 05 41.2	+1.2
GHO	Glory Hole Cre	0.59	183		Pb	07 05 32.2	+0.5
GHO					Sn	07 05 41.4	+1.2
SML	Sawmill	0.61	155		Pb	07 05 32.3	+0.3
SML					Sn	07 05 41.6	+0.9
WAT2	Susitna Watana	0.62	12		Pn	07 05 33.0	+0.7
WAT2					Sn	07 05 42.8	+1.5
CUT	Chulitna	0.66	275	P	Pn	07 05 33.3	+0.6
	baz=95						
CUT				S	Sn	07 05 43.3	+1.5
	baz=95						
PMR	Palmer	0.78	189		Pn	07 05 34.2	-0.1
SCM	Sheep Creek Mo	0.89	125		Pn	07 05 36.5	+0.4
KNK	Knik Glacier	0.97	168		Pn	07 05 37.5	+0.5
KNK					Sb	07 05 50.9	+0.5
DHY	Denali Highway	1.00	43		Pn	07 05 38.1	+0.6
DHY					Sn	07 05 51.6	+1.1
RND	Reindeer	1.05	0		Pn	07 05 39.2	+0.9
TRF	Thorofare Moun	1.28	330		Pn	07 05 42.1	+0.7
RC01	Rabbit Creek A	1.34	198		Pn	07 05 42.7	+0.7
RC01					Sb	07 06 00.7	-0.2
FIS	Fire Island	1.38	208		Pn	07 05 44.2	+1.7
MCK	McKinley	1.38	359		Pn	07 05 44.0	+1.3
MCK					Sn	07 06 01.6	+1.8
PWL	Port Wells	1.52	170		Pn	07 05 45.1	+0.5
KTH	Kantishna Hill	1.52	323		Pn	07 05 45.7	+1.0
KTH					Sn	07 06 04.2	+0.8
PS11	TAPS Pump St11	1.61	98		Pn	07 05 47.9	+2.1
PPLA	Purkeypile	1.63	291		Pn	07 05 47.0	+0.9
STLK	Strandline Lak	1.65	240		Pn	07 05 47.0	+0.7
PAX	Paxson	1.69	67		Pn	07 05 49.1	+2.2
JPK	Jack Peak	1.69	139		Pn	07 05 48.2	+1.2
GLI	Glacier Island	1.71	150		Pn	07 05 48.0	+0.9
VMT	TAPS Tl Valdez	1.75	136		Pn	07 05 48.5	+0.9
PS10	TAPS Pump St10	1.78	52		Pn	07 05 50.2	+2.0
CAST	Castle Rocks	1.82	307		Pn	07 05 50.0	+1.3
SPCG	Spurr Capps Gl	1.84	236		Pn	07 05 50.5	+1.4
BWN	Browne	1.84	352		Pn	07 05 50.0	+1.0
SLKM	Skilak Lake	1.97	200		Pn	07 05 51.1	+0.4
SPCR	Spurr Chakacha	1.97	235		Pn	07 05 52.1	+1.4
PS12	TAPS Pump St12	1.97	115		Pn	07 05 51.6	+0.8
FID	Port Fidalgo	1.98	144		Pn	07 05 51.7	+0.9
SPBG	Spurr Blockage	1.99	238		Pn	07 05 52.9	+1.7
BPAW	Bear Paw Mtn.	2.00	332		Pn	07 05 51.6	+0.5
WRH	Wood River Hil	2.15	9		Pn	07 05 53.9	+0.7
CHUM	Lake Minchumin	2.19	316		Pn	07 05 54.7	+1.0
NEA	Nenana	2.23	358		Pn	07 05 54.9	+0.6
HDA	Harding Lake	2.23	22	P	Pn	07 05 55.4	+1.0
	baz=203						
HDA				S	Sb	07 06 24.8	-1.7
	baz=203						
HDA				S	Sb	07 06 24.8	-1.7
	baz=203						
HDA	Harding Lake	2.23	22		Pn	07 05 55.3	+1.0
HIN	Hinchinbrook I	2.27	149		Pn	07 05 55.7	+0.8
SEW	Seward	2.28	187		Pn	07 05 56.4	+1.5
RIDG	Independent Ri	2.30	51		Pn	07 05 58.3	+3.0
CCB	Clear Creek Bu	2.35	11		Pn	07 05 56.4	+0.5
EYAK	Cordova Ski Ar	2.35	139		Pn	07 05 57.1	+1.1
PS08	TAPS Pump Stn8	2.38	22		Pn	07 05 57.2	+0.9
MENT	Mentasta	2.45	74		Pn	07 05 59.0	+1.7
DOT	Dot Lake	2.55	57		Pn	07 06 00.8	+2.1
DFR	Drift River	2.55	228		Pn	07 06 00.1	+1.3
GLB	Gilahina Butte	2.56	109		Pn	07 05 59.8	+0.9
TCOL	CIGO, UAF Yank	2.57	10	P	Pn	07 05 59.8	+0.9
	baz=190						
TCOL	CIGO, UAF Yank	2.57	10		Pn	07 05 59.8	+0.9
COLA	College	2.57	10		Pn	07 05 59.7	+0.8
IL31		2.58	19		Pn	07 05 59.8	+0.8
RDJH	Redoubt Jeurge	2.59	229		Pn	07 06 00.3	+0.9
MDM	Murphy Dome	2.63	6		Pn	07 06 00.8	+1.0
RSO	Redoubt South	2.67	226		Pn	07 06 02.0	+1.5
RDWB	Redoubt West	2.68	227		Pn	07 06 01.7	+1.2
RED	Redoubt Volcan	2.70	226		Pn	07 06 02.2	+1.3
SCRK	Sand Creek	2.75	52		Pn	07 06 03.3	+1.8
BRSE	Bradley Lake S	2.78	200		Pn	07 06 02.6	+0.7
BRLK	Bradley Lake	2.78	202		Pn	07 06 02.7	+0.8
VRDI	Verde Repeater	2.81	111		Pn	07 06 03.0	+0.6
MLY	Manley	2.81	344		Pn	07 06 03.1	+0.8
RAGM	Ragged Mountai	2.82	133		Pn	07 06 03.3	+0.8
POKR	Poker Plat Res	2.84	12	P	Pn	07 06 03.7	+0.9
	baz=194						
POKR				S	Sn	07 06 39.1	+3.3
	baz=194						
POKR	Poker Plat Res	2.84	12		Pn	07 06 03.7	+0.9
MCARA	McCarthy VSAT	2.94	107		Pn	07 06 05.3	+1.3
PS07	TAPS Pump Stn7	2.98	5		Pn	07 06 05.8	+1.3
HOM	Homer	3.03	208		Pn	07 06 06.7	+1.5
CNPM	China Poot	3.07	203		Pn	07 06 06.7	+0.9
ILW	Iliamna West	3.09	224		Pn	07 06 07.8	+1.5
ILS	Iliamna Low So	3.15	222		Pn	07 06 08.6	+1.6
MID	Middleton Isla	3.19	156		Pn	07 06 09.4	+2.0
PTPK	Patty Peak	3.26	108		Pn	07 06 09.5	+0.9
KHIT	Khitrov Hills	3.31	123		Pn	07 06 10.7	+1.4
BC03		3.34	75		Pn	07 06 11.1	+1.6
TT01	Tatalina	3.35	283		Pn	07 06 10.0	+0.3
BALM	Baldy	3.38	110		Pn	07 06 11.2	+1.0
GRIN	Grindle Hills	3.39	125		Pn	07 06 10.4	+0.1
KIAG	Kiagna River	3.42	12		Pn	07 06 11.1	+0.3
SVW2	Sparwohn	3.44	251		Pn	07 06 11.6	+0.7
WAX	Waxell Ridge	3.47	121		Pn	07 06 11.7	+0.4
PRP	Porcupine Dome	3.50	23		Pn	07 06 13.0	+1.2
KULT	Kultieth River	3.64	123		Pn	07 06 14.6	+0.9
BARN	Barnard Glacie	3.67	108		Pn	07 06 15.6	+1.3
AU22	Augustine Moun	3.71	218		Pn	07 06 16.6	+1.9
AUL	Augustine Lava	3.73	219		Pn	07 06 16.3	+1.5
AUP	Augustine Pinn	3.74	219		Pn	07 06 16.8	+1.7
AUH	Augustine H	3.74	219		Pn	07 06 17.2	+2.1
AUW	Augustine West	3.75	219		Pn	07 06 16.9	+1.7
YUK2	White River	3.82	95		Pn	07 06 17.8	+1.6
CTGM	Chitina Glacie	3.85	108		Pn	07 06 17.5	+0.8
YAH	Yahtse	3.97	117		Pn	07 06 18.8	+0.4
YUK3	Moose Creek	4.00	95		Pn	07 06 20.1	+1.3
EGAK	Eagle	4.22	51		Pn	07 06 23.2	+1.6
IM03		4.22	332		Pn	07 06 22.5	+0.9
CHX	Chaix Hills	4.40	118		Pn	07 06 25.2	+1.1
FYU	Fort Yukon	4.51	19		Pn	07 06 27.0	+1.4
DAWY	Dawson	4.62	64		Pn	07 06 28.8	+1.7
KAHC	Katmai Hardscr	4.80	222		Pn	07 06 30.4	+0.7
COLD	Coldfoot	4.92	354		Pn	07 06 33.3	+2.0
KDAK	Kodiak Island	4.95	204		Pn	07 06 31.1	-0.5
KABU	Katmai Buttres	5.19	221		Pn	07 06 35.9	+0.8
YUK6	Outpost Mounta	5.20	101		Pn	07 06 36.5	+1.2
PNL	Peninsula	5.34	116		Pn	07 06 36.5	-0.5
BM03	Burnt Mountain	5.40	18		Pn	07 06 39.1	+1.3
YUK7	Dusty Glacier	5.46	105		Pn	07 06 40.0	+1.2
OHAK	Old Harbor	5.61	205		Pn	07 06 39.5	-1.2
HYT	Haines Junctio	5.64	101		Pn	07 06 42.2	+1.0
DHAK	Deception Hill	6.17	117		Pn	07 06 49.1	+0.7
TOLK	Toolik Lake Re	6.32	358	P	Pn	07 06 53.2	+2.7
	baz=177						
TOLK				S	Sn	07 08 02.0	+0.6
	baz=177						
TOLK	Toolik Lake Re	6.32	358		Pn	07 06 53.1	+2.7
EPYK	Eagle Plains	6.63	47	P	Pn	07 06 56.7	+2.0
	baz=238						
EPYK				S	Sn	07 08 10.8	+1.8
	baz=238						
EPYK	Eagle Plains	6.63	47		Pn	07 06 56.7	+2.0
WHY	Whitehorse	6.90	98		Pn	07 06 59.9	+1.4
BESE	Bessie Mountai	7.89	112		Pn	07 07 11.4	-0.6
JIS	Juneau Island	8.26	113		Pn	07 07 16.3	-0.8
SIT	Sitka	8.65	122		Pn	07 07 22.5	0.0
INK	Inuvik	8.74	40		Pn	07 07 24.6	+1.0
C36M	Paulatuk	12.25	45	S	Sn	07 10 21.2	-5.4
	baz=247						
C36M	Paulatuk	12.25	45		Pn	07 08 10.7	-0.8

IDC 23 07:18:39.3±10.0, 7°.21S×154°.77E, h87km±66km, mb3.3/4, mb1 3.5/5, mb1mx3.3/47, mbtmp3.7/5, ML3.5/1, MS3.1/2, Ms1 3.1/2, ms1mx2.5/24, Error ellipse: s-maj=120.7km s-min=30.9km az=109.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.97	316	P	Pn	07 19 38.3	+0.3
	3.2nm,0.3s,baz=322,slow=10,SNR=1.3						
KRVT				S	Sn	07 20 18.5	-5.0
	13nm,0.3s,baz=252,slow=16,SNR=2.1						
WRA	Warramunga Arr	23.52	235	P	P	07 23 41.4	-0.5
	1.3nm,0.9s,baz=62,slow=8.8,SNR=6.4						
ASAR	Alice Springs	25.87	228	P	P	07 24 03.1	0.0
	0.4nm,0.7s,baz=57,slow=7.9,SNR=5.2						
FITZ	Fitzroy Crossi	30.37	246	P	P	07 24 43.4	+0.1
	1.6nm,0.8s,baz=69,slow=14,SNR=1.8						
JCJ	Chichijima	36.22	341	LR	LR	07 38 51.7	
	comp=Z,20nm,21.5s,baz=238,slow=34						
NWAO	Narrogin (SRO)	43.19	228	LR	LR	07 43 43.3	
	comp=Z,38nm,19.6s,baz=357,slow=35						
MKAR	Makanchi Array	83.42	319	P	P	07 30 57.0	-0.3
	0.5nm,0.5s,baz=106,slow=5.2,SNR=5.4						
TORD	Torodi Ar. Bea	152.87	285	PKPbc	PKiKP	07 38 28.1	+0.4
	0.5nm,0.7s,baz=85,slow=2.1,SNR=2.5						

*IDC **23** 07:28:30.2±1.4, 6°.86S× 102°.65E, h0km, mb4.3/13, mb1 4.3/14, mb1mx4.1/51, mbtmp4.3/14, ML4.6/1, MS3.1/2, Ms1 3.1/2, ms1mx2.5/50, Error ellipse: s-maj=46.0km s-min=14.3km az=52.0*
*DJA **23** 07:28:31.0±1.2, 7°.5±4°× 10°.3E±°, h14km±8km, M4.7/13, mB5.6/3, mb4.7/13, MLv4.6/12, Mw(mB)5.1/3*
*NEIC **23** 07:28:32.0±1.6, 7°.02S±0°.06× 102°.58E±0°.08, h20km±4km, mb4.6/26, Error ellipse: s-maj=12.1km s-min=8.9km az=72.0*

ISC 23 07:28:34.6±0.5, 6°.93S±0°.06× 102°.56E±0°.06, h35km, n97, σ1$71/95, mb4.6/36, 2C, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	Kota Agung	2.38	54	P	Pn	07 29 09.0	-2.2
KASI				S	Pn	07 29 09.3	-1.9
LWLI	Liwa	2.42	38	P	Pn	07 29 10.3	-1.6
LWLI				S	Sn	07 29 41.0	+0.7
MNAI	Manna	2.59	9		Pn	07 29 12.5	-1.6
MDSI	Maura Dua	2.92	34	P	Pn	07 29 17.2	-1.4
MDSI				S	Pn	07 29 17.2	-1.4
BLSI	Bandar Lampung	3.09	60	P	Pn	07 29 19.7	-1.3
LHSI	Lahat	3.23	17	P	Pn	07 29 21.7	-1.2
DBJI	Dramaga	4.18	85	P	Pn	07 29 34.8	-1.2
CBJI	Citeko	4.30	83	P	Pn	07 29 37.7	+0.1
CNJI	Cibinong	4.55	95	P	Pn	07 29 37.9	-3.2
XMIS	Christmas Isla	4.67	139	Pn	Pn	07 29 35.9	-6.8
KRJI	Kerinci	4.93	347	P	Pn	07 29 45.2	-1.2
LEM	Lembang	5.03	89	Pn	Pn	07 29 47.1	-0.6
	26nm,0.3s,baz=211,slow=6.0,SNR=6.8						
LEM				LR	LR	07 31 59.9	
	comp=Z,230nm,20.6s,baz=216,slow=42						
CISI	Cisompet, Garu	5.26	97	P	Pn	07 29 48.1	-2.7
	1.0nm7µm219nm,0.6s						
CISI	Cisompet, Garu	5.26	97		Pn	07 29 48.0	-2.7
PDSI	Padang	6.33	341	P	Pn	07 30 03.3	-2.3
	0.2nm25nm,0.6s						
BKNI	Bangkinang	7.37	348	Pn	Pn	07 30 17.3	-2.5
COCO	West Island	7.69	227		Pn	07 30 22.9	-1.2
SMRI	Semarang	7.83	91	P	Pn	07 30 35.5	+9.4
UGM	Wanagama	7.96	98		Pn	07 30 25.7	-2.3
JAGI	Jajag, Banyuwa	11.59	98	Pn	Pn	07 31 13.7	-4.1
SBUM	Sibu	13.41	46		Pn	07 31 43.3	+0.7
BKSI	Bulukumba	17.54	86	P	Pn	07 32 34.8	-1.8
	25nm,1.0s						
MPSI	Mapaga	18.75	68	P	P	07 32 50.9	+0.1
	20nm,0.8s						
KKM	Kota Kinabalu	18.76	47	P	P	07 32 49.4	-1.6
MMRI	Maumere	19.57	96	P	P	07 32 57.1	-2.7
DLV	T Lat	19.66	17	P	P	07 33 01.1	+0.2
APSI	Ampana	19.96	73	P	Pn	07 33 14.3	+8.5
BATI	Baumata	21.12	100	P	P	07 33 16.4	-0.2
	90nm,0.8s,baz=133,slow=5.3,SNR=8.3						
BATI	Baumata	21.12	100	P	P	07 33 16.6	0.0
	72nm,0.9s						
SOEI	Soe	21.66	99	P	P	07 33 20.0	-2.5
	90nm,0.8s						
SOEI	Soe	21.66	99	P	P	07 33 20.9	-1.7
SANI	Sanana	23.85	79	P	P	07 33 42.3	-2.7
	3µm8.6nm,1.4s						
FITZ	Fitzroy Crossi	25.08	118	P	P	07 33 56.9	+0.7
	2.1nm,0.8s,baz=247,slow=9.4,SNR=4.6						
FITZ				S	S	07 38 27.6	+8.9
	0.9nm,0.7s,baz=264,slow=18,SNR=1.5						
FITZ	Fitzroy Crossi	25.08	118	P	P	07 33 55.7	-0.4
CM31	Chiang Mai Arr	25.48	352	P	P	07 34 00.7	+1.0
CM31				IAmb	IAmb	07 34 02.6	
	comp=Z,17nm,0.8s						
CMAR	Chiang Mai Arr	25.48	352	P	P	07 33 59.7	0.0
	comp=Z,8.2nm,0.7s,baz=183,slow=8.5,SNR=33						
CHTO	Chiang Mai	25.83	352	P	P	07 34 03.0	+0.1
CHTO				IAmb	IAmb	07 34 05.1	
	comp=Z,13nm,1.2s						
TNTI	Ternate	25.91	74	P	P	07 34 01.0	-2.7
H01W3	Cape Leeuwin H	29.79	161	T	T	08 05 56.9	
	baz=339,slow=76,SNR=16						
H01W2	Cape Leeuwin H	29.80	161	T	T	08 06 21.4	
	baz=339,slow=76,SNR=25						
H01W1	Cape Leeuwin H	29.81	161	T	T	08 06 21.4	
	baz=339,slow=76,SNR=19						
H08S2	Diego Garcia H	29.82	267	T	T	08 05 54.5	
	SNR=57						
H08S3	Diego Garcia H	29.83	267	T	T	08 06 56.6	
	baz=328,slow=74,SNR=45						
H08S1	Diego Garcia H	29.84	267	T	T	08 06 58.8	
	baz=88,slow=74,SNR=44						
WB0	Warramunga Arr	33.42	116	P	P	07 35 10.3	-0.1
WB0				IAmb	IAmb	07 35 15.1	
	comp=Z,8.4nm,1.3s						
WRA	Warramunga Arr	33.43	116	P	P	07 35 09.3	-1.1
	comp=Z,0.9nm,0.6s,baz=285,slow=12,SNR=13						
WRAB	Tennant Creek	33.44	116	P	P	07 35 10.0	-0.5
WRAB				IAmb	IAmb	07 35 19.0	
	comp=Z,3.6nm,0.7s						
WB2	Warramunga Arr	33.44	116	P	P	07 35 09.8	-0.7
WB2				IAmb	IAmb	07 35 19.0	
	comp=Z,3.9nm,0.7s						
WR0	Warramunga Arr	33.61	116	P	P	07 35 11.4	-0.6
ASAR	Alice Springs	34.39	122	P	P	07 35 18.1	-0.7
	comp=Z,0.6nm,0.5s,baz=299,slow=7.7,SNR=9.1						
CD2	Chengdu	37.65	2	P	P	07 35 47.3	+0.8
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
JAY	Jayapura	38.26	85	LR	LR	07 53 13.6	
	comp=Z,24nm,18.6s,baz=2.5,slow=39						
XAN	Xi'an	41.19	8	P	P	07 36 15.8	-0.2
XAN				pP	pP	07 36 23.8	-1.2
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
XAN	Xi'an	41.19	8	P	P	07 36 16.0	-0.1
XAN				IAmb	IAmb	07 36 24.6	
	comp=Z,11nm,0.7s						
NJ2	Nanjing	41.77	21	*eP*	P	07 36 22.8	+2.1
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
STKA	Stephens Creek	44.02	130	P	P	07 36 40.4	+1.2
	comp=Z,1.1nm,0.7s,baz=315,slow=10,SNR=1.9						
STKA	Stephens Creek	44.02	130	P	P	07 36 39.8	+0.7
CTA	Charters Tower	44.33	112	P	P	07 36 42.3	+0.7
	comp=Z,2.4nm,0.8s,baz=230,slow=7.9,SNR=2.3						
HHC	Hu-ho-hao-te	48.26	9	*eP*	P	07 37 12.6	+0.2
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,41nm,4.9s						
BJI	Beijing	48.40	14	P	P	07 37 13.8	+0.5
BJI				p

SYO	Syowa Base	74.07	199	⇑	*e*P	P	07 40 07.0	+0.3
SYO	Syowa Base	74.07	199	⇑	*e*PcP	PcP	07 40 22.2	+0.5
PETK	Petropavlovsk-	75.74	31		P	P	07 40 16.4	-0.2
	comp=Z,1.1nm,0.6s,baz=180,slow=2.9,SNR=2.8							
MA2	Magadan	76.50	23		P	P	07 40 21.3	+0.5
YKA	Yellowknife Ar	118.27	19		PKP	PKiKP	07 47 18.7	+0.8
	comp=Z,0.1nm,0.7s,baz=316,slow=3.5,SNR=2.1							
NVAR	Mina Array Bea	131.60	43		PKP	PKiKP	07 47 47.0	+1.6
	comp=Z,0.1nm,0.3s,baz=225,slow=5.0,SNR=1.7							
R40A	Maddies Statio	146.02	21			PKPbc	07 48 10.8	-0.4
TX31	Lajitas Ar. Si	146.73	45			PKPbc	07 48 14.1	+0.4
TX32	Lajitas Array	146.73	45			PKPbc	07 48 14.0	+0.2
TXAR	Lajitas Array	146.73	45		PKPbc	PKPab	07 48 14.6	-0.4
	comp=Z,2.0nm,0.9s,baz=274,slow=1.6,SNR=16							
ABTX	Abilene, Hawle	147.14	36			PKPbc	07 48 15.1	+0.4
U40A	Yellville	147.50	24			PKPbc	07 48 15.1	-0.4
FCAR	Ozark Folk Cen	148.19	23			PKPbc	07 48 17.1	-0.3
JCT	Junction City	148.56	39			PKiKP	07 48 19.8	-0.4
MIAR	Mount Ida	148.75	26			PKPbc	07 48 18.6	-0.3
WVT	Waverly	149.42	17			PKPbc	07 48 19.7	-0.8
PLAL	Pickwick Lake	150.42	18			PKPbc	07 48 22.5	-0.5
V53A	Saluda	150.98	9			PKPbc	07 48 23.9	-0.5

IDC ***23*** *07:46:56.2±1.6,31°.87S×179°.96E,h328km±24km,mb3.4/3, mb1 3.7/5,mb1mx3.2/44,mbtmp4.3/5, Error ellipse: s-maj=48.7km s-min=20.2km az=120.0*

WEL ***23*** *07:47:01.7±0.5,32°.5×17°.9E±1°.0,h33km,M4.7/13, mB5.2/7,ML4.9/13,MLv4.8/13,Mw(mB)4.6/7*

ISC 23 07:46:55.6±1.2,32.04S±0.09×179.6W±0.2,h350km,n24, σ2s22/32,mb3.5/3,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
GLKZ	Green Lake	3.13	28	P		Pn	07 47 54.8	-1.4
RAO	Raoul Island	3.14	28	P		Pn	07 47 55.7	-0.6
	15nm,0.3s,baz=272,slow=22,SNR=1.3							
RAO				S		S	07 48 35.4	-10
	15nm,0.3s,baz=89,slow=20,SNR=1.4							
RIZ	Raoul Island	3.14	28	S		S	07 48 33.8	-11
MXZ	Matakaoa Point	5.77	197	P		Pn	07 48 26.6	+3.0
MXZ				S		S	07 49 32.7	-2.4
WMGZ	Waiomatatini S	5.99	195	P		Pn	07 48 27.2	+1.0
WMGZ				S		S	07 49 39.9	+0.4
KUZ	Kuaotunu	6.07	218	P		Pn	07 48 28.6	+1.5
HAZ	Te Kaha	6.09	200	P		Pn	07 48 28.2	+1.0
HAZ				S		S	07 49 40.2	-1.5
PKGZ	Pakihiroa	6.13	197	P		Pn	07 48 29.9	+2.1
PKGZ				S		S	07 49 41.9	-0.9
PUZ	Puketiti	6.27	196	P		Pn	07 48 31.5	+2.2
PUZ				S		S	07 49 43.5	-2.0
RUGZ	Raukumara Rang	6.32	200	P		Pn	07 48 32.4	+2.4
RUGZ				S		S	07 49 44.4	-2.3
TWGZ	Tauwhareparae	6.43	197	P		Pn	07 48 35.4	+4.2
OPRZ	Ohinepanea	6.59	207	P		Pn	07 48 37.5	+4.5
CNGZ	Carnagh Statio	6.67	195	P		Pn	07 48 35.2	+1.2
MWZ	Matawai	6.70	200	P		Pn	07 48 34.6	+0.2
MWZ				S		S	07 49 52.4	-2.2
URZ	Urewera	6.76	202	P		Pn	07 48 37.2	+2.2
	14nm,0.3s,baz=272,slow=5.4,SNR=51							
URZ				S		S	07 49 54.0	-1.9
	5.6nm,0.3s,baz=302,slow=23,SNR=9.9							
URZ	Urewera	6.76	202	P		Pn	07 48 34.6	-0.4
URZ				S		S	07 49 53.7	-2.1
RAGZ	Rawiri	6.88	200	P		Pn	07 48 40.6	+4.1
MUGZ	Murupara	7.07	204	P		Pn	07 48 41.2	+2.5
SNGZ	Shannon Statio	7.17	199	P		Pn	07 48 41.3	+1.5
PRRZ	Plateau Road	7.22	206	P		Pn	07 48 43.8	+3.4
STKA	Stephens Creek	32.79	260	P		P	07 52 57.6	+0.3
	1.2nm,0.4s,baz=105,slow=12,SNR=4.7							
ASAR	Alice Springs	41.67	270	P		P	07 54 10.7	-0.7
	1.2nm,0.5s,baz=105,slow=7.5,SNR=26							
WRA	Warramunga Arr	42.81	275	P		P	07 54 19.6	-0.8
	2.1nm,0.4s,baz=113,slow=8.0,SNR=33							
FINES	FINESS Array B	146.17	338	PKPbc		PKPab	08 05 55.4	-0.5
	0.6nm,0.5s,baz=30,slow=3.9,SNR=4.0							

NIED ***23*** *07:50:00,39°.60N×143°.80E,h14km,Mw4.2 Best double couple: M₀2.07000×10¹⁵ NP1:φ=23.00000°,δ52.00000°, λ103.00000°. NP2:φ=184.00000°,δ40.00000°,λ74.00000°.*

JMA ***23*** *07:50:14.8±0.2,39°.61N×143°.80E,h15km,M4.6*

IDC ***23*** *07:50:15.6±0.7,39°.49N×143°.60E,h0km,mb4.2/23, mb1 4.3/29,mb1mx4.1/55,mbtmp4.2/29,ML3.3/5,MS3.4/17, Ms1 3.4/17,ms1mx3.2/44,Error ellipse: s-maj=16.4km s-min=13.4km az=151.0*

MOS ***23*** *07:50:19.0±1.1,39°.64N×143°.58E,h34km,mb4.7/19,Error ellipse: s-maj=8.5km s-min=5.0km az=92.5*

NEIC ***23*** *07:50:21.1±1.7,39°.52N±0°.02×143°.6E±0°.1,h35km±1km, mb4.5/33,Error ellipse: s-maj=15.1km s-min=3.7km az=272.0*

ISC 23 07:50:17.4±0.5,39°.57N±0°.05×143°.60E±0°.04,h11km,n145, σ1s94/153,mb4.5/52,MS3.6/14,8C-2D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.38	271	P		Pn	07 50 42.0	-0.6
MIYJ				*e*S		Sg	07 51 01.4	-0.4
JTH	Tanohata	1.39	286	P		Pn	07 50 41.9	-0.8
JTH				*e*S		Sb	07 51 01.4	+0.3
OFUJ	Ofunato	1.58	252	P		Pn	07 50 44.8	-0.5
JKEN	Kujiedanarisaw	1.59	294	P		Pn	07 50 44.5	-0.9
JOM	Ohasama	1.79	268	P		Pn	07 50 48.3	+0.1
JANG	Nango	1.79	297	P		Pn	07 50 47.2	-1.1
JMK	Ichinoseki	1.95	252	P		Pn	07 50 50.3	-0.1
JMK				*e*S		Sb	07 51 16.1	-1.2
ERM	Erimo	2.46	352	*ce*P		Pn	07 50 56.8	-0.7
ERM				pmax		pmax		
	comp=Z,59nm,0.6s							
ERM	Erimo	2.46	352			Pn	07 50 56.9	-0.6
JYK	Kaneyama	2.60	256	P		Pn	07 50 59.6	+0.2
JOT	Ohata	2.66	314	P		Pn	07 51 00.2	0.0
JNBK	Urakawa-nobuka	2.78	347	*e*S		Sn	07 51 35.8	+0.4
JKB	Kayabe	3.03	321	P		Pn	07 51 05.9	+0.7
JCH	Churui	3.04	357	P		Pn	07 51 04.7	-0.8
JCH				*e*S		Sn	07 51 39.8	-2.1
JFT	Otama	3.28	232	P		Pn	07 51 08.6	-0.1
JAK	Akkeshi	3.52	13	P		Pn	07 51 10.9	-1.1
JFR	Furan	3.67	348	P		Pn	07 51 15.1	+1.0
JAR	Ashorobuto	3.72	2	P		Pn	07 51 13.5	-1.3
JAR				*e*S		Sn	07 51 56.3	-2.3
NMR	Nemuro--Hokkai	4.12	22	*e*P		Pn	07 51 18.3	-1.9
NMR				*e*S		Sn	07 52 03.3	-5.0
GLVR	Golovnino	4.40	18	*e*P		Pn	07 51 23.1	-1.0
GLVR				*e*S		Sn	07 52 10.5	-4.9
GLVR				smax		smax		
	comp=N,544nm,0.4s							
GLVR				smax		smax		
	comp=E,391nm,0.3s							
JKA	Kamikawa-asahi	4.60	351			Pn	07 51 27.4	+0.6
ASAJ	Asahikawa	4.60	351	Pn		Pn	07 51 27.4	+0.5
	comp=E,2.9nm,0.3s,baz=212,slow=12,SNR=6.7							
RUSJ	Misakicho	4.69	15	*e*P		Pn	07 51 27.6	-0.5
RUSJ				*e*S		Sn	07 52 17.9	-4.6
GRPR	Tuman	4.71	19	*e*P		Pn	07 51 26.1	-2.2
GRPR				*e*S		Sn	07 52 17.5	-5.3
GRPR				pmax		pmax		
	comp=Z,165nm,0.3s							
GRPR				pmax		pmax		
	comp=N,70nm,0.2s							
GRPR				pmax		pmax		
	comp=E,104nm,0.3s							
GRPR				smax		smax		
	comp=E,669nm,0.4s							
GRPR				smax		smax		
	comp=N,194nm,0.3s							
LAGR	Lagunnoye	4.77	19	*e*P		Pn	07 51 28.2	-0.9
LAGR				*e*S		Sn	07 52 19.9	-4.4
LAGR				pmax		pmax		
	comp=Z,237nm,0.3s							
LAGR				smax		smax		
	comp=N,535nm,0.3s							
LAGR				smax		smax		
	comp=E,916nm,0.3s							
YUK	Yuzh-Kuril'sk	4.77	20	*e*P		Pn	07 51 28.0	-1.1
YUK				*e*S		Sn	07 52 19.9	-4.4
YUK				smax		smax		
	comp=E,901nm,0.5s							
YUK				smax		smax		
	comp=N,392nm,0.3s							
MJAR	Matsushiro Arr	5.22	236	Pn		Pn	07 51 35.8	+0.3
	comp=N,0.7nm,0.3s,baz=42,slow=12,SNR=103							
MJAR				LR		LR	07 53 50.4	
	comp=N,204nm,19.4s,baz=65,slow=42							
MAJO	Matsushiro	5.22	236	*i* P		Pn	07 51 36.7	+1.3
MAJO	Matsushiro	5.22	236			Pn	07 51 36.8	+1.3
MAT	Matsushiro	5.22	236	P		Pn	07 51 36.8	+1.4
MAT				*e*S		Sn	07 52 36.0	+0.3
MJB9	Matsu-Tunnel	5.22	236			Pn	07 51 36.8	+1.4
KUR	Kuril'sk	6.48	28	*e*P		Pn	07 51 52.9	+0.3
KUR				*e*S		Sn	07 53 01.7	-4.7
KUR				pmax		pmax		
	comp=Z,34nm,0.4s							
KUR				smax		smax		
	comp=N,106nm,0.6s							
KUR				smax		smax		
	comp=E,100nm,0.4s							
INU	Inuyama	6.72	233			Pn	07 51 56.9	+0.9
JHJ	Hachijo jima 2	7.14	207	Sn		Sn	07 53 14.4	-8.5
	comp=E,19nm,0.3s,baz=42,slow=17,SNR=1.1							
JHJ				LR		LR	07 55 16.7	
	comp=E,191nm,18.0s,baz=84,slow=43							
YSS	Yuzh-Sakhalins	7.40	355	⇓	*e*P	Pn	07 52 06.9	+1.6
YSS					*e*S	Sn	07 53 25.1	-4.2
YSS				pmax		pmax		
	comp=Z,20nm,1.3s							
YSS				MLR		MLR		
	comp=Z,400nm,15.0s							
YSS				MLR		MLR		
	comp=N,300nm,19.0s							
TEY	Ternei	7.53	319	⇑	*e*P	Pn	07 52 05.7	-1.3
TEY				pmax		pmax		
	comp=Z,10.0nm,1.0s							
USA0B	Ussuriysk Arra	9.82	302	P		Pn	07 52 41.9	+3.5
USA0B	Ussuriysk Arra	9.82	302			Pn	07 52 41.9	+3.5
USRK	Ussuriysk Ar.	9.82	302	Pn		Pn	07 52 39.9	+1.5
	baz=97,slow=12,SNR=15							
USRK				LR		LR	07 56 25.5	
	comp=Z,170nm,18.9s,baz=148,slow=38							
MDJ	Mudanjiang	11.56	300	P		Pn	07 53 04.3	+2.0
MDJ				pP			07 53 11.8	
MDJ				sP			07 53 16.9	
MDJ				S		Sn	07 55 13.3	+1.9
MDJ				sS			07 55 25.3	
MDJ				pmax		pmax		
	comp=Z,13nm,0.8s							
MDJ				pmax		pmax		
	comp=Z,210nm,4.7s							
MDJ				LR		LR		
	comp=N,300nm,12.1s							
MDJ				LR		LR		
	comp=E,430nm,13.5s							
MDJ				LR		LR		
	comp=Z,550nm,13.5s							
JNU	Nakatsue	12.11	242	LR		LR	07 58 16.8	
	comp=Z,288nm,18.1s,baz=48,slow=40							
KSRS	Korea Array	12.46	265	Pn		Pn	07 53 16.1	+1.4
	comp=Z,0.2nm,0.3s,baz=91,slow=13,SNR=12							
KSRS				LR		LR	07 57 43.5	
	comp=Z,159nm,18.3s,baz=81,slow=36							
KLR	Kul'dur	12.83	323	Pn		Pn	07 53 20.4	+0.7
	comp=Z,0.1nm,0.3s,baz=145,slow=7.3,SNR=5.0							
KLR				LR		LR	07 58 34.6	
	comp=Z,221nm,18.1s,baz=123,slow=39							
KLR	Kul'dur	12.83	323	*ce*P		Pn	07 53 18.7	-0.9
KLR				pmax		pmax		
	comp=Z,3.0nm,1.0s							
PETK	Petropavlovsk-	16.63	31	Pn		P	07 54 12.1	-0.6
	baz=209,slow=12,SNR=6.4							
PETK				LR		LR	08 02 06.1	
	comp=Z,37nm,18.2s,baz=236,slow=42							
ZEA	Zeya	18.01	327	*e*P		Pn	07 54 25.0	-2.5
ZEA				pmax		pmax		
	comp=Z,15nm,0.8s							
MA2	Magadan	20.53	10	P		P	07 54 55.7	+0.2
	comp=Z,17nm,0.7s,baz=189,slow=9.4,SNR=11							
MA2				LR		LR	08 03 17.2	
	comp=Z,71nm,18.1s,baz=186,slow=38							
MA2	Magadan	20.53	10	*ce*P		P	07 54 56.6	+1.1
MA2				pmax		pmax		
	comp=Z,11nm,0.7s							
MA2	Magadan	20.53	10	P		P	07 54 56.3	+0.8
MA2				IAmb		IAmb	07 54 57.9	
	comp=Z,18nm,0.8s							
BJI	Beijing	21.05	280	P		P	07 54 59.3	-2.0
BJI				pmax		pmax		
	comp=Z,10.0nm,0.7s							
TIA	Tai'an	21.14	269	P		P	07 55 02.3	0.0
TIA				pmax		pmax		
	comp=Z,14nm,0.9s							
NJ2	Nanjing	21.39	257	*e*P		P	07 55 06.5	+1.6
NJ2				pmax		pmax		
	comp=Z,13nm,0.5s							
SEY	Seymchan	23.98	10	P		P	07 55 31.9	+0.3
	comp=Z,10nm,0.8s,baz=190,slow=6.7,SNR=27							
YAK	Yakutsk	24.04	344	*i* P		P	07 55 32.9	+0.8
YAK				pmax		pmax		
	comp=Z,13nm,0.6s							
HHC	Hu-ho-hao-te	24.43	283	*e*P		P	07 55 37.8	+1.6
HHC				pmax		pmax		
	comp=Z,9.0nm,0.9s							
HHC				pmax		pmax		
	comp=Z,41nm,4.0s							
HHC				LR		LR		
	comp=N,63nm,9.5s							
HHC				LR		LR		
	comp=E,100nm,8.0s							
HHC				LR		LR		
	comp=Z,120nm,9.6s							
WHN	Wuhan	25.50	258	⇓	P	P	07 55 45.9	+0.2
ULN	Ulaanbaatar	27.48	300	*ce*	P	P	07 56 04.0	+0.4
ULN				pmax		pmax		
	comp=Z,11nm,1.2s							
ULN	Ulaanbaatar	27.48	300	P		P	07 56 03.9	+0.2
ULN				IAmb		IAmb	07 56 05.3	
	comp=Z,11nm,1.1s							
SONM	Songino Array	27.92	300	P		P	07 56 07.4	-0.1
	comp=Z,2.8nm,0.7s,baz=101,slow=8.5,SNR=9.7							
SONM				LR		LR	08 07 59.0	
	comp=Z,176nm,19.1s,baz=252,slow=38							
H11N2	WAKE ISLAND Hy	28.15	128	T		T	08 25 40.3	
	baz=318,slow=75,SNR=59							
H11N1	WAKE ISLAND Hy	28.16	128	T		T	08 25 40.3	
	baz=318,slow=75,SNR=59							
H11N3	WAKE ISLAND Hy	28.17	128	T		T	08 25 40.3	
	baz=318,slow=75,SNR=58							
XAN	Xi'an	28.20	270	P		P	07 56 10.3	+0.2
XAN				pP		pwP	07 56 18.5	+2.1
XAN				pmax		pmax		
	comp=Z,5.0nm,1.1s							
H11S1	WAKE ISLAND Hy	28.97	130	T		T	08 26 41.6	
	baz=322,slow=76,SNR=11							
H11S3	WAKE ISLAND Hy	28.98	130	T		T	08 26 40.2	
	baz=322,slow=76,SNR=8.2							
H11S2	WAKE ISLAND Hy	28.99	130	T		T	08 26 40.8	
	baz=322,slow=76,SNR=9.9							
TLY	Talaya	30.07	307	P		P	07 56 26.9	+0.4
	comp=Z,2.9nm,0.5s,baz=112,slow=16,SNR=3.3							
TLY				LR		LR	08 08 26.3	
	comp=Z,42nm,19.6s,baz=114,slow=36							
TLY	Talaya	30.07	307	P		P	07 56 27.8	+1.3
BILL	Bilibino	31.11	16	*e*P		P	07 56 35.7	+0.2
BILL				*e*PPP		PPP	07 57 42.7	
BILL				pmax		pmax		
	comp=Z,5.0nm,1.4s							
LZH	Lanzhou	31.42	276	*e*P		P	07 56 39.3	+0.6
LZH				pP		pwP	07 56 50.3	+5.2
LZH				sP		sP	07 56 52.4	+10
LZH				pmax		pmax		
	comp=Z,21nm,1.0s							
CD2	Chengdu	33.45	268	P		P	07 56 56.0	-0.4
CD2				S		S	08 02 15.4	-2.4
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
CD2				pmax		pmax		
	comp=Z,120nm,3.7s							
CD2				LR		LR		
	comp=N,280nm,11.2s							
CD2				LR		LR		
	comp=E,260nm,15.2s							
CD2				LR		LR		
	comp=Z,290nm,13.5s							
GTA	Gaotai	33.54	284	*eP*		P	07 56 58.5	+1.2
GTA				pP		pwP	07 57 09.4	+6.2
GTA				sP		sP	07 57 12.8	+12
GTA				pmax		pmax		
	comp=Z,10.0nm,1.2s							
GTA				pmax		pmax		
	comp=Z,26nm,4.8s							
GTA				LR		LR		
	comp=N,72nm,11.7s							
GTA				LR		LR		
	comp=E,340nm,13.3s							
GTA				LR		LR		
	comp=Z,240nm,16.8s							
RDOG	Red Dog Mine	40.46	28	P		P	07 57 59.8	+4.3
RDOG				IAmb		IAmb	07 58 03.6	
	comp=Z,8.1nm,0.6s							
WMQ	Urumqi	41.29	295	*e*P		P	07 58 04.8	+2.0
WMQ				sP		pwP	07 58 19.0	+10
WMQ				pmax		pmax		
	comp=Z,18nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,48nm,3.7s							
WMQ				LR		LR		
	comp=N,190nm,21.3s							
WMQ				LR		LR		
	comp=E,410nm,21.3s							
WMQ				LR		LR		
	comp=Z,320nm,22.9s							
ZAA0	Zalesovo Array	41.53	310	P		P	07 58 04.3	-0.2
ZALV	Zalesovo Beam	41.53	310	P		P	07 58 04.9	+0.4
	comp=Z,3.2nm,0.5s,baz=89,slow=7.9,SNR=11							
ZALV				PcP		PcP	08 00 01.9	+0.2
	comp=Z,2.2nm,0.7s,baz=91,slow=5.1,SNR=3.0							
CMAR	Chiang Mai Arr	43.82	254	P		P	07 58 23.6	+0.1
	comp=Z,3.3nm,1.0s,baz=44,slow=6.9,SNR=6.5							
CMAR				LR		LR	08 18 39.9	
	comp=Z,31nm,18.4s,baz=117,slow=39							
KDAK	Kodiak Island	44.07	44	P		P	07 58 28.6	+3.6
KDAK				pmax		pmax		
	comp=Z,8.0nm,1.3s							
KDAK	Kodiak Island	44.07	44	P		P	07 58 28.6	+3.6
KDAK				IAmb		IAmb	07 58 38.7	
	comp=Z,8.1nm,1.2s							
MK31	Makanchi Array	44.28	300	P		P	07 58 27.2	+0.2
MK31				pmax		pmax		
	comp=Z,4.0nm,0.9s							
MK31	Makanchi Array	44.28	300	P		P	07 58 27.2	+0.2
MK31				IAmb		IAmb	07 58 45.2	
	comp=Z,4.3nm,0.8s							
MKAR	Makanchi Array	44.28	300	P		P	07 58 27.2	+0.2
	comp=Z,3.8nm,0.7s,baz=84,slow=9.0,SNR=30							
MKAR				LR		LR	08 17 47.7	
	comp=Z,70nm,18.3s,baz=78,slow=37							
MAKZ	Makanchi	44.48	300	P		P	07 58 28.3	-0.3
MAKZ				pmax		pmax		
	comp=Z,6.0nm,0.8s							
MAKZ	Makanchi	44.48	300	P		P	07 58 28.3	-0.3
MAKZ				IAmb		IAmb	07 58 45.2	
	comp=Z,6.0nm,0.8s							
TOLK	Toolik Lake Re	45.43	28	P		P	07 58 37.2	+1.4
KURK	Kurchatov	45.77	306	*ce*P		P	07 58 38.6	-0.1
KURK				pmax		pmax		
	comp=Z,7.0nm,0.6s							
KURK	Kurchatov	45.77	306	P		P	07 58 38.5	-0.1
KURBB	Kurchatov Arra	45.84	306	P		P	07 58 39.4	+0.1
	comp=Z,6.9nm,0.6s,baz=81,slow=8.3,SNR=19							
IL31		46.43	34	P		P	07 58 44.0	+0.4
ILAR	Eielson Array	46.43	34	P		P	07 58 44.2	+0.5
	comp=Z,0.9nm,0.7s,baz=262,slow=6.7,SNR=17							
PRP	Porcupine Dome	46.97	33	P		P	07 58 49.6	+1.4
PRP				IAmb		IAmb	07 59 02.6	
	comp=Z,3.8nm,0.9s							
SCRK	Sand Creek	47.74	35	P		P	07 58 55.1	+1.0
TARG	Taragay, Kyrgy	48.86	295	P		P	07 59 04.2	+0.8
BVAR	Borovoye Array	50.17	311	P		P	07 59 13.4	+0.6
	comp=Z,4.6nm,0.7s,baz=76,slow=8.2,SNR=14							
BRVK	Borovoye	50.22	311	*ce*P		P	07 59 14.2	+1.1
BRVK				pmax		pmax		
	comp=Z,4.0nm,0.8s							
BRVK	Borovoye	50.22	311	P		P	07 59 13.0	-0.2
BRVK				IAmb		IAmb	07 59 14.9	
	comp=Z,4.7nm,0.7s							
EPYK	Eagle Plains	50.47	31	P		P	07 59 16.6	+1.8
EPYK				IAmb		IAmb	07 59 17.4	
	comp=Z,3.1nm,0.8s							
AAK	Ala-Archa	50.83	297	P		P	07 59 18.2	+0.1
	comp=Z,0.9nm,0.3s,baz=73,slow=11,SNR=1.8							
AAK	Ala-Archa	50.83	297	P		P	07 59 18.4	+0.3
INK	Inuvik	51.34	28	P		P	07 59 22.4	+1.1
	comp=Z,2.0nm,0.7s,baz=291,slow=5.9,SNR=8.8							
INK	Inuvik	51.34	28	P		P	07 59 22.7	+1.4
ARSB	Arslanbob	52.37	296	P		P	07 59 30.2	+0.6
ARSB				pmax		pmax		
	comp=Z,14nm,1.3s							
ARSB	Arslanbob	52.37	296	P		P	07 59 30.2	+0.6
KK31	Karatay Array	53.37	299	P		P	07 59 36.3	-0.5
KK31				pmax		pmax		
	comp=Z,5.0nm,1.3s							
KK31	Karatay Array	53.37	299	P		P	07 59 36.3	-0.5
KK31				IAmb		IAmb	07 59 37.7	
	comp=Z,4.8nm,1.2s							
C36M	Paulatuk	54.40	26	P		P	07 59 44.7	+0.8
ARU	Arti	55.62	318	P		P	07 59 52.6	-0.3
	comp=Z,2.7nm,0.2s,baz=62,slow=3.4,SNR=8.2							
ARU	Arti	55.62	318	*c* *i*P		P	07 59 52.5	-0.4
ARU							08 01 54.1	
ARU				S		S	08 07 35.7	-2.7
ARU				SS		SS	08 11 14.2	-8.7
ARU				pmax		pmax		
	comp=Z,9.0nm,0.9s							
ARU				MLR		MLR		
	comp=Z,145nm,14.0s							
ARU	Arti	55.62	318	P		P	07 59 53.1	+0.2
KBL	Kabul	58.13	290	P		P	08 00 10.7	-0.6
KBL				pmax		pmax		
	comp=Z,6.0nm,1.2s							
KBL	Kabul	58.13	290	P		P	08 00 10.7	-0.6
KBL				IAmb		IAmb	08 00 11.8	
	comp=Z,6.3nm,1.1s							
AKTO	Aktyubinsk	58.28	311	P		P	08 00 11.8	-0.1
	comp=Z,1.8nm,0.7s,baz=71,slow=12,SNR=6.4							
WB0	Warramunga Arr	59.65	190	P		P	08 00 20.7	-0.9
RES	Resolute Bay	59.71	15	P		P	08 00 21.8	+0.4
RES				pmax		pmax		
	comp=Z,4.0nm,0.9s							
RES	Resolute Bay	59.71	15	P		P	08 00 21.8	+0.4
RES				IAmb		IAmb	08 00 22.7	
	comp=Z,3.9nm,0.9s							
WR0	Warramunga Arr	59.82	190	P		P	08 00 21.8	-1.0
WR0				IAmb		IAmb	08 00 36.6	
	comp=Z,4.0nm,1.1s							
WB2	Warramunga Arr	59.83	190	P		P	08 00 25.4	+2.5
WB2				IAmb		I

NOA				LR	LR	08 37 46.1	
	comp=Z,31nm,18.6s,baz=30,slow=39						
AKASG	**Malin Array Be**	**73.33**	**323**	P	**P**	**08 01 47.8**	**-1.0**
	comp=Z,2.8nm,0.7s,baz=45,slow=6.3,SNR=8.3						
AKASG	**Malin Array Be**	**73.33**	**323**	*i* P	**P**	**08 01 47.7**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PDAR	**Pinedale Array**	**74.67**	**47**	P	**P**	**08 01 57.2**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=242,slow=3.2,SNR=3.9						
PV23	**Carpenter Ridg**	**77.78**	**50**	P	**P**	**08 02 14.8**	**-0.1**
PV13	**Radium Mtn., P**	**78.09**	**50**	P	**P**	**08 02 18.9**	**+2.2**
BRTR	**Keskin Array B**	**78.44**	**312**	LR	LR	08 41 43.6	
	comp=Z,14nm,18.1s,baz=18,slow=39						
CLL	**Collm**	**79.73**	**331**	*e*P	**P**	**08 02 28.0**	**+2.9**
CLL				*e*pP	**PcP**	**08 02 36.0**	**+3.2**
CLL				*e*sP	pwP	08 02 40.0	+8.5
TXAR	**Lajitas Array**	**87.22**	**54**	P	**P**	**08 03 04.3**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=222,slow=1.2,SNR=2.8						
ESDC	**Sonseca Array**	**95.74**	**335**	LR	LR	08 52 43.5	
	comp=Z,24nm,20.7s,baz=190,slow=39						
TSUM	**Tsumeb**	**129.57**	**277**	PKPdf	**PKPdf**	**08 09 25.0**	**-1.8**
SNAA	**Sanae**	**143.68**	**197**	PKIKP	PKPbc	08 09 48.9	+0.1
SNAA	**Sanae**	**143.68**	**197**	PKPpre	PKPbc	08 09 48.9	+0.1
PSGCX	**Pisagua**	**144.84**	**65**		**PKPdf**	**08 09 54.6**	**-0.3**

NNC 23 07:55:20.1±0.7, 51°35N×75°51E, h0km, mb3.6, mpv3.0, 5C-2D, Error ellipse: s-maj=7.5km s-min=3.6km az=174.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.04**	**110**	⇑Pn	Pn	07 55 56.0	+0.4
	11nm,0.5s,baz=296,slow=16						
KURBB				⇑Sn	Sn	07 56 22.8	+0.9
	24nm,0.5s,baz=292,slow=31						
BRZS	**Berezniki**	**2.27**	**234**	Pg	Pb	07 56 01.7	-0.1
	9.7nm,0.2s						
BRZS				Lg	Lg	07 56 32.1	
	14nm,0.6s						
BVA1	**Borovoye Array**	**3.57**	**300**	⇓Pg	Pb	07 56 24.5	+0.4
BVA1				⇑Lg	Lg	07 57 14.5	
OTUK	**Ortayu**	**3.73**	**215**	Pg	Pb	07 56 28.1	+1.3
	0.8nm,0.9s						
OTUK				Lg	Lg	07 57 17.1	
	1.9nm,0.4s						
OTUK	**Ortayu**	**3.73**	**215**	⇑Pg	Pb	07 56 28.0	+1.2
	1.1nm,0.5s						
OTUK				⇓Lg	Lg	07 57 17.9	
	2.5nm,0.5s						
MK31	**Makanchi Array**	**6.37**	**133**	⇑Lg	Lg	07 58 38.7	
	9.1nm,1.0s,baz=83,slow=10,SNR=4.2						

WEL 23 08:16:36.8, 41°S±1°×17°3E±°, h69km±3km, M3.4/12, ML3.6/12, MLv3.4/12, Error ellipse: s-maj=0.0km s-min=0.0km az=105.8, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNZ	**Nelson**	**0.26**	**347**	P	Pn	08 16 47.7	+0.2
NNZ				S	Sn	08 16 55.0	-0.4
TUWZ	**Tuamarina**	**0.37**	**84**	P	Pn	08 16 48.8	+0.4
TUWZ				S	Sn	08 16 56.9	+0.1
BSWZ	**Blackbirch Sta**	**0.40**	**128**	P	Pn	08 16 49.4	+0.8
BSWZ				S	Sn	08 16 57.7	+0.5
THZ	**Tophouse**	**0.51**	**234**	P	Pn	08 16 50.1	+0.4
THZ				S	Sn	08 17 00.0	+1.0
CMWZ	**Cape Campbell**	**0.63**	**116**	P	Pn	08 16 52.3	+1.4
TCW	**Tory Channel**	**0.67**	**68**	P	Pn	08 16 52.2	+0.9
TCW				S	Sn	08 17 02.8	+0.9
DUWZ	**D'Urville Isla**	**0.75**	**28**	P	Pn	08 16 53.5	+1.2
DUWZ				S	Sn	08 17 05.0	+1.3
KHZ	**Kahutara**	**0.95**	**176**	P	Pn	08 16 55.6	+1.1
KHZ				S	Sn	08 17 08.7	+0.9
QRZ	**Quartz Range**	**0.95**	**312**	P	Pn	08 16 55.3	+0.8
WEL	**Wellington**	**1.01**	**80**	P	Pn	08 16 56.1	+0.9
BHW	**Baring Head**	**1.07**	**87**	P	Pn	08 16 56.4	+0.4
KIW	**Kapiti Island**	**1.25**	**62**	P	Pn	08 16 59.6	+1.1
CAW	**Cannon Point**	**1.27**	**74**	P	Pn	08 16 59.2	+0.6
DSZ	**Denniston Nort**	**1.27**	**257**	P	Pn	08 16 59.6	+0.9
MSWZ	**Moikau Station**	**1.35**	**88**	P	Pn	08 16 59.7	0.0
PLWZ	**Palliser**	**1.36**	**95**	P	Pn	08 16 59.6	-0.2
OGWZ	**Otaki Gorge**	**1.45**	**64**	P	Pn	08 17 01.7	+0.6
PAWZ	**Paruwai Farm**	**1.49**	**87**	P	Pn	08 17 01.2	-0.3
GVZ	**Greta Valley S**	**1.53**	**192**	P	Pn	08 17 02.7	+0.6
MTW	**Mount Morrison**	**1.57**	**79**	P	Pn	08 17 02.5	-0.2
LTZ	**Lake Taylor**	**1.58**	**213**	P	Pn	08 17 03.7	+0.9
TRWZ	**Traveller**	**1.68**	**88**	P	Pn	08 17 03.9	-0.2
MRZ	**Mangatainoka R**	**1.80**	**64**	P	Pn	08 17 05.7	0.0
AMCZ	**Amberley**	**1.81**	**199**	P	Pn	08 17 06.1	+0.3
TMWZ	**Te Maipa**	**1.87**	**80**	P	Pn	08 17 06.2	-0.5
OHWZ	**Ohakea**	**1.89**	**49**	P	Pn	08 17 09.3	+2.4
INZ	**Inchbonnie**	**1.95**	**229**	P	Pn	08 17 09.3	+1.5
POWZ	**Post Office Ro**	**2.06**	**59**	P	Pn	08 17 14.1	+5.0
WAZ	**Wanganui**	**2.07**	**35**	P	Pn	08 17 11.9	+2.5
NMEZ	**Namu Road**	**2.08**	**9**	P	Pn	08 17 11.9	+2.5
OXZ	**Oxford**	**2.13**	**209**	P	Pn	08 17 09.6	-0.6
LREZ	**Lake Rotokare**	**2.13**	**20**	P	Pn	08 17 14.6	+4.4
PREZ	**Palmer Road**	**2.19**	**14**	P	Pn	08 17 13.7	+2.6
KHEZ	**Kahui Hut**	**2.21**	**11**	P	Pn	08 17 13.8	+2.4
NBEZ	**Newall Road No**	**2.22**	**8**	P	Pn	08 17 13.9	+2.5
OKCZ	**Okains Bay**	**2.27**	**187**	P	Pn	08 17 12.3	+0.3
PKE	**Pukeiti**	**2.31**	**10**	P	Pn	08 17 15.3	+2.7
MQZ	**McQueen's Vall**	**2.31**	**195**	P	Pn	08 17 11.4	-1.1
DREZ	**Durham Road**	**2.35**	**14**	P	Pn	08 17 15.6	+2.5
TSZ	**Takapari Road**	**2.37**	**54**	P	Pn	08 17 13.3	-0.2
AKCZ	**Akaroa Harbour**	**2.44**	**189**	P	Pn	08 17 13.9	-0.4
MHEZ	**Mangahewa**	**2.48**	**16**	P	Pn	08 17 18.0	+3.1
VRZ	**Vera Road**	**2.54**	**23**	P	Pn	08 17 18.9	+3.1
PNHZ	**Pukenui**	**2.60**	**54**	P	Pn	08 17 16.0	-0.6
PKVZ	**Pokaka**	**2.61**	**34**	P	Pn	08 17 19.0	+2.2
WPHZ	**Waipukurau**	**2.67**	**59**	P	Pn	08 17 25.1	+7.7
MOVZ	**Moawhango**	**2.71**	**41**	P	Pn	08 17 18.7	+0.7
TWVZ	**Taurewa**	**2.84**	**33**	P	Pn	08 17 22.9	+3.1
RPZ	**Rata Peaks**	**2.86**	**218**	P	Pn	08 17 21.9	+1.8
WTVZ	**West Tongariro**	**2.86**	**35**	P	Pn	08 17 22.6	+2.4
KRHZ	**Kereru**	**2.87**	**52**	P	Pn	08 17 21.1	+0.8
KAHZ	**Kahuranaki**	**3.10**	**58**	P	Pn	08 17 22.7	-0.6
RITZ	**Rihia Road**	**3.10**	**37**	P	Pn	08 17 29.7	+6.4
HIZ	**Hauiti**	**3.14**	**20**	P	Pn	08 17 25.8	+1.9
BKZ	**Black Stump Fm**	**3.27**	**46**	P	Pn	08 17 26.0	+0.3
FOZ	**Fox Glacier**	**3.39**	**231**	P	Pn	08 17 28.0	+0.8
MTHZ	**Maungataniwha**	**3.68**	**46**	P	Pn	08 17 38.5	+7.2
LBZ	**Lake Benmore**	**3.78**	**218**	P	Pn	08 17 32.0	-0.5
TOZ	**Tahuroa Road**	**4.05**	**24**	P	Pn	08 17 37.9	+1.5
ODZ	**Otahua Downs**	**4.12**	**209**	P	Pn	08 17 37.1	-0.1
JCZ	**Jackson Bay**	**4.31**	**231**	P	Pn	08 17 40.6	+0.6
AWAZ	**Awhitu Peninsu**	**4.50**	**12**	P	Pn	08 17 44.4	+2.1
MKAZ	**Moumakai**	**4.55**	**17**	P	Pn	08 17 45.3	+2.1
WTAZ	**Waiatarua**	**4.61**	**11**	P	Pn	08 17 46.5	+2.5
ETAZ	**East Tamaki Re**	**4.65**	**15**	P	Pn	08 17 46.7	+2.2
WKZ	**Wanaka**	**4.67**	**223**	P	Pn	08 17 44.3	-0.5
EAZ	**Earnscleugh**	**4.82**	**217**	P	Pn	08 17 50.1	+3.2
MBAZ	**Motutapu North**	**4.83**	**14**	P	Pn	08 17 49.1	+2.2
KUZ	**Kuaotunu**	**5.04**	**21**	P	Pn	08 17 51.1	+1.4
WCZ	**Waipu Caves**	**5.57**	**7**	P	Pn	08 17 59.1	+2.1

*IDC **23** 08:22:21.6±0.7, 6°89S×102°64E, h0km, mb4.5/27, mb1 4.5/29, mb1mx4.4/49, mbtmp4.5/29, ML4.0/2, MS3.3/8, Ms1 3.3/8, ms1mx2.9/54, Error ellipse: s-maj=23.5km s-min=11.8km az=52.0*

*BJI **23** 08:22:24.5±0.0, 7°00S×102°50E, h32km, mB4.9/42, mb4.9/55, Ms4.6/31, Ms7 4.3/29*

*DJA **23** 08:22:24.5±0.9, 7°S±3°×10°3E±°, h17km±6km, M5.0/32, mb4.9/32, mB5.6/11, MLv4.9/19, Mw(mB)5.1/11*

*KLM **23** 08:22:24.0, 6°90S×102°48E, h24km, mb4.8*

*NEIC **23** 08:22:25.9±1.4, 7°00S±0°06×102°56E±0°06, h33km±4km, mb4.8/52, Error ellipse: s-maj=9.9km s-min=7.3km az=51.0*

ISC 23 08:22:22.9±0.4, 6°95S±0°05×102°51E±0°05, h10km, n205, σ1°56/205, mb4.8/65, MS4.2/17, 1D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**2.44**	**54**	P	**Pn**	**08 23 01.3**	**-1.5**
KASI				S	**Sn**	**08 23 28.2**	**-4.4**
LWLI	**Liwa**	**2.46**	**39**	P	**Pn**	**08 23 02.5**	**-0.8**
MNAI	**Manna**	**2.61**	**10**	P	**Pn**	**08 23 04.9**	**-0.3**
MNAI				S	**Sn**	**08 23 36.4**	**-0.6**
MNAI	**Manna**	**2.61**	**10**		**Pn**	**08 23 04.4**	**-0.8**
MDSI	**Maura Dua**	**2.96**	**34**	P	**Pn**	**08 23 09.6**	**-0.4**
BLSI	**Bandar Lampung**	**3.15**	**60**	P	**Pn**	**08 23 12.1**	**-0.5**
LHSI	**Lahat**	**3.27**	**18**	P	**Pn**	**08 23 14.1**	**-0.1**
SBJI	**Serang**	**3.69**	**77**	P	**Pn**	**08 23 20.9**	**+0.8**
MASI	**Maura Aman, Be**	**3.79**	**356**	P	**Pn**	**08 23 20.3**	**-1.2**
DBJI	**Dramaga**	**4.23**	**85**	P	**Pn**	**08 23 27.3**	**-0.3**
CBJI	**Citeko**	**4.35**	**83**	P	**Pn**	**08 23 30.1**	**+1.0**
CNJI	**Cibinong**	**4.60**	**95**	P	**Pn**	**08 23 30.4**	**-2.2**
XMIS	**Christmas Isla**	**4.69**	**139**		Pn	08 23 28.0	-5.8
PPSI	**Pulau Pagai**	**4.85**	**329**	P	**Pn**	**08 23 35.5**	**-0.5**
KRJI	**Kerinci**	**4.94**	**348**	P	**Pn**	**08 23 37.4**	**+0.1**
LEM	**Lembang**	**5.08**	**89**	Pn	**Pn**	**08 23 40.4**	**+1.1**
	51nm,0.3s,baz=180,slow=5.3,SNR=16						
LEM				Sn	**Sn**	**08 24 36.4**	**-1.7**
	baz=180,slow=20,SNR=1.4						
LEM	**Lembang**	**5.08**	**89**	P	**Pn**	**08 23 39.9**	**+0.6**
CISI	**Cisompet, Garu**	**5.30**	**97**	P	**Pn**	**08 23 40.5**	**-1.8**
	2.0nm6µm454nm,0.6s						
CISI	**Cisompet, Garu**	**5.30**	**97**		**Pn**	**08 23 40.4**	**-1.8**
PPBI	**Pangkal Pinang**	**5.98**	**37**	P	**Pn**	**08 23 51.4**	**-0.1**
SDSI	**Sungai Dareh**	**6.07**	**350**	P	**Pn**	**08 23 51.7**	**-1.2**
	0.5nm34nm,0.7s						
PDSI	**Padang**	**6.34**	**341**	P	**Pn**	**08 23 55.4**	**-1.1**
	0.4nm51nm,0.6s						
BKNI	**Bangkinang**	**7.38**	**349**	Pn	**Pn**	**08 24 12.8**	**+2.1**
COCO	**West Island**	**7.64**	**227**		**Pn**	**08 24 15.0**	**+0.6**
SMRI	**Semarang**	**7.88**	**91**	P	**Pn**	**08 24 19.5**	**+1.8**
	1.0nm292nm,0.7s						
SMRI	**Semarang**	**7.88**	**91**		**Pn**	**08 24 18.3**	**+0.6**
UGM	**Wanagama**	**8.01**	**97**	P	**Pn**	**08 24 18.7**	**-0.8**
	0.9nm263nm,0.9s						
UGM	**Wanagama**	**8.01**	**97**		**Pn**	**08 24 17.9**	**-1.5**
MNSI	**Mandailing Nat**	**8.23**	**339**	P	**Pn**	**08 24 21.3**	**-1.2**
	39nm,0.4s						
WOJI	**Wonogiri, Jawa**	**8.39**	**97**	P	**Pn**	**08 24 24.0**	**-0.7**
	50nm,0.9s						
GSI	**Gunungsitoli**	**9.56**	**329**	Pn	**Pn**	**08 24 41.5**	**+0.7**
RPSI	**Rantau Prapat**	**10.23**	**339**		**Pn**	**08 24 49.2**	**-0.7**
RPSI	**Rantau Prapat**	**10.23**	**339**		**Pn**	**08 24 49.0**	**-0.9**
PSI	**Prapat**	**10.33**	**340**	Pn	**Pn**	**08 24 49.0**	**-2.4**
	0.6nm,0.3s,baz=179,slow=9.4,SNR=6.1						
JAGI	**Jajag, Banyuwa**	**11.64**	**98**		**Pn**	**08 25 06.1**	**-3.1**
KULM	**Kulim**	**12.30**	**351**		**Pn**	**08 25 18.2**	**-0.1**
KULM	**Kulim**	**12.30**	**351**	P	**Pn**	**08 25 18.0**	**-0.3**
MLSI	**Meulaboh, Aceh**	**12.70**	**331**	P	**Pn**	**08 25 23.3**	**-0.4**
	65nm,0.8s						
SBUM	**Sibu**	**13.46**	**46**		**Pn**	**08 25 35.4**	**+1.3**
SBUM	**Sibu**	**13.46**	**46**	P	**Pn**	**08 25 36.0**	**+1.8**
PLAI	**Plampang**	**15.24**	**98**	P	**P**	**08 26 03.8**	**+0.4**
KAPI	**Kappang**	**17.26**	**85**	P	**Pn**	**08 26 22.2**	**-2.1**
	1.0nm,0.3s,baz=246,slow=16,SNR=4.0						
KAPI				LR	LR	08 34 23.3	
	comp=Z,163nm,19.7s,baz=264,slow=42						
KAPI	**Kappang**	**17.26**	**85**	P	**Pn**	**08 26 22.6**	**-1.7**
BKSI	**Bulukumba**	**17.59**	**86**	P	**Pn**	**08 26 26.9**	**-1.5**
	761nm58nm,0.8s						
TTSI	**Tai Toraja**	**17.68**	**78**	P	**Pn**	**08 26 28.9**	**-0.5**
	17nm,1.0s						
BNSI	**Bone**	**17.70**	**83**	P	**Pn**	**08 26 28.9**	**-0.8**
	22nm,0.8s						
SPMM	**Sapulut**	**18.12**	**51**	P	**Pn**	**08 26 35.0**	**+0.1**
MPSI	**Mapaga**	**18.80**	**68**	P	**P**	**08 26 42.6**	**-0.2**
	548nm35nm,0.7s						
KKM	**Kota Kinabalu**	**18.81**	**47**	P	**P**	**08 26 42.9**	**0.0**
KKM				IAmb	IAmb	08 26 59.0	
	comp=Z,55nm,1.4s						
EDFI	**Ende, Flores**	**19.09**	**97**	P	**P**	**08 26 43.2**	**-2.9**
	comp=Z,22nm,0.7s						
GIRL	**Giralia**	**19.26**	**145**	P	**P**	**08 26 46.0**	**-1.8**
GIRL				IAmb	IAmb	08 26 47.9	
	comp=Z,107nm,1.3s						
MMRI	**Maumere**	**19.62**	**96**	P	**P**	**08 26 50.5**	**-1.3**
	comp=Z,15µmcomp=Z,157nm,0.8s						
MMRI	**Maumere**	**19.62**	**96**	P	**P**	**08 26 50.4**	**-1.3**
DLV	**T Lat**	**19.69**	**18**	P	**P**	**08 26 53.2**	**+0.5**
APSI	**Ampana**	**20.01**	**73**	P	**P**	**08 26 55.3**	**-0.7**
	comp=Z,41nm,0.8s						
LUWI	**Luwuk**	**21.04**	**75**	P	pP	08 27 17.0	+8.4
BATI	**Baumata**	**21.17**	**100**	P	**P**	**08 27 08.2**	**-0.4**
	comp=Z,228nm,0.9s,baz=266,slow=4.5,SNR=16						
BATI	**Baumata**	**21.17**	**100**	P	**P**	**08 27 08.8**	**+0.2**
	comp=Z,1µmcomp=Z,162nm,0.9s						
SOEI	**Soe**	**21.71**	**99**	P	**P**	**08 27 13.3**	**-1.2**
	comp=Z,2µmcomp=Z,189nm,0.8s						
SOEI	**Soe**	**21.71**	**99**	P	**P**	**08 27 12.8**	**-1.7**
PBKT	**Sadao Pong**	**23.42**	**356**	P	**P**	**08 27 32.6**	**+0.2**
PBKT				IAmb	IAmb	08 27 47.8	
	comp=Z,17nm,0.8s						
SANI	**Sanana**	**23.90**	**79**	P	**P**	**08 27 35.1**	**-2.1**
	comp=Z,1µmcomp=Z,32nm,1.2s						
FITZ	**Fitzroy Crossi**	**25.12**	**118**	P	**P**	**08 27 47.9**	**-0.4**
	comp=Z,4.9nm,0.8s,baz=236,slow=5.0,SNR=9.6						
FITZ				S	**S**	**08 32 22.6**	**+9.4**
	comp=Z,1.9nm,0.8s,baz=190,slow=17,SNR=2.5						
FITZ	**Fitzroy Crossi**	**25.12**	**118**	P	**P**	**08 27 49.1**	**+0.8**
CM31	**Chiang Mai Arr**	**25.49**	**352**	P	**P**	**08 27 52.3**	**+0.8**
CMAR	**Chiang Mai Arr**	**25.49**	**352**	P	**P**	**08 27 52.4**	**+0.8**
	comp=Z,18nm,0.6s,baz=183,slow=8.8,SNR=63						
LBMI	**Labuha**	**25.70**	**77**	P	**P**	**08 27 53.9**	**+0.3**
	comp=Z,85nm,1.0s						
CHTO	**Chiang Mai**	**25.84**	**352**	P	**P**	**08 27 55.2**	**+0.4**
CHTO				IAmb	IAmb	08 27 58.3	
	comp=Z,40nm,1.4s						
TNTI	**Ternate**	**25.96**	**74**	P	**P**	**08 27 55.5**	**-0.5**
	comp=Z,38nm,0.9s						
TNTI	**Ternate**	**25.96**	**74**	P	**P**	**08 27 54.5**	**-1.4**
QIZ	**Qiongzhong**	**26.81**	**16**	P	**P**	**08 28 04.6**	**+1.1**
QIZ				S	**S**	**08 32 41.4**	**+1.5**
QIZ				LR	LR		
	comp=Z,380nm,11.7s						
QIZ				LR	LR		
	comp=Z,170nm,13.0s						
QIZ				LR	LR		
	comp=Z,290nm,13.2s						
DAV	**Davao City (W)**	**26.90**	**59**	LR	LR	08 38 35.8	
	comp=Z,62nm,20.4s,baz=298,slow=36						
KNRA	**Kununurra**	**27.14**	**111**	P	**P**	**08 28 05.4**	**-1.2**
KNRA				IAmb	IAmb	08 28 18.6	
	comp=Z,36nm,0.9s						
SLVN	**Son La**	**28.14**	**3**	P	**P**	**08 28 16.3**	**+0.8**
SLVN				IAmb	IAmb	08 28 26.2	
	comp=Z,10nm,0.7s						
NWAO	**Narrogin (SRO)**	**29.25**	**154**	LR	LR	08 39 11.3	
	comp=Z,86nm,18.9s,baz=320,slow=34						
H08S2	**Diego Garcia H**	**29.77**	**267**	T	T	08 59 49.5	
	baz=89,slow=74						
H08S3	**Diego Garcia H**	**29.78**	**267**	T	T	08 59 49.5	
	baz=89,slow=74						
H01W3	**Cape Leeuwin H**	**29.79**	**161**	T	T	08 59 44.4	
	baz=338,slow=75						
H08S1	**Diego Carcia H**	**29.79**	**267**	T	T	08 59 50.7	
	baz=89,slow=74						
H01W2	**Cape Leeuwin H**	**29.80**	**161**	T	T	09 00 01.2	
	baz=338,slow=75						
H01W1	**Cape Leeuwin H**	**29.81**	**160**	T	T	09 00 01.2	
	baz=338,slow=75						
KMI	**Kunming**	**31.88**	**0**	P	**P**	**08 28 51.3**	**+2.5**
KMI				pP	pwP	08 28 59.4	+3.6
KMI				sP	sP	08 29 05.0	+14
KMI				pmax	pmax		
	comp=Z,15nm,1.3s						
KMI				LR	LR		
	comp=Z,700nm,11.8s						
KMI				LR	LR		
	comp=Z,330nm,9.5s						
KMI				LR	LR		
	comp=Z,730nm,12.3s						
WB0	**Warramunga Arr**	**33.46**	**116**	P	**P**	**08 29 02.5**	**0.0**
WRA	**Warramunga Arr**	**33.47**	**116**	P	**P**	**08 29 02.1**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=285,slow=11,SNR=30						
WRAB	**Tennant Creek**	**33.47**	**116**	P	**P**	**08 29 02.1**	**-0.5**
WRAB				IAmb	IAmb	08 29 13.7	
	comp=Z,7.8nm,0.7s						
WB2	**Warramunga Arr**	**33.48**	**116**	P	**P**	**08 29 02.2**	**-0.4**
WB2				IAmb	IAmb	08 29 11.4	
	comp=Z,6.1nm,0.7s						
WR0	**Warramunga Arr**	**33.65**	**116**	P	**P**	**08 29 03.9**	**-0.2**
WR0				IAmb	IAmb	08 29 05.0	
	comp=Z,16nm,1.4s						
FORT	**Forrest**	**33.69**	**138**	P	**P**	**08 29 03.0**	**-1.3**
FORT				IAmb	IAmb	08 29 05.1	
	comp=Z,14nm,0.9s						
SHL	**Shillong**	**33.93**	**343**	P	**P**	**08 29 06.9**	**+0.2**
ASAR	**Alice Springs**	**34.42**	**122**	P	**P**	**08 29 09.7**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=302,slow=8.1,SNR=17						
ASAR				PcP	**PcP**	**08 31 46.9**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=278,slow=2.7,SNR=2.2						
AS31	**Alice Springs**	**34.42**	**122**	P	**P**	**08 29 10.1**	**-0.7**
YULB	**Yu-li**	**35.31**	**31**	P	**P**	**08 29 20.2**	**+1.7**
YULB				IAmb	IAmb	08 29 22.0	
	comp=Z,14nm,1.1s						
ENH	**Enshi**	**37.61**	**10**	P	**P**	**08 29 37.7**	**-0.4**
ENH				IAmb	IAmb	08 29 38.8	
	comp=Z,15nm,0.7s						
CD2	**Chengdu**	**37.66**	**2**	⇓*i*P	**P**	**08 29 39.1**	**+0.6**
CD2				S	**S**	**08 35 30.3**	**+1.7**
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
CD2				pmax	pmax		
	comp=Z,70nm,4.0s						
CD2				LR	LR		
	comp=Z,500nm,12.4s						
CD2				LR	LR		
	comp=Z,820nm,18.8s						
CD2				LR	LR		
	comp=Z,640nm,11.8s						
JAY	**Jayapura**	**38.31**	**85**	P	P	08 29 53.0	+8.8
WHN	**Wuhan**	**38.97**	**16**	P	**P**	**08 29 50.3**	**+0.9**
COEN	**Coen**	**40.55**	**103**	P	**P**	**08 30 02.0**	**-0.9**
COEN				IAmb	IAmb	08 30 02.7	
	comp=Z,24nm,1.4s						
XAN	**Xi'an**	**41.22**	**8**	P	**P**	**08 30 08.1**	**0.0**
XAN				pP	pwP	08 30 15.9	+0.7
XAN				pmax	pmax		
	comp=Z,22nm,0.8s						
XAN				pmax	pmax		
	comp=Z,65nm,3.5s						
XAN				LR	LR		
	comp=Z,290nm,11.2s						
XAN				LR	LR		
	comp=Z,190nm,10.4s						
XAN				LR	LR		
	comp=Z,290nm,11.5s						
XAN	**Xi'an**	**41.22**	**8**	P	**P**	**08 30 08.1**	**0.0**
XAN				IAmb	IAmb	08 30 17.0	
	comp=Z,19nm,0.7s						
NJ2	**Nanjing**	**41.80**	**21**	*e*P	**P**	**08 30 15.0**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
LZH	**Lanzhou**	**42.83**	**2**	*e*P	**P**	**08 30 23.5**	**+2.1**
LZH				pP	pwP	08 30 31.6	+3.2
LZH				sP	sP	08 30 35.4	+11
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
LZH				pmax	pmax		
	comp=Z,93nm,5.4s						
LZH				LR	LR		
	comp=Z,390nm,12.1s						
LZH				LR	LR		
	comp=Z,350nm,12.5s						
LZH				LR	LR		
	comp=Z,430nm,13.4s						
STKA	**Stephens Creek**	**44.05**	**130**	P	**P**	**08 30 30.6**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=289,slow=6.8,SNR=7.3						
STKA	**Stephens Creek**	**44.05**	**130**	P	**P**	**08 30 31.4**	**+0.2**
CTAO	**Charters Tower**	**44.35**	**112**	P	**P**	**08 30 34.2**	**+0.5**
CTAO				IAmb	IAmb	08 30 43.9	
	comp=Z,9.1nm,0.8s						
TIA	**Tai'an**	**45.08**	**17**	P	**P**	**08 30 39.0**	**-0.3**
TIA				pmax	pmax		
	comp=Z,13nm,1.1s						
GTA	**Gaotai**	**46.19**	**357**	*e*P	**P**	**08 30 49.8**	**+1.6**
GTA				pP	pwP	08 30 57.3	+2.1
GTA				sP	sP	08 31 01.3	+10
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,84nm,4.9s						
GTA				LR	LR		
	comp=Z,220nm,16.8s						
GTA				LR	LR		
	comp=Z,920nm,20.3s						
GTA				LR	LR		
	comp=Z,250nm,18.1s						
JNU	**Nakatsue**	**48.11**	**32**	P	**P**	**08 31 00.9**	**-2.3**
	comp=Z,9.1nm,0.9s,baz=139,slow=2.3,SNR=4.4						
JNU	**Nakatsue**	**48.11**	**32**	P	**P**	**08 31 01.4**	**-1.8**
JNU				IAmb	IAmb	08 31 03.1	
	comp=Z,12nm,1.0s						
HHC	**Hu-ho-hao-te**	**48.29**	**9**	*e*P	**P**	**08 31 05.5**	**+1.0**
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		

AAK	Ala-Archa	55.55	335	P		P	08 31 59.8	+1.1
HRA	Herat	56.02	320	P		P	08 32 02.7	+0.4
MK31	Makanchi Array	56.45	343	P		P	08 32 05.1	+0.2
MK31				IAmb		IAmb	08 32 16.1	
	comp=Z,7.9nm,0.8s							
MKAR	Makanchi Array	56.45	343	P		P	08 32 05.3	+0.5
MKAR	comp=Z,6.1nm,0.8s,baz=144,slow=9.2,SNR=40			LR		LR	09 01 11.7	
	comp=Z,24nm,18.6s,baz=158,slow=41							
MAKZ	Makanchi	56.55	343	P		P	08 32 05.3	-0.3
USA0B	Ussuriysk Arra	57.45	25	P		P	08 32 11.6	-0.4
USRK	Ussuriysk Ar.	57.45	25	P		P	08 32 11.6	-0.4
	comp=Z,10nm,0.6s,baz=216,slow=5.0,SNR=23							
KK31	Karatay Array	57.67	333	P		P	08 32 13.2	-0.4
TLY	Talaya	58.41	1	P		P	08 32 19.3	+0.7
	comp=Z,1.6nm,0.4s,baz=213,slow=9.1,SNR=8.3							
TLY	Talaya	58.41	1	P		P	08 32 19.8	+1.2
TLY				IAmb		IAmb	08 32 34.4	
	comp=Z,6.5nm,0.8s							
GEYT	Alibeck	60.83	321	P		P	08 32 36.4	+0.7
	comp=Z,1.4nm,0.5s,baz=123,slow=5.3,SNR=2.1							
KURK	Kurchatov	61.04	343	P		P	08 32 37.0	+0.3
KURK				IAmb		IAmb	08 32 46.5	
	comp=Z,7.2nm,0.8s							
KLR	Kul'dur	61.51	21	P		P	08 32 39.0	-0.9
	comp=Z,4.9nm,0.6s,baz=209,slow=6.8,SNR=19							
ASAJ	Asahikawa	62.38	32	P		P	08 32 43.5	-2.4
	comp=Z,3.6nm,0.5s,baz=216,slow=6.2,SNR=5.6							
JKA	Kamikawa-asahi	62.38	32	P		P	08 32 43.5	-2.4
ZAA0	Zalesovo Array	62.48	348	P		P	08 32 46.4	+0.1
ZALV	Zalesovo Beam	62.48	348	P		P	08 32 46.4	0.0
	comp=Z,4.9nm,0.4s,baz=160,slow=4.7,SNR=35							
ZALV				LR		LR	09 03 39.0	
	comp=Z,50nm,18.7s,baz=128,slow=40							
BVAR	Borovoye Array	65.66	339	P		P	08 33 07.6	+0.2
	comp=Z,3.5nm,0.6s,baz=145,slow=8.5,SNR=5.7							
BRVK	Borovoye	65.73	339	P		P	08 33 07.5	-0.3
BRVK				IAmb		IAmb	08 33 17.2	
	comp=Z,4.0nm,0.7s							
AKTO	Aktyubinsk	68.87	331	P		P	08 33 27.0	-0.8
	comp=Z,2.8nm,0.8s,baz=126,slow=9.1							
AKTO				LR		LR	09 06 22.3	
	comp=Z,16nm,18.8s,baz=161,slow=38							
YAK	Yakutsk	71.92	13	P		P	08 33 45.7	-0.4
	comp=Z,15nm,0.5s,baz=270,slow=2.9,SNR=1.4							
YAK	Yakutsk	71.92	13	P		P	08 33 45.7	-0.4
ARU	Arti	72.71	336	P		P	08 33 51.5	+0.5
	comp=Z,3.4nm,0.2s,baz=288,slow=20,SNR=1.3							
ARU	Arti	72.71	336	P		P	08 33 50.7	-0.3
ARU				IAmb		IAmb	08 34 09.3	
	comp=Z,11nm,1.0s							
KBZ	Khabaz	73.66	319	P		P	08 33 57.5	+0.7
	comp=Z,1.1nm,0.5s,baz=156,slow=3.6,SNR=2.5							
PEA0B	Petropavlovsk-	75.78	31	P		P	08 34 08.5	-0.4
PEA0B				IAmb		IAmb	08 34 25.1	
	comp=Z,21nm,1.4s							
PETK	Petropavlovsk-	75.78	31	P		P	08 34 08.1	-0.9
	comp=Z,2.4nm,0.7s,baz=201,slow=7.9,SNR=6.8							
MA2	Magadan	76.53	23	P		P	08 34 12.9	-0.2
	comp=Z,13nm,0.7s,baz=212,slow=6.8,SNR=8.0							
MA2	Magadan	76.53	23	P		P	08 34 12.8	-0.3
VNDA	Vanda	76.85	169	P		P	08 34 15.2	+0.5
	comp=Z,1.1nm,0.9s,baz=323,slow=4.3,SNR=5.8							
BRTR	Keskin Array B	78.49	313	P		P	08 34 24.6	-0.1
	comp=Z,0.7nm,0.7s,baz=182,slow=7.4,SNR=3.6							
SEY	Seymchan	79.29	21	P		P	08 34 28.2	-0.1
	comp=Z,3.7nm,0.8s,baz=226,slow=4.9,SNR=12							
TIXI	Tiksi	80.34	8	P		P	08 34 30.6	-3.3
	comp=Z,1.7nm,0.2s,baz=140,slow=0.8,SNR=5.2							
TIXI	Tiksi	80.34	8	P		P	08 34 32.6	-1.3
OBN	Obninsk	82.29	328	LR		LR	09 15 58.9	
	comp=Z,6.2nm,18.4s,baz=316,slow=39							
KLMR	Klimovskoe	83.34	334	*eP*		P	08 34 50.9	+1.0
KLMR				AMP			08 35 00.7	
	comp=Z,10.0nm,1.2s							
FINES	FINESS Array B	89.63	332	P		P	08 35 21.4	+0.7
	comp=Z,0.4nm,0.5s,baz=116,slow=9.7,SNR=1.6							
ARCES	ARCESS Array B	91.95	340	P		P	08 35 30.8	-0.6
	comp=Z,3.6nm,1.1s,baz=83,slow=7.5,SNR=4.0							
YKA	Yellowknife Ar	118.30	19	PKP		PKPdf	08 41 10.2	0.0
	comp=Z,0.3nm,0.9s,baz=310,slow=12,SNR=4.2							
NVAR	Mina Array Bea	131.65	43	PKP		PKPdf	08 41 38.0	+1.1
	comp=Z,0.2nm,0.6s,baz=277,slow=1.5,SNR=2.2							
PDAR	Pinedale Array	134.50	33	PKP		PKPdf	08 41 43.1	+1.0
	comp=Z,0.3nm,0.5s,baz=347,slow=3.7,SNR=1.9							
P38A	Dawn	144.41	22			PKPab	08 41 57.8	-0.2
HDIL	Hopedale	144.91	16			PKPab	08 41 59.2	-0.6
P40A	Paris	145.02	20			PKPab	08 41 59.8	-0.4
KSCT	Kent School, K	145.19	355			PKPbc	08 42 00.5	-0.2
N47A	Urbana	145.43	11			PKPbc	08 42 00.4	-1.1
M54A	Oil Creek Stat	145.53	3			PKPbc	08 42 01.0	-0.9
M56A	Emporium	145.61	1			PKPdf	08 42 01.6	-0.4
SFIN	Lafayette	145.62	13			PKPdf	08 42 01.7	-0.3
N49A	Columbus Grove	145.65	9			PKPdf	08 42 01.5	-0.5
M57A	Sunshine Farm,	145.76	360			PKPdf	08 42 02.0	-0.3
R40A	Maddies Statio	146.05	21			PKPdf	08 42 02.9	+0.1
N58A	Sunbury	146.25	359			PKPdf	08 42 03.2	+0.2
CCM	Cathedral Cave	146.62	20			PKPdf	08 42 04.7	+0.9
TX32	Lajitas Array	146.78	45			PKPbc	08 42 06.7	+0.5
TXAR	Lajitas Array	146.78	45	PKPbc		PKPbc	08 42 07.0	+0.9
	comp=Z,4.5nm,0.9s,baz=264,slow=1.8,SNR=34							
O54A	Avella	146.81	4			PKPdf	08 42 05.6	+1.5
O56A	Blue Knob Stat	146.81	1			PKPdf	08 42 05.4	+1.3
U38A	Gravette	146.84	25			PKPdf	08 42 05.1	+0.9
P48A	Milroy	146.85	11			PKPdf	08 42 04.8	+0.7
MGMO	Mountain Grove	147.06	22			PKPdf	08 42 05.7	+1.1
HHAR	Hobbs	147.16	25			PKPdf	08 42 05.8	+1.1
ABTX	Abilene, Hawle	147.19	36			PKPdf	08 42 07.2	+2.3
U40A	Yellville	147.53	23			PKPdf	08 42 07.0	+1.6
T42A	Van Buren	147.59	21			PKPdf	08 42 06.3	+0.9
X37A	Clayton	147.93	28			PKPdf	08 42 08.1	+2.0
FCAR	Ozark Folk Cen	148.23	23			PKPdf	08 42 08.9	+2.4
JCT	Junction City	148.60	39			PKPbc	08 42 11.1	+0.1
MIAR	Mount Ida	148.79	26			PKPbc	08 42 11.6	+0.3
WVT	Waverly	149.45	17			PKPbc	08 42 12.4	-0.5
CLTN	Cedars of Leba	149.89	14			PKPdf	08 42 11.6	+2.4
V48A	Smith Brothers	150.10	15			PKPdf	08 42 12.7	+3.2
PLAL	Pickwick Lake	150.45	18			PKPdf	08 42 14.0	+3.9
V51A	Loudon	150.60	11			PKPdf	08 42 14.2	+3.9
V52A	Sevierville	150.71	10			PKPbc	08 42 15.4	-0.6
CPCT	Cooper Cave	150.91	12			PKPbc	08 42 15.8	-0.7
Y45A	Yeager Farm, C	150.99	21			PKPbc	08 42 16.3	-0.3
V53A	Saluda	151.00	9			PKPbc	08 42 17.1	+0.3
W52A	Murphy	151.37	11			PKPbc	08 42 17.5	-0.1
Y49A	Blount Mountai	151.98	16			PKPbc	08 42 17.9	-1.2
Z47A	Carrollton	152.10	19			PKPab	08 42 26.6	-2.0

*NEIC **23** 08:36:44.8±1.8,21.7°S±0.1×178.7°W±0.2, h590km±8km, mb4.4/24, Error ellipse: s-maj=22.8km s-min=17.0km az=117.0*
*IDC **23** 08:36:46.7±2.2,21.79°S×178.94°W, h601km±26km, mb3.6/5, mb1 3.8/8, mb1mx3.2/39, mbtmp4.7/8, Error ellipse: s-maj=34.3km s-min=20.6km az=171.0*

ISC 23 08:36:45.6±0.8, 21.78°S±0.1×178.8°W±0.1, h600km, n41, σ1°9'05"/44, mb4.4/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	Nonsavu	5.03	323	P		P	08 38 18.2	-0.8
RAO	Raoul Island	7.47	174	P		P	08 38 41.1	+1.3
	30nm,0.3s,baz=78,slow=13,SNR=6.5							
RAO	Raoul Island	7.47	174	P		P	08 38 39.4	-0.4
DZM	Mont Dzumac	13.75	266	P		P	08 39 40.3	-1.9
	0.9nm,0.3s,baz=92,slow=19,SNR=8.9							
DZM				S		S	08 41 48.8	-18
	0.1nm,0.3s,baz=148,slow=19,SNR=2.0							
DZM	Mont Dzumac	13.75	266	P		P	08 39 43.6	+1.4
OUZ	Omahuta	14.97	205	P		P	08 39 55.6	+2.2
OUZ				IAmb		IAmb	08 39 57.0	
	comp=Z,32nm,1.2s							
MXZ	Matakaoa Point	15.93	189	P		P	08 40 03.6	+1.5
URZ	Urewera	16.80	191	P		P	08 40 09.4	-0.7
	comp=Z,3.2nm,0.3s,baz=286,slow=3.3,SNR=17							
URZ				S		S	08 42 53.8	-2.8
	comp=Z,0.3nm,0.3s,baz=118,slow=16,SNR=1.2							
BKZ	Black Stump Fm	17.80	192	P		P	08 40 18.2	-1.1
KNTN	Kanton	20.09	21	P		P	08 40 39.5	-0.9
THZ	Tophouse	21.12	198	P		P	08 40 49.9	+0.6
KHZ	Kahutara	21.57	196	P		P	08 40 53.7	+0.6
EIDS	Eidsvold	27.85	257	P		P	08 41 48.6	-0.3
EIDS				IAmb		IAmb	08 41 49.4	
	comp=Z,6.9nm,0.9s							
ARMA	Armidale	27.89	246	P		P	08 41 50.8	+1.5
ARMA				IAmb		IAmb	08 41 51.1	
	comp=Z,6.2nm,0.5s							
CTAO	Charters Tower	32.69	266	P		P	08 42 30.4	0.0
CTAO				IAmb		IAmb	08 42 31.1	
	comp=Z,9.5nm,0.8s							
TOO	Toolangi	34.59	235	P		P	08 42 47.2	+1.2
TOO				IAmb		IAmb	08 42 49.6	
	comp=Z,16nm,1.5s							
STKA	Stephens Creek	36.62	246	P		P	08 43 03.2	+0.4
	comp=Z,2.2nm,0.5s,baz=88,slow=12,SNR=9.9							
STKA	Stephens Creek	36.62	246	P		P	08 43 03.7	+0.9
COEN	Coen	36.99	276	P		P	08 43 06.4	+0.3
COEN				IAmb		IAmb	08 43 07.6	
	comp=Z,6.0nm,0.9s							
BBOO	Buckleboo	41.36	245	P		P	08 43 41.1	+0.2
AS31	Alice Springs	43.56	258	P		P	08 43 58.2	0.0
WR0	Warramunga Arr	43.56	264	P		P	08 43 57.5	-0.7
ASAR	Alice Springs	43.56	258	P		P	08 43 57.8	-0.4
	comp=Z,7.2nm,0.6s,baz=92,slow=7.8,SNR=102							
ASAR				PcP		PcP	08 45 33.4	+1.2
	comp=Z,0.8nm,0.7s,baz=103,slow=4.3,SNR=4.2							
ASAR				S		S	08 49 43.4	-1.9
	comp=Z,0.7nm,1.0s,baz=88,slow=16,SNR=4.2							
WB0	Warramunga Arr	43.73	264	P		P	08 43 59.0	-0.6
WB0				IAmb		IAmb	08 43 59.6	
	comp=Z,13nm,0.6s							
WB2	Warramunga Arr	43.74	264	P		P	08 43 58.8	-0.8
WB2				IAmb		IAmb	08 43 59.7	
	comp=Z,10nm,0.8s							
WRAB	Tennant Creek	43.74	264	P		P	08 43 58.8	-0.8
WRAB				IAmb		IAmb	08 43 59.7	
	comp=Z,8.7nm,1.0s							
WRA	Warramunga Arr	43.75	264	P		P	08 43 59.0	-0.7
	comp=Z,4.1nm,0.3s,baz=96,slow=8.1,SNR=381							
JAY	Jayapura	43.81	290	P		P	08 43 59.7	-0.5
	comp=Z,11nm,0.6s,baz=176,slow=20,SNR=7.3							
FORT	Forrest	48.16	248	P		P	08 44 32.8	-0.1
FORT				IAmb		IAmb	08 44 33.6	
	comp=Z,12nm,0.8s							
KNRA	Kununurra	49.89	268	P		P	08 44 45.7	-0.1
KNRA				IAmb		IAmb	08 44 46.4	
	comp=Z,10nm,0.9s							
FITZ	Fitzroy Crossi	52.18	264	P		P	08 45 02.7	+0.5
PSA00	Pilbara Seismi	56.71	258	P		P	08 45 34.0	+0.1
MORW	Morawa	58.70	248	P		P	08 45 47.6	+0.3
MORW				IAmb		IAmb	08 45 54.5	
	comp=Z,20nm,1.3s							
GIRL	Giralia	61.55	255	P		P	08 46 07.6	+1.6
CMAR	Chiang Mai Arr	89.89	290	P		P	08 48 43.5	+1.3
	comp=Z,0.8nm,0.3s,baz=147,slow=3.5,SNR=4.9							
BVAR	Borovoye Array	119.61	320	PKP		PKiKP	08 54 27.9	-0.1
	comp=Z,0.6nm,0.4s,baz=115,slow=0.8,SNR=2.9							
ARCES	ARCESS Array B	130.05	349	PKP		PKiKP	08 54 47.9	-0.5
	comp=Z,2.2nm,1.0s,baz=1.9,slow=2.7,SNR=5.4							
AKASG	Malin Array Be	143.78	330	PKP		PKPdf	08 55 12.2	-0.9
	comp=Z,1.0nm,0.4s,baz=38,slow=4.3,SNR=4.8							
BRTR	Keskin Array B	147.16	310	PKPbc		PKPbc	08 55 22.6	-0.1
	comp=Z,1.1nm,0.7s,baz=158,slow=4.7,SNR=4.1							
CLL	Collm	149.14	346	*e*PKPbc		PKiKP	08 55 29.0	+1.1
GERES	GERESS Array B	151.23	343	PKPbc		PKiKP	08 55 33.0	+0.5
	comp=Z,0.5nm,0.5s,baz=5.2,slow=2.2,SNR=5.6							

*DDA **23** 08:39:04.8, 39.17°N×37.20°E, h6km±4km, ML1.9*
*ATA **23** 08:39:19.7±3.8, 39.24°N×38.86°E, h38km±41km, ML0.8, MW4.0*

ISC 23 08:39:03.7±2.5, 39.23°N±0.08×37.2°E±0.1, h16km±11km, n9, σ2°9'09"/16, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CUGUR	Gurin_SVAS	0.51	170	*i* P		Pg	08 39 13.1	-0.8
CUGUR				*i* S		Sb	08 39 21.5	-0.1
CUGUR				IAML			08 39 24.0	
	comp=N,189nm,0.4s							
CUGUR				IAML			08 39 26.0	
	comp=E,102nm,0.4s							
HEKM	Malatya_Hekimh	0.72	119	*i* P		Pg	08 39 17.6	-0.2
HEKM				*i* S		Sg	08 39 27.1	-0.2
ELBS	KAHRAMANMARAS	0.90	181	*i* P		Pb	08 39 21.7	+0.7
ELBS				*i* S		Sb	08 39 33.8	+0.9
ELBS				IAML			08 39 38.0	
	comp=N,33nm,0.5s							
ELBS				IAML			08 39 43.0	
	comp=E,59nm,0.7s							
KEMA	Kemaliye	1.04	87	*e*P		Pn	08 39 25.3	+1.6
KEMA				*e*S		Sg	08 39 36.7	-0.8
KEMA				IAML			08 39 43.5	
	comp=Z,2.4nm,0.6s							
KEMA	Kemaliye	1.04	87	*i* P		Pb	08 39 24.6	+1.2
KEMA				*i* S		Sn	08 39 39.5	+1.5
AKCD	Akcadag	1.11	147	*i* P		Pn	08 39 25.7	+1.1
AKCD				*i* S		Sg	08 39 38.6	-0.9
AKCD				IAML			08 39 44.0	
	comp=N,27nm,0.7s							
REFA	Refahiye_ERZN	1.26	82	*e*P		Pn	08 39 33.9	+7.0
REFA				IAML			08 39 44.3	
	comp=Z,3.3nm,0.3s							
REFA				*e*S		Sg	08 39 44.5	0.0
TNCL	Tunceli-Merkez	1.86	93	*e*P		Pn	08 39 33.3	-1.7
TNCL				*e*S		Sn	08 39 40.4	-18
TNCL				IAML			08 39 45.4	
	comp=Z,5.6nm,0.7s							
KELT	Kelkit	1.86	60	*e*P		Pb	08 39 40.0	+2.5
KELT				*e*S		Sn	08 39 52.8	-5.7
KELT				IAML			08 39 53.1	
	comp=Z,2.2nm,0.7s							

IDC 23 08:47:03.1±3.3, 54.11°N×87.64°E, h0km, mb1 2.7/2, mb1mx2.7/50, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=26.2km s-min=16.9km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.67	266	*i*			08 56 56.5	
	baz=80,slow=315,SNR=11							
ZALV	Zalesovo Beam	1.67	266	Pg		Pn	08 47 32.4	-1.2
	1.9nm,0.3s,baz=87,slow=15,SNR=17							
ZALV				Lg		Lg	08 47 57.8	
	6.4nm,0.3s,baz=83,slow=24,SNR=20							
KURBB	Kurchatov Arra	6.58	242	Pn		Pn	08 48 41.3	+0.3
	0.1nm,0.3s,baz=54,slow=14,SNR=5.3							
KURBB				Lg		Lg	08 50 30.5	
	0.1nm,0.3s,baz=48,slow=30,SNR=6.3							
MKAR	Makanchi Array	8.08	207	Pn		Pn	08 49 03.9	+2.4
	0.0nm,0.3s,baz=22,slow=13,SNR=1.7							
MKAR				Sn		Sn	08 50 31.9	-1.6
	0.1nm,0.3s,baz=24,slow=25,SNR=3.6							
MKAR				Lg		Lg	08 51 16.8	
	0.1nm,0.3s,baz=26,slow=30,SNR=3.5							

*JMA **23** 08:51:07.2±0.3, 44.36°N×139.24°E, h264km, M2.7*
*IDC **23** 08:51:08.5±3.4, 44.15°N×139.02°E, h273km±34km, mb2.8/4, mb1 3.1/5, mb1mx2.8/55, mbtmp3.5/5, Error ellipse: s-maj=33.1km s-min=21.7km az=86.0*

ISC 23 08:51:06.9±1.0, 44.24°N±0.06×139.29°E±0.08, h250km, n19, σ2°5'41/26, mb3.2/4, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JSK	Shakotan	1.23	135	P		Pn	08 51 45.9	+2.6
JRBN	Rebuntou	1.73	46	P		Pn	08 51 48.1	+1.1
JRBN				*e*S		S	08 52 19.4	+0.8
JWK2	Keihoku	2.15	59	P		Pn	08 51 52.8	+2.2
JOSM	Okushiri--Mats	2.16	176	P		Pn	08 51 53.7	+2.8
JKK2	Kamakawa 2	2.52	97	P		Pn	08 51 56.2	+1.9
JKK2				*e*S		S	08 52 35.5	+3.7
JOMM	Oshimamatsumae	2.76	169	P		Pn	08 51 59.1	+2.2
JOT	Ohata	3.13	155	P		Pn	08 52 03.6	+2.7
JOT				*e*S		S	08 52 49.2	+5.7
JNBK	Urakawa-nobuka	3.20	127	P		Pn	08 52 03.7	+2.2
JNBK				*e*S		S	08 52 46.9	+2.1
JTKR	Abashiri--Toko	3.34	93	P		Pn	08 52 04.2	+1.2
JAR	Ashorobuto	3.38	105	P		Pn	08 52 04.9	+1.4
JCH	Churui	3.38	117	P		Pn	08 52 03.8	+0.2
JCH				*e*S		S	08 52 47.0	-1.4
JANG	Nango	4.20	156	P		Pn	08 52 13.4	+0.3
JANG				*e*S		S	08 53 03.2	-2.5
NEM2	Nemuro 2	4.75	98	*e*S		S	08 53 13.1	-4.4
JMK	Ichinoseki	5.47	164	P		Pn	08 52 28.8	+0.2
JMK				*e*S		S	08 53 32.4	-1.3
MJAR	Matsushiro Arr	7.73	186	P		Pn	08 52 57.5	+0.6
	0.2nm,0.3s,baz=0.7,slow=15,SNR=4.5							
MKAR	Makanchi Array	39.28	294	P		P	08 58 09.7	-1.8
	0.5nm,0.6s,baz=82,slow=9.7,SNR=5.2							
ILAR	Eielson Array	44.44	36	P		P	08 58 53.4	+0.6
	0.2nm,0.6s,baz=285,slow=7.8,SNR=3.4							
WRA	Warramunga Arr	64.03	185	P		P	09 01 12.2	-1.8
	0.3nm,0.6s,baz=2.4,slow=7.0,SNR=6.9							
ASAR	Alice Springs	67.75	185	P		P	09 01 36.5	-1.2
	0.5nm,0.7s,baz=358,slow=5.6,SNR=6.5							

*UPP **23** 08:59:45.4±3.4, 64.47°N×31.34°E, h0km, ML1.7, Suspected explosion*
*HEL **23** 08:59:49.7±0.1, 64.79°N×30.83°E, h0km, ML2.1, Explosion*
*KOLA **23** 08:59:49.4, 64.76°N×30.40°E, h0km*
*IDC **23** 08:59:49.9±2.6, 64.71°N×31.09°E, h0km, mb1 3.1/4, mb1mx2.9/51, mbtmp3.1/4, ML2.4/4, Error ellipse: s-maj=35.0km s-min=10.8km az=106.0*
*NAO **23** 08:59:51.8±1.3, 64.88°N×30.12°E, ML2.5*
*BER **23** 08:59:51.9±5.7, 64.86°N×30.36°E, h0km, ML2.5(NAO), Suspected explosion*

ISC 23 08:59:49.7±0.9, 64.80°N±0.03×30.64°E±0.05, h0km, n37, σ1°9'74/68, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KU6	Riekki	1.27	346	*e*P		Pg	09 00 13.1	-1.0
KU6				*e*S		Sg	09 00 30.5	-0.1
JOF	Joensuu	1.91	171	*e*P		Pn	09 00 22.9	-0.5
JOF				*e*S		Sn	09 00 47.4	-0.6
OUL	Oulu	2.04	280	*e*P		Pn	09 00 26.3	+1.1
OUL				*e*S		Sb	09 00 53.4	-0.1
OUL				MSG			09 00 57.4	
	comp=Z,18nm,0.1s							
OBF4	Vikkela, Lumij	2.37	273	*e*P		Pn	09 00 30.6	+0.9
OBF4				*e*S		Sn	09 01 00.6	+1.2
OBF4				MSG			09 01 09.0	
	comp=Z,6.2nm,0.1s							
OUF	Merijarvi	2.59	263	*e*P		Pn	09 00 33.6	+0.9
OUF				*e*S		Sn	09 01 06.7	+1.9
RNF	Rovaniemi	2.64	316	*e*P		Pn	09 00 34.0	+0.5
RNF				*e*S		Sn	09 01 07.7	+1.5
OBF0	Syolatti, Pyha	2.77	267	*e*P		Pn	09 00 36.0	+0.8
OBF0				*e*S		Sn	09 01 10.6	+1.2
APA0	Apatity Array	2.98	18	Pn		Pn	09 00 38.5	+0.4
	baz=194,slow=12							
APA0				Pg		Pg	09 00 46.8	+0.1
APA0				Lg		Lg	09 01 22.5	
	baz=184,slow=37							
APA0	Apatity Array	2.98	18	P		Pn	09 00 38.2	+0.1
APA0				S		Sn	09 01 14.8	+0.3
APA0	Apatity Array	2.98	18	Pn		Pn	09 00 38.5	+0.4
	baz=194,slow=12							
APA0				Pg		Pg	09 00 46.8	+0.1
APA0				Sg		Sg	09 01 22.5	-2.8
	baz=184,slow=37							
VRF	Varrio	3.00	352	*e*P		Pn	09 00 38.9	+0.6
VRF				*e*S		Sn	09 01 13.9	-1.0
APA	Apatity	3.00	21	P		Pn	09 00 38.6	+0.2
APA				S		Sn	09 01 15.4	+0.3
PAJU	Pajala	3.81	309	P		Pn	09 00 50.1	+0.6
SJUU	Sjulsmark	3.88	285	P		Pn	09 00 50.6	+0.2
ERTU	Ertsjaerv	3.92	301	P		Pn	09 00 52.7	+1.7
FIA0	FINESS Array S	3.95	214	Pn		Pn	09 00 52.0	+0.5
	baz=33,slow=12							
FIA0				Pg		Pb	09 01 01.0	+0.9
	baz=29,slow=16							
FIA0				Sn		Sn	09 01 38.9	+0.5
	baz=50,slow=22							
FIA0				Lg		Lg	09 01 51.5	
	baz=21,slow=37							
FIA0	FINESS Array S	3.95	214	Pn		Pn	09 00 52.0	+0.5
	baz=33,slow=12							
FIA0				Pg		Pb	09 01 01.0	+0.9
	baz=29,slow=16							
FIA0				Sn		Sn	09 01 38.9	+0.5
	baz=50,slow=22							
FIA0				Sg		Sb	09 01 51.5	+3.2
	baz=21,slow=37							
FINES	FINESS Array B	3.95	214	Pn		Pn	09 00 50.6	-0.9
	comp=Z,0.2nm,0.3s,baz=36,slow=12,SNR=1.9							
FINES				Sn		Sn	09 01 38.6	+0.2
	comp=Z,0.4nm,0.3s,baz=46,slow=20,SNR=2.2							
FINES				Lg		Lg	09 01 52.5	
	comp=Z,1.8nm,0.3s,baz=40,slow=27,S

APA0					Rg	Rg	09 05 02.0			
	baz=79,slow=37									
APA0	**Apatity Array**	**0.24**	**316**	P	**Pg**	**Pg**	**09 04 53.8**	**+0.5**		
APA0					S	**Sg**	**09 04 58.7**	**+2.3**		
APA0	**Apatity Array**	**0.24**	**316**	Pg	**Pg**	**Pg**	**09 04 54.0**	**+0.7**		
	baz=101,slow=16									
APA0					Sg	**Sg**	**09 04 59.6**	**+3.1**		
	baz=90,slow=28									
VRF	**Varrio**	**1.50**	**284**	PG	**Pn**	**09 05 16.9**	**+0.1**			
VRF				MSG		09 05 36.8				
	comp=Z,26nm,0.2s									
VRF				SG	**Sn**	**09 05 38.0**	**+1.0**			
KU6	**Riekki**	**2.00**	**226**	PG	**Pg**	**09 05 27.3**	**+0.4**			
	baz=41									
KU6				MSG		09 05 54.4				
	comp=Z,10nm,0.2s									
KU6				SG	**Sg**	**09 05 57.4**	**+4.7**			
SGF	**Sodankyl**	**2.66**	**273**	PG	**Pb**	**09 05 37.5**	**+0.4**			
SGF				SG	**Sg**	**09 06 13.9**	**-0.2**			
RNF	**Rovaniemi**	**3.03**	**258**	PN	**Pn**	**09 05 39.6**	**+1.9**			
RNF				SN	**Sb**	**09 06 20.2**	**-0.6**			
ARA0	**ARCESS Array S**	**3.60**	**309**	Pn	**Pn**	**09 05 44.5**	**-1.1**			
	baz=124,slow=16									
ARA0				Pg	**Pb**	**09 05 53.1**	**0.0**			
	baz=117,slow=16									
ARA0				Sn	**Sn**	**09 06 27.0**	**-1.8**			
	baz=119,slow=28									
ARA0				Lg	Lg	09 06 38.0				
	baz=116,slow=37									
ARA0	**ARCESS Array S**	**3.60**	**309**	Pn	**Pn**	**09 05 44.5**	**-1.1**			
	baz=124,slow=16									
ARA0				Pg	**Pb**	**09 05 53.1**	**0.0**			
	baz=117,slow=16									
ARA0				Sn	**Sn**	**09 06 27.0**	**-1.8**			
	baz=119,slow=28									
ARA0				Sg	**Sb**	**09 06 38.0**	**+0.6**			
	baz=116,slow=37									
ARE0	**ARCESS Array S**	**3.60**	**309**	PN	**Pn**	**09 05 44.6**	**-1.1**			
	baz=119									
ARE0				SN	**Sn**	**09 06 27.0**	**-1.8**			
ARE0	**ARCESS Array S**	**3.60**	**309**	*eP*	**Pn**	**09 05 44.6**	**-1.1**			
ARE0				IAML		09 06 40.3				
	comp=Z,11nm,0.5s									
HEF	**Hetta**	**3.82**	**289**	Pn	**Pn**	**09 05 49.0**	**+0.4**			
HEF				Pg	**Pb**	**09 05 57.4**	**+0.6**			
HEF				Sn	**Sn**	**09 06 34.5**	**+0.4**			
HEF				Lg	Lg	09 06 49.7				
HEF	**Hetta**	**3.82**	**289**	PN	**Pn**	**09 05 49.3**	**+0.7**			
	baz=99									
HEF				SN	**Sn**	**09 06 35.3**	**+1.2**			
HEF	**Hetta**	**3.82**	**289**	Pn	**Pn**	**09 05 49.0**	**+0.4**			
HEF				Pg	**Pb**	**09 05 57.4**	**+0.6**			
HEF				Sn	**Sn**	**09 06 34.5**	**+0.4**			
HEF				Sg	**Sg**	**09 06 49.7**	**-1.4**			
OUL	**Oulu**	**3.85**	**236**	PG	**Pg**	**09 06 02.7**	**+0.3**			
TOF	**Tornio**	**3.86**	**254**	PG	**Pg**	**09 06 01.7**	**-0.8**			
TOF				SB	**Sg**	**09 06 51.0**	**-1.5**			
KTK1	**Kautokeino**	**4.12**	**297**	*eP*	**Pn**	**09 05 50.6**	**-2.1**			
KTK1				IAML		09 06 57.4				
	comp=Z,11nm,0.4s									
LANU	**Lannavaara**	**4.40**	**283**	PN	**Pn**	**09 05 57.0**	**+0.4**			
LANU				SG	**Sg**	**09 07 07.1**	**-2.6**			
KIF	**Kilpisjarvi**	**4.96**	**294**	Pn	**Pn**	**09 06 03.8**	**-0.4**			
KIF				Sn	**Sn**	**09 07 01.0**	**-1.2**			
KIF	**Kilpisjarvi**	**4.96**	**294**	Pn	**Pn**	**09 06 03.8**	**-0.4**			
KIF				Sn	**Sn**	**09 07 01.0**	**-1.2**			
FIA0	**FINESS Array S**	**6.80**	**211**	Lg	Lg	09 08 23.2				
	baz=29,slow=37									
FIA0	**FINESS Array S**	**6.80**	**211**	Sg	**Sg**	**09 08 23.2**	**-3.5**			
	baz=29,slow=37									

KLM ***23*** *09:06:54.0, 7˚.01S×102˚.40E, h16km, mb5.2*
IDC ***23*** *09:06:54.1±0.5, 6˚.84S×102˚.67E, h0km, mb4.8/33, mb1 4.8/35, mb1mx4.7/51, mbtmp4.8/35, ML4.0/2, MS3.9/7, Ms1 3.9/7, ms1mx3.5/54, Error ellipse: s-maj=18.2km s-min=9.6km az=43.0*
BJI ***23*** *09:06:55.6±0.0, 7˚.00S×102˚.60E, h29km, mB5.2/59, mb5.3/77, Ms5.2/73, Ms7 5.0/70*
GCMT ***23*** *09:06:55.6±0.4, 7˚.39S±0˚.03×102˚.29E±0˚.03, h24km±1km, MW4.9/57, Moment Tensor Solution. s28,c31; s57,c73; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.17±.18; Mθθ-1.35±.11; Mϕϕ-0.82±.12; Mrθ1.31±.12; Mrϕ0.60±.06; Mθϕ-1.09±.14; Best double couple: Mo2.59400×10^16 NP1:ϕs127.00000°, δ25.00000°, λ84.00000°. NP2: ϕs127.00000°, δ66.00000°, λ93.00000°. Principal axes: T 2.8110, Plg69.0000°, Azm42.0000°; N -0.4350, Plg2.0000°, Azm306.0000°; P -2.3780, Plg20.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MOS ***23*** *09:06:56.7±0.8, 6˚.86S×102˚.69E, h31km, mb5.5/46, MS5.1/4 Error ellipse: s-maj=9.2km s-min=5.7km az=104.7*
DJA ***23*** *09:06:56.6±0.2, 7˚.S±3˚×10˚.3E±˚, h10km, M5.0/64, mB5.5/38, mb5.2/64, MLv5.3/22, Mw(mB)4.9/38, Mwp5.1/3*
NEIC ***23*** *09:06:57.6±2.1, 6˚.95S±0˚.05×102˚.64E±0˚.02, h30km±3km, mb5.2/80, Error ellipse: s-maj=8.1km s-min=1.9km az=161.0*

ISC 23 09:06:56.2±0.8, 6˚.98S±0˚.04×102˚.63E±0˚.04, h17km±4km, n682, σ1≥31/709, mb5.2/122, MS5.0/28, 26C-5D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**2.35**	**52**	P		**Pn**	**09 07 34.0**	**0.0**
LWLI	**Liwa**	**2.41**	**36**	P		**Pn**	**09 07 34.8**	**-0.2**
MNAI	**Manna**	**2.62**	**7**	P		**Pn**	**09 07 36.7**	**-1.1**
MNAI	**Manna**	**2.62**	**7**			**Pn**	**09 07 36.4**	**-1.4**
MDSI	**Maura Dua**	**2.92**	**32**	P		**Pn**	**09 07 41.9**	**+0.1**
BLSI	**Bandar Lampung**	**3.05**	**58**	P		**Pn**	**09 07 44.3**	**+0.6**
LHSI	**Lahat**	**3.25**	**16**	P		**Pn**	**09 07 46.5**	**0.0**
SBJI	**Serang**	**3.58**	**76**	P		**Pn**	**09 07 51.7**	**+0.8**
MASI	**Maura Aman, Be**	**3.83**	**354**	P		**Pn**	**09 07 53.1**	**-1.4**
DBJI	**Dramaga**	**4.11**	**84**	P		**Pn**	**09 07 59.7**	**+1.4**
CBJI	**Citeko**	**4.22**	**83**	P		**Pn**	**09 08 02.4**	**+2.6**
CNJI	**Cibinong**	**4.47**	**94**	P		**Pn**	**09 08 02.7**	**-0.6**
PMBI	**Palembang**	**4.55**	**28**	P		**Pb**	**09 08 16.2**	**+0.5**
XMIS	**Christmas Isla**	**4.58**	**140**			**Pn**	**09 08 00.6**	**-4.2**
PPSI	**Pulau Pagai**	**4.94**	**328**	P		**Pn**	**09 08 07.6**	**-2.1**
LEM	**Lembang**	**4.95**	**89**	Pn		**Pn**	**09 08 12.8**	**+2.8**
	33nm,0.3s,baz=212,slow=3.9,SNR=57							
LEM				Sn		**Sn**	**09 09 07.2**	**+0.2**
	15nm,0.3s,baz=234,slow=17,SNR=3.9							
KRJI	**Kerinci**	**4.99**	**346**	P		**Pn**	**09 08 09.1**	**-1.4**
CISI	**Cisompet, Garu**	**5.17**	**97**	P		**Pn**	**09 08 12.4**	**-0.5**
	3.7nm13μm927nm,0.5s							
CISI	**Cisompet, Garu**	**5.17**	**97**			**Pn**	**09 08 12.4**	**-0.5**
SDSI	**Sungai Dareh**	**6.13**	**349**	P		**Pn**	**09 08 23.8**	**-2.2**
	0.8nm2μm127nm,1.0s							
PDSI	**Padang**	**6.41**	**340**	P		**Pn**	**09 08 27.6**	**-2.3**
	1.0nm1μm106nm,0.7s							
TPI	**Tanjungpandan**	**6.53**	**50**	P		**Pn**	**09 08 31.7**	**+0.2**
	0.6nm1μm77nm,0.9s							
SISI	**Saibi**	**6.63**	**328**	P		**Pn**	**09 08 30.5**	**-2.5**
	0.9nm1μm141nm,0.8s							
BKNI	**Bangkinang**	**7.43**	**348**	P		**Pn**	**09 08 41.6**	**-2.3**
	1.3nm265nm,0.8s							
BKNI	**Bangkinang**	**7.43**	**348**			**Pn**	**09 08 40.3**	**-3.6**
COCO	**West Island**	**7.71**	**227**	P		**Pn**	**09 08 47.6**	**-0.2**
COCO	**West Island**	**7.71**	**227**	Pn		**Pn**	**09 08 47.6**	**-0.2**
SMRI	**Semarang**	**7.75**	**91**	P		**Pn**	**09 08 50.1**	**+1.8**
	2.7nm8μm672nm,1.3s							
SMRI	**Semarang**	**7.75**	**91**			**Pn**	**09 08 46.9**	**-1.4**
UGM	**Wanagama**	**7.88**	**97**	P		**Pn**	**09 08 50.9**	**+0.8**
	1.9nm5μm572nm,0.8s							
UGM	**Wanagama**	**7.88**	**97**			**Pn**	**09 08 50.6**	**+0.5**
TPRI	**Tanjung Pinang**	**8.07**	**14**	P		**Pn**	**09 08 53.9**	**+1.2**
PBSI	**Pulau Batu**	**8.13**	**328**	P		**Pn**	**09 08 52.8**	**-0.8**
	155nm,0.8s							
WOJI	**Wonogiri, Jawa**	**8.27**	**96**	P		**Pn**	**09 08 56.6**	**+1.2**
	0.6nm166nm,1.0s							
UWJI	**Ujung Watu**	**8.28**	**87**	P		Pn	09 09 02.4	+6.8
MNSI	**Mandailing Nat**	**8.30**	**338**	P		**Pn**	**09 08 53.8**	**-2.1**
	0.4nm5μm67nm,0.7s							
MYKOM	**Kota Tinggi**	**8.79**	**8**	Pn		**Pn**	**09 09 00.7**	**-2.0**
MYKOM	**Kota Tinggi**	**8.79**	**8**	P		**Pn**	**09 09 02.0**	**-0.7**
GSI	**Gunungsitoli**	**9.65**	**328**	P		Pn	09 09 20.8	+6.3
GSI	**Gunungsitoli**	**9.65**	**328**			**Pn**	**09 09 11.5**	**-3.0**
GRJI	**Gresik**	**9.77**	**90**	P		**Pn**	**09 09 18.5**	**+2.4**
	2μm294nm,0.8s							
RPSI	**Rantau Prapat**	**10.30**	**339**	Pn		**Pn**	**09 09 19.9**	**-3.5**
RPSI	**Rantau Prapat**	**10.30**	**339**			**Pn**	**09 09 19.8**	**-3.5**
RPSI						Sn	09 11 07.9	-11
PSI	**Prapat**	**10.40**	**339**	Pn		Pn	09 09 19.8	-5.0
	0.7nm,0.3s,baz=180,slow=6.1,SNR=12							
PSI						Sn	Sn	09 11 07.9	-13
	0.4nm,0.3s,baz=180,slow=19,SNR=1.5							
PSI	**Prapat**	**10.40**	**339**	P		Pn	09 09 19.9	-4.9
SNSI	**Sinabang, Aceh**	**11.25**	**326**	P		**Pn**	**09 09 37.1**	**+0.7**
	214nm,0.9s							
KSM	**Kuching**	**11.37**	**43**	Pn		**Pn**	**09 09 35.7**	**-2.2**
KSM	**Kuching**	**11.37**	**43**	P		**Pn**	**09 09 39.0**	**+1.1**
IPM	**Ipoh**	**11.49**	**352**			Pn	09 09 34.6	-5.1
KCSI	**Kotacane, Aceh**	**11.51**	**335**	P		**Pn**	**09 09 38.5**	**-1.4**
	32nm,1.2s							
JAGI	**Jajag, Banyuwa**	**11.51**	**98**	P		**Pn**	**09 09 39.3**	**-0.6**
	2μm193nm,1.0s							
JAGI	**Jajag, Banyuwa**	**11.51**	**98**			**Pn**	**09 09 37.4**	**-2.5**
TPTI		**11.54**	**332**	P		**Pn**	**09 09 39.3**	**-1.0**
	9.2nm,0.7s							
KULM	**Kulim**	**12.35**	**351**	Pn		**Pn**	**09 09 48.8**	**-2.5**
KULM	**Kulim**	**12.35**	**351**	P		**Pn**	**09 09 50.0**	**-1.4**
SRBI	**Singaraja**	**12.52**	**96**	P		**Pn**	**09 09 53.6**	**-0.1**
	2μm178nm,0.7s							
MLSI	**Meulaboh, Aceh**	**12.79**	**331**	P		**Pn**	**09 09 55.5**	**-1.9**
	202nm,1.1s							
SBUM	**Sibu**	**13.39**	**46**	Pn		**Pn**	**09 10 04.1**	**-1.5**
SBUM	**Sibu**	**13.39**	**46**	P		**Pn**	**09 10 09.0**	**+3.4**
KBKI	**Kotabaru**	**13.96**	**76**	P		**P**	**09 10 23.0**	**+1.6**
PLAI	**Plampang**	**15.11**	**98**	P		**Pn**	**09 10 27.9**	**-1.2**
	2μm179nm,0.9s							
BKB	**Balikpapan**	**15.31**	**69**	P		P	09 10 45.8	+9.4
BKB	**Balikpapan**	**15.31**	**69**	Pn		**Pn**	**09 10 32.3**	**+0.5**
BKB				IAmb		IAmb	09 10 51.7	
	comp=Z,133nm,0.9s							
WBSI	**Waikabubak, Su**	**16.79**	**100**	P		P	09 11 02.0	+9.1
KAPI	**Kappang**	**17.14**	**84**	P		**Pn**	**09 10 53.3**	**-1.7**
	comp=Z,0.7nm,0.3s,baz=266,slow=9.5,SNR=8.4							
KAPI					LR	LR	09 18 45.9	
	comp=Z,877nm,18.8s,baz=264,slow=42							
KAPI	**Kappang**	**17.14**	**84**	P		**Pn**	**09 10 52.8**	**-2.3**
KAPI					pmax	pmax		
	comp=Z,29nm,0.9s							
KAPI	**Kappang**	**17.14**	**84**	Pn		**Pn**	**09 10 52.8**	**-2.3**
SPSI	**Sidrap Palu**	**17.32**	**81**	P		**Pn**	**09 10 56.6**	**-0.7**
	comp=Z,850nmcomp=Z,45nm,1.2s							
BKSI	**Bulukumba**	**17.46**	**86**	P		**Pn**	**09 10 59.3**	**+0.1**
	comp=Z,2μmcomp=Z,226nm,1.1s							
TTSI	**Tana Toraja**	**17.56**	**78**	P		**P**	**09 11 02.5**	**+1.2**
	comp=Z,1μmcomp=Z,65nm,1.6s							
BNSI	**Bone**	**17.57**	**83**	P		**P**	**09 11 01.3**	**-0.2**
	comp=Z,1μmcomp=Z,86nm,1.7s							
BASI	**Baing, Sumba**	**18.03**	**102**	P		**P**	**09 11 09.3**	**+2.7**
	comp=Z,4μmcomp=Z,318nm,1.5s							
SPMM	**Sapulut**	**18.04**	**50**	P		**P**	**09 11 08.0**	**+1.3**
MPSI	**Mapaga**	**18.69**	**68**	P		**Pn**	**09 11 15.2**	**+0.9**
	comp=Z,2μmcomp=Z,3μmcomp=Z,147nm,1.0s							
KKM	**Kota Kinabalu**	**18.73**	**47**	P		**P**	**09 11 13.4**	**-1.1**
KKM				IAmb		IAmb	09 11 15.8	
	comp=Z,182nm,1.3s							
EDFI	**Ende, Flores**	**18.96**	**97**	P		**Pn**	**09 11 17.3**	**-0.3**
	comp=Z,459nmcomp=Z,45nm,1.0s							
MMRI	**Maumere**	**19.49**	**96**	P		**Pn**	**09 11 23.2**	**-0.7**
	comp=Z,438nm,1.5s							
MMRI	**Maumere**	**19.49**	**96**	P		**P**	**09 11 21.4**	**-1.3**
DLV	**T Lat**	**19.68**	**17**	P		**P**	**09 11 23.5**	**-1.4**
APSI	**Ampana**	**19.90**	**73**	P		**P**	**09 11 27.5**	**+0.4**
	comp=Z,2μmcomp=Z,180nm,1.1s							
LUWI	**Luwuk**	**20.93**	**75**	P		**P**	**09 11 39.0**	**+0.7**
	comp=Z,7μmcomp=Z,266nm,1.1s							
LUWI	**Luwuk**	**20.93**	**75**	P		**P**	**09 11 37.2**	**-1.0**
BATI	**Baumata**	**21.04**	**100**	P		**P**	**09 11 41.0**	**+1.5**
	comp=Z,645nm,0.9s,baz=266,slow=3.2,SNR=27							
BATI					S	**S**	**09 15 30.6**	**-2.8**
	comp=Z,30nm,0.4s,baz=238,slow=9.5,SNR=2.5							
BATI	**Baumata**	**21.04**	**100**	P		**P**	**09 11 41.9**	**+2.4**
	comp=Z,3μmcomp=Z,477nm,0.9s							
SOEI	**Soe**	**21.58**	**99**	P		**P**	**09 11 45.4**	**0.0**
	comp=Z,7μmcomp=Z,649nm,1.0s							
SOEI	**Soe**	**21.58**	**99**	P		**P**	**09 11 44.2**	**-1.2**
PSAC1	**Pilbara Seismi**	**22.02**	**133**	P		**P**	**09 11 47.5**	**-2.5**
PSAA2	**Pilbara Seismi**	**22.06**	**133**	P		**P**	**09 11 47.4**	**-3.1**
PSAA2					IAmb	IAmb	09 12 06.7	
	comp=Z,98nm,1.4s							
PSA00	**Pilbara Seismi**	**22.07**	**133**	P		**P**	**09 11 51.2**	**+0.7**
PSAA3	**Pilbara Seismi**	**22.08**	**133**	P		**P**	**09 11 51.3**	**+0.7**
PSAB3	**Pilbara Seismi**	**22.09**	**133**	P		**P**	**09 11 49.5**	**-1.2**
PSAB3					IAmb	IAmb	09 12 06.1	
	comp=Z,100nm,1.4s							
PSAC2	**Pilbara Seismi**	**22.10**	**133**	P		**P**	**09 11 52.6**	**+1.8**
PSAC2					IAmb	IAmb	09 12 07.1	
	comp=Z,116nm,1.5s							
SANI	**Sanana**	**23.78**	**79**	P		**P**	**09 12 07.0**	**-1.3**
	comp=Z,2μmcomp=Z,124nm,1.2s							
NLAI	**Namlea**	**24.65**	**83**	P		**P**	**09 12 18.3**	**+2.1**
	comp=Z,47nm,0.7s							
FITZ	**Fitzroy Crossi**	**24.99**	**118**	P		**P**	**09 12 20.5**	**+1.2**
	baz=25,SNR=13							
FITZ	**Fitzroy Crossi**	**24.99**	**118**	P		**P**	**09 12 20.6**	**+1.2**
	comp=Z,9.8nm,0.8s,baz=290,slow=7.1,SNR=13							
FITZ					S	**S**	**09 16 35.4**	**-7.3**
	comp=Z,2.1nm,0.8s,baz=236,slow=15,SNR=1.3							
FITZ	**Fitzroy Crossi**	**24.99**	**118**	P		**P**	**09 12 18.4**	**-0.9**
FITZ					IAmb	IAmb	09 12 30.5	
	comp=Z,36nm,0.8s							
CM31	**Chiang Mai Arr**	**25.54**	**352**	P		**P**	**09 12 24.6**	**+0.4**
CMAR	**Chiang Mai Arr**	**25.54**	**352**	P		**P**	**09 12 24.7**	**+0.5**
	comp=Z,58nm,0.8s,baz=183,slow=8.6,SNR=147							
CMAR	**Chiang Mai Arr**	**25.54**	**352**	*i*	P	**P**	**09 12 24.7**	**+0.5**
CMAR					pmax	pmax		
	comp=Z,61nm,0.8s							
LBMI	**Labuha**	**25.59**	**77**	P		**P**	**09 12 27.3**	**+2.5**
	comp=Z,2μmcomp=Z,245nm,1.0s							
TNTI	**Ternate**	**25.85**	**74**	P		**P**	**09 12 27.0**	**-0.2**
	comp=Z,2μmcomp=Z,168nm,1.2s							
TNTI	**Ternate**	**25.85**	**74**	P		**P**	**09 12 25.9**	**-1.2**
CHTO	**Chiang Mai**	**25.89**	**352**	P		**P**	**09 12 27.1**	**-0.3**
CHTO					pmax	pmax		
	comp=Z,159nm,1.4s							
CHTO	**Chiang Mai**	**25.89**	**352**	P		**P**	**09 12 27.1**	**-0.3**
CHTO					IAmb	IAmb	09 12 30.8	
	comp=Z,159nm,1.4s							
KCP	**Kidapawan**	**26.36**	**59**	⇓ *i*	P	**P**	**09 12 32.9**	**+1.0**
QIZ	**Qiongzhong**	**26.80**	**15**	P		**P**	**09 12 35.4**	**-0.3**
QIZ					S	**S**	**09 17 11.1**	**-0.2**
QIZ					pmax	pmax		
	comp=Z,33nm,1.6s							
QIZ					LR	LR		
	comp=Z,2μm,13.3s							
QIZ					LR	LR		
	comp=Z,1μm,12.9s							
QIZ					LR	LR		
	comp=Z,2μm,13.7s							
DAV	**Davao City (W)**	**26.81**	**59**	LR		LR	09 22 57.8	
	comp=Z,401nm,21.9s,baz=330,slow=36							
DAV	**Davao City (W)**	**26.81**	**59**	⇑ *iP*		**P**	**09 12 35.2**	**-0.6**
KNRA	**Kununurra**	**27.01**	**111**	P		**P**	**09 12 38.3**	**+0.7**
	baz=27,SNR=7.7							
KNRA	**Kununurra**	**27.01**	**111**	P		**P**	**09 12 36.5**	**-1.1**
SLVN	**Son La**	**28.16**	**3**	P		**P**	**09 12 47.2**	**-0.7**
SLVN					IAmb	IAmb	09 12 50.2	
	comp=Z,61nm,1.1s							
SIJI	**Sorong**	**29.19**	**79**	P		**P**	**09 12 55.6**	**-1.5**
	comp=Z,17nm,0.8s,baz=274,slow=5.8,SNR=12							
H01W3	**Cape Leeuwin H**	**29.72**	**161**	T		T	09 44 28.2	
	baz=338,slow=76							
H01W2	**Cape Leeuwin H**	**29.74**	**161**	T		T	09 44 46.3	
	baz=338,slow=76							
H01W1	**Cape Leeuwin H**	**29.74**	**161**	T		T	09 44 40.1	
	baz=338,slow=76							
FAKI	**Fak Fak**	**29.77**	**84**	P		**P**	**09 13 02.4**	**+0.1**
	comp=Z,768nmcomp=Z,44nm,1.4s							
FAKI	**Fak Fak**	**29.77**	**84**	P		**P**	**09 13 01.3**	**-1.0**
FAKI					IAmb	IAmb	09 13 02.6	
	comp=Z,60nm,1.2s							
H08S2	**Diego Garcia H**	**29.90**	**267**	T		T	09 44 22.1	
	baz=89,slow=75							
H08S3	**Diego Garcia H**	**29.91**	**267**	T		T	09 44 23.4	
	baz=89,slow=75							
H08S1	**Diego Garcia H**	**29.92**	**267**	T		T	09 44 23.6	
	baz=89,slow=75							
KDU	**Kakadu**	**29.93**	**103**	P		**P**	**09 13 03.7**	**0.0**
	baz=30,SNR=4.4							
WRKA	**Warakurna**	**30.41**	**129**	P		**P**	**09 13 09.0**	**+1.1**
	baz=31,SNR=7.7							
KMI	**Kunming**	**31.91**	**0**	P		**P**	**09 13 23.3**	**+2.1**
KMI				pP		pwP	09 13 31.9	+1.8
KMI				sP		sP	09 13 35.3	+8.7
KMI				S		**S**	**09 18 30.8**	**-1.0**
KMI				pmax		pmax		
	comp=Z,66nm,1.3s							
KMI				LR		LR		
	comp=Z,3μm,14.5s							
KMI				LR		LR		
	comp=Z,830nm,12.6s							
KMI				LR		LR		
	comp=Z,3μm,15.3s							
KMI	**Kunming**	**31.91**	**0**	P		**P**	**09 13 19.5**	**-1.7**
KMI				pmax		pmax		
	comp=Z,62nm,0.9s							
KMI	**Kunming**	**31.91**	**0**	P		**P**	**09 13 19.5**	**-1.7**
WB0	**Warramunga Arr**	**33.33**	**116**	P		**P**	**09 13 33.1**	**-0.5**
WB0				IAmb		IAmb	09 13 43.9	
	comp=Z,19nm,0.8s							
WRA	**Warramunga Arr**	**33.34**	**116**	P		**P**	**09 13 33.9**	**+0.2**
	comp=Z,9.5nm,1.0s,baz=285,slow=11,SNR=22							
WRA				PcP		**PcP**	**09 16 17.3**	**+1.8**
	comp=Z,2.5nm,0.8s,baz=302,slow=2.0,SNR=3.6							
WB5	**Warramunga Arr**	**33.34**	**116**	P		**P**	**09 13 34.5**	**+0.8**
	baz=34							
WRAB	**Tennant Creek**	**33.34**	**116**	*ceP*		**P**	**09 13 34.4**	**+0.7**
WRAB				pmax		pmax		
	comp=Z,21nm,1.3s							
WRAB	**Tennant Creek**	**33.34**	**116**	P		**P**	**09 13 32.5**	**-1.2**
WRAB				IAmb		IAmb	09 13 46.3	
	comp=Z,23nm,0.8s							
WB2	**Warramunga Arr**	**33.35**	**116**	P		**P**	**09 13 31.4**	**-2.4**
WB2				IAmb		IAmb	09 13 44.0	
	comp=Z,18nm,0.7s							
GYA	**Guiyang**	**33.47**	**7**	⇑ *iP*		**P**	**09 13 35.1**	**+0.3**
GYA				pP		pwP	09 13 46.0	+2.3
GYA				PP		**PP**	**09 14 50.5**	**-0.2**
GYA				PcP		**PcP**	**09 16 17.3**	**+1.4**
GYA				S		**S**	**09 18 57.6**	**+1.7**
GYA				sS		sS	09 19 12.8	+10
GYA				ScP		**ScP**	**09 19 59.0**	**-0.9**
GYA				SS		**SnSn**	**09 21 02.5**	**+4.1**
GYA				pmax		pmax		
	comp=Z,30nm,0.8s							
GYA				pmax		pmax		
	comp=Z,140nm,4.8s							
GYA				LR		LR		
	comp=Z,490nm,15.8s							
GYA				LR		LR		
	comp=Z,510nm,15.6s							
GYA				LR		LR		
	comp=Z,550nm,16.0s							
WR0	**Warramunga Arr**	**33.52**	**116**	P		**P**	**09 13 34.5**	**-0.8**
WR0				IAmb		IAmb	09 13 50.9	
	comp=Z,33nm,1.2s							
HYB	**Hyderabad**	**33.97**	**316**	*i*	P	P	09 13 46.0	+6.9
SHL	**Shillong**	**34.00**	**342**	P		**P**	**09 13 38.5**	**-1.0**
SHL				pmax		pmax		
	comp=Z,48nm,0.8s							
SHL	**Shillong**	**34.00**	**342**	P		**P**	**09 13 38.5**	**-1.0**
SHL				IAmb		IAmb	09 13 52.0	
	comp=Z,48nm,0.8s							
AS31	**Alice Springs**	**34.30**	**122**	P		**P**	**09 13 41.2**	**-0.8**
ASAR	**Alice Springs**	**34.30**	**122**	P		**P**	**09 13 43.0**	**+1.1**
	comp=Z,4.4nm,1.0s,baz=296,slow=8.2,SNR=24							
ASAR				PcP		**PcP**	**09 16 20.6**	**+2.3**
	comp=Z,1.6nm,1.0s,baz=296,slow=2.0,SNR=2.1							
TWG	**Pinlang**	**34.68**	**31**	P		**P**	**09 13 43.6**	**-1.6**
BOK	**Bokaro**	**34.69**	**332**	*eP*		**P**	**09 13 47.4**	**+2.1**
BOK				IAmb		IAmb	09 13 50.9	
	comp=Z,51nm,1.2s							
YULB	**Yu-li**	**35.27**	**31**	P		**P**	**09 13 49.0**	**-1.3**
YULB				IAmb		IAmb	09 13 53.3	
	comp=Z,47nm,1.4s							
SSLB	**Suanglung**	**35.43**	**30**	P		**P**	**09 13 50.1**	**-1.6**
SSLB				IAmb		IAmb	09 14 06.3	
	comp=Z,33nm,1.0s							
SMPI	**Sarmi**	**36.29**	**84**	P		P	09 14 04.4	+5

NJ2 S **S** **09 21 08.3 +6.6**
NJ2 pmax pmax
comp=Z,50nm,0.9s
NJ2 LR LR
comp=Z,990nm,14.2s
NJ2 LR LR
comp=Z,1μm,14.7s
NJ2 LR LR
comp=Z,1μm,16.1s
MTSU Mount Surprise 42.07 109 P **P** **09 14 49.4 +1.9**
baz=42,SNR=6.1
HTT Hallett 42.66 133 P **P** **09 14 54.1 +1.9**
baz=43,SNR=3.9
LZH Lanzhou 42.85 1 *e*P **P** **09 14 54.9 +1.1**
LZH pP pwP 09 15 03.4 +0.7
LZH sP sP 09 15 08.1 +8.9
LZH S **S** **09 21 17.4 -0.3**
LZH sS sS 09 21 30.3 +5.8
LZH pmax pmax
comp=Z,66nm,1.3s
LZH pmax pmax
comp=Z,190nm,4.9s
LZH LR LR
comp=Z,2μm,12.5s
LZH LR LR
comp=Z,2μm,14.1s
LZH LR LR
comp=Z,2μm,14.9s
STKA Stephens Creek 43.93 130 P **P** **09 15 04.2 +1.7**
baz=44,SNR=6.4
STKA Stephens Creek 43.93 130 P **P** **09 15 03.5 +1.0**
comp=Z,2.6nm,0.5s,baz=284,slow=9.0,SNR=6.9
STKA Stephens Creek 43.93 130 P **P** **09 15 02.2 -0.3**
STKA pmax pmax
comp=Z,4.0nm,1.0s
STKA Stephens Creek 43.93 130 P **P** **09 15 02.2 -0.3**
DDI Dehra Dun 43.95 329 *ex* **P** **09 15 03.3 +0.7**
DDI *i* x x 09 15 11.9
QLP Quilpie 44.07 121 P **P** **09 15 06.3 +2.6**
baz=44,SNR=4.0
PMG Port Moresby 44.12 96 P **P** **09 15 04.6 +0.5**
comp=Z,48nm,1.1s,baz=301,slow=6.5,SNR=9.8
PMG Port Moresby 44.12 96*ce*P **P** **09 15 04.6 +0.5**
PMG pmax pmax
comp=Z,310nm,1.3s
PMG Port Moresby 44.12 96 P **P** **09 15 02.5 -1.7**
PMG IAmb IAmb 09 15 06.0
comp=Z,89nm,1.2s
CTA Charters Tower 44.22 112 P **P** **09 15 06.4 +1.5**
comp=Z,27nm,1.2s,baz=284,slow=8.1,SNR=8.9
CTAO Charters Tower 44.22 112 P **P** **09 15 04.2 -0.8**
CTAO pmax pmax
comp=Z,31nm,1.0s
CTAO Charters Tower 44.22 112 P **P** **09 15 04.2 -0.8**
CTAO IAmb IAmb 09 15 16.0
comp=Z,31nm,1.0s
TIA Tai'an 45.07 17 P **P** **09 15 10.9 -0.5**
TIA pmax pmax
comp=Z,37nm,1.1s
TIA pmax pmax
comp=Z,200nm,3.9s
TIA LR LR
comp=Z,1μm,14.6s
TIA LR LR
comp=Z,650nm,10.7s
TIA LR LR
comp=Z,2μm,14.3s
TIY Taiyuan 45.39 11 *e*P **P** **09 15 14.5 +0.5**
TIY PP **PP** **09 17 04.3 +3.9**
TIY S **S** **09 21 58.8 +4.3**
TIY SS **ScS** **09 25 11.8 +1.5**
TIY pmax pmax
comp=Z,65nm,1.2s
TIY pmax pmax
comp=Z,190nm,4.2s
TIY LR LR
comp=Z,1μm,11.4s
TIY LR LR
comp=Z,460nm,10.2s
TIY LR LR
comp=Z,1μm,11.4s
GTA Gaotai 46.23 357 ⇑P **P** **09 15 21.6 +0.9**
GTA pP pwP 09 15 27.6 -2.0
GTA sP sP 09 15 30.4 +4.2
GTA S **S** **09 22 07.1 +0.4**
GTA pmax pmax
comp=Z,18nm,1.2s
GTA pmax pmax
comp=Z,200nm,5.3s
GTA LR LR
comp=Z,1μm,16.8s
GTA LR LR
comp=Z,1μm,14.3s
GTA LR LR
comp=Z,1μm,16.5s
DHRM DHARAMSHALA 46.39 329 *e*P **P** **09 15 22.6 +0.4**
DHRM IAmb IAmb 09 15 27.9
comp=Z,26nm,1.0s
CMSA Cobar Meteorol 46.99 127 P **P** **09 15 28.7 +2.0**
baz=47,SNR=9.5
BTO Baotou 47.84 8 *e*P **P** **09 15 34.5 +1.3**
JNU Nakatsue 48.07 32 P **P** **09 15 33.6 -1.5**
HHC Hu-ho-hao-te 48.30 9 *e*P **P** **09 15 38.0 +1.3**
HHC pP pwP 09 15 46.1 +0.4
HHC PP **PP** **09 17 27.5 -1.9**
HHC *e*S **S** **09 22 39.6 +3.5**
HHC sS sS 09 22 51.1 +8.3
HHC pmax pmax
comp=Z,27nm,1.1s
HHC pmax pmax
comp=Z,170nm,4.6s
HHC LR LR
comp=Z,880nm,12.2s
HHC LR LR
comp=Z,610nm,12.0s
HHC LR LR
comp=Z,830nm,12.9s
BJT Baijiatuau 48.41 14 P **P** **09 15 37.7 +0.3**
BJT pmax pmax
comp=Z,44nm,0.8s
BJT Baijiatuau 48.41 14 P **P** **09 15 37.7 +0.3**
BJI Beijing 48.43 14 P **P** **09 15 37.9 +0.3**
BJI S **S** **09 22 39.1 +1.5**
BJI pmax pmax
comp=Z,58nm,1.3s
BJI LR LR
comp=Z,1μm,13.9s
BJI LR LR
comp=Z,520nm,13.3s
BJI LR LR
comp=Z,620nm,15.7s
TJN Taejon 48.98 27*ce*P **P** **09 15 41.8 -0.1**
NIL Nilore 49.08 327 P **P** **09 15 42.1 -0.7**
NIL pmax pmax
comp=Z,44nm,0.9s
NIL Nilore 49.08 327 P **P** **09 15 42.1 -0.7**
KSRS Korea Array 50.12 26 P **P** **09 15 50.9 +0.3**
comp=Z,42nm,0.9s,baz=226,slow=7.4,SNR=95
KS19 Wonju Array Si 50.13 26 P **P** **09 15 49.8 -1.0**
KBL Kabul 52.09 325 P **P** **09 16 04.6 -1.1**
KBL pmax pmax
comp=Z,10.0nm,0.9s
KBL Kabul 52.09 325 P **P** **09 16 04.5 -1.1**
SNY Shenyang 52.22 20 ⇑P **P** **09 16 05.4 -0.8**
SNY pmax pmax
comp=Z,21nm,1.2s
SNY pmax pmax
comp=Z,220nm,5.4s
SNY LR LR
comp=Z,970nm,15.1s
SNY LR LR
comp=Z,660nm,14.7s
SNY LR LR
comp=Z,860nm,16.7s
WMQ Urumqi 52.34 346 *e*P **P** **09 16 08.8 +1.5**
WMQ pP pwP 09 16 17.4 +0.4
WMQ S **S** **09 23 34.9 +2.7**
WMQ sS sS 09 23 43.4 +4.3
WMQ ScS **ScS** **09 25 56.1 -0.6**
WMQ pmax pmax
comp=Z,120nm,1.1s
WMQ pmax pmax
comp=Z,190nm,3.7s
WMQ LR LR
comp=Z,370nm,13.3s
WMQ LR LR
comp=Z,460nm,16.1s
WMQ LR LR
comp=Z,300nm,19.1s
KSH Kashi 52.43 334 P **P** **09 16 07.3 -0.8**
KSH pP pwP 09 16 15.8 -1.8
KSH PcP **PcP** **09 17 21.3 +2.5**
KSH PP **PP** **09 18 09.8 +2.7**
KSH S **S** **09 23 27.8 -5.9**
KSH SS **SS** **09 27 07.3 -4.7**
KSH pmax pmax
comp=Z,51nm,1.0s
KSH pmax pmax
comp=Z,410nm,4.7s
KSH LR LR
comp=Z,370nm,5.5s
KSH LR LR
comp=Z,140nm,4.7s
KSH LR LR
comp=Z,400nm,9.3s
TARG Taragay, Kyrgy 53.54 337 P **P** **09 16 15.1 -1.5**
TARG IAmb IAmb 09 16 34.3
comp=Z,21nm,1.1s
ULHL Ulahol 54.59 336 P **P** **09 16 24.8 +0.8**
SNR=7.9
CN2 Changchun 54.60 20 *e*P **P** **09 16 22.8 -1.0**
CN2 pmax pmax
comp=Z,40nm,1.3s
CN2 pmax pmax
comp=Z,300nm,5.3s
CN2 LR LR
comp=Z,700nm,16.0s
CN2 LR LR
comp=Z,500nm,16.0s
CN2 LR LR
comp=Z,900nm,19.0s
MAT Matsushiro 54.64 35 P **P** **09 16 22.0 -2.3**
MJAR Matsushiro Arr 54.64 35 P **P** **09 16 22.4 -1.8**
comp=Z,4.5nm,0.9s,baz=212,slow=8.4,SNR=13
SONM Songino Array 54.68 3 P **P** **09 16 25.8 +1.4**
comp=Z,28nm,0.8s,baz=184,slow=8.4,SNR=66
ULN Ulaanbaatar 54.75 4*c i*P **P** **09 16 26.0 +1.0**
ULN pmax pmax
comp=Z,40nm,1.3s
ULN Ulaanbaatar 54.75 4 P **P** **09 16 23.8 -1.2**
ULN IAmb IAmb 09 16 35.4
comp=Z,28nm,0.8s
KZA Kyzart 54.86 335 P **P** **09 16 27.4 +1.2**
SNR=17
BOOM Boomskoye usch 54.92 336 P **P** **09 16 26.0 -0.3**
BOOM pmax pmax
comp=Z,21nm,1.0s
BOOM Boomskoye usch 54.92 336 P **P** **09 16 26.0 -0.3**
BOOM IAmb IAmb 09 16 36.1
comp=Z,21nm,0.9s
ARSB Arslanbob 55.23 333 P **P** **09 16 28.4 -0.1**
ARSB pmax pmax
comp=Z,71nm,1.2s
ARSB Arslanbob 55.23 333 P **P** **09 16 28.4 -0.1**
UCH Uchtor 55.29 335 P **P** **09 16 29.8 +0.4**
SNR=14
TKM2 Tokmak 2 55.42 336 P **P** **09 16 30.4 +0.4**
SNR=22
KBK Karagaybulak 55.46 335 P **P** **09 16 31.7 +1.4**
SNR=6.4
AML Almayashu 55.56 334 P **P** **09 16 31.7 +0.5**
SNR=9.4
AAK Ala-Archa 55.63 335 P **P** **09 16 31.8 +0.4**
comp=Z,4.7nm,0.9s,baz=153,slow=7.9,SNR=1.6
AAK Ala-Archa 55.63 335 P **P** **09 16 31.7 +0.2**
SNR=6.0
AAK Ala-Archa 55.63 335*ce*P **P** **09 16 32.1 +0.6**
AAK pmax pmax
comp=Z,26nm,2.5s
AAK Ala-Archa 55.63 335 P **P** **09 16 30.6 -0.9**
MSHR Mys Shultsa 55.75 25*ce*P **P** **09 16 31.8 -0.3**
EKS2 Erkin-Say 55.96 335 P **P** **09 16 34.6 +0.9**
SNR=7.8
HRA Herat 56.12 320 P **P** **09 16 33.4 -1.8**
USP Ospenovka 56.15 335 P **P** **09 16 35.4 +0.3**
SNR=7.5
VLA Vladivostok 56.50 25 *i* P **P** **09 16 37.9 +0.5**
VLA pmax pmax
comp=Z,47nm,1.2s
MK31 Makanchi Array 56.51 343 P **P** **09 16 37.5 0.0**
MK31 pmax pmax
comp=Z,25nm,0.9s
MK31 Makanchi Array 56.51 343 P **P** **09 16 37.5 0.0**
MK31 IAmb IAmb 09 16 48.2
comp=Z,25nm,0.9s
MKAR Makanchi Array 56.51 343 P **P** **09 16 37.8 +0.3**
comp=Z,26nm,1.0s,baz=148,slow=7.8,SNR=116
MKAR LR LR 09 45 11.3
comp=Z,110nm,18.0s,baz=149,slow=41
MAKZ Makanchi 56.61 343 P **P** **09 16 38.0 -0.2**
MAKZ pmax pmax
comp=Z,32nm,1.2s
MAKZ Makanchi 56.61 343 P **P** **09 16 38.0 -0.2**
MAKZ IAmb IAmb 09 16 47.9
comp=Z,32nm,1.2s
MDJ Mudanjiang 56.81 23 P **P** **09 16 40.4 +0.8**
MDJ pP pwP 09 16 49.5 -0.1
MDJ sP sP 09 16 53.4 +8.3
MDJ S **S** **09 24 35.4 +3.2**
MDJ sS sS 09 24 51.3 +12
MDJ ScS **ScS** **09 26 27.9 -0.4**
MDJ pmax pmax
comp=Z,110nm,4.3s
MDJ LR LR
comp=Z,1μm,15.7s
MDJ LR LR
comp=Z,1μm,14.2s
MDJ LR LR
comp=Z,1μm,12.8s
MDJ Mudanjiang 56.81 23 IAmb IAmb 09 16 40.8
comp=Z,24nm,1.0s
ZAK Zakamensk 57.13 0 *e*P **P** **09 16 42.5 +0.6**
ZAK pmax pmax
comp=Z,16nm,1.2s
USA0B Ussuriysk Arra 57.42 25 P **P** **09 16 43.5 -0.5**
USA0B pmax pmax
comp=Z,60nm,0.9s
USA0B Ussuriysk Arra 57.42 25 P **P** **09 16 43.5 -0.5**
USRK Ussuriysk Ar. 57.42 25 P **P** **09 16 44.0 +0.1**
comp=Z,51nm,0.9s,baz=218,slow=6.1,SNR=63
KK31 Karatay Array 57.75 333 P **P** **09 16 45.8 -0.6**
KK31 pmax pmax
comp=Z,7.0nm,0.8s
KK31 Karatay Array 57.75 333 P **P** **09 16 45.8 -0.6**
HIA Hailar 57.98 13 IAmb IAmb 09 16 48.7
comp=Z,25nm,1.0s
MOY Mondy 58.43 359 *e*P **P** **09 16 51.8 +0.8**
MOY pmax pmax
comp=Z,55nm,1.9s
TLY Talaya 58.43 1 P **P** **09 16 50.5 -0.5**
comp=Z,13nm,0.9s,baz=192,slow=6.8,SNR=7.0
TLY Talaya 58.43 1*c i*P **P** **09 16 52.4 +1.5**
TLY *e*S **S** **09 24 58.1 +4.8**
TLY pmax pmax
comp=Z,117nm,1.5s
TLY MLR MLR
comp=Z,1μm,10.0s
TLY Talaya 58.43 1 IAmb IAmb 09 16 53.9
comp=Z,35nm,1.1s
IRK Irkutsk 59.01 1 *e*P **P** **09 16 55.6 +0.7**
IRK pmax pmax
comp=Z,65nm,2.6s
CASY Casey 59.46 176 P **P** **09 16 58.5 +0.7**
CASY IAmb IAmb 09 17 14.1
comp=Z,14nm,1.1s
GEYT Alibeck 60.93 321 P **P** **09 17 08.3 -0.2**
comp=Z,7.3nm,0.9s,baz=140,slow=7.7,SNR=8.5
GYA0B ALIBECK ARRAY 60.93 321 P **P** **09 17 08.3 -0.2**
GYA0B IAmb IAmb 09 17 18.4
comp=Z,11nm,0.8s
KURBB Kurchatov Arra 61.05 343 P **P** **09 17 09.0 +0.1**
comp=Z,12nm,1.1s,baz=161,slow=6.4,SNR=44
KURK Kurchatov 61.10 343*c i*P **P** **09 17 09.5 +0.2**
KURK pmax pmax
comp=Z,40nm,1.3s
KURK Kurchatov 61.10 343 P **P** **09 17 09.5 +0.2**
KURK IAmb IAmb 09 17 19.0
comp=Z,32nm,0.9s
KLR Kul'dur 61.49 21*ce*P **P** **09 17 10.3 -1.6**
ZALV Zalesovo Beam 62.53 348 P **P** **09 17 19.1 +0.2**
comp=Z,63nm,1.0s,baz=158,slow=4.3,SNR=114
RAYN Ar Rayn 63.47 300 P **P** **09 17 26.9 +1.1**
RAYN pmax pmax
comp=Z,15nm,1.0s
RAYN Ar Rayn 63.47 300 P **P** **09 17 26.9 +1.1**
RAYN IAmb IAmb 09 17 38.5
comp=Z,15nm,1.0s
ZEA Zeya 63.96 16 *e*P **P** **09 17 29.0 +0.7**
ZEA *e*S **S** **09 26 12.0 +8.5**
ZEA pmax pmax
comp=N,35nm,1.0s
ZEA pmax pmax
comp=E,24nm,1.0s
ZEA pmax pmax
comp=Z,64nm,1.2s
ZEA pmax pmax
comp=Z,400nm,8.0s
ZEA smax smax
comp=N,600nm,12.0s
YUK Yuzh-Kuril'sk 64.02 33 *e*P **P** **09 17 29.2 +0.3**
YUK *e* 09 18 02.2
YUK *e* 09 19 48.7
YUK *e*PPP PPP 09 21 19.6
YUK *e*S **S** **09 26 03.1 -1.5**
YUK *e* 09 27 19.2
YUK *e*SS **SS** **09 30 13.1 -0.6**
YUK pmax pmax
comp=Z,234nm,1.0s
YUK pmax pmax
comp=N,261nm,1.3s
YUK pmax pmax
comp=E,580nm,1.2s
YUK pmax pmax
comp=Z,372nm,1.8s
YUK MLR MLR
comp=N,669nm,17.0s
YSS Yuzh-Sakhalins 64.40 29⇑ *e*P **P** **09 17 31.4 0.0**
YSS *e* 09 17 40.0
YSS *e**SP pwP 09 17 47.9 +6.5
YSS *e*S **S** **09 26 09.4 +0.2**
YSS *e*PPS PPS 09 27 26.4
YSS *e*SS **SS** **09 30 13.2 -6.4**
YSS pmax pmax
comp=Z,300nm,4.1s
YSS pmax pmax
comp=Z,50nm,1.1s
YSS MLR MLR
comp=N,900nm,15.0s
YSS MLR MLR
comp=Z,1μm,15.0s
YSS Yuzh-Sakhalins 64.40 29 P **P** **09 17 30.9 -0.5**
BVAR Borovoye Array 65.74 339 P **P** **09 17 39.7 -0.3**
comp=Z,8.4nm,0.8s,baz=147,slow=8.3,SNR=41
BRVK Borovoye 65.80 339*ce*P **P** **09 17 40.2 -0.1**
BRVK pmax pmax
comp=Z,19nm,1.3s
BRVK Borovoye 65.80 339 P **P** **09 17 39.8 -0.5**
BRVK IAmb IAmb 09 17 49.7
comp=Z,16nm,0.8s
TYV Tymovskoe 67.15 26 *e*P **P** **09 17 50.2 +1.2**
TYV *e*S **S** **09 26 45.2 +2.6**
TYV pmax pmax
comp=Z,200nm,4.2s
TYV pmax pmax
comp=Z,17nm,1.5s
TYV smax smax
comp=E,700nm,9.3s
TYV MLR MLR
comp=Z,1μm,22.0s
AKTO Aktyubinsk 68.96 331 P **P** **09 18 00.1 -0.3**
comp=Z,13nm,1.1s,baz=131,slow=6.7,SNR=17
AKT Akhty 69.56 319 *e*P **P** **09 18 05.5 +1.0**
AKT *e* 09 18 27.2
AKT pmax pmax
comp=Z,26nm,0.9s
YAK Yakutsk 71.92 13 P **P** **09 18 17.8 -0.4**
comp=Z,30nm,0.7s,baz=26,slow=1.1,SNR=1.7
YAK Yakutsk 71.92 13*c i*P **P** **09 18 17.9 -0.3**
YAK *e* 09 18 26.1
YAK pmax pmax
comp=Z,91nm,0.9s
YAK pmax pmax
comp=N,49nm,1.1s
YAK pmax pmax
comp=E,34nm,1.3s
YAK Yakutsk 71.92 13 P **P** **09 18 18.0 -0.3**
SVE Sverdlovsk 72.26 337⇓ *e*P **P** **09 18 21.4 +1.0**
SVE pmax pmax
comp=Z,61nm,1.0s
ZEI Tsey 72.69 319 *e*P **P** **09 18 23.7 +0.1**
ZEI pmax pmax
comp=Z,14nm,1.0s
ARU Arti 72.79 336 P **P** **09 18 24.3 +0.8**
comp=Z,1.9nm,0.4s,baz=164,slow=5.0,SNR=24
ARU Arti 72.79 336*c i*P **P** **09 18 24.0 +0.4**
ARU S **S** **09 27 48.5 -0.1**
ARU SS **SS** **09 32 25.5 -3.4**
ARU pmax pmax
comp=Z,47nm,1.3s
ARU Arti 72.79 336 P **P** **09 18 23.0 -0.6**
ARU IAmb IAmb 09 18 33.5
comp=Z,31nm,0.9s
NCK Nalchik 73.21 319 *i* P **P** **09 18 26.1 -0.3**
NCK pmax pmax
comp=Z,7.0nm,0.8s
SKR Severo-Kuril's 73.58 32*ce*P **P** **09 18 29.1 +0.8**
KBZ Khabaz 73.77 319 P **P** **09 18 30.2 +0.6**
comp=Z,6.9nm,0.9s,baz=165,slow=1.3,SNR=11
KIV Kislovodsk 74.01 319⇓ *i*P **P** **09 18 31.7 +0.5**
KIV *e* 09 18 40.2
KIV *e* 09 18 45.7
KIV *e* 09 21 18.3
KIV *e*PPP PPP 09 23 02.1
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV Kislovodsk 74.01 319 P **P** **09 18 31.2 +0.1**
BOSA Boshof 75.63 242 P **P** **09 18 42.1 +1.1**
comp=Z,4.9nm,1.0s,baz=164,slow=2.4,SNR=5.0
BOSA Boshof 75.63 242 P **P** **09 18 42.1 +1.1**
BOSA pmax pmax
comp=Z,8.0nm,1.0s
BOSA Boshof 75.63 242 IAmb IAmb 09 18 51.4
comp=Z,7.5nm,1.0s
PETK Petropavlovsk- 75.73 31 P **P** **09 18 40.6 -0.2**
comp=Z,7.3nm,0.8s,baz=207,slow=6.2,SNR=14
PET Petropavlovsk 76.17 31 *e*P **P** **09 18 42.7 -0.6**
PET *e*S **S** **09 28 23.0 -3.6**
PET *e*SS **SS** **09 33 20.2 -0.3**
PET pmax pmax
comp=Z,51nm,1.5s
PET pmax pmax
comp=Z,100nm,11.0s
PET MLR MLR
comp=Z,400nm,16.0s
PET MLR MLR
comp=Z,500nm,15.0s
PET Petropavlovsk 76.17 31 P **P** **09 18 42.7 -0.6**
MA2 Magadan 76.51 23*c i*P **P** **09 18 45.8 +0.7**
MA2 pmax pmax
comp=Z,112nm,1.7s
MA2 Magadan 76.51 23 P **P** **09 18 44.0 -1.1**
VNDA Vanda 76.80 169 P **P** **09 18 48.4 +1.9**
comp=Z,2.0nm,0.9s,baz=323,slow=6.0,SNR=8.3
VNDA Vanda 76.80 169 P **P** **09 18 47.8 +1.3**
VNDA pmax pmax
comp=Z,8.0nm,1.2s
VNDA Vanda 76.80 169 P **P** **09 18 47.8 +1.3**
VRH Novokhopyorsk 77.89 326 *e*P **P** **09 18 51.6 -1.4**
VRH pmax pmax
comp=Z,60nm,1.9s
KIRV Kirov 77.97 335 P **P** **09 18 53.1 -0.1**
comp=Z,24nm,0.5s,baz=127,slow=1.2,SNR=10
BRTR Keskin Array B 78.60 313 P **P** **09 18 56.9 -0.6**
comp=Z,3.0nm,0.9s,baz=132,slow=6.8,SNR=12
VORD Divnogorie 79.16 325 *e*P **P** **09 18 58.4 -1.6**
VORD pmax pmax
comp=Z,6.0nm,1.0s
VSR Storozhevoye 79.34 325 *e*P **P** **09 18 59.8 -1.2**
VSR pmax pmax
comp=Z,10.0nm,1.0s
LPSR Galich'ya Gora 80.06 326 *e*P **P** **09 19 04.2 -0.7**
LPSR pmax pmax
comp=Z,20nm,0.9s
TIXI Tiksi 80.36 8 P **P** **09 19 05.3 -0.8**
comp=Z,11nm,1.1s,baz=175,slow=3.9,SNR=18
TIXI Tiksi 80.36 8*c i*P **P** **09 19 05.0 -1.1**
TIXI pmax pmax

comp=Z,35nm,2.5s
TIXI Tiksi 80.36 8 P P 09 19 05.1 -1.0
MDUB Mudurnu 80.62 313 P P 09 19 08.1 -0.3
MOS Moscow 82.09 329 eP P 09 19 15.0 -0.6
MOS pmax pmax
comp=Z,48nm,0.8s
OBN Obninsk 82.38 328 LR LR 10 00 07.1
comp=Z,21nm,19.1s,baz=182,slow=39
OBN Obninsk 82.38 328 eP P 09 19 17.1 0.0
OBN e 09 19 23.7
OBN e 09 22 24.5
OBN ePPP PPP 09 24 17.6
OBN pmax pmax
comp=Z,44nm,1.3s
QSPA South Pole Qui 83.01 180 P P 09 19 19.3 -1.2
KLMR Klimovskoe 83.43 334 eP P 09 19 20.8 -1.7
KLMR pmax pmax
comp=Z,44nm,1.2s
KLMR Klimovskoe 83.43 334 eP P 09 19 20.8 -1.7
KLMR AMP 09 19 32.7
comp=Z,44nm,1.2s
IDI Anoyia 84.09 307 LR LR 09 56 27.0
comp=Z,50nm,21.6s,baz=248,slow=35
AKASG Malin Array Be 85.00 322 P P 09 19 31.3 +0.6
comp=Z,0.9nm,0.5s,baz=97,slow=4.8,SNR=0.9
AKASG Malin Array Be 85.00 322 i P P 09 19 28.3 -2.4
AKASG pmax pmax
comp=Z,1.0nm,0.2s
VRI Vrincioaia 85.27 317 ⇑P P 09 19 33.9 +1.7
PLOR Plostina 85.31 317 ⇑P P 09 19 43.9 +11
TESR Tescani 85.48 318 ⇑P P 09 19 34.7 +1.4
TMCR Tamitsa 85.52 337 eP P 09 19 32.9 -0.1
TMCR pmax pmax
comp=Z,49nm,1.2s
MLR Muntele Rosu 85.70 317 ⇓P P 09 19 36.1 +1.6
MLR Muntele Rosu 85.70 317 IAmb IAmb 09 19 45.0
comp=Z,24nm,1.1s
MICGM Minsk 86.89 326 e P 09 19 52.0 +12
MNK Minsk 86.89 326 eP P 09 19 52.0 +12
BILL Bilibino 86.91 20 eP P 09 19 39.8 0.0
BILL e 09 23 00.9
BILL ePPP PPP 09 24 57.5
BILL pmax pmax
comp=Z,9.0nm,1.3s
BILL Bilibino 86.91 20 P P 09 19 37.7 -2.1
BILL IAmb IAmb 09 19 53.2
comp=Z,11nm,0.9s
LIT Litokhoron 86.97 311 P P 09 19 38.7 -2.1
LIT pmax pmax
comp=Z,15nm,1.0s
LIT Litokhoron 86.97 311 P P 09 19 38.7 -2.1
LIT IAmb IAmb 09 19 49.9
comp=Z,15nm,1.0s
LVV L'vov 87.99 321 eP P 09 19 55.8 +10
SNAA Sanae 88.24 198 P P 09 19 48.3 +2.0
SNAA Sanae 88.24 198 P P 09 19 46.9 +0.6
SNAA pmax pmax
comp=Z,15nm,1.5s
SNAA Sanae 88.24 198 P P 09 19 46.9 +0.6
SNAA IAmb IAmb 09 20 02.0
comp=Z,15nm,1.5s
MDVR Moldovita 88.46 315 ⇓P P 09 19 49.5 +1.7
SIRR Siria 88.79 317 ⇑P P 09 19 51.1 +1.8
UZH Uzhgorod 88.84 319 eP P 09 19 54.2 +4.7
UZH e 09 19 59.6
UZH e 09 20 05.5
DIVS Divibare 89.55 314 P P 09 19 51.8 -1.2
DIVS IAmb IAmb 09 20 03.5
comp=Z,19nm,1.3s
FINES FINESS Array B 89.71 332 P P 09 19 53.3 +0.1
comp=Z,1.3nm,0.8s,baz=125,slow=7.0,SNR=3.0
PDG Podgorica 89.79 313 P P 09 19 53.2 -0.9
PDG IAmb IAmb 09 20 10.2
comp=Z,21nm,1.3s
VNA2 Neumayer--Watz 89.87 198 P P 09 19 58.5 +4.5
VNA1 Neumayer--Stat 90.24 198 P P 09 19 58.1 +2.5
VNA3 Neumayer Olymp 90.44 197 P P 09 20 01.0 +4.4
VYHS Vyhne 91.08 319 eP P 09 20 00.0 +0.1
VYHS Vyhne 91.08 319 eP P 09 20 00.0 +0.1
TIP Timpagrande 91.17 309 P P 09 19 59.8 -0.9
ARCES ARCESS Array B 92.02 340 P P 09 20 03.4 -0.4
comp=Z,1.9nm,0.9s,baz=74,slow=6.7,SNR=1.6
VRAC Vranov 92.66 319 LR LR 10 05 11.3
comp=Z,29nm,18.5s,baz=32,slow=38
GERES GERESS Array B 94.50 319 P P 09 20 15.6 -0.3
comp=Z,2.2nm,0.5s,baz=316,slow=11,SNR=23
HFS Hagfors 95.47 330 LR LR 10 06 22.8
comp=Z,81nm,20.8s,baz=46,slow=37
TOLK Toolik Lake Re 102.91 21 P Pdif 09 20 51.3 -1.9
baz=284
POKR Poker Plat Res 104.63 24 P Pdif 09 21 01.0 +0.2
baz=285
A36M Sachs Harbour 108.78 14 P PKiKP 09 25 24.9 +1.0
baz=309
YKA Yellowknife Ar 118.28 19 PKP PKPdf 09 25 41.5 -0.8
comp=Z,1.4nm,1.1s,baz=298,slow=2.0,SNR=8.9
A04D Lummi Island 123.54 34 P PKPdf 09 25 52.5 -0.3
baz=302
D03D Eldon 123.94 36 P PKPdf 09 25 53.1 -0.5
baz=301
B05A Bryant 124.13 35 P PKPdf 09 25 53.6 -0.4
baz=303
D04E Lakebay 124.31 36 P PKiKP 09 25 54.7 +0.1
baz=301
I02D Swisshome 125.18 40 P PKPdf 09 25 56.3 +0.2
baz=298
I03D Drain, OR 125.69 40 P PKPdf 09 25 57.3 +0.1
baz=299
F05D White Salmon 125.76 37 P PKPdf 09 25 57.0 -0.2
baz=302
K02D Willamette Mer 125.96 41 P PKPdf 09 25 57.3 -0.5
baz=298
G05D Wamic, OR 126.18 37 P PKPdf 09 25 58.3 +0.2
baz=302
I05D Terrebonne, OR 126.63 38 P PKPdf 09 25 59.2 +0.1
baz=301
NEW Newport 126.85 32 P PKPdf 09 25 59.5 +0.2
baz=308
M02C Callahan 127.09 42 P PKPdf 09 26 00.3 +0.3
baz=298
K04D Chiloquin, OR 127.23 40 P PKPdf 09 26 00.1 -0.2
baz=300
J05D Fort Rock, OR 127.23 39 P PKPdf 09 25 59.7 -0.6
baz=300
N02D Trinity Center 127.39 43 P PKPdf 09 26 00.4 -0.2
baz=298
M04C Macdoel 127.58 41 P PKPdf 09 26 00.5 -0.5
baz=299
O02D Mt. Diablo Mer 127.69 44 P PKPdf 09 26 01.1 -0.1
baz=297
O03E Paynes Creek 128.31 43 P PKPdf 09 26 02.1 -0.2
baz=298
J08A Circle Bar Ran 128.91 38 PKiKP 09 26 04.4 +0.3
WVOR Wild Horse Val 129.31 39 PKIKP PKPdf 09 26 03.4 -0.9
WVOR Wild Horse Val 129.31 39 PKPdf 09 26 03.4 -0.9
MSO Missoula 129.43 32 P PKiKP 09 26 04.8 -0.2
baz=310
MSO Missoula 129.43 32 PKPdf 09 26 04.5 +0.1
BEKR Beckworth 129.49 43 PKPdf 09 26 04.7 0.0
AFDM Forest Hills D 129.50 44 PKPdf 09 26 03.9 -0.7
PNTR Pine Nut 130.38 43 PKPdf 09 26 06.3 -0.3
MFID Camas Ranch 130.47 37 PKiKP 09 26 07.4 +0.1
EGMT Eagleton 130.71 28 P PKPdf 09 26 06.8 +0.1
baz=316
EGMT Eagleton 130.71 28 PKPdf 09 26 06.9 +0.2
DLMT Dillon 131.09 33 PKPdf 09 26 06.5 -1.1
NVAR Mina Array Bea 131.58 43 PKP PKPdf 09 26 08.1 -0.8
comp=Z,0.3nm,0.7s,baz=279,slow=1.7,SNR=2.2
SMMC Simmler 131.82 48 P PKPdf 09 26 09.2 +0.1
baz=296
ISA Isabella, Lake 132.78 47 P PKPdf 09 26 11.1 +0.1
baz=297
LAO LASA Array 133.32 27 P PKPdf 09 26 11.9 +0.2
baz=319
LAO LASA Array 133.32 27 PKPdf 09 26 10.4 -1.2
SNOW Snow King Moun 133.33 33 PKPdf 09 26 11.6 -0.5
R11A Troy Canyon, C 133.46 42 P PKiKP 09 26 13.0 -0.5
baz=302
R11A Troy Canyon, C 133.46 42 PKPdf 09 26 12.2 -0.1
EDW2 Edwards Air Fo 133.48 48 P PKPdf 09 26 12.9 +0.6
baz=297
ULM Lac du Bonnet 134.18 17 PKP PKPdf 09 26 12.5 -0.5
comp=Z,3.8nm,0.8s,baz=251,slow=4.2,SNR=2.3
SHOC Shoshone, Teco 134.24 45 P PKPdf 09 26 13.5 -0.2
baz=300
PDAR Pinedale Array 134.45 33 PKP PKPdf 09 26 13.4 -0.7
comp=Z,0.4nm,0.7s,baz=242,slow=1.5,SNR=1.7
BBRC Big Bear Solar 134.55 48 P PKPdf 09 26 14.2 -0.4
baz=298
SHPR Sheep Range 134.71 44 PKPdf 09 26 14.9 +0.1
TUQ Turquoise Moun 134.71 46 P PKPdf 09 26 14.6 -0.1
baz=300
PFO Pinyon Flats O 135.19 48 P PKPdf 09 26 16.3 +0.6
baz=298
GMRC Granite Mounta 135.22 46 P PKPdf 09 26 15.8 +0.1
baz=299
BELC Belle Mtn. Jos 135.35 48 P PKPdf 09 26 16.2 +0.3
baz=298
MONP2 Monument Peak 135.54 49 P PKPdf 09 26 16.4 -0.1
baz=297
LCMT Little Creek M 135.74 42 PKPdf 09 26 16.1 -0.5
IKP In-Ko-Pah, Jac 135.89 49 P PKiKP 09 26 17.9 -0.6
baz=297
RDMU Red Mountain 135.89 36 PKPdf 09 26 16.0 -0.9
IRM Iron Mountain 135.90 47 P PKiKP 09 26 17.7 -0.7
baz=299
K22A Casper 136.14 31 P PKiKP 09 26 18.3 -0.6
baz=316
RSSD Black Hills 136.27 28 PKIKP PKPdf 09 26 17.0 -0.5
RSSD Black Hills 136.27 28 P PKiKP 09 26 18.5 -0.7
baz=320
RSSD Black Hills 136.27 28 PKPdf 09 26 17.0 -0.5
Y12C Blythe 136.55 47 P PKiKP 09 26 19.1 -0.6
baz=300
MATQ Matagami 137.36 0 P PKiKP 09 26 20.2 -0.6
baz=360
EYMN Ely 137.44 14 P PKiKP 09 26 20.3 -0.8
baz=339
EYMN Ely 137.44 14 PKPdf 09 26 17.6 -1.6
WUAZ Wupatki 137.83 43 P PKiKP 09 26 22.1 -0.4
baz=304
LSQQ Lebel-sur-Quev 138.06 360 P PKiKP 09 26 21.9 -0.5
baz=0.7
ISCO Idaho Springs 138.65 33 P PKPdf 09 26 22.2 +0.1
baz=315
MVCO Mesa Verde 138.68 39 P PKPdf 09 26 22.7 +0.6
baz=309
F36A Milaca 138.82 17 PKPdf 09 26 21.6 -0.2
ECSD EROS Data Cent 139.69 22 PKPdf 09 26 21.9 -1.6
D55A Sainte-Anne-du 140.07 358 P PKiKP 09 26 25.6 -0.9
baz=3.0
SDCO Great Sand Dun 140.13 36 P PKiKP 09 26 26.1 -1.2
baz=313
SDCO Great Sand Dun 140.13 36 PKPdf 09 26 23.8 -1.1
D52A ZEK Kipawa Sen 140.14 1 P PKiKP 09 26 25.8 -0.8
baz=358
F51A Arnstein 141.13 3 P PKiKP 09 26 28.3 -0.4
baz=356
F52A Sundridge 141.29 2 P PKiKP 09 26 29.0 0.0
baz=357
ANMO Albuquerque 141.39 40 PKIKP PKPdf 09 26 28.4 +1.3
ANMO Albuquerque 141.39 40 P PKiKP 09 26 28.8 -1.0
baz=310
ANMO Albuquerque 141.39 40 PKPdf 09 26 28.4 +1.3
G60A Masonville 141.78 354 P PKiKP 09 26 28.7 -1.3
baz=8.2
MNTX Cornudas Mount 144.11 43 P PKPdf 09 26 30.9 -0.9
baz=308
MNTX Cornudas Mount 144.11 43 PKPdf 09 26 31.1 -0.7
K62A Royalston 144.17 354 P PKPbc 09 26 30.4 +0.9
baz=8.8
K62A Royalston 144.17 354 PKPbc 09 26 30.1 +0.6
L46A Eue Claire 144.22 11 P PKPbc 09 26 30.0 +0.3
baz=345
TRY Troy 144.24 355 PKPbc 09 26 29.8 +0.1
K61A Williamstown 144.27 355 P PKPbc 09 26 29.9 +0.1
baz=7.0
N41A Harden Midland 144.32 18 PKPab 09 26 29.8 +0.1
MSTX Muleshoe 144.32 38 P PKPab 09 26 30.2 +0.1
baz=313
MSTX Muleshoe 144.32 38 PKPbc 09 26 30.4 -0.1
K58A Earlville 144.33 358 P PKPab 09 26 29.7 -0.1
baz=3.0
AMTX Amarillo 144.33 35 P PKPbc 09 26 30.8 +0.3
baz=316
K57A Scipio Center 144.39 359 P PKPab 09 26 30.0 +0.1
baz=1.6,SNR=7.6
K55A Perry 144.39 1 P PKPab 09 26 29.7 -0.3
baz=359
P38A Dawn 144.40 22 PKPbc 09 26 30.4 0.0
K56A Middlesex 144.43 360 P PKPab 09 26 29.9 -0.3
baz=0.2
M44A Midewin, Midew 144.44 14 PKPbc 09 26 30.3 -0.1
K54A Basiliko Farm, 144.50 2 P PKPab 09 26 29.5 -0.8
baz=358
QUA2 Belchertown 144.57 354 PKPbc 09 26 30.7 -0.1
L48A N Adams 144.62 9 P PKPab 09 26 30.6 -0.3
baz=348,SNR=8.4
U32A Winter Ranch, 144.68 31 PKPab 09 26 30.2 -1.1
WVNY West Valley, N 144.70 2 PKPab 09 26 30.2 -0.9
L64A Middleborough 144.71 352 P PKPab 09 26 30.7 -0.4
baz=11
L50A Kingsville 144.75 7 P PKPab 09 26 30.7 -0.6
baz=351
L61A Hillsdale 1, H 144.77 355 P PKPab 09 26 31.0 -0.3
baz=6.7
L54A Sinclairville 144.85 3 P PKPab 09 26 30.9 -0.8
baz=357
L59A Walton 144.87 357 P PKPab 09 26 31.6 -0.2
baz=4.1,SNR=7.5
L59A Walton 144.87 357 PKPab 09 26 30.8 -1.0
BINY Binghamton 144.90 358 P PKPab 09 26 31.4 -0.5
baz=2.5,SNR=5.4
HDIL Hopedale 144.91 16 P PKPab 09 26 31.6 -0.3
baz=339,SNR=8.4
HDIL Hopedale 144.91 16 PKPab 09 26 29.9 -2.0
L55A Hinsdale 144.93 1 P PKPab 09 26 31.5 -0.5
baz=358
ERPA Erie 144.93 3 P PKPab 09 26 31.3 -0.7
baz=356
ERPA Erie 144.93 3 PKPab 09 26 29.7 -2.3
M47A Cromwell 144.98 11 P PKPab 09 26 31.6 -0.6
baz=346
L56A Greenwood 144.99 0 P PKPab 09 26 31.8 -0.4
baz=360,SNR=8.8
L56A Greenwood 144.99 0 PKPab 09 26 30.6 -1.6
P40A Paris 145.00 20 PKPab 09 26 30.6 -1.7
M48A Edgerton 145.02 10 P PKPab 09 26 31.6 -0.7
baz=347
L60A Shokan 145.02 356 P PKPab 09 26 32.1 -0.2
baz=5.5
L58A Harry Jones Me 145.05 358 P PKPbc 09 26 32.3 -0.1
baz=2.7,SNR=8.0
L53A Girard 145.08 4 P PKPbc 09 26 32.0 -0.5
baz=355
L57A Andrews Acres 145.12 359 P PKPbc 09 26 32.2 -0.4
baz=1.0,SNR=13
M64A Tiverton 145.14 352 P PKPbc 09 26 32.3 -0.4
baz=11
KSCT Kent School, K 145.23 355 PKPbc 09 26 31.9 -1.0
M63A Gales Ferry 145.39 353 P PKPbc 09 26 32.6 -0.8
baz=9.4
M52A Chesterland 145.40 5 P PKPbc 09 26 33.2 -0.4
baz=353,SNR=5.4
N47A Urbana 145.43 11 PKPbc 09 26 32.6 -1.0
M62A Hamden 145.45 354 P PKPbc 09 26 32.7 -0.9
baz=7.9
T35A Sooner Cattle 145.46 28 PKPbc 09 26 33.4 -0.5
O44A Mansfield 145.50 15 PKPbc 09 26 33.3 -0.6
M59A Waymart 145.54 357 P PKPbc 09 26 34.0 0.0
baz=3.5,SNR=8.0
M54A Oil Creek Stat 145.56 3 P PKPdf 09 26 33.6 -0.3
baz=356,SNR=9.3
M53A WI Miller and 145.56 4 P PKPdf 09 26 33.7 -0.3
baz=354,SNR=7.1
N48A Decatur 145.58 10 P PKPdf 09 26 33.4 -0.6
baz=347,SNR=18
SFIN Lafayette 145.62 13 P PKPdf 09 26 34.1 +0.1
baz=343,SNR=9.7
SFIN Lafayette 145.62 13 PKPab 09 26 34.4 -0.1
M55A Ridgway 145.63 2 P PKPdf 09 26 33.7 -0.5
baz=358,SNR=7.8
M55A Ridgway 145.63 2 PKPdf 09 26 33.1 -1.0
M56A Emporium 145.63 1 P PKPdf 09 26 33.8 -0.3
baz=359,SNR=13
M56A Emporium 145.63 1 PKPdf 09 26 34.2 +0.1
N49A Columbus Grove 145.66 9 PKPdf 09 26 34.1 0.0
M61A Granite Spring 145.66 355 P PKPdf 09 26 33.7 -0.4
baz=6.4
P43A Skaggs, Pawnee 145.69 17 PKPdf 09 26 33.9 -0.4
M60A Port Jervis 145.71 356 P PKPdf 09 26 34.1 -0.1
baz=4.9,SNR=9.6
M58A Price's Panora 145.74 359 P PKPdf 09 26 34.1 -0.2
baz=1.7,SNR=12
WSPT Westport, CT 145.76 355 PKPdf 09 26 33.9 -0.4
M57A Sunshine Farm, 145.79 360 P PKPbc 09 26 34.7 -0.1
baz=0.5,SNR=19
M57A Sunshine Farm, 145.79 360 PKPdf 09 26 34.2 -0.2
N51A Ashland 145.91 7 P PKPdf 09 26 34.7 +0.1
baz=351
ODNJ Ogdensburg 145.95 356 PKPdf 09 26 33.8 -0.8
N50A Nevada 145.96 8 P PKPbc 09 26 35.0 -0.3
baz=350,SNR=7.3
PAL Palisades 145.98 355 P PKPbc 09 26 35.3 0.0
baz=6.2,SNR=5.6
N62A Caumsett State 146.01 355 P PKPdf 09 26 34.8 +0.1
baz=7.0
WMOK Wichita Mounta 146.05 33 P PKPbc 09 26 35.8 0.0
baz=320,SNR=16
N54A Moraine State 146.08 4 P PKPbc 09 26 35.4 -0.3
baz=356,SNR=7.3
N52A McGinn's Farm, 146.09 6 P PKPbc 09 26 35.5 -0.2
baz=352
O48A Farmland 146.14 11 P PKPdf 09 26 35.4 +0.4
baz=346,SNR=14
N53A Lisbon 146.17 5 P PKPbc 09 26 35.8 -0.2
baz=354
N53A Lisbon 146.17 5 PKPbc PKPbc 09 26 35.8 -0.2
N59A State Game Lan 146.18 358 P PKPbc 09 26 36.1 +0.1
baz=3.0,SNR=7.7
N60A Cedar Hill Far 146.19 357 P PKPbc 09 26 35.6 -0.4
baz=4.1
N56A West Decatur 146.20 1 P PKPbc 09 26 35.6 -0.5
baz=358
N58A Sunbury 146.28 359 P PKPbc 09 26 36.2 -0.1
baz=1.3,SNR=9.4
N58A Sunbury 146.28 359 PKPbc 09 26 35.8 -0.4
N55A Marion Center 146.31 2 P PKPbc 09 26 36.1 -0.3
baz=357,SNR=11
O49A Covington 146.35 10 PKPdf 09 26 35.7 +0.3
N57A Milroy 146.37 0 P PKPbc 09 26 36.5 -0.1
baz=360,SNR=6.3
SSPA Standing Stone 146.48 1 PKPbc 09 26 36.9 0.0
O50A Cable 146.50 9 P PKPbc 09 26 36.6 -0.4
baz=349,SNR=6.0
ACSO Alum Creek Sta 146.51 8 P PKPbc 09 26 36.6 -0.4
baz=350,SNR=8.4
ACSO Alum Creek Sta 146.51 8 PKPdf 09 26 35.7 +0.1
CCM Cathedral Cave 146.60 20 PKP2 PKPbc 09 26 36.8 -0.5
CCM Cathedral Cave 146.60 20 P PKPbc 09 26 36.9 -0.4
baz=335
CCM Cathedral Cave 146.60 20 PKPbc 09 26 36.8 -0.5
TUL1 Leonard 146.62 28 P PKPbc 09 26 37.6 +0.1
baz=326,SNR=6.9
TUL1 Leonard 146.62 28 PKPdf 09 26 36.7 +0.8
O51A Pataskala 146.64 7 P PKPbc 09 26 36.8 -0.6
baz=351,SNR=13
O53A New Philadelph 146.69 5 P PKPbc 09 26 37.5 0.0
baz=353
TX31 Lajitas Ar. Si 146.71 45 PKPdf 09 26 36.8 +0.4
TX32 Lajitas Array 146.71 45 PKPdf 09 26 36.8 +0.4
TXAR Lajitas Array 146.71 45 PKPbc PKPbc 09 26 37.8 -0.3
comp=Z,11nm,1.0s,baz=188,slow=1.9,SNR=63
O60A Telford 146.76 357 P PKPbc 09 26 37.4 -0.2
baz=3.6
O52A Adamsville 146.76 6 P PKPbc 09 26 37.2 -0.5
baz=352,SNR=5.5
O59A Robesonia 146.79 358 P PKPbc 09 26 37.7 -0.1
baz=2.2
U38A Gravette 146.81 26 PKPdf 09 26 37.1 +0.9
O54A Avella 146.83 4 P PKPbc 09 26 37.8 -0.1
baz=355,SNR=9.3
O56A Blue Knob Stat 146.84 2 P PKPbc 09 26 37.8 -0.2
baz=358,SNR=14
P48A Milroy 146.86 11 PKPdf 09 26 36.2 0.0
O55A Ligonier 146.87 3 P PKPbc 09 26 37.5 -0.5
baz=357
PAGS Pennsylvania G 146.89 359 PKPbc 09 26 37.5 -0.5
O57A Amberson 146.91 0 P PKPbc 09 26 37.6 -0.6
baz=360,SNR=7.5
P49A Miami Univ. Ec 146.92 10 P PKPbc 09 26 37.7 -0.4
baz=347
O58A Lewisberry 147.00 359 P PKPbc 09 26 38.1 -0.3
baz=0.9
P50A Jamestown 147.00 9 P PKPdf 09 26 37.4 +1.0
baz=348,SNR=11
MVL Millersville 147.11 359 PKPbc PKPdf 09 26 37.0 +0.4
ABTX Abilene, Hawle 147.13 36 P PKPbc 09 26 39.6 +0.5
baz=316
ABTX Abilene, Hawle 147.13 36 PKPbc 09 26 38.4 -0.7
P52A Corning 147.21 7 P PKPbc 09 26 38.1 -0.9
baz=351,SNR=10.0
P51A Williamsport 147.24 8 P PKPbc 09 26 38.2 -0.9
baz=350
P60A Greenville 147.27 358 P PKPbc 09 26 38.3 -0.8
baz=3.3
P60A Greenville 147.27 358 PKPdf 09 26 37.9 +1.1
MCWV Mont Chateau 147.39 4 P PKPbc 09 26 39.6 +0.2
baz=356
P54A Burton 147.40 4 P PKPbc 09 26 39.3 -0.2
baz=354,SNR=6.1
P53A Whipple 147.43 6 P PKPbc 09 26 39.6 0.0
baz=353,SNR=6.5
P53A Whipple 147.43 6 PKPbc 09 26 39.0 -0.6
P59A Jarrettsville 147.50 359 P PKPbc 09 26 39.7 -0.1
baz=1.8
U40A Yellville 147.51 24 P PKPbc 09 26 39.7 -0.3
baz=331
P55A Reedsville 147.54 4 P PKPbc 09 26 39.8 -0.2
baz=356
S44A Carbondale 147.57 18 PKPbc 09 26 39.8 -0.3
P56A Dayton Farm, R 147.59 2 P PKPbc 09 26 39.7 -0.3
baz=357,SNR=6.1
P58A Pank, Wackersv 147.63 360 P PKPbc 09 26 40.1 0.0
baz=0.2
Q52A Bidwell 147.85 7 P PKPbc 09 26 40.4 -0.4
baz=351,SNR=14
WCI Wyandotte Cave 147.86 13 PKP2 PKPbc 09 26 40.2 -0.6
WCI Wyandotte Cave 147.86 13 P PKPbc 09 26 40.6 -0.3
baz=343
WCI Wyandotte Cave 147.86 13 PKPbc 09 26 40.2 -0.6
X37A Clayton 147.90 29 PKPbc 09 26 40.6 -0.5
Q54A Coxs Mills 147.98 5 P PKPbc 09 26 40.7 -0.4
baz=354,SNR=6.3
Q55A Buckhannon 148.03 4 P PKPbc 09 26 41.2 -0.2
baz=355,SNR=9.6
R49A Shelbyville 148.04 12 PKPbc 09 26 40.8 -0.5
Q56A Snyder Ridge, 148.04 3 P PKPbc 09 26 41.0 -0.3
baz=357
Q53A Leroy 148.04 6 P PKPbc 09 26 41.3 0.0
baz=352,SNR=5.9
Q57A Strasburg 148.07 2 P PKPbc 09 26 41.0 -0.4
baz=358
W39A Magazine 148.12 26 P PKPbc 09 26 41.7 +0.1
baz=328,SNR=7.1
W39A Magazine 148.12 26 PKPdf 09 26 39.2 +0.8
Q58A Fox Den Farm, 148.18 0 P PKPbc 09 26 41.5 -0.1
baz=360
R50A Paris 148.21 10 PKPdf 09 26 39.7 +1.2
R53A Hurricane 148.51 7 P PKPbc 09 26 42.3 -0.3
baz=351
R53A Hurricane 148.51 7 PKPbc 09 26 42.3 -0.3
JCT Junction City 148.54 39 PKP2 PKPdf 09 26 40.6 +1.3
JCT Junction City 148.54 39 P PKPbc 09 26 43.5 +0.6
baz=314
JCT Junction City 148.54 39 PKPdf 09 26 40.6 +1.3
WHAR Wooly Hollow 148.66 24 PKPbc 09 26 42.0 -1.1
R55A Marlinton 148.74 4 P PKPbc 09 26 43.0 -0.2
baz=355
MIAR Mount Ida 148.76 26 PKP2 PKPbc 09 26 42.9 -0.4
MIAR Mount Ida 148.76 26 P PKPbc 09 26 43.8 +0.5
baz=328,SNR=32
MIAR Mount Ida 148.76 26 PKPbc 09 26 42.9 -0.4
R54A Victor 148.77 6 P PKPbc 09 26 42.6 -0.7
baz=353
W41B Gary Mavity, V 148.78 24 P PKPbc 09 26 43.0 -0.3
baz=331,SNR=8.2
R57A Stanardsville 148.81 2 P PKPbc 09 26 43.0 -0.3
baz=358
R58A Rapidan 148.82 1 P PKPbc 09 26 43.3 0.0
baz=359,SNR=6.0
WHTX Lake Whitney, 148.85 34 P PKPbc 09 26 44.1 +0.5
baz=319
R59A King George, V 148.92 360 P PKPbc 09 26 43.6 0.0
baz=0.6
S51A Beattyville 148.96 10 PKPbc 09 26 42.6 -1.1
PB15 IPOC Station P 149.02 194 PKPbc 09 26 42.9 -1.6

X40A	**Basin Creek Fa**	**149.13**	**25**	P		**PKPbc**	**09 26 44.1**	**0.0**
	baz=329,SNR=7.6							
X40A	**Basin Creek Fa**	**149.13**	**25**			**PKPbc**	**09 26 44.2**	**0.0**
S53A	**Williamson**	**149.13**	**7**	P		**PKPbc**	**09 26 44.1**	**-0.1**
	baz=351							
R58B	**Mineral**	**149.15**	**1**	P		**PKPbc**	**09 26 44.3**	**+0.2**
	baz=359							
S57A	**Dark Hollow, R**	**149.32**	**2**			**PKPbc**	**09 26 44.0**	**-0.6**
T50A	**Nancy**	**149.33**	**12**			**PKPbc**	**09 26 43.2**	**-1.5**
S59A	**Mechanicsville**	**149.36**	**360**	P		**PKPbc**	**09 26 44.8**	**+0.1**
	baz=0.3							
S56A	**Natural Bridge**	**149.38**	**3**	P		**PKPbc**	**09 26 44.2**	**-0.6**
	baz=356							
WVT	**Waverly**	**149.44**	**17**	PKP2		**PKPbc**	**09 26 44.7**	**-0.3**
WVT	**Waverly**	**149.44**	**17**	P		**PKPbc**	**09 26 45.0**	**0.0**
	baz=339							
WVT	**Waverly**	**149.44**	**17**	PKPbc		**PKPbc**	**09 26 44.6**	**-0.3**
LVC	**Limon Verde**	**149.45**	**196**	PKP2		**PKiKP**	**09 26 48.7**	**+1.7**
LVC	**Limon Verde**	**149.45**	**196**			**PKiKP**	**09 26 48.7**	**+1.7**
S58A	**Poland Farm, P**	**149.50**	**1**	P		**PKPbc**	**09 26 44.9**	**-0.2**
	baz=359							
S58A	**Poland Farm, P**	**149.50**	**1**			**PKPbc**	**09 26 45.4**	**+0.3**
U49A	**Red Boiling Sp**	**149.62**	**13**			**PKPbc**	**09 26 45.0**	**-0.4**
435B	**Jarrell**	**149.67**	**36**	P		**PKPbc**	**09 26 46.1**	**+0.4**
	baz=318							
T53A	**Wise**	**149.77**	**8**	P		**PKPbc**	**09 26 45.1**	**-0.8**
	baz=350							
BLA	**Blacksburg**	**149.78**	**5**	P		**PKPbc**	**09 26 45.1**	**-0.7**
	baz=354							
T54A	**Tazewell**	**149.81**	**7**	P		**PKPbc**	**09 26 45.8**	**-0.1**
	baz=352,SNR=6.7							
T55A	**Pulaski**	**149.84**	**5**	P		**PKPbc**	**09 26 45.9**	**-0.1**
	baz=353							
CLTN	**Cedars of Leba**	**149.88**	**15**			**PKPbc**	**09 26 44.5**	**-1.6**
X43A	**Marvell**	**149.89**	**23**	P		**PKPbc**	**09 26 46.3**	**+0.2**
	baz=333							
T56A	**Rocky Mt**	**149.99**	**4**	P		**PKPbc**	**09 26 45.8**	**-0.5**
	baz=355							
TZTN	**Tazewell**	**150.03**	**10**	P		**PKPbc**	**09 26 46.4**	**0.0**
	baz=348,SNR=11							
TZTN	**Tazewell**	**150.03**	**10**			**PKPdf**	**09 26 43.9**	**+2.4**
CCAR	**Cane Creek**	**150.06**	**24**			**PKPbc**	**09 26 45.2**	**-1.4**
T57A	**Hurt**	**150.07**	**3**	P		**PKPbc**	**09 26 46.5**	**0.0**
	baz=356,SNR=5.3							
T57A	**Hurt**	**150.07**	**3**			**PKPbc**	**09 26 45.5**	**-1.0**
T57A				PKPab		**PKPab**	**09 26 54.2**	**+2.0**
V48A	**Smith Brothers**	**150.09**	**16**			**PKPbc**	**09 26 45.8**	**-0.8**
T59A	**Double "B" Far**	**150.15**	**0**	P		**PKPbc**	**09 26 46.8**	**+0.2**
	baz=360,SNR=5.5							
T59A	**Double "B" Far**	**150.15**	**0**			**PKPbc**	**09 26 45.2**	**-1.5**
T58A	**Grand View Acr**	**150.15**	**2**	P		**PKPbc**	**09 26 46.8**	**+0.1**
	baz=358,SNR=5.2							
Z41A	**Richland Creek**	**150.19**	**27**	P		**PKPbc**	**09 26 46.7**	**-0.1**
	baz=328							
833A	**Chaparral WMA,**	**150.26**	**42**	P		**PKPbc**	**09 26 47.0**	**-0.1**
	baz=312							
U54A	**Nelsons Funny**	**150.32**	**7**	P		**PKPbc**	**09 26 46.5**	**-0.7**
	baz=351							
U55A	**TA2, Sparta**	**150.42**	**6**	P		**PKPbc**	**09 26 47.1**	**-0.3**
	baz=353,SNR=8.0							
OXF	**Oxford**	**150.43**	**20**	P		**PKPbc**	**09 26 47.0**	**-0.4**
	baz=335,SNR=11							
PLAL	**Pickwick Lake**	**150.44**	**18**			**PKPbc**	**09 26 46.9**	**-0.5**
PLAL				PKPab		**PKPab**	**09 26 55.9**	**+2.1**
NATX	**Nacogdoches**	**150.53**	**31**	P		**PKPbc**	**09 26 47.6**	**-0.1**
	baz=323							
U57A	**Blanch**	**150.63**	**3**	P		**PKPbc**	**09 26 47.6**	**-0.3**
	baz=356,SNR=6.6							
U60A	**Pendleton**	**150.65**	**360**	P		**PKPbc**	**09 26 46.8**	**-1.1**
	baz=0.5							
U58A	**Oxford**	**150.70**	**2**	P		**PKPbc**	**09 26 48.0**	**0.0**
	baz=358,SNR=8.4							
V52A	**Sevierville**	**150.71**	**10**			**PKiKP**	**09 26 48.5**	**-0.2**
V52A				PKPab		**PKPab**	**09 26 57.2**	**+2.4**
U59A	**Littleton**	**150.76**	**1**	P		**PKPbc**	**09 26 47.9**	**-0.3**
	baz=359							
TKL	**Tuckaleechee C**	**150.86**	**11**	PKIKP		**PKPbc**	**09 26 48.6**	**+0.2**
TKL							09 26 57.5	
TKL	**Tuckaleechee C**	**150.86**	**11**			**PKPbc**	**09 26 48.6**	**+0.2**
TKL				PKPab		**PKPab**	**09 26 57.5**	**+2.0**
CPCT	**Cooper Cave**	**150.91**	**12**			**PKiKP**	**09 26 49.0**	**-0.2**
CPCT				PKPab		**PKPab**	**09 26 57.4**	**+1.7**
V54A	**Nebo**	**151.03**	**8**	P		**PKPbc**	**09 26 48.1**	**-0.8**
	baz=351,SNR=6.7							
V55A	**Taylorsville**	**151.05**	**6**	P		**PKPbc**	**09 26 48.7**	**-0.2**
	baz=352,SNR=5.9							
V55A	**Taylorsville**	**151.05**	**6**			**PKiKP**	**09 26 49.3**	**-0.1**
V55A				PKPab		**PKPab**	**09 26 55.8**	**-0.4**
V57A	**Coltrane Farms**	**151.14**	**4**	P		**PKPbc**	**09 26 48.8**	**-0.3**
	baz=355,SNR=11							
V56A	**Mocksville**	**151.16**	**5**	P		**PKPbc**	**09 26 48.7**	**-0.4**
	baz=354							
X48A	**Hartselle**	**151.24**	**17**			**PKPdf**	**09 26 39.8**	**-3.6**
X48A				PKPbc		**PKPbc**	**09 26 49.0**	**-0.3**
X48A				PKPab		**PKPab**	**09 26 56.8**	**-0.2**
V59A	**Middlesex**	**151.34**	**1**	P		**PKPbc**	**09 26 49.7**	**+0.2**
	baz=358							
V60A	**Jim Taylor Roa**	**151.35**	**360**	P		**PKPbc**	**09 26 49.5**	**0.0**
	baz=0.3							
V62A	**Hyde County Ai**	**151.52**	**358**	P		**PKPbc**	**09 26 49.6**	**-0.3**
	baz=3.0							
FPAL	**Fort Paine**	**151.54**	**14**			**PKPbc**	**09 26 50.0**	**0.0**
FPAL						**PKPab**	**09 26 57.1**	**-1.2**
BG3	**Lake Jocassee**	**151.65**	**10**			**PKiKP**	**09 26 50.7**	**-0.1**
W54A	**Cherokee Point**	**151.68**	**8**	P		**PKPbc**	**09 26 49.6**	**-0.7**
	baz=350,SNR=5.2							
X51A	**Calhoun**	**151.69**	**13**			**PKPbc**	**09 26 48.8**	**-1.6**
X51A						**PKPab**	**09 26 58.7**	**-0.2**
KMSC	**Kings Mountain**	**151.74**	**7**	P		**PKPbc**	**09 26 50.2**	**-0.3**
	baz=352							
KMSC	**Kings Mountain**	**151.74**	**7**			**PKPbc**	**09 26 49.6**	**-0.9**
W56A	**Indian Trail**	**151.82**	**6**	P		**PKPbc**	**09 26 50.3**	**-0.3**
	baz=353							
W57A	**Gilead**	**151.86**	**5**	P		**PKPbc**	**09 26 50.4**	**-0.4**
	baz=355,SNR=5.4							
W57A	**Gilead**	**151.86**	**5**			**PKPbc**	**09 26 50.0**	**-0.7**
W57A						**PKPab**	**09 26 58.3**	**-1.3**
Y49A	**Blount Mountai**	**151.97**	**16**			**PKPbc**	**09 26 50.7**	**-0.4**
PAULI	**Pauline**	**151.99**	**8**			**PKiKP**	**09 26 51.4**	**0.0**
PAULI				PKPab		**PKPab**	**09 26 59.9**	**-0.3**
VBMS	**Vicksburg**	**152.06**	**24**	P		**PKPbc**	**09 26 50.8**	**-0.4**
	baz=331							
W60A	**Pink Hill**	**152.06**	**1**	P		**PKPbc**	**09 26 51.1**	**-0.1**
	baz=359							
Z47A	**Carrollton**	**152.08**	**19**			**PKPbc**	**09 26 49.7**	**-1.6**
Z47A						**PKPab**	**09 27 00.1**	**-0.5**
X54A	**Belton**	**152.18**	**9**	P		**PKPbc**	**09 26 51.3**	**-0.2**
	baz=350,SNR=6.5							
146A	**Union**	**152.25**	**22**			**PKPbc**	**09 26 51.1**	**-0.6**
146A						**PKPab**	**09 27 01.4**	**0.0**
BIRD	**Birdtown, Kers**	**152.32**	**6**			**PKPbc**	**09 26 50.9**	**-0.9**
BIRD						**PKPab**	**09 27 00.3**	**-1.2**
X55A	**Gracelyn & Ava**	**152.36**	**8**	P		**PKPbc**	**09 26 51.7**	**-0.2**
	baz=351,SNR=5.2							
X58A	**Rowland**	**152.50**	**4**	P		**PKPbc**	**09 26 51.5**	**-0.6**
	baz=356							
X59A	**McDuffie Farm,**	**152.52**	**2**	P		**PKPbc**	**09 26 51.7**	**-0.5**
	baz=358							
X60A	**Albert Glenn T**	**152.53**	**1**	P		**PKPbc**	**09 26 51.7**	**-0.5**
	baz=359							
Y52A	**Lilburn**	**152.54**	**12**	P		**PKiKP**	**09 26 52.6**	**+0.1**
	baz=346							
LRAL	**Lakeview Retre**	**152.57**	**18**			**PKPbc**	**09 26 52.4**	**0.0**
LRAL				PKPab		**PKPab**	**09 27 00.2**	**-2.5**
344A	**Westbrook Farm**	**152.63**	**25**			**PKiKP**	**09 26 53.7**	**+0.9**
344A				PKPab		**PKPab**	**09 27 01.3**	**-1.7**
Z50A	**Ashland**	**152.68**	**16**	P		**PKPbc**	**09 26 52.2**	**-0.5**
	baz=342							
Z50A	**Ashland**	**152.68**	**16**			**PKiKP**	**09 26 53.0**	**+0.1**
Z50A				PKPab		**PKPab**	**09 27 01.7**	**-1.4**
Y55A	**Saluda**	**152.85**	**8**	P		**PKPbc**	**09 26 52.8**	**-0.2**
	baz=350							
GOGA	**Godfrey**	**153.10**	**11**	P		**PKPbc**	**09 26 52.9**	**-0.6**
	baz=347							
GOGA	**Godfrey**	**153.10**	**11**			**PKiKP**	**09 26 54.3**	**+0.6**
GOGA						**PKPab**	**09 27 03.3**	**-1.5**
Z57A	**Bowman**	**153.63**	**6**	P		**PKPbc**	**09 26 53.8**	**-0.9**
	baz=353							
SAML	**Samuel**	**158.78**	**222**	PKP2		**PKPab**	**09 27 30.2**	**+0.4**
SAML	**Samuel**	**158.78**	**222**			**PKPab**	**09 27 30.2**	**+0.4**

*IDC **23** 09:13:29.5±0.4, 11°.07S×161°.48E, h0km, mb4.8/34, mb1 4.9/38, mb1mx4.8/49, mbtmp4.8/38, ML4.2/3, MS4.7/33,*

Ms1 4.7/33, ms1mx4.6/51, Error ellipse: s-maj=13.2km s-min=10.8km az=88.0

*NEIC **23** 09:13:30.4±1.7, 11°.10S±0°.07×161°.55E±0°.08, h10km±1km, mb5.3/157, Ms_20 5.0/533, Error ellipse: s-maj=13.8km s-min=11.1km az=56.0*

*MOS **23** 09:13:31.8±1.1, 11°.07S×161°.47E, h28km, mb5.4/39, MS4.6/7, Error ellipse: s-maj=7.8km s-min=7.1km az=113.0*

*BJI **23** 09:13:32.5±0.0, 10°.51S×161°.78E, h21km, mB5.3/41, mb5.0/52, Ms5.2/34, Ms7 4.9/27*

*GCMT **23** 09:13:33.4±0.1, 11°.12S±0°.01×161°.50E±0°.01, h12km, MW5.2/141, Moment Tension Solution. s90,c118; s141,c236; Duration: 1ſ0 Moment tensor: Scale 10^17 Nm; Mrr0.45±.01; Mθθ0.21±.01; Mϕϕ-0.66±.01; Mrθ0.15±.04; Mθϕ0.65±.01; Mϕr-0.15±.03; Best double couple: M≈0.81600×10^17 NP1:ϕs115.00000°, δ65.00000°, λ165.00000°. NP2:ϕs112.00000°, δ76.00000°, λ26.00000°. Principal axes: T 0.5930, Plg28.0000°, Azm336.0000°; N 0.4480, Plg61.0000°, Azm138.0000°; P -1.0400, Plg8.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 09:13:33.3±0.3, 11°.13S±0°.04×161°.59E±0°.05, h28km, n643, σ1ſ35/361, mb5.2/147, MS5.0/310, 6C, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.33**	**316**	Pn	**Pn**	**09 14 08.9**	**-0.8**
	46nm,0.3s,baz=161,slow=8.8,SNR=15						
HNR				Sn	**Sn**	**09 14 36.6**	**-1.0**
	178nm,0.3s,baz=143,slow=20,SNR=5.0						
HNR	**Honiara**	**2.33**	**316**	P	**Pn**	**09 14 08.8**	**-1.0**
HNR	**Honiara**	**2.33**	**316**		**Pn**	**09 14 08.8**	**-1.0**
KRVT	**Keravat (AS076**	**11.64**	**305**	LR	LR	09 21 25.5	
	comp=Z,3μm,18.1s,baz=130,slow=41						
DZM	**Mont Dzumac**	**11.84**	**157**	*e*Pn	**Pn**	**09 16 20.7**	**+0.3**
	330nm,1.5s						
DZM				*e*LR	LR	09 18 56.8	
	comp=Z,8μm,22.7s						
DZM	**Mont Dzumac**	**11.84**	**157**	Pn	**Pn**	**09 16 21.8**	**+1.4**
	1.4nm,0.3s,baz=306,slow=20,SNR=16						
DZM				Sn	**Sn**	**09 18 26.5**	**-5.1**
	0.5nm,0.3s,baz=123,slow=17,SNR=1.2						
DZM				LR	LR	09 20 28.1	
	comp=Z,6μm,19.3s,baz=356,slow=35						
DZM	**Mont Dzumac**	**11.84**	**157**		**Pn**	**09 16 18.8**	**-1.5**
PMG	**Port Moresby**	**14.30**	**276**	Pn	**Pn**	**09 16 52.1**	**-1.9**
	0.3nm,0.3s,baz=228,slow=9.7,SNR=1.8						
PMG				LR	LR	09 22 16.0	
	comp=Z,7μm,18.4s,baz=113,slow=37						
PMG	**Port Moresby**	**14.30**	**276**	*i* P	**Pn**	**09 16 51.5**	**-2.5**
PMG	**Port Moresby**	**14.30**	**276**	Pn	**Pn**	**09 16 51.1**	**-2.9**
TARA	**Tarawa**	**16.76**	**43**	Pn	**Pn**	**09 17 25.0**	**-1.2**
CTA	**Charters Tower**	**17.23**	**237**	P	**Pn**	**09 17 32.3**	**+0.2**
	0.9nm,0.3s,baz=63,slow=15,SNR=20						
CTA				LR	LR	09 23 13.6	
	comp=Z,5μm,21.0s,baz=64,slow=34						
CTAO	**Charters Tower**	**17.23**	**237**	P	**Pn**	**09 17 31.3**	**-0.8**
CTAO				pmax	pmax		
	comp=Z,136nm,1.2s						
CTAO	**Charters Tower**	**17.23**	**237**	Pn	**Pn**	**09 17 31.3**	**-0.8**
MSVF	**Nonsavu**	**17.24**	**114**	P	**Pn**	**09 17 31.4**	**-0.8**
MSVF				pmax	pmax		
	comp=Z,126nm,1.1s						
MSVF	**Nonsavu**	**17.24**	**114**	Pn	**Pn**	**09 17 31.4**	**-0.8**
EIDS	**Eidsvold**	**17.31**	**214**	P	**P**	**09 17 34.3**	**+0.1**
	baz=18,SNR=22						
EIDS	**Eidsvold**	**17.31**	**214**	P	**Pn**	**09 17 33.1**	**+0.1**
MTSU	**Mount Surprise**	**18.09**	**245**	P	**P**	**09 17 44.7**	**+1.7**
	baz=18,SNR=5.9						
PATS	**Pohnpei**	**18.14**	**350**	P	**Pn**	**09 17 42.7**	**-0.6**
	baz=18,SNR=3.8						
PATS	**Pohnpei**	**18.14**	**350**	P	**Pn**	**09 17 39.8**	**-3.5**
PATS				IAmb	IAmb	09 17 56.3	
	comp=Z,293nm,1.5s						
COEN	**Coen**	**18.19**	**259**	P	**P**	**09 17 47.1**	**+3.1**
	baz=18,SNR=23						
COEN	**Coen**	**18.19**	**259**		**Pn**	**09 17 41.9**	**-2.1**
RMQ	**Roma**	**19.49**	**217**	P	**Pn**	**09 18 00.8**	**+1.2**
	baz=20,SNR=56						
ARMA	**Armidale**	**21.31**	**204**	P	**P**	**09 18 19.3**	**+1.3**
	baz=22,SNR=10.0						
ARMA	**Armidale**	**21.31**	**204**	P	**P**	**09 18 19.3**	**+1.3**
ARMA				IAmb	IAmb	09 18 22.5	
	comp=Z,126nm,1.1s						
JAY	**Jayapura**	**22.41**	**291**	P	**P**	**09 18 29.8**	**-0.1**
	comp=Z,20nm,0.9s,baz=152,slow=1.9,SNR=7.6						
JAY				LR	LR	09 27 33.9	
	comp=Z,1μm,19.3s,baz=104,slow=38						
JAY	**Jayapura**	**22.41**	**291**	P	**P**	**09 18 28.6**	**-1.3**
	comp=Z,1μmcomp=Z,28nm,1.1s						
QLP	**Quilpie**	**22.45**	**224**	P	**P**	**09 18 30.9**	**+0.7**
	baz=23,SNR=8.3						
GENI	**Genyem**	**22.87**	**290**	P	**P**	**09 18 37.9**	**+3.1**
	comp=Z,2μmcomp=Z,5μmcomp=Z,165nm,3.0s						
QIS	**Mount Isa**	**23.11**	**243**	P	**P**	**09 18 37.8**	**+0.6**
	baz=23,SNR=16						
MGCD	**Mangrove Creek**	**23.99**	**202**	P	**P**	**09 18 47.0**	**+1.4**
	baz=24,SNR=17						
SMPI	**Sarmi**	**24.45**	**290**	P	**P**	**09 18 51.0**	**+1.0**
	comp=Z,1μmcomp=Z,4μmcomp=Z,168nm,1.7s						
CMSA	**Cobar Meteorol**	**25.07**	**213**	P	**P**	**09 18 56.1**	**+0.6**
	baz=25,SNR=31						
YNG	**Young**	**26.02**	**206**	P	**P**	**09 19 05.7**	**+1.6**
	baz=26,SNR=12						
RAO	**Raoul Island**	**26.29**	**136**	LR	LR	09 27 47.9	
	comp=Z,1μm,18.3s,baz=310,slow=32						
OUZ	**Omahuta**	**26.35**	**157**	P	**P**	**09 19 07.9**	**+0.9**
OUZ				IAmb	IAmb	09 19 12.7	
	comp=Z,63nm,1.1s						
OUZ				IAMs_20	IAMs_20	09 27 46.7	
	comp=Z,4μm,19.0s						
CNB	**Canberra Magne**	**26.52**	**203**	P	**P**	**09 19 10.6**	**+2.0**
	baz=27,SNR=7.6						
CAN	**Canberra**	**26.66**	**203**	P	**P**	**09 19 10.4**	**+0.5**
CAN				pmax	pmax		
	comp=Z,70nm,1.4s						
CAN				MLR	MLR		
	comp=Z,1μm,18.0s						
CAN	**Canberra**	**26.66**	**203**	P	**P**	**09 19 10.4**	**+0.5**
WR0	**Warramunga Arr**	**27.46**	**248**	P	**P**	**09 19 16.7**	**-0.6**
WB0	**Warramunga Arr**	**27.55**	**249**	P	**P**	**09 19 17.6**	**-0.4**
WB0				IAmb	IAmb	09 19 21.1	
	comp=Z,98nm,1.1s						
WB8	**Warramunga Arr**	**27.57**	**248**	P	**P**	**09 19 18.5**	**+0.2**
	baz=28						
WRAB	**Tennant Creek**	**27.63**	**248**	*i* P	**P**	**09 19 18.6**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,11nm,1.2s						
WRAB	**Tennant Creek**	**27.63**	**248**	P	**P**	**09 19 18.6**	**-0.1**
WRAB				IAmb	IAmb	09 19 21.7	
	comp=Z,92nm,1.2s						
WB2	**Warramunga Arr**	**27.63**	**248**	P	**P**	**09 19 18.0**	**-0.8**
WB2				IAmb	IAmb	09 19 21.8	
	comp=Z,87nm,1.2s						
WRA	**Warramunga Arr**	**27.64**	**248**	P	**P**	**09 19 18.4**	**-0.5**
	comp=Z,48nm,1.1s,baz=75,slow=9.0,SNR=31						
WRA				LR	LR	09 30 05.3	
	comp=Z,7μm,19.1s,baz=75,slow=36						
WRA	**Warramunga Arr**	**27.64**	**248**	*i* P	**P**	**09 19 18.7**	**-0.1**
WRA				pmax	pmax		
	comp=Z,48nm,1.1s						
STKA	**Stephens Creek**	**27.69**	**219**	P	**P**	**09 19 20.1**	**+0.9**
	baz=28,SNR=12						
STKA	**Stephens Creek**	**27.69**	**219**	P	**P**	**09 19 18.8**	**-0.3**
	comp=Z,31nm,1.1s,baz=16,slow=12,SNR=9.9						
STKA				LR	LR	09 29 21.6	
	comp=Z,7μm,18.7s,baz=39,slow=34						
STKA	**Stephens Creek**	**27.69**	**219**	P	**P**	**09 19 18.9**	**-0.3**
STKA				pmax	pmax		
	comp=Z,14nm,1.3s						
STKA				MLR	MLR		
	comp=Z,2μm,19.0s						
STKA	**Stephens Creek**	**27.69**	**219**	P	**P**	**09 19 18.9**	**-0.3**
KNTN	**Kanton**	**27.74**	**75**	IAMs_20	IAMs_20	09 27 26.4	
	comp=Z,3μm,18.0s						
AS31	**Alice Springs**	**29.14**	**241**	P	**P**	**09 19 29.9**	**-2.3**
ASAR	**Alice Springs**	**29.14**	**241**	P	**P**	**09 19 31.4**	**-0.8**
	comp=Z,14nm,1.1s,baz=71,slow=9.4,SNR=39						
ASAR				PcP	**PcP**	**09 22 40.7**	**+1.0**
	comp=Z,3.3nm,1.0s,baz=66,slow=2.2,SNR=4.1						
ASAR				ScP	**ScP**	**09 26 22.6**	**+3.1**
	comp=Z,1.2nm,1.1s,baz=73,slow=3.1,SNR=3.7						
ASAR				LR	LR	09 30 36.5	
	comp=Z,5μm,19.9s,baz=70,slow=35						
MTN	**Manton Dam**	**29.83**	**264**	P	**P**	**09 19 36.1**	**-2.3**
TOO	**Toolangi**	**30.04**	**206**	P	**P**	**09 19 41.5**	**+1.6**
	baz=30,SNR=7.4						
TOO	**Toolangi**	**30.04**	**206**	P	**P**	**09 19 39.3**	**-0.7**
TOO				pmax	pmax		
	comp=Z,54nm,1.2s						
TOO				MLR	MLR		
	comp=Z,2μm,19.0s						
TOO	**Toolangi**	**30.04**	**206**	P	**P**	**09 19 39.3**	**-0.7**
TOO				IAmb	IAmb	09 19 44.5	
	comp=Z,54nm,1.2s						
URZ	**Urewera**	**30.38**	**155**	P	**P**	**09 19 44.3**	**+1.3**
	comp=Z,20nm,1.0s,baz=313,slow=3.8,SNR=5.1						
URZ				LR	LR	09 30 37.6	
	comp=Z,2μm,18.5s,baz=352,slow=34						
HTT	**Hallett**	**30.40**	**220**	P	**P**	**09 19 43.7**	**+0.4**
	baz=30,SNR=22						
BKZ	**Black Stump Fm**	**30.92**	**157**	P	**P**	**09 19 48.1**	**+0.4**
BKZ				IAmb	IAmb	09 19 55.6	
	comp=Z,55nm,1.3s						
ARPS	**Mount Arapiles**	**31.13**	**212**	P	**P**	**09 19 51.0**	**+1.4**
	baz=31,SNR=9.1						
SIJI	**Sorong**	**31.79**	**287**	P	**P**	**09 19 55.0**	**-0.7**
	comp=Z,3.4nm,0.3s,baz=88,slow=6.0,SNR=4.0						
SIJI				LR	LR	09 34 56.9	
	comp=Z,2μm,18.8s,baz=114,slow=41						
BBOO	**Buckleboo**	**31.87**	**223**	P	**P**	**09 19 56.3**	**+0.1**
	baz=32,SNR=22						
BBOO	**Buckleboo**	**31.87**	**223**	P	**P**	**09 19 56.2**	**+0.1**
BBOO				IAmb	IAmb	09 19 57.5	
	comp=Z,40nm,0.9s						
BBOO				IAMs_20	IAMs_20	09 33 29.7	
	comp=Z,3μm,18.0s						
TUWZ	**Tuamarina**	**32.08**	**162**		**P**	**09 19 58.5**	**+0.7**
KNRA	**Kununurra**	**32.23**	**258**	P	**P**	**09 20 00.2**	**+0.7**
	baz=32,SNR=8.2						
KNRA	**Kununurra**	**32.23**	**258**	P	**P**	**09 19 58.2**	**-1.2**
BHW	**Baring Head**	**32.34**	**161**	P	**P**	**09 20 01.0**	**+0.8**
MSWZ	**Moikau Station**	**32.47**	**161**	P	**P**	**09 20 00.2**	**-1.1**
LTZ	**Lake Taylor**	**32.88**	**165**	P	**P**	**09 20 04.6**	**-0.3**
OXZ	**Oxford**	**33.34**	**166**	P	**P**	**09 20 09.0**	**+0.1**
OXZ				IAMs_20	IAMs_20	09 31 18.4	
	comp=Z,2μm,19.0s						
RPZ	**Rata Peaks**	**33.49**	**168**	P	**P**	**09 20 11.0**	**+0.8**
	comp=Z,27nm,0.8s,baz=162,slow=2.3,SNR=5.2						
RPZ				LR	LR	09 32 29.6	
	comp=Z,509nm,19.0s,baz=328,slow=34						
RPZ	**Rata Peaks**	**33.49**	**168**	P	**P**	**09 20 10.3**	**+0.2**
MQZ	**McQueen's Vall**	**33.85**	**166**	P	**P**	**09 20 13.4**	**+0.2**
LBZ	**Lake Benmore**	**33.96**	**169**	P	**P**	**09 20 13.9**	**-0.4**
WRKA	**Warakurna**	**34.42**	**242**	P	**P**	**09 20 17.9**	**-0.7**
	baz=34,SNR=5.7						
NLAI	**Namlea**	**35.07**	**280**	P	**P**	**09 20 26.0**	**+1.8**
	comp=Z,59nm,1.4s						
FITZ	**Fitzroy Crossi**	**35.42**	**254**	P	**P**	**09 20 26.9**	**-0.3**
	baz=35,SNR=12						
FITZ	**Fitzroy Crossi**	**35.42**	**254**	P	**P**	**09 20 26.4**	**-0.8**
	comp=Z,13nm,0.8s,baz=110,slow=6.5,SNR=12						
FITZ				LR	LR	09 34 12.2	
	comp=Z,3μm,20.8s,baz=74,slow=35						
FITZ	**Fitzroy Crossi**	**35.42**	**254**	P	**P**	**09 20 26.2**	**-1.0**
FITZ				IAMs_20	IAMs_20	09 34 11.3	
	comp=Z,3μm,21.0s						
SANI	**Sanana**	**36.45**	**282**	P	**P**	**09 20 36.8**	**+0.7**
	comp=Z,4μmcomp=Z,73nm,1.1s						
FORT	**Forrest**	**36.70**	**233**	P	**P**	**09 20 38.6**	**+0.6**
	baz=37,SNR=11						
FORT	**Forrest**	**36.70**	**233**	P	**P**	**09 20 37.6**	**-0.4**
BATI	**Baumata**	**37.26**	**268**	P	**P**	**09 20 41.0**	**-2.0**
	comp=Z,26nm,0.3s,baz=321,slow=6.5,SNR=1.3						
MMRI	**Maumere**	**38.82**	**270**	P	**P**	**09 20 59.1**	**+2.9**
KMSI	**Cibinong**	**39.14**	**285**	P	P	09 21 04.3	+5.5
	comp=Z,6μmcomp=Z,288nm,1.1s						
EDFI	**Ende, Flores**	**39.35**	**270**	P	**P**	**09 21 00.0**	**-0.7**
	comp=Z,1μmcomp=Z,29nm,1.7s						
LUWI	**Luwuk**	**39.82**	**282**	P	**P**	**09 21 05.0**	**+0.5**
	comp=Z,7μmcomp=Z,119nm,1.2s						
LUWI	**Luwuk**	**39.82**	**282**	P	**P**	**09 21 03.9**	**-0.6**
KCP	**Kidapawan**	**40.54**	**295**	*i*P	P	09 21 21.7	+11
APSI	**Ampana**	**40.93**	**282**	P	**P**	**09

JNU Nakatsue 52.85 327 P P 09 22 45.9 -0.7
JNU IAmb IAmb 09 23 02.3
comp=Z,36nm,1.2s
CISI Cisompet, Garu 53.12 269 P P 09 22 46.9 -2.1
MDSI Maura Dua 57.18 272 P P 09 23 19.7 +1.4
TJN Taejon 57.20 327 *i* **P P 09 23 17.4 -0.5**
TAOE Nuku Hiva Isla 57.35 93 *e* **LR LR** 09 39 45.2
comp=Z,1µm,29.6s
KSRS Korea Array 57.73 329 P P 09 23 21.7 +0.1
comp=Z,8.7nm,1.0s,baz=142,slow=6.8,SNR=17
KSRS LR LR 09 46 22.6
comp=Z,660nm,19.9s,baz=125,slow=34
KS19 Wonju Array Si 57.79 329 P P 09 23 19.6 -2.5
INCN Inchon 58.42 328 P P 09 23 26.1 -0.4
INCN pmax pmax
comp=Z,62nm,1.3s
INCN Inchon 58.42 328 P P 09 23 26.1 -0.4
MYKOM Kota Tinggi 58.82 279 P P 09 23 30.0 +0.2
NJ2 Nanjing 59.27 318 *e* **P P 09 23 33.0 +0.5**
NJ2 pmax pmax
comp=Z,13nm,0.6s
YSS Yuzh-Sakhalins 60.22 345 *e* **P P 09 23 38.7 0.0**
YSS Yuzh-Sakhalins 60.22 345 IAMs_20 IAMs_20 09 48 23.7
comp=Z,1µm,18.0s
USA0B Ussuriysk Arra 61.28 336 P P 09 23 45.1 -0.9
USA0B pmax pmax
comp=Z,51nm,1.3s
USA0B Ussuriysk Arra 61.28 336 P P 09 23 45.1 -0.9
USRK Ussuriysk Ar. 61.28 336 P P 09 23 46.6 +0.6
comp=Z,14nm,0.9s,baz=147,slow=6.9,SNR=24
USRK LR LR 09 48 23.2
comp=Z,326nm,20.5s,baz=131,slow=34
RKT Rikitea 61.39 110 *e* **LR LR** 09 41 38.4
comp=Z,754nm,24.2s
IPM Ipoh 62.22 281 P P 09 23 50.6 -2.4
IPM Ipoh 62.22 281 P P 09 23 54.0 +1.0
MDJ Mudanjiang 62.60 335 IAmb IAmb 09 23 58.3
comp=Z,34nm,1.2s
MNSI Mandailing Nat 62.74 277 P P 09 23 56.7 +0.2
comp=Z,34nm,0.9s
KULM Kulim 62.79 282 P P 09 23 57.0 +0.2
CN2 Changchun 63.79 332 *e* **P P 09 24 02.3 -0.5**
CN2 *e* **S S 09 32 40.3 +4.2**
CN2 pmax pmax
comp=Z,10.0nm,1.4s
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=Z,400nm,16.0s
CN2 LR LR
comp=Z,600nm,16.0s
CN2 LR LR
comp=Z,500nm,16.0s
RPSI Rantau Prapat 63.81 279 P P 09 24 03.5 -0.1
PSI Prapat 63.84 279 P P 09 24 03.5 -0.5
comp=Z,1.8nm,0.3s,baz=180,slow=9.2,SNR=5.7
PET Petropavlovsk 63.94 358 *e* **P P 09 24 06.0 +2.4**
PET *e* **S S 09 32 40.4 +2.9**
PET pmax pmax
comp=Z,20nm,1.0s
PET MLR MLR
comp=Z,400nm,16.0s
PETK Petropavlovsk- 64.06 357 P P 09 24 04.4 0.0
comp=Z,3.6nm,0.9s,baz=165,slow=6.2,SNR=6.6
CASY Casey 64.85 200 P P 09 24 09.2 -0.3
CASY IAmb IAmb 09 24 27.6
comp=Z,28nm,1.4s
GYA Guiyang 65.12 306 P P 09 24 13.8 +1.7
GYA pP pwP 09 24 24.4 -1.4
GYA PP **PP 09 26 39.0 +3.3**
GYA S **S 09 32 52.3 -1.2**
GYA sS sS 09 33 10.5 +5.5
GYA SKS **SKSac 09 34 01.8 -3.9**
GYA SS **SS 09 37 05.4 -1.0**
GYA pmax pmax
comp=Z,30nm,0.9s
GYA pmax pmax
comp=Z,130nm,5.3s
GYA LR LR
comp=Z,390nm,17.8s
GYA LR LR
comp=Z,310nm,17.6s
KCSI Kotacane, Aceh 65.13 279 P P 09 24 17.4 +5.2
SLVN Son La 65.17 300 P P 09 24 11.2 -1.2
SLVN IAmb IAmb 09 24 16.4
comp=Z,22nm,1.3s
ADK Adak 65.50 15 P P 09 24 14.8 +1.0
ADK pmax pmax
comp=Z,95nm,1.4s
ADK Adak 65.50 15 P P 09 24 14.8 +1.0
KLR Kul'dur 65.59 339 P P 09 24 14.6 +0.1
comp=Z,7.1nm,1.0s,baz=136,slow=6.2,SNR=14
KLR LR LR 09 51 18.6
comp=Z,282nm,19.5s,baz=148,slow=35
KLR Kul'dur 65.59 339 *i* **P P 09 24 14.6 +0.1**
KLR pmax pmax
comp=Z,25nm,1.5s
VNDA Vanda 66.38 180 P P 09 24 20.9 +1.7
comp=Z,16nm,0.9s,baz=344,slow=7.1,SNR=73
VNDA Vanda 66.38 180 P P 09 24 19.4 +0.2
VNDA pmax pmax
comp=Z,34nm,1.1s
VNDA Vanda 66.38 180 P P 09 24 19.4 +0.2
KMI Kunming 67.71 303 P P 09 24 30.3 +1.5
KMI pP pwP 09 24 40.6 -2.0
KMI pmax pmax
comp=Z,24nm,2.0s
KMI LR LR
comp=Z,400nm,15.9s
KMI LR LR
comp=Z,330nm,14.3s
KMI LR LR
comp=Z,410nm,13.6s
CMAR Chiang Mai Arr 68.42 295 P P 09 24 34.0 +0.9
comp=Z,5.7nm,1.0s,baz=116,slow=4.2,SNR=13
CHTO Chiang Mai 68.55 295 P P 09 24 34.0 +0.1
CHTO pmax pmax
comp=Z,31nm,1.5s
CHTO Chiang Mai 68.55 295 P P 09 24 34.0 +0.1
CHTO IAmb IAmb 09 24 37.6
comp=Z,31nm,1.4s
HHC Hu-ho-hao-te 69.30 322 *e* **P P 09 24 38.3 0.0**
HHC pmax pmax
comp=Z,18nm,0.8s
HHC pmax pmax
comp=Z,100nm,4.3s
HHC LR LR
comp=Z,230nm,11.8s
HHC LR LR
comp=Z,260nm,11.4s
HHC LR LR
comp=Z,320nm,12.7s
CD2 Chengdu 69.44 309 P P 09 24 38.4 -0.9
CD2 pmax pmax
comp=Z,20nm,0.5s
BTO Baotou 70.11 321 *e* **P P 09 24 44.6 +1.3**
HIA Hailar 70.48 332 ‖ *e* **P P 09 24 45.6 +0.3**
HIA pmax pmax
comp=Z,32nm,1.8s
ZEA Zeya 70.90 339 *e* **P P 09 24 48.2 +0.6**
ZEA pmax pmax
comp=Z,43nm,1.2s
MA2 Magadan 71.00 354 P P 09 24 47.7 -0.4
MA2 pmax pmax
comp=Z,19nm,1.2s
MA2 Magadan 71.00 354 P P 09 24 47.7 -0.4
LZH Lanzhou 71.83 314 *e* **P P 09 24 55.0 +1.1**
LZH PP **PP 09 27 37.3 +3.5**
LZH pmax pmax
comp=Z,21nm,1.2s
LZH pmax pmax
comp=Z,140nm,6.0s
LZH LR LR
comp=Z,470nm,15.2s
LZH LR LR
comp=Z,490nm,15.3s
LZH LR LR
comp=Z,530nm,15.7s
CNBA Chernabura Isl 73.37 22 P P 09 25 02.7 +0.3
CNBA IAmb IAmb 09 25 12.4
comp=Z,47nm,1.4s
CNBA IAmb_20 IAMs_20 09 50 00.5
comp=Z,705nm,19.0s
CIT Chita 75.24 332 *e* **P P 09 25 12.2 -1.2**
CIT *e* 09 25 27.2

ULN Ulaanbaatar 76.01 326 P P 09 25 15.7 -2.4
ULN pmax pmax
comp=Z,43nm,1.2s
ULN Ulaanbaatar 76.01 326 P P 09 25 15.7 -2.4
ULN IAmb IAmb 09 25 22.0
comp=Z,43nm,1.2s
GTA Gaotai 76.21 315 P P 09 25 20.6 +1.2
GTA pP PcP 09 25 31.0 -0.3
GTA sP pwP 09 25 35.5 +2.1
GTA pmax pmax
comp=Z,14nm,1.7s
GTA pmax pmax
comp=Z,95nm,5.0s
GTA LR LR
comp=Z,410nm,22.2s
GTA LR LR
comp=Z,890nm,23.2s
GTA LR LR
comp=Z,370nm,18.4s
SONM Songino Array 76.36 325 P P 09 25 20.6 +0.6
comp=Z,14nm,1.1s,baz=134,slow=5.9,SNR=20
SHL Shillong 76.98 300 *ex* **P P 09 25 24.7 +0.5**
SHL IAmb IAmb 09 25 41.6
comp=Z,29nm,1.4s
YAK Yakutsk 77.07 345 P P 09 25 24.9 +1.4
comp=Z,13nm,0.4s,baz=25,slow=1.9,SNR=4.6
YAK LR LR 09 56 50.3
comp=Z,404nm,21.7s,baz=154,slow=34
YAK Yakutsk 77.07 345 *eP* **P P 09 25 22.4 -1.1**
YAK pmax pmax
comp=Z,26nm,0.9s
YAK pmax pmax
comp=N,11nm,1.2s
YAK pmax pmax
comp=E,7.0nm,1.4s
YAK Yakutsk 77.07 345 IAmb IAmb 09 25 41.0
comp=Z,25nm,0.7s
YAK IAMs_20 IAMs_20 09 55 20.3
comp=Z,961nm,18.0s
OHAK Old Harbor 77.54 23 P P 09 25 26.1 -0.1
OHAK IAmb IAmb 09 25 30.5
comp=Z,34nm,1.1s
KDAK Kodiak Island 78.20 23 P P 09 25 31.3 +1.4
comp=Z,19nm,0.9s,baz=214,slow=4.2,SNR=14
KDAK LR LR 09 57 07.7
comp=Z,276nm,18.6s,baz=233,slow=34
KDAK Kodiak Island 78.20 23 P P 09 25 30.3 +0.4
KDAK pmax pmax
comp=Z,22nm,1.0s
KDAK Kodiak Island 78.20 23 P P 09 25 30.3 +0.4
KDAK IAmb IAmb 09 25 34.0
comp=Z,22nm,0.9s
QSPA South Pole Qui 78.88 180 P P 09 25 35.2 +1.3
BILL Bilibino 79.03 2 *eP* **P 09 25 34.4 +0.1**
BILL *e* 09 25 41.4
BILL *e* 09 28 34.2
BILL pmax pmax
comp=Z,26nm,1.1s
BILL Bilibino 79.03 2 P P 09 25 34.0 -0.4
ZAK Zakamensk 79.47 326 *eP* **P 09 25 36.8 -0.4**
ZAK pmax pmax
comp=Z,17nm,1.5s
SVW2 Sparrevohn 79.51 20 P P 09 25 38.2 +1.1
HOM Homer 79.86 22 IAMs_20 IAMs_20 09 54 08.6
comp=Z,601nm,19.0s
CNPM China Poot 79.92 22 P P 09 25 40.5 +1.1
CNPM IAMs_20 IAMs_20 09 54 43.3
comp=Z,710nm,20.0s
IRK Irkutsk 79.94 328 *eP* **P 09 25 39.9 +0.3**
IRK pmax pmax
comp=Z,57nm,1.9s
TLY Talaya 79.96 328 P P 09 25 40.3 +0.5
comp=Z,3.8nm,0.8s,baz=145,slow=5.4,SNR=12
TLY LR LR 09 58 41.8
comp=Z,301nm,19.0s,baz=114,slow=34
TLY Talaya 79.96 328 *c i* **P P 09 25 39.2 -0.6**
TLY pmax pmax
comp=Z,50nm,1.1s
TLY Talaya 79.96 328 P P 09 25 39.5 -0.2
RSO Redoubt South 80.02 21 P P 09 25 40.3 +0.2
BRLK Bradley Lake 80.21 22 P P 09 25 41.7 +0.7
BRLK IAmb IAmb 09 25 53.0
comp=Z,29nm,1.1s
BRLK IAMs_20 IAMs_20 09 54 43.7
comp=Z,608nm,21.0s
GTK Tadong 80.33 300 *ex* **P P 09 25 43.5 +1.0**
GTK IAmb IAmb 09 25 45.7
comp=Z,55nm,1.5s
TTA Tatalina 80.73 18 P P 09 25 45.2 +1.5
TTA pmax pmax
comp=Z,17nm,1.1s
TTA Tatalina 80.73 18 P P 09 25 45.2 +1.5
SEW Seward 80.98 22 P P 09 25 44.3 -0.7
MOY Mondy 81.37 327 *eP* **P 09 25 48.1 +0.7**
RC01 Rabbit Creek A 81.53 22 P P 09 25 47.6 -0.3
RC01 IAmb IAmb 09 25 51.9
comp=Z,36nm,1.3s
PPLA Purkeypile 81.92 20 P P 09 25 51.2 +1.0
PPLA IAmb IAmb 09 25 54.2
comp=Z,44nm,1.5s
PMR Palmer 82.08 21 P P 09 25 50.3 -0.5
PMR pmax pmax
comp=Z,30nm,1.3s
PMR Palmer 82.08 21 P P 09 25 50.3 -0.5
PMR IAmb IAmb 09 25 54.6
comp=Z,30nm,1.3s
PMR IAMs_20 IAMs_20 09 55 57.5
comp=Z,622nm,21.0s
KNK Knik Glacier 82.21 22 P P 09 25 51.3 -0.2
CUT Chulitna 82.23 20 P P 09 25 51.4 -0.1
baz=228
GHO Glory Hole Cre 82.28 21 IAMs_20 IAMs_20 09 55 53.5
comp=Z,633nm,22.0s
HIN Hinchinbrook I 82.29 23 P P 09 25 50.8 -1.1
HIN IAmb IAmb 09 26 07.8
comp=Z,26nm,1.2s
HIN IAMs_20 IAMs_20 09 56 34.1
comp=Z,578nm,21.0s
GLI Glacier Island 82.37 23 P P 09 25 52.7 +0.4
GLI IAmb IAmb 09 25 58.2
comp=Z,24nm,1.0s
SML Sawmill 82.51 22 P P 09 25 53.7 +0.6
SML IAmb IAmb 09 25 56.5
comp=Z,28nm,1.3s
SML IAMs_20 IAMs_20 09 55 47.8
comp=Z,616nm,22.0s
FID Port Fidalgo 82.52 23 IAmb IAmb 09 26 12.4
comp=Z,29nm,1.2s
EYAK Cordova Ski Ar 82.68 23 IAMs_20 IAMs_20 09 55 43.3
comp=Z,674nm,22.0s
KTH Kantishna Hill 82.79 19 IAmb IAmb 09 26 08.0
comp=Z,16nm,1.0s
SCM Sheep Creek Mo 82.89 22 IAmb IAmb 09 26 00.7
comp=Z,22nm,1.0s
TRF Thorofare Moun 82.93 20 IAmb IAmb 09 25 58.3
comp=Z,21nm,1.2s
RAGM Ragged Mountai 83.00 24 IAmb IAmb 09 25 59.6
comp=Z,17nm,1.0s
MAW Mawson 83.10 202 P P 09 25 57.9 +1.8
baz=83,SNR=5.8
MAW Mawson 83.10 202 P P 09 25 56.9 +0.8
comp=Z,12nm,1.0s,baz=91,slow=5.0,SNR=10
MAW LR LR 10 00 25.1
comp=Z,209nm,18.2s,baz=68,slow=34
MAW Mawson 83.10 202 P P 09 25 57.2 +1.1
MAW pmax pmax
comp=Z,7.0nm,1.3s
MAW Mawson 83.10 202 P P 09 25 57.2 +1.1
BPAW Bear Paw Mtn. 83.15 19 P P 09 25 56.6 +0.3
RND Reindeer 83.38 20 IAmb IAmb 09 26 09.3
comp=Z,31nm,1.4s
MCK McKinley 83.57 20 IAmb IAmb 09 26 14.3
comp=Z,30nm,1.0s
DHY Denali Highway 83.67 21 IAMs_20 IAMs_20 09 59 50.5
comp=Z,541nm,19.0s
BWN Browne 83.69 19 IAMs_20 IAMs_20 09 59 54.3
comp=Z,570nm,20.0s
MLY Manley 83.86 18 IAmb IAmb 09 26 16.2
comp=Z,34nm,1.5s
VRDI Verde Repeater 83.98 23 IAmb IAmb 09 26 04.5
comp=Z,33nm,1.2s
NEA Nenana 84.08 19 IAmb IAmb 09 26 14.9
comp=Z,24nm,1.2s
MCARA McCarthy VSAT 84.24 23 P P 09 26 02.3 +0.3
MCARA IAmb IAmb 09 26 17.7
comp=Z,20nm,0.9s

PAX Paxson 84.28 21 IAMs_20 IAMs_20 09 56 42.6
comp=Z,619nm,21.0s
BALM Baldy 84.31 24 IAmb IAmb 09 26 06.1
comp=Z,36nm,1.3s
WRH Wood River Hil 84.33 20 IAmb IAmb 09 26 07.6
comp=Z,16nm,1.0s
WRH IAMs_20 IAMs_20 09 57 27.9
comp=Z,554nm,20.0s
CCB Clear Creek Bu 84.54 20 IAMs_20 IAMs_20 09 58 16.4
comp=Z,642nm,20.0s
TCOL CIGO, UAF Yank 84.67 19 P P 09 26 04.3 +0.2
baz=230
HDA Harding Lake 84.67 20 P P 09 26 04.4 +0.3
baz=230
HDA Harding Lake 84.67 20 P P 09 26 04.4 +0.3
COLA College 84.68 19 ‖ *iP* **P 09 26 04.0 -0.1**
COLA pmax pmax
comp=Z,23nm,1.0s
COLA College 84.68 19 P P 09 26 03.6 -0.4
COLA IAmb IAmb 09 26 21.0
comp=Z,21nm,0.9s
MENT Mentasta 84.90 22 IAmb IAmb 09 26 18.6
comp=Z,21nm,1.0s
IL31 84.93 20 P P 09 26 04.6 -0.7
IL31 IAmb IAmb 09 26 22.4
comp=Z,22nm,1.3s
ILAR Eielson Array 84.93 20 P P 09 26 05.6 +0.2
comp=Z,6.6nm,1.0s,baz=248,slow=5.1,SNR=19
POKR Poker Plat Res 84.97 19 P P 09 26 06.5 +0.9
baz=230
RIDG Independent Ri 84.98 21 P P 09 26 06.7 +0.9
RIDG IAMs_20 IAMs_20 09 59 42.0
comp=Z,589nm,20.0s
DOT Dot Lake 85.20 21 P P 09 26 07.1 +0.3
DOT IAMs_20 IAMs_20 09 57 32.8
comp=Z,614nm,21.0s
SIT Sitka 85.29 29 IAMs_20 IAMs_20 10 04 21.8
comp=Z,610nm,20.0s
SCRK Sand Creek 85.42 21 P P 09 26 08.5 +0.4
SCRK IAmb IAmb 09 26 11.8
comp=Z,37nm,1.2s
SCRK IAMs_20 IAMs_20 10 00 22.8
comp=Z,504nm,19.0s
TIXI Tiksi 85.43 350 P P 09 26 07.3 -0.5
comp=Z,1.0nm,0.3s,baz=115,slow=5.8,SNR=11
TIXI Tiksi 85.43 350 *i* **P P 09 26 06.8 -0.9**
TIXI pmax pmax
comp=Z,4.0nm,1.3s
TIXI Tiksi 85.43 350 P P 09 26 06.5 -1.2
KMRM Mail Ridge 85.70 48 IAMs_20 IAMs_20 09 59 42.9
comp=Z,661nm,19.0s
GDXM Geysers 85.94 49 IAMs_20 IAMs_20 09 58 46.4
comp=Z,561nm,19.0s
HYT Haines Junctio 86.18 25 P P 09 26 12.3 +0.4
WMQ Urumqi 86.28 316 *eP* **P 09 26 12.8 +0.1**
WMQ pmax pmax
comp=Z,98nm,3.8s
WMQ LR LR
comp=Z,320nm,15.5s
WMQ LR LR
comp=Z,440nm,13.5s
SAO San Andreas Ge 86.36 52 P P 09 26 12.1 -1.0
SAO pmax pmax
comp=Z,30nm,1.4s
SAO San Andreas Ge 86.36 52 P P 09 26 12.1 -1.0
SAO IAmb IAmb 09 26 30.7
comp=Z,30nm,1.4s
O02D Mt. Diablo Mer 86.36 48 P P 09 26 15.3 +2.1
baz=252
SKAG Skagway 86.44 27 P P 09 26 13.9 +0.9
SKAG IAMs_20 IAMs_20 09 56 24.2
comp=Z,576nm,22.0s
WRAK Wrangell Islan 86.45 31 IAMs_20 IAMs_20 10 00 12.7
comp=Z,878nm,20.0s
FYU Fort Yukon 86.59 19 P P 09 26 13.5 0.0
FYU IAMs_20 IAMs_20 10 02 59.5
comp=Z,537nm,19.0s
TOLK Toolik Lake Re 86.66 16 P P 09 26 17.4 +3.4
baz=228
WDC Whiskeytown Da 86.66 48 IAMs_20 IAMs_20 10 00 15.4
comp=Z,490nm,19.0s
M02C Callahan 86.69 47 P P 09 26 16.9 +2.2
baz=252
YBH Yreka Blue Hor 86.89 47 LR LR 10 00 09.7
comp=Z,322nm,18.8s,baz=274,slow=32
YBH Yreka Blue Hor 86.89 47 P P 09 26 17.8 +2.0
YBH pmax pmax
comp=Z,38nm,1.5s
YBH Yreka Blue Hor 86.89 47 P P 09 26 17.8 +2.0
YBH IAmb IAmb 09 26 34.4
comp=Z,38nm,1.5s
EGAK Eagle 86.89 21 P P 09 26 16.4 +1.3
EGAK IAMs_20 IAMs_20 09 57 38.6
comp=Z,587nm,22.0s
BBB Bella Bella 86.99 35 LR LR 09 56 39.7
comp=Z,245nm,21.4s,baz=218,slow=30
CMB Columbia Colle 87.53 51 P P 09 26 18.9 0.0
CMB pmax pmax
comp=Z,22nm,1.5s
CMB MLR MLR
comp=Z,300nm,18.0s
CMB Columbia Colle 87.53 51 P P 09 26 18.9 0.0
CMB IAmb IAmb 09 26 36.9
comp=Z,22nm,1.4s
E03A Lebam 87.81 42 P P 09 26 21.8 +1.9
E03A IAMs_20 IAMs_20 10 00 19.2
comp=Z,588nm,19.0s
NLWA Neilton Lookou 87.88 41 IAMs_20 IAMs_20 10 00 34.1
comp=Z,594nm,19.0s
VES Vestal, Richgr 87.94 53 P P 09 26 22.8 +1.9
baz=255
MWC Mount Wilson 88.34 55 P P 09 26 21.5 -1.5
MWC pmax pmax
comp=Z,32nm,1.2s
MWC Mount Wilson 88.34 55 P P 09 26 21.5 -1.5
WAKR Walker 88.38 50 IAmb IAmb 09 26 33.8
comp=Z,18nm,1.4s
ISA Isabella, Lake 88.38 53 P P 09 26 24.6 +1.6
baz=255
ISA Isabella, Lake 88.38 53 IAmb IAmb 09 26 41.3
comp=Z,27nm,1.4s
J05D Fort Rock, OR 88.39 45 P P 09 26 25.2 +2.2
baz=253
MDPB Devils Postpil 88.42 51 P P 09 26 23.6 +0.2
D03D Eldon 88.43 41 P P 09 26 24.3 +1.5
baz=252
DLBC Dease Lake 88.45 29 LR LR 10 00 34.7
comp=Z,551nm,19.4s,baz=282,slow=32
OMMB Old Mammoth Mi 88.47 51 IAMs_20 IAMs_20 10 02 26.6
comp=Z,572nm,18.0s
PGC Sidney 88.55 40 IAmb IAmb 09 26 42.6
comp=Z,26nm,1.3s
EDW2 Edwards Air Fo 88.56 54 P P 09 26 25.9 +2.0
baz=256
MLAC Mammoth, Mammo 88.60 51 P P 09 26 25.8 +1.5
baz=255
I05D Terrebonne, OR 88.63 44 P P 09 26 25.3 +1.3
baz=253
MOD Modoc Plateau 88.66 47 P P 09 26 25.6 +1.3
MOD IAmb IAmb 09 26 28.4
comp=Z,21nm,1.3s
BFSC Mount Baldy Ra 88.67 55 P P 09 26 25.8 +1.3
baz=256
PAHR Pah Rah Range 88.74 49 IAmb IAmb 09 26 28.8
comp=Z,34nm,1.5s
PINE Pine Mountain 88.74 45 IAmb IAmb 09 26 43.5
comp=Z,33nm,1.4s
109C Camp Elliot, M 88.79 56 IAmb IAmb 09 26 29.7
comp=Z,18nm,1.2s
109C IAMs_20 IAMs_20 09 56 19.3
comp=Z,708nm,21.0s
CWC Cottonwood Cre 88.88 53 P P 09 26 27.2 +1.7
baz=256
BAR Barrett 89.09 57 P P 09 26 25.8 -0.6
BAR IAmb IAmb 09 26 44.7
comp=Z,36nm,1.5s
BAR IAMs_20 IAMs_20 09 57 14.3
comp=Z,610nm,20.0s
RYN Ryan 89.10 50 P P 09 26 26.2 -0.3
RYN IAmb IAmb 09 26 30.4
comp=Z,35nm,1.5s
NVAR Mina Array Bea 89.22 51 P P 09 26 28.2 +1.1
comp=Z,3.5nm,1.0s,baz=230,slow=4.8,SNR=20
NVAR LR LR 10 00 20.2
comp=Z,274nm,19.6s,baz=260,slow=31
EPYK Eagle Plains 89.31 21 P P 09 26 28.1 +1.5
baz=240

EPYK Eagle Plains 89.31 21 IAMs_20 IAMs_20 10 00 44.4
comp=Z,524nm,21.0s

NV11 Mina Array Sit 89.33 51 P **P** **09 26 29.2 +1.7**
NV11 IAmb IAmb 09 26 37.0
comp=Z,28nm,1.4s

MONP2 Monument Peak 89.35 56 P **P** **09 26 29.6 +1.8**
baz=256

PFO Pinyon Flats O 89.49 56 LR LR 09 57 49.8
comp=Z,746nm,21.5s,baz=299,slow=30

PFO Pinyon Flats O 89.49 56 P **P** **09 26 27.4 -0.9**
PFO pmax pmax
comp=Z,19nm,1.4s

PFO Pinyon Flats O 89.49 56 P **P** **09 26 29.8 +1.4**
baz=256

PFO Pinyon Flats O 89.49 56 P **P** **09 26 27.4 -0.9**

PFO Pinyon Flats O 89.49 56 IAMs_20 IAMs_20 09 58 18.8
comp=Z,699nm,19.0s

TPFO Pinon Flats 89.49 56 P **P** **09 26 29.8 +1.4**
baz=256

XPFO Pion Flat 89.49 56 P **P** **09 26 27.4 -0.9**
XPFO IAmb IAmb 09 26 46.6
comp=Z,20nm,1.4s

XPFO Pion Flat 89.49 56 IAMs_20 IAMs_20 09 58 19.8
comp=Z,708nm,19.0s

KVN Kaiserville 89.53 50 P **P** **09 26 28.9 +0.4**
KVN pmax pmax
comp=Z,34nm,1.4s

KVN MLR MLR
comp=Z,300nm,20.0s

KVN Kaiserville 89.53 50 P **P** **09 26 28.9 +0.4**
KVN IAmb IAmb 09 26 46.9
comp=Z,34nm,1.4s

GRAC Grapevine Rang 89.58 52 P **P** **09 26 30.4 +1.8**
baz=256

GSC Goldstone, Bar 89.61 54 P **P** **09 26 30.7 +1.8**
baz=256

B06A Marblemount 89.75 40 IAMs_20 IAMs_20 09 59 29.6
comp=Z,616nm,21.0s

FURC Furnace Creek, 89.84 53 P **P** **09 26 31.8 +2.1**
baz=256

BELC Belle Mtn. Jos 89.95 55 P **P** **09 26 31.8 +1.3**
baz=257

WVOR Wild Horse Val 90.00 47 IAMs_20 IAMs_20 10 01 41.6
comp=Z,500nm,19.0s

LLLB Lillooet 90.12 38 IAMs_20 IAMs_20 09 57 46.2
comp=Z,707nm,22.0s

SHOC Shoshone, Teco 90.17 54 P **P** **09 26 32.6 +1.2**
baz=256

BC3 Big Chuckawall 90.31 56 P **P** **09 26 33.8 +1.6**
baz=257

TUQ Turquoise Moun 90.34 54 P **P** **09 26 33.8 +1.5**
baz=257

J08A Circle Bar Ran 90.35 46 P **P** **09 26 32.2 +0.1**
J08A IAmb IAmb 09 26 35.3
comp=Z,24nm,1.1s

TPNV Topopah Spring 90.43 53 P **P** **09 26 34.5 +1.7**
baz=257

TPNV Topopah Spring 90.43 53 IAMs_20 IAMs_20 10 04 07.6
comp=Z,678nm,18.0s

SYO Syowa Base 90.49 198 *i*eP **P** **09 26 31.2 -0.9**

SYO Syowa Base 90.49 198 *i*eP **P** **09 26 35.2 +3.1**

G08A Pilot Rock 90.52 44 IAmb IAmb 09 26 52.1
comp=Z,32nm,1.4s

IRM Iron Mountain 90.67 55 P **P** **09 26 35.7 +1.9**
baz=257

GLA Glamis 90.69 57 IAMs_20 IAMs_20 09 57 51.6
comp=Z,583nm,22.0s

MK31 Makanchi Array 90.81 318 P **P** **09 26 31.7 -2.3**
MK31 pmax pmax
comp=Z,12nm,1.5s

MK31 Makanchi Array 90.81 318 P **P** **09 26 31.7 -2.3**

MKAR Makanchi Array 90.81 318 P **P** **09 26 33.7 -0.3**
comp=Z,1.0nm,0.6s,baz=103,slow=5.4,SNR=9.5

MKAR LR LR 10 05 20.9
comp=Z,156nm,21.1s,baz=87,slow=34

MAKZ Makanchi 91.02 317 P **P** **09 26 33.9 -1.1**
MAKZ pmax pmax
comp=Z,13nm,1.3s

MAKZ Makanchi 91.02 317 P **P** **09 26 33.9 -1.1**

B08A Colville Reser 91.08 41 IAmb IAmb 09 26 39.4
comp=Z,20nm,1.2s

B08A IAMs_20 IAMs_20 10 02 15.8
comp=Z,576nm,20.0s

Y12C Blythe 91.09 56 IAMs_20 IAMs_20 09 58 36.2
comp=Z,480nm,20.0s

SHPR Sheep Range 91.19 53 IAmb IAmb 09 26 47.7
comp=Z,15nm,1.2s

ZALV Zalesovo Beam 91.25 325 P **P** **09 26 36.6 +0.7**
comp=Z,0.5nm,0.4s,baz=117,slow=5.6,SNR=3.8

ZALV LR LR 10 06 41.8
comp=Z,251nm,20.6s,baz=102,slow=35

R11A Troy Canyon, C 91.27 51 P **P** **09 26 38.3 +1.6**
baz=257

R11A Troy Canyon, C 91.27 51 IAMs_20 IAMs_20 10 05 12.6
comp=Z,619nm,18.0s

INK Inuvik 91.33 20 P **P** **09 26 36.6 +0.7**
comp=Z,3.7nm,1.0s,baz=258,slow=4.9,SNR=8.1

INK Inuvik 91.33 20 IAMs_20 IAMs_20 10 04 32.8
comp=Z,611nm,20.0s

E09A Wood Farm, Sta 91.38 43 IAmb IAmb 09 26 39.6
comp=Z,22nm,1.2s

113A Mohawk Valley, 91.50 57 IAMs_20 IAMs_20 09 59 37.1
comp=Z,603nm,20.0s

PDMCI Parker Dam,Lak 91.52 55 P **P** **09 26 40.0 +2.4**
baz=258

C09A Chrisman Ranch 91.62 42 IAmb IAmb 09 26 48.5
comp=Z,17nm,1.2s

W13A Hualapai Mount 91.89 55 IAMs_20 IAMs_20 09 58 55.3
comp=Z,737nm,20.0s

ELK Elko 92.07 49 P **P** **09 26 40.9 +0.6**
ELK pmax pmax
comp=Z,15nm,1.2s

ELK Elko 92.07 49 P **P** **09 26 40.9 +0.6**
ELK IAmb IAmb 09 26 43.4
comp=Z,15nm,1.2s

214A Organ Pipe Nat 92.12 58 IAMs_20 IAMs_20 09 58 20.7
comp=Z,704nm,21.0s

MFID Camas Ranch 92.24 46 IAmb IAmb 09 26 44.0
comp=Z,23nm,1.5s

MFID IAMs_20 IAMs_20 10 03 49.8
comp=Z,466nm,20.0s

Y14A Wickenburg 92.36 56 IAMs_20 IAMs_20 09 58 31.9
comp=Z,555nm,22.0s

NEW Newport 92.49 41 P **P** **09 26 43.5 +1.7**
baz=256

NEW Newport 92.49 41 IAmb IAmb 09 26 59.6
comp=Z,16nm,1.2s

CCUT Cedar City 92.81 52 P **P** **09 26 44.1 +0.3**

HSIG 93.13 61 IAMs_20 IAMs_20 09 58 54.5
comp=Z,540nm,21.0s

U15A North Rim 93.43 54 IAMs_20 IAMs_20 10 00 21.0
comp=Z,658nm,19.0s

KSH Kashi 93.64 309 P **P** **09 26 50.3 +2.8**
KSH pmax pmax
comp=Z,31nm,1.5s

X16A Lo Mia Camp, P 93.73 56 IAMs_20 IAMs_20 09 59 48.0
comp=Z,670nm,21.0s

TUC Tucson 93.88 58 IAMs_20 IAMs_20 09 59 00.1
comp=Z,630nm,22.0s

KURK Kurchatov 94.11 321 *i*P **P** **09 26 48.1 -1.0**
KURK pmax pmax
comp=Z,16nm,1.5s

KURK Kurchatov 94.11 321 P **P** **09 26 48.6 -0.6**
KURK IAmb IAmb 09 27 04.7
comp=Z,17nm,1.4s

KURBB Kurchatov Arra 94.14 321 P **P** **09 26 48.4 -0.9**
comp=Z,2.9nm,0.9s,baz=110,slow=3.3,SNR=14

MCMT McKenzie Canyo 94.63 45 P **P** **09 26 51.4 -0.7**

WALA Waterton Lakes 94.74 41 IAMs_20 IAMs_20 10 07 26.5
comp=Z,468nm,20.0s

C36M Paulatuk 94.89 20 P **P** **09 26 53.0 +0.7**
baz=252

C36M Paulatuk 94.89 20 P **P** **09 26 52.3 0.0**
C36M IAmb IAmb 09 26 55.9
comp=Z,20nm,1.1s

X18A Snowflake 94.96 56 IAMs_20 IAMs_20 10 00 03.7
comp=Z,620nm,21.0s

319A Douglas 94.97 59 IAMs_20 IAMs_20 10 00 39.2
comp=Z,697nm,21.0s

W18A Petrified Fore 95.24 55 IAMs_20 IAMs_20 09 59 49.9
comp=Z,621nm,22.0s

AAK Ala-Archa 95.32 312 *i*P **P** **09 26 53.8 -1.3**
AAK pmax pmax
comp=Z,7.0nm,2.5s

A36M Sachs Harbour 95.38 17 P **P** **09 26 55.4 +0.9**
baz=251

H17A Grant Village 96.15 46 IAMs_20 IAMs_20 10 05 14.3
comp=Z,632nm,20.0s

LKWY Lake 96.30 46 IAMs_20 IAMs_20 10 05 39.4
comp=Z,562nm,19.0s

121A Cookes Peak, D 96.42 58 IAMs_20 IAMs_20 10 01 03.3
comp=Z,576nm,21.0s

MVCO Mesa Verde 96.56 53 IAMs_20 IAMs_20 10 01 13.9
comp=Z,710nm,22.0s

PDAR Pinedale Array 96.62 48 LR LR 10 05 24.0
comp=Z,180nm,19.2s,baz=292,slow=32

SNAA Sanae 96.73 185 P **P** **09 27 01.0 0.0**

SNAA Sanae 96.73 185 P **P** **09 27 00.9 0.0**
SNAA pmax pmax
comp=Z,12nm,1.3s

SNAA Sanae 96.73 185 P **P** **09 27 00.9 0.0**
SNAA IAmb IAmb 09 27 18.4
comp=Z,12nm,1.3s

YKA Yellowknife Ar 96.93 28 P **P** **09 27 01.0 -0.8**
comp=Z,3.7nm,1.0s,baz=259,slow=4.3,SNR=18

YKA LR LR 10 04 43.5
comp=Z,272nm,20.7s,baz=0.0,slow=32

YKA Yellowknife Ar 96.93 28 P **P** **09 27 01.0 -0.8**

O20A White River Ci 97.20 51 IAMs_20 IAMs_20 10 08 34.6
comp=Z,420nm,19.0s

EGMT Eagleton 97.28 43 P Pdif 09 27 05.1 +1.2
baz=262

EGMT Eagleton 97.28 43 P **P** **09 27 03.4 -0.4**
EGMT IAmb IAmb 09 27 14.3
comp=Z,11nm,1.1s

Y22D IRIS PASSCAL I 97.36 57 IAMs_20 IAMs_20 10 01 03.3
comp=Z,555nm,22.0s

EPT El Paso 97.37 59 IAMs_20 IAMs_20 10 01 53.7
comp=Z,609nm,21.0s

HPIG 97.38 64 IAMs_20 IAMs_20 10 01 01.3
comp=Z,638nm,21.0s

VNA3 Neumayer Olymp 97.61 183 P Pdif 09 27 05.0 +0.1

VNA2 Neumayer--Watz 97.80 184 P **P** **09 27 05.3 -0.4**

RWWY Rawlins 98.19 49 IAMs_20 IAMs_20 10 11 10.6
comp=Z,402nm,18.0s

MNTX Cowdas Mount 98.31 59 IAMs_20 IAMs_20 10 03 16.6
comp=Z,559nm,20.0s

SDCO Great Sand Dun 99.00 53 IAMs_20 IAMs_20 10 02 48.4
comp=Z,682nm,22.0s

TXAR Lajitas Array 99.46 62 LR LR 10 03 18.8
comp=Z,410nm,21.8s,baz=0.0,slow=30

MSTX Muleshoe 100.77 57 IAMs_20 IAMs_20 10 04 19.5
comp=Z,493nm,21.0s

RSSD Black Hills 100.78 47 IAMs_20 IAMs_20 10 07 03.8
comp=Z,420nm,20.0s

AMTX Amarillo 101.76 57 IAMs_20 IAMs_20 10 06 40.7
comp=Z,461nm,19.0s

JCT Junction City 102.92 61 IAMs_20 IAMs_20 10 05 08.9
comp=Z,458nm,20.0s

ABTX Abilene, Hawle 103.25 59 IAMs_20 IAMs_20 10 05 42.3
comp=Z,632nm,21.0s

U32A Winter Ranch, 104.05 55 IAMs_20 IAMs_20 10 06 01.2
comp=Z,408nm,21.0s

WMOK Wichita Mounta 104.12 57 IAMs_20 IAMs_20 10 06 37.4
comp=Z,435nm,20.0s

R32A Long Quarter, 104.39 53 IAMs_20 IAMs_20 10 06 52.2
comp=Z,555nm,20.0s

WHTX Lake Whitney, 105.05 60 IAMs_20 IAMs_20 10 06 38.1
comp=Z,539nm,21.0s

OKCFA Oklahoma City 105.25 56 IAMs_20 IAMs_20 10 07 47.2
comp=Z,480nm,20.0s

Z35A Perchaven, San 105.30 58 IAMs_20 IAMs_20 10 07 09.7
comp=Z,543nm,20.0s

D32A Dogwood Acres, 105.81 44 IAMs_20 IAMs_20 10 12 38.8
comp=Z,356nm,18.0s

T35A Sooner Cattle 106.08 55 IAMs_20 IAMs_20 10 08 08.8
comp=Z,377nm,20.0s

HKT Hockley 106.31 62 IAMs_20 IAMs_20 10 09 06.5
comp=Z,427nm,20.0s

237A Washetta, Mont 106.45 60 IAMs_20 IAMs_20 10 07 21.1
comp=Z,564nm,21.0s

TUL1 Leonard 106.62 56 IAMs_20 IAMs_20 10 09 28.4
comp=Z,428nm,19.0s

X37A Clayton 106.92 57 IAMs_20 IAMs_20 10 07 32.5
comp=Z,564nm,22.0s

Z38A Mt. Pleasant 107.20 59 IAMs_20 IAMs_20 10 07 44.8
comp=Z,413nm,21.0s

NATX Nacogdoches 107.41 60 IAMs_20 IAMs_20 10 08 22.6
comp=Z,496nm,20.0s

HHAR Hobbs 108.13 55 IAMs_20 IAMs_20 10 12 22.3
comp=Z,394nm,20.0s

MIAR Mount Ida 108.40 57 IAMs_20 IAMs_20 10 08 50.7
comp=Z,668nm,22.0s

I37A Lemond, Waseca 108.43 47 IAMs_20 IAMs_20 10 12 34.5
comp=Z,482nm,19.0s

S39A Bolivar 108.63 54 IAMs_20 IAMs_20 10 08 56.4
comp=Z,480nm,21.0s

SCIA State Center 108.64 49 IAMs_20 IAMs_20 10 15 01.2
comp=Z,336nm,19.0s

U40A Yellville 109.01 55 IAMs_20 IAMs_20 10 18 07.5
comp=Z,352nm,18.0s

X40A Basin Creek Fa 109.02 57 IAMs_20 IAMs_20 10 09 07.9
comp=Z,506nm,22.0s

342A Flagon Creek P 109.39 61 IAMs_20 IAMs_20 10 08 50.1
comp=Z,475nm,22.0s

R40A Maddies Statio 109.46 53 IAMs_20 IAMs_20 10 11 28.2
comp=Z,434nm,20.0s

WHAR Wooly Hollow 109.47 56 IAMs_20 IAMs_20 10 08 40.8
comp=Z,548nm,22.0s

MGMO Mountain Grove 109.47 54 IAMs_20 IAMs_20 10 09 44.7
comp=Z,362nm,20.0s

E38A The Farm, Brul 109.58 44 IAMs_20 IAMs_20 10 11 20.5
comp=Z,348nm,20.0s

FCAR Ozark Folk Cen 109.60 56 IAMs_20 IAMs_20 10 13 14.2
comp=Z,341nm,20.0s

L40A Anamosa 110.12 49 IAMs_20 IAMs_20 10 15 47.3
comp=Z,400nm,18.0s

143A Socs Landing, 110.19 59 IAMs_20 IAMs_20 10 13 30.3
comp=Z,538nm,20.0s

CCM Cathedral Cave 110.27 54 IAMs_20 IAMs_20 10 11 52.7
comp=Z,388nm,19.0s

T42A Van Buren 110.42 55 IAMs_20 IAMs_20 10 10 12.7
comp=Z,442nm,22.0s

KBS Kingsbay 110.60 354 IAMs_20 IAMs_20 10 12 08.3
comp=Z,335nm,18.0s

G40A Rib Lake 110.63 46 IAMs_20 IAMs_20 10 19 45.5
comp=Z,319nm,19.0s

344A Westbrook Farm 110.75 61 IAMs_20 IAMs_20 10 10 50.2
comp=Z,517nm,21.0s

VBMS Vicksburg 110.94 60 IAMs_20 IAMs_20 10 12 18.1
comp=Z,365nm,19.0s

LPAR Lepanto 111.09 56 IAMs_20 IAMs_20 10 10 03.6
comp=Z,388nm,20.0s

L42A Oliver, Polo 111.28 49 IAMs_20 IAMs_20 10 17 08.0
comp=Z,513nm,19.0s

GNAR Gosnell 111.31 56 IAMs_20 IAMs_20 10 09 38.4
comp=Z,106nm,22.0s

MET Memphis--Engin 111.40 57 IAMs_20 IAMs_20 10 12 35.9
comp=Z,443nm,20.0s

PEBM Pemiscott Bayo 111.43 56 IAMs_20 IAMs_20 10 16 16.7
comp=Z,301nm,18.0s

PARMO Parma 111.50 55 IAMs_20 IAMs_20 10 15 02.5
comp=Z,375nm,20.0s

PVMO Portageville 111.55 55 IAMs_20 IAMs_20 10 18 08.8
comp=Z,385nm,19.0s

PENMO Penman 111.61 55 IAMs_20 IAMs_20 10 18 30.3
comp=Z,366nm,18.0s

HDIL Hopedale 111.66 51 IAMs_20 IAMs_20 10 15 40.3
comp=Z,584nm,20.0s

I42A Draeger Farm, 111.67 47 IAMs_20 IAMs_20 10 26 15.2
comp=Z,311nm,18.0s

LNXT Lenox 111.73 56 IAMs_20 IAMs_20 10 19 48.6
comp=Z,328nm,18.0s

Y45A Yeager Farm, C 111.75 58 IAMs_20 IAMs_20 10 27 50.2
comp=Z,320nm,18.0s

346A Big Creek Wild 111.83 61 IAMs_20 IAMs_20 10 11 33.9
comp=Z,503nm,22.0s

OXF Oxford 111.84 57 IAMs_20 IAMs_20 10 11 28.8
comp=Z,361nm,21.0s

S44A Carbondale 111.86 54 IAMs_20 IAMs_20 10 10 22.7
comp=Z,559nm,22.0s

SIUC Southern Illin 111.88 54 IAMs_20 IAMs_20 10 11 41.0
comp=Z,444nm,20.0s

GLAT Glass 111.89 55 IAMs_20 IAMs_20 10 16 49.8
comp=Z,384nm,19.0s

HICK Hickman 111.93 55 IAMs_20 IAMs_20 10 19 05.7
comp=Z,398nm,18.0s

Q44A Meyer Farm, Va 111.98 53 IAMs_20 IAMs_20 10 11 17.9
comp=Z,545nm,22.0s

W45A Hickory Valley 112.01 57 IAMs_20 IAMs_20 10 11 22.1
comp=Z,371nm,20.0s

146A Union 112.17 59 IAMs_20 IAMs_20 10 10 50.7
comp=Z,538nm,21.0s

K43A Burlington 112.21 48 IAMs_20 IAMs_20 10 16 58.5
comp=Z,409nm,18.0s

H43A Windswept, Lux 112.43 46 IAMs_20 IAMs_20 10 15 37.2
comp=Z,496nm,19.0s

L44A Lake County Fo 112.57 49 IAMs_20 IAMs_20 10 17 48.1
comp=Z,427nm,19.0s

E43A Lone Tree Farm 112.74 44 IAMs_20 IAMs_20 10 19 17.0
comp=Z,309nm,19.0s

PLAL Pickwick Lake 112.93 57 IAMs_20 IAMs_20 10 13 01.4
comp=Z,323nm,20.0s

WVT Waverly 113.07 55 IAMs_20 IAMs_20 10 10 54.1
comp=Z,374nm,22.0s

USIN University of 113.10 53 IAMs_20 IAMs_20 10 12 51.5
comp=Z,480nm,20.0s

I45A Fountain 113.58 47 IAMs_20 IAMs_20 10 17 19.6
comp=Z,441nm,19.0s

T47A Sharon Grove 113.61 54 IAMs_20 IAMs_20 10 18 58.1
comp=Z,331nm,19.0s

L46A Eue Claire 113.78 49 IAMs_20 IAMs_20 10 19 00.2
comp=Z,493nm,18.0s

X48A Hartselle 113.80 57 IAMs_20 IAMs_20 10 11 53.5
comp=Z,383nm,22.0s

G45A Suttons Bay 113.85 46 IAMs_20 IAMs_20 10 17 46.7
comp=Z,455nm,18.0s

BLO Bloomington 113.90 52 IAMs_20 IAMs_20 10 11 56.6
comp=Z,587nm,22.0s

LRAL Lakeview Retre 113.90 59 IAMs_20 IAMs_20 10 21 09.3
comp=Z,493nm,19.0s

WCI Wyandotte Cave 114.16 53 IAMs_20 IAMs_20 10 13 23.5
comp=Z,455nm,20.0s

Y49A Blount Mountai 114.35 58 IAMs_20 IAMs_20 10 13 06.2
comp=Z,458nm,22.0s

250A Grady 114.55 60 IAMs_20 IAMs_20 10 12 47.7
comp=Z,441nm,22.0s

E46A Sault Ste Mari 114.58 44 IAMs_20 IAMs_20 10 21 32.7
comp=Z,337nm,20.0s

GLMI Grayling 114.61 46 IAMs_20 IAMs_20 10 16 43.9
comp=Z,414nm,19.0s

SWET Sewanee 114.67 56 IAMs_20 IAMs_20 10 11 47.5
comp=Z,382nm,22.0s

U49A Red Boiling Sp 114.70 55 IAMs_20 IAMs_20 10 12 31.2
comp=Z,391nm,22.0s

P48A Milroy 114.72 52 IAMs_20 IAMs_20 10 14 59.2
comp=Z,497nm,20.0s

JTS Las Juntas de 114.75 84 IAMs_20 IAMs_20 10 09 52.4
comp=Z,559nm,20.0s

Z50A Ashland 114.79 59 IAMs_20 IAMs_20 10 20 36.8
comp=Z,379nm,19.0s

I47A Gladwin 114.81 47 IAMs_20 IAMs_20 10 19 11.3
comp=Z,434nm,19.0s

FPAL Fort Paine 114.97 57 IAMs_20 IAMs_20 10 14 36.7
comp=Z,326nm,20.0s

R49A Shelbyville 115.03 53 IAMs_20 IAMs_20 10 15 10.7
comp=Z,493nm,20.0s

MAK Makhachkala 115.10 312 *e*P Pdif **09 28 17.4 -5.7**
MAK *i* 09 32 09.5
MAK *e* 09 33 11.8
MAK pmax pmax
comp=Z,266nm,1.6s
MAK MLR MLR
comp=Z,193nm,16.0s

W50A Signal Mountai 115.18 56 IAMs_20 IAMs_20 10 13 09.9
comp=Z,353nm,21.0s

Z51A Franklin 115.41 58 IAMs_20 IAMs_20 10 13 59.3
comp=Z,397nm,21.0s

X51A Calhoun 115.59 57 IAMs_20 IAMs_20 10 12 15.0
comp=Z,366nm,22.0s

AAM Ann Arbor 115.69 48 IAMs_20 IAMs_20 10 20 29.6
comp=Z,406nm,19.0s

R50A Paris 115.69 53 IAMs_20 IAMs_20 10 15 41.2
comp=Z,434nm,20.0s

CPCT Cooper Cave 115.80 56 IAMs_20 IAMs_20 10 16 55.4
comp=Z,362nm,19.0s

152A Waverly Hall 115.83 59 IAMs_20 IAMs_20 10 13 26.5
comp=Z,480nm,22.0s

V51A Loudon 115.91 56 IAMs_20 IAMs_20 10 16 32.3
comp=Z,408nm,19.0s

I49A Point Hope 116.03 46 IAMs_20 IAMs_20 10 18 15.4
comp=Z,533nm,20.0s

553A Crawfordville 116.19 62 IAMs_20 IAMs_20 10 15 59.3
comp=Z,356nm,20.0s

Y52A Lilburn 116.30 58 IAMs_20 IAMs_20 10 21 44.8
comp=Z,490nm,18.0s

S51A Beattyville 116.34 54 IAMs_20 IAMs_20 10 18 44.4
comp=Z,352nm,19.0s

K50A Cusco 116.37 48 IAMs_20 IAMs_20 10 20 44.5
comp=Z,393nm,19.0s

TKL Tuckaleechee C 116.39 56 IAMs_20 IAMs_20 10 15 58.0
comp=Z,344nm,19.0s

TZTN Tazewell 116.49 55 IAMs_20 IAMs_20 10 13 26.5
comp=Z,445nm,22.0s

V52A Sevierville 116.52 56 IAMs_20 IAMs_20 10 16 50.4
comp=Z,338nm,20.0s

GOGA Godfrey 116.83 58 IAMs_20 IAMs_20 10 13 49.9
comp=Z,542nm,22.0s

TIGA Tifton 116.85 60 IAMs_20 IAMs_20 10 13 47.8
comp=Z,312nm,20.0s

V53A Saluda 117.17 56 IAMs_20 IAMs_20 10 19 38.6
comp=Z,393nm,19.0s

154A Montrose 117.19 59 IAMs_20 IAMs_20 10 14 51.5
comp=Z,411nm,21.0s

O52A Adamsville 117.38 51 IAMs_20 IAMs_20 10 16 33.5
comp=Z,360nm,21.0s

M52A Chesterland 117.50 49 IAMs_20 IAMs_20 10 21 13.7
comp=Z,491nm,19.0s

R53A Hurricane 117.54 53 IAMs_20 IAMs_20 10 14 09.1
comp=Z,455nm,22.0s

656A Willston 117.87 63 IAMs_20 IAMs_20 10 14 27.9
comp=Z,336nm,22.0s

U54A Nelsons Funny 117.88 55 IAMs_20 IAMs_20 10 14 08.2
comp=Z,471nm,22.0s

PAULI Pauline 118.07 56 IAMs_20 IAMs_20 10 15 00.5
comp=Z,360nm,22.0s

S54A Dingess, Beckl 118.11 53 IAMs_20 IAMs_20 10 28 07.3
comp=Z,352nm,19.0s

456A Hilliard 118.24 61 IAMs_20 IAMs_20 10 13 09.5
comp=Z,400nm,22.0s

KIV Kislovodsk 118.37 314 *e*PKIKP **PKiKP** **09 32 20.4 +1.9**
KIV *e* 09 33 34.0
KIV pmax pmax
comp=Z,3.0nm,0.7s

ALLY Alegheny Colle 118.38 49 IAMs_20 IAMs_20 10 14 47.8
comp=Z,565nm,22.0s

ERPA Erie 118.41 48 IAMs_20 IAMs_20 10 16 59.5
comp=Z,481nm,20.0s

KMSC Kings Mountain 118.43 56 IAMs_20 IAMs_20 10 20 09.0
comp=Z,415nm,19.0s

V55A Taylorsville 118.44 55 IAMs_20 IAMs_20 10 18 48.2
comp=Z,403nm,19.0s

SADO Sadowa 118.45 45 IAMs_20 IAMs_20 10 24 09.3
comp=Z,425nm,18.0s

Z56A Williston 118.59 58 IAMs_20 IAMs_20 10 16 07.4
comp=Z,470nm,20.0s

OBN Obninsk 118.72 328 *e*PKIKP **PKPdf** **09 32 15.4 -3.2**
OBN pmax pmax
comp=Z,4.0nm,0.8s

VLDQ Val d'Or 118.73 41 IAMs_20 IAMs_20 10 15 47.4
comp=Z,438nm,21.0s

D53A Lac Vacive, Po 118.85 42 IAMs_20 IAMs_20 10 18 25.6
comp=Z,330nm,20.0s

BLA Blacksburg 118.90 54 IAMs_20 IAMs_20 10 17 28.1
comp=Z,319nm,18.0s

MCWV Mont Chateau 118.96 51 IAMs_20 IAMs_20 10 16 03.5
comp=Z,364nm,21.0s

R55A Marlinton 118.97 52 IAMs_20 IAMs_20 10 24 28.0
comp=Z,416nm,18.0s

257A Skidaway Islan 119.00 60 IAMs_20 IAMs_20 10 23 41.4
comp=Z,340nm,20.0s

U56A King 119.05 55 IAMs_20 IAMs_20 10 13 57.2
comp=Z,338nm,22.0s

PAC1 Pacto, Paraso 119.08 96 *e*P PKPpre 09 32 10.6

J54A Appleton 119.14 47 IAMs_20 IAMs_20 10 27 35.7
comp=Z,340nm,18.0s

BIRD Birdtown, Kers 119.20 57 IAMs_20 IAMs_20 10 16 48.4
comp=Z,362nm,20.0s

MEDO Medina 119.30 47 IAMs_20 IAMs_20 10 27 49.8
comp=Z,400nm,18.0s

Y57A Sumter 119.33 57 IAMs_20 IAMs_20 10 15 16.9
comp=Z,467nm,22.0s

CUSE Cuicocha Este 119.47 96 *e*P PKPpre 09 32 16.3

W57A Gilead 119.52 56 IAMs_20 IAMs_20 10 18 42.8
comp=Z,319nm,19.0s

DELO Deloro Mine 119.57 45 IAMs_20 IAMs_20 10 21 33.8
comp=Z,422nm,20.0s

NHSC New Hope 119.60 58 IAMs_20 IAMs_20 10 18 57.3
comp=Z,463nm,20.0s

J55A Hilton 119.73 46 IAMs_20 IAMs_20 10 19 20.2
comp=Z,292nm,20.0s

MMNY Mt. Morris Dam 119.78 47 IAMs_20 IAMs_20 10 21 48.8
comp=Z,337nm,20.0s

O56A	**Blue Knob Stat**	**119.82**	**50**	IAMs_20	IAMs_20	10 23 17.0		
	comp=Z,484nm,19.0s							
T57A	**Hurt**	**119.85**	**54**	IAMs_20	IAMs_20	10 17 56.4		
	comp=Z,300nm,20.0s							
Y58A	**Scranton**	**119.94**	**57**	IAMs_20	IAMs_20	10 15 35.1		
	comp=Z,453nm,21.0s							
S57A	**Dark Hollow, R**	**119.97**	**53**	IAMs_20	IAMs_20	10 15 34.3		
	comp=Z,416nm,21.0s							
X58A	**Rowland**	**120.13**	**57**	IAMs_20	IAMs_20	10 14 57.0		
	comp=Z,380nm,22.0s							
V58A	**Windy Hill, Pi**	**120.14**	**55**	IAMs_20	IAMs_20	10 20 09.2		
	comp=Z,336nm,20.0s							
PECO	**Prince Edward**	**120.15**	**45**	IAMs_20	IAMs_20	10 24 04.2		
	comp=Z,380nm,19.0s							
J56A	**Wolcott**	**120.41**	**46**	IAMs_20	IAMs_20	10 25 35.1		
	comp=Z,436nm,18.0s							
Y59A	**Loris**	**120.58**	**57**	IAMs_20	IAMs_20	10 15 53.1		
	comp=Z,514nm,22.0s							
S58A	**Poland Farm, P**	**120.70**	**53**	IAMs_20	IAMs_20	10 15 43.7		
	comp=Z,508nm,22.0s							
U59A	**Littleton**	**121.11**	**54**	IAMs_20	IAMs_20	10 16 30.9		
	comp=Z,436nm,22.0s							
Y60A	**Bolivia**	**121.12**	**57**	IAMs_20	IAMs_20	10 18 45.4		
	comp=Z,414nm,20.0s							
T59A	**Double "B" Far**	**121.20**	**53**	IAMs_20	IAMs_20	10 19 26.0		
	comp=Z,346nm,20.0s							
CNNC	**Cliffs of the**	**121.21**	**56**	IAMs_20	IAMs_20	10 20 30.6		
	comp=Z,438nm,20.0s							
BINY	**Binghamton**	**121.29**	**47**	IAMs_20	IAMs_20	10 21 20.7		
	comp=Z,478nm,19.0s							
K58A	**Earlville**	**121.39**	**47**	IAMs_20	IAMs_20	10 26 22.3		
	comp=Z,417nm,19.0s							
SOTA	**Rioblanco**	**121.60**	**94**	*eP*	PKiKP	09 32 39.2	+13	
LONY	**Lake Ozonia**	**121.63**	**44**	IAMs_20	IAMs_20	10 26 36.3		
	comp=Z,276nm,19.0s							
V60A	**Jim Taylor Roa**	**121.63**	**55**	IAMs_20	IAMs_20	10 26 20.7		
	comp=Z,321nm,19.0s							
N59A	**State Game Lan**	**121.76**	**49**	IAMs_20	IAMs_20	10 24 22.2		
	comp=Z,395nm,18.0s							
T60A	**Surry**	**121.81**	**53**	IAMs_20	IAMs_20	10 20 41.3		
	comp=Z,432nm,20.0s							
J59A	**Piesco**	**122.01**	**45**	IAMs_20	IAMs_20	10 22 53.6		
	comp=Z,324nm,20.0s							
NCB	**Newcomb**	**122.06**	**45**	IAMs_20	IAMs_20	10 23 22.9		
	comp=Z,333nm,19.0s							
Q60A	**Greensboro**	**122.13**	**51**	IAMs_20	IAMs_20	10 17 58.4		
	comp=Z,447nm,20.0s							
V61A	**Roper**	**122.18**	**55**	IAMs_20	IAMs_20	10 16 49.1		
	comp=Z,364nm,22.0s							
U61A	**Possum Corner**	**122.19**	**54**	IAMs_20	IAMs_20	10 17 35.3		
	comp=Z,399nm,20.0s							
BOSA	**Boshof**	**122.19**	**226**	PKP	**PKiKP**	**09 32 26.7**	**+0.1**	
	comp=Z,3.8nm,0.9s,baz=154,slow=0.2,SNR=6.0							
BOSA	**Boshof**	**122.19**	**226**	PKIKP	**PKPdf**	**09 32 25.5**	**-0.9**	
BOSA	**Boshof**	**122.19**	**226**		**PKPdf**	**09 32 25.5**	**-0.9**	
ODNJ	**Ogdensburg**	**122.57**	**48**	IAMs_20	IAMs_20	10 19 54.7		
	comp=Z,484nm,20.0s							
TRY	**Troy**	**122.81**	**46**	IAMs_20	IAMs_20	10 27 19.7		
	comp=Z,334nm,19.0s							
CBOC	**Ciudad Bolivar**	**122.86**	**90**	*eP*	**PKPdf**	**09 32 27.1**	**-1.0**	
PTLC	**Puerto Leguiza**	**122.95**	**97**	*eP*	**PKiKP**	**09 32 28.5**	**+0.2**	
VT1	**Waterbury**	**122.97**	**44**	IAMs_20	IAMs_20	10 24 30.8		
	comp=Z,386nm,19.0s							
ORTC	**Ortega, Tolima**	**123.28**	**93**	*eP*	**PKPdf**	**09 32 28.8**	**+0.1**	
KMBO	**Kilima Mbogo**	**123.35**	**261**	IAMs_20	IAMs_20	10 20 23.4		
	comp=Z,465nm,21.0s							
RREF	**El Recreo**	**123.36**	**91**	*eP*	**PKiKP**	**09 32 32.2**	**+2.4**	
HELC	**Santa Helena**	**123.39**	**90**	*eP*	**PKPdf**	**09 32 29.2**	**-0.1**	
GUY2C	**Guyana, Caldas**	**123.39**	**91**	*eP*	**PKPdf**	**09 32 29.0**	**-0.4**	
HNH	**Hanover**	**123.48**	**45**	IAMs_20	IAMs_20	10 19 41.4		
	comp=Z,409nm,21.0s							
LBNH	**Lisbon**	**123.56**	**44**	IAMs_20	IAMs_20	10 25 17.3		
	comp=Z,360nm,19.0s							
PRAC	**Prado**	**123.59**	**93**	*eP*	**PKiKP**	**09 32 29.6**	**0.0**	
LPAZ	**La Paz**	**123.78**	**118**	PKP	**PKiKP**	**09 32 31.0**	**+0.4**	
	comp=Z,3.0nm,0.9s,baz=36,slow=4.5,SNR=8.4							
LPAZ	**La Paz**	**123.78**	**118**	PKIKP	**PKPdf**	**09 32 28.2**	**-2.1**	
LPAZ	**La Paz**	**123.78**	**118**		**PKPdf**	**09 32 28.2**	**-2.1**	
K62A	**Royalston**	**123.84**	**46**	IAMs_20	IAMs_20	10 18 33.9		
	comp=Z,302nm,20.0s							
QUA2	**Belchertown**	**123.87**	**46**	IAMs_20	IAMs_20	10 19 43.8		
	comp=Z,429nm,21.0s							
H62A	**Milan**	**123.97**	**43**	IAMs_20	IAMs_20	10 23 08.1		
	comp=Z,302nm,19.0s							
LBTB	**Lobatse**	**124.04**	**230**	PKIKP	**PKiKP**	**09 32 31.1**	**+0.8**	
LBTB	**Lobatse**	**124.04**	**230**		**PKiKP**	**09 32 31.1**	**+0.8**	
I62A	**Tamworth**	**124.08**	**44**	IAMs_20	IAMs_20	10 28 09.2		
	comp=Z,422nm,19.0s							
G62A	**West of Eustis**	**124.17**	**42**	IAMs_20	IAMs_20	10 27 15.2		
	comp=Z,345nm,19.0s							
F62A	**Pittston Farm,**	**124.29**	**41**	IAMs_20	IAMs_20	10 20 15.4		
	comp=Z,389nm,21.0s							
HRV	**Adam Dziewonsk**	**124.36**	**46**	IAMs_20	IAMs_20	10 20 45.8		
	comp=Z,336nm,19.0s							
I63A	**Otisfield**	**124.54**	**44**	IAMs_20	IAMs_20	10 19 12.2		
	comp=Z,453nm,21.0s							
AKASG	**Malin Array Be**	**124.65**	**325**	PKP	**PKPdf**	**09 32 29.6**	**-0.5**	
	comp=Z,1.5nm,0.6s,baz=66,slow=2.0,SNR=5.3							
AKASG	**Malin Array Be**	**124.65**	**325**	*i* PKIKP	PKPpre	09 32 24.3		
SPBC	**San Pablo de B**	**124.73**	**91**	*eP*	**PKPdf**	**09 32 31.6**	**+0.1**	
CHIC	**Chingaza**	**124.89**	**92**	*eP*	**PKPdf**	**09 32 29.7**	**-2.6**	
F63A	**Nahmakanta, Br**	**124.93**	**41**	IAMs_20	IAMs_20	10 27 59.2		
	comp=Z,377nm,18.0s							
PKME	**Peaks-Kenny Pk**	**124.97**	**42**	IAMs_20	IAMs_20	10 20 47.3		
	comp=Z,344nm,19.0s							
WVL	**Waterville**	**124.98**	**43**	IAMs_20	IAMs_20	10 23 11.7		
	comp=Z,409nm,21.0s							
F64A	**Sherman**	**125.35**	**41**	IAMs_20	IAMs_20	10 21 34.4		
	comp=Z,409nm,20.0s							
RUSC	**La Rusia**	**125.74**	**91**	*eP*	**PKPdf**	**09 32 32.9**	**-1.0**	
RUSC	**La Rusia**	**125.74**	**91**		**PKPdf**	**09 32 32.6**	**-1.4**	
BRTR	**Keskin Array B**	**125.98**	**311**	PKP	**PKiKP**	**09 32 33.9**	**+0.2**	
	comp=Z,0.6nm,0.4s,baz=96,slow=4.3,SNR=2.6							
G65A	**Princeton**	**126.12**	**41**	IAMs_20	IAMs_20	10 21 40.8		
	comp=Z,495nm,21.0s							
EMMW	**East Machias**	**126.38**	**42**	IAMs_20	IAMs_20	10 20 13.8		
	comp=Z,482nm,22.0s							
GGN	**Saint George**	**126.62**	**41**	IAMs_20	IAMs_20	10 22 05.4		
	comp=Z,473nm,20.0s							
LSZ	**Lusaka**	**126.91**	**241**	PKIKP	**PKPdf**	**09 32 35.5**	**-0.2**	
LSZ	**Lusaka**	**126.91**	**241**		**PKPdf**	**09 32 35.5**	**-0.2**	
CPUP	**Villa Florida**	**126.92**	**135**	PKP	**PKiKP**	**09 32 36.0**	**+0.2**	
	comp=Z,3.9nm,0.9s,baz=231,slow=4.5,SNR=5.7							
SDDR	**Presa de Saban**	**128.50**	**75**	IAMs_20	IAMs_20	10 18 33.6		
	comp=Z,368nm,20.0s							
SDV	**Santo Domingo**	**128.58**	**87**	*eP*	**PKiKP**	**09 32 39.5**	**-0.1**	
SDV	**Santo Domingo**	**128.58**	**87**		**PKPdf**	**09 32 39.0**	**0.0**	
SDV				IAMs_20	IAMs_20	10 18 50.1		
	comp=Z,308nm,20.0s							
UZH	**Uzhgorod**	**129.57**	**326**	*e*PKHKP	PKPpre	09 32 25.9		
UZH				*e*		09 32 38.9		
SAML	**Samuel**	**131.21**	**112**	PKIKP	**PKPdf**	**09 32 43.7**	**0.0**	
SAML	**Samuel**	**131.21**	**112**		**PKPdf**	**09 32 43.7**	**0.0**	
TSUM	**Tsumeb**	**133.45**	**230**		**PKiKP**	**09 32 48.9**	**-0.4**	
GERES	**GERESS Array B**	**133.87**	**331**	PKP	**PKPdf**	**09 32 48.4**	**+0.4**	
	comp=Z,0.2nm,0.3s,baz=29,slow=2.2,SNR=4.4							
SMRT	**St. Maarten**	**136.32**	**76**	IAMs_20	IAMs_20	10 19 07.7		
	comp=Z,374nm,20.0s							
SCTE	**Santa Cesarea**	**136.50**	**318**	IAMs_20	IAMs_20	10 39 27.2		
	comp=Z,253nm,20.0s							
PTGA	**Pitinga**	**137.05**	**103**	PKP	**PKiKP**	**09 32 55.8**	**-0.8**	
	comp=Z,5.4nm,0.7s,baz=215,slow=1.5,SNR=8.7							
PTGA	**Pitinga**	**137.05**	**103**		**PKPdf**	**09 32 54.5**	**-0.3**	
AQU	**L'Aquila**	**138.32**	**324**	IAMs_20	IAMs_20	10 36 42.8		
	comp=Z,332nm,22.0s							
PAOL	**Paolisi**	**138.44**	**322**	IAMs_20	IAMs_20	10 39 07.1		
	comp=Z,276nm,21.0s							
VLC	**Villacollemand**	**138.77**	**328**	IAMs_20	IAMs_20	10 41 20.3		
	comp=Z,300nm,20.0s							
BDFB	**Brasilia**	**140.43**	**132**	PKP	**PKiKP**	**09 33 02.4**	**-1.2**	
	comp=Z,2.1nm,0.5s,baz=144,slow=12,SNR=4.2							
KEST	**Kesra**	**144.89**	**319**	PKP	**PKPdf**	**09 33 08.2**	**-0.2**	
	comp=Z,12nm,0.9s,baz=333,slow=5.1,SNR=7.2							
KEST	**Kesra**	**144.89**	**319**		PKPbc	09 33 07.6	+0.1	
MDP	**Montagnes des**	**145.61**	**97**	PKPbc	**PKPab**	**09 33 10.8**	**+0.2**	
	comp=Z,24nm,1.1s,baz=294,slow=1.6,SNR=3.3							
ESDC	**Sonseca Array**	**148.81**	**338**	PKPbc	**PKPbc**	**09 33 19.1**	**+0.5**	
	comp=Z,1.7nm,1.0s,baz=358,slow=4.5,SNR=6.2							
CART	**Cartagena**	**149.36**	**332**	IAMs_20	IAMs_20	10 49 05.2		
	comp=Z,270nm,21.0s							
TAM	**Tamanrasset**	**154.38**	**300**	IAMs_20	IAMs_20	10 50 17.8		
	comp=Z,274nm,18.0s							
TOA0	**Torodi Ar. Sit**	**160.24**	**278**		**PKPab**	**09 34 11.4**	**-0.3**	
TORD	**Torodi Ar. Bea**	**160.24**	**278**	PKP	**PKPdf**	**09 33 29.9**	**-1.2**	
	comp=Z,1.2nm,1.0s,baz=0.0,slow=3.3,SNR=3.9							
TORD				PKPab	**PKPab**	**09 34 12.4**	**+0.8**	
	comp=Z,7.3nm,1.1s,baz=83,slow=2.7,SNR=12							

*IDC **23** 09:28:51.3±1.1, 11°.01S×161°.48E, h0km, mb3.9/6, mb1 4.1/9, mb1mx3.8/43, mbtmp3.9/9, ML3.7/3, Error ellipse: s-maj=26.2km s-min=21.8km az=123.0*
*NEIC **23** 09:28:52.9±1.2, 10°.99S±0°.08×161°.40E±0°.09, h10km±1km, mb4.4/14, Error ellipse: s-maj=20.3km s-min=3.4km az=47.0*

ISC 23 09:28:55.5±0.8, 11°.00S±0°.08×161°.4E±0°.1, h28km, n24, σ0s80/26, mb4.2/14, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.08**	**318**	Pn	**Pn**	**09 29 30.0**	**+1.4**
	15nm,0.3s,baz=119,slow=19,SNR=3.7						
HNR				Sn	**Sb**	**09 29 57.3**	**-0.8**
	99nm,0.3s,baz=28,slow=20,SNR=7.8						
HNR	**Honiara**	**2.08**	**318**		**Pn**	**09 29 27.9**	**-0.8**
HNR					**Sb**	**09 29 57.4**	**-0.8**
DZM	**Mont Dzumac**	**12.04**	**157**	Pn	**Pn**	**09 31 44.6**	**-0.8**
	0.2nm,0.3s,baz=23,slow=9.5,SNR=9.7						
DZM				Sn	Sn	09 33 49.1	-10
	0.2nm,0.3s,baz=97,slow=19,SNR=1.5						
CTA	**Charters Tower**	**17.11**	**236**	P	**P**	**09 32 54.9**	**+0.5**
	0.4nm,0.3s,baz=73,slow=19,SNR=1.5						
CTAO	**Charters Tower**	**17.11**	**236**	Pn	**Pn**	**09 32 52.9**	**0.0**
EIDS	**Eidsvold**	**17.29**	**213**	Pn	**Pn**	**09 32 53.7**	**-1.4**
ARMA	**Armidale**	**21.34**	**204**	P	**P**	**09 33 41.4**	**+0.8**
ARMA				IAmb	IAmb	09 33 50.7	
	comp=Z,11nm,1.2s						
WR0	**Warramunga Arr**	**27.30**	**248**	P	**P**	**09 34 39.0**	**+1.0**
WR0				IAmb	IAmb	09 34 42.1	
	comp=Z,10nm,1.4s						
WB0	**Warramunga Arr**	**27.39**	**248**	P	**P**	**09 34 38.8**	**0.0**
WB0				IAmb	IAmb	09 34 50.3	
	comp=Z,8.4nm,1.1s						
WRAB	**Tennant Creek**	**27.47**	**248**	P	**P**	**09 34 40.2**	**+0.6**
WRAB				IAmb	IAmb	09 34 47.2	
	comp=Z,10nm,1.4s						
WB2	**Warramunga Arr**	**27.47**	**248**	P	**P**	**09 34 41.0**	**+1.5**
WB2				IAmb	IAmb	09 34 43.7	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**27.48**	**248**	P	**P**	**09 34 40.4**	**+0.8**
	comp=Z,3.0nm,1.1s,baz=78,slow=10,SNR=8.9						
STKA	**Stephens Creek**	**27.65**	**218**	P	**P**	**09 34 41.3**	**+0.3**
	comp=Z,2.2nm,0.9s,baz=37,slow=15,SNR=4.1						
STKA	**Stephens Creek**	**27.65**	**218**	P	**P**	**09 34 41.1**	**0.0**
ASAR	**Alice Springs**	**29.01**	**241**	P	**P**	**09 34 53.4**	**+0.1**
	comp=Z,1.5nm,1.0s,baz=75,slow=9.5,SNR=8.5						
BBOO	**Buckleboo**	**31.81**	**223**	P	**P**	**09 35 17.3**	**-0.6**
VNDA	**Vanda**	**66.51**	**180**	P	**P**	**09 39 42.9**	**+0.6**
VNDA				IAmb	IAmb	09 39 52.6	
	comp=Z,2.1nm,0.9s						
MLY	**Manley**	**83.81**	**18**	P	**P**	**09 41 22.4**	**+0.3**
GLB	**Gilahina Butte**	**83.94**	**23**	P	**P**	**09 41 23.5**	**+0.7**
GLB				IAmb	IAmb	09 41 34.0	
	comp=Z,2.0nm,0.7s						
ILAR	**Eielson Array**	**84.88**	**20**	P	**P**	**09 41 27.1**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=208,slow=5.1,SNR=3.5						
DOT	**Dot Lake**	**85.16**	**21**	P	**P**	**09 41 29.0**	**+0.1**
DOT				IAmb	IAmb	09 41 31.4	
	comp=Z,2.3nm,0.8s						
EGAK	**Eagle**	**86.85**	**21**	P	**P**	**09 41 36.2**	**-0.9**
NVAR	**Mina Array Bea**	**89.31**	**51**	P	**P**	**09 41 50.5**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=238,slow=8.4,SNR=3.2						
YKA	**Yellowknife Ar**	**96.92**	**28**	P	**P**	**09 42 23.3**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=258,slow=4.2,SNR=7.2						

*IDC **23** 09:30:55.9±2.5, 47°.90N×152°.81E, h148km±23km, mb3.4/13, mb1 3.6/14, mb1mx3.4/52, mbtmp3.9/14, Error ellipse: s-maj=31.4km s-min=13.6km az=164.0*
*NEIC **23** 09:30:55.5±1.1, 48°.0N±0°.2×152°.8E±0°.2, h142km±10km, mb4.1/18, Error ellipse: s-maj=28.3km s-min=13.8km az=148.0*

ISC 23 09:30:54.1±0.9, 47°.9N±0°.2×152°.9E±0°.1, h128km, n42, σ0s85/40, mb4.0/24, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PEA0B	**Petropavlovsk-**	**6.02**	**29**	Pn	**Pn**	**09 32 19.9**	**-0.9**
PETK	**Petropavlovsk-**	**6.02**	**29**	P	**Pn**	**09 32 22.6**	**+1.8**
	0.2nm,0.3s,baz=188,slow=9.0,SNR=4.3						
JKA	**Kamikawa-asahi**	**8.11**	**246**		**Pn**	**09 32 50.4**	**+1.4**
JKA	**Kamikawa-asahi**	**8.11**	**246**	Pn	**Pn**	**09 32 50.4**	**+1.4**
ASAJ	**Asahikawa**	**8.12**	**246**	P	**Pn**	**09 32 50.4**	**+1.3**
	0.6nm,0.3s,baz=90,slow=18,SNR=8.3						
ERM	**Erimo**	**9.08**	**233**	Pn	**Pn**	**09 33 01.8**	**-0.3**
KSRS	**Korea Array**	**21.04**	**249**	P	**P**	**09 35 28.0**	**+0.3**
	0.3nm,0.4s,baz=81,slow=28,SNR=4.4						
H11N2	**WAKE ISLAND Hy**	**30.34**	**153**	T	T	10 08 48.7	
	baz=341,slow=76						
H11N1	**WAKE ISLAND Hy**	**30.35**	**153**	T	T	10 08 45.0	
	baz=341,slow=76						
H11N3	**WAKE ISLAND Hy**	**30.35**	**153**	T	T	10 08 55.7	
	baz=341,slow=76						
CNPM	**China Poot**	**34.00**	**49**	P	**P**	**09 37 25.3**	**+0.1**
CNPM				IAmb	IAmb	09 37 41.3	
	comp=Z,6.9nm,1.2s						
TOLK	**Toolik Lake Re**	**34.83**	**33**	P	**P**	**09 37 33.6**	**+1.3**
TOLK				IAmb	IAmb	09 37 49.8	
	comp=Z,5.5nm,1.5s						
KNK	**Knik Glacier**	**35.20**	**45**	P	**P**	**09 37 36.0**	**+0.4**
WRH	**Wood River Hil**	**35.22**	**40**	P	**P**	**09 37 35.0**	**-0.6**
DHY	**Denali Highway**	**35.59**	**43**	P	**P**	**09 37 38.1**	**-0.8**
DHY				IAmb	IAmb	09 37 48.4	
	comp=Z,4.4nm,1.4s						
ILAR	**Eielson Array**	**35.73**	**40**	P	**P**	**09 37 40.2**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=272,slow=8.9,SNR=12						
PRP	**Porcupine Dome**	**36.28**	**38**	P	**P**	**09 37 44.1**	**-0.8**
PRP				IAmb	IAmb	09 37 46.9	
	comp=Z,2.6nm,0.9s						
WAX	**Waxell Ridge**	**38.04**	**46**	P	**P**	**09 38 01.1**	**+1.4**
WAX				IAmb	IAmb	09 38 01.7	
	comp=Z,3.8nm,0.7s						
EGAK	**Eagle**	**38.17**	**39**	P	**P**	**09 38 00.8**	**+0.2**
EGAK				IAmb	IAmb	09 38 01.7	
	comp=Z,3.7nm,1.1s						
YAH	**Yahtse**	**38.60**	**46**	P	**P**	**09 38 03.8**	**-0.8**
EPYK	**Eagle Plains**	**39.80**	**36**	P	**P**	**09 38 14.7**	**+0.4**
EPYK				IAmb	IAmb	09 38 16.5	
	comp=Z,3.2nm,1.1s						
INK	**Inuvik**	**40.74**	**33**	P	**P**	**09 38 23.1**	**+1.3**
	comp=Z,1.2nm,0.6s,baz=284,slow=4.5,SNR=4.5						
INK	**Inuvik**	**40.74**	**33**	P	**P**	**09 38 22.9**	**+1.1**
C36M	**Paulatuk**	**43.88**	**31**	P	**P**	**09 38 48.4**	**+1.2**
C36M				IAmb	IAmb	09 38 49.1	
	comp=Z,5.0nm,1.2s						
MKAR	**Makanchi Array**	**46.27**	**296**	P	**P**	**09 39 05.4**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=67,slow=8.2,SNR=5.3						
KURK	**Kurchatov**	**46.59**	**303**	P	**P**	**09 39 08.2**	**-0.7**
KURBB	**Kurchatov Arra**	**46.69**	**303**	P	**P**	**09 39 08.8**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=67,slow=8.5,SNR=4.8						
BVAR	**Borovoye Array**	**50.00**	**309**	P	**P**	**09 39 34.8**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=52,slow=8.0,SNR=3.6						
YKA	**Yellowknife Ar**	**50.07**	**37**	P	**P**	**09 39 36.0**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=297,slow=6.6,SNR=13						
YKA				PcP	**PcP**	**09 40 52.5**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=309,slow=3.1,SNR=5.3						
SUMG	**Summit**	**59.53**	**4**	P	**P**	**09 40 42.8**	**-1.0**
SUMG	**Summit**	**59.53**	**4**	*i* P	**P**	**09 40 44.5**	**+0.7**
	comp=Z,23nm,0.9s						
FFC	**Flin Flon**	**59.93**	**40**	P	**P**	**09 40 46.4**	**+0.1**
FFC				IAmb	IAmb	09 40 47.3	
	comp=Z,1.4nm,0.7s						
FCC	**Fort Churchill**	**60.36**	**33**	P	**P**	**09 40 49.4**	**+0.3**
NVAR	**Mina Array Bea**	**62.02**	**63**	P	**P**	**09 41 00.7**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=306,slow=7.7,SNR=3.8						
FIA1	**FINESS Array S**	**62.91**	**334**	P	**P**	**09 41 05.7**	**-0.5**
FINES	**FINESS Array B**	**62.91**	**334**	P	**P**	**09 41 05.6**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=32,slow=7.7,SNR=15						
NOA	**NORSAR Array B**	**67.06**	**341**	P	**P**	**09 41 33.1**	**0.0**
	comp=Z,0.7nm,0.6s,baz=26,slow=6.3,SNR=3.4						
AKASG	**Malin Array Be**	**70.48**	**326**	P	**P**	**09 41 53.5**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=36,slow=6.0,SNR=3.5						
TX31	**Lajitas Ar. Si**	**77.04**	**61**	P	**P**	**09 42 33.1**	**-0.1**
TX31				IAmb	IAmb	09 42 33.2	
	comp=Z,3.6nm,0.8s						
TX32	**Lajitas Array**	**77.04**	**61**	P	**P**	**09 42 33.1**	**0.0**
TXAR	**Lajitas Array**	**77.04**	**61**	P	**P**	**09 42 32.7**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=299,slow=4.5,SNR=12						
BRTR	**Keskin Array B**	**77.43**	**316**	P	**P**	**09 42 35.1**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=112,slow=2.7,SNR=2.7						

*BJI **23** 09:33:57.9±0.0, 11°.23S×162°.41E, h15km, mB5.3/27, mb4.8/47, Ms4.9/11, Ms7 4.6/7*
*IDC **23** 09:33:57.6±0.4, 11°.41S×162°.07E, h0km, mb4.8/26, mb1 4.9/31, mb1mx4.8/40, mbtmp4.8/31, ML4.7/4, MS4.2/23, Ms1 4.2/23, ms1mx4.1/37, Error ellipse: s-maj=14.6km s-min=12.4km az=97.0*
*NEIC **23** 09:33:58.4±1.5, 11°.49S±0°.05×162°.06E±0°.08, h10km±1km, mb5.1/152, Error ellipse: s-maj=12.9km s-min=8.8km az=94.0*
*MOS **23** 09:34:01.7±1.2, 11°.41S×161°.95E, h37km, mb5.2/46, Error ellipse: s-maj=8.0km s-min=7.2km az=91.8*
*GCMT **23** 09:34:02.4±0.2, 11°.46S±0°.01×162°.21E±0°.02, h13km, MW5.0/106, Moment Tension Solution. s52,c62; s106,c163; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}-3.28±.17; $M_{\theta\theta}$3.69±.12; $M_{\phi\phi}$-0.41±.10; $M_{r\theta}$-1.33±.24; $M_{\theta\phi}$1.73±.08; $M_{\phi r}$-2.39±.36; Best double couple: M_o4.76500×10¹⁶ NP1:ϕs275.00000°, δ36.00000°, λ-47.00000°. NP2:ϕs46.00000°, δ64.00000°, λ-117.00000°. Principal axes: T 4.8830, Plg15.0000°, Azm155.0000°; N -0.2430, Plg24.0000°, Azm58.0000°; P -4.6470, Plg61.0000°, Azm275.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 09:34:03.0±0.3, 11°.51S±0°.04×162°.07E±0°.05, h39km, n440, σ1s29/424, mb5.1/147, MS4.2/25, 12C-5D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.93**	**314**	Pn	**Pn**	**09 34 45.5**	**-1.6**
	293nm,0.3s,baz=170,slow=6.2,SNR=52						
HNR				Sn	**Sn**	**09 35 19.2**	**-1.9**
	481nm,0.3s,baz=136,slow=11,SNR=6.9						
HNR				LR	LR	09 36 03.6	
	comp=Z,6μm,18.7s,baz=134,slow=44						
HNR	**Honiara**	**2.93**	**314**	Pn	**Pn**	**09 34 45.7**	**-1.5**
DZM	**Mont Dzumac**	**11.31**	**159**	Pn	**Pn**	**09 36 42.1**	**-0.1**
	5.0nm,0.3s,baz=49,slow=3.8,SNR=419						
DZM				Sn	**Sn**	**09 38 45.3**	**-2.1**
	2.5nm,0.3s,baz=131,slow=19,SNR=1.6						
DZM				LR	LR	09 40 23.7	
	comp=Z,2μm,20.1s,baz=5.5,slow=34						
DZM	**Mont Dzumac**	**11.31**	**159**		**Pn**	**09 36 42.6**	**+0.4**
KRVT	**Keravat (AS076**	**12.24**	**305**	Pn	**Pn**	**09 36 52.8**	**-2.2**
	1.6nm,0.3s,baz=295,slow=3.6,SNR=1.6						
KRVT				LR	LR	09 42 02.4	
	comp=Z,937nm,20.2s,baz=133,slow=40						
PMG	**Port Moresby**	**14.81**	**277**	Pn	**Pn**	**09 37 30.4**	**+0.5**
	0.9nm,0.3s,baz=84,slow=8.7,SNR=14						
PMG				LR	LR	09 42 53.8	
	comp=Z,3μm,18.4s,baz=104,slow=36						
PMG	**Port Moresby**	**14.81**	**277**	*ce*P	**Pn**	**09 37 30.

RKPI	Ransiki, Papua	29.40	288	P	P	09 40 03.4	+0.4	
	comp=Z,102nm,1.0s							
URZ	Urewera	29.84	156	LR	LR	09 50 23.2		
	comp=Z,647nm,18.7s,baz=325,slow=33							
TOO	Toolangi	29.91	207	P	P	09 40 08.8	+1.5	
	baz=30,SNR=7.3							
MTN	Manton Dam	30.26	264	P	P	09 40 11.3	+0.8	
	baz=30,SNR=3.7							
BKZ	Black Stump Fm	30.39	157	P	P	09 40 10.9	-0.6	
HTT	Hallett	30.42	220	P	P	09 40 12.6	+0.8	
	baz=30,SNR=15							
FAKI	Fak Fak	30.76	284	P	P	09 40 14.1	-0.9	
	comp=Z,34nm,1.9s							
FAKI	Fak Fak	30.76	284	P	P	09 40 14.7	-0.3	
FAKI				IAmb	IAmb	09 40 18.8		
	comp=Z,22nm,0.8s							
BBOO	Buckleboo	31.93	224	P	P	09 40 25.5	+0.4	
	baz=32,SNR=83							
BBOO	Buckleboo	31.93	224	P	P	09 40 24.7	-0.4	
CMWZ	Cape Campbell	31.95	163	P	P	09 40 25.0	-0.2	
SIJI	Sorong	32.35	287	P	P	09 40 29.1	+0.1	
	comp=Z,36nm,0.9s,baz=88,slow=7.1,SNR=23							
KNRA	Kununurra	32.61	259	P	P	09 40 31.6	+0.3	
	baz=33,SNR=34							
KNRA	Kununurra	32.61	259	P	P	09 40 31.0	-0.3	
RPZ	Rata Peaks	33.02	168	LR	LR	09 51 39.5		
	comp=Z,350nm,18.7s,baz=50,slow=32							
WRKA	Warakurna	34.66	242	P	P	09 40 48.7	-0.4	
	baz=35,SNR=81							
NLAI	Namlea	35.60	281	P	P	09 40 57.8	+0.6	
	comp=Z,3µmcomp=Z,60nm,1.8s							
FITZ	Fitzroy Crossi	35.77	255	P	P	09 40 58.3	-0.4	
	baz=36,SNR=22							
FITZ	Fitzroy Crossi	35.77	255	LR	LR	09 55 25.9		
	comp=Z,702nm,18.6s,baz=94,slow=36							
FITZ	Fitzroy Crossi	35.77	255	P	P	09 40 58.2	-0.4	
FITZ				IAmb	IAmb	09 40 59.4		
	comp=Z,16nm,0.8s							
LBMI	Labuha	35.97	285	P	P	09 41 02.1	+1.7	
	comp=Z,3µmcomp=Z,167nm,2.0s							
TNTI	Ternate	36.57	287	P	P	09 41 06.6	+1.1	
	comp=Z,88nm,1.1s							
TNTI	Ternate	36.57	287	P	P	09 41 04.6	-0.9	
FORT	Forrest	36.85	233	P	P	09 41 08.5	+0.8	
	baz=37,SNR=32							
FORT	Forrest	36.85	233	P	P	09 41 07.7	0.0	
SANI	Sanana	36.99	282	P	P	09 41 09.5	+0.4	
	comp=Z,1µmcomp=Z,96nm,1.2s							
BATI	Baumata	37.72	268	P	P	09 41 16.7	+1.4	
	comp=Z,83nm,0.6s,baz=126,slow=3.8,SNR=9.1							
BATI				LR	LR	09 57 33.2		
	comp=Z,570nm,18.7s,baz=106,slow=38							
BATI	Baumata	37.72	268	P	P	09 41 16.4	+1.1	
	comp=Z,56nm,0.6s							
KMSI	Cibinong	39.69	285	P	P	09 41 32.8	+0.9	
	comp=Z,225nm,0.5s							
EDFI	Ende, Flores	39.82	270	P	P	09 41 31.6	-1.4	
	comp=Z,18nm,1.6s							
LUWI	Luwuk	40.36	282	P	P	09 41 38.2	+0.8	
	comp=Z,4µmcomp=Z,104nm,0.6s							
LUWI	Luwuk	40.36	282	P	P	09 41 37.4	0.0	
KCP	Kidapawan	41.13	295 ‖	*i*P	P	09 41 45.3	+1.5	
APSI	Ampana	41.47	282	P	P	09 41 47.4	+0.8	
	comp=Z,774nmcomp=Z,72nm,1.0s							
PSA00	Pilbara Seismi	41.57	250	P	P	09 41 46.5	-0.9	
KMBL	Kambalda	41.99	236	P	P	09 41 51.5	+0.8	
	baz=42,SNR=8.0							
BNSI	Bone	42.11	276	P	P	09 41 52.7	+0.9	
	comp=Z,56nm,1.1s							
KAPI	Kappang	42.33	275	LR	LR	09 59 54.7		
	comp=Z,127nm,19.2s,baz=94,slow=37							
KAPI	Kappang	42.33	275	P	P	09 41 53.6	0.0	
KAPI				pmax	pmax			
	comp=Z,48nm,0.8s							
KAPI	Kappang	42.33	275	P	P	09 41 53.6	0.0	
KAPI				IAmb	IAmb	09 41 57.0		
	comp=Z,48nm,0.8s							
SPSI	Sidrap Palu	42.53	277	P	P	09 41 54.5	-0.7	
	comp=Z,19nm,1.0s							
TTSI	Tana Toraja	42.69	278	P	P	09 41 58.2	+1.7	
	comp=Z,18nm,0.7s							
MPSI	Mapaga	43.51	283	P	P	09 42 02.6	-0.5	
	comp=Z,737nmcomp=Z,47nm,1.4s							
MEEK	Meekatharra	43.51	243	P	P	09 42 04.0	+0.9	
	baz=44,SNR=36							
PLAI	Plampang	43.64	269	P	P	09 42 03.7	-0.5	
	comp=Z,1µmcomp=Z,76nm,0.7s							
BLDU	Ballidu	46.04	238	P	P	09 42 23.8	+0.8	
	baz=46,SNR=12							
NWAO	Narrogin (SRO)	46.23	235	P	P	09 42 25.2	+0.7	
	baz=46,SNR=5.4							
NWAO	Narrogin (SRO)	46.23	235	P	P	09 42 24.9	+0.3	
NWAO				pmax	pmax			
	comp=Z,39nm,1.3s							
NWAO	Narrogin (SRO)	46.23	235	P	P	09 42 24.9	+0.3	
NWAO				IAmb	IAmb	09 42 28.6		
	comp=Z,39nm,1.2s							
MORW	Morawa	46.24	241	P	P	09 42 25.5	+0.8	
	baz=46,SNR=10							
MORW	Morawa	46.24	241	P	P	09 42 23.7	-1.1	
MUN	Mundaring	46.80	237	P	P	09 42 30.6	+1.6	
	baz=47,SNR=3.5							
PPT	Papeete	47.10	103	LR	LR	10 00 59.0		
	comp=Z,133nm,18.1s,baz=286,slow=34							
PPT2	Papeete2	47.10	103	*e*LQ	LQ	09 53 53.5		
	comp=Z,620nm,25.2s							
PPT2				*e*LR	LR	09 55 52.4		
	comp=Z,286nm,26.0s							
JAGI	Jajag, Banyuwa	47.24	269	P	P	09 42 31.6	-1.2	
	comp=Z,78nm,1.3s							
JAGI	Jajag, Banyuwa	47.24	269	P	P	09 42 31.1	-1.7	
TBI	Tubuai	47.52	111	*e*S	S	09 49 31.3	+4.0	
	comp=Z,135nm,25.5s							
TBI				*e*LQ	LQ	09 54 06.2		
	comp=Z,529nm,32.2s							
TBI				*e*LR	LR	09 56 03.4		
	comp=Z,280nm,29.5s							
TGY	Tagaytay City	48.06	301	LR	LR	10 01 12.6		
	comp=Z,134nm,21.1s,baz=150,slow=34							
SPMM	Sapulut	48.14	287	P	P	09 42 40.0	+0.3	
KKM	Kota Kinabalu	48.84	289	P	P	09 42 43.1	-2.0	
UGM	Wanagama	50.88	269	P	P	09 43 00.5	-0.2	
SBUM	Sibu	51.46	283	P	P	09 43 04.2	-0.7	
SBUM				IAmb	IAmb	09 43 07.5		
	comp=Z,34nm,1.4s							
SBUM	Sibu	51.46	283	P	P	09 43 07.0	+2.0	
INU	Inuyama	52.28	334	P	P	09 43 09.9	-0.8	
INU				IAmb	IAmb	09 43 11.7		
	comp=Z,28nm,1.2s							
MJAR	Matsushiro Arr	52.81	336	P	P	09 43 13.1	-1.5	
	comp=Z,4.0nm,0.8s,baz=159,slow=8.2,SNR=10							
MJAR				LR	LR	10 09 06.1		
	comp=Z,52nm,18.1s,baz=160,slow=40							
MAJO	Matsushiro	52.81	336	P	P	09 43 13.5	-1.1	
MAJO				pmax	pmax			
	comp=Z,17nm,1.2s							
MAJO	Matsushiro	52.81	336	P	P	09 43 13.5	-1.1	
MAT	Matsushiro	52.81	336	P	P	09 43 13.7	-0.9	
MJB9	Matsu-Tunnel	52.82	336	P	P	09 43 13.6	-1.1	
YULB	Yu-li	52.86	311	P	P	09 43 13.9	-1.2	
KSM	Kuching	53.03	281	P	P	09 43 15.2	-1.4	
KSM				IAmb	IAmb	09 43 18.3		
	comp=Z,41nm,1.1s							
KSM	Kuching	53.03	281	P	P	09 43 17.0	+0.4	
JNU	Nakatsue	53.42	327	P	P	09 43 18.4	-0.8	
JNU				IAmb	IAmb	09 43 22.2		
	comp=Z,25nm,0.9s							
CISI	Cisompet, Garu	53.58	269	P	P	09 43 20.5	-0.3	
	comp=Z,89nm,1.5s							
CISI	Cisompet, Garu	53.58	269	P	P	09 43 19.9	-0.9	
MDSI	Maura Dua	57.66	272	P	P	09 43 49.2	-0.8	
	comp=Z,21nm,1.1s							
HKPS	Hong Kong Po S	57.75	306	P	P	09 43 49.5	-0.9	
TJN	Taejon	57.77	327	*ce*P	P	09 43 49.1	-1.2	
DLV	T Lat	58.08	292	P	P	09 43 51.7	-1.5	
JKA	Kamikawa-asahi	58.12	344	P	P	09 43 52.2	-0.3	
ASAJ	Asahikawa	58.12	344	P	P	09 43 52.3	-0.3	
ASAJ				pmax	pmax			
	comp=Z,31nm,0.9s							
KSRS	Korea Array	58.29	328	P	P	09 43 53.0	-0.9	
	comp=Z,5.5nm,0.9s,baz=143,slow=6.4,SNR=18							
KSRS				LR	LR	10 07 24.9		
	comp=Z,183nm,20.0s,baz=136,slow=34							
KSRS	Korea Array	58.29	328	P	P	09 43 53.0	-0.9	
INCN	Inchon	58.99	327	P	P	09 43 58.1	-0.7	
INCN				pmax	pmax			
	comp=Z,50nm,1.3s							
INCN	Inchon	58.99	327	P	P	09 43 58.1	-0.7	
MYKOM	Kota Tinggi	59.34	279	P	P	09 44 00.6	-1.1	
MYKOM	Kota Tinggi	59.34	279	P	P	09 44 03.0	+1.3	
NJ2	Nanjing	59.87	318	*e*P	P	09 44 07.4	+2.4	
NJ2				pmax	pmax			
	comp=Z,13nm,0.5s							
YSS	Yuzh-Sakhalins	60.71	345 ‖	*e*P	P	09 44 11.3	+0.9	
YSS				*e*		09 44 26.7		
YSS				pmax	pmax			
	comp=Z,30nm,0.9s							
YSS	Yuzh-Sakhalins	60.71	345	P	P	09 44 10.0	-0.4	
BKNI	Bangkinang	61.73	277	P	P	09 44 19.7	+1.7	
	comp=Z,3µmcomp=Z,304nm,1.3s							
BKNI	Bangkinang	61.73	277	P	P	09 44 17.4	-0.6	
USA0B	Ussuriysk Arra	61.81	336	P	P	09 44 17.1	-0.9	
USA0B				pmax	pmax			
	comp=Z,57nm,1.3s							
USA0B	Ussuriysk Arra	61.81	336	P	P	09 44 17.1	-0.9	
USRK	Ussuriysk Ar.	61.81	336	P	P	09 44 17.0	-0.9	
	comp=Z,17nm,0.9s,baz=140,slow=6.2,SNR=23							
USRK				LR	LR	10 09 02.3		
	comp=Z,80nm,21.3s,baz=144,slow=34							
PDSI	Padang	62.02	275	P	P	09 44 18.9	-1.1	
	comp=Z,19nm,0.5s							
IPM	Ipoh	62.76	281	P	P	09 44 25.4	+0.5	
IPM	Ipoh	62.76	281	P	P	09 44 26.0	+1.1	
MDJ	Mudanjiang	63.14	335	P	P	09 44 27.4	+0.6	
MDJ				pmax	pmax			
	comp=Z,23nm,1.2s							
MDJ				pmax	pmax			
	comp=Z,280nm,4.5s							
MDJ	Mudanjiang	63.14	335	P	P	09 44 26.7	-0.1	
MNSI	Mandailing Nat	63.26	277	P	P	09 44 28.2	0.0	
	comp=Z,261nm,0.9s							
KULM	Kulim	63.33	282	P	P	09 44 27.8	-0.9	
KULM	Kulim	63.33	282	P	P	09 44 30.0	+1.3	
PBSI	Pulau Batu	64.33	276	P	P	09 44 36.5	+1.2	
	comp=Z,290nm,1.4s							
RPSI	Rantau Prapat	64.34	279	P	P	09 44 33.6	-1.8	
PET	Petropavlovsk	64.34	358	*e*P	P	09 44 33.0	-1.5	
PET				pmax	pmax			
	comp=Z,30nm,1.3s							
PET	Petropavlovsk	64.34	358	P	P	09 44 33.2	-1.2	
CN2	Changchun	64.35	331	*e*P	P	09 44 34.9	+0.1	
CN2				*e*S	S	09 53 18.8	+8.5	
CN2				pmax	pmax			
	comp=Z,10.0nm,1.5s							
CN2				pmax	pmax			
	comp=Z,100nm,3.0s							
CN2				LR	LR			
	comp=Z,300nm,15.0s							
CN2				LR	LR			
	comp=Z,200nm,15.0s							
CN2				LR	LR			
	comp=Z,400nm,17.0s							
PSI	Prapat	64.36	279	P	P	09 44 33.6	-2.1	
PSI				pmax	pmax			
	comp=Z,71nm,1.0s							
PEA0B	Petropavlovsk-	64.46	357	P	P	09 44 35.3	0.0	
PEA0B				pmax	pmax			
	comp=Z,42nm,1.3s							
PEA0B	Petropavlovsk-	64.46	357	P	P	09 44 35.3	0.0	
PETK	Petropavlovsk-	64.46	357	P	P	09 44 35.7	+0.3	
	comp=Z,6.6nm,0.8s,baz=161,slow=8.2,SNR=13							
PETK				LR	LR	10 05 50.4		
	comp=Z,173nm,21.8s,baz=229,slow=30							
CASY	Casey	64.66	201	P	P	09 44 35.8	-0.8	
CASY				IAmb	IAmb	09 44 54.9		
	comp=Z,18nm,1.1s							
GSI	Gunungsitoli	65.32	277	P	P	09 44 42.2	+0.4	
	comp=Z,1µm,1.0s							
GSI	Gunungsitoli	65.32	277	P	P	09 44 41.7	-0.1	
ENH	Enshi	65.43	311	P	P	09 44 41.6	-0.6	
ENH				IAmb	IAmb	09 44 56.0		
	comp=Z,12nm,1.0s							
KCSI	Kotacane, Aceh	65.65	279	P	P	09 44 42.7	-1.2	
	comp=Z,90nm,0.8s							
GYA	Guiyang	65.73	306	*e*P	P	09 44 46.3	+2.0	
GYA				pmax	pmax			
	comp=Z,10.0nm,0.9s							
SLVN	Son La	65.77	300	P	P	09 44 43.2	-1.4	
SLVN				IAmb	IAmb	09 44 48.9		
	comp=Z,12nm,1.2s							
VNDA	Vanda	66.00	180	P	P	09 44 45.8	+0.7	
	comp=Z,6.0nm,1.0s,baz=339,slow=6.6,SNR=26							
VNDA				LR	LR	10 09 08.8		
	comp=Z,176nm,19.6s,baz=355,slow=32							
VNDA	Vanda	66.00	180	P	P	09 44 44.8	-0.3	
VNDA				pmax	pmax			
	comp=Z,10.0nm,1.1s							
VNDA	Vanda	66.00	180	P	P	09 44 44.8	-0.3	
VNDA				IAmb	IAmb	09 44 48.2		
	comp=Z,9.6nm,1.1s							
KLR	Kul'dur	66.11	339	P	P	09 44 46.1	0.0	
	comp=Z,6.9nm,0.9s,baz=148,slow=5.5,SNR=19							
KLR				LR	LR	10 11 32.4		
	comp=Z,123nm,21.2s,baz=176,slow=34							
KLR	Kul'dur	66.11	339	*ce*P	P	09 44 45.5	-0.6	
TPTI		66.16	279	P	P	09 44 46.3	-0.9	
	comp=Z,12nm,1.1s							
MLSI	Meulaboh, Aceh	67.16	280	P	P	09 44 53.6	+0.1	
	comp=Z,219nm,1.2s							
XAN	Xi'an	67.81	314	P	P	09 44 56.8	-0.5	
XAN				pP	pP	09 45 00.3	-6.4	
XAN				pmax	pmax			
	comp=Z,6.0nm,0.9s							
XAN	Xi'an	67.81	314	IAmb	IAmb	09 45 00.8		
	comp=Z,8.2nm,0.7s							
KMI	Kunming	68.31	303	P	P	09 45 02.5	+1.6	
KMI				pmax	pmax			
	comp=Z,18nm,0.6s							
CMAR	Chiang Mai Arr	69.01	295	P	P	09 45 05.8	+0.7	
	comp=Z,4.5nm,0.8s,baz=120,slow=4.7,SNR=20							
CMAR	Chiang Mai Arr	69.01	295	*ce*P	P	09 45 06.4	+1.3	
CMAR				pmax	pmax			
	comp=Z,5.0nm,0.8s							
HHC	Hu-ho-hao-te	69.89	321	*e*P	P	09 45 11.3	+1.1	
HHC				pmax	pmax			
	comp=Z,9.0nm,1.0s							
HHC				pmax	pmax			
	comp=Z,140nm,5.5s							
HHC				LR	LR			
	comp=Z,99nm,18.4s							
HHC				LR	LR			
	comp=Z,99nm,12.4s							
CD2	Chengdu	70.05	309	P	P	09 45 11.3	0.0	
CD2				pmax	pmax			
	comp=Z,20nm,0.7s							
ZEA	Zeya	71.42	339	*e*P	P	09 45 20.0	+0.9	
ZEA				pmax	pmax			
	comp=N,29nm,1.2s							
ZEA				pmax	pmax			
	comp=Z,83nm,1.4s							
MA2	Magadan	71.42	354	*ce*P	P	09 45 18.8	-0.2	
MA2				pmax	pmax			
	comp=Z,28nm,1.7s							
MA2	Magadan	71.42	354	P	P	09 45 18.2	-0.8	
MA2				IAmb	IAmb	09 45 19.4		
	comp=Z,11nm,0.8s							
LZH	Lanzhou	72.43	314	*e*P	P	09 45 28.0	+2.2	
LZH				pmax	pmax			
	comp=Z,25nm,1.1s							
LZH				pmax	pmax			
	comp=Z,110nm,5.4s							
ULN	Ulaanbaatar	76.59	325	*ce*P	P	09 45 50.6	+0.9	
ULN				pmax	pmax			
	comp=Z,63nm,1.7s							
ULN	Ulaanbaatar	76.59	325	P	P	09 45 50.4	+0.7	
GTA	Gaotai	76.81	315	*e*P	P	09 45 52.3	+1.3	
GTA				pP	pP	09 45 55.8	-5.4	
GTA				sP	PcP	09 45 58.4	-3.8	
GTA				pmax	pmax			
	comp=Z,10.0nm,1.5s							
GTA				LR	LR			
	comp=Z,140nm,23.2s							
GTA				LR	LR			
	comp=Z,930nm,22.9s							
SONM	Songino Array	76.94	325	P	P	09 45 51.9	+0.3	
	comp=Z,9.6nm,0.8s,baz=128,slow=5.3,SNR=27							
SONM				LR	LR	10 19 38.9		
	comp=Z,115nm,19.9s,baz=102,slow=36							
YAK	Yakutsk	77.56	345	P	P	09 45 55.1	+0.6	
	comp=Z,36nm,0.7s,baz=139,slow=0.1,SNR=8.3							
YAK	Yakutsk	77.56	345	*d i*P	P	09 45 54.7	+0.2	
YAK				*e*		09 46 02.8		
YAK				*e**PP	sP	09 46 07.7	-0.9	
YAK				*e*		09 48 47.0		
YAK				*e*PPP	PPP	09 50 37.5		
YAK				*e*S	S	09 55 43.3	+0.5	
YAK				*e**SS	sS	09 55 59.6	-2.3	
YAK				*e*		09 56 09.4		
YAK				*e*SS	SS	10 00 48.1	+5.1	
YAK				*e*SSS	SSS	10 04 05.4		
YAK				pmax	pmax			
	comp=Z,41nm,0.8s							
YAK				pmax	pmax			
	comp=N,10.0nm,0.9s							
YAK				pmax	pmax			
	comp=E,9.0nm,1.0s							
YAK				pmax	pmax			
	comp=Z,37nm,2.0s							
YAK				pmax	pmax			
	comp=N,23nm,2.3s							
YAK				pmax	pmax			
	comp=E,17nm,2.0s							
YAK				smax	smax			
	comp=N,111nm,4.7s							
YAK				smax	smax			
	comp=E,39nm,4.3s							
YAK	Yakutsk	77.56	345	P	P	09 45 54.9	+0.4	
SHL	Shillong	77.58	300	IAmb	IAmb	09 45 58.4		
	comp=Z,12nm,0.6s							
OHAK	Old Harbor	77.70	23	P	P	09 45 56.2	+0.8	
OHAK				IAmb	IAmb	09 46 00.1		
	comp=Z,13nm,1.0s							
KDAK	Kodiak Island	78.37	23	P	P	09 45 59.4	+0.3	
	comp=Z,8.4nm,0.8s,baz=261,slow=6.4,SNR=7.6							
KDAK	Kodiak Island	78.37	23	P	P	09 45 59.6	+0.5	
KDAK				IAmb	IAmb	09 46 13.2		
	comp=Z,15nm,0.9s							
QSPA	South Pole Qui	78.50	180	P	P	09 46 01.5	+1.5	
BILL	Bilibino	79.39	2	*e*P	P	09 46 04.7	+0.1	
BILL				*e*		09 46 13.5		
BILL				*e*		09 49 03.5		
BILL				*e*PPP	PPP	09 50 52.4		
BILL				pmax	pmax			
	comp=Z,32nm,1.7s							
BILL	Bilibino	79.39	2	P	P	09 46 04.5	0.0	
BILL				IAmb	IAmb	09 46 18.7		
	comp=Z,21nm,0.9s							
SVW2	Sparrevohn	79.71	19	P	P	09 46 07.5	+1.0	
SVW2				IAmb	IAmb	09 46 21.3		
	comp=Z,23nm,1.0s							
ZAK	Zakamensk	80.04	326	*e*P	P	09 46 08.4	-0.2	
ZAK				pmax	pmax			
	comp=Z,18nm,1.5s							
CNPM	China Poot	80.09	22	IAmb	IAmb	09 46 22.8		
	comp=Z,19nm,0.9s							
TLY	Talaya	80.53	327	P	P	09 46 11.6	+0.5	
	comp=Z,6.4nm,0.8s,baz=166,slow=6.8,SNR=15							
TLY	Talaya	80.53	327	*i* P	P	09 46 11.6	+0.5	
TLY				pmax	pmax			
	comp=Z,40nm,1.8s							
TLY	Talaya	80.53	327	P	P	09 46 09.8	-1.4	
TLY				IAmb	IAmb	09 46 13.5		
	comp=Z,21nm,1.2s							
TTA	Tatalina	80.94	18	P	P	09 46 14.0	+0.9	
TTA				pmax	pmax			
	comp=Z,9.0nm,1.2s							
TTA	Tatalina	80.94	18	P	P	09 46 14.0	+0.9	
ODAN	Odare	81.82	299	*e*P	P	09 46 18.9	+0.1	
	comp=Z,39nm,1.1s							
HIN	Hinchinbrook I	82.45	23	P	P	09 46 20.9	-0.2	
HIN				IAmb	IAmb	09 46 35.2		
	comp=Z,17nm,1.1s							
RAMN	Ramite	82.52	299	*e*P	P	09 46 22.6	+0.1	
	comp=Z,15nm,0.8s							
GLI	Glacier Island	82.54	22	P	P	09 46 20.8	-0.7	
GLI				IAmb	IAmb	09 46 36.9		
	comp=Z,14nm,0.9s							
FID	Port Fidalgo	82.69	23	P	P	09 46 21.5	-0.7	
FID				IAmb	IAmb	09 46 37.5		
	comp=Z,12nm,1.1s							
SML	Sawmill	82.69	21	P	P	09 46 22.9	+0.6	
SML				IAmb	IAmb	09 46 37.5		
	comp=Z,20nm,1.4s							
MAW	Mawson	82.93	202	P	P	09 46 25.2	+1.7	
	baz=83,SNR=6.1							
MAW	Mawson	82.93	202	P	P	09 46 24.9	+1.4	
	comp=Z,6.2nm,0.6s,baz=111,slow=6.9,SNR=11							
MAW				LR	LR	10 19 56.7		
	comp=Z,89nm,18.7s,baz=60,slow=33							
MAW	Mawson	82.93	202	P	P	09 46 24.8	+1.4	
MAW				pmax	pmax			
	comp=Z,2.0nm,0.8s							
MAW	Mawson	82.93	202	P	P	09 46 24.8	+1.4	
KTH	Kantishna Hill	82.99	19	P	P	09 46 23.1	-0.8	
SCM	Sheep Creek Mo	83.07	22	P	P	09 46 23.8	-0.5	
SCM				pmax	pmax			
	comp=Z,14nm,1.0s							
SCM	Sheep Creek Mo	83.07	22	P	P	09 46 23.8	-0.5	
SCM				IAmb	IAmb	09 46 40.1		
	comp=Z,14nm,1.0s							
JIRN	Jiri	83.07	300	*e*P	P	09 46 23.8	-1.7	
GUN	Gumba	83.41	300	*e*P	P	09 46 25.3	-1.9	
RND	Reindeer	83.57	20	IAmb	IAmb	09 46 41.6		
	comp=Z,14nm,1.2s							
PKI	Pulchoki	83.71	300	*e*P	P	09 46 28.0	-0.7	
	comp=Z,63nm,1.3s							
PKIN	Phulchoki	83.72	300	*e*P	P	09 46 29.0	+0.3	
	comp=Z,18nm,0.6s							
KKN	Kakani	83.88	300	*e*P	P	09 46 28.8	-0.7	
WAX	Waxell Ridge	83.92	24	IAmb	IAmb	09 46 43.1		
	comp=Z,12nm,0.7s							
DMN	Daman	83.98	300	*e*P	P	09 46 30.2	+0.2	
	comp=Z,67nm,1.2s							
MLY	Manley	84.07	18	IAmb	IAmb	09 46 43.4		
	comp=Z,9.6nm,0.8s							
GLB	Gilahina Butte	84.13	23	IAmb	IAmb	09 46 45.2		
	comp=Z,9.3nm,1.0s							
NEA	Nenana	84.28	19	P	P	09 46 30.3	-0.1	
NEA				IAmb	IAmb	09 46 43.8		
	comp=Z,9.3nm,0.9s							
BALM	Baldy	84.46	24	IAmb	IAmb	09 46 44.9		
	comp=Z,11nm,1.3s							
GKN	Gorkha	84.49	300	*e*P	P	09 46 32.6	+0.1	
	comp=Z,62nm,0.7s							
WRH	Wood River Hil	84.53	19	IAmb	IAmb	09 46 46.4		
	comp=Z,17nm,0.9s							
CCB	Clear Creek Bu	84.74	19	P	P	09 46 32.3	-0.4	
CCB				IAmb	IAmb	09 46 47.1		
	comp=Z,10nm,0.9s							
BARN	Barnard Glacie	84.75	24	P	P	09 46 33.0	0.0	
BARN				IAmb	IAmb	09 46 47.9		
	comp=Z,14nm,0.9s							
CTGM	Chit

	comp=Z,12nm,1.3s							
WDC	**Whiskeytown Da**	**86.57**	**48**	P	**P**	**09 46 43.7**	**+1.4**
WDC				IAmb	IAmb	09 46 56.4	
	comp=Z,12nm,1.3s							
YBH	**Yreka Blue Hor**	**86.81**	**46**	P	**P**	**09 46 43.6**	**0.0**
YBH				pmax	pmax			
	comp=Z,9.0nm,1.1s							
YBH	**Yreka Blue Hor**	**86.81**	**46**	P	**P**	**09 46 43.6**	**0.0**
YBH				IAmb	IAmb	09 46 58.3		
	comp=Z,9.2nm,1.1s							
WMQ	**Urumqi**	**86.88**	**316**	*e*P	**P**	**09 46 44.5**	**+0.6**
WMQ				pP	PcP	09 46 49.3	+3.2
WMQ				pmax	pmax			
	comp=Z,25nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,34nm,4.1s							
WMQ				LR	LR			
	comp=Z,120nm,19.5s							
WMQ				LR	LR			
	comp=Z,230nm,18.3s							
WMQ				LR	LR			
	comp=Z,170nm,19.5s							
TOLK	**Toolik Lake Re**	**86.89**	**16**	P	**P**	**09 46 45.3**	**+2.0**
	baz=227							
TOLK	**Toolik Lake Re**	**86.89**	**16**	IAmb	IAmb	09 46 59.0		
	comp=Z,11nm,1.1s							
O03E	**Paynes Creek**	**87.02**	**48**	P	**P**	**09 46 46.2**	**+1.6**
	baz=252							
AFDM	**Forest Hills D**	**87.23**	**50**	P	**P**	**09 46 45.5**	**-0.1**
AFDM				IAmb	IAmb	09 46 59.8		
	comp=Z,10nm,1.1s							
DAWY	**Dawson**	**87.31**	**22**	IAmb	IAmb	09 47 00.7		
	comp=Z,15nm,1.1s							
CMB	**Columbia Colle**	**87.41**	**51**	P	**P**	**09 46 45.9**	**-0.6**
CMB				pmax	pmax			
	comp=Z,7.0nm,1.2s							
CMB	**Columbia Colle**	**87.41**	**51**	P	**P**	**09 46 45.9**	**-0.6**
H04A	**Detroit Lake**	**88.09**	**44**	P	**P**	**09 46 49.4**	**-0.2**
H04A				IAmb	IAmb	09 46 54.6		
	comp=Z,7.7nm,1.2s							
MWC	**Mount Wilson**	**88.18**	**55**	P	**P**	**09 46 50.5**	**0.0**
MWC				pmax	pmax			
	comp=Z,18nm,1.2s							
MWC	**Mount Wilson**	**88.18**	**55**	P	**P**	**09 46 50.5**	**0.0**
MWC				IAmb	IAmb	09 47 04.8		
	comp=Z,18nm,1.2s							
ISA	**Isabella, Lake**	**88.23**	**53**	P	**P**	**09 46 49.8**	**-0.7**
ISA				pmax	pmax			
	comp=Z,7.0nm,1.3s							
ISA	**Isabella, Lake**	**88.23**	**53**	P	**P**	**09 46 52.4**	**+1.8**
	baz=255							
ISA	**Isabella, Lake**	**88.23**	**53**	P	**P**	**09 46 49.8**	**-0.7**
MDPB	**Devils Postpil**	**88.29**	**51**	P	**P**	**09 46 50.0**	**-1.1**
MDPB				IAmb	IAmb	09 47 07.6		
	comp=Z,13nm,1.3s							
PNTR	**Pine Nut**	**88.29**	**50**	P	**P**	**09 46 48.8**	**-2.2**
PNTR				IAmb	IAmb	09 47 06.5		
	comp=Z,8.5nm,1.1s							
J05D	**Fort Rock, OR**	**88.32**	**45**	P	**P**	**09 46 52.5**	**+1.6**
	baz=253							
OMMB	**Old Mammoth Mi**	**88.34**	**51**	P	**P**	**09 46 51.6**	**+0.3**
EDW2	**Edwards Air Fo**	**88.40**	**54**	P	**P**	**09 46 53.4**	**+2.0**
	baz=255							
BFSC	**Mount Baldy Ra**	**88.50**	**55**	P	**P**	**09 46 53.1**	**+1.1**
	baz=255							
MOD	**Modoc Plateau**	**88.58**	**47**	P	**P**	**09 46 51.0**	**-1.2**
PAHR	**Pah Rah Range**	**88.63**	**49**	P	**P**	**09 46 51.8**	**-0.6**
PAHR				IAmb	IAmb	09 47 05.8		
	comp=Z,11nm,1.4s							
PINE	**Pine Mountain**	**88.68**	**45**	P	**P**	**09 46 50.9**	**-1.7**
PINE				IAmb	IAmb	09 47 07.9		
	comp=Z,7.4nm,0.9s							
CWC	**Cottonwood Cre**	**88.74**	**53**	P	**P**	**09 46 54.5**	**+1.4**
	baz=255							
D05A	**Enumclaw**	**89.00**	**41**	IAmb	IAmb	09 47 05.9		
	comp=Z,20nm,1.4s							
NVAR	**Mina Array Bea**	**89.09**	**51**	P	**P**	**09 46 56.2**	**+1.5**
	comp=Z,1.6nm,0.7s,baz=232,slow=4.4,SNR=14							
MPMC	**Manual Prospec**	**89.10**	**53**	P	**P**	**09 46 56.9**	**+2.1**
	baz=255							
MONP2	**Monument Peak**	**89.16**	**56**	P	**P**	**09 46 56.9**	**+1.7**
	baz=253							
NV11	**Mina Array Sit**	**89.20**	**51**	IAmb	IAmb	09 46 57.9		
	comp=Z,14nm,1.4s							
PFO	**Pinyon Flats O**	**89.31**	**56**	P	**P**	**09 46 55.0**	**-0.7**
PFO				pmax	pmax			
	comp=Z,10.0nm,1.3s							
PFO	**Pinyon Flats O**	**89.31**	**56**	P	**P**	**09 46 57.4**	**+1.6**
	baz=256							
PFO	**Pinyon Flats O**	**89.31**	**56**	P	**P**	**09 46 55.0**	**-0.7**
XPFO	**Pion Flat**	**89.31**	**56**	P	**P**	**09 46 55.6**	**-0.1**
IKP	**In-Ko-Pah, Jac**	**89.36**	**57**	P	**P**	**09 46 58.3**	**+2.3**
	baz=256							
GRAC	**Grapevine Rang**	**89.44**	**52**	P	**P**	**09 46 58.1**	**+1.9**
	baz=255							
GSC	**Goldstone, Bar**	**89.45**	**54**	P	**P**	**09 46 58.8**	**+2.5**
	baz=256							
EPYK	**Eagle Plains**	**89.49**	**21**	P	**P**	**09 46 57.9**	**+2.1**
	baz=239							
EPYK	**Eagle Plains**	**89.49**	**21**	P	**P**	**09 46 56.9**	**+1.1**
SWSC	**Sam W. Stewart**	**89.68**	**56**	P	**P**	**09 46 59.7**	**+2.4**
	baz=256							
FURC	**Furnace Creek,**	**89.69**	**53**	P	**P**	**09 46 59.1**	**+1.8**
	baz=256							
BELC	**Belle Mtn. Jos**	**89.78**	**55**	P	**P**	**09 47 00.4**	**+2.4**
	baz=256							
WVOR	**Wild Horse Val**	**89.91**	**47**	IAmb	IAmb	09 47 12.7		
	comp=Z,17nm,1.2s							
SHOC	**Shoshone, Teco**	**90.02**	**53**	P	**P**	**09 47 00.7**	**+1.8**
	baz=256							
BC3	**Big Chuckawall**	**90.13**	**56**	P	**P**	**09 47 01.9**	**+2.4**
	baz=256							
TUQ	**Turquoise Moun**	**90.18**	**54**	P	**P**	**09 47 01.7**	**+1.9**
	baz=256							
GMRC	**Granite Mounta**	**90.23**	**55**	P	**P**	**09 47 02.0**	**+1.9**
	baz=256							
SYO	**Syowa Base**	**90.27**	**198**	↓*e*PcP	**PcP**	**09 47 01.6**	**+1.1**
SYO	**Syowa Base**	**90.27**	**198**	↑*es*P	P	09 47 04.8	+5.4
J08A	**Circle Bar Ran**	**90.28**	**46**	IAmb	IAmb	09 47 14.7		
	comp=Z,13nm,1.1s							
TPNV	**Topopah Spring**	**90.29**	**52**	P	**P**	**09 47 02.4**	**+2.1**
	baz=256							
IRM	**Iron Mountain**	**90.50**	**55**	P	**P**	**09 47 03.6**	**+2.4**
	baz=256							
GLA	**Glamis**	**90.50**	**56**	P	**P**	**09 47 04.0**	**+2.7**
	baz=257							
SHPR	**Sheep Range**	**91.03**	**53**	P	**P**	**09 47 02.0**	**-1.8**
SHPR				IAmb	IAmb	09 47 21.0		
	comp=Z,10nm,1.3s							
R11A	**Troy Canyon, C**	**91.14**	**51**	P	**P**	**09 47 05.8**	**+1.6**
	baz=256							
R11A	**Troy Canyon, C**	**91.14**	**51**	P	**P**	**09 47 05.3**	**+1.1**
R11A				IAmb	IAmb	09 47 07.8		
	comp=Z,13nm,1.5s							
PDMCI	**Parker Dam,Lak**	**91.34**	**55**	P	**P**	**09 47 07.5**	**+2.5**
	baz=257							
MK31	**Makanchi Array**	**91.40**	**317**	P	**P**	**09 47 04.4**	**-0.7**
MK31				pmax	pmax			
	comp=Z,10.0nm,1.5s							
MK31	**Makanchi Array**	**91.40**	**317**	P	**P**	**09 47 04.4**	**-0.7**
MK31				IAmb	IAmb	09 47 06.2		
	comp=Z,10nm,1.4s							
MKAR	**Makanchi Array**	**91.40**	**317**	P	**P**	**09 47 04.7**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=97,slow=6.4,SNR=12							
MKAR				PKKPbc	**PKKPbc**	**10 04 27.4**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=247,slow=2.5,SNR=3.6							
MKAR	**Makanchi Array**	**91.40**	**317**	*i* P	**P**	**09 47 04.9**	**-0.2**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
BMO	**Blue Mountains**	**91.48**	**45**	P	**P**	**09 47 05.8**	**+0.2**
BMO				pmax	pmax			
	comp=Z,15nm,1.5s							
BMO	**Blue Mountains**	**91.48**	**45**	P	**P**	**09 47 05.8**	**+0.2**
BMO				IAmb	IAmb	09 47 08.8		
	comp=Z,15nm,1.5s							
MAKZ	**Makanchi**	**91.61**	**317**	P	**P**	**09 47 05.5**	**-0.5**
MAKZ				pmax	pmax			
	comp=Z,14nm,1.4s							
MAKZ	**Makanchi**	**91.61**	**317**	P	**P**	**09 47 05.5**	**-0.5**
MAKZ				IAmb	IAmb	09 47 07.8		
	comp=Z,14nm,1.4s							
F10A	**Beach Ranch, E**	**91.81**	**44**	P	**P**	**09 47 06.2**	**-0.9**
F10A				IAmb	IAmb	09 47 23.4		
	comp=Z,11nm,1.1s							
ZALV	**Zalesovo Beam**	**91.83**	**325**	P	**P**	**09 47 07.8**	**+0.9**
	comp=Z,1.2nm,0.5s,baz=91,slow=5.8,SNR=2.7							
ELK	**Elko**	**91.96**	**49**	P	**P**	**09 47 07.4**	**-0.7**
ELK				pmax	pmax			
	comp=Z,6.0nm,1.1s							
ELK	**Elko**	**91.96**	**49**	P	**P**	**09 47 07.3**	**-0.7**
MFID	**Camas Ranch**	**92.16**	**46**	P	**P**	**09 47 08.7**	**-0.1**
MFID				IAmb	IAmb	09 47 22.9		
	comp=Z,9.2nm,1.3s							
NEW	**Newport**	**92.46**	**41**	P	**P**	**09 47 09.3**	**-0.6**
NEW				pmax	pmax			
	comp=Z,11nm,1.4s							
NEW	**Newport**	**92.46**	**41**	P	**P**	**09 47 09.3**	**-0.6**
NEW				IAmb	IAmb	09 47 15.5		
	comp=Z,11nm,1.4s							
PSUT	**Pine Spring**	**92.50**	**51**	P	**P**	**09 47 11.1**	**+0.5**
LCMT	**Little Creek M**	**92.65**	**53**	P	**P**	**09 47 11.1**	**-0.1**
CCUT	**Cedar City**	**92.67**	**52**	P	**P**	**09 47 10.8**	**-0.6**
KNB	**Kanab**	**92.98**	**53**	P	**P**	**09 47 12.6**	**-0.2**
KNB				pmax	pmax			
	comp=Z,11nm,1.4s							
KNB	**Kanab**	**92.98**	**53**	P	**P**	**09 47 12.6**	**-0.2**
KSH	**Kashi**	**94.24**	**309**	P	**P**	**09 47 21.8**	**+3.3**
KSH				pP	pP	09 47 26.9	-1.8
KSH				sP	sP	09 47 30.8	-1.4
KSH				pmax	pmax			
	comp=Z,19nm,1.2s							
KURK	**Kurchatov**	**94.70**	**321**	*ce*P	**P**	**09 47 19.7**	**-0.4**
KURK				pmax	pmax			
	comp=Z,16nm,2.5s							
KURK	**Kurchatov**	**94.70**	**321**	P	**P**	**09 47 19.7**	**-0.4**
KURK	**Kurchatov**	**94.70**	**321**	IAmb	IAmb	09 47 21.1		
	comp=Z,14nm,1.5s							
KURBB	**Kurchatov Arra**	**94.73**	**321**	P	**P**	**09 47 19.7**	**-0.6**
	comp=Z,1.3nm,0.2s,baz=99,slow=4.6,SNR=6.5							
C36M	**Paulatuk**	**95.09**	**20**	P	**P**	**09 47 22.1**	**+0.7**
	baz=251							
C36M	**Paulatuk**	**95.09**	**20**	P	**P**	**09 47 21.8**	**+0.3**
C36M				IAmb	IAmb	09 47 37.5		
	comp=Z,8.7nm,1.1s							
NVL	**N'lazarevskaya**	**95.45**	**190**	*e*P	**P**	**09 47 20.1**	**-3.1**
NVL				*e*S	**SKSac**	**09 57 55.6**	**-0.3**
NVL				pmax	pmax			
	comp=Z,5.0nm,0.6s							
A36M	**Sachs Harbour**	**95.60**	**17**	P	**P**	**09 47 25.0**	**+1.3**
	baz=250							
AAK	**Ala-Archa**	**95.92**	**312**	*i* P	**P**	**09 47 25.6**	**-0.5**
AAK				pmax	pmax			
	comp=Z,1.0nm,0.9s							
SNAA	**Sanae**	**96.40**	**185**	P	**P**	**09 47 28.2**	**+0.5**
SNAA	**Sanae**	**96.40**	**185**	*i* P	**P**	**09 47 27.7**	**+0.1**
SNAA	**Sanae**	**96.40**	**185**	P	**P**	**09 47 28.4**	**+0.8**
SNAA				IAmb	IAmb	09 47 30.1		
	comp=Z,9.7nm,1.1s							
YKA	**Yellowknife Ar**	**97.05**	**28**	P	**P**	**09 47 30.2**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=256,slow=4.3,SNR=22							
YKA				PKKPbc	**PKKPbc**	**10 04 10.9**	**-2.6**
	comp=Z,0.2nm,0.6s,baz=89,slow=2.7,SNR=4.6							
VNA3	**Neumayer Olymp**	**97.25**	**183**	P	Pdif	09 47 31.7	+0.2
VNA2	**Neumayer--Watz**	**97.45**	**183**	P	Pdif	09 47 33.0	+0.6
VNA1	**Neumayer--Stat**	**97.77**	**183**	P	Pdif	09 47 35.0	+1.2
TXAR	**Lajitas Array**	**99.22**	**62**	P	**Pdif**	**09 47 42.3**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=229,slow=6.7,SNR=2.5							
ARCES	**ARCESS Array B**	**115.84**	**344**	PKP	**PKiKP**	**09 52 40.1**	**-0.8**
	comp=Z,2.6nm,0.6s,baz=79,slow=0.7,SNR=11							
RAYN	**Ar Rayn**	**118.75**	**291**	PKIKP	**PKPdf**	**09 52 46.9**	**-1.0**
RAYN	**Ar Rayn**	**118.75**	**291**		**PKPdf**	**09 52 46.9**	**-1.0**
KBZ	**Khabaz**	**118.87**	**314**	PKP	**PKiKP**	**09 52 47.7**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=197,slow=3.1,SNR=3.7							
KIV	**Kislovodsk**	**118.97**	**314**	*e*PKIKP	**PKPdf**	**09 52 47.2**	**-0.6**
KIV				*e*		09 54 04.3		
KIV				*e*PPP	PPP	09 56 39.7		
KIV				pmax	pmax			
	comp=Z,4.0nm,1.0s							
OBN	**Obninsk**	**119.29**	**328**	*e*PKIKP	**PKPdf**	**09 52 47.7**	**-0.2**
OBN				*e*		09 54 09.3		
OBN				*e*PPP	PPP	09 56 39.0		
OBN				pmax	pmax			
	comp=Z,5.0nm,0.9s							
FINES	**FINESS Array B**	**120.83**	**337**	PKP	**PKiKP**	**09 52 50.8**	**0.0**
	comp=Z,2.2nm,0.7s,baz=85,slow=4.6,SNR=7.8							
FINES	**FINESS Array B**	**120.83**	**337**	*c i*PKIKP	**PKiKP**	**09 52 51.5**	**+0.7**
FINES				pmax	pmax			
	comp=Z,2.0nm,0.8s							
SOC	**Sochi**	**121.15**	**314**	*i* PKIKP	**PKiKP**	**09 52 53.7**	**+1.7**
SOC				*e*		09 54 22.6		
SOC				*e*PS	**PS**	**10 04 14.3**	**-0.7**
SOC				*e*SS	SS	10 10 51.7	-1.0
SOC				*e*SSS	SSS	10 15 23.7		
BOSA	**Boshof**	**122.27**	**225**	PKIKP	PKPpre	09 52 47.7		
BOSA	**Boshof**	**122.27**	**225**		PKPpre	09 52 47.6		
CBOC	**Ciudad Bolivar**	**122.39**	**90**	*e*P	**PKPdf**	**09 52 55.2**	**-0.1**
ORTC	**Ortega, Tolima**	**122.79**	**93**	*e*P	**PKPdf**	**09 52 55.7**	**-0.2**
GUY2C	**Guyana, Caldas**	**122.92**	**91**	*e*P	**PKiKP**	**09 52 57.6**	**+0.7**
PRAC	**Prado**	**123.11**	**93**	*e*P	**PKiKP**	**09 52 56.7**	**0.0**
LPAZ	**La Paz**	**123.19**	**118**	PKP	**PKiKP**	**09 52 58.3**	**+0.7**
	comp=Z,4.1nm,1.0s,baz=336,slow=3.1,SNR=9.0							
KMBO	**Kilima Mbogo**	**123.75**	**261**	PKP	**PKiKP**	**09 53 00.9**	**+2.6**
	comp=Z,1.3nm,0.3s,baz=30,slow=3.4,SNR=5.5							
CHIC	**Chingaza**	**124.41**	**92**	*e*P	**PKPdf**	**09 52 57.8**	**-1.7**
AKASG	**Malin Array Be**	**125.22**	**325**	PKP	**PKiKP**	**09 52 59.9**	**+0.1**
	comp=Z,7.4nm,0.8s,baz=60,slow=2.3,SNR=23							
RUSC	**La Rusia**	**125.27**	**91**	*e*P	**PKPdf**	**09 53 00.6**	**-0.6**
OCAC	**Ocana**	**125.40**	**88**	*e*P	PKPpre	09 52 56.7		
ASF	**Jabal al Asfar**	**125.72**	**301**	PKP	**PKiKP**	**09 53 01.7**	**+0.2**
	comp=Z,5.7nm,0.8s,baz=82,slow=2.1,SNR=7.9							
PAMC	**Pamplona, Colo**	**125.88**	**89**	*e*P	PKPpre	09 52 54.3		
G65A	**Princeton**	**126.09**	**42**		**PKPdf**	**09 52 59.8**	**-1.5**
HFS	**Hagfors**	**126.11**	**341**	PKP	**PKPdf**	**09 53 00.5**	**-0.3**
	comp=Z,5.8nm,0.9s,baz=112,slow=1.6,SNR=5.0							
ILGA	**Ilgaz**	**126.13**	**313**		**PKiKP**	**09 53 02.6**	**+0.4**
NB2	**NORSAR Subarra**	**126.14**	**343**	PKPdf	**PKiKP**	**09 53 01.3**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=39,slow=1.9							
NOA	**NORSAR Array B**	**126.14**	**343**	PKP	**PKPdf**	**09 53 00.9**	**-0.1**
	comp=Z,2.9nm,0.8s,baz=34,slow=2.0,SNR=8.9							
CPUP	**Villa Florida**	**126.32**	**135**	PKP	**PKiKP**	**09 53 02.7**	**-0.1**
	comp=Z,7.1nm,0.9s,baz=245,slow=1.3,SNR=8.6							
BRTR	**Keskin Array B**	**126.58**	**311**	PKP	**PKPdf**	**09 53 02.1**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=159,slow=3.8,SNR=14							
BRTR	**Keskin Array B**	**126.58**	**311**	*c i*PKIKP	**PKiKP**	**09 53 03.2**	**+0.1**
BRTR				pmax	pmax			
	comp=Z,3.0nm,0.8s							
MMAI	**Mount Meron Ar**	**126.81**	**303**	PKP	**PKPdf**	**09 53 03.1**	**0.0**
	comp=Z,8.7nm,0.8s,baz=54,slow=4.2,SNR=14							
LSZ	**Lusaka**	**127.14**	**241**	PKIKP	**PKPdf**	**09 53 03.9**	**-0.4**
LSZ	**Lusaka**	**127.14**	**241**		**PKPdf**	**09 53 03.9**	**-0.4**
ANTO	**Ankara**	**127.16**	**312**	PKIKP	**PKPdf**	**09 53 02.3**	**-1.3**
ANTO	**Ankara**	**127.16**	**312**		**PKPdf**	**09 53 02.3**	**-1.3**
EIL	**Eilat**	**127.76**	**299**	PKP	**PKiKP**	**09 53 05.2**	**-0.3**
	comp=Z,6.4nm,0.7s,baz=207,slow=3.5,SNR=8.4							
SDV	**Santo Domingo**	**128.12**	**88**	*e*P	**PKPdf**	**09 53 05.7**	**-0.6**
SDV	**Santo Domingo**	**128.12**	**88**		**PKPdf**	**09 53 04.2**	**-2.1**
MLR	**Muntele Rosu**	**129.63**	**321**	PKP	**PKiKP**	**09 53 08.8**	**-0.2**
	comp=Z,2.5nm,0.5s,baz=122,slow=2.4,SNR=7.6							
MLR	**Muntele Rosu**	**129.63**	**321**	PKIKP	**PKPdf**	**09 53 07.4**	**-0.8**
MLR	**Muntele Rosu**	**129.63**	**321**		**PKPdf**	**09 53 07.4**	**-0.8**
UZH	**Uzhgorod**	**130.15**	**326**	*e*PKHKP	PKPpre	09 52 56.4	
SAML	**Samuel**	**130.63**	**112**	PKIKP	**PKPdf**	**09 53 09.6**	**-1.3**
SAML	**Samuel**	**130.63**	**112**		**PKPdf**	**09 53 09.6**	**-1.3**
VYHS	**Vyhne**	**132.09**	**328**	*e*PKIKP	**PKiKP**	**09 53 13.8**	**+0.1**
VYHS	**Vyhne**	**132.09**	**328**	*e*PKP	**PKiKP**	**09 53 13.8**	**+0.1**
BRG	**Berggiesshubel**	**132.90**	**333**	*e*PKP	**PKiKP**	**09 53 15.5**	**+0.3**
	comp=Z,13nm,1.3s							
BRG	**Berggiesshubel**	**132.90**	**333**	*e*PKIKP	**PKiKP**	**09 53 15.5**	**+0.3**
BRG				pmax	pmax			
	comp=Z,13nm,1.3s							
CLL	**Collm**	**133.00**	**334**	*e*PKPdf	**PKiKP**	**09 53 15.0**	**-0.4**
	comp=Z,7.0nm,1.2s							
CLL				LmH		10 32 00.0		
	comp=N,300nm,21.0s							
CLL				LmH		10 32 00.0		
	comp=E,200nm,21.1s							
CLL				LmH		10 32 00.0		
	comp=Z,400nm,20.9s							
CLL				LmV		10 38 00.0		
	comp=Z,400nm,18.3s							
CLL	**Collm**	**133.00**	**334**	*e*PKIKP	**PKiKP**	**09 53 15.0**	**-0.4**
CLL				pmax	pmax			
	comp=Z,7.0nm,1.2s							
CONA	**Conrad Observa**	**133.99**	**329**	*e*PKiKP	**PKiKP**	**09 53 17.5**	**-0.2**
	comp=Z,8.7nm,1.1s							
KHC	**Kasperske Hory**	**134.29**	**331**	*e*PKIKP	**PKPdf**	**09 53 13.0**	**-3.8**
KHC	**Kasperske Hory**	**134.29**	**331**	*e*PKP	**PKPdf**	**09 53 13.0**	**-3.8**
GERES	**GERESS Array B**	**134.43**	**331**	PKP	**PKPdf**	**09 53 17.2**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=5.7,slow=1.3,SNR=12							
IDI	**Anoyia**	**134.59**	**309**	PKP	**PKiKP**	**09 53 18.7**	**-0.5**
	comp=Z,11nm,0.9s,baz=28,slow=17,SNR=3.8							
SOKA	**Soboth**	**135.23**	**328**	*i* PKiKP	**PKiKP**	**09 53 19.7**	**-0.5**
	comp=Z,6.7nm,1.2s							
KBA	**Koelnbreinsper**	**135.82**	**329**	*i* PKiKP	**PKPdf**	**09 53 20.1**	**+0.1**
	comp=Z,11nm,1.3s							
ABTA	**Abfaltersbach**	**136.47**	**330**	*i* PKiKP	**PKPdf**	**09 53 21.4**	**+0.4**
	comp=Z,10nm,1.2s							
WATA	**Walderalm**	**136.51**	**331**	*e*PKiKP	**PKiKP**	**09 53 22.1**	**-0.8**
	comp=Z,4.8nm,0.6s							
WTTA	**Wattenberg**	**136.53**	**331**	*e*PKiKP	**PKiKP**	**09 53 22.7**	**-0.3**
	comp=Z,15nm,1.2s							
MOTA	**Moosalm**	**136.72**	**331**	*i* PKiKP	**PKiKP**	**09 53 22.4**	**-0.9**
	comp=Z,9.8nm,0.8s							
FETA	**Feichten**	**137.14**	**331**	*i* PKiKP	**PKiKP**	**09 53 23.6**	**-0.6**
	comp=Z,13nm,1.1s							
FUORN	**Ofenpass-Fuorn**	**137.65**	**331**		**PKPdf**	**09 53 23.0**	**-0.4**
DAVOX	**Davos/Dischmat**	**137.71**	**332**	PKP	**PKPdf**	**09 53 23.7**	**+0.3**
	comp=Z,1.7nm,0.3s,baz=269,slow=5.7,SNR=6.4							
SGRT	**San Giovanni R**	**137.88**	**322**		**PKPdf**	**09 53 23.0**	**-0.7**
TIP	**Timpagrande**	**138.69**	**318**		**PKPdf**	**09 53 24.4**	**-0.9**
BDFB	**Brasilia**	**139.82**	**132**	PKP	**PKPdf**	**09 53 29.2**	**+1.2**
	comp=Z,1.4nm,0.3s,baz=160,slow=11,SNR=3.2							
KEST	**Kesra**	**145.49**	**319**	PKPbc	**PKPab**	**09 53 38.4**	**+0.5**
	comp=Z,20nm,1.0s,baz=318,slow=3.0,SNR=12							
KEST	**Kesra**	**145.49**	**319**		**PKPab**	**09 53 38.8**	**+1.0**
MVO	**Moncorvo**	**148.94**	**344**	*e*PKP	**PKPdf**	**09 53 44.9**	**+1.8**
PVRL	**Vila Real**	**149.02**	**345**	*e*PKP	**PKiKP**	**09 53 48.5**	**-0.1**
ESDC	**Sonseca Array**	**149.33**	**339**	PKP	**PKPdf**	**09 53 43.1**	**-0.7**
	comp=Z,0.8nm,1.0s,baz=289,slow=3.9,SNR=2.9							
ESDC				PKPbc	**PKiKP**	**09 53 48.9**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=17,slow=2.7,SNR=9.3							
PVIS	**Viseu**	**149.59**	**345**	*e*PKP	**PKiKP**	**09 53 50.0**	**+0.2**
MTE	**Manteigas**	**149.79**	**344**	*e*PKP	**PKiKP**	**09 53 50.8**	**+0.6**
PCBR	**Castelo Branco**	**150.30**	**344**	*e*PKP	**PKiKP**	**09 53 51.8**	**+0.6**
PMRV	**Marv??o**	**150.66**	**343**	*e*PKP	**PKiKP**	**09 53 52.8**	**+0.8**
PMTG	**Montargil**	**151.22**	**344**	*e*PKP	**PKiKP**	**09 53 53.8**	**+0.7**
PBEJ	**Beja**	**152.09**	**343**	*e*PKP	**PKiKP**	**09 53 56.3**	**+1.3**
PNCL	**Nicolau / Gran**	**152.20**	**344**	*e*PKP	**PKiKP**	**09 53 56.6**	**+1.4**
MESJ	**Messejana**	**152.37**	**343**	*e*PKP	**PKiKP**	**09 53 56.5**	**+1.0**
PVAQ	**Vaqueiros**	**152.63**	**342**	*e*PKP	**PKiKP**	**09 53 57.7**	**+1.6**
PBDV	**Barranco-do-Ve**	**152.84**	**342**	*e*PKP	**PKiKP**	**09 53 58.2**	**+1.6**
PFVI	**Vila Bisbo**	**153.20**	**344**	*e*PKP	**PKPbc**	**09 53 56.0**	**-1.1**
MDT	**Midelt**	**155.51**	**332**	PKPab	**PKPab**	**09 54 19.3**	**+0.4**
	comp=Z,2.8nm,0.9s,baz=2.7,slow=3.1,SNR=4.2							
TOA0	**Torodi Ar. Sit**	**160.75**	**277**		**PKPdf**	**09 54 00.8**	**+0.9**
TORD	**Torodi Ar. Bea**	**160.75**	**277**	PKP	**PKPdf**	**09 53 59.7**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=16,slow=1.8,SNR=12							
TORD				PKPab	**PKPab**	**09 54 42.7**	**+0.6**
	comp=Z,3.3nm,0.7s,baz=90,slow=3.8,SNR=9.1							
DBIC	**Dimbokro**	**166.22**	**251**	PKPab	**PKPab**	**09 55 07.0**	**+0.9**
	comp=Z,2.3nm,0.6s,baz=116,slow=3.1,SNR=4.4							

IDC ***23*** *09:37:36.7±2.9, 53°.60N×87°.86E, h0km, mb1 3.1/2, mb1mx3.0/41, mbtmp3.1/2, ML3.0/2, Error ellipse: s-maj=24.7km s-min=15.3km az=56.0*

NNC ***23*** *09:37:36.0±1.8, 53°.49N×87°.96E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=15.2km s-min=8.0km az=59.0, Suspected

STKA	Stephens Creek	36.27 245	P	P	09 58 42.2	+0.5	
COEN	Coen	36.44 276	P	P	09 58 43.8	+0.5	
	baz=42,SNR=6.1						
COEN	Coen	36.44 276	P	P	09 58 44.0	+0.7	
COEN			IAmb	IAmb	09 58 53.4		
	comp=Z,12nm,1.2s						
QIS	Mount Isa	38.29 264	P	P	09 58 57.8	-0.5	
	baz=44						
HTT	Hallett	38.69 243	P	P	09 59 01.7	+0.3	
	baz=44,SNR=6.5						
BBOO	Buckleboo	41.02 244	P	P	09 59 18.2	-1.7	
	baz=46,SNR=27						
BBOO	Buckleboo	41.02 244	P	P	09 59 19.9	0.0	
BBOO			IAmb	IAmb	09 59 20.5		
	comp=Z,7.5nm,0.8s						
WR0	Warramunga Arr	43.07 263	P	P	09 59 35.0	-1.1	
WR0			IAmb	IAmb	09 59 35.9		
	comp=Z,5.8nm,1.1s						
AS31	Alice Springs	43.11 258	P	P	09 59 36.3	-0.1	
ASAR	Alice Springs	43.11 258	P	P	09 59 36.2	-0.2	
	comp=Z,10nm,0.8s,baz=95,slow=7.8,SNR=146						
ASAR			ScP	ScP	10 04 07.2	+0.6	
	comp=Z,0.7nm,0.9s,baz=104,slow=4.2,SNR=4.3						
JAY	Jayapura	43.21 290	P	P	09 59 37.0	-0.3	
	comp=Z,8.8nm,0.5s,baz=118,slow=3.8,SNR=8.6						
WC3	Warramunga Arr	43.23 263	P	P	09 59 36.7	-0.7	
	baz=48						
WB0	Warramunga Arr	43.24 264	P	P	09 59 36.7	-0.8	
WB0			IAmb	IAmb	09 59 37.4		
	comp=Z,8.6nm,0.6s						
WB2	Warramunga Arr	43.25 263	P	P	09 59 36.9	-0.6	
WB2			IAmb	IAmb	09 59 37.6		
	comp=Z,6.3nm,0.8s						
WRAB	Tennant Creek	43.26 263	P	P	09 59 36.7	-0.8	
WRAB			IAmb	IAmb	09 59 37.3		
	comp=Z,5.0nm,0.8s						
WRA	Warramunga Arr	43.26 263	P	P	09 59 36.8	-0.8	
	comp=Z,4.5nm,0.5s,baz=96,slow=7.6,SNR=161						
KDU	Kakadu	46.76 273	P	P	10 00 03.8	-0.5	
	baz=52,SNR=11						
FORT	Forrest	47.79 247	P	P	10 00 11.2	-0.5	
	baz=53,SNR=8.4						
FORT	Forrest	47.79 247	P	P	10 00 11.4	-0.4	
FORT			IAmb	IAmb	10 00 11.9		
	comp=Z,12nm,0.7s						
WRKA	Warakurna	48.03 255	P	P	10 00 13.4	-0.3	
	baz=53,SNR=44						
KNRA	Kununurra	49.38 267	P	P	10 00 23.4	-0.4	
	baz=55,SNR=3.7						
KNRA	Kununurra	49.38 267	P	P	10 00 23.3	-0.4	
FAKI	Fak Fak	50.54 285	P	P	10 00 32.0	-0.2	
FAKI			IAmb	IAmb	10 00 49.9		
	comp=Z,12nm,1.1s						
FITZ	Fitzroy Crossi	51.69 263	P	P	10 00 40.1	-0.3	
	baz=57,SNR=12						
FITZ	Fitzroy Crossi	51.69 263	P	P	10 00 40.3	-0.2	
	comp=Z,2.7nm,0.4s,baz=124,slow=7.1,SNR=21						
FITZ	Fitzroy Crossi	51.69 263	P	P	10 00 39.5	-1.0	
SIJI	Sorong	52.32 286	P	P	10 00 44.3	-0.7	
	comp=Z,14nm,0.7s,baz=57,slow=9.9,SNR=6.3						
SOEI	Soe	55.32 273	P	P	10 01 04.6	-1.6	
SOEI			IAmb	IAmb	10 01 11.8		
	comp=Z,17nm,0.7s						
PSA00	Pilbara Seismi	56.26 258	P	P	10 01 12.0	-0.5	
PSA00			IAmb	IAmb	10 01 26.3		
	comp=Z,6.5nm,1.1s						
MEEK	Meekatharra	56.45 252	P	P	10 01 12.8	-0.9	
	baz=62,SNR=3.1						
GIRL	Giralia	61.12 255	P	P	10 01 45.7	+0.8	
QSPA	South Pole Qui	68.60 180	P	P	10 02 31.4	+0.2	
NVAR	Mina Array Bea	82.57 44	P	P	10 03 48.5	-0.4	
	comp=Z,0.8nm,0.8s,baz=221,slow=7.5,SNR=4.7						
TXAR	Lajitas Array	88.61 58	P	P	10 04 18.1	+0.2	
	comp=Z,0.5nm,0.8s,baz=220,slow=6.8,SNR=7.0						
CMAR	Chiang Mai Arr	89.29 290	P	P	10 04 19.5	-1.6	
	comp=Z,1.1nm,0.3s,baz=108,slow=2.9,SNR=3.2						

IDC 23 09:55:12.9±2.9, 53°.79N×86°.98E, h0km, mb1 3.1/2, mb1mx3.0/61, mbtmp3.1/2, ML2.6/2, Error ellipse: s-maj=26.7km s-min=17.4km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.29	278	*i*		10 03 10.0	
	baz=96,slow=317,SNR=4.5						
ZALV	Zalesovo Beam	1.29	278	Pg	Pg	09 55 36.9	-0.7
	baz=95,slow=16,SNR=1.3						
ZALV				Lg	Lg	09 55 54.2	
	1.0nm,0.3s,baz=96,slow=26,SNR=1.8						
KURBB	Kurchatov Arra	6.09	242	Pn	Pn	09 56 44.8	+0.8
	0.1nm,0.3s,baz=57,slow=14,SNR=8.7						
KURBB				Lg	Lg	09 58 26.4	
	baz=62,slow=30,SNR=1.6						
MKAR	Makanchi Array	7.62	205	Pn	Pn	09 57 06.3	+1.1
	0.2nm,0.3s,baz=26,slow=14,SNR=4.6						

BEO 23 10:04:06.6±1.0, 43°.53N×23°.35E, h0km, ML1.3/5, Mining explosion., Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MPEP	Malo Peshtene	0.33	121	*i* P	Pg	10 04 11.0	-2.0
MPEP				S	Sg	10 04 16.6	-0.7
ZAPS	Zavoj	0.58	244	*e*Pg	Pg	10 04 17.2	-0.5
ZAPS				*e*Sg	Sg	10 04 24.2	-1.1
ZAGS	Zajecar	0.86	290	*e*Pg	Pg	10 04 21.4	-1.7
ZAGS				*e*Sg	Sg	10 04 34.8	+0.6
VTS	Vitosha	0.92	185	*e*Pg	Pg	10 04 23.9	-0.2
VTS				*e*Sg	Sg	10 04 36.3	+0.3
VTS	Vitosha	0.92	185	S	Sn	10 04 43.6	+2.8
BOSS	Bosilegrad	1.22	212	*e*Pg	Pg	10 04 28.3	-1.6
BOSS				*e*Sg	Sb	10 04 46.2	-0.5
BARS	Barje	1.33	238	*e*Pg	Pg	10 04 29.9	-2.2
BARS				*e*Sg	Sg	10 04 48.8	-0.5

SKO 23 10:04:07.8, 41°.63N×23°.70E, h4km, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	Valandovo	0.90	250	*i* Sg	Sg	10 04 37.0	+0.2
VAY				*e*Lg	Lg	10 04 39.7	
	comp=N,4.3nm,0.5s						
VAY	Valandovo	0.90	250	*i* Sg	Sg	10 04 37.0	+0.2
VAY				*e*Lg	Lg	10 04 39.7	
	comp=N,4.3nm,0.5s						
STIP	Stip	1.14	274	*i* Pg	Pg	10 04 24.9	-4.6
STIP				*i* Sg	Sg	10 04 38.1	-6.2
STIP				*e*Lg	Lg	10 04 40.2	
	comp=N,3.3nm,0.3s						
STIP	Stip	1.14	274	*i* Pg	Pg	10 04 24.9	-4.6
STIP				*i* Sg	Sg	10 04 38.1	-6.2
STIP				*e*Lg	Lg	10 04 40.2	
	comp=N,3.3nm,0.3s						

IDC 23 10:04:32.0±2.4, 24°.29S×179°.90E, h496km±23km, mb3.1/5, mb1 3.4/7, mb1mx3.1/22, mbtmp4.1/7, Error ellipse: s-maj=27.4km s-min=19.4km az=40.0

NEIC 23 10:04:32.5±1.1, 24°.3S±0°.1×179°.9E±0°.1, h504km±6km, mb4.2/17, Error ellipse: s-maj=19.5km s-min=17.2km az=88.0

ISC 23 10:04:33.4±0.7, 24°.29S±0°.09×179°.92E±0°.10, h517km, n32, σ0s88/35, mb4.1/13, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.75	345	P	P	10 06 17.6	-0.4
NIUE	Niue	10.77	63	P	P	10 06 58.2	-0.9
DZM	Mont Dzumac	12.59	277	P	P	10 07 18.6	+0.3
	0.2nm,0.3s,baz=148,slow=21,SNR=1.8						
DZM	Mont Dzumac	12.59	277	P	P	10 07 17.6	-0.8
URZ	Urewera	14.13	189	P	P	10 07 33.5	-0.7
	0.7nm,0.3s,baz=343,slow=4.1,SNR=6.0						
URZ				S	S	10 10 02.9	-0.3
	0.7nm,0.3s,baz=79,slow=20,SNR=6.6						
BKZ	Black Stump Fm	15.12	190	P	P	10 07 43.4	-1.0
BKZ				IAmb	IAmb	10 07 59.5	
	comp=Z,14nm,1.2s						
QRZ	Quartz Range	17.62	199	P	P	10 08 07.6	-1.7
LTZ	Lake Taylor	19.50	197	P	P	10 08 26.3	-0.1
CTAO	Charters Tower	31.41	271	P	P	10 10 12.9	+0.8
STKA	Stephens Creek	34.51	249	P	P	10 10 38.5	+0.3
	comp=Z,0.7nm,0.5s,baz=108,slow=11,SNR=4.7						
STKA	Stephens Creek	34.51	249	P	P	10 10 38.2	0.0
BBOO	Buckleboo	39.23	247	P	P	10 11 16.7	-0.3
BBOO				IAmb	IAmb	10 11 18.3	
	comp=Z,8.4nm,1.5s						
AS31	Alice Springs	41.90	261	P	P	10 11 38.4	-0.1
ASAR	Alice Springs	41.90	261	P	P	10 11 38.5	-0.1
	comp=Z,1.0nm,0.4s,baz=93,slow=7.2,SNR=41						
ASAR				ScP	ScP	10 16 26.0	+2.7
	comp=Z,0.6nm,0.8s,baz=113,slow=4.5,SNR=4.5						
WR0	Warramunga Arr	42.12	267	P	P	10 11 39.8	-0.5
WR0				IAmb	IAmb	10 11 53.8	
	comp=Z,12nm,1.5s						
WB2	Warramunga Arr	42.30	267	P	P	10 11 41.3	-0.4
WB2				IAmb	IAmb	10 11 41.5	
	comp=Z,4.9nm,0.5s						
WRAB	Tennant Creek	42.30	267	P	P	10 11 41.3	-0.5
WRAB				IAmb	IAmb	10 11 41.4	
	comp=Z,4.2nm,0.5s						
WB0	Warramunga Arr	42.30	267	P	P	10 11 41.1	-0.7
WB0				IAmb	IAmb	10 11 41.7	
	comp=Z,5.5nm,0.7s						
WRA	Warramunga Arr	42.31	267	P	P	10 11 41.1	-0.7
	comp=Z,3.5nm,0.5s,baz=97,slow=8.2,SNR=143						
WRA				ScP	ScP	10 16 27.3	+2.3
	comp=Z,0.7nm,0.9s,baz=94,slow=4.1,SNR=2.9						
JAY	Jayapura	43.60	294	P	P	10 11 51.3	-0.7
	baz=132,slow=14						
FORT	Forrest	46.11	250	P	P	10 12 10.6	-0.5
MTN	Manton Dam	47.41	275	P	P	10 12 20.4	-0.7
MTN				IAmb	IAmb	10 12 26.4	
	comp=Z,11nm,1.2s						
KNRA	Kununurra	48.62	270	P	P	10 12 30.1	+0.1
KNRA				IAmb	IAmb	10 12 30.6	
	comp=Z,6.5nm,0.9s						
VNDA	Vanda	53.99	185	P	P	10 13 08.0	-0.1
	comp=Z,0.4nm,0.3s,baz=4.0,slow=2.6,SNR=7.5						
VNDA	Vanda	53.99	185	P	P	10 13 08.0	-0.1
QSPA	South Pole Qui	65.80	180	P	P	10 14 28.3	+1.4
QSPA				IAmb	IAmb	10 14 29.1	
	comp=Z,4.9nm,1.0s						
SNAA	Sanae	84.28	179	P	P	10 16 09.8	-0.3
SNAA	Sanae	84.28	179	P	P	10 16 09.8	-0.3
VNA3	Neumayer Olymp	84.49	177	P	P	10 16 10.9	-0.2
VNA2	Neumayer--Watz	84.91	178	P	P	10 16 13.1	0.0
TXAR	Lajitas Array	90.70	58	P	P	10 16 42.1	+1.0
	comp=Z,0.4nm,0.7s,baz=208,slow=6.7,SNR=7.4						
TORD	Torodi Ar. Bea	168.79	189	PKPab	PKPab	10 24 55.3	-0.2
	comp=Z,0.5nm,1.0s,baz=188,slow=2.7,SNR=2.2						

NNC 23 10:13:20.1±4.8, 36°.88N×69°.63E, h0km, mb4.2, mpv4.2, Error ellipse: s-maj=40.3km s-min=33.0km az=137.0

ISC 23 10:13:10.9±1.8, 36°.2N±0°.1×70°.2E±0°.2, h35km, n10, σ1s73/13, 4C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	5.94	128	*e*P	Pn	10 14 36.0	-0.3
THN				*e*S	Sn	10 15 31.5	-12
AML	Almayashu	6.52	24	P	Pn	10 14 45.4	+0.7
	SNR=5.1						
KK31	Karatay Array	6.90	2	⇑P	Pn	10 14 52.9	+3.4
	6.4nm,0.3s,baz=190,slow=16,SNR=27						
KK31				⇓S	Sn	10 16 07.0	+0.3
	2.9nm,0.4s,baz=191,slow=23,SNR=5.5						
UCH	Uchtor	6.90	28	P	Pn	10 14 50.1	+0.2
	SNR=6.5						
EKS2	Erkin-Say	7.03	22	P	Pn	10 14 52.6	+1.2
	SNR=6.2						
AAK	Ala-Archa	7.25	26	P	Pn	10 14 55.0	+0.6
	SNR=5.1						
CHMS	Chumysh	7.65	26	P	Pn	10 15 00.4	+0.5
	SNR=7.7						
USP	Ospenovka	7.80	24	P	Pn	10 15 02.4	+0.4
	SNR=5.9						
AB31	Akbulak array	15.03	333	⇑P	P	10 16 44.4	-1.2
	1.1nm,0.4s,baz=163,slow=11,SNR=31						
AB31				⇑S	Sn	10 19 24.0	-1.8
	1.3nm,0.4s,baz=159,slow=23,SNR=5.8						
AKTO	Aktyubinsk	16.71	332	⇓P	P	10 17 05.3	+1.0
	2.3nm,0.7s						
AKTO				⇑S	Sn	10 20 03.5	-3.1
	1.5nm,0.8s						

NEIC 23 10:44:15.5±2.2, 28°.00S±0°.06×66°.8W±0°.2, h162km±16km, mb4.0/3, Md3.5(SJA), Error ellipse: s-maj=19.8km s-min=8.8km az=95.0

IDC 23 10:44:19.2±5.6, 27°.83S×66°.87W, h176km±46km, mb3.0/2, mb1 3.3/4, mb1mx3.1/19, mbtmp3.6/4, Error ellipse: s-maj=59.4km s-min=30.4km az=36.0

ISC 23 10:44:16.5±0.7, 27°.99S±0°.05×66°.98W±0°.08, h164km, n40, σ1s59/64, mb3.8/4, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GO03	Copiap	2.91	277		Pn	10 45 05.7	+2.3
GO03				Sn	Sn	10 45 41.0	+1.4
AC05	El Transito	3.02	253		Pn	10 45 07.5	+2.7
AC05				Sn	Sn	10 45 45.2	+2.9
CO01	Juntas del Tor	3.37	233		Pn	10 45 12.2	+2.9
CO01				Sn	Sn	10 45 52.2	+1.8
AC04	Llanos de Chal	3.62	266		Pn	10 45 13.7	+1.5
AC04				Sn	Sn	10 45 55.5	-0.2
GO02	Mina Guanaco	3.66	320	Pn	Pn	10 45 13.5	+0.5
GO02				Sn	Sn	10 45 59.7	+2.7
AC01	Pan de Azucar	3.71	299	Pn	Pn	10 45 15.4	+2.0
AC01				Sn	Sn	10 45 57.2	-0.5
GO04	Tololo Observa	3.99	236		Pn	10 45 18.5	+1.3
GO04				Sn	Sn	10 46 06.0	+1.5
CO03	El Pedregal	4.31	228		Pn	10 45 22.5	+1.4
CO03				Sn	Sn	10 46 13.5	+1.9
CO02	Combarbal	4.75	227		Pn	10 45 27.6	+0.7
CO02				Sn	Sn	10 46 22.7	+0.8
PB15	IPOC Station P	5.26	334	Pn	Pn	10 45 36.2	+2.4
PB15				Sn	Sn	10 46 35.0	+0.7
LVC	Limon Verde	5.63	342	Pn	Pn	10 45 38.9	+0.1
LVC				Sn	Sn	10 46 44.0	+0.8
VA03	San Esteban	5.67	212		Pn	10 45 39.7	+0.6
VA03				Sn	Sn	10 46 43.4	-0.4
PB06	IPOC Station P	5.76	335	Pn	Pn	10 45 41.7	+1.4
PB06				Sn	Sn	10 46 45.8	-0.2
PEL	Peldehue	6.05	211		Pn	10 45 43.9	-0.1
PEL				Sn	Sn	10 46 52.7	0.0
ROC1	El Roble	6.07	214		Pn	10 45 44.0	-0.4
ROC1				Sn	Sn	10 46 52.9	-0.6
MT05	Renca	6.28	210	Pn	Pn	10 45 47.4	+0.3
MT05				Sn	Sn	10 46 58.4	+0.2
PB04	IPOC Station P	6.32	332	Pn	Pn	10 45 48.1	+0.4
PB04				Sn	Sn	10 46 58.1	-1.2
MT02	Curacav	6.36	213	Pn	Pn	10 45 47.6	-0.5
MT02				Sn	Sn	10 46 58.2	-1.7
PB07	IPOC Station P	6.77	336	Pn	Pn	10 45 54.4	+0.7
PB07				Sn	Sn	10 47 08.9	-1.2
MT01	Popeta	6.91	211	Pn	Pn	10 45 53.7	-1.6
MT01				Sn	Sn	10 47 10.0	-3.1
PB01	IPOC Station P	7.28	341	Pn	Pn	10 46 01.2	+0.8
PB01				Sn	Sn	10 47 18.7	-3.5
BO02	Sierra Bellavi	7.52	205		Pn	10 46 02.6	-0.9
BO02				Sn	Sn	10 47 28.3	+0.5
PB08	IPOC Station P	8.06	345	Pn	Pn	10 46 10.6	-0.4
PB08				Sn	Sn	10 47 40.1	-1.2
GO05	Huala	8.18	210	Pn	Pn	10 46 09.1	-3.0
GO05				Sn	Sn	10 47 38.7	-4.7
GO01	Chusmiza	8.52	346	Pn	Pn	10 46 15.8	-1.5
PB11	IPOC Station P	8.55	343	Pn	Pn	10 46 16.3	-1.0
CPUP	Villa Florida	8.75	81	P	Pn	10 46 21.6	+1.7
	0.1nm,0.3s,baz=249,slow=17,SNR=1.1						
PSGCX	Pisagua	8.83	340	Pn	Pn	10 46 19.2	-1.8
MNMC	Minye Minye	9.13	344	Pn	Pn	10 46 23.2	-2.0
BI02	San Fabin de	9.38	202		Pn	10 46 27.9	-0.3
PB16	IPOC Station P	9.88	346	Pn	Pn	10 46 34.8	-0.5
LPAZ	La Paz	11.69	355	P	Pn	10 46 58.8	-0.3
	0.5nm,0.3s,baz=150,slow=7.3,SNR=11						
SAML	Samuel	19.27	11	P	P	10 48 27.6	-1.0
SAML				IAmb	IAmb	10 48 31.3	
	comp=Z,3.7nm,0.8s						
PTGA	Pitinga	27.92	15	P	P	10 49 50.8	-0.6
PTGA				IAmb	IAmb	10 49 54.2	
	comp=Z,3.3nm,0.9s						
SNAA	Sanae	55.61	160	P	P	10 53 34.3	-0.4
SNAA				IAmb	IAmb	10 53 40.0	
	comp=Z,4.6nm,1.4s						
TXAR	Lajitas Array	66.94	325	P	P	10 54 53.1	+1.6
	comp=Z,0.1nm,0.5s,baz=131,slow=6.5,SNR=2.0						
TORD	Torodi Ar. Bea	78.01	68	P	P	10 55 57.6	+0.4
	comp=Z,0.6nm,0.7s,baz=256,slow=6.2,SNR=3.5						
ASAR	Alice Springs	124.84	203	PKP	PKiKP	11 02 58.0	+0.2
	comp=Z,0.2nm,0.4s,baz=154,slow=1.4,SNR=2.2						
WRA	Warramunga Arr	128.08	206	PKP	PKiKP	11 03 05.2	+0.9
	comp=Z,0.4nm,0.5s,baz=156,slow=1.9,SNR=12						
MKAR	Makanchi Array	149.48	44	PKPbc	PKiKP	11 03 46.5	-0.6
	comp=Z,0.2nm,0.5s,baz=275,slow=3.6,SNR=2.4						

NNC 23 10:56:60.0±1.1, 52°.08N×75°.60E, h0km, mb3.5, mpv3.1, 2C-3D, Error ellipse: s-maj=17.1km s-min=7.1km az=27.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	Kurchatov Arra	2.35	127	⇑Pn	Pn	10 57 40.1	+0.4
	8.1nm,0.7s,baz=307,slow=18						
KURBB				⇓Sn	Sn	10 58 10.1	+0.8
	57nm,0.8s,baz=311,slow=30						
BVA1	Borovoye Array	3.32	289	⇓Pg	Pb	10 58 00.4	+0.6
BVA1				⇓Lg	Lg	10 58 45.1	
MK31	Makanchi Array	6.86	138	⇑Lg	Lg	11 00 36.9	
	5.3nm,0.8s,baz=315,slow=22,SNR=11						

NEIC 23 11:39:15.0±1.2, 21°.13S±0°.04×69°.0W±0°.1, h113km±6km, Error ellipse: s-maj=14.1km s-min=5.6km az=88.0

GUC 23 11:39:15.6±0.6, 21°.15S×68°.96W, h114km±3km, ML3.8

IDC 23 11:39:16.1±1.2, 21°.19S×68°.53W, h116km±15km, mb3.4/3, mb1 3.5/5, mb1mx3.3/30, mbtmp3.9/5, Error ellipse: s-maj=34.8km s-min=17.6km az=112.0

ISC 23 11:39:14.8±0.8, 21°.12S±0°.03×68°.95W±0°.06, h118km±6km, n51, σ1s27/84, 13C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	IPOC Station P	0.51	278	⇑*i* P	Pn	11 39 32.1	-0.5
PB01				*e*S	Sn	11 39 45.1	-0.9
PB01				IAML		11 39 45.7	
	comp=N,9μm,0.3s						
PB01	IPOC Station P	0.51	278	Pn	Pn	11 39 32.2	-0.5
PB01				Sn	Sn	11 39 45.0	-1.1
PB09	IPOC Station P	0.73	202	*e*P	Pn	11 39 33.9	-0.5
PB09				*e*S	Sn	11 39 48.8	-0.3
PB09				IAML		11 39 50.4	
	comp=N,2μm,0.2s						
PB09	IPOC Station P	0.73	202		Pn	11 39 33.9	-0.5
PB09				Sn	Sn	11 39 48.1	-1.1
PB02	IPOC Station P	0.90	257	⇑*i* P	Pn	11 39 35.7	-0.1
PB02				*i* S	Sn	11 39 51.2	-0.5
PB02				IAML		11 39 52.2	
	comp=N,7μm,0.4s						
PB08	IPOC Station P	0.99	349	⇑*e*P	Pn	11 39 37.4	+0.4
PB08				*e*S	Sn	11 39 54.4	+0.8
PB08				IAML		11 39 55.6	
	comp=E,1μm,0.8s						
PB08	IPOC Station P	0.99	349		Pn	11 39 37.2	+0.2
PB08				Sn	Sn	11 39 54.1	+0.5
PB07	IPOC Station P	1.06	235	⇑*i* P	Pn	11 39 37.0	-0.4
PB07				*i* S	Sn	11 39 53.8	-0.8
PB07				IAML		11 39 54.9	
	comp=E,2μm,0.2s						
PB07	IPOC Station P	1.06	235		Pn	11 39 36.8	-0.6
PB07				Sn	Sn	11 39 53.2	-1.4
PATCX	Punta Patache	1.16	284	⇑*i* P	Pn	11 39 38.4	+0.1
PATCX				*i* S	Sn	11 39 56.1	-0.1
PATCX				IAML		11 39 57.9	
	comp=E,2μm,0.2s						
PATCX	Punta Patache	1.16	284		Pn	11 39 38.4	+0.1
PATCX				Sn	Sn	11 39 55.7	-0.5
PB03	IPOC Station P	1.19	219	⇑*i* P	Pn	11 39 38.4	-0.4
PB03				*e*S	Sn	11 39 55.9	-1.1
PB03				IAML		11 39 56.8	
	comp=E,2μm,0.3s						
TA01	Diego Aracena	1.27	295	⇑*i* P	Pn	11 39 39.2	-0.3
TA01				*i* S	Sn	11 39 57.5	-0.7
TA01				IAML		11 39 58.8	
	comp=E,2μm,0.3s						
TA01	Diego Aracena	1.27	295		Pn	11 39 39.2	-0.3
TA01				Sn	Sn	11 39 57.5	-0.7
TA02	Huaiquique	1.39	307	*e*P	Pn	11 39 40.5	-0.3
TA02				*e*S	Sn	11 40 00.1	-0.4
TA02				IAML		11 40 02.5	
	comp=N,3μm,0.1s						
GO01	Chusmiza	1.46	351	*e*P	Pn	11 39 42.8	+0.7
GO01				*e*S	Sn	11 40 03.9	+1.1
GO01				IAML		11 40 06.3	
	comp=E,2μm,0.1s						
GO01	Chusmiza	1.46	351		Pn	11 39 42.6	+0.5
GO01				Sn	Sn	11 40 04.0	+1.3
LVC	Limon Verde	1.49	179	P	Pn	11 39 42.6	+0.3
	comp=E,15nm,0.3s,baz=30,slow=10,SNR=213						
LVC				S	Sn	11 40 03.6	+0.3
	comp=E,100nm,0.3s,baz=132,slow=16,SNR=65						
LVC	Limon Verde	1.49	179	*e*P	Pn	11 39 42.5	+0.1
LVC				*e*S	Sn	11 40 03.5	+0.3
LVC	Limon Verde	1.49	179		Pn	11 39 42.4	+0.1
LVC				Sn	Sn	11 40 03.5	+0.2
PB11	IPOC Station P	1.50	334	⇑*i* P	Pn	11 39 42.3	+0.1
PB11				*i* S	Sn	11 40 03.4	+0.2
PB11				IAML		11 40 04.5	
	comp=N,2μm,0.4s						
PB11	IPOC Station P	1.50	334		Pn	11 39 41.9	-0.4
PB11				Sn	Sn	11 40 03.1	0.0
PB04	IPOC Station P	1.65	222	⇑*i* P	Pn	11 39 43.5	-0.4
PB04				*i* S	Sn	11 40 05.3	-0.9
PB04				IAML		11 40 09.2	
	comp=E,791nm,0.2s						
PB04	IPOC Station P	1.65	222		Pn	11 39 43.5	-0.4
PB04				Sn	Sn	11 40 04.8	-1.4
PB06	IPOC Station P	1.68	200	⇑*i* P	Pn	11 39 44.4	-0.1
PB06				*i* S	Sn	11 40 06.4	-0.6
PB06				IAML		11 40 07.6	

QSPA	**South Pole Qui**	**69.07**	**180**	P		**P**	**11 50 09.2**	**+1.5**
TORD	**Torodi Ar. Bea**	**77.26**	**70**	P		**P**	**11 50 56.8**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=254,slow=5.1,SNR=2.6							
YKA	**Yellowknife Ar**	**90.81**	**341**	P		**P**	**11 52 05.3**	**+1.1**
	comp=Z,0.1nm,0.4s,baz=139,slow=5.6,SNR=2.2							
MKAR	**Makanchi Array**	**145.35**	**36**	PKPbc		**PKPab**	**11 58 39.6**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=336,slow=3.2,SNR=5.5							

IDC ***23*** *11:46:35.9±0.8, 1°.70N×122°.02E, h0km, mb4.1/8, mb1 4.1/10,mb1mx3.8/47,mbtmp4.1/10,ML3.8/2,MS3.1/5, Ms1 3.1/5,ms1mx2.7/43,Error ellipse: s-maj=44.9km s-min=14.7km az=69.0*

DJA ***23*** *11:46:42.3±0.9,2°.N±5°×12°.1E±°, h13km±6km,M4.5/8, mB4.8/3,mb4.7/4,MLv4.5/8,Mw(mB)4.0/3*

NEIC ***23*** *11:46:43.3±1.0, 1°.53N±0°.10×121°.6E±0°.1,h59km±8km, mb4.3/24,Error ellipse: s-maj=20.1km s-min=10.7km az=57.0*

ISC 23 11:46:38.3±0.5, 1°.67N±0°.06×121°.61E±0°.06, h10km, n54, σ1§97/46, mb4.3/20, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPSI	**Mapaga**	**2.16**	**232**	P	Pn	11 47 12.3	-2.1
APSI	**Ampana**	**2.56**	**179**	P	**Pn**	**11 47 21.6**	**+1.7**
KMSI	**Cibinong**	**2.61**	**115**	P	**Pb**	**11 47 28.0**	**+2.8**
LUWI	**Luwuk**	**2.94**	**157**	P	**Pn**	**11 47 26.4**	**+1.3**
LUWI				S	**Sn**	**11 48 04.1**	**+3.7**
LUWI	**Luwuk**	**2.94**	**157**		**Pn**	**11 47 25.8**	**+0.8**
TTSI	**Tana Toraja**	**5.01**	**201**	P	**Pn**	**11 47 54.9**	**+1.3**
SANI	**Sanana**	**5.73**	**130**	P	**Pn**	**11 48 07.7**	**+4.2**
SPSI	**Sidrap Palu**	**5.89**	**198**	P	**Pn**	**11 48 08.4**	**+2.7**
	0.3nm775nm86nm,1.1s						
BNSI	**Bone**	**6.21**	**194**	P	**Pn**	**11 48 10.9**	**+0.7**
	0.2nm789nm55nm,0.7s						
LBMI	**Labuha**	**6.32**	**111**	P	**Pg**	**11 48 37.2**	**-2.3**
DAV	**Davao City (W)**	**6.67**	**36**	LR	LR	11 51 46.6	
	comp=Z,149nm,18.1s,baz=168,slow=48						
KAPI	**Kappang**	**6.89**	**196**	Pn	**Pn**	**11 48 21.1**	**+1.6**
	2.2nm,0.3s,baz=61,slow=16,SNR=2.3						
KAPI				Sn	**Sn**	**11 49 39.6**	**+1.5**
	baz=268,slow=15,SNR=1.1						
KAPI				LR	LR	11 51 02.2	
	comp=Z,97nm,18.8s,baz=359,slow=38						
KAPI	**Kappang**	**6.89**	**196**		**Pn**	**11 48 20.3**	**+0.8**
KKM	**Kota Kinabalu**	**6.91**	**309**		**Pn**	**11 48 21.4**	**+1.5**
KBKI	**Kotabaru**	**7.34**	**228**	P	Pn	11 48 39.8	+14
NLAI	**Namlea**	**7.34**	**132**	P	Pn	11 48 30.8	+5.1
LEM	**Lembang**	**16.32**	**239**	LR	LR	11 59 20.2	
	comp=Z,117nm,18.1s,baz=74,slow=46						
MTN	**Manton Dam**	**17.24**	**147**		**Pn**	**11 50 38.9**	**-0.5**
KNRA	**Kununurra**	**18.63**	**158**	P	**P**	**11 50 54.8**	**-1.4**
KNRA				IAmb	IAmb	11 51 12.9	
	comp=Z,11nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.04**	**169**	P	**P**	**11 51 09.8**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=1.0,slow=5.7,SNR=7.7						
GSI	**Gunungsitoli**	**24.02**	**269**	P	**P**	**11 51 52.8**	**-1.0**
GSI				IAmb	IAmb	11 52 04.3	
	comp=Z,26nm,1.3s						
WB0	**Warramunga Arr**	**24.73**	**150**	P	**P**	**11 51 57.7**	**-2.4**
WB0				IAmb	IAmb	11 52 10.6	
	comp=Z,5.7nm,0.8s						
WRAB	**Tennant Creek**	**24.84**	**150**	P	**P**	**11 51 59.2**	**-1.9**
WRAB				IAmb	IAmb	11 52 14.7	
	comp=Z,6.1nm,0.9s						
WRA	**Warramunga Arr**	**24.85**	**150**	P	**P**	**11 51 58.4**	**-2.8**
	comp=Z,1.3nm,0.5s,baz=197,slow=30,SNR=40						
WB2	**Warramunga Arr**	**24.85**	**150**	P	**P**	**11 51 59.0**	**-2.3**
COEN	**Coen**	**26.42**	**127**	P	**P**	**11 52 14.3**	**-1.2**
COEN				IAmb	IAmb	11 52 15.1	
	comp=Z,15nm,1.4s						
PMG	**Port Moresby**	**27.73**	**114**	P	**P**	**11 52 23.2**	**-4.1**
	comp=Z,3.1nm,0.4s,baz=92,slow=21,SNR=1.6						
PMG	**Port Moresby**	**27.73**	**114**	P	**P**	**11 52 23.8**	**-3.5**
CMAR	**Chiang Mai Arr**	**27.79**	**308**	LR	LR	12 04 15.1	
	comp=Z,30nm,20.8s,baz=120,slow=38						
AS31	**Alice Springs**	**27.88**	**155**	P	**P**	**11 52 26.5**	**-2.1**
ASAR	**Alice Springs**	**27.88**	**155**	P	**P**	**11 52 26.4**	**-2.1**
	comp=Z,0.5nm,0.5s,baz=343,slow=14,SNR=19						
KSRS	**Korea Array**	**36.08**	**9**	LR	LR	12 09 59.3	
	comp=Z,15nm,18.2s,baz=340,slow=39						
BBOO	**Buckleboo**	**36.92**	**160**	P	P	11 53 45.2	-2.3
BBOO				IAmb	IAmb	11 54 00.7	
	comp=Z,6.3nm,1.4s						
STKA	**Stephens Creek**	**38.38**	**152**	P	P	11 53 57.5	-2.4
	comp=Z,1.1nm,0.5s,baz=345,slow=10,SNR=4.3						
STKA	**Stephens Creek**	**38.38**	**152**	P	P	11 53 57.1	-2.8
GTA	**Gaotai**	**42.49**	**335**	P	**P**	**11 54 36.3**	**+2.3**
GTA				pP	pwP	11 54 48.8	+8.9
GTA				sP	sP	11 54 53.4	+16
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CAN	**Canberra**	**44.84**	**148**	P	**P**	**11 54 52.5**	**-0.3**
ULN	**Ulaanbaatar**	**47.71**	**347**	P	**P**	**11 55 16.1**	**+0.7**
ULN				IAmb	IAmb	11 55 18.0	
	comp=Z,3.3nm,0.8s						
SONM	**Songino Array**	**47.84**	**346**	P	**P**	**11 55 16.0**	**-0.3**
	comp=Z,2.3nm,0.5s,baz=162,slow=7.6,SNR=7.6						
WMQ	**Urumqi**	**51.65**	**329**	*eP*	**P**	**11 55 47.3**	**+1.9**
TLY	**Talaya**	**52.07**	**346**	P	**P**	**11 55 49.4**	**+1.0**
KSH	**Kashi**	**56.01**	**318**	P	**P**	**11 56 21.8**	**+4.3**
KSH				pP	pwP	11 56 31.5	+7.8
KSH				sP	sP	11 56 37.8	+17
KSH				pmax	pmax		
	comp=Z,20nm,1.5s						
KSH				pmax	pmax		
	comp=Z,230nm,4.7s						
MK31	**Makanchi Array**	**56.47**	**329**	P	**P**	**11 56 20.9**	**+0.4**
MKAR	**Makanchi Array**	**56.47**	**329**	P	**P**	**11 56 21.1**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=129,slow=9.0,SNR=13						
MAKZ	**Makanchi**	**56.64**	**328**	P	**P**	**11 56 21.3**	**-0.4**
KBL	**Kabul**	**58.81**	**310**	P	**P**	**11 56 37.4**	**0.0**
ZAA0	**Zalesovo Array**	**60.23**	**336**	P	**P**	**11 56 46.2**	**-0.4**
ZAA0				IAmb	IAmb	11 56 47.6	
	comp=Z,3.6nm,1.1s						
ZALV	**Zalesovo Beam**	**60.23**	**336**	P	**P**	**11 56 46.1**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=131,slow=6.3,SNR=4.8						
YAK	**Yakutsk**	**60.52**	**4**	P	**P**	**11 56 48.5**	**+0.1**
KURK	**Kurchatov**	**60.84**	**330**	P	**P**	**11 56 50.6**	**-0.2**
KURK				IAmb	IAmb	11 56 52.9	
	comp=Z,3.5nm,0.8s						
KK31	**Karatay Array**	**61.35**	**319**	P	**P**	**11 56 55.0**	**+0.5**
KK31				IAmb	IAmb	11 57 06.9	
	comp=Z,2.3nm,1.3s						
TIXI	**Tiksi**	**70.03**	**2**	P	**P**	**11 57 49.1**	**-0.8**
	comp=Z,1.9nm,0.5s,baz=170,slow=3.4,SNR=8.2						
TIXI	**Tiksi**	**70.03**	**2**	P	**P**	**11 57 49.3**	**-0.6**
TIXI				IAmb	IAmb	11 57 50.2	
	comp=Z,3.2nm,0.8s						
RAYN	**Ar Rayn**	**76.59**	**294**	P	**P**	**11 58 28.7**	**-1.1**
RAYN				IAmb	IAmb	11 58 29.5	
	comp=Z,2.2nm,0.8s						

IDC ***23*** *11:55:16.3±0.5, 7°.11S×155°.03E, h0km, mb4.4/23, mb1 4.5/28,mb1mx4.4/49,mbtmp4.4/28,ML3.5/3,MS3.6/23, Ms1 3.6/23,ms1mx3.5/38,Error ellipse: s-maj=15.9km s-min=12.4km az=103.0*

BJI ***23*** *11:55:16.2±0.0, 7°.35S×155°.09E, h13km, mB4.9/22, mb5.0/29,Ms5.0/6*

NEIC ***23*** *11:55:18.0±0.9, 7°.18S±0°.04×155°.05E±0°.05, h10km±1km, mb4.9/87,Error ellipse: s-maj=10.9km s-min=3.4km az=127.0*

GCMT ***23*** *11:55:20.0±0.3, 7°.46S±0°.03×155°.15E±0°.03, h16km±1km, MW4.8/70,Moment Tensor Solution. s20,c21; s70,c91; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 1.73±.14; Mθθ -1.07±.10; Mϕϕ -0.65±.09; Mrθ 1.42±.29; Mϕθ 0.80±.06; Mϕr -0.20±.27; Best double couple: Mo 2.22400×10^16 NP1:ϕs 322.00000°,δ29.00000°,λ 118.00000°. NP2: ϕs 110.00000°,δ65.00000°,λ 75.00000°. Principal axes: T 2.3300, Plg67.0000°, Azm354.0000°; N -0.2100, Plg13.0000°, Azm116.0000°; P -2.1180, Plg19.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***23*** *11:55:21.8±1.8, 7°.5S×15°.5E±1°.1, h38km±12km, M5.1/12, mb4.7/12,mB4.4/1,MLv5.3/1,Mw(mB)3.5/1*

ISC 23 11:55:22.3±0.3, 7°.19S±0°.05×155°.03E±0°.05, h41km, n164, σ1§46/166, mb4.8/67, MS3.6/25, 1C, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**4.12**	**316**		**Pn**	**11 56 21.4**	**-1.5**
RABL				Sn	**Sn**	**11 57 09.6**	**-0.3**
KRVT	**Keravat (AS076**	**4.14**	**314**	Pn	**Pn**	**11 56 20.9**	**-2.2**
	15nm,0.3s,baz=111,slow=1.7,SNR=16						
KRVT				Sn	**Sn**	**11 57 10.1**	**-0.2**
	23nm,0.3s,baz=219,slow=23,SNR=3.8						
KRVT				LR	LR	11 57 32.6	
	comp=Z,176nm,21.4s,baz=127,slow=33						
HNR	**Honiara**	**5.35**	**115**	Pn	**Pn**	**11 56 38.4**	**-1.3**
	3.4nm,0.3s,baz=256,slow=11,SNR=1.2						
HNR				LR	LR	11 58 49.9	
	comp=Z,971nm,20.6s,baz=235,slow=40						
HNR	**Honiara**	**5.35**	**115**	Pn	**Pn**	**11 56 42.6**	**+2.9**
HNR				Sn	**Sn**	**11 57 38.9**	**-1.3**
PMG	**Port Moresby**	**8.10**	**254**	Pn	**Pn**	**11 57 16.3**	**-1.1**
	0.5nm,0.3s,baz=136,slow=20,SNR=1.8						
PMG				Sn	**Sn**	**11 58 49.1**	**+1.3**
	1.1nm,0.3s,baz=277,slow=5.1,SNR=1.9						
PMG	**Port Moresby**	**8.10**	**254**	Pn	**Pn**	**11 57 18.2**	**+0.7**
PMG				Sn	**Sn**	**11 58 48.5**	**+0.7**
COEN	**Coen**	**13.45**	**239**	Pn	**Pn**	**11 58 29.8**	**-1.1**
PATS	**Pohnpei**	**14.31**	**13**	Pn	**Pn**	**11 58 41.1**	**-1.4**
JAY	**Jayapura**	**15.01**	**287**	Pn	**Pn**	**11 58 45.5**	**-6.3**
	0.2nm,0.3s,baz=78,slow=13,SNR=1.7						
JAY				LR	LR	12 05 25.6	
	comp=Z,411nm,19.0s,baz=110,slow=41						
CTA	**Charters Tower**	**15.39**	**213**	Pn	**Pn**	**11 58 55.6**	**-1.2**
	0.1nm,0.3s,baz=0.1,slow=15,SNR=3.5						
CTAO	**Charters Tower**	**15.39**	**213**		**Pn**	**11 58 55.9**	**-0.9**
DZM	**Mont Dzumac**	**18.44**	**145**	*e*LR	LR	12 03 48.5	
	comp=Z,229nm,24.2s						
DZM	**Mont Dzumac**	**18.44**	**145**	P	**P**	**11 59 32.7**	**-2.0**
	0.1nm,0.3s,baz=14,slow=21,SNR=1.9						
DZM	**Mont Dzumac**	**18.44**	**145**	P	**P**	**11 59 33.7**	**-0.9**
FAKI	**Fak Fak**	**23.08**	**279**	P	**P**	**12 00 25.1**	**+0.4**
ARMA	**Armidale**	**23.33**	**187**	P	**P**	**12 00 27.0**	**-0.1**
WR0	**Warramunga Arr**	**23.58**	**235**	P	**P**	**12 00 29.9**	**+0.4**
WR0				IAmb	IAmb	12 00 32.9	
	comp=Z,23nm,0.9s						
WB0	**Warramunga Arr**	**23.61**	**236**	P	**P**	**12 00 29.7**	**-0.1**
WRAB	**Tennant Creek**	**23.73**	**236**	P	**P**	**12 00 30.7**	**-0.2**
WB2	**Warramunga Arr**	**23.73**	**236**	P	**P**	**12 00 30.4**	**-0.5**
WRA	**Warramunga Arr**	**23.74**	**236**	P	**P**	**12 00 30.3**	**-0.7**
	comp=Z,17nm,0.9s,baz=62,slow=9.7,SNR=43						
WRA				PcP	**PcP**	**12 04 14.6**	**+0.2**
	comp=Z,1.6nm,0.9s,baz=69,slow=2.3,SNR=4.4						
WRA				LR	LR	12 10 14.8	
	comp=Z,217nm,18.2s,baz=60,slow=38						
MTN	**Manton Dam**	**24.19**	**255**	P	**P**	**12 00 35.1**	**-0.1**
MTN				IAmb	IAmb	12 00 38.7	
	comp=Z,37nm,1.1s						
SIJI	**Sorong**	**24.51**	**284**	P	**P**	**12 00 38.0**	**-0.2**
	comp=Z,13nm,0.7s,baz=295,slow=22,SNR=2.5						
SIJI				LR	LR	12 09 33.3	
	comp=Z,188nm,21.1s,baz=55,slow=35						
MSVF	**Nonsavu**	**24.77**	**117**	P	**P**	**12 00 40.2**	**-0.4**
MSVF				IAmb	IAmb	12 00 44.6	
	comp=Z,45nm,1.2s						
AS31	**Alice Springs**	**26.07**	**229**	P	**P**	**12 00 51.7**	**-0.7**
ASAR	**Alice Springs**	**26.07**	**229**	P	**P**	**12 00 51.4**	**-1.0**
	comp=Z,4.7nm,0.8s,baz=63,slow=8.6,SNR=37						
ASAR				PcP	**PcP**	**12 04 20.5**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=44,slow=2.8,SNR=2.8						
ASAR				ScP	**ScP**	**12 08 01.5**	**+5.3**
	comp=Z,0.7nm,0.9s,baz=35,slow=3.4,SNR=4.2						
ASAR				LR	LR	12 10 53.6	
	comp=Z,175nm,19.4s,baz=32,slow=36						
KNRA	**Kununurra**	**27.07**	**250**	P	**P**	**12 01 00.6**	**-0.7**
STKA	**Stephens Creek**	**27.58**	**205**	P	**P**	**12 01 06.5**	**+0.7**
	comp=Z,14nm,0.9s,baz=18,slow=11,SNR=18						
STKA				LR	LR	12 11 44.2	
	comp=Z,316nm,19.7s,baz=27,slow=36						
STKA	**Stephens Creek**	**27.58**	**205**	P	**P**	**12 01 06.4**	**+0.7**
H11S3	**WAKE ISLAND Hy**	**27.99**	**24**	T	T	12 30 00.9	
	baz=202,slow=75,SNR=23						
H11S2	**WAKE ISLAND Hy**	**27.99**	**24**	T	T	12 29 37.9	
	baz=202,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	**28.01**	**24**	T	T	12 29 46.3	
	baz=202,slow=75,SNR=23						
LBMI	**Labuha**	**28.21**	**282**	P	**P**	**12 01 13.3**	**+1.7**
	comp=Z,18nm,0.9s						
TNTI	**Ternate**	**28.71**	**285**	P	**P**	**12 01 15.7**	**-0.3**
FITZ	**Fitzroy Crossi**	**30.61**	**246**	P	**P**	**12 01 31.8**	**-1.0**
	comp=Z,4.9nm,0.8s,baz=104,slow=10,SNR=12						
FITZ				LR	LR	12 13 18.5	
	comp=Z,124nm,19.1s,baz=78,slow=35						
FITZ	**Fitzroy Crossi**	**30.61**	**246**	P	**P**	**12 01 32.2**	**-0.6**
BBOO	**Buckleboo**	**31.00**	**212**	P	**P**	**12 01 35.0**	**-1.0**
BATI	**Baumata**	**31.14**	**262**	LR	LR	12 15 11.5	
	comp=Z,246nm,20.6s,baz=144,slow=38						
TOO	**Toolangi**	**31.46**	**195**	P	**P**	**12 01 39.9**	**-0.3**
TOO				IAmb	IAmb	12 01 43.9	
	comp=Z,21nm,1.5s						
DAV	**Davao City (W)**	**32.61**	**295**	LR	LR	12 15 28.7	
	comp=Z,38nm,18.1s,baz=126,slow=37						
MPSI	**Mapaga**	**35.83**	**281**	P	**P**	**12 02 18.8**	**+0.4**
	comp=Z,8.4nm,0.9s						
NIUE	**Niue**	**36.03**	**113**	P	**P**	**12 02 19.2**	**-0.9**
PSAD3	**Pilbara Seismi**	**36.93**	**243**	P	**P**	**12 02 27.7**	**+0.1**
PSAD3				IAmb	IAmb	12 02 30.4	
	comp=Z,11nm,0.8s						
BSWZ	**Blackbirch Sta**	**38.24**	**157**	P	**P**	**12 02 38.5**	**+0.1**
MSWZ	**Moikau Station**	**38.54**	**155**	P	**P**	**12 02 40.7**	**-0.3**
KHZ	**Kahutara**	**38.71**	**158**	P	**P**	**12 02 42.1**	**-0.2**
NWAO	**Narrogin (SRO)**	**43.40**	**229**	LR	LR	12 20 29.6	
	comp=Z,145nm,21.8s,baz=60,slow=35						
YULB	**Yu-li**	**44.84**	**314**	P	**P**	**12 03 33.0**	**+0.2**
YULB				IAmb	IAmb	12 03 37.7	
	comp=Z,15nm,0.9s						
KSM	**Kuching**	**45.45**	**279**	P	**P**	**12 03 37.4**	**-0.4**
KSM				IAmb	IAmb	12 03 49.8	
	comp=Z,12nm,1.0s						
JNU	**Nakatsue**	**46.20**	**332**	P	**P**	**12 03 42.5**	**-0.9**
	comp=Z,6.8nm,0.9s,baz=132,slow=1.4,SNR=4.1						
JNU				ScP	**ScP**	**12 09 16.5**	**+7.6**
	comp=Z,7.3nm,1.0s,baz=164,slow=9.2,SNR=3.7						
JNU	**Nakatsue**	**46.20**	**332**	P	**P**	**12 03 43.3**	**-0.1**
JNU				IAmb	IAmb	12 03 43.5	
	comp=Z,9.7nm,1.0s						
MJAR	**Matsushiro Arr**	**46.27**	**341**	P	**P**	**12 03 43.3**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=332,slow=9.0,SNR=1.6						
MJAR				PcP	**PcP**	**12 05 18.6**	**-0.3**
	comp=Z,1.4nm,0.9s,baz=140,slow=4.3,SNR=4.9						
LEM	**Lembang**	**47.05**	**267**	LR	LR	12 27 32.8	
	comp=Z,60nm,18.0s,baz=196,slow=41						
DLV	**T Lat**	**50.04**	**292**	P	**P**	**12 04 13.5**	**-0.1**
DLV				IAmb	IAmb	12 04 15.7	
	comp=Z,16nm,0.9s						
KSRS	**Korea Array**	**51.12**	**332**	P	**P**	**12 04 19.7**	**-1.4**
	comp=Z,2.1nm,1.0s,baz=150,slow=8.7,SNR=6.2						
KSRS				LR	LR	12 23 18.7	
	comp=Z,46nm,20.6s,baz=112,slow=33						
WHN	**Wuhan**	**54.10**	**6**	P	**P**	**12 04 45.9**	**+2.6**
PPT	**Papeete**	**54.91**	**106**	LR	LR	12 24 42.0	
	comp=Z,29nm,18.7s,baz=294,slow=32						
PPT2	**Papeete2**	**54.91**	**106**	*e*LR	LR	12 20 40.9	
	comp=Z,58nm,22.8s						
USRK	**Ussuriysk Ar.**	**55.22**	**340**	P	**P**	**12 04 49.4**	**-1.8**
	comp=Z,2.5nm,0.9s,baz=148,slow=8.5,SNR=3.8						
TBI	**Tubuai**	**55.57**	**113**	*e*LR	LR	12 21 08.4	
	comp=Z,77nm,32.0s						
ENH	**Enshi**	**57.40**	**313**	P	**P**	**12 05 07.0**	**0.0**
SLVN	**Son La**	**57.61**	**301**	P	**P**	**12 05 08.8**	**+0.1**
PBKT	**Sadao Pong**	**58.45**	**294**	P	**P**	**12 05 14.1**	**-0.5**
KLR	**Kul'dur**	**59.76**	**343**	LR	LR	12 29 27.1	
	comp=Z,36nm,19.6s,baz=166,slow=34						
XAN	**Xi'an**	**59.87**	**316**	P	**P**	**12 05 24.8**	**+0.6**
XAN				pP	pP	12 05 33.8	-1.0
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN	**Xi'an**	**59.87**	**316**	P	**P**	**12 05 24.1**	**-0.1**
XAN				IAmb	IAmb	12 05 25.6	
	comp=Z,8.7nm,0.9s						
PEA0B	**Petropavlovsk-**	**60.10**	**2**	P	**P**	**12 05 25.6**	**+0.2**
PEA0B				IAmb	IAmb	12 05 42.1	
	comp=Z,16nm,1.0s						
PETK	**Petropavlovsk-**	**60.10**	**2**	P	**P**	**12 05 25.3**	**0.0**
	comp=Z,6.8nm,0.9s,baz=149,slow=6.1,SNR=9.2						
PETK				LR	LR	12 30 20.1	
	comp=Z,31nm,19.9s,baz=250,slow=35						
CM31	**Chiang Mai Arr**	**60.90**	**296**	P	**P**	**12 05 31.7**	**+0.2**
CM31				IAmb	IAmb	12 05 36.2	
	comp=Z,9.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**60.90**	**296**	P	**P**	**12 05 31.6**	**+0.1**
	comp=Z,5.9nm,0.9s,baz=122,slow=4.7,SNR=20						
CMAR				LR	LR	12 30 55.1	
	comp=Z,23nm,20.3s,baz=178,slow=35						
CHTO	**Chiang Mai**	**61.02**	**296**	P	**P**	**12 05 31.9**	**-0.4**
CHTO				IAmb	IAmb	12 05 34.8	
	comp=Z,12nm,1.3s						
ADK	**Adak**	**63.64**	**19**	P	**P**	**12 05 49.4**	**+0.3**
MA2	**Magadan**	**66.63**	**358**	P	**P**	**12 06 07.3**	**-1.1**
	comp=Z,4.5nm,0.7s,baz=230,slow=9.1,SNR=4.7						
MA2	**Magadan**	**66.63**	**358**	P	**P**	**12 06 07.5**	**-1.0**
MA2				IAmb	IAmb	12 06 26.2	
	comp=Z,5.9nm,0.8s						
GTA	**Gaotai**	**68.90**	**317**	P	**P**	**12 06 25.5**	**+2.2**
GTA				pP	pP	12 06 28.8	-5.3
GTA				sP	sP	12 06 31.5	-6.8
GTA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,61nm,5.0s						
GTA				LR	LR		
	comp=Z,120nm,21.9s						
GTA				LR	LR		
	comp=Z,1μm,21.9s						
ULN	**Ulaanbaatar**	**69.18**	**328**	P	**P**	**12 06 24.6**	**-0.4**
SHL	**Shillong**	**69.42**	**301**	P	**P**	**12 06 26.5**	**-0.4**
SONM	**Songino Array**	**69.52**	**327**	P	**P**	**12 06 26.8**	**-0.1**
	comp=Z,3.5nm,0.8s,baz=136,slow=6.5,SNR=10						
SONM				LR	LR	12 38 22.4	
	comp=Z,48nm,18.5s,baz=102,slow=37						
SEY	**Seymchan**	**69.94**	**359**	P	**P**	**12 06 28.6**	**-0.4**
	comp=Z,2.5nm,0.8s,baz=134,slow=9.9,SNR=5.7						
VNDA	**Vanda**	**70.39**	**178**	P	**P**	**12 06 32.0**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=360,slow=6.8,SNR=5.4						
TLY	**Talaya**	**73.25**	**329**	LR	LR	12 35 49.6	
	comp=Z,20nm,20.9s,baz=98,slow=33						
TLY	**Talaya**	**73.25**	**329**	P	**P**	**12 06 49.5**	**+0.3**
BILL	**Bilibino**	**75.47**	**4**	P	**P**	**12 07 02.2**	**+0.4**
BILL				IAmb	IAmb	12 07 03.7	
	comp=Z,11nm,0.9s						
HOM	**Homer**	**78.83**	**25**	P	**P**	**12 07 21.1**	**+0.3**
CNPM	**China Poot**	**78.92**	**25**	P	**P**	**12 07 21.7**	**+0.3**
WMQ	**Urumqi**	**78.99**	**317**	*eP*	**P**	**12 07 23.8**	**+1.6**
WMQ				pP	PcP	12 07 27.8	-2.8
WMQ				pmax	pmax		
	comp=Z,21nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,38nm,3.8s						
WMQ				LR	LR		
	comp=Z,89nm,8.1s						
WMQ				LR	LR		
	comp=Z,120nm,12.1s						
TTA	**Tatalina**	**79.19**	**21**	P	**P**	**12 07 23.5**	**+0.6**
TTA				IAmb	IAmb	12 07 24.9	
	comp=Z,12nm,1.0s						
BRLK	**Bradley Lake**	**79.20**	**25**	P	**P**	**12 07 23.2**	**+0.3**
BRLK				IAmb	IAmb	12 07 24.4	
	comp=Z,13nm,0.9s						
SEW	**Seward**	**79.99**	**25**	P	**P**	**12 07 27.7**	**+0.7**
SEW				IAmb	IAmb	12 07 32.0	
	comp=Z,19nm,1.0s						
RC01	**Rabbit Creek A**	**80.42**	**24**	P	**P**	**12 07 29.7**	**+0.3**
RC01				IAmb	IAmb	12 07 31.0	
	comp=Z,24nm,1.1s						
PPLA	**Purkeypile**	**80.53**	**22**	P	**P**	**12 07 30.6**	**+0.4**
TIXI	**Tiksi**	**80.55**	**352**	P	**P**	**12 07 29.7**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=130,slow=3.3,SNR=1.6						
RDOG	**Red Dog Mine**	**80.69**	**15**	P	**P**	**12 07 31.0**	**+0.2**
RDOG				IAmb	IAmb	12 07 33.3	
	comp=Z,16nm,1.2s						
PMR	**Palmer**	**80.95**	**24**	P	**P**	**12 07 32.2**	**0.0**
KNK	**Knik Glacier**	**81.12**	**24**	P	**P**	**12 07 33.8**	**+0.6**
KNK				IAmb	IAmb	12 07 35.1	
	comp=Z,15nm,1.1s						
SML	**Sawmill**	**81.39**	**24**	P	**P**	**12 07 35.1**	**+0.4**
HIN	**Hinchinbrook I**	**81.39**	**25**	P	**P**	**12 07 35.0**	**+0.4**
KTH	**Kantishna Hill**	**81.39**	**22**	P	**P**	**12 07 34.3**	**-0.4**
KTH				IAmb	IAmb	12 07 35.4	
	comp=Z,18nm,0.9s						
GLI	**Glacier Island**	**81.39**	**25**	P	**P**	**12 07 34.9**	**+0.3**
TRF	**Thorofare Moun**	**81.56**	**22**	P	**P**	**12 07 35.3**	**-0.4**
FID	**Port Fidalgo**	**81.58**	**25**	P	**P**	**12 07 35.6**	**0.0**
FID				IAmb	IAmb	12 07 37.2	

NIL					IAmb	IAmb	12 08 05.4	
	comp=Z,6.3nm,0.7s							
EPYK	**Eagle Plains**	**88.02**	**22**	P	**P**		**12 08 09.0**	**+1.0**
ARSB	**Arslanbob**	**88.76**	**312**	P	**P**		**12 08 12.1**	**-0.1**
ARSB					IAmb	IAmb	12 08 14.5	
	comp=Z,14nm,1.2s							
INK	**Inuvik**	**89.88**	**21**	P	**P**		**12 08 16.5**	**-0.1**
INK					IAmb	IAmb	12 08 18.5	
	comp=Z,8.6nm,0.8s							
MWC	**Mount Wilson**	**91.45**	**56**	P	**P**		**12 08 24.7**	**-0.2**
NVAR	**Mina Array Bea**	**91.81**	**52**	P	**P**		**12 08 27.3**	**+0.7**
	comp=Z,3.1nm,0.9s,baz=249,slow=5.5,SNR=17							
NVAR					LR	LR	12 45 25.0	
	comp=Z,50nm,18.8s,baz=248,slow=33							
SYO	**Syowa Base**	**92.16**	**199**	⇑*e*X	**P**		**12 08 24.7**	**-2.5**
C36M	**Paulatuk**	**93.47**	**21**	P	**P**		**12 08 32.9**	**-0.2**
YKA	**Yellowknife Ar**	**96.49**	**28**	P	**P**		**12 08 47.1**	**-0.1**
	comp=Z,3.2nm,0.8s,baz=262,slow=4.3,SNR=33							
YKA					LR	LR	12 48 18.0	
	comp=Z,24nm,19.6s,baz=0.0,slow=33							
PDAR	**Pinedale Array**	**98.80**	**48**	P	**P**		**12 08 57.6**	**-0.8**
	comp=Z,0.9nm,0.9s,baz=208,slow=2.5,SNR=4.7							
PDAR					LR	LR	12 48 49.1	
	comp=Z,53nm,19.1s,baz=306,slow=32							
GERES	**GERESS Array B**	**127.23**	**329**	PKP		**PKPdf**	**12 14 22.9**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=54,slow=2.3,SNR=5.9							
LPAZ	**La Paz**	**131.33**	**119**	PKP		**PKPdf**	**12 14 31.7**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=75,slow=1.6,SNR=5.6							
LPAZ	**La Paz**	**131.33**	**119**			**PKiKP**	**12 14 32.7**	**-0.3**
PVIS	**Viseu**	**143.30**	**338**	*e*PKP		**PKiKP**	**12 15 01.5**	**+5.5**
PTGA	**Pitinga**	**144.21**	**101**			PKPbc	12 14 53.5	+0.3
PMTG	**Montargil**	**144.85**	**337**	*e*PKP		**PKPdf**	**12 14 55.4**	**0.0**
PBEJ	**Beja**	**145.61**	**336**	*e*PKP		**PKPab**	**12 14 58.4**	**+1.2**
PNCL	**Nicolau / Gran**	**145.80**	**337**	*e*PKP		**PKPab**	**12 14 58.3**	**+0.4**
MESJ	**Messejana**	**145.91**	**336**	*e*PKPdf		**PKPdf**	**12 14 57.3**	**+0.1**
MESJ	**Messejana**	**145.91**	**336**	*e*PKP		**PKPab**	**12 14 59.6**	**+1.3**
PCVE	**Castro Verde**	**146.02**	**336**	*e*PKP		**PKPab**	**12 14 59.3**	**+0.5**
PVAQ	**Vaqueiros**	**146.08**	**335**	*e*PKP		**PKPab**	**12 14 59.6**	**+0.6**
PVAQ	**Vaqueiros**	**146.08**	**335**			**PKPab**	**12 14 59.5**	**+0.5**
PTEO	**Sao Teotonio**	**146.37**	**336**	*e*PKP		**PKPab**	**12 15 00.4**	**+0.3**
TAM	**Tamanrasset**	**146.82**	**301**			**PKPbc**	**12 15 01.5**	**+0.3**
BDFB	**Brasilia**	**147.82**	**135**	PKPbc		**PKPbc**	**12 15 04.3**	**+0.2**
	comp=Z,3.3nm,0.6s,baz=246,slow=2.8,SNR=5.6							
BDFB	**Brasilia**	**147.82**	**135**			**PKPbc**	**12 15 04.7**	**+0.6**
TOAO	**Torodi Ar. Sit**	**153.11**	**285**			**PKPbc**	**12 15 16.5**	**-0.1**
TOA0				PKPab		**PKPab**	**12 15 28.7**	**+0.4**
TORD	**Torodi Ar. Bea**	**153.11**	**285**	PKP		**PKPdf**	**12 15 09.6**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=29,slow=3.8,SNR=4.4							
TORD				PKPbc		**PKPbc**	**12 15 16.6**	**-0.1**
	comp=Z,5.1nm,0.8s,baz=46,slow=2.2,SNR=20							

ATH 23 12:14:14.8, 38.34N×22.08E, h7km±5km, ML0.9/1, Error ellipse: s-maj=5.9km s-min=1.1km az=320.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRIZ	**Trizonia**	**0.03**	**344**	P	Pg	12 14 16.0	-0.2
TRIZ				S	Sg	12 14 17.3	+0.1
KALE	**Kalithea**	**0.07**	**40**	P	Pg	12 14 16.6	-0.1
KALE				S	Sg	12 14 18.2	+0.2
KALE				AML	AML	12 14 18.4	
	comp=N,465μm,0.2s						
KALE				AML	AML	12 14 19.3	
	comp=E,190μm,0.2s						
LAKA	**Lakka**	**0.13**	**220**	P	Pg	12 14 17.4	-0.1
LAKA				S	Sg	12 14 19.8	+0.5
KLV	**Kalavryta, Ach**	**0.30**	**170**	P	Pg	12 14 21.0	+0.3
KLV				S	Sg	12 14 24.6	0.0

BEO 23 12:15:06.5±0.9, 42.50N×24.06E, h11km±4km, ML2.2/6, 13C-6D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VTS	**Vitosha**	**0.62**	**281**	*e*Pg	Pg	12 15 17.4	-1.2
VTS				*e*Sg	Sg	12 15 26.8	-0.1
VTS	**Vitosha**	**0.62**	**281**	⇑P	Pg	12 15 17.5	-1.1
VTS				⇑S	Sg	12 15 26.9	0.0
PLVB	**Pleven**	**0.98**	**25**	⇑P	Pg	12 15 23.1	-2.3
PLVB				⇑S	Sg	12 15 37.0	-1.1
BOSS	**Bosilegrad**	**1.17**	**270**	*e*Pg	Pb	12 15 27.6	-1.2
BOSS				*e*Sg	Sg	12 15 44.1	-0.1
ZAPS	**Zavoj**	**1.31**	**307**	*e*Pg	Pn	12 15 30.2	-0.5
ZAPS				*e*Sg	Sg	12 15 48.6	0.0
ELND	**Elena**	**1.40**	**72**	⇓P	Pn	12 15 30.4	-1.7
ELND				⇓S	Sn	12 15 48.4	-2.1
BLKB	**Belogradchik**	**1.52**	**318**	⇑S	Sb	12 15 54.0	+0.1
VLAD	**Vladila**	**1.52**	**9**	⇓P	Pn	12 15 33.5	-0.1
VLAD				⇓S	Sb	12 15 54.6	+0.6
VAY	**Valandovo**	**1.62**	**224**	*e*Pg	Pb	12 15 36.2	-0.2
VAY				*e*Sg	Sg	12 15 58.0	-0.6
VAY	**Valandovo**	**1.62**	**224**	*i* Pn	Pb	12 15 36.5	+0.1
VAY	**Valandovo**	**1.62**	**224**	*i* Pn	Pb	12 15 36.5	+0.1
BARS	**Barje**	**1.69**	**282**	*e*Pg	Pn	12 15 36.7	+0.7
BARS	**Barje**	**1.69**	**282**	*e*Pn	Pg	12 15 43.1	+4.2
BARS				*e*Sg	Sg	12 16 00.4	-0.4
BARS				*e*Sg	Sb	12 16 15.8	+17
COPA	**Copaceanca**	**1.84**	**27**	⇓P	Pn	12 15 37.7	-0.3
COPA				⇑S	Sb	12 16 02.3	-0.9
ZAGS	**Zajecar**	**1.88**	**315**	*e*Pn	Pn	12 15 37.4	-1.1
ZAGS				*e*Sg	Sg	12 16 06.5	-0.3
SELS	**Selova**	**2.28**	**289**	*e*Pn	Pn	12 15 44.2	+0.1
SELS				*e*Sg	Sg	12 16 19.4	-0.4
KUBS	**Kucevo**	**2.58**	**319**	*e*Pn	Pn	12 15 49.8	+1.5
KUBS				*e*Sn	Sn	12 16 19.0	-0.7
HERR	**Herculane**	**2.67**	**334**	⇑P	Pn	12 15 47.9	-1.5
MTUR	**Matau**	**2.82**	**15**	⇓P	Pn	12 15 50.8	-0.8
MDVR	**Moldovita**	**2.85**	**324**	⇑S	Sn	12 16 27.2	+0.9
ARR	**Arges**	**2.90**	**8**	⇑P	Pn	12 15 50.9	-1.8
GZR	**Gura Zlata**	**3.04**	**343**	⇑P	Pn	12 15 53.1	-1.5
GZR				⇑S	Sn	12 16 25.4	-5.6
BZS	**Buzias**	**3.58**	**331**	⇓P	Pn	12 16 01.7	-0.2
BZS				⇑S	Sn	12 16 45.4	+1.1

MAN 23 12:18:27.1, 6.77N×123.74E, h6km, mb4.5, ML3.4, MS3.2, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.67**	**49**	⇓*i*P	Pg	12 18 40.2	+0.1
CTBH				*i* S	Sg	12 18 47.6	-1.3
SKMP	**Bagumbayan, Su**	**0.84**	**107**	*e*P	Pg	12 18 42.7	-0.6
SKMP				*e*S	Sg	12 18 53.2	-1.0
PAGZ	**Pagadian**	**1.12**	**342**	*e*P	Pg	12 18 48.1	-0.7
PAGZ				*e*S	Sg	12 19 01.9	-1.5
KCP	**Kidapawan**	**1.36**	**80**	⇑*i*P	Pg	12 18 55.3	+2.0
KCP				*i* S	Sb	12 19 08.1	-2.7
DDMP	**Don Marcelino,**	**2.07**	**109**	*e*P	Pn	12 19 03.3	+0.8
DDMP				*e*S	Sn	12 19 29.3	+0.6

*ASRS **23** 12:29:34.7±0.2, 50°N±1°×8°7E±°, h10km, MLh3.5/13, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
*NNC **23** 12:29:38.7±2.6, 50.17N×87.21E, h0km, mb3.6, mpv3.1, Error ellipse: s-maj=24.1km s-min=16.1km az=109.0*
ISC 23 12:29:35.5±1.1, 50.03N±0.03×87.55E±0.03, h6km±10km, n20, σ1°40/36, 3C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHBI	**Chibit, Altay**	**0.29**	**354**	Pg	**Pg**	**12 29 41.5**	**+0.3**
CHBI				Sg	**Sg**	**12 29 45.6**	**+0.5**
AKAR	**Aktash**	**0.30**	**9**	Pg	**Pg**	**12 29 42.0**	**+0.7**
AKAR				Sg	**Sg**	**12 29 46.6**	**+1.2**
DGZ	**Jazzator, Alta**	**0.33**	**193**	Pg	**Pg**	**12 29 41.8**	**-0.3**
DGZ				Sg	**Sg**	**12 29 45.8**	**-0.7**
CUR	**Chagan-Uzun**	**0.52**	**81**	Pg	**Pb**	**12 29 46.9**	**-0.3**
CUR				Sg	**Sb**	**12 29 55.2**	**+0.1**
SLNR	**Muhor-Tarhata,**	**0.64**	**112**	Pg	**Pb**	**12 29 49.2**	**-0.1**
SLNR				Sg	**Sb**	**12 29 58.7**	**+0.1**
ULGR	**Ulagan, Altay**	**0.65**	**24**	Pg	**Pb**	**12 29 48.6**	**-0.8**
ULGR				Sg	**Sb**	**12 29 58.0**	**-0.8**
TUNR	**Tungur**	**0.80**	**280**	Pg	**Pg**	**12 29 49.0**	**-1.8**
TUNR				Sg	**Sg**	**12 29 58.6**	**-2.6**
ELDR	**Elanda**	**1.51**	**323**	Pg	**Pn**	**12 30 01.7**	**-1.5**
ELDR				Sg	**Sn**	**12 30 21.1**	**-2.1**
ARTR	**Artybash**	**1.78**	**355**	Pg	**Pb**	**12 30 08.5**	**-0.1**
ARTR				Sg	**Sg**	**12 30 31.9**	**-0.9**
UKR	**Ust'-Kan**	**2.00**	**298**	Pg	**Pn**	**12 30 11.6**	**+1.7**
UKR				Sg	**Sb**	**12 30 37.8**	**+0.4**
GALT	**Gorno-Altaysk,**	**2.19**	**333**	Pg	**Pb**	**12 30 16.0**	**+0.6**
GALT				Sg	**Sg**	**12 30 45.8**	**+0.2**
TASR	**Tashtagol**	**2.75**	**4**	Pg	**Pb**	**12 30 25.8**	**+0.8**
TASR				Sg	**Sg**	**12 31 02.6**	**-1.1**
ELT	**Eltsovka**	**3.34**	**346**	Pg	**Pb**	**12 30 35.6**	**+0.4**
ELT				Sg	**Sb**	**12 31 19.3**	**+3.2**
DJO	**Djoy, Khakassi**	**3.59**	**38**	Pg	**Pg**	**12 30 43.6**	**-0.6**
DJO				Sg	**Sg**	**12 31 29.3**	**-1.4**
VEH	**Verkhnyaya Baz**	**3.66**	**27**	Pg	**Pg**	**12 30 46.2**	**+0.5**
VEH				Sg	**Sg**	**12 31 32.1**	**-1.0**
DJOS	**Djoyskaya Sosn**	**3.67**	**39**	Sg	**Sg**	**12 31 30.9**	**-2.5**
CERR	**Cheremushki**	**3.72**	**39**	Sg	**Sg**	**12 31 34.1**	**-0.9**
ZAA0	**Zalesovo Array**	**4.28**	**338**	⇑Pn	**Pn**	**12 30 41.9**	**+0.8**
	0.5nm,0.5s						
ZAA0				⇑Lg	Lg	12 31 46.8	
	4.4nm,0.8s						
MK31	**Makanchi Array**	**4.77**	**229**	Pn	**Pn**	**12 30 51.4**	**+3.5**
	3.0nm,0.5s,baz=54,slow=12,SNR=82						
MK31				⇓Lg	Lg	12 32 05.6	
	8.1nm,0.5s,baz=51,slow=32,SNR=5.9						
KURBB	**Kurchatov Arra**	**5.81**	**279**	⇑Pn	**Pn**	**12 31 03.0**	**+0.9**
	4.5nm,0.7s						
KURBB				⇓Sn	**Sn**	**12 32 08.2**	**-0.8**
	7.2nm,0.5s						
KURBB				⇓Lg	Lg	12 32 37.4	
	32nm,0.7s						

*NEIC **23** 12:37:20.9±0.8, 4.1N±0.1×125.8E±0.2, h69km±10km, mb4.0/8, Error ellipse: s-maj=31.1km s-min=11.2km az=69.0*
*IDC **23** 12:37:22.1±6.2, 4.18N×125.99E, h85km±66km, mb3.2/4, mb1 3.4/5, mb1mx3.1/50, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=91.9km s-min=27.5km az=72.0*
ISC 23 12:37:24.6±0.8, 3.96N±0.08×126.0E±0.2, h107km, n15, σ1°81/18, mb3.6/6, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**3.15**	**344**	⇓*e*P	Pn	**12 38 11.6**	**-1.1**
KCP				*i* S	**Sn**	**12 38 51.5**	**+1.8**
TNTI	**Ternate**	**3.46**	**156**	Pn	**Pn**	**12 38 15.6**	**-1.1**
TNTI				Sn	**Sn**	**12 38 57.2**	**+0.3**
SIJI	**Sorong**	**7.14**	**132**	P	**Pn**	**12 39 05.9**	**-0.6**
	1.8nm,0.3s,baz=324,slow=19,SNR=5.8						
SIJI				S	**Sn**	**12 40 23.9**	**-2.2**
	0.5nm,0.3s,baz=219,slow=23,SNR=1.9						
KNRA	**Kununurra**	**19.70**	**172**	P	**Pn**	**12 41 47.4**	**-0.8**
KNRA				IAmb	IAmb	12 41 59.3	
	comp=Z,18nm,1.4s						
FITZ	**Fitzroy Crossi**	**21.92**	**181**	P	**P**	**12 42 10.5**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=13,slow=12,SNR=1.3						
FITZ	**Fitzroy Crossi**	**21.92**	**181**	P	**P**	**12 42 10.4**	**+0.9**
FITZ				IAmb	IAmb	12 42 27.3	
	comp=Z,6.5nm,1.3s						
WB0	**Warramunga Arr**	**24.99**	**161**	P	**P**	**12 42 41.1**	**+2.5**
WB0				IAmb	IAmb	12 42 41.8	
	comp=Z,4.7nm,0.9s						
WRA	**Warramunga Arr**	**25.14**	**161**	P	**P**	**12 42 41.5**	**+1.6**
	comp=Z,1.0nm,0.5s,baz=342,slow=10.0,SNR=19						
WB2	**Warramunga Arr**	**25.14**	**161**	P	**P**	**12 42 42.6**	**+2.7**
RPSI	**Rantau Prapat**	**27.04**	**268**	P	**P**	**12 42 55.2**	**-1.9**
RPSI				IAmb	IAmb	12 43 08.7	
	comp=Z,4.2nm,0.9s						
ASAR	**Alice Springs**	**28.53**	**165**	P	**P**	**12 43 11.6**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=342,slow=7.9,SNR=7.6						
BBOO	**Buckleboo**	**37.80**	**166**	P	**P**	**12 44 32.4**	**+1.7**
STKA	**Stephens Creek**	**38.61**	**158**	P	**P**	**12 44 39.2**	**+1.7**
CAN	**Canberra**	**44.65**	**153**	P	**P**	**12 45 29.2**	**+2.4**
MKAR	**Makanchi Array**	**56.94**	**326**	P	**P**	**12 46 57.3**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=125,slow=7.9,SNR=2.7						

*NEIC **23** 12:52:38.9±1.6, 24.9S±0.1×180.0W±0.2, h490km±8km, mb4.1/21, Error ellipse: s-maj=24.6km s-min=14.3km az=65.0*
*IDC **23** 12:52:41.0±1.9, 25.22S×179.85W, h538km±32km, mb3.5/10, mb1 3.5/12, mb1mx3.3/37, mbtmp4.4/12, Error ellipse: s-maj=37.6km s-min=23.1km az=146.0*
ISC 23 12:52:40.3±0.8, 25.09S±0.08×179.9E±0.1, h496km, n40, σ1°23/41, mb4.0/20, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.59**	**155**	P	**P**	**12 54 05.4**	**+2.1**
	107nm,0.3s,baz=255,slow=22,SNR=7.5						
MSVF	**Nonsavu**	**7.51**	**347**	P	**P**	**12 54 32.1**	**+0.4**
DZM	**Mont Dzumac**	**12.67**	**281**	P	**P**	**12 55 28.2**	**+2.1**
	0.3nm,0.3s,baz=272,slow=3.3,SNR=1.6						
URZ	**Urewera**	**13.34**	**189**	P	**P**	**12 55 31.6**	**-1.2**
	2.7nm,0.3s,baz=277,slow=3.1,SNR=23						
URZ				S	**S**	**12 57 51.7**	**-3.5**
	0.6nm,0.3s,baz=295,slow=18,SNR=2.2						
BKZ	**Black Stump Fm**	**14.32**	**191**	P	**P**	**12 55 42.5**	**-0.8**
QRZ	**Quartz Range**	**16.85**	**200**	P	**P**	**12 56 09.1**	**-0.5**
ARMA	**Armidale**	**25.51**	**252**	P	**P**	**12 57 30.0**	**+1.3**
EIDS	**Eidsvold**	**26.02**	**263**	P	**P**	**12 57 34.0**	**+0.9**
EIDS				IAmb	IAmb	12 57 49.8	
	comp=Z,9.6nm,1.2s						
CAN	**Canberra**	**28.46**	**242**	P	**P**	**12 57 55.5**	**+1.1**
CAN				IAmb	IAmb	12 58 10.3	
	comp=Z,13nm,1.2s						
CTA	**Charters Tower**	**31.38**	**272**	P	**P**	**12 58 21.1**	**+1.1**
	comp=Z,12nm,0.4s,baz=95,slow=10,SNR=27						
CTAO	**Charters Tower**	**31.38**	**272**	P	**P**	**12 58 20.9**	**+1.0**
TOO	**Toolangi**	**31.72**	**239**	P	**P**	**12 58 23.2**	**+0.6**
STKA	**Stephens Creek**	**34.19**	**250**	P	**P**	**12 58 43.0**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=113,slow=16,SNR=5.4						
STKA	**Stephens Creek**	**34.19**	**250**	P	**P**	**12 58 43.9**	**+0.3**
PMG	**Port Moresby**	**34.78**	**291**	P	**P**	**12 58 49.3**	**+0.5**
PMG				IAmb	IAmb	12 59 05.4	
	comp=Z,12nm,1.0s						
COEN	**Coen**	**36.20**	**281**	P	**P**	**12 59 01.6**	**+0.9**
COEN				IAmb	IAmb	12 59 02.4	
	comp=Z,4.9nm,0.7s						
PATS	**Pohnpei**	**38.04**	**324**	P	**P**	**12 59 14.7**	**-1.0**
BBOO	**Buckleboo**	**38.88**	**248**	P	**P**	**12 59 22.2**	**-0.2**
BBOO				IAmb	IAmb	12 59 23.7	
	comp=Z,4.3nm,0.9s						
AS31	**Alice Springs**	**41.74**	**262**	P	**P**	**12 59 45.6**	**+0.1**
ASAR	**Alice Springs**	**41.74**	**262**	P	**P**	**12 59 45.6**	**+0.1**
	comp=Z,2.3nm,0.7s,baz=88,slow=6.8,SNR=44						
WB2	**Warramunga Arr**	**42.21**	**267**	P	**P**	**12 59 49.0**	**-0.2**
WB2				IAmb	IAmb	12 59 49.8	
	comp=Z,5.6nm,0.8s						
WRAB	**Tennant Creek**	**42.21**	**267**	P	**P**	**12 59 48.9**	**-0.4**
WRAB				IAmb	IAmb	12 59 49.7	
	comp=Z,4.1nm,0.8s						
WB0	**Warramunga Arr**	**42.22**	**268**	P	**P**	**12 59 48.8**	**-0.5**
WB0				IAmb	IAmb	12 59 50.1	
	comp=Z,5.9nm,0.7s						
WRA	**Warramunga Arr**	**42.22**	**267**	P	**P**	**12 59 48.9**	**-0.4**
	comp=Z,1.7nm,0.3s,baz=99,slow=6.9,SNR=89						
JAY	**Jayapura**	**43.88**	**294**	P	**P**	**13 00 01.8**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=149,slow=12,SNR=1.6						
KNRA	**Kununurra**	**48.57**	**271**	P	**P**	**13 00 38.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**50.63**	**267**	P	**P**	**13 00 53.7**	**+0.4**
FITZ				IAmb	IAmb	13 00 57.3	
	comp=Z,9.2nm,1.3s						
SIJI	**Sorong**	**52.70**	**289**	P	**P**	**13 01 07.3**	**-1.0**
	comp=Z,12nm,0.8s,baz=38,slow=6.0,SNR=6.9						
QSPA	**South Pole Qui**	**65.00**	**180**	P	**P**	**13 02 31.7**	**+1.2**
MJAR	**Matsushiro Arr**	**72.81**	**326**	P	**P**	**13 03 15.6**	**-2.4**
	comp=Z,2.4nm,0.9s,baz=147,slow=5.1,SNR=4.9						
JNU	**Nakatsue**	**74.33**	**319**	P	**P**	**13 03 25.2**	**-1.5**
	comp=Z,2.4nm,0.7s,baz=148,slow=9.5,SNR=1.4						
JNU	**Nakatsue**	**74.33**	**319**	P	**P**	**13 03 27.1**	**+0.3**
KSRS	**Korea Array**	**79.08**	**320**	P	**P**	**13 03 51.4**	**-1.2**
	comp=Z,1.1nm,0.8s,baz=143,slow=5.5,SNR=4.5						
PEA0B	**Petropavlovsk-**	**80.22**	**347**	P	**P**	**13 03 57.9**	**-0.4**
PEA0B				IAmb	IAmb	13 04 10.6	
	comp=Z,8.8nm,1.1s						
PETK	**Petropavlovsk-**	**80.22**	**347**	P	**P**	**13 03 56.8**	**-1.5**
	comp=Z,4.1nm,0.8s,baz=140,slow=9.1,SNR=5.6						
SNAA	**Sanae**	**83.49**	**179**	P	**P**	**13 04 15.4**	**+0.4**
VNA3	**Neumayer Olymp**	**83.70**	**177**	P	**P**	**13 04 17.0**	**+1.0**
VNA2	**Neumayer--Watz**	**84.12**	**178**	P	**P**	**13 04 19.4**	**+1.4**
NB2	**NORSAR Subarra**	**143.23**	**351**	PKP	**PKPdf**	**13 11 15.2**	**-1.8**
	comp=Z,0.6nm,0.6s,baz=14,slow=3.7						
CLL	**Collm**	**151.95**	**342**	*i* PKPbc	**PKiKP**	**13 11 40.3**	**+1.6**

*IDC **23** 12:59:04.0±0.9, 7.14S×155.02E, h0km, mb4.1/10, mb1 4.2/13, mb1mx4.0/37, mbtmp4.0/13, ML3.4/2, MS3.3/1, Ms1 3.2/1, ms1mx2.4/24, Error ellipse: s-maj=28.1km s-min=18.4km az=121.0*
*NEIC **23** 12:59:10.1±1.5, 7.18S±0.10×155.0E±0.1, h35km±2km, mb4.4/15, Error ellipse: s-maj=21.2km s-min=16.8km az=91.0*
ISC 23 12:59:10.5±0.6, 7.18S±0.07×155.00E±0.07, h41km, n35, σ1°27/37, mb4.2/18, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**4.10**	**316**	Pn	**Pn**	**13 00 10.4**	**-0.3**
KRVT	**Keravat (AS076**	**4.11**	**314**	Pn	**Pn**	**13 00 07.0**	**-3.9**
	1.2nm,0.3s,baz=75,slow=18,SNR=2.1						
KRVT				Sn	**Sn**	**13 01 00.6**	**+2.8**
	6.7nm,0.3s,baz=16,slow=21,SNR=4.0						
HNR	**Honiara**	**5.38**	**115**	Sn	**Sn**	**13 01 30.2**	**+1.1**
	0.7nm,0.3s,baz=166,slow=2.0,SNR=1.3						
PMG	**Port Moresby**	**8.07**	**254**	Pn	**Pn**	**13 01 03.1**	**-2.1**
	0.6nm,0.3s,baz=213,slow=18,SNR=1.2						
PMG				Sn	**Sn**	**13 02 38.4**	**+3.2**
	0.2nm,0.3s,baz=136,slow=22,SNR=0.9						
PMG	**Port Moresby**	**8.07**	**254**		**Pn**	**13 01 05.2**	**0.0**
CTA	**Charters Tower**	**15.38**	**213**	Pn	**Pn**	**13 02 42.7**	**-2.1**
	0.2nm,0.3s,baz=298,slow=10,SNR=1.4						
ARMA	**Armidale**	**23.33**	**187**	P	**P**	**13 04 14.5**	**-0.8**
ARMA				IAmb	IAmb	13 05 04.5	
	comp=Z,17nm,1.5s						
WR0	**Warramunga Arr**	**23.56**	**235**	P	**P**	**13 04 16.9**	**-0.7**
WR0				IAmb	IAmb	13 04 18.9	
	comp=Z,10.0nm,0.9s						
WB0	**Warramunga Arr**	**23.59**	**236**	P	**P**	**13 04 16.9**	**-0.9**
WRAB	**Tennant Creek**	**23.70**	**236**	P	**P**	**13 04 18.4**	**-0.5**
WRAB				IAmb	IAmb	13 04 20.2	
	comp=Z,12nm,1.1s						
WB2	**Warramunga Arr**	**23.71**	**236**	P	**P**	**13 04 19.4**	**+0.5**
WB2				IAmb	IAmb	13 04 20.4	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**23.72**	**236**	P	**P**	**13 04 18.4**	**-0.6**
	comp=Z,5.2nm,0.8s,baz=62,slow=9.5,SNR=19						
WRA				PcP	**PcP**	**13 08 02.3**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=62,slow=2.6,SNR=2.4						
MTN	**Manton Dam**	**24.16**	**255**		**P**	**13 04 23.6**	**+0.5**
MTN				IAmb	IAmb	13 04 27.5	
	comp=Z,46nm,1.8s						
AS31	**Alice Springs**	**26.05**	**229**	P	**P**	**13 04 40.2**	**-0.1**
ASAR	**Alice Springs**	**26.05**	**229**	P	**P**	**13 04 40.2**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=63,slow=9.0,SNR=28						
ASAR				PcP	**PcP**	**13 08 08.1**	**+0.4**
	comp=Z,0.4nm,1.0s,baz=57,slow=3.4,SNR=1.8						
KNRA	**Kununurra**	**27.04**	**250**	P	**P**	**13 04 49.6**	**+0.3**
STKA	**Stephens Creek**	**27.57**	**205**	P	**P**	**13 04 52.5**	**-1.3**
	comp=Z,1.0nm,0.7s,baz=98,slow=15,SNR=2.4						
STKA				LR	LR	13 16 03.4	
	comp=Z,53nm,18.9s,baz=24,slow=37						
STKA	**Stephens Creek**	**27.57**	**205**	P	**P**	**13 04 54.0**	**+0.1**
H11S3	**WAKE ISLAND Hy**	**28.00**	**24**	T	T	13 33 31.5	
	baz=202,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.00**	**24**	T	T	13 33 31.6	
	baz=202,slow=74						
H11S1	**WAKE ISLAND Hy**	**28.02**	**24**	T	T	13 33 32.6	
	baz=202						
FITZ	**Fitzroy Crossi**	**30.58**	**246**	P	**P**	**13 05 20.3**	**-0.4**
	comp=Z,4.7nm,0.8s,baz=87,slow=6.4,SNR=12						
FITZ	**Fitzroy Crossi**	**30.58**	**246**	P	**P**	**13 05 20.5**	**-0.2**
FITZ				IAmb	IAmb	13 05 21.3	
	comp=Z,4.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**60.87**	**296**	P	**P**	**13

KSM	**Kuching**	**19.42**	**298**	P	**Pn**	**13 11 28.7**	**-1.7**
KSM				IAmb	IAmb	13 11 32.7	
	comp=Z,8.3nm,0.8s						
PMG	**Port Moresby**	**19.59**	**96**	P	**Pn**	**13 11 32.6**	**+0.2**
	comp=Z,2.2nm,0.3s,baz=129,slow=6.8,SNR=10						
PMG	**Port Moresby**	**19.59**	**96**	P	**Pn**	**13 11 31.9**	**-0.5**
TNG	**Tangerang**	**20.68**	**273**	P	Pn	13 11 46.7	+0.8
CTA	**Charters Tower**	**21.92**	**126**	P	**P**	**13 11 56.1**	**+3.0**
	comp=Z,4.2nm,0.9s,baz=304,slow=10,SNR=3.6						
CTAO	**Charters Tower**	**21.92**	**126**	P	**P**	**13 11 54.3**	**+1.2**
CTAO				IAmb	IAmb	13 12 01.0	
	comp=Z,7.9nm,1.1s						
FORT	**Forrest**	**22.80**	**179**	P	**P**	**13 12 05.6**	**+4.5**
MORW	**Morawa**	**23.65**	**205**	P	**P**	**13 12 13.0**	**+4.2**
BBOO	**Buckleboo**	**26.09**	**163**	P	**P**	**13 12 33.0**	**+2.2**
BBOO				IAmb	IAmb	13 12 35.3	
	comp=Z,4.0nm,0.7s						
STKA	**Stephens Creek**	**27.30**	**153**	P	**P**	**13 12 45.7**	**+4.0**
	comp=Z,2.3nm,0.5s,baz=332,slow=10,SNR=10						
STKA	**Stephens Creek**	**27.30**	**153**	IAmb	IAmb	13 12 50.5	
	comp=Z,0.7nm,0.7s						
KULM	**Kulim**	**29.72**	**295**	P	**P**	**13 13 02.4**	**-1.0**
YULB	**Yu-li**	**31.64**	**349**	P	**P**	**13 13 16.3**	**-3.7**
YULB				IAmb	IAmb	13 13 30.1	
	comp=Z,6.4nm,1.0s						
TPUB	**Ta-pu**	**31.68**	**348**	P	**P**	**13 13 18.6**	**-1.8**
TPUB				IAmb	IAmb	13 13 29.4	
	comp=Z,6.3nm,1.0s						
CAN	**Canberra**	**33.74**	**147**	P	**P**	**13 13 39.2**	**+1.1**
CMAR	**Chiang Mai Arr**	**38.38**	**313**	P	**P**	**13 14 18.6**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=142,slow=6.8,SNR=7.2						
DZM	**Mont Dzumac**	**40.13**	**115**	LR	LR	13 31 25.5	
	comp=Z,19nm,19.5s,baz=218,slow=36						
KSRS	**Korea Array**	**45.09**	**1**	P	**P**	**13 15 11.6**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=183,slow=7.6,SNR=2.0						
GTA	**Gaotai**	**53.54**	**334**	*e*P	**P**	**13 16 17.3**	**+1.4**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PETK	**Petropavlovsk-**	**65.97**	**19**	P	**P**	**13 17 41.0**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=205,slow=5.7,SNR=1.5						
MKAR	**Makanchi Array**	**67.57**	**328**	P	**P**	**13 17 51.5**	**+1.1**
	comp=Z,1.9nm,0.6s,baz=130,slow=7.9,SNR=21						
ZALV	**Zalesovo Beam**	**71.25**	**335**	P	**P**	**13 18 13.1**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=148,slow=5.5,SNR=8.0						
VNDA	**Vanda**	**71.91**	**173**	P	P	13 18 20.2	+3.8
	comp=Z,0.3nm,0.3s,baz=220,slow=11,SNR=2.8						

GCG ***23*** *13:20:33.0±0.6, 11°.02N×88°.64W, h18km±299km, MD4.5*
UCR ***23*** *13:20:34.8±2.2, 12°.24N×87°.42W, h35km±689km, ML4.6, mb4.5(NEIC)*
INET ***23*** *13:20:34.9, 12°.25N×87°.40W, h61km, ML4.8*
NEIC ***23*** *13:20:35.9±2.6, 12°.31N±0°.05×87°.33W±0°.05, h78km±6km, mb4.5/68, Md4.6(SNET), Error ellipse: s-maj=8.0km s-min=6.3km az=146.0*
SNET ***23*** *13:20:35.8±0.8, 12°.28N×87°.62W, h22km±4km, ML4.6*
IDC ***23*** *13:20:36.4±1.3, 12°.41N×87°.14W, h82km±12km, mb4.0/12, mb1 4.3/16, mb1mx3.9/37, mbtmp4.3/16, MS3.2/16, Ms1 3.2/16, ms1mx3.1/37, Error ellipse: s-maj=26.8km s-min=9.1km az=57.0*

ISC 23 13:20:35.0±0.8, 12°.31N±0°.05×87°.37W±0°.05, h72km±6km, n309, σ0°95/312, mb4.5/37, 10C-16D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.50**	**38**	*e*P		**Pn**		**13 20 47.9**	**-0.2**
CRIN	**San Cristobal**	**0.50**	**38**			**Pn**		**13 20 47.7**	**-0.2**
CRIN					Sn	Sn		13 20 58.2	+0.5
CNGN	**Cerro Negro**	**0.68**	**73**	*e*P		**Pn**		**13 20 48.1**	**-1.7**
CNCH	**Conchagua**	**1.07**	**335**	↓*i*P		**Pn**		**13 20 54.4**	**-0.2**
CNCH	**Conchagua**	**1.07**	**335**	↓*i*P		**Pn**		**13 20 54.4**	**-0.2**
LCND	**La Caada**	**1.12**	**333**	↓*i*P		**Pn**		**13 20 54.9**	**-0.3**
LCND				*e*S		**Sn**		**13 21 10.1**	**-0.1**
LCND				IAML				13 21 12.0	
	comp=Z,15μm,0.3s								
LCND	**La Caada**	**1.12**	**333**	↓*i*P		**Pn**		**13 20 54.9**	**-0.3**
LCND				*e*S		**Sn**		**13 21 10.1**	**-0.1**
LCND				IAML				13 21 12.0	
	comp=Z,15μm,0.3s								
MASN	**Masaya**	**1.23**	**105**	*e*P		**Pn**		**13 20 55.8**	**-0.7**
JUCU	**Jucuarn**	**1.28**	**316**	↓*i*P		**Pn**		**13 20 56.1**	**-1.1**
JUCU				*e*S		**Sn**		**13 21 12.1**	**-1.7**
JUCU				IAML				13 21 16.1	
	comp=Z,19μm,0.3s								
JUCU	**Jucuarn**	**1.28**	**318**	↓*i*P		**Pn**		**13 20 56.1**	**-1.1**
JUCU				*e*S		**Sn**		**13 21 12.1**	**-1.7**
JUCU				IAML				13 21 16.1	
	comp=Z,19μm,0.3s								
BLLM	**Bellamira**	**1.42**	**323**	↑*e*P		**Pn**		**13 20 58.7**	**-0.2**
BLLM	**Bellamira**	**1.42**	**323**	↑*e*P		**Pn**		**13 20 58.7**	**-0.2**
LCY	**Lacayo**	**1.43**	**321**	↑*i*P		**Pn**		**13 20 59.0**	**-0.2**
LCY	**Lacayo**	**1.43**	**321**	↑*i*P		**Pn**		**13 20 59.0**	**-0.2**
PACA	**Pacayal**	**1.49**	**321**	↓*e*P		**Pn**		**13 20 59.7**	**-0.3**
PACA	**Pacayal**	**1.49**	**321**	↓*e*P		**Pn**		**13 20 59.7**	**-0.3**
MATN	**Matagalpa**	**1.54**	**66**	*e*P		**Pn**		**13 21 00.9**	**+0.4**
MATN	**Matagalpa**	**1.54**	**66**			**Pn**		**13 21 01.0**	**+0.4**
ALJI	**Alcalda de J**	**1.55**	**311**	↓*e*P		**Pn**		**13 20 59.9**	**-0.8**
ALJI				IAML				13 21 21.1	
	comp=Z,5μm,0.3s								
ALJI	**Alcalda de J**	**1.55**	**311**	↓*e*P		**Pn**		**13 20 59.9**	**-0.8**
ALJI				IAML				13 21 21.1	
	comp=Z,5μm,0.3s								
FAGO	**Alcalda de S**	**1.56**	**332**	↓*i*P		**Pn**		**13 21 00.9**	**+0.1**
FAGO				*e*S		**Sn**		**13 21 20.8**	**+0.5**
FAGO	**Alcalda de S**	**1.56**	**332**	↓*i*P		**Pn**		**13 21 00.9**	**+0.1**
FAGO				*e*S		**Sn**		**13 21 20.8**	**+0.5**
TECA	**Tecapa**	**1.62**	**317**	*e*P		**Pn**		**13 21 01.2**	**-0.6**
TECA	**Tecapa**	**1.62**	**317**	*e*P		**Pn**		**13 21 01.2**	**-0.6**
COEB	**Comit de Eme**	**1.64**	**316**	↑*e*P		**Pn**		**13 21 01.6**	**-0.5**
COEB	**Comit de Eme**	**1.64**	**316**	↑*e*P		**Pn**		**13 21 01.6**	**-0.5**
LFRS	**El Faro**	**2.11**	**309**	↓*i*P		**Pn**		**13 21 07.7**	**-0.6**
LFRS	**El Faro**	**2.11**	**309**	↓*i*P		**Pn**		**13 21 07.7**	**-0.6**
ACON	**Acoyapa**	**2.17**	**99**	*e*P		**Pn**		**13 21 08.4**	**-0.6**
ACON	**Acoyapa**	**2.17**	**99**			**Pn**		**13 21 08.2**	**-0.8**
LBRS	**Las Brisas**	**2.17**	**311**	↑*i*P		**Pn**		**13 21 09.3**	**+0.2**
LBRS	**Las Brisas**	**2.17**	**311**	↑*i*P		**Pn**		**13 21 09.3**	**+0.2**
LALI	**Alcalda de L**	**2.24**	**302**	↑*e*P		**Pn**		**13 21 09.0**	**-1.0**
LALI	**Alcalda de L**	**2.24**	**302**	↑*e*P		**Pn**		**13 21 09.0**	**-1.0**
BOQS	**Boqueron**	**2.35**	**307**	*e*P		**Pn**		**13 21 11.3**	**-0.3**
BOQS	**Boqueron**	**2.35**	**307**	*e*P		**Pn**		**13 21 11.3**	**-0.3**
GBS3	**Finca Las Img**	**2.41**	**129**	*e*P		**Pn**		**13 21 12.0**	**-0.2**
LAPC	**Finca la Perla**	**2.43**	**129**	*e*P		**Pn**		**13 21 11.7**	**-0.9**
NY14	**Universidad de**	**2.44**	**132**	*e*P		**Pn**		**13 21 12.7**	**+0.1**
BUAI	**Buenos Aires**	**2.45**	**125**	*e*P		**Pn**		**13 21 11.6**	**-1.2**
GPS1	**Guardaparques**	**2.49**	**127**	*e*P		**Pn**		**13 21 13.6**	**+0.1**
LIM1	**Limonal**	**2.62**	**127**	*e*P		**Pn**		**13 21 16.0**	**+0.9**
HORNC	**Hornillas**	**2.67**	**126**	*e*P		**Pn**		**13 21 16.1**	**-0.6**
CEVE	**Cerro Verde**	**2.67**	**305**	*e*P		**Pn**		**13 21 16.1**	**+0.1**
CEVE	**Cerro Verde**	**2.67**	**305**	*e*P		**Pn**		**13 21 16.1**	**+0.1**
SBLS	**San Blas**	**2.68**	**305**	*e*P		**Pn**		**13 21 16.4**	**+0.3**
SBLS	**San Blas**	**2.68**	**305**	*e*P		**Pn**		**13 21 16.4**	**+0.3**
SNJE	**San Jose**	**2.68**	**306**	*e*P		**Pn**		**13 21 16.1**	**0.0**
SNJE	**San Jose**	**2.68**	**306**	*e*P		**Pn**		**13 21 16.1**	**0.0**
CUI	**Cuipilapa**	**2.71**	**127**	*e*P		**Pn**		**13 21 15.8**	**-0.5**
CUI				*e*S		**Sn**		**13 21 47.3**	**-0.9**
GUAI	**GUAI**	**2.72**	**138**	*e*P		**Pn**		**13 21 16.0**	**-0.5**
GUAI				*e*S		**Sn**		**13 21 45.4**	**-3.0**
PLVR	**Palo Verde**	**2.77**	**134**	*e*P		**Pn**		**13 21 17.4**	**+0.1**
PTEN	**Parque Tenorio**	**2.82**	**124**	*e*P		**Pn**		**13 21 16.7**	**-1.1**
ACAL	**Aguas Claras**	**2.82**	**126**	*e*P		**Pn**		**13 21 17.3**	**-0.6**
ACAL				*e*S		**Sn**		**13 21 51.1**	**+0.1**
MTO3	**Montecristo**	**2.85**	**317**	↓*i*P		**Pn**		**13 21 18.6**	**+0.2**
MTO3	**Montecristo**	**2.85**	**317**	↓*i*P		**Pn**		**13 21 18.6**	**+0.2**
ESPN	**Las Esperanzas**	**3.00**	**92**	*e*P		**Pn**		**13 21 20.8**	**+0.6**
ESPN	**Las Esperanzas**	**3.00**	**92**		Pn	**Pn**		**13 21 20.6**	**+0.4**
JTS	**Las Juntas de**	**3.10**	**130**	P		**Pn**		**13 21 22.5**	**+0.9**
	comp=Z,12nm,0.3s,baz=16,slow=11,SNR=28								
JTS					S	**Sn**		**13 21 57.4**	**-0.2**
	comp=Z,30nm,0.3s,baz=220,slow=19,SNR=6.3								
JTS	**Las Juntas de**	**3.10**	**130**	*e*P		**Pn**		**13 21 21.8**	**+0.2**
JTS	**Las Juntas de**	**3.10**	**130**			**Pn**		**13 21 21.5**	**-0.1**
ARE1	**Arenal 1**	**3.18**	**125**	*e*P		**Pn**		**13 21 23.5**	**+0.8**
IXG	**Ixpaco**	**3.52**	**302**	*e*P		**Pn**		**13 21 28.2**	**+0.6**
MRL	**Marmol**	**3.56**	**321**	*e*P		Pn		13 21 36.6	+8.4
MRL				*e*S		Sn		13 22 26.2	+17
NBG	**Las Nubes**	**3.68**	**308**	*e*P		**Pn**		**13 21 31.3**	**+1.5**
NBG				*e*S		**Sn**		**13 22 18.9**	**+6.7**
FUG	**Fuego 3**	**4.00**	**303**	*e*P		**Pn**		**13 21 34.8**	**+0.7**
FUG				*e*S		**Sn**		**13 22 22.5**	**+2.7**
LCR2	**La Lucha 2**	**4.17**	**127**	*e*P		**Pn**		**13 21 37.6**	**+1.2**

CVTR	**Volcan Turrial**	**4.21**	**122**	*e*P		**Pn**		**13 21 39.4**	**+2.3**
STG3	**Santiaguito 3,**	**4.74**	**301**	*e*P		**Pn**		**13 21 46.1**	**+2.0**
STG3				*e*S		**Sn**		**13 22 37.9**	**0.0**
DRK0	**Durika**	**5.05**	**126**	*e*P		**Pn**		**13 21 48.8**	**+0.3**
BRU2	**Volcan**	**5.77**	**127**	*e*P		**Pn**		**13 21 59.7**	**+1.4**
TEIG	**Tepich**	**7.92**	**354**	P		**Pn**		**13 22 29.8**	**+2.3**
	comp=Z,1.3nm,0.3s,baz=139,slow=1.1,SNR=6.4								
TEIG				LR		LR		13 25 50.6	
	comp=Z,188nm,20.1s,baz=228,slow=40								
CMIG	**Matias Romero**	**8.69**	**304**	P		**Pn**		**13 22 39.8**	**+1.8**
	comp=Z,1.6nm,0.3s,baz=150,slow=9.3,SNR=18								
CMIG				S		**Sn**		**13 24 13.2**	**-1.3**
	comp=Z,1.0nm,0.3s,baz=279,slow=21,SNR=1.8								
ROSC	**El Rosal**	**14.87**	**119**	LR		LR		13 30 04.7	
	comp=Z,112nm,19.4s,baz=272,slow=39								
SDV	**Santo Domingo**	**16.79**	**100**	P		**Pn**		**13 24 25.8**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=226,slow=12,SNR=2.3								
SDV				LR		LR		13 32 11.9	
	comp=Z,21nm,18.8s,baz=246,slow=42								
TIGA	**Tifton**	**19.36**	**10**	P		**Pn**		**13 24 56.9**	**+0.3**
	baz=191								
833A	**Chaparral WMA,**	**19.50**	**327**	P		**P**		**13 24 57.2**	**+0.8**
	baz=142								
LRAL	**Lakeview Retre**	**20.64**	**1**	P		Pn		13 25 11.4	-0.2
	baz=181								
Z50A	**Ashland**	**20.89**	**3**	P		Pn		13 25 13.5	-1.2
	baz=184,SNR=6.7								
Z50A	**Ashland**	**20.89**	**3**	P		Pn		13 25 13.7	-1.0
Z50A				IAmb		IAmb		13 25 16.3	
	comp=Z,9.6nm,0.7s								
SJG	**San Juan**	**21.26**	**72**	LR		LR		13 34 16.5	
	comp=Z,26nm,18.1s,baz=227,slow=39								
ATAH	**Atahualpa**	**21.27**	**155**	P		**P**		**13 25 18.5**	**+2.4**
	comp=Z,10.0nm,0.8s,baz=350,slow=11,SNR=5.3								
ATAH				LR		LR		13 31 40.3	
	comp=Z,83nm,20.0s,baz=341,slow=31								
GOGA	**Godfrey**	**21.31**	**9**	P		**P**		**13 25 17.5**	**+1.6**
	baz=190,SNR=8.3								
GOGA	**Godfrey**	**21.31**	**9**	P		**P**		**13 25 16.8**	**+0.9**
GOGA				IAmb		IAmb		13 25 22.1	
	comp=Z,12nm,0.6s								
JCT	**Junction City**	**21.44**	**329**	P		**P**		**13 25 18.2**	**+0.8**
	baz=145								
Y52A	**Lilburn**	**21.67**	**7**	P		**P**		**13 25 20.9**	**+1.1**
	baz=189,SNR=5.7								
Y55A	**Saluda**	**22.11**	**12**	P		**P**		**13 25 25.4**	**+0.9**
	baz=194								
OXF	**Oxford**	**22.18**	**356**	P		**P**		**13 25 26.3**	**+1.0**
	baz=175								
HODGE	**Hodges**	**22.32**	**11**	P		**P**		**13 25 26.7**	**0.0**
HODGE				IAmb		IAmb		13 25 31.6	
	comp=Z,11nm,0.6s								
X54A	**Belton**	**22.60**	**11**	P		**P**		**13 25 30.1**	**+0.3**
	baz=193								
X55A	**Gracelyn & Ava**	**22.67**	**12**	P		**P**		**13 25 30.8**	**+0.3**
	baz=195								
TXAR	**Lajitas Array**	**22.74**	**321**	P		**P**		**13 25 31.9**	**+0.6**
	comp=Z,11nm,0.6s,baz=137,slow=9.5,SNR=98								
TXAR				PcP		**PcP**		**13 29 22.0**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=126,slow=5.2,SNR=3.5								
TXAR				ScP		**ScP**		**13 32 51.8**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=34,slow=42,SNR=1.7								
TXAR				LR		LR		13 35 11.2	
	comp=Z,26nm,18.4s,baz=0.0,slow=38								
TX31	**Lajitas Ar. Si**	**22.74**	**321**	P		**P**		**13 25 32.5**	**+1.1**
TX32	**Lajitas Array**	**22.74**	**321**	P		**P**		**13 25 32.3**	**+0.9**
TX32				IAmb		IAmb		13 25 33.4	
	comp=Z,13nm,0.7s								
X56A	**White Oak**	**22.83**	**14**	P		**P**		**13 25 32.2**	**+0.1**
	baz=196								
MIAR	**Mount Ida**	**22.85**	**347**	P		**P**		**13 25 32.7**	**+0.4**
	baz=164								
W50A	**Signal Mountai**	**22.87**	**4**	P		**P**		**13 25 33.2**	**+0.6**
W50A				IAmb		IAmb		13 25 36.4	
	comp=Z,8.0nm,0.7s								
BG3	**Lake Jocassee**	**22.94**	**9**	P		**P**		**13 25 33.3**	**0.0**
BG3				IAmb		IAmb		13 25 37.8	
	comp=Z,13nm,0.7s								
W54A	**Cherokee Point**	**23.16**	**11**	P		**P**		**13 25 36.0**	**+0.6**
	baz=193								
W41B	**Gary Mavity, V**	**23.19**	**350**	P		**P**		**13 25 36.1**	**+0.4**
	baz=168								
WHAR	**Wooly Hollow**	**23.31**	**350**	P		**P**		**13 25 34.9**	**-1.9**
X58A	**Rowland**	**23.32**	**17**	P		**P**		**13 25 37.9**	**+1.0**
	baz=200								
X37A	**Clayton**	**23.35**	**343**	P		**P**		**13 25 38.5**	**+1.4**
X37A				IAmb		IAmb		13 25 40.2	
	comp=Z,12nm,0.7s								
KMSC	**Kings Mountain**	**23.38**	**13**	P		**P**		**13 25 38.3**	**+0.8**
	baz=195								
TKL	**Tuckaleechee C**	**23.48**	**7**	P		**P**		**13 25 39.4**	**+1.0**
	comp=Z,6.0nm,0.5s,baz=144,slow=5.8,SNR=11								
TKL				LR		LR		13 34 12.7	
	comp=Z,46nm,20.3s,baz=184,slow=35								
TKL	**Tuckaleechee C**	**23.48**	**7**	P		**P**		**13 25 39.2**	**+0.8**
TKL				IAmb		IAmb		13 25 57.9	
	comp=Z,9.0nm,0.7s								
W39A	**Magazine**	**23.52**	**347**	P		**P**		**13 25 39.2**	**+0.5**
	baz=164,SNR=5.8								
W39A	**Magazine**	**23.52**	**347**	P		**P**		**13 25 39.3**	**+0.6**
W56A	**Indian Trail**	**23.55**	**14**	P		**P**		**13 25 38.8**	**-0.2**
	baz=197								
W57A	**Gilead**	**23.71**	**15**	P		**P**		**13 25 40.4**	**0.0**
	baz=198								
WVT	**Waverly**	**23.72**	**359**	P		**P**		**13 25 40.4**	**-0.2**
	baz=179								
FCAR	**Ozark Folk Cen**	**23.87**	**350**	P		**P**		**13 25 41.7**	**-0.2**
V54A	**Nebo**	**23.88**	**11**	P		**P**		**13 25 42.7**	**+0.7**
	baz=193								
LCAR	**Lake Charles**	**23.91**	**352**	P		**P**		**13 25 42.1**	**-0.1**
LCAR				IAmb		IAmb		13 25 42.5	
	comp=Z,7.5nm,0.5s								
V55A	**Taylorsville**	**24.09**	**12**	P		**P**		**13 25 43.9**	**0.0**
	baz=195								
U49A	**Red Boiling Sp**	**24.14**	**3**	P		**P**		**13 25 44.6**	**+0.3**
V56A	**Mocksville**	**24.21**	**14**	P		**P**		**13 25 44.7**	**-0.2**
	baz=196								
TZTN	**Tazewell**	**24.38**	**7**	P		**P**		**13 25 46.4**	**0.0**
	baz=189								
U40A	**Yellville**	**24.45**	**349**	P		**P**		**13 25 47.4**	**+0.2**
	baz=167,SNR=7.8								
U40A	**Yellville**	**24.45**	**349**	P		**P**		**13 25 47.1**	**-0.1**
V57A	**Coltrane Farms**	**24.46**	**15**	P		**P**		**13 25 48.0**	**+0.8**
	baz=198								
V58A	**Windy Hill, Pi**	**24.55**	**16**	P		**P**		**13 25 48.8**	**+0.8**
	baz=200								
V58A	**Windy Hill, Pi**	**24.55**	**16**	P		**P**		**13 25 49.7**	**+1.8**
WMOK	**Wichita Mounta**	**24.62**	**337**	P		**P**		**13 25 48.5**	**-0.2**
	baz=152,SNR=10								
WMOK	**Wichita Mounta**	**24.62**	**337**	P		**P**		**13 25 47.6**	**-1.1**
TUL1	**Leonard**	**24.70**	**343**	P		**P**		**13 25 49.6**	**+0.2**
	baz=160								
U55A	**TA2, Sparta**	**24.75**	**12**	P		**P**		**13 25 51.0**	**+1.0**
	baz=195								
T42A	**Van Buren**	**24.85**	**353**	P		**P**		**13 25 49.9**	**-0.8**
V57A	**Blanch**	**25.09**	**15**	P		**P**		**13 25 53.1**	**+0.2**
	baz=199								
U58A	**Oxford**	**25.27**	**17**	P		**P**		**13 25 55.4**	**+0.9**
	baz=200								
T55A	**Pulaski**	**25.40**	**12**	P		**P**		**13 25 56.9**	**+1.0**
	baz=195								
MNTX	**Cornudas Mount**	**25.45**	**322**	P		**P**		**13 25 56.3**	**0.0**
	baz=135,SNR=11								
MNTX	**Cornudas Mount**	**25.45**	**322**	P		**P**		**13 25 57.0**	**+0.7**
T57A	**Hurt**	**25.64**	**15**	P		**P**		**13 25 58.7**	**+0.7**
	baz=198								
MSTX	**Muleshoe**	**25.74**	**329**	P		**P**		**13 25 58.8**	**-0.2**
	baz=143,SNR=10								
MSTX	**Muleshoe**	**25.74**	**329**	P		**P**		**13 25 59.6**	**+0.6**
MSTX				IAmb		IAmb		13 26 00.1	
	comp=Z,17nm,0.8s								
T58A	**Grand View Acr**	**25.79**	**16**	P		**P**		**13 25 59.9**	**+0.7**
	baz=200								
CCM	**Cathedral Cave**	**25.88**	**353**	P		**P**		**13 25 59.7**	**-0.3**
	baz=171								
CCM	**Cathedral Cave**	**25.88**	**353**	P		**P**		**13 25 58.8**	**-1.3**
AMTX	**Amarillo**	**25.96**	**332**	P		**P**		**13 26 01.2**	**+0.2**
	baz=147								
AMTX	**Amarillo**	**25.96**	**332**	P		**P**		**13 26 01.4**	**+0.4**
AMTX				IAmb		IAmb		13 26 04.9	
	comp=Z,7.9nm,0.5s								
T59A	**Double "B" Far**	**26.09**	**18**	P		**P**		**13 26 02.9**	**+0.9**
	baz=202								
R40A	**Maddies Statio**	**26.25**	**351**	P		**P**		**13 26 02.8**	**-0.6**
Q52A	**Bidwell**	**26.93**	**9**	P		**P**		**13 26 09.8**	**+0.2**
	baz=191								
Q53A	**Leroy**	**26.95**	**10**	P		**P**		**13 26 10.2**	**+0.4**

	baz=193								
R57A	**Stanardsville**	**27.06**	**15**	P		**P**		**13 26 10.5**	**-0.2**
	baz=199								
Q54A	**Coxs Mills**	**27.20**	**11**	P		**P**		**13 26 12.2**	**+0.3**
	baz=194								
121A	**Cookes Peak, D**	**27.50**	**320**	P		**P**		**13 26 15.4**	**+0.4**
	baz=132								
P53A	**Whipple**	**27.59**	**10**	P		**P**		**13 26 15.4**	**0.0**
	baz=193								
P52A	**Corning**	**27.61**	**9**	P		**P**		**13 26 16.0**	**+0.3**
	baz=191								
KSU1	**Kansas State U**	**27.92**	**345**	P		**P**		**13 26 18.2**	**-0.2**
	baz=160								
O51A	**Pataskala**	**28.05**	**8**	P		**P**		**13 26 19.9**	**+0.3**
	baz=190								
ACSO	**Alum Creek Sta**	**28.08**	**7**	P		**P**		**13 26 19.8**	**-0.1**
	baz=189								
O52A	**Adamsville**	**28.13**	**9**	P		**P**		**13 26 20.8**	**+0.6**
	baz=191								
P57A	**Homestead Farm**	**28.31**	**15**	P		**P**		**13 26 21.7**	**-0.2**
	baz=200								
O53A	**New Philadelph**	**28.36**	**10**	P		**P**		**13 26 22.9**	**+0.6**
	baz=193								
ANMO	**Albuquerque**	**28.42**	**326**	P		**P**		**13 26 24.8**	**+1.6**
	comp=Z,1.6nm,0.7s,baz=159,slow=8.0,SNR=6.4								
ANMO	**Albuquerque**	**28.42**	**326**	P		**P**		**13 26 22.8**	**-0.4**
	baz=138								
ANMO	**Albuquerque**	**28.42**	**326**	IAmb		IAmb		13 26 25.6	
	comp=Z,2.6nm,0.8s								
CBKS	**Cedar Bluff**	**28.60**	**340**	P		**P**		**13 26 25.1**	**+0.6**
	baz=154								
T25A	**Trinidad**	**29.07**	**331**	P		**P**		**13 26 29.1**	**+0.2**
	baz=144								
O57A	**Amberson**	**29.09**	**15**	P		**P**		**13 26 29.6**	**+0.8**
	baz=200								
O59A	**Robesonia**	**29.59**	**17**	P		**P**		**13 26 34.5**	**+1.3**
	baz=202								
N57A	**Milroy**	**29.62**	**15**	P		**P**		**13 26 33.7**	**+0.2**
	baz=200								
M54A	**Oil Creek Stat**	**29.86**	**12**	P		**P**		**13 26 35.7**	**+0.1**
	baz=195								
M55A	**Ridgway**	**30.01**	**13**	P		**P**		**13 26 38.0**	**+1.1**
	baz=197								
SDCO	**Great Sand Dun**	**30.08**	**331**	P		**P**		**13 26 38.6**	**+0.7**
	baz=143,SNR=7.7								
SDCO	**Great Sand Dun**	**30.08**	**331**	P		**P**		**13 26 39.8**	**+1.8**
PTGA	**Pitinga**	**30.12**	**114**	LR		LR		13 38 48.0	
	comp=Z,60nm,20.8s,baz=57,slow=36								
N59A	**State Game Lan**	**30.27**	**18**	P		**P**		**13 26 39.9**	**+0.7**
	baz=203								
M57A	**Sunshine Farm,**	**30.28**	**15**	P		**P**		**13 26 39.8**	**+0.5**
	baz=200								
M57A	**Sunshine Farm,**	**30.28**	**15**	P		**P**		**13 26 39.8**	**+0.5**

I63A	**Otisfield**	**34.77**	**21**	P	**P**	**13 27 19.1**	**+0.6**
	baz=210						
RSSD	**Black Hills**	**34.80**	**339**	P	**P**	**13 27 19.4**	**+0.4**
	baz=151						
RSSD	**Black Hills**	**34.80**	**339**	P	**P**	**13 27 20.6**	**+1.5**
RSSD				IAmb	IAmb	13 27 21.6	
	comp=Z,4.5nm,0.6s						
D47A	**Chapleau**	**34.82**	**5**	P	**P**	**13 27 18.5**	**-0.5**
	baz=187						
RRX	**Edison Barstow**	**35.02**	**315**	P	**P**	**13 27 20.9**	**+0.1**
	baz=123						
D48A	**Paudash Townsh**	**35.07**	**7**	P	**P**	**13 27 20.1**	**-0.9**
	baz=189						
D53A	**Lac Vacive, Po**	**35.60**	**11**	P	**P**	**13 27 25.9**	**+0.3**
	baz=196						
TPNV	**Topopah Spring**	**35.68**	**318**	P	**P**	**13 27 28.5**	**+1.8**
	baz=126						
DUG	**Dugway, Tooele**	**35.70**	**326**	P	**P**	**13 27 27.5**	**+0.7**
	baz=134						
EYMN	**Ely**	**35.70**	**355**	P	**P**	**13 27 24.9**	**-1.5**
	baz=173						
G62A	**West of Eustis**	**35.81**	**20**	P	**P**	**13 27 27.5**	**+0.1**
	baz=209						
MNMC	**Minye Minye**	**35.81**	**150**	P	**P**	**13 27 29.4**	**+1.3**
BW06	**Boulder Array**	**35.94**	**332**	P	**P**	**13 27 28.8**	**0.0**
	baz=141,SNR=5.4						
BW06	**Boulder Array**	**35.94**	**332**	P	**P**	**13 27 29.8**	**+1.0**
PD31	**Pinedale Array**	**35.94**	**332**	IAmb	IAmb	13 27 30.0	
	comp=Z,2.9nm,0.5s						
PDAR	**Pinedale Array**	**35.94**	**332**	P	**P**	**13 27 29.4**	**+0.5**
	comp=Z,2.7nm,0.5s,baz=128,slow=11,SNR=28						
E58A	**La Victoria**	**35.99**	**17**	P	**P**	**13 27 29.7**	**+0.8**
	baz=204						
MPMC	**Manual Prospec**	**36.00**	**316**	P	**P**	**13 27 30.6**	**+1.1**
	baz=124						
SNCC	**San Nicolas Is**	**36.01**	**311**	P	**P**	**13 27 29.3**	**-0.1**
	baz=118						
D55A	**Sainte-Anne-du**	**36.02**	**14**	P	**P**	**13 27 29.1**	**-0.1**
	baz=200						
G63A	**Kingsbury**	**36.04**	**22**	P	**P**	**13 27 29.6**	**+0.2**
	baz=210						
R11A	**Troy Canyon, C**	**36.10**	**321**	P	**P**	**13 27 31.6**	**+1.3**
	baz=128						
H65A	**Eastbrook**	**36.19**	**23**	P	**P**	**13 27 31.6**	**+0.9**
	baz=213						
PKME	**Peaks-Kenny Pk**	**36.29**	**22**	P	**P**	**13 27 32.3**	**+0.8**
	baz=211						
D57A	**Chemin Vers le**	**36.42**	**16**	P	**P**	**13 27 33.2**	**+0.6**
	baz=202						
G64A	**Maxfield**	**36.47**	**22**	P	**P**	**13 27 33.6**	**+0.5**
	baz=212						
F63A	**Nahmakanta, Br**	**36.73**	**22**	P	**P**	**13 27 35.7**	**+0.4**
	baz=211						
D58A	**Chemin du LacG**	**36.76**	**17**	P	**P**	**13 27 36.4**	**+0.8**
	baz=204						
G65A	**Princeton**	**36.88**	**24**	P	**P**	**13 27 37.5**	**+1.0**
	baz=213						
FXWY	**Fox Creek**	**37.30**	**331**	IAmb	IAmb	13 27 44.0	
	comp=Z,3.0nm,0.5s						
ELK	**Elko**	**37.43**	**324**	P	**P**	**13 27 41.9**	**+0.3**
ELK				IAmb	IAmb	13 27 43.8	
	comp=Z,3.7nm,0.8s						
FLWY	**Flagg Ranch**	**37.48**	**332**	IAmb	IAmb	13 27 43.8	
	comp=Z,5.7nm,0.8s						
RLMT	**Red Lodge**	**37.67**	**334**	P	**P**	**13 27 43.9**	**+0.4**
	baz=143,SNR=7.6						
LAO	**LASA Array**	**37.79**	**339**	P	**P**	**13 27 44.7**	**+0.4**
	baz=149						
NVAR	**Mina Array Bea**	**37.87**	**319**	P	**P**	**13 27 47.3**	**+2.0**
	comp=Z,2.0nm,0.7s,baz=127,slow=7.6,SNR=20						
NVAR				PcP	**PcP**	**13 30 01.8**	**+1.4**
	comp=Z,1.4nm,0.6s,baz=127,slow=3.6,SNR=9.8						
NVAR				ScP	**ScP**	**13 33 40.4**	**-1.4**
	comp=Z,0.3nm,0.5s,baz=139,slow=4.3,SNR=2.4						
NVAR				LR	LR	13 47 08.5	
	comp=Z,46nm,18.3s,baz=27,slow=42						
D62A	**Allapoint, All**	**37.94**	**20**	P	**P**	**13 27 45.3**	**-0.1**
	baz=210						
KVN	**Kaiserville**	**38.10**	**320**	P	**P**	**13 27 48.5**	**+1.4**
KVN				IAmb	IAmb	13 27 49.7	
	comp=Z,3.0nm,0.7s						
MATQ	**Matagami**	**38.20**	**10**	P	**P**	**13 27 47.3**	**-0.2**
	baz=195						
ULM	**Lac du Bonnet**	**38.48**	**351**	P	**P**	**13 27 48.6**	**-1.3**
	comp=Z,6.0nm,0.5s,baz=161,slow=8.3,SNR=9.9						
ULM				LR	LR	13 45 26.6	
	comp=Z,29nm,20.9s,baz=124,slow=39						
CHGQ	**Chibougamau**	**38.99**	**13**	P	**P**	**13 27 54.0**	**-0.3**
	baz=200						
BEKR	**Beckworth**	**40.00**	**319**	P	**P**	**13 28 03.8**	**+0.8**
BEKR				IAmb	IAmb	13 28 05.5	
	comp=Z,5.8nm,1.3s						
EGMT	**Eagleton**	**40.22**	**337**	P	**P**	**13 28 04.4**	**-0.2**
	baz=145						
MSO	**Missoula**	**41.05**	**332**	P	**P**	**13 28 11.1**	**-0.4**
	baz=138						
BMO	**Blue Mountains**	**41.30**	**327**	P	**P**	**13 28 13.6**	**0.0**
O02D	**Mt. Diablo Mer**	**41.73**	**318**	P	**P**	**13 28 16.5**	**-0.6**
	baz=122						
F10A	**Beach Ranch, E**	**42.02**	**329**	IAmb	IAmb	13 28 20.6	
	comp=Z,4.3nm,0.6s						
J05D	**Fort Rock, OR**	**42.50**	**323**	P	**P**	**13 28 23.8**	**+0.3**
	baz=126						
L04D	**Klamath Falls**	**42.53**	**321**	P	**P**	**13 28 24.0**	**+0.3**
	baz=124						
I04A	**Tendick Farm,**	**43.49**	**323**	P	**P**	**13 28 30.9**	**-0.4**
	baz=126						
K02D	**Willamette Mer**	**43.63**	**321**	P	**P**	**13 28 32.5**	**0.0**
	baz=123						
FFC	**Flin Flon**	**43.86**	**348**	P	**P**	**13 28 34.1**	**+0.1**
FFC				IAmb	IAmb	13 28 34.6	
	comp=Z,5.7nm,0.6s						
H04A	**Detroit Lake**	**43.88**	**324**	P	**P**	**13 28 34.1**	**-0.4**
H04A				IAmb	IAmb	13 28 35.3	
	comp=Z,6.5nm,1.0s						
I02D	**Swisshome**	**44.52**	**322**	P	**P**	**13 28 40.1**	**+0.6**
	baz=124						
SCHQ	**Schefferville**	**45.39**	**17**	P	**P**	**13 28 45.0**	**-1.3**
	comp=Z,7.7nm,0.6s,baz=216,slow=5.8,SNR=7.5						
SCHQ				LR	LR	13 49 39.7	
	comp=Z,39nm,18.1s,baz=262,slow=38						
SCHQ	**Schefferville**	**45.39**	**17**	P	**P**	**13 28 45.4**	**-0.9**
BDFB	**Brasilia**	**47.83**	**124**	LR	LR	13 49 21.0	
	comp=Z,59nm,21.0s,baz=139,slow=36						
CPUP	**Villa Florida**	**48.25**	**143**	P	**P**	**13 29 07.7**	**-1.2**
	comp=Z,1.8nm,0.6s,baz=335,slow=8.5,SNR=4.5						
CPUP	**Villa Florida**	**48.25**	**143**	IAmb	IAmb	13 29 17.9	
	comp=Z,12nm,1.5s						
YKA	**Yellowknife Ar**	**53.77**	**345**	P	**P**	**13 29 48.9**	**-0.9**
	comp=Z,1.3nm,0.5s,baz=138,slow=7.9,SNR=37						
YKA				PcP	**PcP**	**13 30 53.6**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=146,slow=4.3,SNR=5.9						
YKA				ScP	**ScP**	**13 34 46.5**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=140,slow=4.9,SNR=5.9						
YKA				LR	LR	13 55 45.9	
	comp=Z,34nm,19.3s,baz=0.0,slow=39						
PLCA	**Paso Flores**	**55.02**	**164**	P	**P**	**13 29 59.7**	**+0.4**
	comp=Z,6.6nm,0.9s,baz=339,slow=9.0,SNR=12						
PLCA	**Paso Flores**	**55.02**	**164**	P	**P**	**13 29 58.7**	**-0.5**
PLCA				IAmb	IAmb	13 30 00.7	
	comp=Z,4.9nm,0.8s						
DOT	**Dot Lake**	**64.60**	**336**	IAmb	IAmb	13 31 05.1	
	comp=Z,2.6nm,0.7s						
HDA	**Harding Lake**	**66.07**	**336**	P	**P**	**13 31 13.0**	**-1.1**
	baz=113						
HDA	**Harding Lake**	**66.07**	**336**	P	**P**	**13 31 12.6**	**-1.5**
HDA				IAmb	IAmb	13 31 14.0	
	comp=Z,2.6nm,0.6s						
ILAR	**Eielson Array**	**66.19**	**336**	P	**P**	**13 31 13.9**	**-0.9**
	comp=Z,1.5nm,0.5s,baz=160,slow=4.6,SNR=30						
RND	**Reindeer**	**66.48**	**334**	P	**P**	**13 31 16.3**	**-0.5**
RND				IAmb	IAmb	13 31 17.3	
	comp=Z,6.2nm,0.7s						
POKR	**Poker Plat Res**	**66.53**	**336**	P	**P**	**13 31 16.0**	**-1.1**
	baz=113						
BPAW	**Bear Paw Mtn.**	**67.61**	**335**	P	**P**	**13 31 22.6**	**-1.3**
TOLK	**Toolik Lake Re**	**68.66**	**340**	P	**P**	**13 31 28.1**	**-2.3**
	baz=112						
SPITS	**Spitsbergen Ar**	**80.83**	**12**	LR	LR	14 09 26.3	
	comp=Z,35nm,20.4s,baz=225,slow=36						
NOA	**NORSAR Array B**	**83.45**	**29**	LR	LR	14 09 05.9	
	comp=Z,7.9nm,18.7s,baz=290,slow=35						
KSRS	**Korea Array**	**120.44**	**328**	PKP	**PKiKP**	**13 39 18.9**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=18,slow=1.3,SNR=6.8						
KSH	**Kashi**	**126.16**	**16**	PKP	**pPKiKP**	**13 39 52.3**	**+1.5**
KSH				sPKP		13 40 06.0	
STKA	**Stephens Creek**	**131.09**	**238**	PKP	**PKPdf**	**13 39 39.5**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=122,slow=8.0,SNR=4.6						
CD2	**Chengdu**	**135.72**	**346**	PKP	**PKPdf**	**13 39 46.0**	**-2.0**
ASAR	**Alice Springs**	**139.29**	**248**	PKhKP	PKPpre	13 39 46.5	
	comp=Z,0.3nm,0.6s,baz=110,slow=3.3,SNR=7.7						
ASAR				PKP	**PKPdf**	**13 39 55.0**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=106,slow=1.9,SNR=15						
WRA	**Warramunga Arr**	**139.31**	**254**	PKhKP	PKPpre	13 39 46.3	
	comp=Z,0.2nm,0.5s,baz=94,slow=3.0,SNR=1.6						
WRA				PKP	**PKPdf**	**13 39 54.9**	**0.0**
	comp=Z,1.5nm,0.8s,baz=91,slow=2.6,SNR=5.1						
CMAR	**Chiang Mai Arr**	**148.81**	**348**	PKPbc	**PKPbc**	**13 40 14.3**	**-0.9**
	comp=Z,1.8nm,0.7s,baz=350,slow=3.6,SNR=11						

IDC 23 13:54:39.8±495.0, 53°25N×31°97E, h0km, Error ellipse: s-maj=186.4km s-min=118.6km az=42.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.60**	**39**	*i*		14 23 20.0	
	baz=225,slow=281,SNR=0.8						
I26DE	**FREYUNG INFRAS**	**12.30**	**256**	*i*		15 13 20.0	
	baz=64,slow=330,SNR=0.9						
I31KZ	**AKTYUBINSK INF**	**16.33**	**90**	*i*		15 36 10.0	
	baz=291,slow=308,SNR=0.7						

IDC 23 13:56:44.4±1.9, 1°91N×127°48E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.5/48, mbtmp3.8/4, Error ellipse: s-maj=152.6km s-min=23.3km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.74**	**163**	P	P	14 01 48.6	+0.4
	2.5nm,0.4s,baz=343,slow=11,SNR=37						
ASAR	**Alice Springs**	**26.11**	**167**	P	P	14 02 20.1	-0.7
	0.3nm,0.5s,baz=344,slow=8.2,SNR=11						
STKA	**Stephens Creek**	**36.17**	**159**	P	P	14 03 48.8	0.0
	1.2nm,0.3s,baz=337,slow=8.6,SNR=8.5						
MKAR	**Makanchi Array**	**59.47**	**326**	P	P	14 06 49.4	+0.2
	0.5nm,0.5s,baz=114,slow=8.6,SNR=7.1						

*IDC **23** 13:58:37.9±0.7, 26°90S×176°71W, h0km, mb4.1/14, mb1 4.3/14, mb1mx4.2/28, mbtmp4.1/14, ML5.4/1, MS3.9/20, Ms1 3.9/20, ms1mx3.8/27, Error ellipse: s-maj=24.3km s-min=16.9km az=109.0*

*NEIC **23** 13:58:38.1±1.8, 26°90S±0°07×176°6W±0°1, h10km±1km, mb4.6/12, Error ellipse: s-maj=17.3km s-min=11.4km az=97.0*

*GCMT **23** 13:58:42.1±0.4, 27°05S±0°02×176°26W±0°03, h34km±1km, MW5.0/71, Moment Tensor Solution. s42,c53; s71,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.95±.16; $M_{\theta\theta}$-0.45±.12; $M_{\phi\phi}$-1.51±.12; $M_{r\theta}$1.97±.15; $M_{\theta\phi}$-1.69±.07; $M_{r\phi}$1.25±.12; Best double couple: $M_0$3.35000×10^{16} NP1:ϕs193.00000°, δ27.00000°, λ52.00000°. NP2: ϕs54.00000°, δ69.00000°, λ108.00000°. Principal axes: T 3.0760, Plg62.0000°, Azm351.0000°; N 0.5400, Plg16.0000°, Azm227.0000°; P -3.6230, Plg22.0000°, Azm131.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 13:58:38.1±0.5, 26°98S±0°08×176°4W±0°1, h10km, n74, σ1°68/47, mb4.3/18, MS4.0/20, 2C-1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.62**	**210**	Pn	**Pn**	**13 59 21.9**	**+1.4**
	804nm,0.3s,baz=50,slow=2.7,SNR=31						
RAO				Sn	**Sn**	**13 59 52.2**	**-0.2**
	839nm,0.3s,baz=159,slow=24,SNR=6.7						
RAO	**Raoul Island**	**2.62**	**210**		**Pn**	**13 59 21.5**	**+0.9**
NIUE	**Niue**	**9.88**	**39**	Pn	**Pn**	**14 00 57.5**	**-2.8**
MSVF	**Nonsavu**	**10.52**	**330**		Pn	14 01 12.6	+3.5
URZ	**Urewera**	**12.49**	**204**	Pn	Pn	14 01 26.2	-10
	0.3nm,0.3s,baz=268,slow=5.0,SNR=8.7						
URZ				Sn	Sn	14 03 42.8	-12
	2.6nm,0.3s,baz=169,slow=22,SNR=8.3						
BFZ	**Birch Farm**	**14.95**	**202**	Pn	**Pn**	**14 02 05.9**	**-3.7**
MSWZ	**Moikau Station**	**15.95**	**203**	Pn	**Pn**	**14 02 19.9**	**-2.7**
RAR	**Rarotonga**	**16.25**	**73**	Pn	**Pn**	**14 02 24.1**	**-2.4**
	1.4nm,0.3s,baz=49,slow=15,SNR=2.8						
RAR				Sn	Sn	14 05 08.4	-18
	1.3nm,0.3s,baz=41,slow=19,SNR=1.0						
RAR				LR	LR	14 07 24.0	
	comp=Z,188nm,21.9s,baz=273,slow=32						
RAR	**Rarotonga**	**16.25**	**73**	IAmb	IAmb	14 02 35.9	
	comp=Z,56nm,1.3s						
DZM	**Mont Dzumac**	**16.33**	**284**	*e*P	P	14 02 43.7	+13
	comp=Z,127nm,1.8s						
DZM				*e*LQ	LQ	14 05 55.4	
	comp=Z,1μm,28.6s						
DZM				*e*LR	LR	14 06 36.8	
	comp=Z,2μm,24.9s						
DZM	**Mont Dzumac**	**16.33**	**284**	LR	LR	14 07 29.0	
	comp=Z,1μm,21.1s,baz=104,slow=33						
TBI	**Tubuai**	**24.65**	**88**	*e*LQ	LQ	14 08 44.0	
	comp=Z,790nm,28.8s						
TBI				*e*LR	LR	14 09 47.6	
	comp=Z,461nm,27.0s						
TBI	**Tubuai**	**24.65**	**88**	*e*T	T	14 28 59.1	
	comp=Z,14nm,0.3s						
PAE	**Paea**	**26.46**	**75**	*e*T	T	14 31 17.4	
	comp=Z,5.5nm,0.2s						
PPT2	**Papeete2**	**26.50**	**75**	*e*LQ	LQ	14 09 27.1	
	comp=Z,976nm,24.8s						
PPT2				*e*LR	LR	14 10 44.0	
	comp=Z,346nm,25.5s						
PPT2	**Papeete2**	**26.50**	**75**	*e*T	T	14 31 20.8	
	comp=Z,4.7nm,0.3s						
PPT	**Papete**	**26.50**	**75**	LR	LR	14 12 49.3	
	comp=Z,118nm,18.2s,baz=258,slow=32						
TVO	**Taravao**	**26.69**	**76**	*e*T	T	14 31 35.0	
	comp=Z,1.9nm,0.3s						
HNR	**Honiara**	**28.34**	**304**	LR	LR	14 13 51.7	
	comp=Z,447nm,21.8s,baz=154,slow=32						
CTA	**Charters Tower**	**34.80**	**273**	P	**P**	**14 05 29.8**	**+0.6**
	comp=Z,4.5nm,0.7s,baz=99,slow=10,SNR=11						
STKA	**Stephens Creek**	**36.72**	**252**	P	**P**	**14 05 45.0**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=37,slow=4.3,SNR=2.8						
STKA				LR	LR	14 19 27.6	
	comp=Z,121nm,18.1s,baz=67,slow=34						
AS31	**Alice Springs**	**44.79**	**263**	P	**P**	**14 06 51.4**	**-1.0**
ASAR	**Alice Springs**	**44.79**	**263**	P	**P**	**14 06 50.8**	**-1.6**
	comp=Z,0.7nm,0.5s,baz=92,slow=6.6,SNR=16						
ASAR				LR	LR	14 24 56.1	
	comp=Z,155nm,18.4s,baz=110,slow=35						
WR0	**Warramunga Arr**	**45.29**	**268**	P	**P**	**14 06 55.1**	**-1.3**
WR0				IAmb	IAmb	14 07 07.4	
	comp=Z,5.3nm,0.9s						
WB2	**Warramunga Arr**	**45.47**	**268**	P	**P**	**14 06 55.9**	**-1.8**
WB2				IAmb	IAmb	14 07 09.2	
	comp=Z,5.8nm,0.7s						
WRAB	**Tennant Creek**	**45.47**	**268**	P	**P**	**14 06 56.5**	**-1.3**
WRAB				IAmb	IAmb	14 07 08.8	
	comp=Z,6.3nm,0.8s						
WRA	**Warramunga Arr**	**45.48**	**268**	P	**P**	**14 06 56.3**	**-1.6**
	comp=Z,2.4nm,0.6s,baz=107,slow=7.4,SNR=13						
WB0	**Warramunga Arr**	**45.49**	**268**	P	**P**	**14 06 56.3**	**-1.6**
FORT	**Forrest**	**48.35**	**252**	P	**P**	**14 07 17.8**	**-2.4**
VNDA	**Vanda**	**51.63**	**186**	P	**P**	**14 07 47.1**	**+2.7**
	comp=Z,0.7nm,0.7s,baz=18,slow=5.6,SNR=6.8						
VNDA				LR	LR	14 27 56.3	
	comp=Z,83nm,19.2s,baz=20,slow=34						
FITZ	**Fitzroy Crossi**	**53.85**	**267**	P	**P**	**14 08 00.3**	**-1.3**
	comp=Z,1.5nm,0.8s,baz=159,slow=13,SNR=2.0						
FITZ	**Fitzroy Crossi**	**53.85**	**267**	IAmb	IAmb	14 08 08.3	
	comp=Z,11nm,1.3s						
QSPA	**South Pole Qui**	**63.12**	**180**	P	**P**	**14 09 07.7**	**+1.9**
JHJ	**Hachijo jima 2**	**72.83**	**323**	LR	LR	14 41 35.6	
	comp=Z,41nm,18.4s,baz=130,slow=36						
MAW	**Mawson**	**75.98**	**200**	P	**P**	**14 10 26.0**	**+1.0**
	comp=Z,5.4nm,0.6s,baz=136,slow=9.6,SNR=14						
MAW				LR	LR	14 43 45.4	
	comp=Z,198nm,18.6s,baz=71,slow=36						
MAW	**Mawson**	**75.98**	**200**	P	**P**	**14 10 24.8**	**-0.2**
MJAR	**Matsushiro Arr**	**76.27**	**324**	P	**P**	**14 10 27.0**	**0.0**
	comp=Z,3.1nm,0.8s,baz=151,slow=5.4,SNR=7.5						
MJAR				LR	LR	14 38 16.7	
	comp=Z,79nm,21.9s,baz=195,slow=31						
MAT	**Matsushiro**	**76.27**	**324**	P	**P**	**14 10 27.6**	**+0.6**
JNU	**Nakatsue**	**77.97**	**317**	LR	LR	14 40 06.3	
	comp=Z,44nm,19.3s,baz=146,slow=32						
ASAJ	**Asahikawa**	**80.08**	**331**	LR	LR	14 39 41.5	
	comp=Z,173nm,21.4s,baz=164,slow=31						
SYO	**Syowa Base**	**80.75**	**192**	*e*P	**P**	**14 10 50.4**	**-0.9**
SYO	**Syowa Base**	**80.75**	**192**	*e*PcP	**PcP**	**14 10 56.4**	**-1.6**
SYO	**Syowa Base**	**80.75**	**192**	*e*P	P	14 11 10.0	+19
H03S2	**Juan Fernandez**	**81.19**	**123**	T	T	15 40 25.6	
	baz=242,slow=74,SNR=7.7						
H03S1	**Juan Fernandez**	**81.20**	**123**	T	T	15 40 26.1	
	baz=242,slow=74,SNR=8.9						
H03S3	**Juan Fernandez**	**81.21**	**123**	T	T	15 40 25.0	
	baz=242,slow=74,SNR=12						
H03N2	**Juan Fernandez**	**81.36**	**123**	T	T	15 40 31.1	
	baz=245,slow=73,SNR=5.4						
H03N3	**Juan Fernandez**	**81.36**	**123**	T	T	15 40 38.5	
	baz=245,slow=73,SNR=6.4						
H03N1	**Juan Fernandez**	**81.38**	**123**	T	T	15 40 33.6	
	baz=245,slow=73,SNR=7.7						
SNAA	**Sanae**	**81.52**	**178**	P	**P**	**14 10 55.4**	**-0.1**
SNAA	**Sanae**	**81.52**	**178**	P	**P**	**14 10 56.0**	**+0.5**
SNAA				IAmb	IAmb	14 11 10.8	
	comp=Z,3.3nm,0.9s						
VNA3	**Neumayer Olymp**	**81.61**	**176**	P	**P**	**14 10 56.1**	**+0.2**
VNA2	**Neumayer--Watz**	**82.06**	**176**	P	**P**	**14 10 58.6**	**+0.4**
	baz=181,slow=3.3						
VNA1	**Neumayer--Stat**	**82.28**	**176**	P	**P**	**14 11 00.1**	**+0.8**
KSRS	**Korea Array**	**82.68**	**319**	P	**P**	**14 11 02.8**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=125,slow=5.6,SNR=7.5						
PETK	**Petropavlovsk-**	**82.87**	**345**	P	**P**	**14 11 03.3**	**+0.8**
	comp=Z,2.0nm,0.9s,baz=268,slow=24,SNR=5.1						
PETK				LR	LR	14 45 24.5	
	comp=Z,70nm,18.8s,baz=235,slow=34						
PLCA	**Paso Flores**	**83.81**	**133**	LR	LR	14 40 03.2	
	comp=Z,91nm,19.9s,baz=234,slow=30						
NVAR	**Mina Array Bea**	**84.79**	**42**	P	**P**	**14 11 15.1**	**+2.2**
	comp=Z,0.7nm,0.7s,baz=223,slow=10,SNR=6.4						
NVAR				LR	LR	14 43 03.8	
	comp=Z,111nm,18.8s,baz=205,slow=31						
USRK	**Ussuriysk Ar.**	**85.11**	**326**	P	**P**	**14 11 15.9**	**+1.8**
	comp=Z,1.9nm,0.6s,baz=116,slow=6.4,SNR=6.5						
USRK				LR	LR	14 43 15.5	
	comp=Z,130nm,20.3s,baz=126,slow=32						
MA2	**Magadan**	**90.38**	**344**	LR	LR	14 47 45.3	
	comp=Z,29nm,19.7s,baz=146,slow=33						
PDAR	**Pinedale Array**	**92.70**	**43**	LR	LR	14 48 25.3	
	comp=Z,52nm,18.4s,baz=288,slow=32						
CMAR	**Chiang Mai Arr**	**93.60**	**289**	P	**P**	**14 11 54.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=99,slow=5.6,SNR=1.1						
ILAR	**Eielson Array**	**94.30**	**12**	P	**P**	**14 11 57.9**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=205,slow=30,SNR=2.9						
ILAR				LR	LR	14 49 25.4	
	comp=Z,33nm,18.7s,baz=190,slow=32						
LPAZ	**La Paz**	**98.24**	**113**	LR	LR	14 46 53.7	
	comp=Z,46nm,21.1s,baz=216,slow=29						
MKAR	**Makanchi Array**	**116.61**	**311**	PKP	**PKPdf**	**14 17 21.4**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=133,slow=28,SNR=2.5						
ARCES	**ARCESS Array B**	**135.52**	**349**	PKP	**PKPdf**	**14 17 57.9**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=5.7,slow=1.2,SNR=4.0						
FINES	**FINESS Array B**	**142.36**	**342**	PKhKP	**PKPdf**	**14 18 06.8**	**-3.6**
	comp=Z,1.3nm,0.8s,baz=79,slow=9.9,SNR=3.4						
NB2	**NORSAR Subarra**	**145.55**	**353**	PKP	**PKPab**	**14 18 17.0**	**+0.5**
	comp=Z,2.7nm,0.9s,baz=2.2,slow=2.6						
NOA	**NORSAR Array B**	**145.55**	**353**	PKPbc	**PKPab**	**14 18 16.7**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=5.3,slow=3.9,SNR=6.4						
AKASG	**Malin Array Be**	**149.29**	**327**	PKPbc	**PKPbc**	**14 18 26.1**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=41,slow=3.9,SNR=6.1						
BRTR	**Keskin Array B**	**151.99**	**305**	PKPbc	**PKiKP**	**14 18 35.9**	**+1.7**
	comp=Z,0.4nm,0.4s,baz=303,slow=37,SNR=2.4						
CLL	**Collm**	**154.67**	**346**	*i* PKPbc	**PKiKP**	**14 18 43.3**	**+4.2**
GERES	**GERESS Array B**	**156.79**	**343**	PKPab	**PKPab**	**14 19 02.7**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=41,slow=9.1,SNR=2.6						
TORD	**Torodi Ar. Bea**	**166.13**	**172**	PKPab	**PKPab**	**14 19 45.4**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=194,slow=3.6,SNR=6.2						

*ANF **23** 14:14:55.1±0.8, 32°34N×115°18W, h0km, ML3.1/16, Error ellipse: s-maj=6.9km s-min=3.3km az=164.0*

*ECX **23** 14:14:56.4±0.6, 32°36N×115°19W, h6km±3km, MD3.2, ML3.4*

*NEIC **23** 14:14:57.9±1.8, 32°35N±0°01×115°18W±0°02, h8km±7km, Error ellipse: s-maj=2.1km s-min=1.9km az=89.0*

*PAS **23** 14:14:57.6±2.3, 32°33N±0°02×115°18W±0°02, h11km±6km, Error ellipse: s-maj=3.4km s-min=0.7km az=130.0*

*MEX **23** 14:14:59.0±1.1, 32°44N×115°13W, h5km, MD3.7*

ISC 23 14:14:57.2±0.8, 32°41N±0°03×115°21W±0°02, h15km±4km, n56, σ0°94/77, 2C-5D, California-Baja California border region

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

SFX	**San Felipe**	**1.40**	**167**	IAML			14 15 43.5	
	comp=E,247nm,0.2s							
SFX				⇓*e*			14 15 43.5	
Y12C	**Blythe**	**1.46**	**23**	P		**Pn**	**14 15 22.8**	**-0.1**
	baz=202							
Y12C				S		**Sg**	**14 15 44.1**	**-0.1**
	baz=202							
Y12C	**Blythe**	**1.46**	**23**			**Pg**	**14 15 25.4**	**+0.2**
XPFO	**Pion Flat**	**1.59**	**319**			**Pn**	**14 15 23.9**	**-0.9**
PFO	**Pinyon Flats O**	**1.59**	**319**	P		**Pn**	**14 15 23.9**	**-1.0**
	baz=140,SNR=38							
109C	**Camp Elliot, M**	**1.67**	**287**	Pg		**Pb**	**14 15 28.2**	**+0.6**
	baz=108							
109C				S		**Sb**	**14 15 49.2**	**+0.9**
	baz=108							
109C	**Camp Elliot, M**	**1.67**	**287**			**Pn**	**14 15 26.1**	**+0.3**
IRM	**Iron Mountain**	**1.74**	**2**	Pb		**Pb**	**14 15 28.8**	**-0.1**
	baz=181							
IRM				Sb		**Sg**	**14 15 54.2**	**+0.9**
	baz=181							
MURC	**Murrieta**	**2.04**	**306**	Sb		**Sg**	**14 16 02.7**	**-0.3**
	baz=126							
214A	**Organ Pipe Nat**	**2.09**	**102**	P		**Pn**	**14 15 30.8**	**-0.9**
	baz=281,SNR=6.1							
214A	**Organ Pipe Nat**	**2.09**	**102**			**Pn**	**14 15 30.7**	**-0.9**
PDMCI	**Parker Dam,Lak**	**2.09**	**25**	Sb		**Sg**	**14 16 03.3**	**-1.1**
	baz=204							
GMRC	**Granite Mounta**	**2.40**	**351**	Pb		**Pb**	**14 15 40.8**	**+0.6**
	baz=171							
Y14A	**Wickenburg**	**2.40**	**50**			**Pg**	**14 15 41.8**	**-1.4**
BFSC	**Mount Baldy Ra**	**2.74**	**312**	Pg		**Pg**	**14 15 49.1**	**-0.7**
	baz=132							
DSCC	**Desert Studies**	**2.83**	**345**			**Pn**	**14 15 42.9**	**+1.2**
CIS	**Catalina Islan**	**2.87**	**291**	Sb		**Sg**	**14 16 26.4**	**-3.0**
	baz=111							
EDW2	**Edwards Air Fo**	**3.38**	**317**	Pg		**Pg**	**14 16 01.4**	**-0.6**
	baz=137							
X16A	**Lo Mia Camp, P**	**3.74**	**57**			**Pn**	**14 15 56.3**	**+1.9**
U15A	**North Rim**	**4.68**	**30**			**Pn**	**14 16 09.8**	**+2.3**
X18A	**Snowflake**	**4.88**	**63**			**Pn**	**14 16 12.5**	**+2.3**

IDC ***23*** *14:22:58.8±1.0, 25°.90N×98°.02E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.5/45, mbtmp3.6/7, ML3.6/1, MS3.5/2, Ms1 3.5/2, ms1mx2.6/36, Error ellipse: s-maj=42.1km s-min=18.2km az=64.0*

ISC 23 14:22:59.9±1.0, 25°.9N±0°.1×98°.1E±0°.2, h10km, n10, σ1§24/8, mb3.7/6, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BRDH	**Bariadhala**	**6.67**	**243**	Pn		**Pn**	**14 24 37.7**	**-0.3**
	133nm,0.3s,baz=39,slow=0.4,SNR=8.6							
CMAR	**Chiang Mai Arr**	**7.43**	**174**	Pn		**Pn**	**14 24 47.6**	**-0.8**
	0.3nm,0.3s,baz=322,slow=15,SNR=5.5							
MKAR	**Makanchi Array**	**24.35**	**333**	P		**P**	**14 28 19.2**	**+1.1**
	1.3nm,0.4s,baz=160,slow=9.7,SNR=7.1							
KURBB	**Kurchatov Arra**	**28.91**	**334**	P		**P**	**14 28 59.5**	**+0.5**
	0.3nm,0.6s,baz=141,slow=9.4,SNR=1.8							
ZALV	**Zalesovo Beam**	**29.72**	**344**	P		**P**	**14 29 04.5**	**-1.7**
	0.5nm,0.4s,baz=157,slow=7.8,SNR=1.8							
YAK	**Yakutsk**	**41.89**	**22**	LR		LR	14 49 56.5	
	comp=Z,64nm,21.6s,baz=150,slow=39							
TIXI	**Tiksi**	**48.95**	**12**	LR		LR	14 55 35.6	
	comp=Z,63nm,20.6s,baz=150,slow=40							
WRA	**Warramunga Arr**	**57.58**	**139**	P		**P**	**14 32 50.5**	**+0.3**
	0.5nm,0.6s,baz=322,slow=7.6,SNR=6.2							
ARCES	**ARCESS Array B**	**59.92**	**337**	P		**P**	**14 33 05.7**	**-0.1**
	2.8nm,0.9s,baz=96,slow=8.3,SNR=3.7							
ASAR	**Alice Springs**	**60.24**	**142**	P		**P**	**14 33 10.2**	**+1.6**
	0.4nm,0.7s,baz=320,slow=7.8,SNR=6.4							

IDC ***23*** *14:26:02.1±1.1, 46°.66N×27°.43W, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.6/51, mbtmp3.7/8, ML4.2/1, MS3.5/21, Ms1 3.5/21, ms1mx3.3/40, Error ellipse: s-maj=36.8km s-min=21.1km az=24.0*

NEIC ***23*** *14:26:03.9±1.1, 46°.7N±0°.1×27°.4W±0°.2, h10km±1km, mb4.3/6, Error ellipse: s-maj=26.6km s-min=13.9km az=233.0*

ISC 23 14:26:05.0±1.0, 46°.8N±0°.2×27°.3W±0°.1, h16km, n38, σ0§95/15, mb4.0/10, MS3.4/19, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ESK	**Eskdalemuir**	**17.35**	**52**	Pn		**Pn**	**14 30 04.1**	**-2.1**
ESK				IAmb		IAmb	14 30 13.3	
	comp=Z,20nm,1.4s							
PAB	**San Pablo**	**18.21**	**105**	P		**P**	**14 30 18.2**	**+0.9**
BORG	**Borgarnes**	**18.33**	**8**	LR		LR	14 35 23.6	
	comp=Z,58nm,21.4s,baz=181,slow=30							
ESDC	**Sonseca Array**	**18.40**	**104**	P		**Pn**	**14 30 19.6**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=300,slow=13,SNR=7.8							
ESDC				LR		LR	14 36 04.6	
	comp=Z,134nm,18.7s,baz=290,slow=33							
MDT	**Midelt**	**22.23**	**121**	LR		LR	14 38 32.4	
	comp=Z,46nm,18.9s,baz=342,slow=34							
SFJD	**Kangerlussuaq**	**23.66**	**337**	LR		LR	14 38 31.2	
	comp=Z,125nm,20.0s,baz=138,slow=32							
DAVOX	**Davos/Dischmat**	**25.33**	**76**	LR		LR	14 40 34.3	
	comp=Z,71nm,18.8s,baz=266,slow=34							
SCHQ	**Schefferville**	**25.95**	**303**	LR		LR	14 39 46.6	
	comp=Z,107nm,20.0s,baz=68,slow=32							
NOA	**NORSAR Array B**	**26.35**	**43**	LR		LR	14 40 40.0	
	comp=Z,26nm,20.6s,baz=240,slow=33							
SUMG	**Summit**	**26.40**	**352**	P		**P**	**14 31 41.6**	**+0.9**
SUMG				IAmb		IAmb	14 31 49.8	
	comp=Z,9.1nm,1.4s							
CASP	**Castiglione de**	**27.22**	**84**	P		**P**	**14 31 48.0**	**+0.1**
CASP				IAmb		IAmb	14 31 51.0	
	comp=Z,18nm,1.0s							
GERES	**GERESS Array B**	**27.40**	**70**	LR		LR	14 42 37.5	
	comp=Z,100nm,18.1s,baz=272,slow=36							
FRB	**Frobisher Bay**	**28.31**	**322**	LR		LR	14 40 18.7	
	comp=Z,77nm,19.0s,baz=305,slow=30							
VRAC	**Vranov**	**29.17**	**69**	LR		LR	14 43 27.3	
	comp=Z,121nm,18.9s,baz=268,slow=36							
KEST	**Kesra**	**29.44**	**99**	LR		LR	14 42 55.9	
	comp=Z,141nm,19.2s,baz=321,slow=34							
FINES	**FINESS Array B**	**33.51**	**44**	LR		LR	14 44 41.4	
	comp=Z,32nm,21.6s,baz=268,slow=33							
AKASG	**Malin Array Be**	**36.73**	**63**	LR		LR	14 49 08.5	
	comp=Z,53nm,18.2s,baz=280,slow=38							
TORD	**Torodi Ar. Bea**	**41.43**	**134**	P		**P**	**14 33 50.3**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=326,slow=7.6,SNR=6.3							
TORD				LR		LR	14 49 46.5	
	comp=Z,160nm,19.0s,baz=315,slow=34							
BRTR	**Keskin Array B**	**43.98**	**76**	P		**P**	**14 34 12.1**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=305,slow=6.8,SNR=3.6							
BRTR				LR		LR	14 52 08.9	
	comp=Z,26nm,21.4s,baz=293,slow=36							
ULM	**Lac du Bonnet**	**44.09**	**301**	LR		LR	14 51 11.9	
	comp=Z,100nm,21.4s,baz=50,slow=34							
DBIC	**Dimbokro**	**44.37**	**147**	LR		LR	14 51 34.8	
	comp=Z,75nm,18.1s,baz=296,slow=35							
YKA	**Yellowknife Ar**	**48.83**	**322**	P		**P**	**14 34 49.6**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=69,slow=7.5,SNR=6.0							
H10N2	**ASCENSION HYDR**	**55.54**	**165**	T		T	15 35 11.9	
	baz=349,slow=75,SNR=11							
H10N3	**ASCENSION HYDR**	**55.55**	**165**	T		T	15 35 14.4	
	baz=349,slow=75,SNR=10							
H10N1	**ASCENSION HYDR**	**55.56**	**165**	T		T	15 35 13.3	
	baz=349,slow=75,SNR=12							
PDAR	**Pinedale Array**	**55.96**	**298**	LR		LR	14 57 17.1	
	comp=Z,104nm,18.1s,baz=314,slow=34							
H10S3	**ASCENSION HYDR**	**56.60**	**165**	T		T	15 36 33.0	
	SNR=9.2							
H10S2	**ASCENSION HYDR**	**56.61**	**165**	T		T	15 36 32.1	
ILAR	**Eielson Array**	**59.28**	**334**	P		**P**	**14 36 05.1**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=58,slow=3.8,SNR=4.3							
TXAR	**Lajitas Array**	**60.28**	**282**	P		**P**	**14 36 12.4**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=70,slow=7.2,SNR=5.2							
TXAR				LR		LR	15 02 03.6	
	comp=Z,103nm,18.3s,baz=0.0,slow=36							
KURK	**Kurchatov**	**63.87**	**43**	P		**P**	**14 36 37.1**	**+0.8**
KURK	**Kurchatov**	**63.87**	**43**	IAmb		IAmb	14 36 37.8	
	comp=Z,1.4nm,0.8s							
KURBB	**Kurchatov Arra**	**63.89**	**43**	P		**P**	**14 36 37.1**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=318,slow=6.7,SNR=9.6							
BDFB	**Brasilia**	**64.84**	**202**	LR		LR	14 59 45.4	
	comp=Z,88nm,21.3s,baz=249,slow=31							
MKAR	**Makanchi Array**	**68.34**	**44**	P		**P**	**14 37 05.8**	**+0.6**
	comp=Z,1.1nm,0.9s,baz=316,slow=5.1,SNR=9.2							
CMAR	**Chiang Mai Arr**	**99.06**	**51**	LR		LR	15 28 08.1	
	comp=Z,8.2nm,20.1s,baz=265,slow=38							
WRA	**Warramunga Arr**	**149.33**	**35**	PKPbc		**PKPbc**	**14 45 52.6**	**-0.5**
	comp=Z,0.9nm,0.9s,baz=332,slow=2.4,SNR=4.0							
ASAR	**Alice Springs**	**152.46**	**40**	PKPbc		**PKPbc**	**14 45 58.9**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=340,slow=1.6,SNR=5.7							

IDC ***23*** *15:22:17.3±1.8, 0°.26N×126°.30E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/29, mbtmp3.4/5, ML3.4/1, Error ellipse: s-maj=111.5km s-min=26.4km az=67.0*

DJA ***23*** *15:22:22.7±0.4, 0°.N±6°×12°.6E±°, h10km, M2.8/6, MLv2.8/6*

ISC 23 15:22:24.2±1.0, 0°.01N±0°.09×125°.71E±0°.08, h44km, n9, σ1§52/9, mb3.4/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.82**	**65**	P		**Pn**	**15 22 54.4**	**+1.4**
KMSI	**Cibinong**	**1.82**	**288**	P		**Pn**	**15 22 54.1**	**+1.1**
LBMI	**Labuha**	**1.90**	**110**	P		**Pn**	**15 22 55.2**	**+1.1**
SANI	**Sanana**	**2.06**	**172**	P		**Pn**	**15 22 58.4**	**+2.0**
FITZ	**Fitzroy Crossi**	**17.99**	**180**	P		**Pn**	**15 26 30.9**	**-0.3**
	0.1nm,0.3s,baz=8.1,slow=13,SNR=0.9							
WRA	**Warramunga Arr**	**21.55**	**157**	P		**P**	**15 27 08.2**	**-1.9**
	0.6nm,0.5s,baz=338,slow=10,SNR=12							
ASAR	**Alice Springs**	**24.84**	**162**	P		**P**	**15 27 43.0**	**+0.4**
	0.4nm,0.6s,baz=345,slow=7.6,SNR=16							
STKA	**Stephens Creek**	**35.09**	**156**	P		**P**	**15 29 12.0**	**-1.4**
	0.5nm,0.7s,baz=349,slow=10,SNR=1.4							
MKAR	**Makanchi Array**	**60.06**	**327**	P		**P**	**15 32 26.9**	**+0.1**
	0.2nm,0.5s,baz=124,slow=8.4,SNR=2.8							

ASRS ***23*** *15:49:52.8±0.3, 51°.N±1°×9°1E±°, h10km, MLh3.6/17, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

NNC ***23*** *15:50:01.2±5.6, 50°.22N×91°.19E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=54.9km s-min=22.7km az=88.0*

ISC 23 15:49:54.4±0.9, 50°.98N±0°.03×91°.00E±0°.03, h10km, n24, σ1§62/46, 4C-3D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DJO	**Djoy, Khakassi**	**1.81**	**4**	Pg		**Pg**	**15 50 30.1**	**+0.9**
DJO				Sg		**Sg**	**15 50 54.3**	**+1.6**
DJOS	**Djoyskaya Sosn**	**1.84**	**8**	Pg		**Pg**	**15 50 30.5**	**+0.8**
DJOS				Sg		**Sg**	**15 50 55.1**	**+1.6**
CERR	**Cheremushki**	**1.90**	**8**	Pg		**Pg**	**15 50 31.0**	**+0.8**
CERR				Sg		**Sg**	**15 50 56.5**	**+1.0**
CUR	**Chagan-Uzun**	**1.91**	**244**	Pg		**Pg**	**15 50 31.5**	**+0.5**
CUR				Sg		**Sg**	**15 50 57.1**	**+1.4**
ULGR	**Ulagan, Altay**	**1.96**	**261**	Pg		**Pg**	**15 50 32.9**	**+0.8**
ULGR				Sg		**Sg**	**15 50 59.2**	**+1.7**
SLNR	**Muhor-Tarhata,**	**2.02**	**235**	Pg		**Pg**	**15 50 33.1**	**0.0**
SLNR				Sg		**Sg**	**15 51 00.3**	**+1.0**
AKAR	**Aktash**	**2.25**	**254**	Pg		**Pg**	**15 50 35.7**	**-1.8**
AKAR				Sg		**Sg**	**15 51 06.5**	**-0.3**
KZLR	**Kyzyl**	**2.28**	**70**	Pg		**Pb**	**15 50 34.1**	**-1.7**
KZLR				Sg		**Sg**	**15 51 04.9**	**-2.9**
VEH	**Verkhnyaya Baz**	**2.32**	**350**	Pg		**Pg**	**15 50 39.6**	**+0.7**
VEH				Sg		**Sg**	**15 51 09.3**	**+0.4**
CHBI	**Chibit, Altay**	**2.33**	**255**	Pg		**Pg**	**15 50 36.6**	**-2.4**
CHBI				Sg		**Sg**	**15 51 09.9**	**+0.8**
ARTR	**Artybash**	**2.47**	**291**	Pg		**Pg**	**15 50 39.7**	**-2.1**
ARTR				Sg		**Sg**	**15 51 15.6**	**+1.7**
DGZ	**Jazzator, Alta**	**2.62**	**242**	Pg		**Pb**	**15 50 40.9**	**-0.7**
DGZ				Sg		**Sg**	**15 51 18.2**	**-0.4**
TASR	**Tashtagol**	**2.63**	**314**	Pg		**Pg**	**15 50 44.5**	**-0.4**
TASR				Sg		**Sg**	**15 51 19.9**	**+0.8**
ABNR	**Abakan**	**2.77**	**5**	Pg		**Pg**	**15 50 45.4**	**-2.1**
ABNR				Sg		**Sg**	**15 51 23.3**	**0.0**
LUZB	**Luzhba, Kemero**	**2.98**	**335**	Pg		**Pg**	**15 50 50.6**	**-1.0**
LUZB				Sg		**Sg**	**15 51 31.2**	**+1.0**
TUNR	**Tungur**	**3.09**	**256**	Pg		**Pg**	**15 50 53.0**	**-0.6**
TUNR				Sg		**Sg**	**15 51 34.9**	**+1.3**
ELDR	**Elanda**	**3.11**	**276**	Pg		**Pg**	**15 50 54.4**	**+0.5**
ELDR				Sg		**Sg**	**15 51 35.2**	**+1.0**
GALT	**Gorno-Altaysk,**	**3.31**	**289**	Pg		**Pg**	**15 50 56.6**	**-1.3**
GALT				Sg		**Sg**	**15 51 40.6**	**-0.1**
TDJR	**Todzha**	**3.48**	**64**	Pg		**Pb**	**15 50 55.2**	**-0.9**
TDJR				Sg		**Sb**	**15 51 40.0**	**+1.6**
ELT	**Eltsovka**	**3.72**	**310**	Pg		**Pg**	**15 51 03.4**	**-2.4**
ELT				Sg		**Sg**	**15 51 53.8**	**-0.1**
UKR	**Ust'-Kan**	**3.94**	**272**	Pg		**Pg**	**15 51 06.2**	**-3.7**
UKR				Sg		**Sg**	**15 52 03.2**	**+2.4**
ZAA0	**Zalesovo Array**	**4.81**	**311**	⇓Pn		**Pg**	**15 51 23.4**	**-3.1**
	0.3nm,0.6s							
ZAA0				⇑Sn		**Sg**	**15 52 26.7**	**-2.1**
	1.2nm,0.4s							
MK31	**Makanchi Array**	**7.11**	**237**	⇓Pn		**Pn**	**15 51 40.4**	**+1.9**
	0.6nm,0.5s,baz=55,slow=16,SNR=10							
MK31				⇓Pg		**Pg**	**15 52 07.3**	**-3.1**
	2.1nm,0.7s,baz=61,slow=16,SNR=5.4							
MK31				⇑Lg		Lg	15 53 38.8	
	3.3nm,0.6s,baz=56,slow=30,SNR=6.3							
KURBB	**Kurchatov Arra**	**7.91**	**272**	⇑Pn		Pb	15 52 02.6	-9.0
	1.2nm,0.4s							
KURBB				⇑Lg		Lg	15 54 17.9	
	18nm,0.9s							

SJA ***23*** *15:57:14.7±0.8, 31°.28S×68°.62W, h104km±3km, ML3.9, MW4.1*

NEIC ***23*** *15:57:14.4±2.5, 31°.36S±0°.06×68°.5W±0°.1, h96km±5km, mb4.4/10, Md4.3(SJA), Error ellipse: s-maj=15.7km s-min=8.2km az=85.0*

IDC ***23*** *15:57:15.1±0.6, 31°.40S×68°.59W, h103km±4km, mb3.8/10, mb1 4.0/12, mb1mx3.9/25, mbtmp4.2/12, MS2.9/1, Ms1 3.0/1, ms1mx2.5/20, Error ellipse: s-maj=21.6km s-min=13.8km az=65.0*

GUC ***23*** *15:57:15.8±0.6, 31°.29S×68°.77W, h119km±13km, ML4.7*

ISC 23 15:57:14.9±0.5, 31°.28S±0°.04×68°.60W±0°.04, h105km±4km, n92, σ1§62/109, mb4.3/15, 5C-3D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RTLL	**Cerro Villicun**	**0.11**	**114**	*e*P		**Pn**	**15 57 30.1**	**+0.6**
RTLL				*e*S		**Sn**	**15 57 41.1**	**+0.6**
RTLL				IAML			15 57 42.5	
	comp=Z,5μm,0.2s							
AMOG	**MOGNA**	**0.35**	**15**	*i* P		**Pn**	**15 57 31.1**	**+0.6**
AMOG				IAML			15 58 01.2	
	comp=Z,1μm,0.5s							
CFA	**Coronel Fontan**	**0.44**	**136**	P		**Pn**	**15 57 31.3**	**+0.4**
	comp=Z,1μm,0.3s,baz=246,slow=1.3,SNR=9019							
CFA				S		**Sn**	**15 57 43.5**	**+0.6**
	comp=Z,2μm,0.3s,baz=133,slow=18,SNR=127							
CFA	**Coronel Fontan**	**0.44**	**136**	*e*P		**Pn**	**15 57 31.4**	**+0.5**
CFA				*e*S		**Sn**	**15 57 43.6**	**+0.7**
CFA				IAML			15 57 44.9	
	comp=Z,4μm,0.2s							
RTCV	**Cerro Valdivia**	**0.58**	**175**	*e*P		**Pn**	**15 57 32.3**	**+0.5**
RTLS	**Leoncito**	**0.79**	**229**	*e*P		**Pn**	**15 57 34.5**	**+0.6**
RTLS				*e*S		**Sn**	**15 57 49.3**	**+1.1**
RTLS				IAML			15 57 50.8	
	comp=Z,2μm,0.4s							
ACCO	**Cerro Coronel**	**0.80**	**330**	*i* P		**Pn**	**15 57 34.7**	**+0.5**
ACDV	**Cuesta del Vie**	**1.20**	**338**	*e*P		**Pn**	**15 57 39.3**	**+1.2**
ACDV				*e*S		**Sn**	**15 57 56.6**	**+1.1**
ACDV				IAML			15 57 58.5	
	comp=Z,4μm,0.5s							
AROD	**Rodeo**	**1.34**	**326**	*e*P		**Pn**	**15 57 41.1**	**+1.2**
AROD				⇓*e*S		**Sn**	**15 58 00.3**	**+1.5**
ACAN	**Cantantal**	**1.55**	**130**	*i* P		**Pn**	**15 57 43.4**	**+1.2**
ACAN				IAML			15 58 06.8	
	comp=Z,731nm,0.5s							
CO01	**Juntas del Tor**	**1.83**	**315**	⇑*i*P		**Pn**	**15 57 47.8**	**+2.0**
CO01				*i* S		**Sn**	**15 58 11.3**	**+2.0**
CO01				IAML			15 58 12.5	
	comp=N,6μm,0.4s							
CO01	**Juntas del Tor**	**1.83**	**315**			**Pn**	**15 57 47.8**	**+2.0**
CO01				Sn		**Sn**	**15 58 11.7**	**+2.3**
CO03	**El Pedregal**	**1.85**	**283**	⇑*i*P		**Pn**	**15 57 46.9**	**+1.1**
CO03				*i* S		**Sn**	**15 58 10.2**	**+0.8**
CO03				IAML			15 58 11.8	
	comp=E,8μm,0.3s							
CO03	**El Pedregal**	**1.85**	**283**			**Pn**	**15 57 46.9**	**+1.1**
CO03				Sn		**Sn**	**15 58 10.6**	**+1.1**
CO02	**Combarbal**	**2.06**	**272**	⇓*i*P		**Pn**	**15 57 49.1**	**+0.5**
CO02				*i* S		**Sn**	**15 58 14.3**	**0.0**
CO02				IAML			15 58 16.0	
	comp=N,11μm,0.2s							
CO02	**Combarbal**	**2.06**	**272**			**Pn**	**15 57 49.1**	**+0.5**
CO02				Sn		**Sn**	**15 58 15.1**	**+0.8**
GO04	**Tololo Observa**	**2.20**	**300**	⇑*i*P		**Pn**	**15 57 50.9**	**+0.5**
GO04				*i* S		**Sn**	**15 58 17.9**	**+0.3**
GO04	**Tololo Observa**	**2.20**	**300**			**Pn**	**15 57 50.9**	**+0.5**
GO04	**Tololo Observa**	**2.20**	**300**	*e*P		**Pn**	**15 57 51.2**	**+0.7**
GO04				*e*S		**Sn**	**15 58 18.3**	**+0.7**
VA03	**San Esteban**	**2.22**	**228**	⇑*i*P		**Pn**	**15 57 51.3**	**+0.7**
VA03				*i* S		**Sn**	**15 58 18.9**	**+0.9**
VA03				IAML			15 58 21.0	
	comp=E,4μm,0.3s							
VA03	**San Esteban**	**2.22**	**228**			**Pn**	**15 57 51.3**	**+0.7**
PEL	**Peldehue**	**2.56**	**223**			**Pn**	**15 57 55.4**	**+0.3**
PEL				Sn		**Sn**	**15 58 26.4**	**+0.5**
ROC1	**El Roble**	**2.66**	**230**			**Pn**	**15 57 56.0**	**-0.4**
CLCH	**Cerro Calan**	**2.67**	**217**	⇑*i*P		**Pn**	**15 57 57.3**	**+0.8**
CLCH				*i* S		**Sn**	**15 58 29.5**	**+1.0**
CLCH				IAML			15 58 31.7	
	comp=E,3μm,0.5s							
MRA	**San Martin**	**2.70**	**116**	*e*P		**Pn**	**15 57 58.5**	**+1.6**
MRA				IAML			15 58 34.5	
	comp=Z,341nm,0.5s							
MT05	**Renca**	**2.78**	**220**			**Pn**	**15 57 58.0**	**+0.2**
AC05	**El Transito**	**2.84**	**329**			**Pn**	**15 58 00.6**	**+1.8**
LCO	**Las Campanas**	**2.91**	**321**	Pn		**Pn**	**15 58 01.2**	**+1.4**
LCO	**Las Campanas**	**2.91**	**321**	*i* PZ			15 58 01.3	
MT02	**Curacav**	**2.92**	**227**			**Pn**	**15 57 59.2**	**-0.5**
TCA	**Tanti**	**3.42**	**92**	*i* P		**Pn**	**15 58 07.5**	**+1.0**
TCA				IAML			15 59 03.1	
	comp=Z,396nm,0.6s							
CYA	**Choya**	**3.73**	**41**	*i* P		**Pn**	**15 58 11.3**	**+0.7**
CYA				IAML			15 59 28.0	
	comp=Z,211nm,0.6s							
AC04	**Llanos de Chal**	**3.75**	**324**	⇓*i*P		**Pn**	**15 58 10.7**	**-0.1**
AC04				*i* S		**Sn**	**15 58 52.6**	**-1.5**
AC04	**Llanos de Chal**	**3.75**	**324**			**Pn**	**15 58 10.6**	**-0.3**
GO03	**Copiap**	**3.94**	**338**			**Pn**	**15 58 14.2**	**+0.6**
GO03	**Copiap**	**3.94**	**338**	*i* P		**Pn**	**15 58 14.1**	**+0.6**
BO02	**Sierra Bellavi**	**3.95**	**207**			**Pn**	**15 58 13.4**	**-0.2**
AC02	**Maricunga**	**4.46**	**354**			**Pn**	**15 58 21.3**	**+0.4**
GO05	**Huala**	**4.65**	**216**			**Pn**	**15 58 19.9**	**-3.1**
AC01	**Pan de Azucar**	**5.41**	**341**			**Pn**	**15 58 33.2**	**-0.1**
BI02	**San Fabin de**	**5.81**	**202**			**Pn**	**15 58 36.7**	**-2.0**
GO02	**Mina Guanaco**	**6.16**	**352**			**Pn**	**15 58 43.3**	**-0.4**
PB10	**IPOC Station P**	**7.93**	**347**			**Pn**	**15 59 06.0**	**-1.5**
LC01	**Cunco**	**8.06**	**199**	Pn		**Pn**	**15 59 05.8**	**-3.4**
PB15	**IPOC Station P**	**8.08**	**354**			**Pn**	**15 59 08.3**	**-1.4**
PB06	**IPOC Station P**	**8.59**	**354**			**Pn**	**15 59 14.2**	**-2.4**
LVC	**Limon Verde**	**8.64**	**358**	P		**Pn**	**15 59 15.9**	**-1.7**
	comp=Z,15nm,0.3s,baz=192,slow=8.2,SNR=58							
LVC				S		**Sn**	**16 00 49.8**	**-3.7**
	comp=Z,0.6nm,0.3s,baz=245,slow=23,SNR=1.2							
LVC	**Limon Verde**	**8.64**	**358**			**Pn**	**15 59 16.0**	**-1.5**
PB04	**IPOC Station P**	**9.02**	**351**			**Pn**	**15 59 18.7**	**-3.8**
PB09	**IPOC Station P**	**9.47**	**356**			**Pn**	**15 59 26.6**	**-2.0**
PLCA	**Paso Flores**	**9.56**	**189**	P		**Pn**	**15 59 27.1**	**-2.5**
	comp=Z,1.2nm,0.3s,baz=348,slow=10,SNR=18							
PLCA	**Paso Flores**	**9.56**	**189**			**Pn**	**15 59 28.3**	**-1.3**
PB07	**IPOC Station P**	**9.59**	**353**			**Pn**	**15 59 26.6**	**-3.6**
PB01	**IPOC Station P**	**10.23**	**355**			**Pn**	**15 59 35.1**	**-3.8**
PB08	**IPOC Station P**	**11.11**	**357**			**Pn**	**15 59 47.5**	**-3.5**
LL01	**San Ignacio de**	**11.49**	**194**			**Pn**	**15 59 51.1**	**-4.4**
PB11	**IPOC Station P**	**11.51**	**355**			**Pn**	15 59 51.3	-5.0
GO01

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ESL	**Shilin** baz=241	**0.29**	**234**	*i* P	**Pn**	**16 04 40.2**	**-0.4**
ESL	baz=241			S	**Sn**	**16 04 45.9**	**+0.6**
ETLH	**Xiulin Townshi** baz=310	**0.29**	**319**	P	**Pn**	**16 04 40.4**	**-0.3**
ETLH	baz=310			S	**Sn**	**16 04 46.1**	**+0.6**
EGFH	**Guangfu** baz=227	**0.40**	**218**	*i* P	**Pb**	**16 04 41.4**	**-0.5**
EGFH	baz=227			*i* S	**Sb**	**16 04 48.5**	**+0.3**
WHF	**Hehuan Shan** baz=285	**0.42**	**292**	*i* P	**Pb**	**16 04 42.2**	**-0.5**
WHF	baz=285			*i* S	**Sb**	**16 04 49.3**	**0.0**
ENA	**Nanau** baz=12	**0.44**	**6**	*i* P	**Pb**	**16 04 42.6**	**-0.1**
ENA	baz=12			*i* S	**Sb**	**16 04 49.7**	**+0.4**
OWD	**Renai** baz=269	**0.47**	**266**	P	**Pb**	**16 04 42.9**	**-0.2**
OWD	baz=269			S	**Sb**	**16 04 50.0**	**-0.3**
CHGB	**Renai** baz=275	**0.48**	**279**	P	**Pb**	**16 04 43.0**	**-0.3**
CHGB	baz=275			S	**Sb**	**16 04 50.7**	**+0.2**
NNSB	**Datong** baz=327	**0.52**	**328**	P	**Pn**	**16 04 43.5**	**-0.6**
NNSB	baz=327			S	**Sb**	**16 04 51.2**	**-0.4**
NNSH	**Datong** baz=326	**0.52**	**328**	P	**Pn**	**16 04 43.4**	**-0.7**
NNSH	baz=326			S	**Sb**	**16 04 50.9**	**-0.6**
NNS	**Nan Shan** baz=327	**0.54**	**327**	*i* P	**Pn**	**16 04 43.6**	**-0.6**
NNS	baz=327			*i* S	**Sb**	**16 04 51.5**	**-0.5**
TWT	**Tachien** baz=298	**0.54**	**300**	*i* P	**Pn**	**16 04 44.3**	**-0.1**
TWT	baz=298			*i* S	**Sb**	**16 04 51.9**	**-0.2**
HGSD	**Ruisui** baz=220	**0.55**	**207**	P	**Pn**	**16 04 44.4**	**+0.1**
HGSD	baz=220			*e*S	**Sb**	**16 04 52.3**	**+0.3**
VWDT	**VWDT** baz=240	**0.55**	**246**	P	**Pn**	**16 04 44.2**	**-0.2**
VWDT	baz=240			S	**Sn**	**16 04 52.2**	**-0.2**
TDCB	**Techi** baz=295	**0.56**	**299**	P	**Pn**	**16 04 44.2**	**-0.3**
TDCB	baz=295			S	**Sb**	**16 04 52.1**	**-0.3**
EHY	**Hungye** baz=215	**0.58**	**215**	*i* P	**Pn**	**16 04 43.3**	**-1.5**
EHY	baz=215			*e*S	**Sn**	**16 04 53.0**	**-0.2**
NDT	**Datong Townshi** baz=338	**0.64**	**345**	*i* P	**Pn**	**16 04 45.0**	**-0.5**
NDT	baz=338			*i* S	**Sn**	**16 04 53.6**	**-0.9**
TWC	**Suao** baz=20	**0.64**	**13**	*i* P	**Pn**	**16 04 45.5**	**0.0**
TWC	baz=20			*i* S	**Sn**	**16 04 55.3**	**+0.8**
ENTT	**Nioudou** baz=350	**0.66**	**350**	*i* P	**Pn**	**16 04 45.3**	**-0.6**
ENTT	baz=350			S	**Sn**	**16 04 54.4**	**-0.8**
EOS1	**EOS1** baz=49	**0.69**	**35**	P	**Pn**	**16 04 46.8**	**+0.6**
EOS1	baz=49			*e*S	**Sb**	**16 04 56.5**	**+0.7**
YULB	**Yu-li** baz=220	**0.69**	**212**	P	**Pn**	**16 04 44.7**	**-1.6**
YULB	baz=220			*e*S	**Sn**	**16 04 54.1**	**-1.8**
DPDB	**Guoxing** baz=271	**0.70**	**274**	P	**Pn**	**16 04 46.3**	**-0.2**
DPDB	baz=271			*e*S	**Sn**	**16 04 56.9**	**+0.7**
SSLB	**Suanglung** baz=258	**0.70**	**254**	P	**Pn**	**16 04 46.0**	**-0.5**
SSLB	baz=258			S	**Sn**	**16 04 55.8**	**-0.4**
TWF1	**Yuli** baz=221	**0.73**	**210**	*i* P	**Pn**	**16 04 45.2**	**-1.5**
TWF1	baz=221			*e*S	**Sn**	**16 04 55.6**	**-1.1**
SMLT	**Sun Moon Lake** baz=262	**0.73**	**262**	*i* P	**Pn**	**16 04 46.5**	**-0.4**
SMLT	baz=262			*i* S	**Sn**	**16 04 57.0**	**0.0**
TWE	**Neicheng** baz=349	**0.73**	**358**	*i* P	**Pn**	**16 04 46.4**	**-0.5**
TWE	baz=349			*i* S	**Sn**	**16 04 56.7**	**-0.2**
WHP	**Taichung City** baz=292	**0.74**	**293**	*i* P	**Pn**	**16 04 47.1**	**+0.1**
WHP	baz=292			S	**Sn**	**16 04 57.2**	**-0.1**
YHNB	**Yeheng** baz=336	**0.74**	**337**	P	**Pn**	**16 04 46.7**	**-0.4**
YHNB	baz=336			S	**Sn**	**16 04 56.2**	**-1.0**
NSK	**Sanguang** baz=336	**0.75**	**336**	*i* P	**Pn**	**16 04 46.7**	**-0.5**
NSK	baz=336			*i* S	**Sn**	**16 04 56.6**	**-0.9**
TYC	**Yuchr** baz=264	**0.77**	**264**	*i* P	**Pn**	**16 04 46.9**	**-0.4**
TYC	baz=264			S	**Sn**	**16 04 57.5**	**-0.2**
ILA	**Ilan** baz=353	**0.78**	**4**	*e*P	**Pn**	**16 04 47.2**	**-0.2**
ILA	baz=353			*e*S	**Sb**	**16 04 59.1**	**+0.7**
NWLT	**Wulai** baz=340	**0.81**	**348**	*i* P	**Pn**	**16 04 47.3**	**-0.6**
NWLT	baz=340			S	**Sn**	**16 04 58.3**	**-0.5**
WHYT	**Xinyi Township** baz=250	**0.82**	**250**	*i* P	**Pn**	**16 04 48.4**	**+0.3**
WHYT	baz=250			S	**Sn**	**16 04 59.7**	**+0.6**
FULB	**Fuli** baz=216	**0.86**	**205**	*i* P	**Pn**	**16 04 48.0**	**-0.6**
FULB	baz=216			*e*S	**Sn**	**16 05 01.0**	**+0.9**
NTC	**Toucheng** baz=355	**0.88**	**8**	P	**Pn**	**16 04 49.6**	**+0.8**
NTC	baz=355			*e*S	**Sb**	**16 05 02.5**	**+1.5**
WJS	**Zhushan** baz=260	**0.90**	**260**	*i* P	**Pn**	**16 04 49.9**	**+0.8**
WJS	baz=260			S	**Sb**	**16 05 04.1**	**+2.4**
NSTT	**Nanjuang** baz=315	**0.90**	**316**	*i* P	**Pn**	**16 04 49.9**	**+0.7**
NSTT	baz=315			S	**Sn**	**16 05 01.6**	**+0.6**
LIOB	**Emei** baz=316	**0.90**	**317**	P	**Pn**	**16 04 50.0**	**+0.8**
LIOB	baz=316			S	**Sn**	**16 05 01.9**	**+0.8**
TWQ1	**Liyutan** baz=292	**0.91**	**294**	*i* P	**Pn**	**16 04 49.9**	**+0.5**
TWQ1	baz=292			S	**Sb**	**16 05 03.1**	**+0.9**
WNT	**Mingjian** baz=263	**0.93**	**264**	*i* P	**Pn**	**16 04 50.4**	**+0.9**
WNT	baz=263			S	**Sb**	**16 05 04.2**	**+1.7**
CHKT	**Chengkung** baz=189	**0.93**	**199**	P	**Pn**	**16 04 49.2**	**-0.4**
CHKT	baz=189			*e*S	**Sn**	**16 05 01.9**	**+0.2**
TCU	**Taichung** baz=279	**0.94**	**280**	*i* P	**Pn**	**16 04 50.8**	**+1.1**
TCU	baz=279			*i* S	**Sb**	**16 05 04.3**	**+1.3**
NSY	**Sanyi** baz=296	**0.95**	**297**	*i* P	**Pn**	**16 04 50.8**	**+0.9**
NHDH	**Xindian Distri** baz=343	**0.98**	**351**	*i* P	**Pn**	**16 04 50.3**	**0.0**
NHDH	baz=343			S	**Sn**	**16 05 03.7**	**+0.6**
NMLH	**Miaoli** baz=303	**0.99**	**304**	*i* P	**Pn**	**16 04 51.0**	**+0.6**
NMLH	baz=303			S	**Sb**	**16 05 04.9**	**+0.6**
TIPB	**Shuangxi** baz=356	**0.99**	**7**	*i* P	**Pn**	**16 04 50.6**	**+0.2**
TIPB	baz=356			S	**Sn**	**16 05 03.5**	**+0.1**
TWA	**Mucha** baz=348	**1.00**	**354**	*i* P	**Pn**	**16 04 50.6**	**+0.1**
TWA	baz=348			S	**Sn**	**16 05 03.5**	**+0.1**
TATO	**Taipei** baz=348	**1.00**	**349**	P	**Pn**	**16 04 50.3**	**-0.3**
TATO	baz=348			S	**Sn**	**16 05 03.9**	**+0.3**
CHN5	**Tsauling** baz=239	**1.00**	**248**	*i* P	**Pn**	**16 04 51.3**	**+0.6**
CHN5	baz=239			*e*S	**Sn**	**16 05 05.2**	**+1.4**
ELDTW	**Lidau** baz=213	**1.00**	**218**	*i* P	**Pn**	**16 04 49.4**	**-1.3**
ELDTW	baz=213			*e*S	**Sn**	**16 05 03.0**	**-0.8**
PTSB	**Yuanli** baz=296	**1.01**	**297**	*e*P	**Pn**	**16 04 50.6**	**-0.1**
PTSB	baz=296			*e*S	**Sn**	**16 05 05.2**	**+1.4**
WDJ	**Dajia District** baz=290	**1.02**	**291**	*e*P	**Pn**	**16 04 51.2**	**+0.3**
WDJ	baz=290			*e*S	**Sb**	**16 05 06.2**	**+0.9**
SBCB	**Hsinchu** baz=320	**1.03**	**321**	*e*P	**Pn**	**16 04 52.4**	**+1.5**
SBCB	baz=320			*e*S	**Sb**	**16 05 06.7**	**+1.3**
WCHH	**Zhanghua** baz=275	**1.04**	**275**	P	**Pn**	**16 04 52.0**	**+0.9**
WCHH	baz=275			S	**Sb**	**16 05 07.2**	**+1.5**
TWB1	**Santiao Chiao** baz=24	**1.05**	**15**	P	**Pn**	**16 04 51.8**	**+0.5**
TWB1	baz=24			*e*S	**Sb**	**16 05 06.3**	**+0.2**
WGK	**Gukeng** baz=254	**1.08**	**254**	*i* P	**Pn**	**16 04 52.5**	**+1.0**
WGK	baz=254			S	**Sb**	**16 05 08.1**	**+1.4**
NCUH	**Zhongli** baz=333	**1.08**	**335**	P	**Pn**	**16 04 52.1**	**+0.4**
NCUH	baz=333			S	**Sb**	**16 05 07.8**	**+0.9**
NCU	**National Centr** baz=334	**1.08**	**335**	*e*P	**Pn**	**16 04 52.1**	**+0.5**
NCU	baz=334			*e*S	**Sn**	**16 05 07.2**	**+1.6**
NWF	**Wu-fen Shan** baz=352	**1.08**	**4**	*i* P	**Pn**	**16 04 51.9**	**+0.1**
NWF	baz=352			*e*S	**Sn**	**16 05 06.2**	**+0.5**
WFSB	**Wu-fen Shan** baz=352	**1.08**	**4**	P	**Pn**	**16 04 52.0**	**+0.3**
WFSB	baz=352			S	**Sn**	**16 05 06.8**	**+1.2**
WDLH	**Douliu** baz=255	**1.10**	**255**	*i* P	**Pn**	**16 04 52.9**	**+1.0**
WDLH	baz=255			S	**Sb**	**16 05 08.5**	**+1.2**
TWS1	**Kuangyinshan** baz=346	**1.14**	**347**	P	**Pn**	**16 04 52.6**	**+0.2**
TWS1	baz=346			S	**Sb**	**16 05 09.0**	**+0.5**
YM01	**YM01** baz=353	**1.16**	**355**	*i* P	**Pn**	**16 04 52.6**	**-0.2**
YM01	baz=353			*e*S	**Sn**	**16 05 07.3**	**-0.2**
YM10	**YM10** baz=354	**1.17**	**354**	*i* P	**Pn**	**16 04 52.4**	**-0.6**
YM11	**YM11** baz=354	**1.18**	**355**	*i* P	**Pn**	**16 04 52.1**	**-1.0**
STYT	**Tauyuan** baz=228	**1.19**	**227**	P	**Pn**	**16 04 53.5**	**+0.4**
STYT	baz=228			*e*S	**Sn**	**16 05 09.3**	**+1.1**
CHN4	**Tsaushan** baz=230	**1.19**	**238**	*i* P	**Pn**	**16 04 54.0**	**+0.8**
CHN4	baz=230			S	**Sb**	**16 05 10.7**	**+0.8**
TPUB	**Ta-pu** baz=235	**1.19**	**235**	P	**Pn**	**16 04 54.0**	**+0.8**
TPUB	baz=235			S	**Sn**	**16 05 09.7**	**+1.6**
NTST	**Danshui** baz=348	**1.20**	**349**	*e*P	**Pn**	**16 04 52.7**	**-0.5**
NTST	baz=348			S	**Sb**	**16 05 10.2**	**0.0**
YM03	**YM03** baz=352	**1.20**	**353**	P	**Pn**	**16 04 52.9**	**-0.4**
YM03	baz=352			*e*S	**Sn**	**16 05 09.1**	**+0.6**
ANP	**Anpu** baz=352	**1.21**	**353**	P	**Pn**	**16 04 52.8**	**-0.7**
ANP	baz=352			*e*S	**Sn**	**16 05 08.5**	**-0.2**
RLNB	**Erlin** baz=276	**1.22**	**266**	P	**Pn**	**16 04 54.6**	**+1.1**
RLNB	baz=276			S	**Sb**	**16 05 11.6**	**+0.7**
WTP	**Ta-pu** baz=234	**1.23**	**234**	*i* P	**Pn**	**16 04 54.6**	**+0.8**
WTP	baz=234			S	**Sb**	**16 05 11.5**	**+0.3**
JYNG	**Yonagunijimaku**	**1.24**	**68**	P	**Pn**	**16 04 53.4**	**-0.4**
CHY	**Chiayi** baz=248	**1.26**	**248**	*i* P	**Pn**	**16 04 55.3**	**+1.2**
CHY	baz=248			S	**Sb**	**16 05 12.7**	**+0.8**
TWH	**Lutao** baz=181	**1.28**	**189**	P	**Pn**	**16 04 53.2**	**-1.2**
TWH	baz=181			*e*S	**Sn**	**16 05 10.2**	**-0.3**
TWY	**Chenhua** baz=343	**1.29**	**356**	*e*S	**Sn**	**16 05 11.1**	**+0.5**
TWG	**Pinlang** baz=208	**1.29**	**206**	P	**Pn**	**16 04 53.5**	**-1.0**
TWG	baz=208			*e*S	**Sn**	**16 05 10.3**	**-0.4**
TWGBT	**Beinan** baz=208	**1.29**	**206**	P	**Pn**	**16 04 52.6**	**-1.9**
TWGBT	baz=208			*e*S	**Sn**	**16 05 10.2**	**-0.4**
YOJ	**Yonaguni jima** baz=69	**1.29**	**68**	P	**Pn**	**16 04 54.3**	**-0.3**
YOJ	baz=69			*e*S	**Sn**	**16 05 10.9**	**+0.1**
YOJ	**Yonaguni jima**	**1.29**	**68**	P	**Pn**	**16 04 54.3**	**-0.3**
WTCT	**Ta-ch'eng** baz=274	**1.30**	**265**	P	**Pn**	**16 04 54.9**	**+0.3**
WTCT	baz=274			S	**Sb**	**16 05 13.5**	**+0.5**
TWK	**Hsinying** baz=230	**1.31**	**237**	*i* P	**Pn**	**16 04 55.6**	**+0.7**
TWK	baz=230			*i* S	**Sb**	**16 05 13.7**	**+0.1**
TTN	**Taitung** baz=205	**1.32**	**202**	*e*S	**Sn**	**16 05 12.2**	**+0.7**
CHN1	**Nanshi** baz=235	**1.33**	**233**	*i* P	**Pn**	**16 04 55.9**	**+0.7**
CHN1	baz=235			*i* S	**Sb**	**16 05 14.3**	**+0.3**
SNST	**Tainan City** baz=237	**1.33**	**235**	P	**Pn**	**16 04 56.1**	**+1.0**
SNST	baz=237			S	**Sb**	**16 05 14.3**	**+0.2**
SGST	**Jiashian** baz=230	**1.36**	**229**	*i* P	**Pn**	**16 04 55.6**	**+0.1**
SGST	baz=230			*i* S	**Sb**	**16 05 14.8**	**0.0**
SLGT	**Liugui** baz=226	**1.38**	**224**	*i* P	**Pn**	**16 04 56.5**	**+0.8**
SLGT	baz=226			S	**Sb**	**16 05 15.1**	**-0.2**
WSF	**Szhu** baz=245	**1.39**	**256**	*i* P	**Pn**	**16 04 57.0**	**+1.1**
WSF	baz=245			*i* S	**Sb**	**16 05 16.1**	**+0.4**
CHN8	**Yiju** baz=246	**1.50**	**245**	*e*P	**Pn**	**16 04 57.7**	**+0.3**
CHN8	baz=246			S	**Sn**	**16 05 18.3**	**+2.5**
CHN3	**Shinhua** baz=247	**1.52**	**234**	*e*S	**Sb**	**16 05 19.7**	**+0.4**
ECL	**Taimali** baz=200	**1.54**	**206**	P	**Pn**	**16 04 57.3**	**-0.6**
ECL	baz=200			S	**Sn**	**16 05 15.7**	**-1.1**
SSD	**Sandimen** baz=221	**1.57**	**218**	P	**Pn**	**16 04 59.5**	**+1.1**
SSD	baz=221			S	**Sb**	**16 05 20.4**	**-0.5**
TWM1	**Shoushan** baz=228	**1.64**	**225**	P	**Pn**	**16 05 01.2**	**+1.8**
TWM1	baz=228			*e*S	**Sb**	**16 05 22.9**	**0.0**
MASBT	**Mashibuluo** baz=219	**1.68**	**216**	P	**Pn**	**16 05 00.1**	**+0.3**
MASBT	baz=219			S	**Sn**	**16 05 22.5**	**+2.3**
EAST	**Anshuo** baz=203	**1.77**	**206**	P	**Pn**	**16 05 01.1**	**-0.1**
EAST	baz=203			*e*S	**Sn**	**16 05 22.1**	**-0.5**
SSPT	**Xinbi** baz=205	**1.82**	**215**	*e*P	**Pn**	**16 05 04.0**	**+2.2**
SCZT	**Fangliau** baz=226	**1.88**	**212**	P	**Pn**	**16 05 04.0**	**+1.3**
SCZT	baz=226			*e*S	**Sn**	**16 05 27.4**	**+2.1**
IRIF	**Iriomote-Funau**	**1.90**	**79**	P	**Pn**	**16 05 02.7**	**-0.1**
IRIF				S	**Sn**	**16 05 26.0**	**+0.4**
HATJ	**Hateruma jima**	**1.93**	**87**	P	**Pn**	**16 05 03.5**	**+0.1**
LAY	**Lan-yu** baz=183	**1.94**	**184**	P	**Pn**	**16 05 02.5**	**-1.0**
PHUB	**P'eng-hu** baz=257	**2.00**	**257**	P	**Pn**	**16 05 04.3**	**+0.1**
PHUB	baz=257			S	**Sn**	**16 05 28.1**	**0.0**
WDGT	**Dungji** baz=250	**2.00**	**249**	P	**Pn**	**16 05 04.4**	**+0.1**
WDGT	baz=250			S	**Sn**	**16 05 28.3**	**+0.1**
PNG	**Penghu** baz=258	**2.00**	**258**	*i* P	**Pn**	**16 05 03.9**	**-0.4**
PNG	baz=258			S	**Sn**	**16 05 28.4**	**+0.2**
JKRS	**Kuro-shima**	**2.13**	**83**	P	**Pn**	**16 05 06.7**	**+0.6**
JKRS				S	**Sn**	**16 05 31.9**	**+0.4**
HEN	**Hengchun** baz=202	**2.16**	**204**	*e*S	**Sn**	**16 05 33.5**	**+1.5**
TWK1	**Hengchun** baz=197	**2.19**	**202**	*e*S	**Sn**	**16 05 33.6**	**+0.7**
TWKBT	**Hengchun** baz=197	**2.19**	**202**	*e*S	**Sn**	**16 05 33.4**	**+0.5**
JIJ	**Ishigaki jima**	**2.27**	**80**	P	**Pn**	**16 05 07.6**	**-0.4**
JIJ				S	**Sn**	**16 05 33.6**	**-1.3**
VWUC	**VWUC** baz=294	**2.27**	**297**	*e*P	**Pn**	**16 05 07.1**	**-1.0**
VWUC	baz=294			*e*S	**Sn**	**16 05 32.7**	**-2.3**
PTTC	**Pingtan** baz=309	**2.31**	**311**	*e*P	**Pn**	**16 05 07.5**	**-1.0**
PTTC	baz=309			*e*S	**Sn**	**16 05 33.6**	**-2.2**
JISG	**Ishigakijimahi**	**2.46**	**75**	P	**Pn**	**16 05 10.1**	**-0.6**
JISG				*e*S	**Sn**	**16 05 39.7**	**+0.1**
PTMZ	**Houxiangcun** baz=292	**2.57**	**295**	*e*P	**Pn**	**16 05 11.2**	**-0.9**
PTMZ	baz=292			*e*S	**Sn**	**16 05 39.8**	**-2.3**
MATB	**Ma-tsu** baz=331	**2.67**	**324**	*e*P	**Pn**	**16 05 13.1**	**-0.5**
MATB	baz=331			*e*S	**Sn**	**16 05 43.2**	**-1.7**
JTJ	**Tarama**	**2.82**	**76**	P	**Pn**	**16 05 15.7**	**+0.1**
JTJ				S	**Sn**	**16 05 48.9**	**+0.4**
KNMB	**Chin-men Tao** baz=278	**3.05**	**280**	*e*P	**Pn**	**16 05 18.1**	**-0.7**
KNMB	baz=278			*e*S	**Sn**	**16 05 51.8**	**-2.4**
LYJJ	**Jianjiangzhen** baz=334	**3.10**	**326**	*e*P	**Pn**	**16 05 20.1**	**+0.8**
LYJJ	baz=334			*e*S	**Sn**	**16 05 56.5**	**+1.3**
MHZQ	**Yeshan** baz=309	**3.20**	**312**	*e*P	**Pn**	**16 05 21.5**	**+0.7**
MHZQ	baz=309			*e*S	**Sn**	**16 05 56.0**	**-1.9**
XPSS	**Dashiqiu** baz=343	**3.23**	**335**	*e*P	**Pn**	**16 05 19.9**	**-1.3**
XPSS	baz=343			*e*S	**Sn**	**16 05 57.0**	**-1.5**
AXDP	**Jialang** baz=283	**3.51**	**286**	*e*P	**Pn**	**16 05 24.5**	**-0.6**
AXDP	baz=283			*e*S	**Sn**	**16 06 02.7**	**-2.7**
ZPLA	**Ao Xicun** baz=268	**3.61**	**270**	*e*P	**Pn**	**16 05 26.0**	**-0.4**
ZPLA	baz=268			*e*S	**Sn**	**16 06 06.3**	**-1.5**

JMA 23 16:54:42.2±0.3**, 24.°81N×123.°85E, h4**km**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JISG	**Ishigakijimahi**	**0.47**	**118**	S	Sg	16 54 57.5	0.0
IRIF	**Iriomote-Funau**	**0.49**	**193**	P	Pg	16 54 51.7	+0.2
IRIF				S	Sg	16 54 58.3	+0.5
JIJ	**Ishigaki jima**	**0.52**	**149**	P	Pg	16 54 52.2	0.0
JIJ				S	Sg	16 54 59.3	+0.4
JKRS	**Kuro-shima**	**0.59**	**166**	P	Pg	16 54 53.9	+0.4
JKRS				S	Sg	16 55 02.1	+1.0
HATJ	**Hateruma jima**	**0.75**	**183**	*e*S	Sg	16 55 07.2	+0.8
JTJ	**Tarama**	**0.79**	**102**	*e*S	Sb	16 55 09.4	-0.2

TAP 23 16:54:52.3, 24.°59N×121.°85E, h33km**, ML1.6, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao** baz=27	**0.02**	**5**	*i* P	Pb	16 54 57.9	0.0
TWC	baz=27			S	Sb	16 55 02.0	+0.4
ENA	**Nanau** baz=209	**0.18**	**212**	*e*P	Pb	16 54 58.9	+0.1
ENA	baz=209			S	Sb	16 55 03.8	+0.6
TWE	**Neicheng** baz=312	**0.21**	**309**	P	Pb	16 54 59.4	+0.3
TWE	baz=312			*e*S	Sb	16 55 04.4	+0.7
EOS1	**EOS1** baz=92	**0.26**	**98**	P	Pb	16 54 60.0	+0.4
EOS1	baz=92			*e*S	Sb	16 55 05.3	+0.9
ENTT	**Nioudou** baz=283	**0.26**	**282**	P	Pb	16 55 00.1	+0.5
ENTT	baz=283			S	Sb	16 55 05.2	+0.6
NDT	**Datong Townshi** baz=275	**0.30**	**273**	P	Pn	16 55 00.7	+0.3
NDT	baz=275			S	Sb	16 55 06.0	+0.5
NWLT	**Wulai** baz=306	**0.37**	**301**	P	Pn	16 55 01.4	0.0
NWLT	baz=306			S	Sn	16 55 07.2	0.0
TIPB	**Shuangxi** baz=354	**0.39**	**357**	P	Pn	16 55 01.7	0.0
TIPB	baz=354			S	Sn	16 55 07.9	+0.2
YHNB	**Yeheng** baz=286	**0.44**	**281**	P	Pn	16 55 02.4	0.0
YHNB	baz=286			S	Sn	16 55 09.2	+0.1
NNSB	**Datong** baz=248	**0.45**	**250**	P	Pn	16 55 02.5	-0.1
NNSB	baz=248			S	Sn	16 55 09.9	+0.3
NNSH	**Datong** baz=249	**0.45**	**250**	*i* P	Pn	16 55 02.5	-0.1
NNSH				*e*S	Sn	16 55 09.6	0.0

	baz=249							
NSK	**Sanguang**	**0.45**	**281**	P	Pn	16 55 02.6	0.0
	baz=286							
NSK				S	Sn	16 55 09.5	-0.1
	baz=286							
NNS	**Nan Shan**	**0.46**	**251**	*e*P	Pn	16 55 02.7	0.0
	baz=249							
NNS				S	Sn	16 55 09.8	+0.1
	baz=249							
TWA	**Mucha**	**0.46**	**329**	*e*P	Pn	16 55 02.9	+0.3
	baz=330							
TWA				*e*S	Sn	16 55 10.1	+0.4
	baz=330							
NACB	**Ninganchiao**	**0.47**	**209**	*e*S	Sn	16 55 10.1	+0.2
	baz=213							
ETLH	**Xiulin Townshi**	**0.50**	**221**	*e*P	Pn	16 55 03.3	+0.1
	baz=230							
ETLH				*e*S	Sn	16 55 11.7	+0.9
	baz=230							
WHF	**Hehuan Shan**	**0.69**	**231**	*e*P	Pb	16 55 06.7	+0.4
	baz=231							
WHF				*e*S	Sn	16 55 16.3	+0.4
	baz=231							

NEIC ***23*** *16:55:54.7±2.8, 6.25S±0.04×154.60E±0.09, h35km±1km, mb4.2/9, Error ellipse: s-maj=15.1km s-min=5.7km az=253.0*

IDC ***23*** *16:55:58.6±1.5, 6.33S×154.51E, h69km±14km, mb3.7/13, mb1 3.9/17, mb1mx3.8/41, mbtmp4.1/17, MS3.2/5, Ms1 3.2/5, ms1mx2.9/25, Error ellipse: s-maj=14.3km s-min=10.6km az=47.0*

ISC 23 16:55:55.8±0.6, 6.22S±0.07×154.57E±0.07, h35km, n32, σ2.38/30, mb4.1/17, MS3.1/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.13**	**310**				**Pn**	**16 56 45.2**	**+2.5**
KRVT	**Keravat (AS076**	**3.17**	**307**	P			**Pn**	**16 56 45.4**	**+2.3**
	37nm,0.3s,baz=105,slow=1.4,SNR=69								
KRVT				S			**Sn**	**16 57 23.1**	**+3.4**
	51nm,0.3s,baz=126,slow=22,SNR=5.8								
KRVT				LR			LR	16 58 19.9	
	comp=Z,284nm,20.2s,baz=101,slow=44								
HNR	**Honiara**	**6.21**	**121**	P			**Pn**	**16 57 27.1**	**+2.1**
HNR	14nm,0.3s,baz=277,slow=6.1,SNR=6.7			S			**Sn**	**16 58 39.2**	**+4.4**
	2.6nm,0.3s,baz=350,slow=24,SNR=1.9								
HNR	**Honiara**	**6.21**	**121**				**Pn**	**16 57 27.6**	**+2.6**
PMG	**Port Moresby**	**7.99**	**246**	P			**Pn**	**16 57 52.8**	**+3.3**
	2.3nm,0.3s,baz=92,slow=2.2,SNR=10.0								
PMG				S			**Sn**	**16 59 21.7**	**+3.0**
	4.5nm,0.3s,baz=200,slow=21,SNR=8.6								
PMG				LR			LR	17 00 44.5	
	comp=Z,177nm,21.9s,baz=62,slow=36								
DZM	**Mont Dzumac**	**19.49**	**145**	P			**Pn**	**17 00 19.6**	**-1.9**
	0.4nm,0.3s,baz=144,slow=4.3,SNR=2.8								
DZM	**Mont Dzumac**	**19.49**	**145**	IAmb			IAmb	17 00 22.1	
	comp=Z,31nm,1.4s								
WR0	**Warramunga Arr**	**23.77**	**233**	P			**P**	**17 01 02.5**	**-2.8**
WR0				IAmb			IAmb	17 01 05.3	
	comp=Z,9.0nm,0.9s								
WB0	**Warramunga Arr**	**23.79**	**234**	P			**P**	**17 01 03.3**	**-2.1**
WB0				IAmb			IAmb	17 01 22.4	
	comp=Z,5.0nm,0.8s								
WRAB	**Tennant Creek**	**23.91**	**233**	P			**P**	**17 01 04.2**	**-2.4**
WRAB				IAmb			IAmb	17 01 06.5	
	comp=Z,7.1nm,0.9s								
WB2	**Warramunga Arr**	**23.91**	**233**	P			**P**	**17 01 04.3**	**-2.3**
WB2				IAmb			IAmb	17 01 06.7	
	comp=Z,9.5nm,1.0s								
WRA	**Warramunga Arr**	**23.92**	**233**	P			**P**	**17 01 05.1**	**-1.6**
	comp=Z,5.6nm,0.9s,baz=57,slow=9.6,SNR=23								
AS31	**Alice Springs**	**26.38**	**227**	P			**P**	**17 01 27.4**	**-1.6**
ASAR	**Alice Springs**	**26.38**	**227**	P			**P**	**17 01 27.4**	**-1.7**
	comp=Z,0.9nm,0.6s,baz=55,slow=9.4,SNR=26								
ASAR				PcP			**PcP**	**17 04 52.5**	**-1.9**
	comp=Z,0.2nm,0.6s,baz=52,slow=2.3,SNR=4.1								
ASAR				LR			LR	17 11 33.8	
	comp=Z,50nm,19.6s,baz=62,slow=36								
KNRA	**Kununurra**	**26.99**	**248**	P			**P**	**17 01 30.3**	**-4.3**
H11S3	**WAKE ISLAND Hy**	**27.31**	**26**	T			T	17 30 11.2	
	baz=203,slow=75,SNR=28								
H11S2	**WAKE ISLAND Hy**	**27.32**	**26**	T			T	17 29 53.7	
	baz=203,slow=75,SNR=33								
H11S1	**WAKE ISLAND Hy**	**27.33**	**26**	T			T	17 30 13.0	
	baz=203,slow=75,SNR=21								
STKA	**Stephens Creek**	**28.26**	**204**	P			**P**	**17 01 44.5**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=292,slow=7.0,SNR=1.3								
STKA				LR			LR	17 13 04.7	
	comp=Z,40nm,20.6s,baz=24,slow=36								
FITZ	**Fitzroy Crossi**	**30.59**	**245**	P			**P**	**17 02 04.1**	**-2.5**
	comp=Z,2.7nm,0.8s,baz=31,slow=13,SNR=2.8								
FITZ	**Fitzroy Crossi**	**30.59**	**245**	IAmb			IAmb	17 02 17.8	
	comp=Z,4.6nm,0.9s								
MJAR	**Matsushiro Arr**	**45.22**	**341**	P			**P**	**17 04 09.4**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=164,slow=6.6,SNR=2.3								
KSRS	**Korea Array**	**50.06**	**332**	P			**P**	**17 04 47.6**	**+0.5**
	comp=Z,2.1nm,0.7s,baz=147,slow=7.8,SNR=11								
PETK	**Petropavlovsk-**	**59.16**	**2**	P			**P**	**17 05 53.4**	**+0.5**
	comp=Z,2.3nm,0.7s,baz=156,slow=6.3,SNR=6.2								
SONM	**Songino Array**	**68.46**	**327**	P			**P**	**17 06 55.7**	**+1.2**
	comp=Z,0.9nm,0.5s,baz=123,slow=6.8,SNR=4.7								
MKAR	**Makanchi Array**	**82.55**	**319**	P			**P**	**17 08 14.8**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=96,slow=5.4,SNR=14								
ILAR	**Eielson Array**	**82.81**	**22**	P			**P**	**17 08 15.3**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=255,slow=5.7,SNR=7.9								
ZALV	**Zalesovo Beam**	**83.31**	**326**	P			**P**	**17 08 18.4**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=103,slow=4.7,SNR=4.0								
NVAR	**Mina Array Bea**	**91.58**	**52**	P			**P**	**17 08 57.8**	**-1.8**
	comp=Z,0.4nm,0.5s,baz=244,slow=8.3,SNR=4.8								
YKA	**Yellowknife Ar**	**95.85**	**28**	P			**P**	**17 09 17.9**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=262,slow=4.4,SNR=6.1								
PDAR	**Pinedale Array**	**98.50**	**48**	LR			LR	17 48 13.5	
	comp=Z,20nm,19.3s,baz=289,slow=32								
TORD	**Torodi Ar. Bea**	**152.41**	**286**	PKPbc			**PKPbc**	**17 15 46.3**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=116,slow=36,SNR=3.6								

UPP ***23*** *17:02:04.7±0.1, 67.08N×20.94E, h0km, ML2.2, Explosion*
HEL ***23*** *17:02:05.3±0.0, 67.08N×20.93E, h0km, ML2.1, ML2.0(UPP), Explosion*
NAO ***23*** *17:02:05.8±1.2, 67.10N×21.38E, ML2.3*
IDC ***23*** *17:02:06.4±1.3, 67.09N×21.31E, h0km, mb1 2.9/3, mb1mx2.8/42, mbtmp2.8/3, ML1.9/3, Error ellipse: s-maj=24.7km s-min=10.0km az=104.0*
BER ***23*** *17:02:07.9±4.0, 67.12N×21.02E, h0km, ML1.5, Suspected explosion*

ISC 23 17:02:04.5±0.7, 67.08N±0.02×20.96E±0.02, h0km, n57, σ0.99/83, Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.16**	**287**	P			**Pg**	**17 02 07.8**	**+0.3**
DUNU				S			**Sg**	**17 02 09.8**	**+0.2**
DUNU	**Dundret**	**0.16**	**287**	*i* P			**Pg**	**17 02 07.8**	**+0.3**
DUNU				*i* S			**Sg**	**17 02 09.8**	**+0.2**
MASU	**Masugnsbyn**	**0.56**	**46**	P			**Pg**	**17 02 15.4**	**+0.3**
MASU	**Masugnsbyn**	**0.56**	**46**	*i* P			**Pg**	**17 02 15.4**	**+0.3**
ERTU	**Ertsjaerv**	**0.71**	**137**	P			**Pg**	**17 02 18.3**	**+0.2**
ERTU	**Ertsjaerv**	**0.71**	**137**	*e*P			**Pg**	**17 02 18.2**	**0.0**
ERTU				*e*S			**Sg**	**17 02 25.1**	**-2.3**
PAJU	**Pajala**	**0.84**	**93**	P			**Pg**	**17 02 20.7**	**0.0**
PAJU	**Pajala**	**0.84**	**93**	*i* P			**Pg**	**17 02 20.7**	**0.0**
KUA	**Kurravaara**	**0.92**	**345**	P			**Pg**	**17 02 21.4**	**-0.6**
KUA				S			**Sg**	**17 02 33.6**	**-0.3**
KUA	**Kurravaara**	**0.92**	**345**	*e*P			**Pg**	**17 02 21.4**	**-0.6**
KUA				*e*S			**Sg**	**17 02 33.6**	**-0.3**
HARU	**Harads**	**0.92**	**180**	P			**Pg**	**17 02 21.8**	**-0.2**
HARU	**Harads**	**0.92**	**180**	*e*P			**Pg**	**17 02 21.8**	**-0.2**
NIKU	**Nikkaluokta**	**1.09**	**318**	P			**Pg**	**17 02 24.7**	**-0.7**
NIKU	**Nikkaluokta**	**1.09**	**318**	*e*P			**Pg**	**17 02 24.7**	**-0.7**
KOVU	**Salmi**	**1.19**	**345**	P			**Pg**	**17 02 26.6**	**-0.8**
KOVU	**Salmi**	**1.19**	**345**	*e*P			**Pg**	**17 02 26.6**	**-0.8**
SJUU	**Sjulsmark**	**1.60**	**170**	P			**Pn**	**17 02 34.0**	**+0.1**
SJUU	**Sjulsmark**	**1.60**	**170**	*e*P			**Pn**	**17 02 34.0**	**+0.1**
TOF	**Tornio**	**1.68**	**125**	*e*PG			**Pn**	**17 02 35.5**	**+0.5**
TOF				MSG				17 02 56.1	
	comp=Z,17nm,0.2s								
HEF	**Hetta**	**1.69**	**36**	Pn			**Pn**	**17 02 35.3**	**+0.1**
HEF				Sn			**Sn**	**17 02 57.4**	**-0.1**
HEF	**Hetta**	**1.69**	**36**	*e*P			**Pn**	**17 02 35.2**	**-0.1**
	baz=214								
HEF				MSG				17 02 56.1	
	comp=Z,16nm,0.2s								
HEF				*e*SN			**Sg**	**17 03 00.4**	**+1.7**
HEF	**Hetta**	**1.69**	**36**	Pn			**Pn**	**17 02 35.3**	**+0.1**
HEF				Sn			**Sn**	**17 02 57.4**	**-0.1**
LILU	**Lilltraesk**	**1.85**	**195**	P			**Pn**	**17 02 37.9**	**+0.4**
LILU	**Lilltraesk**	**1.85**	**195**	*e*P			**Pn**	**17 02 37.9**	**+0.4**
KIF	**Kilpisjarvi**	**1.94**	**358**	Pn			**Pb**	**17 02 40.1**	**-0.6**
KIF				Sn			**Sg**	**17 03 06.8**	**+0.1**
KIF	**Kilpisjarvi**	**1.94**	**358**	*e*PB			**Pb**	**17 02 40.0**	**-0.6**
KIF				MSG				17 03 03.4	
	comp=Z,20nm,0.2s								
KIF				*e*SG			**Sg**	**17 03 07.0**	**+0.3**
KIF	**Kilpisjarvi**	**1.94**	**358**	Pn			**Pb**	**17 02 40.1**	**-0.6**
KIF				Sn			**Sg**	**17 03 06.8**	**+0.1**
RNF	**Rovaniemi**	**2.05**	**101**	*e*PB			**Pb**	**17 02 41.5**	**-1.1**
	baz=294								
RNF				*e*SG			**Sg**	**17 03 10.8**	**+0.5**
KTK1	**Kautokeino**	**2.12**	**23**	Pn			**Pn**	**17 02 42.3**	**+1.0**
KTK1				Sn			**Sb**	**17 03 09.4**	**-1.3**
KTK1	**Kautokeino**	**2.12**	**23**	*e*P			**Pn**	**17 02 42.2**	**+1.0**
KTK1				*e*S			**Sn**	**17 03 06.9**	**-1.4**
KTK1				IAML				17 03 16.2	
	comp=Z,7.2nm,0.3s								
SGF	**Sodankyl**	**2.19**	**78**	*e*PB			**Pb**	**17 02 44.0**	**-1.0**
SGF				*e*SG			**Sb**	**17 03 13.4**	**+0.7**
STEI	**Steigen**	**2.36**	**294**	*e*P			**Pn**	**17 02 45.6**	**+1.1**
STEI				*e*S			**Sn**	**17 03 15.0**	**+1.0**
STEI				IAML				17 03 27.5	
	comp=Z,4.5nm,0.2s								
BURU	**Burvik**	**2.51**	**176**	P			**Pn**	**17 02 47.4**	**+1.0**
BURU	**Burvik**	**2.51**	**176**	*e*P			**Pn**	**17 02 47.6**	**+1.2**
	baz=352								
OUL	**Oulu**	**2.83**	**133**	*e*PB			**Pb**	**17 02 54.5**	**-1.4**
OBF0	**Syolatti, Pyha**	**2.92**	**151**	*e*PG			**Pg**	**17 02 59.5**	**-0.9**
	baz=344								
ARA0	**ARCESS Array S**	**2.99**	**32**	Pn			**Pn**	**17 02 53.7**	**+0.6**
	baz=208,slow=14								
ARA0				Sn			**Sn**	**17 03 29.8**	**+0.2**
	baz=228,slow=22								
ARA0				Lg			Lg	17 03 35.0	
	baz=207,slow=28								
ARA0	**ARCESS Array S**	**2.99**	**32**	Pn			**Pn**	**17 02 53.7**	**+0.6**
	baz=208,slow=14								
ARA0				Sn			**Sn**	**17 03 29.8**	**+0.2**
	baz=228,slow=22								
ARA0				Sg			**Sb**	**17 03 35.0**	**-0.7**
	baz=207,slow=28								
ARCES	**ARCESS Array B**	**2.99**	**32**	Pn			**Pn**	**17 02 53.9**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=212,slow=14,SNR=31								
ARCES				Sn			**Sn**	**17 03 31.0**	**+1.4**
	comp=Z,0.8nm,0.3s,baz=226,slow=22,SNR=11								
ARE0	**ARCESS Array S**	**2.99**	**32**	*e*P			**Pn**	**17 02 53.7**	**+0.6**
	baz=209								
OUF	**Merijarvi**	**3.13**	**148**	*e*PG			**Pb**	**17 03 01.4**	**+0.4**
	baz=342								
OUF				MSG				17 03 37.6	
	comp=Z,2.9nm,0.2s								
UMAU	**Umeaa**	**3.21**	**182**	*e*P			**Pn**	**17 02 56.9**	**+0.9**
	baz=351								
VRF	**Varrio**	**3.41**	**75**	*e*PB			**Pb**	**17 03 03.2**	**-2.5**
	baz=248								
VRF				*e*SG			**Sb**	**17 03 49.8**	**+2.3**
KU6	**Riekki**	**3.72**	**102**	*e*P			**Pn**	**17 03 04.6**	**+1.5**
	baz=291								
HUSU	**Husum**	**3.82**	**192**	*e*P			**Pn**	**17 03 06.1**	**+1.6**
	baz=5.0								
VAF	**Ylistaro**	**4.12**	**169**	*e*P			**Pn**	**17 03 09.9**	**+1.3**
	baz=345								
HEMU	**Hemsoen**	**4.59**	**197**	*e*PB			**Pb**	**17 03 23.3**	**-2.5**
	baz=13								
APA0	**Apatity Array**	**4.68**	**78**	Pn			**Pn**	**17 03 16.0**	**-0.3**
	baz=267,slow=11								
APA0				Sn			**Sn**	**17 04 11.4**	**+0.1**
	baz=276,slow=28								
APA0	**Apatity Array**	**4.68**	**78**	Pn			**Pn**	**17 03 16.0**	**-0.3**
	baz=267,slow=11								
APA0				Sn			**Sn**	**17 04 11.4**	**+0.1**
	baz=276,slow=28								
FIA0	**FINESS Array S**	**6.08**	**156**	Pn			**Pn**	**17 03 36.7**	**+1.2**
	baz=346,slow=16								
FIA0				Sn			**Sn**	**17 04 46.4**	**+0.8**
	baz=348,slow=22								
FIA0	**FINESS Array S**	**6.08**	**156**	Pn			**Pn**	**17 03 36.7**	**+1.2**
	baz=346,slow=16								
FIA0				Sn			**Sn**	**17 04 46.4**	**+0.8**
	baz=348,slow=22								
FINES	**FINESS Array B**	**6.08**	**156**	Pn			**Pn**	**17 03 37.2**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=346,slow=12,SNR=5.4								
FINES				Sn			**Sn**	**17 04 46.2**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=347,slow=23,SNR=3.5								
NB2	**NORSAR Subarra**	**7.41**	**220**	Pn			**Pn**	**17 03 55.8**	**+2.0**
	baz=28,slow=14								
NB2	**NORSAR Subarra**	**7.41**	**220**	Pn			**Pn**	**17 03 55.8**	**+2.0**
	baz=28,slow=14								
NOA	**NORSAR Array B**	**7.41**	**220**	Pn			**Pn**	**17 03 55.6**	**+1.8**
	comp=Z,0.0nm,0.3s,baz=325,slow=15,SNR=1.8								
NRA0	**NORESS Array S**	**7.59**	**218**	Pn			**Pn**	**17 03 56.2**	**-0.1**
	baz=32,slow=11								
NRA0	**NORESS Array S**	**7.59**	**218**	Pn			**Pn**	**17 03 56.2**	**-0.1**
	baz=32,slow=11								

KRNET ***23*** *17:02:21.9±0.1, 43.08N×78.62E, h17km, mb2.2*
NNC ***23*** *17:02:21.4±0.7, 43.04N×78.62E, h0km±6km, mb2.5, mpv2.7, Error ellipse: s-maj=7.4km s-min=3.4km az=171.0*
SOME ***23*** *17:02:22.3, 43.12N×78.62E, h5km*

ISC 23 17:02:22.6±0.7, 43.09N±0.02×78.60E±0.02, h10km, n43, σ1.37/84, 14C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
UZB	**Uzynbulak**	**0.32**	**79**	⇓*e*P			**Pg**	**17 02 28.0**	**-1.0**
	baz=78								
UZB				⇓*e*S			**Sg**	**17 02 32.2**	**-1.1**
	baz=78								
UZB	**Uzynbulak**	**0.32**	**79**	⇓*e*P			**Pg**	**17 02 28.0**	**-1.0**
	4.4nm,0.1s								
UZB				*e*S			**Sg**	**17 02 32.2**	**-1.1**
	42nm,0.1s								
UZB	**Uzynbulak**	**0.32**	**79**	P			**Pg**	**17 02 28.0**	**-1.0**
	4.4nm,0.1s								
UZB				S			**Sg**	**17 02 32.2**	**-1.1**
	42nm,0.1s								
PRZ	**Przheval'sk**	**0.62**	**193**	⇑*i*P			**Pg**	**17 02 33.8**	**-0.9**
	baz=94								
PRZ				⇑*i*S			**Sg**	**17 02 42.0**	**-0.9**
	baz=94								
SHLS	**Shalkode**	**0.64**	**84**	*e*P			**Pn**	**17 02 39.9**	**+2.1**
	baz=85								
SHLS				*e*S			**Sn**	**17 02 52.6**	**+4.5**
	baz=85								
SHLS	**Shalkode**	**0.64**	**84**	*e*P			**Pn**	**17 02 39.9**	**+2.1**
	2.0nm,0.1s								
SHLS				*e*S			**Sn**	**17 02 52.6**	**+4.5**
	4.5nm,0.1s								
SHLS	**Shalkode**	**0.64**	**84**	P			**Pn**	**17 02 39.9**	**+2.1**
	2.0nm,0.1s								
SHLS				S			**Sn**	**17 02 52.7**	**+4.5**
	4.5nm,0.1s								
ANVS	**Anan'yevo**	**0.75**	**246**	⇑*i*P			**Pg**	**17 02 36.3**	**-0.8**
	baz=47								
ANVS				⇑*i*S			**Sb**	**17 02 47.0**	**-1.2**
	baz=47								
MNBS	**Baschi**	**1.00**	**352**	*e*P			**Pg**	**17 02 41.1**	**-0.8**
MNBS				*e*S			**Sb**	**17 02 54.6**	**-0.7**
	0.1nm,0.1s								
MNBS	**Baschi**	**1.00**	**352**	P			**Pg**	**17 02 41.1**	**-0.8**
MNBS				S			**Sb**	**17 02 54.6**	**-0.7**
	0.1nm,0.1s								
KOTS	**Kotyrbulak**	**1.09**	**278**	*e*P			**Pg**	**17 02 43.0**	**-0.6**
	baz=78								
KOTS				*e*S			**Sb**	**17 02 57.8**	**-0.3**
	baz=78								
KOTS	**Kotyrbulak**	**1.09**	**278**	*e*P			**Pg**	**17 02 43.0**	**-0.6**
	1.9nm,0.2s								
KOTS				*e*S			**Sb**	**17 02 57.9**	**-0.3**
	3.9nm,0.3s								
KOTS	**Kotyrbulak**	**1.09**	**278**	P			**Pg**	**17 02 43.0**	**-0.6**
	1.9nm,0.2s								
KOTS				S			**Sb**	**17 02 57.9**	**-0.3**
	3.9nm,0.3s								
MDOK	**Medeo**	**1.14**	**274**	*e*P			**Pb**	**17 02 43.3**	**-1.1**
	baz=74								
MDOK				*e*S			**Sg**	**17 02 58.4**	**-0.8**
	baz=74								
MDOK	**Medeo**	**1.14**	**274**	*e*P			**Pb**	**17 02 43.3**	**-1.1**
	1.2nm,0.3s								
MDOK				*e*S			**Sg**	**17 02 58.4**	**-0.8**
	2.9nm,0.2s								
MDOK	**Medeo**	**1.14**	**274**	Pg			**Pb**	**17 02 43.3**	**-1.1**
	1.1nm,0.4s								
MDOK				Lg			Lg	17 02 58.4	
	3.1nm,0.2s								
TNSS	**Tian-Shan**	**1.21**	**268**	*e*P			**Pb**	**17 02 44.9**	**-0.9**
	baz=68								
TNSS				*e*S			**Sb**	**17 03 01.2**	**-0.4**
	baz=68								
TNSS	**Tian-Shan**	**1.21**	**268**	*e*P			**Pb**	**17 02 44.9**	**-0.9**
	0.6nm,0.1s								
TNSS				*e*S			**Sb**	**17 03 01.2**	**-0.4**
	5.0nm,0.2s								
TNSS	**Tian-Shan**	**1.21**	**268**	P			**Pb**	**17 02 44.9**	**-0.9**
	0.6nm,0.1s								
TNSS				S			**Sb**	**17 03 01.2**	**-0.4**
	5.0nm,0.2s								
TNSS	**Tian-Shan**	**1.21**	**268**	P			**Pb**	**17 02 44.6**	**-1.2**
	0.8nm,0.1s								
TNSS				S			**Sg**	**17 03 00.6**	**-1.0**
	9.4nm,0.2s								
ARXS	**Arharly**	**1.25**	**334**	*e*P			**Pn**	**17 02 45.3**	**-1.0**
	1.9nm,0.2s								
ARXS				*e*S			**Sb**	**17 03 02.0**	**-0.6**
	3.3nm,0.3s								
ARXS	**Arharly**	**1.25**	**334**	P			**Pn**	**17 02 45.3**	**-1.0**
	1.9nm,0.2s								
ARXS				S			**Sb**	**17 03 02.0**	**-0.6**
	3.3nm,0.3s								
KTMS	**Ketmen**	**1.33**	**74**	*e*P			**Pn**	**17 02 46.2**	**-1.2**
	baz=73								
KTMS				*e*S			**Sb**	**17 03 03.4**	**-1.5**
	baz=73								
KTMS	**Ketmen**	**1.33**	**74**	*e*P			**Pn**	**17 02 46.2**	**-1.2**
	0.6nm,0.1s								
KTMS				*e*S			**Sb**	**17 03 03.4**	**-1.5**
	7.8nm,0.1s								
KTMS	**Ketmen**	**1.33**	**74**	P			**Pn**	**17 02 46.2**	**-1.2**
	0.6nm,0.1s								
KTMS				S			**Sb**	**17 03 03.4**	**-1.5**
	7.8nm,0.1s								
CHKK	**Chushkaly**	**1.40**	**304**	*e*P			**Pg**	**17 02 48.8**	**-0.7**
	0.8nm,0.1s								
CHKK				*e*S			**Sg**	**17 03 07.8**	**+0.3**
	2.5nm,0.1s								
CHKK	**Chushkaly**	**1.40**	**304**	P			**Pg**	**17 02 48.7**	**-0.7**
	0.8nm,0.1s								
CHKK				S			**Sg**	**17 03 07.8**	**+0.3**
	2.5nm,0.1s								
KDJ	**Kajisay**	**1.42**	**228**	⇑*i*P			**Pb**	**17 02 48.4**	**-0.8**
	baz=28								
KDJ				⇑*i*S			**Sg**	**17 03 07.3**	**-0.9**
	baz=28								
TARG	**Taragay, Kyrgy**	**1.48**	**204**	⇑*i*P			**Pb**	**17 02 49.6**	**-0.8**
	baz=4.0								
TARG				⇑*i*S			**Sg**	**17 03 09.4**	**-0.9**
	baz=4.0								
DJR	**Jarkent**	**1.51**	**34**	⇓*e*P			**Pb**	**17 02 50.3**	**-0.5**
	4.1nm,0.2s								
DJR				*e*S			**Sg**	**17 03 10.5**	**-0.8**
	13nm,0.3s								
DJR	**Jarkent**	**1.51**	**34**	P			**Pb**	**17 02 50.3**	**-0.5**
	4.1nm,0.2s								
DJR				S			**Sg**	**17 03 10.5**	**-0.8**
	13nm,0.3s								
KTBS	**Karatobe**	**1.53**	**295**	*e*P			**Pg**	**17 02 51.6**	**-0.3**
	1.1nm,0.2s								
KTBS				*e*S			**Sg**	**17 03 12.9**	**+1.2**
	12nm,0.3s								
KTBS	**Karatobe**	**1.53**	**295**	P			**Pg**	**17 02 51.6**	**-0.3**
	1.1nm,0.2s								
KTBS				S			**Sg**	**17 03 12.9**	**+1.2**
	15nm,0.6s								
KUU	**Kurty**	**1.83**	**297**	*e*P			**Pb**	**17 02 56.1**	**0.0**
	baz=97								
KUU				*e*S			**Sg**	**17 03 20.5**	**-0.8**
	baz=97								
KUU	**Kurty**	**1.83**	**297**	*e*P			**Pb**	**17 02 56.1**	**0.0**
	0.7nm,0.2s								
KUU				*e*S			**Sg**	**17 03 20.6**	**-0.8**
	2.6nm,0.2s								
KUU	**Kurty**	**1.83**	**297**	P			**Pb**	**17 02 56.1**	**0.0**
	0.7nm,0.2s								
KUU				S			**Sg**	**17 03 20.6**	**-0.8**
	2.6nm,0.2s								
ULHL	**Ulahol**	**1.93**	**245**	⇑*i*P			**Pb**	**17 02 57.1**	**-0.9**
	baz=45								
ULHL				⇑*e*S			**Sb**	**17 03 22.5**	**+0.3**
	baz=45								
BOOM	**Boomskoye usch**	**2.04**	**254**	⇓*i*P			**Pb

ESL	**Shilin**					**0.31**	**334**	⇓*i*P	**Pb**	**17 25 52.1 -0.4**
	baz=337									
ESL								*e*S	**Sb**	**17 25 56.9 -0.6**
	baz=337									
TWF1	**Yuli**					**0.32**	**235**	⇓*i*P	**Pb**	**17 25 52.6 +0.1**
	baz=237									
TWF1								*e*S	**Sb**	**17 25 57.6 -0.2**
	baz=237									
FULB	**Fuli**					**0.43**	**218**	⇓*i*P	**Pn**	**17 25 54.9 -0.1**
	baz=226									
FULB								*e*S	**Sn**	**17 26 02.4 +0.6**
	baz=226									
HWA	**Hwalien**					**0.44**	**3**	*e*P	**Pb**	**17 25 54.6 +0.3**
	baz=16									
HWA								*e*S	**Sn**	**17 26 02.6 +0.5**
	baz=16									
VWDT	**VWDT**					**0.46**	**298**	⇓*i*P	**Pb**	**17 25 54.5 -0.1**
	baz=302									
VWDT								*e*S	**Sb**	**17 26 02.3 +1.0**
	baz=302									
CHKT	**Chengkung**					**0.48**	**205**	⇓*i*P	**Pn**	**17 25 55.7 +0.1**
	baz=188									
CHKT								*e*S	**Sn**	**17 26 03.2 +0.2**
	baz=188									
TWD	**Chiawan**					**0.54**	**1**	P	**Pb**	**17 25 55.7 -0.2**
	baz=354									
TWD								*e*S	**Sn**	**17 26 05.2 +0.6**
	baz=354									
OWD	**Renai**					**0.56**	**318**	⇓*i*P	**Pb**	**17 25 55.8 -0.5**
	baz=320									
OWD								*e*S	**Sb**	**17 26 02.9 -1.3**
	baz=320									
YUS	**Yu-Shan**					**0.58**	**266**	P	**Pb**	**17 25 55.5 -1.3**
	baz=263									
ELDTW	**Lidau**					**0.62**	**236**	⇓*i*P	**Pb**	**17 25 56.6 -0.8**
	baz=233									
ELDTW								*e*S	**Sb**	**17 26 04.5 -1.4**
	baz=233									
SSLB	**Suanglung**					**0.63**	**294**	⇓*i*P	**Pb**	**17 25 56.6 -0.8**
	baz=293									
SSLB								*e*S	**Sb**	**17 26 03.7 -2.2**
	baz=293									
SSLB	**Suanglung**					**0.63**	**294**		**Pb**	**17 25 56.5 -0.8**
NACB	**Ninganchiao**					**0.64**	**1**	⇓*i*P	**Pb**	**17 25 56.7 -0.9**
	baz=353									
NACB								*e*S	**Sb**	**17 26 07.1 +0.9**
	baz=353									
NACB	**Ninganchiao**					**0.64**	**1**		**Pb**	**17 25 56.6 -0.9**
CHGB	**Renai**					**0.64**	**325**	⇓*i*P	**Pb**	**17 25 57.3 -0.5**
	baz=333									
CHGB								*e*S	**Sb**	**17 26 04.7 -1.9**
	baz=333									
WHF	**Hehuan Shan**					**0.67**	**335**	⇓*i*P	**Pb**	**17 25 57.4 -1.0**
	baz=337									
WHF								*e*S	**Sb**	**17 26 06.4 -1.3**
	baz=337									
ETLH	**Xiulin Townshi**					**0.67**	**352**	⇓*i*P	**Pb**	**17 25 57.2 -1.0**
	baz=355									
WHYT	**Xinyi Township**					**0.69**	**284**	⇓*i*P	**Pb**	**17 25 58.3 -0.1**
	baz=280									
WHYT								*e*S	**Sb**	**17 26 06.9 -0.7**
	baz=280									
SMLT	**Sun Moon Lake**					**0.71**	**299**	⇓*i*P	**Pb**	**17 25 58.3 -0.6**
	baz=301									
SMLT								*e*S	**Sb**	**17 26 06.9 -1.6**
	baz=301									
TYC	**Yuchr**					**0.76**	**299**	⇓*i*P	**Pb**	**17 25 58.9 -0.6**
	baz=299									
TYC								*e*S	**Sb**	**17 26 08.8 -0.7**
	baz=299									
DPDB	**Guoxing**					**0.78**	**310**	⇓*i*P	**Pb**	**17 25 59.5 -0.4**
	baz=314									
DPDB								*e*S	**Sb**	**17 26 09.3 -0.8**
	baz=314									
TWT	**Tachien**					**0.81**	**333**	⇓*i*P	**Pb**	**17 26 00.0 -0.4**
	baz=332									
TWT								*e*S	**Sb**	**17 26 09.6 -1.5**
	baz=332									
TDCB	**Techi**					**0.81**	**332**	⇓*i*P	**Pb**	**17 26 00.1 -0.4**
	baz=332									
TDCB								*e*S	**Sb**	**17 26 09.6 -1.7**
	baz=332									
TWH	**Lutao**					**0.83**	**187**	⇓*i*P	**Pn**	**17 26 00.3 -0.1**
	baz=172									
TWH								*e*S	**Sn**	**17 26 11.5 -0.1**
	baz=172									
CHN5	**Tsauling**					**0.83**	**274**	⇓*i*P	**Pn**	**17 26 01.0 +0.4**
	baz=273									
CHN5								*e*S	**Sb**	**17 26 12.1 +0.3**
	baz=273									
WJS	**Zhushan**					**0.83**	**290**	⇓P	**Pn**	**17 26 01.0 +0.5**
	baz=289									
WJS								*e*S	**Sb**	**17 26 12.2 +0.6**
	baz=289									
TWGBT	**Beinan**					**0.85**	**213**	⇑P	**Pb**	**17 25 59.5 -1.6**
	baz=211									
TWGBT								*e*S	**Sb**	**17 26 10.3 -1.9**
	baz=211									
TWG	**Pinlang**					**0.85**	**213**	*e*P	**Pb**	**17 25 59.6 -1.6**
	baz=211									
TWG								*e*S	**Sb**	**17 26 10.5 -1.7**
	baz=211									
TWG	**Pinlang**					**0.85**	**213**		**Pb**	**17 25 59.4 -1.8**
TTN	**Taitung**					**0.88**	**207**	*e*P	**Pn**	**17 26 01.2 +0.1**
	baz=205									
WNT	**Mingjian**					**0.89**	**293**	⇓*i*P	**Pn**	**17 26 02.0 +0.7**
	baz=292									
WNT								*e*S	**Sn**	**17 26 13.9 +0.7**
	baz=292									
ENA	**Nanau**					**0.90**	**9**	*e*P	**Pb**	**17 26 00.9 -1.0**
	baz=357									
ENA								*e*S	**Sb**	**17 26 11.5 -2.1**
	baz=357									
TPUB	**Ta-pu**					**0.91**	**255**	⇓*i*P	**Pn**	**17 26 02.0 +0.5**
	baz=254									
TPUB								*e*S	**Sn**	**17 26 14.1 +0.5**
	baz=254									
TPUB	**Ta-pu**					**0.91**	**255**		**Pb**	**17 26 01.6 -0.5**
NNSB	**Datong**					**0.91**	**349**	⇓*i*P	**Pb**	**17 26 01.1 -1.1**
	baz=358									
NNSB								*e*S	**Sb**	**17 26 12.0 -2.0**
	baz=358									
NNSH	**Datong**					**0.91**	**349**	⇓*i*P	**Pb**	**17 26 01.0 -1.1**
	baz=358									
NNSH								*e*S	**Sb**	**17 26 11.9 -2.0**
	baz=358									
NNS	**Nan Shan**					**0.92**	**348**	*e*P	**Pb**	**17 26 01.4 -1.0**
	baz=358									
NNS								*e*S	**Sb**	**17 26 12.4 -1.9**
	baz=358									
CHN4	**Tsaushan**					**0.93**	**259**	⇓*i*P	**Pn**	**17 26 02.6 +0.8**
	baz=258									
CHN4								*e*S	**Sn**	**17 26 15.3 +1.2**
	baz=258									
WTP	**Ta-pu**					**0.93**	**252**	⇓*i*P	**Pn**	**17 26 02.6 +0.7**
	baz=251									
WTP								*e*S	**Sn**	**17 26 15.2 +0.9**
	baz=251									
WHP	**Taichung City**					**0.94**	**322**	⇓P	**Pn**	**17 26 02.0 0.0**
	baz=325									
WHP								*e*S	**Sb**	**17 26 13.6 -1.2**
	baz=325									
WGK	**Gukeng**					**0.95**	**279**	⇓*i*P	**Pn**	**17 26 02.8 +0.7**
	baz=278									
WGK								*e*S	**Sn**	**17 26 15.4 +0.8**
	baz=278									
WDLH	**Douliu**					**0.97**	**279**	⇓*i*P	**Pb**	**17 26 03.2 +0.2**
	baz=278									
WDLH								*e*S	**Sb**	**17 26 15.7 +0.2**
	baz=278									
SLGT	**Liugui**					**1.01**	**238**	P	**Pb**	**17 26 03.9 +0.1**
	baz=236									
SLGT								*e*S	**Sn**	**17 26 17.0 +0.7**
	baz=236									
SGST	**Jiashian**					**1.02**	**244**	*e*P	**Pn**	**17 26 03.3 +0.2**
	baz=242									
SGST								*e*S	**Sb**	**17 26 16.7 -0.4**
	baz=242									
TCU	**Taichung**					**1.03**	**306**	⇓P	**Pb**	**17 26 04.2 +0.1**
	baz=306									
TCU								*e*S	**Sn**	**17 26 17.9 +1.3**
	baz=306									
CHN1	**Nanshi**					**1.03**	**250**	⇓*i*P	**Pb**	**17 26 04.3 +0.2**
	baz=249									
CHN1								*e*S	**Sn**	**17 26 17.2 +0.6**
	baz=249									
SNST	**Tainan City**					**1.04**	**253**	*e*P	**Pb**	**17 26 04.5 +0.1**
	baz=252									
SNST								*e*S	**Sn**	**17 26 18.4 +1.4**
	baz=252									
CHY	**Chiayi**					**1.06**	**268**	*e*P	**Pb**	**17 26 04.7 +0.1**
	baz=267									
CHY								*e*S	**Sn**	**17 26 18.9 +1.5**
	baz=267									
NDT	**Datong Townshi**					**1.06**	**357**	*e*P	**Pn**	**17 26 03.5 -0.3**
	baz=356									
NDT								*e*S	**Sb**	**17 26 17.3 -0.9**
	baz=356									
WCHH	**Zhanghua**					**1.08**	**300**	*e*P	**Pb**	**17 26 05.2 +0.2**
	baz=299									
WCHH								*e*S	**Sb**	**17 26 19.1 +0.4**
	baz=299									
TWC	**Suao**					**1.10**	**13**	*e*P	**Pn**	**17 26 04.7 +0.5**
TWC								*e*S	**Sb**	**17 26 20.1 +0.9**
TWQ1	**Liyutan**					**1.10**	**318**	⇓*i*P	**Pb**	**17 26 05.5 +0.3**
	baz=317									
TWQ1								*e*S	**Sb**	**17 26 20.0 +0.8**
	baz=317									
ECL	**Taimali**					**1.10**	**212**	*e*P	**Pn**	**17 26 03.0 -1.2**
	baz=201									
ECL								*e*S	**Sn**	**17 26 18.7 +0.3**
	baz=201									
ENTT	**Nioudou**					**1.10**	**359**	*e*P	**Pn**	**17 26 04.0 -0.2**
	baz=360									
EOS1	**EOS1**					**1.13**	**26**	*e*P	**Pb**	**17 26 06.2 +0.5**
	baz=45									
EOS1								*e*S	**Sb**	**17 26 20.8 +0.9**
	baz=45									
YHNB	**Yeheng**					**1.14**	**351**	P	**Pn**	**17 26 05.1 +0.2**
	baz=350									
YHNB								*e*S	**Sn**	**17 26 18.3 -1.3**
	baz=350									
YHNB	**Yeheng**					**1.14**	**351**		**Pn**	**17 26 04.7 -0.2**
NSK	**Sanguang**					**1.15**	**350**	P	**Pn**	**17 26 05.1 +0.1**
	baz=350									
NSK								*e*S	**Sn**	**17 26 18.4 -1.4**
	baz=350									
NSY	**Sanyi**					**1.15**	**320**	*e*P	**Pb**	**17 26 06.7 +0.5**
	baz=332									
NSY								*e*S	**Sb**	**17 26 22.1 +1.3**
	baz=332									
RLNB	**Erlin**					**1.17**	**288**	*e*P	**Pn**	**17 26 06.0 +0.8**
	baz=277									
RLNB								*e*S	**Sb**	**17 26 21.8 +0.5**
	baz=277									
SSD	**Sandimen**					**1.18**	**228**	*e*P	**Pb**	**17 26 06.1 -0.5**
	baz=225									
SSD								*e*S	**Sb**	**17 26 21.6 +0.1**
	baz=225									
WDJ	**Dajia District**					**1.18**	**313**	*e*P	**Pb**	**17 26 07.0 +0.3**
	baz=312									
WDJ								*e*S	**Sb**	**17 26 22.1 +0.6**
	baz=312									
TWE	**Neicheng**					**1.18**	**4**	*e*P	**Pn**	**17 26 05.5 +0.2**
	baz=4.0									
TWE								*e*S	**Sn**	**17 26 21.5 +1.1**
	baz=4.0									
CHN3	**Shinhua**					**1.21**	**248**	*e*P	**Pb**	**17 26 08.4 +1.3**
	baz=260									
CHN3								*e*S	**Sb**	**17 26 26.1 +3.8**
	baz=260									
PTSB	**Yuanli**					**1.21**	**319**	*e*P	**Pb**	**17 26 07.2 0.0**
	baz=318									
PTSB								*e*S	**Sb**	**17 26 23.5 +1.0**
	baz=318									
NSTT	**Nanjuang**					**1.21**	**334**	⇓P	**Pn**	**17 26 06.9 +1.2**
	baz=339									
NSTT								*e*S	**Sn**	**17 26 21.0 -0.2**
	baz=339									
LIOB	**Emei**					**1.22**	**335**	*e*P	**Pn**	**17 26 06.8 +0.9**
	baz=341									
NMLH	**Miaoli**					**1.23**	**324**	*e*P	**Pb**	**17 26 07.4 -0.1**
	baz=323									
NMLH								*e*S	**Sn**	**17 26 23.1 +1.4**
	baz=323									
WTCT	**Ta-ch'eng**					**1.24**	**286**	*e*P	**Pn**	**17 26 07.1 +1.1**
	baz=274									
WTCT								*e*S	**Sb**	**17 26 23.1 0.0**
	baz=274									
NWLT	**Wulai**					**1.24**	**357**	*e*P	**Pn**	**17 26 06.9 +0.8**
	baz=356									
NWLT								*e*S	**Sn**	**17 26 20.2 -1.6**
	baz=356									
WSF	**Szhu**					**1.25**	**275**	*e*P	**Pb**	**17 26 07.7 -0.1**
	baz=274									
WSF								*e*S	**Sn**	**17 26 23.2 +1.2**
	baz=274									
MASBT	**Mashibuluo**					**1.27**	**224**	*e*P	**Pn**	**17 26 06.6 +0.1**
	baz=224									
MASBT								*e*S	**Sb**	**17 26 25.0 +1.0**
	baz=224									
CHN8	**Yiju**					**1.27**	**262**	*e*P	**Pb**	**17 26 07.7 -0.5**
	baz=261									
CHN8								*e*S	**Sb**	**17 26 24.3 +0.2**
	baz=261									
WMLT	**Mailiao**					**1.27**	**282**	*e*P	**Pb**	**17 26 08.2 0.0**
	baz=282									
WMLT								*e*S	**Sb**	**17 26 24.7 +0.5**
	baz=282									
TWM1	**Shoushan**					**1.28**	**237**	*e*P	**Pb**	**17 26 09.6 +1.3**
	baz=249									
TWM1								*e*S	**Sb**	**17 26 28.8 +4.3**
	baz=249									
SGLT	**Jiouru**					**1.29**	**231**	*e*P	**Pb**	**17 26 10.3 +1.9**
	baz=231									
SCLT	**Jiali**					**1.32**	**255**	*e*P	**Pb**	**17 26 08.8 -0.2**
	baz=254									
SCLT								*e*S	**Sb**	**17 26 26.0 +0.3**
	baz=254									
EAST	**Anshuo**					**1.33**	**211**	*e*P	**Pn**	**17 26 06.7 -0.7**
	baz=201									
NTC	**Toucheng**					**1.33**	**10**	*e*P	**Pn**	**17 26 08.0 +0.7**
	baz=359									
TAW	**Tawu**					**1.33**	**208**	*e*P	**Pn**	**17 26 07.5 +0.1**
	baz=199									
TAI1	**Yung-k'ang**					**1.34**	**249**	*e*P	**Pb**	**17 26 09.9 +0.6**
	baz=262									
TAI1								*e*S	**Sb**	**17 26 28.4 +2.4**
	baz=262									
SBCB	**Hsinchu**					**1.36**	**337**	*e*P	**Pn**	**17 26 09.3 +1.4**
	baz=336									
SBCB								*e*S	**Sb**	**17 26 28.0 +1.2**
	baz=336									
HSN	**Hsinchu**					**1.38**	**336**	*e*P	**Pb**	**17 26 10.6 +0.6**
	baz=324									
HSN								*e*S	**Sb**	**17 26 28.2 +1.0**
	baz=324									
SNJT	**Kaohsiung City**					**1.39**	**236**	*e*P	**Pb**	**17 26 10.6 +0.4**
	baz=235									
SNJT								*e*S	**Sb**	**17 26 29.7 +2.3**
	baz=235									
SSPT	**Xinbi**					**1.40**	**222**	*e*P	**Pb**	**17 26 10.4 0.0**
	baz=211									
SSPT								*e*S	**Sb**	**17 26 29.5 +1.6**
	baz=211									
NHDH	**Xindian Distri**					**1.42**	**358**	*e*P	**Pn**	**17 26 09.4 +0.8**
	baz=356									
NHDH								*e*S	**Sn**	**17 26 27.2 +0.9**
	baz=356									
TATO	**Taipei**					**1.44**	**357**	*e*P	**Pn**	**17 26 09.5 +0.7**
	baz=5.0									
TATO								*e*S	**Sn**	**17 26 26.7 +0.1**
	baz=5.0									
TATO	**Taipei**					**1.44**	**357**		**Pn**	**17 26 09.6 +0.7**
TWA	**Mucha**					**1.44**	**0**	*e*P	**Pn**	**17 26 09.7 +0.8**
	baz=359									
TWA								*e*S	**Sn**	**17 26 27.2 +0.4**
	baz=359									
TIPB	**Shuangxi**					**1.45**	**9**	*e*P	**Pn**	**17 26 09.4 +0.4**
	baz=358									
TIPB								*e*S	**Sn**	**17 26 27.5 +0.5**
	baz=358									
SCZT	**Fangliau**					**1.46**	**218**	*e*P	**Pb**	**17 26 10.4 -0.9**
	baz=206									
NCUH	**Zhongli**					**1.47**	**346**	*e*P	**Pn**	**17 26 11.0 +1.7**
	baz=345									
NCU	**National Centr**					**1.47**	**346**	*e*P	**Pn**	**17 26 10.9 +1.5**
	baz=344									
NCU								*e*S	**Sb**	**17 26 30.1 +0.1**
	baz=344									
LAY	**Lan-yu**					**1.49**	**181**	*e*P	**Pn**	**17 26 09.0 -0.6**
	baz=169									
LAY								*e*S	**Sn**	**17 26 27.0 -1.0**
	baz=169									
TAP1	**Taipei**					**1.50**	**358**	*e*P	**Pb**	**17 26 12.3 +0.3**
	baz=5.0									
TAP1								*e*S	**Sn**	**17 26 28.8 +0.6**
	baz=5.0									
TWB1	**Santiao Chiao**					**1.51**	**14**	*e*P	**Pb**	**17 26 12.3 +0.1**
	baz=1.0									
NWF	**Wu-fen Shan**					**1.54**	**7**	*e*P	**Pn**	**17 26 11.2 +0.9**
	baz=6.0									
WFSB	**Wu-fen Shan**					**1.54**	**7**	*e*P	**Pn**	**17 26 11.3 +1.0**
	baz=5.0									
WFSB								*e*S	**Sn**	**17 26 31.4 +2.1**
	baz=5.0									
JYNG	**Yonagunijimaku**					**1.54**	**54**	P	**Pn**	**17 26 11.4 +1.1**
JYNG								S	**Sn**	**17 26 30.7 +1.3**
TWS1	**Kuangyinshan**					**1.56**	**355**	*e*P	**Pn**	**17 26 11.6 +1.0**
	baz=5.0									
TWS1								*e*S	**Sn**	**17 26 31.0 +1.1**
	baz=5.0									
YOJ	**Yonaguni jima**					**1.60**	**55**	*e*P	**Pn**	**17 26 11.2 +0.1**
	baz=60									
YOJ	**Yonaguni jima**					**1.60**	**55**	P	**Pn**	**17 26 12.4 +1.3**
YOJ								S	**Sn**	**17 26 31.2 +0.5**
YOJ	**Yonaguni jima**					**1.60**	**55**		**Pn**	**17 26 12.1 +1.1**
YM01	**YM01**					**1.60**	**360**	*e*P	**Pn**	**17 26 12.2 +1.0**
	baz=359									
YM04	**YM04**					**1.61**	**359**	*e*P	**Pn**	**17 26 11.8 +0.5**
	baz=358									
YM10	**YM10**					**1.61**	**359**	*e*P	**Pn**	**17 26 12.2 +0.8**
	baz=358									
WLCH	**Liuqiu**					**1.62**	**223**	*e*P	**Pb**	**17 26 15.5 +1.5**
	baz=223									
YM05	**YM05**					**1.62**	**360**	*e*P	**Pn**	**17 26 12.4 +1.0**
	baz=359									
YM11	**YM11**					**1.62**	**360**	*e*P	**Pn**	**17 26 11.7 +0.2**
	baz=359									
NTST	**Danshui**					**1.63**	**356**	*e*P	**Pb**	**17 26 13.6 -0.6**
	baz=4.0									
NTST								*e*S	**Sn**	**17 26 33.7 +2.4**
	baz=4.0									
YM03	**YM03**					**1.64**	**359**	*e*P	**Pn**	**17 26 12.6 +1.0**
	baz=358									
ANP	**Anpu**					**1.64**	**358**	*e*P	**Pn**	**17 26 13.8 +2.0**
	baz=357									
YM08	**YM08**					**1.65**	**0**	*e*P	**Pn**	**17 26 11.4 -0.3**
	baz=359									
HEN	**Hengchun**					**1.71**	**207**	*e*P	**Pb**	**17 26 15.1 -0.5**
	baz=200									
TWK1	**Hengchun**					**1.74**	**204**	*e*P	**Pb**	**17 26 14.4 -1.7**
	baz=192									
TWKBT	**Hengchun**					**1.74**	**204**	*e*P	**Pn**	**17 26 14.1 +1.1**
	baz=192									
TSEB	**Hengchuen, Pin**					**1.75**	**201**	*e*P	**Pn**	**17 26 13.7 +0.6**
	baz=191									
WDGT	**Dungji**					**1.79**	**262**	*e*P	**Pn**	**17 26 14.2 +0.6**
	baz=261									
PHUB	**P'eng-hu**					**1.84**	**270**	*e*P	**Pn**	**17 26 14.7 +0.3**
	baz=269									
PNG	**Penghu**					**1.86**	**271**	*e*P	**Pn**	**17 26 15.2 +0.6**
	baz=271									
PNG								*e*S	**Sn**	**17 26 36.2 -0.9**
	baz=271									
HATJ	**Hateruma jima**					**2.10**	**75**	P	**Pn**	**17 26 19.0 +1.0**
HATJ								S	**Sn**	**17 26 43.4 +0.3**
IRIF	**Iriomote-Funau**					**2.12**	**68**	P	**Pn**	**17 26 19.6 +1.4**
IRIF								S	**Sn**	**17 26 45.5 +1.9**
JKRS	**Kuro-shima**					**2.33**	**72**	P	**Pn**	**17 26 22.5 +1.4**
JKRS								S	**Sn**	**17 26 50.0 +1.3**
VWUC	**VWUC**					**2.43**	**307**	*e*P	**Pn**	**17 26 22.3 -0.1**
	baz=306									
JIJ	**Ishigaki jima**					**2.48**	**70**	P	**Pn**	**17 26 23.9 +0.7**
JIJ								S	**Sn**	**17 26 52.8 +0.2**
PTTC	**Pingtan**					**2.56**	**320**	*e*P	**Pn**	**17 26 24.3 +0.1**
	baz=320									
PTMZ	**Houxiangcun**					**2.70**	**304**	*e*P	**Pn**	**17 26 26.3 +0.1**
	baz=304									
JISG	**Ishigakijimahi**					**2.71**	**67**	P	**Pn**	**17 26 27.0 +0.7**
JISG								S	**Sn**	**17 26 58.1 +0.1**
MATB	**Ma-tsu**					**3.00**	**331**	*e*P	**Pn**	**17 26 30.1 -0.2**
	baz=330									
KNM	**Kinmen**					**3.01**	**288**	*e*P	**Pn**	**17 26 32.0 +1.5**
	baz=286									
JTJ	**Tarama**					**3.06**	**68**	S	**Sn**	**17 27 07.6 +0.9**
KNMB	**Chin-men Tao**					**3.06**	**288**	*e*P	**Pn**	**17 26 31.3 +0.1**
	baz=288									
KNMB	**Chin-men Tao**					**3.06**	**288**	Pn	**Pn**	**17 26 31.3 +0.1**
QZH	**Quanzhou**					**3.07**	**298**	Pn	**Pn**	**17 26 31.3 +0.1**
QZH								Sn	**Sn**	**17 27 04.9 -2.0**
QZH								smax	smax	
	comp=N,240nm,0.4s									
QZH								smax	smax	
	comp=E,190nm,0.4s									
LYJJ	**Jianjiangzhen**					**3.43**	**332**	*e*P	**Pn**	**17 26 36.8 +0.6**
	baz=331									
MHZQ	**Yeshan**					**3.45**	**318**	*e*P	**Pn**	**17 26 36.7 +0.2**
	baz=319									
JIRB	**Irabujima**					**3.52**	**68**	P	**Pn**	**17 26 38.4 +0.9**
JIRB								S	**Sn**	**17 27 18.2 0.0**
ZPLA	**Ao Xicun**					**3.53**	**277**	*e*P	**Pn**	**17 26 37.5 -0.1**
	baz=277									
AXDP	**Jialang**					**3.57**	**293**	*e*P	**Pn**	**17 26 38.4 +0.3**
	baz=293									
JMJ	**Miyako jima 2**					**3.62**	**69**	*e*P	**Pn**	**17 26 39.9 +1.0**
	baz=84									
JMJ2	**Miyako jima3**					**3.63**	**70**	P	**Pn**	**17 26 40.3 +1.4**
JMJ2								S	**Sn**	**17 27 22.2 +1.4**
JOGS	**Gusukube**					**3.70**	**70**	P	**Pn**	**17 26 41.8 +1.8**
JOGS								S	**Sn**	**17 27 24.3 +1.7**
ZZJH	**Jiuhuzhen**					**3.73**	**285**	*e*P	**Pn**	**17 26 40.4 0.0**
	baz=285									
JOW	**Kunigami**					**6.89**	**60**	Pn	**Pn**	**17 27 23.3 -0.6**
	comp=E,0.3nm,0.3s,baz=71,slow=15,SNR=7.2									
JOW	**Kunigami**					**6.89**	**60**		**Pn**	**17 27 23.8 -0.1**
KSRS	**Korea Array**					**14.90**	**20**	Pn	**Pn**	**17 29 12.9 -0.4**
	baz=109,slow=35,SNR=1.8									
KSRS								LR	LR	17 35 20.1

STKA	**Stephens Creek**	**58.33**	**160**	P	**P**	**17 35 37.0**	**-0.1**	
ILAR	**Eielson Array**	**69.62**	**27**	P	**P**	**17 36 50.7**	**-0.3**	
	comp=Z,0.3nm,0.6s,baz=297,slow=8.3,SNR=4.6							
FINES	**FINESS Array B**	**72.19**	**330**	P	**P**	**17 37 05.5**	**-1.1**	
	comp=Z,0.8nm,0.7s,baz=77,slow=6.3,SNR=1.9							
NOA	**NORSAR Array B**	**78.97**	**332**	LR	LR	18 16 40.1		
	comp=Z,10nm,19.3s,baz=55,slow=39							
YKA	**Yellowknife Ar**	**83.42**	**23**	P	**P**	**17 38 09.4**	**+0.3**	
	comp=Z,0.2nm,0.7s,baz=313,slow=4.9,SNR=5.3							

*IDC **23** 17:48:44.7±1.0,55.90N×114.17E,h0km,mb3.6/8, mb1 3.8/9,mb1mx3.5/58,mbtmp3.6/9,ML2.8/1,MS2.9/5, Ms1 2.9/5,ms1mx2.5/43,Error ellipse: s-maj=26.6km s-min=20.8km az=171.0*

*MOS **23** 17:48:44.6±1.1,56.01N×113.97E,h4km,mb3.8/1,Error ellipse: s-maj=12.2km s-min=8.8km az=69.5*

*BYKL **23** 17:48:46.5±0.2,56.06N×113.89E*

ISC 23 17:48:45.7±0.5,55.96N±0.02×113.83E±0.02,h10km,n68, σ2§91/109,mb3.5/8,MS2.9/4,10C-7D,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.22**	**316**	⇑	*i*	Pg	**Pg**	**17 48 50.3**	**0.0**
SVKR					*i*	Sg	**Sg**	**17 48 53.8**	**+0.4**
SVKR					*e*			17 48 58.9	
SVKR				Pmax					
	14μm,0.3s								
SVKR				Smax					
	31μm,0.4s								
SVKR	**Severomuysk**	**0.22**	**316**	⇑	*i*	Pg	**Pg**	**17 48 50.3**	**0.0**
SVKR					*e*			17 48 53.2	
SVKR				pmax	pmax				
	comp=Z,14μm,4.2s								
SVKR				smax	smax				
	comp=N,31μm,0.8s								
UKT	**Uakit**	**0.48**	**194**	⇑	*i*	Pg	**Pb**	**17 48 56.9**	**+0.6**
UKT					*e*	Sg	**Sb**	**17 49 05.2**	**+1.7**
UKT				Pmax					
	comp=N,355nm,0.6s								
UKT				Smax					
	comp=N,2μm,0.6s								
NLYR	**Nelyaty**	**1.18**	**62**	⇓	*i*	Pg	**Pb**	**17 49 06.2**	**-1.9**
NLYR					*e*	Pb	**Pn**	**17 49 08.5**	**+0.3**
NLYR					*e*			17 49 10.2	
NLYR					*e*	Sg	**Sb**	**17 49 21.3**	**-2.0**
NLYR					*e*	Sb	**Sn**	**17 49 25.4**	**+1.1**
NLYR				max					
	comp=N,342nm,0.7s								
NLYR				max					
	comp=N,793nm,1.2s								
NLYR	**Nelyaty**	**1.18**	**62**	⇓	*i*	Pg	**Pb**	**17 49 06.2**	**-1.9**
NLYR					*e*			17 49 18.9	
NLYR				pmax	pmax				
	comp=Z,339nm,0.7s								
NLYR				smax	smax				
	comp=E,770nm,1.1s								
YOA	**Uoyan**	**1.20**	**279**	⇑	*i*	Pg	**Pg**	**17 49 08.6**	**0.0**
YOA					*e*	Sg	**Sn**	**17 49 25.2**	**+0.4**
YOA					*e*			17 49 30.5	
YOA				Pmax					
	comp=E,726nm,0.3s								
YOA				max					
	comp=E,5μm,0.5s								
YOA	**Uoyan**	**1.20**	**279**	⇑	*i*	Pg	**Pg**	**17 49 08.6**	**0.0**
YOA					*i*			17 49 26.0	
YOA				pmax	pmax				
	comp=Z,679nm,0.3s								
YOA				smax	smax				
	comp=E,5μm,0.5s								
KMO	**Kumora**	**1.48**	**268**	⇑	*i*	Pg	**Pg**	**17 49 13.7**	**-0.4**
KMO					*e*	Pb	**Pb**	**17 49 15.1**	**+1.8**
KMO					*e*	Sg	**Sg**	**17 49 34.2**	**+0.9**
KMO					*e*			17 49 37.2	
KMO				max					
	comp=E,629nm,0.5s								
KMO				max					
	comp=E,3μm,1.2s								
KMO	**Kumora**	**1.48**	**268**	⇑	*i*	Pg	**Pg**	**17 49 13.7**	**-0.4**
KMO					*e*			17 49 34.0	
KMO				pmax	pmax				
	comp=Z,634nm,0.5s								
KMO				smax	smax				
	comp=N,3μm,1.2s								
YLYR	**Ulyunkhan**	**1.87**	**236**	⇓	*i*	Pn	**Pg**	**17 49 20.9**	**-0.6**
YLYR					*e*	Pg	**Pb**	**17 49 22.2**	**+2.3**
YLYR					*e*			17 49 23.8	
YLYR					*e*	Sg	**Sg**	**17 49 48.2**	**+2.5**
YLYR				max					
	comp=N,137nm,0.3s								
YLYR				Smax					
	comp=N,534nm,0.5s								
YLYR	**Ulyunkhan**	**1.87**	**236**		*e*	PN	**Pb**	**17 49 19.7**	**-0.2**
YLYR					*e*			17 49 21.1	
YLYR					*e*	S	**Sg**	**17 49 44.5**	**-1.2**
YLYR					*e*			17 49 46.1	
YLYR				pmax	pmax				
	comp=Z,138nm,0.3s								
YLYR				smax	smax				
	comp=E,544nm,0.3s								
BOD	**Bodaibo**	**1.87**	**3**	⇑	*i*	Pg	**Pb**	**17 49 17.9**	**-2.0**
BOD					*e*	Sg	**Sb**	**17 49 41.3**	**-2.0**
BOD					*e*			17 49 44.0	
BOD				Pmax					
	comp=E,354nm,0.8s								
BOD				Smax					
	comp=E,1μm,1.0s								
BOD	**Bodaibo**	**1.87**	**3**	⇑	*i*	PN	**Pb**	**17 49 18.2**	**-1.7**
BOD					*e*			17 49 41.0	
BOD				pmax	pmax				
	comp=Z,358nm,0.8s								
BOD				smax	smax				
	comp=E,1μm,1.0s								
NIZ	**Nizh Angarsk**	**2.42**	**267**		*e*	Pn	**Pb**	**17 49 28.1**	**-1.3**
NIZ					*e*	Pg	**Pg**	**17 49 30.6**	**-1.5**
NIZ					*e*	Sg	**Sg**	**17 50 03.6**	**+0.1**
NIZ					*e*			17 50 06.6	
NIZ				Pmax					
	comp=E,78nm,0.6s								
NIZ				max					
	comp=E,880nm,0.4s								
CRS	**Chara**	**2.64**	**67**	⇓	*i*	Pn	**Pn**	**17 49 29.1**	**+0.8**
CRS				⇓	*i*	Pg	**Pb**	**17 49 33.3**	**+0.3**
CRS					*e*			17 49 40.6	
CRS					*e*	Sg	**Sb**	**17 50 06.8**	**+1.3**
CRS				Pmax					
	comp=E,449nm,0.9s								
CRS				Smax					
	comp=E,1μm,0.9s								
CRS	**Chara**	**2.64**	**67**		*e*	PN	**Pn**	**17 49 28.8**	**+0.5**
CRS					*e*			17 49 33.0	
CRS					*e*			17 50 06.1	
CRS				pmax	pmax				
	comp=Z,446nm,0.8s								
CRS				smax	smax				
	comp=E,1μm,0.8s								
SYVR	**Suvo**	**3.20**	**225**	⇑	*i*	Pn	**Pb**	**17 49 39.2**	**-3.3**
SYVR					*e*	Pg	**Pg**	**17 49 46.1**	**-0.8**
SYVR					*e*	PgPg	**PbPb**	**17 49 49.6**	**+3.9**
SYVR					*e*			17 50 10.4	
SYVR					*e*	Sg	**Sg**	**17 50 28.7**	**+0.4**
SYVR				max					
	comp=E,90nm,1.0s								
SYVR				Smax					
	comp=E,275nm,1.3s								
SYVR	**Suvo**	**3.20**	**225**		*e*	PN	**Pb**	**17 49 39.0**	**-3.5**
SYVR					*e*			17 49 46.8	
SYVR					*e*			17 50 28.6	
SYVR				pmax	pmax				
	comp=Z,91nm,0.7s								
SYVR				smax	smax				
	comp=N,281nm,1.3s								
KHNR	**Khani**	**3.55**	**72**		*e*	Pg	**Pb**	**17 49 49.1**	**+0.6**
KHNR					*e*	Sn	**Sn**	**17 50 21.0**	**-1.8**
KHNR					*e*	Sg	**Sb**	**17 50 33.9**	**+2.3**
KHNR					*e*			17 50 35.9	
VTMR	**Vitim**	**3.56**	**349**		*e*	Pn	**Pn**	**17 49 40.8**	**-0.1**
VTMR					*e*			17 49 43.3	
VTMR					*e*	Pg	**Pb**	**17 49 47.5**	**-1.2**
VTMR					*e*			17 50 15.5	
VTMR					*e*			17 50 23.0	
VTMR					*e*	Sg	**Sb**	**17 50 32.6**	**+0.7**
TUP	**Tupik**	**3.83**	**111**	⇓	*i*	Pn	**Pn**	**17 49 46.0**	**+1.3**
TUP					*e*	Pg	**Pb**	**17 49 54.9**	**+1.6**
TUP					*e*	PgPg	**PbPb**	**17 49 56.7**	**+0.2**
TUP					*e*			17 50 01.7	
TUP					*e*	Sn	**Sn**	**17 50 30.4**	**+0.7**
TUP					*e*	Sg	**Sg**	**17 50 45.2**	**-3.4**
TUP					*e*			17 50 50.7	
TUP				max					
	comp=N,63nm,0.4s								
TUP				max					
	comp=N,542nm,0.7s								
TUP	**Tupik**	**3.83**	**111**	⇓	*i*	PN	**Pn**	**17 49 46.0**	**+1.3**
TUP					*e*			17 49 55.8	
TUP					*e*	S	**Sn**	**17 50 30.4**	**+0.7**
TUP					*e*			17 50 45.2	
TUP				pmax	pmax				
	comp=Z,63nm,0.4s								
TUP				smax	smax				
	comp=E,544nm,0.7s								
CIT	**Chita**	**3.95**	**183**		*e*		**Pb**	**17 49 56.1**	**+0.8**
CIT					*e*			17 50 10.9	
CIT					*e*	Sg	**Sg**	**17 50 52.2**	**-0.1**
CIT					*e*			17 51 00.7	
CIT				max					
	comp=E,47nm,0.3s								
CIT				max					
	comp=E,359nm,0.6s								
CIT	**Chita**	**3.95**	**183**		*e*	PN	**Pn**	**17 49 50.2**	**+3.9**
CIT					*e*			17 49 59.6	
CIT					*e*	S	**Sn**	**17 50 35.6**	**+2.9**
CIT					*e*			17 50 49.6	
CIT				pmax	pmax				
	comp=Z,87nm,0.6s								
CIT				smax	smax				
	comp=E,401nm,1.2s								
MXMB	**Maximikha**	**4.00**	**230**		*e*	PN	**Pn**	**17 49 49.9**	**+2.9**
MXMB					*e*			17 49 56.4	
MXMB					*e*	Pg	**Pg**	**17 50 01.8**	**-0.5**
MXMB					*e*			17 50 29.4	
MXMB					*e*	Sg	**Sg**	**17 50 53.1**	**-1.0**
MXMB					*e*			17 51 03.4	
OGRR	**Ongureny**	**4.29**	**240**		*e*	PN	**Pn**	**17 49 54.9**	**+3.9**
OGRR					*e*	Pg	**Pg**	**17 50 04.5**	**-3.3**
OGRR					*e*			17 50 06.9	
OGRR					*e*			17 50 39.8	
OGRR					*e*	Sg	**Sg**	**17 51 02.4**	**-0.9**
OGRR				max					
	comp=E,35nm,0.6s								
OGRR				Smax					
	comp=E,145nm,0.8s								
OGRR	**Ongureny**	**4.29**	**240**		*e*	PN	**Pn**	**17 49 54.9**	**+3.9**
OGRR					*e*			17 50 06.0	
OGRR					*e*			17 51 00.9	
OGRR				pmax	pmax				
	comp=Z,35nm,1.2s								
OGRR				smax	smax				
	comp=N,153nm,2.0s								
YKLR	**Yuktali**	**4.41**	**78**		*e*	PN	**Pn**	**17 49 53.5**	**+0.9**
YKLR					*e*	Pg	**Pb**	**17 50 03.8**	**+0.7**
YKLR					*e*			17 50 11.8	
YKLR					*e*			17 50 28.7	
YKLR					*e*			17 50 55.5	
YKLR					*e*	Sg	**Sb**	**17 51 00.5**	**+4.2**
TRG	**Tyrgan**	**5.42**	**237**		*e*		**Pb**	**17 50 21.6**	**+1.2**
TRG					*e*	Sg	**Sg**	**17 51 37.0**	**-2.6**
TRG				max					
	comp=N,13nm,0.6s								
TRG				Smax					
	comp=N,80nm,1.1s								
UUDB	**Ulan-Yde**	**5.48**	**224**		*e*		**Pb**	**17 50 19.0**	**-2.5**
UUDB					*e*	Pg	**Pg**	**17 50 27.8**	**-2.8**
UUDB					*e*	Sg	**Sg**	**17 51 39.0**	**-2.6**
UUDB				Pmax					
	comp=N,27nm,0.5s								
UUDB				Smax					
	comp=N,193nm,1.2s								
HRMR	**Khuramsha**	**5.95**	**226**		*e*	PN	Pn	17 50 18.4	+4.6
HRMR					*e*	Pg	**Pg**	**17 50 35.2**	**-4.3**
HRMR					*e*			17 50 40.9	
HRMR					*e*	Sg	**Sg**	**17 51 53.4**	**-3.1**
CLNS	**Chul'man**	**6.21**	**77**		*e*	Pg	**Pb**	**17 50 36.3**	**+2.5**
CLNS					*e*			17 50 38.5	
CLNS					*e*			17 51 48.7	
CLNS					*e*	Sg	**Sg**	**17 51 57.7**	**-7.0**
BGT	**Bolshoye Golou**	**6.33**	**235**		*e*	Pg	Pg	17 50 41.3	-5.4
BGT					*e*			17 50 43.8	
BGT					*e*	Sg	**Sg**	**17 52 05.5**	**-3.0**
BGT					*e*			17 52 15.0	
BGT				max					
	comp=N,4.0nm,0.5s								
BGT				Smax					
	comp=N,43nm,0.7s								
KPC	**Khapcheranga**	**6.33**	**189**		*e*	PN	**Pn**	**17 50 21.1**	**+2.1**
KPC					*e*	Pg	**Pg**	**17 50 42.7**	**-4.0**
KPC					*e*			17 51 46.8	
KPC					*e*	Sg	**Sg**	**17 52 06.9**	**-1.7**
KPC					*e*			17 52 14.2	
KPC				Pmax					
	comp=N,5.0nm,0.8s								
KPC				max					
	comp=N,171nm,1.5s								
KPC	**Khapcheranga**	**6.33**	**189**		*e*	PN	**Pn**	**17 50 20.9**	**+1.9**
KPC					*e*			17 50 41.3	
KPC					*e*			17 52 04.9	
KPC				pmax	pmax				
	comp=Z,8.0nm,0.5s								
KPC				smax	smax				
	comp=E,172nm,1.8s								
LSTR	**Listvyanka**	**6.71**	**236**		*e*	Pn	**Pn**	**17 50 25.5**	**+1.3**
LSTR					*e*			17 50 43.7	
LSTR					*e*	Sg	**Sg**	**17 52 15.8**	**-5.1**
LSTR					*e*			17 52 31.1	
LSTR				max					
	comp=E,7.0nm,1.2s								
LSTR				Smax					
	comp=E,70nm,1.7s								
IRK	**Irkutsk**	**6.74**	**240**		*e*	Sg	**Sg**	**17 52 16.2**	**-5.6**
IRK				Smax					
	comp=E,175nm,1.0s								
IRK	**Irkutsk**	**6.74**	**240**		*e*	PG	**Pg**	**17 50 49.9**	**-4.7**
IRK					*e*			17 52 17.2	
IRK				pmax	pmax				
	comp=Z,33nm,0.2s								
IRK				smax	smax				
	comp=N,175nm,0.9s								
IVK	**Ivanovka**	**6.95**	**237**		*e*		**Pg**	**17 50 54.2**	**-4.4**
IVK					*e*	Sg	**Sg**	**17 52 22.9**	**-5.6**
IVK					*e*			17 52 26.0	
IVK					*e*			17 52 34.4	
IVK				max					
	comp=N,68nm,1.5s								
TLY	**Talaya**	**7.39**	**239**		*e*	Pg	Pg	17 51 00.6	-6.5
TLY					*e*	Sg	**Sg**	**17 52 37.5**	**-5.3**
TLY					*e*			17 52 46.4	
TLY				Pmax					
	comp=N,5.0nm,0.5s								
TLY				max					
	comp=N,41nm,1.1s								
TLY	**Talaya**	**7.39**	**239**		Pg	Pg		17 50 59.9	-7.3
	comp=N,0.0nm,0.3s,baz=31,slow=12,SNR=4.5								
TLY					Lg	Lg		17 52 36.5	
	comp=N,0.0nm,0.3s,baz=244,slow=19,SNR=6.6								
HIA	**Hailar**	**7.60**	**149**		*e*		**Sn**	**17 51 55.3**	**-7.3**
HIA					*e*			17 52 34.2	
HIA					*e*			17 52 37.5	
HIA					*e*	Sg	**Sg**	**17 52 44.6**	**-4.9**
ARS	**Arshan**	**7.85**	**244**		*e*	Pn	**Pn**	**17 50 42.0**	**+2.1**
ARS					*e*			17 50 54.3	
ARS					*e*	Sg	**Sg**	**17 52 50.5**	**-6.9**
ARS					*e*			17 52 59.3	
ARS				max					
	comp=N,15nm,0.5s								
ARS				Smax					
	comp=N,185nm,0.8s								
ZEA	**Zeya**	**8.06**	**100**		*e*	PN	Pb	17 50 56.4	-8.8
ZEA					*e*			17 52 57.2	
ZEA				pmax	pmax				
	comp=Z,10.0nm,0.8s								
ZEA				smax	smax				
	comp=Z,36nm,0.8s								
ZEA				smax	smax				
	comp=N,130nm,1.0s								
ZEA				MLR	MLR				
	comp=E,300nm,6.0s								
ZEA				MLR	MLR				
	comp=Z,200nm,6.0s								
ZAK	**Zakamensk**	**8.44**	**233**		*e*			17 52 56.5	
ZAK					*e*	Sg	**Sg**	**17 53 09.6**	**-6.8**
ZAK				max					
	comp=E,3.0nm,0.8s								
ZAK				Smax					
	comp=Z,29nm,1.4s								
MOY	**Mondy**	**8.72**	**246**		*e*	Pn	**Pn**	**17 50 55.5**	**+3.6**
MOY					*e*			17 52 54.6	
MOY					*e*	Sg	**Sg**	**17 53 18.4**	**-7.0**
MOY					*e*			17 53 31.0	
MOY				max					
	comp=Z,10.0nm,0.8s								
MOY				Smax					
	comp=Z,82nm,1.6s								
ORL	**Orlik**	**8.89**	**253**		*e*	Pn	**Pn**	**17 50 57.6**	**+3.4**
ORL					*e*			17 51 06.2	
ORL					*e*			17 51 30.3	
ORL					*e*			17 52 37.0	
ORL					*e*	Sg	**Sg**	**17 53 24.7**	**-6.1**
ORL				max					
	comp=Z,1.0nm,0.6s								
ORL				Smax					
	comp=Z,47nm,1.5s								
ORL	**Orlik**	**8.89**	**253**		*e*	PN	**Pn**	**17 50 57.8**	**+3.6**
ORL					*e*			17 51 29.3	
ORL					*e*	S	**Sn**	**17 52 35.3**	**+0.9**
ORL					*e*			17 53 24.8	
ORL				pmax	pmax				
	comp=Z,10.0nm,1.0s								
ORL				smax	smax				
	comp=N,47nm,1.3s								
SONM	**Songino Array**	**9.34**	**213**		Pg	Pn		17 51 39.3	+39
	comp=N,0.4nm,0.3s,baz=23,slow=11,SNR=2.4								
SONM					Lg	Lg		17 53 43.6	
	comp=N,0.7nm,0.3s,baz=26,slow=27,SNR=4.6								
YAK	**Yakutsk**	**10.18**	**47**		Lg	Lg		17 53 53.9	
	comp=N,0.2nm,0.3s,baz=309,slow=21,SNR=7.8								
TDJR	**Todzha**	**10.98**	**258**		*e*	Pn		17 51 31.6	+8.9
TDJR					*e*			17 51 39.1	
TDJR					*e*			17 54 24.0	
TDJR					*e*	Sg		17 54 26.3	
KZLR	**Kyzyl**	**12.20**	**258**		eSg			17 55 05.5	
KLR	**Kul'dur**	**12.79**	**114**		Pn	**Pn**		**17 51 48.3**	**+0.9**
	comp=N,0.3nm,0.3s,baz=314,slow=17,SNR=6.1								
KLR					Lg	Lg		17 55 26.2	
	comp=N,0.3nm,0.3s,baz=26,slow=15,SNR=4.5								
ZALV	**Zalesovo Beam**	**16.73**	**275**		Pn	**P**		**17 52 41.9**	**-0.2**
	comp=N,0.2nm,0.3s,baz=65,slow=10,SNR=2.5								
ZALV					LR	LR		17 59 25.3	
	comp=N,22nm,21.3s,baz=28,slow=38								
TIXI	**Tiksi**	**17.00**	**16**		Pn	**Pn**		**17 52 38.1**	**-5.0**
	comp=N,0.7nm,0.3s,baz=216,slow=9.3,SNR=16								
TIXI					Sn	Sn		17 55 36.5	-15
	comp=N,0.3nm,0.3s,baz=84,slow=12,SNR=3.3								
KSRS	**Korea Array**	**20.80**	**147**		LR	LR		18 01 14.7	
	comp=N,28nm,18.8s,baz=73,slow=36								
KURK	**Kurchatov**	**21.50**	**271**		P	**P**		**17 53 38.4**	**+4.0**
MKAR	**Makanchi Array**	**21.55**	**258**		P	**P**		**17 53 36.8**	**+1.8**
	comp=N,1.1nm,0.6s,baz=59,slow=8.8,SNR=9.4								
KURBB	**Kurchatov Arra**	**21.60**	**271**		P	**P**		**17 53 38.4**	**+3.0**
	comp=N,2.8nm,0.6s,baz=69,slow=11,SNR=12								
BVAR	**Borovoye Array**	**25.09**	**282**		P	**P**		**17 54 12.8**	**+2.6**
	comp=N,1.1nm,0.8s,baz=57,slow=5.5,SNR=5.3								
JNU	**Nakatsue**	**25.72**	**145**		LR	LR		18 04 27.2	
	comp=N,38nm,19.2s,baz=282,slow=37								
FINES	**FINESS Array B**	**42.63**	**315**		P	**P**		**17 56 43.7**	**+2.1**
	comp=N,1.7nm,0.8s,baz=30,slow=12,SNR=4.9								
FINES					LR	LR		18 18 49.5	
	comp=N,11nm,18.3s,baz=252,slow=42								
ILAR	**Eielson Array**	**44.91**	**37**		P	**P**		**17 57 00.3**	**+0.3**
	comp=N,0.6nm,0.9s,baz=299,slow=7.7,SNR=7.0								
YKA	**Yellowknife Ar**	**56.01**	**25**		P	**P**		**17 58 23.6**	**-0.2**
	comp=N,0.2nm,0.6s,baz=333,slow=6.9,SNR=6.0								
WRA	**Warramunga Arr**	**77.57**	**160**		P	**P**		**18 00 41.8**	**+0.2**
	comp=N,0.4nm,0.8s,baz=346,slow=4.0,SNR=4.9								
ASAR	**Alice Springs**	**81.12**	**161**		P	**P**		**18 01 00.8**	**-0.1**
	comp=N,0.3nm,0.8s,baz=353,slow=7.1,SNR=4.5								
DZM	**Mont Dzumac**	**89.55**	**133**		LR	LR		18 38 36.2	
	comp=N,15nm,21.0s,baz=186,slow=34								
CHN	**Chinchina**	**118.79**	**11**		P	**Pdif**		**18 03 57.3**	**+2.4**

*MOS **23** 18:00:56.8±0.9,51.63N×179.36E,h100km,mb4.1/11, Error ellipse: s-maj=10.9km s-min=7.9km az=90.7*

*NEIC **23** 18:00:56.5±1.7,51.6N±0.1×179.33E±0.08,h81km±6km, Error ellipse: s-maj=17.6km s-min=7.5km az=182.0*

*AEIC **23** 18:00:56.4±2.8,51.8N±0.1×179.42E±0.09,h87km±3km, ML4.5/42,mb4.2/74(NEIC),Error ellipse: s-maj=18.1km s-min=8.3km az=181.0*

*IDC **23** 18:00:58.0±1.7,51.69N×179.23E,h89km±13km,mb3.8/20, mb1 3.9/24,mb1mx3.8/56,mbtmp4.1/24,MS2.7/8, Ms1 2.7/8,ms1mx2.6/39,Error ellipse: s-maj=18.8km s-min=10.6km az=177.0*

ISC 23 18:00:56.7±0.5,51.7N±0.1×179.36E±0.04,h81km,n203, σ1§45/195,mb4.2/53,6C,Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GAEA	**Gareloi East**	**1.19**	**84**				**Pn**	**18 01 18.1**	**0.0**
TASE	**Tanaga Southea**	**1.63**	**83**				**Pn**	**18 01 23.6**	**-0.1**
TAFP	**Tanaga Falls P**	**1.67**	**81**				**Pn**	**18 01 23.9**	**-0.3**
TAFP							**Sn**	**18 01 45.8**	**+0.7**
TAPA	**Tanaga Point A**	**1.77**	**84**				**Pn**	**18 01 25.4**	**-0.2**
KIMD	**Kanaga Island**	**2.12**	**86**				**Pn**	**18 01 30.2**	**-0.1**
KIMD							**Sn**	**18 01 56.5**	**+0.7**
KICM	**Kanaga Island**	**2.16**	**82**				**Pn**	**18 01 30.8**	**+0.2**
KIKV	**Kanaga Island**	**2.17**	**83**				**Pn**	**18 01 30.7**	**-0.1**
KIWB	**Kanaga Island**	**2.18**	**84**				Pn	18 01 39.1	+8.1
KINC	**Kanaga Island**	**2.20**	**82**				**Pn**	**18 01 31.4**	**+0.2**
KIRH	**Kanaga Island**	**2.22**	**83**				**Pn**	**18 01 31.6**	**+0.1**
ADK	**Adak**	**2.47**	**83**	P			**Pn**	**18 01 34.6**	**-0.2**
ADK	**Adak**	**2.47**	**83**				**Pn**	**18 01 34.6**	**-0.2**
ADAG	**Mount Adagdak**	**2.53**	**81**				**Pn**	**18 01 35.6**	**-0.1**
GSTD	**Great Sitkin T**	**2.82**	**80**				**Pn**	**18 01 39.1**	**-0.5**
GSMY	**Great Sitkin M**	**2.87**	**81**				**Pn**	**18 01 40.1**	**-0.2**
GSTR	**Great Sitkin T**	**2.87**	**80**				**Pn**	**18 01 40.0**	**-0.4**
SMY	**Shemya**	**3.40**	**290**				**Pn**	**18 01 46.2**	**-1.3**
SMY	**Shemya**	**3.40**	**290**				**Sn**	**18 02 31.8**	**+5.1**
KOWE	**Korovin West**	**4.01**	**77**				**Pn**	**18 01 56.0**	**+0.3**
ATKA	**Atka Island**	**4.03**	**80**				**Pn**	**18 01 55.8**	**-0.1**
ATKA	**Atka Island**	**4.03**	**80**				**Sn**	**18 02 42.6**	**+0.7**
KOKL	**Mount Kliuchef**	**4.04**	**78**				**Pn**	**18 01 56.5**	**+0.3**
KOFP	**Korovin Flat P**	**4.09**	**79**				**Pn**	**18 01 57.6**	**+0.7**
KOSE	**Korovin Southe**	**4.13**	**78**				**Pn**	**18 01 58.6**	**+1.2**
NIKH	**Nikolski High**	**7.34**	**75**				**Pn**	**18 02 42.6**	**+1.4**
OKSP	**Okmok Steeple**	**7.71**	**73**				**Pn**	**18 02 47.7**	**+1.5**
OKFG	**Magazine Ridge**	**7.96**	**72**				**Pn**	**18 02 51.3**	**+1.7**
SPIA	**Saint Paul Isl**	**8.19**	**44**				**Pn**	**18 02 55.6**	**+3.0**
MCIR	**Makushin Cirqu**	**8.64**	**69**				**Pn**	**18 03 00.8**	**+1.9**
MSW	**Makushin Switc**	**8.70**	**70**		

	comp=Z,10nm,0.8s							
KDAK	**Kodiak Island**	**17.24**	**58**	P		**Pn**	**18 04 51.4**	**-0.6**
	comp=Z,4.4nm,0.3s,baz=274,slow=7.0,SNR=49							
KDAK				S		**Sn**	**18 07 57.0**	**-6.1**
	comp=Z,0.1nm,0.3s,baz=204,slow=21,SNR=1.5							
KDAK				LR		LR	18 11 13.0	
	comp=Z,30nm,20.5s,baz=200,slow=36							
KDAK	**Kodiak Island**	**17.24**	**58**	P		**Pn**	**18 04 50.8**	**-1.2**
KDAK				IAmb		IAmb	18 05 09.3	
	comp=Z,12nm,1.1s							
TTA	**Tatalina**	**17.31**	**40**	P		**Pn**	**18 04 53.2**	**+0.3**
TTA	**Tatalina**	**17.31**	**40**	Pn		**Pn**	**18 04 53.2**	**+0.3**
BILL	**Bilibino**	**17.61**	**344**	*eP*		**Pn**	**18 04 58.5**	**+2.0**
BILL				pmax		pmax		
	comp=Z,17nm,1.7s							
BILL				MLR		MLR		
	comp=Z,56nm,21.0s							
BILL	**Bilibino**	**17.61**	**344**	P		**Pn**	**18 04 58.7**	**+2.2**
BILL				IAmb		IAmb	18 05 02.0	
	comp=Z,17nm,1.3s							
RSO	**Redoubt South**	**17.76**	**49**	P		**P**	**18 04 55.4**	**-2.9**
MA2	**Magadan**	**17.86**	**307**	P		**Pn**	**18 05 00.2**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=110,slow=10,SNR=4.6							
MA2				LR		LR	18 11 28.2	
	comp=Z,23nm,21.7s,baz=118,slow=35							
MA2	**Magadan**	**17.86**	**307**	*eP*		**Pn**	**18 04 59.6**	**+0.1**
MA2				pmax		pmax		
	comp=Z,3.0nm,0.9s							
MA2	**Magadan**	**17.86**	**307**	IAmb		IAmb	18 05 03.1	
	comp=Z,3.5nm,0.8s							
CNPM	**China Poot**	**18.26**	**53**	P		**Pn**	**18 05 04.5**	**+0.1**
CNPM				IAmb		IAmb	18 05 31.1	
	comp=Z,14nm,1.1s							
SEY	**Seymchan**	**18.26**	**319**	P		**Pn**	**18 05 04.5**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=106,slow=19,SNR=5.4							
BRLK	**Bradley Lake**	**18.48**	**52**	P		**P**	**18 05 06.5**	**+0.5**
PPLA	**Purkeypile**	**18.86**	**42**	P		**P**	**18 05 07.7**	**-2.6**
PPLA				IAmb		IAmb	18 05 43.3	
	comp=Z,19nm,1.3s							
KTH	**Kantishna Hill**	**19.65**	**41**	P		**P**	**18 05 19.5**	**+0.8**
KTH				IAmb		IAmb	18 05 27.9	
	comp=Z,13nm,0.9s							
BPAW	**Bear Paw Mtn.**	**19.85**	**40**	P		**Pn**	**18 05 23.4**	**+0.3**
TRF	**Thorofare Moun**	**19.87**	**42**	P		**P**	**18 05 21.9**	**+0.6**
TRF				IAmb		IAmb	18 05 45.6	
	comp=Z,7.4nm,0.8s							
GHO	**Glory Hole Cre**	**19.92**	**47**	P		**P**	**18 05 19.9**	**-1.8**
GHO				IAmb		IAmb	18 05 41.5	
	comp=Z,12nm,1.1s							
KNK	**Knik Glacier**	**20.04**	**48**	P		**P**	**18 05 19.4**	**-3.6**
KNK				IAmb		IAmb	18 05 45.4	
	comp=Z,22nm,1.4s							
SML	**Sawmill**	**20.20**	**47**	P		**P**	**18 05 21.6**	**-3.1**
SML				IAmb		IAmb	18 05 38.7	
	comp=Z,5.9nm,0.6s							
MLY	**Manley**	**20.35**	**37**	P		**P**	**18 05 23.4**	**-2.9**
RND	**Reindeer**	**20.46**	**43**	P		Pn	18 05 30.1	-0.2
RND				pmax		pmax		
	comp=Z,4.0nm,0.7s							
RND	**Reindeer**	**20.46**	**43**	P		Pn	18 05 30.1	-0.3
BWN	**Browne**	**20.49**	**40**	P		Pn	18 05 31.2	+0.6
MCK	**McKinley**	**20.54**	**42**	P		Pn	18 05 30.6	-0.6
MCK				pmax		pmax		
	comp=Z,18nm,1.6s							
MCK	**McKinley**	**20.54**	**42**	P		Pn	18 05 30.6	-0.6
MCK				IAmb		IAmb	18 06 04.1	
	comp=Z,18nm,1.6s							
GLI	**Glacier Island**	**20.56**	**50**	P		**P**	**18 05 29.5**	**+0.9**
GLI				IAmb		IAmb	18 05 46.3	
	comp=Z,7.6nm,0.7s							
SCM	**Sheep Creek Mo**	**20.66**	**48**	P		**P**	**18 05 29.9**	**+0.1**
SCM				pmax		pmax		
	comp=Z,12nm,1.0s							
SCM	**Sheep Creek Mo**	**20.66**	**48**	P		**P**	**18 05 29.9**	**+0.1**
SCM				IAmb		IAmb	18 05 34.9	
	comp=Z,12nm,1.0s							
HIN	**Hinchinbrook I**	**20.76**	**52**	P		**P**	**18 05 32.6**	**+1.9**
HIN				IAmb		IAmb	18 06 11.1	
	comp=Z,17nm,1.3s							
NEA	**Nenana**	**20.80**	**40**	P		**P**	**18 05 32.8**	**+1.7**
NEA				IAmb		IAmb	18 05 57.0	
	comp=Z,8.2nm,0.8s							
DHY	**Denali Highway**	**20.98**	**44**	P		**P**	**18 05 33.3**	**0.0**
DHY				IAmb		IAmb	18 05 38.6	
	comp=Z,10.0nm,0.6s							
MDM	**Murphy Dome**	**21.29**	**39**	P		**P**	**18 05 37.7**	**+1.4**
MDM				IAmb		IAmb	18 05 40.1	
	comp=Z,8.3nm,0.5s							
COLA	**College**	**21.40**	**39**	*i* P		**P**	**18 05 38.8**	**+1.3**
COLA				pmax		pmax		
	comp=Z,4.0nm,1.0s							
HDA	**Harding Lake**	**21.60**	**41**	P		**P**	**18 05 40.3**	**+0.7**
HDA				IAmb		IAmb	18 05 44.8	
	comp=Z,4.5nm,0.4s							
RAGM	**Ragged Mountai**	**21.66**	**52**	P		**P**	**18 05 41.5**	**+1.2**
RAGM				IAmb		IAmb	18 05 57.2	
	comp=Z,12nm,0.8s							
IL31		**21.75**	**40**	P		**P**	**18 05 42.2**	**+1.0**
ILAR	**Eielson Array**	**21.75**	**40**	P		**P**	**18 05 40.9**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=240,slow=9.4,SNR=15							
ILAR				ScP		**ScP**	**18 13 06.8**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=281,slow=3.2,SNR=7.2							
GLB	**Gilahina Butte**	**22.23**	**50**	P		**P**	**18 05 46.3**	**-0.2**
RIDG	**Independent Ri**	**22.27**	**43**	P		**P**	**18 05 46.8**	**0.0**
RIDG				IAmb		IAmb	18 05 49.8	
	comp=Z,4.8nm,0.4s							
VRDI	**Verde Repeater**	**22.37**	**50**	P		**P**	**18 05 48.1**	**+0.1**
VRDI				IAmb		IAmb	18 06 14.0	
	comp=Z,11nm,1.4s							
PRP	**Porcupine Dome**	**22.55**	**39**	P		**P**	**18 05 49.7**	**-0.3**
TOLK	**Toolik Lake Re**	**22.57**	**30**	P		**P**	**18 05 51.3**	**+1.3**
DOT	**Dot Lake**	**22.58**	**44**	P		**P**	**18 05 50.5**	**+0.4**
SCRK	**Sand Creek**	**22.70**	**43**	P		**P**	**18 05 51.5**	**0.0**
SCRK				IAmb		IAmb	18 05 54.3	
	comp=Z,4.9nm,0.4s							
FYU	**Fort Yukon**	**23.06**	**36**	P		**P**	**18 05 55.0**	**+0.1**
FYU				IAmb		IAmb	18 05 58.1	
	comp=Z,6.6nm,0.8s							
BARN	**Barnard Glacie**	**23.21**	**51**	P		**P**	**18 05 56.9**	**+0.2**
CTGM	**Chitina Glacie**	**23.36**	**51**	P		**P**	**18 05 58.2**	**+0.2**
EGAK	**Eagle**	**24.09**	**42**	P		**P**	**18 06 05.3**	**+1.0**
EGAK				IAmb		IAmb	18 06 07.4	
	comp=Z,5.9nm,0.7s							
DAWY	**Dawson**	**24.69**	**44**	P		**P**	**18 06 11.9**	**+2.1**
DAWY				IAmb		IAmb	18 06 15.0	
	comp=Z,6.6nm,0.6s							
ASAJ	**Asahikawa**	**25.56**	**267**	LR		LR	18 15 17.4	
	comp=Z,18nm,19.7s,baz=111,slow=34							
ERM	**Erimo**	**26.33**	**263**	*ceP*		**P**	**18 06 26.2**	**+1.4**
ERM				pmax		pmax		
	comp=Z,60nm,1.7s							
INK	**Inuvik**	**27.89**	**36**	P		**P**	**18 06 39.1**	**+0.6**
	comp=Z,1.4nm,0.3s,baz=241,slow=12,SNR=20							
INK				ScP		**ScP**	**18 13 25.0**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=175,slow=3.4,SNR=4.3							
INK	**Inuvik**	**27.89**	**36**	P		**P**	**18 06 39.3**	**+0.8**
INK				pmax		pmax		
	comp=Z,3.0nm,1.1s							
INK	**Inuvik**	**27.89**	**36**	P		**P**	**18 06 39.3**	**+0.8**
YAK	**Yakutsk**	**28.36**	**311**	P		**P**	**18 06 42.8**	**+0.1**
	comp=Z,2.7nm,0.3s,baz=98,slow=3.6,SNR=5.6							
YAK				ScP		**ScP**	**18 13 25.0**	**-1.7**
	comp=Z,1.7nm,0.5s,baz=31,slow=1.6,SNR=5.1							
YAK	**Yakutsk**	**28.36**	**311**	IAmb		IAmb	18 06 49.9	
	comp=Z,7.9nm,0.5s							
TIXI	**Tiksi**	**29.82**	**331**	P		**P**	**18 06 55.8**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=102,slow=9.4,SNR=2.9							
TIXI				ScP		**ScP**	**18 13 30.0**	**-1.2**
	comp=Z,0.7nm,0.3s,baz=138,slow=2.8,SNR=8.0							
TIXI	**Tiksi**	**29.82**	**331**	P		**P**	**18 06 56.1**	**+0.6**
TIXI				IAmb		IAmb	18 07 12.2	
	comp=Z,6.6nm,1.8s							
KLR	**Kul'dur**	**29.99**	**284**	P		**P**	**18 06 57.7**	**+0.3**
	comp=Z,4.5nm,0.4s,baz=68,slow=7.0,SNR=23							
KLR	**Kul'dur**	**29.99**	**284**	*i* P		**P**	**18 06 57.0**	**-0.3**
KLR				pmax		pmax		
	comp=Z,3.0nm,0.8s							
C36M	**Paulatuk**	**31.44**	**35**	P		**P**	**18 07 10.9**	**+1.1**
C36M				IAmb		IAmb	18 07 13.0	
	comp=Z,3.2nm,0.8s							
MJAR	**Matsushiro Arr**	**32.70**	**259**	LR		LR	18 19 31.9	
	comp=Z,5.7nm,20.1s,baz=70,slow=34							
H11N2	**WAKE ISLAND Hy**	**33.34**	**202**	T		T	18 42 33.3	
	baz=21,slow=76,SNR=126							
H11N3	**WAKE ISLAND Hy**	**33.35**	**202**	T		T	18 43 12.6	
	SNR=135							
H11N1	**WAKE ISLAND Hy**	**33.36**	**202**	T		T	18 42 50.6	
	baz=13,slow=76,SNR=120							
H11S1	**WAKE ISLAND Hy**	**34.57**	**201**	T		T	18 44 16.2	
	baz=20,slow=75,SNR=103							
H11S2	**WAKE ISLAND Hy**	**34.58**	**201**	T		T	18 44 16.1	
	baz=20,slow=75,SNR=45							
H11S3	**WAKE ISLAND Hy**	**34.58**	**202**	T		T	18 44 44.4	
	baz=20,slow=75,SNR=53							
YKA	**Yellowknife Ar**	**35.87**	**46**	P		**P**	**18 07 49.4**	**+1.0**
	comp=Z,1.2nm,0.4s,baz=284,slow=7.5,SNR=23							
YKA				PcP		**PcP**	**18 10 14.3**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=293,slow=3.1,SNR=3.9							
YKA				ScP		**ScP**	**18 13 51.6**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=291,slow=3.2,SNR=9.0							
BOD	**Bodaibo**	**36.88**	**306**	*eP*		**P**	**18 07 56.4**	**-0.6**
BOD				pmax		pmax		
	comp=Z,4.0nm,2.0s							
KSRS	**Korea Array**	**38.49**	**269**	LR		LR	18 22 35.3	
	comp=Z,8.7nm,21.6s,baz=205,slow=34							
YBH	**Yreka Blue Hor**	**39.98**	**81**	P		**P**	**18 08 25.9**	**+2.7**
	comp=Z,1.1nm,0.5s,baz=308,slow=6.5,SNR=4.6							
YBH	**Yreka Blue Hor**	**39.98**	**81**	P		**P**	**18 08 25.9**	**+2.7**
YBH				pmax		pmax		
	comp=Z,2.0nm,0.9s							
PNTR	**Pine Nut**	**43.45**	**82**	P		**P**	**18 08 53.1**	**+1.3**
MCMT	**McKenzie Canyo**	**44.18**	**71**	P		**P**	**18 08 57.6**	**+0.1**
NVAR	**Mina Array Bea**	**44.66**	**82**	P		**P**	**18 09 02.8**	**+1.4**
	comp=Z,0.8nm,0.5s,baz=297,slow=7.4,SNR=7.7							
ULN	**Ulaanbaatar**	**45.09**	**295**	*ceP*		**P**	**18 09 03.7**	**-1.0**
ULN				pmax		pmax		
	comp=Z,2.0nm,0.6s							
SONM	**Songino Array**	**45.48**	**295**	P		**P**	**18 09 08.1**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=55,slow=9.5,SNR=6.8							
R11A	**Troy Canyon, C**	**46.38**	**80**	P		**P**	**18 09 15.0**	**0.0**
R11A				IAmb		IAmb	18 09 18.4	
	comp=Z,3.7nm,1.1s							
HHC	**Hu-ho-hao-te**	**46.50**	**284**	*eP*		**P**	**18 09 16.8**	**+1.0**
HHC				pmax		pmax		
	comp=Z,4.0nm,0.8s							
HHC				pmax		pmax		
	comp=Z,46nm,3.9s							
TPNV	**Topopah Spring**	**46.85**	**82**	P		**P**	**18 09 18.2**	**-0.5**
TPNV				pmax		pmax		
	comp=Z,3.0nm,0.7s							
TPNV	**Topopah Spring**	**46.85**	**82**	P		**P**	**18 09 18.2**	**-0.5**
TPNV				IAmb		IAmb	18 09 37.3	
	comp=Z,3.5nm,0.7s							
DUG	**Dugway, Tooele**	**46.92**	**76**	P		**P**	**18 09 19.4**	**+0.2**
DUG				pmax		pmax		
	comp=Z,4.0nm,1.0s							
DUG	**Dugway, Tooele**	**46.92**	**76**	P		**P**	**18 09 19.4**	**+0.2**
DUG				IAmb		IAmb	18 09 38.9	
	comp=Z,4.2nm,1.0s							
BW06	**Boulder Array**	**47.31**	**71**	P		**P**	**18 09 22.8**	**+0.5**
BW06				IAmb		IAmb	18 09 41.5	
	comp=Z,2.5nm,0.6s							
PD31	**Pinedale Array**	**47.31**	**71**	P		**P**	**18 09 22.8**	**+0.5**
PD31				IAmb		IAmb	18 09 41.5	
	comp=Z,2.3nm,0.6s							
PDAR	**Pinedale Array**	**47.31**	**71**	P		**P**	**18 09 22.8**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=316,slow=3.6,SNR=13							
PDAR				ScP		**ScP**	**18 14 38.3**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=318,slow=2.0,SNR=4.7							
PSUT	**Pine Spring**	**47.32**	**79**	P		**P**	**18 09 22.7**	**+0.4**
TMUT	**Trail Mountain**	**48.45**	**76**	P		**P**	**18 09 31.8**	**+0.6**
RDMU	**Red Mountain**	**48.64**	**74**	P		**P**	**18 09 33.3**	**+0.8**
SRU	**San Rafael Swe**	**48.98**	**76**	P		**P**	**18 09 35.6**	**+0.5**
SRU				pmax		pmax		
	comp=Z,6.0nm,0.9s							
SRU	**San Rafael Swe**	**48.98**	**76**	P		**P**	**18 09 35.6**	**+0.5**
U15A	**North Rim**	**49.62**	**80**	P		**P**	**18 09 40.9**	**+0.8**
U15A				IAmb		IAmb	18 09 44.4	
	comp=Z,3.9nm,0.9s							
SPITS	**Spitsbergen Ar**	**50.00**	**355**	LR		LR	18 33 39.9	
	comp=Z,13nm,18.1s,baz=195,slow=39							
PV04	**Paradox Valley**	**50.41**	**76**	P		**P**	**18 09 46.8**	**+0.8**
PV17	**East Wray Mesa**	**50.45**	**76**	P		**P**	**18 09 45.7**	**-0.6**
PV11	**David Mesa, Pa**	**50.49**	**76**	P		**P**	**18 09 46.2**	**-0.3**
PV03	**Paradox Valley**	**50.54**	**76**	P		**P**	**18 09 47.7**	**+0.7**
PV13	**Radium Mtn., P**	**50.61**	**76**	P		**P**	**18 09 47.8**	**+0.2**
ZALV	**Zalesovo Beam**	**52.99**	**312**	P		**P**	**18 10 03.8**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=52,slow=6.4,SNR=4.9							
GTA	**Gaotai**	**54.39**	**290**	*eP*		**P**	**18 10 15.1**	**-0.2**
GTA				pP		pP	18 10 32.5	-2.7
GTA				sP		sP	18 10 39.8	-4.3
GTA				pmax		pmax		
	comp=Z,3.0nm,1.0s							
SFJD	**Kangerlussuaq**	**55.80**	**21**	LR		LR	18 37 14.6	
	comp=Z,17nm,18.5s,baz=271,slow=39							
MNTX	**Cornudas Mount**	**57.03**	**79**	P		**P**	**18 10 33.5**	**-0.7**
MNTX				IAmb		IAmb	18 10 37.7	
	comp=Z,2.6nm,1.0s							
ARCES	**ARCESS Array B**	**57.60**	**349**	P		**P**	**18 10 37.3**	**-0.3**
	comp=Z,3.7nm,1.0s,baz=19,slow=7.8,SNR=3.9							
KURK	**Kurchatov**	**57.98**	**313**	*ceP*		**P**	**18 10 39.5**	**-1.0**
KURK				pmax		pmax		
	comp=Z,11nm,1.0s							
KURK	**Kurchatov**	**57.98**	**313**	P		**P**	**18 10 40.3**	**-0.2**
WMQ	**Urumqi**	**58.21**	**302**	*eP*		**P**	**18 10 45.6**	**+3.3**
MK31	**Makanchi Array**	**58.94**	**307**	P		**P**	**18 10 46.9**	**-0.4**
MK31				pmax		pmax		
	comp=Z,2.0nm,1.0s							
MK31	**Makanchi Array**	**58.94**	**307**	P		**P**	**18 10 46.9**	**-0.4**
MK31				IAmb		IAmb	18 10 49.6	
	comp=Z,1.8nm,0.9s							
MKAR	**Makanchi Array**	**58.94**	**307**	P		**P**	**18 10 47.0**	**-0.3**
	comp=Z,1.3nm,0.3s,baz=48,slow=6.5,SNR=46							
MKAR	**Makanchi Array**	**58.94**	**307**	*i* P		**P**	**18 10 47.0**	**-0.3**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
MAKZ	**Makanchi**	**59.09**	**307**	P		**P**	**18 10 47.6**	**-0.7**
MAKZ				pmax		pmax		
	comp=Z,2.0nm,0.6s							
MAKZ	**Makanchi**	**59.09**	**307**	P		**P**	**18 10 47.6**	**-0.7**
TXAR	**Lajitas Array**	**59.74**	**80**	P		**P**	**18 10 54.2**	**+1.0**
	comp=Z,0.7nm,0.4s,baz=303,slow=5.2,SNR=9.0							
BRVK	**Borovoye**	**59.94**	**319**	*ceP*		**P**	**18 10 50.3**	**-3.7**
BRVK				pmax		pmax		
	comp=Z,1.0nm,0.5s							
BRVK	**Borovoye**	**59.94**	**319**	P		**P**	**18 10 53.9**	**0.0**
FCAR	**Ozark Folk Cen**	**61.98**	**67**	P		**P**	**18 11 07.0**	**-1.1**
FINES	**FINESS Array B**	**65.24**	**346**	P		**P**	**18 11 27.9**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=41,slow=6.1,SNR=5.6							
AAK	**Ala-Archa**	**65.78**	**309**	*ceP*		**P**	**18 11 33.8**	**+0.6**
AAK				pmax		pmax		
	comp=Z,8.0nm,1.3s							
AAK	**Ala-Archa**	**65.78**	**309**	P		**P**	**18 11 33.0**	**-0.1**
NB2	**NORSAR Subarra**	**67.24**	**354**	P		**P**	**18 11 41.6**	**-0.4**
	comp=Z,1.8nm,0.6s,baz=7,slow=6.5							
NOA	**NORSAR Array B**	**67.24**	**354**	P		**P**	**18 11 42.0**	**0.0**
	comp=Z,1.7nm,0.7s,baz=7.7,slow=6.2,SNR=7.9							
NOA	**NORSAR Array B**	**67.24**	**354**	P		**P**	**18 11 42.0**	**0.0**
KK31	**Karatay Array**	**67.33**	**311**	P		**P**	**18 11 42.6**	**-0.2**
KK31				pmax		pmax		
	comp=Z,8.0nm,0.6s							
KK31	**Karatay Array**	**67.33**	**311**	P		**P**	**18 11 42.6**	**-0.2**
OBN	**Obninsk**	**69.18**	**338**	*eP*		**P**	**18 11 53.6**	**-0.5**
OBN				*e*			18 12 18.5	
OBN				*e*			18 14 23.9	
OBN				*e*PPP		PPP	18 16 09.8	
OBN				pmax		pmax		
	comp=Z,4.0nm,0.9s							
BTK	**Batken**	**69.54**	**309**	P		**P**	**18 11 57.1**	**+0.4**
BTK				pmax		pmax		
	comp=Z,9.0nm,0.8s							
BTK	**Batken**	**69.54**	**309**	P		**P**	**18 11 57.1**	**+0.4**
CMAR	**Chiang Mai Arr**	**69.84**	**274**	P		**P**	**18 11 58.6**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=32,slow=6.0,SNR=7.6							
CMAR	**Chiang Mai Arr**	**69.84**	**274**	*ceP*		**P**	**18 11 59.0**	**+0.3**
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
TAPN	**Taplejung**	**70.02**	**289**	*eP*		**P**	**18 12 00.8**	**+0.7**
	comp=Z,16nm,0.8s							
ODAN	**Odare**	**70.58**	**289**	*eP*		**P**	**18 12 04.5**	**+1.1**
	comp=Z,5.6nm,0.5s							
GUN	**Gumba**	**70.68**	**291**	*eP*		**P**	**18 12 05.2**	**+1.0**
	comp=Z,45nm,0.7s							
JIRN	**Jiri**	**70.68**	**290**	*eP*		**P**	**18 12 05.3**	**+1.1**
	comp=Z,22nm,0.5s							
RAMN	**Ramite**	**70.97**	**289**	*eP*		**P**	**18 12 06.6**	**+0.7**
	comp=Z,18nm,0.5s							
KKN	**Kakani**	**71.12**	**291**	*eP*		**P**	**18 12 07.5**	**+0.8**
	comp=Z,16nm,0.5s							
PKI	**Pulchoki**	**71.20**	**291**	*eP*		**P**	**18 12 07.9**	**+0.5**
	comp=Z,12nm,0.5s							
PKIN	**Phulchoki**	**71.21**	**291**	*eP*		**P**	**18 12 07.9**	**+0.6**
	comp=Z,14nm,0.5s							
GKN	**Gorkha**	**71.33**	**292**	*eP*		**P**	**18 12 08.5**	**+0.6**
	comp=Z,17nm,0.5s							
DMN	**Daman**	**71.35**	**291**	*eP*		**P**	**18 12 08.9**	**+0.7**
	comp=Z,13nm,0.7s							
DANN	**Dangsing**	**71.57**	**292**	*eP*		**P**	**18 12 10.3**	**+0.8**
	comp=Z,19nm,0.6s							
KOLN	**Koldanda**	**72.10**	**292**	*eP*		**P**	**18 12 12.2**	**-0.4**
	comp=Z,8.0nm,0.8s							
KBL	**Kabul**	**74.74**	**307**	P		**P**	**18 12 27.1**	**-0.9**
KBL				pmax		pmax		
	comp=Z,8.0nm,0.6s							
KBL	**Kabul**	**74.74**	**307**	P		**P**	**18 12 27.1**	**-0.9**
AKASG	**Malin Array Be**	**74.91**	**341**	P		**P**	**18 12 27.7**	**-0.7**
	comp=Z,1.6nm,0.4s,baz=21,slow=6.5,SNR=11							
KIV	**Kislovodsk**	**77.64**	**330**	*eP*		**P**	**18 12 43.8**	**-0.3**
KIV				*e*			18 12 50.4	
KIV				*e*			18 15 38.0	
KIV				*e*PPP		PPP	18 17 26.4	
KIV				pmax		pmax		
	comp=Z,1.0nm,0.8s							
BUR08	**Bucovina Ar. S**	**78.61**	**342**	P		**P**	**18 12 49.9**	**+0.4**
WRA	**Warramunga Arr**	**81.44**	**222**	P		**P**	**18 13 03.2**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=30,slow=5.7,SNR=7.9							
ASAR	**Alice Springs**	**84.94**	**221**	P		**P**	**18 13 22.9**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=25,slow=5.5,SNR=15							
TORD	**Torodi Ar. Bea**	**115.42**	**357**	PKP		**PKiKP**	**18 19 27.9**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=346,slow=2.8,SNR=7.3							
BOSA	**Boshof**	**149.92**	**310**	PKPbc		**PKPbc**	**18 20 37.8**	**+0.2**
	comp=Z,3.0nm,0.5s,baz=21,slow=3.0,SNR=16							

WEL 23 18:08:22.0, 40.7S±0.8×17.6E±, h28km±1km, M3.7/13, ML4.0/13, MLv3.7/13, Error ellipse: s-maj=0.0km s-min=0.0km az=86.8, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIWZ	**Tintock**	**0.07**	**216**	P	Pb	18 08 27.4	+0.4
TIWZ				S	Sb	18 08 31.5	+1.0
PRWZ	**Pori Road**	**0.16**	**8**	P	Pn	18 08 28.1	-0.5
PRWZ				S	Sb	18 08 32.2	+0.7
BFZ	**Birch Farm**	**0.23**	**81**	P	Pb	18 08 28.6	+0.1
BFZ				S	Sb	18 08 33.5	+0.7
CPWZ	**Castlepoint**	**0.28**	**134**	P	Pn	18 08 30.0	-0.2
CPWZ				S	Sn	18 08 36.8	+1.4
MRZ	**Mangatainoka R**	**0.28**	**281**	P	Pb	18 08 29.4	+0.3
MRZ				S	Sb	18 08 34.6	+0.7
POWZ	**Post Office Ro**	**0.35**	**338**	P	Pb	18 08 30.4	+0.4
HOWZ	**Holdsworth Sta**	**0.37**	**241**	P	Pb	18 08 30.1	-0.2
HOWZ				S	Sn	18 08 37.3	-0.5
TMWZ	**Te Maipa**	**0.39**	**186**	P	Pn	18 08 31.3	-0.5
TMWZ				S	Sn	18 08 38.4	0.0
DVHZ	**Dannevirke**	**0.45**	**22**	P	Pb	18 08 31.6	+0.1
ANWZ	**Angora Road**	**0.48**	**58**	P	Pb	18 08 32.5	+0.4
ANWZ				S	Sn	18 08 41.0	+0.6
MTW	**Mount Morrison**	**0.55**	**217**	P	Pb	18 08 33.4	+0.2
OGWZ	**Otaki Gorge**	**0.59**	**260**	P	Pn	18 08 34.3	-0.2
TSZ	**Takapari Road**	**0.66**	**1**	P	Pb	18 08 35.0	0.0
PRHZ	**Porangahau**	**0.69**	**50**	P	Pb	18 08 35.3	-0.3
OHWZ	**Ohakea**	**0.70**	**317**	P	Pn	18 08 36.7	+0.8
TRWZ	**Traveller**	**0.71**	**196**	P	Pb	18 08 35.5	-0.3
WPHZ	**Waipukurau**	**0.76**	**30**	P	Pn	18 08 36.7	0.0
CAW	**Cannon Point**	**0.77**	**239**	P	Pb	18 08 36.7	-0.1
PAWZ	**Paruwai Farm**	**0.77**	**210**	P	Pb	18 08 36.4	-0.5
KIW	**Kapiti Island**	**0.80**	**259**	P	Pn	18 08 37.5	+0.1
PNHZ	**Pukenui**	**0.83**	**14**	P	Pb	18 08 37.8	0.0
MSWZ	**Moikau Station**	**0.87**	**217**	P	Pn	18 08 37.5	-0.9
PXZ	**Pawanui**	**0.98**	**46**	P	Pn	18 08 39.0	-0.9
**PLW

MCQ	**Macquarie Isla**	**1.70**	**71**		**Pb**	**18 18 18.4**	**+0.4**
MCQ				Sn	**Sn**	**18 18 38.4**	**+0.3**
MLZ	**Mavora Lakes**	**12.34**	**43**		Pn	18 20 51.6	+9.3
TAU	**Tasmania Unive**	**13.49**	**331**	Pn	**Pn**	**18 20 57.1**	**-0.8**
ODZ	**Otahua Downs**	**13.65**	**49**	Pn	**P**	**18 21 06.0**	**-3.0**
MQZ	**McQueen's Vall**	**15.59**	**50**		**P**	**18 21 32.8**	**+2.3**
VNDA	**Vanda**	**22.63**	**177**	P	**P**	**18 22 45.6**	**-1.6**
	1.8nm,1.1s,baz=340,slow=10,SNR=6.4						
VNDA				LR	LR	18 29 24.9	
	comp=Z,76nm,19.9s,baz=331,slow=31						
VNDA	**Vanda**	**22.63**	**177**	P	**P**	**18 22 45.5**	**-1.8**
STKA	**Stephens Creek**	**25.39**	**330**	P	**P**	**18 23 15.5**	**+1.4**
	1.7nm,0.8s,baz=147,slow=7.9,SNR=4.6						
STKA				LR	LR	18 32 32.3	
	comp=Z,184nm,18.1s,baz=201,slow=35						
STKA	**Stephens Creek**	**25.39**	**330**	P	**P**	**18 23 15.3**	**+1.3**
BBOO	**Buckleboo**	**26.38**	**319**	P	**P**	**18 23 23.0**	**0.0**
BBOO				IAmb	IAmb	18 23 38.8	
	comp=Z,10nm,1.3s						
QSPA	**South Pole Qui**	**35.03**	**180**	P	**P**	**18 24 39.5**	**+0.3**
QSPA				IAmb	IAmb	18 24 43.4	
	comp=Z,7.0nm,1.4s						
H01W1	**Cape Leeuwin H**	**35.22**	**287**	T	T	19 01 55.4	
	baz=138,slow=75,SNR=3.7						
H01W2	**Cape Leeuwin H**	**35.23**	**287**	T	T	19 01 43.4	
	baz=138,slow=75,SNR=3.6						
H01W3	**Cape Leeuwin H**	**35.24**	**287**	T	T	19 01 53.8	
	baz=138,slow=75,SNR=3.3						
ASAR	**Alice Springs**	**35.47**	**323**	P	**P**	**18 24 43.3**	**0.0**
	comp=Z,4.6nm,0.8s,baz=159,slow=7.6,SNR=48						
AS31	**Alice Springs**	**35.47**	**323**	P	**P**	**18 24 43.6**	**+0.4**
CTAO	**Charters Tower**	**35.74**	**344**	P	**P**	**18 24 47.6**	**+2.1**
WR0	**Warramunga Arr**	**38.71**	**326**	P	**P**	**18 25 09.9**	**-0.8**
WR0				IAmb	IAmb	18 25 11.3	
	comp=Z,9.9nm,1.1s						
WB2	**Warramunga Arr**	**38.78**	**326**	P	**P**	**18 25 10.8**	**-0.6**
WB2				IAmb	IAmb	18 25 26.7	
	comp=Z,11nm,1.5s						
WRA	**Warramunga Arr**	**38.79**	**326**	P	**P**	**18 25 10.1**	**-1.3**
	comp=Z,2.5nm,0.9s,baz=162,slow=9.8,SNR=10						
WRAB	**Tennant Creek**	**38.79**	**326**	P	**P**	**18 25 08.5**	**-2.9**
WRAB				IAmb	IAmb	18 25 26.0	
	comp=Z,6.6nm,1.2s						
WB0	**Warramunga Arr**	**38.94**	**326**	P	**P**	**18 25 11.3**	**-1.3**
WB0				IAmb	IAmb	18 25 13.0	
	comp=Z,5.2nm,1.0s						
FITZ	**Fitzroy Crossi**	**43.65**	**316**	P	**P**	**18 25 50.6**	**-0.7**
	comp=Z,2.4nm,0.8s,baz=173,slow=11,SNR=5.6						
FITZ	**Fitzroy Crossi**	**43.65**	**316**	P	**P**	**18 25 50.3**	**-1.0**
FITZ				IAmb	IAmb	18 25 51.7	
	comp=Z,3.9nm,0.9s						
KNRA	**Kununurra**	**44.66**	**321**	P	**P**	**18 25 59.2**	**-0.2**
SNAA	**Sanae**	**52.68**	**188**	P	**P**	**18 27 02.2**	**+1.6**
SNAA				IAmb	IAmb	18 27 14.6	
	comp=Z,3.9nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**73.82**	**10**	T	T	19 49 45.3	
	baz=188,slow=76,SNR=5.7						
H11S3	**WAKE ISLAND Hy**	**73.82**	**10**	T	T	19 49 49.5	
	baz=188,slow=76,SNR=6.3						
H11S1	**WAKE ISLAND Hy**	**73.84**	**10**	T	T	19 49 49.8	
	baz=188,slow=76,SNR=6.2						
H08S2	**Diego Garcia H**	**80.17**	**271**	T	T	19 57 49.1	
	baz=144,slow=76,SNR=3.6						
H08S1	**Diego Garcia H**	**80.19**	**271**	T	T	19 57 47.5	
	baz=144,slow=76,SNR=3.7						
H08S3	**Diego Garcia H**	**80.19**	**271**	T	T	19 57 52.2	
	baz=144,slow=76,SNR=4.2						

*ISU **23** 18:26:54.9, 40˚.16N×72˚.92E, h0km*
*KRNET **23** 18:26:56.0±0.1, 40˚.22N×72˚.94E, h13km, mb3.5*
*NNC **23** 18:27:00.2±2.5, 40˚.49N×73˚.06E, h4km±16km, mb3.9, mpv3.6, Error ellipse: s-maj=19.1km s-min=8.3km az=173.0*
*SOME **23** 18:27:00.1, 40˚.47N×73˚.00E, h15km*

ISC 23 18:26:58.0±1.1, 40˚.27N±0˚.05×72˚.87E±0˚.03, h10km, n50, σ1°42/84, 29C-12D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANR	**Andizhan**	**0.62**	**321**	*eP*	**Pb**	**18 27 10.4**	**-0.5**
ANR				*eS*	**Sn**	**18 27 21.9**	**-0.9**
FRG	**Fergana**	**0.95**	**299**	*eP*	**Pg**	**18 27 13.3**	**-2.9**
FRG				*eS*	**Sg**	**18 27 27.8**	**-0.7**
ARSB	**Arslanbob**	**1.05**	**5**	⇓*iP*	**Pg**	**18 27 16.7**	**-1.5**
	baz=2.0						
ARSB				⇓*iS*	**Sb**	**18 27 32.1**	**-0.2**
	baz=2.0						
ARSB	**Arslanbob**	**1.05**	**5**	*eP*	**Pg**	**18 27 16.9**	**-1.3**
ARSB				*eS*	**Sb**	**18 27 31.9**	**-0.4**
BTK	**Batken**	**1.59**	**263**	⇑*iP*	**Pn**	**18 27 26.5**	**+0.2**
	baz=65						
BTK				⇑*iS*	**Sg**	**18 27 49.1**	**+0.1**
	baz=65						
BTK	**Batken**	**1.59**	**263**	*iP*	**Pn**	**18 27 26.4**	**+0.2**
BTK				*iS*	**Sg**	**18 27 49.9**	**+0.9**
ARK	**Arkit**	**1.67**	**336**	⇑*iP*	**Pb**	**18 27 28.0**	**-0.9**
	baz=35						
ARK				⇑*iS*	**Sg**	**18 27 51.6**	**-0.1**
	baz=35						
AML	**Almayashu**	**1.96**	**18**	⇓*iP*	**Pb**	**18 27 32.9**	**-1.1**
	baz=16						
AML				⇓*iS*	**Sg**	**18 27 59.6**	**-1.3**
	baz=16						
AML	**Almayashu**	**1.96**	**18**	P	**Pb**	**18 27 32.9**	**-1.1**
	SNR=368						
UCH	**Uchtor**	**2.31**	**32**	⇑*iP*	**Pn**	**18 27 37.5**	**+0.9**
	baz=30						
UCH				⇑*iS*	**Sb**	**18 28 07.7**	**-1.2**
	baz=30						
UCH	**Uchtor**	**2.31**	**32**	P	**Pb**	**18 27 39.1**	**-1.0**
	SNR=35						
EKS2	**Erkin-Say**	**2.48**	**16**	⇑*iP*	**Pn**	**18 27 39.9**	**+1.3**
	baz=14						
EKS2				⇑*iS*	**Sb**	**18 28 12.2**	**-1.2**
	baz=14						
EKS2	**Erkin-Say**	**2.48**	**16**	P	**Pb**	**18 27 41.9**	**-0.9**
	SNR=12						
MRKS	**Merke**	**2.48**	**6**	*eP*	**Pb**	**18 27 42.6**	**-0.2**
	62nm,0.3s						
MRKS				*eS*	**Sb**	**18 28 13.2**	**-0.3**
	240nm,0.3s						
MRKS	**Merke**	**2.48**	**6**	Pg	**Pb**	**18 27 42.6**	**-0.2**
	74nm,0.5s						
MRKS				Lg	Lg	18 28 13.1	
	240nm,0.3s						
KZA	**Kyzart**	**2.54**	**44**	⇑*iP*	**Pn**	**18 27 40.8**	**+1.1**
	baz=43						
KZA				⇑*iS*	**Sb**	**18 28 13.3**	**-2.2**
	baz=43						
KZA	**Kyzart**	**2.54**	**44**	P	**Pb**	**18 27 42.3**	**-1.7**
	SNR=26						
CHRV	**Charvak**	**2.60**	**303**	*eP*	**Pg**	**18 27 46.9**	**-0.8**
CHRV				*eS*	**Sg**	**18 28 22.4**	**+1.0**
AAK	**Ala-Archa**	**2.66**	**27**	⇓*iP*	**Pn**	**18 27 42.5**	**+1.4**
	baz=25						
AAK				⇓*iS*	**Sb**	**18 28 16.0**	**-2.5**
	baz=25						
AAK	**Ala-Archa**	**2.66**	**27**	P	**Pb**	**18 27 45.3**	**-0.5**
	SNR=54						
IUG	**Iuzhnay**	**2.84**	**312**	*eP*	**Pg**	**18 27 51.5**	**-1.0**
	8.3nm,0.4s						
IUG				*eS*	**Sg**	**18 28 28.8**	**-0.5**
	74nm,0.4s						
IUG	**Iuzhnay**	**2.84**	**312**	Pg	**Pg**	**18 27 51.5**	**-1.0**
	8.3nm,0.4s						
IUG				Lg	Lg	18 28 28.8	
	110nm,0.7s						
KBK	**Karagaybulak**	**2.85**	**33**	⇑*iP*	**Pn**	**18 27 45.1**	**+1.4**
	baz=31						
KBK				⇑*iS*	**Sb**	**18 28 20.6**	**-3.4**
	baz=31						
KBK	**Karagaybulak**	**2.85**	**33**	P	**Pb**	**18 27 49.0**	**0.0**
	SNR=8.7						
FRU1	**Bishkek**	**2.86**	**27**	⇑*iP*	**Pn**	**18 27 44.9**	**+1.2**
	baz=26						
FRU1				⇑*iS*	**Sb**	**18 28 20.9**	**-3.3**
	baz=26						
TAS	**Tashkent**	**2.91**	**292**	⇑*iP*	**Pn**	**18 27 46.2**	**+1.9**
	baz=93						
TAS				⇑*iS*	**Sb**	**18 28 23.3**	**-2.3**
	baz=93						
CHMS	**Chumysh**	**3.07**	**27**	⇑*iP*	**Pn**	**18 27 47.9**	**+1.4**
	baz=25						
CHMS				⇑*iS*	**Sn**	**18 28 25.7**	**+2.4**
	baz=25						
CHMS	**Chumysh**	**3.07**	**27**	P	**Pb**	**18 27 52.5**	**-0.2**
	SNR=7.5						
BOOM	**Boomskoye usch**	**3.20**	**45**	⇓*iP*	**Pn**	**18 27 49.6**	**+1.1**
	baz=44						
BOOM				⇓*iS*	**Sn**	**18 28 28.5**	**+1.7**
	baz=44						
ULHL	**Ulahol**	**3.22**	**51**	⇑*iP*	**Pn**	**18 27 49.8**	**+1.0**
	baz=50						
ULHL				⇑*iS*	**Sn**	**18 28 28.8**	**+1.5**
	baz=50						
ULHL	**Ulahol**	**3.22**	**51**	P	**Pb**	**18 27 55.2**	**-0.2**
	SNR=7.6						
USP	**Ospenovka**	**3.23**	**22**	⇑*iP*	**Pn**	**18 27 50.4**	**+1.6**
	baz=20						
USP				⇑*iS*	**Sn**	**18 28 29.7**	**+2.4**
	baz=20						
USP	**Ospenovka**	**3.23**	**22**	P	**Pb**	**18 27 56.0**	**+0.5**
	SNR=11						
KK31	**Karatay Array**	**3.33**	**329**	⇓Pn	**Pn**	**18 27 51.7**	**+1.5**
	0.8nm,0.3s,baz=133,slow=12,SNR=63						
KK31				⇑Pg	**Pg**	**18 27 59.4**	**-2.4**
	2.4nm,0.3s,baz=131,slow=13,SNR=22						
KK31				⇑Lg	Lg	18 28 42.6	
	16nm,0.4s,baz=138,slow=28,SNR=6.6						
TKM2	**Tokmak 2**	**3.34**	**37**	⇓*iP*	**Pn**	**18 27 51.8**	**+1.3**
	baz=36						
TKM2				⇓*iS*	**Sn**	**18 28 32.3**	**+1.9**
	baz=36						
TKM2	**Tokmak 2**	**3.34**	**37**	P	**Pb**	**18 27 57.1**	**-0.4**
	SNR=8.6						
SGDS	**Sogindy**	**3.44**	**22**	Pg	**Pb**	**18 27 57.9**	**-1.1**
	13nm,0.4s						
SGDS				Lg	Lg	18 28 39.8	
	33nm,0.4s						
BRLS	**Borolday**	**3.57**	**321**	*eP*	**Pb**	**18 28 02.4**	**+1.2**
	14nm,0.4s						
BRLS				*eS*	**Sb**	**18 28 47.5**	**+2.9**
	45nm,0.5s						
BRLS	**Borolday**	**3.57**	**321**	Pg	**Pb**	**18 28 02.4**	**+1.2**
	14nm,0.4s						
BRLS				Lg	Lg	18 28 47.5	
	45nm,0.5s						
KST	**Kastek**	**3.61**	**39**	*eP*	**Pb**	**18 28 00.1**	**-1.8**
	13nm,0.5s						
KST				*eS*	**Sb**	**18 28 43.6**	**-2.2**
	28nm,0.6s						
KST	**Kastek**	**3.61**	**39**	Pg	**Pb**	**18 28 00.1**	**-1.8**
	13nm,0.5s						
KST				Lg	Lg	18 28 43.6	
	28nm,0.6s						
DGS	**Degeres**	**3.68**	**35**	*eP*	**Pb**	**18 28 03.5**	**+0.4**
	14nm,0.6s						
DGS				*eS*	**Sb**	**18 28 48.8**	**+1.1**
	33nm,0.5s						
KDJ	**Kajisay**	**3.74**	**59**	⇑*iP*	**Pn**	**18 27 56.4**	**+0.4**
	baz=58						
KDJ				⇑*iS*	**Sn**	**18 28 41.4**	**+1.2**
	baz=58						
MTBS	**Maitube**	**3.91**	**42**	*eP*	**Pb**	**18 28 06.5**	**-0.5**
	12nm,0.6s						
MTBS				*eS*	**Sb**	**18 28 54.1**	**-0.2**
	12nm,0.3s						
IZV	**Izvestkoviy**	**3.94**	**44**	*eP*	**Pb**	**18 28 07.8**	**+0.2**
	11nm,0.4s						
IZV				*eS*	**Sb**	**18 28 56.0**	**+0.7**
	23nm,0.4s						
KRBS	**Karabastau**	**4.01**	**31**	*eP*	**Pb**	**18 28 08.6**	**-0.1**
	20nm,0.6s						
KRBS				*eS*	**Sb**	**18 28 57.7**	**+0.4**
	14nm,0.4s						
KNDC	**Almaty**	**4.25**	**45**	⇑Pg	**Pb**	**18 28 13.1**	**+0.3**
	21nm,0.6s						
KNDC				⇓Lg	Lg	18 29 11.8	
	25nm,0.5s						
MDOK	**Medeo**	**4.26**	**46**	*eP*	**Pb**	**18 28 13.5**	**+0.5**
	22nm,0.5s						
MDOK				*eS*	**Sb**	**18 29 06.1**	**+1.6**
	13nm,0.8s						
ANVS	**Anan'yevo**	**4.39**	**54**	⇑*iP*	**Pn**	**18 28 05.8**	**+1.0**
	baz=53						
ANVS				⇑*iS*	**Sn**	**18 28 57.0**	**+0.9**
	baz=53						
KTBS	**Karatobe**	**4.46**	**38**	*eP*	**Pb**	**18 28 17.5**	**+1.1**
	9.5nm,0.5s						
KTBS				*eS*	**Sb**	**18 29 13.0**	**+2.8**
	38nm,0.4s						

*IDC **23** 18:30:31.9±1.3, 19˚.06S×177˚.37W, h0km, mb4.1/9, mb1 4.3/10, mb1mx4.1/27, mbtmp4.2/10, ML4.7/1, Error ellipse: s-maj=40.6km s-min=21.3km az=131.0*
*NEIC **23** 18:31:09.3±1.8, 19˚.8S±0˚.1×177˚.4W±0˚.1, h361km±8km, mb4.1/23, Error ellipse: s-maj=18.8km s-min=16.3km az=135.0*

ISC 23 18:31:08.3±0.8, 19˚.8S±0˚.1×177˚.4W±0˚.1, h350km, n34, σ0°99/34, mb4.0/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.81**	**295**		**Pn**	**18 32 27.2**	**+1.2**
OUZ	**Omahuta**	**17.28**	**206**	P	**P**	**18 34 50.7**	**+3.2**
OUZ				IAmb	IAmb	18 35 02.6	
	comp=Z,6.1nm,1.0s						
KNTN	**Kanton**	**17.83**	**19**	P	**P**	**18 34 53.0**	**-0.7**
URZ	**Urewera**	**18.98**	**193**	P	**P**	**18 35 04.8**	**-0.7**
	comp=Z,2.3nm,0.3s,baz=254,slow=4.0,SNR=22						
BKZ	**Black Stump Fm**	**19.98**	**194**	P	**P**	**18 35 14.2**	**-1.8**
BKZ				IAmb	IAmb	18 35 31.5	
	comp=Z,16nm,1.2s						
THZ	**Tophouse**	**23.37**	**199**	P	**P**	**18 35 46.6**	**-0.3**
THZ				IAmb	IAmb	18 35 57.7	
	comp=Z,12nm,0.9s						
KHZ	**Kahutara**	**23.79**	**197**	P	**P**	**18 35 50.0**	**-0.5**
LTZ	**Lake Taylor**	**24.49**	**199**	P	**P**	**18 35 57.6**	**+0.7**
LTZ				IAmb	IAmb	18 35 57.9	
	comp=Z,19nm,1.1s						
EIDS	**Eidsvold**	**29.60**	**253**	P	**P**	**18 36 42.6**	**+0.2**
EIDS				IAmb	IAmb	18 36 49.5	
	comp=Z,12nm,1.4s						
ARMA	**Armidale**	**29.89**	**243**	P	**P**	**18 36 45.6**	**+0.5**
ARMA				IAmb	IAmb	18 36 48.5	
	comp=Z,8.8nm,1.1s						
CTA	**Charters Tower**	**34.15**	**263**	P	**P**	**18 37 21.8**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=306,slow=17,SNR=1.8						
CTAO	**Charters Tower**	**34.15**	**263**	P	**P**	**18 37 21.4**	**-0.5**
CTAO				IAmb	IAmb	18 37 36.1	
	comp=Z,6.2nm,1.1s						
TOO	**Toolangi**	**36.76**	**233**	P	**P**	**18 37 43.7**	**-0.1**
TOO				IAmb	IAmb	18 37 58.0	
	comp=Z,18nm,1.4s						
STKA	**Stephens Creek**	**38.61**	**244**	P	**P**	**18 37 58.4**	**-0.7**
	comp=Z,2.5nm,0.9s,baz=108,slow=12,SNR=4.2						
STKA	**Stephens Creek**	**38.61**	**244**	P	**P**	**18 37 59.0**	**-0.1**
BBOO	**Buckleboo**	**43.37**	**243**	P	**P**	**18 38 36.8**	**-0.7**
BBOO				IAmb	IAmb	18 38 44.3	
	comp=Z,21nm,1.4s						
WR0	**Warramunga Arr**	**45.09**	**261**	P	**P**	**18 38 50.1**	**-1.2**
AS31	**Alice Springs**	**45.24**	**256**	P	**P**	**18 38 51.9**	**-0.6**
ASAR	**Alice Springs**	**45.25**	**256**	P	**P**	**18 38 52.1**	**-0.3**
	comp=Z,5.7nm,0.6s,baz=98,slow=7.8,SNR=93						
WB0	**Warramunga Arr**	**45.25**	**262**	P	**P**	**18 38 51.5**	**-1.0**
WB0				IAmb	IAmb	18 39 00.4	
	comp=Z,9.6nm,1.4s						
WB2	**Warramunga Arr**	**45.27**	**261**	P	**P**	**18 38 51.6**	**-1.0**
WRAB	**Tennant Creek**	**45.27**	**261**	P	**P**	**18 38 51.2**	**-1.4**
WRA	**Warramunga Arr**	**45.28**	**261**	P	**P**	**18 38 52.1**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=98,slow=6.8,SNR=29						
FORT	**Forrest**	**50.10**	**246**	P	**P**	**18 39 28.8**	**-0.4**
FORT				IAmb	IAmb	18 39 46.9	
	comp=Z,19nm,1.1s						
FITZ	**Fitzroy Crossi**	**53.70**	**262**	P	**P**	**18 39 55.9**	**+0.2**
FITZ				IAmb	IAmb	18 39 57.8	
	comp=Z,6.5nm,1.2s						
MORW	**Morawa**	**60.63**	**247**	P	**P**	**18 40 42.0**	**-1.6**
MJAR	**Matsushiro Arr**	**70.03**	**323**	P	**P**	**18 41 42.8**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=144,slow=5.4,SNR=6.0						
QSPA	**South Pole Qui**	**70.23**	**180**	P	**P**	**18 41 45.1**	**+1.1**
QSPA				IAmb	IAmb	18 41 46.0	
	comp=Z,2.5nm,0.8s						
PEA0B	**Petropavlovsk-**	**75.78**	**345**	P	**P**	**18 42 17.0**	**+0.8**
PETK	**Petropavlovsk-**	**75.78**	**345**	P	**P**	**18 42 15.9**	**-0.2**
	comp=Z,2.9nm,0.8s,baz=121,slow=8.5,SNR=5.8						
NVAR	**Mina Array Bea**	**80.14**	**43**	P	**P**	**18 42 41.1**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=241,slow=8.8,SNR=4.5						
IPM	**Ipoh**	**83.63**	**277**	P	**P**	**18 42 59.3**	**+0.4**
ILAR	**Eielson Array**	**87.54**	**13**	P	**P**	**18 43 16.4**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=225,slow=4.7,SNR=4.7						
SONM	**Songino Array**	**95.64**	**319**	P	**P**	**18 43 55.5**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=40,slow=46,SNR=2.1						

IDC 23 18:53:53.9±7.2, 11˚.86S×167˚.06E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.7/34, mbtmp3.8/5, Error ellipse: s-maj=200.6km s-min=39.5km az=122.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.43**	**251**	P	P	19 00 25.8	-0.2
	0.5nm,0.7s,baz=84,slow=9.2,SNR=9.8						
ASAR	**Alice Springs**	**33.59**	**245**	P	P	19 00 36.3	+0.1
	0.7nm,0.7s,baz=68,slow=10.0,SNR=13						
CMAR	**Chiang Mai Arr**	**73.61**	**293**	P	P	19 05 30.0	+0.3
	1.1nm,0.8s,baz=122,slow=3.9,SNR=7.2						
SONM	**Songino Array**	**80.08**	**323**	P	P	19 06 06.1	+0.3
	0.3nm,0.4s,baz=143,slow=5.0,SNR=2.2						
MKAR	**Makanchi Array**	**94.99**	**317**	P	P	19 07 17.9	-0.7
	1.0nm,0.7s,baz=94,slow=6.8,SNR=9.8						

*DDA **23** 19:13:36.9, 38˚.68N×43˚.33E, h7km±3km, ML2.0*
*ISK **23** 19:13:36.1, 38˚.71N×43˚.35E, h2km, ML2.4/6*
*ATA **23** 19:13:37.3±3.9, 38˚.76N×43˚.17E, h0km±12km, ML1.8, MW2.6*

ISC 23 19:13:38.2±0.9, 38˚.71N±0˚.03×43˚.31E±0˚.03, h15km±7km, n21, σ1°75/39, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.13**	**152**	PG	**Pg**	**19 13 41.3**	**-0.7**
TVAN	**Van**	**0.19**	**158**	*eP*	**Pg**	**19 13 41.1**	**-1.9**
TVAN				*eS*	**Sg**	**19 13 51.1**	**+5.0**
TVAN				IAML		19 13 53.2	
	comp=Z,429nm,0.5s						
VMUR	**Van-Muradiye**	**0.35**	**36**	*i* P	**Pb**	**19 13 44.8**	**-1.4**
VMUR				*i* S	**Sb**	**19 13 51.0**	**-0.6**
VMUR				IAML		19 13 52.0	
	comp=E,218nm,0.4s						
VMUR				IAML		19 13 52.0	
	comp=N,197nm,0.4s						
GEVA	**Gevas**	**0.44**	**207**	*eP*	**Pg**	**19 13 45.8**	**-1.3**
GEVA				*eS*	**Sb**	**19 13 56.8**	**+2.5**
GEVA				IAML		19 14 01.8	
	comp=Z,62nm,0.5s						
GEVA	**Gevas**	**0.44**	**207**	*i* P	**Pg**	**19 13 45.7**	**-1.5**
GEVA				*i* S	**Sg**	**19 13 52.6**	**-0.6**
AKDM	**Akdamar-Van**	**0.46**	**215**	PG	**Pg**	**19 13 46.3**	**-1.2**
AKDM				SG	**Sb**	**19 13 54.2**	**-0.6**
ADCV	**BITLIS_Adilcev**	**0.47**	**283**	*i* P	**Pg**	**19 13 47.2**	**-0.5**
ADCV				*i* S	**Sb**	**19 13 54.4**	**-0.7**
CLDR	**Caldiran**	**0.64**	**47**	PG	**Pg**	**19 13 48.9**	**-2.0**
CLDR				SG	**Sg**	**19 13 58.4**	**-1.1**
CLDR	**Caldiran**	**0.64**	**47**	*i* P	**Pg**	**19 13 48.9**	**-2.0**
CLDR				*i* S	**Sb**	**19 13 59.0**	**-1.2**
MLAZ	**Malazgirt-MUS**	**0.74**	**306**	PG	**Pb**	**19 13 52.3**	**-0.5**
TUTA	**Tutak**	**0.80**	**331**	*eP*	**Pg**	**19 13 52.9**	**-0.9**
TUTA				*eS*	**Sg**	**19 14 02.4**	**-2.0**
TUTA				IAML		19 14 06.9	
	comp=Z,68nm,0.3s						
TUTA	**Tutak**	**0.80**	**331**	*i* P	**Pg**	**19 13 52.9**	**-0.9**
TUTA				*i* S	**Sb**	**19 14 04.5**	**-0.1**
DYDN	**Diyadin**	**0.89**	**19**	*eP*	**Pn**	**19 13 57.2**	**+0.9**
DYDN				IAML		19 14 08.0	
	comp=Z,11nm,0.3s						
DYDN				*eS*	**Sn**	**19 14 09.0**	**0.0**
AGRB	**Hanur-Agry**	**0.90**	**344**	PG	**Pg**	**19 13 54.5**	**-1.3**
AGRB				SG	**Sb**	**19 14 07.8**	**+0.2**
BLIS	**Bitlis-Merkez**	**0.98**	**253**	*i* P	**Pg**	**19 13 55.4**	**-1.9**
BLIS				*i* S	**Sg**	**19 14 08.7**	**-1.5**
BLIS				IAML		19 14 11.0	
	comp=E,47nm,0.3s						
BLIS				IAML		19 14 13.0	
	comp=N,69nm,0.3s						
GURO	**Guroymak-BITLI**	**1.01**	**262**	PG	**Pg**	**19 13 56.5**	**-1.4**
SRTM	**Siirt_Merkez**	**1.31**	**237**	*i* P	**Pn**	**19 14 02.5**	**+0.5**
SRTM				IAML		19 14 26.0	
	comp=E,18nm,0.6s						
EATA	**Eleskirt**	**1.32**	**331**	*eP*	**Pn**	**19 14 02.8**	**+0.5**
EATA				*eS*	**Sn**	**19 14 21.6**	**+1.8**
EATA				IAML		19 14 24.2	
	comp=Z,4.5nm,0.7s						
EATA	**Eleskirt**	**1.32**	**331**	*i* P	**Pb**	**19 14 02.6**	**-0.2**
EATA				*i* S	**Sn**	**19 14 20.9**	**+1.1**
EATA				IAML		19 14 23.0	
	comp=E,19nm,0.3s						
EATA				IAML		19 14 23.0	
	comp=N,23nm,0.4s						
DIGO	**Kars**	**1.71**	**2**	*eP*	**Pg**	**19 14 11.7**	**+0.6**
DIGO				*eS*	**Sg**	**19 14 34.2**	**+1.0**
DIGO				*eS*	**Sb**	**19 14 36.0**	**+5.3**
DIGO				IAML		19 14 40.0	
	comp=Z,2.8nm,0.4s						
HOMI	**Horasan**	**1.73**	**321**	*eP*	**Pg**	**19 14 10.4**	**-1.0**
HOMI				*eS*	**Sn**	**19 14 30.8**	**+1.0**
HOMI				IAML		19 14 39.8	
	comp=Z,7.3nm,0.7s						

*MOS **23** 19:42:25.7±0.8, 56˚.05N×113˚.94E, h6km, mb5.7/51, MS5.1/144, Error ellipse: s-maj=4.6km s-min=3.6km az=91.5 Broadband fault plane solution: P waves. M_o3.60000×10^{17} NP1:ϕ_s200.00000°, δ62.00000°, λ-124.00000°. NP2:ϕ_s75.00000°, δ42.00000°, λ-43.00000°. Principal axes: T Plg11.0000°, Azm313.0000°; N Plg29.0000°, Azm217.0000°; P Plg58.0000°, Azm62.0000°;*
*MOS Fault plane solution: P-wave C98, D29 . Felt (IV-V) at Severomuyisk, (III-IV) at Bodayibo, Mamakan, (III) at Novyy Uoyan, Severobaykal'sk,

Azm162.0000°; N -0.4678, Plg16.0000°, Azm254.0000°; P -1.1644, Plg72.0000°, Azm47.0000°;

SOME ***23*** *19:42:29.2±0.0, 56°18N×113°44E, h0km, mb5.9/13, Ms5.1/6*

NEIC ***23*** *19:42:30, 56°24N×114°35E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.08; $M_{\theta\theta}$1.05; $M_{\theta\phi}$0.03; $M_{r\theta}$1.20; $M_{r\phi}$0.25; $M_{\phi\phi}$0.19; Fault plane solution: M_o1.64000×10^{17} NP1:♁s260.00000°, δ69.00000°, λ-87.00000°. NP2:♁s74.00000°, δ21.00000°, λ-95.00000°. Principal axes: T 1.6466, Plg24.0000°, Azm348.0000°; N -0.0210, Plg2.0000°, Azm79.0000°; P -1.6255, Plg66.0000°, Azm174.0000°;*

BGR ***23*** *19:42:32.7±0.0, 55°70N×113°61E, h33km, mb5.6, Ms5.1*

ISC 23 19:42:27.3±0.4, 56°08N±0°02×114°01E±0°02, h6km±2km, n2100, σ1%58/2218, mb5.6/523, MS5.2/495, 89C-54D, East of Lake Baikal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.26**	**279**	⇑*i*Pg	**Pg**	**19 42 31.1**	**-1.3**
SVKR				*e*Sg	**Sg**	**19 42 34.9**	**-0.9**
SVKR	**Severomuysk**	**0.26**	**279**	⇑*i*PG	**Pg**	**19 42 31.1**	**-1.3**
SVKR				*e*S	**Sg**	**19 42 34.6**	**-1.2**
UKT	**Uakit**	**0.63**	**200**	⇑*i*Pg	**Pg**	**19 42 37.7**	**-1.7**
UKT				Pmax		19 42 45.6	
	35μm,1.3s						
UKT				*e*Sg	**Sg**	**19 42 46.0**	**-1.6**
UKT				Smax		19 42 52.6	
	178μm,2.0s						
UKT	**Uakit**	**0.63**	**200**	⇑*i*PG	**Pg**	**19 42 37.7**	**-1.7**
UKT				*e*		19 42 46.2	
UKT				pmax	pmax		
	comp=Z,11μm,0.7s						
UKT				smax	smax		
	comp=N,930μm,3.4s						
NLYR	**Nelyaty**	**1.03**	**66**	⇓*i*Pg	**Pg**	**19 42 47.0**	**0.0**
NLYR				*e*		19 42 51.3	
NLYR				max		19 42 59.6	
	comp=N,12μm,0.7s						
NLYR				*e*Sg	**Sb**	**19 43 02.0**	**+0.8**
NLYR				*e*		19 43 06.8	
NLYR				max		19 43 19.9	
	comp=N,52μm,1.6s						
NLYR	**Nelyaty**	**1.03**	**66**	⇓*i*PG	**Pg**	**19 42 47.1**	**0.0**
NLYR				*e*		19 43 01.8	
NLYR				pmax	pmax		
	comp=Z,12μm,1.1s						
NLYR				smax	smax		
	comp=N,3μm,1.4s						
YOA	**Uoyan**	**1.28**	**273**	⇑*i*Pg	**Pg**	**19 42 49.4**	**-2.5**
YOA				*e*Sg	**Sg**	**19 43 06.3**	**-2.2**
YOA	**Uoyan**	**1.28**	**273**	⇑*i*PG	**Pg**	**19 42 49.9**	**-2.0**
YOA				*i*		19 43 05.4	
YOA				pmax	pmax		
	comp=Z,162μm,1.8s						
YOA				smax	smax		
	comp=N,40μm,1.1s						
KMO	**Kumora**	**1.59**	**264**	⇑*i*Pg	**Pn**	**19 42 54.7**	**-1.3**
KMO				⇓*i*		19 42 56.2	
KMO				max		19 42 58.7	
	comp=N,34μm,0.4s						
KMO				*e*		19 43 02.1	
KMO				*e*Sg	**Sn**	**19 43 15.4**	**-1.4**
KMO				*e*		19 43 18.9	
KMO				max		19 43 19.8	
	comp=N,264μm,1.5s						
KMO				*e*		19 43 24.6	
KMO	**Kumora**	**1.59**	**264**	⇑*i*PG	**Pn**	**19 42 54.6**	**-1.4**
KMO				*e*		19 43 15.3	
KMO				pmax	pmax		
	comp=Z,25μm,0.4s						
KMO				smax	smax		
	comp=N,13μm,1.2s						
BOD	**Bodaibo**	**1.74**	**360**	⇑*i*Pg	**Pb**	**19 42 58.8**	**-0.8**
BOD				Pmax		19 43 01.9	
	comp=N,16μm,0.6s						
BOD				*e*Sg	**Sb**	**19 43 22.3**	**+0.5**
BOD				Smax		19 43 24.7	
	comp=N,128μm,1.4s						
BOD				*e*		19 43 34.9	
BOD	**Bodaibo**	**1.74**	**360**	⇑*i*PN	**Pb**	**19 42 58.8**	**-0.8**
BOD				*e*		19 43 22.1	
BOD				pmax	pmax		
	comp=Z,19μm,0.7s						
BOD				smax	smax		
	comp=N,27μm,1.3s						
YLYR	**Ulyunkhan**	**2.02**	**235**	⇓*i*Pn	**Pn**	**19 43 01.9**	**0.0**
YLYR				⇑*i*Pg	**Pb**	**19 43 02.9**	**-1.5**
YLYR				*e*		19 43 04.4	
YLYR				max		19 43 14.4	
	comp=N,14μm,1.5s						
YLYR				*e*Sg	**Sb**	**19 43 29.0**	**-0.8**
YLYR				Smax		19 43 32.5	
	comp=N,78μm,2.1s						
YLYR				Smax		19 43 41.3	
YLYR	**Ulyunkhan**	**2.02**	**235**	*e*PN	**Pn**	**19 43 00.3**	**-1.6**
YLYR				*e*		19 43 02.1	
YLYR				*e*S	**Sn**	**19 43 26.0**	**-1.4**
YLYR				*e*		19 43 28.2	
YLYR				pmax	pmax		
	comp=Z,16μm,1.1s						
YLYR				smax	smax		
	comp=N,66μm,3.7s						
CRS	**Chara**	**2.50**	**69**	⇓*i*Pn	**Pn**	**19 43 09.9**	**+1.5**
CRS				⇑*i*Pg	**Pg**	**19 43 14.5**	**-0.6**
CRS				Pmax		19 43 16.6	
	comp=N,32μm,1.2s						
CRS				*e*		19 43 29.2	
CRS				*e*		19 43 38.3	
CRS				*e*Sg	**Sg**	**19 43 48.1**	**+0.6**
CRS				Smax		19 53 50.6	
	comp=N,134μm,1.7s						
CRS	**Chara**	**2.50**	**69**	*e*PN	**Pn**	**19 43 09.9**	**+1.5**
CRS				*e*		19 43 14.1	
CRS				*e*		19 43 45.9	
CRS				pmax	pmax		
	comp=Z,32μm,1.2s						
CRS				smax	smax		
	comp=N,134μm,1.4s						
NIZ	**Nizh Angarsk**	**2.54**	**265**	⇑*i*Pn	**Pn**	**19 43 08.8**	**-0.1**
NIZ				⇓*i*		19 43 09.4	
NIZ				*e*Pg	**Pb**	**19 43 11.5**	**-1.6**
NIZ				*e*		19 43 13.2	
NIZ				max		19 43 14.9	
	comp=N,6μm,0.8s						
NIZ				*e*		19 43 37.2	
NIZ				*e*Sg	**Sb**	**19 43 42.2**	**-2.3**
NIZ				Smax		19 43 50.2	
	comp=N,85μm,1.1s						
NIZ	**Nizh Angarsk**	**2.54**	**265**	*e*PN	**Pn**	**19 43 09.5**	**+0.6**
NIZ				*e*		19 43 11.9	
NIZ				*e*		19 43 42.0	
NIZ				pmax	pmax		
	comp=Z,6μm,1.1s						
NIZ				smax	smax		
	comp=N,5μm,1.2s						
SYVR	**Suvo**	**3.36**	**225**	*i* Pn	**Pn**	**19 43 19.8**	**-0.4**
SYVR				⇓*e*Pg	**Pb**	**19 43 27.5**	**+0.4**
SYVR				*e*		19 43 30.6	
SYVR				max		19 43 32.6	
	comp=N,9μm,0.9s						
SYVR				*e*		19 43 37.0	
SYVR				*e*Sg	**Sb**	**19 44 10.4**	**+2.3**
SYVR				*e*SgSg	**Sg**	**19 44 16.3**	**+1.3**
SYVR				max		19 44 20.0	
	comp=N,37μm,1.4s						
SYVR	**Suvo**	**3.36**	**225**	⇑*i*PN	**Pn**	**19 43 20.0**	**-0.2**
SYVR				*e*		19 43 27.2	
SYVR				*e*		19 44 09.3	
SYVR				pmax	pmax		
	comp=Z,9μm,1.0s						
SYVR				smax	smax		
	comp=N,38μm,1.4s						
KHNR	**Khani**	**3.41**	**73**	⇓*i*Pn	**Pn**	**19 43 22.8**	**+1.8**
KHNR				*e*Pg	**Pg**	**19 43 30.8**	**-1.8**
KHNR				*e*		19 43 35.3	
KHNR				*e*Sg	**Sg**	**19 44 15.9**	**-0.9**
VTMR	**Vitim**	**3.46**	**348**	⇑*i*Pn	**Pn**	**19 43 21.9**	**+0.3**
VTMR				*e*Pg	**Pb**	**19 43 30.1**	**+1.2**
VTMR				*e*Sn	**Sn**	**19 43 59.6**	**-3.2**
VTMR				*e*Sg	**Sb**	**19 44 13.9**	**+2.8**
TUP	**Tupik**	**3.78**	**114**	⇓*i*Pn	**Pn**	**19 43 26.7**	**+0.7**
TUP				*e*Pg	**Pg**	**19 43 37.3**	**-2.4**
TUP				Pmax		19 43 44.1	
	comp=N,5μm,1.5s						
TUP				*e*		19 43 57.4	
TUP				*e*Sg	**Sg**	**19 44 26.7**	**-1.9**
TUP				Smax		19 44 35.0	
	comp=N,33μm,2.0s						
TUP	**Tupik**	**3.78**	**114**	⇓*i*PN	**Pn**	**19 43 26.9**	**+0.9**
TUP				*e*		19 43 36.5	
TUP				*e*S	**Sn**	**19 44 11.2**	**+0.4**
TUP				*e*		19 44 26.4	
TUP				pmax	pmax		
	comp=Z,5μm,1.0s						
TUP				smax	smax		
	comp=N,2μm,1.7s						
CIT	**Chita**	**4.08**	**184**	*e*Pn	**Pn**	**19 43 29.3**	**-0.8**
CIT				*e*		19 43 31.5	
CIT				*e*Pg	**Pb**	**19 43 40.0**	**+0.6**
CIT				Pmax		19 43 43.5	
	comp=N,9μm,1.2s						
CIT				*e*Sg	**Sg**	**19 44 33.3**	**-4.8**
CIT				Smax		19 44 44.1	
	comp=N,52μm,2.5s						
CIT				*e*		19 44 52.4	
CIT	**Chita**	**4.08**	**184**	*e*PN	**Pn**	**19 43 29.9**	**-0.2**
CIT				*e*		19 43 39.9	
CIT				*e*S	**Sn**	**19 44 16.9**	**-1.2**
CIT				*e*		19 44 31.8	
CIT				pmax	pmax		
	comp=Z,9μm,1.2s						
CIT				smax	smax		
	comp=N,52μm,3.0s						
MXMB	**Maximikha**	**4.16**	**229**	⇓*i*Pn	**Pn**	**19 43 30.8**	**-0.4**
MXMB				⇓*i*		19 43 32.6	
MXMB				*e*Pg	**Pb**	**19 43 40.5**	**-0.3**
MXMB				*e*Sg	**Sb**	**19 44 35.3**	**+4.0**
MXMB				*e*		19 44 41.7	
MXMB				*e*L	L	19 45 01.0	
YKLR	**Yuktali**	**4.28**	**80**	⇓*i*Pn	**Pn**	**19 43 34.4**	**+1.5**
YKLR				*e*Pg	**Pb**	**19 43 45.2**	**+2.3**
YKLR				*e*Sg	**Sg**	**19 44 43.2**	**-1.5**
YKLR				*e*L	L	19 45 26.8	
OGRR	**Ongureny**	**4.44**	**239**	⇓*i*Pn	**Pn**	**19 43 35.5**	**+0.4**
OGRR				*e*Pg	**Pb**	**19 43 46.3**	**+0.7**
OGRR				Pmax		19 43 51.3	
	comp=N,5μm,1.7s						
OGRR				*e*		19 44 20.6	
OGRR				*e*Sg	**Sb**	**19 44 42.1**	**+2.8**
OGRR				*e*		19 44 50.6	
OGRR				max		19 44 55.1	
	comp=N,19μm,1.5s						
OGRR	**Ongureny**	**4.44**	**239**	*e*PN	**Pn**	**19 43 35.7**	**+0.6**
OGRR				*e*		19 43 47.0	
OGRR				*e*		19 44 42.4	
OGRR				pmax	pmax		
	comp=Z,5μm,1.9s						
OGRR				smax	smax		
	comp=N,9μm,3.0s						
ZRHB	**Zarechye**	**5.35**	**232**	*e*Pn	**Pn**	**19 43 46.7**	**-0.8**
ZRHB				*e*Sg	**Sg**	**19 45 12.2**	**-6.6**
TRG	**Tyrgan**	**5.58**	**237**	*e*Pn	**Pn**	**19 43 50.6**	**-0.1**
TRG				*e*		19 43 54.5	
TRG				*e*		19 44 01.6	
TRG				max		19 44 15.0	
	comp=N,2μm,1.3s						
TRG				*e*Sg	**Sg**	**19 45 18.8**	**-7.3**
TRG				*e*		19 45 33.4	
TRG				max		19 45 34.1	
	comp=N,14μm,1.5s						
TRG	**Tyrgan**	**5.58**	**237**	*e*PN	**Pn**	**19 43 51.7**	**+1.0**
TRG				*e*		19 44 05.7	
TRG				*e*S	**Sn**	**19 44 49.7**	**-5.3**
TRG				*e*		19 45 16.0	
TRG				pmax	pmax		
	comp=Z,2μm,1.6s						
TRG				smax	smax		
	comp=N,4μm,1.3s						
UUDB	**Ulan-Yde**	**5.64**	**224**	⇑*i*Pn	**Pn**	**19 43 51.4**	**-0.2**
UUDB				*e*Pg	**Pb**	**19 44 08.6**	**+2.5**
UUDB				Pmax		19 44 14.1	
	comp=N,3μm,1.1s						
UUDB				*e*		19 45 07.1	
UUDB				*e*Sg	**Sg**	**19 45 21.3**	**-7.0**
UUDB				Smax		19 46 05.0	
	comp=N,20μm,2.3s						
KAB	**Kabansk**	**5.92**	**230**	*e*Pn	**Pn**	**19 43 54.4**	**-1.0**
KAB				*e*		19 44 14.6	
KAB				max		19 44 36.8	
	comp=N,4μm,1.2s						
KAB				*e*Sg	**Sb**	**19 45 28.1**	**+6.2**
KAB				*e*		19 45 43.8	
KAB				max		19 46 01.7	
	comp=N,54μm,1.7s						
STDB	**Stepnoy Dvoret**	**5.96**	**232**	*e*Pn	**Pn**	**19 43 56.1**	**+0.1**
STDB				*e*		19 44 17.4	
STDB				*e*		19 45 27.7	
STDB				*e*Sg	**Sg**	**19 45 30.4**	**-8.2**
CLNS	**Chul'man**	**6.08**	**78**	⇓*i*Pn	**Pn**	**19 43 59.1**	**+1.5**
CLNS				*e*Pg	Pg	19 44 18.7	-4.9
CLNS				*e*		19 45 11.2	
CLNS				*e*Sg	**Sg**	**19 45 38.4**	**-3.9**
CLNS				*e*		19 45 44.4	
HRMR	**Khuramsha**	**6.11**	**226**	⇑*i*Pn	**Pn**	**19 43 57.7**	**-0.3**
HRMR				*e*		19 44 02.7	
HRMR				*e*Pg	**Pb**	**19 44 17.3**	**+3.3**
HRMR				Pmax		19 44 21.4	
	comp=N,2μm,0.7s						
HRMR				*e*		19 45 31.7	
HRMR				*e*Sg	**Sg**	**19 45 35.5**	**-7.7**
HRMR				Smax		19 45 53.3	
	comp=N,36μm,1.1s						
KPC	**Khapcheranga**	**6.46**	**189**	⇓*i*Pn	**Pn**	**19 44 01.5**	**-1.4**
KPC				*e*		19 44 13.9	
KPC				⇑*i*		19 44 25.9	
KPC				max		19 44 28.9	
	comp=N,918nm,1.4s						
KPC				*e*Sg	**Sg**	**19 45 47.1**	**-7.5**
KPC				*e*		19 45 57.2	
KPC				max		19 46 05.1	
	comp=N,30μm,1.8s						
KPC	**Khapcheranga**	**6.46**	**189**	*e*PN	**Pn**	**19 44 01.7**	**-1.2**
KPC				*e*		19 44 22.6	
KPC				*e*		19 45 46.7	
KPC				pmax	pmax		
	comp=Z,901nm,1.4s						
KPC				smax	smax		
	comp=N,30μm,2.2s						
LSTR	**Listvyanka**	**6.86**	**236**	*e*Pn	**Pn**	**19 44 08.2**	**-0.1**
LSTR				*e*		19 44 21.2	
LSTR				*e*Pg	**Pb**	**19 44 30.2**	**+3.4**
LSTR				Pmax		19 44 33.4	
	comp=N,596nm,1.2s						
LSTR				*e*		19 45 12.9	
LSTR				*e*Sg	Sb	19 45 57.6	+8.7
LSTR				Smax		19 46 08.3	
	comp=N,14μm,1.9s						
LSTR	**Listvyanka**	**6.86**	**236**	*e*PN	**Pn**	**19 44 08.2**	**-0.1**
LSTR				*e*		19 44 29.5	
LSTR				*e*		19 45 56.0	
LSTR				pmax	pmax		
	comp=Z,588nm,1.2s						
LSTR				smax	smax		
	comp=N,14μm,2.0s						
IRK	**Irkutsk**	**6.89**	**240**	*e*Pn	**Pn**	**19 44 08.2**	**-0.5**
IRK				*e*		19 44 32.5	
IRK				max		19 44 40.2	
	comp=N,828nm,1.1s						
IRK				*e*		19 45 38.5	
IRK				*e*Sg	**Sb**	**19 45 57.9**	**+8.2**
IRK				*e*		19 46 10.6	
IRK				max		19 46 11.3	
	comp=N,23μm,1.2s						
IRK	**Irkutsk**	**6.89**	**240**	*e*PN	**Pn**	**19 44 08.8**	**+0.1**
IRK				*e*		19 44 29.1	
IRK				*e*		19 45 57.6	
IRK				pmax	pmax		
	comp=Z,848nm,1.1s						
IRK				smax	smax		
	comp=N,3μm,1.2s						
IVK	**Ivanovka**	**7.10**	**237**	*e*Pn	**Pn**	**19 44 10.4**	**-1.2**
IVK				*e*Pg	**Pb**	**19 44 33.2**	**+2.3**
IVK				Pmax		19 44 50.1	
	comp=N,531nm,1.4s						
IVK				*e*		19 45 19.2	
IVK				*e*Sg	Sb	19 46 04.6	+8.8
IVK				Smax		19 46 14.3	
	comp=N,13μm,1.8s						
TLY	**Talaya**	**7.54**	**239**	*e*Pn	**Pn**	**19 44 17.6**	**-0.1**
TLY				*e*		19 44 28.7	
TLY				*e*Pg	**Pb**	**19 44 41.9**	**+3.5**
TLY				Pmax		19 44 46.9	
	comp=N,367nm,1.5s						
TLY				*e*		19 45 52.1	
TLY				*e*Sg	Sb	19 46 17.3	+8.8
TLY				*e*		19 46 27.2	
TLY				max		19 46 29.7	
	comp=N,7μm,1.9s						
TLY	**Talaya**	**7.54**	**239**	Pn	**Pn**	**19 44 16.5**	**-1.2**
	comp=N,0.1nm,0.3s,baz=44,slow=7.0,SNR=17						
TLY				Pg	Pb	19 44 31.4	-7.1
	comp=N,0.1nm,0.3s,baz=44,slow=8.7,SNR=7.8						
TLY				Lg	Lg	19 46 16.4	
	comp=N,0.3nm,0.3s,baz=308,slow=7.4,SNR=3.2						
TLY				LR	LR	19 47 25.1	
	comp=N,11μm,20.3s,baz=42,slow=40						
TLY	**Talaya**	**7.54**	**239**	P	**Pn**	**19 44 16.9**	**-0.8**
TLY	**Talaya**	**7.54**	**239**	*e*PN	**Pn**	**19 44 17.7**	**0.0**
TLY				*e*		19 44 42.2	
TLY				*e*		19 46 18.3	
TLY				smax	smax		
	comp=E,3μm,0.5s						
TLY	**Talaya**	**7.54**	**239**		**Pn**	**19 44 16.0**	**-1.7**
HIA	**Hailar**	**7.66**	**151**	*e*Pn	**Pn**	**19 44 20.0**	**+0.7**
HIA				*e*Pg	Pb	19 44 46.5	+6.1
HIA				*e*		19 45 55.5	
HIA				*e*Sg	**Sg**	**19 46 26.1**	**-6.8**
HIA				*e*		19 46 50.8	
HIA	**Hailar**	**7.66**	**151**	PN	**Pn**	**19 44 16.8**	**-2.5**
HIA	**Hailar**	**7.66**	**151**		**Pn**	**19 44 16.8**	**-2.5**
ZEA	**Zeya**	**7.98**	**102**	*e*PN	**Pn**	**19 44 24.2**	**+0.6**
ZEA				*i*		19 44 54.6	
ZEA				pmax	pmax		
	comp=E,300nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,310nm,1.2s						
ZEA				pmax	pmax		
	comp=N,200nm,1.5s						
ZEA				pmax	pmax		
	comp=E,600nm,1.5s						
ZEA				pmax	pmax		
	comp=Z,600nm,1.5s						
ZEA				MLR	MLR		
	comp=Z,63μm,7.0s						
ZEA				MLR	MLR		
	comp=E,100μm,6.0s						
ZEA				MLR	MLR		
	comp=N,26μm,5.0s						
ARS	**Arshan**	**8.00**	**243**	*e*Pn	Pn	19 44 34.1	+10
ARS				*e*Pg	Pb	19 44 50.6	+4.5
ARS				Pmax		19 44 57.9	
	comp=N,939nm,0.8s						
ARS				*e*		19 46 22.5	
ARS				*e*Sg	Sg	19 46 32.4	-11
ARS				Smax		19 46 47.0	
	comp=N,17μm,1.4s						
ARS	**Arshan**	**8.00**	**243**	*e*PN	**Pn**	**19 44 23.1**	**-0.8**
ZAK	**Zakamensk**	**8.60**	**233**	*e*Pn	**Pn**	**19 44 32.4**	**+0.2**
ZAK				max		19 44 37.8	
	comp=N,383nm,1.6s						
ZAK				*e*		19 45 06.2	
ZAK				*e*		19 46 34.8	
ZAK				Sg	Sg	19 46 53.3	-10
ZAK				Smax		19 47 30.2	
	comp=N,5μm,1.9s						
ZAK	**Zakamensk**	**8.60**	**233**	*e*PN	**Pn**	**19 44 34.8**	**+2.6**
ZAK				*e*		19 46 57.7	
ZAK				pmax	pmax		
	comp=Z,260nm,1.2s						
ZAK				smax	smax		
	comp=E,5μm,1.4s						
MOY	**Mondy**	**8.87**	**246**	⇑*i*Pn	**Pn**	**19 44 35.8**	**-0.1**
MOY				max		19 45 18.1	
	comp=E,2μm,1.4s						
MOY				*e*		19 46 22.8	
MOY				*e*		19 46 34.4	
MOY				*e*Sg	Sg	19 46 59.9	-12
MOY				Smax		19 47 17.4	
	comp=E,15μm,2.1s						
MOY	**Mondy**	**8.87**	**246**	*e*PN	**Pn**	**19 44 36.2**	**+0.3**
MOY				*e*		19 45 04.1	
MOY				*e*		19 46 59.2	
MOY				pmax	pmax		
	comp=Z,2μm,2.4s						
MOY				smax	smax		
	comp=N,5μm,2.3s						
ORL	**Orlik**	**9.03**	**253**	⇓*i*Pn	**Pn**	**19 44 37.7**	**-0.4**
ORL				*e*		19 44 58.1	
ORL				max		19 44 59.6	
	comp=N,1μm,1.1s						
ORL				*e*Sn	**Sn**	**19 46 15.0**	**-5.0**
ORL				*e*		19 46 37.6	
ORL				*e*Sg		19 47 05.8	
ORL				Smax		19 47 11.7	
	comp=N,8μm,1.4s						
ULN	**Ulaanbaatar**	**9.28**	**210**	*ce*P	**Pn**	**19 44 42.5**	**+1.0**
ULN				pmax	pmax		
	comp=Z,91nm,1.7s						
ULN	**Ulaanbaatar**	**9.28**	**210**		**Pn**	**19 44 41.4**	**-0.1**
SONM	**Songino Array**	**9.50**	**213**	Pn	**Pn**	**19 44 44.3**	**-0.2**
	comp=Z,4.5nm,0.3s,baz=22,slow=13,SNR=74						
SONM				Pg		19 45 19.0	
	comp=Z,7.1nm,0.3s,baz=25,slow=14,SNR=6.7						
SONM				Lg	Lg	19 47 25.8	
	comp=Z,55nm,0.3s,baz=27,slow=27,SNR=14						
SONM				LR	LR	19 48 30.9	
	comp=Z,8μm,19.1s,baz=25,slow=39						
I34MN	**SONGINO INFRAS**	**9.52**	**213**	Lg	Lg	19 47 27.3	
	baz=29,slow=29,SNR=2.4						
YAK	**Yakutsk**	**10.02**	**47**	Pn	**Pn**	**19 44 48.8**	**-2.7**
	comp=Z,0.6nm,0.3s,baz=220,slow=3.1,SNR=43						
YAK				Pg		19 45 27.5	
	comp=Z,1.6nm,0.3s,baz=89,slow=2.9,SNR=5.9						
YAK				Sn	**Sn**	**19 46 47.3**	**+3.3**
	comp=Z,0.9nm,0.3s,baz=354,slow=22,SNR=2.2						
YAK				Lg	Lg	19 47 35.5	
	comp=Z,1.6nm,0.3s,baz=245,slow=18,SNR=11						
YAK	**Yakutsk**	**10.02**	**47**	*e*P	**Pn**	**19 44 49.1**	**-2.4**
YAK				*e*S	**Sn**	**19 46 43.4**	**-0.6**
YAK				pmax	pmax		
	comp=Z,74nm,0.9s						
YAK				pmax	pmax		
	comp=N,33nm,1.0s						
YAK				pmax	pmax		
	comp=E,66nm,1.0s						
YAK				pmax	pmax		
	comp=Z,186nm,0.9s						
YAK				pmax	pmax		
	comp=N,65nm,1.1s						
YAK				pmax	pmax		
	comp=E,139nm,1.1s						
YAK				smax	smax		
	comp=E,266nm,1.0s						
YAK				smax	smax		
	comp=N,473nm,0.8s						
YAK	**Yakutsk**	**10.02**	**47**		**Pn**	**19 44 47.8**	**-3.6**
TDJR	**Todzha**	**11.11**	**258**	⇑*i*Pn	**Pn**	**19 45 04.7**	**-1.8**
TDJR				*e*Sg	Sn	19 48 06.7	+56
TDJR				*e*		19 48 27.4	
KRAR	**Krasnoyarsk**	**11.82**	**278**	*i* P	**Pn**	**19 45 13.5**	**-2.6**
KZLR	**Kyzyl**	**12.33**	**257**	*e*Pn	**Pn**	**19 45 22.9**	**-0.2**
KZLR				*e*Sg		19 48 47.0	
KLR	**Kul'dur**	**12.74**	**115**	Pn	**Pn**	**19 45 28.2**	**-0.5**
	comp=N,12nm,0.3s,baz=309,slow=14,SNR=60						
KLR				Lg	Lg	19 48 58.5	
	comp=N,4.3nm,0.3s,baz=20,slow=14,SNR=3.6						
KLR				LR	LR	19 50 51.6	
	comp=N,8μm,18.0s,baz=308,slow=40						
KLR	**Kul'dur**	**12.74**	**115**	*d*P	**Pn**	**19 45 30.6**	**+1.8**
CN2	**Changchun**	**14.30**	**144**	*e*P	**Pn**	**19 45 46.9**	**-3.2**
CN2				*e*S	**Sn**	**19 48 29.4**	**+0.6**
CN2				pmax	pmax		
	comp=N,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=N,300nm,3.0s						
CN2				LR	LR		
	comp=N,14μm,10.0s						
CN2				LR	LR		
	comp=N,19μm,10.0s						

CN2 LR LR
comp=N,21μm,10.0s
GRNR Gornyy 14.35 102⇑ *i*P **Pn 19 45 53.0 +2.3**
GRNR *e*S **Sn 19 48 36.2 +6.2**
GRNR pmax pmax
comp=Z,10.0nm,0.8s
GRNR MLR MLR
comp=Z,6μm,12.0s
MDJ Mudanjiang 15.14 133 P **Pn 19 46 02.1 +0.7**
MDJ PP **sP 19 46 10.3 +0.5**
MDJ S **Sn 19 48 50.6 +1.4**
MDJ SS **S 19 49 04.3 -2.3**
MDJ pmax pmax
comp=Z,59nm,1.4s
MDJ pmax pmax
comp=Z,1μm,3.7s
MDJ LR LR
comp=Z,36μm,7.1s
MDJ LR LR
comp=Z,16μm,7.1s
MDJ LR LR
comp=Z,30μm,12.7s
MDJ Mudanjiang 15.14 133 Pn 19 46 01.3 -0.1
HHC Hu-ho-hao-te 15.33 187 *e*P **Pn 19 46 04.8 +0.8**
HHC sP sP 19 46 11.4 -0.6
HHC pmax pmax
comp=Z,430nm,3.7s
HHC LR LR
comp=Z,11μm,6.5s
HHC LR LR
comp=Z,6μm,4.3s
HHC LR LR
comp=Z,11μm,8.5s
NKL Nikolayevsk 15.68 90 *e*P **Pn 19 46 08.4 -0.1**
NKL pmax pmax
comp=Z,25nm,1.2s
NKL pmax pmax
comp=N,5.0nm,0.9s
BTO Baotou 15.71 191 *e*P **Pn 19 46 08.3 -0.7**
BJI Beijing 16.11 174 P **Pn 19 46 14.9 +0.8**
BJI pP **sP 19 46 20.0 -0.6**
BJI S **Sn 19 49 13.0 +0.1**
BJI pmax pmax
comp=N,33nm,1.2s
BJI LR LR
comp=N,9μm,17.8s
BJI LR LR
comp=N,2μm,18.4s
BJI LR LR
comp=N,20μm,11.7s
BJT Baijiatuau 16.14 174 P **Pn 19 46 13.5 -0.9**
BJT pmax pmax
comp=Z,95nm,0.8s
BJT Baijiatuau 16.14 174 Pn 19 46 13.5 -0.9
USA0B Ussuriysk Arra 16.49 129 P **Pn 19 46 18.4 -0.6**
USA0B pmax pmax
comp=Z,438nm,1.6s
USA0B Ussuriysk Arra 16.49 129 P **Pn 19 46 18.4 -0.6**
USRK Ussuriysk Ar. 16.49 129 Pn **Pn 19 46 19.7 +0.7**
baz=149,slow=40,SNR=26
USRK Lg Lg 19 51 03.5
baz=326,slow=27,SNR=12
USRK LR LR 19 53 27.2
comp=Z,1μm,21.5s,baz=318,slow=40
ZAA0 Zalesovo Array 16.82 275 Pn 19 46 18.5 -4.6
ZALV Zalesovo Beam 16.82 275 Pn **Pn 19 46 20.9 -2.2**
comp=Z,0.7nm,0.3s,baz=68,slow=13,SNR=82
ZALV Lg Lg 19 51 15.5
comp=Z,0.8nm,0.3s,baz=325,slow=21,SNR=3.1
ZALV LR LR 19 53 08.5
comp=Z,2μm,19.0s,baz=66,slow=38
TIXI Tiksi 16.85 16 Pn **Pn 19 46 17.9 -5.4**
comp=Z,9.1nm,0.3s,baz=210,slow=11,SNR=237
TIXI Sn Sn 19 49 17.8 -13
comp=Z,5.9nm,0.3s,baz=102,slow=17,SNR=8.8
TIXI Lg Lg 19 51 16.8
comp=Z,2.4nm,0.3s,baz=130,slow=20,SNR=2.0
TIXI LR LR 19 52 47.8
comp=Z,7μm,20.7s,baz=226,slow=37
TIXI Tiksi 16.85 16*d i*P **Pn 19 46 17.8 -5.5**
TIXI Tiksi 16.85 16 **Pn 19 46 16.9 -6.4**
TIXI IAmb IAmb 19 46 26.7
comp=Z,226nm,0.7s
VLA Vladivostok 17.32 131⇓ *e*P **P 19 46 31.1 +0.3**
TYV Tymovskoe 17.75 95 *e*P **P 19 46 38.8 +3.2**
TYV pmax pmax
comp=Z,1μm,6.2s
TYV pmax pmax
comp=Z,53nm,1.4s
DL2 Dalian 17.91 160 P **P 19 46 38.3 +0.9**
DL2 S **S 19 50 02.0 -1.3**
DL2 pmax pmax
comp=Z,76nm,1.1s
DL2 pmax pmax
comp=Z,1μm,6.1s
DL2 LR LR
comp=Z,19μm,12.9s
DL2 LR LR
comp=Z,10μm,11.4s
DL2 LR LR
comp=Z,24μm,13.5s
TEY Ternei 18.02 118⇑ *e*P **Pn 19 46 37.6 -0.5**
TEY pmax pmax
comp=Z,10.0nm,2.3s
TEY pmax pmax
comp=E,300nm,4.5s
TEY pmax pmax
comp=Z,500nm,4.7s
TEY pmax pmax
comp=N,300nm,4.5s
TEY MLR MLR
comp=E,1μm,9.0s
TEY MLR MLR
comp=N,1μm,10.0s
TEY MLR MLR
comp=Z,2μm,8.0s
UGL Uglegorsk 18.34 101 *e*P **Pn 19 46 40.6 -1.3**
UGL *e*S **Sn 19 50 05.6 -1.2**
UGL pmax pmax
comp=Z,3μm,3.6s
UGL pmax pmax
comp=Z,146nm,1.4s
UGL smax smax
comp=N,1μm,10.0s
UGL MLR MLR
comp=Z,9μm,7.0s
UGL MLR MLR
comp=E,9μm,7.0s
TIY Taiyuan 18.40 184 *e*P **P 19 46 44.8 +1.9**
TIY S **S 19 50 14.5 +1.1**
TIY pmax pmax
comp=E,2μm,4.2s
TIY LR LR
comp=E,8μm,9.4s
TIY LR LR
comp=E,9μm,6.9s
TIY LR LR
comp=E,10μm,17.1s
GTA Gaotai 19.15 215⇓ P **P 19 46 50.8 -0.4**
GTA pP sP 19 46 57.0 +2.7
GTA sP pP 19 46 59.9 +6.6
GTA S **Sn 19 50 25.5 -1.2**
GTA sS sS 19 50 32.3 +0.4
GTA pmax pmax
comp=E,38nm,1.3s
GTA pmax pmax
comp=E,380nm,5.0s
GTA LR LR
comp=E,15μm,12.1s
GTA LR LR
comp=E,35μm,10.5s
GTA LR LR
comp=E,15μm,12.7s
MA2 Magadan 19.71 65 P **Pn 19 46 58.7 +0.2**
comp=E,0.9nm,0.3s,baz=274,slow=12,SNR=47
MA2 Lg Lg 19 52 35.8
comp=E,0.6nm,0.3s,baz=264,slow=13,SNR=2.9
MA2 LR LR 19 54 51.3
comp=E,3μm,19.1s,baz=276,slow=38
MA2 Magadan 19.71 65*d i*P **Pn 19 46 58.9 +0.5**
MA2 pmax pmax
comp=Z,281nm,1.4s
MA2 MLR MLR
comp=Z,4μm,14.0s
MA2 Magadan 19.71 65 P **Pn 19 46 58.2 -0.3**
MA2 IAmb IAmb 19 47 02.8
comp=Z,473nm,1.5s
ZSN Zaisan 19.87 257 *e*P **P 19 46 58.9 -0.1**
comp=Z,114nm,1.2s
ZSN *e*S **Sn 19 50 47.1 +3.2**
ZSN *e*LR LR 19 54 19.6
comp=Z,2μm,6.5s
ZSN Zaisan 19.87 257 *e*P **P 19 46 58.8 -0.1**
ZSN *e*S **Sn 19 50 47.0 +3.2**
ZSN pmax pmax
comp=Z,114nm,1.2s
ZSN MLR MLR
comp=Z,2μm,6.0s
YSS Yuzh-Sakhalins 19.95 105⇑ *e*P **Pn 19 47 01.8 +0.5**
YSS *e*S **S 19 50 35.4 -8.8**
YSS pmax pmax
comp=Z,70nm,1.2s
YSS pmax pmax
comp=Z,1μm,7.7s
YSS MLR MLR
comp=E,5μm,13.0s
YSS MLR MLR
comp=Z,9μm,13.0s
YSS Yuzh-Sakhalins 19.95 105 P **P 19 46 59.7 0.0**
YSS IAmb IAmb 19 47 07.1
comp=Z,402nm,1.8s
TIA Tai'an 19.98 173 P **Pn 19 47 01.6 -0.3**
TIA S **Sn 19 50 50.5 +3.8**
TIA pmax pmax
comp=Z,83nm,1.3s
TIA pmax pmax
comp=Z,1μm,5.5s
TIA LR LR
comp=Z,16μm,12.0s
TIA LR LR
comp=Z,7μm,8.2s
TIA LR LR
comp=Z,24μm,12.2s
SEY Seymchan 20.38 55 P Pn 19 47 06.2 -0.1
comp=Z,55nm,0.9s,baz=274,slow=9.8,SNR=123
SEY Lg Lg 19 53 02.1
comp=Z,279nm,1.4s,baz=278,slow=11,SNR=11
SEY LR LR 19 55 12.5
comp=Z,6μm,18.7s,baz=285,slow=38
INCN Inchon 20.45 150 P Pn 19 47 06.9 -0.5
INCN Inchon 20.45 150 P Pn 19 47 06.4 -0.9
INCN pmax pmax
comp=Z,201nm,1.2s
INCN MLR MLR
comp=Z,4μm,20.0s
INCN Inchon 20.45 150 P Pn 19 47 06.3 -1.0
WMQ Urumqi 20.76 245 *e*P Pn 19 47 10.1 -0.9
WMQ pP sP 19 47 15.4 +3.7
WMQ sP pP 19 47 22.6 +12
WMQ S Sn 19 51 05.4 +0.1
WMQ sS pS 19 51 11.8 +2.7
WMQ pmax pmax
comp=Z,130nm,1.1s
WMQ pmax pmax
comp=Z,690nm,3.8s
WMQ LR LR
comp=Z,9μm,8.9s
WMQ LR LR
comp=Z,3μm,8.9s
WMQ LR LR
comp=Z,7μm,14.1s
WMQ Urumqi 20.76 245 P **P 19 47 09.2 +0.6**
WMQ pmax pmax
comp=Z,232nm,1.1s
WMQ MLR MLR
comp=Z,11μm,19.0s
WMQ Urumqi 20.76 245 P **P 19 47 09.2 +0.6**
WMQ IAmb IAmb 19 47 12.4
comp=Z,232nm,1.1s
WMQ Urumqi 20.76 245 IAMs_20 IAMs_20 19 55 11.1
comp=Z,11μm,19.0s
KS19 Wonju Array Si 20.79 148 P **P 19 47 09.0 +0.1**
KS19 IAmb IAmb 19 47 14.7
comp=Z,418nm,2.0s
SEM Semipalatinsk 20.84 268 *e*P **P 19 47 09.5 -0.1**
comp=Z,71nm,1.2s
SEM *e*S **S 19 51 00.4 -1.9**
SEM *e*LR LR 19 54 42.8
SEM Semipalatinsk 20.84 268 *e*P **P 19 47 09.5 -0.1**
SEM *e*S **S 19 51 00.3 -1.9**
SEM pmax pmax
comp=Z,71nm,1.2s
KSRS Korea Array 20.85 147 P **P 19 47 10.3 +0.8**
comp=Z,23nm,0.9s,baz=339,slow=10,SNR=71
KSRS S **S 19 51 03.8 +1.6**
comp=Z,1.2nm,0.7s,baz=342,slow=7.7,SNR=1.2
KSRS Lg Lg 19 53 21.6
comp=Z,5.5nm,1.0s,baz=328,slow=30,SNR=4.2
KSRS LR LR 19 56 10.1
comp=Z,7μm,19.9s,baz=340,slow=40
LZH Lanzhou 21.16 203 *e*P **P 19 47 14.4 +1.3**
LZH pP sP 19 47 19.5 +3.3
LZH S **S 19 51 08.3 -0.4**
LZH sS Sn 19 51 15.0 -0.2
LZH pmax pmax
comp=Z,170nm,1.6s
LZH pmax pmax
comp=Z,600nm,5.4s
LZH LR LR
comp=Z,20μm,13.6s
LZH LR LR
comp=Z,19μm,12.5s
LZH LR LR
comp=Z,17μm,13.8s
KURK Kurchatov 21.61 271 P **P 19 47 17.4 -0.1**
KURK S **S 19 51 15.4 -1.5**
KURK Kurchatov 21.61 271*d i*P **P 19 47 17.5 -0.1**
KURK pmax pmax
comp=Z,492nm,1.1s
KURK MLR MLR
comp=Z,3μm,18.0s
KURK Kurchatov 21.61 271 P **P 19 47 16.9 -0.7**
KURK IAmb IAmb 19 47 22.1
comp=Z,418nm,1.0s
KURK Kurchatov 21.61 271 S 19 51 17.9 +0.9
MK31 Makanchi Array 21.67 258 P **P 19 47 17.8 -0.6**
MK31 pmax pmax
comp=Z,246nm,1.0s
MK31 Makanchi Array 21.67 258 P **P 19 47 17.8 -0.6**
MK31 IAmb IAmb 19 47 24.0
comp=Z,246nm,1.0s
MKAR Makanchi Array 21.67 258 P **P 19 47 18.1 -0.3**
comp=Z,166nm,1.0s,baz=60,slow=9.8,SNR=376
MKAR Lg Lg 19 53 42.2
comp=Z,26nm,1.0s,baz=36,slow=21,SNR=4.1
MKAR LR LR 19 55 58.8
comp=Z,5μm,20.5s,baz=43,slow=38
MKAR Makanchi Array 21.67 258 *i* P **P 19 47 18.1 -0.3**
MKAR pmax pmax
comp=Z,167nm,1.0s
TJN Taejon 21.69 150*ce*P **P 19 47 20.0 +1.4**
KURBB Kurchatov Arra 21.70 270 P **P 19 47 18.4 -0.2**
comp=Z,299nm,1.1s,baz=68,slow=10,SNR=199
KURBB S **S 19 51 17.9 -1.0**
comp=Z,15nm,1.1s,baz=52,slow=10,SNR=1.5
KURBB Lg Lg 19 53 51.5
comp=Z,104nm,1.2s,baz=67,slow=32,SNR=8.0
ASAJ Asahikawa 21.72 111 P **P 19 47 18.7 -0.1**
comp=Z,24nm,0.9s,baz=340,slow=9.0,SNR=14
ASAJ S **S 19 51 14.7 -4.6**
comp=Z,8.0nm,1.0s,baz=125,slow=32,SNR=1.5
ASAJ LR LR 19 56 29.3
comp=Z,3μm,18.4s,baz=315,slow=39
JKA Kamikawa-asahi 21.72 111 S 19 51 14.7 -4.6
MAKZ Makanchi 21.84 258 P **P 19 47 19.5 -0.6**
MAKZ pmax pmax
comp=Z,341nm,1.1s
MAKZ MLR MLR
comp=Z,7μm,19.0s
MAKZ Makanchi 21.84 258 P **P 19 47 19.5 -0.6**
MAKZ IAmb IAmb 19 47 24.9
comp=Z,341nm,1.1s
MAKZ IAMs_20 IAMs_20 19 55 51.6
comp=Z,7μm,19.0s
XAN Xi'an 22.32 191 P **P 19 47 25.8 +0.4**
XAN pP sP 19 47 32.5 +4.0
XAN PP pP 19 47 52.8 +25
XAN S **S 19 51 33.3 +2.3**
XAN pmax pmax
comp=Z,55nm,1.4s
XAN pmax pmax
comp=Z,400nm,3.5s
XAN LR LR
comp=Z,14μm,11.6s
XAN LR LR
comp=Z,15μm,10.6s
XAN LR LR
comp=Z,19μm,13.4s
XAN Xi'an 22.32 191 P **P 19 47 25.3 -0.1**
XAN pmax pmax
comp=Z,134nm,1.1s
XAN MLR MLR
comp=Z,8μm,18.0s
XAN Xi'an 22.32 191 P **P 19 47 25.2 -0.1**
XAN Xi'an 22.32 191 IAMs_20 IAMs_20 19 56 53.3
comp=Z,8μm,18.0s
ERM Erimo 23.50 114 P **P 19 47 37.2 -0.3**
ERM pmax pmax
comp=Z,73nm,1.3s
ERM MLR MLR
comp=Z,2μm,20.0s
ERM Erimo 23.50 114 P **P 19 47 37.1 -0.3**
YUK Yuzh-Kuril'sk 23.50 107 *e*P **P 19 47 38.7 +1.2**
YUK *i* 19 48 03.4
YUK *i* 19 51 23.6
YUK *e*S **S 19 51 52.7 +1.3**
YUK *e*SS **SnSn 19 52 31.6 +4.8**
YUK MLR MLR
comp=Z,3μm,11.0s
YUK MLR MLR
comp=E,998nm,15.0s
YUK MLR MLR
comp=N,2μm,12.0s
KUR Kuril'sk 23.80 103 *e*P **P 19 47 41.0 +0.5**
KUR *e* 19 48 06.6
KUR *e* 19 51 24.8
KUR *e*SS Sn 19 52 37.2 +19
KUR pmax pmax
comp=Z,167nm,1.2s
KUR MLR MLR
comp=N,2μm,12.0s
KUR MLR MLR
comp=Z,2μm,12.0s
KUR MLR MLR
comp=E,2μm,10.0s
NJ2 Nanjing 24.26 170 *e*P **P 19 47 46.4 +1.5**
NJ2 pP **sP 19 47 50.1 +2.0**
NJ2 sP **pP 19 47 51.5 +4.3**
NJ2 S **S 19 52 05.5 +1.8**
NJ2 sS **sS 19 52 13.5 +6.1**
NJ2 pmax pmax
comp=E,100nm,1.0s
NJ2 pmax pmax
comp=E,1μm,3.7s
NJ2 LR LR
comp=E,12μm,13.3s
NJ2 LR LR
comp=E,6μm,12.8s
NJ2 LR LR
comp=E,14μm,13.7s
TDK Taldyqorghan 24.91 259 *e*P **P 19 47 50.8 +0.1**
comp=E,626nm,1.0s
TDK *e*S **S 19 52 22.0 +7.8**
TDK *e*LR LR 19 57 16.7
comp=E,5μm,9.9s
TDK Taldyqorghan 24.91 259 *e*P **P 19 47 50.8 +0.1**
TDK pmax pmax
comp=Z,626nm,1.0s
TDK MLR MLR
comp=Z,5μm,10.0s
PEA0B Petropavlovsk- 25.17 78 P **P 19 47 53.7 +0.7**
PEA0B pmax pmax
comp=Z,171nm,1.1s
PEA0B MLR MLR
comp=Z,3μm,19.0s
PEA0B Petropavlovsk- 25.17 78 P **P 19 47 53.7 +0.7**
PEA0B IAmb IAmb 19 47 56.7
comp=Z,171nm,1.1s
PETK Petropavlovsk- 25.17 78 P **P 19 47 53.7 +0.7**
comp=Z,76nm,0.9s,baz=284,slow=2.8,SNR=52
PETK LR LR 19 58 18.1
comp=Z,3μm,18.9s,baz=290,slow=38
BVAR Borovoye Array 25.17 281 P **P 19 47 52.8 -0.1**
comp=Z,150nm,0.9s,baz=66,slow=8.4,SNR=211
BRVK Borovoye 25.21 282 P **P 19 47 53.3 -0.1**
BRVK S **S 19 52 22.4 +3.6**
BRVK Borovoye 25.21 282*c i*P **P 19 47 54.0 +0.6**
BRVK pmax pmax
comp=Z,270nm,1.0s
BRVK MLR MLR
comp=Z,3μm,15.0s
BRVK Borovoye 25.21 282 P **P 19 47 53.2 -0.2**
BRZS Berezniki 25.29 274⇑ *i*P **P 19 47 54.3 +0.1**
comp=Z,239nm,0.9s
BRZS *e*S **S 19 52 27.4 +7.3**
BRZS *e*LR LR 19 58 24.2
BRZS Berezniki 25.29 274*c i*P **P 19 47 54.2 +0.1**
BRZS pmax pmax
comp=Z,239nm,0.9s
SKR Severo-Kuril's 25.38 84 *e*P **P 19 47 55.6 +0.8**
SKR *e*PPP PPP 19 48 52.3
SKR *e*SS 19 53 34.0
SKR pmax pmax
comp=Z,400nm,4.3s
SKR pmax pmax
comp=Z,900nm,2.7s
SKR pmax pmax
comp=Z,91nm,1.3s
SKR MLR MLR
comp=Z,2μm,17.0s
MJB9 Matsu-Tunnel 25.48 130 P **P 19 47 54.9 -1.0**
MJB9 **PcP 19 51 27.3 -0.2**
MAJO Matsushiro 25.48 130⇓ *i*P **P 19 47 55.2 -0.7**
MAJO pmax pmax
comp=Z,41nm,1.9s
MAJO MLR MLR
comp=Z,5μm,14.0s
MAJO Matsushiro 25.48 130 P **P 19 47 54.6 -1.3**
MAT Matsushiro 25.48 130 P **P 19 47 54.6 -1.3**
MAT S **S 19 52 23.0 -0.3**
MJAR Matsushiro Arr 25.48 130 P **P 19 47 55.1 -0.8**
comp=Z,9.9nm,1.0s,baz=326,slow=9.8,SNR=19
MJAR PcP **PcP 19 51 27.2 -0.3**
comp=Z,9.9nm,1.0s,baz=304,slow=3.6,SNR=8.8
SSE Sheshan 25.48 166 P **P 19 47 57.1 +1.2**
SSE S **S 19 52 24.6 +1.3**
SSE pmax pmax
comp=Z,63nm,1.0s
SSE pmax pmax
comp=Z,400nm,4.7s
SSE LR LR
comp=Z,7μm,13.4s
SSE Sheshan 25.48 166 P **P 19 47 56.0 +0.1**
SSE IAmb IAmb 19 47 58.6
comp=Z,124nm,1.0s
WHN Wuhan 25.53 179 ⇑P **P 19 47 57.3 +1.0**
WHN pP **sP 19 48 01.4 +1.8**
WHN S **S 19 52 20.3 -3.7**
WHN sS **sS 19 52 28.3 +0.5**
WHN pmax pmax
comp=Z,150nm,1.0s
WHN LR LR
comp=Z,14μm,9.9s
WHN LR LR
comp=Z,6μm,11.7s
WHN LR LR
comp=Z,16μm,17.9s
SHLS Shalkode 25.54 254 *e*P **P 19 47 54.9 -1.7**
comp=Z,334nm,1.2s
SHLS *e*S **S 19 52 33.6 +9.2**
SHLS *e*LR LR 19 57 34.0
SHLS Shalkode 25.54 254 *e*P **P 19 47 54.9 -1.7**
SHLS pmax pmax
comp=Z,334nm,1.2s
PET Petropavlovsk 25.73 78K *i*P **P 19 47 59.0 +1.0**
PET *e*S **S 19 52 21.7 -5.2**
PET pmax pmax
comp=Z,1μm,4.2s
PET pmax pmax
comp=Z,178nm,1.3s
PET pmax pmax
comp=Z,200nm,10.1s
PET MLR MLR
comp=Z,6μm,12.0s
PET MLR MLR
comp=Z,6μm,13.0s
PET Petropavlovsk 25.73 78 P **P 19 47 58.9 +0.9**

PET IAmb IAmb 19 48 00.7
comp=Z,221nm,1.2s
JNU Nakatsue 25.77 146 P P 19 47 58.2 -0.4
comp=Z,39nm,0.9s,baz=24,slow=7.3,SNR=20
JNU S **S** **19 52 27.3 -0.6**
comp=Z,3.8nm,0.9s,baz=181,slow=21,SNR=1.5
JNU Lg Lg 19 56 07.8
comp=Z,9.0nm,1.2s,baz=201,slow=23,SNR=7.4
JNU LR LR 19 58 55.4
comp=Z,6µm,19.5s,baz=343,slow=38
JNU Nakatsue 25.77 146 P P 19 47 59.5 +0.9
UZB Uzynbulak 25.79 255 *eP* **P 19 47 59.3 +0.4**
comp=Z,138nm,1.2s
UZB *eS* **S** **19 52 30.9 +2.4**
UZB *eLR* LR 19 57 58.3
UZB Uzynbulak 25.79 255 *eP* **P 19 47 59.3 +0.4**
UZB *eS* **S** **19 52 30.8 +2.4**
UZB pmax pmax
comp=Z,138nm,1.2s
ENH Enshi 26.00 189 P P **19 48 00.8 +0.2**
ENH IAmb IAmb 19 48 08.4
comp=Z,110nm,1.1s
ENH IAMs_20 IAMs_20 19 58 52.4
comp=Z,7µm,18.0s
INU Inuyama 26.00 133 P **P** **19 47 59.4 -1.2**
INU **PcP** **19 51 27.4 -1.3**
ZHN Zhinishke 26.09 255 *eS* S 19 52 46.1 +13
SATY Saty 26.18 255 *eP* **P** **19 48 02.8 +0.3**
comp=Z,90nm,1.4s
SATY *eS* S 19 52 51.6 +17
SATY *eLR* LR 19 58 07.7
SATY Saty 26.18 255 *eP* **P** **19 48 02.7 +0.3**
SATY pmax pmax
comp=Z,90nm,1.4s
BILL Bilibino 26.32 42 *d iP* **P** **19 48 05.0 +1.7**
BILL *e* 19 48 44.0
BILL *ePPP* PPP 19 48 52.5
BILL *eS* **S** **19 52 36.8 +0.8**
BILL *eSS* **SnSn** **19 53 37.7 +2.4**
BILL pmax pmax
comp=Z,105nm,1.2s
BILL MLR MLR
comp=Z,3µm,15.0s
BILL Bilibino 26.32 42 P **P** **19 48 03.6 +0.3**
BILL IAmb IAmb 19 48 06.7
comp=Z,107nm,1.2s
CHKK Chushkaly 26.43 258 *eP* **P** **19 48 04.5 0.0**
comp=Z,3µm,0.8s
CHKK Chushkaly 26.43 258 *eP* **P** **19 48 04.5 0.0**
PRZ Przheval'sk 26.57 254 P **P** **19 48 07.3 +1.3**
PRZ pmax pmax
comp=Z,176nm,1.2s
PRZ Przheval'sk 26.57 254 P **P** **19 48 07.3 +1.3**
PRZ IAmb IAmb 19 48 13.5
comp=Z,176nm,1.1s
KUU Kurty 26.76 259 *eP* **P** **19 48 07.7 +0.2**
comp=Z,313nm,1.9s
KUU *eS* S 19 52 56.6 +13
KUU *eLR* LR 19 58 22.1
KUU Kurty 26.76 259 *eP* **P** **19 48 07.7 +0.2**
KUU pmax pmax
comp=Z,313nm,1.9s
MDOK Medeo 26.85 257 *eP* **P** **19 48 08.7 +0.2**
MDOK *eS* S 19 53 03.6 +18
MDOK *eLR* LR 19 58 27.5
comp=Z,8µm,11.0s
MDOK Medeo 26.85 257 *eP* **P** **19 48 08.7 +0.2**
MDOK MLR MLR
comp=Z,8µm,11.0s
AAA Alma-Ata 26.89 257 ⇑ *iP* **P** **19 48 10.1 +1.3**
comp=Z,370nm,1.7s
AAA *eLR* LR 19 58 32.9
comp=Z,5µm,9.5s
AAA Alma-Ata 26.89 257 *c iP* **P** **19 48 10.0 +1.3**
AAA pmax pmax
comp=Z,370nm,1.7s
AAA MLR MLR
comp=Z,5µm,10.0s
TNSS Tian-Shan 26.99 257 *eP* **P** **19 48 09.5 -0.5**
TNSS Tian-Shan 26.99 257 *eP* **P** **19 48 09.5 -0.5**
MTBS Maitube 27.21 258 *eP* **P** **19 48 11.9 +0.3**
MTBS Maitube 27.21 258 *eP* **P** **19 48 11.9 +0.3**
BTLS Baital 27.30 263 *eP* **P** **19 48 11.7 -0.7**
comp=Z,108nm,1.2s
BTLS *eS* S 19 53 09.3 +17
BTLS *eLR* LR 19 58 29.3
comp=Z,686nm,8.1s
BTLS Baital 27.30 263 *eP* **P** **19 48 11.6 -0.7**
BTLS pmax pmax
comp=Z,108nm,1.2s
BTLS MLR MLR
comp=Z,686nm,8.0s
TARG Taragay, Kyrgy 27.41 254 P **P** **19 48 13.9 0.0**
TARG IAmb IAmb 19 48 48.5
comp=Z,112nm,1.3s
KDJ Kajisay 27.48 255 P **P** **19 48 14.1 0.0**
KDJ pmax pmax
comp=Z,76nm,1.2s
KDJ Kajisay 27.48 255 P **P** **19 48 14.1 0.0**
TKM2 Tokmak 2 27.81 258 P **P** **19 48 20.9 +3.8**
SNR=109
ULHL Ulahol 27.91 256 P **P** **19 48 18.2 +0.1**
SNR=41
SGDS Sogindy 27.99 260 *eP* **P** **19 48 18.8 +0.3**
comp=Z,258nm,3.2s
SGDS *eS* S 19 53 23.4 +21
SGDS *eLR* LR 19 59 02.5
comp=Z,1µm,8.5s
USP Ospenovka 28.18 260 P **P** **19 48 23.8 +3.5**
SNR=50
CHMS Chumysh 28.22 259 P **P** **19 48 24.4 +3.8**
SNR=46
KBK Karagaybulak 28.34 258 P **P** **19 48 23.1 +1.3**
SNR=58
FRU1 Bishkek 28.41 259 P **P** **19 48 21.8 -0.5**
FRU1 pmax pmax
comp=Z,196nm,1.4s
FRU1 MLR MLR
comp=Z,5µm,18.0s
FRU1 Bishkek 28.41 259 P **P** **19 48 21.8 -0.5**
FRU1 IAmb IAmb 19 48 27.2
comp=Z,196nm,1.4s
FRU1 IAMs_20 IAMs_20 20 00 13.4
comp=Z,5µm,18.0s
KZA Kyzart 28.56 257 P **P** **19 48 25.8 +1.7**
SNR=61
AAK Ala-Archa 28.60 259 P **P** **19 48 25.0 +0.8**
comp=Z,36nm,0.9s,baz=63,slow=4.4,SNR=48
AAK Lg Lg 19 57 31.0
comp=Z,12nm,1.2s,baz=174,slow=16,SNR=4.7
AAK LR LR 20 00 30.4
comp=Z,4µm,18.5s,baz=26,slow=38
AAK Ala-Archa 28.60 259 P **P** **19 48 25.4 +1.2**
SNR=46
AAK Ala-Archa 28.60 259 *i P* **P** **19 48 25.5 +1.3**
SNR=25
AAK Ala-Archa 28.60 259 P **P** **19 48 24.9 +0.8**
AAK Ala-Archa 28.60 259 *d iP* **P** **19 48 24.2 +0.1**
AAK pmax pmax
comp=Z,123nm,1.4s
AAK MLR MLR
comp=Z,4µm,14.0s
AAK Ala-Archa 28.60 259 P **P** **19 48 24.6 +0.4**
AAK IAmb IAmb 19 48 28.8
comp=Z,125nm,1.3s
AAK Ala-Archa 28.60 259 IAMs_20 IAMs_20 20 00 26.4
comp=Z,5µm,19.0s
UCH Uchtor 28.86 258 P **P** **19 48 28.1 +1.3**
SNR=21
SVE Sverdlovsk 28.89 294 *eP* **P** **19 48 28.5 +2.1**
SVE *eS* **S** **19 53 15.4 -1.3**
SVE pmax pmax
comp=Z,113nm,1.1s
SVE MLR MLR
comp=Z,4µm,9.0s
EKS2 Erkin-Say 28.98 260 P **P** **19 48 31.2 +3.8**
SNR=81
JHJ Hachijo jima 2 29.07 131 LR LR 19 59 45.0
comp=Z,3µm,18.7s,baz=332,slow=36
JHJ2 Mitsune 29.09 131 P **P** **19 48 28.0 -0.3**
JHJ2 IAMs_20 IAMs_20 19 59 56.0
comp=Z,5µm,18.0s
AML Almayashu 29.38 259 P **P** **19 48 33.9 +2.6**
SNR=22
KSH Kashi 29.96 253 P P 19 48 41.8 +5.6
KSH sP sP 19 48 49.9 +10
KSH PP **PP** **19 49 40.1 -3.5**
KSH S **S** **19 53 39.8 +5.7**
KSH SS **ScP** **19 55 19.8 -0.9**
KSH pmax pmax
comp=Z,190nm,1.1s
KSH pmax pmax
comp=Z,470nm,3.8s
KSH LR LR
comp=Z,1µm,7.9s
KSH LR LR
comp=Z,2µm,7.0s
KSH LR LR
comp=Z,3µm,6.5s
GYA Guiyang 30.07 193 ⇑ *iP* **P** **19 48 37.8 +0.6**
GYA PP **PP** **19 49 38.3 -6.7**
GYA PcP **PcP** **19 51 41.5 +2.6**
GYA S **S** **19 53 37.5 +1.6**
GYA SS **SnSn** **19 55 13.3 +5.5**
GYA ScP **ScP** **19 55 22.8 +1.6**
GYA ScS **ScS** **19 59 16.6 -0.3**
GYA pmax pmax
comp=Z,30nm,0.8s
GYA pmax pmax
comp=Z,150nm,4.9s
ARU Arti 30.10 294 *c iP* **P** **19 48 37.7 +0.6**
ARU 19 49 32.2
ARU 19 51 36.7
ARU S **S** **19 53 38.2 +2.5**
ARU SS **ScP** **19 55 12.6 -8.1**
ARU SSS SSS 19 55 28.3
ARU pmax pmax
comp=Z,22nm,1.0s
ARU MLR MLR
comp=Z,3µm,14.0s
ARU Arti 30.10 294 P **P** **19 48 36.0 -1.1**
ARU IAmb IAmb 19 49 29.8
comp=Z,116nm,1.1s
ARU IAMs_20 IAMs_20 19 59 57.9
comp=Z,4µm,21.0s
DZA Taraz 30.18 262 *eP* **P** **19 48 38.5 +0.4**
DZA Taraz 30.18 262 *eP* **P** **19 48 38.4 +0.4**
KK31 Karatay Array 30.50 263 P **P** **19 48 40.6 -0.2**
KK31 pmax pmax
comp=Z,69nm,1.2s
KK31 Karatay Array 30.50 263 P **P** **19 48 40.6 -0.2**
LSA Lhasa 30.95 221 P **P** **19 48 46.8 +1.5**
LSA pmax pmax
comp=Z,55nm,1.7s
LSA LR LR
comp=Z,4µm,10.7s
LSA LR LR
comp=Z,6µm,7.8s
LSA LR LR
comp=Z,5µm,10.0s
LSA Lhasa 30.95 221 P **P** **19 48 46.4 +1.0**
LSA Lhasa 30.95 221 P **P** **19 48 45.2 -0.1**
LSA pmax pmax
comp=Z,16nm,1.1s
LSA Lhasa 30.95 221 P **P** **19 48 45.2 -0.1**
JOW Kunigami 30.99 155 P **P** **19 48 45.2 0.0**
QZH Quanzhou 31.28 172 ⇑ *iP* P **19 48 53.6 +5.8**
QZH S **S** **19 54 02.1 +7.5**
QZH LR LR
comp=N,5µm,10.9s
QZH LR LR
comp=E,2µm,7.6s
QZH LR LR
comp=Z,5µm,14.5s
IUG luzhnay 31.39 262 *eP* **P** **19 48 49.4 +0.5**
comp=Z,28nm,1.4s
IUG eLR LR 20 01 01.4
IUG luzhnay 31.39 262 *eP* **P** **19 48 49.3 +0.5**
IUG pmax pmax
comp=Z,28nm,1.4s
TATO Taipei 31.55 167 IAMs_20 IAMs_20 20 02 58.1
comp=Z,7µm,21.0s
YHNB Yeheng 31.84 167 P **P** **19 48 51.6 -1.1**
YHNB IAMs_20 IAMs_20 20 02 43.7
comp=Z,4µm,20.0s
KMI Kunming 32.00 200 P **P** **19 48 54.5 +0.1**
KMI pP sP 19 48 58.9 +1.3
KMI sP pP 19 48 59.9 +3.2
KMI S **S** **19 54 07.1 +0.8**
KMI sS sS 19 54 11.8 +1.6
KMI pmax pmax
comp=Z,110nm,1.3s
KMI pmax pmax
comp=Z,300nm,3.6s
KMI LR LR
comp=Z,6µm,11.9s
KMI LR LR
comp=Z,8µm,12.9s
KMI LR LR
comp=Z,9µm,12.9s
KMI Kunming 32.00 200 P **P** **19 48 53.8 -0.6**
KMI pmax pmax
comp=Z,130nm,1.1s
KMI MLR MLR
comp=Z,7µm,20.0s
KMI Kunming 32.00 200 P **P** **19 48 53.8 -0.6**
KMI IAmb IAmb 19 48 57.1
comp=Z,130nm,1.1s
KMI Kunming 32.00 200 IAMs_20 IAMs_20 20 03 00.4
comp=Z,7µm,20.0s
YOJ Yonaguni jima 32.27 165 P **P** **19 48 56.8 +0.4**
YOJ pmax pmax
comp=Z,226nm,1.3s
YOJ MLR MLR
comp=Z,6µm,20.0s
YOJ Yonaguni jima 32.27 165 P **P** **19 48 56.8 +0.4**
YOJ IAMs_20 IAMs_20 20 03 35.9
comp=Z,6µm,20.0s
TAS Tashkent 32.35 262 P **P** **19 48 57.4 +0.3**
TAS pmax pmax
comp=Z,220nm,1.2s
TAS MLR MLR
comp=Z,200nm,20.0s
TAS Tashkent 32.35 262 P **P** **19 48 57.4 +0.3**
BTK Batken 32.38 259 P **P** **19 48 57.1 -0.3**
BTK pmax pmax
comp=Z,157nm,1.0s
BTK MLR MLR
comp=Z,3µm,19.0s
BTK Batken 32.38 259 P **P** **19 48 57.1 -0.3**
BTK IAMs_20 IAMs_20 20 02 58.4
comp=Z,3µm,19.0s
SSLB Suanglung 32.66 168 P **P** **19 49 01.1 +1.2**
SSLB IAMs_20 IAMs_20 20 03 33.4
comp=Z,4µm,21.0s
YULB Yu-li 33.09 168 P **P** **19 49 04.4 +0.8**
TPUB Ta-pu 33.10 169 P **P** **19 49 03.9 +0.1**
GAR Garm 33.40 258 P **P** **19 49 06.8 +0.4**
HKPS Hong Kong Po S 33.76 180 IAMs_20 IAMs_20 20 04 08.3
comp=Z,6µm,19.0s
SMY Shemya 34.17 70 P **P** **19 49 11.5 -1.3**
SMY pmax pmax
comp=Z,40nm,1.1s
SMY MLR MLR
comp=Z,1µm,18.0s
SMY Shemya 34.17 70 P **P** **19 49 11.4 -1.3**
TAPN Taplejung 34.37 224 *eP* **P** **19 49 15.0 -0.1**
comp=Z,214nm,1.2s
SHL Shillong 34.47 217 P **P** **19 49 15.7 -0.2**
SNR=41
SHL Shillong 34.47 217 P **P** **19 49 15.2 -0.6**
SHL pmax pmax
comp=Z,85nm,1.0s
SHL MLR MLR
comp=Z,4µm,20.0s
SHL Shillong 34.47 217 P **P** **19 49 15.2 -0.6**
SHL IAmb IAmb 19 49 18.3
comp=Z,85nm,1.0s
SHL IAMs_20 IAMs_20 20 04 11.6
comp=Z,4µm,20.0s
GUN Gumba 34.60 227 *eP* **P** **19 49 17.3 +0.1**
comp=Z,182nm,1.0s
JIRN Jiri 34.70 227 *eP* **P** **19 49 18.4 +0.4**
comp=Z,327nm,1.1s
ODAN Odare 34.93 224 *eP* **P** **19 49 19.9 0.0**
comp=Z,286nm,1.1s
KKN Kakani 34.96 228 *eP* **P** **19 49 20.7 +0.6**
comp=Z,15nm,1.1s
GKN Gorkha 35.04 229 *eP* **P** **19 49 21.2 +0.4**
comp=Z,490nm,1.1s
PKI Pulchoki 35.10 228 *eP* **P** **19 49 21.4 -0.1**
comp=Z,300nm,1.4s
PKIN Phulchoki 35.10 228 *eP* **P** **19 49 20.9 -0.5**
comp=Z,278nm,1.5s
DANN Dangsing 35.12 231 *eP* **P** **19 49 22.2 +0.6**
comp=Z,217nm,0.8s
RAMN Ramite 35.16 226 *eP* **P** **19 49 21.8 -0.1**
comp=Z,133nm,1.1s
DMN Daman 35.19 228 *eP* **P** **19 49 22.7 +0.5**
comp=Z,300nm,1.2s
SLVN Son La 35.51 196 P **P** **19 49 23.6 -1.0**
SLVN IAmb IAmb 19 49 28.5
comp=Z,102nm,1.2s
SLVN IAMs_20 IAMs_20 20 05 05.5
comp=Z,4µm,18.0s
PYUN Piuthan 35.67 231 *eP* **P** **19 49 26.5 +0.3**
comp=Z,430nm,1.0s
KOLN Koldanda 35.69 230 *eP* **P** **19 49 26.9 +0.5**
comp=Z,362nm,1.0s
NIL Nilore 35.81 249 P **P** **19 49 27.5 +0.3**
NIL P **P** **19 49 27.5 +0.3**
NIL Nilore 35.81 249 P **P** **19 49 27.0 -0.2**
NIL pmax pmax
comp=Z,97nm,1.2s
NIL MLR MLR
comp=Z,4µm,18.0s
NIL Nilore 35.81 249 P **P** **19 49 27.0 -0.2**
NIL IAmb IAmb 19 49 30.4
comp=Z,97nm,1.1s
NIL Nilore 35.81 249 IAMs_20 IAMs_20 20 05 44.3
comp=Z,4µm,18.0s
BHK Bhakra 35.97 243 *ex* **P** **19 49 33.2 +4.6**
LVZ Lovozero 36.33 321 *i* P **P** **19 49 31.2 -0.1**
LVZ pmax pmax
comp=Z,22nm,0.9s
LVZ MLR MLR
comp=Z,3µm,19.0s
LVZ Lovozero 36.33 321 P **P** **19 49 32.2 +1.0**
LVZ IAMs_20 IAMs_20 20 05 45.6
comp=Z,3µm,18.0s
TMCR Tamitsa 36.50 314 *eP* **P** **19 49 32.3 -0.4**
TMCR *eS* **S** **19 55 18.2 +3.6**
TMCR pmax pmax
comp=Z,97nm,1.0s
APA Apatity 36.89 321 ⇓ *iP* **P** **19 49 32.4 -3.6**
APA *i* 19 51 52.0
APA *i S* **S** **19 55 15.0 -5.6**
APA pmax pmax
comp=Z,26nm,1.0s
APA MLR MLR
comp=Z,4µm,18.0s
QIZ Qiongzhong 37.12 187 P **P** **19 49 39.5 +1.1**
QIZ PP **PnPn** **19 51 04.6 +1.3**
QIZ S **S** **19 55 27.6 +2.6**
QIZ pmax pmax
comp=Z,34nm,1.1s
QIZ pmax pmax
comp=Z,200nm,3.3s
QIZ LR LR
comp=Z,4µm,15.6s
QIZ LR LR
comp=Z,2µm,12.6s
QIZ LR LR
comp=Z,5µm,17.0s
QIZ Qiongzhong 37.12 187 P **P** **19 49 39.5 +1.1**
KLMR Klimovskoe 37.30 309 *d iP* **P** **19 49 40.4 +0.9**
KLMR *e* 19 51 57.8
KLMR *eS* **S** **19 55 30.7 +3.7**
KLMR pmax pmax
comp=Z,164nm,1.2s
KLMR MLR MLR
comp=Z,3µm,14.0s
KLMR Klimovskoe 37.30 309 ⇓ *iP* **P** **19 49 40.5 +0.9**
KLMR *i* P **P** **19 49 40.5 +0.9**
KLMR *i* P **P** **19 49 40.5 +0.9**
KLMR AMP 19 49 43.5
comp=Z,164nm,1.2s
KLMR *ePcP* **PcP** **19 51 57.9 -0.7**
KLMR *eS* **S** **19 55 30.7 +3.7**
KLMR *eS* **S** **19 55 30.7 +3.7**
KLMR LQ LQ 20 01 51.7
KLMR LQ LQ 20 01 51.7
KLMR LR LR 20 03 47.0
KLMR AMP 20 06 37.2
comp=Z,3µm,13.5s
SPA0 Spitsbergen Ar 37.35 340 P **P** **19 49 39.0 -0.9**
SPA0 IAmb IAmb 19 49 43.0
comp=Z,125nm,1.3s
SPA0 Spitsbergen Ar 37.35 340 *eP* **P** **19 49 39.8 -0.1**
KBL Kabul 37.37 254 P **P** **19 49 39.6 -1.0**
KBL Kabul 37.37 254 P **P** **19 49 39.7 -1.0**
KBL pmax pmax
comp=Z,51nm,1.1s
KBL MLR MLR
comp=Z,2µm,22.0s
KBL Kabul 37.37 254 P **P** **19 49 39.7 -1.0**
RDOG Red Dog Mine 37.56 38 P **P** **19 49 42.0 +0.3**
KBS Kingsbay 37.84 342 *ceP* **P** **19 49 44.2 +0.3**
KBS pmax pmax
comp=Z,46nm,1.0s
KBS Kingsbay 37.84 342 P **P** **19 49 43.5 -0.4**
KBS Kingsbay 37.84 342 *eP* **P** **19 49 44.1 +0.2**
HSPB Hornsund (broa 38.01 339 *eS* **S** **19 55 38.2 +0.8**
HSPB LMZ LR 20 07 23.5
comp=Z,5.4nm,16.7s
HSPB Hornsund (broa 38.01 339 *eP* **P** **19 49 45.3 -0.1**
KEV Kevo 38.14 326 P **P** **19 49 46.0 -0.6**
KEV pmax pmax
comp=Z,92nm,1.4s
KEV MLR MLR
comp=Z,2µm,20.0s
KEV Kevo 38.14 326 P **P** **19 49 46.0 -0.6**
ANM Nome 38.15 44 P **P** **19 49 49.3 +2.5**
ANM pmax pmax
comp=Z,100nm,1.2s
ANM MLR MLR
comp=Z,2µm,20.0s
ANM Nome 38.15 44 P **P** **19 49 49.3 +2.5**
ANM IAmb IAmb 19 49 50.6
comp=Z,100nm,1.2s
ARCES ARCESS Array B 38.71 326 P **P** **19 49 49.8 -1.6**
comp=Z,30nm,1.1s,baz=76,slow=10,SNR=28
ARCES PP **PP** **19 51 19.2 -0.5**
comp=Z,34nm,0.9s,baz=62,slow=14,SNR=6.3
ARCES PcP **PcP** **19 52 04.5 +1.6**
comp=Z,21nm,0.9s,baz=38,slow=2.2,SNR=2.2
ARCES LR LR 20 08 59.9
comp=Z,1µm,18.2s,baz=65,slow=41
ARE0 ARCESS Array S 38.71 326 P **P** **19 49 50.8 -0.6**
ARE0 ARCESS Array S 38.71 326 *eP* **P** **19 49 51.2 -0.2**
SZP Santa 38.77 170 P **P** **19 49 51.8 -0.5**
SZP IAmb IAmb 19 49 58.4
comp=Z,210nm,1.7s
SZP IAMs_20 IAMs_20 20 07 29.5
comp=Z,4µm,20.0s
HAMF Hammerfest 38.78 328 *eP* **P** **19 49 51.4 -0.5**
CHTO Chiang Mai 38.90 203 P **P** **19 49 53.5 0.0**
CHTO Chiang Mai 38.90 203 P **P** **19 49 52.6 -0.9**
CHTO pmax pmax
comp=Z,53nm,1.5s
CHTO MLR MLR
comp=Z,3µm,18.0s
CHTO Chiang Mai 38.90 203 P **P** **19 49 52.5 -0.9**
CHTO Chiang Mai 38.90 203 IAMs_20 IAMs_20 20 07 29.1
comp=Z,3µm,18.0s
CM31 Chiang Mai Arr 39.25 203 P **P** **19 49 56.8 +0.5**
SNR=8.3
CM31 Chiang Mai Arr 39.25 203 P **P** **19 49 55.7 -0.6**
CMAR Chiang Mai Arr 39.25 203 P **P** **19 49 55.6 -0.7**
comp=Z,7.4nm,1.1s,baz=2.2,slow=7.7,SNR=26
CMAR PcP **PcP** **19 52 06.0 +0.7**
comp=Z,5.0nm,1.0s,baz=332,slow=2.8,SNR=6.0
CMAR LR LR 20 07 51.9
comp=Z,3µm,18.4s,baz=66,slow=39
ADK Adak 39.41 66 P **P** **19 49 57.4 0.0**
ADK pmax pmax
comp=Z,33nm,1.5s
ADK MLR MLR
comp=Z,1µm,18.0s
ADK Adak 39.41 66 P **P** **19 49 57.4 0.0**
GSTR Great Sitkin T 39.61 65 P **P** **19 49 56.2 -2.9**
KTK1 Kautokeino 39.67 326 *eP* **P** **19 49 59.2 -0.2**
SPIA Saint Paul Isl 39.67 56 P **P** **19 49 57.3 -2.2**
NOR Nord 40.06 350 *i P* **P** **19 50 02.1 -0.4**
NOR pmax pmax
comp=Z,31nm,0.9s

NOR	**Nord**	**40.06**	**350**	*i*	P		**P**	**19 50 02.1**	**-0.4**
	comp=Z,31nm,0.9s									
ATKA	**Atka Island**	**40.49**	**64**		P		**P**	**19 50 07.5**	**+1.1**
PBKT	**Sadao Pong**	**40.67**	**199**		P		**P**	**19 50 07.9**	**-0.2**
PBKT					IAmb		IAmb	19 50 12.7		
	comp=Z,131nm,1.2s									
PBKT					IAMs_20		IAMs_20	20 08 45.0		
	comp=Z,2µm,19.0s									
TRO	**Tromso**	**40.69**	**328**	*e*	P		**P**	**19 50 07.9**	**+0.1**
MOS	**Moscow**	**40.75**	**303**	*e*	P		**P**	**19 50 06.8**	**-1.7**
MOS				*e*				19 51 43.5		
MOS				*e*	PPP		PPP	19 52 14.5		
MOS				*e*	S		**S**	**19 56 16.9**	**-2.1**
MOS				*i*	SSS		SSS	19 59 49.2		
MOS					pmax		pmax			
	comp=Z,200nm,1.6s									
MOS					pmax		pmax			
	comp=Z,111nm,1.1s									
MOS					MLR		MLR			
	comp=N,2µm,16.0s									
MOS					MLR		MLR			
	comp=E,2µm,16.0s									
MOS					MLR		MLR			
	comp=Z,2µm,16.0s									
ASHT	**Ashkhabad**	**40.78**	**268**		P		**P**	**19 50 10.5**	**+1.6**
ASHT					pmax		pmax			
	comp=Z,58nm,0.4s									
ASHT					MLR		MLR			
	comp=Z,2µm,19.0s									
ASHT	**Ashkhabad**	**40.78**	**268**		P		**P**	**19 50 10.5**	**+1.6**
ASHT					IAmb		IAmb	19 50 26.7		
	comp=Z,58nm,0.4s									
GEYT	**Alibeck**	**40.94**	**268**		P		**P**	**19 50 11.1**	**+0.8**
	comp=Z,42nm,1.0s,baz=29,slow=3.4,SNR=44									
GEYT					LR		LR	20 07 28.9		
	comp=Z,801nm,18.2s,baz=45,slow=37									
GYA0B	**ALIBECK ARRAY**	**40.94**	**268**		P		**P**	**19 50 10.7**	**+0.4**
HRA	**Herat**	**41.20**	**261**		P		**P**	**19 50 12.8**	**+0.1**
VRH	**Novokhopyorsk**	**41.33**	**295**	*e*	P		**P**	**19 50 12.8**	**-0.5**
VRH				*e*	S		**S**	**19 56 25.6**	**-2.0**
VRH					pmax		pmax			
	comp=Z,110nm,1.2s									
VRH					smax		smax			
	comp=N,140nm,2.8s									
VRH					MLR		MLR			
	comp=Z,4µm,10.0s									
OBN	**Obninsk**	**41.60**	**302**	*c i*	P		**P**	**19 50 15.9**	**+0.4**
OBN				*e*				19 51 52.6		
OBN				*e*				19 52 12.2		
OBN				*e*	PPP		PPP	19 52 19.6		
OBN				*e*	S		**S**	**19 56 31.2**	**-0.4**
OBN				*e*	SS		**SS**	**19 59 32.6**	**-3.3**
OBN				*e*	SSS		SSS	20 00 20.3		
OBN					pmax		pmax			
	comp=Z,67nm,1.3s									
OBN					MLR		MLR			
	comp=Z,3µm,16.0s									
OBN	**Obninsk**	**41.60**	**302**		P		**P**	**19 50 14.9**	**-0.6**
OBN					IAMs_20		IAMs_20	20 09 08.1		
	comp=Z,3µm,18.0s									
TOLK	**Toolik Lake Re**	**41.62**	**33**		P		**P**	**19 50 16.9**	**+1.3**
	baz=303,SNR=90									
TOLK					S		**S**	**19 56 33.7**	**+1.9**
	baz=303									
TOLK	**Toolik Lake Re**	**41.62**	**33**		P		**P**	**19 50 16.2**	**+0.6**
TOLK					IAmb		IAmb	19 50 21.1		
	comp=Z,94nm,1.1s									
PUL	**Pulkovo**	**41.80**	**311**	*i*	P		**P**	**19 50 15.3**	**-1.8**
PUL					MLR		MLR			
	comp=Z,3µm,16.0s									
LPSR	**Galich'ya Gora**	**41.91**	**298**	*e*	P		**P**	**19 50 18.0**	**0.0**
LPSR				*e*	S		**S**	**19 56 34.2**	**-2.0**
LPSR					pmax		pmax			
	comp=Z,80nm,1.0s									
LPSR					smax		smax			
	comp=N,320nm,2.6s									
LPSR					MLR		MLR			
	comp=Z,2µm,14.0s									
COLD	**Coldfoot**	**42.20**	**35**		IAMs_20		IAMs_20	20 07 22.2		
	comp=Z,3µm,18.0s									
TGY	**Tagaytay City**	**42.23**	**170**		LR		LR	20 09 50.8		
	comp=Z,2µm,19.7s,baz=6.0,slow=39									
TTA	**Tatalina**	**42.57**	**43**		P		**P**	**19 50 24.3**	**+0.9**
TTA					pmax		pmax			
	comp=Z,69nm,1.2s									
TTA	**Tatalina**	**42.57**	**43**		P		**P**	**19 50 24.2**	**+0.9**
VSR	**Storozhevoye**	**42.61**	**296**	*e*	P		**P**	**19 50 23.5**	**-0.3**
VSR				*e*	S		**S**	**19 56 44.2**	**-2.4**
VSR					pmax		pmax			
	comp=Z,70nm,1.1s									
VSR					smax		smax			
	comp=N,290nm,2.8s									
VSR					MLR		MLR			
	comp=Z,2µm,12.0s									
FIA1	**FINESS Array S**	**42.62**	**315**		P		**P**	**19 50 23.3**	**-0.4**
FIA1					IAmb		IAmb	19 50 26.7		
	comp=Z,99nm,0.8s									
FINES	**FINESS Array B**	**42.62**	**315**		P		**P**	**19 50 23.5**	**-0.1**
	comp=Z,62nm,0.6s,baz=59,slow=7.4,SNR=102									
FINES					LR		LR	20 09 39.2		
	comp=Z,3µm,18.2s,baz=61,slow=38									
NIKH	**Nikolski High**	**42.69**	**60**		P		**P**	**19 50 23.9**	**-0.6**
VORD	**Divnogorie**	**42.70**	**296**	*e*	P		**P**	**19 50 23.5**	**-1.0**
VORD				*e*	S		**S**	**19 56 45.8**	**-2.1**
VORD					pmax		pmax			
	comp=Z,50nm,0.8s									
VORD					smax		smax			
	comp=N,20nm,3.3s									
STEI	**Steigen**	**42.75**	**327**	*e*	P		**P**	**19 50 24.7**	**0.0**
LOF	**Lofoten**	**43.15**	**327**	*e*	P		**P**	**19 50 28.8**	**+0.9**
UNV	**Unalaska Valle**	**43.31**	**58**		P		**P**	**19 50 30.2**	**+0.8**
MAK	**Makhachkala**	**43.42**	**282**	*e*	P		P	19 50 24.9	-5.5
MAK				*e*				19 52 06.4		
MAK				*e*	S		**S**	**19 56 50.6**	**-8.0**
MAK					pmax		pmax			
	comp=Z,147nm,1.2s									
MAK					MLR		MLR			
	comp=Z,2µm,15.0s									
BPAW	**Bear Paw Mtn.**	**43.74**	**39**		P		**P**	**19 50 33.1**	**+0.3**
SVW2	**Sparrevohn**	**43.79**	**45**		P		**P**	**19 50 34.6**	**+1.4**
SVW2					IAmb		IAmb	19 50 36.9		
	comp=Z,100nm,1.3s									
SVW2					IAMs_20		IAMs_20	20 09 08.8		
	comp=Z,2µm,19.0s									
PPLA	**Purkeypile**	**44.02**	**41**		P		**P**	**19 50 35.5**	**+0.3**
VSU	**Vasula**	**44.07**	**311**	*e*	P		**P**	**19 50 35.5**	**0.0**
VSU	**Vasula**	**44.07**	**311**	⇓ *e*	P		**P**	**19 50 34.3**	**-1.2**
VSU					pmax		pmax			
	comp=Z,270nm,1.0s									
VSU					MLR		MLR			
	comp=Z,6µm,17.0s									
DAG	**Danmarks Havn**	**44.09**	**346**	*i*	P		**P**	**19 50 34.4**	**-1.0**
DAG					pmax		pmax			
	comp=Z,17nm,1.0s									
DAG	**Danmarks Havn**	**44.09**	**346**	*i*	P		**P**	**19 50 34.4**	**-1.0**
	comp=Z,16nm,1.0s									
KTH	**Kantishna Hill**	**44.09**	**40**		P		**P**	**19 50 37.2**	**+1.5**
KTH					IAmb		IAmb	19 50 39.1		
	comp=Z,148nm,1.3s									
NEA	**Nenana**	**44.12**	**38**		P		**P**	**19 50 36.3**	**+0.5**
FALS	**False Pass**	**44.15**	**55**		P		**P**	**19 50 35.4**	**-0.7**
FALS					IAmb		IAmb	19 51 46.3		
	comp=Z,188nm,1.4s									
FALS					IAMs_20		IAMs_20	20 09 25.6		
	comp=Z,2µm,18.0s									
FYU	**Fort Yukon**	**44.18**	**34**		P		**P**	**19 50 37.5**	**+1.2**
FYU					IAMs_20		IAMs_20	20 12 28.4		
	comp=Z,3µm,18.0s									
MDM	**Murphy Dome**	**44.18**	**37**		P		**P**	**19 50 37.6**	**+1.3**
DLV	**T Lat**	**44.24**	**188**		P		**P**	**19 50 38.8**	**+1.3**
DLV					IAMs_20		IAMs_20	20 10 29.8		
	comp=Z,3µm,19.0s									
AKT	**Akhty**	**44.29**	**280**	*e*	P		**P**	**19 50 38.4**	**+0.8**
AKT				*e*				19 52 22.1		
AKT					pmax		pmax			
	comp=Z,109nm,1.0s									
POKR	**Poker Plat Res**	**44.35**	**37**		P		**P**	**19 50 39.8**	**+2.1**
	baz=308,SNR=16									
TCOL	**CIGO, UAF Yank**	**44.36**	**37**		P		**P**	**19 50 39.4**	**+1.8**
	baz=308									
COLA	**College**	**44.36**	**37**	*d i*	P		**P**	**19 50 39.0**	**+1.3**
COLA					pmax		pmax			
	comp=Z,79nm,0.9s									
COLA					MLR		MLR			
	comp=Z,1µm,15.0s									
COLA	**College**	**44.36**	**37**		P		**P**	**19 50 39.1**	**+1.3**
COLA					IAmb		IAmb	19 50 42.2		
	comp=Z,87nm,0.8s									
TRF	**Thorofare Moun**	**44.38**	**40**		P		**P**	**19 50 38.8**	**+0.7**
TRF					IAmb		IAmb	19 50 41.4		
	comp=Z,165nm,1.1s									
GOF	**Gofitskoye**	**44.46**	**287**	⇑ *i*	P		**P**	**19 50 39.7**	**+0.9**
GOF					pmax		pmax			
	comp=Z,191nm,1.1s									
CCB	**Clear Creek Bu**	**44.52**	**37**		P		**P**	**19 50 40.1**	**+1.2**
CCB					IAmb		IAmb	19 50 42.1		
	comp=Z,134nm,1.4s									
WRH	**Wood River Hil**	**44.53**	**38**		P		**P**	**19 50 40.0**	**+0.9**
WRH					IAmb		IAmb	19 50 42.1		
	comp=Z,145nm,1.2s									
MCK	**McKinley**	**44.69**	**39**		P		**P**	**19 50 41.4**	**+1.0**
MCK					pmax		pmax			
	comp=Z,81nm,1.1s									
MCK					MLR		MLR			
	comp=Z,2µm,18.0s									
MCK	**McKinley**	**44.69**	**39**		P		**P**	**19 50 41.4**	**+1.0**
MCK					IAmb		IAmb	19 50 44.3		
	comp=Z,81nm,1.1s									
MCK					IAMs_20		IAMs_20	20 12 30.9		
	comp=Z,2µm,18.0s									
PRP	**Porcupine Dome**	**44.74**	**36**		P		**P**	**19 50 42.4**	**+1.4**
PRP					IAmb		IAmb	19 50 46.5		
	comp=Z,76nm,1.0s									
PRP					IAMs_20		IAMs_20	20 09 08.2		
	comp=Z,2µm,19.0s									
IL31		**44.75**	**37**		P		**P**	**19 50 41.5**	**+0.7**
ILAR	**Eielson Array**	**44.75**	**37**		P		**P**	**19 50 42.2**	**+1.4**
	comp=Z,64nm,1.0s,baz=301,slow=7.0,SNR=379									
ILAR					LR		LR	20 10 08.1		
	comp=Z,2µm,19.3s,baz=328,slow=37									
RND	**Reindeer**	**44.92**	**39**		P		**P**	**19 50 43.0**	**+0.7**
RND					pmax		pmax			
	comp=Z,42nm,1.0s									
RND					MLR		MLR			
	comp=Z,2µm,21.0s									
RND	**Reindeer**	**44.92**	**39**		P		**P**	**19 50 43.0**	**+0.7**
HDA	**Harding Lake**	**44.96**	**37**		P		**P**	**19 50 43.2**	**+0.7**
	baz=308,SNR=26									
HDA	**Harding Lake**	**44.96**	**37**		P		**P**	**19 50 43.1**	**+0.7**
HDA					IAmb		IAmb	19 50 45.0		
	comp=Z,101nm,1.2s									
HDA					IAMs_20		IAMs_20	20 09 56.0		
	comp=Z,2µm,18.0s									
SDPT	**Sand Point**	**45.19**	**53**		P		**P**	**19 50 45.9**	**+1.5**
SDPT					IAmb		IAmb	19 50 48.9		
	comp=Z,87nm,1.1s									
NCK	**Nalchik**	**45.20**	**285**	⇓ *e*	P		**P**	**19 50 45.0**	**+0.3**
NCK					pmax		pmax			
	comp=Z,85nm,1.2s									
RSO	**Redoubt South**	**45.28**	**44**				**P**	**19 50 47.7**	**+2.3**
RPR	**Rampur**	**45.38**	**229**	*e*	P		**P**	**19 50 45.7**	**-0.6**
KIV	**Kislovodsk**	**45.38**	**286**	*i*	P		**P**	**19 50 47.6**	**+1.4**
	SNR=46									
KIV	**Kislovodsk**	**45.38**	**286**		P		**P**	**19 50 47.0**	**+0.8**
KIV					P		**P**	**19 50 47.0**	**+0.8**
KIV	**Kislovodsk**	**45.38**	**286**	*d*	P		**P**	**19 50 46.9**	**+0.7**
KIV				*e*				19 52 26.0		
KIV				*e*				19 52 34.1		
KIV				*e*	PPP		PPP	19 53 16.6		
KIV				*e*	S		**S**	**19 57 30.1**	**+2.7**
KIV					pmax		pmax			
	comp=Z,237nm,1.1s									
KIV					MLR		MLR			
	comp=Z,3µm,17.0s									
KIV	**Kislovodsk**	**45.38**	**286**		P		**P**	**19 50 46.5**	**+0.3**
KBZ	**Khabaz**	**45.42**	**286**		P		**P**	**19 50 47.1**	**+0.7**
	comp=Z,20nm,1.0s,baz=50,slow=5.5,SNR=13									
KBZ					S		**S**	**19 57 30.5**	**+2.8**
	comp=Z,2.2nm,0.8s,baz=16,slow=21,SNR=1.3									
KBZ					LR		LR	20 10 58.0		
	comp=Z,3µm,18.9s,baz=26,slow=38									
ZEI	**Tsey**	**45.51**	**284**	*e*	P		**P**	**19 50 46.8**	**-0.6**
ZEI					pmax		pmax			
	comp=Z,53nm,1.0s									
DHY	**Denali Highway**	**45.65**	**39**		P		**P**	**19 50 48.6**	**+0.5**
SRSP	**Sriramsagar**	**45.72**	**230**	*e*	P		**P**	**19 50 48.1**	**-0.9**
SRSP					IVmB_BB			19 50 50.5		
	comp=Z,491nm,1.1s									
SRSP					IVMs_BB		IVMs_BB	20 11 06.2		
	comp=Z,478nm,12.0s									
A36M	**Sachs Harbour**	**45.75**	**22**		P		**P**	**19 50 49.2**	**+0.6**
	baz=318,SNR=18									
A36M					S		**S**	**19 57 30.5**	**-1.2**
	baz=318									
NEY	**Neytrino**	**45.83**	**285**	*d i*	P		**P**	**19 50 51.7**	**+1.8**
NEY					pmax		pmax			
	comp=Z,47nm,1.0s									
NEY					MLR		MLR			
	comp=Z,1µm,17.0s									
PVM	**Polavaram**	**45.86**	**226**	*e*	P		**P**	**19 50 50.0**	**-0.1**
PVM					IVmB_BB			19 50 52.1		
	comp=Z,314nm,1.6s									
PVM					IVMsBB			20 10 33.5		
	comp=Z,514nm,14.0s									
NSS	**Namsos**	**45.89**	**324**	*e*	P		**P**	**19 50 49.9**	**+0.1**
GHO	**Glory Hole Cre**	**45.92**	**41**		P		**P**	**19 50 51.2**	**+1.0**
CNBA	**Chernabura Isl**	**45.92**	**54**		P		**P**	**19 50 49.2**	**-1.0**
PMR	**Palmer**	**45.95**	**41**		P		**P**	**19 50 51.9**	**+1.5**
PMR					pmax		pmax			
	comp=Z,124nm,1.2s									
PMR					MLR		MLR			
	comp=Z,1µm,20.0s									
PMR	**Palmer**	**45.95**	**41**		P		**P**	**19 50 51.9**	**+1.5**
PMR					IAmb		IAmb	19 50 52.9		
	comp=Z,124nm,1.2s									
MICGM	**Minsk**	**46.00**	**306**	⇓ *e*	P		**P**	**19 50 52.0**	**+1.2**
MICGM					PM			19 50 53.0		
	comp=Z,0.3nm,1.0s									
MICGM				*e*	S		**S**	**19 57 38.0**	**+2.2**
MICGM				*e*	LR		LR	20 09 35.0		
MICGM					LRM		MLR	20 12 19.0		
	comp=Z,9.4nm,14.0s									
MNK	**Minsk**	**46.00**	**306**	⇓ *e*	P		**P**	**19 50 52.0**	**+1.2**
MNK				*e*	S		**S**	**19 57 38.0**	**+2.2**
MNK					pmax		pmax			
	comp=Z,330nm,1.0s									
MNK					MLR		MLR			
	comp=Z,9µm,14.0s									
RC01	**Rabbit Creek A**	**46.05**	**42**		P		**P**	**19 50 52.1**	**+0.9**
RC01					IAmb		IAmb	19 50 53.7		
	comp=Z,98nm,1.2s									
RIDG	**Independent Ri**	**46.10**	**37**		P		**P**	**19 50 51.2**	**-0.4**
RIDG					IAmb		IAmb	19 50 53.3		
	comp=Z,119nm,1.3s									
ISAL	**Salakas**	**46.11**	**308**	*e*	P		**P**	**19 50 52.1**	**+0.5**
SML	**Sawmill**	**46.11**	**41**		P		**P**	**19 50 52.7**	**+1.0**
IIGN	**Ignalina**	**46.21**	**308**	*e*	P		**P**	**19 50 52.8**	**+0.3**
HOM	**Homer**	**46.22**	**45**		P		**P**	**19 50 54.1**	**+1.6**
SCRK	**Sand Creek**	**46.23**	**37**		P		**P**	**19 50 52.7**	**0.0**
SCRK					IAMs_20		IAMs_20	20 12 32.7		
	comp=Z,2µm,20.0s									
NACGM	**Naroch**	**46.24**	**307**	*e*	P		**P**	**19 50 52.0**	**-0.7**
NACGM				*e*	S		**S**	**19 57 38.0**	**-1.2**
NACGM				*e*	PS			19 58 08.0		
NACGM				*e*	SS		**SS**	**20 01 04.0**	**0.0**
NACGM				*e*	LQ		LQ	20 06 07.0		
NACGM				*e*	LR		LR	20 09 46.0		
NACGM					LRM		MLR	20 12 08.0		
	comp=Z,14nm,14.0s									
KNK	**Knik Glacier**	**46.32**	**41**		P		**P**	**19 50 54.7**	**+1.4**
KNK					IAmb		IAmb	19 50 56.4		
	comp=Z,96nm,1.2s									
PAX	**Paxson**	**46.38**	**38**		P		**P**	**19 50 54.4**	**+0.5**
PAX					IAmb		IAmb	19 50 56.0		
	comp=Z,62nm,1.0s									
PAX							**PcP**	**19 52 29.2**	**+0.6**
DOT	**Dot Lake**	**46.42**	**37**		P		**P**	**19 50 54.6**	**+0.5**
DOT					IAMs_20		IAMs_20	20 10 48.6		
	comp=Z,2µm,19.0s									
INK	**Inuvik**	**46.44**	**28**		P		**P**	**19 50 54.9**	**+0.7**
INK					pmax		pmax			
	comp=Z,125nm,1.2s									
INK					MLR		MLR			
	comp=Z,3µm,21.0s									
INK	**Inuvik**	**46.44**	**28**		P		**P**	**19 50 54.9**	**+0.7**
INK					IAMs_20		IAMs_20	20 11 31.0		
	comp=Z,3µm,21.0s									
BRLK	**Bradley Lake**	**46.45**	**44**		P		**P**	**19 50 54.9**	**+0.5**
SLIT	**Slitere, Latvi**	**46.45**	**312**	*e*	P		**P**	**19 50 53.4**	**-0.9**
SCM	**Sheep Creek Mo**	**46.46**	**40**		P		**P**	**19 50 55.7**	**+1.2**
SCM					pmax		pmax			
	comp=Z,50nm,0.8s									
SCM					MLR		MLR			
	comp=Z,1µm,20.0s									
SCM	**Sheep Creek Mo**	**46.46**	**40**		P		**P**	**19 50 55.7**	**+1.2**
SCM					IAmb		IAmb	19 50 58.6		
	comp=Z,50nm,0.8s									
CNPM	**China Poot**	**46.47**	**44**		P		**P**	**19 50 55.4**	**+0.9**
CNPM					IAMs_20		IAMs_20	20 10 53.1		
	comp=Z,2µm,19.0s									
EGAK	**Eagle**	**46.63**	**35**		P		**P**	**19 50 56.6**	**+0.9**
EGAK					IAMs_20		IAMs_20	20 10 19.1		
	comp=Z,3µm,20.0s									
AKH	**Akhalkalaki**	**46.66**	**283**	⇑	P		**P**	**19 50 58.2**	**+1.7**
AKH	**Akhalkalaki**	**46.66**	**283**		P		**P**	**19 50 57.7**	**+1.2**
AKH								19 52 28.7		
AKH					pmax		pmax			
	comp=Z,69nm,1.1s									
AKH					MLR		MLR			
	comp=Z,2µm,20.0s									
AKH	**Akhalkalaki**	**46.66**	**283**		P		**P**	**19 50 57.7**	**+1.2**
AKH					IAmb		IAmb	19 51 01.9		
	comp=Z,69nm,1.1s									
AKH					PcP		**PcP**	**19 52 28.7**	**-1.4**
SEW	**Seward**	**46.79**	**43**		P		**P**	**19 50 57.8**	**+0.8**
SEW					IAmb		IAmb	19 50 59.4		
	comp=Z,79nm,1.3s									
EPYK	**Eagle Plains**	**46.90**	**31**		P		**P**	**19 50 58.7**	**+0.8**
	baz=314,SNR=42									
EPYK	**Eagle Plains**	**46.90**	**31**		P		**P**	**19 50 58.5**	**+0.6**
EPYK					IAmb		IAmb	19 51 00.3		
	comp=Z,77nm,1.1s									
HYBB	**Hyderabad (bro**	**46.97**	**229**	*e*	P		**P**	**19 50 58.6**	**-0.3**
HYBB					IVmB_BB			19 51 00.5		
	comp=Z,392nm,1.3s									
HYBB					IVMs_BB		IVMs_BB	20 11 58.7		
	comp=Z,553nm,13.8s									
HYB	**Hyderabad**	**46.98**	**229**	*i*	P		**P**	**19 50 59.0**	**+0.1**
MENT	**Mentasta**	**47.01**	**38**		P		**P**	**19 50 59.3**	**+0.6**
MENT					IAmb		IAmb	19 51 03.2		
	comp=Z,56nm,0.9s									
MENT					IAMs_20		IAMs_20	20 11 45.2		
	comp=Z,2µm,18.0s									
KDAK	**Kodiak Island**	**47.05**	**47**		P		**P**	**19 50 59.7**	**+0.7**
KDAK					pmax		pmax			
	comp=Z,95nm,1.3s									
KDAK					MLR		MLR			
	comp=Z,2µm,20.0s									
KDAK	**Kodiak Island**	**47.05**	**47**		P		**P**	**19 50 59.7**	**+0.7**
KDAK					IAmb		IAmb	19 51 01.4		
	comp=Z,95nm,1.3s									
PABE	**Paberze**	**47.10**	**309**	*e*	P		**P**	**19 50 59.4**	**0.0**
OHAK	**Old Harbor**	**47.12**	**48**		P		**P**	**19 51 00.6**	**+1.0**
GLI	**Glacier Island**	**47.17**	**41**		P		**P**	**19 51 01.2**	**+1.3**
GLI					IAmb		IAmb	19 51 02.5		
	comp=Z,98nm,1.3s									
SOC	**Sochi**	**47.23**	**288**	*c i*	P		**P**	**19 51 01.2**	**+0.6**
SOC				*e*				19 52 46.2		
SOC				*e*	PPP		PPP	19 53 40.2		
SOC				*e*	S		**S**	**19 57 56.2**	**+2.6**
SOC				*e*	SS		**SS**	**20 01 19.6**	**-0.7**
SOC				*e*	SSS		SSS	20 02 22.3		
SOC					pmax		pmax			
	comp=Z,103nm,1.2s									
SOC					MLR		MLR			
	comp=Z,3µm,19.0s									
KLRI	**Killari**	**47.24**	**232**	*e*	P		**P**	**19 51 00.2**	**-0.8**
KLRI					IVmB_BB			19 51 02.6		
	comp=Z,677nm,1.4s									
KLRI					IVMs_BB		IVMs_BB	20 12 03.7		
	comp=Z,476nm,9.6s									
TBLU	**Trondheim**	**47.30**	**323**	*e*	P		**P**	**19 50 59.0**	**-1.9**
PBA	**Port Blair**	**47.31**	**209**		P		P	19 51 02.3	+0.8
PBA					IAMs_20		IAMs_20	20 10 51.8		
	comp=Z,3µm,21.0s									
NJS	**Nagarjunasagar**	**47.43**	**228**	*e*	P		**P**	**19 51 01.9**	**-0.5**
NJS					IVmB_BB			19 51 04.3		
	comp=Z,419nm,1.4s									
NJS					IVMs_BB		IVMs_BB	20 11 41.5		
	comp=Z,494nm,9.6s									
FID	**Port Fidalgo**	**47.48**	**41**		P		**P**	**19 51 03.3**	**+0.9**
BATM	**Batumi**	**47.51**	**284**	⇑	P		**P**	**19 51 04.4**	**+1.5**
ANN	**Anapa**	**47.61**	**290**	*e*	P		**P**	**19 51 01.7**	**-1.9**
ANN				*e*	S		**S**	**19 57 59.8**	**+0.7**
ANN					pmax		pmax			
	comp=Z,63nm,1.3s									
ANN					MLR		MLR			
	comp=Z,3µm,16.0s									
TULEG	**Thule**	**47.64**	**1**		P		**P**	**19 51 02.6**	**-0.8**
PBUR	**Paburge**	**47.64**	**311**	*e*	P		**P**	**19 51 03.6**	**-0.1**
DAWY	**Dawson**	**47.68**	**35**		P		**P**	**19 51 04.4**	**+0.5**
DAWY					IAmb		IAmb	19 51 06.5		
	comp=Z,58nm,1.1s									
DAWY					PcP		**PcP**	**19 52 34.1**	**+1.0**
HIN	**Hinchinbrook I**	**47.71**	**41**		P		**P**	**19 51 06.0**	**+1.8**
ADKI	**Addanki**	**47.79**	**227**	*e*	P		**P**	**19 51 05.0**	**-0.2**
ADKI					IVmB_BB			19 51 07.5		
	comp=Z,322nm,1.2s									
ADKI					IVMs_BB		IVMs_BB	20 11 43.7		
	comp=Z,368nm,13.3s									
AKASG	**Malin Array Be**	**47.82**	**301**		P		**P**	**19 51 04.5**	**-0.6**
	comp=Z,67nm,0.9s,baz=44,slow=8.7,SNR=84									
AKASG					S		**S**	**19 58 02.6**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=260,slow=17,SNR=1.6									
AKASG					LR		LR	20 12 57.3		
	comp=Z,1µm,21.1s,baz=45,slow=38									
AKBB	**Malin Array Si**

SUW pmax pmax
comp=Z,106nm,1.1s
SUW MLR MLR
comp=Z,2µm,18.0s
SUW Suwalki 48.42 308 P **P** **19 51 08.8 -0.8**
SUW PcP **PcP** **19 52 35.0 -0.8**
SUW IAMs_20 IAMs_20 20 13 12.4
comp=Z,2µm,18.0s
NB201 NORSAR Array S 48.44 321 P **P** **19 51 09.7 -0.2**
NC204 NORSAR Array S 48.47 321 P **P** **19 51 10.6 +0.5**
NB2 NORSAR Subarra 48.48 321 P **P** **19 51 09.7 -0.4**
comp=Z,56nm,0.9s,baz=49,slow=7.9
NB2 NORSAR Subarra 48.48 321 P **P** **19 51 09.7 -0.4**
baz=49,slow=7.9
NOA NORSAR Array B 48.48 321 P **P** **19 51 09.6 -0.6**
comp=Z,46nm,0.9s,baz=47,slow=7.5,SNR=79
NOA LR LR 20 13 12.6
comp=Z,2µm,20.1s,baz=30,slow=38
DOMB Dombas 48.53 323 *e*P **P** **19 51 10.0 -0.6**
NC602 NORSAR Array S 48.57 320 P **P** **19 51 09.6 -1.2**
NC602 NORSAR Array S 48.57 320 *e*P **P** **19 51 11.1 +0.3**
GUMO Guam 48.60 138 P **P** **19 51 11.3 -0.2**
GUMO pmax pmax
comp=Z,156nm,1.3s
GUMO Guam 48.60 138 P **P** **19 51 11.3 -0.2**
NBO00 NORSAR Array S 48.64 321 P **P** **19 51 10.5 -0.8**
MOL Molde 48.67 324 *e*P **P** **19 51 11.6 +0.1**
NAO01 NORSAR Array S 48.73 321 P **P** **19 51 11.2 -0.8**
BALM Baldy 48.78 39 P **P** **19 51 13.6 +1.0**
BARN Barnard Glacie 49.00 39 P **P** **19 51 16.1 +1.8**
WAX Waxell Ridge 49.00 40 P **P** **19 51 15.6 +1.4**
WAX IAmb IAmb 19 51 17.7
comp=Z,106nm,1.2s
WAX IAMs_20 IAMs_20 20 15 17.0
comp=Z,2µm,19.0s
AKN Aaknes 49.13 324 *e*P **P** **19 51 15.1 -0.1**
CTGM Chitina Glacie 49.18 39 P **P** **19 51 17.2 +1.5**
SIM Simferopol' **49.24 293** *ce*P **P** **19 51 16.6 +0.4**
SIM *e* 19 53 10.0
SIM *e*S **S** **19 58 23.0 +0.9**
SIM pmax pmax
comp=Z,24nm,1.1s
SIM MLR MLR
comp=Z,2µm,11.0s
YAH Yahtse 49.46 39 P **P** **19 51 19.6 +1.7**
YAH IAMs_20 IAMs_20 20 12 57.1
comp=Z,2µm,22.0s
KULLO Kullorsuaq 49.49 357 ⇓ *i*P **P** **19 51 17.2 -0.4**
KULLO pmax pmax
comp=Z,32nm,1.1s
KULLO Kullorsuaq 49.49 357 ⇓ *i*P **P** **19 51 17.2 -0.4**
comp=Z,32nm,1.1s
MESA MESA 49.51 40 P **P** **19 51 19.6 +1.4**
MESA IAmb IAmb 19 51 21.8
comp=Z,87nm,1.2s
KCP Kidapawan **49.72 166** ⇑ *i*P **P** **19 51 22.0 +1.8**
URV Uravakonda 49.73 229 *e*P **P** **19 51 19.4 -0.8**
URV IVmB_BB 19 51 21.8
comp=Z,317nm,1.3s
URV IVMs_BB IVMs_BB 20 13 30.5
comp=Z,550nm,15.1s
DAV Davao City (W) 49.73 165 ⇑ *i*P **P** **19 51 22.0 +1.9**
DAV Davao City (W) 49.73 165 P **P** **19 51 20.5 +0.4**
DAV Davao City (W) 49.73 165 IAMs_20 IAMs_20 20 15 03.9
comp=Z,3µm,19.0s
SKAR Skarslia 49.75 322 *e*P **P** **19 51 20.7 +0.8**
SKHT Srikalahasti 49.80 226 *e*P **P** **19 51 20.1 -0.5**
SKHT IVmBBB 19 51 23.9
comp=Z,309nm,1.4s
SKHT IVMs_BB IVMs_BB 20 13 20.6
comp=Z,427nm,14.9s
SCO Scoresbysund 49.88 342 *i* P **P** **19 51 22.0 +1.4**
SCO pmax pmax
comp=Z,36nm,1.5s
SCO Scoresbysund 49.88 342 P **P** **19 51 20.6 0.0**
SCO Scoresbysund 49.88 342 *i* P **P** **19 51 22.0 +1.4**
comp=Z,36nm,1.5s
KKM Kota Kinabalu 49.93 177 P **P** **19 51 21.1 -0.7**
KKM PcP **PcP** **19 52 42.0 0.0**
KKM IAMs_20 IAMs_20 20 13 18.9
comp=Z,3µm,20.0s
SORM Soroca 49.97 299 ⇓ P **P** **19 51 21.4 -0.2**
KONO Kongsberg 50.02 320 P **P** **19 51 22.2 +0.3**
KONO pmax pmax
comp=Z,39nm,1.2s
KONO MLR MLR
comp=Z,2µm,18.0s
KONO Kongsberg 50.02 320 P **P** **19 51 22.2 +0.3**
KONO Kongsberg 50.02 320 IAMs_20 IAMs_20 20 16 15.7
comp=Z,2µm,18.0s
KONO Kongsberg 50.02 320 *e*P **P** **19 51 22.3 +0.3**
HYA Hoyanger 50.13 323 *e*P **P** **19 51 23.9 +1.2**
SUMG Summit 50.22 350 *i* P **P** **19 51 24.6 +0.8**
SUMG pmax pmax
comp=Z,210nm,1.3s
SUMG Summit 50.22 350 P **P** **19 51 24.5 +0.8**
SUMG IAmb IAmb 19 51 28.4
comp=Z,88nm,1.3s
SUMG IAMs_20 IAMs_20 20 12 16.2
comp=Z,2µm,20.0s
SUMG Summit 50.22 350 *i* P **P** **19 51 24.6 +0.8**
comp=Z,213nm,1.3s
KIS Kishinev 50.52 298 ⇓ *i*P **P** **19 51 28.0 +2.2**
comp=Z,170nm,2.0s
KIS Kishinev 50.52 298 *e*PP PP 19 53 24.0 +2.8
KIS *e*S **S** **19 58 42.0 +2.1**
KIS *i* SS **SS** **20 02 20.0 +6.8**
KIS *i* LQ LQ 20 09 20.0
KIS LRM MLR 20 12 44.0
comp=Z,2µm,16.0s
KIS Kishinev 50.52 298 ⇓ *i*P **P** **19 51 28.0 +2.2**
KIS *i* 19 51 31.0
KIS *e* 19 53 24.0
KIS *e*S **S** **19 58 42.0 +2.1**
KIS pmax pmax
comp=Z,170nm,2.0s
KIS MLR MLR
comp=Z,2µm,16.0s
KIS MLR MLR
comp=N,3µm,10.0s
MILM Milestii Mici 50.58 298 ⇑ P **P** **19 51 26.2 -0.1**
HYT Haines Junctio 50.60 37 P **P** **19 51 27.7 +1.3**
HYT IAmb IAmb 19 51 29.9
comp=Z,75nm,1.1s
HYT IAMs_20 IAMs_20 20 16 38.1
comp=Z,2µm,20.0s
LVV L'vov 50.88 303 *e*P **P** **19 51 27.7 -0.8**
LVV *e* 19 53 19.7
LVV *e*S **S** **19 58 40.5 -4.3**
LVV *e* 19 58 58.5
LVV *e* 20 02 21.8
LVV *e* 20 03 56.4
LVV pmax pmax
comp=Z,100nm,1.4s
LVV MLR MLR
comp=N,2µm,13.0s
LVV MLR MLR
comp=E,2µm,13.0s
LVV MLR MLR
comp=Z,2µm,13.0s
DIKM Dikmen 50.94 289 ⇑ P **P** **19 51 30.2 +1.2**
SHME Shamm 50.96 259 *i* P **P** **19 51 29.1 -0.4**
SNR=16
BANOM Banah 50.97 259 *i* P **P** **19 51 29.8 +0.3**
SNR=15
BANOM Banah 50.97 259 P **P** **19 51 29.2 -0.3**
SNR=6.7
LEOM Leova 51.16 298 ⇓ P **P** **19 51 31.1 +0.5**
VASR Vaslui 51.27 298 ⇑ P **P** **19 51 31.7 +0.1**
BLS5 Blasjo 51.30 321 *e*P **P** **19 51 32.3 +0.7**
HOMB Homborsund 51.41 319 *e*P **P** **19 51 32.7 +0.4**
MSFE Esma-Masafi 51.49 258 *i* P **P** **19 51 33.6 +0.1**
SNR=5.6
GKP Gorka Klasztor 51.51 310 *e*P **P** **19 51 34.0 +0.9**
GKP *e*S **S** **19 58 56.8 +3.3**
GKP LMZ LR 20 14 31.4
comp=Z,2.7nm,20.9s
PRAR RASCA 51.54 300 ⇑ P **P** **19 51 33.8 +0.3**
WHY Whitehorse 51.59 36 P **P** **19 51 34.1 +0.2**
BIR Birlad 51.62 298 ⇑ P **P** **19 51 35.6 +1.5**
DHAK Deception Hill 51.62 39 P **P** **19 51 35.8 +1.8**
KULM Kulim 51.76 197 P **P** **19 51 35.8 +0.4**
TLCR 51.78 296 ⇑ P **P** **19 51 35.0 -0.3**
UOSS Minazif 51.80 258 *i* P **P** **19 51 35.4 -0.3**
SNR=14
UOSS Minazif 51.80 258 P **P** **19 51 34.1 -1.6**
UOSS P **P** **19 51 34.1 -1.6**
UOSS Minazif 51.80 258 P **P** **19 51 35.2 -0.5**
SNART Snartemo 51.83 320 *e*P **P** **19 51 37.2 +1.7**
BUR08 Bucovina Ar. S 51.84 301 P **P** **19 51 35.9 0.0**
BUR08 IAmb IAmb 19 51 42.3
comp=Z,60nm,1.1s
WSAR Wadi Sarin 51.84 254 P **P** **19 51 36.6 +0.6**
BURAR Bucovina Array 51.85 301 ⇑ P **P** **19 51 36.2 +0.2**
BIDO Bidbid 51.89 255 P **P** **19 51 36.1 -0.2**
SNR=9.7
BIDO P **P** **19 51 36.1 -0.2**
SNR=9.7
BIZ Bicaz 51.89 300 ⇑ P **P** **19 51 36.5 +0.3**
TESR Tescani 51.93 299 ⇑ P **P** **19 51 36.7 +0.3**
HATD Hatta, Dubai 51.93 258 *i* P **P** **19 51 36.4 -0.4**
SNR=22
HATD Hatta, Dubai 51.93 258 P **P** **19 51 36.1 -0.6**
SNR=12
HATD P **P** **19 51 36.1 -0.6**
SNR=12
JURR Jurilovca 52.05 296 ⇑ P **P** **19 51 37.8 +0.5**
NAZ Nazwa, Dubai 52.06 258 *i* P **P** **19 51 37.7 +0.1**
SNR=7.9
NAZ Nazwa, Dubai 52.06 258 P **P** **19 51 40.0 +2.3**
SNR=6.1
ASHO Ashiyiah 52.09 258 *i* P **P** **19 51 38.0 +0.1**
SNR=30
ASHO Ashiyiah 52.09 258 P **P** **19 51 37.5 -0.4**
SNR=20
CFR Carcaliu 52.13 297 ⇑ P **P** **19 51 38.0 +0.2**
WBK Wadi Bani Khal 52.17 254 P **P** **19 51 39.1 +0.6**
SNR=9.3
WBK P **P** **19 51 39.1 +0.6**
SNR=9.3
ILGA Ilgaz 52.18 289 P **P** **19 51 39.1 +0.5**
RGN Rugen 52.24 314 *e*P **P** **19 51 39.5 +0.9**
comp=Z,176nm,1.2s,baz=41,slow=7.1
RGN Rugen 52.24 314 P **P** **19 51 39.1 +0.5**
RGN IAMs_20 IAMs_20 20 15 16.2
comp=Z,2µm,22.0s
ODBI Odobesti 52.25 298 ⇑ P **P** **19 51 40.1 +1.3**
SOHO SOHO 52.26 257 P **P** **19 51 38.6 -0.6**
SNR=10.0
SOHO P **P** **19 51 38.6 -0.6**
SNR=10.0
HOQ Hoqain 52.28 256 P **P** **19 51 39.1 -0.2**
SNR=16
HOQ P **P** **19 51 39.1 -0.2**
SNR=16
SMDO Samad 52.30 255 P **P** **19 51 39.9 +0.3**
SNR=11
SMDO P **P** **19 51 39.9 +0.3**
SNR=11
SKAG Skagway 52.34 37 P **P** **19 51 41.3 +2.0**
SKAG IAMs_20 IAMs_20 20 14 21.2
comp=Z,2µm,21.0s
VRI Vrincioaia 52.34 298 ⇑ P **P** **19 51 40.2 +0.7**
PLOR Plostina 52.39 298 ⇑ P **P** **19 51 40.1 +0.2**
MUD Monsted U'grnd 52.48 317 *i* P **P** **19 51 40.9 +0.6**
MUD pmax pmax
comp=Z,81nm,1.2s
MUD Monsted U'grnd 52.48 317 *i* P **P** **19 51 40.9 +0.6**
comp=Z,80nm,1.2s
IPM Ipoh 52.49 196 P **P** **19 51 40.2 -0.7**
IPM **PcP** **19 52 51.3 -0.1**
TIRR Tirgusor 52.50 296 P **P** **19 51 39.8 -0.8**
TIRR pmax pmax
comp=Z,44nm,0.9s
TIRR MLR MLR
comp=Z,7µm,18.0s
TIRR Tirgusor 52.50 296 P **P** **19 51 39.8 -0.8**
LHMI Lhok Sumawe 52.50 202 IAMs_20 IAMs_20 20 15 53.6
comp=Z,2µm,20.0s
UZH Uzhgorod 52.52 303 *d* iP **P** **19 51 42.1 +1.3**
UZH *e* 19 53 43.7
UZH *e*PPP PPP 19 54 47.6
UZH *i* S **S** **19 59 07.0 -0.4**
UZH *i* PS PKiKP 19 59 17.4 -13
UZH *e*SP SPn 19 59 30.4 +15
UZH MLR MLR
comp=N,700nm,14.0s
UZH MLR MLR
comp=E,400nm,14.0s
UZH MLR MLR
comp=Z,350nm,14.0s
OJC Ojcow 52.55 306 *e*P **P** **19 51 40.9 0.0**
OJC *e*S **S** **19 59 09.8 +2.0**
OJC LMZ LR 20 15 51.8
comp=Z,3.0nm,18.0s
OJC Ojcow 52.55 306 P **P** **19 51 41.0 0.0**
OJC pmax pmax
comp=Z,42nm,1.2s
OJC Ojcow 52.55 306 P **P** **19 51 41.0 0.0**
TLBR Topalu 52.62 296 ⇑ P **P** **19 51 41.8 +0.2**
BMR Baia Mare 52.63 302 ⇑ P **P** **19 51 42.0 +0.4**
ARCR ARCALIA 52.64 301 ⇑ P **P** **19 51 43.2 +1.5**
ALNE Al Ain 52.75 258 *i* P **P** **19 51 42.9 0.0**
SNR=6.4
TRPA Tarpa 52.76 303 ⇑ P **P** **19 51 43.5 +0.9**
AJN Ajban 52.77 259 *i* P **P** **19 51 43.7 +0.8**
SNR=5.1
JMDO Jabal Madar 52.83 254 P **P** **19 51 44.2 +0.9**
SNR=6.3
JMDO P **P** **19 51 44.2 +0.9**
SNR=6.3
NIE Niedzica 52.89 305 *e*P **P** **19 51 44.0 +0.5**
NIE *e*S **S** **19 59 15.8 +3.3**
NIE LMZ LR 20 16 25.4
comp=Z,2.2nm,15.3s
ARQ Araqi 52.91 256 P **P** **19 51 43.9 -0.1**
SNR=16
ARQ P **P** **19 51 43.9 -0.1**
SNR=16
DOPR Dopca 52.93 299 ⇑ P **P** **19 51 45.3 +1.4**
AMRR Amara 52.93 297 ⇑ P **P** **19 51 44.9 +1.1**
MLR Muntele Rosu 53.00 298 ⇑ P **P** **19 51 45.3 +0.8**
MLR Muntele Rosu 53.00 298 P **P** **19 51 44.7 +0.2**
MLR pmax pmax
comp=Z,53nm,1.4s
MLR MLR MLR
comp=Z,4µm,19.0s
MLR Muntele Rosu 53.00 298 P **P** **19 51 44.7 +0.2**
BSY Bisya 53.02 255 P **P** **19 51 44.8 0.0**
SNR=9.7
BSY P **P** **19 51 44.8 0.0**
SNR=9.7
ICOR Ion Corvin 53.05 296 ⇑ P **P** **19 51 45.6 +0.8**
GAZ Gaziantep 53.10 283 P **P** **19 51 45.8 +0.5**
GAZ IAmb IAmb 19 51 49.2
comp=Z,147nm,1.8s
BESE Bessie Mountai 53.17 38 P **P** **19 51 46.3 +0.8**
BESE IAmb IAmb 19 51 48.7
comp=Z,92nm,1.1s
BR131 Keskin Array S 53.17 288 P **P** **19 51 46.1 +0.2**
SNR=15
BR131 Keskin Array S 53.17 288 P **P** **19 51 46.3 +0.4**
BR131 19 52 51.0
BR131 pmax pmax
comp=Z,34nm,1.0s
BR131 Keskin Array S 53.17 288 P **P** **19 51 46.3 +0.4**
BR131 PcP **PcP** **19 52 51.0 -2.9**
BRTR Keskin Array B 53.17 288 P **P** **19 51 45.8 -0.1**
comp=Z,22nm,0.9s,baz=61,slow=5.1,SNR=27
BRTR PcP **PcP** **19 52 51.1 -2.8**
comp=Z,16nm,1.1s,baz=79,slow=2.5,SNR=1.9
SULR 53.42 297 ⇑ P **P** **19 51 48.9 +1.4**
LANS Liptovska Anna 53.46 305 *e*P **P** **19 51 49.4 +1.6**
LANS pmax pmax
comp=Z,34nm,1.2s
LANS Liptovska Anna 53.46 305 *e*P **P** **19 51 49.4 +1.6**
KECS Kecovo 53.47 304 *e*P **P** **19 51 48.3 +0.5**
KECS pmax pmax
comp=Z,16nm,0.9s
KECS Kecovo 53.47 304 *e*P **P** **19 51 48.3 +0.5**
SBUM Sibu 53.49 182 P **P** **19 51 48.9 +0.7**
ANTO Ankara 53.52 289 ⇑ P **P** **19 51 49.7 +1.3**
ANTO Ankara 53.52 289 P **P** **19 51 48.3 -0.1**
ANTO pmax pmax
comp=Z,23nm,1.1s
ANTO MLR MLR
comp=Z,2µm,21.0s
ANTO Ankara 53.52 289 P **P** **19 51 48.3 -0.1**
ANTO Ankara 53.52 289 IAMs_20 IAMs_20 20 16 09.5
comp=Z,2µm,21.0s
RUE Ruedersdorf 53.54 312 *e*P **P** **19 51 48.8 +0.5**
RUE Ruedersdorf 53.54 312 *e*P **P** **19 51 48.9 +0.6**
comp=Z,49nm,0.8s,baz=41,slow=7.1
BR231 Keskin MP Arra 53.55 289 P **P** **19 51 49.3 +0.7**
JIS Juneau Island 53.56 38 P **P** **19 51 49.1 +0.8**
JIS IAmb IAmb 19 51 51.9
comp=Z,106nm,1.2s
OKC Ostrava-Krasne 53.56 307 *e*P **P** **19 51 48.6 +0.2**
OKC *e*S **S** **19 59 24.5 +2.9**
OKC MLR MLR
comp=Z,3µm,16.5s
OKC Ostrava-Krasne 53.56 307 *e*P **P** **19 51 48.6 +0.2**
OKC *e*S **S** **19 59 24.5 +2.9**
OKC AMS AMS 20 16 40.0
comp=Z,3µm,16.5s
DRGR 53.64 301 ⇑ P **P** **19 51 50.1 +0.9**
KSP Ksiaz 53.66 309 *e*P **P** **19 51 49.5 +0.4**
KSP *e*PcP **PcP** **19 52 57.4 +2.0**
KSP *e*S **S** **19 59 24.9 +2.0**
KSP LMZ LR 20 15 41.9
comp=Z,2.1nm,21.3s
SKMB Sankelmark Bun 53.66 316 *e*P **P** **19 51 50.5 +1.4**
comp=Z,110nm,0.7s,baz=41,slow=7.1
MORC Moravsky Berou 53.88 307 *e*P **P** **19 51 51.1 +0.3**
MORC *e*S **S** **19 59 27.8 +1.8**
MORC Moravsky Berou 53.88 307 ⇑ P **P** **19 51 51.6 +0.8**
MORC Moravsky Berou 53.88 307 P **P** **19 51 50.8 0.0**
MORC pmax pmax
comp=Z,61nm,1.2s
MORC MLR MLR
comp=Z,2µm,18.0s
MORC Moravsky Berou 53.88 307 P **P** **19 51 50.8 0.0**
MORC IAmb IAmb 19 51 53.8
comp=Z,61nm,1.2s
MORC IAMs_20 IAMs_20 20 16 56.7
comp=Z,2µm,18.0s
BSEG Bad Segeberg 53.89 315 *e*P **P** **19 51 51.8 +1.0**
comp=Z,54nm,1.1s,baz=41,slow=7.1
OSTC Ostas 53.90 309 *e*P **P** **19 51 51.5 +0.6**
OSTC *e*S **S** **19 59 27.7 +1.5**
OSTC AMS AMS 20 18 20.0
comp=Z,2µm,11.4s
PRD Provadia 53.91 295 *i* P **P** **19 51 51.7 +0.6**
MDUB Mudurnu 53.92 291 P **P** **19 51 51.3 -0.1**
CHVC Chvalec 53.95 309 *e*P **P** **19 51 51.8 +0.5**
CHVC AMS AMS 20 18 30.0
comp=Z,2µm,11.9s
KRLC Kraliky 54.00 308 *e*P **P** **19 51 52.1 +0.4**
KRLC *e*S **S** **19 59 29.5 +1.9**
KRLC MLR MLR
comp=Z,3µm,12.5s
KRLC Kraliky 54.00 308 *e*P **P** **19 51 52.1 +0.4**
KRLC *e*S **S** **19 59 29.5 +1.9**
KRLC AMS AMS 20 16 50.0
comp=Z,3µm,12.5s
DPC Dobruska-Polom 54.00 308 *e*P **P** **19 51 52.7 +1.0**
DPC *e*S **S** **19 59 30.2 +2.5**
DPC MLR MLR
comp=Z,2µm,16.0s
DPC Dobruska-Polom 54.00 308 *e*P **P** **19 51 52.7 +1.0**
DPC *e*S **S** **19 59 30.2 +2.5**
DPC AMS AMS 20 16 40.0
comp=Z,2µm,16.0s
MHTO MHTO 54.02 253 P **P** **19 51 52.1 0.0**
SNR=18
UPC Upice 54.02 309 *e*P **P** **19 51 52.6 +0.8**
UPC *e*S **S** **19 59 27.5 -0.4**
UPC MLR MLR
comp=Z,2µm,14.2s
UPC Upice 54.02 309 *e*P **P** **19 51 52.6 +0.8**
UPC *e*S **S** **19 59 27.5 -0.4**
UPC AMS AMS 20 16 50.0
comp=Z,2µm,14.2s
RAZG Razgrad 54.10 296 ⇑ P **P** **19 51 52.9 +0.4**
PSZ Piszkesteto 54.15 304 ⇑ P **P** **19 51 54.3 +1.4**
PSZ Piszkesteto 54.15 304 P **P** **19 51 52.9 0.0**
PSZ pmax pmax
comp=Z,77nm,1.3s
PSZ MLR MLR
comp=Z,4µm,19.0s
PSZ Piszkesteto 54.15 304 P **P** **19 51 52.9 0.0**
PSZ IAmb IAmb 19 51 57.0
comp=Z,77nm,1.3s
SIT Sitka 54.16 39 P **P** **19 51 53.7 +1.0**
SIT pmax pmax
comp=Z,135nm,1.1s
SIT MLR MLR
comp=Z,1µm,18.0s
SIT Sitka 54.16 39 P **P** **19 51 53.6 +1.0**
SIT IAMs_20 IAMs_20 20 17 16.7
comp=Z,1µm,18.0s
DEV Deva 54.20 301 ⇓ P **P** **19 51 54.8 +1.6**
VYHS Vyhne 54.22 305 *e*P **P** **19 51 54.1 +0.7**
VYHS pmax pmax
comp=Z,80nm,1.3s
VYHS Vyhne 54.22 305 *e*P **P** **19 51 54.0 +0.7**
VYHS *e*S **S** **19 59 38.5 +7.9**
VYHS *e*SS SS 20 03 30.0 +18
ORH Orhaniye 54.23 292 P P 19 52 05.2 +12
JAVC Velka Javorina 54.49 306 *e*P **P** **19 51 56.4 +1.1**
PSI Prapat 54.49 199 LR LR 20 15 45.0
comp=Z,1µm,18.7s,baz=272,slow=37
PSI Prapat 54.49 199 P **P** **19 51 55.6 -0.1**
PSI pmax pmax
comp=Z,56nm,0.9s
SIRR Siria 54.52 302 ⇑ P **P** **19 51 56.5 +1.0**
KSM Kuching 54.52 185 P **P** **19 51 56.5 +0.7**
KSM IAmb IAmb 19 51 59.5
comp=Z,53nm,0.9s
KSM **PcP** **19 52 58.5 -0.5**
RPSI Rantau Prapat 54.59 199 P **P** **19 51 55.6 -0.6**
RPSI IAmb IAmb 19 51 58.4
comp=Z,56nm,0.9s
SZH Strazhica 54.60 296 *i* P **P** **19 51 55.6 -0.5**
ZIMR 54.60 297 ⇑ P **P** **19 51 57.2 +1.1**
ISK Istanbul-Kandi 54.61 292 P **P** **19 51 56.4 +0.2**
GZR Gura Zlata 54.62 300 ⇑ P **P** **19 51 57.0 +0.7**
PVCC Panska Ves 54.64 309 *e*P **P** **19 51 57.3 +1.0**
PVCC *e*S **S** **19 59 37.6 +1.5**
PVCC MLR MLR
comp=Z,3µm,17.9s
PVCC Panska Ves 54.64 309 *e*P **P** **19 51 57.3 +1.0**
PVCC *e*S **S** **19 59 37.6 +1.5**
PVCC AMS AMS 20 17 20.0
comp=Z,3µm,17.9s
VRAC Vranov 54.64 307 *e*P **P** **19 51 56.8 +0.4**
VRAC *e*S **S** **19 59 39.1 +2.9**
VRAC Vranov 54.64 307 ⇑ P **P** **19 51 57.2 +0.8**
BRG Berggiesshubel 54.65 310 ⇑ *i*P **P** **19 51 56.3 -0.1**
comp=Z,94nm,1.2s
BRG *i* PCP **PcP** **19 52 59.2 +0.1**
comp=Z,26nm,1.0s
BRG PP **PP** **19 54 00.0 +1.6**
BRG S **S** **19 59 33.0 -3.3**
BRG Berggiesshubel 54.65 310 *e*P **P** **19 51 56.8 +0.4**
comp=Z,93nm,1.2s,baz=41,slow=7.1
BRG Berggiesshubel 54.65 310 ⇑ *i*P **P** **19 51 56.3 -0.1**
BRG *i* 19 52 59.2
BRG 19 54 00.0
BRG S **S** **19 59 33.0 -3.3**
BRG SS **SS** **20 03 12.0 -6.3**
BRG pmax pmax
comp=Z,94nm,1.3s
BRG MLR MLR
comp=N,3µm,15.4s
BRG MLR MLR
comp=E,3µm,13.0s
BRG MLR MLR
comp=Z,4µm,15.2s
HLG Helgoland 54.66 316 *e*P **P** **19 51 57.1 +0.7**
comp=Z,69nm,1.2s,baz=41,slow=7.1
CLL Collm 54.73 311 ⇓ *i*P **P** **19 51 57.8 +0.9**
comp=Z,76nm,1.2s
CLL *e*PP **PP** **19 54 06.0 +6.9**
CLL *e*PPP PPP 19 55 07.0
CLL *e*S **S** **19 59 36.0 -1.3**
CLL *e*SS **SS** **20 03 20.0 +0.5**
CLL Collm 54.73 311 *e*P **P** **19 51 58.0 +1.1**
comp=Z,76nm,1.2s,baz=41,slow=7.1
CLL Collm 54.73 311 ⇓ *i*P **P** **19 51 57.8 +0.9**
CLL *e*S **S** **19 59 36.0 -1.3**
CLL pmax pmax
comp=Z,76nm,1.2s

CLL	**Collm**	**54.73**	**311**	P	**P**	**19 51 57.4**	**+0.5**
CLL				IAmb	IAmb	19 52 00.9	
	comp=Z,56nm,1.0s						
CLL				IAMs_20	IAMs_20	20 17 50.3	
	comp=Z,2µm,20.0s						
MYKOM	**Kota Tinggi**	**54.74**	**192**	P	**P**	**19 51 57.9**	**+0.6**
MYKOM				IAmb	IAmb	19 52 03.0	
	comp=Z,52nm,1.1s						
MYKOM				PcP	**PcP**	**19 52 59.5**	**-0.4**
BORG	**Borgarnes**	**54.76**	**338**	P	**P**	**19 51 58.3**	**+1.3**
BORG				pmax	pmax		
	comp=Z,292nm,1.7s						
BORG	**Borgarnes**	**54.76**	**338**	P	**P**	**19 51 58.3**	**+1.3**
SMOL	**Smolenice**	**54.85**	**306**	*e*P	**P**	**19 51 59.2**	**+1.3**
SMOL				pmax	pmax		
	comp=Z,28nm,1.2s						
SMOL	**Smolenice**	**54.85**	**306**	*e*P	**P**	**19 51 59.2**	**+1.3**
FBE	**Freiberg**	**54.87**	**310**	*e*P	**P**	**19 51 58.6**	**+0.6**
	comp=Z,72nm,1.3s,baz=41,slow=7.1						
ELND	**Elena**	**54.88**	**296**	⇑P	**P**	**19 51 58.3**	**+0.2**
DLBC	**Dease Lake**	**54.89**	**35**	P	**P**	**19 51 59.3**	**+1.2**
DLBC				IAmb	IAmb	19 52 01.6	
	comp=Z,119nm,1.3s						
DLBC				IAMs_20	IAMs_20	20 16 25.6	
	comp=Z,2µm,20.0s						
KRUC	**Moravsky**	**54.91**	**307**	*e*P	**P**	**19 51 58.7**	**+0.4**
KRUC				*e*S	**S**	**19 59 43.2**	**+3.4**
SRE	**Strehaia**	**54.94**	**299**	⇑P	**P**	**19 51 59.8**	**+1.2**
BZS	**Buzias**	**55.01**	**301**	⇑P	**P**	**19 51 59.6**	**+0.5**
MODS	**Modra-Piesok**	**55.02**	**306**	*e*P	**P**	**19 51 59.4**	**+0.3**
MODS				pmax	pmax		
	comp=Z,54nm,1.5s						
MODS	**Modra-Piesok**	**55.02**	**306**	*e*P	**P**	**19 51 59.4**	**+0.3**
MODS				*e*S	**S**	**19 59 48.4**	**+7.0**
MODS				*e*SS	SS	20 03 40.6	+16
MODS				*e*L	L	20 17 56.7	
PRA	**Prague**	**55.03**	**309**	*e*P	**P**	**19 52 00.0**	**+0.9**
PRA				*e*S	**S**	**19 59 44.4**	**+3.0**
PRA				MLR	MLR		
	comp=Z,1µm,19.0s						
PRA	**Prague**	**55.03**	**309**	*e*P	**P**	**19 52 00.0**	**+0.9**
PRA				*e*S	**S**	**19 59 44.4**	**+3.0**
PRA				AMS	AMS	20 16 30.0	
	comp=Z,1µm,19.0s						
PRU	**Pruhonice**	**55.05**	**309**	*e*P	**P**	**19 52 00.3**	**+1.0**
PRU				*e*S	**S**	**19 59 40.8**	**-0.8**
PRU				MLR	MLR		
	comp=Z,3µm,17.4s						
PRU	**Pruhonice**	**55.05**	**309**	*e*P	**P**	**19 52 00.3**	**+1.0**
PRU				*e*S	**S**	**19 59 40.8**	**-0.8**
PRU				AMS	AMS	20 16 30.0	
	comp=Z,3µm,17.4s						
NRDL	**Niedersach Rie**	**55.05**	**314**	*e*P	**P**	**19 52 00.0**	**+0.9**
	comp=Z,62nm,1.2s,baz=41,slow=7.1						
ASSE	**Asse, Remlinge**	**55.09**	**313**	*e*P	**P**	**19 52 00.2**	**+0.8**
	comp=Z,89nm,1.2s,baz=41,slow=7.1						
TREC	**Trest**	**55.14**	**308**	*e*P	**P**	**19 52 01.0**	**+1.0**
TREC				MLR	MLR		
	comp=Z,3µm,15.1s						
TREC	**Trest**	**55.14**	**308**	*e*P	**P**	**19 52 01.0**	**+1.0**
TREC				AMS	AMS	20 17 30.0	
	comp=Z,3µm,15.1s						
HERR	**Herculane**	**55.16**	**300**	⇑P	**P**	**19 52 01.0**	**+0.8**
RETH	**Rethem/Aller,**	**55.17**	**314**	*e*P	**P**	**19 52 00.8**	**+0.8**
	comp=Z,83nm,1.2s,baz=41,slow=7.1						
PLVB	**Pleven**	**55.17**	**297**	⇑P	**P**	**19 52 00.7**	**+0.4**
ZST	**Bratislava**	**55.23**	**306**	*e*S	**S**	**19 59 48.3**	**+4.2**
ZST				*e*SS	SS	20 03 46.1	+19
NEUB	**Neuenburg**	**55.32**	**312**	*e*P	**P**	**19 52 01.4**	**+0.2**
	comp=Z,100nm,1.2s,baz=41,slow=7.1						
PUNG	**Punghina**	**55.35**	**299**	⇑P	**P**	**19 52 02.3**	**+0.8**
CLZ	**Clausthal**	**55.43**	**313**	*e*P	**P**	**19 52 03.0**	**+1.0**
	comp=Z,68nm,1.1s,baz=41,slow=7.1						
PBCC	**Pribram**	**55.51**	**309**	*e*P	**P**	**19 52 02.7**	**+0.1**
TPRI	**Tanjung Pinang**	**55.52**	**192**	P	**P**	**19 52 07.7**	**+4.7**
MDVR	**Moldovita**	**55.58**	**300**	⇑P	**P**	**19 52 04.2**	**+1.0**
TANN	**Tannenbergstha**	**55.62**	**311**	*e*P	**P**	**19 52 04.1**	**+0.6**
	comp=Z,106nm,1.3s,baz=41,slow=7.1						
MPEP	**Malo Peshtene**	**55.63**	**298**	P	**P**	**19 52 04.6**	**+1.0**
WRAK	**Wrangell Islan**	**55.70**	**38**	P	**P**	**19 52 04.5**	**+0.7**
WRAK	**Wrangell Islan**	**55.70**	**38**	IAMs_20	IAMs_20	20 16 24.2	
	comp=Z,1µm,18.0s						
PLN	**Plauen**	**55.70**	**311**	*e*P	**P**	**19 52 04.7**	**+0.7**
	comp=Z,109nm,1.4s,baz=41,slow=7.1						
SBSI	**Sibolga**	**55.72**	**198**	P	**P**	**19 52 07.4**	**+3.0**
	comp=Z,396nmcomp=Z,23nm,1.0s						
GUNZ	**Gunzen**	**55.72**	**311**	*e*P	**P**	**19 52 04.9**	**+0.7**
	comp=Z,79nm,1.3s,baz=41,slow=7.1						
WERN	**Wernitzgruen**	**55.76**	**311**	*e*P	**P**	**19 52 05.2**	**+0.7**
	comp=Z,89nm,1.3s,baz=41,slow=7.1						
NKC	**Novy Kostel**	**55.77**	**310**	*e*P	**P**	**19 52 04.9**	**+0.4**
NKC				*e*S	**S**	**19 59 54.6**	**+3.3**
NKC				MLR	MLR		
	comp=Z,5µm,14.9s						
NKC	**Novy Kostel**	**55.77**	**310**	*e*P	**P**	**19 52 04.9**	**+0.4**
NKC				*e*S	**S**	**19 59 54.6**	**+3.3**
NKC				AMS	AMS	20 17 50.0	
	comp=Z,5µm,14.9s						
MPSI	**Mapaga**	**55.77**	**173**	P	**P**	**19 52 06.0**	**+1.2**
	comp=Z,592nmcomp=Z,42nm,0.9s						
MOX	**Moxa**	**55.81**	**311**	*e*P	**P**	**19 52 05.4**	**+0.6**
	comp=Z,111nm,1.2s,baz=41,slow=7.1						
MOX				*e*L	L	20 15 48.1	
	comp=Z,1µm,20.3s						
GTTG	**Gottingen**	**55.82**	**313**	*e*P	**P**	**19 52 05.7**	**+0.9**
	comp=Z,89nm,1.0s,baz=41,slow=7.1						
YKA	**Yellowknife Ar**	**55.85**	**25**	P	**P**	**19 52 04.0**	**-0.9**
	comp=Z,39nn,0.8s,baz=332,slow=6.9,SNR=206						
YKA				LR	LR	20 17 15.8	
	comp=Z,1µm,21.9s,baz=0.0,slow=37						
YKA	**Yellowknife Ar**	**55.85**	**25**	P	**P**	**19 52 04.0**	**-0.9**
HWQ	**Hawqa**	**55.93**	**282**	*e*P	**P**	**19 52 05.9**	**-0.1**
MORH	**Mrgy. Hungar**	**55.98**	**303**	‖*i*P	**P**	**19 52 05.4**	**-0.6**
CONA	**Conrad Observa**	**55.99**	**307**	*i* sP	**P**	**19 52 07.0**	**+0.8**
	comp=Z,39nn,1.2s,SNR=27						
KDZ	**Kurdzhali**	**56.05**	**295**	*i* P	**P**	**19 52 07.6**	**+1.0**
MANZ	**Manzenberg**	**56.10**	**310**	*e*P	**P**	**19 52 07.5**	**+0.6**
	baz=41,slow=7.1						
KHC	**Kasperske Hory**	**56.10**	**309**	*e*P	**P**	**19 52 07.8**	**+0.9**
KHC				*e*S	**S**	**19 59 57.0**	**+1.1**
KHC				MLR	MLR		
	comp=Z,2µm,18.0s						
KHC	**Kasperske Hory**	**56.10**	**309**	*e*P	**P**	**19 52 07.8**	**+0.9**
KHC				*ex*	x	19 52 20.0	
KHC				*e*S	**S**	**19 59 57.0**	**+1.1**
KHC				AMS	AMS	20 17 10.0	
	comp=Z,2µm,18.0s						
KHC	**Kasperske Hory**	**56.10**	**309**	P	**P**	**19 52 07.0**	**+0.1**
IBBN	**Ibbenburen**	**56.13**	**315**	*e*P	**P**	**19 52 07.2**	**+0.2**
	comp=Z,98nm,1.2s,baz=41,slow=7.1						
CRAG	**Craig**	**56.17**	**39**	P	**P**	**19 52 07.6**	**+0.4**
TNTI	**Ternate**	**56.19**	**164**	P	**P**	**19 52 08.6**	**+0.8**
	comp=Z,386nmcomp=Z,25nm,1.1s						
TNTI	**Ternate**	**56.19**	**164**	P	**P**	**19 52 06.7**	**-1.1**
GSI	**Gunungsitoli**	**56.20**	**200**	P	**P**	**19 52 08.4**	**+0.5**
	comp=Z,351nm,1.1s						
GSI	**Gunungsitoli**	**56.20**	**200**	P	**P**	**19 52 07.5**	**-0.4**
GSI				IAmb	IAmb	19 52 10.6	
	comp=Z,102nm,1.1s						
GSI				IAMs_20	IAMs_20	20 19 30.7	
	comp=Z,2µm,18.0s						
FRGS	**Fruska Gora**	**56.21**	**302**	‖*i*P	**P**	**19 52 07.2**	**-0.5**
ROTZ	**Rotzenmuhle**	**56.22**	**310**	*e*P	**P**	**19 52 08.6**	**+0.9**
	comp=Z,80nm,1.2s,baz=41,slow=7.1						
ISP	**Isparta**	**56.22**	**289**	P	**P**	**19 52 07.6**	**-0.4**
ISP				pmax	pmax		
	comp=Z,32nm,0.9s						
ISP				MLR	MLR		
	comp=Z,1µm,19.0s						
ISP	**Isparta**	**56.22**	**289**	P	**P**	**19 52 07.5**	**-0.4**
ISP	**Isparta**	**56.22**	**289**	IAMs_20	IAMs_20	20 18 26.8	
	comp=Z,1µm,19.0s						
GEC2	**GERESS Array S**	**56.26**	**309**	*e*P	**P**	**19 52 08.7**	**+0.6**
	comp=Z,55nm,1.2s,baz=41,slow=7.1						
GEC2	**GERESS Array S**	**56.26**	**309**	P	**P**	**19 52 08.2**	**+0.1**
GEC2				IAmb	IAmb	19 52 10.9	
	comp=Z,52nm,1.2s						
GEC2				IAMs_20	IAMs_20	20 16 36.8	
	comp=Z,2µm,19.0s						
GERES	**GERESS Array B**	**56.26**	**309**	P	**P**	**19 52 08.2**	**+0.1**
	comp=Z,23nm,1.0s,baz=46,slow=7.6,SNR=95						
GERES				LR	LR	20 17 46.2	
	comp=Z,2µm,19.7s,baz=45,slow=38						
GERES				PKP2bc		20 22 15.9	
	comp=Z,0.6nm,0.9s,baz=151,slow=3.0,SNR=4.1						

ALN	**Alexandroupoli**	**56.28**	**294**	P	**P**	**19 52 08.7**	**+0.5**
ALN	**Alexandroupoli**	**56.28**	**294**	P	**P**	**19 52 08.3**	**+0.1**
ALN				pmax	pmax		
	comp=Z,11nm,1.1s						
ALN				MLR	MLR		
	comp=Z,1µm,20.0s						
ALN	**Alexandroupoli**	**56.28**	**294**	P	**P**	**19 52 08.3**	**+0.1**
MNSI	**Mandailing Nat**	**56.34**	**197**	P	**P**	**19 52 08.4**	**-0.4**
	comp=Z,14nm,0.4s						
ENEZ	**Enez**	**56.34**	**294**	P	**P**	**19 52 09.4**	**+0.7**
UBBA	**Unterbreizbach**	**56.35**	**312**	*e*P	**P**	**19 52 09.2**	**+0.7**
	comp=Z,28nn,1.1s,baz=41,slow=7.1						
RDO	**Rodhopi**	**56.36**	**295**	P	**P**	**19 52 09.8**	**+1.0**
BHL	**Bhannes**	**56.37**	**282**	*e*P	**P**	**19 52 08.8**	**-0.3**
WET	**Wettzell**	**56.40**	**309**	*e*P	**P**	**19 52 10.0**	**+0.9**
	comp=Z,81nn,1.1s,baz=41,slow=7.1						
VTS	**Vitosha**	**56.42**	**298**	⇑P	**P**	**19 52 10.0**	**+0.6**
VTS	**Vitosha**	**56.42**	**298**	*i* P	**P**	**19 52 10.2**	**+0.8**
VTS	**Vitosha**	**56.42**	**298**	P	**P**	**19 52 09.5**	**0.0**
VTS				pmax	pmax		
	comp=Z,51nm,1.3s						
VTS				MLR	MLR		
	comp=Z,2µm,21.0s						
VTS	**Vitosha**	**56.42**	**298**	P	**P**	**19 52 09.5**	**0.0**
VTS				IAMs_20	IAMs_20	20 18 05.3	
	comp=Z,2µm,21.0s						
BKNI	**Bangkinang**	**56.56**	**196**	P	**P**	**19 52 12.6**	**+2.1**
	comp=Z,2µmcomp=Z,144nm,1.1s						
BKNI	**Bangkinang**	**56.56**	**196**	P	**P**	**19 52 10.9**	**+0.4**
ARSA	**Arzberg**	**56.65**	**306**	*i* sP	**P**	**19 52 11.5**	**+0.7**
	comp=Z,23nm,1.1s,SNR=8.7						
BEHE	**Becsehely**	**56.66**	**305**	‖*i*P	**P**	**19 52 11.0**	**+0.1**
GRA1	**Grafenberg Arr**	**56.70**	**311**	P	**P**	**19 52 11.5**	**+0.4**
GRA1				IAmb	IAmb	19 52 14.3	
	comp=Z,78nm,1.3s						
GRA1				IAMs_20	IAMs_20	20 18 29.2	
	comp=Z,2µm,22.0s						
GRF	**Grafenberg Arr**	**56.70**	**311**	*e*P	**P**	**19 52 12.1**	**+0.9**
	comp=Z,71nm,1.2s,baz=41,slow=7.1						
GRF				*e*L	L	20 16 17.1	
	comp=Z,1µm,19.0s						
GRF	**Grafenberg Arr**	**56.70**	**311**	P	**P**	**19 52 11.5**	**+0.4**
GRF				pmax	pmax		
	comp=Z,78nm,1.3s						
GRF				MLR	MLR		
	comp=Z,2µm,22.0s						
SFJD	**Kangerlussuaq**	**56.70**	**353**	P	**P**	**19 52 11.8**	**+1.0**
SFJD				pmax	pmax		
	comp=Z,89nm,1.3s						
SFJD				MLR	MLR		
	comp=Z,1µm,19.0s						
SFJD	**Kangerlussuaq**	**56.70**	**353**	P	**P**	**19 52 11.8**	**+1.0**
SFJD				IAmb	IAmb	19 52 12.4	
	comp=Z,89nm,1.2s						
SFJD	**Kangerlussuaq**	**56.70**	**353**	IAMs_20	IAMs_20	20 17 02.5	
	comp=Z,1µm,19.0s						
SFJD	**Kangerlussuaq**	**56.70**	**353**	*i* P	**P**	**19 52 11.4**	**+0.6**
	comp=Z,5.0nm,1.1s						
ANGG	**Ammassalik, Gr**	**56.74**	**346**	IAMs_20	IAMs_20	20 16 13.3	
	comp=Z,1µm,20.0s						
SHBL	**Chebaa**	**56.74**	**281**	*e*P	**P**	**19 52 11.9**	**+0.1**
MANT	**Manisa**	**56.76**	**291**	P	**P**	**19 52 12.0**	**0.0**
MANT				IAmb	IAmb	19 52 20.5	
	comp=Z,101nm,1.1s						
MOA	**Molln**	**56.76**	**307**	*i* pP	**P**	**19 52 11.1**	**-0.5**
	comp=Z,35nn,1.1s,SNR=22						
CSS	**Mathiatis**	**56.84**	**285**	P	**P**	**19 52 11.8**	**-0.6**
CSS				IAMs_20	IAMs_20	20 16 55.6	
	comp=Z,2µm,21.0s						
SMTH	**Samothraki Isl**	**56.86**	**294**	P	**P**	**19 52 13.1**	**+0.7**
GADA	**Gvkgeada**	**56.88**	**294**	P	**P**	**19 52 13.0**	**+0.5**
DIVS	**Divibare**	**56.91**	**301**	‖*i*P	**P**	**19 52 12.1**	**-0.7**
DIVS	**Divibare**	**56.91**	**301**	IAMs_20	IAMs_20	20 18 15.1	
	comp=Z,1µm,18.0s						
EZN	**Ezine**	**56.93**	**293**	P	**P**	**19 52 13.6**	**+0.7**
MMB	**Musomiste**	**56.94**	**296**	*i* P	**P**	**19 52 13.2**	**+0.2**
BUG	**Bochum--Univer**	**56.99**	**314**	*e*P	**P**	**19 52 13.7**	**+0.5**
	comp=Z,88nm,1.1s,baz=41,slow=7.1						
KKB	**Krupnik**	**57.06**	**297**	*i* P	**P**	**19 52 15.0**	**+1.2**
KALN	**Kalnik**	**57.06**	**305**	*i* P	**P**	**19 52 13.8**	**+0.1**
APSI	**Ampana**	**57.15**	**171**	P	**P**	**19 52 16.2**	**+1.6**
	comp=Z,620nmcomp=Z,59nm,1.3s						
THAS	**Thassos island**	**57.17**	**295**	P	**P**	**19 52 15.3**	**+0.8**
BKB	**Balikpapan**	**57.20**	**177**	IAMs_20	IAMs_20	20 19 12.6	
	comp=Z,2µm,18.0s						
PERS	**Pernice**	**57.29**	**306**	*i* P	**P**	**19 52 16.0**	**+0.6**
PERS				*e*S	**S**	**20 00 16.3**	**+4.6**
SOKA	**Soboth**	**57.30**	**306**	*i* sP	**P**	**19 52 15.8**	**+0.3**
	comp=Z,47nn,1.2s,SNR=30						
MOSL	**Moslavina**	**57.31**	**304**	*i* P	**P**	**19 52 14.8**	**-0.7**
ELL	**Elmali**	**57.35**	**288**	P	**P**	**19 52 15.8**	**-0.3**
ELL				pmax	pmax		
	comp=Z,83nm,1.0s						
ELL				MLR	MLR		
	comp=Z,6µm,21.0s						
ELL	**Elmali**	**57.35**	**288**	P	**P**	**19 52 15.8**	**-0.3**
ELL				IAmb	IAmb	19 52 20.1	
	comp=Z,83nm,1.0s						
SRS	**Serrai**	**57.36**	**296**	P	**P**	**19 52 16.4**	**+0.5**
BBLS	**Lazići**	**57.37**	**301**	‖*i*P	**P**	**19 52 15.5**	**-0.5**
LUWI	**Luwuk**	**57.38**	**170**	P	**P**	**19 52 20.7**	**+4.5**
LUWI	**Luwuk**	**57.38**	**170**	P	**P**	**19 52 13.7**	**-2.6**
PRK	**Paraskevi**	**57.39**	**293**	P	**P**	**19 52 17.7**	**+1.6**
HAPS	**Han Pijesak,BI**	**57.42**	**302**	*e*P	**P**	**19 52 16.4**	**0.0**
PTJ	**Puntijarka**	**57.45**	**305**	P	**P**	**19 52 15.8**	**-0.8**
TNS	**Taunus Mts**	**57.45**	**313**	*e*P	**P**	**19 52 17.1**	**+0.6**
	comp=Z,43nn,1.1s,baz=41,slow=7.1						
LIA	**Limnos Island**	**57.46**	**294**	P	**P**	**19 52 16.9**	**+0.3**
RJOB	**Jochberg**	**57.50**	**308**	*e*P	**P**	**19 52 17.9**	**+1.0**
	comp=Z,43nn,1.1s,baz=41,slow=7.1						
RUDO	**Rudo**	**57.57**	**301**	*e*P	**P**	**19 52 17.4**	**0.0**
LBMI	**Labuha**	**57.59**	**164**	P	**P**	**19 52 17.6**	**-0.1**
	comp=Z,1µmcomp=Z,26nm,1.1s						
SIGR	**SIGRI**	**57.63**	**293**	P	**P**	**19 52 18.4**	**+0.6**
OBKA	**Obir**	**57.65**	**306**	*i* sP	**P**	**19 52 18.7**	**+0.7**
	comp=Z,98nn,1.0s,SNR=38						
KNT	**Kendrikon**	**57.68**	**297**	P	**P**	**19 52 18.8**	**+0.7**
SOH	**Sokhos**	**57.70**	**296**	P	**P**	**19 52 18.7**	**+0.3**
CRES	**Cresnjev**	**57.75**	**305**	*e*P	**P**	**19 52 18.4**	**-0.2**
KBA	**Koeinbreinsper**	**57.75**	**307**	*i* sP	**P**	**19 52 19.8**	**+1.0**
	comp=Z,113nm,1.1s,SNR=53						
BLY	**Banja Luka**	**57.76**	**303**	*e*P	**P**	**19 52 18.3**	**-0.4**
AHRW	**Bad Neuenahr-A**	**57.77**	**314**	*e*P	**P**	**19 52 19.3**	**+0.7**
	comp=Z,97nn,1.1s,baz=41,slow=7.1						
SKO	**Skopje**	**57.80**	**298**	*i* P	**P**	**19 52 19.6**	**+0.7**
SKO	**Skopje**	**57.80**	**298**	*i* P	**P**	**19 52 19.6**	**+0.7**
ESK	**Eskdalemuir**	**57.80**	**323**	P	**P**	**19 52 18.6**	**-0.2**
ESK				pmax	pmax		
	comp=Z,88nm,1.5s						
ESK				MLR	MLR		
	comp=Z,2µm,21.0s						
ESK	**Eskdalemuir**	**57.80**	**323**	P	**P**	**19 52 18.6**	**-0.2**
ESK				IAmb	IAmb	19 52 22.1	
	comp=Z,88nm,1.5s						
ESK	**Eskdalemuir**	**57.80**	**323**	IAMs_20	IAMs_20	20 18 51.0	
	comp=Z,2µm,21.0s						
FUR	**Furstenfeldbru**	**57.83**	**310**	*e*P	**P**	**19 52 20.1**	**+0.9**
	comp=Z,128nm,1.1s,baz=41,slow=7.1						
FETY	**Fethiye**	**57.87**	**289**	P	**P**	**19 52 18.6**	**-1.0**
OZLJ	**Ozalj**	**57.90**	**305**	*i* P	**P**	**19 52 20.1**	**+0.5**
YER	**Yerkesik**	**57.92**	**290**	P	**P**	**19 52 20.6**	**+0.6**
MYKA	**Terra Mystica**	**57.96**	**307**	*i* sP	**P**	**19 52 20.5**	**+0.4**
	comp=Z,67nn,1.0s,SNR=29						
PLG	**Polygyros**	**57.99**	**296**	P	**P**	**19 52 20.7**	**+0.3**
LJU	**Ljubljana**	**58.01**	**306**	*i* P	**P**	**19 52 20.5**	**+0.1**
LJU	**Ljubljana**	**58.01**	**306**	*e*P	**P**	**19 52 20.4**	**0.0**
MGRS	**Mrkonjic Grad**	**58.06**	**303**	*e*P	**P**	**19 52 21.8**	**+1.0**
BOJS	**Bojanci**	**58.09**	**305**	*i* P	**P**	**19 52 20.9**	**-0.1**
UPM	**Unac-Piva**	**58.11**	**301**	*e*P	**P**	**19 52 21.4**	**0.0**
CHOS	**Chios island**	**58.15**	**292**	P	**P**	**19 52 21.9**	**+0.3**
DIB	**Dawson Inlet,**	**58.20**	**40**	P	**P**	**19 52 22.9**	**+1.3**
DIB				IAmb	IAmb	19 52 24.9	
	comp=Z,100nn,1.2s						
CEY	**Cerknica**	**58.28**	**306**	*e*P	**P**	**19 52 21.7**	**-0.7**
WATA	**Walderalm**	**58.34**	**309**	*i* sP	**P**	**19 52 23.4**	**+0.6**
	comp=Z,60nn,1.0s,SNR=27						
WTTA	**Wattenberg**	**58.37**	**309**	*i* sP	**P**	**19 52 23.6**	**+0.5**
	comp=Z,90nn,1.0s,SNR=38						
ABTA	**Abfaltersbach**	**58.38**	**308**	*i* pP	**P**	**19 52 22.5**	**-0.5**
	comp=Z,36nn,1.0s,SNR=17						
SIJI	**Sorong**	**58.48**	**160**	LR	LR	20 17 45.8	
	comp=Z,1µm,19.2s,baz=348,slow=36						
PHP	**Peshkopia**	**58.50**	**299**	P	**P**	**19 52 24.2**	**+0.2**
BRY	**Bratogost**	**58.51**	**301**	*e*P	**P**	**19 52 23.2**	**-0.9**
PDG	**Podgorica**	**58.52**	**300**	⇑P	**P**	**19 52 24.3**	**+0.3**

PDG	**Podgorica**	**58.52**	**300**	*e*P	**P**	**19 52 23.2**	**-0.8**
PDG	**Podgorica**	**58.52**	**300**	P	**P**	**19 52 23.0**	**-1.0**
PDG				IAmb	IAmb	19 52 26.2	
	comp=Z,49nm,1.3s						
PDG				IAMs_20	IAMs_20	20 17 31.6	
	comp=Z,2µm,18.0s						
MOTA	**Moosalm**	**58.54**	**309**	*i* sP	**P**	**19 52 24.7**	**+0.4**
	comp=Z,43nn,1.0s,SNR=24						
RIY	**Rijeka**	**58.57**	**305**	*e*P	**P**	**19 52 24.3**	**0.0**
RIY	**Rijeka**	**58.57**	**305**	P	**P**	**19 52 24.1**	**-0.3**
RETA	**Reutte**	**58.58**	**309**	*i* sP	**P**	**19 52 24.0**	**-0.5**
	comp=Z,28nn,1.0s,SNR=13						
SQTA	**Sankt Quirin**	**58.59**	**309**	*i* sP	**P**	**19 52 25.1**	**+0.5**
	comp=Z,38nn,1.0s,SNR=32						
AOS	**Alonnisos**	**58.67**	**294**	P	**P**	**19 52 25.4**	**+0.3**
LIT	**Litokhoron**	**58.68**	**296**	P	**P**	**19 52 25.0**	**-0.2**
LIT	**Litokhoron**	**58.68**	**296**	P	**P**	**19 52 24.9**	**-0.2**
LIT				pmax	pmax		
	comp=Z,14nm,1.0s						
LIT				MLR	MLR		
	comp=Z,1µm,20.0s						
LIT	**Litokhoron**	**58.68**	**296**	P	**P**	**19 52 24.9**	**-0.2**
LIT				IAMs_20	IAMs_20	20 17 01.9	
	comp=Z,1µm,20.0s						
KIJV	**Kijevo**	**58.69**	**303**	*i* P	**P**	**19 52 25.3**	**+0.1**
UBR	**Ueberruh**	**58.71**	**310**	*e*P	**P**	**19 52 25.8**	**+0.4**
	comp=Z,49nn,1.4s,baz=41,slow=7.1						
FNA	**Florina**	**58.72**	**297**	P	**P**	**19 52 25.8**	**+0.3**
FNA				pmax	pmax		
	comp=Z,26nn,1.2s						
FNA	**Florina**	**58.72**	**297**	P	**P**	**19 52 25.8**	**+0.3**
RICI	**Ricice**	**58.73**	**302**	P	**P**	**19 52 24.1**	**-1.5**
DRME	**Dracevica, Mon**	**58.74**	**300**	*e*P	**P**	**19 52 25.2**	**-0.3**
TREB	**Trebinje**	**58.74**	**301**	*e*P	**P**	**19 52 24.9**	**-0.7**
SANI	**Sanana**	**58.76**	**166**	P	**P**	**19 52 24.9**	**-1.0**
	comp=Z,699nmcomp=Z,31nm,1.1s						
OHR	**Ohrid**	**58.76**	**298**	*i* P	**P**	**19 52 26.4**	**+0.6**
OHR	**Ohrid**	**58.76**	**298**	*i* P	**P**	**19 52 26.4**	**+0.6**
WHFO	**Wadi Hawf**	**58.79**	**255**	P	**P**	**19 52 27.0**	**+0.8**
	SNR=6.9						
WHFO				P	**P**	**19 52 27.0**	**+0.8**
	SNR=6.9						
WLF	**Walferdange**	**58.82**	**314**	*e*P	**P**	**19 52 26.5**	**+0.5**
	comp=Z,72nm,1.1s,baz=41,slow=7.1						
WLF	**Walferdange**	**58.82**	**314**	P	**P**	**19 52 25.9**	**-0.1**
WLF				pmax	pmax		
	comp=Z,69nm,1.1s						
WLF				MLR	MLR		
	comp=Z,2µm,20.0s						
WLF	**Walferdange**	**58.82**	**314**	P	**P**	**19 52 25.9**	**-0.1**
WLF				IAmb	IAmb	19 52 31.2	
	comp=Z,70nm,1.1s						
WLF				IAMs_20	IAMs_20	20 19 41.4	
	comp=Z,2µm,20.0s						
RAYN	**Ar Rayn**	**58.86**	**266**	P	**P**	**19 52 26.8**	**+0.1**
TPI	**Tanjungpandan**	**58.87**	**187**	P	**P**	**19 52 29.1**	**+2.5**
	comp=Z,524nmcomp=Z,36nm,1.1s						
DBRK	**Dubrovnik**	**58.87**	**301**	*i* P	**P**	**19 52 24.6**	**-1.9**
HCY	**Herceg Novi**	**58.88**	**301**	*e*P	**P**	**19 52 25.5**	**-1.0**
XOR	**Xorichti**	**58.88**	**295**	P	**P**	**19 52 25.9**	**-0.7**
STON	**Ston**	**58.93**	**301**	*e*P	**P**	**19 52 25.9**	**-1.0**
STON	**Ston**	**58.93**	**301**	*i* P	**P**	**19 52 25.0**	**-1.8**
MAKA	**Makarska**	**58.94**	**302**	*i* P	**P**	**19 52 25.0**	**-1.9**
FETA	**Feichten**	**58.95**	**309**	*i* sP	**P**	**19 52 27.6**	**+0.5**
	comp=Z,40nm,1.1s,SNR=19						
BFO

MDSI Maura Dua 60.90 191 P P 19 52 42.7 +2.1
comp=Z,6.5nm,1.1s
ZCCA Zocca 60.91 307 P P 19 52 39.8 -0.8
ZCCA IAmb IAmb 19 53 08.7
comp=Z,50nm,1.2s
MNAI Manna 60.91 193 IAMs_20 IAMs_20 20 22 02.8
comp=Z,2µm,20.0s
SENIN Lac Senin/Sane 60.94 311 P P 19 52 39.7 -1.2
SENIN IAMs_20 IAMs_20 20 18 43.5
comp=Z,2µm,19.0s
KFL Anninata 61.05 296 P P 19 52 40.9 -0.6
MURB Monte Urbino 61.06 305 P P 19 52 42.1 +0.5
KAPI Kappang 61.06 173 LR LR 20 21 18.8
comp=Z,467nm,20.7s,baz=358,slow=38
IDI Anoyia 61.10 291 P P 19 52 39.3 -2.7
MATE Matera 61.11 300 ⇑P P 19 52 42.1 +0.2
NRCA Norcia 61.12 304 P P 19 52 41.7 -0.3
NRCA IAmb IAmb 19 52 44.9
comp=Z,71nm,1.1s
ITM Ithomi 61.19 294 P P 19 52 41.0 -1.5
ITM IAMs_20 IAMs_20 20 19 14.4
comp=Z,1µm,22.0s
SMPI Sarmi 61.28 152 P P 19 52 45.0 +1.8
comp=Z,40nm,2.0s
VLC Villacollemand 61.33 307 P P 19 52 42.6 -0.8
VLC IAMs_20 IAMs_20 20 19 10.8
comp=Z,2µm,20.0s
AQU L'Aquila 61.36 304 ⇓*i*P P 19 52 43.7 +0.1
AQU L'Aquila 61.36 304 P P 19 52 43.7 +0.1
AQU pmax pmax
comp=Z,142nm,1.0s
AQU MLR MLR
comp=Z,2µm,18.0s
AQU L'Aquila 61.36 304 P P 19 52 43.7 +0.1
INTR Introdacqua 61.39 303 P P 19 52 42.7 -1.1
INTR IAmb IAmb 19 52 47.6
comp=Z,87nm,1.3s
INTR IAMs_20 IAMs_20 20 18 13.6
comp=Z,2µm,18.0s
LWLI Liwa 61.44 191 P P 19 52 48.2 +3.8
OSSC Osservatorio P 61.44 306 P P 19 52 43.6 -0.5
OSSC IAMs_20 IAMs_20 20 23 08.8
comp=Z,2µm,21.0s
MSSA Maissana 61.59 308 P P 19 52 44.1 -1.1
CLF Chambon-Foret 61.69 315 P P 19 52 45.4 -0.2
PAOL Paolisi 61.84 302 P P 19 52 46.0 -0.8
PAOL IAmb IAmb 19 52 50.7
comp=Z,36nm,1.1s
PAOL IAMs_20 IAMs_20 20 21 11.5
comp=Z,1µm,18.0s
LATE Laterza 61.90 305 P P 19 52 46.7 -0.5
NRS Narsarsuaq 61.98 349 IAMs_20 IAMs_20 20 21 01.1
comp=Z,2µm,20.0s
CASP Castiglione de 62.19 306 P P 19 52 48.2 -0.9
CASP IAmb IAmb 19 52 51.2
comp=Z,66nm,1.1s
IVI Ivigtut 62.22 350 P P 19 52 48.8 -0.2
TIP Timpagrande 62.23 299 ⇑P P 19 52 50.2 +0.7
TIP Timpagrande 62.23 299 P P 19 52 48.5 -1.0
TIP IAmb IAmb 19 52 52.3
comp=Z,90nm,1.6s
TIP IAMs_20 IAMs_20 20 21 46.8
comp=Z,2µm,20.0s
BNI Bardonecchia 62.24 310 P P 19 52 49.3 -0.3
BNI pmax pmax
comp=Z,86nm,1.0s
BNI MLR MLR
comp=Z,2µm,19.0s
BNI Bardonecchia 62.24 310 P P 19 52 49.3 -0.3
GENI Genyem 62.26 150 P P 19 52 54.9 +5.1
JAY Jayapura 62.33 150 LR LR 20 17 20.1
comp=Z,1µm,21.4s,baz=336,slow=34
JAY Jayapura 62.33 150 P P 19 52 52.3 +1.9
comp=Z,219nmcomp=Z,8.3nm,1.0s
KMMI Kalianget 62.90 180 P P 19 52 56.7 +2.6
comp=Z,115nm,0.9s
LEM Lembang 62.91 187 LR LR 20 21 10.5
comp=Z,1µm,19.4s,baz=324,slow=37
FCC Fort Churchill 63.32 16 P P 19 52 55.6 -0.7
FCC pmax pmax
comp=Z,147nm,1.1s
FCC Fort Churchill 63.32 16 P P 19 52 55.6 -0.7
CEL Celeste 63.37 299 P P 19 52 56.2 -0.9
CEL IAmb IAmb 19 53 02.3
comp=Z,41nm,0.9s
CEL IAMs_20 IAMs_20 20 22 35.9
comp=Z,2µm,21.0s
SOCY Socotra 63.41 251 P P 19 52 54.1 -3.6
SOCY Socotra 63.41 251 P P 19 52 54.5 -3.2
CISI Cisompet, Garu 63.61 187 IAMs_20 IAMs_20 20 21 13.4
comp=Z,1µm,21.0s
UGM Wanagama 63.83 184 IAMs_20 IAMs_20 20 24 06.2
comp=Z,1µm,18.0s
LLLB Lillooet 64.03 36 P P 19 53 00.9 -0.3
LLLB IAMs_20 IAMs_20 20 21 56.2
comp=Z,2µm,20.0s
VAE Valguarnera 64.70 300 LR LR 20 22 26.5
comp=Z,988nm,19.5s,baz=65,slow=37
PLAI Plampang 64.75 176 P P 19 53 06.7 +0.5
comp=Z,36nm,1.2s
CLTB Caltabellotta 65.20 301 IAMs_20 IAMs_20 20 25 11.5
comp=Z,2µm,18.0s
A04D Lummi Island 65.37 38 P P 19 53 10.9 +1.0
baz=329,SNR=7.9
VSL Villasalto 65.48 305 P P 19 53 10.3 -0.5
VSL IAmb IAmb 19 53 14.8
comp=Z,33nm,1.2s
VSL IAMs_20 IAMs_20 20 24 50.9
comp=Z,1µm,18.0s
FFC Flin Flon 65.71 22 P P 19 53 11.2 -0.9
FFC pmax pmax
comp=Z,105nm,1.2s
FFC MLR MLR
comp=Z,1µm,22.0s
FFC Flin Flon 65.71 22 P P 19 53 11.2 -0.9
FFC Flin Flon 65.71 22 IAMs_20 IAMs_20 20 21 47.2
comp=Z,1µm,22.0s
B06A Marblemount 65.96 37 P P 19 53 12.6 -1.2
B06A IAmb IAmb 19 53 17.0
comp=Z,35nm,0.8s
B06A IAMs_20 IAMs_20 20 23 21.5
comp=Z,2µm,21.0s
B05A Bryant 65.97 37 P P 19 53 15.0 +1.2
baz=330,SNR=18
NLWA Neilton Lookou 66.11 39 P P 19 53 13.9 -0.9
NLWA IAmb IAmb 19 53 17.8
comp=Z,65nm,1.1s
NLWA IAMs_20 IAMs_20 20 23 06.5
comp=Z,2µm,21.0s
SOEI Soe 66.15 169 P P 19 53 15.5 +0.1
comp=Z,72nm,1.0s
SOEI Soe 66.15 169 P P 19 53 13.3 -2.1
D03D Eldon 66.26 38 P P 19 53 17.4 +1.7
baz=329
BATI Baumata 66.53 170 LR LR 20 25 28.4
comp=Z,338nm,19.8s,baz=342,slow=39
DAMY Dhamar 66.67 261 P P 19 53 19.3 +0.2
SNR=12
DAMY Dhamar 66.67 261 P P 19 53 18.5 -0.6
DAMY IAmb IAmb 19 53 22.3
comp=Z,64nm,1.1s
DAMY IAMs_20 IAMs_20 20 25 54.7
comp=Z,1µm,22.0s
D04E Lakebay 66.67 38 P P 19 53 19.9 +1.6
baz=329
B08A Colville Reser 66.81 36 P P 19 53 19.2 -0.1
B08A IAmb IAmb 19 53 23.0
comp=Z,42nm,1.0s
B08A IAMs_20 IAMs_20 20 23 14.0
comp=Z,1µm,21.0s
E03A Lebam 66.94 39 P P 19 53 21.7 +1.6
E03A IAMs_20 IAMs_20 20 24 56.5
comp=Z,1µm,18.0s
E04D Cinebar 67.28 39 P P 19 53 24.0 +1.8
baz=330,SNR=10.0
LTY Liberty 67.33 37 P P 19 53 22.1 -0.5
LTY IAmb IAmb 19 53 24.7
comp=Z,30nm,1.1s
LTY IAMs_20 IAMs_20 20 24 51.8
comp=Z,1µm,20.0s
LON Longmire 67.38 38 P P 19 53 23.0 0.0
LON pmax pmax
comp=Z,26nm,1.1s
LON Longmire 67.38 38 P P 19 53 23.0 0.0
LON IAMs_20 IAMs_20 20 27 10.1
comp=Z,974nm,19.0s

F03A Seaside 67.47 40 P P 19 53 22.7 -0.7
F03A IAmb IAmb 19 53 26.5
comp=Z,69nm,1.0s
F04D Rainier, OR 67.53 39 P P 19 53 25.1 +1.2
baz=330
NEW Newport 67.60 34 P P 19 53 24.3 -0.1
NEW pmax pmax
comp=Z,20nm,0.9s
NEW MLR MLR
comp=Z,1µm,20.0s
NEW Newport 67.60 34 P P 19 53 25.1 +0.8
baz=332,SNR=15
NEW Newport 67.60 34 P P 19 53 24.3 -0.1
NEW Newport 67.60 34 IAMs_20 IAMs_20 20 23 56.9
comp=Z,1µm,20.0s
C09A Chrisman Ranch 67.64 35 P P 19 53 24.8 +0.2
C09A IAmb IAmb 19 53 27.1
comp=Z,72nm,1.1s
C09A IAMs_20 IAMs_20 20 23 50.0
comp=Z,1µm,19.0s
RABL Rabaul 67.69 138 P P 19 53 24.4 -0.7
KRVT Keravat (AS076 67.75 138 LR LR 20 21 30.6
comp=Z,233nm,19.1s,baz=338,slow=35
F04A Amboy 67.87 39 P P 19 53 25.8 -0.2
F04A IAmb IAmb 19 53 28.5
comp=Z,43nm,1.0s
WALA Waterton Lakes 67.88 32 P P 19 53 26.0 -0.2
WALA IAmb IAmb 19 53 29.7
comp=Z,41nm,0.9s
WALA IAMs_20 IAMs_20 20 24 59.1
comp=Z,1µm,20.0s
D08A Wollman Farm, 68.08 36 P P 19 53 27.7 +0.4
D08A IAmb IAmb 19 53 31.2
comp=Z,37nm,0.9s
G03D McMinnville, O 68.19 40 P P 19 53 29.5 +1.5
baz=330
E07A Sunnyside 68.21 37 P P 19 53 29.2 +1.0
E07A IAmb IAmb 19 53 30.8
comp=Z,66nm,1.1s
E07A IAMs_20 IAMs_20 20 25 18.1
comp=Z,1µm,20.0s
F05D White Salmon 68.25 38 P P 19 53 29.9 +1.6
baz=330
HAWA Hanford 68.46 37 P P 19 53 30.6 +0.9
HAWA IAmb IAmb 19 53 32.4
comp=Z,71nm,1.2s
HAWA IAMs_20 IAMs_20 20 23 06.8
comp=Z,1µm,22.0s
E08A Dider Farm, El 68.53 36 P P 19 53 30.5 +0.4
E08A IAmb IAmb 19 53 32.8
comp=Z,58nm,1.1s
E08A IAMs_20 IAMs_20 20 23 58.7
comp=Z,962nm,19.0s
KEST Kesra 68.53 302 P P 19 53 30.9 +0.5
comp=Z,4.2nm,0.6s,baz=287,slow=3.8,SNR=8.1
KEST LR LR 20 26 36.2
comp=Z,739nm,18.1s,baz=356,slow=39
KEST Kesra 68.53 302 IAMs_20 IAMs_20 20 22 38.7
comp=Z,1µm,22.0s
CMAH Djebel Manchou 68.71 304 P P 19 53 31.1 -0.4
COR Corvallis 68.72 40 P P 19 53 32.9 +1.6
COR pmax pmax
comp=Z,124nm,1.2s
COR MLR MLR
comp=Z,1µm,21.0s
COR Corvallis 68.72 40 P P 19 53 32.9 +1.6
F07A Phinny Hill Vi 68.76 37 P P 19 53 31.4 -0.2
F07A IAmb IAmb 19 53 34.6
comp=Z,47nm,1.0s
F07A IAMs_20 IAMs_20 20 25 10.8
comp=Z,1µm,21.0s
E09A Wood Farm, Sta 68.82 36 P P 19 53 32.0 +0.1
E09A IAmb IAmb 19 53 34.5
comp=Z,51nm,1.1s
G05D Wamic, OR 68.86 39 P P 19 53 33.7 +1.5
baz=330
I02D Swisshome 68.93 41 P P 19 53 34.6 +2.0
baz=330,SNR=5.1
JTMT Jette 68.94 33 P P 19 53 32.7 -0.2
JTMT IAmb IAmb 19 53 36.9
comp=Z,34nm,0.9s
JTMT IAMs_20 IAMs_20 20 28 42.2
comp=Z,977nm,18.0s
H04D Lebanon 68.97 40 P P 19 53 34.6 +1.7
baz=330,SNR=5.9
H04A Detroit Lake 69.03 39 P P 19 53 33.7 +0.3
H04A IAmb IAmb 19 53 35.9
comp=Z,66nm,1.2s
G06A Carlson Farm, 69.10 38 P P 19 53 34.3 +0.6
G06A IAmb IAmb 19 53 36.7
comp=Z,46nm,1.3s
G06A IAMs_20 IAMs_20 20 24 27.7
comp=Z,1µm,20.0s
CKFL Kef-Lekhel 69.22 305 P P 19 53 36.0 +1.3
CASM Ain Smara 69.44 305 P P 19 53 35.6 -0.4
SCHQ Schefferville 69.45 1 P P 19 53 36.3 +0.6
comp=Z,75nm,1.0s,baz=12,slow=6.9,SNR=36
SCHQ LR LR 20 24 57.3
comp=Z,501nm,18.5s,baz=329,slow=37
SCHQ Schefferville 69.45 1 P P 19 53 35.6 -0.1
I03D Drain, OR 69.47 41 P P 19 53 37.4 +1.5
baz=330,SNR=14
F10A Beach Ranch, E 69.59 35 P P 19 53 37.4 +0.5
F10A IAMs_20 IAMs_20 20 22 51.7
comp=Z,967nm,20.0s
G08A Pilot Rock 69.62 37 P P 19 53 37.3 +0.2
I05D Terrebonne, OR 69.63 39 P P 19 53 38.5 +1.5
baz=331,SNR=6.3
J01E Myrtle Point 69.71 41 P P 19 53 39.2 +1.7
baz=330,SNR=11
I04A Tendick Farm, 69.72 40 P P 19 53 38.6 +0.9
baz=330,SNR=15
MSO Missoula 69.87 33 P P 19 53 39.6 +1.1
baz=334,SNR=44
MSO Missoula 69.87 33 P P 19 53 39.2 +0.7
MSO IAmb IAmb 19 53 42.7
comp=Z,66nm,1.1s
SET Setif 69.99 305 P P 19 53 41.0 +1.5
EGMT Eagleton 70.00 30 P P 19 53 39.6 +0.3
baz=336,SNR=12
EGMT Eagleton 70.00 30 P P 19 53 39.2 -0.1
EGMT IAMs_20 IAMs_20 20 25 23.2
comp=Z,1µm,20.0s
ATD Arta Tunnel 70.01 261 P P 19 53 41.1 +1.3
SNR=5.1
ATD Arta Tunnel 70.01 261 P P 19 53 39.8 0.0
ATD IAmb IAmb 19 53 43.0
comp=Z,49nm,1.2s
MTN Manton Dam 70.14 162 P P 19 53 39.6 -0.7
MTN IAmb IAmb 19 53 40.9
comp=Z,31nm,0.9s
K02D Willamette Mer 70.22 41 P P 19 53 42.2 +1.5
baz=330,SNR=15
PINE Pine Mountain 70.25 39 P P 19 53 42.1 +1.1
PINE IAmb IAmb 19 53 44.5
comp=Z,65nm,1.1s
J04D Umpqua Nationa 70.31 40 P P 19 53 42.8 +1.3
baz=330,SNR=11
PBRG Braganca 70.39 317 *e*PKPdf P 19 53 42.5 +0.7
PBRG *e*S S 20 02 52.1 -2.4
PBRG *e*SS SS 20 07 27.8 +3.7
I07A Izee 70.50 38 P P 19 53 43.6 +1.2
I07A IAmb IAmb 19 53 45.8
comp=Z,43nm,1.1s
I07A IAMs_20 IAMs_20 20 26 07.7
comp=Z,1µm,21.0s
BMO Blue Mountains 70.56 36 P P 19 53 43.3 +0.5
BMO pmax pmax
comp=Z,78nm,1.2s
BMO MLR MLR
comp=Z,800nm,20.0s
BMO Blue Mountains 70.56 36 P P 19 53 43.3 +0.5
BMO IAmb IAmb 19 53 45.6
comp=Z,78nm,1.1s
J05D Fort Rock, OR 70.59 40 P P 19 53 44.9 +1.9
baz=331,SNR=26
PMG Port Moresby 70.81 145 LR LR 20 24 40.8
comp=Z,409nm,18.3s,baz=334,slow=36
PGAV Gavieira, Arco 70.83 318 *e*PKPdf P 19 53 45.4 +0.9
PGAV *e*S S 20 03 01.1 +1.4
PGAV *e*SS SS 20 07 39.0 +8.1
PGAV *e*LR LR 20 16 48.8
comp=Z,1µm,20.0s
PCAB Cabril 70.96 318 *e*PKPdf P 19 53 46.0 +0.8
K04D Chiloquin, OR 70.98 40 P P 19 53 46.7 +1.3
baz=331

DGMT Dagmar 71.04 26 P P 19 53 46.1 +0.5
baz=339,SNR=6.5
DGMT Dagmar 71.04 26 P P 19 53 45.0 -0.6
DGMT Dagmar 71.04 26 IAMs_20 IAMs_20 20 27 07.5
comp=Z,1µm,20.0s
MVO Moncorvo 71.05 317 *e*PKPdf P 19 53 46.4 +0.6
MVO *e*S S 20 03 09.9 +7.7
MVO *e*SS SS 20 07 37.6 +3.3
MVO *e*LR LR 20 16 47.8
comp=Z,1µm,20.0s
ESDC Sonseca Array 71.12 314 P P 19 53 46.5 +0.3
comp=Z,97nm,1.0s,baz=25,slow=5.9,SNR=158
ESDC LR LR 20 27 15.0
comp=Z,882nm,18.4s,baz=25,slow=38
L04D Klamath Falls 71.13 41 P P 19 53 47.5 +1.2
baz=331,SNR=20
ULM Lac du Bonnet 71.16 20 P P 19 53 45.0 -1.2
comp=Z,29nm,1.1s,baz=342,slow=6.5,SNR=20
ULM LR LR 20 26 50.5
comp=Z,1µm,20.2s,baz=339,slow=37
ULM Lac du Bonnet 71.16 20 P P 19 53 45.6 -0.6
ULM pmax pmax
comp=Z,63nm,1.3s
ULM MLR MLR
comp=Z,2µm,20.0s
ULM Lac du Bonnet 71.16 20 P P 19 53 45.6 -0.6
ULM IAmb IAmb 19 53 46.9
comp=Z,63nm,1.2s
ULM IAMs_20 IAMs_20 20 26 49.5
comp=Z,2µm,20.0s
PVRL Vila Real 71.22 317 *e*PKPdf P 19 53 47.5 +0.7
LRM Limekiln Ridge 71.22 32 P P 19 53 47.5 +0.5
PAB San Pablo 71.39 314 P P 19 53 47.7 -0.2
PAB pmax pmax
comp=Z,75nm,1.3s
PAB MLR MLR
comp=Z,1µm,18.0s
PAB San Pablo 71.39 314 P P 19 53 47.6 -0.2
PAB IAmb IAmb 19 53 51.0
comp=Z,75nm,1.3s
PAB San Pablo 71.39 314 IAMs_20 IAMs_20 20 24 24.9
comp=Z,1µm,18.0s
YBH Yreka Blue Hor 71.40 41 P P 19 53 49.4 +1.4
YBH pmax pmax
comp=Z,33nm,1.3s
YBH MLR MLR
comp=Z,900nm,19.0s
YBH Yreka Blue Hor 71.40 41 P P 19 53 49.4 +1.4
YBH IAMs_20 IAMs_20 20 30 35.9
comp=Z,893nm,19.0s
J08A Circle Bar Ran 71.49 38 P P 19 53 50.1 +1.6
J08A IAmb IAmb 19 53 51.9
comp=Z,54nm,1.1s
DLMT Dillon 71.59 33 P P 19 53 49.6 +0.5
DLMT IAMs_20 IAMs_20 20 26 34.5
comp=Z,1µm,20.0s
M02C Callahan 71.64 42 P P 19 53 51.4 +1.9
baz=330,SNR=27
CART Cartagena 71.66 311 IAMs_20 IAMs_20 20 27 48.2
comp=Z,1µm,20.0s
BOZ Bozeman (W) 71.67 32 IAMs_20 IAMs_20 20 26 05.9
comp=Z,1µm,21.0s
M04C Macdoel 71.68 41 P P 19 53 51.0 +1.3
baz=331,SNR=7.7
JCC Jacoby Creek, 71.70 43 P P 19 53 48.9 -0.7
JCC IAmb IAmb 19 53 52.9
comp=Z,77nm,1.2s
KHMM Horse Mountain 71.77 42 P P 19 53 49.3 -1.0
PVIS Viseu 71.77 317 *e*PKPdf P 19 53 50.9 +0.7
MTE Manteigas 71.91 317 *e*PKPdf P 19 53 51.9 +0.9
MTE *e*S S 20 03 16.7 +4.5
MTE *e*SS SS 20 07 51.9 +4.5
MTE *e*LR LR 20 16 03.3
comp=Z,2µm,18.0s
MTE Manteigas 71.91 317 P P 19 53 51.3 +0.3
MCMT McKenzie Canyo 72.00 33 P P 19 53 52.5 +0.7
N02D Trinity Center 72.06 42 P P 19 53 53.4 +1.5
baz=331,SNR=22
GCMT Greycliff 72.06 31 P P 19 53 51.6 -0.4
MOD Modoc Plateau 72.13 40 P P 19 53 53.5 +1.1
MOD IAmb IAmb 19 53 55.5
comp=Z,64nm,1.1s
LAO LASA Array 72.18 28 P P 19 53 53.2 +0.6
baz=338,SNR=7.5
LAO LASA Array 72.18 28 P P 19 53 53.1 +0.6
LAO IAMs_20 IAMs_20 20 28 07.8
comp=Z,1µm,18.0s
WVOR Wild Horse Val 72.25 38 P P 19 53 53.8 +0.7
WVOR pmax pmax
comp=Z,32nm,1.1s
WVOR MLR MLR
comp=Z,1µm,21.0s
WVOR Wild Horse Val 72.25 38 P P 19 53 53.8 +0.7
WVOR IAMs_20 IAMs_20 20 26 26.1
comp=Z,1µm,21.0s
MFID Camas Ranch 72.32 36 P P 19 53 54.3 +0.7
MFID IAmb IAmb 19 53 56.3
comp=Z,54nm,1.1s
KMRM Mail Ridge 72.34 43 P P 19 53 54.3 +0.7
KMRM IAmb IAmb 19 53 57.0
comp=Z,46nm,1.2s
PCBR Castelo Branco 72.37 316 *e*PKPdf P 19 53 54.3 +0.6
COI Coimbra 72.41 317 P P 19 53 54.6 +0.7
COI pmax pmax
comp=Z,219nm,1.4s
COI MLR MLR
comp=Z,1µm,20.0s
COI Coimbra 72.41 317 *e*PKPdf P 19 53 55.0 +1.1
COI *e*S S 20 03 21.0 +3.3
COI Coimbra 72.41 317 P P 19 53 54.6 +0.7
COI IAMs_20 IAMs_20 20 27 57.8
comp=Z,1µm,20.0s
QLMT Earthquake Lak 72.43 32 P P 19 53 54.6 +0.4
WDC Whiskeytown Da 72.47 42 P P 19 53 55.0 +0.7
WDC pmax pmax
comp=Z,29nm,1.2s
WDC MLR MLR
comp=Z,800nm,21.0s
WDC Whiskeytown Da 72.47 42 P P 19 53 55.0 +0.7
YHL Hebgen Lake 72.48 32 P P 19 53 55.0 +0.4
KNRA Kununurra 72.55 165 P P 19 53 55.0 +0.2
YHB Horse Butte 72.57 32 P P 19 53 55.8 +0.7
PCAS Casmilo, Conde 72.57 317 *e*PKPdf P 19 53 56.1 +1.2
PCAS *e*S SKiKP 20 03 24.8 -4.8
PCAS *e*SS SS 20 08 05.2 +7.7
YHH Holmes Hill 72.64 32 P P 19 53 56.2 +0.7
YNE Yellowstone No 72.68 31 P P 19 53 55.8 0.0
MDND Maddock 72.69 23 P P 19 53 55.8 +0.3
baz=341
MDND Maddock 72.69 23 IAMs_20 IAMs_20 20 25 52.9
comp=Z,968nm,21.0s
PMRV Marv??o 72.69 316 *e*PKPdf P 19 53 56.0 +0.4
PMRV *e*S SKiKP 20 03 25.8 -4.0
PMRV *e*SS SS 20 08 04.1 +4.8
PMRV *e*LR LR 20 17 06.6
comp=Z,2µm,18.0s
O02D Mt. Diablo Mer 72.73 42 P P 19 53 57.5 +1.6
baz=331,SNR=12
YNR Norris Junctio 72.75 32 P P 19 53 57.5 +1.3
RLMT Red Lodge 72.79 31 P P 19 53 57.3 +0.9
baz=336,SNR=38
RLMT Red Lodge 72.79 31 P P 19 53 56.9 +0.5
RLMT IAmb IAmb 19 54 00.3
comp=Z,75nm,0.9s
RLMT IAMs_20 IAMs_20 20 27 22.0
comp=Z,1µm,21.0s
YMP Mirror Lake Pl 72.88 31 P P 19 53 57.6 +0.5
LKWY Lake 72.97 32 P P 19 53 59.2 +1.7
LKWY pmax pmax
comp=Z,71nm,0.9s
LKWY MLR MLR
comp=Z,2µm,20.0s
LKWY Lake 72.97 32 P P 19 53 59.2 +1.7
LKWY IAmb IAmb 19 54 02.6
comp=Z,71nm,0.9s
LKWY IAMs_20 IAMs_20 20 25 06.9
comp=Z,2µm,20.0s
O03E Paynes Creek 72.99 41 P P 19 53 57.9 +0.4
baz=331,SNR=6.8
AGMN Agassiz Nation 73.03 20 P P 19 53 56.6 -0.9
baz=343,SNR=20
AGMN Agassiz Nation 73.03 20 P P 19 53 57.0 -0.5
AGMN IAmb IAmb 19 53 58.2
comp=Z,69nm,1.1s
AGMN IAMs_20 IAMs_20 20 28 17.0

	comp=Z,1µm,20.0s																		
H17A	**Grant Village**	**73.08**	**32**	P	**P**	**19 54 00.9 +2.7**													
	baz=336,SNR=12																		
H17A	**Grant Village**	**73.08**	**32**	P	**P**	**19 53 58.5 +0.3**													
H17A				IAmb	IAmb	19 54 03.4													
	comp=Z,35nm,0.8s																		
YPP	**Pitchstone Pla**	**73.12**	**32**	P	**P**	**19 53 59.8 +1.3**													
PESTR	**Estremoz**	**73.25**	**316**	*e*S	**SKiKP**	**20 03 33.4 +2.8**													
PESTR				eSS	**SS**	**20 08 14.2 +6.3**													
PMTG	**Montargil**	**73.32**	**317**	*e*PKPdf	**P**	**19 54 00.0 +0.7**													
PMTG				*e*S	**SKiKP**	**20 03 33.3 +2.6**													
PMTG				eSS	**SS**	**20 08 18.2 +9.3**													
FLWY	**Flagg Ranch**	**73.32**	**32**	P	**P**	**19 54 00.9 +1.3**													
FLWY				IAmb	IAmb	19 54 04.2													
	comp=Z,44nm,0.9s																		
B35A	**Bob, Littlefor**	**73.38**	**19**	P	**P**	**19 53 58.6 -0.9**													
B35A				IAmb	IAmb	19 54 00.5													
	comp=Z,73nm,1.1s																		
IMW	**Indian Meadow**	**73.42**	**32**	P	**P**	**19 54 00.9 +0.7**													
IMW				IAMs_20	IAMs_20	20 27 05.8													
	comp=Z,1µm,21.0s																		
FXWY	**Fox Creek**	**73.63**	**32**	P	**P**	**19 54 02.1 +0.7**													
FXWY				IAmb	IAmb	19 54 05.9													
	comp=Z,54nm,0.9s																		
FXWY				IAMs_20	IAMs_20	20 27 11.3													
	comp=Z,1µm,22.0s																		
E28A	**Huff**	**73.65**	**24**	P	**P**	**19 54 01.8 +0.6**													
E28A				IAmb	IAmb	19 54 04.7													
	comp=Z,92nm,1.0s																		
E28A				IAMs_20	IAMs_20	20 26 40.4													
	comp=Z,1µm,22.0s																		
ORV	**Oroville**	**73.75**	**42**	P	**P**	**19 54 02.2 +0.3**													
ORV				pmax	pmax														
	comp=Z,33nm,1.2s																		
ORV				MLR	MLR														
	comp=Z,600nm,19.0s																		
ORV	**Oroville**	**73.75**	**42**	P	**P**	**19 54 02.2 +0.3**													
TPAW	**Teton Pass**	**73.79**	**32**	P	**P**	**19 54 03.3 +0.9**													
TPAW				IAmb	IAmb	19 54 05.4													
	comp=Z,83nm,1.1s																		
TPAW				IAMs_20	IAMs_20	20 27 17.5													
	comp=Z,1µm,22.0s																		
PMAFR	**Mafra**	**73.83**	**317**	*e*PKPdf	**P**	**19 54 04.1 +1.8**													
PMAFR				*e*S	**S**	**20 03 38.3 +4.4**													
SNOW	**Snow King Moun**	**73.87**	**32**	P	**P**	**19 54 03.4 +0.6**													
SNOW				IAmb	IAmb	19 54 07.4													
	comp=Z,70nm,1.0s																		
SNOW				IAMs_20	IAMs_20	20 27 20.7													
	comp=Z,1µm,22.0s																		
BEKR	**Beckworth**	**73.90**	**41**	P	**P**	**19 54 04.0 +1.0**													
BEKR				IAmb	IAmb	19 54 05.4													
	comp=Z,58nm,1.2s																		
GDXM	**Geysers**	**73.92**	**43**	P	**P**	**19 54 04.6 +1.7**													
GDXM				IAmb	IAmb	19 54 06.5													
	comp=Z,84nm,1.2s																		
GDXM				IAMs_20	IAMs_20	20 27 20.5													
	comp=Z,1µm,19.0s																		
COEN	**Coen**	**73.93**	**151**	P	**P**	**19 54 02.7 -0.3**													
REDW	**Red Top Meadow**	**73.93**	**32**	P	**P**	**19 54 04.3 +1.1**													
REDW				IAmb	IAmb	19 54 06.1													
	comp=Z,64nm,1.2s																		
REDW				IAMs_20	IAMs_20	20 27 23.4													
	comp=Z,1µm,22.0s																		
MATQ	**Matagami**	**74.08**	**8**	P	**P**	**19 54 03.6 -0.1**													
	baz=353,SNR=26																		
PBEJ	**Beja**	**74.09**	**316**	*e*PKPdf	**P**	**19 54 04.6 +0.7**													
CHGQ	**Chibougamau**	**74.15**	**6**	P	**P**	**19 54 03.9 -0.1**													
	baz=355,SNR=10																		
EYMN	**Ely**	**74.17**	**18**	P	**P**	**19 54 03.4 -0.7**													
	baz=346,SNR=29																		
EYMN	**Ely**	**74.17**	**18**	P	**P**	**19 54 03.5 -0.7**													
EYMN				IAmb	IAmb	19 54 05.3													
	comp=Z,62nm,1.2s																		
EYMN	**Ely**	**74.17**	**18**	IAMs_20	IAMs_20	20 29 40.9													
	comp=Z,1µm,19.0s																		
PNCL	**Nicolau / Gran**	**74.27**	**316**	*e*PKPdf	**P**	**19 54 05.6 +0.7**													
PNCL				*e*S	**S**	**20 03 43.8 +4.9**													
PNCL				eSS	**SS**	**20 08 32.3 +8.9**													
MESJ	**Messejana**	**74.39**	**316**	*e*P	**P**	**19 54 06.4 +0.8**													
MESJ				*e*S	**S**	**20 03 41.2 +1.0**													
MESJ				AMS	AMS	20 25 13.8													
	comp=E,2µm,20.2s																		
MESJ	**Messejana**	**74.39**	**316**	*e*P	**P**	**19 54 06.4 +0.8**													
MESJ				*e*S	**S**	**20 03 41.2 +1.0**													
MESJ	**Messejana**	**74.39**	**316**	*e*PKPdf	**P**	**19 54 06.6 +1.0**													
PAHR	**Pah Rah Range**	**74.39**	**40**	P	**P**	**19 54 06.0 +0.2**													
PAHR				IAMs_20	IAMs_20	20 28 10.8													
	comp=Z,938nm,21.0s																		
AHID	**Auburn Hatcher**	**74.40**	**33**	P	**P**	**19 54 06.4 +0.5**													
AHID				IAmb	IAmb	19 55 38.3													
	comp=Z,25nm,0.3s																		
AHID				IAMs_20	IAMs_20	20 27 48.8													
	comp=Z,1µm,21.0s																		
AFDM	**Forest Hills D**	**74.48**	**42**	P	**P**	**19 54 06.8 +0.7**													
FITZ	**Fitzroy Crossi**	**74.54**	**169**	LR	LR	20 29 12.9													
	comp=Z,258nm,21.6s,baz=355,slow=38																		
FITZ	**Fitzroy Crossi**	**74.54**	**169**	P	**P**	**19 54 06.4 -0.1**													
PVAQ	**Vaqueiros**	**74.57**	**315**	*e*PKPdf	**P**	**19 54 07.5 +0.8**													
PVAQ				*e*S	**S**	**20 03 48.5 +6.2**													
PVAQ	**Vaqueiros**	**74.57**	**315**	*e*LR	LR	20 17 53.4													
	comp=Z,2µm,18.0s																		
PVAQ	**Vaqueiros**	**74.57**	**315**	P	**P**	**19 54 07.2 +0.5**													
PVAQ				IAmb	IAmb	19 54 09.7													
	comp=Z,85nm,1.3s																		
VCNR	**Virginia City**	**74.66**	**40**	P	**P**	**19 54 08.7 +1.2**													
HVU	**Hansel Valley**	**74.78**	**34**	P	**P**	**19 54 08.3 +0.3**													
HVU				pmax	pmax														
	comp=Z,60nm,1.5s																		
HVU	**Hansel Valley**	**74.78**	**34**	P	**P**	**19 54 08.3 +0.3**													
PBDV	**Barranco-do-Ve**	**74.79**	**315**	*e*PKPdf	**P**	**19 54 09.3 +1.3**													
PBDV				*e*S	**S**	**20 03 51.5 +6.7**													
PBDV				eSS	**SS**	**20 08 40.0 +8.6**													
DRLN	**Deer Lake**	**74.80**	**354**	P	**P**	**19 54 07.4 -0.4**													
DRLN				IAmb	IAmb	19 54 10.2													
	comp=Z,80nm,0.8s																		
DRLN				IAMs_20	IAMs_20	20 26 55.9													
	comp=Z,1µm,20.0s																		
LSQQ	**Lebel-sur-Quev**	**74.83**	**7**	P	**P**	**19 54 08.3 +0.3**													
	baz=354																		
PTEO	**Sao Teotonio**	**74.84**	**316**	*e*PKPdf	**P**	**19 54 09.2 +1.0**													
PNTR	**Pine Nut**	**74.86**	**40**	P	**P**	**19 54 09.6 +0.9**													
PNTR				IAmb	IAmb	19 54 11.5													
	comp=Z,58nm,1.2s																		
BW06	**Boulder Array**	**74.86**	**32**	P	**P**	**19 54 08.8 +0.2**													
	baz=336,SNR=9.6																		
BW06	**Boulder Array**	**74.86**	**32**	P	**P**	**19 54 08.6 0.0**													
BW06				IAMs_20	IAMs_20	20 29 21.9													
	comp=Z,1µm,20.0s																		
PD31	**Pinedale Array**	**74.86**	**32**	P	**P**	**19 54 08.6 0.0**													
PDAR	**Pinedale Array**	**74.86**	**32**	P	**P**	**19 54 08.6 0.0**													
	comp=Z,17nm,0.9s,baz=5.7,slow=3.0,SNR=25																		
PDAR				LR	LR	20 29 33.7													
	comp=Z,816nm,20.8s,baz=344,slow=38																		
ELK	**Elko**	**74.91**	**37**	P	**P**	**19 54 09.5 +0.6**													
ELK				pmax	pmax														
	comp=Z,25nm,1.1s																		
ELK				MLR	MLR														
	comp=Z,1µm,21.0s																		
ELK	**Elko**	**74.91**	**37**	P	**P**	**19 54 09.4 +0.6**													
ELK				IAMs_20	IAMs_20	20 26 43.4													
	comp=Z,1µm,21.0s																		
MORF	**Marmelete**	**75.02**	**316**	*e*P	**P**	**19 54 10.0 +0.7**													
MORF				*e*S	**S**	**20 03 48.3 +0.9**													
MORF				AMS	AMS	20 25 24.3													
	comp=E,2µm,14.3s																		
MORF	**Marmelete**	**75.02**	**316**	*e*P	**P**	**19 54 10.0 +0.7**													
MORF				*e*S	**S**	**20 03 48.3 +0.9**													
MORF	**Marmelete**	**75.02**	**316**	*e*PKPdf	**P**	**19 54 10.3 +0.9**													
MORF				*e*S	**S**	**20 03 53.2 +5.8**													
MORF				eSS	SS	20 08 47.2 +12													
YERR	**Yerington**	**75.08**	**40**	P	**P**	**19 54 11.3 +1.4**													
YERR				IAmb	IAmb	19 54 12.6													
	comp=Z,67nm,1.3s																		
YERR				IAMs_20	IAMs_20	20 28 44.2													
	comp=Z,1µm,20.0s																		
RSSD	**Black Hills**	**75.14**	**27**	P	**P**	**19 54 10.3 +0.2**													
RSSD				pmax	pmax														
	comp=Z,68nm,0.9s																		
RSSD				MLR	MLR														
	comp=Z,1µm,21.0s																		
RSSD	**Black Hills**	**75.14**	**27**	P	**P**	**19 54 10.5 +0.4**													
	baz=339																		
RSSD	**Black Hills**	**75.14**	**27**	P	**P**	**19 54 10.3 +0.2**													
RSSD				IAmb	IAmb	19 54 13.2													
	comp=Z,68nm,0.9s																		
RSSD	**Black Hills**	**75.14**	**27**	IAMs_20	IAMs_20	20 28 35.9													
	comp=Z,1µm,21.0s																		
PFVI	**Vila Bisbo**	**75.24**	**316**	*e*S	**S**	**20 03 55.4 +5.7**													
F33A	**5 Mile Ranch,**	**75.30**	**21**	P	**P**	**19 54 10.6 -0.2**													
F33A				IAmb	IAmb	19 54 12.1													
	comp=Z,62nm,1.1s																		
HWUT	**Hardware Ranch**	**75.31**	**34**	IAMs_20	IAMs_20	20 29 22.0													
	comp=Z,1µm,18.0s																		
KVN	**Kaiserville**	**75.43**	**39**	P	**P**	**19 54 13.0 +1.1**													
KVN				pmax	pmax														
	comp=Z,64nm,1.1s																		
KVN				MLR	MLR														
	comp=Z,1µm,19.0s																		
KVN	**Kaiserville**	**75.43**	**39**	P	**P**	**19 54 13.0 +1.1**													
KVN				IAmb	IAmb	19 54 14.8													
	comp=Z,64nm,1.1s																		
KVN				IAMs_20	IAMs_20	20 29 23.5													
	comp=Z,1µm,19.0s																		
WAKR	**Walker**	**75.44**	**41**	P	**P**	**19 54 12.9 +1.0**													
WAKR				IAMs_20	IAMs_20	20 32 59.6													
	comp=Z,921nm,19.0s																		
E38A	**The Farm, Brul**	**75.46**	**18**	P	**P**	**19 54 11.2 -0.4**													
E38A				IAmb	IAmb	19 54 12.6													
	comp=Z,99nm,1.1s																		
BGU	**Big Grassy Mou**	**75.47**	**35**	P	**P**	**19 54 12.7 +0.7**													
D41A	**Chassel**	**75.50**	**16**	P	**P**	**19 54 11.2 -0.7**													
D41A				IAMs_20	IAMs_20	20 29 20.0													
	comp=Z,1µm,20.0s																		
CMB	**Columbia Colle**	**75.50**	**42**	P	**P**	**19 54 12.9 +0.8**													
CMB				pmax	pmax														
	comp=Z,39nm,1.4s																		
CMB				MLR	MLR														
	comp=Z,700nm,22.0s																		
CMB	**Columbia Colle**	**75.50**	**42**	P	**P**	**19 54 12.9 +0.8**													
HNR	**Honiara**	**75.53**	**133**	LR	LR	20 25 22.3													
	comp=Z,400nm,21.7s,baz=330,slow=34																		
RYN	**Ryan**	**75.66**	**40**	P	**P**	**19 54 13.8 +0.6**													
RYN				IAMs_20	IAMs_20	20 29 01.4													
	comp=Z,947nm,21.0s																		
VLDQ	**Val d'Or**	**75.73**	**8**	P	**P**	**19 54 12.8 -0.4**													
VLDQ				IAmb	IAmb	19 54 14.3													
	comp=Z,99nm,1.1s																		
VLDQ				IAMs_20	IAMs_20	20 28 11.4													
	comp=Z,1µm,19.0s																		
TCUT	**Toone Canyon**	**75.81**	**34**	P	**P**	**19 54 14.6 +0.5**													
F36A	**Milaca**	**75.82**	**19**	P	**P**	**19 54 12.8 -1.0**													
F36A				IAmb	IAmb	19 54 14.7													
	comp=Z,72nm,1.0s																		
F36A				IAMs_20	IAMs_20	20 29 19.7													
	comp=Z,940nm,20.0s																		
K22A	**Casper**	**75.84**	**30**	P	**P**	**19 54 13.8 -0.4**													
	baz=338,SNR=8.7																		
K22A	**Casper**	**75.84**	**30**	P	**P**	**19 54 13.7 -0.4**													
K22A				IAMs_20	IAMs_20	20 29 16.6													
	comp=Z,1µm,22.0s																		
NVAR	**Mina Arroyo Bea**	**75.91**	**40**	P	**P**	**19 54 15.8 +1.1**													
	comp=Z,16nm,0.9s,baz=311,slow=4.0,SNR=46																		
NVAR				LR	LR	20 29 54.7													
	comp=Z,987nm,21.1s,baz=330,slow=38																		
NV11	**Mina Array Sit**	**75.96**	**40**	P	**P**	**19 54 15.5 +0.6**													
NV11				IAMs_20	IAMs_20	20 29 42.5													
	comp=Z,1µm,22.0s																		
SUSD	**Miller**	**76.06**	**24**	P	**P**	**19 54 15.4 +0.3**													
	baz=342,SNR=38																		
SUSD	**Miller**	**76.06**	**24**	P	**P**	**19 54 15.5 +0.3**													
SUSD				IAMs_20	IAMs_20	20 30 00.2													
	comp=Z,1µm,19.0s																		
CTU	**Camp Tracy**	**76.09**	**34**	P	**P**	**19 54 16.2 +0.6**													
DUG	**Dugway, Tooele**	**76.20**	**35**	P	**P**	**19 54 16.7 +0.5**													
DUG				pmax	pmax														
	comp=Z,34nm,1.2s																		
DUG				MLR	MLR														
	comp=Z,800nm,20.0s																		
DUG	**Dugway, Tooele**	**76.20**	**35**	P	**P**	**19 54 17.4 +1.2**													
	baz=335,SNR=14																		
DUG	**Dugway, Tooele**	**76.20**	**35**	P	**P**	**19 54 16.7 +0.5**													
DUG				IAMs_20	IAMs_20	20 29 42.5													
	comp=Z,820nm,20.0s																		
D49A	**Beulah Townshi**	**76.21**	**11**	P	**P**	**19 54 15.8 -0.2**													
	baz=351,SNR=14																		
SAO	**San Andreas Ge**	**76.22**	**43**	P	**P**	**19 54 17.7 +1.5**													
SAO				pmax	pmax														
	comp=Z,21nm,1.1s																		
SAO				MLR	MLR														
	comp=Z,700nm,19.0s																		
SAO	**San Andreas Ge**	**76.22**	**43**	P	**P**	**19 54 17.6 +1.5**													
D47A	**Chapleau**	**76.24**	**12**	P	**P**	**19 54 15.9 -0.2**													
	baz=350,SNR=22																		
D48A	**Paudash Townsh**	**76.26**	**11**	P	**P**	**19 54 16.1 -0.1**													
	baz=351,SNR=11																		
JLU	**Jordanelle**	**76.27**	**34**	P	**P**	**19 54 17.2 +0.5**													
D46A	**Sault St. Mari**	**76.29**	**13**	P	**P**	**19 54 16.1 -0.3**													
	baz=350,SNR=14																		
MDPB	**Devils Postpil**	**76.34**	**41**	P	**P**	**19 54 17.1 -0.1**													
COWI	**Conover**	**76.35**	**16**	P	**P**	**19 54 16.2 -0.6**													
COWI				IAmb	IAmb	19 54 19.1													
	comp=Z,84nm,1.7s																		
OMMB	**Old Mammoth Mi**	**76.38**	**41**	P	**P**	**19 54 18.3 +0.8**													
E43A	**Lone Tree Farm**	**76.40**	**15**	P	**P**	**19 54 16.6 -0.4**													
E43A				IAmb	IAmb	19 54 19.4													
	comp=Z,45nm,0.8s																		
E43A				IAMs_20	IAMs_20	20 29 13.8													
	comp=Z,2µm,20.0s																		
MLAC	**Mammoth, Mammo**	**76.43**	**41**	P	**P**	**19 54 19.2 +1.6**													
	baz=333																		
D50A	**G1974 Best Tow**	**76.47**	**10**	P	**P**	**19 54 17.6 +0.2**													
	baz=352,SNR=9.3																		
RWWY	**Rawlins**	**76.53**	**30**	P	**P**	**19 54 17.2 -1.0**													
RWWY				IAMs_20	IAMs_20	20 31 52.1													
	comp=Z,845nm,20.0s																		
SPMN	**Marine on St.**	**76.57**	**19**	P	**P**	**19 54 17.8 -0.2**													
	baz=345,SNR=11																		
SPMN	**Marine on St.**	**76.57**	**19**	P	**P**	**19 54 17.6 -0.4**													
SPMN				IAmb	IAmb	19 54 20.7													
	comp=Z,74nm,0.9s																		
D51A	**Lot 18 Range I**	**76.59**	**9**	P	**P**	**19 54 18.0 -0.1**													
	baz=352,SNR=8.6																		
NLU	**North Lily Min**	**76.66**	**35**	P	**P**	**19 54 19.6 +0.7**													
D53A	**Lac Vacive, Po**	**76.74**	**8**	P	**P**	**19 54 19.1 +0.1**													
	baz=353,SNR=21																		
D53A	**Lac Vacive, Po**	**76.74**	**8**	P	**P**	**19 54 18.9 0.0**													
D53A				IAmb	IAmb	19 54 20.6													
	comp=Z,90nm,1.3s																		
D54A	**Lac Fusel, La**	**76.75**	**7**	P	**P**	**19 54 18.7 -0.3**													
	baz=354,SNR=20																		
LATQ	**La Tuque**	**76.75**	**5**	P	**P**	**19 54 19.6 +0.7**													
	baz=356																		
LATQ	**La Tuque**	**76.75**	**5**	P	**P**	**19 54 18.3 -0.7**													
E46A	**Sault Ste Mari**	**76.77**	**13**	P	**P**	**19 54 18.4 -0.7**													
E46A				IAmb	IAmb	19 54 20.2													
	comp=Z,47nm,1.1s																		
E46A				IAMs_20	IAMs_20	20 30 46.5													
	comp=Z,1µm,18.0s																		
D52A	**ZEK Kipawa Sen**	**76.79**	**9**	P	**P**	**19 54 19.2 -0.1**													
	baz=353,SNR=14																		
E47A	**Iron Bridge**	**76.81**	**12**	P	**P**	**19 54 19.1 -0.2**													
	baz=350,SNR=9.4																		
RDMU	**Red Mountain**	**76.87**	**33**	P	**P**	**19 54 20.7 +0.6**													
E48A	**Lockeyer**	**76.91**	**11**	P	**P**	**19 54 19.5 -0.4**													
	baz=351,SNR=6.7																		
R11A	**Troy Canyon, C**	**76.94**	**38**	P	**P**	**19 54 21.6 +1.1**													
	baz=334,SNR=37																		
R11A	**Troy Canyon, C**	**76.94**	**38**	P	**P**	**19 54 20.6 +0.2**													
R11A				IAMs_20	IAMs_20	20 29 15.3													
	comp=Z,925nm,18.0s																		
PMPB	**Monarch Peak**	**76.95**	**43**	P	**P**	**19 54 21.1 +0.7**													
PMPB				IAmb	IAmb	19 54 30.4													
	comp=Z,38nm,1.1s																		
PMPB				IAMs_20	IAMs_20	20 29 59.7													
	comp=Z,884nm,20.0s																		
D55A	**Sainte-Anne-du**	**76.96**	**7**	P	**P**	**19 54 20.6 +0.3**													
	baz=355,SNR=22																		
D56A	**ZEC Mazanza, M**	**76.98**	**6**	P	**P**	**19 54 20.3 0.0**													
	baz=355,SNR=21																		
G40A	**Rib Lake**	**76.98**	**17**	P	**P**	**19 54 19.9 -0.5**													
G40A				IAmb	IAmb	19 54 21.8													
	comp=Z,63nm,1.1s																		
G40A				IAMs_20	IAMs_20	20 31 26.3													
	comp=Z,1µm,18.0s																		
BATG	**Bathurst New B**	**77.01**	**0**	P	**P**	**19 54 20.9 +0.4**													
BATG				IAmb	IAmb	19 54 24.3													
	comp=Z,63nm,0.9s																		
D61A	**St Aubert, Com**	**77.03**	**3**	P	**P**	**19 54 21.3 +0.7**													
	baz=358																		
D58A	**Chemin du LacG**	**77.03**	**5**	P	**P**	**19 54 20.6 0.0**													
	baz=356,SNR=27																		
D57A	**Chemin Vers le**	**77.06**	**6**	P	**P**	**19 54 21.2 +0.4**													
	baz=356,

baz=332,SNR=7.2
F55A **Otter Lake** **78.08** **7** P **P** **19 54 26.5 0.0**
baz=354,SNR=5.6
H43A **Windswept, Lux** **78.15** **16** P **P** **19 54 26.6 -0.3**
H43A IAmb IAmb 19 54 28.1
comp=Z,68nm,1.1s
H43A IAMs_20 IAMs_20 20 29 40.1
comp=Z,1µm,20.0s
FURC **Furnace Creek,** **78.18** **40** P **P** **19 54 28.6 +1.5**
baz=334,SNR=17
F60A **Warwick** **78.20** **4** P **P** **19 54 27.2 +0.1**
baz=357,SNR=15
F58A **St-Lin Laurent** **78.21** **6** P **P** **19 54 27.5 +0.3**
baz=356
F57A **Harrington** **78.22** **6** P **P** **19 54 27.3 +0.1**
baz=355
F61A **St Evariste** **78.23** **4** P **P** **19 54 27.6 +0.3**
baz=357,SNR=19
GLMI **Grayling** **78.25** **13** P **P** **19 54 27.2 -0.2**
baz=350
GLMI **Grayling** **78.25** **13** P **P** **19 54 27.2 -0.2**
GLMI IAMs_20 IAMs_20 20 30 37.6
comp=Z,1µm,19.0s
I40A **Norwalk** **78.25** **18** P **P** **19 54 27.1 -0.3**
I40A IAmb IAmb 19 54 28.9
comp=Z,56nm,0.9s
I40A IAMs_20 IAMs_20 20 32 15.9
comp=Z,1µm,18.0s
H45A **Beulah** **78.25** **14** P **P** **19 54 27.3 -0.1**
baz=349
F59A **Saint Guilaume** **78.28** **5** P **P** **19 54 28.0 +0.5**
baz=356,SNR=7.9
ISA **Isabella, Lake** **78.31** **41** P **P** **19 54 28.2 +0.2**
ISA pmax pmax
comp=Z,25nm,1.3s
ISA MLR MLR
comp=Z,700nm,19.0s
ISA **Isabella, Lake** **78.31** **41** P **P** **19 54 28.2 +0.2**
baz=333,SNR=6.3
ISA **Isabella, Lake** **78.31** **41** P **P** **19 54 28.1 +0.2**
MPMC **Manual Prospec** **78.32** **40** P **P** **19 54 29.3 +1.1**
baz=334,SNR=27
F62A **Pittston Farm,** **78.34** **3** P **P** **19 54 28.8 +0.9**
baz=358,SNR=25
F62A **Pittston Farm,** **78.34** **3** P **P** **19 54 28.0 +0.1**
F62A IAmb IAmb 19 54 30.3
comp=Z,98nm,1.3s
F62A IAMs_20 IAMs_20 20 29 32.8
comp=Z,963nm,20.0s
MTPU **Mount Pierson** **78.36** **36** P **P** **19 54 28.7 +0.1**
G54A **Lake Saint Pet** **78.38** **9** P **P** **19 54 28.0 -0.1**
baz=353,SNR=16
F64A **Sherman** **78.41** **2** P **P** **19 54 29.3 +1.0**
baz=359,SNR=22
F64A **Sherman** **78.41** **2** P **P** **19 54 29.2 +1.0**
F64A IAmb IAmb 19 54 30.7
comp=Z,83nm,1.2s
F64A IAMs_20 IAMs_20 20 31 21.6
comp=Z,844nm,19.0s
CCUT **Cedar City** **78.42** **37** P **P** **19 54 29.4 +0.6**
LMN **Caledonia Moun** **78.44** **359** P **P** **19 54 29.2 +0.8**
H46A **Fife Lake** **78.45** **14** P **P** **19 54 28.1 -0.4**
baz=349
SZCU **Shurtz Canyon** **78.47** **36** P **P** **19 54 29.6 +0.5**
PKM **Mcpherson Peak** **78.49** **43** P **P** **19 54 30.6 +1.4**
baz=333,SNR=14
H47A **Mio** **78.52** **13** P **P** **19 54 28.9 -0.1**
baz=350
ORIO **Orleans, Innes** **78.52** **7** P **P** **19 54 28.7 -0.1**
baz=355,SNR=5.7
ORIO **Orleans, Innes** **78.52** **7** P **P** **19 54 29.0 +0.1**
H48A **Harrisville** **78.53** **13** P **P** **19 54 28.7 -0.3**
baz=350
H48A **Harrisville** **78.53** **13** IAMs_20 IAMs_20 20 31 59.1
comp=Z,1µm,18.0s
I42A **Draeger Farm,** **78.53** **17** P **P** **19 54 29.1 +0.1**
I42A IAmb IAmb 19 54 30.4
comp=Z,62nm,1.1s
F63A **Nahmakanta, Br** **78.56** **2** P **P** **19 54 29.9 +0.8**
baz=358,SNR=13
F63A **Nahmakanta, Br** **78.56** **2** P **P** **19 54 29.9 +0.8**
F63A IAmb IAmb 19 54 31.6
comp=Z,74nm,1.3s
G53A **Haliburton** **78.61** **9** P **P** **19 54 29.8 +0.4**
baz=353,SNR=14
OGNE **Ogallala** **78.63** **27** P **P** **19 54 30.1 +0.4**
baz=340,SNR=16
OGNE **Ogallala** **78.63** **27** P **P** **19 54 30.0 +0.3**
OGNE IAMs_20 IAMs_20 20 30 47.3
comp=Z,1µm,20.0s
G55A **Calabogie** **78.63** **8** P **P** **19 54 29.1 -0.5**
baz=354,SNR=13
ARVC **Arvin** **78.65** **42** P **P** **19 54 30.5 +0.7**
baz=333
ISCO **Idaho Springs** **78.74** **30** P **P** **19 54 31.5 +0.9**
ISCO pmax pmax
comp=Z,67nm,1.6s
ISCO MLR MLR
comp=Z,1µm,21.0s
ISCO **Idaho Springs** **78.74** **30** P **P** **19 54 31.5 +0.9**
baz=339,SNR=11
ISCO **Idaho Springs** **78.74** **30** P **P** **19 54 31.5 +0.9**
ISCO IAmb IAmb 19 54 33.3
comp=Z,67nm,1.6s
ISCO IAMs_20 IAMs_20 20 31 03.4
comp=Z,1µm,21.0s
SHPR **Sheep Range** **78.75** **38** P **P** **19 54 31.6 +1.1**
SHPR IAmb IAmb 19 54 33.6
comp=Z,64nm,1.3s
LRMC **Laurel Mtn Rad** **78.76** **41** P **P** **19 54 31.7 +1.1**
baz=334,SNR=23
I45A **Fountain** **78.80** **15** P **P** **19 54 30.2 -0.2**
baz=349
GBN **Guysborough** **78.81** **357** P **P** **19 54 31.4 +1.0**
GBN IAmb IAmb 19 54 34.2
comp=Z,83nm,0.9s
PLVO **Plevna** **78.82** **8** P **P** **19 54 30.9 +0.4**
PKCU **Pink Cliffs** **78.86** **36** P **P** **19 54 31.9 +0.5**
SHOC **Shoshone, Teco** **78.90** **40** P **P** **19 54 32.3 +1.2**
baz=334
PV21 **Cone Mtn., Par** **78.90** **33** P **P** **19 54 32.3 +0.9**
PV21 IAmb IAmb 19 54 33.8
comp=Z,56nm,1.1s
G61A **St-Isidore-de-** **78.90** **4** P **P** **19 54 32.0 +1.0**
baz=357,SNR=23
G57A **Newington** **78.90** **6** P **P** **19 54 31.4 +0.5**
baz=355,SNR=16
PV09 **Paradox Valley** **78.91** **33** P **P** **19 54 32.4 +0.8**
SADO **Sadowa** **78.91** **10** P **P** **19 54 30.4 -0.7**
SADO IAmb IAmb 19 54 34.8
comp=Z,69nm,1.6s
G58A **Ormstown** **78.91** **6** P **P** **19 54 31.5 +0.5**
baz=355
SBC **Santa Barbara** **78.93** **43** P **P** **19 54 32.7 +1.4**
baz=333
PV22 **Blue Mesa, Par** **78.98** **33** P **P** **19 54 32.2 +0.4**
PV22 IAmb IAmb 19 54 34.1
comp=Z,51nm,1.0s
L34A **Svendsen Farm,** **78.99** **23** P **P** **19 54 31.1 -0.5**
PV23 **Carpenter Ridg** **78.99** **33** P **P** **19 54 31.9 -0.1**
PV23 IAmb IAmb 19 54 34.3
comp=Z,78nm,1.1s
PKME **Peaks-Kenny Pk** **78.99** **2** P **P** **19 54 32.2 +0.7**
baz=358,SNR=11
PKME **Peaks-Kenny Pk** **78.99** **2** P **P** **19 54 32.1 +0.7**
PKME IAMs_20 IAMs_20 20 29 32.0
comp=Z,949nm,22.0s
I48A **Sherman Twp** **78.99** **13** P **P** **19 54 31.3 -0.2**
baz=350
G62A **West of Eustis** **79.00** **3** P **P** **19 54 32.1 +0.5**
baz=357,SNR=7.7
G62A **West of Eustis** **79.00** **3** P **P** **19 54 32.2 +0.6**
G62A IAmb IAmb 19 54 35.5
comp=Z,67nm,1.4s
G62A IAMs_20 IAMs_20 20 30 01.3
comp=Z,932nm,20.0s
I46A **Reed City** **79.00** **14** P **P** **19 54 31.5 -0.1**
baz=349
G64A **Maxfield** **79.01** **2** P **P** **19 54 32.5 +0.9**
baz=358,SNR=25
G59A **Clarenceville** **79.03** **5** P **P** **19 54 32.4 +0.8**
baz=356
PV10 **Paradox Valley** **79.05** **33** P **P** **19 54 33.3 +1.1**
PV10 IAmb IAmb 19 54 35.1
comp=Z,77nm,1.1s
G60A **Masonville** **79.05** **5** P **P** **19 54 32.2 +0.4**
baz=356,SNR=9.9

I47A **Gladwin** **79.05** **14** P **P** **19 54 32.1 +0.3**
baz=350
I47A **Gladwin** **79.05** **14** IAMs_20 IAMs_20 20 31 12.9
comp=Z,1µm,19.0s
PV14 **Lion Creek, Pa** **79.06** **33** P **P** **19 54 32.7 +0.4**
PV14 IAmb IAmb 19 54 34.6
comp=Z,71nm,1.1s
K38A **Parkersburg** **79.06** **20** P **P** **19 54 31.5 -0.5**
K38A IAmb IAmb 19 54 34.6
comp=Z,103nm,1.1s
K38A IAMs_20 IAMs_20 20 31 21.5
comp=Z,1µm,19.0s
PV04 **Paradox Valley** **79.07** **33** P **P** **19 54 32.6 +0.3**
KNB **Kanab** **79.08** **36** P **P** **19 54 33.1 +0.7**
KNB pmax pmax
comp=Z,128nm,1.1s
KNB **Kanab** **79.08** **36** P **P** **19 54 33.1 +0.7**
G65A **Princeton** **79.08** **1** P **P** **19 54 33.0 +1.0**
baz=359,SNR=22
G65A **Princeton** **79.08** **1** P **P** **19 54 32.2 +0.3**
G65A IAmb IAmb 19 54 34.5
comp=Z,97nm,1.2s
G65A IAMs_20 IAMs_20 20 33 18.4
comp=Z,1µm,18.0s
PV20 **West Nyswonger** **79.10** **33** P **P** **19 54 33.1 +0.6**
PV20 IAMs_20 IAMs_20 20 31 54.2
comp=Z,1µm,21.0s
PV07 **Paradox Valley** **79.11** **33** P **P** **19 54 33.5 +0.9**
BGNE **Belgrade** **79.13** **24** P **P** **19 54 32.2 -0.2**
baz=342
BGNE **Belgrade** **79.13** **24** P **P** **19 54 32.6 +0.3**
BGNE IAMs_20 IAMs_20 20 32 30.4
comp=Z,1µm,20.0s
PV19 **Morning Glory** **79.13** **33** P **P** **19 54 33.3 +0.7**
PV19 IAmb IAmb 19 54 35.0
comp=Z,62nm,1.2s
G63A **Kingsbury** **79.13** **3** P **P** **19 54 33.2 +0.9**
baz=358,SNR=11
PV16 **Nyswonger Mesa** **79.15** **33** P **P** **19 54 32.8 0.0**
PV16 IAMs_20 IAMs_20 20 30 56.4
comp=Z,989nm,20.0s
OSI **Osito Audit: C** **79.15** **42** P **P** **19 54 34.0 +1.3**
baz=333
H53A **Bobcaygeon** **79.16** **9** P **P** **19 54 32.3 -0.1**
baz=353,SNR=7.9
PV17 **East Wray Mesa** **79.16** **33** P **P** **19 54 33.2 +0.4**
GGN **Saint George** **79.17** **1** P **P** **19 54 33.4 +1.0**
GGN IAmb IAmb 19 54 34.7
comp=Z,94nm,1.2s
GGN IAMs_20 IAMs_20 20 30 43.6
comp=Z,1µm,20.0s
PV11 **David Mesa, Pa** **79.17** **33** P **P** **19 54 32.9 0.0**
PV11 IAmb IAmb 19 54 35.2
comp=Z,53nm,1.2s
PV12 **Saucer Basin,** **79.17** **33** P **P** **19 54 32.9 0.0**
EDW2 **Edwards Air Fo** **79.18** **41** P **P** **19 54 33.8 +1.0**
baz=333,SNR=21
PV18 **Skein Mesa, Pa** **79.21** **33** P **P** **19 54 33.2 +0.1**
PV18 IAMs_20 IAMs_20 20 30 42.7
comp=Z,1µm,21.0s
PV03 **Paradox Valley** **79.22** **33** P **P** **19 54 33.6 +0.4**
GSC **Goldstone, Bar** **79.24** **40** P **P** **19 54 34.2 +1.1**
GSC pmax pmax
comp=Z,31nm,1.2s
GSC MLR MLR
comp=Z,900nm,19.0s
GSC **Goldstone, Bar** **79.24** **40** P **P** **19 54 34.2 +1.1**
baz=334,SNR=13
GSC **Goldstone, Bar** **79.24** **40** P **P** **19 54 34.2 +1.1**
GSC IAMs_20 IAMs_20 20 31 40.3
comp=Z,864nm,19.0s
PV15 **Paradox Valley** **79.25** **33** P **P** **19 54 33.3 -0.1**
PV15 IAmb IAmb 19 54 35.7
comp=Z,70nm,1.2s
PV15 IAMs_20 IAMs_20 20 30 38.1
comp=Z,989nm,22.0s
FRNY **Flat Rock** **79.25** **5** P **P** **19 54 32.5 -0.4**
FRNY IAMs_20 IAMs_20 20 28 34.0
comp=Z,1µm,22.0s
JFWS **Jewell Farm** **79.26** **18** P **P** **19 54 32.4 -0.6**
JFWS pmax pmax
comp=Z,83nm,1.1s
JFWS MLR MLR
comp=Z,1µm,18.0s
JFWS **Jewell Farm** **79.26** **18** P **P** **19 54 32.6 -0.4**
baz=346,SNR=13
JFWS **Jewell Farm** **79.26** **18** P **P** **19 54 32.4 -0.6**
JFWS IAmb IAmb 19 54 34.1
comp=Z,83nm,1.1s
JFWS **Jewell Farm** **79.26** **18** IAMs_20 IAMs_20 20 32 47.7
comp=Z,1µm,18.0s
DELO **Deloro Mine** **79.29** **8** P **P** **19 54 33.1 0.0**
DELO IAmb IAmb 19 54 34.9
comp=Z,89nm,1.3s
H55A **Tweed** **79.30** **8** P **P** **19 54 33.4 +0.2**
baz=354,SNR=11
PV02 **Paradox Valley** **79.30** **33** P **P** **19 54 34.1 +0.5**
PV05 **Paradox Valley** **79.30** **33** P **P** **19 54 34.4 +0.8**
PV05 IAmb IAmb 19 54 35.9
comp=Z,59nm,1.3s
PV05 IAMs_20 IAMs_20 20 30 45.9
comp=Z,1µm,21.0s
PV13 **Radium Mtn., P** **79.32** **33** P **P** **19 54 33.8 +0.1**
PV13 IAMs_20 IAMs_20 20 30 58.8
comp=Z,1µm,19.0s
H56A **Elgin** **79.33** **7** P **P** **19 54 33.6 +0.3**
baz=354,SNR=14
I49A **Point Hope** **79.34** **12** P **P** **19 54 32.8 -0.6**
I49A IAmb IAmb 19 54 34.7
comp=Z,104nm,1.3s
I49A IAMs_20 IAMs_20 20 31 09.6
comp=Z,1µm,18.0s
SCZ2 **Santa Cruz Isl** **79.35** **43** P **P** **19 54 34.8 +1.1**
baz=333
J45A **Montague** **79.37** **15** P **P** **19 54 33.4 -0.2**
baz=349
LONY **Lake Ozonia** **79.41** **6** P **P** **19 54 34.0 +0.2**
baz=355,SNR=24
LONY **Lake Ozonia** **79.41** **6** P **P** **19 54 34.4 +0.6**
LONY IAmb IAmb 19 54 35.8
comp=Z,96nm,1.4s
LONY IAMs_20 IAMs_20 20 30 15.2
comp=Z,1µm,20.0s
PV01 **Paradox Valley** **79.42** **33** P **P** **19 54 34.9 +0.6**
PV01 IAMs_20 IAMs_20 20 30 47.5
comp=Z,1µm,22.0s
H59A **Cadyville** **79.44** **6** P **P** **19 54 34.1 +0.2**
baz=356,SNR=10
TUQ **Turquoise Moun** **79.44** **39** P **P** **19 54 35.5 +1.2**
baz=334,SNR=15
H66A **Whiting** **79.50** **1** P **P** **19 54 35.0 +0.7**
baz=359,SNR=18
I52A **Shelburne** **79.51** **10** P **P** **19 54 34.4 0.0**
baz=352
RRX **Edison Barstow** **79.55** **41** P **P** **19 54 36.2 +1.4**
baz=334
H60A **Morristown** **79.57** **5** P **P** **19 54 35.5 +0.8**
baz=356,SNR=7.1
H63A **New Sharon** **79.57** **3** P **P** **19 54 35.4 +0.8**
baz=358
EMMW **East Machias** **79.57** **1** P **P** **19 54 35.5 +0.8**
EMMW IAmb IAmb 19 54 37.0
comp=Z,86nm,1.3s
EMMW IAMs_20 IAMs_20 20 33 23.5
comp=Z,876nm,19.0s
H65A **Eastbrook** **79.58** **2** P **P** **19 54 35.4 +0.7**
baz=359,SNR=16
I55A **Frankford** **79.59** **9** P **P** **19 54 34.7 0.0**
baz=353,SNR=5.3
H64A **Troy** **79.61** **2** P **P** **19 54 36.1 +1.2**
baz=358,SNR=12
DECC **Green Verdugo** **79.61** **42** P **P** **19 54 36.0 +0.8**
baz=333
H62A **Milan** **79.62** **4** P **P** **19 54 35.7 +0.7**
baz=357,SNR=11
H62A **Milan** **79.62** **4** P **P** **19 54 35.9 +0.9**
H62A IAmb IAmb 19 54 37.2
comp=Z,97nm,1.4s
H62A IAMs_20 IAMs_20 20 30 36.8
comp=Z,1µm,19.0s
H61A **Lyndonville** **79.63** **4** P **P** **19 54 36.0 +1.0**
baz=357,SNR=13
H58A **Gabriels** **79.64** **6** P **P** **19 54 35.6 +0.6**
baz=355,SNR=13
WVL **Waterville** **79.68** **3** P **P** **19 54 35.9 +0.7**
WVL IAmb IAmb 19 54 39.0
comp=Z,56nm,1.2s

WVL IAMs_20 IAMs_20 20 30 24.3
comp=Z,960nm,20.0s
I51A **Listowel** **79.68** **11** P **P** **19 54 35.2 -0.1**
baz=352
SCIA **State Center** **79.69** **20** P **P** **19 54 35.3 -0.1**
baz=345,SNR=7.2
SCIA **State Center** **79.69** **20** P **P** **19 54 35.7 +0.3**
SCIA IAmb IAmb 19 54 37.0
comp=Z,119nm,1.1s
SCIA IAMs_20 IAMs_20 20 32 53.2
comp=Z,947nm,18.0s
PASC **Pasadena Art C** **79.74** **42** IAMs_20 IAMs_20 20 32 30.7
comp=Z,855nm,19.0s
MWC **Mount Wilson** **79.74** **42** P **P** **19 54 35.2 -0.8**
MWC pmax pmax
comp=Z,76nm,1.4s
MWC MLR MLR
comp=Z,800nm,20.0s
MWC **Mount Wilson** **79.74** **42** P **P** **19 54 35.2 -0.8**
MWC IAmb IAmb 19 54 38.5
comp=Z,76nm,1.4s
MWC IAMs_20 IAMs_20 20 31 53.7
comp=Z,780nm,20.0s
J47A **Sunmer** **79.78** **14** P **P** **19 54 35.8 0.0**
baz=350
J47A **Sunmer** **79.78** **14** P **P** **19 54 35.9 0.0**
J47A IAMs_20 IAMs_20 20 31 44.2
comp=Z,1µm,21.0s
K43A **Burlington** **79.78** **17** P **P** **19 54 35.1 -0.8**
K43A IAmb IAmb 19 54 36.9
comp=Z,87nm,1.0s
K43A IAMs_20 IAMs_20 20 32 42.5
comp=Z,1µm,18.0s
U15A **North Rim** **79.79** **36** P **P** **19 54 37.0 +0.6**
U15A IAMs_20 IAMs_20 20 33 24.6
comp=Z,814nm,19.0s
VT1 **Waterbury** **79.80** **5** P **P** **19 54 36.3 +0.4**
VT1 IAmb IAmb 19 54 38.2
comp=Z,120nm,1.6s
VT1 IAMs_20 IAMs_20 20 31 06.7
comp=Z,1µm,19.0s
I53A **Kortright Cn E** **79.81** **10** P **P** **19 54 36.0 0.0**
baz=352
HEC **Hector,Ludlow** **79.83** **40** P **P** **19 54 37.2 +0.8**
baz=334,SNR=26
J48A **Bridge Port** **79.85** **13** P **P** **19 54 36.2 0.0**
baz=350
J48A **Bridge Port** **79.85** **13** P **P** **19 54 36.6 +0.4**
J48A IAmb IAmb 19 54 37.7
comp=Z,67nm,1.1s
J48A IAMs_20 IAMs_20 20 31 38.2
comp=Z,1µm,19.0s
J49A **Marlette** **79.88** **13** P **P** **19 54 36.0 -0.3**
baz=350
BFSC **Mount Baldy Ra** **79.88** **41** P **P** **19 54 37.3 +0.6**
baz=334,SNR=9.3
L40A **Anamosa** **79.92** **19** P **P** **19 54 35.8 -0.8**
L40A IAmb IAmb 19 54 38.9
comp=Z,77nm,0.8s
L40A IAMs_20 IAMs_20 20 33 29.0
comp=Z,1µm,19.0s
N33A **J Bar K, Exete** **79.92** **24** P **P** **19 54 36.5 -0.2**
N33A IAmb IAmb 19 54 39.1
comp=Z,64nm,0.8s
N33A IAMs_20 IAMs_20 20 31 31.8
comp=Z,1µm,21.0s
PECO **Prince Edward** **79.92** **8** P **P** **19 54 36.6 0.0**
LBNH **Lisbon** **79.93** **4** P **P** **19 54 36.7 +0.1**
LBNH pmax pmax
comp=Z,129nm,1.8s
LBNH **Lisbon** **79.93** **4** P **P** **19 54 37.4 +0.8**
baz=357,SNR=8.1
LBNH **Lisbon** **79.93** **4** P **P** **19 54 36.7 +0.1**
LBNH IAmb IAmb 19 54 41.4
comp=Z,129nm,1.8s
LBNH IAMs_20 IAMs_20 20 30 44.8
comp=Z,1µm,20.0s
I57A **Carthage** **80.02** **7** P **P** **19 54 37.3 +0.2**
baz=355,SNR=5.9
SNCC **San Nicolas Is** **80.06** **43** P **P** **19 54 38.8 +1.2**
baz=333
NCB **Newcomb** **80.08** **6** P **P** **19 54 37.7 +0.2**
NCB IAMs_20 IAMs_20 20 29 10.8
comp=Z,1µm,22.0s
FMP **Fort Macarthur** **80.11** **42** P **P** **19 54 39.1 +1.3**
baz=333
GMRC **Granite Mounta** **80.12** **40** P **P** **19 54 38.9 +0.9**
baz=334,SNR=15
BBRC **Big Bear Solar** **80.13** **41** P **P** **19 54 39.3 +1.1**
baz=334
I63A **Otisfield** **80.17** **3** P **P** **19 54 38.3 +0.4**
baz=357,SNR=21
I63A **Otisfield** **80.17** **3** P **P** **19 54 39.0 +1.1**
I63A IAmb IAmb 19 54 42.7
comp=Z,75nm,0.9s
I63A IAMs_20 IAMs_20 20 30 47.1
comp=Z,1µm,20.0s
K46A **Dorr** **80.19** **15** P **P** **19 54 37.7 -0.3**
baz=349
N35A **Tabor** **80.20** **22** P **P** **19 54 39.0 +0.8**
I61A **Oroboro, Fairl** **80.22** **5** P **P** **19 54 39.1 +0.9**
baz=356,SNR=16
L42A **Oliver, Polo** **80.25** **18** P **P** **19 54 37.3 -1.1**
L42A IAmb IAmb 19 54 40.7
comp=Z,90nm,0.9s
L42A IAMs_20 IAMs_20 20 33 26.7
comp=Z,1µm,18.0s
I60A **Shoreham** **80.26** **5** P **P** **19 54 39.5 +1.2**
baz=356,SNR=9.5
I59A **Olmsteadville** **80.27** **6** P **P** **19 54 39.0 +0.5**
baz=356
MVCO **Mesa Verde** **80.29** **33** P **P** **19 54 40.0 +1.0**
baz=338,SNR=22
MVCO **Mesa Verde** **80.29** **33** P **P** **19 54 39.4 +0.4**
MVCO IAMs_20 IAMs_20 20 31 30.6
comp=Z,1µm,21.0s
KSCO **Kaye Shedlock'** **80.29** **28** P **P** **19 54 38.9 +0.1**
baz=340,SNR=13
KSCO **Kaye Shedlock'** **80.29** **28** P **P** **19 54 39.3 +0.5**
KSCO IAmb IAmb 19 54 40.7
comp=Z,124nm,1.1s
KSCO IAMs_20 IAMs_20 20 31 48.4
comp=Z,1µm,19.0s
J52A **Paris** **80.29** **11** P **P** **19 54 38.4 -0.2**
baz=352
S22A **4UR Ranch, Cre** **80.30** **32** P **P** **19 54 40.1 +1.0**
baz=338,SNR=22
K48A **Perry** **80.30** **13** P **P** **19 54 38.6 0.0**
baz=350,SNR=7.5
I58A **Old Forge** **80.31** **7** P **P** **19 54 39.2 +0.4**
baz=355,SNR=7.3
K47A **Vermontville** **80.31** **14** P **P** **19 54 38.5 -0.2**
baz=349,SNR=6.9
I62A **Tamworth** **80.31** **4** P **P** **19 54 40.1 +1.4**
baz=357,SNR=7.3
I62A **Tamworth** **80.31** **4** P **P** **19 54 39.2 +0.5**
I62A IAmb IAmb 19 54 43.7
comp=Z,183nm,1.9s
I62A IAMs_20 IAMs_20 20 31 07.1
comp=Z,1µm,19.0s
I64A **Boothbay** **80.32** **3** P **P** **19 54 39.5 +0.8**
baz=358
CIS **Catalina Islan** **80.34** **42** P **P** **19 54 40.2 +1.2**
baz=333
L44A **Lake County Fo** **80.36** **16** P **P** **19 54 38.9 -0.1**
baz=348
L44A **Lake County Fo** **80.36** **16** P **P** **19 54 38.9 -0.1**
L44A IAmb IAmb 19 54 41.7
comp=Z,63nm,0.8s
L44A IAMs_20 IAMs_20 20 33 00.8
comp=Z,1µm,20.0s
K49A **Clarkson** **80.40** **13** P **P** **19 54 39.2 0.0**
baz=350
J54A **Appleton** **80.44** **9** P **P** **19 54 39.5 +0.1**
baz=353
J54A **Appleton** **80.44** **9** P **P** **19 54 39.6 +0.2**
J54A IAmb IAmb 19 54 40.9
comp=Z,47nm,1.0s
HNH **Hanover** **80.44** **5** P **P** **19 54 40.3 +0.9**
HNH IAmb IAmb 19 54 42.1
comp=Z,106nm,1.7s
W13A **Hualapai Mount** **80.46** **38** P **P** **19 54 40.6 +0.7**
NEE2 **Needles Airpor** **80.50** **39** P **P** **19 54 41.0 +1.1**
baz=335
K50A **Casco** **80.51** **12** P **P** **19 54 39.6 -0.2**
baz=351
K50A **Casco** **80.51** **12** P **P** **19 54 39.6 -0.2**

K50A IAmb IAmb 19 54 41.0
comp=Z,63nm,0.9s
K50A IAMs_20 IAMs_20 20 33 26.6
comp=Z,1µm,18.0s
J57A Williamstown 80.52 7 P P 19 54 40.4 +0.6
baz=354,SNR=12
J57A Williamstown 80.52 7 P P 19 54 39.9 +0.1
J57A IAmb IAmb 19 54 41.5
comp=Z,64nm,1.1s
J55A Hilton 80.52 9 P P 19 54 39.8 0.0
baz=353
J55A Hilton 80.52 9 IAmb IAmb 19 54 41.2
comp=Z,56nm,1.1s
J59A Piesco 80.56 6 P P 19 54 40.7 +0.6
baz=355,SNR=14
J59A Piesco 80.56 6 P P 19 54 40.8 +0.7
J59A IAmb IAmb 19 54 42.2
comp=Z,100nm,1.6s
J59A IAMs_20 IAMs_20 20 31 00.8
comp=Z,1µm,20.0s
MEDO Medina 80.56 9 P P 19 54 40.0 -0.1
MEDO IAmb IAmb 19 54 41.5
comp=Z,58nm,1.1s
J56A Wolcott 80.59 8 P P 19 54 40.5 +0.3
baz=354,SNR=6.4
J56A Wolcott 80.59 8 P P 19 54 40.3 +0.1
J56A IAmb IAmb 19 54 41.7
comp=Z,62nm,1.1s
J58A Remsen 80.62 7 P P 19 54 40.7 +0.3
baz=355,SNR=6.6
J58A Remsen 80.62 7 P P 19 54 40.3 -0.1
CTAO Charters Tower 80.62 149 P P 19 54 41.1 +0.6
CTAO pmax pmax
comp=Z,56nm,1.7s
CTAO MLR MLR
comp=Z,600nm,18.0s
CTAO Charters Tower 80.62 149 P P 19 54 41.1 +0.6
MURC Murrieta 80.62 41 P P 19 54 41.5 +0.9
baz=334
SDCO Great Sand Dun 80.68 31 P P 19 54 41.8 +0.6
baz=339,SNR=45
SDCO Great Sand Dun 80.68 31 P P 19 54 41.1 0.0
SDCO IAmb IAmb 19 54 43.3
comp=Z,50nm,1.1s
SDCO IAMs_20 IAMs_20 20 32 30.9
comp=Z,1µm,21.0s
ACCN Adirondack Com 80.69 6 P P 19 54 41.3 +0.5
ACCN IAmb IAmb 19 54 43.2
comp=Z,110nm,1.6s
ACCN IAMs_20 IAMs_20 20 31 25.2
comp=Z,1µm,22.0s
K51A Iona Station 80.69 12 P P 19 54 40.8 +0.1
baz=351
BELC Belle Mtn. Jos 80.70 40 P P 19 54 41.9 +0.8
baz=334,SNR=14
K52A Tillsonburg 80.72 11 P P 19 54 40.9 0.0
baz=352
N38A Joes South For 80.76 21 P P 19 54 41.3 +0.1
N38A IAmb IAmb 19 54 43.8
comp=Z,80nm,0.9s
L46A Eue Claire 80.77 15 P P 19 54 40.9 -0.3
baz=349
J61A Chester 80.79 5 P P 19 54 42.1 +0.9
baz=356,SNR=5.5
LODK Lodwar 80.84 262 P P 19 54 42.0 0.0
SNR=11
J60A Lant Hill Farm 80.85 5 P P 19 54 42.7 +1.2
baz=356,SNR=10.0
AAM Ann Arbor 80.85 13 P P 19 54 41.7 +0.1
baz=350
IRM Iron Mountain 80.86 39 P P 19 54 43.0 +1.1
baz=335,SNR=41
PFO Pinyon Flats O 80.88 41 P P 19 54 42.6 +0.5
PFO pmax pmax
comp=Z,39nm,1.2s
PFO MLR MLR
comp=Z,900nm,20.0s
PFO Pinyon Flats O 80.88 41 P P 19 54 42.9 +0.8
baz=334,SNR=11
PFO Pinyon Flats O 80.88 41 P P 19 54 42.6 +0.5
PFO Pinyon Flats O 80.88 41 IAMs_20 IAMs_20 20 32 39.8
comp=Z,866nm,20.0s
XPFO Pion Flat 80.88 41 P P 19 54 43.1 +1.0
XPFO Pion Flat 80.88 41 IAMs_20 IAMs_20 20 32 40.8
comp=Z,869nm,20.0s
J63A Strafford 80.92 4 P P 19 54 43.1 +1.2
baz=357
WUAZ Wupatki 80.92 36 P P 19 54 43.1 +0.7
baz=336,SNR=13
WUAZ Wupatki 80.92 36 P P 19 54 43.1 +0.7
J62A Henniker 80.94 4 P P 19 54 43.1 +1.0
baz=357,SNR=8.7
K55A Perry 81.03 9 P P 19 54 42.5 -0.2
baz=353,SNR=6.6
PDMCI Parker Dam,Lak 81.09 39 P P 19 54 43.8 +0.8
baz=335,SNR=7.1
TAM Tamanrasset 81.09 298 P P 19 54 43.9 +0.5
TAM pmax pmax
comp=Z,36nm,1.3s
TAM MLR MLR
comp=Z,500nm,20.0s
TAM Tamanrasset 81.09 298 P P 19 54 43.9 +0.5
K54A Basiliko Farm, 81.09 9 P P 19 54 42.6 -0.3
baz=353
M44A Midewin, Midew 81.12 17 P P 19 54 43.4 +0.3
M44A IAMs_20 IAMs_20 20 32 24.7
comp=Z,1µm,20.0s
K56A Middlesex 81.13 8 P P 19 54 43.2 +0.1
baz=354,SNR=7.8
K57A Scipio Center 81.16 8 P P 19 54 43.7 +0.4
baz=354,SNR=6.6
K58A Earlville 81.19 7 P P 19 54 43.9 +0.4
baz=355,SNR=15
K58A Earlville 81.19 7 P P 19 54 43.9 +0.4
K58A IAmb IAmb 19 54 50.7
comp=Z,58nm,1.2s
BC3 Big Chuckawall 81.21 40 P P 19 54 44.8 +0.9
baz=335,SNR=7.1
AS31 Alice Springs 81.21 162 P P 19 54 43.2 -0.4
ASAR Alice Springs 81.21 162 P P 19 54 43.2 -0.4
comp=Z,16nm,0.9s,baz=353,slow=4.8,SNR=81
ASAR PKPPKP P'P'df 20 21 25.7 +8.5
comp=Z,1.3nm,1.0s,baz=144,slow=2.6,SNR=5.9
ASAR LR LR 20 31 27.1
comp=Z,278nm,21.9s,baz=335,slow=36
L50A Kingsville 81.21 13 P P 19 54 43.6 +0.1
baz=351,SNR=6.1
CBKS Cedar Bluff 81.21 26 P P 19 54 43.4 -0.3
CBKS pmax pmax
comp=Z,85nm,1.2s
CBKS MLR MLR
comp=Z,1µm,21.0s
CBKS Cedar Bluff 81.21 26 P P 19 54 43.5 -0.3
baz=342,SNR=11
CBKS Cedar Bluff 81.21 26 P P 19 54 43.4 -0.3
CBKS IAmb IAmb 19 54 44.9
comp=Z,85nm,1.1s
CBKS IAMs_20 IAMs_20 20 31 38.7
comp=Z,994nm,21.0s
K59A Cooperstown 81.23 7 P P 19 54 44.3 +0.6
baz=355,SNR=10
109C Camp Elliot, M 81.29 42 P P 19 54 45.0 +0.9
baz=334
109C Camp Elliot, M 81.29 42 IAMs_20 IAMs_20 20 32 37.6
comp=Z,915nm,20.0s
N41A Harden Midland 81.30 19 P P 19 54 43.6 -0.4
N41A IAmb IAmb 19 54 45.0
comp=Z,72nm,1.1s
WVNY West Valley, N 81.30 9 P P 19 54 44.2 +0.2
WVNY IAmb IAmb 19 54 45.4
comp=Z,74nm,1.1s
WVNY IAMs_20 IAMs_20 20 32 22.4
comp=Z,1µm,18.0s
TRY Troy 81.34 6 P P 19 54 44.9 +0.7
TRY IAmb IAmb 19 54 46.6
comp=Z,66nm,1.4s
TRY IAMs_20 IAMs_20 20 31 55.4
comp=Z,1µm,20.0s
L54A Sinclairville 81.41 10 P P 19 54 44.1 -0.5
baz=353
K61A Williamstown 81.43 5 P P 19 54 45.5 +0.8
baz=356,SNR=6.6
K60A Five Rivers En 81.45 6 P P 19 54 45.5 +0.8
baz=356
Y12C Blythe 81.45 39 P P 19 54 45.9 +0.9
baz=335,SNR=10
Y12C Blythe 81.45 39 P P 19 54 46.2 +1.2
Y12C IAmb IAmb 19 54 47.7
comp=Z,66nm,1.2s
ERPA Erie 81.46 10 P P 19 54 44.5 -0.3
baz=352
K62A Royalston 81.48 5 P P 19 54 46.1 +1.1
baz=356,SNR=7.4
K62A Royalston 81.48 5 P P 19 54 45.5 +0.5
K62A IAmb IAmb 19 54 49.9
comp=Z,44nm,1.1s
K62A IAMs_20 IAMs_20 20 29 52.0
comp=Z,1µm,21.0s
K63A Dunstable 81.49 4 P P 19 54 45.5 +0.5
baz=357
M47A Cromwell 81.51 15 P P 19 54 45.0 -0.2
baz=349
L55A Hinsdale 81.54 9 P P 19 54 45.3 -0.1
baz=353,SNR=5.7
MONP2 Monument Peak 81.54 41 P P 19 54 46.8 +1.1
baz=334,SNR=9.4
T25A Trinidad 81.56 30 P P 19 54 45.4 -0.3
baz=340,SNR=16
L53A Girard 81.59 11 P P 19 54 45.2 -0.3
baz=352
BAR Barrett 81.64 41 P P 19 54 47.2 +1.2
L56A Greenwood 81.66 9 P P 19 54 45.9 -0.1
baz=354,SNR=7.6
L56A Greenwood 81.66 9 P P 19 54 45.9 -0.1
HRV Adam Dziewonsk 81.67 4 P P 19 54 46.6 +0.6
HRV pmax pmax
comp=Z,35nm,1.1s
HRV MLR MLR
comp=Z,1µm,19.0s
HRV Adam Dziewonsk 81.67 4 P P 19 54 46.5 +0.6
baz=357
HRV Adam Dziewonsk 81.67 4 P P 19 54 46.6 +0.6
HRV Adam Dziewonsk 81.67 4 IAMs_20 IAMs_20 20 31 57.0
comp=Z,1µm,19.0s
KSU1 Kansas State U 81.68 24 P P 19 54 46.2 +0.1
baz=343,SNR=27
KSU1 Kansas State U 81.68 24 P P 19 54 46.2 +0.1
KSU1 Kansas State U 81.68 24 IAMs_20 IAMs_20 20 32 35.8
comp=Z,960nm,20.0s
HDIL Hopedale 81.72 18 P P 19 54 45.9 -0.4
baz=347
HDIL Hopedale 81.72 18 P P 19 54 46.0 -0.3
HDIL IAmb IAmb 19 54 49.8
comp=Z,69nm,1.1s
HDIL IAMs_20 IAMs_20 20 34 30.7
comp=Z,938nm,18.0s
SWSC Sam W. Stewart 81.72 40 P P 19 54 47.5 +1.1
baz=334
BINY Binghamton 81.72 7 P P 19 54 46.6 +0.3
baz=354,SNR=12
BINY Binghamton 81.72 7 P P 19 54 46.3 0.0
BINY IAmb IAmb 19 54 48.2
comp=Z,61nm,1.1s
L59A Walton 81.80 7 P P 19 54 46.7 0.0
baz=355,SNR=10
L59A Walton 81.80 7 P P 19 54 46.9 +0.1
L59A IAmb IAmb 19 54 48.6
comp=Z,68nm,1.2s
WES Weston 81.80 4 P P 19 54 46.1 -0.5
WES pmax pmax
comp=Z,49nm,1.4s
WES MLR MLR
comp=Z,1µm,18.0s
WES Weston 81.80 4 P P 19 54 46.1 -0.5
WES IAMs_20 IAMs_20 20 32 17.5
comp=Z,1µm,18.0s
M50A Fremont 81.81 13 P P 19 54 46.5 -0.2
M50A IAmb IAmb 19 54 49.2
comp=Z,43nm,0.8s
W18A Petrified Fore 81.82 35 P P 19 54 48.2 +1.0
baz=337
P38A Dawn 81.83 21 P P 19 54 46.5 -0.4
P38A IAMs_20 IAMs_20 20 33 19.8
comp=Z,1µm,19.0s
R32A Long Quarter, 81.83 25 P P 19 54 46.9 -0.1
R32A IAMs_20 IAMs_20 20 31 29.1
comp=Z,963nm,22.0s
L57A Andrews Acres 81.86 8 P P 19 54 47.2 +0.2
baz=354,SNR=9.2
QUA2 Belchertown 81.86 5 P P 19 54 47.2 +0.2
QUA2 IAMs_20 IAMs_20 20 30 04.1
comp=Z,1µm,21.0s
IKP In-Ko-Pah, Jac 81.87 41 P P 19 54 48.3 +1.0
baz=334,SNR=8.3
M52A Chesterland 81.88 12 P P 19 54 47.0 -0.1
baz=351
M52A Chesterland 81.88 12 P P 19 54 46.5 -0.7
M52A IAmb IAmb 19 54 48.5
comp=Z,101nm,1.4s
M52A IAMs_20 IAMs_20 20 33 34.7
comp=Z,890nm,18.0s
L61A Hillsdale 1, H 81.89 6 P P 19 54 47.9 +0.8
baz=356
L58A Harry Jones Me 81.89 7 P P 19 54 47.6 +0.5
baz=354,SNR=9.0
ALLY Alegheny Colle 81.90 11 P P 19 54 46.0 -1.2
ALLY IAmb IAmb 19 54 50.8
comp=Z,51nm,1.0s
ALLY IAMs_20 IAMs_20 20 31 30.3
comp=Z,778nm,21.0s
X16A Lo Mia Camp, P 81.91 37 P P 19 54 48.6 +1.0
X16A IAMs_20 IAMs_20 20 34 30.4
comp=Z,818nm,20.0s
N47A Urbana 81.97 15 P P 19 54 47.1 -0.5
N47A IAmb IAmb 19 54 49.8
comp=Z,42nm,0.8s
GLA Glamis 81.97 40 P P 19 54 48.7 +0.9
GLA pmax pmax
comp=Z,54nm,1.2s
GLA MLR MLR
comp=Z,600nm,21.0s
GLA Glamis 81.97 40 P P 19 54 48.9 +1.1
baz=335,SNR=14
GLA Glamis 81.97 40 P P 19 54 48.7 +0.9
GLA IAmb IAmb 19 54 50.4
comp=Z,54nm,1.1s
L60A Shokan 82.05 6 P P 19 54 48.4 +0.3
baz=355,SNR=8.9
M53A WI Miller and 82.06 11 P P 19 54 47.7 -0.3
baz=352
N48A Decatur 82.09 14 P P 19 54 47.8 -0.4
baz=349,SNR=8.5
M54A Oil Creek Stat 82.09 10 P P 19 54 47.8 -0.4
baz=352
L62A Suffield 82.09 5 P P 19 54 49.2 +1.0
baz=356
N49A Columbus Grove 82.14 14 P P 19 54 48.5 0.0
N49A IAmb IAmb 19 54 49.6
comp=Z,47nm,0.9s
N49A IAMs_20 IAMs_20 20 33 26.7
comp=Z,1µm,19.0s
PMOZ Porto Moniz, M 82.20 320 *e*LR LR 20 25 40.3
comp=Z,626nm,20.0s
P40A Paris 82.22 20 P P 19 54 48.5 -0.4
M55A Ridgway 82.22 10 P P 19 54 48.8 -0.1
baz=353,SNR=7.8
M55A Ridgway 82.22 10 P P 19 54 48.4 -0.5
SFIN Lafayette 82.25 16 P P 19 54 48.9 -0.1
baz=348,SNR=31
SFIN Lafayette 82.25 16 P P 19 54 48.7 -0.4
O44A Mansfield 82.25 17 P P 19 54 49.1 0.0
O44A IAmb IAmb 19 54 51.4
comp=Z,44nm,0.8s
O44A IAMs_20 IAMs_20 20 34 36.8
comp=Z,1µm,18.0s
M56A Emporium 82.26 9 P P 19 54 48.9 -0.2
baz=353,SNR=9.2
M56A Emporium 82.26 9 P P 19 54 48.6 -0.5
M56A IAmb IAmb 19 54 51.7
comp=Z,68nm,1.5s
BRYW Bryant College 82.26 4 P P 19 54 49.3 +0.2
BRYW IAMs_20 IAMs_20 20 32 50.6
comp=Z,1µm,19.0s
L64A Middleborough 82.27 4 P P 19 54 49.6 +0.5
baz=357
X18A Snowflake 82.30 35 P P 19 54 49.7 0.0
L63A North Scituate 82.31 4 P P 19 54 50.0 +0.7
baz=357
KSCT Kent School, K 82.36 6 P P 19 54 49.8 +0.2
KSCT IAmb IAmb 19 54 51.7
comp=Z,85nm,1.8s
N51A Ashland 82.38 12 P P 19 54 49.5 -0.2
baz=351
N51A Ashland 82.38 12 P P 19 54 49.3 -0.4
N51A IAMs_20 IAMs_20 20 32 43.8
comp=Z,1µm,20.0s
KSPA Keystone Colle 82.38 7 P P 19 54 50.2 +0.5
KSPA IAmb IAmb 19 54 53.9
comp=Z,100nm,1.7s
M59A Waymart 82.42 7 P P 19 54 50.0 0.0
baz=355,SNR=8.4
N50A Nevada 82.42 13 P P 19 54 49.8 -0.1
baz=350,SNR=13
M57A Sunshine Farm, 82.49 8 P P 19 54 50.4 +0.1
baz=354,SNR=14
M57A Sunshine Farm, 82.49 8 P P 19 54 50.2 -0.1
M57A IAmb IAmb 19 54 52.0
comp=Z,54nm,1.1s
M58A Price's Panora 82.51 8 P P 19 54 50.5 +0.1
baz=354,SNR=12
N52A McGinn's Farm, 82.56 12 P P 19 54 50.2 -0.5
baz=351
P43A Skaggs, Pawnee 82.57 18 P P 19 54 50.6 -0.1
P43A IAMs_20 IAMs_20 20 34 50.3
comp=Z,1µm,19.0s
N54A Moraine State 82.60 11 P P 19 54 50.5 -0.4
baz=352,SNR=7.6
N54A Moraine State 82.60 11 P P 19 54 50.6 -0.3
N54A IAmb IAmb 19 54 57.7
comp=Z,71nm,1.2s
113A Mohawk Valley, 82.61 39 P P 19 54 51.4 +0.4
M64A Tiverton 82.64 4 P P 19 54 51.4 +0.4
baz=357
M65A Busby, Falmout 82.65 4 P P 19 54 51.7 +0.6
baz=357
O48A Farmland 82.66 15 P P 19 54 50.4 -0.8
baz=349,SNR=9.0
N53A Lisbon 82.66 11 P P 19 54 50.6 -0.7
baz=352,SNR=7.0
N53A Lisbon 82.66 11 P P 19 54 50.5 -0.7
N53A IAmb IAmb 19 54 52.4
comp=Z,63nm,1.1s
N53A IAMs_20 IAMs_20 20 33 59.4
comp=Z,1µm,18.0s
M62A Hamden 82.67 5 P P 19 54 51.4 +0.2
baz=356
M60A Port Jervis 82.69 7 P P 19 54 51.6 +0.3
baz=355,SNR=10
M63A Gales Ferry 82.75 5 P P 19 54 51.9 +0.3
baz=357
M61A Granite Spring 82.75 6 P P 19 54 52.0 +0.3
baz=356
YLE Yale 82.80 5 IAMs_20 IAMs_20 20 32 31.8
comp=Z,1µm,20.0s
N56A West Decatur 82.81 9 P P 19 54 51.8 -0.2
baz=353,SNR=6.3
O49A Covington 82.84 14 P P 19 54 51.8 -0.4
O49A IAMs_20 IAMs_20 20 33 58.3
comp=Z,1µm,20.0s
N55A Marion Center 82.88 10 P P 19 54 52.0 -0.4
baz=353,SNR=6.6
ODNJ Ogdensburg 82.93 7 P P 19 54 52.0 -0.6
ODNJ IAmb IAmb 19 54 54.3
comp=Z,49nm,1.1s
ODNJ IAMs_20 IAMs_20 20 32 22.4
comp=Z,1µm,20.0s
ACSO Alum Creek Sta 82.98 13 P P 19 54 52.6 -0.2
baz=351,SNR=13
ACSO Alum Creek Sta 82.98 13 P P 19 54 52.6 -0.2
ACSO IAmb IAmb 19 54 54.0
comp=Z,62nm,0.9s
O50A Cable 82.98 14 P P 19 54 52.6 -0.3
baz=350,SNR=6.7
P46A Rosedale 82.98 16 P P 19 54 52.3 -0.5
P46A IAmb IAmb 19 54 56.8
comp=Z,54nm,0.9s
P46A IAMs_20 IAMs_20 20 33 32.0
comp=Z,1µm,20.0s
ANMO Albuquerque 83.00 32 P P 19 54 53.5 +0.2
ANMO MLR MLR
comp=Z,800nm,20.0s
ANMO Albuquerque 83.00 32 P P 19 54 54.5 +1.1
baz=339
ANMO Albuquerque 83.00 32 P P 19 54 53.5 +0.2
ANMO IAmb IAmb 19 54 56.0
comp=Z,46nm,1.2s
ANMO Albuquerque 83.00 32 IAMs_20 IAMs_20 20 33 12.4
comp=Z,783nm,20.0s
N59A State Game Lan 83.02 7 P P 19 54 53.4 +0.3
baz=355,SNR=18
N59A State Game Lan 83.02 7 P P 19 54 53.1 0.0
N59A IAmb IAmb 19 54 56.4
comp=Z,40nm,1.0s
N58A Sunbury 83.02 8 P P 19 54 52.5 -0.5
baz=354,SNR=8.2
N58A Sunbury 83.02 8 P P 19 54 53.5 +0.5
N58A IAmb IAmb 19 54 56.0
comp=Z,90nm,1.6s
N57A Milroy 83.03 9 P P 19 54 52.8 -0.3
baz=354,SNR=11
PAL Palisades 83.05 6 P P 19 54 52.9 -0.3
PAL pmax pmax
comp=Z,114nm,1.7s
PAL MLR MLR
comp=Z,1µm,19.0s
PAL Palisades 83.05 6 P P 19 54 53.6 +0.4
baz=356
PAL Palisades 83.05 6 P P 19 54 52.9 -0.3
O51A Pataskala 83.11 13 P P 19 54 53.4 -0.2
baz=351,SNR=11
N60A Cedar Hill Far 83.11 7 P P 19 54 53.6 +0.1
baz=355,SNR=6.1
N62A Caumsett State 83.15 6 P P 19 54 53.8 +0.1
baz=356
O53A New Philadelph 83.17 12 P P 19 54 53.5 -0.3
baz=352,SNR=7.7
O52A Adamsville 83.23 12 P P 19 54 53.9 -0.3
baz=351,SNR=13
O52A Adamsville 83.23 12 P P 19 54 53.9 -0.3
O52A IAMs_20 IAMs_20 20 37 54.5
comp=Z,1µm,20.0s
N61A South Mountain 83.28 6 P P 19 54 54.9 +0.6
baz=355
O54A Avella 83.33 11 P P 19 54 54.3 -0.4
baz=352,SNR=6.5
O54A Avella 83.33 11 P P 19 54 54.8 +0.1
O54A IAmb IAmb 19 54 56.1
comp=Z,68nm,1.2s
O54A IAMs_20 IAMs_20 20 34 21.1
comp=Z,1µm,18.0s
BRNJ Basking Ridge 83.33 7 P P 19 54 55.1 +0.5
BRNJ IAMs_20 IAMs_20 20 32 44.7
comp=Z,1µm,20.0s
LUPA Lehigh Univers 83.36 7 P P 19 54 54.9 0.0
R40A Maddies Statio 83.37 21 P P 19 54 54.6 -0.3
R40A IAmb IAmb 19 54 57.9
comp=Z,28nm,0.7s
R40A IAMs_20 IAMs_20 20 34 16.5
comp=Z,1µm,20.0s
Q44A Meyer Farm, Va 83.38 18 P P 19 54 55.0 +0.1
P48A Milroy 83.40 15 P P 19 54 55.1 0.0
P48A IAmb IAmb 19 54 56.0
comp=Z,54nm,1.0s
P48A IAMs_20 IAMs_20 20 34 45.1
comp=Z,1µm,19.0s
O55A Ligonier 83.42 10 P P 19 54 54.8 -0.3
baz=353,SNR=6.0
SLM Saint Louis 83.42 19 P P 19 54 55.3 +0.1
SLM pmax pmax
comp=Z,43nm,0.8s
SLM MLR MLR
comp=Z,2µm,19.0s
SLM Saint Louis 83.42 19 P P 19 54 55.3 +0.1
SLM IAmb IAmb 19 54 57.2
comp=Z,43nm,0.8s
O56A Blue Knob Stat 83.43 10 P P 19 54 54.8 -0.4
baz=353,SNR=7.2
O56A Blue Knob Stat 83.43 10 P P 19 54 54.9 -0.3
O56A IAmb IAmb 19 54 56.6
comp=Z,57nm,1.1s
O56A IAMs_20 IAMs_20 20 33 46.6
comp=Z,1µm,18.0s
P49A Miami Univ. Ec 83.43 14 P P 19 54 54.3 -0.9
baz=350,SNR=11
P50A Jamestown 83.48 14 P P 19 54 54.9 -0.6
baz=350,SNR=14
BLO Bloomington 83.52 16 P P 19 54 56.1 +0.4
BLO pmax pmax
comp=Z,50nm,0.8s
BLO MLR MLR
comp=Z,2µm,20.0s

BLO	**Bloomington**	**83.52**	**16**	P	**P**	**19 54 56.1**	**+0.4**	
BLO	comp=Z,50nm,0.8s			IAmb	IAmb	19 54 59.0		
KMBO	**Kilima Mbogo**	**83.56**	**258**	P	**P**	**19 54 58.2**	**+1.8**	
KMBO	comp=Z,21nm,1.0s,baz=24,slow=8.0,SNR=20			LR	LR	20 34 24.8		
KMBO	**Kilima Mbogo**	**83.56**	**258**	*i* P	**P**	**19 54 57.0**	**+0.5**	
KMBO	**Kilima Mbogo**	**83.56**	**258**	P	**P**	**19 54 56.7**	**+0.3**	
KMBO	comp=Z,52nm,1.2s			IAmb	IAmb	19 54 59.7		
O57A	**Amberson**	**83.57**	**9**	P	**P**	**19 54 55.8**	**-0.1**	
	baz=354,SNR=5.4							
O59A	**Robesonia**	**83.59**	**8**	P	**P**	**19 54 55.9**	**-0.1**	
	baz=354,SNR=9.5							
PAGS	**Pennsylvania G**	**83.63**	**8**	P	**P**	**19 54 55.7**	**-0.5**	
PAGS	comp=Z,57nm,1.4s			IAmb	IAmb	19 55 03.7		
O60A	**Telford**	**83.64**	**7**	P	**P**	**19 54 56.0**	**-0.2**	
	baz=355							
P52A	**Corning**	**83.67**	**12**	P	**P**	**19 54 55.9**	**-0.5**	
	baz=351,SNR=11							
Y22D	**IRIS PASSCAL I**	**83.67**	**33**	P	**P**	**19 54 58.5**	**+1.7**	
	baz=338							
Y22D	**IRIS PASSCAL I**	**83.67**	**33**	IAMs_20	IAMs_20	20 33 39.1		
	comp=Z,1µm,21.0s							
214A	**Organ Pipe Nat**	**83.68**	**39**	P	**P**	**19 54 57.5**	**+0.9**	
	baz=336,SNR=7.1							
214A	**Organ Pipe Nat**	**83.68**	**39**	P	**P**	**19 54 56.3**	**-0.4**	
214A	comp=Z,708nm,19.0s			IAMs_20	IAMs_20	20 33 29.7		
BNM	**Barren Site**	**83.69**	**33**	P	**P**	**19 54 58.0**	**+1.1**	
OLIL	**Olney**	**83.70**	**17**	P	**P**	**19 54 56.7**	**+0.1**	
OLIL	comp=Z,934nm,20.0s			IAMs_20	IAMs_20	20 34 06.0		
P51A	**Williamsport**	**83.70**	**13**	P	**P**	**19 54 55.7**	**-0.9**	
	baz=350,SNR=6.2							
P51A	**Williamsport**	**83.70**	**13**	P	**P**	**19 54 55.5**	**-1.1**	
P51A	comp=Z,52nm,1.1s			IAmb	IAmb	19 54 57.5		
U32A	**Winter Ranch,**	**83.70**	**26**	P	**P**	**19 54 56.7**	**0.0**	
U32A	comp=Z,1µm,22.0s			IAMs_20	IAMs_20	20 33 05.7		
O58A	**Lewisberry**	**83.72**	**8**	P	**P**	**19 54 56.7**	**0.0**	
	baz=354							
T35A	**Sooner Cattle**	**83.79**	**24**	P	**P**	**19 54 57.4**	**+0.3**	
T35A	comp=Z,885nm,20.0s			IAMs_20	IAMs_20	20 33 52.8		
CCM	**Cathedral Cave**	**83.80**	**20**	P	**P**	**19 54 57.1**	**0.0**	
CCM	comp=Z,54nm,0.8s			pmax	pmax			
CCM	comp=Z,1µm,19.0s			MLR	MLR			
CCM	**Cathedral Cave**	**83.80**	**20**	P	**P**	**19 54 56.9**	**-0.2**	
	baz=346							
CCM	**Cathedral Cave**	**83.80**	**20**	P	**P**	**19 54 57.1**	**0.0**	
CCM	**Cathedral Cave**	**83.80**	**20**	IAMs_20	IAMs_20	20 35 25.8		
	comp=Z,1µm,19.0s							
MVL	**Millersville**	**83.89**	**8**	P	**P**	**19 54 57.4**	**-0.1**	
P54A	**Burton**	**83.89**	**11**	P	**P**	**19 54 57.7**	**+0.1**	
	baz=352,SNR=10							
P53A	**Whipple**	**83.90**	**12**	P	**P**	**19 54 57.3**	**-0.3**	
	baz=351,SNR=24							
P53A	**Whipple**	**83.90**	**12**	P	**P**	**19 54 57.4**	**-0.3**	
P53A	comp=Z,990nm,19.0s			IAMs_20	IAMs_20	20 35 30.3		
MCWV	**Mont Chateau**	**83.91**	**11**	P	**P**	**19 54 57.6**	**0.0**	
	baz=352							
MCWV	**Mont Chateau**	**83.91**	**11**	P	**P**	**19 54 57.8**	**+0.1**	
MCWV	comp=Z,738nm,18.0s			IAMs_20	IAMs_20	20 34 30.3		
O61A	**Allentown**	**83.92**	**7**	P	**P**	**19 54 57.9**	**+0.3**	
	baz=355							
PSUB	**Penn St. - Bra**	**84.02**	**7**	P	**P**	**19 54 57.7**	**-0.5**	
PSUB	comp=Z,40nm,1.2s			IAmb	IAmb	19 55 04.8		
TUC	**Tucson**	**84.05**	**37**	P	**P**	**19 54 58.8**	**+0.2**	
TUC	comp=Z,15nm,1.4s			pmax	pmax			
TUC	comp=Z,1µm,22.0s			MLR	MLR			
TUC	**Tucson**	**84.05**	**37**	P	**P**	**19 54 59.4**	**+0.8**	
	baz=337							
TUC	**Tucson**	**84.05**	**37**	P	**P**	**19 54 58.8**	**+0.2**	
TUC	**Tucson**	**84.05**	**37**	IAMs_20	IAMs_20	20 32 27.5		
	comp=Z,951nm,22.0s							
P55A	**Reedsville**	**84.06**	**11**	P	**P**	**19 54 58.6**	**+0.1**	
	baz=352,SNR=13							
P60A	**Greenville**	**84.12**	**7**	P	**P**	**19 54 58.6**	**-0.1**	
	baz=355,SNR=6.2							
P60A	**Greenville**	**84.12**	**7**	P	**P**	**19 54 58.6**	**-0.1**	
P60A	comp=Z,35nm,1.0s			IAmb	IAmb	19 55 00.1		
KIBK	**Kibwezi**	**84.13**	**257**	P	**P**	**19 55 00.3**	**+1.1**	
P56A	**Dayton Farm, R**	**84.16**	**10**	P	**P**	**19 54 58.5**	**-0.5**	
	baz=353,SNR=9.2							
P57A	**Homestead Farm**	**84.26**	**9**	P	**P**	**19 54 59.3**	**-0.1**	
	baz=353							
P57A	**Homestead Farm**	**84.26**	**9**	P	**P**	**19 54 59.3**	**-0.1**	
P57A	comp=Z,1µm,18.0s			IAMs_20	IAMs_20	20 34 02.6		
P59A	**Jarrettsville**	**84.27**	**8**	P	**P**	**19 54 59.5**	**+0.1**	
	baz=354							
P58A	**Pank, Wackersv**	**84.31**	**9**	P	**P**	**19 54 59.4**	**-0.3**	
	baz=354							
Q52A	**Bidwell**	**84.32**	**13**	P	**P**	**19 54 59.3**	**-0.5**	
	baz=351,SNR=14							
P61A	**Hammonton**	**84.32**	**7**	P	**P**	**19 54 59.8**	**+0.1**	
	baz=355							
AMTX	**Amarillo**	**84.43**	**29**	P	**P**	**19 55 01.3**	**+0.8**	
	baz=341							
AMTX	**Amarillo**	**84.43**	**29**	P	**P**	**19 55 00.9**	**+0.4**	
AMTX	comp=Z,57nm,0.9s			IAmb	IAmb	19 55 04.7		
SDMD	**Soldier's Deli**	**84.43**	**8**	IAMs_20	IAMs_20	20 33 51.1		
	comp=Z,806nm,19.0s							
Q54A	**Coxs Mills**	**84.47**	**12**	P	**P**	**19 55 00.5**	**+0.1**	
	baz=352,SNR=31							
Q54A	**Coxs Mills**	**84.47**	**12**	P	**P**	**19 55 00.3**	**-0.1**	
Q54A	comp=Z,874nm,20.0s			IAMs_20	IAMs_20	20 32 21.7		
MGMO	**Mountain Grove**	**84.47**	**21**	P	**P**	**19 54 59.8**	**-0.8**	
MGMO	comp=Z,50nm,0.8s			IAmb	IAmb	19 55 02.6		
WCI	**Wyandotte Cave**	**84.48**	**16**	P	**P**	**19 55 00.4**	**-0.2**	
WCI	comp=Z,142nm,1.0s			pmax	pmax			
WCI	comp=Z,2µm,20.0s			MLR	MLR			
WCI	**Wyandotte Cave**	**84.48**	**16**	P	**P**	**19 55 00.9**	**+0.3**	
	baz=349							
WCI	**Wyandotte Cave**	**84.48**	**16**	P	**P**	**19 55 00.4**	**-0.2**	
SIUC	**Southern Illin**	**84.50**	**18**	P	**P**	**19 55 01.1**	**+0.4**	
Q53A	**Leroy**	**84.51**	**12**	P	**P**	**19 55 00.7**	**0.0**	
	baz=351,SNR=24							
S44A	**Carbondale**	**84.51**	**18**	P	**P**	**19 55 01.1**	**+0.4**	
S44A	comp=Z,1µm,18.0s			IAMs_20	IAMs_20	20 36 11.7		
USIN	**University of**	**84.52**	**17**	P	**P**	**19 55 01.2**	**+0.4**	
USIN	comp=Z,1µm,20.0s			IAMs_20	IAMs_20	20 34 31.8		
Q55A	**Buckhannon**	**84.54**	**11**	P	**P**	**19 55 01.3**	**+0.4**	
	baz=352,SNR=13							
Q56A	**Snyder Ridge,**	**84.58**	**10**	P	**P**	**19 55 01.1**	**0.0**	
	baz=353,SNR=7.8							
R49A	**Shelbyville**	**84.59**	**15**	P	**P**	**19 55 01.5**	**+0.4**	
R49A	comp=Z,1µm,19.0s			IAMs_20	IAMs_20	20 35 31.5		
Q57A	**Strasburg**	**84.66**	**10**	P	**P**	**19 55 01.3**	**-0.2**	
	baz=353,SNR=10							
R50A	**Paris**	**84.72**	**14**	P	**P**	**19 55 01.4**	**-0.4**	
R50A	comp=Z,50nm,1.1s			IAmb	IAmb	19 55 03.1		
R50A	comp=Z,1µm,20.0s			IAMs_20	IAMs_20	20 35 27.9		
U38A	**Gravette**	**84.72**	**23**	P	**P**	**19 55 01.5**	**-0.4**	
U38A	comp=Z,59nm,1.0s			IAmb	IAmb	19 55 02.7		
T42A	**Van Buren**	**84.82**	**20**	P	**P**	**19 55 01.9**	**-0.4**	
T42A	comp=Z,1µm,19.0s			IAMs_20	IAMs_20	20 35 12.9		
Q58A	**Fox Den Farm,**	**84.82**	**9**	P	**P**	**19 55 02.2**	**-0.1**	
	baz=354							
121A	**Cookes Peak, D**	**84.83**	**34**	P	**P**	**19 55 03.9**	**+1.2**	
	baz=338,SNR=18							
121A	**Cookes Peak, D**	**84.83**	**34**	P	**P**	**19 55 03.2**	**+0.6**	
121A	comp=Z,47nm,1.2s			IAmb	IAmb	19 55 05.4		
121A	comp=Z,821nm,22.0s			IAMs_20	IAMs_20	20 33 09.9		
TUL1	**Leonard**	**84.92**	**24**	P	**P**	**19 55 02.8**	**0.0**	
	baz=344,SNR=10							
TUL1	**Leonard**	**84.92**	**24**	P	**P**	**19 55 03.3**	**+0.5**	
TUL1	comp=Z,993nm,18.0s			IAMs_20	IAMs_20	20 36 59.6		
HHAR	**Hobbs**	**84.97**	**22**	P	**P**	**19 55 02.6**	**-0.5**	
HHAR	comp=Z,66nm,1.1s			IAmb	IAmb	19 55 04.0		
R53A	**Hurricane**	**84.98**	**13**	P	**P**	**19 55 03.5**	**+0.4**	
	baz=351,SNR=26							
R53A	**Hurricane**	**84.98**	**13**	P	**P**	**19 55 03.5**	**+0.4**	
MSTX	**Muleshoe**	**84.99**	**30**	P	**P**	**19 55 03.7**	**+0.4**	
	baz=340,SNR=13							
MSTX	**Muleshoe**	**84.99**	**30**	P	**P**	**19 55 03.5**	**+0.1**	
MSTX	comp=Z,720nm,21.0s			IAMs_20	IAMs_20	20 33 38.8		
Q59A	**Harwood**	**84.99**	**8**	P	**P**	**19 55 03.4**	**+0.3**	
	baz=354							
Q61A	**Milford**	**85.07**	**7**	P	**P**	**19 55 04.0**	**+0.5**	
	baz=355							
U40A	**Yellville**	**85.12**	**21**	P	**P**	**19 55 03.5**	**-0.4**	
	baz=345,SNR=68							
U40A	**Yellville**	**85.12**	**21**	P	**P**	**19 55 03.2**	**-0.6**	
FNO	**Franklin**	**85.16**	**25**	P	**P**	**19 55 04.7**	**+0.6**	
R55A	**Marlinton**	**85.24**	**11**	P	**P**	**19 55 04.4**	**-0.1**	
	baz=353,SNR=11							
R55A	**Marlinton**	**85.24**	**11**	P	**P**	**19 55 04.5**	**0.0**	
R55A	comp=Z,33nm,0.9s			IAmb	IAmb	19 55 07.3		
R55A	comp=Z,1µm,18.0s			IAMs_20	IAMs_20	20 35 12.5		
R54A	**Victor**	**85.24**	**12**	P	**P**	**19 55 04.2**	**-0.2**	
	baz=352,SNR=10							
T45A	**Paducah**	**85.28**	**18**	P	**P**	**19 55 05.0**	**+0.4**	
T45A	comp=Z,721nm,20.0s			IAMs_20	IAMs_20	20 33 36.9		
WMOK	**Wichita Mounta**	**85.32**	**27**	P	**P**	**19 55 05.2**	**+0.3**	
WMOK	comp=Z,103nm,1.1s			pmax	pmax			
WMOK	comp=Z,2µm,22.0s			MLR	MLR			
WMOK	**Wichita Mounta**	**85.32**	**27**	P	**P**	**19 55 05.8**	**+0.9**	
	baz=342,SNR=97							
WMOK	**Wichita Mounta**	**85.32**	**27**	P	**P**	**19 55 05.2**	**+0.3**	
R57A	**Stanardsville**	**85.39**	**10**	P	**P**	**19 55 05.3**	**+0.2**	
	baz=353,SNR=7.2							
W35A	**Tecumseh**	**85.39**	**25**	P	**P**	**19 55 05.5**	**+0.3**	
319A	**Douglas**	**85.41**	**36**	P	**P**	**19 55 05.2**	**-0.3**	
319A	comp=Z,49nm,1.1s			IAmb	IAmb	19 55 07.9		
PARMO	**Parma**	**85.43**	**19**	IAMs_20	IAMs_20	20 36 57.9		
	comp=Z,1µm,18.0s							
R58A	**Rapidan**	**85.43**	**9**	P	**P**	**19 55 04.9**	**-0.5**	
	baz=353							
S51A	**Beattyville**	**85.45**	**14**	P	**P**	**19 55 05.2**	**-0.3**	
S51A	comp=Z,34nm,1.0s			IAmb	IAmb	19 55 08.1		
S51A	comp=Z,1µm,21.0s			IAMs_20	IAMs_20	20 35 28.3		
CPRX	**Cap Rock**	**85.55**	**31**	P	**P**	**19 55 05.8**	**-0.5**	
T47A	**Sharon Grove**	**85.56**	**17**	P	**P**	**19 55 06.5**	**+0.5**	
T47A	comp=Z,80nm,1.1s			IAmb	IAmb	19 55 07.8		
S54A	**Dingess, Beckl**	**85.58**	**12**	P	**P**	**19 55 06.1**	**-0.1**	
	baz=352,SNR=12							
S54A	**Dingess, Beckl**	**85.58**	**12**	P	**P**	**19 55 06.2**	**+0.1**	
S54A	comp=Z,49nm,0.9s			IAmb	IAmb	19 55 09.0		
CBN	**Corbin Frederi**	**85.58**	**9**	P	**P**	**19 55 06.1**	**0.0**	
	baz=354							
R60A	**Leonardtown, M**	**85.59**	**8**	P	**P**	**19 55 06.3**	**+0.2**	
	baz=354							
S53A	**Williamson**	**85.60**	**13**	P	**P**	**19 55 06.7**	**+0.5**	
	baz=351,SNR=5.7							
R59A	**King George, V**	**85.61**	**9**	P	**P**	**19 55 06.1**	**-0.1**	
	baz=354							
R61A	**Willards**	**85.62**	**7**	IAMs_20	IAMs_20	20 34 06.6		
	comp=Z,1µm,20.0s							
HICK	**Hickman**	**85.64**	**19**	P	**P**	**19 55 06.2**	**-0.2**	
PVMO	**Portageville**	**85.68**	**19**	IAMs_20	IAMs_20	20 37 15.5		
	comp=Z,1µm,18.0s							
S55A	**Lewisburg**	**85.70**	**11**	P	**P**	**19 55 06.5**	**-0.3**	
	baz=352,SNR=9.7							
FCAR	**Ozark Folk Cen**	**85.72**	**21**	P	**P**	**19 55 06.4**	**-0.5**	
FCAR	comp=Z,51nm,0.8s			IAmb	IAmb	19 55 09.2		
LCAR	**Lake Charles**	**85.74**	**20**	P	**P**	**19 55 06.6**	**-0.3**	
R58B	**Mineral**	**85.78**	**9**	P	**P**	**19 55 07.1**	**+0.1**	
	baz=353,SNR=11							
R58B	**Mineral**	**85.78**	**9**	P	**P**	**19 55 07.2**	**+0.2**	
S57A	**Dark Hollow, R**	**85.87**	**10**	P	**P**	**19 55 07.1**	**-0.5**	
	baz=353,SNR=14							
S57A	**Dark Hollow, R**	**85.87**	**10**	P	**P**	**19 55 07.6**	**0.0**	
S57A	comp=Z,57nm,1.2s			IAmb	IAmb	19 55 09.4		
T50A	**Nancy**	**85.88**	**15**	P	**P**	**19 55 06.9**	**-0.7**	
T50A	comp=Z,35nm,1.1s			IAmb	IAmb	19 55 10.3		
T50A	comp=Z,1µm,18.0s			IAMs_20	IAMs_20	20 36 33.8		
S56A	**Natural Bridge**	**85.89**	**11**	P	**P**	**19 55 07.5**	**-0.2**	
	baz=352,SNR=6.3							
PEBM	**Pemiscott Bayo**	**85.94**	**19**	IAMs_20	IAMs_20	20 37 24.4		
	comp=Z,869nm,18.0s							
S59A	**Mechanicsville**	**86.03**	**9**	P	**P**	**19 55 08.4**	**+0.1**	
	baz=354							
W39A	**Magazine**	**86.05**	**23**	P	**P**	**19 55 08.3**	**-0.2**	
	baz=345,SNR=35							
W39A	**Magazine**	**86.05**	**23**	P	**P**	**19 55 08.0**	**-0.5**	
W39A	comp=Z,61nm,1.1s			IAmb	IAmb	19 55 09.9		
GNAR	**Gosnell**	**86.06**	**19**	IAMs_20	IAMs_20	20 35 28.6		
	comp=Z,949nm,20.0s							
S58A	**Poland Farm, P**	**86.11**	**10**	P	**P**	**19 55 08.4**	**-0.3**	
	baz=353,SNR=5.7							
S58A	**Poland Farm, P**	**86.11**	**10**	P	**P**	**19 55 08.8**	**+0.1**	
S58A	comp=Z,1µm,19.0s			IAMs_20	IAMs_20	20 35 19.6		
S60A	**Water View**	**86.14**	**8**	P	**P**	**19 55 09.1**	**+0.2**	
	baz=354							
GDL2	**Guadalupe Moun**	**86.19**	**32**	P	**P**	**19 55 09.7**	**+0.4**	
T53A	**Wise**	**86.23**	**13**	P	**P**	**19 55 09.6**	**+0.1**	
	baz=351,SNR=8.7							
U49A	**Red Boiling Sp**	**86.24**	**16**	P	**P**	**19 55 09.2**	**-0.2**	
U49A	comp=Z,68nm,1.1s			IAmb	IAmb	19 55 11.1		
U49A	comp=Z,1µm,20.0s			IAMs_20	IAMs_20	20 34 39.3		
BLA	**Blacksburg**	**86.26**	**12**	P	**P**	**19 55 09.5**	**-0.1**	
BLA	comp=Z,49nm,1.0s			pmax	pmax			
BLA	comp=Z,900nm,18.0s			MLR	MLR			
BLA	**Blacksburg**	**86.26**	**12**	P	**P**	**19 55 09.2**	**-0.3**	
	baz=352,SNR=11							
BLA	**Blacksburg**	**86.26**	**12**	P	**P**	**19 55 09.5**	**-0.1**	
BLA	comp=Z,49nm,1.0s			IAmb	IAmb	19 55 12.1		
BLA	comp=Z,888nm,18.0s			IAMs_20	IAMs_20	20 36 11.7		
WHAR	**Wooly Hollow**	**86.27**	**21**	P	**P**	**19 55 09.5**	**-0.1**	
T54A	**Tazewell**	**86.28**	**12**	P	**P**	**19 55 09.8**	**+0.2**	
	baz=351,SNR=23							
X37A	**Clayton**	**86.28**	**24**	P	**P**	**19 55 10.5**	**+0.9**	
X37A	comp=Z,60nm,1.1s			IAmb	IAmb	19 55 11.5		
WVT	**Waverly**	**86.28**	**18**	P	**P**	**19 55 09.7**	**+0.1**	
WVT	comp=Z,85nm,0.9s			pmax	pmax			
WVT	comp=Z,1µm,19.0s			MLR	MLR			
WVT	**Waverly**	**86.28**	**18**	P	**P**	**19 55 10.0**	**+0.4**	
	baz=348							
WVT	**Waverly**	**86.28**	**18**	P	**P**	**19 55 09.7**	**+0.1**	
T55A	**Pulaski**	**86.31**	**12**	P	**P**	**19 55 09.1**	**-0.7**	
	baz=352,SNR=8.1							
MNTX	**Cornudas Mount**	**86.35**	**33**	P	**P**	**19 55 10.6**	**+0.6**	
	baz=339,SNR=23							
MNTX	**Cornudas Mount**	**86.35**	**33**	P	**P**	**19 55 10.7**	**+0.6**	
MNTX	comp=Z,789nm,21.0s			IAMs_20	IAMs_20	20 34 04.9		
LPAR	**Lepanto**	**86.36**	**20**	IAMs_20	IAMs_20	20 35 36.5		
	comp=Z,881nm,20.0s							
W41B	**Gary Mavity, V**	**86.39**	**21**	P	**P**	**19 55 09.9**	**-0.3**	
	baz=346,SNR=22							
T56A	**Rocky Mt**	**86.49**	**11**	P	**P**	**19 55 10.5**	**-0.1**	
	baz=352							
TZTN	**Tazewell**	**86.53**	**14**	P	**P**	**19 55 11.1**	**+0.2**	
	baz=350,SNR=14							
TZTN	**Tazewell**	**86.53**	**14**	P	**P**	**19 55 10.7**	**-0.2**	
TZTN	comp=Z,53nm,1.1s			IAmb	IAmb	19 55 12.5		
CLTN	**Cedars of Leba**	**86.57**	**16**	P	**P**	**19 55 11.1**	**+0.1**	
T57A	**Hurt**	**86.60**	**11**	P	**P**	**19 55 11.3**	**+0.1**	
	baz=353,SNR=7.8							
T57A	**Hurt**	**86.60**	**11**	P	**P**	**19 55 11.3**	**+0.1**	
T60A	**Surry**	**86.69**	**9**	P	**P**	**19 55 11.5**	**-0.1**	
	baz=354							
T60A	**Surry**	**86.69**	**9**	P	**P**	**19 55 12.6**	**+1.0**	
MIAR	**Mount Ida**	**86.72**	**23**	P	**P**	**19 55 11.7**	**-0.1**	
MIAR	comp=Z,22nm,1.0s			pmax	pmax			
MIAR	comp=Z,2µm,18.0s			MLR	MLR			
MIAR	**Mount Ida**	**86.72**	**23**	P	**P**	**19 55 12.0**	**+0.2**	
	baz=345,SNR=15							
MIAR	**Mount Ida**	**86.72**	**23**	P	**P**	**19 55 11.7**	**-0.1**	
T58A	**Grand View Acr**	**86.72**	**10**	P	**P**	**19 55 11.7**	**0.0**	
	baz=353,SNR=13							
MBAR	**Mbarara**	**86.73**	**264**	P	**P**	**19 55 12.5**	**+0.2**	
MBAR	comp=Z,44nm,1.2s			pmax	pmax			
MBAR	comp=Z,600nm,18.0s			MLR	MLR			
MBAR	**Mbarara**	**86.73**	**264**	P	**P**	**19 55 12.5**	**+0.2**	
MBAR	comp=Z,44nm,1.2s			IAmb	IAmb	19 55 15.3		
UALR	**University of**	**86.75**	**21**	P	**P**	**19 55 12.0**	**+0.1**	
UALR	comp=Z,41nm,1.1s			IAmb	IAmb	19 55 13.4		
UALR	comp=Z,1µm,19.0s			IAMs_20	IAMs_20	20 37 04.1		
U54A	**Nelsons Funny**	**86.78**	**13**	P	**P**	**19 55 12.3**	**+0.2**	
	baz=351,SNR=6.5							
U54A	**Nelsons Funny**	**86.78**	**13**	P	**P**	**19 55 11.6**	**-0.5**	
U54A	comp=Z,44nm,1.2s			IAmb	IAmb	19 55 13.8		
T59A	**Double "B" Far**	**86.79**	**9**	P	**P**	**19 55 12.2**	**+0.2**	
	baz=354							
T59A	**Double "B" Far**	**86.79**	**9**	P	**P**	**19 55 11.9**	**-0.1**	
T59A	comp=Z,1µm,19.0s			IAMs_20	IAMs_20	20 35 29.6		
V48A	**Smith Brothers**	**86.83**	**17**	P	**P**	**19 55 12.4**	**+0.1**	
V48A	comp=Z,63nm,1.1s			IAmb	IAmb	19 55 13.8		
MET	**Memphis--Engin**	**86.89**	**19**	IAMs_20	IAMs_20	20 35 53.6		
	comp=Z,1µm,21.0s							
U55A	**TA2, Sparta**	**86.89**	**12**	P	**P**	**19 55 12.9**	**+0.2**	
	baz=352,SNR=13							
X40A	**Basin Creek Fa**	**86.93**	**22**	P	**P**	**19 55 13.0**	**+0.3**	
	baz=345,SNR=25							
X40A	**Basin Creek Fa**	**86.93**	**22**	P	**P**	**19 55 13.1**	**+0.3**	
X40A	comp=Z,44nm,1.1s			IAmb	IAmb	19 55 14.4		
X40A	comp=Z,970nm,20.0s			IAMs_20	IAMs_20	20 36 28.8		
W45A	**Hickory Valley**	**86.99**	**19**	P	**P**	**19 55 13.0**	**-0.1**	
W45A	comp=Z,948nm,18.0s			IAMs_20	IAMs_20	20 37 54.4		
HSIG		**87.01**	**38**	P	**P**	**19 55 13.8**	**+0.5**	
HSIG	comp=Z,47nm,1.3s			IAmb	IAmb	19 55 15.4		
Z35A	**Perchaven, San**	**87.04**	**26**	P	**P**	**19 55 13.2**	**-0.1**	
Z35A	comp=Z,978nm,18.0s			IAMs_20	IAMs_20	20 37 51.9		
ABTX	**Abilene, Hawle**	**87.11**	**28**	P	**P**	**19 55 14.1**	**+0.4**	
	baz=342,SNR=10							
ABTX	**Abilene, Hawle**	**87.11**	**28**	P	**P**	**19 55 13.8**	**+0.1**	
ABTX	comp=Z,1µm,22.0s			IAMs_20	IAMs_20	20 35 32.7		
U56A	**King**	**87.12**	**12**	P	**P**	**19 55 13.0**	**-0.7**	
	baz=352							
U56A	**King**	**87.12**	**12**	IAMs_20	IAMs_20	20 41 48.4		
	comp=Z,1µm,20.0s							
V51A	**Loudon**	**87.15**	**15**	P	**P**	**19 55 14.2**	**+0.4**	
V51A	comp=Z,985nm,20.0s			IAMs_20	IAMs_20	20 35 03.2		
U57A	**Blanch**	**87.15**	**11**	P	**P**	**19 55 13.8**	**0.0**	
	baz=353,SNR=6.3							
V52A	**Sevierville**	**87.22**	**14**	P	**P**	**19 55 13.9**	**-0.3**	
V52A	comp=Z,56nm,1.1s			IAmb	IAmb	19 56 40.5		
U58A	**Oxford**	**87.27**	**10**	P	**P**	**19 55 14.6**	**+0.2**	
	baz=353,SNR=14							
X43A	**Marvell**	**87.30**	**20**	P	**P**	**19 55 13.9**	**-0.7**	
	baz=346							
U60A	**Pendleton**	**87.32**	**9**	P	**P**	**19 55 14.1**	**-0.5**	
	baz=354							
FORT	**Forrest**	**87.34**	**168**	P	**P**	**19 55 14.8**	**+0.3**	
PLAL	**Pickwick Lake**	**87.36**	**18**	P	**P**	**19 55 14.6**	**-0.3**	
PLAL	comp=Z,46nm,1.2s			IAmb	IAmb	19 55 17.7		
TKL	**Tuckaleechee C**	**87.37**	**14**	P	**P**	**19 55 15.3**	**+0.3**	
TKL	comp=Z,46nm,1.2s			pmax	pmax			
TKL	comp=Z,2µm,18.0s			MLR	MLR			
TKL	**Tuckaleechee C**	**87.37**	**14**	P	**P**	**19 55 15.3**	**+0.3**	
TKL	comp=Z,46nm,1.1s			IAmb	IAmb	19 55 16.4		
U59A	**Littleton**	**87.38**	**10**	P	**P**	**19 55 15.3**	**+0.4**	
	baz=354							
U59A	**Littleton**	**87.38**	**10**	P	**P**	**19 55 15.8**	**+0.8**	
U59A	comp=Z,44nm,1.3s			IAmb	IAmb	19 55 22.3		
U59A	comp=Z,1µm,18.0s			IAMs_20	IAMs_20	20 35 59.3		
CPCT	**Cooper Cave**	**87.47**	**15**	P	**P**	**19 55 15.4**	**-0.1**	
CPCT	comp=Z,46nm,1.1s			IAmb	IAmb	19 55 16.9		
CPCT	comp=Z,1µm,21.0s			IAMs_20	IAMs_20	20 35 14.7		
SWET	**Sewanee**	**87.49**	**16**	P	**P**	**19 55 14.9**	**-0.7**	
SWET	comp=Z,35nm,1.0s			IAmb	IAmb	19 55 16.5		
V53A	**Saluda**	**87.49**	**14**	P	**P**	**19 55 15.2**	**-0.4**	
V53A	comp=Z,40nm,1.0s			IAmb	IAmb	19 55 18.7		
V53A	comp=Z,1µm,20.0s			IAMs_20	IAMs_20	20 36 31.3		
V54A	**Nebo**	**87.50**	**13**	P	**P**	**19 55 15.7**	**+0.1**	
	baz=351,SNR=16							
V55A	**Taylorsville**	**87.51**	**12**	P	**P**	**19 55 15.8**	**+0.1**	
	baz=352,SNR=12							
V55A	**Taylorsville**	**87.51**	**12**	P	**P**	**19 55 15.4**	**-0.2**	
V55A	comp=Z,47nm,1.1s			IAmb	IAmb	19 55 18.8		
OXF	**Oxford**	**87.58**	**19**	P	**P**	**19 55 15.6**	**-0.4**	
OXF	comp=Z,93nm,1.0s			pmax	p

baz=354
V60A Jim Taylor Roa 88.01 9 IAMs_20 IAMs_20 20 35 34.0
comp=Z,937nm,19.0s
V61A Roper 88.05 9 P **P** 19 55 18.5 +0.4
baz=354
X48A Hartselle 88.05 17 P **P** 19 55 18.1 -0.1
X48A IAMs_20 IAMs_20 20 36 58.3
comp=Z,1µm,18.0s
Z41A Richland Creek 88.12 22 P **P** 19 55 19.0 +0.5
baz=345
BG3 Lake Jocassee 88.14 14 P **P** 19 55 19.2 +0.6
BG3 IAmb IAmb 19 55 20.4
comp=Z,30nm,1.3s
BG3 IAMs_20 IAMs_20 20 37 34.6
comp=Z,944nm,19.0s
W54A Cherokee Point 88.15 13 P **P** 19 55 18.7 +0.1
baz=351,SNR=14
Y45A Yeager Farm, C 88.18 19 P **P** 19 55 19.2 +0.3
Y45A IAMs_20 IAMs_20 20 35 59.9
comp=Z,879nm,20.0s
FPAL Fort Paine 88.20 16 P **P** 19 55 18.7 -0.3
KMSC Kings Mountain 88.20 13 P **P** 19 55 18.8 -0.1
baz=352,SNR=13
KMSC Kings Mountain 88.20 13 P **P** 19 55 18.9 0.0
KMSC IAmb IAmb 19 55 21.9
comp=Z,52nm,1.0s
WHTX Lake Whitney, 88.27 26 P **P** 19 55 19.8 +0.5
baz=343,SNR=10
WHTX Lake Whitney, 88.27 26 P **P** 19 55 19.8 +0.5
WHTX IAMs_20 IAMs_20 20 38 43.3
comp=Z,1µm,19.0s
X51A Calhoun 88.29 15 P **P** 19 55 19.9 +0.5
X51A IAmb IAmb 19 55 22.4
comp=Z,38nm,1.0s
W56A Indian Trail 88.30 12 P **P** 19 55 19.4 0.0
baz=352,SNR=10
V62A Hyde County Ai 88.32 8 P **P** 19 55 20.4 +0.9
baz=354
W57A Gilead 88.34 11 P **P** 19 55 19.8 +0.2
baz=352,SNR=12
W57A Gilead 88.34 11 P **P** 19 55 20.0 +0.4
W57A IAmb IAmb 19 55 22.6
comp=Z,48nm,1.1s
W57A IAMs_20 IAMs_20 20 33 14.8
comp=Z,931nm,22.0s
PAULI Pauline 88.46 13 P **P** 19 55 20.5 +0.4
CNNC Cliffs of the 88.48 10 P **P** 19 55 20.6 +0.5
baz=353
CNNC Cliffs of the 88.48 10 IAMs_20 IAMs_20 20 36 41.3
comp=Z,1µm,20.0s
W59A Clinton 88.49 10 P **P** 19 55 20.6 +0.3
baz=353
W58A Raeford 88.56 11 P **P** 19 55 21.0 +0.5
baz=353,SNR=6.2
W61A Ground Anchor 88.62 9 P **P** 19 55 21.4 +0.5
baz=354
X54A Belton 88.65 13 P **P** 19 55 21.3 +0.2
baz=351,SNR=8.2
237A Washetta, Mont 88.66 25 P **P** 19 55 22.0 +0.9
W60A Pink Hill 88.68 10 P **P** 19 55 21.8 +0.7
baz=354
Y49A Blount Mountai 88.74 17 P **P** 19 55 21.4 -0.1
Y49A IAmb IAmb 19 55 24.3
comp=Z,51nm,1.3s
BIRD Birdtown, Kers 88.79 12 P **P** 19 55 22.0 +0.3
BIRD IAmb IAmb 19 55 23.5
comp=Z,42nm,1.2s
BIRD IAMs_20 IAMs_20 20 36 20.7
comp=Z,980nm,19.0s
X55A Gracelyn & Ava 88.83 13 P **P** 19 55 21.6 -0.3
baz=351,SNR=11
X56A White Oak 88.88 12 P **P** 19 55 22.2 +0.1
baz=352,SNR=13
HODGE Hodges 88.98 13 P **P** 19 55 22.2 -0.4
HODGE IAmb IAmb 19 55 24.1
comp=Z,45nm,1.1s
HODGE IAMs_20 IAMs_20 20 37 17.8
comp=Z,1µm,20.0s
X58A Rowland 89.01 11 P **P** 19 55 23.1 +0.4
baz=353
X58A Rowland 89.01 11 P **P** 19 55 23.4 +0.7
X58A IAmb IAmb 19 55 25.9
comp=Z,41nm,1.1s
X57A Johnson Farm, 89.01 12 P **P** 19 55 22.8 0.0
baz=352
X59A McDuffie Farm, 89.07 10 P **P** 19 55 23.3 +0.3
baz=353
TX31 Lajitas Ar. Si 89.07 32 P **P** 19 55 23.6 +0.3
TX31 IAmb IAmb 19 55 27.5
comp=Z,40nm,0.9s
TX32 Lajitas Array 89.07 32 P **P** 19 55 23.7 +0.4
TXAR Lajitas Array 89.07 32 P **P** 19 55 23.6 +0.4
comp=Z,10nm,0.8s,baz=321,slow=1.8,SNR=28
TXAR LR LR 20 39 55.0
comp=Z,607nm,19.3s,baz=0.0,slow=39
JCT Junction City 89.09 29 P **P** 19 55 23.8 +0.5
JCT pmax pmax
comp=Z,29nm,1.0s
JCT MLR MLR
comp=Z,1µm,21.0s
JCT Junction City 89.09 29 P **P** 19 55 23.6 +0.3
baz=342,SNR=8.2
JCT Junction City 89.09 29 P **P** 19 55 23.8 +0.5
JCT IAmb IAmb 19 55 25.1
comp=Z,29nm,0.9s
Y52A Lilburn 89.09 15 P **P** 19 55 23.5 +0.3
baz=350,SNR=26
Y52A Lilburn 89.09 15 P **P** 19 55 23.8 +0.6
Z47A Carrollton 89.10 18 P **P** 19 55 23.0 -0.2
X60A Albert Glenn T 89.12 10 P **P** 19 55 23.7 +0.5
baz=353
NATX Nacogdoches 89.16 24 P **P** 19 55 24.5 +1.1
baz=344,SNR=6.0
NATX Nacogdoches 89.16 24 P **P** 19 55 23.7 +0.2
Y55A Saluda 89.32 13 P **P** 19 55 24.4 +0.2
baz=351,SNR=10
435B Jarrell 89.39 27 P **P** 19 55 25.4 +0.8
baz=343
Z50A Ashland 89.41 17 P **P** 19 55 24.5 -0.1
baz=349,SNR=30
Z50A Ashland 89.41 17 P **P** 19 55 24.6 -0.1
Z50A IAmb IAmb 19 55 26.0
comp=Z,63nm,1.1s
Y57A Sumter 89.42 12 P **P** 19 55 25.2 +0.5
baz=352
Y57A Sumter 89.42 12 IAMs_20 IAMs_20 20 36 50.4
comp=Z,946nm,19.0s
LRAL Lakeview Retre 89.45 18 P **P** 19 55 24.5 -0.3
baz=348,SNR=9.5
LRAL Lakeview Retre 89.45 18 P **P** 19 55 24.6 -0.2
LRAL IAmb IAmb 19 55 26.9
comp=Z,30nm,0.9s
146A Union 89.47 19 P **P** 19 55 25.7 +0.8
146A IAMs_20 IAMs_20 20 37 10.8
comp=Z,856nm,20.0s
Y56A Pelion 89.53 13 P **P** 19 55 25.3 +0.1
baz=352
DZM Mont Dzumac 89.56 133 *e*P **P** 19 55 24.9 -0.4
comp=Z,83nm,1.4s
DZM Mont Dzumac 89.56 133 *e*S **S** 20 06 14.2 -2.3
comp=Z,180nm,25.1s
DZM *e*SS **SS** 20 12 13.9 +1.0
comp=Z,256nm,27.9s
DZM Mont Dzumac 89.56 133 *e*LR LR 20 23 56.7
comp=Z,665nm,22.5s
DZM Mont Dzumac 89.56 133 P **P** 19 55 26.6 +1.3
DZM IAmb IAmb 19 55 28.2
comp=Z,39nm,1.2s
VBMS Vicksburg 89.60 21 P **P** 19 55 26.3 +0.8
baz=347
VBMS Vicksburg 89.60 21 P **P** 19 55 26.7 +1.2
Y58A Scranton 89.61 11 P **P** 19 55 25.6 +0.1
baz=352
Y59A Loris 89.61 11 P **P** 19 55 25.9 +0.3
baz=353
Y59A Loris 89.61 11 P **P** 19 55 25.8 +0.3
GOGA Godfrey 89.62 15 P **P** 19 55 26.0 +0.4
GOGA pmax pmax
comp=Z,61nm,1.1s
GOGA MLR MLR
comp=Z,1µm,18.0s
GOGA Godfrey 89.62 15 P **P** 19 55 25.7 +0.1
baz=350,SNR=21
GOGA Godfrey 89.62 15 P **P** 19 55 26.0 +0.4
GOGA IAmb IAmb 19 55 27.4
comp=Z,61nm,1.1s
Y60A Bolivia 89.67 10 P **P** 19 55 26.3 +0.5
baz=353
Y60A Bolivia 89.67 10 P **P** 19 55 27.2 +1.4
Z56A Williston 89.99 13 P **P** 19 55 27.6 +0.3
baz=352
342A Flagon Creek P 90.04 22 P **P** 19 55 29.1 +1.5
342A IAMs_20 IAMs_20 20 38 27.2
comp=Z,945nm,20.0s
Z57A Bowman 90.10 12 P **P** 19 55 27.9 0.0
baz=352,SNR=6.5
Z58A St. Stephen 90.16 12 P **P** 19 55 28.4 +0.3
baz=352,SNR=7.1
152A Waverly Hall 90.17 16 P **P** 19 55 28.6 +0.4
152A IAmb IAmb 19 55 29.9
comp=Z,26nm,1.1s
Z59A Georgetown, SC 90.31 11 P **P** 19 55 29.2 +0.4
baz=353
NHSC New Hope 90.35 12 P **P** 19 55 29.6 +0.6
baz=352
NHSC New Hope 90.35 12 IAMs_20 IAMs_20 20 37 16.8
comp=Z,1µm,20.0s
441A DeRidder 90.46 23 P **P** 19 55 31.5 +2.0
154A Montrose 90.46 14 P **P** 19 55 30.4 +0.9
BBOO Buckleboo 90.51 162 P **P** 19 55 29.0 -0.4
250A Grady 90.60 17 P **P** 19 55 30.4 +0.2
250A IAMs_20 IAMs_20 20 38 06.7
comp=Z,1µm,20.0s
HKT Hockley 90.61 26 P **P** 19 55 31.4 +1.2
HKT pmax pmax
comp=Z,42nm,1.3s
HKT MLR MLR
comp=Z,1µm,18.0s
HKT Hockley 90.61 26 P **P** 19 55 31.4 +1.2
HKT IAmb IAmb 19 55 33.1
comp=Z,42nm,1.3s
157A Early Branch 90.67 13 P **P** 19 55 30.7 +0.2
baz=352
HPIG 90.69 35 P **P** 19 55 31.8 +0.8
HPIG IAMs_20 IAMs_20 20 38 17.2
comp=Z,606nm,19.0s
158A Hollywood 90.71 12 P **P** 19 55 30.8 +0.1
baz=352
STKA Stephens Creek 90.71 157 P **P** 19 55 29.6 -0.7
comp=Z,8.1nm,1.0s,baz=353,slow=7.0,SNR=11
STKA LR LR 20 35 31.9
comp=Z,374nm,22.0s,baz=349,slow=35
STKA Stephens Creek 90.71 157 P **P** 19 55 29.6 -0.7
TOC1 Torodi Ar. Sit 91.14 296 IAMs_20 IAMs_20 20 40 13.5
comp=Z,632nm,19.0s
TOC2 Torodi Ar. Sit 91.14 296 IAMs_20 IAMs_20 20 40 14.6
comp=Z,583nm,18.0s
TOC3 Torodi Ar. Sit 91.16 296 IAMs_20 IAMs_20 20 40 16.0
comp=Z,579nm,19.0s
TOA2 Torodi Ar. Sit 91.16 296 IAMs_20 IAMs_20 20 41 04.0
comp=Z,579nm,19.0s
TOA0 Torodi Ar. Sit 91.16 296 P **P** 19 55 32.3 -0.7
SNR=11
TOA0 Torodi Ar. Sit 91.16 296 P **P** 19 55 32.3 -0.7
TOA0 IAMs_20 IAMs_20 20 40 16.1
comp=Z,560nm,18.0s
TORD Torodi Ar. Bea 91.16 296 P **P** 19 55 32.6 -0.5
comp=Z,40nm,1.1s,baz=22,slow=5.1,SNR=72
TORD LR LR 20 41 24.2
comp=Z,454nm,19.2s,baz=15,slow=39
TOB5 Torodi Ar. Sit 91.16 296 IAMs_20 IAMs_20 20 40 16.2
comp=Z,612nm,18.0s
TOB3 Torodi Ar. Sit 91.16 296 IAMs_20 IAMs_20 20 40 15.2
comp=Z,571nm,18.0s
TOC4 Torodi Ar. Sit 91.18 296 IAMs_20 IAMs_20 20 40 16.6
comp=Z,562nm,18.0s
TOC5 Torodi Ar. Sit 91.19 296 IAMs_20 IAMs_20 20 41 05.8
comp=Z,623nm,19.0s
255A Hazlehurst 91.22 14 P **P** 19 55 33.5 +0.4
833A Chaparral WMA, 91.25 29 P **P** 19 55 34.2 +0.9
baz=342
352A Blakely 91.30 16 P **P** 19 55 33.7 +0.2
TIGA Tifton 91.55 15 P **P** 19 55 35.2 +0.6
baz=350
TIGA Tifton 91.55 15 P **P** 19 55 35.0 +0.4
TIGA IAmb IAmb 19 55 36.7
comp=Z,42nm,0.9s
451A Vernon 92.02 17 P **P** 19 55 38.1 +1.3
456A Hilliard 92.47 14 IAMs_20 IAMs_20 20 39 08.0
comp=Z,930nm,18.0s
553A Crawfordville 92.65 16 P **P** 19 55 41.1 +1.4
DWPF Disney Wildern 95.12 14 IAMs_20 IAMs_20 20 41 04.2
comp=Z,798nm,20.0s
ZAIG Zacatecas 95.56 34 P **P** 19 55 53.5 0.0
ZAIG IAmb IAmb 19 55 56.1
comp=Z,21nm,1.3s
ZAIG IAMs_20 IAMs_20 20 42 37.0
comp=Z,1µm,20.0s
060A Indiantown 96.31 13 IAMs_20 IAMs_20 20 42 18.0
comp=Z,847nm,18.0s
DBIC Dimbokro 99.98 298 P Pdif 19 56 12.8 -0.3
comp=Z,12nm,1.1s,baz=357,slow=6.8,SNR=6.1
DBIC Dimbokro 99.98 298 P **Pdif** 19 56 13.3 +0.1
DBIC pmax pmax
comp=Z,19nm,1.2s
DBIC Dimbokro 99.98 298 **Pdif** 19 56 13.3 +0.1
DBIC IAmb IAmb 19 56 16.5
comp=Z,19nm,1.2s
TIC Toumodi 100.08 298 *e*P **Pdif** 19 56 13.9 +0.2
KIC Kosan Boka 100.19 298 *e*P **Pdif** 19 56 14.3 +0.2
comp=Z,33nm,1.3s
LIC Lamto 100.45 298 *e*P **Pdif** 19 56 16.7 +1.4
comp=Z,35nm,1.2s
TEIG Tepich 101.69 21 IAMs_20 IAMs_20 20 43 23.6
comp=Z,667nm,22.0s
GRTK Grand Turk 102.59 5 IAMs_20 IAMs_20 20 45 38.1
comp=Z,905nm,20.0s
GTBY Guantanamo Bay 103.90 9 IAMs_20 IAMs_20 20 42 07.8
comp=Z,794nm,22.0s
CCIG Comitan 104.63 26 IAMs_20 IAMs_20 20 45 07.9
comp=Z,793nm,21.0s
SC01 Santiago de lo 104.69 5 IAMs_20 IAMs_20 20 45 04.4
comp=Z,644nm,19.0s
SDDR Presa de Saban 105.10 5 IAMs_20 IAMs_20 20 44 26.5
comp=Z,1µm,22.0s
MTDJ Mount Denham 105.34 11 IAMs_20 IAMs_20 20 44 47.7
comp=Z,851nm,22.0s
SJG San Juan 106.10 0 IAMs_20 IAMs_20 20 45 35.9
comp=Z,513nm,21.0s
SABA Saba 106.55 357 IAMs_20 IAMs_20 20 47 23.8
comp=Z,618nm,19.0s
SNET Serv Nac Est T 107.82 24 IAMs_20 IAMs_20 20 45 27.2
comp=Z,875nm,20.0s
PPT2 Papeete2 107.96 95 *e*LR LR 20 32 23.9
comp=Z,553nm,23.8s
CRIN San Cristobal 109.25 22 IAMs_20 IAMs_20 20 46 20.2
comp=Z,567nm,21.0s
SVB Belmont 110.80 355 IAMs_20 IAMs_20 20 50 26.3
comp=Z,561nm,18.0s
TBI Tubuai 112.64 98 *e*LR LR 20 34 43.0
comp=Z,451nm,27.8s
BCIP Isla Barro Col 113.98 15 IAMs_20 IAMs_20 20 53 00.1
comp=Z,786nm,22.0s
SDV Santo Domingo 115.16 5 IAMs_20 IAMs_20 20 51 29.0
comp=Z,689nm,20.0s
ROSC El Rosal 118.91 9 IAMs_20 IAMs_20 20 54 47.3
comp=Z,508nm,22.0s
CASY Casey 122.07 182 **PKiKP PKPdf** 20 01 21.1 -0.1
RCBR Riachuelo 124.48 323 *e*P **PKPdf** 20 01 22.1 -5.3
PTGA Pitinga 124.61 353 PKP **PKPdf** 20 01 27.6 0.0
comp=Z,2.4nm,0.7s,baz=43,slow=7.1,SNR=5.4
PTGA Pitinga 124.61 353 IAMs_20 IAMs_20 20 55 33.3
comp=Z,542nm,20.0s
PRPB Parauapebas 128.59 339 *e*P **PKPdf** 20 01 30.1 -5.1
PRPB Parauapebas 128.59 339 *e*P **PKPdf** 20 01 34.9 -0.3
MAW Mawson 129.06 203 PKP **PKiKP** 20 01 34.8 -0.1
comp=Z,3.4nm,0.9s,baz=35,slow=5.8,SNR=4.0
ATAH Atahualpa 130.21 16 PKP **PKiKP** 20 01 40.5 +0.9
comp=Z,16nm,1.1s,baz=42,slow=6.2,SNR=4.9
NPGB Novo Progresso 130.38 346 *e*P **PKPdf** 20 01 38.4 -0.2
SMTB Santa Maria do 130.73 336 *e*P **PKPdf** 20 01 33.7 -5.5
SMTB Santa Maria do 130.73 336 *e*P **PKiKP** 20 01 40.1 0.0
SAML Samuel 132.94 356 PKIKP **PKPdf** 20 01 43.2 -0.2
SAML Samuel 132.94 356 **PKPdf** 20 01 43.2 -0.2
SAML Samuel 132.94 356 *e*P **PKPdf** 20 01 38.7 -4.7
SAML Samuel 132.94 356 *e*P **PKPdf** 20 01 43.8 +0.4
GDUG Guandu, BA 133.09 324 *e*P **PKiKP** 20 01 46.0 +1.2
CLDB Colider 134.20 346 *e*P **PKPdf** 20 01 45.4 -0.4
JANB Januaria 135.82 329 *e*P **PKPdf** 20 01 42.9 -5.9
JANB Januaria 135.82 329 *e*P **PKiKP** 20 01 50.0 -0.3
VNDA Vanda 136.58 166 PKP **PKPdf** 20 01 48.0 -0.3
comp=Z,8.5nm,1.0s,baz=304,slow=4.0,SNR=23
VNDA Vanda 136.58 166 PKIKP **PKPdf** 20 01 48.0 -0.3
VNDA Vanda 136.58 166 **PKPdf** 20 01 47.8 -0.5
VILB Vilhena 136.74 352 *e*P **PKPdf** 20 01 44.9 -5.6
VILB Vilhena 136.74 352 *e*P **PKiKP** 20 01 52.5 +0.2
NAN01 Guarapari, ES 137.12 322 *e*P **PKPdf** 20 01 43.6 -7.4
NAN01 Guarapari, ES 137.12 322 *e*P **PKiKP** 20 01 52.1 -0.7
MC01 Montes Claros 137.27 328 *e*P **PKiKP** 20 01 54.2 +0.9
BDFB Brasilia 137.36 334 PKP **PKPdf** 20 01 51.7 0.0
comp=Z,6.7nm,0.9s,baz=36,slow=5.5,SNR=5.0
ARAG Araguaiana, MT 138.27 339 *e*P **PKPdf** 20 01 53.9 +0.7
SJMB Sao Joao De Ma 138.27 323 *e*P **PKPdf** 20 01 47.0 -6.2
RIB01 Linhares ES 138.57 322 *e*P **PKPdf** 20 01 48.2 -5.4
RIB01 Linhares ES 138.57 322 *e*P **PKiKP** 20 01 55.6 -0.2
PTLB Pontes e Lacer 139.11 350 *e*P **PKPdf** 20 01 48.9 -5.8
PTLB Pontes e Lacer 139.11 350 *e*P **PKiKP** 20 01 55.9 -1.1
SALV Santo Antonio 139.13 345 *e*P **PKPdf** 20 01 47.7 -7.1
SALV Santo Antonio 139.13 345 *e*P **PKPdf** 20 01 54.9 +0.1
IPMB Ipameri, GO 139.66 333 *e*P **PKPdf** 20 01 48.9 -6.8
IPMB Ipameri, GO 139.66 333 *e*P **PKPdf** 20 01 55.5 -0.3
SIV San Ignacio 139.81 353 PKhKP PKPpre 20 01 50.7
comp=Z,5.3nm,1.0s,baz=68,slow=6.7,SNR=4.1
SIV PKP **PKPdf** 20 01 55.6 -0.5
comp=Z,7.4nm,1.1s,baz=318,slow=3.9,SNR=9.9
LPAZ La Paz 140.25 3 PKIKP **PKPdf** 20 01 55.7 -1.9
LPAZ La Paz 140.25 3 **PKPdf** 20 01 55.7 -1.9
LPAZ La Paz 140.25 3 *e*P **PKPdf** 20 01 52.5 -5.1
LPAZ La Paz 140.25 3 *e*P **PKPdf** 20 01 57.9 +0.3
BSEB Bom Sucesso 141.57 327 *e*P **PKPdf** 20 01 54.0 -4.3
BB19B Bebedouro 142.69 332 *e*P **PKPdf** 20 01 56.1 -5.0
MAN01 Angra dos Reis 143.06 325 *e*P PKPab 20 01 56.4 -0.7
MAN01 Angra dos Reis 143.06 325 *e*P **PKiKP** 20 02 04.3 -0.6
PB11 IPOC Station P 143.63 6 PKPbc 20 02 00.3 0.0
PARB Paraibuna 144.03 327 *e*P **PKPab** 20 01 56.1 -4.7
VAO Valinhos 144.11 329 *e*P **PKPab** 20 01 55.0 -6.2
TA01 Diego Aracena 144.40 7 PKPbc 20 02 03.0 +0.6
PATCX Punta Patache 144.66 7 **PKPab** 20 02 03.1 -0.2
SPB Sao Paulo 144.80 330 **PKPab** 20 02 03.2 -0.4
SPB Sao Paulo 144.80 330 *e*P **PKPab** 20 01 58.1 -5.5
PB01 IPOC Station P 144.92 6 **PKPab** 20 02 04.2 0.0
NVL N'lazarevskaya 145.13 215 *e*PKIKP **PKPbc** 20 02 02.7 -0.7
NVL pmax pmax
comp=Z,56nm,0.9s
FRTB Fartura 145.14 333 *e*P **PKPbc** 20 01 58.8 -6.0
TRCB Terra Rica 145.32 338 *e*P **PKPbc** 20 01 59.8 -5.7
PET01 Itanhaem-SP 145.41 329 *e*P **PKPbc** 20 01 59.9 -5.8
PET01 Itanhaem-SP 145.41 329 *e*P **PKPab** 20 02 06.9 +1.1
PB07 IPOC Station P 145.57 6 **PKPdf** 20 02 06.3 0.0
PB09 IPOC Station P 145.68 5 **PKPab** 20 02 07.3 +0.2
QSPA South Pole Qui 145.84 180 **PKPdf** 20 02 04.6 -0.6
LVC Limon Verde 146.50 5 PKPbc **PKPbc** 20 02 09.7 +0.2
comp=Z,23nm,0.8s,baz=326,slow=2.7,SNR=10
LVC Limon Verde 146.50 5 **PKPbc** 20 02 09.2 -0.3
LVC Limon Verde 146.50 5 *e*P **PKPdf** 20 02 02.5 -5.6
LVC Limon Verde 146.50 5 *e*P **PKPab** 20 02 10.2 -0.3
PB06 IPOC Station P 146.56 6 **PKPdf** 20 02 08.7 +0.7
TIJ01 Guaruva-PR 146.88 331 *e*P **PKPdf** 20 02 03.8 -4.5
PTGB Pitanga 147.06 336 *e*P **PKPdf** 20 02 03.1 -5.5
PTGB Pitanga 147.06 336 *e*P **PKPbc** 20 02 10.6 -0.1
PB05 IPOC Station P 147.07 6 **PKPdf** 20 02 09.4 +0.5
ITAB Concordia 149.50 335 *e*P **PKPdf** 20 02 05.7 -6.7
ITAB Concordia 149.50 335 *e*P **PKPbc** 20 02 15.4 -1.5
CPUP Villa Florida 149.62 345 PKPbc **PKPbc** 20 02 17.1 -0.2
comp=Z,39nm,1.0s,baz=16,slow=3.3,SNR=25
CPUP Villa Florida 149.62 345 **PKPdf** 20 02 13.1 +0.5
CPUP Villa Florida 149.62 345 *e*P **PKPbc** 20 02 15.3 -2.0
SNAA Sanae 149.96 214 **PKPdf** 20 02 12.7 +0.8
SNAA PKPbc **PKPbc** 20 02 16.9 +0.1
VNA2 Neumayer--Watz 151.41 216 PKPbc **PKiKP** 20 02 20.4 -0.2
baz=71,slow=2.9
VNA1 Neumayer--Stat 151.70 216 PKPbc **PKiKP** 20 02 21.5 +0.3
VNA3 Neumayer Olymp 152.14 215 PKPbc **PKPbc** 20 02 21.4 -0.5
ITQB Itaqui 152.78 342 *e*P **PKPdf** 20 02 20.2 +2.8
PLCA Paso Flores 164.35 13 *e*P **PKPdf** 20 02 26.3 -4.7

SJA ***23*** *19:57:57.5±0.6,35.61S×73.60W,h2km±18km,ML4.0, MW3.8*

NEIC ***23*** *19:57:58,35.81S×73.87W,h14km,Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr-1.28; Mθθ0.97; Mϕϕ0.31; Mrθ1.14; Mrϕ-0.52; Mθϕ-0.10; Fault plane solution: M0 1.71000×10^15 NP1:φs131.58000°, δ26.37000°,λ-64.56000°. NP2:φs283.61000°,δ66.35000°, λ-102.03000°. Principal axes: T 1.6488, Plg20.0000°, Azm23.0000°; N 0.1141, Plg11.0000°, Azm288.0000°; P -1.7629, Plg67.0000°, Azm172.0000°;*

IDC ***23*** *19:58:01.6±1.2,35.82S×73.04W,h0km,mb4.1/7, mb1 4.2/11,mb1mx4.0/32,mbtmp4.0/11,ML4.0/4,MS3.4/5, Ms1 3.4/5,ms1mx3.2/24 Error ellipse: s-maj=28.1km s-min=17.7km az=89.0*

NEIC ***23*** *19:58:01.4±2.2,35.76S±0.05×73.4W±0.1,h10km±1km, Mwr4.1/19,ML4.3(GUC),Error ellipse: s-maj=15.3km s-min=7.8km az=271.0*

GUC ***23*** *19:58:02.8±0.5,35.78S×73.37W,h31km±3km,ML4.3*

ISC 23 19:58:01.5±2.0,35.77S±0.03×73.37W±0.07,h7km±12km, n60,σt1.40/70,mb4.1/9,3C,Off coast of central Chile

Code	Station Name	Δ°	Az°	Phase	ID	Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**1.10**	**169**	*e*P		**Pb**		**19 58 21.6**	**-1.2**
CCSP				*i* S		**Sg**		**19 58 35.3**	**-1.5**
CCSP				IAML				19 58 41.2	
	comp=E,21µm,0.5s								
BI03	**Tigo**	**1.11**	**166**	*e*P		**Pb**		**19 58 21.8**	**-1.3**
BI03				*i* S		**Sb**		**19 58 35.7**	**-2.1**
BI03				IAML				19 58 40.8	
	comp=E,18µm,0.3s								
BI03	**Tigo**	**1.11**	**166**			**Pb**		**19 58 21.9**	**-1.1**
BI03					Sg	**Sg**		**19 58 37.8**	**+0.5**
GO05	**Huala**	**1.40**	**58**	⇑*i* P		**Pn**		**19 58 26.3**	**-1.2**
GO05				*e*S		**Sb**		**19 58 44.5**	**-1.5**
GO05	**Huala**	**1.40**	**58**			**Pn**		**19 58 26.4**	**-1.1**
GO05	**Huala**	**1.40**	**58**	*i* P		**Pn**		**19 58 26.4**	**-1.1**
GO05				*e*S		**Sg**		**19 58 47.9**	**+1.4**
LAJA	**Laja**	**1.60**	**161**	*e*P		**Pn**		**19 58 29.4**	**-0.8**
LAJA				*e*S		**Sn**		**19 58 48.8**	**-2.4**
BI02	**San Fabin de**	**1.92**	**118**	⇑*i*P		**Pn**		**19 58 34.2**	**-0.5**
BI02				*i* S		**Sn**		**19 58 58.3**	**-0.8**
BI02				IAML				19 59 05.0	
	comp=E,2µm,0.5s								
BI02	**San Fabin de**	**1.92**	**118**			**Pn**		**19 58 34.1**	**-0.5**
BO02	**Sierra Bellavi**	**2.33**	**66**			**Pn**		**19 58 39.8**	**-0.5**
BO02					Sn	**Sg**		**19 59 14.8**	**-1.5**
MT01	**Popeta**	**2.58**	**43**	*e*P		**Pn**		**19 58 43.4**	**-0.3**
MT01				IAML				19 59 32.4	
	comp=E,2µm,0.4s								
MT01	**Popeta**	**2.58**	**43**			**Pn**		**19 58 42.5**	**-1.2**
CANA	**Caviahue**	**2.81**	**140**	*i* P		**Pn**		**19 58 48.2**	**+1.1**
CANA				*e*S		**Sg**		**19 59 36.7**	**+4.9**
CANA				IAML				19 59 41.9	
	comp=Z,396nm,0.8s								
MT02	**Curacav**	**3.11**	**37**	⇑*i*P		**Pn**		**19 58 50.2**	**-0.7**
MT02	**Curacav**	**3.11**	**37**			**Pn**		**19 58 50.1**	**-0.9**
MT05	**Renca**	**3.21**	**43**			**Pn**		**19 58 50.8**	**-1.7**
LC01	**Cunco**	**3.34**	**160**	*e*P		**Pn**		**19 58 53.8**	**-0.5**
LC01				IAML				19 59 51.9	
	comp=E,324nm,0.6s								
LC01	**Cunco**	**3.34**	**160**			**Pn**		**19 58 54.3**	**+0.1**
ROC1	**El Roble**	**3.40**	**36**			**Pn**		**19 58 55.1**	**-0.1**
ROCH	**El Roble**	**3.40**	**36**	*e*P		**Pn**		**19 58 55.1**	**-0.1**
PEL	**Peldehue**	**3.43**	**41**	*e*P		**Pn**		**19 58 55.5**	**0.0**
PEL				*i* S		**Sn**		**19 59 35.1**	**-1.3**
PEL	**Peldehue**	**3.43**	**41**			**Pn**		**19 58 56.3**	**+0.8**
VA03	**San Esteban**	**3.80**	**39**	*e*P		**Pn**		**19 59 00.9**	**+0.4**
VA03				*e*S		**Sn**		**19 59 44.0**	**-1.5**
VA03	**San Esteban**	**3.80**	**39**			**Pn**		**19 59 01.1**	**+0.5**
CO02	**Combarbal**	**4.96**	**24**			**Pn**		**19 59 16.2**	**-0.4**
RTLS	**Leoncito**	**5.21**	**42**	*i* P		**Pn**		**19 59 22.0**	**+1.8**
RTLS				IAML				20 01 01.2	
	comp=Z,58nm,0.7s								
RTLS				IAML				20 01 01.3	
	comp=Z,104nm,0.7s								
CO03	**El Pedregal**	**5.40**	**25**			**Pn**		**19 59 22.3**	**-0.3**
PLCA	**Paso Flores**	**5.43**	**157**	Pn		**Pn**		**19 59 23.3**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=332,slow=8.2,SNR=28								
PLCA				Lg		Lg		20 00 47.8	
	comp=Z,1.1nm,0.3s,baz=260,slow=17,SNR=4.7								
PLCA	**Paso Flores**	**5.43**	**157**			**Pn**		**19 59 23.5**	**+0.5**
RTCV	**Cerro Valdivia**	**5.59**	**47**	*i* P		**Pn**		**19 59 26.2**	**+0.9**
RTCV				IAML				20 01 04.0	
	comp=Z,85nm,1.8s								
CFA	**Coronel Fontan**	**5.96**	**47**	Pn		**Pn**		**19 59 30.4**	**+0.2**

comp=Z,5.4nm,0.3s,baz=220,slow=12,SNR=34
CFA Sn **Sn** **20 00 39.4 +0.7**
comp=Z,1.8nm,0.3s,baz=227,slow=15,SNR=1.4
CFA Lg Lg 20 01 02.0
comp=Z,5.0nm,0.3s,baz=106,slow=20,SNR=5.8
CFA LR LR 20 01 52.4
comp=Z,313nm,18.7s,baz=240,slow=40
CFA Coronel Fontan 5.96 47 *i* P **Pn** **19 59 30.6 +0.4**
CFA IAML 20 01 17.2
comp=Z,33nm,0.7s
GO04 Tololo Observa 5.98 22 Pn 19 59 29.9 -0.8
GO04 Tololo Observa 5.98 22 *i* P **Pn** **19 59 29.9 -0.8**
RTLL Cerro Villicun 6.02 44 *i* P **Pn** **19 59 31.5 +0.4**
RTLL IAML 20 01 15.1
comp=Z,73nm,0.9s
ACAN Cantantal 6.20 58 *i* P **Pn** **19 59 34.9 +1.3**
ACAN IAML 20 01 35.3
comp=Z,20nm,0.7s
ACCO Cerro Coronel 6.30 36 *i* P **Pn** **19 59 35.9 +0.8**
ACCO IAML 20 01 41.9
comp=Z,69nm,2.0s
CO01 Juntas del Tor 6.40 26 Pn 19 59 36.5 +0.1
ACDV Cuesta del Vie 6.62 34 *i* P **Pn** **19 59 40.3 +0.8**
ACDV IAML 20 01 48.5
comp=Z,45nm,0.9s
LL01 San Ignacio de 6.64 174 Pn 19 59 33.8 -5.7
MRA San Martin 7.17 64 *i* P **Pn** **19 59 47.4 +0.5**
MRA IAML 20 02 13.1
comp=Z,16nm,0.6s
AC05 El Transito 7.39 22 Pn 19 59 49.6 -0.4
AC04 Llanos de Chal 7.79 15 Pn **Pn** **19 59 52.9 -2.4**
GO03 Copiap 8.57 19 Pn 20 00 02.8 -3.3
AC02 Maricunga 9.61 23 Pn **Pn** **20 00 16.9 -3.9**
AC01 Pan de Azucar 9.88 15 Pn **Pn** **20 00 20.4 -3.6**
LVC Limon Verde 13.67 18 LR LR 20 07 12.7
comp=Z,147nm,18.6s,baz=290,slow=40
PB01 IPOC Station P 15.06 14 P **P** **20 01 40.5 +0.2**
CPUP Villa Florida 16.64 60 Pn **Pn** **20 01 55.7 +0.5**
comp=Z,0.1nm,0.3s,baz=253,slow=18,SNR=1.8
CPUP LR LR 20 08 17.8
comp=Z,67nm,20.3s,baz=230,slow=38
LPAZ La Paz 19.95 15 P **Pn** **20 02 37.7 +1.1**
comp=Z,0.2nm,0.3s,baz=157,slow=11,SNR=3.7
SIV San Ignacio 22.55 32 P **P** **20 03 02.6 +0.3**
comp=Z,6.2nm,0.9s,baz=216,slow=13,SNR=6.6
SIV LR LR 20 13 39.2
comp=Z,180nm,19.9s,baz=220,slow=42
PTGA Pitinga 37.02 23 P **P** **20 05 12.2 +0.2**
comp=Z,3.3nm,0.8s,baz=268,slow=23,SNR=2.9
PTGA LR LR 20 20 46.0
comp=Z,76nm,21.2s,baz=82,slow=37
TXAR Lajitas Array 70.76 332 P **P** **20 09 19.9 +1.3**
comp=Z,0.7nm,0.6s,baz=165,slow=7.2,SNR=1.9
LIC Lamto 76.36 72 *e*P **P** **20 09 51.5 -0.3**
comp=Z,8.8nm,0.5s
TIC Toumodi 76.63 72 *e*P **P** **20 09 53.1 -0.2**
KIC Kosan Boka 76.67 72 *e*P **P** **20 09 53.5 0.0**
comp=Z,16nm,0.9s
DBIC Dimbokro 76.78 72 P **P** **20 09 54.3 +0.2**
comp=Z,2.7nm,0.6s,baz=182,slow=3.9,SNR=5.4
BOSA Boshof 80.21 118 P **P** **20 10 12.5 -0.7**
comp=Z,2.8nm,0.8s,baz=231,slow=4.2,SNR=4.6
NVAR Mina Array Bea 84.72 326 P **P** **20 10 38.6 +2.2**
comp=Z,0.4nm,0.5s,baz=141,slow=5.8,SNR=2.5
TORD Torodi Ar. Bea 85.83 71 P **P** **20 10 41.8 -0.3**
comp=Z,1.3nm,0.9s,baz=220,slow=5.6,SNR=5.3

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*IDC **23** 20:05:59.4±6.8,20.˚76S×169.˚37E,h72km±55km,mb3.7/4, mb1 3.8/5,mb1mx3.4/41,mbtmp3.9/5,ML2.8/1,MS2.7/1, Ms1 2.7/1,ms1mx2.6/27, Error ellipse: s-maj=145.4km s-min=48.5km az=155.0*
ISC 23 20:06:00.1±3.3,21.˚S±1.˚×169.˚5E±0.˚5,h100km,n6,σ1s73/7, mb3.9/4,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.00**	**253**	P	**Pn**	**20 06 44.6**	**-1.3**
	1.1nm,0.3s,baz=62,slow=18,SNR=80						
DZM				S	**Sn**	**20 07 20.6**	**-0.6**
	41nm,0.3s,baz=131,slow=19,SNR=23						
DZM				LR	LR	20 07 51.7	
	comp=Z,113nm,18.2s,baz=76,slow=37						
CTA	**Charters Tower**	**21.81**	**269**	P	**P**	**20 10 45.0**	**+0.6**
	2.4nm,0.6s,baz=94,slow=11,SNR=6.6						
WRA	**Warramunga Arr**	**32.94**	**266**	P	**P**	**20 12 24.8**	**-0.6**
	0.4nm,0.6s,baz=96,slow=8.3,SNR=7.4						
ASAR	**Alice Springs**	**32.97**	**259**	P	**P**	**20 12 27.2**	**+1.5**
	3.6nm,0.8s,baz=87,slow=9.1,SNR=51						
FITZ	**Fitzroy Crossi**	**41.36**	**266**	P	**P**	**20 13 37.9**	**+1.3**
	1.9nm,0.7s,baz=78,slow=9.3,SNR=2.8						
GERES	**GERESS Array B**	**146.36**	**331**	PKPbc	**PKiKP**	**20 25 30.1**	**-2.3**
	0.4nm,0.7s,baz=29,slow=3.0,SNR=4.8						

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*DJA **23** 20:07:42.7±6.2,6˚N±47.˚×12˚6E±2.˚6,h310km±26km, M3.8/5,mB4.6/2,mb3.2/4, MLv4.0/5, Mw(mB)3.8/2, Mwp5.2/1*
*IDC **23** 20:07:48.2±1.6,3.˚00N×122.˚49E,h0km,mb3.5/3, mb1 3.7/3,mb1mx3.3/43,mbtmp3.5/3,MS4.4/1,Ms1 4.4/1, ms1mx3.2/27, Error ellipse: s-maj=212.9km s-min=24.2km az=62.0*
ISC 23 20:07:50.0±1.4,2.˚88N±0.˚09×122.˚7E±0.˚2,h10km,n7, σ2s58/6,mb3.4/3,1D,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**4.75**	**30**	⇓*i* P	**Pg**	**20 09 22.5**	**+1.4**
TNTI	**Ternate**	**5.13**	**114**	P	**Pn**	**20 09 04.2**	**-2.7**
	0.2nm868nm11nm,0.7s						
SANI	**Sanana**	**5.91**	**146**	P	**Pb**	**20 09 33.9**	**+0.7**
	0.1nm806nm4.6nm,3.0s						
WRA	**Warramunga Arr**	**25.41**	**154**	P	**P**	**20 13 18.5**	**+0.5**
	0.5nm,0.7s,baz=330,slow=11,SNR=12						
ASAR	**Alice Springs**	**28.56**	**158**	P	**P**	**20 13 48.9**	**+2.6**
	0.4nm,0.6s,baz=343,slow=6.7,SNR=5.0						
CTA	**Charters Tower**	**32.50**	**136**	LR	LR	20 28 39.0	
	comp=Z,617nm,21.4s,baz=342,slow=38						
MKAR	**Makanchi Array**	**56.02**	**328**	P	**P**	**20 17 27.3**	**-1.7**
	0.5nm,0.4s,baz=118,slow=7.8,SNR=14						

DJA 23 20:08:42.0±0.3,3.˚S±5.˚×13.˚6E±.˚,h10km,M4.1/11,mB5.9/2, mb4.5/5,MLv3.9/11,Mw(mB)5.5/2,Mwp5.0/1,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRPI	**Serui, Papua**	**1.61**	**27**	P	Pn	20 09 09.7	-0.8
FAKI	**Fak Fak**	**3.27**	**277**	P	Pn	20 09 33.1	-0.3
SMPI	**Sarmi**	**3.46**	**68**	P	Pn	20 09 36.1	+0.1
GENI	**Genyem**	**4.72**	**81**	P	Pn	20 09 53.7	+0.4
JAY	**Jayapura**	**5.26**	**81**	P	Pn	20 10 00.5	-0.3
	0.0nm3.1nm,1.1s						
BNDI	**Bandanaira**	**5.71**	**258**	P	Pn	20 10 06.7	-0.2
SAUI	**Saumlaki**	**6.25**	**222**	P	Pn	20 10 14.1	-0.2
	2.1nm22um500nm,1.0s						
MSAI	**Masohi**	**6.56**	**269**	P	Pn	20 10 18.6	0.0
	0.1nm8.6nm,0.9s						
MMPI	**Merauke**	**7.06**	**137**	P	Pn	20 10 26.4	+0.9

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*SJA **23** 20:08:57.2±0.5,21.˚43S×68.˚81W,h154km±5km,ML3.3, MW3.5*
*IDC **23** 20:08:58.6±0.9,21.˚37S×68.˚28W,h121km±13km,mb3.6/3, mb1 3.6/6,mb1mx3.4/36,mbtmp3.9/6, Error ellipse: s-maj=37.6km s-min=16.6km az=110.0*
*GUC **23** 20:08:58.3±0.8,21.˚27S×68.˚80W,h121km±5km,ML3.9*
ISC 23 20:08:57.5±0.8,21.˚27S±0.˚04×68.˚79W±0.˚06,h133km±7km, n29,σ1s28/45,mb3.8/3,2C-8D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.67**	**219**	⇑*i* P	**Pn**	**20 09 18.6**	**+0.3**
PB09				*i* S	**Sn**	**20 09 33.5**	**-0.4**
PB09				IAML		20 09 35.1	
	comp=E,2μm,0.2s						
PB01	**IPOC Station P**	**0.69**	**289**	⇓*i* P	**Pn**	**20 09 18.2**	**-0.1**
PB01				*i* S	**Sn**	**20 09 32.9**	**-1.1**
PB01				IAML		20 09 33.9	
	comp=N,5μm,0.2s						
PB02	**IPOC Station P**	**1.04**	**267**	⇓*i* P	**Pn**	**20 09 21.6**	**+0.4**
PB02				*e*S	**Sn**	**20 09 38.6**	**-0.5**
PB02				IAML		20 09 40.3	
	comp=E,6μm,0.2s						
PB07	**IPOC Station P**	**1.12**	**246**	⇓*i* P	**Pn**	**20 09 22.5**	**+0.5**
PB07				*i* S	**Sn**	**20 09 40.1**	**-0.5**
PB07				IAML		20 09 40.6	
	comp=N,4μm,0.2s						
PB08	**IPOC Station P**	**1.18**	**343**	*i* P	**Pn**	**20 09 23.4**	**+0.5**
PB08				*i* S	**Sn**	**20 09 42.0**	**0.0**
PB08				IAML		20 09 44.5	
	comp=N,935nm,0.3s						
LVC	**Limon Verde**	**1.34**	**185**	P	**Pn**	**20 09 24.8**	**+0.4**
	comp=N,68nm,0.3s,baz=16,slow=10,SNR=689						
LVC				S	**Sn**	**20 09 45.0**	**0.0**
	comp=N,41nm,0.3s,baz=73,slow=19,SNR=33						
LVC	**Limon Verde**	**1.34**	**185**	⇓*i* P	**Pn**	**20 09 25.0**	**+0.5**
LVC				*i* S	**Sn**	**20 09 44.8**	**-0.2**
LVC	**Limon Verde**	**1.34**	**185**	*i* P	**Pn**	**20 09 25.0**	**+0.5**
LVC				IAML		20 09 50.2	
	comp=Z,175nm,0.5s						
PATCX	**Punta Patache**	**1.35**	**289**	⇓*i* P	**Pn**	**20 09 24.9**	**+0.6**
PATCX				*i* S	**Sn**	**20 09 45.2**	**+0.4**
PATCX				IAML		20 09 47.0	
	comp=E,4μm,0.5s						
TA01	**Diego Aracena**	**1.48**	**298**	⇓*i* P	**Pn**	**20 09 25.9**	**+0.2**
TA01				*i* S	**Sn**	**20 09 46.7**	**-0.3**
TA01				IAML		20 09 48.1	
	comp=E,3μm,0.3s						
PB06	**IPOC Station P**	**1.60**	**207**	⇑*i* P	**Pn**	**20 09 27.9**	**+0.7**
PB06				*i* S	**Sn**	**20 09 49.8**	**0.0**
PB06				IAML		20 09 50.6	
	comp=E,1μm,0.4s						
PB06	**IPOC Station P**	**1.60**	**207**	*i* P	**Pn**	**20 09 27.8**	**+0.7**
PB06				*i* Sg	**Sn**	**20 09 49.6**	**-0.2**
PB04	**IPOC Station P**	**1.65**	**230**	⇓*i* P	**Pn**	**20 09 28.1**	**+0.4**
PB04				*i* S	**Sn**	**20 09 50.3**	**-0.4**
PB04				IAML		20 09 52.4	
	comp=N,2μm,0.2s						
PB11	**IPOC Station P**	**1.71**	**331**	⇓*i* P	**Pn**	**20 09 28.4**	**0.0**
PB11				*i* S	**Sn**	**20 09 51.6**	**-0.3**
PB11				IAML		20 09 53.1	
	comp=N,2μm,0.2s						
MNMC	**Minye Minye**	**2.26**	**340**	*i* P	**Pn**	**20 09 36.2**	**+1.0**
MNMC				*i* S	**Sn**	**20 10 04.0**	**0.0**
PB10	**IPOC Station P**	**2.77**	**216**	*i* P	**Pn**	**20 09 40.7**	**-0.6**
PB10				*i* Sg	**Sn**	**20 10 13.1**	**-1.9**
PB10				IAML		20 10 17.2	
	comp=Z,121nm,0.3s						
YJA	**Yavi**	**3.17**	**107**	*i* P	**Pn**	**20 09 48.4**	**+1.5**
PB14	**IPOC Station P**	**3.66**	**204**	*i* P	**Pn**	**20 09 52.4**	**-0.7**
PB14				IAML		20 10 38.1	
	comp=Z,84nm,0.3s						
AZAP	**Zapla**	**4.52**	**131**	*i* P	**Pn**	**20 10 04.8**	**+0.4**
AZAP				IAML		20 11 01.3	
	comp=Z,19nm,3.3s						
ASTB	**Santa Barbara**	**4.81**	**124**	*i* P	**Pn**	**20 10 08.5**	**+0.3**
ASTB				IAML		20 11 49.1	
	comp=Z,11nm,2.6s						
LPAZ	**La Paz**	**5.00**	**7**	P	**Pn**	**20 10 13.8**	**+2.6**
	comp=Z,1.7nm,0.3s,baz=196,slow=16,SNR=22						
LPAZ				S	**Sn**	**20 11 04.7**	**-3.8**
	comp=Z,0.4nm,0.3s,baz=15,slow=4.9,SNR=1.8						
LPAZ	**La Paz**	**5.00**	**7**	*i* P	**Pn**	**20 10 14.2**	**+3.0**
GO03	**Copiap**	**6.43**	**192**	*i* P	**Pn**	**20 10 28.5**	**-1.4**
SIV	**San Ignacio**	**9.00**	**56**	P	**Pn**	**20 11 01.5**	**-3.0**
	comp=Z,2.1nm,0.3s,baz=245,slow=14,SNR=28						
CFA	**Coronel Fontan**	**10.30**	**177**	P	**Pn**	**20 11 20.0**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=335,slow=14,SNR=11						
PTGA	**Pitinga**	**22.16**	**24**	P	**P**	**20 13 42.2**	**-0.6**
	comp=Z,2.5nm,0.3s,baz=182,slow=8.8,SNR=5.2						
TORD	**Torodi Ar. Bea**	**77.17**	**70**	P	**P**	**20 20 37.2**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=252,slow=5.7,SNR=8.3						
YKA	**Yellowknife Ar**	**91.01**	**341**	P	**P**	**20 21 49.0**	**+2.8**
	comp=Z,0.3nm,0.5s,baz=132,slow=4.9,SNR=8.6						
MKAR	**Makanchi Array**	**145.38**	**36**	PKPbc	**PKiKP**	**20 28 22.7**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=327,slow=4.3,SNR=11						

DJA 23 20:19:45.2±0.6,4.˚S±6.˚×13.˚6E±.˚,h120km±34km,M4.0/11, mb4.3/6,MLv3.9/11,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRPI	**Serui, Papua**	**2.51**	**0**	P	Pn	20 20 25.1	-0.1
SMPI	**Sarmi**	**3.44**	**46**	P	Pn	20 20 38.3	+1.0
RKPI	**Ransiki, Papua**	**3.53**	**324**	P	Pn	20 20 38.4	-0.2
FAKI	**Fak Fak**	**4.25**	**290**	P	Pn	20 20 47.4	-0.7
GENI	**Genyem**	**4.31**	**96**	P	Pn	20 20 50.2	+1.3
JAY	**Jayapura**	**4.83**	**67**	P	Pn	20 20 53.9	-2.1
MMPI	**Merauke**	**5.77**	**135**	P	Pn	20 21 09.5	+1.0
	1.0nm247nm,1.2s						
SAUI	**Saumlaki**	**6.07**	**234**	P	Pn	20 21 12.4	-0.2
	2.3nm615nm,1.1s						
BNDI	**Bandanaira**	**6.32**	**269**	P	Pn	20 21 16.3	+0.3
	0.8nm239nm,1.1s						
MSAI	**Masohi**	**7.37**	**278**	P	Pn	20 21 30.3	+0.1

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*BJI **23** 20:25:52.0±0.0, 16.˚40S×174.˚70W,h186km, mB5.2/12, mb4.8/32*
*IDC **23** 20:25:57.9±0.5,16.˚28S×174.˚71W,h222km±3km,mb4.2/22, mb1 4.3/24,mb1mx4.2/30,mbtmp4.7/24, Error ellipse: s-maj=12.6km s-min=8.7km az=139.0*
*NEIC **23** 20:25:57.1±1.8, 16.˚31S±0.˚08×174.˚6W±0.˚1,h220km±6km, mb4.6/174, Error ellipse: s-maj=14.0km s-min=11.9km az=84.0*
*BGR **23** 20:26:01.5±0.0, 16.˚00S×174.˚40W,h235km*
ISC 23 20:25:57.3±0.4,16.˚31S±0.˚06×174.˚56W±0.˚05, h222km±4km,h223km:pP-P,n364,σ0s99/393,mb4.6/116, 18C-21D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.60**	**49**		**Pn**	**20 26 53.0**	**-2.2**
NIUE	**Niue**	**5.21**	**123**		**Pn**	**20 27 14.9**	**+0.1**
NIUE					**S**	**20 28 13.5**	**-2.7**
MSVF	**Nonsavu**	**7.21**	**258**		**Pn**	**20 27 42.1**	**+1.7**
KNTN	**Kanton**	**13.74**	**12**	Pn	**Pn**	**20 29 02.6**	**-0.6**
RAR	**Rarotonga**	**14.83**	**111**	P	**P**	**20 29 17.2**	**+0.3**
	0.9nm,0.3s,baz=285,slow=16,SNR=2.6						
RAR	**Rarotonga**	**14.83**	**111**	Pn	**Pn**	**20 29 15.5**	**-1.1**
DZM	**Mont Dzumac**	**18.82**	**249**	P	**P**	**20 29 59.3**	**-1.5**
	0.5nm,0.3s,baz=84,slow=16,SNR=6.9						
DZM	**Mont Dzumac**	**18.82**	**249**	P	**P**	**20 29 58.6**	**-2.2**
OUZ	**Omahuta**	**21.61**	**207**	P	**P**	**20 30 30.3**	**+0.5**
OUZ				IAmb	IAmb	20 30 41.1	
	comp=Z,47nm,1.3s						
URZ	**Urewera**	**23.06**	**197**	P	**P**	**20 30 42.3**	**-0.9**
	comp=Z,38nm,0.8s,baz=337,slow=5.8,SNR=8.8						
URZ	**Urewera**	**23.06**	**197**	P	**P**	**20 30 42.1**	**-1.1**
BKZ	**Black Stump Fm**	**24.08**	**197**	P	**P**	**20 30 50.8**	**-1.7**
BFZ	**Birch Farm**	**25.56**	**196**	P	**P**	**20 31 04.5**	**-1.4**
HNR	**Honiara**	**25.75**	**282**	P	**P**	**20 31 09.0**	**+1.2**
	comp=Z,50nm,0.6s,baz=135,slow=11,SNR=2.4						
MSWZ	**Moikau Station**	**26.52**	**197**	P	**P**	**20 31 14.0**	**-0.5**
PLWZ	**Palliser**	**26.66**	**197**	P	**P**	**20 31 14.7**	**-1.0**
QRZ	**Quartz Range**	**26.87**	**202**	P	**P**	**20 31 16.6**	**-0.9**
NNZ	**Nelson**	**26.92**	**200**	P	**P**	**20 31 16.9**	**-1.0**
TUWZ	**Tuamarina**	**26.93**	**199**	P	**P**	**20 31 16.6**	**-1.5**
THZ	**Tophouse**	**27.57**	**201**	P	**P**	**20 31 23.8**	**0.0**
KHZ	**Kahutara**	**27.95**	**199**	P	**P**	**20 31 25.1**	**-2.0**
LTZ	**Lake Taylor**	**28.69**	**200**	P	**P**	**20 31 30.9**	**-2.8**
OXZ	**Oxford**	**29.25**	**200**	P	**P**	**20 31 36.7**	**-1.9**
RPZ	**Rata Peaks**	**29.93**	**201**	P	**P**	**20 31 46.1**	**+1.5**
	comp=Z,13nm,0.7s,baz=75,slow=9.4,SNR=2.5						
FOZ	**Fox Glacier**	**30.22**	**203**	P	**P**	**20 31 45.2**	**-1.8**
ODZ	**Otahua Downs**	**31.24**	**200**	P	**P**	**20 31 53.9**	**-2.2**
ODZ				IAmb	IAmb	20 32 12.2	
	comp=Z,27nm,1.2s						
WKZ	**Wanaka**	**31.62**	**203**	P	**P**	**20 31 57.8**	**-1.7**
MLZ	**Mavora Lakes**	**32.41**	**203**	P	**P**	**20 32 05.8**	**-0.5**
WHZ	**Wether Hill Ro**	**32.92**	**203**	P	**P**	**20 32 10.7**	**-0.1**
EIDS	**Eidsvold**	**33.27**	**249**	P	**P**	**20 32 11.9**	**-2.1**
EIDS				IAmb	IAmb	20 32 13.3	
	comp=Z,13nm,0.9s						
ARMA	**Armidale**	**33.92**	**239**	P	**P**	**20 32 19.2**	**-0.5**
ARMA				IAmb	IAmb	20 32 20.2	
	comp=Z,12nm,0.9s						
CTA	**Charters Tower**	**37.35**	**258**	P	**P**	**20 32 47.9**	**-1.0**
	comp=Z,4.0nm,0.7s,baz=112,slow=10,SNR=5.1						
CTA				PcP	**PcP**	**20 35 04.2**	**+1.0**
	comp=Z,4.0nm,0.7s,baz=39,slow=16,SNR=3.7						
CTAO	**Charters Tower**	**37.35**	**258**	P	**P**	**20 32 47.5**	**-1.4**
CTAO				IAmb	IAmb	20 32 52.6	
	comp=Z,13nm,1.2s						
CAN	**Canberra**	**37.59**	**233**	P	**P**	**20 32 48.1**	**-2.7**
PMG	**Port Moresby**	**37.90**	**276**	P	**P**	**20 32 54.4**	**+0.9**
	baz=78,slow=2.6						
COEN	**Coen**	**40.81**	**267**	P	**P**	**20 33 17.2**	**-0.4**
COEN				IAmb	IAmb	20 33 19.5	
	comp=Z,27nm,1.1s						
TOO	**Toolangi**	**41.03**	**231**	P	**P**	**20 33 19.0**	**-0.1**
STKA	**Stephens Creek**	**42.62**	**240**	P	**P**	**20 33 31.5**	**-0.4**
	comp=Z,24nm,0.9s,baz=90,slow=9.0,SNR=41						
STKA				PcP	**PcP**	**20 35 21.3**	**+1.4**
	comp=Z,5.3nm,0.8s,baz=60,slow=5.5,SNR=3.7						
STKA	**Stephens Creek**	**42.62**	**240**	P	**P**	**20 33 31.5**	**-0.4**
JAY	**Jayapura**	**46.08**	**283**	P	**P**	**20 34 00.7**	**+1.1**
	comp=Z,8.2nm,0.9s						
BBOO	**Buckleboo**	**47.39**	**240**	P	**P**	**20 34 08.7**	**-0.8**
BBOO				IAmb	IAmb	20 34 09.7	
	comp=Z,32nm,1.1s						
WR0	**Warramunga Arr**	**48.36**	**258**	P	**P**	**20 34 15.4**	**-1.7**
WR0				PcP	**PcP**	**20 35 40.0**	**-0.1**
WB0	**Warramunga Arr**	**48.52**	**258**	P	**P**	**20 34 16.5**	**-1.8**
WB0				PcP	**PcP**	**20 35 41.1**	**+0.3**
WB2	**Warramunga Arr**	**48.54**	**258**	P	**P**	**20 34 16.7**	**-1.8**
WB2				PcP	**PcP**	**20 35 39.8**	**-1.1**
WRAB	**Tennant Creek**	**48.54**	**258**	P	**P**	**20 34 16.0**	**-2.5**
WRAB				PcP	**PcP**	**20 35 40.0**	**-0.8**
WRA	**Warramunga Arr**	**48.55**	**258**	P	**P**	**20 34 16.6**	**-1.9**
	comp=Z,1.4nm,0.4s,baz=91,slow=7.3,SNR=52						
WRA				pP	**pP**	**20 35 04.9**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=98,slow=6.3,SNR=1.2						
WRA				PcP	**PcP**	**20 35 41.2**	**+0.3**
	comp=Z,7.0nm,0.9s,baz=86,slow=4.0,SNR=13						
AS31	**Alice Springs**	**48.77**	**253**	P	**P**	**20 34 18.9**	**-1.3**
AS31				PcP	**PcP**	**20 35 40.7**	**-1.0**
ASAR	**Alice Springs**	**48.77**	**253**	P	**P**	**20 34 19.0**	**-1.2**
	comp=Z,11nm,0.6s,baz=88,slow=7.8,SNR=162						
ASAR				pP	**pP**	**20 35 06.6**	**-1.2**
	comp=Z,4.6nm,0.7s,baz=87,slow=8.7,SNR=2.4						
ASAR				PcP	**PcP**	**20 35 41.5**	**-0.2**
	comp=Z,5.5nm,0.8s,baz=92,slow=5.8,SNR=8.0						
ASAR				ScP	**ScP**	**20 39 17.5**	**+2.1**
	comp=Z,0.2nm,0.7s,baz=93,slow=3.8,SNR=3.5						
MTN	**Manton Dam**	**52.55**	**266**		**P**	**20 34 48.0**	**-0.5**
MTN				IAmb	IAmb	20 34 48.5	
	comp=Z,17nm,0.9s						
FORT	**Forrest**	**54.01**	**244**	P	**P**	**20 34 57.4**	**-1.5**
FORT				IAmb	IAmb	20 35 25.3	
	comp=Z,24nm,1.0s						
KNRA	**Kununurra**	**54.33**	**262**	P	**P**	**20 34 59.9**	**-1.4**
KNRA				IAmb	IAmb	20 35 01.6	
	comp=Z,14nm,0.9s						
FITZ	**Fitzroy Crossi**	**56.93**	**259**	P	**P**	**20 35 19.6**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=87,slow=4.2,SNR=20						
FITZ	**Fitzroy Crossi**	**56.93**	**259**	P	**P**	**20 35 19.6**	**-0.3**
FITZ				IAmb	IAmb	20 35 22.6	
	comp=Z,16nm,1.4s						
LBMI	**Labuha**	**59.15**	**279**	P	**P**	**20 35 37.4**	**+2.1**
	comp=Z,18nm,1.2s						
SOEI	**Soe**	**59.77**	**268**	P	**P**	**20 35 41.2**	**+1.5**
SANI	**Sanana**	**60.15**	**277**	P	**P**	**20 35 42.4**	**+0.3**
	comp=Z,650nmcomp=Z,16nm,1.4s						
PSA00	**Pilbara Seismi**	**61.88**	**254**	P	**P**	**20 35 53.0**	**-0.6**
VNDA	**Vanda**	**62.37**	**186**	P	**P**	**20 35 57.5**	**+1.7**
	comp=Z,7.7nm,0.8s,baz=2.2,slow=6.5,SNR=48						
VNDA				PcP	**PcP**	**20 36 34.5**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=92,slow=2.1,SNR=3.6						
VNDA	**Vanda**	**62.37**	**186**	P	**P**	**20 35 57.6**	**+1.7**
VNDA				IAmb	IAmb	20 35 58.9	
	comp=Z,10nm,0.8s						
EDFI	**Ende, Flores**	**62.48**	**269**	P	**P**	**20 35 58.7**	**+0.9**
	comp=Z,15nm,1.5s						
LUWI	**Luwuk**	**63.52**	**277**	P	**P**	**20 36 07.4**	**+2.9**
LUWI	**Luwuk**	**63.52**	**277**	P	**P**	**20 36 04.2**	**-0.4**
KCP	**Kidapawan**	**64.04**	**286**	⇓*i* P	**P**	**20 36 07.9**	**-0.1**
APSI	**Ampana**	**64.63**	**277**	P	**P**	**20 36 15.3**	**+3.5**
MPSI	**Mapaga**	**66.67**	**278**	P	**P**	**20 36 25.5**	**+0.7**
	comp=Z,372nmcomp=Z,18nm,1.0s						
ATKA	**Atka Island**	**68.22**	**0**	P	**P**	**20 36 32.8**	**-0.8**
MJAR	**Matsushiro Arr**	**68.92**	**321**	P	**P**	**20 36 37.7**	**-0.7**
	comp=Z,3.9nm,0.9s,baz=146,slow=6.1,SNR=11						
MAT	**Matsushiro**	**68.92**	**321**	P	**P**	**20 36 38.1**	**-0.3**
MJB9	**Matsu-Tunnel**	**68.92**	**321**	P	**P**	**20 36 37.9**	**-0.5**
CASY	**Casey**	**69.12**	**205**	P	**P**	**20 36 38.8**	**-0.3**
CASY				IAmb	IAmb	20 36 40.5	
	comp=Z,15nm,0.9s						
JAGI	**Jajag, Banyuwa**	**69.78**	**267**	P	**P**	**20 36 42.1**	**-2.0**
JNU	**Nakatsue**	**71.61**	**314**	P	**P**	**20 36 54.5**	**-0.2**
PETK	**Petropavlovsk-**	**73.16**	**343**	P	**P**	**20 37 03.2**	**-0.2**
	comp=Z,7.4nm,0.7s,baz=117,slow=9.1,SNR=18						
QSPA	**South Pole Qui**	**73.74**	**180**	P	**P**	**20 37 07.8**	**+0.9**
ISA	**Isabella, Lake**	**74.08**	**45**	P	**P**	**20 37 09.6**	**+0.3**
ISA				IAmb	IAmb	20 37 12.2	
	comp=Z,9.1nm,1.2s						
AFDM	**Forest Hills D**	**74.35**	**41**	P	**P**	**20 37 11.5**	**+0.8**
TPUB	**Ta-pu**	**74.57**	**300**	P	**P**	**20 37

	comp=Z,13nm,0.8s						
WUAZ	Wupatki	78.93	48	P	P	20 37 37.8	+1.2
WUAZ				IAmb	IAmb	20 37 39.9	
	comp=Z,21nm,1.5s						
ELK	Elko	79.00	42	P	P	20 37 37.4	+0.5
PKCU	Pink Cliffs	79.23	46	P	P	20 37 39.5	+1.2
MTPU	Mount Pierson	79.61	45	P	P	20 37 42.3	+1.8
MTPU				pP	pP	20 38 32.8	-0.3
RC01	Rabbit Creek A	79.65	12	P	P	20 37 39.4	-0.3
RC01				IAmb	IAmb	20 37 40.7	
	comp=Z,17nm,1.1s						
TCRU	Three Creeks R	79.72	45	P	P	20 37 41.9	+1.0
NJ2	Nanjing	79.82	308	*e*P	P	20 37 40.8	-0.4
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
MSU	Marysvale	79.86	45	P	P	20 37 41.5	-0.1
MSU				pP	pP	20 38 34.9	+0.6
GLI	Glacier Island	80.02	13	P	P	20 37 41.1	-0.5
BMO	Blue Mountains	80.02	37	P	P	20 37 42.5	+0.3
121A	Cookes Peak, D	80.19	52	P	P	20 37 44.9	+1.4
121A				IAmb	IAmb	20 37 46.3	
	comp=Z,10nm,1.0s						
PMR	Palmer	80.23	12	P	P	20 37 42.1	-0.6
PMR				IAmb	IAmb	20 37 43.8	
	comp=Z,32nm,1.5s						
TTA	Tatalina	80.31	8	P	P	20 37 43.9	+0.7
GHO	Glory Hole Cre	80.44	12	P	P	20 37 43.3	-0.7
GHO				IAmb	IAmb	20 37 45.0	
	comp=Z,11nm,0.6s						
WAX	Waxell Ridge	80.64	15	P	P	20 37 45.5	+0.5
WAX				IAmb	IAmb	20 37 46.7	
	comp=Z,21nm,1.0s						
MA2	Magadan	80.69	343	P	P	20 37 44.1	-1.1
MA2				IAmb	IAmb	20 37 45.8	
	comp=Z,11nm,0.9s						
F10A	Beach Ranch, E	80.71	37	P	P	20 37 46.1	+0.3
F10A				IAmb	IAmb	20 37 47.1	
	comp=Z,7.3nm,1.0s						
SCM	Sheep Creek Mo	80.82	13	P	P	20 37 46.0	0.0
SCM				IAmb	IAmb	20 37 47.0	
	comp=Z,17nm,0.9s						
YAH	Yahtse	80.86	16	P	P	20 37 46.6	+0.3
TMUT	Trail Mountain	80.90	45	P	P	20 37 48.2	+0.9
CN2	Changchun	81.07	321	*e*P	P	20 37 48.4	+0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DLV	T Lat	81.09	285	P	P	20 37 47.5	-1.1
VRDI	Verde Repeater	81.17	15	P	P	20 37 47.9	-0.1
VRDI				IAmb	IAmb	20 37 49.2	
	comp=Z,17nm,1.1s						
GLB	Gilahina Butte	81.27	14	P	P	20 37 47.9	-0.4
GLB				IAmb	IAmb	20 37 49.5	
	comp=Z,10nm,0.9s						
SRU	San Rafael Swe	81.27	45	P	P	20 37 49.7	+0.7
BALM	Baldy	81.28	15	P	P	20 37 48.5	0.0
BALM				IAmb	IAmb	20 37 49.7	
	comp=Z,13nm,1.1s						
MCARA	McCarthy VSAT	81.41	15	P	P	20 37 48.9	-0.1
MCARA				IAmb	IAmb	20 37 50.4	
	comp=Z,18nm,1.2s						
BARN	Barnard Glacie	81.47	15	P	P	20 37 49.5	-0.1
BARN				IAmb	IAmb	20 37 51.0	
	comp=Z,16nm,1.1s						
CTGM	Chitina Glacie	81.47	16	P	P	20 37 49.0	-0.6
CTGM				IAmb	IAmb	20 37 50.9	
	comp=Z,8.4nm,0.9s						
TPRI	Tanjung Pinang	81.53	273	P	P	20 37 52.3	+1.6
	comp=Z,12µmcomp=Z,25nm,1.2s						
MNTX	Cornudas Mount	81.66	54	P	P	20 37 51.6	+0.5
MNTX					pP	20 38 48.7	+4.6
TCUT	Toone Canyon	81.67	43	P	P	20 37 51.0	-0.2
KTH	Kantishna Hill	81.70	10	P	P	20 37 50.1	-0.5
KTH				IAmb	IAmb	20 37 52.4	
	comp=Z,9.7nm,1.1s						
TRF	Thorofare Moun	81.72	11	P	P	20 37 50.0	-0.7
TRF				IAmb	IAmb	20 37 53.0	
	comp=Z,12nm,1.0s						
BNM	Barren Site	81.77	51	P	P	20 37 53.2	+1.4
DHY	Denali Highway	81.93	12	P	P	20 37 51.4	-0.4
PV09	Paradox Valley	81.94	46	P	P	20 37 53.9	+1.2
RND	Reindeer	81.94	11	P	P	20 37 51.6	-0.2
RND				IAmb	IAmb	20 37 53.5	
	comp=Z,17nm,1.0s						
PV20	West Nyswonger	81.98	46	P	P	20 37 53.0	+0.2
PV20				IAmb	IAmb	20 37 54.8	
	comp=Z,8.5nm,0.9s						
PV13	Radium Mtn., P	81.99	47	P	P	20 37 52.3	-0.6
PV13				IAmb	IAmb	20 37 54.9	
	comp=Z,11nm,1.2s						
PV23	Carpenter Ridg	82.00	46	P	P	20 37 53.4	+0.4
PV23				IAmb	IAmb	20 37 55.1	
	comp=Z,12nm,0.9s						
PV04	Paradox Valley	82.04	46	P	P	20 37 53.2	+0.1
PV04				IAmb	IAmb	20 37 55.2	
	comp=Z,9.7nm,0.9s						
TX31	Lajitas Ar. Si	82.04	56	P	P	20 37 54.1	+0.9
TX31				IAmb	IAmb	20 37 56.0	
	comp=Z,13nm,1.1s						
TX32	Lajitas Array	82.04	56	P	P	20 37 53.9	+0.7
TXAR	Lajitas Array	82.05	56	P	P	20 37 54.7	+1.5
	comp=Z,2.6nm,1.0s,baz=232,slow=6.1,SNR=12						
TXAR				pP	pP	20 38 49.1	+2.8
	comp=Z,3.1nm,1.1s,baz=234,slow=5.7,SNR=4.9						
PV12	Saucer Basin,	82.08	46	P	P	20 37 53.4	+0.1
PV12				IAmb	IAmb	20 37 55.4	
	comp=Z,9.6nm,0.9s						
MCK	McKinley	82.22	11	P	P	20 37 52.9	-0.3
MCK				IAmb	IAmb	20 37 54.1	
	comp=Z,18nm,1.0s						
ANMO	Albuquerque	82.24	50	P	P	20 37 55.1	+0.9
ANMO				IAmb	IAmb	20 37 56.5	
	comp=Z,11nm,1.1s						
PV07	Paradox Valley	82.24	46	P	P	20 37 54.5	+0.4
PV07				IAmb	IAmb	20 37 56.1	
	comp=Z,6.1nm,0.8s						
HYT	Haines Junctio	82.40	17	P	P	20 37 54.7	+0.3
MYKOM	Kota Tinggi	82.43	274	P	P	20 37 54.9	-0.5
MYKOM				IAmb	IAmb	20 37 57.2	
	comp=Z,19nm,1.1s						
MENT	Mentasta	82.59	14	P	P	20 37 55.3	+0.1
MENT				IAmb	IAmb	20 37 56.7	
	comp=Z,12nm,1.1s						
RDMU	Red Mountain	82.62	44	P	P	20 37 56.6	+0.5
MCMT	McKenzie Canyo	82.66	39	P	P	20 37 56.7	+0.5
TIA	Tai'an	82.94	311	P	P	20 37 58.5	+0.9
TIA				pmax	pmax		
	comp=Z,11nm,1.0s						
DLBC	Dease Lake	82.95	22	P	P	20 37 58.0	+0.8
DLBC				IAmb	IAmb	20 37 59.2	
	comp=Z,17nm,1.4s						
NEA	Nenana	82.97	11	P	P	20 37 56.6	-0.4
NEA				IAmb	IAmb	20 37 58.9	
	comp=Z,7.3nm,1.0s						
WHY	Whitehorse	83.05	18	P	P	20 37 57.9	+0.2
RIDG	Independent Ri	83.05	13	P	P	20 37 57.0	-0.6
RIDG				IAmb	IAmb	20 37 58.6	
	comp=Z,15nm,1.2s						
WRH	Wood River Hil	83.05	11	P	P	20 37 57.1	-0.3
DOT	Dot Lake	83.14	13	P	P	20 37 57.5	-0.4
DOT				IAmb	IAmb	20 37 59.1	
	comp=Z,11nm,1.0s						
REDW	Red Top Meadow	83.15	41	P	P	20 37 59.3	+0.5
REDW				IAmb	IAmb	20 38 00.7	
	comp=Z,12nm,1.1s						
TPAW	Teton Pass	83.15	41	P	P	20 37 59.1	+0.3
TPAW				IAmb	IAmb	20 38 00.8	
	comp=Z,6.3nm,0.8s						
FXWY	Fox Creek	83.18	41	P	P	20 37 59.4	+0.5
HDA	Harding Lake	83.21	12	P	P	20 37 57.9	-0.4
HDA				IAmb	IAmb	20 37 59.1	
	comp=Z,26nm,1.3s						
CCB	Clear Creek Bu	83.26	11	P	P	20 37 57.8	-0.7
IMW	Indian Meadow	83.36	41	P	P	20 37 59.8	-0.1
IMW				IAmb	IAmb	20 38 01.9	
	comp=Z,7.2nm,0.8s						
IMW				pP	pP	20 38 53.2	+0.2
SCRK	Sand Creek	83.44	13	P	P	20 37 59.1	-0.5
SCRK				IAmb	IAmb	20 38 00.9	
	comp=Z,14nm,1.3s						
MDM	Murphy Dome	83.47	11	P	P	20 37 59.1	-0.5
MDM				IAmb	IAmb	20 38 00.4	
	comp=Z,27nm,1.2s						
IL31		83.55	12	P	P	20 37 59.4	-0.6
IL31				IAmb	IAmb	20 38 01.6	
	comp=Z,24nm,1.3s						
ILAR	Eielson Array	83.55	12	P	P	20 37 59.4	-0.6
	comp=Z,3.9nm,0.5s,baz=223,slow=5.5,SNR=47						
ILAR				pP	pwP	20 38 55.3	-0.8
	comp=Z,0.2nm,0.5s,baz=219,slow=5.6,SNR=1.2						
FLWY	Flagg Ranch	83.61	41	P	P	20 38 02.1	+1.1
FLWY				IAmb	IAmb	20 38 03.4	
	comp=Z,14nm,1.1s						
FLWY					pwP	20 38 55.9	-0.4
YHB	Horse Butte	83.63	40	P	P	20 38 01.6	+0.4
BW06	Boulder Array	83.69	42	P	P	20 38 01.6	+0.1
BW06				IAmb	IAmb	20 38 02.7	
	comp=Z,5.8nm,0.8s						
BW06				pP	pP	20 38 54.1	-0.6
PD31	Pinedale Array	83.69	42	P	P	20 38 01.3	-0.2
PDAR	Pinedale Array	83.69	42	P	P	20 38 01.9	+0.4
	comp=Z,5.9nm,0.8s,baz=204,slow=3.3,SNR=29						
PDAR				pP	pP	20 38 55.9	+1.2
	comp=Z,0.2nm,0.4s,baz=220,slow=6.8,SNR=1.5						
YHL	Hebgen Lake	83.69	40	P	P	20 38 02.4	+0.8
YHL				pP	pP	20 38 54.4	-0.2
H17A	Grant Village	83.84	40	P	P	20 38 03.7	+1.4
H17A				pP	pP	20 38 56.4	+1.0
YHH	Holmes Hill	83.86	40	P	P	20 38 03.5	+1.1
YHH				pP	pP	20 38 55.4	-0.1
SDCO	Great Sand Dun	84.15	48	P	P	20 38 04.3	+0.2
PRP	Porcupine Dome	84.48	12	P	P	20 38 04.5	-0.4
PRP				IAmb	IAmb	20 38 06.0	
	comp=Z,15nm,1.0s						
DAWY	Dawson	84.58	15	P	P	20 38 05.4	+0.2
DAWY				IAmb	IAmb	20 38 06.8	
	comp=Z,12nm,0.9s						
MSTX	Muleshoe	84.60	52	P	P	20 38 06.0	-0.1
RWWY	Rawlins	84.72	44		pwP	20 39 03.4	+3.3
EGAK	Eagle	84.76	14	P	P	20 38 05.5	-0.6
EGAK				IAmb	IAmb	20 38 07.5	
	comp=Z,10nm,0.9s						
PDSI	Padang	84.92	271	P	P	20 38 07.8	-0.3
RLMT	Red Lodge	85.01	40	P	P	20 38 08.4	+0.4
COLD	Coldfoot	85.21	9	P	P	20 38 08.9	+0.6
BJT	Baijiatuau	85.28	314	P	P	20 38 09.7	+0.5
BJT				IAmb	IAmb	20 38 11.3	
	comp=Z,25nm,1.2s						
BJI	Beijing	85.28	314	P	P	20 38 10.4	+1.2
BJI				pmax	pmax		
	comp=Z,17nm,1.0s						
IPM	Ipoh	85.89	276	P	P	20 38 12.6	-0.2
MNSI	Mandailing Nat	86.24	272	P	P	20 38 14.2	-0.4
ENH	Enshi	86.46	303	P	P	20 38 13.1	-2.2
KULM	Kulim	86.48	277	P	P	20 38 14.7	-1.0
KULM				IAmb	IAmb	20 38 18.0	
	comp=Z,22nm,1.3s						
ABTX	Abilene, Hawle	86.50	55	P	P	20 38 15.8	+0.4
ABTX				IAmb	IAmb	20 38 17.2	
	comp=Z,14nm,1.0s						
MAW	Mawson	86.58	199	P	P	20 38 15.7	+0.5
	comp=Z,7.8nm,0.7s,baz=144,slow=4.9,SNR=14						
MAW	Mawson	86.58	199	P	P	20 38 15.6	+0.5
EPYK	Eagle Plains	87.12	14	P	P	20 38 17.6	-0.1
RPSI	Rantau Prapat	87.40	274	P	P	20 38 19.0	-1.2
SLVN	Son La	88.23	293	P	P	20 38 24.1	+0.2
SLVN				IAmb	IAmb	20 38 26.8	
	comp=Z,14nm,1.1s						
XAN	Xi'an	88.25	306	P	P	20 38 24.6	+0.8
XAN				pmax	pmax		
	comp=Z,13nm,1.2s						
XAN	Xi'an	88.25	306	P	P	20 38 24.0	+0.2
GSI	Gunungsitoli	88.31	272	P	P	20 38 26.2	+1.8
	comp=Z,243nm,1.5s						
GSI	Gunungsitoli	88.31	272	P	P	20 38 24.6	+0.2
KCSI	Kotacane, Aceh	88.74	274	P	P	20 38 27.8	+1.3
	comp=Z,20nm,0.5s						
HHC	Hu-ho-hao-te	88.82	313	*e*P	P	20 38 27.0	+0.6
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,75nm,5.6s						
INK	Inuvik	89.41	14	P	P	20 38 27.8	-0.5
PBKT	Sadao Pong	89.44	287	P	P	20 38 30.0	+0.4
PBKT				IAmb	IAmb	20 38 33.1	
	comp=Z,18nm,1.4s						
KMI	Kunming	90.41	296	P	P	20 38 35.6	+1.3
KMI				pmax	pmax		
	comp=Z,17nm,1.0s						
CD2	Chengdu	91.33	302	P	P	20 38 37.8	-0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YKA	Yellowknife Ar	91.37	24	P	P	20 38 37.6	+0.1
	comp=Z,2.6nm,0.9s,baz=230,slow=4.1,SNR=31						
YKA				pP	pP	20 39 32.4	+1.3
	comp=Z,0.2nm,0.5s,baz=249,slow=3.0,SNR=2.1						
MT01	Popeta	91.67	126	P	P	20 38 39.1	-0.6
CM31	Chiang Mai Arr	91.84	289	P	P	20 38 41.1	+0.4
CMAR	Chiang Mai Arr	91.84	289	P	P	20 38 41.9	+1.1
	comp=Z,7.7nm,0.9s,baz=93,slow=2.8,SNR=37						
CHTO	Chiang Mai	91.94	289	P	P	20 38 41.2	0.0
CHTO				IAmb	IAmb	20 38 43.5	
	comp=Z,11nm,0.9s						
VNA3	Neumayer Olymp	92.06	175	P	P	20 38 41.4	+0.7
SNAA	Sanae	92.06	177	P	P	20 38 41.5	+0.7
SNAA	Sanae	92.06	177	P	P	20 38 40.6	-0.2
SNAA				IAmb	IAmb	20 38 42.3	
	comp=Z,12nm,1.2s						
VNA2	Neumayer--Watz	92.54	176	P	P	20 38 44.4	+1.5
	baz=175,slow=3.0						
VNA1	Neumayer--Stat	92.74	175	P	P	20 38 45.1	+1.2
LZH	Lanzhou	92.86	307	*e*P	P	20 38 48.1	+2.8
LZH				pP	pP	20 39 30.8	-8.2
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
MGMO	Mountain Grove	93.72	53	P	P	20 38 48.5	-0.5
MGMO				IAmb	IAmb	20 38 50.3	
	comp=Z,6.9nm,0.9s						
SONM	Songino Array	94.77	318	P	P	20 38 53.7	0.0
	comp=Z,0.2nm,0.4s,baz=138,slow=38,SNR=3.0						
SONM				PP	PP	20 42 43.0	-2.7
	comp=Z,0.2nm,0.4s,baz=129,slow=25,SNR=1.9						
TIXI	Tiksi	95.57	345	P	P	20 38 55.3	-1.3
TIXI				IAmb	IAmb	20 38 57.4	
	comp=Z,3.6nm,1.1s						
MKAR	Makanchi Array	110.66	314	PKiKP	PKiKP	20 44 02.6	-0.9
	comp=Z,0.7nm,0.7s,baz=184,slow=1.0,SNR=9.8						
MKAR				PP	PP	20 44 46.6	+2.7
	comp=Z,0.8nm,1.1s,baz=72,slow=12,SNR=3.6						
ARCES	ARCESS Array B	125.34	351	PKP	PKPdf	20 44 31.0	-0.1
	comp=Z,4.9nm,0.7s,baz=4.6,slow=1.5,SNR=20						
FINES	FINESS Array B	132.57	347	PKP	PKPdf	20 44 45.4	+0.4
	comp=Z,1.6nm,0.5s,baz=26,slow=3.6,SNR=17						
NOA	NORSAR Array B	135.13	356	PKP	PKiKP	20 44 51.3	-0.1
	comp=Z,1.4nm,0.9s,baz=13,slow=4.1,SNR=3.5						
AKASG	Malin Array Be	140.73	336	PKP	PKPdf	20 44 59.6	-0.8
	comp=Z,0.6nm,0.5s,baz=44,slow=2.6,SNR=6.4						
SORM	Soroca	143.10	334	⇑P	PKPbc	20 45 01.9	-0.3
DIKM	Dikmen	144.01	321	⇓P	PKPbc	20 45 05.8	+0.7
KMBO	Kilima Mbogo	144.13	244	PKP	PKPdf	20 45 08.8	+0.9
	comp=Z,22nm,0.9s,baz=55,slow=3.6,SNR=32						
CLZ	Clausthal	144.33	355	*e*PKPbc	PKPbc	20 45 05.8	+0.1
	baz=9.7,slow=3.0						
KSP	Ksiaz	144.46	348	*e*PKP	PKPbc	20 45 06.2	+0.1
VASR	Vaslui	144.50	333	⇑P	PKPab	20 45 06.4	+0.2
CLL	Collm	144.56	352	⇓*i*PKPdf	PKPdf	20 45 07.0	-0.1
	comp=Z,15nm,0.9s						
CLL				*i* PKiKP	PKiKP	20 45 11.2	+0.3
CLL	Collm	144.56	352	*e*PKPbc	PKPdf	20 45 07.1	0.0
	baz=9.7,slow=3.0						
BZK	Bozkurt	144.58	322	⇓P	PKPdf	20 45 07.3	-0.1
GTTG	Gottingen	144.66	355	*e*PKPbc	PKPbc	20 45 07.0	+0.3
	baz=9.7,slow=3.0						
OSTC	Ostas	144.75	348	*e*PKP	PKPdf	20 45 07.7	+0.1
CHVC	Chvalec	144.75	348	*e*PKP	PKPdf	20 45 07.6	0.0
BURAR	Bucovina Array	144.77	337	⇓P	PKPab	20 45 07.4	+0.1
NEUB	Neuenburg	144.81	353	*e*PKPbc	PKPbc	20 45 07.2	+0.1
	baz=9.7,slow=3.0						
NIE	Niedzica	144.83	343	*e*PKP	PKPdf	20 45 07.9	+0.2
UPC	Upice	144.84	348	*e*PKP	PKPdf	20 45 07.7	0.0
BRG	Berggiesshubel	144.85	351	*e*PKPbc	PKPbc	20 45 07.4	+0.1
	baz=9.7,slow=3.0						
FBE	Freiberg	144.89	351	*e*PKPbc	PKPdf	20 45 07.9	+0.1
	baz=9.7,slow=3.0						
BUG	Bochum--Univer	144.92	358	*e*PKPbc	PKPbc	20 45 07.6	+0.1
	baz=9.7,slow=3.0						
DPC	Dobruska-Polom	144.92	348	*e*PKP	PKPdf	20 45 08.0	+0.1
DPC				*e*x	x	20 46 08.0	
CRVS	Cervenica-Dubn	144.96	342	*e*PKP	PKPdf	20 45 08.6	+0.7
BIZ	Bicaz	144.97	335	⇑P	PKPab	20 45 08.4	+0.4
OKC	Ostrava-Krasne	145.00	346	*e*PKP	PKPab	20 45 08.3	+0.3
VARL	Varlezi	145.05	332	⇑P	PKPab	20 45 08.4	+0.2
PVCC	Panska Ves	145.08	350	*e*PKP	PKPab	20 45 08.5	+0.3
KRLC	Kraliky	145.09	347	*e*PKP	PKPab	20 45 08.5	+0.1
TESR	Tescani	145.09	334	⇑P	PKPab	20 45 08.6	+0.2
GHRR		145.12	333	⇑P	PKPab	20 45 09.3	+0.7
MORC	Moravsky Berou	145.20	346	*e*PKP	PKPbc	20 45 08.7	+0.2
MORC	Moravsky Berou	145.20	346	⇓P	PKPab	20 45 09.0	+0.2
TRPA	Tarpa	145.29	340	⇓P	PKPbc	20 45 08.9	+0.2
BMR	Baia Mare	145.35	338	⇑P	PKPab	20 45 09.6	+0.2
UBBA	Unterbreizbach	145.38	355	*e*PKPbc	PKPab	20 45 09.2	0.0
	baz=9.7,slow=3.0						
MOX	Moxa	145.39	353	*e*PKPbc	PKPbc	20 45 09.3	+0.3
	baz=9.7,slow=3.0						
JURR	Jurilovca	145.43	330	⇓P	PKPbc	20 45 09.1	-0.1
CFR	Carcaliu	145.47	331	⇑P	PKPbc	20 45 09.7	+0.3
PLN	Plauen	145.48	352	*e*PKPbc	PKPbc	20 45 09.6	+0.3
	baz=9.7,slow=3.0						
ODBI	Odobesti	145.51	333	⇓P	PKPab	20 45 11.0	+1.0
TANN	Tannenbergstha	145.51	352	*e*PKPbc	PKPbc	20 45 09.8	+0.3
	baz=9.7,slow=3.0						
ARCR	ARCALIA	145.54	337	⇑P	PKPab	20 45 10.1	0.0
VRI	Vrincioaia	145.57	333	⇑P	PKPbc	20 45 09.9	+0.2
GUNZ	Gunzen	145.58	352	*e*PKPbc	PKPab	20 45 10.2	0.0
	baz=9.7,slow=3.0						
TOPG	Topolog	145.59	331	⇓P	PKPab	20 45 10.5	+0.1
BEBN	Eben Emael	145.60	360	PKPdf	PKPbc	20 45 09.7	+0.1
PRU	Pruhonice	145.60	350	*e*PKP	PKPbc	20 45 09.9	+0.2
PLOR	Plostina	145.62	333	⇓P	PKPbc	20 45 10.1	+0.2
WERN	Wernitzgruen	145.65	352	*e*PKPbc	PKPab	20 45 10.6	+0.1
	baz=9.7,slow=3.0						
NKC	Novy Kostel	145.69	352	*e*PKP	PKPab	20 45 10.5	-0.1
MEM	Membach	145.78	359	PKPdf	PKPbc	20 45 10.0	-0.1
BSTI	Sart Tilman	145.81	360	PKPdf	PKPbc	20 45 10.6	+0.4
AHRW	Bad Neuenahr-A	145.83	358	*e*PKPbc	PKPab	20 45 11.2	+0.1
	baz=9.7,slow=3.0						
BISRR	Bisoca	145.83	333	⇑P	PKPab	20 45 12.2	+0.8
VRAC	Vranov	145.85	347	*e*PKP	PKPbc	20 45 10.6	+0.1
VRAC				*e*		20 46 10.1	
VRAC	Vranov	145.85	347	⇓P	PKPab	20 45 11.0	-0.3
TIRR	Tirgusor	145.88	330	⇑P	PKPbc	20 45 11.0	+0.3
HARR	Harsova	145.94	331	⇓P	PKPbc	20 45 11.3	+0.5
BCLA	Clavier	145.97	0	PKPdf	PKPbc	20 45 10.7	-0.1
MANZ	Manzenberg	145.98	352	*e*PKPbc	PKPab	20 45 11.4	-0.3
	baz=9.7,slow=3.0						
PBCC	Pribram	145.99	350	*e*PKP	PKPbc	20 45 10.9	+0.1
TLBR	Topalu	145.99	331	⇑P	PKPab	20 45 11.9	0.0
BGES	Gesves	146.01	0	PKPdf	PKPbc	20 45 10.4	-0.5
JAVC	Velka Javorina	146.03	345	*e*PKP	PKPab	20 45 12.3	+0.3
BHOU	Houvegnez	146.04	359	PKPdf	PKPbc	20 45 11.3	+0.3
DOPR	Dopca	146.05	335	⇑P	PKPab	20 45 12.2	0.0
VYHS	Vyhne	146.07	344	*e*PKP	PKPbc	20 45 11.7	+0.6
TNS	Taunus Mts	146.08	357	*e*PKPbc	PKPab	20 45 12.1	0.0
	baz=9.7,slow=3.0						
BMRD	Maredsous	146.09	1	PKPdf	PKPab	20 45 11.7	-0.4
BRTR	Keskin Array B	146.13	319	PKPbc	PKPdf	20 45 11.0	+0.6
	comp=Z,21nm,1.1s,baz=132,slow=1.8,SNR=57						
BRTR				pPKPbc	pPKPab	20 46 09.1	+1.5
	comp=Z,0.4nm,0.4s,baz=306,slow=37,SNR=1.0						
KRUC	Moravsky	146.13	347	*e*PKP	PKPbc	20 45 11.3	0.0
KRUC				*e*		20 46 09.2	
ROTZ	Rotzenmuhle	146.18	352	*e*PKPbc	PKPab	20 45 12.1	-0.4
	baz=9.7,slow=3.0						
MLR	Muntele Rosu	146.20	334	⇑P	PKPbc	20 45 12.1	+0.4
MANR	Mangalia	146.27	329	⇑P	PKPab	20 45 12.7	-0.3
DOU	Dourbes	146.29	1	PKPdf	PKPbc	20 45 11.0	-0.6
PSZ	Piszkesteto	146.30	342	⇓P	PKPbc	20 45 12.2	+0.3
GRF	Grafenberg Arr	146.37	353	*e*PKPbc	PKPbc	20 45 12.6	+0.7
	baz=9.7,slow=3.0						
DRGR		146.39	338	⇓P	PKPbc	20 45 12.3	+0.1
SECR		146.51	333	⇑P	PKPbc	20 45 13.1	+0.6
ANTO	Ankara	146.57	320	⇓P	PKPbc	20 45 13.6	+0.7
MODS	Modra-Piesok	146.58	346	*e*PKP	PKPbc	20 45 12.2	-0.4
KHC	Kasperske Hory	146.60	350	*e*PKP	PKPbc	20 45 12.2	-0.5
KHC				*e*x	x	20 46 10.7	
WET	Wettzell	146.69	351	*e*PKPbc	PKPbc	20 45 13.5	+0.6
	baz=9.7,slow=3.0						
WET				*e*pPKPbc	pPKPab	20 46 12.7	+3.4
WLF	Walferdange	146.72	359	PKPdf	PKPbc	20 45 13.9	+0.9
WLF	Walferdange	146.72	359	*e*PKPbc	PKPab	20 45 14.1	-0.5
	baz=9.7,slow=3.0						
GEC2	GERESS Array S	146.85	350	*e*PKPbc	PKPbc	20 45 14.0	+0.5
	baz=9.7,slow=3.0						
GERES	GERESS Array B	146.85	350	PKPbc	PKPdf	20 45 12.3	+1.0
	comp=Z,7.6nm,1.0s,baz=45,slow=2.1,SNR=34						
GERES				pPKPbc	pPKPab	20 46 10.6	+0.7
	comp=Z,2.0nm,1.0s,baz=264,slow=1.3,SNR=2.0						
DEV	Deva	147.09	337	⇓P	PKPbc	20 45 14.7	+0.6
SIRR	Siria	147.21	339	⇑P	PKPbc	20 45 15.2	+0.8
CONA	Conrad Observa	147.32	347	*i* PKPab	PKPbc	20 45 15.4	+0.7
	comp=Z,29nm,1.5s,SNR=14						
MOA	Molln	147.72	349	*i* PKiKP	PKPbc	20 45 16.2	+0.5
	comp=Z,10nm,1.0s,SNR=6.5						
FUR	Furstenfeldbru	147.87	353	*e*PKPbc	PKPbc	20 45 16.7	+0.6
	baz=9.7,slow=3.0						
FUR				*e*pPKPbc	pPKPab	20 46 15.9	+2.1
BFO	Black Forest	147.98	356	*e*PKPbc	PKPbc	20 45 17.1	+0.6
	baz=9.7,slow=3.0						
ARSA	Arzberg	148.03	347	*e*PKiKP	PKPbc	20 45 16.8	+0.1
	comp=Z,11nm,1.1s						
RJOB	Jochberg	148.08	351	*e*PKPbc	PKPbc	20 45 17.2	+0.4
	baz=9.7,slow=3.0						
UBR	Ueberruh	148.48	354	*e*PKPbc	PKPbc	20 45 18.3	+0.5
	baz=9.7,slow=3.0						
RETA	Reutte	148.60	353	*i* PKiKP	PKPbc	20 45 18.5	+0.4
	comp=Z,13nm,1.5s						
KBA	Koelnbreinsper	148.62	350	*e*PKPbc	PKPbc	20 45 18.0	-0.3
	comp=Z,9.5nm,1.1s						
WATA	Walderalm	148.65	352	*i* PKiKP	PKPbc	20 45 18.2	-0.1
	comp=Z,21nm,1.3s,SNR=6.3						
SOKA	Soboth	148.68	347	*e*PKPbc	PKPbc	20 45 18.1	-0.3
	comp=Z,23nm,1.7s,SNR=11						
MOTA	Moosalm	148.70	353	*i* PKiKP	PKPbc	20 45 18.4	-0.1
	comp=Z,23nm,1.5s,SNR=6.1						
PERS	Pernice	148.71	347	*i* PKPbc	PKPbc	20 45 18.0	-0.3
WTTA	Wattenberg	148.71	352	*i* PKiKP	PKPbc	20 45 18.8	+0.3
	comp=Z,16nm,0.8s,SNR=7.6						
SQTA	Sankt Quirin	148.81	352	*i* PKiKP	PKPbc	20 45 19.0	+0.3
	comp=Z,18nm,1.2s,SNR=7.6						
DAVA	Damuels	148.89	354	*i* PKiKP	PKPbc	20 45 19.2	+0.3
	comp=Z,22nm,1.2s,SNR=5.1						
OBKA	Obir	148.94	348	*e*PKPbc	PKPbc	20 45 18.5	-0.5
	comp=Z,5.4nm,0.8s						
MYKA	Terra Mystica	149.00	349	*e*PKPbc	PKPbc	20 45 18.5	-0.7
	comp=Z,8.2nm,0.8s						
FETA	Feichten	149.06	353	*i* PKiKP	PKPbc	20 45 19.8	+0.4
	comp=Z,24nm,1.1s,SNR=9.3						
ABTA	Abfaltersbach	149.08	351	*i* PKPbc	PKPbc	20 45 19.1	-0.3
	comp=Z,16nm,1.0s,SNR=7.8						
LEF	Lefka	149.13	313	⇓P	PKPbc	20 45 19.8	0.0
LJU	Ljubljana	149.39	348	*i* PKPbc	PKPbc	20 45 20.0	0.0
VTS	Vitosha	149.67	333	⇓P	PKPbc	20 45 21.4	+0.4
BOJS	Bojanci	149.75	346	*i* PKPbc	PKPbc	20 45 21.4	+0.5
SKO	Skopje	150.96	335	*i* P	PKiKP	20 45 24.5	+0.1
SKO	Skopje	150.96	335	*i* P	PKiKP	20 45 24.5	+0.1
VAY	Valandovo	151.02	333	*i* P	PKPbc	20 45 23.8	-0.3
VAY	Valandovo	151.02	333	*i* P	PKPbc	20 45 23.8	-0.3
PDG	Podgorica	151.40	338	⇓P	PKPbc	20 45 24.8	0.0
OHR	Ohrid	151.94	335	*i* P	PKiKP	20 45 26.5	0.0
OHR	Ohrid	151.94	335	*i* P	PKiKP	20 45 26.5	0.0
MATE	Matera	153.85	340	⇓P	PKPbc	20 45 30.2	-0.1
ESDC	Sonseca Array	155.32	18	PKPbc	PKPbc	20 45 33.9	
	comp=Z,0.7nm,0.9s,baz=336,slow=3.3,SNR=4.4						
ESDC				PKPab	PKPab	20 45 49.7	-0.9
	comp=Z,2.2nm,0.9s,baz=330,slow=3.5,SNR=11						
TORD	Torodi Ar. Bea	175.21	130	PKP	PKPdf	20 45 40.2	-1.2
	comp=Z,3.3nm,1.0s,baz=90,slow=0.5,SNR=13						
TORD				pPKP	pPKPdf	20 46 39.3	+1.0
	comp=Z,0.6nm,1.0s,baz=174,slow=5.6,SNR=2.2						
TORD				PKPab	PKPab	20 47 19.8	+1.1
	comp=Z,1.5nm,0.9s,baz=241,slow=5.2,SNR=5.6						

*MOS **23** 20:49:21.8±1.1, 24°90N×97°86E, h16km, mb5.7/54, MS5.5/88, Error ellipse: s-maj=5.5km s-min=3.2km az=120.7*

*IDC **23** 20:49:22.0±0.3, 25°00N×97°96E, h0km, mb5.0/43, mb1 5.0/45, mb1mx5.0/47, mbtmp5.0/45, ML5.6/2, MS5.3/37, Ms1 5.3/37, ms1mx5.2/50, Error ellipse: s-maj=9.6km s-min=8.1km az=56.0*

*NEIC **23** 20:49:22.0±2.0, 24°97N±0°06×97°84E±0°06, h8km±1km, mb5.6/261, Ms_20 5.5/732, Mwb5.7/36, Mwc5.7/32, Mww5.8,*

Mwc5.8(GCMT),Error ellipse: s-maj=10.4km s-min=9.3km az=195.0

*BJI **23** 20:49:22.4±0.0,24°.98N×97°.83E,h12km,mB5.6/59, mb5.3/66,ML6.1/10,Ms5.9/92,Ms7 5.7/86*

*SOME **23** 20:49:24.0±0.0,24°.89N×98°.04E,h21km,mb5.8/10, Ms5.3/4*

*BGR **23** 20:49:24.7±0.0,24°.65N×97°.13E,h11km,mb6.0,Ms5.5*

*GCMT **23** 20:49:25.0±0.1,24°.96N±0°.01×97°.90E±0°.01,h20km, MW5.7/173,Moment Tensor Solution. s149,c287; s173,c464; Duration: 1s8 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.30±.04; $M_{\theta\theta}$-3.67±.04; $M_{\phi\phi}$3.98±.04; $M_{r\theta}$0.28±.08; $M_{\theta\phi}$2.95±.03; $M_{\phi r}$0.35±.08; Best double couple: $M_0$4.85000×10^{17} NP1:ϕ_s334.00000°,δ85.00000°, λ178.00000°. NP2:ϕ_s64.00000°,δ88.00000°,λ5.00000°. Principal axes: T 5.0190, Plg5.0000°, Azm289.0000°; N -0.3340, Plg85.0000°, Azm85.0000°; P -4.6810, Plg2.0000°, Azm199.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **23** 20:49:26,24°.97N×97°.91E,h19km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.36; $M_{\theta\theta}$-3.89; $M_{\phi\phi}$4.24; $M_{r\theta}$0.82; $M_{\theta\phi}$3.23; $M_{\phi r}$-0.07; Fault plane solution: $M_0$5.27000×10^{17} NP1:ϕ_s335.00000°, δ82.00000°,λ-175.00000°. NP2:ϕ_s244.00000°, δ85.00000°,λ-8.00000°. Principal axes: T 5.3764, Plg2.0000°, Azm289.0000°; N -0.2276, Plg80.0000°, Azm31.0000°; P -5.1489, Plg10.0000°, Azm199.0000°;*

*NEIC **23** 20:49:26.5,24°.94N×97°.85E,h15km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.06; $M_{\theta\theta}$-3.39; $M_{\phi\phi}$3.32; $M_{r\theta}$-0.21; $M_{\theta\phi}$1.78; $M_{\phi r}$-0.38; Fault plane solution: $M_0$3.82000×10^{17} NP1:ϕ_s148.83000°, δ84.34000°,λ176.59000°. NP2:ϕ_s239.16000°,δ86.61000°, λ5.67000°. Principal axes: T 3.8165, Plg6.0000°, Azm104.0000°; N 0.0166, Plg83.0000°, Azm270.0000°; P -3.8331, Plg2.0000°, Azm14.0000°;*

*NEIC **23** 20:49:31,24°.88N×97°.65E,h20km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.69; $M_{\theta\theta}$-4.12; $M_{\phi\phi}$4.80; $M_{r\theta}$-1.51; $M_{\theta\phi}$3.84; $M_{\phi r}$1.69; Fault plane solution: $M_0$6.33000×10^{17} NP1:ϕ_s64.00000°, δ69.00000°,λ-8.00000°. NP2:ϕ_s157.00000°,δ82.00000°, λ-159.00000°. Principal axes: T 6.3932, Plg9.0000°, Azm289.0000°; N -0.1198, Plg68.0000°, Azm176.0000°; P -6.2734, Plg20.0000°, Azm22.0000°;*

*NEIC **23** 20:49:35.8,24°.73N×97°.73E,h10km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.36; $M_{\theta\theta}$-2.93; $M_{\phi\phi}$3.29; $M_{r\theta}$0.71; $M_{\theta\phi}$2.39; $M_{\phi r}$-1.08; Fault plane solution: $M_0$4.14000×10^{17} NP1:ϕ_s334.53000°, δ86.06000°,λ-161.46000°. NP2:ϕ_s243.21000°, δ71.51000°,λ-4.15000°. Principal axes: T 4.2437, Plg10.0000°, Azm107.0000°; N -0.2155, Plg71.0000°, Azm346.0000°; P -4.0282, Plg16.0000°, Azm200.0000°;*

ISC 23 20:49:23.7±0.4**,24°.92N**±0°.03×**97°.91E**±0°.02**,h13**km±2km**, h14**km**:pP-P,n1409,**σ**1s98**/1311**,mb5.6**/341**,MS5.5**/473**, 58C-38D,Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOHI	KOHIMA	3.53	284	ex	Pn	20 50 20.8	+2.4
KMI	Kunming	4.39	86	Pn	Pn	20 50 32.1	+1.9
KMI				Pg	Pb	20 50 43.3	+2.5
KMI				Sg	Sg	20 51 46.8	+2.1
KMI				smax	smax		
	comp=N,15µm,1.3s						
KMI				smax	smax		
	comp=E,7µm,1.2s						
KMI				LR	LR		
	comp=N,60µm,4.3s						
KMI				LR	LR		
	comp=E,87µm,7.2s						
KMI				LR	LR		
	comp=Z,75µm,7.5s						
KMI	Kunming	4.39	86	P	Pn	20 50 31.9	+1.7
KMI	Kunming	4.39	86		Pn	20 50 31.9	+1.7
CRAI	Chiangrai	5.19	153	P	Pn	20 50 41.9	+0.8
SHL	Shillong	5.49	278	eP	Pn	20 50 44.4	-1.0
SHL				ex	x	20 51 59.7	
SHL				ex	x	20 52 01.0	
SHL	Shillong	5.49	278	P	Pn	20 50 44.7	-0.7
	SNR=104						
SHL	Shillong	5.49	278	P	Pn	20 50 43.9	-1.4
SHL	Shillong	5.49	278		Pn	20 50 43.9	-1.4
PAYA	Payao	5.82	161	P	Pn	20 50 51.1	+1.4
CHTO	Chiang Mai	6.15	171	P	Pn	20 50 56.3	+2.1
CHTO	Chiang Mai	6.15	171	P	Pn	20 50 55.6	+1.3
CHTO	Chiang Mai	6.15	171		Pn	20 50 55.6	+1.3
CMMT	Chiang Mai	6.15	171	P	Pn	20 50 55.8	+1.5
BRDH	Bariadhala	6.16	250	Pn	Pn	20 50 57.2	+2.9
	119nm,0.3s,baz=90,slow=15,SNR=6.4						
BRDH				Sn	Sn	20 51 57.5	-7.1
	121nm,0.3s,baz=333,slow=4.2,SNR=1.3						
CM36	Chiang Mai Arr	6.46	170	P	Pn	20 50 58.2	-0.4
CM31	Chiang Mai Arr	6.50	171	P	Pn	20 51 01.4	+2.3
	SNR=73						
CM31	Chiang Mai Arr	6.50	171		Pn	20 51 00.3	+1.2
CMAR	Chiang Mai Arr	6.50	171	Pn	Pn	20 51 01.5	+2.5
	34nm,0.3s,baz=345,slow=13,SNR=293						
CMAR				Pg	Pg	20 51 25.6	-2.6
	39nm,0.3s,baz=349,slow=15,SNR=19						
CMAR				Lg	Lg	20 52 50.6	
	72nm,0.3s,baz=345,slow=30,SNR=5.4						
CMAR				LR	LR	20 53 37.0	
	comp=Z,17µm,20.8s,baz=28,slow=39						
CM09	Chiang Mai Arr	6.52	171	P	Pn	20 51 01.3	+1.9
SLVN	Son La	6.57	122		Pn	20 51 00.7	+0.6
MHMT	Maesarieng	6.71	180	P	Pn	20 51 03.6	+1.8
PHRA	Phrae	6.74	161	P	Pn	20 51 03.7	+1.4
UTTA	Uttaradit	7.55	160	P	Pn	20 51 15.5	+2.0
LSA	Lhasa	7.67	310	Pn	Pn	20 51 15.9	+0.4
LSA				Sn	Sn	20 52 42.6	+0.1
LSA				LR	LR		
	comp=N,44µm,7.8s						
LSA				LR	LR		
	comp=E,47µm,9.3s						
LSA				LR	LR		
	comp=Z,52µm,9.3s						
LSA	Lhasa	7.67	310	i P	Pn	20 51 16.0	+0.4
	SNR=147						
LSA	Lhasa	7.67	310	P	Pn	20 51 16.3	+0.8
LSA	Lhasa	7.67	310	P	Pn	20 51 15.1	-0.4
LSA	Lhasa	7.67	310		Pn	20 51 15.1	-0.4
CD2	Chengdu	7.90	40	P	Pn	20 51 20.3	+2.0
CD2				smax	smax		
	comp=N,3µm,1.8s						
CD2				smax	smax		
	comp=E,3µm,1.4s						
CD2				LR	LR		
	comp=N,61µm,7.8s						
CD2				LR	LR		
	comp=E,79µm,6.8s						
CD2				LR	LR		
	comp=Z,50µm,9.1s						
GYA	Guiyang	8.05	77	⇑iP	Pn	20 51 21.6	+1.2
GYA				S	Sn	20 52 55.5	+4.2
GYA				smax	smax		
	comp=N,1µm,1.0s						
GYA				smax	smax		
	comp=E,900nm,1.2s						
GYA				LR	LR		
	comp=E,55µm,10.6s						
GYA				LR	LR		
	comp=Z,65µm,12.0s						
NONG	Nongkai	8.38	143	P	Pn	20 51 26.7	+1.9
PBKT	Sadao Pong	8.79	160		Pn	20 51 32.8	+2.4
TAPN	Taplejung	9.48	287	ePn	Pn	20 51 38.4	-1.8
TAPN				eSn	Sn	20 53 26.4	-0.4
	2µm,1.3s						
ODAN	Odare	9.67	284	ePn	Pn	20 51 41.4	-1.3
SKNT	Sakolnakorn	9.73	143	P	Pn	20 51 45.2	+1.9
CHAI	Chaiyaphum	9.75	156	P	Pn	20 51 46.5	+2.9
RAMN	Ramite	10.38	284	ePn	Pn	20 51 51.0	-1.5
SRDT	SRDT	10.57	174	P	Pn	20 51 56.4	+1.4
JIRN	Jiri	10.86	287	ePn	Pn	20 51 57.7	-1.5
GUN	Gumba	11.19	288	ePn	Pn	20 52 02.0	-1.6
PKI	Pulchoki	11.53	286	ePn	Pn	20 52 05.8	-2.5
PKI				eSn	Sn	20 54 16.9	-0.2
	638nm,1.4s						
PKIN	Phulchoki	11.54	286	ePn	Pn	20 52 05.6	-2.8
ENH	Enshi	11.57	60		Pn	20 52 06.9	-1.6
DMN	Daman	11.80	286	ePn	Pn	20 52 09.0	-2.9
LZH	Lanzhou	12.25	23	eP	Pn	20 52 18.5	+0.6
LZH				pP	P	20 52 22.0	-8.4
LZH				sP		20 52 24.0	
LZH				S	Sn	20 54 38.5	+4.1
LZH				pmax	pmax		
	comp=Z,170nm,1.3s						
LZH				pmax	pmax		
	comp=Z,1µm,6.5s						
LZH				LR	LR		
	comp=N,17µm,13.6s						
LZH				LR	LR		
	comp=E,20µm,11.9s						
LZH				LR	LR		
	comp=Z,19µm,13.6s						
GKN	Gorkha	12.28	287	ePn	Pn	20 52 15.4	-3.0
GKN				eSn	Sn	20 54 33.8	-1.5
	1µm,1.3s						
QIZ	Qiongzhong	12.52	116	P	Pn	20 52 21.9	+0.3
QIZ				S	Sn	20 54 42.5	+1.5
QIZ				pmax	pmax		
	comp=Z,93nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,860nm,3.5s						
QIZ				LR	LR		
	comp=N,11µm,11.2s						
QIZ				LR	LR		
	comp=E,23µm,11.2s						
QIZ				LR	LR		
	comp=Z,28µm,12.0s						
QIZ	Qiongzhong	12.52	116		Pn	20 52 21.8	+0.2
DGPR	DIGLIPUR	12.59	203	ex	Pn	20 52 15.0	-7.5
DGPR				ex	Sn	20 54 45.5	+2.9
DANN	Dangsing	13.11	288	ePn	Pn	20 52 25.4	-4.5
KOLN	Koldanda	13.14	286	ePn	Pn	20 52 26.5	-3.7
XAN	Xi'an	13.21	44	P	Pn	20 52 30.4	-0.5
XAN				pP	P	20 52 33.8	-7.1
XAN				PP	PnPn	20 52 41.3	+2.4
XAN				SS	S	20 55 20.8	-1.6
XAN				pmax	pmax		
	comp=Z,24nm,1.0s						
XAN				pmax	pmax		
	comp=Z,490nm,3.8s						
XAN				LR	LR		
	comp=N,148µm,14.9s						
XAN				LR	LR		
	comp=E,84µm,15.5s						
XAN				LR	LR		
	comp=Z,27µm,10.8s						
XAN	Xi'an	13.21	44	P	Pn	20 52 28.8	-2.1
XAN	Xi'an	13.21	44		Pn	20 52 28.8	-2.1
PYUN	Piuthan	13.73	287	ePn	Pn	20 52 33.7	-4.5
PBA	Port Blair	14.07	201	P	Pn	20 52 44.3	+1.6
PBA	Port Blair	14.07	201	P	Pn	20 52 46.5	+3.7
GTA	Gaotai	14.54	6	P	Pn	20 52 45.3	-3.9
GTA				pP	P	20 52 50.0	-5.8
GTA				sP		20 52 53.4	
GTA				S	Sn	20 55 24.3	-6.0
GTA				SS	SnSn	20 55 45.9	+2.7
GTA				pmax	pmax		
	comp=Z,200nm,4.4s						
GTA				LR	LR		
	comp=N,14µm,11.4s						
GTA				LR	LR		
	comp=E,78µm,11.7s						
GTA				LR	LR		
	comp=Z,16µm,10.5s						
HKPS	Hong Kong Po S	15.11	97	P	P	20 52 59.8	-2.3
WHN	Wuhan	15.60	65	⇓P	Pn	20 53 01.3	-1.9
WHN				pP	P	20 53 06.0	-1.4
WHN				S	Sn	20 55 52.3	-3.6
WHN				LR	LR		
	comp=N,41µm,12.0s						
WHN				LR	LR		
	comp=E,52µm,8.4s						
WHN				LR	LR		
	comp=Z,44µm,8.7s						
DLV	T Lat	16.33	140	P	Pn	20 53 13.9	+0.9
JBP	Jabalpur	16.47	268	ex	Pn	20 53 12.1	-2.4
JBP				eS	S	20 56 29.1	0.0
JBP				AMS	AMS	21 00 31.4	
	comp=Z,17µm,11.2s						
TIY	Taiyuan	17.77	41	eP	Pn	20 53 30.4	-0.4
TIY				S	Sn	20 56 49.5	+0.8
TIY				SS	SnSn	20 57 08.3	+6.0
TIY				pmax	pmax		
	comp=Z,57nm,1.1s						
TIY				LR	LR		
	comp=Z,33µm,15.5s						
TIY				LR	LR		
	comp=Z,19µm,9.8s						
TIY				LR	LR		
	comp=Z,26µm,12.4s						
RPR	Rampur	18.29	254	eP	Pn	20 53 37.2	0.0
RPR				IVmB_BB		20 53 42.2	
	comp=Z,1µm,2.2s						
RPR				IVMsBB		21 02 10.6	
	comp=Z,2µm,8.1s						
KNMB	Chin-men Tao	18.62	87	P	P	20 53 40.2	-0.7
BTO	Baotou	18.64	30	eP	P	20 53 40.3	-0.8
QZH	Quanzhou	18.76	86	⇑iP	P	20 53 41.3	-1.2
QZH				S	Sn	20 57 13.3	+0.6
QZH				LR	LR		
	comp=Z,27µm,14.8s						
NDI	New Delhi	18.84	286	eP	P	20 53 39.0	-4.4
ADKI	Addanki	19.07	245	eP	P	20 53 45.6	-0.3
ADKI				IVmBBB		20 53 55.9	
	comp=Z,854nm,1.3s						
ADKI				IVMsBB		21 03 07.8	
	comp=Z,3µm,13.7s						
SRSP	Sriramsagar	19.10	256	eP	P	20 53 44.8	-1.5
SRSP				IVmBBB		20 53 52.4	
	comp=Z,917nm,1.7s						
SRSP				IVMs_BB	IVMs_BB	21 02 26.7	
	comp=Z,3µm,7.8s						
NJS	Nagarjunasagar	19.27	248	eP	P	20 53 48.1	0.0
NJS				IVmBBB		20 53 54.2	
	comp=Z,966nm,2.2s						
NJS				IVMs_BB	IVMs_BB	21 03 15.0	
	comp=Z,3µm,11.4s						
SMLA	Simla	19.32	293	eP	P	20 53 48.6	+0.1
SMLA				i x	x	20 53 51.3	
SMLA				eS	S	20 57 26.9	0.0
SMLA				ex	x	20 57 27.0	
HYB	Hyderabad	19.52	251	i P	Pn	20 53 52.0	-0.2
HYB				eS	S	20 57 32.0	+0.8
HYB				eLR	LR		
	comp=Z,8.0nm,16.0s						
HYB	Hyderabad	19.52	251	eP	Pn	20 53 53.2	+1.0
HYB				ex	x	20 57 30.1	
HYBB	Hyderabad (bro	19.52	251	eP	P	20 53 50.0	-0.9
HYBB				IVmBBB		20 53 56.8	
	comp=Z,2µm,2.0s						
HYBB				IVMs_BB	IVMs_BB	21 04 48.7	
	comp=Z,4µm,9.0s						
HHC	Hu-ho-hao-te	19.55	32	eP	Pn	20 53 51.8	-0.7
HHC				sP	sP	20 54 01.9	+4.2
HHC				PP	PnPn	20 54 07.1	+1.1
HHC				S	S	20 57 24.5	-7.3
HHC				sS	Sn	20 57 32.3	+0.5
HHC				pmax	pmax		
	comp=Z,72nm,1.5s						
HHC				pmax	pmax		
	comp=Z,1µm,4.7s						
HHC				LR	LR		
	comp=Z,7µm,8.2s						
HHC				LR	LR		
	comp=Z,6µm,8.2s						
HHC				LR	LR		
	comp=Z,7µm,7.3s						
LHMI	Lhok Sumawe	19.60	183	P	Pn	20 54 01.3	+8.3
LHMI	Lhok Sumawe	19.60	183	P	Pn	20 53 54.2	+1.1
LHMI				IAmb	IAmb	20 54 37.0	
	comp=Z,316nm,1.1s						
KULM	Kulim	19.69	172	P	Pn	20 53 53.6	-0.6
KULM	Kulim	19.69	172	P	Pn	20 53 55.0	+0.8
NJ2	Nanjing	19.72	64	⇑iP	Pn	20 53 54.1	-0.3
NJ2				pP	pP	20 53 58.1	+0.8
NJ2				sP	sP	20 54 02.4	+3.1
NJ2				S	S	20 57 34.8	-0.2
NJ2				pmax	pmax		
	comp=Z,94nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,1µm,3.5s						
NJ2				LR	LR		
	comp=Z,44µm,14.2s						
NJ2				LR	LR		
	comp=Z,17µm,13.7s						
SRLM	Srisailam	19.84	247	eP	P	20 53 52.4	-2.0
SRLM				IVmBBB		20 54 01.6	
	comp=Z,1µm,1.3s						
SRLM				IVMsBB		21 03 40.0	
	comp=Z,3µm,11.5s						
TIA	Tai'an	19.97	51	P	Pn	20 53 56.9	-0.5
TIA				S	Sn	20 57 41.1	-0.8
TIA				pmax	pmax		
	comp=Z,36nm,0.8s						
TIA				LR	LR		
	comp=Z,57µm,17.1s						
TIA				LR	LR		
	comp=Z,35µm,15.1s						
TIA				LR	LR		
	comp=Z,17µm,16.0s						
SKHT	Srikalahasti	20.43	240	eP	P	20 54 00.9	+0.1
SKHT				IVmB_BB		20 54 10.1	
	comp=Z,1µm,1.5s						
SKHT				IVMs_BB	IVMs_BB	21 01 40.5	
	comp=Z,1µm,28.9s						
IPM	Ipoh	20.54	171	P	P	20 54 02.1	+0.2
IPM	Ipoh	20.54	171	P	Pn	20 54 04.0	-0.2
MLSI	Meulaboh, Aceh	20.58	184	P	Pn	20 54 05.9	+1.2
	comp=Z,8µmcomp=Z,5µmcomp=Z,365nm,1.1s						
WMQ	Urumqi	20.62	339	P	P	20 54 03.0	+0.2
WMQ				sP	sP	20 54 14.4	+5.3
WMQ				S	S	20 57 52.9	-0.1
WMQ				sS	sS	20 57 59.5	-0.5
WMQ				pmax	pmax		
	comp=Z,37nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,390nm,3.7s						
WMQ				LR	LR		
	comp=Z,10µm,11.3s						
WMQ				LR	LR		
	comp=Z,9µm,12.7s						
WMQ				LR	LR		
	comp=Z,5µm,14.1s						
WMQ	Urumqi	20.62	339	P	P	20 54 02.6	-0.2
WMQ				pmax	pmax		
	comp=Z,486nm,1.3s						
WMQ				MLR	MLR		
	comp=Z,9µm,18.0s						
WMQ	Urumqi	20.62	339	P	P	20 54 02.6	-0.2
WMQ				IAmb	IAmb	20 54 21.2	
	comp=Z,486nm,1.3s						
TPUB	Ta-pu	20.80	90	P	Pn	20 54 06.4	-0.8
TPUB				IAmb	IAmb	20 54 08.0	
	comp=Z,276nm,1.0s						
KLRI	Killari	20.95	255	eP	P	20 54 06.5	0.0
KLRI				IVmBBB		20 54 12.1	
	comp=Z,2µm,1.2s						
KLRI				IVMs_BB	IVMs_BB	21 04 52.8	
	comp=Z,4µm,7.6s						
SSLB	Suanglung	21.02	88	P	P	20 54 08.8	+1.6
SSLB				IAmb	IAmb	20 54 14.1	
	comp=Z,215nm,1.2s						
KCSI	Kotacane, Aceh	21.27	180	P	P	20 54 12.1	+2.2
	comp=Z,6µmcomp=Z,4µmcomp=Z,281nm,1.2s						
TWG	Pinlang	21.28	91	P	P	20 54 12.1	+2.1
YHNB	Yeheng	21.30	86	P	P	20 54 11.6	+1.4
YHNB				IAmb	IAmb	20 54 28.5	
	comp=Z,250nm,1.4s						
TATO	Taipei	21.38	85	P	P	20 54 12.3	+1.4
YULB	Yu-li	21.39	89	P	P	20 54 12.5	+1.3
YULB				IAMs_20	IAMs_20	21 02 45.2	
	comp=Z,17µm,20.0s						
SSE	Sheshan	21.43	68	P	P	20 54 12.3	+0.8
SSE				S	S	20 58 09.5	+0.4
SSE				pmax	pmax		
	comp=Z,120nm,1.2s						
SSE				pmax	pmax		
	comp=Z,770nm,9.1s						
SSE				LR	LR		
	comp=Z,7µm,14.1s						
SSE				LR	LR		
	comp=Z,5µm,14.1s						
SSE	Sheshan	21.43	68	P	P	20 54 11.4	-0.2
SSE				IAmb	IAmb	20 54 22.8	
	comp=Z,580nm,1.4s						
SSE	Sheshan	21.43	68	IAMs_20	IAMs_20	21 01 44.6	
	comp=Z,17µm,18.0s						
BJT	Baijiatuau	21.48	41	P	P	20 54 12.5	+0.6
BJT				pmax	pmax		
	comp=Z,277nm,1.2s						
BJT				MLR	MLR		
	comp=Z,9µm,19.0s						
BJT	Baijiatuau	21.48	41	P	P	20 54 12.5	+0.6
BJT				IAmb	IAmb	20 54 21.3	
	comp=Z,277nm,1.2s						
BJI	Beijing	21.50	41	P	P	20 54 13.8	+1.7
BJI				S	S	20 58 11.5	+1.3
BJI				pmax	pmax		
	comp=Z,150nm,2.0s						
BJI				LR	LR		
	comp=Z,37µm,14.1s						
BJI				LR	LR		
	comp=Z,35µm,15.9s						
BJI				LR	LR		
	comp=Z,7µm,23.0s						
NACB	Ninganchiao	21.56	87	P	P	20 54 14.4	+1.5
NACB				IAmb	IAmb	20 54 33.0	
	comp=Z,846nm,1.9s						
URV	Uravakonda	21.77	247	eP	P	20 54 15.9	+0.6
URV				IVmB_BB		20 54 22.4	
	comp=Z,1µm,1.6s						
URV				IVMsBB		21 04 48.7	
	comp=Z,4µm,19.8s						
PSI	Prapat	22.01	177	P	P	20 54 19.3	+1.4
	comp=Z,21nm,0.7s,baz=360,slow=7.4,SNR=26						
PSI				Lg	Lg	21 01 09.1	
	comp=Z,3.8nm,0.6s,baz=0.2,slow=22,SNR=5.7						
PSI				LR	LR	21 01 47.3	
	comp=Z,5µm,21.0s,baz=271,slow=34						
PSI	Prapat	22.01	177	P	P	20 54 19.4	+1.5
PSI				pmax	pmax		
	comp=Z,172nm,1.2s						
PSI				MLR	MLR		
	comp=Z,3µm,19.0s						
RPSI	Rantau Prapat	22.11	177	P	P	20 54 19.4	+0.5
SZP	Santa	22.24	105	P	P	20 54 20.8	+0.6
SNSI	Sinabang, Aceh	22.43	184	P	P	20 54 28.9	+6.6
YOJ	Yonaguni jima	22.81	86	P	P	20 54 26.1	-0.2
YOJ				pmax	pmax		
	comp=Z,535nm,1.6s						
YOJ	Yonaguni jima	22.81	86	P	P	20 54 26.1	-0.2
YOJ				IAmb	IAmb	20 54 49.4	
	comp=Z,535nm,1.6s						
NIL	Nilore	23.16	298	P	P	20 54 29.0	-0.9
NIL	Nilore	23.16	298	P	P	20 54 28.1	-1.8
NIL				pmax	pmax		
	comp=Z,531nm,1.2s						
NIL	Nilore	23.16	298	P	P	20 54 28.1	-1.8
POO	Poona	23.22	259	⇓iP	P	20 54 32.4	+1.8
	comp=Z,60nm,1.2s						
SBSI	Sibolga	23.25	178	P	P	20 54 32.7	+1.8
	comp=Z,2µmcomp=Z,142nm,1.0s						
GSI	Gunungsitoli	23.48	181	P	P	20 54 33.5	+0.4
	comp=Z,16µmcomp=Z,18µmcomp=Z,1µm,1.5s						
GSI	Gunungsitoli	23.48	181	P	P	20 54 33.2	0.0
KSH	Kashi	23.50	314	P	P	20 54 33.8	+0.4
KSH				pP	pP	20 54 36.3	-1.6
KSH				PP	PnPn	20 55 06.8	+6.8
KSH				S	S	20 58 44.1	-2.8
KSH				SS	SnSn	20 59 32.3	+9.3
KSH				pmax	pmax		
	comp=Z,150nm,0.9s						
KSH				pmax	pmax		
	comp=Z,4µm,4.5s						
KSH				LR	LR		
	comp=Z,9µm,10.6s						
KSH				LR	LR		
	comp=Z,5µm,9.0s						
KSH				LR	LR		
	comp=Z,10µm,11.4s						
PCPH	Palayan	23.63	109	⇓eP	P	20 54 34.1	-0.5
TARG	Taragay, Kyrgy	23.64	320	P	P	20 54 34.8	-0.3
TARG				IAmb	IAmb	20 55 17.6	
	comp=Z,190nm,1.0s						
SHLS	Shalkode	23.67	325	⇓iP	P	20 54 32.5	-2.5
	comp=Z,388nm,1.8s						

SHLS eS S 20 58 46.9 -2.7
SHLS eLR LR 21 05 40.1
SHLS Shalkode 23.67 325 *d* iP P 20 54 32.5 -2.5
SHLS eS S 20 58 46.9 -2.7
SHLS pmax pmax
comp=Z,388nm,1.8s
MYKOM Kota Tinggi 23.70 165 P P 20 54 34.3 -1.0
PRZ Przheval'sk 23.79 322 P P 20 54 35.2 -1.0
PRZ pmax pmax
comp=Z,570nm,1.2s
PRZ MLR MLR
comp=Z,13µm,18.0s
PRZ Przheval'sk 23.79 322 P P 20 54 35.2 -1.0
PRZ IAMs_20 IAMs_20 21 04 21.0
comp=Z,13µm,18.0s
SONM Songino Array 23.84 14 P P 20 54 36.2 -0.4
comp=Z,22nm,0.9s,baz=197,slow=8.2,SNR=64
SONM S S 20 58 50.0 -2.2
comp=Z,0.8nm,0.3s,baz=27,slow=45,SNR=1.0
SONM LR LR 21 04 48.6
comp=Z,8µm,18.1s,baz=196,slow=39
UZB Uzynbulak 23.90 324 ⇓ *i* P P 20 54 37.1 -0.2
comp=Z,484nm,2.7s
UZB eS S 20 58 54.8 +1.5
UZB eLR LR 21 03 55.4
UZB Uzynbulak 23.90 324 *d i* P P 20 54 37.0 -0.2
UZB eS S 20 58 54.7 +1.5
UZB pmax pmax
comp=Z,484nm,2.7s
ULN Ulaanbaatar 24.02 15 P P 20 54 38.2 -0.2
ULN P P 20 54 38.2 -0.2
ULN S S 20 58 59.6 +4.5
ULN S S 20 58 59.6 +4.5
ULN Ulaanbaatar 24.02 15 *d i* P P 20 54 38.0 -0.3
ULN pmax pmax
comp=Z,173nm,1.7s
ULN Ulaanbaatar 24.02 15 P P 20 54 38.1 -0.3
ULN IAmb IAmb 20 54 44.9
comp=Z,293nm,1.3s
BOM Bombay 24.02 261 *ex* P 20 54 25.0 -13
BOM ex S 20 58 42.8 -12
MNSI Mandailing Nat 24.04 176 P P 20 54 37.3 -1.2
comp=Z,2µmcomp=Z,67nm,0.7s
PALK Pallekele 24.05 226 P P 20 54 39.5 +0.7
PALK P P 20 54 39.5 +0.7
SATY Saty 24.17 323 *eP* P 20 54 40.1 +0.3
comp=Z,654nm,2.6s
SATY eS S 20 59 00.2 +2.7
SATY eLR LR 21 04 01.8
SATY Saty 24.17 323 *eP* P 20 54 40.0 +0.3
SATY eS S 20 59 00.2 +2.7
SATY pmax pmax
comp=Z,654nm,2.6s
TGY Tagaytay City 24.19 112 P P 20 54 42.1 +2.0
comp=Z,85nm,0.4s,baz=139,slow=6.4,SNR=1.9
TGY S S 20 59 13.1 +15
comp=Z,78nm,0.3s,baz=134,slow=7.1,SNR=1.1
TGY LR LR 21 03 54.3
comp=Z,5µm,19.8s,baz=302,slow=36
ZHN Zhinishke 24.23 324 eS S 20 59 02.1 +3.7
KDJ Kajisay 24.26 320 P P 20 54 40.5 -0.1
KDJ Kajisay 24.26 320 P P 20 54 40.5 -0.1
DL2 Dalian 24.40 49 P P 20 54 45.1 +3.4
DL2 S S 20 59 01.1 +0.1
DL2 pmax pmax
comp=Z,67nm,1.2s
DL2 pmax pmax
comp=Z,510nm,4.8s
DL2 LR LR
comp=Z,20µm,19.9s
DL2 LR LR
comp=Z,22µm,17.9s
DL2 LR LR
comp=Z,17µm,13.1s
GOA Goa 24.43 252 *eP* P 20 54 44.7 +2.5
GOA ex x 20 59 07.5
PGP Puerto Galera 24.50 113 ⇑ *i* P P 20 54 42.5 -0.4
BKNI Bangkinang 24.63 172 P P 20 54 45.3 +1.3
comp=Z,3µmcomp=Z,2µmcomp=Z,97nm,0.9s
BKNI Bangkinang 24.63 172 P P 20 54 43.7 -0.3
BKNI IAmb IAmb 20 55 17.0
comp=Z,236nm,1.2s
LQP Lukban 24.69 111 *eP* P 20 54 44.8 +0.1
TPRI Tanjung Pinang 24.70 164 P P 20 54 46.0 +1.4
comp=Z,2µmcomp=Z,114nm,1.3s
ZSN Zaisan 24.76 339 ⇓ *i* P P 20 54 45.5 +0.5
comp=Z,346nm,2.6s
ZSN eS S 20 59 08.7 +1.9
ZSN Zaisan 24.76 339 *d i* P P 20 54 45.4 +0.5
ZSN eS S 20 59 08.6 +1.9
ZSN pmax pmax
comp=Z,346nm,2.6s
PBSI Pulau Batu 24.83 179 P P 20 54 47.0 +1.3
comp=Z,7µmcomp=Z,269nm,1.8s
ULHL Ulahol 24.88 319 P P 20 54 47.0 +0.7
SNR=128
TNSS Tian-Shan 24.96 322 *eP* P 20 54 47.5 +0.3
TNSS Tian-Shan 24.96 322 *eP* P 20 54 47.5 +0.3
MDOK Medeo 24.98 322 *eP* P 20 54 47.7 +0.5
MDOK eS S 20 59 12.8 +2.1
MDOK eLR LR 21 05 15.8
comp=Z,7µm,15.0s
MDOK Medeo 24.98 322 *eP* P 20 54 47.7 +0.5
MDOK eS S 20 59 12.8 +2.1
MDOK MLR MLR
comp=Z,7µm,15.0s
AAA Alma-Ata 25.09 322 *eP* P 20 54 48.4 +0.3
comp=Z,1µm,3.3s
AAA eS S 20 59 22.9 +11
AAA eLR LR 21 04 40.9
comp=Z,6µm,14.1s
AAA Alma-Ata 25.09 322 *eP* P 20 54 48.3 +0.3
AAA pmax pmax
comp=Z,1µm,3.3s
AAA MLR MLR
comp=Z,6µm,14.0s
MK31 Makanchi Array 25.14 334 P P 20 54 48.3 -0.1
MK31 pmax pmax
comp=Z,126nm,1.1s
MK31 Makanchi Array 25.14 334 P P 20 54 48.3 -0.1
MK31 IAmb IAmb 20 54 58.8
comp=Z,126nm,1.1s
MKAR Makanchi Array 25.14 334 P P 20 54 48.6 +0.2
comp=Z,48nm,0.9s,baz=148,slow=8.8,SNR=283
MKAR PcP PcP 20 58 23.1 +0.8
comp=Z,11nm,0.9s,baz=111,slow=3.2,SNR=3.6
MKAR S S 20 59 16.8 +3.9
comp=Z,1.3nm,0.8s,baz=212,slow=4.3,SNR=1.1
MKAR LR LR 21 05 16.1
comp=Z,7µm,18.6s,baz=145,slow=38
MAKZ Makanchi 25.28 334 P P 20 54 49.5 -0.1
MAKZ pmax pmax
comp=Z,169nm,1.1s
MAKZ MLR MLR
comp=Z,8µm,20.0s
MAKZ Makanchi 25.28 334 P P 20 54 49.5 -0.1
MAKZ IAmb IAmb 20 55 02.2
comp=Z,169nm,1.1s
MTBS Maitube 25.31 321 *eP* P 20 54 50.4 +0.4
MTBS Maitube 25.31 321 *eP* P 20 54 50.4 +0.4
KZA Kyzart 25.37 318 P P 20 54 51.5 +0.5
SNR=88
CHKK Chushkaly 25.47 323 *eP* P 20 54 51.0 -0.4
CHKK Chushkaly 25.47 323 *eP* P 20 54 50.9 -0.4
TDK Taldyqorghan 25.51 327 *eP* P 20 54 52.8 +1.0
comp=Z,260nm,1.2s
TDK eS S 20 59 24.9 +6.0
TDK eLR LR 21 04 15.5
comp=Z,6µm,16.4s
TDK Taldyqorghan 25.51 327 *eP* P 20 54 52.7 +1.0
TDK eS S 20 59 24.8 +6.0
TDK pmax pmax
comp=Z,260nm,1.2s
TDK MLR MLR
comp=Z,6µm,16.0s
TKM2 Tokmak 2 25.66 320 P P 20 54 53.5 +0.1
SNR=49
KKM Kota Kinabalu 25.69 134 P P 20 54 54.1 +0.3
KKM IAmb IAmb 20 55 03.5
comp=Z,226nm,1.2s
ZAK Zakamensk 25.76 8 *eP* P 20 54 54.4 +0.3
ZAK pmax pmax
comp=Z,94nm,1.7s
PDSI Padang 25.80 174 P P 20 54 55.9 +1.4
comp=Z,559nmcomp=Z,29nm,0.9s

TRD Trivandrum 25.80 234 IAmb IAmb 20 55 04.3
comp=Z,168nm,1.4s
TRD *ex* S 20 59 26.1 +2.4
TRD IAMs_20 IAMs_20 21 05 53.1
comp=N,11µm,22.0s
KUU Kurty 25.85 322 *eP* P 20 54 54.3 -0.5
comp=N,274nm,2.0s
KUU eS S 20 59 28.6 +4.4
KUU eLR LR 21 05 08.4
comp=N,7µm,17.0s
KUU Kurty 25.85 322 *eP* P 20 54 54.3 -0.5
KUU eS S 20 59 28.5 +4.4
KUU pmax pmax
comp=Z,274nm,2.0s
KUU MLR MLR
comp=Z,7µm,17.0s
KBK Karagaybulak 25.89 319 P P 20 54 56.4 +0.9
SNR=148
UCH Uchtor 25.91 318 P P 20 54 56.1 +0.2
SNR=72
SDSI Sungai Dareh 25.92 172 P P 20 55 00.1 +4.4
comp=Z,1µmcomp=Z,57nm,1.2s
SISI Saibi 26.11 177 P P 20 54 58.4 +1.0
comp=Z,1µmcomp=Z,125nm,1.4s
AAK Ala-Archa 26.15 318 P P 20 54 58.6 +0.8
comp=Z,85nm,0.9s,baz=129,slow=5.6,SNR=149
AAK S S 20 59 32.8 +3.5
comp=Z,8.7nm,1.1s,baz=125,slow=20,SNR=2.1
AAK LR LR 21 06 44.2
comp=Z,11µm,19.1s,baz=102,slow=40
AAK Ala-Archa 26.15 318 P P 20 54 58.6 +0.8
SNR=157
AAK Ala-Archa 26.15 318 *i* P P 20 54 58.6 +0.8
SNR=195
AAK Ala-Archa 26.15 318 P P 20 54 58.7 +0.9
AAK P P 20 54 58.7 +0.9
AAK P P 20 54 58.7 +0.9
AAK S S 20 59 34.2 +4.9
AAK S S 20 59 34.2 +4.9
AAK S S 20 59 34.2 +4.9
AAK Ala-Archa 26.15 318 *d i* P P 20 54 58.5 +0.7
AAK pmax pmax
comp=Z,345nm,1.7s
AAK Ala-Archa 26.15 318 P P 20 54 58.2 +0.4
AAK IAmb IAmb 20 55 10.6
comp=Z,182nm,0.9s
AAK Ala-Archa 26.15 318 IAMs_20 IAMs_20 21 06 32.8
comp=Z,12µm,21.0s
FRU1 Bishkek 26.17 319 P P 20 54 58.2 +0.3
FRU1 pmax pmax
comp=Z,248nm,0.9s
FRU1 MLR MLR
comp=Z,12µm,21.0s
FRU1 Bishkek 26.17 319 P P 20 54 58.2 +0.3
FRU1 IAMs_20 IAMs_20 21 06 19.3
comp=Z,12µm,21.0s
KSM Kuching 26.20 151 P P 20 54 58.6 +0.4
KSM IAmb IAmb 20 55 18.4
comp=Z,77nm,0.9s
KSM Kuching 26.20 151 P P 20 55 00.0 +1.8
CHMS Chumysh 26.21 319 P P 20 54 58.6 +0.4
SNR=46
SBUM Sibu 26.26 146 P P 20 54 59.5 +0.8
SBUM Sibu 26.26 146 P P 20 55 00.0 +1.3
AML Almayashu 26.36 317 P P 20 55 00.2 +0.3
SNR=244
USP Ospenovka 26.52 319 P P 20 55 01.0 +0.1
SNR=52
SGDS Sogindy 26.55 320 ⇓ *i* P P 20 55 01.1 -0.2
comp=Z,226nm,2.2s
SGDS eS S 20 59 37.1 +1.7
SGDS eLR LR 21 05 44.3
EKS2 Erkin-Say 26.60 318 P P 20 55 02.5 +0.7
SNR=134
KBL Kabul 26.76 298 P P 20 55 03.2 -0.2
KBL P P 20 55 03.2 -0.2
KBL S S 20 59 48.0 +8.8
KBL S S 20 59 48.0 +8.8
KBL Kabul 26.76 298 P P 20 55 03.1 -0.4
KBL pmax pmax
comp=Z,290nm,0.9s
KBL Kabul 26.76 298 P P 20 55 03.0 -0.4
MOY Mondy 26.81 4 *eP* P 20 55 04.2 +0.6
MOY pmax pmax
comp=Z,240nm,2.4s
RCP Roxas 27.01 115 ⇑ *eP* P 20 55 04.8 -0.8
KRJI Kerinci 27.07 172 P P 20 55 07.4 +1.3
comp=Z,4µmcomp=Z,170nm,1.6s
TLY Talaya 27.08 8 P P 20 55 07.3 +1.5
comp=Z,6.2nm,0.7s,baz=165,slow=14,SNR=7.6
TLY S S 20 59 42.3 -1.2
comp=Z,1.6nm,0.6s,baz=260,slow=14,SNR=1.1
TLY LR LR 21 06 43.7
comp=Z,6µm,20.9s,baz=179,slow=39
TLY Talaya 27.08 8 P P 20 55 04.9 -1.0
TLY Talaya 27.08 8 *eP* P 20 55 06.8 +0.9
TLY eS S 20 59 45.5 +2.0
TLY pmax pmax
comp=Z,121nm,2.0s
TLY MLR MLR
comp=Z,17µm,18.0s
TLY Talaya 27.08 8 P P 20 55 06.8 +0.9
SNY Shenyang 27.12 45 ⇓ P P 20 55 08.8 +2.5
SNY S S 20 59 37.8 -6.5
SNY pmax pmax
comp=Z,55nm,1.2s
SNY pmax pmax
comp=Z,510nm,4.3s
SNY LR LR
comp=Z,34µm,18.6s
SNY LR LR
comp=Z,16µm,21.1s
SNY LR LR
comp=Z,14µm,11.8s
GAR Garm 27.17 308 P P 20 55 05.8 -1.1
BTK Batken 27.25 310 P P 20 55 07.7 +0.1
BTK pmax pmax
comp=Z,251nm,0.9s
BTK MLR MLR
comp=Z,14µm,20.0s
BTK Batken 27.25 310 P P 20 55 07.7 +0.1
BTK IAMs_20 IAMs_20 21 07 32.6
comp=Z,14µm,20.0s
JOW Kunigami 27.36 79 P P 20 55 07.9 -0.7
INCN Inchon 27.46 56 P P 20 55 11.2 +1.7
INCN Inchon 27.46 56 P P 20 55 10.2 +0.7
INCN pmax pmax
comp=Z,133nm,1.6s
INCN MLR MLR
comp=Z,10µm,21.0s
INCN Inchon 27.46 56 P P 20 55 10.2 +0.7
INCN IAmb IAmb 20 55 36.0
comp=Z,133nm,1.6s
PPSI Pulau Pagai 27.59 175 P P 20 55 12.2 +1.5
comp=Z,132nm,0.9s
TJN Taejon 27.69 59 *i* P P 20 55 10.5 -1.0
IRK Irkutsk 27.71 8 *eP* P 20 55 12.5 +1.0
IRK pmax pmax
comp=Z,184nm,2.5s
BTLS Baital 27.85 322 *eP* P 20 55 11.9 -1.0
comp=Z,71nm,2.3s
BTLS eS S 21 00 03.0 +7.4
BTLS eLR LR 21 06 35.1
BTLS Baital 27.85 322 *eP* P 20 55 11.8 -1.0
BTLS eS S 21 00 03.0 +7.4
BTLS pmax pmax
comp=Z,71nm,2.3s
CHGR Chuyangaron 27.88 306 P P 20 55 12.0 -1.4
DZA Taraz 28.25 316 *eP* P 20 55 14.8 -1.6
DZA Taraz 28.25 316 *eP* P 20 55 14.8 -1.6
KS19 Wonju Array Si 28.40 57 P P 20 55 16.4 -1.5
KSRS Korea Array 28.43 57 P P 20 55 16.3 -1.8
comp=Z,4.4nm,1.1s,baz=222,slow=14,SNR=5.1
KSRS LR LR 21 06 13.2
comp=Z,11µm,19.0s,baz=258,slow=36
PMBI Palembang 28.47 166 P P 20 55 18.2 -0.4
PMBI IAmb IAmb 20 56 13.2
comp=Z,142nm,1.0s
PMBI IAMs_20 IAMs_20 21 06 48.3
comp=Z,14µm,20.0s
IUG luzhnay 28.72 314 *eP* P 20 55 21.0 +0.2
IUG eS S 21 00 13.1 +3.4
IUG eLR LR 21 07 28.0
IUG luzhnay 28.72 314 *eP* P 20 55 20.9 +0.2
IUG eS S 21 00 13.0 +3.4

TAS Tashkent 28.84 312 P P 20 55 21.7 0.0
TAS pmax pmax
comp=Z,280nm,1.2s
TAS Tashkent 28.84 312 P P 20 55 21.7 0.0
KK31 Karatay Array 28.87 316 P P 20 55 21.5 -0.5
KK31 pmax pmax
comp=Z,47nm,1.1s
KK31 Karatay Array 28.87 316 P P 20 55 21.5 -0.5
SEM Semipalatinsk 28.88 336 *eP* P 20 55 20.8 -1.4
SEM eS S 21 00 10.4 -1.9
SEM eLR LR 21 05 32.7
SEM Semipalatinsk 28.88 336 *eP* P 20 55 20.8 -1.4
SEM eS S 21 00 10.4 -1.9
LHSI Lahat 29.09 168 P P 20 55 25.9 +1.8
comp=Z,39nm,1.3s
TPI Tanjungpandan 29.09 160 P P 20 55 25.9 +1.8
comp=Z,914nmcomp=Z,60nm,1.0s
BRLS Borolday 29.27 315 *eS* S 21 00 17.8 -0.2
CN2 Changchun 29.32 43 *eP* P 20 55 29.4 +3.5
CN2 eS S 21 00 14.3 -4.4
CN2 pmax pmax
comp=Z,400nm,6.4s
CN2 LR LR
comp=Z,27µm,17.0s
CN2 LR LR
comp=Z,16µm,17.0s
CN2 LR LR
comp=Z,6µm,14.0s
MNAI Manna 29.51 170 P P 20 55 27.8 -0.1
MNAI IAmb IAmb 20 56 18.0
comp=Z,131nm,1.1s
CIT Chita 29.57 20 *eP* P 20 55 28.9 +0.8
CIT *e* 20 56 18.8
CIT *e* 20 56 33.5
HIA Hailar 29.69 29 P P 20 55 29.1 -0.1
HIA pmax pmax
comp=Z,82nm,1.4s
HIA MLR MLR
comp=Z,5µm,19.0s
HIA Hailar 29.69 29 P P 20 55 29.1 -0.1
KURBB Kurchatov Arra 29.70 335 P P 20 55 28.9 -0.4
comp=Z,6.7nm,0.9s,baz=148,slow=9.0,SNR=50
KURBB PP PnPn 20 56 21.5 -3.0
comp=Z,20nm,0.9s,baz=147,slow=9.3,SNR=6.5
KURBB PcP PcP 20 58 35.3 +2.2
comp=Z,12nm,0.8s,baz=154,slow=1.9,SNR=7.6
KURBB S S 21 00 24.6 -0.1
comp=Z,1.5nm,0.9s,baz=8.6,slow=31,SNR=1.2
KURK Kurchatov 29.74 335 P P 20 55 29.4 -0.1
KURK P P 20 55 29.4 -0.1
KURK Kurchatov 29.74 335 *de* P P 20 55 29.0 -0.6
KURK pmax pmax
comp=Z,51nm,2.5s
KURK Kurchatov 29.74 335 P P 20 55 29.3 -0.3
KURK Kurchatov 29.74 335 PcP PcP 20 55 35.3 +2.1
KURK S S 21 00 24.6 -0.7
KURK Kurchatov 29.74 335 IAMs_20 IAMs_20 21 07 07.2
comp=Z,15µm,22.0s
JNU Nakatsue 29.87 66 P P 20 55 32.5 +1.5
comp=Z,29nm,1.1s,baz=278,slow=1.3,SNR=7.4
JNU LR LR 21 08 49.2
comp=Z,9µm,20.0s,baz=261,slow=39
JNU Nakatsue 29.87 66 P P 20 55 30.9 -0.1
JNU IAMs_20 IAMs_20 21 06 26.8
comp=Z,12µm,20.0s
ZAA0 Zalesovo Array 30.60 345 P P 20 55 37.0 -0.1
ZAA0 IAmb IAmb 20 55 44.3
comp=Z,138nm,1.1s
ZALV Zalesovo Beam 30.60 345 P P 20 55 37.1 0.0
comp=Z,52nm,0.6s,baz=164,slow=10,SNR=170
ZALV PcP PcP 20 58 38.1 +2.7
comp=Z,2.9nm,0.7s,baz=180,slow=4.4,SNR=1.7
SMKI Samarinda 31.38 141 P P 20 55 45.3 +0.9
comp=Z,6µmcomp=Z,66nm,0.6s
KCP Kidapawan 31.51 120 ⇑ *i* P P 20 55 46.5 +0.9
BRZS Berezniki 31.76 328 *eP* P 20 55 47.6 +0.1
comp=Z,77nm,1.2s
BRZS eLR LR 21 08 56.8
BRZS Berezniki 31.76 328 *eP* P 20 55 47.6 +0.1
BRZS pmax pmax
comp=Z,77nm,1.2s
DAV Davao City (W) 31.86 119 ⇑ *i* P P 20 55 49.0 +0.3
BKB Balikpapan 31.87 142 P P 20 55 49.1 +0.4
comp=Z,108nm,0.9s
BKB Balikpapan 31.87 142 P P 20 55 47.5 -1.2
BKB IAmb IAmb 20 55 50.6
comp=Z,119nm,1.1s
HRA Herat 32.26 295 P P 20 55 51.8 -0.5
MDJ Mudanjiang 32.32 45 P P 20 55 55.6 +3.2
MDJ pP sP 20 56 02.9 +3.8
MDJ sP pP 20 56 05.9 +8.8
MDJ PP PnPn 20 57 00.5 +1.7
MDJ S S 21 01 05.9 +0.1
MDJ sS sS 21 01 17.3 +3.8
MDJ pmax pmax
comp=Z,39nm,1.4s
MDJ pmax pmax
comp=Z,310nm,3.5s
MDJ LR LR
comp=Z,26µm,21.4s
MDJ LR LR
comp=Z,13µm,19.9s
MDJ LR LR
comp=Z,17µm,12.9s
MDJ Mudanjiang 32.32 45 P P 20 55 52.7 +0.3
MDJ IAmb IAmb 20 55 56.9
comp=Z,71nm,1.4s
MPSI Mapaga 32.40 136 P P 20 55 54.7 +1.4
comp=Z,378nmcomp=Z,27nm,1.0s
DBJI Dramaga 32.44 163 P P 20 55 53.2 -0.5
comp=Z,23nm,1.2s
MSHR Mys Shultsa 32.51 49 *ce* P P 20 55 58.0 +4.0
MSHR pmax pmax
comp=Z,27nm,1.0s
LEM Lembang 32.94 162 P P 20 55 59.0 +0.8
comp=Z,23nm,1.5s
KBKI Kotabaru 33.18 145 P P 20 56 01.7 +1.5
comp=Z,20nm,1.0s
VLA Vladivostok 33.21 48 *d i* P P 20 56 01.5 +1.4
CISI Cisompet, Garu 33.69 162 IAMs_20 IAMs_20 21 10 50.8
comp=Z,11µm,18.0s
USA0B Ussuriysk Arra 33.70 47 P P 20 56 03.8 -0.6
USA0B pmax pmax
comp=Z,104nm,1.1s
USA0B MLR MLR
comp=Z,7µm,22.0s
USA0B Ussuriysk Arra 33.70 47 P P 20 56 03.8 -0.6
USA0B IAmb IAmb 20 56 09.0
comp=Z,104nm,1.1s
USRK Ussuriysk Ar. 33.70 47 P P 20 56 04.0 -0.4
comp=Z,50nm,0.8s,baz=244,slow=8.3,SNR=35
USRK LR LR 21 09 08.5
comp=Z,7µm,21.3s,baz=244,slow=35
SMRI Semarang 34.04 157 P P 20 56 11.7 +4.1
comp=Z,137nm,0.8s
SMRI Semarang 34.04 157 P P 20 56 07.5 -0.1
SMRI IAmb IAmb 20 56 15.2
comp=Z,111nm,0.9s
APSI Ampana 34.47 135 P P 20 56 13.5 +2.1
comp=Z,1µmcomp=Z,138nm,1.1s
BOD Bodaibo 34.83 15 *eP* P 20 56 14.6 +0.5
BOD pmax pmax
comp=Z,98nm,2.1s
UGM Wanagama 34.87 158 IAMs_20 IAMs_20 21 11 47.3
comp=Z,8µm,18.0s
BVAR Borovoye Array 34.88 331 PcP PcP 20 58 47.6 +0.3
comp=Z,9.6nm,0.7s,baz=144,slow=3.5,SNR=5.7
KMSI Cibinong 34.94 130 P P 20 56 16.8 +1.3
comp=Z,2µmcomp=Z,151nm,0.9s
BRVK Borovoye 34.95 331 P P 20 56 15.5 +0.3
BRVK Borovoye 34.95 331 *d i* P P 20 56 14.9 -0.3
BRVK pmax pmax
comp=Z,45nm,1.3s
BRVK Borovoye 34.95 331 P P 20 56 14.6 -0.6
BRVK IAmb IAmb 20 56 24.0
comp=Z,70nm,1.1s
BRVK Borovoye 34.95 331 IAMs_20 IAMs_20 21 11 26.9
comp=Z,9µm,22.0s
TTSI Tana Toraja 35.00 139 P P 20 56 17.5 +1.5
comp=Z,805nmcomp=Z,77nm,1.0s
INU Inuyama 35.19 63 P P 20 56 15.7 -1.8
INU IAMs_20 IAMs_20 21 09 19.7
comp=Z,11µm,21.0s
LUWI Luwuk 35.30 133 P P 20 56 18.7 +0.1
comp=Z,207nm,1.1s
LUWI Luwuk 35.30 133 P P 20 56 17.9 -0.7

JLN	**Jalan Bani Buh**	**35.33**	**274**	P		**P**		**20 56 18.5**	**-0.3**
WBK	**Wadi Bani Khal**	**35.63**	**275**	P		**P**		**20 56 22.8**	**+1.3**
	SNR=16								
WBK				P		**P**		**20 56 22.8**	**+1.3**
	SNR=16								
WBK				P		**P**		**20 56 22.8**	**+1.3**
	SNR=16								
SPSI	**Sidrap Palu**	**35.71**	**140**	P		**P**		**20 56 23.0**	**+0.9**
	comp=Z,1µmcomp=Z,72nm,1.6s								
WSAR	**Wadi Sarin**	**35.82**	**276**	LR		LR		21 13 55.6	
	comp=Z,5µm,18.9s,baz=107,slow=41								
KLR	**Kul'dur**	**35.83**	**39**	P		**P**		**20 56 23.6**	**+0.8**
	comp=Z,12nm,1.1s,baz=241,slow=9.1,SNR=14								
KLR				S		**S**		**21 01 57.0**	**-2.9**
	comp=Z,1.6nm,0.9s,baz=160,slow=23,SNR=1.2								
KLR				LR		LR		21 11 08.5	
	comp=Z,6µm,21.2s,baz=235,slow=37								
KLR	**Kul'dur**	**35.83**	**39**	*ce*P		**P**		**20 56 23.1**	**+0.3**
ASHT	**Ashkhabad**	**35.88**	**301**	P		**P**		**20 56 22.6**	**-0.8**
ASHT				pmax		pmax			
	comp=Z,155nm,1.1s								
ASHT				MLR		MLR			
	comp=Z,2µm,22.0s								
ASHT	**Ashkhabad**	**35.88**	**301**	P		**P**		**20 56 22.6**	**-0.8**
ASHT				IAmb		IAmb		20 56 29.2	
	comp=Z,155nm,1.1s								
XMIS	**Christmas Isla**	**35.98**	**167**	P		**P**		**20 56 22.7**	**-1.7**
XMIS				IAmb		IAmb		20 57 04.9	
	comp=Z,119nm,1.2s								
GEYT	**Alibeck**	**36.08**	**301**	P		**P**		**20 56 25.6**	**+0.5**
	comp=Z,67nm,0.8s,baz=116,slow=6.8,SNR=67								
GEYT				PcP		**PcP**		**20 58 53.0**	**+1.9**
	comp=Z,12nm,0.7s,baz=149,slow=3.1,SNR=3.3								
GEYT				S		**S**		**21 02 01.0**	**-3.2**
	comp=Z,0.5nm,0.4s,baz=318,slow=26,SNR=0.7								
GEYT				LR		LR		21 13 24.4	
	comp=Z,6µm,19.3s,baz=85,slow=40								
GYA0B	**ALIBECK ARRAY**	**36.08**	**301**	P		**P**		**20 56 25.2**	**0.0**
GYA0B				IAmb		IAmb		20 56 34.6	
	comp=Z,123nm,0.9s								
GYA0B				IAMs_20		IAMs_20		21 13 13.3	
	comp=Z,6µm,18.0s								
ZEA	**Zeya**	**36.17**	**30**	*e*P		**P**		**20 56 28.8**	**+3.1**
ZEA				*e*				20 57 45.0	
ZEA				*e*S		**S**		**21 02 07.0**	**+1.9**
ZEA				pmax		pmax			
	comp=Z,200nm,2.0s								
ZEA				pmax		pmax			
	comp=E,24nm,1.0s								
ZEA				pmax		pmax			
	comp=N,56nm,1.4s								
ZEA				pmax		pmax			
	comp=Z,92nm,1.4s								
ZEA				pmax		pmax			
	comp=Z,700nm,10.0s								
ZEA				pmax		pmax			
	comp=N,400nm,9.0s								
ZEA				pmax		pmax			
	comp=E,400nm,9.0s								
ZEA				smax		smax			
	comp=E,600nm,18.0s								
ZEA				smax		smax			
	comp=N,1µm,16.0s								
ZEA				MLR		MLR			
	comp=Z,12µm,13.0s								
ZEA				MLR		MLR			
	comp=E,8µm,14.0s								
ZEA				MLR		MLR			
	comp=N,8µm,11.0s								
BIDO	**Bidbid**	**36.22**	**276**	P		**P**		**20 56 28.5**	**+2.1**
	SNR=36								
BIDO				P		**P**		**20 56 28.5**	**+2.1**
	SNR=36								
MJB9	**Matsu-Tunnel**	**36.28**	**62**	P		**P**		**20 56 26.6**	**-0.2**
MAJO	**Matsushiro**	**36.28**	**62**	*i* P		**P**		**20 56 26.2**	**-0.7**
MAJO				pmax		pmax			
	comp=Z,88nm,1.6s								
MAJO	**Matsushiro**	**36.28**	**62**	P		**P**		**20 56 26.1**	**-0.8**
MAJO				IAmb		IAmb		20 56 34.3	
	comp=Z,126nm,1.6s								
MAT	**Matsushiro**	**36.28**	**62**	P		**P**		**20 56 25.8**	**-1.1**
MAT				S		**S**		**21 02 06.0**	**-1.3**
MJAR	**Matsushiro Arr**	**36.29**	**62**	P		**P**		**20 56 25.6**	**-1.3**
	comp=Z,12nm,1.0s,baz=270,slow=9.4,SNR=19								
MJAR				PcP		**PcP**		**20 58 54.6**	**+2.8**
	comp=Z,3.2nm,0.9s,baz=103,slow=13,SNR=2.4								
MJAR				LR		LR		21 11 46.6	
	comp=Z,6µm,18.3s,baz=250,slow=37								
SMDO	**Samad**	**36.38**	**276**	P		**P**		**20 56 30.0**	**+2.1**
	SNR=44								
SMDO				P		**P**		**20 56 30.0**	**+2.1**
	SNR=44								
JMDO	**Jabal Madar**	**36.47**	**274**	P		**P**		**20 56 30.8**	**+2.2**
	SNR=16								
JMDO				P		**P**		**20 56 30.8**	**+2.2**
	SNR=16								
KAPI	**Kappang**	**36.56**	**142**	P		**P**		**20 56 29.7**	**+0.3**
KAPI				pmax		pmax			
	comp=Z,39nm,1.3s								
KAPI				MLR		MLR			
	comp=Z,6µm,19.0s								
KAPI	**Kappang**	**36.56**	**142**	P		**P**		**20 56 29.7**	**+0.3**
JAGI	**Jajag, Banyuwa**	**36.77**	**152**	P		P		20 56 37.4	+6.3
JAGI	**Jajag, Banyuwa**	**36.77**	**152**	P		**P**		**20 56 31.2**	**0.0**
COCO	**West Island**	**36.90**	**182**	P		**P**		**20 56 32.3**	**+0.2**
COCO				pmax		pmax			
	comp=Z,150nm,1.2s								
COCO	**West Island**	**36.90**	**182**	P		**P**		**20 56 32.3**	**+0.2**
COCO				IAmb		IAmb		20 56 43.6	
	comp=Z,150nm,1.1s								
MHTO	**MHTO**	**36.90**	**272**	P		**P**		**20 56 33.8**	**+1.5**
	SNR=19								
MHTO				P		**P**		**20 56 33.8**	**+1.5**
	SNR=19								
HOQ	**Hoqain**	**36.95**	**277**	P		**P**		**20 56 34.4**	**+1.7**
	SNR=43								
HOQ				P		**P**		**20 56 34.4**	**+1.7**
	SNR=43								
HOQ				P		**P**		**20 56 34.4**	**+1.7**
	SNR=43								
TEY	**Ternei**	**37.07**	**47**	⇓ *e*P		**P**		**20 56 34.8**	**+1.4**
TEY				pmax		pmax			
	comp=Z,20nm,1.2s								
TEY				MLR		MLR			
	comp=N,900nm,11.0s								
TEY				MLR		MLR			
	comp=Z,900nm,12.0s								
BSY	**Bisya**	**37.21**	**275**	P		**P**		**20 56 36.9**	**+2.0**
	SNR=30								
BSY				P		**P**		**20 56 36.9**	**+2.0**
	SNR=30								
TNTI	**Ternate**	**37.24**	**126**	P		**P**		**20 56 34.6**	**-0.6**
	comp=Z,946nmcomp=Z,76nm,1.2s								
TNTI	**Ternate**	**37.24**	**126**	P		**P**		**20 56 34.3**	**-0.9**
TNTI				IAmb		IAmb		20 56 36.0	
	comp=Z,105nm,1.2s								
JHJ2	**Mitsune**	**37.35**	**68**	P		**P**		**20 56 35.3**	**-0.7**
BANOM	**Banah**	**37.48**	**281**	P		**P**		**20 56 40.2**	**+3.0**
SOHO	**SOHO**	**37.55**	**278**	P		**P**		**20 56 39.3**	**+1.6**
	SNR=28								
SOHO				P		**P**		**20 56 39.3**	**+1.6**
	SNR=28								
MDH	**Madha**	**37.57**	**280**	*i* P		**P**		**20 56 37.8**	**-0.2**
	SNR=8.4								
MDH	**Madha**	**37.57**	**280**	P		**P**		**20 56 39.0**	**+1.1**
	SNR=6.9								
MDH				P		**P**		**20 56 39.0**	**+1.1**
	SNR=6.9								
MDH				P		**P**		**20 56 39.0**	**+1.1**
	SNR=6.9								
SHME	**Shamm**	**37.61**	**281**	*i* P		**P**		**20 56 40.2**	**+1.9**
	SNR=8.0								
MSFE	**Esma-Masafi**	**37.69**	**280**	*i* P		**P**		**20 56 41.8**	**+2.8**
	SNR=9.9								
ARQ	**Araqi**	**37.70**	**276**	P		**P**		**20 56 41.6**	**+2.5**
	SNR=22								
ARQ				P		**P**		**20 56 41.6**	**+2.5**
	SNR=22								
ARQ				P		**P**		**20 56 41.6**	**+2.5**
	SNR=22								
UOSS	**Minazif**	**37.71**	**279**	*i* P		**P**		**20 56 39.2**	**+0.1**
	SNR=10								
UOSS	**Minazif**	**37.71**	**279**	P		**P**		**20 56 39.8**	**+0.6**
UOSS				P		**P**		**20 56 39.8**	**+0.6**
UOSS	**Minazif**	**37.71**	**279**	P		**P**		**20 56 37.9**	**-1.2**
HATD	**Hatta, Dubai**	**37.79**	**279**	*i* P		**P**		**20 56 41.9**	**+2.0**
	SNR=28								
HATD	**Hatta, Dubai**	**37.79**	**279**	P		**P**		**20 56 42.3**	**+2.4**
	SNR=21								
HATD				P		**P**		**20 56 42.3**	**+2.4**
	SNR=21								
HATD				P		**P**		**20 56 42.3**	**+2.4**
	SNR=21								
ASHO	**Ashiyiah**	**37.88**	**279**	*i* P		**P**		**20 56 43.0**	**+2.3**
ASHO	**Ashiyiah**	**37.88**	**279**	P		**P**		**20 56 44.0**	**+3.3**
	SNR=41								
ASHO				P		**P**		**20 56 44.0**	**+3.3**
	SNR=41								
NAZ	**Nazwa, Dubai**	**38.19**	**279**	*i* P		**P**		**20 56 44.6**	**+1.5**
	SNR=8.0								
NAZ	**Nazwa, Dubai**	**38.19**	**279**	P		**P**		**20 56 45.5**	**+2.4**
	SNR=9.1								
NAZ				P		**P**		**20 56 45.5**	**+2.4**
	SNR=9.1								
SANI	**Sanana**	**38.21**	**130**	P		**P**		**20 56 42.4**	**-1.0**
	comp=Z,639nmcomp=Z,20nm,1.0s								
ALNE	**Al Ain**	**38.27**	**278**	*i* P		**P**		**20 56 44.5**	**+0.7**
	SNR=13								
FAQ	**Al Faqa, Dubai**	**38.29**	**279**	P		**P**		**20 56 45.6**	**+1.6**
LBMI	**Labuha**	**38.29**	**127**	P		**P**		**20 56 44.5**	**+0.4**
	comp=Z,2µmcomp=Z,90nm,1.0s								
PLAI	**Plampang**	**38.73**	**148**	P		P		20 56 55.5	+7.8
AJN	**Ajban**	**38.86**	**279**	*i* P		**P**		**20 56 50.7**	**+1.9**
	SNR=10								
AJN	**Ajban**	**38.86**	**279**	P		**P**		**20 56 50.0**	**+1.1**
	SNR=9.9								
AJN				P		**P**		**20 56 50.0**	**+1.1**
	SNR=9.9								
SHAO	**Shalim**	**39.82**	**269**	P		**P**		**20 56 59.4**	**+2.5**
NLAI	**Namlea**	**39.83**	**131**	P		**P**		**20 56 59.5**	**+2.5**
	comp=Z,36nm,1.1s								
AKTO	**Aktyubinsk**	**39.86**	**320**	S		**S**		**21 02 58.1**	**-2.9**
	comp=Z,2.1nm,0.9s,baz=75,slow=4.3,SNR=1.5								
WBSI	**Waikabubak, Su**	**40.23**	**146**	P		**P**		**20 57 01.1**	**+0.8**
	comp=Z,1µmcomp=Z,126nm,0.9s								
EDFI	**Ende, Flores**	**40.71**	**142**	P		**P**		**20 57 04.9**	**+0.6**
	comp=Z,26nm,1.2s								
ERM	**Erimo**	**40.91**	**54**	P		**P**		**20 57 05.1**	**-0.5**
ERM				pmax		pmax			
	comp=Z,193nm,1.1s								
ERM	**Erimo**	**40.91**	**54**	P		**P**		**20 57 05.0**	**-0.5**
ERM				IAmb		IAmb		20 57 16.5	
	comp=Z,193nm,1.1s								
ERM	**Erimo**	**40.91**	**54**	IAMs_20		IAMs_20		21 16 51.4	
	comp=Z,6µm,18.0s								
AAI	**Ambon**	**40.91**	**130**	P		**P**		**20 57 07.8**	**+1.9**
	comp=Z,1µmcomp=Z,151nm,1.1s								
ASAJ	**Asahikawa**	**40.92**	**51**	P		**P**		**20 57 06.6**	**+0.9**
	comp=Z,49nm,0.8s,baz=269,slow=8.6,SNR=3.5								
ASAJ				S		**S**		**21 03 16.4**	**-0.6**
	comp=Z,5.6nm,1.0s,baz=258,slow=24,SNR=1.9								
MMRI	**Maumere**	**40.92**	**142**	P		P		20 57 11.1	+5.1
	comp=Z,85nm,0.9s								
MMRI	**Maumere**	**40.92**	**142**	P		**P**		**20 57 04.7**	**-1.3**
MMRI				IAmb		IAmb		20 58 25.2	
	comp=Z,213nm,1.4s								
MMRI				IAMs_20		IAMs_20		21 15 03.2	
	comp=Z,7µm,19.0s								
JKA	**Kamikawa-asahi**	**40.92**	**51**	P		**P**		**20 57 06.6**	**+0.9**
JKA						**S**		**21 03 16.4**	**-0.7**
MSAI	**Masohi**	**41.19**	**129**	P		P		20 57 14.2	+6.0
RBK	**Rabkut**	**41.27**	**268**	P		**P**		**20 57 10.9**	**+2.0**
	SNR=25								
WHFO	**Wadi Hawf**	**41.54**	**269**	P		**P**		**20 57 12.5**	**+1.4**
	SNR=14								
WHFO				P		**P**		**20 57 12.5**	**+1.4**
	SNR=14								
WHFO				P		**P**		**20 57 12.5**	**+1.4**
	SNR=14								
SVE	**Sverdlovsk**	**41.65**	**330**	*ce*P		**P**		**20 57 11.9**	**+0.4**
SVE				*e*S		**S**		**21 03 29.8**	**+2.3**
SVE				*e*				21 06 25.6	
SVE				pmax		pmax			
	comp=Z,125nm,1.2s								
SVE				MLR		MLR			
	comp=Z,8µm,22.0s								
YSS	**Yuzh-Sakhalins**	**41.73**	**47**	*e*P		**P**		**20 57 15.5**	**+3.2**
YSS				*e**PP		**sP**		**20 57 26.5**	**+7.4**
YSS				*e*				20 58 49.1	
YSS				*e*S		**S**		**21 03 29.5**	**+0.5**
YSS				*e*SS		**SS**		**21 06 35.4**	**+0.8**
YSS				pmax		pmax			
	comp=Z,80nm,1.3s								
YSS				MLR		MLR			
	comp=Z,10µm,13.0s								
YSS				MLR		MLR			
	comp=E,7µm,12.0s								
YSS	**Yuzh-Sakhalins**	**41.73**	**47**	P		**P**		**20 57 11.2**	**-1.1**
YSS				IAmb		IAmb		20 57 20.4	
	comp=Z,160nm,1.3s								
YSS				IAMs_20		IAMs_20		21 13 11.0	
	comp=Z,7µm,22.0s								
ABTO	**Aybut**	**42.14**	**269**	P		**P**		**20 57 17.3**	**+1.2**
	SNR=19								
ABTO				P		**P**		**20 57 17.3**	**+1.2**
	SNR=19								
ABTO				P		**P**		**20 57 17.3**	**+1.2**
	SNR=19								
ARU	**Arti**	**42.40**	**329**	*d* *i* P		**P**		**20 57 17.3**	**-0.3**
ARU								20 58 55.7	
ARU								20 59 11.6	
ARU				PPP		PPP		20 59 24.9	
ARU				S		**S**		**21 03 37.5**	**-1.1**
ARU				SS		**SS**		**21 06 46.8**	**-0.7**
ARU								21 07 13.2	
ARU				SSS		SSS		21 07 32.3	
ARU				pmax		pmax			
	comp=Z,121nm,1.4s								
ARU				MLR		MLR			
	comp=Z,8µm,17.0s								
ARU	**Arti**	**42.40**	**329**	P		**P**		**20 57 16.2**	**-1.4**
ARU				IAmb		IAmb		20 57 21.4	
	comp=Z,120nm,1.3s								
YAK	**Yakutsk**	**42.83**	**21**	P		**P**		**20 57 21.3**	**+0.3**
	comp=Z,29nm,0.6s,baz=210,slow=1.8,SNR=14								
YAK				S		**S**		**21 03 41.1**	**-3.5**
	comp=Z,2.4nm,0.3s,baz=6.5,slow=2.7,SNR=1.3								
YAK	**Yakutsk**	**42.83**	**21**	*e*P		**P**		**20 57 20.7**	**-0.3**
YAK				*e*				20 58 59.3	
YAK				*e*				20 59 13.9	
YAK				*e*PPP		PPP		20 59 31.3	
YAK				*e*S		**S**		**21 03 42.1**	**-2.6**
YAK				*e*SS		**SS**		**21 06 48.3**	**-7.4**
YAK				*e*				21 07 20.4	
YAK				*e*SSS		SSS		21 07 44.1	
YAK				pmax		pmax			
	comp=Z,27nm,1.2s								
YAK				pmax		pmax			
	comp=N,12nm,1.2s								
YAK				pmax		pmax			
	comp=E,9.0nm,1.3s								
YAK				pmax		pmax			
	comp=Z,27nm,1.3s								
YAK				pmax		pmax			
	comp=N,48nm,1.6s								
YAK				pmax		pmax			
	comp=E,37nm,1.5s								
YAK				smax		smax			
	comp=N,90nm,2.8s								
YAK				smax		smax			
	comp=E,31nm,2.3s								
YAK				MLR		MLR			
	comp=Z,2µm,14.0s								
YAK				MLR		MLR			
	comp=N,750nm,13.0s								
YAK				MLR		MLR			
	comp=E,2µm,15.0s								
YAK	**Yakutsk**	**42.83**	**21**	P		**P**		**20 57 19.7**	**-1.2**
YAK				IAmb		IAmb		20 57 25.9	
	comp=Z,82nm,0.9s								
TYV	**Tymovskoe**	**42.88**	**41**	*e*P		**P**		**20 57 26.0**	**+4.4**
TYV				*e*S		**S**		**21 03 53.4**	**+7.6**
TYV				pmax		pmax			
	comp=Z,500nm,2.2s								
TYV				pmax		pmax			
	comp=Z,71nm,1.4s								
TYV				smax		smax			
	comp=N,800nm,9.7s								
TYV				MLR		MLR			
	comp=E,7µm,13.0s								
TYV				MLR		MLR			
	comp=Z,9µm,13.0s								
SOEI	**Soe**	**42.99**	**140**	P		**P**		**20 57 22.6**	**-0.4**
	comp=Z,2µmcomp=Z,309nm,1.0s								
SOEI	**Soe**	**42.99**	**140**	P		**P**		**20 57 20.7**	**-2.3**
BATI	**Baumata**	**43.01**	**141**	P		**P**		**20 57 26.2**	**+3.2**
	comp=Z,31nm,1.0s								
YUK	**Yuzh-Kuril'sk**	**43.21**	**51**	*d* *i* P		**P**		**20 57 19.9**	**-4.5**
YUK				*e*S		**S**		**21 03 49.3**	**-1.5**
YUK				*e*SSS		SSS		21 07 42.4	
YUK				MLR		MLR			
	comp=Z,3µm,17.0s								
YUK				MLR		MLR			
	comp=N,6µm,18.0s								
FAKI	**Fak Fak**	**43.32**	**125**	P		**P**		**20 57 25.4**	**-0.2**
	comp=N,769nmcomp=N,81nm,1.0s								
FAKI	**Fak Fak**	**43.32**	**125**	P		**P**		**20 57 23.4**	**-2.2**
FAKI				IAmb		IAmb		20 57 31.2	
	comp=Z,68nm,0.9s								
SOCY	**Socotra**	**43.34**	**261**	P		**P**		**20 57 26.2**	**+0.3**
	SNR=6.1								
SOCY	**Socotra**	**43.34**	**261**	P		**P**		**20 57 23.9**	**-1.9**
SOCY				IAmb		IAmb		20 57 29.1	
	comp=Z,268nm,1.6s								
RKPI	**Ransiki, Papua**	**43.88**	**121**	P		**P**		**20 57 30.7**	**+0.6**
	comp=Z,2µmcomp=Z,101nm,0.9s								
AKT	**Akhty**	**44.49**	**305**	*e*P		**P**		**20 57 34.6**	**-0.3**
AKT				*e*				20 59 16.6	
AKT				*e*				20 59 21.5	
AKT				*e*S		**S**		**21 04 13.7**	**+3.8**
AKT				pmax		pmax			
	comp=Z,82nm,1.1s								
MAK	**Makhachkala**	**44.82**	**307**	*e*P		**P**		**20 57 34.7**	**-2.6**
MAK				*e*				20 59 19.0	
MAK				*e*S		**S**		**21 04 11.9**	**-2.4**
MAK				*e*SS		**SS**		**21 07 35.1**	**-0.1**
MAK				pmax		pmax			
	comp=Z,106nm,1.1s								
MAK				MLR		MLR			
	comp=Z,5µm,14.0s								
SAUI	**Saumlaki**	**46.13**	**131**	IAMs_20		IAMs_20		21 18 58.7	
	comp=Z,5µm,20.0s								
TBLG	**Delisi**	**46.74**	**305**	P		**P**		**20 57 51.6**	**-1.0**
TBLG				pmax		pmax			
	comp=Z,72nm,1.4s								
TBLG	**Delisi**	**46.74**	**305**	P		**P**		**20 57 51.5**	**-1.0**
TBLG				IAmb		IAmb		20 58 04.2	
	comp=Z,72nm,1.4s								
ZEI	**Tsey**	**47.44**	**306**	*e*P		**P**		**20 57 56.0**	**-2.2**
ZEI				pmax		pmax			
	comp=Z,74nm,1.0s								
AKH	**Akhalkalaki**	**47.66**	**304**	⇓ P		**P**		**20 58 01.0**	**+1.1**
AKH	**Akhalkalaki**	**47.66**	**304**	P		**P**		**20 57 59.8**	**-0.2**
AKH				pmax		pmax			
	comp=Z,129nm,1.2s								
AKH				MLR		MLR			
	comp=Z,4µm,22.0s								
AKH	**Akhalkalaki**	**47.66**	**304**	P		**P**		**20 57 59.8**	**-0.2**
NCK	**Nalchik**	**47.71**	**307**	⇑ *e*P		**P**		**20 57 59.5**	**-0.6**
NCK				pmax		pmax			
	comp=Z,102nm,1.7s								
SMPI	**Sarmi**	**47.74**	**118**	P		**P**		**20 58 01.3**	**+0.7**
	comp=Z,815nmcomp=Z,42nm,1.1s								
KIRV	**Kirov**	**47.77**	**328**	P		**P**		**20 58 00.8**	**+0.5**
KIRV				S		**S**		**21 04 59.7**	**+3.5**
	comp=Z,2.5nm,0.6s,baz=329,slow=20,SNR=6.6								
KBZ	**Khabaz**	**48.24**	**307**	P		**P**		**20 58 04.5**	**+0.3**
	comp=Z,6.7nm,1.0s,baz=78,slow=9.3,SNR=25								
KBZ				LR		LR		21 20 46.5	
	comp=Z,4µm,21.4s,baz=86,slow=39								
GOF	**Gofitskoye**	**48.25**	**309**	⇑ *e*P		**P**		**20 58 03.8**	**-0.4**
GOF				pmax		pmax			
	comp=Z,193nm,1.4s								
NEY	**Neytrino**	**48.33**	**307**	*i* P		**P**		**20 58 06.0**	**+0.9**
NEY				pmax		pmax			
	comp=Z,13nm,0.8s								
KIV	**Kislovodsk**	**48.41**	**308**	*i* P		**P**		**20 58 06.0**	**+0.4**
	SNR=27								
KIV	**Kislovodsk**	**48.41**	**308**	*c* *i* P		**P**		**20 58 04.9**	**-0.7**
KIV				*e*				20 59 28.7	
KIV				*e*				20 59 55.2	
KIV				*e*PPP		PPP		21 00 46.1	
KIV				pmax		pmax			
	comp=Z,181nm,1.7s								
KIV				MLR		MLR			
	comp=Z,4µm,17.0s								
KIV	**Kislovodsk**	**48.41**	**308**	P		**P**		**20 58 05.1**	**-0.5**
KIV				IAMs_20		IAMs_20		21 21 31.5	
	comp=Z,4µm,18.0s								
BCA	**Borcka**	**49.07**	**304**	⇑ P		**P**		**20 58 11.0**	**+0.3**
GENI	**Genyem**	**49.27**	**118**	P		**P**		**20 58 13.1**	**+0.7**
	comp=Z,2µmcomp=Z,175nm,1.0s								
MTN	**Manton Dam**	**49.59**	**135**	P		**P**		**20 58 13.3**	**-1.5**
JAY	**Jayapura**	**49.66**	**117**	P		**P**		**20 58 17.5**	**+2.1**
	comp=Z,13nm,1.0s								
TIXI	**Tiksi**	**49.91**	**12**	P		**P**		**20 58 15.5**	**-1.0**
	comp=Z,11nm,0.7s,baz=214,slow=5.5,SNR=47								
TIXI	**Tiksi**	**49.91**	**12**	*d* *i* P		**P**		**20 58 15.3**	**-1.2**
TIXI				pmax		pmax			
	comp=Z,102nm,1.3s								
TIXI	**Tiksi**	**49.91**	**12**	P		**P**		**20 58 15.0**	**-1.5**
TIXI				IAmb		IAmb		20 58 21.9	
	comp=Z,88nm,1.2s								
VRH	**Novokhopyorsk**	**49.94**	**317**	*e*P		**P**		**20 58 16.5**	**-0.6**
VRH				*e*S		**S**		**21 05 22.8**	**-4.2**
VRH				pmax		pmax			
	comp=Z,150nm,1.1s								
VRH				smax		smax			
	comp=N,240nm,9.4s								
VRH				MLR		MLR			
	comp=Z,4µm,17.0s								
MA2	**Magadan**	**50.23**	**32**	P		**P**		**20 58 17.9**	**-1.3**
	comp=Z,47nm,0.8s,baz=256,slow=8.5,SNR=28								
MA2	**Magadan**	**50.23**	**32**	*ce*P		**P**		**20 58 19.9**	**+0.7**
MA2				pmax		pmax			
	comp=Z,137nm,1.2s								
MA2	**Magadan**	**50.23**	**32**	P		**P**		**20 58 19.3**	**+0.1**
MA2				IAmb		IAmb		20 58 24.5	
	comp=Z,129nm,1.1s								
KNRA	**Kununurra**	**50.33**	**140**	P		**P**		**20 58 20.1**	**-0.2**
KNRA				IAmb		IAmb		20 58 29.5	
	comp=Z,64nm,1.1s								
MBWA	**Marble Bar**	**50.47**	**153**	P		**P**		**20 58 20.0**	**-1.4**
MBWA				IAmb		IAmb		20 58 27.1	
	comp=Z,61nm,0.9s								
SOC	**Sochi**	**50.53**	**307**	*d* *i* P		**P**		**20 58 22.2**	**+0.5**
SOC				*e*				21 00 14.3	
SOC				*e*PPP		PPP		21 01 12.2	
SOC				*e*S		**S**		**21 05 35.1**	**-0.4**
SOC				*e*SS		**SS**		**21 09 08.1**	**-1.3**
SOC				*e*SSS		SSS		21 10 41.3	
SOC				pmax		pmax			
	comp=Z,99nm,1.

comp=Z,2µm,13.0s
SEY Seymchan 52.12 28 P **P** **20 58 33.8 +0.5**
comp=Z,12nm,1.0s,baz=264,slow=8.2,SNR=22
ANN Anapa 52.21 308 *e*P **P** **20 58 32.3 -1.9**
ANN *e*S **S** **21 05 53.9 -4.6**
ANN *e*SS **SS** **21 09 38.5 +2.7**
ANN pmax pmax
comp=Z,41nm,1.0s
ANN MLR MLR
comp=Z,4µm,16.0s
PEA0B Petropavlovsk- 52.43 41 P **P** **20 58 34.7 -1.1**
PEA0B pmax pmax
comp=Z,56nm,1.3s
PEA0B MLR MLR
comp=Z,7µm,19.0s
PEA0B Petropavlovsk- 52.43 41 P **P** **20 58 34.7 -1.1**
PETK Petropavlovsk- 52.43 41 P **P** **20 58 35.4 -0.4**
comp=Z,18nm,1.1s,baz=90,slow=0.6,SNR=7.0
PETK LR LR 21 20 43.1
comp=Z,6µm,18.5s,baz=255,slow=36
GAZ Gaziantep 52.62 299 P **P** **20 58 36.6 -0.9**
PET Petropavlovsk 52.99 41 *e*P **P** **20 58 42.9 +3.1**
PET *e*S **S** **21 06 07.2 -1.8**
PET *e*SS **SS** **21 09 43.3 -4.5**
PET pmax pmax
comp=Z,33nm,1.2s
PET MLR MLR
comp=Z,5µm,14.0s
PET MLR MLR
comp=Z,5µm,14.0s
PET Petropavlovsk 52.99 41 P **P** **20 58 40.1 +0.2**
MOS Moscow 53.12 322 *e*P **P** **20 58 38.4 -2.4**
MOS *e* 21 00 44.6
MOS *e*S **S** **21 06 07.4 -3.3**
MOS pmax pmax
comp=Z,261nm,1.4s
MOS pmax pmax
comp=Z,800nm,2.3s
MOS MLR MLR
comp=Z,4µm,19.0s
KLMR Klimovskoe 53.25 329*c* *i*P **P** **20 58 41.4 -0.2**
KLMR *e*S **S** **21 06 12.0 -0.2**
KLMR *e*SS **SS** **21 09 53.8 +2.1**
KLMR pmax pmax
comp=Z,346nm,1.4s
KLMR MLR MLR
comp=Z,5µm,19.0s
KLMR Klimovskoe 53.25 329⇑ *i*P **P** **20 58 41.5 -0.2**
KLMR *i* P **P** **20 58 41.5 -0.2**
KLMR *i* P **P** **20 58 41.5 -0.2**
KLMR AMP 20 58 50.5
comp=Z,346nm,1.4s
KLMR *e*S **S** **21 06 12.1 -0.2**
KLMR *e*S **S** **21 06 12.1 -0.2**
KLMR *e*SS **SS** **21 09 53.8 +2.1**
KLMR *e*SS **SS** **21 09 53.8 +2.1**
KLMR LQ LQ 21 17 14.2
KLMR LQ LQ 21 17 14.2
KLMR LR LR 21 20 50.5
KLMR AMP 21 22 52.8
comp=Z,5µm,19.0s
ASF Jabal al Asfar 53.47 293 S **S** **21 06 18.5 +2.1**
comp=Z,0.4nm,0.3s,baz=82,slow=9.5,SNR=1.8
OBN Obninsk 53.62 321*d* *i*P **P** **20 58 43.5 -0.9**
OBN *e* 20 59 48.8
OBN *e* 21 00 40.5
OBN *e*PPP PPP 21 01 54.5
OBN pmax pmax
comp=Z,205nm,1.6s
OBN MLR MLR
comp=Z,4µm,19.0s
OBN Obninsk 53.62 321 P **P** **20 58 43.3 -1.1**
OBN IAMs_20 IAMs_20 21 21 55.4
comp=Z,6µm,22.0s
ATD Arta Tunnel 53.64 266 P **P** **20 58 48.0 +2.7**
SNR=10
ATD Arta Tunnel 53.64 266 P **P** **20 58 45.0 -0.3**
ATD IAmb IAmb 20 58 50.6
comp=Z,136nm,1.5s
HWQ Hawqa 53.96 295 *e*P **P** **20 58 47.6 +0.2**
BHL Bhannes 54.25 295 *e*P **P** **20 58 49.3 -0.3**
SIM Simferopol' 54.57 309*ce*P **P** **20 58 50.7 -0.9**
SIM *i* S **S** **21 06 38.0 +7.3**
SIM pmax pmax
comp=Z,35nm,1.0s
SIM MLR MLR
comp=Z,1µm,14.0s
TMCR Tamitsa 54.81 332 *e*P **P** **20 58 52.5 -0.5**
TMCR *e*S **S** **21 06 36.7 +3.5**
TMCR pmax pmax
comp=Z,153nm,0.9s
ILGA Ilgaz 55.03 304 P **P** **20 58 54.1 -1.2**
ILGA IAmb IAmb 20 58 58.8
comp=Z,122nm,1.2s
BR131 Keskin Array S 55.20 302 P **P** **20 58 55.5 -0.9**
SNR=34
BR131 Keskin Array S 55.20 302 P **P** **20 58 54.6 -1.8**
BR131 pmax pmax
comp=Z,76nm,1.5s
BR131 Keskin Array S 55.20 302 P **P** **20 58 54.6 -1.8**
BR131 IAmb IAmb 20 58 59.5
comp=Z,76nm,1.4s
BRTR Keskin Array B 55.20 302 P **P** **20 58 55.7 -0.7**
comp=Z,10nm,0.7s,baz=115,slow=8.5,SNR=27
BRTR LR LR 21 26 08.1
comp=Z,1µm,19.0s,baz=72,slow=40
ANTO Ankara 55.84 302⇑P **P** **20 59 00.4 -0.5**
ANTO Ankara 55.84 302 P **P** **20 59 00.3 -0.6**
ANTO pmax pmax
comp=Z,290nm,1.7s
ANTO Ankara 55.84 302 P **P** **20 59 00.3 -0.6**
BR231 Keskin MP Arra 55.85 302 P **P** **20 58 59.4 -1.7**
CSS Mathiatis 56.00 297 P **P** **20 59 00.5 -1.6**
MORW Morawa 56.44 161 P **P** **20 59 05.8 +0.7**
MORW IAmb IAmb 20 59 13.8
comp=Z,93nm,1.2s
MORW IAMs_20 IAMs_20 21 23 32.5
comp=Z,4µm,21.0s
WB0 Warramunga Arr 56.86 138 P **P** **20 59 07.3 -1.0**
WB0 IAmb IAmb 20 59 09.5
comp=Z,53nm,0.9s
WRAB Tennant Creek 56.96 138 P **P** **20 59 08.7 -0.3**
WRAB pmax pmax
comp=Z,57nm,1.0s
WRAB MLR MLR
comp=Z,2µm,20.0s
WRAB Tennant Creek 56.96 138 P **P** **20 59 08.7 -0.3**
WRAB IAmb IAmb 20 59 10.4
comp=Z,57nm,1.0s
WRA Warramunga Arr 56.96 138 P **P** **20 59 08.6 -0.4**
comp=Z,31nm,0.8s,baz=327,slow=7.6,SNR=106
WRA LR LR 21 25 57.7
comp=Z,2µm,18.7s,baz=310,slow=38
WRA Warramunga Arr 56.96 138 *i* P **P** **20 59 09.0 0.0**
WRA pmax pmax
comp=Z,31nm,0.9s
WB2 Warramunga Arr 56.97 138 P **P** **20 59 08.2 -0.9**
WB2 IAmb IAmb 20 59 10.4
comp=Z,53nm,0.9s
MDUB Mudurnu 56.99 303 P **P** **20 59 07.5 -1.6**
WR0 Warramunga Arr 57.10 138 P **P** **20 59 08.8 -1.1**
WR0 IAmb IAmb 20 59 16.3
comp=Z,58nm,1.1s
LVZ Lovozero 57.15 336 P **P** **20 59 07.9 -1.9**
LVZ pmax pmax
comp=Z,57nm,1.1s
LVZ MLR MLR
comp=Z,5µm,19.0s
LVZ Lovozero 57.15 336 P **P** **20 59 07.9 -1.9**
LVZ IAmb IAmb 20 59 37.1
comp=Z,57nm,1.1s
LVZ IAMs_20 IAMs_20 21 24 27.8
comp=Z,5µm,19.0s
APA Apatity 57.53 336⇑ *i*P **P** **20 59 08.7 -3.7**
APA pmax pmax
comp=Z,15nm,1.3s
APA MLR MLR
comp=Z,4µm,14.0s
AKASG Malin Array Be 57.77 316 P **P** **20 59 12.9 -1.4**
comp=Z,28nm,0.9s,baz=75,slow=7.1,SNR=29
AKASG LR LR 21 27 45.7
comp=Z,4µm,19.0s,baz=75,slow=40
AKASG Malin Array Be 57.77 316 *i* P **P** **20 59 13.1 -1.3**
AKASG pmax pmax
comp=Z,33nm,0.9s
AKBB Malin Array Si 57.77 316 P **P** **20 59 12.4 -2.0**
AKBB pmax pmax
comp=Z,75nm,1.2s
AKBB MLR MLR
comp=Z,4µm,20.0s
AKBB Malin Array Si 57.77 316 P **P** **20 59 12.4 -2.0**
AKBB IAmb IAmb 20 59 16.8
comp=Z,74nm,1.2s
AKBB IAMs_20 IAMs_20 21 27 24.3
comp=Z,4µm,20.0s
ISP Isparta 57.84 300 P **P** **20 59 12.9 -2.3**
ISP pmax pmax
comp=Z,118nm,1.7s
ISP Isparta 57.84 300 P **P** **20 59 12.9 -2.3**
ISP IAmb IAmb 20 59 18.3
comp=Z,118nm,1.7s
KIS Kishinev 58.18 311 *i*P **P** **20 59 19.0 +1.7**
comp=Z,170nm,2.0s
KIS Kishinev 58.18 311 *e*PP PP 21 02 08.0 +42
KIS Kishinev 58.18 311 *e*PS **PnS** **21 07 33.0 +3.0**
KIS *e*SSS SSS 21 13 00.0
KIS *e*LQ LQ 21 20 08.0
comp=Z,3µm,20.0s
KIS LRM MLR 21 28 44.0
comp=Z,2µm,14.0s
KIS Kishinev 58.18 311⇑ *i*P **P** **20 59 19.0 +1.7**
KIS *e*S **S** **21 07 16.0 -2.5**
KIS *e*PS **PnS** **21 07 33.0 +3.0**
KIS pmax pmax
comp=Z,170nm,2.0s
KIS MLR MLR
comp=Z,2µm,14.0s
KIS MLR MLR
comp=N,4µm,15.0s
MILM Milestii Mici 58.19 311⇑P **P** **20 59 15.9 -1.4**
TLCR 58.31 309⇑P **P** **20 59 17.3 -0.9**
SORM Soroca 58.43 313⇓P **P** **20 59 17.8 -1.2**
FURI Furi 58.44 265 P **P** **20 59 18.2 -1.7**
FURI IAmb IAmb 20 59 26.2
comp=Z,68nm,1.2s
ELL Elmali 58.48 299 P **P** **20 59 18.2 -1.5**
ELL pmax pmax
comp=Z,550nm,1.1s
ELL MLR MLR
comp=Z,5µm,22.0s
ELL Elmali 58.48 299 P **P** **20 59 18.2 -1.5**
ELL IAMs_20 IAMs_20 21 28 30.2
comp=Z,5µm,22.0s
MICGM Minsk 58.58 320⇑ *e*P **P** **20 59 22.0 +2.0**
MICGM PM 20 59 23.0
comp=Z,0.5nm,2.0s
MICGM PM 20 59 23.0
comp=E,0.5nm,1.5s
MICGM *e*S **S** **21 07 24.0 +0.5**
MICGM *e*SS **SS** **21 11 14.0 -1.9**
KIS *e*SSS SSS 21 13 48.0
MICGM *e*LQ LQ 21 20 30.0
MICGM LQM 21 22 04.0
comp=N,12nm,20.0s
MICGM *e*LR LR 21 23 10.0
MICGM LRM MLR 21 28 16.0
comp=Z,6.8nm,15.0s
MNK Minsk 58.58 320⇑ *e*P **P** **20 59 22.0 +2.0**
MNK *e*S **S** **21 07 24.0 +0.5**
MNK *e*SS **SS** **21 11 14.0 -1.9**
MNK pmax pmax
comp=Z,480nm,2.0s
MNK pmax pmax
comp=E,460nm,1.5s
MNK MLR MLR
comp=Z,7µm,15.0s
LEOM Leova 58.61 311⇓P **P** **20 59 19.4 -0.8**
TOPG Topolog 58.64 309⇓P **P** **20 59 21.5 +0.9**
TIRR Tirgusor 58.65 308 P **P** **20 59 19.0 -1.6**
TIRR pmax pmax
comp=Z,227nm,1.5s
TIRR MLR MLR
comp=Z,6µm,20.0s
TIRR Tirgusor 58.65 308 P **P** **20 59 19.0 -1.6**
COEN Coen 58.67 126 P **P** **20 59 19.3 -1.8**
COEN IAmb IAmb 20 59 54.3
comp=Z,54nm,1.6s
CFR Carcaliu 58.79 309⇑P **P** **20 59 20.8 -0.8**
PMG Port Moresby 58.88 119 P **P** **20 59 21.9 -0.7**
PMG pmax pmax
comp=Z,102nm,0.9s
PMG Port Moresby 58.88 119 P **P** **20 59 21.9 -0.7**
PSN Preselentsi 58.89 307 *i* P **P** **20 59 23.2 +0.9**
TLBR Topalu 58.91 308⇑P **P** **20 59 22.2 -0.2**
VASR Vaslui 58.91 311⇑P **P** **20 59 21.8 -0.6**
VARL Varlezi 58.93 310⇑P **P** **20 59 22.1 -0.4**
HARR Harsova 58.98 309⇓P **P** **20 59 22.3 -0.6**
BILL Bilibino 59.06 24*ce*P **P** **20 59 23.4 +0.3**
BILL *e* 21 00 11.8
BILL *e* 21 01 31.0
BILL *e*PPP PPP 21 02 54.7
BILL pmax pmax
comp=Z,106nm,1.7s
BILL MLR MLR
comp=Z,4µm,16.0s
BILL Bilibino 59.06 24 P **P** **20 59 22.6 -0.5**
BILL IAmb IAmb 20 59 27.9
comp=Z,123nm,1.5s
BILL IAMs_20 IAMs_20 21 26 10.6
comp=Z,4µm,19.0s
TUDR 59.08 310⇑P **P** **20 59 24.2 +0.6**
ICOR Ion Corvin 59.12 308⇑P **P** **20 59 23.7 -0.2**
FETY Fethiye 59.15 299 P **P** **20 59 21.4 -2.9**
NACGM Naroch 59.22 321 *e*P **P** **20 59 25.0 +0.6**
NACGM *e*PPP PPP 21 03 02.0
NACGM *e*S **S** **21 07 26.0 -5.8**
NACGM *e*SS **SS** **21 11 29.0 +3.1**
NACGM *e*SSS SSS 21 14 20.0
NACGM *e*LQ LQ 21 20 25.0
NACGM *e*LR LR 21 22 34.0
NACGM LRM MLR 21 27 00.0
comp=Z,19nm,18.0s
MANT Manisa 59.27 301 P **P** **20 59 22.6 -2.7**
MANT IAMs_20 IAMs_20 21 28 10.0
comp=Z,5µm,20.0s
VSU Vasula 59.31 325 *e*P **P** **20 59 24.6 -0.3**
VSU Vasula 59.31 325 *i* P **P** **20 59 24.5 -0.4**
VSU pmax pmax
comp=Z,90nm,0.7s
ODBI Odobesti 59.49 310⇓P **P** **20 59 26.9 +0.5**
IIGN Ignalina 59.54 321 *e*P **P** **20 59 26.2 -0.4**
AS31 Alice Springs 59.58 141 P **P** **20 59 25.7 -1.6**
ASAR Alice Springs 59.58 141 P **P** **20 59 27.2 -0.1**
comp=Z,16nm,0.9s,baz=322,slow=6.7,SNR=114
ISAL Salakas 59.60 321 *e*P **P** **20 59 26.8 -0.2**
TESR Tescani 59.70 311⇑P **P** **20 59 27.2 -0.7**
VRI Vrincioaia 59.71 310⇑P **P** **20 59 28.2 +0.2**
BISRR Bisoca 59.75 310⇑P **P** **20 59 28.9 +0.5**
PLOR Plostina 59.76 310⇓P **P** **20 59 28.6 +0.2**
FIA1 FINESS Array S 59.77 328 P **P** **20 59 27.5 -0.5**
FINES FINESS Array B 59.77 328 P **P** **20 59 27.4 -0.6**
comp=Z,14nm,0.9s,baz=101,slow=9.9,SNR=26
FINES LR LR 21 27 08.1
comp=Z,6µm,19.0s,baz=88,slow=38
PRAR RASCA 59.91 312⇑P **P** **20 59 28.3 -1.1**
BIZ Bicaz 60.04 311⇑P **P** **20 59 29.5 -0.7**
RABL Rabaul 60.09 111 P **P** **20 59 29.6 -1.4**
RAZG Razgrad 60.12 307⇓P **P** **20 59 30.3 -0.5**
SULR 60.17 309⇑P **P** **20 59 31.3 +0.2**
JMB Yambol 60.20 306 P **P** **20 59 31.4 0.0**
KEV Kevo 60.25 338 P **P** **20 59 30.5 -0.7**
KEV pmax pmax
comp=Z,122nm,1.6s
KEV MLR MLR
comp=Z,2µm,22.0s
KEV Kevo 60.25 338 P **P** **20 59 30.5 -0.7**
KEV IAmb IAmb 20 59 36.6
comp=Z,122nm,1.6s
MLR Muntele Rosu 60.29 310⇓P **P** **20 59 32.1 -0.1**
MLR Muntele Rosu 60.29 310 P **P** **20 59 30.2 -2.0**
MLR pmax pmax
comp=Z,465nm,1.9s
MLR MLR
comp=Z,6µm,21.0s
MLR Muntele Rosu 60.29 310 P **P** **20 59 30.2 -2.0**
PATS Pohnpei 60.34 96 P **P** **20 59 32.3 -0.4**
NWAO Narrogin (SRO) 60.40 161 P **P** **20 59 32.4 -0.3**
NWAO pmax pmax
comp=Z,106nm,1.5s
NWAO MLR MLR
comp=Z,3µm,20.0s
NWAO Narrogin (SRO) 60.40 161 P **P** **20 59 32.4 -0.3**
NWAO IAmb IAmb 20 59 40.7
comp=Z,106nm,1.4s
NWAO IAMs_20 IAMs_20 21 26 16.5
comp=Z,3µm,20.0s
BURAR Bucovina Array 60.57 312⇓P **P** **20 59 33.1 -0.9**
BUR08 Bucovina Ar. S 60.58 312 P **P** **20 59 32.8 -1.3**
DOPR Dopca 60.63 310⇑P **P** **20 59 33.8 -0.4**
SMG Samos 60.74 301 P **P** **20 59 35.3 +0.1**
ARCES ARCESS Array B 60.74 337 P **P** **20 59 33.0 -1.6**
comp=Z,2.7nm,0.6s,baz=83,slow=7.6,SNR=17
ARCES LR LR 21 26 46.5
comp=Z,3µm,19.0s,baz=100,slow=37
ARCES ARCESS Array B 60.74 337 P **P** **20 59 33.0 -1.6**
ARE0 ARCESS Array S 60.74 337 P **P** **20 59 34.8 +0.2**
ARE0 ARCESS Array S 60.74 337 *e*P **P** **20 59 34.6 0.0**
ENEZ Enez 60.77 304 P **P** **20 59 33.7 -1.6**
EZN Ezine 60.78 303 P **P** **20 59 36.0 +0.7**
ALN Alexandroupoli 60.82 304 P **P** **20 59 33.1 -2.5**
ALN Alexandroupoli 60.82 304 P **P** **20 59 33.6 -2.0**
ALN pmax pmax
comp=Z,88nm,1.7s
ALN Alexandroupoli 60.82 304 P **P** **20 59 33.6 -2.0**
ALN IAmb IAmb 20 59 38.5
comp=Z,88nm,1.7s
PABE Paberze 60.83 321 *e*P **P** **20 59 34.8 -0.6**
KARP Karpathos 60.88 298 P **P** **20 59 34.5 -1.7**
ZIMR 60.93 308⇑P **P** **20 59 36.4 +0.2**
COPA Copaceanca 60.97 308⇑P **P** **20 59 36.8 +0.2**
LVV L'vov 61.15 315 *e*P **P** **20 59 36.7 -1.0**
LVV *e* 21 01 51.9
LVV *e*S **S** **21 07 50.6 -6.1**
LVV *e* 21 08 10.1
LVV pmax pmax
comp=Z,200nm,1.5s
LVV MLR MLR
comp=N,1µm,15.0s
LVV MLR MLR
comp=E,2µm,15.0s
LVV MLR MLR
comp=Z,2µm,15.0s
RDO Rodhopi 61.16 305 P **P** **20 59 37.0 -0.9**
ARCR ARCALIA 61.21 312⇑P **P** **20 59 38.7 +0.5**
ARR Arges 61.23 310⇓P **P** **20 59 37.5 -0.9**
CHOS Chios Island 61.23 302 P **P** **20 59 37.7 -0.8**
SIGR SIGRI 61.24 303 P **P** **20 59 36.9 -1.6**
SMTH Samothraki Isl 61.28 304 P **P** **20 59 37.0 -1.8**
SUW Suwalki 61.35 320 *e*pP **P** **20 59 41.2 +2.2**
SUW *e*S **S** **21 07 58.4 -0.8**
SUW LMZ LR 21 26 37.6
comp=Z,4.6nm,21.8s
SUW Suwalki 61.35 320 P **P** **20 59 37.8 -1.2**
SUW pmax pmax
comp=Z,189nm,1.1s
SUW MLR MLR
comp=Z,4µm,18.0s
SUW Suwalki 61.35 320 P **P** **20 59 37.8 -1.2**
SUW IAMs_20 IAMs_20 21 28 25.0
comp=Z,4µm,18.0s
KTK1 Kautokeino 61.49 337 *e*P **P** **20 59 39.3 -0.4**
PLVB Pleven 61.50 307⇑P **P** **20 59 39.6 -0.6**
VLAD Vladila 61.57 308⇑P **P** **20 59 40.1 -0.6**
AMGA Amorgos Island 61.64 300 P **P** **20 59 41.6 +0.3**
SLIT Slitere, Latvi 61.67 324 *e*P **P** **20 59 39.9 -1.2**
RZN Rozhen 61.69 305 *i* P **P** **20 59 42.6 +0.8**
ZKR Zakros 61.72 298 P **P** **20 59 39.6 -2.3**
CJR Cluj-Napoca 61.77 311⇑P **P** **20 59 42.2 +0.2**
THAS Thassos island 61.86 304 P **P** **20 59 40.7 -2.0**
PBUR Paburge 61.95 322 *e*P **P** **20 59 42.6 -0.4**
SANT Santorini 62.07 299 P **P** **20 59 42.1 -2.1**
MPEP Malo Peshtene 62.14 307 *i* P **P** **20 59 44.8 +0.3**
NPS Neapolis 62.17 298 P **P** **20 59 45.0 +0.1**
TRPA Tarpa 62.31 313⇑P **P** **20 59 45.3 -0.2**
SMY Shemya 62.33 42 P **P** **20 59 44.1 -1.5**
SMY pmax pmax
comp=Z,120nm,1.2s
SMY MLR MLR
comp=Z,2µm,18.0s
SMY Shemya 62.33 42 P **P** **20 59 44.1 -1.5**
DRGR 62.37 311⇑P **P** **20 59 45.7 -0.4**
UZH Uzhgorod 62.41 314*c* *i*P **P** **20 59 47.0 +0.8**
UZH *i* 20 59 52.2
UZH *i* S **S** **21 08 13.4 +0.7**
UZH MLR MLR
comp=N,2µm,18.0s
UZH MLR MLR
comp=E,1µm,18.0s
UZH MLR MLR
comp=Z,600nm,18.0s
MMB Musomiste 62.44 305 *i* P **P** **20 59 46.9 +0.3**
FORT Forrest 62.46 151 P **P** **20 59 47.4 +0.8**
FORT IAmb IAmb 20 59 56.5
comp=Z,61nm,1.1s
FORT IAMs_20 IAMs_20 21 31 11.5
comp=Z,3µm,20.0s
OUR Ouranopolis 62.47 304 P **P** **20 59 45.7 -1.0**
GZR Gura Zlata 62.52 310⇓P **P** **20 59 46.4 -0.7**
PUNG Punghina 62.58 309⇓P **P** **20 59 48.5 +1.1**
SRS Serrai 62.62 305 P **P** **20 59 48.3 +0.5**
VTS Vitosha 62.62 307⇑P **P** **20 59 47.6 -0.3**
VTS Vitosha 62.62 307 *i* P **P** **20 59 49.1 +1.1**
VTS Vitosha 62.62 307 P **P** **20 59 46.5 -1.5**
VTS pmax pmax
comp=Z,339nm,2.0s
VTS MLR MLR
comp=Z,2µm,19.0s
VTS Vitosha 62.62 307 P **P** **20 59 46.5 -1.5**
SERI Serifos 62.68 300 P **P** **20 59 47.7 -0.6**
KYMI Kymi, Euboea I 62.69 302 P **P** **20 59 44.7 -3.6**
IDI Anoyia 62.75 298 P **P** **20 59 46.0 -2.8**
IDI Anoyia 62.75 298⇑P **P** **20 59 49.4 +0.6**
IDI Anoyia 62.75 298 P **P** **20 59 48.7 -0.1**
AOS Alonnisos 62.76 303 P **P** **20 59 47.0 -1.7**
PAIG Paliouri 62.77 304 P **P** **20 59 49.3 +0.5**
HERR Herculane 62.85 309⇓P **P** **20 59 49.2 0.0**
PLG Polygyros 62.86 304 P **P** **20 59 48.2 -1.2**
CRVS Cervenica-Dubn 62.92 314 *e*P **P** **20 59 53.3 +3.6**
CRVS Cervenica-Dubn 62.92 314 *e*P **P** **20 59 53.3 +3.6**
DION Dionisos Attik 62.93 302 P **P** **20 59 47.9 -2.0**
PTL Penteli 62.98 302 P **P** **20 59 49.9 -0.4**
TRO Tromso 63.05 337 *e*P **P** **20 59 49.6 -0.5**
ATHU Athens Univers 63.06 301 P **P** **20 59 51.0 +0.2**
MRKA Markates 63.07 302 P **P** **20 59 50.2 -0.6**
HORT Hortiatis 63.08 304 P **P** **20 59 48.5 -2.4**
VLY Voula,Athens 63.08 301 P **P** **20 59 47.9 -3.0**
KNT Kendrikon 63.12 305 P **P** **20 59 47.2 -4.0**
SIRR Siria 63.16 311⇑P **P** **20 59 51.3 0.0**
XOR Xorichti 63.24 303 P **P** **20 59 51.9 -0.1**
VAM Vamos 63.27 299 P **P** **20 59 49.5 -2.7**
BZS Buzias 63.29 310⇑P **P** **20 59 51.4 -0.7**
VAY Valandovo 63.34 305 *i* P **P** **20 59 53.8 +1.3**
VAY Valandovo 63.34 305 *i* P **P** **20 59 53.8 +1.3**
WAKE Wake Island 63.35 80 P **P** **20 59 52.7 -0.2**
MDVR Moldovita 63.36 309⇑P **P** **20 59 52.4 -0.2**
VILL Villia 63.39 302 P **P** **20 59 48.3 -4.7**
IMMV Iera Moni Meta 63.44 299 P **P** **20 59 51.9 -1.4**
GVD Gavdhos 63.49 298 P **P** **20 59 50.3 -3.3**
DID Didima 63.58 301 P P 20 59 48.8 -5.5
NIE Niedzica 63.61 315 *e*P **P** **20 59 54.2 0.0**
NIE *e*pP **pP** **20 59 57.1 -2.1**
NIE *e*S **S** **21 08 29.0 +1.2**
NIE LMZ LR 21 26 12.5
comp=Z,2.0nm,27.2s
KECS Kecovo 63.62 314 *e*P **P** **20 59 56.9 +2.6**
KECS pmax pmax
comp=Z,28nm,1.5s
KECS Kecovo 63.62 314 *e*P **P** **20 59 56.9 +2.6**
LIT Litokhoron 63.63 304 P **P** **20 59 52.2 -2.3**
LIT pmax pmax
comp=Z,52nm,1.1s
LIT Litokhoron 63.63 304 P **P** **20 59 52.2 -2.3**
LIT IAmb IAmb 20 59 57.4
comp=Z,52nm,1.1s
LTK Loutraki 63.68 302 P **P** **20 59 51.0 -3.9**
LODK Lodwar 63.72 261 P **P** **20 59 57.4 +1.8**
SNR=18
AXAR Agios Charalam 63.77 303 P **P** **20 59 54.9 -0.6**
OJC Ojcow 63.81 316 *e*P **P** **20 59 54.8 -0.7**
OJC *e*pP **pP** **20 59 57.5 -3.0**
OJC *e*S **S** **21 08 30.1 -0.2**

OJC LMZ LR 21 27 24.1
comp=Z,3.6nm,26.6s
OJC Ojcow 63.81 316 P **P** **20 59 54.2 -1.3**
OJC pmax pmax
comp=Z,47nm,1.0s
OJC Ojcow 63.81 316 P **P** **20 59 54.2 -1.3**
OJC IAmb IAmb 20 59 60.0
comp=Z,48nm,1.0s
ANKY Antikythira Is 63.89 299 P **P** **20 59 52.0 -4.2**
AGG Agios Georgios 63.97 303 P **P** **20 59 54.3 -2.5**
AGG Agios Georgios 63.97 303 P **P** **20 59 54.0 -2.8**
AGG pmax pmax
comp=Z,63nm,1.1s
AGG Agios Georgios 63.97 303 P **P** **20 59 54.0 -2.8**
AGG IAmb IAmb 20 59 59.0
comp=Z,63nm,1.1s
VLI Veliai 63.98 300 P **P** **20 59 52.5 -4.4**
SKO Skopje 64.05 306 *i* P **P** **20 59 55.9 -1.3**
SKO Skopje 64.05 306 *i* P **P** **20 59 55.9 -1.3**
SPA0 Spitsbergen Ar 64.05 347 P **P** **20 59 55.4 -1.3**
SPA0 Spitsbergen Ar 64.05 347 *eP* **P** **20 59 56.6 -0.1**
SPITS Spitsbergen Ar 64.05 347 P **P** **20 59 56.0 -0.7**
comp=Z,17nm,0.9s,baz=90,slow=8.8,SNR=13
SPITS Spitsbergen Ar 64.05 347 P **P** **20 59 56.0 -0.7**
PSZ Piszkesteto 64.10 313 ⇑P **P** **20 59 57.3 -0.2**
PSZ Piszkesteto 64.10 313 P **P** **20 59 56.6 -0.9**
PSZ pmax pmax
comp=Z,192nm,2.0s
PSZ MLR MLR
comp=Z,4μm,19.0s
PSZ Piszkesteto 64.10 313 P **P** **20 59 56.6 -0.9**
PSZ IAMs_20 IAMs_20 21 30 50.6
comp=Z,4μm,19.0s
THL Klokotos Trika 64.10 304 P **P** **20 59 56.8 -0.8**
KMBO Kilima Mbogo 64.11 256 P **P** **21 00 00.1 +1.8**
comp=Z,14nm,1.0s,baz=47,slow=7.4,SNR=21
KMBO LR LR 21 27 10.0
comp=Z,2μm,21.5s,baz=56,slow=35
KMBO Kilima Mbogo 64.11 256 *i* P **P** **21 00 00.5 +2.2**
SNR=12
KMBO Kilima Mbogo 64.11 256 P **P** **21 00 00.8 +2.5**
KMBO P **P** **21 00 00.8 +2.5**
KMBO Kilima Mbogo 64.11 256 P **P** **20 59 57.5 -0.8**
KMBO IAmb IAmb 21 00 03.1
comp=Z,72nm,1.4s
LANS Liptovska Anna 64.18 314 *eP* **P** **20 59 59.5 +1.5**
LANS pmax pmax
comp=Z,15nm,1.6s
LANS Liptovska Anna 64.18 314 *eP* **P** **20 59 59.5 +1.5**
HSPB Hornsund (broa 64.19 346 *eP* **P** **20 59 56.9 -0.6**
HSPB *epP* **pP** **21 00 00.0 -2.4**
HSPB *eS* **S** **21 08 35.8 +1.7**
HSPB LMZ LR 21 28 41.3
comp=Z,3.5nm,23.7s
HSPB Hornsund (broa 64.19 346 *eP* **P** **20 59 57.2 -0.3**
KALE Kalithea 64.24 302 P P 20 59 51.5 -7.2
VLX Vlachokerasia 64.28 301 P **P** **20 59 55.9 -3.0**
TRIZ Trizonia 64.30 302 P **P** **20 59 54.3 -4.6**
KLV Kalavryta, Ach 64.31 302 P P 20 59 53.8 -5.3
FNA Florina 64.33 305 P **P** **20 59 57.1 -2.1**
FNA pmax pmax
comp=Z,26nm,0.9s
FNA Florina 64.33 305 P **P** **20 59 57.0 -2.1**
FNA IAmb IAmb 21 00 05.1
comp=Z,26nm,0.9s
ANX Ano Chora 64.37 303 P **P** **20 59 59.3 -0.2**
STEI Steigen 64.42 335 *eP* **P** **20 59 59.0 -0.2**
NEST Nestorio 64.65 305 P **P** **21 00 01.3 0.0**
DRO Drossia 64.67 302 P **P** **20 59 57.6 -3.8**
ITM Ithomi 64.67 301 P **P** **20 59 58.5 -3.0**
ITM Ithomi 64.67 301 P **P** **20 59 58.4 -3.0**
DIVS Divibare 64.69 309 P **P** **20 59 59.4 -2.1**
OHR Ohrid 64.69 305 *i* P **P** **21 00 02.2 +0.7**
OHR Ohrid 64.69 305 *i* P **P** **21 00 02.2 +0.7**
VYHS Vyhne 64.70 314 *eP* **P** **21 00 01.1 -0.4**
VYHS pmax pmax
comp=Z,102nm,1.8s
VYHS Vyhne 64.70 314 *eP* **P** **21 00 01.0 -0.4**
AMT Artemida-Makis 64.76 301 P P 20 59 55.3 -6.7
PYL PYLOS 64.88 301 P **P** **20 59 58.3 -4.5**
CTAO Charters Tower 64.90 129 P **P** **21 00 02.3 -0.7**
CTAO pmax pmax
comp=Z,36nm,1.1s
CTAO MLR MLR
comp=Z,2μm,21.0s
CTAO Charters Tower 64.90 129 P **P** **21 00 02.3 -0.7**
CTAO IAmb IAmb 21 00 09.7
comp=Z,36nm,1.1s
OKC Ostrava-Krasne 64.92 315 *eP* **P** **21 00 02.9 +0.1**
OKC *eS* **S** **21 08 42.6 -1.4**
OKC MLR MLR
comp=Z,2μm,14.4s
OKC Ostrava-Krasne 64.92 315 *eP* **P** **21 00 02.9 +0.1**
OKC *eS* **S** **21 08 42.6 -1.4**
OKC AMS AMS 21 32 50.0
comp=Z,2μm,14.4s
KBS Kingsbay 64.95 348 P **P** **21 00 01.1 -1.4**
KBS pmax pmax
comp=Z,79nm,1.6s
KBS MLR MLR
comp=Z,4μm,20.0s
KBS Kingsbay 64.95 348 P **P** **21 00 01.1 -1.4**
KBS IAmb IAmb 21 00 08.0
comp=Z,79nm,1.6s
KBS Kingsbay 64.95 348 IAMs_20 IAMs_20 21 31 28.1
comp=Z,4μm,20.0s
KBS Kingsbay 64.95 348 *eP* **P** **21 00 02.0 -0.5**
GKP Gorka Klasztor 64.95 319 *eP* **P** **21 00 01.5 -1.4**
GKP *epP* **pP** **21 00 05.0 -2.8**
GKP LMZ LR 21 28 54.0
comp=Z,4.5nm,22.4s
MORC Moravsky Berou 65.32 315 *eP* **P** **21 00 05.2 -0.3**
MORC *eS* **S** **21 08 46.7 -2.3**
MORC Moravsky Berou 65.32 315 ⇓P **P** **21 00 05.2 -0.3**
MORC Moravsky Berou 65.32 315 P **P** **21 00 04.2 -1.3**
MORC pmax pmax
comp=Z,64nm,1.2s
MORC MLR MLR
comp=Z,2μm,18.0s
MORC Moravsky Berou 65.32 315 P **P** **21 00 04.2 -1.3**
MORC IAmb IAmb 21 00 09.3
comp=Z,64nm,1.2s
MORC IAMs_20 IAMs_20 21 32 19.9
comp=Z,2μm,18.0s
TIR Tirane 65.33 306 P **P** **21 00 02.7 -2.9**
TIR pmax pmax
comp=Z,73nm,1.2s
TIR Tirane 65.33 306 P **P** **21 00 02.7 -2.9**
TIR IAmb IAmb 21 00 25.5
comp=Z,73nm,1.2s
JAVC Velka Javorina 65.40 314 *eP* **P** **21 00 06.8 +0.8**
JAVC *eS* **S** **21 08 54.6 +4.6**
PDG Podgorica 65.55 307 ⇑P **P** **21 00 05.9 -1.1**
PDG Podgorica 65.55 307 P **P** **21 00 05.4 -1.6**
PDG IAmb IAmb 21 00 09.5
comp=Z,69nm,1.1s
KEK Kerkira 65.74 304 P **P** **21 00 04.9 -3.4**
MODS Modra-Piesok 65.74 314 *eP* **P** **21 00 07.3 -0.9**
MODS pmax pmax
comp=Z,102nm,1.8s
MODS Modra-Piesok 65.74 314 *eP* **P** **21 00 07.3 -0.9**
KRLC Kraliky 65.75 316 *eP* **P** **21 00 08.1 -0.1**
KRLC MLR MLR
comp=Z,3μm,16.0s
KRLC Kraliky 65.75 316 *eP* **P** **21 00 08.1 -0.1**
KRLC AMS AMS 21 30 50.0
comp=Z,3μm,16.0s
ABPO Ambohimpanom 65.88 233 P **P** **21 00 07.3 -2.3**
ABPO pmax pmax
comp=Z,56nm,1.4s
ABPO MLR MLR
comp=Z,3μm,20.0s
ABPO Ambohimpanom 65.88 233 P **P** **21 00 07.3 -2.3**
ABPO IAmb IAmb 21 00 21.3
comp=Z,56nm,1.4s
ABPO Ambohimpanom 65.88 233 IAMs_20 IAMs_20 21 27 17.7
comp=Z,3μm,20.0s
ZST Bratislava 65.89 314 *eP* **P** **21 00 08.2 -0.9**
ZST Bratislava 65.89 314 *eP* **P** **21 00 08.2 -0.9**
KSP Ksiaz 65.92 317 *eP* **P** **21 00 09.5 +0.2**
KSP *eS* **S** **21 08 54.9 -1.3**
KSP LMZ LR 21 29 08.2
comp=Z,2.9nm,23.7s
DPC Dobruska-Polom 65.99 316 *eP* **P** **21 00 10.0 +0.2**
DPC MLR MLR
comp=Z,5μm,16.1s
DPC Dobruska-Polom 65.99 316 *eP* **P** **21 00 10.0 +0.2**
DPC AMS AMS 21 31 00.0
comp=Z,5μm,16.1s
VRAC Vranov 66.01 315 *eP* **P** **21 00 10.1 +0.2**
VRAC *eS* **S** **21 08 55.4 -2.0**
VRAC Vranov 66.01 315 ⇑P **P** **21 00 10.4 +0.5**
OSTC Ostas 66.02 316 *eP* **P** **21 00 09.8 -0.1**
OSTC *eS* **S** **21 08 58.1 +0.6**
OSTC AMS AMS 21 31 00.0
comp=Z,5μm,16.2s
NSS Namsos 66.07 332 *eP* **P** **21 00 08.7 -1.2**
CHVC Chvalec 66.12 316 *eP* **P** **21 00 10.6 0.0**
CHVC AMS AMS 21 31 00.0
comp=Z,4μm,16.3s
UPC Upice 66.16 316 *eP* **P** **21 00 11.0 +0.2**
UPC MLR MLR
comp=Z,5μm,16.0s
UPC Upice 66.16 316 *eP* **P** **21 00 11.0 +0.2**
UPC AMS AMS 21 31 00.0
comp=Z,5μm,16.0s
KRUC Moravsky 66.19 315 *eP* **P** **21 00 11.0 0.0**
KRUC *eS* **S** **21 09 00.1 +0.6**
SCTE Santa Cesarea 66.65 305 P **P** **21 00 11.4 -2.7**
SCTE IAmb IAmb 21 00 15.6
comp=Z,73nm,1.1s
NC405 NORSAR Array S 66.70 328 P **P** **21 00 12.9 -1.2**
TREC Trest 66.73 315 *eP* **P** **21 00 15.1 +0.6**
TREC *eS* **S** **21 09 06.4 +0.3**
TREC MLR MLR
comp=Z,5μm,18.6s
TREC Trest 66.73 315 *eP* **P** **21 00 15.1 +0.6**
TREC *eS* **S** **21 09 06.4 +0.3**
TREC AMS AMS 21 33 00.0
comp=Z,5μm,18.6s
CONA Conrad Observa 66.76 314 *i* pP **P** **21 00 14.7 -0.1**
comp=Z,113nm,1.6s,SNR=61
NC303 NORSAR Array S 66.85 328 P **P** **21 00 14.4 -0.6**
NC602 NORSAR Array S 66.85 328 P **P** **21 00 14.0 -1.0**
NB201 NORSAR Array S 66.91 328 P **P** **21 00 14.1 -1.3**
NB2 NORSAR Subarra 66.95 328 P **P** **21 00 14.7 -1.0**
comp=Z,188nm,2.0s,baz=79,slow=6.5
NB2 NORSAR Subarra 66.95 328 P **P** **21 00 14.7 -1.0**
baz=79,slow=6.5
NOA NORSAR Array B 66.95 328 P **P** **21 00 14.8 -1.0**
comp=Z,10nm,0.7s,baz=81,slow=6.3,SNR=25
NOA PP **PP** **21 02 45.5 +2.7**
comp=Z,4.1nm,0.9s,baz=79,slow=8.3,SNR=3.4
NOA LR LR 21 32 21.2
comp=Z,2μm,21.9s,baz=85,slow=39
TBLU Trondheim 67.01 331 *eP* **P** **21 00 15.3 -0.7**
RGN Rugen 67.02 321 *eP* **P** **21 00 17.7 +1.5**
RGN Rugen 67.02 321 *eP* **P** **21 00 16.2 0.0**
comp=Z,248nm,1.3s,baz=77,slow=6.2
RGN Rugen 67.02 321 P **P** **21 00 14.7 -1.4**
PVCC Panska Ves 67.06 316 *eP* **P** **21 00 17.1 +0.6**
PVCC *eS* **S** **21 09 09.5 -0.5**
PVCC MLR MLR
comp=Z,3μm,14.9s
PVCC Panska Ves 67.06 316 *eP* **P** **21 00 17.1 +0.6**
PVCC *eS* **S** **21 09 09.5 -0.5**
PVCC AMS AMS 21 31 30.0
comp=Z,3μm,14.9s
ARSA Arzberg 67.13 313 *i* pP **P** **21 00 17.8 +0.7**
comp=Z,45nm,1.6s,SNR=10
NC204 NORSAR Array S 67.13 328 P **P** **21 00 15.9 -0.9**
NAO01 NORSAR Array S 67.14 328 P **P** **21 00 15.3 -1.6**
RUE Ruedersdorf 67.15 319 *eP* **P** **21 00 17.1 +0.1**
RUE Ruedersdorf 67.15 319 *eP* **P** **21 00 16.6 -0.4**
comp=Z,379nm,1.9s,baz=77,slow=6.2
NBO00 NORSAR Array S 67.16 328 P **P** **21 00 15.7 -1.3**
PRU Pruhonice 67.19 316 *eP* **P** **21 00 17.4 0.0**
PRU *eS* **S** **21 09 11.3 -0.2**
PRU MLR MLR
comp=Z,5μm,16.3s
PRU Pruhonice 67.19 316 *eP* **P** **21 00 17.4 0.0**
PRU *eS* **S** **21 09 11.3 -0.2**
PRU AMS AMS 21 31 50.0
comp=Z,5μm,16.3s
PRA Prague 67.24 316 *eP* **P** **21 00 17.8 +0.1**
PRA MLR MLR
comp=Z,2μm,16.1s
PRA Prague 67.24 316 *eP* **P** **21 00 17.8 +0.1**
PRA AMS AMS 21 31 40.0
comp=Z,2μm,16.1s
BRG Berggiesshubel 67.38 317 *eP* **P** **21 00 18.1 -0.5**
comp=Z,162nm,1.8s,baz=77,slow=6.2
BRG Berggiesshubel 67.38 317 *eP* **P** **21 00 18.5 0.0**
BRG S **S** **21 09 16.0 +2.2**
BRG SS **SS** **21 13 40.0 +6.7**
BRG pmax pmax
comp=Z,10.0nm,0.9s
BRG MLR MLR
comp=N,7μm,21.4s
BRG MLR MLR
comp=E,3μm,22.1s
BRG MLR MLR
comp=Z,3μm,21.1s
SOKA Soboth 67.58 312 *i* pP **P** **21 00 19.6 -0.4**
comp=Z,53nm,1.5s,SNR=35
PBCC Pribram 67.60 316 *eP* **P** **21 00 19.9 -0.1**
BOJS Bojanci 67.70 311 *i* P **P** **21 00 20.1 -0.6**
BOJS *e* 21 00 22.7
BOJS *i* S **S** **21 09 15.3 -2.5**
FBE Freiberg 67.73 317 *eP* **P** **21 00 20.7 -0.1**
comp=Z,244nm,1.8s,baz=77,slow=6.2
MATE Matera 67.82 306 ⇓P **P** **21 00 22.2 +0.7**
MOA Molln 67.83 314 *i* pP **P** **21 00 21.0 -0.5**
comp=Z,31nm,0.8s,SNR=24
CLL Collm 67.87 318 *i* P **P** **21 00 21.7 +0.1**
comp=Z,110nm,1.8s
CLL *e* 21 00 42.0
CLL *e* 21 00 51.0
CLL *eP* **PP** **21 02 48.0 -3.0**
CLL *eS* **S** **21 09 19.0 -0.6**
CLL *e* 21 10 23.0
CLL *eSS* **SS** **21 13 42.0 +1.2**
CLL *e* 21 14 42.0
CLL *eSSS* SSS 21 16 57.0
CLL *eSSSS* 21 17 57.0
CLL LmV 21 33 00.0
comp=Z,4μm,19.7s
CLL Collm 67.87 318 *eP* **P** **21 00 21.8 +0.2**
comp=Z,110nm,1.8s,baz=77,slow=6.2
CLL Collm 67.87 318 *i* P **P** **21 00 21.7 +0.1**
CLL *e* 21 00 42.0
CLL *eS* **S** **21 09 19.0 -0.6**
CLL pmax pmax
comp=Z,110nm,1.8s
CLL MLR MLR
comp=Z,4μm,19.7s
CLL Collm 67.87 318 P **P** **21 00 21.2 -0.4**
CLL IAmb IAmb 21 00 26.1
comp=Z,103nm,1.7s
OBKA Obir 67.94 312 *i* pP **P** **21 00 21.9 -0.4**
comp=Z,33nm,1.2s,SNR=8.7
BBOO Buckleboo 67.95 146 P **P** **21 00 20.9 -1.4**
BBOO IAmb IAmb 21 00 31.0
comp=Z,73nm,1.4s
BBOO IAMs_20 IAMs_20 21 31 22.2
comp=Z,2μm,19.0s
GEC2 GERESS Array S 67.97 315 *eP* **P** **21 00 22.0 -0.5**
comp=Z,170nm,1.6s,baz=77,slow=6.2
GEC2 GERESS Array S 67.97 315 P **P** **21 00 21.3 -1.2**
GERES GERESS Array B 67.97 315 P **P** **21 00 22.1 -0.4**
comp=Z,14nm,0.9s,baz=76,slow=5.6,SNR=52
GERES LR LR 21 34 28.2
comp=Z,4μm,18.1s,baz=82,slow=40
KHC Kasperske Hory 67.98 315 *eP* **P** **21 00 21.9 -0.6**
KHC *e* 21 00 33.5
KHC *eS* **S** **21 09 21.2 0.0**
KHC MLR MLR
comp=Z,6μm,18.8s
KHC Kasperske Hory 67.98 315 *eP* **P** **21 00 21.9 -0.6**
KHC *ex* x 21 00 33.5
KHC *eS* **S** **21 09 21.2 0.0**
KHC AMS AMS 21 33 40.0
comp=Z,6μm,18.8s
KHC Kasperske Hory 67.98 315 P **P** **21 00 21.6 -0.8**
KHC IAmb IAmb 21 00 26.3
comp=Z,47nm,1.8s
KHC IAMs_20 IAMs_20 21 33 59.4
comp=Z,2μm,19.0s
KONO Kongsberg 68.00 327 P **P** **21 00 21.3 -1.0**
KONO pmax pmax
comp=Z,87nm,1.6s
KONO MLR MLR
comp=Z,3μm,21.0s
KONO Kongsberg 68.00 327 P **P** **21 00 21.3 -1.0**
KONO IAmb IAmb 21 00 26.7
comp=Z,87nm,1.6s
KONO Kongsberg 68.00 327 IAMs_20 IAMs_20 21 32 02.7
comp=Z,3μm,21.0s
ADK Adak 68.05 42 P **P** **21 00 21.6 -1.1**
ADK pmax pmax
comp=Z,13nm,0.9s
ADK MLR MLR
comp=Z,3μm,20.0s
ADK Adak 68.05 42 P **P** **21 00 21.6 -1.1**
ADK Adak 68.05 42 IAMs_20 IAMs_20 21 29 39.6
comp=Z,3μm,20.0s
LJU Ljubljana 68.07 312 *i* P **P** **21 00 22.5 -0.5**
LJU *i* 21 00 25.1
TIP Timpagrande 68.15 304 P **P** **21 00 21.6 -2.1**
TIP IAmb IAmb 21 00 26.3
comp=Z,90nm,1.5s
SGRT San Giovanni R 68.25 307 P **P** **21 00 22.2 -2.1**
MOL Molde 68.36 330 *eP* **P** **21 00 24.8 +0.3**
TANN Tannenbergstha 68.40 317 *eP* **P** **21 00 24.6 -0.5**
comp=Z,286nm,1.9s,baz=77,slow=6.2
WET Wettzell 68.43 315 *eP* **P** **21 00 24.9 -0.4**
comp=Z,52nm,1.2s,baz=77,slow=6.2
NKC Novy Kostel 68.45 317 *eP* **P** **21 00 25.4 +0.1**
NKC MLR MLR
comp=Z,3μm,17.7s
NKC Novy Kostel 68.45 317 *eP* **P** **21 00 25.4 +0.1**
NKC AMS AMS 21 32 20.0
comp=Z,3μm,17.7s
WERN Wernitzgruen 68.48 317 *eP* **P** **21 00 25.2 -0.4**
comp=Z,153nm,1.9s,baz=77,slow=6.2
GUNZ Gunzen 68.49 317 *eP* **P** **21 00 25.2 -0.4**
comp=Z,48nm,1.1s,baz=77,slow=6.2
MYKA Terra Mystica 68.52 313 *i* pP **P** **21 00 26.0 +0.1**
comp=Z,16nm,0.9s,SNR=6.2
CADS Cadrg 68.56 312 *eP* **P** **21 00 25.0 -1.1**
CADS *e* 21 17 11.9
PLN Plauen 68.57 317 *eP* **P** **21 00 25.6 -0.5**
comp=Z,133nm,1.9s,baz=77,slow=6.2
KBA Koelnbreinsper 68.61 313 *epP* **P** **21 00 25.6 -1.0**
comp=Z,19nm,0.8s,SNR=9.2
NEUB Neuenburg 68.64 318 *eP* **P** **21 00 25.9 -0.6**
comp=Z,276nm,2.0s,baz=77,slow=6.2
NEUB *epP* **pP** **21 00 29.2 -2.3**
ROTZ Rotzenmuhle 68.71 316 *eP* **P** **21 00 26.8 -0.1**
comp=Z,234nm,1.8s,baz=77,slow=6.2
MANZ Manzenberg 68.72 316 *eP* **P** **21 00 27.0 -0.1**
comp=Z,121nm,1.6s,baz=77,slow=6.2
RJOB Jochberg 68.82 314 *eP* **P** **21 00 26.9 -0.8**
comp=Z,54nm,1.1s,baz=77,slow=6.2
MOX Moxa 68.87 317 *eP* **P** **21 00 27.5 -0.5**
comp=Z,105nm,1.7s,baz=77,slow=6.2
MOX *epP* **pP** **21 00 30.9 -2.0**
MOX *eL* L 21 33 53.1
comp=Z,3μm,21.1s
BSEG Bad Segeberg 68.87 321 *eP* **P** **21 00 28.0 +0.2**
comp=Z,193nm,1.6s,baz=77,slow=6.2
MUD Monsted U'grnd 68.92 324 *i* P **P** **21 00 31.4 +3.3**
MUD Monsted U'grnd 68.92 324 *i* P **P** **21 00 31.4 +3.3**
NOR Nord 68.97 352 *i* P **P** **21 00 26.8 -1.2**
NOR pmax pmax
comp=Z,14nm,1.0s
NOR Nord 68.97 352 *i* P **P** **21 00 26.8 -1.2**
comp=Z,14nm,1.0s
CEL Celeste 69.04 303 P **P** **21 00 28.0 -1.3**
ASSE Asse, Remlinge 69.09 319 *eP* **P** **21 00 28.7 -0.5**
comp=Z,162nm,1.9s,baz=77,slow=6.2
SKMB Sankelmark Bun 69.19 322 *eP* **P** **21 00 30.6 +0.8**
comp=Z,405nm,1.9s,baz=77,slow=6.2
STAL STALIGIAL 69.24 312 P **P** **21 00 28.8 -1.5**
ABTA Abfaltersbach 69.25 313 *i* P **P** **21 00 29.0 -1.4**
comp=Z,29nm,1.1s,SNR=7.8
PAOL Paolisi 69.29 307 P **P** **21 00 29.6 -1.2**
PAOL IAmb IAmb 21 00 33.7
comp=Z,50nm,1.6s
NRDL Niedersach Rie 69.34 319 *eP* **P** **21 00 31.0 +0.3**
comp=Z,281nm,1.7s,baz=77,slow=6.2
CLZ Clausthal 69.34 319 *eP* **P** **21 00 30.7 -0.2**
comp=Z,208nm,1.7s,baz=77,slow=6.2
GRA1 Grafenberg Arr 69.35 316 P **P** **21 00 29.6 -1.3**
GRA1 IAMs_20 IAMs_20 21 33 12.4
comp=Z,3μm,21.0s
GRF Grafenberg Arr 69.35 316 *eP* **P** **21 00 30.9 0.0**
comp=Z,197nm,1.7s,baz=77,slow=6.2
GRF *epP* **pP** **21 00 34.2 -1.7**
GRF *eL* L 21 33 12.5
comp=Z,3μm,19.6s
GRF Grafenberg Arr 69.35 316 P **P** **21 00 29.6 -1.3**
GRF pmax pmax
comp=Z,177nm,1.6s
GRF MLR MLR
comp=Z,4μm,21.0s
HNR Honiara 69.40 111 P **P** **21 00 31.1 -0.6**
HNR pmax pmax
comp=Z,150nm,1.2s
HNR MLR MLR
comp=Z,1μm,20.0s
HNR Honiara 69.40 111 P **P** **21 00 31.1 -0.6**
ATKA Atka Island 69.47 41 P **P** **21 00 30.9 -0.7**
INTR Introdacqua 69.51 308 P **P** **21 00 30.5 -1.7**
INTR IAmb IAmb 21 00 40.8
comp=Z,67nm,1.3s
INTR IAMs_20 IAMs_20 21 33 06.9
comp=Z,2μm,20.0s
MBAR Mbarara 69.64 259 *ceP* **P** **21 00 34.6 +1.1**
MBAR pmax pmax
comp=Z,94nm,1.7s
MBAR Mbarara 69.64 259 P **P** **21 00 31.6 -1.9**
MBAR IAmb IAmb 21 00 38.0
comp=Z,51nm,1.1s
GTTG Gottingen 69.66 318 *eP* **P** **21 00 32.4 -0.4**
comp=Z,157nm,1.7s,baz=77,slow=6.2
WTTA Wattenberg 69.70 314 *i* pP **P** **21 00 32.3 -1.0**
comp=Z,74nm,1.6s,SNR=20
FUR Furstenfeldbru 69.70 315 *eP* **P** **21 00 32.8 -0.4**
comp=Z,391nm,1.8s,baz=77,slow=6.2
WATA Walderalm 69.72 314 *i* P **P** **21 00 32.1 -1.3**
comp=Z,46nm,1.4s,SNR=9.6
RETH Rethem/Aller, 69.72 320 *eP* **P** **21 00 32.9 -0.2**
comp=Z,129nm,1.8s,baz=77,slow=6.2
AQU L'Aquila 69.78 308 P **P** **21 00 32.4 -1.4**
AQU pmax pmax
comp=Z,145nm,1.5s
AQU MLR MLR
comp=Z,4μm,22.0s
AQU L'Aquila 69.78 308 P **P** **21 00 32.4 -1.4**
UBBA Unterbreizbach 69.82 318 *eP* **P** **21 00 33.3 -0.3**
comp=Z,102nm,1.7s,baz=77,slow=6.2
NRCA Norcia 69.85 309 P **P** **21 00 32.4 -1.9**
SQTA Sankt Quirin 69.99 314 *i* pP **P** **21 00 34.0 -1.0**
comp=Z,74nm,1.6s,SNR=19
CTI Castel Tesino 70.01 312 P **P** **21 00 33.1 -2.1**
CTI pmax pmax
comp=Z,166nm,2.0s
CTI MLR MLR
comp=Z,2μm,20.0s
CTI Castel Tesino 70.01 312 P **P** **21 00 33.1 -2.1**
CTI IAmb IAmb 21 00 37.8
comp=Z,166nm,2.0s
MOTA Moosalm 70.03 314 *i* pP **P** **21 00 34.2 -1.2**
comp=Z,45nm,1.0s,SNR=32
MURB Monte Urbino 70.15 309 P **P** **21 00 34.7 -1.4**
HLG Helgoland 70.20 321 *eP* **P** **21 00 36.2 +0.2**
comp=Z,134nm,1.6s,baz=77,slow=6.2
RETA Reutte 70.21 314 *i* pP **P** **21 00 35.7 -0.7**
comp=Z,71nm,1.2s,SNR=25
STKA Stephens Creek 70.22 141 P **P** **21 00 36.1 -0.3**
comp=Z,24nm,0.8s,baz=322,slow=7.3,SNR=44
STKA LR LR 21 34 07.1
comp=Z,2μm,21.2s,baz=312,slow=38
STKA Stephens Creek 70.22 141 P **P** **21 00 35.7 -0.7**
FETA Feichten 70.36 313 *i* pP **P** **21 00 36.4 -1.0**
comp=Z,61nm,1.5s,SNR=17
SPIA Saint Paul Isl 70.40 35 P **P** **21 00 36.7 -0.5**
SPIA IAMs_20 IAMs_20 21 34 54.2
comp=Z,2μm,18.0s
RDOG Red Dog Mine 70.50 23 P **P** **21 00 35.8 -1.9**
RDOG IAmb IAmb 21 00 42.8
comp=Z,114nm,1.9s
UBR Ueberruh 70.58 314 *eP* **P** **21 00 37.5 -1.2**

comp=Z,111nm,1.8s,baz=77,slow=6.2
ANM Nome 70.61 27 P **P** 21 00 36.5 -1.9
ANM pmax pmax
comp=Z,82nm,1.5s
ANM MLR MLR
comp=Z,3µm,19.0s
ANM Nome 70.61 27 P **P** 21 00 36.5 -1.9
ANM IAmb IAmb 21 00 43.9
comp=Z,82nm,1.5s
ANM IAMs_20 IAMs_20 21 31 41.2
comp=Z,3µm,19.0s
FUORN Ofenpass-Fuorn 70.78 313 P **P** 21 00 38.2 -1.8
FUORN IAmb IAmb 21 00 44.2
comp=Z,57nm,1.4s
IBBN Ibbenburen 70.78 319 *e*P **P** 21 00 39.4 -0.2
comp=Z,289nm,2.0s,baz=77,slow=6.2
WDD Wied Dalam 70.78 301 P **P** 21 00 39.8 -0.1
WDD IAmb IAmb 21 01 31.2
comp=Z,83nm,1.0s
DAVA Damuels 70.84 314 *i* pP **P** 21 00 39.5 -0.8
comp=Z,79nm,1.7s,SNR=18
LATE Laterza 70.84 309 P **P** 21 00 37.9 -2.4
SALO Salr 70.88 312 P **P** 21 00 38.8 -1.7
ZCCA Zocca 70.93 311 P **P** 21 00 40.8 +0.1
ZCCA IAmb IAmb 21 00 50.0
comp=Z,81nm,1.2s
ZCCA IAMs_20 IAMs_20 21 31 44.4
comp=Z,4µm,21.0s
TNS Taunus Mts 70.94 317 *e*P **P** 21 00 40.2 -0.5
comp=Z,45nm,0.3s,baz=77,slow=6.2
OSSC Osservatorio P 70.98 310 P **P** 21 00 38.1 -2.9
OSSC IAmb IAmb 21 00 44.6
comp=Z,45nm,1.1s
CORL Corleone 71.11 304 P **P** 21 00 38.7 -3.3
CORL IAmb IAmb 21 01 08.8
comp=Z,50nm,1.2s
PRMA PARMA 71.27 311 P **P** 21 00 41.0 -1.7
PRMA IAmb IAmb 21 00 47.7
comp=Z,42nm,0.9s
CLTB Caltabellotta 71.27 303 P **P** 21 00 40.0 -2.9
BUG Bochum--Univer 71.31 319 *e*P **P** 21 00 42.6 -0.3
comp=Z,174nm,1.8s,baz=77,slow=6.2
VLC Villacollemand 71.39 311 P **P** 21 00 42.1 -1.4
VLC IAmb IAmb 21 01 21.5
comp=Z,42nm,1.2s
VLC IAMs_20 IAMs_20 21 37 01.6
comp=Z,3µm,20.0s
CASP Castiglione de 71.45 309 P **P** 21 00 42.0 -1.9
CASP IAmb IAmb 21 00 45.9
comp=Z,107nm,2.0s
BFO Black Forest 71.55 315 *e*P **P** 21 00 43.6 -0.8
comp=Z,85nm,1.6s,baz=77,slow=6.2
BFO *e*pP **pP** 21 00 46.6 -2.8
BFO Black Forest 71.55 315 P **P** 21 00 42.8 -1.6
BFO pmax pmax
comp=Z,98nm,1.7s
BFO MLR MLR
comp=Z,3µm,18.0s
BFO Black Forest 71.55 315 P **P** 21 00 42.8 -1.6
BFO IAmb IAmb 21 00 47.9
comp=Z,98nm,1.7s
BFO IAMs_20 IAMs_20 21 36 35.7
comp=Z,3µm,18.0s
DAG Danmarks Havn 71.69 347 *i* P **P** 21 00 42.0 -2.7
DAG pmax pmax
comp=Z,15nm,0.9s
DAG Danmarks Havn 71.69 347 *i* P **P** 21 00 42.0 -2.7
comp=Z,15nm,0.9s
AHRW Bad Neuenahr-A 71.69 318 *e*P **P** 21 00 45.1 -0.1
comp=Z,116nm,1.7s,baz=77,slow=6.2
EIDS Eidsvold 71.71 130 P **P** 21 00 45.4 -0.1
EIDS IAmb IAmb 21 00 53.2
comp=Z,44nm,1.1s
MSSA Maissana 71.94 311 P **P** 21 00 46.1 -0.8
ECH Echery 72.33 315 P **P** 21 00 46.8 -2.3
ECH pmax pmax
comp=Z,24nm,1.3s
ECH MLR MLR
comp=Z,2µm,20.0s
ECH Echery 72.33 315 P **P** 21 00 46.8 -2.3
ECH IAMs_20 IAMs_20 21 34 49.3
comp=Z,2µm,20.0s
NIKH Nikolski High 72.38 39 IAMs_20 IAMs_20 21 31 39.0
comp=Z,2µm,20.0s
WLF Walferdange 72.52 317 *e*P **P** 21 00 50.4 +0.2
comp=Z,350nm,1.6s,baz=77,slow=6.2
WLF Walferdange 72.52 317 P **P** 21 00 50.1 -0.1
WLF pmax pmax
comp=Z,186nm,1.3s
WLF MLR MLR
comp=Z,3µm,20.0s
WLF Walferdange 72.52 317 P **P** 21 00 50.1 -0.1
WLF IAMs_20 IAMs_20 21 33 40.3
comp=Z,3µm,20.0s
SENIN Lac Senin/Sane 72.81 314 P **P** 21 00 50.9 -1.3
SENIN IAMs_20 IAMs_20 21 36 01.1
comp=Z,4µm,20.0s
VSL Villasalto 73.53 306 P **P** 21 00 55.5 -0.9
VSL IAmb IAmb 21 00 59.5
comp=Z,157nm,1.8s
BNI Bardonecchia 73.64 312 P **P** 21 00 55.3 -1.8
BNI pmax pmax
comp=Z,51nm,1.3s
BNI MLR MLR
comp=Z,2µm,19.0s
BNI Bardonecchia 73.64 312 P **P** 21 00 55.3 -1.8
BNI IAmb IAmb 21 01 00.3
comp=Z,51nm,1.3s
AKUT Akutan 73.74 38 IAMs_20 IAMs_20 21 33 02.9
comp=Z,2µm,20.0s
FALS False Pass 74.77 36 IAMs_20 IAMs_20 21 33 10.0
comp=Z,3µm,20.0s
TOLK Toolik Lake Re 74.78 21 P **P** 21 01 06.2 +3.0
baz=300
TOLK Toolik Lake Re 74.78 21 P **P** 21 01 02.0 -1.1
TOLK IAmb IAmb 21 01 08.6
comp=Z,129nm,1.9s
KEST Kesra 74.80 303 P **P** 21 01 03.6 -0.3
comp=Z,48nm,1.2s,baz=12,slow=2.1,SNR=15
KEST LR LR 21 38 34.1
comp=Z,1µm,21.7s,baz=5.5,slow=40
KEST Kesra 74.80 303 P **P** 21 01 01.8 -2.1
TTA Tatalina 75.08 27 P **P** 21 01 03.8 -1.2
TTA Tatalina 75.08 27 P **P** 21 01 03.8 -1.2
ARMA Armidale 75.34 134 P **P** 21 01 07.4 +0.3
CLF Chambon-Foret 75.49 316 P **P** 21 01 05.4 -2.1
CLF IAmb IAmb 21 01 12.1
comp=Z,160nm,1.6s
CLF IAMs_20 IAMs_20 21 34 56.9
comp=Z,3µm,22.0s
ESK Eskdalemuir 75.89 325 P **P** 21 01 09.3 -0.4
ESK pmax pmax
comp=Z,71nm,1.2s
ESK MLR MLR
comp=Z,5µm,20.0s
ESK Eskdalemuir 75.89 325 P **P** 21 01 09.3 -0.4
ESK IAmb IAmb 21 01 19.7
comp=Z,71nm,1.2s
SCO Scoresbysund 75.95 343 *i* P **P** 21 01 10.2 +0.4
SCO Scoresbysund 75.95 343 P **P** 21 01 08.9 -0.8
SCO Scoresbysund 75.95 343 *i* P **P** 21 01 10.2 +0.4
CMAH Djebel Manchou 75.96 304 P **P** 21 01 10.5 -0.1
SVW2 Sparrevohn 76.06 29 P **P** 21 01 09.6 -1.0
SVW2 IAmb IAmb 21 01 22.5
comp=Z,52nm,1.4s
SVW2 IAMs_20 IAMs_20 21 38 04.9
comp=Z,2µm,18.0s
MLY Manley 76.17 24 P **P** 21 01 10.8 -0.4
BPAW Bear Paw Mtn. 76.54 25 P **P** 21 01 12.3 -1.0
BPAW IAmb IAmb 21 01 18.7
comp=Z,44nm,1.3s
BPAW IAMs_20 IAMs_20 21 33 51.7
comp=Z,2µm,22.0s
TOO Toolangi 76.57 143 P **P** 21 01 14.4 +0.6
TOO pmax pmax
comp=Z,42nm,1.3s
TOO MLR MLR
comp=Z,3µm,20.0s
TOO Toolangi 76.57 143 P **P** 21 01 14.4 +0.6
TOO IAmb IAmb 21 01 25.2
comp=Z,42nm,1.2s
TOO IAMs_20 IAMs_20 21 36 41.5
comp=Z,3µm,20.0s
PPLA Purkeypile 76.65 26 P **P** 21 01 13.3 -0.8
PPLA IAMs_20 IAMs_20 21 36 32.9
comp=Z,2µm,22.0s

CASM Ain Smara 76.79 304 P **P** 21 01 13.8 -1.5
CHGN Chignik 76.81 34 IAMs_20 IAMs_20 21 33 08.7
comp=Z,2µm,22.0s
CNBA Chernabura Isl 76.83 35 P **P** 21 01 13.8 -1.2
CNBA IAmb IAmb 21 01 32.7
comp=Z,45nm,0.9s
CNBA IAMs_20 IAMs_20 21 35 40.1
comp=Z,3µm,20.0s
KTH Kantishna Hill 76.83 25 P **P** 21 01 13.7 -1.3
KTH IAMs_20 IAMs_20 21 38 41.5
comp=Z,2µm,19.0s
CAN Canberra 76.98 139 IAMs_20 IAMs_20 21 40 10.6
comp=Z,2µm,20.0s
NEA Nenana 77.01 24 P **P** 21 01 14.7 -1.3
NEA IAmb IAmb 21 01 20.9
comp=Z,148nm,2.0s
NEA IAMs_20 IAMs_20 21 37 59.1
comp=Z,2µm,19.0s
MDM Murphy Dome 77.12 24 P **P** 21 01 15.7 -0.9
MDM IAmb IAmb 21 01 24.9
comp=Z,58nm,1.5s
TRF Thorofare Moun 77.13 25 P **P** 21 01 17.1 +0.3
DFRA Djebel Bou Aff 77.14 304 P **P** 21 01 19.6 +2.2
FYU Fort Yukon 77.29 21 IAMs_20 IAMs_20 21 34 41.5
comp=Z,2µm,19.0s
COLA College 77.31 24 IAMs_20 IAMs_20 21 38 30.9
comp=Z,2µm,20.0s
POKR Poker Plat Res 77.33 23 P **P** 21 01 18.7 +1.0
baz=302
WRH Wood River Hil 77.43 24 P **P** 21 01 17.4 -0.8
WRH IAMs_20 IAMs_20 21 39 00.3
comp=Z,2µm,21.0s
CCB Clear Creek Bu 77.44 24 P **P** 21 01 17.1 -1.2
CCB IAMs_20 IAMs_20 21 38 24.7
comp=Z,2µm,19.0s
MCK McKinley 77.51 25 P **P** 21 01 17.9 -0.9
MCK pmax pmax
comp=Z,53nm,1.5s
MCK MLR MLR
comp=Z,3µm,20.0s
MCK McKinley 77.51 25 P **P** 21 01 17.9 -0.9
MCK IAmb IAmb 21 01 26.7
comp=Z,53nm,1.5s
MCK IAMs_20 IAMs_20 21 34 31.3
comp=Z,3µm,20.0s
SET Setif 77.63 304 P **P** 21 01 18.0 -2.1
RND Reindeer 77.71 25 P **P** 21 01 18.1 -1.8
RND pmax pmax
comp=Z,40nm,1.2s
RND MLR MLR
comp=Z,2µm,18.0s
RND Reindeer 77.71 25 P **P** 21 01 18.1 -1.8
RND IAmb IAmb 21 01 23.3
comp=Z,40nm,1.2s
RND IAMs_20 IAMs_20 21 40 08.6
comp=Z,2µm,18.0s
IL31 77.71 23 P **P** 21 01 18.9 -0.9
ILAR Eielson Array 77.71 23 P **P** 21 01 19.4 -0.5
comp=Z,4.5nm,1.1s,baz=296,slow=5.6,SNR=24
ILAR PP **PP** 21 04 15.5 +0.9
comp=Z,2.0nm,0.7s,baz=296,slow=3.5,SNR=3.4
ILAR LR LR 21 39 50.5
comp=Z,2µm,18.3s,baz=308,slow=39
PRP Porcupine Dome 77.78 22 P **P** 21 01 19.4 -1.0
PRP IAmb IAmb 21 01 26.6
comp=Z,63nm,1.4s
HDA Harding Lake 77.89 24 P **P** 21 01 19.4 -1.4
HDA IAMs_20 IAMs_20 21 39 31.3
comp=Z,2µm,18.0s
SUMG Summit 78.37 348 *i* P **P** 21 01 23.4 -0.5
SUMG pmax pmax
comp=Z,280nm,1.1s
SUMG Summit 78.37 348 P **P** 21 01 22.1 -1.8
SUMG IAMs_20 IAMs_20 21 37 04.8
comp=Z,2µm,21.0s
SUMG Summit 78.37 348 *i* P **P** 21 01 23.4 -0.5
comp=Z,278nm,1.1s
TULEG Thule 78.45 357 P **P** 21 01 22.1 -1.6
TULEG IAmb IAmb 21 01 29.2
comp=Z,77nm,0.9s
TULEG IAMs_20 IAMs_20 21 40 02.0
comp=Z,2µm,20.0s
DHY Denali Highway 78.45 25 P **P** 21 01 21.5 -2.7
DHY IAMs_20 IAMs_20 21 40 31.3
comp=Z,3µm,20.0s
HOM Homer 78.47 29 IAMs_20 IAMs_20 21 37 38.0
comp=Z,2µm,20.0s
GHO Glory Hole Cre 78.53 26 IAMs_20 IAMs_20 21 41 18.7
comp=Z,2µm,18.0s
PMR Palmer 78.55 27 P **P** 21 01 23.6 -0.9
PMR pmax pmax
comp=Z,39nm,1.2s
PMR MLR MLR
comp=Z,2µm,19.0s
PMR Palmer 78.55 27 P **P** 21 01 23.6 -0.9
PMR IAMs_20 IAMs_20 21 40 38.0
comp=Z,2µm,19.0s
RC01 Rabbit Creek A 78.56 27 P **P** 21 01 22.9 -1.7
RC01 IAMs_20 IAMs_20 21 39 47.3
comp=Z,3µm,19.0s
CNPM China Poot 78.71 29 P **P** 21 01 24.6 -0.9
CNPM IAMs_20 IAMs_20 21 38 51.6
comp=Z,2µm,21.0s
BRLK Bradley Lake 78.75 29 P **P** 21 01 23.5 -2.2
SML Sawmill 78.76 26 P **P** 21 01 22.6 -3.1
SML IAmb IAmb 21 01 33.9
comp=Z,78nm,1.2s
SML IAMs_20 IAMs_20 21 39 06.5
comp=Z,2µm,19.0s
LSZ Lusaka 78.81 247 P **P** 21 01 23.2 -3.6
LSZ pmax pmax
comp=Z,62nm,1.1s
LSZ Lusaka 78.81 247 P **P** 21 01 23.2 -3.6
LSZ IAmb IAmb 21 01 34.7
comp=Z,62nm,1.1s
LSZ Lusaka 78.81 247 IAMs_20 IAMs_20 21 32 47.0
comp=Z,2µm,20.0s
OHAK Old Harbor 78.91 32 P **P** 21 01 24.2 -2.4
OHAK IAmb IAmb 21 01 32.1
comp=Z,71nm,1.3s
KNK Knik Glacier 78.92 27 P **P** 21 01 23.9 -2.7
KNK IAMs_20 IAMs_20 21 35 28.7
comp=Z,2µm,18.0s
A36M Sachs Harbour 78.92 13 P **P** 21 01 26.6 +0.2
baz=321
KDAK Kodiak Island 78.97 31 P **P** 21 01 26.7 -0.2
comp=Z,18nm,1.0s,baz=277,slow=4.6,SNR=12
KDAK LR LR 21 37 42.1
comp=Z,3µm,20.1s,baz=197,slow=37
KDAK Kodiak Island 78.97 31 P **P** 21 01 25.4 -1.4
RIDG Independent Ri 79.03 24 P **P** 21 01 26.1 -1.1
RIDG IAMs_20 IAMs_20 21 42 17.5
comp=Z,2µm,19.0s
SEW Seward 79.19 28 P **P** 21 01 27.5 -0.6
SEW IAmb IAmb 21 01 38.6
comp=Z,74nm,1.4s
SCRK Sand Creek 79.20 23 P **P** 21 01 26.6 -1.7
SCRK IAmb IAmb 21 01 33.9
comp=Z,101nm,1.9s
PAX Paxson 79.23 25 P **P** 21 01 26.7 -1.7
PAX pmax pmax
comp=Z,18nm,1.2s
PAX MLR MLR
comp=Z,3µm,20.0s
PAX Paxson 79.23 25 P **P** 21 01 26.7 -1.7
PAX IAMs_20 IAMs_20 21 39 42.5
comp=Z,3µm,20.0s
DOT Dot Lake 79.37 24 P **P** 21 01 27.3 -1.7
DOT IAMs_20 IAMs_20 21 42 28.3
comp=Z,2µm,18.0s
KULLO Kullorsuaq 79.44 353 *i* P **P** 21 01 28.1 -1.1
KULLO pmax pmax
comp=Z,140nm,1.0s
KULLO Kullorsuaq 79.44 353 *i* P **P** 21 01 28.1 -1.1
comp=Z,136nm,1.0s
EGAK Eagle 79.71 22 P **P** 21 01 29.2 -1.7
EGAK IAMs_20 IAMs_20 21 39 45.4
comp=Z,2µm,19.0s
INK Inuvik 79.72 17 P **P** 21 01 31.0 +0.2
comp=Z,4.1nm,0.7s,baz=314,slow=6.8,SNR=19
INK LR LR 21 41 41.1
comp=Z,2µm,19.1s,baz=298,slow=39
INK Inuvik 79.72 17 P **P** 21 01 31.0 +0.2
INK Inuvik 79.72 17 P **P** 21 01 29.5 -1.3
INK IAmb IAmb 21 01 39.3
comp=Z,123nm,1.6s

GLI Glacier Island 79.76 27 IAMs_20 IAMs_20 21 35 56.1
comp=Z,2µm,22.0s
MENT Mentasta 79.91 24 P **P** 21 01 30.4 -1.6
MENT IAMs_20 IAMs_20 21 41 14.8
comp=Z,2µm,19.0s
FID Port Fidalgo 80.08 27 P **P** 21 01 31.8 -1.1
FID IAmb IAmb 21 01 37.9
comp=Z,123nm,1.8s
FID IAMs_20 IAMs_20 21 36 14.7
comp=Z,3µm,19.0s
EPYK Eagle Plains 80.12 19 P **P** 21 01 33.4 +0.3
baz=311
EPYK Eagle Plains 80.12 19 P **P** 21 01 31.9 -1.2
EPYK IAMs_20 IAMs_20 21 37 13.1
comp=Z,2µm,20.0s
HIN Hinchinbrook I 80.27 27 P **P** 21 01 31.6 -2.4
RES Resolute Bay 80.29 3 P **P** 21 01 30.2 -3.6
RES pmax pmax
comp=Z,45nm,1.0s
RES MLR MLR
comp=Z,2µm,21.0s
RES Resolute Bay 80.29 3 P **P** 21 01 30.1 -3.6
RES IAmb IAmb 21 01 39.9
comp=Z,45nm,1.0s
EBNR Beni Rached 80.48 305 P **P** 21 01 39.2 +3.6
EYAK Cordova Ski Ar 80.50 27 P **P** 21 01 35.5 +0.4
EYAK IAMs_20 IAMs_20 21 36 38.5
comp=Z,2µm,19.0s
ECHA Ech Chlef 80.66 305 P **P** 21 01 40.0 +3.5
GLB Gilahina Butte 80.75 25 P **P** 21 01 33.6 -3.0
GLB IAMs_20 IAMs_20 21 39 52.2
comp=Z,3µm,18.0s
DAWY Dawson 80.76 22 P **P** 21 01 34.4 -2.2
EANR 'Ain N'Sour 80.94 305 P **P** 21 01 42.1 +4.0
ETRT Tiaret 81.01 305 P P 21 01 44.0 +5.4
VRDI Verde Repeater 81.02 25 IAMs_20 IAMs_20 21 36 36.2
comp=Z,2µm,21.0s
RAGM Ragged Mountai 81.02 27 P **P** 21 01 37.6 -0.5
RAGM IAmb IAmb 21 01 44.5
comp=Z,66nm,1.4s
MCARA McCarthy VSAT 81.09 25 IAMs_20 IAMs_20 21 40 12.1
comp=Z,3µm,20.0s
C36M Paulatuk 81.24 14 P **P** 21 01 38.7 -0.3
baz=322
C36M Paulatuk 81.24 14 P **P** 21 01 37.6 -1.3
C36M IAmb IAmb 21 01 46.2
comp=Z,60nm,0.8s
C36M IAMs_20 IAMs_20 21 44 01.3
comp=Z,2µm,18.0s
DZM Mont Dzumac 81.28 119 *e*P **P** 21 01 41.0 +1.0
comp=Z,62nm,1.4s
DZM Mont Dzumac 81.28 119 *e*S **S** 21 11 49.4 -1.2
comp=Z,1µm,36.4s
DZM *e*SS **SS** 21 17 06.9 +0.1
comp=Z,2µm,29.1s
DZM Mont Dzumac 81.28 119 *e*LR LR 21 27 08.2
comp=Z,2µm,35.6s
BALM Baldy 81.56 25 IAMs_20 IAMs_20 21 39 37.6
comp=Z,2µm,19.0s
WAX Waxell Ridge 81.72 26 IAMs_20 IAMs_20 21 40 18.8
comp=Z,3µm,19.0s
CTGM Chitina Glacie 82.00 25 P **P** 21 01 43.1 -0.2
CTGM IAmb IAmb 21 01 49.1
comp=Z,107nm,1.9s
CTGM IAMs_20 IAMs_20 21 40 01.5
comp=Z,2µm,19.0s
ODJA Bouhanifia 82.12 305 P **P** 21 01 49.0 +4.7
YAH Yahtse 82.21 26 IAMs_20 IAMs_20 21 40 34.7
comp=Z,2µm,18.0s
TAM Tamanrasset 82.73 292 P **P** 21 01 45.5 -2.4
TAM pmax pmax
comp=Z,106nm,1.7s
TAM Tamanrasset 82.73 292 P **P** 21 01 45.5 -2.4
TAM IAmb IAmb 21 01 53.2
comp=Z,106nm,1.7s
PCA Pinnacle 82.96 25 IAMs_20 IAMs_20 21 40 20.0
comp=Z,2µm,18.0s
ESDC Sonseca Array 82.98 310 P **P** 21 01 48.4 -0.3
comp=Z,15nm,1.1s,baz=46,slow=4.2,SNR=20
ESDC LR LR 21 42 43.2
comp=Z,1µm,19.9s,baz=55,slow=39
PAB San Pablo 83.30 310 P **P** 21 01 50.2 -0.2
PAB pmax pmax
comp=Z,106nm,1.8s
PAB MLR MLR
comp=Z,2µm,20.0s
PAB San Pablo 83.30 310 P **P** 21 01 50.2 -0.2
PAB IAmb IAmb 21 01 55.3
comp=Z,106nm,1.8s
PAB San Pablo 83.30 310 IAMs_20 IAMs_20 21 43 45.9
comp=Z,2µm,20.0s
ILULI Iluliasat 83.48 349 IAMs_20 IAMs_20 21 41 13.8
comp=Z,3µm,21.0s
PBRG Braganca 83.88 313 *e*P **P** 21 01 55.9 +2.5
comp=Z,82nm,1.8s
MVO Moncorvo 84.37 313 *e*P **P** 21 01 56.8 +0.9
comp=Z,81nm,1.8s
MVO Moncorvo 84.37 313 *e*S S 21 12 31.0 +9.2
MVO *e*SS **SS** 21 17 58.4 +7.4
MVO Moncorvo 84.37 313 *e*LR LR 21 31 51.9
comp=Z,1µm,18.0s
DHAK Deception Hill 84.40 26 IAMs_20 IAMs_20 21 44 03.7
comp=Z,2µm,18.0s
TDRA Tendrara 84.51 304 P **P** 21 01 60.0 +3.1
SNR=5.8
TDRA P **P** 21 01 60.0 +3.1
SNR=5.8
PVRL Vila Real 84.78 313 *e*P **P** 21 02 00.7 +2.8
comp=Z,84nm,1.8s
PGAV Gavieira, Arco 84.81 314 *e*S **S** 21 12 30.8 +4.7
PGAV *e*SS **SS** 21 18 00.1 +2.6
PGAV Gavieira, Arco 84.81 314 *e*LR LR 21 33 21.4
comp=Z,2µm,22.0s
MTE Manteigas 85.08 312 *e*P **P** 21 02 00.5 +1.0
comp=Z,128nm,1.8s
MTE Manteigas 85.08 312 *e*S **S** 21 12 34.0 +5.2
MTE *e*SS **SS** 21 18 07.6 +6.1
MTE Manteigas 85.08 312 *e*LR LR 21 31 38.6
comp=Z,1µm,22.0s
MTE Manteigas 85.08 312 P **P** 21 01 57.6 -1.8
MTE IAmb IAmb 21 02 05.0
comp=Z,102nm,1.5s
PVIS Viseu 85.17 313 *e*P **P** 21 02 00.7 +0.8
comp=Z,131nm,1.7s
AKLM AKL 85.22 306 P **P** 21 02 04.0 +3.7
SNR=8.9
AKLM P **P** 21 02 04.0 +3.7
SNR=8.9
SKAG Skagway 85.25 24 IAMs_20 IAMs_20 21 44 59.1
comp=Z,2µm,18.0s
PCBR Castelo Branco 85.30 312 *e*P **P** 21 02 01.4 +0.9
comp=Z,74nm,1.8s
SFJD Kangerlussuaq 85.36 348 *i* P **P** 21 02 01.7 +1.5
SFJD Kangerlussuaq 85.36 348 P **P** 21 01 59.5 -0.7
SFJD IAmb IAmb 21 02 05.4
comp=Z,43nm,0.9s
SFJD Kangerlussuaq 85.36 348 IAMs_20 IAMs_20 21 42 51.4
comp=Z,2µm,21.0s
SFJD Kangerlussuaq 85.36 348 *i* P **P** 21 02 01.7 +1.5
PMRV Marv??o 85.44 311 *e*P **P** 21 02 01.9 +0.7
comp=Z,85nm,1.8s
PMRV Marv??o 85.44 311 *e*S **S** 21 12 34.5 +2.2
PMRV *e*SS SS 21 18 17.9 +11
PMRV Marv??o 85.44 311 *e*LR LR 21 31 51.4
comp=Z,2µm,20.0s
LBTB Lobatse 85.75 240 P **P** 21 02 01.5 -1.5
LBTB pmax pmax
comp=Z,110nm,1.0s
LBTB Lobatse 85.75 240 P **P** 21 02 01.5 -1.5
COI Coimbra 85.76 313 *e*S **S** 21 12 36.5 +1.2
COI *e*SS **SS** 21 18 12.3 +1.1
COI Coimbra 85.76 313 IAMs_20 IAMs_20 21 45 22.7
comp=Z,2µm,20.0s
SMIR Smir Dam 85.79 307 P **P** 21 02 07.0 +4.0
SNR=5.4
PESTR Estremoz 85.85 311 *e*S **S** 21 12 38.4 +2.1
PESTR *e*SS **SS** 21 18 21.7 +9.0
PCAS Casmilo, Conde 85.89 312 *e*P **P** 21 02 04.2 +0.8
PCAS Casmilo, Conde 85.89 312 *e*S **S** 21 12 38.0 +1.3
PCAS *e*SS **SS** 21 18 21.7 +8.5
SFS San Fernando 86.02 308 IAMs_20 IAMs_20 21 44 00.9
comp=Z,2µm,18.0s
CHEFC Chefchaouen 86.03 307 P **P** 21 02 08.0 +3.6
SNR=5.8
CHEFC P **P** 21 02 08.0 +3.6
SNR=5.8

BESE Bessie Mountai 86.04 25 IAMs_20 IAMs_20 21 45 16.9
comp=Z,2µm,18.0s
PMTG Montargil 86.18 311 eP **P** **21 02 06.0 +1.1**
comp=Z,114nm,1.6s
PMTG Montargil 86.18 311 eS **S** **21 12 40.2 +0.7**
PMTG eSS **SS** **21 18 25.8 +8.2**
PBEJ Beja 86.44 310 eP **P** **21 02 07.0 +0.8**
comp=Z,76nm,1.5s
MDT Midelt 86.54 305 LR LR 21 47 28.6
comp=Z,750nm,18.7s,baz=48,slow=40
PVAQ Vaqueiros 86.64 310 eP **P** **21 02 08.1 +0.9**
comp=Z,148nm,1.5s
PVAQ Vaqueiros 86.64 310 eS **S** **21 12 41.2 -2.8**
PVAQ eSS **SS** **21 18 28.4 +4.1**
PVAQ Vaqueiros 86.64 310 eLR LR 21 32 38.3
comp=Z,1µm,18.0s
PVAQ Vaqueiros 86.64 310 P **P** **21 02 05.1 -2.1**
PVAQ IAMs_20 IAMs_20 21 44 44.2
comp=Z,2µm,19.0s
MESJ Messejana 86.78 310 eP **P** **21 02 07.6 -0.2**
MESJ AMS AMS 21 39 48.8
comp=N,2µm,22.4s
MESJ Messejana 86.78 310 eP **P** **21 02 07.6 -0.2**
MESJ Messejana 86.78 310 eP **P** **21 02 09.0 +1.2**
comp=N,120nm,1.6s
PNCL Nicolau / Gran 86.86 311 eP **P** **21 02 09.2 +1.0**
comp=N,119nm,1.6s
PNCL Nicolau / Gran 86.86 311 eS **S** **21 12 44.5 -1.6**
PNCL eSS **SS** **21 18 31.1 +3.6**
PBDV Barranco-do-Ve 86.86 310 eP **P** **21 02 09.1 +0.8**
comp=N,179nm,1.6s
PBDV Barranco-do-Ve 86.86 310 eS **S** **21 12 41.0 -5.3**
SIT Sitka 86.91 26 IAMs_20 IAMs_20 21 44 23.0
comp=Z,2µm,18.0s
PMAFR Mafra 86.96 312 eP **P** **21 02 12.0 +3.3**
comp=Z,189nm,1.5s
PMAFR Mafra 86.96 312 eS **SKSac** **21 12 38.1 +2.3**
LIS Lisbon 86.98 312 eP **P** **21 02 09.1 +0.2**
LIS AMS AMS 21 40 21.0
comp=N,3µm,27.3s
LIS Lisbon 86.98 312 eP **P** **21 02 09.0 +0.2**
PTEO Sao Teotonio 87.27 310 eP **P** **21 02 13.6 +3.4**
comp=N,148nm,1.7s
MORF Marmelete 87.33 310 eP **P** **21 02 10.7 0.0**
MORF AMS AMS 21 40 55.4
comp=N,2µm,21.6s
MORF Marmelete 87.33 310 eP **P** **21 02 10.6 0.0**
MORF Marmelete 87.33 310 eP **P** **21 02 12.4 +1.8**
comp=N,140nm,1.6s
MORF Marmelete 87.33 310 eS S 21 13 00.8 +10
MORF eSS **SS** **21 18 36.9 +2.3**
PFVI Vila Bisbo 87.54 310 eP **P** **21 02 15.0 +3.5**
comp=N,158nm,1.5s
PFVI Vila Bisbo 87.54 310 eS **SKSac** **21 12 38.7 -0.7**
PFVI Vila Bisbo 87.54 310 IAMs_20 IAMs_20 21 42 06.6
comp=Z,2µm,20.0s
BOSA Boshof 87.80 237 P **P** **21 02 12.4 -0.6**
comp=Z,41nm,1.0s,baz=62,slow=4.6,SNR=30
BOSA LR LR 21 42 01.3
comp=Z,1µm,19.0s,baz=60,slow=36
BOSA Boshof 87.80 237 P **P** **21 02 09.5 -3.4**
BOSA IAmb IAmb 21 02 19.5
comp=Z,60nm,1.1s
TZRR Tazzarine 88.21 303 P **P** **21 02 18.0 +3.0**
SNR=6.1
WRAK Wrangell Islan 88.53 25 IAMs_20 IAMs_20 21 43 44.7
comp=Z,2µm,19.0s
ZGR Zagora 88.56 303 P **P** **21 02 21.4 +4.7**
SNR=6.8
ZGR P **P** **21 02 21.4 +4.7**
SNR=6.8
OUZM OUZ 89.05 304 P P 21 02 24.0 +5.0
SNR=6.1
OUZM P P 21 02 24.0 +5.0
SNR=6.1
YKA Yellowknife Ar 89.11 14 P **P** **21 02 18.2 -0.2**
comp=Z,3.9nm,0.9s,baz=332,slow=4.0,SNR=16
YKA PP **PP** **21 05 46.4 -1.3**
comp=Z,1.1nm,0.7s,baz=336,slow=6.5,SNR=4.9
YKA PKKP **PKKPbc** **21 19 54.2 -3.0**
comp=Z,0.3nm,0.5s,baz=145,slow=2.6,SNR=4.9
YKA LR LR 21 45 20.3
comp=Z,2µm,21.8s,baz=0.0,slow=38
NRS Narsarsuaq 89.24 343 IAMs_20 IAMs_20 21 42 01.8
comp=Z,2µm,22.0s
TSUM Tsumeb 89.59 249 IAMs_20 IAMs_20 21 43 20.4
comp=Z,2µm,20.0s
OUK Oukaimeden 89.74 304 P **P** **21 02 26.0 +3.5**
SNR=7.5
TOA0 Torodi Ar. Sit 90.06 284 P **P** **21 02 26.2 +2.4**
SNR=9.3
TOA0 Torodi Ar. Sit 90.06 284 P **P** **21 02 21.0 -2.8**
TOA0 IAmb IAmb 21 02 28.5
comp=Z,93nm,1.8s
TORD Torodi Ar. Bea 90.06 284 P **P** **21 02 23.5 -0.3**
comp=Z,11nm,1.1s,baz=56,slow=3.3,SNR=16
TORD PP **PP** **21 05 56.5 -0.4**
comp=Z,5.4nm,1.1s,baz=22,slow=1.2,SNR=2.9
TTIG Tnine Tigouga, 90.49 304 P P 21 02 31.0 +5.2
SNR=6.5
TTIG P P 21 02 31.0 +5.2
SNR=6.5
MOBC Moresby Island 91.03 27 IAMs_20 IAMs_20 21 44 33.2
comp=Z,2µm,21.0s
CASY Casey 91.42 175 P **P** **21 02 26.8 -2.0**
BBB Bella Bella 93.33 26 IAMs_20 IAMs_20 21 43 29.8
comp=Z,2µm,20.0s
RPZ Rata Peaks 95.60 136 LR LR 21 47 44.2
comp=Z,1µm,21.4s,baz=283,slow=37
PMOZ Porto Moniz, M 95.64 310 eLR LR 21 37 08.5
comp=Z,634nm,20.0s
MAW Mawson 95.86 193 P **P** **21 02 51.0 +1.8**
comp=Z,4.1nm,1.0s,baz=320,slow=13,SNR=3.4
MAW Mawson 95.86 193 P **P** **21 02 51.0 +1.8**
MAW pmax pmax
comp=Z,9.0nm,2.0s
MAW MLR MLR
comp=Z,300nm,20.0s
FCC Fort Churchill 96.04 6 P **P** **21 02 50.1 -0.4**
FCC pmax pmax
comp=Z,20nm,1.3s
FCC Fort Churchill 96.04 6 P **P** **21 02 50.1 -0.4**
FCC IAmb IAmb 21 02 57.8
comp=Z,20nm,1.3s
LLLB Lillooet 96.98 24 IAMs_20 IAMs_20 21 46 12.8
comp=Z,2µm,22.0s
URZ Urewera 97.15 129 LR LR 21 49 46.5
comp=Z,570nm,19.7s,baz=327,slow=37
URZ Urewera 97.15 129 IAMs_20 IAMs_20 21 54 16.0
comp=Z,2µm,20.0s
DBIC Dimbokro 98.68 281 P Pdif 21 03 05.5 +2.1
comp=Z,1.5nm,0.7s,baz=70,slow=4.8,SNR=3.6
DBIC PP **PP** **21 06 59.9 -4.4**
comp=Z,7.8nm,1.1s,baz=13,slow=11,SNR=4.0
DBIC Dimbokro 98.68 281 P **P** **21 03 02.1 -1.2**
DBIC 21 06 59.8
DBIC pmax pmax
comp=Z,36nm,1.7s
DBIC Dimbokro 98.68 281 P **P** **21 03 02.1 -1.2**
DBIC IAmb IAmb 21 03 07.2
comp=Z,36nm,1.7s
DBIC **PP** **21 06 59.8 -4.6**
NLWA Neilton Lookou 98.78 27 IAMs_20 IAMs_20 21 48 12.1
comp=Z,2µm,21.0s
B06A Marblemount 98.83 25 IAMs_20 IAMs_20 21 47 40.4
comp=Z,2µm,22.0s
FFC Flin Flon 98.86 12 IAMs_20 IAMs_20 21 50 50.3
comp=Z,2µm,21.0s
SCHQ Schefferville 99.50 351 P **Pdif** **21 03 07.6 +1.4**
comp=Z,4.3nm,0.6s,baz=70,slow=7.6,SNR=4.6
SCHQ LR LR 21 50 11.5
comp=Z,2µm,20.2s,baz=12,slow=37
SCHQ Schefferville 99.50 351 IAMs_20 IAMs_20 21 49 59.3
comp=Z,2µm,21.0s
D05A Enumclaw 99.71 26 IAMs_20 IAMs_20 21 51 15.7
comp=Z,1µm,20.0s
B08A Colville Reser 99.78 24 IAMs_20 IAMs_20 21 50 25.4
comp=Z,1µm,20.0s
F03A Seaside 100.07 28 IAMs_20 IAMs_20 21 48 53.7
comp=Z,1µm,18.0s
LTY Liberty 100.18 26 IAMs_20 IAMs_20 21 53 52.1
comp=Z,1µm,19.0s
C09A Chrisman Ranch 100.64 24 IAMs_20 IAMs_20 21 50 10.0
comp=Z,2µm,22.0s
NEW Newport 100.67 23 IAMs_20 IAMs_20 21 54 16.6
comp=Z,1µm,19.0s
WALA Waterton Lakes 101.06 21 IAMs_20 IAMs_20 21 50 37.0
comp=Z,2µm,20.0s
E08A Dider Farm, El 101.44 25 IAMs_20 IAMs_20 21 50 04.2
comp=Z,1µm,20.0s
F07A Phinny Hill Vi 101.59 26 IAMs_20 IAMs_20 21 49 30.4
comp=Z,2µm,21.0s
E09A Wood Farm, Sta 101.77 25 IAMs_20 IAMs_20 21 50 46.9
comp=Z,1µm,21.0s
JTMT Jette 102.09 22 IAMs_20 IAMs_20 21 49 37.1
comp=Z,2µm,22.0s
F10A Beach Ranch, E 102.57 24 IAMs_20 IAMs_20 21 51 10.5
comp=Z,1µm,20.0s
DRLN Deer Lake 102.97 344 IAMs_20 IAMs_20 21 52 42.0
comp=Z,1µm,20.0s
MSO Missoula 103.00 22 IAMs_20 IAMs_20 21 54 05.3
comp=Z,2µm,20.0s
EGMT Eagleton 103.26 19 IAMs_20 IAMs_20 21 54 49.7
comp=Z,2µm,18.0s
BMO Blue Mountains 103.48 25 IAMs_20 IAMs_20 21 51 16.3
comp=Z,1µm,22.0s
ULM Lac du Bonnet 104.17 9 IAMs_20 IAMs_20 21 52 47.6
comp=Z,2µm,20.0s
DGMT Dagmar 104.31 15 IAMs_20 IAMs_20 21 52 09.3
comp=Z,2µm,22.0s
KMRM Mail Ridge 104.49 32 IAMs_20 IAMs_20 21 48 25.2
comp=Z,1µm,20.0s
DLMT Dillon 104.74 22 IAMs_20 IAMs_20 21 56 23.2
comp=Z,2µm,20.0s
LAO LASA Array 105.46 17 IAMs_20 IAMs_20 21 55 07.9
comp=Z,2µm,21.0s
MDND Maddock 105.88 12 IAMs_20 IAMs_20 21 57 32.9
comp=Z,1µm,20.0s
RLMT Red Lodge 106.02 20 IAMs_20 IAMs_20 21 56 48.9
comp=Z,2µm,20.0s
GDXM Geysers 106.04 32 IAMs_20 IAMs_20 21 50 11.7
comp=Z,1µm,20.0s
AGMN Agassiz Nation 106.08 10 IAMs_20 IAMs_20 21 57 18.1
comp=Z,1µm,19.0s
B35A Bob, Littlefor 106.32 8 IAMs_20 IAMs_20 21 58 42.2
comp=Z,1µm,18.0s
FLWY Flagg Ranch 106.50 21 IAMs_20 IAMs_20 21 55 47.8
comp=Z,1µm,21.0s
IMW Indian Meadow 106.59 21 IAMs_20 IAMs_20 21 55 50.1
comp=Z,1µm,20.0s
BATG Bathurst New B 106.70 349 IAMs_20 IAMs_20 21 58 31.7
comp=Z,1µm,21.0s
FXWY Fox Creek 106.79 22 IAMs_20 IAMs_20 21 56 27.4
comp=Z,2µm,18.0s
E28A Huff 106.88 13 IAMs_20 IAMs_20 21 59 21.1
comp=Z,2µm,18.0s
TPAW Teton Pass 106.94 22 IAMs_20 IAMs_20 21 57 15.6
comp=Z,2µm,20.0s
EYMN Ely 106.98 7 IAMs_20 IAMs_20 21 59 55.8
comp=Z,2µm,19.0s
SNOW Snow King Moun 107.03 21 IAMs_20 IAMs_20 21 57 18.9
comp=Z,2µm,20.0s
REDW Red Top Meadow 107.09 22 IAMs_20 IAMs_20 21 57 30.4
comp=Z,2µm,19.0s
VLDQ Val d'Or 107.19 357 IAMs_20 IAMs_20 21 56 58.1
comp=Z,2µm,21.0s
PNTR Pine Nut 107.30 30 IAMs_20 IAMs_20 21 50 43.9
comp=Z,1µm,20.0s
D62A Allapoint, All 107.38 351 IAMs_20 IAMs_20 21 57 43.6
comp=Z,1µm,20.0s
AHID Auburn Hatcher 107.54 22 IAMs_20 IAMs_20 21 58 02.3
comp=Z,1µm,20.0s
PQI Presque Isle 107.62 350 IAMs_20 IAMs_20 21 56 33.0
comp=Z,1µm,20.0s
ELK Elko 107.77 26 IAMs_20 IAMs_20 21 52 46.9
comp=Z,1µm,22.0s
WAKR Walker 107.85 30 IAMs_20 IAMs_20 22 00 09.5
comp=Z,1µm,21.0s
E62A Clayton Lake 107.90 351 IAMs_20 IAMs_20 21 58 09.3
comp=Z,1µm,20.0s
KVN Kaiserville 108.00 29 IAMs_20 IAMs_20 22 00 15.3
comp=Z,1µm,18.0s
BW06 Boulder Array 108.05 21 IAMs_20 IAMs_20 21 56 58.7
comp=Z,1µm,21.0s
PDAR Pinedale Array 108.05 21 PKiKP **PKiKP** **21 07 54.0 +2.3**
comp=Z,0.6nm,0.6s,baz=22,slow=1.6,SNR=4.5
D41A Chassel 108.12 5 IAMs_20 IAMs_20 21 54 58.8
comp=Z,2µm,22.0s
D53A Lac Vacive, Po 108.23 357 IAMs_20 IAMs_20 22 02 33.4
comp=Z,2µm,18.0s
E38A The Farm, Brul 108.30 7 IAMs_20 IAMs_20 21 55 46.7
comp=Z,2µm,20.0s
HWUT Hardware Ranch 108.40 23 IAMs_20 IAMs_20 22 00 49.2
comp=Z,1µm,19.0s
RSSD Black Hills 108.41 16 IAMs_20 IAMs_20 21 52 37.0
comp=Z,2µm,22.0s
F64A Sherman 108.46 350 IAMs_20 IAMs_20 21 56 57.2
comp=Z,2µm,20.0s
NV11 Mina Array Sit 108.49 29 IAMs_20 IAMs_20 22 00 33.2
comp=Z,1µm,21.0s
F62A Pittston Farm, 108.67 351 IAMs_20 IAMs_20 21 58 41.8
comp=Z,2µm,20.0s
F63A Nahmakanta, Br 108.73 350 IAMs_20 IAMs_20 21 57 26.4
comp=Z,2µm,21.0s
OMMB Old Mammoth Mi 108.78 30 IAMs_20 IAMs_20 21 54 58.1
comp=Z,996nm,19.0s
E43A Lac Tnee Farm 108.91 4 IAMs_20 IAMs_20 22 00 53.5
comp=Z,2µm,20.0s
G65A Princeton 108.97 349 IAMs_20 IAMs_20 22 00 18.8
comp=Z,1µm,22.0s
COWI Conover 109.03 5 IAMs_20 IAMs_20 22 01 21.9
comp=Z,2µm,19.0s
PMPB Monarch Peak 109.06 32 IAMs_20 IAMs_20 21 55 17.7
comp=Z,942nm,18.0s
K22A Casper 109.09 19 IAMs_20 IAMs_20 21 57 54.1
comp=Z,1µm,20.0s
DUG Dugway, Tooele 109.18 24 IAMs_20 IAMs_20 21 55 20.1
comp=Z,1µm,21.0s
PKME Peaks-Kenny Pk 109.19 350 IAMs_20 IAMs_20 21 56 22.5
comp=Z,1µm,20.0s
SUSD Miller 109.27 13 IAMs_20 IAMs_20 21 56 28.4
comp=Z,2µm,20.0s
G62A West of Eustis 109.41 351 IAMs_20 IAMs_20 21 56 02.4
comp=Z,1µm,21.0s
EMMW East Machias 109.43 349 IAMs_20 IAMs_20 21 57 39.0
comp=Z,1µm,19.0s
G40A Rib Lake 109.76 6 IAMs_20 IAMs_20 22 00 03.3
comp=Z,1µm,20.0s
RWWY Rawlins 109.76 20 IAMs_20 IAMs_20 21 58 03.0
comp=Z,1µm,20.0s
WVL Waterville 109.93 351 IAMs_20 IAMs_20 21 58 12.1
comp=Z,2µm,21.0s
H62A Milan 110.13 352 IAMs_20 IAMs_20 21 56 33.4
comp=Z,2µm,20.0s
FRNY Flat Rock 110.15 354 IAMs_20 IAMs_20 21 55 02.1
comp=Z,2µm,22.0s
LONY Lake Ozonia 110.46 354 IAMs_20 IAMs_20 21 56 39.3
comp=Z,1µm,21.0s
LBNH Lisbon 110.55 352 IAMs_20 IAMs_20 21 57 31.7
comp=Z,1µm,21.0s
TPNV Topopah Spring 110.56 29 IAMs_20 IAMs_20 21 54 05.0
comp=Z,1µm,21.0s
GLMI Grayling 110.56 2 IAMs_20 IAMs_20 21 59 59.1
comp=Z,1µm,20.0s
VT1 Waterbury 110.56 353 IAMs_20 IAMs_20 21 59 42.2
comp=Z,1µm,18.0s
I63A Otisfield 110.56 351 IAMs_20 IAMs_20 21 58 46.9
comp=Z,2µm,20.0s
PHWY Pilot Hill 110.64 19 IAMs_20 IAMs_20 21 59 01.2
comp=Z,1µm,22.0s
H43A Windswept, Lux 110.76 4 IAMs_20 IAMs_20 21 57 20.5
comp=Z,2µm,22.0s
DELO Deloro Mine 110.78 357 IAMs_20 IAMs_20 22 02 08.8
comp=Z,1µm,20.0s
I62A Tamworth 110.84 352 IAMs_20 IAMs_20 21 57 04.2
comp=Z,2µm,20.0s
O20A White River Ci 110.85 21 IAMs_20 IAMs_20 22 01 28.8
comp=Z,1µm,20.0s
NCB Newcomb 111.07 354 IAMs_20 IAMs_20 22 00 23.3
comp=Z,1µm,21.0s
HNH Hanover 111.12 352 IAMs_20 IAMs_20 21 59 02.8
comp=Z,1µm,19.0s
I42A Draeger Farm, 111.25 5 IAMs_20 IAMs_20 21 56 56.5
comp=Z,2µm,22.0s
I45A Fountain 111.28 3 IAMs_20 IAMs_20 21 58 07.3
comp=Z,1µm,19.0s
PECO Prince Edward 111.33 356 IAMs_20 IAMs_20 21 58 37.8
comp=Z,2µm,20.0s
I47A Gladwin 111.37 2 IAMs_20 IAMs_20 22 02 52.5
comp=Z,2µm,20.0s
SHPR Sheep Range 111.40 28 IAMs_20 IAMs_20 21 57 25.3
comp=Z,1µm,19.0s
I49A Point Hope 111.48 1 IAMs_20 IAMs_20 22 00 56.4
comp=Z,2µm,22.0s
J59A Piesco 111.60 354 IAMs_20 IAMs_20 21 57 30.4
comp=Z,2µm,21.0s
J58A Remsen 111.77 355 IAMs_20 IAMs_20 21 57 09.0
comp=Z,2µm,21.0s
J57A Williamstown 111.78 355 IAMs_20 IAMs_20 21 56 48.2
comp=Z,1µm,20.0s
J45A Montague 111.87 3 IAMs_20 IAMs_20 21 57 49.9
comp=Z,1µm,20.0s
OGNE Ogallala 111.90 16 IAMs_20 IAMs_20 22 01 07.4
comp=Z,1µm,22.0s
PASC Pasadena Art C 111.97 32 IAMs_20 IAMs_20 22 02 38.6
comp=Z,955nm,18.0s
ISCO Idaho Springs 111.98 19 IAMs_20 IAMs_20 21 54 51.6
comp=Z,2µm,22.0s
J55A Hilton 112.04 357 IAMs_20 IAMs_20 21 56 45.2
comp=Z,1µm,22.0s
J54A Appleton 112.07 357 IAMs_20 IAMs_20 22 00 08.0
comp=Z,1µm,20.0s
JFWS Jewell Farm 112.09 6 IAMs_20 IAMs_20 21 57 17.9
comp=Z,2µm,21.0s
J47A Sunmer 112.14 2 IAMs_20 IAMs_20 22 02 49.9
comp=Z,2µm,20.0s
K62A Royalston 112.14 352 IAMs_20 IAMs_20 22 00 29.7
comp=Z,1µm,21.0s
MEDO Medina 112.17 357 IAMs_20 IAMs_20 22 00 11.7
comp=Z,1µm,20.0s
PV04 Paradox Valley 112.19 23 IAMs_20 IAMs_20 22 02 22.5
comp=Z,2µm,19.0s
PV20 West Nyswonger 112.21 23 IAMs_20 IAMs_20 21 56 24.1
comp=Z,1µm,21.0s
HRV Adam Dziewonsk 112.21 352 IAMs_20 IAMs_20 21 55 03.6
comp=Z,1µm,22.0s
PV19 Morning Glory 112.23 23 IAMs_20 IAMs_20 22 00 57.7
comp=Z,1µm,21.0s
PV07 Paradox Valley 112.24 22 IAMs_20 IAMs_20 22 02 36.6
comp=Z,1µm,20.0s
TRY Troy 112.24 353 IAMs_20 IAMs_20 21 58 34.4
comp=Z,1µm,20.0s
PV16 Nyswonger Mesa 112.26 23 IAMs_20 IAMs_20 22 00 59.3
comp=Z,1µm,18.0s
WES Weston 112.30 351 IAMs_20 IAMs_20 22 00 14.9
comp=Z,1µm,20.0s
PV18 Skein Mesa, Pa 112.32 23 IAMs_20 IAMs_20 22 02 19.9
comp=Z,1µm,19.0s
PV03 Paradox Valley 112.33 23 IAMs_20 IAMs_20 22 02 20.3
comp=Z,2µm,22.0s
K58A Earlville 112.40 355 IAMs_20 IAMs_20 21 57 27.5
comp=Z,1µm,21.0s
K43A Burlington 112.47 5 IAMs_20 IAMs_20 21 59 59.9
comp=Z,1µm,21.0s
QUA2 Belchertown 112.54 352 IAMs_20 IAMs_20 21 57 26.2
comp=Z,1µm,22.0s
MMNY Mt. Morris Dam 112.58 357 IAMs_20 IAMs_20 21 59 41.4
comp=Z,1µm,20.0s
L40A Anamosa 112.82 7 IAMs_20 IAMs_20 21 58 47.4
comp=Z,1µm,21.0s
WVNY West Valley, N 112.94 357 IAMs_20 IAMs_20 22 00 33.9
comp=Z,1µm,20.0s
M65A Busby, Falmout 113.01 351 IAMs_20 IAMs_20 22 01 02.7
comp=Z,1µm,20.0s
L42A Oliver, Polo 113.05 6 IAMs_20 IAMs_20 22 03 05.2
comp=Z,2µm,18.0s
L56A Greenwood 113.15 356 IAMs_20 IAMs_20 21 57 41.5
comp=Z,2µm,22.0s
L46A Eue Claire 113.29 3 IAMs_20 IAMs_20 21 58 51.6
comp=Z,2µm,20.0s
N35A Tabor 113.36 11 IAMs_20 IAMs_20 21 59 50.8
comp=Z,2µm,20.0s
MVCO Mesa Verde 113.39 23 IAMs_20 IAMs_20 21 56 59.3
comp=Z,1µm,22.0s
YLE Yale 113.56 352 IAMs_20 IAMs_20 22 01 21.2
comp=Z,1µm,21.0s
WSPT Westport, CT 113.75 353 IAMs_20 IAMs_20 21 57 39.2
comp=Z,1µm,20.0s
M44A Midewin, Midew 113.80 5 IAMs_20 IAMs_20 21 56 57.1
comp=Z,2µm,20.0s
M56A Emporium 113.84 357 IAMs_20 IAMs_20 22 00 04.7
comp=Z,1µm,20.0s
M54A Oil Creek Stat 113.87 358 IAMs_20 IAMs_20 21 59 07.7
comp=Z,1µm,19.0s
M52A Chesterland 113.88 359 IAMs_20 IAMs_20 22 02 26.8
comp=Z,2µm,22.0s
M55A Ridgway 113.88 357 IAMs_20 IAMs_20 22 05 30.8
comp=Z,1µm,19.0s
SDCO Great Sand Dun 113.90 20 IAMs_20 IAMs_20 22 00 38.5
comp=Z,1µm,19.0s
M57A Sunshine Farm, 113.92 356 IAMs_20 IAMs_20 21 58 52.9
comp=Z,2µm,22.0s
ODNJ Ogdensburg 113.97 354 IAMs_20 IAMs_20 21 59 12.1
comp=Z,2µm,21.0s
PAL Palisades 113.97 353 IAMs_20 IAMs_20 22 01 11.2
comp=Z,1µm,19.0s
BRNJ Basking Ridge 114.36 354 IAMs_20 IAMs_20 21 57 43.5
comp=Z,1µm,20.0s
N54A Moraine State 114.43 358 IAMs_20 IAMs_20 21 59 14.4
comp=Z,2µm,20.0s
N47A Urbana 114.45 3 IAMs_20 IAMs_20 22 00 17.3
comp=Z,1µm,19.0s
CBKS Cedar Bluff 114.48 15 IAMs_20 IAMs_20 21 58 07.5
comp=Z,2µm,21.0s
SSPA Standing Stone 114.67 356 IAMs_20 IAMs_20 22 00 40.6
comp=Z,1µm,20.0s
QSPA South Pole Qui 114.72 180 IAMs_20 IAMs_20 21 53 04.9
comp=Z,2µm,21.0s
W18A Petrified Fore 114.80 25 IAMs_20 IAMs_20 22 04 31.8
comp=Z,1µm,20.0s
SFIN Lafayette 114.87 4 IAMs_20 IAMs_20 22 02 23.4
comp=Z,1µm,19.0s
KSU1 Kansas State U 114.88 12 IAMs_20 IAMs_20 21 59 24.9
comp=Z,2µm,19.0s
P38A Dawn 114.91 10 IAMs_20 IAMs_20 22 00 25.8
comp=Z,2µm,20.0s
O56A Blue Knob Stat 115.07 357 IAMs_20 IAMs_20 22 01 25.3
comp=Z,1µm,20.0s
113A Mohawk Valley, 115.17 29 IAMs_20 IAMs_20 21 57 00.2
comp=Z,1µm,19.0s
PSUB Penn St. - Bra 115.19 354 IAMs_20 IAMs_20 22 01 43.5
comp=Z,1µm,19.0s
X18A Snowflake 115.24 25 IAMs_20 IAMs_20 22 04 49.4
comp=Z,1µm,20.0s
O52A Adamsville 115.30 360 IAMs_20 IAMs_20 21 58 48.6
comp=Z,2µm,20.0s
P60A Greenville 115.33 355 IAMs_20 IAMs_20 22 06 53.0
comp=Z,1µm,18.0s
P61A Hammonton 115.38 354 IAMs_20 IAMs_20 22 00 02.6
comp=Z,1µm,20.0s
P43A Skaggs, Pawnee 115.40 6 IAMs_20 IAMs_20 21 59 44.6
comp=Z,1µm,21.0s
P46A Rosedale 115.62 4 IAMs_20 IAMs_20 21 58 02.3
comp=Z,1µm,20.0s
P57A Homestead Farm 115.82 356 IAMs_20 IAMs_20 21 59 42.2
comp=Z,2µm,21.0s
P53A Whipple 115.93 359 IAMs_20 IAMs_20 21 59 09.1
comp=Z,2µm,21.0s
ANMO Albuquerque 116.14 22 IAMs_20 IAMs_20 22 02 38.0
comp=Z,1µm,20.0s
214A Organ Pipe Nat 116.28 29 IAMs_20 IAMs_20 22 05 55.6
comp=Z,906nm,19.0s
Q56A Snyder Ridge, 116.32 357 IAMs_20 IAMs_20 22 00 27.4
comp=Z,1µm,22.0s
SLM Saint Louis 116.32 7 IAMs_20 IAMs_20 22 03 24.9
comp=Z,1µm,20.0s
OLIL Olney 116.43 5 IAMs_20 IAMs_20 22 02 54.8
comp=Z,1µm,20.0s
Y22D IRIS PASSCAL I 116.77 23 IAMs_20 IAMs_20 21 59 07.7
comp=Z,1µm,21.0s
R61A Willards 116.77 354 IAMs_20 IAMs_20 21 58 59.2
comp=Z,1µm,20.0s
SNAA Sanae 116.81 200 PKPdf **PKPdf** **21 08 07.0 -0.1**
SNAA Sanae 116.81 200 IAMs_20 IAMs_20 21 57 52.7
comp=Z,1µm,20.0s
TUC Tucson 116.84 27 IAMs_20 IAMs_20 21 58 00.3
comp=Z,1µm,21.0s
U32A Winter Ranch, 116.98 15 IAMs_20 IAMs_20 22 01 56.6
comp=Z,1µm,20.0s
CBN Corbin Frederi 117.06 356 IAMs_20 IAMs_20 22 04 39.8
comp=Z,1µm,19.0s
PPT2 Papeete2 117.22 98 eLR LR 21 43 48.7
comp=Z,2µm,24.8s
R58B Mineral 117.33 356 IAMs_20 IAMs_20 22 03 00.0
comp=Z,2µm,19.0s
SIUC Southern Illin 117.34 6 IAMs_20 IAMs_20 22 02 31.0
comp=Z,1µm,20.0s
S44A Carbondale 117.36 6 IAMs_20 IAMs_20 22 04 27.3
comp=Z,1µm,19.0s
MGMO Mountain Grove 117.52 9 IAMs_20 IAMs_20 22 02 42.8
comp=Z,2µm,21.0s
AMTX Amarillo 117.69 18 IAMs_20 IAMs_20 22 03 47.8
comp=Z,1µm,19.0s
T60A Surry 118.07 355 IAMs_20 IAMs_20 22 00 37.6

	comp=Z,2µm,22.0s							
T45A	**Paducah**	118.09	6	IAMs_20	IAMs_20	22 03 55.7		
	comp=Z,1µm,20.0s							
HHAR	**Hobbs**	118.11	11		PKPdf	21 08 08.4	-2.3	
HHAR				IAMs_20	IAMs_20	21 59 36.6		
	comp=Z,1µm,22.0s							
BLA	**Blacksburg**	118.18	358	IAMs_20	IAMs_20	22 03 09.8		
	comp=Z,1µm,19.0s							
U40A	**Yellville**	118.22	10		PKPdf	21 08 09.7	-1.2	
MSTX	**Muleshoe**	118.23	19	IAMs_20	IAMs_20	22 02 59.0		
	comp=Z,2µm,22.0s							
T47A	**Sharon Grove**	118.25	5	IAMs_20	IAMs_20	21 59 34.7		
	comp=Z,1µm,21.0s							
OKCFA	**Oklahoma City**	118.26	14	IAMs_20	IAMs_20	22 00 38.4		
	comp=Z,2µm,21.0s							
319A	**Douglas**	118.28	26	IAMs_20	IAMs_20	22 02 25.1		
	comp=Z,1µm,20.0s							
T59A	**Double "B" Far**	118.29	356	IAMs_20	IAMs_20	22 05 21.6		
	comp=Z,1µm,19.0s							
VNA2	**Neumayer--Watz**	118.33	201	PKPdf	PKiKP	21 08 12.5	+2.6	
VNA1	**Neumayer--Stat**	118.64	201	PKPdf	PKiKP	21 08 13.1	+2.6	
FCAR	**Ozark Folk Cen**	118.78	9	IAMs_20	IAMs_20	22 02 14.2		
	comp=Z,1µm,20.0s							
U49A	**Red Boiling Sp**	118.80	3	IAMs_20	IAMs_20	22 06 56.4		
	comp=Z,1µm,19.0s							
U61A	**Possum Corner**	118.85	355	IAMs_20	IAMs_20	22 00 12.3		
	comp=Z,1µm,22.0s							
TZTN	**Tazewell**	118.85	1	P	PKPdf	21 08 12.1	-0.1	
	baz=359							
PEBM	**Pemiscott Bayo**	118.86	7	IAMs_20	IAMs_20	22 02 02.1		
	comp=Z,1µm,21.0s							
U54A	**Nelsons Funny**	118.89	360	IAMs_20	IAMs_20	22 06 19.6		
	comp=Z,1µm,19.0s							
U59A	**Littleton**	118.92	356	IAMs_20	IAMs_20	22 08 10.3		
	comp=Z,1µm,20.0s							
GNAR	**Gosnell**	118.98	7	IAMs_20	IAMs_20	22 04 42.5		
	comp=Z,1µm,20.0s							
EPT	**El Paso**	118.99	24	IAMs_20	IAMs_20	22 00 20.7		
	comp=Z,1µm,21.0s							
VNA3	**Neumayer Olymp**	119.02	201	PKPdf	PKPdf	21 08 10.6	-0.6	
WVT	**Waverly**	119.04	5	PKIKP	PKPdf	21 08 09.1	-3.4	
WVT				MLR	MLR			
	comp=Z,2µm,21.0s							
WVT	**Waverly**	119.04	5		PKPdf	21 08 09.1	-3.4	
WVT	**Waverly**	119.04	5	IAMs_20	IAMs_20	22 00 07.8		
	comp=Z,2µm,21.0s							
TBI	**Tubuai**	119.09	104	*e*LR	LR	21 44 39.6		
	comp=Z,800nm,36.8s							
CLTN	**Cedars of Leba**	119.19	4		PKPdf	21 08 11.6	-1.2	
CLTN				IAMs_20	IAMs_20	22 00 03.7		
	comp=Z,1µm,21.0s							
LPAR	**Lepanto**	119.31	8	IAMs_20	IAMs_20	22 04 50.1		
	comp=Z,1µm,20.0s							
WHAR	**Wooly Hollow**	119.35	10	IAMs_20	IAMs_20	22 00 55.2		
	comp=Z,2µm,21.0s							
MNTX	**Cornudas Mount**	119.46	23	IAMs_20	IAMs_20	22 04 35.0		
	comp=Z,1µm,20.0s							
V58A	**Windy Hill, Pi**	119.55	357	IAMs_20	IAMs_20	22 02 52.0		
	comp=Z,1µm,20.0s							
V55A	**Taylorsville**	119.55	359	IAMs_20	IAMs_20	22 08 05.1		
	comp=Z,1µm,20.0s							
HSIG		119.62	29	IAMs_20	IAMs_20	22 07 18.0		
	comp=Z,899nm,19.0s							
MET	**Memphis--Engin**	119.83	7	IAMs_20	IAMs_20	22 05 07.7		
	comp=Z,2µm,20.0s							
CNNC	**Cliffs of the**	120.04	356	IAMs_20	IAMs_20	22 08 48.8		
	comp=Z,1µm,21.0s							
SWET	**Sewanee**	120.08	4	IAMs_20	IAMs_20	22 06 05.3		
	comp=Z,1µm,20.0s							
W50A	**Signal Mountai**	120.13	3	IAMs_20	IAMs_20	22 05 03.6		
	comp=Z,1µm,21.0s							
W52A	**Murphy**	120.29	2	IAMs_20	IAMs_20	22 02 36.1		
	comp=Z,1µm,20.0s							
Z35A	**Perchaven, San**	120.30	15	IAMs_20	IAMs_20	22 02 27.6		
	comp=Z,1µm,22.0s							
ABTX	**Abilene, Hawle**	120.38	17	IAMs_20	IAMs_20	22 02 20.9		
	comp=Z,1µm,19.0s							
BG3	**Lake Jocassee**	120.41	1	IAMs_20	IAMs_20	22 04 54.9		
	comp=Z,1µm,21.0s							
BBSR	**BB Station**	120.66	343	IAMs_20	IAMs_20	21 57 23.3		
	comp=Z,2µm,22.0s							
X48A	**Hartselle**	120.77	5		PKPdf	21 08 14.4	-1.5	
FPAL	**Fort Paine**	120.77	3	IAMs_20	IAMs_20	22 03 02.6		
	comp=Z,2µm,21.0s							
X51A	**Calhoun**	120.78	3	IAMs_20	IAMs_20	22 02 20.8		
	comp=Z,2µm,21.0s							
Y59A	**Loris**	121.34	357	IAMs_20	IAMs_20	22 07 43.2		
	comp=Z,1µm,20.0s							
Y58A	**Scranton**	121.46	358	IAMs_20	IAMs_20	22 01 13.4		
	comp=Z,1µm,20.0s							
WHTX	**Lake Whitney,**	121.54	15	IAMs_20	IAMs_20	22 03 31.3		
	comp=Z,1µm,19.0s							
237A	**Washetta, Mont**	121.90	14	IAMs_20	IAMs_20	22 02 53.9		
	comp=Z,1µm,20.0s							
Z50A	**Ashland**	122.04	4	IAMs_20	IAMs_20	22 06 04.0		
	comp=Z,1µm,20.0s							
TXAR	**Lajitas Array**	122.21	22	PKP	PKPdf	21 08 18.1	-0.8	
	comp=Z,3.4nm,0.9s,baz=233,slow=0.4,SNR=19							
JCT	**Junction City**	122.36	18	PKIKP	PKPdf	21 08 17.7	-1.4	
JCT				MLR	MLR			
	comp=Z,1µm,20.0s							
JCT	**Junction City**	122.36	18	P	PKPdf	21 08 18.6	-0.5	
	baz=341							
JCT	**Junction City**	122.36	18		PKPdf	21 08 17.7	-1.4	
JCT				IAMs_20	IAMs_20	22 02 21.4		
	comp=Z,1µm,20.0s							
NATX	**Nacogdoches**	122.38	13	IAMs_20	IAMs_20	22 08 58.3		
	comp=Z,1µm,19.0s							
TAOE	**Nuku Hiva Isla**	122.60	85	*e*LR	LR	21 46 23.0		
	comp=Z,1µm,28.5s							
VBMS	**Vicksburg**	122.62	8	IAMs_20	IAMs_20	22 09 33.7		
	comp=Z,1µm,20.0s							
344A	**Westbrook Farm**	123.34	9	IAMs_20	IAMs_20	22 02 54.9		
	comp=Z,1µm,22.0s							
HPIG		123.65	25	IAMs_20	IAMs_20	22 08 20.3		
	comp=Z,1µm,20.0s							
352A	**Blakely**	123.86	3	IAMs_20	IAMs_20	22 04 34.2		
	comp=Z,1µm,20.0s							
451A	**Vernon**	124.67	4	IAMs_20	IAMs_20	22 05 26.8		
	comp=Z,1µm,21.0s							
KVTX	**Kingsville**	125.66	17	IAMs_20	IAMs_20	22 10 10.8		
	comp=Z,1µm,18.0s							
RCBR	**Riachuelo**	131.88	285	IAMs_20	IAMs_20	22 10 44.8		
	comp=Z,882nm,20.0s							
RCBR	**Riachuelo**	131.88	285	*e*P	PKiKP	21 08 41.1	+2.5	
GRTK	**Grand Turk**	132.64	346	IAMs_20	IAMs_20	22 14 13.4		
	comp=Z,826nm,19.0s							
UNM	**Universidad Na**	132.98	22	IAMs_20	IAMs_20	22 08 38.1		
	comp=Z,1µm,19.0s							
SABA	**Saba**	133.90	335	IAMs_20	IAMs_20	22 11 43.3		
	comp=Z,989nm,20.0s							
SEUS	**St. Eustatius**	133.92	334	IAMs_20	IAMs_20	22 10 16.7		
	comp=Z,1µm,20.0s							
NBMO	**Morrinhos-CE**	134.20	291	*e*P	PKiKP	21 08 44.8	+1.5	
SJG	**San Juan**	134.50	339	IAMs_20	IAMs_20	22 07 40.0		
	comp=Z,835nm,21.0s							
TEIG	**Tepich**	134.73	8	IAMs_20	IAMs_20	22 10 12.4		
	comp=Z,879nm,22.0s							
GTBY	**Guantanamo Bay**	134.91	351	IAMs_20	IAMs_20	22 14 12.6		
	comp=Z,1µm,21.0s							
SDDR	**Presa de Saban**	135.12	345	IAMs_20	IAMs_20	22 10 39.1		
	comp=Z,1µm,20.0s							
FDF	**Fort de France**	135.61	330	IAMs_20	IAMs_20	22 07 23.7		
	comp=Z,1µm,22.0s							
MCLT	**Moule a Chique**	136.41	329	IAMs_20	IAMs_20	22 07 49.2		
	comp=Z,688nm,19.0s							
MTDJ	**Mount Denham**	136.89	354	IAMs_20	IAMs_20	22 13 02.1		
	comp=Z,1µm,20.0s							
ROSB	**Rosrio**	137.39	295	*e*P	PKiKP	21 08 50.9	+1.2	
CCIG	**Comitan**	137.90	14	IAMs_20	IAMs_20	22 16 17.6		
	comp=Z,1µm,22.0s							
PMSA	**Palmer Station**	138.46	192	*e*P	PKiKP	21 08 51.2	+0.9	
NAN01	**Guarapari, ES**	140.41	272	*e*P	PKiKP	21 08 55.4	-0.4	
TGUH	**Tegucigalpa,Un**	140.93	8	IAMs_20	IAMs_20	22 15 07.9		
	comp=Z,1µm,21.0s							
RIB01	**Linhares ES**	141.08	270	*e*P	PKiKP	21 08 57.4	+0.3	
BSFB	**Barra de Sao F**	141.36	271	*e*P	PKiKP	21 08 56.8	-0.9	
SJMB	**Sao Joao De Ma**	141.63	271	*e*P	PKiKP	21 08 58.1	-0.2	
CRIN	**San Cristobal**	142.30	8	IAMs_20	IAMs_20	22 15 42.2		
	comp=Z,1µm,21.0s							
ACON	**Acoyapa**	143.22	5		PKPab	21 08 50.6	-3.4	
PRPB	**Parauapebas**	143.91	296	*e*P	PKiKP	21 09 02.8	-0.3	
SDV	**Santo Domingo**	144.59	340	*e*P	PKPab	21 08 58.8	-0.7	
SDV	**Santo Domingo**	144.59	340		PKPab	21 08 58.1	-1.4	
SDV	**Santo Domingo**	144.59	340	IAMs_20	IAMs_20	22 23 09.4		
	comp=Z,719nm,21.0s							
SJCC	**San Jacinto, C**	144.75	348	*e*P	PKPdf	21 09 00.7	-0.5	

JTS	**Las Juntas de**	144.90	5	IAMs_20	IAMs_20	22 14 52.7		
	comp=Z,860nm,21.0s							
MAN01	**Angra dos Reis**	145.15	265	*e*P	PKPdf	21 09 03.0	+1.4	
BSCB	**Bom Sucesso**	145.49	269	*e*P	PKPab	21 09 04.2	+1.7	
SMLC	**San Martn de**	145.59	346	*e*P	PKPdf	21 09 01.5	-1.0	
ESAR	**Angra dos Reis**	145.61	265	*e*P	PKPab	21 09 04.4	+1.6	
OCAC	**Ocana**	145.95	344	*e*P	PKPab	21 09 04.3	-0.1	
BCIP	**Isla Barro Col**	146.05	356	IAMs_20	IAMs_20	22 16 39.9		
	comp=Z,815nm,21.0s							
CAPC	**Capurgana**	146.33	352	*e*P	PKPbc	21 09 04.8	-0.1	
PAMC	**Pamplona, Colo**	146.66	343	*e*P	PKPab	21 09 07.1	-0.4	
BDFB	**Brasilia**	146.81	280	PKPbc	PKPbc	21 09 06.2	-0.2	
	comp=Z,8.3nm,0.8s,baz=128,slow=4.2,SNR=9.0							
BDFB	**Brasilia**	146.81	280		PKPdf	21 09 04.9	+0.2	
BDFB				IAMs_20	IAMs_20	22 21 37.6		
	comp=Z,686nm,20.0s							
UREC	**San Jos de Ur**	146.91	348	*e*P	PKPbc	21 09 06.8	+0.1	
ZARC	**Zaragoza, Cauc**	147.03	347	*e*P	PKPbc	21 09 06.6	-0.4	
BRRC	**Barranca, Sant**	147.14	345	*e*P	PKPbc	21 09 07.8	+0.5	
ITTB	**Itaituba**	147.45	305	*e*P	PKPab	21 09 09.6	-0.5	
BARC	**Barichara**	147.50	343	*e*P	PKPbc	21 09 09.2	+0.6	
IPMB	**Ipameri, GO**	147.78	276	*e*P	PKPbc	21 09 08.1	-0.9	
PTGA	**Pitinga**	147.82	315		PKPbc	21 09 08.1	-1.2	
PTGA	**Pitinga**	147.82	315	*e*P	PKPbc	21 09 09.9	+0.4	
PTBC	**PUERTO BERRIO**	147.86	346	*e*P	PKPbc	21 09 08.9	-0.4	
VAO	**Valinhos**	147.90	266	*e*P	PKPbc	21 09 09.7	+0.4	
RUSC	**La Rusia**	148.15	343	*e*P	PKPdf	21 09 08.9	+1.5	
RUSC	**La Rusia**	148.15	343		PKPdf	21 09 08.3	+0.8	
RCLB	**Rio Claro- Sao**	148.30	267	*e*P	PKPbc	21 09 10.3	0.0	
PET01	**Itanhaem-SP**	148.39	264	*e*P	PKPbc	21 09 10.0	-0.4	
SPB	**Sao Paulo**	148.42	265		PKPbc	21 09 09.6	-0.9	
SPB				IAMs_20	IAMs_20	22 17 00.9		
	comp=Z,1µm,21.0s							
SPB	**Sao Paulo**	148.42	265	*e*P	PKPbc	21 09 10.5	0.0	
HELC	**Santa Helena**	148.43	347	*e*P	PKiKP	21 09 13.3	+0.4	
SPBC	**San Pablo de B**	148.63	345	*e*P	PKPbc	21 09 10.3	-1.1	
CBOC	**Ciudad Bolivar**	148.84	348	*e*P	PKiKP	21 09 12.8	-0.7	
NPGB	**Novo Progresso**	148.86	300	*e*P	PKPbc	21 09 11.7	-0.2	
NORC	**Norcasia**	148.90	346	*e*P	PKPdf	21 09 09.9	+1.7	
BB19B	**Bebedouro**	148.91	270	*e*P	PKPbc	21 09 11.9	0.0	
GUY2C	**Guyana, Caldas**	149.33	347	*e*P	PKPbc	21 09 14.1	+0.4	
ROSC	**El Rosal**	149.47	345	PKPbc	PKPbc	21 09 13.7	-0.2	
	comp=Z,171nm,0.8s,baz=178,slow=6.9,SNR=19							
ROSC				PKPab	PKPab	21 09 17.4	-1.2	
	comp=Z,171nm,0.8s,baz=167,slow=8.6,SNR=15							
ROSC	**El Rosal**	149.47	345	*e*P	PKiKP	21 09 15.6	+0.5	
ROSC	**El Rosal**	149.47	345	PKPdf	PKPdf	21 09 05.9	-3.6	
ROSC					PKPbc	21 09 12.9	-1.0	
ROSC				IAMs_20	IAMs_20	22 21 40.4		
	comp=Z,858nm,20.0s							
PTGC	**Puerto Gaitan,**	149.48	340	*e*P	PKiKP	21 09 14.2	-0.4	
CHIC	**Chingaza**	149.53	343	*e*P	PKPdf	21 09 11.6	+2.0	
RREF	**El Recreo**	149.64	347	*e*P	PKiKP	21 09 16.4	+0.6	
ANIL	**Santa Ana**	150.05	347	*e*P	PKPab	21 09 18.9	-2.0	
TIJ01	**Guaruva-PR**	150.08	262	*e*P	PKPbc	21 09 13.3	-1.4	
MACA	**Manacapuru-AM**	150.12	313	*e*P	PKPbc	21 09 13.6	-1.5	
ARAG	**Araguaiana, MT**	150.22	282	*e*P	PKPbc	21 09 14.3	-0.8	
ITRB	**Iturama**	150.23	274	*e*P	PKPbc	21 09 13.4	-1.8	
FRTB	**Fartura**	150.31	266	*e*P	PKPbc	21 09 14.2	-1.1	
ORTC	**Ortega, Tolima**	150.58	346	*e*P	PKiKP	21 09 17.2	+0.3	
PRAC	**Prado**	150.69	345	*e*P	PKPbc	21 09 14.7	-1.8	
YOTC	**Yotoco, Valle**	150.73	348	*e*P	PKPdf	21 09 11.5	+0.4	
CLDB	**Colider**	151.42	295	*e*P	PKPbc	21 09 15.4	-2.7	
PCMB	**Pacaembu**	151.52	270	*e*P	PKPbc	21 09 15.6	-2.6	
C2SB	**Chapadao do Su**	152.20	277	*e*P	PKPdf	21 09 16.2	+3.2	
GARC	**Garzon, Huila**	152.31	346	*e*P	PKPdf	21 09 16.4	+2.7	
BBAC	**Balboa, Cauca**	152.81	349	*e*P	PKiKP	21 09 22.8	+1.1	
TRCB	**Terra Rica**	153.00	268	*e*P	PKPdf	21 09 17.0	+2.8	
CPSB	**Cacapava Do Su**	154.08	251	*e*P	PKPbc	21 09 20.2	-3.4	
OGAUY	**Aigu**	154.48	242	*e*P	PKPdf	21 09 19.8	+3.9	
SAML	**Samuel**	155.98	308	IAMs_20	IAMs_20	22 19 49.7		
	comp=Z,1µm,21.0s							
VILB	**Vilhena**	156.16	296	*e*P	PKPdf	21 09 23.1	+4.4	
PTLB	**Pontes e Lacer**	156.52	289	*e*P	PKPdf	21 09 23.1	+3.9	
CPUP	**Villa Florida**	157.63	261	PKP	PKPdf	21 09 22.6	+2.3	
	comp=Z,5.9nm,1.1s,baz=93,slow=4.6,SNR=4.8							
CPUP				PKPab	PKPab	21 09 53.1	+0.6	
	comp=Z,3.7nm,0.9s,baz=241,slow=2.0,SNR=2.0							
CPUP	**Villa Florida**	157.63	261	PKP2	PKPab	21 09 51.9	-0.6	
CPUP	**Villa Florida**	157.63	261		PKPdf	21 09 23.7	+3.4	
CPUP					PKPab	21 09 51.9	-0.6	
CPUP	**Villa Florida**	157.63	261	*e*P	PKPdf	21 09 25.4	+5.1	
PLCA	**Paso Flores**	161.51	209	PKP	PKPdf	21 09 26.6	+2.2	
	comp=Z,2.1nm,0.9s,baz=38,slow=6.4,SNR=3.1							
PLCA				PKPab	PKPab	21 10 11.3	+2.4	
	comp=Z,4.2nm,0.9s,baz=200,slow=2.5,SNR=2.5							
PLCA	**Paso Flores**	161.51	209	PKIKP	PKPdf	21 09 25.8	+1.4	
PLCA	**Paso Flores**	161.51	209		PKPdf	21 09 25.8	+1.4	
PLCA					PKPab	21 10 08.6	-0.3	
PLCA	**Paso Flores**	161.51	209	*e*P	PKPdf	21 09 28.9	+4.5	
LPAZ	**La Paz**	164.37	301	PKP	PKPdf	21 09 30.7	+2.1	
	comp=Z,3.6nm,0.9s,baz=28,slow=4.9,SNR=7.2							
LPAZ				PKPab	PKPab	21 10 22.8	-0.1	
	comp=Z,7.7nm,1.0s,baz=26,slow=6.5,SNR=6.1							
LPAZ	**La Paz**	164.37	301	PKIKP	PKPdf	21 09 26.6	-1.9	
LPAZ						21 09 27.0		
LPAZ						21 10 21.6		
LPAZ	**La Paz**	164.37	301		PKPdf	21 09 26.6	-1.9	
LVC	**Limon Verde**	167.71	278	*e*P	PKPdf	21 09 35.4	+4.7	

*NEIC **23** 20:51:44.8±1.0,58.98N±0.05×154.4W±0.1, h136km±6km, Error ellipse: s-maj=9.2km s-min=6.2km az=117.0*

AEIC 23 20:51:46.2±1.8,58.96N±0.05×154.4W±0.1,h130km±5km, ML2.5/72, Error ellipse: s-maj=8.9km s-min=6.0km az=129.0, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAHC	**Katmai Hardscr**	0.45	227		Pn	20 52 04.1	-1.0
KAHG	**Katmai Hook Gl**	0.47	191		Pn	20 52 04.6	-0.6
KARR	**Katmai Rainbow**	0.49	200		Pn	20 52 04.8	-0.4
KAWH	**Katmai**	0.62	201		Pn	20 52 05.2	-0.9
AUH	**Augustine H**	0.63	49		Pn	20 52 05.6	-0.5
AUJK	**Augustine Jueg**	0.64	51		Pn	20 52 05.5	-0.6
AUP	**Augustine Pinn**	0.64	50		Pn	20 52 05.8	-0.4
AUL	**Augustine Lava**	0.65	48		Pn	20 52 05.6	-0.5
AU22	**Augustine Moun**	0.67	51		Pn	20 52 05.7	-0.5
AU22					Sn	20 52 21.0	-0.4
KCG	**Knife Ck. Glac**	0.76	211		Pn	20 52 06.5	-0.5
KABU	**Katmai Buttres**	0.84	215		Pn	20 52 07.1	-0.6
KABU					Sn	20 52 23.3	-0.7
ANCK	**Angle Creek**	0.96	218		Pn	20 52 07.9	-0.9
CAHL	**Cahill**	1.03	208		Pn	20 52 09.0	-0.4
ILS	**Iliamna Low So**	1.21	33		Pn	20 52 10.7	-0.4
KDAK	**Kodiak Island**	1.51	140		Pn	20 52 13.5	-0.9
KDAK	**Kodiak Island**	1.51	140		Sn	20 52 34.4	-1.3
HOM	**Homer**	1.57	62		Pn	20 52 11.0	-4.0
RED	**Redoubt Volcan**	1.68	28		Pn	20 52 15.5	-0.8
RED					Sn	20 52 37.9	-1.5
CNPM	**China Poot**	1.71	69	Pn	Pn	20 52 15.8	-0.9
CNPM	**China Poot**	1.71	69		Sn	20 52 38.6	-1.3
RSO	**Redoubt South**	1.72	28		Pn	20 52 15.8	-1.2
RDWB	**Redoubt West**	1.72	26		Pn	20 52 15.8	-1.1
RDWB					Sn	20 52 39.0	-1.4
OHAK	**Old Harbor**	1.83	161		Pn	20 52 16.9	-1.2
OHAK	**Old Harbor**	1.83	161		Sn	20 52 41.1	-1.3
DFR	**Drift River**	1.85	27		Pn	20 52 17.3	-1.1
DFR					Sn	20 52 41.7	-1.3
BRLK	**Bradley Lake**	1.96	64		Pn	20 52 18.1	-1.6
BRSE	**Bradley Lake S**	2.00	66		Pn	20 52 19.6	-0.8
SVW2	**Sparrevohn**	2.23	345	Pn	Pn	20 52 21.7	-1.2
SPCR	**Spurr Chakacha**	2.50	25		Pn	20 52 25.4	-1.0
SPNN	**North Nagishla**	2.56	18		Pn	20 52 26.0	-1.2
SLKM	**Skilak Lake**	2.62	52		Pn	20 52 26.9	-0.9
SPCG	**Spurr Capps Gl**	2.62	26		Pn	20 52 26.9	-1.0
SEW	**Seward**	2.76	63	Pn	Pn	20 52 28.5	-1.1
STLK	**Strandline Lak**	2.85	25		Pn	20 52 30.0	-0.8
RC01	**Rabbit Creek A**	3.16	45	Pn	Pn	20 52 33.3	-1.5
CHGN	**Chignik**	3.44	221	Pn	Pn	20 52 37.8	-0.6
PWL	**Port Wells**	3.59	55		Pn	20 52 38.5	-1.9
KNK	**Knik Glacier**	3.85	48	Pn	Pn	20 52 41.9	-2.0
GHO	**Glory Hole Cre**	3.91	41	Pn	Pn	20 52 42.7	-2.0
TT01	**Tatalina**	4.04	349		Pn	20 52 45.0	-1.3
TTA	**Tatalina**	4.07	349	Pn	Pn	20 52 45.5	-1.3
GLI	**Glacier Island**	4.14	59	Pn	Pn	20 52 45.8	-1.9
MID	**Middleton Isla**	4.16	80		Pn	20 52 47.2	-0.7
HIN	**Hinchinbrook I**	4.25	67	Pn	Pn	20 52 47.8	-1.3
FID	**Port Fidalgo**	4.37	62	Pn	Pn	20 52 48.9	-1.8
JPK	**Jack Peak**	4.43	58		Pn	20 52 50.4	-1.3
SCM	**Sheep Creek Mo**	4.53	47		Pn	20 52 51.4	-1.6
EYAK	**Cordova Ski Ar**	4.65	66		Pn	20 52 52.8	-1.6
WAT6	**Susitna Watana**	4.88	39		Pn	20 52 55.2	-2.4
KTH	**Kantishna Hill**	4.90	18	Pn	Pn	20 52 55.8	-2.1
WAT2	**Susitna Watana**	4.91	33		Pn	20 52 55.6	-2.4
TRF	**Thorofare Moun**	4.92	22	Pn	Pn	20 52 55.8	-2.5
RAGM	**Ragged Mountai**	5.12	70	Pn	Pn	20 52 58.7	-2.1
RND	**Reindeer**	5.20	29	Pn	Pn	20 52 59.5	-2.4
DHY	**Denali Highway**	5.35	37	Pn	Pn	20 53 01.5	-2.5
BPAW	**Bear Paw Mtn.**	5.41	16	Pn	Pn	20 53 00.8	-3.9
BWN	**Browne**	5.73	22	Pn	Pn	20 53 07.4	-1.6
KHIT	**Khitrov Hills**	5.83	70		Pn	20 53 09.3	-1.0
GLB	**Gilahina Butte**	5.83	60	Pn	Pn	20 53 09.2	-1.1
PAX	**Paxson**	5.92	43		Pn	20 53 09.9	-1.6
VRDI	**Verde Repeater**	5.92	63		Pn	20 53 10.3	-1.4
WAX	**Waxell Ridge**	6.02	71	Pn	Pn	20 53 11.6	-1.3
KULT	**Kultieth River**	6.06	73		Pn	20 53 12.5	-1.0
MCARA	**McCarthy VSAT**	6.17	62	Pn	Pn	20 53 13.1	-1.7
KIAG	**Kiagna River**	6.35	67		Pn	20 53 16.4	-1.0
PTPK	**Patty Peak**	6.37	64		Pn	20 53 16.6	-1.1
BALM	**Baldy**	6.39	66	Pn	Pn	20 53 16.4	-1.5
CCB	**Clear Creek Bu**	6.50	26	Pn	Pn	20 53 16.1	-3.1
BARN	**Barnard Glacie**	6.72	66	Pn	Pn	20 53 21.6	-0.8
RKAV	**Rock Avalanche**	6.75	73		Pn	20 53 21.3	-1.4
IL31		6.82	28	Pn	Pn	20 53 20.9	-2.6
DOT	**Dot Lake**	6.84	42	Pn	Pn	20 53 21.8	-2.0
CTGM	**Chitina Glacie**	6.85	67	Pn	Pn	20 53 23.4	-0.8
SCRK	**Sand Creek**	7.07	40	Pn	Pn	20 53 25.4	-1.7
BC03		7.37	51		Pn	20 53 29.5	-1.4
PNL	**Peninsula**	7.70	78		Pn	20 53 34.4	-1.1
DHAK	**Deception Hill**	8.34	82	Pn	Pn	20 53 42.9	-1.2

BJI 23 21:00:41.9±0.0, 25.04N×97.83E, h15km, ML4.0/4, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	4.45	88	Pn	Pg	21 02 07

δ62.00000°,λ-82.00000°. Principal axes: T 5.3192, Plg16.0000°, Azm249.0000°; N 0.0718, Plg7.0000°, Azm341.0000°; P -5.3910, Plg72.0000°, Azm93.0000°;
NEIC **23** 21:20:09, 18.88N×145.04E,h560km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=3.81; $M_{\theta\theta}$=0.36; $M_{\phi\phi}$=3.45; $M_{r\theta}$=-0.46; $M_{r\phi}$=-1.07; $M_{\theta\phi}$=2.09; Fault plane solution: M_o=4.36000×10^{17} NP1:ϕ340.00000°, δ30.00000°,λ-94.00000°. NP2:ϕ165.00000°,δ60.00000°, λ-87.00000°. Principal axes: T 4.3429, Plg15.0000°, Azm253.0000°; N 0.0323, Plg2.0000°, Azm344.0000°; P -4.3752, Plg75.0000°, Azm82.0000°;
ISC 23 21:20:07.2±0.3,**18.97N**±0.03,**145.10E**±0.03,**h565**km±3km, **h565**km:**pP-P,n1276,**σ1s**25**/1262,**mb5.5**/402,**60C-28D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**5.36**	**182**	P		**P**	**21 21 39.7**	**-1.4**
GUMO				S		**S**	**21 22 52.8**	**-4.8**
GUMO	**Guam**	**5.36**	**182**	P		**P**	**21 21 39.7**	**-1.4**
GUMO				S		**S**	**21 22 52.8**	**-4.8**
JCJ	**Chichijima**	**8.52**	**342**	P		**P**	**21 22 10.0**	**-0.4**
	199nm,0.3s,baz=245,slow=5.0,SNR=77							
JCJ				S		**S**	**21 23 50.9**	**-0.7**
	49nm,0.3s,baz=97,slow=23,SNR=17							
JHJ2	**Mitsune**	**14.86**	**342**	P		**P**	**21 23 14.7**	**-0.1**
JHJ2						**S**	**21 25 48.8**	**-0.1**
JHJ	**Hachijo jima 2**	**14.88**	**342**	P		**P**	**21 23 15.5**	**+0.5**
	64nm,0.3s,baz=180,slow=9.4,SNR=12							
JHJ				S		**S**	**21 25 46.1**	**-3.2**
	41nm,0.3s,baz=45,slow=20,SNR=11							
JOW	**Kunigami**	**17.35**	**300**	P		**P**	**21 23 38.8**	**+0.3**
	17nm,0.3s,baz=78,slow=14,SNR=128							
JOW				S		**S**	**21 26 29.4**	**-1.1**
	baz=83,slow=17,SNR=4.5							
JOW	**Kunigami**	**17.35**	**300**	P		**P**	**21 23 38.8**	**+0.3**
JOW				S		**S**	**21 26 30.2**	**-0.3**
PATS	**Pohnpei**	**17.63**	**131**	P		**P**	**21 23 41.0**	**-0.1**
INU	**Inuyama**	**17.82**	**338**	P		**P**	**21 23 42.8**	**+0.2**
MJAR	**Matsushiro Arr**	**18.53**	**342**	P		**P**	**21 23 48.7**	**-0.3**
	2.3nm,0.3s,baz=154,slow=9.3,SNR=191							
MJAR				S		**S**	**21 26 49.2**	**-0.2**
	0.3nm,0.3s,baz=152,slow=14,SNR=4.4							
MJAR				PcP		**PcP**	**21 27 50.8**	**+1.4**
	0.2nm,0.3s,baz=176,slow=5.0,SNR=4.0							
MJAR				ScP		**ScP**	**21 30 29.9**	**-2.0**
	0.1nm,0.3s,baz=172,slow=3.9,SNR=9.7							
MAJO	**Matsushiro**	**18.53**	**342**	*i* P		**P**	**21 23 48.8**	**-0.3**
MAJO	**Matsushiro**	**18.53**	**342**	P		**P**	**21 23 48.3**	**-0.8**
MAT	**Matsushiro**	**18.53**	**342**	P		**P**	**21 23 48.3**	**-0.8**
MAT				S		**S**	**21 26 48.0**	**-1.4**
MJB9	**Matsu-Tunnel**	**18.53**	**342**	P		**P**	**21 23 48.7**	**-0.4**
MJB9				IAmb		IAmb	21 23 53.3	
	comp=Z,198nm,1.0s							
JNU	**Nakatsue**	**18.99**	**321**	P		**P**	**21 23 53.1**	**-0.3**
	comp=Z,7.9nm,0.3s,baz=120,slow=3.4,SNR=89							
JNU				S		**S**	**21 26 55.2**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=226,slow=23,SNR=1.4							
JNU				ScP		**ScP**	**21 30 31.5**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=66,slow=4.4,SNR=7.8							
JNU	**Nakatsue**	**18.99**	**321**	P		**P**	**21 23 53.2**	**-0.2**
JNU				IAmb		IAmb	21 23 56.3	
	comp=Z,182nm,0.9s							
WAKE	**Wake Island**	**20.37**	**86**	P		**P**	**21 24 06.4**	**+0.5**
WAKE				IAmb		IAmb	21 24 08.1	
	comp=Z,218nm,1.1s							
YOJ	**Yonaguni jima**	**21.23**	**289**	P		**P**	**21 24 13.3**	**-0.4**
YOJ				pmax		pmax		
	comp=Z,333nm,1.2s							
YOJ	**Yonaguni jima**	**21.23**	**289**	P		**P**	**21 24 13.3**	**-0.4**
SMPI	**Sarmi**	**21.76**	**197**	P		**P**	**21 24 19.3**	**+0.8**
	comp=Z,1μmcomp=Z,74nm,0.6s							
JAY	**Jayapura**	**21.78**	**192**	P		**P**	**21 24 19.5**	**+0.6**
	comp=Z,107nm,0.8s,baz=327,slow=4.5,SNR=50							
JAY				ScP		**ScP**	**21 30 41.6**	**+1.5**
	comp=Z,17nm,1.0s,baz=326,slow=4.2,SNR=5.5							
JAY	**Jayapura**	**21.78**	**192**	P		**P**	**21 24 19.4**	**+0.6**
	comp=Z,1μmcomp=Z,100nm,0.9s							
GENI	**Genyem**	**21.97**	**193**	P		**P**	**21 24 22.4**	**+2.0**
	comp=Z,201nm,1.5s							
DAV	**Davao City (W)**	**22.37**	**241**	P		**P**	**21 24 24.7**	**+0.7**
	comp=Z,264nm,0.4s,baz=85,slow=3.7,SNR=15							
DAV	**Davao City (W)**	**22.37**	**241**	P		**P**	**21 24 23.9**	**-0.1**
CGP	**Cagayan de Oro**	**22.38**	**245**	⇓*eP*		**P**	**21 24 24.5**	**+0.4**
NACB	**Ninganchiao**	**22.45**	**287**	P		**P**	**21 24 23.0**	**-1.6**
NACB				IAmb		IAmb	21 24 27.8	
	comp=Z,246nm,1.3s							
TBP	**Tagbilaran**	**22.53**	**249**	*eP*		**P**	**21 24 27.2**	**+1.8**
YULB	**Yu-li**	**22.62**	**285**	P		**P**	**21 24 24.6**	**-1.5**
YULB				IAmb		IAmb	21 24 33.2	
	comp=Z,63nm,0.7s							
TATO	**Taipei**	**22.68**	**289**	P		**P**	**21 24 24.8**	**-1.9**
TATO	**Taipei**	**22.68**	**289**	P		**P**	**21 24 24.6**	**-2.1**
TATO				IAmb		IAmb	21 24 38.9	
	comp=Z,83nm,1.0s							
YHNB	**Yeheng**	**22.73**	**289**	P		**P**	**21 24 26.5**	**-0.7**
TWG	**Pinlang**	**22.77**	**284**	P		**P**	**21 24 26.6**	**-0.9**
RCP	**Roxas**	**22.77**	**254**	⇓*eP*		**P**	**21 24 27.2**	**-0.5**
KCP	**Kidapawan**	**22.80**	**241**	⇑*iP*		**P**	**21 24 27.5**	**-0.5**
SSLB	**Suanglung**	**22.98**	**286**	IAmb		IAmb	21 24 36.8	
	comp=Z,186nm,0.9s							
RKPI	**Ransiki, Papua**	**23.01**	**209**	P		**P**	**21 24 30.8**	**+1.1**
	comp=Z,7μmcomp=Z,168nm,0.7s							
ERM	**Erimo**	**23.03**	**356**	P		**P**	**21 24 28.8**	**-0.7**
ERM				pmax		pmax		
	comp=Z,93nm,1.3s							
ERM	**Erimo**	**23.03**	**356**	P		**P**	**21 24 28.8**	**-0.7**
LQP	**Lukban**	**23.09**	**261**	*eP*		**P**	**21 24 30.6**	**-0.1**
TPUB	**Ta-pu**	**23.22**	**285**	P		**P**	**21 24 30.2**	**-1.3**
SNPH	**Sibulan**	**23.23**	**249**	⇓*eP*		**P**	**21 24 33.1**	**+1.3**
TJN	**Taejon**	**23.33**	**322**	*eP*		**P**	**21 24 31.0**	**-1.3**
CTBH	**Cotabato--PC H**	**23.40**	**243**	⇑*eP*		**P**	**21 24 33.6**	**+0.4**
SZP	**Santa**	**23.44**	**270**	P		**P**	**21 24 32.8**	**-0.7**
SZP				IAmb		IAmb	21 24 50.3	
	comp=Z,114nm,0.6s							
WAMI	**Wamena**	**23.57**	**196**	P		P	21 24 44.2	+10
TGY	**Tagaytay City**	**23.66**	**262**	P		**P**	**21 24 35.8**	**+0.3**
	comp=Z,974nm,0.4s,baz=6.3,slow=4.2,SNR=19							
TGY				ScP		**ScP**	**21 30 45.3**	**+0.1**
	comp=Z,87nm,0.4s,baz=221,slow=1.8,SNR=4.8							
KSRS	**Korea Array**	**23.77**	**324**	P		**P**	**21 24 35.9**	**-0.2**
	comp=Z,29nm,0.4s,baz=145,slow=8.5,SNR=75							
KSRS				PcP		**PcP**	**21 28 00.1**	**+0.4**
	comp=Z,20nm,1.0s,baz=147,slow=1.8,SNR=11							
KSRS				ScP		**ScP**	**21 30 45.1**	**+0.1**
	comp=Z,22nm,0.9s,baz=133,slow=3.4,SNR=28							
KSRS				P3KPbc			21 57 42.5	
	comp=Z,1.2nm,0.7s,baz=330,slow=5.0,SNR=5.7							
KS19	**Wonju Array Si**	**23.83**	**324**	IAmb		IAmb	21 24 38.5	
	comp=Z,95nm,1.1s							
SIJI	**Sorong**	**23.95**	**216**	P		**P**	**21 24 38.0**	**-0.1**
	comp=Z,250nm,0.5s,baz=22,slow=9.6,SNR=94							
SIJI				ScP		**ScP**	**21 30 45.2**	**-0.7**
	comp=Z,24nm,0.8s,baz=354,slow=6.2,SNR=7.2							
RABL	**Rabaul**	**24.04**	**162**	P		**P**	**21 24 38.7**	**-0.2**
RABL				IAmb		IAmb	21 24 39.9	
	comp=Z,115nm,0.8s							
KRVT	**Keravat (AS076**	**24.11**	**163**	P		**P**	**21 24 39.9**	**+0.4**
	comp=Z,40nm,0.4s,baz=170,slow=9.5,SNR=9.7							
INCN	**Inchon**	**24.52**	**323**	P		**P**	**21 24 41.5**	**-1.3**
INCN				pmax		pmax		
	comp=Z,23nm,0.8s							
INCN	**Inchon**	**24.52**	**323**	P		**P**	**21 24 41.5**	**-1.3**
YUK	**Yuzh-Kuril'sk**	**25.00**	**1**	*i* P		**P**	**21 24 48.3**	**+1.4**
TNTI	**Ternate**	**25.09**	**226**	P		**P**	**21 24 49.3**	**+1.1**
	comp=Z,1μmcomp=Z,78nm,0.5s							
TNTI	**Ternate**	**25.09**	**226**	IAmb		IAmb	21 24 51.2	
	comp=Z,78nm,0.8s							
FAKI	**Fak Fak**	**25.16**	**212**	P		**P**	**21 24 48.5**	**-0.3**
	comp=Z,3μmcomp=Z,191nm,0.7s							
ASAJ	**Asahikawa**	**25.16**	**356**	P		**P**	**21 24 49.3**	**+0.9**
	comp=Z,123nm,0.7s,baz=213,slow=9.9,SNR=72							
ASAJ				PcP		**PcP**	**21 28 03.5**	**+0.7**
	comp=Z,10nm,0.4s,baz=255,slow=8.3,SNR=5.9							
ASAJ				ScP		**ScP**	**21 30 47.8**	**-1.0**
	comp=Z,8.6nm,0.6s,baz=228,slow=6.3,SNR=4.9							
QZH	**Quanzhou**	**25.27**	**288**	⇑*iP*		**P**	**21 24 49.5**	**-0.1**
QZH				sP		**sP**	**21 27 22.6**	**-0.9**
QZH				S		**S**	**21 28 36.1**	**-0.2**
QZH				pmax		pmax		
	comp=Z,100nm,0.8s							
KNMB	**Chin-men Tao**	**25.39**	**287**	P		**P**	**21 24 49.8**	**-0.9**
LBMI	**Labuha**	**26.05**	**224**	P		**P**	**21 24 57.2**	**+0.6**
	comp=Z,5μmcomp=Z,476nm,1.0s							
KUR	**Kuril'sk**	**26.29**	**4**	*i* P		**P**	**21 24 59.3**	**+1.0**
MSHR	**Mys Shultsa**	**26.34**	**336**	*ceP*		**P**	**21 25 00.8**	**+2.1**
VLA	**Vladivostok**	**26.54**	**338**	*c iP*		**P**	**21 25 02.1**	**+1.6**
TEY	**Ternei**	**26.94**	**347**	⇑*iP*		**P**	**21 25 04.7**	**+0.7**
TEY				pmax		pmax		
	comp=E,30nm,0.6s							
TEY				pmax		pmax		
	comp=Z,30nm,0.6s							
TEY				pmax		pmax		
	comp=N,30nm,0.5s							
NJ2	**Nanjing**	**26.95**	**304**	*eP*		**P**	**21 25 04.3**	**0.0**
NJ2				pmax		pmax		
	comp=N,12nm,0.5s							
MSAI	**Masohi**	**27.30**	**217**	P		**P**	**21 25 09.1**	**+1.5**
	comp=N,1μmcomp=N,118nm,0.8s							
USRK	**Ussuriysk Ar.**	**27.45**	**339**	P		**P**	**21 25 08.8**	**+0.3**
	comp=N,50nm,0.7s,baz=144,slow=8.2,SNR=103							
USRK				ScP		**ScP**	**21 30 55.2**	**-0.5**
	comp=N,4.1nm,0.6s,baz=115,slow=4.8,SNR=5.7							
USRK				P3KPbc			21 57 22.9	
	comp=N,2.8nm,0.8s,baz=280,slow=11,SNR=4.9							
KMSI	**Cibinong**	**27.63**	**231**	P		**P**	**21 25 11.9**	**+1.4**
	comp=N,7μmcomp=N,411nm,0.4s							
BNDI	**Bandanaira**	**27.73**	**214**	P		**P**	**21 25 12.5**	**+1.2**
	comp=N,7μmcomp=N,885nm,1.0s							
YSS	**Yuzh-Sakhalins**	**27.98**	**357**	*eP*		**P**	**21 25 13.6**	**+0.6**
YSS				*e*			21 28 11.2	
YSS				*eS*		**S**	**21 29 17.9**	**0.0**
YSS				pmax		pmax		
	comp=Z,180nm,0.7s							
YSS				MLR		MLR		
	comp=Z,1μm,16.0s							
YSS	**Yuzh-Sakhalins**	**27.98**	**357**	P		**P**	**21 25 13.7**	**+0.6**
YSS				IAmb		IAmb	21 25 15.5	
	comp=Z,155nm,0.8s							
AAI	**Ambon**	**28.00**	**218**	P		**P**	**21 25 14.4**	**+0.7**
	comp=Z,6μmcomp=Z,641nm,0.9s							
SANI	**Sanana**	**28.10**	**224**	P		**P**	**21 25 12.7**	**-1.9**
	comp=Z,3μmcomp=Z,188nm,0.4s							
PMG	**Port Moresby**	**28.27**	**176**	P		**P**	**21 25 16.3**	**+0.3**
	comp=Z,136nm,0.9s,baz=349,slow=7.8,SNR=25							
PMG				ScP		**ScP**	**21 31 00.6**	**+2.0**
	comp=Z,73nm,1.0s,baz=328,slow=3.7,SNR=7.8							
PMG	**Port Moresby**	**28.27**	**176**	*ceP*		**P**	**21 25 15.5**	**-0.5**
PMG				pmax		pmax		
	comp=Z,675nm,1.2s							
PMG	**Port Moresby**	**28.27**	**176**	P		**P**	**21 25 15.2**	**-0.8**
NLAI	**Namlea**	**28.30**	**221**	P		**P**	**21 25 16.9**	**+0.6**
	comp=Z,4μmcomp=Z,378nm,1.0s							
DL2	**Dalian**	**28.43**	**319**	P		**P**	**21 25 20.5**	**+3.4**
DL2				pmax		pmax		
	comp=Z,39nm,0.6s							
MDJ	**Mudanjiang**	**28.67**	**337**	P		**P**	**21 25 20.3**	**+1.2**
MDJ				pmax		pmax		
	comp=Z,57nm,0.8s							
MDJ				pmax		pmax		
	comp=Z,890nm,4.5s							
MDJ	**Mudanjiang**	**28.67**	**337**	P		**P**	**21 25 19.5**	**+0.4**
MDJ				IAmb		IAmb	21 25 22.1	
	comp=Z,148nm,1.5s							
HKPS	**Hong Kong Po S**	**29.14**	**282**	P		**P**	**21 25 21.9**	**-1.6**
HKPS				IAmb		IAmb	21 25 27.3	
	comp=Z,64nm,0.7s							
LUWI	**Luwuk**	**29.61**	**230**	P		**P**	**21 25 26.9**	**-0.8**
	comp=Z,31μmcomp=Z,2μm,0.5s							
LUWI	**Luwuk**	**29.61**	**230**	P		**P**	**21 25 26.8**	**-0.9**
TIA	**Tai'an**	**30.01**	**311**	P		**P**	**21 25 32.0**	**+1.2**
TIA				pmax		pmax		
	comp=Z,9.0nm,0.6s							
WHN	**Wuhan**	**30.11**	**298**	⇑P		**P**	**21 25 32.3**	**+0.5**
WHN				PcP		**PcP**	**21 28 17.4**	**+2.1**
WHN				ScS		ScS	21 35 04.3	+2.7
WHN				pmax		pmax		
	comp=Z,56nm,0.8s							
APSI	**Ampana**	**30.35**	**232**	P		**P**	**21 25 34.2**	**+0.2**
	comp=Z,11μmcomp=Z,1μm,1.1s							
MPSI	**Mapaga**	**30.89**	**236**	P		**P**	**21 25 39.2**	**+0.5**
	comp=Z,6μmcomp=Z,354nm,0.9s							
SPMM	**Sapulut**	**31.33**	**247**	P		**P**	**21 25 43.0**	**+0.5**
TYV	**Tymovskoe**	**31.88**	**357**	*eP*		**P**	**21 25 47.7**	**+1.1**
TYV				*eS*		**S**	**21 30 20.9**	**+3.0**
TYV				pmax		pmax		
	comp=Z,2μm,6.6s							
TYV				pmax		pmax		
	comp=Z,222nm,1.0s							
TYV				smax		smax		
	comp=N,52nm,1.7s							
TYV				smax		smax		
	comp=E,1μm,7.9s							
KLR	**Kul'dur**	**32.05**	**343**	P		**P**	**21 25 47.9**	**-0.1**
	comp=E,66nm,0.6s,baz=165,slow=6.0,SNR=143							
KLR				PcP		**PcP**	**21 28 20.9**	**+0.7**
	comp=E,36nm,0.5s,baz=53,slow=2.3,SNR=10							
KLR				ScP		**ScP**	**21 31 10.9**	**+0.2**
	comp=E,6.6nm,0.8s,baz=319,slow=2.4,SNR=4.7							
BJI	**Beijing**	**32.55**	**316**	P		**P**	**21 25 52.5**	**+0.1**
BJI				PcP		**PcP**	**21 28 21.6**	**-0.2**
BJI				S		**S**	**21 30 26.3**	**-2.1**
BJI				pmax		pmax		
	comp=E,66nm,0.8s							
COEN	**Coen**	**32.77**	**183**	P		**P**	**21 25 55.5**	**+0.8**
COEN				IAmb		IAmb	21 25 57.6	
	comp=Z,168nm,0.8s							
SKR	**Severo-Kuril's**	**32.83**	**13**	*ceP*		**P**	**21 25 57.3**	**+2.7**
BBSI	**Bau Bau**	**32.91**	**225**	P		**P**	**21 25 58.9**	**+3.0**
	comp=Z,529nmcomp=Z,74nm,1.1s							
TTSI	**Tana Toraja**	**33.13**	**231**	P		**P**	**21 25 58.8**	**+1.1**
	comp=Z,9μmcomp=Z,882nm,0.7s							
QIZ	**Qiongzhong**	**33.30**	**276**	P		**P**	**21 26 00.3**	**+1.2**
QIZ				S		**S**	**21 30 39.0**	**-1.4**
QIZ				sS		**sS**	**21 33 36.8**	**+3.6**
QIZ				pmax		pmax		
	comp=Z,56nm,0.8s							
QIZ	**Qiongzhong**	**33.30**	**276**	P		**P**	**21 25 59.1**	**-0.1**
SMKI	**Samarinda**	**33.50**	**238**	P		**P**	**21 26 04.1**	**+3.3**
	comp=Z,9μmcomp=Z,965nm,1.2s							
SPSI	**Sidrap Palu**	**33.78**	**230**	P		**P**	**21 26 03.4**	**+0.2**
	comp=Z,8μmcomp=Z,651nm,0.7s							
BNSI	**Bone**	**33.84**	**229**	P		**P**	**21 26 06.0**	**+2.4**
	comp=Z,7μmcomp=Z,430nm,0.8s							
ENH	**Enshi**	**34.14**	**296**	IAmb		IAmb	21 26 09.2	
	comp=Z,85nm,0.5s							
BKB	**Balikpapan**	**34.23**	**237**	P		**P**	**21 26 09.4**	**+2.4**
	comp=Z,4μmcomp=Z,423nm,1.1s							
BKB	**Balikpapan**	**34.23**	**237**	P		**P**	**21 26 05.3**	**-1.7**
BKSI	**Bulukumba**	**34.47**	**228**	P		**P**	**21 26 10.7**	**+1.8**
	comp=Z,2μmcomp=Z,154nm,0.9s							
KAPI	**Kappang**	**34.52**	**229**	P		**P**	**21 26 09.8**	**+0.5**
KAPI	**Kappang**	**34.52**	**229**	P		**P**	**21 26 09.8**	**+0.5**
KAPI				pmax		pmax		
	comp=Z,243nm,0.8s							
KAPI	**Kappang**	**34.52**	**229**	P		**P**	**21 26 09.8**	**+0.5**
SOEI	**Soe**	**35.17**	**217**	P		**P**	**21 26 14.8**	**-0.1**
	comp=Z,205nm,0.8s							
SOEI	**Soe**	**35.17**	**217**	IAmb		IAmb	21 26 22.2	
	comp=Z,138nm,0.7s							
PEA0B	**Petropavlovsk-**	**35.45**	**13**	P		**P**	**21 26 17.7**	**+1.2**
PEA0B				pmax		pmax		
	comp=Z,114nm,1.2s							
PEA0B	**Petropavlovsk-**	**35.45**	**13**	P		**P**	**21 26 17.7**	**+1.2**
PEA0B				IAmb		IAmb	21 26 19.9	
	comp=Z,114nm,1.1s							
PETK	**Petropavlovsk-**	**35.45**	**13**	P		**P**	**21 26 17.8**	**+1.3**
	comp=Z,29nm,0.7s,baz=147,slow=6.9,SNR=60							
PETK				PcP		**PcP**	**21 28 30.5**	**+0.4**
	comp=Z,36nm,0.8s,baz=204,slow=3.3,SNR=8.1							
PETK				ScP		**ScP**	**21 31 20.6**	**-2.2**
	comp=Z,6.2nm,0.6s,baz=199,slow=5.9,SNR=4.6							
XAN	**Xi'an**	**35.48**	**302**	P		**P**	**21 26 17.3**	**+0.2**
XAN				pmax		pmax		
	comp=Z,6.0nm,0.4s							
MIDW	**Midway**	**35.48**	**68**	P		**P**	**21 26 16.6**	**-0.5**
MIDW				IAmb		IAmb	21 26 20.1	
	comp=Z,82nm,0.7s							
MMRI	**Maumere**	**35.51**	**221**	P		**P**	**21 26 18.3**	**+0.8**
	comp=Z,3μmcomp=Z,325nm,0.8s							
PET	**Petropavlovsk**	**35.59**	**14**	*eP*		**P**	**21 26 19.5**	**+1.9**
PET				*e**PP		**pwP**	**21 27 55.8**	**-3.0**
PET				*e*			21 28 31.4	
PET				*eS*		**S**	**21 31 18.0**	**+4.3**
PET				pmax		pmax		
	comp=Z,131nm,1.5s							
PET	**Petropavlovsk**	**35.59**	**14**	P		**P**	**21 26 17.6**	**0.0**
PET				IAmb		IAmb	21 26 20.8	
	comp=Z,287nm,1.5s							
BATI	**Baumata**	**35.88**	**218**	P		**P**	**21 26 20.5**	**-0.1**
	comp=Z,3μmcomp=Z,187nm,1.0s							
EDFI	**Ende, Flores**	**35.94**	**222**	P		**P**	**21 26 21.0**	**-0.2**
	comp=Z,2μmcomp=Z,127nm,0.5s							
HHC	**Hu-ho-hao-te**	**36.01**	**315**	*eP*		**P**	**21 26 22.1**	**+0.6**
HHC				PcP		**PcP**	**21 28 34.4**	**+2.2**
HHC				*eS*		**S**	**21 31 23.6**	**+2.9**
HHC				ScS		**ScS**	**21 35 36.3**	**+3.5**
HHC				pmax		pmax		
	comp=Z,46nm,0.8s							
KBKI	**Kotabaru**	**36.06**	**235**	P		**P**	**21 26 23.0**	**+0.9**
	comp=Z,933nmcomp=Z,78nm,1.0s							
SBUM	**Sibu**	**36.12**	**247**	P		**P**	**21 26 23.3**	**+0.7**
SBUM	**Sibu**	**36.12**	**247**	P		**P**	**21 26 24.0**	**+1.3**
GYA	**Guiyang**	**36.13**	**289**	⇑*iP*		**P**	**21 26 23.8**	**+1.1**
GYA				pP		pP	21 27 59.6	+2.7
GYA				PP		**pwP**	**21 28 03.0**	**-0.3**
GYA				PcP		**PcP**	**21 28 34.3**	**+1.4**
GYA				sP		sP	21 29 01.5	+0.4
GYA				S		**S**	**21 31 24.9**	**+2.0**
GYA				ScP		**ScP**	**21 31 28.0**	**+2.0**
GYA				ScS		**ScS**	**21 35 34.4**	**+0.3**
GYA				pmax		pmax		
	comp=Z,50nm,0.7s							
GYA				pmax		pmax		
	comp=Z,140nm,4.9s							
HIA	**Hailar**	**36.45**	**332**	P		**P**	**21 26 26.0**	**+1.1**
HIA				pmax		pmax		
	comp=Z,139nm,0.7s							
HIA	**Hailar**	**36.45**	**332**	P		**P**	**21 26 26.0**	**+1.1**
BTO	**Baotou**	**36.95**	**313**	*eP*		**P**	**21 26 31.1**	**+1.9**
ZEA	**Zeya**	**37.34**	**343**	*eP*		**P**	**21 26 32.6**	**+0.6**
ZEA				pmax		pmax		
	comp=N,110nm,1.0s							
ZEA				pmax		pmax		
	comp=E,59nm,1.0s							
ZEA				pmax		pmax		
	comp=Z,150nm,1.0s							
BASI	**Baing, Sumba**	**37.76**	**222**	P		**P**	**21 26 35.7**	**-0.3**
	comp=Z,10μmcomp=Z,946nm,1.0s							
WBSI	**Waikabubak, Su**	**38.09**	**224**	P		**P**	**21 26 37.6**	**-1.2**
	comp=Z,5μmcomp=Z,324nm,0.5s							
KSM	**Kuching**	**38.26**	**247**	P		**P**	**21 26 39.3**	**-0.8**
KSM				IAmb		IAmb	21 26 42.3	
	comp=Z,133nm,1.0s							
KSM	**Kuching**	**38.26**	**247**	P		**P**	**21 26 40.0**	**-0.2**
PLAI	**Plampang**	**38.59**	**227**	P		**P**	**21 26 43.1**	**+0.4**
	comp=Z,15μmcomp=Z,495nm,0.5s							
SLVN	**Son La**	**38.67**	**281**	P		**P**	**21 26 43.7**	**+0.2**
CTAO	**Charters Tower**	**38.83**	**178**	P		**P**	**21 26 44.9**	**+0.3**
CTAO				pmax		pmax		
	comp=Z,118nm,1.1s							
CTAO	**Charters Tower**	**38.83**	**178**	P		**P**	**21 26 44.9**	**+0.3**
CTAO				IAmb		IAmb	21 26 46.4	
	comp=Z,118nm,1.1s							
CD2	**Chengdu**	**39.12**	**296**	⇓*iP*		**P**	**21 26 47.6**	**+0.7**
CD2				S		**S**	**21 32 05.5**	**-1.3**
CD2				pmax		pmax		
	comp=Z,150nm,0.7s							
KMI	**Kunming**	**39.62**	**287**	P		**P**	**21 26 52.3**	**+1.1**
KMI				pP		pP	21 28 27.1	-0.7
KMI				pmax		pmax		
	comp=Z,30nm,1.5s							
KMI	**Kunming**	**39.62**	**287**	P		**P**	**21 26 50.2**	**-1.0**
KMI				pmax		pmax		
	comp=Z,38nm,0.7s							
KMI	**Kunming**	**39.62**	**287**	P		**P**	**21 26 50.2**	**-1.0**
LZH	**Lanzhou**	**40.03**	**304**	*eP*		**P**	**21 26 55.3**	**+1.0**
LZH				ScP		**ScP**	**21 31 42.0**	**+1.2**
LZH				ScS		**ScS**	**21 35 57.6**	**+0.9**
LZH				pmax		pmax		
	comp=Z,36nm,1.2s							
WR0	**Warramunga Arr**	**40.05**	**196**	IAmb		IAmb	21 26 56.6	
	comp=Z,116nm,1.1s							
WRAB	**Tennant Creek**	**40.07**	**196**	*ceP*		**P**	**21 26 54.6**	**0.0**
WRAB				pmax		pmax		
	comp=Z,149nm,0.6s							
WRAB	**Tennant Creek**	**40.07**	**196**	P		**P**	**21 26 54.6**	**0.0**
WRA	**Warramunga Arr**	**40.09**	**196**	P		**P**	**21 26 54.3**	**-0.4**
	comp=Z,124nm,0.5s,baz=23,slow=6.4,SNR=577							
WRA				PcP		**PcP**	**21 28 46.0**	**+0.8**
	comp=Z,20nm,0.7

comp=Z,55nm,0.4s,baz=14,slow=6.8,SNR=466
ASAR PcP **PcP** **21 28 58.9 +1.2**
comp=Z,25nm,0.8s,baz=19,slow=4.2,SNR=9.6
ASAR ScP **ScP** **21 31 57.3 +1.5**
comp=Z,22nm,0.9s,baz=19,slow=3.3,SNR=15
ASAR S **S** **21 33 11.6 -2.0**
comp=Z,39nm,0.8s,baz=22,slow=20,SNR=35
ASAR P3KPbc 21 56 14.8
comp=Z,0.6nm,0.4s,baz=188,slow=4.1,SNR=12
MYKOM Kota Tinggi 43.85 252 P **P** **21 27 24.3 -0.1**
MYKOM IAmb IAmb 21 27 28.5
comp=Z,243nm,1.0s
GTA Gaotai 43.94 307 ⇑P **P** **21 27 25.5 +0.6**
GTA PcP **PcP** **21 28 59.6 +1.4**
GTA pP pP 21 29 03.1 -1.2
GTA sP sP 21 30 04.3 -2.8
GTA ScP **ScP** **21 31 56.3 -0.2**
GTA ScS **ScS** **21 36 21.8 +0.8**
GTA pmax pmax
comp=Z,36nm,0.8s
KIWB Kanaga Island 44.15 33 P **P** **21 27 24.4 -1.7**
SEY Seymchan 44.21 5 P **P** **21 27 26.8 +0.4**
comp=Z,68nm,0.6s,baz=181,slow=6.8,SNR=174
SEY PcP **PcP** **21 28 59.1 +0.7**
comp=Z,35nm,0.8s,baz=193,slow=4.1,SNR=5.4
YAK Yakutsk 44.35 350 P **P** **21 27 27.1 -0.3**
comp=Z,195nm,0.5s,baz=192,slow=0.2,SNR=114
YAK PcP **PcP** **21 28 59.1 +0.2**
comp=Z,24nm,0.7s,baz=0.4,slow=1.5,SNR=2.5
YAK ScP **ScP** **21 31 54.6 -2.9**
comp=Z,4.8nm,0.3s,baz=70,slow=3.1,SNR=1.9
YAK S **S** **21 33 19.1 -1.7**
comp=Z,8.0nm,0.4s,baz=114,slow=24,SNR=7.9
YAK Yakutsk 44.35 350 *d iP* **P** **21 27 27.1 -0.3**
YAK *e* 21 28 58.8
YAK *e**PP **pwP** **21 29 12.2 -2.5**
YAK *e* 21 29 22.2
YAK *e*S **S** **21 33 19.1 -1.7**
YAK *e* 21 36 17.2
YAK *e*SS **SS** **21 36 51.3 -1.0**
YAK pmax pmax
comp=Z,305nm,0.8s
YAK pmax pmax
comp=N,142nm,0.8s
YAK pmax pmax
comp=E,52nm,0.9s
YAK pmax pmax
comp=Z,102nm,2.5s
YAK pmax pmax
comp=N,79nm,2.3s
YAK pmax pmax
comp=E,42nm,2.0s
YAK smax smax
comp=N,152nm,1.6s
YAK smax smax
comp=E,163nm,2.0s
YAK Yakutsk 44.35 350 P **P** **21 27 27.1 -0.3**
ADK Adak 44.40 33 P **P** **21 27 28.9 +0.9**
ADK pmax pmax
comp=Z,271nm,0.7s
ADK Adak 44.40 33 P **P** **21 27 28.9 +0.9**
GSTR Great Sitkin T 44.84 33 P **P** **21 27 32.3 +0.9**
BOD Bodaibo 45.04 337 *eP* **P** **21 27 33.2 +0.4**
BOD pmax pmax
comp=Z,9.0nm,1.4s
CISI Cisompet, Garu 45.23 238 P **P** **21 27 33.9 -1.1**
comp=Z,5µmcomp=Z,374nm,0.5s
PMBI Palembang 45.24 246 P **P** **21 27 35.6 +0.5**
PMBI IAmb IAmb 21 27 38.5
comp=Z,159nm,0.8s
IPM Ipoh 45.34 257 IAmb IAmb 21 27 39.2
comp=Z,114nm,1.0s
KULM Kulim 45.39 258 IAmb IAmb 21 27 39.9
comp=Z,282nm,1.4s
DBJI Dramaga 45.51 240 P **P** **21 27 38.0 +0.8**
comp=Z,3µmcomp=Z,75nm,1.0s
ZAK Zakamensk 45.59 323 *eP* **P** **21 27 37.5 +0.1**
ZAK *e* 21 29 03.6
ZAK pmax pmax
comp=Z,70nm,1.1s
ZAK pmax pmax
comp=Z,29nm,1.4s
ZAK pmax pmax
comp=Z,18nm,1.4s
CNJI Cibinong 45.64 239 P **P** **21 27 38.0 0.0**
comp=Z,2µmcomp=Z,313nm,0.9s
DZM Mont Dzumac 45.82 152 *eP* **P** **21 27 40.3 +0.9**
comp=Z,155nm,1.1s
DZM Mont Dzumac 45.82 152 ScP **ScP** **21 32 05.3 +0.9**
comp=Z,12nm,0.9s,baz=54,slow=18,SNR=4.1
DZM Mont Dzumac 45.82 152 P **P** **21 27 40.1 +0.7**
DZM IAmb IAmb 21 27 41.4
comp=Z,181nm,1.3s
IRK Irkutsk 45.96 326 *eP* **P** **21 27 40.5 +0.5**
IRK pmax pmax
comp=Z,138nm,1.4s
TLY Talaya 46.02 325 P **P** **21 27 41.2 +0.8**
comp=Z,38nm,0.6s,baz=132,slow=7.4,SNR=27
TLY PcP **PcP** **21 29 05.8 +0.7**
comp=Z,16nm,1.0s,baz=150,slow=3.9,SNR=3.8
TLY ScP **ScP** **21 32 04.5 -0.3**
comp=Z,5.3nm,0.6s,baz=283,slow=7.2,SNR=4.7
TLY Talaya 46.02 325 *c iP* **P** **21 27 41.6 +1.2**
TLY pmax pmax
comp=Z,198nm,0.9s
TLY Talaya 46.02 325 P **P** **21 27 41.3 +0.8**
BLSI Bandar Lampung 46.11 242 P **P** **21 27 42.1 +0.4**
comp=Z,5µmcomp=Z,521nm,0.8s
LHSI Lahat 46.77 245 P **P** **21 27 47.6 +1.0**
comp=Z,2µmcomp=Z,150nm,1.1s
LWLI Liwa 46.92 244 P **P** **21 27 48.2 +0.3**
comp=Z,3µmcomp=Z,140nm,0.8s
MBWA Marble Bar 46.98 213 P **P** **21 27 48.7 +0.6**
MBWA Marble Bar 46.98 213 P **P** **21 27 48.2 +0.1**
MBWA IAmb IAmb 21 27 50.3
comp=Z,156nm,0.7s
BKNI Bangkinang 47.01 252 P **P** **21 27 51.0 +2.5**
comp=Z,213nm,0.9s
BKNI Bangkinang 47.01 252 P **P** **21 27 49.2 +0.7**
BKNI IAmb IAmb 21 27 52.0
comp=Z,155nm,0.8s
SDSI Sungai Dareh 47.22 250 P **P** **21 27 51.7 +1.6**
comp=Z,80nm,1.4s
PSA00 Pilbara Seismi 47.27 213 IAmb IAmb 21 27 52.5
comp=Z,212nm,1.1s
KOHI KOHIMA 47.41 288 *eP* **P** **21 27 47.9 -3.6**
KOHI IAmb IAmb 21 27 55.4
comp=Z,28nm,0.3s
MOY Mondy 47.47 324 *eP* **P** **21 27 52.5 +1.0**
MOY pmax pmax
comp=Z,96nm,2.8s
MNAI Manna 47.52 245 P **P** **21 27 52.7 +0.4**
comp=Z,5µmcomp=Z,496nm,1.2s
MASI Maura Aman, Be 47.54 247 P **P** **21 27 53.7 +1.2**
comp=Z,6µmcomp=Z,580nm,1.1s
KNTN Kanton 47.64 112 P **P** **21 27 53.2 0.0**
KNTN IAmb IAmb 21 27 55.8
comp=Z,117nm,1.1s
KRJI Kerinci 47.72 249 P **P** **21 27 55.1 +1.2**
comp=Z,6µmcomp=Z,731nm,0.7s
PDSI Padang 48.07 251 P **P** **21 27 56.1 -0.4**
MNSI Mandailing Nat 48.13 253 P **P** **21 27 57.2 +0.4**
comp=Z,4µmcomp=Z,426nm,0.6s
XMIS Christmas Isla 48.67 236 IAmb IAmb 21 28 01.9
comp=Z,221nm,0.8s
KCSI Kotacane, Aceh 48.70 258 P **P** **21 28 01.6 +0.5**
comp=Z,58nm,1.1s
MSVF Nonsavu 48.77 136 P **P** **21 28 02.0 +0.4**
MSVF pmax pmax
comp=Z,77nm,1.0s
MSVF Nonsavu 48.77 136 P **P** **21 28 02.0 +0.4**
LHMI Lhok Sumawe 48.85 260 P **P** **21 28 05.6 +3.4**
comp=Z,4µmcomp=Z,418nm,0.6s
LHMI Lhok Sumawe 48.85 260 P **P** **21 28 02.9 +0.7**
PPSI Pulau Pagai 49.32 249 P **P** **21 28 06.2 +0.6**
comp=Z,3µmcomp=Z,288nm,0.9s
SHL Shillong 49.42 288 *eP* **P** **21 28 06.5 +0.1**
SHL IAmb IAmb 21 28 08.6
comp=Z,146nm,0.4s
SHL Shillong 49.42 288 P **P** **21 28 06.6 +0.1**
SNR=12
SISI Saibi 49.48 251 P **P** **21 28 07.7 +0.8**
comp=Z,2µmcomp=Z,182nm,1.2s
ARMA Armidale 49.50 173 P **P** **21 28 06.3 -0.5**
PBSI Pulau Batu 49.66 253 P **P** **21 28 10.0 +1.8**
comp=Z,149nm,0.5s

MLSI Meulaboh, Aceh 49.70 259 P **P** **21 28 12.5 +4.0**
comp=Z,50nm,0.7s
GSI Gunungsitoli 49.74 255 P **P** **21 28 08.8 0.0**
comp=Z,19µmcomp=Z,2µm,0.9s
LSA Lhasa 49.92 293 P **P** **21 28 12.2 +1.7**
LSA Lhasa 49.92 293 P **P** **21 28 12.3 +1.8**
SPIA Saint Paul Isl 50.38 30 P **P** **21 28 13.8 +1.1**
SNSI Sinabang, Aceh 50.46 257 P **P** **21 28 18.6 +4.6**
comp=Z,132nm,0.8s
STKA Stephens Creek 50.67 184 P **P** **21 28 14.9 -0.2**
comp=Z,14nm,0.3s,baz=16,slow=7.5,SNR=93
STKA ScP **ScP** **21 32 25.1 +0.3**
comp=Z,12nm,0.8s,baz=338,slow=8.5,SNR=5.6
STKA S **S** **21 34 47.8 -0.9**
comp=Z,11nm,1.0s,baz=148,slow=18,SNR=6.7
UNV Unalaska Valle 50.76 35 IAmb IAmb 21 28 18.2
comp=Z,264nm,1.1s
BILL Bilibino 50.85 10 ⇓*iP* **P** **21 28 16.3 +0.3**
BILL *e* 21 29 23.0
BILL *e**PP **pwP** **21 30 04.6 -2.7**
BILL *e* 21 30 19.3
BILL pmax pmax
comp=Z,224nm,1.0s
BILL Bilibino 50.85 10 P **P** **21 28 16.1 +0.1**
BILL IAmb IAmb 21 28 18.8
comp=Z,318nm,1.1s
PBA Port Blair 50.87 270 P **P** 21 28 15.3 -1.7
PBA IAmb IAmb 21 29 26.6
comp=Z,259nm,1.4s
GIRL Giralia 51.19 217 P **P** **21 28 19.4 +0.3**
GIRL IAmb IAmb 21 28 22.4
comp=Z,175nm,0.8s
AKUT Akutan 51.27 35 IAmb IAmb 21 28 22.6
comp=Z,291nm,0.9s
KEKH Kekaha 51.56 77 P **P** **21 28 22.8 +0.9**
KEKH IAmb IAmb 21 28 25.1
comp=Z,227nm,1.0s
LHI Lord Howe Isla 51.96 165 P **P** **21 28 24.6 +0.2**
LHI IAmb IAmb 21 28 28.6
comp=Z,176nm,1.2s
FORT Forrest 52.11 199 P **P** **21 28 25.8 +0.3**
FORT IAmb IAmb 21 28 27.9
comp=Z,158nm,0.8s
BBOO Buckleboo 52.21 190 P **P** **21 28 26.0 -0.3**
TAPN Taplejung 53.04 290 *eP* **P** **21 28 33.1 +0.3**
comp=Z,60nm,0.4s
OPA Opana 53.16 77 P **P** **21 28 33.3 0.0**
OPA pmax pmax
comp=Z,106nm,0.6s
OPA Opana 53.16 77 P **P** **21 28 33.3 0.0**
OPA IAmb IAmb 21 28 36.5
comp=Z,106nm,0.6s
KIP Kipapa 53.20 77 *ce*P **P** **21 28 35.9 +2.3**
KIP pmax pmax
comp=Z,470nm,1.7s
KIP Kipapa 53.20 77 P **P** **21 28 34.7 +1.1**
KIP IAmb IAmb 21 28 36.6
comp=Z,194nm,0.8s
HON Honolulu 53.22 77 P **P** **21 28 34.7 +1.0**
HON pmax pmax
comp=Z,194nm,0.7s
HON Honolulu 53.22 77 P **P** **21 28 34.7 +1.0**
HON IAmb IAmb 21 28 36.9
comp=Z,194nm,0.7s
ODAN Odare 53.36 290 *eP* **P** **21 28 35.5 +0.5**
comp=Z,108nm,0.5s
TIXI Tiksi 53.54 354 P **P** **21 28 34.3 -0.9**
comp=Z,47nm,0.3s,baz=141,slow=5.0,SNR=109
TIXI Tiksi 53.54 354 ⇓*iP* **P** **21 28 34.2 -0.9**
TIXI pmax pmax
comp=Z,81nm,0.9s
TIXI Tiksi 53.54 354 P **P** **21 28 34.2 -0.9**
AFI Afiamalu 53.59 124 P **P** **21 28 36.2 -0.3**
AFI pmax pmax
comp=Z,90nm,1.1s
AFI Afiamalu 53.59 124 P **P** **21 28 36.2 -0.3**
WMQ Urumqi 53.70 311 P **P** **21 28 38.4 +1.5**
WMQ PcP **PcP** **21 29 34.6 +0.6**
WMQ pP pwP 21 30 26.5 -1.4
WMQ S **S** **21 35 32.5 +3.5**
WMQ ScS **ScS** **21 37 29.5 +2.0**
WMQ sS sS 21 38 39.5 -0.2
WMQ pmax pmax
comp=Z,93nm,1.1s
WMQ pmax pmax
comp=Z,380nm,3.6s
WMQ Urumqi 53.70 311 IAmb IAmb 21 28 40.7
comp=Z,253nm,1.4s
RAMN Ramite 54.05 290 *eP* **P** **21 28 40.3 +0.4**
comp=Z,76nm,0.6s
JIRN Jiri 54.36 291 *eP* **P** **21 28 43.0 +0.8**
comp=Z,409nm,0.7s
GUN Gumba 54.62 291 *eP* **P** **21 28 44.6 +0.7**
comp=Z,148nm,0.4s
KHLH Kahului Airpor 54.74 77 P **P** **21 28 44.8 +0.3**
KHLH IAmb IAmb 21 28 48.2
comp=Z,144nm,0.8s
HLK Haleakala 54.93 78 P **P** **21 28 46.8 +0.8**
BOK Bokaro 55.02 286 *eP* **P** **21 28 45.5 -0.9**
BOK IAmb IAmb 21 28 49.7
comp=Z,59nm,0.8s
PKI Pulchoki 55.06 291 *eP* **P** **21 28 47.1 +0.1**
comp=Z,127nm,0.6s
PKIN Phulchoki 55.07 291 *eP* **P** **21 28 47.0 0.0**
comp=Z,181nm,0.6s
KKN Kakani 55.16 291 *eP* **P** **21 28 47.9 +0.4**
KKH Kailua Kona 55.32 79 P **P** **21 28 48.5 0.0**
KKH Kailua Kona 55.32 79 P **P** **21 28 48.5 0.0**
DMN Daman 55.33 291 *eP* **P** **21 28 49.1 +0.3**
comp=Z,107nm,0.7s
KHLU Kahalu`u 55.45 79 P **P** **21 28 49.2 -0.3**
KHLU IAmb IAmb 21 28 52.3
comp=Z,176nm,0.8s
HPAH Hawaii Prepara 55.55 78 P **P** **21 28 50.5 +0.3**
HPAH IAmb IAmb 21 28 53.1
comp=Z,161nm,0.7s
GKN Gorkha 55.71 291 *eP* **P** **21 28 51.7 +0.4**
comp=Z,185nm,0.4s
MWH Moku'aweowe 55.74 79 P **P** **21 28 51.5 -0.6**
MLOA Mauna Loa Obse 55.75 79 P **P** **21 28 52.1 0.0**
KHU Kahuku 55.77 79 P **P** **21 28 52.2 +0.3**
KHU pmax pmax
comp=Z,191nm,0.9s
KHU Kahuku 55.77 79 P **P** **21 28 52.2 +0.3**
KHU IAmb IAmb 21 28 54.8
comp=Z,191nm,0.9s
HMH Humu'ula Sheep 55.83 79 P **P** **21 28 52.1 -0.3**
HMH IAmb IAmb 21 29 00.6
comp=Z,302nm,1.5s
AIN Ainahou 55.89 79 P **P** **21 28 52.7 +0.1**
AIN IAmb IAmb 21 28 56.0
comp=Z,332nm,0.8s
MLH Mauna Loa 55.94 79 P **P** **21 28 53.4 +0.3**
MLH IAmb IAmb 21 28 56.5
comp=Z,415nm,1.3s
CHGN Chignik 55.98 34 IAmb IAmb 21 28 54.2
comp=Z,212nm,0.6s
WRMHI West Rim 56.03 79 P **P** **21 28 52.5 -1.1**
WRMHI IAmb IAmb 21 28 57.0
comp=Z,220nm,0.9s
UWE Uwekahuna 56.03 79 P **P** **21 28 54.2 +0.6**
UWE IAmb IAmb 21 28 57.3
comp=Z,181nm,0.9s
SDHHI Sand Hill 56.04 79 P **P** **21 28 52.8 -0.8**
SDHHI IAmb IAmb 21 28 56.6
comp=Z,288nm,0.9s
HLP Hilina Pali 56.04 79 P **P** **21 28 54.1 +0.5**
HLP IAmb IAmb 21 28 56.8
comp=Z,249nm,0.9s
OBL Observatory Le 56.04 79 P **P** **21 28 53.0 -0.6**
OBL IAmb IAmb 21 28 57.2
comp=Z,176nm,0.9s
NPH North Pit 56.05 79 P **P** **21 28 54.3 +0.6**
UWB Uwekahuna B 56.05 79 P **P** **21 28 53.8 +0.1**
RIM Rim 56.06 79 P **P** **21 28 54.4 +0.6**
RIM IAmb IAmb 21 28 56.8
comp=Z,278nm,1.0s
SBLHI Steaming Bluff 56.06 79 P **P** **21 28 54.0 +0.2**
HATHI Halema'uma'u T 56.06 79 P **P** **21 28 53.6 -0.2**
KKO Keanakako`i 56.06 79 P **P** **21 28 54.9 +1.1**
KKO IAmb IAmb 21 28 57.4
comp=Z,258nm,1.0s
BYL Byron's Ledge 56.07 79 P **P** **21 28 53.2 -0.7**
BYL IAmb IAmb 21 28 56.8
comp=Z,190nm,1.0s

PUH Pauahi 56.12 79 P **P** **21 28 55.1 +0.9**
PUH IAmb IAmb 21 28 57.1
comp=Z,243nm,0.9s
ANM Nome 56.17 23 IAmb IAmb 21 28 56.8
comp=Z,153nm,0.8s
DANN Dangsing 56.45 292 *eP* **P** **21 28 57.2 +0.6**
comp=Z,734nm,0.6s
KOLN Koldanda 56.64 291 *eP* **P** **21 28 58.0 +0.2**
comp=Z,180nm,0.8s
COCO West Island 56.76 241 P **P** **21 28 57.8 -0.6**
COCO pmax pmax
comp=Z,115nm,0.7s
COCO West Island 56.76 241 P **P** **21 28 57.8 -0.6**
COCO IAmb IAmb 21 29 02.4
comp=Z,115nm,0.7s
PYUN Piuthan 57.15 292 *eP* **P** **21 29 01.5 +0.2**
ZALV Zalesovo Beam 57.46 322 P **P** **21 29 02.2 -0.4**
comp=Z,43nm,0.4s,baz=112,slow=8.1,SNR=100
ZALV PcP **PcP** **21 29 48.8 +0.4**
comp=Z,20nm,0.5s,baz=121,slow=3.9,SNR=6.8
ZALV ScP **ScP** **21 32 53.6 -0.7**
comp=Z,16nm,0.7s,baz=116,slow=4.3,SNR=7.9
ZALV S **S** **21 36 16.0 -1.0**
comp=Z,3.2nm,0.7s,baz=111,slow=11,SNR=6.1
ZALV PKPPKP **P'P'df** **21 58 39.2 -1.5**
comp=Z,1.9nm,0.7s,baz=302,slow=3.3,SNR=5.4
MKAR Makanchi Array 57.87 314 P **P** **21 29 06.0 +0.4**
comp=Z,43nm,0.4s,baz=90,slow=7.9,SNR=329
MKAR PcP **PcP** **21 29 50.9 +0.6**
comp=Z,11nm,0.4s,baz=76,slow=4.2,SNR=6.3
MKAR ScP **ScP** **21 32 55.6 -0.7**
comp=Z,4.1nm,0.6s,baz=81,slow=6.2,SNR=2.8
MKAR PKiKP **PKiKP** **21 36 09.9 -2.1**
comp=Z,0.4nm,0.4s,baz=289,slow=0.6,SNR=9.7
MKAR S **S** **21 36 22.7 +0.1**
comp=Z,1.6nm,0.7s,baz=86,slow=17,SNR=5.4
MKAR PKPPKP **P'P'df** **21 58 40.6 -0.1**
comp=Z,1.3nm,1.0s,baz=299,slow=2.5,SNR=4.4
NWAO Narrogin (SRO) 58.08 208 P **P** **21 29 06.0 -1.1**
NWAO pmax pmax
comp=Z,169nm,1.8s
NWAO Narrogin (SRO) 58.08 208 P **P** **21 29 06.0 -1.1**
MAKZ Makanchi 58.08 314 P **P** **21 29 07.5 +0.5**
MAKZ pmax pmax
comp=Z,164nm,1.1s
MAKZ Makanchi 58.08 314 P **P** **21 29 07.5 +0.5**
NIUE Niue 58.12 128 P **P** **21 29 06.1 -1.4**
NIUE IAmb IAmb 21 29 10.5
comp=Z,188nm,0.9s
XMAS Kiritimati 58.65 99 P **P** **21 29 12.9 +1.5**
XMAS IAmb IAmb 21 29 14.7
comp=Z,156nm,0.8s
RDOG Red Dog Mine 58.77 20 IAmb IAmb 21 29 14.5
comp=Z,205nm,0.8s
OHAK Old Harbor 58.94 34 IAmb IAmb 21 29 15.3
comp=Z,190nm,0.9s
TTA Tatalina 59.27 27 P **P** **21 29 15.4 +0.7**
TTA Tatalina 59.27 27 P **P** **21 29 15.4 +0.7**
KDAK Kodiak Island 59.44 33 P **P** **21 29 16.0 +0.1**
comp=Z,70nm,0.3s,baz=170,slow=1.5,SNR=238
KDAK S **S** **21 36 39.7 -2.2**
comp=Z,5.6nm,1.0s,baz=220,slow=14,SNR=2.8
KDAK Kodiak Island 59.44 33 P **P** **21 29 16.0 +0.1**
KDAK pmax pmax
comp=Z,149nm,0.8s
KDAK Kodiak Island 59.44 33 P **P** **21 29 16.0 +0.1**
KDAK IAmb IAmb 21 29 18.5
comp=Z,149nm,0.8s
RSO Redoubt South 60.02 30 P **P** **21 29 20.1 +0.2**
PVM Polavaram 60.06 279 *eP* **P** **21 29 20.7 0.0**
OUZ Omahuta 60.30 153 P **P** **21 29 22.1 +0.3**
HOM Homer 60.36 31 P **P** **21 29 22.5 +0.6**
HOM IAmb IAmb 21 29 25.2
comp=Z,249nm,0.7s
PRZ Przheval'sk 60.38 309 IAmb IAmb 21 29 26.8
comp=Z,176nm,0.8s
CNPM China Poot 60.53 32 IAmb IAmb 21 29 25.1
comp=Z,357nm,1.0s
KURK Kurchatov 60.69 318 P **P** **21 29 24.3 +0.1**
KURK Kurchatov 60.69 318 *d iP* **P** **21 29 24.1 -0.2**
KURK pmax pmax
comp=Z,515nm,1.2s
KURK Kurchatov 60.69 318 P **P** **21 29 24.2 0.0**
KURBB Kurchatov Arra 60.74 318 PKPPKP **P'P'df** **21 58 35.8 -0.1**
comp=Z,2.0nm,0.9s,baz=250,slow=3.2,SNR=7.7
BRLK Bradley Lake 60.76 31 IAmb IAmb 21 29 26.2
comp=Z,167nm,0.9s
PPLA Purkeypile 60.92 28 IAmb IAmb 21 29 28.7
comp=Z,131nm,0.9s
KDJ Kajisay 61.28 308 P **P** **21 29 28.7 +0.1**
KDJ Kajisay 61.28 308 P **P** **21 29 28.7 +0.1**
SEW Seward 61.53 31 IAmb IAmb 21 29 31.9
comp=Z,354nm,1.1s
TAU Tasmania Unive 61.60 178 P **P** **21 29 29.4 -0.8**
TAU pmax pmax
comp=Z,217nm,1.7s
TAU Tasmania Unive 61.60 178 P **P** **21 29 29.4 -0.8**
KTH Kantishna Hill 61.65 27 IAmb IAmb 21 29 33.4
comp=Z,370nm,1.1s
RPR Rampur 61.90 282 *eP* **P** **21 29 32.5 -0.2**
SMLA Simla 61.90 296 *eP* **P** **21 29 32.6 +0.1**
SMLA IAmb IAmb 21 29 35.0
comp=Z,138nm,0.3s
TRF Thorofare Moun 61.90 27 IAmb IAmb 21 29 34.2
comp=Z,176nm,0.8s
ADKI Addanki 61.92 278 *eP* **P** **21 29 33.0 +0.2**
ULHL Ulahol 61.97 308 P **P** **21 29 33.8 +0.7**
SNR=66
MLY Manley 62.12 26 IAmb IAmb 21 29 36.3
comp=Z,217nm,0.8s
GHO Glory Hole Cre 62.13 29 IAmb IAmb 21 29 35.6
comp=Z,257nm,0.8s
KSH Kashi 62.25 305 P **P** **21 29 39.3 +4.4**
KSH PP **PP** **21 32 07.9 +6.6**
KSH S **S** **21 37 18.8 +1.1**
KSH pmax pmax
comp=Z,150nm,1.0s
KSH pmax pmax
comp=Z,610nm,4.3s
NJS Nagarjunasagar 62.38 279 *eP* **P** **21 29 35.8 0.0**
TKM2 Tokmak 2 62.44 309 P **P** **21 29 31.9 -4.2**
SNR=32
RND Reindeer 62.52 28 IAmb IAmb 21 29 38.5
comp=Z,139nm,0.8s
MCK McKinley 62.56 27 IAmb IAmb 21 29 38.7
comp=Z,200nm,1.2s
SKHT Srikalahasti 62.66 276 *eP* **P** **21 29 37.6 -0.1**
NEA Nenana 62.69 26 IAmb IAmb 21 29 40.3
comp=Z,212nm,1.2s
KZA Kyzart 62.72 308 P **P** **21 29 39.5 +1.4**
SNR=104
SRSP Sriramsagar 62.76 282 *eP* **P** **21 29 38.0 -0.4**
GLI Glacier Island 62.83 31 IAmb IAmb 21 29 40.3
comp=Z,166nm,0.7s
SRLM Srisailam 62.87 279 *eP* **P** **21 29 39.0 0.0**
HYB Hyderabad 62.89 280 *eP* **P** **21 29 39.3 +0.1**
HYB *i* x x 21 29 40.5
HYBB Hyderabad (bro 62.89 280 *eP* **P** **21 29 39.0 -0.2**
KBK Karagaybulak 62.92 309 P **P** **21 29 39.8 +0.6**
SNR=50
MID Middleton Isla 62.97 32 P **P** **21 29 39.6 +0.8**
MID pmax pmax
comp=Z,409nm,1.0s
MID Middleton Isla 62.97 32 P **P** **21 29 39.6 +0.8**
HIN Hinchinbrook I 63.03 31 IAmb IAmb 21 29 42.1
comp=Z,258nm,1.0s
CHMS Chumysh 63.06 309 P **P** **21 29 41.5 +1.6**
SNR=31
WRH Wood River Hil 63.08 27 IAmb IAmb 21 29 41.4
comp=Z,136nm,0.8s
DHY Denali Highway 63.10 28 IAmb IAmb 21 29 42.9
comp=Z,134nm,1.1s
MDM Murphy Dome 63.13 26 IAmb IAmb 21 29 42.9
comp=Z,182nm,0.6s
FRU1 Bishkek 63.15 309 P **P** **21 29 40.7 +0.1**
FRU1 pmax pmax
comp=Z,67nm,1.0s
FRU1 Bishkek 63.15 309 P **P** **21 29 40.7 +0.1**
USP Ospenovka 63.24 309 P **P** **21 29 41.2 +0.2**
SNR=45
UCH Uchtor 63.26 308 P **P** **21 29 43.1 +1.4**
SNR=6.1
AAK Ala-Archa 63.26 309 P **P** **21 29 41.8 +0.4**
SNR=34
AAK Ala-Archa 63.26 309 *i* P **P** **21 29 41.7 +0.4**
SNR=42

AAK	**Ala-Archa**	63.26	309		P		**P**	**21 29 41.7**	**+0.4**
AAK	**Ala-Archa**	63.26	309	*ce*	P		**P**	**21 29 41.6**	**+0.3**
AAK					pmax		pmax		
	comp=Z,50nm,1.2s								
AAK	**Ala-Archa**	63.26	309		P		**P**	**21 29 41.0**	**-0.3**
TCOL	**CIGO, UAF Yank**	63.27	26		P		**P**	**21 29 39.9**	**-0.8**
	baz=257								
COLA	**College**	63.27	26		P		**P**	**21 29 40.7**	**0.0**
COLA					pmax		pmax		
	comp=Z,175nm,1.2s								
COLA	**College**	63.27	26		P		**P**	**21 29 40.7**	**0.0**
COLA					IAmb		IAmb	21 29 44.9	
	comp=Z,175nm,1.1s								
EYAK	**Cordova Ski Ar**	63.42	31		IAmb		IAmb	21 29 44.7	
	comp=Z,188nm,0.8s								
POKR	**Poker Flat Res**	63.50	26		P		**P**	**21 29 41.4**	**-0.8**
	baz=258								
TOLK	**Toolik Lake Re**	63.55	22		P		**P**	**21 29 43.4**	**+0.9**
	baz=254								
TOLK	**Toolik Lake Re**	63.55	22		IAmb		IAmb	21 29 45.9	
	comp=Z,251nm,0.8s								
HDA	**Harding Lake**	63.55	27		P		**P**	**21 29 41.4**	**-1.2**
	baz=258								
HDA	**Harding Lake**	63.55	27		IAmb		IAmb	21 29 44.0	
	comp=Z,133nm,0.9s								
HIZ	**Hauiti**	63.63	154		P		**P**	**21 29 42.7**	**-0.7**
HIZ					IAmb		IAmb	21 29 46.2	
	comp=Z,269nm,1.3s								
IL31		63.65	26		IAmb		IAmb	21 29 44.4	
	comp=Z,194nm,1.0s								
ILAR	**Eielson Array**	63.65	26		P		**P**	**21 29 42.0**	**-1.2**
	comp=Z,96nm,0.6s,baz=251,slow=5.1,SNR=392								
ILAR					S		**S**	**21 37 26.9**	**-6.6**
	comp=Z,5.2nm,1.2s,baz=258,slow=11,SNR=9.7								
ILAR					PKPPKP		**P'P'df**	**21 58 24.6**	**-6.1**
	comp=Z,0.6nm,0.9s,baz=71,slow=3.2,SNR=4.8								
ILAR	**Eielson Array**	63.65	26		P		**P**	**21 29 42.0**	**-1.2**
EKS2	**Erkin-Say**	63.79	309		P		**P**	**21 29 46.4**	**+1.8**
	SNR=54								
AML	**Almayashu**	63.87	308		P		**P**	**21 29 46.5**	**+1.0**
	SNR=87								
GLB	**Gilahina Butte**	64.48	30		IAmb		IAmb	21 29 52.1	
	comp=Z,194nm,0.9s								
KLRI	**Killari**	64.56	281	*e*	P		**P**	**21 29 49.0**	**-0.9**
VRDI	**Verde Repeater**	64.63	31		IAmb		IAmb	21 29 52.3	
	comp=Z,140nm,0.9s								
URV	**Uravakonda**	64.67	278	*e*	P		**P**	**21 29 50.0**	**-0.6**
QRZ	**Quartz Range**	64.72	157		P		**P**	**21 29 50.0**	**-0.3**
QRZ					IAmb		IAmb	21 29 53.2	
	comp=Z,141nm,1.0s								
SCRK	**Sand Creek**	64.75	27		IAmb		IAmb	21 29 52.7	
	comp=Z,255nm,1.1s								
WAX	**Waxell Ridge**	64.84	31		IAmb		IAmb	21 29 53.8	
	comp=Z,200nm,0.8s								
MCARA	**McCarthy VSAT**	64.85	30		IAmb		IAmb	21 29 54.1	
	comp=Z,199nm,0.8s								
NIL	**Nilore**	64.90	299		P		**P**	**21 29 52.5**	**+0.7**
NIL	**Nilore**	64.90	299		P		**P**	**21 29 52.4**	**+0.7**
NIL					pmax		pmax		
	comp=Z,331nm,1.0s								
NIL	**Nilore**	64.90	299		P		**P**	**21 29 52.4**	**+0.7**
BALM	**Baldy**	65.14	31		IAmb		IAmb	21 29 55.4	
	comp=Z,132nm,0.9s								
MESA	**MESA**	65.26	32		P		**P**	**21 29 54.6**	**+1.0**
MESA					IAmb		IAmb	21 29 56.8	
	comp=Z,192nm,0.8s								
YAH	**Yahtse**	65.37	32		IAmb		IAmb	21 29 57.6	
	comp=Z,200nm,0.8s								
NNZ	**Nelson**	65.38	157		P		**P**	**21 29 53.6**	**-0.7**
NNZ					IAmb		IAmb	21 29 57.0	
	comp=Z,258nm,1.4s								
CTGM	**Chitina Glacie**	65.63	31		IAmb		IAmb	21 29 59.0	
	comp=Z,163nm,0.7s								
THZ	**Tophouse**	65.68	157		P		**P**	**21 29 56.3**	**-0.1**
SNZO	**South Karori**	65.96	156		P		**P**	**21 29 57.4**	**-0.6**
SNZO					IAmb		IAmb	21 29 59.0	
	comp=Z,207nm,1.1s								
BRVK	**Borovoye**	65.97	320		P		**P**	**21 29 58.0**	**0.0**
BRVK	**Borovoye**	65.97	320	*ce*	P		**P**	**21 29 57.9**	**0.0**
BRVK					pmax		pmax		
	comp=Z,199nm,0.9s								
BRVK	**Borovoye**	65.97	320		P		**P**	**21 29 58.0**	**0.0**
BRVK					IAmb		IAmb	21 30 00.7	
	comp=Z,155nm,0.8s								
BFZ	**Birch Farm**	66.04	155		IAmb		IAmb	21 30 00.2	
	comp=Z,69nm,0.6s								
EGAK	**Eagle**	66.08	27		IAmb		IAmb	21 30 01.5	
	comp=Z,65nm,0.6s								
PCA	**Pinnacle**	66.10	32		IAmb		IAmb	21 30 01.7	
	comp=Z,180nm,0.9s								
KK31	**Karatay Array**	66.16	309		IAmb		IAmb	21 30 02.3	
	comp=Z,118nm,0.9s								
FOZ	**Fox Glacier**	66.20	161		P		**P**	**21 29 57.6**	**-1.8**
FOZ					IAmb		IAmb	21 31 43.5	
	comp=Z,297nm,1.7s								
LTZ	**Lake Taylor**	66.35	158		P		**P**	**21 29 59.8**	**-0.7**
GAR	**Garm**	66.67	305		P		**P**	**21 30 03.0**	**+0.2**
GAR					IAmb		IAmb	21 30 05.5	
	comp=Z,221nm,1.3s								
OXZ	**Oxford**	66.75	159		IAmb		IAmb	21 30 04.0	
	comp=Z,73nm,0.6s								
RPZ	**Rata Peaks**	66.77	160		IAmb		IAmb	21 30 03.8	
	comp=Z,130nm,1.1s								
DAWY	**Dawson**	66.78	28		IAmb		IAmb	21 30 05.9	
	comp=Z,121nm,0.8s								
RAR	**Rarotonga**	67.13	124		P		**P**	**21 30 06.5**	**+0.9**
RAR					pmax		pmax		
	comp=Z,448nm,2.0s								
RAR	**Rarotonga**	67.13	124		P		**P**	**21 30 06.5**	**+0.9**
RAR					IAmb		IAmb	21 30 19.5	
	comp=Z,448nm,1.9s								
TAS	**Tashkent**	67.21	308		P		**P**	**21 30 06.7**	**+0.8**
TAS					pmax		pmax		
	comp=Z,208nm,1.4s								
TAS	**Tashkent**	67.21	308		P		**P**	**21 30 06.7**	**+0.8**
TAS					IAmb		IAmb	21 30 09.1	
	comp=Z,208nm,1.4s								
MQZ	**McQueen's Vall**	67.30	159		P		**P**	**21 30 06.5**	**+0.4**
MLZ	**Mavora Lakes**	67.36	163		P		**P**	**21 30 05.9**	**-0.8**
CHGR	**Chuyangaron**	67.61	305		P		**P**	**21 30 09.2**	**+0.7**
EPYK	**Eagle Plains**	68.05	25		P		**P**	**21 30 11.0**	**+0.5**
	baz=267								
KBL	**Kabul**	68.25	300		P		**P**	**21 30 12.5**	**-0.1**
KBL	**Kabul**	68.25	300		P		**P**	**21 30 12.5**	**-0.1**
KBL					pmax		pmax		
	comp=Z,125nm,0.9s								
KBL	**Kabul**	68.25	300		P		**P**	**21 30 12.5**	**-0.1**
KBL					IAmb		IAmb	21 30 15.2	
	comp=Z,125nm,0.9s								
SKAG	**Skagway**	68.57	33		IAmb		IAmb	21 30 17.2	
	comp=Z,130nm,1.0s								
SIT	**Sitka**	68.64	35		P		**P**	**21 30 14.9**	**+0.7**
SIT					pmax		pmax		
	comp=Z,53nm,0.8s								
SIT	**Sitka**	68.64	35		P		**P**	**21 30 14.8**	**+0.7**
WHY	**Whitehorse**	68.78	31		IAmb		IAmb	21 30 18.5	
	comp=Z,108nm,0.8s								
BESE	**Bessie Mountai**	68.84	34		IAmb		IAmb	21 30 18.9	
	comp=Z,155nm,0.8s								
JIS	**Juneau Island**	69.10	34		IAmb		IAmb	21 30 20.3	
	comp=Z,233nm,1.1s								
INK	**Inuvik**	69.35	23		P		**P**	**21 30 18.2**	**-0.1**
	comp=Z,156nm,0.8s,baz=277,slow=5.4,SNR=231								
INK					S		**S**	**21 38 37.9**	**-2.3**
	comp=Z,2.8nm,0.9s,baz=75,slow=31,SNR=21								
INK	**Inuvik**	69.35	23		IAmb		IAmb	21 30 20.7	
	comp=Z,201nm,0.9s								
CRAG	**Craig**	69.96	37		P		**P**	**21 30 23.4**	**+1.2**
WRAK	**Wrangell Islan**	70.32	36		IAmb		IAmb	21 30 27.6	
	comp=Z,150nm,0.8s								
DIB	**Dawson Inlet,**	70.54	39		IAmb		IAmb	21 30 28.1	
	comp=Z,137nm,0.7s								
MOBC	**Moresby Island**	70.85	39		P		**P**	**21 30 27.8**	**+0.3**
SVE	**Sverdlovsk**	71.33	325	*ce*	P		**P**	**21 30 30.3**	**+0.1**
SVE					*e*S		**S**	**21 39 02.5**	**-0.7**
SVE					pmax		pmax		
	comp=Z,208nm,1.1s								
DLBC	**Dease Lake**	71.38	34		IAmb		IAmb	21 30 34.1	
	comp=Z,152nm,0.8s								
A36M	**Sachs Harbour**	72.01	19		P		**P**	**21 30 34.1**	**+0.3**
	baz=276								
A36M					S		**S**	**21 39 08.9**	**-1.3**
	baz=276								
ARU	**Arti**	72.52	324	*d i*	P		**P**	**21 30 36.9**	**-0.2**
ARU								21 30 50.0	
ARU					PPP		PPP	21 35 13.4	
ARU					*e*S		**S**	**21 39 14.7**	**-1.7**
ARU								21 39 48.3	
ARU					pmax		pmax		
	comp=Z,273nm,1.0s								
ARU	**Arti**	72.52	324		P		**P**	**21 30 36.5**	**-0.6**
C36M	**Paulatuk**	72.71	22		P		**P**	**21 30 37.6**	**-0.3**
	baz=278,SNR=155								
C36M	**Paulatuk**	72.71	22		IAmb		IAmb	21 30 40.2	
	comp=Z,233nm,0.9s								
BBB	**Bella Bella**	73.31	40		IAmb		IAmb	21 30 44.5	
	comp=Z,107nm,0.8s								
PPT	**Papeete**	73.74	115		P		**P**	**21 30 45.6**	**+0.9**
	comp=Z,76nm,0.7s,baz=296,slow=9.2,SNR=8.5								
PPT2	**Papeete2**	73.75	115	*e*	P		**P**	**21 30 47.5**	**+2.6**
	comp=Z,86nm,1.1s								
PPTF	**Pamatai, Papee**	73.76	115		P		**P**	**21 30 47.4**	**+2.5**
PPTF					IAmb		IAmb	21 30 49.9	
	comp=Z,205nm,1.3s								
PAE	**Paea**	73.78	116	*e*	P		**P**	**21 30 47.3**	**+2.4**
	comp=Z,12nm,0.9s								
TIAR	**Tiarei**	73.93	115	*e*	P		**P**	**21 30 48.3**	**+2.5**
	comp=Z,36nm,1.0s								
PMOR	**Pomariorio Ree**	74.09	112	*e*	P		**P**	**21 30 48.9**	**+2.2**
	comp=Z,200nm,0.9s								
TVO	**Taravao**	74.11	116	*e*	P		**P**	**21 30 48.6**	**+1.7**
	comp=Z,20nm,0.8s								
VAH	**Vaihoa**	74.42	112	*e*	P		**P**	**21 30 50.3**	**+1.7**
	comp=Z,105nm,1.0s								
MEH	**Mehetia**	75.17	115	*e*	P		**P**	**21 30 55.0**	**+2.2**
	comp=Z,26nm,1.0s								
GEYT	**Alibeck**	76.28	306		P		**P**	**21 30 59.0**	**+0.3**
	comp=Z,33nm,0.8s,baz=48,slow=2.2,SNR=65								
TBI	**Tubuai**	76.45	121	*e*	P		**P**	**21 31 02.0**	**+2.3**
	comp=Z,223nm,1.0s								
A04D	**Lummi Island**	77.40	43		P		**P**	**21 31 05.3**	**+0.8**
	baz=284								
D03D	**Eldon**	77.44	44		P		**P**	**21 31 06.4**	**+1.6**
	baz=284,SNR=26								
LLLB	**Lillooet**	77.45	41		IAmb		IAmb	21 31 08.1	
	comp=Z,149nm,1.0s								
D04E	**Lakebay**	77.74	44		P		**P**	**21 31 08.0**	**+1.7**
	baz=285,SNR=6.9								
I02D	**Swisshome**	77.78	47		P		**P**	**21 31 07.9**	**+1.2**
	baz=285,SNR=44								
F04D	**Rainier, OR**	77.86	45		P		**P**	**21 31 07.7**	**+0.7**
	baz=285								
B05A	**Bryant**	77.91	43		P		**P**	**21 31 08.3**	**+1.1**
	baz=285,SNR=50								
B05A					S		**S**	**21 40 14.9**	**+0.2**
	baz=285								
G03D	**McMinnville, O**	77.91	46		P		**P**	**21 31 08.4**	**+1.0**
	baz=285,SNR=20								
J01E	**Myrtle Point**	77.96	48		P		**P**	**21 31 08.8**	**+1.2**
	baz=285,SNR=45								
YKA	**Yellowknife Ar**	78.02	28		P		**P**	**21 31 07.4**	**-0.1**
	comp=Z,102nm,0.5s,baz=288,slow=4.8,SNR=433								
YKA					PKPPKP		P'P'df	21 57 56.4	-10
	comp=Z,0.6nm,1.0s,baz=120,slow=2.1,SNR=3.7								
E04D	**Cinebar**	78.04	45		P		**P**	**21 31 09.0**	**+1.0**
	baz=285,SNR=52								
COR	**Corvallis**	78.04	47		P		**P**	**21 31 08.4**	**+0.4**
COR					pmax		pmax		
	comp=Z,170nm,1.0s								
COR	**Corvallis**	78.04	47		P		**P**	**21 31 08.4**	**+0.4**
COR					IAmb		IAmb	21 31 11.9	
	comp=Z,170nm,1.0s								
B06A	**Marblemount**	78.24	43		IAmb		IAmb	21 31 11.8	
	comp=Z,194nm,1.2s								
I03D	**Drain, OR**	78.24	48		P		**P**	**21 31 10.0**	**+0.9**
	baz=285,SNR=76								
D05A	**Enumclaw**	78.26	44		IAmb		IAmb	21 31 12.8	
	comp=Z,198nm,0.8s								
K02D	**Willamette Mer**	78.27	49		P		**P**	**21 31 10.1**	**+0.7**
	baz=285,SNR=68								
F04A	**Amboy**	78.30	45		IAmb		IAmb	21 31 12.5	
	comp=Z,238nm,0.9s								
HOPEN	**Hopen**	78.31	348	*e*	P		**P**	**21 31 08.9**	**0.0**
H04D	**Lebanon**	78.45	47		P		**P**	**21 31 11.0**	**+0.8**
	baz=285,SNR=25								
JCC	**Jacoby Creek,**	78.49	51		IAmb		IAmb	21 31 14.3	
	comp=Z,184nm,1.2s								
KHMM	**Horse Mountain**	78.70	51		IAmb		IAmb	21 31 15.6	
	comp=Z,172nm,0.9s								
C06D	**Leavenworth**	78.78	43		P		**P**	**21 31 12.4**	**+0.5**
	baz=286								
H04A	**Detroit Lake**	78.78	47		IAmb		IAmb	21 31 14.9	
	comp=Z,151nm,1.1s								
SPA0	**Spitsbergen Ar**	78.81	351	*e*	P		**P**	**21 31 10.7**	**-0.9**
I04A	**Tendick Farm,**	78.87	48		P		**P**	**21 31 12.9**	**+0.4**
	baz=286,SNR=46								
KMRM	**Mail Ridge**	78.89	51		IAmb		IAmb	21 31 16.5	
	comp=Z,114nm,0.9s								
KBS	**Kingsbay**	78.94	352	*ce*	P		**P**	**21 31 13.7**	**+1.5**
KBS					pmax		pmax		
	comp=Z,67nm,0.7s								
KBS	**Kingsbay**	78.94	352		P		**P**	**21 31 12.2**	**0.0**
KBS	**Kingsbay**	78.94	352	*e*	P		**P**	**21 31 12.2**	**0.0**
F05D	**White Salmon**	78.96	45		P		**P**	**21 31 14.0**	**+1.1**
	baz=286,SNR=14								
LTY	**Liberty**	79.10	44		IAmb		IAmb	21 31 16.4	
	comp=Z,130nm,0.9s								
M02C	**Callahan**	79.20	50		P		**P**	**21 31 15.4**	**+1.0**
	baz=286,SNR=110								
YBH	**Yreka Blue Hor**	79.21	50		IAmb		IAmb	21 31 17.8	
	comp=Z,124nm,0.7s								
G05D	**Wamic, OR**	79.23	46		P		**P**	**21 31 14.9**	**+0.5**
	baz=286								
J04D	**Umpqua Nationa**	79.23	48		P		**P**	**21 31 15.4**	**+0.7**
	baz=286,SNR=55								
L04D	**Klamath Falls**	79.37	49		P		**P**	**21 31 16.0**	**+0.6**
	baz=286,SNR=126								
N02D	**Trinity Center**	79.42	50		P		**P**	**21 31 16.8**	**+1.2**
	baz=286,SNR=49								
I05D	**Terrebonne, OR**	79.46	47		P		**P**	**21 31 16.3**	**+0.6**
	baz=286,SNR=24								
WBK	**Wadi Bani Khal**	79.48	290		P		**P**	**21 31 16.7**	**+0.5**
	SNR=8.3								
O02D	**Mt. Diablo Mer**	79.58	51		P		**P**	**21 31 17.6**	**+1.1**
	baz=286								
WSAR	**Wadi Sarin**	79.61	291		P		**P**	**21 31 17.2**	**+0.3**
	SNR=11								
K04D	**Chiloquin, OR**	79.65	49		P		**P**	**21 31 17.5**	**+0.7**
	baz=286,SNR=23								
B08A	**Colville Reser**	79.66	42		IAmb		IAmb	21 31 19.3	
	comp=Z,167nm,0.8s								
HOPS	**Hopland Field**	79.69	52		IAmb		IAmb	21 31 20.0	
	comp=Z,138nm,1.1s								
HSPB	**Hornsund (broa**	79.73	350	*e*	P		**P**	**21 31 16.4**	**0.0**
M04C	**Macdoel**	79.82	49		P		**P**	**21 31 18.5**	**+0.7**
	baz=286,SNR=65								
J05D	**Fort Rock, OR**	79.83	48		P		**P**	**21 31 18.5**	**+0.7**
	baz=286,SNR=90								
E07A	**Sunnyside**	79.84	44		IAmb		IAmb	21 31 20.7	
	comp=Z,132nm,0.9s								
GDXM	**Geysers**	79.95	52		IAmb		IAmb	21 31 22.0	
	comp=Z,152nm,1.0s								
BIDO	**Bidbid**	79.97	291		P		**P**	**21 31 19.3**	**+0.6**
	SNR=17								
LVZ	**Lovozero**	79.98	339	*ce*	P		**P**	**21 31 17.4**	**-0.5**
LVZ					pmax		pmax		
	comp=Z,33nm,0.8s								
LVZ	**Lovozero**	79.98	339		P		**P**	**21 31 17.1**	**-0.8**
SMDO	**Samad**	80.17	291		P		**P**	**21 31 19.1**	**-0.8**
	SNR=9.2								
O03E	**Paynes Creek**	80.27	51		P		**P**	**21 31 20.1**	**+0.1**
	baz=287,SNR=70								
TMCR	**Tamitsa**	80.28	335	*e*	P		**P**	**21 31 17.8**	**-1.6**
TMCR					pmax		pmax		
	comp=Z,316nm,0.9s								
D08A	**Wollman Farm,**	80.31	44		IAmb		IAmb	21 31 22.9	
	comp=Z,178nm,1.1s								
JMDO	**Jabal Madar**	80.32	290		P		**P**	**21 31 20.6**	**0.0**
	SNR=9								
C09A	**Chrisman Ranch**	80.50	43		IAmb		IAmb	21 31 23.7	
	comp=Z,101nm,0.8s								
APA	**Apatity**	80.55	339	*‖ i*	P		**P**	**21 31 19.4**	**-1.4**
APA					pmax		pmax		
	comp=Z,84nm,0.7s								
APA					MLR		MLR		
	comp=Z,600nm,14.0s								
HOQ	**Hoqain**	80.67	292		P		**P**	**21 31 21.6**	**-0.8**
	SNR=28								
ORV	**Oroville**	80.70	51		IAmb		IAmb	21 31 24.9	
	comp=Z,236nm,1.2s								
BJO1	**Bjornoya**	80.72	347	*e*	P		**P**	**21 31 20.3**	**-1.2**
MHTO	**MHTO**	80.83	289		P		**P**	**21 31 23.0**	**-0.2**
	SNR=15								
MOD	**Modoc Plateau**	80.89	49		IAmb		IAmb	21 31 26.1	
	comp=Z,83nm,0.7s								
BANOM	**Banah**	80.89	294	*i*	P		**P**	**21 31 24.6**	**+1.1**
	SNR=10								
BANOM	**Banah**	80.89	294		P		**P**	**21 31 24.1**	**+0.6**
	SNR=5.4								
KLMR	**Klimovskoe**	80.95	331	*d i*	P		**P**	**21 31 22.7**	**-0.3**
KLMR					pmax		pmax		
	comp=Z,289nm,1.3s								
KLMR	**Klimovskoe**	80.95	331	*‖ i*	P		**P**	**21 31 22.7**	**-0.3**
KLMR				*i*	P		**P**	**21 31 22.7**	**-0.3**
KLMR				*i*	P		**P**	**21 31 22.7**	**-0.3**
KLMR					AMP			21 31 24.7	
	comp=Z,289nm,1.3s								
KLMR				*e*	pP		**pwP**	**21 33 31.3**	**+5.0**
E09A	**Wood Farm, Sta**	80.98	44		IAmb		IAmb	21 31 26.4	
	comp=Z,106nm,0.8s								
SHME	**Shamm**	80.99	294		P		**P**	**21 31 25.1**	**+1.1**
BSY	**Bisya**	81.01	291		P		**P**	**21 31 24.0**	**-0.2**
	SNR=11								
MDH	**Madha**	81.07	294		P		**P**	**21 31 25.3**	**+0.9**
MDH	**Madha**	81.07	294		P		**P**	**21 31 25.3**	**+0.9**
NEW	**Newport**	81.09	42		P		**P**	**21 31 24.0**	**-0.1**
	baz=288								
NEW	**Newport**	81.09	42		IAmb		IAmb	21 31 26.8	
	comp=Z,117nm,0.7s								
MSFE	**Esma-Masafi**	81.17	294	*i*	P		**P**	**21 31 25.8**	**+0.8**
	SNR=14								
SOHO	**SOHO**	81.20	292		P		**P**	**21 31 25.1**	**+0.1**
	SNR=11								
UOSS	**Minazif**	81.25	293	*i*	P		**P**	**21 31 25.5**	**+0.2**
	SNR=7.1								
UOSS	**Minazif**	81.25	293		P		**P**	**21 31 25.3**	**0.0**
AFDM	**Forest Hills D**	81.27	52		IAmb		IAmb	21 31 28.0	
	comp=Z,121nm,0.9s								
HATD	**Hatta, Dubai**	81.35	293	*i*	P		**P**	**21 31 26.0**	**+0.2**
	SNR=26								
HATD	**Hatta, Dubai**	81.35	293		P		**P**	**21 31 26.2**	**+0.4**
	SNR=16								
ARQ	**Araqi**	81.44	292		P		**P**	**21 31 26.7**	**+0.4**
	SNR=11								
BEKR	**Beckworth**	81.45	51		IAmb		IAmb	21 31 28.9	
	comp=Z,149nm,0.8s								
ASHO	**Ashiyiah**	81.45	293	*i*	P		**P**	**21 31 26.4**	**0.0**
	SNR=5.3								
ASHO	**Ashiyiah**	81.45	293		P		**P**	**21 31 26.6**	**+0.2**
	SNR=16								
KEV	**Kevo**	81.50	342		P		**P**	**21 31 25.0**	**-0.6**
KEV					pmax		pmax		
	comp=Z,136nm,1.1s								
KEV	**Kevo**	81.50	342		P		**P**	**21 31 25.0**	**-0.6**
KEV					IAmb		IAmb	21 31 27.6	
	comp=Z,136nm,1.1s								
NAZ	**Nazwa, Dubai**	81.71	294	*i*	P		**P**	**21 31 28.0**	**+0.3**
	SNR=14								
NAZ	**Nazwa, Dubai**	81.71	294		P		**P**	**21 31 28.0**	**+0.3**
	SNR=13								
J08A	**Circle Bar Ran**	81.73	47		IAmb		IAmb	21 31 30.5	
	comp=Z,133nm,0.8s								
FAQ	**Al Faqa, Dubai**	81.84	293		P		**P**	**21 31 28.7**	**+0.4**
RUBR	**Rubicon Trail**	81.85	52		IAmb		IAmb	21 31 31.4	
	comp=Z,160nm,0.9s								
ALNE	**Al Ain**	81.91	293	*i*	P		**P**	**21 31 29.2**	**+0.5**
	SNR=28								
WVOR	**Wild Horse Val**	81.91	48		IAmb		IAmb	21 31 31.3	
	comp=Z,101nm,0.8s								
HAMF	**Hammerfest**	81.94	343	*e*	P		**P**	**21 31 27.5**	**-0.4**
CMB	**Columbia Colle**	81.98	53		IAmb		IAmb	21 31 31.7	
	comp=Z,149nm,0.8s								
BMO	**Blue Mountains**	82.06	45		IAmb		IAmb	21 31 31.9	
	comp=Z,185nm,1.0s								
ARCES	**ACCESS Array B**	82.06	342		P		**P**	**21 31 27.9**	**-0.6**
	comp=Z,91nm,0.7s,baz=61,slow=4.9,SNR=159								
ARCES					PKiKP		**PKiKP**	**21 36 45.4**	**0.0**
	comp=Z,0.9nm,0.4s,baz=102,slow=1.3,SNR=7.4								
ARCES	**ACCESS Array B**	82.06	342		P		**P**	**21 31 28.0**	**-0.6**
ARE0	**ACCESS Array S**	82.06	342	*e*	P		**P**	**21 31 28.4**	**-0.2**
PMPB	**Monarch Peak**	82.22	54		IAmb		IAmb	21 31 33.3	
	comp=Z,144nm,1.1s								
PNTR	**Pine Nut**	82.25	51		IAmb		IAmb	21 31 33.6	
	comp=Z,226nm,1.1s								
AJN	**Ajban**	82.42	293	*i*	P		**P**	**21 31 31.8**	**+0.6**
	SNR=8.0								
AJN	**Ajban**	82.42	293		P		**P**	**21 31 31.3**	**+0.1**
	SNR=10								
TULEG	**Thule**	82.52	8		IAmb		IAmb	21 31 33.7	
	comp=Z,273nm,0.9s								
YERR	**Yerington**	82.55	51		IAmb		IAmb	21 31 34.8	
	comp=Z,240nm,1.3s								
WAKR	**Walker**	82.55	52		IAmb		IAmb	21 31 35.1	
	comp=Z,100nm,0.7s								
MAK	**Makhachkala**	82.67	313	*e*	P		**P**

OBN Obninsk 84.74 327⇓ *e*P **P** 21 31 40.5 -1.6
OBN *e**PP **pP** 21 33 42.5 0.0
OBN *e* 21 35 07.2
OBN pmax pmax
comp=Z,66nm,1.0s
OBN Obninsk 84.74 327 P **P** 21 31 41.7 -0.4
DECC Green Verdugo 84.76 56 P **P** 21 31 42.6 -0.1
baz=289,SNR=6.5
MPMC Manual Prospec 84.81 54 P **P** 21 31 43.5 +0.3
baz=290,SNR=189
EDW2 Edwards Air Fo 84.81 55 P **P** 21 31 43.5 +0.5
baz=290,SNR=33
LRMC Laurel Mtn Rad 84.86 54 P **P** 21 31 43.6 +0.3
baz=290,SNR=61
PASC Pasadena Art C 84.90 56 IAmb IAmb 21 31 45.8
comp=Z,116nm,1.4s
GOF Gofitskoye 84.96 316⇑ *e*P **P** 21 31 42.9 -0.5
GOF pmax pmax
comp=Z,53nm,1.1s
VSR Storozhevoye 84.96 323 *e*P **P** 21 31 41.8 -1.5
VSR pmax pmax
comp=Z,70nm,0.6s
FMP Fort Macarthur 84.97 56 P **P** 21 31 43.4 -0.2
baz=289
CIS Catalina Islan 84.97 57 P **P** 21 31 43.6 -0.1
baz=289,SNR=8.2
MWC Mount Wilson 84.98 56 IAmb IAmb 21 31 46.6
comp=Z,163nm,1.5s
VORD Divnogorie 84.99 322 *e*P **P** 21 31 41.1 -2.3
VORD pmax pmax
comp=Z,40nm,0.5s
SCI2 San Clemente I 85.01 57 P **P** 21 31 43.6 -0.3
baz=289
DLMT Dillon 85.01 44 IAmb IAmb 21 31 46.5
comp=Z,112nm,1.1s
FURC Furnace Creek, 85.15 53 P **P** 21 31 45.2 +0.8
baz=290,SNR=99
NCK Nalchik 85.17 314 *i* P **P** 21 31 44.0 -0.5
NCK pmax pmax
comp=Z,116nm,1.0s
ZEI Tsey 85.22 314 *e*P **P** 21 31 41.6 -3.4
ZEI pmax pmax
comp=Z,95nm,1.3s
RBK Rabkut 85.27 287 P **P** 21 31 46.2 +0.7
SNR=5.2
BFSC Mount Baldy Ra 85.29 56 P **P** 21 31 45.2 -0.2
baz=290,SNR=13
TPNV Topopah Spring 85.45 53 P **P** 21 31 46.7 +0.6
baz=290,SNR=310
R11A Troy Canyon, C 85.46 51 P **P** 21 31 46.8 +0.6
baz=291,SNR=94
R11A Troy Canyon, C 85.46 51 P **P** 21 31 46.9 +0.7
R11A IAmb IAmb 21 31 49.3
comp=Z,99nm,1.1s
BOZ Bozeman (W) 85.55 43 P **P** 21 31 46.3 -0.2
BOZ pmax pmax
comp=Z,50nm,1.1s
BOZ Bozeman (W) 85.55 43 P **P** 21 31 46.3 -0.2
KBZ Khabaz 85.55 315 P **P** 21 31 45.4 -0.9
comp=Z,50nm,0.9s,baz=51,slow=3.2,SNR=52
KULLO Kullorsuaq 85.58 6 *i* P **P** 21 31 45.4 -0.3
KULLO pmax pmax
comp=Z,47nm,0.7s
KULLO Kullorsuaq 85.58 6 *i* P **P** 21 31 45.4 -0.3
comp=Z,47nm,0.7s
RRX Edison Barstow 85.59 55 P **P** 21 31 47.1 +0.4
baz=290,SNR=5.8
GSC Goldstone, Bar 85.59 54 P **P** 21 31 47.2 +0.4
baz=290,SNR=120
GSC Goldstone, Bar 85.59 54 IAmb IAmb 21 31 49.7
comp=Z,156nm,1.0s
KIV Kislovodsk 85.61 315 ⇑P **P** 21 31 46.6 0.0
KIV Kislovodsk 85.61 315 *i* P **P** 21 31 46.7 0.0
SNR=7.5
KIV Kislovodsk 85.61 315 *ce*P **P** 21 31 45.9 -0.8
KIV *e**PP **pwP** 21 33 51.8 -0.4
KIV *e* 21 35 12.8
KIV pmax pmax
comp=Z,50nm,0.9s
KIV Kislovodsk 85.61 315 P **P** 21 31 46.1 -0.6
EGMT Eagleton 85.78 41 P **P** 21 31 47.3 -0.1
baz=294
EGMT Eagleton 85.78 41 IAmb IAmb 21 31 49.9
comp=Z,105nm,1.1s
SHOC Shoshone, Teco 85.79 54 P **P** 21 31 48.0 +0.3
baz=290,SNR=53
NEY Neytrino 85.85 314⇑ *e*P **P** 21 31 47.3 -0.6
NEY pmax pmax
comp=Z,6.0nm,0.6s
BBRC Big Bear Solar 85.86 55 P **P** 21 31 47.9 -0.3
baz=290
MURC Murrieta 85.87 56 P **P** 21 31 47.9 -0.2
baz=290,SNR=14
STEI Steigen 85.99 343 *e*P **P** 21 31 46.9 -0.9
AKH Akhalkalaki 86.00 312 ⇑P **P** 21 31 48.8 0.0
AKH Akhalkalaki 86.00 312 IAmb IAmb 21 31 51.1
comp=Z,91nm,1.1s
HEC Hector,Ludlow 86.11 55 P **P** 21 31 49.6 +0.3
baz=290,SNR=78
ABTO Aybut 86.14 287 P **P** 21 31 48.5 -1.1
SNR=12
109C Camp Elliot, M 86.18 57 P **P** 21 31 49.6 +0.1
baz=290,SNR=5.4
109C Camp Elliot, M 86.18 57 IAmb IAmb 21 31 52.0
comp=Z,184nm,1.3s
TUQ Turquoise Moun 86.22 54 P **P** 21 31 50.5 +0.7
baz=291,SNR=54
LOF Lofoten 86.31 344 *e*P **P** 21 31 49.8 +0.5
FIA1 FINESS Array S 86.40 335 IAmb IAmb 21 31 50.6
comp=Z,71nm,0.6s
FINES FINESS Array B 86.40 335 P **P** 21 31 48.0 -1.8
comp=Z,43nm,0.4s,baz=64,slow=4.3,SNR=240
FINES PKKP **PKKPdf** 21 49 29.8 -6.3
comp=Z,1.6nm,0.9s,baz=214,slow=1.9,SNR=4.3
SHPR Sheep Range 86.42 53 IAmb IAmb 21 31 54.2
comp=Z,116nm,0.9s
PFO Pinyon Flats O 86.44 56 P **P** 21 31 51.2 +0.3
PFO pmax pmax
comp=Z,143nm,1.1s
PFO Pinyon Flats O 86.44 56 P **P** 21 31 51.2 +0.3
baz=290,SNR=56
PFO Pinyon Flats O 86.44 56 P **P** 21 31 51.2 +0.3
PFO IAmb IAmb 21 31 53.5
comp=Z,143nm,1.1s
XPFO Pion Flat 86.44 56 P **P** 21 31 51.2 +0.3
XPFO IAmb IAmb 21 31 53.5
comp=Z,131nm,1.1s
YNM Yellowstone No 86.49 44 P **P** 21 31 51.9 +0.9
YNR Norris Junctio 86.51 44 P **P** 21 31 52.8 +1.7
BAR Barrett 86.59 57 IAmb IAmb 21 31 53.9
comp=Z,42nm,0.7s
YUF Upper Falls 86.62 44 P **P** 21 31 52.5 +0.8
SPUT South Promonto 86.63 47 P **P** 21 31 51.9 +0.2
GMRC Granite Mounta 86.65 54 P **P** 21 31 52.4 +0.5
baz=291,SNR=171
BELC Belle Mtn. Jos 86.66 55 P **P** 21 31 52.0 +0.1
baz=291,SNR=85
H17A Grant Village 86.71 44 P **P** 21 31 53.9 +1.8
baz=293,SNR=39
H17A Grant Village 86.71 44 P **P** 21 31 53.2 +1.1
MONP2 Monument Peak 86.72 56 P **P** 21 31 52.6 +0.3
baz=290,SNR=34
FLWY Flagg Ranch 86.75 44 IAmb IAmb 21 31 55.9
comp=Z,68nm,0.8s
DUG Dugway, Tooele 86.79 49 P **P** 21 31 53.1 +0.6
baz=292,SNR=178
TPAW Teton Pass 86.81 45 IAmb IAmb 21 31 55.9
comp=Z,128nm,1.5s
YNE Yellowstone No 86.83 43 P **P** 21 31 53.7 +1.0
AHID Auburn Hatcher 87.00 46 IAmb IAmb 21 31 56.2
comp=Z,105nm,1.2s
IKP In-Ko-Pah, Jac 87.05 57 P **P** 21 31 53.9 +0.2
baz=291,SNR=23
HWUT Hardware Ranch 87.13 47 IAmb IAmb 21 31 56.9
comp=Z,181nm,1.2s
SOCY Socotra 87.15 282 P **P** 21 31 53.4 -1.1
FFC Flin Flon 87.17 32 P **P** 21 31 53.7 0.0
FFC pmax pmax
comp=Z,166nm,0.9s
FFC Flin Flon 87.17 32 P **P** 21 31 53.7 0.0
BATM Batumi 87.18 313 ⇑P **P** 21 31 53.4 -0.6
BATM Batumi 87.18 313 ⇑P **P** 21 31 53.4 -0.6
SWSC Sam W. Stewart 87.19 56 P **P** 21 31 54.6 +0.3
baz=291,SNR=13
BC3 Big Chuckawall 87.21 55 P **P** 21 31 55.0 +0.5
baz=291,SNR=117

RLMT Red Lodge 87.27 43 P **P** 21 31 55.5 +0.9
baz=294,SNR=53
RLMT Red Lodge 87.27 43 IAmb IAmb 21 31 59.0
comp=Z,48nm,0.5s
IRM Iron Mountain 87.27 55 P **P** 21 31 55.0 +0.4
baz=291,SNR=114
BCA Borcka 87.29 313 ⇑P **P** 21 31 53.4 -1.1
NEE2 Needles Airpor 87.46 54 P **P** 21 31 56.2 +0.7
baz=291,SNR=21
KONS Konsvik 87.58 343 *e*P **P** 21 31 55.4 +0.1
TCRU Three Creeks R 87.65 50 P **P** 21 31 57.7 +1.0
SOC Sochi 87.73 315 *e*P **P** 21 31 54.3 -2.3
SOC *e* 21 35 36.1
SOC *e*PPP PPP 21 37 29.4
SOC *e*S **SKSac** 21 41 25.8 -5.4
SOC pmax pmax
comp=Z,30nm,0.7s
VSU Vasula 87.79 332 *e*P **P** 21 31 55.7 -0.8
W13A Hualapai Mount 87.90 54 IAmb IAmb 21 32 00.9
comp=Z,81nm,0.8s
Y12C Blythe 87.90 55 P **P** 21 31 58.0 +0.5
baz=291,SNR=41
Y12C Blythe 87.90 55 IAmb IAmb 21 32 00.7
comp=Z,113nm,0.9s
GLA Glamis 87.92 56 P **P** 21 31 58.4 +0.7
baz=291,SNR=63
PDMCI Parker Dam,Lak 87.99 54 P **P** 21 31 58.7 +0.8
baz=292,SNR=39
BW06 Boulder Array 88.04 45 P **P** 21 31 57.9 -0.4
baz=294
PDAR Pinedale Array 88.04 45 P **P** 21 31 58.2 -0.1
comp=Z,16nm,0.7s,baz=44,slow=0.2,SNR=69
LAO LASA Array 88.52 41 P **P** 21 32 00.5 +0.2
baz=296,SNR=54
U15A North Rim 88.60 52 IAmb IAmb 21 32 04.5
comp=Z,96nm,0.9s
SUMG Summit 88.65 1 *i* P **P** 21 32 00.9 +0.2
SUMG Summit 88.65 1 *i* P **P** 21 32 00.9 +0.2
FCC Fort Churchill 88.67 27 IAmb IAmb 21 32 02.8
comp=Z,83nm,0.9s
ANN Anapa 88.72 317 *e*P **P** 21 31 59.8 -1.3
ANN *e*S **SKSac** 21 41 33.3 -3.5
ANN pmax pmax
comp=Z,88nm,1.2s
KTUT Trabzon 88.76 313 ⇑P **P** 21 32 01.6 +0.2
CASY Casey 88.87 193 P **P** 21 32 02.2 +1.1
DGMT Dagmar 88.94 39 P **P** 21 32 01.7 -0.5
baz=298
DGMT Dagmar 88.94 39 IAmb IAmb 21 32 04.1
comp=Z,71nm,0.8s
NSS Namsos 89.34 342 *e*P **P** 21 32 02.7 -0.8
MICGM Minsk 89.43 329⇓ *e*P **P** 21 32 05.0 +0.8
MICGM PM 21 32 06.0
comp=Z,0.6nm,1.0s
MICGM *e*LR LR 22 09 55.0
MNK Minsk 89.43 329⇓ *e*P **P** 21 32 05.0 +0.8
MNK pmax pmax
comp=Z,550nm,1.0s
WUAZ Wupatki 89.64 52 P **P** 21 32 06.7 +0.8
baz=293,SNR=65
ISAL Salakas 89.68 330 *e*P **P** 21 32 04.7 -0.6
NACGM Naroch 89.74 329 *e*P **P** 21 32 04.0 -1.6
NACGM PM 21 32 07.0
comp=Z,0.4nm,1.0s
IIGN Ignalina 89.76 330 *e*P **P** 21 32 04.5 -1.2
214A Organ Pipe Nat 89.90 56 P **P** 21 32 07.5 +0.6
baz=292
X16A Lo Mia Camp, P 90.02 54 IAmb IAmb 21 32 11.1
comp=Z,70nm,1.3s
O20A White River Ci 90.03 47 P **P** 21 32 07.5 -0.1
baz=295
K22A Casper 90.11 44 P **P** 21 32 07.8 -0.1
baz=296
K22A Casper 90.11 44 P **P** 21 32 07.5 -0.3
K22A IAmb IAmb 21 32 11.5
comp=Z,79nm,0.9s
SLIT Slitere, Latvi 90.20 333 *e*P **P** 21 32 05.5 -2.1
PV04 Paradox Valley 90.29 49 P **P** 21 32 08.7 -0.1
PV22 Blue Mesa, Par 90.31 49 P **P** 21 32 08.9 0.0
SCO Scoresbysund 90.32 356 *i* P **P** 21 32 07.6 -0.4
SCO Scoresbysund 90.32 356 *i* P **P** 21 32 07.6 -0.4
PV11 David Mesa, Pa 90.35 49 P **P** 21 32 09.6 +0.5
PABE Paberze 90.72 331 *e*P **P** 21 32 09.3 -0.8
SIM Simferopol' 90.75 318 *de*P **P** 21 32 10.1 -0.4
SIM pmax pmax
comp=Z,10.0nm,0.8s
AKASG Malin Array Be 90.76 325 P **P** 21 32 08.5 -1.9
comp=Z,6.1nm,0.5s,baz=50,slow=5.3,SNR=29
AKASG PKKP **PKKPdf** 21 49 31.3 +2.8
comp=Z,1.1nm,0.5s,baz=260,slow=3.1,SNR=5.3
TBLU Trondheim 90.79 341 *e*P **P** 21 32 08.0 -2.3
RAYN Ar Rayn 90.95 295 P **P** 21 32 10.7 -1.3
RAYN Ar Rayn 90.95 295 P **P** 21 32 10.6 -1.4
RAYN pmax pmax
comp=Z,31nm,1.0s
RAYN Ar Rayn 90.95 295 P **P** 21 32 10.6 -1.4
RAYN IAmb IAmb 21 32 13.3
comp=Z,31nm,0.9s
W18A Petrified Fore 91.03 52 P **P** 21 32 12.9 +0.7
baz=294,SNR=12
W18A Petrified Fore 91.03 52 IAmb IAmb 21 32 15.6
comp=Z,112nm,1.4s
RSSD Black Hills 91.06 42 P **P** 21 32 11.9 -0.4
RSSD pmax pmax
comp=Z,64nm,0.6s
RSSD Black Hills 91.06 42 P **P** 21 32 11.9 -0.4
baz=298
RSSD Black Hills 91.06 42 P **P** 21 32 11.9 -0.4
MVCO Mesa Verde 91.08 50 P **P** 21 32 12.8 +0.3
baz=295,SNR=54
X18A Snowflake 91.10 53 IAmb IAmb 21 32 15.8
comp=Z,48nm,0.9s
N23A Red Feather La 91.28 46 P **P** 21 32 14.2 +0.8
baz=297
ILULI Ilulissat 91.30 6 P **P** 21 32 12.3 -0.2
ILULI pmax pmax
comp=Z,71nm,0.9s
ILULI Ilulissat 91.30 6 P **P** 21 32 12.3 -0.2
ILULI IAmb IAmb 21 32 14.3
comp=Z,71nm,0.9s
PBUR Paburge 91.34 332 *e*P **P** 21 32 12.3 -0.6
TUC Tucson 91.35 55 P **P** 21 32 14.7 +1.0
TUC pmax pmax
comp=Z,64nm,1.1s
TUC Tucson 91.35 55 P **P** 21 32 14.4 +0.7
baz=294
TUC Tucson 91.35 55 P **P** 21 32 14.7 +1.0
TUC IAmb IAmb 21 32 17.1
comp=Z,64nm,1.1s
PHWY Pilot Hill 91.42 45 IAmb IAmb 21 32 16.8
comp=Z,77nm,1.1s
DIKM Dikmen 91.54 315 ⇑P **P** 21 32 13.7 -0.5
MDND Maddock 91.92 38 P **P** 21 32 15.8 -0.1
baz=301
NC303 NORSAR Array S 91.94 340 IAmb IAmb 21 32 16.2
comp=Z,34nm,0.9s
SUW Suwalki 91.98 330 *e*P **P** 21 32 15.6 -0.3
ISCO Idaho Springs 91.99 47 P **P** 21 32 17.4 +0.6
comp=Z,297,SNR=61
ISCO Idaho Springs 91.99 47 IAmb IAmb 21 32 19.8
comp=Z,58nm,0.9s
S22A 4UR Ranch, Cre 92.05 49 P **P** 21 32 17.4 +0.4
baz=296,SNR=71
NB201 NORSAR Array S 92.09 339 IAmb IAmb 21 32 16.6
comp=Z,34nm,0.7s
NC204 NORSAR Array S 92.10 340 IAmb IAmb 21 32 17.0
comp=Z,29nm,0.7s
NB2 NORSAR Subarra 92.12 339 P **P** 21 32 15.0 -1.6
comp=Z,16nm,0.7s,baz=43,slow=5.1
NB2 NORSAR Subarra 92.12 339 P pP 21 34 19.3 +0.2
comp=Z,12nm,1.2s,baz=44,slow=5.1
NB2 NORSAR Subarra 92.12 339 P **P** 21 32 15.0 -1.6
baz=43,slow=5.1
NOA NORSAR Array B 92.12 339 P **P** 21 32 14.9 -1.7
comp=Z,7.3nm,0.5s,baz=44,slow=4.5,SNR=44
NOA PP **PP** 21 36 06.2 +0.3
comp=Z,5.7nm,0.9s,baz=39,slow=7.4,SNR=6.6
NOA PKKP **PKKPbc** 21 49 29.4 -2.0
comp=Z,0.9nm,0.6s,baz=90,slow=3.1,SNR=3.6
NC602 NORSAR Array S 92.23 339 IAmb IAmb 21 33 42.0
comp=Z,128nm,2.0s
NC602 NORSAR Array S 92.23 339 *e*P **P** 21 32 17.4 +0.4
NBO00 NORSAR Array S 92.27 340 IAmb IAmb 21 32 17.4
comp=Z,29nm,0.8s
NAO01 NORSAR Array S 92.38 339 IAmb IAmb 21 32 17.2
comp=Z,121nm,1.6s

AKN Aaknes 92.59 342 *e*P **P** 21 32 19.2 +0.6
SORM Soroca 92.60 323 ⇑P **P** 21 32 16.8 -2.1
SORM Soroca 92.60 323 ⇑P **P** 21 32 16.8 -2.1
ULM Lac du Bonnet 92.70 34 P **P** 21 32 17.6 -1.7
comp=Z,27nm,1.0s,baz=310,slow=5.0,SNR=18
ULM Lac du Bonnet 92.70 34 IAmb IAmb 21 32 21.1
comp=Z,38nm,1.1s
319A Douglas 92.90 56 P **P** 21 32 21.1 +0.3
MILM Milestii Mici 92.98 322 ⇑P **P** 21 32 20.1 -0.6
SDCO Great Sand Dun 92.99 48 P **P** 21 32 21.6 +0.2
baz=297,SNR=40
SKAR Skarslia 93.34 340 *e*P **P** 21 32 22.0 -0.2
LENM Lemitar 93.49 52 P **P** 21 32 23.0 -0.6
SFJD Kangerlussuaq 93.49 6 *i* P **P** 21 32 22.3 -0.3
SFJD Kangerlussuaq 93.49 6 P **P** 21 32 22.2 -0.3
SFJD IAmb IAmb 21 32 24.1
comp=Z,35nm,0.8s
SFJD Kangerlussuaq 93.49 6 *i* P **P** 21 32 22.3 -0.3
BR131 Keskin Array S 93.52 314 P **P** 21 32 21.7 -1.9
SNR=8.9
BR131 Keskin Array S 93.52 314 IAmb IAmb 21 32 24.5
comp=Z,37nm,1.1s
BRTR Keskin Array B 93.52 314 P **P** 21 32 22.1 -1.4
comp=Z,42nm,1.1s,baz=103,slow=2.8,SNR=51
BRTR PKKP **PKKPbc** 21 49 26.9 -0.3
comp=Z,1.6nm,0.5s,baz=192,slow=3.7,SNR=6.6
ANMO Albuquerque 93.54 51 *ce*P **P** 21 32 24.5 +0.7
ANMO pmax pmax
comp=Z,44nm,1.7s
ANMO Albuquerque 93.54 51 P **P** 21 32 24.2 +0.4
baz=296
ANMO Albuquerque 93.54 51 P **P** 21 32 24.2 +0.4
ANMO IAmb IAmb 21 32 26.7
comp=Z,28nm,1.1s
121A Cookes Peak, D 93.57 54 P **P** 21 32 24.8 +0.8
baz=295,SNR=20
FOO Floro 93.62 342 *e*P **P** 21 32 23.2 -0.1
HYA Hoyanger 93.62 341 *e*P **P** 21 32 21.5 -1.8
VASR Vaslui 93.72 322 ⇓P **P** 21 32 23.7 -0.4
AGMN Agassiz Nation 93.80 36 P **P** 21 32 23.6 -0.8
baz=304
AGMN Agassiz Nation 93.80 36 IAmb IAmb 21 32 26.1
comp=Z,34nm,1.1s
OGNE Ogallala 93.88 44 P **P** 21 32 24.4 -0.7
baz=299,SNR=9.5
OGNE Ogallala 93.88 44 IAmb IAmb 21 32 26.9
comp=Z,26nm,0.9s
ANTO Ankara 94.02 314 ⇓P **P** 21 32 25.2 -0.6
ANTO Ankara 94.02 314 P **P** 21 32 27.0 +1.2
ANTO Ankara 94.02 314 P **P** 21 32 25.5 -0.2
ANTO IAmb IAmb 21 32 27.0
comp=Z,20nm,0.8s
LVV L'vov 94.02 326 *e*P **P** 21 32 24.1 -1.3
T25A Trinidad 94.04 49 P **P** 21 32 26.2 +0.1
baz=297,SNR=24
BR231 Keskin MP Arra 94.05 314 P **P** 21 32 25.4 -0.5
SUSD Miller 94.08 40 P **P** 21 32 25.1 -0.7
baz=302
SUE Sulen 94.13 342 *e*P **P** 21 32 25.3 -0.3
CFR Carcaliu 94.31 321 ⇑P **P** 21 32 25.3 -1.5
CFR Carcaliu 94.31 321 ⇑P **P** 21 32 25.3 -1.5
KSCO Kaye Shedlock' 94.41 46 P **P** 21 32 27.7 +0.1
baz=299,SNR=11
TESR Tescani 94.46 322 ⇓P **P** 21 32 26.8 -0.7
ASK Askoy 94.46 341 *e*P **P** 21 32 27.5 +0.4
BER Bergen 94.50 341 *e*P **P** 21 32 27.1 -0.2
TIRR Tirgusor 94.52 320 IAmb IAmb 21 32 29.6
comp=Z,94nm,1.7s
BIZ Bicaz 94.53 323 ⇑P **P** 21 32 27.3 -0.5
BURAR Bucovina Array 94.65 324 ⇑P **P** 21 32 27.4 -1.1
BURAR Bucovina Array 94.65 324 P **P** 21 32 29.3 +0.8
VRI Vrincioaia 94.77 322 ⇓P **P** 21 32 29.2 +0.3
VRI Vrincioaia 94.77 322 ⇓P **P** 21 32 29.2 +0.3
MDUB Mudurnu 94.80 316 P **P** 21 32 28.2 -1.0
PLOR Plostina 94.82 322 ⇓P **P** 21 32 28.4 -0.8
PLOR Plostina 94.82 322 ⇓P **P** 21 32 28.4 -0.8
F33A 5 Mile Ranch, 94.92 38 IAmb IAmb 21 32 31.4
comp=Z,43nm,0.9s
B35A Bob, Littlefor 94.93 35 IAmb IAmb 21 32 31.4
comp=Z,48nm,1.6s
BSD Bornholm Skovb 94.95 334 *i* P **P** 21 32 28.9 -0.6
BSD Bornholm Skovb 94.95 334 *i* P **P** 21 32 28.9 -0.6
HOMB Homborsund 95.11 339 *e*P **P** 21 32 29.6 -0.5
K31A O'Neill 95.15 42 P **P** 21 32 30.4 -0.3
MLR Muntele Rosu 95.43 322 ⇑P **P** 21 32 30.7 -1.4
MLR Muntele Rosu 95.43 322 ⇑P **P** 21 32 30.7 -1.4
DOPR Dopca 95.49 323 ⇑P **P** 21 32 31.3 -0.9
UZH Uzhgorod 95.65 326 *di* P **P** 21 32 32.4 -0.4
MNTX Cornudas Mount 95.77 54 P **P** 21 32 34.2 +0.5
baz=296,SNR=34
MNTX Cornudas Mount 95.77 54 IAmb IAmb 21 32 36.5
comp=Z,21nm,0.8s
TRPA Tarpa 95.81 325 ⇓P **P** 21 32 32.7 -0.8
ECSD EROS Data Cent 95.88 40 P **P** 21 32 33.0 -1.0
baz=303
ECSD EROS Data Cent 95.88 40 IAmb IAmb 21 32 35.5
comp=Z,25nm,1.1s
ARR Arges 96.26 322 ⇓P **P** 21 32 36.2 +0.5
GDL2 Guadalupe Moun 96.32 53 P **P** 21 32 36.2 -0.2
EYMN Ely 96.38 34 P **P** 21 32 35.1 -1.0
baz=308
CBKS Cedar Bluff 96.47 45 P **P** 21 32 36.2 -0.6
CBKS pmax pmax
comp=Z,33nm,1.1s
CBKS Cedar Bluff 96.47 45 P **P** 21 32 35.8 -1.0
baz=301
CBKS Cedar Bluff 96.47 45 P **P** 21 32 36.2 -0.6
CBKS IAmb IAmb 21 32 38.3
comp=Z,34nm,1.1s
F36A Milaca 96.50 37 IAmb IAmb 21 32 38.3
comp=Z,25nm,1.1s
DRGR 96.52 324 ⇑P **P** 21 32 37.0 +0.1
DRGR 96.52 324 ⇑P **P** 21 32 37.0 +0.1
MSTX Muleshoe 96.69 51 Pdiff **P** 21 32 37.3 -0.6
baz=298
MSTX Muleshoe 96.69 51 IAmb IAmb 21 32 39.9
comp=Z,33nm,1.4s
VNDA Vanda 96.79 176 P **P** 21 32 36.4 -0.8
comp=Z,2.3nm,0.8s,baz=309,slow=7.1,SNR=9.8
VNDA PKKP **PKKPbc** 21 49 17.9 -1.7
comp=Z,1.7nm,0.6s,baz=229,slow=2.3,SNR=13
VNDA Vanda 96.79 176 P **P** 21 32 38.0 +0.8
VNDA pmax pmax
comp=Z,3.0nm,0.9s
VNDA Vanda 96.79 176 P **P** 21 32 38.0 +0.8
AMTX Amarillo 97.05 50 Pdiff **P** 21 32 39.1 -0.4
baz=299
AMTX Amarillo 97.05 50 P **P** 21 32 39.3 -0.2
AMTX IAmb IAmb 21 32 42.1
comp=Z,41nm,1.1s
VLAD Vladila 97.18 321 ⇑P Pdif 21 32 39.9 +0.2
SPMN Marine on St. 97.28 37 Pdiff Pdif 21 32 39.6 -0.6
baz=306
SPMN Marine on St. 97.28 37 P **P** 21 32 40.5 +0.3
SPMN IAmb IAmb 21 32 42.0
comp=Z,24nm,0.9s
PSZ Piszkesteto 97.35 326 ⇑P **P** 21 32 40.9 +0.3
PSZ Piszkesteto 97.35 326 ⇑P **P** 21 32 40.9 +0.3
MORC Moravsky Berou 97.35 329 *e*PDIFF **P** 21 32 40.8 +0.3
MORC *e*PP **PP** 21 36 47.1 +1.0
MORC Moravsky Berou 97.35 329 ⇑P **P** 21 32 40.9 +0.4
MORC Moravsky Berou 97.35 329 ⇑P **P** 21 32 40.9 +0.4
R32A Long Quarter, 97.36 45 P Pdif 21 32 40.0 -0.7
R32A IAmb IAmb 21 32 42.5
comp=Z,16nm,0.8s
PLVB Pleven 97.40 321 ⇑P **P** 21 32 41.3 +0.5
OSTC Ostas 97.47 330 *e*PDIFF **P** 21 32 42.0 +1.0
KRLC Kraliky 97.53 329 *e*P Pdif 21 32 40.8 -0.4
KRLC Kraliky 97.53 329 *e*PDIFF Pdif 21 32 40.8 -0.4
CHVC Chvalec 97.53 330 *e*PDIFF **P** 21 32 41.5 +0.3
ELL Elmali 97.53 313 P Pdif 21 32 40.0 -1.7
ELL pmax pmax
comp=Z,64nm,1.3s
ELL Elmali 97.53 313 P Pdif 21 32 40.0 -1.6
VYHS Vyhne 97.53 327 *e*P Pdif 21 32 41.1 -0.2
VYHS Vyhne 97.53 327 *e*PDIFF Pdif 21 32 41.1 -0.2
DPC Dobruska-Polom 97.56 330 *e*P Pdif 21 32 40.4 -1.0
DPC *e* 21 36 51.3
DPC Dobruska-Polom 97.56 330 *e*PDIFF Pdif 21 32 40.4 -1.0
DPC *e*PP **PP** 21 36 51.3 +3.7
BSEG Bad Segeberg 97.68 335 *e*Pdiff **P** 21 32 42.6 +0.9
baz=44,slow=4.5
BZS Buzias 97.83 324 ⇑P Pdif 21 32 42.2 -0.4
BZS Buzias 97.83 324 ⇑P Pdif 21 32 42.2 -0.4

JAVC	**Velka Javorina**	**97.89**	**328**	*e*PDIFF	**P**		**21**	**32**	**44.4 +1.5**
JAVC				*e*PP	**PP**		**21**	**36**	**52.5 +2.3**
VRAC	**Vranov**	**98.13**	**329**	*e*PDIFF	**P**		**21**	**32**	**44.5 +0.6**
VRAC				*e*PP	**PP**		**21**	**36**	**53.7 +1.8**
VRAC	**Vranov**	**98.13**	**329**	⇓P	Pdif		21	32	42.3 -1.6
VRAC	**Vranov**	**98.13**	**329**	⇓P	Pdif		21	32	42.3 -1.6
TXAR	**Lajitas Array**	**98.15**	**55**	P	**P**		**21**	**32**	**44.6 0.0**
	comp=Z,4.2nm,0.6s,baz=298,slow=2.7,SNR=33								
TXAR				PP	**PP**		**21**	**36**	**53.5 +0.5**
	comp=Z,1.3nm,0.7s,baz=285,slow=5.6,SNR=4.3								
TXAR				PKKP	**PKKPbc**		**21**	**49**	**14.7 +0.1**
	comp=Z,2.1nm,0.7s,baz=133,slow=4.6,SNR=18								
MDVR	**Moldovita**	**98.28**	**323**	⇑P	**P**		**21**	**32**	**45.1 +0.3**
BRG	**Berggiesshubel**	**98.32**	**331**	*e*Pdiff	**P**		**21**	**32**	**44.9 +0.2**
	baz=44,slow=4.5								
BRG	**Berggiesshubel**	**98.32**	**331**	*e*P	**P**		**21**	**32**	**44.9 +0.2**
BRG				*e*			21	36	52.3
BRG				pmax	pmax				
	comp=Z,18nm,1.6s								
BRG				pmax	pmax				
	comp=Z,16nm,1.5s								
KRUC	**Moravsky**	**98.39**	**329**	*e*PDIFF	**P**		**21**	**32**	**45.4 +0.3**
KRUC				*e*PP	**PP**		**21**	**36**	**55.7 +1.9**
KSU1	**Kansas State U**	**98.40**	**44**	Pdiff	Pdif		21	32	44.3 -1.0
	baz=303								
CLL	**Collm**	**98.44**	**332**	*i* Pdif	**P**		**21**	**32**	**45.5 +0.3**
	comp=Z,15nm,1.0s								
CLL				*e*pP	**pP**		**21**	**34**	**46.0 -2.2**
CLL				*e*			21	36	38.0
CLL				*e*PP	**PP**		**21**	**36**	**55.0 +0.9**
	comp=Z,20nm,1.5s								
CLL				*i* PKiKP	**PKiKP**		**21**	**37**	**10.7 -2.8**
	comp=Z,12nm,1.4s								
CLL				*e*pPP			21	38	38.0
CLL				*e*PKKPdf	**PKKPbc**		**21**	**49**	**13.0 -1.5**
	comp=Z,9.0nm,1.4s								
CLL				LmH			22	43	00.0
	comp=N,100nm,18.8s								
CLL				LmH			22	43	00.0
	comp=E,200nm,21.4s								
CLL				LmV			22	44	00.0
	comp=Z,200nm,19.0s								
CLL	**Collm**	**98.44**	**332**	*e*Pdiff	**P**		**21**	**32**	**45.9 +0.7**
	baz=44,slow=4.5								
CLL	**Collm**	**98.44**	**332**	*i* P	**P**		**21**	**32**	**45.5 +0.3**
CLL				*e**PP	**pP**		**21**	**34**	**46.0 -2.2**
CLL				*e*			21	36	55.0
CLL				pmax	pmax				
	comp=Z,15nm,1.0s								
CLL				pmax	pmax				
	comp=Z,20nm,1.5s								
CLL				pmax	pmax				
	comp=Z,12nm,1.4s								
CLL				pmax	pmax				
	comp=Z,9.0nm,1.4s								
FBE	**Freiberg**	**98.55**	**331**	*e*Pdiff	**P**		**21**	**32**	**46.3 +0.5**
	baz=44,slow=4.5								
PRU	**Pruhonice**	**98.65**	**330**	*e*P	**P**		**21**	**32**	**46.4 +0.2**
PRU				*e*			21	36	57.6
PRU	**Pruhonice**	**98.65**	**330**	*e*PDIFF	**P**		**21**	**32**	**46.4 +0.2**
PRU				*e*PP	**PP**		**21**	**36**	**57.6 +1.9**
VTS	**Vitosha**	**98.67**	**321**	⇑P	Pdif		21	32	45.8 -0.9
VTS	**Vitosha**	**98.67**	**321**	⇑P	Pdif		21	32	45.8 -0.9
NRDL	**Niedersach Rie**	**98.83**	**334**	*e*Pdiff	**P**		**21**	**32**	**47.0 +0.2**
	baz=44,slow=4.5								
ASSE	**Asse, Remlinge**	**98.86**	**334**	*e*Pdiff	**P**		**21**	**32**	**47.5 +0.5**
	baz=44,slow=4.5								
RETH	**Rethem/Aller,**	**98.95**	**335**	*e*PP	**PP**		**21**	**36**	**59.2 +1.3**
	baz=42,slow=7.3								
NEUB	**Neuenburg**	**99.05**	**332**	*e*Pdiff	**Pdif**		**21**	**32**	**48.1 +0.2**
	baz=44,slow=4.5								
NEUB				*e*PP	**PP**		**21**	**37**	**00.1 +1.5**
	baz=42,slow=7.3								
CLZ	**Clausthal**	**99.19**	**333**	*e*Pdiff	**Pdif**		**21**	**32**	**49.0 +0.4**
	baz=44,slow=4.5								
CLZ				*e*PP	**PP**		**21**	**37**	**00.5 +0.8**
	baz=42,slow=7.3								
WMOK	**Wichita Mounta**	**99.20**	**49**	Pdiff	**Pdif**		**21**	**32**	**48.7 -0.3**
	baz=301								
TANN	**Tannenbergstha**	**99.31**	**332**	*e*PP	**PP**		**21**	**37**	**01.5 +0.7**
	baz=42,slow=7.3								
PLN	**Plauen**	**99.40**	**332**	*e*PP	**PP**		**21**	**37**	**01.9 +0.6**
	baz=42,slow=7.3								
GUNZ	**Gunzen**	**99.41**	**332**	*e*Pdiff	**Pdif**		**21**	**32**	**50.4 +0.8**
	baz=44,slow=4.5								
GUNZ				*e*PP	**PP**		**21**	**37**	**02.1 +0.7**
	baz=42,slow=7.3								
CONA	**Conrad Observa**	**99.41**	**328**	*e*Pdiff	**Pdif**		**21**	**32**	**48.9 -0.8**
	comp=Z,11nm,1.2s								
CONA				*e*PP	**PP**		**21**	**36**	**58.1 -3.5**
	comp=Z,8.5nm,1.1s								
WERN	**Wernitzgruen**	**99.44**	**331**	*e*Pdiff	**Pdif**		**21**	**32**	**50.3 +0.5**
	baz=44,slow=4.5								
WERN				*e*PP	**PP**		**21**	**37**	**02.3 +0.7**
	baz=42,slow=7.3								
NKC	**Novy Kostel**	**99.44**	**331**	*e*P	**Pdif**		**21**	**32**	**50.7 +1.0**
NKC	**Novy Kostel**	**99.44**	**331**	*e*PDIFF	**Pdif**		**21**	**32**	**50.7 +1.0**
MOX	**Moxa**	**99.52**	**332**	*e*Pdiff	**Pdif**		**21**	**32**	**50.5 +0.5**
	baz=44,slow=4.5								
MOX				*e*PP	**PP**		**21**	**37**	**02.8 +0.6**
	baz=42,slow=7.3								
GTTG	**Gottingen**	**99.58**	**333**	*e*Pdiff	**Pdif**		**21**	**32**	**50.8 +0.5**
	baz=44,slow=4.5								
GTTG				*e*PP	**PP**		**21**	**37**	**02.9 +0.3**
	baz=42,slow=7.3								
ABTX	**Abilene, Hawle**	**99.64**	**51**	Pdiff	**Pdif**		**21**	**32**	**50.8 -0.2**
	baz=300								
DIVS	**Divibare**	**99.68**	**323**	Pdif	**Pdif**		**21**	**32**	**49.9 -1.1**
KHC	**Kasperske Hory**	**99.70**	**330**	*e*P	**Pdif**		**21**	**32**	**50.3 -0.6**
KHC				*e*			21	37	05.5
KHC	**Kasperske Hory**	**99.70**	**330**	*e*PDIFF	**Pdif**		**21**	**32**	**50.3 -0.6**
KHC				*ex*	x		21	36	00.0
KHC				*e*PP	**PP**		**21**	**37**	**01.4 -2.2**
KHC				*ex*	x		21	37	05.5
MANZ	**Manzenberg**	**99.78**	**331**	*e*PP	**PP**		**21**	**37**	**04.8 +0.6**
	baz=42,slow=7.3								
GEC2	**GERESS Array S**	**99.84**	**330**	*e*Pdiff	**Pdif**		**21**	**32**	**51.6 -0.1**
	baz=44,slow=4.5								
GEC2				*e*PP	**PP**		**21**	**37**	**05.3 +0.5**
	baz=42,slow=7.3								
GERES	**GERESS Array B**	**99.84**	**330**	P	**Pdif**		**21**	**32**	**49.8 -1.8**
	comp=Z,2.2nm,0.6s,baz=42,slow=5.3,SNR=21								
GERES				PP	**PP**		**21**	**37**	**02.2 -2.6**
	comp=Z,1.9nm,0.8s,baz=50,slow=7.1,SNR=6.9								
GERES				PKKP	**PKKPbc**		**21**	**49**	**08.3 -2.3**
	comp=Z,1.7nm,0.7s,baz=208,slow=2.6,SNR=12								
ROTZ	**Rotzenmuhle**	**99.89**	**331**	*e*Pdiff	**Pdif**		**21**	**32**	**51.6 -0.1**
	baz=44,slow=4.5								
ROTZ				*e*PP	**PP**		**21**	**37**	**05.9 +0.9**
	baz=42,slow=7.3								
IBBN	**Ibbenburen**	**99.92**	**335**	*e*PP	**PP**		**21**	**37**	**04.9 -0.2**
	baz=42,slow=7.3								
WET	**Wettzell**	**100.02**	**330**	*e*PP	**PP**		**21**	**37**	**06.9 +0.9**
	baz=42,slow=7.3								
ARSA	**Arzberg**	**100.03**	**328**	*e*Pdiff	**Pdif**		**21**	**32**	**51.4 -1.0**
	comp=Z,7.4nm,1.3s								
ARSA				*e*PP	**PP**		**21**	**37**	**02.8 -3.4**
	comp=Z,3.1nm,0.8s								
ARSA				*e*PKKPbc	**PKKPbc**		**21**	**49**	**08.9 -1.1**
	comp=Z,3.2nm,0.9s								
UBBA	**Unterbreizbach**	**100.10**	**333**	*e*PP	**PP**		**21**	**37**	**07.0 +0.6**
	baz=42,slow=7.3								
JFWS	**Jewell Farm**	**100.14**	**38**	Pdiff	**Pdif**		**21**	**32**	**51.6 -1.4**
	baz=308								
MOA	**Molln**	**100.25**	**329**	*e*Pdiff	**Pdif**		**21**	**32**	**52.2 -1.2**
	comp=Z,5.1nm,0.9s								
MOA				*e*PP	**PP**		**21**	**37**	**07.7 -0.1**
	comp=Z,14nm,1.4s								
MOA				*e*PKKPbc	**PKKPbc**		**21**	**49**	**08.5 -0.9**
	comp=Z,3.1nm,0.7s								
JCT	**Junction City**	**100.57**	**53**	Pdiff	**Pdif**		**21**	**32**	**54.2 -1.0**
	baz=300								
SOKA	**Soboth**	**100.67**	**328**	*e*Pdiff	**Pdif**		**21**	**32**	**53.9 -1.4**
	comp=Z,10.0nm,1.2s								
SOKA				*e*PP	**PP**		**21**	**37**	**11.2 +0.2**
	comp=Z,9.7nm,1.2s								
SOKA				*e*PKKPbc	**PKKPbc**		**21**	**49**	**07.9 -0.4**
	comp=Z,2.4nm,0.8s								
BUG	**Bochum--Univer**	**100.78**	**335**	*e*Pdiff	**Pdif**		**21**	**32**	**55.8 +0.2**
	baz=44,slow=4.5								
BUG				*e*PP	**PP**		**21**	**37**	**11.5 +0.1**
	baz=42,slow=7.3								
D46A	**Sault St. Mari**	**100.92**	**32**	Pdiff	**Pdif**		**21**	**32**	**55.2 -1.1**
	baz=313								
OBKA	**Obir**	**101.03**	**328**	*e*PP	**PP**		**21**	**37**	**12.7 -1.0**
	comp=Z,13nm,1.1s								
OBKA				*e*PKKPbc	**PKKPbc**		**21**	**49**	**05.9 -1.4**
	comp=Z,4.5nm,0.8s								
PDG	**Podgorica**	**101.13**	**322**	⇓P	**Pdif**		**21**	**32**	**56.9 -0.4**
TNS	**Taunus Mts**	**101.21**	**333**	*e*Pdiff	**Pdif**		**21**	**32**	**58.4 +0.7**
	baz=44,slow=4.5								
TNS				*e*PP	**PP**		**21**	**37**	**15.4 +0.6**
	baz=42,slow=7.3								
EKA	**Eskdalemuir Ar**	**101.23**	**342**	PKKP	**PKKPbc**		**21**	**49**	**03.9 -3.1**
	comp=Z,2.0nm,0.4s,baz=237,slow=3.4,SNR=15								
KBA	**Koenbreinsper**	**101.24**	**329**	*i* Pdiff	**Pdif**		**21**	**32**	**55.9 -2.1**
	comp=Z,2.5nm,0.8s								
KBA				*e*PP	**PP**		**21**	**37**	**15.2 -0.1**
	comp=Z,18nm,1.0s								
KBA				*e*PKKPbc	**PKKPbc**		**21**	**49**	**05.0 -1.8**
	comp=Z,3.9nm,1.1s								
D47A	**Chapleau**	**101.27**	**31**	Pdiff	**Pdif**		**21**	**32**	**57.2 -0.7**
	baz=314								
MYKA	**Terra Mystica**	**101.40**	**328**	*i* PP	**PP**		**21**	**37**	**15.4 -0.9**
	comp=Z,17nm,1.5s								
FUR	**Furstenfeldbru**	**101.46**	**330**	*e*PP	**PP**		**21**	**37**	**17.6 +0.9**
	baz=42,slow=7.3								
SCHQ	**Schefferville**	**101.60**	**18**	P	**Pdif**		**21**	**32**	**58.8 -0.5**
	comp=Z,4.6nm,0.5s,baz=313,slow=4.6,SNR=4.6								
MATQ	**Matagami**	**101.82**	**27**	Pdiff	**Pdif**		**21**	**32**	**59.6 -0.7**
	baz=319								
ABTA	**Abfaltersbach**	**101.88**	**329**	*e*Pdiff	**Pdif**		**21**	**32**	**58.4 -2.4**
	comp=Z,1.6nm,0.7s								
ABTA				PKiKP	**PP**		**21**	**37**	**18.8 -1.1**
	comp=Z,3.3nm,0.6s								
ABTA				*e*PKKPbc	**PKKPbc**		**21**	**49**	**04.4 -0.4**
	comp=Z,1.7nm,0.5s								
WATA	**Walderalm**	**101.91**	**330**	*e*PKiKP	**PKiKP**		**21**	**37**	**20.5 +0.4**
	comp=Z,25nm,1.7s								
WATA				*e*PKKPbc	**PKKPbc**		**21**	**49**	**04.2 -0.6**
	comp=Z,2.2nm,0.7s								
MEM	**Membach**	**101.93**	**335**	PP	**PP**		**21**	**37**	**19.8 -0.2**
833A	**Chaparral WMA,**	**101.93**	**54**	Pdiff	**Pdif**		**21**	**33**	**00.5 -0.7**
	baz=299								
WTTA	**Wattenberg**	**101.94**	**330**	*e*PKiKP	**PKiKP**		**21**	**37**	**20.7 +0.4**
	comp=Z,20nm,1.3s								
WTTA				*i* PKKPbc	**PKKPbc**		**21**	**49**	**04.2 -0.7**
	comp=Z,6.9nm,0.9s								
BSTI	**Sart Tilman**	**102.12**	**335**	PP	**PP**		**21**	**37**	**21.9 +0.4**
MOTA	**Moosalm**	**102.13**	**330**	*e*PP	**PP**		**21**	**37**	**21.0 -0.8**
	comp=Z,25nm,1.4s								
MOTA				*i* PKKPbc	**PKKPbc**		**21**	**49**	**03.6 -0.7**
	comp=Z,7.9nm,1.4s								
E48A	**Lockeyer**	**102.14**	**31**	Pdiff	**Pdif**		**21**	**33**	**01.1 -0.7**
	baz=315								
SQTA	**Sankt Quirin**	**102.17**	**330**	*i* PP	**PP**		**21**	**37**	**21.0 -1.1**
	comp=Z,20nm,1.8s								
SQTA				*i* PKKPbc	**PKKPbc**		**21**	**49**	**03.6 -0.5**
	comp=Z,4.7nm,0.8s								
RETA	**Reutte**	**102.19**	**330**	*e*PP	**PP**		**21**	**37**	**22.8 +0.6**
	comp=Z,13nm,1.5s								
RETA				*e*PKKPbc	**PKKPbc**		**21**	**49**	**03.7 -0.3**
	comp=Z,2.8nm,0.6s								
UBR	**Ueberruh**	**102.35**	**331**	*e*PP	**PP**		**21**	**37**	**24.3 +1.0**
	baz=42,slow=7.3								
BCLA	**Clavier**	**102.36**	**335**	PP	**PP**		**21**	**37**	**23.6 +0.5**
CCM	**Cathedral Cave**	**102.45**	**42**	Pdiff	**Pdif**		**21**	**33**	**02.6 -0.8**
	baz=306								
BGES	**Gesves**	**102.47**	**335**	PP	**PP**		**21**	**37**	**24.8 +0.8**
FETA	**Feichten**	**102.54**	**330**	*e*PKiKP	**PKiKP**		**21**	**37**	**21.7 +0.3**
	comp=Z,8.7nm,1.1s								
BMRD	**Maredsous**	**102.66**	**335**	PP	**PP**		**21**	**37**	**25.9 +0.5**
BFO	**Black Forest**	**102.68**	**332**	*e*PP	**PP**		**21**	**37**	**25.6 -0.1**
	baz=42,slow=7.3								
SNF	**Seneffe**	**102.69**	**336**	PP	**PP**		**21**	**37**	**25.0 -0.6**
DOU	**Dourbes**	**102.89**	**335**	PP	**PP**		**21**	**37**	**27.5 +0.4**
MIAR	**Mount Ida**	**102.93**	**46**	Pdiff	**Pdif**		**21**	**33**	**04.9 -0.7**
	baz=304								
I48A	**Sherman Twp**	**102.94**	**34**	Pdiff	**Pdif**		**21**	**33**	**05.0 -0.4**
	baz=313								
CHGQ	**Chibougamau**	**103.05**	**25**	Pdiff	**Pdif**		**21**	**33**	**05.0 -0.8**
	baz=322								
J48A	**Bridge Port**	**103.50**	**34**	Pdiff	**Pdif**		**21**	**33**	**07.1 -0.8**
	baz=313								
SGRT	**San Giovanni R**	**103.57**	**323**		**Pdif**		**21**	**33**	**08.3 -0.1**
D54A	**Lac Fusel, La**	**104.22**	**28**	Pdiff	**Pdif**		**21**	**33**	**09.7 -1.4**
	baz=320								
E53A	**Dumoine, Ponti**	**104.35**	**29**	Pdiff	**Pdif**		**21**	**33**	**10.6 -1.0**
	baz=319								
MAW	**Mawson**	**104.44**	**203**	Pdiff	**Pdif**		**21**	**33**	**13.1 +1.8**
	comp=Z,3.7nm,0.9s,baz=74,slow=6.0,SNR=3.9								
MAW				PKKP	**PKKPbc**		**21**	**48**	**55.4 -2.0**
	comp=Z,4.9nm,0.6s,baz=321,slow=3.7,SNR=9.8								
N48A	**Decatur**	**104.45**	**37**	Pdiff	**Pdif**		**21**	**33**	**10.9 -1.3**
	baz=312								
TIP	**Timpagrande**	**104.66**	**321**	⇑P	**Pdif**		**21**	**33**	**14.1 +0.9**
E56A	**St. Veronique**	**105.40**	**27**	PKiKP	**PKiKP**		**21**	**37**	**26.8 +0.4**
	baz=321								
WCI	**Wyandotte Cave**	**105.42**	**40**	PKiKP	**PKiKP**		**21**	**37**	**26.4 -0.3**
	baz=310								
D57A	**Chemin Vers le**	**105.53**	**27**	PKiKP	**PKiKP**		**21**	**37**	**26.6 0.0**
	baz=322								
O50A	**Cable**	**105.73**	**37**	PKiKP	**PKiKP**		**21**	**37**	**27.2 0.0**
	baz=312								
OXF	**Oxford**	**105.75**	**44**	PKiKP	**PKiKP**		**21**	**37**	**27.5 +0.1**
	baz=307								
WVT	**Waverly**	**105.79**	**42**	PKiKP	**PKiKP**		**21**	**37**	**27.3 -0.1**
	baz=308								
D58A	**Chemin du LacG**	**105.88**	**26**	PKiKP	**PKiKP**		**21**	**37**	**27.7 +0.4**
	baz=323								
E57A	**Chemin Saint G**	**105.89**	**27**	PKiKP	**PKiKP**		**21**	**37**	**27.6 +0.2**
	baz=322								
N51A	**Ashland**	**105.90**	**36**	PKiKP	**PKiKP**		**21**	**37**	**27.9 +0.4**
	baz=314								
P50A	**Jamestown**	**105.99**	**37**	PKiKP	**PKiKP**		**21**	**37**	**28.0 +0.3**
	baz=312								
E58A	**La Victoria**	**106.29**	**27**	PKiKP	**PKiKP**		**21**	**37**	**28.1 +0.1**
	baz=322								
O51A	**Pataskala**	**106.30**	**36**	PKiKP	**PKiKP**		**21**	**37**	**28.1 -0.2**
	baz=313								
ERPA	**Erie**	**106.33**	**33**	PKiKP	**PKiKP**		**21**	**37**	**28.2 0.0**
	baz=316								
N52A	**McGinn's Farm,**	**106.35**	**35**	PKiKP	**PKiKP**		**21**	**37**	**28.1 -0.2**
	baz=314								
G57A	**Newington**	**106.54**	**28**	PKiKP	**PKiKP**		**21**	**37**	**28.6 +0.1**
	baz=321								
N53A	**Lisbon**	**106.81**	**35**	PKiKP	**PKiKP**		**21**	**37**	**28.9 -0.3**
	baz=315								
P52A	**Corning**	**106.92**	**36**	PKiKP	**PKiKP**		**21**	**37**	**29.3 -0.1**
	baz=314								
M54A	**Oil Creek Stat**	**106.94**	**34**	PKiKP	**PKiKP**		**21**	**37**	**29.2 -0.3**
	baz=316								
E60A	**Ste Agathe de**	**107.06**	**26**	PKiKP	**PKiKP**		**21**	**37**	**29.2 -0.3**
	baz=324								
L55A	**Hinsdale**	**107.08**	**32**	PKiKP	**PKiKP**		**21**	**37**	**29.2 -0.5**
	baz=317								
N54A	**Moraine State**	**107.16**	**34**	PKiKP	**PKiKP**		**21**	**37**	**29.5 -0.3**
	baz=316								
F60A	**Warwick**	**107.17**	**26**	PKiKP	**PKiKP**		**21**	**37**	**29.7 +0.1**
	baz=324								
Q52A	**Bidwell**	**107.30**	**37**	PKiKP	**PKiKP**		**21**	**37**	**29.8 -0.3**
	baz=313								
E61A	**Lac Etchemin**	**107.39**	**25**	PKiKP	**PKiKP**		**21**	**37**	**29.8 -0.3**
	baz=325								
D62A	**Allapoint, All**	**107.42**	**24**	PKiKP	**PKiKP**		**21**	**37**	**29.8 -0.3**
	baz=326								
P53A	**Whipple**	**107.43**	**36**	PKiKP	**PKiKP**		**21**	**37**	**30.4 0.0**
	baz=314								
H58A	**Gabriels**	**107.43**	**28**	PKiKP	**PKiKP**		**21**	**37**	**30.0 -0.3**
	baz=321								
M55A	**Ridgway**	**107.43**	**33**	PKiKP	**PKiKP**		**21**	**37**	**30.0 -0.3**
	baz=317								
O54A	**Avella**	**107.50**	**35**	PKiKP	**PKiKP**		**21**	**37**	**30.3 -0.2**
	baz=315								
L56A	**Greenwood**	**107.56**	**32**	PKiKP	**PKiKP**		**21**	**37**	**30.5 -0.1**
	baz=318								
F61A	**St Evariste**	**107.56**	**26**	PKiKP	**PKiKP**		**21**	**37**	**30.2 -0.2**
	baz=324								
E62A	**Clayton Lake**	**107.62**	**24**	PKiKP	**PKiKP**		**21**	**37**	**30.2 -0.3**
	baz=326								
K57A	**Scipio Center**	**107.63**	**31**	PKiKP	**PKiKP**		**21**	**37**	**30.6 0.0**
	baz=319								
I58A	**Old Forge**	**107.63**	**29**	PKiKP	**PKiKP**		**21**	**37**	**30.6 -0.1**
	baz=320								
G60A	**Masonville**	**107.71**	**27**	PKiKP	**PKiKP**		**21**	**37**	**29.9 -0.8**
	baz=323								
M56A	**Emporium**	**107.72**	**33**	PKiKP	**PKiKP**		**21**	**37**	**30.5 -0.4**
	baz=317								
J58A	**Remsen**	**107.74**	**30**	PKiKP	**PKiKP**		**21**	**37**	**30.3 -0.6**
	baz=320								
Q53A	**Leroy**	**107.79**	**37**	PKiKP	**PKiKP**		**21**	**37**	**30.7 -0.3**
	baz=314								
D63A	**Stockholm**	**107.81**	**23**	PKiKP	**PKiKP**		**21**	**37**	**30.2 -0.6**
	baz=327								
P54A	**Burton**	**107.85**	**35**	PKiKP	**PKiKP**		**21**	**37**	**30.7 -0.4**
	baz=315								
G61A	**St-Isidore-de-**	**107.90**	**26**	PKiKP	**PKiKP**		**21**	**37**	**30.8 -0.3**
	baz=324								
J59A	**Piesco**	**108.02**	**29**	PKiKP	**PKiKP**		**21**	**37**	**31.3 -0.1**
	baz=321								
I59A	**Olmsteadville**	**108.05**	**29**	PKiKP	**PKiKP**		**21**	**37**	**31.4 0.0**
	baz=321								
O55A	**Ligonier**	**108.06**	**34**	PKiKP	**PKiKP**		**21**	**37**	**31.3 -0.3**
	baz=316								
N56A	**West Decatur**	**108.08**	**33**	PKiKP	**PKiKP**		**21**	**37**	**31.2 -0.4**
	baz=317								
Q54A	**Coxs Mills**	**108.09**	**36**	PKiKP	**PKiKP**		**21**	**37**	**31.1 -0.5**
	baz=314								
MCWV	**Mont Chateau**	**108.16**	**35**	PKiKP	**PKiKP**		**21**	**37**	**31.4 -0.3**
	baz=315								
TZTN	**Tazewell**	**108.18**	**40**	PKiKP	**PKiKP**		**21**	**37**	**31.8 0.0**
	baz=312								
E63A	**Oxbow**	**108.21**	**24**	PKiKP	**PKiKP**		**21**	**37**	**31.6 0.0**
	baz=327								
LRAL	**Lakeview Retre**	**108.24**	**44**	PKiKP	**PKiKP**		**21**	**37**	**31.7 -0.4**
	baz=308								
S53A	**Williamson**	**108.25**	**38**	PKiKP	**PKiKP**		**21**	**37**	**31.4 -0.6**
	baz=313								
P55A	**Reedsville**	**108.28**	**35**	PKiKP	**PKiKP**		**21**	**37**	**31.2 -0.8**
	baz=315								
I60A	**Shoreham**	**108.28**	**28**	PKiKP	**PKiKP**		**21**	**37**	**31.5 -0.3**
	baz=322								
BINY	**Binghamton**	**108.29**	**31**	PKiKP	**PKiKP**		**21**	**37**	**31.9 -0.1**
	baz=319								
H61A	**Lyndonville**	**108.33**	**27**	PKiKP	**PKiKP**		**21**	**37**	**31.9 0.0**
	baz=323								
G62A	**West of Eustis**	**108.36**	**26**	PKiKP	**PKiKP**		**21**	**37**	**31.7 -0.2**
	baz=325								
M57A	**Sunshine Farm,**	**108.37**	**32**	PKiKP	**PKiKP**		**21**	**37**	**31.9 -0.2**
	baz=318								
O56A	**Blue Knob Stat**	**108.41**	**34**	PKiKP	**PKiKP**		**21**	**37**	**32.1 -0.1**
	baz=317								
E64A	**Bridgewater**	**108.43**	**23**	PKiKP	**PKiKP**		**21**	**37**	**32.0 -0.1**
	baz=327								
L58A	**Harry Jones Me**	**108.47**	**31**	PKiKP	**PKiKP**		**21**	**37**	**32.1 -0.2**
	baz=319								
T53A	**Wise**	**108.49**	**39**	PKiKP	**PKiKP**		**21**	**37**	**32.5 0.0**
	baz=313								
Q55A	**Buckhannon**	**108.50**	**36**	PKiKP	**PKiKP**		**21**	**37**	**32.1 -0.4**
	baz=315								
F63A	**Nahmakanta, Br**	**108.54**	**25**	PKiKP	**PKiKP**		**21**	**37**	**32.1 -0.2**
	baz=326								
R54A	**Victor**	**108.56**	**37**	PKiKP	**PKiKP**		**21**	**37**	**32.7 +0.2**
	baz=314								
LBNH	**Lisbon**	**108.57**	**27**	PKiKP	**PKiKP**		**21**	**37**	**32.6 +0.2**
	baz=323								
N57A	**Milroy**	**108.58**	**33**	PKiKP	**PKiKP**		**21**	**37**	**32.5 0.0**
	baz=318								
H62A	**Milan**	**108.63**	**26**	PKiKP	**PKiKP**		**21**	**37**	**32.7 +0.2**
	baz=324								
S54A	**Dingess, Beckl**	**108.64**	**37**	PKiKP	**PKiKP**		**21**	**37**	**32.7 -0.1**
	baz=314								
M58A	**Price's Panora**	**108.67**	**32**	PKiKP	**PKiKP**		**21**	**37**	**32.6 -0.1**
	baz=319								
I61A	**Oroboro, Fairl**	**108.69**	**28**	PKiKP	**PKiKP**		**21**	**37**	**32.8 +0.2**
	baz=323								
**J

R58B	**Mineral**	**110.44**	**35**	PKiKP	**PKiKP**	**21 37 36.1**	**0.0**		
	baz=317								
KMSC	**Kings Mountain**	**110.45**	**39**	PKiKP	**PKiKP**	**21 37 36.4**	**+0.3**		
	baz=313								
V56A	**Mocksville**	**110.49**	**38**	PKiKP	**PKiKP**	**21 37 36.4**	**+0.2**		
	baz=314								
X55A	**Gracelyn & Ava**	**110.72**	**40**	PKiKP	**PKiKP**	**21 37 36.8**	**+0.1**		
	baz=313								
U57A	**Blanch**	**110.72**	**37**	PKiKP	**PKiKP**	**21 37 36.4**	**-0.3**		
	baz=315								
M63A	**Gales Ferry**	**110.77**	**29**	PKiKP	**PKiKP**	**21 37 36.1**	**-0.5**		
	baz=322								
T58A	**Grand View Acr**	**110.81**	**36**	PKiKP	**PKiKP**	**21 37 36.9**	**+0.1**		
	baz=316								
V57A	**Coltrane Farms**	**110.85**	**38**	PKiKP	**PKiKP**	**21 37 37.2**	**+0.3**		
	baz=315								
L64A	**Middleborough**	**110.89**	**28**	PKiKP	**PKiKP**	**21 37 37.0**	**+0.2**		
	baz=324								
W56A	**Indian Trail**	**110.90**	**39**	PKiKP	**PKiKP**	**21 37 37.3**	**+0.3**		
	baz=314								
Y55A	**Saluda**	**110.94**	**41**	PKiKP	**PKiKP**	**21 37 37.4**	**+0.3**		
	baz=312								
X56A	**White Oak**	**111.07**	**40**	PKiKP	**PKiKP**	**21 37 37.6**	**+0.2**		
	baz=313								
U58A	**Oxford**	**111.20**	**37**	PKiKP	**PKiKP**	**21 37 37.4**	**-0.1**		
	baz=316								
W57A	**Gilead**	**111.24**	**39**	PKiKP	**PKiKP**	**21 37 37.4**	**-0.3**		
	baz=314								
M65A	**Busby, Falmout**	**111.27**	**28**	PKiKP	**PKiKP**	**21 37 37.5**	**0.0**		
	baz=324								
S60A	**Water View**	**111.30**	**35**	PKiKP	**PKiKP**	**21 37 37.7**	**0.0**		
	baz=318								
V58A	**Windy Hill, Pi**	**111.30**	**37**	PKiKP	**PKiKP**	**21 37 37.6**	**-0.1**		
	baz=315								
KEST	**Kesra**	**111.33**	**322**	PKKP	**PKKPbc**	**21 48 36.4**	**+0.6**		
	comp=Z,2.9nm,0.8s,baz=211,slow=5.2,SNR=3.7								
T59A	**Double "B" Far**	**111.34**	**36**	PKiKP	**PKiKP**	**21 37 38.1**	**+0.3**		
	baz=317								
W58A	**Raeford**	**111.78**	**38**	PKiKP	**PKiKP**	**21 37 38.6**	**0.0**		
	baz=315								
V59A	**Middlesex**	**111.82**	**37**	PKiKP	**PKiKP**	**21 37 38.7**	**0.0**		
	baz=316								
S61A	**Accomac**	**111.84**	**34**	PKiKP	**PKiKP**	**21 37 38.7**	**0.0**		
	baz=318								
U60A	**Pendleton**	**111.92**	**36**	PKiKP	**PKiKP**	**21 37 39.3**	**+0.4**		
	baz=317								
X58A	**Rowland**	**112.04**	**39**	PKiKP	**PKiKP**	**21 37 39.8**	**+0.6**		
	baz=314								
Z57A	**Bowman**	**112.08**	**40**	PKiKP	**PKiKP**	**21 37 40.1**	**+0.8**		
	baz=313								
Y58A	**Scranton**	**112.30**	**39**	PKiKP	**PKiKP**	**21 37 40.7**	**+1.1**		
	baz=314								
157A	**Early Branch**	**112.32**	**41**	PKiKP	**PKiKP**	**21 37 40.8**	**+1.0**		
	baz=313								
NHSC	**New Hope**	**112.54**	**40**	PKiKP	**PKiKP**	**21 37 40.9**	**+0.8**		
	baz=313								
Z58A	**St. Stephen**	**112.60**	**40**	PKiKP	**PKiKP**	**21 37 40.8**	**+0.5**		
	baz=314								
X60A	**Albert Glenn T**	**112.82**	**38**	PKiKP	**PKiKP**	**21 37 41.1**	**+0.4**		
	baz=316								
W61A	**Ground Anchor**	**112.95**	**37**	PKiKP	**PKiKP**	**21 37 41.4**	**+0.5**		
	baz=317								
SYO	**Syowa Base**	**113.12**	**202**⇑	*e*X	**Pdif**	**21 33 45.4**	**-4.5**		
SYO	**Syowa Base**	**113.12**	**202**⇑	*e*Pdiff	pPdif	21 35 54.2	+1.4		
V62A	**Hyde County Ai**	**113.25**	**36**	PKiKP	**PKiKP**	**21 37 42.0**	**+0.5**		
	baz=318								
PBRG	**Braganca**	**114.16**	**337**	*e*PKPdf	**PKiKP**	**21 37 43.2**	**+0.1**		
PGAV	**Gavieira, Arco**	**114.56**	**338**	*e*PKPdf	**PKiKP**	**21 37 44.4**	**+0.4**		
PCAB	**Cabril**	**114.70**	**338**	*e*PKPdf	**PKiKP**	**21 37 45.5**	**+1.3**		
MVO	**Moncorvo**	**114.82**	**337**	*e*PKPdf	**PKiKP**	**21 37 45.1**	**+0.6**		
ESDC	**Sonseca Array**	**114.90**	**334**	PKP	PKPdf	21 37 44.2	-0.4		
	comp=Z,1.8nm,0.4s,baz=5.3,slow=2.7,SNR=28								
ESDC				PP	**PP**	**21 38 49.8**	**-3.0**		
	comp=Z,4.1nm,0.7s,baz=23,slow=6.7,SNR=12								
ESDC				PKKPbc	**PKKPbc**	**21 48 23.9**	**-0.4**		
	comp=Z,3.1nm,1.0s,baz=241,slow=2.9,SNR=11								
PVRL	**Vila Real**	**114.97**	**338**	*e*PKPdf	**PKiKP**	**21 37 46.0**	**+1.3**		
DWPF	**Disney Wildern**	**115.06**	**45**	PKiKP	**PKiKP**	**21 37 45.3**	**+0.2**		
	baz=311								
PVIS	**Viseu**	**115.53**	**338**	*e*PKPdf	**PKiKP**	**21 37 47.0**	**+1.2**		
MTE	**Manteigas**	**115.68**	**337**	*e*PKPdf	**PKPdf**	**21 37 46.1**	**0.0**		
PCBR	**Castelo Branco**	**116.14**	**337**	*e*PKPdf	**PKPdf**	**21 37 46.9**	**0.0**		
PCAS	**Casmilo, Conde**	**116.33**	**338**	*e*PKPdf	**PKiKP**	**21 37 48.1**	**+0.8**		
PMRV	**Marv??o**	**116.47**	**336**	*e*PKPdf	**PKiKP**	**21 37 49.1**	**+1.5**		
PMTG	**Montargil**	**117.09**	**337**	*e*PKPdf	**PKiKP**	**21 37 50.2**	**+1.4**		
PBEJ	**Beja**	**117.87**	**336**	*e*PKPdf	**PKiKP**	**21 37 51.1**	**+0.7**		
PNCL	**Nicolau / Gran**	**118.05**	**337**	*e*PKPdf	**PKiKP**	**21 37 52.0**	**+1.3**		
MESJ	**Messejana**	**118.17**	**336**	*e*PKPdf	**PKiKP**	**21 37 51.0**	**0.0**		
MESJ	**Messejana**	**118.17**	**336**	*e*PKPdf	**PKiKP**	**21 37 51.5**	**+0.6**		
PBDV	**Barranco-do-Ve**	**118.58**	**336**	*e*PKPdf	**PKiKP**	**21 37 54.1**	**+2.3**		
PALE	**Palemas**	**118.62**	**331**	P	**PKiKP**	**21 37 52.1**	**+0.1**		
	SNR=12								
MORF	**Marmelete**	**118.80**	**336**	*e*PKPdf	**PKPdf**	**21 37 52.1**	**-0.1**		
MORF	**Marmelete**	**118.80**	**336**	*e*PKPdf	**PKiKP**	**21 37 54.1**	**+1.8**		
SMIR	**Smir Dam**	**118.87**	**333**	P	**PKiKP**	**21 37 53.0**	**+0.6**		
	SNR=13								
PFVI	**Vila Bisbo**	**119.02**	**336**	*e*PKPdf	**PKiKP**	**21 37 53.9**	**+1.3**		
AKLM	**AKL**	**119.17**	**331**	P	**PKiKP**	**21 37 54.0**	**+0.9**		
	SNR=8.2								
LSZ	**Lusaka**	**119.87**	**263**	PKiKP	**PKiKP**	**21 37 55.1**	**+0.2**		
LSZ	**Lusaka**	**119.87**	**263**		**PKiKP**	**21 37 55.1**	**+0.2**		
MDT	**Midelt**	**120.92**	**330**	PKKP	**PKKPbc**	**21 48 04.9**	**+1.8**		
	comp=Z,5.6nm,0.9s,baz=202,slow=2.2,SNR=8.8								
ZHG	**ZHG**	**121.31**	**332**	P	**PKiKP**	**21 37 58.0**	**+0.7**		
	SNR=14								
NVL	**N'lazarevskaya**	**121.32**	**196**	*e*PKiKP	**PKPdf**	**21 37 55.6**	**-0.2**		
NVL				pmax	pmax				
	comp=Z,31nm,1.1s								
JTS	**Las Juntas de**	**122.73**	**64**	PKiKP	**PKiKP**	**21 38 00.4**	**-0.1**		
JTS	**Las Juntas de**	**122.73**	**64**		**PKiKP**	**21 38 00.4**	**-0.1**		
TZRR	**Tazzarine**	**123.06**	**330**	P	**PKiKP**	**21 38 02.0**	**+1.1**		
	SNR=19								
OUZM	**OUZ**	**123.51**	**331**	P	**PKiKP**	**21 38 03.0**	**+1.1**		
	SNR=11								
ZGR	**Zagora**	**123.63**	**329**	P	**PKiKP**	**21 38 03.0**	**+0.9**		
	SNR=24								
LBTB	**Lobatse**	**123.97**	**252**	PKKP	**PKKPab**	**21 47 52.0**	**+1.2**		
	comp=Z,1.0nm,0.4s,baz=261,slow=3.0,SNR=5.9								
SNAA	**Sanae**	**124.07**	**192**	PKPdf	**PKPdf**	**21 38 00.6**	**-0.7**		
SNAA	**Sanae**	**124.07**	**192**	PKKP	**PKKPab**	**21 47 48.5**	**-0.4**		
	comp=Z,3.7nm,0.8s,baz=253,slow=6.8,SNR=22								
SNAA	**Sanae**	**124.07**	**192**	PKiKP	**PKPdf**	**21 38 00.6**	**-0.7**		
SNAA	**Sanae**	**124.07**	**192**		**PKPdf**	**21 38 00.6**	**-0.7**		
BOSA	**Boshof**	**124.61**	**248**	PKP	**PKiKP**	**21 38 03.8**	**-0.2**		
	comp=Z,3.3nm,0.3s,baz=97,slow=0.9,SNR=19								
BOSA				PKKP	**PKKPbc**	**21 47 49.1**	**+0.8**		
	comp=Z,3.7nm,0.6s,baz=201,slow=2.9,SNR=9.4								
BOSA	**Boshof**	**124.61**	**248**		**PKPdf**	**21 38 02.4**	**-1.2**		
VNA2	**Neumayer--Watz**	**125.53**	**191**	PKPdf	**PKPdf**	**21 38 04.1**	**+0.2**		
	baz=127,slow=0.8								
VNA3	**Neumayer Olymp**	**125.64**	**190**	PKPdf	**PKPdf**	**21 38 03.6**	**-0.6**		
VNA1	**Neumayer--Stat**	**125.92**	**191**	PKPdf	**PKPdf**	**21 38 04.7**	**+0.1**		
TOA0	**Torodi Ar. Sit**	**131.84**	**309**		**PKPdf**	**21 38 17.7**	**+0.1**		
TORD	**Torodi Ar. Bea**	**131.84**	**309**	PKhKP	PKPpre	21 38 01.6			
	comp=Z,0.8nm,0.6s,baz=112,slow=2.1,SNR=7.4								
TORD				PKP	**PKPdf**	**21 38 16.1**	**-1.4**		
	comp=Z,6.0nm,0.6s,baz=14,slow=2.1,SNR=26								
TORD				PP	**PP**	**21 40 46.7**	**+0.7**		
	comp=Z,10nm,0.7s,baz=30,slow=3.5,SNR=14								
TORD				PKKP	PKKPdf	21 47 15.9	-57		
	comp=Z,0.5nm,0.6s,baz=226,slow=4.1,SNR=9.8								
TORD				SKKP		21 51 01.6			
	comp=Z,3.5nm,1.0s,baz=231,slow=4.0,SNR=5.7								
UREC	**San Jos de Ur**	**131.94**	**60**	*e*P	PKPpre	21 38 01.9			
CBOC	**Ciudad Bolivar**	**132.57**	**63**	*e*P	PKPpre	21 38 06.3			
ZARC	**Zaragoza, Cauc**	**132.64**	**60**	*e*P	PKPpre	21 38 05.6			
PAC1	**Pacto, Paraso**	**132.88**	**71**	*e*P	**PKiKP**	**21 38 20.6**	**-0.4**		
YOTC	**Yotoco, Valle**	**133.27**	**65**	*e*P	PKPpre	21 38 06.0			
BBAC	**Balboa, Cauca**	**133.45**	**68**	*e*P	PKPpre	21 38 12.9			
GUY2C	**Guyana, Caldas**	**133.46**	**63**	*e*P	PKPpre	21 38 08.3			
OCAC	**Ocana**	**133.46**	**58**	*e*P	PKPpre	21 38 08.5			
PTBC	**PUERTO BERRIO**	**133.50**	**61**	*e*P	PKPpre	21 38 05.3			
RREF	**El Recreo**	**133.64**	**63**	*e*P	PKPpre	21 38 09.8			
NORC	**Norcasia**	**133.69**	**62**	*e*P	PKPpre	21 38 07.2			
TOLC	**Tolima**	**133.83**	**64**	*e*P	PKPpre	21 38 09.5			
SMRT	**St. Maarten**	**133.96**	**39**		**PKPdf**	**21 38 21.2**	**-0.3**		
ORTC	**Ortega, Tolima**	**134.25**	**64**	*e*P	PKPpre	21 38 05.9			
PAMC	**Pamplona, Colo**	**134.49**	**58**	*e*P	PKPpre	21 38 07.0			
BARC	**Barichara**	**134.52**	**60**	*e*P	PKPpre	21 38 07.9			
PRAC	**Prado**	**134.65**	**64**	*e*P	PKPpre	21 38 05.0			
RUSC	**La Rusia**	**134.99**	**60**	*e*P	PKPpre	21 38 08.8			
RUSC	**La Rusia**	**134.99**	**60**	PKPdf	**PKPdf**	**21 38 24.2**	**+0.1**		
CHIC	**Chingaza**	**135.15**	**62**	*e*P	PKPpre	21 38 09.7			
SDV	**Santo Domingo**	**135.19**	**55**	PKhKP	PKPpre	21 38 13.7			
	comp=Z,17nm,0.6s,baz=337,slow=3.3,SNR=15								
SDV				PKP	**PKPdf**	**21 38 24.1**	**0.0**		
	comp=Z,62nm,1.0s,baz=316,slow=3.4,SNR=9.4								
SDV				SKP		21 41 02.7			
	comp=Z,35nm,0.9s,baz=294,slow=2.4,SNR=12								
SDV	**Santo Domingo**	**135.19**	**55**	*e*P	PKPpre	21 38 10.2			
SDV	**Santo Domingo**	**135.19**	**55**		PKPpre	21 38 13.2			
SDV				PKPdf	**PKPdf**	**21 38 24.8**	**+0.7**		
ATAH	**Atahualpa**	**136.15**	**80**	PKhKP	PKPpre	21 38 17.8			
	comp=Z,8.7nm,0.7s,baz=39,slow=12,SNR=5.5								
ATAH				PKP	**PKiKP**	**21 38 27.1**	**-0.8**		
	comp=Z,35nm,1.0s,baz=339,slow=5.5,SNR=8.3								
ATAH				SKP		21 41 06.9			
	comp=Z,6.3nm,0.7s,baz=353,slow=5.7,SNR=3.9								
PCM	**Pelee Case Pet**	**137.59**	**39**	*e*P	**SKSac**	**21 44 54.3**	**+4.1**		
BAMF	**Morne Balai**	**137.63**	**39**	*e*P	**SKSac**	**21 44 54.3**	**+4.0**		
GBMF	**Grand Be**	**137.63**	**39**	*e*P	**SKSac**	**21 44 54.6**	**+4.2**		
PML	**Morne Lenard**	**137.63**	**39**	*e*P	**SKSac**	**21 44 54.3**	**+4.0**		
FDF	**Fort de France**	**137.69**	**39**	PKHKP	PKPpre	21 38 19.2			
FDF						21 38 28.6			
FDF	**Fort de France**	**137.69**	**39**		PKPpre	21 38 19.2			
FDF				PKPdf	**PKPdf**	**21 38 28.6**	**0.0**		
ILAM	**Ilet Lapin Mar**	**137.83**	**39**	*e*P	**SKSac**	**21 44 54.2**	**+3.6**		
ZAM	**Aeronautique**	**137.89**	**39**	*e*P	**SKSac**	**21 44 54.9**	**+4.1**		
LPMF	**Morne Lapointe**	**137.93**	**39**	*e*P	**SKSac**	**21 44 54.7**	**+3.8**		
MVM	**Montagne Vaucl**	**137.99**	**39**	*e*P	**SKSac**	**21 44 55.1**	**+4.0**		
MPOM	**Morne Pois Mar**	**138.09**	**39**	*e*P	**SKSac**	**21 44 56.2**	**+5.0**		
PCRV	**Puerto La Cruz**	**138.79**	**48**	PKhKP	PKPpre	21 38 21.5			
	comp=Z,14nm,0.5s,baz=259,slow=1.7,SNR=7.1								
DBIC	**Dimbokro**	**140.94**	**308**	PKhKP	PKPpre	21 38 28.7			
	comp=Z,21nm,0.3s,baz=32,slow=3.2,SNR=90								
DBIC				SKP		21 41 16.1			
	comp=Z,22nm,0.7s,baz=58,slow=2.9,SNR=9.8								
DBIC	**Dimbokro**	**140.94**	**308**	PKHKP	PKPpre	21 38 28.4			
DBIC						21 38 33.6			
DBIC	**Dimbokro**	**140.94**	**308**		PKPpre	21 38 28.4			
DBIC				PKPdf	**PKPdf**	**21 38 33.6**	**-0.8**		
KIC	**Kosan Boka**	**141.05**	**307**	*e*PKiKP	**PKPdf**	**21 38 28.7**	**-5.9**		
	comp=Z,14nm,0.3s								
TIC	**Toumodi**	**141.08**	**308**	*e*PKiKP	**PKPdf**	**21 38 28.8**	**-5.9**		
LIC	**Lamto**	**141.36**	**308**	*e*PKiKP	**PKPdf**	**21 38 29.0**	**-6.2**		
	comp=Z,31nm,0.6s								
PLCA	**Paso Flores**	**142.60**	**133**	PKP	**PKPdf**	**21 38 34.4**	**-2.3**		
	comp=Z,144nm,0.8s,baz=233,slow=4.3,SNR=90								
PLCA	**Paso Flores**	**142.60**	**133**	*e*P	**PKPdf**	**21 38 34.1**	**-2.6**		
HOPE	**Hope Point**	**144.73**	**178**	PKiKP	PKPbc	21 38 40.2	0.0		
HOPE	**Hope Point**	**144.73**	**178**		PKPbc	21 38 40.2	0.0		
CFA	**Coronel Fontan**	**147.47**	**119**	PKPbc	**PKPbc**	**21 38 48.7**	**0.0**		
	comp=Z,166nm,0.7s,baz=267,slow=2.6,SNR=57								
LVC	**Limon Verde**	**148.04**	**102**	PKPbc	**PKiKP**	**21 38 52.3**	**+0.2**		
	comp=Z,119nm,0.6s,baz=271,slow=2.5,SNR=70								
LVC	**Limon Verde**	**148.04**	**102**		**PKPbc**	**21 38 49.0**	**-1.8**		
LVC					**PKiKP**	**21 38 52.7**	**+0.6**		
LVC	**Limon Verde**	**148.04**	**102**	*e*P	**PKPdf**	**21 38 48.5**	**+1.7**		
LVC	**Limon Verde**	**148.04**	**102**	*e*P	**PKPdf**	**21 38 48.5**	**+1.7**		
LPAZ	**La Paz**	**148.24**	**90**	PKP	**PKPdf**	**21 38 48.0**	**+0.4**		
	comp=Z,31nm,0.9s,baz=359,slow=2.4,SNR=57								
LPAZ				PKPbc	**PKiKP**	**21 38 52.8**	**-0.1**		
	comp=Z,98nm,0.5s,baz=298,slow=1.9,SNR=70								
LPAZ	**La Paz**	**148.24**	**90**		**PKPdf**	**21 38 48.7**	**+1.1**		
LPAZ	**La Paz**	**148.24**	**90**	PKPab	**PKiKP**	**21 38 53.9**	**+0.9**		
LPAZ	**La Paz**	**148.24**	**90**	*e*P	**PKPdf**	**21 38 48.1**	**+0.6**		
LPAZ	**La Paz**	**148.24**	**90**	*e*P	**PKPdf**	**21 38 48.2**	**+0.6**		
PTGA	**Pitinga**	**149.46**	**56**	PKP	**PKPdf**	**21 38 49.0**	**+0.1**		
	comp=Z,39nm,1.0s,baz=296,slow=1.3,SNR=38								
PTGA				PKPbc	**PKPbc**	**21 38 54.4**	**+0.3**		
	comp=Z,201nm,0.6s,baz=292,slow=5.0,SNR=84								
PTGA	**Pitinga**	**149.46**	**56**		**PKPdf**	**21 38 49.1**	**+0.1**		
PTGA	**Pitinga**	**149.46**	**56**	*e*P	**PKPdf**	**21 38 48.8**	**-0.1**		
MDP	**Montagnes des**	**150.38**	**38**	PKP	**PKPdf**	**21 38 50.5**	**+0.2**		
	comp=Z,26nm,1.0s,baz=307,slow=1.6,SNR=5.0								
MDP				PKPbc	**PKPbc**	**21 38 56.1**	**-0.1**		
	comp=Z,189nm,0.7s,baz=280,slow=2.5,SNR=83								
MDP				PKPab	**PKPab**	**21 39 04.6**	**-0.4**		
	comp=Z,59nm,0.8s,baz=248,slow=5.6,SNR=6.2								
SAML	**Samuel**	**150.84**	**74**		**PKPdf**	**21 38 51.3**	**+0.3**		
SAML				PKPbc	**PKiKP**	**21 38 57.8**	**+0.1**		
SAML				PKPab	**PKPab**	**21 39 07.5**	**+0.4**		
SAML	**Samuel**	**150.84**	**74**	*e*P	**PKPdf**	**21 38 50.5**	**-0.4**		
SAML	**Samuel**	**150.84**	**74**	*e*P	**PKPdf**	**21 38 50.9**	**-0.1**		
SHEL	**Horse Pasture**	**152.04**	**272**	PKiKP	**PKiKP**	**21 39 02.0**	**+1.9**		
SHEL	**Horse Pasture**	**152.04**	**272**		**PKiKP**	**21 39 02.0**	**+1.9**		
SHEL				PKPab	**PKPab**	**21 39 12.8**	**+0.6**		
MALB	**Monte Alegre**	**154.52**	**50**	*e*P	**PKPdf**	**21 38 56.4**	**+0.1**		
SIV	**San Ignacio**	**154.87**	**87**	PKP	**PKPdf**	**21 38 56.6**	**-0.1**		
	comp=Z,20nm,0.9s,baz=265,slow=2.0,SNR=52								
SIV				PKPab	**PKPab**	**21 39 25.1**	**+0.8**		
	comp=Z,15nm,0.6s,baz=335,slow=3.9,SNR=11								
VILB	**Vilhena**	**154.97**	**80**	*e*P	**PKPdf**	**21 38 57.7**	**+0.8**		
VILB	**Vilhena**	**154.97**	**80**	*e*P	**PKPdf**	**21 38 57.5**	**+0.6**		
VILB	**Vilhena**	**154.97**	**80**	*e*P	**PKPdf**	**21 38 58.5**	**+1.6**		
ITTB	**Itaituba**	**155.01**	**57**	*e*P	**PKPdf**	**21 38 59.2**	**+2.2**		
PTLB	**Pontes e Lacer**	**156.59**	**85**	*e*P	**PKPdf**	**21 38 58.8**	**-0.1**		
NPGB	**Novo Progresso**	**156.84**	**62**	*e*P	**PKPdf**	**21 38 59.1**	**-0.3**		
ITQB	**Itaqui**	**157.56**	**122**	*e*P	**PKPdf**	**21 39 01.0**	**+1.2**		
CPUP	**Villa Florida**	**158.06**	**114**	PKP	**PKPdf**	**21 38 59.9**	**-0.6**		
	comp=Z,7.2nm,1.0s,baz=343,slow=1.8,SNR=7.4								
CPUP				PKPab	**PKPab**	**21 39 39.1**	**+1.3**		
	comp=Z,56nm,0.9s,baz=260,slow=5.9,SNR=34								
CPUP	**Villa Florida**	**158.06**	**114**	*e*P	**PKPdf**	**21 39 02.3**	**+1.8**		
CLDB	**Colider**	**158.28**	**71**	*e*P	**PKPdf**	**21 39 00.7**	**-0.4**		
PLTB	**Pedras Altas**	**158.88**	**131**	*e*P	**PKPab**	**21 39 42.9**	**+1.6**		
PLTB	**Pedras Altas**	**158.88**	**131**	*e*P	**PKPdf**	**21 39 01.7**	**+0.3**		
CPSB	**Cacapava Do Su**	**159.70**	**128**	*e*P	**PKPdf**	**21 39 03.0**	**+0.7**		
SALV	**Santo Antonio**	**159.93**	**84**	*e*P	**PKPdf**	**21 39 03.6**	**+0.7**		
SALV	**Santo Antonio**	**159.93**	**84**	*e*P	**PKPdf**	**21 39 03.3**	**+0.4**		
PRPB	**Parauapebas**	**160.69**	**51**	*e*P	**PKPdf**	**21 39 04.1**	**+0.2**		
ROSB	**Rosrio**	**161.65**	**31**	*e*P	**PKPdf**	**21 39 05.4**	**+0.5**		
ITAB	**Concordia**	**162.15**	**121**	*e*P	**PKPdf**	**21 39 07.5**	**+2.6**		
ITAB	**Concordia**	**162.15**	**121**	*e*P	**PKPab**	**21 39 56.7**	**+0.9**		
CNLB	**Canela**	**162.19**	**128**	*e*P	**PKPdf**	**21 39 06.7**	**+1.7**		
TRRB	**Terra Rica**	**163.00**	**106**	*e*P	**PKPdf**	**21 39 07.2**	**+1.2**		
C2SB	**Chapadao do Su**	**163.02**	**92**	*e*P	**PKPdf**	**21 39 07.5**	**+1.5**		
PTGB	**Pitanga**	**163.07**	**113**	*e*P	**PKPdf**	**21 39 05.5**	**-0.5**		
ARAG	**Araguaiana, MT**	**163.53**	**81**	*e*P	**PKPdf**	**21 39 08.3**	**+1.8**		
SMTB	**Santa Maria do**	**164.12**	**52**	*e*P	**PKPdf**	**21 39 09.2**	**+2.0**		
PCMB	**Pacaembu**	**164.43**	**102**	*e*P	**PKPdf**	**21 39 08.6**	**+1.3**		
FRTB	**Fartura**	**165.65**	**110**	*e*P	**PKPdf**	**21 39 10.8**	**+2.5**		
RCBR	**Riachuelo**	**166.90**	**4**	PKP	**PKPdf**	**21 39 09.4**	**-0.1**		
	comp=Z,18nm,1.0s,baz=317,slow=9.7,SNR=3.7								
BB19B	**Bebedouro**	**167.02**	**102**	*e*P	**PKPab**	**21 40 18.9**	**+1.4**		
BB19B	**Bebedouro**	**167.02**	**102**	*e*P	**PKPdf**	**21 39 11.5**	**+2.1**		
BDFB	**Brasilia**	**167.05**	**77**	PKP	**PKPdf**	**21 39 09.5**	**0.0**		
	comp=Z,16nm,1.0s,baz=22,slow=1.1,SNR=13								
BDFB				PKPab	**PKPab**	**21 40 18.7**	**+0.9**		
	comp=Z,8.2nm,0.8s,baz=267,slow=4.2,SNR=7.2								
BDFB	**Brasilia**	**167.05**	**77**	PKiKP	**PKPdf**	**21 39 09.4**	**-0.2**		
BDFB	**Brasilia**	**167.05**	**77**	PKPdf	**PKPdf**	**21 39 09.4**	**-0.2**		
IPMB	**Ipameri, GO**	**167.33**	**88**	*e*P	**PKPdf**	**21 39 09.2**	**-0.4**		
PET01	**Itanhaem-SP**	**167.33**	**117**	*e*P	**PKPdf**	**21 39 10.8**	**+1.4**		
SPB	**Sao Paulo**	**167.45**	**114**	*e*P	**PKPdf**	**21 39 11.8**	**+2.2**		
VAO	**Valinhos**	**168.04**	**112**	*e*P	**PKPdf**	**21 39 12.2**	**+2.1**		
JANB	**Januaria**	**170.19**	**68**	*e*P	**PKPdf**	**21 39 13.6**	**+2.0**		
BSCB	**Bom Sucesso**	**170.50**	**104**	*e*P	**PKPdf**	**21 39 13.2**	**+1.6**		
MAN01	**Angra dos Reis**	**170.68**	**116**	*e*P	**PKPdf**	**21 39 11.7**	**+0.1**		
MC01	**Montes Claros**	**171.10**	**77**	*e*P	**PKPdf**	**21 39 14.3**	**+2.3**		
GDU01	**Guandu, BA**	**173.12**	**41**	*e*P	**PKPdf**	**21 39 15.2**	**+2.3**		
SJMB	**Sao Joao De Ma**	**174.04**	**88**	*e*P	**PKPdf**	**21 39 14.0**	**+0.9**		
BSFB	**Barra de Sao F**	**174.37**	**90**	*e*P	**PKPdf**	**21 39 14.6**	**+1.4**		
RIB01	**Linhares ES**	**174.79**	**95**	*e*P	**PKPdf**	**21 39 13.8**	**+0.5**		
NAN01	**Guarapari, ES**	**174.91**	**78**	*e*P	**PKPdf**	**21 39 12.7**	**-0.6**		

TAP 23 21:27:50.0,23.74N×121.40E,h17km,ML2.3,4C-1D,B,
Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
EGFH	**Guangfu**	**0.07**	**162**	⇑*i*	P	Pg	21 27 54.0	+0.7
	baz=162							
EGFH				*i*	S	Sg	21 27 56.1	+0.6
	baz=162							
ESL	**Shilin**	**0.08**	**19**	⇑*i*	P	Pg	21 27 54.1	+0.7
	baz=24							
ESL				*i*	S	Sg	21 27 56.3	+0.6
	baz=24							
VWDT	**VWDT**	**0.24**	**274**	⇑	P	Pb	21 27 56.9	+1.0
	baz=273							
VWDT					S	Sb	21 28 00.8	+0.9
	baz=273							
EHY	**Hungye**	**0.24**	**198**	*i*	P	Pb	21 27 56.0	+0.1
	baz=196							
EHY				*i*	S	Sb	21 27 60.0	+0.1
	baz=196							
HGSD	**Ruisui**	**0.24**	**176**	P		Pb	21 27 56.5	+0.5
	baz=175							
HGSD					S	Sb	21 28 00.9	+1.0
	baz=175							
OWD	**Renai**	**0.30**	**316**	*i*	P	Pb	21 27 57.7	+0.7
	baz=315							
OWD				*i*	S	Sb	21 28 01.9	+0.1
	baz=315							
HWA	**Hwalien**	**0.30**	**38**	*

ASAR Alice Springs 43.69 195 P **P** 21 36 22.1 +0.3
comp=Z,1.8nm,0.5s,baz=12,slow=6.6,SNR=8.7
SEY Seymchan 44.29 5 P **P** 21 36 26.1 +0.3
comp=Z,0.6nm,0.4s,baz=344,slow=19,SNR=3.5
EIDS Eidsvold 44.37 172 P **P** 21 36 27.2 +0.2
ADK Adak 44.45 33 P **P** 21 36 27.8 +0.5
ADK IAmb IAmb 21 36 28.4
comp=Z,6.3nm,0.7s
DZM Mont Dzumac 45.73 152 P **P** 21 36 38.5 +0.9
comp=Z,4.3nm,0.7s,baz=174,slow=16,SNR=8.2
DZM Mont Dzumac 45.73 152 P **P** 21 36 38.0 +0.4
DZM IAmb IAmb 21 36 39.4
comp=Z,4.9nm,0.7s
ATKA Atka Island 45.93 34 P **P** 21 36 37.5 -1.1
ARMA Armidale 49.42 173 P **P** 21 37 06.0 +0.9
ARMA IAmb IAmb 21 37 24.4
comp=Z,7.9nm,1.1s
GSI Gunungsitoli 49.76 255 P **P** 21 37 07.8 -0.1
GSI IAmb IAmb 21 37 11.4
comp=Z,10nm,1.0s
LSA Lhasa 49.99 293 P **P** 21 37 10.1 +0.2
LSA IAmb IAmb 21 37 13.6
comp=Z,6.3nm,1.1s
STKA Stephens Creek 50.59 184 P **P** 21 37 13.5 0.0
comp=Z,1.8nm,0.6s,baz=6.6,slow=6.9,SNR=6.1
STKA Stephens Creek 50.59 184 P **P** 21 37 13.4 -0.1
FORT Forrest 52.04 199 P **P** 21 37 24.5 +0.5
BBOO Buckleboo 52.13 190 P **P** 21 37 24.5 -0.1
BBOO IAmb IAmb 21 37 30.3
comp=Z,12nm,1.1s
JIRN Jiri 54.42 291 *eP* **P** 21 37 42.4 +0.8
comp=Z,25nm,0.5s
GUN Gumba 54.68 291 *eP* **P** 21 37 44.2 +0.9
PKI Pulchoki 55.12 291 *eP* **P** 21 37 46.5 +0.1
comp=Z,22nm,0.7s
PKIN Phulchoki 55.13 291 *eP* **P** 21 37 46.5 +0.1
comp=Z,15nm,0.5s
DMN Daman 55.39 291 *eP* **P** 21 37 48.5 +0.3
comp=Z,13nm,0.5s
GKN Gorkha 55.77 291 *eP* **P** 21 37 50.7 0.0
DANN Dangsing 56.51 292 *eP* **P** 21 37 56.2 +0.2
comp=Z,50nm,0.6s
ZAA0 Zalesovo Array 57.54 323 P **P** 21 38 01.1 -1.0
ZALV Zalesovo Beam 57.54 323 P **P** 21 38 01.9 -0.3
comp=Z,1.7nm,0.3s,baz=122,slow=7.3,SNR=7.7
MK31 Makanchi Array 57.95 314 P **P** 21 38 05.0 -0.1
MKAR Makanchi Array 57.95 314 P **P** 21 38 05.5 +0.4
comp=Z,2.4nm,0.6s,baz=90,slow=7.8,SNR=16
MAKZ Makanchi 58.16 314 P **P** 21 38 07.0 +0.5
MAKZ IAmb IAmb 21 38 07.8
comp=Z,4.2nm,0.6s
TTA Tatalina 59.33 27 P **P** 21 38 14.5 +0.4
KDAK Kodiak Island 59.49 33 P **P** 21 38 15.5 +0.3
comp=Z,1.2nm,0.4s,baz=208,slow=4.1,SNR=5.3
KDAK Kodiak Island 59.49 33 P **P** 21 38 15.4 +0.2
CNPM China Poot 60.58 32 P **P** 21 38 22.0 -0.5
CNPM IAmb IAmb 21 38 23.3
comp=Z,5.3nm,0.8s
KURK Kurchatov 60.78 318 P **P** 21 38 23.7 -0.1
KURK IAmb IAmb 21 38 24.7
comp=Z,13nm,0.9s
BRLK Bradley Lake 60.81 31 P **P** 21 38 23.5 -0.4
BRLK IAmb IAmb 21 38 36.1
comp=Z,8.1nm,1.1s
PPLA Purkeypile 60.98 28 P **P** 21 38 24.8 -0.4
PPLA IAmb IAmb 21 38 30.1
comp=Z,6.7nm,1.0s
RC01 Rabbit Creek A 61.66 30 P **P** 21 38 29.2 -0.2
RC01 IAmb IAmb 21 38 29.9
comp=Z,4.3nm,0.6s
BPAW Bear Paw Mtn. 61.83 27 P **P** 21 38 31.1 +0.6
BPAW IAmb IAmb 21 38 31.7
comp=Z,6.1nm,1.2s
TRF Thorofare Moun 61.96 27 P **P** 21 38 31.1 -0.5
TRF IAmb IAmb 21 38 31.9
comp=Z,6.6nm,1.0s
GHO Glory Hole Cre 62.19 29 P **P** 21 38 31.8 -1.1
GHO IAmb IAmb 21 38 33.4
comp=Z,7.2nm,0.8s
WRH Wood River Hil 63.14 27 P **P** 21 38 38.8 -0.2
FID Port Fidalgo 63.16 31 P **P** 21 38 38.9 -0.2
FID IAmb IAmb 21 38 40.0
comp=Z,5.5nm,0.7s
DHY Denali Highway 63.16 28 P **P** 21 38 39.2 -0.1
DHY IAmb IAmb 21 38 42.0
comp=Z,4.2nm,0.9s
TOLK Toolik Lake Re 63.62 22 P **P** 21 38 42.9 +0.9
TOLK IAmb IAmb 21 38 43.8
comp=Z,7.8nm,1.1s
IL31 63.71 26 P **P** 21 38 41.6 -0.9
ILAR Eielson Array 63.71 26 P **P** 21 38 41.5 -1.2
comp=Z,1.8nm,0.7s,baz=243,slow=6.2,SNR=8.9
VRDI Verde Repeater 64.68 30 P **P** 21 38 48.8 -0.3
FYU Fort Yukon 64.74 24 P **P** 21 38 49.6 +0.5
FYU IAmb IAmb 21 38 51.5
comp=Z,2.7nm,0.7s
SCRK Sand Creek 64.81 27 P **P** 21 38 49.5 -0.3
SCRK IAmb IAmb 21 38 51.0
comp=Z,5.1nm,1.1s
NIL Nilore 64.97 299 P **P** 21 38 52.1 +0.8
BALM Baldy 65.20 31 P **P** 21 38 51.9 -0.3
BALM IAmb IAmb 21 38 56.2
comp=Z,5.2nm,1.2s
BRVK Borovoye 66.06 320 P **P** 21 38 57.6 +0.1
BRVK IAmb IAmb 21 38 58.2
comp=Z,3.8nm,0.8s
INK Inuvik 69.41 23 P **P** 21 39 18.0 +0.3
INK IAmb IAmb 21 39 18.5
comp=Z,4.4nm,1.0s
ARU Arti 72.61 324 P **P** 21 39 36.5 -0.2
C36M Paulatuk 72.77 22 P **P** 21 39 37.6 +0.2
C36M IAmb IAmb 21 39 41.4
comp=Z,6.3nm,0.9s
YKA Yellowknife Ar 78.07 28 P **P** 21 40 06.9 -0.1
comp=Z,1.4nm,0.5s,baz=288,slow=4.7,SNR=10.0
ORV Oroville 80.73 51 P **P** 21 40 21.7 +0.2
G08A Pilot Rock 80.84 45 P P 21 40 15.6 -6.6
KEV Kevo 81.59 342 P **P** 21 40 23.9 -1.3
KEV IAmb IAmb 21 40 25.8
comp=Z,6.6nm,0.9s
ARCES ARCESS Array B 82.15 342 P **P** 21 40 27.4 -0.8
comp=Z,2.4nm,0.7s,baz=80,slow=7.5,SNR=9.1
KVN Kaiserville 83.39 51 P **P** 21 40 34.9 -0.4
NVAR Mina Array Bea 83.44 52 P **P** 21 40 35.9 +0.4
comp=Z,0.6nm,0.5s,baz=287,slow=6.2,SNR=3.0
TPNV Topopah Spring 85.47 53 P **P** 21 40 46.1 +0.7
FIA1 FINESS Array S 86.49 335 P **P** 21 40 48.2 -1.3
FIA1 IAmb IAmb 21 40 49.3
comp=Z,2.9nm,0.7s
FINES FINESS Array B 86.49 335 P **P** 21 40 47.5 -2.1
comp=Z,1.0nm,0.3s,baz=66,slow=3.8,SNR=10
NOA NORSAR Array B 92.21 339 P **P** 21 41 14.4 -1.8
comp=Z,0.7nm,0.9s,baz=48,slow=7.7,SNR=2.1

SJA 23 21:36:18.8±0.7, 35.56S×73.69W, h10km, ML3.5, MW3.4, 2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	**Huala**	**1.54**	**70**	*i* P	Pn	21 36 46.2	-0.2
GO05				*e*S	Sg	21 37 09.0	+0.5
CANA	**Caviahue**	**3.14**	**138**	*i* P	Pn	21 37 10.9	+2.4
CANA				IAML		21 38 39.6	
	comp=Z,154nm,1.0s						
COIS	**El Sosneado**	**3.38**	**83**	*i* P	Pb	21 37 17.2	-1.6
ROC1	**El Roble**	**3.40**	**41**	*i* P	Pn	21 37 15.0	+2.8
PUMA	**Malargue**	**3.46**	**90**	*i* P	Pn	21 37 16.1	+3.3
PEL	**Peldehue**	**3.47**	**47**	‖ *i* P	Pn	21 37 15.9	+3.1
LAMA	**Las Malvinas**	**3.72**	**82**	*i* P	Pn	21 37 19.8	+3.4
RTLS	**Leoncito**	**5.25**	**46**	*i* P	Pn	21 37 41.8	+4.2
RTLS				IAML		21 39 22.2	
	comp=Z,13nm,0.8s						
CFA	**Coronel Fontan**	**6.02**	**51**	‖ *i* P	Pn	21 37 50.8	+2.8
CFA				IAML		21 40 02.1	
	comp=Z,8.9nm,0.8s						
ACCO	**Cerro Coronel**	**6.30**	**39**	*i* P	Pn	21 37 55.6	+3.5
ACCO				IAML		21 39 49.9	
	comp=Z,19nm,4.3s						
AROD	**Rodeo**	**6.45**	**35**	*i* P	Pn	21 37 59.0	+4.9
ACDV	**Cuesta del Vie**	**6.61**	**37**	*i* P	Pn	21 38 00.2	+4.0
ACDV				IAML		21 40 30.7	
	comp=Z,13nm,3.5s						

*INET **23** 21:40:23.3, 12.03N×86.39W, h188km, ML3.4*
*UCR **23** 21:40:31.0±2.6, 11.83N×86.46W, h14km±31km, MD3.9*
ISC 23 21:40:24.9±2.9, 12.03N±0.09×86.3W±0.1, h172km±23km, n15, σ1s90/21, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.96**	**313**	*eP*	**Pn**	**21 40 51.5**	**-0.1**
MATN	**Matagalpa**	**0.98**	**24**	*eP*	**Pn**	**21 40 52.4**	**+0.6**
ACON	**Acoyapa**	**1.14**	**93**	*eP*	**Pn**	**21 40 53.4**	**+0.6**
CSGN	**Cosiguina Volc**	**1.52**	**308**	*eP*	**Pn**	**21 40 57.2**	**+0.7**
NY14	**Universidad de**	**1.58**	**150**	*i* P	**Pn**	**21 40 57.5**	**+0.5**
HORNC	**Hornillas**	**1.73**	**139**	*i* S	**Sn**	**21 41 24.7**	**-0.1**
PTEN	**Parque Tenorio**	**1.86**	**135**	*i* P	**Pn**	**21 41 00.3**	**+0.3**
PTEN				*i* S	**Sn**	**21 41 27.5**	**+0.4**
ACAL	**Aguas Claras**	**1.89**	**137**	*i* P	**Pn**	**21 41 00.7**	**+0.5**
ACAL				*i* S	**Sn**	**21 41 29.1**	**+1.4**
GUAI	**GUAI**	**1.93**	**155**	*i* P	**Pn**	**21 41 01.3**	**+0.6**
PLVR	**Palo Verde**	**1.93**	**150**	*eP*	**Pn**	**21 41 01.8**	**+0.9**
PLVR				*eS*	**Sn**	**21 41 27.8**	**-0.9**
ESPN	**Las Esperanzas**	**1.99**	**85**	*eP*	**Pn**	**21 41 01.6**	**+0.3**
JTS	**Las Juntas de**	**2.20**	**142**	*eP*	**Pn**	**21 41 05.1**	**+1.4**
JTS				*eS*	**Sn**	**21 41 27.7**	**-6.1**
ARE1	**Arenal 1**	**2.22**	**134**	*eP*	**Pn**	**21 41 07.1**	**+3.1**
ARE1				*eS*	**Sn**	**21 41 35.6**	**+1.3**
CVTR	**Volcan Turrial**	**3.22**	**128**	*eP*	**Pn**	**21 41 14.9**	**-1.4**
LCR2	**La Lucha 2**	**3.23**	**135**	*eP*	**Pn**	**21 41 17.4**	**+1.1**
LCR2				*eS*	**Sn**	**21 41 55.0**	**-1.1**

*NEIC **23** 21:40:40.1±1.2, 18.99N±0.08×145.1E±0.1, h554km±2km, mb4.3/89, Error ellipse: s-maj=15.7km s-min=11.2km az=84.0*
*IDC **23** 21:40:41.1±1.2, 19.00N×145.04E, h566km±14km, mb3.5/25, mb1 3.6/28, mb1mx3.4/58, mbtmp4.4/28, Error ellipse: s-maj=13.8km s-min=6.4km az=94.0*
ISC 23 21:40:39.7±0.3, 18.95N±0.04×145.08E±0.07, h550km, n161, σ0s80/168, mb4.2/68, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.34**	**182**	P	**P**	**21 42 13.0**	**+0.5**
JCJ	**Chichijima**	**8.53**	**342**	P	**P**	**21 42 43.8**	**+1.2**
	24nm,0.3s,baz=94,slow=23,SNR=12						
JCJ				S	**S**	**21 44 22.9**	**-0.6**
	6.7nm,0.3s,baz=278,slow=21,SNR=2.4						
JHJ2	**Mitsune**	**14.87**	**343**	P	**P**	**21 43 45.6**	**-2.0**
JOW	**Kunigami**	**17.34**	**300**	P	**P**	**21 44 11.8**	**+0.2**
	0.3nm,0.3s,baz=111,slow=20,SNR=4.0						
JOW	**Kunigami**	**17.34**	**300**	P	**P**	**21 44 10.7**	**-0.9**
INU	**Inuyama**	**17.82**	**338**	P	**P**	**21 44 15.5**	**-0.4**
MJAR	**Matsushiro Arr**	**18.54**	**342**	P	**P**	**21 44 21.5**	**-0.9**
	0.1nm,0.3s,baz=156,slow=9.4,SNR=22						
MAJO	**Matshiro**	**18.54**	**342**	P	**P**	**21 44 22.6**	**+0.2**
MAT	**Matsushiro**	**18.54**	**342**	P	**P**	**21 44 22.1**	**-0.3**
MAT				*e*S	**S**	**21 47 25.9**	**+2.4**
MJB9	**Matsu-Tunnel**	**18.54**	**342**	P	**P**	**21 44 22.4**	**-0.1**
MJB9				IAmb	IAmb	21 44 23.6	
	comp=Z,8.9nm,0.6s						
JNU	**Nakatsue**	**18.99**	**321**	P	**P**	**21 44 26.2**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=94,slow=3.6,SNR=10						
JNU	**Nakatsue**	**18.99**	**321**	P	**P**	**21 44 26.1**	**-0.5**
JNU				IAmb	IAmb	21 44 27.7	
	comp=Z,10nm,0.7s						
NACB	**Ninganchiao**	**22.44**	**288**	P	**P**	**21 44 57.3**	**-0.5**
YULB	**Yu-li**	**22.60**	**285**	P	**P**	**21 44 59.1**	**-0.2**
YULB				IAmb	IAmb	21 45 15.8	
	comp=Z,9.0nm,1.1s						
YHNB	**Yeheng**	**22.72**	**289**	P	**P**	**21 45 00.7**	**+0.4**
SSLB	**Suanglung**	**22.96**	**286**	P	**P**	**21 45 02.5**	**-0.1**
SSLB				IAmb	IAmb	21 45 16.1	
	comp=Z,13nm,1.1s						
KSRS	**Korea Array**	**23.77**	**324**	P	**P**	**21 45 08.5**	**-0.9**
	comp=Z,2.3nm,0.4s,baz=145,slow=8.8,SNR=15						
SIJI	**Sorong**	**23.92**	**216**	P	**P**	**21 45 10.5**	**-0.6**
	comp=Z,12nm,0.6s,baz=117,slow=6.0,SNR=4.5						
FAKI	**Fak Fak**	**25.13**	**211**	P	**P**	**21 45 21.9**	**0.0**
FAKI				IAmb	IAmb	21 45 23.6	
	comp=Z,9.1nm,0.7s						
USA0B	**Ussuriysk Arra**	**27.46**	**339**	P	**P**	**21 45 42.2**	**+0.4**
USA0B				IAmb	IAmb	21 45 47.1	
	comp=Z,8.9nm,1.1s						
USRK	**Ussuriysk Ar.**	**27.46**	**339**	P	**P**	**21 45 41.4**	**-0.5**
	comp=Z,2.0nm,0.6s,baz=156,slow=7.3,SNR=7.3						
PMG	**Port Moresby**	**28.25**	**176**	P	**P**	**21 45 50.3**	**+1.1**
	comp=Z,7.4nm,0.4s,baz=34,slow=18,SNR=2.4						
PMG	**Port Moresby**	**28.25**	**176**	P	**P**	**21 45 49.3**	**+0.1**
LUWI	**Luwuk**	**29.58**	**230**	P	**P**	**21 46 00.7**	**-0.1**
KKM	**Kota Kinabalu**	**30.90**	**249**	P	**P**	**21 46 12.7**	**+0.4**
SPMM	**Sapulut**	**31.30**	**247**	P	**P**	**21 46 15.0**	**-0.6**
KLR	**Kul'dur**	**32.06**	**343**	P	**P**	**21 46 21.5**	**0.0**
	comp=Z,1.2nm,0.4s,baz=171,slow=6.1,SNR=5.3						
COEN	**Coen**	**32.76**	**183**	P	**P**	**21 46 29.3**	**+1.5**
MTN	**Manton Dam**	**34.45**	**205**	P	**P**	**21 46 42.8**	**+0.7**
PEA0B	**Petropavlovsk-**	**35.47**	**13**	P	**P**	**21 46 51.6**	**+1.5**
PEA0B				IAmb	IAmb	21 46 57.2	
	comp=Z,15nm,1.1s						
HHC	**Hu-ho-hao-te**	**36.01**	**315**	*eP*	**P**	**21 46 56.0**	**+1.1**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,58nm,3.8s						
SBUM	**Sibu**	**36.10**	**247**	P	**P**	**21 46 56.7**	**+0.8**
SBUM				IAmb	IAmb	21 46 58.2	
	comp=Z,11nm,0.8s						
SBUM	**Sibu**	**36.10**	**247**	P	**P**	**21 46 55.0**	**-0.9**
KNRA	**Kununurra**	**37.97**	**206**	P	**P**	**21 47 12.0**	**+0.9**
KNRA				IAmb	IAmb	21 47 21.4	
	comp=Z,5.2nm,0.7s						
CTA	**Charters Tower**	**38.81**	**178**	P	**P**	**21 47 19.0**	**+1.1**
	comp=Z,4.9nm,0.5s,baz=358,slow=9.4,SNR=9.2						
CTAO	**Charters Tower**	**38.81**	**178**	P	**P**	**21 47 19.0**	**+1.1**
CTAO				IAmb	IAmb	21 47 20.4	
	comp=Z,7.0nm,0.7s						
CD2	**Chengdu**	**39.11**	**296**	P	**P**	**21 47 19.8**	**-0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WB0	**Warramunga Arr**	**39.88**	**196**	P	**P**	**21 47 27.4**	**+0.8**
WB0				IAmb	IAmb	21 47 27.9	
	comp=Z,5.9nm,0.5s						
WR0	**Warramunga Arr**	**40.03**	**196**	P	**P**	**21 47 28.3**	**+0.6**
WR0				IAmb	IAmb	21 47 34.0	
	comp=Z,4.7nm,1.1s						
WRAB	**Tennant Creek**	**40.05**	**196**	P	**P**	**21 47 28.7**	**+0.8**
WRAB				IAmb	IAmb	21 47 29.3	
	comp=Z,7.2nm,0.6s						
WB2	**Warramunga Arr**	**40.06**	**196**	P	**P**	**21 47 28.8**	**+0.8**
WB2				IAmb	IAmb	21 47 29.4	
	comp=Z,6.9nm,0.6s						
WRA	**Warramunga Arr**	**40.06**	**196**	P	**P**	**21 47 28.7**	**+0.7**
	comp=Z,5.2nm,0.6s,baz=20,slow=8.4,SNR=32						
WRA				PcP	**PcP**	**21 49 19.3**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=2.8,slow=3.2,SNR=5.4						
WRA				S	**S**	**21 52 53.9**	**-1.0**
	comp=Z,3.3nm,1.1s,baz=14,slow=14,SNR=4.5						
JAGI	**Jajag, Banyuwa**	**40.90**	**231**	P	**P**	**21 47 34.4**	**-0.3**
JAGI				IAmb	IAmb	21 47 34.5	
	comp=Z,14nm,0.9s						
FITZ	**Fitzroy Crossi**	**41.48**	**209**	P	**P**	**21 47 40.1**	**+0.9**
	comp=Z,4.1nm,0.2s,baz=20,slow=9.1,SNR=148						
FITZ	**Fitzroy Crossi**	**41.48**	**209**	P	**P**	**21 47 40.1**	**+0.9**
FITZ				IAmb	IAmb	21 47 40.8	
	comp=Z,3.5nm,0.8s						
PBKT	**Sadao Pong**	**41.99**	**274**	P	**P**	**21 47 43.8**	**+0.4**
SONM	**Songino Array**	**42.58**	**322**	P	**P**	**21 47 48.0**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=139,slow=6.9,SNR=9.6						
SONM				PcP	**PcP**	**21 49 26.8**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=119,slow=3.7,SNR=3.8						
SONM				ScP	**ScP**	**21 52 24.4**	**-1.6**
	comp=Z,0.4nm,0.4s,baz=145,slow=5.4,SNR=3.6						
UGM	**Wanagama**	**43.28**	**235**	P	**P**	**21 47 53.3**	**-0.2**
CHTO	**Chiang Mai**	**43.55**	**278**	P	**P**	**21 47 55.5**	**-0.1**
CMAR	**Chiang Mai Arr**	**43.60**	**277**	P	**P**	**21 47 56.6**	**+0.6**
	comp=Z,4.0nm,0.7s,baz=73,slow=6.6,SNR=6.4						
AS31	**Alice Springs**	**43.74**	**195**	P	**P**	**21 47 57.5**	**+0.7**
AS31					**S**	**21 53 47.1**	**-0.5**
ASAR	**Alice Springs**	**43.74**	**195**	P	**P**	**21 47 57.3**	**+0.4**
	comp=Z,2.8nm,0.4s,baz=16,slow=7.4,SNR=60						
ASAR				PcP	**PcP**	**21 49 31.5**	**0.0**
	comp=Z,1.4nm,0.7s,baz=14,slow=3.7,SNR=6.7						
ASAR				S	**S**	**21 53 45.1**	**-2.5**
	comp=Z,2.1nm,0.7s,baz=22,slow=20,SNR=14						
SEY	**Seymchan**	**44.23**	**5**	PcP	**PcP**	**21 49 32.3**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=173,slow=1.9,SNR=3.7						
YAK	**Yakutsk**	**44.37**	**350**	P	**P**	**21 48 00.9**	**-0.2**
	comp=Z,4.7nm,0.3s,baz=293,slow=0.3,SNR=1.4						
ADK	**Adak**	**44.43**	**33**	P	**P**	**21 48 01.6**	**-0.2**
ADK				IAmb	IAmb	21 48 05.6	
	comp=Z,6.6nm,0.8s						
EIDS	**Eidsvold**	**44.44**	**172**	P	**P**	**21 48 02.4**	**+0.2**
EIDS				IAmb	IAmb	21 48 02.9	
	comp=Z,5.7nm,0.8s						
LEM	**Lembang**	**44.94**	**239**	P	**P**	**21 48 06.8**	**+0.4**
	comp=Z,15nm,0.6s,baz=49,slow=8.7,SNR=4.2						
CISI	**Cisompet, Garu**	**45.20**	**238**	P	**P**	**21 48 06.7**	**-1.7**
KULM	**Kulim**	**45.36**	**258**	P	**P**	**21 48 08.8**	**-0.7**
KULM				IAmb	IAmb	21 48 12.7	
	comp=Z,11nm,1.0s						
KULM	**Kulim**	**45.36**	**258**	P	**P**	**21 48 09.0**	**-0.6**
DZM	**Mont Dzumac**	**45.81**	**152**	P	**P**	**21 48 13.3**	**+0.4**
DZM				IAmb	IAmb	21 48 14.6	
	comp=Z,8.2nm,0.6s						
ATKA	**Atka Island**	**45.90**	**34**	P	**P**	**21 48 13.0**	**0.0**
ATKA				IAmb	IAmb	21 48 14.1	
	comp=Z,8.4nm,0.7s						
PSA00	**Pilbara Seismi**	**47.24**	**213**	P	**P**	**21 48 23.6**	**0.0**
GSI	**Gunungsitoli**	**49.72**	**255**	P	**P**	**21 48 42.5**	**+0.3**
GSI				IAmb	IAmb	21 48 43.9	
	comp=Z,19nm,1.0s						
STKA	**Stephens Creek**	**50.65**	**184**	P	**P**	**21 48 49.0**	**+0.4**
	comp=Z,3.6nm,0.6s,baz=14,slow=7.4,SNR=13						
STKA	**Stephens Creek**	**50.65**	**184**	P	**P**	**21 48 48.7**	**+0.1**
FORT	**Forrest**	**52.08**	**199**	P	**P**	**21 48 59.1**	**+0.2**
FORT				IAmb	IAmb	21 49 05.0	
	comp=Z,20nm,1.0s						
BBOO	**Buckleboo**	**52.19**	**190**	P	**P**	**21 48 59.4**	**-0.3**
BBOO				IAmb	IAmb	21 49 18.1	
	comp=Z,12nm,1.1s						
WMQ	**Urumqi**	**53.70**	**311**	*eP*	**P**	**21 49 12.3**	**+1.8**
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
RAMN	**Ramite**	**54.04**	**290**	*eP*	**P**	**21 49 14.5**	**+1.1**
JIRN	**Jiri**	**54.35**	**291**	*eP*	**P**	**21 49 16.0**	**+0.3**
	comp=Z,10nm,0.5s						
SDPT	**Sand Point**	**54.60**	**35**	P	**P**	**21 49 15.9**	**-0.6**
GUN	**Gumba**	**54.60**	**291**	*eP*	**P**	**21 49 18.5**	**+1.0**
	comp=Z,7.2nm,0.3s						
PKI	**Pulchoki**	**55.05**	**291**	*eP*	**P**	**21 49 21.0**	**+0.4**
	comp=Z,5.9nm,0.3s						
PKIN	**Phulchoki**	**55.06**	**291**	*eP*	**P**	**21 49 20.8**	**+0.2**
	comp=Z,8.1nm,0.3s						
DMN	**Daman**	**55.31**	**291**	*eP*	**P**	**21 49 23.0**	**+0.7**
	comp=Z,5.6nm,0.4s						
MORW	**Morawa**	**55.36**	**211**	P	**P**	**21 49 22.3**	**+0.1**
MORW				IAmb	IAmb	21 49 36.1	
	comp=Z,9.5nm,1.1s						
GKN	**Gorkha**	**55.69**	**291**	*eP*	**P**	**21 49 25.7**	**+0.9**
	comp=Z,10nm,0.3s						
DANN	**Dangsing**	**56.44**	**292**	*eP*	**P**	**21 49 31.1**	**+1.0**
	comp=Z,25nm,0.5s						
KOLN	**Koldanda**	**56.63**	**291**	*eP*	**P**	**21 49 31.9**	**+0.6**
	comp=Z,2.8nm,0.3s						
ZALV	**Zalesovo Beam**	**57.46**	**322**	P	**P**	**21 49 36.0**	**-0.2**
	comp=Z,1.3nm,0.4s,baz=108,slow=4.8,SNR=7.7						
ZALV				PcP	**PcP**	**21 50 21.1**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=92,slow=6.7,SNR=3.6						
MK31	**Makanchi Array**	**57.87**	**314**	P	**P**	**21 49 39.2**	**0.0**
MKAR	**Makanchi Array**	**57.87**	**314**	P	**P**	**21 49 39.9**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=90,slow=8.0,SNR=26						
MKAR				PcP	**PcP**	**21 50 23.7**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=82,slow=4.3,SNR=2.0						
MAKZ	**Makanchi**	**58.08**	**314**	P	**P**	**21 49 41.4**	**+0.7**
OHAK	**Old Harbor**	**58.97**	**34**	P	**P**	**21 49 46.6**	**+0.3**
KDAK	**Kodiak Island**	**59.47**	**33**	P	**P**	**21 49 50.2**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=248,slow=3.1,SNR=5.7						
KDAK	**Kodiak Island**	**59.47**	**33**	P	**P**	**21 49 49.6**	**-0.1**
KURK	**Kurchatov**	**60.69**	**318**	P	**P**	**21 49 58.2**	**+0.3**
KURK				IAmb	IAmb	21 49 59.1	
	comp=Z,12nm,1.0s						
BRLK	**Bradley Lake**	**60.78**	**31**	P	**P**	**21 49 57.6**	**-0.8**
TAU	**Tasmania Unive**	**61.59**	**178**	P	**P**	**21 50 03.8**	**0.0**
BPAW	**Bear Paw Mtn.**	**61.79**	**27**	P	**P**	**21 50 05.2**	**+0.3**
ILAR	**Eielson Array**	**63.68**	**26**	P	**P**	**21 50 15.1**	**-1.9**
	comp=Z,0.9nm,0.6s,baz=252,slow=6.0,SNR=10						
DOT	**Dot Lake**	**64.70**	**28**	P	**P**	**21 50 23.2**	**-0.4**
FYU	**Fort Yukon**	**64.70**	**25**	P	**P**	**21 50 23.4**	**-0.1**
SCRK	**Sand Creek**	**64.78**	**27**	P	**P**	**21 50 24.4**	**+0.1**
NIL	**Nilore**	**64.89**	**299**	P	**P**	**21 50 26.2**	**+0.8**
NIL				IAmb	IAmb	21 50 27.3	
	comp=Z,8.2nm,0.8s						
BALM	**Baldy**	**65.17**	**31**	P	**P**	**21 50 26.5**	**-0.2**
NNZ	**Nelson**	**65.37**	**157**	P	**P**	**21 50 28.0**	**0.0**
THZ	**Tophouse**	**65.67**	**157**	P	**P**	**21 50 29.7**	**-0.3**
THZ				IAmb	IAmb	21 50 44.0	
	comp=Z,18nm,1.0s						
BRVK	**Borovoye**	**65.97**	**320**	P	**P**	**21 50 32.2**	**+0.5**
BRVK				IAmb	IAmb	21 50 32.8	
	comp=Z,6.1nm,0.8s						
MSWZ	**Moikau Station**	**66.25**	**156**	P	**P**	**21 50 33.5**	**-0.1**
PLWZ	**Palliser**	**66.39**	**156**	P	**P**	**21 50 34.3**	**-0.1**
KHZ	**Kahutara**	**66.47**	**157**	P	**P**	**21 50 33.4**	**-1.4**
MLZ	**Mavora Lakes**	**67.36**	**163**	P	**P**	**21 50 38.6**	**-1.7**
MLZ				IAmb	IAmb	21 50 42.7	
	comp=Z,19nm,1.0s						
INK	**Inuvik**	**69.37**	**23**	P	**P**	**21 50 52.0**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=273,slow=7.0,SNR=6.0						
INK	**Inuvik**	**69.37**	**23**	P	**P**	**21 50 52.0**	**-0.1**
ARU	**Arti**	**72.52**	**324**	P	**P**	**21 51 10.2**	**-0.7**
ARU				IAmb	IAmb	21 51 11.7	
	comp=Z,5.8nm,0.7s						
YKA	**Yellowknife Ar**	**78.04**	**28**	P	**P**	**21 51 41.0**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=288,slow=4.

PV18	**Skein Mesa, Pa**	**90.38**	**49**	P		**P**	**21 52 42.3**	**-0.8**
PV03	**Paradox Valley**	**90.42**	**49**	P		**P**	**21 52 43.2**	**-0.1**
PV13	**Radium Mtn., P**	**90.47**	**49**	P		**P**	**21 52 43.7**	**+0.1**
PV02	**Paradox Valley**	**90.51**	**49**	P		**P**	**21 52 43.8**	**0.0**
NOA	**NORSAR Array B**	**92.13**	**339**	P		**P**	**21 52 48.8**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=227,slow=23,SNR=2.7							
K31A	**O'Neill**	**95.18**	**42**			pP	21 55 06.3	+1.7
LSZ	**Lusaka**	**119.85**	**263**	PKP		**PKPdf**	**21 58 28.9**	**+0.1**
	comp=Z,4.0nm,0.7s,baz=114,slow=1.8,SNR=8.0							
SNAA	**Sanae**	**124.05**	**192**	PKPdf		**PKPdf**	**21 58 35.0**	**-0.2**
SNAA	**Sanae**	**124.05**	**192**	PKP		**PKPdf**	**21 58 34.6**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=181,slow=3.5,SNR=20							
VNA2	**Neumayer--Watz**	**125.51**	**191**	PKPdf		**PKPdf**	**21 58 38.1**	**+0.2**
VNA3	**Neumayer Olymp**	**125.62**	**190**	PKPdf		**PKPdf**	**21 58 37.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**131.84**	**309**	PKP		**PKPdf**	**21 58 51.4**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=60,slow=1.0,SNR=6.0							
PLCA	**Paso Flores**	**142.60**	**133**	PKP		**PKPdf**	**21 59 08.6**	**-2.1**
	comp=Z,5.9nm,0.6s,baz=236,slow=4.9,SNR=13							
PLCA	**Paso Flores**	**142.60**	**133**			**PKPdf**	**21 59 08.9**	**-1.8**
BI02	**San Fabin de**	**143.59**	**127**			PKPbc	21 59 12.1	+0.6
VA03	**San Esteban**	**145.29**	**120**			**PKPbc**	**21 59 17.5**	**+0.7**
GO04	**Tololo Observa**	**145.64**	**116**			**PKPbc**	**21 59 18.3**	**+0.3**
AC05	**El Transito**	**146.32**	**114**			**PKPbc**	**21 59 20.7**	**+0.9**
PB11	**IPOC Station P**	**147.25**	**97**			**PKPbc**	**21 59 23.5**	**+1.0**
PB16	**IPOC Station P**	**147.25**	**95**			**PKPbc**	**21 59 24.2**	**+1.1**
GO01	**Chusmiza**	**147.68**	**97**			**PKPdf**	**21 59 21.9**	**+1.4**
LVC	**Limon Verde**	**148.06**	**102**			**PKiKP**	**21 59 26.0**	**-0.1**
LPAZ	**La Paz**	**148.26**	**90**	PKPbc		**PKPbc**	**21 59 26.6**	**+0.8**
	comp=Z,6.2nm,0.6s,baz=296,slow=1.7,SNR=21							
LPAZ	**La Paz**	**148.26**	**90**			**PKPbc**	**21 59 26.1**	**+0.2**
PTGA	**Pitinga**	**149.48**	**56**			**PKPbc**	**21 59 28.5**	**+0.3**

NEIC ***23*** *21:47:35.8±1.0, 19°.03N×0°.08×145°.8E±0°.2, h601km±8km, mb4.3/14, Error ellipse: s-maj=27.0km s-min=9.6km az=76.0*

IDC ***23*** *21:47:37.0±4.0, 19°.05N×145°.76E, h611km±54km, mb2.8/8, mb1 2.9/9, mb1mx2.6/61, mbtmp3.7/9, Error ellipse: s-maj=42.3km s-min=13.3km az=84.0*

ISC 23 21:47:35.8±0.7,**19°.05N**±0°.09×**145°.8E**±0°.2,**h600**km,**n25,** σ0^{6}**67**/25,**mb3.9**/15,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**5.49**	**189**	P		**P**	**21 49 12.7**	**-0.1**
JHJ2	**Mitsune**	**14.99**	**340**	P		**P**	**21 50 43.2**	**-0.5**
JHJ	**Hachijo jima 2**	**15.01**	**340**	P		**P**	**21 50 45.8**	**+1.9**
	16nm,0.3s,baz=77,slow=21,SNR=2.7							
JOW	**Kunigami**	**17.87**	**299**	P		**P**	**21 51 10.0**	**-0.3**
MJAR	**Matsushiro Arr**	**18.66**	**341**	P		**P**	**21 51 17.3**	**0.0**
	0.1nm,0.3s,baz=150,slow=9.9,SNR=2.1							
WB0	**Warramunga Arr**	**40.15**	**197**	P		**P**	**21 54 21.9**	**+0.2**
WB0				IAmb		IAmb	21 56 05.2	
	comp=Z,24nm,1.9s							
WR0	**Warramunga Arr**	**40.30**	**196**	P		**P**	**21 54 22.5**	**-0.2**
WR0				IAmb		IAmb	21 54 28.9	
	comp=Z,22nm,1.8s							
WRAB	**Tennant Creek**	**40.32**	**197**	P		**P**	**21 54 22.7**	**-0.3**
WRAB				IAmb		IAmb	21 55 24.9	
	comp=Z,15nm,1.5s							
WB2	**Warramunga Arr**	**40.33**	**197**	P		**P**	**21 54 22.1**	**-1.0**
WB2				IAmb		IAmb	21 55 45.1	
	comp=Z,26nm,1.8s							
WRA	**Warramunga Arr**	**40.34**	**197**	P		**P**	**21 54 23.4**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=24,slow=6.4,SNR=14							
FITZ	**Fitzroy Crossi**	**41.88**	**209**	P		**P**	**21 54 34.8**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=29,slow=9.0,SNR=6.6							
FITZ	**Fitzroy Crossi**	**41.88**	**209**	P		**P**	**21 54 34.4**	**-0.8**
FITZ				IAmb		IAmb	21 54 44.9	
	comp=Z,10.0nm,1.5s							
ASAR	**Alice Springs**	**44.00**	**196**	P		**P**	**21 54 52.1**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=14,slow=6.4,SNR=5.7							
STKA	**Stephens Creek**	**50.79**	**185**	P		**P**	**21 55 43.7**	**+1.5**
	comp=Z,0.7nm,0.7s,baz=232,slow=21,SNR=1.2							
TOO	**Toolangi**	**56.31**	**180**	P		**P**	**21 56 20.6**	**-0.4**
TOO				IAmb		IAmb	21 58 16.0	
	comp=Z,36nm,1.6s							
MK31	**Makanchi Array**	**58.28**	**314**	P		**P**	**21 56 33.7**	**-0.6**
MKAR	**Makanchi Array**	**58.28**	**314**	P		**P**	**21 56 34.6**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=90,slow=9.0,SNR=9.0							
MAKZ	**Makanchi**	**58.49**	**314**	P		**P**	**21 56 35.1**	**-0.6**
KURK	**Kurchatov**	**61.06**	**318**	P		**P**	**21 56 52.8**	**+0.2**
KURBB	**Kurchatov Arra**	**61.11**	**318**	P		**P**	**21 56 53.4**	**+0.4**
	comp=Z,1.9nm,0.4s,baz=97,slow=7.0,SNR=15							
SEW	**Seward**	**61.14**	**31**	P		**P**	**21 56 52.5**	**-0.5**
SEW				IAmb		IAmb	21 57 47.8	
	comp=Z,13nm,1.0s							
MCARA	**McCarthy VSAT**	**64.47**	**30**	P		**P**	**21 57 14.5**	**+0.2**
MCARA				IAmb		IAmb	21 57 19.6	
	comp=Z,15nm,1.2s							
THZ	**Tophouse**	**65.51**	**158**	P		**P**	**21 57 20.8**	**-0.2**
YKA	**Yellowknife Ar**	**77.65**	**28**	P		**P**	**21 58 31.0**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=269,slow=7.4,SNR=1.7							
FINES	**FINESS Array B**	**86.60**	**335**	P		**P**	**21 59 16.4**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=64,slow=4.4,SNR=4.4							

IDC ***23*** *21:51:48.1±1.2, 7°.22S×155°.09E, h0km, mb3.8/8, mb1 4.0/10, mb1mx3.7/49, mbtmp3.8/10, ML1.9/1, Error ellipse: s-maj=34.1km s-min=21.2km az=118.0*

ISC 23 21:51:54.3±1.0,**7°.21S**±0°.09×**155°.0E**±0°.1,**h41**km,**n12,** σ0^{6}**63**/13,**mb3.6**/8,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KRVT	**Keravat (AS076**	**4.15**	**314**	Pn		**Pn**	**21 52 55.3**	**+0.1**
	5.8nm,0.3s,baz=4.6,slow=20,SNR=1.6							
KRVT				Sn		**Sn**	**21 53 42.6**	**0.0**
	11nm,0.3s,baz=165,slow=18,SNR=1.8							
PMG	**Port Moresby**	**8.09**	**254**	Pn		**Pn**	**21 53 49.9**	**+0.6**
	0.8nm,0.3s,baz=245,slow=17,SNR=2.3							
CTA	**Charters Tower**	**15.37**	**213**	Pn		**P**	**21 55 32.4**	**-0.1**
	0.3nm,0.3s,baz=209,slow=12,SNR=2.7							
WRA	**Warramunga Arr**	**23.72**	**236**	P		**P**	**21 57 01.5**	**-1.3**
	2.7nm,0.8s,baz=59,slow=9.6,SNR=8.9							
ASAR	**Alice Springs**	**26.05**	**229**	P		**P**	**21 57 24.2**	**+0.1**
	0.7nm,0.5s,baz=60,slow=8.7,SNR=8.6							
STKA	**Stephens Creek**	**27.55**	**205**	P		**P**	**21 57 37.8**	**+0.4**
	1.3nm,0.8s,baz=341,slow=18,SNR=2.0							
FITZ	**Fitzroy Crossi**	**30.59**	**246**	P		**P**	**21 58 04.0**	**-0.7**
	0.6nm,0.6s,baz=40,slow=21,SNR=1.2							
SONM	**Songino Array**	**69.54**	**327**	P		**P**	**22 02 59.7**	**+0.7**
	0.1nm,0.3s,baz=133,slow=55,SNR=1.7							
ILAR	**Eielson Array**	**83.56**	**21**	P		**P**	**22 04 17.9**	**+0.1**
	0.3nm,0.9s,baz=250,slow=10,SNR=2.3							
MKAR	**Makanchi Array**	**83.59**	**319**	P		**P**	**22 04 17.9**	**-0.6**
	0.5nm,0.6s,baz=106,slow=4.4,SNR=4.9							
YKA	**Yellowknife Ar**	**96.51**	**28**	P		**P**	**22 05 19.5**	**+0.3**
	0.3nm,0.5s,baz=268,slow=4.5,SNR=5.2							
TORD	**Torodi Ar. Bea**	**153.11**	**285**	PKPbc		**PKPbc**	**22 11 48.1**	**-0.6**
	0.3nm,0.5s,baz=93,slow=36,SNR=2.8							

IDC ***23*** *21:55:09.9±0.9, 25°.30N×98°.78E, h0km, mb3.7/13, mb1 3.8/14, mb1mx3.6/61, mbtmp3.6/14, ML3.9/1, Error ellipse: s-maj=36.3km s-min=16.2km az=64.0*

BJI ***23*** *21:55:13.4±0.0, 25°.00N×97°.75E, h10km, mB3.9/1, mb4.1/8, ML4.0/8, Ms3.9/6, Ms7 3.7/4*

ISC 23 21:55:12.5±0.6,**24°.86N**±0°.07×**98°.07E**±0°.05,**h10**km,**n27,** σ2^{5}**79**/29,**mb3.7**/14,**Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KOHI	**KOHIMA**	**3.69**	**284**	*e*P		**Pn**	**21 56 11.5**	**+1.8**
KOHI				*e*S		**Sb**	**21 57 08.3**	**+5.5**
KMI	**Kunming**	**4.24**	**85**	Pg		**Pg**	**21 56 33.3**	**-0.5**
KMI				Sg		**Sg**	**21 57 33.1**	**+4.3**
KMI				smax		smax		
	comp=N,260nm,1.0s							
KMI				smax		smax		
	comp=E,160nm,0.7s							
KMI				LR		LR		
	comp=N,450nm,5.0s							
KMI				LR		LR		
	comp=E,520nm,4.6s							
KMI				LR		LR		
	comp=Z,740nm,8.0s							
SHL	**Shillong**	**5.65**	**278**	*e*P		**Pn**	**21 56 39.1**	**+2.4**
CMAR	**Chiang Mai Arr**	**6.42**	**173**	Pn		**Pn**	**21 56 50.7**	**+3.6**
	0.5nm,0.3s,baz=346,slow=13,SNR=10							
CMAR				Pg		**Pg**	**21 57 14.8**	**-0.7**
	1.1nm,0.3s,baz=349,slow=18,SNR=24							
CMAR				Lg		Lg	21 58 40.5	
	1.2nm,0.3s,baz=322,slow=19,SNR=4.4							

TAPN	**Taplejung**	**9.64**	**287**	*e*P		**Pn**	**21 57 29.6**	**-2.0**
	7.9nm,0.4s							
ODAN	**Odare**	**9.83**	**284**	*e*P		**Pn**	**21 57 31.9**	**-2.2**
	23nm,0.7s							
RAMN	**Ramite**	**10.54**	**284**	*e*P		**Pn**	**21 57 40.8**	**-3.1**
	15nm,0.5s							
JIRN	**Jiri**	**11.03**	**287**	*e*P		**Pn**	**21 57 47.9**	**-2.7**
	13nm,0.4s							
PKI	**Pulchoki**	**11.69**	**286**	*e*P		**Pn**	**21 57 56.0**	**-3.7**
	6.6nm,0.5s							
PKIN	**Phulchoki**	**11.70**	**286**	*e*P		**Pn**	**21 57 56.9**	**-2.9**
	7.6nm,0.5s							
GKN	**Gorkha**	**12.44**	**288**	*e*P		**Pn**	**21 58 06.2**	**-3.6**
	9.3nm,0.5s							
HHC	**Hu-ho-hao-te**	**19.53**	**32**	*e*P		**Pn**	**21 59 44.0**	**+2.6**
HHC				pmax		pmax		
	comp=Z,5.0nm,0.8s							
HHC				pmax		pmax		
	comp=Z,26nm,4.5s							
HHC				LR		LR		
	comp=N,60nm,6.1s							
HHC				LR		LR		
	comp=E,68nm,6.6s							
WMQ	**Urumqi**	**20.74**	**338**	*e*P		Pn	21 59 54.3	-1.3
WMQ				sP		sP	22 00 05.1	+7.0
WMQ				LR		LR		
	comp=N,160nm,9.3s							
WMQ				LR		LR		
	comp=E,250nm,10.5s							
WMQ				LR		LR		
	comp=Z,220nm,14.1s							
KSH	**Kashi**	**23.65**	**313**	P		**P**	**22 00 25.6**	**+1.4**
KSH				PP		**PnPn**	**22 00 56.8**	**+5.5**
KSH				S		S	22 04 25.6	-13
KSH				pmax		pmax		
	comp=Z,17nm,0.8s							
KSH				LR		LR		
	comp=N,220nm,5.1s							
KSH				LR		LR		
	comp=E,210nm,4.8s							
KSH				LR		LR		
	comp=Z,350nm,6.9s							
SONM	**Songino Array**	**23.86**	**14**	P		P	22 00 17.4	-8.7
	1.3nm,1.1s,baz=270,slow=3.0,SNR=3.5							
MKAR	**Makanchi Array**	**25.26**	**334**	P		**P**	**22 00 37.6**	**-1.2**
	2.0nm,0.6s,baz=140,slow=8.3,SNR=17							
AAK	**Ala-Archa**	**26.30**	**318**	P		**P**	**22 00 48.7**	**+0.3**
	3.0nm,0.7s,baz=118,slow=6.6,SNR=10.0							
KURBB	**Kurchatov Arra**	**29.82**	**335**	P		**P**	**22 01 18.2**	**-1.4**
	0.2nm,0.7s,baz=146,slow=10,SNR=1.5							
ZALV	**Zalesovo Beam**	**30.70**	**345**	P		**P**	**22 01 23.7**	**-3.6**
	0.5nm,0.4s,baz=166,slow=8.6,SNR=1.8							
GEYT	**Alibeck**	**36.24**	**301**	P		**P**	**22 02 16.9**	**+1.1**
	1.0nm,0.3s,baz=93,slow=7.4,SNR=4.5							
AKTO	**Aktyubinsk**	**40.00**	**320**	P		**P**	**22 02 48.0**	**+0.6**
	0.7nm,0.4s,baz=141,slow=9.2,SNR=2.3							
WRA	**Warramunga Arr**	**56.82**	**138**	P		**P**	**22 04 56.2**	**-1.1**
	0.3nm,0.6s,baz=326,slow=7.6,SNR=1.3							
AKASG	**Malin Array Be**	**57.92**	**316**	P		**P**	**22 05 03.2**	**-1.6**
	0.1nm,0.3s,baz=77,slow=5.8,SNR=2.5							
ASAR	**Alice Springs**	**59.44**	**141**	P		**P**	**22 05 13.8**	**-1.9**
	0.3nm,0.8s,baz=228,slow=0.3,SNR=2.3							
FINES	**FINESS Array B**	**59.90**	**328**	P		**P**	**22 05 18.0**	**-0.3**
	2.3nm,1.0s,baz=98,slow=8.5,SNR=4.2							
GERES	**GERESS Array B**	**68.12**	**315**	P		**P**	**22 06 11.6**	**-1.2**
	1.3nm,1.1s,baz=72,slow=4.3,SNR=4.6							
YKA	**Yellowknife Ar**	**89.13**	**15**	P		**P**	**22 08 05.7**	**-2.2**
	0.1nm,0.4s,baz=331,slow=5.0,SNR=2.1							

INET ***23*** *22:20:49.6, 10°.99N×86°.11W, h26km, ML3.6*

UCR 23 22:20:48.6±1.1,**11°.00N×86°.12W,h28**km±3km,**MD4.0, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GBS3	**Finca Las Img**	**0.69**	**108**	*i* P		Pb	22 21 02.0	-0.1
LAPC	**Finca la Perla**	**0.71**	**109**	*i* P		Pb	22 21 02.2	-0.3
BUAI	**Buenos Aires**	**0.78**	**99**	*i* P		Pb	22 21 03.7	0.0
BUAI				*i* S		Sn	22 21 15.1	+0.4
GPS1	**Guardaparques**	**0.79**	**106**	*i* P		Pb	22 21 03.5	-0.3
GPS1				*i* S		Sn	22 21 14.6	-0.3
LIM1	**Limonal**	**0.90**	**109**	*i* P		Pn	22 21 05.1	-0.4
LIM1				*i* S		Sn	22 21 17.8	+0.1
COLC	**Colonia**	**0.96**	**110**	*i* P		Pn	22 21 06.0	-0.3
HORNC	**Hornillas**	**0.97**	**107**	*i* P		Pn	22 21 05.9	-0.5
PLVR	**Palo Verde**	**1.00**	**131**	*e*P		Pn	22 21 06.3	-0.6
PLVR				*e*S		Sb	22 21 21.9	+1.7
CUI	**Cuipilapa**	**1.00**	**110**	*i* P		Pn	22 21 06.5	-0.3
CUI				*i* S		Sn	22 21 20.0	0.0
ACAL	**Aguas Claras**	**1.13**	**109**	*i* P		Pn	22 21 08.8	+0.2
PTEN	**Parque Tenorio**	**1.15**	**104**	*i* P		Pn	22 21 09.0	+0.1
JTS	**Las Juntas de**	**1.35**	**121**	*e*P		Pn	22 21 11.3	-0.3
ARE1	**Arenal 1**	**1.48**	**111**	*e*P		Pn	22 21 13.6	+0.2
MATN	**Matagalpa**	**1.93**	**6**	*e*P		Pn	22 21 19.6	0.0
CSGN	**Cosiguina Volc**	**2.42**	**325**	*e*P		Pn	22 21 27.4	+1.0
LCR2	**La Lucha 2**	**2.43**	**121**	*e*P		Pn	22 21 29.0	+2.3

IDC ***23*** *22:28:03.0±1.0, 44°.79N×28°.03W, h0km, mb3.7/16, mb1 3.8/18, mb1mx3.7/63, mbtmp3.7/18, ML3.1/2, MS3.7/8, Ms1 3.7/8, ms1mx3.3/45, Error ellipse: s-maj=29.6km s-min=15.6km az=18.0*

NEIC ***23*** *22:28:03.7±2.0, 44°.7N±0°.1×28°.0W±0°.2, h10km±1km, mb4.4/21, Error ellipse: s-maj=19.1km s-min=17.4km az=217.0*

ISC 23 22:28:03.8±0.6,**44°.68N**±0°.09×**28°.05W**±0°.08,**h10**km,**n45,** σ1^{9}**13**/42,**mb4.2**/25,**MS3.7**/7,**Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ROSA	**Rosais**	**5.96**	**181**	Pn		**Pn**	**22 29 31.9**	**-0.3**
ESDC	**Sonseca Array**	**18.51**	**97**	P		**P**	**22 32 19.2**	**-1.0**
	0.0nm,0.3s,baz=286,slow=6.5,SNR=1.5							
ESDC				LR		LR	22 38 54.9	
	comp=Z,107nm,18.3s,baz=305,slow=35							
EKA	**Eskdalemuir Ar**	**19.11**	**47**	P		**Pn**	**22 32 27.0**	**-0.5**
	baz=191,slow=29,SNR=2.7							
MDT	**Midelt**	**21.70**	**115**	LR		LR	22 39 59.1	
	comp=Z,91nm,19.0s,baz=310,slow=33							
ECH	**Echery**	**24.38**	**69**	P		**P**	**22 33 20.8**	**-1.2**
ECH				IAmb		IAmb	22 33 30.2	
	comp=Z,7.8nm,1.2s							
BNI	**Bardonecchia**	**24.51**	**77**	P		**P**	**22 33 22.6**	**-0.7**
SENIN	**Lac Senin/Sane**	**24.70**	**73**	P		**P**	**22 33 24.4**	**-0.7**
SENIN				IAmb		IAmb	22 33 33.1	
	comp=Z,16nm,1.5s							
BFO	**Black Forest**	**25.15**	**69**	P		**P**	**22 33 27.9**	**-1.0**
BFO				IAmb		IAmb	22 33 35.3	
	comp=Z,11nm,1.3s							
LMN	**Caledonia Moun**	**25.75**	**286**	P		**P**	**22 33 31.9**	**-2.5**
SCO	**Scoresbysund**	**26.05**	**5**	P		**P**	**22 33 35.4**	**-1.4**
SCHQ	**Schefferville**	**26.71**	**306**	LR		LR	22 42 16.6	
	comp=Z,191nm,19.1s,baz=125,slow=32							
GERES	**GERESS Array B**	**28.63**	**67**	P		**P**	**22 34 00.2**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=280,slow=7.9,SNR=4.2							
NRCA	**Norcia**	**29.57**	**79**	P		**P**	**22 34 06.8**	**-1.9**
NRCA				IAmb		IAmb	22 34 50.5	
	comp=Z,10nm,1.7s							
FRB	**Frobisher Bay**	**29.66**	**324**	P		**P**	**22 34 08.9**	**-0.3**
	comp=Z,3.8nm,0.8s,baz=97,slow=0.7,SNR=4.6							
KEST	**Kesra**	**29.71**	**94**	P		**P**	**22 34 12.5**	**+2.5**
	comp=Z,5.7nm,1.0s,baz=339,slow=9.4,SNR=3.8							
KEST				LR		LR	22 44 28.1	
	comp=Z,137nm,19.7s,baz=204,slow=33							
HNH	**Hanover**	**31.44**	**284**	P		**P**	**22 34 25.5**	**+0.3**
DIVS	**Divibare**	**33.94**	**74**	P		**P**	**22 34 45.7**	**-1.4**
FINES	**FINESS Array B**	**35.37**	**42**	P		**P**	**22 35 00.5**	**+1.4**
	comp=Z,3.2nm,1.1s,baz=345,slow=36,SNR=2.9							
TULEG	**Thule**	**36.11**	**345**	P		**P**	**22 35 06.0**	**+0.7**
TULEG				IAmb		IAmb	22 35 54.7	
	comp=Z,9.6nm,0.9s							
BUR08	**Bucovina Ar. S**	**36.40**	**66**	P		**P**	**22 35 07.4**	**-0.9**
BUR08				IAmb		IAmb	22 35 17.2	
	comp=Z,4.4nm,1.1s							
VTS	**Vitosha**	**36.66**	**75**	P		**P**	**22 35 09.2**	**-1.5**
MLR	**Muntele Rosu**	**37.52**	**69**	P		**P**	**22 35 17.9**	**0.0**
MLR				IAmb		IAmb	22 35 26.3	
	comp=Z,5.5nm,1.2s							
SPA0	**Spitsbergen Ar**	**37.74**	**14**	P		**P**	**22 35 19.5**	**+0.2**
AKASG	**Malin Array Be**	**38.18**	**60**	P		**P**	**22 35 22.2**	**-1.0**
	comp=Z,1.0nm,0.6s,baz=299,slow=7.4,SNR=3.5							
AKASG				LR		LR	22 50 43.7	
	comp=Z,106nm,18.3s,baz=255,slow=36							

ALN	**Alexandroupoli**	**39.27**	**76**	P		**P**	**22 35 31.8**	**-0.7**
TOA0	**Torodi Ar. Sit**	**40.38**	**132**	P		**P**	**22 35 41.6**	**-0.3**
TORD	**Torodi Ar. Bea**	**40.38**	**132**	P		**P**	**22 35 42.8**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=330,slow=7.2,SNR=8.3							
U54A	**Nelsons Funny**	**40.99**	**278**	P		**P**	**22 35 45.7**	**-1.2**
U54A				IAmb		IAmb	22 35 48.3	
	comp=Z,25nm,1.6s							
FCC	**Fort Churchill**	**41.49**	**314**	P		**P**	**22 35 49.8**	**-0.8**
BRTR	**Keskin Array B**	**45.01**	**74**	P		**P**	**22 36 18.9**	**-0.6**
	comp=Z,1.3nm,0.9s,baz=283,slow=6.2,SNR=4.0							
BRTR				LR		LR	22 55 23.0	
	comp=Z,49nm,21.6s,baz=280,slow=36							
KBZ	**Khabaz**	**49.34**	**65**	LR		LR	22 57 46.6	
	comp=Z,81nm,20.3s,baz=306,slow=36							
YKA	**Yellowknife Ar**	**50.16**	**323**	P		**P**	**22 36 59.8**	**+0.8**
	comp=Z,0.0nm,0.3s,baz=300,slow=10,SNR=7.1							
INK	**Inuvik**	**54.56**	**334**	P		**P**	**22 37 30.1**	**-1.5**
	comp=Z,1.2nm,0.9s,baz=57,slow=12,SNR=3.8							
INK	**Inuvik**	**54.56**	**334**	P		**P**	**22 37 32.2**	**+0.6**
INK				IAmb		IAmb	22 37 36.6	
	comp=Z,11nm,1.8s							
PDAR	**Pinedale Array**	**56.52**	**299**	P		**P**	**22 37 46.5**	**+0.2**
	comp=Z,0.6nm,0.9s,baz=47,slow=6.5,SNR=3.7							
TXAR	**Lajitas Array**	**60.25**	**283**	P		**P**	**22 38 13.2**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=212,slow=42,SNR=2.6							
TXAR				LR		LR	23 02 40.5	
	comp=Z,178nm,19.1s,baz=0.0,slow=34							
BVAR	**Borovoye Array**	**60.31**	**43**	P		**P**	**22 38 13.3**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=45,slow=55,SNR=1.8							
SCRK	**Sand Creek**	**60.57**	**333**	P		**P**	**22 38 15.1**	**+0.9**
SCRK				IAmb		IAmb	22 38 26.0	
	comp=Z,2.7nm,1.0s							
ILAR	**Eielson Array**	**60.94**	**335**	P		**P**	**22 38 17.6**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=52,slow=4.7,SNR=4.3							
J08A	**Circle Bar Ran**	**61.60**	**304**	P		**P**	**22 38 23.0**	**+1.5**
J08A				IAmb		IAmb	22 38 25.2	
	comp=Z,7.0nm,1.2s							
ZALV	**Zalesovo Beam**	**66.33**	**36**	P		**P**	**22 38 53.5**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=352,slow=9.2,SNR=1.6							
MKAR	**Makanchi Array**	**70.19**	**43**	P		**P**	**22 39 16.1**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=343,slow=2.0,SNR=2.1							
SONM	**Songino Array**	**79.55**	**29**	P		**P**	**22 40 09.4**	**-1.4**
	comp=Z,1.2nm,1.0s,baz=332,slow=8.6,SNR=5.1							
WRA	**Warramunga Arr**	**151.31**	**36**	PKPbc		**PKiKP**	**22 47 59.0**	**+0.7**
	comp=Z,0.7nm,1.1s,baz=261,slow=37,SNR=4.5							
ASAR	**Alice Springs**	**154.37**	**41**	PKPbc		**PKiKP**	**22 48 05.6**	**+1.1**
	comp=Z,0.1nm,0.4s,baz=79,slow=24,SNR=3.0							

BJI 23 22:29:53.5±0.0,**24°.96N×97°.81E,h5**km,**ML3.5**/4, **Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WMQ	**Urumqi**	**20.55**	**339**	*e*P		P	22 34 32.6	-0.4

IDC ***23*** *23:02:46.1±3.1, 5°.42S×129°.22E, h150km±43km, mb2.8/1, mb1 3.6/5, mb1mx3.2/40, mbtmp4.0/5, Error ellipse: s-maj=67.5km s-min=20.3km az=87.0*

NEIC ***23*** *23:02:46.9±2.2, 5°.48S±0°.06×129°.7E±0°.1, h173km±10km, mb4.1/5, Error ellipse: s-maj=18.3km s-min=7.8km az=73.0*

ISC 23 23:02:45.3±0.8,**5°.50S**±0°.06×**129°.6E**±0°.1,**h150**km,**n16,** σ2^{8}**43**/20,**Banda Sea**

| Code | Station Name |

YOA pmax pmax
comp=Z,168nm,0.3s
YOA smax smax
comp=E,2µm,0.5s
KMO Kumora 1.51 266 ⇓*i*Pg **Pb 23 04 57.9 -0.1**
KMO *e* 23 05 01.0
KMO *e* 23 05 06.2
KMO *e*Sg **Sg 23 05 19.1 +0.7**
KMO *e* 23 05 24.2
KMO max
comp=E,308nm,0.4s
KMO max
comp=E,822nm,1.1s
KMO Kumora 1.51 266 ⇓*i*PN **Pb 23 04 57.9 -0.1**
KMO *e* 23 05 19.0
KMO pmax pmax
comp=Z,309nm,0.4s
KMO smax smax
comp=N,821nm,1.1s
BOD Bodaibo 1.81 2 ⇑*i*Pg **Pb 23 05 01.8 -1.2**
BOD *e*Sg **Sg 23 05 25.2 -2.8**
BOD *e* 23 05 27.4
BOD Pmax
comp=N,247nm,0.2s
BOD max
comp=N,459nm,0.4s
BOD Bodaibo 1.81 2 *e*PN **Pb 23 05 01.6 -1.4**
BOD *e* 23 05 25.5
BOD pmax pmax
comp=Z,248nm,0.2s
BOD smax smax
comp=E,460nm,0.4s
YLYR Ulyunkhan 1.92 235 ⇓*i*Pn **Pb 23 05 05.6 +0.6**
YLYR *e*Pg **Pg 23 05 06.5 -0.2**
YLYR *e* 23 05 08.1
YLYR *e*Sg **Sg 23 05 32.5 +0.9**
YLYR max
comp=E,88nm,0.6s
YLYR Smax
comp=E,330nm,0.8s
YLYR Ulyunkhan 1.92 235 ⇓*i*PN **Pb 23 05 05.5 +0.6**
YLYR *e*S **Sb 23 05 30.5 +1.5**
YLYR *e* 23 05 31.9
YLYR pmax pmax
comp=Z,88nm,0.4s
YLYR smax smax
comp=E,257nm,0.4s
NIZ Nizh Angarsk 2.46 266 *e* **Pn 23 05 09.7 -0.2**
NIZ *e*Pg **Pb 23 05 13.5 -0.5**
NIZ *e*Sn **Sn 23 05 39.5 -0.5**
NIZ *e*Sg **Sb 23 05 45.7 +1.4**
NIZ *e* 23 05 48.5
NIZ Pmax
comp=E,28nm,0.7s
NIZ max
comp=E,186nm,0.6s
NIZ Nizh Angarsk 2.46 266 *e*PN **Pb 23 05 13.2 -0.8**
NIZ *e* 23 05 17.2
NIZ *e*S **Sb 23 05 43.6 -0.7**
NIZ *e* 23 05 48.1
NIZ pmax pmax
comp=Z,23nm,0.7s
NIZ smax smax
comp=N,236nm,0.9s
CRS Chara 2.59 68 ⇓*i*Pn **Pn 23 05 13.2 +1.4**
CRS ⇑*i*Pg **Pg 23 05 17.4 -2.1**
CRS *i*Sg **Sg 23 05 50.9 -2.2**
CRS *e*SgSg **SnSn 23 05 58.6 +4.6**
CRS Pmax
comp=N,346nm,0.8s
CRS max
comp=N,540nm,1.1s
CRS Chara 2.59 68 *e*PN **Pn 23 05 13.0 +1.2**
CRS *e* 23 05 16.8
CRS *e* 23 05 50.4
CRS pmax pmax
comp=Z,348nm,0.6s
CRS smax smax
comp=E,480nm,0.6s
SYVR Suvo 3.26 225 *e*Pn **Pn 23 05 24.1 +3.2**
SYVR *e* 23 05 28.3
SYVR *e*Pg **Pg 23 05 30.7 -1.5**
SYVR *e*Sg **Sg 23 06 14.0 -0.3**
SYVR *e*SgSg **SbSb 23 06 19.5 +7.0**
SYVR Pmax
comp=E,31nm,0.8s
SYVR max
comp=E,223nm,1.5s
SYVR Suvo 3.26 225 *e*PN **Pn 23 05 23.7 +2.8**
SYVR *e* 23 05 31.4
SYVR *e* 23 06 13.9
SYVR pmax pmax
comp=Z,32nm,0.8s
SYVR smax smax
comp=E,230nm,1.0s
SYVR Suvo 3.26 225 *e* 20 05 58.1
KHNR Khani 3.50 72 *e*Pn **Pn 23 05 26.1 +1.8**
KHNR *e*Pg **Pb 23 05 32.8 +0.9**
KHNR *e*Sg **Sg 23 06 17.8 -4.5**
VTMR Vitim 3.51 349 *e*Pn **Pn 23 05 24.9 +0.5**
VTMR *e*Pg **Pb 23 05 32.4 +0.5**
VTMR *e* 23 05 36.2
VTMR *e*Sn **Sn 23 06 07.0 +1.1**
VTMR *e*Sg **Sb 23 06 15.6 +1.0**
TUP Tupik 3.83 112 ⇓*i*Pn **Pn 23 05 30.2 +1.4**
TUP *e*Pg **Pb 23 05 39.7 +2.3**
TUP *e*Sn Sn 23 06 03.2 -11
TUP *e* 23 06 20.4
TUP *e*Sg **Sg 23 06 30.3 -2.3**
TUP Pmax
comp=E,52nm,0.3s
TUP Smax
comp=E,146nm,0.9s
TUP Tupik 3.83 112 *e*PN **Pn 23 05 30.2 +1.4**
TUP *e* 23 05 39.8
TUP *e*S **Sn 23 06 15.6 +1.8**
TUP *e* 23 06 30.2
TUP pmax pmax
comp=Z,52nm,0.4s
TUP smax smax
comp=E,131nm,0.9s
CIT Chita 4.00 183 *e*Sg **Sg 23 06 36.0 -2.3**
CIT *e* 23 06 40.2
CIT max
comp=E,138nm,0.3s
CIT Chita 4.00 183 *e*PN **Pn 23 05 31.9 +0.6**
CIT *e* 23 05 40.4
CIT *e*S **Sn 23 06 17.3 -0.9**
CIT *e* 23 06 32.1
CIT pmax pmax
comp=Z,92nm,0.3s
CIT smax smax
comp=E,178nm,0.6s
MXMB Maximikha 4.06 229 *e*Pg **Pb 23 05 43.6 +2.2**
MXMB *e*Sg **Sg 23 06 39.2 -0.9**
MXMB *e* 23 06 47.6
OGRR Ongureny 4.34 239 *e*Pn **Pn 23 05 38.3 +2.5**
OGRR *e*Pg **Pb 23 05 48.2 +2.1**
OGRR *e* 23 06 18.7
OGRR *e*Sg **Sg 23 06 46.0 -3.1**
OGRR *e* 23 06 54.2
OGRR Pmax
comp=E,17nm,1.4s
OGRR max
comp=E,90nm,1.1s
YKLR Yuktali 4.37 79 *e* **Pn 23 05 36.2 0.0**
YKLR *e*Pg **Pb 23 05 47.3 +0.7**
YKLR *e* 23 06 11.5
YKLR *e* 23 06 36.9
YKLR *e*Sg **Sg 23 06 45.6 -4.4**
ZRHB Zarechye 5.25 231 *e*Sg **Sg 23 07 13.3 -4.9**
TRG Tyrgan 5.48 237 *e* **Pb 23 06 04.0 -1.5**
TRG *e* 23 06 07.5
TRG *e* 23 07 18.1
TRG *e*Sg **Sg 23 07 22.2 -3.3**
TRG max
comp=E,21nm,1.6s
TRG Smax
comp=E,45nm,1.3s
UUDB Ulan-Yde 5.54 224 *e*Pg **Pg 23 06 12.5 -3.4**
UUDB *e*Sg **Sg 23 07 24.5 -3.1**
UUDB *e* 23 07 28.4
UUDB *e* 23 07 37.0
UUDB Pmax
comp=E,15nm,0.9s
UUDB max
comp=E,103nm,1.4s
KAB Kabansk 5.82 230 *e*Sg **Sg 23 07 33.5 -3.0**
KAB Smax
comp=E,319nm,1.9s
HRMR Khuramsha 6.01 226 *e* **Pg 23 06 21.0 -3.8**
HRMR *e*Sg **Sg 23 07 36.7 -5.8**
HRMR *e* 23 07 41.9
HRMR max
comp=E,11nm,0.4s
HRMR max
comp=E,169nm,0.9s
CLNS Chul'man 6.17 78 *e* **Sn 23 07 18.5 +7.1**
CLNS *e*Sg **Sg 23 07 41.9 -5.7**
KPC Khapcheranga 6.39 189 *e* **Pn 23 06 05.3 +1.3**
KPC *e*Pg **Pg 23 06 28.1 -3.9**
KPC *e*Sg **Sg 23 07 51.9 -2.8**
KPC Pmax
comp=E,4.0nm,0.7s
KPC Smax
comp=E,74nm,1.3s
KPC Khapcheranga 6.39 189 *e*PN **Pn 23 06 05.5 +1.5**
KPC *e* 23 06 26.2
KPC *e* 23 07 48.2
KPC pmax pmax
comp=Z,7.0nm,1.2s
KPC smax smax
comp=E,74nm,1.3s
LSTR Listvyanka 6.76 236 *e* 23 07 57.4
LSTR *e*Sg **Sg 23 08 02.6 -4.1**
LSTR Smax
comp=E,37nm,1.8s
IVK Ivanovka 7.00 237 *e* **Pg 23 06 44.4 +0.6**
IVK *e*Sg **Sg 23 08 09.3 -5.1**
IVK *e* 23 08 23.2
IVK Smax
comp=E,49nm,1.8s
TLY Talaya 7.45 239 *e*Sg **Sg 23 08 21.8 -6.8**
TLY Smax
comp=E,23nm,1.1s
ARS Arshan 7.90 244 *e*Pg Pb 23 06 52.1 +5.3
ARS *e*Sg **Sg 23 08 35.7 -7.4**
ARS Pmax
comp=E,6.0nm,0.5s
ARS Smax
comp=E,70nm,1.2s
ZAK Zakamensk 8.50 233 *e* **Pg 23 07 13.3 +0.9**
ZAK *e*Sg **Sg 23 08 55.1 -7.2**
ZAK *e* 23 09 01.4
ZAK max
comp=E,18nm,1.5s
MOY Mondy 8.77 246 *e* Pn 23 06 49.2 +12
MOY *e* 23 08 36.5
MOY *e*Sg **Sg 23 09 03.3 -7.8**
MOY *e* 23 09 14.0
MOY Smax
comp=E,36nm,1.6s
ORL Orlik 8.94 253 *e* **Pn 23 06 38.1 -0.8**
ORL *e*Sn **Sn 23 08 15.0 -4.6**
ORL *e* 23 08 37.3
ORL *e*Sg **Sg 23 09 07.5 -8.8**
ORL max
comp=E,2.0nm,0.8s
ORL Smax
comp=E,28nm,1.4s
SONM Songino Array 9.40 213 Lg Lg 23 09 26.9
comp=E,0.5nm,0.3s,baz=12,slow=30,SNR=8.9
TDJR Todzha 11.02 258 *e*Sg 23 10 13.8
KLR Kul'dur 12.78 115 LR LR 23 13 47.1
comp=E,96nm,20.0s,baz=326,slow=41
KURK Kurchatov 21.53 271 P **P 23 09 22.9 +4.1**
MKAR Makanchi Array 21.59 258 P **P 23 09 22.8 +3.3**
comp=E,0.8nm,0.7s,baz=54,slow=10,SNR=7.7
KURBB Kurchatov Arra 21.62 270 P **P 23 09 22.9 +3.1**
comp=E,0.6nm,0.5s,baz=67,slow=11,SNR=3.1
FINES FINESS Array B 42.61 315 P **P 23 12 27.6 +2.0**
comp=E,0.9nm,0.8s,baz=53,slow=7.4,SNR=4.3
ASAR Alice Springs 81.17 161 P P 23 16 56.4 +11
comp=E,0.5nm,1.0s,baz=338,slow=9.1,SNR=2.9

*IDC **23** 23:12:37.2±0.7,49.90N×178.80W,h0km,mb4.2/23, mb1 4.4/25,mb1mx4.2/42,mbtmp4.2/25,ML5.1/1,MS3.8/3, Ms1 3.8/3,ms1mx3.0/47,Error ellipse: s-maj=20.4km s-min=13.2km az=168.0*
*MOS **23** 23:12:39.2±1.2,49.94N×178.59W,h28km,mb4.7/14, Error ellipse: s-maj=9.3km s-min=6.2km az=90.7*
*NEIC **23** 23:12:40.8±1.7,49.87N±0.05×178.66W±0.08,h34km±4km, Error ellipse: s-maj=9.6km s-min=5.5km az=221.0*
*AEIC **23** 23:12:41.8±1.7,49.99N±0.08×178.62W±0.10,h41km±5km, ML4.3/37,mb4.3/117(NEIC),Error ellipse: s-maj=12.3km s-min=9.1km az=169.0*
ISC 23 23:12:41.5±0.5,49.89N±0.07×178.67W±0.05,h35km, n295,σ1§30/292,mb4.4/103,23C-7D,South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAEA	**Gareloi East**	**1.89**	**358**		**Pn**	**23 13 11.1**	**-0.2**
TASE	**Tanaga Southea**	**1.98**	**11**		**Pn**	**23 13 12.3**	**-0.4**
TAPA	**Tanaga Point A**	**2.00**	**15**		**Pn**	**23 13 12.4**	**-0.5**
TAPA					**Sn**	**23 13 37.2**	**+0.5**
TAFP	**Tanaga Falls P**	**2.06**	**12**		**Pn**	**23 13 13.1**	**-0.5**
TAFP					**Sn**	**23 13 37.8**	**-0.1**
KIMD	**Kanaga Island**	**2.08**	**25**		**Pn**	**23 13 13.4**	**-0.5**
KIKV	**Kanaga Island**	**2.20**	**25**		**Pn**	**23 13 15.5**	**-0.1**
KIKV					**Sn**	**23 13 42.5**	**+0.9**
KICM	**Kanaga Island**	**2.23**	**24**		**Pn**	**23 13 16.1**	**+0.1**
KIRH	**Kanaga Island**	**2.24**	**26**		**Pn**	**23 13 16.2**	**+0.1**
KINC	**Kanaga Island**	**2.26**	**25**		**Pn**	**23 13 16.4**	**0.0**
ADK	**Adak**	**2.35**	**31**	P	**Pn**	**23 13 17.5**	**-0.2**
ADK						23 13 45.0	
ADK	**Adak**	**2.35**	**31**	Sn	**Sn**	**23 13 45.0**	**-0.3**
ADK	**Adak**	**2.35**	**31**	Pn	**Pn**	**23 13 17.5**	**-0.2**
ADAG	**Mount Adagdak**	**2.46**	**31**		**Pn**	**23 13 19.5**	**+0.4**
GSTD	**Great Sitkin T**	**2.69**	**35**		**Pn**	**23 13 22.4**	**+0.1**
GSTD					**Sn**	**23 13 54.4**	**+0.7**
GSMY	**Great Sitkin M**	**2.71**	**36**		**Pn**	**23 13 22.5**	**-0.1**
GSTR	**Great Sitkin T**	**2.75**	**36**		**Pn**	**23 13 23.4**	**+0.3**
ATKA	**Atka Island**	**3.65**	**49**		**Pn**	**23 13 34.8**	**-0.6**
ATKA					**Sn**	**23 14 16.7**	**-0.4**
KOKI	**Mount Kliuchef**	**3.72**	**47**		**Pn**	**23 13 36.5**	**+0.1**
KOFP	**Korovin Flat P**	**3.74**	**49**		**Pn**	**23 13 36.8**	**+0.1**
KOSE	**Korovin Southe**	**3.81**	**48**		**Pn**	**23 13 38.6**	**+1.0**
SMY	**Shemya**	**5.35**	**305**	P	**Pn**	**23 13 58.6**	**-0.2**
SMY	**Shemya**	**5.35**	**305**	Pn	**Pn**	**23 13 58.6**	**-0.2**
NIKH	**Nikolski High**	**6.86**	**60**		**Pn**	**23 14 19.1**	**-0.5**
OKSP	**Okmok Steeple**	**7.29**	**59**		**Pn**	**23 14 26.7**	**+1.3**
OKWE	**Okmok W'ng Wal**	**7.40**	**57**		**Pn**	**23 14 28.7**	**+1.7**
OKFG	**Magazine Ridge**	**7.56**	**58**		**Pn**	**23 14 31.1**	**+2.0**
MREP	**Makushin Rep't**	**8.36**	**57**		**Pn**	**23 14 41.4**	**+1.3**
MSW	**Makushin Switc**	**8.38**	**57**		**Pn**	**23 14 41.4**	**+1.1**
UNV	**Unalaska Valle**	**8.50**	**58**		**Pn**	**23 14 42.2**	**+0.3**
SPIA	**Saint Paul Isl**	**8.85**	**31**	Pn	**Pn**	**23 14 45.9**	**-0.8**
AKMO	**Akutan Morgan**	**8.87**	**57**		**Pn**	**23 14 48.7**	**+1.7**
ZRO	**Akutan Zero**	**8.88**	**57**		**Pn**	**23 14 48.5**	**+1.3**
AKBBA	**Akutan Broad B**	**8.91**	**57**		**Pn**	**23 14 49.2**	**+1.6**
AKUT	**Akutan**	**9.01**	**57**	Pn	**Pn**	**23 14 49.1**	**+0.2**
WESP	**Westdahl Peak**	**9.72**	**56**		**Pn**	**23 15 00.4**	**+1.7**
FALS	**False Pass**	**10.56**	**56**	Pn	**Pn**	**23 15 08.8**	**-1.3**
SDPT	**Sand Point**	**12.31**	**57**	Pn	**Pn**	**23 15 33.3**	**-0.8**
CNBA	**Chernabura Isl**	**12.65**	**60**	Pn	**Pn**	**23 15 37.0**	**-1.6**
CHGN	**Chignik**	**13.72**	**54**	Pn	**Pn**	**23 15 51.4**	**-2.0**
GAMB	**Gambell**	**14.41**	**12**	Pn	**Pn**	**23 16 02.3**	**-0.4**
PEA0B	**Petropavlovsk-**	**15.05**	**291**	P	**Pn**	**23 16 10.5**	**-0.8**
PEA0B				pmax	pmax		
comp=Z,27nm,1.1s							
PEA0B	**Petropavlovsk-**	**15.05**	**291**	Pn	**Pn**	**23 16 10.5**	**-0.8**
PEA0B				IAmb	IAmb	23 16 17.6	
comp=Z,26nm,1.1s							
PETK	**Petropavlovsk-**	**15.05**	**291**	Pn	**Pn**	**23 16 10.4**	**-0.9**
comp=Z,0.5nm,0.3s,baz=96,slow=18,SNR=14							
ANM	**Nome**	**16.31**	**21**	P	**Pn**	**23 16 25.4**	**-2.2**
ANM				pmax	pmax		
comp=Z,9.0nm,1.0s							
ANM	**Nome**	**16.31**	**21**	Pn	**Pn**	**23 16 25.4**	**-2.2**
OHAK	**Old Harbor**	**16.69**	**54**		**Pn**	**23 16 30.7**	**-1.7**
KDAK	**Kodiak Island**	**17.21**	**53**	P	**Pn**	**23 16 36.0**	**-2.9**
comp=Z,1.6nm,0.3s,baz=176,slow=3.4,SNR=19							
KDAK				LR	LR	23 23 26.2	
comp=Z,186nm,20.6s,baz=202,slow=38							
KDAK	**Kodiak Island**	**17.21**	**53**	P	**Pn**	**23 16 36.8**	**-2.1**
KDAK				pmax	pmax		
comp=Z,19nm,0.7s							
KDAK	**Kodiak Island**	**17.21**	**53**		**Pn**	**23 16 36.8**	**-2.1**
KDAK				IAmb	IAmb	23 16 43.3	
comp=Z,19nm,0.7s							
TTA	**Tatalina**	**17.96**	**35**	P	**Pn**	**23 16 47.5**	**-0.7**
TTA				pmax	pmax		
comp=Z,4.0nm,1.0s							
TTA	**Tatalina**	**17.96**	**35**	P	**Pn**	**23 16 47.5**	**-0.7**
CNPM	**China Poot**	**18.42**	**48**		**P**	**23 16 53.2**	**-0.3**
BRLK	**Bradley Lake**	**18.66**	**47**	P	**P**	**23 16 55.1**	**-1.1**
SPU	**Mount Spurr**	**18.67**	**43**	P	**Pn**	**23 16 56.4**	**-0.4**
PPLA	**Purkeypile**	**19.41**	**38**	P	**P**	**23 17 04.5**	**0.0**
PPLA				IAmb	IAmb	23 17 12.8	
comp=Z,22nm,1.2s							
SEW	**Seward**	**19.46**	**47**	P	**P**	**23 17 04.7**	**-0.1**
RC01	**Rabbit Creek A**	**19.67**	**44**	P	**P**	**23 17 06.6**	**-0.6**
BILL	**Bilibino**	**19.68**	**343**	*e*P	**Pn**	**23 17 08.0**	**-0.8**
BILL				pmax	pmax		
comp=Z,36nm,1.7s							
BILL				MLR	MLR		
comp=Z,119nm,22.0s							
BILL	**Bilibino**	**19.68**	**343**	P	**P**	**23 17 07.1**	**-0.1**
BILL				IAmb	IAmb	23 17 11.7	
comp=Z,15nm,0.9s							
RDOG	**Red Dog Mine**	**19.82**	**18**	P	**P**	**23 17 06.7**	**-2.0**
RDOG				IAmb	IAmb	23 17 15.5	
comp=Z,13nm,0.8s							
MA2	**Magadan**	**19.96**	**311**	P	**P**	**23 17 10.9**	**+0.6**
comp=Z,0.6nm,0.3s,baz=110,slow=12,SNR=4.8							
MA2	**Magadan**	**19.96**	**311**	*ce*P	**Pn**	**23 17 11.2**	**-1.0**
MA2				pmax	pmax		
comp=Z,6.0nm,0.8s							
MA2	**Magadan**	**19.96**	**311**	P	**P**	**23 17 10.2**	**-0.1**
KTH	**Kantishna Hill**	**20.24**	**37**	P	**P**	**23 17 11.9**	**-1.5**
KTH				IAmb	IAmb	23 17 26.0	
comp=Z,12nm,0.9s							
GHO	**Glory Hole Cre**	**20.29**	**43**	P	**P**	**23 17 12.8**	**-1.1**
GHO				IAmb	IAmb	23 17 19.5	
comp=Z,9.2nm,0.6s							
KNK	**Knik Glacier**	**20.36**	**44**	P	**P**	**23 17 13.6**	**-1.1**
KNK				IAmb	IAmb	23 17 20.9	
comp=Z,16nm,0.7s							
SEY	**Seymchan**	**20.43**	**321**	P	Pn	23 17 16.3	-1.3
comp=Z,13nm,0.9s,baz=117,slow=10,SNR=24							
TRF	**Thorofare Moun**	**20.43**	**38**	P	**P**	**23 17 16.4**	**+0.8**
BPAW	**Bear Paw Mtn.**	**20.49**	**36**	P	**P**	**23 17 15.6**	**-0.5**
BPAW				IAmb	IAmb	23 17 22.5	
comp=Z,12nm,0.8s							
SML	**Sawmill**	**20.56**	**43**	P	**P**	**23 17 16.3**	**-0.6**
SML				IAmb	IAmb	23 17 22.8	
comp=Z,23nm,0.8s							
GLI	**Glacier Island**	**20.81**	**46**	P	**P**	**23 17 19.8**	**+0.2**
GLI				IAmb	IAmb	23 17 24.6	
comp=Z,5.7nm,0.6s							
HIN	**Hinchinbrook I**	**20.95**	**48**	P	**P**	**23 17 21.0**	**-0.1**
HIN				IAmb	IAmb	23 17 38.2	
comp=Z,14nm,1.2s							
RND	**Reindeer**	**20.99**	**39**	P	**P**	**23 17 19.6**	**-1.9**
RND				pmax	pmax		
comp=Z,6.0nm,0.7s							
RND	**Reindeer**	**20.99**	**39**	P	**P**	**23 17 19.6**	**-1.9**
SCM	**Sheep Creek Mo**	**21.01**	**43**	P	**P**	**23 17 20.9**	**-0.9**
SCM				pmax	pmax		
comp=Z,24nm,1.0s							
SCM	**Sheep Creek Mo**	**21.01**	**43**	P	**P**	**23 17 20.9**	**-0.9**
SCM				IAmb	IAmb	23 17 27.9	
comp=Z,24nm,1.0s							
FID	**Port Fidalgo**	**21.06**	**47**	P	**P**	**23 17 21.3**	**-0.9**
BWN	**Browne**	**21.10**	**36**	P	**P**	**23 17 24.5**	**+1.9**
BWN				IAmb	IAmb	23 17 38.9	
comp=Z,11nm,0.8s							
MCK	**McKinley**	**21.10**	**38**	P	**P**	**23 17 21.8**	**-0.9**
MCK				pmax	pmax		
comp=Z,5.0nm,0.7s							
MCK	**McKinley**	**21.10**	**38**	P	**P**	**23 17 21.8**	**-0.9**
EYAK	**Cordova Ski Ar**	**21.35**	**48**	P	**P**	**23 17 22.3**	**-3.0**
NEA	**Nenana**	**21.45**	**36**	P	**P**	**23 17 27.1**	**+0.8**
DHY	**Denali Highway**	**21.46**	**40**	P	**P**	**23 17 25.6**	**-1.0**
DHY				IAmb	IAmb	23 17 31.5	
comp=Z,17nm,0.9s							
WRH	**Wood River Hil**	**21.77**	**36**	P	**P**	**23 17 28.9**	**-0.9**
RAGM	**Ragged Mountai**	**21.83**	**48**	P	**P**	**23 17 28.8**	**-1.7**
RAGM				IAmb	IAmb	23 17 44.8	
comp=Z,13nm,1.1s							
MDM	**Murphy Dome**	**21.95**	**35**	P	**P**	**23 17 30.4**	**-1.4**
CCB	**Clear Creek Bu**	**21.96**	**36**	P	**P**	**23 17 30.5**	**-1.3**
IL31		**22.37**	**36**	P	**P**	**23 17 35.3**	**-0.9**
ILAR	**Eielson Array**	**22.37**	**36**	P	**P**	**23 17 36.0**	**-0.2**
comp=Z,1.1nm,0.5s,baz=240,slow=8.7,SNR=17							
GLB	**Gilahina Butte**	**22.50**	**46**	P	**P**	**23 17 38.9**	**+1.2**
COLD	**Coldfoot**	**22.50**	**29**	P	**P**	**23 17 37.3**	**-0.3**
VRDI	**Verde Repeater**	**22.61**	**47**	P	**P**	**23 17 38.4**	**-0.6**
VRDI				IAmb	IAmb	23 17 42.4	
comp=Z,7.6nm,0.7s							
WAX	**Waxell Ridge**	**22.72**	**49**	P	**P**	**23 17 40.4**	**+0.3**
WAX				IAmb	IAmb	23 17 43.6	
comp=Z,8.5nm,0.7s							
RIDG	**Independent Ri**	**22.76**	**40**	IAmb	IAmb	23 17 44.2	
comp=Z,9.5nm,0.6s							
MCARA	**McCarthy VSAT**	**22.85**	**46**	P	**P**	**23 17 41.3**	**-0.1**
MCARA				IAmb	IAmb	23 17 54.6	
comp=Z,8.3nm,0.9s							
MENT	**Mentasta**	**22.97**	**42**	P	**P**	**23 17 42.8**	**+0.2**
MENT				IAmb	IAmb	23 17 47.6	
comp=Z,7.2nm,0.6s							
DOT	**Dot Lake**	**23.06**	**40**	P	**P**	**23 17 44.0**	**+0.5**
BALM	**Baldy**	**23.09**	**47**	P	**P**	**23 17 43.5**	**-0.5**
BALM				IAmb	IAmb	23 17 46.6	
comp=Z,7.2nm,0.9s							
MESA	**MESA**	**23.11**	**50**	P	**P**	**23 17 43.2**	**-1.0**
MESA				IAmb	IAmb	23 17 48.1	
comp=Z,16nm,1.1s							
SCRK	**Sand Creek**	**23.20**	**40**	IAmb	IAmb	23 17 47.9	
comp=Z,8.9nm,0.8s							
PRP	**Porcupine Dome**	**23.22**	**35**	P	**P**	**23 17 44.6**	**-0.6**
YAH	**Yahtse**	**23.25**	**49**	P	**P**	**23 17 44.3**	**-1.3**
YAH				IAmb	IAmb	23 17 48.9	
comp=Z,11nm,0.8s							
BARN	**Barnard Glacie**	**23.42**	**47**	P	**P**	**23 17 46.0**	**-1.3**
TOLK	**Toolik Lake Re**	**23.55**	**26**	P	**P**	**23 17 47.2**	**-1.1**
TOLK				IAmb	IAmb	23 17 53.7	
comp=Z,6.4nm,0.6s							
CTGM	**Chitina Glacie**	**23.56**	**48**	P	**P**	**23 17 47.9**	**-0.7**
FYU	**Fort Yukon**	**23.81**	**33**	P	**P**	**23 17 51.0**	**+0.3**
EGAK	**Eagle**	**24.64**	**39**	P	**P**	**23 17 58.1**	**-0.2**
EGAK				IAmb	IAmb	23 18 02.5	
comp=Z,11nm,0.8s							
DHAK	**Deception Hill**	**24.87**	**53**	P	**P**	**23 17 59.6**	**-1.0**
DAWY	**Dawson**	**25.15**	**41**	P	**P**	**23 18 03.7**	**+0.6**
DAWY				IAmb	IAmb	23 18 06.3	
comp=Z,8.8nm,0.9s							
HYT	**Haines Junctio**	**25.38**	**49**	P	**P**	**23 18 02.1**	**-3.2**
HYT				IAmb	IAmb	23 18 12.2	
comp=Z,7.1nm,1.2s							
EPYK	**Eagle Plains**	**26.89**	**37**	P	**P**	**23 18 17.9**	**-0.8**
EPYK				IAmb	IAmb	23 18 21.6	
comp=Z,3.6nm,0.6s							
INK	**Inuvik**	**28.64**	**33**	P	**P**	**23 18 35.0**	**+0.8**
comp=Z,3.4nm,0.4s,baz=243,slow=7.1,SNR=42							
INK	**Inuvik**	**28.64**	**33**	P	**P**	**23 18 35.0**	**+0.8**
INK				pmax	pmax		
comp=Z,4.0nm,0.5s							
INK	**Inuvik**	**28.64**	**33**	P	**P**	**23 18 35.0**	**+0.8**
INK				IAmb	IAmb	23 18 36.6	
comp=Z,3.8nm,0.5s							
MOBC	**Moresby Island**	**28.84**	**65**	P	**P**	**23 18 37.1**	**+0.9**
DLBC	**Dease Lake**	**29.14**	**54**	P	**P**	**23 18 40.4**	**+1.5**
comp=Z,1.2nm,0.5s,baz=244,slow=6.0,SNR=3.6							
DLBC	**Dease Lake**	**29.14**	**54**	P	**P**	**23 18 38.3**	**-0.6**
KLR	**Kul'dur**	**31.70**	**288**	*ce*P	**P**	**23 19 01.7**	**+0.2**
C36M	**Paulatuk**	**32.22**	**33**	P	**P**	**23 19 05.6**	**-0.2**
C36M				IAmb	IAmb	23 19 09.8	
comp=Z,2.8nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**32.23**	**206**	T	T	23 52 52.2	
baz=18,slow=74,SNR=16							
H11N3	**WAKE ISLAND Hy**	**32.23**	**206**	T	T	23 52 50.6	
baz=18,slow=74,SNR=15							
H11N1	**WAKE ISLAND Hy**	**32.24**	**206**	T	T	23 52 53.1	
baz=18,slow=74,SNR=17							
H11S1	**WAKE ISLAND Hy**	**33.44**	**206**	T	T	23 54 27.8	
baz=21,slow=74,SNR=6.5							
H11S2	**WAKE ISLAND Hy**	**33.46**	**206**	T	T	23 54 27.2	

H11S3	**WAKE ISLAND Hy**	**33.46**	**206**	T	T	23 54 23.9			
	baz=64,slow=74,SNR=4.0								
USA0B	**Ussuriysk Arra**	**33.60**	**280**	P	**P**	**23 19 15.2**	**-3.0**		
USA0B				pmax	pmax				
	comp=Z,6.0nm,0.7s								
USA0B	**Ussuriysk Arra**	**33.60**	**280**	P	**P**	**23 19 15.2**	**-3.0**		
PGC	**Sidney**	**35.36**	**70**	P	**P**	**23 19 33.0**	**-0.3**		
LLLB	**Lillooet**	**35.55**	**66**	P	**P**	**23 19 34.8**	**-0.3**		
LLLB				IAmb	IAmb	23 19 43.7			
	comp=Z,5.2nm,0.8s								
YKA	**Yellowknife Ar**	**36.21**	**45**	P	**P**	**23 19 42.7**	**+2.3**		
	comp=Z,7.1nm,0.9s,baz=280,slow=8.2,SNR=56								
YKA				PcP	**PcP**	**23 22 05.8**	**+0.8**		
	comp=Z,1.0nm,0.9s,baz=287,slow=2.4,SNR=6.0								
BOD	**Bodaibo**	**38.95**	**308**	*eP*	**P**	**23 20 03.5**	**-0.2**		
BOD				pmax	pmax				
	comp=Z,8.0nm,1.6s								
KSRS	**Korea Array**	**39.77**	**273**	P	**P**	**23 20 12.1**	**+1.4**		
	comp=Z,1.7nm,0.7s,baz=52,slow=11,SNR=5.9								
MSO	**Missoula**	**41.92**	**68**	P	**P**	**23 20 27.5**	**-1.1**		
MSO				IAmb	IAmb	23 20 31.3			
	comp=Z,4.3nm,1.1s								
KVN	**Kaiserville**	**43.44**	**80**	P	**P**	**23 20 40.7**	**-0.4**		
KVN				pmax	pmax				
	comp=Z,2.0nm,0.8s								
KVN	**Kaiserville**	**43.44**	**80**	P	**P**	**23 20 40.7**	**-0.4**		
MCMT	**McKenzie Canyo**	**43.58**	**70**	P	**P**	**23 20 40.3**	**-1.9**		
NVAR	**Mina Array Bea**	**43.67**	**81**	P	**P**	**23 20 45.0**	**+2.1**		
	comp=Z,0.9nm,0.6s,baz=292,slow=7.8,SNR=4.5								
OMMB	**Old Mammoth Mi**	**43.70**	**83**	P	**P**	**23 20 41.9**	**-1.4**		
EGMT	**Eagleton**	**43.82**	**65**	P	**P**	**23 20 43.0**	**-0.9**		
EGMT				IAmb	IAmb	23 20 54.1			
	comp=Z,2.6nm,0.7s								
BOZ	**Bozeman (W)**	**43.92**	**69**	P	**P**	**23 20 43.5**	**-1.3**		
BOZ				pmax	pmax				
	comp=Z,2.0nm,0.7s								
BOZ	**Bozeman (W)**	**43.92**	**69**	P	**P**	**23 20 43.5**	**-1.3**		
ELK	**Elko**	**44.30**	**77**	P	**P**	**23 20 48.3**	**+0.3**		
ELK				pmax	pmax				
	comp=Z,5.0nm,0.8s								
ELK	**Elko**	**44.30**	**77**	P	**P**	**23 20 48.3**	**+0.3**		
ELK				IAmb	IAmb	23 21 02.9			
	comp=Z,4.5nm,0.8s								
FFC	**Flin Flon**	**44.95**	**53**	P	**P**	**23 20 52.3**	**-0.4**		
FFC				pmax	pmax				
	comp=Z,3.0nm,0.7s								
FFC	**Flin Flon**	**44.95**	**53**	P	**P**	**23 20 52.3**	**-0.4**		
FFC				IAmb	IAmb	23 20 54.5			
	comp=Z,2.9nm,0.7s								
H17A	**Grant Village**	**45.19**	**70**	P	**P**	**23 20 54.9**	**-0.2**		
H17A				IAmb	IAmb	23 21 05.4			
	comp=Z,2.3nm,0.4s								
ISA	**Isabella, Lake**	**45.21**	**85**	P	**P**	**23 20 53.8**	**-1.3**		
ISA				pmax	pmax				
	comp=Z,2.0nm,0.6s								
ISA	**Isabella, Lake**	**45.21**	**85**	P	**P**	**23 20 53.8**	**-1.3**		
ISA				IAmb	IAmb	23 20 59.5			
	comp=Z,2.4nm,0.6s								
R11A	**Troy Canyon, C**	**45.45**	**80**	P	**P**	**23 20 56.5**	**-0.6**		
RLMT	**Red Lodge**	**45.59**	**68**	P	**P**	**23 20 57.5**	**-0.7**		
RLMT				IAmb	IAmb	23 21 00.8			
	comp=Z,2.9nm,0.8s								
TPNV	**Topopah Spring**	**45.86**	**82**	P	**P**	**23 21 00.4**	**0.0**		
TPNV				pmax	pmax				
	comp=Z,4.0nm,0.8s								
TPNV	**Topopah Spring**	**45.86**	**82**	P	**P**	**23 21 00.4**	**0.0**		
TPNV				IAmb	IAmb	23 21 03.4			
	comp=Z,3.9nm,0.8s								
DUG	**Dugway, Tooele**	**46.13**	**76**	P	**P**	**23 21 01.7**	**-0.8**		
DUG				pmax	pmax				
	comp=Z,2.0nm,0.9s								
DUG	**Dugway, Tooele**	**46.13**	**76**	P	**P**	**23 21 01.7**	**-0.8**		
DUG				IAmb	IAmb	23 21 20.9			
	comp=Z,2.4nm,0.8s								
PSUT	**Pine Spring**	**46.44**	**78**	P	**P**	**23 21 04.9**	**-0.1**		
TCUT	**Toone Canyon**	**46.48**	**74**	P	**P**	**23 21 05.2**	**-0.1**		
GSC	**Goldstone, Bar**	**46.51**	**84**	P	**P**	**23 21 04.4**	**-1.0**		
GSC				pmax	pmax				
	comp=Z,4.0nm,0.7s								
GSC	**Goldstone, Bar**	**46.51**	**84**	P	**P**	**23 21 04.4**	**-1.0**		
GSC				IAmb	IAmb	23 21 09.8			
	comp=Z,4.5nm,0.7s								
PD31	**Pinedale Array**	**46.70**	**71**	P	**P**	**23 21 05.6**	**-1.4**		
PDAR	**Pinedale Array**	**46.70**	**71**	P	**P**	**23 21 08.7**	**+1.7**		
	comp=Z,1.0nm,0.6s,baz=298,slow=3.2,SNR=8.0								
ULN	**Ulaanbaatar**	**47.01**	**298**	P	**P**	**23 21 08.9**	**-0.3**		
ULN				pmax	pmax				
	comp=Z,4.0nm,1.2s								
ULN	**Ulaanbaatar**	**47.01**	**298**	P	**P**	**23 21 08.9**	**-0.3**		
ULN				IAmb	IAmb	23 21 11.0			
	comp=Z,4.3nm,1.1s								
SONM	**Songino Array**	**47.40**	**298**	P	**P**	**23 21 12.7**	**+0.4**		
	comp=Z,1.3nm,0.9s,baz=57,slow=11,SNR=6.8								
MSU	**Marysvale**	**47.52**	**77**	P	**P**	**23 21 12.0**	**-1.4**		
MSU	**Marysvale**	**47.52**	**77**	P	**P**	**23 21 12.0**	**-1.4**		
TMUT	**Trail Mountain**	**47.66**	**76**	P	**P**	**23 21 13.9**	**-0.7**		
LCMT	**Little Creek M**	**47.74**	**80**	P	**P**	**23 21 15.1**	**+0.1**		
ZAK	**Zakamensk**	**47.81**	**302**	*eP*	**P**	**23 21 16.3**	**+1.0**		
ZAK				pmax	pmax				
	comp=Z,5.0nm,1.2s								
Q16A	**Castle Valley**	**47.91**	**76**	P	**P**	**23 21 16.3**	**-0.1**		
RDMU	**Red Mountain**	**47.94**	**73**	P	**P**	**23 21 15.5**	**-1.2**		
KNB	**Kanab**	**48.01**	**79**	P	**P**	**23 21 17.5**	**+0.4**		
KNB				pmax	pmax				
	comp=Z,4.0nm,0.8s								
KNB	**Kanab**	**48.01**	**79**	P	**P**	**23 21 17.5**	**+0.4**		
HHC	**Hu-ho-hao-te**	**48.20**	**287**	*eP*	**P**	**23 21 21.5**	**+3.0**		
HHC				pmax	pmax				
	comp=Z,8.0nm,0.8s								
HHC				pmax	pmax				
	comp=Z,20nm,4.2s								
W13A	**Hualapai Mount**	**48.51**	**82**	P	**P**	**23 21 20.6**	**-0.4**		
W13A				IAmb	IAmb	23 21 25.0			
	comp=Z,2.3nm,1.0s								
U15A	**North Rim**	**48.70**	**80**	P	**P**	**23 21 22.6**	**0.0**		
U15A				IAmb	IAmb	23 21 25.8			
	comp=Z,4.1nm,0.9s								
Y12C	**Blythe**	**48.94**	**84**	P	**P**	**23 21 23.6**	**-0.5**		
O20A	**White River Ci**	**49.02**	**73**	P	**P**	**23 21 23.6**	**-1.3**		
O20A				IAmb	IAmb	23 21 39.0			
	comp=Z,2.2nm,0.6s								
PV13	**Radium Mtn., P**	**49.84**	**76**	P	**P**	**23 21 31.0**	**-0.2**		
WUAZ	**Wupatki**	**49.85**	**80**	P	**P**	**23 21 30.6**	**-0.6**		
WUAZ				IAmb	IAmb	23 21 36.1			
	comp=Z,4.0nm,0.8s								
MVCO	**Mesa Verde**	**50.62**	**76**	P	**P**	**23 21 36.7**	**-0.4**		
MVCO				IAmb	IAmb	23 21 41.4			
	comp=Z,4.3nm,0.9s								
SPA0	**Spitsbergen Ar**	**51.86**	**356**	P	**P**	**23 21 46.0**	**+0.4**		
TUC	**Tucson**	**52.27**	**83**	P	**P**	**23 21 48.6**	**-0.8**		
TUC				pmax	pmax				
	comp=Z,3.0nm,0.9s								
TUC	**Tucson**	**52.27**	**83**	P	**P**	**23 21 48.6**	**-0.8**		
TUC				IAmb	IAmb	23 21 52.2			
	comp=Z,3.2nm,0.8s								
DAG	**Danmarks Havn**	**52.97**	**6**	*i* P	**P**	**23 21 55.0**	**+1.2**		
DAG				pmax	pmax				
	comp=Z,1.0nm,0.6s								
DAG	**Danmarks Havn**	**52.97**	**6**	*i* P	**P**	**23 21 55.0**	**+1.2**		
	comp=Z,1.0nm,0.6s								
ANMO	**Albuquerque**	**53.33**	**77**	*ceP*	**P**	**23 21 58.4**	**+1.1**		
ANMO				pmax	pmax				
	comp=Z,2.0nm,1.3s								
SUMG	**Summit**	**54.72**	**14**	*i* P	**P**	**23 22 08.9**	**+1.8**		
SUMG				pmax	pmax				
	comp=Z,24nm,0.8s								
SUMG	**Summit**	**54.72**	**14**	P	**P**	**23 22 07.3**	**+0.2**		
SUMG	**Summit**	**54.72**	**14**	*i* P	**P**	**23 22 08.9**	**+1.8**		
	comp=Z,24nm,0.8s								
MNTX	**Cornudas Mount**	**56.12**	**80**	P	**P**	**23 22 17.0**	**-0.4**		
MNTX				IAmb	IAmb	23 22 20.1			
	comp=Z,2.8nm,0.9s								
MSTX	**Muleshoe**	**56.27**	**76**	P	**P**	**23 22 17.3**	**-1.2**		
WMOK	**Wichita Mounta**	**58.25**	**72**	P	**P**	**23 22 31.7**	**-0.6**		
WMOK				pmax	pmax				
	comp=Z,2.0nm,1.0s								
WMOK	**Wichita Mounta**	**58.25**	**72**	P	**P**	**23 22 31.7**	**-0.6**		
WMOK				IAmb	IAmb	23 22 34.2			
	comp=Z,2.2nm,1.0s								
TXAR	**Lajitas Array**	**58.81**	**80**	P	**P**	**23 22 37.9**	**+1.5**		
	comp=Z,1.4nm,0.9s,baz=326,slow=10,SNR=4.4								
TXAR				PcP	**PcP**	**23 23 27.5**	**+1.8**		
	comp=Z,0.7nm,0.6s,baz=298,slow=5.3,SNR=2.5								
ARCES	**ARCESS Array B**	**59.57**	**350**	P	**P**	**23 22 41.8**	**+0.8**		
	comp=Z,5.0nm,0.7s,baz=25,slow=7.9,SNR=19								

KURK	**Kurchatov**	**60.12**	**314**	*ceP*	**P**	**23 22 45.4**	**+0.4**		
KURK				pmax	pmax				
	comp=Z,10.0nm,1.3s								
KURK	**Kurchatov**	**60.12**	**314**	P	**P**	**23 22 44.2**	**-0.8**		
WMQ	**Urumqi**	**60.23**	**304**	*eP*	**P**	**23 22 49.6**	**+3.6**		
MKAR	**Makanchi Array**	**61.03**	**309**	P	**P**	**23 22 51.1**	**-0.2**		
	comp=Z,1.3nm,0.8s,baz=52,slow=6.6,SNR=10								
SCHQ	**Schefferville**	**61.12**	**38**	P	**P**	**23 22 52.9**	**+1.1**		
	comp=Z,5.2nm,0.9s,baz=320,slow=7.7,SNR=5.5								
SCHQ	**Schefferville**	**61.12**	**38**	P	**P**	**23 22 50.2**	**-1.6**		
MIAR	**Mount Ida**	**61.56**	**69**	P	**P**	**23 22 53.0**	**-2.0**		
MIAR				pmax	pmax				
	comp=Z,8.0nm,1.0s								
MIAR	**Mount Ida**	**61.56**	**69**	P	**P**	**23 22 53.0**	**-2.0**		
BRVK	**Borovoye**	**62.10**	**320**	*ceP*	**P**	**23 22 58.6**	**+0.2**		
BRVK				pmax	pmax				
	comp=Z,12nm,2.5s								
BRVK	**Borovoye**	**62.10**	**320**	P	**P**	**23 22 57.7**	**-0.7**		
SSPA	**Standing Stone**	**66.25**	**55**	P	**P**	**23 23 24.6**	**-1.2**		
FINES	**FINESS Array B**	**67.25**	**347**	P	**P**	**23 23 32.6**	**+0.8**		
	comp=Z,3.9nm,0.7s,baz=27,slow=9.4,SNR=16								
AAK	**Ala-Archa**	**67.88**	**310**	*ceP*	**P**	**23 23 37.1**	**+0.7**		
AAK				pmax	pmax				
	comp=Z,9.0nm,1.3s								
AAK	**Ala-Archa**	**67.88**	**310**	P	**P**	**23 23 35.9**	**-0.5**		
LMN	**Caledonia Moun**	**68.74**	**43**	P	**P**	**23 23 39.8**	**-1.6**		
NB2	**NORSAR Subarra**	**69.13**	**355**	P	**P**	**23 23 44.8**	**+1.1**		
	comp=Z,2.7nm,0.6s,baz=7.4,slow=6.9								
NOA	**NORSAR Array B**	**69.13**	**355**	P	**P**	**23 23 45.2**	**+1.5**		
	comp=Z,2.5nm,0.8s,baz=6.6,slow=6.3,SNR=10								
KK31	**Karatay Array**	**69.46**	**313**	P	**P**	**23 23 46.1**	**+0.1**		
KK31				pmax	pmax				
	comp=Z,7.0nm,0.8s								
KK31	**Karatay Array**	**69.46**	**313**	P	**P**	**23 23 46.1**	**+0.1**		
KSH	**Kashi**	**69.46**	**307**	P	**P**	**23 23 48.3**	**+2.1**		
KSH				pP	pwP	23 24 01.3	-1.0		
KSH				pmax	pmax				
	comp=Z,140nm,2.0s								
KSH				pmax	pmax				
	comp=Z,200nm,4.4s								
CMAR	**Chiang Mai Arr**	**71.26**	**277**	P	**P**	**23 23 57.3**	**0.0**		
	comp=Z,1.3nm,0.5s,baz=28,slow=6.7,SNR=7.3								
CMAR	**Chiang Mai Arr**	**71.26**	**277**	*ceP*	**P**	**23 23 58.2**	**+0.9**		
CMAR				pmax	pmax				
	comp=Z,1.0nm,0.5s								
OBN	**Obninsk**	**71.29**	**340**	*eP*	**P**	**23 23 56.4**	**-0.5**		
OBN				*e*		23 24 10.6			
OBN				*e*		23 26 38.2			
OBN				*ePPP*	PPP	23 28 17.8			
OBN				pmax	pmax				
	comp=Z,8.0nm,1.1s								
PBKT	**Sadao Pong**	**71.34**	**274**	P	**P**	**23 23 54.7**	**-3.0**		
PBKT				IAmb	IAmb	23 24 01.9			
	comp=Z,5.6nm,1.2s								
BTK	**Batken**	**71.64**	**311**	P	**P**	**23 23 58.7**	**-0.7**		
BTK	**Batken**	**71.64**	**311**	P	**P**	**23 23 58.7**	**-0.7**		
RAR	**Rarotonga**	**72.75**	**162**	LR	LR	23 49 47.5			
	comp=Z,178nm,20.2s,baz=239,slow=31								
VRH	**Novokhopyorsk**	**73.56**	**335**	*eP*	**P**	**23 24 10.0**	**-0.5**		
VRH				pmax	pmax				
	comp=Z,10.0nm,0.6s								
VSR	**Storozhevoye**	**74.23**	**336**	*eP*	**P**	**23 24 14.8**	**+0.4**		
VSR				pmax	pmax				
	comp=Z,9.0nm,1.1s								
KBL	**Kabul**	**76.82**	**308**	P	**P**	**23 24 28.3**	**-1.6**		
KBL				pmax	pmax				
	comp=Z,7.0nm,0.9s								
KBL	**Kabul**	**76.82**	**308**	P	**P**	**23 24 28.3**	**-1.6**		
AKASG	**Malin Array Be**	**76.99**	**342**	P	**P**	**23 24 31.2**	**+1.0**		
	comp=Z,5.2nm,0.6s,baz=22,slow=6.0,SNR=23								
AKASG	**Malin Array Be**	**76.99**	**342**	*ceP*	**P**	**23 24 31.2**	**+1.0**		
AKASG				pmax	pmax				
	comp=Z,8.0nm,0.8s								
AKBB	**Malin Array Si**	**76.99**	**342**	P	**P**	**23 24 28.8**	**-1.4**		
AKBB				pmax	pmax				
	comp=Z,7.0nm,0.9s								
AKBB	**Malin Array Si**	**76.99**	**342**	P	**P**	**23 24 28.8**	**-1.4**		
CLL	**Collm**	**78.69**	**353**	*i* P	**P**	**23 24 41.6**	**+2.0**		
CLL				*ep*	**pP**	**23 24 50.0**	**+1.1**		
CLL	**Collm**	**78.69**	**353**	*eP*	**P**	**23 24 42.0**	**+2.4**		
CLL				*e*		23 24 50.0			
RAO	**Raoul Island**	**78.79**	**179**	LR	LR	23 52 39.8			
	comp=Z,32nm,20.5s,baz=218,slow=30								
BRG	**Berggiesshubel**	**79.04**	**352**	*eP*	**P**	**23 24 42.0**	**+0.4**		
BRG				pmax	pmax				
	comp=Z,4.0nm,0.8s								
GEYT	**Alibeck**	**79.24**	**318**	P	**P**	**23 24 43.4**	**+0.4**		
	comp=Z,0.9nm,0.5s,baz=358,slow=5.0,SNR=3.9								
DPC	**Dobruska-Polom**	**79.31**	**350**	*eP*	**P**	**23 24 44.9**	**+1.7**		
DPC	**Dobruska-Polom**	**79.31**	**350**	*eP*	**P**	**23 24 44.9**	**+1.7**		
KRLC	**Kraliky**	**79.53**	**350**	*eP*	**P**	**23 24 45.5**	**+1.1**		
KRLC	**Kraliky**	**79.53**	**350**	*eP*	**P**	**23 24 45.5**	**+1.1**		
SORM	**Soroca**	**79.61**	**342**	⇑P	**P**	**23 24 45.8**	**+1.1**		
SORM	**Soroca**	**79.61**	**342**	⇑P	**P**	**23 24 45.8**	**+1.1**		
NKC	**Novy Kostel**	**79.80**	**353**	*eP*	**P**	**23 24 47.5**	**+1.7**		
NKC	**Novy Kostel**	**79.80**	**353**	*eP*	**P**	**23 24 47.5**	**+1.7**		
KIV	**Kislovodsk**	**79.81**	**331**	*eP*	**P**	**23 24 47.4**	**+1.4**		
KIV				*e*		23 24 51.8			
KIV				*e*		23 27 48.9			
KIV				*ePPP*	PPP	23 29 36.5			
KIV				pmax	pmax				
	comp=Z,3.0nm,0.8s								
KBZ	**Khabaz**	**79.95**	**331**	P	**P**	**23 24 47.9**	**+1.3**		
	comp=Z,1.7nm,0.6s,baz=346,slow=0.6,SNR=3.7								
PBCC	**Pribram**	**80.21**	**352**	*eP*	**P**	**23 24 49.2**	**+1.2**		
HRA	**Herat**	**80.29**	**313**	P	**P**	**23 24 48.0**	**-1.0**		
HRA				IAmb	IAmb	23 24 51.2			
	comp=Z,3.7nm,0.8s								
VRAC	**Vranov**	**80.31**	**350**	⇓P	**P**	**23 24 49.9**	**+1.3**		
VRAC	**Vranov**	**80.31**	**350**	⇓P	**P**	**23 24 49.9**	**+1.3**		
ZEI	**Tsey**	**80.47**	**330**	*eP*	**P**	**23 24 48.5**	**-1.3**		
ZEI				pmax	pmax				
	comp=Z,4.0nm,0.8s								
TRPA	**Tarpa**	**80.66**	**346**	⇑P	**P**	**23 24 52.4**	**+2.1**		
BUR08	**Bucovina Ar. S**	**80.68**	**344**	P	**P**	**23 24 50.1**	**-0.5**		
BURAR	**Bucovina Array**	**80.70**	**344**	⇓P	**P**	**23 24 52.7**	**+1.9**		
BURAR	**Bucovina Array**	**80.70**	**344**	⇓P	**P**	**23 24 52.7**	**+1.9**		
KHC	**Kasperske Hory**	**80.80**	**352**	P	**P**	**23 24 51.4**	**+0.2**		
KHC				pmax	pmax				
	comp=Z,2.0nm,1.1s								
KHC	**Kasperske Hory**	**80.80**	**352**	*eP*	**P**	**23 24 52.5**	**+1.3**		
KHC	**Kasperske Hory**	**80.80**	**352**	P	**P**	**23 24 51.4**	**+0.2**		
VYHS	**Vyhne**	**80.84**	**348**	*eP*	**P**	**23 24 53.2**	**+1.8**		
VYHS				pmax	pmax				
	comp=Z,4.0nm,0.9s								
VYHS	**Vyhne**	**80.84**	**348**	*eP*	**P**	**23 24 53.2**	**+1.8**		
WRA	**Warramunga Arr**	**81.00**	**224**	P	**P**	**23 24 53.9**	**+1.4**		
	comp=Z,1.0nm,0.8s,baz=114,slow=3.0,SNR=3.4								
GERES	**GERESS Array B**	**81.07**	**352**	P	**P**	**23 24 53.6**	**+0.9**		
	comp=Z,1.5nm,0.7s,baz=28,slow=6.0,SNR=14								
BIZ	**Bicaz**	**81.19**	**343**	⇑P	**P**	**23 24 54.8**	**+1.5**		
ARCR	**ARCALIA**	**81.37**	**344**	⇑P	**P**	**23 24 56.8**	**+2.6**		
CONA	**Conrad Observa**	**81.76**	**350**	*ePcP*	**P**	**23 24 58.7**	**+2.4**		
	comp=Z,3.7nm,0.7s								
DRGR		**81.93**	**345**	⇑P	**P**	**23 24 58.7**	**+1.4**		
DRGR		**81.93**	**345**	⇑P	**P**	**23 24 58.7**	**+1.4**		
DOPR	**Dopca**	**82.26**	**343**	⇑P	**P**	**23 25 01.2**	**+2.2**		
ARSA	**Arzberg**	**82.46**	**350**	*ePcP*	**P**	**23 25 02.4**	**+2.4**		
	comp=Z,3.0nm,0.9s								
CFR	**Carcaliu**	**82.48**	**341**	⇑P	**P**	**23 25 01.5**	**+1.5**		
CFR	**Carcaliu**	**82.48**	**341**	⇑P	**P**	**23 25 01.5**	**+1.5**		
MLR	**Muntele Rosu**	**82.62**	**343**	⇓P	**P**	**23 25 03.6**	**+2.6**		
MLR	**Muntele Rosu**	**82.62**	**343**	⇓P	**P**	**23 25 03.6**	**+2.6**		
RETA	**Reutte**	**82.66**	**354**	*ePcP*	**P**	**23 25 03.5**	**+2.4**		
	comp=Z,2.6nm,0.9s								
WATA	**Walderalm**	**82.75**	**353**	*ePcP*	**P**	**23 25 03.5**	**+1.8**		
	comp=Z,6.7nm,1.0s								
MOTA	**Moosalm**	**82.78**	**353**	*ePcP*	**P**	**23 25 04.5**	**+2.7**		
	comp=Z,11nm,1.3s								
WTTA	**Wattenberg**	**82.81**	**353**	*ePcP*	**P**	**23 25 04.1**	**+2.0**		
	comp=Z,4.9nm,0.8s								
KBA	**Koelnbreinsper**	**82.85**	**352**	*ePcP*	**P**	**23 25 04.8**	**+2.6**		
	comp=Z,12nm,0.6s								
SQTA	**Sankt Quirin**	**82.89**	**353**	*ePcP*	**P**	**23 25 04.4**	**+2.0**		
	comp=Z,6.0nm,0.8s								
DAVA	**Damuels**	**82.92**	**354**	*ePcP*	**P**	**23 25 05.2**	**+2.7**		
	comp=Z,4.6nm,1.1s								
ARR	**Arges**	**82.98**	**344**	⇑P	**P**	**23 25 06.9**	**+4.2**		
SOKA	**Soboth**	**83.08**	**351**	*i* PcP	**P**	**23 25 05.5**	**+2.2**		
	comp=Z,5.3nm,0.8s								
FETA	**Feichten**	**83.12**	**354**	*i* PcP	**P**	**23 25 05.6**	**+2.0**		
	comp=Z,7.4nm,0.9s								
BZS	**Buzias**	**83.25**	**346**	⇑P	**P**	**23 25 04.9**	**+0.8**		
BZS	**Buzias**	**83.25**	**346**	⇑P	**P**	**23 25 04.9**	**+0.8**		

ABTA	**Abfaltersbach**	**83.25**	**352**	*i* PcP	**P**	**23 25 05.9**	**+1.7**		
	comp=Z,2.7nm,0.6s								
GZR	**Gura Zlata**	**83.28**	**345**	⇑P	**P**	**23 25 05.2**	**+0.9**		
GZR	**Gura Zlata**	**83.28**	**345**	⇑P	**P**	**23 25 05.2**	**+0.9**		
MDVR	**Moldovita**	**84.05**	**346**	⇓P	**P**	**23 25 09.6**	**+1.4**		
ASAR	**Alice Springs**	**84.45**	**223**	P	**P**	**23 25 10.9**	**+0.5**		
	comp=Z,0.9nm,0.8s,baz=43,slow=2.9,SNR=6.5								
DIVS	**Divibare**	**84.98**	**347**	P	**P**	**23 25 12.3**	**-0.7**		
DIVS				IAmb	IAmb	23 25 15.5			
	comp=Z,2.5nm,0.9s								
BNI	**Bardonecchia**	**85.32**	**356**	P	**P**	**23 25 12.9**	**-1.9**		
BNI				pmax	pmax				
	comp=Z,9.0nm,0.9s								
BNI	**Bardonecchia**	**85.32**	**356**	P	**P**	**23 25 12.9**	**-1.9**		
ESDC	**Sonseca Array**	**90.69**	**4**	P	**P**	**23 25 40.6**	**+0.1**		
	comp=Z,0.2nm,0.5s,baz=32,slow=38,SNR=3.8								
MAW	**Mawson**	**145.35**	**216**	PKPbc	**PKPab**	**23 32 15.1**	**+0.9**		
	comp=Z,8.2nm,1.0s,baz=45,slow=2.6,SNR=6.9								
BOSA	**Boshof**	**152.03**	**311**	PKPbc	**PKPbc**	**23 32 31.7**	**-1.2**		
	comp=Z,1.8nm,0.6s,baz=45,slow=3.1,SNR=8.6								

SJA ***23*** *23:24:47.2±0.8, 21°.83S×68°.54W, h133km±10km, ML3.2, MW3.5*

GUC ***23*** *23:24:49.1±0.5, 21°.87S×68°.51W, h125km±4km, ML3.6*

ISC 23 23:24:48.9±1.8**, 21°.85S**±0°.04×**68°.57W**±0°.08**, h127**km±14**km, n23,** σ**0**.**40**/36**, 9C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.63**	**275**	⇑*i* P	**Pn**	**23 25 08.5**	**-0.1**
PB09				*i* S	**Sn**	**23 25 24.3**	**+0.7**
PB09	**IPOC Station P**	**0.63**	**275**	*i* P	**Pn**	**23 25 08.6**	**-0.1**
PB09				IAML		23 25 28.6	
	comp=Z,566nm,0.2s						
LVC	**Limon Verde**	**0.82**	**203**	*eP*	**Pn**	**23 25 09.4**	**-1.0**
LVC	**Limon Verde**	**0.82**	**203**	*i* P	**Pn**	**23 25 09.8**	**-0.6**
LVC				IAML		23 25 29.1	
	comp=Z,138nm,0.1s						
PB03	**IPOC Station P**	**1.12**	**260**	⇑*i* P	**Pn**	**23 25 12.5**	**-0.4**
PB03				*i* S	**Sn**	**23 25 31.1**	**0.0**
PB03				IAML		23 25 32.4	
	comp=E,2μm,0.2s						
PB01	**IPOC Station P**	**1.17**	**313**	⇑*i* P	**Pn**	**23 25 13.0**	**-0.4**
PB01				*i* S	**Sn**	**23 25 32.4**	**+0.4**
PB01				IAML		23 25 35.0	
	comp=E,1μm,0.1s						
PB07	**IPOC Station P**	**1.23**	**275**	⇑*i* P	**Pn**	**23 25 13.8**	**-0.2**
PB07				*i* S	**Sn**	**23 25 33.2**	**0.0**
PB06	**IPOC Station P**	**1.26**	**227**	⇑*i* P	**Pn**	**23 25 14.3**	**-0.1**
PB06				*i* S	**Sn**	**23 25 33.9**	**+0.1**
PB06				IAML		23 25 34.8	
	comp=E,974nm,0.1s						
PB06	**IPOC Station P**	**1.26**	**227**	*i* P	**Pn**	**23 25 14.4**	**0.0**
PB06				*eS*	**Sn**	**23 25

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,21nm,1.1s,baz=275,slow=9.1						
DAVA	Damuels	26.41	71	epP	P	23 41 47.9	+0.3
	comp=Z,14nm,1.3s						
ASSE	Asse, Remlinge	26.53	60	eP	P	23 41 48.6	+0.3
	comp=Z,7.5nm,1.0s,baz=275,slow=9.1						
FUORN	Ofenpass-Fuorn	26.78	73	P	P	23 41 49.2	-1.9
RETA	Reutte	26.97	71	epP	P	23 41 52.6	+0.1
	comp=Z,5.4nm,0.9s						
GRA1	Grafenberg Arr	26.99	66	P	P	23 41 49.8	-2.8
GRA1				IAmb	IAmb	23 42 01.3	
	comp=Z,11nm,1.2s						
GRF	Grafenberg Arr	26.99	66	eP	P	23 41 52.3	-0.3
	comp=Z,14nm,1.3s,baz=275,slow=9.1						
FETA	Feichten	27.02	72	epP	P	23 41 53.5	+0.3
	comp=Z,6.4nm,1.1s						
GGN	Saint George	27.04	284	P	P	23 41 53.5	+0.5
MOTA	Moosalm	27.22	71	epP	P	23 41 55.3	+0.4
	comp=Z,11nm,1.2s						
SQTA	Sankt Quirin	27.31	71	epP	P	23 41 55.5	-0.2
	comp=Z,6.7nm,1.1s						
G65A	Princeton	27.51	285	P	P	23 41 57.1	-0.2
G65A				IAmb	IAmb	23 41 58.9	
	comp=Z,11nm,1.2s						
MANZ	Manzenberg	27.54	65	eP	P	23 41 56.0	-1.6
	comp=Z,12nm,1.1s,baz=275,slow=9.1						
WTTA	Wattenberg	27.59	71	pP	P	23 41 58.6	+0.4
	comp=Z,7.4nm,1.2s						
E63A	Oxbow	27.83	287	P	P	23 42 01.2	+1.0
E63A				IAmb	IAmb	23 42 08.8	
	comp=Z,15nm,1.4s						
CTI	Castel Tesino	27.84	73	P	P	23 41 58.5	-1.9
CLL	Collm	28.01	62	eP	P	23 42 03.0	+1.3
	comp=Z,7.0nm,1.3s						
CLL				ePPPP		23 43 06.0	
CLL				Lm	MLR	23 52 00.0	
	comp=Z,600nm,18.0s						
CLL	Collm	28.01	62	P	P	23 41 59.9	-1.8
CASP	Castiglione de	28.15	80	P	P	23 41 59.1	-4.0
ABTA	Abfaltersbach	28.28	72	epP	P	23 42 04.4	+0.2
	comp=Z,6.8nm,1.1s						
NC405	NORSAR Array S	28.40	41	P	P	23 42 04.7	-0.4
E62A	Clayton Lake	28.53	288	P	P	23 42 06.2	-0.2
E62A				IAmb	IAmb	23 42 10.5	
	comp=Z,20nm,1.6s						
KHC	Kasperske Hory	28.59	66	eP	P	23 42 04.9	-2.0
KHC	Kasperske Hory	28.59	66	P	P	23 42 04.9	-2.0
PKME	Peaks-Kenny Pk	28.68	285	P	P	23 42 08.3	+0.6
PKME				IAmb	IAmb	23 42 31.0	
	comp=Z,13nm,1.2s						
GEC2	GERESS Array S	28.71	67	P	P	23 42 06.6	-1.5
GERES	GERESS Array B	28.71	67	P	P	23 42 06.9	-1.2
	comp=Z,3.1nm,1.1s,baz=281,slow=7.9,SNR=12						
KBA	Koelnbreinsper	28.77	71	epP	P	23 42 10.2	+1.5
	comp=Z,4.7nm,1.0s						
PRU	Pruhonice	29.10	65	eP	P	23 42 12.2	+0.8
FRB	Frobisher Bay	29.31	324	P	P	23 42 13.5	+0.4
	comp=Z,9.5nm,0.9s,baz=102,slow=7.9,SNR=7.3						
OBKA	Obir	29.70	72	eP	P	23 42 16.5	-0.4
	comp=Z,12nm,1.3s						
I63A	Otisfield	29.89	283	P	P	23 42 19.4	+0.9
KEST	Kesra	29.93	95	P	P	23 42 17.4	-1.6
	comp=Z,6.7nm,1.0s,baz=284,slow=6.2,SNR=6.5						
KEST	Kesra	29.93	95	IAmb	IAmb	23 42 19.8	
	comp=Z,15nm,1.2s						
UPC	Upice	29.98	63	eP	P	23 42 19.8	+0.6
SOKA	Soboth	29.99	71	eP	P	23 42 18.3	-1.1
	comp=Z,4.0nm,1.2s						
AQU	L'Aquila	30.07	80	P	P	23 42 19.4	-0.8
AQU				IAmb	IAmb	23 42 21.9	
	comp=Z,11nm,1.0s						
OSTC	Ostas	30.10	63	eP	P	23 42 20.8	+0.5
ARSA	Arzberg	30.19	70	P	P	23 42 20.4	-0.7
	comp=Z,3.9nm,0.9s						
DPC	Dobruska-Polom	30.19	64	eP	P	23 42 21.4	+0.2
CONA	Conrad Observa	30.28	68	epP	P	23 42 21.9	-0.1
	comp=Z,3.5nm,0.9s						
KRLC	Kraliky	30.52	64	eP	P	23 42 24.8	+0.7
INTR	Introdacqua	30.54	80	P	P	23 42 21.9	-2.4
INTR				IAmb	IAmb	23 42 50.1	
	comp=Z,10nm,1.4s						
MORC	Moravsky Berou	31.05	64	⇑P	P	23 42 28.0	-0.8
MORC	Moravsky Berou	31.05	64	P	P	23 42 28.2	-0.6
MORC				IAmb	IAmb	23 42 34.2	
	comp=Z,14nm,1.4s						
TRQ	Mont Tremblant	32.01	289	P	P	23 42 38.4	+1.1
OJC	Ojcow	32.42	63	IAmb	IAmb	23 42 45.6	
	comp=Z,5.1nm,0.7s						
NCB	Newcomb	32.42	285	P	P	23 42 42.1	+1.3
NCB				IAmb	IAmb	23 42 45.8	
	comp=Z,10nm,1.3s						
LONY	Lake Ozonia	32.47	286	P	P	23 42 43.6	+2.4
LONY				IAmb	IAmb	23 42 51.0	
	comp=Z,6.9nm,1.1s						
J59A	Piesco	32.78	284	P	P	23 42 45.8	+1.9
J59A				IAmb	IAmb	23 42 49.3	
	comp=Z,11nm,1.3s						
PSZ	Piszkesteto	32.93	67	P	P	23 42 44.4	-1.0
TIP	Timpagrande	33.62	84	P	P	23 42 50.2	-1.2
TIP				IAmb	IAmb	23 43 05.8	
	comp=Z,6.7nm,1.2s						
K58A	Earlville	33.80	283	P	P	23 42 54.3	+1.4
D53A	Lac Vacive, Po	33.88	292	P	P	23 42 54.6	+1.0
D53A				IAmb	IAmb	23 42 58.7	
	comp=Z,8.7nm,1.4s						
DIVS	Divibare	34.05	74	P	P	23 42 53.8	-1.4
DIVS				IAmb	IAmb	23 42 56.8	
	comp=Z,7.5nm,1.2s						
PDG	Podgorica	34.11	77	P	P	23 42 53.5	-2.1
KSPA	Keystone Colle	34.32	281	P	P	23 42 57.9	+0.5
TRPA	Tarpa	34.61	66	⇑P	P	23 42 58.9	-0.8
BZS	Buzias	34.68	71	⇑P	P	23 43 00.3	-0.2
DRGR		35.07	68	⇑P	P	23 43 03.1	-0.9
FINES	FINESS Array B	35.29	43	P	P	23 43 04.4	-1.0
	comp=Z,2.7nm,0.9s,baz=224,slow=8.0,SNR=7.8						
HERR	Herculane	35.45	72	⇑P	P	23 43 05.8	-1.3
GZR	Gura Zlata	35.53	71	⇑P	P	23 43 07.6	-0.2
LOT	Lotru	36.17	70	⇑P	P	23 43 12.1	-1.3
FNA	Florina	36.21	79	P	P	23 43 12.8	-0.9
ARCES	ARCESS Array B	36.22	29	P	P	23 43 12.8	-0.6
	comp=Z,6.8nm,1.0s,baz=329,slow=13,SNR=3.8						
BURAR	Bucovina Array	36.48	66	⇑P	P	23 43 15.9	-0.2
VTS	Vitosha	36.78	75	⇑P	P	23 43 17.8	-1.0
VTS	Vitosha	36.78	75	P	P	23 43 17.9	-0.8
DOPR	Dopca	37.09	69	⇑P	P	23 43 20.3	-0.8
BIZ	Bicaz	37.26	67	⇑P	P	23 43 22.3	-0.3
HUMR	Humele	37.29	71	⇑P	P	23 43 22.6	-0.2
N54A	Moraine State	37.48	283	P	P	23 43 26.1	+1.5
S58A	Poland Farm, P	37.57	277	P	P	23 43 26.5	+1.2
S58A				IAmb	IAmb	23 43 33.4	
	comp=Z,15nm,1.4s						
AGG	Agios Georgios	37.61	81	P	P	23 43 24.5	-1.1
MLR	Muntele Rosu	37.61	69	⇑P	P	23 43 25.7	0.0
MLR	Muntele Rosu	37.61	69	P	P	23 43 24.9	-0.7
MLR				IAmb	IAmb	23 43 32.2	
	comp=Z,10nm,1.1s						
Q56A	Snyder Ridge,	37.73	279	P	P	23 43 28.0	+1.4
TESR	Tescani	37.75	68	⇑P	P	23 43 25.9	-0.8
PLOR	Plostina	37.96	69	⇑P	P	23 43 27.9	-0.6
VRI	Vrincioaia	38.00	68	⇑P	P	23 43 28.6	-0.3
AKASG	Malin Array Be	38.21	60	P	P	23 43 28.3	-2.2
	comp=Z,3.3nm,0.8s,baz=280,slow=8.5,SNR=8.2						
AKBB	Malin Array Si	38.21	60	P	P	23 43 29.0	-1.5
SORM	Soroca	38.36	64	⇑P	P	23 43 29.2	-2.5
ELND	Elena	38.47	73	⇑P	P	23 43 32.9	+0.1
RAZG	Razgrad	38.66	72	⇑P	P	23 43 32.7	-1.7
ANWB	Willy Bob	39.00	237	P	P	23 43 36.3	-1.1
MILM	Milestii Mici	39.03	66	⇑P	P	23 43 35.3	-2.1
CFR	Carcaliu	39.17	69	⇑P	P	23 43 36.7	-1.9
HARR	Harsova	39.21	70	⇑P	P	23 43 36.5	-2.4
ALN	Alexandroupoli	39.40	76	P	P	23 43 40.1	-0.5
ACSO	Alum Creek Sta	39.86	283	P	P	23 43 45.8	+1.3
Q51A	Peebles	40.64	282	P	P	23 43 51.2	+0.2
Q51A				IAmb	IAmb	23 43 56.3	
	comp=Z,20nm,1.5s						
TOA0	Torodi Ar. Sit	40.73	132	P	P	23 43 50.9	-1.0
TORD	Torodi Ar. Bea	40.73	132	P	P	23 43 50.5	-1.3
	comp=Z,5.4nm,0.9s,baz=326,slow=6.2,SNR=22						
U54A	Nelsons Funny	40.75	277	P	P	23 43 51.9	-0.1
FCC	Fort Churchill	41.14	314	P	P	23 43 55.4	+0.6
TZTN	Tazewell	41.95	278	P	P	23 44 02.0	+0.3
TZTN				IAmb	IAmb	23 44 06.5	
	comp=Z,18nm,1.6s						
GRTK	Grand Turk	42.12	251	P	P	23 44 01.7	-1.5
T50A	Nancy	42.62	280		P	23 44 08.2	+1.0
G40A	Rib Lake	42.68	293	P	P	23 44 08.9	+1.3
P46A	Rosedale	43.05	284	P	P	23 44 11.2	+0.6
DBIC	Dimbokro	43.29	145	P	P	23 44 12.6	-0.1
	comp=Z,3.8nm,0.9s,baz=324,slow=8.0,SNR=5.0						
GRGR	Grenville	43.35	231	P	P	23 44 11.5	-1.8
BR131	Keskin Array S	45.12	74	P	P	23 44 26.3	-1.1
BRTR	Keskin Array B	45.12	74	P	P	23 44 26.8	-0.6
	comp=Z,2.1nm,0.9s,baz=292,slow=6.5,SNR=13						
BRTR				PcP	PcP	23 46 07.7	-0.2
	comp=Z,0.2nm,0.6s,baz=266,slow=3.7,SNR=3.5						
WVT	Waverly	45.15	280	P	P	23 44 27.0	-0.5
WVT				IAmb	IAmb	23 44 35.8	
	comp=Z,20nm,1.9s						
FFC	Flin Flon	46.39	310	P	P	23 44 39.4	+2.4
FFC				IAmb	IAmb	23 44 48.3	
	comp=Z,6.1nm,1.2s						
P40A	Paris	46.40	287	P	P	23 44 39.2	+1.8
CCM	Cathedral Cave	46.56	285	P	P	23 44 40.9	+2.3
CCM				IAmb	IAmb	23 44 43.7	
	comp=Z,6.0nm,0.9s						
T42A	Van Buren	46.97	283	P	P	23 44 43.6	+1.8
T42A				IAmb	IAmb	23 44 51.5	
	comp=Z,6.3nm,1.2s						
R40A	Maddies Statio	47.15	285	P	P	23 44 44.1	+0.8
R40A				IAmb	IAmb	23 44 54.2	
	comp=Z,7.6nm,1.2s						
MGMO	Mountain Grove	47.72	284	P	P	23 44 49.3	+1.6
FCAR	Ozark Folk Cen	48.26	283	P	P	23 44 52.4	+0.5
U40A	Yellville	48.53	283	P	P	23 44 55.9	+1.9
U40A				IAmb	IAmb	23 45 02.9	
	comp=Z,10nm,1.2s						
KBZ	Khabaz	49.40	65	P	P	23 45 01.1	+0.7
	comp=Z,3.3nm,0.9s,baz=306,slow=3.2,SNR=5.2						
W39A	Magazine	49.78	283	P	P	23 45 05.3	+1.8
W39A				IAmb	IAmb	23 45 13.1	
	comp=Z,8.2nm,1.2s						
YKA	Yellowknife Ar	49.81	323	P	P	23 45 04.8	+1.4
	comp=Z,0.3nm,0.7s,baz=71,slow=7.3,SNR=5.5						
YKA				PcP	PcP	23 46 24.5	+0.6
	comp=Z,0.5nm,0.8s,baz=66,slow=4.2,SNR=6.6						
MIAR	Mount Ida	49.98	282	P	P	23 45 06.9	+1.8
MIAR				IAmb	IAmb	23 45 14.8	
	comp=Z,8.2nm,1.1s						
AKH	Akhalkalaki	50.90	67	⇑P	P	23 45 11.6	-0.6
AKH	Akhalkalaki	50.90	67	P	P	23 45 10.6	-1.6
AKH				IAmb	IAmb	23 45 18.2	
	comp=Z,6.2nm,1.0s						
LAO	LASA Array	52.16	302	P	P	23 45 21.7	+0.3
LAO				IAmb	IAmb	23 45 26.4	
	comp=Z,8.5nm,1.1s						
ARU	Arti	52.62	44	P	P	23 45 24.1	-0.5
INK	Inuvik	54.21	334	P	P	23 45 36.2	+0.2
	comp=Z,3.4nm,1.0s,baz=68,slow=9.4,SNR=7.7						
INK	Inuvik	54.21	334	P	P	23 45 36.9	+0.8
K22A	Casper	54.36	297	P	P	23 45 39.0	+1.3
K22A				IAmb	IAmb	23 45 45.4	
	comp=Z,8.0nm,1.1s						
GCMT	Greycliff	54.68	302	P	P	23 45 40.7	+0.6
RLMT	Red Lodge	54.78	301	P	P	23 45 42.2	+1.3
RLMT				IAmb	IAmb	23 45 52.6	
	comp=Z,11nm,1.6s						
ISCO	Idaho Springs	55.28	294	P	P	23 45 44.7	+0.1
YNE	Yellowstone No	55.29	301	P	P	23 45 45.7	+1.1
AMTX	Amarillo	55.37	287	P	P	23 45 45.0	-0.1
WALA	Waterton Lakes	55.49	307	P	P	23 45 46.4	+0.6
YMP	Mirror Lake Pl	55.52	301	P	P	23 45 47.5	+1.2
YHH	Holmes Hill	55.91	302	P	P	23 45 48.0	-1.1
H17A	Grant Village	55.95	301	P	P	23 45 48.8	-0.6
BOZ	Bozeman (W)	55.96	303	P	P	23 45 50.5	+1.2
BOZ				IAmb	IAmb	23 45 53.8	
	comp=Z,5.0nm,1.0s						
YHL	Hebgen Lake	56.08	302	P	P	23 45 50.9	+0.6
YPP	Pitchstone Pla	56.16	301	P	P	23 45 52.2	+1.3
FLWY	Flagg Ranch	56.20	301	P	P	23 45 51.4	+0.4
FLWY				IAmb	IAmb	23 45 58.2	
	comp=Z,15nm,1.7s						
PDAR	Pinedale Array	56.20	299	P	P	23 45 52.0	+0.9
	comp=Z,1.7nm,1.0s,baz=60,slow=8.8,SNR=4.5						
SDCO	Great Sand Dun	56.33	292	P	P	23 45 51.7	-0.5
SDCO				IAmb	IAmb	23 46 25.7	
	comp=Z,6.3nm,1.6s						
IMW	Indian Meadow	56.44	301	P	P	23 45 54.0	+1.1
IMW				IAmb	IAmb	23 45 57.7	
	comp=Z,13nm,1.6s						
SNOW	Snow King Moun	56.56	300	P	P	23 45 54.8	+1.1
MSTX	Muleshoe	56.63	287	P	P	23 45 54.8	+0.6
MSTX				IAmb	IAmb	23 46 09.7	
	comp=Z,5.2nm,0.9s						
FXWY	Fox Creek	56.63	300	P	P	23 45 54.8	+0.6
DLMT	Dillon	56.66	303	P	P	23 45 55.6	+1.3
DLMT				IAmb	IAmb	23 45 58.6	
	comp=Z,8.7nm,1.2s						
MSO	Missoula	56.67	305	P	P	23 45 55.1	+0.9
TPAW	Teton Pass	56.67	300	P	P	23 45 54.6	+0.1
REDW	Red Top Meadow	56.67	300	P	P	23 45 55.0	+0.5
REDW				IAmb	IAmb	23 45 59.3	
	comp=Z,8.0nm,1.1s						
RDMU	Red Mountain	57.40	297	P	P	23 45 59.3	-0.4
NEW	Newport	57.71	308	P	P	23 46 02.3	+0.8
NEW				IAmb	IAmb	23 46 05.2	
	comp=Z,5.2nm,1.0s						
PV22	Blue Mesa, Par	58.03	294	P	P	23 46 04.7	+0.6
PV22				IAmb	IAmb	23 46 13.2	
	comp=Z,5.2nm,1.3s						
HWUT	Hardware Ranch	58.08	299	P	P	23 46 04.5	+0.1
HWUT				IAmb	IAmb	23 46 08.2	
	comp=Z,3.3nm,0.8s						
PV16	Nyswonger Mesa	58.24	294	P	P	23 46 06.0	+0.4
TCUT	Toone Canyon	58.25	298	P	P	23 46 05.8	+0.1
PV09	Paradox Valley	58.28	294	P	P	23 46 06.3	+0.3
PV14	Lion Creek, Pa	58.28	294	P	P	23 46 06.6	+0.7
PV14				IAmb	IAmb	23 46 43.0	
	comp=Z,6.2nm,0.9s						
PV17	East Wray Mesa	58.29	294	P	P	23 46 06.3	+0.4
PV17				IAmb	IAmb	23 47 10.4	
	comp=Z,3.5nm,0.9s						
TOLK	Toolik Lake Re	58.62	338	P	P	23 46 07.8	+0.2
TOLK				IAmb	IAmb	23 46 10.2	
	comp=Z,5.0nm,1.2s						
DAWY	Dawson	58.63	331	P	P	23 46 08.4	+0.7
DAWY				IAmb	IAmb	23 46 11.2	
	comp=Z,4.9nm,1.1s						
P17A	Butcher Ranch,	58.76	296	P	P	23 46 10.6	+1.4
FYU	Fort Yukon	58.85	335	P	P	23 46 09.8	+0.7
B08A	Colville Reser	58.89	309	P	P	23 46 09.9	+0.1
B08A				IAmb	IAmb	23 46 12.8	
	comp=Z,3.3nm,0.9s						
TMUT	Trail Mountain	59.16	296	P	P	23 46 12.3	+0.3
NLU	North Lily Min	59.33	297	P	P	23 46 09.9	-3.2
BGU	Big Grassy Mou	59.37	299	P	P	23 46 13.8	+0.4
DUG	Dugway, Tooele	59.66	298	P	P	23 46 16.6	+1.3
DUG				IAmb	IAmb	23 46 19.7	
	comp=Z,5.0nm,1.0s						
COLD	Coldfoot	59.80	338	P	P	23 46 16.1	+0.4
COLD				IAmb	IAmb	23 46 19.1	
	comp=Z,4.1nm,1.0s						
TXAR	Lajitas Array	59.98	283	P	P	23 46 18.2	+0.6
	comp=Z,1.5nm,1.1s,baz=58,slow=4.7,SNR=7.5						
TX31	Lajitas Ar. Si	59.98	283	P	P	23 46 17.6	0.0
TX32	Lajitas Array	59.98	283	P	P	23 46 17.9	+0.3
TX32				IAmb	IAmb	23 46 24.6	
	comp=Z,7.6nm,1.6s						
HYT	Haines Junctio	60.01	328	P	P	23 46 18.5	+1.1
HYT				IAmb	IAmb	23 46 21.6	
	comp=Z,4.0nm,1.1s						
SCRK	Sand Creek	60.22	333	IAmb	IAmb	23 46 22.3	
	comp=Z,4.8nm,0.9s						
MSU	Marysvale	60.23	296	P	P	23 46 20.7	+1.3
DOT	Dot Lake	60.47	332	P	P	23 46 20.9	+0.6
DOT				IAmb	IAmb	23 46 23.9	
	comp=Z,3.2nm,1.0s						
IL31		60.59	334	P	P	23 46 21.6	+0.5
ILAR	Eielson Array	60.59	334	P	P	23 46 20.4	-0.7
	comp=Z,1.4nm,0.9s,baz=46,slow=5.7,SNR=14						
RIDG	Independent Ri	60.66	333	IAmb	IAmb	23 46 25.4	
	comp=Z,4.7nm,0.9s						
MENT	Mentasta	60.84	332	P	P	23 46 24.1	+1.2
ELK	Elko	60.85	300	P	P	23 46 24.3	+0.8
ELK				IAmb	IAmb	23 46 27.8	
	comp=Z,3.5nm,1.1s						
HDA	Harding Lake	60.86	334	IAmb	IAmb	23 46 26.6	
	comp=Z,4.9nm,0.9s						
CCB	Clear Creek Bu	60.95	335	P	P	23 46 24.7	+1.1
WRH	Wood River Hil	61.17	335	P	P	23 46 24.6	-0.5
WRH				IAmb	IAmb	23 46 28.2	
	comp=Z,4.7nm,0.9s						
J08A	Circle Bar Ran	61.27	304	P	P	23 46 27.5	+1.3
PSUT	Pine Spring	61.28	297	P	P	23 46 26.0	-0.5
CTGM	Chitina Glacie	61.34	329	P	P	23 46 26.6	+0.1
SZCU	Shurtz Canyon	61.34	296	P	P	23 46 27.2	+0.3
DHAK	Deception Hill	61.40	326	P	P	23 46 26.1	-0.7
CCUT	Cedar City	61.55	296	P	P	23 46 28.4	+0.1
WVOR	Wild Horse Val	61.91	303	P	P	23 46 31.4	+0.8
DHY	Denali Highway	61.94	333	P	P	23 46 31.5	+1.0
DHY				IAmb	IAmb	23 46 33.7	
	comp=Z,3.1nm,1.0s						
RND	Reindeer	62.17	334	P	P	23 46 32.3	+0.4
RND				IAmb	IAmb	23 46 37.7	
	comp=Z,7.7nm,1.3s						
SAML	Samuel	62.19	220	P	P	23 46 32.6	+0.2
SAML				IAmb	IAmb	23 46 36.4	
	comp=Z,5.1nm,1.1s						
GEYT	Alibeck	62.23	63	P	P	23 46 32.6	-0.1
	comp=Z,1.4nm,0.8s,baz=290,slow=9.3,SNR=4.5						
BPAW	Bear Paw Mtn.	62.31	335	P	P	23 46 32.9	+0.1
BPAW				IAmb	IAmb	23 46 36.1	
	comp=Z,3.3nm,1.0s						
PINE	Pine Mountain	62.45	305	P	P	23 46 33.9	-0.4
TIXI	Tiksi	62.55	8	P	P	23 46 34.1	-0.1
TIXI				IAmb	IAmb	23 47 52.4	
	comp=Z,2.8nm,0.8s						
KTH	Kantishna Hill	62.70	335	P	P	23 46 35.7	+0.3
MOD	Modoc Plateau	63.22	303	P	P	23 46 40.5	+1.1
MOD				IAmb	IAmb	23 46 44.3	
	comp=Z,5.7nm,1.0s						
KNK	Knik Glacier	63.49	332	P	P	23 46 41.1	+0.4
PMR	Palmer	63.58	333	P	P	23 46 41.3	+0.1
KVN	Kaiserville	63.62	300	P	P	23 46 42.6	+0.5
PAHR	Pah Rah Range	64.01	301	P	P	23 46 45.3	+0.7
PAHR				IAmb	IAmb	23 46 49.2	
	comp=Z,4.2nm,0.9s						
NV11	Mina Array Sit	64.03	299	P	P	23 46 46.1	+1.3
NV11				IAmb	IAmb	23 46 49.3	
	comp=Z,4.4nm,1.2s						
RYN	Ryan	64.14	299	P	P	23 46 44.4	-1.1
RYN				IAmb	IAmb	23 46 49.6	
	comp=Z,3.8nm,1.1s						
BEKR	Beckworth	64.50	302	P	P	23 46 48.0	+0.1
BEKR				IAmb	IAmb	23 46 54.5	
	comp=Z,3.9nm,1.1s						
PNTR	Pine Nut	64.52	300	P	P	23 46 48.8	+0.7
OMMB	Old Mammoth Mi	65.06	299	P	P	23 46 50.5	-1.3
KURK	Kurchatov	65.66	42	P	P	23 46 53.9	-1.0
KURK				IAmb	IAmb	23 47 02.2	
	comp=Z,3.5nm,0.9s						
UOSS	Minazif	69.10	75	P	P	23 47 17.0	-0.2
MKAR	Makanchi Array	70.12	43	P	P	23 47 21.4	-1.7
	comp=Z,1.1nm,0.9s,baz=336,slow=2.7,SNR=6.9						
LPAZ	La Paz	70.89	221	P	P	23 47 28.3	-0.5
LPAZ				IAmb	IAmb	23 47 36.5	
	comp=Z,4.8nm,1.1s						
WMQ	Urumqi	74.89	42	eP	P	23 47 53.8	+2.1
WMQ				sP	pwP	23 47 59.9	+3.1
WMQ				LR	LR		
	comp=N,420nm,14.5s						
WMQ				LR	LR		
	comp=E,220nm,14.7s						
WMQ				LR	LR		
	comp=Z,460nm,14.7s						
SONM	Songino Array	79.39	29	P	P	23 48 16.3	-0.7
	comp=Z,3.4nm,1.0s,baz=324,slow=5.6,SNR=13						
ULN	Ulaanbaatar	79.59	29	P	P	23 48 17.2	-1.0
ULN				IAmb	IAmb	23 48 20.3	
	comp=Z,6.6nm,1.1s						
GTA	Gaotai	83.93	38	eP	P	23 48 42.5	+1.4
GTA				pP	pwP	23 48 47.8	+1.5
GTA				sP	PcP	23 48 50.6	+5.5
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HHC	Hu-ho-hao-te	87.30	29	eP	P	23 48 58.0	+0.2
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,49nm,4.8s						
BOSA	Boshof	88.01	135	P	P	23 49 02.2	+1.0
	comp=Z,4.1nm,1.1s,baz=94,slow=11,SNR=2.9						
BOSA	Boshof	88.01	135	IAmb	IAmb	23 49 07.0	
	comp=Z,44nm,1.8s						
CD2	Chengdu	92.80	40	P	P	23 49 22.4	-1.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VNDA	Vanda	147.09	184	PKPbc	PKPab	23 55 53.6	-0.5
	comp=Z,1.3nm,0.9s,baz=262,slow=5.0,SNR=5.8						
WRA	Warramunga Arr	151.19	36	PKPbc	PKPbc	23 56 03.2	-1.4
	comp=Z,3.8nm,1.0s,baz=326,slow=3.0,SNR=9.6						
ASAR	Alice Springs	154.28	40	PKPbc	PKPbc	23 56 10.3	-1.0
	comp=Z,2.1nm,1.1s,baz=303,slow=0.5,SNR=7.4						

BJI **23** *23:41:44.1±0.0, 45.°01N×28.°46W, h5km, mB5.5/34, mb5.0/42, Ms5.4/31, Ms7 5.1/31*

IDC **23** *23:41:46.8±0.4, 45.°06N×28.°06W, h0km, mb4.5/38, mb1 4.6/40, mb1mx4.6/49, mbtmp4.5/40, ML4.3/2, MS4.9/37, Ms1 4.9/37, ms1mx4.9/39, Error ellipse: s-maj=11.8km s-min=9.2km az=11.0*

MOS **23** *23:41:47.1±0.9, 44.°99N×27.°95W, h10km, mb5.1/38, MS5.1/50, Error ellipse: s-maj=5.5km s-min=4.5km az=47.9*

IGIL **23** *23:41:49.4, 45.°01N×27.°87W, h10km, mb5.3*

NEIC **23** *23:41:49.2±1.4, 45.°01N±0.°08×27.°8W±0.°1, h10km±1km, mb5.2/682, Ms_20 5.2/657, Mwc5.5(GCMT), Error ellipse: s-maj=13.3km s-min=13.1km az=336.0*

GCMT **23** *23:41:50.2±0.1, 45.°06N±0.°01×27.°98W±0.°01, h12km, MW5.4/153, Moment Tensor Solution. s106,c165; s153,c326; Duration: 1.s2 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.66±.02; $M_{\theta\theta}$0.04±.02; $M_{\phi\phi}$1.62±.01; $M_{r\theta}$0.29±.05; $M_{\theta\phi}$0.17±.01; $M_{\phi r}$-0.20±.04; Best double couple: $M_0$1.68500×10^{17} NP1:ϕ_s196.00000°, δ43.00000°, λ-75.00000°. NP2:ϕ_s356.00000°, δ49.00000°, λ-103.00000°. Principal axes: T 1.6470, Plg3.0000°, Azm96.0000°; N 0.0720, Plg10.0000°, Azm5.0000°; P -1.7240, Plg80.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **23** *23:41:50, 45.°04N×27.°97W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.73; $M_{\theta\theta}$0.01; $M_{\phi\phi}$1.72; $M_{r\theta}$0.23; $M_{\theta\phi}$0.19; $M_{\phi r}$-0.06; Fault plane solution: $M_0$1.75000×10^{17} NP1:ϕ_s194.00000°, δ45.00000°, λ-79.00000°. NP2:ϕ_s359.00000°, δ46.00000°, λ-100.00000°. Principal axes: T 1.7396, Plg1.0000°, Azm96.0000°; N 0.0221, Plg7.0000°, Azm6.0000°; P -1.7617, Plg82.0000°, Azm190.0000°;*

ISC 23 23:41:48.5±0.4**, 45.°03N**±0.°04×**27.°97W**±0.°03**, h7**km±2km**, h8km:pP-P, n1592,** σ**1.s31**/1427**, mb5.1**/473**, MS5.2**/405**, 57C-7D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07N1	FLORES T-PHASE	5.82	205	eP	Pn	23 43 16.6	+1.4
H07N1	FLORES T-PHASE	5.82	205	T	T	23 49 12.0	
	SNR=14						
SRBC	Serra Branca	5.98	181	eP	Pn	23 43 20.1	+2.7
	116nm,0.6s						
SRBC				eT	T	23 49 12.9	
PGRA	Graciosa	5.99	180	eP	Pn	23 43 20.4	+2.9
	176nm,1.2s						
PGRA				eLQ	LQ	23 44 52.9	
PGRA				eT	T	23 49 16.8	
H07S1	FLORES T-PHASE	6.13	204	eP	Pn	23 43 18.8	-0.7
H07S1				eLQ	LQ	23 44 44.3	
ROSA	Rosais	6.30	182	eLQ	LQ	23 44 52.9	
ROSA				eT	T	23 49 34.1	
ROSA	Rosais	6.30	182	Pn	Pn	23 43 22.5	+0.7
PMAN	Manadas	6.39	181	eP	Pn	23 43 26.8	+3.9
PMAN				eLQ	LQ	23 45 29.4	
ADH	Angra Heroismo	6.39	175	eP	Pn	23 43 21.4	-1.5
	123nm,0.6s						
PCED	Cedros	6.42	185	eLQ	LQ	23 45 27.6	
CALA	Caldeira	6.46	185	eLQ	LQ	23 45 27.6	
CALA				eT	T	23 49 35.0	
PCAN	Candelaria	6.57	184	eP	Pn	23 43 28.7	+3.3
PCAN				eP	Pb	23 43 31.3	-12
PCAN				eLQ	LQ	23 45 15.5	
PCAN				eT	T	23 49 49.8	

PSET Sete Cidades 7.39 166 *e*P **Pn 23 43 36.2 -0.5**
286nm,0.9s
PSET *e*LQ LQ 23 45 19.0
PSET *e*T T 23 50 52.2
PDA Ponta Delgada 7.47 166 *e*P **Pn 23 43 37.4 -0.4**
132nm,0.5s
GRON Grota Negra 7.48 165 *e*P **Pn 23 43 37.1 -0.8**
151nm,1.0s
GRON *e*T T 23 50 50.7
CMLA Cha da Macela 7.48 165 *e*P **Pn 23 43 36.5 -1.5**
106nm,0.7s
CMLA *e*T T 23 50 50.3
CMLA Cha da Macela 7.48 165 P **Pn 23 43 36.7 -1.3**
CMLA Cha da Macela 7.48 165 Pn 23 43 36.7 -1.3
BART Pico Bartolome 7.54 163 *e*P **Pn 23 43 37.1 -1.7**
101nm,0.6s
BART *e*LQ LQ 23 45 08.6
BART *e*T T 23 50 54.6
PSMA Santa Maria 8.30 164 *e*P **Pn 23 43 47.2 -2.0**
171nm,1.3s
PSMN Pico do Norte, 8.31 164 *e*P **Pn 23 43 47.9 -1.4**
365nm,1.2s
PSMN *e*LQ LQ 23 45 44.1
PGAV Gavieira, Arco 14.62 95 *e*P **Pn 23 45 15.7 0.0**
275nm,1.7s
PGAV *e*LR LR 23 48 27.8
13µm,20.0s
PMOZ Porto Moniz, M 14.77 142 *e*P **Pn 23 45 20.1 +2.3**
221nm,1.8s
PMOZ *e*LR LR 23 48 35.5
4µm,18.0s
PMOZ Porto Moniz, M 14.77 142 *e*T T 00 00 00.5
PMOZ Porto Moniz, M 14.77 142 Pn **Pn 23 45 16.7 -1.1**
PMPST Porto Santo, M 14.95 139 *e*T T 00 00 09.2
PMPS Porto Santo 14.96 139 *e*P **Pn 23 45 20.4 +0.1**
188nm,1.1s
PMPS Porto Santo 14.96 139 *e*T T 00 00 16.7
PMAR Madeira 14.98 141 *e*P **Pn 23 45 21.2 +0.5**
259nm,1.5s
PMAR Madeira 14.98 141 *e*T T 00 00 00.0
FUL Funchal 15.05 141 *e*T T 00 00 11.6
COI Coimbra 15.17 102 P **Pn 23 45 21.4 -1.6**
COI pmax pmax
comp=Z,56nm,1.3s
COI Coimbra 15.17 102 Pn **Pn 23 45 21.4 -1.6**
PCAS Casmilo, Conde 15.18 102 *e*P **Pn 23 45 23.4 +0.2**
comp=Z,114nm,1.8s
PVRL Vila Real 15.24 97 *e*P **Pn 23 45 24.1 +0.1**
comp=Z,54nm,1.6s
LIS Lisbon 15.36 108 *e*P **Pn 23 45 25.2 -0.3**
LIS AMb AMB 23 45 29.7
comp=Z,263nm,1.5s
LIS *e*S **Sn 23 48 15.8 0.0**
LIS Lisbon 15.36 108 *e*P **Pn 23 45 25.1 -0.3**
LIS *e*S **Sn 23 48 15.7 0.0**
LIS pmax pmax
comp=Z,263nm,1.5s
MTE Manteigas 15.70 100 *e*P **P 23 45 32.1 -2.0**
comp=Z,65nm,1.7s
MTE *e*LR LR 23 48 59.7
comp=Z,6µm,20.0s
MTE Manteigas 15.70 100 Pn **Pn 23 45 26.0 -4.0**
PBRG Braganca 15.75 94 *e*P **Pn 23 45 31.6 +0.9**
comp=Z,130nm,1.7s
MVO Moncorvo 15.77 97 *e*P **Pn 23 45 30.0 -0.9**
comp=Z,63nm,1.8s
MVO *e*LR LR 23 49 08.6
comp=Z,9µm,18.0s
PMTG Montargil 15.81 105 *e*P **Pn 23 45 30.2 -1.2**
comp=Z,131nm,1.6s
PCBR Castelo Branco 15.98 102 *e*P **Pn 23 45 34.0 +0.4**
comp=Z,107nm,1.6s
PNCL Nicolau / Gran 16.08 109 *e*P **Pn 23 45 35.6 +0.7**
comp=Z,80nm,1.8s
PMRV Marv??o 16.22 103 *e*P **Pn 23 45 37.5 +0.8**
comp=Z,61nm,1.7s
PMRV *e*LR LR 23 49 19.3
comp=Z,6µm,20.0s
PTEO Sao Teotonio 16.26 111 *e*P **Pn 23 45 37.5 +0.3**
comp=Z,143nm,1.5s
PESTR Estremoz 16.34 105 Pn 23 45 35.3 -3.0
PFVI Vila Bisbo 16.42 112 *e*P **P 23 45 40.7 -1.4**
comp=Z,133nm,1.4s
PFVI Vila Bisbo 16.42 112 Pn **Pn 23 45 37.1 -2.1**
MESJ Messejana 16.43 109 *e*P **Pn 23 45 39.2 -0.2**
MESJ AMb AMB 23 45 50.2
comp=Z,81nm,2.4s
MESJ *e*S **Sn 23 48 41.7 -0.3**
MESJ Messejana 16.43 109 *e*P **Pn 23 45 39.2 -0.2**
MESJ *e*S **Sn 23 48 41.6 -0.3**
MESJ pmax pmax
comp=Z,81nm,2.4s
MESJ Messejana 16.43 109 *e*P **Pn 23 45 39.4 0.0**
comp=Z,81nm,1.5s
MORF Marmelete 16.44 111 *e*P **Pn 23 45 39.3 -0.2**
MORF AMb AMB 23 45 53.6
comp=Z,118nm,1.8s
MORF *e*S **Sn 23 48 41.9 -0.2**
MORF Marmelete 16.44 111 *e*P **Pn 23 45 39.3 -0.2**
MORF *e*S **Sn 23 48 41.9 -0.2**
MORF pmax pmax
comp=Z,118nm,1.8s
MORF Marmelete 16.44 111 *e*P **Pn 23 45 39.7 +0.1**
comp=Z,120nm,1.7s
PBEJ Beja 16.57 108 *e*P **P 23 45 45.1 +1.3**
comp=Z,68nm,1.6s
PVAQ Vaqueiros 17.00 110 *e*P **P 23 45 48.3 -0.3**
comp=Z,64nm,1.6s
PVAQ *e*LR LR 23 49 39.2
comp=Z,9µm,18.0s
PVAQ Vaqueiros 17.00 110 Pn **Pn 23 45 45.4 -1.2**
PAB San Pablo 18.29 99 P **Pn 23 46 01.4 -1.2**
PAB pmax pmax
comp=Z,42nm,1.5s
PAB San Pablo 18.29 99 P **Pn 23 46 01.4 -1.2**
ESDC Sonseca Array 18.50 98 P **P 23 46 04.2 -1.0**
comp=Z,0.2nm,0.3s,baz=294,slow=12,SNR=18
ESDC LR LR 23 51 56.2
comp=Z,6µm,19.2s,baz=285,slow=33
SFS San Fernando 18.53 110 P **P 23 46 05.3 -0.1**
SFS pmax pmax
comp=Z,112nm,1.0s
SFS San Fernando 18.53 110 *e*P **P 23 46 04.0 -1.4**
SFS *e*S S 23 49 52.4 +15
SFS San Fernando 18.53 110 P **P 23 46 05.3 -0.1**
UCM Universidad Co 18.75 96 *e*P **P 23 46 07.3 -0.6**
UCM *e*S S 23 49 59.1 +18
ESK Eskdalemuir 18.81 48 P **P 23 46 08.5 +0.2**
ESK pmax pmax
comp=Z,75nm,1.1s
ESK Eskdalemuir 18.81 48 P **P 23 46 08.5 +0.2**
EKA Eskdalemuir Ar 18.84 48 P **Pn 23 46 09.2 0.0**
baz=243,slow=7.4,SNR=12
EKA LR LR 23 52 17.1
comp=Z,4µm,18.7s,baz=250,slow=33
NRS Narsarsuaq 19.15 334 P **Pn 23 46 12.8 -0.1**
NRS pmax pmax
comp=Z,78nm,1.3s
NRS Narsarsuaq 19.15 334 P **Pn 23 46 12.8 -0.1**
CEU Ceuta 19.41 110 *e*P **P 23 46 14.3 -0.7**
CEU *e*S **S 23 50 04.5 +10**
EMAL Malaga-Limoner 19.57 107 *e*P **P 23 46 15.7 -1.1**
EMAL *e*S **S 23 50 08.0 +10**
AVE Averroes 19.71 119 *e*P **Pn 23 46 19.7 -0.2**
AVE *e*S **Sn 23 50 06.3 +4.9**
IVI Ivigtut 20.10 331 P Pn 23 46 23.6 -0.5
IVI IAmb IAmb 23 46 30.5
comp=Z,145nm,1.2s
BORG Borgarnes 20.11 8 LR LR 23 50 53.8
comp=Z,306nm,20.8s,baz=186,slow=27
DRLN Deer Lake 20.47 293 P **P 23 46 27.4 +1.0**
DRLN IAmb IAmb 23 46 35.5
comp=Z,174nm,1.2s
PVLZ Peæn de 20.54 110 *e*P **P 23 46 27.3 0.0**
PVLZ *e*S **S 23 50 08.0 -9.3**
CLF Chambon-Foret 20.95 71 P **P 23 46 32.6 +0.9**
IFR Ifrane 21.01 115 *e*P **P 23 46 32.5 -0.2**
IFR *e*S Sn 23 50 34.5 +1.5
MELI Melilla 21.38 108 *e*P **P 23 46 37.6 +1.2**
MELI *e*S Sn 23 50 41.4 -0.1
CART Cartagena 21.51 101 *e*P **P 23 46 39.8 +2.0**
CART *e*S Sn 23 50 46.3 +1.8
MDT Midelt 21.80 116 P **P 23 46 41.2 +0.2**
comp=Z,3.0nm,0.8s,baz=327,slow=12,SNR=6.2
MDT LR LR 23 53 22.3
comp=Z,2µm,21.5s,baz=339,slow=32
SNF Seneffe 22.25 64 P **P 23 46 46.9 +1.3**
DOU Dourbes 22.44 65 P **P 23 46 47.5 -0.2**
comp=Z,54nm,1.7s
DOU PP **PnPn 23 47 08.5 -2.0**
BMRD Maredsous 22.55 65 P **P 23 46 49.6 +0.7**
BGES Gesves 22.76 65 P **P 23 46 51.2 +0.1**
BCLA Clavier 22.90 64 P **P 23 46 51.2 -1.3**
BCLA PnPn **PnPn 23 47 14.3 -2.4**
BSTI Sart Tilman 23.07 64 P **P 23 46 55.7 +1.4**
BSTI PcP **pwP 23 46 58.8 +0.6**
BSTI PnPn **PnPn 23 47 19.0 -0.1**
BEBN Eben Emael 23.14 63 P **P 23 46 55.2 +0.2**
BHOU Houvegnez 23.34 65 P **P 23 46 57.0 -0.2**
BHOU x x 23 47 03.9
MEM Membach 23.35 64 P **P 23 46 57.5 +0.3**
MEM x x 23 47 03.9
MEM PnPn **PnPn 23 47 22.7 -0.2**
WLF Walferdange 23.45 66 P **P 23 46 58.1 -0.2**
WLF x x 23 47 05.2
WLF Walferdange 23.45 66 *e*P **P 23 46 58.8 +0.6**
comp=Z,130nm,1.5s,baz=275,slow=8.9
WLF Walferdange 23.45 66 P **P**
WLF pmax pmax **23 46 58.3 +0.1**
comp=Z,133nm,1.5s
WLF Walferdange 23.45 66 P **P 23 46 58.2 +0.1**
WLF IAmb IAmb 23 47 07.0
comp=Z,133nm,1.5s
GBN Guysborough 23.54 283 P **P 23 47 00.9 +1.8**
EANR 'Ain N'Sour 23.79 102 P **P 23 47 02.8 +1.1**
ECHA Ech Chlef 23.87 102 P **P 23 47 04.5 +2.1**
EBNR Beni Rached 23.91 101 P **P 23 47 05.8 +2.9**
AHRW Bad Neuenahr-A 24.03 64 *e*P **P 23 47 05.3 +1.5**
comp=Z,61nm,1.4s,baz=275,slow=8.9
BUG Bochum--Univer 24.16 62 *e*P **P 23 47 06.3 +1.3**
comp=Z,223nm,2.0s,baz=275,slow=8.9
ECH Echery 24.21 70 IAmb IAmb 23 47 13.5
comp=Z,78nm,1.3s
ETRT Tiaret 24.22 103 P **P 23 47 08.0 +2.1**
BNI Bardonecchia 24.37 78 P **P 23 47 06.9 -0.3**
BNI pmax pmax
comp=Z,92nm,1.6s
BNI Bardonecchia 24.37 78 P **P 23 47 06.9 -0.3**
BNI IAmb IAmb 23 47 22.0
comp=Z,92nm,1.6s
IBBN Ibbenburen 24.50 60 *e*P **P 23 47 09.5 +1.4**
comp=Z,184nm,1.6s,baz=275,slow=8.9
SENIN Lac Senin/Sane 24.55 74 P **P 23 47 09.3 +0.4**
SENIN IAmb IAmb 23 47 19.1
comp=Z,51nm,1.1s
HLG Helgoland 24.73 55 *e*P **P 23 47 11.5 +1.3**
comp=Z,129nm,1.4s,baz=275,slow=8.9
TNS Taunus Mts 24.91 65 *e*P **P 23 47 13.1 +1.2**
comp=Z,34nm,1.2s,baz=275,slow=8.9
BFO Black Forest 24.97 69 *e*P **P 23 47 12.5 0.0**
comp=Z,76nm,1.6s,baz=275,slow=8.9
BFO Black Forest 24.97 69 P **P**
BFO pmax pmax **23 47 12.6 +0.1**
comp=Z,137nm,1.9s
BFO Black Forest 24.97 69 P **P 23 47 12.6 +0.1**
BFO IAmb IAmb 23 47 25.5
comp=Z,137nm,1.9s
SFJD Kangerlussuaq 25.11 339 P **P 23 47 12.8 -0.5**
comp=Z,13nm,1.1s,baz=140,slow=3.9,SNR=2.7
SFJD LR LR 23 54 49.1
comp=Z,4µm,20.3s,baz=144,slow=31
SFJD Kangerlussuaq 25.11 339 P **P 23 47 12.9 -0.5**
SFJD pmax pmax
comp=Z,162nm,2.0s
SFJD Kangerlussuaq 25.11 339 IAmb IAmb 23 47 22.6
comp=Z,162nm,1.9s
SFJD Kangerlussuaq 25.11 339 *i*P **P 23 47 12.3 -1.1**
HAL Halifax 25.15 282 P **P 23 47 14.3 +0.3**
HAL pmax pmax
comp=Z,159nm,1.5s
HAL Halifax 25.15 282 P **P 23 47 14.3 +0.3**
RETH Rethem/Aller, 25.50 59 *e*P **P 23 47 17.8 +0.8**
comp=Z,102nm,1.4s,baz=275,slow=8.9
SKMB Sankelmark Bun 25.70 54 *e*P **P 23 47 18.8 -0.1**
comp=Z,163nm,1.2s,baz=275,slow=8.9
SCO Scoresbysund 25.70 5 P **P 23 47 18.8 0.0**
SCO pmax pmax
comp=Z,38nm,1.3s
SCO Scoresbysund 25.70 5 P **P 23 47 18.8 0.0**
SCO Scoresbysund 25.70 5 *i*P **P 23 47 19.8 +1.0**
comp=Z,15nm,1.1s
LMN Caledonia Moun 25.72 285 IAmb IAmb 23 47 22.7
comp=Z,50nm,0.9s
MUD Monsted U'grnd 25.81 50 *i*P **P 23 47 24.1 +4.2**
MUD pmax pmax
comp=Z,39nm,1.1s
MUD Monsted U'grnd 25.81 50 *i*P **P 23 47 24.1 +4.2**
comp=Z,39nm,1.1s
GTTG Gottingen 25.85 62 *e*P **P 23 47 21.1 +0.8**
comp=Z,82nm,1.5s,baz=275,slow=8.9
UBBA Unterbreizbach 25.88 63 *e*P **P 23 47 21.3 +0.7**
comp=Z,43nm,1.6s,baz=275,slow=8.9
NRDL Niedersach Rie 25.94 60 *e*P **P 23 47 21.9 +0.8**
comp=Z,42nm,1.1s,baz=275,slow=8.9
CLZ Clausthal 26.10 61 *e*P **P 23 47 23.6 +1.0**
comp=Z,98nm,1.3s,baz=275,slow=8.9
BSEG Bad Segeberg 26.14 56 *e*P **P 23 47 23.6 +0.7**
comp=Z,130nm,1.2s,baz=275,slow=8.9
DAVA Damuels 26.15 71 *e*pP **P 23 47 25.2 +2.0**
comp=Z,66nm,1.3s,SNR=12
UBR Ueberruh 26.24 70 *e*P **P 23 47 23.7 -0.3**
comp=Z,46nm,1.4s,baz=275,slow=8.9
ASSE Asse, Remlinge 26.28 60 *e*P **P 23 47 25.3 +1.1**
comp=Z,69nm,1.3s,baz=275,slow=8.9
BATG Bathurst New B 26.31 289 P **P 23 47 24.4 -0.2**
BATG IAmb IAmb 23 47 31.2
comp=Z,83nm,1.5s
FUORN Ofenpass-Fuorn 26.52 73 P **P 23 47 26.5 -0.2**
SCHQ Schefferville 26.55 306 P **P 23 47 26.7 0.0**
comp=Z,7.3nm,0.9s,baz=95,slow=8.5,SNR=14
SCHQ LR LR 23 56 08.7
comp=Z,5µm,18.7s,baz=102,slow=33
SCHQ Schefferville 26.55 306 P **P 23 47 27.4 +0.7**
SCHQ IAmb IAmb 23 47 33.2
comp=Z,60nm,1.3s
SET Setif 26.67 98 P **P 23 47 30.0 +2.0**
RETA Reutte 26.71 71 *e*pP **P 23 47 29.8 +1.6**
comp=Z,23nm,1.2s
GRA1 Grafenberg Arr 26.73 66 P **P 23 47 27.6 -0.8**
GRA1 IAmb IAmb 23 47 37.4
comp=Z,104nm,1.5s
GRF Grafenberg Arr 26.73 66 *e*P **P 23 47 29.2 +0.8**
comp=Z,89nm,1.6s,baz=275,slow=8.9
GRF *e*L L 23 57 13.1
comp=Z,7µm,18.1s
GRF Grafenberg Arr 26.73 66 P **P 23 47 27.6 -0.8**
GRF pmax pmax
comp=Z,104nm,1.5s
FETA Feichten 26.76 72 *e*P **P 23 47 30.9 +2.0**
comp=Z,47nm,1.3s,SNR=12
KONO Kongsberg 26.77 43 *i*P **P 23 47 28.1 -0.5**
KONO pmax pmax
comp=Z,16nm,1.1s
KONO Kongsberg 26.77 43 P **P 23 47 29.1 +0.6**
KONO IAmb IAmb 23 48 14.9
comp=Z,52nm,1.4s
SALO Salr 26.90 75 P **P 23 47 30.3 +0.3**
SALO IAmb IAmb 23 47 51.3
comp=Z,110nm,1.8s
MOX Moxa 26.92 64 *e*P **P 23 47 30.7 +0.6**
comp=Z,41nm,1.5s,baz=275,slow=8.9
MOX *e*L L 23 57 00.5
comp=Z,5µm,21.2s
FUR Furstenfeldbru 26.95 69 *e*P **P 23 47 29.3 -1.1**
comp=Z,131nm,1.8s,baz=275,slow=8.9
ILULI Ilulissat 26.95 342 P **P 23 47 30.0 -0.1**
ILULI pmax pmax
comp=Z,157nm,1.8s
ILULI Ilulissat 26.95 342 P **P 23 47 30.0 -0.1**
MOTA Moosalm 26.96 71 *e*pP **P 23 47 32.1 +1.5**
comp=Z,45nm,1.2s,SNR=13
NEUB Neuenburg 26.99 62 *e*P **P 23 47 31.2 +0.6**
comp=Z,61nm,1.4s,baz=275,slow=8.9
SQTA Sankt Quirin 27.05 71 *e*pP **P 23 47 33.2 +1.8**
comp=Z,51nm,1.4s,SNR=19
VLC Villacollemand 27.16 78 P **P**
VLC IAmb IAmb **23 47 33.1 +0.8**
23 47 41.9
comp=Z,74nm,1.7s
PLN Plauen 27.27 64 *e*P **P 23 47 33.7 +0.5**
comp=Z,28nm,1.3s,baz=275,slow=8.9
WATA Walderalm 27.28 71 *e*pP **P 23 47 35.1 +1.7**
comp=Z,36nm,1.3s,SNR=12
GGN Saint George 27.28 284 P **P 23 47 32.7 -0.5**
GGN IAmb IAmb 23 47 43.7
comp=Z,73nm,1.7s
MANZ Manzenberg 27.28 65 *e*P **P 23 47 34.3 +0.9**
comp=Z,111nm,1.4s,baz=275,slow=8.9
WTTA Wattenberg 27.33 71 *e*pP **P 23 47 35.7 +1.8**
comp=Z,37nm,1.5s,SNR=12
ROTZ Rotzenmuhle 27.36 66 *e*P **P 23 47 34.4 +0.4**
comp=Z,43nm,1.5s,baz=275,slow=8.9
GUNZ Gunzen 27.39 64 *e*P **P 23 47 34.8 +0.5**
comp=Z,33nm,1.3s,baz=275,slow=8.9
WERN Wernitzgruen 27.43 64 *e*P **P 23 47 35.4 +0.8**
comp=Z,74nm,1.7s,baz=275,slow=8.9
TANN Tannenbergstha 27.47 64 *e*P **P 23 47 35.6 +0.6**
comp=Z,52nm,1.3s,baz=275,slow=8.9
NKC Novy Kostel 27.48 64 *e*P **P 23 47 36.7 +1.6**
NKC *e* 23 47 42.5
NKC MLR MLR
comp=Z,9µm,16.6s
NKC Novy Kostel 27.48 64 *e*P **P 23 47 36.7 +1.6**
NKC *ex* x 23 47 42.5
NKC AMS AMS 23 57 50.0
comp=Z,9µm,16.6s
ZCCA Zocca 27.52 77 P **P 23 47 34.3 -1.2**
ZCCA IAmb IAmb 23 47 48.0
comp=Z,89nm,1.6s
CTI Castel Tesino 27.57 74 IAmb IAmb 23 47 44.8
comp=Z,42nm,1.1s
E64A Bridgewater 27.66 287 P **P 23 47 36.5 -0.3**
baz=78
H66A Whiting 27.68 284 P **P 23 47 37.0 +0.1**
baz=75,SNR=8.8
NAO01 NORSAR Array S 27.73 41 P **P 23 47 38.1 +0.9**
NAO01 IAmb IAmb 23 47 55.9
comp=Z,70nm,1.4s
D63A Stockholm 27.73 289 P **P 23 47 36.4 -1.0**
baz=79,SNR=5.3
NBO00 NORSAR Array S 27.73 41 P **P 23 47 37.4 +0.1**
PQI Presque Isle 27.74 288 P **P 23 47 37.9 +0.5**
CLL Collm 27.75 62 *i*P **P 23 47 38.8 +1.3**
comp=Z,33nm,1.4s
CLL *i* 23 47 45.4
comp=Z,36nm,1.2s
CLL *e* 23 48 45.0
CLL *eS* **S 23 52 24.0 +3.9**
CLL *e* 23 53 00.0
CLL Lmax 23 58 00.0
CLL Collm 27.75 62 *e*P **P 23 47 38.5 +1.0**
comp=Z,36nm,1.2s,baz=275,slow=8.9
CLL Collm 27.75 62 P **P**
CLL pmax pmax **23 47 37.9 +0.4**
comp=Z,41nm,1.4s
CLL Collm 27.75 62 P **P 23 47 37.9 +0.4**
G65A Princeton 27.75 285 P **P 23 47 37.1 -0.5**
baz=76
G65A Princeton 27.75 285 P **P**
G65A IAmb IAmb **23 47 37.7 +0.2**
23 47 42.0
comp=Z,62nm,1.6s
EMMW East Machias 27.80 284 P **P 23 47 38.5 +0.6**
EMMW IAmb IAmb 23 47 48.5
comp=Z,75nm,1.5s
WET Wettzell 27.87 67 *e*P **P 23 47 39.1 +0.5**
comp=Z,32nm,1.5s,baz=275,slow=8.9
CASP Castiglione de 27.89 81 P **P 23 47 38.9 +0.1**
OSSC Osservatorio P 27.93 79 P **P 23 47 38.9 -0.3**
NOA NORSAR Array B 27.94 41 P **P 23 47 40.0 +0.9**
comp=Z,4.4nm,1.1s,baz=96,slow=15,SNR=6.4
NOA LR LR 23 57 47.9
comp=Z,1µm,19.2s,baz=250,slow=34
NB201 NORSAR Array S 27.98 41 P **P 23 47 39.3 -0.1**
FBE Freiberg 28.00 63 *e*P **P 23 47 40.4 +0.7**
comp=Z,51nm,1.5s,baz=275,slow=8.9
NC602 NORSAR Array S 28.00 42 P **P 23 47 39.8 +0.2**
NC602 IAmb IAmb 23 47 47.9
comp=Z,113nm,1.8s
ABTA Abfaltersbach 28.02 72 *e*pP **P 23 47 41.7 +1.7**
comp=Z,26nm,1.2s
RJOB Jochberg 28.02 70 *e*P **P 23 47 39.1 -0.9**
comp=Z,33nm,1.7s,baz=275,slow=8.9
NC303 NORSAR Array S 28.07 41 P **P 23 47 40.7 +0.5**
E63A Oxbow 28.07 287 P **P 23 47 40.8 +0.4**
baz=78
SUMG Summit 28.07 353 P **P 23 47 41.4 +0.8**
SUMG pmax pmax
comp=Z,41nm,1.3s
SUMG Summit 28.07 353 P **P 23 47 41.4 +0.8**
SUMG IAmb IAmb 23 47 52.8
comp=Z,41nm,1.3s
F64A Sherman 28.14 286 P **P 23 47 40.2 -0.7**
baz=77
F64A Sherman 28.14 286 IAmb IAmb 23 47 44.9
comp=Z,122nm,1.9s
RUE Ruedersdorf 28.19 60 *e*P **P 23 47 41.7 +0.4**
comp=Z,62nm,1.2s,baz=275,slow=8.9
NC405 NORSAR Array S 28.19 41 P **P 23 47 41.1 -0.3**
NC405 IAmb IAmb 23 47 59.0
comp=Z,81nm,1.5s
STAL STALIGIAL 28.25 73 P **P 23 47 41.8 -0.3**
KHC Kasperske Hory 28.33 67 *e*P **P 23 47 42.5 -0.2**
KHC *e* 23 47 48.2
KHC MLR MLR
comp=Z,4µm,19.9s
KHC Kasperske Hory 28.33 67 *e*P **P 23 47 42.5 -0.2**
KHC *epP* **pwP 23 47 48.2 +1.2**
KHC AMS AMS 23 57 30.0
comp=Z,4µm,19.9s
H65A Eastbrook 28.35 284 P **P 23 47 42.1 -0.8**
baz=75,SNR=5.1
D62A Allapoint, All 28.36 289 P **P 23 47 42.6 -0.3**
baz=79,SNR=11
D62A Allapoint, All 28.36 289 IAmb IAmb 23 47 49.8
comp=Z,53nm,1.4s
BRG Berggiesshubel 28.38 63 *e*P **P 23 47 43.7 +0.6**
comp=Z,47nm,1.5s,baz=275,slow=8.9
BRG Berggiesshubel 28.38 63 *e*P **P 23 47 43.8 +0.8**
BRG S **S 23 52 30.0 +0.1**
BRG pmax pmax
comp=Z,75nm,2.0s
BRG MLR MLR
comp=N,4µm,15.1s
BRG MLR MLR
comp=E,4µm,15.4s
BRG MLR MLR
comp=Z,6µm,16.0s
GEC2 GERESS Array S 28.45 67 *e*P **P 23 47 44.5 +0.6**
comp=Z,39nm,1.4s,baz=275,slow=8.9
GEC2 GERESS Array S 28.45 67 P **P 23 47 43.5 -0.3**
GERES GERESS Array B 28.45 67 P **P 23 47 44.6 +0.8**
comp=Z,6.4nm,1.0s,baz=282,slow=8.0,SNR=28
GERES LR LR 23 57 53.1
comp=Z,4µm,21.0s,baz=272,slow=34
KBA Koelnbreinsper 28.51 71 *e*pP **P 23 47 45.8 +1.3**
comp=Z,49nm,1.5s,SNR=14
PBCC Pribram 28.53 65 *e*P **P 23 47 45.2 +0.8**
G64A Maxfield 28.56 285 P **P 23 47 44.7 0.0**
baz=76
LATE Laterza 28.60 81 P **P 23 47 44.9 -0.3**
LATE IAmb IAmb 23 47 56.2
comp=Z,51nm,1.4s
F63A Nahmakanta, Br 28.69 286 P **P 23 47 46.1 +0.2**
baz=76
F63A Nahmakanta, Br 28.69 286 P **P 23 47 47.5 +1.6**
F63A IAmb IAmb 23 47 54.2
comp=Z,100nm,1.8s
PRA Prague 28.76 65 AMS AMS 23 58 40.0
comp=Z,4µm,17.3s
E62A Clayton Lake 28.77 288 P **P 23 47 45.8 -0.8**
baz=78
E62A Clayton Lake 28.77 288 P **P 23 47 47.8 +1.2**
E62A IAmb IAmb 23 47 54.5
comp=Z,57nm,1.6s
MYKA Terra Mystica 28.80 72 *e*pP **P 23 47 48.4 +1.4**
comp=Z,39nm,1.2s,SNR=11
PVCC Panska Ves 28.80 64 *e*P **P 23 47 49.1 +2.2**
PVCC MLR MLR
comp=Z,7µm,16.4s
PVCC Panska Ves 28.80 64 *e*P **P 23 47 49.1 +2.2**
PVCC AMS AMS 23 58 40.0
comp=Z,7µm,16.4s
PRU Pruhonice 28.84 65 *e*P **P 23 47 48.2 +1.0**
PRU MLR MLR
comp=Z,8µm,15.4s
PRU Pruhonice 28.84 65 *e*P **P 23 47 48.2 +1.0**
PRU AMS AMS 23 59 00.0
comp=Z,8µm,15.4s

MURB **Monte Urbino** 28.90 79 P P 23 47 47.9 0.0
PKME **Peaks-Kenny Pk** 28.92 285 P P 23 47 46.2 -1.7
baz=75,SNR=7.0
PKME **Peaks-Kenny Pk** 28.92 285 P P 23 47 47.8 -0.2
PKME IAmb IAmb 23 47 51.6
comp=Z,28nm,1.0s
CADS **Cadrg** 28.95 73 *i* P P 23 47 48.0 -0.3
H64A **Troy** 29.04 284 P P 23 47 47.3 -1.7
baz=74
D61A **St Aubert, Com** 29.09 290 P P 23 47 48.4 -1.0
baz=78
G63A **Kingsbury** 29.18 285 P P 23 47 49.3 -1.0
baz=75,SNR=6.5
F62A **Pittston Farm,** 29.23 287 P P 23 47 50.6 -0.1
baz=76,SNR=7.4
F62A **Pittston Farm,** 29.23 287 P P 23 47 51.3 +0.6
F62A IAmb IAmb 23 47 57.9
comp=Z,30nm,1.1s
WVL **Waterville** 29.36 284 P P 23 47 53.4 +1.6
WVL IAmb IAmb 23 47 55.0
comp=Z,39nm,1.5s
FRB **Frobisher Bay** 29.42 324 P P 23 47 51.1 -1.0
comp=Z,34nm,0.9s,baz=104,slow=8.4,SNR=16
FRB LR LR 23 56 40.5
comp=Z,3μm,19.1s,baz=102,slow=30
OBKA **Obir** 29.44 72 *e*P P 23 47 52.4 -0.2
comp=Z,34nm,1.0s,SNR=16
NRCA **Norcia** 29.45 80 P P 23 47 52.7 0.0
E61A **Lac Etchemin** 29.46 288 P P 23 47 51.7 -1.1
baz=77
I64A **Boothbay** 29.52 283 P P 23 47 53.7 +0.5
baz=73
I64A S S 23 52 49.5 +1.4
baz=73
TREC **Trest** 29.54 66 AMS AMS 23 59 10.0
comp=Z,5μm,16.8s
H63A **New Sharon** 29.59 284 P P 23 47 53.1 -0.8
baz=74
D60A **Saint Jean D'O** 29.65 289 P P 23 47 53.1 -1.2
baz=78
KEST **Kesra** 29.68 95 P P 23 47 54.8 -0.1
comp=Z,14nm,0.9s,baz=262,slow=1.3,SNR=15
KEST LR LR 23 59 02.4
comp=Z,2μm,19.3s,baz=242,slow=35
KEST **Kesra** 29.68 95 P P 23 47 53.9 -0.9
UPC **Upice** 29.72 63 *e*P P 23 47 56.0 +1.0
UPC *e* 23 48 01.2
UPC MLR MLR
comp=Z,7μm,16.3s
UPC **Upice** 29.72 63 *e*P P 23 47 56.0 +1.0
UPC *e*pP **pwP** 23 48 01.2 +1.9
UPC AMS AMS 23 59 00.0
comp=Z,7μm,16.3s
SOKA **Soboth** 29.73 71 *e*P P 23 47 54.7 -0.4
comp=Z,16nm,1.7s,SNR=12
CHVC **Chvalec** 29.74 63 *e*P P 23 47 55.3 +0.1
CHVC AMS AMS 23 59 10.0
comp=Z,7μm,16.1s
G62A **West of Eustis** 29.78 286 P P 23 47 55.5 -0.1
baz=75
G62A **West of Eustis** 29.78 286 P P 23 47 57.3 +1.7
G62A IAmb IAmb 23 48 03.0
comp=Z,62nm,1.7s
AQU **L'Aquila** 29.80 80 IAmb IAmb 23 48 05.3
comp=Z,25nm,0.9s
PDKS **Podkum** 29.84 72 *i* P P 23 47 56.0 -0.2
OSTC **Ostas** 29.84 63 *e*P P 23 47 56.5 +0.4
OSTC *ex* x 23 48 02.0
OSTC AMS AMS 23 59 10.0
comp=Z,6μm,16.2s
F61A **St Evariste** 29.91 287 P P 23 47 55.9 -0.8
baz=76
ARSA **Arzberg** 29.93 70 *e*pP P 23 47 57.4 +0.5
comp=Z,18nm,0.9s,SNR=12
DPC **Dobruska-Polom** 29.94 64 *e*P P 23 47 57.6 +0.6
DPC MLR MLR
comp=Z,7μm,16.3s
DPC **Dobruska-Polom** 29.94 64 *e*P P 23 47 57.6 +0.6
DPC AMS AMS 23 59 20.0
comp=Z,7μm,16.3s
CONA **Conrad Observa** 30.02 69 *e*pP P 23 47 58.6 +0.8
comp=Z,23nm,1.2s,SNR=11
E60A **Ste Agathe de** 30.12 288 P P 23 47 58.4 -0.2
baz=76,SNR=7.8
I63A **Otisfield** 30.14 284 P P 23 47 58.6 -0.1
baz=73,SNR=7.5
I63A **Otisfield** 30.14 284 P P 23 47 59.5 +0.7
I63A IAmb IAmb 23 48 02.7
comp=Z,77nm,1.4s
BOJS **Bojanci** 30.15 73 *i* P P 23 47 59.0 +0.2
KRUC **Moravsky** 30.17 66 *e*P P 23 47 59.2 +0.2
D59A **Saint-Raymond** 30.24 290 P P 23 48 00.2 +0.6
baz=77
VRAC **Vranov** 30.26 66 P P 23 47 59.2 -0.5
comp=Z,4.7nm,0.8s,baz=271,slow=7.8,SNR=9.0
VRAC **Vranov** 30.26 66 *e*P P 23 48 00.0 +0.2
VRAC **Vranov** 30.26 66 ⇑P P 23 47 59.7 0.0
KRLC **Kraliky** 30.27 64 *e*P P 23 48 00.9 +1.0
KRLC *e* 23 48 05.4
KRLC MLR MLR
comp=Z,6μm,15.5s
KRLC **Kraliky** 30.27 64 *e*P P 23 48 00.9 +1.0
KRLC *e*pP **pwP** 23 48 05.4 +1.2
KRLC AMS AMS 00 00 00.0
comp=Z,6μm,15.5s
INTR **Introdacqua** 30.27 81 IAMs_20 IAMs_20 23 59 37.8
comp=Z,4μm,20.0s
H62A **Milan** 30.38 285 P P 23 48 02.5 +1.6
H62A IAMs_20 IAMs_20 23 59 05.5
comp=Z,8μm,20.0s
G61A **St-Isidore-de-** 30.44 286 P P 23 48 02.1 +0.6
baz=75
F60A **Warwick** 30.56 288 P P 23 48 02.3 -0.1
baz=76
I62A **Tamworth** 30.71 283 P P 23 48 02.5 -1.3
baz=72,SNR=5.9
I62A **Tamworth** 30.71 283 P P 23 48 04.6 +0.8
I62A IAmb IAmb 23 48 11.7
comp=Z,55nm,1.4s
J63A **Strafford** 30.72 282 P P 23 48 03.5 -0.3
baz=72
LATQ **La Tuque** 30.79 291 P P 23 48 04.8 +0.4
baz=78
MORC **Moravsky Berou** 30.80 65 *e*P P 23 48 04.9 +0.3
MORC **Moravsky Berou** 30.80 65 ⇑P P 23 48 04.4 -0.1
MORC **Moravsky Berou** 30.80 65 IAmb IAmb 23 48 13.4
comp=Z,35nm,1.3s
MORC IAMs_20 IAMs_20 23 59 28.9
comp=Z,6μm,20.0s
E59A **St. Maurice** 30.81 289 P P 23 48 04.8 +0.1
baz=76
MODS **Modra-Piesok** 30.87 67 *e*P P 23 48 05.1 -0.1
MODS pmax pmax
comp=Z,28nm,1.3s
MODS **Modra-Piesok** 30.87 67 *e*P P 23 48 05.1 -0.1
D58A **Chemin du LacG** 30.91 290 P P 23 48 05.0 -0.6
baz=77,SNR=8.7
H61A **Lyndonville** 30.92 285 P P 23 48 05.8 +0.1
baz=73
SMOL **Smolenice** 30.94 67 *e*P P 23 48 06.4 +0.6
SMOL pmax pmax
comp=Z,12nm,1.3s
SMOL **Smolenice** 30.94 67 *e*P P 23 48 06.4 +0.6
M65A **Busby, Falmout** 30.99 279 P P 23 48 06.7 +0.4
baz=69
M65A **Busby, Falmout** 30.99 279 IAMs_20 IAMs_20 00 00 04.8
comp=Z,3μm,18.0s
L64A **Middleborough** 31.00 280 P P 23 48 06.0 -0.3
baz=69
LBNH **Lisbon** 31.01 284 P P 23 48 07.3 +0.8
baz=73
LBNH **Lisbon** 31.01 284 IAmb IAmb 23 48 14.4
comp=Z,38nm,1.2s
LBNH IAMs_20 IAMs_20 23 59 45.1
comp=Z,8μm,20.0s
JAVC **Velka Javorina** 31.03 66 *e*P P 23 48 07.5 +0.8
G60A **Masonville** 31.04 286 P P 23 48 07.1 +0.3
baz=74
PAOL **Paolisi** 31.08 82 P P 23 48 06.9 -0.3
BCX **Boston College** 31.09 281 IAMs_20 IAMs_20 00 00 01.3
comp=Z,3μm,20.0s
F59A **Saint Guilaume** 31.15 288 P P 23 48 07.3 -0.3
baz=75
OKC **Ostrava-Krasne** 31.17 64 AMS AMS 00 00 10.0
comp=Z,6μm,14.3s
WES **Weston** 31.18 281 P P 23 48 07.5 -0.4
WES pmax pmax
comp=Z,41nm,1.3s
WES MLR MLR
comp=Z,3μm,20.0s
WES **Weston** 31.18 281 P P 23 48 07.5 -0.4
WES IAmb IAmb 23 48 14.5
comp=Z,41nm,1.3s
WES IAMs_20 IAMs_20 23 59 43.7
comp=Z,3μm,20.0s
K63A **Dunstable** 31.22 281 P P 23 48 08.2 -0.1
baz=70
J62A **Henniker** 31.24 283 P P 23 48 07.9 -0.6
baz=71
I61A **Oroboro, Fairl** 31.30 284 P P 23 48 09.3 +0.3
baz=72
HRV **Adam Dziewonsk** 31.30 281 P P 23 48 11.0 +2.0
HRV pmax pmax
comp=Z,72nm,2.0s
HRV MLR MLR
comp=Z,3μm,20.0s
HRV **Adam Dziewonsk** 31.30 281 P P 23 48 08.7 -0.3
baz=70
HRV **Adam Dziewonsk** 31.30 281 P P 23 48 11.0 +2.0
HRV IAmb IAmb 23 48 17.0
comp=Z,72nm,1.9s
HRV **Adam Dziewonsk** 31.30 281 IAMs_20 IAMs_20 23 59 57.9
comp=Z,3μm,20.0s
E58A **La Victoria** 31.35 289 P P 23 48 08.8 -0.6
baz=76
CHGQ **Chibougamau** 31.35 296 P P 23 48 09.0 -0.4
baz=81
M64A **Tiverton** 31.39 279 P P 23 48 09.0 -0.8
baz=69
HNH **Hanover** 31.42 284 P P 23 48 10.9 +0.9
HNH IAmb IAmb 23 48 17.6
comp=Z,25nm,1.2s
H60A **Morristown** 31.44 285 P P 23 48 08.8 -1.5
baz=73,SNR=7.3
CORL **Corleone** 31.47 88 P P 23 48 10.7 +0.1
BRYW **Bryant College** 31.49 280 P P 23 48 12.7 +1.9
BRYW IAmb IAmb 23 48 18.3
comp=Z,32nm,1.4s
CLTB **Caltabellotta** 31.55 89 P P 23 48 10.2 -1.2
CLTB IAmb IAmb 23 48 14.1
comp=Z,83nm,1.7s
VT1 **Waterbury** 31.55 285 P P 23 48 11.6 +0.4
VT1 IAmb IAmb 23 48 19.4
comp=Z,28nm,1.2s
VT1 IAMs_20 IAMs_20 23 59 52.4
comp=Z,8μm,21.0s
L63A **North Scituate** 31.56 280 P P 23 48 11.0 -0.3
baz=69
D57A **Chemin Vers le** 31.60 290 P P 23 48 11.0 -0.7
baz=76
SGRT **San Giovanni R** 31.64 80 P P 23 48 11.0 -1.2
SGRT IAMs_20 IAMs_20 00 01 14.2
comp=Z,4μm,18.0s
J61A **Chester** 31.72 283 P P 23 48 12.0 -0.7
baz=71,SNR=12
K62A **Royalston** 31.72 282 P P 23 48 11.6 -1.1
baz=70
K62A **Royalston** 31.72 282 P P 23 48 13.9 +1.2
K62A IAmb IAmb 23 48 17.0
comp=Z,80nm,1.9s
VYHS **Vyhne** 31.86 67 *e*P P 23 48 14.0 +0.1
VYHS pmax pmax
comp=Z,38nm,1.9s
VYHS **Vyhne** 31.86 67 *e*P P 23 48 14.0 +0.1
E57A **Chemin Saint G** 31.92 289 P P 23 48 13.8 -0.7
baz=75
QUA2 **Belchertown** 31.93 281 P P 23 48 15.7 +1.1
QUA2 IAmb IAmb 23 48 22.7
comp=Z,59nm,1.6s
QUA2 IAMs_20 IAMs_20 00 00 25.6
comp=Z,4μm,19.0s
FRNY **Flat Rock** 31.97 286 P P 23 48 15.0 +0.1
FRNY IAMs_20 IAMs_20 00 00 14.5
comp=Z,7μm,19.0s
M63A **Gales Ferry** 32.03 279 P P 23 48 16.1 +0.6
baz=68
I60A **Shoreham** 32.07 284 P P 23 48 15.7 -0.1
baz=72,SNR=6.6
DAG **Danmarks Havn** 32.09 4 *i* P P 23 48 15.8 +0.3
DAG pmax pmax
comp=Z,16nm,1.5s
DAG **Danmarks Havn** 32.09 4 *i* P P 23 48 15.8 +0.3
comp=Z,16nm,1.5s
H59A **Cadyville** 32.10 286 P P 23 48 14.6 -1.4
baz=73
L61B **Northampton** 32.10 282 P P 23 48 15.5 -0.6
baz=70
LANS **Liptovska Anna** 32.14 65 *e*P P 23 48 17.8 +1.4
LANS pmax pmax
comp=Z,8.0nm,1.2s
LANS **Liptovska Anna** 32.14 65 *e*P P 23 48 17.8 +1.4
OJC **Ojcow** 32.16 63 *e*P P 23 48 17.4 +0.9
OJC LMZ LR 00 00 49.4
comp=Z,6.7nm,17.4s
OJC **Ojcow** 32.16 63 P P 23 48 16.9 +0.4
OJC pmax pmax
comp=Z,27nm,1.0s
OJC **Ojcow** 32.16 63 P P 23 48 16.9 +0.4
OJC IAmb IAmb 23 48 25.4
comp=Z,27nm,1.0s
D56A **ZEC Mazanza, M** 32.17 291 P P 23 48 15.7 -0.9
baz=76
G58A **Ormstown** 32.20 287 P P 23 48 17.0 +0.1
baz=73
L62A **Suffield** 32.23 281 P P 23 48 17.3 +0.1
baz=69
J60A **Lant Hill Farm** 32.35 283 P P 23 48 19.7 +1.5
baz=71
K61A **Williamstown** 32.43 282 P P 23 48 20.3 +1.2
baz=70
F57A **Harrington** 32.45 288 P P 23 48 20.1 +1.0
baz=74
ACCN **Adirondack Com** 32.47 284 IAMs_20 IAMs_20 00 00 18.8
comp=Z,8μm,20.0s
E56A **St. Veronique** 32.48 290 P P 23 48 18.5 -0.9
baz=75,SNR=13
I59A **Olmsteadville** 32.48 284 P P 23 48 19.2 -0.2
baz=71
H58A **Gabriels** 32.50 286 P P 23 48 19.2 -0.4
baz=72,SNR=16
N63A **Mattituck** 32.52 279 P P 23 48 20.6 +0.8
baz=68
M62A **Hamden** 32.61 280 P P 23 48 20.5 0.0
baz=68,SNR=7.1
NIE **Niedzica** 32.62 65 *e*P P 23 48 21.8 +1.2
NIE LMZ LR 00 00 25.1
comp=Z,2.7nm,19.8s
D55A **Sainte-Anne-du** 32.65 291 P P 23 48 21.1 +0.2
baz=76,SNR=8.1
NCB **Newcomb** 32.67 285 P P 23 48 21.7 +0.7
NCB IAmb IAmb 23 48 26.1
comp=Z,84nm,1.8s
NCB IAMs_20 IAMs_20 00 00 35.9
comp=Z,7μm,20.0s
PSZ **Piszkesteto** 32.67 68 ⇑P P 23 48 22.1 +1.0
PSZ **Piszkesteto** 32.67 68 P P 23 48 21.1 -0.1
PSZ pmax pmax
comp=Z,75nm,1.7s
PSZ MLR MLR
comp=Z,2μm,20.0s
PSZ **Piszkesteto** 32.67 68 P P 23 48 21.1 -0.1
PSZ IAmb IAmb 23 48 30.6
comp=Z,75nm,1.7s
YLE **Yale** 32.69 280 P P 23 48 21.9 +0.7
YLE IAMs_20 IAMs_20 00 01 12.6
comp=Z,3μm,19.0s
TRY **Troy** 32.69 282 P P 23 48 22.5 +1.3
TRY IAmb IAmb 23 48 25.9
comp=Z,31nm,1.3s
TRY IAMs_20 IAMs_20 00 00 00.6
comp=Z,4μm,22.0s
LONY **Lake Ozonia** 32.71 286 P P 23 48 21.7 +0.3
baz=72,SNR=13
LONY **Lake Ozonia** 32.71 286 IAmb IAmb 23 48 28.9
comp=Z,40nm,1.2s
LONY IAMs_20 IAMs_20 00 00 37.2
comp=Z,6μm,19.0s
L61A **Hillsdale 1, H** 32.80 281 P P 23 48 21.3 -0.9
baz=69
G57A **Newington** 32.84 287 P P 23 48 22.1 -0.4
baz=73
PBUR **Paburge** 32.87 52 *e*P P 23 48 21.8 -0.8
K60A **Five Rivers En** 32.88 282 P P 23 48 22.3 -0.6
baz=70
KSCT **Kent School, K** 32.92 281 P P 23 48 24.1 +0.9
KSCT IAmb IAmb 23 48 27.7
comp=Z,45nm,1.2s
WSPT **Westport, CT** 33.02 280 P P 23 48 25.6 +1.6
WSPT IAmb IAmb 23 48 31.7
comp=Z,45nm,1.3s
WSPT IAMs_20 IAMs_20 00 01 23.2
comp=Z,3μm,18.0s
J59A **Piesco** 33.02 284 P P 23 48 23.0 -1.2
baz=71,SNR=11
J59A **Piesco** 33.02 284 IAmb IAmb 23 48 32.3
comp=Z,41nm,1.2s
ORIO **Orleans, Innes** 33.10 288 P P 23 48 23.3 -1.4
baz=73
ORIO **Orleans, Innes** 33.10 288 P P 23 48 25.0 +0.3
CEL **Celeste** 33.14 86 P P 23 48 24.1 -1.2
LSQQ **Lebel-sur-Quev** 33.18 295 P P 23 48 24.7 -0.7
baz=78
E55A **Montcerf-Lytto** 33.19 290 P P 23 48 25.3 -0.2
baz=74
N62A **Caumsett State** 33.20 279 P P 23 48 25.1 -0.6
baz=67
M61A **Granite Spring** 33.27 280 P P 23 48 26.4 +0.1
baz=68
I58A **Old Forge** 33.27 285 P P 23 48 27.0 +0.6
baz=71,SNR=7.1
WDD **Wied Dalam** 33.29 91 IAMs_20 IAMs_20 00 00 06.9
comp=Z,4μm,20.0s
L60A **Shokan** 33.34 281 P P 23 48 27.6 +0.7
baz=69
TIP **Timpagrande** 33.36 84 ⇑P P 23 48 28.5 +1.3
TIP **Timpagrande** 33.36 84 P P 23 48 26.5 -0.7
TIP IAmb IAmb 23 48 39.9
comp=Z,33nm,1.5s
TIP IAMs_20 IAMs_20 00 02 34.6
comp=Z,4μm,19.0s
D54A **Lac Fusel, La** 33.40 291 P P 23 48 27.7 +0.2
baz=75
MATQ **Matagami** 33.46 296 P P 23 48 28.1 +0.2
baz=79
PAL **Palisades** 33.48 280 P P 23 48 28.6 +0.5
PAL pmax pmax
comp=Z,55nm,1.7s
PAL **Palisades** 33.48 280 P P 23 48 28.2 +0.1
baz=67
PAL **Palisades** 33.48 280 P P 23 48 28.6 +0.5
PAL IAmb IAmb 23 49 44.5
comp=Z,55nm,1.6s
K59A **Cooperstown** 33.49 283 P P 23 48 28.8 +0.5
baz=70
F55A **Otter Lake** 33.55 289 P P 23 48 28.7 0.0
baz=74
J58A **Remsen** 33.59 284 P P 23 48 30.0 +0.9
baz=70,SNR=6.6
J58A **Remsen** 33.59 284 P P 23 48 29.7 +0.5
J58A IAmb IAmb 23 48 34.4
comp=Z,69nm,1.6s
CPNY **Central Park** 33.60 279 P P 23 48 29.6 +0.4
CPNY IAmb IAmb 23 48 36.5
comp=Z,73nm,1.8s
CPNY IAMs_20 IAMs_20 00 01 29.8
comp=Z,4μm,22.0s
I57A **Carthage** 33.66 285 P P 23 48 30.4 +0.7
baz=71,SNR=7.7
VLDQ **Val d'Or** 33.69 293 P P 23 48 32.0 +2.1
VLDQ IAmb IAmb 23 48 38.4
comp=Z,29nm,1.4s
VLDQ IAMs_20 IAMs_20 00 01 11.7
comp=Z,3μm,18.0s
SUW **Suwalki** 33.73 56 P P 23 48 30.6 +0.5
SUW pmax pmax
comp=Z,29nm,1.0s
SUW MLR MLR
comp=Z,2μm,20.0s
SUW **Suwalki** 33.73 56 P P 23 48 30.6 +0.5
SUW IAmb IAmb 23 48 43.6
comp=Z,30nm,1.0s
DIVS **Divibare** 33.79 74 P P 23 48 31.0 +0.1
DIVS IAmb IAmb 23 48 44.7
comp=Z,28nm,1.1s
DIVS IAMs_20 IAMs_20 00 01 43.0
comp=Z,4μm,19.0s
L59A **Walton** 33.83 282 P P 23 48 31.7 +0.4
baz=69
L59A **Walton** 33.83 282 P P 23 48 32.6 +1.3
L59A IAmb IAmb 23 48 39.5
comp=Z,32nm,1.1s
PDG **Podgorica** 33.85 77 ⇑P P 23 48 30.9 -0.4
PDG **Podgorica** 33.85 77 IAMs_20 IAMs_20 00 03 03.6
comp=Z,3μm,18.0s
N61A **South Mountain** 33.85 279 P P 23 48 31.9 +0.5
baz=67
H56A **Elgin** 33.86 287 P P 23 48 31.3 -0.1
baz=72,SNR=9.5
M60A **Port Jervis** 33.86 281 P P 23 48 31.5 0.0
baz=68
ODNJ **Ogdensburg** 33.94 280 P P 23 48 32.7 +0.5
ODNJ IAmb IAmb 23 48 39.8
comp=Z,47nm,1.4s
E54A **Lac Daplat, Po** 33.95 290 P P 23 48 31.5 -0.7
baz=74,SNR=7.2
G55A **Calabogie** 33.97 288 P P 23 48 32.3 0.0
baz=72
K58A **Earlville** 34.05 283 P P 23 48 34.1 +1.0
baz=69,SNR=16
K58A **Earlville** 34.05 283 P P 23 48 34.4 +1.3
K58A IAMs_20 IAMs_20 00 01 35.5
comp=Z,5μm,19.0s
PABE **Paberze** 34.05 53 *e*P P 23 48 32.2 -0.6
J57A **Williamstown** 34.06 285 P P 23 48 32.2 -1.0
baz=70,SNR=6.0
J57A **Williamstown** 34.06 285 P P 23 48 34.5 +1.3
BRNJ **Basking Ridge** 34.07 279 P P 23 48 35.0 +1.8
BRNJ IAmb IAmb 23 48 41.3
comp=Z,63nm,1.4s
BRNJ IAMs_20 IAMs_20 00 01 55.1
comp=Z,3μm,18.0s
UZH **Uzhgorod** 34.07 66 *e*P P 23 48 33.4 +0.2
UZH *e* 23 48 40.3
UZH *e* 23 49 43.1
UZH *e*PPP PPP 23 50 12.3
UZH *i* S **S** 23 53 55.7 -3.2
UZH MLR MLR
comp=N,450nm,16.0s
UZH MLR MLR
comp=E,1μm,16.0s
UZH MLR MLR
comp=Z,550nm,16.0s
D53A **Lac Vacive, Po** 34.11 292 P P 23 48 34.2 +0.6
baz=75,SNR=7.6
D53A **Lac Vacive, Po** 34.11 292 IAmb IAmb 23 48 41.1
comp=Z,42nm,1.4s
D53A IAMs_20 IAMs_20 00 01 46.1
comp=Z,5μm,18.0s
SCTE **Santa Cesarea** 34.19 82 P P 23 48 34.6 +0.3
PLVO **Plevna** 34.27 288 P P 23 48 36.1 +1.1
PLVO IAmb IAmb 23 48 42.8
comp=Z,52nm,1.5s
PLVO IAMs_20 IAMs_20 00 01 44.5
comp=Z,7μm,20.0s
O61A **Allentown** 34.29 278 P P 23 48 36.0 +0.8
baz=66
M59A **Waymart** 34.34 281 P P 23 48 34.9 -0.8
baz=68
TRPA **Tarpa** 34.35 66 ⇑P P 23 48 36.5 +0.9
N60A **Cedar Hill Far** 34.37 280 P P 23 48 36.7 +0.9
baz=67,SNR=5.5
BZS **Buzias** 34.42 71 ⇑P P 23 48 36.8 +0.6
L58A **Harry Jones Me** 34.45 282 P P 23 48 36.0 -0.5
baz=68
BINY **Binghamton** 34.48 283 P P 23 48 37.9 +1.1
baz=68,SNR=10
BINY **Binghamton** 34.48 283 P P 23 48 38.1 +1.2
BINY IAmb IAmb 23 48 45.0
comp=Z,66nm,1.3s
H55A **Tweed** 34.50 287 P P 23 48 37.9 +0.9
baz=71
KSPA **Keystone Colle** 34.57 282 IAmb IAmb 23 48 41.8
comp=Z,45nm,1.2s
KSPA IAMs_20 IAMs_20 00 01 45.4
comp=Z,3μm,20.0s
PECO **Prince Edward** 34.57 286 P P 23 48 39.1 +1.5
PECO IAmb IAmb 23 48 45.3
comp=Z,32nm,1.1s
D52A **ZEK Kipawa Sen** 34.61 292 P P 23 48 37.1 -0.8
baz=74,SNR=8.9

P61A Hammonton 34.63 278 P **P** **23 48 38.7 +0.5**
baz=65
P61A Hammonton 34.63 278 IAMs_20 IAMs_20 00 01 42.1
comp=Z,3µm,19.0s
ALGO Algonquin Park 34.66 290 P **P** **23 48 38.5 +0.2**
baz=73
K57A Scipio Center 34.66 284 P **P** **23 48 38.7 +0.3**
baz=69,SNR=12
LUPA Lehigh Univers 34.66 280 P **P** **23 48 40.0 +1.6**
TIR Tirane 34.67 79 IAMs_20 IAMs_20 00 03 31.2
comp=Z,3µm,19.0s
J56A Wolcott 34.70 285 P **P** **23 48 38.5 -0.2**
baz=70
J56A Wolcott 34.70 285 P **P** **23 48 40.9 +2.2**
J56A IAmb IAmb 23 48 46.6
comp=Z,30nm,0.9s
MDVR Moldovita 34.74 72 ⇑P **P** **23 48 38.8 -0.3**
O60A Telford 34.80 279 P **P** **23 48 38.2 -1.4**
baz=66,SNR=5.5
DELO Deloro Mine 34.81 287 P **P** **23 48 41.3 +1.7**
DELO IAmb IAmb 23 48 47.3
comp=Z,46nm,1.5s
DELO IAMs_20 IAMs_20 00 02 36.5
comp=Z,5µm,18.0s
DRGR 34.81 69 ⇑P **P** **23 48 40.1 +0.3**
N59A State Game Lan 34.82 280 P **P** **23 48 40.5 +0.7**
baz=67
N59A State Game Lan 34.82 280 P **P** **23 48 41.5 +1.7**
N59A IAMs_20 IAMs_20 00 01 09.0
comp=Z,3µm,21.0s
G54A Lake Saint Pet 34.85 289 P **P** **23 48 39.7 -0.3**
baz=72,SNR=5.9
LVV L'vov 34.92 63 *e*P **P** **23 48 41.0 +0.5**
LVV MLR MLR
comp=N,2µm,16.0s
LVV MLR MLR
comp=E,2µm,16.0s
LVV MLR MLR
comp=Z,3µm,16.0s
I55A Frankford 34.95 287 P **P** **23 48 41.0 +0.2**
baz=71
E52A Mattawa 34.96 291 P **P** **23 48 41.4 +0.4**
baz=73
PSUB Penn St. - Bra 34.99 279 P **P** **23 48 37.1 -4.2**
PSUB IAmb IAmb 23 48 48.7
comp=Z,33nm,0.8s
PSUB IAMs_20 IAMs_20 00 02 31.6
comp=Z,4µm,18.0s
FINES FINESS Array B 35.08 43 P **P** **23 48 41.0 -0.7**
comp=Z,11nm,1.0s,baz=270,slow=5.7,SNR=12
FINES LR LR 00 02 42.8
comp=Z,1µm,18.1s,baz=266,slow=36
FINES FINESS Array B 35.08 43 P **P** **23 48 41.0 -0.7**
FIA1 FINESS Array S 35.08 43 P **P** **23 48 41.4 -0.3**
FIA1 IAmb IAmb 23 48 59.6
comp=Z,27nm,1.1s
BMR Baia Mare 35.09 67 ⇑P **P** **23 48 42.3 +0.3**
M58A Price`s Panora 35.12 282 P **P** **23 48 42.0 -0.4**
baz=67,SNR=10
L57A Andrews Acres 35.15 283 P **P** **23 48 42.0 -0.7**
baz=68,SNR=7.5
P60A Greenville 35.17 279 P **P** **23 48 42.5 -0.2**
baz=65
P60A Greenville 35.17 279 P **P** **23 48 43.8 +1.1**
P60A IAmb IAmb 23 48 47.3
comp=Z,69nm,1.4s
P60A IAMs_20 IAMs_20 00 02 27.3
comp=Z,4µm,19.0s
TAM Tamanrasset 35.18 118 P **P** **23 48 42.0 -1.2**
TAM pmax pmax
comp=Z,10.0nm,1.3s
TAM MLR MLR
comp=Z,3µm,20.0s
TAM Tamanrasset 35.18 118 P **P** **23 48 42.0 -1.2**
TAM IAMs_20 IAMs_20 00 01 30.3
comp=Z,3µm,20.0s
HERR Herculane 35.18 72 ⇓P **P** **23 48 43.8 +1.0**
D51A Lot 18 Range I 35.21 292 P **P** **23 48 43.0 -0.1**
baz=74
K56A Middlesex 35.23 284 P **P** **23 48 42.6 -0.7**
baz=69,SNR=7.9
ISAL Salakas 35.26 53 *e*P **P** **23 48 45.6 +2.2**
GZR Gura Zlata 35.27 71 ⇑P **P** **23 48 44.2 +0.5**
IIGN Ignalina 35.34 53 *e*P **P** **23 48 45.4 +1.3**
Q61A Milford 35.34 277 P **P** **23 48 45.0 +0.8**
baz=64
O59A Robesonia 35.35 280 P **P** **23 48 44.8 +0.5**
baz=66,SNR=9.3
J55A Hilton 35.36 285 P **P** **23 48 43.9 -0.5**
baz=69
J55A Hilton 35.36 285 P **P** **23 48 44.9 +0.5**
J55A IAmb IAmb 23 48 52.3
comp=Z,42nm,1.2s
VSU Vasula 35.39 48 *e*P **P** **23 48 40.1 -4.4**
CJR Cluj-Napoca 35.42 68 ⇑P **P** **23 48 45.4 +0.5**
H53A Bobcaygeon 35.44 288 P **P** **23 48 44.8 -0.3**
baz=71
E51A G1948 Merrick 35.45 291 P **P** **23 48 45.0 -0.1**
baz=73
D50A G1974 Best Tow 35.50 292 P **P** **23 48 44.9 -0.6**
baz=74
N58A Sunbury 35.51 281 P **P** **23 48 46.6 +0.9**
baz=66,SNR=8.8
N58A Sunbury 35.51 281 P **P** **23 48 47.1 +1.4**
N58A IAmb IAmb 23 48 53.7
comp=Z,58nm,1.4s
F52A Sundridge 35.55 290 P **P** **23 48 45.7 -0.3**
baz=72
MVL Millersville 35.59 279 P **P** **23 48 47.3 +0.9**
MVL IAmb IAmb 23 48 54.4
comp=Z,51nm,1.3s
MVL IAMs_20 IAMs_20 00 02 51.5
comp=Z,4µm,18.0s
L56A Greenwood 35.59 283 P **P** **23 48 46.8 +0.4**
baz=68
L56A Greenwood 35.59 283 P **P** **23 48 46.9 +0.4**
L56A IAmb IAmb 23 48 51.7
comp=Z,94nm,1.9s
L56A IAMs_20 IAMs_20 00 01 52.4
comp=Z,4µm,22.0s
R61A Willards 35.59 276 P **P** **23 48 48.1 +1.7**
baz=64
R61A Willards 35.59 276 IAMs_20 IAMs_20 00 04 33.6
comp=Z,3µm,18.0s
M57A Sunshine Farm, 35.60 282 P **P** **23 48 46.0 -0.5**
baz=67,SNR=11
M57A Sunshine Farm, 35.60 282 P **P** **23 48 48.2 +1.7**
M57A IAMs_20 IAMs_20 00 02 26.6
comp=Z,4µm,20.0s
MMNY Mt. Morris Dam 35.61 284 P **P** **23 48 47.3 +0.7**
Q60A Greensboro 35.66 277 P **P** **23 48 47.9 +1.0**
baz=64
Q60A Greensboro 35.66 277 P **P** **23 48 48.5 +1.5**
Q60A IAMs_20 IAMs_20 00 00 52.2
comp=Z,3µm,21.0s
NACGM Naroch 35.71 54 *e*P P 23 48 32.0 -15
NACGM *e*PP **PnPn** **23 49 58.0 -8.7**
NACGM *e*PPP PPP 23 50 16.0
NACGM *e*S S 23 54 00.0 -24
NACGM *e*ScP ScP 23 54 24.0 -37
NACGM *e*SS **SS** **23 57 08.0 +8.9**
NACGM *e*SSS SSS 23 57 53.0
NACGM *e*LQ LQ 00 01 44.0
comp=Z,11nm,16.0s
NACGM *e*LR LR 00 03 40.0
NACGM LRM MLR 00 05 14.0
K55A Perry 35.73 285 P **P** **23 48 47.7 +0.1**
baz=69
SADO Sadowa 35.75 288 P **P** **23 48 46.6 -1.2**
comp=Z,6.4nm,0.8s,baz=92,slow=9.8,SNR=6.6
SADO Sadowa 35.75 288 P **P** **23 48 48.2 +0.4**
SADO IAmb IAmb 23 48 55.4
comp=Z,33nm,1.4s
PAGS Pennsylvania G 35.76 280 P **P** **23 48 48.8 +0.9**
PAGS IAMs_20 IAMs_20 00 01 35.8
comp=Z,3µm,21.0s
SRE Strehaia 35.79 72 ⇑P **P** **23 48 48.4 +0.3**
TULEG Thule 35.80 345 P **P** **23 48 47.6 -0.1**
TULEG IAmb IAmb 23 48 55.1
comp=Z,47nm,1.5s
TULEG IAMs_20 IAMs_20 00 01 07.6
comp=Z,3µm,20.0s
ARCR ARCALIA 35.81 68 ⇑P **P** **23 48 48.7 +0.5**
P59A Jarrettsville 35.81 279 P **P** **23 48 47.6 -0.7**
baz=65
MEDO Medina 35.83 285 P **P** **23 48 49.3 +0.8**

F51A Arnstein 35.91 290 P **P** **23 48 48.0 -1.1**
baz=72
LOT Lotru 35.91 70 ⇑P **P** **23 48 49.6 +0.3**
J54A Appleton 35.92 286 P **P** **23 48 48.9 -0.3**
baz=69
J54A Appleton 35.92 286 P **P** **23 48 50.5 +1.3**
J54A IAmb IAmb 23 48 54.3
comp=Z,47nm,1.4s
O58A Lewisberry 35.94 280 P **P** **23 48 50.3 +0.9**
baz=66
FNA Florina 35.94 79 P **P** **23 48 49.3 -0.2**
FNA pmax pmax
comp=Z,14nm,1.0s
FNA Florina 35.94 79 P **P** **23 48 49.3 -0.2**
ARCES ARCESS Array B 36.05 29 P **P** **23 48 49.8 -0.3**
comp=Z,5.6nm,0.8s,baz=230,slow=26,SNR=7.0
ARCES LR LR 00 01 38.1
comp=Z,1µm,20.8s,baz=264,slow=33
ARE0 ARCESS Array S 36.05 29 P **P** **23 48 50.1 0.0**
S61A Accomac 36.12 275 IAMs_20 IAMs_20 00 04 24.5
comp=Z,2µm,18.0s
N57A Milroy 36.12 281 P **P** **23 48 51.1 +0.2**
baz=66
L55A Hinsdale 36.18 284 P **P** **23 48 52.1 +0.6**
baz=68
SDMD Soldier's Deli 36.18 279 P **P** **23 48 52.0 +0.6**
K54A Basiliko Farm, 36.20 285 P **P** **23 48 51.3 -0.4**
baz=68
BUR08 Bucovina Ar. S 36.21 66 P **P** **23 48 52.1 +0.4**
BUR08 IAmb IAmb 23 49 00.7
comp=Z,56nm,1.4s
WVNY West Valley, N 36.21 284 P **P** **23 48 51.2 -0.5**
WVNY IAmb IAmb 23 48 56.7
comp=Z,60nm,1.6s
BURAR Bucovina Array 36.23 66 ⇓P **P** **23 48 52.6 +0.6**
M56A Emporium 36.27 283 P **P** **23 48 51.8 -0.5**
baz=67,SNR=7.7
M56A Emporium 36.27 283 P **P** **23 48 52.4 +0.1**
M56A IAmb IAmb 23 48 56.7
comp=Z,46nm,1.2s
M56A IAMs_20 IAMs_20 00 03 14.4
comp=Z,3µm,18.0s
Q59A Harwood 36.28 278 P **P** **23 48 52.6 +0.2**
baz=64
H52A Wyevale 36.30 288 P **P** **23 48 52.6 +0.1**
baz=70
E50A Wahnapitae 36.30 292 P **P** **23 48 52.1 -0.4**
baz=72
I53A Kortright Cn E 36.38 287 P **P** **23 48 52.5 -0.6**
baz=70
MICGM Minsk 36.40 54 *e*P **P** **23 48 53.0 -0.2**
MICGM *e*S **S** **23 54 36.0 +1.4**
MICGM *e*LR LR 00 03 30.0
MICGM LRM MLR 00 04 44.0
comp=Z,3.9nm,12.0s
MNK Minsk 36.40 54 *e*P **P** **23 48 53.0 -0.2**
MNK *e*S **S** **23 54 36.0 +1.4**
MNK MLR MLR
comp=Z,4µm,12.0s
O57A Amberson 36.40 280 P **P** **23 48 53.5 +0.2**
baz=66
SSPA Standing Stone 36.40 281 P **P** **23 48 54.5 +1.1**
SSPA IAmb IAmb 23 48 58.4
comp=Z,67nm,1.5s
SSPA Standing Stone 36.40 281 IAMs_20 IAMs_20 00 02 08.9
comp=Z,3µm,20.0s
D49A Beulah Townshi 36.46 293 P **P** **23 48 53.9 +0.1**
baz=73
P58A Pank, Wackersv 36.47 279 P **P** **23 48 54.9 +0.9**
baz=65
R60A Leonardtown, M 36.50 277 P **P** **23 48 54.6 +0.5**
baz=63
ARR Arges 36.52 70 ⇑P **P** **23 48 54.6 +0.3**
VTS Vitosha 36.52 75 ⇑P **P** **23 48 54.9 +0.3**
VTS Vitosha 36.52 75 *i*P **P** **23 48 55.9 +1.4**
VTS Vitosha 36.52 75 P **P** **23 48 54.3 -0.2**
VTS pmax pmax
comp=Z,17nm,1.2s
VTS MLR MLR
comp=Z,1µm,20.0s
VTS Vitosha 36.52 75 P **P** **23 48 54.3 -0.2**
N56A West Decatur 36.57 282 P **P** **23 48 55.0 +0.1**
baz=66
MPEP Malo Peshtene 36.60 74 P **P** **23 48 55.0 0.0**
M55A Ridgway 36.68 283 P **P** **23 48 56.4 +0.6**
baz=67
M55A Ridgway 36.68 283 P **P** **23 48 57.2 +1.4**
M55A IAmb IAmb 23 49 00.8
comp=Z,99nm,1.8s
M55A IAMs_20 IAMs_20 00 03 00.2
comp=Z,3µm,19.0s
I52A Shelburne 36.69 288 P **P** **23 48 57.3 +1.5**
baz=70
KKB Krupnik 36.70 76 *i*P **P** **23 48 58.5 +2.6**
L54A Sinclairville 36.77 284 P **P** **23 48 57.5 +1.1**
baz=68
D48A Paudash Townsh 36.78 293 P **P** **23 48 57.1 +0.5**
baz=73
S60A Water View 36.80 276 P **P** **23 48 56.8 0.0**
baz=63
DOPR Dopca 36.83 69 ⇑P **P** **23 48 57.1 +0.1**
R59A King George, V 36.90 277 P **P** **23 48 58.8 +1.2**
baz=63
PRAR RASCA 36.95 67 ⇑P **P** **23 48 57.5 -0.5**
P57A Homestead Farm 36.97 279 P **P** **23 48 59.1 +0.9**
baz=64
P57A Homestead Farm 36.97 279 P **P** **23 49 00.3 +2.1**
P57A IAmb IAmb 23 49 03.5
comp=Z,53nm,1.6s
P57A IAMs_20 IAMs_20 00 03 52.0
comp=Z,4µm,18.0s
Q58A Fox Den Farm, 36.97 278 P **P** **23 48 58.9 +0.7**
baz=64
LIT Litokhoron 37.00 79 P **P** **23 48 58.0 -0.5**
LIT pmax pmax
comp=Z,33nm,1.7s
LIT MLR MLR
comp=Z,1µm,22.0s
LIT Litokhoron 37.00 79 P **P** **23 48 58.0 -0.5**
BIZ Bicaz 37.00 67 ⇑P **P** **23 48 58.7 +0.3**
HUMR Humele 37.03 71 ⇓P **P** **23 48 59.6 +1.0**
O56A Blue Knob Stat 37.03 281 P **P** **23 48 59.6 +0.8**
baz=65
O56A Blue Knob Stat 37.03 281 P **P** **23 49 00.8 +2.0**
O56A IAMs_20 IAMs_20 00 02 27.4
comp=Z,3µm,21.0s
CBN Corbin Frederi 37.08 277 P **P** **23 48 59.9 +0.7**
baz=63
N55A Marion Center 37.11 282 P **P** **23 48 58.2 -1.3**
baz=66,SNR=8.5
T60A Surry 37.12 275 P **P** **23 48 59.3 -0.2**
baz=62
T60A Surry 37.12 275 P **P** **23 49 00.9 +1.4**
T60A IAmb IAmb 23 49 04.9
comp=Z,93nm,1.5s
KBS Kingsbay 37.16 12 P **P** **23 49 00.4 +1.0**
KBS pmax pmax
comp=Z,19nm,1.3s
KBS Kingsbay 37.16 12 P **P** **23 49 00.4 +1.0**
PLVB Pleven 37.18 73 ⇑P **P** **23 49 00.8 +0.8**
J52A Paris 37.19 286 P **P** **23 49 00.1 +0.1**
baz=68
E48A Lockeyer 37.22 292 P **P** **23 49 01.1 +0.8**
baz=72
S59A Mechanicsville 37.23 276 P **P** **23 49 00.9 +0.5**
baz=63
MMB Musomiste 37.25 77 *i*P **P** **23 49 03.2 +2.6**
ERPA Erie 37.27 284 P **P** **23 49 00.6 -0.1**
baz=67
ERPA Erie 37.27 284 P **P** **23 49 01.3 +0.5**
ERPA IAmb IAmb 23 49 04.8
comp=Z,92nm,1.6s
M54A Oil Creek Stat 37.29 283 P **P** **23 49 02.2 +1.3**
baz=67
M54A Oil Creek Stat 37.29 283 P **P** **23 49 02.4 +1.4**
M54A IAmb IAmb 23 49 06.3
comp=Z,101nm,1.8s
M54A IAMs_20 IAMs_20 00 03 08.3
comp=Z,3µm,21.0s
U61A Possum Corner 37.30 274 P **P** **23 49 02.0 +1.0**
baz=61
U61A Possum Corner 37.30 274 P **P** **23 49 02.1 +1.1**
V62A Hyde County Ai 37.33 272 IAMs_20 IAMs_20 00 01 21.5
comp=Z,2µm,21.0s
MLR Muntele Rosu 37.35 70 ⇑P **P** **23 49 01.8 +0.3**
MLR Muntele Rosu 37.35 70 IAmb IAmb 23 49 11.3
comp=Z,42nm,1.1s
MLR IAMs_20 IAMs_20 00 03 29.2
comp=Z,3µm,20.0s
I51A Listowel 37.35 287 P **P** **23 49 02.0 +0.6**
baz=69
F49A Sandfield 37.37 291 P **P** **23 49 01.6 +0.1**
baz=71
SPA0 Spitsbergen Ar 37.39 14 P **P** **23 49 00.2 -1.2**
SPA0 IAmb IAmb 23 49 13.3
comp=Z,51nm,1.5s
SPITS Spitsbergen Ar 37.39 14 P **P** **23 49 00.9 -0.5**
comp=Z,9.3nm,1.0s,baz=174,slow=19,SNR=4.7
Q57A Strasburg 37.44 279 P **P** **23 49 03.1 +0.9**
baz=64
R58A Rapidan 37.48 278 P **P** **23 49 03.2 +0.7**
baz=63
TESR Tescani 37.49 68 ⇑P **P** **23 49 02.3 -0.2**
K52A Tillsonburg 37.52 286 P **P** **23 49 03.2 +0.3**
baz=68
L53A Girard 37.52 284 P **P** **23 49 03.2 +0.3**
baz=67
P56A Dayton Farm, R 37.54 280 P **P** **23 49 03.0 -0.1**
baz=64
R58B Mineral 37.55 277 P **P** **23 49 03.3 +0.2**
baz=63
R58B Mineral 37.55 277 P **P** **23 49 04.1 +1.0**
ALLY Alegheny Colle 37.56 284 P **P** **23 49 03.6 +0.3**
ALLY IAmb IAmb 23 49 08.3
comp=Z,77nm,1.4s
ALLY IAMs_20 IAMs_20 00 03 35.5
comp=Z,5µm,20.0s
O55A Ligonier 37.57 281 P **P** **23 49 04.1 +0.8**
baz=65
V61A Roper 37.66 273 P **P** **23 49 05.2 +1.2**
baz=60
D47A Chapleau 37.66 293 P **P** **23 49 04.8 +0.7**
baz=72
PLOR Plostina 37.70 69 ⇑P **P** **23 49 04.4 0.0**
F48A Evansville 37.73 291 P **P** **23 49 04.9 +0.3**
baz=71
N54A Moraine State 37.73 283 P **P** **23 49 04.1 -0.6**
baz=66,SNR=5.8
N54A Moraine State 37.73 283 P **P** **23 49 05.9 +1.3**
N54A IAmb IAmb 23 49 13.0
comp=Z,58nm,1.4s
N54A IAMs_20 IAMs_20 00 03 33.0
comp=Z,3µm,20.0s
U60A Pendleton 37.74 275 P **P** **23 49 04.0 -0.7**
baz=61
VRI Vrincioaia 37.74 69 ⇑P **P** **23 49 05.3 +0.6**
T59A Double "B" Far 37.78 275 P **P** **23 49 04.6 -0.5**
baz=62
T59A Double "B" Far 37.78 275 P **P** **23 49 06.8 +1.7**
T59A IAmb IAmb 23 49 13.5
comp=Z,62nm,1.6s
T59A IAMs_20 IAMs_20 00 05 42.4
comp=Z,3µm,18.0s
S58A Poland Farm, P 37.83 277 P **P** **23 49 05.0 -0.5**
baz=62
S58A Poland Farm, P 37.83 277 P **P** **23 49 06.8 +1.3**
S58A IAmb IAmb 23 49 14.8
comp=Z,69nm,1.4s
S58A IAMs_20 IAMs_20 00 06 10.7
comp=Z,2µm,18.0s
SULR 37.83 71 ⇑P **P** **23 49 06.3 +0.9**
BISRR Bisoca 37.84 69 ⇑P **P** **23 49 05.9 +0.3**
R57A Stanardsville 37.85 278 P **P** **23 49 05.8 +0.2**
baz=63
RZN Rozhen 37.89 76 *i*P **P** **23 49 08.0 +1.7**
ITM Ithomi 37.90 84 P **P** **23 49 06.4 +0.3**
AKASG Malin Array Be 37.96 60 P **P** **23 49 05.7 -0.7**
comp=Z,12nm,0.8s,baz=281,slow=8.6,SNR=25
AKASG PcP **PcP** **23 51 20.6 -1.5**
comp=Z,0.9nm,0.6s,baz=277,slow=3.6,SNR=4.5
AKASG LR LR 00 04 28.7
comp=Z,2µm,18.8s,baz=280,slow=36
AKASG Malin Array Be 37.96 60 *e*P **P** **23 49 05.6 -0.8**
AKASG pmax pmax
comp=Z,12nm,0.8s
AKBB Malin Array Si 37.96 60 IAMs_20 IAMs_20 00 05 18.3
comp=Z,4µm,18.0s
E47A Iron Bridge 37.96 292 P **P** **23 49 06.1 -0.4**
baz=71
Q56A Snyder Ridge, 37.98 279 P **P** **23 49 07.2 +0.4**
baz=64
Q56A Snyder Ridge, 37.98 279 P **P** **23 49 08.2 +1.4**
Q56A IAmb IAmb 23 49 11.6
comp=Z,71nm,1.4s
Q56A IAMs_20 IAMs_20 00 04 13.8
comp=Z,3µm,18.0s
M53A WI Miller and 38.01 284 P **P** **23 49 06.6 -0.4**
baz=66
K51A Iona Station 38.08 286 P **P** **23 49 07.2 -0.4**
baz=68
SORM Soroca 38.10 65 ⇑P **P** **23 49 06.5 -1.1**
SZH Strazhica 38.12 73 *i*P **P** **23 49 09.2 +1.3**
V60A Jim Taylor Roa 38.15 274 P **P** **23 49 09.0 +0.7**
baz=60
V60A Jim Taylor Roa 38.15 274 P **P** **23 49 10.3 +2.0**
V60A IAmb IAmb 23 49 13.0
comp=Z,76nm,1.8s
MCWV Mont Chateau 38.18 281 P **P** **23 49 08.1 -0.4**
baz=64
MCWV Mont Chateau 38.18 281 P **P** **23 49 10.8 +2.4**
MCWV IAmb IAmb 23 49 14.1
comp=Z,58nm,1.8s
VASR Vaslui 38.19 67 ⇑P **P** **23 49 07.9 -0.6**
ELND Elena 38.21 73 ⇑P **P** **23 49 08.4 -0.2**
P55A Reedsville 38.23 280 P **P** **23 49 09.2 +0.3**
baz=64
U59A Littleton 38.24 275 P **P** **23 49 09.7 +0.7**
baz=61
U59A Littleton 38.24 275 P **P** **23 49 10.2 +1.3**
W61A Ground Anchor 38.25 273 P **P** **23 49 09.6 +0.5**
baz=60
D46A Sault St. Mari 38.32 293 P **P** **23 49 08.6 -0.9**
baz=72
O54A Avella 38.32 282 P **P** **23 49 09.5 -0.1**
baz=65
O54A Avella 38.32 282 P **P** **23 49 10.2 +0.5**
O54A IAmb IAmb 23 49 14.3
comp=Z,45nm,1.2s
O54A IAMs_20 IAMs_20 00 04 28.7
comp=Z,4µm,18.0s
N53A Lisbon 38.38 283 P **P** **23 49 10.2 +0.1**
baz=66
N53A Lisbon 38.38 283 P **P** **23 49 11.1 +1.0**
N53A IAmb IAmb 23 49 18.4
comp=Z,75nm,1.6s
N53A IAMs_20 IAMs_20 00 04 04.2
comp=Z,4µm,20.0s
S57A Dark Hollow, R 38.40 277 P **P** **23 49 10.0 -0.3**
baz=62
S57A Dark Hollow, R 38.40 277 P **P** **23 49 10.6 +0.3**
S57A IAMs_20 IAMs_20 00 02 10.7
comp=Z,3µm,22.0s
RAZG Razgrad 38.40 72 ⇑P **P** **23 49 10.2 -0.1**
M52A Chesterland 38.44 284 P **P** **23 49 11.0 +0.3**
baz=66
M52A Chesterland 38.44 284 P **P** **23 49 12.1 +1.4**
VARL Varlezi 38.47 68 ⇑P **P** **23 49 10.4 -0.4**
T58A Grand View Acr 38.48 276 P **P** **23 49 10.7 -0.3**
baz=62
LEOM Leova 38.55 67 ⇑P **P** **23 49 11.4 0.0**
H48A Harrisville 38.58 290 P **P** **23 49 11.1 -0.7**
baz=69
H48A Harrisville 38.58 290 IAMs_20 IAMs_20 00 04 38.4
comp=Z,5µm,18.0s
APA Apatity 38.61 33 ⇓*i*P **P** **23 49 13.5 +1.8**
APA pmax pmax
comp=Z,10.0nm,1.0s
Q55A Buckhannon 38.63 280 P **P** **23 49 12.6 +0.3**
baz=64
P54A Burton 38.64 281 P **P** **23 49 13.0 +0.6**
baz=64,SNR=14
E46A Sault Ste Mari 38.66 293 P **P** **23 49 13.5 +1.1**
E46A IAMs_20 IAMs_20 00 04 30.4
comp=Z,4µm,18.0s
KIS Kishinev 38.75 66 *e*P **P** **23 49 12.0 -1.1**
KIS Kishinev 38.75 66 *e*PP PP 23 50 45.0 +3.4
KIS *e*S **S** **23 55 18.0 +7.6**
KIS *i* ScS **SS** **23 58 10.0 +9.3**
KIS *e*L L 23 59 20.0
KIS LRM MLR 00 04 54.0
comp=Z,2µm,16.0s
KIS Kishinev 38.75 66 *e*P **P** **23 49 12.0 -1.1**

KIS *e* 23 50 45.0
KIS *eS* **S** **23 55 18.0 +7.6**
KIS MLR MLR
comp=Z,4μm,20.0s
KIS MLR MLR
comp=N,2μm,16.0s
U58A Oxford **38.76 275** P **P** **23 49 13.5 +0.2**
baz=61
G47A Hillman **38.77 291** P **P** **23 49 14.6 +1.2**
baz=70
MILM Milestii Mici **38.77 66** ⇑P **P** **23 49 12.7 -0.7**
K50A Casco **38.82 287** P **P** **23 49 14.6 +0.8**
baz=67
K50A Casco **38.82 287** P **P** **23 49 14.9 +1.1**
K50A IAmb IAmb 23 49 18.9
comp=Z,122nm,1.9s
W60A Pink Hill **38.83 273** P **P** **23 49 13.2 -0.7**
baz=60
V59A Middlesex **38.84 274** P **P** **23 49 14.3 +0.2**
baz=60
CNNC Cliffs of the **38.86 273** P **P** **23 49 15.6 +1.4**
baz=60
CNNC Cliffs of the **38.86 273** P **P** **23 49 15.9 +1.7**
CNNC IAMs_20 IAMs_20 00 02 20.0
comp=Z,2μm,21.0s
S56A Natural Bridge **38.87 278** P **P** **23 49 15.3 +1.1**
baz=62
O53A New Philadelph **38.87 282** P **P** **23 49 15.8 +1.5**
baz=65,SNR=8.4
CFR Carcaliu **38.91 69** ⇑P **P** **23 49 13.7 -0.8**
HARR Harsova **38.94 70** ⇑P **P** **23 49 13.5 -1.3**
J49A Marlette **38.95 288** P **P** **23 49 15.9 +1.0**
baz=68
T57A Hurt **38.96 277** P **P** **23 49 16.7 +1.6**
baz=62
T57A Hurt **38.96 277** P **P** **23 49 16.7 +1.6**
T57A IAmb IAmb 23 49 24.0
comp=Z,58nm,1.5s
N52A McGinn's Farm, **38.97 283** P **P** **23 49 15.1 +0.1**
baz=65
R55A Marlinton **38.98 279** P **P** **23 49 15.8 +0.5**
baz=63
R55A Marlinton **38.98 279** IAmb IAmb 23 49 21.1
comp=Z,72nm,1.9s
R55A IAMs_20 IAMs_20 00 04 54.0
comp=Z,4μm,18.0s
I48A Sherman Twp **39.02 289** P **P** **23 49 14.8 -0.7**
baz=68
TLBR Topalu **39.07 70** ⇑P **P** **23 49 14.7 -1.2**
LVZ Lovozero **39.10 32** P **P** **23 49 16.6 +0.7**
LVZ pmax pmax
comp=Z,37nm,1.0s
LVZ Lovozero **39.10 32** P **P** **23 49 16.6 +0.7**
LVZ IAmb IAmb 23 49 23.9
comp=Z,37nm,1.0s
LVZ IAMs_20 IAMs_20 00 02 42.1
comp=Z,3μm,22.0s
ALN Alexandroupoli **39.13 76** P **P** **23 49 16.5 +0.1**
ALN pmax pmax
comp=Z,31nm,1.3s
ALN MLR MLR
comp=Z,1μm,18.0s
ALN Alexandroupoli **39.13 76** P **P** **23 49 16.5 +0.1**
Q54A Coxs Mills **39.16 280** P **P** **23 49 17.8 +1.1**
baz=63
Q54A Coxs Mills **39.16 280** IAmb IAmb 23 49 25.7
comp=Z,56nm,1.2s
Q54A IAMs_20 IAMs_20 00 03 18.9
comp=Z,3μm,22.0s
TOPG Topolog **39.17 70** ⇑P **P** **23 49 15.7 -1.0**
H47A Mio **39.20 290** P **P** **23 49 17.8 +0.7**
baz=69
L50A Kingsville **39.23 286** P **P** **23 49 18.1 +0.8**
baz=66
X60A Albert Glenn T **39.25 272** P **P** **23 49 18.4 +0.9**
baz=59
W59A Clinton **39.28 274** P **P** **23 49 18.4 +0.7**
baz=60
U57A Blanch **39.29 276** P **P** **23 49 17.8 -0.1**
baz=61
P53A Whipple **39.33 281** P **P** **23 49 18.6 +0.6**
baz=64,SNR=7.4
P53A Whipple **39.33 281** IAmb IAmb 23 49 23.8
comp=Z,154nm,1.8s
P53A IAMs_20 IAMs_20 00 04 00.2
comp=Z,3μm,21.0s
TIRR Tirgusor **39.35 70** ⇑P **P** **23 49 17.9 -0.3**
TIRR Tirgusor **39.35 70** P **P** **23 49 18.5 +0.3**
TIRR pmax pmax
comp=Z,52nm,1.0s
TIRR MLR MLR
comp=Z,7μm,19.0s
TIRR Tirgusor **39.35 70** P **P** **23 49 18.5 +0.3**
TIRR IAmb IAmb 23 49 29.3
comp=Z,52nm,1.0s
O52A Adamsville **39.36 282** P **P** **23 49 19.3 +0.9**
baz=64,SNR=9.3
O52A Adamsville **39.36 282** IAMs_20 IAMs_20 00 04 35.2
comp=Z,4μm,20.0s
K49A Clarkson **39.38 287** P **P** **23 49 19.3 +0.7**
baz=67
G46A Petoskey **39.38 291** P **P** **23 49 18.8 +0.3**
baz=69
N51A Ashland **39.40 284** P **P** **23 49 19.7 +1.0**
baz=65
N51A Ashland **39.40 284** P **P** **23 49 20.4 +1.8**
N51A IAMs_20 IAMs_20 00 04 33.0
comp=Z,5μm,20.0s
GLMI Grayling **39.40 291** P **P** **23 49 18.9 +0.2**
baz=69
GLMI Grayling **39.40 291** P **P** **23 49 19.4 +0.7**
GLMI IAMs_20 IAMs_20 00 05 04.0
comp=Z,4μm,18.0s
J48A Bridge Port **39.41 288** P **P** **23 49 19.7 +1.0**
baz=67
J48A Bridge Port **39.41 288** P **P** **23 49 19.6 +0.9**
J48A IAmb IAmb 23 49 26.7
comp=Z,56nm,1.5s
J48A IAMs_20 IAMs_20 00 04 23.2
comp=Z,4μm,20.0s
V58A Windy Hill, Pi **39.45 275** P **P** **23 49 20.0 +0.9**
baz=60
V58A Windy Hill, Pi **39.45 275** P **P** **23 49 20.4 +1.2**
V58A IAmb IAmb 23 49 28.6
comp=Z,73nm,1.8s
S55A Lewisburg **39.48 278** P **P** **23 49 20.7 +1.3**
baz=62
T56A Rocky Mt **39.50 277** P **P** **23 49 21.3 +1.8**
baz=61
I47A Gladwin **39.62 289** P **P** **23 49 22.8 +2.3**
I47A IAmb IAmb 23 49 28.7
comp=Z,83nm,1.4s
I47A IAMs_20 IAMs_20 00 04 24.9
comp=Z,3μm,20.0s
R54A Victor **39.63 279** P **P** **23 49 21.2 +0.5**
baz=62
M50A Fremont **39.65 285** P **P** **23 49 22.7 +2.0**
BLA Blacksburg **39.68 278** P **P** **23 49 22.8 +1.7**
BLA pmax pmax
comp=Z,33nm,1.2s
BLA Blacksburg **39.68 278** P **P** **23 49 22.2 +1.0**
baz=62
BLA Blacksburg **39.68 278** P **P** **23 49 22.8 +1.7**
F45A CMU Biological **39.69 292** P **P** **23 49 22.2 +1.2**
baz=69
Q53A Leroy **39.70 280** P **P** **23 49 21.3 +0.1**
baz=63
X59A McDuffie Farm, **39.70 273** P **P** **23 49 22.2 +0.9**
baz=59
MANR Mangalia **39.70 71** ⇑P **P** **23 49 21.4 +0.3**
AAM Ann Arbor **39.71 286** P **P** **23 49 22.0 +0.8**
AAM pmax pmax
comp=Z,74nm,1.7s
AAM MLR MLR
comp=Z,8μm,20.0s
AAM Ann Arbor **39.71 286** P **P** **23 49 21.7 +0.5**
baz=66
AAM Ann Arbor **39.71 286** P **P** **23 49 22.0 +0.8**
AAM IAmb IAmb 23 49 29.2
comp=Z,74nm,1.7s
Y60A Bolivia **39.72 272** P **P** **23 49 21.9 +0.5**
baz=58
Y60A Bolivia **39.72 272** P **P** **23 49 21.2 -0.2**
Y60A IAmb IAmb 23 49 31.2
comp=Z,62nm,1.1s
P52A Corning **39.78 282** P **P** **23 49 22.8 +1.0**
baz=64,SNR=11

K48A Perry **39.82 287** P **P** **23 49 22.2 0.0**
baz=67
V57A Coltrane Farms **39.87 275** P **P** **23 49 23.0 +0.4**
baz=60
O51A Pataskala **39.88 283** P **P** **23 49 23.0 +0.3**
baz=64
H05N1 Guadeloupe/Mar **39.88 235** T T 00 31 25.9
SNR=6.5
W58A Raeford **39.92 274** P **P** **23 49 23.2 +0.2**
baz=59
T55A Pulaski **39.98 278** P **P** **23 49 23.7 +0.1**
baz=61
N50A Nevada **39.99 284** P **P** **23 49 23.6 0.0**
baz=65
G45A Suttons Bay **40.01 291** P **P** **23 49 23.5 -0.2**
baz=69
G45A Suttons Bay **40.01 291** P **P** **23 49 24.7 +1.0**
G45A IAmb IAmb 23 49 31.6
comp=Z,68nm,1.8s
G45A IAMs_20 IAMs_20 00 05 16.1
comp=Z,4μm,18.0s
S54A Dingess, Beckl **40.03 279** P **P** **23 49 23.6 -0.4**
baz=62
S54A Dingess, Beckl **40.03 279** P **P** **23 49 24.3 +0.2**
S54A IAmb IAmb 23 49 29.6
comp=Z,97nm,1.9s
S54A IAMs_20 IAMs_20 00 05 27.0
comp=Z,3μm,18.0s
U56A King **40.07 276** P **P** **23 49 24.7 +0.4**
baz=61
U56A King **40.07 276** P **P** **23 49 25.7 +1.4**
U56A IAmb IAmb 23 49 34.0
comp=Z,98nm,1.4s
ACSO Alum Creek Sta **40.10 283** P **P** **23 49 25.3 +0.7**
baz=64,SNR=8.6
ACSO Alum Creek Sta **40.10 283** P **P** **23 49 25.8 +1.2**
ACSO IAmb IAmb 23 49 33.6
comp=Z,122nm,1.6s
ACSO IAMs_20 IAMs_20 00 05 05.8
comp=Z,5μm,20.0s
J47A Sunmer **40.13 288** P **P** **23 49 25.2 +0.5**
baz=67
J47A Sunmer **40.13 288** P **P** **23 49 26.5 +1.8**
J47A IAmb IAmb 23 49 32.8
comp=Z,72nm,1.4s
J47A IAMs_20 IAMs_20 00 05 29.3
comp=Z,4μm,18.0s
Q52A Bidwell **40.17 281** P **P** **23 49 26.4 +1.3**
baz=63
Y59A Loris **40.19 272** P **P** **23 49 26.7 +1.4**
baz=58
Y59A Loris **40.19 272** IAMs_20 IAMs_20 00 02 44.4
comp=Z,2μm,20.0s
X58A Rowland **40.23 273** P **P** **23 49 26.3 +0.7**
baz=59
X58A Rowland **40.23 273** P **P** **23 49 26.7 +1.1**
X58A IAmb IAmb 23 49 34.5
comp=Z,64nm,1.8s
X58A IAMs_20 IAMs_20 00 03 00.4
comp=Z,2μm,21.0s
R53A Hurricane **40.23 280** P **P** **23 49 26.7 +1.0**
baz=62
R53A Hurricane **40.23 280** P **P** **23 49 27.6 +1.9**
R53A IAMs_20 IAMs_20 00 05 26.4
comp=Z,3μm,19.0s
I46A Reed City **40.28 290** P **P** **23 49 26.9 +0.9**
baz=68
L48A N Adams **40.38 286** P **P** **23 49 28.1 +1.3**
W57A Gilead **40.39 275** P **P** **23 49 26.6 -0.3**
baz=60
W57A Gilead **40.39 275** P **P** **23 49 28.2 +1.2**
E43A Lone Tree Farm **40.41 294** P **P** **23 49 27.8 +0.7**
E43A IAMs_20 IAMs_20 00 05 17.7
comp=Z,4μm,19.0s
V56A Mocksville **40.42 276** P **P** **23 49 29.0 +1.8**
baz=60
H45A Beulah **40.42 291** P **P** **23 49 28.0 +0.9**
baz=68
U55A TA2, Sparta **40.46 277** P **P** **23 49 28.9 +1.2**
baz=61
K47A Vermontville **40.47 288** P **P** **23 49 28.5 +1.0**
baz=66
P51A Williamsport **40.49 282** P **P** **23 49 28.5 +0.8**
baz=64
P51A Williamsport **40.49 282** P **P** **23 49 28.9 +1.1**
P51A IAmb IAmb 23 49 32.9
comp=Z,72nm,1.6s
P51A IAMs_20 IAMs_20 00 05 09.0
comp=Z,4μm,20.0s
TMCR Tamitsa **40.52 38** *eP* **P** **23 49 28.3 +0.6**
TMCR *eS* **S** **23 55 38.3 +1.7**
TMCR pmax pmax
comp=Z,39nm,0.9s
TOC7 Torodi Ar. Sit **40.55 132** IAMs_20 IAMs_20 00 05 08.8
comp=Z,5μm,18.0s
TOB1 Torodi Ar. Sit **40.55 132** IAMs_20 IAMs_20 00 05 00.1
comp=Z,5μm,18.0s
T54A Tazewell **40.57 278** P **P** **23 49 28.8 +0.2**
baz=61
TOA0 Torodi Ar. Sit **40.57 132** P **P** **23 49 28.0 -0.5**
TOA0 IAMs_20 IAMs_20 00 05 00.4
comp=Z,5μm,19.0s
TORD Torodi Ar. Bea **40.57 132** P **P** **23 49 27.8 -0.8**
comp=Z,9.5nm,0.9s,baz=327,slow=5.3,SNR=38
TORD LR LR 00 05 20.5
comp=Z,5μm,18.2s,baz=325,slow=35
TOB4 Torodi Ar. Sit **40.57 132** IAMs_20 IAMs_20 00 05 00.5
comp=Z,5μm,19.0s
TOA2 Torodi Ar. Sit **40.57 132** IAMs_20 IAMs_20 00 05 00.5
comp=Z,5μm,19.0s
TOA3 Torodi Ar. Sit **40.57 132** IAMs_20 IAMs_20 00 05 00.5
comp=Z,5μm,19.0s
TOC2 Torodi Ar. Sit **40.57 132** IAMs_20 IAMs_20 00 05 00.6
comp=Z,5μm,19.0s
O50A Cable **40.58 283** P **P** **23 49 30.0 +1.5**
baz=64
N49A Columbus Grove **40.63 285** P **P** **23 49 29.8 +0.8**
S53A Williamson **40.66 279** P **P** **23 49 30.0 +0.8**
baz=62
I45A Fountain **40.77 290** P **P** **23 49 30.7 +0.7**
baz=67
I45A Fountain **40.77 290** IAMs_20 IAMs_20 00 06 04.2
comp=Z,4μm,18.0s
Y58A Scranton **40.80 273** P **P** **23 49 31.0 +0.7**
baz=58
Y58A Scranton **40.80 273** P **P** **23 49 32.0 +1.7**
Y58A IAmb IAmb 23 49 35.2
comp=Z,48nm,1.1s
Y58A IAMs_20 IAMs_20 00 02 52.4
comp=Z,2μm,22.0s
X57A Johnson Farm, **40.81 274** P **P** **23 49 31.1 +0.6**
baz=59
W56A Indian Trail **40.81 275** P **P** **23 49 31.1 +0.6**
baz=59
Z59A Georgetown, SC **40.87 272** P **P** **23 49 31.7 +0.7**
baz=58
Q51A Peebles **40.89 282** P **P** **23 49 33.3 +2.2**
Q51A IAmb IAmb 23 49 40.0
comp=Z,51nm,1.2s
V55A Taylorsville **40.90 276** P **P** **23 49 32.8 +1.5**
baz=60
V55A Taylorsville **40.90 276** P **P** **23 49 32.9 +1.7**
V55A IAmb IAmb 23 49 40.7
comp=Z,73nm,1.5s
V55A IAMs_20 IAMs_20 00 05 08.1
comp=Z,2μm,20.0s
IDI Anoyia **40.91 85** P **P** **23 49 31.0 -0.4**
P50A Jamestown **40.94 283** P **P** **23 49 32.2 +0.7**
baz=63
BIRD Birdtown, Kers **40.98 274** P **P** **23 49 32.8 +1.0**
BIRD IAMs_20 IAMs_20 00 03 35.1
comp=Z,3μm,21.0s
K46A Dorr **40.99 288** P **P** **23 49 31.4 -0.5**
baz=66
U54A Nelsons Funny **41.00 277** P **P** **23 49 31.9 -0.2**
baz=61
U54A Nelsons Funny **41.00 277** P **P** **23 49 33.9 +1.8**
U54A IAmb IAmb 23 49 40.9
comp=Z,62nm,1.4s
O49A Covington **41.06 284** P **P** **23 49 33.1 +0.6**
O49A IAmb IAmb 23 49 41.0
comp=Z,62nm,1.4s
O49A IAMs_20 IAMs_20 00 05 44.0
comp=Z,5μm,20.0s
J45A Montague **41.10 289** P **P** **23 49 33.2 +0.5**
baz=67
J45A Montague **41.10 289** IAMs_20 IAMs_20 00 06 22.1
comp=Z,2μm,18.0s
RES Resolute Bay **41.10 338** P **P** **23 49 31.4 -1.0**
comp=Z,8.2nm,0.9s,baz=105,slow=7.6,SNR=7.7
RES Resolute Bay **41.10 338** P **P** **23 49 32.9 +0.5**
RES pmax pmax
comp=Z,63nm,1.8s
RES Resolute Bay **41.10 338** P **P** **23 49 32.9 +0.5**
RES IAmb IAmb 23 49 40.2
comp=Z,63nm,1.8s
D41A Chassel **41.19 295** P **P** **23 49 35.4 +1.9**
D41A IAmb IAmb 23 49 42.0
comp=Z,77nm,1.6s
Z58A St. Stephen **41.20 272** P **P** **23 49 34.6 +0.9**
baz=58
OBN Obninsk **41.22 52** ⇑P **P** **23 49 34.1 +0.6**
OBN Obninsk **41.22 52** *eP* **P** **23 49 32.0 -1.5**
OBN *ePPP* PPP 23 51 32.0
OBN pmax pmax
comp=Z,29nm,1.3s
OBN Obninsk **41.22 52** P **P** **23 49 34.1 +0.6**
OBN IAmb IAmb 23 49 41.0
comp=Z,41nm,1.1s
OBN IAMs_20 IAMs_20 00 05 44.6
comp=Z,2μm,20.0s
N48A Decatur **41.24 285** P **P** **23 49 34.9 +1.0**
baz=64
Y57A Sumter **41.25 273** P **P** **23 49 35.2 +1.1**
baz=58
Y57A Sumter **41.25 273** P **P** **23 49 35.5 +1.4**
Y57A IAmb IAmb 23 50 15.5
comp=Z,18nm,0.3s
Y57A IAMs_20 IAMs_20 00 03 40.4
comp=Z,2μm,20.0s
H05S1 Guadeloupe/Mar **41.27 233** T T 00 33 04.0
SNR=3.9
T53A Wise **41.28 278** P **P** **23 49 35.8 +1.4**
baz=61
FCC Fort Churchill **41.29 314** IAMs_20 IAMs_20 00 03 37.3
comp=Z,2μm,19.0s
KMSC Kings Mountain **41.34 275** P **P** **23 49 35.9 +1.1**
baz=59
KMSC Kings Mountain **41.34 275** P **P** **23 49 35.1 +0.3**
KMSC IAmb IAmb 23 49 44.1
comp=Z,49nm,1.5s
GCPR Guaynabo City **41.39 242** P **P** **23 49 36.1 +0.7**
GCPR IAmb IAmb 23 50 45.4
comp=Z,82nm,1.4s
M47A Cromwell **41.43 286** P **P** **23 49 36.0 +0.5**
baz=65
V54A Nebo **41.45 277** P **P** **23 49 36.3 +0.6**
baz=60
X56A White Oak **41.46 274** P **P** **23 49 36.9 +1.1**
baz=59
NHSC New Hope **41.58 272** P **P** **23 49 37.2 +0.4**
baz=58
NHSC New Hope **41.58 272** P **P** **23 49 39.1 +2.3**
O48A Farmland **41.59 284** P **P** **23 49 36.6 -0.2**
baz=64
KLMR Klimovskoe **41.61 43** *eP* **P** **23 49 38.5 +1.9**
KLMR *e* 23 51 11.3
KLMR *e* 23 51 34.5
KLMR *eS* **S** **23 55 58.4 +5.7**
KLMR pmax pmax
comp=Z,36nm,1.4s
KLMR Klimovskoe **41.61 43** *eP* **P** **23 49 38.6 +1.9**
KLMR AMP 23 49 45.1
comp=Z,36nm,1.4s
KLMR *ePP* **PP** **23 51 11.4 -1.1**
KLMR *ePcP* **PcP** **23 51 34.5 +1.0**
KLMR *eS* **S** **23 55 58.5 +5.7**
KLMR *eS* **S** **23 55 58.5 +5.7**
KLMR *eSS* **SnSn** **23 59 07.1 0.0**
KLMR *eSS* **SnSn** **23 59 07.1 0.0**
KLMR LQ LQ 00 02 42.2
KLMR LQ LQ 00 02 42.2
KLMR LR LR 00 04 08.6
P49A Miami Univ. Ec **41.61 283** P **P** **23 49 37.7 +0.7**
baz=63
L46A Eue Claire **41.62 287** P **P** **23 49 37.5 +0.5**
baz=65
L46A Eue Claire **41.62 287** P **P** **23 49 38.2 +1.2**
L46A IAmb IAmb 23 49 45.0
comp=Z,88nm,1.4s
H43A Windswept, Lux **41.62 291** P **P** **23 49 37.7 +0.7**
MOS Moscow **41.65 51** *eP* **P** **23 49 35.8 -1.3**
MOS *e* 23 49 42.8
MOS *e* 23 51 14.3
MOS MLR MLR
comp=Z,3μm,18.0s
N47A Urbana **41.69 285** P **P** **23 49 38.5 +0.9**
N47A IAmb IAmb 23 49 45.2
comp=Z,47nm,1.3s
S51A Beattyville **41.70 280** P **P** **23 49 38.9 +1.1**
S51A IAmb IAmb 23 49 46.1
comp=Z,51nm,1.3s
S51A IAMs_20 IAMs_20 00 06 30.3
comp=Z,4μm,18.0s
158A Hollywood **41.79 272** P **P** **23 49 39.7 +1.2**
baz=57
PAULI Pauline **41.84 275** P **P** **23 49 40.9 +2.0**
Z57A Bowman **41.85 273** P **P** **23 49 39.7 +0.7**
baz=58
X55A Gracelyn & Ava **41.90 275** P **P** **23 49 41.2 +1.8**
baz=59
COWI Conover **41.90 294** IAMs_20 IAMs_20 00 06 03.0
comp=Z,5μm,18.0s
MCLT Moule a Chique **41.91 232** P **P** **23 49 37.9 -1.7**
R50A Paris **41.91 281** P **P** **23 49 41.3 +1.8**
R50A IAmb IAmb 23 49 48.5
comp=Z,72nm,1.4s
R50A IAMs_20 IAMs_20 00 05 19.8
comp=Z,3μm,21.0s
MANT Manisa **41.93 78** P **P** **23 49 39.4 -0.5**
MANT IAMs_20 IAMs_20 00 07 28.4
comp=Z,4μm,18.0s
W54A Cherokee Point **41.97 276** P **P** **23 49 40.8 +0.8**
baz=59
Y56A Pelion **42.02 274** P **P** **23 49 41.2 +0.9**
baz=58
V53A Saluda **42.12 277** P **P** **23 49 42.9 +1.6**
P48A Milroy **42.13 283** IAmb IAmb 23 49 45.8
comp=Z,118nm,1.9s
P48A IAMs_20 IAMs_20 00 06 18.5
comp=Z,5μm,20.0s
TZTN Tazewell **42.20 279** P **P** **23 49 43.4 +1.5**
baz=59
TZTN Tazewell **42.20 279** P **P** **23 49 42.8 +0.9**
CRPR Cabo Rojo, PR **42.27 243** P **P** **23 49 41.0 -1.5**
CRPR IAmb IAmb 23 49 42.4
comp=Z,110nm,1.5s
Z56A Williston **42.31 273** IAMs_20 IAMs_20 00 03 48.4
comp=Z,2μm,22.0s
Y55A Saluda **42.33 274** P **P** **23 49 44.0 +1.1**
baz=58
KARP Karpathos **42.38 83** P **P** **23 49 43.7 +0.4**
X54A Belton **42.38 275** P **P** **23 49 44.6 +1.3**
baz=59
GRTK Grand Turk **42.38 251** IAMs_20 IAMs_20 00 03 28.4
comp=Z,3μm,20.0s
HODGE Hodges **42.46 275** P **P** **23 49 45.5 +1.5**
HODGE IAMs_20 IAMs_20 00 04 32.4
comp=Z,3μm,21.0s
R49A Shelbyville **42.50 282** P **P** **23 49 45.0 +0.8**
R49A IAmb IAmb 23 49 53.3
comp=Z,93nm,1.6s
R49A IAMs_20 IAMs_20 00 05 37.2
comp=Z,4μm,22.0s
BG3 Lake Jocassee **42.55 276** P **P** **23 49 45.5 +0.9**
V52A Sevierville **42.58 278** P **P** **23 49 46.1 +1.2**
V52A IAmb IAmb 23 49 53.8
comp=Z,53nm,1.5s
V52A IAMs_20 IAMs_20 00 07 16.6
comp=Z,2μm,18.0s
I42A Draeger Farm, **42.60 291** P **P** **23 49 46.4 +1.3**
L44A Lake County Fo **42.64 288** P **P** **23 49 45.8 +0.4**
baz=65
L44A Lake County Fo **42.64 288** P **P** **23 49 46.8 +1.5**
L44A IAmb IAmb 23 49 53.0
comp=Z,68nm,1.4s
L44A IAMs_20 IAMs_20 00 07 37.8
comp=Z,2μm,18.0s
K43A Burlington **42.70 289** P **P** **23 49 47.1 +1.3**
K43A IAMs_20 IAMs_20 00 07 27.4
comp=Z,2μm,18.0s
EYMN Ely **42.74 298** P **P** **23 49 45.7 -0.4**
baz=69

EYMN Ely 42.74 298 IAMs_20 IAMs_20 00 05 56.2
comp=Z,4µm,19.0s
257A Skidaway Islan 42.80 271 P **P** **23 49 45.7 -1.0**
TKL Tuckaleechee C 42.80 278 P **P** **23 49 47.3 +0.6**
comp=Z,4.9nm,0.9s,baz=73,slow=10,SNR=7.2
TKL Tuckaleechee C 42.80 278 IAMs_20 IAMs_20 00 07 14.3
comp=Z,2µm,18.0s
MDUB Mudurnu 42.85 74 P **P** **23 49 46.2 -1.0**
MDUB IAmb IAmb 23 49 54.7
comp=Z,53nm,1.0s
SFIN Lafayette 42.87 285 P **P** **23 49 46.5 -0.7**
baz=63
SFIN Lafayette 42.87 285 P **P** **23 49 48.2 +1.0**
T50A Nancy 42.87 280 IAmb IAmb 23 49 56.6
comp=Z,43nm,1.3s
T50A IAMs_20 IAMs_20 00 07 16.2
comp=Z,4µm,18.0s
G40A Rib Lake 42.90 293 P **P** **23 49 48.5 +1.0**
G40A IAMs_20 IAMs_20 00 06 08.6
comp=Z,3µm,19.0s
SIM Simferopol' 42.93 67 *e*P **P** **23 49 49.0 +1.3**
SIM *e* 23 51 29.0
SIM *i* S **S** **23 56 13.0 +0.3**
SIM pmax pmax
comp=Z,10.0nm,1.4s
SIM MLR MLR
comp=N,2µm,16.0s
BLO Bloomington 43.02 284 P **P** **23 49 49.4 +0.9**
BLO Bloomington 43.02 284 P **P** **23 49 49.4 +0.9**
BLO IAmb IAmb 23 49 57.3
comp=Z,82nm,1.4s
M44A Midewin, Midew 43.07 287 P **P** **23 49 50.1 +1.3**
M44A IAmb IAmb 23 49 53.6
comp=Z,46nm,1.4s
TIC Toumodi 43.13 145 *e*PKP1 **P** **23 49 50.9 +1.3**
DBIC Dimbokro 43.18 145 P **P** **23 49 49.8 -0.1**
comp=Z,6.2nm,0.7s,baz=322,slow=8.5,SNR=11
DBIC LR LR 00 06 02.5
comp=Z,2µm,21.8s,baz=318,slow=34
DBIC Dimbokro 43.18 145 P **P** **23 49 49.3 -0.6**
DBIC pmax pmax
comp=Z,83nm,2.0s
DBIC Dimbokro 43.18 145 P **P** **23 49 49.3 -0.6**
DBIC IAmb IAmb 23 49 55.7
comp=Z,83nm,1.9s
W52A Murphy 43.20 277 P **P** **23 49 50.6 +0.7**
W52A IAmb IAmb 23 49 58.9
comp=Z,65nm,1.6s
W52A IAMs_20 IAMs_20 00 09 32.8
comp=Z,2µm,18.0s
LPSR Galich'ya Gora 43.24 55 *e*P **P** **23 49 49.6 -0.5**
LPSR pmax pmax
comp=Z,40nm,0.9s
LPSR MLR MLR
comp=Z,2µm,14.0s
E38A The Farm, Brul 43.27 296 P **P** **23 49 51.7 +1.3**
P46A Rosedale 43.29 285 P **P** **23 49 51.5 +0.9**
P46A IAmb IAmb 23 49 58.5
comp=Z,103nm,1.7s
P46A IAMs_20 IAMs_20 00 06 31.0
comp=Z,5µm,21.0s
WCI Wyandotte Cave 43.30 282 P **P** **23 49 50.8 0.0**
WCI pmax pmax
comp=Z,96nm,1.6s
WCI MLR MLR
comp=Z,5µm,20.0s
WCI Wyandotte Cave 43.30 282 P **P** **23 49 50.5 -0.2**
baz=62
WCI Wyandotte Cave 43.30 282 P **P** **23 49 50.8 0.0**
WCI IAmb IAmb 23 49 59.8
comp=Z,96nm,1.6s
CPCT Cooper Cave 43.43 278 IAmb IAmb 23 50 00.9
comp=Z,65nm,1.5s
CPCT IAMs_20 IAMs_20 00 07 51.0
comp=Z,2µm,18.0s
KIC Kosan Boka 43.50 145 *e*PKP1 **P** **23 49 51.0 -1.6**
comp=Z,33nm,1.2s
LIC Lamto 43.51 146 *e*PKP1 **P** **23 49 51.9 -0.7**
comp=Z,30nm,1.2s
SC01 Santiago de lo 43.57 248 IAMs_20 IAMs_20 00 04 19.0
comp=Z,3µm,20.0s
GRGR Grenville 43.59 232 P **P** **23 49 54.0 +0.7**
ISP Isparta 43.61 78 P **P** **23 49 52.6 -0.8**
ISP pmax pmax
comp=Z,20nm,0.8s
ISP MLR MLR
comp=Z,1µm,20.0s
ISP Isparta 43.61 78 P **P** **23 49 52.5 -0.8**
TOSP Speyside 43.66 230 P **P** **23 49 51.4 -2.4**
ELL Elmali 43.70 80 P **P** **23 49 54.3 +0.1**
ELL pmax pmax
comp=Z,79nm,1.6s
ELL Elmali 43.70 80 P **P** **23 49 54.3 +0.1**
ELL IAmb IAmb 23 50 02.3
comp=Z,78nm,1.6s
I40A Norwalk 43.73 292 P **P** **23 49 55.8 +1.6**
SDD Santo Domingo 43.74 247 IAMs_20 IAMs_20 00 03 24.3
comp=Z,4µm,20.0s
GOGA Godfrey 43.75 275 P **P** **23 49 56.5 +2.1**
GOGA pmax pmax
comp=Z,61nm,1.7s
GOGA Godfrey 43.75 275 P **P** **23 49 54.3 -0.1**
baz=58
GOGA Godfrey 43.75 275 P **P** **23 49 56.5 +2.1**
GOGA IAmb IAmb 23 50 03.9
comp=Z,61nm,1.7s
GOGA Godfrey 43.75 275 IAMs_20 IAMs_20 00 04 58.5
comp=Z,2µm,22.0s
U49A Red Boiling Sp 43.78 280 IAmb IAmb 23 50 02.9
comp=Z,64nm,1.6s
U49A IAMs_20 IAMs_20 00 07 45.2
comp=Z,3µm,18.0s
VSR Storozhevoye 43.83 57 *i* P **P** **23 49 53.9 -0.9**
VSR pmax pmax
comp=Z,20nm,0.7s
255A Hazlehurst 43.85 272 P **P** **23 49 57.0 +1.8**
255A IAmb IAmb 23 50 04.8
comp=Z,46nm,1.2s
255A IAMs_20 IAMs_20 00 04 33.3
comp=Z,2µm,22.0s
JFWS Jewell Farm 43.89 290 P **P** **23 49 57.2 +1.8**
JFWS pmax pmax
comp=Z,29nm,1.5s
JFWS Jewell Farm 43.89 290 P **P** **23 49 55.4 -0.1**
baz=65
JFWS Jewell Farm 43.89 290 P **P** **23 49 57.2 +1.8**
L42A Oliver, Polo 43.89 289 P **P** **23 49 56.7 +1.3**
L42A IAmb IAmb 23 50 03.2
comp=Z,62nm,1.6s
O44A Mansfield 43.91 286 P **P** **23 49 56.2 +0.6**
O44A IAmb IAmb 23 50 03.4
comp=Z,72nm,1.6s
154A Montrose 43.92 273 P **P** **23 49 57.6 +1.8**
154A IAMs_20 IAMs_20 00 05 00.1
comp=Z,2µm,22.0s
Y52A Lilburn 43.93 275 P **P** **23 49 54.5 -1.4**
baz=58
Y52A Lilburn 43.93 275 IAmb IAmb 23 50 05.1
comp=Z,37nm,1.4s
Y52A IAMs_20 IAMs_20 00 06 20.3
comp=Z,2µm,20.0s
B35A Bob, Littlefor 43.98 299 IAmb IAmb 23 50 04.3
comp=Z,63nm,1.8s
B35A IAMs_20 IAMs_20 00 06 22.1
comp=Z,4µm,20.0s
W50A Signal Mountai 44.11 278 P **P** **23 49 58.2 +0.9**
W50A IAmb IAmb 23 50 05.7
comp=Z,49nm,1.4s
X51A Calhoun 44.12 277 P **P** **23 49 59.1 +1.7**
X51A IAmb IAmb 23 50 06.3
comp=Z,46nm,1.6s
456A Hilliard 44.20 270 P **P** **23 49 59.8 +1.8**
456A IAMs_20 IAMs_20 00 04 47.5
comp=Z,2µm,21.0s
ANTO Ankara 44.21 74 ⇑P **P** **23 49 57.9 -0.2**
ANTO Ankara 44.21 74 P **P** **23 49 58.5 +0.3**
ANTO pmax pmax
comp=Z,51nm,1.5s
ANTO MLR MLR
comp=Z,2µm,21.0s
ANTO Ankara 44.21 74 P **P** **23 49 58.5 +0.3**
ANTO IAmb IAmb 23 50 07.3
comp=Z,51nm,1.5s
BR231 Keskin MP Arra 44.21 74 P **P** **23 49 58.0 -0.2**
SDDR Presa de Saban 44.26 248 P **P** **23 49 59.2 +0.5**
SDDR IAmb IAmb 23 50 08.7
comp=Z,53nm,1.4s
SDDR IAMs_20 IAMs_20 00 04 51.2
comp=Z,3µm,20.0s
HDIL Hopedale 44.28 287 P **P** **23 49 57.4 -1.3**
baz=63
HDIL Hopedale 44.28 287 P **P** **23 49 59.6 +1.0**
HDIL IAmb IAmb 23 50 07.4
comp=Z,76nm,1.5s
ILGA Ilgaz 44.30 72 P **P** **23 49 59.7 +0.6**
OLIL Olney 44.31 284 P **P** **23 50 00.5 +1.6**
CLTN Cedars of Leba 44.38 280 P **P** **23 50 01.0 +1.5**
CLTN IAmb IAmb 23 50 07.7
comp=Z,51nm,1.6s
CLTN IAMs_20 IAMs_20 00 08 03.0
comp=Z,2µm,19.0s
USIN University of 44.38 283 P **P** **23 50 00.2 +0.8**
USIN IAmb IAmb 23 50 03.7
comp=Z,73nm,1.7s
T47A Sharon Grove 44.47 281 P **P** **23 50 01.5 +1.4**
T47A IAmb IAmb 23 50 09.1
comp=Z,56nm,1.4s
T47A IAMs_20 IAMs_20 00 06 37.4
comp=Z,4µm,22.0s
SWET Sewanee 44.54 278 IAmb IAmb 23 50 06.1
comp=Z,88nm,1.9s
SWET IAMs_20 IAMs_20 00 08 10.4
comp=Z,2µm,19.0s
SPMN Marine on St. 44.61 294 P **P** **23 50 00.8 -0.4**
baz=66
SPMN Marine on St. 44.61 294 P **P** **23 50 02.6 +1.5**
SPMN IAMs_20 IAMs_20 00 07 02.7
comp=Z,3µm,19.0s
ULM Lac du Bonnet 44.62 302 P **P** **23 50 00.2 -1.0**
comp=Z,2.8nm,0.7s,baz=55,slow=6.9,SNR=2.2
ULM LR LR 00 07 05.9
comp=Z,4µm,18.2s,baz=72,slow=34
ULM Lac du Bonnet 44.62 302 P **P** **23 50 01.4 +0.2**
ULM pmax pmax
comp=Z,22nm,1.2s
ULM Lac du Bonnet 44.62 302 P **P** **23 50 01.4 +0.2**
ULM IAMs_20 IAMs_20 00 06 35.7
comp=Z,5µm,20.0s
FPAL Fort Paine 44.67 277 P **P** **23 50 02.2 +0.4**
FPAL IAmb IAmb 23 50 09.7
comp=Z,54nm,1.7s
F36A Milaca 44.82 295 P **P** **23 50 04.4 +1.6**
BRTR Keskin Array B 44.85 74 P **P** **23 50 03.8 +0.4**
comp=Z,5.4nm,0.8s,baz=274,slow=4.7,SNR=24
BRTR PcP **PcP** **23 51 44.9 -0.2**
comp=Z,0.3nm,0.4s,baz=239,slow=4.2,SNR=3.6
BRTR LR LR 00 09 07.2
comp=Z,1µm,20.6s,baz=278,slow=36
P43A Skaggs, Pawnee 44.86 286 P **P** **23 50 04.3 +1.1**
Q44A Meyer Farm, Va 44.86 285 P **P** **23 50 04.9 +1.6**
Q44A IAMs_20 IAMs_20 00 07 40.7
comp=Z,3µm,20.0s
V48A Smith Brothers 44.90 279 IAmb IAmb 23 50 12.8
comp=Z,61nm,1.5s
V48A IAMs_20 IAMs_20 00 08 28.8
comp=Z,2µm,18.0s
L40A Anamosa 44.91 290 P **P** **23 50 04.2 +0.6**
L40A IAmb IAmb 23 50 12.3
comp=Z,63nm,1.4s
TIGA Tifton 44.91 272 P **P** **23 50 04.8 +1.1**
baz=56
TIGA Tifton 44.91 272 P **P** **23 50 05.3 +1.5**
TIGA IAMs_20 IAMs_20 00 05 16.3
comp=Z,2µm,22.0s
152A Waverly Hall 45.03 274 IAmb IAmb 23 50 14.1
comp=Z,51nm,1.4s
152A IAMs_20 IAMs_20 00 05 47.5
comp=Z,2µm,22.0s
ANN Anapa 45.15 66 *e*P **P** **23 50 06.1 +0.7**
ANN *e*S **S** **23 56 46.5 +1.5**
ANN pmax pmax
comp=Z,52nm,1.2s
ANN MLR MLR
comp=Z,4µm,18.0s
MDP Montagnes des 45.24 216 LR LR 00 04 15.1
comp=Z,1µm,19.2s,baz=29,slow=30
N41A Harden Midland 45.27 288 P **P** **23 50 07.5 +1.0**
N41A IAMs_20 IAMs_20 00 08 04.5
comp=Z,4µm,20.0s
DWPF Disney Wildern 45.30 267 P **P** **23 50 07.8 +1.0**
baz=53
DWPF Disney Wildern 45.30 267 P **P** **23 50 07.9 +1.1**
DWPF IAmb IAmb 23 50 11.6
comp=Z,46nm,1.2s
DWPF Disney Wildern 45.30 267 IAMs_20 IAMs_20 00 05 09.7
comp=Z,2µm,21.0s
AGMN Agassiz Nation 45.33 300 P **P** **23 50 07.2 +0.3**
baz=67
AGMN Agassiz Nation 45.33 300 IAmb IAmb 23 50 15.5
comp=Z,28nm,1.4s
AGMN IAMs_20 IAMs_20 00 07 10.6
comp=Z,5µm,20.0s
VRH Novokhopyorsk 45.34 56 *e*P **P** **23 50 06.9 0.0**
VRH pmax pmax
comp=Z,20nm,0.9s
VRH MLR MLR
comp=Z,4µm,18.0s
656A Willston 45.34 269 P **P** **23 50 07.9 +0.8**
656A IAmb IAmb 23 51 10.7
comp=Z,29nm,1.1s
656A IAMs_20 IAMs_20 00 05 57.8
comp=Z,2µm,21.0s
WVT Waverly 45.40 280 P **P** **23 50 08.8 +1.2**
WVT pmax pmax
comp=Z,51nm,1.6s
WVT MLR MLR
comp=Z,3µm,18.0s
WVT Waverly 45.40 280 P **P** **23 50 08.8 +1.2**
baz=59
WVT Waverly 45.40 280 P **P** **23 50 08.8 +1.2**
WVT IAmb IAmb 23 50 15.6
comp=Z,51nm,1.6s
WVT Waverly 45.40 280 IAMs_20 IAMs_20 00 08 36.2
comp=Z,3µm,18.0s
I37A Lemond, Waseca 45.50 293 P **P** **23 50 10.0 +1.7**
I37A IAmb IAmb 23 50 16.9
comp=Z,31nm,1.1s
T45A Paducah 45.52 282 IAMs_20 IAMs_20 00 07 43.3
comp=Z,5µm,21.0s
Z50A Ashland 45.57 276 P **P** **23 50 10.0 +1.0**
baz=57
Z50A Ashland 45.57 276 IAmb IAmb 23 50 13.4
comp=Z,25nm,1.2s
Z50A IAMs_20 IAMs_20 00 07 00.6
comp=Z,2µm,20.0s
SIUC Southern Illin 45.58 283 P **P** **23 50 10.7 +1.8**
Y49A Blount Mountai 45.59 277 P **P** **23 50 10.9 +1.8**
Y49A IAmb IAmb 23 50 17.3
comp=Z,32nm,1.5s
Y49A IAMs_20 IAMs_20 00 08 05.2
comp=Z,2µm,20.0s
S44A Carbondale 45.61 283 P **P** **23 50 10.8 +1.6**
K38A Parkersburg 45.68 291 P **P** **23 50 11.3 +1.6**
K38A IAMs_20 IAMs_20 00 08 47.2
comp=Z,4µm,18.0s
X48A Hartselle 45.72 278 P **P** **23 50 11.3 +1.2**
X48A IAmb IAmb 23 50 19.0
comp=Z,37nm,1.5s
X48A IAMs_20 IAMs_20 00 08 46.6
comp=Z,2µm,19.0s
SLM Saint Louis 45.83 285 IAMs_20 IAMs_20 00 08 11.3
comp=Z,4µm,20.0s
352A Blakely 45.84 273 P **P** **23 50 12.3 +1.2**
352A IAMs_20 IAMs_20 00 05 56.8
comp=Z,2µm,22.0s
GTBY Guantanamo Bay 46.16 253 IAMs_20 IAMs_20 00 04 25.5
comp=Z,2µm,22.0s
PLAL Pickwick Lake 46.16 279 IAmb IAmb 23 50 19.0
comp=Z,46nm,1.4s
PLAL IAMs_20 IAMs_20 00 09 17.4
comp=Z,2µm,18.0s
HICK Hickman 46.17 282 IAMs_20 IAMs_20 00 07 51.4
comp=Z,4µm,21.0s
553A Crawfordville 46.21 271 IAMs_20 IAMs_20 00 05 17.8
comp=Z,2µm,22.0s
HENM Henderson Moun 46.25 282 IAMs_20 IAMs_20 00 08 04.5
comp=Z,5µm,21.0s
SCIA State Center 46.31 290 P **P** **23 50 15.3 +0.6**
baz=63
SCIA State Center 46.31 290 P **P** **23 50 15.9 +1.2**
GLAT Glass 46.35 282 P **P** **23 50 16.5 +1.5**
GLAT IAMs_20 IAMs_20 00 07 45.1
comp=Z,4µm,22.0s
LRAL Lakeview Retre 46.44 276 P **P** **23 50 16.4 +0.5**
baz=57
LRAL Lakeview Retre 46.44 276 P **P** **23 50 17.2 +1.3**
LRAL IAmb IAmb 23 50 21.4
comp=Z,21nm,1.2s
LRAL IAMs_20 IAMs_20 00 08 09.8
comp=Z,3µm,20.0s
250A Grady 46.51 275 P **P** **23 50 18.5 +2.1**
250A IAMs_20 IAMs_20 00 06 43.5
comp=Z,2µm,22.0s
FFC Flin Flon 46.56 310 P **P** **23 50 16.2 -0.3**
FFC pmax pmax
comp=Z,81nm,1.8s
FFC Flin Flon 46.56 310 P **P** **23 50 16.2 -0.3**
FFC Flin Flon 46.56 310 IAMs_20 IAMs_20 00 06 28.7
comp=Z,3µm,22.0s
HALT Halls 46.57 281 P **P** **23 50 18.0 +1.2**
HALT IAMs_20 IAMs_20 00 08 01.9
comp=Z,3µm,22.0s
LNXT Lenox 46.57 281 P **P** **23 50 18.2 +1.4**
LNXT IAMs_20 IAMs_20 00 07 51.1
comp=Z,4µm,22.0s
F33A 5 Mile Ranch, 46.59 297 P **P** **23 50 19.1 +2.3**
F33A IAMs_20 IAMs_20 00 08 05.0
comp=Z,3µm,21.0s
LEF Lefka 46.62 80 ⇑P **P** **23 50 18.1 +0.9**
P40A Paris 46.63 287 P **P** **23 50 17.4 +0.2**
P40A IAmb IAmb 23 50 25.5
comp=Z,32nm,1.2s
CCM Cathedral Cave 46.80 285 P **P** **23 50 18.4 -0.2**
CCM pmax pmax
comp=Z,58nm,1.2s
CCM Cathedral Cave 46.80 285 P **P** **23 50 19.2 +0.6**
baz=60
CCM Cathedral Cave 46.80 285 P **P** **23 50 18.4 -0.2**
CCM Cathedral Cave 46.80 285 IAMs_20 IAMs_20 00 09 03.1
comp=Z,4µm,20.0s
PEBM Pemiscott Bayo 46.83 282 P **P** **23 50 19.9 +1.2**
PEBM IAMs_20 IAMs_20 00 08 09.8
comp=Z,4µm,21.0s
N38A Joes South For 46.84 289 P **P** **23 50 19.8 +1.0**
N38A IAmb IAmb 23 50 27.1
comp=Z,33nm,1.2s
W45A Hickory Valley 46.85 280 P **P** **23 50 19.8 +0.8**
W45A IAMs_20 IAMs_20 00 09 11.5
comp=Z,3µm,20.0s
451A Vernon 46.90 273 P **P** **23 50 20.4 +1.0**
451A IAMs_20 IAMs_20 00 06 41.0
comp=Z,2µm,21.0s
CSS Mathiatis 47.01 80 P **P** **23 50 20.5 +0.2**
CSS IAmb IAmb 23 50 31.5
comp=Z,12nm,0.8s
GNAR Gosnell 47.01 282 P **P** **23 50 21.5 +1.3**
GNAR IAMs_20 IAMs_20 00 08 04.7
comp=Z,4µm,22.0s
Z47A Carrollton 47.11 277 P **P** **23 50 22.4 +1.4**
Z47A IAMs_20 IAMs_20 00 09 02.4
comp=Z,2µm,20.0s
SOC Sochi 47.15 66 *e*P **P** **23 50 23.1 +1.8**
SOC *e*PPP PPP 23 53 01.4
SOC *e*S **S** **23 57 18.6 +4.7**
SOC *e*SS **SS** **00 00 35.0 -5.6**
SOC *e*SSS SSS 00 01 44.4
SOC pmax pmax
comp=Z,9.0nm,1.1s
SOC MLR MLR
comp=Z,1µm,18.0s
OXF Oxford 47.34 280 P **P** **23 50 23.4 +0.5**
baz=58
OXF Oxford 47.34 280 IAMs_20 IAMs_20 00 09 53.6
comp=Z,2µm,18.0s
MET Memphis--Engin 47.39 281 IAMs_20 IAMs_20 00 09 37.7
comp=Z,4µm,19.0s
LPAR Lepanto 47.39 281 P **P** **23 50 24.8 +1.6**
P38A Dawn 47.59 288 P **P** **23 50 25.8 +1.0**
P38A IAmb IAmb 23 50 32.9
comp=Z,30nm,1.1s
ECSD EROS Data Cent 47.71 294 P **P** **23 50 24.5 -1.2**
baz=63
ECSD EROS Data Cent 47.71 294 P **P** **23 50 26.7 +1.0**
LCAR Lake Charles 47.74 282 P **P** **23 50 26.6 +0.7**
Y45A Yeager Farm, C 47.78 279 P **P** **23 50 27.2 +0.9**
Y45A IAMs_20 IAMs_20 00 10 17.2
comp=Z,2µm,18.0s
MDND Maddock 47.81 300 P **P** **23 50 25.6 -0.7**
baz=65
MDND Maddock 47.81 300 P **P** **23 50 27.5 +1.2**
MDND IAMs_20 IAMs_20 00 08 35.2
comp=Z,4µm,20.0s
146A Union 48.11 277 P **P** **23 50 29.6 +0.8**
X43A Marvell 48.37 280 P **P** **23 50 30.3 -0.5**
baz=58
L34A Svendsen Farm, 48.37 292 P **P** **23 50 31.9 +1.2**
KTUT Trabzon 48.39 70 ⇑P **P** **23 50 31.8 +0.9**
N35A Tabor 48.41 290 P **P** **23 50 31.6 +0.5**
N35A IAmb IAmb 23 51 16.9
comp=Z,12nm,0.5s
N35A IAMs_20 IAMs_20 00 10 08.5
comp=Z,2µm,18.0s
GAZ Gaziantep 48.55 75 P **P** **23 50 32.7 +0.5**
GAZ IAMs_20 IAMs_20 00 11 57.6
comp=Z,2µm,19.0s
GOF Gofitskoye 48.63 63⇑ *e*P **P** **23 50 33.7 +1.0**
GOF pmax pmax
comp=Z,24nm,0.9s
U40A Yellville 48.77 284 P **P** **23 50 32.9 -1.1**
baz=58
SUSD Miller 48.90 296 P **P** **23 50 34.8 0.0**
baz=63
SUSD Miller 48.90 296 P **P** **23 50 37.1 +2.3**
SUSD IAmb IAmb 23 50 42.5
comp=Z,48nm,1.3s
SUSD IAMs_20 IAMs_20 00 09 56.1
comp=Z,3µm,19.0s
KIV Kislovodsk 48.90 65 ⇑P **P** **23 50 34.5 -0.4**
KIV Kislovodsk 48.90 65 *e*P **P** **23 50 36.4 +1.5**
KIV *e* 23 51 59.0
KIV *e* 23 52 27.0
KIV pmax pmax
comp=Z,7.0nm,0.8s
KIV Kislovodsk 48.90 65 P **P** **23 50 35.6 +0.6**
W41B Gary Mavity, V 48.97 282 P **P** **23 50 35.4 0.0**
baz=58
E28A Huff 49.03 299 P **P** **23 50 37.6 +1.8**
346A Big Creek Wild 49.09 276 P **P** **23 50 38.8 +2.4**
346A IAMs_20 IAMs_20 00 09 30.0
comp=Z,2µm,20.0s
KBZ Khabaz 49.14 65 P **P** **23 50 38.1 +1.5**
comp=Z,6.3nm,0.9s,baz=310,slow=9.5,SNR=11
KBZ LR LR 00 11 30.8
comp=Z,2µm,21.5s,baz=312,slow=36
UALR University of 49.25 282 P **P** **23 50 38.9 +1.3**
UALR IAmb IAmb 23 50 44.6
comp=Z,33nm,1.4s
UALR IAMs_20 IAMs_20 00 09 22.0
comp=Z,4µm,22.0s
NEY Neytrino 49.25 66 *i* P **P** **23 50 39.9 +2.2**
NEY pmax pmax
comp=Z,2.0nm,1.0s
CCAR Cane Creek 49.31 280 P **P** **23 50 40.3 +2.2**
CCAR IAMs_20 IAMs_20 00 10 55.7
comp=Z,3µm,18.0s
VBMS Vicksburg 49.37 278 P **P** **23 50 37.4 -1.1**
baz=56
VBMS Vicksburg 49.37 278 P **P** **23 50 39.8 +1.3**
VBMS IAMs_20 IAMs_20 00 11 02.3
comp=Z,2µm,18.0s
HHAR Hobbs 49.56 284 IAmb IAmb 23 50 47.8
comp=Z,53nm,1.7s
K31A O'Neill 49.61 294 P **P** **23 50 41.6 +1.3**
K31A IAmb IAmb 23 50 49.2
comp=Z,30nm,1.0s
N33A J Bar K, Exete 49.67 291 IAMs_20 IAMs_20 00 10 22.8
comp=Z,1µm,20.0s
143A Socs Landing, 49.72 279 P **P** **23 50 42.5 +1.3**
143A IAMs_20 IAMs_20 00 09 44.6
comp=Z,2µm,20.0s
X40A Basin Creek Fa 49.75 282 P **P** **23 50 41.1 -0.3**
baz=57
X40A Basin Creek Fa 49.75 282 IAmb IAmb 23 50 48.3
comp=Z,33nm,1.4s
X40A IAMs_20 IAMs_20 00 11 25.1
comp=Z,3µm,18.0s
U38A Gravette 49.78 285 IAmb IAmb 23 50 48.4
comp=Z,32nm,1.6s
BGNE Belgrade 49.80 292 P **P** **23 50 43.0 +1.3**

KSU1 **Kansas State U** 49.92 289 P P 23 50 42.3 -0.4
baz=60
KSU1 **Kansas State U** 49.92 289 P P 23 50 43.7 +1.1
KSU1 IAmb IAmb 23 50 50.5
comp=Z,28nm,0.9s
KSU1 **Kansas State U** 49.92 289 IAMs_20 IAMs_20 00 11 21.6
comp=Z,2µm,20.0s
YKA **Yellowknife Ar** 49.93 323 P P 23 50 40.8 -1.5
comp=Z,3.3nm,1.0s,baz=70,slow=7.2,SNR=22
YKA PcP PcP 23 52 00.4 -2.1
comp=Z,3.6nm,1.0s,baz=64,slow=4.3,SNR=9.0
YKA LR LR 00 09 00.9
comp=Z,1µm,19.7s,baz=0.0,slow=33
344A **Westbrook Farm** 49.95 277 P P 23 50 44.5 +1.6
344A IAMs_20 IAMs_20 00 10 51.7
comp=Z,3µm,19.0s
W39A **Magazine** 50.02 283 P P 23 50 40.8 -2.7
baz=57
A36M **Sachs Harbour** 50.05 336 P P 23 50 39.8 -3.4
baz=66,SNR=12
URIC **Uribia, Colomb** 50.09 243 P P 23 50 41.6 -2.6
MIAR **Mount Ida** 50.23 282 P P 23 50 44.3 -0.8
baz=57
ZEI **Tsey** 50.23 66 *e*P P 23 50 45.8 +0.6
ZEI pmax pmax
comp=Z,43nm,1.0s
DGMT **Dagmar** 50.31 303 P P 23 50 46.4 +0.8
baz=63
DGMT **Dagmar** 50.31 303 P P 23 50 46.1 +0.5
WLAR **White Oak Lake** 50.37 281 P P 23 50 46.3 +0.2
Z41A **Richland Creek** 50.40 280 P P 23 50 46.1 -0.2
baz=56
545A **Edgard** 50.59 275 IAMs_20 IAMs_20 00 10 27.5
comp=Z,2µm,19.0s
AKH **Akhalkalaki** 50.64 67 ⇑P P 23 50 48.9 +0.6
AKH **Akhalkalaki** 50.64 67 P P 23 50 48.5 +0.2
AKH pmax pmax
comp=Z,41nm,1.4s
AKH MLR MLR
comp=Z,1µm,21.0s
AKH **Akhalkalaki** 50.64 67 P P 23 50 48.5 +0.2
AKH IAmb IAmb 23 50 57.3
comp=Z,41nm,1.4s
C36M **Paulatuk** 50.77 333 P P 23 50 48.5 -0.1
baz=65
T35A **Sooner Cattle** 50.98 286 IAmb IAmb 23 50 58.1
comp=Z,44nm,1.2s
TUL1 **Leonard** 51.02 285 P P 23 50 50.2 -0.8
baz=58
TUL1 **Leonard** 51.02 285 IAmb IAmb 23 50 58.3
comp=Z,36nm,1.3s
342A **Flagon Creek P** 51.12 278 P P 23 50 52.2 +0.5
342A IAMs_20 IAMs_20 00 12 51.5
comp=Z,3µm,18.0s
RCBR **Riachuelo** 51.12 190 P P 23 50 51.5 -0.4
RCBR pmax pmax
comp=Z,59nm,1.2s
RCBR **Riachuelo** 51.12 190 P P 23 50 51.5 -0.4
RCBR **Riachuelo** 51.12 190 *e*P P 23 50 52.7 +0.8
TBLG **Delisi** 51.29 66 P P 23 50 54.2 +1.2
TBLG pmax pmax
comp=Z,27nm,1.0s
TBLG **Delisi** 51.29 66 P P 23 50 54.1 +1.2
TBLG IAmb IAmb 23 51 02.1
comp=Z,27nm,1.0s
SDV **Santo Domingo** 51.43 239 LR LR 00 08 45.4
comp=Z,603nm,20.8s,baz=32,slow=32
SDV **Santo Domingo** 51.43 239 P P 23 50 56.4 +2.0
SDV **Santo Domingo** 51.43 239 *e*P P 23 50 57.0 +2.5
X37A **Clayton** 51.45 283 IAmb IAmb 23 51 01.5
comp=Z,41nm,1.6s
R32A **Long Quarter,** 51.68 289 P P 23 50 55.0 -1.0
R32A IAmb IAmb 23 51 00.5
comp=Z,28nm,1.4s
Z38A **Mt. Pleasant** 51.91 281 P P 23 50 58.6 +0.9
Z38A IAmb IAmb 23 52 31.8
comp=Z,32nm,0.8s
441A **DeRidder** 52.08 278 P P 23 50 59.6 +0.6
441A IAmb IAmb 23 52 30.3
comp=Z,28nm,1.1s
441A IAMs_20 IAMs_20 00 13 17.0
comp=Z,3µm,18.0s
CBKS **Cedar Bluff** 52.16 290 P P 23 51 00.3 +0.7
CBKS pmax pmax
comp=Z,10.0nm,0.8s
CBKS MLR MLR
comp=Z,2µm,18.0s
CBKS **Cedar Bluff** 52.16 290 P P 23 50 58.6 -1.0
baz=58
CBKS **Cedar Bluff** 52.16 290 P P 23 51 00.3 +0.7
CBKS IAMs_20 IAMs_20 00 12 36.8
comp=Z,3µm,18.0s
MALB **Monte Alegre** 52.21 214 *e*P P 23 51 00.6 +0.6
MALB *ep*P **sP** 23 51 03.3 +1.0
RSSD **Black Hills** 52.26 298 P P 23 51 00.7 +0.2
RSSD pmax pmax
comp=Z,6.0nm,1.0s
RSSD **Black Hills** 52.26 298 P P 23 50 59.2 -1.3
baz=60
RSSD **Black Hills** 52.26 298 P P 23 51 00.7 +0.2
RSSD **Black Hills** 52.26 298 IAMs_20 IAMs_20 00 11 29.0
comp=Z,3µm,20.0s
ETX02 **Prairie Street** 52.27 280 P P 23 51 01.6 +1.2
LAO **LASA Array** 52.36 302 P P 23 50 59.5 -1.5
baz=61,SNR=7.3
LAO **LASA Array** 52.36 302 IAMs_20 IAMs_20 00 10 57.4
comp=Z,3µm,22.0s
ARU **Arti** 52.40 44*d i*P P 23 51 00.3 -0.7
ARU 23 52 05.5
ARU 23 52 57.2
ARU PPP PPP 23 53 59.2
ARU S **S** 23 58 26.6 -0.3
ARU pmax pmax
comp=Z,15nm,1.1s
ARU MLR MLR
comp=Z,1µm,18.0s
ARU **Arti** 52.40 44 P P 23 51 00.5 -0.5
ARU IAmb IAmb 23 51 13.7
comp=Z,28nm,1.2s
ARU IAMs_20 IAMs_20 00 13 17.5
comp=Z,1µm,19.0s
OKCFA **Oklahoma City** 52.43 285 P P 23 51 02.0 +0.4
MAK **Makhachkala** 52.46 64 *e*P P 23 50 55.8 -5.8
MAK *e* 23 52 55.6
MAK *e*S **S** 23 58 19.4 -8.6
MAK *e*SS **SS** 00 02 05.5 +0.1
MAK pmax pmax
comp=Z,75nm,1.2s
MAK MLR MLR
comp=Z,2µm,17.0s
FNO **Franklin** 52.48 285 P P 23 51 02.8 +0.9
NATX **Nacogdoches** 52.53 280 P P 23 51 01.8 -0.5
baz=55
NATX **Nacogdoches** 52.53 280 P P 23 51 03.9 +1.5
NATX IAMs_20 IAMs_20 00 13 17.0
comp=Z,2µm,19.0s
OGNE **Ogallala** 52.57 293 P P 23 51 00.4 -2.3
baz=59
OGNE **Ogallala** 52.57 293 P P 23 51 03.7 +1.1
U32A **Winter Ranch,** 52.96 287 P P 23 51 05.8 +0.3
U32A IAmb IAmb 23 51 10.2
comp=Z,36nm,1.1s
X34A **Smith Ranch, M** 53.14 285 P P 23 51 08.1 +1.3
237A **Washetta, Mont** 53.20 281 P P 23 51 09.1 +1.9
SVE **Sverdlovsk** 53.24 43 *e*P P 23 51 07.7 +0.5
SVE *e*S **S** 23 58 42.3 +4.0
SVE pmax pmax
comp=Z,21nm,1.4s
SVE MLR MLR
comp=Z,880nm,15.0s
AKT **Akhty** 53.35 65 *e*P P 23 51 08.9 +0.5
AKT *e* 23 52 17.0
AKT pmax pmax
comp=Z,12nm,1.0s
Z35A **Perchaven, San** 53.45 283 P P 23 51 09.8 +0.7
Z35A IAmb IAmb 23 51 22.4
comp=Z,58nm,1.5s
PTGA **Pitinga** 53.67 221 P P 23 51 12.0 +1.2
PTGA **Pitinga** 53.67 221 *e*P P 23 51 12.3 +1.4
WMOK **Wichita Mounta** 53.71 285 P P 23 51 10.6 -0.4
baz=56
WMOK **Wichita Mounta** 53.71 285 IAmb IAmb 23 51 18.9
comp=Z,23nm,1.3s
EGMT **Eagleton** 53.80 305 P P 23 51 10.9 -0.7
baz=60,SNR=5.8
EGMT **Eagleton** 53.80 305 IAMs_20 IAMs_20 00 11 57.5
comp=Z,2µm,19.0s
KSCO **Kaye Shedlock'** 53.97 292 P P 23 51 12.4 -0.6
baz=58
KSCO **Kaye Shedlock'** 53.97 292 P P 23 51 12.9 -0.2
KSCO IAmb IAmb 23 51 19.9
comp=Z,28nm,1.6s
H10N2 **ASCENSION HYDR** 53.99 163 T T 00 49 02.8
baz=349,slow=75,SNR=7.4
H10N3 **ASCENSION HYDR** 54.00 163 T T 00 49 08.8
baz=349,slow=75,SNR=7.3
H10N1 **ASCENSION HYDR** 54.01 163 T T 00 49 08.6
baz=349,slow=75,SNR=8.4
INK **Inuvik** 54.28 334 P P 23 51 13.1 -1.5
comp=Z,17nm,1.0s,baz=52,slow=9.1,SNR=19
INK **Inuvik** 54.28 334 IAmb IAmb 23 51 21.2
comp=Z,28nm,1.1s
WHTX **Lake Whitney,** 54.35 282 P P 23 51 14.9 -0.8
baz=55
WHTX **Lake Whitney,** 54.35 282 P P 23 51 16.9 +1.2
WHTX IAMs_20 IAMs_20 00 14 11.0
comp=Z,2µm,19.0s
HKT **Hockley** 54.40 279 P P 23 51 16.8 +0.8
HKT pmax pmax
comp=Z,24nm,1.6s
HKT MLR MLR
comp=Z,2µm,19.0s
HKT **Hockley** 54.40 279 P P 23 51 16.8 +0.8
HKT **Hockley** 54.40 279 IAMs_20 IAMs_20 00 14 51.4
comp=Z,2µm,19.0s
K22A **Casper** 54.57 297 P P 23 51 16.8 -0.6
baz=58,SNR=7.6
PHWY **Pilot Hill** 54.60 296 P P 23 51 18.4 +0.6
PHWY IAMs_20 IAMs_20 00 13 12.0
comp=Z,2µm,19.0s
GCMT **Greycliff** 54.88 302 P P 23 51 19.5 0.0
RLMT **Red Lodge** 54.98 301 P P 23 51 19.8 -0.5
baz=59,SNR=11
RLMT **Red Lodge** 54.98 301 IAmb IAmb 23 51 31.9
comp=Z,35nm,1.3s
H10S3 **ASCENSION HYDR** 55.05 164 T T 00 50 36.9
SNR=6.7
H10S2 **ASCENSION HYDR** 55.06 164 T T 00 50 30.6
TEIG **Tepich** 55.10 264 P P 23 51 22.0 +0.8
TEIG IAmb IAmb 23 51 30.6
comp=Z,43nm,1.4s
N23A **Red Feather La** 55.13 295 P P 23 51 22.1 +0.5
baz=58,SNR=14
435B **Jarrell** 55.14 281 P P 23 51 20.7 -0.8
baz=54
ABTX **Abilene, Hawle** 55.50 284 P P 23 51 23.9 -0.1
baz=55
ABTX **Abilene, Hawle** 55.50 284 P P 23 51 23.9 -0.1
ABTX IAmb IAmb 23 51 31.6
comp=Z,25nm,1.3s
ISCO **Idaho Springs** 55.50 294 P P 23 51 24.5 +0.1
ISCO pmax pmax
comp=Z,15nm,1.4s
ISCO **Idaho Springs** 55.50 294 P P 23 51 23.8 -0.5
baz=57,SNR=9.0
ISCO **Idaho Springs** 55.50 294 P P 23 51 24.4 +0.1
RWWY **Rawlins** 55.51 297 P P 23 51 24.0 -0.3
RWWY IAmb IAmb 23 51 32.0
comp=Z,38nm,1.4s
RWWY IAMs_20 IAMs_20 00 13 43.1
comp=Z,3µm,19.0s
AMTX **Amarillo** 55.61 287 P P 23 51 25.3 +0.4
baz=55
AMTX **Amarillo** 55.61 287 P P 23 51 24.9 0.0
WALA **Waterton Lakes** 55.67 307 IAMs_20 IAMs_20 00 12 39.7
comp=Z,2µm,21.0s
LKWY **Lake** 55.96 301 P P 23 51 28.6 +1.1
LKWY pmax pmax
comp=Z,10.0nm,0.8s
LKWY **Lake** 55.96 301 P P 23 51 28.6 +1.1
YNR **Norris Junctio** 56.05 302 P P 23 51 29.5 +1.4
YHH **Holmes Hill** 56.11 302 P P 23 51 27.9 -0.7
BOZ **Bozeman (W)** 56.15 303 P P 23 51 28.2 -0.5
BOZ pmax pmax
comp=Z,69nm,1.7s
BOZ **Bozeman (W)** 56.15 303 P P 23 51 28.2 -0.5
H17A **Grant Village** 56.16 301 P P 23 51 29.9 +1.0
baz=58
H17A **Grant Village** 56.16 301 P P 23 51 29.8 +1.0
T25A **Trinidad** 56.17 291 P P 23 51 26.9 -2.2
baz=56
YMR **Madison River** 56.24 302 P P 23 51 31.2 +1.8
YHL **Hebgen Lake** 56.28 302 P P 23 51 30.7 +0.9
YHB **Horse Butte** 56.34 302 P P 23 51 31.0 +0.8
YPP **Pitchstone Pla** 56.36 301 P P 23 51 31.4 +1.0
FLWY **Flagg Ranch** 56.40 301 P P 23 51 30.8 +0.2
FLWY IAmb IAmb 23 51 38.4
comp=Z,55nm,1.8s
FLWY IAMs_20 IAMs_20 00 13 15.4
comp=Z,3µm,22.0s
BW06 **Boulder Array** 56.40 299 P P 23 51 30.2 -0.4
baz=57
PDAR **Pinedale Array** 56.40 299 P P 23 51 28.4 -2.2
comp=Z,6.9nm,1.0s,baz=61,slow=7.1,SNR=14
PDAR LR LR 00 14 28.3
comp=Z,3µm,18.2s,baz=60,slow=35
EPYK **Eagle Plains** 56.41 333 P P 23 51 28.3 -1.8
baz=54,SNR=6.0
EPYK **Eagle Plains** 56.41 333 P P 23 51 29.5 -0.6
735A **Kenedy** 56.44 279 P P 23 51 31.8 +1.0
735A IAMs_20 IAMs_20 00 16 50.3
comp=Z,2µm,18.0s
QLMT **Earthquake Lak** 56.44 302 P P 23 51 31.7 +0.8
SMTB **Santa Maria do** 56.48 203 *e*P P 23 51 31.5 +0.4
LRM **Limekiln Ridge** 56.52 303 P P 23 51 30.5 -0.9
SDCO **Great Sand Dun** 56.56 292 P P 23 51 31.7 -0.1
baz=56
SDCO **Great Sand Dun** 56.56 292 P P 23 51 32.5 +0.6
SDCO **PcP** 23 52 29.1 +0.6
SDCO IAMs_20 IAMs_20 00 14 25.0
comp=Z,3µm,20.0s
JTMT **Jette** 56.56 306 P P 23 51 31.6 0.0
JTMT IAMs_20 IAMs_20 00 13 09.5
comp=Z,2µm,21.0s
IMW **Indian Meadow** 56.64 301 IAmb IAmb 23 51 36.2
comp=Z,21nm,1.1s
IMW IAMs_20 IAMs_20 00 13 57.9
comp=Z,3µm,20.0s
SNOW **Snow King Moun** 56.77 300 IAmb IAmb 23 51 37.2
comp=Z,43nm,1.2s
FXWY **Fox Creek** 56.84 301 IAMs_20 IAMs_20 00 14 12.0
comp=Z,3µm,19.0s
ROSC **El Rosal** 56.85 239 LR LR 00 14 35.5
comp=Z,1µm,20.4s,baz=29,slow=35
ROSC **El Rosal** 56.85 239 P P 23 51 35.2 +1.0
ROSC IAMs_20 IAMs_20 00 11 56.7
comp=Z,2µm,22.0s
DLMT **Dillon** 56.85 303 IAmb IAmb 23 51 42.3
comp=Z,39nm,1.2s
MSO **Missoula** 56.85 305 P P 23 51 31.9 -1.8
baz=58,SNR=6.5
MSO **Missoula** 56.85 305 IAMs_20 IAMs_20 00 13 43.2
comp=Z,2µm,19.0s
JCT **Junction City** 56.86 282 P P 23 51 34.0 +0.2
JCT pmax pmax
comp=Z,19nm,1.3s
JCT MLR MLR
comp=Z,2µm,20.0s
JCT **Junction City** 56.86 282 P P 23 51 33.0 -0.8
baz=53
JCT **Junction City** 56.86 282 P P 23 51 34.0 +0.2
JCT IAMs_20 IAMs_20 00 15 31.5
comp=Z,2µm,20.0s
TPAW **Teton Pass** 56.87 300 IAmb IAmb 23 51 37.7
comp=Z,22nm,1.2s
O20A **White River Ci** 57.01 296 P P 23 51 35.4 +0.4
baz=56
O20A **White River Ci** 57.01 296 IAmb IAmb 23 52 03.0
comp=Z,24nm,1.4s
O20A IAMs_20 IAMs_20 00 15 52.8
comp=Z,2µm,18.0s
BCIP **Isla Barro Col** 57.05 248 IAMs_20 IAMs_20 00 13 01.1
comp=Z,1µm,20.0s
KVTX **Kingsville** 57.29 278 IAMs_20 IAMs_20 00 18 38.9
comp=Z,2µm,18.0s
AHID **Auburn Hatcher** 57.36 300 P P 23 51 37.0 -0.4
AHID IAmb IAmb 23 51 44.5
comp=Z,24nm,1.3s
NPGB **Novo Progresso** 57.38 213 *e*P P 23 51 36.8 -0.7
S22A **4UR Ranch, Cre** 57.43 293 P P 23 51 39.1 +1.0
baz=56
RDMU **Red Mountain** 57.61 297 P P 23 51 39.8 +0.6
ESPN **Las Esperanzas** 57.84 254 P P 23 51 41.9 +1.1
ESPN IAmb IAmb 23 51 50.6
comp=Z,39nm,1.2s
833A **Chaparral WMA,** 57.87 279 P P 23 51 40.6 -0.2
baz=52
NEW **Newport** 57.89 308 P P 23 51 40.3 -0.6
baz=57,SNR=7.7
NEW **Newport** 57.89 308 IAMs_20 IAMs_20 00 13 37.5
comp=Z,2µm,22.0s
PV15 **Paradox Valley** 58.17 294 P P 23 51 44.8 +1.7
PV07 **Paradox Valley** 58.22 294 P P 23 51 45.3 +1.8
PV07 IAmb IAmb 23 51 51.4
comp=Z,56nm,2.0s
PV22 **Blue Mesa, Par** 58.25 294 P P 23 51 44.5 +0.8
PV22 IAmb IAmb 23 51 52.5
comp=Z,34nm,1.5s
HWUT **Hardware Ranch** 58.28 299 IAmb IAmb 23 51 47.3
comp=Z,21nm,1.1s
HWUT IAMs_20 IAMs_20 00 15 11.4
comp=Z,3µm,20.0s
PV01 **Paradox Valley** 58.34 294 P P 23 51 46.1 +1.7
PV21 **Cone Mtn., Par** 58.36 295 P P 23 51 45.2 +0.6
PV21 IAmb IAmb 23 53 05.6
comp=Z,17nm,0.8s
PV12 **Saucer Basin,** 58.39 294 P P 23 51 45.8 +1.1
PV12 IAmb IAmb 23 53 13.2
comp=Z,15nm,0.9s
PV02 **Paradox Valley** 58.41 294 P P 23 51 46.5 +1.6
PV04 **Paradox Valley** 58.41 294 P P 23 51 46.2 +1.3
PV04 IAmb IAmb 23 51 49.0
comp=Z,24nm,1.2s
MATN **Matagalpa** 58.43 256 IAMs_20 IAMs_20 00 13 39.6
comp=Z,2µm,20.0s
PV11 **David Mesa, Pa** 58.44 294 P P 23 51 46.7 +1.6
PV23 **Carpenter Ridg** 58.45 294 P P 23 51 46.6 +1.4
PV23 IAmb IAmb 23 51 53.8
comp=Z,27nm,1.1s
TCUT **Toone Canyon** 58.46 298 P P 23 51 45.7 +0.5
PV16 **Nyswonger Mesa** 58.47 294 P P 23 51 45.6 +0.4
PV16 IAmb IAmb 23 51 54.0
comp=Z,32nm,1.4s
PV20 **West Nyswonger** 58.48 294 P P 23 51 45.9 +0.5
PV20 IAmb IAmb 23 51 54.1
comp=Z,30nm,1.4s
PV13 **Radium Mtn., P** 58.49 294 P P 23 51 45.6 +0.2
PV18 **Skein Mesa, Pa** 58.50 294 P P 23 51 46.0 +0.5
PV18 IAmb IAmb 23 51 54.3
comp=Z,21nm,1.4s
PV10 **Paradox Valley** 58.51 294 P P 23 51 45.6 0.0
PV10 IAmb IAmb 23 51 54.7
comp=Z,48nm,1.5s
PV19 **Morning Glory** 58.51 294 P P 23 51 46.7 +1.1
PV19 IAmb IAmb 23 51 53.5
comp=Z,28nm,1.5s
PV17 **East Wray Mesa** 58.51 294 P P 23 51 46.9 +1.3
PV17 IAmb IAmb 23 51 54.3
comp=Z,41nm,1.6s
DLBC **Dease Lake** 58.55 323 P P 23 51 45.5 +0.1
DLBC IAMs_20 IAMs_20 00 14 10.1
comp=Z,1µm,20.0s
TGUH **Tegucigalpa,Un** 58.57 258 IAMs_20 IAMs_20 00 12 39.4
comp=Z,2µm,21.0s
ACON **Acoyapa** 58.59 255 P P 23 51 47.5 +1.4
ACON IAmb IAmb 23 51 54.9
comp=Z,20nm,1.0s
TOLK **Toolik Lake Re** 58.68 339 P P 23 51 44.9 -1.2
baz=45
TOLK **Toolik Lake Re** 58.68 339 IAMs_20 IAMs_20 00 16 33.4
comp=Z,1µm,20.0s
DAWY **Dawson** 58.71 331 P P 23 51 45.3 -1.1
DAWY IAmb IAmb 23 51 50.2
comp=Z,24nm,1.1s
DAWY IAMs_20 IAMs_20 00 14 32.8
comp=Z,2µm,19.0s
PV05 **Paradox Valley** 58.72 294 P P 23 51 47.3 +0.3
JLU **Jordanelle** 58.78 298 P P 23 51 47.3 -0.1
ANMO **Albuquerque** 58.78 290 *ce*P P 23 51 49.0 +1.5
ANMO pmax pmax
comp=Z,11nm,1.7s
ANMO **Albuquerque** 58.78 290 P P 23 51 45.4 -2.1
baz=54
ANMO **Albuquerque** 58.78 290 P P 23 51 49.3 +1.8
C09A **Chrisman Ranch** 58.79 308 P P 23 51 48.1 +1.0
C09A IAMs_20 IAMs_20 00 14 16.3
comp=Z,2µm,22.0s
MVCO **Mesa Verde** 58.82 293 P P 23 51 43.6 -4.1
baz=55
MVCO **Mesa Verde** 58.82 293 P P 23 51 48.6 +0.8
MVCO IAmb IAmb 23 51 56.4
comp=Z,28nm,1.5s
EGAK **Eagle** 58.84 333 IAmb IAmb 23 52 05.6
comp=Z,15nm,1.1s
EGAK IAMs_20 IAMs_20 00 15 13.2
comp=Z,1µm,18.0s
CTU **Camp Tracy** 58.92 298 P P 23 51 49.1 +0.8
HVU **Hansel Valley** 58.94 300 P P 23 51 48.7 +0.3
HVU pmax pmax
comp=Z,36nm,1.3s
HVU **Hansel Valley** 58.94 300 P P 23 51 48.7 +0.3
GDL2 **Guadalupe Moun** 58.98 286 P P 23 51 50.8 +2.0
SPUT **South Promonto** 59.00 299 P P 23 51 49.0 +0.1
SRU **San Rafael Swe** 59.04 296 P P 23 51 49.4 +0.2
SRU pmax pmax
comp=Z,6.0nm,1.0s
SRU **San Rafael Swe** 59.04 296 P P 23 51 49.4 +0.2
B08A **Colville Reser** 59.07 309 IAmb IAmb 23 51 55.0
comp=Z,32nm,1.5s
B08A IAMs_20 IAMs_20 00 14 47.5
comp=Z,1µm,20.0s
LLLB **Lillooet** 59.17 312 P P 23 51 50.0 +0.3
LLLB IAmb IAmb 23 51 56.7
comp=Z,49nm,1.9s
WHY **Whitehorse** 59.20 327 IAMs_20 IAMs_20 00 14 25.1
comp=Z,1µm,21.0s
F10A **Beach Ranch, E** 59.23 306 IAMs_20 IAMs_20 00 18 29.9
comp=Z,1µm,19.0s
BNM **Barren Site** 59.36 289 P P 23 51 52.8 +1.3
CRIN **San Cristobal** 59.37 257 IAMs_20 IAMs_20 00 11 44.2
comp=Z,1µm,22.0s
GDU01 **Guandu, BA** 59.41 193 *e*P P 23 51 51.0 -0.6
GDU01 *ep*P **sP** 23 51 54.0 +0.1
E09A **Wood Farm, Sta** 59.45 307 P P 23 51 53.1 +1.5
E09A IAMs_20 IAMs_20 00 15 08.7
comp=Z,2µm,20.0s
NLU **North Lily Min** 59.54 297 P P 23 51 52.9 +0.2
D08A **Wollman Farm,** 59.57 308 IAMs_20 IAMs_20 00 14 28.1
comp=Z,2µm,22.0s
LENM **Lemitar** 59.59 289 P P 23 51 54.2 +1.2
Y22D **IRIS PASSCAL I** 59.60 289 P P 23 51 52.3 -0.9
baz=54
Y22D **IRIS PASSCAL I** 59.60 289 P P 23 51 54.7 +1.6
Y22D IAMs_20 IAMs_20 00 17 28.9
comp=Z,2µm,18.0s
MFID **Camas Ranch** 59.86 303 IAmb IAmb 23 51 58.7
comp=Z,18nm,1.4s
DUG **Dugway, Tooele** 59.87 298 P P 23 51 53.6 -1.2
baz=55
DUG **Dugway, Tooele** 59.87 298 IAmb IAmb 23 51 58.9
comp=Z,35nm,1.1s
BMO **Blue Mountains** 59.91 305 IAMs_20 IAMs_20 00 15 41.1
comp=Z,2µm,20.0s
BRVK **Borovoye** 59.95 44 *ce*P P 23 51 54.7 -0.3
BRVK pmax pmax
comp=Z,10.0nm,1.0s
BRVK **Borovoye** 59.95 44 P P 23 51 55.7 +0.7
BRVK **Borovoye** 59.95 44 IAMs_20 IAMs_20 00 18 54.2
comp=Z,1µm,19.0s
E08A **Dider Farm, El** 59.98 307 P P 23 51 55.8 +0.5
E08A IAMs_20 IAMs_20 00 15 24.7
comp=Z,2µm,20.0s
MNTX **Cornudas Mount** 59.98 286 P P 23 51 53.7 -1.8
baz=53
MNTX **Cornudas Mount** 59.98 286 P P 23 51 56.1 +0.6
HYT **Haines Junctio** 60.11 328 IAmb IAmb 23 52 00.2
comp=Z,16nm,1.1s
HYT IAMs_20 IAMs_20 00 15 23.9
comp=Z,2µm,19.0s
SKAG **Skagway** 60.13 326 P P 23 51 57.3 +1.2
B06A **Marblemount** 60.15 310 IAMs_20 IAMs_20 00 14 47.2
comp=Z,2µm,21.0s
SNET **Serv Nac Est T** 60.19 259 IAMs_20 IAMs_20 00 19 34.2
comp=Z,1µm,18.0s
TXAR **Lajitas Array** 60.23 283 P P 23 51 55.6 -1.8
comp=Z,2.2nm,0.7s,baz=58,slow=7.0,SNR=15
TXAR LR LR 00 17 39.4

comp=Z,3µm,20.1s,baz=0.0,slow=36
TX32 Lajitas Array 60.23 283 lAmb lAmb 23 52 05.2
comp=Z,42nm,1.8s
HAWA Hanford 60.30 307 P **P** **23 51 58.3 +0.8**
HAWA lAmb lAmb 23 52 03.5
comp=Z,34nm,1.6s
HAWA IAMs_20 IAMs_20 00 15 34.3
comp=Z,1µm,20.0s
E07A Sunnyside 60.39 308 IAMs_20 IAMs_20 00 15 03.5
comp=Z,1µm,22.0s
LTY Liberty 60.44 309 IAMs_20 IAMs_20 00 15 06.8
comp=Z,2µm,21.0s
CCIG Comitan 60.45 264 P **P** **23 51 59.1 0.0**
CCIG IAMs_20 IAMs_20 00 13 17.1
comp=Z,2µm,22.0s
JIS Juneau Island 60.48 324 P **P** **23 51 59.8 +1.2**
JIS IAMs_20 IAMs_20 00 15 45.1
comp=Z,1µm,18.0s
BESE Bessie Mountai 60.49 325 P **P** **23 51 59.9 +1.3**
TCRU Three Creeks R 60.56 296 P **P** **23 52 01.1 +1.4**
POKR Poker Plat Res 60.58 335 P **P** **23 51 59.0 -0.1**
baz=45,SNR=5.9
G08A Pilot Rock 60.61 306 P **P** **23 51 59.5 -0.3**
G08A IAMs_20 IAMs_20 00 16 35.6
comp=Z,2µm,18.0s
IL31 60.66 335 lAmb lAmb 23 52 11.0
comp=Z,15nm,1.1s
ILAR Eielson Array 60.66 335 P **P** **23 51 58.5 -1.1**
comp=Z,8.8nm,1.0s,baz=43,slow=4.8,SNR=18
ILAR LR LR 00 17 09.4
comp=Z,774nm,18.6s,baz=56,slow=35
A04D Lummi Island 60.69 311 P **P** **23 52 00.4 +0.3**
baz=54
MTPU Mount Pierson 60.72 296 P **P** **23 52 01.8 +0.8**
RIDG Independent Ri 60.74 333 lAmb lAmb 23 52 06.8
comp=Z,24nm,1.0s
WRAK Wrangell Islan 60.77 322 IAMs_20 IAMs_20 00 15 39.8
comp=Z,1µm,21.0s
F07A Phinny Hill Vi 60.81 307 P **P** **23 52 01.5 +0.5**
F07A lAmb lAmb 23 52 04.0
comp=Z,21nm,0.8s
F07A IAMs_20 IAMs_20 00 16 00.9
comp=Z,2µm,20.0s
W18A Petrified Fore 60.86 292 P **P** **23 52 02.2 +0.5**
baz=53
W18A Petrified Fore 60.86 292 P **P** **23 52 02.2 +0.5**
W18A lAmb lAmb 23 52 09.7
comp=Z,18nm,1.4s
W18A IAMs_20 IAMs_20 00 17 24.9
comp=Z,3µm,19.0s
COLA College 60.88 335‖ *e*P **P** **23 52 01.5 +0.4**
COLA pmax pmax
comp=Z,10.0nm,1.0s
COLA College 60.88 335 P **P** **23 52 01.1 0.0**
COLA lAmb lAmb 23 52 11.0
comp=Z,16nm,0.8s
MENT Mentasta 60.92 332 P **P** **23 52 01.2 -0.3**
MENT lAmb lAmb 23 52 05.5
comp=Z,23nm,1.0s
MENT IAMs_20 IAMs_20 00 16 00.1
comp=Z,1µm,19.0s
MDM Murphy Dome 60.93 335 P **P** **23 52 02.0 +0.5**
MDM lAmb lAmb 23 52 09.8
comp=Z,18nm,1.3s
HDA Harding Lake 60.93 334 P **P** **23 52 01.6 +0.1**
baz=45
HDA Harding Lake 60.93 334 lAmb lAmb 23 52 12.2
comp=Z,36nm,1.3s
CCB Clear Creek Blu 61.02 335 lAmb lAmb 23 52 09.5
comp=Z,40nm,1.6s
ELK Elko 61.05 300 lAmb lAmb 23 52 12.1
comp=Z,28nm,1.2s
ELK IAMs_20 IAMs_20 00 16 27.6
comp=Z,2µm,21.0s
CLDB Colider 61.06 212 *e*P **P** **23 52 01.7 -1.2**
CLDB *epP* **sP** **23 52 05.5 +0.2**
121A Cookes Peak, D 61.10 288 P **P** **23 52 04.2 +0.8**
baz=53
121A Cookes Peak, D 61.10 288 lAmb lAmb 23 52 12.9
comp=Z,42nm,1.6s
PGC Sidney 61.13 311 IAMs_20 IAMs_20 00 15 50.1
comp=Z,1µm,20.0s
PKCU Pink Cliffs 61.15 295 P **P** **23 52 04.2 +0.3**
X18A Snowflake 61.35 291 P **P** **23 52 05.2 +0.1**
LON Longmire 61.37 309 P **P** **23 52 04.3 -0.6**
LON pmax pmax
comp=Z,10.0nm,1.2s
LON Longmire 61.37 309 P **P** **23 52 04.3 -0.6**
BBB Bella Bella 61.40 316 IAMs_20 IAMs_20 00 16 37.9
comp=Z,2µm,18.0s
CTGM Chitina Glacie 61.43 329 lAmb lAmb 23 52 15.2
comp=Z,17nm,0.9s
CTGM IAMs_20 IAMs_20 00 16 08.8
comp=Z,1µm,19.0s
J08A Circle Bar Ran 61.46 304 IAMs_20 IAMs_20 00 16 52.2
comp=Z,2µm,20.0s
PAX Paxson 61.48 333 lAmb lAmb 23 52 13.1
comp=Z,23nm,1.2s
DHAK Deception Hill 61.50 327 IAMs_20 IAMs_20 00 15 56.8
comp=Z,1µm,20.0s
D03D Eldon 61.60 310 P **P** **23 52 06.1 -0.2**
baz=53
G06A Carlson Farm, 61.60 307 P **P** **23 52 07.0 +0.6**
G06A lAmb lAmb 23 52 23.5
comp=Z,40nm,1.8s
G06A IAMs_20 IAMs_20 00 16 34.8
comp=Z,1µm,20.0s
MLY Manley 61.61 336 P **P** **23 52 06.0 -0.2**
MLY lAmb lAmb 23 52 13.9
comp=Z,29nm,1.3s
JANB Januaria 61.61 198 *e*P **P** **23 52 06.4 -0.3**
JANB *epP* **sP** **23 52 09.0 0.0**
I07A Izee 61.64 305 IAMs_20 IAMs_20 00 16 35.8
comp=Z,2µm,21.0s
D04E Lakebay 61.64 309 P **P** **23 52 06.1 -0.4**
baz=53
F05D White Salmon 61.68 308 P **P** **23 52 06.2 -0.7**
baz=53
WUAZ Wupatki 61.69 293 P **P** **23 52 07.4 0.0**
baz=53
WUAZ Wupatki 61.69 293 P **P** **23 52 08.4 +1.0**
WUAZ lAmb lAmb 23 52 16.6
comp=Z,26nm,1.6s
CRAG Craig 61.71 321 IAMs_20 IAMs_20 00 16 20.6
comp=Z,1µm,20.0s
KNB Kanab 61.74 295 P **P** **23 52 08.5 +0.8**
KNB pmax pmax
comp=Z,17nm,1.4s
KNB Kanab 61.74 295 P **P** **23 52 08.5 +0.8**
BALM Baldy 61.74 330 lAmb lAmb 23 52 10.9
comp=Z,16nm,1.1s
MCARA McCarthy VSAT 61.75 330 P **P** **23 52 08.4 +1.3**
YKU2 Yakutat 61.78 327 IAMs_20 IAMs_20 00 16 09.3
comp=Z,1µm,20.0s
E04D Cinebar 61.90 309 P **P** **23 52 07.9 -0.4**
baz=53
GEYT Alibeck 61.97 63 P **P** **23 52 07.6 -1.5**
comp=Z,7.0nm,1.0s,baz=302,slow=8.5,SNR=13
GEYT LR LR 00 20 08.0
comp=Z,484nm,21.2s,baz=330,slow=37
GYA0B ALIBECK ARRAY 61.97 63 P **P** **23 52 08.8 -0.2**
GYA0B lAmb lAmb 23 52 17.7
comp=Z,21nm,1.2s
GLB Gilahina Butte 61.98 331 P **P** **23 52 09.4 +0.6**
YAH Yahtse 61.99 329 P **P** **23 52 09.4 +0.4**
YAH lAmb lAmb 23 52 17.4
comp=Z,21nm,1.2s
YAH IAMs_20 IAMs_20 00 16 37.7
comp=Z,2µm,19.0s
VRDI Verde Repeater 62.01 330 P **P** **23 52 09.8 +0.8**
LCMT Little Creek M 62.01 295 P **P** **23 52 09.6 +0.1**
DHY Denali Highway 62.02 333 lAmb lAmb 23 52 16.8
comp=Z,21nm,1.2s
WVOR Wild Horse Val 62.11 303 lAmb lAmb 23 52 14.5
comp=Z,28nm,1.1s
WVOR IAMs_20 IAMs_20 00 17 46.3
comp=Z,2µm,19.0s
NLWA Neilton Lookou 62.11 310 P **P** **23 52 11.0 +1.2**
NLWA IAMs_20 IAMs_20 00 16 12.0
comp=Z,3µm,21.0s
MESA MESA 62.19 329 P **P** **23 52 11.1 +0.7**
F04A Amboy 62.19 308 IAMs_20 IAMs_20 00 20 05.3
comp=Z,1µm,18.0s
RND Reindeer 62.24 334 P **P** **23 52 10.8 +0.3**
RND pmax pmax
comp=Z,31nm,1.5s
RND Reindeer 62.24 334 P **P** **23 52 10.8 +0.3**
RND lAmb lAmb 23 52 17.6
comp=Z,31nm,1.5s
RDOG Red Dog Mine 62.29 343 P **P** **23 52 10.2 -0.4**
RAYN Ar Rayn 62.29 84 P **P** **23 52 11.5 +0.1**
RAYN Ar Rayn 62.29 84 P **P** **23 52 11.5 +0.1**
WAX Waxell Ridge 62.33 329 P **P** **23 52 12.0 +0.9**
WAX IAMs_20 IAMs_20 00 16 38.6
comp=Z,926nm,18.0s
BPAW Bear Paw Mtn. 62.38 335 lAmb lAmb 23 52 21.2
comp=Z,13nm,1.0s
SAML Samuel 62.39 220 P **P** **23 52 11.2 -0.7**
SAML pmax pmax
comp=Z,12nm,1.2s
SAML Samuel 62.39 220 P **P** **23 52 11.2 -0.7**
X16A Lo Mia Camp, P 62.40 292 P **P** **23 52 13.1 +0.9**
X16A lAmb lAmb 23 52 21.1
comp=Z,19nm,1.6s
E03A Lebam 62.46 309 P **P** **23 52 12.7 +0.6**
E03A IAMs_20 IAMs_20 00 16 23.2
comp=Z,2µm,22.0s
TIXI Tiksi 62.47 8 *ce*P **P** **23 52 11.7 -0.1**
TIXI pmax pmax
comp=Z,32nm,2.5s
TIXI Tiksi 62.47 8 P **P** **23 52 12.2 +0.5**
TIXI lAmb lAmb 23 53 29.7
comp=Z,12nm,0.5s
PINE Pine Mountain 62.64 305 lAmb lAmb 23 52 22.9
comp=Z,20nm,1.1s
PINE IAMs_20 IAMs_20 00 16 54.3
comp=Z,2µm,21.0s
MOBC Moresby Island 62.65 319 IAMs_20 IAMs_20 00 17 05.7
comp=Z,2µm,20.0s
R11A Troy Canyon, C 62.69 298 P **P** **23 52 15.1 +1.1**
baz=53
R11A Troy Canyon, C 62.69 298 IAMs_20 IAMs_20 00 17 43.1
comp=Z,2µm,21.0s
319A Douglas 62.81 288 P **P** **23 52 15.9 +1.1**
H04A Detroit Lake 62.81 307 P **P** **23 52 13.6 -1.0**
H04A lAmb lAmb 23 52 17.3
comp=Z,14nm,1.2s
H04A IAMs_20 IAMs_20 00 17 23.8
comp=Z,1µm,19.0s
F03A Seaside 62.83 309 P **P** **23 52 13.9 -0.7**
F03A IAMs_20 IAMs_20 00 17 09.0
comp=Z,1µm,19.0s
DIB Dawson Inlet, 62.85 319 IAMs_20 IAMs_20 00 17 12.0
comp=Z,2µm,20.0s
SCM Sheep Creek Mo 62.90 332 P **P** **23 52 15.9 +1.0**
SCM pmax pmax
comp=Z,65nm,1.8s
SCM Sheep Creek Mo 62.90 332 P **P** **23 52 15.9 +1.0**
RAGM Ragged Mountai 63.02 330 P **P** **23 52 15.4 -0.3**
BDFB Brasilia 63.07 202 P **P** **23 52 16.7 +0.2**
comp=Z,16nm,1.1s,baz=20,slow=10,SNR=8.4
BDFB LR LR 00 15 06.5
comp=Z,1µm,21.1s,baz=358,slow=32
BDFB Brasilia 63.07 202 P **P** **23 52 16.2 -0.3**
BDFB pmax pmax
comp=Z,24nm,1.2s
BDFB Brasilia 63.07 202 P **P** **23 52 16.2 -0.3**
BDFB lAmb lAmb 23 52 20.9
comp=Z,24nm,1.2s
BDFB IAMs_20 IAMs_20 00 14 33.6
comp=Z,1µm,21.0s
HPIG 63.09 282 P **P** **23 52 18.2 +1.4**
HPIG lAmb lAmb 23 52 24.6
comp=Z,21nm,1.5s
HPIG IAMs_20 IAMs_20 00 19 21.5
comp=Z,2µm,20.0s
G03D McMinnville, O 63.10 308 P **P** **23 52 17.6 +1.2**
baz=52
J05D Fort Rock, OR 63.12 305 P **P** **23 52 17.8 +1.0**
baz=52
H04D Lebanon 63.23 307 P **P** **23 52 16.8 -0.4**
baz=52
SML Sawmill 63.24 333 P **P** **23 52 17.9 +0.7**
TUC Tucson 63.25 290 P **P** **23 52 18.9 +1.2**
TUC pmax pmax
comp=Z,26nm,1.6s
TUC MLR MLR
comp=Z,6µm,18.0s
TUC Tucson 63.25 290 P **P** **23 52 19.3 +1.6**
baz=52
TUC Tucson 63.25 290 P **P** **23 52 18.9 +1.2**
TUC lAmb lAmb 23 52 26.3
comp=Z,26nm,1.6s
EYAK Cordova Ski Ar 63.28 331 P **P** **23 52 17.4 +0.1**
EYAK lAmb lAmb 23 52 55.2
comp=Z,20nm,1.4s
EYAK IAMs_20 IAMs_20 00 17 29.7
comp=Z,2µm,19.0s
FID Port Fidalgo 63.39 331 P **P** **23 52 19.4 +1.3**
FID IAMs_20 IAMs_20 00 17 42.0
comp=Z,2µm,18.0s
MOD Modoc Plateau 63.41 303 lAmb lAmb 23 52 22.9
comp=Z,27nm,1.1s
MOD IAMs_20 IAMs_20 00 18 16.9
comp=Z,2µm,20.0s
GHO Glory Hole Cre 63.46 333 P **P** **23 52 19.1 +0.4**
I04A Tendick Farm, 63.49 306 P **P** **23 52 18.1 -1.0**
baz=52
COR Cervallis 63.51 307 IAMs_20 IAMs_20 00 17 46.1
comp=Z,1µm,20.0s
GLI Glacier Island 63.51 331 lAmb lAmb 23 52 26.4
comp=Z,31nm,1.3s
GLI IAMs_20 IAMs_20 00 17 45.6
comp=Z,1µm,19.0s
SHPR Sheep Range 63.54 296 P **P** **23 52 20.6 +1.0**
SHPR IAMs_20 IAMs_20 00 18 52.6
comp=Z,2µm,19.0s
ZAIG Zacatecas 63.57 276 P **P** **23 52 21.1 +0.9**
ZAIG IAMs_20 IAMs_20 00 21 15.4
comp=Z,1µm,18.0s
W13A Hualapai Mount 63.58 294 P **P** **23 52 20.9 +0.9**
W13A lAmb lAmb 23 52 28.4
comp=Z,21nm,1.6s
PPLA Purkeypile 63.64 335 P **P** **23 52 19.9 0.0**
PPLA lAmb lAmb 23 52 59.7
comp=Z,18nm,1.2s
J04D Umpqua Nationa 63.65 306 P **P** **23 52 20.4 0.0**
baz=52
PMR Palmer 63.66 333 lAmb lAmb 23 52 23.6
comp=Z,27nm,1.1s
Y14A Wickenburg 63.72 293 P **P** **23 52 22.2 +1.4**
K04D Chiloquin, OR 63.82 305 P **P** **23 52 21.5 +0.1**
baz=52
TPNV Topopah Spring 63.96 297 P **P** **23 52 23.1 +0.7**
TPNV pmax pmax
comp=Z,11nm,1.2s
TPNV Topopah Spring 63.96 297 P **P** **23 52 22.6 +0.2**
baz=52
TPNV Topopah Spring 63.96 297 P **P** **23 52 23.1 +0.7**
SHEL Horse Pasture 63.97 156 P **P** **23 52 21.9 -0.4**
SHEL pmax pmax
comp=Z,164nm,1.7s
SHEL Horse Pasture 63.97 156 P **P** **23 52 21.9 -0.4**
I03D Drain, OR 64.08 307 P **P** **23 52 23.2 +0.3**
baz=52
I02D Swisshome 64.11 307 P **P** **23 52 24.1 +1.0**
baz=52
PAHR Pah Rah Range 64.21 301 lAmb lAmb 23 52 28.3
comp=Z,30nm,1.2s
ARAG Araguaiana, MT 64.21 206 *e*P **P** **23 52 24.1 +0.1**
ARAG *epP* **sP** **23 52 26.8 +0.5**
RC01 Rabbit Creek A 64.23 333 P **P** **23 52 23.6 0.0**
RC01 lAmb lAmb 23 52 31.2
comp=Z,31nm,1.2s
NV11 Mina Array Sit 64.24 299 lAmb lAmb 23 52 27.8
comp=Z,15nm,1.1s
NV11 IAMs_20 IAMs_20 00 18 51.0
comp=Z,2µm,21.0s
NVAR Mina Array Bea 64.33 299 P **P** **23 52 23.9 -1.0**
comp=Z,1.5nm,0.7s,baz=42,slow=6.1,SNR=11
NVAR LR LR 00 19 32.6
comp=Z,2µm,18.9s,baz=58,slow=35
RYN Ryan 64.35 300 lAmb lAmb 23 52 28.8
comp=Z,16nm,1.1s
RYN IAMs_20 IAMs_20 00 19 40.8
comp=Z,2µm,18.0s
M04C Macdoel 64.39 304 P **P** **23 52 25.8 +0.6**
baz=52
L04D Klamath Falls 64.40 305 P **P** **23 52 26.3 +1.1**
baz=52
YERR Yerington 64.57 300 P **P** **23 52 27.2 +0.8**
BSFB Barra de Sao F 64.62 194 *e*P **P** **23 52 26.1 -0.5**
VCNR Virginia City 64.62 301 P **P** **23 52 27.8 +0.9**
GRAC Grapevine Rang 64.64 298 P **P** **23 52 27.5 +0.8**
baz=52
FURC Furnace Creek, 64.64 297 P **P** **23 52 26.9 +0.2**
baz=52
VILB Vilhena 64.67 215 *e*P **P** **23 52 27.6 +0.6**
VILB *epP* **sP** **23 52 29.9 +0.5**
BEKR Beckworth 64.70 302 P **P** **23 52 27.9 +0.6**
BEKR lAmb lAmb 23 52 31.2
comp=Z,16nm,1.1s
TTA Tatalina 64.72 337 lAmb lAmb 23 52 34.0
comp=Z,21nm,1.3s
J01E Myrtle Point 64.75 306 P **P** **23 52 29.9 +2.7**
baz=51
214A Organ Pipe Nat 64.82 291 P **P** **23 52 28.8 +0.8**
Y12C Blythe 64.83 293 P **P** **23 52 28.9 +1.0**
baz=51
Y12C Blythe 64.83 293 P **P** **23 52 29.3 +1.3**
Y12C lAmb lAmb 23 52 36.2
comp=Z,22nm,1.5s
SEW Seward 64.87 332 P **P** **23 52 28.5 +0.7**
SEW lAmb lAmb 23 52 43.1
comp=Z,19nm,1.1s
SEW IAMs_20 IAMs_20 00 18 35.6
comp=Z,1µm,18.0s
K02D Willamette Mer 64.89 306 P **P** **23 52 28.5 +0.2**
baz=51
GMRC Granite Mounta 64.92 295 P **P** **23 52 29.7 +1.0**
baz=51
YBH Yreka Blue Hor 64.94 305 P **P** **23 52 29.0 +0.4**
YBH pmax pmax
comp=Z,8.0nm,1.3s
YBH Yreka Blue Hor 64.94 305 P **P** **23 52 29.0 +0.4**
YBH IAMs_20 IAMs_20 00 19 06.1
comp=Z,2µm,20.0s
113A Mohawk Valley, 64.94 292 P **P** **23 52 29.9 +1.2**
113A lAmb lAmb 23 52 37.0
comp=Z,22nm,1.6s
IRM Iron Mountain 64.98 294 P **P** **23 52 29.9 +0.9**
baz=51
WAKR Walker 64.98 300 P **P** **23 52 29.6 +0.5**
WAKR lAmb lAmb 23 53 46.0
comp=Z,25nm,1.8s
WAKR IAMs_20 IAMs_20 00 18 55.7
comp=Z,3µm,21.0s
OMMB Old Mammoth Mi 65.27 299 lAmb lAmb 23 52 46.1
comp=Z,24nm,1.3s
MPMC Manual Prospec 65.30 297 P **P** **23 52 31.3 +0.1**
baz=51
O03E Paynes Creek 65.30 303 P **P** **23 52 31.2 +0.1**
baz=51
HEC Hector,Ludlow 65.33 295 P **P** **23 52 32.7 +1.4**
baz=51
GSC Goldstone, Bar 65.33 296 P **P** **23 52 31.6 +0.2**
baz=51
GSC Goldstone, Bar 65.33 296 lAmb lAmb 23 52 40.5
comp=Z,25nm,1.2s
N02D Trinity Center 65.41 304 P **P** **23 52 30.2 -1.6**
baz=51
HSIG 65.41 287 P **P** **23 52 33.4 +1.6**
CWC Cottonwood Cre 65.43 298 P **P** **23 52 32.7 +0.7**
baz=51
KURK Kurchatov 65.45 42 *ce*P **P** **23 52 31.0 -0.7**
KURK pmax pmax
comp=Z,10.0nm,1.0s
KURK Kurchatov 65.45 42 P **P** **23 52 31.3 -0.4**
KURK lAmb lAmb 23 52 39.2
comp=Z,19nm,1.2s
GLA Glamis 65.46 293 P **P** **23 52 33.2 +1.1**
GLA pmax pmax
comp=Z,17nm,1.3s
GLA Glamis 65.46 293 P **P** **23 52 32.5 +0.4**
baz=51
GLA Glamis 65.46 293 P **P** **23 52 33.2 +1.1**
GLA lAmb lAmb 23 52 40.4
comp=Z,17nm,1.2s
BC3 Big Chuckawall 65.49 294 P **P** **23 52 31.5 -0.9**
baz=51
WDC Whiskeytown Da 65.56 303 P **P** **23 52 31.5 -1.1**
WDC pmax pmax
comp=Z,4.0nm,0.9s
WDC Whiskeytown Da 65.56 303 P **P** **23 52 31.5 -1.1**
WDC IAMs_20 IAMs_20 00 19 57.6
comp=Z,1µm,20.0s
BRLK Bradley Lake 65.60 332 P **P** **23 52 32.4 -0.2**
BRLK lAmb lAmb 23 52 36.0
comp=Z,18nm,1.1s
BELC Belle Mtn. Jos 65.63 294 P **P** **23 52 33.6 +0.3**
baz=51
AFDM Forest Hills D 65.64 301 P **P** **23 52 34.5 +1.3**
SALV Santo Antonio 65.67 209 *e*P **P** **23 52 33.8 +0.4**
SALV *epP* **sP** **23 52 36.7 +0.9**
KRMB Red Mountain 65.76 305 P **P** **23 52 34.7 +0.6**
KRMB IAMs_20 IAMs_20 00 19 30.0
comp=Z,1µm,20.0s
ANM Nome 65.77 341 IAMs_20 IAMs_20 00 19 30.7
comp=Z,1µm,22.0s
LRMC Laurel Mtn Rad 65.78 296 P **P** **23 52 36.1 +1.9**
baz=51
CMB Columbia Colle 65.86 300 lAmb lAmb 23 52 38.7
comp=Z,14nm,1.1s
CMB IAMs_20 IAMs_20 00 19 22.9
comp=Z,3µm,22.0s
CNPM China Poot 65.90 332 lAmb lAmb 23 52 48.5
comp=Z,16nm,1.0s
HOM Homer 65.94 332 P **P** **23 52 35.7 +1.0**
ZAA0 Zalesovo Array 66.03 37 P **P** **23 52 35.0 -0.4**
ZAA0 IAMs_20 IAMs_20 00 22 23.8
comp=Z,966nm,19.0s
ZALV Zalesovo Beam 66.03 37 P **P** **23 52 34.9 -0.4**
comp=Z,1.1nm,0.6s,baz=296,slow=7.4,SNR=4.8
ZALV LR LR 00 22 35.2
comp=Z,892nm,18.2s,baz=302,slow=37
SVW2 Sparrevohn 66.05 335 P **P** **23 52 35.0 -0.5**
KHMM Horse Mountain 66.07 304 lAmb lAmb 23 52 40.0
comp=Z,27nm,1.1s
KHMM IAMs_20 IAMs_20 00 20 44.2
comp=Z,2µm,20.0s
SWSC Sam W. Stewart 66.16 293 P **P** **23 52 37.0 +0.4**
baz=51
ISA Isabella, Lake 66.17 297 P **P** **23 52 37.1 +0.4**
ISA pmax pmax
comp=Z,48nm,1.8s
ISA Isabella, Lake 66.17 297 P **P** **23 52 36.9 +0.2**
baz=51
ISA Isabella, Lake 66.17 297 P **P** **23 52 37.1 +0.4**
XPFO Pion Flat 66.17 294 P **P** **23 52 37.5 +0.7**
XPFO lAmb lAmb 23 52 51.8
comp=Z,20nm,1.5s
PFO Pinyon Flats O 66.17 294 P **P** **23 52 38.1 +1.3**
PFO pmax pmax
comp=Z,21nm,1.5s
PFO MLR MLR
comp=Z,2µm,19.0s
PFO Pinyon Flats O 66.17 294 P **P** **23 52 35.9 -0.9**
baz=51
PFO Pinyon Flats O 66.17 294 P **P** **23 52 38.1 +1.3**
PFO lAmb lAmb 23 52 51.8
comp=Z,21nm,1.5s
PFO Pinyon Flats O 66.17 294 IAMs_20 IAMs_20 00 21 44.4
comp=Z,2µm,19.0s
TPFO Pinon Flats 66.17 294 P **P** **23 52 38.2 +1.3**
baz=51
KK31 Karatay Array 66.20 52 P **P** **23 52 36.2 -0.6**
KK31 pmax pmax
comp=Z,11nm,1.5s
KK31 Karatay Array 66.20 52 P **P** **23 52 36.2 -0.6**
JCC Jacoby Creek, 66.28 304 IAMs_20 IAMs_20 00 20 50.8
comp=Z,1µm,20.0s
EDW2 Edwards Air Fo 66.35 296 P **P** **23 52 38.7 +0.8**
baz=50
KMRM Mail Ridge 66.47 304 P **P** **23 52 39.8 +1.2**
KMRM IAMs_20 IAMs_20 00 20 20.2
comp=Z,2µm,19.0s
PTLB Pontes e Lacer 66.52 213 *e*P **P** **23 52 38.5 -0.3**
BFSC Mount Baldy Ra 66.55 295 P **P** **23 52 38.9 -0.4**
baz=50
IKP In-Ko-Pah, Jac 66.55 293 P **P** **23 52 40.5 +1.3**
baz=50
MONP2 Monument Peak 66.60 294 P **P** **23 52 41.5 +1.8**
baz=50
ARVC Arvin 66.73 297 P **P** **23 52 41.6 +1.4**
baz=50
KCPM Cahto Peak 66.74 303 IAMs_20 IAMs_20 00 20 48.0
comp=Z,1µm,20.0s
BILL Bilibino 66.75 354 *e*P **P** **23 52 38.8 -1.0**

BILL *e* 23 53 07.3
BILL *e* 23 55 07.8
BILL pmax pmax
comp=Z,25nm,2.5s
BILL Bilibino 66.75 354 P **P** **23 52 39.8 0.0**
BILL IAmb IAmb 23 52 48.0
comp=Z,26nm,1.8s
HRA Herat 66.78 64 P **P** **23 52 41.0 +0.2**
HOPS Hopland Field 66.88 302 P **P** **23 52 42.4 +1.3**
HOPS IAMs_20 IAMs_20 00 20 25.7
comp=Z,2μm,19.0s
BAR Barrett 66.90 294 IAMs_20 IAMs_20 00 21 17.7
comp=Z,1μm,20.0s
OSI Osito Audit: C 66.99 296 IAMs_20 IAMs_20 00 21 57.9
comp=Z,2μm,19.0s
109C Camp Elliot, M 67.05 294 IAMs_20 IAMs_20 00 22 29.6
comp=Z,2μm,19.0s
PMPB Monarch Peak 67.27 299 P **P** **23 52 45.3 +1.6**
PMPB IAMs_20 IAMs_20 00 20 59.3
comp=Z,2μm,20.0s
FURI Furi 67.29 100 IAMs_20 IAMs_20 00 21 38.6
comp=Z,2μm,21.0s
SAO San Andreas Ge 67.32 300 P **P** **23 52 44.2 +0.3**
SAO pmax pmax
comp=Z,19nm,1.2s
SAO San Andreas Ge 67.32 300 P **P** **23 52 44.2 +0.3**
SAO IAmb IAmb 23 52 48.6
comp=Z,19nm,1.2s
SAO IAMs_20 IAMs_20 00 20 20.5
comp=Z,2μm,21.0s
SMMC Simmler 67.34 298 P **P** **23 52 44.4 +0.3**
baz=50
SRIG Santa Rosalia 67.37 286 IAMs_20 IAMs_20 00 22 17.6
comp=Z,2μm,18.0s
PKM Mcpherson Peak 67.50 297 P **P** **23 52 47.1 +1.8**
baz=50
KDAK Kodiak Island 67.70 332 P **P** **23 52 45.3 -0.6**
KDAK pmax pmax
comp=Z,17nm,1.3s
KDAK Kodiak Island 67.70 332 P **P** **23 52 45.3 -0.6**
KDAK IAmb IAmb 23 53 07.2
comp=Z,17nm,1.2s
KDAK Kodiak Island 67.70 332 IAMs_20 IAMs_20 00 20 20.3
comp=Z,848nm,18.0s
GAMB Gambell 67.81 344 P **P** **23 52 46.6 +0.1**
GAMB IAmb IAmb 23 52 54.4
comp=Z,38nm,1.5s
CHGR Chuyangaron 68.30 57 P **P** **23 52 51.3 +1.1**
BTK Batken 68.36 55 P **P** **23 52 50.2 -0.3**
BTK pmax pmax
comp=Z,8.0nm,1.1s
BTK MLR MLR
comp=Z,3μm,19.0s
BTK Batken 68.36 55 P **P** **23 52 50.2 -0.3**
OHAK Old Harbor 68.37 331 IAmb IAmb 23 52 52.8
comp=Z,16nm,1.2s
ATD Arta Tunnel 68.38 95 P **P** **23 52 48.2 -2.7**
FRU1 Bishkek 68.68 50 P **P** **23 52 52.2 -0.3**
FRU1 pmax pmax
comp=Z,9.0nm,0.9s
FRU1 MLR MLR
comp=Z,2μm,18.0s
FRU1 Bishkek 68.68 50 P **P** **23 52 52.2 -0.3**
FRU1 IAMs_20 IAMs_20 00 27 17.1
comp=Z,2μm,18.0s
AAK Ala-Archa 68.72 51 *ce*P **P** **23 52 53.0 +0.1**
AAK pmax pmax
comp=Z,11nm,1.7s
AAK Ala-Archa 68.72 51 P **P** **23 52 53.6 +0.8**
AAK Ala-Archa 68.72 51 IAMs_20 IAMs_20 00 24 02.2
comp=Z,1μm,20.0s
GAR Garm 68.76 56 P **P** **23 52 53.6 +0.5**
GAR IAmb IAmb 23 53 00.2
comp=Z,16nm,0.9s
UOSS Minazif 68.83 76 P **P** **23 52 53.0 -0.6**
MBAR Mbarara 68.84 114 P **P** **23 52 53.6 -0.3**
MBAR pmax pmax
comp=Z,13nm,1.3s
MBAR MLR MLR
comp=Z,1μm,19.0s
MBAR Mbarara 68.84 114 P **P** **23 52 53.6 -0.3**
MBAR IAMs_20 IAMs_20 00 23 16.1
comp=Z,1μm,19.0s
MAKZ Makanchi 69.74 43 P **P** **23 52 58.8 -0.2**
MAKZ pmax pmax
comp=Z,17nm,1.5s
MAKZ MLR MLR
comp=Z,1μm,19.0s
MAKZ Makanchi 69.74 43 P **P** **23 52 58.8 -0.2**
MAKZ IAMs_20 IAMs_20 00 24 31.1
comp=Z,961nm,19.0s
MKAR Makanchi Array 69.91 43 P **P** **23 52 59.0 -0.9**
comp=Z,4.5nm,1.0s,baz=316,slow=5.1,SNR=17
MKAR LR LR 00 24 57.9
comp=Z,1μm,19.0s,baz=292,slow=37
KDJ Kajisay 70.53 50 P **P** **23 53 03.5 -0.6**
KDJ Kajisay 70.53 50 P **P** **23 53 03.5 -0.6**
CHGN Chignik 70.80 333 P **P** **23 53 05.8 +0.7**
CHGN IAmb IAmb 23 53 14.2
comp=Z,24nm,0.8s
PRZ Przheval'sk 70.94 49 P **P** **23 53 06.9 +0.4**
PRZ pmax pmax
comp=Z,16nm,1.3s
PRZ MLR MLR
comp=Z,1μm,20.0s
PRZ Przheval'sk 70.94 49 P **P** **23 53 06.9 +0.4**
PRZ IAMs_20 IAMs_20 00 25 41.1
comp=Z,1μm,20.0s
KBL Kabul 70.94 60 P **P** **23 53 06.2 -0.5**
KBL pmax pmax
comp=Z,14nm,1.7s
KBL MLR MLR
comp=Z,800nm,20.0s
KBL Kabul 70.94 60 P **P** **23 53 06.2 -0.5**
KBL IAMs_20 IAMs_20 00 27 57.3
comp=Z,826nm,20.0s
LPAZ La Paz 71.10 221 P **P** **23 53 07.1 -1.1**
comp=Z,15nm,1.2s,baz=15,slow=11,SNR=11
LPAZ LR LR 00 20 12.8
comp=Z,381nm,21.9s,baz=13,slow=32
LPAZ La Paz 71.10 221 IAmb IAmb 23 53 12.9
comp=Z,26nm,1.4s
LPAZ La Paz 71.10 221 *eP* **P** **23 53 07.1 -1.1**
TARG Taragay, Kyrgy 71.14 50 P **P** **23 53 08.8 +0.8**
TARG IAMs_20 IAMs_20 00 25 06.2
comp=Z,1μm,20.0s
PAYG Puerto Ayora 71.27 249 IAMs_20 IAMs_20 00 18 49.9
comp=Z,917nm,19.0s
KSH Kashi 71.66 52 P **P** **23 53 12.9 +2.0**
KSH pP pwP 23 53 21.1 +5.8
KSH PP **PP** **23 55 51.1 +1.7**
KSH S **S** **00 02 30.3 -0.5**
KSH pmax pmax
comp=Z,28nm,1.2s
KSH pmax pmax
comp=Z,450nm,4.0s
KSH LR LR
comp=Z,170nm,4.9s
KSH LR LR
comp=Z,300nm,12.0s
KSH LR LR
comp=Z,610nm,10.3s
YAK Yakutsk 71.79 11 P **P** **23 53 10.4 -0.6**
YAK pmax pmax
comp=Z,24nm,0.5s
YAK Yakutsk 71.79 11 P **P** **23 53 10.4 -0.6**
NNA Nana 71.89 231 P **P** **23 53 12.7 +0.4**
NNA pmax pmax
comp=Z,66nm,1.5s
NNA Nana 71.89 231 P **P** **23 53 12.7 +0.4**
SDPT Sand Point 72.24 334 P **P** **23 53 12.9 -1.0**
SDPT IAMs_20 IAMs_20 00 23 54.3
comp=Z,1μm,19.0s
CNBA Chernabura Isl 72.40 333 P **P** **23 53 15.7 +0.9**
CNBA IAMs_20 IAMs_20 00 23 05.4
comp=Z,801nm,19.0s
BOD Bodaibo 72.74 20 *eP* **P** **23 53 12.9 -4.0**
BOD pmax pmax
comp=Z,38nm,1.6s
PB16 IPOC Station P 73.52 221 IAmb IAmb 23 53 26.2
comp=Z,19nm,1.0s
KMBO Kilima Mbogo 73.53 109 P **P** **23 53 23.9 +1.4**
comp=Z,2.5nm,0.7s,baz=8.0,slow=12,SNR=4.2
KMBO LR LR 00 26 51.4
comp=Z,1μm,18.7s,baz=303,slow=37
KMBO Kilima Mbogo 73.53 109 P **P** **23 53 22.1 -0.4**
KMBO pmax pmax
comp=Z,19nm,1.5s
KMBO MLR MLR
comp=Z,1μm,19.0s
KMBO Kilima Mbogo 73.53 109 P **P** **23 53 22.1 -0.4**
KMBO Kilima Mbogo 73.53 109 IAMs_20 IAMs_20 00 26 28.5
comp=Z,1μm,19.0s
MOY Mondy 74.10 30 *eP* **P** **23 53 24.7 -0.4**
MOY pmax pmax
comp=Z,66nm,3.3s
NIL Nilore 74.11 58 P **P** **23 53 25.3 -0.1**
NIL pmax pmax
comp=Z,30nm,1.5s
NIL MLR MLR
comp=Z,1μm,20.0s
NIL Nilore 74.11 58 P **P** **23 53 25.3 -0.1**
NIL IAmb IAmb 23 53 49.3
comp=Z,30nm,1.5s
NIL Nilore 74.11 58 IAMs_20 IAMs_20 00 29 16.3
comp=Z,1μm,20.0s
GO01 Chusmiza 74.53 220 IAmb IAmb 23 53 32.7
comp=Z,41nm,1.6s
WMQ Urumqi 74.68 43 *eP* **P** **23 53 30.8 +2.2**
WMQ sP PcP 23 53 38.3 -4.5
WMQ S **S** **00 03 07.4 +2.5**
WMQ sS sS 00 03 14.5 +6.8
WMQ pmax pmax
comp=Z,6.0nm,1.1s
WMQ pmax pmax
comp=Z,96nm,4.1s
WMQ LR LR
comp=Z,1μm,17.9s
WMQ LR LR
comp=Z,800nm,13.5s
WMQ LR LR
comp=Z,810nm,20.1s
WMQ Urumqi 74.68 43 P **P** **23 53 29.1 +0.5**
WMQ pmax pmax
comp=Z,27nm,0.9s
WMQ MLR MLR
comp=Z,1μm,20.0s
WMQ Urumqi 74.68 43 P **P** **23 53 29.1 +0.5**
WMQ IAmb IAmb 23 55 29.7
comp=Z,27nm,0.9s
WMQ Urumqi 74.68 43 IAMs_20 IAMs_20 00 27 03.1
comp=Z,1μm,20.0s
PB11 IPOC Station P 74.82 220 P **P** **23 53 29.7 +0.1**
PB11 IAmb IAmb 23 53 35.3
comp=Z,37nm,1.2s
PB08 IPOC Station P 74.92 220 IAmb IAmb 23 53 32.5
comp=Z,20nm,1.0s
TLY Talaya 75.02 29 *eP* **P** **23 53 31.5 +1.2**
TLY pmax pmax
comp=Z,39nm,1.8s
TLY MLR MLR
comp=Z,932nm,16.0s
TLY Talaya 75.02 29 P **P** **23 53 30.4 0.0**
MA2 Magadan 75.75 1 *ce*P **P** **23 53 34.3 -0.1**
MA2 pmax pmax
comp=Z,11nm,1.2s
MA2 Magadan 75.75 1 P **P** **23 53 34.3 -0.1**
CPUP Villa Florida 75.90 207 P **P** **23 53 35.9 +0.4**
comp=Z,3.9nm,0.9s,baz=336,slow=5.0,SNR=4.7
CPUP LR LR 00 25 33.1
comp=Z,186nm,19.3s,baz=18,slow=35
ZAK Zakamensk 75.98 30 *eP* **P** **23 53 35.5 -0.5**
ZAK pmax pmax
comp=Z,10.0nm,1.2s
TSUM Tsumeb 76.18 136 IAMs_20 IAMs_20 00 25 13.4
comp=Z,1μm,21.0s
LVC Limon Verde 76.97 218 P **P** **23 53 42.5 +0.4**
LVC pmax pmax
comp=Z,28nm,1.6s
LVC Limon Verde 76.97 218 P **P** **23 53 42.5 +0.4**
LVC IAmb IAmb 23 53 46.0
comp=Z,28nm,1.6s
LVC Limon Verde 76.97 218 *eP* **P** **23 53 42.3 +0.2**
PB06 IPOC Station P 77.35 219 P **P** **23 53 44.1 +0.2**
PB06 IAmb IAmb 23 53 50.3
comp=Z,50nm,1.7s
PB15 IPOC Station P 77.74 219 P **P** **23 53 45.1 -1.2**
LSZ Lusaka 78.66 125 P **P** **23 53 51.0 -0.4**
LSZ pmax pmax
comp=Z,10.0nm,1.1s
LSZ Lusaka 78.66 125 P **P** **23 53 51.0 -0.4**
LSZ Lusaka 78.66 125 IAMs_20 IAMs_20 00 27 28.9
comp=Z,1μm,18.0s
SONM Songino Array 79.23 29 P **P** **23 53 53.8 -0.4**
comp=Z,8.4nm,1.0s,baz=322,slow=5.2,SNR=28
SONM LR LR 00 30 59.0
comp=Z,226nm,18.0s,baz=312,slow=37
ZEA Zeya 79.36 15 *eP* **P** **23 53 53.9 -0.7**
ULN Ulaanbaatar 79.43 29 *ce*P **P** **23 53 55.0 -0.3**
ULN pmax pmax
comp=Z,19nm,1.0s
ULN Ulaanbaatar 79.43 29 P **P** **23 53 55.6 +0.3**
ULN IAmb IAmb 23 53 58.9
comp=Z,22nm,1.1s
GO02 Mina Guanaco 79.50 218 P **P** **23 53 56.5 +0.5**
GO02 IAmb IAmb 23 55 49.6
comp=Z,16nm,0.8s
AC01 Pan de Azucar 80.80 218 P **P** **23 54 03.4 +0.8**
AC01 IAmb IAmb 23 54 10.8
comp=Z,42nm,1.4s
GO03 Copiap 81.90 217 P **P** **23 54 09.1 +0.6**
HIA Hailar 81.95 21 P **P** **23 54 09.4 +0.7**
HIA pmax pmax
comp=Z,14nm,1.3s
HIA MLR MLR
comp=Z,300nm,20.0s
HIA Hailar 81.95 21 P **P** **23 54 09.4 +0.7**
PEA0B Petropavlovsk- 82.12 357 P **P** **23 54 08.3 -1.1**
PEA0B pmax pmax
comp=Z,88nm,1.9s
PEA0B Petropavlovsk- 82.12 357 P **P** **23 54 08.3 -1.1**
PETK Petropavlovsk- 82.12 357 P **P** **23 54 08.2 -1.3**
comp=Z,1.5nm,0.6s,baz=90,slow=16,SNR=7.7
PETK LR LR 00 31 41.1
comp=Z,469nm,18.9s,baz=31,slow=36
AC04 Llanos de Chal 82.79 217 P **P** **23 54 12.0 -1.0**
AC04 IAmb IAmb 23 57 23.2
comp=Z,28nm,1.1s
GTA Gaotai 83.73 38 ⇑P **P** **23 54 17.9 -0.3**
GTA pP pwP 23 54 23.4 +0.8
GTA sP PcP 23 54 26.4 +4.0
GTA pmax pmax
comp=Z,11nm,1.2s
GTA pmax pmax
comp=Z,180nm,4.8s
GTA LR LR
comp=Z,480nm,18.7s
GTA LR LR
comp=Z,1μm,20.3s
GTA LR LR
comp=Z,900nm,19.7s
CO01 Juntas del Tor 83.92 216 P **P** **23 54 18.4 -0.8**
GO04 Tololo Observa 84.39 216 P **P** **23 54 20.4 -1.1**
GO04 IAmb IAmb 23 54 24.4
comp=Z,24nm,1.1s
KLR Kul'dur 84.47 13 *ce*P **P** **23 54 19.7 -1.9**
KLR pmax pmax
comp=Z,12nm,1.1s
CO03 El Pedregal 84.92 216 P **P** **23 54 22.9 -1.1**
CO03 IAmb IAmb 23 54 39.2
comp=Z,24nm,1.4s
BTO Baotou 86.79 31 *eP* **P** **23 54 32.3 -1.2**
HHC Hu-ho-hao-te 87.13 30 *eP* **P** **23 54 36.3 +1.2**
HHC pmax pmax
comp=Z,14nm,0.8s
HHC pmax pmax
comp=Z,82nm,3.8s
HHC LR LR
comp=Z,340nm,18.6s
HHC LR LR
comp=Z,250nm,15.5s
HHC LR LR
comp=Z,440nm,14.1s
LSA Lhasa 87.29 50 P **P** **23 54 36.0 -0.5**
LSA pmax pmax
comp=Z,12nm,1.3s
LSA MLR MLR
comp=Z,600nm,21.0s
LSA Lhasa 87.29 50 P **P** **23 54 36.0 -0.5**
BOSA Boshof 87.86 135 P **P** **23 54 37.8 -0.8**
comp=Z,7.1nm,1.2s,baz=51,slow=8.9,SNR=4.6
BOSA LR LR 00 31 30.4
comp=Z,1μm,21.1s,baz=318,slow=34
LZH Lanzhou 88.25 37 *e*P **P** **23 54 41.3 +0.6**
LZH pP pwP 23 54 45.9 +0.9
LZH sP sP 23 54 49.6 +6.6
LZH pmax pmax
comp=Z,13nm,1.0s
USRK Ussuriysk Ar. 89.39 14 LR LR 00 35 56.5
comp=Z,82nm,18.5s,baz=332,slow=36
BJT Baijiatuau 89.41 27 P **P** **23 54 45.9 +0.1**
BJT pmax pmax
comp=Z,6.0nm,0.8s
BJT Baijiatuau 89.41 27 P **P** **23 54 45.9 +0.1**
SHL Shillong 90.93 52 IAMs_20 IAMs_20 00 39 14.8
comp=Z,1μm,19.0s
XAN Xi'an 92.12 35 IAMs_20 IAMs_20 00 38 49.6
comp=Z,778nm,18.0s
LC01 Cunco 92.42 213 P **P** **23 54 58.1 -1.3**
LC01 IAmb IAmb 23 55 08.1
comp=Z,9.0nm,1.1s
CD2 Chengdu 92.59 40 P **P** **23 54 59.3 -1.5**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
ABPO Ambohimpanom 93.26 114 IAMs_20 IAMs_20 00 37 32.4
comp=Z,988nm,19.0s
PLCA Paso Flores 93.53 211 P **P** **23 55 03.6 -1.0**
comp=Z,3.8nm,1.2s,baz=8.8,slow=7.2,SNR=3.0
PLCA LR LR 00 35 10.0
comp=Z,248nm,21.1s,baz=24,slow=34
INCN Inchon 94.73 20 IAMs_20 IAMs_20 00 44 57.2
comp=Z,487nm,18.0s
KSRS Korea Array 95.06 19 P **P** **23 55 10.2 -1.7**
comp=Z,0.4nm,0.3s,baz=335,slow=5.5,SNR=4.5
ENH Enshi 95.64 36 IAMs_20 IAMs_20 00 45 14.6
comp=Z,514nm,20.0s
KMI Kunming 96.98 44 P **P** **23 55 23.1 +1.9**
KMI pmax pmax
comp=Z,7.0nm,0.5s
KMI pmax pmax
comp=Z,79nm,4.5s
KMI LR LR
comp=Z,450nm,17.0s
KMI LR LR
comp=Z,510nm,18.6s
KMI LR LR
comp=Z,640nm,21.0s
KMI Kunming 96.98 44 IAMs_20 IAMs_20 00 42 38.3
comp=Z,634nm,22.0s
WHN Wuhan 97.34 32 *e*P Pdif 23 55 29.6 +7.1
NJ2 Nanjing 97.57 28 *e*P **P** **23 55 22.1 -1.3**
NJ2 pmax pmax
comp=Z,11nm,0.6s
SSE Sheshan 99.20 26 IAMs_20 IAMs_20 00 44 38.8
comp=Z,482nm,18.0s
CHTO Chiang Mai 100.22 50 IAMs_20 IAMs_20 00 45 00.3
comp=Z,488nm,20.0s
JOW Kunigami 105.27 22 IAMs_20 IAMs_20 00 41 56.3
comp=Z,540nm,19.0s
QIZ Qiongzhong 105.58 41 Pdif **Pdif** **23 55 57.6 -1.8**
QIZ S **Sdif** **00 07 52.4 -3.9**
QIZ SS **SS** **00 15 17.0 -1.1**
QIZ LR LR
comp=Z,400nm,21.0s
QIZ LR LR
comp=Z,330nm,16.7s
QIZ LR LR
comp=Z,440nm,21.6s
QIZ Qiongzhong 105.58 41 IAMs_20 IAMs_20 00 48 24.0
comp=Z,508nm,19.0s
NACB Ninganchiao 105.74 29 IAMs_20 IAMs_20 00 48 47.9
comp=Z,552nm,20.0s
YULB Yu-li 106.36 29 IAMs_20 IAMs_20 00 53 35.3
comp=Z,436nm,19.0s
DLV T Lat 110.98 46 IAMs_20 IAMs_20 00 50 49.0
comp=Z,576nm,22.0s
RKT Rikitea 117.79 264 *e*LR LR 00 36 16.6
comp=Z,613nm,36.0s
PPT2 Papeete2 124.49 280 *e*SP SP 00 12 29.8 -3.7
comp=Z,112nm,25.2s
PPT2 *e*SS **SS** **00 19 27.9 -0.6**
comp=Z,364nm,28.5s
PPT2 Papeete2 124.49 280 *e*LR LR 00 39 27.0
comp=Z,1μm,21.8s
TBI Tubuai 128.20 274 *e*SP SP 00 13 11.0 +5.2
comp=Z,142nm,26.2s
TBI *e*SS **SS** **00 20 12.4 -2.3**
comp=Z,134nm,30.2s
TBI Tubuai 128.20 274 *e*LR LR 00 41 16.8
comp=Z,789nm,27.2s
QSPA South Pole Qui 134.91 180 **PKiKP** **00 01 08.1 -0.3**
FITZ Fitzroy Crossi 145.28 48 **PKPbc** **00 01 26.3 -0.4**
VNDA Vanda 147.16 184 PKPbc **PKPbc** **00 01 30.5 -0.3**
comp=Z,3.8nm,1.0s,baz=244,slow=3.3,SNR=13
VNDA Vanda 147.16 184 PKP2 **PKPdf** **00 01 29.0 +0.5**
VNDA Vanda 147.16 184 **PKPdf** **00 01 29.0 +0.5**
CASY Casey 149.28 148 **PKPbc** **00 01 36.8 +0.2**
WB0 Warramunga Arr 150.87 36 **PKPbc** **00 01 40.8 -1.1**
WRA Warramunga Arr 151.00 36 PKPbc **PKPbc** **00 01 39.5 -2.7**
comp=Z,9.8nm,1.0s,baz=331,slow=3.0,SNR=23
WB2 Warramunga Arr 151.01 36 **PKPbc** **00 01 41.1 -1.1**
WR0 Warramunga Arr 151.10 36 **PKPdf** **00 01 36.0 -0.6**
WR0 PKPbc **PKPbc** **00 01 42.6 +0.2**
ASAR Alice Springs 154.07 41 PKP **PKPdf** **00 01 41.5 +0.5**
comp=Z,0.7nm,0.9s,baz=180,slow=0.9,SNR=4.0
ASAR PKPbc **PKPbc** **00 01 47.9 -1.2**
comp=Z,1.9nm,0.7s,baz=325,slow=1.7,SNR=13
DZM Mont Dzumac 154.23 328 *e*LR LR 00 53 14.0
comp=Z,564nm,23.4s

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*SKHL **23** 23:42:42.1±0.7, 49°.28N×142°.92E, h10km, mb5.1/11*
SKHL Felt (III-IV) at Leonidovo; (II-III) at Poronaisk, Zabaikalets; (II) at Gastello, Tikhmenevo, Vakhrushev, Byukly.
*MOS **23** 23:42:42.6±1.3, 49°.35N×142°.65E, h10km, mb4.3/4, Error ellipse: s-maj=12.6km s-min=7.7km az=85.0*
MOS Felt (III-IV) at Leonidovo, (II-III) at Poronaysk, Zabaykaletc, (II) at Gastello, Tikhmenevo, Vakhrushev, Buyukly.
*IDC **23** 23:42:42.9±0.9, 49°.41N×142°.53E, h0km, mb3.6/7, mb1 3.7/11, mb1mx3.6/52, mbtmp3.6/11, ML3.3/3, MS2.8/2, Ms1 2.8/2, ms1mx2.5/32, Error ellipse: s-maj=24.4km s-min=15.7km az=156.0*

ISC 23 23:42:44.9±1.1, 49°.35N±0°.02×142°.68E±0°.04, h16km±8km, n31, σ2.2 21/50, mb3.8/13, 2D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGL	**Uglegorsk**	**0.48**	**237**	*i* Pg	**Pg**	**23 42 54.5**	**-0.1**
UGL				AMB	AMB	23 42 56.2	
	5μm,0.6s						
UGL				*e*Sg	**Sb**	**23 43 02.7**	**+0.9**
UGL				A	A	23 43 05.0	
	18μm,0.6s						
UGL				A	A	23 43 05.0	
	23μm,0.6s						
UGL	**Uglegorsk**	**0.48**	**237**	⇓*i* PN	**Pg**	**23 42 54.4**	**-0.1**
UGL				*e*S	**Sb**	**23 43 02.6**	**+0.8**
UGL				pmax	pmax		
	comp=Z,5μm,0.6s						
UGL				smax	smax		
	comp=E,23μm,0.5s						
TYV	**Tymovskoe**	**1.52**	**359**	*e*P	**Pn**	**23 43 11.2**	**-0.1**
TYV				P	**Pb**	**23 43 12.6**	**0.0**
	comp=E,500nm,0.7s						
TYV				S	**Sg**	**23 43 35.6**	**+1.8**
	comp=E,1μm,0.7s						
TYV				S	**Sg**	**23 43 35.6**	**+1.8**
	comp=E,2μm,0.7s						
TYV	**Tymovskoe**	**1.52**	**359**	*e*PN	**Pn**	**23 43 10.0**	**-1.3**
TYV				*e*S	**Sb**	**23 43 32.2**	**+0.6**
TYV				pmax	pmax		
	comp=Z,451nm,0.7s						
TYV				smax	smax		
	comp=N,1μm,0.6s						
YSS	**Yuzh-Sakhalins**	**2.40**	**179**	*e*P	**Pn**	**23 43 24.6**	**+1.2**
YSS				P	**Pb**	**23 43 26.0**	**-1.6**
	comp=N,14μm,0.4s						
YSS				*e*Pg	**Pg**	**23 43 28.8**	**-2.0**
YSS				AMB	AMB	23 43 29.6	
	comp=N,21μm,0.3s						
YSS				*e*S	**Sn**	**23 43 52.3**	**-0.1**
YSS				*e*Sg	**Sg**	**23 44 00.2**	**-1.6**
YSS				A	A	23 44 01.4	
	comp=N,860nm,0.4s						
YSS				A	A	23 44 01.4	
	comp=N,500nm,0.4s						

YSS	**Yuzh-Sakhalins**	**2.40**	**179**	⇓	*e*PN		**Pn**	**23 43 23.1**	**-0.3**
YSS					*e*S		**Sn**	**23 43 52.6**	**+0.2**
YSS					pmax	pmax			
	comp=Z,40nm,0.5s								
YSS					smax	smax			
	comp=E,490nm,0.7s								
YSS					MLR	MLR			
	comp=Z,900nm,14.0s								
YSS					MLR	MLR			
	comp=N,800nm,18.0s								
YSS					MLR	MLR			
	comp=E,700nm,16.0s								
NGLR	**Nogliki**	**2.46**	**6**		*e*PN		**Pb**	**23 43 26.7**	**-1.9**
NGLR					*e*			23 43 53.0	
NGLR					pmax	pmax			
	comp=Z,300nm,0.5s								
NGLR					pmax	pmax			
	comp=Z,700nm,0.6s								
NGLR					smax	smax			
	comp=N,800nm,0.7s								
NGLR					smax	smax			
	comp=E,500nm,0.7s								
NGLR					smax	smax			
	comp=N,3μm,0.7s								
NGLR					smax	smax			
	comp=E,1μm,0.7s								
NKL	**Nikolayevsk**	**4.01**	**342**		*e*P		**Pn**	**23 43 44.7**	**-0.9**
NKL					AMB	AMB		23 43 45.1	
	comp=E,400nm,0.5s								
NKL					*e*P		**Pb**	**23 43 55.5**	**+0.4**
NKL					P		Pg	23 43 55.8	-5.8
	comp=E,160nm,0.5s								
NKL					*e*Pg		Pg	23 44 05.2	+3.6
NKL					AMB	AMB		23 44 06.2	
	comp=E,700nm,1.0s								
NKL					*e*S		**Sn**	**23 44 34.2**	**+2.0**
NKL					A		A	23 44 34.3	
	comp=E,160nm,0.5s								
NKL					A		A	23 44 34.3	
	comp=E,110nm,0.5s								
NKL					*e*S		**Sb**	**23 44 41.8**	**-1.5**
NKL	**Nikolayevsk**	**4.01**	**342**		*e*PN		**Pn**	**23 43 44.7**	**-0.9**
NKL					*e*S		**Sb**	**23 44 41.8**	**-1.5**
NKL					pmax	pmax			
	comp=Z,400nm,0.5s								
NKL					pmax	pmax			
	comp=Z,160nm,0.5s								
NKL					pmax	pmax			
	comp=Z,700nm,1.0s								
ASAJ	**Asahikawa**	**5.23**	**181**		Pn		**Pn**	**23 44 03.5**	**+1.1**
	comp=Z,2.3nm,0.3s,baz=25,slow=15,SNR=4.4								
ASAJ					Sn		**Sn**	**23 45 01.6**	**-0.8**
	comp=Z,2.2nm,0.3s,baz=105,slow=26,SNR=1.7								
ASAJ					LR		LR	23 46 03.2	
	comp=Z,87nm,19.6s,baz=344,slow=38								
TEY	**Ternei**	**5.98**	**226**		*e*S		**Sn**	**23 45 21.3**	**+0.6**
TEY					A		A	23 45 24.8	
	comp=Z,30nm,0.4s								
TEY					*e*Sg		**Sg**	**23 46 04.1**	**+7.5**
TEY					A		A	23 46 09.0	
	comp=Z,40nm,0.8s								
TEY					A		A	23 46 09.0	
	comp=Z,50nm,0.8s								
KLR	**Kul'dur**	**7.15**	**273**		Pn		**Pn**	**23 44 29.1**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=76,slow=12,SNR=5.5								
KLR					Lg		Lg	23 46 26.5	
	comp=Z,1.6nm,0.3s,baz=199,slow=20,SNR=6.4								
KLR	**Kul'dur**	**7.15**	**273**		*i* PN		**Pn**	**23 44 29.3**	**+0.6**
EKMR	**Ekimchan**	**7.16**	**305**		*e*P		**Pn**	**23 44 32.0**	**+3.2**
EKMR					*e*Pg		**Pg**	**23 45 03.0**	**+1.2**
EKMR					AMB	AMB		23 45 03.8	
	comp=Z,10.0nm,0.5s								
EKMR					*e*S		**Sb**	**23 46 07.5**	**-6.3**
EKMR					*e*Sg		**Sg**	**23 46 27.0**	**-7.4**
EKMR					A		A	23 46 53.0	
	comp=Z,50nm,0.7s								
EKMR					A		A	23 46 53.0	
	comp=Z,30nm,0.7s								
EKMR	**Ekimchan**	**7.16**	**305**		*e*PN		**Pn**	**23 44 32.0**	**+3.2**
EKMR					pmax	pmax			
	comp=Z,10.0nm,0.5s								
USRK	**Ussuriysk Ar.**	**8.96**	**239**		Pn		**Pn**	**23 44 54.1**	**+0.6**
	baz=147,slow=43,SNR=1.4								
USRK					Lg		Lg	23 47 24.6	
	baz=93,slow=40,SNR=4.0								
BMKR	**Bomnak**	**10.07**	**307**		*e*Pg		Pn	23 46 05.0	+56
BMKR					*e*Sg			23 48 12.0	
BMKR					A		A	23 48 16.9	
	comp=Z,10.0nm,0.5s								
PETK	**Petropavlovsk-**	**10.14**	**63**		Pn		**Pn**	**23 45 10.3**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=308,slow=6.3,SNR=4.5								
PETK					LR		LR	23 50 02.9	
	comp=Z,64nm,18.2s,baz=68,slow=43								
BILL	**Bilibino**	**22.12**	**24**		*i* P		**P**	**23 47 41.2**	**+1.9**
BILL					pmax	pmax			
	comp=Z,2.0nm,1.0s								
TIXI	**Tiksi**	**23.26**	**349**		*i* P		**P**	**23 47 50.5**	**-0.7**
TIXI					pmax	pmax			
	comp=Z,3.0nm,0.7s								
ULN	**Ulaanbaatar**	**23.48**	**280**		*i* P		**P**	**23 47 53.4**	**-0.3**
ULN					pmax	pmax			
	comp=Z,1.0nm,0.3s								
SONM	**Songino Array**	**23.91**	**280**		P		**P**	**23 47 56.4**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=98,slow=8.9,SNR=2.8								
ILAR	**Eielson Array**	**38.98**	**40**		P		**P**	**23 50 10.3**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=280,slow=7.9,SNR=5.1								
MKAR	**Makanchi Array**	**39.49**	**290**		P		**P**	**23 50 14.7**	**+0.2**
	comp=Z,1.1nm,0.9s,baz=86,slow=7.4,SNR=6.5								
KURK	**Kurchatov**	**40.02**	**297**		*i* P		**P**	**23 50 17.3**	**-1.4**
KURK					pmax	pmax			
	comp=Z,3.0nm,1.1s								
INK	**Inuvik**	**43.23**	**33**		P		**P**	**23 50 46.4**	**+1.6**
	comp=Z,0.5nm,0.7s,baz=341,slow=6.1,SNR=3.1								
FINES	**FINESS Array B**	**58.48**	**330**		P		**P**	**23 52 38.5**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=23,slow=10,SNR=6.2								
OBN	**Obninsk**	**59.01**	**320**		*e*P		**P**	**23 52 42.9**	**-0.4**
OBN					pmax	pmax			
	comp=Z,4.0nm,1.0s								
KIV	**Kislovodsk**	**63.81**	**308**		*e*P		**P**	**23 53 15.3**	**-0.9**
KIV					pmax	pmax			
	comp=Z,3.0nm,1.1s								
ASAR	**Alice Springs**	**73.10**	**188**		P		**P**	**23 54 14.8**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=0.4,slow=5.1,SNR=5.6								
TXAR	**Lajitas Array**	**81.97**	**54**		P		**P**	**23 55 04.8**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=278,slow=3.6,SNR=4.4								

IDC 23 23:46:53.8±2.5, 4.71S×152.06E, h76km±17km, mb3.3/2, mb1 3.6/2, mb1mx3.1/28, mbtmp3.6/2, Error ellipse: s-maj=89.4km s-min=32.6km az=120.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KRVT	**Keravat (AS076**	**0.40**	**356**	P		Pn	23 47 07.8	+1.4
	241nm,0.3s,baz=160,slow=1.3,SNR=168							
KRVT				S		Sn	23 47 17.8	+2.1
	168nm,0.3s,baz=134,slow=22,SNR=7.8							
WRA	**Warramunga Arr**	**22.95**	**227**	P		P	23 51 51.5	-0.5
	0.8nm,0.4s,baz=53,slow=9.8,SNR=15							
ASAR	**Alice Springs**	**25.72**	**221**	P		P	23 52 17.4	+0.1
	0.5nm,0.4s,baz=55,slow=8.8,SNR=2.4							
TORD	**Torodi Ar. Bea**	**149.57**	**288**	PKPbc		PKPbc	00 06 35.3	-0.4
	0.4nm,0.5s,baz=88,slow=2.6,SNR=9.4							

MAN 24 00:04:40.5, 10.03N×123.97E, h29km, mb3.9, ML2.7, MS2.3, Cebu

ISC 24 00:16:01.2±1.8, 44.46N±0.04×17.2E±0.1, h4km±14km, n6, σ0.55/12, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MGRS	**Mrkonjic Grad**	**0.09**	**246**	⇓ *i* P	g	**Pg**	**00 16 03.2**	**0.0**
MGRS				*e*S	g	**Sg**	**00 16 04.4**	**-0.1**
KIJV	**Kijevo**	**0.73**	**232**	*e*P	g	**Pg**	**00 16 14.7**	**-0.5**
KIJV				S	g	**Sg**	**00 16 24.5**	**-0.2**
RICI	**Ricice**	**0.96**	**183**	*e*P	n	**Pn**	**00 16 21.6**	**+0.1**
RICI				S	g	**Sb**	**00 16 33.5**	**0.0**
MAKA	**Makarska**	**1.18**	**187**	*e*P	g	**Pb**	**00 16 24.3**	**+0.2**
MAKA				S	g	**Sn**	**00 16 40.8**	**0.0**
MOSL	**Moslavina**	**1.20**	**345**	*e*P	g	**Pb**	**00 16 23.9**	**-0.7**
MOSL				S	g	**Sg**	**00 16 40.9**	**+1.1**
DUGI	**Dugi Otok**	**1.61**	**254**	*e*P	n	**Pb**	**00 16 31.7**	**+0.2**
DUGI				S	n	**Sg**	**00 16 53.6**	**+0.6**

*THE **24** 00:19:42.3, 38.07N×20.20E, h7km±14km, ML2.3/4, Error ellipse: s-maj=14.5km s-min=1.0km az=95.0*
*ATH **24** 00:19:42.1, 38.07N×20.22E, h18km±1km, ML2.5/11, Error ellipse: s-maj=2.1km s-min=1.0km az=59.0*

ISC 24 00:19:42.5±1.4, 38.07N±0.05×20.22E±0.06, h17km±6km, n32, σ0.55/52, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KEF3	**Kipouria, Keph**	**0.16**	**37**	P		**Pg**	**00 19 46.5**	**-0.3**
KEF3				S		**Sg**	**00 19 49.5**	**-0.2**
LXRA	**Lixouri, Kepha**	**0.21**	**53**	P		**Pg**	**00 19 47.4**	**-0.1**
LXRA				S		**Sg**	**00 19 51.1**	**+0.1**
ARGA	**Argostoli. Kep**	**0.23**	**63**	P		**Pg**	**00 19 47.5**	**-0.2**
ARGA				S		**Sg**	**00 19 51.3**	**-0.1**
KEF4	**Livadi, Kephal**	**0.24**	**41**	P		**Pg**	**00 19 47.9**	**-0.2**
KEF4				S		**Sg**	**00 19 52.0**	**+0.2**
VLS	**Valsamata**	**0.31**	**70**	P		**Pg**	**00 19 48.7**	**-0.4**
VLS				S		**Sg**	**00 19 53.4**	**-0.2**
	3μm,0.1s							
VLS	**Valsamata**	**0.31**	**70**	P		**Pg**	**00 19 48.7**	**-0.4**
VLS				S		**Sg**	**00 19 53.4**	**-0.2**
VLS				AML	AML		00 19 54.0	
	comp=E,5798μm,0.1s							
VLS				AML	AML		00 19 54.2	
	comp=N,7940μm,0.1s							
VLMS	**Volimes, Zakyn**	**0.40**	**119**	P		**Pg**	**00 19 50.5**	**-0.2**
VLMS				S		**Sb**	**00 19 56.8**	**-0.1**
VLMS				AML	AML		00 19 57.7	
	comp=N,4858μm,0.3s							
VLMS				AML	AML		00 19 59.7	
	comp=E,2945μm,0.1s							
KFL	**Anninata**	**0.45**	**85**	P		**Pg**	**00 19 51.1**	**-0.4**
KFL				S		**Sg**	**00 19 57.9**	**+0.2**
KFL				AML	AML		00 19 59.6	
	comp=E,3087μm,0.3s							
KFL				AML	AML		00 20 02.5	
	comp=N,2052μm,0.3s							
FSK	**Fiskardo**	**0.47**	**35**	P		**Pg**	**00 19 51.7**	**-0.2**
FSK				S		**Sb**	**00 19 58.8**	**-0.1**
FSK				AML	AML		00 19 59.9	
	comp=N,1479μm,0.4s							
FSK				AML	AML		00 20 00.0	
	comp=E,2966μm,0.5s							
EVGI	**Lefkada island**	**0.65**	**32**	P		**Pg**	**00 19 54.9**	**-0.3**
EVGI				S		**Sb**	**00 20 04.6**	**+0.6**
VTN	**Vitineika**	**0.78**	**101**	P		**Pb**	**00 19 57.7**	**+0.2**
LKD2	**Lefkada island**	**0.79**	**25**	P		**Pg**	**00 19 57.3**	**-0.7**
LKD2				S		**Sb**	**00 20 09.2**	**+0.9**
	comp=E,282nm,0.5s							
LKD2	**Lefkada island**	**0.79**	**25**	P		**Pg**	**00 19 57.5**	**-0.5**
LKD2				AML	AML		00 20 20.1	
	comp=E,704μm,0.6s							
LKD2				AML	AML		00 20 20.5	
	comp=N,410μm,0.3s							
RLS	**Riolos of Patr**	**0.98**	**91**	P		**Pb**	**00 20 00.7**	**-0.3**
RLS				S		**Sg**	**00 20 15.0**	**+0.6**
RLS				AML	AML		00 20 26.6	
	comp=E,152μm,0.5s							
RLS				AML	AML		00 20 27.3	
	comp=N,230μm,0.9s							
DRO	**Drossia**	**1.18**	**95**	P		**Pn**	**00 20 04.6**	**+0.3**
DRO				S		**Sg**	**00 20 20.6**	**-0.2**
DRO				AML	AML		00 20 29.7	
	comp=E,457μm,0.4s							
DRO				AML	AML		00 20 30.3	
	comp=N,498μm,0.5s							
ANX	**Ano Chora**	**1.43**	**68**	P		**Pb**	**00 20 09.1**	**+0.3**
ANX				AML	AML		00 20 40.6	
	comp=E,269μm,0.5s							
ANX				AML	AML		00 20 40.9	
	comp=N,250μm,0.5s							
IGT	**Igoumenitsa**	**1.46**	**3**	P		**Pb**	**00 20 09.2**	**0.0**
IGT				S		**Sb**	**00 20 28.4**	**+0.9**
	comp=N,60nm,0.5s							
IGT	**Igoumenitsa**	**1.46**	**3**	P		**Pg**	**00 20 09.9**	**-0.7**
IGT				AML	AML		00 20 38.1	
	comp=E,150μm,0.5s							
IGT				AML	AML		00 20 41.6	
	comp=N,93μm,0.4s							
SERG	**Sergoula**	**1.48**	**76**	P		**Pb**	**00 20 09.4**	**-0.2**
SERG				AML	AML		00 20 38.5	
	comp=E,160μm,0.3s							
SERG				AML	AML		00 20 42.9	
	comp=N,149μm,0.4s							
EVR	**Evrytania**	**1.50**	**55**	P		**Pb**	**00 20 10.0**	**0.0**
EVR	**Evrytania**	**1.50**	**55**	P		**Pg**	**00 20 10.9**	**-0.6**
EVR				S		**Sg**	**00 20 31.3**	**+0.2**
EVR				AML	AML		00 20 44.0	
	comp=E,100μm,0.9s							
EVR				AML	AML		00 20 45.0	
	comp=N,91μm,0.6s							
KLV	**Kalavryta, Ach**	**1.52**	**91**	P		**Pb**	**00 20 10.1**	**-0.2**
KLV	**Kalavryta, Ach**	**1.52**	**91**	P		**Pb**	**00 20 10.2**	**-0.2**
KALE	**Kalithea**	**1.54**	**78**	P		**Pb**	**00 20 10.3**	**-0.3**
JAN	**Janina**	**1.66**	**17**	P		**Pn**	**00 20 10.9**	**+0.1**
AGG	**Agios Georgios**	**1.91**	**60**	P		**Pn**	**00 20 14.9**	**+0.7**
AGG				S		**Sb**	**00 20 40.9**	**+0.6**
	comp=N,35nm,0.9s							
DBRK	**Dubrovnik**	**4.86**	**342**	*e*Pn		**Pn**	**00 20 55.0**	**+0.3**
DBRK				Sn		**Sn**	**00 21 49.6**	**-0.9**
STON	**Ston**	**5.17**	**339**	*e*Pn		**Pn**	**00 20 59.2**	**+0.3**
STON				Sn		**Sn**	**00 21 56.1**	**-2.0**
MAKA	**Makarska**	**5.75**	**336**	*e*Pn		**Pn**	**00 21 08.1**	**+1.2**
MAKA				Sn		**Sn**	**00 22 12.8**	**+0.4**
RICI	**Ricice**	**5.90**	**338**	*i* Pn		**Pn**	**00 21 09.6**	**+0.5**
RICI				Sn		**Sn**	**00 22 16.0**	**-0.3**
KIJV	**Kijevo**	**6.59**	**335**	*e*Pn		**Pn**	**00 21 18.9**	**+0.3**
MORI	**Morici**	**6.72**	**331**	*i* Pn		**Pn**	**00 21 21.3**	**+1.0**

*IDC **24** 00:32:01.8±1.1, 45.07N×28.01W, h0km, mb3.7/13, mb1 3.9/14, mb1mx3.7/45, mbtmp3.7/14, ML3.7/1, MS3.7/20, Ms1 3.7/20, ms1mx3.5/48, Error ellipse: s-maj=32.3km s-min=17.8km az=11.0*
*NEIC **24** 00:32:02.6±2.4, 45.0N±0.1×28.1W±0.1, h10km±1km, mb4.3/19, Error ellipse: s-maj=18.0km s-min=17.4km az=173.0*

ISC 24 00:32:03.2±0.5, 44.95N±0.10×28.08W±0.08, h14km, n50, σ1.32/37, mb4.1/21, MS3.7/19, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ROSA	**Rosais**	**6.23**	**181**	P		**Pn**	**00 33 33.9**	**-0.7**
ESDC	**Sonseca Array**	**18.57**	**98**	LR		LR	00 41 49.1	
	comp=Z,267nm,21.1s,baz=300,slow=32							
EKA	**Eskdalemuir Ar**	**18.95**	**48**	P		**Pn**	**00 36 23.5**	**-0.8**
	baz=246,slow=16,SNR=2.2							
NRS	**Narsarsuaq**	**19.18**	**334**	P		**P**	**00 36 25.6**	**-0.5**
NRS				IAmb	IAmb		00 36 37.6	
	comp=Z,11nm,0.9s							
IVI	**Ivigtut**	**20.12**	**331**	P		**P**	**00 36 35.1**	**-1.2**
IVI				IAmb	IAmb		00 36 49.3	
	comp=Z,16nm,1.0s							
SFJD	**Kangerlussuaq**	**25.15**	**339**	LR		LR	00 45 01.9	
	comp=Z,68nm,20.1s,baz=275,slow=33							
SCHQ	**Schefferville**	**26.53**	**306**	LR		LR	00 46 13.9	
	comp=Z,183nm,19.9s,baz=158,slow=32							
ILULI	**Ilulissat**	**27.00**	**342**	P		**P**	**00 37 40.9**	**-3.2**
ILULI				IAmb	IAmb		00 37 59.8	
	comp=Z,5.3nm,0.7s							
PRMA	**PARMA**	**27.05**	**77**	P		**P**	**00 37 41.0**	**-3.8**
NOA	**NORSAR Array B**	**28.05**	**41**	LR		LR	00 47 11.2	
	comp=Z,68nm,20.1s,baz=275,slow=33							
GERES	**GERESS Array B**	**28.55**	**67**	P		**P**	**00 37 58.5**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=280,slow=6.6,SNR=4.6							
F62A	**Pittston Farm.**	**29.17**	**287**	P		**P**	**00 38 01.7**	**-2.1**
FRB	**Frobisher Bay**	**29.43**	**324**	P		**P**	**00 38 05.1**	**-0.8**
	comp=Z,5.6nm,0.9s,baz=111,slow=8.1,SNR=4.7							
FRB				LR		LR	00 46 19.6	
	comp=Z,186nm,21.4s,baz=214,slow=29							
NRCA	**Norcia**	**29.54**	**79**	P		**P**	**00 38 06.9**	**-0.3**
KEST	**Kesra**	**29.75**	**95**	LR		LR	00 48 40.0	
	comp=Z,78nm,21.5s,baz=234,slow=34							
VRAC	**Vranov**	**30.36**	**66**	LR		LR	00 50 03.7	
	comp=Z,212nm,18.6s,baz=281,slow=36							
OJC	**Ojcow**	**32.27**	**63**	P		**P**	**00 38 31.3**	**+0.2**
OJC				IAmb	IAmb		00 38 50.7	
	comp=Z,4.2nm,1.1s							
ACCN	**Adirondack Com**	**32.41**	**284**	P		**P**	**00 38 33.3**	**+0.9**
ACCN				IAmb	IAmb		00 38 49.1	
	comp=Z,4.0nm,1.1s							
NCB	**Newcomb**	**32.61**	**285**	P		**P**	**00 38 33.3**	**-0.9**
NCB				IAmb	IAmb		00 38 43.3	
	comp=Z,3.9nm,1.0s							
DIVS	**Divibare**	**33.88**	**74**	P		**P**	**00 38 44.9**	**-0.5**
FINES	**FINESS Array B**	**35.18**	**43**	P		**P**	**00 38 55.2**	**-1.1**
	comp=Z,1.5nm,0.9s,baz=241,slow=11,SNR=4.4							
FINES				LR		LR	00 51 22.6	
	comp=Z,102nm,21.1s,baz=284,slow=33							
MLR	**Muntele Rosu**	**37.45**	**69**	P		**P**	**00 39 16.4**	**+0.4**
AKASG	**Malin Array Be**	**38.06**	**60**	P		**P**	**00 39 20.6**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=292,slow=7.7,SNR=4.6							
AKASG				LR		LR	00 54 00.7	
	comp=Z,99nm,21.3s,baz=60,slow=35							
ALN	**Alexandroupoli**	**39.23**	**76**	P		**P**	**00 39 31.9**	**+1.1**
BLA	**Blacksburg**	**39.61**	**278**	P		**P**	**00 39 34.6**	**+0.4**
BLA				IAmb	IAmb		00 39 49.4	
	comp=Z,7.0nm,1.0s							
TORD	**Torodi Ar. Bea**	**40.58**	**132**	P		**P**	**00 39 43.4**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=327,slow=8.7,SNR=5.1							
TORD				LR		LR	00 55 32.7	
	comp=Z,280nm,18.1s,baz=295,slow=35							
OBIP	**Obispado Ponce**	**41.82**	**243**	P		**P**	**00 39 52.2**	**-0.2**
DBIC	**Dimbokro**	**43.16**	**145**	LR		LR	00 56 04.6	
	comp=Z,123nm,21.0s,baz=330,slow=33							
WCI	**Wyandotte Cave**	**43.24**	**282**	P		**P**		
WCI				IAmb	IAmb		00 40 06.2	
	comp=Z,3.2nm,0.7s							
255A	**Hazlehurst**	**43.77**	**272**	P		**P**	**00 40 06.1**	**-2.1**
ULM	**Lac du Bonnet**	**44.59**	**302**	LR		LR	00 57 11.7	
	comp=Z,177nm,19.7s,baz=91,slow=34							
BRTR	**Keskin Array B**	**44.95**	**74**	LR		LR	00 58 38.4	
	comp=Z,52nm,20.3s,baz=277,slow=36							
KBZ	**Khabaz**	**49.25**	**65**	P		**P**	**00 40 51.8**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=182,slow=2.1,SNR=3.8							
KBZ				LR		LR	01 01 21.6	
	comp=Z,65nm,20.3s,baz=313,slow=36							
YKA	**Yellowknife Ar**	**49.94**	**323**	P		**P**	**00 40 56.2**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=74,slow=6.2,SNR=2.9							
YKA				PcP		**PcP**	**00 42 15.9**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=80,slow=4.3,SNR=4.5							
INK	**Inuvik**	**54.31**	**334**	P		**P**	**00 41 28.2**	**-0.3**
	comp=Z,1.6nm,1.0s,baz=59,slow=8.8,SNR=3.8							
INK	**Inuvik**	**54.31**	**334**	IAmb		IAmb	00 41 29.2	
	comp=Z,2.3nm,1.1s							
AKTO	**Aktyubinsk**	**55.09**	**51**	LR		LR	01 05 49.6	
	comp=Z,57nm,19.1s,baz=298,slow=37							
PDAR	**Pinedale Array**	**56.37**	**299**	P		**P**	**00 41 45.0**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=57,slow=9.8,SNR=2.3							
PDAR				LR		LR	01 04 22.7	
	comp=Z,96nm,18.7s,baz=18,slow=34							
ROSC	**El Rosal**	**56.74**	**239**	LR		LR	01 04 59.7	
	comp=Z,48nm,19.5s,baz=56,slow=35							
TXAR	**Lajitas Array**	**60.16**	**283**	P		**P**	**00 42 12.1**	**+1.6**
	comp=Z,0.1nm,0.6s,baz=47,slow=6.6,SNR=2.7							
TXAR				LR		LR	01 07 53.3	
	comp=Z,132nm,19.5s,baz=0.0,slow=36							
SCRK	**Sand Creek**	**60.32**	**333**	P		**P**	**00 42 12.6**	**+1.4**
SCRK				IAmb	IAmb		00 42 12.7	
	comp=Z,2.8nm,1.0s							
ILAR	**Eielson Array**	**60.69**	**334**	P		**P**	**00 42 14.9**	**+1.5**
	comp=Z,0.4nm,0.8s,baz=40,slow=8.0,SNR=4.5							
HDA	**Harding Lake**	**60.96**	**334**	P		**P**	**00 42 16.5**	**+1.2**
HDA				IAmb	IAmb		00 42 17.4	
	comp=Z,3.1nm,1.0s							
BDFB	**Brasilia**	**62.97**	**202**	LR		LR	01 06 47.5	
	comp=Z,80nm,18.6s,baz=147,slow=33							
KVN	**Kaiserville**	**63.79**	**300**	P		**P**	**00 42 36.9**	**+2.0**
NVAR	**Mina Array Bea**	**64.30**	**299**	LR		LR	01 11 42.9	
	comp=Z,74nm,18.4s,baz=229,slow=37							
MKAR	**Makanchi Array**	**70.01**	**43**	P		**P**	**00 43 14.6**	**+0.4**
	comp=Z,0.1nm,0.4s,baz=316,slow=4.0,SNR=2.5							
SONM	**Songino Array**	**79.33**	**29**	P		**P**	**00 44 09.4**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=348,slow=6.1,SNR=4.6							
WRA	**Warramunga Arr**	**151.11**	**36**	PKPbc		**PKPbc**	**00 51 55.1**	**-0.9**
	comp=Z,0.9nm,1.0s,baz=328,slow=2.5,SNR=4.7							
ASAR	**Alice Springs**	**154.18**	**41**	PKPab		**PKPab**	**00 52 17.0**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=316,slow=3.9,SNR=4.1							

*IDC **24** 00:58:31.2±2.2, 36.42N×70.99E, h196km±19km, mb3.7/15, mb1 3.9/22, mb1mx3.6/48, mbtmp4.4/22, Error ellipse: s-maj=15.3km s-min=11.1km az=173.0*
*BJI **24** 00:58:33.4±0.0, 36.73N×70.99E, h210km, mB4.3/4, mb4.3/10*
*NEIC **24** 00:58:34.8±1.6, 36.65N±0.03×70.94E±0.09, h231km±6km, mb4.2/62, Error ellipse: s-maj=10.7km s-min=4.1km az=79.0*
*NNC **24** 00:58:38.5±4.5, 37.05N×71.00E, h227km±46km, mb3.3, mpv4.3, Error ellipse: s-maj=45.6km s-min=17.3km az=16.0*

ISC 24 00:58:35.8±0.4, 36.63N±0.04×70.96E±0.05, h250km, n165, σ2.9/19/176, mb4.2/44, 5C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GAR	**Garm**	**2.42**	**348**	Pn		**Pn**	**00 59 19.4**	**-2.9**
GAR				S		**S**	**00 59 51.2**	**-7.9**
CHGR	**Chuyangaron**	**2.48**	**325**	Pn		**Pn**	**00 59 19.9**	**-3.0**
CHGR				S		**S**	**00 59 52.6**	**-7.6**
KBL	**Kabul**	**2.61**	**217**			**Pn**	**00 59 22.0**	**-2.5**
CEP	**Cherat**	**2.91**	**164**	⇑ P		**Pn**	**00 59 28.8**	**+1.2**
BTK	**Batken**	**3.42**	**358**			**Pn**	**00 59 31.4**	**-1.5**
**CHC

	comp=E,403nm,0.4s								
MDOK	**Medeo**	**8.02**	**34**	⇑P		**Pn**	**01 00 27.4**	**-2.1**
	comp=E,21nm,0.6s								
PRZ	**Przheval'sk**	**8.19**	**42**			**Pn**	**01 00 30.2**	**-1.4**
DDI	**Dehra Dun**	**8.64**	**135**	*ex*		**Pn**	**01 00 37.5**	**+0.2**
NDI	**New Delhi**	**9.52**	**145**	*ex*		**Pn**	**01 00 45.5**	**-2.9**
GEYT	**Alibeck**	**10.32**	**281**	P		**Pn**	**01 00 56.3**	**-2.1**
	comp=E,3.6nm,0.3s,baz=121,slow=12,SNR=23								
GEYT				S		**S**	**01 02 49.3**	**-5.0**
	comp=E,1.1nm,0.3s,baz=106,slow=42,SNR=2.0								
GYA0B	**ALIBECK ARRAY**	**10.32**	**281**			**Pn**	**01 00 55.9**	**-2.5**
MAKZ	**Makanchi**	**13.06**	**35**			**Pn**	**01 01 30.8**	**-1.6**
MK31	**Makanchi Array**	**13.20**	**36**	P		**Pn**	**01 01 32.8**	**-1.3**
	comp=E,7.4nm,0.7s,baz=221,slow=11,SNR=86								
MK31	**Makanchi Array**	**13.20**	**36**			**Pn**	**01 01 32.8**	**-1.3**
MKAR	**Makanchi Array**	**13.20**	**36**	P		**Pn**	**01 01 33.0**	**-1.1**
	comp=E,1.6nm,0.3s,baz=212,slow=11,SNR=33								
MKAR				S		**S**	**01 04 03.0**	**+2.4**
	baz=222,slow=16,SNR=3.2								
PYUN	**Piuthan**	**13.25**	**127**	*e*P		**Pn**	**01 01 32.5**	**-2.6**
	comp=E,102nm,0.3s								
DANN	**Dangsing**	**13.59**	**124**	*e*P		**Pn**	**01 01 37.1**	**-2.2**
	comp=E,49nm,0.3s								
KOLN	**Koldanda**	**13.87**	**126**	*e*P		**Pn**	**01 01 40.3**	**-2.3**
	comp=E,41nm,0.3s								
GKN	**Gorkha**	**14.40**	**123**	*e*P		**Pn**	**01 01 47.8**	**-1.2**
	comp=E,142nm,0.3s								
AB31	**Akbulak array**	**14.95**	**331**	⇓P		**Pn**	**01 01 54.4**	**-0.9**
	comp=E,1.0nm,0.3s								
DMN	**Daman**	**14.97**	**123**	*e*P		**P**	**01 01 54.7**	**-1.0**
	comp=E,66nm,0.3s								
KKN	**Kakani**	**14.97**	**122**	*e*P		**P**	**01 01 54.5**	**-1.1**
	comp=E,36nm,0.3s								
KURBB	**Kurchatov Arra**	**15.01**	**19**	P		**P**	**01 01 54.2**	**-1.2**
	comp=E,0.8nm,0.3s,baz=206,slow=11,SNR=54								
KURBB				S		**S**	**01 04 41.6**	**+0.4**
	baz=233,slow=42,SNR=3.0								
KURK	**Kurchatov**	**15.11**	**19**	P		**P**	**01 01 55.6**	**-1.1**
KURK				IAmb		IAmb	01 02 00.5		
	comp=Z,12nm,1.0s								
KURK	**Kurchatov**	**15.11**	**19**			**S**	**01 04 41.6**	**-1.9**
PKIN	**Phulchoki**	**15.19**	**122**	*e*P		**P**	**01 01 57.2**	**-0.9**
	comp=E,64nm,0.3s								
PKI	**Pulchoki**	**15.20**	**122**	*e*P		**P**	**01 01 57.3**	**-1.0**
	comp=E,54nm,0.3s								
GUN	**Gumba**	**15.31**	**120**	*e*P		**P**	**01 01 58.6**	**-0.9**
	comp=E,70nm,0.4s								
JIRN	**Jiri**	**15.68**	**120**	*e*P		**Pn**	**01 02 03.8**	**-0.8**
	comp=E,91nm,0.3s								
BVAR	**Borovoye Array**	**16.39**	**359**	P		**Pn**	**01 02 11.6**	**-0.8**
	comp=E,5.3nm,0.3s,baz=158,slow=11,SNR=69								
BVAR				S		**S**	**01 05 11.2**	**+2.0**
	baz=168,slow=21,SNR=6.3								
RAMN	**Ramite**	**16.41**	**122**	*e*P		**Pn**	**01 02 12.2**	**-0.9**
	comp=E,34nm,0.3s								
BRVK	**Borovoye**	**16.43**	**359**	P		**Pn**	**01 02 11.6**	**-1.2**
BRVK				IAmb		IAmb	01 02 13.4		
	comp=Z,13nm,1.0s								
BANOM	**Banah**	**16.44**	**234**	P		**Pn**	**01 02 13.9**	**+0.7**
AKTO	**Aktyubinsk**	**16.65**	**330**	P		**Pn**	**01 02 15.4**	**+0.1**
	comp=Z,2.5nm,0.3s,baz=136,slow=11,SNR=49								
AKTO				S		**S**	**01 05 15.6**	**+1.2**
	comp=Z,0.0nm,0.3s,baz=277,slow=20,SNR=2.4								
AKTO	**Aktyubinsk**	**16.65**	**330**	⇑P		**Pn**	**01 02 14.5**	**-0.9**
	comp=Z,18nm,0.7s								
MDH	**Madha**	**16.88**	**232**	P		**Pn**	**01 02 17.8**	**-0.5**
MSFE	**Esma-Masafi**	**16.93**	**233**	P		**Pn**	**01 02 19.7**	**+0.7**
TAPN	**Taplejung**	**16.94**	**118**	*e*P		**Pn**	**01 02 19.3**	**0.0**
	comp=Z,35nm,0.4s								
ODAN	**Odare**	**17.01**	**120**	*e*P		**Pn**	**01 02 19.9**	**-0.2**
	comp=Z,38nm,0.4s								
UOSS	**Minazif**	**17.20**	**231**	P		**Pn**	**01 02 21.3**	**-0.8**
UOSS	**Minazif**	**17.20**	**231**	P		**P**	**01 02 19.7**	**-0.1**
UOSS				IAmb		IAmb	01 02 24.9		
	comp=Z,13nm,0.8s								
HATD	**Hatta, Dubai**	**17.33**	**231**	*i* P		**Pn**	**01 02 23.6**	**+0.1**
	SNR=7.2								
ASHO	**Ashiyiah**	**17.47**	**231**	*i* P		**Pn**	**01 02 24.8**	**-0.5**
	SNR=7.6								
ZAA0	**Zalesovo Array**	**19.81**	**25**	P		**P**	**01 02 47.3**	**-0.2**
ZALV	**Zalesovo Beam**	**19.81**	**25**	P		**P**	**01 02 47.8**	**+0.2**
	comp=Z,8.2nm,0.3s,baz=220,slow=12,SNR=59								
ZALV				S		**S**	**01 06 14.8**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=114,slow=39,SNR=3.1								
ARU	**Arti**	**21.50**	**341**	P		**P**	**01 03 06.7**	**+1.8**
	comp=Z,1.9nm,0.3s,baz=172,slow=5.4,SNR=12								
ARU	**Arti**	**21.50**	**341**	P		**P**	**01 03 05.4**	**+0.5**
ARU				IAmb		IAmb	01 03 08.5		
	comp=Z,7.7nm,0.7s								
KIV	**Kislovodsk**	**22.70**	**298**	P		**P**	**01 03 17.0**	**+0.8**
GTA	**Gaotai**	**22.86**	**74**	*e*P		**P**	**01 03 20.3**	**+2.6**
GTA				pP		pP	01 04 05.9	+3.6
GTA				pmax		pmax			
	comp=Z,7.0nm,1.0s								
RAYN	**Ar Rayn**	**25.52**	**246**	P		**P**	**01 03 44.5**	**+2.7**
TLY	**Talaya**	**27.57**	**47**	P		**P**	**01 04 02.5**	**+2.8**
	comp=Z,1.0nm,0.4s,baz=254,slow=19,SNR=3.3								
SONM	**Songino Array**	**28.28**	**56**	P		**P**	**01 04 08.2**	**+2.0**
	comp=Z,2.1nm,0.8s,baz=253,slow=10,SNR=8.7								
AKASG	**Malin Array Be**	**32.84**	**309**			**P**	**01 04 48.0**	**+2.1**
	comp=Z,0.5nm,0.4s,baz=81,slow=7.6,SNR=1.7								
FINES	**FINESS Array B**	**37.36**	**326**	P		**P**	**01 05 26.4**	**+2.2**
	comp=Z,3.7nm,0.5s,baz=120,slow=9.7,SNR=58								
FNA	**Florina**	**38.50**	**292**	P		**P**	**01 05 30.8**	**-3.3**
FNA				IAmb		IAmb	01 05 31.6		
	comp=Z,10nm,1.1s								
KEV	**Kevo**	**40.67**	**338**	P		**P**	**01 05 52.8**	**+1.3**
SCTE	**Santa Cesarea**	**40.82**	**291**	P		**P**	**01 05 53.9**	**+0.8**
SCTE				IAmb		IAmb	01 06 07.2		
	comp=Z,6.1nm,0.9s								
ARCES	**ARCESS Array B**	**41.01**	**338**	P		**P**	**01 05 56.7**	**+2.4**
	comp=Z,4.5nm,0.5s,baz=114,slow=8.2,SNR=52								
ARE0	**ARCESS Array S**	**41.01**	**338**	P		**P**	**01 05 55.2**	**+1.0**
ARE0	**ARCESS Array S**	**41.01**	**338**	*e*P		**P**	**01 05 56.8**	**+2.5**
KTK1	**Kautokeino**	**41.48**	**336**	*e*P		**P**	**01 06 00.3**	**+2.2**
HAMF	**Hammerfest**	**42.09**	**339**	*e*P		**P**	**01 06 05.9**	**+2.9**
TRO	**Tromso**	**43.13**	**336**	*e*P		**P**	**01 06 14.0**	**+2.7**
MOR8	**Moi Rana**	**43.69**	**331**	*e*P		**P**	**01 06 17.4**	**+1.6**
STEI	**Steigen**	**43.84**	**333**	*e*P		**P**	**01 06 19.4**	**+2.4**
NC405	**NORSAR Array S**	**44.02**	**323**	P		**P**	**01 06 19.8**	**+1.2**
NC405				IAmb		IAmb	01 06 28.1		
	comp=Z,6.7nm,0.9s								
NC602	**NORSAR Array S**	**44.07**	**323**	P		**P**	**01 06 19.6**	**+0.7**
NC303	**NORSAR Array S**	**44.20**	**323**	P		**P**	**01 06 21.4**	**+1.5**
NB201	**NORSAR Array S**	**44.22**	**323**	P		**P**	**01 06 21.2**	**+1.1**
NB201				IAmb		IAmb	01 06 39.6		
	comp=Z,7.8nm,0.9s								
NB2	**NORSAR Subarra**	**44.26**	**323**	P		**P**	**01 06 22.2**	**+1.8**
	comp=Z,1.5nm,0.5s,baz=97,slow=7.9								
NB2	**NORSAR Subarra**	**44.26**	**323**	P		**P**	**01 06 22.2**	**+1.8**
	baz=97,slow=7.9								
NOA	**NORSAR Array B**	**44.26**	**323**	P		**P**	**01 06 22.0**	**+1.6**
	comp=Z,3.4nm,0.7s,baz=97,slow=7.7,SNR=9.8								
KONS	**Konsvik**	**44.28**	**331**	*e*P		**P**	**01 06 22.7**	**+2.3**
NAO01	**NORSAR Array S**	**44.40**	**323**	P		**P**	**01 06 21.7**	**+0.2**
NBO00	**NORSAR Array S**	**44.47**	**323**	P		**P**	**01 06 22.7**	**+0.6**
NBO00				IAmb		IAmb	01 06 25.9		
	comp=Z,10nm,1.0s								
NC204	**NORSAR Array S**	**44.49**	**323**	P		**P**	**01 06 22.9**	**+0.6**
LOF	**Lofoten**	**44.51**	**333**	*e*P		**P**	**01 06 23.9**	**+1.6**
KLR	**Kul'dur**	**45.09**	**54**	P		**P**	**01 06 28.7**	**+1.6**
	comp=Z,0.8nm,0.3s,baz=307,slow=6.3,SNR=3.2								
TIXI	**Tiksi**	**45.66**	**22**	P		**P**	**01 06 33.0**	**+1.7**
TIXI				IAmb		IAmb	01 06 33.3		
	comp=Z,9.6nm,0.8s								
SPA0	**Spitsbergen Ar**	**47.36**	**347**	P		**P**	**01 06 45.9**	**+1.6**
SPA0				IAmb		IAmb	01 06 55.7		
	comp=Z,12nm,1.1s								
SPA0	**Spitsbergen Ar**	**47.36**	**347**	*e*P		**P**	**01 06 47.6**	**+3.3**
KBS	**Kingsbay**	**48.48**	**347**	P		**P**	**01 06 54.1**	**+1.3**
KBS				IAmb		IAmb	01 06 56.1		
	comp=Z,7.7nm,0.8s								
KBS	**Kingsbay**	**48.48**	**347**	*e*P		**P**	**01 06 55.6**	**+2.8**
TOA0	**Torodi Ar. Sit**	**65.69**	**269**	P		**P**	**01 08 54.3**	**+0.3**
TORD	**Torodi Ar. Bea**	**65.69**	**269**	P		**P**	**01 08 54.5**	**+0.6**
	comp=Z,1.2nm,0.4s,baz=49,slow=6.0,SNR=72								
TOLK	**Toolik Lake Re**	**70.80**	**15**	P		**P**	**01 09 26.7**	**+1.8**
COLD	**Coldfoot**	**71.85**	**16**	P		**P**	**01 09 33.2**	**+2.2**
COLD				IAmb		IAmb	01 09 34.4		
	comp=Z,4.4nm,1.1s								
INK	**Inuvik**	**73.78**	**9**	P		**P**	**01 09 44.8**	**+2.5**
	comp=Z,3.8nm,0.5s,baz=345,slow=6.6,SNR=35								
INK	**Inuvik**	**73.78**	**9**	P		**P**	**01 09 43.6**	**+1.3**
PSA00	**Pilbara Seismi**	**74.03**	**133**	P		**P**	**01 09 45.0**	**+0.7**
PSAA3	**Pilbara Seismi**	**74.04**	**133**	P		**P**	**01 09 45.5**	**+1.0**
PSAB3	**Pilbara Seismi**	**74.05**	**133**	P		**P**	**01 09 45.7**	**+1.2**
PSAC2	**Pilbara Seismi**	**74.05**	**133**	P		**P**	**01 09 45.8**	**+1.3**
PSAC3	**Pilbara Seismi**	**74.06**	**133**	P		**P**	**01 09 45.7**	**+1.1**
PSAC3				IAmb		IAmb	01 09 56.7		
	comp=Z,6.9nm,1.1s								
PSAD2	**Pilbara Seismi**	**74.13**	**133**	P		**P**	**01 09 46.4**	**+1.4**
PSAD2				IAmb		IAmb	01 09 49.0		
	comp=Z,5.7nm,1.1s								
BPAW	**Bear Paw Mtn.**	**74.28**	**18**	P		**P**	**01 09 46.6**	**+1.4**
CCB	**Clear Creek Bu**	**74.56**	**16**	P		**P**	**01 09 47.7**	**+0.8**
ILAR	**Eielson Array**	**74.66**	**16**	P		**P**	**01 09 48.7**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=313,slow=4.5,SNR=15								
KTH	**Kantishna Hill**	**74.75**	**18**	P		**P**	**01 09 50.1**	**+2.0**
LBTB	**Lobatse**	**74.76**	**222**	P		**P**	**01 09 50.4**	**+1.7**
PPLA	**Purkeypile**	**74.97**	**19**	P		**P**	**01 09 51.3**	**+1.8**
PPLA				IAmb		IAmb	01 10 07.6		
	comp=Z,4.7nm,1.0s								
FITZ	**Fitzroy Crossi**	**75.00**	**127**	P		**P**	**01 09 51.1**	**+1.1**
FITZ				IAmb		IAmb	01 09 52.7		
	comp=Z,5.0nm,1.1s								
KNRA	**Kununurra**	**75.32**	**123**	P		**P**	**01 09 52.6**	**+0.7**
RND	**Reindeer**	**75.38**	**17**	P		**P**	**01 09 52.5**	**+0.8**
RND				IAmb		IAmb	01 09 55.0		
	comp=Z,1.9nm,0.5s								
EGAK	**Eagle**	**75.82**	**14**	P		**P**	**01 09 55.3**	**+1.3**
SCRK	**Sand Creek**	**75.97**	**15**	P		**P**	**01 09 56.6**	**+1.5**
SCRK				IAmb		IAmb	01 09 57.7		
	comp=Z,3.3nm,0.6s								
RIDG	**Independent Ri**	**76.00**	**16**	P		**P**	**01 09 56.2**	**+1.1**
DHY	**Denali Highway**	**76.01**	**17**	P		**P**	**01 09 56.5**	**+1.1**
DHY				IAmb		IAmb	01 09 57.8		
	comp=Z,4.0nm,0.7s								
DOT	**Dot Lake**	**76.25**	**15**	P		**P**	**01 09 57.9**	**+1.3**
PAX	**Paxson**	**76.54**	**16**	P		**P**	**01 09 59.0**	**+0.7**
PAX				IAmb		IAmb	01 10 00.5		
	comp=Z,3.4nm,0.6s								
GHO	**Glory Hole Cre**	**76.75**	**18**	P		**P**	**01 09 55.6**	**-3.8**
NIKH	**Nikolski High**	**76.79**	**32**	P		**P**	**01 09 58.6**	**-1.0**
DAWY	**Dawson**	**76.80**	**13**	P		**P**	**01 10 01.5**	**+1.9**
SCM	**Sheep Creek Mo**	**77.09**	**18**	P		**P**	**01 10 02.0**	**+0.7**
SCM				IAmb		IAmb	01 10 03.9		
	comp=Z,4.4nm,0.6s								
BOSA	**Boshof**	**77.83**	**220**	P		**P**	**01 10 06.7**	**+0.9**
	comp=Z,3.1nm,0.8s,baz=290,slow=2.3,SNR=3.8								
BOSA	**Boshof**	**77.83**	**220**	IAmb		IAmb	01 10 12.4		
	comp=Z,1.9nm,0.9s								
MORW	**Morawa**	**77.87**	**141**	P		**P**	**01 10 06.7**	**+0.8**
MORW				IAmb		IAmb	01 10 23.6		
	comp=Z,8.3nm,1.1s								
BRLK	**Bradley Lake**	**77.93**	**20**	P		**P**	**01 10 06.9**	**+1.0**
BRLK				IAmb		IAmb	01 10 24.5		
	comp=Z,2.6nm,0.7s								
CNPM	**China Poot**	**78.03**	**20**	P		**P**	**01 10 07.7**	**+1.3**
CNPM				IAmb		IAmb	01 10 12.5		
	comp=Z,6.0nm,1.0s								
FID	**Port Fidalgo**	**78.24**	**18**	P		**P**	**01 10 08.7**	**+1.1**
FID				IAmb		IAmb	01 10 17.3		
	comp=Z,5.1nm,1.1s								
VRDI	**Verde Repeater**	**78.53**	**16**	P		**P**	**01 10 10.7**	**+1.4**
BALM	**Baldy**	**78.94**	**16**	P		**P**	**01 10 13.1**	**+1.5**
BALM				IAmb		IAmb	01 10 14.4		
	comp=Z,3.3nm,0.6s								
KDAK	**Kodiak Island**	**79.08**	**22**	P		**P**	**01 10 13.3**	**+1.2**
KDAK				IAmb		IAmb	01 10 14.5		
	comp=Z,3.1nm,0.7s								
CNBA	**Chernabura Isl**	**79.12**	**27**	P		**P**	**01 10 13.3**	**+0.9**
CTGM	**Chitina Glacie**	**79.23**	**15**	P		**P**	**01 10 14.1**	**+1.0**
CTGM				IAmb		IAmb	01 10 16.1		
	comp=Z,3.7nm,0.6s								
OHAK	**Old Harbor**	**79.33**	**23**	P		**P**	**01 10 15.1**	**+1.6**
OHAK				IAmb		IAmb	01 10 17.3		
	comp=Z,5.1nm,0.9s								
WAX	**Waxell Ridge**	**79.36**	**16**	P		**P**	**01 10 13.9**	**+0.1**
WAX				IAmb		IAmb	01 10 18.8		
	comp=Z,5.7nm,0.7s								
HYT	**Haines Junctio**	**80.13**	**14**	P		**P**	**01 10 19.1**	**+1.2**
WHY	**Whitehorse**	**80.76**	**13**	P		**P**	**01 10 22.1**	**+0.8**
YKA	**Yellowknife Ar**	**81.11**	**3**	P		**P**	**01 10 25.0**	**+2.1**
	comp=Z,1.5nm,0.4s,baz=354,slow=5.3,SNR=55								
WRA	**Warramunga Arr**	**82.09**	**122**	P		**P**	**01 10 28.8**	**+0.2**
	comp=Z,2.2nm,0.9s,baz=324,slow=4.9,SNR=29								
WB2	**Warramunga Arr**	**82.09**	**122**	P		**P**	**01 10 29.1**	**+0.4**
WR0	**Warramunga Arr**	**82.24**	**122**	P		**P**	**01 10 29.8**	**+0.4**
WR0				IAmb		IAmb	01 10 35.0		
	comp=Z,4.6nm,1.1s								
ASAR	**Alice Springs**	**84.36**	**125**	P		**P**	**01 10 40.6**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=310,slow=5.1,SNR=22								
FORT	**Forrest**	**85.78**	**134**	P		**P**	**01 10 46.2**	**-0.7**
PLCA	**Paso Flores**	**149.84**	**250**	PKPbc		**PKiKP**	**01 17 57.3**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=72,slow=6.4,SNR=3.4								

NEIC ***24*** *01:04:55.8±1.4,21.°5S±0.°2×178.°9W±0.°1,h560km±9km, mb4.1/22, Error ellipse: s-maj=25.8km s-min=15.7km az=154.0*

IDC ***24*** *01:04:57.4±2.3,21.°54S×178.°96W,h576km±26km, mb3.4/11,mb1 3.6/13,mb1mx3.4/33,mbtmp4.3/13, Error ellipse: s-maj=26.6km s-min=12.3km az=157.0*

ISC 24 01:04:55.4±0.7,21.°5S±0.°2×178.°9W±0.°1,h550km,n86, σ1§54/101,mb4.1/20,11C-3D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.69**	**322**	P	**P**	**01 06 24.0**	**+1.1**
DZM	**Mont Dzumac**	**13.61**	**265**	P	**P**	**01 07 51.9**	**+1.1**
	0.4nm,0.3s,baz=93,slow=17,SNR=1.6						
URZ	**Urewera**	**17.07**	**191**	P	**P**	**01 08 23.7**	**-0.9**
	2.0nm,0.3s,baz=257,slow=4.9,SNR=7.1						
STKA	**Stephens Creek**	**36.59**	**245**	P	**P**	**01 11 15.8**	**+0.4**
	1.7nm,0.5s,baz=83,slow=11,SNR=3.1						
AS31	**Alice Springs**	**43.46**	**258**	P	**P**	**01 12 12.0**	**+1.4**
ASAR	**Alice Springs**	**43.46**	**258**	P	**P**	**01 12 10.8**	**+0.3**
	8.0nm,0.6s,baz=94,slow=8.1,SNR=28						
ASAR				PcP	**PcP**	**01 13 46.5**	**0.0**
	1.0nm,0.6s,baz=108,slow=3.9,SNR=6.2						
ASAR				S	**S**	**01 17 57.1**	**-2.5**
	1.2nm,0.9s,baz=95,slow=15,SNR=4.9						
WB0	**Warramunga Arr**	**43.60**	**264**	P	**P**	**01 12 11.4**	**-0.3**
WB2	**Warramunga Arr**	**43.61**	**263**	P	**P**	**01 12 11.6**	**-0.1**
WRA	**Warramunga Arr**	**43.62**	**263**	P	**P**	**01 12 11.4**	**-0.4**
	2.5nm,0.3s,baz=95,slow=7.7,SNR=44						
WRA				S	**S**	**01 18 01.4**	**-0.4**
	0.4nm,0.6s,baz=100,slow=14,SNR=2.1						
SIJI	**Sorong**	**52.66**	**286**	P	**P**	**01 13 19.1**	**-0.2**
	baz=76,slow=12						
MJAR	**Matsushiro Arr**	**70.49**	**324**	P	**P**	**01 15 14.4**	**-0.6**
	1.6nm,0.4s,baz=134,slow=6.5,SNR=2.7						
PETK	**Petropavlovsk-**	**77.00**	**346**	P	**P**	**01 15 50.5**	**-1.0**
	1.3nm,0.6s,baz=108,slow=6.7,SNR=1.7						
WDC	**Whiskeytown Da**	**80.98**	**40**	P	**P**	**01 16 12.1**	**-0.8**
WDC				IAmb	IAmb	01 16 15.0	
	comp=Z,4.0nm,0.8s						
YBH	**Yreka Blue Hor**	**81.59**	**39**	P	**P**	**01 16 16.3**	**+0.1**
YBH				IAmb	IAmb	01 16 22.6	
	comp=Z,5.1nm,0.9s						
WAKR	**Walker**	**81.64**	**43**	P	**P**	**01 16 16.0**	**-0.7**
WAKR				IAmb	IAmb	01 16 19.3	
	comp=Z,8.3nm,1.4s						
PNTR	**Pine Nut**	**81.88**	**43**	P	**P**	**01 16 16.7**	**-1.2**
PNTR				IAmb	IAmb	01 16 23.9	
	comp=Z,5.1nm,0.9s						
YERR	**Yerington**	**82.05**	**43**	P	**P**	**01 16 18.1**	**-0.6**
NVAR	**Mina Array Bea**	**82.33**	**44**	P	**P**	**01 16 20.9**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=215,slow=9.1,SNR=5.7						
KLR	**Kul'dur**	**82.93**	**330**	P	**P**	**01 16 23.5**	**+0.9**
	comp=Z,2.1nm,1.0s,baz=111,slow=8.8,SNR=2.8						
GLB	**Gilahina Butte**	**87.31**	**16**	IAmb	IAmb	01 20 02.7	
	comp=Z,3.5nm,0.7s						
BALM	**Baldy**	**87.36**	**17**	P	**P**	**01 16 43.5**	**-0.4**
TXAR	**Lajitas Array**	**88.31**	**58**	P	**P**	**01 16 50.3**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=203,slow=5.2,SNR=5.9						
WRH	**Wood River Hil**	**88.94**	**13**	P	**P**	**01 16 50.1**	**-1.0**
DOT	**Dot Lake**	**89.12**	**15**	IAmb	IAmb	01 16 56.7	
	comp=Z,2.9nm,0.9s						
HDA	**Harding Lake**	**89.13**	**13**	IAmb	IAmb	01 16 56.0	
	comp=Z,2.4nm,0.6s						
ILAR	**Eielson Array**	**89.46**	**13**	P	**P**	**01 16 52.6**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=216,slow=5.2,SNR=12						
CMAR	**Chiang Mai Arr**	**89.63**	**290**	P	**P**	**01 16 56.5**	**+1.2**
	comp=Z,1.3nm,0.4s,baz=108,slow=2.9,SNR=2.1						
BW06	**Boulder Array**	**90.26**	**44**	P	**P**	**01 16 56.9**	**-1.2**
BW06				IAmb	IAmb	01 16 58.9	
	comp=Z,2.3nm,0.9s						
PDAR	**Pinedale Array**	**90.26**	**44**	P	**P**	**01 16 58.0**	**0.0**
	comp=Z,0.9nm,0.7s,baz=184,slow=4.2,SNR=5.5						
DAWY	**Dawson**	**90.64**	**16**	P	**P**	**01 16 58.6**	**-0.4**
DAWY				IAmb	IAmb	01 17 04.0	
	comp=Z,3.2nm,1.1s						
ZALV	**Zalesovo Beam**	**110.71**	**321**	PKiKP	**PKiKP**	**01 22 23.6**	**-2.0**
	comp=Z,0.4nm,0.3s,baz=48,slow=2.1,SNR=2.1						
MKAR	**Makanchi Array**	**111.24**	**313**	PKiKP	**PKiKP**	**01 22 25.8**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=231,slow=1.6,SNR=2.4						
ARCES	**ARCESS Array B**	**129.72**	**349**	PKP	**PKPdf**	**01 23 00.6**	**-1.0**
	comp=Z,2.3nm,0.5s,baz=48,slow=1.3,SNR=14						
FINES	**FINESS Array B**	**136.46**	**343**	PKhKP	PKPpre	01 23 04.7	
	comp=Z,1.6nm,1.0s,baz=48,slow=2.8,SNR=4.3						
FINES				PKP	**PKPdf**	**01 23 15.1**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=43,slow=3.9,SNR=5.7						
AKASG	**Malin Array Be**	**143.43**	**330**	PKP	PKPab	01 23 24.8	-1.0
	comp=Z,6.1nm,0.6s,baz=43,slow=4.3,SNR=14						
AKBB	**Malin Array Si**	**143.43**	**330**		PKPab	01 23 23.7	-2.1
SORM	**Soroca**	**145.57**	**327**	⇑P	**PKPdf**	**01 23 31.4**	**+0.3**
MILM	**Milestii Mici**	**146.11**	**325**	⇑P	**PKPdf**	**01 23 30.2**	**-1.9**
BRTR	**Keskin Array B**	**146.84**	**311**	PKPbc	**PKPbc**	**01 23 35.6**	**-1.0**
	comp=Z,1.8nm,0.6s,baz=130,slow=3.9,SNR=5.1						
BSEG	**Bad Segeberg**	**146.84**	**350**	*e*pPKPbc	**PKPab**	**01 23 39.8**	**+0.9**
	baz=15,slow=2.3						
HLG	**Helgoland**	**146.94**	**353**	*e*PKPbc	**PKPbc**	**01 23 36.2**	**0.0**
	baz=15,slow=2.3						
HLG				*ep*PKPbc	**PKPab**	**01 23 40.2**	**+0.9**
	baz=15,slow=2.3						
BUR08	**Bucovina Ar. S**	**147.46**	**329**		**PKPbc**	**01 23 36.7**	**-1.2**
BURAR	**Bucovina Array**	**147.47**	**329**	⇑P	**PKPdf**	**01 23 33.5**	**-1.0**
TRPA	**Tarpa**	**148.31**	**332**	⇓P	**PKPbc**	**01 23 39.4**	**-0.5**
DOPR	**Dopca**	**148.53**	**327**	⇓P	**PKPdf**	**01 23 34.1**	**-2.1**
MLR	**Muntele Rosu**	**148.55**	**325**		**PKPbc**	**01 23 40.4**	**-0.4**
OSTC	**Ostas**	**148.63**	**341**	*e*PKP	**PKPbc**	**01 23 41.1**	**+0.4**
OSTC				*ex*	x	01 23 45.2	
DPC	**Dobruska-Polom**	**148.78**	**341**	*e*PKP	**PKPbc**	**01 23 41.4**	**+0.3**
DPC				*ex*	x	01 23 45.1	
CLL	**Collm**	**148.80**	**345**	*e*PKPbc	**PKPbc**	**01 23 41.4**	**+0.4**
	baz=15,slow=2.3						
CLL				*ep*PKPbc	**PKPab**	**01 23 45.8**	**-1.2**
	baz=15,slow=2.3						
CLL	**Collm**	**148.80**	**345**		**PKPbc**	**01 23 40

URZ	Urewera	13.67	191	P	P	01 28 55.6	+1.8
	2.3nm,0.3s,baz=36,slow=9.4,SNR=11						
URZ				S	S	01 31 17.0	-2.0
	0.5nm,0.3s,baz=239,slow=22,SNR=6.4						
RPZ	Rata Peaks	20.32	200	P	P	01 29 59.8	+0.7
	7.0nm,0.6s,baz=27,slow=8.0,SNR=1.6						
CTA	Charters Tower	31.82	272	P	P	01 31 41.4	+0.4
	2.3nm,0.5s,baz=78,slow=9.3,SNR=3.7						
ASAR	Alice Springs	42.22	262	P	P	01 33 06.5	-0.1
	0.4nm,0.4s,baz=98,slow=7.2,SNR=6.7						
WRA	Warramunga Arr	42.68	267	P	P	01 33 09.5	-0.7
	0.8nm,0.3s,baz=102,slow=8.2,SNR=10						
FITZ	Fitzroy Crossi	51.09	266	P	P	01 34 13.7	-0.1
	2.4nm,0.8s,baz=79,slow=5.2,SNR=3.7						
NOA	NORSAR Array B	143.05	351	PKP	PKPdf	01 44 32.5	-1.3
	1.3nm,0.8s,baz=16,slow=5.1,SNR=3.8						
AKASG	Malin Array Be	145.93	327	PKPbc	PKPbc	01 44 40.8	0.0
	0.3nm,0.3s,baz=43,slow=4.1,SNR=5.0						

TAP ***24*** *01:51:23.8,24.85N×122.07E,h7km,ML3.3,C*
JMA ***24*** *01:51:24.4±0.1,24.86N×122.04E,h39km±5km,M2.6*

ISC 24 01:51:22.7±1.0,24.87N±0.02×122.13E±0.02,h14km±7km, n79,σ0°76/110,8C-1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		0.18	263	⇑*i* P	Pb	01 51 27.3	-0.6
	baz=266						
EGS				*i* S	Sg	01 51 29.1	-0.8
	baz=266						
TWB1	Santiao Chiao	0.19	317	⇑*i* P	Pb	01 51 28.0	-0.1
	baz=337						
TWB1				*i* S	Sb	01 51 30.6	-1.1
	baz=337						
NTC	Toucheng	0.28	268	*i* P	Pb	01 51 29.3	-0.2
	baz=271						
NTC				*i* S	Sg	01 51 33.0	+0.5
	baz=271						
TIPB	Shuangxi	0.30	291	⇑*i* P	Pb	01 51 29.7	-0.2
	baz=299						
TIPB				*i* S	Sg	01 51 33.3	+0.1
	baz=299						
EOS1	EOS1	0.32	181	P	Pb	01 51 30.9	+0.7
	baz=169						
EOS1				S	Sb	01 51 35.7	+0.6
	baz=169						
TWC	Suao	0.36	225	*i* P	Pg	01 51 30.3	+0.2
	baz=218						
TWC				*i* S	Sg	01 51 34.2	-0.9
	baz=218						
NWF	Wu-fen Shan	0.38	303	⇑*i* P	Pb	01 51 31.6	+0.3
	baz=299						
NWF				*i* S	Sb	01 51 37.1	0.0
	baz=299						
WFSB	Wu-fen Shan	0.38	303	⇑P	Pb	01 51 31.6	+0.3
	baz=309						
TWE	Neicheng	0.45	251	⇑*i* P	Pb	01 51 32.0	-0.4
	baz=249						
TWE				*i* S	Sg	01 51 37.5	-0.2
	baz=249						
NHDH	Xindian Distri	0.56	280	*e*P	Pb	01 51 34.9	+0.5
	baz=274						
NHDH				S	Sb	01 51 42.2	0.0
	baz=274						
ENTT	Nioudou	0.56	247	⇓*i* P	Pb	01 51 34.5	+0.1
	baz=244						
ENTT				S	Sb	01 51 41.7	-0.7
	baz=244						
ENA	Nanau	0.56	219	P	Pb	01 51 34.4	0.0
	baz=218						
ENA				*i* S	Sg	01 51 40.7	-0.6
	baz=218						
NWLT	Wulai	0.58	261	*i* P	Pb	01 51 34.5	-0.2
	baz=261						
NWLT				S	Sg	01 51 41.5	-0.4
	baz=261						
TAP1	Taipei	0.58	287	P	Pn	01 51 35.8	-0.8
	baz=289						
YM01	YM01	0.58	299	⇑*i* P	Pn	01 51 35.6	-1.0
	baz=303						
YM01				S	Sb	01 51 43.1	+0.2
	baz=303						
YM08	YM08	0.59	303	*i* P	Pn	01 51 35.5	-1.2
	baz=306						
YM11	YM11	0.59	301	*i* P	Pn	01 51 35.8	-1.0
	baz=304						
YM10	YM10	0.59	299	P	Pn	01 51 35.9	-1.0
	baz=302						
YM05	YM05	0.59	300	*i* P	Pn	01 51 35.8	-1.0
	baz=303						
YM04	YM04	0.61	298	*i* P	Pn	01 51 36.1	-1.0
	baz=301						
YM03	YM03	0.62	300	*i* P	Pn	01 51 36.2	-1.1
	baz=304						
NDT	Datong Townshi	0.62	245	P	Pb	01 51 35.4	-0.1
	baz=243						
NDT				*e*S	Sg	01 51 42.9	-0.3
	baz=243						
TWY	Chenhua	0.63	310	P	Pn	01 51 36.7	-0.6
	baz=315						
ANP	Anpu	0.64	300	*e*P	Pn	01 51 36.3	-1.2
	baz=303						
NTST	Danshui	0.69	296	P	Pn	01 51 37.9	-0.2
	baz=306						
TWS1	Kuangyinshan	0.69	290	P	Pn	01 51 37.6	-0.5
	baz=300						
YHNB	Yeheng	0.72	254	*i* P	Pb	01 51 36.8	-0.3
	baz=263						
NSK	Sanguang	0.73	255	⇑*i* P	Pb	01 51 36.9	-0.4
	baz=254						
NSK				*e*S	Sg	01 51 46.5	0.0
	baz=254						
PCYT	Pengchaiyu	0.76	356	*e*P	Pn	01 51 40.2	+1.1
	baz=354						
WLTB	Daxi	0.80	269	P	Pn	01 51 39.8	+0.1
	baz=270						
NNSB	Datong	0.81	238	*i* P	Pb	01 51 38.8	+0.1
	baz=235						
NNSH	Datong	0.81	238	P	Pb	01 51 38.8	+0.1
	baz=235						
NNSH				*e*S	Sg	01 51 48.4	-0.8
	baz=235						
NNS	Nan Shan	0.81	239	P	Pb	01 51 38.9	+0.2
	baz=235						
NNS				S	Sg	01 51 47.6	-1.6
	baz=235						
JYNG	Yonagunijimaku	0.85	119	P	Pn	01 51 41.0	+0.8
JYNG				S	Sn	01 51 53.5	+1.0
NACB	Ninganchiao	0.85	216	P	Pn	01 51 39.6	-0.6
	baz=201						
NACB				S	Sb	01 51 50.0	-0.5
	baz=201						
NCU	National Centr	0.87	277	P	Pn	01 51 41.2	+0.7
	baz=278						
NCU				S	Sn	01 51 53.7	+0.7
	baz=278						
NCUH	Zhongli	0.87	277	*e*P	Pn	01 51 41.4	+0.8
	baz=278						
NCUH				*e*S	Sn	01 51 53.7	+0.7
	baz=278						
ETLH	Xiulin Townshi	0.89	222	P	Pg	01 51 40.1	+0.2
	baz=229						
ETLH				S	Sb	01 51 51.3	-0.4
	baz=229						
YOJ	Yonaguni jima	0.89	117	P	Pn	01 51 41.6	+0.7
YOJ				S	Sn	01 51 54.6	+0.9
TWD	Chiawan	0.92	212	*i* P	Pn	01 51 41.3	0.0
	baz=198						
TWD				*i* S	Sb	01 51 52.3	-0.4
	baz=198						
LIOB	Emei	1.04	258	P	Pg	01 51 44.5	+1.7
	baz=250						
SBCB	Hsinchu	1.05	266	P	Pg	01 51 43.2	+0.2
	baz=285						
NSTT	Nanjuang	1.06	257	P	Pg	01 51 43.6	+0.5
	baz=257						
HSN	Hsinchu	1.06	267	P	Pg	01 51 43.9	+0.7
	baz=267						
HSN				S	Sn	01 51 57.1	-0.7
	baz=267						
TWT	Tachien	1.06	235	*e*P	Pg	01 51 44.5	+1.2
	baz=225						
WHF	Hehuan Shan	1.07	228	*i* P	Pn	01 51 43.7	-0.1
	baz=223						
WHF				*i* S	Sn	01 51 58.5	-0.1
	baz=223						
TDCB	Techi	1.08	236	*e*P	Pg	01 51 43.9	+0.3
	baz=225						
CHGB	Renai	1.19	228	P	Pg	01 51 45.9	+0.2
	baz=223						
ESL	Shilin	1.23	212	P	Pg	01 51 46.6	+0.2
	baz=206						
WHP	Taichung City	1.23	242	P	Pg	01 51 47.3	+0.8
	baz=240						
NMLH	Miaoli	1.27	255	*e*P	Pg	01 51 49.0	+1.9
	baz=272						
NSY	Sanyi	1.33	251	*e*P	Pg	01 51 48.8	+0.5
	baz=269						
TWQ1	Liyutan	1.34	248	P	Pg	01 51 50.2	+1.7
	baz=264						
EGFH	Guangfu	1.36	209	*e*P	Pg	01 51 49.6	+0.8
	baz=209						
EGFH				*e*S	Sg	01 52 06.5	+0.1
	baz=209						
DPDB	Guoxing	1.38	233	*e*P	Pg	01 51 49.3	0.0
	baz=217						
VWDT	VWDT	1.43	219	P	Pg	01 51 50.4	+0.2
	baz=224						
VWDT				*e*S	Sg	01 52 09.0	+0.2
	baz=224						
SMLT	Sun Moon Lake	1.49	229	P	Pg	01 51 52.1	+0.6
	baz=225						
TYC	Yuchi	1.51	231	P	Pg	01 51 51.5	-0.3
	baz=216						
HGSD	Ruisui	1.51	205	P	Pg	01 51 52.7	+0.8
	baz=217						
SSLB	Suanglung	1.52	225	P	Pg	01 51 52.2	+0.2
	baz=221						
IRIF	Iriomote-Funau	1.55	110	P	Pb	01 51 50.9	-0.3
WNT	Mingjian	1.65	234	*e*P	Pg	01 51 55.9	+1.5
	baz=221						
WJS	Zhushan	1.65	231	*e*P	Pg	01 51 56.3	+1.9
	baz=219						
YULB	Yu-li	1.66	208	P	Pb	01 51 53.2	+0.1
	baz=216						
TWF1	Yuli	1.69	207	P	Pb	01 51 53.7	0.0
	baz=216						
HATJ	Hateruma jima	1.72	118	P	Pb	01 51 53.7	-0.5
HATJ				*e*S	Sn	01 52 14.5	+0.4
JKRS	Kuro-shima	1.82	110	P	Pb	01 51 55.2	-0.6
JKRS				*e*S	Sg	01 52 19.6	-1.7
CHN5	Tsauling	1.83	227	P	Pg	01 51 58.6	+0.7
	baz=224						
JIJ	Ishigaki jima	1.90	105	P	Pb	01 51 56.7	-0.4
JIJ				S	Sb	01 52 20.8	+0.1
ELDTW	Lidau	1.96	212	P	Pg	01 51 59.5	-0.8
	baz=189						
JISG	Ishigakijimahi	2.00	98	P	Pb	01 51 57.7	-1.2
CHN4	Tsaushan	2.06	223	P	Pg	01 52 01.7	-0.6
	baz=218						
TPUB	Ta-pu	2.08	222	*e*P	Pb	01 51 59.5	-0.8
	baz=217						
WTP	Ta-pu	2.13	221	*e*P	Pb	01 52 01.9	+0.8
	baz=216						
TWK	Hsinying	2.19	224	P	Pg	01 52 03.4	-1.4
	baz=218						
CHN1	Nanshi	2.23	222	*e*P	Pg	01 52 04.2	-1.3
	baz=216						
SGST	Jiashian	2.27	219	*e*P	Pb	01 52 04.4	+0.8
	baz=210						
SLGT	Liugui	2.31	216	*e*P	Pb	01 52 05.4	+1.2
	baz=208						
MASBT	Mashibuluo	2.63	212	*e*P	Pb	01 52 10.0	+0.3
	baz=186						

IDC ***24*** *01:59:38.3×1.6,27.27N×65.64E,h0km,mb3.6/4, mb1 3.7/4,mb1mx3.4/47,mbtmp3.6/4,MS3.0/3,Ms1 3.0/3, ms1mx2.7/42,Error ellipse: s-maj=39.7km s-min=34.7km az=156.0*

ISC 24 01:59:41.0±1.4,27.3N±0.2×65.6E±0.2,h18km,n8,σ0°63/6, mb3.6/4,Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THW	Thamme Wali	7.65	42	P	Pn	02 01 31.6	-0.1
CEP	Cherat	8.49	38	P	Pn	02 01 43.3	0.0
GEYT	Alibeck	12.37	331	LR	LR	02 07 57.0	
	comp=Z,62nm,18.6s,baz=30,slow=40						
MKAR	Makanchi Array	23.52	30	P	P	02 04 50.7	+0.7
	1.1nm,0.7s,baz=214,slow=10,SNR=9.9						
MKAR				LR	LR	02 16 27.3	
	comp=Z,49nm,22.0s,baz=209,slow=43						
ZALV	Zalesovo Beam	30.18	23	LR	LR	02 19 04.8	
	comp=Z,32nm,21.1s,baz=30,slow=39						
FINES	FINESS Array B	43.17	333	P	P	02 07 39.7	-0.6
	0.7nm,0.5s,baz=107,slow=6.6,SNR=8.0						
TORD	Torodi Ar. Bea	61.05	270	P	P	02 09 54.6	+0.5
	0.5nm,0.7s,baz=56,slow=6.1,SNR=5.1						
ASAR	Alice Springs	83.10	121	P	P	02 12 05.8	-0.3
	0.4nm,0.9s,baz=323,slow=6.0,SNR=2.0						

IDC ***24*** *02:49:31.1±1.2,4.54S×133.88E,h0km,mb3.7/2, mb1 3.8/8,mb1mx3.7/34,mbtmp3.7/8,ML3.7/6,MS3.2/2, Ms1 3.3/2,ms1mx2.5/30,Error ellipse: s-maj=35.4km s-min=22.4km az=74.0*
NEIC ***24*** *02:49:35.9±2.1,4.50S±0.04×133.9E±0.1,h32km±8km, mb4.0/7,Error ellipse: s-maj=14.5km s-min=6.2km az=84.0*

ISC 24 02:49:33.9±0.8,4.47S±0.08×134.0E±0.1,h21km,n20, σ1°66/18,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	2.30	312		Pn	02 50 10.6	0.0
SIJI	Sorong	4.47	323	Pn	Pn	02 50 41.5	+0.9
	1.4nm,0.3s,baz=162,slow=20,SNR=1.8						
SIJI					Sn	02 51 30.3	-1.8
	5.3nm,0.3s,baz=149,slow=23,SNR=10						
JAY	Jayapura	7.01	74	Pn	Pn	02 51 17.7	+2.2
	0.4nm,0.3s,baz=265,slow=11,SNR=2.4						
MTN	Manton Dam	8.78	198		Pn	02 51 41.0	+1.3
KNRA	Kununurra	12.25	204		Pn	02 52 27.9	+0.5
PMG	Port Moresby	13.99	111	LR	LR	03 00 27.1	
	comp=Z,74nm,18.5s,baz=334,slow=47						
WB0	Warramunga Arr	15.21	178	Pn	Pn	02 53 09.8	+2.1
WB0				IAmb	IAmb	02 53 50.0	
	comp=Z,16nm,1.6s						
WRA	Warramunga Arr	15.38	179	Pn	Pn	02 53 06.8	-3.2
	comp=Z,0.2nm,0.3s,baz=357,slow=13,SNR=12						
WRA					Sn	02 55 47.0	-13
	comp=Z,0.1nm,0.3s,baz=0.4,slow=23,SNR=3.2						
WB2	Warramunga Arr	15.38	179	Pn	Pn	02 53 10.9	+1.0
WB2				IAmb	IAmb	02 53 24.9	
	comp=Z,5.6nm,0.9s						
WR0	Warramunga Arr	15.41	178	Pn	Pn	02 53 07.8	-2.4
FITZ	Fitzroy Crossi	15.80	210	Pn	Pn	02 53 13.5	-1.8
	comp=Z,0.4nm,0.3s,baz=40,slow=11,SNR=17						
FITZ					Sn	02 55 56.7	-13
	comp=Z,0.2nm,0.3s,baz=128,slow=11,SNR=2.9						
FITZ	Fitzroy Crossi	15.80	210	IAmb	IAmb	02 53 19.1	
	comp=Z,23nm,1.9s						
AS31	Alice Springs	19.08	180	P	Pn	02 53 56.2	0.0
ASAR	Alice Springs	19.09	180	P	P	02 53 55.5	+0.1
	comp=Z,0.4nm,0.3s,baz=6.7,slow=12,SNR=22						
CTA	Charters Tower	19.61	143	P	Pn	02 54 01.8	-0.7
	comp=Z,0.3nm,0.3s,baz=336,slow=9.0,SNR=3.6						
CTAO	Charters Tower	19.61	143	P	P	02 53 59.0	-2.0
CTAO				IAmb	IAmb	02 54 15.9	
	comp=Z,11nm,1.1s						
PSA00	Pilbara Seismi	21.83	218	P	P	02 54 25.3	+0.2
CMAR	Chiang Mai Arr	41.35	304	LR	LR	03 13 54.0	
	comp=Z,44nm,21.0s,baz=96,slow=35						
MKAR	Makanchi Array	68.37	325	P	P	03 00 35.0	+1.0
	comp=Z,0.7nm,0.7s,baz=110,slow=7.0,SNR=6.3						
ILAR	Eielson Array	89.40	25	P	P	03 02 28.5	-0.4
	comp=Z,0.3nm,0.8s,baz=247,slow=4.7,SNR=2.5						

IDC ***24*** *03:16:18.7±1.9,8.16S×74.39W,h155km±21km,mb3.5/9, mb1 3.7/15,mb1mx3.5/38,mbtmp4.0/15,MS2.6/2, Ms1 2.6/2,ms1mx2.3/23,Error ellipse: s-maj=27.9km s-min=14.1km az=37.0*
NEIC ***24*** *03:16:18.5±1.5,8.18S±0.09×74.40W±0.10,h153km±8km, mb4.1/13,Error ellipse: s-maj=16.3km s-min=9.7km az=49.0*

ISC 24 03:16:17.9±0.6,8.18S±0.07×74.41W±0.07,h151km,n31, σ0°94/33,mb3.7/11,Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	4.09	284	P	Pn	03 17 19.7	0.0
	35nm,0.3s,baz=56,slow=5.6,SNR=180						
ATAH				S	Sn	03 18 06.9	-0.8
	16nm,0.3s,baz=104,slow=13,SNR=7.7						
NNA	Nana	4.48	212	P	Pn	03 17 25.8	+1.3
	8.0nm,0.3s,baz=13,slow=3.0,SNR=20						
NNA				S	Sn	03 18 13.8	-2.7
	39nm,0.3s,baz=175,slow=22,SNR=14						
NNA				LR	LR	03 19 28.9	
	comp=Z,29nm,21.6s,baz=110,slow=42						
NNA	Nana	4.48	212		Pn	03 17 24.8	+0.2
LPAZ	La Paz	10.12	143	P	Pn	03 18 41.2	+1.0
	0.1nm,0.3s,baz=167,slow=11,SNR=1.7						
SAML	Samuel	11.13	95		Pn	03 18 52.0	-0.9
SIV	San Ignacio	15.17	122	P	P	03 19 47.0	+0.9
	0.4nm,0.3s,baz=297,slow=13,SNR=11						
SIV				S	Sn	03 22 31.7	-1.6
	0.2nm,0.3s,baz=242,slow=20,SNR=2.5						
PTGA	Pitinga	16.18	63	P	P	03 19 57.4	+0.1
	1.0nm,0.3s,baz=251,slow=18,SNR=11						
PTGA	Pitinga	16.18	63		P	03 19 57.3	0.0
SDV	Santo Domingo	17.37	13	P	Pn	03 20 11.6	+0.2
	1.2nm,0.3s,baz=5.5,slow=1.8,SNR=7.8						
CPUP	Villa Florida	24.27	140	P	P	03 21 21.7	+0.5
	2.5nm,0.9s,baz=16,slow=8.2,SNR=3.7						
MDP	Montagnes des	25.41	59	LR	LR	03 31 30.5	
	comp=Z,37nm,18.0s,baz=104,slow=36						
TXAR	Lajitas Array	46.75	324	P	P	03 24 33.1	+0.9
	0.5nm,0.6s,baz=148,slow=8.9,SNR=6.6						
SDCO	Great Sand Dun	54.14	330	P	P	03 25 28.8	+1.0
WUAZ	Wupatki	55.70	324	P	P	03 25 40.0	+1.0
WUAZ				IAmb	IAmb	03 25 41.3	
	comp=Z,2.6nm,0.9s						
Y12C	Blythe	56.45	320	P	P	03 25 44.5	+0.4
PDAR	Pinedale Array	59.97	331	P	P	03 26 08.9	+0.2
	comp=Z,0.4nm,0.4s,baz=141,slow=7.5,SNR=4.5						
ULM	Lac du Bonnet	61.12	344	P	P	03 26 15.1	-0.9
	comp=Z,2.6nm,0.5s,baz=174,slow=2.3,SNR=3.2						
NVAR	Mina Array Bea	61.79	322	P	P	03 26 22.5	+1.5
	comp=Z,0.4nm,0.5s,baz=133,slow=6.3,SNR=4.8						
YNE	Yellowstone No	61.88	332	P	P	03 26 21.4	-0.2
YHL	Hebgen Lake	62.31	331	P	P	03 26 25.3	+0.8
GCMT	Greycliff	62.32	333	P	P	03 26 25.1	+0.7
BOZ	Bozeman (W)	63.08	332	P	P	03 26 29.8	+0.4
BOZ				IAmb	IAmb	03 26 31.1	
	comp=Z,2.1nm,0.8s						
MFID	Camas Ranch	63.63	327	P	P	03 26 33.5	+0.4
J08A	Circle Bar Ran	65.03	326	P	P	03 26 41.8	-0.4
MSO	Missoula	65.07	331	P	P	03 26 40.5	-1.9
DBIC	Dimbokro	70.90	80	P	P	03 27 19.2	0.0
	comp=Z,6.3nm,1.1s,baz=210,slow=3.5,SNR=6.7						
YKA	Yellowknife Ar	76.95	342	P	P	03 27 53.4	0.0
	comp=Z,0.5nm,0.4s,baz=138,slow=6.6,SNR=11						
TORD	Torodi Ar. Bea	78.48	75	P	P	03 28 02.8	-0.2
	comp=Z,0.7nm,0.6s,baz=263,slow=5.0,SNR=7.6						
ILAR	Eielson Array	90.00	336	P	P	03 29 00.0	+0.1
	comp=Z,0.2nm,0.5s,baz=139,slow=4.4,SNR=2.8						
ASAR	Alice Springs	137.96	220	PKP	PKPdf	03 35 25.2	-0.3
	comp=Z,0.4nm,0.5s,baz=127,slow=1.8,SNR=6.2						
WRA	Warramunga Arr	140.23	225	PKP	PKPdf	03 35 30.4	+0.6
	comp=Z,0.9nm,0.5s,baz=132,slow=1.8,SNR=5.3						

IDC 24 03:34:34.1±3.5,4.15S×128.92E,h205km±46km,mb3.0/1, mb1 3.4/5,mb1mx3.1/32,mbtmp3.9/5,Error ellipse: s-maj=66.4km s-min=16.7km az=85.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.01	36	P	Pn	03 35 36.9	+0.6
	5.7nm,0.3s,baz=220,slow=16,SNR=28						
SIJI				S	S	03 36 25.4	+0.7
	12nm,0.3s,baz=202,slow=22,SNR=13						
FITZ	Fitzroy Crossi	14.23	193	P	Pn	03 37 47.0	+0.2
	0.1nm,0.3s,baz=18,slow=15,SNR=2.3						
WRA	Warramunga Arr	16.56	162	P	P	03 38 13.9	-0.2
	0.8nm,0.3s,baz=343,slow=12,SNR=23						
WRA				S	S	03 41 12.0	-5.0
	0.1nm,0.3s,baz=352,slow=23,SNR=1.7						
ASAR	Alice Springs	19.99	167	P	P	03 38 51.2	0.0
	0.6nm,0.3s,baz=346,slow=12,SNR=27						
ASAR				S	S	03 42 22.6	-2.2
	baz=349,slow=24,SNR=2.8						
MKAR	Makanchi Array	65.27	327	P	P	03 44 54.0	0.0
	0.2nm,0.3s,baz=123,slow=7.8,SNR=3.1						

IDC 24 04:10:27.9±4.2,22.43S×178.09W,h0km,mb4.1/3, mb1 4.3/3,mb1mx3.8/33,mbtmp4.1/3,Error ellipse: s-maj=163.5km s-min=66.9km az=150.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	36.91	246	P	P	04 17 39.0	+0.4
	1.2nm,0.4s,baz=99,slow=10,SNR=7.3						
ASAR	Alice Springs	44.02	259	P	P	04 18 37.2	-0.5
	2.3nm,0.7s,baz=95,slow=8.1,SNR=24						
WRA	Warramunga Arr	44.28	264	P	P	04 18 39.5	-0.3
	0.5nm,0.4s,baz=103,slow=8.2,SNR=17						
AKASG	Malin Array Be	144.64	330	PKP	PKPdf	04 30 05.9	-0.5
	1.5nm,0.5s,baz=44,slow=4.2,SNR=9.4						

NEIC ***24*** *04:12:23.7±1.8,62.14N±0.01×148.12W±0.06, h36km±19km,Error ellipse: s-maj=4.6km s-min=1.1km az=111.0*

AEIC 24 04:12:24.2±1.5,62.13N±0.02×148.04W±0.05,h26km±6km, ML2.8/110,Error ellipse: s-maj=4.3km s-min=2.1km az=125.0,Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SML	Sawmill	0.35	203		Pb	04 12 31.8	-0.3
SML					Sn	04 12 38.7	-1.2
SCM	Sheep Creek Mo	0.45	131		Pb	04 12 32.9	-0.7
SCM					Sb	04 12 41.0	+1.0
WAT6	Susitna Watana	0.47	17		Pb	04 12 33.3	-0.8
WAT6					Sb	04 12 41.2	+0.3
GHO	Glory Hole Cre	0.55	230		Pb	04 12 34.0	-1.2
GHO					Sb	04 12 43.1	+0.2
KNK	Knik Glacier	0.74	196		Pb	04 12 36.8	-1.7
KNK					Sb	04 12 47.9	-0.4
PMR	Palmer	0.75	224	Pn	Pb	04 12 35.6	-2.8
PMR	Palmer	0.75	224		Sb	04 12 47.3	-1.0
WAT2	Susitna Watana	0.87	343		Pb	04 12 38.6	-2.1
WAT2					Sb	04 12 50.9	-1.2
DHY	Denali Highway	1.00	18		Pb	04 12 40.6	-2.0
DHY					Sb	04 12 54.1	-1.5
PS11	TAPS Pump St11	1.21	91		Pn	04 12 44.5	-0.9
PWL	Port Wells	1.28	186		Pn	04 12 44.6	-1.8
VMT	TAPS Tl Valdez	1.32	142		Pn	04 12 45.0	-1.8
RC01	Rabbit Creek A	1.32	219		Pn	04 12 45.6	-1.3
GLI	Glacier Island	1.33	160		Pn	04 12 45.5	-1.7
RND	Reindeer	1.33	344		Pn	04 12 45.5	-1.7
FIS	Fire Island	1.43	227		Pn	04 12 47.6	-0.8
PAX	Paxson	1.46	54		Pn	04 12 47.6	-1.3
PS12	TAPS Pump St12	1.52	114		Pn	04 12 48.0	-1.7
FID	Port Fidalgo	1.57	151		Pn	04 12 48.9	-1.6
MCK	McKinley	1.66	346		Pn	04 12 50.6	-1.0
PS10	TAPS Pump St10	1.67	38		Pn	04 12

PS08	**TAPS Pump Stn8**	**2.48**	**12**			Pn	04 13 02.4	-0.5
MCARA	**McCarthy VSAT**	**2.50**	**105**			Pn	04 13 02.6	-0.5
NEA	**Nenana**	**2.50**	**350**			Pn	04 13 01.7	-1.4
CCB	**Clear Creek Bu**	**2.53**	**2**			Pn	04 13 02.9	-0.6
SCRK	**Sand Creek**	**2.62**	**43**			Pn	04 13 03.8	-1.0
CHUM	**Lake Minchumin**	**2.63**	**314**			Pn	04 13 04.1	-0.7
IL31		**2.70**	**11**			Pn	04 13 05.2	-0.7
DFR	**Drift River**	**2.72**	**237**			Pn	04 13 05.4	-0.7
BERG	**Berg Lake**	**2.73**	**128**			Pn	04 13 04.9	-1.3
BRSE	**Bradley Lake S**	**2.73**	**210**			Pn	04 13 05.5	-0.9
BRLK	**Bradley Lake**	**2.75**	**212**			Pn	04 13 05.8	-0.8
COLA	**College**	**2.76**	**2**			Pn	04 13 06.1	-0.5
RDJH	**Redoubt Jeurge**	**2.76**	**238**			Pn	04 13 06.2	-0.7
PTPK	**Patty Peak**	**2.82**	**107**			Pn	04 13 06.7	-1.1
RSO	**Redoubt South**	**2.82**	**236**			Pn	04 13 07.0	-0.8
RDWB	**Redoubt West**	**2.84**	**237**			Pn	04 13 07.0	-1.0
MDM	**Murphy Dome**	**2.84**	**358**			Pn	04 13 07.4	-0.4
RED	**Redoubt Volcan**	**2.86**	**235**			Pn	04 13 07.2	-0.9
KHIT	**Khitrov Hills**	**2.87**	**124**			Pn	04 13 06.5	-1.7
BALM	**Baldy**	**2.94**	**109**			Pn	04 13 08.1	-1.1
KIAG	**Kiagna River**	**2.98**	**111**			Pn	04 13 08.3	-1.6
POKR	**Poker Plat Res**	**3.01**	**5**			Pn	04 13 09.3	-0.8
WAX	**Waxell Ridge**	**3.02**	**122**			Pn	04 13 08.6	-1.7
BC03		**3.04**	**69**			Pn	04 13 09.9	-0.6
CNPM	**China Poot**	**3.04**	**212**			Pn	04 13 09.7	-0.9
MLY	**Manley**	**3.15**	**339**			Pn	04 13 10.8	-1.3
KULT	**Kultieth River**	**3.19**	**124**			Pn	04 13 11.7	-1.0
PS07	**TAPS Pump Stn7**	**3.20**	**358**			Pn	04 13 12.5	-0.2
BARN	**Barnard Glacie**	**3.23**	**107**			Pn	04 13 12.5	-0.8
CTGM	**Chitina Glacie**	**3.42**	**107**			Pn	04 13 14.9	-0.9
YUK2	**White River**	**3.42**	**93**			Pn	04 13 15.1	-0.8
YAH	**Yahtse**	**3.52**	**117**			Pn	04 13 16.8	-0.5
YUK1	**Sand Pete Hill**	**3.53**	**86**			Pn	04 13 17.4	0.0
MESA	**MESA**	**3.54**	**121**		Pn	Pn	04 13 18.5	+0.9
PRP	**Porcupine Dome**	**3.58**	**17**			Pn	04 13 18.1	0.0
YUK3	**Moose Creek**	**3.60**	**92**			Pn	04 13 17.7	-0.7
RKAV	**Rock Avalanche**	**3.72**	**117**			Pn	04 13 19.0	-1.0
SVW2	**Sparrevohn**	**3.75**	**257**			Pn	04 13 18.4	-1.8
TT01	**Tatalina**	**3.78**	**285**			Pn	04 13 19.1	-1.6
TTA	**Tatalina**	**3.78**	**286**			Pn	04 13 18.9	-1.8
AU22	**Augustine Moun**	**3.80**	**226**			Pn	04 13 20.5	-0.5
EGAK	**Eagle**	**4.08**	**46**			Pn	04 13 23.8	-0.9
DAWY	**Dawson**	**4.38**	**60**			Pn	04 13 28.1	-1.0
IM03		**4.61**	**330**			Pn	04 13 31.0	-1.0
FYU	**Fort Yukon**	**4.62**	**14**			Pn	04 13 31.5	-0.7
PNL	**Peninsula**	**4.89**	**116**			Pn	04 13 34.6	-1.4
KDAK	**Kodiak Island**	**4.92**	**210**		Pn	Pn	04 13 34.6	-1.7
COLD	**Coldfoot**	**5.20**	**351**			Pn	04 13 39.9	-0.3
KABU	**Katmai Buttres**	**5.29**	**226**			Pn	04 13 40.5	-1.0
BM03	**Burnt Mountain**	**5.51**	**14**			Pn	04 13 43.8	-0.7
OHAK	**Old Harbor**	**5.59**	**211**			Pn	04 13 42.6	-2.9
DHAK	**Deception Hill**	**5.72**	**118**			Pn	04 13 46.2	-1.1
TOLK	**Toolik Lake Re**	**6.57**	**355**			Pn	04 13 58.5	-0.6

IDC 24 04:22:22.5±8.5, 1°04N×123°01E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.5/46, mbtmp3.8/4, ML4.0/1, Error ellipse: s-maj=144.0km s-min=115.8km az=110.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.20**	**172**	P	P	04 26 48.1	0.0
	0.4nm,0.3s,baz=0.6,slow=9.7,SNR=15						
WRA	**Warramunga Arr**	**23.63**	**153**	P	P	04 27 34.6	-0.9
	1.9nm,0.3s,baz=328,slow=10,SNR=16						
ASAR	**Alice Springs**	**26.75**	**157**	P	P	04 28 05.5	+1.4
	0.4nm,0.6s,baz=339,slow=13,SNR=2.7						
STKA	**Stephens Creek**	**37.18**	**153**	P	P	04 29 35.2	-0.3
	1.9nm,0.9s,baz=333,slow=11,SNR=3.2						

IDC 24 04:27:35.6±3.8, 18°71N×147°57E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/61, mbtmp3.6/5, Error ellipse: s-maj=163.3km s-min=27.1km az=85.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**18.12**	**88**	T	T	04 51 05.4	
	baz=273,slow=74,SNR=7.3						
H11S1	**WAKE ISLAND Hy**	**18.13**	**88**	T	T	04 51 13.1	
	baz=273,slow=74,SNR=6.3						
H11S2	**WAKE ISLAND Hy**	**18.14**	**88**	T	T	04 51 13.6	
	baz=273,slow=74,SNR=4.1						
WRA	**Warramunga Arr**	**40.54**	**199**	P	P	04 35 15.9	-0.9
	0.4nm,0.8s,baz=24,slow=8.9,SNR=0.5						
ASAR	**Alice Springs**	**44.18**	**198**	P	P	04 35 47.1	+0.7
	0.3nm,0.8s,baz=23,slow=12,SNR=1.9						
KURBB	**Kurchatov Arra**	**62.50**	**318**	P	P	04 38 00.6	-0.3
	0.5nm,0.4s,baz=92,slow=7.4,SNR=7.5						
BVAR	**Borovoye Arr**	**67.60**	**320**	P	P	04 38 34.4	+0.2
	0.6nm,0.4s,baz=82,slow=11,SNR=4.6						
FINES	**FINESS Array B**	**87.61**	**336**	P	P	04 40 25.7	+0.1
	0.4nm,0.6s,baz=68,slow=4.7,SNR=6.1						

IDC ***24*** *04:28:32.4±0.5, 24°55S×176°00W, h0km, mb4.5/21, mb1 4.6/21, mb1mx4.5/42, mbtmp4.5/21, MS4.1/20, Ms1 4.1/20, ms1mx4.1/23, Error ellipse: s-maj=22.1km s-min=16.4km az=140.0*

GCMT ***24*** *04:28:36.3±0.2, 24°68S±0°03×175°43W±0°02, h21km, MW4.9/101, Moment Tensor Solution. s53,c63; s101,c136; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.95±.12; Mθθ-0.46±.08; Mϕϕ-2.50±.08; Mrθ0.58±.18; Mθϕ-0.25±.06; Mrϕ1.33±.13; Best double couple: M♂3.09700×10¹⁶ NP1:ϕs182.00000°, δ32.00000°, λ79.00000°. NP2:ϕs14.00000°, δ59.00000°, λ96.00000°. Principal axes: T 3.3280, Plg75.0000°, Azm302.0000°; N -0.4690, Plg6.0000°, Azm191.0000°; P -2.8660, Plg14.0000°, Azm99.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***24*** *04:28:38.3±1.7, 24°7S±0°1×175°9W±0°1, h42km±5km, mb4.9/107 Error ellipse: s-maj=18.8km s-min=17.3km az=109.0*

ISC 24 04:28:37.0±0.4, 24°66S±0°08×175°91W±0°09, h30km, n143, σ1§07/110, mb4.9/58, MS4.1/21, 1C-1D, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.91**	**201**	Pn	**Pn**	**04 29 48.0**	**-0.7**
NIUE	**Niue**	**7.86**	**46**		Pn	04 30 22.9	-6.4
MSVF	**Nonsavu**	**8.90**	**320**		**Pn**	**04 30 44.8**	**+1.1**
RAR	**Rarotonga**	**15.26**	**80**	Pn	Pn	04 32 00.7	-10
	13nm,0.3s,baz=246,slow=9.7,SNR=15						
DZM	**Mont Dzumac**	**16.41**	**275**	*e*P	**P**	**04 32 31.3**	**+3.5**
	106nm,1.4s						
DZM				*e*LR	LR	04 36 23.3	
	comp=Z,2μm,23.9s						
DZM	**Mont Dzumac**	**16.41**	**275**	LR	LR	04 37 35.0	
	comp=Z,1μm,21.6s,baz=98,slow=33						
DZM	**Mont Dzumac**	**16.41**	**275**		**P**	**04 32 28.7**	**+0.9**
RPZ	**Rata Peaks**	**21.80**	**206**	LR	LR	04 42 01.3	
	comp=Z,922nm,18.9s,baz=10,slow=37						
TBI	**Tubuai**	**24.18**	**92**	*e*LR	LR	04 39 30.0	
	comp=Z,869nm,29.0s						
TBI	**Tubuai**	**24.18**	**92**	*e*T	T	04 58 12.0	
	5.5nm,0.4s						
PAE	**Paea**	**25.49**	**79**	*e*T	T	04 59 55.5	
	2.6nm,0.3s						
PPT2	**Papeete2**	**25.52**	**79**	*e*LQ	LQ	04 39 04.5	
	878nm,22.5s						
PPT2				*e*LR	LR	04 40 10.3	
	comp=Z,929nm,25.0s,baz=252						
PPT2	**Papeete2**	**25.52**	**79**	*e*T	T	04 59 59.6	
	2.7nm,0.4s						
PPT	**Papeete**	**25.53**	**79**	LR	LR	04 42 45.6	
	comp=Z,313nm,18.1s,baz=263,slow=33						
HNR	**Honiara**	**27.54**	**299**	LR	LR	04 43 50.0	
	comp=Z,751nm,19.6s,baz=176,slow=34						
CTA	**Charters Tower**	**35.21**	**270**	P	**P**	**04 35 27.8**	**-1.0**
	2.3nm,0.4s,baz=93,slow=12,SNR=6.3						
CTAO	**Charters Tower**	**35.21**	**270**	P	**P**	**04 35 27.8**	**-1.0**
CTAO				IAmb	IAmb	04 35 29.4	
	comp=Z,14nm,1.2s						
TOO	**Toolangi**	**35.22**	**239**	P	**P**	**04 35 28.2**	**-0.5**
TOO				IAmb	IAmb	04 36 28.7	
	comp=Z,39nm,1.6s						
STKA	**Stephens Creek**	**37.93**	**249**	P	**P**	**04 35 51.6**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=101,slow=15,SNR=4.1						
STKA				LR	LR	04 50 30.3	
	comp=Z,1μm,18.2s,baz=77,slow=35						
AS31	**Alice Springs**	**45.59**	**260**	P	**P**	**04 36 54.3**	**-0.4**
ASAR	**Alice Springs**	**45.59**	**260**	P	**P**	**04 36 53.4**	**-1.3**
	comp=Z,3.8nm,0.8s,baz=92,slow=6.9,SNR=23						
ASAR				S		**04 43 32.2**	**-3.3**
	comp=Z,0.6nm,1.0s,baz=92,slow=14,SNR=4.6						
ASAR				LR	LR	04 55 47.2	
	comp=Z,814nm,18.3s,baz=118,slow=36						
WB2	**Warramunga Arr**	**46.06**	**266**	P	**P**	**04 36 58.2**	**-0.2**
WB0	**Warramunga Arr**	**46.07**	**266**	P	**P**	**04 36 56.9**	**-1.6**
WB0				IAmb	IAmb	04 37 01.6	
	comp=Z,38nm,1.8s						
WRA	**Warramunga Arr**	**46.08**	**266**	P	**P**	**04 36 56.2**	**-2.3**
	comp=Z,3.0nm,0.6s,baz=103,slow=8.1,SNR=5.0						
WRA				LR	LR	04 55 39.9	
	comp=Z,827nm,18.8s,baz=100,slow=35						
VNDA	**Vanda**	**53.97**	**186**	P	**P**	**04 37 59.1**	**+1.5**
	comp=Z,3.9nm,1.0s,baz=0.8,slow=7.5,SNR=12						
VNDA				LR	LR	04 56 47.3	
	comp=Z,125nm,21.1s,baz=6.0,slow=31						
VNDA	**Vanda**	**53.97**	**186**	P	**P**	**04 37 58.9**	**+1.3**
VNDA				IAmb	IAmb	04 38 02.2	
	comp=Z,35nm,1.9s						
CASY	**Casey**	**61.07**	**206**	P	**P**	**04 38 48.2**	**+0.5**
QSPA	**South Pole Qui**	**65.43**	**180**	P	**P**	**04 39 18.0**	**+1.3**
QSPA				IAmb	IAmb	04 39 33.4	
	comp=Z,17nm,1.0s						
MJAR	**Matsushiro Arr**	**74.69**	**323**	P	**P**	**04 40 14.3**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=160,slow=6.0,SNR=4.0						
MJAR				LR	LR	05 07 40.9	
	comp=Z,99nm,22.0s,baz=125,slow=32						
ATKA	**Atka Island**	**76.55**	**1**	P	**P**	**04 40 23.4**	**-0.5**
JNU	**Nakatsue**	**76.61**	**316**	P	**P**	**04 40 25.9**	**+1.0**
JNU				IAmb	IAmb	04 40 27.2	
	comp=Z,21nm,1.3s						
MAW	**Mawson**	**78.31**	**200**	P	**P**	**04 40 35.4**	**+1.6**
	comp=Z,4.5nm,0.8s,baz=78,slow=4.7,SNR=5.3						
MAW				LR	LR	05 15 45.1	
	comp=Z,201nm,18.0s,baz=72,slow=36						
MAW	**Mawson**	**78.31**	**200**	P	**P**	**04 40 34.6**	**+0.8**
YSS	**Yuzh-Sakhalins**	**80.46**	**333**	P	**P**	**04 40 45.8**	**+0.1**
PETK	**Petropavlovsk-**	**80.78**	**344**	P	**P**	**04 40 46.8**	**-0.4**
	comp=Z,7.0nm,0.8s,baz=136,slow=11,SNR=6.3						
PETK				LR	LR	05 13 26.6	
	comp=Z,143nm,19.1s,baz=230,slow=33						
ISA	**Isabella, Lake**	**80.91**	**44**	P	**P**	**04 40 48.5**	**0.0**
CMB	**Columbia Colle**	**81.25**	**41**	P	**P**	**04 40 50.3**	**+0.1**
KSRS	**Korea Array**	**81.27**	**318**	P	**P**	**04 40 50.7**	**+0.5**
	comp=Z,12nm,1.2s,baz=137,slow=5.6,SNR=20						
KSRS				LR	LR	05 15 57.7	
	comp=Z,88nm,18.2s,baz=126,slow=35						
KS19	**Wonju Array Si**	**81.33**	**318**	P	**P**	**04 40 50.0**	**-0.6**
KS19				IAmb	IAmb	04 43 10.4	
	comp=Z,29nm,1.4s						
AFDM	**Forest Hills D**	**81.50**	**40**	P	**P**	**04 40 51.1**	**-0.4**
MDPB	**Devils Postpil**	**81.78**	**42**	P	**P**	**04 40 52.9**	**-0.4**
MDPB				IAmb	IAmb	04 40 54.8	
	comp=Z,9.9nm,1.1s						
OMMB	**Old Mammoth Mi**	**81.82**	**42**	P	**P**	**04 40 53.6**	**0.0**
H03S2	**Juan Fernandez**	**82.07**	**123**	T	T	06 11 54.7	
	baz=244,slow=74,SNR=3.6						
H03S1	**Juan Fernandez**	**82.08**	**123**	T	T	06 12 09.8	
	baz=244,slow=74,SNR=3.3						
H03S3	**Juan Fernandez**	**82.09**	**123**	T	T	06 11 55.8	
	baz=244,slow=74,SNR=3.7						
WAKR	**Walker**	**82.12**	**41**	IAmb	IAmb	04 40 56.9	
	comp=Z,13nm,1.1s						
YBH	**Yreka Blue Hor**	**82.37**	**37**	P	**P**	**04 40 57.2**	**+1.2**
	comp=Z,0.2nm,0.9s,baz=172,slow=5.1,SNR=6.1						
YBH	**Yreka Blue Hor**	**82.37**	**37**	IAmb	IAmb	04 42 47.3	
	comp=Z,27nm,1.9s						
PNTR	**Pine Nut**	**82.40**	**41**	IAmb	IAmb	04 40 58.1	
	comp=Z,9.2nm,0.9s						
RYN	**Ryan**	**82.75**	**42**	P	**P**	**04 40 59.2**	**+1.0**
RYN				IAmb	IAmb	04 41 07.4	
	comp=Z,15nm,1.6s						
NVAR	**Mina Array Bea**	**82.76**	**42**	P	**P**	**04 40 58.4**	**+0.1**
	comp=Z,3.8nm,0.9s,baz=223,slow=8.6,SNR=20						
NVAR				LR	LR	05 10 02.4	
	comp=Z,71nm,21.3s,baz=256,slow=30						
NV11	**Mina Array Sit**	**82.85**	**42**	P	**P**	**04 40 58.7**	**0.0**
SYO	**Syowa Base**	**83.10**	**192**	*i*eX	P	04 40 54.6	-4.8
SYO	**Syowa Base**	**83.10**	**192**	*i*eX	P	04 41 06.0	+6.6
KVN	**Kaiserville**	**83.28**	**42**	P	**P**	**04 41 01.5**	**+0.6**
USRK	**Ussuriysk Ar.**	**83.47**	**325**	P	**P**	**04 41 01.8**	**+0.2**
	comp=Z,14nm,0.9s,baz=143,slow=3.8,SNR=22						
USA0B	**Ussuriysk Arra**	**83.47**	**325**	P	**P**	**04 41 01.8**	**+0.2**
SHPR	**Sheep Range**	**83.55**	**45**	IAmb	IAmb	04 41 05.2	
	comp=Z,16nm,1.7s						
OHAK	**Old Harbor**	**83.76**	**12**	P	**P**	**04 41 02.5**	**-0.2**
OHAK				IAmb	IAmb	04 41 19.3	
	comp=Z,19nm,1.4s						
SNAA	**Sanae**	**83.81**	**178**	P	**P**	**04 41 03.2**	**+0.1**
SNAA	**Sanae**	**83.81**	**178**	P	**P**	**04 41 03.3**	**+0.1**
SNAA				IAmb	IAmb	04 41 19.4	
	comp=Z,18nm,1.3s						
VNA3	**Neumayer Olymp**	**83.87**	**176**	P	**P**	**04 41 03.2**	**-0.2**
TUC	**Tucson**	**84.07**	**51**	P	**P**	**04 41 05.0**	**-0.1**
VNA2	**Neumayer--Watz**	**84.33**	**176**	P	**P**	**04 41 05.8**	**0.0**
	baz=171,slow=4.2						
VNA1	**Neumayer--Stat**	**84.55**	**176**	P	**P**	**04 41 07.3**	**+0.5**
PINE	**Pine Mountain**	**84.72**	**37**	IAmb	IAmb	04 41 09.5	
	comp=Z,11nm,1.1s						
MDJ	**Mudanjiang**	**85.02**	**324**	P	**P**	**04 41 08.8**	**-0.6**
PLCA	**Paso Flores**	**85.03**	**133**	LR	LR	05 12 31.3	
	comp=Z,53nm,18.7s,baz=242,slow=31						
ZAIG	**Zacatecas**	**85.35**	**63**	P	**P**	**04 41 09.9**	**-2.1**
U15A	**North Rim**	**85.37**	**46**	IAmb	IAmb	04 41 14.0	
	comp=Z,11nm,1.2s						
WUAZ	**Wupatki**	**85.46**	**48**	IAmb	IAmb	04 41 14.8	
	comp=Z,12nm,1.4s						
I07A	**Izee**	**85.69**	**37**	P	**P**	**04 41 13.1**	**+0.1**
J08A	**Circle Bar Ran**	**85.80**	**38**	IAmb	IAmb	04 42 08.9	
	comp=Z,3.5nm,0.6s						
RPSI	**Rantau Prapat**	**86.72**	**274**	P	**P**	**04 41 17.3**	**-1.3**
RPSI				IAmb	IAmb	04 41 21.2	
	comp=Z,14nm,1.2s						
KLR	**Kul'dur**	**87.08**	**329**	P	**P**	**04 41 19.8**	**+0.3**
	comp=Z,3.1nm,0.9s,baz=161,slow=4.7,SNR=5.1						
GSI	**Gunungsitoli**	**87.37**	**273**	P	**P**	**04 41 22.5**	**+0.7**
MNTX	**Cornudas Mount**	**87.62**	**54**	IAmb	IAmb	04 41 23.9	
	comp=Z,6.1nm,1.1s						
TX32	**Lajitas Array**	**87.70**	**56**	IAmb	IAmb	04 41 39.7	
	comp=Z,12nm,1.6s						
TXAR	**Lajitas Array**	**87.70**	**56**	P	**P**	**04 41 23.2**	**+0.1**
	comp=Z,1.7nm,1.0s,baz=209,slow=7.2,SNR=13						
TXAR				LR	LR	05 12 28.0	
	comp=Z,70nm,22.0s,baz=0.0,slow=30						
MA2	**Magadan**	**88.30**	**344**	P	**P**	**04 41 25.1**	**0.0**
	comp=Z,2.6nm,0.4s,baz=139,slow=11,SNR=4.2						
MA2	**Magadan**	**88.30**	**344**	IAmb	IAmb	04 41 26.1	
	comp=Z,27nm,1.5s						
ANMO	**Albuquerque**	**88.53**	**50**	P	**P**	**04 41 27.6**	**+0.6**
	comp=Z,3.2nm,1.1s,baz=218,slow=8.0,SNR=7.2						
ANMO	**Albuquerque**	**88.53**	**50**	P	**P**	**04 41 27.2**	**+0.1**
ANMO				IAmb	IAmb	04 41 29.3	
	comp=Z,10.0nm,1.6s						
PEL	**Peldehue**	**88.55**	**126**	P	**P**	**04 41 25.5**	**-1.7**
PMR	**Palmer**	**88.62**	**12**	P	**P**	**04 41 26.3**	**-0.3**
PMR				IAmb	IAmb	04 41 27.1	
	comp=Z,8.5nm,1.1s						
BALM	**Baldy**	**89.62**	**16**	IAmb	IAmb	04 41 32.5	
	comp=Z,11nm,1.1s						
GLB	**Gilahina Butte**	**89.63**	**15**	IAmb	IAmb	04 41 34.4	
	comp=Z,8.9nm,1.1s						
TRF	**Thorofare Moun**	**90.12**	**11**	IAmb	IAmb	04 41 45.8	
	comp=Z,11nm,1.2s						
BJT	**Baijiatuau**	**90.18**	**315**	P	**P**	**04 41 34.4**	**0.0**
BJT				IAmb	IAmb	04 41 56.2	
	comp=Z,5.0nm,0.7s						
FXWY	**Fox Creek**	**90.28**	**41**	IAmb	IAmb	04 41 45.9	
	comp=Z,4.9nm,0.6s						
DHY	**Denali Highway**	**90.32**	**13**	IAmb	IAmb	04 41 50.2	
	comp=Z,14nm,1.5s						
PAX	**Paxson**	**90.61**	**13**	IAmb	IAmb	04 41 37.6	
	comp=Z,14nm,1.6s						
MCK	**McKinley**	**90.62**	**12**	P	**P**	**04 41 35.3**	**-0.6**
MCK				IAmb	IAmb	04 42 04.5	
	comp=Z,11nm,1.3s						
PDAR	**Pinedale Array**	**90.69**	**42**	P	**P**	**04 41 36.2**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=186,slow=5.4,SNR=5.7						
PDAR				LR	LR	05 19 59.7	
	comp=Z,49nm,18.1s,baz=280,slow=34						
PBKT	**Sadao Pong**	**90.75**	**288**	P	**P**	**04 41 38.4**	**+0.8**
SEY	**Seymchan**	**90.85**	**346**	P	**P**	**04 41 36.7**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=174,slow=7.5,SNR=7.2						
RIDG	**Independent Ri**	**91.43**	**13**	IAmb	IAmb	04 41 41.1	
	comp=Z,9.3nm,1.2s						
MLY	**Manley**	**91.50**	**10**	IAmb	IAmb	04 41 41.7	
	comp=Z,7.3nm,1.6s						
DOT	**Dot Lake**	**91.52**	**14**	IAmb	IAmb	04 41 41.5	
	comp=Z,9.8nm,1.2s						
HDA	**Harding Lake**	**91.61**	**12**	P	**P**	**04 41 38.6**	**-1.9**
HDA				IAmb	IAmb	04 41 52.7	
	comp=Z,4.3nm,1.0s						
CCB	**Clear Creek Bu**	**91.66**	**12**	IAmb	IAmb	04 41 41.4	
	comp=Z,11nm,1.4s						
SCRK	**Sand Creek**	**91.82**	**13**	IAmb	IAmb	04 41 42.5	
	comp=Z,6.2nm,1.3s						
IL31		**91.94**	**12**	P	**P**	**04 41 41.7**	**-0.3**
IL31				IAmb	IAmb	04 41 42.1	
	comp=Z,5.3nm,1.2s						
ILAR	**Eielson Array**	**91.94**	**12**	P	**P**	**04 41 40.8**	**-1.2**
	comp=Z,4.1nm,1.2s,baz=223,slow=4.6,SNR=12						
ILAR				LR	LR	05 16 12.4	
	comp=Z,55nm,21.7s,baz=176,slow=31						
XAN	**Xi'an**	**92.17**	**307**	P	**P**	**04 41 43.4**	**-0.5**
PB14	**IPOC Station P**	**92.83**	**119**	P	**P**	**04 41 46.7**	**-1.0**
PRP	**Porcupine Dome**	**92.87**	**12**	IAmb	IAmb	04 41 49.6	
	comp=Z,8.2nm,1.4s						
KMI	**Kunming**	**92.94**	**296**	P	**P**	**04 41 47.1**	**-0.7**
EGAK	**Eagle**	**93.13**	**14**	IAmb	IAmb	04 41 49.8	
	comp=Z,9.5nm,1.5s						
CMAR	**Chiang Mai Arr**	**93.30**	**289**	P	**P**	**04 41 50.6**	**+1.2**
	comp=Z,2.0nm,0.4s,baz=123,slow=5.3,SNR=12						
CMAR				LR	LR	05 23 39.6	
	comp=Z,38nm,18.0s,baz=184,slow=36						
BILL	**Bilibino**	**93.36**	**353**	P	**P**	**04 41 47.8**	**-0.7**
BILL				IAmb	IAmb	04 41 49.8	
	comp=Z,10nm,1.4s						
CHTO	**Chiang Mai**	**93.45**	**289**	P	**P**	**04 41 50.0**	**-0.1**
LPAZ	**La Paz**	**98.69**	**112**	LR	LR	05 18 48.2	
	comp=Z,38nm,19.1s,baz=260,slow=30						
YKA	**Yellowknife Ar**	**99.48**	**24**	P	**Pdif**	**04 42 16.0**	**-0.3**
	comp=Z,0.2nm,0.8s,baz=232,slow=4.3,SNR=5.1						
YKA				LR	LR	05 21 09.0	
	comp=Z,79nm,20.9s,baz=0.0,slow=32						
MKAR	**Makanchi Array**	**115.43**	**312**	PKP	**PKPdf**	**04 47 14.8**	**-0.9**
	comp=Z,0.8nm,0.9s,baz=61,slow=4.1,SNR=4.8						
KURK	**Kurchatov**	**118.33**	**316**		**PKPdf**	**04 47 19.6**	**-1.6**
KURBB	**Kurchatov Arra**	**118.38**	**316**	PKP	**PKPdf**	**04 47 19.5**	**-1.7**
	comp=Z,0.9nm,0.8s,baz=95,slow=2.1,SNR=4.5						
BVAR	**Borovoye Array**	**123.48**	**318**	PKP	**PKPdf**	**04 47 29.5**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=84,slow=7.6,SNR=5.2						
AKASG	**Malin Array Be**	**147.57**	**330**	PKPbc	**PKPdf**	**04 48 16.8**	**+1.4**
	comp=Z,1.2nm,0.4s,baz=30,slow=1.9,SNR=9.0						
AKBB	**Malin Array Si**	**147.57**	**330**		**PKPdf**	**04 48 17.0**	**+1.6**
ILGA	**Ilgaz**	**150.42**	**311**		**PKPbc**	**04 48 26.4**	**+0.5**
BRTR	**Keskin Array B**	**151.00**	**308**	PKPbc	**PKPbc**	**04 48 26.2**	**-1.0**
	comp=Z,2.1nm,0.9s,baz=151,slow=2.8,SNR=10.0						
OJC	**Ojcow**	**151.72**	**338**		**PKPbc**	**04 48 28.2**	**-0.1**
CLL	**Collm**	**152.53**	**348**	*e*PKPdf	**PKPdf**	**04 48 24.0**	**+0.9**
	comp=Z,2.0nm,0.8s						
CLL				*e*PKPbc	**PKiKP**	**04 48 31.0**	**+0.6**
	comp=Z,11nm,1.2s						
CLL				*i* PKPab	**PKPab**	**04 48 41.6**	**+1.1**
	comp=Z,5.0nm,1.0s						
CLL				*es*PKPab	**sPKPab**	**04 48 57.0**	**+4.4**
CLL				*e*PSKS		05 02 30.0	
CLL				*e*		05 06 24.0	
CLL				*e*SS	SS	05 11 45.0	+5.1
CLL	**Collm**	**152.53**	**348**		**PKiKP**	**04 48 30.9**	**+0.6**
MLR	**Muntele Rosu**	**152.74**	**325**	PKPbc	**PKPbc**	**04 48 30.5**	**-0.5**
	comp=Z,3.4nm,0.8s,baz=354,slow=0.9,SNR=4.8						
VYHS	**Vyhne**	**153.53**	**338**	*e*PKP	**PKPab**	**04 48 44.9**	**+0.1**

HWA	**Hwalien**	**0.27**	**205**	*e*P	Pb	04 41 28.9	-0.4
	baz=210						
NNSB	**Datong**	**0.38**	**303**	⇓*i*P	Pg	04 41 30.7	+0.2
	baz=303						
NNSH	**Datong**	**0.38**	**303**	⇓*i*P	Pg	04 41 30.7	+0.2
	baz=303						
NNSH				*e*S	Sg	04 41 35.9	+0.2
	baz=303						
NNS	**Nan Shan**	**0.39**	**304**	⇓*i*P	Pg	04 41 31.0	+0.2
	baz=304						
TWC	**Suao**	**0.40**	**15**	*e*P	Pg	04 41 30.7	-0.1
	baz=9.0						
TWC				*e*S	Sg	04 41 36.0	-0.4
	baz=9.0						
NDT	**Datong Townshi**	**0.43**	**332**	⇓*i*P	Pb	04 41 31.8	-0.3
	baz=332						
WHF	**Hehuan Shan**	**0.43**	**260**	⇓*i*P	Pg	04 41 31.6	+0.1
	baz=261						
ENTT	**Nioudou**	**0.44**	**340**	⇓*i*P	Pg	04 41 32.0	+0.3
	baz=340						
ESL	**Shilin**	**0.49**	**214**	*e*P	Pg	04 41 31.3	-1.1
	baz=220						
EOS1	**EOS1**	**0.49**	**48**	*e*P	Pb	04 41 33.0	0.0
	baz=38						
TWE	**Neicheng**	**0.50**	**353**	⇓*i*P	Pb	04 41 33.1	-0.3
	baz=359						
TDCB	**Techi**	**0.52**	**274**	*e*P	Pb	04 41 33.5	-0.3
	baz=274						
TDCB				*e*S	Sg	04 41 40.0	-0.1
	baz=274						
CHGB	**Renai**	**0.53**	**253**	⇓*i*P	Pg	04 41 33.6	+0.3
	baz=249						
CHGB				*e*S	Sg	04 41 41.0	+0.5
	baz=249						
YHNB	**Yeheng**	**0.55**	**324**	⇓P	Pb	04 41 34.0	-0.3
	baz=324						
NSK	**Sanguang**	**0.57**	**323**	⇓*i*P	Pg	04 41 34.2	+0.3
	baz=323						
NSK				*e*S	Sg	04 41 42.0	+0.4
	baz=323						
NWLT	**Wulai**	**0.59**	**339**	*e*P	Pb	04 41 34.8	-0.1
	baz=344						
NWLT				*e*S	Sg	04 41 42.7	+0.4
	baz=344						
EGFH	**Guangfu**	**0.61**	**207**	*e*P	Pb	04 41 35.0	-0.2
	baz=213						
NTC	**Toucheng**	**0.64**	**8**	*e*P	Pg	04 41 35.2	0.0
	baz=7.0						
VWDT	**VWDT**	**0.71**	**229**	*e*P	Pg	04 41 36.2	-0.4
	baz=230						
VWDT				*e*S	Sg	04 41 44.1	-1.9
	baz=230						
WHP	**Taichung City**	**0.72**	**275**	*e*P	Pb	04 41 37.6	+0.5
	baz=275						
WHP				*e*S	Sb	04 41 46.8	0.0
	baz=275						
TIPB	**Shuangxi**	**0.75**	**7**	*e*P	Pb	04 41 37.6	-0.1
	baz=5.0						
TIPB				*e*S	Sg	04 41 46.5	-0.9
	baz=5.0						
DPDB	**Guoxing**	**0.76**	**256**	*e*P	Pb	04 41 37.9	+0.1
	baz=257						
HGSD	**Ruisui**	**0.78**	**201**	*e*P	Pb	04 41 38.6	+0.5
	baz=216						
HGSD				*e*S	Sb	04 41 49.4	+1.0
	baz=216						
EHY	**Hungye**	**0.80**	**208**	*e*P	Pb	04 41 39.0	+0.5
	baz=221						
TWB1	**Santiao Chiao**	**0.82**	**17**	*e*P	Pg	04 41 38.2	-0.4
	baz=10.0						
SMLT	**Sun Moon Lake**	**0.83**	**246**	*e*P	Pb	04 41 39.2	+0.2
	baz=247						
SSLB	**Suanglung**	**0.83**	**239**	*e*P	Pg	04 41 38.8	-0.1
	baz=247						
SSLB				*e*S	Sg	04 41 49.7	-0.1
	baz=247						
YULB	**Yu-li**	**0.92**	**206**	*e*P	Pb	04 41 39.4	-0.9
	baz=219						
TWF1	**Yuli**	**0.95**	**205**	*e*P	Pb	04 41 40.5	-0.5
	baz=217						

TAP **24** *04:41:28.0,24.°22N×121.°72E,h16km,ML2.8,C,Taiwan*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.12**	**248**	*i* P	Pg	04 41 31.5	-0.1
	baz=248						
NACB				*i* S	Sg	04 41 33.9	-0.1
	baz=248						
TWD	**Chiawan**	**0.18**	**218**	P	Pg	04 41 32.5	+0.1
	baz=218						
TWD				S	Sg	04 41 35.5	+0.2
	baz=218						
ENA	**Nanau**	**0.21**	**6**	P	Pg	04 41 32.8	-0.1
	baz=7.0						
ENA				S	Sg	04 41 36.0	-0.2
	baz=7.0						
ETLH	**Xiulin Townshi**	**0.21**	**267**	P	Pb	04 41 33.5	-0.1
	baz=267						
ETLH				S	Sg	04 41 36.9	+0.4
	baz=267						
NNSB	**Datong**	**0.37**	**304**	*e*P	Pg	04 41 35.6	0.0
	baz=304						
NNSB				*e*S	Sb	04 41 41.4	-0.5
	baz=304						
NNSB	**Datong**	**0.37**	**304**	*e*S	Pg	04 41 36.0	+0.4
	baz=303						
NNSH	**Datong**	**0.37**	**304**	*e*S	Sg	04 41 41.3	+0.5
	baz=304						
NNS	**Nan Shan**	**0.38**	**305**	*e*P	Pb	04 41 36.9	+0.4
	baz=305						
NNS				*e*S	Sg	04 41 41.8	+0.5
	baz=305						
NNS	**Nan Shan**	**0.38**	**305**	*e*S	Pb	04 41 36.5	-0.1
	baz=304						
TWC	**Suao**	**0.41**	**17**	*e*P	Pb	04 41 37.2	+0.3
	baz=14						
TWC				*e*S	Sg	04 41 42.3	+0.5
	baz=14						
WHF	**Hehuan Shan**	**0.42**	**260**	*e*P	Pg	04 41 36.7	+0.1
	baz=260						
WHF				*e*S	Sg	04 41 42.9	+0.4
	baz=260						
WHF	**Hehuan Shan**	**0.42**	**260**	*e*S	Pg	04 41 37.0	+0.3
	baz=261						
NDT	**Datong Townshi**	**0.42**	**334**	*e*P	Pb	04 41 37.1	-0.1
	baz=334						
NDT				*e*S	Sb	04 41 43.3	0.0
	baz=334						
NDT	**Datong Townshi**	**0.42**	**334**	S	Pb	04 41 37.0	-0.2
	baz=332						
ENTT	**Nioudou**	**0.44**	**342**	P	Pb	04 41 37.4	-0.1
	baz=342						
ENTT				*e*S	Sb	04 41 43.5	-0.3
	baz=342						
ENTT	**Nioudou**	**0.44**	**342**	S	Pg	04 41 37.4	0.0
	baz=340						
EOS1	**EOS1**	**0.50**	**49**	*e*P	Pb	04 41 39.2	+0.8
	baz=38						
TWE	**Neicheng**	**0.50**	**355**	P	Pb	04 41 38.4	-0.1
	baz=356						
TWE				*e*S	Sb	04 41 45.4	-0.1
	baz=356						
TWE	**Neicheng**	**0.50**	**355**	*e*S	Pb	04 41 38.4	-0.1
	baz=359						
CHGB	**Renai**	**0.52**	**252**	*e*P	Pb	04 41 39.1	+0.2
	baz=248						
CHGB				*e*S	Sb	04 41 45.9	-0.4
	baz=248						
YHNB	**Yeheng**	**0.55**	**325**	*e*P	Pb	04 41 39.2	-0.1
	baz=325						
YHNB				*e*S	Sb	04 41 46.8	-0.2
	baz=325						
YHNB	**Yeheng**	**0.55**	**325**	*e*S	Pb	04 41 39.5	+0.2
	baz=324						
NSK	**Sanguang**	**0.56**	**324**	*e*P	Pb	04 41 39.4	-0.1
	baz=325						
NSK				*e*S	Sb	04 41 47.1	-0.2
	baz=325						
NWLT	**Wulai**	**0.59**	**341**	*e*P	Pb	04 41 40.1	+0.1
	baz=345						
NWLT				*e*S	Sg	04 41 47.8	+0.2
	baz=345						
VWDT	**VWDT**	**0.70**	**229**	*e*P	Pg	04 41 41.6	-0.2
	baz=236						
WHP	**Taichung City**	**0.71**	**275**	*e*P	Pb	04 41 42.0	0.0
	baz=275						
WHP				*e*S	Sb	04 41 52.5	+0.9
	baz=275						

IDC **24** *04:58:55.6±1.5,24.°14S×66.°95W,h174km±28km,mb3.0/1, mb1 3.3/7,mb1mx3.1/24,mbtmp3.8/7,Error ellipse: s-maj=33.6km s-min=18.9km az=100.0*

ISC 24 04:58:55.3±0.9,**24.°23S**±0.°07×**67.°0W**±0.°1,**h181**km,**n7, σ1°99/9,Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.40**	**312**	P	**Pn**	**04 59 37.9**	**+0.6**
	9.1nm,0.3s,baz=143,slow=7.8,SNR=80						
LVC				S	**Sn**	**05 00 08.4**	**-1.4**
	57nm,0.3s,baz=222,slow=12,SNR=85						
CFA	**Coronel Fontan**	**7.43**	**188**	P	**Pn**	**05 00 42.2**	**+1.1**
	0.6nm,0.3s,baz=22,slow=16,SNR=22						
CFA				S	**Sn**	**05 02 01.2**	**-3.7**
	1.7nm,0.3s,baz=247,slow=20,SNR=11						
LPAZ	**La Paz**	**7.97**	**352**	P	**Pn**	**05 00 48.6**	**-0.3**
	0.6nm,0.3s,baz=167,slow=7.7,SNR=17						
SIV	**San Ignacio**	**9.89**	**35**	P	**Pn**	**05 01 12.1**	**-1.4**
	1.1nm,0.3s,baz=232,slow=12,SNR=21						
PLCA	**Paso Flores**	**16.73**	**189**	P	**P**	**05 02 40.4**	**+2.0**
	0.1nm,0.3s,baz=5.7,slow=10,SNR=2.8						
BDFB	**Brasilia**	**19.75**	**68**	P	**P**	**05 03 12.0**	**+0.4**
	0.6nm,0.3s,baz=247,slow=13,SNR=9.3						
TORD	**Torodi Ar. Bea**	**76.63**	**69**	P	**P**	**05 10 27.2**	**+0.7**
	0.2nm,0.3s,baz=267,slow=5.9,SNR=6.1						

DJA **24** **05:01:09.9**±0.7,**9.°S**±4.°×**11.°3E**±.°,**h12**km±6km,**M3.9**/15, **mB5.0/2,mb4.3/4,MLv3.7/15,Mw(mB)4.4/2,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**1.35**	**64**	P	Pn	05 01 34.2	-0.4
JAGI				S	Sg	05 01 53.4	+0.1
GRJI	**Gresik**	**2.19**	**348**	P	Pn	05 01 46.1	0.0
GRJI				S	Sn	05 02 14.1	+1.0
KMMI	**Kalianget**	**2.25**	**27**	P	Pn	05 01 46.8	-0.2
KMMI				S	Sn	05 02 15.2	+0.4
DNP	**Denpasar**	**2.29**	**80**	P	Pn	05 01 47.8	+0.3
DNP				S	Sn	05 02 16.5	+0.9
WOJI	**Wonogiri, Jawa**	**2.33**	**302**	P	Pn	05 01 48.4	+0.3
SRBI	**Singaraja**	**2.46**	**67**	P	Pn	05 01 50.1	+0.2
UGM	**Wanagama**	**2.64**	**296**	P	Pn	05 01 51.8	-0.6
SMRI	**Semarang**	**3.18**	**309**	P	Pn	05 01 59.9	+0.1
PLAI	**Plampang**	**4.79**	**87**	P	Pn	05 02 22.0	0.0
CISI	**Cisompet, Garu**	**5.28**	**286**	P	Pn	05 02 28.8	+0.1
	2.0nm27nm,0.7s						
CNJI	**Cibinong**	**6.00**	**287**	P	Pn	05 02 38.8	+0.2
	0.2nm2µm48nm,1.2s						
WBSI	**Waikabubak, Su**	**6.40**	**96**	P	Pn	05 02 44.0	-0.1
	0.1nm28nm,0.9s						
KBKI	**Kotabaru**	**6.57**	**30**	P	Pn	05 02 46.6	+0.1

TIR **24** *05:10:01.1,41.°49N×19.°38E,h6km,Md2.7/4*
SKO **24** *05:10:02.1,41.°3N×19.°30E,h2km*
PDG **24** *05:10:03.7±0.2,41.°55N×19.°58E,h11km,ML2.2/14,Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
BEO **24** *05:10:04.2±0.5,41.°51N×19.°54E,h12km±2km,ML2.0/9*

ISC 24 05:10:03.1±1.1,**41.°48N**±0.°03×**19.°49E**±0.°03,**h14**km±8km, **n41,σ0°93/81,7C-7D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.31**	**116**	*e*Pg	**Pg**	**05 10 09.5**	**0.0**
TIR				*e*Sg	**Sb**	**05 10 15.2**	**-0.2**
TIR	**Tirane**	**0.31**	**116**	*i* PG	**Pg**	**05 10 09.7**	**+0.1**
TIR				*i* SG	**Sb**	**05 10 15.5**	**0.0**
ULC	**Ulcinj**	**0.52**	**339**	⇓*i*Pg	**Pg**	**05 10 13.0**	**-0.3**
ULC				*i* Sg	**Sg**	**05 10 20.8**	**+0.6**
PUK	**Puka**	**0.63**	**28**	*i* PG	**Pg**	**05 10 14.5**	**-1.0**
PUK				*i* SG	**Sb**	**05 10 24.7**	**-0.2**
PHP	**Peshkopia**	**0.74**	**74**	*i* PG	**Pg**	**05 10 16.6**	**-0.9**
PHP				*i* SG	**Sn**	**05 10 29.1**	**-1.3**
DRME	**Dracevica, Mon**	**0.74**	**342**	⇓*i*Pg	**Pg**	**05 10 16.8**	**-0.7**
DRME				*i* Sg	**Sb**	**05 10 28.0**	**+0.2**
BUM	**Brajici-Budva**	**0.93**	**332**	⇑*i*Pg	**Pg**	**05 10 20.7**	**-0.4**
BUM				*i* Sg	**Sb**	**05 10 35.0**	**+1.6**
PDG	**Podgorica**	**0.96**	**349**	*e*Pg	**Pg**	**05 10 21.1**	**-0.6**
PDG				*e*Sg	**Sb**	**05 10 35.0**	**+0.8**
TTG	**Podgorica**	**0.96**	**349**	⇓*i*Pg	**Pg**	**05 10 20.7**	**-1.0**
TTG				*i* Sg	**Sb**	**05 10 35.1**	**+0.8**
BCI	**Bajram Curri**	**0.98**	**26**	*i* PG	**Pg**	**05 10 20.5**	**-1.6**
BCI				*i* SG	**Sn**	**05 10 36.1**	**-0.2**
OHR	**Ohrid**	**1.05**	**110**	*i* Pg	**Pg**	**05 10 22.6**	**-0.8**
OHR				*i* Sg	**Sn**	**05 10 39.0**	**+0.9**
OHR				*e*Lg	Lg	05 10 42.4	
	comp=N,35nm,0.3s						
OHR	**Ohrid**	**1.05**	**110**	*i* Pg	**Pg**	**05 10 22.6**	**-0.8**
OHR				*i* Sg	**Sn**	**05 10 39.0**	**+0.9**
OHR				*e*Lg	Lg	05 10 42.4	
	comp=N,35nm,0.3s						
CEME	**Cevo**	**1.15**	**338**	⇓*i*Pg	**Pb**	**05 10 24.2**	**-0.6**
CEME				*i* Sg	**Sn**	**05 10 41.7**	**+1.3**
PVY	**Plav**	**1.16**	**17**	⇑*i*Pg	**Pb**	**05 10 23.6**	**-1.5**
PVY				*i* Sg	**Sg**	**05 10 40.5**	**-0.2**
HCY	**Herceg Novi**	**1.22**	**323**	⇓*i*Pg	**Pn**	**05 10 26.0**	**+0.2**
HCY				*i* Sg	**Sn**	**05 10 45.0**	**+2.9**
NKME	**Niksic**	**1.34**	**343**	⇓*i*Pg	**Pn**	**05 10 28.0**	**+0.4**
NKME				*i* Sg	**Sg**	**05 10 47.9**	**+1.4**
KOME	**Kolasin**	**1.37**	**1**	⇑*i*Pg	**Pn**	**05 10 27.7**	**-0.2**
KOME				*i* Sg	**Sg**	**05 10 47.8**	**+0.6**
NKY	**Niksic**	**1.38**	**345**	⇑*i*Pg	**Pn**	**05 10 28.8**	**+0.7**
NKY				*i* Sg	**Sg**	**05 10 49.0**	**+1.4**
IVA	**Berane**	**1.42**	**12**	⇓*i*Pg	**Pn**	**05 10 29.0**	**+0.4**
IVA				*i* Sg	**Sg**	**05 10 49.1**	**+0.2**
TREB	**Trebinje**	**1.50**	**326**	*e*Pg	**Pn**	**05 10 30.5**	**+0.9**
TREB				*e*Sg	**Sg**	**05 10 51.5**	**+0.1**
SKO	**Skopje**	**1.54**	**71**	*e*Pg	**Pb**	**05 10 31.7**	**+0.3**
SKO				*e*Sg	**Sg**	**05 10 52.1**	**-0.5**
DBRK	**Dubrovnik**	**1.55**	**320**	*e*Pn	**Pn**	**05 10 30.8**	**+0.4**
DBRK				*e*Sn	**Sn**	**05 10 50.5**	**+0.2**
BRY	**Bratogost**	**1.58**	**334**	⇑*i*Pg	**Pn**	**05 10 32.1**	**+1.1**
BRY				*i* Sg	**Sg**	**05 10 55.5**	**+1.3**
UPM	**Unac-Piva**	**1.77**	**346**	⇑*i*Pn	**Pn**	**05 10 35.0**	**+1.4**
UPM				*i* Sn	**Sg**	**05 10 59.6**	**-0.6**
SJES	**Sjenica**	**1.81**	**11**	*e*Pg	**Pb**	**05 10 36.2**	**0.0**
SJES				*e*Sg	**Sg**	**05 11 00.1**	**-1.3**
PLE	**Pljevlja**	**1.85**	**358**	⇑*i*Pn	**Pn**	**05 10 35.3**	**+0.7**
PLE				*i* Sn	**Sb**	**05 11 01.0**	**+1.2**
STON	**Ston**	**1.92**	**317**	*e*Pn	**Pn**	**05 10 35.2**	**-0.2**
STON				Sn	**Sn**	**05 10 58.5**	**-0.9**
SELS	**Selova**	**2.11**	**34**	*e*Pn	**Pn**	**05 10 38.4**	**+0.3**
SELS				*e*Sn	**Sn**	**05 11 03.9**	**-0.3**
BARS	**Barje**	**2.18**	**52**	*e*Pn	**Pn**	**05 10 39.6**	**+0.6**
BARS				*e*Sn	**Sn**	**05 11 05.6**	**-0.3**
BBLS	**Lazići**	**2.38**	**358**	*e*Pn	**Pn**	**05 10 42.8**	**+0.9**
BBLS				*e*Sn	**Sn**	**05 11 10.8**	**-0.1**
BOSS	**Bosilegrad**	**2.45**	**65**	*e*Pn	**Pn**	**05 10 43.1**	**+0.4**
BOSS				*e*Sn	**Sn**	**05 11 12.8**	**+0.4**
GRUS	**Gruza**	**2.57**	**20**	*e*Pn	**Pn**	**05 10 45.3**	**+1.0**
MAKA	**Makarska**	**2.57**	**315**	*e*Pn	**Pn**	**05 10 44.1**	**-0.2**
MAKA				Sn	**Sn**	**05 11 14.3**	**-1.1**
DIVS	**Divibare**	**2.64**	**8**	*e*Pn	**Pn**	**05 10 47.6**	**+2.2**
DIVS				*e*Sn	**Sn**	**05 11 18.4**	**+1.1**
RICI	**Ricice**	**2.66**	**320**	*i* Pn	**Pn**	**05 10 45.5**	**-0.1**
RICI				Sn	**Sn**	**05 11 17.9**	**+0.1**
HVAR	**Hvar**	**2.82**	**308**	*e*Pn	**Pn**	**05 10 47.4**	**-0.4**
HVAR				Sn	**Sn**	**05 11 19.9**	**-1.7**
ZAPS	**Zavoj**	**2.94**	**51**	*e*Pn	**Pn**	**05 10 51.1**	**+1.7**
ZAPS				*e*Sn	**Sn**	**05 11 23.6**	**-0.9**
KIJV	**Kijevo**	**3.40**	**319**	*e*Pn	**Pn**	**05 10 56.4**	**+0.7**
KIJV				Sn	**Sn**	**05 11 35.3**	**-0.5**
ZIRJ	**Zirje**	**3.58**	**309**	*e*Pn	**Pn**	**05 10 57.9**	**-0.3**
ZIRJ				Sn	**Sn**	**05 11 39.0**	**-1.3**
MORI	**Morici**	**3.67**	**312**	*e*Pn	**Pn**	**05 10 59.7**	**+0.2**
MORI				Sn	**Sn**	**05 11 41.9**	**-0.6**
DUGI	**Dugi Otok**	**4.12**	**309**	*e*Pn	**Pn**	**05 11 05.9**	**+0.3**
DUGI				Sn	**Sn**	**05 11 52.2**	**-1.4**

NEIC **24** *05:11:09.2±2.3,4.°9S±0.°1×153.°8E±0.°1,h52km±8km, mb4.3/11,Error ellipse: s-maj=17.6km s-min=14.5km az=199.0*
IDC **24** *05:11:10.3±4.6,4.°86S×153.°77E,h60km±37km,mb3.4/5, mb1 3.7/6,mb1mx3.5/22,mbtmp3.8/6,ML2.3/1,Error ellipse: s-maj=34.7km s-min=18.8km az=89.0*

ISC 24 05:11:09.7±0.9,**4.°86S**±0.°09×**153.°77E**±0.°10,**h50**km,**n21, σ1°35/25,mb4.1/11,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.73**	**292**		**Pn**	**05 11 37.3**	**-0.2**
RABL				Sn	**Sn**	**05 12 00.1**	**+1.6**
KRVT	**Keravat (AS076**	**1.82**	**287**	P	**Pn**	**05 11 37.8**	**-0.9**
	55nm,0.3s,baz=264,slow=0.9,SNR=20						
KRVT				S	**Sn**	**05 12 01.9**	**+1.3**
	327nm,0.3s,baz=172,slow=22,SNR=18						
PMG	**Port Moresby**	**7.97**	**235**	P	**Pn**	**05 13 04.1**	**+1.1**
	2.5nm,0.3s,baz=91,slow=5.9,SNR=7.5						
PMG				S	**Sn**	**05 14 32.5**	**+0.7**
	8.9nm,0.3s,baz=1.9,slow=22,SNR=7.8						
PMG	**Port Moresby**	**7.97**	**235**		**Pn**	**05 13 03.8**	**+0.8**
FAKI	**Fak Fak**	**21.56**	**274**	P	**P**	**05 15 54.4**	**-0.9**
MTN	**Manton Dam**	**23.72**	**249**	P	**P**	**05 16 16.2**	**-1.3**
MTN				IAmb	IAmb	05 16 24.0	
	comp=Z,23nm,1.4s						
WB0	**Warramunga Arr**	**24.00**	**230**	P	**P**	**05 16 19.4**	**-0.6**
WB0				IAmb	IAmb	05 16 21.3	
	comp=Z,8.1nm,1.2s						
WR0	**Warramunga Arr**	**24.00**	**230**	P	**P**	**05 16 18.7**	**-1.3**
WR0				IAmb	IAmb	05 16 19.7	
	comp=Z,9.9nm,1.4s						
WB2	**Warramunga Arr**	**24.13**	**230**	P	**P**	**05 16 19.7**	**-1.5**
WB2				IAmb	IAmb	05 16 31.1	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**24.14**	**230**	P	**P**	**05 16 19.9**	**-1.4**
	comp=Z,1.5nm,0.5s,baz=55,slow=9.9,SNR=15						
ASAR	**Alice Springs**	**26.77**	**224**	P	**P**	**05 16 44.4**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=57,slow=9.7,SNR=9.0						
KNRA	**Kununurra**	**26.82**	**245**	P	**P**	**05 16 46.6**	**+1.0**
KNRA				IAmb	IAmb	05 16 50.3	
	comp=Z,12nm,0.7s						
FITZ	**Fitzroy Crossi**	**30.48**	**242**	P	**P**	**05 17 16.2**	**-2.0**
FORT	**Forrest**	**35.36**	**220**	P	**P**	**05 17 59.3**	**-1.4**
JAGI	**Jajag, Banyuwa**	**39.50**	**263**	P	**P**	**05 18 36.5**	**+0.6**
JAGI				IAmb	IAmb	05 18 39.7	
	comp=Z,17nm,1.0s						
VNDA	**Vanda**	**72.74**	**178**	P	**P**	**05 22 33.2**	**+1.0**
	comp=Z,1.0nm,1.0s,baz=315,slow=6.8,SNR=4.4						
VNDA	**Vanda**	**72.74**	**178**	P	**P**	**05 22 32.9**	**+0.7**
VNDA				IAmb	IAmb	05 22 33.0	
	comp=Z,4.1nm,1.5s						
MK31	**Makanchi Array**	**81.01**	**319**	P	**P**	**05 23 19.6**	**+0.3**
MKAR	**Makanchi Array**	**81.01**	**319**	P	**P**	**05 23 18.8**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=108,slow=7.4,SNR=4.5						
ILAR	**Eielson Array**	**81.85**	**22**	P	**P**	**05 23 22.8**	**-0.6**
	comp=Z,0.5nm,0.9s,baz=258,slow=4.5,SNR=5.0						
ILAR				pP	**sP**	**05 23 45.0**	**+3.5**
	comp=Z,0.8nm,0.7s,baz=251,slow=5.9,SNR=6.9						
TORD	**Torodi Ar. Bea**	**151.24**	**289**	PKPbc	**PKPbc**	**05 30 57.4**	**-1.3**
	comp=Z,1.8nm,0.8s,baz=44,slow=2.3,SNR=9.2						

PDG **24** *05:26:06.2±0.2,43.°28N×17.°91E,h11km,ML2.7/11,Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
BEO **24** *05:26:06.9±0.3,43.°33N×17.°90E,h5km±2km,ML2.9/12*
RHSSO **24** *05:26:07.1±0.2,43.°29N×17.°96E,h6km±2km,ML3.0/13*

ISC 24 05:26:06.6±1.0,**43.°31N**±0.°02×**17.°96E**±0.°01,**h5**km±9km, **n85,σ1°20/152,20C-19D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.48**	**204**	*e*Pg	**Pg**	**05 26 15.6**	**-0.2**
STON				*e*Sg	**Sb**	**05 26 22.9**	**-2.0**
STON	**Ston**	**0.48**	**204**	⇓*i*Pg	**Pg**	**05 26 15.4**	**-0.4**
STON				*e*Sg	**Sg**	**05 26 22.6**	**+0.5**
STON	**Ston**	**0.48**	**204**	*i* Pg	**Pg**	**05 26 15.7**	**-0.1**
STON				Sg	**Sb**	**05 26 23.1**	**-1.7**
BRY	**Bratogost**	**0.59**	**134**	⇑*i*Pg	**Pg**	**05 26 17.2**	**-0.7**
BRY				*e*Sg	**Sg**	**05 26 26.6**	**+1.0**
BRY	**Bratogost**	**0.59**	**134**	⇑*i*Pg	**Pg**	**05 26 17.3**	**-0.7**
BRY				*i* Sg	**Sg**	**05 26 26.7**	**+1.1**
RICI	**Ricice**	**0.63**	**287**	*i* Pg	**Pg**	**05 26 18.8**	**0.0**
RICI				Sg	**Sb**	**05 26 28.8**	**-0.6**
DBRK	**Dubrovnik**	**0.66**	**168**	*i* Pg	**Pg**	**05 26 19.1**	**-0.1**
DBRK				Sg	**Sb**	**05 26 29.9**	**-0.1**
TREB	**Trebinje**	**0.66**	**154**	*e*Pg	**Pg**	**05 26 18.6**	**-0.7**
TREB				*e*Sg	**Sg**	**05 26 28.8**	**+1.0**
TREB	**Trebinje**	**0.66**	**154**	⇑*i*Pg	**Pg**	**05 26 18.5**	**-0.7**
TREB				*e*Sg	**Sg**	**05 26 28.9**	**+1.1**
MAKA	**Makarska**	**0.69**	**268**	*i* Pg	**Pg**	**05 26 19.6**	**-0.3**
MAKA				Sg	**Sb**	**05 26 30.2**	**-0.7**
UPM	**Unac-Piva**	**0.70**	**99**	⇓*i*Pg	**Pg**	**05 26 20.1**	**0.0**
UPM				*e*Sg	**Sg**	**05 26 30.4**	**+1.3**
UPM	**Unac-Piva**	**0.70**	**99**	⇓*i*Pg	**Pg**	**05 26 20.0**	**0.0**
UPM				*i* Sg	**Sb**	**05 26 31.8**	**+0.5**
NKY	**Niksic**	**0.90**	**123**	⇓*i*Pg	**Pg**	**05 26 23.0**	**-0.7**
NKY				*i* Sg	**Sb**	**05 26 37.8**	**+0.6**
NKME	**Niksic**	**0.91**	**127**	⇑*i*Pg	**Pg**	**05 26 23.3**	**-0.7**
NKME				*i* Sg	**Sb**	**05 26 37.5**	**+0.2**
HCY	**Herceg Novi**	**0.95**	**156**	*e*Pg	**Pg**	**05 26 23.8**	**-1.0**
HCY				*e*Sg	**Sg**	**05 26 37.1**	**0.0**
HCY	**Herceg Novi**	**0.95**	**156**	⇑*i*Pg	**Pg**	**05 26 23.6**	**-1.2**
HCY				*i* Sg	**Sb**	**05 26 38.2**	**-0.2**
CEME	**Cevo**	**1.04**	**137**	⇑*i*Pg	**Pg**	**05 26 25.4**	**-1.1**

DUGI	**Dugi Otok**	**2.22**	**289**	*e*Pn		**Pn**	**05 26 45.1**	**+1.1**
DUGI					Sn	**Sb**	**05 27 15.6**	**+0.7**
FRGS	**Fruska Gora**	**2.27**	**35**	*e*Pn		**Pn**	**05 26 45.9**	**+1.0**
FRGS					*e*Sn	**Sn**	**05 27 12.9**	**-0.4**
FRGS	**Fruska Gora**	**2.27**	**35**	*e*Pn		**Pn**	**05 26 46.1**	**+1.2**
FRGS					*e*Sn	**Sn**	**05 27 13.2**	**-0.1**
SELS	**Selova**	**2.31**	**91**	*e*Pn		**Pn**	**05 26 45.6**	**+0.3**
TIR	**Tirane**	**2.42**	**144**	⇑P		**Pn**	**05 26 48.6**	**+1.8**
TIR				⇑S		**Sb**	**05 27 19.8**	**-0.9**
MOSL	**Moslavina**	**2.46**	**340**	*e*Pn		**Pn**	**05 26 47.5**	**+0.1**
NVLJ	**Novalja**	**2.56**	**300**	*e*Pn		**Pn**	**05 26 49.9**	**+1.1**
NVLJ					Sn	**Sb**	**05 27 22.7**	**-2.1**
MATE	**Matera**	**2.82**	**200**	⇑P		**Pb**	**05 26 56.5**	**-0.9**
BARS	**Barje**	**2.87**	**99**	*e*Pn		**Pn**	**05 26 53.7**	**+0.7**
OZLJ	**Ozalj**	**2.92**	**323**	*e*Pn		**Pn**	**05 26 54.8**	**+1.2**
MORH	**Mrgy, Hungar**	**2.94**	**9**	*e*Pn		**Pn**	**05 26 54.4**	**+0.4**
PTJ	**Puntijarka**	**2.96**	**332**	*e*Pn		**Pn**	**05 26 54.6**	**+0.3**
KALN	**Kalnik**	**3.02**	**340**	*e*Pn		**Pn**	**05 26 54.9**	**-0.2**
MDVR	**Moldovita**	**3.08**	**60**	⇑P		**Pg**	**05 27 04.8**	**-0.8**
MDVR				⇑S		**Sg**	**05 27 44.9**	**-0.5**
CRES	**Cresnjev**	**3.09**	**325**	*e*Pn		**Pn**	**05 26 56.9**	**+0.9**
CRES					*e*Sn	**Sn**	**05 27 33.3**	**0.0**
ZAGS	**Zajecar**	**3.14**	**79**	*e*Pn		**Pn**	**05 26 57.3**	**+0.5**
ZAPS	**Zavoj**	**3.41**	**89**	*e*Pn		**Pn**	**05 27 01.9**	**+1.4**
BOSS	**Bosilegrad**	**3.42**	**102**	*e*Pn		**Pn**	**05 27 02.0**	**+1.4**
BZS	**Buzias**	**3.49**	**47**	⇓P		**Pn**	**05 26 59.4**	**-2.1**
CEY	**Cerknica**	**3.50**	**315**	*e*Pn		**Pn**	**05 27 02.2**	**+0.4**
CEY					*e*Sn	**Sn**	**05 27 43.4**	**-0.3**
HERR	**Herculane**	**3.57**	**62**	⇑P		**Pb**	**05 27 07.7**	**-2.5**
VTS	**Vitosha**	**3.93**	**98**	⇓P		**Pb**	**05 27 14.1**	**-2.4**
VTS				⇑S		**Sb**	**05 28 03.4**	**-1.0**
SOKA	**Soboth**	**3.96**	**329**	*e*Pn		**Pn**	**05 27 08.6**	**+0.5**
SOKA	3.6nm,0.3s,SNR=12				*e*Sn	**Sn**	**05 27 53.2**	**-1.7**
	1.2nm,0.2s							
SIRR	**Siria**	**3.96**	**40**	⇓P		Pn	05 27 12.8	+4.8
SIRR				⇓S		**Sn**	**05 27 53.0**	**-1.7**
OBKA	**Obir**	**4.01**	**324**	*i* Pn		**Pn**	**05 27 10.5**	**+1.7**
	1.2nm,0.2s							
OBKA					Pg	**Pb**	**05 27 20.1**	**+2.3**
	2.7nm,0.3s							
OBKA					*e*Sn	**Sn**	**05 27 56.6**	**+0.3**
	8.1nm,0.6s							
GZR	**Gura Zlata**	**4.03**	**57**	⇓P		**Pb**	**05 27 15.1**	**-3.0**
ARSA	**Arzberg**	**4.30**	**337**	*i* Pn		**Pn**	**05 27 12.9**	**+0.2**
	4.8nm,0.3s							
ARSA					*e*Sn	**Sn**	**05 28 01.5**	**-1.7**
	2.4nm,0.3s							
PSZ	**Piszkesteto**	**4.80**	**16**	⇓P		**Pn**	**05 27 22.5**	**+2.9**
PSZ				⇑S		**Sn**	**05 28 12.3**	**-3.4**
CONA	**Conrad Observa**	**4.85**	**343**	*e*Pn		**Pn**	**05 27 19.9**	**-0.4**
	0.5nm,0.2s							
CONA					*e*Sn	**Sn**	**05 28 14.4**	**-2.4**
	6.3nm,0.4s							
KBA	**Koelnbreinsper**	**4.98**	**321**	*e*Pn		**Pn**	**05 27 24.3**	**+2.1**
	1.1nm,0.2s,SNR=4.0							
KBA					*i* Sn	**Sn**	**05 28 20.7**	**+0.3**
	0.5nm,0.2s							
ABTA	**Abfaltersbach**	**5.17**	**314**	*i* Pn		**Pn**	**05 27 26.0**	**+1.3**
	0.7nm,0.2s							
ABTA					*e*Sn	**Sn**	**05 28 24.5**	**-0.3**
	3.5nm,0.6s							
VYHS	**Vyhne**	**5.22**	**6**	*e*SN		**Sn**	**05 28 23.4**	**-2.5**
MOA	**Molln**	**5.23**	**332**	*e*Pn		**Pn**	**05 27 27.3**	**+1.9**
	1.3nm,0.2s							
MOA					*i* Sn	**Sn**	**05 28 26.2**	**+0.1**
	1.2nm,0.2s							
WTTA	**Wattenberg**	**5.96**	**314**	*e*Pn		**Pn**	**05 27 36.9**	**+1.3**
	2.3nm,0.3s							
WATA	**Walderalm**	**6.04**	**314**	*e*Pn		**Pn**	**05 27 38.9**	**+2.3**
	1.1nm,0.2s							
SQTA	**Sankt Quirin**	**6.16**	**312**	*e*Pn		**Pn**	**05 27 40.4**	**+2.0**
	2.4nm,0.3s							
MOTA	**Moosalm**	**6.30**	**312**	*e*Pn		**Pn**	**05 27 42.0**	**+1.8**
	3.9nm,0.5s,SNR=6.3							
MOTA					*e*Sn	**Sn**	**05 28 54.3**	**+1.7**
	2.0nm,0.6s							
FETA	**Feichten**	**6.32**	**308**	*e*Pn		**Pn**	**05 27 42.5**	**+2.0**
	0.8nm,0.3s							
FETA					Sn	**Sn**	**05 28 55.5**	**+2.3**
	6.1nm,1.0s							

*PDG **24** 05:28:43.5±0.2,43°.29N×17°.94E,h8km,MD3.1/1, ML2.7/13,Error ellipse: s-maj=0.4km s-min=0.8km az=0.0*
*BEO **24** 05:28:43.7±0.3,43°.32N×17°.89E,h6km±2km,ML2.8/15*
*RHSSO **24** 05:28:44.3±0.2,43°.30N×17°.97E,h7km±2km,ML2.9/13*

ISC 24 05:28:43.4±1.1,43°.31N±0°.02×17°.95E±0°.01,h5km±9km, n75,σ1§03/136,24C-14D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.48**	**203**	*e*Pg	**Pg**	**05 28 52.4**	**-0.2**
STON				*e*Sg	**Sb**	**05 28 59.9**	**-1.7**
STON	**Ston**	**0.48**	**203**	⇓*i*Pg	**Pg**	**05 28 52.4**	**-0.2**
STON				*e*Sg	**Sb**	**05 29 00.0**	**-1.7**
STON	**Ston**	**0.48**	**203**	*i* Pg	**Pg**	**05 28 52.5**	**-0.2**
STON				*i* Sg	**Sb**	**05 28 59.9**	**-1.7**
BRY	**Bratogost**	**0.59**	**134**	⇑*i*Pg	**Pg**	**05 28 54.2**	**-0.7**
BRY				*e*Sg	**Sg**	**05 29 04.0**	**+1.4**
BRY	**Bratogost**	**0.59**	**134**	⇓*i*Pg	**Pg**	**05 28 54.2**	**-0.7**
BRY				*i* Sg	**Sg**	**05 29 02.7**	**+0.1**
RICI	**Ricice**	**0.62**	**287**	*i* Pg	**Pg**	**05 28 55.5**	**+0.1**
RICI				Sg	**Sb**	**05 29 05.1**	**-0.8**
DBRK	**Dubrovnik**	**0.66**	**168**	*i* Pg	**Pg**	**05 28 55.7**	**-0.4**
DBRK				Sg	**Sb**	**05 29 06.3**	**-0.6**
TREB	**Trebinje**	**0.66**	**154**	*e*Pg	**Pg**	**05 28 55.6**	**-0.6**
TREB				*e*Sg	**Sg**	**05 29 05.8**	**+1.0**
TREB	**Trebinje**	**0.66**	**154**	⇑*i*Pg	**Pg**	**05 28 55.4**	**-0.8**
TREB				*e*Sg	**Sb**	**05 29 06.4**	**-0.6**
MAKA	**Makarska**	**0.68**	**268**	*i* Pg	**Pg**	**05 28 56.2**	**-0.3**
MAKA				Sg	**Sb**	**05 29 06.7**	**-0.8**
UPM	**Unac-Piva**	**0.70**	**99**	⇓*i*Pg	**Pg**	**05 28 57.0**	**0.0**
UPM				*e*Sg	**Sb**	**05 29 07.7**	**-0.6**
UPM	**Unac-Piva**	**0.70**	**99**	⇑*i*Pg	**Pg**	**05 28 56.9**	**0.0**
UPM				*i* Sg	**Sg**	**05 29 07.5**	**+1.4**
NKY	**Niksic**	**0.91**	**123**	⇓*i*Pg	**Pg**	**05 29 00.2**	**-0.7**
NKY				*i* Sg	**Sg**	**05 29 13.6**	**+0.9**
NKME	**Niksic**	**0.91**	**126**	⇑*i*Pg	**Pg**	**05 29 00.2**	**-0.7**
NKME				*i* Sg	**Sg**	**05 29 13.7**	**+0.9**
HCY	**Herceg Novi**	**0.95**	**155**	*e*Pg	**Pg**	**05 29 00.8**	**-0.9**
HCY				*e*Sg	**Sb**	**05 29 14.7**	**-0.6**
HCY	**Herceg Novi**	**0.95**	**155**	⇑*i*Pg	**Pg**	**05 29 00.8**	**-0.9**
HCY				*i* Sg	**Sb**	**05 29 15.5**	**+0.2**
CEME	**Cevo**	**1.04**	**137**	⇑*i*Pg	**Pg**	**05 29 02.4**	**-1.0**
CEME				*i* Sg	**Sn**	**05 29 18.8**	**-0.9**
PLE	**Pljevlja**	**1.05**	**89**	⇑*i*Pg	**Pg**	**05 29 03.3**	**-0.2**
PLE				*i* Sg	**Sn**	**05 29 19.5**	**-0.4**
HAPS	**Han Pijesak,BI**	**1.06**	**43**	*e*Pg	**Pg**	**05 29 03.2**	**-0.5**
HAPS				*e*Sg	**Sg**	**05 29 18.3**	**+0.9**
HAPS	**Han Pijesak,BI**	**1.06**	**43**	⇑*i*Pg	**Pg**	**05 29 03.0**	**-0.7**
HAPS				*e*Sg	**Sg**	**05 29 17.8**	**+0.4**
RUDO	**Rudo**	**1.07**	**73**	⇓*i*Pg	**Pg**	**05 29 03.0**	**-1.0**
RUDO				*e*Sg	**Sg**	**05 29 17.9**	**-0.1**
HVAR	**Hvar**	**1.11**	**263**	*e*Pg	**Pg**	**05 29 04.2**	**-0.5**
HVAR				Sg	**Sb**	**05 29 20.0**	**+0.2**
BBLS	**Lazići**	**1.19**	**62**	*e*Pg	**Pg**	**05 29 06.3**	**+0.1**
BBLS				*e*Sg	**Sb**	**05 29 23.0**	**+0.8**
BBLS	**Lazići**	**1.19**	**62**	⇓*i*Pg	**Pg**	**05 29 06.1**	**-0.1**
BBLS				*e*Sg	**Sg**	**05 29 22.1**	**+0.4**
BUM	**Brajici-Budva**	**1.23**	**145**	⇓*i*Pg	**Pb**	**05 29 05.9**	**-1.2**
BUM				*i* Sg	**Sn**	**05 29 25.0**	**+0.8**
KOME	**Kolasin**	**1.23**	**112**	⇓*i*Pg	**Pb**	**05 29 06.5**	**-0.8**
KOME				*i* Sg	**Sn**	**05 29 25.7**	**+1.2**
MGRS	**Mrkonjic Grad**	**1.27**	**331**	⇑*i*Pg	**Pn**	**05 29 07.7**	**-0.1**
MGRS				*e*Sg	**Sn**	**05 29 25.2**	**-0.1**
PDG	**Podgorica**	**1.30**	**132**	*e*Pg	**Pn**	**05 29 07.3**	**-0.9**
PDG				*e*Sg	**Sn**	**05 29 27.1**	**+1.1**
PDG	**Podgorica**	**1.30**	**132**	⇑P	**Pn**	**05 29 07.5**	**-0.8**
PDG				⇑S	**Sn**	**05 29 28.4**	**+2.4**
PDG	**Podgorica**	**1.30**	**132**	*e*Pg	**Pn**	**05 29 07.3**	**-0.9**
PDG				*e*Sg	**Sg**	**05 29 25.5**	**+0.3**
TTG	**Podgorica**	**1.30**	**132**	⇓*i*Pg	**Pn**	**05 29 07.1**	**-1.1**
TTG				*i* Sg	**Sn**	**05 29 27.6**	**+1.6**
KIJV	**Kijevo**	**1.32**	**302**	*i* Pn	**Pn**	**05 29 08.3**	**-0.2**
KIJV				Sn	**Sn**	**05 29 28.3**	**+1.8**
DRME	**Dracevica, Mon**	**1.45**	**141**	*e*Pg	**Pn**	**05 29 10.0**	**-0.2**
DRME				*e*Sg	**Sg**	**05 29 30.2**	**+0.3**
DRME	**Dracevica, Mon**	**1.45**	**141**	⇓*i*Pg	**Pn**	**05 29 10.1**	**-0.2**
DRME				*i* Sg	**Sg**	**05 29 32.6**	**+2.7**
SJES	**Sjenica**	**1.48**	**91**	*e*Pg	**Pb**	**05 29 11.5**	**+0.1**
SJES				*e*Sg	**Sg**	**05 29 32.3**	**+1.5**
IVA	**Berane**	**1.49**	**107**	⇑*i*Pg	**Pn**	**05 29 11.3**	**+0.4**
IVA				*i* Sg	**Sg**	**05 29 33.7**	**+2.5**
BLY	**Banja Luka**	**1.54**	**339**	*e*Pg	**Pn**	**05 29 11.7**	**+0.2**
BLY				*e*Sg	**Sg**	**05 29 33.2**	**+0.4**
BLY	**Banja Luka**	**1.54**	**339**	*e*Pn	**Pn**	**05 29 11.8**	**+0.2**
BLY				*e*Sn	**Sg**	**05 29 33.3**	**+0.4**
PVY	**Plav**	**1.64**	**115**	⇑*i*Pn	**Pb**	**05 29 13.8**	**-0.4**
PVY				*i* Sn	**Sg**	**05 29 37.9**	**+1.9**
ULC	**Ulcinj**	**1.65**	**144**	⇓*i*Pn	**Pn**	**05 29 13.5**	**+0.4**
ULC				*i* Sn	**Sg**	**05 29 37.8**	**+1.3**
DIVS	**Divibare**	**1.67**	**61**	*e*Pg	**Pn**	**05 29 13.2**	**-0.2**
DIVS				*e*Sg	**Sg**	**05 29 38.0**	**+0.8**
DIVS	**Divibare**	**1.67**	**61**	⇓*i*Pn	**Pn**	**05 29 13.1**	**-0.3**
DIVS				*e*Sn	**Sn**	**05 29 35.6**	**+0.3**
TEKS	**Tekeris**	**1.68**	**42**	*e*Pg	**Pn**	**05 29 14.5**	**+1.0**
TEKS				*e*Sg	**Sg**	**05 29 38.5**	**+1.2**
TEKS	**Tekeris**	**1.68**	**42**	*e*Pn	**Pn**	**05 29 14.4**	**+1.0**
TEKS				*e*Sn	**Sn**	**05 29 36.2**	**+0.8**
ZIRJ	**Zirje**	**1.72**	**282**	*i* Pn	**Pb**	**05 29 14.6**	**-0.8**
ZIRJ				Sn	**Sb**	**05 29 37.5**	**+0.2**
MORI	**Morici**	**1.72**	**289**	*e*Pn	**Pb**	**05 29 14.8**	**-0.7**
MORI				Sn	**Sg**	**05 29 38.8**	**+0.1**
TRUS	**Trudelj**	**2.00**	**62**	*e*Pn	**Pn**	**05 29 17.7**	**-0.1**
TRUS				*e*Sn	**Sn**	**05 29 44.2**	**+1.1**
GRUS	**Gruza**	**2.09**	**73**	*e*Pn	**Pn**	**05 29 19.2**	**+0.2**
GRUS				*e*Sn	**Sb**	**05 29 47.3**	**-0.6**
DUGI	**Dugi Otok**	**2.21**	**289**	*e*Pn	**Pn**	**05 29 21.5**	**+0.8**
DUGI				Sn	**Sb**	**05 29 52.4**	**+1.0**
FRGS	**Fruska Gora**	**2.27**	**35**	*e*Pn	**Pn**	**05 29 22.5**	**+0.8**
FRGS				*e*Sn	**Sn**	**05 29 50.2**	**+0.1**
FRGS	**Fruska Gora**	**2.27**	**35**	*e*Pn	**Pn**	**05 29 22.5**	**+0.8**
SELS	**Selova**	**2.31**	**91**	*e*Pn	**Pn**	**05 29 22.4**	**+0.2**
BAI	**Bari**	**2.35**	**200**	*e*Pn	**Pb**	**05 29 25.7**	**-0.4**
TIR	**Tirane**	**2.42**	**144**	⇑P	**Pg**	**05 29 29.0**	**-0.8**
TIR				⇑S	**Sb**	**05 29 56.4**	**-1.2**
MOSL	**Moslavina**	**2.45**	**340**	*e*Pn	**Pn**	**05 29 24.0**	**-0.1**
NVLJ	**Novalja**	**2.55**	**300**	*i* Pn	**Pn**	**05 29 26.2**	**+0.8**
SG1	**Sgolgore (BA)**	**2.65**	**201**	*e*Pn	**Pn**	**05 29 26.2**	**-0.6**
MATE	**Matera**	**2.82**	**200**	⇑P	**Pb**	**05 29 35.6**	**+1.4**
BARS	**Barje**	**2.87**	**99**	*e*Pn	**Pn**	**05 29 31.4**	**+1.5**
BARS				*e*Sn	**Sn**	**05 30 06.1**	**+1.3**
OZLJ	**Ozalj**	**2.91**	**323**	*e*Pn	**Pn**	**05 29 29.0**	**-1.3**
PTJ	**Puntijarka**	**2.96**	**332**	*e*Pn	**Pn**	**05 29 31.4**	**+0.4**
KALN	**Kalnik**	**3.01**	**340**	*e*Pn	**Pn**	**05 29 31.4**	**-0.4**
CRES	**Cresnjev**	**3.08**	**325**	*e*Pn	**Pn**	**05 29 33.3**	**+0.6**
CRES				*e*Sn	**Sn**	**05 30 10.6**	**+0.7**
ZAGS	**Zajecar**	**3.15**	**79**	*e*Pn	**Pn**	**05 29 33.9**	**+0.3**
ZAGS				*e*Sn	**Sn**	**05 30 12.7**	**+1.1**
RIY	**Rijeka**	**3.20**	**310**	*e*Pn	**Pn**	**05 29 35.5**	**+1.2**
RIY				*e*Sn	**Sn**	**05 30 13.1**	**+0.2**
ZAPS	**Zavoj**	**3.42**	**89**	*e*Pn	**Pn**	**05 29 39.0**	**+1.6**
ZAPS				*e*Sn	**Sn**	**05 30 19.4**	**+1.2**
BOSS	**Bosilegrad**	**3.42**	**102**	*e*Pn	**Pn**	**05 29 38.2**	**+0.8**
BOSS				*e*Sn	**Sn**	**05 30 18.7**	**+0.3**
BLKB	**Belogradchik**	**3.45**	**83**	⇑S	**Sn**	**05 30 18.5**	**-0.6**
BZS	**Buzias**	**3.49**	**47**	⇑P	**Pg**	**05 29 50.0**	**-0.2**
BZS				⇑S	**Sn**	**05 30 18.0**	**-2.0**
CEY	**Cerknica**	**3.50**	**315**	*e*Pn	**Pn**	**05 29 39.7**	**+1.2**
CEY				*e*Sn	**Sn**	**05 30 20.3**	**0.0**
HERR	**Herculane**	**3.58**	**62**	⇑P	**Pb**	**05 29 44.6**	**-2.5**
VTS	**Vitosha**	**3.94**	**98**	⇑P	**Pb**	**05 29 51.4**	**-1.9**
VTS				⇓S	**Sn**	**05 30 30.8**	**-0.4**
SIRR	**Siria**	**3.96**	**40**	⇑P	**Pn**	**05 29 44.9**	**+0.1**
SIRR				⇑S	**Sn**	**05 30 31.0**	**-0.6**
GZR	**Gura Zlata**	**4.04**	**57**	⇑P	**Pn**	**05 29 50.3**	**+4.4**
DRGR		**4.84**	**42**	⇑P	**Pg**	**05 30 14.6**	**-1.5**

IDC 24 05:33:06.5±62.0,20°.44S×178°.61E,h0km,mb4.0/3, mb1 4.2/3,mb1mx3.7/25,mbtmp4.0/3,Error ellipse: s-maj=1097.0km s-min=148.5km az=81.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.97**	**243**	P	P	05 39 59.7	-0.8
	0.9nm,0.5s,baz=96,slow=12,SNR=4.7						
ASAR	**Alice Springs**	**41.44**	**257**	P	P	05 40 54.9	-0.3
	1.6nm,0.6s,baz=97,slow=7.8,SNR=19						
WRA	**Warramunga Arr**	**41.46**	**263**	P	P	05 40 56.0	+0.6
	0.6nm,0.3s,baz=94,slow=7.9,SNR=24						

*NIED **24** 05:59:00,26°.00N×125°.60E,h5km,Mw4.3 Best double couple: M♭3.43000×10^15 NP1:φs94.00000°,δ50.00000°, λ-73.00000°. NP2:φs248.00000°,δ43.00000°, λ-110.00000°.*
*JMA **24** 05:59:04.6±0.3,25°.97N×125°.57E,h7km,M4.5*
*IDC **24** 05:59:07.9±0.7,25°.96N×125°.62E,h23km±4km,mb3.8/8, mb1 3.9/8,mb1mx3.6/56,mbtmp3.9/8,ML2.6/1,Error ellipse: s-maj=28.9km s-min=14.1km az=60.0*
*NEIC **24** 05:59:11.4±2.5,26°.06N±0°.07×125°.67E±0°.08,h50km±9km, mb4.5/4,Error ellipse: s-maj=12.0km s-min=9.3km az=129.0*

ISC 24 05:59:07.9±0.7,25°.83N±0°.05×125°.69E±0°.05,h23km±5km, n37,σ1§43/44,mb4.3/10,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	**0.98**	**204**	P	**Pn**	**05 59 25.0**	**-1.3**
JIKM				*e*S	**Sb**	**05 59 39.0**	**+0.1**
JOGS	**Gusukube**	**1.09**	**194**	P	**Pn**	**05 59 27.8**	**-0.1**
JOGS				*e*S	**Sn**	**05 59 43.4**	**+1.1**
JIRB	**Irabujima**	**1.10**	**205**	P	**Pn**	**05 59 26.4**	**-1.5**
JIRB				*e*S	**Sn**	**05 59 41.9**	**-0.5**
JKE	**Kume jima 2**	**1.10**	**63**	P	**Pn**	**05 59 26.1**	**-1.9**
JKE				*e*S	**Sb**	**05 59 42.0**	**-0.3**
JMJ2	**Miyako jima3**	**1.13**	**197**	P	**Pn**	**05 59 27.6**	**-0.8**
JMJ2				S	**Sn**	**05 59 44.3**	**+1.1**
JTJ	**Tarama**	**1.48**	**217**	P	**Pn**	**05 59 32.4**	**-0.8**
JAGN	**Aguni-jima**	**1.59**	**61**	P	**Pn**	**05 59 33.9**	**-0.7**
JISG	**Ishigakijimahi**	**1.76**	**226**	P	**Pn**	**05 59 36.1**	**-0.9**
JISG				S	**Sn**	**05 59 59.1**	**+0.5**
JJT3	**Tamagusuku3**	**1.91**	**80**	P	**Pb**	**05 59 41.3**	**-0.8**
JIJ	**Ishigaki jima**	**2.02**	**224**	P	**Pn**	**05 59 41.5**	**+0.9**
JKRS	**Kuro-shima**	**2.20**	**224**	P	**Pn**	**05 59 43.7**	**+0.7**
JKRS				*e*S	**Sn**	**06 00 11.5**	**+2.0**
JNTH	**Nagotoyohara**	**2.21**	**71**	P	**Pn**	**05 59 45.3**	**+2.1**
IRIF	**Iriomote-Funau**	**2.32**	**230**	P	**Pn**	**05 59 46.2**	**+1.5**
JIH	**Iheya**	**2.37**	**59**	P	**Pn**	**05 59 46.9**	**+1.5**
JOW	**Kunigami**	**2.53**	**66**	Pn	**Pn**	**05 59 48.3**	**+0.7**
	1.9nm,0.3s,baz=327,slow=19,SNR=12						
JOW	**Kunigami**	**2.53**	**66**	Pn	**Pn**	**05 59 48.6**	**+1.1**
YOJ	**Yonaguni jima**	**2.78**	**241**	Pn	**Pb**	**05 59 54.8**	**-2.2**
NACB	**Ninganchiao**	**4.06**	**247**	Pn	Pn	06 00 13.6	+4.9
YHNB	**Yeheng**	**4.07**	**254**	Pn	**Pn**	**06 00 12.1**	**+3.1**
YULB	**Yu-li**	**4.67**	**240**	Pn	**Pn**	**06 00 18.6**	**+1.4**
TWG	**Pinlang**	**5.17**	**236**	Pn	Pn	06 00 29.2	+5.3
JNU	**Nakatsue**	**8.56**	**31**	Pn	Pn	06 01 14.3	+3.8
	0.4nm,0.3s,baz=208,slow=6.6,SNR=5.1						
KSRS	**Korea Array**	**11.74**	**9**	Pn	Pn	06 01 57.7	+3.7
	0.4nm,0.3s,baz=187,slow=14,SNR=14						
ENH	**Enshi**	**14.97**	**291**	P	P	06 02 47.1	+3.6
USRK	**Ussuriysk Ar.**	**19.03**	**14**	P	**Pn**	**06 03 30.7**	**+1.6**
	baz=210,slow=20,SNR=2.3						
MKAR	**Makanchi Array**	**40.11**	**313**	P	**P**	**06 06 40.8**	**-1.1**
	1.0nm,0.4s,baz=97,slow=10,SNR=22						
MKAR				pP	**pP**	**06 06 47.7**	**-0.5**
	5.4nm,0.7s,baz=100,slow=11,SNR=31						
ZALV	**Zalesovo Beam**	**41.20**	**324**	P	**P**	**06 06 49.0**	**-1.7**
	1.2nm,0.3s,baz=157,slow=7.8,SNR=2.1						
ZALV				pP	**pP**	**06 06 55.9**	**-1.1**
	4.7nm,0.7s,baz=109,slow=7.9,SNR=3.8						
KURBB	**Kurchatov Arra**	**43.58**	**317**	P	**P**	**06 07 09.0**	**-1.1**
	1.0nm,0.6s,baz=103,slow=8.0,SNR=7.8						
KURBB				pP	**pP**	**06 07 15.8**	**-0.7**
	5.7nm,0.8s,baz=107,slow=8.6,SNR=13						
WB0	**Warramunga Arr**	**46.10**	**169**	P	**P**	**06 07 30.5**	**0.0**
WB0				IAmb	IAmb	06 07 39.7	
	comp=Z,6.7nm,1.1s						
WRA	**Warramunga Arr**	**46.27**	**169**	P	**P**	**06 07 32.2**	**+0.4**
	comp=Z,1.2nm,0.9s,baz=350,slow=8.1,SNR=5.8						
WRA				pP	**pP**	**06 07 39.7**	**+1.4**
	comp=Z,1.8nm,0.9s,baz=355,slow=7.9,SNR=7.6						
WB2	**Warramunga Arr**	**46.27**	**169**	P	**P**	**06 07 35.3**	**+3.5**
WR0	**Warramunga Arr**	**46.32**	**168**	P	**P**	**06 07 34.1**	**+1.9**
WR0				IAmb	IAmb	06 07 41.9	
	comp=Z,9.4nm,1.4s						
CHGR	**Chuyangaron**	**48.80**	**300**	P	**P**	**06 07 51.6**	**+0.1**
ASAR	**Alice Springs**	**49.84**	**170**	P	**P**	**06 08 00.6**	**+1.2**
ASAR				pP	**pP**	**06 08 07.7**	**+1.8**
	comp=Z,1.4nm,0.8s,baz=352,slow=6.9,SNR=8.0						
FINES	**FINESS Array B**	**72.08**	**330**	P	**P**	**06 10 30.1**	**+0.1**
	comp=Z,1.5nm,0.9s,baz=52,slow=9.0,SNR=3.6						
BRTR	**Keskin Array B**	**75.47**	**307**	P	**P**	**06 10 49.4**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=90,slow=2.9,SNR=4.3						
YKA	**Yellowknife Ar**	**79.84**	**24**	P	**P**	**06 11 13.3**	**-1.0**
	comp=Z,4.0nm,1.1s,baz=310,slow=4.8,SNR=23						

*NIED **24** 06:02:00,25°.90N×125°.60E,h5km,Mw4.5 Best double couple: M♭6.81000×10^15 NP1:φs83.00000°,δ53.00000°, λ-83.0000°. NP2:φs251.00000°,δ38.00000°, λ-99.00000°.*
*BJI **24** 06:02:17.6±0.0,25°.50N×126°.07E,h40km,mB4.7/39, mb4.4/54,ML4.8/1,Ms4.6/48,Ms7 4.3/45*
*JMA **24** 06:02:17.5±0.2,25°.95N×125°.61E,h11km,M4.6*
*IDC **24** 06:02:20.3±0.5,25°.89N×125°.52E,h22km±3km,mb3.9/13, mb1 4.1/14,mb1mx3.8/54,mbtmp4.0/14,ML2.4/2,MS3.8/27, Ms1 3.8/27,ms1mx3.7/40,Error ellipse: s-maj=21.4km s-min=11.3km az=70.0*
*NEIC **24** 06:02:24.1±2.4,25°.88N±0°.09×125°.74E±0°.08,h56km±8km, mb4.6/48,Error ellipse: s-maj=14.6km s-min=8.8km az=145.0*

ISC 24 06:02:20.3±0.5,25°.80N±0°.04×125°.70E±0°.04,h24km±3km, h24km:pP-P,n127,σ1§77/129,mb4.6/44,MS3.8/24,3C, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	**0.97**	**205**	P	**Pb**	**06 02 37.7**	**-0.7**
JIKM				S	**Sn**	**06 02 52.6**	**+1.4**
JOGS	**Gusukube**	**1.07**	**194**	P	**Pn**	**06 02 39.7**	**-0.1**
JOGS				*e*S	**Sb**	**06 02 55.3**	**+1.5**
JIRB	**Irabujima**	**1.08**	**206**	P	**Pn**	**06 02 39.1**	**-0.8**
JIRB				S	**Sb**	**06 02 53.5**	**-0.5**
JKE	**Kume jima 2**	**1.11**	**62**	P	**Pn**	**06 02 38.2**	**-2.1**
JKE				S	**Sn**	**06 02 53.9**	**-0.9**
JMJ2	**Miyako jima3**	**1.11**	**198**	P	**Pn**	**06 02 39.7**	**-0.6**
JMJ2				*e*S	**Sn**	**06 02 56.6**	**+1.8**
JTJ	**Tarama**	**1.47**	**218**	P	**Pn**	**06 02 45.2**	**0.0**
JTJ				*e*S	**Sb**	**06 03 04.9**	**-0.2**
JAGN	**Aguni-jima**	**1.59**	**60**	P	**Pn**	**06 02 46.4**	**-0.6**
JAGN				S

comp=Z,750nm,14.0s
DAV Davao City (W) 18.63 180 LR LR 06 13 06.2
comp=Z,364nm,21.8s,baz=350,slow=34
MDJ Mudanjiang 19.03 9 P **Pn** **06 06 40.8 -0.5**
MDJ pP pwP 06 06 49.3 -0.1
MDJ sP sP 06 06 53.1 +3.6
MDJ S **Sn** **06 10 12.6 -1.2**
MDJ pmax pmax
comp=Z,4.0nm,0.4s
MDJ pmax pmax
comp=Z,120nm,4.9s
MDJ LR LR
comp=N,550nm,8.1s
MDJ LR LR
comp=E,810nm,13.8s
MDJ LR LR
comp=Z,510nm,14.3s
USRK Ussuriysk Ar. 19.05 14 P **Pn** **06 06 42.1 +0.6**
baz=193,slow=7.8,SNR=5.1
USRK LR LR 06 13 34.4
comp=Z,235nm,19.9s,baz=190,slow=36
HHC Hu-ho-hao-te 19.06 325 *e*P **Pn** **06 06 43.0 +1.2**
HHC sP pwP 06 06 58.4 +8.6
HHC pmax pmax
comp=Z,7.0nm,1.0s
HHC pmax pmax
comp=Z,140nm,4.4s
HHC LR LR
comp=N,410nm,9.6s
HHC LR LR
comp=E,220nm,8.0s
HHC LR LR
comp=Z,310nm,9.1s
BTO Baotou 19.70 322 *e*P **Pn** **06 06 54.4 +4.9**
CD2 Chengdu 19.96 290 ⇑*i*P **Pn** **06 06 51.8 -0.7**
CD2 pP sP 06 07 03.4 +3.6
CD2 sP pwP 06 07 09.1 +9.4
CD2 S **Sn** **06 10 35.4 -0.9**
CD2 pmax pmax
comp=Z,50nm,1.0s
CD2 pmax pmax
comp=Z,170nm,4.3s
CD2 LR LR
comp=N,3μm,12.8s
CD2 LR LR
comp=E,2μm,8.2s
CD2 LR LR
comp=Z,2μm,8.0s
SLVN Son La 20.46 262 P Pn 06 06 59.4 +0.9
LZH Lanzhou 21.32 304 ⇑P **P** **06 07 07.1 +1.5**
LZH pP pwP 06 07 16.1 +1.5
LZH eS **S** **06 10 54.0 -7.4**
LZH pmax pmax
comp=Z,73nm,1.1s
LZH pmax pmax
comp=Z,230nm,4.5s
LZH LR LR
comp=N,910nm,12.5s
LZH LR LR
comp=E,990nm,12.1s
LZH LR LR
comp=Z,1μm,14.1s
KLR Kul'dur 23.86 10 pP **pP** **06 07 38.9 +0.7**
4.1nm,0.8s,baz=238,slow=10,SNR=7.6
KLR LR LR 06 16 41.0
comp=Z,259nm,20.1s,baz=208,slow=36
PBKT Sadao Pong 24.78 253 P **P** **06 07 40.5 +0.1**
GTA Gaotai 25.57 308 P **P** **06 07 46.8 -0.8**
GTA pmax pmax
comp=Z,8.0nm,1.5s
GTA pmax pmax
comp=Z,120nm,5.5s
GTA LR LR
comp=N,750nm,14.3s
GTA LR LR
comp=E,900nm,11.1s
GTA LR LR
comp=Z,650nm,10.8s
CMAR Chiang Mai Arr 25.81 259 pP **pP** **06 07 56.8 +0.5**
1.5nm,0.4s,baz=60,slow=8.1,SNR=2.9
CMAR LR LR 06 18 42.9
comp=Z,48nm,19.6s,baz=50,slow=38
ULN Ulaanbaatar 26.47 331 P **P** **06 07 54.8 -0.8**
ULN lAmb lAmb 06 08 07.3
comp=Z,31nm,1.1s
SBUM Sibu 26.59 211 P **P** **06 07 58.1 +1.3**
SBUM lAmb lAmb 06 08 07.5
comp=Z,18nm,0.9s
SONM Songino Array 26.73 330 P **P** **06 07 57.2 -0.7**
comp=Z,3.7nm,0.6s,baz=69,slow=4.8,SNR=1.5
SONM pP **sP** **06 08 04.2 -3.1**
comp=Z,9.2nm,0.8s,baz=142,slow=7.5,SNR=4.9
SONM LR LR 06 20 05.5
comp=Z,536nm,18.1s,baz=80,slow=40
SIJI Sorong 27.06 168 LR LR 06 16 57.8
comp=Z,308nm,21.0s,baz=28,slow=32
SANI Sanana 27.69 179 P P 06 08 18.4 +12
comp=Z,5μmcomp=Z,26nm,1.2s
TLY Talaya 30.80 333 P **P** **06 08 33.1 -0.9**
TLY lAmb lAmb 06 08 41.9
comp=Z,20nm,1.4s
IPM Ipoh 31.76 232 P **P** **06 08 42.8 0.0**
MLSI Meulaboh, Aceh 35.31 238 P P 06 09 22.7 +9.0
WMQ Urumqi 35.62 310 *e*P **P** **06 09 18.5 +2.3**
WMQ sP pwP 06 09 35.5 +10
WMQ PP **PP** **06 10 35.9 -1.3**
WMQ pmax pmax
comp=Z,23nm,0.9s
WMQ pmax pmax
comp=Z,49nm,3.9s
WMQ LR LR
comp=Z,460nm,12.9s
WMQ LR LR
comp=Z,340nm,11.5s
WMQ LR LR
comp=Z,160nm,14.1s
PETK Petropavlovsk- 36.27 33 LR LR 06 24 41.1
comp=Z,138nm,18.3s,baz=241,slow=37
MA2 Magadan 37.98 21 LR LR 06 25 27.8
comp=Z,88nm,18.7s,baz=230,slow=37
KRVT Keravat (AS076 39.34 136 LR LR 06 23 05.7
comp=Z,168nm,21.2s,baz=308,slow=32
MK31 Makanchi Array 40.14 313 P **P** **06 09 52.9 -1.4**
MK31 lAmb lAmb 06 10 00.9
comp=Z,10nm,0.8s
MKAR Makanchi Array 40.14 313 P **P** **06 09 53.4 -0.9**
comp=Z,2.9nm,0.5s,baz=100,slow=10,SNR=37
MKAR pP **pP** **06 10 00.2 -0.8**
comp=Z,10nm,0.6s,baz=99,slow=11,SNR=38
MKAR LR LR 06 26 48.1
comp=Z,130nm,19.8s,baz=108,slow=37
MAKZ Makanchi 40.35 313 P **P** **06 09 54.9 -1.1**
ZALV Zalesovo Beam 41.23 324 P **P** **06 10 01.5 -1.6**
comp=Z,0.9nm,0.3s,baz=108,slow=9.4,SNR=1.8
ZALV pP **pP** **06 10 08.2 -1.6**
comp=Z,5.2nm,0.6s,baz=113,slow=8.2,SNR=5.2
ZALV LR LR 06 28 29.3
comp=Z,230nm,18.4s,baz=80,slow=38
KNRA Kununurra 41.34 176 P **P** **06 10 06.1 +1.8**
KNRA lAmb lAmb 06 10 25.0
comp=Z,16nm,1.2s
PRZ Przheval'sk 41.97 306 P **P** **06 10 10.8 +1.3**
PRZ lAmb lAmb 06 10 29.5
comp=Z,7.9nm,0.8s
KDJ Kajisay 42.82 305 P **P** **06 10 16.5 0.0**
KDJ lAmb lAmb 06 10 25.0
comp=Z,15nm,1.2s
KSH Kashi 43.52 301 P P 06 10 26.6 +4.5
KSH pP pwP 06 10 38.9 +7.2
KSH pmax pmax
comp=Z,7.0nm,0.8s
KURK Kurchatov 43.58 318 P **P** **06 10 20.7 -1.5**
KURBB Kurchatov Arra 43.60 317 P **P** **06 10 21.1 -1.4**
comp=Z,1.3nm,0.6s,baz=105,slow=8.4,SNR=12
KURBB pP **pP** **06 10 28.2 -1.0**
comp=Z,8.1nm,0.8s,baz=107,slow=8.3,SNR=16
FITZ Fitzroy Crossi 43.64 180 P **P** **06 10 23.7 +0.8**
comp=Z,1.0nm,0.6s,baz=1.6,slow=6.7,SNR=5.4
FITZ pP **pP** **06 10 30.4 +0.6**
comp=Z,3.2nm,0.7s,baz=0.1,slow=6.6,SNR=4.7
FITZ Fitzroy Crossi 43.64 180 P **P** **06 10 23.1 +0.1**
FITZ lAmb lAmb 06 10 31.0
comp=Z,13nm,1.5s
TIXI Tiksi 45.91 1 LR LR 06 31 21.7
comp=Z,254nm,19.1s,baz=224,slow=38
WB0 Warramunga Arr 46.08 169 P **P** **06 10 42.4 -0.1**
WB0 lAmb lAmb 06 10 53.7
comp=Z,5.8nm,1.0s
WRA Warramunga Arr 46.24 169 P **P** **06 10 44.8 +1.1**
comp=Z,1.0nm,0.8s,baz=351,slow=8.3,SNR=5.4
WRA pP **pP** **06 10 51.9 +1.2**
comp=Z,2.7nm,0.8s,baz=352,slow=8.7,SNR=11
WRA LR LR 06 29 30.0
comp=Z,98nm,22.0s,baz=220,slow=35
WB2 Warramunga Arr 46.24 169 P **P** **06 10 45.3 +1.6**
WB2 lAmb lAmb 06 10 54.4
comp=Z,9.9nm,1.0s
WR0 Warramunga Arr 46.29 168 P **P** **06 10 44.8 +0.6**
PSA00 Pilbara Seismi 47.44 187 P P **06 10 54.0 +1.0**
PSA00 lAmb lAmb 06 11 02.6
comp=Z,12nm,1.1s
HNR Honiara 48.34 132 LR LR 06 29 32.7
comp=Z,88nm,20.4s,baz=324,slow=34
BRVK Borovoye 49.16 319 P **P** **06 11 06.1 +0.1**
BRVK lAmb lAmb 06 11 14.2
comp=Z,12nm,1.1s
KBL Kabul 49.20 294 P **P** **06 11 06.7 -0.3**
KBL lAmb lAmb 06 11 15.3
comp=Z,9.1nm,0.9s
ASAR Alice Springs 49.82 170 P **P** **06 11 12.7 +1.4**
comp=Z,0.8nm,0.6s,baz=358,slow=13,SNR=11
ASAR pP **pP** **06 11 19.8 +1.4**
comp=Z,2.0nm,0.8s,baz=352,slow=6.5,SNR=11
ASAR LR LR 06 31 01.8
comp=Z,68nm,20.9s,baz=5.0,slow=34
GEYT Alibeck 57.53 300 LR LR 06 40 19.8
comp=Z,149nm,18.1s,baz=35,slow=40
STKA Stephens Creek 59.33 164 LR LR 06 38 57.9
comp=Z,41nm,19.2s,baz=21,slow=37
KDAK Kodiak Island 64.21 36 P **P** **06 12 52.6 -0.2**
KDAK lAmb lAmb 06 12 59.9
comp=Z,9.3nm,0.9s
MLY Manley 64.22 28 P **P** **06 12 53.2 +0.2**
TOLK Toolik Lake Re 64.33 24 P **P** **06 12 52.9 -0.7**
RND Reindeer 65.24 30 P **P** **06 12 58.9 -0.8**
RND lAmb lAmb 06 13 08.8
comp=Z,5.5nm,0.8s
WRH Wood River Hil 65.42 28 P **P** **06 13 01.3 +0.6**
ILAR Eielson Array 65.89 28 LR LR 06 43 33.9
comp=Z,56nm,18.2s,baz=278,slow=38
HDA Harding Lake 65.92 28 P **P** **06 13 03.1 -0.8**
SCRK Sand Creek 67.27 29 P **P** **06 13 12.2 -0.6**
SCRK lAmb lAmb 06 13 19.4
comp=Z,6.4nm,1.3s
DOT Dot Lake 67.31 29 P **P** **06 13 12.1 -0.8**
MENT Mentasta 67.62 30 P **P** **06 13 14.8 0.0**
KBZ Khabaz 67.66 309 pP pP 06 13 22.5 +0.1
comp=Z,3.5nm,0.9s,baz=108,slow=6.0,SNR=4.1
GLB Gilahina Butte 67.92 31 P **P** **06 13 16.8 0.0**
GLB lAmb lAmb 06 13 17.7
comp=Z,7.8nm,1.2s
OBN Obninsk 68.76 322 LR LR 06 45 29.1
comp=Z,32nm,18.8s,baz=64,slow=38
CTGM Chitina Glacie 69.20 31 P **P** **06 13 24.5 -0.4**
CTGM lAmb lAmb 06 13 34.6
comp=Z,5.3nm,0.7s
DAWY Dawson 69.21 28 P **P** **06 13 24.4 -0.4**
EPYK Eagle Plains 69.62 25 P **P** **06 13 26.9 -0.4**
EPYK lAmb lAmb 06 13 46.1
comp=Z,5.9nm,1.0s
INK Inuvik 70.17 23 P **P** **06 13 30.6 +0.2**
comp=Z,2.4nm,1.0s,baz=284,slow=9.4,SNR=5.2
INK Inuvik 70.17 23 P **P** **06 13 29.7 -0.8**
HYT Haines Junctio 71.03 31 P **P** **06 13 35.5 -0.6**
FINES FINESS Array B 72.10 330 P **P** **06 13 41.5 -0.8**
comp=Z,1.3nm,0.7s,baz=36,slow=7.1,SNR=3.5
FINES LR LR 06 49 00.5
comp=Z,175nm,18.6s,baz=57,slow=39
WHY Whitehorse 72.30 31 P **P** **06 13 44.1 +0.4**
WHY lAmb lAmb 06 13 44.8
comp=Z,6.0nm,1.0s
C36M Paulatuk 72.89 20 P **P** **06 13 45.3 -1.6**
C36M lAmb lAmb 06 13 47.1
comp=Z,8.6nm,1.4s
AKASG Malin Array Be 74.37 319 P **P** **06 13 54.5 -1.4**
comp=Z,0.5nm,0.5s,baz=72,slow=5.3,SNR=2.2
AKASG pP **pP** **06 14 01.0 -2.0**
comp=Z,1.4nm,0.5s,baz=58,slow=6.4,SNR=4.3
AKASG LR LR 06 50 39.4
comp=Z,97nm,18.1s,baz=65,slow=39
DLBC Dease Lake 75.45 32 P **P** **06 14 03.4 +1.3**
comp=Z,1.7nm,0.7s,baz=310,slow=4.1,SNR=4.7
DLBC pP **pP** **06 14 10.1 +0.8**
comp=Z,1.9nm,0.6s,baz=287,slow=7.7,SNR=3.4
DLBC Dease Lake 75.45 32 P **P** **06 14 03.0 +0.9**
DLBC lAmb lAmb 06 14 17.8
comp=Z,10nm,1.4s
BRTR Keskin Array B 75.49 307 LR LR 06 50 54.8
comp=Z,26nm,19.9s,baz=14,slow=39
DIB Dawson Inlet, 76.43 37 P **P** **06 14 07.5 -0.2**
DIB lAmb lAmb 06 14 17.4
comp=Z,12nm,1.2s
YKA Yellowknife Ar 79.86 24 P **P** **06 14 25.9 -0.6**
comp=Z,3.8nm,1.0s,baz=311,slow=5.0,SNR=28
KMBO Kilima Mbogo 89.08 268 pP pP 06 15 23.8 +2.0
comp=Z,2.8nm,0.9s,baz=37,slow=8.6,SNR=3.4
MOD Modoc Plateau 89.18 43 P **P** **06 15 13.7 -0.6**
FCC Fort Churchill 89.51 19 P **P** **06 15 14.3 -0.9**
MSO Missoula 89.89 36 P **P** **06 15 17.7 +0.3**
MSO lAmb lAmb 06 15 19.0
comp=Z,9.2nm,1.4s
FFC Flin Flon 89.97 25 P **P** **06 15 16.9 -0.6**
MFID Camas Ranch 90.96 40 P **P** **06 15 23.4 +0.9**
DLMT Dillon 91.55 37 P **P** **06 15 26.3 +1.0**
NVAR Mina Array Bea 92.43 45 P **P** **06 15 30.4 +0.9**
comp=Z,0.3nm,0.7s,baz=328,slow=3.2,SNR=2.2
YHL Hebgen Lake 92.64 37 P **P** **06 15 31.8 +1.3**
YHB Horse Butte 92.70 37 P **P** **06 15 30.6 -0.1**
PPT Papeete 92.92 108 LR LR 06 49 09.0
comp=Z,42nm,19.9s,baz=317,slow=30
H17A Grant Village 93.27 37 P **P** **06 15 35.5 +2.2**

WEL ***24*** *06:13:43.0±0.2, 33°S±3°×18°0E±°, h33km, M5.2/17, mB5.8/10, ML5.3/17, MLv5.1/17, Mw(mB)5.3/10*
IDC ***24*** *06:13:43.0±2.4, 32.93S×179.64E, h265km±23km, mb4.2/6, mb1 4.3/7, mb1mx3.7/29, mbtmp4.8/7, Error ellipse: s-maj=22.7km s-min=14.9km az=33.0*
NEIC ***24*** *06:13:45.1±2.6, 33.50S±0.08×179.3E±0.1, h271km±6km, mb4.3/17, Error ellipse: s-maj=13.2km s-min=11.2km az=132.0*
ISC 24 06:13:43.5±0.6, 33.54S±0.06×179.49E±0.09, h250km, n136, σ2s19/136, mb4.4/15, 1D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
MXZ	**Matakaoa Point**	**4.12**	**193**	P	**Pn**	**06 14 48.8**	**+0.1**
MXZ				S	**S**	**06 15 42.3**	**+1.8**
MXZ	**Matakaoa Point**	**4.12**	**193**	Pn	**Pn**	**06 14 52.0**	**+3.3**
MXZ				S	**S**	**06 15 42.9**	**+2.3**
WMGZ	**Waiomatatini S**	**4.36**	**191**	P	**Pn**	**06 14 52.3**	**+0.9**
WMGZ				S	**S**	**06 15 47.2**	**+1.7**
HAZ	**Te Kaha**	**4.43**	**198**	P	**Pn**	**06 14 52.7**	**+0.5**
HAZ				S	**S**	**06 15 50.5**	**+3.5**
KUZ	**Kuaotunu**	**4.44**	**223**	P	**Pn**	**06 14 56.7**	**+4.3**
PKGZ	**Pakihiroa**	**4.49**	**194**	P	**Pn**	**06 14 53.2**	**+0.2**
PKGZ				S	**S**	**06 15 51.0**	**+2.6**
PUZ	**Puketiti**	**4.63**	**192**	P	**Pn**	**06 14 54.5**	**-0.2**
PUZ				S	**S**	**06 15 53.0**	**+1.5**
RUGZ	**Raukumara Rang**	**4.65**	**198**	P	**Pn**	**06 14 57.8**	**+2.7**
RUGZ				S	**S**	**06 15 54.5**	**+2.3**
WHRZ	**Whale Island**	**4.76**	**205**	P	Pn	06 15 02.1	+5.7
TWGZ	**Tauwhareparae**	**4.78**	**194**	P	**Pn**	**06 14 57.7**	**+1.1**
GLKZ	**Green Lake**	**4.81**	**28**	P	Pn	06 14 46.4	-11
GLKZ				S	S	06 15 37.4	-18
RAO	**Raoul Island**	**4.82**	**28**	P	Pn	06 14 48.7	-8.5
	17nm,0.3s,baz=78,slow=22,SNR=1.8						
RAO				S	S	06 15 38.9	-17
	93nm,0.3s,baz=89,slow=19,SNR=4.1						
RAO	**Raoul Island**	**4.82**	**28**	Pn	**Pn**	**06 15 00.2**	**+3.1**
RIZ	**Raoul Island**	**4.82**	**28**	P	Pn	06 14 48.3	-8.9
RIZ				S	S	06 15 40.0	-16
WCZ	**Waipu Caves**	**4.86**	**239**	P	**Pn**	**06 15 01.0**	**+3.4**
OPRZ	**Ohinepanea**	**4.91**	**208**	P	**Pn**	**06 14 59.7**	**+1.5**
TGRZ	**Tauranga**	**4.94**	**211**	P	**Pn**	**06 15 02.2**	**+3.7**
MWZ	**Matawai**	**5.04**	**198**	P	**Pn**	**06 14 59.8**	**0.0**
MWZ				S	**S**	**06 16 03.2**	**+2.7**
URZ	**Urewera**	**5.09**	**202**	P	**Pn**	**06 14 59.8**	**-0.4**
	33nm,0.3s,baz=275,slow=4.5,SNR=286						
URZ S **S** **06 16 04.0 +2.5**
45nm,0.3s,baz=288,slow=5.9,SNR=12
URZ Urewera 5.09 202 P **Pn** **06 14 60.0 -0.3**
URZ Urewera 5.09 202 **Pn** **06 15 02.1 +1.8**
URZ S **S** **06 16 03.8 +2.3**
OUZ Omahuta 5.15 249 P **Pn** **06 15 03.9 +2.8**
OUZ Omahuta 5.15 249 Pn **Pn** **06 15 03.2 +2.1**
RAGZ Rawiri 5.22 198 P **Pn** **06 15 03.8 +1.9**
RIGZ Rimuhau 5.34 195 P **Pn** **06 15 05.9 +2.5**
RRRZ Republican Roa 5.36 206 P **Pn** **06 15 07.5 +3.8**
MUGZ Murupara 5.39 203 P **Pn** **06 15 05.5 +1.5**
HRRZ Handcock Road 5.49 207 P **Pn** **06 15 09.7 +4.4**
SNGZ Shannon Statio 5.51 198 P **Pn** **06 15 05.1 -0.4**
PRGZ Paritu Road 5.52 193 P **Pn** **06 15 04.8 -0.9**
GRRZ Galatos Road 5.52 209 P **Pn** **06 15 10.3 +4.6**
PRRZ Plateau Road 5.54 206 P **Pn** **06 15 09.2 +3.2**
ALRZ Allen Road 5.62 206 P **Pn** **06 15 08.6 +1.8**
WPRZ Whakapapatarin 5.65 208 P **Pn** **06 15 11.4 +4.2**
KNZ Kokohu 5.66 195 P **Pn** **06 15 06.0 -1.3**
RAHZ Arahi 5.70 199 P **Pn** **06 15 08.9 +1.0**
MTHZ Maungataniwha 5.71 201 P **Pn** **06 15 10.9 +2.9**
MHGZ Mahia Peninsul 5.74 192 P **Pn** **06 15 07.8 -0.6**
KUTZ Kaahu Road 5.76 210 P **Pn** **06 15 12.6 +3.9**
WHHZ Waihua 5.81 198 P **Pn** **06 15 08.5 -0.8**
MRHZ Matea Rd 5.83 204 P **Pn** **06 15 11.8 +2.2**
NMHZ Naumai 5.95 201 P **Pn** **06 15 13.2 +2.2**
WATZ Wairara 5.98 209 P **Pn** **06 15 15.0 +3.6**
HATZ Hinemaiaia 6.00 206 P **Pn** **06 15 14.1 +2.5**
RATZ Rangitukua 6.10 208 P **Pn** **06 15 16.2 +3.3**
BKZ Black Stump Fm 6.11 202 P **Pn** **06 15 14.5 +1.5**
BKZ Black Stump Fm 6.11 202 **Pn** **06 15 12.4 -0.6**
RITZ Rihia Road 6.17 207 P **Pn** **06 15 16.5 +2.9**
HIZ Hauiti 6.22 216 P Pn 06 15 19.8 +5.5
HIZ Hauiti 6.22 216 **Pn** **06 15 18.8 +4.5**
MCHZ McNeill Hill 6.30 200 P **Pn** **06 15 16.8 +1.4**
KRVZ Karewarewa 6.35 208 P **Pn** **06 15 18.9 +2.8**
KWHZ Kaweka Forest 6.37 202 P **Pn** **06 15 18.4 +2.2**
WTVZ West Tongariro 6.39 208 P **Pn** **06 15 19.0 +2.4**
CKHZ Cape Kidnapper 6.40 197 P **Pn** **06 15 16.5 -0.1**
NGZ Ngauruhoe 6.44 208 P **Pn** **06 15 20.1 +2.9**
FWVZ Far West T-bar 6.52 208 P **Pn** **06 15 20.4 +2.1**
BHHZ Black Hill Sta 6.54 204 P **Pn** **06 15 19.5 +1.1**
MOVZ Moawhango 6.58 206 P **Pn** **06 15 18.7 -0.2**
KAHZ Kahuranaki 6.58 198 P **Pn** **06 15 19.2 +0.4**
KRHZ Kereru 6.58 202 P Pn 06 15 12.4 -6.5
VRZ Vera Road 6.75 213 P **Pn** **06 15 24.2 +3.3**
PXZ Pawanui 6.81 197 P **Pn** **06 15 21.0 -0.7**
PNHZ Pukenui 6.88 202 P **Pn** **06 15 22.9 +0.2**
WPHZ Waipukurau 6.95 200 P **Pn** **06 15 24.3 +0.8**
PRHZ Porangahau 7.09 198 P **Pn** **06 15 25.9 +0.7**
TSZ Takapari Road 7.09 203 P **Pn** **06 15 24.1 -1.2**
LREZ Lake Rotokare 7.18 213 P **Pn** **06 15 29.3 +2.9**
ANWZ Angora Road 7.31 198 P **Pn** **06 15 28.8 +0.9**
POWZ Post Office Ro 7.46 202 P **Pn** **06 15 29.3 -0.5**
PRWZ Pori Road 7.54 201 P **Pn** **06 15 31.6 +0.7**
BFZ Birch Farm 7.58 199 P **Pn** **06 15 31.8 +0.4**
BFZ Birch Farm 7.58 199 Pn **Pn** **06 15 31.8 +0.4**
OGWZ Otaki Gorge 8.04 204 P **Pn** **06 15 36.0 -1.1**
TMWZ Te Maipa 8.07 200 P **Pn** **06 15 36.7 -1.0**
KIW Kapiti Island 8.16 205 P **Pn** **06 15 37.4 -1.4**
MTW Mount Morrison 8.24 202 P **Pn** **06 15 38.1 -1.6**
CAW Cannon Point 8.33 204 P **Pn** **06 15 39.3 -1.5**
TRWZ Traveller 8.40 200 P **Pn** **06 15 40.5 -1.3**
PAWZ Paruwai Farm 8.46 201 P **Pn** **06 15 41.5 -1.1**
MSWZ Moikau Station 8.55 202 P **Pn** **06 15 41.1 -1.7**
MSWZ Moikau Station 8.55 202 **Pn** **06 15 42.5 -1.2**
SNZO South Karori 8.63 205 Pn **Pn** **06 15 43.7 -1.0**
BHW Baring Head 8.66 204 P **Pn** **06 15 43.4 -1.7**
BHW Baring Head 8.66 204 **Pn** **06 15 43.6 -1.5**
PLWZ Palliser 8.69 202 P **Pn** **06 15 43.8 -1.7**
PLWZ Palliser 8.69 202 Pn **Pn** **06 15 44.4 -1.1**
TUWZ Tuamarina 9.02 208 **Pn** **06 15 47.7 -1.8**
KHZ Kahutara 10.02 206 **Pn** **06 16 00.8 -1.4**
RPZ Rata Peaks 12.10 210 P **Pn** **06 16 25.6 -2.6**
2.6nm,0.3s,baz=235,slow=1.7,SNR=15
RPZ S **S** **06 18 34.6 -8.5**
3.2nm,0.3s,baz=112,slow=20,SNR=1.6
EIDS Eidsvold 25.98 281 P **P** **06 18 53.3 -0.3**
CTA Charters Tower 32.40 286 P **P** **06 19 49.5 -0.7**
12nm,0.5s,baz=113,slow=10,SNR=48
CTAO Charters Tower 32.40 286 P **P** **06 19 49.5 -0.7**
BBOO Buckleboo 36.16 259 P **P** **06 20 21.7 -0.6**
BBOO lAmb lAmb 06 20 30.0
comp=Z,17nm,1.3s
COEN Coen 38.27 292 P **P** **06 20 38.6 -1.5**
COEN lAmb lAmb 06 20 40.4
comp=Z,7.7nm,0.8s
KRVT Keravat (AS076 38.74 313 P **P** **06 20 40.9 -3.1**
comp=Z,26nm,0.4s,baz=228,slow=23,SNR=4.0
AS31 Alice Springs 40.94 272 P **P** **06 21 00.7 -1.4**
AS31 lAmb lAmb 06 21 01.8
comp=Z,3.5nm,0.4s
ASAR Alice Springs 40.94 272 P **P** **06 21 00.6 -1.5**
comp=Z,4.4nm,0.4s,baz=109,slow=7.3,SNR=53
ASAR PcP **PcP** **06 22 53.4 -3.9**
comp=Z,0.4nm,0.4s,baz=120,slow=3.6,SNR=4.4
WR0 Warramunga Arr 42.05 277 P **P** **06 21 09.2 -1.8**
WB2 Warramunga Arr 42.21 277 P **P** **06 21 10.6 -1.8**
WB2 lAmb lAmb 06 21 11.2
comp=Z,15nm,1.1s
WRA Warramunga Arr 42.22 277 P **P** **06 21 10.5 -2.0**
comp=Z,7.9nm,0.5s,baz=117,slow=7.9,SNR=114
WB0 Warramunga Arr 42.26 277 P **P** **06 21 11.0 -1.8**
WB0 lAmb lAmb 06 21 11.6
comp=Z,16nm,1.1s
FORT Forrest 43.27 259 P **P** **06 21 19.9 -0.8**
KNRA Kununurra 48.93 278 P **P** **06 22 03.3 -1.6**
KNRA lAmb lAmb 06 22 14.6
comp=Z,26nm,1.4s
FITZ Fitzroy Crossi 50.33 274 P **P** **06 22 14.2 -1.2**
CASY Casey 51.37 209 P **P** **06 22 22.4 +0.1**
FAKI Fak Fak 53.55 294 P **P** **06 22 37.0 -2.1**
QSPA South Pole Qui 56.57 180 P **P** **06 23 02.5 +2.4**
comp=Z,9.2nm,0.9s,baz=39,slow=0.7,SNR=35
QSPA South Pole Qui 56.57 180 P **P** **06 23 02.4 +2.4**
QSPA lAmb lAmb 06 23 03.3
comp=Z,7.6nm,0.8s
MAW Mawson 68.62 202 **P** **06 24 19.9 +0.8**
SNAA Sanae 75.06 179 P **P** **06 24 57.8 +0.4**
SNAA Sanae 75.06 179 P **P** **06 24 57.9 +0.5**
SNAA lAmb lAmb 06 24 58.8
comp=Z,4.4nm,0.9s
VNA3 Neumayer Olymp 75.30 177 P **P** **06 24 59.0 +0.2**
VNA2 Neumayer--Watz 75.71 178 P **P** **06 25 02.0 +1.0**
baz=181,slow=4.4
VNA1 Neumayer--Stat 75.95 177 P **P** **06 25 03.0 +0.7**
H03S2 Juan Fernandez 80.49 124 T T 07 54 38.5
baz=233,slow=74,SNR=2.9
H03S1 Juan Fernandez 80.50 124 T T 07 54 42.7
baz=233,slow=74,SNR=3.7
H03S3 Juan Fernandez 80.50 124 T T 07 54 37.0
baz=233,slow=74,SNR=3.8
H03N3 Juan Fernandez 80.70 124 T T 07 54 48.7
baz=238,slow=72,SNR=1.1
H03N2 Juan Fernandez 80.70 124 T T 07 54 47.9
baz=238,slow=72,SNR=8.8
H03N1 Juan Fernandez 80.72 124 T T 07 54 52.1
baz=238,slow=72,SNR=12
PLCA Paso Flores 81.90 134 P **P** **06 25 36.4 +1.0**
comp=Z,1.6nm,0.5s,baz=240,slow=6.8,SNR=14
PLCA Paso Flores 81.90 134 P **P** **06 25 36.1 +0.8**
PLCA lAmb lAmb 06 25 36.9
comp=Z,5.5nm,1.4s
HHC Hu-ho-hao-te 96.91 315 *e*P **P** **06 26 45.8 -0.5**
HHC pmax pmax
comp=Z,13nm,1.0s
HHC pmax pmax
comp=Z,84nm,6.3s
LZH Lanzhou 98.91 307 ⇓P Pdif 06 26 56.0 +0.5
LZH pP pwP 06 27 59.8 +1.7
LZH sP sP 06 28 36.8 +15
LZH PP **PP** **06 31 03.3 +2.1**
LZH pmax pmax
comp=Z,18nm,1.4s
LZH pmax pmax
comp=Z,53nm,5.3s
WMQ Urumqi 113.48 308 *e*P **PKiKP** **06 31 51.4 -0.2**
FINES FINESS Array B 147.27 337 PKPbc **PKPdf** **06 32 52.2 -1.7**
comp=Z,3.4nm,0.8s,baz=49,slow=5.8,SNR=9.2
NB2 NORSAR Subarra151.46 348 PKP **PKPdf** **06 33 02.8 +2.2**
comp=Z,0.9nm,0.6s,baz=18,slow=2.6
NOA NORSAR Array B151.46 348 PKPbc **PKPdf** **06 33 02.9 +2.2**
comp=Z,0.6nm,0.5s,baz=12,slow=4.5,SNR=4.9

AKASG	**Malin Array Be**	**152.33**	**317**	PKPbc	**PKPdf**	**06**	**33**	**05.7**	**+3.5**
	comp=Z,1.0nm,0.3s,baz=46,slow=2.9,SNR=9.3								
LIC	**Lamto**	**152.49**	**170**	*eP*	**PKPbc**	**06**	**33**	**09.3**	**-1.4**
	comp=Z,20nm,0.7s								
KIC	**Kosan Boka**	**152.67**	**171**	*eP*	**PKPbc**	**06**	**33**	**09.7**	**-1.4**
	comp=Z,5.0nm,0.4s								
TIC	**Toumodi**	**152.91**	**170**	*eP*	**PKPdf**	**06**	**33**	**07.4**	**+3.1**
DBIC	**Dimbokro**	**152.96**	**170**	PKPbc	**PKPbc**	**06**	**33**	**10.3**	**-1.4**
	comp=Z,2.0nm,0.4s,baz=126,slow=3.8,SNR=7.5								
DBIC	**Dimbokro**	**152.96**	**170**		**PKPbc**	**06**	**33**	**10.2**	**-1.6**
TORD	**Torodi Ar. Bea**	**159.60**	**186**	PKPab	**PKPab**	**06**	**33**	**51.5**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=162,slow=4.5,SNR=11								

VIE ***24*** *06:40:49.6±0.1, 47.°56N×14.°82E, h11km±1km, mb2.3/9, ml3.0/9, Error ellipse: s-maj=1.1km s-min=0.8km az=164.0*
5 km WNW of Eisenerz felt 4 ems98 at Eisenerz / Styria
IPEC ***24*** *06:40:49.8±0.1, 47.°56N×14.°81E, h4km, ML3.1/6, Error ellipse: s-maj=1.1km s-min=0.7km az=33.0*
PRU ***24*** *06:40:50.6±0.0, 47.°60N×14.°89E, h4km*
LDG ***24*** *06:40:50.9±0.1, 47.°62N×14.°91E, h5km, Ml3.2/20*
BGR ***24*** *06:40:52.2±0.4, 47.°53N×14.°82E, h10km, ML3.3/17, Error ellipse: s-maj=7.8km s-min=5.6km az=49.0*
BGR Rockfall at the fixed rope route at Seemauer and at the federal road near Eisenerz.

ISC 24 06:40:50.2±0.9, 47.°57N±0.°02×14.°77E±0.°02, h15km±8km, n107, σ1§72/175, 3C-3D, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
MOA	**Molln**	**0.44**	**309**	*e*Pg	**Pg**	**06**	**40**	**58.9**	**-0.2**
MOA	**Molln**	**0.44**	**309**	*e*Pg	**Pg**	**06**	**40**	**58.9**	**-0.2**
	19nm,0.1s								
MOA				*e*Sg	**Sb**	**06**	**41**	**06.3**	**+0.1**
	111nm,0.2s								
ARSA	**Arzberg**	**0.60**	**122**	*e*Pg	**Pg**	**06**	**41**	**01.0**	**-1.0**
ARSA	**Arzberg**	**0.60**	**122**	*e*Pg	**Pg**	**06**	**41**	**00.9**	**-1.0**
	62nm,0.4s,SNR=54								
ARSA				*e*Sg	**Sg**	**06**	**41**	**08.8**	**-1.2**
	103nm,0.3s								
CONA	**Conrad Observa**	**0.82**	**64**	*e*Pg	**Pg**	**06**	**41**	**05.2**	**-0.9**
	7.6nm,0.1s,SNR=53								
CONA				*e*Sg	**Sg**	**06**	**41**	**15.1**	**-1.8**
	128nm,0.3s								
SOKA	**Soboth**	**0.91**	**169**	*e*Pg	**Pg**	**06**	**41**	**07.0**	**-0.8**
	64nm,0.5s,SNR=81								
SOKA				Sg	**Sg**	**06**	**41**	**19.3**	**-0.5**
	90nm,0.3s								
OBKA	**Obir**	**1.07**	**188**	*e*Pg	**Pb**	**06**	**41**	**10.7**	**+0.3**
OBKA	**Obir**	**1.07**	**188**	*e*Pg	**Pb**	**06**	**41**	**10.8**	**+0.3**
	19nm,0.2s,SNR=23								
OBKA				*e*Sg	**Sg**	**06**	**41**	**24.9**	**0.0**
	74nm,0.3s								
KBA	**Koelnbreinsper**	**1.09**	**244**	*e*Pg	**Pb**	**06**	**41**	**11.1**	**+0.2**
KBA	**Koelnbreinsper**	**1.09**	**244**	*e*Pg	**Pb**	**06**	**41**	**11.0**	**+0.2**
	33nm,0.4s								
KBA				Sg	**Sn**	**06**	**41**	**26.3**	**+0.3**
	176nm,0.4s								
MYKA	**Terra Mystica**	**1.22**	**220**	*e*Pg	**Pb**	**06**	**41**	**13.4**	**+0.5**
	17nm,0.2s,SNR=33								
MYKA				*e*Sg	**Sg**	**06**	**41**	**30.6**	**+1.1**
	49nm,0.3s								
RJOB	**Jochberg**	**1.35**	**278**	*e*Pn	**Pg**	**06**	**41**	**17.1**	**+1.0**
GEC2	**GERESS Array S**	**1.47**	**331**	*e*Pn	**Pb**	**06**	**41**	**18.2**	**+1.0**
ZST	**Bratislava**	**1.69**	**67**	*e*PN	**Pn**	**06**	**41**	**19.6**	**+0.5**
ZST				*e*SG	**Sb**	**06**	**41**	**42.6**	**+0.6**
ZST				*e*LG	Lg	06	41	43.1	
ABTA	**Abfaltersbach**	**1.75**	**243**	Pg	**Pg**	**06**	**41**	**23.3**	**-0.5**
	22nm,0.4s,SNR=15								
ABTA				*e*Sg	**Sg**	**06**	**41**	**47.4**	**+0.9**
	46nm,0.4s								
KHC	**Kasperske Hory**	**1.75**	**333**	*e*PG	**Pb**	**06**	**41**	**22.0**	**-0.1**
KHC				*e*SG	**Sg**	**06**	**41**	**46.4**	**-0.3**
	comp=Z,206nm,0.4s								
TREC	**Trest**	**1.79**	**15**	*e*PG	**Pn**	**06**	**41**	**22.0**	**+1.4**
TREC				*e*SG	**Sb**	**06**	**41**	**45.7**	**+0.7**
	comp=Z,261nm,0.3s								
KALN	**Kalnik**	**1.84**	**141**	*e*Pn	**Pn**	**06**	**41**	**22.1**	**+0.8**
KRUC	**Moravsky**	**1.84**	**35**	*e*PN	**Pn**	**06**	**41**	**22.4**	**+1.1**
KRUC				*e*SN	**Sb**	**06**	**41**	**46.7**	**+0.2**
KRUC	**Moravsky**	**1.84**	**35**	*e*Pn	**Pn**	**06**	**41**	**22.4**	**+1.1**
	baz=216								
KRUC				*e*Sn	**Sb**	**06**	**41**	**46.6**	**+0.1**
	151nm,0.4s,baz=216								
PTJ	**Puntijarka**	**1.85**	**153**	*e*Pn	**Pb**	**06**	**41**	**25.1**	**+1.3**
MODS	**Modra-Piesok**	**1.86**	**64**	*e*PN	**Pn**	**06**	**41**	**22.2**	**+0.6**
MODS				*e*SG	**Sb**	**06**	**41**	**47.0**	**-0.1**
MODS				*e*LG	Lg	06	41	55.3	
OZLJ	**Ozalj**	**2.01**	**166**	*e*Pn	**Pb**	**06**	**41**	**26.1**	**-0.4**
OZLJ				Sn	**Sg**	**06**	**41**	**53.9**	**-0.9**
SMOL	**Smolenice**	**2.02**	**61**	*e*PN	**Pn**	**06**	**41**	**25.7**	**+2.0**
SMOL				*e*SG	**Sb**	**06**	**41**	**53.4**	**+1.9**
SMOL				*e*LG	Lg	06	41	58.2	
WET	**Wettzell**	**2.02**	**322**	*e*Pn	**Pb**	**06**	**41**	**27.0**	**+0.3**
WET				*e*Sg	**Sg**	**06**	**41**	**56.1**	**+1.0**
VRAC	**Vranov**	**2.12**	**34**	*e*PN	**Pn**	**06**	**41**	**26.2**	**+1.1**
VRAC				*e*SN	**Sb**	**06**	**41**	**53.8**	**-0.7**
VRAC	**Vranov**	**2.12**	**34**	*e*Pn	**Pn**	**06**	**41**	**26.1**	**+1.0**
	baz=215								
VRAC				*e*Sn	**Sb**	**06**	**41**	**53.7**	**-0.7**
	141nm,0.5s,baz=215								
WTTA	**Wattenberg**	**2.15**	**263**	*e*Pn	**Pb**	**06**	**41**	**29.6**	**+0.7**
	27nm,0.3s,SNR=16								
WTTA				Sg	**Sg**	**06**	**42**	**01.4**	**+2.0**
	68nm,0.4s								
PBCC	**Pribram**	**2.18**	**347**	*e*PG	**Pb**	**06**	**41**	**29.5**	**+0.2**
PBCC				*e*SG	**Sg**	**06**	**41**	**59.4**	**-0.9**
	comp=Z,23nm,0.4s								
WATA	**Walderalm**	**2.18**	**265**	Pn	**Pb**	**06**	**41**	**30.4**	**+1.0**
	7.7nm,0.2s,SNR=7.5								
WATA				Sg	**Sg**	**06**	**42**	**03.2**	**+2.8**
	67nm,0.3s								
JAVC	**Velka Javorina**	**2.33**	**55**	*e*PN	**Pn**	**06**	**41**	**28.8**	**+0.7**
JAVC				*e*SN	**Sn**	**06**	**41**	**58.7**	**+2.3**
JAVC	**Velka Javorina**	**2.33**	**55**	*e*Pn	**Pn**	**06**	**41**	**28.7**	**+0.7**
	baz=237								
JAVC				*e*Sn	**Sn**	**06**	**41**	**58.7**	**+2.3**
	81nm,1.6s,baz=237								
MOSL	**Moslavina**	**2.39**	**144**	*e*Pn	**Pn**	**06**	**41**	**29.6**	**+0.8**
PRU	**Pruhonice**	**2.43**	**356**	*e*PN	**Pn**	**06**	**41**	**30.6**	**+1.3**
SQTA	**Sankt Quirin**	**2.45**	**263**	*e*Pn	**Pb**	**06**	**41**	**34.8**	**+0.8**
	12nm,0.3s,SNR=18								
SQTA				Sg	**Sg**	**06**	**42**	**11.0**	**+2.2**
	53nm,0.4s								
MOTA	**Moosalm**	**2.50**	**266**	*e*Pn	**Pb**	**06**	**41**	**33.9**	**-1.0**
	3.9nm,0.2s								
MOTA				Sg	**Sg**	**06**	**42**	**11.5**	**+1.0**
	55nm,0.5s								
RETA	**Reutte**	**2.72**	**270**	*e*Pn	**Pb**	**06**	**41**	**38.0**	**-0.6**
	6.8nm,0.2s								
RETA				Sg	**Sg**	**06**	**42**	**19.2**	**+1.7**
	20nm,0.2s								
ROTZ	**Rotzenmuhle**	**2.78**	**323**	*e*Pn	**Pn**	**06**	**41**	**37.4**	**+3.2**
ROTZ				*e*Sg	**Sg**	**06**	**42**	**21.2**	**+1.7**
FETA	**Feichten**	**2.81**	**260**	Pn	**Pb**	**06**	**41**	**38.7**	**-1.4**
	9.5nm,0.3s								
FETA				Sg	**Sg**	**06**	**42**	**20.4**	**0.0**
	16nm,0.4s								
MORC	**Moravsky Berou**	**2.87**	**39**	*e*PN	**Pn**	**06**	**41**	**36.5**	**+1.0**
MORC				*e*SN	**Sn**	**06**	**42**	**12.4**	**+2.6**
MORC				*e*SG	**Sb**	**06**	**42**	**19.8**	**+3.6**
MORC	**Moravsky Berou**	**2.87**	**39**	*e*Pn	**Pn**	**06**	**41**	**36.4**	**+1.0**
	baz=220								
MORC				*e*Sn	**Sn**	**06**	**42**	**12.4**	**+2.6**
	baz=220								
MORC				*e*Sg	**Sb**	**06**	**42**	**19.7**	**+3.6**
	71nm,0.7s,baz=220								
VYHS	**Vyhne**	**2.88**	**70**	*e*PN	**Pn**	**06**	**41**	**36.0**	**+0.5**
VYHS				*e*PG	**Pg**	**06**	**41**	**45.5**	**+0.1**
VYHS				*e*		07	18	16.0	
DPC	**Dobruska-Polom**	**2.96**	**20**	*e*SG	**Sg**	**06**	**42**	**23.0**	**-2.4**
	comp=Z,70nm,0.4s								
MANZ	**Manzenberg**	**2.99**	**325**	*e*Pn	**Pn**	**06**	**41**	**39.8**	**+2.7**
NVLJ	**Novalja**	**3.01**	**179**	*e*Pn	**Pn**	**06**	**41**	**37.0**	**-0.2**
OBER	**Oberstdorf**	**3.04**	**269**	*e*Pn	**Pb**	**06**	**41**	**41.5**	**-2.5**
OBER				*e*Sg	**Sg**	**06**	**42**	**29.1**	**+1.2**
UPC	**Upice**	**3.05**	**15**	*e*PN	**Pn**	**06**	**41**	**39.1**	**+1.2**
UPC				*e*SG	**Sg**	**06**	**42**	**26.3**	**-1.9**
	comp=Z,79nm,0.4s								
NKC	**Novy Kostel**	**3.08**	**331**	*e*PN	**Pn**	**06**	**41**	**40.3**	**+2.0**
NKC				*e*PG	**Pb**	**06**	**41**	**47.3**	**+2.7**
NKC				*e*SG	**Sg**	**06**	**42**	**29.5**	**+0.5**
	comp=Z,102nm,0.4s								
UBR	**Ueberruh**	**3.16**	**274**	*e*Pn	**Pn**	**06**	**41**	**42.8**	**+3.4**
GRF	**Grafenberg Arr**	**3.17**	**313**	*e*Pn	**Pn**	**06**	**41**	**42.1**	**+2.5**
GRF				*e*Sg	**Sg**	**06**	**42**	**33.7**	**+1.6**
DAVA	**Damuels**	**3.33**	**267**	*e*Pn	**Pn**	**06**	**41**	**44.0**	**+2.1**
DAVA	**Damuels**	**3.33**	**267**	*i* Pn	**Pn**	**06**	**41**	**44.0**	**+2.1**
	6.5nm,0.2s,SNR=5.4								
DAVA				*e*Pg	**Pg**	**06**	**41**	**53.9**	**-0.1**
	32nm,0.4s								
DAVA				Sg	**Sg**	**06**	**42**	**38.9**	**+1.7**
	34nm,0.3s								
BRG	**Berggiesshubel**	**3.35**	**351**	PN	**Pn**	**06**	**41**	**42.8**	**+0.8**
BRG				PG	**Pg**	**06**	**41**	**52.9**	**-1.5**
BRG				SN	**Sn**	**06**	**42**	**20.6**	**-0.9**
BRG				SG	**Sg**	**06**	**42**	**37.7**	**-0.1**
	45nm,0.4s								
PSZ	**Piszkesteto**	**3.47**	**82**	⇑P	**Pn**	**06**	**41**	**45.0**	**+1.3**
PSZ				⇑S	**Sn**	**06**	**42**	**26.3**	**+1.7**
DUGI	**Dugi Otok**	**3.58**	**177**	*e*Pn	**Pn**	**06**	**41**	**47.9**	**+2.7**
MOX	**Moxa**	**3.71**	**327**	*e*Pn	**Pn**	**06**	**41**	**49.4**	**+2.4**
KIJV	**Kijevo**	**3.74**	**162**	*e*Pn	**Pn**	**06**	**41**	**50.5**	**+3.1**
MORI	**Morici**	**3.76**	**170**	*e*Pn	**Pn**	**06**	**41**	**50.3**	**+2.7**
CLL	**Collm**	**3.92**	**344**	*e*Pn	**Pn**	**06**	**41**	**53.0**	**+3.2**
CLL				*e*Pg	**Pg**	**06**	**42**	**04.0**	**-1.2**
CLL				*e*		06	42	40.0	
CLL				*e*Sg	**Sg**	**06**	**42**	**55.0**	**-0.9**
	comp=Z,53nm,0.7s								
CLL				Lm	MLR	06	56	00.0	
	comp=Z,200nm,18.3s								
KECS	**Kecovo**	**3.94**	**74**	*e*PN	**Pn**	**06**	**41**	**51.1**	**+1.0**
KECS				*e*SN	**Sn**	**06**	**42**	**36.5**	**+0.4**
ZIRJ	**Zirje**	**3.96**	**171**	*e*Pn	**Pn**	**06**	**41**	**50.9**	**+0.5**
BFO	**Black Forest**	**4.40**	**282**	*e*Pn	**Pn**	**06**	**41**	**58.7**	**+2.3**
SIRR	**Siria**	**4.89**	**103**	⇓S	**Sn**	**06**	**42**	**58.7**	**-0.9**
TNS	**Taunus Mts**	**4.95**	**305**	*e*Pn	**Pn**	**06**	**42**	**07.0**	**+3.0**
CDF	**Champ du Feu**	**5.10**	**282**	*e*Pn	**Pn**	**06**	**42**	**07.7**	**+1.5**
CDF	**Champ du Feu**	**5.10**	**282**	*e*Pg	**Pg**	**06**	**42**	**26.1**	**-1.8**
CDF				*e*Sg	**Sg**	**06**	**43**	**33.2**	**-0.8**
	comp=Z,13nm,0.3s								
BZS	**Buzias**	**5.11**	**110**	⇓P	**Pn**	**06**	**42**	**08.0**	**+1.9**
HINF	**Hinteralfeld**	**5.35**	**276**	*e*Pn	**Pn**	**06**	**42**	**10.4**	**+0.8**
HINF	**Hinteralfeld**	**5.35**	**276**	*e*Pg	**Pg**	**06**	**42**	**31.1**	**-1.6**
HINF				*e*Sn	**Sn**	**06**	**43**	**10.1**	**-0.9**
	comp=Z,7.8nm,0.4s								
HINF				*e*Sg	**Sg**	**06**	**43**	**41.4**	**-0.6**
	comp=Z,14nm,0.5s								
DRGR		**5.47**	**95**	⇑P	Pn	06	42	16.1	+4.9
HAU	**Haudompre**	**5.70**	**278**	*e*Pn	**Pn**	**06**	**42**	**15.3**	**+1.1**
HAU	**Haudompre**	**5.70**	**278**	*e*Pg	**Pg**	**06**	**42**	**37.7**	**-1.5**
HAU				*e*Sn	**Sn**	**06**	**43**	**18.5**	**-0.8**
	comp=Z,6.3nm,0.3s								
HAU				*e*Sg	**Sg**	**06**	**43**	**51.9**	**-1.0**
	comp=Z,22nm,0.4s								
LPG	**La Plagne**	**5.91**	**252**	*e*P	**Pn**	**06**	**42**	**21.8**	**+4.4**
LPG				*e*Sn	**Sn**	**06**	**43**	**24.1**	**-0.9**
	comp=Z,1.7nm,0.4s								
LPL	**La Plagne**	**5.92**	**253**	*e*P	**Pn**	**06**	**42**	**21.6**	**+4.2**
LPL				*e*Sn	**Sn**	**06**	**43**	**24.9**	**-0.1**
	comp=Z,4.3nm,0.4s								
GZR	**Gura Zlata**	**5.94**	**109**	⇓P	**Pn**	**06**	**42**	**18.2**	**+0.6**
CABF	**La Chapelle**	**6.01**	**264**	*e*Pn	**Pn**	**06**	**42**	**19.8**	**+1.2**
CABF	**La Chapelle**	**6.01**	**264**	*e*Pg	**Pg**	**06**	**42**	**43.0**	**-2.2**
CABF				*e*Sn	**Sn**	**06**	**43**	**24.8**	**-2.3**
	comp=Z,1.9nm,0.3s								
CABF				*e*Sg	**Sg**	**06**	**44**	**01.6**	**-1.4**
	comp=Z,1.4nm,0.3s								
CABF	**La Chapelle**	**6.01**	**264**	*e*Sn	**Sg**	**06**	**44**	**01.7**	**-1.3**
	comp=Z,7.4nm,0.5s								
PAGF	**Fort de Pagny**	**6.15**	**283**	*e*Pn	**Pn**	**06**	**42**	**22.0**	**+1.6**
	baz=102								
PAGF	**Fort de Pagny**	**6.15**	**283**	*e*Pg	**Pg**	**06**	**42**	**43.5**	**-4.3**
PAGF				*e*Sn	**Sn**	**06**	**43**	**31.8**	**+1.4**
	comp=Z,4.5nm,0.4s								
PAGF				*e*Sg	**Sg**	**06**	**44**	**06.4**	**-0.9**
	comp=Z,48nm,1.0s								
SACR	**S. Croce Del S**	**6.17**	**180**	S	**Sb**	**06**	**43**	**52.0**	**+1.0**
MBDF	**Montbardon**	**6.24**	**246**	*e*Pn	**Pn**	**06**	**42**	**23.3**	**+1.4**
MBDF	**Montbardon**	**6.24**	**246**	*e*P	Pn	06	42	27.8	+5.9
MBDF				*e*Sn	**Sn**	**06**	**43**	**31.6**	**-1.4**
	comp=Z,2.2nm,0.3s								
SFTF	**Sexfontaines**	**6.58**	**279**	*e*Pn	**Pn**	**06**	**42**	**27.5**	**+1.2**
SFTF	**Sexfontaines**	**6.58**	**279**	*e*Pg	**Pg**	**06**	**42**	**53.3**	**-2.8**
SFTF				*e*Sn	**Sn**	**06**	**43**	**38.9**	**-2.1**
	comp=Z,2.7nm,0.2s								
MEZF	**Maizieres J'vi**	**6.59**	**282**	*e*Pn	**Pn**	**06**	**42**	**24.7**	**-1.7**
	baz=95								
MEZF	**Maizieres J'vi**	**6.59**	**282**	*e*Pg	**Pg**	**06**	**42**	**55.1**	**-1.1**
MEZF				*e*Sn	**Sn**	**06**	**43**	**38.6**	**-2.6**
MEZF				*e*Sg	**Sg**	**06**	**44**	**19.1**	**-2.3**
	comp=Z,8.9nm,0.5s								
ORIF	**Oris-en-Rattie**	**6.71**	**250**	*e*Pn	**Pn**	**06**	**42**	**30.1**	**+1.8**
ORIF				*e*Sn	**Sn**	**06**	**43**	**42.8**	**-1.7**
GIVF	**Givet**	**7.04**	**295**	*e*Pn	**Pn**	**06**	**42**	**33.2**	**+0.6**
GIVF	**Givet**	**7.04**	**295**	*e*Pg	**Pg**	**06**	**43**	**02.1**	**-2.8**
GIVF				*e*Sn	**Sn**	**06**	**43**	**49.8**	**-2.5**
	comp=Z,3.2nm,0.2s								
SMRF	**Simiane la Rot**	**7.37**	**244**	*e*Pn	**Pn**	**06**	**42**	**38.6**	**+1.4**
SMRF	**Simiane la Rot**	**7.37**	**244**	*e*Pg	**Pg**	**06**	**43**	**08.9**	**-2.2**
SMRF				*e*Sn	**Sn**	**06**	**43**	**58.8**	**-1.7**
	comp=Z,1.3nm,0.3s								
BAIF	**Baives**	**7.41**	**294**	*e*Pn	**Pn**	**06**	**42**	**37.8**	**+0.1**
BAIF	**Baives**	**7.41**	**294**	*e*Pg	**Pg**	**06**	**43**	**09.0**	**-2.9**
BAIF				*e*Sn	**Sn**	**06**	**43**	**59.2**	**-2.2**
LOR	**Lormes**	**7.41**	**272**	*e*Pn	**Pn**	**06**	**42**	**38.8**	**+1.0**
	baz=93								
LOR	**Lormes**	**7.41**	**272**	*e*Pg	**Pg**	**06**	**43**	**10.2**	**-1.8**
	baz=92								
LOR				*e*Sg	**Sg**	**06**	**44**	**44.2**	**-3.7**
	comp=Z,7.9nm,0.6s								
VIVF	**Saint-Julien-l**	**7.51**	**253**	*e*Pn	**Pn**	**06**	**42**	**40.4**	**+1.2**
VIVF				*e*Sn	**Sn**	**06**	**44**	**01.7**	**-2.4**
	comp=Z,1.6nm,0.3s								
SMF	**Signal de Mont**	**7.52**	**267**	*e*Pn	**Pn**	**06**	**42**	**39.9**	**+0.7**
SSF	**Saint Saulge**	**7.68**	**270**	*e*Pn	**Pn**	**06**	**42**	**42.5**	**+1.1**
SSF	**Saint Saulge**	**7.68**	**270**	*e*Pg	**Pg**	**06**	**43**	**13.7**	**-3.3**
AVF	**Avril sur Loir**	**7.82**	**268**	*e*Pn	**Pn**	**06**	**42**	**44.7**	**+1.3**
BGF	**Bois d'Agland**	**8.21**	**267**	*e*Pn	**Pn**	**06**	**42**	**49.9**	**+1.2**
BGF				*e*Sn	**Sn**	**06**	**44**	**18.6**	**-2.5**
	comp=Z,7.2nm,0.5s								
LASF	**Ste Croix**	**8.38**	**249**	*e*Pn	**Pn**	**06**	**42**	**52.4**	**+1.3**
LASF				*e*Sn	**Sn**	**06**	**44**	**23.1**	**-2.4**
	comp=Z,1.7nm,0.4s								
LASF	**Ste Croix**	**8.38**	**249**	*e*Sn	**Sn**	**06**	**44**	**23.3**	**-2.2**
	comp=Z,1.5nm,0.3s								
TCF	**Toulx Ste Croi**	**8.70**	**266**	*e*Pn	**Pn**	**06**	**42**	**55.3**	**-0.1**
CAF	**Calviac**	**9.20**	**258**	*e*Pn	**Pn**	**06**	**43**	**03.9**	**+1.6**
LFF	**La Frestale**	**10.07**	**260**	*e*P	Pn	06	43	20.3	+6.1

ROM ***24*** *06:42:02.3±0.1, 44.°007N±0.°004×11.°758E±0.°005, h28km, ML2.7/33, Error ellipse: s-maj=0.5km s-min=0.1km az=230.0*
LDG ***24*** *06:42:02.6±0.1, 44.°00N×11.°76E, h25km, Ml2.9/14, Error ellipse: s-maj=2.2km s-min=1.4km az=44.0*

ISC 24 06:42:02.0±0.8, 44.°00N±0.°02×11.°73E±0.°02, h24km±4km, n87, σ1§85/127, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
LMD	**Lutirano**	**0.07**	**347**	*e*Pg	**Pb**	**06**	**42**	**06.5**	**0.0**
LMD				*e*Sg	**Sb**	**06**	**42**	**10.2**	**+0.7**
LMD	**Lutirano**	**0.07**	**347**	*i* P	**Pb**	**06**	**42**	**06.5**	**0.0**
LMD				S	**Sb**	**06**	**42**	**10.4**	**+0.9**
SFI	**Santa Sofia**	**0.13**	**140**	P	**Pb**	**06**	**42**	**07.2**	**+0.3**
SFI				AML	AML				
	comp=E,5845μm,0.4s								
SFI				AML	AML				
	comp=N,3270μm,0.8s								
SFI				AML	AML				
	comp=E,5685μm,0.3s								
SFI				AML	AML				
	comp=E,5680μm,0.3s								
SFI				AML	AML				
	comp=N,3955μm,0.4s								
SFI				AML	AML				
	comp=N,3960μm,0.4s								
SFI				AML	AML				
	comp=E,5845μm,0.4s								
SFI				AML	AML				
	comp=N,3270μm,0.8s								
ASQU	**Asqua**	**0.21**	**169**	P	**Pb**	**06**	**42**	**08.3**	**+0.5**
ASQU				S	**Sb**	**06**	**42**	**13.2**	**+1.4**
ASQU				AML	AML				
	comp=N,10290μm,0.3s								
ASQU				AML	AML				
	comp=E,13800μm,0.3s								
BRIS	**BRISIGHELLA**	**0.22**	**313**	*i* P	**Pb**	**06**	**42**	**07.8**	**0.0**
BRIS				S	**Sb**	**06**	**42**	**12.9**	**+1.1**
BRIS				AML	AML				
	comp=N,6555μm,0.4s								
BRIS				AML	AML				
	comp=E,4325μm,1.3s								
RUFI	**Rufina**	**0.23**	**224**	*i* P	**Pb**	**06**	**42**	**08.9**	**+1.0**
RUFI				S	**Sb**	**06**	**42**	**14.2**	**+2.1**
RUFI				AML	AML				
	comp=E,1250μm,0.3s								
RUFI				AML	AML				
	comp=N,3310μm,0.7s								
RUFI				AML	AML				
	comp=E,1248μm,0.3s								
RUFI				AML	AML				
	comp=N,3320μm,0.7s								
SEI	**Scarperia**	**0.28**	**281**	P	**Pb**	**06**	**42**	**09.5**	**+0.8**
SEI				S	**Sb**	**06**	**42**	**15.4**	**+2.2**
SEI				AML	AML				
	comp=E,5165μm,0.9s								
SEI				AML	AML				
	comp=N,7310μm,0.4s								
SEI				AML	AML				
	comp=E,5160μm,0.9s								
FAEN	**Faenza**	**0.30**	**20**	P	**Pb**	**06**	**42**	**09.7**	**+0.6**
FAEN				S	**Sn**	**06**	**42**	**15.6**	**-1.0**
IMOL	**Imola, Italy**	**0.35**	**1**	P	**Pb**	**06**	**42**	**10.6**	**+0.7**
IMOL				S	**Sb**	**06**	**42**	**16.7**	**+1.5**
CRE	**Caprese Michel**	**0.42**	**157**	P	**Pb**	**06**	**42**	**11.2**	**+0.3**
CRE				S	**Sb**	**06**	**42**	**17.8**	**+0.9**
CRE				AML	AML				
	comp=E,1825μm,0.3s								
CRE				AML	AML				
	comp=N,2640μm,0.8s								
MTRZ	**Monterenzio**	**0.42**	**333**	*i* P	**Pb**	**06**	**42**	**11.4**	**+0.5**
MTRZ				S	**Sb**	**06**	**42**	**17.7**	**+0.7**
MTRZ				AML	AML				
	comp=E,2470μm,0.9s								
MTRZ				AML	AML				
	comp=N,2490μm,0.5s								
MTRZ				AML	AML				
	comp=E,2595μm,0.9s								
MTRZ				AML	AML				
	comp=N,2565μm,0.5s								
MTRZ				AML	AML				
	comp=E,2475μm,0.9s								
FNVD	**Fontana Vidola**	**0.47**	**291**	P	**Pb**	**06**	**42**	**12.7**	**+1.0**
FNVD				S	**Sb**	**06**	**42**	**20.3**	**+2.0**
FNVD				AML	AML				
	comp=E,1403μm,0.7s								
FNVD				AML	AML				
	comp=N,874μm,0.3s								
CPGN	**Carpegna, Ital**	**0.47**	**115**	P	**Pb**	**06**	**42**	**12.0**	**+0.1**
CPGN				S	**Sn**	**06**	**42**	**20.0**	**-1.0**
CPGN				AML	AML				
	comp=E,872μm,0.6s								
CPGN				AML	AML				
	comp=N,620μm,1.5s								
CPGN				AML	AML				
	comp=E,872μm,0.6s								
CPGN				AML	AML				
	comp=N,620μm,1.5s								
PARC	**Parchiule**	**0.51**	**134**	P	**Pb**	**06**	**42**	**12.4**	**0.0**
PARC				S	**Sn**	**06**	**42**	**20.7**	**-1.1**
PARC				AML	AML				
	comp=N,528μm,0.8s								
PARC				AML	AML				
	comp

comp=N,912µm,0.3s
FSSB AML AML
comp=E,724µm,1.3s
MPAG Monte Paganucc 0.83 116 AML AML
comp=E,322µm,0.9s
MPAG AML AML
comp=E,323µm,0.9s
MPAG AML AML
comp=N,349µm,0.4s
ATFO Monte Foce - G 0.88 136 AML AML
comp=N,332µm,0.5s
ATFO AML AML
comp=E,292µm,1.4s
MAIM Mastiano 0.90 265 P **Pn** **06 42 18.8 -0.4**
MAIM Mastiano 0.90 265 P **Pn** **06 42 18.7 -0.4**
MAIM S **Sb** **06 42 31.4 +0.9**
MAIM AML AML
comp=E,220µm,0.9s
MAIM AML AML
comp=N,224µm,0.5s
CARD Cardoso 0.90 272 P **Pn** **06 42 18.9 -0.3**
PII Pisa 0.92 253 AML AML
comp=N,377µm,1.1s
PII AML AML
comp=E,336µm,0.3s
PII AML AML
comp=E,336µm,0.3s
ATTE AVT- Monte Tez 0.92 151 AML AML
comp=N,285µm,1.0s
ATTE AML AML
comp=E,248µm,0.5s
SARO Sassorosso 0.97 281 P **Pn** **06 42 20.5 +0.2**
CAVE Cavezzo 1.01 329 P **Pb** **06 42 24.7 +3.9**
CAVE S **Sn** **06 42 36.0 +2.0**
ATCC AVT- Casa Cast 1.05 141 AML AML
comp=E,414µm,0.4s
ATCC AML AML
comp=N,322µm,1.5s
ATCC AML AML
comp=E,415µm,0.4s
ATCC AML AML
comp=N,324µm,1.5s
SERM Sermide 1.05 343 P **Pb** **06 42 21.9 +0.3**
SERM S **Sb** **06 42 36.4 +1.5**
SERM AML AML
comp=N,567µm,1.6s
SERM AML AML
comp=E,464µm,0.5s
MGAB Montegabbione 1.13 166 P **Pn** **06 42 22.6 +0.4**
MGAB S **Sb** **06 42 38.1 +1.1**
MGAB AML AML
comp=E,314µm,1.3s
MGAB AML AML
comp=E,314µm,0.5s
MGAB AML AML
comp=N,446µm,0.3s
MGAB AML AML
comp=N,416µm,0.3s
EQUI Equi 1.15 279 P **Pn** **06 42 22.8 +0.2**
EQUI Equi 1.15 279 P **Pn** **06 42 22.7 +0.2**
EQUI AML AML
comp=E,72µm,1.1s
EQUI AML AML
comp=N,102µm,0.7s
SACS San Casciano d 1.16 174 P **Pn** **06 42 23.1 +0.3**
SACS AML AML
comp=E,153µm,0.8s
SACS AML AML
comp=N,135µm,0.5s
ASSB Assisi San Ben 1.17 145 P **Pb** **06 42 24.0 +0.3**
ASSB AML AML
comp=N,164µm,1.2s
ASSB AML AML
comp=E,140µm,0.8s
GRAM Graiana 1.29 293 P **Pb** **06 42 28.6 +2.9**
MNTV Mantova 1.33 330 P **Pb** **06 42 29.7 +3.5**
CASP Castiglione de 1.37 208 P **Pn** **06 42 25.1 -0.5**
CASP AML AML
comp=N,72µm,0.4s
CASP AML AML
comp=E,51µm,0.6s
SALO Salr 1.83 332 P **Pn** **06 42 32.5 +0.5**
SALO AML AML
comp=N,154µm,0.8s
SALO AML AML
comp=E,166µm,0.7s
LEOD Capriano del C 1.85 322 P **Pn** **06 42 30.8 -1.4**
MAGA Magasa 1.94 337 P **Pn** **06 42 33.2 -0.3**
MAGA AML AML
comp=E,395µm,0.5s
MAGA AML AML
comp=N,285µm,0.3s
TERO Teramo 1.94 135 P **Pb** **06 42 40.7 +4.0**
CTI Castel Tesino 2.04 358 S **Sn** **06 42 59.0 -0.8**
CERT Cerreto 2.25 155 P **Pn** **06 42 37.1 -0.6**
CERT AML AML
comp=E,77µm,0.6s
CERT AML AML
comp=N,32µm,0.5s
NVLJ Novalja 2.32 75 *e*Pn **Pn** **06 42 37.6 -1.0**
NVLJ Sn **Sn** **06 43 04.5 -1.9**
STAL STALIGIAL 2.36 17 P **Pn** **06 42 37.8 -1.5**
STAL S **Sn** **06 43 07.0 -0.5**
DUGI Dugi Otok 2.40 89 *e*Pn **Pn** **06 42 38.9 -0.9**
DUGI Sn **Sn** **06 43 05.3 -3.1**
PGF Pioggiola 2.47 235 *e*Pn **Pn** **06 42 40.1 -0.7**
PGF *e*Sn **Sn** **06 43 06.8 -3.4**
comp=N,30nm,0.8s
ACOM Acomizza, Ital 2.84 26 P **Pn** **06 42 45.3 -0.7**
ACOM AML AML
comp=N,88µm,1.5s
ACOM AML AML
comp=E,108µm,0.3s
LJU Ljubljana 2.84 43 P **Pn** **06 42 44.5 -1.4**
LJU S **Sn** **06 43 18.0 -1.4**
LJU AML AML
comp=N,204µm,0.5s
LJU AML AML
comp=E,154µm,1.1s
ZIRJ Zirje 2.85 96 *i* Pn **Pn** **06 42 45.4 -0.6**
ZIRJ Sn **Sn** **06 43 16.9 -2.6**
MORI Morici 2.88 91 *e*Pn **Pn** **06 42 45.8 -0.4**
MORI Sn **Sn** **06 43 18.8 -1.3**
BOJS Bojanci 2.92 58 S **Sn** **06 43 21.0 -0.2**
SBF Sospel 3.11 269 *e*Pn **Pn** **06 42 48.9 -0.6**
SBF *e*Sn **Sn** **06 43 21.9 -4.0**
comp=E,36nm,0.6s
KIJV Kijevo 3.37 88 *i* Pn **Pn** **06 42 53.9 +0.8**
KIJV Sn **Sn** **06 43 30.5 -1.9**
MBDF Montbardon 3.63 283 *e*Pn **Pn** **06 42 56.1 -0.7**
MBDF Montbardon 3.63 283 *e*P **Pn** **06 42 59.2 +2.4**
MBDF *e*Sn **Sn** **06 43 35.1 -3.8**
comp=E,3.0nm,0.4s
FRF La Foret Royal 3.71 265 *e*Pn **Pn** **06 42 56.5 -1.2**
FRF *e*Sn **Sn** **06 43 35.8 -4.9**
comp=E,5.8nm,0.3s
LMR La Mourre 3.85 262 *e*Pn **Pn** **06 42 58.7 -0.9**
LMR *e*Sn **Sn** **06 43 39.6 -4.5**
comp=E,6.9nm,0.6s
LPG La Plagne 3.85 295 *e*Pn **Pn** **06 42 58.8 -1.1**
LPG La Plagne 3.85 295 *e*P **Pn** **06 43 02.6 +2.7**
LPG *e*Sn **Sn** **06 43 40.2 -4.3**
comp=E,8.5nm,0.8s
LPL La Plagne 3.87 295 *e*P **Pn** **06 43 03.0 +2.9**
LPL *e*Sn **Sn** **06 43 40.2 -4.7**
comp=E,6.7nm,0.4s
RICI Ricice 3.95 96 *i* Pn **Pn** **06 43 01.7 +0.7**
RICI Sn **Sn** **06 43 45.9 -0.7**
ORIF Oris-en-Rattie 4.29 284 *e*Pn **Pn** **06 43 04.5 -1.3**
ORIF *e*Sn **Sn** **06 43 50.6 -4.5**
comp=E,9.2nm,0.6s
SMRF Simiane la Rot 4.44 272 *e*Pn **Pn** **06 43 06.8 -1.1**
SMRF Simiane la Rot 4.44 272 *e*P **Pn** **06 43 09.8 +1.9**
SMRF *e*Sn **Sn** **06 43 53.9 -4.9**
comp=E,1.1nm,0.4s
PZUN Potenza 4.51 137 S **Sn** **06 44 05.0 +4.5**
MCEL Monticello 4.76 139 P **Pn** **06 43 10.7 -1.6**
HINF Hinteralfeld 5.11 320 *e*Sn **Sn** **06 44 10.7 -4.6**
comp=E,11nm,0.5s
T0702 Acquaformosa (5.37 141 S **Sb** **06 44 41.0 +1.8**
HAU Haudompre 5.48 319 *e*Pn **Pn** **06 43 21.3 -0.8**
HAU *e*Sn **Sn** **06 44 19.5 -4.9**
comp=E,18nm,0.4s
TDS Terranova Siba 5.54 140 P Pn 06 43 29.1 +6.3
LASF Ste Croix 5.68 273 *e*Pn **Pn** **06 43 23.7 -1.1**

MTLF Montolieu 6.93 268 *e*Pn **Pn** **06 43 40.7 -1.3**

IDC ***24*** *06:45:29.2±1.4,30°.17N×67°.12E,h0km,mb3.5/7, mb1 3.7/8,mb1mx3.5/45,mbtmp3.5/8,ML3.6/1,MS2.8/1, Ms1 3.0/1,ms1mx2.3/27,Error ellipse: s-maj=42.4km s-min=27.6km az=119.0*
ISC 24 06:45:34.7±1.3,30°.2N±0°.2×67°.1E±0°.2,h35km,n9,σ0s66/8, mb3.5/6,Pakistan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
AAK	**Ala-Archa**	**13.72**	**24**	Pn		**Pn**	**06 48 46.8**	**0.0**
	0.3nm,0.3s,baz=207,slow=6.8,SNR=2.2							
MKAR	**Makanchi Array**	**20.29**	**31**	P		**P**	**06 50 06.4**	**-1.0**
	0.6nm,0.4s,baz=215,slow=11,SNR=2.7							
KURBB	**Kurchatov Arra**	**22.09**	**20**	P		**P**	**06 50 26.4**	**-0.2**
	1.4nm,0.6s,baz=211,slow=8.8,SNR=10							
BVAR	**Borovoye Array**	**22.90**	**5**	P		**P**	**06 50 36.0**	**+0.8**
	0.5nm,0.4s,baz=177,slow=10,SNR=4.1							
CMAR	**Chiang Mai Arr**	**31.16**	**105**	LR		LR	07 08 06.6	
	comp=Z,16nm,18.2s,baz=225,slow=44							
TORD	**Torodi Ar. Bea**	**62.37**	**270**	P		**P**	**06 55 53.8**	**-0.4**
	0.5nm,0.8s,baz=63,slow=6.6,SNR=3.9							
ILAR	**Eielson Array**	**81.65**	**14**	P		**P**	**06 57 48.7**	**-0.2**
	0.1nm,0.5s,baz=305,slow=4.5,SNR=4.2							
ASAR	**Alice Springs**	**83.52**	**122**	P		**P**	**06 57 59.5**	**+0.2**
	0.2nm,0.6s,baz=294,slow=5.8,SNR=4.3							
YKA	**Yellowknife Ar**	**87.59**	**1**	P		**P**	**06 58 19.5**	**+0.6**
	0.5nm,0.9s,baz=354,slow=4.4,SNR=5.6							

VAO ***24*** *06:47:27.4±0.8, 15°.04S×73°.63W,h10km,mb4.8*
BJI ***24*** *06:47:32.2±0.0, 15°.51S×74°.05W,h90km,mB5.4/2*
NEIC ***24*** *06:47:32.1±2.2, 15°.30S±0°.07×73°.81W±0°.08,h81km±2km, mb5.1/322,ML4.8(ARE),Error ellipse: s-maj=13.2km s-min=7.1km az=55.0*
ARE ***24*** *06:47:32±2.8, 15°.39S±0°.06×73°.96W±0°.08,h74km±4km, Error ellipse: s-maj=12.8km s-min=5.8km az=52.0*
IDC ***24*** *06:47:33.3±0.8, 15°.20S×73°.73W,h85km±6km,mb4.4/17, mb1 4.5/22,mb1mx4.4/34,mbtmp4.7/22,MS3.4/7, Ms1 3.4/7,ms1mx3.0/30,Error ellipse: s-maj=17.4km s-min=9.3km az=54.0*
ISC 24 06:47:33.8±0.3, 15°.30S±0°.05×73°.70W±0°.06,h100km, h100km:pP-P,n625,σ1s34/505,mb5.0/164,7C-1D, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
AP01	**Chacalluta**	**4.43**	**134**	⇑*i*P		**Pn**	**06 48 37.6**	**-1.2**
AP01				*i* S		**Sn**	**06 49 25.6**	**-3.8**
AP01	**Chacalluta**	**4.43**	**134**			**Pn**	**06 48 39.4**	**+0.5**
AP01				Sn		**Sn**	**06 49 27.1**	**-2.4**
NNA	**Nana**	**4.49**	**317**	P		**Pn**	**06 48 36.2**	**-3.6**
	30nm,0.3s,baz=145,slow=13,SNR=36							
NNA				S		**Sn**	**06 49 28.4**	**-2.6**
	57nm,0.3s,baz=334,slow=16,SNR=6.4							
NNA				LR		LR	06 50 19.5	
	comp=Z,214nm,20.9s,baz=180,slow=38							
NNA	**Nana**	**4.49**	**317**			**Pn**	**06 48 36.5**	**-3.3**
NNA				Sn		**Sn**	**06 49 26.6**	**-4.3**
PB12	**IPOC Station P**	**4.61**	**136**	⇑*i*P		**Pn**	**06 48 40.2**	**-1.2**
PB12				*i* S		**Sn**	**06 49 29.6**	**-4.4**
PB12	**IPOC Station P**	**4.61**	**136**			**Pn**	**06 48 40.3**	**-1.2**
PB12				Sn		**Sn**	**06 49 30.0**	**-3.9**
PB16	**IPOC Station P**	**5.02**	**128**	⇑*i*P		**Pn**	**06 48 47.8**	**+0.4**
PB16				*i* S		**Sn**	**06 49 40.6**	**-4.0**
PB16	**IPOC Station P**	**5.02**	**128**			**Pn**	**06 48 48.0**	**+0.6**
PB16				Sn		**Sn**	**06 49 43.1**	**-1.5**
LPAZ	**La Paz**	**5.45**	**101**	P		**Pn**	**06 48 55.8**	**+2.5**
	20nm,0.3s,baz=283,slow=9.5,SNR=337							
MNMC	**Minye Minye**	**5.47**	**135**	⇑*i*P		**Pn**	**06 48 52.2**	**-0.9**
MNMC	**Minye Minye**	**5.47**	**135**			**Pn**	**06 48 52.5**	**-0.7**
PSGC	**Pisagua**	**5.47**	**142**	⇑*i*P		**Pn**	**06 48 51.6**	**-1.5**
PSGC				*i* S		**Sn**	**06 49 48.8**	**-6.0**
PSGCX	**Pisagua**	**5.47**	**142**			**Pn**	**06 48 51.2**	**-1.9**
PB11	**IPOC Station P**	**5.88**	**140**	⇑*i*P		**Pn**	**06 48 57.3**	**-1.4**
PB11	**IPOC Station P**	**5.88**	**140**			**Pn**	**06 48 57.4**	**-1.3**
GO01	**Chusmiza**	**6.11**	**136**	⇑*i*P		**Pn**	**06 49 01.3**	**-0.8**
GO01	**Chusmiza**	**6.11**	**136**			**Pn**	**06 49 01.7**	**-0.5**
TA01	**Diego Aracena**	**6.22**	**148**			**Pn**	**06 49 01.5**	**-1.6**
PATCX	**Punta Patache**	**6.45**	**149**			**Pn**	**06 49 04.3**	**-2.0**
PB01	**IPOC Station P**	**6.98**	**146**			**Pn**	**06 49 12.3**	**-1.2**
PB07	**IPOC Station P**	**7.35**	**151**			**Pn**	**06 49 16.9**	**-1.8**
PB09	**IPOC Station P**	**7.72**	**147**			**Pn**	**06 49 23.1**	**-0.6**
PB04	**IPOC Station P**	**7.76**	**155**			**Pn**	**06 49 22.2**	**-2.0**
PB06	**IPOC Station P**	**8.34**	**153**			**Pn**	**06 49 30.0**	**-2.1**
LVC	**Limon Verde**	**8.57**	**149**	P		**Pn**	**06 49 34.9**	**-0.5**
	12nm,0.3s,baz=2.7,slow=7.7,SNR=89							
LVC				S		**Sn**	**06 51 06.9**	**-3.7**
	9.1nm,0.3s,baz=196,slow=16,SNR=8.2							
LVC	**Limon Verde**	**8.57**	**149**	*e*P		**Pn**	**06 49 35.2**	**-0.2**
PB10	**IPOC Station P**	**8.69**	**161**			**Pn**	**06 49 34.5**	**-2.3**
PB15	**IPOC Station P**	**8.82**	**154**			**Pn**	**06 49 37.0**	**-1.8**
ATAH	**Atahualpa**	**9.33**	**330**	P		**Pn**	**06 49 47.2**	**+1.4**
	2.9nm,0.3s,baz=150,slow=10,SNR=13							
ATAH				S		**Sn**	**06 51 28.4**	**-0.8**
	2.4nm,0.3s,baz=359,slow=18,SNR=1.3							
PB14	**IPOC Station P**	**9.78**	**162**			**Pn**	**06 49 51.4**	**-0.5**
GO02	**Mina Guanaco**	**10.54**	**159**			**Pn**	**06 50 01.3**	**-1.0**
AC01	**Pan de Azucar**	**11.18**	**165**	Pn		**Pn**	**06 50 07.2**	**-3.3**
SAML	**Samuel**	**12.06**	**60**			**Pn**	**06 50 18.9**	**-3.5**
SIV	**San Ignacio**	**12.18**	**95**	P		**Pn**	**06 50 21.4**	**-2.6**
	8.3nm,0.3s,baz=284,slow=10,SNR=163							
SIV				LR		LR	06 55 46.1	
	comp=Z,323nm,20.9s,baz=316,slow=40							
VILB	**Vilhena**	**13.30**	**82**	*e*P		**Pn**	**06 50 35.8**	**-3.0**
AC05	**El Transito**	**13.84**	**167**	P		**P**	**06 50 48.3**	**-2.5**
PTLB	**Pontes e Lacer**	**14.04**	**93**	*e*P		**Pn**	**06 50 45.5**	**-2.9**
CO01	**Juntas del Tor**	**14.98**	**168**	P		**P**	**06 51 04.4**	**+0.7**
GO04	**Tololo Observa**	**15.04**	**170**	P		**P**	**06 51 03.7**	**-0.6**
PTLC	**Puerto Leguiza**	**15.41**	**356**	*e*P		**Pn**	**06 51 00.6**	**-5.3**
CO03	**El Pedregal**	**15.71**	**170**	P		**P**	**06 51 11.7**	**+0.1**
PUAC	**Puerto Asis, P**	**16.00**	**350**	*e*P		**P**	**06 51 12.9**	**-1.9**
CFA	**Coronel Fontan**	**16.98**	**164**	P		**P**	**06 51 28.2**	**+2.7**
	0.3nm,0.3s,baz=346,slow=13,SNR=7.0							
CFA				LR		LR	06 56 28.7	
	comp=Z,54nm,21.0s,baz=326,slow=31							
CRUC	**La Cruz**	**17.06**	**349**	*e*P		**P**	**06 51 28.7**	**+1.8**
MACC	**Macarena, Meta**	**17.33**	**359**	*e*P		**Pn**	**06 51 27.8**	**-1.8**
SALV	**Santo Antonio**	**17.35**	**94**	*e*P		**Pn**	**06 51 28.7**	**-1.2**
GARC	**Garzon, Huila**	**17.46**	**354**	*e*P		**Pn**	**06 51 31.6**	**+0.2**
BBAC	**Balboa, Cauca**	**17.56**	**348**	*e*P		**Pn**	**06 51 33.4**	**+0.8**
MACA	**Manacapuru-AM**	**17.60**	**48**	*e*P		**P**	**06 51 29.2**	**-3.3**
ROC1	**El Roble**	**17.77**	**173**	P		**Pn**	**06 51 36.1**	**+1.1**
AQDB	**Aquidauana**	**17.88**	**109**	*e*P		**Pn**	**06 51 37.2**	**+0.9**
BETC	**Betania**	**17.95**	**354**	*e*P		**Pn**	**06 51 37.8**	**+0.7**
CLDB	**Colider**	**17.98**	**78**	*e*P		**Pn**	**06 51 36.7**	**-0.8**
MT02	**Curacav**	**18.03**	**173**	P		**Pn**	**06 51 38.4**	**+0.5**
H03N1	**Juan Fernandez**	**18.67**	**194**	T		T	07 10 24.7	
	baz=15,slow=74,SNR=5113							
H03N2	**Juan Fernandez**	**18.68**	**194**	T		T	07 10 21.2	
	baz=15,slow=74,SNR=1521							
H03N3	**Juan Fernandez**	**18.69**	**194**	T		T	07 10 34.5	
	baz=15,slow=74,SNR=4977							
CPUP	**Villa Florida**	**18.81**	**128**	P		**Pn**	**06 51 47.9**	**+0.7**
	0.5nm,0.3s,baz=310,slow=12,SNR=13							
CPUP	**Villa Florida**	**18.81**	**128**	P		**Pn**	**06 51 47.5**	**+0.3**
ORTC	**Ortega, Tolima**	**19.14**	**355**	*e*P		**Pn**	**06 51 51.2**	**-0.2**
VILC	**Villavicencio,**	**19.28**	**0**	*e*P		**Pn**	**06 51 54.2**	**+1.2**
YOTC	**Yotoco, Valle**	**19.34**	**352**	*e*P		**Pn**	**06 51 53.0**	**-0.6**
PTGC	**Puerto Gaitan,**	**19.43**	**5**	*e*P		**Pn**	**06 51 52.7**	**-1.9**
BO02	**Sierra Bellavi**	**19.59**	**173**			**Pn**	**06 51 56.9**	**+0.5**
CVER	**Cruz Verde, Cu**	**19.69**	**359**	*e*P		**Pn**	**06 51 58.3**	**+0.1**
ANIL	**Santa Ana**	**19.73**	**355**	*e*P		**Pn**	**06 52 00.9**	**+2.4**
NPGB	**Novo Progresso**	**19.76**	**67**	*e*P		**Pn**	**06 51 56.0**	**-2.5**
CHIC	**Chingaza**	**19.80**	**360**	*e*P		**Pn**	**06 51 59.2**	**-0.1**
PTGA	**Pitinga**	**19.83**	**44**	P		**Pn**	**06 51 57.3**	**-2.0**
	9.6nm,0.3s,baz=219,slow=14,SNR=42							
PTGA	**Pitinga**	**19.83**	**44**	P		**Pn**	**06 51 57.7**	**-1.7**
PTGA	**Pitinga**	**19.83**	**44**	*e*P		**Pn**	**06 51 57.0**	**-2.4**
ROSC	**El Rosal**	**20.02**	**358**	P		Pn	06 52 02.6	+0.8
	2.0nm,0.3s,baz=160,slow=6.8,SNR=19							
ROSC	**El Rosal**	**20.02**	**358**	P		Pn	06 52 03.0	+1.1
ROSC				IAmb		IAmb	06 52 09.5	
	comp=Z,56nm,0.9s							
C2SB	**Chapadao do Su**	**20.24**	**103**	*e*P		Pn	06 52 03.2	-0.9
GUY2C	**Guyana, Caldas**	**20.46**	**355**	*e*P		Pn	06 52 06.6	-0.5
NORC	**Norcasia**	**20.76**	**357**	*e*P		Pn	06 52 08.4	-1.8
SPBC	**San Pablo de B**	**20.82**	**359**	*e*P		Pn	06 52 09.5	-1.4
RUSC	**La Rusia**	**21.06**	**2**	*e*P		**P**	**06 52 11.7**	**+1.1**
RUSC	**La Rusia**	**21.06**	**2**	P		**P**	**06 52 11.2**	**+0.7**

ARAG Araguaiana, MT 21.09 94 *e*P **P** **06 52 13.0 +2.6**
CBOC Ciudad Bolivar 21.15 354 *e*P **P** **06 52 11.9 +0.7**
BI02 San Fabin de 21.39 175 P **P** **06 52 14.5 +1.0**
HELC Santa Helena 21.43 355 *e*P **P** **06 52 16.5 +2.2**
PTBC PUERTO BERRIO, 21.71 358 *e*P **P** **06 52 17.4 +0.4**
BARC Barichara 21.75 1 *e*P **P** **06 52 17.8 +0.1**
PCMB Pacaembu 22.18 110 *e*P **P** **06 52 23.0 +1.1**
BRRC Barranca, Sant 22.26 360 *e*P **P** **06 52 21.9 -0.9**
DBBC Dabeiba 22.31 353 *e*P **P** **06 52 25.7 +2.3**
PAMC Pamplona, Colo 22.51 3 *e*P **P** **06 52 27.1 +1.2**
MALB Monte Alegre 23.36 57 *e*P **P** **06 52 35.2 +1.4**
LC01 Cunco 23.57 176 P **P** **06 52 36.2 +0.8**
SMLC San Martn de 23.95 359 *e*P **P** **06 52 38.1 -0.8**
FRTB Fartura 24.11 113 *e*P **P** **06 52 42.7 +2.2**
SDV Santo Domingo 24.22 7 P **P** **06 52 42.0 +0.4**
comp=Z,27nm,0.8s,baz=185,slow=8.9,SNR=26
SDV LR LR 07 03 20.7
comp=Z,63nm,19.2s,baz=218,slow=39
SDV Santo Domingo 24.22 7 *e*P **P** **06 52 41.8 +0.2**
SDV Santo Domingo 24.22 7 P **P** **06 52 41.8 +0.2**
SDV IAmb IAmb 06 52 46.2
comp=Z,23nm,0.7s
SDV Santo Domingo 24.22 7 *e*P **P** **06 52 42.1 +0.4**
IPMB Ipameri, GO 24.56 100 *e*P **P** **06 52 46.7 +2.1**
PLTB Pedras Altas 24.59 135 *e*P **P** **06 52 49.3 +4.6**
BDFB Brasilia 24.75 94 P **P** **06 52 48.0 +1.5**
comp=Z,10nm,0.8s,baz=281,slow=10,SNR=9.2
BDFB LR LR 07 03 40.7
comp=Z,104nm,18.9s,baz=264,slow=39
BDFB Brasilia 24.75 94 P **P** **06 52 47.9 +1.4**
ARGC Ariguani, Magd 25.00 359 *e*P **P** **06 52 49.9 +1.4**
BCIP Isla Barro Col 25.06 346 P **P** **06 52 48.6 -0.4**
BCIP IAmb IAmb 06 53 47.2
comp=Z,103nm,1.6s
SJCC San Jacinto, C 25.07 357 *e*P **P** **06 52 50.4 +1.1**
PRPB Parauapebas 25.13 71 *e*P **P** **06 52 51.8 +2.0**
PLCA Paso Flores 25.49 174 P **P** **06 52 53.8 +1.0**
comp=Z,3.6nm,0.8s,baz=339,slow=10,SNR=6.9
PLCA PcP **PcP** **06 56 23.9 +1.8**
comp=Z,1.6nm,0.7s,baz=18,slow=4.7,SNR=4.2
PLCA Paso Flores 25.49 174 P **P** **06 52 54.2 +1.4**
SMTB Santa Maria do 26.30 79 *e*P **P** **06 53 02.5 +2.1**
URIC Uribia, Colomb 26.88 4 P **P** **06 53 05.8 +0.4**
MDP Montagnes des 29.08 47 LR LR 07 04 50.3
comp=Z,87nm,21.4s,baz=258,slow=36
BSFB Barra de Sao F 31.57 101 *e*P **P** **06 53 49.0 +1.9**
ROSB Rosrio 31.64 70 *e*P **P** **06 53 49.0 +1.3**
TGUH Tegucigalpa,Un 32.11 335 P **P** **06 53 53.3 +1.4**
TGUH IAmb IAmb 06 53 53.6
comp=Z,19nm,0.8s
MTDJ Mount Denham 33.52 353 P **P** **06 54 06.1 +1.9**
MLPR Magueyes Islan 33.70 11 P **P** **06 54 05.4 -0.2**
ICMP Isla Caja de M 33.72 12 P **P** **06 54 05.9 +0.2**
CRPR Cabo Rojo, PR 33.72 11 P **P** **06 54 05.7 -0.1**
OBIP Obispado Ponce 33.86 12 P **P** **06 54 06.3 -0.7**
OBIP IAmb IAmb 06 54 07.3
comp=Z,22nm,0.8s
SJG San Juan 34.02 13 P **P** **06 54 07.7 -0.6**
HUMP Col San Antoni 34.12 13 P **P** **06 54 08.2 -1.0**
HUMP IAmb IAmb 06 54 10.4
comp=Z,44nm,1.3s
TEIG Tepich 38.10 337 P **P** **06 54 43.6 +0.5**
comp=Z,32nm,0.8s,baz=139,slow=1.8,SNR=17
TEIG Tepich 38.10 337 P **P** **06 54 43.9 +0.7**
CMIG Matias Romero 38.37 326 P **P** **06 54 46.4 +0.9**
comp=Z,14nm,0.8s,baz=129,slow=6.1,SNR=19
TIGA Tifton 47.43 348 P **P** **06 55 58.5 +0.1**
baz=167
352A Blakely 47.74 347 IAmb IAmb 06 56 01.6
comp=Z,22nm,0.8s
157A Early Branch 48.21 352 P **P** **06 56 05.2 +0.8**
baz=171
250A Grady 48.53 346 IAmb IAmb 06 56 07.5
comp=Z,23nm,0.8s
NHSC New Hope 48.53 353 P **P** **06 56 07.9 +1.1**
baz=172
NHSC New Hope 48.53 353 P **P** **06 56 07.7 +1.0**
Z58A St. Stephen 48.71 353 P **P** **06 56 09.2 +1.0**
baz=172,SNR=5.8
Z57A Bowman 48.78 352 P **P** **06 56 09.5 +0.7**
baz=171,SNR=7.3
152A Waverly Hall 48.85 348 IAmb IAmb 06 56 09.9
comp=Z,22nm,0.8s
Y58A Scranton 49.26 353 P **P** **06 56 13.2 +0.9**
baz=173
344A Westbrook Farm 49.28 341 IAmb IAmb 06 56 13.9
comp=Z,26nm,0.8s
GOGA Godfrey 49.32 349 P **P** **06 56 13.0 +0.1**
baz=168,SNR=9.1
GOGA Godfrey 49.32 349 IAmb IAmb 06 56 13.7
comp=Z,33nm,1.1s
Y56A Pelion 49.35 352 P **P** **06 56 13.4 +0.4**
baz=170
Y57A Sumter 49.45 353 P **P** **06 56 14.5 +0.7**
baz=172,SNR=8.3
Y55A Saluda 49.57 351 P **P** **06 56 15.2 +0.4**
baz=170,SNR=15
Z50A Ashland 49.67 347 P **P** **06 56 15.3 -0.2**
baz=165,SNR=11
Z50A Ashland 49.67 347 IAmb IAmb 06 56 16.2
comp=Z,22nm,0.9s
LRAL Lakeview Retre 49.71 345 P **P** **06 56 15.5 -0.4**
baz=163,SNR=10
LRAL Lakeview Retre 49.71 345 P **P** **06 56 14.8 -1.0**
LRAL IAmb IAmb 06 56 15.9
comp=Z,13nm,0.8s
X57A Johnson Farm, 49.86 353 P **P** **06 56 17.5 +0.6**
baz=172
X58A Rowland 49.86 354 P **P** **06 56 17.2 +0.3**
baz=173
Y52A Lilburn 49.88 349 P **P** **06 56 16.7 -0.4**
baz=167
Y52A Lilburn 49.88 349 IAmb IAmb 06 56 17.8
comp=Z,21nm,1.0s
833A Chaparral WMA, 49.99 330 P **P** **06 56 18.9 +0.8**
baz=147,SNR=5.6
X56A White Oak 50.00 352 P **P** **06 56 18.5 +0.5**
baz=171,SNR=14
X55A Gracelyn & Ava 50.06 351 P **P** **06 56 19.0 +0.5**
baz=170,SNR=9.2
X54A Belton 50.25 351 P **P** **06 56 20.2 +0.3**
baz=169,SNR=14
W58A Raeford 50.31 354 P **P** **06 56 21.0 +0.6**
baz=173,SNR=5.5
Y49A Blount Mountai 50.36 346 IAmb IAmb 06 56 20.9
comp=Z,15nm,0.7s
W57A Gilead 50.53 353 P **P** **06 56 22.3 +0.3**
baz=172,SNR=8.1
W56A Indian Trail 50.58 353 P **P** **06 56 22.5 +0.2**
baz=172,SNR=6.7
KMSC Kings Mountain 50.68 352 P **P** **06 56 23.5 +0.4**
baz=171,SNR=13
X51A Calhoun 50.71 348 P **P** **06 56 23.2 -0.2**
W54A Cherokee Point 50.75 351 P **P** **06 56 24.1 +0.4**
baz=170,SNR=12
BG3 Lake Jocassee 50.77 350 IAmb IAmb 06 56 25.1
comp=Z,11nm,1.0s
V59A Middlesex 50.96 355 P **P** **06 56 25.8 +0.6**
baz=174
W52A Murphy 51.05 349 IAmb IAmb 06 56 26.8
comp=Z,19nm,0.9s
V58A Windy Hill, Pi 51.07 354 P **P** **06 56 26.3 +0.3**
baz=173
V58A Windy Hill, Pi 51.07 354 IAmb IAmb 06 56 27.2
comp=Z,11nm,0.9s
X48A Hartselle 51.08 346 IAmb IAmb 06 56 26.4
comp=Z,16nm,0.8s
V57A Coltrane Farms 51.23 354 P **P** **06 56 27.3 +0.1**
baz=173
V56A Mocksville 51.23 353 P **P** **06 56 27.8 +0.6**
baz=172,SNR=12
435B Jarrell 51.26 333 P **P** **06 56 28.2 +0.7**
baz=150
V55A Taylorsville 51.37 352 P **P** **06 56 28.8 +0.6**
baz=171,SNR=7.4
V55A Taylorsville 51.37 352 P **P** **06 56 28.6 +0.3**
V55A IAmb IAmb 06 56 29.8
comp=Z,25nm,1.0s
V54A Nebo 51.39 351 P **P** **06 56 28.7 +0.3**
baz=170,SNR=9.9
V53A Saluda 51.42 351 IAmb IAmb 06 56 29.5
comp=Z,16nm,1.1s
CPCT Cooper Cave 51.50 349 IAmb IAmb 06 56 29.9
comp=Z,16nm,0.8s
U59A Littleton 51.51 356 P **P** **06 56 30.2 +0.9**
baz=175

TKL	Tuckaleechee C	51.57 350	IAmb	IAmb	06 56 30.3
	comp=Z,24nm,1.1s				
237A	Washetta, Mont	51.59 336	IAmb	IAmb	06 56 31.8
	comp=Z,21nm,0.8s				
U60A	Pendleton	51.59 356	P	P	06 56 30.5 +0.6
	baz=176				
Z41A	Richland Creek	51.62 340	P	P	06 56 31.0 +0.8
	baz=156,SNR=6.3				
U57A	Blanch	51.72 354	P	P	06 56 31.3 +0.5
	baz=173				
OXF	Oxford	51.74 343	P	P	06 56 30.4 -0.7
	baz=161				
U56A	King	51.75 353	P	P	06 56 32.1 +1.0
	baz=172,SNR=8.2				
PLAL	Pickwick Lake	51.83 345	IAmb	IAmb	06 56 31.6
	comp=Z,20nm,1.2s				
U55A	TA2, Sparta	51.98 352	P	P	06 56 32.8 -0.1
	baz=171				
JCT	Junction City	51.99 331	P	P	06 56 33.3 +0.3
	baz=148				
JCT	Junction City	51.99 331	P	P	06 56 32.4 -0.7
T59A	Double "B" Far	52.11 356	P	P	06 56 34.7 +1.0
	baz=175,SNR=6.8				
T59A	Double "B" Far	52.11 356	IAmb	IAmb	06 56 35.4
	comp=Z,26nm,0.9s				
T58A	Grand View Acr	52.16 355	P	P	06 56 34.8 +0.6
	baz=174,SNR=6.5				
WHTX	Lake Whitney,	52.25 334	P	P	06 56 35.5 +0.6
	baz=151,SNR=8.3				
WHTX	Lake Whitney,	52.25 334	IAmb	IAmb	06 56 36.1
	comp=Z,21nm,0.9s				
T57A	Hurt	52.28 354	P	P	06 56 35.7 +0.7
	baz=173,SNR=6.5				
T57A	Hurt	52.28 354	IAmb	IAmb	06 56 36.4
	comp=Z,22nm,0.9s				
T56A	Rocky Mt	52.38 354	P	P	06 56 36.4 +0.6
	baz=172				
Z38A	Mt. Pleasant	52.39 337	P	P	06 56 36.4 +0.5
TZTN	Tazewell	52.39 350	P	P	06 56 35.8 0.0
	baz=168,SNR=5.4				
TZTN	Tazewell	52.39 350	IAmb	IAmb	06 56 36.5
	comp=Z,37nm,1.4s				
CLTN	Cedars of Leba	52.49 347	IAmb	IAmb	06 56 36.8
	comp=Z,11nm,1.0s				
T55A	Pulaski	52.56 353	P	P	06 56 38.0 +0.9
	baz=172,SNR=9.4				
T54A	Tazewell	52.60 352	P	P	06 56 37.7 +0.2
	baz=171,SNR=8.5				
BLA	Blacksburg	52.61 353	P	P	06 56 38.0 +0.5
	baz=172				
T53A	Wise	52.66 351	P	P	06 56 37.9 0.0
	baz=169,SNR=9.8				
U49A	Red Boiling Sp	52.78 348	IAmb	IAmb	06 56 38.8
	comp=Z,13nm,0.6s				
S58A	Poland Farm, P	52.78 356	P	P	06 56 39.5 +0.8
	baz=175				
S58A	Poland Farm, P	52.78 356	IAmb	IAmb	06 56 40.2
	comp=Z,20nm,0.9s				
UALR	University of	52.85 341	IAmb	IAmb	06 56 40.1
	comp=Z,20nm,1.0s				
WVT	Waverly	52.87 346	P	P	06 56 38.2 -1.1
	baz=163				
WVT	Waverly	52.87 346	P	P	06 56 37.6 -1.7
WVT			IAmb	IAmb	06 56 39.0
	comp=Z,14nm,0.9s				
TX32	Lajitas Array	52.97 327	P	P	06 56 40.5 0.0
TX32			IAmb	IAmb	06 56 41.5
	comp=Z,12nm,0.8s				
TXAR	Lajitas Array	52.97 327	P	P	06 56 40.6 +0.2
	comp=Z,12nm,0.7s,baz=152,slow=9.0,SNR=151				
S56A	Natural Bridge	52.98 354	P	P	06 56 40.7 +0.5
	baz=173				
S57A	Dark Hollow, R	53.01 355	P	P	06 56 41.1 +0.8
	baz=174,SNR=5.6				
S57A	Dark Hollow, R	53.01 355	IAmb	IAmb	06 56 41.9
	comp=Z,18nm,0.9s				
MIAR	Mount Ida	53.05 339	P	P	06 56 40.8 +0.1
	baz=156,SNR=17				
MIAR	Mount Ida	53.05 339	IAmb	IAmb	06 56 41.8
	comp=Z,20nm,0.9s				
T50A	Nancy	53.09 349	IAmb	IAmb	06 56 41.3
	comp=Z,18nm,0.8s				
R58B	Mineral	53.12 356	P	P	06 56 42.2 +1.0
	baz=175,SNR=9.3				
R58B	Mineral	53.12 356	IAmb	IAmb	06 56 43.1
	comp=Z,22nm,1.0s				
S55A	Lewisburg	53.17 353	P	P	06 56 42.2 +0.6
	baz=172,SNR=7.5				
W41B	Gary Mavity, V	53.19 341	P	P	06 56 41.6 -0.1
	baz=158,SNR=15				
S54A	Dingess, Beckl	53.30 352	P	P	06 56 42.5 0.0
	baz=171,SNR=6.5				
S54A	Dingess, Beckl	53.30 352	IAmb	IAmb	06 56 43.4
	comp=Z,24nm,0.9s				
WHAR	Wooly Hollow	53.31 341	P	P	06 56 42.2 -0.4
WHAR			IAmb	IAmb	06 56 43.4
	comp=Z,18nm,0.8s				
CBN	Corbin Frederi	53.33 356	P	P	06 56 43.6 +0.9
	baz=176				
Z35A	Perchaven, San	53.33 335	IAmb	IAmb	06 56 44.3
	comp=Z,22nm,0.8s				
R58A	Rapidan	53.46 356	P	P	06 56 44.6 +0.9
	baz=175				
S51A	Beattyville	53.47 350	IAmb	IAmb	06 56 44.2
	comp=Z,10nm,0.8s				
R57A	Stanardsville	53.50 355	P	P	06 56 45.1 +1.1
	baz=174				
T47A	Sharon Grove	53.52 347	IAmb	IAmb	06 56 44.2
	comp=Z,16nm,1.0s				
R54A	Victor	53.63 353	P	P	06 56 45.0 0.0
	baz=171				
R55A	Marlinton	53.63 354	P	P	06 56 45.8 +0.7
	baz=172				
R55A	Marlinton	53.63 354	IAmb	IAmb	06 56 46.3
	comp=Z,9.3nm,0.8s				
LCAR	Lake Charles	53.69 342	IAmb	IAmb	06 56 45.6
	comp=Z,12nm,0.9s				
W39A	Magazine	53.71 340	P	P	06 56 46.4 +0.8
	baz=156,SNR=9.7				
W39A	Magazine	53.71 340	IAmb	IAmb	06 56 47.2
	comp=Z,16nm,0.8s				
ABTX	Abilene, Hawle	53.73 333	P	P	06 56 46.1 +0.3
	baz=149,SNR=13				
ABTX	Abilene, Hawle	53.73 333	P	P	06 56 45.5 -0.3
FCAR	Ozark Folk Cen	53.81 341	IAmb	IAmb	06 56 46.6
	comp=Z,12nm,0.9s				
R53A	Hurricane	53.90 352	P	P	06 56 46.3 -0.6
	baz=170				
T45A	Paducah	53.91 345	P	P	06 56 45.4 -1.6
Q58A	Fox Den Farm,	54.08 356	P	P	06 56 49.5 +1.3
	baz=175,SNR=6.4				
R50A	Paris	54.22 350	IAmb	IAmb	06 56 49.8
	comp=Z,23nm,1.1s				
Q57A	Strasburg	54.23 355	P	P	06 56 50.7 +1.4
	baz=174,SNR=12				
Q56A	Snyder Ridge,	54.30 355	P	P	06 56 51.1 +1.3
	baz=174,SNR=6.3				
Q56A	Snyder Ridge,	54.30 355	IAmb	IAmb	06 56 51.8
	comp=Z,24nm,0.9s				
Q55A	Buckhannon	54.34 354	P	P	06 56 50.9 +0.8
	baz=173				
Q53A	Leroy	54.37 352	P	P	06 56 50.5 +0.2
	baz=171,SNR=6.0				
R49A	Shelbyville	54.38 349	IAmb	IAmb	06 56 50.7
	comp=Z,35nm,1.4s				
Q54A	Coxs Mills	54.41 353	P	P	06 56 50.4 -0.1
	baz=172,SNR=5.1				
Q54A	Coxs Mills	54.41 353	IAmb	IAmb	06 56 50.9
	comp=Z,10nm,0.7s				
U40A	Yellville	54.47 341	P	P	06 56 50.9 -0.2
	baz=157,SNR=28				
U40A	Yellville	54.47 341	IAmb	IAmb	06 56 51.7
	comp=Z,20nm,0.8s				
WCI	Wyandotte Cave	54.54 348	P	P	06 56 50.9 -0.6
	baz=165				
WCI	Wyandotte Cave	54.54 348	P	P	06 56 50.0 -1.5
Q52A	Bidwell	54.57 352	P	P	06 56 51.5 -0.2
	baz=170				
P58A	Pank, Wackersv	54.60 357	P	P	06 56 52.9 +0.9
	baz=176,SNR=5.5				
P57A	Homestead Farm	54.64 356	P	P	06 56 53.4 +1.2
	baz=175				
P56A	Dayton Farm, R	54.73 355	P	P	06 56 53.8 +1.0
	baz=174				
HHAR	Hobbs	54.75 340	IAmb	IAmb	06 56 54.0
	comp=Z,18nm,1.1s				
P55A	Reedsville	54.82 354	P	P	06 56 53.9 +0.3
	baz=173				
MCWV	Mont Chateau	54.97 354	P	P	06 56 55.0 +0.4
	baz=173				
P53A	Whipple	54.97 353	P	P	06 56 54.8 +0.2
	baz=171,SNR=5.8				
P53A	Whipple	54.97 353	IAmb	IAmb	06 56 55.5
	comp=Z,16nm,0.9s				
P54A	Burton	54.98 354	P	P	06 56 54.8 +0.1
	baz=172,SNR=8.6				
MGMO	Mountain Grove	55.03 342	P	P	06 56 54.5 -0.6
MGMO			IAmb	IAmb	06 56 55.8
	comp=Z,30nm,1.2s				
U38A	Gravette	55.04 340	IAmb	IAmb	06 56 56.0
	comp=Z,11nm,1.1s				
TUL1	Leonard	55.06 338	P	P	06 56 55.6 +0.3
	baz=154,SNR=16				
WMOK	Wichita Mounta	55.17 335	P	P	06 56 56.9 +0.7
	baz=150				
P52A	Corning	55.21 352	P	P	06 56 55.8 -0.5
	baz=170				
O57A	Amberson	55.34 356	P	P	06 56 58.2 +0.9
	baz=176,SNR=5.5				
O60A	Telford	55.35 358	P	P	06 56 57.9 +0.6
	baz=178				
P50A	Jamestown	55.43 351	P	P	06 56 57.2 -0.7
	baz=168,SNR=8.5				
O55A	Ligonier	55.46 355	P	P	06 56 58.6 +0.4
	baz=174				
O56A	Blue Knob Stat	55.46 355	P	P	06 56 59.1 +0.9
	baz=174				
O56A	Blue Knob Stat	55.46 355	IAmb	IAmb	06 57 00.1
	comp=Z,19nm,1.1s				
BLO	Bloomington	55.49 348	IAmb	IAmb	06 56 58.1
	comp=Z,16nm,0.7s				
P49A	Miami Univ. Ec	55.51 350	P	P	06 56 57.4 -1.1
	baz=167,SNR=7.7				
O54A	Avella	55.54 354	P	P	06 56 58.8 +0.1
	baz=172				
P48A	Milroy	55.56 349	IAmb	IAmb	06 56 58.1
	comp=Z,13nm,0.7s				
CCM	Cathedral Cave	55.57 343	P	P	06 56 58.3 -0.6
	baz=160				
CCM	Cathedral Cave	55.57 343	P	P	06 56 58.1 -0.9
CCM			IAmb	IAmb	06 56 59.3
	comp=Z,14nm,1.3s				
O52A	Adamsville	55.65 352	P	P	06 56 58.8 -0.7
	baz=171				
O53A	New Philadelph	55.70 353	P	P	06 56 59.6 -0.3
	baz=171				
MNTX	Cornudas Mount	55.74 327	P	P	06 57 00.2 -0.1
	baz=142,SNR=20				
MNTX	Cornudas Mount	55.74 327	IAmb	IAmb	06 57 01.4
	comp=Z,8.6nm,0.8s				
O51A	Pataskala	55.78 352	P	P	06 56 59.7 -0.7
	baz=170,SNR=8.6				
SSPA	Standing Stone	55.78 356	P	P	06 57 01.1 +0.7
	baz=175				
SSPA	Standing Stone	55.78 356	P	P	06 57 01.2 +0.8
SSPA			IAmb	IAmb	06 57 01.7
	comp=Z,13nm,0.9s				
ACSO	Alum Creek Sta	55.91 351	P	P	06 57 00.7 -0.7
	baz=169,SNR=13				
N58A	Sunbury	55.92 357	P	P	06 57 02.3 +1.0
	baz=177				
N58A	Sunbury	55.92 357	IAmb	IAmb	06 57 03.2
	comp=Z,15nm,0.9s				
O50A	Cable	55.93 351	P	P	06 57 01.0 -0.4
	baz=169,SNR=7.3				
N55A	Marion Center	56.01 355	P	P	06 57 02.8 +0.8
	baz=174,SNR=8.0				
P46A	Rosedale	56.06 347	IAmb	IAmb	06 57 02.3
	comp=Z,20nm,0.8s				
O49A	Covington	56.08 350	IAmb	IAmb	06 57 02.6
	comp=Z,18nm,0.9s				
R40A	Maddies Statio	56.08 342	IAmb	IAmb	06 57 03.0
	comp=Z,38nm,1.6s				
N56A	West Decatur	56.09 356	P	P	06 57 03.3 +0.7
	baz=175,SNR=6.2				
N53A	Lisbon	56.21 353	P	P	06 57 03.0 -0.4
	baz=172				
T35A	Sooner Cattle	56.21 338	IAmb	IAmb	06 57 05.5
	comp=Z,25nm,1.1s				
N54A	Moraine State	56.27 354	P	P	06 57 04.3 +0.3
	baz=173				
N54A	Moraine State	56.27 354	IAmb	IAmb	06 57 04.7
	comp=Z,12nm,0.8s				
MSTX	Muleshoe	56.28 331	P	P	06 57 04.1 -0.2
	baz=146,SNR=8.4				
MSTX	Muleshoe	56.28 331	P	P	06 57 03.3 -1.0
MSTX			IAmb	IAmb	06 57 04.9
	comp=Z,18nm,1.2s				
O48A	Farmland	56.29 349	P	P	06 57 03.3 -0.8
	baz=167,SNR=18				
N52A	McGinn's Farm,	56.31 353	P	P	06 57 03.5 -0.7
	baz=171				
M57A	Sunshine Farm,	56.44 357	P	P	06 57 06.3 +1.2
	baz=176,SNR=5.7				
M57A	Sunshine Farm,	56.44 357	IAmb	IAmb	06 57 06.7
	comp=Z,13nm,0.8s				
M58A	Price's Panora	56.44 358	P	P	06 57 06.2 +1.1
	baz=177				
M62A	Hamden	56.46 1	P	P	06 57 05.9 +0.7
	baz=181				
N50A	Nevada	56.47 351	P	P	06 57 04.7 -0.6
	baz=169,SNR=6.2				
N51A	Ashland	56.50 352	P	P	06 57 04.8 -0.7
	baz=170				
M59A	Waymart	56.57 358	P	P	06 57 07.3 +1.3
	baz=178				
M56A	Emporium	56.65 356	P	P	06 57 07.0 +0.5
	baz=175,SNR=6.3				
M56A	Emporium	56.65 356	P	P	06 57 06.7 +0.1
M56A			IAmb	IAmb	06 57 08.1
	comp=Z,28nm,1.2s				
M55A	Ridgway	56.67 355	P	P	06 57 07.2 +0.4
	baz=174,SNR=5.4				
M55A	Ridgway	56.67 355	IAmb	IAmb	06 57 08.1
	comp=Z,14nm,0.9s				
SFIN	Lafayette	56.77 348	P	P	06 57 06.3 -1.1
	baz=165,SNR=6.9				
SFIN	Lafayette	56.77 348	IAmb	IAmb	06 57 06.8
	comp=Z,15nm,0.7s				
M54A	Oil Creek Stat	56.79 355	P	P	06 57 07.6 +0.1
	baz=173,SNR=6.7				
M54A	Oil Creek Stat	56.79 355	IAmb	IAmb	06 57 08.6
	comp=Z,25nm,1.1s				
M53A	WI Miller and	56.82 354	P	P	06 57 07.7 -0.1
	baz=172				
N48A	Decatur	56.85 350	P	P	06 57 07.1 -0.9
	baz=167				
O44A	Mansfield	56.85 347	IAmb	IAmb	06 57 07.5
	comp=Z,27nm,1.4s				
ALLY	Alegheny Colle	56.97 354	P	P	06 57 08.3 -0.6
ALLY			IAmb	IAmb	06 57 09.7
	comp=Z,24nm,1.0s				
L60A	Shokan	57.00 360	P	P	06 57 10.1 +1.0
	baz=180				
L57A	Andrews Acres	57.08 357	P	P	06 57 10.5 +0.8
	baz=176				
L58A	Harry Jones Me	57.09 358	P	P	06 57 11.0 +1.3
	baz=178				
P40A	Paris	57.17 343	IAmb	IAmb	06 57 10.0
	comp=Z,7.9nm,0.6s				
L59A	Walton	57.21 359	P	P	06 57 11.5 +1.0
	baz=179				
L59A	Walton	57.21 359	IAmb	IAmb	06 57 12.4
	comp=Z,11nm,0.7s				
BINY	Binghamton	57.25 358	P	P	06 57 11.7 +0.9
	baz=178,SNR=5.0				
BINY	Binghamton	57.25 358	IAmb	IAmb	06 57 12.2
	comp=Z,11nm,0.6s				
L56A	Greenwood	57.26 357	P	P	06 57 11.4 +0.5
	baz=176,SNR=6.1				
L56A	Greenwood	57.26 357	IAmb	IAmb	06 57 12.4
	comp=Z,21nm,1.1s				
L53A	Girard	57.28 354	P	P	06 57 10.9 -0.1
	baz=173				
L55A	Hinsdale	57.36 356	P	P	06 57 12.2 +0.6
	baz=175,SNR=7.1				
HDIL	Hopedale	57.43 346	P	P	06 57 11.0 -1.0
	baz=162				
HDIL	Hopedale	57.43 346	IAmb	IAmb	06 57 11.8
	comp=Z,16nm,0.8s				
L54A	Sinclairville	57.48 355	P	P	06 57 12.8 +0.4
	baz=174,SNR=5.9				
WVNY	West Valley, N	57.59 356	P	P	06 57 12.8 -0.4
121A	Cookes Peak, D	57.67 326	P	P	06 57 15.2 +1.0
	baz=140,SNR=15				
K59A	Cooperstown	57.79 359	P	P	06 57 15.3 +0.7
	baz=179				
K57A	Scipio Center	57.80 358	P	P	06 57 15.0 +0.4
	baz=177				
K58A	Earlville	57.80 358	P	P	06 57 15.4 +0.7
	baz=178				
K54A	Basiliko Farm,	57.80 356	P	P	06 57 14.9 +0.2
	baz=174				
K56A	Middlesex	57.80 357	P	P	06 57 15.1 +0.4
	baz=176				
K55A	Perry	57.88 356	P	P	06 57 15.5 +0.3
	baz=175				
N41A	Harden Midland	57.95 345	IAmb	IAmb	06 57 15.6
	comp=Z,24nm,1.0s				
AAM	Ann Arbor	58.04 351	IAmb	IAmb	06 57 17.3
	comp=Z,13nm,0.7s				
K52A	Tillsonburg	58.15 354	P	P	06 57 16.7 -0.4
	baz=172				
L46A	Eue Claire	58.20 349	P	P	06 57 16.2 -1.2
	baz=166				
J56A	Wolcott	58.36 357	P	P	06 57 18.6 +0.1
	baz=177				
K50A	Casco	58.36 352	P	P	06 57 17.7 -0.9
	baz=170				
J58A	Remsen	58.39 359	P	P	06 57 17.9 -0.9
	baz=178				
J55A	Hilton	58.40 356	P	P	06 57 19.2 +0.4
	baz=176				
J57A	Williamstown	58.45 358	P	P	06 57 19.8 +0.6
	baz=178				
J54A	Appleton	58.46 356	P	P	06 57 19.6 +0.4
	baz=174				
J59A	Piesco	58.48 359	P	P	06 57 20.0 +0.6
	baz=179				
K49A	Clarkson	58.48 352	P	P	06 57 18.6 -0.8
	baz=169				
J52A	Paris	58.58 354	P	P	06 57 20.0 -0.1
	baz=172,SNR=7.1				
K48A	Perry	58.60 351	P	P	06 57 19.3 -0.9
	baz=168,SNR=12				
K47A	Vermontville	58.61 350	P	P	06 57 19.2 -1.1
	baz=167,SNR=11				
I58A	Old Forge	58.71 359	P	P	06 57 21.5 +0.5
	baz=179				
K46A	Dorr	58.76 350	P	P	06 57 20.3 -1.0
	baz=166,SNR=10				
I59A	Olmsteadville	58.80 360	P	P	06 57 22.3 +0.6
	baz=180				
I60A	Shoreham	58.85 0	P	P	06 57 22.6 +0.7
	baz=181				
ANMO	Albuquerque	58.86 329	P	P	06 57 22.5 +0.1
	baz=143				
ANMO	Albuquerque	58.86 329	P	P	06 57 22.3 -0.1
L42A	Oliver, Polo	58.89 346	IAmb	IAmb	06 57 21.9
	comp=Z,10nm,0.8s				
I61A	Oroboro, Fairl	58.95 1	P	P	06 57 23.6 +1.0
	baz=182				
J49A	Marlette	59.01 352	P	P	06 57 21.4 -1.6
	baz=170				
PECO	Prince Edward	59.02 357	IAmb	IAmb	06 57 24.4
	comp=Z,20nm,1.0s				
J48A	Bridge Port	59.04 351	P	P	06 57 22.5 -0.7
	baz=169,SNR=8.3				
CBKS	Cedar Bluff	59.09 336	P	P	06 57 24.4 +0.6
	baz=151				
CBKS	Cedar Bluff	59.09 336	IAmb	IAmb	06 57 25.0
	comp=Z,27nm,1.4s				
J47A	Sunmer	59.13 351	P	P	06 57 23.1 -0.8
	baz=168,SNR=18				
TUC	Tucson	59.18 324	P	P	06 57 25.0 +0.4
	baz=138				
TUC	Tucson	59.18 324	P	P	06 57 24.4 -0.2
I51A	Listowel	59.19 354	P	P	06 57 23.9 -0.4
	baz=172,SNR=5.7				
L40A	Anamosa	59.32 345	IAmb	IAmb	06 57 25.8
	comp=Z,20nm,1.1s				
I55A	Frankford	59.34 357	P	P	06 57 25.0 -0.3
	baz=176,SNR=5.9				
I52A	Shelburne	59.37 355	P	P	06 57 25.5 -0.1
	baz=173				
I49A	Point Hope	59.54 352	P	P	06 57 24.9 -1.8
	baz=170				
H61A	Lyndonville	59.56 1	P	P	06 57 28.0 +1.2
	baz=182				
DELO	Deloro Mine	59.63 357	IAmb	IAmb	06 57 28.4
	comp=Z,13nm,0.8s				
LONY	Lake Ozonia	59.63 359	P	P	06 57 27.9 +0.6
	baz=179				
H55A	Tweed	59.64 357	P	P	06 57 27.7 +0.4
	baz=176,SNR=6.3				
T25A	Trinidad	59.64 332	P	P	06 57 28.5 +0.6
	baz=145,SNR=6.6				
H59A	Cadyville	59.65 0	P	P	06 57 28.2 +0.7
	baz=180				
H53A	Bobcaygeon	59.75 356	P	P	06 57 27.9 -0.2
	baz=175,SNR=5.4				
H63A	New Sharon	59.76 3	P	P	06 57 29.7 +1.6
	baz=184				
H64A	Troy	59.79 4	P	P	06 57 29.6 +1.3
	baz=185				
I47A	Gladwin	59.85 351	P	P	06 57 28.0 -0.8
	baz=168				
I47A	Gladwin	59.85 351	IAmb	IAmb	06 57 28.6
	comp=Z,26nm,1.1s				
JFWS	Jewell Farm	59.89 346	P	P	06 57 29.0 -0.1
	baz=162				
JFWS	Jewell Farm	59.89 346	IAmb	IAmb	06 57 29.3
	comp=Z,11nm,1.1s				
I48A	Sherman Twp	59.90 352	P	P	06 57 28.3 -0.8
	baz=169,SNR=7.2				
H65A	Eastbrook	59.91 4	P	P	06 57 30.3 +1.1
	baz=186				
H52A	Wyevale	59.92 355	P	P	06 57 28.9 -0.3
	baz=173				
I46A	Reed City	59.92 350	P	P	06 57 28.1 -1.2
	baz=167,SNR=8.7				
SADO	Sadowa	59.98 356	IAmb	IAmb	06 57 30.2
	comp=Z,12nm,0.6s				
EMMW	East Machias	59.99 5	P	P	06 57 30.6 +0.9
EMMW			IAmb	IAmb	06 57 32.3
	comp=Z,16nm,1.2s				
H66A	Whiting	60.08 5	P	P	06 57 31.7 +1.4
	baz=187				
214A	Organ Pipe Nat	60.11 322	P	P	06 57 32.0 +1.1
	baz=136,SNR=6.6				
214A	Organ Pipe Nat	60.11 322	IAmb	IAmb	06 57 32.9
	comp=Z,10nm,0.9s				
G57A	Newington	60.12 359	P	P	06 57 31.3 +0.7
	baz=179				
PLVO	Plevna	60.12 357	IAmb	IAmb	06 57 32.0
	comp=Z,41nm,1.8s				
G63A	Kingsbury	60.24 3	P	P	06 57 32.7 +1.3
	baz=185				
G62A	West of Eustis	60.29 3	P	P	06 57 33.0 +1.2
	baz=184,SNR=5.4				
G62A	West of Eustis	60.29 3	IAmb	IAmb	06 57 34.2
	comp=Z,22nm,1.1s				
G53A	Haliburton	60.30 356	P	P	06 57 32.1 +0.2
	baz=175,SNR=8.3				
G61A	St-Isidore-de-	60.32 2	P	P	06 57 33.3 +1.3
	baz=182				
G55A	Calabogie	60.32 358	P	P	06 57 32.3 +0.3
	baz=177,SNR=5.9				
H48A	Harrisville	60.35 352	P	P	06 57 31.5 -0.7
	baz=169				
H47A	Mio	60.37 351	P	P	06 57 31.4 -1.0
	baz=168				
PKME	Peaks-Kenny Pk	60.40 4	P	P	06 57 33.5 +0.9
	baz=185				
KSCO	Kaye Shedlock'	60.42 334	P	P	06 57 33.9 +0.9
	baz=148				
G64A	Maxfield	60.43 4	P	P	06 57 33.6 +0.9
	baz=186				
GGN	Saint George	60.45 6	IAmb	IAmb	06 57 35.0
	comp=Z,14nm,0.8s				
G65A	Princeton	60.47 5	P	P	06 57 34.2 +1.3
	baz=187,SNR=8.9				
G65A	Princeton	60.47 5	P	P	06 57 33.9 +1.0
I42A	Draeger Farm,	60.52 347	IAmb	IAmb	06 57 33.9
	comp=Z,17nm,1.0s				
G54A	Lake Saint Pet	60.54 356	P	P	06 57 33.8 +0.3
	baz=175,SNR=5.3				
SDCO	Great Sand Dun	60.64 331	P	P	06 57 35.4 +0.7
	baz=144,SNR=35				
SDCO	Great Sand Dun	60.64 331	IAmb	IAmb	06 57 35.8
	comp=Z,8.2nm,0.8s				
H45A	Beulah	60.68 350	P	P	06 57 33.4 -1.1
	baz=166,SNR=8.2				
W18A	Petrified Fore	60.69 326	P	P	06 57 36.5 +1.6

baz=140
W18A **Petrified Fore** 60.69 326 IAmb IAmb 06 57 37.5
comp=Z,18nm,0.9s
L34A **Svendsen Farm,** 60.70 341 IAmb IAmb 06 57 34.9
comp=Z,21nm,1.0s
H43A **Windswept, Lux** 60.85 349 P **P** **06 57 34.8 -0.8**
G47A **Hillman** 60.88 352 P **P** **06 57 35.0 -0.8**
baz=169
I40A **Norwalk** 60.90 346 IAmb IAmb 06 57 36.4
comp=Z,20nm,1.1s
F60A **Warwick** 61.00 1 P **P** **06 57 37.1 +0.5**
baz=182
F62A **Pittston Farm,** 61.00 3 P **P** **06 57 37.7 +1.2**
baz=184
G45A **Suttons Bay** 61.02 350 P **P** **06 57 35.6 -1.2**
baz=167,SNR=5.7
G45A **Suttons Bay** 61.02 350 IAmb IAmb 06 57 36.2
comp=Z,11nm,0.7s
F64A **Sherman** 61.06 4 P **P** **06 57 38.3 +1.3**
baz=186,SNR=5.9
F64A **Sherman** 61.06 4 IAmb IAmb 06 57 39.1
comp=Z,14nm,0.8s
ALGO **Algonquin Park** 61.09 357 P **P** **06 57 37.3 +0.1**
baz=175,SNR=8.8
X16A **Lo Mia Camp, P** 61.10 325 IAmb IAmb 06 57 39.9
comp=Z,16nm,1.1s
G46A **Petoskey** 61.17 351 P **P** **06 57 37.0 -0.7**
baz=168
F49A **Sandfield** 61.24 353 P **P** **06 57 37.3 -0.9**
baz=171
S22A **4UR Ranch, Cre** 61.26 330 P **P** **06 57 39.4 +0.4**
baz=143
LMN **Caledonia Moun** 61.39 7 P **P** **06 57 39.4 +0.1**
E52A **Mattawa** 61.46 356 P **P** **06 57 39.6 -0.1**
baz=175
E53A **Dumoine, Ponti** 61.49 357 P **P** **06 57 39.9 0.0**
baz=176
E61A **Lac Etchemin** 61.51 3 P **P** **06 57 41.4 +1.3**
baz=184
E54A **Lac Daplat, Po** 61.52 357 P **P** **06 57 40.3 +0.2**
baz=176,SNR=7.3
E56A **St. Veronique** 61.56 359 P **P** **06 57 40.9 +0.5**
baz=179
E63A **Oxbow** 61.61 4 P **P** **06 57 41.7 +1.0**
baz=186
F45A **CMU Biological** 61.63 351 P **P** **06 57 40.2 -0.6**
baz=167,SNR=6.7
Y14A **Wickenburg** 61.63 323 IAmb IAmb 06 57 43.1
comp=Z,11nm,0.9s
E64A **Bridgewater** 61.65 5 P **P** **06 57 41.9 +1.0**
baz=186
MVCO **Mesa Verde** 61.66 329 P **P** **06 57 42.0 +0.5**
baz=142,SNR=5.9
MVCO **Mesa Verde** 61.66 329 IAmb IAmb 06 58 24.2
comp=Z,15nm,1.4s
E62A **Clayton Lake** 61.74 3 P **P** **06 57 43.0 +1.4**
baz=185
E51A **G1948 Merrick** 61.76 355 P **P** **06 57 42.5 +0.8**
baz=174
WUAZ **Wupatki** 61.87 326 P **P** **06 57 44.3 +1.4**
baz=138,SNR=14
WUAZ **Wupatki** 61.87 326 P **P** **06 57 43.6 +0.7**
WUAZ IAmb IAmb 06 57 45.6
comp=Z,15nm,1.1s
E48A **Lockeyer** 61.96 353 P **P** **06 57 42.6 -0.4**
baz=171
D57A **Chemin Vers le** 62.02 360 P **P** **06 57 43.9 +0.4**
baz=180
D55A **Sainte-Anne-du** 62.05 359 P **P** **06 57 43.9 +0.2**
baz=178,SNR=5.3
D56A **ZEC Mazanza, M** 62.06 359 P **P** **06 57 43.9 +0.1**
baz=179
E47A **Iron Bridge** 62.07 353 P **P** **06 57 43.2 -0.6**
baz=170,SNR=5.3
D58A **Chemin du LacG** 62.11 1 P **P** **06 57 44.1 +0.1**
baz=181,SNR=6.8
E46A **Sault Ste Mari** 62.12 352 IAmb IAmb 06 57 44.1
comp=Z,18nm,1.1s
D52A **ZEK Kipawa Sen** 62.13 356 P **P** **06 57 44.7 +0.5**
baz=175,SNR=9.1
D53A **Lac Vacive, Po** 62.19 357 P **P** **06 57 44.8 +0.2**
baz=176,SNR=6.9
D53A **Lac Vacive, Po** 62.19 357 IAmb IAmb 06 57 45.3
comp=Z,9.9nm,0.8s
D54A **Lac Fusel, La** 62.22 358 P **P** **06 57 44.6 -0.2**
baz=177,SNR=5.6
D62A **Allapoint, All** 62.23 4 P **P** **06 57 46.0 +1.1**
baz=185,SNR=7.0
D62A **Allapoint, All** 62.23 4 P **P** **06 57 45.9 +1.1**
D62A IAmb IAmb 06 57 46.9
comp=Z,17nm,0.8s
D63A **Stockholm** 62.25 4 P **P** **06 57 46.2 +1.2**
baz=186
ISCO **Idaho Springs** 62.36 333 P **P** **06 57 46.7 +0.4**
baz=145,SNR=5.8
ECSD **EROS Data Cent** 62.37 341 P **P** **06 57 45.6 -0.3**
baz=155,SNR=9.5
ECSD **EROS Data Cent** 62.37 341 IAmb IAmb 06 57 46.7
comp=Z,38nm,1.8s
Y12C **Blythe** 62.39 322 P **P** **06 57 47.3 +1.0**
baz=135
Y12C **Blythe** 62.39 322 IAmb IAmb 06 57 48.4
comp=Z,14nm,1.3s
PV01 **Paradox Valley** 62.41 329 IAmb IAmb 06 57 48.5
comp=Z,17nm,1.5s
D50A **G1974 Best Tow** 62.42 355 P **P** **06 57 46.0 -0.1**
baz=173
PV15 **Paradox Valley** 62.53 330 IAmb IAmb 06 58 24.6
comp=Z,11nm,1.0s
E43A **Lone Tree Farm** 62.55 350 P **P** **06 57 46.2 -0.8**
E43A IAmb IAmb 06 57 47.0
comp=Z,15nm,0.7s
PV13 **Radium Mtn., P** 62.55 329 IAmb IAmb 06 57 49.2
comp=Z,24nm,1.6s
D46A **Sault St. Mari** 62.59 352 P **P** **06 57 46.4 -0.8**
baz=169
D48A **Paudash Townsh** 62.61 354 P **P** **06 57 47.2 -0.2**
baz=171
D47A **Chapleau** 62.64 353 P **P** **06 57 46.1 -1.4**
baz=170,SNR=5.2
BATG **Bathurst New B** 62.66 6 IAmb IAmb 06 57 49.7
comp=Z,19nm,0.9s
PV12 **Saucer Basin,** 62.67 329 IAmb IAmb 06 57 50.2
comp=Z,18nm,1.6s
COWI **Conover** 62.68 348 IAmb IAmb 06 57 48.5
comp=Z,11nm,0.9s
SPMN **Marine on St.** 62.68 345 P **P** **06 57 47.6 -0.3**
baz=159,SNR=9.8
SPMN **Marine on St.** 62.68 345 IAmb IAmb 06 57 48.4
comp=Z,21nm,0.9s
BC3 **Big Chuckawall** 62.88 321 P **P** **06 57 50.3 +0.7**
baz=134,SNR=5.2
MONP2 **Monument Peak** 62.95 320 P **P** **06 57 50.8 +0.6**
baz=133
IRM **Iron Mountain** 63.05 322 P **P** **06 57 51.8 +1.2**
baz=134,SNR=8.7
BELC **Belle Mtn. Jos** 63.45 321 P **P** **06 57 55.2 +1.8**
baz=134
TPFO **Pinon Flats** 63.45 321 P **P** **06 57 54.6 +1.1**
baz=133
F36A **Milaca** 63.46 345 IAmb IAmb 06 57 53.9
comp=Z,22nm,1.0s
XPFO **Pion Flat** 63.46 321 P **P** **06 57 54.2 +0.8**
PFO **Pinyon Flats O** 63.46 321 P **P** **06 57 54.7 +1.2**
baz=133
PFO **Pinyon Flats O** 63.46 321 P **P** **06 57 53.7 +0.2**
D41A **Chassel** 63.49 349 IAmb IAmb 06 57 54.0
comp=Z,25nm,0.8s
E38A **The Farm, Brul** 63.68 346 IAmb IAmb 06 57 55.0
comp=Z,12nm,0.8s
GMRC **Granite Mounta** 63.78 322 P **P** **06 57 56.4 +0.8**
baz=134
O20A **White River Ci** 63.83 331 P **P** **06 57 56.8 +0.9**
baz=143,SNR=5.3
LSQQ **Lebel-sur-Quev** 64.13 358 P **P** **06 57 57.5 +0.1**
baz=177
MTPU **Mount Pierson** 64.18 327 P **P** **06 57 59.0 +0.6**
F33A **5 Mile Ranch,** 64.19 343 IAmb IAmb 06 57 58.8
comp=Z,58nm,1.6s
HEC **Hector,Ludlow** 64.22 322 P **P** **06 57 60.0 +1.6**
baz=134
TUQ **Turquoise Moun** 64.39 323 P **P** **06 58 00.6 +1.0**
baz=134
GSC **Goldstone, Bar** 64.82 322 P **P** **06 58 03.7 +1.4**
baz=133
MATQ **Matagami** 64.86 357 P **P** **06 58 02.0 -0.1**
baz=176,SNR=7.0
CHGQ **Chibougamau** 64.92 360 P **P** **06 58 02.6 0.0**

baz=179
EYMN **Ely** 64.94 347 P **P** **06 58 02.4 -0.2**
baz=161,SNR=12
EYMN **Ely** 64.94 347 IAmb IAmb 06 58 03.2
comp=Z,17nm,1.0s
K22A **Casper** 65.08 334 P **P** **06 58 04.4 +0.5**
baz=145
EDW2 **Edwards Air Fo** 65.25 321 P **P** **06 58 06.6 +1.5**
baz=132
PSUT **Pine Spring** 65.43 326 P **P** **06 58 07.5 +1.1**
LRMC **Laurel Mtn Rad** 65.47 321 P **P** **06 58 07.9 +1.4**
baz=133
TPNV **Topopah Spring** 65.63 324 P **P** **06 58 09.0 +1.4**
baz=134,SNR=6.2
FURC **Furnace Creek,** 65.66 323 P **P** **06 58 08.8 +1.3**
baz=134,SNR=7.0
MPMC **Manual Prospec** 65.74 322 P **P** **06 58 09.2 +0.8**
baz=133
B35A **Bob, Littlefor** 65.84 346 IAmb IAmb 06 58 08.7
comp=Z,16nm,0.7s
ISA **Isabella, Lake** 66.07 321 P **P** **06 58 11.5 +1.2**
baz=132
DUG **Dugway, Tooele** 66.11 328 P **P** **06 58 11.8 +1.2**
baz=138,SNR=12
R11A **Troy Canyon, C** 66.24 325 P **P** **06 58 12.9 +1.4**
baz=136,SNR=7.0
AGMN **Agassiz Nation** 66.32 344 P **P** **06 58 11.7 +0.1**
baz=157,SNR=12
AGMN **Agassiz Nation** 66.32 344 P **P** **06 58 11.1 -0.5**
AGMN IAmb IAmb 06 58 12.5
comp=Z,18nm,0.9s
CWC **Cottonwood Cre** 66.35 322 P **P** **06 58 13.4 +1.2**
baz=133
PDAR **Pinedale Array** 66.51 332 P **P** **06 58 13.8 +0.7**
comp=Z,0.6nm,0.5s,baz=103,slow=6.4,SNR=6.4
HWUT **Hardware Ranch** 66.56 330 P **P** **06 58 13.6 +0.2**
VES **Vestal, Richgr** 66.56 321 P **P** **06 58 14.5 +1.2**
baz=132
BGU **Big Grassy Mou** 66.77 328 P **P** **06 58 15.0 +0.3**
MDND **Maddock** 66.99 341 P **P** **06 58 16.6 +0.8**
baz=153
VNA3 **Neumayer Olymp** 67.37 162 P **P** **06 58 19.8 +1.8**
VNA1 **Neumayer--Stat** 67.61 161 P **P** **06 58 21.8 +2.3**
ELK **Elko** 67.77 327 P **P** **06 58 20.7 -0.5**
NVAR **Mina Array Bea** 67.83 323 P **P** **06 58 22.5 +0.9**
comp=Z,1.2nm,0.8s,baz=163,slow=8.4,SNR=11
NVAR PcP **pP** **06 58 48.2 +0.1**
comp=Z,1.2nm,0.7s,baz=128,slow=1.1,SNR=7.4
VNA2 **Neumayer--Watz** 67.97 161 P **P** **06 58 23.3 +1.5**
baz=286,slow=8.4
ULM **Lac du Bonnet** 68.12 345 P **P** **06 58 22.6 -0.3**
comp=Z,17nm,0.6s,baz=156,slow=5.5,SNR=23
ULM **Lac du Bonnet** 68.12 345 IAmb IAmb 06 58 23.5
comp=Z,21nm,0.7s
RLMT **Red Lodge** 68.25 334 IAmb IAmb 06 59 21.7
comp=Z,18nm,0.9s
LAO **LASA Array** 68.29 337 P **P** **06 58 25.4 +1.3**
baz=146
YHL **Hebgen Lake** 68.88 332 P **P** **06 58 29.6 +1.5**
DGMT **Dagmar** 69.04 339 P **P** **06 58 30.0 +1.3**
baz=149,SNR=9.1
DGMT **Dagmar** 69.04 339 IAmb IAmb 06 58 30.8
comp=Z,27nm,1.1s
SNAA **Sanae** 69.58 161 P **P** **06 58 33.4 +1.5**
SNAA **Sanae** 69.58 161 P **P** **06 58 32.9 +1.0**
MFID **Camas Ranch** 70.00 329 IAmb IAmb 06 59 12.6
comp=Z,14nm,1.0s
SCHQ **Schefferville** 70.09 4 P **P** **06 58 35.3 +0.3**
comp=Z,9.6nm,0.9s,baz=213,slow=3.9,SNR=8.0
SCHQ **Schefferville** 70.09 4 IAmb IAmb 06 58 36.2
comp=Z,15nm,1.1s
EGMT **Eagleton** 70.77 335 P **P** **06 58 40.0 +0.7**
baz=143
DBIC **Dimbokro** 71.59 78 P **P** **06 58 45.1 +0.2**
comp=Z,2.4nm,0.6s,baz=241,slow=4.1,SNR=5.0
DBIC LR LR 07 29 14.5
comp=Z,45nm,18.1s,baz=267,slow=35
DBIC **Dimbokro** 71.59 78 IAmb IAmb 06 58 58.1
comp=Z,27nm,1.5s
MSO **Missoula** 71.63 332 P **P** **06 58 46.3 +1.7**
baz=139
MSO **Missoula** 71.63 332 P **P** **06 58 45.9 +1.3**
M04C **Macdoel** 72.09 324 P **P** **06 58 48.4 +1.0**
baz=131
M02C **Callahan** 72.41 323 P **P** **06 58 49.7 +0.3**
baz=130
K04D **Chiloquin, OR** 72.59 325 P **P** **06 58 50.8 +0.3**
baz=131
L04D **Klamath Falls** 72.63 324 P **P** **06 58 51.1 +0.4**
baz=131
J05D **Fort Rock, OR** 72.74 326 P **P** **06 58 52.6 +1.2**
baz=132
J04D **Umpqua Nationa** 73.19 325 P **P** **06 58 55.1 +1.0**
baz=131
I05D **Terrebonne, OR** 73.50 326 P **P** **06 58 57.3 +1.6**
baz=132
FFC **Flin Flon** 73.78 343 P **P** **06 58 56.8 -0.2**
QSPA **South Pole Qui** 74.86 180 P **P** **06 59 04.6 +1.2**
FCC **Fort Churchill** 75.66 349 IAmb IAmb 06 59 09.0
comp=Z,26nm,1.4s
TOA0 **Torodi Ar. Sit** 79.76 73 P **P** **06 59 32.0 +0.5**
TOA0 IAmb IAmb 06 59 33.2
comp=Z,14nm,0.8s
TORD **Torodi Ar. Bea** 79.76 73 P **P** **06 59 32.4 +0.9**
comp=Z,11nm,0.7s,baz=257,slow=5.0,SNR=59
MESJ **Messejana** 80.97 47 *eP* **P** **06 59 38.5 +1.0**
MESJ AMb AMB 06 59 54.0
comp=Z,36nm,2.5s
MESJ **Messejana** 80.97 47 *eP* **P** **06 59 39.1 +1.6**
comp=Z,36nm,1.8s
PCVE **Castro Verde** 81.00 47 *eP* **P** **06 59 40.2 +2.5**
comp=Z,32nm,1.4s
PBEJ **Beja** 81.30 47 *eP* **P** **06 59 41.8 +2.5**
comp=Z,24nm,1.6s
VNDA **Vanda** 82.12 190 P **P** **06 59 45.4 +2.5**
comp=Z,2.0nm,0.9s,baz=143,slow=4.2,SNR=10
VNDA **Vanda** 82.12 190 P **P** **06 59 45.4 +2.5**
PCAB **Cabril** 82.88 43 *eP* **P** **06 59 49.4 +1.9**
comp=Z,58nm,1.5s
MVO **Moncorvo** 83.30 44 *eP* **P** **06 59 51.6 +1.9**
PBRG **Braganca** 83.78 44 *eP* **P** **06 59 53.8 +1.7**
YKA **Yellowknife Ar** 83.89 342 P **P** **06 59 52.2 +0.1**
comp=Z,11nm,0.9s,baz=135,slow=5.6,SNR=114
YKA pP **pP** **07 00 15.6 -3.9**
comp=Z,2.5nm,0.9s,baz=135,slow=5.6,SNR=3.8
PAB **San Pablo** 84.44 47 P **P** **06 59 57.3 +1.7**
PAB IAmb IAmb 06 59 58.4
comp=Z,16nm,0.8s
ESDC **Sonseca Array** 84.76 47 P **P** **06 59 58.9 +1.7**
comp=Z,9.8nm,0.8s,baz=256,slow=5.4,SNR=42
TAM **Tamanrasset** 86.24 65 P **P** **07 00 06.7 +1.7**
TSUM **Tsumeb** 86.25 109 P **P** **07 00 06.5 +1.3**
DLBC **Dease Lake** 86.65 334 IAmb IAmb 07 00 08.4
comp=Z,16nm,0.9s
WHY **Whitehorse** 89.95 334 IAmb IAmb 07 00 23.7
comp=Z,19nm,1.7s
SUMG **Summit** 90.72 10 *iP* **P** **07 00 26.7 +1.3**
comp=Z,82nm,0.9s
MAW **Mawson** 91.51 165 P **P** **07 00 30.5 +1.7**
comp=Z,1.9nm,0.8s,baz=189,slow=5.4,SNR=4.3
DAWY **Dawson** 93.49 336 P **P** **07 00 37.6 -0.4**
DAWY IAmb IAmb 07 00 39.0
comp=Z,4.3nm,0.8s
A36M **Sachs Harbour** 93.58 346 P **P** **07 00 38.4 +0.3**
baz=131
INK **Inuvik** 93.62 341 P **P** **07 00 38.3 -0.1**
INK IAmb IAmb 07 00 39.5
comp=Z,4.4nm,0.9s
VRDI **Verde Repeater** 93.89 333 IAmb IAmb 07 00 41.0
comp=Z,5.9nm,1.0s
PAX **Paxson** 95.47 334 P **P** **07 00 46.7 -0.4**
PAX IAmb IAmb 07 00 47.5
comp=Z,4.1nm,0.7s
ILAR **Eielson Array** 96.73 336 P **P** **07 00 52.1 -0.5**
comp=Z,1.3nm,0.8s,baz=152,slow=3.4,SNR=13
BRLK **Bradley Lake** 96.77 330 IAmb IAmb 07 00 53.5
comp=Z,7.5nm,0.9s
CCB **Clear Creek Bu** 97.06 335 IAmb IAmb 07 03 08.2
comp=Z,2.9nm,0.6s
RND **Reindeer** 97.06 334 IAmb IAmb 07 00 55.3
comp=Z,8.7nm,1.2s
NEA **Nenana** 97.55 335 P Pdif 07 00 54.6 -1.8
NEA IAmb IAmb 07 04 44.4
comp=Z,7.3nm,1.0s
KBZ **Khabaz** 119.59 48 PKP **PKiKP** **07 06 13.5 +1.4**
comp=Z,4.2nm,0.8s,baz=31,slow=2.2,SNR=8.7
STKA **Stephens Creek** 122.16 215 PKP **PKiKP** **07 06 18.4 +0.7**

comp=Z,1.6nm,0.6s,baz=121,slow=2.8,SNR=4.3
H11N3 **WAKE ISLAND Hyl** 22.28 284 T T 09 19 26.5
baz=100,slow=74,SNR=4.8
H11N2 **WAKE ISLAND Hyl** 22.30 284 T T 09 20 28.8
baz=100,SNR=5.2
H11N1 **WAKE ISLAND Hyl** 22.30 284 T T 09 19 21.5
baz=100,slow=74,SNR=3.3
H11S2 **WAKE ISLAND Hyl** 22.34 282 T T 09 20 11.6
baz=98,slow=75,SNR=10
H11S1 **WAKE ISLAND Hyl** 22.35 282 T T 09 20 21.2
baz=98,slow=75,SNR=6.7
H11S3 **WAKE ISLAND Hyl** 22.36 282 T T 09 20 38.1
baz=98,slow=75,SNR=8.1
ASAR **Alice Springs** 132.80 215 PKP **PKiKP** **07 06 38.6 -0.7**
comp=Z,1.7nm,0.6s,baz=126,slow=1.9,SNR=30
ASAR pPKP **pPKPdf** **07 07 02.6 -4.2**
comp=Z,1.9nm,0.7s,baz=128,slow=1.9,SNR=8.0
WRA **Warramunga Arr** 135.43 219 PKP **PKiKP** **07 06 43.8 -0.8**
comp=Z,2.9nm,0.5s,baz=140,slow=1.9,SNR=14
WRA pPKP **pPKPdf** **07 07 08.3 -3.5**
comp=Z,3.7nm,0.8s,baz=149,slow=1.6,SNR=7.7
ZALV **Zalesovo Beam** 137.93 19 PKP **PKiKP** **07 06 47.9 -0.6**
comp=Z,4.2nm,0.6s,baz=282,slow=2.9,SNR=9.0
KURK **Kurchatov** 138.21 26 **PKiKP** **07 06 48.8 -0.4**
MKAR **Makanchi Array** 142.76 28 PKhKP PKPpre 07 06 52.9
comp=Z,1.1nm,0.6s,baz=318,slow=2.9,SNR=11
KDJ **Kajisay** 143.35 37 **PKPdf** **07 06 55.9 -1.1**
TARG **Taragay, Kyrgy** 143.97 37 **PKiKP** **07 06 58.3 -3.6**
KSH **Kashi** 144.14 42 PKP PKPab 07 06 42.6 -14
KSH pPKP pPKPdf 07 07 21.6 -5.6
MJAR **Matsushiro Arr** 144.60 313 PKP **PKPdf** **07 06 57.9 -1.3**
comp=Z,4.5nm,0.8s,baz=127,slow=1.0,SNR=13
MAJO **Matsushiro** 144.60 313 **PKPdf** **07 06 57.8 -1.4**
MAT **Matsushiro** 144.60 313 PKP **PKPdf** **07 06 57.6 -1.5**
MJB9 **Matsu-Tunnel** 144.61 313 **PKPdf** **07 06 58.0 -1.1**
MDJ **Mudanjiang** 144.74 331 PKP **PKPdf** **07 06 58.4 -0.7**
NIL **Nilore** 145.02 53 **PKiKP** **07 07 00.3 -3.6**
WMQ **Urumqi** 147.45 25 *e*PKPbc **PKPbc** **07 07 04.3 -2.1**
WMQ LR LR
comp=Z,410nm,28.9s
WMQ LR LR
comp=Z,590nm,28.9s
WMQ LR LR
comp=Z,57nm,28.3s
ULN **Ulaanbaatar** 147.52 359 **PKiKP** **07 07 06.1 -2.6**
SONM **Songino Array** 147.56 360 PKPbc **PKPab** **07 07 07.7 -1.3**
comp=Z,8.0nm,0.8s,baz=13,slow=2.7,SNR=5.8
KS19 **Wonju Array Si** 150.77 323 **PKiKP** **07 07 16.2 +0.7**
KSRS **Korea Array** 150.77 323 PKP **PKPbc** **07 07 10.9 -4.0**
comp=Z,3.1nm,0.9s,baz=17,slow=0.7,SNR=12
KSRS PKPbc **PKiKP** **07 07 16.0 +0.6**
comp=Z,10nm,0.8s,baz=4.0,slow=1.8,SNR=31
HHC **Hu-ho-hao-te** 154.13 351 *e*PKPbc **PKPdf** **07 07 10.3 -4.0**
HHC LR LR
comp=Z,96nm,18.7s
HHC LR LR
comp=Z,140nm,18.9s
HHC LR LR
comp=Z,45nm,19.1s
GTA **Gaotai** 155.31 12 PKP **PKPdf** **07 07 17.9 +1.9**
GTA pPKP pPKPdf 07 07 44.0 -0.8
GTA sPKP 07 07 55.3
GTA LR LR
comp=Z,52nm,18.7s
GTA LR LR
comp=Z,200nm,22.2s
GTA LR LR
comp=Z,66nm,18.7s
LZH **Lanzhou** 159.18 6 *e*PKP **PKPdf** **07 07 18.3 -2.7**
LZH PKPab **sPKPdf** **07 07 57.4 -3.2**
LZH LR LR
comp=Z,140nm,18.1s
LZH LR LR
comp=Z,140nm,18.0s
LZH LR LR
comp=Z,170nm,20.3s
NJ2 **Nanjing** 159.78 328 *e*PKP **PKPdf** **07 07 20.3 -1.2**
CD2 **Chengdu** 164.28 8 PKP **PKPdf** **07 07 25.8 -0.4**

JMA 24 06:58:26.0±0.3, 34°24N×141°88E, h64km±3km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	0.85	299	P	Pn	06 58 42.4	+0.6
BSO1				X		06 58 54.8	
BSO3	**Boso 3**	1.26	297	P	Pn	06 58 48.5	+1.1
BSO4	**Boso 4**	1.48	301	P	Pn	06 58 51.8	+1.5
JKUC	**kamogawauchiur**	1.66	304	P	Pn	06 58 53.9	+1.0
JKUC				S	Sn	06 59 14.5	+1.2
JMKN	**Mikurajimanish**	1.93	260	P	Pn	06 58 57.3	+0.7
JMKN				S	Sn	06 59 19.6	-0.2
JHJ2	**Mitsune**	2.06	237	P	Pn	06 58 59.4	+1.1
JHJ2				S	Sn	06 59 23.8	+1.0
JIM2	**Oshima 3**	2.08	284	S	Sn	06 59 23.6	+0.1
JYT	**Yasato**	2.42	326	P	Pn	06 59 04.5	+1.4
JYT				S	Sn	06 59 33.2	+1.6
JOD2	**Odawara 2**	2.52	295	P	Pn	06 59 05.1	+0.6
JHO	**Hitachi**	2.60	336	P	Pn	06 59 05.5	-0.1
JHU	**Hanno**	2.67	308	P	Pn	06 59 07.7	+1.1
JAG	**Ashikaga**	2.95	318	P	Pn	06 59 11.1	+0.7
JYN	**Shimob**	3.02	296	P	Pn	06 59 12.2	+0.8
JYN				S	Sn	06 59 47.2	+0.8
JRY	**Ryogami san**	3.02	307	P	Pn	06 59 12.3	+0.9
MAT	**Matsushiro**	3.78	308	P	Pn	06 59 23.2	+1.4
MAT				S	Sn	07 00 05.5	+0.5

*HLW **24** 07:27:27.3, 30°.63N×35°.63E, h10km±31km, Md3.9, MlI5.1*
*NIC **24** 07:27:28.4±0.0, 30°.44N×35°.14E, h11km±1km, Ml4.5/4*
*NEIC **24** 07:27:29.0±2.1, 30°.49N±0°.03×35°.24E±0°.08, h10km±1km, Error ellipse: s-maj=11.8km s-min=4.5km az=74.0*
*JSO **24** 07:27:29.8±0.2, 31°.N±2°×3°.5E±°, h14km±2km, M4.7/29, Mjma4.6/29, ML4.5/12, MLv4.9/29*
*GRAL **24** 07:27:29.9±0.9, 30°.49N×35°.46E, h4km±21km, MD4.3*
*GII **24** 07:27:30.7±0.3, 30°.48N×35°.30E, h20km, mb4.6/1, MD4.6/6, Mm4.1/10*
*SGS **24** 07:27:30, 30°.54N×35°.19E, h19km, Ml4.8*
*IDC **24** 07:27:30.9±0.7, 30°.50N×35°.22E, h22km±5km, mb3.5/11, mb1 3.7/14, mb1mx3.5/40, mbtmp3.7/14, ML4.3/3, MS2.9/4, Ms1 2.9/4, ms1mx2.5/34, Error ellipse: s-maj=19.2km s-min=8.4km az=105.0*

ISC 24 07:27:31.0±0.5, 30°.49N±0°.02×35°.26E±0°.03, h22km±4km, n142, σ1s17/169, mb3.9/14, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZFRI	**Zfri**	0.09	311	P	**Pb**	**07 27 34.8**	**-0.4**
ZFRI	**Zfri**	0.09	311	Pg	**Pb**	**07 27 35.2**	**0.0**
ZFRI				Sg	**Sb**	**07 27 38.6**	**+0.5**
PRNI	**Paran**	0.26	238	P	**Pb**	**07 27 37.0**	**-0.2**
PRNI	**Paran**	0.26	238	Pg	**Pb**	**07 27 37.2**	**0.0**
PRNI				Sg	**Sb**	**07 27 42.7**	**+1.2**
JDRJ	**Daraweish**	0.42	56	P	**Pb**	**07 27 39.9**	**0.0**
HSNJ	**Maan**	0.44	122	P	**Pb**	**07 27 39.0**	**-1.1**
RMNI	**Mount Ramon**	0.44	284	Pg	**Pn**	**07 27 40.8**	**-1.2**
HRFI	**Mount Harif**	0.49	203	P	**Pb**	**07 27 40.0**	**-1.0**
HRFI	**Mount Harif**	0.49	203	Pg	**Pb**	**07 27 40.6**	**-0.4**
HRFI				Sg	**Sb**	**07 27 47.8**	**0.0**
KRMI	**Paran Flat**	0.59	231	P	**Pb**	**07 27 42.3**	**-0.4**
KRMI	**Paran Flat**	0.59	231	Pg	**Pb**	**07 27 42.5**	**-0.2**
KRMI				Sg	**Sn**	**07 27 51.5**	**-1.6**
DAMI2	**DAM2**	0.70	13	Pg	**Pb**	**07 27 44.3**	**-0.1**
DAMI2				Sg	**Sn**	**07 27 54.7**	**-0.8**
KARJ	**KARJ**	0.71	28	Pn	**Sn**	**07 27 56.3**	**+0.3**
MBRI	**Mt Berech**	0.76	203	P	**Pb**	**07 27 44.9**	**-0.6**
MBRI	**Mt Berech**	0.76	203	Pg	**Pb**	**07 27 45.0**	**-0.6**
MBRI				Sg	**Sb**	**07 27 55.6**	**+0.2**
LISJ	**El Lisan**	0.77	14	P	**Pb**	**07 27 45.0**	**-0.7**
AQBJ	**Aqaba**	0.78	193	P	**Pb**	**07 27 45.7**	**-0.2**
AQBJ	**Aqaba**	0.78	193	Pg	**Pb**	**07 27 45.7**	**-0.2**
AQBJ				Sg	**Sn**	**07 27 57.1**	**-0.6**
MDBI	**Mazsada**	0.82	6	P	**Pb**	**07 27 45.2**	**-1.4**
KZIT	**Kziot**	0.85	299	P	**Pn**	**07 27 47.0**	**-0.6**
KZIT	**Kziot**	0.85	299	Pg	**Pn**	**07 27 47.0**	**-0.6**
KZIT				Sg	**Sn**	**07 27 59.1**	**-0.3**
GHAJ	**Ghor Haditha**	0.85	18	P	**Pb**	**07 27 45.7**	**-1.4**
GHAJ	**Ghor Haditha**	0.85	18	Pg	**Pb**	**07 27 45.7**	**-1.4**
GHAJ				Sg	**Sb**	**07 27 57.9**	**-0.2**
EIL	**Elat**	0.86	198	Pg	**Pb**	**07 27 46.4**	**-0.8**
	337nm,0.3s,baz=282,slow=2.8,SNR=4032						

EIL				Lg	Lg	07 27 58.7		
	3µm,0.3s,baz=90,slow=11,SNR=34							
EIL	**Elat**	**0.86**	**198**	P	**Pb**	**07 27 46.5**	**-0.8**	
EIL	**Elat**	**0.86**	**198**	Pg	**Pb**	**07 27 46.5**	**-0.8**	
EIL				Sg	**Sb**	**07 27 58.7**	**+0.3**	
YTIR	**Yattir**	**0.88**	**352**	P	**Pb**	**07 27 46.7**	**-0.9**	
YTIR	**Yattir**	**0.88**	**352**	Pg	**Pb**	**07 27 46.7**	**-0.9**	
YTIR				Sg	**Sb**	**07 27 58.7**	**-0.2**	
SWQJ	**Swaqa**	**1.02**	**42**	P	**Pb**	**07 27 50.6**	**+0.6**	
AMAZ	**Amatzia**	**1.08**	**344**	P	**Pn**	**07 27 49.5**	**-1.3**	
AMAZ	**Amatzia**	**1.08**	**344**	Pg	**Pn**	**07 27 49.8**	**-1.0**	
AMAZ				Sg	**Sn**	**07 28 04.7**	**-0.4**	
AMAZ	**Amatzia**	**1.08**	**344**	P	**Pn**	**07 27 49.8**	**-1.1**	
AMAZ				Sg	**Sn**	**07 28 04.5**	**-0.6**	
DSI	**Dead Sea**	**1.08**	**6**	Pg	**Pn**	**07 27 49.6**	**-1.2**	
DSI				Sg	**Sn**	**07 28 04.8**	**-0.3**	
DRHJ	**Al-Direh**	**1.16**	**193**	P	**Pb**	**07 27 52.6**	**+0.3**	
WALJ	**Wala**	**1.17**	**24**	P	**Pn**	**07 27 50.7**	**-1.3**	
HBST	**Basata**	**1.35**	**200**	P	**Pn**	**07 27 53.9**	**-0.6**	
	baz=210							
HBST				S	**Sb**	**07 28 12.9**	**+0.4**	
	baz=210							
RSH		**1.40**	**290**	P	**Pn**	**07 27 54.5**	**-0.8**	
	baz=282							
UJAP	**Al Uja**	**1.47**	**7**	P	**Pn**	**07 27 54.7**	**-1.3**	
HAQS	**Haql**	**1.47**	**192**	P	**Pn**	**07 27 54.8**	**-1.4**	
HAQS				S	**Sn**	**07 28 12.9**	**-1.8**	
SLTI	**Sal'it**	**1.75**	**354**	P	**Pn**	**07 27 59.6**	**-0.5**	
SLTI	**Sal'it**	**1.75**	**354**	Pn	**Pn**	**07 27 59.5**	**-0.5**	
JLOS		**1.76**	**173**	P	**Pn**	**07 27 59.1**	**-1.2**	
HMDT	**Nahal Hemdat**	**1.77**	**7**	Pn	**Pn**	**07 27 59.6**	**-0.7**	
HSUJ	**Al Zarqa**	**1.80**	**26**	P	**Pn**	**07 27 59.0**	**-1.7**	
HDHB	**Dhahab**	**1.85**	**198**	P	**Pn**	**07 27 59.8**	**-1.5**	
	baz=206							
QRNJ	**Al-Qirein**	**1.86**	**8**	P	**Pn**	**07 28 00.7**	**-0.7**	
QRNJ	**Al-Qirein**	**1.86**	**8**	Pn	**Pn**	**07 28 00.6**	**-0.8**	
MMLI	**Mount Malkishu**	**1.94**	**4**	P	**Pn**	**07 28 02.2**	**-0.5**	
MMLI	**Mount Malkishu**	**1.94**	**4**	P	**Pn**	**07 28 02.3**	**-0.4**	
MMLI				S	**Sn**	**07 28 27.4**	**+1.0**	
BDAS	**Al Bad`**	**2.06**	**184**	P	**Pn**	**07 28 02.7**	**-1.6**	
OFRI	**`Ofer**	**2.13**	**354**	P	**Pn**	**07 28 05.1**	**-0.3**	
OFRI	**`Ofer**	**2.13**	**354**	Pn	**Pn**	**07 28 05.0**	**-0.3**	
ASF	**Jabal al Asfar**	**2.18**	**40**	Pn	**Pn**	**07 28 04.2**	**-1.9**	
	45nm,0.3s,baz=169,slow=7.9,SNR=164							
ASF				Lg	Lg	07 28 34.2		
	401nm,0.3s,baz=207,slow=22,SNR=22							
ASF	**Jabal al Asfar**	**2.18**	**40**	P	**Pn**	**07 28 04.2**	**-1.9**	
SUZ	**Suez**	**2.20**	**253**	P	**Pn**	**07 28 06.2**	**+0.1**	
	baz=253							
QREAT	**Al Qurayyat**	**2.22**	**63**	P	**Pn**	**07 28 04.9**	**-1.7**	
RSHS		**2.22**	**191**	P	**Pn**	**07 28 04.8**	**-1.7**	
BLGI	**Bet Lehem HaGe**	**2.23**	**359**	P	**Pn**	**07 28 06.6**	**-0.1**	
BLGI	**Bet Lehem HaGe**	**2.23**	**359**	Pn	**Pn**	**07 28 06.5**	**-0.1**	
SHMJ	**Saham**	**2.27**	**11**	P	**Pn**	**07 28 06.4**	**-0.7**	
SHMJ	**Saham**	**2.27**	**11**	Pn	**Pn**	**07 28 06.3**	**-0.8**	
ZNM	**Zenema**	**2.35**	**242**	P	**Pn**	**07 28 08.4**	**+0.2**	
	baz=244							
KRABS	**KRABS**	**2.38**	**180**	P	**Pn**	**07 28 07.1**	**-1.6**	
HRDS	**Abu Rudays**	**2.46**	**224**	P	**Pn**	**07 28 09.4**	**-0.4**	
	baz=228							
WTBKS	**WTBKS**	**2.47**	**166**	P	**Pn**	**07 28 09.0**	**-0.9**	
MMA0B	**Mount Meron ar**	**2.52**	**3**	Pn	**Pn**	**07 28 10.2**	**-0.4**	
MMAI	**Mount Meron Ar**	**2.52**	**3**	Pn	**Pn**	**07 28 10.0**	**-0.7**	
	134nm,0.3s,baz=175,slow=16,SNR=248							
MMAI				Sn	**Sn**	**07 28 42.5**	**+1.8**	
	247nm,0.3s,baz=171,slow=20,SNR=7.0							
MMAI				LR	LR	07 28 44.4		
	comp=Z,86nm,21.3s,baz=70,slow=29							
TBKS	**Tabuk**	**2.52**	**153**	P	**Pn**	**07 28 09.3**	**-1.3**	
HNTI	**Hanita**	**2.58**	**358**	P	**Pn**	**07 28 11.4**	**-0.1**	
KSDI	**Kefar Szold**	**2.71**	**7**	P	**Pn**	**07 28 13.2**	**0.0**	
KSDI	**Kefar Szold**	**2.71**	**7**	P	**Pn**	**07 28 12.8**	**-0.4**	
TR1	**Tor 1**	**2.73**	**205**	P	**Pn**	**07 28 12.3**	**-1.1**	
	baz=210							
GEM	**Giv'at Ha'Em**	**2.73**	**7**	P	**Pn**	**07 28 13.4**	**-0.1**	
GEM	**Giv'at Ha'Em**	**2.73**	**7**	Pn	**Pn**	**07 28 12.9**	**-0.6**	
MWLHS	**Almuwaylih**	**2.75**	**175**	P	**Pn**	**07 28 12.0**	**-1.6**	
HANO	**Al Hamad**	**2.79**	**71**	P	**Pn**	**07 28 12.5**	**-1.8**	
HHAG	**Hagoal**	**2.79**	**260**	P	**Pn**	**07 28 14.0**	**-0.3**	
	baz=259							
HHAG				S	**Sn**	**07 28 48.8**	**+1.5**	
	baz=259							
NATI	**Neve Ativ**	**2.79**	**8**	P	**Pn**	**07 28 14.0**	**-0.3**	
SHBL	**Chebaa**	**2.88**	**8**	*eP*	**Pn**	**07 28 15.3**	**-0.4**	
KOT	**Kottamia**	**3.02**	**260**	AMP		07 29 00.0		
	baz=259							
RCY	**Rachaya**	**3.04**	**9**	*eP*	**Pn**	**07 28 17.4**	**-0.4**	
QRWL	**Qaraoun**	**3.07**	**7**	*eP*	**Pn**	**07 28 17.9**	**-0.3**	
GRB	**Gharib**	**3.09**	**225**	P	**Pn**	**07 28 17.4**	**-1.1**	
	baz=228							
JOFS	**JOFS**	**3.10**	**109**	P	**Pn**	**07 28 17.0**	**-1.6**	
GLL	**Jalalah**	**3.21**	**254**	P	**Pn**	**07 28 20.0**	**-0.1**	
	baz=254							
DQRL	**Deir Qamar**	**3.21**	**5**	*eP*	**Pn**	**07 28 20.1**	**-0.1**	
DQRL				*eS*	**Sn**	**07 28 56.0**	**-1.9**	
BEYL	**Beirut**	**3.38**	**3**	*eP*	**Pn**	**07 28 21.9**	**-0.4**	
WELAS	**Turaif**	**3.38**	**67**	P	**Pn**	**07 28 21.2**	**-1.3**	
BHL	**Bhannes**	**3.42**	**6**	*eP*	**Pn**	**07 28 22.8**	**-0.3**	
BHL				*eS*	**Sn**	**07 29 02.7**	**-0.2**	
QLABS	**Al Qalibar**	**3.51**	**138**	P	**Pn**	**07 28 23.2**	**-1.2**	
TRAF	**Turaif**	**3.60**	**77**	P	**Pn**	**07 28 24.3**	**-1.2**	
OSC2	**CSNet OBS 4**	**3.62**	**316**	P	**Pn**	**07 28 23.7**	**-2.0**	
OSC2				S	**Sn**	**07 29 06.3**	**-1.4**	
HWQ	**Hawqa**	**3.82**	**9**	*eP*	**Pn**	**07 28 28.1**	**-0.5**	
WJHS		**3.88**	**165**	P	**Pn**	**07 28 28.1**	**-1.2**	
BIDS	**Bi'r al Bayda'**	**3.91**	**157**	P	**Pn**	**07 28 28.9**	**-0.8**	
HNAT	**Natroun**	**4.11**	**259**	P	**Pn**	**07 28 32.9**	**+0.3**	
	baz=259							
HNAT				AMP		07 29 00.0		
	baz=259							
EWJHS	**Al Wajh**	**4.49**	**164**	P	**Pn**	**07 28 36.3**	**-1.4**	
ASGA	**Asgata**	**4.61**	**339**	P	**Pn**	**07 28 38.2**	**-1.1**	
ASGA				S	**Sn**	**07 29 30.5**	**-1.5**	
ASGA				AML	AML	07 29 46.0		
	1.5nm,0.5s							
ASGA				AML	AML	07 29 46.0		
	1.5nm,0.5s							
ASGA				AML	AML	07 29 53.5		
	1.5nm,0.3s							
ASGA				AML	AML	07 29 53.5		
	1.5nm,0.3s							
PARAL	**Paralimni**	**4.61**	**347**	P	**Pn**	**07 28 38.1**	**-1.1**	
PARAL				AML	AML	07 29 49.1		
	1.2nm,0.6s							
PARAL				AML	AML	07 29 53.7		
	1.2nm,0.7s							
SZAC	**Souni**	**4.70**	**335**	P	**Pn**	**07 28 40.2**	**-0.4**	
SZAC				S	**Sn**	**07 29 33.9**	**-0.5**	
SZAC				AML	AML	07 29 48.7		
	6.4nm,0.6s							
SZAC				AML	AML	07 29 48.7		
	6.4nm,0.6s							
SZAC				AML	AML	07 29 51.4		
	4.0nm,0.4s							
SZAC				AML	AML	07 29 51.4		
	4.0nm,0.4s							
CSS	**Mathiatis**	**4.74**	**340**	P	**Pn**	**07 28 40.8**	**-0.4**	
CSS	**Mathiatis**	**4.74**	**340**	Pn	**Pn**	**07 28 40.5**	**-0.7**	
CSS	**Mathiatis**	**4.74**	**340**	P	**Pn**	**07 28 40.6**	**-0.6**	
CSS	**Mathiatis**	**4.74**	**340**		**Pn**	**07 28 40.5**	**-0.7**	
CSS				Sn	**Sn**	**07 29 34.2**	**-1.2**	
GAZ	**Gaziantep**	**6.86**	**13**	Pn	**Pn**	**07 29 10.1**	**-0.2**	
ELL	**Elmali**	**7.67**	**326**		**Pn**	**07 29 20.2**	**-1.2**	
ISP	**Isparta**	**8.30**	**333**	Pn	**Pn**	**07 29 29.8**	**-0.2**	
BRTR	**Keskin Array B**	**9.31**	**352**	Pn	**Pn**	**07 29 47.0**	**+3.1**	
	0.2nm,0.3s,baz=185,slow=16,SNR=4.2							
BRTR				LR	LR	07 33 50.1		
	comp=Z,68nm,19.1s,baz=154,slow=41							
BR131	**Keskin Array S**	**9.31**	**352**	Pn	**Pn**	**07 29 46.6**	**+2.7**	
MANT	**Manisa**	**9.70**	**327**		**Pn**	**07 29 50.7**	**+1.3**	
IDI	**Anoyia**	**9.94**	**301**	Pn	**Pn**	**07 29 50.7**	**-1.8**	
	2.5nm,0.3s,baz=78,slow=13,SNR=9.3							
IDI				Sn	**Sn**	**07 31 36.7**	**-6.7**	
	6.2nm,0.3s,baz=308,slow=22,SNR=9.3							
IDI	**Anoyia**	**9.94**	**301**		**Pn**	**07 29 50.9**	**-1.6**	
ILGA	**Ilgaz**	**10.61**	**354**		**Pn**	**07 30 02.0**	**+0.1**	
RAYN	**Ar Rayn**	**11.47**	**125**		**Pn**	**07 30 14.2**	**+0.7**	
ITM	**Ithomi**	**12.93**	**305**	Pn	**Pn**	**07 30 32.5**	**-0.9**	
KBZ	**Khabaz**	**14.54**	**23**	LR	LR	07 36 24.0		
	comp=Z,82nm,19.1s,baz=202,slow=37							
TIP	**Timpagrande**	**17.46**	**305**		**Pn**	**07 31 33.2**	**+0.1**	
TIP				IAmb	IAmb	07 31 41.2		
	comp=Z,8.8nm,0.6s							
PDG	**Podgorica**	**17.50**	**317**	P	**P**	**07 31 35.9**	**+1.3**	
SGRT	**San Giovanni R**	**19.31**	**311**	P	**P**	**07 31 54.2**	**-0.4**	
SGRT				IAmb	IAmb	07 32 13.8		
	comp=Z,7.1nm,0.7s							
GEYT	**Alibeck**	**20.28**	**62**	P	**P**	**07 32 05.8**	**+0.7**	
	comp=Z,7.7nm,0.7s,baz=274,slow=8.8,SNR=15							
GYA0B	**ALIBECK ARRAY**	**20.28**	**62**	P	**P**	**07 32 05.4**	**+0.3**	
GYA0B				IAmb	IAmb	07 32 06.4		
	comp=Z,8.1nm,0.8s							
AKASG	**Malin Array Be**	**20.69**	**349**	P	**P**	**07 32 08.3**	**-1.0**	
	comp=Z,1.1nm,0.4s,baz=170,slow=8.3,SNR=5.2							
AKASG				pP	**pP**	**07 32 15.3**	**-0.3**	
	comp=Z,6.4nm,0.7s,baz=165,slow=9.5,SNR=7.8							
AKBB	**Malin Array Si**	**20.69**	**349**	P	**P**	**07 32 08.2**	**-1.1**	
GERES	**GERESS Array B**	**24.58**	**324**	P	**P**	**07 32 48.6**	**-0.8**	
	comp=Z,0.3nm,0.4s,baz=113,slow=6.9,SNR=4.1							
GERES				pP	**pP**	**07 32 56.6**	**+0.5**	
	comp=Z,0.7nm,0.5s,baz=126,slow=9.1,SNR=4.4							
KHC	**Kasperske Hory**	**24.83**	**325**	*eP*	P	07 33 08.1	+17	
AKTO	**Aktyubinsk**	**26.21**	**34**	P	**P**	**07 33 04.4**	**+0.5**	
	comp=Z,3.3nm,0.6s,baz=232,slow=9.0,SNR=10							
BNI	**Bardonecchia**	**26.69**	**311**	P	**P**	**07 33 10.4**	**+1.8**	
SENIN	**Lac Senin/Sane**	**26.85**	**314**	P	**P**	**07 33 13.7**	**+3.7**	
SENIN				IAmb	IAmb	07 33 21.0		
	comp=Z,5.7nm,1.0s							
FINES	**FINESS Array B**	**31.54**	**352**	P	**P**	**07 33 50.7**	**-0.6**	
	comp=Z,1.1nm,0.7s,baz=154,slow=14,SNR=5.1							
NOA	**NORSAR Array B**	**34.44**	**339**	pP	pP	07 34 22.5	-1.0	
	comp=Z,1.5nm,0.8s,baz=138,slow=8.6,SNR=4.3							
TORD	**Torodi Ar. Bea**	**35.44**	**248**	P	**P**	**07 34 25.8**	**+0.1**	
	comp=Z,0.2nm,0.6s,baz=63,slow=6.9,SNR=1.8							
TORD				pP	**pP**	**07 34 32.5**	**-0.1**	
	comp=Z,0.6nm,0.8s,baz=61,slow=8.4,SNR=3.8							
EKA	**Eskdalemuir Ar**	**36.80**	**324**	P	**P**	**07 34 36.2**	**-0.7**	
	comp=Z,0.9nm,0.6s,baz=109,slow=11,SNR=3.5							
KURBB	**Kurchatov Arra**	**37.86**	**45**	P	**P**	**07 34 46.1**	**+0.2**	
	comp=Z,0.7nm,0.7s,baz=265,slow=8.8,SNR=7.5							
KURK	**Kurchatov**	**37.94**	**45**	P	**P**	**07 34 46.1**	**-0.5**	
KURK				IAmb	IAmb	07 34 47.2		
	comp=Z,1.4nm,0.8s							
ARCES	**ARCESS Array B**	**39.48**	**355**	P	**P**	**07 34 59.1**	**-0.2**	
	comp=Z,1.9nm,0.9s,baz=155,slow=6.7,SNR=1.2							
ARCES				pP	**pP**	**07 35 05.5**	**-0.7**	
	comp=Z,2.3nm,0.8s,baz=170,slow=7.4,SNR=2.1							
MK31	**Makanchi Array**	**39.55**	**52**	P	**P**	**07 34 59.5**	**-0.7**	
MKAR	**Makanchi Array**	**39.55**	**52**	P	**P**	**07 35 00.1**	**-0.2**	
	comp=Z,0.7nm,0.6s,baz=256,slow=7.2,SNR=8.1							
WMQ	**Urumqi**	**43.17**	**57**	*eP*	**P**	**07 35 32.8**	**+2.7**	
LZH	**Lanzhou**	**56.54**	**65**	*eP*	**P**	**07 37 12.5**	**+0.5**	
LZH				pP	pP	07 37 15.8	-3.3	
LZH				sP	sP	07 37 17.3	-4.4	
LZH				*e*PP	**PP**	**07 39 19.6**	**+1.9**	
LZH				pmax	pmax			
	comp=Z,16nm,1.3s							
LZH				pmax	pmax			
	comp=Z,69nm,6.8s							
HHC	**Hu-ho-hao-te**	**61.05**	**57**	*eP*	**P**	**07 37 43.8**	**+0.6**	
HHC				pmax	pmax			
	comp=Z,15nm,1.2s							
HHC				pmax	pmax			
	comp=Z,48nm,6.2s							
KSRS	**Korea Array**	**74.11**	**56**	LR	LR	08 15 37.5		
	comp=Z,11nm,19.6s,baz=10.0,slow=39							
YKA	**Yellowknife Ar**	**84.23**	**346**	P	**P**	**07 40 01.9**	**+1.5**	
	comp=Z,0.2nm,0.8s,baz=29,slow=6.1,SNR=2.1							
YKA				pP	**pP**	**07 40 07.8**	**0.0**	
	comp=Z,0.3nm,0.6s,baz=28,slow=5.9,SNR=4.6							

THE 24 07:29:15.1,34.88N×26.72E,h0km±3km,ML1.6/1,Error ellipse: s-maj=9.4km s-min=0.9km az=161.0,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.47**	**299**	P	Pg	07 29 24.8	+0.6
KARP	**Karpathos**	**0.75**	**28**	P	Pg	07 29 30.0	+0.5
KARP				S	Sb	07 29 42.1	+0.1
	52nm,0.4s						
KARP	**Karpathos**	**0.75**	**28**		Pg	07 29 30.0	+0.5
LAST	**Lasithi**	**1.06**	**286**	P	Pb	07 29 35.9	-0.4
IDI	**Anoyia**	**1.56**	**286**	P	Pn	07 29 42.3	-1.8
GVD	**Gavdhos**	**2.17**	**270**	P	Pn	07 29 51.8	-0.7

*IDC **24** 07:50:15.5±2.1,15°.04S×71°.57W,h112km±19km,mb3.6/5, mb1 3.9/11,mb1mx3.7/30,mbtmp4.2/11,MS3.0/1, Ms1 3.0/1,ms1mx2.4/26,Error ellipse: s-maj=20.7km s-min=17.3km az=64.0*
*NEIC **24** 07:50:15.5±2.8,15°.23S±0°.07×71°.89W±0°.08,h116km±6km, mb4.1/17, Error ellipse: s-maj=12.2km s-min=9.1km az=65.0*
*VAO **24** 07:50:19.4±1.1,15°.39S×71°.61W,h186km±8km,mb3.9*
ISC 24 07:50:16.6±0.5,15°.19S±0°.05×71°.78W±0°.06,h133km,n76, σ2s00/83,mb3.9/10,Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AP01	**Chacalluta**	**3.45**	**157**		**Pn**	**07 51 09.4**	**+0.2**
AP01				Sn	**Sn**	**07 51 48.5**	**-1.4**
PB12	**IPOC Station P**	**3.68**	**158**		**Pn**	**07 51 11.9**	**-0.4**
PB12				Sn	**Sn**	**07 51 53.0**	**-2.3**
LPAZ	**La Paz**	**3.68**	**108**	P	**Pn**	**07 51 14.7**	**+1.9**
	9.6nm,0.3s,baz=281,slow=9.8,SNR=82						
LPAZ				S	**Sn**	**07 51 58.5**	**+2.4**
	3.3nm,0.3s,baz=178,slow=16,SNR=5.9						
LPAZ	**La Paz**	**3.68**	**108**		**Pn**	**07 51 14.6**	**+1.9**
LPAZ				Sn	**Sn**	**07 51 57.8**	**+1.7**
LPAZ	**La Paz**	**3.68**	**108**	*eP*	**Pn**	**07 51 15.2**	**+2.4**
LPAZ				*eS*	**Sn**	**07 51 56.1**	**0.0**
PB16	**IPOC Station P**	**3.81**	**146**		**Pn**	**07 51 15.7**	**+1.2**
PB16				Sn	**Sn**	**07 51 59.9**	**+0.7**
MNMC	**Minye Minye**	**4.44**	**152**		**Pn**	**07 51 22.3**	**-0.2**
MNMC				Sn	**Sn**	**07 52 12.7**	**-1.0**
PSGCX	**Pisagua**	**4.66**	**160**		**Pn**	**07 51 23.9**	**-1.4**
PB11	**IPOC Station P**	**4.97**	**156**		**Pn**	**07 51 28.4**	**-1.2**
PB11				Sn	**Sn**	**07 52 23.2**	**-3.2**
GO01	**Chusmiza**	**5.09**	**151**		**Pn**	**07 51 32.1**	**+0.7**
TA01	**Diego Aracena**	**5.56**	**164**		**Pn**	**07 51 35.5**	**-1.7**
PATCX	**Punta Patache**	**5.81**	**165**		**Pn**	**07 51 38.7**	**-2.0**
NNA	**Nana**	**5.86**	**302**	P	**Pn**	**07 51 41.0**	**-0.4**
	16nm,0.3s,baz=144,slow=12,SNR=16						
NNA				S	**Sn**	**07 52 43.5**	**-4.1**
	40nm,0.3s,baz=288,slow=4.8,SNR=23						
NNA	**Nana**	**5.86**	**302**		**Pn**	**07 51 41.1**	**-0.4**
PB01	**IPOC Station P**	**6.21**	**160**		**Pn**	**07 51 44.2**	**-1.9**
PB07	**IPOC Station P**	**6.74**	**165**		**Pn**	**07 51 51.5**	**-1.8**
PB04	**IPOC Station P**	**7.27**	**168**		**Pn**	**07 51 58.1**	**-2.3**
PB06	**IPOC Station P**	**7.76**	**165**		**Pn**	**07 52 04.5**	**-2.5**
LVC	**Limon Verde**	**7.86**	**160**	P	**Pn**	**07 52 07.3**	**-1.2**
	6.5nm,0.3s,baz=334,slow=8.6,SNR=60						
LVC				S	**Sn**	**07 53 30.9**	**-5.3**
	7.0nm,0.3s,baz=31,slow=23,SNR=17						
LVC	**Limon Verde**	**7.86**	**160**		**Pn**	**07 52 07.0**	**-1.6**
LVC	**Limon Verde**	**7.86**	**160**	*eP*	**Pn**	**07 52 07.4**	**-1.2**
PB15	**IPOC Station P**	**8.27**	**165**		**Pn**	**07 52 12.1**	**-1.8**
PB10	**IPOC Station P**	**8.36**	**172**	Pn	**Pn**	**07 52 12.4**	**-2.5**
GO02	**Mina Guanaco**	**10.13**	**169**		**Pn**	**07 52 35.8**	**-3.1**
SIV	**San Ignacio**	**10.35**	**96**	P	**Pn**	**07 52 39.4**	**-2.2**
	0.7nm,0.3s,baz=282,slow=12,SNR=27						
SAML	**Samuel**	**10.44**	**55**		**Pn**	**07 52 39.4**	**-3.5**
AC01	**Pan de Azucar**	**10.96**	**174**	Pn	**Pn**	**07 52 47.2**	**-2.5**
PTLB	**Pontes e Lacer**	**12.20**	**93**	*eP*	**Pn**	**07 53 04.6**	**-1.5**
AC05	**El Transito**	**13.65**	**174**		**Pn**	**07 53 25.1**	**+0.2**
CO01	**Juntas del Tor**	**14.80**	**174**	P	**Pn**	**07 53 40.3**	**+0.8**
GO04	**Tololo Observa**	**14.94**	**177**	P	**Pn**	**07 53 42.2**	**+0.9**
SALV	**Santo Antonio**	**15.52**	**95**	*eP*	**Pn**	**07 53 47.5**	**-0.8**
CO03	**El Pedregal**	**15.61**	**177**	P	**Pn**	**07 53 49.5**	**+0.1**
CLDB	**Colider**	**16.15**	**76**	*eP*	**Pn**	**07 53 54.5**	**-1.6**
AQDB	**Aquidauana**	**16.18**	**111**	*eP*	**Pn**	**07 53 54.6**	**-1.9**
MACA	**Manacapuru-AM**	**16.20**	**44**	*eP*	**P**	**07 53 57.1**	**-0.3**
CFA	**Coronel Fontan**	**16.66**	**169**	P	**P**	**07 54 03.6**	**+1.3**
	0.6nm,0.3s,baz=353,slow=12,SNR=27						
CPUP	**Villa Florida**	**17.46**	**132**	P	**Pn**	**07 54 11.5**	**-0.4**
	0.6nm,0.3s,baz=315,slow=8.3,SNR=15						
CPUP				LR	LR	08 02 58.4	
	comp=Z,44nm,18.4s,baz=231,slow=44						
CPUP	**Villa Florida**	**17.46**	**132**	P	**Pn**	**07 54 11.3**	**-0.6**
CPUP	**Villa Florida**	**17.46**	**132**	*eP*	**P**	**07 54 07.8**	**-3.4**
MT02	**Curacav**	**18.00**	**178**	P	**P**	**07 54 18.9**	**+1.8**
MT02				IAmb	IAmb	07 54 29.2	
	comp=Z,24nm,1.4s						
NPGB	**Novo Progresso**	**18.02**	**65**	*eP*	**P**	**07 54 16.3**	**-1.1**
C2SB	**Chapadao do Su**	**18.46**	**104**	*eP*	**P**	**07 54 19.0**	**-3.2**
PTGA	**Pitinga**	**18.51**	**40**	P	**P**	**07 54 22.2**	**-0.6**
	comp=Z,1.9nm,0.3s,baz=231,slow=22,SNR=22						
PTGA	**Pitinga**	**18.51**	**40**	P	**P**	**07 54 22.0**	**-0.7**
PTGA				IAmb	IAmb	07 54 24.4	
	comp=Z,9.9nm,1.0s						
PTGA	**Pitinga**	**18.51**	**40**	*eP*	**P**	**07 54 22.2**	**-0.6**
ARAG	**Araguaiana, MT**	**19.25**	**94**	*eP*	**P**	**07 54 27.8**	**-3.0**
H03N1	**Juan Fernandez**	**19.29**	**198**	T	T	08 13 10.3	
	baz=17,slow=74,SNR=9.6						
H03N2	**Juan Fernandez**	**19.29**	**198**	T	T	08 13 07.9	
	baz=17,slow=74,SNR=7.7						
H03N3	**Juan Fernandez**	**19.30**	**198**	T	T	08 13 12.5	
	baz=17,slow=74,SNR=9.5						
BO02	**Sierra Bellavi**	**19.54**	**178**	P	**P**	**07 54 36.2**	**+2.3**
GO05	**Huala**	**19.74**	**180**	Pn	**P**	**07 54 37.7**	**+1.8**
GO05				IAmb	IAmb	07 54 54.2	
	comp=Z,11nm,1.1s						
RUSC	**La Rusia**	**20.99**	**356**	P	**P**	**07 54 49.5**	**-0.6**
BI02	**San Fabin de**	**21.39**	**179**	P	**P**	**07 54 56.8**	**+3.1**
BI02				IAmb	IAmb	07 54 58.4	
	comp=Z,9.0nm,0.8s						
BDFB	**Brasilia**	**22.91**	**94**	P	**P**	**07 55 08.6**	**-0.8**
	comp=Z,1.8nm,0.5s,baz=262,slow=14,SNR=3.5						
BDFB	**Brasilia**	**22.91**	**94**	P	**P**	**07 55 09.3**	**-0.1**
PRPB	**Parauapebas**	**23.35**	**70**	*eP*	**P**	**07 55 09.5**	**-3.8**
LC01	**Cunco**	**23.62**	**180**	P	**P**	**07 55 16.7**	**+1.2**
LC01				IAmb	IAmb	07 55 19.0	
	comp=Z,7.5nm,1.0s						
SDV	**Santo Domingo**	**23.95**	**3**	P	**P**	**07 55 19.5**	**+0.6**
SDV				IAmb	IAmb	07 55 31.7	
	comp=Z,7.9nm,1.3s						
PLCA	**Paso Flores**	**25.47**	**178**	P	**P**	**07 55 34.5**	**+2.1**
	comp=Z,3.4nm,0.9s,baz=1.8,slow=10.0,SNR=12						
PLCA	**Paso Flores**	**25.47**	**178**	P	**P**	**07 55 34.7**	**+2.3**
TX31	**Lajitas Ar. Si**	**53.92**	**325**	P	**P**	**07 59 27.2**	**+0.5**
TX31				IAmb	IAmb	07 59 42.9	
	comp=Z,3.9nm,1.4s						
VNA3	**Neumayer Olymp**	**66.89**	**162**	P	**P**	**08 00 56.2**	**+2.2**
VNA2	**Neumayer--Watz**	**67.47**	**161**	P	**P**	**08 01 00.0**	**+2.3**
	baz=280,slow=9.1						
SNAA	**Sanae**	**69.10**	**162**	P	**P**	**08 01 09.8**	**+1.9**
SNAA	**Sanae**	**69.10**	**162**	P	**P**	**08 01 09.8**	**+1.9**
QSPA	**South Pole Qui**	**74.97**	**180**	P	**P**	**08 01 45.8**	**+2.7**
TOA0	**Torodi Ar. Sit**	**77.95**	**73**	P	**P**	**08 02 02.3**	**+1.6**
TOA0				IAmb	IAmb	08 02 12.9	
	comp=Z,3.7nm,1.4s						
TORD	**Torodi Ar. Bea**	**77.95**	**73**	P	**P**	**08 01 59.4**	**-1.2**
	comp=Z,1.3nm,0.6s,baz=256,slow=4.8,SNR=8.9						
VNDA	**Vanda**	**82.55**	**190**	P	**P**	**08 02 27.6**	**+3.5**
	comp=Z,0.

GLVR				smax	smax		
	comp=N,584nm,0.3s						
GLVR				smax	smax		
	comp=E,382nm,0.2s						
RUSJ	**Misakicho**	**2.12**	**270**	*e*PN	**Pn**	**08 09 57.0**	**+1.6**
RUSJ				*e*S	**Sn**	**08 10 18.9**	**-1.7**
JRA	**Rausu**	**2.22**	**266**	P	**Pn**	**08 09 57.7**	**+0.9**
JNSB	**Nemuroshibetsu**	**2.33**	**262**	P	**Pn**	**08 09 59.1**	**+0.8**
JNSB				*e*S	**Sn**	**08 10 26.0**	**+0.3**
JKHN	**Kushirohamanak**	**2.44**	**246**	P	**Pn**	**08 10 00.4**	**+0.6**
JKHN				*e*S	**Sn**	**08 10 28.0**	**-0.3**
JNK	**Nakash**	**2.57**	**259**	P	**Pn**	**08 10 01.9**	**+0.3**
JNK				*e*S	**Sn**	**08 10 31.0**	**-0.6**
JAK	**Akkeshi**	**2.78**	**247**	P	**Pn**	**08 10 04.5**	**0.0**
JAK				*e*S	**Sn**	**08 10 35.0**	**-1.8**
JAR	**Ashorobuto**	**3.31**	**257**	P	**Pn**	**08 10 12.4**	**+0.6**
JAR				*e*S	**Sn**	**08 10 49.5**	**-0.4**
JCH	**Churui**	**3.83**	**248**	P	**Pn**	**08 10 18.7**	**-0.2**
JCH				*e*S	**Sn**	**08 11 01.0**	**-1.7**
ERM	**Erimo**	**4.25**	**242**	*e*PN	**Pn**	**08 10 26.5**	**+1.8**
JNBK	**Urakawa-nobuka**	**4.38**	**247**	P	**Pn**	**08 10 25.8**	**-0.7**
YSS	**Yuzh-Sakhalins**	**4.75**	**308**	*e*P	**Pn**	**08 10 33.2**	**+1.7**
JKB	**Kayabe**	**5.71**	**249**	P	**Pn**	**08 10 43.8**	**-0.8**
JOT	**Ohata**	**5.93**	**245**	P	**Pn**	**08 10 46.2**	**-1.5**
EKMR	**Ekimchan**	**13.46**	**317**	*e*P	**Pn**	**08 12 30.9**	**+0.3**

IDC ***24*** *08:11:00.5±6.0,21°.08S×178°.56W,h465km±70km, mb3.3/8, mb1 3.5/9, mb1mx3.3/26, mbtmp4.2/9, Error ellipse: s-maj=30.6km s-min=22.3km az=56.0*

NEIC ***24*** *08:11:01.2±1.9,21°.1S±0°.1×178°.5W±0°.2, h483km±10km, mb4.2/21, Error ellipse: s-maj=25.0km s-min=16.2km az=92.0*

ISC 24 08:10:59.0±0.8, 21°.20S±0°.08×178°.4W±0°.1, h450km, n37, σ1ş26/34, mb4.1/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**8.03**	**177**	P	**P**	**08 12 53.6**	**-1.1**
FUNA	**Funafuti**	**12.81**	**349**	P	**P**	**08 13 49.1**	**+2.4**
URZ	**Urewera**	**17.44**	**192**	P	**P**	**08 14 37.6**	**+1.8**
	1.3nm,0.3s,baz=0.0,slow=20,SNR=7.2						
PLWZ	**Palliser**	**21.01**	**193**	P	**P**	**08 15 07.4**	**-2.0**
TUWZ	**Tuamarina**	**21.19**	**196**	P	**P**	**08 15 11.8**	**+0.8**
THZ	**Tophouse**	**21.78**	**198**	P	**P**	**08 15 17.9**	**+1.4**
KHZ	**Kahutara**	**22.22**	**196**	P	**P**	**08 15 21.6**	**+1.3**
LTZ	**Lake Taylor**	**22.90**	**198**	P	**P**	**08 15 28.8**	**+2.2**
EIDS	**Eidsvold**	**28.31**	**256**	P	**P**	**08 16 15.9**	**+1.2**
EIDS				IAmb	IAmb	08 16 16.6	
	comp=Z,12nm,1.4s						
ARMA	**Armidale**	**28.43**	**245**	P	**P**	**08 16 17.8**	**+1.9**
ARMA				IAmb	IAmb	08 16 31.3	
	comp=Z,12nm,1.4s						
CTAO	**Charters Tower**	**33.06**	**265**	P	**P**	**08 16 56.7**	**+0.7**
CTAO				IAmb	IAmb	08 16 57.0	
	comp=Z,4.2nm,0.5s						
STKA	**Stephens Creek**	**37.15**	**245**	P	**P**	**08 17 30.8**	**+0.7**
	comp=Z,1.9nm,0.9s,baz=90,slow=11,SNR=3.0						
COEN	**Coen**	**37.26**	**275**	P	**P**	**08 17 31.6**	**+0.4**
COEN				IAmb	IAmb	08 17 50.8	
	comp=Z,14nm,1.2s						
BBOO	**Buckleboo**	**41.91**	**244**	P	**P**	**08 18 08.0**	**-0.7**
WR0	**Warramunga Arr**	**43.95**	**263**	P	**P**	**08 18 23.7**	**-1.3**
AS31	**Alice Springs**	**44.00**	**257**	P	**P**	**08 18 24.6**	**-0.8**
ASAR	**Alice Springs**	**44.00**	**257**	P	**P**	**08 18 24.5**	**-0.9**
	comp=Z,2.7nm,0.5s,baz=94,slow=7.7,SNR=61						
WB0	**Warramunga Arr**	**44.12**	**263**	P	**P**	**08 18 25.2**	**-1.1**
WB0				IAmb	IAmb	08 18 25.4	
	comp=Z,4.2nm,0.7s						
WB2	**Warramunga Arr**	**44.13**	**263**	P	**P**	**08 18 25.1**	**-1.2**
WB2				IAmb	IAmb	08 18 26.2	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**44.14**	**263**	P	**P**	**08 18 25.0**	**-1.5**
	comp=Z,1.5nm,0.3s,baz=97,slow=7.4,SNR=107						
MTN	**Manton Dam**	**48.80**	**271**	P	**P**	**08 19 00.7**	**-1.3**
MTN				IAmb	IAmb	08 19 18.9	
	comp=Z,8.1nm,0.9s						
KNRA	**Kununurra**	**50.24**	**267**	P	**P**	**08 19 11.6**	**-1.1**
KNRA				IAmb	IAmb	08 19 25.1	
	comp=Z,16nm,1.4s						
FAKI	**Fak Fak**	**51.30**	**284**	P	**P**	**08 19 20.2**	**-0.4**
FAKI				IAmb	IAmb	08 19 33.7	
	comp=Z,45nm,1.4s						
FITZ	**Fitzroy Crossi**	**52.57**	**263**	P	**P**	**08 19 28.9**	**-0.8**
PSA00	**Pilbara Seismi**	**57.15**	**257**	P	**P**	**08 20 00.4**	**-1.5**
VNDA	**Vanda**	**57.19**	**185**	P	**P**	**08 20 02.1**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=359,slow=7.3,SNR=11						
VNDA	**Vanda**	**57.19**	**185**	P	**P**	**08 20 02.6**	**+1.4**
GIRL	**Giralia**	**62.01**	**255**	P	**P**	**08 20 33.6**	**-0.9**
QSPA	**South Pole Qui**	**68.88**	**180**	P	**P**	**08 21 17.3**	**+0.1**
QSPA				IAmb	IAmb	08 21 17.7	
	comp=Z,4.2nm,0.7s						
MJAR	**Matsushiro Arr**	**70.55**	**324**	P	**P**	**08 21 26.6**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=139,slow=5.8,SNR=6.2						
ADK	**Adak**	**72.78**	**1**	P	**P**	**08 21 40.1**	**-0.1**
ADK				IAmb	IAmb	08 21 59.0	
	comp=Z,9.8nm,1.1s						
PETK	**Petropavlovsk-**	**76.84**	**345**	P	**P**	**08 22 02.6**	**-0.6**
	comp=Z,3.4nm,0.7s,baz=148,slow=5.9,SNR=6.5						
USRK	**Ussuriysk Ar.**	**79.33**	**326**	P	**P**	**08 22 16.9**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=129,slow=4.6,SNR=3.6						
SNAA	**Sanae**	**87.33**	**179**	P	P	08 22 54.0	-2.6
VNA3	**Neumayer Olymp**	**87.48**	**176**	P	P	08 22 54.7	-2.6
ILAR	**Eielson Array**	**89.07**	**13**	P	**P**	**08 23 03.4**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=220,slow=5.0,SNR=8.0						
AKASG	**Malin Array Be**	**143.43**	**330**	PKhKP	PKPab	08 29 36.2	-2.9
	comp=Z,2.0nm,0.4s,baz=44,slow=4.1,SNR=10						

IDC ***24*** *08:22:00.3±3.4,24°.84S×176°.19W,h0km,mb4.2/7, mb1 4.3/7,mb1mx4.1/29,mbtmp4.2/7,MS3.2/3,Ms1 3.2/3, ms1mx3.0/24,Error ellipse: s-maj=109.0km s-min=34.2km az=134.0*

NEIC ***24*** *08:22:04.8±2.7,24°.54S±0°.1×175°.5W±0°.1, h35km±4km, mb4.6/13,Error ellipse: s-maj=14.1km s-min=13.3km az=163.0*

ISC 24 08:22:01.7±0.6, 24°.5S±0°.1×175°.68W±0°.10, h19km, n32, σ1ş96/28, mb4.6/14, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**7.57**	**46**		**Pn**	**08 23 49.2**	**-1.9**
MSVF	**Nonsavu**	**8.89**	**318**		Pn	08 24 14.1	+4.7
AFI	**Afiamalu**	**11.12**	**20**	Pn	**Pn**	**08 24 38.2**	**-1.7**
MXZ	**Matakaoa Point**	**14.03**	**200**	P	P	08 25 31.6	+4.3
RAR	**Rarotonga**	**15.01**	**81**	Pn	**Pn**	**08 25 30.4**	**-2.6**
URZ	**Urewera**	**15.06**	**202**	LR	LR	08 29 59.5	
	comp=Z,145nm,18.3s,baz=352,slow=33						
DZM	**Mont Dzumac**	**16.60**	**275**	LR	LR	08 29 54.6	
	comp=Z,62nm,18.6s,baz=40,slow=29						
MQZ	**McQueen's Vall**	**21.45**	**204**	P	**P**	**08 26 49.9**	**+1.1**
CTAO	**Charters Tower**	**35.42**	**269**	P	**P**	**08 28 55.9**	**-1.0**
CTAO				IAmb	IAmb	08 28 56.5	
	comp=Z,4.5nm,0.8s						
TOO	**Toolangi**	**35.51**	**239**	P	**P**	**08 28 57.9**	**+0.4**
TOO				IAmb	IAmb	08 28 59.0	
	comp=Z,16nm,1.4s						
STKA	**Stephens Creek**	**38.19**	**249**	P	**P**	**08 29 17.7**	**-2.7**
	comp=Z,1.0nm,0.5s,baz=110,slow=9.6,SNR=3.0						
PTCN	**Pitcairn Islan**	**41.24**	**101**	P	**P**	**08 29 47.1**	**+1.3**
ASAR	**Alice Springs**	**45.84**	**260**	P	**P**	**08 30 19.9**	**-3.0**
	comp=Z,1.1nm,0.7s,baz=90,slow=6.9,SNR=11						
ASAR				PcP	**PcP**	**08 31 59.9**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=105,slow=3.9,SNR=4.4						
WR0	**Warramunga Arr**	**46.12**	**265**	P	**P**	**08 30 22.4**	**-2.8**
WB2	**Warramunga Arr**	**46.29**	**265**	P	**P**	**08 30 24.3**	**-2.2**
WB2				IAmb	IAmb	08 30 43.4	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**46.30**	**266**	P	**P**	**08 30 24.3**	**-2.3**
WRA	**Warramunga Arr**	**46.30**	**265**	P	**P**	**08 30 23.2**	**-3.4**
	comp=Z,1.6nm,0.6s,baz=103,slow=8.2,SNR=15						
KNRA	**Kununurra**	**52.63**	**269**	P	**P**	**08 31 12.2**	**-2.7**
KNRA				IAmb	IAmb	08 31 19.0	
	comp=Z,11nm,1.1s						
FITZ	**Fitzroy Crossi**	**54.72**	**265**	P	**P**	**08 31 29.3**	**-0.9**
FITZ				IAmb	IAmb	08 31 40.5	
	comp=Z,6.3nm,1.2s						
QSPA	**South Pole Qui**	**65.62**	**180**	P	**P**	**08 32 44.9**	**+0.5**
QSPA				IAmb	IAmb	08 32 47.2	
	comp=Z,6.7nm,1.1s						
ADK	**Adak**	**76.02**	**359**	P	**P**	**08 33 49.3**	**+1.9**

MAW	**Mawson**	**78.57**	**199**	P	**P**	**08 34 02.0**	**+0.3**
PETK	**Petropavlovsk-**	**80.64**	**344**	P	**P**	**08 34 15.3**	**+2.3**
	comp=Z,4.2nm,0.9s,baz=134,slow=8.5,SNR=3.6						
KSRS	**Korea Array**	**81.26**	**318**	P	**P**	**08 34 19.3**	**+2.7**
	comp=Z,0.3nm,0.3s,baz=126,slow=4.9,SNR=4.2						
USRK	**Ussuriysk Ar.**	**83.43**	**325**	P	**P**	**08 34 29.6**	**+1.8**
	comp=Z,4.1nm,0.8s,baz=116,slow=3.3,SNR=6.3						
SNAA	**Sanae**	**84.00**	**178**	P	**P**	**08 34 30.0**	**-0.6**
SNAA	**Sanae**	**84.00**	**178**	P	**P**	**08 34 30.2**	**-0.3**
SNAA				IAmb	IAmb	08 34 31.3	
	comp=Z,6.7nm,1.2s						
VNA3	**Neumayer Olymp**	**84.05**	**175**	P	**P**	**08 34 29.8**	**-1.0**
VNA2	**Neumayer--Watz**	**84.52**	**176**	P	**P**	**08 34 33.5**	**+0.4**
	baz=186,slow=4.2						
CMAR	**Chiang Mai Arr**	**93.44**	**289**	P	**P**	**08 35 18.2**	**+1.8**
	comp=Z,0.9nm,0.3s,baz=134,slow=2.6,SNR=4.8						
BRTR	**Keskin Array B**	**151.04**	**309**	PKPbc	**PKiKP**	**08 41 54.2**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=108,slow=3.2,SNR=3.5						

SNET ***24*** *08:23:51.8±5.3, 16°.68N×102°.35W, h1km±999km, ML6.4*

IDC ***24*** *08:24:46.0±2.9, 16°.36N×98°.24W, h12km±16km, mb4.6/26, mb1 4.7/31, mb1mx4.7/36, mbtmp4.7/31, ML4.5/5, MS5.2/21, Ms1 5.2/21, ms1mx5.0/36, Error ellipse: s-maj=19.8km s-min=9.7km az=46.0*

MEX ***24*** *08:24:46.0±0.8, 16°.20N×98°.41W, h4km±5km, MD5.7*

NEIC ***24*** *08:24:48.0±2.3, 16°.53N±0°.08×98°.14W±0°.06, h17km±1km, mb5.4/533, Ms_20 5.4/571, Mwb5.6/44, Mww5.7, Md5.7/35(MEX), Mwc5.7(GCMT), Error ellipse: s-maj=14.4km s-min=8.4km az=208.0*

BJI ***24*** *08:24:47.0±0.0, 16°.50N×98°.20W, h20km, mB5.7/18, Ms5.7/14, Ms7 5.3/12*

MOS ***24*** *08:24:47.3±0.9, 16°.50N×98°.14W, h27km, mb5.5/32, MS5.3/24, Error ellipse: s-maj=10.1km s-min=5.0km az=101.9*

GCMT ***24*** *08:24:49.0±0.1, 16°.52N±0°.01×98°.28W±0°.01, h16km, MW5.7/147, Moment Tensor Solution. s138,c261; s147,c289; Duration: 167 Moment tensor: Scale 1017 Nm; Mrr1.99±.03; Mθθ-1.75±.03; Mϕϕ-0.24±.03; Mrθ3.48±.15; Mθϕ0.61±.02; Mϕr-2.29±.12; Best double couple: M⌀4.61100×1017 NP1:ϕs279.00000°, δ13.00000°, λ68.00000°. NP2:ϕs122.00000°, δ78.00000°, λ95.00000°. Principal axes: T 4.6670, Plg57.0000°, Azm39.0000°; N -0.1140, Plg5.0000°, Azm301.0000°; P -4.5550, Plg32.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***24*** *08:24:51, 16°.56N×98°.11W, h12km, Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr2.21; Mθθ-1.38; Mϕϕ-0.83; Mrθ1.77; Mθϕ 1.61; Mϕr-0.85; Fault plane solution: M⌀3.19000×1017 NP1:ϕs119.73000°, δ64.63000°, λ79.33000°. NP2:ϕs323.48000°, δ27.38000°, λ111.34000°. Principal axes: T 2.9447, Plg69.0000°, Azm9.0000°; N 0.4479, Plg10.0000°, Azm124.0000°; P -3.3926, Plg19.0000°, Azm218.0000°;*

NEIC ***24*** *08:24:51, 16°.52N×98°.25W, h14km, Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr1.83; Mθθ-1.72; Mϕϕ-0.11; Mrθ3.10; Mθϕ0.52; Mϕr-1.82; Fault plane solution: M⌀4.04000×1017 NP1:ϕs275.00000°, δ15.00000°, λ67.00000°. NP2:ϕs119.00000°, δ77.00000°, λ96.00000°. Principal axes: T 4.0666, Plg58.0000°, Azm37.0000°; N -0.0453, Plg6.0000°, Azm297.0000°; P -4.0213, Plg31.0000°, Azm204.0000°;*

NEIC ***24*** *08:24:54, 16°.64N×98°.36W, h12km, Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr1.78; Mθθ-1.06; Mϕϕ-0.72; Mrθ3.50; Mθϕ0.83; Mϕr-2.11; Fault plane solution: M⌀4.45000×1017 NP1:ϕs316.00000°, δ12.00000°, λ104.00000°. NP2:ϕs122.00000°, δ78.00000°, λ87.00000°. Principal axes: T 4.4858, Plg56.0000°, Azm28.0000°; N -0.0706, Plg3.0000°, Azm122.0000°; P -4.4152, Plg33.0000°, Azm214.0000°;*

ISC 24 08:24:46.8±0.6, 16°.49N±0°.03×98°.25W±0°.03, h12km±2km, n1264, σ1ş55/915, mb5.4/300, MS5.4/316, 16C-2D, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.15**	**128**	*i* P	**Pb**	**08 24 52.1**	**+0.5**
PNIG				*i* S	**Sg**	**08 24 56.4**	**+3.5**
PNIG	**Pinotepa**	**0.15**	**128**		**Pb**	**08 24 52.1**	**+0.5**
YOIG	**Yosondua**	**0.77**	**61**	*e*P	**Pn**	**08 25 04.1**	**+0.4**
YOIG				*e*S	**Sn**	**08 25 17.1**	**+1.7**
CRIG	**Cruz Grande**	**0.88**	**287**	*e*P	**Pg**	**08 25 00.5**	**-3.3**
CRIG				*e*S	**Sg**	**08 25 12.1**	**-3.2**
TXIG	**Tlaxiaco**	**0.89**	**31**	*i* P	**Pn**	**08 25 06.5**	**+1.1**
TXIG				*i* S	**Sn**	**08 25 22.1**	**+3.7**
PEIG	**Puerto Escondi**	**1.17**	**114**	*e*P	**Pb**	**08 25 06.4**	**-2.5**
HMTT	**Tlapaneco**	**1.34**	**347**	*e*P	**Pn**	**08 25 11.5**	**+0.1**
HMTT	**Tlapaneco**	**1.34**	**347**		**Pn**	**08 25 11.5**	**+0.1**
HLIG	**Huajuapan de L**	**1.40**	**18**	*e*P	**Pg**	**08 25 13.8**	**0.0**
FTIG	**Fresnillo de T**	**1.42**	**5**	*e*P	**Pg**	**08 25 13.8**	**-0.3**
VHO	**Vista Hermosa**	**1.57**	**68**	*e*P	**Pb**	**08 25 15.5**	**-0.4**
MEIG	**Mezcala**	**1.94**	**318**	*e*P	**Pn**	**08 25 18.9**	**-0.7**
MEIG	**Mezcala**	**1.94**	**318**		**Pn**	**08 25 18.9**	**-0.7**
TOIG	**Toxpalan**	**1.96**	**35**	*e*P	**Pn**	**08 25 21.1**	**+1.1**
CAIG	**El Cayaco**	**2.01**	**286**	*e*P	**Pn**	**08 25 16.6**	**-3.9**
TPIG	**Tehuac#an**	**2.10**	**24**	*e*P	**Pb**	**08 25 23.6**	**-1.3**
TPIG	**Tehuac#an**	**2.10**	**24**		**Pb**	**08 25 23.6**	**-1.3**
HUIG	**Huatulco**	**2.18**	**109**	*e*P	**Pn**	**08 25 20.8**	**-2.0**
HUIG	**Huatulco**	**2.18**	**109**		**Pn**	**08 25 20.8**	**-2.0**
PLIG	**Platanillo**	**2.24**	**328**	*e*P	**Pn**	**08 25 24.0**	**+0.2**
PLIG	**Platanillo**	**2.24**	**328**		**Pn**	**08 25 24.0**	**+0.2**
YAIG	**Yautepec**	**2.49**	**342**	*e*P	**Pn**	**08 25 28.2**	**+1.0**
YAIG	**Yautepec**	**2.49**	**342**		**Pn**	**08 25 28.2**	**+1.0**
PPM	**Popocatepetl**	**2.59**	**352**	*e*P	**Pn**	**08 25 30.6**	**+1.6**
ARIG	**Puente Sto Nin**	**2.68**	**312**	*e*P	**Pn**	**08 25 29.3**	**-0.5**
ARIG	**Puente Sto Nin**	**2.68**	**312**		**Pn**	**08 25 29.3**	**-0.5**
MAVM	**Malinalco, Edo**	**2.73**	**334**	*e*P	**Pn**	**08 25 31.5**	**+0.9**
MAVM	**Malinalco, Edo**	**2.73**	**334**		**Pn**	**08 25 31.5**	**+0.9**
UNM	**Universidad Na**	**2.96**	**343**	P	**Pn**	**08 25 35.7**	**+1.8**
UNM	**Universidad Na**	**2.96**	**343**	*e*P	**Pn**	**08 25 35.5**	**+1.6**
UNM	**Universidad Na**	**2.96**	**343**		**Pn**	**08 25 35.7**	**+1.8**
CVM	**Colonia del Va**	**3.01**	**343**	*e*P	**Pb**	**08 25 39.3**	**-1.1**
PTVM	**Pico Tres Padr**	**3.20**	**345**	*e*P	**Pn**	**08 25 39.2**	**+2.1**
PTVM	**Pico Tres Padr**	**3.20**	**345**		**Pn**	**08 25 39.2**	**+2.1**
AZVM	**Cuida Lopez Ma**	**3.23**	**342**	*e*P	**Pn**	**08 25 40.0**	**+2.4**
AZVM	**Cuida Lopez Ma**	**3.23**	**342**		**Pn**	**08 25 40.0**	**+2.4**
CMIG	**Matias Romero**	**3.28**	**79**	Pn	**Pn**	**08 25 37.8**	**-0.3**
	54nm,0.3s,baz=258,slow=11,SNR=235						
CMIG				LR	LR	08 26 24.2	
	comp=Z,9μm,20.2s,baz=218,slow=30						
CMIG				Lg	Lg	08 26 33.2	
	2μm,0.3s,baz=10,slow=19,SNR=12						
CMIG	**Matias Romero**	**3.28**	**79**	*e*P	**Pn**	**08 25 37.8**	**-0.3**
MOIG	**Morelia**	**4.23**	**319**		**Pn**	**08 25 53.3**	**+2.0**
CCIG	**Comitan**	**5.87**	**91**		**Pn**	**08 26 14.8**	**+1.0**
ZAIG	**Zacatecas**	**7.46**	**328**		**Pn**	**08 26 39.0**	**+3.3**
MRL	**Marmol**	**8.36**	**98**	*e*P	**Pn**	**08 26 48.5**	**+0.3**
MRL	**Marmol**	**8.36**	**98**	*e*P	**Pn**	**08 26 48.5**	**+0.3**
CEVE	**Cerro Verde**	**8.74**	**106**	*e*P	**Pn**	**08 26 51.6**	**-1.7**
CEVE				IAML		08 30 10.2	
	comp=Z,217nm,0.6s						
CEVE	**Cerro Verde**	**8.74**	**106**	*e*P	**Pn**	**08 26 51.6**	**-1.7**
CEVE				IAML		08 30 10.2	
	comp=Z,217nm,0.6s						
MTO3	**Montecristo**	**8.82**	**102**	*e*S	Sg	08 29 18.5	-11
SNET	**Serv Nac Est T**	**9.14**	**107**	*e*P	**Pn**	**08 26 54.8**	**-3.9**
LFRS	**El Faro**	**9.32**	**107**	*e*P	**Pn**	**08 27 04.3**	**+3.2**
LFRS	**El Faro**	**9.32**	**107**	*e*P	**Pn**	**08 27 04.3**	**+3.2**
TEIG	**Tepich**	**10.17**	**67**	Pn	**Pn**	**08 27 12.9**	**+0.2**
	comp=Z,14nm,0.3s,baz=319,slow=0.5,SNR=66						
TEIG				Sn	**Sn**	**08 29 04.5**	**-2.3**
	comp=Z,28nm,0.3s,baz=319,slow=12,SNR=1.5						
TEIG				LR	LR	08 31 58.6	
	comp=Z,33μm,18.6s,baz=320,slow=42						
TEIG	**Tepich**	**10.17**	**67**		**Pn**	**08 27 12.6**	**-0.1**
LCND	**La Caada**	**10.50**	**106**	*e*P	**Pn**	**08 27 16.9**	**-0.3**
LCND	**La Caada**	**10.50**	**106**	*e*P	**Pn**	**08 27 16.9**	**-0.3**
TGUH	**Tegucigalpa,Un**	**10.86**	**101**		**Pn**	**08 27 23.2**	**+0.9**
833A	**Chaparral WMA,**	**11.83**	**355**	P	**Pn**	**08 27 38.3**	**+3.0**
	baz=174,SNR=20						
H06E1	**SOCORRO T-PHAS**	**12.30**	**283**	T	T	08 39 52.6	
735A	**Kenedy**	**12.32**	**2**		**Pn**	**08 27 43.7**	**+1.7**
H06S1	**SOCORRO T**	**12.32**	**282**	T	T	08 39 54.6	
	SNR=62						
H06N1	**SOCORRO T-PHAS**	**12.37**	**283**	T	T	08 39 55.3	

MATN	**Matagalpa**	**12.44**	**105**	*e*P	**Pn**	**08 27 43.5**	**-0.3**
MATN	**Matagalpa**	**12.44**	**105**		**Pn**	**08 27 43.8**	**0.0**
HPIG		**12.47**	**328**		**Pn**	**08 27 48.0**	**+3.7**
HKT	**Hockley**	**13.58**	**9**	P	**Pn**	**08 27 59.1**	**-0.1**
HKT	**Hockley**	**13.58**	**9**		**Pn**	**08 27 59.1**	**-0.1**
LPIG	**La Paz**	**13.61**	**306**	LR	LR	08 32 15.4	
	comp=Z,8μm,19.1s,baz=128,slow=33						
TXAR	**Lajitas Array**	**13.72**	**340**	Pn	**Pn**	**08 28 04.0**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=163,slow=12,SNR=23						
TXAR				Lg	Lg	08 32 06.1	
	comp=Z,0.2nm,0.3s,baz=182,slow=27,SNR=2.8						
TXAR				LR	LR	08 33 58.0	
	comp=Z,35μm,18.8s,baz=0.0,slow=40						
TX31	**Lajitas Ar. Si**	**13.72**	**340**		**Pn**	**08 28 03.9**	**+2.6**
TX32	**Lajitas Array**	**13.72**	**340**		**Pn**	**08 28 03.8**	**+2.4**
PLVR	**Palo Verde**	**13.95**	**114**	*e*P	**Pn**	**08 28 07.1**	**+2.5**
JCT	**Junction City**	**14.00**	**354**	P	**Pn**	**08 28 06.1**	**+1.0**
JCT	**Junction City**	**14.00**	**354**	P	**Pn**	**08 28 06.3**	**+1.2**
	baz=173,SNR=25						
JCT	**Junction City**	**14.00**	**354**		**Pn**	**08 28 06.1**	**+1.0**
ESPN	**Las Esperanzas**	**14.17**	**106**	*e*P	**Pn**	**08 28 05.9**	**-1.6**
435B	**Jarrell**	**14.24**	**2**	P	**Pn**	**08 28 09.2**	**+0.9**
	baz=182,SNR=10						
JTS	**Las Juntas de**	**14.32**	**114**	Pn	**Pn**	**08 28 09.8**	**+0.2**
	comp=Z,3.7nm,0.3s,baz=24,slow=23,SNR=19						
JTS	**Las Juntas de**	**14.32**	**114**	*c iP*	**Pn**	**08 28 10.7**	**+1.1**
JTS				pmax	pmax		
	comp=Z,93nm,1.7s						
JTS	**Las Juntas de**	**14.32**	**114**	*e*P	**Pn**	**08 28 09.4**	**-0.2**
JTS	**Las Juntas de**	**14.32**	**114**		**Pn**	**08 28 10.7**	**+1.1**
ARE1	**Arenal 1**	**14.46**	**113**	*e*P	**Pn**	**08 28 11.9**	**+0.5**
SRA1	**San Ramn**	**14.83**	**114**	*e*P	**Pn**	**08 28 17.0**	**+0.4**
441A	**DeRidder**	**14.93**	**17**		**Pn**	**08 28 16.4**	**-1.4**
SJS	**Escuela Geolog**	**15.27**	**113**	*e*P	**Pn**	**08 28 24.4**	**+1.9**
WHTX	**Lake Whitney,**	**15.45**	**3**	P	**Pn**	**08 28 24.9**	**+0.2**
	baz=182,SNR=19						
WHTX	**Lake Whitney,**	**15.45**	**3**	IAmb	IAmb	08 29 03.6	
	comp=Z,248nm,0.8s						
CVTR	**Volcan Turrial**	**15.49**	**113**	*e*P	**Pn**	**08 28 26.1**	**+0.4**
NATX	**Nacogdoches**	**15.55**	**11**	P	**Pn**	**08 28 24.7**	**-1.2**
	baz=192,SNR=21						
NATX	**Nacogdoches**	**15.55**	**11**	IAmb	IAmb	08 29 00.4	
	comp=Z,234nm,0.9s						
237A	**Washetta, Mont**	**15.61**	**8**	IAmb	IAmb	08 28 59.6	
	comp=Z,200nm,1.0s						
342A	**Flagon Creek P**	**15.77**	**19**	IAmb	IAmb	08 28 52.4	
	comp=Z,237nm,0.9s						
EDLM	**Las Mercedes**	**15.98**	**115**	*e*P	**P**	**08 28 34.0**	**-1.1**
ABTX	**Abilene, Hawle**	**16.12**	**356**	P	**Pn**	**08 28 33.4**	**+0.1**
	baz=175,SNR=91						
ABTX	**Abilene, Hawle**	**16.12**	**356**	IAmb	IAmb	08 28 48.4	
	comp=Z,632nm,1.3s						
DRK0	**Durika**	**16.29**	**114**	*e*P	**Pn**	**08 28 36.9**	**+1.2**
344A	**Westbrook Farm**	**16.40**	**23**	IAmb	IAmb	08 29 27.0	
	comp=Z,509nm,1.3s						
MNTX	**Cornudas Mount**	**16.48**	**338**	P	**Pn**	**08 28 39.2**	**+1.3**
	baz=155,SNR=75						
MNTX	**Cornudas Mount**	**16.48**	**338**		**Pn**	**08 28 39.1**	**+1.3**
EDSV	**San Vito**	**16.73**	**115**	*e*P	**P**	**08 28 43.6**	**0.0**
Z35A	**Perchaven, San**	**16.80**	**3**	IAmb	IAmb	08 29 15.0	
	comp=Z,202nm,0.8s						
346A	**Big Creek Wild**	**16.86**	**27**	IAmb	IAmb	08 29 30.6	
	comp=Z,411nm,1.1s						
Z38A	**Mt. Pleasant**	**16.

U38A	Gravette	20.17	9	P	P	08 29 20.7	-0.5	
152A	Waverly Hall	20.24	35	IAmb	IAmb	08 29 52.4		
	comp=Z,190nm,1.1s							
W45A	Hickory Valley	20.28	22	IAmb	IAmb	08 30 02.3		
	comp=Z,135nm,0.8s							
214A	Organ Pipe Nat	20.30	322	P	Pn	08 29 24.7	+0.1	
	baz=136,SNR=14							
Y49A	Blount Mountai	20.32	29	IAmb	IAmb	08 29 35.0		
	comp=Z,462nm,1.6s							
U40A	Yellville	20.36	13	P	P	08 29 23.6	+0.4	
	baz=195,SNR=120							
U40A	Yellville	20.36	13	IAmb	IAmb	08 29 41.6		
	comp=Z,220nm,1.1s							
LCAR	Lake Charles	20.50	17	IAmb	IAmb	08 29 55.8		
	comp=Z,130nm,1.0s							
X48A	Hartselle	20.52	27	IAmb	IAmb	08 29 35.9		
	comp=Z,318nm,1.6s							
PLAL	Pickwick Lake	20.55	24	P	P	08 29 24.4	-0.9	
PLAL				IAmb	IAmb	08 29 42.1		
	comp=Z,230nm,1.1s							
X18A	Snowflake	20.81	332	IAmb	IAmb	08 29 40.6		
	comp=Z,330nm,1.3s							
HALT	Halls	20.91	21	P	P	08 29 28.8	-0.4	
255A	Hazlehurst	21.01	40	IAmb	IAmb	08 30 12.4		
	comp=Z,251nm,1.1s							
W18A	Petrified Fore	21.21	333	P	P	08 29 35.0	+2.4	
	baz=148,SNR=10							
W18A	Petrified Fore	21.21	333	P	P	08 29 34.9	+2.4	
W18A				IAmb	IAmb	08 29 44.5		
	comp=Z,196nm,1.4s							
W18A				IAMs_20	IAMs_20	08 39 05.6		
	comp=Z,19µm,20.0s							
PVMO	Portageville	21.25	19	P	P	08 29 33.3	+0.5	
FPAL	Fort Paine	21.25	30	IAmb	IAmb	08 29 45.7		
	comp=Z,378nm,1.6s							
T25A	Trinidad	21.28	346	P	P	08 29 35.1	+1.7	
	baz=163,SNR=165							
T42A	Van Buren	21.42	16	IAmb	IAmb	08 29 50.0		
	comp=Z,291nm,1.2s							
X16A	Lo Mia Camp, P	21.42	329	IAmb	IAmb	08 29 43.0		
	comp=Z,178nm,0.9s							
X16A				IAMs_20	IAMs_20	08 38 12.1		
	comp=Z,17µm,21.0s							
GOGA	Godfrey	21.49	36	P	P	08 29 34.9	-0.5	
GOGA				pmax	pmax			
	comp=Z,684nm,1.9s							
GOGA	Godfrey	21.49	36	P	P	08 29 34.9	-0.5	
	baz=222,SNR=30							
GOGA	Godfrey	21.49	36	P	P	08 29 34.9	-0.5	
Y52A	Lilburn	21.50	34	P	P	08 29 35.3	-0.3	
	baz=220,SNR=19							
Y52A	Lilburn	21.50	34	IAmb	IAmb	08 29 46.5		
	comp=Z,185nm,0.8s							
X51A	Calhoun	21.64	31	IAmb	IAmb	08 30 08.7		
	comp=Z,258nm,1.2s							
WVT	Waverly	21.65	23	P	P	08 29 36.3	-0.8	
WVT				pmax	pmax			
	comp=Z,328nm,1.3s							
WVT	Waverly	21.65	23	P	P	08 29 36.6	-0.5	
	baz=208							
WVT	Waverly	21.65	23	P	P	08 29 36.2	-0.8	
WVT				IAmb	IAmb	08 29 51.0		
	comp=Z,328nm,1.3s							
R32A	Long Quarter,	21.86	359	IAmb	IAmb	08 29 52.3		
	comp=Z,183nm,1.1s							
Y14A	Wickenburg	21.87	325	IAmb	IAmb	08 29 52.0		
	comp=Z,291nm,1.4s							
Y14A				IAMs_20	IAMs_20	08 37 27.7		
	comp=Z,8µm,19.0s							
257A	Skidaway Islan	21.96	42	P	P	08 29 42.2	+1.7	
257A				IAmb	IAmb	08 29 54.9		
	comp=Z,402nm,1.6s							
SDCO	Great Sand Dun	22.12	345	P	P	08 29 43.7	+1.2	
	baz=161,SNR=92							
CLTN	Cedars of Leba	22.22	26	IAmb	IAmb	08 29 54.3		
	comp=Z,340nm,1.4s							
GTBY	Guantanamo Bay	22.24	78	P	P	08 29 43.2	-0.4	
GLA	Glamis	22.28	321	P	P	08 29 45.5	+1.6	
	baz=134,SNR=7.7							
WUAZ	Wupatki	22.28	331	P	P	08 29 46.3	+2.2	
	baz=145,SNR=92							
CBKS	Cedar Bluff	22.28	357	P	P	08 29 43.8	-0.2	
	baz=176,SNR=23							
CBKS	Cedar Bluff	22.28	357	IAmb	IAmb	08 30 12.4		
	comp=Z,200nm,1.0s							
R40A	Maddies Statio	22.35	12	IAmb	IAmb	08 30 13.5		
	comp=Z,196nm,0.9s							
CCM	Cathedral Cave	22.36	15	P	P	08 29 43.7	-0.9	
CCM				pmax	pmax			
	comp=Z,290nm,1.1s							
CCM	Cathedral Cave	22.36	15	P	P	08 29 43.9	-0.8	
	baz=198							
CCM	Cathedral Cave	22.36	15	P	P	08 29 43.7	-0.9	
157A	Early Branch	22.44	41	P	P	08 29 45.0	-0.6	
	baz=228,SNR=9.7							
S22A	4UR Ranch, Cre	22.49	342	P	P	08 29 48.2	+1.8	
	baz=158,SNR=135							
MVCO	Mesa Verde	22.55	338	P	P	08 29 48.2	+1.2	
	baz=153,SNR=71							
MVCO	Mesa Verde	22.55	338	P	P	08 29 48.2	+1.2	
MVCO				IAMs_20	IAMs_20	08 39 22.6		
	comp=Z,30µm,19.0s							
S44A	Carbondale	22.57	19	IAmb	IAmb	08 30 03.5		
	comp=Z,193nm,0.8s							
KSU1	Kansas State U	22.58	3	P	P	08 29 46.2	-0.9	
	baz=184,SNR=14							
KSU1	Kansas State U	22.58	3	IAmb	IAmb	08 30 29.0		
	comp=Z,108nm,0.8s							
KSU1	Kansas State U	22.58	3	IAMs_20	IAMs_20	08 39 30.9		
	comp=Z,15µm,18.0s							
Y12C	Blythe	22.59	323	P	P	08 29 48.6	+1.5	
	baz=135,SNR=11							
Y12C	Blythe	22.59	323	IAmb	IAmb	08 30 38.3		
	comp=Z,231nm,1.9s							
SIUC	Southern Illin	22.60	19	IAmb	IAmb	08 30 19.6		
	comp=Z,192nm,0.9s							
Z56A	Williston	22.65	39	P	P	08 29 46.9	-1.0	
	baz=226,SNR=13							
Z56A	Williston	22.65	39	IAmb	IAmb	08 30 00.1		
	comp=Z,170nm,0.8s							
T47A	Sharon Grove	22.68	24	IAmb	IAmb	08 30 19.9		
	comp=Z,166nm,0.8s							
KSCO	Kaye Shedlock'	22.77	351	P	P	08 29 50.0	+0.8	
	baz=169,SNR=60							
KSCO	Kaye Shedlock'	22.77	351	IAmb	IAmb	08 30 01.2		
	comp=Z,166nm,0.8s							
PDMCI	Parker Dam,Lak	22.77	324	P	P	08 29 50.6	+1.5	
	baz=137,SNR=12							
Y55A	Saluda	22.79	37	P	P	08 29 48.4	-1.0	
	baz=224,SNR=24							
SWSC	Sam W. Stewart	22.80	319	P	P	08 29 51.0	+1.5	
	baz=132,SNR=13							
IKP	In-Ko-Pah, Jac	22.81	318	P	P	08 29 51.1	+1.4	
	baz=130,SNR=9.0							
V51A	Loudon	22.88	30	IAmb	IAmb	08 30 02.9		
	comp=Z,293nm,1.4s							
X54A	Belton	22.94	35	P	P	08 29 50.2	-0.7	
	baz=222,SNR=10							
BG3	Lake Jocassee	22.97	34	IAmb	IAmb	08 30 02.1		
	comp=Z,107nm,1.2s							
158A	Hollywood	22.99	42	P	P	08 29 51.1	-0.3	
	baz=229							
Y56A	Pelion	23.01	38	P	P	08 29 50.5	-1.2	
	baz=225,SNR=8.8							
Z57A	Bowman	23.04	40	P	P	08 29 51.2	-0.7	
	baz=227,SNR=14							
TKL	Tuckaleechee C	23.05	31	P	P	08 29 51.3	-0.7	
	comp=Z,32nm,0.9s,baz=190,slow=11,SNR=34							
TKL				LR	LR	08 40 08.4		
	comp=Z,1µm,21.9s,baz=217,slow=40							
BC3	Big Chuckawall	23.07	321	P	P	08 29 53.8	+1.4	
	baz=134,SNR=30							
SLM	Saint Louis	23.16	16	IAmb	IAmb	08 30 21.9		
	comp=Z,172nm,1.1s							
MONP2	Monument Peak	23.16	318	P	P	08 29 54.8	+1.3	
	baz=130,SNR=12							
Q24A	Divide	23.20	346	P	P	08 29 54.8	+0.9	
	baz=163							
W13A	Hualapai Mount	23.22	326	IAmb	IAmb	08 30 21.1		
	comp=Z,136nm,1.6s							
W13A				IAMs_20	IAMs_20	08 39 28.4		
	comp=Z,10µm,21.0s							
IRM	Iron Mountain	23.24	322	P	P	08 29 55.4	+1.4	
	baz=135,SNR=39							
NHSC	New Hope	23.24	41	P	P	08 29 53.6	-0.4	
	baz=229,SNR=11							
NHSC	New Hope	23.24	41	P	P	08 29 54.8	+0.8	
V52A	Sevierville	23.28	31	IAmb	IAmb	08 30 13.3		
	comp=Z,150nm,1.2s							
X55A	Gracelyn & Ava	23.30	37	P	P	08 29 53.8	-0.8	
	baz=224,SNR=15							
NEE2	Needles Airpor	23.38	324	P	P	08 29 56.8	+1.5	
	baz=137							
SJCC	San Jacinto, C	23.38	103	eP	P	08 29 54.4	-1.3	
PV01	Paradox Valley	23.40	339	IAMs_20	IAMs_20	08 39 58.1		
	comp=Z,34µm,19.0s							
P38A	Dawn	23.42	9	IAmb	IAmb	08 30 46.8		
	comp=Z,102nm,0.9s							
W54A	Cherokee Point	23.44	35	P	P	08 29 56.0	+0.1	
	baz=222,SNR=31							
PAULI	Pauline	23.45	36	P	P	08 29 55.3	-0.8	
PAULI				IAmb	IAmb	08 30 08.5		
	comp=Z,174nm,1.1s							
U15A	North Rim	23.45	331	IAmb	IAmb	08 30 12.4		
	comp=Z,104nm,1.1s							
PV13	Radium Mtn., P	23.51	339	IAMs_20	IAMs_20	08 40 02.1		
	comp=Z,29µm,18.0s							
DBBC	Dabeiba	23.52	111	eP	P	08 29 57.7	+0.7	
PV02	Paradox Valley	23.52	339	IAmb	IAmb	08 30 08.8		
	comp=Z,187nm,1.3s							
PV05	Paradox Valley	23.53	338	IAMs_20	IAMs_20	08 40 29.8		
	comp=Z,9µm,18.0s							
PV15	Paradox Valley	23.56	340	IAmb	IAmb	08 30 02.6		
	comp=Z,169nm,1.0s							
PV15				IAMs_20	IAMs_20	08 40 02.3		
	comp=Z,31µm,19.0s							
P40A	Paris	23.59	12	IAmb	IAmb	08 29 60.0		
	comp=Z,164nm,0.9s							
PV03	Paradox Valley	23.60	339	P	P	08 29 58.8	+1.0	
PV03				IAMs_20	IAMs_20	08 40 05.6		
	comp=Z,30µm,18.0s							
109C	Camp Elliot, M	23.60	317	P	P	08 29 58.6	+1.0	
	baz=129							
109C	Camp Elliot, M	23.60	317	P	P	08 29 57.9	+0.2	
PV18	Skein Mesa, Pa	23.62	339	IAmb	IAmb	08 30 09.3		
	comp=Z,314nm,1.6s							
PV18				IAMs_20	IAMs_20	08 38 58.9		
	comp=Z,8µm,19.0s							
Z58A	St. Stephen	23.62	41	P	P	08 29 57.5	-0.2	
	baz=229,SNR=6.3							
BELC	Belle Mtn. Jos	23.64	321	P	P	08 29 59.5	+1.3	
	baz=133,SNR=25							
PV12	Saucer Basin,	23.64	339	IAMs_20	IAMs_20	08 38 59.6		
	comp=Z,11µm,18.0s							
T50A	Nancy	23.65	28	IAmb	IAmb	08 30 08.8		
	comp=Z,172nm,1.1s							
PV11	David Mesa, Pa	23.65	339	IAmb	IAmb	08 30 24.4		
	comp=Z,99nm,0.9s							
PV11				IAMs_20	IAMs_20	08 38 59.9		
	comp=Z,10µm,19.0s							
XPFO	Pion Flat	23.66	319	P	P	08 29 58.6	+0.3	
PFO	Pinyon Flats O	23.66	319	P	P	08 29 59.7	+1.4	
	comp=Z,10nm,0.8s,baz=127,slow=10,SNR=29							
PFO				Lg	Lg	08 37 40.6		
	comp=Z,2.2nm,0.9s,baz=120,slow=13,SNR=1.8							
PFO				LR	LR	08 38 36.2		
	comp=Z,6µm,18.6s,baz=138,slow=35							
PFO	Pinyon Flats O	23.66	319	P	P	08 29 59.9	+1.5	
	baz=132,SNR=18							
PFO	Pinyon Flats O	23.66	319	P	P	08 29 57.7	-0.6	
PV17	East Wray Mesa	23.66	339	IAmb	IAmb	08 30 09.7		
	comp=Z,222nm,1.4s							
PV17				IAMs_20	IAMs_20	08 38 46.8		
	comp=Z,10µm,22.0s							
X56A	White Oak	23.66	38	P	P	08 29 57.7	-0.4	
	baz=225,SNR=29							
PV16	Nyswonger Mesa	23.68	339	IAmb	IAmb	08 30 09.9		
	comp=Z,162nm,1.2s							
PV16				IAMs_20	IAMs_20	08 39 00.5		
	comp=Z,8µm,21.0s							
PV07	Paradox Valley	23.70	339	IAmb	IAmb	08 30 03.7		
	comp=Z,157nm,1.1s							
PV07				IAMs_20	IAMs_20	08 40 08.2		
	comp=Z,34µm,19.0s							
Y57A	Sumter	23.72	39	P	P	08 29 58.1	-0.6	
	baz=227,SNR=8.5							
PV20	West Nyswonger	23.72	339	IAmb	IAmb	08 30 10.2		
	comp=Z,124nm,1.2s							
PV20				IAMs_20	IAMs_20	08 40 09.7		
	comp=Z,29µm,18.0s							
Q44A	Meyer Farm, Va	23.75	18	IAmb	IAmb	08 30 18.4		
	comp=Z,173nm,0.9s							
PV14	Lion Creek, Pa	23.77	339	IAMs_20	IAMs_20	08 39 29.6		
	comp=Z,11µm,18.0s							
PV22	Blue Mesa, Par	23.83	339	IAmb	IAmb	08 30 04.8		
	comp=Z,206nm,1.4s							
PV22				IAMs_20	IAMs_20	08 38 53.3		
	comp=Z,11µm,22.0s							
SMCO	Snowmass	23.86	343	IAmb	IAmb	08 30 03.6		
	comp=Z,94nm,0.6s							
TZTN	Tazewell	23.86	30	P	P	08 29 59.8	-0.3	
	baz=217,SNR=22							
TZTN	Tazewell	23.86	30	IAmb	IAmb	08 30 30.5		
	comp=Z,209nm,1.2s							
Z59A	Georgetown, SC	23.90	42	P	P	08 30 00.7	+0.2	
	baz=230							
PV21	Cone Mtn., Par	23.92	339	P	P	08 30 02.2	+1.3	
PV21				IAMs_20	IAMs_20	08 39 08.0		
	comp=Z,10µm,22.0s							
KMSC	Kings Mountain	23.96	36	P	P	08 30 00.9	-0.1	
	baz=223,SNR=13							
KMSC	Kings Mountain	23.96	36	IAmb	IAmb	08 30 13.2		
	comp=Z,165nm,1.2s							
GMRC	Granite Mounta	23.98	323	P	P	08 30 02.6	+1.2	
	baz=135,SNR=29							
WCI	Wyandotte Cave	24.08	24	P	P	08 30 01.8	-0.3	
WCI				pmax	pmax			
	comp=Z,616nm,1.4s							
WCI	Wyandotte Cave	24.08	24	P	P	08 30 01.9	-0.2	
	baz=209							
WCI	Wyandotte Cave	24.08	24	P	P	08 30 01.8	-0.3	
V54A	Nebo	24.09	34	P	P	08 30 02.4	+0.2	
	baz=221,SNR=23							
Y58A	Scranton	24.09	40	P	P	08 30 02.0	-0.2	
	baz=228,SNR=14							
ISCO	Idaho Springs	24.10	346	P	P	08 30 04.0	+1.4	
ISCO				pmax	pmax			
	comp=Z,800nm,2.0s							
ISCO				MLR	MLR			
	comp=Z,18µm,18.0s							
ISCO	Idaho Springs	24.10	346	P	P	08 30 04.0	+1.4	
	baz=162,SNR=163							
ISCO	Idaho Springs	24.10	346	P	P	08 30 04.0	+1.4	
ISCO				IAMs_20	IAMs_20	08 40 13.2		
	comp=Z,18µm,18.0s							
BIRD	Birdtown, Kers	24.11	38	IAmb	IAmb	08 30 12.8		
	comp=Z,210nm,1.4s							
MURC	Murrieta	24.12	318	P	P	08 30 04.3	+1.7	
	baz=130,SNR=13							
N33A	J Bar K, Exete	24.18	1	IAMs_20	IAMs_20	08 40 22.3		
	comp=Z,10µm,21.0s							
X57A	Johnson Farm,	24.20	39	P	P	08 30 03.2	0.0	
	baz=227,SNR=12							
CBOC	Ciudad Bolivar	24.21	113	eP	P	08 30 05.1	+1.4	
ARGC	Ariguani, Magd	24.27	103	eP	P	08 30 03.7	-0.4	
P43A	Skaggs, Pawnee	24.29	17	IAmb	IAmb	08 31 02.1		
	comp=Z,155nm,0.9s							
BBRC	Big Bear Solar	24.38	320	P	P	08 30 07.1	+1.9	
	baz=132,SNR=5.7							
W56A	Indian Trail	24.38	37	P	P	08 30 04.7	-0.2	
	baz=225,SNR=13							
N35A	Tabor	24.39	5	IAmb	IAmb	08 30 55.8		
	comp=Z,129nm,0.8s							
N35A				IAMs_20	IAMs_20	08 40 39.9		
	comp=Z,13µm,19.0s							
HEC	Hector,Ludlow	24.41	322	P	P	08 30 06.8	+1.5	
	baz=134,SNR=14							
HELC	Santa Helena	24.48	112	eP	P	08 30 07.1	+0.6	
V55A	Taylorsville	24.54	35	P	P	08 30 06.4	+0.1	
	baz=222,SNR=13							
V55A	Taylorsville	24.54	35	IAmb	IAmb	08 30 26.1		
	comp=Z,98nm,1.0s							
OGNE	Ogallala	24.59	353	P	P	08 30 08.1	+1.3	
	baz=171,SNR=19							
OGNE	Ogallala	24.59	353	P	P	08 30 08.2	+1.4	
OGNE				IAMs_20	IAMs_20	08 40 40.8		
	comp=Z,10µm,20.0s							
TUQ	Turquoise Moun	24.60	323	P	P	08 30 08.5	+1.4	
	baz=136,SNR=40							
SCI2	San Clemente I	24.61	316	P	P	08 30 08.2	+1.1	
	baz=127							
Y59A	Loris	24.64	41	P	P	08 30 07.2	-0.1	
	baz=230							
T53A	Wise	24.70	31	P	P	08 30 07.8	-0.1	
	baz=218,SNR=15							
U54A	Nelsons Funny	24.71	33	P	P	08 30 08.0	-0.1	
	baz=220,SNR=35							
X58A	Rowland	24.72	40	P	P	08 30 08.0	0.0	
	baz=228,SNR=11							
X58A	Rowland	24.72	40	IAMs_20	IAMs_20	08 41 20.1		
	comp=Z,7µm,21.0s							
W57A	Gilead	24.74	38	P	P	08 30 08.1	0.0	
	baz=226,SNR=21							
SMLC	San Martn de	24.78	105	eP	P	08 30 08.3	-0.4	
CIS	Catalina Islan	24.78	317	P	P	08 30 09.6	+0.9	
	baz=128							
BFSC	Mount Baldy Ra	24.82	319	P	P	08 30 10.5	+1.4	
	baz=130							
BGNE	Belgrade	24.84	0	P	P	08 30 09.6	+0.6	
	baz=180,SNR=7.5							
BGNE	Belgrade	24.84	0	P	P	08 30 09.5	+0.5	
BGNE				IAmb	IAmb	08 30 40.6		
	comp=Z,117nm,0.8s							
RRX	Edison Barstow	24.84	321	P	P	08 30 10.9	+1.8	
	baz=133							
YOTC	Yotoco, Valle	24.84	118	eP	P	08 30 09.6	+0.2	
HORQ	Saladito	24.87	119	eP	P	08 30 15.8	+6.0	
FMP	Fort Macarthur	24.89	317	P	P	08 30 10.9	+1.3	
	baz=128							
V56A	Mocksville	24.91	36	P	P	08 30 09.7	0.0	
	baz=224,SNR=12							
SHPR	Sheep Range	24.96	326	IAMs_20	IAMs_20	08 40 21.3		
	comp=Z,9µm,20.0s							
N41A	Harden Midland	24.97	13	IAmb	IAmb	08 30 12.0		
	comp=Z,109nm,0.8s							
GSC	Goldstone, Bar	25.01	322	P	P	08 30 12.4	+1.6	
GSC				pmax	pmax			
	comp=Z,237nm,2.0s							
GSC				MLR	MLR			
	comp=Z,6µm,18.0s							
GSC	Goldstone, Bar	25.01	322	P	P	08 30 12.1	+1.3	
	baz=134,SNR=16							
GSC	Goldstone, Bar	25.01	322	P	P	08 30 12.4	+1.6	
GSC				IAmb	IAmb	08 30 23.6		
	comp=Z,236nm,1.9s							
GSC				IAMs_20	IAMs_20	08 40 11.5		
	comp=Z,6µm,18.0s							
MWC	Mount Wilson	25.07	318	IAmb	IAmb	08 30 24.0		
	comp=Z,192nm,1.9s							
O44A	Mansfield	25.07	18	IAmb	IAmb	08 30 39.9		
	comp=Z,122nm,0.9s							
Y60A	Bolivia	25.07	42	P	P	08 30 10.7	-0.4	
	baz=231							
GUY2C	Guyana, Caldas	25.07	114	eP	P	08 30 13.3	+1.4	
W58A	Raeford	25.10	39	P	P	08 30 11.4	0.0	
	baz=227,SNR=11							
U55A	TA2, Sparta	25.11	34	P	P	08 30 11.7	+0.1	
	baz=222,SNR=27							
PASC	Pasadena Art C	25.11	318	IAmb	IAmb	08 30 17.6		
	comp=Z,121nm,1.8s							
O20A	White River Ci	25.11	342	P	P	08 30 13.4	+1.6	
	baz=157,SNR=107							
O20A	White River Ci	25.11	342	IAMs_20	IAMs_20	08 41 39.1		
	comp=Z,9µm,19.0s							
SHOC	Shoshone, Teco	25.13	324	P	P	08 30 12.9	+1.2	
	baz=136							
BBAC	Balboa, Cauca	25.18	123	eP	P	08 30 13.3	+0.7	
X59A	McDuffie Farm,	25.19	41	P	P	08 30 12.4	+0.2	
	baz=229,SNR=8.5							
HDIL	Hopedale	25.21	16	P	P	08 30 12.5	+0.2	
	baz=200,SNR=26							
N23A	Red Feather La	25.22	346	P	P	08 30 14.3	+1.6	
	baz=162,SNR=84							
RREF	El Recreo	25.24	115	eP	P	08 30 15.5	+1.9	
T54A	Tazewell	25.25	33	P	P	08 30 12.6	-0.3	
	baz=220,SNR=25							
DECC	Green Verdugo	25.26	318	P	P	08 30 14.4	+1.5	
	baz=129							
PTBC	PUERTO BERRIO,	25.29	110	eP	P	08 30 14.0	+0.6	
NORC	Norcasia	25.35	113	eP	P	08 30 15.3	+1.3	
U56A	King	25.36	35	P	P	08 30 13.9	+0.1	
	baz=223,SNR=7.2							
P17A	Butcher Ranch,	25.36	337	P	P	08 30 15.3	+1.3	
V57A	Coltrane Farms	25.38	37	P	P	08 30 13.8	-0.2	
	baz=225,SNR=26							
L34A	Svendsen Farm,	25.44	3	IAMs_20	IAMs_20	08 41 10.8		
	comp=Z,10µm,20.0s							
EDW2	Edwards Air Fo	25.45	320	P	P	08 30 15.6	+0.9	
	baz=131,SNR=10							
S53A	Williamson	25.45	31	P	P	08 30 14.7	+0.1	
	baz=218,SNR=19							
P48A	Milroy	25.48	24	IAmb	IAmb	08 31 12.5		
	comp=Z,108nm,0.9s							
PHWY	Pilot Hill	25.50	347	IAmb	IAmb	08 30 27.7		
	comp=Z,92nm,1.1s							
GCUF	Volcan Galeras	25.57	124	eP	P	08 30 16.2	-0.3	
X60A	Albert Glenn T	25.59	41	P	P	08 30 15.5	-0.4	
	baz=230							
LRMC	Laurel Mtn Rad	25.66	321	P	P	08 30 18.0	+1.4	
	baz=132,SNR=18							
OCAC	Ocana	25.67	106	eP	P	08 30 17.6	+0.6	
W59A	Clinton	25.68	40	P	P	08 30 16.8	+0.2	
	baz=228							
V58A	Windy Hill, Pi	25.70	38	P	P	08 30 16.5	-0.3	
	baz=226,SNR=32							
SCIA	State Center	25.70	9	P	P	08 30 17.1	+0.3	
	baz=191,SNR=30							
SFIN	Lafayette	25.70	20	P	P	08 30 16.9	+0.1	
	baz=205,SNR=30							
SFIN	Lafayette	25.70	20	IAmb	IAmb	08 30 28.1		
	comp=Z,102nm,1.0s							
T55A	Pulaski	25.71	34	P	P	08 30 17.0	0.0	
	baz=221,SNR=18							
OSI	Osito Audit: C	25.74	318	P	P	08 30 18.5	+1.2	
	baz=129							
OSI	Osito Audit: C	25.74	318	IAmb	IAmb	08 30 33.2		
	comp=Z,137nm,1.4s							
OSI				IAMs_20	IAMs_20	08 42 20.4		
	comp=Z,8µm,19.0s							
SDDR	Presa de Saban	25.79	80	P	P	08 30 18.2	+0.2	
ORTC	Ortega, Tolima	25.82	116	eP	P	08 30 18.8	+0.6	
P49A	Miami Univ. Ec	25.82	25	P	P	08 30 17.7	-0.3	
	baz=211,SNR=78							
FURC	Furnace Creek,	25.86	324	P	P	08 30 19.9	+1.6	
	baz=135,SNR=15							
TPNV	Topopah Spring	25.87	325	P	P	08 30 20.4	+1.8	
	baz=137,SNR=59							
MPMC	Manual Prospec	25.94	322	P	P	08 30 20.5	+1.2	
	baz=

comp=Z,192nm,1.4s
RWWY IAMs_20 IAMs_20 08 39 39.9
comp=Z,6µm,18.0s
O48A Farmland 26.28 23 P P 08 30 21.5 -0.5
baz=209,SNR=69
SC01 Santiago de lo 26.33 79 P P 08 30 24.1 +1.3
S55A Lewisburg 26.35 33 P P 08 30 22.8 0.0
baz=221
Q52A Bidwell 26.40 29 P P 08 30 23.3 +0.1
baz=216,SNR=18
R54A Victor 26.41 32 P P 08 30 23.6 +0.3
baz=220,SNR=14
BARC Barichara 26.42 109 eP P 08 30 25.3 +1.4
U58A Oxford 26.44 38 P P 08 30 23.7 +0.1
baz=226,SNR=28
T57A Hurt 26.46 36 P P 08 30 23.7 0.0
baz=224,SNR=9.8
P51A Williamsport 26.47 27 P P 08 30 23.5 -0.3
baz=214,SNR=17
GRAC Grapevine Rang 26.52 324 P P 08 30 26.0 +1.6
baz=135,SNR=17
CWC Cottonwood Cre 26.55 322 P P 08 30 26.1 +1.4
baz=133
PAMC Pamplona, Colo 26.57 107 eP P 08 30 26.8 +1.3
R11A Troy Canyon, C 26.57 328 P P 08 30 26.5 +1.5
baz=140,SNR=33
R11A Troy Canyon, C 26.57 328 IAmb IAmb 08 30 40.1
comp=Z,137nm,1.8s
R11A IAMs_20 IAMs_20 08 41 17.5
comp=Z,11µm,20.0s
W61A Ground Anchor 26.59 42 P P 08 30 25.1 +0.1
baz=231
PKM Mcpherson Peak 26.61 318 P P 08 30 26.4 +1.1
baz=128
BANI BANI 26.67 82 P P 08 30 23.8 -2.2
Q53A Leroy 26.67 30 P P 08 30 25.8 +0.2
baz=218,SNR=21
VES Vestal, Richgr 26.75 320 P P 08 30 28.1 +1.7
baz=131,SNR=19
S56A Natural Bridge 26.77 34 P P 08 30 26.5 -0.1
baz=223,SNR=11
CHIC Chingaza 26.79 113 eP P 08 30 32.3 +5.0
O50A Cable 26.79 25 P P 08 30 26.3 -0.4
baz=212,SNR=27
V60A Jim Taylor Roa 26.80 40 P P 08 30 26.9 +0.2
baz=229,SNR=7.8
DUG Dugway, Tooele 26.80 335 P P 08 30 28.6 +1.6
DUG pmax pmax
comp=Z,55nm,1.0s
DUG MLR MLR
comp=Z,14µm,21.0s
DUG Dugway, Tooele 26.80 335 P P 08 30 28.8 +1.9
baz=148,SNR=58
DUG Dugway, Tooele 26.80 335 P P 08 30 28.6 +1.6
DUG IAMs_20 IAMs_20 08 42 50.5
comp=Z,14µm,21.0s
RUSC La Rusia 26.80 110 eP P 08 30 27.7 +0.1
T58A Grand View Acr 26.83 37 P P 08 30 27.0 -0.1
baz=226,SNR=16
N48A Decatur 26.85 23 P P 08 30 26.6 -0.6
baz=209,SNR=29
U59A Littleton 26.86 39 P P 08 30 27.4 0.0
baz=228,SNR=7.8
U59A Littleton 26.86 39 IAmb IAmb 08 30 47.5
comp=Z,118nm,1.5s
U59A IAMs_20 IAMs_20 08 42 45.8
comp=Z,6µm,20.0s
R55A Marlinton 26.93 33 P P 08 30 28.1 0.0
baz=221,SNR=10
R55A Marlinton 26.93 33 IAmb IAmb 08 30 40.7
comp=Z,131nm,0.9s
SMMC Simmler 26.99 318 P P 08 30 30.0 +1.4
baz=128,SNR=5.9
P52A Corning 27.01 28 P P 08 30 28.2 -0.4
baz=216,SNR=18
K22A Casper 27.02 346 P P 08 30 30.2 +1.2
baz=162,SNR=45
K22A Casper 27.02 346 IAmb IAmb 08 30 41.1
comp=Z,138nm,1.1s
K22A IAMs_20 IAMs_20 08 42 14.5
comp=Z,14µm,18.0s
TIN Tinemaha, Big 27.06 323 P P 08 30 31.1 +1.9
baz=134
VILC Villavicencio, 27.06 114 eP P 08 30 35.8 +6.2
M47A Cromwell 27.08 21 P P 08 30 28.9 -0.3
baz=207
L44A Lake County Fo 27.10 17 P P 08 30 29.8 +0.3
baz=202,SNR=17
Q54A Coxs Mills 27.11 31 P P 08 30 29.8 +0.2
baz=219,SNR=16
ACSO Alum Creek Sta 27.12 26 P P 08 30 29.4 -0.3
baz=213,SNR=15
S57A Dark Hollow, R 27.17 35 P P 08 30 30.0 -0.1
baz=224,SNR=8.6
ECSD EROS Data Cent 27.20 3 P P 08 30 30.2 -0.1
baz=183,SNR=21
ECSD EROS Data Cent 27.20 3 IAmb IAmb 08 30 59.2
comp=Z,70nm,0.9s
ECSD EROS Data Cent 27.20 3 IAMs_20 IAMs_20 08 42 15.3
comp=Z,13µm,21.0s
JFWS Jewell Farm 27.21 13 P P 08 30 30.4 -0.1
baz=197,SNR=34
JFWS Jewell Farm 27.21 13 IAmb IAmb 08 31 16.3
comp=Z,68nm,0.8s
JFWS Jewell Farm 27.21 13 IAMs_20 IAMs_20 08 43 14.1
comp=Z,8µm,18.0s
O51A Pataskala 27.22 27 P P 08 30 30.1 -0.4
baz=214,SNR=21
N49A Columbus Grove 27.22 24 IAmb IAmb 08 30 43.9
comp=Z,107nm,1.0s
P53A Whipple 27.23 29 P P 08 30 30.7 +0.1
baz=217,SNR=11
P53A Whipple 27.23 29 IAmb IAmb 08 30 42.7
comp=Z,200nm,1.4s
V61A Roper 27.24 41 P P 08 30 31.0 +0.2
baz=230
V61A Roper 27.24 41 P P 08 30 30.8 0.0
VOG Valley Oaks Go 27.25 321 P P 08 30 31.9 +1.1
baz=131
U60A Pendleton 27.32 39 P P 08 30 31.6 +0.2
baz=228,SNR=13
PAGB Antelope Grade 27.41 319 IAmb IAmb 08 30 40.8
comp=Z,175nm,1.9s
T59A Double "B" Far 27.42 38 P P 08 30 32.4 0.0
baz=227,SNR=11
T59A Double "B" Far 27.42 38 IAmb IAmb 08 30 45.7
comp=Z,216nm,1.6s
T59A IAMs_20 IAMs_20 08 43 02.6
comp=Z,6µm,20.0s
L46A Eue Claire 27.43 20 P P 08 30 32.2 -0.2
baz=205,SNR=9.5
L46A Eue Claire 27.43 20 IAmb IAmb 08 31 17.8
comp=Z,123nm,1.1s
Q55A Buckhannon 27.49 32 P P 08 30 33.0 0.0
baz=220
BGU Big Grassy Mou 27.50 335 P P 08 30 34.7 +1.4
N50A Nevada 27.51 25 P P 08 30 32.6 -0.5
baz=212,SNR=7.7
O52A Adamsville 27.53 28 P P 08 30 32.9 -0.5
baz=216,SNR=11
HWUT Hardware Ranch 27.54 338 IAmb IAmb 08 30 45.2
comp=Z,84nm,1.4s
HWUT IAMs_20 IAMs_20 08 42 42.7
comp=Z,25µm,21.0s
S58A Poland Farm, P 27.57 36 P P 08 30 33.3 -0.4
baz=225
U61A Possum Corner 27.67 40 P P 08 30 34.1 -0.4
baz=230
I37A Lemond, Waseca 27.75 8 IAmb IAmb 08 31 12.5
comp=Z,87nm,0.9s
TAMC Tame, Arauca 27.75 108 eP P 08 30 36.7 +1.0
P54A Burton 27.76 30 P P 08 30 35.5 +0.1
baz=219,SNR=15
R57A Stanardsville 27.79 35 P P 08 30 35.5 -0.2
baz=224
MLAC Mammoth, Mammo 27.80 323 P P 08 30 37.7 +1.6
baz=134
SUSD Miller 27.88 359 P P 08 30 36.5 +0.1
baz=178
SUSD Miller 27.88 359 IAmb IAmb 08 31 26.9
comp=Z,63nm,0.9s
SUSD IAMs_20 IAMs_20 08 42 25.4
comp=Z,8µm,21.0s
OMMB Old Mammoth Mi 27.89 323 IAMs_20 IAMs_20 08 43 43.5
comp=Z,9µm,20.0s
R58B Mineral 27.91 36 P P 08 30 36.4 -0.3
baz=225
R58B Mineral 27.91 36 IAmb IAmb 08 30 50.5
comp=Z,124nm,1.8s
BW06 Boulder Array 27.92 342 P P 08 30 38.0 +1.0
baz=156,SNR=35
BW06 Boulder Array 27.92 342 P P 08 30 37.6 +0.5
BW06 IAMs_20 IAMs_20 08 41 27.6
comp=Z,10µm,22.0s
PD31 Pinedale Array 27.92 342 IAmb IAmb 08 30 48.4
comp=Z,180nm,1.5s
PDAR Pinedale Array 27.92 342 P P 08 30 38.0 +0.9
comp=Z,10nm,0.7s,baz=138,slow=11,SNR=58
PDAR LR LR 08 43 09.3
comp=Z,5µm,20.0s,baz=167,slow=39
O53A New Philadelph 27.92 29 P P 08 30 36.4 -0.5
baz=217
MDPB Devils Postpil 27.95 323 IAMs_20 IAMs_20 08 43 38.0
comp=Z,8µm,18.0s
N51A Ashland 27.95 26 P P 08 30 36.3 -0.8
baz=214,SNR=6.5
SDV Santo Domingo 27.96 102 P P 08 30 37.9 +0.2
comp=Z,31nm,0.9s,baz=301,slow=3.9,SNR=24
SDV LR LR 08 43 31.9
comp=Z,4µm,19.3s,baz=321,slow=40
SDV Santo Domingo 27.96 102 eP P 08 30 37.6 -0.1
SDV Santo Domingo 27.96 102 P P 08 30 36.8 -0.8
SDV IAmb IAmb 08 30 53.1
comp=Z,68nm,0.9s
RSSD Black Hills 27.98 351 P P 08 30 38.1 +0.5
RSSD pmax pmax
comp=Z,110nm,1.6s
RSSD MLR MLR
comp=Z,4µm,19.0s
RSSD Black Hills 27.98 351 P P 08 30 38.7 +1.1
baz=168
RSSD Black Hills 27.98 351 P P 08 30 38.1 +0.5
RSSD IAmb IAmb 08 30 49.0
comp=Z,110nm,1.6s
Q56A Snyder Ridge, 27.98 33 P P 08 30 37.9 +0.5
baz=222
Q56A Snyder Ridge, 27.98 33 IAmb IAmb 08 30 49.9
comp=Z,96nm,1.1s
NV11 Mina Array Sit 27.99 325 IAmb IAmb 08 30 51.8
comp=Z,77nm,1.4s
NV11 IAMs_20 IAMs_20 08 42 29.7
comp=Z,9µm,19.0s
P55A Reedsville 28.01 31 P P 08 30 37.8 +0.2
baz=220
T60A Surry 28.02 39 P P 08 30 37.7 0.0
baz=228
T60A Surry 28.02 39 IAMs_20 IAMs_20 08 43 40.4
comp=Z,6µm,20.0s
PMPB Monarch Peak 28.06 319 P P 08 30 38.9 +0.6
PMPB IAmb IAmb 08 30 54.7
comp=Z,232nm,1.9s
PMPB IAMs_20 IAMs_20 08 42 26.4
comp=Z,7µm,18.0s
NVAR Mina Array Bea 28.07 325 P P 08 30 40.1 +1.7
comp=Z,8.7nm,0.9s,baz=150,slow=9.9,SNR=55
NVAR LR LR 08 42 39.9
comp=Z,7µm,18.7s,baz=138,slow=38
I40A Norwalk 28.07 12 IAmb IAmb 08 31 06.9
comp=Z,60nm,0.8s
R58A Rapidan 28.08 35 P P 08 30 38.2 -0.1
baz=225
M50A Fremont 28.08 25 IAmb IAmb 08 30 49.5
comp=Z,141nm,1.1s
S59A Mcmanicsville 28.11 37 P P 08 30 38.6 +0.1
baz=226
MCWV Mont Chateau 28.11 31 P P 08 30 38.8 +0.2
baz=220
HVU Hansel Valley 28.13 337 P P 08 30 40.0 +1.1
HVU pmax pmax
comp=Z,53nm,0.9s
HVU Hansel Valley 28.13 337 P P 08 30 40.0 +1.1
N52A McGinn's Farm, 28.16 27 P P 08 30 38.0 -1.0
baz=215
K46A Derr 28.21 20 P P 08 30 38.7 -0.6
baz=206,SNR=19
O54A Avella 28.26 30 P P 08 30 39.8 -0.1
baz=218,SNR=5.6
ELK Elko 28.30 332 P P 08 30 42.2 +1.7
comp=Z,7.6nm,0.8s,baz=142,slow=8.8,SNR=26
ELK LR LR 08 42 21.0
comp=Z,5µm,18.7s,baz=167,slow=37
ELK Elko 28.30 332 IAMs_20 IAMs_20 08 41 48.2
comp=Z,8µm,22.0s
CBN Corbin Frederi 28.37 36 P P 08 30 40.8 0.0
baz=226
CBN Corbin Frederi 28.37 36 P P 08 30 39.7 -1.2
CBN IAmb IAmb 08 31 36.2
comp=Z,53nm,0.7s
Q57A Strasburg 28.39 34 P P 08 30 41.4 +0.4
baz=223,SNR=6.6
PTGC Puerto Gaitan, 28.40 113 eP P 08 30 41.3 -0.1
AHID Auburn Hatcher 28.40 340 IAmb IAmb 08 30 52.7
comp=Z,83nm,1.3s
AHID IAMs_20 IAMs_20 08 43 02.5
comp=Z,21µm,21.0s
KVN Kaiserville 28.40 326 IAmb IAmb 08 30 57.4
comp=Z,130nm,1.8s
KVN IAMs_20 IAMs_20 08 42 32.6
comp=Z,6µm,20.0s
S60A Water View 28.44 38 P P 08 30 41.6 +0.1
baz=228
I42A Draeger Farm, 28.44 14 IAmb IAmb 08 30 43.4
comp=Z,57nm,1.0s
I42A IAMs_20 IAMs_20 08 43 41.6
comp=Z,8µm,18.0s
K47A Vermontville 28.45 21 P P 08 30 40.8 -0.7
baz=207,SNR=45
P56A Dayton Farm, R 28.51 33 P P 08 30 42.1 0.0
baz=222
R59A King George, V 28.51 37 P P 08 30 41.9 -0.2
baz=226
N53A Lisbon 28.54 28 P P 08 30 41.8 -0.5
baz=217,SNR=12
AAM Ann Arbor 28.61 23 P P 08 30 42.5 -0.5
baz=210
AAM Ann Arbor 28.61 23 IAmb IAmb 08 30 55.5
comp=Z,80nm,0.7s
J45A Montague 28.70 18 P P 08 30 43.5 -0.2
baz=204
Q58A Fox Den Farm, 28.71 35 P P 08 30 44.1 +0.2
baz=224
L50A Kingsville 28.71 24 P P 08 30 43.1 -0.8
baz=212
WAKR Walker 28.75 324 IAMs_20 IAMs_20 08 41 54.8
comp=Z,6µm,20.0s
O55A Ligonier 28.80 31 P P 08 30 44.6 -0.1
baz=220
SAO San Andreas Ge 28.81 319 IAMs_20 IAMs_20 08 42 57.1
comp=Z,7µm,18.0s
REDW Red Top Meadow 28.86 341 IAmb IAmb 08 31 21.6
comp=Z,143nm,1.3s
REDW IAMs_20 IAMs_20 08 43 02.5
comp=Z,18µm,18.0s
R60A Leonardtown, M 28.86 37 P P 08 30 45.1 -0.1
baz=227
K48A Perry 28.88 22 P P 08 30 44.7 -0.6
baz=209,SNR=17
M52A Chesterland 28.90 27 P P 08 30 44.8 -0.7
baz=215,SNR=7.8
SNOW Snow King Moun 28.92 341 P P 08 30 47.2 +1.2
SNOW IAmb IAmb 08 30 57.8
comp=Z,82nm,1.0s
SNOW IAMs_20 IAMs_20 08 43 06.1
comp=Z,15µm,19.0s
P57A Homestead Farm 28.92 34 P P 08 30 46.1 +0.4
baz=223
P57A Homestead Farm 28.92 34 IAmb IAmb 08 30 57.7
comp=Z,78nm,1.3s
CMB Columbia Colle 28.98 322 IAMs_20 IAMs_20 08 44 26.5
comp=Z,5µm,18.0s
TPAW Teton Pass 29.00 341 IAmb IAmb 08 30 58.6
comp=Z,107nm,1.2s
TPAW IAMs_20 IAMs_20 08 41 27.4
comp=Z,6µm,19.0s
S61A Accomac 29.01 39 IAMs_20 IAMs_20 08 43 59.7
comp=Z,6µm,21.0s
SPMN Marine on St. 29.01 8 P P 08 30 46.1 -0.4
baz=191,SNR=24
SPMN Marine on St. 29.01 8 IAmb IAmb 08 31 30.9
comp=Z,76nm,0.8s
J47A Sunmer 29.02 20 P P 08 30 46.3 -0.3
baz=207,SNR=8.5
N54A Moraine State 29.05 29 P P 08 30 46.7 -0.2
baz=218,SNR=6.9
N54A Moraine State 29.05 29 IAmb IAmb 08 30 59.0
comp=Z,167nm,1.4s
K49A Clarkson 29.10 23 P P 08 30 46.6 -0.7
baz=210,SNR=9.0
M53A WI Miller and 29.12 28 P P 08 30 46.9 -0.6
baz=216,SNR=14
FXWY Fox Creek 29.16 341 IAmb IAmb 08 30 59.9
comp=Z,95nm,1.6s
FXWY IAMs_20 IAMs_20 08 43 12.5
comp=Z,16µm,18.0s
O56A Blue Knob Stat 29.22 32 P P 08 30 48.4 0.0
baz=221
O56A Blue Knob Stat 29.22 32 P P 08 30 48.3 -0.2
H43A Windswept, Lux 29.27 15 IAmb IAmb 08 31 49.2
comp=Z,47nm,0.9s
H43A IAMs_20 IAMs_20 08 44 11.3
comp=Z,7µm,22.0s
I45A Fountain 29.29 18 P P 08 30 49.0 0.0
baz=204,SNR=6.3
P58A Pank, Wackersv 29.31 34 P P 08 30 49.6 +0.4
baz=224
IMW Indian Meadow 29.37 341 IAmb IAmb 08 31 01.6
comp=Z,115nm,1.6s
IMW IAMs_20 IAMs_20 08 43 29.0
comp=Z,14µm,18.0s
N55A Marion Center 29.39 31 P P 08 30 49.8 -0.1
baz=220,SNR=11
K50A Casco 29.41 24 P P 08 30 48.9 -1.1
baz=212
K50A Casco 29.41 24 IAmb IAmb 08 31 00.2
comp=Z,91nm,0.9s
J48A Bridge Port 29.43 22 P P 08 30 49.6 -0.6
baz=209,SNR=17
J48A Bridge Port 29.43 22 IAmb IAmb 08 31 00.9
comp=Z,110nm,0.9s
I46A Reed City 29.44 19 P P 08 30 50.0 -0.4
baz=205,SNR=12
FLWY Flagg Ranch 29.46 342 IAmb IAmb 08 31 03.5
comp=Z,57nm,1.1s
FLWY IAMs_20 IAMs_20 08 43 48.4
comp=Z,15µm,18.0s
G40A Rib Lake 29.48 12 IAmb IAmb 08 31 02.4
comp=Z,81nm,1.2s
G40A IAMs_20 IAMs_20 08 44 13.2
comp=Z,6µm,18.0s
ALLY Alegheny Colle 29.52 28 P P 08 30 49.8 -1.3
ALLY IAmb IAmb 08 31 02.7
comp=Z,82nm,0.9s
RUBR Rubicon Trail 29.53 324 IAmb IAmb 08 31 39.1
comp=Z,54nm,1.0s
RUBR IAMs_20 IAMs_20 08 43 31.5
comp=Z,5µm,19.0s
F36A Milaca 29.55 7 IAMs_20 IAMs_20 08 43 44.3
comp=Z,8µm,22.0s
PAHR Pah Rah Range 29.57 326 IAMs_20 IAMs_20 08 43 32.5
comp=Z,6µm,21.0s
M54A Oil Creek Stat 29.63 29 P P 08 30 51.8 -0.3
baz=218,SNR=10
R61A Willards 29.63 38 IAMs_20 IAMs_20 08 44 20.2
comp=Z,6µm,20.0s
O57A Amberson 29.65 33 P P 08 30 52.5 +0.3
baz=223
H17A Grant Village 29.71 342 P P 08 30 54.6 +1.6
baz=155,SNR=8.9
H17A Grant Village 29.71 342 IAmb IAmb 08 31 06.1
comp=Z,111nm,1.8s
H17A IAMs_20 IAMs_20 08 41 43.9
comp=Z,22µm,21.0s
J49A Marlette 29.71 23 P P 08 30 51.8 -0.9
baz=210,SNR=11
L53A Girard 29.72 28 P P 08 30 51.9 -0.9
baz=216,SNR=13
Q60A Greensboro 29.79 37 P P 08 30 53.6 +0.2
baz=227
K51A Iona Station 29.81 25 P P 08 30 52.2 -1.3
baz=214
LKWY Lake 29.81 342 IAmb IAmb 08 31 12.9
comp=Z,101nm,1.6s
LKWY IAMs_20 IAMs_20 08 41 45.7
comp=Z,25µm,21.0s
I47A Gladwin 29.81 20 P P 08 30 53.3 -0.3
baz=207,SNR=15
SSPA Standing Stone 29.83 32 P P 08 30 53.9 0.0
baz=222
SSPA Standing Stone 29.83 32 P P 08 30 53.2 -0.7
N56A West Decatur 29.84 31 P P 08 30 53.9 0.0
baz=221,SNR=6.2
P59A Jarrettsville 29.87 35 P P 08 30 54.3 +0.2
baz=226
H45A Beulah 29.88 18 P P 08 30 54.1 -0.1
baz=204,SNR=25
AFDM Forest Hills D 29.93 323 IAMs_20 IAMs_20 08 44 37.5
comp=Z,4µm,18.0s
O58A Lewisberry 29.97 34 P P 08 30 54.7 -0.4
baz=224
ERPA Erie 29.97 28 P P 08 30 54.0 -1.0
baz=217
ERPA Erie 29.97 28 IAmb IAmb 08 31 08.3
comp=Z,57nm,0.9s
RLMT Red Lodge 30.01 344 P P 08 30 56.7 +1.1
baz=158,SNR=13
RLMT Red Lodge 30.01 344 P P 08 30 56.8 +1.1
RLMT IAmb IAmb 08 31 11.9
comp=Z,52nm,0.8s
RLMT IAMs_20 IAMs_20 08 44 31.9
comp=Z,6µm,18.0s
M55A Ridgway 30.03 30 P P 08 30 55.3 -0.3
baz=220,SNR=15
M55A Ridgway 30.03 30 IAmb IAmb 08 31 09.6
comp=Z,61nm,0.8s
YNR Norris Junctio 30.03 342 P P 08 30 57.6 +1.7
N57A Milroy 30.09 32 P P 08 30 55.0 -1.1
baz=222
K52A Tillsonburg 30.19 26 P P 08 30 55.9 -1.0
baz=215,SNR=7.1
BEKR Beckworth 30.21 325 IAMs_20 IAMs_20 08 44 55.6
comp=Z,11µm,19.0s
YHB Horse Butte 30.22 342 P P 08 30 58.7 +1.2
I48A Sherman Twp 30.23 21 P P 08 30 57.2 -0.1
baz=208,SNR=12
M56A Emporium 30.32 31 P P 08 30 58.0 -0.2
baz=220
M56A Emporium 30.32 31 IAmb IAmb 08 31 16.9
comp=Z,53nm,1.1s
I49A Point Hope 30.33 22 P P 08 30 57.3 -0.9
baz=210
I49A Point Hope 30.33 22 IAmb IAmb 08 31 09.1
comp=Z,64nm,0.9s
L54A Sinclairville 30.36 28 P P 08 30 57.9 -0.6
baz=218
G45A Suttons Bay 30.38 18 P P 08 30 58.4 -0.1
baz=204,SNR=23
H47A Mio 30.43 20 P P 08 30 58.9 -0.2
baz=207,SNR=30
P60A Greenville 30.45 36 P P 08 30 59.2 -0.1
baz=226
P60A Greenville 30.45 36 IAmb IAmb 08 31 12.2
comp=Z,63nm,1.4s
GLMI Grayling 30.50 19 P P 08 30 59.6 -0.1
baz=206,SNR=14
O59A Robesonia 30.50 34 P P 08 30 59.7 0.0
baz=225
E38A The Farm, Brul 30.54 9 IAmb IAmb 08 32 03.0
comp=Z,79nm,1.2s
MCCM Marconi Confer 30.56 320 IAMs_20 IAMs_20 08 43 13.4
comp=Z,6µm,18.0s
N58A Sunbury 30.59 33 P P 08 31 00.0 -0.5
baz=224
ORV Oroville 30.64 323 P P 08 31 02.5 +1.5
ORV pmax pmax
comp=Z,65nm,1.9s
ORV MLR MLR
comp=Z,4µm,19.0s
ORV Oroville 30.64 323 P P 08 31 02.5 +1.5
J52A Paris 30.66 26 P P 08 31 00.0 -1.1
baz=215
SJG San Juan 30.67 82 P P 08 31 00.3 -1.2
comp=Z,21nm,0.9s,baz=271,slow=6.7,SNR=4.5
SJG San Juan 30.67 82 P P 08 31 00.4 -1.1
SJG pmax pmax
comp=Z,37nm,0.8s
SJG MLR MLR
comp=Z,4µm,21.0s
SJG San Juan 30.67 82 P P 08 31 00.4 -1.1
SJG IAmb IAmb 08 31 25.6
comp=Z,37nm,0.8s
MFID Camas Ranch 30.73 334 IAmb IAmb 08 31 21.1
comp=Z,90nm,1.8s
MFID IAMs_20 IAMs_20 08 44 38.4
comp=Z,13µm,18.0s

L55A **Hinsdale** 30.73 30 P P 08 31 01.7 -0.1
baz=219,SNR=10
M57A **Sunshine Farm,** 30.74 32 P P 08 31 01.8 0.0
baz=222
M57A **Sunshine Farm,** 30.74 32 IAmb IAmb 08 31 27.9
comp=Z,76nm,1.4s
H48A **Harrisville** 30.82 21 P P 08 31 02.3 -0.2
baz=209
H48A **Harrisville** 30.82 21 IAmb IAmb 08 31 14.5
comp=Z,58nm,0.9s
LAO **LASA Array** 30.84 349 P P 08 31 03.3 +0.6
baz=165,SNR=24
LAO **LASA Array** 30.84 349 IAMs_20 IAMs_20 08 43 16.3
comp=Z,5µm,18.0s
G46A **Petoskey** 30.86 19 P P 08 31 02.6 -0.3
baz=205
I51A **Listowel** 30.91 25 P P 08 31 02.3 -1.0
baz=213,SNR=9.7
GDXM **Geysers** 30.92 321 IAMs_20 IAMs_20 08 42 53.9
comp=Z,10µm,19.0s
O60A **Telford** 30.93 35 P P 08 31 03.1 -0.4
baz=226
CBYP **Canovanas** 30.95 82 IAmb IAmb 08 31 11.1
comp=Z,65nm,1.1s
K54A **Basiliko Farm,** 30.95 29 P P 08 31 03.2 -0.5
baz=218
HUMP **Col San Antoni** 30.96 82 IAmb IAmb 08 31 13.1
comp=Z,48nm,1.1s
F45A **CMU Biological** 31.00 17 P P 08 31 03.8 -0.2
baz=204,SNR=21
G47A **Hillman** 31.05 20 P P 08 31 04.3 -0.3
baz=207
M58A **Price's Panora** 31.11 33 P P 08 31 05.0 -0.1
baz=223,SNR=6.4
L56A **Greenwood** 31.12 31 P P 08 31 03.7 -1.5
baz=221
L56A **Greenwood** 31.12 31 IAmb IAmb 08 31 32.4
comp=Z,58nm,1.1s
LUPA **Lehigh Univers** 31.14 35 P P 08 31 05.1 -0.3
N59A **State Game Lan** 31.15 34 P P 08 31 05.4 -0.1
baz=225
WVOR **Wild Horse Val** 31.20 330 IAmb IAmb 08 31 52.7
comp=Z,41nm,1.0s
DLMT **Dillon** 31.20 340 IAmb IAmb 08 31 26.1
comp=Z,78nm,1.1s
DLMT IAMs_20 IAMs_20 08 44 48.7
comp=Z,14µm,20.0s
HOPS **Hopland Field** 31.20 321 IAMs_20 IAMs_20 08 43 38.0
comp=Z,9µm,18.0s
MTP **Monte Pirata** 31.24 82 P P 08 31 05.3 -1.2
E43A **Lone Tree Farm** 31.24 15 IAMs_20 IAMs_20 08 45 19.6
comp=Z,8µm,22.0s
O61A **Allentown** 31.26 36 P P 08 31 06.2 -0.2
baz=228
MDND **Maddock** 31.29 358 P P 08 31 07.1 +0.4
baz=177,SNR=13
MDND **Maddock** 31.29 358 IAMs_20 IAMs_20 08 44 28.9
comp=Z,6µm,21.0s
O03E **Paynes Creek** 31.31 324 P P 08 31 07.7 +0.7
baz=132
K55A **Perry** 31.33 29 P P 08 31 06.6 -0.4
baz=219
L57A **Andrews Acres** 31.37 31 P P 08 31 07.2 -0.3
baz=222
N60A **Cedar Hill Far** 31.48 35 P P 08 31 08.5 +0.2
baz=226
J54A **Appleton** 31.49 28 P P 08 31 07.6 -0.8
baz=218
J54A **Appleton** 31.49 28 P P 08 31 08.1 -0.3
J54A IAmb IAmb 08 31 19.8
comp=Z,104nm,1.4s
I53A **Kortright Cn E** 31.51 26 P P 08 31 07.6 -1.0
baz=216
D41A **Chassel** 31.53 13 IAMs_20 IAMs_20 08 45 39.2
comp=Z,5µm,20.0s
MOD **Modoc Plateau** 31.63 328 IAMs_20 IAMs_20 08 45 56.3
comp=Z,11µm,19.0s
BRNJ **Basking Ridge** 31.65 36 IAmb IAmb 08 31 40.4
comp=Z,52nm,0.9s
K56A **Middlesex** 31.66 30 P P 08 31 09.9 0.0
baz=220,SNR=18
M59A **Waymart** 31.77 34 P P 08 31 10.7 -0.2
baz=225
AGMN **Agassiz Nation** 31.79 3 P P 08 31 10.6 -0.4
baz=184,SNR=50
AGMN IAmb IAmb 08 31 14.3
comp=Z,79nm,0.9s
AGMN IAMs_20 IAMs_20 08 44 55.6
comp=Z,9µm,21.0s
STVI **Saint Thomas** 31.80 82 IAmb IAmb 08 31 19.0
comp=Z,51nm,0.9s
J08A **Circle Bar Ran** 31.84 331 IAmb IAmb 08 31 23.3
comp=Z,62nm,1.0s
J55A **Hilton** 31.86 29 P P 08 31 10.9 -0.7
baz=219
J55A **Hilton** 31.86 29 IAmb IAmb 08 31 23.2
comp=Z,74nm,0.9s
EYMN **Ely** 31.86 9 P P 08 31 11.2 -0.5
baz=192,SNR=19
EYMN **Ely** 31.86 9 IAMs_20 IAMs_20 08 46 26.3
comp=Z,4µm,18.0s
ODNJ **Ogdensburg** 31.90 35 IAmb IAmb 08 31 25.1
comp=Z,148nm,1.9s
L58A **Harry Jones Me** 31.91 32 P P 08 31 12.1 -0.1
baz=224,SNR=10.0
KCPM **Cahto Peak** 31.95 321 P P 08 31 12.9 +0.2
KCPM IAmb IAmb 08 31 24.9
comp=Z,92nm,1.3s
KCPM IAMs_20 IAMs_20 08 43 17.6
comp=Z,7µm,20.0s
BINY **Binghamton** 31.95 32 P P 08 31 12.6 0.0
baz=223,SNR=5.8
B35A **Bob, Littlefor** 32.00 6 IAmb IAmb 08 31 15.1
B35A IAMs_20 IAMs_20 08 45 06.2
comp=Z,38nm,0.8s
comp=Z,7µm,21.0s
F48A **Evansville** 32.04 21 P P 08 31 12.9 -0.3
baz=209
M60A **Port Jervis** 32.05 35 P P 08 31 13.6 +0.2
baz=226
H52A **Wyevale** 32.06 25 P P 08 31 12.4 -0.9
baz=214,SNR=5.6
K57A **Scipio Center** 32.08 31 P P 08 31 13.3 -0.3
baz=222
F49A **Sandfield** 32.19 22 P P 08 31 13.9 -0.6
baz=210,SNR=17
PAL **Palisades** 32.23 36 P P 08 31 14.5 -0.4
baz=228
DGMT **Dagmar** 32.27 353 P P 08 31 16.1 +0.9
baz=169,SNR=15
J56A **Wolcott** 32.32 30 P P 08 31 15.4 -0.3
baz=221
M04C **Macdoel** 32.35 326 P P 08 31 17.1 +0.9
baz=134
KMRM **Mail Ridge** 32.36 322 IAmb IAmb 08 31 30.1
comp=Z,55nm,1.4s
KMRM IAMs_20 IAMs_20 08 44 02.7
comp=Z,11µm,18.0s
E47A **Iron Bridge** 32.38 19 P P 08 31 16.3 +0.1
baz=207,SNR=19
N62A **Caumsett State** 32.43 36 P P 08 31 16.2 -0.5
baz=228
L59A **Walton** 32.43 33 P P 08 31 16.9 +0.1
baz=225
L59A **Walton** 32.43 33 IAmb IAmb 08 31 48.5
comp=Z,43nm,0.9s
SADO **Sadowa** 32.47 26 IAmb IAmb 08 31 27.9
comp=Z,93nm,1.3s
BMO **Blue Mountains** 32.51 334 P P 08 31 17.6 0.0
BMO pmax pmax
comp=Z,20nm,1.1s
BMO MLR MLR
comp=Z,12µm,18.0s
BMO **Blue Mountains** 32.51 334 P P 08 31 17.6 0.0
BMO IAMs_20 IAMs_20 08 45 45.7
comp=Z,12µm,18.0s
M61A **Granite Spring** 32.52 36 P P 08 31 17.4 -0.1
baz=228
K05A **Summer Lake** 32.53 328 IAMs_20 IAMs_20 08 46 06.0
comp=Z,16µm,18.0s
D46A **Sault St. Mari** 32.53 18 P P 08 31 17.6 0.0
baz=206,SNR=22
K58A **Earlville** 32.53 32 P P 08 31 17.6 -0.1
baz=223
K58A **Earlville** 32.53 32 IAmb IAmb 08 31 49.1
comp=Z,54nm,1.1s
H53A **Bobcaygeon** 32.55 27 P P 08 31 17.0 -0.7
baz=217,SNR=6.1
I55A **Frankford** 32.66 28 P P 08 31 17.9 -0.7
baz=218
WSPT **Westport, CT** 32.67 36 IAmb IAmb 08 31 48.5
comp=Z,36nm,0.9s
L60A **Shokan** 32.73 34 P P 08 31 19.4 +0.1
baz=226
PECO **Prince Edward** 32.76 29 IAmb IAmb 08 31 46.3
comp=Z,38nm,0.7s
E48A **Lockeyer** 32.77 21 P P 08 31 19.7 +0.1
baz=209,SNR=7.5
YBH **Yreka Blue Hor** 32.79 325 P P 08 31 19.1 -0.9
YBH pmax pmax
comp=Z,6.0nm,0.8s
YBH MLR MLR
comp=Z,4µm,20.0s
YBH **Yreka Blue Hor** 32.79 325 P P 08 31 19.1 -0.9
YBH IAMs_20 IAMs_20 08 46 39.8
comp=Z,5µm,20.0s
KHMM **Horse Mountain** 32.79 323 IAmb IAmb 08 31 36.0
comp=Z,130nm,1.9s
KHMM IAMs_20 IAMs_20 08 44 32.7
comp=Z,10µm,19.0s
J57A **Williamstown** 32.84 31 P P 08 31 19.7 -0.6
baz=222,SNR=14
EGMT **Eagleton** 32.84 346 P P 08 31 21.4 +1.0
baz=159,SNR=16
EGMT **Eagleton** 32.84 346 IAMs_20 IAMs_20 08 46 51.7
comp=Z,4µm,19.0s
I07A **Izee** 32.87 331 IAMs_20 IAMs_20 08 45 15.3
comp=Z,5µm,18.0s
K04D **Chiloquin, OR** 32.90 327 P P 08 31 21.8 +0.8
baz=135
L04D **Klamath Falls** 32.90 326 P P 08 31 20.6 -0.4
baz=134
DELO **Delore Mine** 32.92 28 IAmb IAmb 08 31 32.3
comp=Z,59nm,1.1s
JCC **Jacoby Creek,** 32.93 323 IAMs_20 IAMs_20 08 44 14.0
comp=Z,8µm,19.0s
MSO **Missoula** 32.94 340 P P 08 31 22.2 +0.9
baz=151,SNR=14
MSO **Missoula** 32.94 340 IAMs_20 IAMs_20 08 46 03.6
comp=Z,20µm,20.0s
K59A **Cooperstown** 32.95 33 P P 08 31 20.6 -0.7
baz=224
KSCT **Kent School, K** 32.95 35 IAmb IAmb 08 31 39.4
comp=Z,38nm,0.9s
D47A **Chapleau** 32.97 19 P P 08 31 21.1 -0.2
baz=207,SNR=11
G53A **Haliburton** 32.97 26 P P 08 31 20.5 -0.9
baz=216,SNR=6.0
YLE **Yale** 32.99 36 IAMs_20 IAMs_20 08 46 24.0
comp=Z,5µm,22.0s
M62A **Hamden** 33.09 36 P P 08 31 21.0 -1.5
baz=229
J05D **Fort Rock, OR** 33.10 329 P P 08 31 23.5 +0.7
baz=137
F51A **Arnstein** 33.11 24 P P 08 31 21.4 -1.2
baz=213
H55A **Tweed** 33.15 28 P P 08 31 22.1 -0.8
baz=219,SNR=7.8
J58A **Remsen** 33.15 31 P P 08 31 22.7 -0.3
baz=223,SNR=5.9
J58A **Remsen** 33.15 31 IAmb IAmb 08 31 58.6
comp=Z,66nm,1.4s
E50A **Wahnapitae** 33.22 22 P P 08 31 22.8 -0.7
baz=212,SNR=8.4
L61A **Hillsdale 1, H** 33.23 35 P P 08 31 23.7 0.0
baz=227
F52A **Sundridge** 33.23 24 P P 08 31 22.4 -1.3
baz=214,SNR=7.6
PCRV **Puerto La Cruz** 33.27 97 P P 08 31 24.1 -0.3
comp=Z,46nm,1.3s,baz=277,slow=6.4,SNR=2.7
KRMB **Red Mountain** 33.32 324 IAMs_20 IAMs_20 08 44 53.7
comp=Z,7µm,20.0s
PLCV **Puerto La Cruz** 33.32 97 P P 08 31 24.1 -0.7
PINE **Pine Mountain** 33.33 329 IAMs_20 IAMs_20 08 45 45.7
comp=Z,8µm,20.0s
I57A **Carthage** 33.39 30 P P 08 31 24.6 -0.5
baz=222,SNR=7.2
F10A **Beach Ranch, E** 33.40 336 P P 08 31 25.8 +0.6
F10A IAmb IAmb 08 31 38.4
comp=Z,101nm,1.2s
F10A IAMs_20 IAMs_20 08 45 34.0
comp=Z,7µm,20.0s
G54A **Lake Saint Pet** 33.42 26 P P 08 31 24.4 -0.9
baz=217,SNR=7.1
D48A **Paudash Townsh** 33.49 20 P P 08 31 25.5 -0.4
baz=209,SNR=14
J04D **Umpqua Nationa** 33.52 328 P P 08 31 27.4 +1.0
baz=135,SNR=8.2
TRY **Troy** 33.54 34 IAmb IAmb 08 31 40.2
comp=Z,139nm,1.9s
I58A **Old Forge** 33.55 31 P P 08 31 26.2 -0.3
baz=223,SNR=9.4
M63A **Gales Ferry** 33.55 37 P P 08 31 26.6 +0.1
baz=230
G08A **Pilot Rock** 33.56 333 IAMs_20 IAMs_20 08 44 59.6
comp=Z,5µm,22.0s
PLVO **Plevna** 33.57 28 IAmb IAmb 08 31 38.1
comp=Z,118nm,1.8s
H56A **Elgin** 33.60 29 P P 08 31 26.3 -0.6
baz=220,SNR=8.3
L62A **Suffield** 33.61 36 P P 08 31 27.0 0.0
baz=228
J59A **Piesco** 33.62 32 P P 08 31 26.8 -0.3
baz=224
J59A **Piesco** 33.62 32 IAmb IAmb 08 31 53.1
comp=Z,99nm,1.8s
K61A **Williamstown** 33.71 34 P P 08 31 28.4 +0.5
baz=227,SNR=9.5
D49A **Beulah Townshi** 33.73 21 P P 08 31 27.7 -0.3
baz=210,SNR=11
ULM **Lac du Bonnet** 33.73 3 P P 08 31 27.4 -0.6
comp=Z,24nm,0.9s,baz=187,slow=9.1,SNR=17
ULM LR LR 08 46 14.5
comp=Z,4µm,22.0s,baz=198,slow=38
ULM **Lac du Bonnet** 33.73 3 IAmb IAmb 08 31 30.7
comp=Z,38nm,0.9s
ULM IAMs_20 IAMs_20 08 46 05.1
comp=Z,7µm,22.0s
E51A **G1948 Merrick** 33.78 24 P P 08 31 27.8 -0.7
baz=214,SNR=9.5
JTMT **Jette** 33.86 340 IAmb IAmb 08 31 40.5
comp=Z,62nm,1.3s
JTMT IAMs_20 IAMs_20 08 46 18.8
comp=Z,14µm,22.0s
ALGO **Algonquin Park** 33.88 26 P P 08 31 28.4 -0.9
baz=216
L61B **Northampton** 33.88 35 P P 08 31 28.9 -0.5
baz=228
G55A **Calabogie** 33.90 28 P P 08 31 28.9 -0.6
baz=219
E52A **Mattawa** 33.90 25 P P 08 31 28.6 -0.9
baz=215
I05D **Terrebonne, OR** 33.93 330 P P 08 31 30.9 +1.0
baz=138,SNR=8.1
QUA2 **Belchertown** 33.95 35 IAmb IAmb 08 32 11.2
comp=Z,34nm,1.0s
K02D **Willamette Mer** 33.96 326 P P 08 31 30.5 +0.3
baz=132
J60A **Lant Hill Farm** 34.02 33 P P 08 31 30.8 +0.2
baz=226
I04A **Tendick Farm,** 34.07 328 P P 08 31 31.5 +0.4
baz=135
L63A **North Scituate** 34.10 37 P P 08 31 31.6 +0.3
baz=230
M64A **Tiverton** 34.13 37 P P 08 31 31.3 -0.3
baz=231
BRYW **Bryant College** 34.17 37 IAMs_20 IAMs_20 08 47 08.4
comp=Z,5µm,22.0s
I59A **Olmsteadville** 34.18 32 P P 08 31 31.4 -0.5
baz=225,SNR=5.5
D50A **G1974 Best Tow** 34.18 23 P P 08 31 31.1 -0.8
baz=212
E09A **Wood Farm, Sta** 34.21 335 IAMs_20 IAMs_20 08 46 23.4
comp=Z,7µm,21.0s
BBSR **BB Station** 34.22 56 IAMs_20 IAMs_20 08 44 46.4
comp=Z,5µm,20.0s
G06A **Carlson Farm,** 34.27 331 IAMs_20 IAMs_20 08 47 14.4
comp=Z,15µm,18.0s
K62A **Royalston** 34.27 35 P P 08 31 32.2 -0.5
baz=228
D51A **Lot 18 Range I** 34.29 23 P P 08 31 32.2 -0.7
baz=213
E53A **Dumoine, Ponti** 34.38 26 P P 08 31 32.9 -0.8
baz=216
LONY **Lake Ozonia** 34.42 30 P P 08 31 33.5 -0.5
baz=223
LONY **Lake Ozonia** 34.42 30 P P 08 31 33.4 -0.6
LONY IAmb IAmb 08 31 47.8
comp=Z,107nm,1.8s
J01E **Myrtle Point** 34.42 326 P P 08 31 34.9 +0.9
baz=133
F07A **Phinny Hill Vi** 34.46 333 IAMs_20 IAMs_20 08 46 26.3
comp=Z,6µm,18.0s
H58A **Gabriels** 34.47 31 P P 08 31 34.0 -0.5
baz=224
M65A **Busby, Falmout** 34.47 38 IAMs_20 IAMs_20 08 48 06.8
comp=Z,5µm,19.0s
I03D **Drain, OR** 34.48 327 P P 08 31 35.4 +0.8
baz=134
I60A **Shoreham** 34.51 33 P P 08 31 34.6 -0.2
baz=225
F55A **Otter Lake** 34.51 27 P P 08 31 34.2 -0.5
baz=219,SNR=6.4
HRV **Adam Dziewonsk** 34.54 36 P P 08 31 34.7 -0.4
baz=229
J61A **Chester** 34.55 34 P P 08 31 35.3 +0.1
baz=227
E08A **Dider Farm, El** 34.56 334 IAMs_20 IAMs_20 08 45 42.9
comp=Z,4µm,19.0s
D52A **ZEK Kipawa Sen** 34.56 24 P P 08 31 34.6 -0.6
baz=215
G57A **Newington** 34.58 30 P P 08 31 35.0 -0.4
baz=222
L64A **Middleborough** 34.59 37 P P 08 31 35.8 +0.3
baz=231
G05D **Wamic, OR** 34.59 331 P P 08 31 36.6 +1.0
baz=138
H04A **Detroit Lake** 34.59 329 IAmb IAmb 08 31 49.8
comp=Z,75nm,1.0s
H04A IAMs_20 IAMs_20 08 47 01.1
comp=Z,15µm,19.0s
ORIO **Orleans, Innes** 34.60 29 P P 08 31 34.9 -0.6
baz=221
WES **Weston** 34.60 36 IAMs_20 IAMs_20 08 47 30.7
comp=Z,4µm,21.0s
E54A **Lac Daplat, Po** 34.62 26 P P 08 31 35.1 -0.6
baz=217,SNR=8.2
BCX **Boston College** 34.65 36 IAMs_20 IAMs_20 08 47 32.0
comp=Z,4µm,22.0s
K63A **Dunstable** 34.68 36 P P 08 31 36.2 0.0
baz=229
HAWA **Hanford** 34.68 334 IAMs_20 IAMs_20 08 45 46.1
comp=Z,7µm,18.0s
H04D **Lebanon** 34.75 329 P P 08 31 37.2 +0.3
baz=136
J62A **Henniker** 34.87 35 P P 08 31 38.3 +0.3
baz=228
H59A **Cadyville** 34.88 31 P P 08 31 37.6 -0.3
baz=224
WALA **Waterton Lakes** 34.91 342 IAmb IAmb 08 31 50.0
comp=Z,158nm,1.9s
WALA IAMs_20 IAMs_20 08 47 41.5
comp=Z,8µm,19.0s
D53A **Lac Vacive, Po** 34.93 25 P P 08 31 38.3 -0.1
baz=216
E07A **Sunnyside** 34.95 334 IAMs_20 IAMs_20 08 45 55.2
comp=Z,7µm,19.0s
D08A **Wollman Farm,** 34.96 335 IAMs_20 IAMs_20 08 46 29.4
comp=Z,4µm,21.0s
G58A **Ormstown** 35.06 30 P P 08 31 39.2 -0.3
baz=223
COR **Corvallis** 35.08 328 P P 08 31 42.0 +2.3
COR pmax pmax
comp=Z,145nm,1.5s
COR MLR MLR
comp=Z,10µm,20.0s
COR **Corvallis** 35.08 328 P P 08 31 42.0 +2.3
COR **orvallis** 35.08 328 IAMs_20 IAMs_20 08 48 13.6
comp=Z,10µm,20.0s
E55A **Montcerf-Lytto** 35.12 27 P P 08 31 39.6 -0.4
baz=219
I61A **Oroboro, Fairl** 35.14 33 P P 08 31 40.6 +0.3
baz=227
F05D **White Salmon** 35.14 331 P P 08 31 42.0 +1.8
baz=139,SNR=8.4
F57A **Harrington** 35.25 29 P P 08 31 40.7 -0.4
baz=221
NEW **Newport** 35.27 338 P P 08 31 41.6 +0.2
baz=147,SNR=6.9
C09A **Chrisman Ranch** 35.31 336 IAmb IAmb 08 32 19.2
comp=Z,35nm,0.9s
C09A IAMs_20 IAMs_20 08 47 41.6
comp=Z,12µm,19.0s
J63A **Strafford** 35.31 35 P P 08 31 41.8 0.0
baz=229
H60A **Morristown** 35.31 32 P P 08 31 41.5 -0.3
baz=226
NNA **Nana** 35.34 142 IAMs_20 IAMs_20 08 43 05.9
comp=Z,4µm,20.0s
D54A **Lac Fusel, La** 35.41 26 P P 08 31 42.1 -0.5
baz=217
LBNH **Lisbon** 35.50 33 P P 08 31 42.4 -0.9
baz=227
LBNH **Lisbon** 35.50 33 IAmb IAmb 08 31 57.6
comp=Z,124nm,1.6s
G03D **McMinnville, O** 35.51 329 P P 08 31 44.0 +0.6
baz=136
I62A **Tamworth** 35.56 34 P P 08 31 44.2 +0.3
baz=228,SNR=5.8
I62A **Tamworth** 35.56 34 IAmb IAmb 08 32 26.5
comp=Z,82nm,1.1s
F04A **Amboy** 35.62 331 IAMs_20 IAMs_20 08 45 14.2
comp=Z,4µm,18.0s
E56A **St. Veronique** 35.64 28 P P 08 31 43.9 -0.7
baz=220
H61A **Lyndonville** 35.70 33 P P 08 31 45.1 0.0
baz=227
F58A **St-Lin Laurent** 35.70 30 P P 08 31 44.3 -0.7
baz=223
D55A **Sainte-Anne-du** 35.81 27 P P 08 31 45.3 -0.7
baz=219,SNR=12
LTY **Liberty** 35.84 334 P P 08 31 47.5 +1.1
LTY IAMs_20 IAMs_20 08 46 20.8
comp=Z,4µm,18.0s
SVB **Belmont** 35.87 90 IAMs_20 IAMs_20 08 46 59.5
comp=Z,4µm,19.0s
G60A **Masonville** 35.88 32 P P 08 31 46.8 +0.2
baz=226
E57A **Chemin Saint G** 35.95 29 P P 08 31 46.6 -0.6
baz=222
LON **Longmire** 35.95 332 IAMs_20 IAMs_20 08 45 23.9
comp=Z,5µm,19.0s
I63A **Otisfield** 36.09 35 P P 08 31 48.3 -0.1
baz=229
I63A **Otisfield** 36.09 35 IAmb IAmb 08 32 30.8
comp=Z,49nm,1.0s
MCLT **Moule a Chique** 36.09 89 IAMs_20 IAMs_20 08 47 24.9
comp=Z,5µm,21.0s
H62A **Milan** 36.13 34 P P 08 31 49.3 +0.6
baz=228
D56A **ZEC Mazanza, M** 36.15 28 P P 08 31 48.2 -0.8
baz=220,SNR=11
E04D **Cinebar** 36.15 331 P P 08 31 49.7 +0.8
baz=138
B08A **Colville Reser** 36.18 336 IAmb IAmb 08 31 53.4
comp=Z,144nm,2.0s
B08A IAMs_20 IAMs_20 08 48 09.5
comp=Z,13µm,18.0s
F59A **Saint Guilaume** 36.19 31 P P 08 31 48.9 -0.3
baz=224
E58A **La Victoria** 36.32 30 P P 08 31 49.9 -0.5
baz=223
D05A **Enumclaw** 36.37 332 IAmb IAmb 08 31 55.2
comp=Z,49nm,0.9s
D05A IAMs_20 IAMs_20 08 47 36.7
comp=Z,5µm,18.0s
G61A **St-Isidore-de-** 36.42 32 P P 08 31 51.4 +0.1
baz=226
D57A **Chemin Vers le** 36.52 28 P P 08 31 51.1 -0.9
baz=222,SNR=6.9
I64A **Boothbay** 36.53 36 P P 08 31 52.0 -0.2
baz=230
E03A **Lebam** 36.61 330 IAmb IAmb 08 32 12.7
comp=Z,46nm,1.0s
F60A **Warwick** 36.68 31 P P 08 31 52.3 -1.1
baz=225
H63A **New Sharon** 36.79 34 P P 08 31 54.7 +0.4
baz=229
LSQQ **Lebel-sur-Quev** 36.82 23 P P 08 31 54.0 -0.6
baz=215
G62A **West of Eustis** 36.89 33 P P 08 31 55.6 +0.4
baz=228,SNR=7.8
D58A **Chemin du LacG** 37.04 29 P P 08 31 56.3 -0.2

baz=223
D03D Eldon 37.12 332 P **P** 08 31 57.7 +0.5
baz=138,SNR=10
MATQ Matagami 37.15 22 P **P** 08 31 56.9 -0.4
baz=214,SNR=11
F61A St Evariste 37.16 32 P **P** 08 31 58.0 +0.4
baz=226
B06A Marblemount 37.17 334 IAMs_20 IAMs_20 08 48 37.0
comp=Z,9μm,20.0s
E60A Ste Agathe de 37.21 31 P **P** 08 31 57.7 -0.2
baz=226
H64A Troy 37.22 35 P **P** 08 31 58.3 +0.3
baz=230
B05A Bryant 37.23 333 P **P** 08 31 58.0 -0.1
baz=140
G63A Kingsbury 37.31 34 P **P** 08 31 58.4 -0.4
baz=229
NLWA Neilton Lookou 37.37 331 IAmb IAmb 08 32 11.1
comp=Z,119nm,1.4s
NLWA IAMs_20 IAMs_20 08 47 15.5
comp=Z,9μm,19.0s
D59A Saint-Raymond 37.47 30 P **P** 08 32 00.1 0.0
baz=224
BBGH Gun Hill 37.52 90 IAMs_20 IAMs_20 08 48 58.2
comp=Z,5μm,21.0s
PKME Peaks-Kenny Pk 37.58 34 P **P** 08 32 00.2 -0.8
baz=229
F62A Pittston Farm, 37.64 33 P **P** 08 32 01.7 +0.1
baz=228
E61A Lac Etchemin 37.73 32 P **P** 08 32 02.4 0.0
baz=227
H65A Eastbrook 37.79 36 P **P** 08 32 02.8 -0.1
baz=231
A04D Lummi Island 37.84 333 P **P** 08 32 04.1 +0.8
baz=140
D60A Saint Jean D'O 37.85 31 P **P** 08 32 02.6 -0.7
baz=226
G64A Maxfield 37.86 35 P **P** 08 32 03.3 -0.1
baz=230
F63A Nahmakanta, Br 37.96 34 P **P** 08 32 04.3 -0.1
baz=229
FFC Flin Flon 38.27 357 P **P** 08 32 06.8 0.0
FFC pmax pmax
comp=Z,60nm,1.0s
FFC MLR MLR
comp=Z,5μm,21.0s
FFC Flin Flon 38.27 357 P **P** 08 32 06.8 0.0
FFC IAmb IAmb 08 32 16.1
comp=Z,60nm,0.9s
FFC Flin Flon 38.27 357 IAMs_20 IAMs_20 08 48 35.5
comp=Z,5μm,21.0s
E62A Clayton Lake 38.35 32 P **P** 08 32 07.0 -0.6
baz=228
H66A Whiting 38.37 36 P **P** 08 32 05.2 -2.5
baz=232
D61A St Aubert, Com 38.41 31 P **P** 08 32 07.9 -0.1
baz=226
F64A Sherman 38.47 34 P **P** 08 32 08.7 +0.1
baz=230
G65A Princeton 38.48 35 P **P** 08 32 07.3 -1.4
baz=232
CHGQ Chibougamau 38.52 25 P **P** 08 32 08.6 -0.4
baz=218,SNR=10
E63A Oxbow 38.79 33 P **P** 08 32 10.8 -0.4
baz=229
E63A Oxbow 38.79 33 IAmb IAmb 08 32 25.6
comp=Z,59nm,1.0s
D62A Allapoint, All 38.90 32 P **P** 08 32 12.2 +0.1
baz=228
D62A Allapoint, All 38.90 32 IAmb IAmb 08 32 46.5
comp=Z,74nm,1.0s
LLLB Lillooet 38.98 336 IAMs_20 IAMs_20 08 48 57.6
comp=Z,5μm,19.0s
E64A Bridgewater 39.10 34 P **P** 08 32 13.8 -0.1
baz=230
D63A Stockholm 39.36 33 P **P** 08 32 15.7 -0.3
baz=229,SNR=5.8
LMN Caledonia Moun 40.43 36 IAMs_20 IAMs_20 08 50 47.4
comp=Z,4μm,20.0s
BATG Bathurst New B 40.59 34 P **P** 08 32 26.5 +0.3
PTGA Pitinga 41.46 111 P **P** 08 32 32.7 -1.1
comp=Z,5.8nm,0.7s,baz=314,slow=8.9,SNR=13
PTGA Pitinga 41.46 111 P **P** 08 32 32.4 -1.4
PTGA Pitinga 41.46 111 *eP* **P** 08 32 32.8 -1.1
MACA Manacapuru-AM 41.94 114 *eP* **P** 08 32 36.7 -1.1
FCC Fort Churchill 42.32 3 P **P** 08 32 40.1 -0.1
FCC pmax pmax
comp=Z,87nm,1.5s
FCC Fort Churchill 42.32 3 P **P** 08 32 40.1 -0.1
FCC IAmb IAmb 08 32 51.0
comp=Z,86nm,1.4s
BBB Bella Bella 42.73 333 IAMs_20 IAMs_20 08 49 01.2
comp=Z,4μm,21.0s
SAML Samuel 42.93 124 P **P** 08 32 44.7 -1.1
SAML pmax pmax
comp=Z,26nm,1.4s
SAML Samuel 42.93 124 P **P** 08 32 44.7 -1.1
LPAZ La Paz 44.08 136 P **P** 08 32 54.2 -1.5
comp=Z,2.9nm,0.9s,baz=353,slow=8.3,SNR=4.9
LPAZ LR LR 08 49 17.2
comp=Z,3μm,21.9s,baz=314,slow=34
LPAZ La Paz 44.08 136 P **P** 08 32 55.0 -0.8
LPAZ pmax pmax
comp=Z,13nm,1.1s
LPAZ La Paz 44.08 136 P **P** 08 32 55.0 -0.8
LPAZ La Paz 44.08 136 *eP* **P** 08 32 54.5 -1.2
MOBC Moresby Island 45.10 332 IAMs_20 IAMs_20 08 53 45.9
comp=Z,9μm,20.0s
SCHQ Schefferville 45.27 25 P **P** 08 33 04.0 -0.2
comp=Z,34nm,0.9s,baz=219,slow=6.5,SNR=23
SCHQ LR LR 08 54 45.1
comp=Z,3μm,19.9s,baz=220,slow=40
SCHQ Schefferville 45.27 25 P **P** 08 33 03.6 -0.5
SCHQ IAmb IAmb 08 33 06.7
comp=Z,39nm,0.9s
GO01 Chusmiza 45.90 140 IAmb IAmb 08 33 18.1
comp=Z,86nm,1.8s
DRLN Deer Lake 46.42 36 P **P** 08 33 12.7 -0.6
DRLN IAmb IAmb 08 33 27.8
comp=Z,60nm,1.1s
DRLN IAMs_20 IAMs_20 08 54 53.6
comp=Z,5μm,20.0s
PB01 IPOC Station P 46.77 142 P **P** 08 33 15.6 -0.8
PB01 IAmb IAmb 08 33 24.1
comp=Z,61nm,1.8s
CRAG Craig 47.15 334 IAMs_20 IAMs_20 08 55 00.9
comp=Z,8μm,21.0s
YKA Yellowknife Ar 47.37 350 P **P** 08 33 20.1 -0.4
comp=Z,10nm,0.9s,baz=156,slow=7.6,SNR=70
YKA LR LR 08 53 44.5
comp=Z,3μm,18.6s,baz=0.0,slow=37
WRAK Wrangell Islan 47.47 335 IAMs_20 IAMs_20 08 54 40.3
comp=Z,3μm,18.0s
VILB Vilhena 47.65 126 *eP* **P** 08 33 21.4 -1.9
PB06 IPOC Station P 48.01 143 P **P** 08 33 30.2 +4.1
PB06 IAmb IAmb 08 33 46.8
comp=Z,25nm,0.9s
DLBC Dease Lake 48.02 338 IAmb IAmb 08 33 58.1
comp=Z,63nm,1.1s
DLBC IAMs_20 IAMs_20 08 55 28.6
comp=Z,9μm,19.0s
LVC Limon Verde 48.32 143 *eP* **P** 08 33 29.7 +0.9
TAOE Nuku Hiva Isla 48.50 242 *eS* **S** 08 40 34.8 +3.4
comp=Z,1μm,23.0s
TAOE *eLQ* LQ 08 44 06.7
comp=Z,4μm,34.2s
TAOE *eLR* LR 08 46 57.3
comp=Z,6μm,24.8s
TAOE Nuku Hiva Isla 48.50 242 IAMs_20 IAMs_20 08 48 08.4
comp=Z,5μm,18.0s
SIT Sitka 49.12 334 IAMs_20 IAMs_20 08 55 47.0
comp=Z,7μm,20.0s
JIS Juneau Island 49.54 336 IAMs_20 IAMs_20 08 56 41.0
comp=Z,9μm,18.0s
BESE Bessie Mountai 49.93 336 IAMs_20 IAMs_20 08 56 53.3
comp=Z,9μm,19.0s
SKAG Skagway 50.70 337 IAMs_20 IAMs_20 08 55 48.6
comp=Z,5μm,21.0s
WHY Whitehorse 51.34 338 IAMs_20 IAMs_20 08 57 26.5
comp=Z,10μm,20.0s
AC04 Llanos de Chal 51.63 149 IAMs_20 IAMs_20 08 50 16.7
comp=Z,2μm,22.0s
HYT Haines Junctio 52.42 337 IAmb IAmb 08 34 28.6
comp=Z,45nm,1.2s
HYT IAMs_20 IAMs_20 08 58 27.0
comp=Z,7μm,18.0s
YKU2 Yakutat 52.45 335 IAMs_20 IAMs_20 08 58 22.0
comp=Z,9μm,19.0s
AC05 El Transito 52.55 149 P **P** 08 34 03.5 +3.0
AC05 IAmb IAmb 08 34 27.1
comp=Z,97nm,2.0s
SALV Santo Antonio 52.90 125 *eP* **P** 08 34 02.3 -0.7
PRPB Parauapebas 52.93 111 *eP* **P** 08 34 01.2 -2.2
H03N2 Juan Fernandez 52.96 160 T T 09 30 46.5
baz=337,slow=77,SNR=9562
H03N1 Juan Fernandez 52.97 160 T T 09 30 47.6
baz=337,slow=77
H03N3 Juan Fernandez 52.98 160 T T 09 30 46.6
baz=337,slow=77
RKT Rikitea 53.28 223 *eS* **S** 08 41 38.4 +1.2
comp=Z,2μm,27.8s
RKT *eLR* LR 08 49 43.6
comp=Z,4μm,25.2s
RKT Rikitea 53.28 223 *eT* T 09 30 43.0
comp=Z,70nm,0.3s
GO04 Tololo Observa 53.40 150 IAMs_20 IAMs_20 08 51 07.9
comp=Z,4μm,21.0s
CO01 Juntas del Tor 53.58 149 IAMs_20 IAMs_20 08 51 06.6
comp=Z,3μm,22.0s
MESA MESA 53.77 335 IAMs_20 IAMs_20 08 56 50.0
comp=Z,5μm,18.0s
CTGM Chitina Glacie 53.98 336 IAmb IAmb 08 34 28.0
comp=Z,82nm,1.8s
CTGM IAMs_20 IAMs_20 08 59 03.5
comp=Z,9μm,18.0s
CO03 El Pedregal 54.01 151 IAMs_20 IAMs_20 08 51 26.0
comp=Z,4μm,21.0s
CO02 Combarbal 54.17 151 IAMs_20 IAMs_20 08 52 07.1
comp=Z,4μm,20.0s
WAX Waxell Ridge 54.30 335 P **P** 08 34 14.5 +1.7
WAX IAmb IAmb 08 34 24.9
comp=Z,94nm,1.7s
WAX IAMs_20 IAMs_20 09 00 04.8
comp=Z,6μm,20.0s
AIN Ainahou 54.30 282 P **P** 08 34 17.8 +4.2
POHA Pohakuloa 54.33 283 IAMs_20 IAMs_20 08 53 16.7
comp=Z,2μm,19.0s
MLOA Mauna Loa Obse 54.39 282 IAMs_20 IAMs_20 08 53 37.5
comp=Z,7μm,22.0s
BALM Baldy 54.42 335 IAMs_20 IAMs_20 08 59 36.1
comp=Z,6μm,20.0s
HPAH Hawaii Prepara 54.45 283 IAMs_20 IAMs_20 08 53 19.0
comp=Z,2μm,18.0s
KHLU Kahalu`u 54.68 283 IAMs_20 IAMs_20 08 53 35.2
comp=Z,2μm,19.0s
MCARA McCarthy VSAT 54.89 336 IAmb IAmb 08 34 57.3
comp=Z,35nm,0.9s
VRDI Verde Repeater 54.98 335 IAMs_20 IAMs_20 08 59 44.8
comp=Z,7μm,19.0s
RAGM Ragged Mountai 55.02 334 IAMs_20 IAMs_20 08 56 03.1
comp=Z,3μm,21.0s
GLB Gilahina Butte 55.24 335 IAMs_20 IAMs_20 08 59 45.7
comp=Z,8μm,18.0s
C36M Paulatuk 55.24 349 P **P** 08 34 19.2 -0.2
baz=149
C36M Paulatuk 55.24 349 IAMs_20 IAMs_20 09 01 01.7
comp=Z,4μm,18.0s
EYAK Cordova Ski Ar 55.56 334 P **P** 08 34 23.6 +1.8
EYAK IAMs_20 IAMs_20 09 01 16.3
comp=Z,5μm,18.0s
VA03 San Esteban 55.68 152 IAMs_20 IAMs_20 08 53 18.4
comp=Z,4μm,20.0s
HIN Hinchinbrook I 55.81 333 IAMs_20 IAMs_20 08 58 45.8
comp=Z,3μm,19.0s
MT02 Curacav 55.84 153 P **P** 08 34 25.9 +1.8
MT02 IAmb IAmb 08 35 31.0
comp=Z,44nm,1.4s
MT02 IAMs_20 IAMs_20 08 52 56.5
comp=Z,4μm,19.0s
ARAG Araguaiana, MT 55.88 123 *eP* **P** 08 34 24.2 -0.6
EPYK Eagle Plains 55.88 342 P **P** 08 34 24.0 -0.1
baz=134,SNR=7.6
EPYK Eagle Plains 55.88 342 IAmb IAmb 08 35 30.4
comp=Z,36nm,1.2s
PEL Peldehue 55.94 152 IAMs_20 IAMs_20 08 53 01.3
comp=Z,3μm,19.0s
FID Port Fidalgo 55.97 334 IAMs_20 IAMs_20 09 01 32.3
comp=Z,5μm,18.0s
MENT Mentasta 56.05 337 IAMs_20 IAMs_20 08 59 29.8
comp=Z,4μm,19.0s
SMTB Santa Maria do 56.09 113 *eP* **P** 08 34 25.4 -1.0
MT05 Renca 56.12 152 IAMs_20 IAMs_20 08 53 15.2
comp=Z,3μm,20.0s
EGAK Eagle 56.23 339 P **P** 08 34 26.6 0.0
EGAK IAmb IAmb 08 35 03.1
comp=Z,22nm,0.8s
EGAK IAMs_20 IAMs_20 09 00 31.4
comp=Z,7μm,19.0s
HARP HAARP 56.30 336 IAMs_20 IAMs_20 08 59 40.6
comp=Z,5μm,19.0s
GLI Glacier Island 56.30 334 IAMs_20 IAMs_20 09 01 22.9
comp=Z,4μm,19.0s
INK Inuvik 56.42 345 P **P** 08 34 27.8 -0.1
INK pmax pmax
comp=Z,39nm,0.9s
INK MLR MLR
comp=Z,7μm,20.0s
INK Inuvik 56.42 345 P **P** 08 34 27.8 -0.1
INK IAmb IAmb 08 34 53.7
comp=Z,38nm,0.8s
INK IAMs_20 IAMs_20 09 02 03.2
comp=Z,7μm,20.0s
DOT Dot Lake 56.58 337 P **P** 08 34 29.4 +0.3
DOT IAmb IAmb 08 34 59.2
comp=Z,52nm,1.2s
PAX Paxson 56.73 336 IAMs_20 IAMs_20 09 00 48.0
comp=Z,7μm,19.0s
C2SB Chapadao do Su 56.77 126 *eP* **P** 08 34 31.6 +0.5
ROSB Rosrio 56.81 105 *eP* **P** 08 34 31.1 -0.5
SCM Sheep Creek Mo 56.88 335 IAmb IAmb 08 35 35.9
comp=Z,110nm,1.8s
SCM IAMs_20 IAMs_20 09 00 48.4
comp=Z,4μm,19.0s
RIDG Independent Ri 56.92 337 IAMs_20 IAMs_20 08 58 58.8
comp=Z,5μm,18.0s
SEW Seward 56.96 332 P **P** 08 34 29.9 -1.9
SEW IAMs_20 IAMs_20 09 00 24.4
comp=Z,3μm,18.0s
IVI Ivigtut 56.98 26 IAMs_20 IAMs_20 09 00 08.0
comp=Z,3μm,21.0s
GO05 Huala 56.99 154 IAMs_20 IAMs_20 08 53 08.2
comp=Z,3μm,20.0s
KNK Knik Glacier 57.14 334 IAMs_20 IAMs_20 08 59 30.0
comp=Z,4μm,18.0s
SML Sawmill 57.28 334 IAmb IAmb 08 35 03.6
comp=Z,47nm,1.2s
SML IAMs_20 IAMs_20 09 00 07.6
comp=Z,3μm,21.0s
BO02 Sierra Bellavi 57.29 153 P **P** 08 34 37.5 +2.9
BO02 IAMs_20 IAMs_20 08 53 41.1
comp=Z,3μm,19.0s
BRLK Bradley Lake 57.46 332 IAmb IAmb 08 35 15.0
comp=Z,31nm,0.8s
BRLK IAMs_20 IAMs_20 08 59 00.7
comp=Z,3μm,20.0s
KDAK Kodiak Island 57.46 329 P **P** 08 34 35.5 +0.1
KDAK pmax pmax
comp=Z,55nm,1.7s
KDAK MLR MLR
comp=Z,4μm,18.0s
KDAK Kodiak Island 57.46 329 P **P** 08 34 35.5 +0.1
KDAK IAmb IAmb 08 34 39.2
comp=Z,55nm,1.7s
KDAK Kodiak Island 57.46 329 IAMs_20 IAMs_20 08 59 23.6
comp=Z,4μm,18.0s
GHO Glory Hole Cre 57.51 334 IAmb IAmb 08 34 39.6
comp=Z,26nm,0.8s
GHO IAMs_20 IAMs_20 09 00 03.7
comp=Z,3μm,21.0s
PMR Palmer 57.51 334 IAMs_20 IAMs_20 08 59 42.8
comp=Z,4μm,19.0s
CNPM China Poot 57.52 331 IAMs_20 IAMs_20 08 58 42.3
comp=Z,3μm,21.0s
DHY Denali Highway 57.52 336 IAMs_20 IAMs_20 08 59 22.0
comp=Z,3μm,20.0s
RC01 Rabbit Creek A 57.53 333 IAMs_20 IAMs_20 09 02 13.5
comp=Z,3μm,18.0s
OHAK Old Harbor 57.61 328 IAmb IAmb 08 34 40.2
comp=Z,45nm,1.2s
OHAK IAMs_20 IAMs_20 08 59 44.4
comp=Z,4μm,18.0s
A36M Sachs Harbour 57.72 350 P **P** 08 34 36.5 -0.5
baz=149,SNR=37
HOM Homer 57.76 331 IAMs_20 IAMs_20 08 59 12.8
comp=Z,3μm,21.0s
HDA Harding Lake 58.06 337 P **P** 08 34 39.5 0.0
baz=122,SNR=24
HDA Harding Lake 58.06 337 IAmb IAmb 08 35 18.1
comp=Z,26nm,0.9s
HDA IAMs_20 IAMs_20 08 59 33.0
comp=Z,4μm,20.0s
BI03 Tigo 58.14 156 IAMs_20 IAMs_20 08 52 58.7
comp=Z,3μm,21.0s
PMOR Pomariorio Ree 58.14 240 *eT* T 09 36 53.5
comp=Z,12nm,0.2s
PRP Porcupine Dome 58.15 339 P **P** 08 34 40.9 +0.6
PRP IAmb IAmb 08 34 44.3
comp=Z,63nm,1.4s
PRP IAMs_20 IAMs_20 08 58 09.4
comp=Z,3μm,20.0s
ILAR Eielson Array 58.23 338 P **P** 08 34 40.7 0.0
comp=Z,5.3nm,0.7s,baz=133,slow=5.5,SNR=75
ILAR LR LR 09 02 27.0
comp=Z,5μm,21.4s,baz=132,slow=39
RES Resolute Bay 58.24 1 IAMs_20 IAMs_20 08 59 44.0
comp=Z,2μm,20.0s
CPUP Villa Florida 58.25 136 P **P** 08 34 38.7 -2.7
comp=Z,2.3nm,0.9s,baz=340,slow=7.8,SNR=6.5
CPUP LR LR 08 58 21.8
comp=Z,846nm,21.5s,baz=332,slow=35
RND Reindeer 58.27 336 IAMs_20 IAMs_20 08 59 43.8
comp=Z,4μm,22.0s
MCK McKinley 58.46 336 IAmb IAmb 08 35 16.1
comp=Z,32nm,1.0s
MCK IAMs_20 IAMs_20 09 00 28.8
comp=Z,4μm,19.0s
CCB Clear Creek Bu 58.50 337 IAMs_20 IAMs_20 08 59 45.6
comp=Z,4μm,20.0s
WRH Wood River Hil 58.51 337 IAmb IAmb 08 35 16.5
comp=Z,25nm,0.9s
WRH IAMs_20 IAMs_20 09 01 07.1
comp=Z,5μm,19.0s
POKR Poker Plat Res 58.61 338 P **P** 08 34 43.7 +0.3
baz=122,SNR=13
COLA College 58.63 338 *c iP* **P** 08 34 43.7 +0.2
COLA pmax pmax
comp=Z,56nm,2.2s
COLA College 58.63 338 P **P** 08 34 43.5 0.0
COLA IAmb IAmb 08 35 21.9
comp=Z,34nm,0.9s
COLA College 58.63 338 IAMs_20 IAMs_20 09 02 37.3
comp=Z,5μm,19.0s
TCOL CIGO, UAF Yank 58.64 338 P **P** 08 34 43.5 0.0
baz=121,SNR=7.7
FYU Fort Yukon 58.65 340 IAmb IAmb 08 35 14.8
comp=Z,84nm,1.5s
BI02 San Fabin de 58.68 155 IAMs_20 IAMs_20 08 54 10.0
comp=Z,2μm,19.0s
MDM Murphy Dome 58.81 338 IAmb IAmb 08 35 44.1
comp=Z,36nm,1.4s
TRF Thorofare Moun 58.86 336 IAMs_20 IAMs_20 09 02 08.3
comp=Z,5μm,19.0s
BWN Browne 58.88 336 IAMs_20 IAMs_20 09 00 17.2
comp=Z,4μm,20.0s
NEA Nenana 58.94 337 IAmb IAmb 08 34 56.2
comp=Z,49nm,1.4s
NEA IAMs_20 IAMs_20 09 01 20.3
comp=Z,4μm,21.0s
BDFB Brasilia 58.96 120 P **P** 08 34 45.6 -1.0
comp=Z,6.7nm,0.6s,baz=293,slow=10,SNR=13
BDFB Brasilia 58.96 120 IAMs_20 IAMs_20 09 03 00.5
comp=Z,2μm,18.0s
SFJD Kangerlussuaq 59.10 20 P **P** 08 34 46.8 +0.1
SFJD pmax pmax
comp=Z,67nm,1.5s
SFJD MLR MLR
comp=Z,3μm,19.0s
SFJD Kangerlussuaq 59.10 20 P **P** 08 34 46.8 +0.1
SFJD IAmb IAmb 08 35 24.1
comp=Z,67nm,1.5s
SFJD Kangerlussuaq 59.10 20 IAMs_20 IAMs_20 09 04 32.2
comp=Z,3μm,19.0s
SFJD Kangerlussuaq 59.10 20 *i* P **P** 08 34 46.6 -0.1
KTH Kantishna Hill 59.16 335 IAmb IAmb 08 34 50.5
comp=Z,32nm,0.8s
KTH IAMs_20 IAMs_20 09 02 16.2
comp=Z,5μm,19.0s
PPLA Purkeypile 59.38 335 IAMs_20 IAMs_20 09 02 18.1
comp=Z,7μm,18.0s
BPAW Bear Paw Mtn. 59.44 336 IAmb IAmb 08 34 59.6
comp=Z,44nm,1.4s
BPAW IAMs_20 IAMs_20 09 02 36.5
comp=Z,5μm,19.0s
PCMB Pacaembu 59.62 128 *eP* **P** 08 34 51.8 +0.8
MLY Manley 59.78 337 IAmb IAmb 08 35 28.7
comp=Z,45nm,1.0s
MLY IAMs_20 IAMs_20 09 00 49.4
comp=Z,4μm,19.0s
CHGN Chignik 59.98 326 IAMs_20 IAMs_20 09 00 40.2
comp=Z,1μm,18.0s
IPMB Ipameri, GO 60.01 123 *eP* **P** 08 34 54.9 +1.1
SVW2 Sparrevohn 60.12 332 IAmb IAmb 08 35 34.1
comp=Z,36nm,1.2s
SVW2 IAMs_20 IAMs_20 09 04 03.7
comp=Z,3μm,20.0s
ILULI Ilulissat 60.24 18 IAMs_20 IAMs_20 09 04 37.2
comp=Z,3μm,18.0s
CNBA Chernabura Isl 60.24 324 IAMs_20 IAMs_20 09 00 11.1
comp=Z,2μm,19.0s
LC01 Cunco 60.37 156 IAMs_20 IAMs_20 08 54 19.1
comp=Z,2μm,20.0s
TIAR Tiarei 60.64 238 *eT* T 09 40 00.2
comp=Z,2.1nm,0.2s
COLD Coldfoot 60.66 339 IAmb IAmb 08 35 01.9
comp=Z,77nm,1.9s
COLD IAMs_20 IAMs_20 08 59 07.6
comp=Z,6μm,18.0s
PPT Papeete 60.84 239 LR LR 08 54 33.3
comp=Z,2μm,18.6s,baz=64,slow=29
PPT2 Papeete2 60.85 239 *eS* **S** 08 43 21.9 +4.5
comp=Z,3μm,28.0s
PPT2 *eSS* **SS** 08 47 18.6 +1.8
comp=Z,555nm,26.2s
PPT2 *eLQ* LQ 08 50 20.7
comp=Z,3μm,35.0s
PPT2 *eLR* LR 08 52 41.1
comp=Z,4μm,25.5s
SDPT Sand Point 60.87 325 IAMs_20 IAMs_20 09 00 52.5
comp=Z,2μm,20.0s
TOLK Toolik Lake Re 61.18 341 P **P** 08 35 01.5 +0.5
baz=121,SNR=10
TOLK Toolik Lake Re 61.18 341 P **P** 08 35 01.4 +0.3
TOLK IAMs_20 IAMs_20 09 03 56.2
comp=Z,7μm,22.0s
TULEG Thule 61.97 7 P **P** 08 35 05.5 -0.6
TULEG IAmb IAmb 08 35 53.2
comp=Z,28nm,1.2s
TULEG IAMs_20 IAMs_20 09 03 03.2
comp=Z,3μm,21.0s
KULLO Kullorsuaq 62.26 11 *i* P **P** 08 35 08.3 +0.1
KULLO pmax pmax
comp=Z,25nm,1.0s
KULLO Kullorsuaq 62.26 11 *i* P **P** 08 35 08.3 +0.1
comp=Z,25nm,1.0s
ITAB Concordia 62.37 134 *eP* **P** 08 35 11.3 +1.8
FALS False Pass 62.41 324 IAMs_20 IAMs_20 09 02 53.1
comp=Z,2μm,18.0s
PLCA Paso Flores 62.47 157 P **P** 08 35 08.6 -1.5
comp=Z,5.7nm,1.1s,baz=316,slow=10,SNR=6.0
PLCA LR LR 08 57 13.3
comp=Z,3μm,18.5s,baz=334,slow=31
PLCA Paso Flores 62.47 157 P **P** 08 35 11.3 +1.2
PLCA pmax pmax
comp=Z,21nm,1.1s
PLCA Paso Flores 62.47 157 P **P** 08 35 11.3 +1.2
PLCA Paso Flores 62.47 157 *eP* **P** 08 35 14.4 +4.3
MC01 Montes Claros 62.88 119 *eP* **P** 08 35 14.6 +1.3
LL01 San Ignacio de 63.23 159 P **P** 08 35 17.7 +2.7
LL01 IAmb IAmb 08 35 24.5
comp=Z,36nm,1.4s
LL01 IAMs_20 IAMs_20 08 56 00.6
comp=Z,3μm,20.0s
CPSB Cacapava Do Su 63.51 137 *eP* **P** 08 35 19.8 +2.7
TBI Tubuai 63.82 233 *eS* **S** 08 43 59.0 +4.5
comp=Z,1μm,27.2s
TBI *eLQ* LQ 08 51 31.9
comp=Z,2μm,31.8s
TBI *eLR* LR 08 54 15.7
comp=Z,4μm,26.2s
TBI Tubuai 63.82 233 *eT* T 09 43 55.5
comp=Z,60nm,0.2s

UNV Unalaska Valle 64.03 322 P P 08 35 21.4 +1.1
PLTB Pedras Altas 64.30 138 *e*P P 08 35 25.6 +3.2
ROSA Rosais 64.39 55 *e*P P 08 35 23.1 +0.2
comp=Z,52nm,1.1s
SRBC Serra Branca 64.54 54 *e*P P 08 35 23.1 -0.8
comp=Z,113nm,1.4s
PGRA Graciosa 64.58 54 *e*P P 08 35 23.9 -0.3
comp=Z,32nm,0.5s
NIKH Nikolski High 65.34 321 IAMs_20 IAMs_20 09 05 03.6
comp=Z,2µm,20.0s
RDOG Red Dog Mine 65.44 338 IAmb IAmb 08 35 32.5
comp=Z,75nm,1.9s
RDOG IAMs_20 IAMs_20 09 07 16.9
comp=Z,4µm,18.0s
ANM Nome 65.45 334 IAMs_20 IAMs_20 09 06 26.7
comp=Z,4µm,20.0s
RCBR Riachuelo 65.51 104 P P 08 35 30.3 -0.3
RCBR pmax pmax
comp=Z,53nm,1.2s
RCBR MLR MLR
comp=Z,1µm,22.0s
RCBR Riachuelo 65.51 104 P P 08 35 30.3 -0.3
RCBR IAmb IAmb 08 35 46.1
comp=Z,53nm,1.2s
SUMG Summit 65.52 17 *i* P P 08 35 30.5 +0.4
SUMG pmax pmax
comp=Z,57nm,0.7s
SUMG Summit 65.52 17 P P 08 35 29.6 -0.5
SUMG IAmb IAmb 08 35 42.2
comp=Z,34nm,0.9s
SUMG IAMs_20 IAMs_20 09 05 50.7
comp=Z,3µm,20.0s
SUMG Summit 65.52 17 *i* P P 08 35 30.5 +0.4
comp=Z,57nm,0.7s
PSET Sete Cidades 66.40 56 *e*P P 08 35 35.4 -0.6
comp=Z,85nm,0.6s
BSFB Barra de Sao F 66.48 120 *e*P P 08 35 37.7 +1.0
CMLA Cha da Macela 66.56 56 *e*P P 08 35 36.7 -0.3
comp=Z,152nm,1.7s
BART Pico Bartolome 66.84 56 *e*P P 08 35 39.4 +0.5
comp=Z,70nm,1.1s
PSMN Pico do Norte, 66.97 56 *e*P P 08 35 38.9 -0.7
comp=Z,60nm,1.2s
ATKA Atka Island 68.55 320 P P 08 35 49.2 0.0
ATKA IAmb IAmb 08 35 56.3
comp=Z,38nm,1.1s
ADK Adak 70.09 320 P P 08 35 57.6 -1.2
ADK pmax pmax
comp=Z,40nm,1.0s
ADK MLR MLR
comp=Z,1µm,20.0s
ADK Adak 70.09 320 P P 08 35 57.6 -1.2
ADK IAmb IAmb 08 36 06.9
comp=Z,40nm,0.9s
DAG Danmarks Havn 71.68 14 *i* P P 08 36 07.6 -0.4
DAG pmax pmax
comp=Z,17nm,0.8s
DAG Danmarks Havn 71.68 14 *i* P P 08 36 07.6 -0.4
comp=Z,17nm,0.8s
NOR Nord 72.56 9 *i* P P 08 36 13.3 0.0
NOR Nord 72.56 9 *i* P P 08 36 13.3 0.0
EFI East Falkland 76.37 156 IAMs_20 IAMs_20 09 05 11.0
comp=Z,3µm,19.0s
BILL Bilibino 76.89 337 *c i* P P 08 36 38.6 +0.1
BILL *i* *SP **sP** 08 36 45.5 +1.4
BILL *i* S **S** 08 46 27.0 +1.1
BILL *i* 08 46 36.7
BILL *e* 08 46 53.5
BILL *e*SS **SS** 08 51 26.0 +4.3
BILL SSS SSS 08 54 45.0
BILL pmax pmax
comp=Z,51nm,2.0s
BILL MLR MLR
comp=Z,3µm,18.0s
BILL Bilibino 76.89 337 P P 08 36 38.5 -0.1
BILL IAmb IAmb 08 36 46.5
comp=Z,54nm,1.5s
KBS Kingsbay 77.72 11 P P 08 36 44.4 +1.4
KBS Kingsbay 77.72 11 P P 08 36 44.4 +1.4
KBS Kingsbay 77.72 11 IAMs_20 IAMs_20 09 15 49.4
comp=Z,3µm,19.0s
PMAFR Mafra 79.04 53 *e*P P 08 36 50.8 -0.3
PCAB Cabril 79.39 50 *e*P P 08 36 54.1 +1.1
comp=Z,39nm,1.3s
PCAS Casmilo, Conde 79.40 51 *e*P P 08 36 53.4 +0.4
comp=Z,127nm,1.6s
COI Coimbra 79.43 51 IAMs_20 IAMs_20 09 18 16.0
comp=Z,2µm,18.0s
ESK Eskdalemuir 79.44 35 IAMs_20 IAMs_20 09 15 56.8
comp=Z,2µm,20.0s
PVIS Viseu 79.70 51 *e*P P 08 36 55.1 +0.4
comp=Z,36nm,1.3s
PTEO Sao Teotonio 79.78 54 *e*P P 08 36 56.1 +1.0
comp=Z,88nm,1.9s
PFVI Vila Bisbo 79.79 54 IAMs_20 IAMs_20 09 09 37.7
comp=Z,2µm,19.0s
PNCL Nicolau / Gran 79.80 53 *e*P P 08 36 55.5 +0.3
comp=Z,48nm,1.3s
PMTG Montargil 79.82 52 *e*P P 08 36 55.4 +0.1
comp=Z,51nm,1.7s
MORF Marmelete 79.89 54 *e*P P 08 36 55.4 -0.4
MORF AMb AMB 08 37 03.6
comp=Z,56nm,1.8s
MORF *e*PP **PP** 08 39 56.4 -0.7
MORF *e*S **S** 08 46 59.1 -0.3
MORF Marmelete 79.89 54 *e*P P 08 36 55.4 -0.4
MORF *e* 08 39 56.4
MORF *e*S **S** 08 46 59.1 -0.3
MORF pmax pmax
comp=Z,56nm,1.8s
MORF Marmelete 79.89 54 *e*P P 08 36 55.6 -0.2
comp=Z,61nm,1.4s
MTE Manteigas 80.03 51 *e*P P 08 36 56.4 -0.2
comp=Z,51nm,1.2s
MTE Manteigas 80.03 51 P P 08 36 55.8 -0.8
MTE IAMs_20 IAMs_20 09 18 11.0
comp=Z,2µm,18.0s
MESJ Messejana 80.10 53 *e*P P 08 36 56.6 -0.3
MESJ AMb AMB 08 37 00.5
comp=Z,26nm,1.8s
MESJ *e*PP **PP** 08 39 58.1 -0.7
MESJ Messejana 80.10 53 *e*P P 08 36 56.6 -0.3
MESJ *e* 08 39 58.1
MESJ pmax pmax
comp=Z,26nm,1.8s
MESJ Messejana 80.10 53 *e*P P 08 36 56.8 -0.1
comp=Z,35nm,1.5s
PCBR Castelo Branco 80.21 51 *e*P P 08 36 57.5 +0.1
comp=Z,44nm,1.5s
MVO Moncorvo 80.24 50 *e*P P 08 36 57.8 +0.1
comp=Z,54nm,1.5s
PCVE Castro Verde 80.29 54 *e*P P 08 36 58.4 +0.5
comp=Z,41nm,1.8s
PBEJ Beja 80.33 53 *e*P P 08 36 58.4 +0.3
comp=Z,51nm,1.5s
PMRV Marv??o 80.37 52 *e*P P 08 36 58.3 0.0
comp=Z,63nm,1.6s
PBDV Barranco-do-Ve 80.46 54 *e*P P 08 36 59.5 +0.6
comp=Z,94nm,1.6s
PVAQ Vaqueiros 80.59 54 *e*P P 08 36 59.9 +0.4
comp=Z,62nm,1.6s
PVAQ Vaqueiros 80.59 54 IAMs_20 IAMs_20 09 15 25.9
comp=Z,1µm,18.0s
PAB San Pablo 82.62 51 P P 08 37 10.1 -0.3
PAB pmax pmax
comp=Z,34nm,1.1s
PAB San Pablo 82.62 51 P P 08 37 10.1 -0.3
PAB IAmb IAmb 08 37 24.0
comp=Z,34nm,1.1s
PAB San Pablo 82.62 51 IAMs_20 IAMs_20 09 10 39.4
comp=Z,1µm,21.0s
SMIR Smir Dam 82.84 55 P P 08 37 14.0 +2.6
SNR=5.5
ESDC Sonseca Array 82.88 51 P P 08 37 11.1 -0.5
comp=Z,2.1nm,0.8s,baz=296,slow=4.7,SNR=14
SEY Seymchan 83.96 334 LR LR 09 17 28.4
comp=Z,2µm,18.1s,baz=33,slow=38
TZRR Tazzarine 83.97 60 P P 08 37 21.0 +3.5
SNR=5.0
GOLM Goulmima 84.23 59 P P 08 37 21.0 +2.1
SNR=6.3
AKLM AKL 84.35 56 P P 08 37 21.0 +1.6
SNR=6.4
SESP Santiago Espad 84.37 52 P P 08 37 21.1 +1.6
SNR=6.7
KONO Kongsberg 84.63 29⇑ *e*P P 08 37 20.4 +0.3
KONO pmax pmax
comp=Z,17nm,1.0s
KONO Kongsberg 84.63 29 P P 08 37 20.3 +0.2
KONO IAmb IAmb 08 37 34.6
comp=Z,42nm,1.1s
KONO Kongsberg 84.63 29 IAMs_20 IAMs_20 09 16 26.7
comp=Z,1µm,20.0s
PET Petropavlovsk 84.64 324 *c i* P P 08 37 20.0 -0.2
PET *e* 08 40 36.6
PET *e*S **S** 08 47 43.5 -3.8
PET *e*PS **PnS** 08 48 32.6 -8.8
PET *e*SS **SS** 08 53 19.9 +2.0
PET pmax pmax
comp=Z,600nm,13.6s
PET pmax pmax
comp=Z,48nm,1.3s
PET pmax pmax
comp=Z,300nm,15.4s
PET MLR MLR
comp=Z,900nm,18.0s
PET Petropavlovsk 84.64 324 IAMs_20 IAMs_20 09 17 43.2
comp=Z,1µm,19.0s
CLF Chambon-Foret 84.75 42 IAMs_20 IAMs_20 09 12 53.2
comp=Z,2µm,20.0s
NB2 NORSAR Subarra 84.79 27 P P 08 37 21.6 +0.6
comp=Z,587nm,3.3s,baz=302,slow=5.1
NB2 NORSAR Subarra 84.79 27 P P 08 37 21.6 +0.6
baz=302,slow=5.1
NOA NORSAR Array B 84.79 27 P P 08 37 20.8 -0.2
comp=Z,2.7nm,0.7s,baz=300,slow=5.0,SNR=11
ARF Arif 84.91 59 P P 08 37 24.0 +1.7
SNR=5.1
PEA0B Petropavlovsk- 85.15 324 IAMs_20 IAMs_20 09 13 54.6
comp=Z,942nm,20.0s
PETK Petropavlovsk- 85.15 324 P P 08 37 22.9 +0.1
comp=Z,5.4nm,0.7s,baz=90,slow=9.2,SNR=7.6
PETK Petropavlovsk- 85.15 324 P P 08 37 23.0 +0.1
ARCES ARCESS Array B 85.61 17 P P 08 37 24.1 -0.7
comp=Z,9.4nm,0.8s,baz=328,slow=4.3,SNR=12
CART Cartagena 85.69 52 IAMs_20 IAMs_20 09 17 14.0
comp=Z,2µm,18.0s
MA2 Magadan 86.10 332 LR LR 09 17 04.7
comp=Z,1µm,18.2s,baz=52,slow=36
MA2 Magadan 86.10 332 *c e* P P 08 37 27.2 -0.3
MA2 pmax pmax
comp=Z,22nm,1.3s
MA2 Magadan 86.10 332 IAMs_20 IAMs_20 09 20 54.9
comp=Z,1µm,20.0s
TIXI Tiksi 86.52 347 LR LR 09 21 57.0
comp=Z,993nm,18.2s,baz=70,slow=40
TIXI Tiksi 86.52 347 *c i* P P 08 37 28.3 -1.0
TIXI pmax pmax
comp=Z,61nm,2.5s
TIXI Tiksi 86.52 347 P P 08 37 28.0 -1.3
TIXI IAmb IAmb 08 37 39.0
comp=Z,41nm,1.5s
TIXI IAMs_20 IAMs_20 09 21 45.5
comp=Z,1µm,18.0s
IBBN Ibbenburen 86.55 36 *e*P P 08 37 29.4 -0.4
baz=295,slow=4.6
WLF Walferdange 86.60 39 *e*P P 08 37 29.7 -0.5
comp=Z,30nm,1.3s,baz=295,slow=4.6
WLF Walferdange 86.60 39 IAMs_20 IAMs_20 09 22 45.2
comp=Z,2µm,18.0s
BUG Bochum--Univer 86.60 37 *e*P P 08 37 29.6 -0.5
comp=Z,25nm,1.6s,baz=295,slow=4.6
AHRW Bad Neuenahr-A 86.83 38 *e*P P 08 37 30.7 -0.5
comp=Z,9.2nm,0.7s,baz=295,slow=4.6
RETH Rethem/Aller, 87.28 35 *e*P P 08 37 33.1 -0.2
comp=Z,25nm,1.5s,baz=295,slow=4.6
ECH Echery 87.75 40 IAMs_20 IAMs_20 09 15 40.8
comp=Z,2µm,21.0s
TNS Taunus Mts 87.76 38 *e*P P 08 37 35.0 -0.8
comp=Z,7.6nm,0.9s,baz=295,slow=4.6
UBBA Unterbreizbach 88.43 37 *e*P P 08 37 37.6 -1.1
comp=Z,25nm,1.9s,baz=295,slow=4.6
BFO Black Forest 88.43 40 *e*P P 08 37 37.3 -1.7
baz=295,slow=4.6
BFO Black Forest 88.43 40 IAMs_20 IAMs_20 09 16 23.7
comp=Z,2µm,20.0s
SENIN Lac Senin/Sane 88.55 42 IAMs_20 IAMs_20 09 20 14.8
comp=Z,2µm,19.0s
BNI Bardonecchia 88.64 43 IAMs_20 IAMs_20 09 20 59.3
comp=Z,2µm,18.0s
RGN Rugen 88.64 33 IAMs_20 IAMs_20 09 18 05.9
comp=Z,2µm,21.0s
MSVF Nonsavu 89.14 251 IAMs_20 IAMs_20 09 08 15.5
comp=Z,1µm,20.0s
LVZ Lovozero 89.20 16 IAMs_20 IAMs_20 09 19 53.6
comp=Z,2µm,20.0s
WAKE Wake Island 89.31 290 IAMs_20 IAMs_20 09 23 07.6
comp=Z,1µm,21.0s
MOX Moxa 89.43 37 *e*P P 08 37 42.3 -1.3
comp=Z,6.6nm,1.2s,baz=295,slow=4.6
GRA1 Grafenberg Arr 89.61 38 IAMs_20 IAMs_20 09 21 13.8
comp=Z,2µm,18.0s
UBR Ueberruh 89.79 40 *e*P P 08 37 44.1 -1.4
comp=Z,14nm,1.2s,baz=295,slow=4.6
CLL Collm 89.93 36 *e*P P 08 37 46.0 +0.1
CLL *i* sP **sP** 08 37 53.4 +1.8
CLL *e*PP **PP** 08 41 18.0 -0.2
CLL *e*PPP PPP 08 43 18.0
CLL *e*SKSac **SKSac** 08 48 20.0 +3.4
CLL *e*PS **PS** 08 49 48.0 +2.7
CLL *e*SS **SS** 08 54 42.0 +6.8
CLL *e*SSS SSS 08 58 24.0
CLL LmV 09 23 00.0
comp=Z,1µm,19.4s
CLL Collm 89.93 36 *e*P P 08 37 45.4 -0.6
baz=295,slow=4.6
CLL Collm 89.93 36 *e*P P 08 37 46.0 +0.1
CLL *i* 08 37 53.4
CLL MLR MLR
comp=Z,1µm,19.4s
CLL Collm 89.93 36 IAMs_20 IAMs_20 09 23 04.1
comp=Z,1µm,19.0s
GUNZ Gunzen 89.97 37 *e*P P 08 37 45.0 -1.2
comp=Z,24nm,1.9s,baz=295,slow=4.6
MANZ Manzenberg 90.00 37 *e*P P 08 37 45.1 -1.2
comp=Z,6.3nm,1.4s,baz=295,slow=4.6
TANN Tannenbergstha 90.02 37 *e*P P 08 37 45.2 -1.2
comp=Z,24nm,1.5s,baz=295,slow=4.6
WERN Wernitzgruen 90.03 37 *e*P P 08 37 45.4 -1.1
comp=Z,17nm,1.5s,baz=295,slow=4.6
ROTZ Rotzenmuhle 90.16 37 *e*P P 08 37 45.8 -1.2
comp=Z,5.7nm,1.3s,baz=295,slow=4.6
RETA Reutte 90.27 40 *e*PcP P 08 37 48.1 +0.4
comp=Z,13nm,1.5s
FBE Freiberg 90.30 36 *e*P P 08 37 46.6 -1.1
baz=295,slow=4.6
FUORN Ofenpass-Fuorn 90.32 41 P P 08 37 47.6 -0.6
FUORN IAMs_20 IAMs_20 09 18 47.8
comp=Z,2µm,21.0s
FETA Feichten 90.45 40 *e*PcP P 08 37 49.2 +0.5
comp=Z,7.6nm,1.1s
MOTA Moosalm 90.54 40 *e*PcP P 08 37 48.7 -0.3
comp=Z,7.2nm,1.1s
BRG Berggiesshubel 90.65 36 *e*P P 08 37 48.9 -0.4
comp=Z,4.5nm,0.8s
BRG *e* 08 37 56.3
comp=Z,5.4nm,1.0s
BRG PP **PP** 08 41 19.0 -5.0
BRG SKS **SKSac** 08 48 18.0 -2.9
BRG SS **SS** 08 54 49.0 +3.2
comp=N,971nm,18.3s
comp=E,893nm,17.1s
comp=Z,1µm,17.3s
BRG Berggiesshubel 90.65 36 *e*P P 08 37 48.2 -1.1
comp=Z,9.7nm,1.2s,baz=295,slow=4.6
BRG Berggiesshubel 90.65 36 *e*P P 08 37 48.9 -0.4
BRG *e* 08 37 56.3
BRG 08 41 19.0
BRG 08 48 18.0
BRG SS SS 08 54 49.0 +3.2
BRG pmax pmax
comp=Z,5.0nm,0.8s
BRG pmax pmax
comp=Z,5.0nm,1.0s
BRG MLR MLR
comp=N,971nm,18.3s
BRG MLR MLR
comp=E,893nm,17.1s
BRG MLR MLR
comp=Z,1µm,17.3s
SQTA Sankt Quirin 90.66 40 *e*PcP P 08 37 48.9 -0.7
comp=Z,9.3nm,1.2s
FINES FINESS Array B 90.72 23 P P 08 37 48.2 -1.2
comp=Z,5.3nm,0.8s,baz=304,slow=3.7,SNR=12
WET Wettzell 90.82 38 *e*P P 08 37 49.2 -1.0
comp=Z,7.9nm,1.0s,baz=295,slow=4.6
WATA Walderalm 90.83 40 *e*PcP PcP 08 37 51.0 -0.5
comp=Z,2.4nm,0.6s
WTTA Wattenberg 90.90 40 *e*PcP P 08 37 50.1 -0.7
comp=Z,14nm,1.7s
PRMA PARMA 91.13 42 IAMs_20 IAMs_20 09 22 04.1
comp=Z,3µm,18.0s
TIC Toumodi 91.22 83 *e*P P 08 37 52.9 +0.2
KHC Kasperske Hory 91.24 38 IAMs_20 IAMs_20 09 21 52.9
comp=Z,1µm,18.0s
LIC Lamto 91.33 83 *e*P P 08 37 51.7 -1.5
comp=Z,39nm,1.2s
RJOB Jochberg 91.40 39 *e*P P 08 37 51.8 -1.2
comp=Z,5.9nm,1.2s,baz=295,slow=4.6
VLC Villacollemand 91.42 43 IAMs_20 IAMs_20 09 19 22.0
comp=Z,1µm,19.0s
CTI Castel Tesino 91.44 41 IAMs_20 IAMs_20 09 23 53.2
comp=Z,884nm,19.0s
GEC2 GERESS Array S 91.44 38 *e*P P 08 37 51.8 -1.3
comp=Z,25nm,1.7s,baz=295,slow=4.6
GERES GERESS Array B 91.44 38 P P 08 37 52.6 -0.6
comp=Z,0.8nm,0.3s,baz=309,slow=4.9,SNR=6.8
KIC Kosan Boka 91.57 83 *e*P P 08 37 50.6 -3.7
comp=Z,38nm,1.5s
ABTA Abfaltersbach 91.67 40 *e*PcP P 08 37 54.2 -0.1
comp=Z,10nm,1.3s
KBA Koelnbreinsper 92.03 39 *e*PcP P 08 37 55.3 -0.8
comp=Z,7.7nm,1.2s
MOA Molln 92.23 39 *e*PcP P 08 37 56.9 +0.1
comp=Z,13nm,1.4s
ROBS Robic 92.51 40 *i* P P 08 37 57.1 -0.9
VSL Villasalto 92.64 48 IAMs_20 IAMs_20 09 22 11.8
comp=Z,989nm,18.0s
VOJS Vojsko 92.84 40 *i* P P 08 37 59.0 -0.7
TRI Trieste 92.91 41 IAMs_20 IAMs_20 09 20 20.2
comp=Z,1µm,21.0s
OBKA Obir 93.03 40 *e*P P 08 37 59.4 -1.1
comp=Z,5.6nm,1.1s
YAK Yakutsk 93.11 339 *e*P P 08 37 55.5 -4.9
YAK *e*PP sP 08 38 05.8 -0.2
YAK *e* 08 41 41.8
YAK *e*PPP PPP 08 43 42.2
YAK *e*S **SKSac** 08 48 25.6 -8.6
YAK *e*SS **SKKSac** 08 48 59.5 +6.5
YAK pmax pmax
comp=Z,7.0nm,0.6s
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=Z,215nm,18.1s
YAK pmax pmax
comp=E,75nm,18.1s
YAK pmax pmax
comp=N,121nm,21.5s
YAK smax smax
comp=N,274nm,8.1s
YAK smax smax
comp=E,197nm,8.6s
YAK MLR MLR
comp=Z,2µm,26.0s
YAK MLR MLR
comp=E,1µm,24.0s
YAK MLR MLR
comp=N,1µm,23.0s
YAK Yakutsk 93.11 339 IAMs_20 IAMs_20 09 20 59.7
comp=Z,2µm,20.0s
CONA Conrad Observa 93.14 38 *e*PcP P 08 38 00.3 -0.7
comp=Z,4.6nm,1.1s
MORC Moravsky Berou 93.20 36 IAMs_20 IAMs_20 09 23 59.7
comp=Z,2µm,18.0s
SOKA Soboth 93.24 39 *e*PcP P 08 38 01.5 0.0
comp=Z,3.2nm,1.1s
CRES Cresnjev 93.91 40 *e*P P 08 38 04.0 -0.5
NKL Nikolayevsk 94.19 329 *e*P P 08 38 03.0 -2.6
NKL pmax pmax
comp=Z,21nm,1.3s
NKL pmax pmax
comp=E,2.0nm,0.9s
NKL pmax pmax
comp=N,7.0nm,1.3s
AQU L'Aquila 94.19 44 IAMs_20 IAMs_20 09 24 17.3
comp=Z,2µm,20.0s
TORD Torodi Ar. Bea 95.60 75 P P 08 38 10.4 -2.5
comp=Z,1.3nm,0.8s,baz=294,slow=4.5,SNR=6.8
TORD PKKPbc **PKKPdf** 08 55 05.0 +1.3
comp=Z,1.1nm,1.0s,baz=98,slow=4.4,SNR=4.3
KLMR Klimovskoe 95.84 19 *e*P P 08 38 10.4 -2.5
KLMR *e* 08 42 00.9
KLMR *e*S **SKSac** 08 48 45.6 -3.4
KLMR *e*SS **SS** 08 55 51.8 -7.4
KLMR pmax pmax
comp=Z,25nm,1.3s
KLMR Klimovskoe 95.84 19 *e*P P 08 38 10.5 -2.5
KLMR AMP 08 38 23.9
comp=Z,25nm,1.3s
KLMR *e*PP **PP** 08 42 00.9 -3.3
KLMR *e*S **SKSac** 08 48 45.7 -3.3
KLMR *e*S **SKSac** 08 48 45.7 -3.3
KLMR *e*SS **SS** 08 55 51.9 -7.3
KLMR *e*SS **SS** 08 55 51.9 -7.3
KLMR LQ LQ 09 15 04.5
KLMR LQ LQ 09 15 04.5
KLMR LR LR 09 17 57.5
TAM Tamanrasset 95.86 64 IAMs_20 IAMs_20 09 16 22.1
comp=Z,2µm,22.0s
YUK Yuzh-Kuril'sk 96.13 319 *e*P P 08 38 12.5 -2.1
YUK *e*S **SKSac** 08 48 49.4 -1.8
YUK MLR MLR
comp=Z,789nm,22.0s
YSS Yuzh-Sakhalins 96.49 323⇑ *e*P P 08 38 11.2 -5.0
YSS *e* 08 42 15.3
YSS *e*S **SKKSac** 08 49 24.8 +6.3
YSS *e*PS **PS** 08 51 06.0 +8.2
YSS *e*SS **SS** 08 56 20.0 +11
YSS pmax pmax
comp=Z,100nm,6.1s
YSS MLR MLR
comp=Z,500nm,19.0s
YSS MLR MLR
comp=N,300nm,18.0s
YSS MLR MLR
comp=E,500nm,16.0s
YSS Yuzh-Sakhalins 96.49 323 IAMs_20 IAMs_20 09 27 01.3
comp=Z,1µm,18.0s
AKASG Malin Array Be 98.83 31 P P 08 38 24.6 -2.0
comp=Z,0.8nm,0.6s,baz=284,slow=3.9,SNR=4.3
AKASG Malin Array Be 98.83 31 *i* P P 08 38 25.7 -1.0
AKASG pmax pmax
comp=Z,1.0nm,0.6s
OBN Obninsk 99.07 24 *c e* P Pdif 08 38 26.6 -1.0
OBN *e* 08 42 27.5
OBN PPP PPP 08 44 46.0
OBN *i* PS PS 08 51 32.8 +7.5
OBN SS SS 08 56 57.0 +12
OBN pmax pmax
comp=Z,93µm,18.7s
OBN MLR MLR
comp=Z,2µm,18.0s
DZM Mont Dzumac 100.82 250 *e*PP PP 08 42 46.7 +2.5
comp=Z,98nm,26.9s
DZM *e*SKSac **SKSac** 08 49 16.6 +0.9
comp=Z,585nm,25.6s
DZM *e*SP SP 08 51 40.2 -4.2
comp=Z,508nm,26.4s
DZM *e*SS **SS** 08 57 16.2 +3.6
comp=Z,1µm,27.1s
DZM Mont Dzumac 100.82 250 *e*LQ LQ 09 07 25.2
comp=Z,823nm,42.0s
DZM *e*LR LR 09 11 44.5
comp=Z,2µm,23.6s
DZM Mont Dzumac 100.82 250 IAMs_20 IAMs_20 09 14 27.7
comp=Z,1µm,20.0s
OXZ Oxford 100.91 228 IAMs_20 IAMs_20 09 13 56.9
comp=Z,2µm,21.0s
KLR Kul'dur 101.03 329⇑ *e*P Pdif 08 38 39.3 +2.8
KLR pmax pmax
comp=Z,6.0nm,1.5s
LPSR Galich'ya Gora 101.87 25 *e*P Pdif 08 38 39.1 -1.1
LPSR pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 103.00 26⇓ *e*P Pdif 08 38 44.7 -0.5
VSR pmax pmax

	comp=Z,28nm,2.1s							
VORD	**Divnogorie**	**103.24**	**26**	*e*P	**Pdif**	**08 38 45.1**	**-1.2**	
VORD				pmax	pmax			
	comp=Z,3.0nm,0.8s							
SIM	**Simferopol'**	**105.10**	**33**	*ce*P	**Pdif**	**08 38 58.6**	**+3.9**	
SIM				*e*		08 43 19.0		
SIM				*e*SS	SS	08 58 03.0	-5.8	
SIM				pmax	pmax			
	comp=Z,30nm,14.9s							
SIM				pmax	pmax			
	comp=Z,200nm,15.9s							
MDJ	**Mudanjiang**	**105.22**	**327**	IAMs_20	IAMs_20	09 25 25.6		
	comp=Z,991nm,21.0s							
HIA	**Hailar**	**106.39**	**335**	IAMs_20	IAMs_20	09 35 44.8		
	comp=Z,2μm,21.0s							
QSPA	**South Pole Qui**	**106.42**	**180**	IAMs_20	IAMs_20	09 20 26.5		
	comp=Z,1μm,18.0s							
INU	**Inuyama**	**106.52**	**316**	IAMs_20	IAMs_20	09 37 48.7		
	comp=Z,1μm,20.0s							
SNAA	**Sanae**	**107.23**	**161**	IAMs_20	IAMs_20	09 18 49.0		
	comp=Z,680nm,20.0s							
LHI	**Lord Howe Isla**	**109.07**	**242**	IAMs_20	IAMs_20	09 27 58.9		
	comp=Z,803nm,18.0s							
TLY	**Talaya**	**109.48**	**346**	IAMs_20	IAMs_20	09 34 22.4		
	comp=Z,2μm,19.0s							
RABL	**Rabaul**	**109.95**	**272**	IAMs_20	IAMs_20	09 21 24.6		
	comp=Z,1μm,20.0s							
KIV	**Kislovodsk**	**110.05**	**29**	*e*P	**Pdif**	**08 39 23.0**	**+6.1**	
KIV				*e*		08 43 48.9		
KIV				*e*PPP	PPP	08 46 12.5		
KIV				*e*PS	**PS**	**08 53 24.4**	**+3.8**	
KIV				*e*SS	SS	08 59 12.2	-3.7	
KIV				pmax	pmax			
	comp=Z,29μm,17.6s							
KIV				MLR	MLR			
	comp=Z,4μm,15.0s							
INCN	**Inchon**	**111.71**	**323**	IAMs_20	IAMs_20	09 39 55.3		
	comp=Z,3μm,20.0s							
JNU	**Nakatsue**	**111.93**	**317**	IAMs_20	IAMs_20	09 40 21.8		
	comp=Z,3μm,21.0s							
ULN	**Ulaanbaatar**	**112.06**	**342**	*i*PKIKP	**PKiKP**	**08 43 22.0**	**-0.4**	
MAK	**Makhachkala**	**113.00**	**27**	*e*P	**Pdif**	**08 39 24.8**	**-5.1**	
MAK				*e*		08 50 02.2		
MAK				*e*PS	**PS**	**08 53 45.6**	**-1.9**	
MAK				*e*SS	SS	08 59 52.9	-1.9	
MAK				pmax	pmax			
	comp=Z,188nm,1.3s							
EIDS	**Eidsvold**	**115.25**	**249**	IAMs_20	IAMs_20	09 21 09.0		
	comp=Z,1μm,21.0s							
HHC	**Hu-ho-hao-te**	**116.60**	**335**	*e*PKP	**PKPdf**	**08 43 31.3**	**0.0**	
HHC				PP	**PP**	**08 44 38.9**	**+1.5**	
HHC				AMB	AMB			
	comp=Z,200nm,10.2s							
HHC				LR	LR			
	comp=Z,560nm,19.0s							
HHC				LR	LR			
	comp=Z,730nm,18.1s							
HHC				LR	LR			
	comp=Z,560nm,19.0s							
MKAR	**Makanchi Array**	**117.01**	**360**	PKP	**PKPdf**	**08 43 28.7**	**-3.2**	
	comp=Z,0.4nm,0.8s,baz=33,slow=4.0,SNR=3.6							
MKAR				PP	**PP**	**08 44 38.8**	**-1.1**	
	comp=Z,0.6nm,0.8s,baz=2.7,slow=3.0,SNR=1.7							
CTAO	**Charters Tower**	**118.98**	**256**	IAMs_20	IAMs_20	09 23 33.0		
	comp=Z,870nm,20.0s							
SSE	**Sheshan**	**119.39**	**321**	IAMs_20	IAMs_20	09 46 00.5		
	comp=Z,2μm,19.0s							
WMQ	**Urumqi**	**119.74**	**355**	*e*PKP	**PKiKP**	**08 43 37.9**	**+0.6**	
WMQ				LR	LR			
	comp=Z,2μm,19.5s							
WMQ				LR	LR			
	comp=Z,2μm,20.5s							
WMQ				LR	LR			
	comp=Z,3μm,19.7s							
NJ2	**Nanjing**	**120.05**	**324**	*e*PKP	**PKiKP**	**08 43 39.1**	**+1.0**	
TOO	**Toolangi**	**120.56**	**236**	IAMs_20	IAMs_20	09 31 30.8		
	comp=Z,2μm,18.0s							
SYO	**Syowa Base**	**121.29**	**164**	*i*Pdiff	**Pdif**	**08 40 03.0**	**-3.0**	
SYO	**Syowa Base**	**121.29**	**164**	*ep*Pdiff	pPdif	08 40 09.8	-0.4	
SYO	**Syowa Base**	**121.29**	**164**	*e*PKPdf	**PKPdf**	**08 43 39.0**	**-0.1**	
GEYT	**Alibeck**	**121.49**	**22**	PKP	**PKPdf**	**08 43 39.8**	**-0.9**	
	comp=Z,2.9nm,0.6s,baz=254,slow=2.6,SNR=5.1							
GTA	**Gaotai**	**121.89**	**344**	*e*PKP	PKiKP	08 43 50.5	+8.8	
GTA				PP	PP	08 45 26.6	+13	
GTA				SKS	**SKSdf**	**08 50 49.0**	**-4.7**	
GTA				SKKS	**SKKSac**	**08 52 21.3**	**+6.7**	
GTA	**Gaotai**	**121.89**	**344**	SS	SS	09 02 26.5	+36	
GTA				AMB	AMB			
	comp=Z,230nm,10.3s							
GTA				LR	LR			
	comp=N,480nm,24.4s							
GTA				LR	LR			
	comp=E,970nm,24.1s							
GTA				LR	LR			
	comp=Z,340nm,23.8s							
XAN	**Xi'an**	**123.48**	**333**	PKP	**PKPdf**	**08 43 43.3**	**-1.3**	
LZH	**Lanzhou**	**123.69**	**339**	SS	SS	09 02 07.4	-6.0	
LZH				AMB	AMB			
	comp=Z,500nm,9.2s							
LZH				LR	LR			
	comp=N,700nm,18.5s							
LZH				LR	LR			
	comp=E,1μm,19.0s							
LZH				LR	LR			
	comp=Z,700nm,19.8s							
WHN	**Wuhan**	**123.69**	**326**	PKP	**PKiKP**	**08 43 46.6**	**+1.3**	
WHN				LR	LR			
	comp=Z,770nm,17.4s							
WHN				LR	LR			
	comp=Z,820nm,21.4s							
STKA	**Stephens Creek**	**123.93**	**242**	PKP	**PKPdf**	**08 43 44.1**	**-1.3**	
	comp=Z,2.5nm,0.7s,baz=163,slow=0.6,SNR=8.7							
KSH	**Kashi**	**124.03**	**5**	PKP	**PKiKP**	**08 43 47.8**	**+1.9**	
KSH				SKKS		08 52 28.8		
KSH				SS	**SS**	**09 02 22.8**	**+5.6**	
KSH				AMB	AMB			
	comp=Z,770nm,6.6s							
CASY	**Casey**	**126.73**	**194**	IAMs_20	IAMs_20	09 51 00.1		
	comp=Z,1μm,19.0s							
BOSA	**Boshof**	**126.87**	**114**	PKP	**PKPdf**	**08 43 49.9**	**-1.3**	
	comp=Z,2.6nm,0.8s,baz=141,slow=11,SNR=4.2							
CD2	**Chengdu**	**128.34**	**336**	PKP	**PKPdf**	**08 43 52.8**	**-1.2**	
CD2				PP	**PP**	**08 45 56.1**	**-0.9**	
CD2				SKS	**SKSdf**	**08 51 05.3**	**-0.7**	
CD2				SKKS	**SKKSac**	**08 52 51.8**	**-4.1**	
CD2				SS	SS	**09 03 12.3**	**+0.6**	
WB2	**Warramunga Arr**	**130.08**	**258**		**PKPdf**	**08 43 57.7**	**+0.3**	
WRA	**Warramunga Arr**	**130.09**	**258**	PKP	**PKPdf**	**08 43 56.0**	**-1.5**	
	comp=Z,2.7nm,0.9s,baz=81,slow=2.6,SNR=16							
WRA				SKPbc	**SKPab**	**08 47 19.8**	**-0.2**	
	comp=Z,1.1nm,1.1s,baz=104,slow=3.5,SNR=6.6							
ASAR	**Alice Springs**	**130.71**	**253**	PKP	**PKPdf**	**08 43 56.5**	**-2.2**	
	comp=Z,1.4nm,0.8s,baz=98,slow=2.0,SNR=11							
ASAR				SKPbc	**SKPbc**	**08 47 21.9**	**-0.6**	
	comp=Z,2.1nm,1.2s,baz=76,slow=3.9,SNR=3.7							
GYA	**Guiyang**	**130.92**	**330**	Pdif	**Pdif**	**08 40 49.3**	**-0.8**	
GYA				PKP	**PKPdf**	**08 43 58.3**	**-0.8**	
GYA				PP	**PP**	**08 46 18.8**	**+4.7**	
GYA				AMB	AMB			
	comp=Z,140nm,8.0s							
TNTI	**Ternate**	**131.85**	**286**	IAMs_20	IAMs_20	09 54 46.9		
	comp=Z,1μm,20.0s							
QIZ	**Qiongzhong**	**135.18**	**321**	PKP	**PKPdf**	**08 44 06.3**	**-0.8**	
QIZ				SS	SS	09 04 36.3	+0.3	
QIZ				AMB	AMB			
	comp=Z,230nm,9.8s							
QIZ				LR	LR			
	comp=Z,310nm,23.5s							
QIZ				LR	LR			
	comp=Z,310nm,27.5s							
CMAR	**Chiang Mai Arr**	**141.37**	**333**	PKP	**PKPdf**	**08 44 18.1**	**-0.4**	
	comp=Z,1.0nm,0.3s,baz=327,slow=2.8,SNR=6.1							
HYB	**Hyderabad**	**146.16**	**5**	*i* PKP	**PKPdf**	**08 44 26.0**	**-1.0**	
KSM	**Kuching**	**146.64**	**300**		**PKPdf**	**08 44 27.2**	**-0.6**	
ABPO	**Ambohimpanom**	**147.06**	**100**	PKP2	**PKPbc**	**08 44 30.0**	**-0.7**	
ABPO	**Ambohimpanom**	**147.06**	**100**		**PKPbc**	**08 44 30.0**	**-0.7**	
KULM	**Kulim**	**151.41**	**318**		**PKPbc**	**08 44 40.0**	**-1.6**	
PSI	**Prapat**	**154.40**	**317**	PKIKP	**PKPdf**	**08 44 40.7**	**+0.6**	
RPSI	**Rantau Prapat**	**154.48**	**317**		**PKPdf**	**08 44 40.7**	**+0.7**	

WEL 24 08:26:40.0, 45°S±3°×16°8E±°, h129km±3km, M3.5/12, MLv3.5/12, Error ellipse: s-maj=0.0km s-min=0.0km az=77.9, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.46**	**217**	P	Pn	08 26 58.6	-0.2
DCZ				S	Sn	08 27 12.5	-0.4
MLZ	**Mavora Lakes**	**0.49**	**124**	P	Pn	08 26 59.5	+0.5
MLZ				S	Sn	08 27 13.9	+0.5
MSZ	**Milford Sound**	**0.51**	**33**	P	Pn	08 26 59.4	+0.4
MSZ				S	Sn	08 27 13.2	-0.2
WHZ	**Wether Hill Ro**	**0.84**	**160**	P	Pn	08 27 02.2	+0.7
WHZ				S	Sn	08 27 18.0	+0.2
WKZ	**Wanaka**	**1.08**	**76**	P	Pn	08 27 04.4	+0.7
WKZ				S	Sn	08 27 21.6	0.0
PYZ	**Puysegur Point**	**1.23**	**209**	P	Pn	08 27 05.3	+0.2
PYZ				S	Sn	08 27 23.8	-0.5
EAZ	**Earnscleugh**	**1.25**	**97**	P	Pn	08 27 06.1	+0.7
JCZ	**Jackson Bay**	**1.36**	**41**	P	Pn	08 27 06.4	-0.2
TUZ	**Tuapeka**	**1.70**	**121**	P	Pn	08 27 11.3	+1.0
APZ	**The Paps**	**1.76**	**170**	P	Pn	08 27 11.7	+0.6
SYZ	**Scrubby Hill**	**1.82**	**143**	P	Pn	08 27 12.7	+1.0
LBZ	**Lake Benmore**	**2.01**	**70**	P	Pn	08 27 13.4	-0.8
ODZ	**Otahua Downs**	**2.20**	**90**	P	Pn	08 27 16.3	-0.1
FOZ	**Fox Glacier**	**2.26**	**47**	P	Pn	08 27 15.8	-1.3
HHSZ	**Highcliff Hill**	**2.29**	**111**	P	Pn	08 27 18.1	+0.7
RPZ	**Rata Peaks**	**2.87**	**62**	P	Pn	08 27 23.6	-1.4
INZ	**Inchbonnie**	**3.68**	**51**	P	Pn	08 27 32.8	-2.7
OXZ	**Oxford**	**3.69**	**63**	P	Pn	08 27 34.7	-0.9
MQZ	**McQueen's Vall**	**3.92**	**71**	P	Pn	08 27 37.9	-0.7
AKCZ	**Akaroa Harbour**	**4.03**	**74**	P	Pn	08 27 39.9	-0.2
LTZ	**Lake Taylor**	**4.12**	**58**	P	Pn	08 27 39.7	-1.8
AMCZ	**Amberley**	**4.15**	**64**	P	Pn	08 27 41.8	+0.1
OKCZ	**Okains Bay**	**4.18**	**73**	P	Pn	08 27 42.3	+0.1
GVZ	**Greta Valley S**	**4.50**	**64**	P	Pn	08 27 46.2	-0.1
DSZ	**Denniston Nort**	**4.57**	**44**	P	Pn	08 27 46.1	-1.2
KHZ	**Kahutara**	**5.10**	**60**	P	Pn	08 27 54.0	-0.4
THZ	**Tophouse**	**5.13**	**51**	P	Pn	08 27 54.8	-0.1
BFZ	**Birch Farm**	**7.76**	**58**	P	Pn	08 28 34.9	+4.6
VRZ	**Vera Road**	**8.02**	**44**	P	Pn	08 28 33.8	+0.1
KRHZ	**Kereru**	**8.51**	**53**	P	Pn	08 28 40.5	+0.2

IDC 24 08:43:58.9±2.5, 8.7°S×121.5°E, h0km, mb3.6/1, mb1 3.7/3, mb1mx3.5/20, mbtmp3.5/3, ML3.5/2, Error ellipse: s-maj=274.1km s-min=30.0km az=54.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.66**	**133**	Pn	Pn	08 47 52.9	-1.0
	0.2nm,0.3s,baz=306,slow=13,SNR=14						
ASAR	**Alice Springs**	**18.98**	**143**	P	Pn	08 48 22.6	-0.1
	0.2nm,0.3s,baz=322,slow=12,SNR=20						
MKAR	**Makanchi Array**	**65.41**	**331**	P	P	08 54 43.4	0.0
	0.4nm,0.6s,baz=131,slow=6.7,SNR=3.8						

SKO **24** *09:24:55.5, 40°.26N×25°.97E, h6km*
TIR **24** *09:24:57.9, 40°.32N×25°.69E, h40km, Md6.8/7*
IDC **24** *09:25:00.8±0.4, 40°.29N×25°.44E, h0km, mb5.3/30, mb1 5.3/43, mb1mx5.3/50, mbtmp5.2/43, ML4.8/13, MS6.7/46, Ms1 6.7/46, ms1mx6.6/57, Error ellipse: s-maj=8.8km s-min=8.2km az=7.0*
BJI **24** *09:25:00.0±0.0, 40°.31N×25°.43E, h5km, mB6.2/68, mb5.5/73, Ms7.1/92, Ms7 7.1/80*
MOS **24** *09:25:00.4±1.1, 40°.33N×25°.38E, h7km, mb6.3/56, MS6.7/113, Error ellipse: s-maj=3.6km s-min=2.4km az=90.6*
PDG **24** *09:25:01.7±0.5, 40°.29N×25°.38E, h20km, MD6.8/13, ML6.9/11, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
ATH **24** *09:25:01.0, 40°.29N×25°.40E, h28km, ML6.3/14, Error ellipse: s-maj=1.2km s-min=0.6km az=48.0*
ISK **24** *09:25:01.6, 40°.30N×25°.46E, h21km, ML6.5/42*
SOF **24** *09:25:01.2, 40°.27N×25°.41E, h19km, MD6.6*
DDA **24** *09:25:01.8, 40°.30N×25°.28E, h26km±1km, MW6.5*
NEIC **24** *09:25:02.4±1.4, 40°.29N±0°.04×25°.39E±0°.05, h6km±3km, mb6.3/484, Ms_20 6.8/829, Mwb6.8/159, Mwc6.9/156, Mww6.9, ML6.5(ISK), ML6.3(ATH), ML6.3(THE), ML7.0/4(BUC), Mwc6.9(GCMT), Error ellipse: s-maj=6.5km s-min=5.4km az=207.0*
MED_RC **24** *09:25:02.0±0.1, 40°.34N×25°.73E, h19km, MW6.9/36, Moment Tensor Solution. Body waves: s36,c80;Mantle waves: s33,c89; Duration: 6s4 Moment tensor: Scale 10^19Nm; Mrr-0.54±.02; Mθθ1.73±.03; Mφφ-1.19±.03; Mrθ-0.03±.06; Mθφ-1.99±.02; Mφr-0.24±.06; Best double couple: M○2.48000×10^19 NP1:φs72.00000°, δ84.00000°, λ-176.00000°. NP2:φs342.00000°, δ86.00000°, λ-6.00000°. Principal axes: T 2.7400, Plg1.0000°, Azm27.0000°; N -0.5100, Plg82.0000°, Azm127.0000°; P -2.2300, Plg8.0000°, Azm297.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface waves, cutoff=50s.*
THE **24** *09:25:02.1, 40°.29N×25°.38E, h13km, ML6.2/14 Error ellipse: s-maj=0.9km s-min=0.4km az=62.0*
GII **24** *09:25:02.2±0.0, 40°.29N×25°.40E, h27km*
NEIC **24** *09:25:03.1, 40°.30N×25°.38E, h21km, Moment Tensor Solution. Moment tensor: Scale 10^19Nm; Mrr-0.12; Mθθ1.12; Mφφ-1.00; Mrθ-0.15; Mθφ-1.50; Mφr0.10; Fault plane solution: M○1.85000×10^19 NP1:φs252.28000°, δ86.02000°, λ176.76000°. NP2:φs342.50000°, δ86.77000°, λ3.99000°. Principal axes: T 1.9102, Plg5.0000°, Azm207.0000°; N -0.1337, Plg85.0000°, Azm21.0000°; P -1.7765, Plg1.0000°, Azm117.0000°;*
BGR **24** *09:25:08.1±3.6, 40°.63N×25°.24E, h10km, Ms6.1 Error ellipse: s-maj=55.6km s-min=23.3km az=142.0*
NEIC **24** *09:25:17, 40°.20N×25°.71E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^19Nm; Mrr-0.19; Mθθ1.40; Mφφ-1.21; Mrθ0.79; Mθφ-1.99; Mφr-0.46; Fault plane solution: M○2.56000×10^19 NP1:φs72.00000°, δ77.00000°, λ168.00000°. NP2:φs165.00000°, δ78.00000°, λ13.00000°. Principal axes: T 2.7602, Plg17.0000°, Azm29.0000°; N -0.4731, Plg73.0000°, Azm206.0000°; P -2.2871, Plg1.0000°, Azm298.0000°;*
GCMT **24** *09:25:18.1±0.0, 40°.30N×25°.67E, h12km, MW6.9/177, Moment Tensor Solution. s162,c434; s177,c808; Duration: 6s6 Moment tensor: Scale 10^19Nm; Mrr-0.51±.01; Mθθ1.63±.01; Mφφ-1.12±.01; Mrθ-0.03±.02; Mθφ-2.04±.01; Mφr-0.19±.02; Best double couple: M○2.47000×10^19 NP1:φs73.00000°, δ85.00000°, λ-177.00000°. NP2:φs343.00000°, δ87.00000°, λ-5.00000°. Principal axes: T 2.7170, Plg1.0000°, Azm28.0000°; N -0.4890, Plg84.0000°, Azm129.0000°; P -2.2240, Plg6.0000°, Azm298.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NEIC **24** *09:25:19, 40°.32N×25°.68E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^19Nm; Mrr-0.59; Mθθ1.72; Mφφ-1.14; Mrθ0.20; Mθφ-2.08; Mφr0.01; Fault plane solution: M○2.58000×10^19 NP1:φs163.00000°, δ85.00000°, λ0.00000°. NP2:φs253.00000°, δ90.00000°, λ-175.00000°. Principal axes: T 2.8255, Plg3.0000°, Azm28.0000°; N -0.5870, Plg85.0000°, Azm259.0000°; P -2.2385, Plg4.0000°, Azm118.0000°;*
NEIC **24** *09:25:26, 40°.38N×25°.44E, h19km, Moment Tensor Solution. Moment tensor: Scale 10^19Nm; Mrr-0.51; Mθθ1.84; Mφφ-1.33; Mrθ-1.62; Mθφ-2.31; Mφr0.10; Fault plane solution: M○3.19000×10^19 NP1:φs344.33000°, δ61.61000°, λ0.64000°. NP2:φs254.03000°, δ89.44000°, λ151.61000°. Principal axes: T 3.6007, Plg20.0000°, Azm205.0000°; N -0.8182, Plg62.0000°, Azm73.0000°; P -2.7825, Plg19.0000°, Azm303.0000°;*
ISC 24 09:25:03.2±0.4, 40°.28N±0°.01×25°.37E±0°.01, h8km±2km, n2772, σ1°99/2941, mb6.3/408, MS6.8/560, 106C-121D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMTH	**Samothraki Isl**	**0.23**	**32**	P	**Pg**	**09 25 06.5**	**-1.3**
SMTH				S	**Sg**	**09 25 10.1**	**-0.9**
SMTH	**Samothraki Isl**	**0.23**	**32**	P	**Pg**	**09 25 06.5**	**-1.3**
SMTH				S	**Sg**	**09 25 10.9**	**-0.1**
LIA	**Limnos Island**	**0.40**	**201**	P	**Pb**	**09 25 10.9**	**-1.7**
LIA				S	**Sb**	**09 25 16.9**	**-2.0**
LIA	**Limnos Island**	**0.40**	**201**	P	**Pb**	**09 25 10.9**	**-1.7**
LIA				S	**Sb**	**09 25 17.1**	**-1.7**
GADA	**Gvkgeada**	**0.41**	**102**	P	**Pg**	**09 25 09.8**	**-1.5**
GADA	**Gvkgeada**	**0.41**	**102**	PG	**Pg**	**09 25 09.8**	**-1.5**
GADA	**Gvkgeada**	**0.41**	**102**		**Pg**	**09 25 10.1**	**-1.2**
THAS	**Thassos island**	**0.60**	**304**	P	**Pg**	**09 25 13.1**	**-1.6**
THAS	**Thassos island**	**0.60**	**304**	P	**Pg**	**09 25 14.1**	**-0.6**
THAS				S	**Sg**	**09 25 22.0**	**-0.5**
THAS				AML	AML	09 25 24.8	
THAS				AML	AML	09 25 27.3	
THAS	**Thassos island**	**0.60**	**304**		**Pg**	**09 25 14.1**	**-0.6**
BOZC	**Bozcaada**	**0.68**	**129**	PG	**Pg**	**09 25 14.9**	**-1.4**
BOZC	**Bozcaada**	**0.68**	**129**	*i*P	**Pg**	**09 25 14.9**	**-1.4**
BOZC				*i* S	**Sb**	**09 25 26.4**	**-0.4**
ENEZ	**Enez**	**0.75**	**52**	P	**Pg**	**09 25 15.7**	**-2.0**
ENEZ	**Enez**	**0.75**	**52**	PG	**Pg**	**09 25 15.7**	**-2.0**
ENEZ	**Enez**	**0.75**	**52**		**Pg**	**09 25 15.9**	**-1.8**
EFSA	**Agios Efstrati**	**0.79**	**202**	P	**Pb**	**09 25 18.0**	**-1.2**
EFSA				S	**Sb**	**09 25 29.2**	**-0.8**
EFSA				AML	AML	09 25 32.8	
EFSA				AML	AML	09 25 33.4	
ALN	**Alexandroupoli**	**0.81**	**39**	P	**Pg**	**09 25 16.9**	**-1.8**
ALN	**Alexandroupoli**	**0.81**	**39**	P	**Pg**	**09 25 17.0**	**-1.8**
ALN	**Alexandroupoli**	**0.81**	**39**	PG	**Pg**	**09 25 16.9**	**-1.8**
ALN	**Alexandroupoli**	**0.81**	**39**	*i*P	**Pg**	**09 25 17.2**	**-1.5**
ALN				*i* S	**Sn**	**09 25 33.7**	**+0.7**
ALN	**Alexandroupoli**	**0.81**	**39**	P	**Pg**	**09 25 17.4**	**-1.3**
ALN	**Alexandroupoli**	**0.81**	**39**		**Pg**	**09 25 17.4**	**-1.3**
GELI	**Tayfur-Gelibol**	**0.85**	**81**	PG	**Pg**	**09 25 17.3**	**-2.3**
EZN	**Ezine**	**0.86**	**121**	P	**Pg**	**09 25 17.7**	**-2.0**
EZN	**Ezine**	**0.86**	**121**	PG	**Pg**	**09 25 17.8**	**-2.0**
EZN	**Ezine**	**0.86**	**121**	P	**Pg**	**09 25 17.7**	**-2.1**
EZN	**Ezine**	**0.86**	**121**		**Pg**	**09 25 17.6**	**-2.1**
RDO	**Rodhopi**	**0.88**	**8**	P	**Pg**	**09 25 18.3**	**-1.9**
RDO				S	**Sb**	**09 25 31.9**	**-0.7**
RDO	**Rodhopi**	**0.88**	**8**	P	**Pg**	**09 25 18.2**	**-1.9**
RDO				AML	AML	09 25 51.1	
RDO				AML	AML	09 25 52.9	
RDO	**Rodhopi**	**0.88**	**8**	PG	**Pg**	**09 25 18.2**	**-1.9**
RDO	**Rodhopi**	**0.88**	**8**		**Pg**	**09 25 18.2**	**-1.9**
ERIK	**Erikli-Kesan**	**0.96**	**65**	PG	**Pg**	**09 25 18.9**	**-2.7**
KAVA	**Kavala**	**0.97**	**318**	P	**Pg**	**09 25 20.9**	**-0.9**
KAVA				S	**Sb**	**09 25 34.4**	**-0.8**
	826μm,0.9s						
KAVA	**Kavala**	**0.97**	**318**	P	**Pg**	**09 25 20.5**	**-1.3**
KAVA				S	**Sg**	**09 25 33.3**	**-1.2**
KAVA				AML	AML	09 25 36.5	
KAVA				AML	AML	09 25 39.6	
KAVA	**Kavala**	**0.97**	**318**		**Pg**	**09 25 20.9**	**-0.9**
KAVA					**Sb**	**09 25 34.4**	**-0.8**
KVLA	**Kavala**	**1.00**	**312**	P	**Pg**	**09 25 21.0**	**-1.3**
KVLA				S	**Sg**	**09 25 34.2**	**-1.1**
KVLA				AML	AML	09 25 39.3	
KVLA				AML	AML	09 25 39.5	
BAYC	**CANAKKALE_Bayr**	**1.05**	**120**	*i*P	**Pg**	**09 25 21.5**	**-1.9**
BAYC				*i* S	**Sb**	**09 25 36.1**	**-1.4**
OUR	**Ouranopolis**	**1.06**	**274**	P	**Pg**	**09 25 22.4**	**-1.2**
OUR				S	**Sb**	**09 25 36.9**	**-0.9**
OUR	**Ouranopolis**	**1.06**	**274**	P	**Pg**	**09 25 22.4**	**-1.2**
OUR	**Ouranopolis**	**1.06**	**274**	PN	**Pb**	**09 25 22.6**	**-1.2**
OUR				SN	**Sb**	**09 25 37.8**	**0.0**
OUR	**Ouranopolis**	**1.06**	**274**		**Pg**	**09 25 22.4**	**-1.2**
OUR					**Sb**	**09 25 36.9**	**-0.9**
LPK	**Lapseki**	**1.07**	**84**	PG	**Pg**	**09 25 21.1**	**-2.6**
SIGR	**SIGRI**	**1.13**	**160**	P	**Pg**	**09 25 22.2**	**-2.0**
SIGR				S	**Sb**	**09 25 38.4**	**-1.3**
SIGR	**SIGRI**	**1.13**	**160**	P	**Pg**	**09 25 23.1**	**-1.7**
SIGR				S	**Sn**	**09 25 39.5**	**-1.4**
SIGR	**SIGRI**	**1.13**	**160**	PN	**Pg**	**09 25 22.9**	**-1.9**
KESN	**Edirne-Kesan**	**1.14**	**61**	*i*P	**Pn**	**09 25 25.4**	**-0.4**
KESN				*i* S	**Sn**	**09 25 40.2**	**-1.6**
PRK	**Paraskevi**	**1.24**	**146**	P	**Pb**	**09 25 25.6**	**-1.3**
PRK				S	**Sb**	**09 25 42.1**	**-0.9**
PRK	**Paraskevi**	**1.24**	**146**	P	**Pb**	**09 25 25.6**	**-1.3**
PRK				S	**Sg**	**09 25 40.3**	**-2.8**
PRK				AML	AML	09 26 03.2	
PRK				AML	AML	09 26 04.0	
UKOP	**Uzunkopru-Edir**	**1.28**	**48**	PN	**Pg**	**09 25 23.9**	**-3.9**
PAIG	**Paliouri**	**1.34**	**255**	P	**Pn**	**09 25 25.9**	**-2.3**
PAIG				S	**Sg**	**09 25 43.9**	**-2.5**
	844μm,1.0s						
PAIG	**Paliouri**	**1.34**	**255**	P	**Pn**	**09 25 25.9**	**-2.3**
KDZ	**Kurdzhali**	**1.37**	**1**	*i*P	**Pn**	**09 25 26.2**	**-2.5**
KDZ	**Kurdzhali**	**1.37**	**1**	PN	**Pn**	**09 25 25.9**	**-2.8**
AYVA	**Ayvalik**	**1.40**	**133**	*i*P	**Pn**	**09 25 27.1**	**-2.0**
AYVA				*i* S	Sn	09 25 56.4	+8.7
RKY	**Sarkoy-Tekirda**	**1.44**	**73**	PN	**Pn**	**09 25 25.1**	**-4.5**
SART	**Tekirdag**	**1.44**	**73**	*i*P	**Pn**	**09 25 26.6**	**-3.0**
SART				*i* S	**Sn**	**09 25 52.6**	**+3.9**
PLG	**Polygyros**	**1.47**	**274**	P	**Pn**	**09 25 28.3**	**-1.8**
PLG				S	**Sb**	**09 25 45.4**	**-4.3**
	494μm,0.8s						
PLG	**Polygyros**	**1.47**	**274**	P	**Pn**	**09 25 28.3**	**-1.8**
PLG				AML	AML	09 26 04.2	
PLG				AML	AML	09 26 09.8	
KRBG	**Karabiga-Canak**	**1.48**	**85**	PN	**Pn**	**09 25 27.2**	**-2.9**
RZN	**Rozhen**	**1.50**	**341**	*i*P	**Pn**	**09 25 29.1**	**-1.4**
SKY	**Skiros Island**	**1.53**	**205**	P	**Pn**	**09 25 28.5**	**-2.4**
SKY				AML	AML	09 25 55.0	
SKY				AML	AML	09 25 58.0	
SRS

CRLT Corlu 1.99 64 PN Pn 09 25 34.4 -2.7
KIRK Kırklareli 1.99 40 i P Pn 09 25 36.2 -1.0
STEP BALIKESIR_Sava 2.02 116⇓i P Pn 09 25 35.8 -1.7
STEP i S Sg 09 26 16.9 +8.8
BALB Balikesir 2.03 107 PN Pn 09 25 33.8 -3.9
CESE eme 2.07 159 PN Pn 09 25 35.6 -2.6
KNT Kendrikon 2.08 296 P Pn 09 25 37.2 -1.1
KNT Kendrikon 2.08 296 P Pn 09 25 37.3 -1.0
KNT Kendrikon 2.08 296 PN Pn 09 25 37.1 -1.2
MRKA Markates 2.09 222 P Pn 09 25 35.9 -2.6
MRKA Markates 2.09 222 P Pn 09 25 36.2 -2.3
URLA Izmir 2.14 153 PN Pn 09 25 37.1 -2.0
URLA Izmir 2.14 153 i P Pn 09 25 37.2 -2.0
URLA i S Sn 09 26 06.0 +0.1
LIT Litokhoron 2.21 266 P Pn 09 25 38.1 -2.1
LIT Litokhoron 2.21 266 P Pn 09 25 38.1 -2.1
LIT Litokhoron 2.21 266 P Pn 09 25 40.2 0.0
LIT Litokhoron 2.21 266 Pn 09 25 40.2 0.0
KCTX Karacabey (Bur 2.29 89 PN Pn 09 25 38.5 -2.7
BLCB Balcova 2.29 145 P Pn 09 25 39.1 -2.1
BLCB Balcova 2.29 145 PN Pn 09 25 38.8 -2.4
AKHS Akhisar 2.35 126⇓i P Pn 09 25 40.2 -1.9
AKHS i S Sg 09 26 26.4 +7.8
AKS Akhisar 2.35 126 PN Pn 09 25 39.4 -2.6
KKB Krupnik 2.35 313 P Pn 09 25 41.1 -1.0
KARY Karystos 2.35 198 P Pn 09 25 39.6 -2.5
KARY Karystos 2.35 198 P Pn 09 25 39.7 -2.5
SLVT Silivri 2.36 65 PN Pn 09 25 38.7 -3.5
LRSO Larissa Observ 2.37 256 P Pn 09 25 40.9 -1.4
LRSO Larissa Observ 2.37 256 P Pn 09 25 40.9 -1.4
VAY Valandovo 2.37 297 i Pn Pn 09 25 41.2 -1.1
VAY i Sn Sg 09 26 20.6 +1.3
VAY eLg Lg 09 26 32.8
comp=N,322µm,0.9s
VAY Valandovo 2.37 297 i Pn Pn 09 25 41.2 -1.1
VAY i Sn Sg 09 26 20.6 +1.3
VAY eLg Lg 09 26 32.8
comp=N,322µm,0.9s
JMB Yambol 2.37 22 i P Pb 09 25 43.4 -2.7
PGB Panagyurishte 2.44 339 i P Pn 09 25 41.9 -1.5
LKR Lokris 2.45 229 P Pn 09 25 41.1 -2.3
LKR Lokris 2.45 229 P Pn 09 25 41.4 -2.0
DION Dionisos Attik 2.46 207 P Pn 09 25 41.1 -2.5
DION Dionisos Attik 2.46 207 P Pn 09 25 41.3 -2.3
DURS Dursunbey 2.48 105⇓i P Pn 09 25 42.3 -1.6
DURS i S Sg 09 26 23.5 +0.6
ELBA Catalca 2.48 69 i P Pn 09 25 40.7 -3.2
ELBA i S Sg 09 26 19.9 -3.0
DGB zmir 2.51 152⇓i P Pn 09 25 42.1 -2.1
DGB i S Sg 09 26 24.4 +0.5
PTL Penteli 2.51 208 P Pn 09 25 41.5 -2.8
PTL Penteli 2.51 208 P Pn 09 25 41.9 -2.5
CTYL Yalikoy Yolu 2.52 61 PN Pn 09 25 41.6 -2.7
CTKS Kestanelik-??a 2.57 67 PN Pn 09 25 41.2 -3.8
AXAR Agios Charalam 2.58 235 P Pn 09 25 43.4 -1.9
AXAR Agios Charalam 2.58 235 P Pn 09 25 43.5 -1.7
ATHU Athens Univers 2.62 209 P Pn 09 25 43.1 -2.6
ATHU Athens Univers 2.62 209 P Pn 09 25 43.3 -2.4
VIL2 Platees 2.63 219 P Pn 09 25 44.1 -1.8
ATH Athens Observa 2.64 210 P Pn 09 25 43.5 -2.5
ATH Athens Observa 2.64 210 P Pn 09 25 43.9 -2.1
VILL Villia 2.65 218 P Pn 09 25 44.0 -2.2
AVCI Avcilar-stanb 2.65 73 PN Pn 09 25 42.8 -3.4
AGG Agios Georgios 2.66 243 P Pn 09 25 44.5 -1.8
AGG Agios Georgios 2.66 243 P Pn 09 25 44.5 -1.8
AGG Agios Georgios 2.66 243 PN Pn 09 25 44.6 -1.8
AGG Agios Georgios 2.66 243⇑i P Pn 09 25 44.7 -1.7
AGG i S Sg 09 26 43.1 +14
AGG Agios Georgios 2.66 243 P Pn 09 25 44.6 -1.8
AGG Agios Georgios 2.66 243 Pn 09 25 44.6 -1.8
THL Klokotos Trika 2.68 256 P Pn 09 25 45.0 -1.5
THL Klokotos Trika 2.68 256 P Pn 09 25 45.0 -1.5
ELND Elena 2.68 8 ⇓P Pn 09 25 45.8 -0.7
ELND Elena 2.68 8 Pn 09 25 45.8 -0.7
ARMT Armutlu 2.68 83 PN Pn 09 25 43.2 -3.4
MDNY Mudanya-Bursa 2.69 87 PN Pn 09 25 44.1 -2.6
VLY Voula,Athens 2.71 207 P Pn 09 25 44.5 -2.6
VLY Voula,Athens 2.71 207 P Pn 09 25 44.8 -2.3
HVHR Bakirkoy-Istan 2.73 74 PN Pn 09 25 44.0 -3.3
TNSA Tinos 2.74 183 P Pn 09 25 44.6 -2.8
BGKT Bogazkoy 2.74 70 PN Pn 09 25 43.7 -3.7
KZN Kozani 2.75 272 P Pn 09 25 46.6 -1.1
PROD Prodromos 2.78 224 P Pn 09 25 45.7 -2.3
PROD Prodromos 2.78 224 P Pn 09 25 45.8 -2.2
MAKR Makrakomi, Fth 2.80 244 P Pn 09 25 47.0 -1.2
MAKR Makrakomi, Fth 2.80 244 P Pn 09 25 47.1 -1.2
SMG Samos 2.81 156 P Pn 09 25 46.3 -2.1
VTS Vitosha 2.84 326 ⇓P Pn 09 25 48.4 -0.5
VTS Vitosha 2.84 326 i P Pn 09 25 49.1 +0.2
VTS Vitosha 2.84 326 P Pn 09 25 49.4 +0.5
VTS Vitosha 2.84 326 Pn 09 25 49.4 +0.5
SOF Sofiya 2.85 328 P Pb 09 25 52.3 -2.0
DLFA Delphi 2.86 232 P Pn 09 25 46.9 -2.3
DLFA AML AML 09 26 57.9
DLFA AML AML 09 27 00.2
DEMI Demirci 2.86 114 i P Pn 09 25 49.2 0.0
ULDT Uludag 2.89 91 i P Pb 09 25 55.0 -0.1
BUY Buyukada 2.91 77⇓i P Pn 09 25 46.1 -3.7
BUY i S Sg 09 26 40.3 +3.6
ISK Istanbul-Kandi 2.92 73 P Pn 09 25 46.1 -3.7
ISK Istanbul-Kandi 2.92 73 PN Pn 09 25 46.5 -3.3
KAVV Kandilli-Istan 2.92 73 PN Pn 09 25 46.7 -3.1
GEMT Gemlik 2.92 86 PN Pn 09 25 46.8 -3.1
LTK Loutraki 2.92 220 P Pn 09 25 47.9 -2.1
LTK Loutraki 2.92 220 P Pn 09 25 48.1 -1.9
IGD Bursa 2.93 89 i P Pg 09 25 56.4 -2.9
PVL Pavlikeni 2.94 359 P Pn 09 25 48.2 -1.9
LOUT Loutraki 2.95 220 P Pn 09 25 48.2 -2.1
LOUT Loutraki 2.95 220 P Pn 09 25 48.4 -1.9
GCAM G?zelcaml? 2.95 150 PN Pn 09 25 48.7 -1.6
KLYT Kilyos 2.96 70 PN Pn 09 25 47.1 -3.3
TUZL Tuzla-Istanbul 3.02 79 PN Pn 09 25 47.7 -3.5
SZH Strazhica 3.02 8 i P Pn 09 25 49.8 -1.4
SMAA Simav-Kutahya 3.02 112 PN Pn 09 25 48.3 -3.1
SIMA Simav-Kutahya 3.03 112 PN Pn 09 25 48.9 -2.6
AYDB Zeytinkoy-Aydi 3.04 139 PN Pn 09 25 50.2 -1.5
MANT Manisa 3.05 125 PN Pn 09 25 50.4 -1.5
YLVH Yalova 3.08 81 PN Pn 09 25 48.6 -3.5
FNA Florina 3.09 281 P Pn 09 25 51.5 -0.8
FNA Florina 3.09 281 P Pn 09 25 51.5 -0.8
FNA Florina 3.09 281 PN Pn 09 25 51.5 -0.8
FNA Florina 3.09 281⇓i P Pn 09 25 51.4 -0.8
FNA i S Sg 09 27 06.9 +25
FNA Florina 3.09 281 P Pn 09 25 52.7 +0.5
FNA Florina 3.09 281 Pn 09 25 52.7 +0.5
KPRO Kipourio 3.09 265 P Pn 09 25 51.5 -0.8
KPRO Kipourio 3.09 265 P Pn 09 25 51.5 -0.8
KULA Kula-Manisa 3.10 124 P Pn 09 25 50.8 -1.6
KULA Kula-Manisa 3.10 124 PN Pn 09 25 49.9 -2.5
KALE Kalithea 3.13 234 P Pn 09 25 51.1 -1.8
KALE Kalithea 3.13 234 P Pn 09 25 51.1 -1.8
ANX Ano Chora 3.15 239 P Pn 09 25 51.8 -1.5
ANX Ano Chora 3.15 239 P Pn 09 25 51.8 -1.5
PLVB Pleven 3.16 350 ⇓P Pn 09 25 52.4 -0.8
PLVB Pleven 3.16 350 Pn 09 25 52.4 -0.8
SERG Sergoula 3.17 235 P Pn 09 25 51.7 -1.6
SERG Sergoula 3.17 235 P Pn 09 25 51.8 -1.6
SERI Serifos 3.19 193 P Pn 09 25 51.0 -2.6
SERI Serifos 3.19 193 P Pn 09 25 50.7 -2.9
TRIZ Trizonia 3.19 234 P Pn 09 25 51.9 -1.7
TRIZ Trizonia 3.19 234 P Pn 09 25 52.0 -1.6
APE Apeiranthos 3.21 178 P Pn 09 25 51.1 -2.7
APE Apeiranthos 3.21 178 ⇑P Pn 09 25 55.5 +1.6
APE Apeiranthos 3.21 178 PN Pn 09 25 52.4 -1.5
APE Apeiranthos 3.21 178 i P Pn 09 25 51.0 -2.7
APE i S Sg 09 26 45.2 -0.9
APE Apeiranthos 3.21 178 P Pn 09 25 51.2 -2.7
APE Apeiranthos 3.21 178 Pn 09 25 55.5 +1.6
MEV Metsovon 3.22 263 P Pn 09 25 53.8 -0.3
SHAP Saphane-Kutahy 3.23 112 PN Pn 09 25 51.1 -3.1
DID Didima 3.23 212 P Pn 09 25 51.5 -2.7
DID Didima 3.23 212 P Pn 09 25 51.7 -2.5
ALIK Aliki, Aigiali 3.23 233 P Pn 09 25 53.0 -1.2
PENT Pentalofos 3.24 270 P Pn 09 25 53.6 -0.8
PENT Pentalofos 3.24 270 P Pn 09 25 53.9 -0.5
TVSB Tavsanli 3.25 103 PN Pn 09 25 51.4 -3.2
EFP Efpalio 3.26 237 P Pn 09 25 53.0 -1.6
AYDN Tasoluk 3.26 142 i P Pn 09 25 53.3 -1.4
AYDN i S Sg 09 26 58.4 +10
YDRA Hydra 3.28 208 P Pn 09 25 52.6 -2.3
PRD Provadia 3.29 27 P Pn 09 25 54.3 -0.7
NEST Nestorio 3.31 274 P Pn 09 25 54.7 -0.6
NEST Nestorio 3.31 274 P Pn 09 25 54.6 -0.6
MPEP Malo Peshtene 3.31 339 i P Pn 09 25 55.0 -0.3
HRT Hereke 3.32 79 PN Pn 09 25 52.7 -2.7
LAKA Lakka 3.33 233 P Pn 09 25 54.0 -1.5
LAKA Lakka 3.33 233 P Pn 09 25 54.1 -1.5
KLV Kalavryta, Ach 3.35 229 P Pn 09 25 54.2 -1.7
GEDZ Gediz 3.35 110 PN Pn 09 25 53.3 -2.6
SILT Sile 3.36 74 PN Pn 09 25 53.3 -2.7
KRND KRANIDI 3.37 212 P Pn 09 25 53.5 -2.5
KRND KRANIDI 3.37 212 P Pn 09 25 53.6 -2.5
ZIMR 3.38 360 ⇑P Pn 09 25 55.9 -0.3
ZIMR 3.38 360 P Pn 09 25 55.9 -0.3
ZIMR 3.38 360 Pn 09 25 55.9 -0.3
RAZG Razgrad 3.40 14 ⇓P Pn 09 25 55.2 -1.3
RAZG Razgrad 3.40 14 Pn 09 25 55.2 -1.3
PVO Paravola 3.41 242 P Pn 09 25 55.5 -1.1
PVO Paravola 3.41 242 P Pn 09 25 55.5 -1.1
SKO Skopje 3.42 301⇓i Pn Pn 09 25 56.3 -0.5
SKO i Sn Sg 09 26 53.0 +0.1
SKO eLg Lg 09 26 57.3
comp=E,10µm,1.5s
SKO Skopje 3.42 301⇓i Pn Pn 09 25 56.3 -0.5
SKO i Sn Sg 09 26 53.0 +0.1
SKO eLg Lg 09 26 57.3
comp=E,10µm,1.5s
CAVI Cavuskoy 3.42 90 PN Pn 09 25 53.6 -3.3
AMGA Amorgos Island 3.46 173 P Pn 09 25 55.0 -2.4
JAN Janina 3.53 261 P Pn 09 25 57.9 -0.4
JAN Janina 3.53 261 P Pn 09 25 58.1 -0.2
IOSP Ios island 3.55 181 P Pn 09 25 55.8 -2.7
IOSP Ios island 3.55 181 P Pn 09 25 56.0 -2.5
BODT Bodrum 3.55 154 P Pn 09 25 56.8 -1.8
BODT Bodrum 3.55 154 PN Pn 09 25 56.9 -1.7
OHR Ohrid 3.57 285⇓i Pn Pn 09 25 58.7 -0.3
OHR i Sn Sg 09 27 00.8 +2.8
OHR eLg Lg 09 27 16.0
comp=E,82µm,1.1s
OHR Ohrid 3.57 285⇓i Pn Pn 09 25 58.7 -0.3
OHR i Sn Sg 09 27 00.8 +2.8
OHR eLg Lg 09 27 16.0
comp=E,82µm,1.1s
BDRM Kayabasi 3.59 152 i P Pn 09 25 57.1 -2.0
BDRM ⇓i P Pn 09 25 57.4 -1.7
BDRM i S Sg 09 26 56.8 -1.8
MHLA Plaka, Milos I 3.60 192 P Pn 09 25 56.9 -2.4
TRIP Tripoli 3.66 222 P Pn 09 25 58.7 -1.4
TRIP Tripoli 3.66 222 P Pn 09 25 58.8 -1.3
MHLO Agia Marina, M 3.66 192 P Pn 09 25 57.4 -2.7
MHLO Agia Marina, M 3.66 192 P Pn 09 25 57.8 -2.3
DRO Drossia 3.67 232 P Pn 09 25 58.7 -1.6
DRO Drossia 3.67 232 P Pn 09 25 58.9 -1.4
VLX Vlachokerasia 3.73 220 P Pn 09 25 59.6 -1.5
VLX Vlachokerasia 3.73 220 P Pn 09 25 59.8 -1.3
KOSK Kos Island 3.74 160 PN Pn 09 25 59.4 -1.7
AST1 Astakos 3.74 244 P Pn 09 26 02.0 +0.8
RLS Riolos of Patr 3.76 235 P Pn 09 25 59.9 -1.5
RLS Riolos of Patr 3.76 235 P Pn 09 26 00.6 -0.8
KAND Kocaeli-Kandir 3.76 76 i P Pb 09 26 09.0 -0.7
GEYV SAKARYA_Geyve 3.77 85 i P Pb 09 26 07.8 -2.2
VLAD Vladila 3.79 349 ⇑P Pn 09 26 00.5 -1.3
VLAD Vladila 3.79 349 Pn 09 26 00.5 -1.3
SPNC Sapanca-Adapaz 3.79 82 PN Pn 09 25 59.2 -2.6
SAP4 Santorini-Oia 3.80 180 P Pn 09 26 00.1 -1.8
SAP4 Santorini-Oia 3.80 180 P Pn 09 26 00.5 -1.4
CMBO Columbo, Santo 3.80 180 P Pn 09 26 00.0 -2.0
SAUV Serdivan-Sakar 3.81 81 PN Pn 09 25 59.5 -2.6
SAP3 Santorini-Thir 3.83 180 P Pn 09 26 00.4 -2.1
THT2 Imerovigli 3.83 179 P Pn 09 26 00.5 -2.0
THT2 Imerovigli 3.83 179 PN Pn 09 26 01.9 -0.6
SFIR Foira Santorin 3.85 179 P Pn 09 26 01.5 -1.2
SNT1 Gialos, Santor 3.85 179 P Pn 09 25 59.5 -3.2
COPA Copaceanca 3.86 358 ⇑P Pn 09 26 02.1 -0.7
COPA Copaceanca 3.86 358 Pn 09 26 02.1 -0.7
SNT3 Karterados, Sa 3.86 179 P Pn 09 26 01.7 -1.1
YER Yerkesik 3.88 143 P Pn 09 26 01.6 -1.5
YER Yerkesik 3.88 143 PN Pn 09 26 01.8 -1.3
SANT Santorini 3.90 179 ⇑P Pn 09 26 04.2 +0.9
SANT Santorini 3.90 179 PN Pn 09 26 02.6 -0.8
SANT Santorini 3.90 179 Pn 09 26 04.3 +0.9
NISR Nisiros 3.91 159 P Pn 09 26 00.9 -2.6
NISR Nisiros 3.91 159 P Pn 09 26 01.8 -1.7
BORA Eskisehir 3.92 94 PN Pn 09 26 00.7 -3.0
BORA Eskisehir 3.92 94 i P Pn 09 26 02.0 -1.8
BORA i S Sg 09 27 09.6 +0.5
ANAF Anafi Island 3.93 175 P Pn 09 26 01.4 -2.4
ANAF Anafi Island 3.93 175 P Pn 09 26 01.6 -2.2
GULT Gulveren 3.93 86 PN Pn 09 26 01.3 -2.6
TAVA DENIZLI_Tavas 3.94 134 i P Pn 09 26 04.8 +0.7
DAT Datca 3.94 153 P Pn 09 26 02.2 -1.9
DAT Datca 3.94 153 PN Pn 09 26 02.4 -1.7
DAT Datca 3.94 153 i P Pn 09 26 03.1 -1.0
IGT Igoumenitsa 3.94 261 P Pn 09 26 04.2 +0.2
AMT Artemida-Makis 3.96 227 P Pn 09 26 02.8 -1.4
AMT Artemida-Makis 3.96 227 P Pn 09 26 03.4 -0.8
PHP Peshkopia 3.99 292 i PN Pn 09 26 04.6 -0.1
PHP i SN Sn 09 26 55.6 +4.1
PSN Preselentsi 4.00 31 i P Pn 09 26 02.7 -2.0
EVGI Lefkada island 4.01 247 P Pn 09 26 05.7 +0.9
EVGI Lefkada island 4.01 247 P Pn 09 26 03.9 -0.9
VTN Vitineika 4.02 235 P Pn 09 26 06.4 +1.4
MNVA Monemvasia 4.02 208 P Pn 09 26 02.7 -2.4
BAIL Bailesti 4.03 339 ⇑P Pn 09 26 04.1 -1.1
BAIL Bailesti 4.03 339 Pn 09 26 04.1 -1.1
VLI Veliai 4.03 209 P Pn 09 26 02.8 -2.4
VLI Veliai 4.03 209 P Pn 09 26 02.9 -2.3
SRCK Saricakaya, Es 4.03 92 PN Pn 09 26 02.3 -2.9
SRCK Saricakaya, Es 4.03 92 i P Pn 09 26 08.1 +2.9
AFYO Afyonkarahisar 4.09 110⇓i P Pn 09 26 05.1 -1.0
AFYO i S Sg 09 27 20.6 +6.1
AFYO IAML 09 27 30.0
comp=E,235µm,1.3s
AFYO IAML 09 27 34.0
comp=N,224µm,1.5s
BUC1 Bucharest 4.10 7 ⇑P Pn 09 26 05.4 -0.7
BUC1 Bucharest 4.10 7 P Pn 09 26 05.4 -0.7
BUC1 Bucharest 4.10 7 Pn 09 26 05.4 -0.7
AUKIR Kırka- Seyitga 4.10 102⇓i P Pn 09 26 05.2 -1.0
AUKIR i S Sg 09 27 18.9 +4.1
ITM Ithomi 4.10 222 P Pn 09 26 05.4 -0.7
ITM Ithomi 4.10 222 P Pn 09 26 05.6 -0.5
ITM Ithomi 4.10 222 PN Pn 09 26 05.7 -0.5
ITM Ithomi 4.10 222 Pn 09 26 05.8 -0.3
SRN Sarande 4.14 266 i PN Pn 09 26 07.6 +1.0
SRN i SN Sn 09 26 57.9 +2.8
FSK Fiskardo 4.14 246 P Pn 09 26 06.7 0.0
FSK Fiskardo 4.14 246 P Pn 09 26 06.7 0.0
RASA Rasa 4.15 18 ⇓P Pn 09 26 05.6 -1.2
RASA Rasa 4.15 18 Pn 09 26 05.6 -1.2
KFL Anninata 4.17 240 P Pn 09 26 07.1 +0.1
VSK1 VASILIKIADES 4.17 245 P Pn 09 26 07.2 +0.2
INCR INCERC-Sediu C 4.20 8 ⇓P Pn 09 26 06.9 -0.6
INCR INCERC-Sediu C 4.20 8 Pn 09 26 06.9 -0.6
SAHE Sakarya_HENDEK 4.22 80 i P Pb 09 26 19.1 +1.5
TURN Turunc 4.24 142 PN Pn 09 26 05.6 -2.4
TURN Turunc 4.24 142 i P Pn 09 26 06.9 -1.1
ICOR Ion Corvin 4.24 24 ⇓P Pn 09 26 07.0 -1.0
ICOR Ion Corvin 4.24 24 Pn 09 26 07.0 -1.0
HUMR Humele 4.26 356 ⇑P Pn 09 26 06.8 -1.5
HUMR Humele 4.26 356 Pn 09 26 06.8 -1.5
TSMN Mangalia Port- 4.26 33 ⇑P Pn 09 26 07.6 -0.7
TSMN Mangalia Port- 4.26 33 Pn 09 26 07.6 -0.7
VLS Valsamata 4.26 242 P Pn 09 26 08.5 +0.1
MANR Mangalia 4.27 33 ⇑P Pn 09 26 07.7 -0.8
MANR Mangalia 4.27 33 Pn 09 26 07.7 -0.8
BTAS Taskesti 4.31 84 i P Pb 09 26 20.6 +1.4
DALY Dalyan (Mula) 4.31 142 PN Pn 09 26 08.1 -0.8
DALY Dalyan (Mula) 4.31 142 i P Pn 09 26 12.1 +3.1
TIR Tirane 4.31 286 i PN Pn 09 26 10.2 +1.2
TIR i SN Sn 09 27 04.4 +4.9
TIR Tirane 4.31 286 ⇓P Pn 09 26 10.2 +1.2
TIR Tirane 4.31 286 P Pn 09 26 09.4 +0.4
TIR Tirane 4.31 286 Pn 09 26 09.4 +0.4
KEK Kerkira 4.32 264 P Pn 09 26 09.0 -0.1
KEK Kerkira 4.32 264 P Pn 09 26 09.3 +0.2
LEHL Lehliu 4.33 14 ⇑P Pn 09 26 08.4 -0.9
LEHL Lehliu 4.33 14 Pn 09 26 08.4 -0.9
BASM Basmaki-Afyon 4.33 121 PN Pn 09 26 07.5 -1.9
KEF4 Livadi, Kephal 4.33 244 P Pn 09 26 09.6 +0.2
AGT1 Agia Thekli 4.37 244 P Pn 09 26 09.9 +0.1
SHUT Suhut-Afyon 4.37 112 PN Pn 09 26 07.8 -2.1
VLMS Volimes, Zakyn 4.38 238 P Pn 09 26 10.2 +0.2
PUNG Punghina 4.39 336 ⇑P Pn 09 26 09.4 -0.7
PUNG Punghina 4.39 336 Pn 09 26 09.4 -0.7
KRI1 kERI 4.41 235 P Pn 09 26 10.5 +0.2
PYL PYLOS 4.41 221 P Pn 09 26 10.1 -0.3
PYL PYLOS 4.41 221 P Pn 09 26 10.4 -0.1
KEF3 Kipouria, Keph 4.41 244 P Pn 09 26 10.5 +0.1
SULR 4.45 8 ⇑P Pn 09 26 10.5 -0.4
SULR 4.45 8 Pn 09 26 10.5 -0.4
MDUB Mudurnu 4.46 86 PN Pn 09 26 08.9 -2.2
MDUB Mudurnu 4.46 86 Pn 09 26 10.3 -0.9
BRDR BURDUR-Merkez 4.47 124 i P Pn 09 26 12.4 +1.0
CIFT Cifteler, Eski 4.48 100 PN Pn 09 26 08.8 -2.6
CIFT Cifteler, Eski 4.48 100 i P Pn 09 26 14.3 +3.0
VLO Vlora 4.49 274 i PN Pn 09 26 13.2 +1.8
VLO i SN Sn 09 27 08.4 +4.6
PUK Puka 4.50 295 i PN Pn 09 26 11.7 0.0
PUK i SN Sn 09 27 07.7 +3.6
BCI Bajram Curri 4.51 299 i PN Pn 09 26 12.2 +0.4
BCI i SN Sn 09 27 07.8 +3.5
EFOR EFORIE 4.51 31 ⇓P Pn 09 26 11.4 -0.3
EFOR EFORIE 4.51 31 Pn 09 26 11.4 -0.3
MFTR Murfatlar 4.51 29 ⇑P Pn 09 26 10.9 -0.8
MFTR Murfatlar 4.51 29 Pn 09 26 10.9 -0.8
CVDA Cernavoda 4.51 25 ⇑P Pn 09 26 10.7 -1.1
CVDA Cernavoda 4.51 25 Pn 09 26 10.7 -1.1
AMRR Amara 4.57 18 ⇓P Pn 09 26 11.4 -1.1
AMRR Amara 4.57 18 P Pn 09 26 11.4 -1.1
AMRR Amara 4.57 18 Pn 09 26 11.4 -1.1
TSCT Constanta Port 4.58 31 ⇑P Pn 09 26 12.2 -0.6
TSCT Constanta Port 4.58 31 Pn 09 26 12.2 -0.6
ARG Arkhangelos 4.60 151 P Pn 09 26 11.8 -1.2
ARG Arkhangelos 4.60 151 PN Pn 09 26 11.9 -1.1
FETY Fethiye 4.66 140 P Pn 09 26 13.2 -0.6
FETY Fethiye 4.66 140 PN Pn 09 26 12.5 -1.3
PLAR PLOIESTI 4.66 6 ⇑P Pn 09 26 13.6 -0.2
PLAR PLOIESTI 4.66 6 Pn 09 26 13.6 -0.2
SRE Strehaia 4.67 341 ⇓P Pn 09 26 13.1 -0.8
SRE Strehaia 4.67 341 P Pn 09 26 13.1 -0.8
SRE Strehaia 4.67 341 Pn 09 26 13.1 -0.8
PVY Plav 4.68 301⇑i Pn Pn 09 26 12.8 -1.4
PVY i Sn Sn 09 27 06.4 -2.4
ANKY Antikythira Is 4.70 201 P Pn 09 26 11.5 -2.8
ANKY Antikythira Is 4.70 201 P Pn 09 26 12.0 -2.3
ISP Isparta 4.70 120 PN Pn 09 26 13.3 -1.2
ISP Isparta 4.70 120 P Pn 09 26 14.3 -0.2
ISP Isparta 4.70 120 Pn Pn 09 26 13.1 -1.4
ISP Isparta 4.70 120 Pn 09 26 14.3 -0.2
TLBR Topalu 4.70 24 ⇓P Pn 09 26 13.2 -1.2
KDZE Karadeniz Ereo 4.72 75 ⇑P Pn 09 26 15.7 +1.0
KDZE Karadeniz Ereo 4.72 75 Pn 09 26 15.7 +1.0
TIRR Tirgusor 4.75 27 ⇓P Pn 09 26 14.0 -1.0
TIRR Tirgusor 4.75 27 ⇓P Pn 09 26 14.0 -1.0
TIRR Tirgusor 4.75 27 P Pn 09 26 14.0 -1.0
TIRR Tirgusor 4.75 27 Pn 09 26 14.0 -1.0
TIRR Tirgusor 4.75 27 Pn 09 26 14.5 -0.5
PGOR Pogoanele 4.78 14 ⇑P Pn 09 26 14.7 -0.7
PGOR Pogoanele 4.78 14 Pn 09 26 14.7 -0.7
SECR 4.78 6 ⇑P Pn 09 26 15.5 0.0
SECR 4.78 6 Pn 09 26 15.5 0.0
HARR Harsova 4.80 22 ⇑P Pn 09 26 14.3 -1.4
HARR Harsova 4.80 22 P Pn 09 26 14.3 -1.4
HARR Harsova 4.80 22 Pn 09 26 14.3 -1.4
AUSIV SIVRIHISAR 4.82 98 PN Pn 09 26 13.7 -2.4
YUVA Yuva-Kibriscik 4.83 87 PN Pn 09 26 14.4 -1.9
IVA Berane 4.86 304⇑i Pn Pn 09 26 16.7 +0.1
IVA i Sn Sn 09 27 10.5 -2.6
RODP Rodopos 4.88 196 PN Pn 09 26 15.8 -1.0
ISR Istrita 4.92 10 ⇓P Pn 09 26 17.2 -0.2
ISR Istrita 4.92 10 P Pn 09 26 17.2 -0.2
ISR Istrita 4.92 10 Pn 09 26 17.2 -0.2
ULC Ulcinj 4.92 292⇓i Pn Pn 09 26 18.6 +1.1
ULC i Sn Sn 09 27 12.1 -2.5
KARP Karpathos 4.93 163 P Pn 09 26 15.6 -1.9
KARP Karpathos 4.93 163 P Pn 09 26 15.6 -1.9
KARP Karpathos 4.93 163 Pn 09 26 16.3 -1.3
IMMV Iera Moni Meta 4.93 193 P Pn 09 26 14.9 -2.7
IMMV Iera Moni Meta 4.93 193 P Pn 09 26 15.8 -1.8
IMMV Iera Moni Meta 4.93 193 PN Pn 09 26 17.1 -0.5
BCK Bucak 4.95 123 PN Pn 09 26 16.9 -1.0
VAM Vamos 4.95 191 P Pn 09 26 16.2 -1.5
MTUR Matau 4.95 357 ⇓P Pn 09 26 16.9 -1.0
MTUR Matau 4.95 357 P Pn 09 26 16.9 -1.0
MTUR Matau 4.95 357 Pn 09 26 16.9 -1.0
IDI Anoyia 4.99 185 P Pn 09 26 15.2 -3.3
IDI Anoyia 4.99 185 Pn Pn 09 26 15.7 -2.7
comp=N,32nm,0.3s,baz=12,slow=12,SNR=34
IDI Anoyia 4.99 185 P Pn 09 26 16.3 -2.2
IDI Anoyia 4.99 185 ⇑P Pn 09 26 19.8 +1.3
IDI Anoyia 4.99 185 Pn 09 26 17.8 -0.7
ELL Elmali 5.01 133 PN Pn 09 26 17.1 -1.6
ELL Elmali 5.01 133 P Pn 09 26 19.3 +0.6
ELL Elmali 5.01 133 Pn 09 26 19.3 +0.6
NPS Neapolis 5.01 178 P Pn 09 26 15.9 -2.7
DRME Dracevica, Mon 5.04 294⇓i Pn Pn 09 26 20.3 +1.3
DRME Dracevica, Mon 5.04 294⇑i Pn Pn 09 26 16.2 -2.8
DRME i Sn Sn 09 27 15.6 -1.8
PDG Podgorica 5.08 297 ⇓P Pn 09 26 20.4 +0.8
PDG Podgorica 5.08 297⇓i Pn Pn 09 26 20.4 +0.8
PDG Podgorica 5.08 297 Pn 09 26 20.3 +0.8
TTG Podgorica 5.08 297⇓i Pn Pn 09 26 18.7 -0.9
TTG i Sn Sn 09 27 16.5 -1.9
KOME Kolasin 5.09 302⇓i Pn Pn 09 26 18.9 -0.9
KOME i Sn Sn 09 27 16.9 -1.9
KORT Korkueli 5.09 128 PN Pn 09 26 18.0 -1.8
HERR Herculane 5.09 336 ⇑P Pn 09 26 18.4 -1.4
HERR Herculane 5.09 336 Pn 09 26 18.4 -1.4
TOPG Topolog 5.11 25 ⇑P Pn 09 26 19.5 -0.4
LAST Lasithi 5.11 179 P Pn 09 26 17.4 -2.6
ARR Arges 5.12 354 ⇑P Pn 09 26 18.5 -1.7
ARR Arges 5.12 354 Pn 09 26 18.5 -1.7
JURR Jurilovca 5.18 29 ⇓P Pn 09 26 19.9 -1.0
ZKR Zakros 5.20 172 P Pn 09 26 18.6 -2.6
ZKR Zakros 5.20 172 PN Pn 09 26 20.4 -0.8
KIZT Kizilcal 5.22 103 PN Pn 09 26 20.7 -0.9
MLR Muntele Rosu 5.23 4 Pn Pn 09 26 21.2 -0.6
comp=N,122nm,0.3s,baz=203,slow=5.3,SNR=597
MLR Lg Lg 09 27 54.5
comp=N,282nm,0.3s,baz=231,slow=16,SNR=4.3
MLR Muntele Rosu 5.23 4 ⇑P Pn 09 26 21.6 -0.1
MLR Muntele Rosu 5.23 4 Pn 09 26 21.6 -0.1
AKAS Kas 5.24 139 PN Pn 09 26 21.5 -0.3
AKAS Kas 5.24 139⇓i P Pn 09 26 22.0 +0.2
AKAS i S Sb 09 27 42.7 +4.6
GRER 5.24 12 ⇓P Pn 09 26 21.8 +0.1
GRER 5.24 12 Pn 09 26 21.8 +0.1
MDVR Moldovita 5.25 330 ⇑P Pn 09 26 20.9 -1.1
MDVR Moldovita 5.25 330 Pn 09 26 20.9 -1.1
BUM Brajici-Budva 5.28 295⇑i Pn Pn 09 26 21.1 -1.3
BUM i Sn Sn 09 27 20.8 -2.7
SCTE Santa Cesarea 5.29 270 P Pn 09 26 22.4 -0.1
LOT Lotru 5.30 348 ⇑P Pn 09 26 21.2 -1.5
LOT Lotru 5.30 348 Pn 09 26 21.2 -1.5
CFR Carcaliu 5.30 22 ⇑P Pn 09 26 21.5 -1.1
CFR Carcaliu 5.30 22 P Pn 09 26 21.5 -1.1
CFR Carcaliu 5.30 22 Pn 09 26 21.5 -1.1
ANTB Antalya 5.34 127 PN Pn 09 26 21.8 -1.3
BISRR Bisoca 5.36 10 ⇑P Pn 09 26 23.4 -0.1
BISRR Bisoca 5.36 10 Pn 09 26 23.4 -0.1
PLE Pljevlja 5.41 306⇑i Pn Pn 09 26 22.9 -1.3
PLE i Sn Sn 09 27 23.8 -2.9
NKY Niksic 5.41 300⇓i Pn Pn 09 26 23.0 -1.3
NKY i Sn Sn 09 27 23.8 -3.0
NKME Niksic 5.42 299⇓i Pn Pn 09 26 23.1 -1.2
NKME i Sn Sn 09 27 24.0 -2.9
GZR Gura Zlata 5.46 340 ⇑P Pn 09 26 23.3 -1.5
GZR Gura Zlata 5.46 340 P Pn 09 26 23.3 -1.5
GZR Gura Zlata 5.46 340 Pn 09 26 23.3 -1.5
TLCR 5.52 26 ⇑P Pn 09 26 25.6 -0.1
TLCR 5.52 26 P Pn 09 26 25.6 -0.1
TLCR 5.52 26 Pn 09 26 25.6 -0.1
DIVS Divibare 5.53 315⇓i Pn Pn 09 26 24.4 -1.4
DIVS Divibare 5.53 315 Pn 09 26 25.2 -0.6
GISR Galati 5.53 20 ⇑P Pn 09 26 24.8 -0.9
GISR Galati 5.53 20 Pn 09 26 24.8 -0.9
TUDR 5.58 17 ⇑P Pn 09 26 26.2 -0.2

TUDR		5.58	17			Pn	09 26 26.2	-0.2
RUDO	Rudo	5.58	309		ePn	Pn	09 26 25.2	-1.3
GIUM	Giurgiulesti	5.61	21	⇑	P	Pn	09 26 25.6	-1.2
GIUM	Giurgiulesti	5.61	21			Pn	09 26 25.6	-1.2
HCY	Herceg Novi	5.61	295	⇓	iPn	Pn	09 26 27.4	+0.5
HCY	Herceg Novi	5.61	295	⇓	iPn	Pn	09 26 25.2	-1.7
HCY					iSn	Sn	09 27 28.6	-2.9
PETR	Petresti	5.61	13	⇓	P	Pn	09 26 27.0	+0.1
PETR	Petresti	5.61	13			Pn	09 26 27.0	+0.1
ODBI	Odobesti	5.62	12	⇑	P	Pn	09 26 27.1	+0.1
ODBI	Odobesti	5.62	12			Pn	09 26 27.1	+0.1
PLOR	Plostina	5.65	9	⇓	P	Pn	09 26 27.4	-0.1
PLOR	Plostina	5.65	9	⇑	P	Pn	09 26 27.4	-0.1
PLOR	Plostina	5.65	9			Pn	09 26 27.4	-0.1
UPM	Unac-Piva	5.65	303	⇓	iPn	Pn	09 26 27.8	+0.2
UPM	Unac-Piva	5.65	303	⇓	iPn	Pn	09 26 26.3	-1.3
UPM					iSn	Sn	09 27 29.8	-3.0
VRI	Vrincioaia	5.67	10	⇑	P	Pn	09 26 27.3	-0.4
VRI	Vrincioaia	5.67	10		P	Pn	09 26 27.3	-0.4
VRI	Vrincioaia	5.67	10			Pn	09 26 27.3	-0.4
LOD	Lodumlu	5.69	92		PN	Pn	09 26 27.3	-0.7
DOPR	Dopca	5.69	0	⇑	P	Pn	09 26 27.9	0.0
DOPR	Dopca	5.69	0			Pn	09 26 27.9	0.0
BBLS	Lazići	5.71	311	⇓	iPn	Pn	09 26 27.4	-0.9
ANTO	Ankara	5.71	92	⇑	P	Pn	09 26 28.5	+0.2
ANTO	Ankara	5.71	92		PN	Pn	09 26 27.2	-1.1
ANTO	Ankara	5.71	92		P	Pn	09 26 28.3	0.0
ANTO	Ankara	5.71	92		P	Pn	09 26 28.5	+0.2
ANTO	Ankara	5.71	92			Pn	09 26 28.5	+0.2
BRY	Bratogost	5.75	299	⇓	iPn	Pn	09 26 29.9	+0.9
BRY	Bratogost	5.75	299	⇓	iPn	Pn	09 26 27.2	-1.8
BRY					iSn	Sn	09 27 32.2	-3.0
TREB	Trebinje	5.81	297		ePn	Pn	09 26 30.6	+1.0
LADK	Ladik-KONYA	5.81	109		PN	Pn	09 26 29.1	-0.7
DEV	Deva	5.89	343	⇓	P	Pn	09 26 30.5	-0.1
DEV	Deva	5.89	343		P	Pn	09 26 30.5	-0.1
DEV	Deva	5.89	343			Pn	09 26 30.5	-0.1
MDB	Medias	5.91	353	⇓	P	Pn	09 26 31.1	+0.2
MDB	Medias	5.91	353		P	Pn	09 26 31.1	+0.2
MDB	Medias	5.91	353			Pn	09 26 31.1	+0.2
DBRK	Dubrovnik	5.93	296		iP	Pn	09 26 30.8	-0.5
GHRR		5.97	14	⇓	P	Pn	09 26 32.0	+0.2
GHRR		5.97	14			Pn	09 26 32.0	+0.2
BANR	Banloc	5.98	330	⇑	P	Pn	09 26 31.3	-0.5
BANR	Banloc	5.98	330			Pn	09 26 31.3	-0.5
BZS	Buzias	6.00	334	⇓	P	Pn	09 26 31.0	-1.3
BZS	Buzias	6.00	334		P	Pn	09 26 31.0	-1.3
BZS	Buzias	6.00	334			Pn	09 26 31.0	-1.3
CGL1	Ceglie Messapi	6.03	276	⇓	iPn	Pn	09 26 31.3	-1.4
TEKS	Tekeris	6.08	317		ePn	Pn	09 26 32.1	-1.2
HAPS	Han Pijesak,BI	6.10	311		ePn	Pn	09 26 32.0	-1.7
TAR1	Taranto	6.18	275	⇓	iPn	Pn	09 26 33.2	-1.4
BIR	Birlad	6.21	15	⇑	P	Pn	09 26 34.3	-0.8
BIR	Birlad	6.21	15		P	Pn	09 26 34.3	-0.8
BIR	Birlad	6.21	15			Pn	09 26 34.3	-0.8
TIM	Timisoara	6.25	332	⇓	P	Pn	09 26 35.2	-0.3
TIM	Timisoara	6.25	332		P	Pn	09 26 35.2	-0.3
TIM	Timisoara	6.25	332			Pn	09 26 35.2	-0.3
TESR	Tescani	6.30	8	⇓	P	Pn	09 26 35.9	-0.4
TESR	Tescani	6.30	8			Pn	09 26 35.9	-0.4
STON	Ston	6.31	297	⇓	iPn	Pn	09 26 36.4	0.0
STON	Ston	6.31	297		iP	Pn	09 26 36.2	-0.2
FRGS	Fruska Gora	6.37	322	⇓	iPn	Pn	09 26 35.0	-2.3
BR131	Keskin Array S SNR=620	6.37	92		P	Pn	09 26 36.1	-1.3
BRTR	Keskin Array B comp=N,14nm,0.3s,baz=204,slow=11,SNR=110	6.37	92		Pn	Pn	09 26 35.1	-2.3
BRTR					Lg	Lg	09 28 30.5	
	comp=N,55nm,0.3s,baz=90,slow=33,SNR=2.8							
BRTR	Keskin Array B	6.37	92		iP	Pn	09 26 35.2	-2.3
BRTR					pmax	pmax		
	comp=Z,52nm,0.6s							
ILGA	Ilgaz	6.39	80			Pn	09 26 36.9	-1.0
BAI	Bari	6.51	280	⇓	iPn	Pn	09 26 37.8	-1.4
LEOM	Leova	6.54	18	⇓	P	Pn	09 26 38.5	-1.1
LEOM	Leova	6.54	18		P	Pn	09 26 38.5	-1.1
LEOM	Leova	6.54	18			Pn	09 26 38.5	-1.1
CJR	Cluj-Napoca	6.56	349	⇑	P	Pn	09 26 39.1	-0.9
CJR	Cluj-Napoca	6.56	349		P	Pn	09 26 39.1	-0.9
CJR	Cluj-Napoca	6.56	349			Pn	09 26 39.1	-0.9
SIRR	Siria	6.57	337	⇑	P	Pn	09 26 38.4	-1.7
SIRR	Siria	6.57	337			Pn	09 26 38.4	-1.7
VASR	Vaslui	6.60	15	⇑	P	Pn	09 26 39.1	-1.4
MATE	Matera	6.62	276	⇑	P	Pn	09 26 39.7	-1.0
MATE	Matera	6.62	276			Pn	09 26 39.7	-1.0
SG1	Sgolgore (BA)	6.64	278	⇓	iPn	Pn	09 26 39.6	-1.5
BIZ	Bicaz	6.68	4	⇓	P	Pn	09 26 41.3	-0.3
BIZ	Bicaz	6.68	4			Pn	09 26 41.3	-0.3
TIP	Timpagrande	6.73	263	⇓	P	Pn	09 26 42.3	0.0
TIP	Timpagrande	6.73	263			Pn	09 26 41.6	-0.7
BZK	Bozkurt	6.73	73	⇑	P	Pn	09 26 43.0	+0.8
BZK	Bozkurt	6.73	73			Pn	09 26 43.0	+0.8
DRGR		6.79	344	⇑	P	Pn	09 26 42.9	-0.3
DRGR		6.79	344		P	Pn	09 26 42.9	-0.3
DRGR		6.79	344			Pn	09 26 42.9	-0.3
ARCR	ARCALIA	6.85	354	⇓	P	Pn	09 26 43.0	-0.8
ARCR	ARCALIA	6.85	354			Pn	09 26 43.0	-0.8
MAKA	Makarska	6.93	298		iP	Pn	09 26 44.5	-0.4
RICI	Ricice	6.94	300		P	Pn	09 26 45.3	+0.2
IAS	Iasi	7.09	12	⇑	P	Pn	09 26 45.7	-1.5
IAS	Iasi	7.09	12		P	Pn	09 26 45.7	-1.5
IAS	Iasi	7.09	12			Pn	09 26 45.7	-1.5
MILM	Milestii Mici	7.09	19	⇑	P	Pn	09 26 47.2	0.0
MILM	Milestii Mici	7.09	19			Pn	09 26 47.2	0.0
PRAR	RASCA	7.11	5	⇓	P	Pn	09 26 46.8	-0.7
PRAR	RASCA	7.11	5			Pn	09 26 46.8	-0.7
KIS	Kishinev	7.17	19	⇑	iP	Pn	09 26 47.5	-0.7
KIS	comp=Z,11µm,1.4s				iS	Sn	09 28 08.0	-1.8
KIS					LRM	MLR	09 31 17.0	
	comp=Z,525µm,12.0s							
KIS	Kishinev	7.17	19	⇑	P	Pn	09 26 47.3	-0.9
KIS	Kishinev	7.17	19	⇓	iP	Pn	09 26 47.5	-0.7
KIS					iS	Sn	09 28 08.0	-1.8
KIS					pmax	pmax		
	comp=Z,11µm,1.4s							
KIS					pmax	pmax		
	comp=N,28µm,10.0s							
KIS					MLR	MLR		
	comp=Z,525µm,12.0s							
KIS	Kishinev	7.17	19			Pn	09 26 47.3	-0.9
BURAR	Bucovina Array	7.34	359	⇓	P	Pn	09 26 50.9	+0.2
BURAR	Bucovina Array	7.34	359			Pn	09 26 50.9	+0.2
MGRS	Mrkonjic Grad	7.40	307	⇑	iPn	Pn	09 26 52.1	+0.6
SGRT	San Giovanni R	7.43	285			Pn	09 26 50.0	-1.9
SEV	Sevastopol'	7.47	52	⇑	eP	Pn	09 26 48.6	-3.8
SEV					eS	Sn	09 28 14.1	-3.2
BMR	Baia Mare	7.52	350	⇓	P	Pn	09 26 51.8	-1.2
BMR	Baia Mare	7.52	350		P	Pn	09 26 51.8	-1.2
BMR	Baia Mare	7.52	350			Pn	09 26 51.8	-1.2
BLY	Banja Luka	7.52	309	⇓	iPn	Pn	09 26 52.7	-0.3
DIKM	Dikmen	7.61	76	⇓	P	Pn	09 26 54.8	+0.5
DIKM	Dikmen	7.61	76			Pn	09 26 54.8	+0.5
CEL	Celeste	7.62	258			Pn	09 26 53.5	-1.1
KIJV	Kijevo	7.63	302		iP	Pn	09 26 55.2	+0.6
MORH	Mrgy, Hungar	7.70	323	⇓	iPn	Pn	09 26 53.4	-2.1
YAL	Yalta	7.74	54		eP	Pn	09 26 53.0	-3.1
YAL					eS	Sn	09 28 21.5	-2.4
LEF	Lefka	7.87	128	⇑	P	Pn	09 27 00.0	+2.1
LEF	Lefka	7.87	128			Pn	09 27 00.0	+2.1
SIM	Simferopol'	7.96	51		ceP	Pn	09 26 57.1	-2.0
SIM					eS	Sn	09 28 28.0	-1.3
SIM					pmax	pmax		
	comp=Z,4µm,0.8s							
SIM					MLR	MLR		
	comp=Z,334µm,12.1s							
ZIRJ	Zirje	7.99	298		iP	Pn	09 26 58.8	-0.8
ALU	Alushta	8.00	54		eP	Pn	09 26 56.7	-2.9
ALU					eS	Sn	09 28 28.2	-1.9
MORI	Morici	8.03	300		iP	Pn	09 26 59.9	-0.2
TRPA	Tarpa	8.11	346	⇑	P	Pn	09 27 00.1	-1.1
TRPA	Tarpa	8.11	346			Pn	09 27 00.1	-1.1
SORM	Soroca	8.14	14	⇑	P	Pn	09 27 00.4	-1.2
SORM	Soroca	8.14	14		P	Pn	09 27 00.4	-1.2
SORM	Soroca	8.14	14			Pn	09 27 00.4	-1.2
CSS	Mathiatis	8.25	128		Pn	Pn	09 27 00.6	-2.5
CSS	Mathiatis	8.25	128			Pn	09 27 01.3	-1.8
PAOL	Paolisi	8.25	279			Pn	09 27 02.7	-0.4
MOSL	Moslavina	8.27	313		iP	Pn	09 27 02.1	-1.2
SUDU	Sudak	8.47	54	⇑	eP	Pn	09 27 03.6	-2.4
DUGI	Dugi Otok	8.51	299		iP	Pn	09 27 06.0	-0.7
PSZ	Piszkesteto	8.59	335	⇓	P	Pn	09 27 05.9	-1.9
PSZ	Piszkesteto	8.59	335		P	Pn	09 27 06.3	-1.6
PSZ	Piszkesteto	8.59	335			Pn	09 27 06.3	-1.6
PSZ	Piszkesteto	8.59	335			Pn	09 27 05.9	-1.9
UZH	Uzhgorod	8.64	346		eP	Pn	09 27 11.2	+2.8
UZH					eS	Sn	09 28 50.2	+4.3
UZH					MLR	MLR		
	comp=N,174µm,12.5s							
UZH					MLR	MLR		
	comp=E,90µm,12.5s							
UZH					MLR	MLR		
	comp=Z,90µm,12.5s							
KALN	Kalnik	8.75	315		iP	Pn	09 27 08.2	-1.8
FEO	Feodosiya	8.77	54	⇓	eP	Pn	09 27 07.2	-3.0
FEO					eS	Sn	09 28 49.6	+0.4
BEHE	Becsehely	8.80	318		ePn	Pn	09 27 09.2	-1.4
INTR	Introdacqua	8.82	285			Pn	09 27 09.7	-1.4
ZAG	Zagreb	8.83	312	⇓	iPn	Pn	09 27 09.9	-1.1
ZAG	Zagreb	8.83	312		P	Pn	09 27 09.7	-1.3
NVLJ	Novalja	8.87	302		iP	Pn	09 27 10.5	-1.0
PTJ	Puntijarka	8.88	312		P	Pn	09 27 10.5	-1.3
KECS	Kecovo	8.92	339		eP	Pn	09 27 11.6	-0.6
KECS	Kecovo	8.92	339		ePN	Pn	09 27 11.6	-0.6
VAE	Valguarnera	8.99	255		Pn	Pn	09 27 13.0	-0.3
	comp=Z,14nm,0.3s,baz=114,slow=1.8,SNR=20							
OZLJ	Ozalj	9.01	310		iP	Pn	09 27 12.2	-1.2
SRO2	Moca	9.01	328		eP	Pn	09 27 14.1	+0.6
SRO2	Moca	9.01	328		ePN	Pn	09 27 14.1	+0.6
BOJS	Bojanci	9.08	308		ePn	Pn	09 27 13.4	-1.0
CRES	Cresnjev	9.13	311		ePn	Pn	09 27 13.9	-1.2
CRES	Cresnjev	9.13	311	⇓	iPn	Pn	09 27 13.8	-1.4
GOLS	Golise	9.14	312		ePn	Pn	09 27 14.1	-1.2
AQU	L'Aquila	9.24	287	⇓	iPn	Pn	09 27 15.3	-1.5
AQU	L'Aquila	9.24	287		P	Pn	09 27 15.1	-1.7
AQU	L'Aquila	9.24	287			Pn	09 27 15.1	-1.7
VYHS	Vyhne	9.45	333		eP	Pn	09 27 17.2	-2.3
VYHS					MLR	MLR		
	comp=Z,290µm,21.6s							
VYHS	Vyhne	9.45	333		ePN	Pn	09 27 17.2	-2.3
VYHS					eL	L	09 31 16.5	
RIY	Rijeka	9.46	306	⇓	iPn	Pn	09 27 19.4	-0.2
RIY	Rijeka	9.46	306		P	Pn	09 27 19.2	-0.4
NRCA	Norcia	9.54	290			Pn	09 27 19.4	-1.4
KERU	Kerch	9.58	55		eP	Pn	09 27 19.6	-1.6
LVV	L'vov	9.59	355		eP	Pn	09 27 23.0	+1.6
LVV					eS	Sn	09 29 09.8	+0.5
LVV					pmax	pmax		
	comp=Z,2µm,1.4s							
LVV					smax	smax		
	comp=N,5µm,1.8s							
LVV					MLR	MLR		
	comp=E,604µm,8.5s							
LVV					MLR	MLR		
	comp=N,380µm,9.4s							
LVV					MLR	MLR		
	comp=Z,570µm,8.5s							
WDD	Wied Dalam	9.63	246			Pn	09 27 19.6	-2.4
CORL	Corleone	9.68	260			Pn	09 27 21.7	-1.1
CEY	Cerknica	9.69	308	⇓	iPn	Pn	09 27 21.9	-1.0
GAZ	Gaziantep	9.76	105			Pn	09 27 22.4	-1.5
LJU	Ljubljana	9.79	310		ePn	Pn	09 27 23.3	-0.9
LJU	Ljubljana	9.79	310	⇓	iPn	Pn	09 27 22.8	-1.4
LANS	Liptovska Anna	9.81	337		eP	Pn	09 27 24.7	+0.2
LANS	Liptovska Anna	9.81	337		ePN	Pn	09 27 24.7	+0.2
NIE	Niedzica	9.82	340		LMZ	LR	09 32 46.5	
	comp=Z,206nm,16.1s							
CLTB	Caltabellotta	9.85	258			Pn	09 27 24.7	-0.4
SKDS	Skadanscina	9.85	306		iPn	Pn	09 27 24.0	-1.1
SOKA	Soboth	9.86	314		iPn	Pn	09 27 23.6	-1.7
	comp=Z,384nm,0.7s,SNR=68							
ZST	Bratislava	9.89	326		eP	Pn	09 27 23.4	-2.1
ZST	Bratislava	9.89	326		ePN	Pn	09 27 23.4	-2.1
MODS	Modra-Piesok	9.95	327		eP	Pn	09 27 24.4	-2.0
MODS					MLR	MLR		
	comp=Z,390µm,19.8s							
MODS	Modra-Piesok	9.95	327		ePN	Pn	09 27 24.4	-2.0
MODS	Modra-Piesok	9.95	327		eSG	Sn	09 29 58.1	+40
MODS					eL	L	09 31 42.2	
ARSA	Arzberg	9.96	318		ePn	Pn	09 27 25.2	-1.4
	comp=Z,270nm,0.7s,SNR=96							
ANN	Anapa	9.98	59		iP	Pn	09 27 24.6	-2.2
ANN					iS	Sn	09 29 17.5	-1.4
ANN					pmax	pmax		
	comp=Z,177nm,0.9s							
OBKA	Obir	10.04	312		ePn	Pn	09 27 26.8	-0.8
	comp=Z,142nm,0.8s,SNR=113							
MURB	Monte Urbino	10.05	291			Pn	09 27 26.7	-1.2
TRI	Trieste	10.08	306		P	Pn	09 27 27.2	-1.0
TRI	Trieste	10.08	306			Pn	09 27 27.2	-1.0
JAVC	Velka Javorina	10.18	330		ePN	Pn	09 27 28.9	-0.7
JAVC					eSN	Sn	09 29 21.1	-2.9
JAVC					e		09 31 01.1	
CONA	Conrad Observa	10.25	321		iPn	Pn	09 27 29.4	-1.3
	comp=Z,162nm,0.7s,SNR=73							
HWQ	Hawqa	10.33	122		eP	Pn	09 27 32.9	+1.1
BHL	Bhannes	10.38	125		eP	Pn	09 27 29.2	-3.3
LATE	Laterza	10.45	287		Pn	Pn	09 27 31.4	-1.9
MYKA	Terra Mystica	10.62	311		Pn	Pn	09 27 35.7	0.0
	comp=Z,280nm,0.6s,SNR=75							
QRWL	Qaraoun	10.64	126		eP	Pn	09 27 33.4	-2.5
HNTI	Hanita	10.65	129		Pn	Pn	09 27 32.9	-3.1
OJC	Ojcow	10.69	340		eP	Pn	09 27 34.7	-1.8
OJC					LMZ	LR	09 33 41.9	
	comp=Z,315nm,17.4s							
OJC	Ojcow	10.69	340		P	Pn	09 27 35.6	-0.8
OJC	Ojcow	10.69	340			Pn	09 27 35.6	-0.8
RCY	Rachaya	10.77	126		eP	Pn	09 27 35.0	-2.8
AKASG	Malin Array Be	10.77	13		Pn	Pn	09 27 33.3	-4.3
	comp=Z,22nm,0.3s,baz=196,slow=13,SNR=80							
AKASG					LR	LR	09 32 14.4	
	comp=Z,556µm,20.8s,baz=190,slow=40							
AKBB	Malin Array Si	10.77	13		P	Pn	09 27 34.2	-3.4
AKBB	Malin Array Si	10.77	13			Pn	09 27 34.2	-3.4
SHBL	Chebaa	10.81	127		eP	Pn	09 27 35.1	-3.3
MMAOB	Mount Meron ar	10.83	129		Pn	Pn	09 27 35.2	-3.4
MMAI	Mount Meron Ar	10.83	129		Pn	Pn	09 27 35.7	-2.9
	comp=Z,14nm,0.3s,baz=310,slow=12,SNR=109							
MMAI					LR	LR	09 32 55.4	
	comp=Z,317µm,19.0s,baz=320,slow=44							
OKC	Ostrava-Krasne	10.83	334		eP	Pn	09 27 42.2	+3.7
OKC					MLR	MLR		
	comp=Z,476µm,12.9s							
OKC	Ostrava-Krasne	10.83	334		eP	Pn	09 27 42.2	+3.7
OKC					AMS	AMS	09 32 50.0	
	comp=Z,476µm,12.9s							
GEM	Giv'at Ha'Em	10.85	127		Pn	Pn	09 27 36.0	-2.8
KRUC	Moravsky	10.86	327		ePN	Pn	09 27 36.8	-2.0
KRUC	Moravsky	10.86	327		eSN	Sn	09 29 37.9	-2.4
KRUC					e		09 31 23.5	
NATI	Neve Ativ	10.86	127		Pn	Pn	09 27 36.1	-2.8
KSDI	Kefar Szold	10.86	127		Pn	Pn	09 27 36.0	-2.9
OFRI	`Ofer	10.87	132		Pn	Pn	09 27 35.4	-3.7
BLGI	Bet Lehem HaGe	10.91	131		Pn	Pn	09 27 36.3	-3.3
VRAC	Vranov	10.97	328		Pn	Pn	09 27 38.8	-1.5
	comp=Z,2.8nm,0.3s,baz=152,slow=12,SNR=26							
VRAC					Lg	Lg	09 30 49.6	
	comp=Z,3.6nm,0.3s,baz=96,slow=20,SNR=1.4							
VRAC					LR	LR	09 31 48.9	
	comp=Z,145µm,21.5s,baz=126,slow=37							
VRAC	Vranov	10.97	328		ePN	Pn	09 27 39.1	-1.2
VRAC	Vranov	10.97	328		eSN	Sn	09 29 44.2	+1.1
VRAC					e		09 31 24.4	
VRAC	Vranov	10.97	328	⇓	P	Pn	09 27 39.2	-1.1
VRAC	Vranov	10.97	328			Pn	09 27 39.2	-1.1
MORC	Moravsky Berou	10.99	332		ePN	Pn	09 27 40.1	-0.5
MORC	Moravsky Berou	10.99	332		eSN	Sn	09 29 47.4	+3.7
MORC					e		09 31 27.2	
MORC	Moravsky Berou	10.99	332	⇓	P	Pn	09 27 40.0	-0.7
MORC	Moravsky Berou	10.99	332		P	Pn	09 27 39.8	-0.8
MORC	Moravsky Berou	10.99	332			Pn	09 27 39.8	-0.8
MORC	Moravsky Berou	10.99	332			Pn	09 27 40.0	-0.7
MOA	Molln	11.00	317		ePn	Pn	09 27 40.4	-0.4
	comp=Z,251nm,0.8s,SNR=51							
OSSC	Osservatorio P	11.02	292			Pn	09 27 39.0	-2.0
KBA	Koelnbreinsper	11.04	312		iPn	Pn	09 27 40.1	-1.4
	comp=Z,312nm,0.9s,SNR=231							
KSHT	Keshet	11.10	128		Pn	Pn	09 27 40.4	-1.8
CASP	Castiglione de	11.16	288			Pn	09 27 40.1	-2.9
SOC	Sochi	11.19	68		iP	Pn	09 27 42.1	-1.2
SOC					e		09 29 45.2	
SOC					pmax	pmax		
	comp=Z,35nm,0.7s							
SOC					MLR	MLR		
	comp=Z,420µm,14.0s							
SHMJ	Saham	11.25	129		Pn	Pn	09 27 42.3	-2.0
MMLI	Mount Malkishu	11.26	131		Pn	Pn	09 27 41.1	-3.3
ABTA	Abfaltersbach	11.35	309		ePn	Pn	09 27 44.7	-0.9
	comp=Z,737nm,0.8s,SNR=301							
ZCCA	Zocca	11.41	296			Pn	09 27 46.6	+0.2
TREC	Trest	11.42	325		eP	Pn	09 27 47.6	+1.1
TREC					MLR	MLR		
	comp=Z,517µm,12.9s							
TREC	Trest	11.42	325		eP	Pn	09 27 47.6	+1.1
TREC					AMS	AMS	09 33 10.0	
	comp=Z,517µm,12.9s							
QRNJ	Al-Qirein	11.42	131		Pn	Pn	09 27 43.7	-2.8
HMDT	Nahal Hemdat	11.45	131		Pn	Pn	09 27 44.2	-2.8
KRLC	Kraliky	11.51	331		eP	Pn	09 27 48.2	+0.4
KRLC					MLR	MLR		
	comp=Z,468µm,12.1s							
KRLC	Kraliky	11.51	331		eP	Pn	09 27 48.2	+0.4
KRLC					AMS	AMS	09 32 40.0	
	comp=Z,468µm,12.1s							
CTI	Castel Tesino	11.56	304		P	Pn	09 27 46.8	-1.7
CTI	Castel Tesino	11.56	304			Pn	09 27 46.8	-1.7
AMAZ	Amatzia	11.65	135		Pn	Pn	09 27 46.5	-3.3
RJOB	Jochberg baz=129,slow=13	11.72	314		eP	Pn	09 27 51.4	+0.7
VLC	Villacollemand	11.77	294			Pn	09 27 49.5	-1.7
DSI	Dead Sea	11.88	134		Pn	Pn	09 27 49.5	-3.3
KZIT	Kziot	11.88	139		Pn	Pn	09 27 49.3	-3.6
YTIR	Yattir	11.89	135		Pn	Pn	09 27 49.7	-3.4
YTIR	Yattir	11.89	135		Pn	Pn	09 27 51.1	-2.0
DPC	Dobruska-Polom	11.91	331		eP	Pn	09 27 54.6	+1.4
DPC					MLR	MLR		
	comp=Z,358µm,10.6s							
DPC	Dobruska-Polom	11.91	331		eP	Pn	09 27 54.6	+1.4
DPC					AMS	AMS	09 34 20.0	
	comp=Z,358µm,10.6s							
GEC2	GERESS Array S baz=129,slow=13	11.93	320		eP	Pn	09 27 52.6	-0.9
GERES	GERESS Array B comp=Z,0.9nm,0.3s,baz=126,slow=14,SNR=67	11.93	320		Pn	Pn	09 27 52.3	-1.2
PRMA	PARMA	11.98	297			Pn	09 27 53.4	-0.7
BEL	Belsk	11.99	346		eP	Pn	09 27 54.0	-0.2
BEL					LMZ	LR	09 33 34.7	
	comp=Z,843nm,13.5s							
SALO	Salr	12.11	301			Pn	09 27 54.1	-1.9
OSTC	Ostas comp=Z,394µm,13.2s	12.12	331		AMS	AMS	09 32 40.0	
WTTA	Wattenberg comp=Z,547nm,0.7s,SNR=109	12.13	310		ePn	Pn	09 27 56.7	+0.4
UPC	Upice	12.15	330		eP	Pn	09 27 57.6	+1.1
UPC					MLR	MLR		
	comp=Z,328µm,10.5s							
UPC	Upice	12.15	330		eP	Pn	09 27 57.6	+1.1
UPC					AMS	AMS	09 35 20.0	
	comp=Z,328µm,10.5s							
KHC	Kasperske Hory	12.18	321		ceP	Pn	09 27 56.9	-0.1
KHC					pmax	pmax		
	comp=Z,849nm,2.5s							
KHC	Kasperske Hory	12.18	321		eP	Pn	09 27 56.7	-0.3
KHC					AMS	AMS	09 33 50.0	
	comp=Z,442µm,10.9s							
KHC	Kasperske Hory	12.18	321			Pn	09 27 55.9	-1.1
CHVC	Chvalec	12.20	331		e

comp=Z,429µm,13.0s
KIV Kislovodsk 13.37 68 Pn Pn 09 28 13.3 +0.1
KEST Kesra 13.42 255 Pn Pn 09 28 13.3 -0.7
comp=Z,7.2nm,0.3s,baz=21,slow=6.2,SNR=50
KEST LR LR 09 34 35.5
comp=Z,213µm,20.2s,baz=7.0,slow=43
KEST Kesra 13.42 255 Pn 09 28 14.2 +0.2
MANZ Manzenberg 13.47 321 *eP* **Pn 09 28 13.1 -1.4**
baz=129,slow=13
NKC Novy Kostel 13.47 322 *eP* **Pn 09 28 11.9 -2.6**
NKC MLR MLR
comp=Z,364µm,11.4s
NKC Novy Kostel 13.47 322 *eP* **Pn 09 28 11.9 -2.6**
NKC AMS AMS 09 35 00.0
comp=Z,364µm,11.4s
KBZ Khabaz 13.48 69 Pn Pn **09 28 14.8 +0.1**
comp=Z,0.7nm,0.3s,baz=281,slow=14,SNR=18
WERN Wernitzgruen 13.54 322 *eP* **Pn 09 28 13.9 -1.6**
baz=129,slow=13
FBE Freiberg 13.55 326 *eP* **Pn 09 28 14.7 -0.8**
baz=129,slow=13
TANN Tannenbergstha 13.59 323 *eP* **Pn 09 28 14.5 -1.7**
baz=129,slow=13
GUNZ Gunzen 13.61 322 *eP* **Pn 09 28 15.0 -1.5**
baz=129,slow=13
GRA1 Grafenberg Arr 13.72 318 Pn 09 28 15.7 -2.2
GRF Grafenberg Arr 13.72 318 *eP* **Pn 09 28 15.9 -2.0**
baz=129,slow=13
GRF *eL* L 09 33 30.6
comp=Z,143µm,20.3s
GRF Grafenberg Arr 13.72 318 P Pn 09 28 15.7 -2.2
AKH Akhalkalaki 13.77 79 ⇑P **Pn 09 28 18.6 -0.2**
AKH Akhalkalaki 13.77 79 P Pn 09 28 18.4 -0.4
AKH Akhalkalaki 13.77 79 Pn 09 28 18.4 -0.4
AKH Akhalkalaki 13.77 79 Pn 09 28 18.6 -0.2
PLN Plauen 13.78 322 *eP* **Pn 09 28 17.0 -1.7**
baz=129,slow=13
SUW Suwalki 13.82 355 *eP* **Pn 09 28 17.8 -1.4**
SUW LMZ LR 09 34 05.1
comp=Z,252nm,17.8s
SUW Suwalki 13.82 355 P Pn 09 28 17.4 -1.8
SUW Suwalki 13.82 355 Pn 09 28 17.4 -1.8
GOF Gofitskoye 13.85 64 ⇓*iP* **Pn 09 28 22.3 +2.6**
GOF *eS* **Sn 09 31 01.5 +7.9**
GOF pmax pmax
comp=Z,1µm,1.0s
GOF smax smax
comp=N,3µm,1.1s
NCK Nalchik 13.95 71⇑ *eP* **P 09 28 27.7 -1.6**
CLL Collm 13.98 326 *e*(P) **Pn 09 28 23.0 +1.6**
CLL *e*PP **PnPn 09 28 28.0 -1.3**
CLL *e* 09 28 37.0
CLL *e* 09 28 48.0
CLL *e* 09 29 00.0
CLL *eS* **Sn 09 31 05.0 +8.3**
CLL Lmax 09 34 00.0
CLL Collm 13.98 326 *eP* **Pn 09 28 21.3 -0.1**
baz=129,slow=13
CLL Collm 13.98 326 *eP* **Pn 09 28 23.0 +1.6**
CLL *eS* **Sn 09 31 05.0 +8.3**
CLL Collm 13.98 326 Pn 09 28 20.6 -0.9
ZEI Tsey 14.11 74 *eP* **Pn 09 28 25.4 +2.0**
ZEI pmax pmax
comp=Z,349nm,1.3s
GKP Gorka Klasztor 14.13 340 *eP* **Pn 09 28 21.4 -2.1**
GKP LMZ LR 09 35 58.2
comp=Z,414nm,16.7s
MOX Moxa 14.14 322 *eP* **Pn 09 28 22.1 -1.6**
baz=129,slow=13
MOX *eL* L 09 33 54.9
comp=Z,217µm,19.1s
MICGM Minsk 14.33 6⇑ *eP* **Pn 09 28 22.0 -4.2**
MICGM PM 09 28 30.0
comp=Z,26nm,14.0s
MICGM *eS* **Sn 09 30 58.0 -7.3**
MICGM *eL* LR 09 33 00.0
MICGM LRM MLR 09 34 48.0
comp=N,663nm,8.0s
MICGM LRM MLR 09 34 52.0
comp=E,749nm,10.0s
MICGM LRM MLR 09 34 54.0
comp=Z,503nm,8.0s
MNK Minsk 14.33 6*ceP* **Pn 09 28 22.0 -4.2**
MNK *eS* **Sn 09 30 58.0 -7.3**
MNK pmax pmax
comp=Z,26µm,14.0s
VORD Divnogorie 14.44 38 *eP* **Pn 09 28 27.5 -0.2**
VORD pmax pmax
comp=Z,720nm,1.4s
VORD pmax pmax
comp=Z,480nm,1.2s
VORD MLR MLR
comp=Z,460µm,14.0s
NEUB Neuenburg 14.45 324 *eP* **Pn 09 28 26.4 -1.5**
baz=129,slow=13
SENIN Lac Senin/Sane 14.48 301 Pn 09 28 27.2 -1.3
CMAH Djebel Manchou 14.53 261 P Pn 09 28 28.9 -0.2
VSR Storozhevoye 14.55 37 *eP* **Pn 09 28 28.0 -1.2**
VSR pmax pmax
comp=Z,390nm,1.2s
VSR pmax pmax
comp=Z,2µm,2.6s
VSR MLR MLR
comp=Z,563µm,13.0s
BNI Bardonecchia 14.55 295 P Pn 09 28 27.5 -1.9
BNI Bardonecchia 14.55 295 Pn 09 28 27.5 -1.9
RUE Ruedersdorf 14.57 331 *eP* **Pn 09 28 30.1 +0.7**
RUE Ruedersdorf 14.57 331 *eP* **Pn 09 28 28.8 -0.6**
baz=129,slow=13
BFO Black Forest 14.60 309 *eP* **Pn 09 28 28.0 -1.9**
baz=129,slow=13
BFO Black Forest 14.60 309 P Pn 09 28 26.3 -3.6
BFO Black Forest 14.60 309 Pn 09 28 26.3 -3.6
NACGM Naroch 14.67 3 *eP* **Pn 09 28 27.0 -3.8**
NACGM *eS* Sn 09 31 04.0 -9.4
TBLG Delisi 14.70 78 P Pn 09 28 29.6 -1.8
TBLG Delisi 14.70 78 Pn 09 28 29.6 -1.8
VORR Voronezh 14.88 35 *eP* **Pn 09 28 32.0 -1.7**
VORR *eS* **Sn 09 31 18.0 -0.7**
VORR pmax pmax
comp=Z,750nm,2.0s
CAEH 'Ain El Ouahch 14.91 262 P Pn 09 28 35.1 +0.9
UBBA Unterbreizbach 15.04 320 *eP* **Pn 09 28 33.7 -2.0**
baz=129,slow=13
IIGN Ignalina 15.09 2 *eP* **Pn 09 28 33.1 -3.4**
IIGN IAmb IAmb 09 29 04.3
comp=Z,730nm,1.0s
CKFL Kef-Lekhel 15.14 261 P Pn 09 28 37.7 +0.3
ECH Echery 15.25 307 P Pn 09 28 36.3 -2.4
ECH pmax pmax
comp=Z,799nm,1.2s
ECH Echery 15.25 307 Pn 09 28 36.3 -2.4
PABE Paberze 15.27 357 *eP* **Pn 09 28 36.0 -2.8**
PABE IAmb IAmb 09 29 05.4
comp=Z,2µm,0.8s
ISAL Salakas 15.31 2 *eP* **Pn 09 28 35.6 -3.8**
ISAL IAmb IAmb 09 29 08.2
comp=Z,533nm,1.0s
CASM Ain Smara 15.36 261 P Pn 09 28 40.4 +0.2
LPSR Galich'ya Gora 15.44 32 *eP* **Pn 09 28 38.9 -2.2**
LPSR pmax pmax
comp=Z,2µm,1.4s
LPSR pmax pmax
comp=Z,1µm,1.1s
LPSR MLR MLR
comp=Z,515µm,18.0s
TNS Taunus Mts 15.49 316 *eP* **Pn 09 28 42.0 +0.1**
baz=129,slow=13
CTEI Djebel Teioual 15.49 260 P Pn 09 28 43.5 +1.4
GTTG Gottingen 15.52 322 *eP* **Pn 09 28 41.1 -1.1**
baz=129,slow=13
CLZ Clausthal 15.52 323 *eP* **Pn 09 28 41.5 -0.7**
baz=129,slow=13
ASSE Asse, Remlinge 15.59 324 *eP* **Pn 09 28 41.8 -1.2**
baz=129,slow=13
DFRA Djebel Bou Aff 15.72 263 P Pn 09 28 45.9 +0.8
VRH Novokhopyorsk 15.76 41 *eP* **Pn 09 28 44.6 -0.7**
VRH pmax pmax
comp=Z,2µm,2.1s
VRH pmax pmax
comp=Z,590nm,1.0s
VRH MLR MLR
comp=Z,649µm,22.0s
PBUR Paburge 15.92 353 *eP* **Pn 09 28 43.5 -3.8**
PBUR IAmb IAmb 09 29 16.9
comp=Z,1µm,1.0s
NRDL Niedersach Rie 16.09 324 *eP* **Pn 09 28 49.2 -0.3**
baz=129,slow=13
CKHR Kef el Ahmar 16.18 261 P P 09 28 52.2 -2.1
SET Setif 16.20 262 P P 09 28 53.0 -1.4
AHRW Bad Neuenahr-A 16.40 315 *eP* **Pn 09 28 54.1 +0.6**
baz=129,slow=13
BSD Bornholm Skovb 16.40 338 *iP* **Pn 09 28 54.0 +0.5**
BSD MLR MLR
comp=Z,400µm,12.0s
BSD Bornholm Skovb 16.40 338 *iP* **Pn 09 28 54.0 +0.5**
comp=Z,396µm,12.0s
RGN Rugen 16.41 334 *eP* **Pn 09 28 53.4 -0.2**
RGN Rugen 16.41 334 Pn 09 28 52.9 -0.6
WLF Walferdange 16.48 311 *eP* **Pn 09 28 53.5 -1.1**
comp=Z,2µm,1.5s,baz=129,slow=13
WLF Walferdange 16.48 311 P Pn 09 28 52.9 -1.7
WLF pmax pmax
comp=Z,2µm,1.2s
WLF Walferdange 16.48 311 Pn 09 28 52.9 -1.7
RETH Rethem/Aller, 16.59 324 *eP* **Pn 09 28 55.0 -0.9**
baz=129,slow=13
OBN Obninsk 16.61 23 Pn Pn **09 28 51.2 -5.1**
comp=Z,4.5nm,0.3s,baz=140,slow=2.5,SNR=20
OBN LR LR 09 35 45.4
comp=Z,156µm,18.3s,baz=205,slow=39
OBN Obninsk 16.61 23*deP* **Pn 09 28 51.1 -5.1**
OBN *eS* **Sn 09 32 00.6 -0.1**
OBN pmax pmax
comp=Z,3µm,1.4s
OBN pmax pmax
comp=Z,2µm,1.8s
OBN MLR MLR
comp=Z,584µm,18.0s
OBN Obninsk 16.61 23 P **Pn 09 28 52.4 -3.9**
OBN IAmb IAmb 09 29 30.1
comp=Z,3µm,1.5s
MAK Makhachkala 16.76 74*diP* **P 09 29 01.4 +1.0**
MAK pmax pmax
comp=Z,13µm,1.5s
MAK pmax pmax
comp=Z,7µm,1.3s
MAK MLR MLR
comp=Z,480µm,14.0s
BUG Bochum--Univer 16.79 318 *eP* **Pn 09 28 56.6 -1.9**
baz=129,slow=13
AKT Akhty 16.95 79 *eP* **Pn 09 29 00.6 -0.1**
AKT *eS* **Sn 09 32 12.7 +3.5**
AKT pmax pmax
comp=Z,51nm,1.2s
AKT smax smax
comp=E,45nm,1.2s
AKT smax smax
comp=N,69nm,1.1s
BSEG Bad Segeberg 17.03 328 *eP* **Pn 09 28 59.2 -2.2**
baz=129,slow=13
IBBN Ibbenburen 17.06 321 *eP* **Pn 09 29 01.4 -0.5**
comp=N,2µm,1.7s,baz=129,slow=13
AKET Djebel Ketaf 17.41 263 P P 09 29 06.8 -1.0
MOS Moscow 17.46 24 *eP* **Pn 09 29 04.1 -2.8**
MOS *eS* **Sn 09 32 22.7 +1.4**
MOS pmax pmax
comp=Z,10µm,2.4s
MOS pmax pmax
comp=Z,4µm,1.9s
MOS MLR MLR
comp=N,430µm,18.0s
MOS MLR MLR
comp=E,540µm,18.0s
MOS MLR MLR
comp=Z,540µm,18.0s
SLIT Slitere, Latvi 17.48 354 *eP* **Pn 09 29 01.9 -5.1**
SLIT IAmb IAmb 09 29 20.3
comp=Z,3µm,1.3s
ADJB Djebel Djouab 17.71 264 P P 09 29 10.2 -0.9
SKMB Sankelmark Bun 17.95 329 *eP* **Pn 09 29 10.7 -2.2**
baz=129,slow=13
HLG Helgoland 18.22 326 *eP* **Pn 09 29 14.3 -1.9**
baz=129,slow=13
VSU Vasula 18.22 2 *eP* **Pn 09 29 13.9 -2.4**
VSU Vasula 18.22 2*ciP* **Pn 09 29 14.1 -2.1**
VSU pmax pmax
comp=Z,6µm,1.5s
VSU MLR MLR
comp=Z,675µm,17.0s
CLF Chambon-Foret 18.26 303 P Pn 09 29 15.9 -0.8
EBNR Beni Rached 19.12 266 P Pn 09 29 27.5 +0.2
ECHA Ech Chlef 19.29 265 P P 09 29 27.6 -0.7
MUD Monsted U'grnd 19.36 332 *iP* **Pn 09 29 30.7 +0.7**
MUD MLR MLR
comp=Z,430µm,11.0s
MUD Monsted U'grnd 19.36 332 *iP* **Pn 09 29 30.7 +0.7**
comp=Z,432µm,11.0s
EANR 'Ain N'Sour 19.56 265 P P 09 29 31.2 -0.2
ETRT Tiaret 19.61 263 P P 09 29 31.5 -0.5
PUL Pulkovo 19.77 7 *eP* **P 09 29 29.2 -4.1**
PUL Pulkovo 19.77 7⇓*eP* **P 09 29 32.8 -0.5**
PUL pmax pmax
comp=Z,1µm,0.9s
PUL MLR MLR
comp=Z,216µm,11.0s
GOET G??ttrup 19.79 333 *iP* **Pn 09 29 35.8 +0.7**
OKGL Djebel Kef Gue 19.88 266 P Pn 09 29 44.0 +7.6
OJGS Djebel Guires 19.98 264 P Pn 09 29 38.0 +0.3
ELSH Elham, Standar 20.02 311 *eP* **P 09 29 36.0 -0.2**
ELSH IAmb IAmb 09 29 44.2
comp=Z,950nm,1.1s
ELSH *e* 09 33 22.2
ELSH IAMs_20 IAMs_20 09 37 03.2
comp=Z,343µm,12.6s
OJBR Djebel Berber 20.26 265 P P 09 29 35.0 -4.1
HMNX Herstmonceux 20.38 310 *eP* **P 09 29 39.4 -0.7**
HMNX IAmb IAmb 09 29 48.8
comp=Z,3µm,1.1s
HMNX IAMs_20 IAMs_20 09 38 59.5
comp=Z,569µm,11.0s
CART Cartagena 20.67 271 *iP* **P 09 29 41.9 -1.4**
CART *iS* **S 09 33 32.3 -2.0**
CART Cartagena 20.67 271 P P 09 29 42.0 -1.4
CART IAmb IAmb 09 30 06.3
comp=Z,2µm,1.6s
ODJA Bouhanifia 20.73 264 P P 09 29 28.0 -16
USTO Oran 20.89 266 P P 09 29 42.0 -3.8
WACR West Acre 20.97 315 *eP* **P 09 29 45.5 -1.0**
WACR IAmb IAmb 09 29 55.2
comp=Z,468nm,0.9s
WACR IAMs_20 IAMs_20 09 37 44.7
comp=Z,305µm,12.9s
HOMB Homborsund 21.00 335 *eP* **P 09 29 45.6 -1.1**
HOMB *eS* **S 09 33 38.0 -2.5**
FINES FINESS Array B 21.20 1 P P 09 29 46.1 -2.8
comp=Z,50nm,0.6s,baz=154,slow=12,SNR=87
FINES LR LR 09 38 42.2
comp=Z,396µm,19.2s,baz=178,slow=39
OTSS Djebel Tessala 21.24 265 P P 09 29 40.0 -10
JQE Queens East 21.32 304 *eP* **P 09 29 49.5 -0.8**
JLP Les Platons 21.37 304 *eP* **P 09 29 49.9 -0.9**
JVM Valle D.L. Mar 21.43 304 *eP* **P 09 29 49.2 -2.2**
WOL Wolverton 21.45 310 *eP* **P 09 29 50.8 -0.9**
WOL IAmb IAmb 09 29 59.8
comp=Z,4µm,1.9s
WOL IAMs_20 IAMs_20 09 39 35.6
comp=Z,529µm,12.4s
SNART Snartemo 21.48 333 *eP* **P 09 29 51.1 -0.8**
SNART *eS* **S 09 33 52.4 +2.3**
SESP Santiago Espad 21.71 273 P P 09 29 54.8 0.0
SNR=177
OSL Oslo 21.71 340 *eP* **P 09 29 52.7 -1.7**
OSL *eS* **S 09 33 54.6 0.0**
OSL IVMs_BB IVMs_BB 09 41 19.8
comp=Z,151µm,8.8s
KONO Kongsberg 21.78 338*deP* **P 09 29 53.2 -1.9**
KONO pmax pmax
comp=Z,389nm,1.1s
KONO MLR MLR
comp=Z,138µm,15.0s
KONO Kongsberg 21.78 338 P P 09 29 54.4 -0.7
KONO IAmb IAmb 09 30 27.8
comp=Z,2µm,1.4s
KONO Kongsberg 21.78 338 *eP* **P 09 29 54.9 -0.2**
KONO *eS* **S 09 33 50.2 -5.7**
UCM Universidad Co 21.79 279 *eP* **P 09 29 51.3 -4.2**
UCM *iS* **S 09 33 57.1 +0.6**
LMK Market Rasen 21.82 316 *eP* **P 09 29 54.5 -1.1**
LMK IAmb IAmb 09 30 05.4
comp=Z,3µm,1.8s
LMK IAMs_20 IAMs_20 09 39 49.1
comp=Z,257µm,13.3s
SWN1 Swindon 21.86 310 *eP* **P 09 29 56.1 0.0**
SWN1 IAmb IAmb 09 30 03.7
comp=Z,4µm,1.2s
SWN1 IAMs_20 IAMs_20 09 39 49.9
comp=Z,524µm,11.0s
CWF Charnwood Fore 22.04 313 *eP* **P 09 29 56.2 -1.9**
CWF IAMs_20 IAMs_20 09 38 20.7
comp=Z,201µm,12.4s
STRD Stroud 22.17 310 *eP* **P 09 29 57.9 -1.5**
STRD IAmb IAmb 09 30 07.8
comp=Z,2µm,1.0s
STRD IAMs_20 IAMs_20 09 39 40.3
comp=Z,284µm,11.1s
NC602 NORSAR Array S 22.20 342 *eP* **P 09 29 57.0 -2.6**
NC602 *eS* **S 09 34 00.2 -3.8**
OLDB Oldbury-Upon-S 22.36 310 *eP* **P 09 29 59.8 -1.6**
OLDB IAmb IAmb 09 30 05.6
comp=Z,550nm,0.9s
OLDB IAMs_20 IAMs_20 09 40 12.3
comp=Z,441µm,12.1s
KLMR Klimovskoe 22.38 18*ciP* **P 09 29 58.3 -3.3**
KLMR *eS* **S 09 34 05.7 -1.6**
KLMR pmax pmax
comp=Z,2µm,1.4s
KLMR Klimovskoe 22.38 18⇑*iP* **P 09 29 58.3 -3.3**
KLMR ⇑*iP* **P 09 29 58.3 -3.3**
KLMR *iP* **P 09 29 58.3 -3.3**
KLMR AMP 09 30 07.9
comp=Z,2µm,1.4s
KLMR *eS* **S 09 34 05.8 -1.6**
KLMR *eS* **S 09 34 05.8 -1.6**
KLMR LQ LQ 09 36 23.8
KLMR LQ LQ 09 36 23.8
KLMR LR LR 09 37 50.3
ESDC Sonseca Array 22.45 278 P **P 09 30 01.1 -1.5**
comp=Z,209nm,1.0s,baz=72,slow=10.0,SNR=132
ESDC LR LR 09 38 57.9
comp=Z,67µm,18.5s,baz=65,slow=37
NAO01 NORSAR Array S 22.45 341 P **P 09 29 60.0 -2.4**
NC405 NORSAR Array S 22.49 343 P **P 09 30 00.3 -2.5**
NB201 NORSAR Array S 22.53 342 P **P 09 29 59.9 -3.4**
NB2 NORSAR Subarra 22.54 342 P **P 09 30 00.3 -3.1**
comp=Z,1µm,1.2s,baz=151,slow=10
NB2 NORSAR Subarra 22.54 342 P **P 09 30 00.3 -3.1**
baz=151,slow=10
NOA NORSAR Array B 22.54 342 P **P 09 29 60.0 -3.4**
comp=Z,48nm,0.8s,baz=51,slow=21,SNR=44
NOA LR LR 09 39 33.7
comp=Z,139µm,18.2s,baz=145,slow=39
LBWR Ladybower, Pea 22.55 315 *eP* **P 09 30 02.2 -1.2**
LBWR IAMs_20 IAMs_20 09 45 16.0
comp=Z,179µm,12.4s
MONM Monmouth 22.56 310 *eP* **P 09 30 01.7 -1.9**
MONM IAmb IAmb 09 30 10.5
comp=Z,2µm,1.0s
MONM IAMs_20 IAMs_20 09 40 19.3
comp=Z,377µm,11.1s
BLS5 Blasjo 22.57 334 *eP* **P 09 30 04.0 +0.4**
BLS5 *eS* **S 09 34 10.3 -0.6**
BLS5 IVMs_BB IVMs_BB 09 41 08.9
comp=Z,138µm,9.5s
TAF Taforalt 22.65 265 P **P 09 30 05.0 +0.3**
SNR=70
TAF P **P 09 30 05.0 +0.3**
SNR=70
STNC Stoke 22.68 314 *eP* **P 09 30 03.9 -1.0**
STNC IAmb IAmb 09 30 22.6
comp=Z,5µm,1.4s
STNC IAMs_20 IAMs_20 09 38 42.4
comp=Z,205µm,11.4s
HPK Haverah Park 22.73 316 *eP* **P 09 30 04.0 -1.4**
HPK IAMs_20 IAMs_20 09 38 57.6
comp=Z,176µm,13.1s
MCH1 Michaelchurch 22.73 311 *eP* **P 09 30 03.4 -2.0**
MCH1 IAmb IAmb 09 30 14.4
comp=Z,2µm,1.1s
MCH1 IAMs_20 IAMs_20 09 39 59.3
comp=Z,273µm,10.1s
PAB San Pablo 22.76 278 P **P 09 30 04.4 -1.5**
PAB pmax pmax
comp=Z,2µm,1.4s
PAB San Pablo 22.76 278 P **P 09 30 04.4 -1.5**
PAB IAmb IAmb 09 30 14.6
comp=Z,2µm,1.4s
KMY Karmoy 22.82 333 *eP* **P 09 30 04.9 -1.3**
KMY *eS* **S 09 34 18.6 +3.2**
KMY IVMs_BB IVMs_BB 09 41 00.8
comp=Z,95µm,11.0s
HLM1 Long Mynd 22.84 312 *eP* **P 09 30 04.8 -1.8**
HLM1 IAmb IAmb 09 30 13.8
comp=Z,1µm,1.1s
HLM1 *e* 09 34 09.5
HLM1 IAMs_20 IAMs_20 09 40 29.8
comp=Z,228µm,12.0s
MELI Melilla 22.87 266⇓*iP* **P 09 30 06.1 -0.9**
MELI *iS* **S 09 34 16.2 -0.5**
ODD1 Odda 22.89 335 *eP* **P 09 30 07.2 +0.2**
ODD1 *eS* **S 09 34 16.9 +0.1**
ODD1 IVMs_BB IVMs_BB 09 40 35.2
comp=Z,162µm,13.7s
HEX Exmoor 22.91 308 *eP* **P 09 30 06.2 -1.2**
GOG Mont Gurugu 22.94 266 P **P 09 30 09.0 +1.1**
SNR=71
GOG P **P 09 30 09.0 +1.1**
SNR=71
SKAR Skarslia 23.00 338 *eP* **P 09 30 06.0 -2.2**
SKAR *eS* **S 09 34 15.0 -3.7**
SKAR IVMs_BB IVMs_BB 09 41 02.8
comp=Z,122µm,8.8s
FOEL Foel Wylfa 23.16 313 *eP* **P 09 30 09.4 -0.5**
FOEL *e* 09 34 20.8
FOEL IAMs_20 IAMs_20 09 40 40.2
comp=Z,185µm,11.8s
HTL Hartland 23.31 307 *eP* **P 09 30 10.2 -1.1**
HTL IAmb IAmb 09 30 17.9
comp=Z,714nm,1.0s
HTL IAMs_20 IAMs_20 09 40 47.2
comp=Z,425µm,11.6s
LLW Llanuwychllyn 23.41 312 *eP* **P 09 30 10.1 -2.3**
LLW *e* 09 34 25.9
LLW IAMs_20 IAMs_20 09 40 48.5
comp=Z,96µm,11.9s
EMAL Malaga-Limoner 23.52 271⇓*iP* **P 09 30 13.1 -0.6**
EMAL *iS* **S 09 34 23.1 -4.6**
PALE Palemas 23.66 267 P **P 09 30 16.3 +1.2**
SNR=32
PALE P **P 09 30 16.3 +1.2**
SNR=32
BER Bergen 23.66 335 *eP* **P 09 30 13.6 -1.2**
BER IVmBBB 09 30 21.4
comp=Z,7µm,2.3s
BER *eS* **S 09 34 28.7 -0.7**
BER IVMs_BB IVMs_BB 09 41 49.7
comp=Z,163µm,11.8s
RSBS Rosebush, Pemb 23.74 310 *eP* **P 09 30 13.0 -2.6**
RSBS IAmb IAmb 09 30 22.1
comp=Z,313nm,0.8s
RSBS IAMs_20 IAMs_20 09 41 03.4
comp=Z,302µm,11.8s
ASK Askoy 23.79 335 *eP* **P 09 30 15.5 -0.5**
ASK *eS* **S 09 34 34.2 +2.8**
ASK IVMs_BB IVMs_BB 09 41 52.5
comp=Z,125µm,11.9s
RAYN Ar Rayn 23.81 129 P **P 09 30 16.0 -0.7**
RAYN Ar Rayn 23.81 129 P **P 09 30 16.0 -0.7**
RAYN Ar Rayn 23.81 129 P **P 09 30 15.9 -0.7**
RAYN pmax pmax
comp=Z,3µm,2.1s
RAYN MLR MLR
comp=Z,114µm,19.0s
RAYN Ar Rayn 23.81 129 P **P 09 30 15.9 -0.7**
HORN Hornachuelos 23.85 274 P **P 09 30 17.5 +0.7**
SNR=32
KIRV Kirov 23.86 32 P **P 09 30 13.9 -2.8**
comp=Z,126nm,0.7s,baz=237,slow=6.9,SNR=16
KIRV LR LR 09 40 03.2
comp=Z,402µm,19.5s,baz=227,slow=38
AKLM AKL 23.87 265 P **P 09 30 18.2 +1.1**
SNR=158
DOMB Dombas 23.93 341 *eP* **P 09 30 16.7 -0.8**
DOMB IVmB_BB 09 30 24.4
comp=Z,9µm,2.2s

DOMB eS S 09 34 34.5 +0.7
DOMB IVMs_BB IVMs_BB 09 41 40.6
comp=Z,210µm,9.9s
PVLZ Peæn de 23.95 267 ⇓ *i* P P 09 30 16.4 -1.5
PVLZ *i* S S 09 34 36.0 +1.5
HYA Hoyanger 24.00 337 *eP* P 09 30 17.1 -1.0
HYA eS S 09 34 36.2 +1.4
WPS Cemaes, Angles 24.08 313 *eP* P 09 30 16.9 -1.9
WPS IAmb IAmb 09 30 26.7
comp=Z,898nm,1.2s
WPS *e* 09 34 34.9
WPS IAMs_20 IAMs_20 09 41 16.5
comp=Z,173µm,13.0s
ESY Stoneypath 24.14 320 *eP* P 09 30 18.1 -1.3
EKA Eskdalemuir Ar 24.14 318 P P 09 30 17.3 -2.1
comp=Z,72nm,0.8s,baz=115,slow=10,SNR=42
EKA LR LR 09 40 53.4
comp=Z,146µm,18.4s,baz=110,slow=39
ESK Eskdalemuir 24.16 318 *eP* P 09 30 17.6 -2.0
ESK IAMs_20 IAMs_20 09 40 37.6
comp=Z,181µm,17.8s
ESK Eskdalemuir 24.16 318 P P 09 30 18.0 -1.5
ESK pmax pmax
comp=Z,2µm,1.5s
ESK MLR MLR
comp=Z,152µm,21.0s
ESK Eskdalemuir 24.16 318 P P 09 30 18.0 -1.5
PBRG Braganca 24.20 284 *eP* P 09 30 19.8 -0.3
comp=Z,4µm,1.6s
PBRG eS S 09 34 42.5 +4.0
TAM Tamanrasset 24.20 230 P P 09 30 20.5 +0.2
TAM pmax pmax
comp=Z,853nm,1.4s
TAM MLR MLR
comp=Z,107µm,22.0s
TAM Tamanrasset 24.20 230 P P 09 30 20.5 +0.2
TAM IAmb IAmb 09 30 27.5
comp=Z,853nm,1.4s
REAL Reales 24.21 271 ⇓ *i* P P 09 30 18.4 -2.0
EBL Broad Law 24.28 319 *eP* P 09 30 19.6 -1.1
SUE Sulen 24.36 335 *eP* P 09 30 20.5 -0.8
SUE eS S 09 34 39.3 -1.3
SUE IVMs_BB IVMs_BB 09 41 58.4
comp=Z,141µm,9.4s
EDI Edinburgh 24.43 319 *eP* P 09 30 21.4 -0.6
EDI IAMs_20 IAMs_20 09 42 29.9
comp=Z,225µm,16.7s
IOMK Kirk Michael 24.43 315 *eP* P 09 30 19.3 -2.8
IOMK IAmb IAmb 09 30 29.5
comp=Z,1µm,1.1s
IOMK IAMs_20 IAMs_20 09 44 13.2
comp=Z,418µm,12.8s
MVO Moncorvo 24.50 283 *eP* P 09 30 23.3 +0.4
comp=Z,3µm,1.5s
MVO eS S 09 34 47.5 +4.1
MVO eLR LR 09 41 09.7
comp=Z,53µm,18.0s
CEU Ceuta 24.52 270 ⇓ *i* P P 09 30 20.1 -3.0
CEU *i* S S 09 34 41.8 -1.8
ALJ Aljibe 24.53 271 ⇓ *i* P P 09 30 20.8 -2.4
DRUM Mains of Drumt 24.57 322 *eP* P 09 30 18.4 -4.9
DRUM IAMs_20 IAMs_20 09 42 52.1
comp=Z,228µm,13.5s
AKN Aaknes 24.59 339 *eP* P 09 30 24.2 +0.7
AKN IVmBBB 09 30 30.6
comp=Z,8µm,3.0s
AKN eS S 09 34 44.7 +0.4
AKN IVMs_BB IVMs_BB 09 43 17.0
comp=Z,145µm,9.6s
SMIR Smir Dam 24.60 269 P P 09 30 25.0 +1.2
SNR=58
EDU Dundee 24.64 321 *eP* P 09 30 22.6 -1.3
GIBL Gibalbin 24.68 272 ⇓ *i* P P 09 30 22.7 -1.8
FOO Floro 24.69 337 *eP* P 09 30 22.3 -2.0
FOO eS S 09 34 43.5 -2.3
FOO IVMs_BB IVMs_BB 09 42 13.6
comp=Z,123µm,15.8s
TBLU Trondheim 24.71 344 *eP* P 09 30 23.4 -1.0
TBLU eS S 09 34 46.6 +0.5
TBLU IVMs_BB IVMs_BB 09 41 50.0
comp=Z,185µm,11.8s
GAL1 Galloway 24.75 316 *eP* P 09 30 24.4 -0.5
GAL1 IAMs_20 IAMs_20 09 45 28.4
comp=Z,196µm,13.5s
MOL Molde 24.77 340 *eP* P 09 30 24.7 -0.3
MOL eS S 09 34 49.2 +2.1
MOL IVMs_BB IVMs_BB 09 41 53.1
comp=Z,151µm,10.4s
CHEFC Chefchaouen 24.77 268 P P 09 30 27.0 +1.5
SNR=38
CNIL Conil 24.89 271 ⇓ *i* P P 09 30 23.9 -2.5
AKTO Aktyubinsk 24.90 55 P P 09 30 24.9 -1.5
comp=Z,65nm,0.9s,baz=256,slow=8.9,SNR=28
AKTO LR LR 09 43 06.3
comp=Z,259µm,20.6s,baz=254,slow=44
ELO Logie Almond 24.94 320 *eP* P 09 30 25.9 -0.7
SFS San Fernando 24.98 271 P P 09 30 25.1 -2.0
SFS pmax pmax
comp=Z,1µm,1.3s
SFS MLR MLR
comp=Z,69µm,19.0s
SFS San Fernando 24.98 271 ⇓ *i* P P 09 30 24.6 -2.5
SFS *i* S S 09 34 54.0 +3.0
SFS San Fernando 24.98 271 P P 09 30 25.1 -2.0
SFS IAmb IAmb 09 30 47.6
comp=Z,1µm,1.3s
PVRL Vila Real 25.00 283 *eP* P 09 30 27.5 +0.1
comp=Z,1µm,1.7s
MTE Manteigas 25.01 281 *eP* P 09 30 27.7 +0.1
comp=Z,2µm,1.5s
MTE eS S 09 34 54.5 +2.8
MTE eLR LR 09 40 48.2
comp=Z,67µm,18.0s
MTE Manteigas 25.01 281 P P 09 30 26.2 -1.3
TMCR Tamitsa 25.05 13 *eP* P 09 30 23.4 -4.1
TMCR eS S 09 34 46.3 -5.4
TMCR pmax pmax
comp=Z,583nm,1.2s
PCBR Castelo Branco 25.07 280 *eP* P 09 30 28.0 0.0
comp=Z,1µm,1.8s
INVG Invergeldie, C 25.09 320 *eP* P 09 30 27.7 -0.3
INVG IAmb IAmb 09 30 32.4
comp=Z,543nm,1.4s
INVG *e* 09 34 59.2
INVG IAMs_20 IAMs_20 09 42 18.0
comp=Z,263µm,14.7s
PMRV Marv??o 25.09 279 *eP* P 09 30 27.9 -0.3
comp=Z,2µm,1.6s
PMRV eS S 09 34 55.1 +2.2
PMRV eLR LR 09 40 55.6
comp=Z,91µm,16.0s
EAB Aberfoyle 25.12 319 *eP* P 09 30 27.8 -0.5
MDT Midelt 25.12 262 P P 09 30 28.8 +0.1
comp=Z,292nm,1.1s,baz=86,slow=10,SNR=70
MDT Midelt 25.12 262 P P 09 30 29.8 +1.1
SNR=110
SICH Sidi Chahed 25.13 266 P P 09 30 29.0 +0.4
SNR=58
PCAB Cabril 25.16 284 *eP* P 09 30 29.1 +0.2
comp=Z,2µm,1.6s
GMM Mts of Mourne 25.18 314 *eP* P 09 30 27.6 -1.2
PVIS Viseu 25.22 282 *eP* P 09 30 29.8 +0.4
comp=Z,2µm,1.5s
RSA Sarsar 25.22 268 P P 09 30 31.0 +1.5
SNR=21
IFR Ifrane 25.22 264 ⇓ *i* P P 09 30 31.6 +1.9
IFR *i* S S 09 34 57.9 +2.6
MCD Coleburn Disti 25.27 323 *eP* P 09 30 29.6 0.0
PGAV Gavieira, Arco 25.31 285 *eP* P 09 30 30.8 +0.5
comp=Z,3µm,1.7s
PGAV eS S 09 34 59.0 +2.6
PGAV eLR LR 09 41 24.7
comp=Z,67µm,18.0s
CZD Col de Zad 25.36 263 P P 09 30 32.3 +1.3
SNR=110
PESTR Estremoz 25.37 278 P P 09 30 30.8 +0.1
SNR=27
PESTR Estremoz 25.37 278 *eS* S 09 35 01.6 +4.3
PESTR Estremoz 25.37 278 P P 09 30 30.6 -0.2
GEYT Alibeck 25.44 85 P P 09 30 30.4 -1.0
comp=Z,36nm,0.9s,baz=265,slow=7.4,SNR=50
GEYT LR LR 09 41 25.6
comp=Z,367µm,19.4s,baz=270,slow=39
GYA0B ALIBECK ARRAY 25.44 85 P P 09 30 30.6 -0.8
GYA0B IAMs_20 IAMs_20 09 41 14.5
comp=Z,350µm,19.0s
ARF Arif 25.46 259 P P 09 30 33.0 +1.3
SNR=168
NSS Namsos 25.52 347 *eP* P 09 30 30.0 -1.8
NSS IVmB_BB 09 30 38.8
comp=Z,8µm,2.3s
NSS *eS* S 09 34 58.0 -1.1
NSS IVMs_BB IVMs_BB 09 42 15.9
comp=Z,188µm,9.9s
CLGH Cloghs, Cushen 25.58 316 *eP* P 09 30 30.2 -2.2
CLGH *e* 09 35 05.5
CLGH IAMs_20 IAMs_20 09 46 02.2
comp=Z,161µm,13.5s
ASHT Ashkhabad 25.64 84 IAMs_20 IAMs_20 09 42 02.8
comp=Z,251µm,18.0s
LAWE Loch Awe, Argy 25.68 319 *eP* P 09 30 32.2 -1.2
LAWE IAMs_20 IAMs_20 09 43 15.3
comp=Z,189µm,12.8s
COI Coimbra 25.70 281 P P 09 30 34.3 +0.6
COI pmax pmax
comp=Z,950nm,1.1s
COI Coimbra 25.70 281 *eP* P 09 30 34.3 +0.6
comp=Z,2µm,1.8s
COI *eS* S 09 35 07.0 +4.5
COI Coimbra 25.70 281 P P 09 30 34.3 +0.6
COI IAmb IAmb 09 30 41.0
comp=Z,950nm,1.1s
MLA1 Latheron 25.70 324 *eP* P 09 30 36.0 +2.5
MDO Dochfour 25.72 322 *eP* P 09 30 33.7 0.0
PBEJ Beja 25.79 276 *eP* P 09 30 34.3 -0.2
comp=Z,878nm,1.7s
PCAS Casmilo, Conde 25.80 281 *eP* P 09 30 35.8 +1.2
comp=Z,2µm,1.8s
PCAS *eS* S 09 35 07.3 +3.3
PMTG Montargil 25.80 278 *eP* P 09 30 34.1 -0.5
comp=Z,1µm,1.7s
PMTG *eS* S 09 35 10.0 +5.9
LRW Lerwick 25.84 329 *eP* P 09 30 34.5 -0.3
LRW IAmb IAmb 09 30 42.8
comp=Z,307nm,0.9s
LRW IAMs_20 IAMs_20 09 44 32.5
comp=Z,212µm,13.8s
PVAQ Vaqueiros 25.85 274 P P 09 30 35.6 +0.5
SNR=8.1
PVAQ Vaqueiros 25.85 274 *eP* P 09 30 34.5 -0.6
comp=Z,1µm,1.7s
PVAQ *eS* S 09 35 08.1 +3.2
PVAQ *e*LR LR 09 41 35.2
comp=Z,55µm,18.0s
PVAQ Vaqueiros 25.85 274 P P 09 30 34.1 -1.0
PVAQ IAmb IAmb 09 30 52.2
comp=Z,779nm,1.2s
GOLM Goulmima 25.89 260 P P 09 30 38.0 +2.4
SNR=127
GOLM P P 09 30 38.0 +2.4
SNR=127
PCVE Castro Verde 26.03 275 *eP* P 09 30 36.3 -0.4
comp=Z,990nm,2.0s
PCVE *eS* S 09 35 09.9 +2.2
PBDV Barranco-do-Ve 26.06 274 *eP* P 09 30 36.8 -0.2
comp=Z,3µm,1.2s
PBDV *eS* S 09 35 08.9 +0.7
WAL1 Walls 26.09 329 *eP* P 09 30 37.1 +0.1
MESJ Messejana 26.11 276 *eP* P 09 30 36.9 -0.6
MESJ *eS* S 09 35 07.7 -1.3
MESJ AMS AMS 09 42 04.2
comp=Z,76µm,19.3s
MESJ Messejana 26.11 276 *eP* P 09 30 36.8 -0.6
MESJ *eS* S 09 35 07.6 -1.3
MESJ Messejana 26.11 276 *eP* P 09 30 37.5 +0.1
comp=Z,903nm,1.3s
KAC Achnashellach 26.19 321 *eP* P 09 30 37.1 -0.9
PNCL Nicolau / Gran 26.27 276 *eP* P 09 30 39.1 +0.2
comp=Z,1µm,1.5s
PNCL *eS* S 09 35 17.9 +6.4
KPL Plockton 26.29 321 *eP* P 09 30 37.9 -0.9
KPL IAMs_20 IAMs_20 09 43 12.9
comp=Z,315µm,13.2s
RTC Rabat Centre 26.35 267 P P 09 30 42.0 +2.3
SNR=19
RTC Rabat Centre 26.35 267 P P 09 30 39.5 -0.1
ZHG ZHG 26.41 265 P P 09 30 43.0 +2.7
SNR=40
ZHG P P 09 30 43.0 +2.7
SNR=40
PTEO Sao Teotonio 26.58 275 *eP* P 09 30 40.9 -0.7
comp=Z,2µm,2.0s
LIS Lisbon 26.59 278 *eP* P 09 30 41.0 -0.7
LIS *eS* S 09 35 14.9 -1.6
LIS AMS AMS 09 42 27.6
comp=N,142µm,24.0s
LIS Lisbon 26.59 278 *eP* P 09 30 41.0 -0.7
LIS *eS* S 09 35 14.9 -1.6
LIS Lisbon 26.59 278 *eP* P 09 30 42.5 +0.8
comp=N,2µm,1.4s
MORF Marmelete 26.59 275 *eP* P 09 30 40.9 -0.9
MORF *eS* S 09 35 15.1 -1.6
MORF AMS AMS 09 44 32.7
comp=N,82µm,20.1s
MORF Marmelete 26.59 275 *eP* P 09 30 40.9 -0.9
MORF *eS* S 09 35 15.0 -1.6
MORF Marmelete 26.59 275 *eP* P 09 30 41.5 -0.3
comp=N,1µm,1.8s
MORF *eS* S 09 35 24.7 +8.0
PMAFR Mafra 26.63 278 *eP* P 09 30 43.2 +1.1
comp=N,2µm,1.7s
PMAFR *eS* S 09 35 27.0 +10
MOR8 Moi Rana 26.67 350 *eP* P 09 30 41.1 -1.1
MOR8 *eS* S 09 35 22.0 +4.7
PFVI Vila Bisbo 26.77 274 P P 09 30 43.5 0.0
SNR=25
PFVI Vila Bisbo 26.77 274 *eP* P 09 30 42.9 -0.5
comp=N,2µm,1.4s
PFVI *eS* S 09 35 23.4 +3.9
PFVI Vila Bisbo 26.77 274 P P 09 30 42.5 -1.0
TZRR Tazzarine 26.79 259 P P 09 30 46.0 +2.2
SNR=37
ARU Arti 26.99 42 P P 09 30 45.3 +0.2
comp=N,37nm,1.0s,baz=247,slow=7.1,SNR=28
ARU LR LR 09 42 31.3
comp=N,525µm,18.2s,baz=226,slow=39
ARU Arti 26.99 42*c* *i* P P 09 30 45.3 +0.2
ARU PPP PPP 09 31 32.0
ARU 09 34 06.9
ARU S S 09 35 22.8 +0.3
ARU SS SnSn 09 36 30.2 +2.4
ARU pmax pmax
comp=Z,190nm,1.1s
ARU MLR MLR
comp=Z,476µm,18.0s
ARU Arti 26.99 42 P P 09 30 45.2 +0.1
STOK Stokkvaagen 27.02 349 *eS* S 09 35 25.1 +2.3
AVE Averroes 27.06 266 P P 09 30 47.3 +1.3
SNR=34
AVE Averroes 27.06 266 ⇓ *i* P P 09 30 47.5 +1.5
AVE *i* S S 09 35 23.5 -0.5
ZGR Zagora 27.16 258 P P 09 30 50.0 +2.9
SNR=41
KONS Konsvik 27.16 349 *eP* P 09 30 44.3 -2.3
LEWI Lewis, Hebride 27.24 322 *eP* P 09 30 45.1 -2.3
LEWI IAMs_20 IAMs_20 09 44 14.7
comp=Z,221µm,13.1s
OUZM OUZ 27.62 260 P P 09 30 54.0 +2.7
SNR=31
OUZM P P 09 30 54.0 +2.7
SNR=31
APA Apatity 27.70 7 ⇑ *i* P P 09 30 53.7 +2.2
APA *i* 09 31 35.5
APA *i* S S 09 35 35.0 +1.5
APA pmax pmax
comp=Z,111nm,0.8s
APA MLR MLR
comp=Z,229µm,21.0s
LVZ Lovozero 28.14 7*c* *i* P P 09 30 56.6 +1.2
LVZ pmax pmax
comp=Z,603nm,2.0s
LVZ MLR MLR
comp=Z,180µm,16.0s
LVZ Lovozero 28.14 7 P P 09 30 54.9 -0.6
LVZ IAMs_20 IAMs_20 09 42 10.1
comp=Z,221µm,20.0s
SVE Sverdlovsk 28.20 42*de* P P 09 30 57.0 +1.0
SVE *e* 09 37 06.7
SVE pmax pmax
comp=Z,1µm,1.3s
SVE MLR MLR
comp=N,223µm,18.0s
SVE MLR MLR
comp=Z,427µm,18.0s
SVE MLR MLR
comp=E,284µm,17.0s
STEI Steigen 28.26 352 *eP* P 09 30 55.4 -1.0
STEI *eS* S 09 35 39.8 -2.4
STEI IVMs_BB IVMs_BB 09 43 17.6
comp=Z,174µm,11.0s
OUK Oukaimeden 28.32 262 P P 09 30 59.0 +1.2
SNR=43
OUK P P 09 30 59.0 +1.2
SNR=43
LOF Lofoten 28.65 351 *eP* P 09 30 58.1 -1.8
LOF IVmBBB 09 31 05.2
comp=Z,2µm,2.3s
LOF *eS* S 09 35 50.1 +1.7
LOF IVMs_BB IVMs_BB 09 44 40.2
comp=Z,163µm,9.1s
KTK1 Kautokeino 28.82 358 *eP* P 09 31 00.5 -0.9
KTK1 *eS* S 09 35 49.6 -1.5
TTIG Tnine Tigouga, 29.07 261 P P 09 31 06.1 +1.9
SNR=41
TTIG P P 09 31 06.1 +1.9
SNR=41
UMQ Umm Al-Quwin 29.21 111 P P 09 31 04.4 -0.8
SNR=9.0
UMQ P P 09 31 04.4 -0.8
SNR=9.0
SHME Shamm 29.24 110 *i* P P 09 31 04.1 -1.5
SNR=15
SHME Shamm 29.24 110 *i* P P 09 31 04.1 -1.5
SNR=15
ARCES ARCESS Array B 29.32 0 P P 09 31 06.2 +0.3
comp=Z,28nm,0.9s,baz=171,slow=8.4,SNR=20
ARCES LR LR 09 43 33.4
comp=Z,389µm,18.8s,baz=172,slow=38
ARE0 ARCESS Array S 29.32 0 *eP* P 09 31 06.6 +0.7
ARE0 *eS* S 09 35 56.8 -2.2
ARE0 IVMs_BB IVMs_BB 09 43 21.9
comp=Z,163µm,12.6s
AJN Ajban 29.33 113 P P 09 31 05.8 -0.5
SNR=8.4
AJN P P 09 31 05.8 -0.5
SNR=8.4
BANOM Banah 29.43 110 *i* P P 09 31 05.4 -1.9
SNR=15
BANOM Banah 29.43 110 *i* P P 09 31 05.4 -1.9
SNR=15
BANOM Banah 29.43 110 P P 09 31 04.6 -2.7
SNR=16
BANOM P P 09 31 04.6 -2.7
SNR=16
NAZ Nazwa, Dubai 29.54 112 *i* P P 09 31 07.5 -0.7
SNR=25
NAZ Nazwa, Dubai 29.54 112 *i* P P 09 31 07.5 -0.7
SNR=25
NAZ Nazwa, Dubai 29.54 112 P P 09 31 07.2 -1.0
SNR=36
NAZ P P 09 31 07.2 -1.0
SNR=36
KEV Kevo 29.56 1 P P 09 31 07.4 -0.5
KEV pmax pmax
comp=Z,2µm,1.8s
KEV MLR MLR
comp=Z,276µm,22.0s
KEV Kevo 29.56 1 P P 09 31 07.4 -0.5
KEV IAMs_20 IAMs_20 09 42 51.5
comp=Z,276µm,22.0s
TRO Tromso 29.62 355 *eP* P 09 31 06.5 -1.9
TRO *eS* S 09 36 00.1 -3.4
TRO IVMs_BB IVMs_BB 09 43 49.4
comp=Z,129µm,10.7s
FAQ Al Faqa, Dubai 29.64 112 P P 09 31 08.5 -0.6
FAQ Al Faqa, Dubai 29.64 112 P P 09 31 08.5 -0.6
FAQ Al Faqa, Dubai 29.64 112 P P 09 31 07.2 -1.9
SNR=8.3
MSFE Esma-Masafi 29.67 111 *i* P P 09 31 07.8 -1.6
SNR=11
MSFE Esma-Masafi 29.67 111 *i* P P 09 31 07.8 -1.6
SNR=11
HRA Herat 29.75 90 P P 09 31 07.8 -2.5
MDH Madha 29.80 111 *i* P P 09 31 09.0 -1.5
SNR=9.7
MDH Madha 29.80 111 *i* P P 09 31 09.0 -1.5
SNR=9.7
MDH Madha 29.80 111 P P 09 31 08.6 -1.9
SNR=14
MDH P P 09 31 08.6 -1.9
SNR=14
MDH P P 09 31 08.6 -1.9
SNR=14
UOSS Minazif 29.95 111 *i* P P 09 31 09.8 -2.1
SNR=25
UOSS Minazif 29.95 111 *i* P P 09 31 09.8 -2.1
SNR=25
UOSS Minazif 29.95 111 P P 09 31 10.6 -1.3
UOSS P P 09 31 10.6 -1.3
UOSS P P 09 31 10.6 -1.3
UOSS Minazif 29.95 111 P P 09 31 09.8 -2.1
UOSS IAmb IAmb 09 31 35.7
comp=Z,596nm,1.4s
UOSS Minazif 29.95 111 IAMs_20 IAMs_20 09 45 22.3
comp=Z,393µm,20.0s
HATD Hatta, Dubai 29.98 112 *i* P P 09 31 10.0 -2.1
SNR=27
HATD Hatta, Dubai 29.98 112 *i* P P 09 31 10.0 -2.1
SNR=27
HATD Hatta, Dubai 29.98 112 P P 09 31 10.2 -1.9
SNR=46
HATD P P 09 31 10.2 -1.9
SNR=46
HATD P P 09 31 10.2 -1.9
SNR=46
ASHO Ashiyiah 30.01 112 *i* P P 09 31 09.6 -2.9
SNR=33
ASHO Ashiyiah 30.01 112 *i* P P 09 31 09.6 -2.9
SNR=33
ASHO Ashiyiah 30.01 112 P P 09 31 10.6 -1.9
SNR=54
ASHO P P 09 31 10.6 -1.9
SNR=54
ASHO P P 09 31 10.6 -1.9
SNR=54
ALNE Al Ain 30.19 113 *i* P P 09 31 11.7 -2.3
SNR=43
ALNE Al Ain 30.19 113 *i* P P 09 31 11.7 -2.3
SNR=43
HAMF Hammerfest 30.45 359 *eP* P 09 31 12.7 -3.1
HAMF IVmBBB 09 31 21.9
comp=Z,3µm,2.5s
HAMF *eS* S 09 36 14.0 -2.6
HAMF IVMs_BB IVMs_BB 09 43 55.9
comp=Z,126µm,22.1s
DAMY Dhamar 30.53 142 P P 09 31 19.1 +1.7
SNR=88
DAMY Dhamar 30.53 142 P P 09 31 18.7 +1.3
DAMY IAMs_20 IAMs_20 09 45 43.2
comp=Z,200µm,18.0s
SOHO SOHO 30.69 112 P P 09 31 17.0 -1.4
SNR=101
SOHO P P 09 31 17.0 -1.4
SNR=101
SOHO P P 09 31 17.0 -1.4
SNR=101
ARQ Araqi 31.19 113 P P 09 31 21.7 -1.2
SNR=95
ARQ P P 09 31 21.7 -1.2
SNR=95
HOQ Hoqain 31.59 112 P P 09 31 24.4 -2.0
SNR=30
HOQ P P 09 31 24.4 -2.0
SNR=30
DESE Dese 31.67 153 *eP* P 09 31 27.7 +0.3
DESE *eS* S 09 36 56.7 +20
BSY Bisya 32.05 113 P P 09 31 24.3 -6.1
SNR=38
BSY P P 09 31 24.3 -6.1
SNR=38
BIDO Bidbid 32.21 111 P P 09 31 29.5 -2.3
SNR=32
BIDO P P 09 31 29.5 -2.3
SNR=32
BIDO P P 09 31 29.5 -2.3
SNR=32
SMDO Samad 32.45 112 P P 09 31 32.0 -2.0

SMDO P P 09 31 32.0 -2.0
SNR=91
SMDO P P 09 31 32.0 -2.0
SNR=91
ATD Arta Tunnel 32.53 147‖ *e*P P 09 31 35.5 +0.8
ATD *i* S S 09 37 15.5 +25
ATD Arta Tunnel 32.53 147 P P 09 31 36.1 +1.3
SNR=33
ATD Arta Tunnel 32.53 147‖ *e*P P 09 31 35.5 +0.8
ATD Arta Tunnel 32.53 147 P P 09 31 34.5 -0.3
WSAR Wadi Sarin 32.74 111 P P 09 31 34.7 -1.8
SNR=33
BRVK Borovoye 32.81 52*ce*P P 09 31 36.1 -0.7
BRVK pmax pmax
comp=Z,301nm,1.7s
BRVK MLR MLR
comp=Z,166μm,17.0s
BRVK Borovoye 32.81 52 P P 09 31 36.6 -0.2
BRVK IAmb IAmb 09 31 59.0
comp=Z,385nm,1.1s
BRVK Borovoye 32.81 52 IAMs_20 IAMs_20 09 46 49.5
comp=Z,193μm,20.0s
BVAR Borovoye Array 32.87 52 P P 09 31 37.1 -0.3
comp=Z,18nm,0.8s,baz=258,slow=5.9,SNR=48
JMDO Jabal Madar 32.92 113 P P 09 31 35.9 -2.2
SNR=53
JMDO P P 09 31 35.9 -2.2
SNR=53
CHM Chimkent 33.02 72 *e*P P 09 31 39.7 +0.9
CHM Chimkent 33.02 72 *e*P P 09 31 39.6 +0.9
BRLS Borolday 33.05 70 *e*S S 09 37 11.1 +13
WHFO Wadi Hawf 33.10 124 P P 09 31 37.7 -2.0
SNR=23
WHFO P P 09 31 37.7 -2.0
SNR=23
ABTO Aybut 33.23 125 P P 09 31 39.5 -1.3
SNR=36
ABTO P P 09 31 39.5 -1.3
SNR=36
AAE Adis Abeba 33.33 155‖ *e*P P 09 31 49.2 +7.2
AAE *e*S S 09 37 36.4 +33
AAE Adis Abeba 33.33 155‖ *e*P P 09 31 49.2 +7.2
IUG luzhnay 33.36 72 *e*P P 09 31 40.5 -1.5
IUG *e*S S 09 37 16.1 +13
IUG *e*LR LR 09 49 49.3
IUG luzhnay 33.36 72 *e*P P 09 31 40.4 -1.5
WBK Wadi Bani Khal 33.38 112 P P 09 31 40.8 -1.3
SNR=28
WBK P P 09 31 40.8 -1.3
SNR=28
FURI Furi 33.42 156⇑ *e*P P 09 31 45.0 +2.2
FURI *e*S S 09 37 35.9 +31
FURI Furi 33.42 156⇑ *e*P P 09 31 45.0 +2.2
FURI *e*S S 09 37 35.9 +31
KK31 Karatay Array 33.52 70 *i* P P 09 31 42.2 -0.9
CHGR Chuyangaron 33.59 78 P P 09 31 43.1 -0.8
RBK Rabkut 33.69 124 P P 09 31 43.3 -1.5
SNR=27
RBK P P 09 31 43.3 -1.5
SNR=27
MHTO MHTO 33.74 115 P P 09 31 43.8 -1.3
SNR=42
MHTO P P 09 31 43.8 -1.3
SNR=42
PMPST Porto Santo, M 33.97 271 *e*P P 09 31 47.9 +0.8
comp=Z,2μm,1.5s
PMPS Porto Santo 33.97 271 *e*P P 09 31 48.4 +1.3
comp=Z,2μm,1.5s
DMTO DMTO 34.01 123 P P 09 31 45.6 -2.0
SNR=13
DMTO P P 09 31 45.6 -2.0
SNR=13
TOA0 Torodi Ar. Sit 34.10 224 P P 09 31 47.5 -0.9
SNR=93
TORD Torodi Ar. Bea 34.10 224 P P 09 31 47.1 -1.2
comp=Z,60nm,0.6s,baz=31,slow=9.2,SNR=268
TORD LR LR 09 47 08.2
comp=Z,41μm,18.0s,baz=20,slow=39
DZA Taraz 34.15 70 *e*P P 09 31 48.5 -0.1
DZA Taraz 34.15 70 *e*P P 09 31 48.5 -0.1
SHAO Shalim 34.22 122 P P 09 31 46.2 -3.2
SHAO Shalim 34.22 122 P P 09 31 46.2 -3.2
BRZS Berezniki 34.24 57 *e*P P 09 31 47.4 -1.9
comp=Z,892nm,2.6s
BRZS *e*S S 09 37 33.6 +17
BRZS *e*LR LR 09 48 37.2
comp=Z,40μm,13.4s
BRZS Berezniki 34.24 57 *e*P P 09 31 47.4 -1.9
BRZS pmax pmax
comp=Z,892nm,2.6s
BRZS MLR MLR
comp=Z,40μm,13.0s
GAR Garm 34.36 77 P P 09 31 50.0 -0.6
BTK Batken 34.44 75 P P 09 31 49.8 -1.4
BTK pmax pmax
comp=Z,786nm,1.4s
BTK MLR MLR
comp=Z,204μm,22.0s
BTK Batken 34.44 75 P P 09 31 49.8 -1.4
BTK IAmb IAmb 09 32 19.2
comp=Z,786nm,1.4s
BTK IAMs_20 IAMs_20 09 47 04.4
comp=Z,204μm,22.0s
BJO1 Bjornoya 34.45 357 *e*P P 09 31 47.7 -3.0
BJO1 *e*S S 09 37 18.1 -0.6
BJO1 IVMs_BB IVMs_BB 09 47 34.3
comp=Z,88μm,11.5s
PMAR Madeira 34.56 271 *e*P P 09 31 53.6 +1.2
comp=Z,4μm,1.5s
PMOZ Porto Moniz, M 34.73 271 *e*P P 09 31 52.6 -1.2
comp=Z,1μm,1.7s
PMOZ *e*S S 09 37 36.0 +12
PMOZ Porto Moniz, M 34.73 271 P P 09 31 54.1 +0.2
KBL Kabul 34.89 85 P P 09 31 54.4 -0.9
KBL P P 09 31 54.4 -0.9
KBL Kabul 34.89 85 P P 09 31 54.2 -1.1
KBL pmax pmax
comp=Z,532nm,1.6s
KBL MLR MLR
comp=Z,282μm,19.0s
KBL Kabul 34.89 85 P P 09 31 54.2 -1.1
KBL IAmb IAmb 09 32 34.1
comp=Z,532nm,1.6s
JMIC Jan Mayen 35.26 342 *e*P P 09 31 55.5 -2.3
JMIC *e*S S 09 37 27.1 -4.2
BTLS Baital 35.68 66 *e*P P 09 32 00.9 -0.8
comp=Z,478nm,2.3s
BTLS *e*S S 09 37 49.1 +11
BTLS *e*LR LR 09 48 48.4
BTLS Baital 35.68 66 *e*P P 09 32 00.9 -0.8
BTLS pmax pmax
comp=Z,478nm,2.3s
EKS2 Erkin-Say 35.96 70 P P 09 32 04.2 -0.1
SNR=56
AML Almayashu 36.02 71 P P 09 32 04.0 -1.2
SNR=31
BORG Borgarnes 36.22 328 P P 09 32 08.7 +2.7
comp=Z,161nm,1.2s,baz=130,slow=6.7,SNR=6.7
BORG Borgarnes 36.22 328 P P 09 32 06.4 +0.3
BORG pmax pmax
comp=Z,563nm,1.4s
BORG MLR MLR
comp=Z,66μm,22.0s
BORG Borgarnes 36.22 328 P P 09 32 06.4 +0.3
BORG IAmb IAmb 09 32 38.1
comp=Z,564nm,1.4s
MACI Morro de la Ar 36.32 264 P P 09 32 06.2 -1.4
MACI IAmb IAmb 09 32 26.2
comp=Z,762nm,1.3s
HOPEN Hopen 36.34 360 *e*P P 09 32 03.3 -3.7
HOPEN *e*S S 09 37 46.5 -1.2
HOPEN IVMs_BB IVMs_BB 09 48 03.9
comp=Z,166μm,14.2s
USP Ospenovka 36.34 69 P P 09 32 10.3 +2.8
SNR=30
SGDS Sogindy 36.40 68 *e*P P 09 32 06.3 -1.7
comp=Z,434nm,2.1s
SGDS *e*PPP PPP 09 33 45.8
SGDS *e*S S 09 37 56.0 +6.4
SGDS *e*LR LR 09 50 30.9
comp=Z,60μm,16.0s
AAK Ala-Archa 36.48 70 P P 09 32 08.3 -0.5
SNR=46
AAK Ala-Archa 36.48 70 *i* P P 09 32 08.0 -0.9
SNR=94
AAK Ala-Archa 36.48 70 *i* P P 09 32 08.0 -0.9
SNR=94
AAK Ala-Archa 36.48 70*d* P P 09 32 08.1 -0.8
AAK pmax pmax
comp=Z,977nm,1.8s
AAK MLR MLR
comp=Z,156μm,16.0s
AAK Ala-Archa 36.48 70 P P 09 32 07.8 -1.1
AAK IAmb IAmb 09 32 32.5
comp=Z,1μm,1.4s
AAK Ala-Archa 36.48 70 IAMs_20 IAMs_20 09 49 19.4
comp=Z,154μm,18.0s
FRU1 Bishkek 36.54 69 P P 09 32 09.5 +0.3
FRU1 pmax pmax
comp=Z,1μm,1.2s
FRU1 MLR MLR
comp=Z,145μm,22.0s
FRU1 Bishkek 36.54 69 P P 09 32 09.5 +0.3
FRU1 IAMs_20 IAMs_20 09 48 29.5
comp=Z,145μm,22.0s
CHMS Chumysh 36.58 69 P P 09 32 12.9 +3.4
SNR=28
UCH Uchtor 36.59 70 P P 09 32 09.8 -0.4
SNR=36
KBK Karagaybulak 36.80 70 P P 09 32 15.6 +4.0
SNR=24
HSPB Hornsund (broa 37.07 356 *e*P P 09 32 15.7 +2.4
HSPB *e*S S 09 38 13.3 +14
HSPB LMZ LR 09 46 45.3
comp=Z,228nm,26.5s
HSPB Hornsund (broa 37.07 356 *e*P P 09 32 11.3 -1.9
HSPB *e*S S 09 37 54.0 -5.0
HSPB IVMs_BB IVMs_BB 09 46 51.4
comp=Z,74μm,18.1s
KZA Kyzart 37.16 70 P P 09 32 14.7 -0.2
SNR=39
TKM2 Tokmak 2 37.20 69 P P 09 32 18.3 +3.3
SNR=20
KUU Kurty 37.51 67 *e*P P 09 32 16.5 -1.0
comp=Z,2μm,2.0s
KUU *e*S S 09 38 09.1 +2.7
KUU *e*LR LR 09 50 19.7
comp=Z,119μm,17.6s
KUU Kurty 37.51 67 *e*P P 09 32 16.4 -1.0
KUU *e*S S 09 38 09.1 +2.7
KUU pmax pmax
comp=Z,2μm,2.0s
KUU MLR MLR
comp=Z,119μm,18.0s
SOCY Socotra 37.65 130 P P 09 32 16.7 -2.2
SNR=25
SOCY Socotra 37.65 130 P P 09 32 16.0 -2.9
SOCY IAmb IAmb 09 32 25.6
comp=Z,547nm,1.1s
MTBS Maitube 37.75 68 *e*P P 09 32 18.8 -0.7
MTBS Maitube 37.75 68 *e*P P 09 32 18.8 -0.7
LODK Lodwar 37.78 164 P P 09 32 21.6 +1.6
SNR=37
ULHL Ulahol 37.83 70 P P 09 32 24.4 +4.0
SNR=29
KURBB Kurchatov Arra 37.95 56 P P 09 32 19.7 -1.3
CHKK Chushkaly 37.98 67 *e*P P 09 32 20.5 -0.9
CHKK Chushkaly 37.98 67 *e*P P 09 32 20.5 -0.9
KURK Kurchatov 37.99 56*ce*P P 09 32 20.2 -1.2
KURK pmax pmax
comp=Z,555nm,1.8s
KURK MLR MLR
comp=Z,309μm,19.0s
KURK Kurchatov 37.99 56 P P 09 32 21.0 -0.4
KURK IAmb IAmb 09 32 40.8
comp=Z,782nm,1.6s
AAA Alma-Ata 38.08 68 *e*P P 09 32 22.8 +0.5
comp=Z,1μm,2.3s
AAA *e*S S 09 38 29.7 +15
AAA *e*LR LR 09 50 56.6
comp=Z,89μm,14.4s
AAA Alma-Ata 38.08 68 *e*P P 09 32 22.7 +0.5
AAA pmax pmax
comp=Z,1μm,2.3s
KNDC Almaty 38.11 68 P P 09 32 24.3 +1.7
TNSS Tian-Shan 38.14 68 *e*P P 09 32 22.4 -0.8
TNSS Tian-Shan 38.14 68 *e*P P 09 32 22.4 -0.8
MDOK Medeo 38.18 68 *e*P P 09 32 22.1 -1.2
MDOK *e*S S 09 38 20.4 +3.5
MDOK *e*LR LR 09 51 03.0
comp=Z,96μm,13.0s
MDOK Medeo 38.18 68 *e*P P 09 32 22.0 -1.2
MDOK *e*S S 09 38 20.3 +3.5
MDOK MLR MLR
comp=Z,96μm,13.0s
SPA0 Spitsbergen Ar 38.19 357 *e*P P 09 32 22.1 -0.6
SPA0 *e*S S 09 38 18.7 +2.7
SPA0 IVMs_BB IVMs_BB 09 49 49.4
comp=Z,66μm,13.1s
SPITS Spitsbergen Ar 38.19 357 P P 09 32 23.7 +0.9
comp=Z,45nm,1.0s,baz=151,slow=12,SNR=10
KSH Kashi 38.40 74 P PcS 09 38 34.4 +6.7
KSH pmax pmax
comp=Z,250nm,2.0s
KSH pmax pmax
comp=Z,2μm,5.0s
KSH Kashi 38.40 74 P P 09 32 23.8 -1.3
KSH pP sP 09 32 27.3 -1.1
KSH sP pP 09 32 30.4 +3.0
KSH PcP PcP 09 34 35.8 -2.7
KSH S S 09 38 15.8 -4.3
KSH SS SnSn 09 40 50.8 -15
KSH ScS ScS 09 42 31.8 -4.9
KSH pmax pmax
comp=Z,38nm,0.9s
KSH pmax pmax
comp=Z,1μm,6.3s
KSH LR LR
comp=Z,40μm,8.0s
KSH LR LR
comp=Z,79μm,13.7s
KSH LR LR
comp=Z,151μm,12.6s
NIL Nilore 38.45 84 P P 09 32 22.6 -2.9
NIL P P 09 32 22.6 -2.9
NIL Nilore 38.45 84 P P 09 32 24.8 -0.7
NIL pmax pmax
comp=Z,4μm,2.2s
NIL MLR MLR
comp=Z,234μm,21.0s
NIL Nilore 38.45 84 P P 09 32 24.8 -0.7
NIL Nilore 38.45 84 IAMs_20 IAMs_20 09 49 16.1
comp=Z,234μm,21.0s
KDJ Kajisay 38.53 70 P P 09 32 24.8 -1.5
KDJ pmax pmax
comp=Z,1μm,1.8s
KDJ MLR MLR
comp=Z,157μm,21.0s
KDJ Kajisay 38.53 70 P P 09 32 24.8 -1.5
KDJ IAmb IAmb 09 32 49.4
comp=Z,1μm,1.8s
KDJ IAMs_20 IAMs_20 09 50 09.4
comp=Z,157μm,21.0s
SCO Scoresbysund 38.67 337 *i* P P 09 32 26.8 0.0
SCO Scoresbysund 38.67 337 *i* P P 09 32 26.8 0.0
TDK Taldyqorghan 38.72 65 *e*P P 09 32 28.4 +0.8
comp=Z,1μm,2.6s
TDK *e*PPP PPP 09 34 10.5
TDK *e*S S 09 38 33.8 +9.1
TDK *e*LR LR 09 51 41.4
comp=Z,189μm,15.0s
TDK Taldyqorghan 38.72 65 *e*P P 09 32 28.3 +0.7
TDK pmax pmax
comp=Z,1μm,2.6s
BART Pico Bartolome 38.91 283 *e*P P 09 32 29.4 0.0
comp=Z,1μm,1.7s
SEM Semipalatinsk 39.06 56 *e*P P 09 32 31.2 +0.6
comp=Z,687nm,2.8s
SEM *e*PPP PPP 09 34 21.1
SEM *e*S S 09 38 31.2 +1.1
SEM *e*LR LR 09 51 23.8
SEM Semipalatinsk 39.06 56 *e*P P 09 32 31.2 +0.6
SEM *e*PPP PPP 09 34 21.0
SEM *e*S S 09 38 31.1 +1.1
SEM pmax pmax
comp=Z,687nm,2.8s
TARG Taragay, Kyrgy 39.09 70 P P 09 32 31.3 +0.1
TARG IAmb IAmb 09 33 17.8
comp=Z,1μm,1.8s
TARG IAMs_20 IAMs_20 09 50 26.4
comp=Z,187μm,22.0s
KBS Kingsbay 39.13 356 P P 09 32 29.3 -1.3
KBS pmax pmax
comp=Z,522nm,1.4s
KBS MLR MLR
comp=Z,204μm,22.0s
KBS Kingsbay 39.13 356 P P 09 32 29.3 -1.3
KBS Kingsbay 39.13 356 IAMs_20 IAMs_20 09 48 53.3
comp=Z,284μm,22.0s
KBS Kingsbay 39.13 356 *e*P P 09 32 29.3 -1.3
KBS IVmBBB 09 32 37.8
comp=Z,2μm,2.5s
KBS *e*S S 09 38 29.2 -0.9
KBS IVMs_BB IVMs_BB 09 48 44.5
comp=Z,67μm,11.7s
PSMA Santa Maria 39.15 282 *e*P P 09 32 31.1 -0.2
comp=Z,1μm,1.6s
SATY Saty 39.17 68 *e*P P 09 32 29.9 -1.6
comp=Z,508nm,1.9s
SATY *e*PPP PPP 09 34 19.9
SATY *e*LR LR 09 51 30.2
comp=Z,33μm,14.0s
SATY Saty 39.17 68 *e*P P 09 32 29.9 -1.6
SATY pmax pmax
comp=Z,508nm,1.9s
SATY MLR MLR
comp=Z,33μm,14.0s
CMLA Cha da Macela 39.18 283 *e*P P 09 32 31.6 +0.1
comp=Z,2μm,1.7s
CMLA Cha da Macela 39.18 283 P P 09 32 32.0 +0.5
CMLA pmax pmax
comp=Z,2μm,1.7s
CMLA MLR MLR
comp=Z,41μm,20.0s
CMLA Cha da Macela 39.18 283 P P 09 32 32.0 +0.5
CMLA IAmb IAmb 09 32 40.4
comp=Z,2μm,1.7s
GRON Grota Negra 39.19 283 *e*P P 09 32 30.4 -1.2
comp=Z,1μm,1.7s
PDA Ponta Delgada 39.29 283 *e*P P 09 32 32.5 +0.1
comp=Z,2μm,1.6s
PSET Sete Cidades 39.31 283 *e*P P 09 32 31.7 -0.9
comp=Z,699nm,0.7s
UZB Uzynbulak 39.59 68 *e*P P 09 32 36.3 +1.2
comp=Z,352nm,2.2s
UZB *e*PPP PPP 09 34 27.0
UZB *e*S S 09 38 41.0 +3.0
UZB *e*LR LR 09 51 47.8
comp=Z,24μm,12.9s
UZB Uzynbulak 39.59 68 *e*P P 09 32 36.2 +1.2
UZB *e*PPP PPP 09 34 27.0
UZB *e*S S 09 38 41.0 +3.0
UZB pmax pmax
comp=Z,352nm,2.2s
UZB MLR MLR
comp=Z,24μm,13.0s
SHLS Shalkode 39.89 68 *e*P P 09 32 39.3 +1.8
comp=Z,487nm,2.2s
SHLS *e*PPP PPP 09 34 33.0
SHLS *e*LR LR 09 52 40.7
comp=Z,32μm,13.7s
SHLS Shalkode 39.89 68 *e*P P 09 32 39.3 +1.8
SHLS pmax pmax
comp=Z,487nm,2.2s
SHLS MLR MLR
comp=Z,32μm,14.0s
ADH Angra Heroismo 40.15 285 *e*P P 09 32 40.2 +0.7
comp=Z,2μm,1.8s
PGRA Graciosa 40.58 286 *e*P P 09 32 42.8 -0.3
comp=Z,1μm,1.6s
SRBC Serra Branca 40.62 286 *e*P P 09 32 43.3 -0.1
comp=Z,1μm,1.6s
MAKZ Makanchi 40.78 61 P P 09 32 44.4 -0.3
MAKZ pmax pmax
comp=Z,1μm,2.2s
MAKZ MLR MLR
comp=Z,240μm,19.0s
MAKZ Makanchi 40.78 61 P P 09 32 44.4 -0.3
MAKZ IAmb IAmb 09 32 53.4
comp=Z,1μm,2.1s
PMAN Manadas 40.79 286 *e*P P 09 32 44.6 -0.2
comp=Z,1μm,1.9s
ROSA Rosais 40.87 286 *e*P P 09 32 44.5 -1.0
comp=Z,808nm,2.1s
ROSA Rosais 40.87 286 P P 09 32 46.1 +0.5
MBAR Mbarara 40.98 172*ce*P P 09 32 47.7 +0.9
MBAR pmax pmax
comp=Z,62nm,1.3s
MBAR Mbarara 40.98 172 P P 09 32 46.4 -0.3
MK31 Makanchi Array 40.99 61 *i* P P 09 32 45.2 -1.3
MKAR Makanchi Array 40.99 61 P P 09 32 45.1 -1.4
comp=Z,51nm,0.6s,baz=280,slow=6.9,SNR=158
MKAR LR LR 09 52 49.1
comp=Z,236μm,19.2s,baz=264,slow=41
MKAR Makanchi Array 40.99 61 *i* P P 09 32 45.0 -1.5
MKAR pmax pmax
comp=Z,51nm,0.6s
DAG Danmarks Havn 41.12 346 *i* P P 09 32 46.4 -0.7
DAG MLR MLR
comp=Z,69μm,18.0s
DAG Danmarks Havn 41.12 346 *i* P P 09 32 46.4 -0.7
comp=Z,69μm,18.0s
PCAN Candelaria 41.14 285 *e*P P 09 32 47.8 +0.1
comp=Z,832nm,1.6s
PCED Cedros 41.24 286 *e*P P 09 32 48.8 +0.2
comp=Z,1μm,1.6s
CALA Caldeira 41.26 286 *e*P P 09 32 48.9 +0.1
comp=Z,571nm,1.0s
ZALV Zalesovo Beam 41.47 50 P P 09 32 48.8 -1.4
comp=Z,75nm,0.7s,baz=270,slow=9.1,SNR=56
ZALV LR LR 09 52 18.0
comp=Z,214μm,21.6s,baz=267,slow=40
ZALV Zalesovo Beam 41.47 50 *i* P P 09 32 48.7 -1.6
ZALV pmax pmax
comp=Z,75nm,0.7s
SMLA Simla 42.52 86 *e*P P 09 32 58.6 -0.5
SMLA *i* x x 09 33 02.2
ZSN Zaisan 42.57 60 *e*P P 09 32 58.5 -0.9
comp=Z,809nm,2.6s
ZSN *e*PPP PPP 09 35 03.8
ZSN *e*S S 09 39 23.5 +1.5
ZSN Zaisan 42.57 60 *e*P P 09 32 58.4 -0.9
ZSN *e*S S 09 39 23.4 +1.5
ZSN pmax pmax
comp=Z,809nm,2.6s
KMBO Kilima Mbogo 42.61 162⇑ *e*P P 09 32 58.2 -2.0
KMBO *e*S S 09 39 49.8 +26
KMBO Kilima Mbogo 42.61 162 *i* P P 09 33 02.7 +2.4
SNR=16
KMBO Kilima Mbogo 42.61 162 *i* P P 09 33 02.7 +2.4
SNR=16
KMBO Kilima Mbogo 42.61 162 P P 09 33 00.3 +0.1
KMBO pmax pmax
comp=Z,929nm,2.6s
KMBO MLR MLR
comp=Z,58μm,20.0s
KMBO Kilima Mbogo 42.61 162⇑ *e*P P 09 32 58.2 -2.0
KMBO *e*S S 09 39 49.8 +26
KMBO Kilima Mbogo 42.61 162 P P 09 33 00.2 +0.1
H07N1 FLORES T-PHASE 42.65 288 *e*P P 09 33 00.0 -0.1
H07N1 FLORES T-PHASE 42.65 288 P P 09 33 01.2 +1.1
H07S1 FLORES T-PHASE 42.82 288 *e*P P 09 33 01.2 -0.3
DBIC Dimbokro 43.03 227 P P 09 33 02.1 -1.3
comp=Z,50nm,0.8s,baz=16,slow=9.2,SNR=32
DBIC LR LR 09 52 12.4
comp=Z,35μm,18.8s,baz=18,slow=38
DBIC Dimbokro 43.03 227 P P 09 33 02.2 -1.1
TIC Toumodi 43.15 227 *e*P P 09 33 02.9 -1.4
KIC Kosan Boka 43.22 227 *e*P P 09 33 03.6 -1.3
comp=Z,1μm,1.4s
LIC Lamto 43.50 227 *e*P P 09 33 05.2 -1.9
comp=Z,1μm,1.4s
DDI Dehra Dun 43.57 86 *e*P P 09 33 06.9 -0.8
DDI IAmb IAmb 09 33 34.6
comp=Z,328nm,0.8s
DDI IAMs_20 IAMs_20 09 53 22.2
comp=Z,205μm,17.8s
NOR Nord 43.91 352 *i* P P 09 33 10.9 +1.2
NOR MLR MLR
comp=Z,130μm,25.0s
NOR Nord 43.91 352 *i* P P 09 33 10.9 +1.2
comp=Z,126μm,25.0s
KIBK Kibwezi 43.97 162 P P 09 33 14.1 +3.1
SNR=9.0
SUMG Summit 44.30 337 P P 09 33 12.2 -1.2
SUMG pmax pmax

	comp=Z,239nm,1.0s									
SUMG					MLR	MLR				
	comp=Z,45µm,20.0s									
SUMG	**Summit**	**44.30**	**337**		**P**	**P**	**09 33 12.2**	**-1.2**		
SUMG	**Summit**	**44.30**	**337**	*i*	**P**	**P**	**09 33 13.9**	**+0.5**		
	comp=Z,109µm,16.0s									
WMQ	**Urumqi**	**45.45**	**64**		P	**P**	**09 33 23.0**	**+0.4**		
WMQ					pP	sP	09 33 26.1	+0.2		
WMQ					S	**S**	**09 40 09.1**	**+4.9**		
WMQ					sS	sS	09 40 17.3	+9.2		
WMQ					pmax	pmax				
	comp=Z,94nm,1.3s									
WMQ					pmax	pmax				
	comp=Z,2µm,3.6s									
WMQ					LR	LR				
	comp=Z,98µm,18.1s									
WMQ					LR	LR				
	comp=Z,176µm,21.1s									
WMQ	**Urumqi**	**45.45**	**64**		P	**P**	**09 33 22.6**	**0.0**		
WMQ					pmax	pmax				
	comp=Z,615nm,1.2s									
WMQ					MLR	MLR				
	comp=Z,179µm,20.0s									
WMQ	**Urumqi**	**45.45**	**64**		P	**P**	**09 33 22.6**	**0.0**		
WMQ					IAmb	IAmb	09 34 04.4			
	comp=Z,615nm,1.2s									
BOM	**Bombay**	**45.80**	**103**	*ex*		P	09 33 16.0	-10		
BOM					AMP		09 33 18.4			
	comp=Z,1µm,1.9s									
BOM				*ex*	x	x	09 40 07.3			
BOM					AMS	AMS	09 53 19.9			
	comp=Z,20µm,22.2s									
POO	**Poona**	**46.80**	**103**	*ex*		**P**	**09 33 30.4**	**-3.0**		
POO				*ex*	x	x	09 33 37.0			
	comp=Z,200nm,1.2s									
POO				*ex*	x	x	09 35 27.0			
POO				*ex*	x	x	09 36 13.0			
POO				*i*	x	x	09 40 29.0			
POO				*ex*	x	x	09 43 48.0			
POO				*ex*	x	x	09 44 58.0			
IVI	**Ivigtut**	**48.06**	**321**		P	**P**	**09 33 42.1**	**-0.5**		
IVI					IAmb	IAmb	09 33 51.3			
	comp=Z,463nm,1.2s									
ILULI	**Ilulissat**	**48.29**	**332**		P	**P**	**09 33 43.7**	**-0.6**		
ILULI					pmax	pmax				
	comp=Z,339nm,1.3s									
ILULI					MLR	MLR				
	comp=Z,100µm,18.0s									
ILULI	**Ilulissat**	**48.29**	**332**		P	**P**	**09 33 43.7**	**-0.6**		
ILULI					IAmb	IAmb	09 34 23.1			
	comp=Z,339nm,1.3s									
ILULI					IAMs_20	IAMs_20	09 56 53.7			
	comp=Z,101µm,18.0s									
SFJD	**Kangerlussuaq**	**48.32**	**329**		P	**P**	**09 33 44.2**	**-0.4**		
	comp=Z,44nm,1.1s,baz=86,slow=7.1,SNR=5.2									
SFJD	**Kangerlussuaq**	**48.32**	**329**		P	**P**	**09 33 44.9**	**+0.2**		
SFJD	**Kangerlussuaq**	**48.32**	**329**		IAMs_20	IAMs_20	09 57 31.8			
	comp=Z,92µm,18.0s									
SFJD	**Kangerlussuaq**	**48.32**	**329**	*i*	P	**P**	**09 33 45.6**	**+1.0**		
	comp=Z,6µm,18.0s									
PYUN	**Piuthan**	**48.42**	**86**	*e*	P	**P**	**09 33 45.1**	**-1.1**		
	comp=Z,2µm,1.1s									
GOA	**Goa**	**48.69**	**106**	*e*	P	**P**	**09 33 45.7**	**-2.3**		
GOA					IAMs_20	IAMs_20	09 57 36.6			
	comp=Z,134µm,17.5s									
DANN	**Dangsing**	**48.88**	**85**	*e*	P	**P**	**09 33 48.1**	**-1.7**		
	comp=Z,3µm,1.1s									
KOLN	**Koldanda**	**49.05**	**86**	*e*	P	**P**	**09 33 49.2**	**-1.8**		
	comp=Z,3µm,1.5s									
KLRI	**Killari**	**49.13**	**101**	*e*	P	**P**	**09 33 48.8**	**-2.7**		
KLRI					IVMs_BB	IVMs_BB	09 57 57.8			
	comp=Z,43µm,15.0s									
NGP	**Nagpur**	**49.16**	**96**	*e*	P	**P**	**09 33 49.1**	**-2.6**		
NGP					IAMs_20	IAMs_20	09 55 27.1			
	comp=Z,169µm,21.0s									
GKN	**Gorkha**	**49.72**	**85**	*e*	P	**P**	**09 33 54.4**	**-1.7**		
	comp=Z,1µm,1.2s									
SRSP	**Sriramsagar**	**49.93**	**99**	*e*	P	**P**	**09 33 54.4**	**-3.2**		
SRSP					IVMs_BB	IVMs_BB	09 57 55.6			
	comp=Z,41µm,16.0s									
DMN	**Daman**	**50.28**	**85**	*e*	P	**P**	**09 33 58.5**	**-2.0**		
	comp=Z,2µm,1.3s									
KKN	**Kakani**	**50.32**	**85**	*e*	P	**P**	**09 33 58.4**	**-2.3**		
	comp=Z,882nm,1.3s									
KSMZ	**Kasama**	**50.48**	**173**	*i*	P	P	09 33 55.9	-6.0		
PKIN	**Phulchoki**	**50.52**	**85**	*e*	P	**P**	**09 34 00.2**	**-2.1**		
	comp=Z,3µm,1.9s									
PKI	**Pulchoki**	**50.53**	**85**	*e*	P	**P**	**09 34 00.4**	**-2.1**		
	comp=Z,3µm,1.7s									
RPR	**Rampur**	**50.69**	**98**	*e*	P	**P**	**09 34 00.1**	**-3.2**		
RPR					IVMs_BB	IVMs_BB	09 58 10.6			
	comp=Z,38µm,15.4s									
GUN	**Gumba**	**50.72**	**84**	*e*	P	**P**	**09 34 01.7**	**-2.2**		
	comp=Z,1µm,1.2s									
HYBB	**Hyderabad (bro**	**51.00**	**100**	*e*	P	**P**	**09 34 04.2**	**-1.6**		
HYBB					IVMs_BB	IVMs_BB	09 59 19.4			
	comp=Z,30nm,16.3s									
HYB	**Hyderabad**	**51.00**	**100**	*i*	P	**P**	**09 34 02.0**	**-3.7**		
HYB				*e*	PcP	**PcP**	**09 35 21.0**	**-0.8**		
HYB				*e*	PP	PP	09 36 12.0	+10		
HYB				*e*			09 37 20.0			
HYB				*e*	S	**S**	**09 41 24.0**	**+0.8**		
HYB				*e*	LR	LR				
	comp=Z,78nm,20.0s									
HYB	**Hyderabad**	**51.00**	**100**	*e*	P	**P**	**09 34 03.6**	**-2.1**		
HYB					IAmb	IAmb	09 34 14.1			
	comp=Z,99nm,1.1s									
MOY	**Mondy**	**51.53**	**50**	*e*	P	**P**	**09 34 10.2**	**+0.8**		
MOY					pmax	pmax				
	comp=Z,935nm,2.5s									
URV	**Uravakonda**	**51.58**	**104**	*e*	P	**P**	**09 34 06.4**	**-3.7**		
URV					IVMs_BB	IVMs_BB	09 56 58.4			
	comp=Z,26µm,21.0s									
RAMN	**Ramite**	**51.76**	**85**	*e*	P	**P**	**09 34 09.2**	**-2.4**		
	comp=Z,760nm,0.9s									
SRLM	**Srisailam**	**52.07**	**101**	*e*	P	**P**	**09 34 10.8**	**-2.9**		
SRLM					IVMs_BB	IVMs_BB	09 59 57.1			
	comp=Z,29µm,15.0s									
NJS	**Nagarjunasagar**	**52.10**	**101**	*e*	P	**P**	**09 34 10.8**	**-3.1**		
NJS					IVMs_BB	IVMs_BB	09 59 25.3			
	comp=Z,24µm,15.3s									
TULEG	**Thule**	**52.20**	**343**		P	**P**	**09 34 12.3**	**-1.5**		
TAPN	**Taplejung**	**52.40**	**84**	*e*	P	**P**	**09 34 14.1**	**-2.3**		
	comp=Z,2µm,1.3s									
ODAN	**Odare**	**52.41**	**85**	*e*	P	**P**	**09 34 14.2**	**-2.2**		
	comp=Z,970nm,1.1s									
MSEY	**Mahe Island**	**52.59**	**141**		P	**P**	**09 34 16.8**	**-0.7**		
MSEY	**Mahe Island**	**52.59**	**141**		P	**P**	**09 34 16.8**	**-0.7**		
MSEY	**Mahe Island**	**52.59**	**141**		P	**P**	**09 34 16.8**	**-0.7**		
MSEY					pmax	pmax				
	comp=Z,274nm,1.1s									
MSEY					MLR	MLR				
	comp=Z,60µm,20.0s									
MSEY	**Mahe Island**	**52.59**	**141**		P	**P**	**09 34 16.8**	**-0.7**		
BOK	**Bokaro**	**52.90**	**89**	*e*	P	**P**	**09 34 17.8**	**-2.0**		
BOK					IAmb	IAmb	09 34 24.4			
	comp=Z,394nm,1.7s									
BOK				*ex*		x	09 41 56.3			
BOK					IAMs_20	IAMs_20	09 58 18.2			
	comp=Z,106µm,19.2s									
ADKI	**Addanki**	**53.04**	**101**	*e*	P	**P**	**09 34 19.4**	**-1.5**		
ADKI					IVMs_BB	IVMs_BB	10 00 02.1			
	comp=Z,24µm,15.2s									
TLY	**Talaya**	**53.08**	**50**	*c*	*i* P	**P**	**09 34 21.2**	**+0.4**		
TLY				*e*	S	**S**	**09 41 53.8**	**+2.9**		
TLY					pmax	pmax				
	comp=Z,1µm,1.6s									
TLY					MLR	MLR				
	comp=Z,537µm,17.0s									
TLY	**Talaya**	**53.08**	**50**		P	**P**	**09 34 21.7**	**+0.9**		
TLY					IAmb	IAmb	09 34 44.9			
	comp=Z,1µm,1.8s									
TLY					IAMs_20	IAMs_20	09 58 58.9			
	comp=Z,291µm,21.0s									
GTK	**Tadong**	**53.09**	**83**	*e*	P	**P**	**09 34 19.6**	**-1.7**		
GTK					IAmb	IAmb	09 34 49.5			
	comp=Z,4µm,2.1s									
IRK	**Irkutsk**	**53.25**	**49**	*e*	P	**P**	**09 34 24.0**	**+2.0**		
IRK				*e*			09 36 18.9			
IRK					pmax	pmax				
	comp=Z,1µm,2.8s									
ZAK	**Zakamensk**	**53.33**	**51**	*e*	P	**P**	**09 34 22.8**	**+0.1**		
ZAK					pmax	pmax				
	comp=Z,215nm,1.7s									
PVM	**Polavaram**	**53.42**	**98**	*e*	P	**P**	**09 34 21.4**	**-2.3**		
PVM					IVMs_BB	IVMs_BB	09 59 52.2			
	comp=Z,49µm,16.3s									
LSA	**Lhasa**	**53.81**	**79**		P	**P**	**09 34 26.1**	**-0.9**		
LSA					LR	LR				
	comp=Z,130µm,18.5s									
LSA					LR	LR				
	comp=Z,146µm,19.2s									
LSA					LR	LR				
	comp=Z,124µm,21.4s									
LSA	**Lhasa**	**53.81**	**79**		P	**P**	**09 34 25.4**	**-1.6**		
LSA	**Lhasa**	**53.81**	**79**		P	**P**	**09 34 25.4**	**-1.6**		
LSA	**Lhasa**	**53.81**	**79**		P	**P**	**09 34 26.1**	**-0.9**		
LSA					pmax	pmax				
	comp=Z,119nm,0.9s									
LSA					MLR	MLR				
	comp=Z,102µm,20.0s									
LSA	**Lhasa**	**53.81**	**79**		P	**P**	**09 34 26.1**	**-0.9**		
LSA					IAMs_20	IAMs_20	10 01 02.8			
	comp=Z,102µm,20.0s									
SKHT	**Srikalahasti**	**54.17**	**103**	*e*	P	**P**	**09 34 26.3**	**-2.9**		
SKHT					IVMs_BB	IVMs_BB	10 01 04.6			
	comp=Z,26µm,14.7s									
BWNR	**Bhubaneshwar**	**54.80**	**92**	*e*	P	**P**	**09 34 32.4**	**-1.3**		
BWNR					IAMs_20	IAMs_20	10 00 27.0			
	comp=Z,208µm,16.4s									
DHUB	**DHUBRI**	**54.83**	**84**	*e*	P	**P**	**09 34 32.0**	**-1.8**		
DHUB					IAmb	IAmb	09 34 40.2			
	comp=Z,121nm,0.8s									
LSZ	**Lusaka**	**55.33**	**177**	*i*	P	**P**	**09 34 37.1**	**-0.4**		
LSZ	**Lusaka**	**55.33**	**177**	*i*	P	**P**	**09 34 37.1**	**-0.4**		
LSZ	**Lusaka**	**55.33**	**177**		P	**P**	**09 34 37.7**	**+0.1**		
LSZ					pmax	pmax				
	comp=Z,197nm,1.3s									
LSZ					MLR	MLR				
	comp=Z,43µm,18.0s									
LSZ	**Lusaka**	**55.33**	**177**		P	**P**	**09 34 37.7**	**+0.1**		
GTA	**Gaotai**	**55.52**	**65**		P	**P**	**09 34 37.5**	**-1.4**		
GTA					pP	sP	09 34 40.9	-1.3		
GTA					sP	pP	09 34 43.9	+2.6		
GTA					S	**S**	**09 42 24.3**	**-0.1**		
GTA					pmax	pmax				
	comp=Z,46nm,1.7s									
GTA					pmax	pmax				
	comp=Z,1µm,7.5s									
GTA					LR	LR				
	comp=Z,92µm,17.8s									
GTA					LR	LR				
	comp=Z,140µm,19.7s									
TRD	**Trivandrum**	**55.61**	**110**	*e*	P	**P**	**09 34 35.8**	**-3.8**		
TRD					IAmb	IAmb	09 34 46.3			
	comp=Z,195nm,1.4s									
TRD					IAMs_20	IAMs_20	10 00 03.2			
	comp=Z,104µm,16.8s									
GUWA	**GUWAHATI**	**56.03**	**83**	*e*	P	**P**	**09 34 40.5**	**-2.0**		
SONM	**Songino Array**	**56.20**	**53**		P	**P**	**09 34 42.1**	**-1.5**		
	comp=Z,29nm,1.0s,baz=287,slow=8.8,SNR=34									
SONM					LR	LR	10 03 03.1			
	comp=Z,189µm,19.6s,baz=288,slow=41									
TIXI	**Tiksi**	**56.34**	**22**	*i*	P	**P**	**09 34 43.9**	**-0.2**		
TIXI					pmax	pmax				
	comp=Z,391nm,1.7s									
TIXI					MLR	MLR				
	comp=Z,315µm,18.0s									
TIXI	**Tiksi**	**56.34**	**22**		P	**P**	**09 34 43.9**	**-0.2**		
TIXI					IAmb	IAmb	09 35 08.0			
	comp=Z,525nm,1.6s									
BOD	**Bodaibo**	**56.38**	**40**	*e*	P	**P**	**09 34 43.1**	**-1.4**		
BOD					pmax	pmax				
	comp=Z,351nm,1.4s									
SHL	**Shillong**	**56.51**	**83**	*e*	P	**P**	**09 34 44.0**	**-2.2**		
SHL					IAmb	IAmb	09 34 52.5			
	comp=Z,1µm,2.0s									
SHL					IAMs_20	IAMs_20	10 01 03.2			
	comp=Z,115µm,24.6s									
SHL	**Shillong**	**56.51**	**83**		P	**P**	**09 34 43.5**	**-2.7**		
	SNR=116									
SHL	**Shillong**	**56.51**	**83**		P	**P**	**09 34 44.0**	**-2.2**		
SHL					pmax	pmax				
	comp=Z,906nm,1.4s									
SHL					MLR	MLR				
	comp=Z,178µm,21.0s									
SHL	**Shillong**	**56.51**	**83**		P	**P**	**09 34 44.0**	**-2.2**		
ULN	**Ulaanbaatar**	**56.59**	**53**	*de*	P	**P**	**09 34 45.2**	**-1.2**		
ULN					pmax	pmax				
	comp=Z,560nm,2.4s									
ULN					MLR	MLR				
	comp=Z,181µm,21.0s									
ULN	**Ulaanbaatar**	**56.59**	**53**		P	**P**	**09 34 45.6**	**-0.8**		
ULN					IAmb	IAmb	09 35 07.9			
	comp=Z,382nm,1.4s									
DRLN	**Deer Lake**	**56.73**	**309**		P	**P**	**09 34 46.6**	**-0.6**		
DRLN					IAmb	IAmb	09 35 08.2			
	comp=Z,264nm,0.9s									
ZIRO	**ZIRO**	**56.96**	**80**	*e*	P	**P**	**09 34 47.5**	**-1.8**		
ITAN	**ITANAGAR**	**57.06**	**81**	*e*	P	**P**	**09 34 48.9**	**-1.0**		
ITAN					IAmb	IAmb	09 34 59.6			
	comp=Z,254nm,0.9s									
LKP	**Lekhapani**	**58.56**	**79**	*ex*		**P**	**09 35 02.9**	**+2.5**		
LKP					IAmb	IAmb	09 35 23.7			
	comp=Z,526nm,1.4s									
CIT	**Chita**	**58.58**	**46**	*e*	P	**P**	**09 35 03.1**	**+2.8**		
CIT				*e*			09 35 51.6			
CIT				*e*			09 38 36.6			
CIT					pmax	pmax				
	comp=Z,756nm,2.6s									
RES	**Resolute Bay**	**58.78**	**344**		LR	LR	09 59 44.0			
	comp=Z,72µm,19.8s,baz=35,slow=35									
RES	**Resolute Bay**	**58.78**	**344**		P	**P**	**09 35 00.4**	**-0.8**		
RES					pmax	pmax				
	comp=Z,248nm,1.1s									
RES	**Resolute Bay**	**58.78**	**344**		P	**P**	**09 35 00.4**	**-0.8**		
RES					IAmb	IAmb	09 35 25.8			
	comp=Z,248nm,1.1s									
RES					IAMs_20	IAMs_20	09 59 32.7			
	comp=Z,76µm,20.0s									
PALK	**Pallekele**	**59.16**	**108**		IAMs_20	IAMs_20	10 05 18.0			
	comp=Z,104µm,18.0s									
SCHQ	**Schefferville**	**59.46**	**318**		P	**P**	**09 35 05.6**	**-0.6**		
	comp=Z,64nm,0.8s,baz=67,slow=7.1,SNR=44									
SCHQ					LR	LR	10 00 46.3			
	comp=Z,25µm,19.0s,baz=58,slow=36									
TSUM	**Tsumeb**	**59.61**	**189**	*i*	P	**P**	**09 35 08.5**	**+0.8**		
TSUM	**Tsumeb**	**59.61**	**189**	*i*	P	**P**	**09 35 04.3**	**-3.5**		
TSUM	**Tsumeb**	**59.61**	**189**	*i*	P	**P**	**09 35 08.5**	**+0.8**		
TSUM	**Tsumeb**	**59.61**	**189**		P	**P**	**09 35 07.8**	**0.0**		
LZH	**Lanzhou**	**59.90**	**67**	⇑	P	**P**	**09 35 12.5**	**+2.7**		
LZH					pP	sP	09 35 16.0	+2.8		
LZH					S	**S**	**09 43 22.0**	**-0.1**		
LZH					SS	**SS**	**09 47 18.9**	**+1.0**		
LZH					pmax	pmax				
	comp=Z,380nm,1.3s									
LZH					pmax	pmax				
	comp=Z,3µm,6.0s									
LZH					LR	LR				
	comp=Z,191µm,17.3s									
LZH					LR	LR				
	comp=Z,127µm,18.4s									
LZH					LR	LR				
	comp=Z,150µm,19.5s									
ASCN	**Ascension**	**60.36**	**227**		P	**P**	**09 35 12.3**	**-0.5**		
MATP	**Matopo**	**60.46**	**177**	*i*	P	**P**	**09 35 12.6**	**-0.9**		
MATP	**Matopo**	**60.46**	**177**	*i*	P	**P**	**09 35 14.7**	**+1.2**		
MATP	**Matopo**	**60.46**	**177**	*i*	P	**P**	**09 35 14.3**	**+0.8**		
MATP	**Matopo**	**60.46**	**177**	*i*	P	**P**	**09 35 12.6**	**-0.9**		
MATP	**Matopo**	**60.46**	**177**	*i*	P	**P**	**09 35 14.7**	**+1.2**		
GBN	**Guysborough**	**60.90**	**306**		P	**P**	**09 35 15.8**	**-0.4**		
GBN					IAmb	IAmb	09 35 39.2			
	comp=Z,245nm,1.0s									
YAK	**Yakutsk**	**61.40**	**31**	*c*	*i* P	**P**	**09 35 19.4**	**+0.1**		
YAK					*e*		09 37 33.6			
YAK					*e*PPP	PPP	09 38 59.7			
YAK					*e*S	**S**	**09 43 40.1**	**+0.1**		
YAK					*e*SS	**SS**	**09 47 40.7**	**+0.9**		
YAK					pmax	pmax				
	comp=Z,135nm,1.6s									
YAK					pmax	pmax				
	comp=N,97nm,1.6s									
YAK					pmax	pmax				
	comp=E,101nm,1.5s									
YAK					pmax	pmax				
	comp=Z,899nm,3.2s									
YAK					pmax	pmax				
	comp=N,657nm,3.0s									
YAK					pmax	pmax				
	comp=E,692nm,2.5s									
YAK					smax	smax				
	comp=E,6µm,8.4s									
YAK					smax	smax				
	comp=N,5µm,6.2s									
YAK					MLR	MLR				
	comp=Z,140µm,18.0s									
YAK					MLR	MLR				
	comp=N,242µm,21.0s									
YAK					MLR	MLR				
	comp=E,94µm,19.0s									
YAK	**Yakutsk**	**61.40**	**31**		P	**P**	**09 35 18.0**	**-1.3**		
YAK					IAmb	IAmb	09 35 35.6			
	comp=Z,134nm,0.8s									
ABPO	**Ambohimpanom**	**62.41**	**157**		IAMs_20	IAMs_20	10 07 10.9			
	comp=Z,59µm,20.0s									
CD2	**Chengdu**	**62.52**	**72**	⇑	*i* P	**P**	**09 35 26.4**	**-1.0**		
CD2					sP	sP	09 35 33.0	+2.2		
CD2					PP	**PP**	**09 37 47.0**	**+2.3**		
CD2					S	**S**	**09 43 51.6**	**-3.6**		
CD2					SS	**SS**	**09 47 57.0**	**-1.8**		
CD2					pmax	pmax				
	comp=Z,110nm,1.3s									
CD2					LR	LR				
	comp=Z,204µm,22.4s									
CD2					LR	LR				
	comp=Z,239µm,22.2s									
CD2					LR	LR				
	comp=Z,221µm,22.2s									
LMN	**Caledonia Moun**	**62.68**	**308**		P	**P**	**09 35 28.3**	**0.0**		
LMN					IAMs_20	IAMs_20	10 03 02.3			
	comp=Z,55µm,18.0s									
BATG	**Bathurst New B**	**62.70**	**310**		P	**P**	**09 35 28.3**	**-0.1**		
BATG					IAmb	IAmb	09 35 56.7			
	comp=Z,323nm,1.2s									
BATG					IAMs_20	IAMs_20	10 06 23.7			
	comp=Z,43µm,18.0s									
HHC	**Hu-ho-hao-te**	**62.74**	**58**	*e*	P	**P**	**09 35 31.3**	**+2.5**		
HHC					pP	sP	09 35 37.0	+4.8		
HHC					S	**S**	**09 44 00.0**	**+2.2**		
HHC					pmax	pmax				
	comp=Z,91nm,1.2s									
HHC					pmax	pmax				
	comp=Z,990nm,4.9s									
HHC					LR	LR				
	comp=Z,62µm,15.8s									
HHC					LR	LR				
	comp=Z,60µm,16.4s									
HHC					LR	LR				
	comp=Z,97µm,18.7s									
SHEL	**Horse Pasture**	**62.99**	**214**		P	**P**	**09 35 30.3**	**-0.3**		
SHEL					pmax	pmax				
	comp=Z,388nm,1.3s									
SHEL					MLR	MLR				
	comp=Z,18µm,19.0s									
SHEL	**Horse Pasture**	**62.99**	**214**		P	**P**	**09 35 30.3**	**-0.3**		
HIA	**Hailar**	**63.36**	**47**		P	**P**	**09 35 31.3**	**-1.5**		
HIA					pmax	pmax				
	comp=Z,196nm,1.0s									
HIA					MLR	MLR				
	comp=Z,115µm,18.0s									
HIA	**Hailar**	**63.36**	**47**		P	**P**	**09 35 31.3**	**-1.5**		
HIA					IAmb	IAmb	09 35 52.1			
	comp=Z,196nm,1.0s									
D63A	**Stockholm**	**64.02**	**311**		P	**P**	**09 35 37.5**	**+0.4**		
	baz=58,SNR=17									
D63A					S	**S**	**09 44 15.6**	**+2.1**		
	baz=58									
PQI	**Presque Isle**	**64.16**	**310**		P	**P**	**09 35 37.8**	**-0.2**		
PQI					IAmb	IAmb	09 36 08.1			
	comp=Z,160nm,1.0s									
E64A	**Bridgewater**	**64.19**	**310**		P	**P**	**09 35 38.3**	**+0.1**		
	baz=58,SNR=21									
E64A					S	**S**	**09 44 16.3**	**+0.8**		
	baz=58									
DGAR	**Diego Garcia**	**64.27**	**126**		IAMs_20	IAMs_20	10 02 44.0			
	comp=Z,68µm,21.0s									
GGN	**Saint George**	**64.29**	**308**		P	**P**	**09 35 38.6**	**-0.2**		
GGN					IAmb	IAmb	09 36 19.9			
	comp=Z,268nm,1.3s									
GGN					IAMs_20	IAMs_20	10 03 59.5			
	comp=Z,42µm,18.0s									
DGPR	**DIGLIPUR**	**64.51**	**94**	*ex*		**P**	**09 35 42.8**	**+2.1**		
DGPR				*e*	P	**P**	**09 35 42.9**	**+2.1**		
DGPR					IAmb	IAmb	09 35 56.3			
	comp=Z,700nm,1.2s									
DGPR				*ex*		x	09 51 40.5			
XAN	**Xi'an**	**64.52**	**66**		P	**P**	**09 35 43.0**	**+2.3**		
XAN					S	**S**	**09 44 26.3**	**+6.2**		
XAN					pmax	pmax				
	comp=Z,59nm,1.7s									
XAN					pmax	pmax				
	comp=Z,1µm,3.5s									
XAN					LR	LR				
	comp=Z,73µm,19.8s									
XAN					LR	LR				
	comp=Z,171µm,19.0s									
XAN	**Xi'an**	**64.52**	**66**		P	**P**	**09 35 40.1**	**-0.6**		
XAN					pmax	pmax				
	comp=Z,616nm,1.3s									
XAN					MLR	MLR				
	comp=Z,72µm,19.0s									
XAN	**Xi'an**	**64.52**	**66**		P	**P**	**09 35 40.1**	**-0.6**		
XAN	**Xi'an**	**64.52**	**66**		IAMs_20	IAMs_20	10 08 50.6			
	comp=Z,71µm,19.0s									
E63A	**Oxbow**	**64.53**	**310**		P	**P**	**09 35 40.7**	**+0.2**		
	baz=58,SNR=19									
E63A					S	**S**	**09 44 21.5**	**+1.7**		
	baz=58									
E63A	**Oxbow**	**64.53**	**310**		P	**P**	**09 35 40.7**	**+0.2**		
E63A					IAmb	IAmb	09 36 10.0			
	comp=Z,226nm,1.2s									
D62A	**Allapoint, All**	**64.54**	**311**		P	**P**	**09 35 39.9**	**-0.6**		
	baz=58,SNR=20									
D62A					S	**S**	**09 44 21.9**	**+2.1**		
	baz=58									
D62A	**Allapoint, All**	**64.54**	**311**		P	**P**	**09 35 40.8**	**+0.3**		
D62A					IAmb	IAmb	09 36 22.8			
	comp=Z,342nm,1.2s									
D62A

comp=N,2µm,5.0s
KMI LR LR
comp=N,82µm,22.4s
KMI LR LR
comp=N,89µm,20.0s
KMI Kunming 64.94 78 P **P** **09 35 42.4 -1.3**
KMI pmax pmax
comp=Z,201nm,1.2s
KMI MLR MLR
comp=Z,94µm,20.0s
KMI Kunming 64.94 78 P **P** **09 35 42.4 -1.3**
KMI IAmb IAmb 09 36 19.9
comp=Z,201nm,1.2s
LBTB Lobatse 64.95 180 P **P** **09 35 43.0 -0.4**
LBTB pmax pmax
comp=Z,413nm,1.2s
LBTB Lobatse 64.95 180 P **P** **09 35 43.0 -0.4**
TIY Taiyuan 64.95 61 *e*P P 09 35 48.3 +4.8
TIY PP **PP** **09 38 12.4 +6.4**
TIY S **S** **09 44 21.8 -3.6**
TIY pmax pmax
comp=Z,120nm,1.3s
TIY LR LR
comp=Z,34µm,13.8s
TIY LR LR
comp=Z,107µm,18.1s
E62A Clayton Lake 65.07 311 P **P** **09 35 44.4 +0.5**
baz=57,SNR=24
E62A S **S** **09 44 29.0 +2.6**
baz=57
E62A Clayton Lake 65.07 311 P **P** **09 35 44.0 0.0**
E62A IAmb IAmb 09 36 13.5
comp=Z,286nm,1.2s
D61A St Aubert, Com 65.13 312 P **P** **09 35 45.0 +0.6**
baz=57,SNR=8.6
D61A S **S** **09 44 30.2 +3.1**
baz=57
PBA Port Blair 65.32 96 P P 09 35 45.6 -0.4
F63A Nahmakanta, Br 65.32 310 P **P** **09 35 46.2 +0.6**
baz=57,SNR=6.1
F63A S **S** **09 44 31.8 +2.3**
baz=57
F63A Nahmakanta, Br 65.32 310 P **P** **09 35 45.1 -0.5**
F63A IAmb IAmb 09 36 12.1
comp=Z,164nm,1.1s
F63A IAMs_20 IAMs_20 10 07 56.0
comp=Z,44µm,18.0s
H65A Eastbrook 65.36 308 P **P** **09 35 46.2 +0.3**
baz=57
H65A S **S** **09 44 31.3 +1.4**
baz=57
G64A Maxfield 65.36 309 P **P** **09 35 46.5 +0.7**
baz=57,SNR=23
G64A S **S** **09 44 32.4 +2.5**
baz=57
PKME Peaks-Kenny Pk 65.67 309 P **P** **09 35 47.9 0.0**
baz=57,SNR=15
PKME S **S** **09 44 35.9 +2.2**
baz=57
PKME Peaks-Kenny Pk 65.67 309 P **P** **09 35 47.2 -0.6**
PKME IAmb IAmb 09 36 15.2
comp=Z,197nm,1.2s
PKME IAMs_20 IAMs_20 10 08 07.3
comp=Z,40µm,18.0s
CHTO Chiang Mai 65.71 85 P **P** **09 35 45.7 -2.8**
CHTO pmax pmax
comp=Z,180nm,1.0s
CHTO MLR MLR
comp=Z,42µm,22.0s
CHTO Chiang Mai 65.71 85 P **P** **09 35 45.7 -2.8**
CHTO IAmb IAmb 09 36 14.3
comp=Z,180nm,0.9s
D60A Saint Jean D'O 65.71 312 P **P** **09 35 48.9 +0.8**
baz=56
D60A S **S** **09 44 35.4 +1.2**
baz=56
E61A Lac Etchemin 65.73 311 P **P** **09 35 48.7 +0.4**
baz=56
E61A S **S** **09 44 36.6 +2.1**
baz=56
CM31 Chiang Mai Arr 65.92 86 P **P** **09 35 47.6 -2.2**
SNR=53
CM31 Chiang Mai Arr 65.92 86 P **P** **09 35 47.7 -2.2**
CMAR Chiang Mai Arr 65.92 86 P **P** **09 35 47.4 -2.5**
comp=Z,20nm,0.9s,baz=303,slow=8.0,SNR=43
CMAR LR LR 10 11 03.0
comp=Z,56µm,18.7s,baz=334,slow=42
G63A Kingsbury 65.94 309 P **P** **09 35 50.5 +0.8**
baz=56,SNR=6.0
G63A S **S** **09 44 40.2 +3.1**
baz=56
CHGQ Chibougamau 65.95 316 P **P** **09 35 49.8 +0.1**
baz=56,SNR=36
CHGQ S **S** **09 44 39.0 +1.9**
baz=56
H64A Troy 65.97 309 P **P** **09 35 50.3 +0.5**
baz=56,SNR=6.1
H64A S **S** **09 44 40.1 +2.6**
baz=56
A36M Sachs Harbour 66.14 350 P **P** **09 35 50.4 0.0**
baz=24,SNR=117
A36M S **S** **09 44 41.5 +2.9**
baz=24
BJI Beijing 66.15 57 P **P** **09 35 51.5 +0.5**
BJI PcP **PcP** **09 36 20.3 -1.0**
BJI S **S** **09 44 36.6 -3.1**
BJI SS **SS** **09 48 53.8 -1.0**
BJI pmax pmax
comp=Z,88nm,2.2s
BJI LR LR
comp=Z,82µm,16.9s
BJT Baijiatuau 66.16 57 P **P** **09 35 50.4 -0.7**
BJT pmax pmax
comp=Z,503nm,1.6s
BJT MLR MLR
comp=Z,204µm,21.0s
BJT Baijiatuau 66.16 57 P **P** **09 35 50.4 -0.7**
D59A Saint-Raymond 66.18 312 P **P** **09 35 51.2 +0.1**
baz=56
D59A S **S** **09 44 42.4 +2.5**
baz=56
F61A St Evariste 66.27 311 P **P** **09 35 52.3 +0.6**
baz=56
F61A S **S** **09 44 44.5 +3.4**
baz=56
E60A Ste Agathe de 66.31 311 P **P** **09 35 52.0 +0.1**
baz=56
G62A West of Eustis 66.42 310 P **P** **09 35 53.6 +0.8**
baz=56,SNR=17
G62A S **S** **09 44 46.6 +3.6**
baz=56
G62A West of Eustis 66.42 310 P **P** **09 35 52.2 -0.5**
G62A IAmb IAmb 09 36 23.0
comp=Z,315nm,1.4s
G62A IAMs_20 IAMs_20 10 08 39.2
comp=Z,49µm,19.0s
H63A New Sharon 66.44 309 P **P** **09 35 53.2 +0.4**
baz=56,SNR=15
LATQ La Tuque 66.50 313 P **P** **09 35 53.2 0.0**
baz=56,SNR=10
I64A Boothbay 66.62 308 P **P** **09 35 54.7 +0.8**
baz=56
D58A Chemin du LacG 66.72 313 P **P** **09 35 53.8 -0.8**
baz=55,SNR=14
D58A S **S** **09 44 48.5 +1.9**
baz=55
F60A Warwick 66.83 311 P **P** **09 35 55.5 +0.2**
baz=56,SNR=23
E59A St. Maurice 66.86 312 P **P** **09 35 56.6 +1.1**
baz=55
G61A St-Isidore-de- 66.97 310 P **P** **09 35 57.4 +1.1**
baz=56,SNR=18
G61A S **S** **09 44 53.4 +3.8**
baz=56
ENH Enshi 66.99 69 P **P** **09 35 55.6 -1.1**
GYA Guiyang 67.10 74⇑ *i*P **P** **09 35 58.5 +1.0**
GYA PcP **PcP** **09 36 26.0 +0.3**
GYA PP **PP** **09 38 27.5 +2.5**
GYA ScP 09 40 28.5
GYA S **S** **09 44 51.0 -0.9**
GYA SKS **SKSac** **09 45 51.0 -4.3**
GYA SS **SS** **09 49 09.9 -0.5**
GYA pmax pmax
comp=Z,90nm,1.0s
GYA pmax pmax
comp=Z,1µm,5.2s
GYA LR LR
comp=Z,15µm,19.2s
GYA LR LR
comp=Z,7µm,17.0s
I63A Otisfield 67.11 309 P **P** **09 35 57.8 +0.7**
baz=56
I63A S **S** **09 44 54.7 +3.4**
baz=56
I63A Otisfield 67.11 309 P **P** **09 35 56.8 -0.2**
I63A IAmb IAmb 09 36 22.4
comp=Z,366nm,1.6s
H62A Milan 67.15 310 P **P** **09 35 58.2 +0.8**
baz=55,SNR=12
H62A Milan 67.15 310 P **P** **09 35 57.8 +0.4**
H62A IAMs_20 IAMs_20 10 09 01.5
comp=Z,45µm,19.0s
D57A Chemin Vers le 67.33 313 P **P** **09 35 58.6 +0.1**
baz=55,SNR=18
D57A S **S** **09 44 56.7 +2.8**
baz=55
RER Riviere de l'E 67.36 149 IAMs_20 IAMs_20 10 11 10.2
comp=Z,40µm,19.0s
E58A La Victoria 67.36 312 P **P** **09 35 58.9 +0.3**
baz=55,SNR=21
E58A S **S** **09 44 56.2 +2.0**
baz=55
F59A Saint Guilaume 67.37 311 P **P** **09 35 59.0 +0.3**
baz=55,SNR=14
F59A S **S** **09 44 57.8 +3.4**
baz=55
G60A Masonville 67.55 311 P **P** **09 36 00.2 +0.3**
baz=55
G60A S **S** **09 45 00.4 +3.8**
baz=55
H61A Lyndonville 67.63 310 P **P** **09 36 04.3 +3.8**
baz=55,SNR=14
H61A S **S** **09 45 00.9 +3.3**
baz=55
I62A Tamworth 67.66 309 P **P** **09 36 01.7 +1.1**
baz=55,SNR=9.0
I62A S **S** **09 45 01.5 +3.6**
baz=55
I62A Tamworth 67.66 309 P **P** **09 35 59.5 -1.1**
MATQ Matagami 67.76 317 P **P** **09 36 01.3 +0.2**
baz=54
MATQ S **S** **09 45 01.2 +2.3**
baz=54
LBNH Lisbon 67.80 310 P **P** **09 36 01.3 -0.1**
baz=55,SNR=17
LBNH S **S** **09 45 02.7 +3.1**
baz=55
D56A ZEC Mazanza, M 67.80 313 P **P** **09 36 02.0 +0.6**
baz=54,SNR=22
D56A S **S** **09 45 02.3 +2.7**
baz=54
E57A Chemin Saint G 67.83 313 P **P** **09 36 02.1 +0.5**
baz=54,SNR=19
E57A S **S** **09 45 03.2 +3.3**
baz=54
LSQQ Lebel-sur-Quev 67.83 316 P **P** **09 36 02.0 +0.4**
baz=54
J63A Strafford 67.84 308 P **P** **09 36 00.9 -0.9**
baz=55
J63A S **S** **09 45 04.1 +4.0**
baz=55
F58A St-Lin Laurent 67.95 312 P **P** **09 36 03.1 +0.7**
baz=54
SLVN Son La 68.00 80 P **P** **09 36 02.1 -1.0**
SLVN IAMs_20 IAMs_20 10 10 23.5
comp=Z,47µm,19.0s
H60A Morristown 68.07 310 P **P** **09 36 04.1 +0.9**
baz=55,SNR=12
H60A S **S** **09 45 06.2 +3.4**
baz=55
BILL Bilibino 68.08 15*d i*P **P** **09 36 02.2 -0.6**
BILL *e**PP **sP** **09 36 07.7 +1.5**
BILL *i* 09 36 23.7
BILL *i* S **S** **09 45 03.8 +1.6**
BILL *e*SS **SS** **09 49 20.8 -2.6**
BILL pmax pmax
comp=Z,918nm,1.8s
BILL pmax pmax
comp=Z,442nm,1.6s
BILL MLR MLR
comp=Z,135µm,18.0s
BILL Bilibino 68.08 15 P **P** **09 36 03.3 +0.5**
I61A Oroboro, Fairl 68.14 309 P **P** **09 36 04.9 +1.2**
baz=55,SNR=10
I61A S **S** **09 45 08.2 +4.5**
baz=55
TRQ Mont Tremblant 68.17 313 P **P** **09 36 03.9 0.0**
D55A Sainte-Anne-du 68.21 314 P **P** **09 36 03.5 -0.6**
baz=54,SNR=35
D55A S **S** **09 45 06.7 +2.2**
baz=54
VT1 Waterbury 68.23 310 IAMs_20 IAMs_20 10 09 34.1
comp=Z,47µm,18.0s
E56A St. Veronique 68.25 313 P **P** **09 36 03.9 -0.3**
baz=54,SNR=33
E56A S **S** **09 45 07.7 +2.8**
baz=54
J62A Henniker 68.31 309 P **P** **09 36 05.8 +1.1**
baz=55
HNH Hanover 68.32 309 P **P** **09 36 05.6 +0.8**
HNH IAmb IAmb 09 36 24.2
comp=Z,220nm,1.1s
C36M Paulatuk 68.39 349 P **P** **09 36 04.4 -0.3**
baz=25,SNR=74
C36M S **S** **09 45 08.3 +2.5**
baz=25
C36M Paulatuk 68.39 349 P **P** **09 36 04.7 0.0**
C36M IAmb IAmb 09 36 49.1
comp=Z,331nm,1.4s
C36M IAMs_20 IAMs_20 10 05 19.5
comp=Z,54µm,21.0s
FRNY Flat Rock 68.42 311 P **P** **09 36 05.0 -0.4**
K63A Dunstable 68.45 308 P **P** **09 36 06.6 +1.0**
baz=55
L64A Middleborough 68.47 307 P **P** **09 36 06.5 +0.8**
baz=55
F57A Harrington 68.48 312 P **P** **09 36 06.4 +0.7**
baz=54
F57A S **S** **09 45 10.3 +2.6**
baz=54
WES Weston 68.50 308 P **P** **09 36 05.9 0.0**
WES pmax pmax
comp=Z,273nm,1.1s
WES Weston 68.50 308 P **P** **09 36 05.9 0.0**
WES IAmb IAmb 09 36 23.8
comp=Z,273nm,1.1s
G58A Ormstown 68.51 311 P **P** **09 36 07.5 +1.6**
baz=54
G58A S **S** **09 45 11.5 +3.6**
baz=54
BOSA Boshof 68.54 180 *i*P **P** **09 36 07.8 +1.6**
BOSA Boshof 68.54 180 *i*P **P** **09 36 05.8 -0.4**
BOSA Boshof 68.54 180 P **P** **09 36 06.7 +0.4**
comp=Z,32nm,0.9s,baz=350,slow=6.0,SNR=29
BOSA LR LR 10 07 08.2
comp=Z,28µm,19.6s,baz=358,slow=37
BOSA Boshof 68.54 180 *i*P **P** **09 36 08.2 +2.0**
BOSA Boshof 68.54 180 *i*P **P** **09 36 07.8 +1.6**
BOSA Boshof 68.54 180 *i*P **P** **09 36 05.8 -0.4**
BOSA Boshof 68.54 180 P **P** **09 36 06.5 +0.3**
BOSA pmax pmax
comp=Z,213nm,1.2s
BOSA Boshof 68.54 180 P **P** **09 36 06.5 +0.3**
BOSA IAmb IAmb 09 36 42.6
comp=Z,212nm,1.1s
M65A Busby, Falmout 68.57 307 P **P** **09 36 07.4 +1.1**
baz=55
M65A Busby, Falmout 68.57 307 IAMs_20 IAMs_20 10 07 00.1
comp=Z,54µm,20.0s
HRV Adam Dziewonsk 68.58 308 P **P** **09 36 06.2 -0.2**
HRV pmax pmax
comp=Z,145nm,1.1s
HRV Adam Dziewonsk 68.58 308 P **P** **09 36 07.2 +0.9**
baz=54
HRV S **S** **09 45 12.4 +3.5**
baz=54
HRV Adam Dziewonsk 68.58 308 P **P** **09 36 06.2 -0.2**
H59A Cadyville 68.59 311 P **P** **09 36 07.3 +0.8**
baz=54,SNR=25
H59A S **S** **09 45 12.8 +3.7**
baz=54
PBKT Sadao Pong 68.59 86 P **P** **09 36 05.4 -1.4**
PBKT IAmb IAmb 09 36 33.5
comp=Z,146nm,1.0s
PBKT IAMs_20 IAMs_20 10 10 47.2
comp=Z,46µm,22.0s
VLDQ Val d'Or 68.64 315 P **P** **09 36 07.4 +0.7**
VLDQ IAmb IAmb 09 36 36.9
comp=Z,188nm,1.1s
J61A Chester 68.69 309 P **P** **09 36 08.4 +1.4**
baz=54,SNR=10
SEY Seymchan 68.78 23 LR LR 10 09 05.7
comp=Z,134µm,21.6s,baz=314,slow=38
D54A Lac Fusel, La 68.79 314 P **P** **09 36 07.9 +0.2**
baz=53,SNR=24
D54A S **S** **09 45 13.6 +2.3**
baz=53
I60A Shoreham 68.83 310 P **P** **09 36 08.2 +0.3**
baz=54,SNR=16
I60A S **S** **09 45 14.7 +2.8**
baz=54
E55A Montcerf-Lytto 68.87 313 P **P** **09 36 08.8 +0.6**
baz=53,SNR=15
K62A Royalston 68.89 308 P **P** **09 36 06.0 -2.4**
baz=54
K62A S **S** **09 45 16.9 +4.3**
baz=54
K62A Royalston 68.89 308 P **P** **09 36 06.4 -1.9**
K62A IAmb IAmb 09 36 27.9
comp=Z,200nm,1.2s
K62A IAMs_20 IAMs_20 10 06 37.6
comp=Z,39µm,18.0s
BRYW Bryant College 68.91 307 P **P** **09 36 09.6 +1.1**
BRYW IAmb IAmb 09 36 27.5
comp=Z,188nm,1.2s
BRYW IAMs_20 IAMs_20 10 07 45.0
comp=Z,38µm,18.0s
TIA Tai'an 68.91 60 P **P** **09 36 09.8 +1.2**
TIA pmax pmax
comp=Z,16nm,1.2s
TIA pmax pmax
comp=Z,440nm,4.1s
TIA LR LR
comp=Z,82µm,23.5s
TIA LR LR
comp=Z,63µm,27.0s
TIA LR LR
comp=Z,25µm,18.5s
M64A Tiverton 68.92 307 P **P** **09 36 09.4 +0.9**
baz=54
L63A North Scituate 68.98 307 P **P** **09 36 10.9 +2.0**
baz=54
H58A Gabriels 69.01 311 P **P** **09 36 09.7 +0.6**
baz=54,SNR=24
H58A S **S** **09 45 17.3 +3.2**
baz=54
G57A Newington 69.07 312 P **P** **09 36 10.2 +0.8**
baz=54,SNR=20
G57A S **S** **09 45 16.9 +2.2**
baz=54
LONY Lake Ozonia 69.12 311 P **P** **09 36 07.5 -2.3**
baz=54,SNR=28
LONY S **S** **09 45 19.4 +4.0**
baz=54
LONY Lake Ozonia 69.12 311 P **P** **09 36 10.2 +0.4**
LONY IAMs_20 IAMs_20 10 05 58.6
comp=Z,40µm,18.0s
ORIO Orleans, Innes 69.16 312 P **P** **09 36 10.7 +0.8**
baz=53
ORIO S **S** **09 45 18.2 +2.4**
baz=53
QUA2 Belchertown 69.19 308 P **P** **09 36 09.8 -0.3**
QUA2 IAmb IAmb 09 36 29.6
comp=Z,200nm,1.1s
I59A Olmsteadville 69.20 310 P **P** **09 36 11.3 +1.1**
baz=54,SNR=24
I59A S **S** **09 45 21.8 +5.5**
baz=54
J60A Lant Hill Farm 69.26 309 P **P** **09 36 12.0 +1.4**
baz=54,SNR=12
J60A S **S** **09 45 22.1 +5.2**
baz=54
L61B Northampton 69.28 308 P **P** **09 36 11.7 +0.9**
baz=54,SNR=13
L61B S **S** **09 45 22.3 +5.0**
baz=54
FCC Fort Churchill 69.30 331 P **P** **09 36 10.8 +0.3**
FCC pmax pmax
comp=Z,150nm,0.9s
FCC MLR MLR
comp=Z,71µm,20.0s
FCC Fort Churchill 69.30 331 P **P** **09 36 10.8 +0.3**
FCC IAmb IAmb 09 36 35.8
comp=Z,150nm,0.8s
FCC IAMs_20 IAMs_20 10 08 27.1
comp=Z,71µm,20.0s
ACCN Adirondack Com 69.32 310 P **P** **09 36 11.8 +0.7**
ACCN IAmb IAmb 09 36 30.5
comp=Z,295nm,1.1s
D53A Lac Vacive, Po 69.40 315 P **P** **09 36 11.8 +0.4**
baz=53,SNR=46
D53A S **S** **09 45 21.0 +2.5**
baz=53
D53A Lac Vacive, Po 69.40 315 P **P** **09 36 10.9 -0.5**
D53A IAmb IAmb 09 36 41.3
comp=Z,229nm,1.1s
D53A IAMs_20 IAMs_20 10 05 03.6
comp=Z,55µm,20.0s
F55A Otter Lake 69.41 313 P **P** **09 36 13.3 +1.8**
baz=53,SNR=16
F55A S **S** **09 45 20.4 +1.8**
baz=53
K61A Williamstown 69.51 309 P **P** **09 36 13.7 +1.5**
baz=54,SNR=13
E54A Lac Daplat, Po 69.51 314 P **P** **09 36 12.6 +0.5**
baz=53,SNR=25
E54A S **S** **09 45 23.0 +3.2**
baz=53
M63A Gales Ferry 69.51 307 P **P** **09 36 13.5 +1.3**
baz=54
M63A S **S** **09 45 24.6 +4.6**
baz=54
L62A Suffield 69.52 308 P **P** **09 36 13.4 +1.2**
baz=54
CN2 Changchun 69.68 49 *e*P **P** **09 36 15.3 +2.1**
CN2 *e*S **S** **09 45 23.8 +1.8**
CN2 pmax pmax
comp=Z,100nm,1.0s
CN2 pmax pmax
comp=Z,880nm,4.0s
CN2 LR LR
comp=Z,114µm,18.0s
CN2 LR LR
comp=Z,56µm,18.0s
CN2 LR LR
comp=Z,91µm,18.0s
TRY Troy 69.71 309 P **P** **09 36 12.6 -0.8**
TRY IAmb IAmb 09 36 50.9
comp=Z,213nm,1.3s
TRY IAMs_20 IAMs_20 10 09 08.1
comp=Z,47µm,18.0s
SNY Shenyang 69.75 52⇑ P **P** **09 36 14.4 +0.8**
SNY S **S** **09 45 22.3 -0.4**
SNY pmax pmax
comp=Z,15nm,0.4s
SNY pmax pmax
comp=Z,2µm,11.8s
SNY LR LR
comp=Z,128µm,24.0s
SNY LR LR
comp=Z,145µm,19.6s
SNY LR LR
comp=Z,194µm,20.1s
J59A Piesco 69.76 310 P **P** **09 36 14.8 +1.0**
baz=53,SNR=20
J59A S **S** **09 45 27.7 +4.7**
baz=53
J59A Piesco 69.76 310 P **P** **09 36 14.5 +0.7**
J59A IAmb IAmb 09 36 44.8
comp=Z,400nm,1.4s
J59A IAMs_20 IAMs_20 10 09 31.6
comp=Z,44µm,19.0s
E53A Dumoine, Ponti 69.81 314 P **P** **09 36 14.4 +0.4**
baz=52,SNR=40
E53A S **S** **09 45 26.4 +3.1**
baz=52
KLR Kul'dur 69.83 42*de*P **P** **09 36 14.4 +0.4**
KLR pmax pmax
comp=Z,242nm,2.0s
KLR MLR MLR
comp=Z,133µm,17.0s

D52A ZEK Kipawa Sen 69.85 315 P **P** **09 36 12.8 -1.4**
baz=52,SNR=28
D52A S **S** **09 45 26.9 +3.1**
baz=52
I58A Old Forge 69.90 311 P **P** **09 36 15.7 +1.1**
baz=53,SNR=18
I58A S **S** **09 45 29.4 +4.8**
baz=53
K60A Five Rivers En 69.91 309 P **P** **09 36 15.7 +1.1**
baz=53
L61A Hillsdale 1, H 69.96 309 P **P** **09 36 16.2 +1.2**
baz=53,SNR=12
L61A S **S** **09 45 30.2 +5.0**
baz=53
G55A Calabogie 69.96 313 P **P** **09 36 15.5 +0.6**
baz=53,SNR=24
G55A S **S** **09 45 28.9 +3.7**
baz=53
BBSR BB Station 69.98 296 P **P** **09 36 14.7 -0.5**
M62A Hamden 70.01 308 P **P** **09 36 18.6 +3.3**
baz=54,SNR=8.3
M62A S **S** **09 45 30.1 +4.3**
baz=54
H56A Elgin 70.10 312 P **P** **09 36 16.7 +1.0**
baz=53,SNR=21
H56A S **S** **09 45 31.4 +4.6**
baz=53
I57A Carthage 70.15 311 P **P** **09 36 17.1 +1.0**
baz=53,SNR=20
I57A S **S** **09 45 32.1 +4.7**
baz=53
KSCT Kent School, K 70.19 308 P **P** **09 36 15.3 -1.1**
KSCT IAmb IAmb 09 36 47.4
comp=Z,344nm,1.4s
DL2 Dalian 70.26 55 P P 09 36 21.1 +4.3
DL2 pmax pmax
comp=Z,140nm,1.4s
DL2 pmax pmax
comp=Z,2μm,4.3s
DL2 LR LR
comp=Z,67μm,17.7s
DL2 LR LR
comp=Z,96μm,16.7s
DL2 LR LR
comp=Z,175μm,18.3s
ALGO Algonquin Park 70.28 314 P **P** **09 36 17.1 +0.3**
baz=52,SNR=23
J58A Remsen 70.28 310 P **P** **09 36 18.1 +1.1**
baz=53,SNR=24
J58A S **S** **09 45 33.2 +4.1**
baz=53
J58A Remsen 70.28 310 P **P** **09 36 17.6 +0.7**
J58A IAMs_20 IAMs_20 10 09 55.3
comp=Z,46μm,18.0s
WHN Wuhan 70.28 66 *i*P P 09 36 22.1 +5.0
WHN sP PcP 09 36 29.8 -9.0
WHN S **S** **09 45 30.3 +0.9**
WHN pmax pmax
comp=Z,780nm,2.2s
WHN pmax pmax
comp=Z,1μm,2.3s
WHN pmax pmax
comp=Z,3μm,13.9s
WHN LR LR
comp=N,151μm,15.9s
WHN LR LR
comp=E,175μm,19.3s
WHN LR LR
comp=Z,200μm,17.6s
PLVO Plevna 70.29 313 P **P** **09 36 16.3 -0.6**
PLVO IAMs_20 IAMs_20 10 08 42.3
comp=Z,47μm,19.0s
D51A Lot 18 Range I 70.30 315 P **P** **09 36 17.6 +0.7**
baz=52,SNR=14
D51A S **S** **09 45 31.3 +2.2**
baz=52
K59A Cooperstown 70.38 310 P **P** **09 36 18.4 +0.8**
baz=53,SNR=18
K59A S **S** **09 45 35.8 +5.6**
baz=53
E52A Mattawa 70.41 314 P **P** **09 36 18.0 +0.4**
baz=52,SNR=22
E52A S **S** **09 45 34.2 +3.9**
baz=52
L60A Shokan 70.48 309 P **P** **09 36 19.9 +1.7**
baz=53,SNR=9.8
L60A S **S** **09 45 37.5 +6.1**
baz=53
D50A G1974 Best Tow 70.50 316 P **P** **09 36 18.6 +0.5**
baz=51,SNR=56
D50A S **S** **09 45 35.0 +3.5**
baz=51
INK Inuvik 70.58 352 P **P** **09 36 17.8 -0.5**
INK pmax pmax
comp=Z,220nm,1.4s
INK MLR MLR
comp=Z,33μm,20.0s
INK Inuvik 70.58 352 P **P** **09 36 17.8 -0.5**
M61A Granite Spring 70.61 308 P **P** **09 36 19.5 +0.5**
baz=53
M61A S **S** **09 45 36.9 +4.0**
baz=53
G54A Lake Saint Pet 70.64 313 P **P** **09 36 19.8 +0.7**
baz=52,SNR=52
G54A S **S** **09 45 36.7 +3.6**
baz=52
H55A Tweed 70.65 312 P **P** **09 36 20.0 +0.9**
baz=52,SNR=22
H55A S **S** **09 45 37.0 +3.8**
baz=52
N62A Caumsett State 70.66 307 P **P** **09 36 21.3 +2.1**
baz=53
J57A Williamstown 70.67 311 P **P** **09 36 21.2 +2.0**
baz=52,SNR=18
J57A S **S** **09 45 36.9 +3.5**
baz=52
E51A G1948 Merrick 70.71 315 P **P** **09 36 20.0 +0.6**
baz=51,SNR=29
E51A S **S** **09 45 37.1 +3.2**
baz=51
MA2 Magadan 70.81 26 LR LR 10 11 18.1
comp=Z,159μm,18.2s,baz=310,slow=39
MA2 Magadan 70.81 26 *eP* **P** **09 36 20.5 +0.7**
MA2 pmax pmax
comp=Z,362nm,1.8s
MA2 MLR MLR
comp=Z,134μm,17.0s
MA2 Magadan 70.81 26 P **P** **09 36 19.7 -0.1**
MA2 IAmb IAmb 09 36 42.1
comp=Z,270nm,1.0s
L59A Walton 70.85 309 P **P** **09 36 21.5 +1.0**
baz=53,SNR=20
L59A S **S** **09 45 40.5 +4.8**
baz=53
L59A Walton 70.85 309 P **P** **09 36 20.1 -0.3**
L59A IAmb IAmb 09 36 49.3
comp=Z,320nm,1.1s
L59A IAMs_20 IAMs_20 10 11 05.2
comp=Z,48μm,19.0s
K58A Earlville 70.86 310 P **P** **09 36 21.2 +0.8**
baz=52,SNR=24
K58A S **S** **09 45 40.6 +4.8**
baz=52
K58A Earlville 70.86 310 P **P** **09 36 20.5 0.0**
K58A IAmb IAmb 09 36 49.2
comp=Z,300nm,1.2s
K58A IAMs_20 IAMs_20 10 05 47.4
comp=Z,47μm,22.0s
PAL Palisades 70.88 308 P **P** **09 36 20.0 -0.6**
PAL pmax pmax
comp=Z,1μm,2.8s
PAL MLR MLR
comp=Z,28μm,19.0s
PAL Palisades 70.88 308 P **P** **09 36 22.2 +1.7**
baz=53,SNR=7.0
PAL S **S** **09 45 40.2 +4.2**
baz=53
PAL Palisades 70.88 308 P **P** **09 36 20.0 -0.6**
DELO Deloro Mine 70.92 312 P **P** **09 36 20.7 -0.1**
DELO IAmb IAmb 09 37 06.7
comp=Z,527nm,1.7s
DELO IAMs_20 IAMs_20 10 09 02.9
comp=Z,50μm,18.0s
PECO Prince Edward 70.92 312 P **P** **09 36 20.7 0.0**
PECO IAMs_20 IAMs_20 10 07 49.0
comp=Z,38μm,18.0s
CPNY Central Park 71.04 308 P **P** **09 36 20.6 -0.9**
CPNY IAmb IAmb 09 36 49.1
comp=Z,393nm,1.6s
F52A Sundridge 71.07 314 P **P** **09 36 22.5 +0.8**
baz=51,SNR=36
F52A S **S** **09 45 42.0 +3.8**
baz=51
G53A Haliburton 71.11 313 P **P** **09 36 22.7 +0.8**
baz=52,SNR=22
G53A S **S** **09 45 42.8 +4.3**
baz=52
M60A Port Jervis 71.12 308 P **P** **09 36 23.1 +1.0**
baz=53
M60A S **S** **09 45 42.4 +3.6**
baz=53
I55A Frankford 71.14 312 P **P** **09 36 23.0 +1.0**
baz=52,SNR=17
I55A S **S** **09 45 42.2 +3.3**
baz=52
D49A Beulah Townshi 71.24 316 P **P** **09 36 22.9 +0.2**
baz=50,SNR=20
D49A S **S** **09 45 42.3 +2.3**
baz=50
J56A Wolcott 71.25 311 P **P** **09 36 23.6 +0.9**
baz=52,SNR=16
J56A S **S** **09 45 43.7 +3.6**
baz=52
J56A Wolcott 71.25 311 P **P** **09 36 22.6 -0.2**
J56A IAmb IAmb 09 36 53.7
comp=Z,329nm,1.2s
ODNJ Ogdensburg 71.25 308 P **P** **09 36 22.1 -0.8**
N61A South Mountain 71.27 308 P **P** **09 36 24.8 +1.8**
baz=53
F51A Arnstein 71.31 315 P **P** **09 36 23.9 +0.7**
baz=51,SNR=35
F51A S **S** **09 45 43.9 +2.9**
baz=51
TOLK Toolik Lake Re 71.34 358 P **P** **09 36 26.2 +3.2**
baz=4.0,SNR=56
TOLK S **S** **09 45 44.9 +4.3**
baz=4.0
TOLK Toolik Lake Re 71.34 358 P **P** **09 36 23.4 +0.4**
K57A Scipio Center 71.38 310 P **P** **09 36 24.6 +1.0**
baz=52,SNR=15
K57A S **S** **09 45 45.0 +3.1**
baz=52
BINY Binghamton 71.40 310 P **P** **09 36 24.7 +1.0**
baz=52,SNR=17
BINY S **S** **09 45 47.0 +4.9**
baz=52
BINY Binghamton 71.40 310 P **P** **09 36 23.6 -0.1**
BINY IAmb IAmb 09 37 09.7
comp=Z,497nm,1.6s
BINY IAMs_20 IAMs_20 10 12 25.8
comp=Z,38μm,19.0s
L58A Harry Jones Me 71.41 310 P **P** **09 36 25.1 +1.2**
baz=52,SNR=16
L58A S **S** **09 45 46.0 +3.8**
baz=52
H53A Bobcaygeon 71.42 313 P **P** **09 36 24.9 +1.1**
baz=51,SNR=34
H53A S **S** **09 45 45.8 +3.5**
baz=51
E50A Wahnapitae 71.45 315 P **P** **09 36 24.8 +0.8**
baz=51,SNR=29
E50A S **S** **09 45 44.6 +2.2**
baz=51
M59A Waymart 71.47 309 P **P** **09 36 25.1 +0.9**
baz=52,SNR=16
M59A S **S** **09 45 47.0 +4.1**
baz=52
BRNJ Basking Ridge 71.47 308 P **P** **09 36 24.5 +0.4**
NKL Nikolayevsk 71.52 35 *eP* **P** **09 36 24.4 +0.2**
NKL *eS* **S** **09 45 50.5 +7.6**
NKL pmax pmax
comp=E,2.0nm,1.3s
NKL pmax pmax
comp=Z,93nm,1.3s
NKL pmax pmax
comp=N,6.0nm,1.1s
NKL pmax pmax
comp=Z,241nm,2.8s
D48A Paudash Townsh 71.54 317 P **P** **09 36 24.6 +0.1**
baz=50,SNR=17
D48A S **S** **09 45 46.0 +2.5**
baz=50
MDJ Mudanjiang 71.55 47 P P 09 36 29.0 +4.4
MDJ pP sP 09 36 31.4 +3.4
MDJ sP PcP 09 36 34.1 -10
MDJ S **S** **09 45 44.8 +1.1**
MDJ SS **SS** **09 50 18.3 +0.5**
MDJ pmax pmax
comp=Z,10.0nm,0.7s
MDJ pmax pmax
comp=Z,1μm,5.4s
MDJ LR LR
comp=Z,156μm,19.4s
MDJ LR LR
comp=Z,68μm,14.0s
MDJ LR LR
comp=Z,156μm,14.7s
SADO Sadowa 71.61 313 P **P** **09 36 24.1 -0.9**
SADO IAmb IAmb 09 36 51.7
comp=Z,157nm,0.8s
KSPA Keystone Colle 71.66 309 P **P** **09 36 24.9 -0.4**
KSPA IAMs_20 IAMs_20 10 11 39.8
comp=Z,50μm,18.0s
N60A Cedar Hill Far 71.68 308 P **P** **09 36 26.2 +0.8**
baz=52,SNR=14
N60A S **S** **09 45 49.3 +4.0**
baz=52
J55A Hilton 71.80 312 P **P** **09 36 26.6 +0.5**
baz=52,SNR=15
J55A S **S** **09 45 50.6 +4.0**
baz=52
J55A Hilton 71.80 312 P **P** **09 36 26.5 +0.3**
J55A IAmb IAmb 09 36 56.8
comp=Z,432nm,1.4s
J55A IAMs_20 IAMs_20 10 07 30.4
comp=Z,40μm,19.0s
RDOG Red Dog Mine 71.81 3 P **P** **09 36 25.2 -0.6**
RDOG IAMs_20 IAMs_20 10 07 45.9
comp=Z,46μm,22.0s
O61A Allentown 71.82 307 P **P** **09 36 26.6 +0.3**
baz=52
K56A Middlesex 71.87 311 P **P** **09 36 27.5 +0.9**
baz=52,SNR=31
K56A S **S** **09 45 51.0 +3.5**
baz=52
L57A Andrews Acres 72.03 310 P **P** **09 36 28.5 +1.0**
baz=52,SNR=21
L57A S **S** **09 45 52.2 +2.8**
baz=52
N59A State Game Lan 72.05 309 P **P** **09 36 28.9 +1.1**
baz=52,SNR=18
N59A S **S** **09 45 54.2 +4.5**
baz=52
N59A State Game Lan 72.05 309 P **P** **09 36 27.6 -0.2**
N59A IAMs_20 IAMs_20 10 11 53.3
comp=Z,45μm,18.0s
H52A Wyevale 72.11 314 P **P** **09 36 28.3 +0.4**
baz=51,SNR=13
H52A S **S** **09 45 53.8 +3.7**
baz=51
E48A Lockeyer 72.17 316 P **P** **09 36 28.5 +0.2**
baz=50,SNR=35
E48A S **S** **09 45 53.3 +2.5**
baz=50
M58A Price's Panora 72.18 309 P **P** **09 36 29.5 +1.0**
baz=52,SNR=14
M58A S **S** **09 45 55.0 +3.8**
baz=52
MMNY Mt. Morris Dam 72.19 311 IAMs_20 IAMs_20 10 07 43.6
comp=Z,40μm,21.0s
O60A Telford 72.20 308 P **P** **09 36 28.6 0.0**
baz=52,SNR=11
O60A S **S** **09 45 56.2 +4.9**
baz=52
MEDO Medina 72.23 312 P **P** **09 36 28.9 +0.2**
MEDO IAmb IAmb 09 36 58.5
comp=Z,392nm,1.4s
MEDO IAMs_20 IAMs_20 10 08 37.7
comp=Z,41μm,18.0s
J54A Appleton 72.27 312 P **P** **09 36 29.6 +0.7**
baz=51,SNR=9.9
J54A S **S** **09 45 56.6 +4.7**
baz=51
J54A Appleton 72.27 312 P **P** **09 36 29.3 +0.4**
J54A IAMs_20 IAMs_20 10 08 39.7
comp=Z,44μm,19.0s
K55A Perry 72.28 311 P **P** **09 36 29.7 +0.7**
baz=51,SNR=16
K55A S **S** **09 45 57.4 +5.1**
baz=51
D47A Chapleau 72.29 317 P **P** **09 36 29.5 +0.5**
baz=50,SNR=29
D47A S **S** **09 45 54.6 +2.4**
baz=50
L56A Greenwood 72.36 310 P **P** **09 36 30.3 +0.8**
baz=51,SNR=20
L56A S **S** **09 45 56.6 +3.4**
baz=51
L56A Greenwood 72.36 310 P **P** **09 36 29.3 -0.3**
L56A IAmb IAmb 09 36 59.5
comp=Z,315nm,1.1s
SUR Sutherland 72.42 184 IAMs_20 IAMs_20 10 11 08.9
comp=Z,33μm,18.0s
I53A Kortright Cn E 72.46 313 P **P** **09 36 30.8 +0.7**
baz=51,SNR=11
PSUB Penn St. - Bra 72.47 308 P **P** **09 36 30.3 +0.1**
PSUB IAmb IAmb 09 36 59.7
comp=Z,340nm,1.6s
RCBR Riachuelo 72.49 246 P **P** **09 36 30.1 -0.5**
RCBR pmax pmax
RCBR comp=Z,234nm,1.2s MLR MLR
comp=Z,35μm,21.0s
RCBR Riachuelo 72.49 246 P **P** **09 36 30.1 -0.5**
RCBR IAmb IAmb 09 36 38.7
comp=Z,234nm,1.2s
RCBR Riachuelo 72.49 246 *eP* **P** **09 36 32.9 +2.2**
NJ2 Nanjing 72.51 63 *eP* **P** **09 36 32.1 +1.6**
NJ2 pP **sP** **09 36 35.4 +1.5**
NJ2 S **S** **09 45 54.8 -0.2**
NJ2 SKS **SKSac** **09 46 29.1 -6.7**
NJ2 SS **SS** **09 50 34.6 +1.5**
NJ2 pmax pmax
comp=Z,60nm,1.2s
NJ2 pmax pmax
comp=Z,1μm,5.1s
NJ2 LR LR
comp=Z,148μm,21.8s
NJ2 LR LR
comp=Z,71μm,18.5s
NJ2 LR LR
comp=Z,54μm,18.9s
F49A Sandfield 72.57 316 P **P** **09 36 31.5 +0.8**
baz=50,SNR=28
F49A S **S** **09 45 58.1 +2.8**
baz=50
LHMI Lhok Sumawe 72.60 98 IAMs_20 IAMs_20 10 10 02.9
comp=Z,65μm,21.0s
M57A Sunshine Farm, 72.60 310 P **P** **09 36 31.8 +0.9**
baz=51,SNR=24
M57A S **S** **09 46 00.3 +4.5**
baz=51
M57A Sunshine Farm, 72.60 310 P **P** **09 36 29.5 -1.4**
M57A IAmb IAmb 09 37 12.1
comp=Z,246nm,0.9s
M57A IAMs_20 IAMs_20 10 06 41.7
comp=Z,40μm,21.0s
I52A Shelburne 72.63 313 P **P** **09 36 31.9 +0.8**
baz=50,SNR=35
I52A S **S** **09 46 00.0 +3.8**
baz=50
YKA Yellowknife Ar 72.64 342 P **P** **09 36 29.6 -1.2**
comp=Z,20nm,0.8s,baz=38,slow=5.4,SNR=77
YKA PKPPKP **P'P'df** **10 04 18.1 -3.7**
comp=Z,2.6nm,1.1s,baz=194,slow=2.2,SNR=7.2
YKA LR LR 10 08 49.8
comp=Z,51μm,19.2s,baz=0.0,slow=36
P60A Greenville 72.65 308 P **P** **09 36 31.4 +0.2**
baz=52,SNR=7.7
P60A S **S** **09 46 00.1 +3.6**
baz=52
P60A Greenville 72.65 308 P **P** **09 36 30.4 -0.9**
P60A IAmb IAmb 09 37 00.9
comp=Z,273nm,1.4s
N58A Sunbury 72.67 309 P **P** **09 36 32.1 +0.8**
baz=51,SNR=18
N58A S **S** **09 45 59.7 +3.1**
baz=51
N58A Sunbury 72.67 309 P **P** **09 36 30.7 -0.6**
N58A IAmb IAmb 09 37 01.3
comp=Z,523nm,1.4s
N58A IAMs_20 IAMs_20 10 12 20.4
comp=Z,50μm,18.0s
O59A Robesonia 72.68 308 P **P** **09 36 32.0 +0.6**
baz=52,SNR=16
O59A S **S** **09 46 00.6 +3.8**
baz=52
K54A Basiliko Farm, 72.71 311 P **P** **09 36 32.4 +0.7**
baz=51,SNR=14
K54A S **S** **09 46 00.1 +3.0**
baz=51
E47A Iron Bridge 72.77 317 P **P** **09 36 32.2 +0.4**
baz=49,SNR=36
E47A S **S** **09 46 00.2 +2.5**
baz=49
EPYK Eagle Plains 72.79 353 P **P** **09 36 31.8 +0.1**
baz=14,SNR=76
EPYK S **S** **09 46 00.2 +2.9**
baz=14
EPYK Eagle Plains 72.79 353 P **P** **09 36 31.4 -0.3**
EPYK IAmb IAmb 09 37 13.8
comp=Z,565nm,1.6s
EPYK IAMs_20 IAMs_20 10 11 06.8
comp=Z,40μm,19.0s
WVNY West Valley, N 72.79 311 P **P** **09 36 31.8 -0.3**
WVNY IAMs_20 IAMs_20 10 08 01.6
comp=Z,48μm,22.0s
F48A Evansville 72.83 316 P **P** **09 36 33.7 +1.4**
baz=49,SNR=15
F48A S **S** **09 46 01.6 +3.2**
baz=49
L55A Hinsdale 72.84 311 P **P** **09 36 32.4 0.0**
baz=51,SNR=19
L55A S **S** **09 46 02.1 +3.5**
baz=51
D46A Sault St. Mari 72.88 317 P **P** **09 36 33.4 +0.8**
baz=49,SNR=67
D46A S **S** **09 46 02.2 +3.3**
baz=49
MVL Millersville 72.97 308 P **P** **09 36 33.8 +0.7**
MVL IAmb IAmb 09 37 01.8
comp=Z,316nm,1.2s
Q61A Milford 73.04 307 P P 09 36 39.6 +6.0
baz=52
PAGS Pennsylvania G 73.05 308 P **P** **09 36 33.5 -0.1**
PAGS IAMs_20 IAMs_20 10 11 10.6
comp=Z,47μm,18.0s
M56A Emporium 73.13 310 P **P** **09 36 34.9 +0.8**
baz=51,SNR=19
M56A S **SKiKP** **09 46 05.3 -1.2**
baz=51
M56A Emporium 73.13 310 P **P** **09 36 35.2 +1.1**
M56A IAMs_20 IAMs_20 10 13 29.6
comp=Z,46μm,19.0s
USA0B Ussuriysk Arra 73.14 46 IAMs_20 IAMs_20 10 12 05.5
comp=Z,66μm,22.0s
USRK Ussuriysk Ar. 73.14 46 P **P** **09 36 33.1 -1.0**
comp=Z,4.6nm,0.8s,baz=288,slow=5.6,SNR=17
USRK LR LR 10 13 17.1
comp=Z,55μm,18.4s,baz=292,slow=40
N57A Milroy 73.21 309 P **P** **09 36 35.2 +0.6**
baz=51,SNR=28
O58A Lewisberry 73.23 309 P **P** **09 36 35.1 +0.4**
baz=51,SNR=10
O58A S **SKiKP** **09 46 05.6 -1.1**
baz=51
FYU Fort Yukon 73.24 356 P **P** **09 36 32.5 -1.8**
P59A Jarrettsville 73.26 308 P **P** **09 36 36.3 +1.5**
baz=51
P59A S **SKiKP** **09 46 05.9 -0.8**
baz=51
I51A Listowel 73.27 314 P **P** **09 36 34.3 -0.6**
baz=50,SNR=34
I51A S **SKiKP** **09 46 07.7 +1.1**
baz=50
Q60A Greensboro 73.28 307 P **P** **09 36 36.6 +1.7**
baz=51
Q60A Greensboro 73.28 307 IAMs_20 IAMs_20 10 11 58.9
comp=Z,35μm,19.0s
L54A Sinclairville 73.31 311 P **P** **09 36 35.5 +0.4**
baz=50,SNR=21

L54A S **SKiKP** **09 46 07.0 +0.2**
baz=50
J52A **Paris** **73.33 313** P **P** **09 36 35.8 +0.6**
baz=50,SNR=15
J52A S **SKiKP** **09 46 07.8 +1.1**
baz=50
E46A **Sault Ste Mari** **73.37 317** P **P** **09 36 35.7 +0.3**
E46A IAmb IAmb 09 37 01.1
comp=Z,574nm,1.5s
R61A **Willards** **73.39 306** P **P** **09 36 39.1 +3.5**
baz=52
M55A **Ridgway** **73.48 311** P **P** **09 36 37.8 +1.6**
baz=50,SNR=20
M55A **Ridgway** **73.48 311** P **P** **09 36 36.3 +0.1**
M55A IAmb IAmb 09 37 03.4
comp=Z,230nm,0.8s
M55A IAMs_20 IAMs_20 10 12 20.8
comp=Z,39µm,20.0s
SSPA **Standing Stone** **73.49 309** P **P** **09 36 36.1 -0.1**
baz=51
SSPA **Standing Stone** **73.49 309** P **P** **09 36 35.9 -0.3**
SSPA IAmb IAmb 09 37 07.0
comp=Z,432nm,1.2s
SSPA **Standing Stone** **73.49 309** IAMs_20 IAMs_20 10 06 57.2
comp=Z,43µm,22.0s
N56A **West Decatur** **73.55 310** P **P** **09 36 37.4 +0.7**
baz=51,SNR=23
N56A S **SKiKP** **09 46 11.1 +3.9**
baz=51
O57A **Amberson** **73.61 309** P **P** **09 36 37.6 +0.7**
baz=51,SNR=15
O57A S **S** **09 46 11.0 +3.7**
baz=51
SDMD **Soldier's Deli** **73.63 308** P **P** **09 36 37.2 +0.1**
K52A **Tillsonburg** **73.76 313** P **P** **09 36 38.0 +0.2**
baz=50,SNR=13
K52A S **S** **09 46 12.6 +3.7**
baz=50
ERPA **Erie** **73.77 312** P **P** **09 36 38.4 +0.5**
baz=50,SNR=17
ERPA S **S** **09 46 12.3 +3.2**
baz=50
ERPA **Erie** **73.77 312** P **P** **09 36 37.4 -0.4**
ERPA IAmb IAmb 09 37 04.5
comp=Z,386nm,0.9s
VLA **Vladivostok** **73.78 47***d i*P **P** **09 36 41.8 +3.9**
VLA pmax pmax
comp=Z,251nm,2.9s
VLA MLR MLR
comp=Z,76µm,17.0s
QIZ **Qiongzhong** **73.83 79** P **P** **09 36 40.3 +1.7**
QIZ sP **sP** **09 36 44.3 +2.3**
QIZ S **S** **09 46 12.1 +1.6**
QIZ sS **sS** **09 46 19.3 +4.8**
QIZ LR LR
comp=Z,52µm,22.5s
QIZ LR LR
comp=Z,75µm,25.5s
QIZ LR LR
comp=Z,56µm,22.1s
QIZ **Qiongzhong** **73.83 79** P **P** **09 36 38.4 -0.2**
QIZ **Qiongzhong** **73.83 79** IAMs_20 IAMs_20 10 14 39.8
comp=Z,53µm,22.0s
P58A **Pank, Wackersv** **73.86 308** P **P** **09 36 38.9 +0.5**
baz=51,SNR=15
P58A S **S** **09 46 13.2 +3.0**
baz=51
Q59A **Harwood** **73.86 307** P **P** **09 36 41.6 +3.2**
baz=51
G47A **Hillman** **73.92 316** P **P** **09 36 39.4 +0.8**
baz=49,SNR=17
G47A S **S** **09 46 14.5 +3.8**
baz=49
H48A **Harrisville** **73.95 315** P **P** **09 36 39.5 +0.7**
baz=49
H48A **Harrisville** **73.95 315** P **P** **09 36 39.1 +0.3**
H48A IAmb IAmb 09 37 02.2
comp=Z,402nm,1.4s
H48A IAMs_20 IAMs_20 10 10 51.8
comp=Z,38µm,20.0s
M54A **Oil Creek Stat** **73.97 311** P **P** **09 36 39.7 +0.7**
baz=50,SNR=32
M54A S **S** **09 46 14.8 +3.3**
baz=50
M54A **Oil Creek Stat** **73.97 311** P **P** **09 36 39.2 +0.1**
M54A IAmb IAmb 09 37 08.9
comp=Z,578nm,1.4s
TYV **Tymovskoe** **73.99 36** *e*P P 09 36 44.1 +5.2
TYV pmax pmax
comp=Z,50nm,1.4s
TYV pmax pmax
comp=Z,1µm,3.8s
TYV MLR MLR
comp=N,126µm,23.0s
TYV MLR MLR
comp=Z,72µm,23.0s
S61A **Accomac** **74.00 306** P **P** **09 36 43.0 +3.8**
baz=51
S61A **Accomac** **74.00 306** IAMs_20 IAMs_20 10 10 31.3
comp=Z,45µm,20.0s
L53A **Girard** **74.03 312** P **P** **09 36 39.7 +0.4**
baz=50,SNR=18
L53A S **S** **09 46 15.1 +3.0**
baz=50
N55A **Marion Center** **74.04 310** P **P** **09 36 40.3 +0.7**
baz=50,SNR=41
N55A S **S** **09 46 15.8 +3.5**
baz=50
O56A **Blue Knob Stat** **74.12 309** P **P** **09 36 40.7 +0.7**
baz=50,SNR=16
O56A S **S** **09 46 16.1 +2.8**
baz=50
O56A **Blue Knob Stat** **74.12 309** P **P** **09 36 40.3 +0.3**
O56A IAMs_20 IAMs_20 10 13 06.9
comp=Z,38µm,19.0s
ALLY **Alegheny Colle** **74.16 311** P **P** **09 36 40.1 0.0**
ALLY IAMs_20 IAMs_20 10 08 52.8
comp=Z,51µm,22.0s
I49A **Point Hope** **74.17 314** P **P** **09 36 40.6 +0.4**
baz=49,SNR=14
I49A S **S** **09 46 16.5 +2.9**
baz=49
I49A **Point Hope** **74.17 314** P **P** **09 36 40.5 +0.3**
I49A IAMs_20 IAMs_20 10 07 48.0
comp=Z,44µm,21.0s
R60A **Leonardtown, M** **74.19 307** P **P** **09 36 43.3 +3.0**
baz=51
R60A S **S** **09 46 19.4 +5.5**
baz=51
K51A **Iona Station** **74.24 313** P **P** **09 36 41.0 +0.4**
baz=49,SNR=11
K51A S **S** **09 46 16.7 +2.3**
baz=49
P57A **Homestead Farm** **74.29 309** P **P** **09 36 41.4 +0.5**
baz=50,SNR=22
P57A S **S** **09 46 18.3 +3.3**
baz=50
P57A **Homestead Farm** **74.29 309** P **P** **09 36 40.7 -0.2**
P57A IAmb IAmb 09 37 11.0
comp=Z,510nm,1.4s
P57A IAMs_20 IAMs_20 10 10 49.5
comp=Z,39µm,19.0s
PRP **Porcupine Dome** **74.30 356** P **P** **09 36 40.7 0.0**
PRP IAmb IAmb 09 37 04.5
comp=Z,331nm,1.5s
G46A **Petoskey** **74.36 317** P **P** **09 36 41.3 +0.1**
baz=48,SNR=12
Q58A **Fox Den Farm,** **74.43 308** P **P** **09 36 42.1 +0.4**
baz=50,SNR=11
Q58A S **S** **09 46 19.6 +2.9**
baz=50
F45A **CMU Biological** **74.45 317** P **P** **09 36 41.5 -0.3**
baz=48,SNR=22
F45A S **S** **09 46 18.7 +2.0**
baz=48
H47A **Mio** **74.49 316** P **P** **09 36 42.6 +0.7**
baz=48
I48A **Sherman Twp** **74.49 315** P **P** **09 36 42.5 +0.5**
baz=48,SNR=19
I48A S **S** **09 46 21.4 +4.3**
baz=48
N54A **Moraine State** **74.51 311** P **P** **09 36 42.6 +0.4**
baz=50,SNR=38
N54A S **S** **09 46 21.4 +3.9**
baz=50
N54A **Moraine State** **74.51 311** P **P** **09 36 41.8 -0.4**
N54A IAmb IAmb 09 37 09.9
comp=Z,306nm,0.9s
N54A IAMs_20 IAMs_20 10 12 51.1
comp=Z,40µm,18.0s
GLMI **Grayling** **74.56 316** P **P** **09 36 43.4 +1.0**
baz=48,SNR=7.0
GLMI **Grayling** **74.56 316** P **P** **09 36 42.5 +0.1**
GLMI IAmb IAmb 09 37 07.9
comp=Z,387nm,1.2s
GLMI IAMs_20 IAMs_20 10 11 51.9
comp=Z,48µm,18.0s
R59A **King George, V** **74.56 307** P **P** **09 36 42.7 +0.2**
baz=51,SNR=8.9
R59A S **S** **09 46 22.6 +4.6**
baz=51
S60A **Water View** **74.59 306** P **P** **09 36 43.5 +0.8**
baz=51
O55A **Ligonier** **74.59 310** P **P** **09 36 42.8 +0.1**
baz=50,SNR=32
O55A S **S** **09 46 22.1 +3.6**
baz=50
M53A **WI Miller and** **74.60 311** P **P** **09 36 42.8 0.0**
baz=50,SNR=19
M53A S **S** **09 46 22.3 +3.8**
baz=50
SSE **Sheshan** **74.67 62** P P 09 36 37.9 -5.3
SSE S **SKiKP** **09 46 13.8 +4.8**
SSE pmax pmax
comp=Z,14nm,0.8s
SSE pmax pmax
comp=Z,280nm,3.8s
CBN **Corbin Frederi** **74.71 307** P **P** **09 36 42.9 -0.5**
baz=50
CBN **Corbin Frederi** **74.71 307** P **P** **09 36 43.0 -0.4**
CBN IAmb IAmb 09 37 11.7
comp=Z,537nm,1.4s
J49A **Marlette** **74.73 314** P **P** **09 36 43.2 -0.2**
baz=49,SNR=22
J49A S **S** **09 46 23.8 +4.0**
baz=49
E43A **Lone Tree Farm** **74.75 318** P **P** **09 36 43.0 -0.5**
E43A IAMs_20 IAMs_20 10 09 38.7
comp=Z,45µm,18.0s
EGAK **Eagle** **74.75 354** P **P** **09 36 43.2 0.0**
P56A **Dayton Farm, R** **74.77 309** P **P** **09 36 44.2 +0.5**
baz=50,SNR=18
P56A S **S** **09 46 23.2 +2.8**
baz=50
POKR **Poker Plat Res** **74.79 357** P **P** **09 36 46.4 +3.0**
baz=5.6,SNR=14
POKR S **S** **09 46 24.7 +4.8**
baz=5.6
Q57A **Strasburg** **74.81 308** P **P** **09 36 44.6 +0.6**
baz=50,SNR=15
Q57A S **S** **09 46 24.7 +3.7**
baz=50
K50A **Casco** **74.83 313** P **P** **09 36 44.2 +0.2**
baz=49,SNR=14
K50A S **S** **09 46 24.6 +3.7**
baz=49
K50A **Casco** **74.83 313** P **P** **09 36 44.2 +0.2**
K50A IAmb IAmb 09 37 07.8
comp=Z,371nm,1.2s
K50A IAMs_20 IAMs_20 10 08 29.3
comp=Z,37µm,20.0s
M52A **Chesterland** **74.92 312** P **P** **09 36 44.6 +0.1**
baz=49,SNR=16
M52A S **S** **09 46 25.2 +3.1**
baz=49
M52A **Chesterland** **74.92 312** P **P** **09 36 44.0 -0.6**
M52A IAmb IAmb 09 37 11.1
comp=Z,243nm,1.0s
M52A IAMs_20 IAMs_20 10 09 18.9
comp=Z,36µm,19.0s
S59A **Mechanicsville** **74.94 307** P **P** **09 36 45.3 +0.5**
baz=50,SNR=11
S59A S **S** **09 46 26.1 +3.7**
baz=50
G45A **Suttons Bay** **74.96 317** P **P** **09 36 44.3 -0.5**
baz=48,SNR=31
G45A S **S** **09 46 25.3 +2.9**
baz=48
G45A **Suttons Bay** **74.96 317** P **P** **09 36 43.9 -0.8**
G45A IAMs_20 IAMs_20 10 13 30.5
comp=Z,33µm,18.0s
MDM **Murphy Dome** **74.98 357** P **P** **09 36 45.1 +0.6**
T60A **Surry** **74.99 306** P **P** **09 36 45.9 +0.9**
baz=51
KS19 **Wonju Array Si** **75.01 53** P **P** **09 36 44.8 -0.3**
I47A **Gladwin** **75.03 315** P **P** **09 36 45.6 +0.4**
baz=48,SNR=12
I47A S **S** **09 46 27.6 +4.4**
baz=48
I47A **Gladwin** **75.03 315** IAMs_20 IAMs_20 10 12 00.6
comp=Z,54µm,19.0s
R58A **Rapidan** **75.04 308** P **P** **09 36 46.7 +1.4**
baz=50
R58A S **S** **09 46 26.6 +3.2**
baz=50
COLA **College** **75.05 357***d i*P **P** **09 36 45.2 +0.3**
COLA pmax pmax
comp=Z,231nm,1.7s
COLA MLR MLR
comp=Z,28µm,19.0s
COLA **College** **75.05 357** P **P** **09 36 45.6 +0.8**
COLA IAmb IAmb 09 37 04.4
comp=Z,427nm,1.8s
TCOL **CIGO, UAF Yank** **75.05 357** P **P** **09 36 47.6 +2.7**
baz=5.3,SNR=16
TCOL S **S** **09 46 27.2 +4.5**
baz=5.3
H46A **Fife Lake** **75.06 316** P **P** **09 36 46.7 +1.4**
baz=48
H46A S **S** **09 46 27.3 +3.8**
baz=48
D41A **Chassel** **75.06 320** P **P** **09 36 45.5 +0.3**
D41A IAmb IAmb 09 37 11.3
comp=Z,360nm,0.9s
D41A IAMs_20 IAMs_20 10 12 42.0
comp=Z,55µm,18.0s
KSRS **Korea Array** **75.07 54** P **P** **09 36 43.4 -2.1**
comp=Z,19nm,1.1s,baz=311,slow=4.9,SNR=23
KSRS LR LR 10 13 30.0
comp=Z,81µm,20.8s,baz=304,slow=39
N53A **Lisbon** **75.10 311** P **P** **09 36 46.1 +0.5**
baz=49,SNR=28
N53A S **S** **09 46 26.1 +1.9**
baz=49
N53A **Lisbon** **75.10 311** P **P** **09 36 45.8 +0.2**
N53A IAmb IAmb 09 37 08.8
comp=Z,232nm,1.1s
IL31 **75.11 357** P **P** **09 36 45.6 +0.4**
ILAR **Eielson Array** **75.11 357** P **P** **09 36 44.7 -0.6**
comp=Z,11nm,0.9s,baz=354,slow=4.0,SNR=26
PKKPbc **PKKPbc** **09 56 13.8 +6.2**
comp=Z,0.4nm,0.9s,baz=185,slow=10.0,SNR=4.0
ILAR PKPPKP P'P'df 10 03 59.8 -18
comp=Z,1.9nm,1.2s,baz=242,slow=1.9,SNR=2.4
ILAR LR LR 10 12 33.2
comp=Z,20µm,19.1s,baz=13,slow=38
J48A **Bridge Port** **75.12 314** P **P** **09 36 46.0 +0.3**
baz=48,SNR=17
J48A S **S** **09 46 27.7 +3.5**
baz=48
J48A **Bridge Port** **75.12 314** P **P** **09 36 46.0 +0.3**
J48A IAMs_20 IAMs_20 10 08 28.0
comp=Z,47µm,21.0s
ANM **Nome** **75.16 5** IAMs_20 IAMs_20 10 10 09.2
comp=Z,52µm,21.0s
R58B **Mineral** **75.17 307** P **P** **09 36 48.8 +2.8**
baz=50,SNR=14
R58B **Mineral** **75.17 307** P **P** **09 36 45.0 -1.1**
FFC **Flin Flon** **75.21 332** P **P** **09 36 45.4 -0.6**
FFC pmax pmax
comp=Z,118nm,1.1s
FFC MLR MLR
comp=Z,55µm,18.0s
FFC **Flin Flon** **75.21 332** P **P** **09 36 45.4 -0.6**
FFC **Flin Flon** **75.21 332** IAMs_20 IAMs_20 10 11 55.4
comp=Z,55µm,18.0s
O54A **Avella** **75.24 310** P **P** **09 36 46.9 +0.5**
baz=49,SNR=17
O54A **Avella** **75.24 310** P **P** **09 36 46.5 +0.1**
O54A IAMs_20 IAMs_20 10 13 24.5
comp=Z,52µm,19.0s
MCWV **Mont Chateau** **75.27 310** P **P** **09 36 47.1 +0.6**
baz=50,SNR=26
MCWV **Mont Chateau** **75.27 310** P **P** **09 36 46.7 +0.1**
Q56A **Snyder Ridge,** **75.27 309** P **P** **09 36 47.2 +0.5**
baz=50,SNR=38
CCB **Clear Creek Bu** **75.28 357** P **P** **09 36 46.4 +0.2**
K49A **Clarkson** **75.28 314** P **P** **09 36 46.7 +0.1**
baz=48,SNR=11
DAWY **Dawson** **75.30 353** P **P** **09 36 46.1 -0.3**
U61A **Possum Corner** **75.33 305** P **P** **09 36 50.4 +3.4**
baz=50
U61A **Possum Corner** **75.33 305** IAMs_20 IAMs_20 10 11 25.5
comp=Z,51µm,20.0s
P55A **Reedsville** **75.35 309** P **P** **09 36 47.6 +0.5**
baz=50,SNR=27
R57A **Stanardsville** **75.35 308** P **P** **09 36 47.6 +0.5**
baz=50,SNR=13
KULM **Kulim** **75.37 96** P **P** **09 36 45.9 -1.7**
KULM **Kulim** **75.37 96** P **P** **09 36 49.0 +1.5**
NEA **Nenana** **75.39 358** P **P** **09 36 46.9 0.0**
TJN **Taejon** **75.41 55***de*P **P** **09 36 45.6 -1.8**
L50A **Kingsville** **75.41 313** P **P** **09 36 47.7 +0.4**
baz=48,SNR=20
H45A **Beulah** **75.44 317** P **P** **09 36 47.8 +0.3**
baz=47,SNR=9.8
WRH **Wood River Hil** **75.46 357** P **P** **09 36 47.4 +0.1**
WRH IAmb IAmb 09 37 25.9
comp=Z,218nm,1.0s
HDA **Harding Lake** **75.48 357** P **P** **09 36 47.3 0.0**
baz=6.0,SNR=54
HDA **Harding Lake** **75.48 357** P **P** **09 36 46.8 -0.6**
HDA IAmb IAmb 09 37 10.3
comp=Z,682nm,1.9s
S58A **Poland Farm, P** **75.50 307** P **P** **09 36 48.5 +0.5**
baz=50,SNR=10
S58A **Poland Farm, P** **75.50 307** P **P** **09 36 48.2 +0.3**
S58A IAmb IAmb 09 37 18.2
comp=Z,228nm,1.1s
N52A **McGinn's Farm,** **75.59 311** P **P** **09 36 48.7 +0.3**
baz=49,SNR=12
I46A **Reed City** **75.59 316** P **P** **09 36 48.6 +0.3**
baz=47,SNR=32
T59A **Double "B" Far** **75.61 306** P **P** **09 36 48.9 +0.3**
baz=50,SNR=11
T59A **Double "B" Far** **75.61 306** P **P** **09 36 48.2 -0.4**
T59A IAmb IAmb 09 37 16.7
comp=Z,256nm,1.2s
GSI **Gunungsitoli** **75.62 101** P **P** **09 36 46.6 -2.3**
GSI IAmb IAmb 09 37 27.9
comp=Z,561nm,1.6s
K48A **Perry** **75.63 314** P **P** **09 36 48.9 +0.2**
baz=48,SNR=17
PSI **Prapat** **75.66 99** P **P** **09 36 46.6 -2.8**
comp=Z,26nm,0.9s,baz=183,slow=1.8,SNR=9.2
PSI LR LR 10 13 01.1
comp=Z,71µm,21.3s,baz=270,slow=38
PSI **Prapat** **75.66 99** P **P** **09 36 46.6 -2.8**
PSI pmax pmax
comp=Z,170nm,0.9s
PSI MLR MLR
comp=Z,119µm,22.0s
P54A **Burton** **75.67 310** P **P** **09 36 49.7 +0.8**
baz=49,SNR=19
U60A **Pendleton** **75.68 306** P **P** **09 36 50.9 +1.9**
baz=50
O53A **New Philadelph** **75.68 311** P **P** **09 36 49.3 +0.3**
baz=49,SNR=30
AAM **Ann Arbor** **75.71 314** P **P** **09 36 49.2 +0.1**
baz=48,SNR=10.0
AAM **Ann Arbor** **75.71 314** IAMs_20 IAMs_20 10 10 49.7
comp=Z,40µm,20.0s
J47A **Sunmer** **75.73 315** P **P** **09 36 49.5 +0.4**
baz=48,SNR=13
J47A **Sunmer** **75.73 315** P **P** **09 36 49.0 -0.2**
J47A IAmb IAmb 09 37 16.2
comp=Z,190nm,0.9s
J47A IAMs_20 IAMs_20 10 12 22.9
comp=Z,46µm,18.0s
RPSI **Rantau Prapat** **75.73 99** P **P** **09 36 46.5 -3.1**
RPSI IAmb IAmb 09 37 16.4
comp=Z,170nm,0.9s
RPSI **Rantau Prapat** **75.73 99** P **P** **09 36 46.6 -3.0**
SCRK **Sand Creek** **75.75 355** P **P** **09 36 49.3 +0.2**
SCRK IAmb IAmb 09 37 28.2
comp=Z,447nm,1.6s
V61A **Roper** **75.75 305** P **P** **09 36 52.4 +3.0**
baz=50
V61A **Roper** **75.75 305** IAMs_20 IAMs_20 10 11 47.7
comp=Z,38µm,20.0s
Q55A **Buckhannon** **75.83 309** P **P** **09 36 50.5 +0.6**
baz=49,SNR=16
EYMN **Ely** **75.86 322** P **P** **09 36 50.0 +0.1**
baz=45,SNR=28
EYMN **Ely** **75.86 322** P **P** **09 36 49.0 -0.9**
EYMN IAmb IAmb 09 37 30.5
comp=Z,498nm,1.6s
N51A **Ashland** **75.91 312** P **P** **09 36 50.1 -0.1**
baz=48,SNR=14
N51A **Ashland** **75.91 312** P **P** **09 36 49.5 -0.8**
N51A IAmb IAmb 09 37 33.1
comp=Z,224nm,1.2s
N51A IAMs_20 IAMs_20 10 10 08.1
comp=Z,42µm,20.0s
BPAW **Bear Paw Mtn.** **75.92 358** P **P** **09 36 49.3 -0.6**
BPAW IAmb IAmb 09 37 12.8
comp=Z,282nm,1.3s
BPAW IAMs_20 IAMs_20 10 16 53.6
comp=Z,35µm,20.0s
I45A **Fountain** **75.94 316** P **P** **09 36 50.8 +0.4**
baz=47,SNR=8.8
I45A **Fountain** **75.94 316** P **P** **09 36 49.4 -1.0**
I45A IAMs_20 IAMs_20 10 11 13.6
comp=Z,44µm,18.0s
S57A **Dark Hollow, R** **75.96 308** P **P** **09 36 52.0 +1.4**
baz=50
S57A **Dark Hollow, R** **75.96 308** IAMs_20 IAMs_20 10 14 17.6
comp=Z,42µm,19.0s
M50A **Fremont** **75.97 313** P **P** **09 36 50.2 -0.4**
M50A IAMs_20 IAMs_20 10 12 16.6
comp=Z,48µm,19.0s
COWI **Conover** **76.01 319** P **P** **09 36 50.2 -0.6**
COWI IAmb IAmb 09 37 16.4
comp=Z,240nm,0.9s
COWI IAMs_20 IAMs_20 10 09 46.2
comp=Z,38µm,19.0s
RIDG **Independent Ri** **76.03 356** P **P** **09 36 50.9 +0.3**
DOT **Dot Lake** **76.08 355** P **P** **09 36 50.7 -0.1**
DOT IAmb IAmb 09 37 14.8
comp=Z,645nm,1.9s
O52A **Adamsville** **76.13 311** P **P** **09 36 51.7 +0.2**
baz=49,SNR=14
O52A **Adamsville** **76.13 311** P **P** **09 36 51.0 -0.5**
O52A IAmb IAmb 09 37 15.1
comp=Z,293nm,1.2s
U59A **Littleton** **76.15 306** P **P** **09 36 51.9 +0.2**
baz=50,SNR=11
U59A **Littleton** **76.15 306** P **P** **09 36 51.3 -0.4**
U59A IAmb IAmb 09 37 21.4
comp=Z,484nm,1.6s
U59A IAMs_20 IAMs_20 10 09 32.8
comp=Z,35µm,21.0s
ULM **Lac du Bonnet** **76.17 326** P **P** **09 36 51.0 -0.6**
comp=Z,24nm,0.5s,baz=42,slow=5.5,SNR=15
ULM LR LR 10 12 21.8
comp=Z,29µm,18.2s,baz=38,slow=37
ULM **Lac du Bonnet** **76.17 326** P **P** **09 36 49.9 -1.7**
ULM pmax pmax
comp=Z,545nm,1.4s
ULM **Lac du Bonnet** **76.17 326** P **P** **09 36 49.9 -1.7**
ULM IAMs_20 IAMs_20 10 16 03.2
comp=Z,44µm,19.0s
IPM **Ipoh** **76.18 96** P **P** **09 36 52.5 +0.3**
IPM IAmb IAmb 09 37 36.6
comp=Z,591nm,2.0s
IPM IAMs_20 IAMs_20 10 14 23.7
comp=Z,51µm,20.0s
IPM **Ipoh** **76.18 96** P **P** **09 36 55.0 +2.8**
V60A **Jim Taylor Roa** **76.19 305** P **P** **09 36 53.5 +1.6**
baz=50
V60A **Jim Taylor Roa** **76.19 305** IAMs_20 IAMs_20 10 12 00.1
comp=Z,48µm,20.0s
K47A **Vermontville** **76.20 315** P **P** **09 36 52.8 +0.9**
baz=47,SNR=25
T58A **Grand View Acr** **76.22 307** P **P** **09 36 53.3 +1.2**
baz=50,SNR=12
MCK **McKinley** **76.23 357** P **P** **09 36 51.3 -0.4**
MCK pmax pmax
comp=Z,386nm,1.4s
MCK **McKinley** **76.23 357** P **P** **09 36 51.3 -0.4**
MCK IAmb IAmb 09 37 14.6

comp=Z,386nm,1.4s
P53A Whipple 76.28 310 P P 09 36 52.1 -0.3
baz=49,SNR=30
P53A Whipple 76.28 310 P P 09 36 52.0 -0.4
P53A IAmb IAmb 09 37 19.1
comp=Z,295nm,1.0s
P53A IAMs_20 IAMs_20 10 15 15.1
comp=Z,44µm,19.0s
Q54A Coxs Mills 76.29 310 P P 09 36 52.5 +0.1
baz=49,SNR=13
Q54A Coxs Mills 76.29 310 P P 09 36 52.4 +0.1
Q54A IAMs_20 IAMs_20 10 08 45.2
comp=Z,42µm,21.0s
R55A Marlinton 76.32 309 P P 09 36 53.3 +0.6
baz=49,SNR=13
R55A Marlinton 76.32 309 P P 09 36 52.5 -0.2
R55A IAMs_20 IAMs_20 10 10 59.1
comp=Z,37µm,19.0s
S56A Natural Bridge 76.38 308 P P 09 36 53.6 +0.6
baz=49,SNR=11
L48A N Adams 76.38 314 P P 09 36 51.9 -1.0
L48A IAmb IAmb 09 37 21.0
comp=Z,808nm,2.1s
ROSB Rosrio 76.39 254 eP P 09 36 55.7 +2.4
J45A Montague 76.43 316 P P 09 36 53.7 +0.6
baz=47,SNR=8.8
J45A Montague 76.43 316 P P 09 36 53.1 -0.1
J45A IAmb IAmb 09 37 19.5
comp=Z,268nm,0.8s
J45A IAMs_20 IAMs_20 10 11 28.6
comp=Z,46µm,18.0s
N50A Nevada 76.45 312 P P 09 36 52.9 -0.4
baz=48,SNR=15
H43A Windswept, Lux 76.45 317 P P 09 36 52.7 -0.6
H43A IAmb IAmb 09 37 18.6
comp=Z,428nm,1.4s
KTH Kantishna Hill 76.47 358 P P 09 36 52.7 -0.4
KTH IAmb IAmb 09 37 18.1
comp=Z,327nm,1.4s
O51A Pataskala 76.55 311 P P 09 36 53.6 -0.4
baz=48,SNR=45
RND Reindeer 76.56 357 P P 09 36 52.7 -1.0
RND pmax pmax
comp=Z,148nm,1.2s
RND MLR MLR
comp=Z,32µm,22.0s
RND Reindeer 76.56 357 P P 09 36 52.6 -1.0
TRF Thorofare Moun 76.56 358 P P 09 36 53.2 -0.6
TRF IAMs_20 IAMs_20 10 17 06.3
comp=Z,39µm,21.0s
U58A Oxford 76.59 306 P P 09 36 54.4 +0.2
baz=50,SNR=12
B35A Bob, Littlefor 76.60 323 P P 09 36 53.1 -0.9
B35A IAMs_20 IAMs_20 10 12 39.7
comp=Z,60µm,20.0s
P52A Corning 76.62 311 P P 09 36 54.3 0.0
baz=48,SNR=25
K46A Dorr 76.62 315 P P 09 36 54.2 0.0
baz=47,SNR=12
T57A Hurt 76.63 307 P P 09 36 54.9 +0.5
baz=49,SNR=11
T57A Hurt 76.63 307 P P 09 36 54.8 +0.4
T57A IAMs_20 IAMs_20 10 13 25.5
comp=Z,32µm,19.0s
QZH Quanzhou 76.64 69⇑ *i*P P 09 36 55.9 +1.3
QZH S S 09 46 44.3 +2.8
QZH LR LR
comp=Z,73µm,20.8s
QZH LR LR
comp=Z,24µm,19.8s
QZH LR LR
comp=Z,75µm,19.6s
ANWB Willy Bob 76.68 282 eP P 09 36 58.4 +3.4
ANWB Willy Bob 76.68 282 e SKSac 09 46 58.7 -8.6
ACSO Alum Creek Sta 76.71 312 P P 09 36 54.8 0.0
baz=48,SNR=16
ACSO Alum Creek Sta 76.71 312 P P 09 36 54.8 0.0
ACSO IAMs_20 IAMs_20 10 10 42.3
comp=Z,38µm,21.0s
MENT Mentasta 76.76 355 P P 09 36 55.4 +0.7
Q53A Leroy 76.78 310 P P 09 36 55.5 +0.3
baz=49,SNR=18
V59A Middlesex 76.80 306 P P 09 36 58.2 +2.8
baz=50,SNR=8.6
YSS Yuzh-Sakhalins 76.82 39 *ce*P P 09 36 56.8 +1.5
YSS *e* 09 37 00.7
YSS *e*S S 09 46 41.0 -1.7
YSS MLR MLR
comp=Z,102µm,14.6s
YSS MLR MLR
comp=N,106µm,17.0s
YSS MLR MLR
comp=E,88µm,16.0s
YSS Yuzh-Sakhalins 76.82 39 P P 09 36 54.6 -0.6
DHY Denali Highway 76.83 357 P P 09 36 54.9 -0.4
DHY IAmb IAmb 09 37 48.0
comp=Z,210nm,1.1s
PAX Paxson 76.84 356 P P 09 36 54.7 -0.5
PAX pmax pmax
comp=Z,87nm,1.2s
PAX MLR MLR
comp=Z,28µm,20.0s
PAX Paxson 76.84 356 P P 09 36 54.7 -0.5
E38A The Farm, Brul 76.84 321 P P 09 36 54.5 -1.0
E38A IAMs_20 IAMs_20 10 12 51.3
comp=Z,53µm,19.0s
S55A Lewisburg 76.88 308 P P 09 36 56.5 +0.6
baz=49,SNR=14
R54A Victor 76.91 309 P P 09 36 55.9 -0.1
baz=49,SNR=12
CNNC Cliffs of the 76.92 305 P P 09 36 58.7 +2.6
baz=50
CNNC Cliffs of the 76.92 305 IAMs_20 IAMs_20 10 12 21.8
comp=Z,53µm,20.0s
N49A Columbus Grove 76.93 313 P P 09 36 54.7 -1.3
N49A IAMs_20 IAMs_20 10 12 46.0
comp=Z,48µm,18.0s
W60A Pink Hill 76.93 305 P P 09 36 57.5 +1.4
baz=50
U57A Blanch 77.05 307 P P 09 36 57.1 +0.3
baz=49,SNR=13
T56A Rocky Mt 77.08 308 P P 09 36 58.4 +1.4
baz=49,SNR=13
G40A Rib Lake 77.13 319 P P 09 36 56.5 -0.6
G40A IAmb IAmb 09 37 37.7
comp=Z,628nm,1.8s
G40A IAMs_20 IAMs_20 10 11 12.9
comp=Z,36µm,19.0s
O50A Cable 77.13 312 P P 09 36 57.2 0.0
baz=48,SNR=34
TTA Tatalina 77.13 1 P P 09 36 56.6 -0.3
TTA pmax pmax
comp=Z,370nm,1.6s
TTA Tatalina 77.13 1 P P 09 36 56.6 -0.3
TTA IAmb IAmb 09 37 05.0
comp=Z,370nm,1.6s
Q52A Bidwell 77.14 310 P P 09 36 57.3 0.0
baz=48,SNR=15
PPLA Purkeypile 77.16 359 P P 09 36 56.7 -0.4
PPLA IAmb IAmb 09 37 17.1
comp=Z,602nm,1.6s
DLV T Lat 77.17 85 IAMs_20 IAMs_20 10 16 11.2
comp=Z,52µm,22.0s
ABD La Joyeuse, An 77.19 281 eP P 09 37 01.3 +3.5
ABD La Joyeuse, An 77.19 281 e SKSac 09 46 58.7 -12
BLA Blacksburg 77.20 308 P P 09 36 57.5 -0.2
BLA pmax pmax
comp=Z,154nm,1.3s
BLA MLR MLR
comp=Z,45µm,19.0s
BLA Blacksburg 77.20 308 P P 09 36 59.0 +1.3
baz=49
BLA Blacksburg 77.20 308 P P 09 36 57.5 -0.2
BLA IAMs_20 IAMs_20 10 14 11.5
comp=Z,45µm,19.0s
P51A Williamsport 77.25 311 P P 09 36 58.3 +0.4
baz=48,SNR=12
P51A Williamsport 77.25 311 P P 09 36 57.3 -0.5
W59A Clinton 77.32 305 P P 09 36 59.9 +1.6
baz=49
V58A Windy Hill, Pi 77.33 306 P P 09 36 59.4 +1.1
baz=49,SNR=11
V58A Windy Hill, Pi 77.33 306 P P 09 36 58.9 +0.5
S54A Dingess, Beckl 77.35 309 P P 09 37 00.8 +2.3
baz=48,SNR=8.0
S54A Dingess, Beckl 77.35 309 P P 09 36 57.6 -0.9
S54A IAMs_20 IAMs_20 10 14 57.3
comp=Z,38µm,20.0s
L46A Eue Claire 77.36 315 P P 09 36 58.2 -0.2
baz=47,SNR=7.1
L46A Eue Claire 77.36 315 P P 09 36 58.5 +0.1
MAGL Barre de l'ile 77.36 280 eP P 09 37 02.3 +3.5
MAGL Barre de l'ile 77.36 280 e S 09 46 55.5 +6.0
R53A Hurricane 77.37 310 P P 09 36 59.8 +1.2
baz=48,SNR=16
R53A Hurricane 77.37 310 P P 09 36 57.9 -0.7
R53A IAmb IAmb 09 37 21.6
comp=Z,285nm,1.1s
R53A IAMs_20 IAMs_20 10 14 44.0
comp=Z,41µm,19.0s
SMRT St. Maarten 77.40 283 eP P 09 36 55.1 -4.0
X60A Albert Glenn T 77.41 305 P P 09 37 04.8 +6.0
baz=50
M47A Cromwell 77.43 314 P P 09 36 59.6 +0.8
baz=47
I42A Draeger Farm, 77.44 318 P P 09 36 57.7 -1.1
I42A IAmb IAmb 09 37 23.8
comp=Z,321nm,1.4s
I42A IAMs_20 IAMs_20 10 15 17.3
comp=Z,42µm,19.0s
N48A Decatur 77.44 313 P P 09 36 59.5 +0.5
baz=47,SNR=10
T55A Pulaski 77.48 308 P P 09 37 02.9 +3.6
baz=49,SNR=8.7
O49A Covington 77.51 312 P P 09 36 57.3 -2.0
O49A IAmb IAmb 09 37 25.7
comp=Z,194nm,0.9s
O49A IAMs_20 IAMs_20 10 10 58.4
comp=Z,35µm,18.0s
CBE Ff, Capester 77.53 280 eP P 09 37 02.6 +2.8
CBE Ff, Capester 77.53 280 e S 09 46 59.5 +8.1
MLYT Lee's Yard 77.56 281 eP P 09 37 00.3 +0.4
MLYT Lee's Yard 77.56 281 e S 09 46 58.0 +6.2
P50A Jamestown 77.59 312 P P 09 37 00.5 +0.7
baz=48,SNR=14
SKI Saint Kitts 77.60 282 eP P 09 37 00.4 +0.3
SKI Saint Kitts 77.60 282 e SKSac 09 47 04.3 -10
AGMN Agassiz Nation 77.62 324 P P 09 36 59.5 -0.2
baz=42,SNR=16
AGMN Agassiz Nation 77.62 324 P P 09 36 59.6 -0.2
AGMN IAmb IAmb 09 37 39.0
comp=Z,356nm,1.7s
AGMN IAMs_20 IAMs_20 10 12 12.5
comp=Z,41µm,18.0s
V57A Coltrane Farms 77.67 307 P P 09 37 02.8 +2.5
baz=49,SNR=11
SEUS St. Eustatius 77.68 282 eP P 09 37 04.3 +3.8
SEUS St. Eustatius 77.68 282 e SKSac 09 47 05.0 -10
U56A King 77.74 307 P P 09 37 00.9 +0.2
baz=49,SNR=10
U56A King 77.74 307 P P 09 36 59.7 -1.0
U56A IAmb IAmb 09 37 31.1
comp=Z,252nm,1.2s
U56A IAMs_20 IAMs_20 10 13 58.9
comp=Z,35µm,19.0s
SABA Saba 77.80 283 eP P 09 37 04.3 +3.1
SABA Saba 77.80 283 e SKSac 09 47 06.4 -9.1
BBGH Gun Hill 77.80 277 eP P 09 37 05.9 +4.7
BBGH Gun Hill 77.80 277 e S 09 46 55.6 +1.3
N47A Urbana 77.80 314 P P 09 37 00.3 -0.6
N47A IAmb IAmb 09 37 27.1
comp=Z,225nm,1.1s
N47A IAMs_20 IAMs_20 10 12 12.0
comp=Z,53µm,19.0s
X59A McDuffie Farm, 77.80 305 P P 09 37 02.3 +1.3
baz=49
W58A Raeford 77.90 306 P P 09 37 02.1 +0.6
baz=49,SNR=8.2
S53A Williamson 77.91 309 P P 09 37 00.6 -1.1
baz=48,SNR=13
O48A Farmland 77.92 313 P P 09 37 00.9 -0.7
baz=47,SNR=10.0
K43A Burlington 77.97 316 P P 09 37 00.8 -1.0
K43A IAMs_20 IAMs_20 10 12 35.3
comp=Z,52µm,18.0s
MPOM Morne Pois Mar 77.97 279 eP P 09 36 59.0 -3.2
MPOM Morne Pois Mar 77.97 279 e SKSac 09 47 09.1 -7.7
T54A Tazewell 77.99 309 P P 09 37 01.8 -0.4
baz=48,SNR=15
FDF Fort de France 78.01 279 eP P 09 37 03.9 +1.3
FDF Fort de France 78.01 279 e S 09 47 03.6 +6.9
U55A TA2, Sparta 78.04 308 P P 09 37 02.9 +0.4
baz=48,SNR=29
SCM Sheep Creek Mo 78.07 356 P P 09 37 02.4 +0.2
SCM pmax pmax
comp=Z,524nm,1.3s
SCM MLR MLR
comp=Z,18µm,20.0s
SCM Sheep Creek Mo 78.07 356 P P 09 37 02.4 +0.2
BIM Bigot 78.09 279 eP P 09 37 03.3 +0.4
BIM Bigot 78.09 279 e S 09 46 57.6 +0.1
L44A Lake County Fo 78.11 316 P P 09 37 03.2 +0.6
baz=46,SNR=12
L44A Lake County Fo 78.11 316 P P 09 37 02.5 -0.1
L44A IAmb IAmb 09 37 28.0
comp=Z,252nm,1.1s
L44A IAMs_20 IAMs_20 10 14 02.1
comp=Z,42µm,18.0s
WHY Whitehorse 78.12 350 P P 09 37 02.2 -0.3
WHY IAMs_20 IAMs_20 10 13 03.8
comp=Z,44µm,21.0s
SML Sawmill 78.14 357 P P 09 37 02.2 -0.3
SML IAmb IAmb 09 37 41.0
comp=Z,292nm,1.1s
V56A Mocksville 78.17 307 P P 09 37 04.2 +1.2
baz=49,SNR=13
P49A Miami Univ. Ec 78.17 312 P P 09 37 02.3 -0.7
baz=47,SNR=13
GHO Glory Hole Cre 78.20 357 P P 09 37 02.4 -0.5
GHO IAmb IAmb 09 37 46.6
comp=Z,214nm,1.0s
MCARA McCarthy VSAT 78.25 354 IAMs_20 IAMs_20 10 14 36.1
comp=Z,42µm,21.0s
X58A Rowland 78.27 305 P P 09 37 04.0 +0.4
baz=49,SNR=9.2
X58A Rowland 78.27 305 IAMs_20 IAMs_20 10 18 18.1
comp=Z,38µm,19.0s
PETK Petropavlovsk- 78.28 27 P P 09 37 04.6 +1.3
comp=Z,5.1nm,1.0s,baz=64,slow=5.1,SNR=6.1
PETK LR LR 10 14 08.0
comp=Z,91µm,21.0s,baz=310,slow=38
HYT Haines Junctio 78.28 352 P P 09 37 03.4 0.0
HYT IAmb IAmb 09 37 35.2
comp=Z,346nm,1.4s
W57A Gilead 78.29 306 P P 09 37 03.4 -0.3
baz=49
W57A Gilead 78.29 306 P P 09 37 03.5 -0.3
I40A Norwalk 78.32 318 P P 09 37 03.7 0.0
I40A IAMs_20 IAMs_20 10 10 58.3
comp=Z,46µm,19.0s
SLBI Saint Lucia, B 78.32 278 eP P 09 37 07.8 +3.7
SLBI Saint Lucia, B 78.32 278 e SKSac 09 47 16.0 -3.3
F36A Milaca 78.33 321 P P 09 37 02.5 -1.3
F36A IAMs_20 IAMs_20 10 11 47.5
comp=Z,43µm,21.0s
Y59A Loris 78.35 305 P P 09 37 08.8 +4.7
baz=49
Y59A Loris 78.35 305 IAMs_20 IAMs_20 10 15 58.2
comp=Z,35µm,19.0s
PMR Palmer 78.38 357 P P 09 37 03.1 -0.6
PMR pmax pmax
comp=Z,238nm,1.2s
PMR MLR MLR
comp=Z,23µm,21.0s
PMR Palmer 78.38 357 P P 09 37 03.1 -0.6
PMR IAmb IAmb 09 38 09.5
comp=Z,238nm,1.2s
SPMN Marine on St. 78.44 321 P P 09 37 04.3 -0.1
baz=43,SNR=26
SPMN Marine on St. 78.44 321 P P 09 37 03.7 -0.7
SPMN IAmb IAmb 09 37 29.9
comp=Z,230nm,1.1s
MCLT Moule a Chique 78.49 278 eP P 09 37 08.1 +3.0
MCLT Moule a Chique 78.49 278 e S 09 47 14.2 +12
U54A Nelsons Funny 78.50 308 P P 09 37 04.7 -0.2
baz=48,SNR=13
U54A Nelsons Funny 78.50 308 P P 09 37 04.8 -0.2
U54A IAMs_20 IAMs_20 10 15 44.8
comp=Z,35µm,20.0s
CTGM Chitina Glacie 78.53 353 IAMs_20 IAMs_20 10 13 00.4
comp=Z,38µm,21.0s
KNK Knik Glacier 78.54 357 P P 09 37 04.5 -0.1
KNK IAmb IAmb 09 37 27.3
comp=Z,484nm,1.5s
V55A Taylorsville 78.58 307 P P 09 37 05.8 +0.5
baz=48,SNR=12
V55A Taylorsville 78.58 307 P P 09 37 04.6 -0.7
V55A IAmb IAmb 09 37 35.0
comp=Z,588nm,2.0s
T53A Wise 78.62 309 P P 09 37 05.7 +0.1
baz=48
P48A Milroy 78.62 312 P P 09 37 04.3 -1.2
P48A IAMs_20 IAMs_20 10 16 29.7
comp=Z,43µm,19.0s
W56A Indian Trail 78.66 307 P P 09 37 06.1 +0.3
baz=48,SNR=12
PET Petropavlovsk 78.68 27 *c i*P P 09 37 06.2 +0.7
PET *e* 09 40 04.5
PET *e*S S 09 46 57.9 -4.7
PET pmax pmax
comp=Z,1µm,13.9s
PET pmax pmax
comp=Z,58nm,1.3s
PET pmax pmax
comp=Z,2µm,14.3s
PET smax smax
comp=N,3µm,21.6s
PET smax smax
comp=E,3µm,14.9s
M44A Midewin, Midew 78.73 315 P P 09 37 05.6 -0.5
M44A IAmb IAmb 09 37 31.5
comp=Z,324nm,1.2s
M44A IAMs_20 IAMs_20 10 12 48.6
comp=Z,37µm,20.0s
YHNB Yeheng 78.79 67 IAMs_20 IAMs_20 10 17 52.3
comp=Z,44µm,20.0s
R50A Paris 78.79 311 P P 09 37 05.8 -0.6
S51A Beattyville 78.80 310 P P 09 37 05.1 -1.4
S51A IAMs_20 IAMs_20 10 10 24.7
comp=Z,60µm,22.0s
X57A Johnson Farm, 78.80 306 P P 09 37 06.7 +0.2
baz=48
JFWS Jewell Farm 78.82 318 P P 09 37 04.7 -1.8
JFWS pmax pmax
comp=Z,204nm,1.0s
JFWS MLR MLR
comp=Z,34µm,19.0s
JFWS Jewell Farm 78.82 318 P P 09 37 05.7 -0.8
baz=44,SNR=31
JFWS Jewell Farm 78.82 318 P P 09 37 04.7 -1.8
JFWS Jewell Farm 78.82 318 IAMs_20 IAMs_20 10 16 08.8
comp=Z,34µm,19.0s
CDVI St. Croix 78.85 284 eP P 09 37 09.6 +2.5
CDVI St. Croix 78.85 284 e SKSac 09 47 13.3 -10
Y58A Scranton 78.90 305 P P 09 37 07.6 +0.5
baz=49
Y58A Scranton 78.90 305 IAMs_20 IAMs_20 10 13 29.8
comp=Z,38µm,20.0s
RC01 Rabbit Creek A 78.91 358 P P 09 37 06.5 -0.2
RC01 IAmb IAmb 09 37 45.4
comp=Z,467nm,1.3s
BIRD Birdtown, Kers 78.91 306 P P 09 37 06.6 -0.5
SFIN Lafayette 78.92 314 P P 09 37 06.3 -0.8
baz=46,SNR=32
SFIN Lafayette 78.92 314 P P 09 37 06.2 -0.8
SVW2 Sparrevohn 78.98 0 P P 09 37 07.8 +0.7
SVB Belmont 79.00 278 eP P 09 37 14.6 +6.7
D32A Dogwood Acres, 79.00 324 IAMs_20 IAMs_20 10 10 45.2
comp=Z,50µm,21.0s
V54A Nebo 79.07 308 P P 09 37 08.3 +0.2
baz=48,SNR=16
Z59A Georgetown, SC 79.09 304 P P 09 37 11.3 +3.1
baz=49
KMSC Kings Mountain 79.12 307 P P 09 37 09.4 +1.1
baz=48,SNR=9.1
KMSC Kings Mountain 79.12 307 P P 09 37 07.0 -1.3
TPUB Ta-pu 79.12 69 P P 09 37 07.9 -0.6
TPUB IAMs_20 IAMs_20 10 17 42.2
comp=Z,47µm,20.0s
WAX Waxell Ridge 79.16 354 IAMs_20 IAMs_20 10 15 05.3
comp=Z,49µm,18.0s
L42A Oliver, Polo 79.16 317 P P 09 37 07.5 -0.9
L42A IAmb IAmb 09 37 33.8
comp=Z,257nm,1.0s
L42A IAMs_20 IAMs_20 10 13 12.9
comp=Z,38µm,18.0s
EYAK Cordova Ski Ar 79.27 356 IAMs_20 IAMs_20 10 15 09.9
comp=Z,37µm,20.0s
R49A Shelbyville 79.27 311 P P 09 37 09.0 -0.1
R49A IAmb IAmb 09 37 37.9
comp=Z,330nm,1.4s
R49A IAMs_20 IAMs_20 10 15 23.1
comp=Z,42µm,19.0s
Y57A Sumter 79.28 306 P P 09 37 10.4 +1.3
baz=48
Y57A Sumter 79.28 306 P P 09 37 09.9 +0.7
Y57A IAMs_20 IAMs_20 10 14 12.8
comp=Z,36µm,19.0s
SKAG Skagway 79.34 350 IAMs_20 IAMs_20 10 13 39.8
comp=Z,48µm,20.0s
X56A White Oak 79.36 306 P P 09 37 10.0 +0.4
baz=48,SNR=11
Z58A St. Stephen 79.37 305 P P 09 37 09.6 -0.1
baz=48
HUMP Col San Antoni 79.41 285 P P 09 37 10.4 +0.3
HUMP IAmb IAmb 09 37 37.8
comp=Z,606nm,1.8s
BLO Bloomington 79.43 313 P P 09 37 09.5 -0.5
BLO pmax pmax
comp=Z,257nm,0.9s
BLO MLR MLR
comp=Z,45µm,19.0s
BLO Bloomington 79.43 313 P P 09 37 09.4 -0.5
BLO IAmb IAmb 09 37 36.5
comp=Z,257nm,0.9s
BLO IAMs_20 IAMs_20 10 14 13.3
comp=Z,45µm,19.0s
P46A Rosedale 79.51 314 P P 09 37 09.7 -0.7
P46A IAMs_20 IAMs_20 10 11 56.2
comp=Z,46µm,19.0s
TZTN Tazewell 79.51 309 P P 09 37 10.6 +0.2
baz=47,SNR=11
TZTN Tazewell 79.51 309 P P 09 37 09.4 -1.1
TZTN IAmb IAmb 09 37 38.8
comp=Z,1µm,2.4s
TZTN IAMs_20 IAMs_20 10 16 01.7
comp=Z,51µm,19.0s
DLBC Dease Lake 79.53 347 IAMs_20 IAMs_20 10 12 59.0
comp=Z,51µm,21.0s
MDND Maddock 79.60 326 P P 09 37 10.6 -0.1
baz=39,SNR=24
MDND Maddock 79.60 326 P P 09 37 10.7 -0.1
MDND IAmb IAmb 09 37 20.1
comp=Z,612nm,1.4s
MDND IAMs_20 IAMs_20 10 14 06.8
comp=Z,39µm,19.0s
RSO Redoubt South 79.61 359 P P 09 37 10.2 -0.5
I37A Lemond, Waseca 79.62 320 P P 09 37 10.9 0.0
I37A IAmb IAmb 09 37 36.3
comp=Z,400nm,1.1s
I37A IAMs_20 IAMs_20 10 12 25.7
comp=Z,52µm,20.0s
GCMP Grenada, Carri 79.62 278 eP P 09 37 10.1 -1.2
GCMP Grenada, Carri 79.62 278 e SKSac 09 47 21.8 -6.8
PAULI Pauline 79.63 307 P P 09 37 10.5 -0.6
F33A 5 Mile Ranch, 79.65 323 P P 09 37 09.9 -1.1
SJG San Juan 79.65 285 eP P 09 37 12.1 +0.7
V53A Saluda 79.66 308 P P 09 37 10.9 -0.5
V53A IAmb IAmb 09 37 39.4
comp=Z,779nm,2.5s
V53A IAMs_20 IAMs_20 10 16 29.7
comp=Z,42µm,18.0s
W54A Cherokee Point 79.68 307 P P 09 37 11.5 +0.2
baz=48,SNR=10
SKR Severo-Kuril's 79.68 29 eP P 09 37 14.6 +3.6
SKR *e* 09 40 14.1
SKR *e*S S 09 47 22.5 +9.2
SKR *e*SSS SSS 09 55 43.7
SKR pmax pmax
comp=Z,1µm,6.6s
SKR smax smax
comp=N,2µm,13.3s
SKR smax smax
comp=E,2µm,13.0s
SKR MLR MLR
comp=Z,53µm,19.0s
TOSP Speyside 79.69 276 eP P 09 37 18.1 +6.4
TOSP Speyside 79.69 276 e SKSac 09 47 23.0 -6.1

JNU Nakatsue 79.72 55 LR LR 10 15 22.4
comp=Z,62µm,21.7s,baz=310,slow=38
JNU Nakatsue 79.72 55 P **P** **09 37 09.6 -2.1**
JNU IAmb IAmb 09 37 47.9
comp=Z,555nm,1.6s
NHSC New Hope 79.75 305 P **P** **09 37 12.6 +0.8**
baz=48
X55A Gracelyn & Ava 79.75 307 P **P** **09 37 12.1 +0.4**
baz=48,SNR=9.0
O44A Mansfield 79.83 315 P **P** **09 37 12.1 0.0**
O44A IAmb IAmb 09 37 37.6
comp=Z,231nm,0.9s
O44A IAMs_20 IAMs_20 10 13 25.6
comp=Z,35µm,19.0s
SEW Seward 79.89 357 P **P** **09 37 11.3 -0.6**
SEW IAmb IAmb 09 37 33.6
comp=Z,384nm,1.6s
L40A Anamosa 79.93 317 P **P** **09 37 11.4 -1.2**
L40A IAmb IAmb 09 37 37.7
comp=Z,462nm,1.1s
L40A IAMs_20 IAMs_20 10 16 52.2
comp=Z,31µm,18.0s
T50A Nancy 79.95 310 P **P** **09 37 12.6 -0.2**
Z57A Bowman 79.95 305 P **P** **09 37 13.1 +0.2**
baz=48,SNR=8.3
WCI Wyandotte Cave 79.96 312 P **P** **09 37 12.5 -0.3**
WCI pmax pmax
comp=Z,205nm,1.0s
WCI MLR MLR
comp=Z,39µm,19.0s
WCI Wyandotte Cave 79.96 312 P **P** **09 37 12.1 -0.7**
baz=46
WCI Wyandotte Cave 79.96 312 P **P** **09 37 12.5 -0.3**
WCI Wyandotte Cave 79.96 312 IAMs_20 IAMs_20 10 12 40.2
comp=Z,39µm,19.0s
HDIL Hopedale 79.99 315 P **P** **09 37 12.8 -0.2**
baz=45,SNR=20
HDIL Hopedale 79.99 315 P **P** **09 37 11.8 -1.2**
HDIL IAmb IAmb 09 37 38.5
comp=Z,322nm,0.9s
HDIL IAMs_20 IAMs_20 10 15 09.9
comp=Z,41µm,19.0s
Y56A Pelion 80.00 306 P **P** **09 37 13.4 +0.3**
baz=48,SNR=8.2
V52A Sevierville 80.02 309 P **P** **09 37 12.9 -0.2**
V52A IAMs_20 IAMs_20 10 16 32.0
comp=Z,43µm,19.0s
GRGR Grenville 80.02 277 *e*P **P** **09 37 14.9 +1.4**
OBIP Obispado Ponce 80.03 285 P **P** **09 37 10.5 -2.9**
OBIP IAmb IAmb 09 37 55.5
comp=Z,344nm,1.4s
MYKOM Kota Tinggi 80.06 96 IAMs_20 IAMs_20 10 16 30.4
comp=Z,44µm,20.0s
MYKOM Kota Tinggi 80.06 96 P **P** **09 37 17.0 +3.4**
BESE Bessie Mountai 80.13 350 IAMs_20 IAMs_20 10 12 55.0
comp=Z,34µm,21.0s
X54A Belton 80.15 307 P **P** **09 37 15.1 +1.2**
baz=48,SNR=16
BG3 Lake Jocassee 80.19 308 P **P** **09 37 14.0 -0.2**
BG3 IAmb IAmb 09 37 42.4
comp=Z,596nm,2.4s
Y55A Saluda 80.24 306 P **P** **09 37 14.5 +0.1**
baz=48,SNR=8.6
TKL Tuckaleechee C 80.25 309 P **P** **09 37 14.4 0.0**
TKL pmax pmax
comp=Z,142nm,1.1s
TKL MLR MLR
comp=Z,46µm,19.0s
TKL Tuckaleechee C 80.25 309 P **P** **09 37 14.4 0.0**
TKL IAMs_20 IAMs_20 10 16 39.1
comp=Z,46µm,19.0s
BRLK Bradley Lake 80.27 358 P **P** **09 37 14.2 +0.1**
BRLK IAmb IAmb 09 37 36.5
comp=Z,437nm,1.3s
K38A Parkersburg 80.30 319 P **P** **09 37 13.8 -0.8**
K38A IAMs_20 IAMs_20 10 17 19.9
comp=Z,49µm,18.0s
Z56A Williston 80.35 306 P **P** **09 37 16.4 +1.4**
baz=48
Z56A Williston 80.35 306 IAMs_20 IAMs_20 10 14 26.1
comp=Z,32µm,20.0s
JIS Juneau Island 80.36 349 IAMs_20 IAMs_20 10 14 40.0
comp=Z,45µm,20.0s
HOM Homer 80.39 358 P **P** **09 37 14.4 -0.4**
YUK Yuzh-Kuril'sk 80.44 39*d i*P **P** **09 37 15.8 +0.5**
YUK *e*S **S** **09 47 20.9 -0.7**
YUK *e*SS **SS** **09 52 30.7 -1.5**
YUK *e*SSS SSS 09 55 52.9
YUK pmax pmax
comp=Z,537nm,3.2s
YUK pmax pmax
comp=Z,585nm,1.0s
YUK pmax pmax
comp=E,335nm,1.2s
YUK pmax pmax
comp=N,447nm,1.3s
KUR Kuril'sk 80.49 37 *e*P **P** **09 37 19.4 +3.9**
KUR *e* 09 37 24.3
KUR *e*S **S** **09 47 25.1 +3.0**
KUR *e*SS **SS** **09 52 37.0 +4.2**
KUR MLR MLR
comp=Z,65µm,21.0s
KUR MLR MLR
comp=N,65µm,19.0s
KUR MLR MLR
comp=E,25µm,17.0s
V51A Loudon 80.49 309 P **P** **09 37 15.4 -0.3**
V51A IAMs_20 IAMs_20 10 16 32.6
comp=Z,46µm,18.0s
CNPM China Poot 80.52 358 P **P** **09 37 15.0 -0.4**
157A Early Branch 80.55 305 P **P** **09 37 16.5 +0.5**
baz=48
GDU01 Guandu, BA 80.61 243 *e*P **P** **09 37 17.9 +1.3**
OLIL Olney 80.62 313 P **P** **09 37 16.1 -0.3**
OLIL IAmb IAmb 09 37 42.2
comp=Z,286nm,0.9s
OLIL IAMs_20 IAMs_20 10 12 31.7
comp=Z,45µm,19.0s
N41A Harden Midland 80.72 316 P **P** **09 37 15.2 -1.6**
N41A IAmb IAmb 09 37 41.9
comp=Z,321nm,1.1s
N41A IAMs_20 IAMs_20 10 14 10.0
comp=Z,39µm,19.0s
W52A Murphy 80.72 308 P **P** **09 37 17.0 -0.1**
TRN Trinidad (W) 80.76 276 *e*P **P** **09 37 20.4 +2.9**
TRN Trinidad (W) 80.76 276 *e* **S** **09 47 29.6 +3.7**
P43A Skaggs, Pawnee 80.76 315 P **P** **09 37 16.2 -0.9**
P43A IAmb IAmb 09 37 42.6
comp=Z,261nm,0.9s
P43A IAMs_20 IAMs_20 10 16 15.3
comp=Z,37µm,18.0s
CPCT Cooper Cave 80.83 309 P **P** **09 37 17.0 -0.6**
CPCT IAMs_20 IAMs_20 10 14 18.6
comp=Z,35µm,18.0s
U49A Red Boiling Sp 80.84 310 P **P** **09 37 16.9 -0.7**
U49A IAmb IAmb 09 37 44.6
comp=Z,233nm,0.9s
USIN University of 80.92 313 P **P** **09 37 17.4 -0.5**
USIN IAmb IAmb 09 37 43.2
comp=Z,291nm,1.0s
USIN IAMs_20 IAMs_20 10 15 10.6
comp=Z,49µm,19.0s
DGMT Dagmar 81.01 329 P **P** **09 37 18.9 +0.6**
baz=36,SNR=18
DGMT Dagmar 81.01 329 P **P** **09 37 18.5 +0.2**
DGMT Dagmar 81.01 329 IAMs_20 IAMs_20 10 14 06.9
comp=Z,52µm,20.0s
Q44A Meyer Farm, Va 81.01 314 P **P** **09 37 17.4 -1.1**
Q44A IAmb IAmb 09 37 43.9
comp=Z,301nm,0.9s
Q44A IAMs_20 IAMs_20 10 12 10.0
comp=Z,47µm,20.0s
E28A Huff 81.05 326 P **P** **09 37 16.9 -1.7**
E28A IAMs_20 IAMs_20 10 13 18.3
comp=Z,37µm,20.0s
SCIA State Center 81.07 318 P **P** **09 37 18.9 +0.2**
baz=43
SCIA State Center 81.07 318 P **P** **09 37 18.2 -0.5**
SCIA IAMs_20 IAMs_20 10 12 21.2
comp=Z,41µm,21.0s
T47A Sharon Grove 81.28 312 P **P** **09 37 19.5 -0.4**
T47A IAmb IAmb 09 37 45.9
comp=Z,282nm,0.9s
T47A IAMs_20 IAMs_20 10 15 26.3
comp=Z,42µm,18.0s
ECSD EROS Data Cent 81.38 322 P **P** **09 37 20.2 -0.1**
baz=41,SNR=20
ECSD EROS Data Cent 81.38 322 P **P** **09 37 20.3 -0.1**
ECSD EROS Data Cent 81.38 322 IAMs_20 IAMs_20 10 11 24.3
comp=Z,45µm,21.0s
GUIV Guiria 81.39 277 *e*P **P** **09 37 21.6 +0.8**
CLTN Cedars of Leba 81.46 310 P **P** **09 37 20.9 0.0**
CLTN IAMs_20 IAMs_20 10 12 06.1
comp=Z,52µm,22.0s
W50A Signal Mountai 81.47 309 P **P** **09 37 20.3 -0.8**
W50A IAmb IAmb 09 37 48.3
comp=Z,308nm,0.9s
W50A IAMs_20 IAMs_20 10 17 01.6
comp=Z,48µm,20.0s
GOGA Godfrey 81.59 307 P **P** **09 37 20.9 -0.7**
GOGA pmax pmax
comp=Z,152nm,1.2s
GOGA MLR MLR
comp=Z,39µm,19.0s
GOGA Godfrey 81.59 307 P **P** **09 37 21.7 +0.1**
baz=47,SNR=15
GOGA Godfrey 81.59 307 P **P** **09 37 20.9 -0.7**
GOGA Godfrey 81.59 307 IAMs_20 IAMs_20 10 16 09.7
comp=Z,39µm,19.0s
X51A Calhoun 81.64 308 IAMs_20 IAMs_20 10 17 31.0
comp=Z,50µm,19.0s
Y52A Lilburn 81.64 308 P **P** **09 37 22.4 +0.5**
baz=47,SNR=19
Y52A Lilburn 81.64 308 P **P** **09 37 22.3 +0.4**
SIT Sitka 81.67 349 IAMs_20 IAMs_20 10 15 00.7
comp=Z,34µm,19.0s
MJB9 Matsu-Tunnel 81.80 49 P **P** **09 37 22.2 -0.5**
MAJO Matsushiro 81.80 49*ce*P **P** **09 37 23.7 +1.0**
MAJO pmax pmax
comp=Z,105nm,2.6s
MAJO Matsushiro 81.80 49 P **P** **09 37 22.2 -0.5**
MAT Matsushiro 81.80 49 P **P** **09 37 21.0 -1.7**
MAT S **S** **09 47 34.0 -2.1**
MJAR Matsushiro Arr 81.80 49 P **P** **09 37 21.4 -1.4**
comp=Z,11nm,1.0s,baz=320,slow=5.0,SNR=16
MJAR LR LR 10 18 33.3
comp=Z,80µm,18.1s,baz=295,slow=39
SWET Sewanee 81.83 310 P **P** **09 37 22.8 -0.1**
SWET IAmb IAmb 09 37 50.5
comp=Z,786nm,2.5s
WRAK Wrangell Islan 81.84 348 IAMs_20 IAMs_20 10 14 34.1
comp=Z,34µm,20.0s
SLM Saint Louis 81.87 314 IAMs_20 IAMs_20 10 12 35.6
comp=Z,46µm,20.0s
N38A Joes South For 81.89 318 P **P** **09 37 22.9 -0.2**
154A Montrose 81.91 306 P **P** **09 37 23.7 +0.4**
154A IAmb IAmb 09 37 53.5
comp=Z,314nm,1.1s
SUSD Miller 81.93 323 P **P** **09 37 23.3 0.0**
baz=40,SNR=10
SUSD Miller 81.93 323 P **P** **09 37 23.0 -0.3**
SUSD IAMs_20 IAMs_20 10 12 12.8
comp=Z,47µm,22.0s
INU Inuyama 81.94 50 P **P** **09 37 22.7 -0.7**
SIUC Southern Illin 81.96 313 P **P** **09 37 22.9 -0.6**
255A Hazlehurst 81.98 305 P **P** **09 37 22.5 -1.1**
V48A Smith Brothers 81.99 310 P **P** **09 37 23.1 -0.6**
V48A IAMs_20 IAMs_20 10 12 32.1
comp=Z,46µm,21.0s
S44A Carbondale 82.00 313 P **P** **09 37 22.5 -1.2**
S44A IAmb IAmb 09 37 49.2
comp=Z,325nm,1.1s
S44A IAMs_20 IAMs_20 10 13 31.2
comp=Z,46µm,18.0s
SPIA Saint Paul Isl 82.02 9 IAMs_20 IAMs_20 10 20 29.8
comp=Z,52µm,20.0s
FPAL Fort Paine 82.11 309 P **P** **09 37 24.5 +0.1**
FPAL IAmb IAmb 09 37 51.4
comp=Z,193nm,1.0s
FPAL IAMs_20 IAMs_20 10 17 58.4
comp=Z,40µm,19.0s
T45A Paducah 82.13 312 IAMs_20 IAMs_20 10 15 45.9
comp=Z,50µm,19.0s
JOW Kunigami 82.16 62 LR LR 10 18 39.3
comp=Z,7µm,20.9s,baz=136,slow=39
JOW Kunigami 82.16 62 P **P** **09 37 23.3 -1.4**
JOW IAMs_20 IAMs_20 10 17 14.1
comp=Z,50µm,21.0s
P40A Paris 82.20 316 P **P** **09 37 24.2 -0.6**
P40A IAmb IAmb 09 37 49.8
comp=Z,189nm,0.9s
P40A IAMs_20 IAMs_20 10 15 05.2
comp=Z,38µm,19.0s
KDAK Kodiak Island 82.29 359 P **P** **09 37 24.8 0.0**
KDAK pmax pmax
comp=Z,274nm,1.2s
KDAK Kodiak Island 82.29 359 P **P** **09 37 24.8 0.0**
KDAK IAmb IAmb 09 37 52.7
comp=Z,274nm,1.1s
KDAK Kodiak Island 82.29 359 IAMs_20 IAMs_20 10 19 44.8
comp=Z,41µm,22.0s
WVT Waverly 82.30 311 P **P** **09 37 24.0 -1.3**
WVT pmax pmax
comp=Z,145nm,1.2s
WVT MLR MLR
comp=Z,43µm,18.0s
WVT Waverly 82.30 311 P **P** **09 37 24.4 -0.9**
baz=45
WVT Waverly 82.30 311 P **P** **09 37 24.0 -1.3**
WVT Waverly 82.30 311 IAMs_20 IAMs_20 10 15 08.2
comp=Z,43µm,18.0s
L34A Svendsen Farm, 82.60 320 P **P** **09 37 26.1 -0.7**
L34A IAmb IAmb 09 37 51.3
comp=Z,260nm,1.1s
L34A IAMs_20 IAMs_20 10 14 35.6
comp=Z,55µm,21.0s
PRPB Parauapebas 82.78 256 *e*P **P** **09 37 30.5 +2.5**
HICK Hickman 82.80 312 IAMs_20 IAMs_20 10 16 15.5
comp=Z,36µm,20.0s
HENM Henderson Moun 82.82 313 P **P** **09 37 27.7 -0.3**
HENM IAMs_20 IAMs_20 10 16 15.8
comp=Z,42µm,18.0s
CCM Cathedral Cave 82.83 315 P **P** **09 37 27.8 -0.3**
CCM pmax pmax
comp=Z,170nm,0.8s
CCM MLR MLR
comp=Z,49µm,19.0s
CCM Cathedral Cave 82.83 315 P **P** **09 37 26.2 -1.9**
baz=43
CCM Cathedral Cave 82.83 315 P **P** **09 37 27.8 -0.3**
CCM IAmb IAmb 09 37 53.4
comp=Z,170nm,0.8s
CCM Cathedral Cave 82.83 315 IAMs_20 IAMs_20 10 17 36.2
comp=Z,49µm,19.0s
152A Waverly Hall 82.86 307 P **P** **09 37 28.2 -0.1**
152A IAmb IAmb 09 37 55.3
comp=Z,189nm,1.0s
152A IAMs_20 IAMs_20 10 16 59.4
comp=Z,31µm,18.0s
OHAK Old Harbor 82.86 359 P **P** **09 37 27.5 -0.3**
OHAK IAMs_20 IAMs_20 10 21 15.9
comp=Z,32µm,20.0s
SDDR Presa de Saban 82.86 289 P **P** **09 37 28.3 -0.3**
CRAG Craig 82.88 348 IAMs_20 IAMs_20 10 21 35.5
comp=Z,34µm,21.0s
P38A Dawn 82.91 317 P **P** **09 37 26.9 -1.5**
P38A IAmb IAmb 09 37 53.9
comp=Z,235nm,1.0s
SMTB Santa Maria do 82.93 252 *e*P **P** **09 37 31.8 +3.0**
TIGA Tifton 83.01 305 P **P** **09 37 29.3 +0.2**
baz=47,SNR=11
PARMO Parma 83.01 313 P **P** **09 37 27.9 -1.1**
PARMO IAMs_20 IAMs_20 10 15 14.0
comp=Z,37µm,20.0s
X48A Hartselle 83.02 310 P **P** **09 37 28.1 -1.0**
X48A IAMs_20 IAMs_20 10 18 54.4
comp=Z,45µm,19.0s
GLAT Glass 83.03 312 P **P** **09 37 28.4 -0.7**
GLAT IAmb IAmb 09 37 54.3
comp=Z,322nm,1.1s
GLAT IAMs_20 IAMs_20 10 13 57.6
comp=Z,30µm,20.0s
Y49A Blount Mountai 83.06 309 P **P** **09 37 28.0 -1.3**
Y49A IAMs_20 IAMs_20 10 18 26.5
comp=Z,41µm,20.0s
N35A Tabor 83.07 319 P **P** **09 37 28.8 -0.5**
N35A IAmb IAmb 09 37 56.5
comp=Z,231nm,0.8s
N35A IAMs_20 IAMs_20 10 16 33.0
comp=Z,40µm,18.0s
PENMO Penman 83.09 313 P **P** **09 37 29.4 0.0**
PENMO IAMs_20 IAMs_20 10 13 59.2
comp=Z,36µm,20.0s
PVMO Portageville 83.16 313 IAMs_20 IAMs_20 10 14 00.9
comp=Z,39µm,20.0s
Z50A Ashland 83.19 308 P **P** **09 37 30.1 +0.1**
baz=46,SNR=38
Z50A Ashland 83.19 308 P **P** **09 37 29.9 -0.1**
R40A Maddies Statio 83.22 315 P **P** **09 37 29.5 -0.5**
R40A IAmb IAmb 09 37 55.8
comp=Z,313nm,1.1s
R40A IAMs_20 IAMs_20 10 19 07.3
comp=Z,33µm,21.0s
PLAL Pickwick Lake 83.25 311 P **P** **09 37 29.4 -0.8**
PLAL IAmb IAmb 09 37 55.3
comp=Z,212nm,1.0s
PLAL IAMs_20 IAMs_20 10 14 25.4
comp=Z,32µm,20.0s
LAO LASA Array 83.25 329 P **P** **09 37 30.3 +0.1**
baz=35,SNR=134
LAO LASA Array 83.25 329 P **P** **09 37 30.8 +0.6**
LAO IAMs_20 IAMs_20 10 15 35.2
comp=Z,48µm,19.0s
LNXT Lenox 83.27 312 P **P** **09 37 29.6 -0.7**
ORIV Oritupano 83.28 276 *e*P **P** **09 37 32.0 +1.2**
MALB Monte Alegre 83.29 262 *e*P **P** **09 37 33.5 +2.8**
HALT Halls 83.32 312 IAMs_20 IAMs_20 10 16 45.1
comp=Z,40µm,18.0s
MNAI Manna 83.38 101 IAMs_20 IAMs_20 10 21 50.7
comp=Z,37µm,22.0s
PEBM Pemiscott Bayo 83.47 313 IAMs_20 IAMs_20 10 14 10.1
comp=Z,39µm,20.0s
EGMT Eagleton 83.49 332 P **P** **09 37 31.9 +0.4**
baz=33,SNR=75
EGMT Eagleton 83.49 332 P **P** **09 37 31.1 -0.3**
T42A Van Buren 83.49 314 P **P** **09 37 30.8 -0.7**
GNAR Gosnell 83.66 312 P **P** **09 37 31.7 -0.6**
GNAR IAMs_20 IAMs_20 10 14 15.2
comp=Z,36µm,20.0s
SMPP San Manuel, Pa 83.69 74 *e*P **P** **09 37 29.6 -3.2**
W45A Hickory Valley 83.77 311 P **P** **09 37 32.3 -0.7**
W45A IAMs_20 IAMs_20 10 16 03.1
comp=Z,40µm,18.0s
352A Blakely 83.81 306 IAMs_20 IAMs_20 10 17 53.6
comp=Z,33µm,19.0s
PMBI Palembang 83.81 99 IAMs_20 IAMs_20 10 16 57.2
comp=Z,44µm,21.0s
BGNE Belgrade 83.89 321 P **P** **09 37 33.4 -0.1**
baz=40,SNR=16
BGNE Belgrade 83.89 321 P **P** **09 37 32.8 -0.7**
BGNE IAMs_20 IAMs_20 10 17 01.6
comp=Z,43µm,19.0s
DWPF Disney Wildern 83.89 302 P **P** **09 37 35.2 +1.6**
baz=47
NAN01 Guarapari, ES 83.91 241 *e*P **P** **09 37 36.7 +3.0**
LRAL Lakeview Retre 83.98 309 P **P** **09 37 33.6 -0.4**
baz=45,SNR=102
LRAL Lakeview Retre 83.98 309 P **P** **09 37 33.5 -0.6**
LRAL IAMs_20 IAMs_20 10 18 42.0
comp=Z,48µm,22.0s
CAUP Cauayan 84.02 73 *e*P P 09 37 40.6 +6.2
MGMO Mountain Grove 84.05 315 P **P** **09 37 33.6 -0.8**
MGMO IAMs_20 IAMs_20 10 13 54.3
comp=Z,46µm,19.0s
WALA Waterton Lakes 84.06 334 P **P** **09 37 33.2 -1.1**
WALA IAmb IAmb 09 38 03.2
comp=Z,225nm,1.2s
WALA IAMs_20 IAMs_20 10 15 08.2
comp=Z,46µm,20.0s
N33A J Bar K, Exete 84.06 320 IAMs_20 IAMs_20 10 15 30.2
comp=Z,53µm,21.0s
LPAR Lepanto 84.08 312 P **P** **09 37 34.9 +0.4**
LPAR IAMs_20 IAMs_20 10 14 37.3
comp=Z,32µm,20.0s
MET Memphis--Engin 84.22 312 IAMs_20 IAMs_20 10 17 21.0
comp=Z,44µm,18.0s
LCAR Lake Charles 84.22 313 P **P** **09 37 34.5 -0.7**
LCAR IAmb IAmb 09 38 01.1
comp=Z,223nm,1.0s
LCAR IAMs_20 IAMs_20 10 16 02.0
comp=Z,45µm,20.0s
HDBT Hernando Brdge 84.27 312 IAMs_20 IAMs_20 10 17 22.3
comp=Z,32µm,18.0s
250A Grady 84.28 307 P **P** **09 37 35.5 -0.1**
250A IAMs_20 IAMs_20 10 17 51.0
comp=Z,37µm,18.0s
HBAR Harrisburg 84.32 313 P **P** **09 37 35.8 +0.1**
HBAR IAmb IAmb 09 37 58.6
comp=Z,327nm,1.2s
HBAR IAMs_20 IAMs_20 10 14 45.5
comp=Z,38µm,20.0s
OXF Oxford 84.35 311 P **P** **09 37 33.8 -2.1**
OXF pmax pmax
comp=Z,246nm,1.2s
OXF MLR MLR
comp=Z,34µm,20.0s
OXF Oxford 84.35 311 P **P** **09 37 33.5 -2.4**
baz=44,SNR=12
OXF Oxford 84.35 311 P **P** **09 37 33.8 -2.1**
OXF IAmb IAmb 09 38 15.7
comp=Z,246nm,1.1s
OXF IAMs_20 IAMs_20 10 15 17.7
comp=Z,34µm,20.0s
RSSD Black Hills 84.44 326 P **P** **09 37 35.8 -0.7**
RSSD pmax pmax
comp=Z,692nm,1.8s
RSSD MLR MLR
comp=Z,61µm,20.0s
RSSD Black Hills 84.44 326 P **P** **09 37 36.6 +0.1**
baz=36
RSSD Black Hills 84.44 326 P **P** **09 37 35.8 -0.7**
Z47A Carrollton 84.50 309 P **P** **09 37 35.9 -0.8**
Z47A IAMs_20 IAMs_20 10 13 29.8
comp=Z,40µm,22.0s
SDPT Sand Point 84.61 3 IAMs_20 IAMs_20 10 22 11.3
comp=Z,42µm,21.0s
JANB Januaria 84.81 245 *e*P **P** **09 37 41.0 +2.5**
KSU1 Kansas State U 84.88 318 P **P** **09 37 38.0 -0.5**
baz=40,SNR=42
KSU1 Kansas State U 84.88 318 P **P** **09 37 38.3 -0.2**
KSU1 Kansas State U 84.88 318 IAMs_20 IAMs_20 10 15 58.1
comp=Z,47µm,20.0s
FCAR Ozark Folk Cen 84.89 314 P **P** **09 37 38.5 -0.1**
FCAR IAmb IAmb 09 38 04.2
comp=Z,236nm,1.0s
FCAR IAMs_20 IAMs_20 10 16 01.7
comp=Z,47µm,20.0s
Y45A Yeager Farm, C 84.89 311 P **P** **09 37 38.1 -0.5**
Y45A IAMs_20 IAMs_20 10 14 50.0
comp=Z,40µm,21.0s
H02N1 VAN INLET T-PH 84.91 347 P **P** **09 37 38.8 +0.3**
LUBP Lubang 84.91 76 *e*P **P** **09 37 40.2 +1.2**
MOBC Moresby Island 84.91 347 P **P** **09 37 39.5 +1.1**
MOBC IAMs_20 IAMs_20 10 20 18.3
comp=Z,29µm,20.0s
451A Vernon 84.91 306 IAMs_20 IAMs_20 10 18 47.8
comp=Z,33µm,19.0s
FALS False Pass 84.94 5 IAMs_20 IAMs_20 10 22 09.9
comp=Z,35µm,21.0s
DIB Dawson Inlet, 84.94 347 P **P** **09 37 39.5 +1.0**
H02S1 DAWSON INLET T 84.94 347 P **P** **09 37 39.0 +0.5**
U40A Yellville 84.95 314 P **P** **09 37 38.8 -0.1**
baz=42,SNR=104
U40A Yellville 84.95 314 P **P** **09 37 38.4 -0.5**
U40A IAmb IAmb 09 38 04.5
comp=Z,253nm,1.1s
U40A IAMs_20 IAMs_20 10 14 31.2
comp=Z,47µm,19.0s
BBB Bella Bella 85.07 344 IAMs_20 IAMs_20 10 20 39.7
comp=Z,42µm,18.0s
BSFB Barra de Sao F 85.09 240 *e*P **P** **09 37 42.5 +2.8**
RIB01 Linhares ES 85.13 240 *e*P **P** **09 37 42.9 +3.0**
JHJ2 Mitsune 85.16 50 IAMs_20 IAMs_20 10 20 39.7
comp=Z,46µm,20.0s
CNBA Chernabura Isl 85.18 3 IAMs_20 IAMs_20 10 18 45.0
comp=Z,55µm,22.0s
KSM Kuching 85.19 92 IAMs_20 IAMs_20 10 19 02.3
comp=Z,39µm,20.0s
KSM Kuching 85.19 92 P P 09 37 45.0 +4.6
TGY Tagaytay City 85.19 76 LR LR 10 19 24.9
comp=Z,18µm,21.8s,baz=297,slow=38
X43A Marvell 85.19 312 P **P** **09 37 40.3 +0.2**
baz=43,SNR=17
SJMB Sao Joao De Ma 85.22 241 *e*P **P** **09 37 43.2 +2.8**
JTMT Jette 85.31 334 P **P** **09 37 39.4 -1.3**
JTMT IAmb IAmb 09 38 08.1
comp=Z,310nm,1.1s
WHAR Wooly Hollow 85.42 313 P **P** **09 37 41.2 -0.1**

WHAR IAmb IAmb 09 38 06.9
comp=Z,294nm,1.0s
WHAR IAMs_20 IAMs_20 10 16 47.8
comp=Z,45µm,18.0s
W41B Gary Mavity, V 85.48 313 P **P** **09 37 40.4 -1.2**
baz=43,SNR=79
146A Union 85.49 310 IAMs_20 IAMs_20 10 16 25.8
comp=Z,43µm,21.0s
PGP Puerto Galera 85.58 76‖ *eP* **P** **09 37 43.9 +1.4**
HHAR Hobbs 85.60 315 P **P** **09 37 41.8 -0.4**
HHAR IAmb IAmb 09 38 07.4
comp=Z,236nm,1.1s
HHAR IAMs_20 IAMs_20 10 17 03.3
comp=Z,38µm,18.0s
MC01 Montes Claros 85.70 244 *eP* **P** **09 37 45.7 +2.8**
U38A Gravette 85.72 315 P **P** **09 37 41.5 -1.3**
U38A IAMs_20 IAMs_20 10 20 34.5
comp=Z,41µm,20.0s
RLMT Red Lodge 85.74 330 P **P** **09 37 43.7 +0.7**
baz=33,SNR=47
RLMT Red Lodge 85.74 330 P **P** **09 37 42.8 -0.2**
NEW Newport 85.78 336 P **P** **09 37 42.7 -0.2**
NEW pmax pmax
comp=Z,503nm,1.8s
NEW MLR MLR
comp=Z,44µm,22.0s
NEW Newport 85.78 336 P **P** **09 37 43.4 +0.5**
baz=28,SNR=30
NEW Newport 85.78 336 P **P** **09 37 42.7 -0.2**
NEW IAmb IAmb 09 38 07.9
comp=Z,503nm,1.8s
NEW Newport 85.78 336 IAMs_20 IAMs_20 10 16 01.8
comp=Z,44µm,22.0s
UALR University of 85.83 313 P **P** **09 37 42.8 -0.5**
UALR IAmb IAmb 09 38 08.8
comp=Z,221nm,1.0s
ENPP El Nido 85.91 79 *eP* **P** **09 37 47.3 +3.3**
MSO Missoula 86.00 333 P **P** **09 37 44.1 0.0**
baz=30,SNR=51
MSO Missoula 86.00 333 P **P** **09 37 44.1 0.0**
MSO IAmb IAmb 09 38 11.7
comp=Z,569nm,1.8s
MSO IAMs_20 IAMs_20 10 17 41.6
comp=Z,42µm,20.0s
SBUM Sibu 86.02 90 P P 09 37 50.0 +5.4
ITTB Itaituba 86.03 261 *eP* **P** **09 37 47.2 +2.7**
OGNE Ogallala 86.08 323 P **P** **09 37 43.6 -1.0**
baz=37
OGNE Ogallala 86.08 323 P **P** **09 37 44.0 -0.6**
OGNE IAmb IAmb 09 38 11.1
comp=Z,404nm,1.6s
OGNE IAMs_20 IAMs_20 10 14 08.5
comp=Z,43µm,22.0s
YNE Yellowstone No 86.12 330 P **P** **09 37 45.6 +0.6**
CCAR Cane Creek 86.13 312 P **P** **09 37 45.1 +0.3**
CCAR IAmb IAmb 09 38 10.8
comp=Z,310nm,0.9s
ADK Adak 86.23 13 IAMs_20 IAMs_20 10 23 03.1
comp=Z,37µm,19.0s
BATP Bataraza 86.23 82 *eP* **P** **09 37 48.1 +2.5**
X40A Basin Creek Fa 86.31 313 P **P** **09 37 45.2 -0.5**
baz=42,SNR=42
X40A Basin Creek Fa 86.31 313 P **P** **09 37 44.6 -1.2**
X40A IAmb IAmb 09 38 26.3
comp=Z,371nm,1.7s
W39A Magazine 86.32 314 P **P** **09 37 45.5 -0.2**
baz=42,SNR=33
W39A Magazine 86.32 314 P **P** **09 37 44.7 -1.0**
W39A IAMs_20 IAMs_20 10 19 19.4
comp=Z,45µm,19.0s
ATKA Atka Island 86.34 12 P **P** **09 37 43.9 -1.6**
ATKA IAMs_20 IAMs_20 10 22 03.0
comp=Z,38µm,20.0s
LRM Limekiln Ridge 86.34 332 P **P** **09 37 45.9 0.0**
B08A Colville Reser 86.37 337 P **P** **09 37 45.8 0.0**
R32A Long Quarter, 86.46 319 P **P** **09 37 45.9 -0.6**
R32A IAMs_20 IAMs_20 10 16 08.7
comp=Z,39µm,20.0s
T35A Sooner Cattle 86.49 317 P **P** **09 37 46.4 -0.1**
T35A IAmb IAmb 09 37 55.2
comp=Z,260nm,1.1s
C09A Chrisman Ranch 86.55 336 P **P** **09 37 46.5 -0.2**
346A Big Creek Wild 86.62 309 IAMs_20 IAMs_20 10 17 12.9
comp=Z,32µm,19.0s
YHH Holmes Hill 86.63 330 P **P** **09 37 48.3 +0.8**
VBMS Vicksburg 86.64 310 P **P** **09 37 47.4 +0.1**
baz=43,SNR=16
CBKS Cedar Bluff 86.66 320 P **P** **09 37 47.0 -0.5**
CBKS pmax pmax
comp=Z,206nm,1.2s
CBKS MLR MLR
comp=Z,52µm,21.0s
CBKS Cedar Bluff 86.66 320 P **P** **09 37 46.9 -0.5**
baz=39,SNR=16
CBKS Cedar Bluff 86.66 320 P **P** **09 37 47.0 -0.5**
CBKS IAmb IAmb 09 38 13.5
comp=Z,206nm,1.2s
MIAR Mount Ida 86.68 314 P **P** **09 37 47.7 +0.2**
MIAR pmax pmax
comp=Z,283nm,1.0s
MIAR MLR MLR
comp=Z,54µm,20.0s
MIAR Mount Ida 86.68 314 P **P** **09 37 47.8 +0.2**
baz=42,SNR=82
MIAR Mount Ida 86.68 314 P **P** **09 37 47.7 +0.2**
MIAR IAmb IAmb 09 38 13.6
comp=Z,282nm,1.0s
K22A Casper 86.69 327 P **P** **09 37 46.8 -1.0**
baz=35,SNR=33
K22A Casper 86.69 327 P **P** **09 37 46.6 -1.0**
YHL Hebgen Lake 86.70 331 P **P** **09 37 49.0 +1.1**
DLMT Dillon 86.79 332 P **P** **09 37 47.5 -0.5**
DLMT IAmb IAmb 09 38 23.2
comp=Z,323nm,1.4s
YHB Horse Butte 86.79 331 P **P** **09 37 48.2 0.0**
143A Socs Landing, 86.81 311 P **P** **09 37 47.5 -0.6**
H17A Grant Village 86.86 330 P **P** **09 37 50.6 +2.0**
baz=32,SNR=114
TUL1 Leonard 86.87 316 P **P** **09 37 47.9 -0.5**
baz=41,SNR=50
TUL1 Leonard 86.87 316 P **P** **09 37 46.9 -1.6**
TUL1 IAMs_20 IAMs_20 10 17 31.9
comp=Z,28µm,20.0s
BAUV El Baul 86.88 279 *eP* **P** **09 37 48.4 -0.4**
PTGA Pitinga 86.90 266 P **P** **09 37 48.4 -0.5**
PTGA IAmb IAmb 09 38 22.6
comp=Z,344nm,1.6s
PTGA Pitinga 86.90 266 *eP* **P** **09 37 51.6 +2.7**
WLAR White Oak Lake 87.06 313 P **P** **09 37 50.0 +0.6**
FLWY Flagg Ranch 87.17 330 IAMs_20 IAMs_20 10 18 16.9
comp=Z,46µm,20.0s
Z41A Richland Creek 87.20 312 P **P** **09 37 50.5 +0.4**
baz=42,SNR=17
B05A Bryant 87.24 339 P **P** **09 37 50.4 +0.4**
baz=24,SNR=9.8
344A Westbrook Farm 87.32 310 IAMs_20 IAMs_20 10 16 31.4
comp=Z,44µm,20.0s
PHWY Pilot Hill 87.33 325 P **P** **09 37 50.7 -0.3**
PHWY IAMs_20 IAMs_20 10 15 38.5
comp=Z,36µm,21.0s
MCMT McKenzie Canyo 87.34 332 P **P** **09 37 51.2 +0.3**
IMW Indian Meadow 87.42 330 P **P** **09 37 52.6 +1.2**
IMW IAMs_20 IAMs_20 10 19 53.5
comp=Z,47µm,21.0s
NPGB Novo Progresso 87.48 259 *eP* **P** **09 37 54.0 +2.4**
X37A Clayton 87.64 315 P **P** **09 37 51.9 -0.3**
X37A IAMs_20 IAMs_20 10 16 05.3
comp=Z,48µm,22.0s
E09A Wood Farm, Sta 87.66 336 IAMs_20 IAMs_20 10 17 10.4
comp=Z,43µm,22.0s
FXWY Fox Creek 87.67 330 P **P** **09 37 53.2 +0.7**
FXWY IAmb IAmb 09 38 22.4
comp=Z,250nm,1.6s
FXWY IAMs_20 IAMs_20 10 18 43.2
comp=Z,48µm,21.0s
SNOW Snow King Moun 87.72 330 P **P** **09 37 52.3 -0.4**
SNOW IAMs_20 IAMs_20 10 18 33.4
comp=Z,48µm,20.0s
LTY Liberty 87.75 338 P **P** **09 37 51.9 -0.7**
RWWY Rawlins 87.77 327 P **P** **09 37 52.0 -1.0**
RWWY IAmb IAmb 09 38 21.4
comp=Z,217nm,1.4s
TPAW Teton Pass 87.77 330 P **P** **09 37 53.7 +0.6**
TPAW IAmb IAmb 09 39 08.0
comp=Z,264nm,1.8s
TPAW IAMs_20 IAMs_20 10 18 46.8
comp=Z,49µm,21.0s
BDFB Brasilia 87.81 248 P **P** **09 37 54.4 +1.1**
comp=Z,97nm,1.1s,baz=59,slow=5.2,SNR=30
BDFB LR LR 10 17 26.8
comp=Z,19µm,21.5s,baz=63,slow=36
BDFB Brasilia 87.81 248 P **P** **09 37 54.3 +1.1**
BDFB pmax pmax
comp=Z,262nm,1.0s
BDFB Brasilia 87.81 248 P **P** **09 37 54.3 +1.1**
BDFB IAMs_20 IAMs_20 10 23 12.5
comp=Z,28µm,20.0s
PD31 Pinedale Array 87.83 329 P **P** **09 37 52.8 -0.5**
PDAR Pinedale Array 87.83 329 P **P** **09 37 52.0 -1.3**
comp=Z,4.6nm,0.9s,baz=64,slow=3.4,SNR=13
PDAR PKKPbc **PKKPbc** **09 55 43.5 +4.6**
comp=Z,0.7nm,0.8s,baz=197,slow=2.8,SNR=4.7
PDAR PKPPKP **P'P'df** **10 03 46.4 -7.3**
comp=Z,0.3nm,0.4s,baz=142,slow=4.6,SNR=2.5
PDAR LR LR 10 17 42.1
comp=Z,19µm,21.9s,baz=24,slow=36
BW06 Boulder Array 87.83 329 P **P** **09 37 52.6 -0.7**
baz=33,SNR=14
BW06 Boulder Array 87.83 329 P **P** **09 37 52.5 -0.8**
BW06 IAmb IAmb 09 38 20.5
comp=Z,461nm,2.4s
BW06 IAMs_20 IAMs_20 10 24 46.6
comp=Z,32µm,20.0s
REDW Red Top Meadow 87.84 330 P **P** **09 37 53.6 +0.3**
F10A Beach Ranch, E 87.84 335 P **P** **09 37 52.6 -0.4**
F10A IAMs_20 IAMs_20 10 17 27.4
comp=Z,46µm,20.0s
N23A Red Feather La 87.88 325 P **P** **09 37 53.7 +0.1**
baz=35,SNR=52
PVCP Virac 87.89 74 *eP* **P** **09 37 55.5 +1.9**
KSCO Kaye Shedlock' 87.89 322 P **P** **09 37 53.5 0.0**
baz=37,SNR=28
KSCO Kaye Shedlock' 87.89 322 P **P** **09 37 53.5 0.0**
URIC Uribia, Colomb 88.07 284 *eP* **P** **09 37 54.5 0.0**
OKCFA Oklahoma City 88.12 317 IAMs_20 IAMs_20 10 18 50.0
comp=Z,37µm,20.0s
RCP Roxas 88.17 76‖ *eP* **P** **09 37 58.6 +3.6**
D03D Eldon 88.18 339 P **P** **09 37 56.8 +2.2**
baz=24,SNR=15
U32A Winter Ranch, 88.18 318 P **P** **09 37 54.6 -0.2**
U32A IAmb IAmb 09 38 20.7
comp=Z,168nm,0.9s
U32A IAMs_20 IAMs_20 10 17 16.4
comp=Z,41µm,21.0s
HAWA Hanford 88.19 337 P **P** **09 37 54.6 -0.1**
FNO Franklin 88.22 316 P **P** **09 37 54.8 -0.2**
Z38A Mt. Pleasant 88.42 314 P **P** **09 37 56.2 +0.3**
Z38A IAMs_20 IAMs_20 10 16 40.2
comp=Z,45µm,20.0s
AHID Auburn Hatcher 88.44 330 P **P** **09 37 55.8 -0.4**
AHID IAMs_20 IAMs_20 10 19 06.6
comp=Z,42µm,21.0s
LEM Lembang 88.48 100 P **P** **09 37 58.0 +1.4**
comp=Z,16nm,0.4s,baz=273,slow=4.6,SNR=4.3
LEM LR LR 10 19 46.5
comp=Z,18µm,21.6s,baz=302,slow=37
LEM Lembang 88.48 100 P **P** **09 37 58.0 +1.4**
LON Longmire 88.54 338 P **P** **09 37 55.9 -0.4**
LON pmax pmax
comp=Z,64nm,1.2s
LON Longmire 88.54 338 P **P** **09 37 55.9 -0.4**
LON IAMs_20 IAMs_20 10 23 14.7
comp=Z,44µm,19.0s
ISCO Idaho Springs 88.62 324 P **P** **09 37 56.0 -1.2**
ISCO pmax pmax
comp=Z,483nm,1.9s
ISCO MLR MLR
comp=Z,59µm,18.0s
ISCO Idaho Springs 88.62 324 P **P** **09 37 57.0 -0.2**
baz=35,SNR=38
ISCO Idaho Springs 88.62 324 P **P** **09 37 56.0 -1.2**
ISCO IAmb IAmb 09 38 05.6
comp=Z,483nm,1.9s
GUIM Jordan 88.66 77 *eP* **P** **09 37 58.7 +1.4**
BMO Blue Mountains 88.86 334 P **P** **09 37 56.9 -1.0**
BMO pmax pmax
comp=Z,101nm,1.3s
BMO MLR MLR
comp=Z,38µm,18.0s
BMO Blue Mountains 88.86 334 P **P** **09 37 56.9 -1.0**
BMO IAMs_20 IAMs_20 10 20 22.4
comp=Z,39µm,18.0s
SDV Santo Domingo 88.87 281 *eP* **P** **09 38 00.9 +2.4**
SDV Santo Domingo 88.87 281 P **P** **09 37 57.9 -0.7**
SDV IAmb IAmb 09 38 43.1
comp=Z,149nm,1.1s
SDV Santo Domingo 88.87 281 *eP* **P** **09 38 01.0 +2.5**
E04D Cinebar 88.93 339 P **P** **09 38 01.4 +3.3**
baz=24,SNR=6.3
MACA Macaparuro-AM 89.01 265 *eP* **P** **09 38 01.4 +2.5**
Q24A Divide 89.10 324 P **P** **09 37 58.8 -0.7**
baz=35
CISI Cisompet, Garu 89.11 101 IAMs_20 IAMs_20 10 18 44.6
comp=Z,37µm,22.0s
CNOP Candoni, Negro 89.21 78 *eP* **P** **09 38 02.9 +3.0**
F05D White Salmon 89.23 338 P **P** **09 38 03.1 +3.6**
baz=25
BSCB Bom Sucesso 89.23 242 *eP* **P** **09 38 02.4 +2.6**
VAS01 Vassouras-RJ 89.23 240 *eP* **P** **09 38 02.3 +2.6**
WMOK Wichita Mounta 89.34 317 P **P** **09 37 59.5 -0.8**
WMOK pmax pmax
comp=Z,86nm,1.0s
WMOK MLR MLR
comp=Z,36µm,22.0s
WMOK Wichita Mounta 89.34 317 P **P** **09 37 59.8 -0.5**
baz=39,SNR=114
WMOK Wichita Mounta 89.34 317 P **P** **09 37 59.5 -0.8**
WMOK Wichita Mounta 89.34 317 IAMs_20 IAMs_20 10 18 56.1
comp=Z,36µm,22.0s
NATX Nacogdoches 89.36 312 P **P** **09 38 01.1 +0.8**
baz=41
NATX Nacogdoches 89.36 312 IAMs_20 IAMs_20 10 21 02.7
comp=Z,37µm,18.0s
XMIS Christmas Isla 89.39 104 IAMs_20 IAMs_20 10 21 31.3
comp=Z,34µm,18.0s
F04A Amboy 89.46 338 IAMs_20 IAMs_20 10 19 10.1
comp=Z,34µm,21.0s
O20A White River Ci 89.49 326 P **P** **09 38 00.5 -0.7**
baz=34,SNR=26
O20A White River Ci 89.49 326 P **P** **09 38 00.4 -0.7**
O20A IAmb IAmb 09 38 30.1
comp=Z,180nm,1.2s
O20A IAMs_20 IAMs_20 10 20 01.6
comp=Z,46µm,20.0s
IPMB Ipameri, GO 89.53 246 *eP* **P** **09 38 04.1 +2.9**
Z35A Perchaven, San 89.61 315 P **P** **09 38 01.3 -0.2**
Z35A IAmb IAmb 09 38 09.0
comp=Z,163nm,1.1s
Z35A IAMs_20 IAMs_20 10 18 13.5
comp=Z,35µm,22.0s
HWUT Hardware Ranch 89.61 329 IAMs_20 IAMs_20 10 24 38.5
comp=Z,35µm,20.0s
MFID Camas Ranch 89.63 333 P **P** **09 38 01.6 0.0**
RDMU Red Mountain 89.68 327 P **P** **09 38 01.5 -0.5**
G05D Wamic, OR 89.77 337 P P 09 38 07.2 +5.2
baz=25
F03A Seaside 89.78 339 P **P** **09 38 02.9 +0.8**
F03A IAmb IAmb 09 38 26.8
comp=Z,366nm,1.5s
F03A IAMs_20 IAMs_20 10 18 53.5
comp=Z,41µm,20.0s
TCUT Toone Canyon 89.96 329 P **P** **09 38 02.8 -0.6**
MAN01 Angra dos Reis 89.98 240 *eP* **P** **09 38 06.0 +2.7**
SPUT South Promonto 90.21 330 P **P** **09 38 04.6 +0.2**
T25A Trinidad 90.23 322 P **P** **09 38 04.5 -0.2**
baz=36,SNR=33
SDCO Great Sand Dun 90.25 323 P **P** **09 38 03.9 -0.9**
baz=35,SNR=61
SDCO Great Sand Dun 90.25 323 P **P** **09 38 04.1 -0.7**
SDCO IAmb IAmb 09 38 12.7
comp=Z,196nm,1.4s
SDCO IAMs_20 IAMs_20 10 20 51.6
comp=Z,44µm,19.0s
I07A Izee 90.26 336 P **P** **09 38 05.1 +0.6**
I07A IAmb IAmb 09 38 42.6
comp=Z,277nm,1.8s
CLDB Colider 90.30 256 *eP* **P** **09 38 06.4 +1.5**
G03D McMinnville, O 90.36 338 P **P** **09 38 05.8 +1.0**
baz=23,SNR=8.7
ESAR Angra dos Reis 90.41 240 *eP* **P** **09 38 07.6 +2.4**
JLU Jordanelle 90.42 329 P **P** **09 38 04.9 -0.6**
CTU Camp Tracy 90.46 329 P **P** **09 38 05.5 -0.1**
H04A Detroit Lake 90.53 337 P **P** **09 38 05.5 -0.2**
ARAG Araguaiana, MT 90.56 250 *eP* **P** **09 38 08.3 +2.3**
J08A Circle Bar Ran 90.57 335 P **P** **09 38 06.4 +0.4**
J08A IAMs_20 IAMs_20 10 22 50.7
comp=Z,43µm,20.0s
I05D Terrebonne, OR 90.60 337 P **P** **09 38 09.0 +3.0**
baz=25
AMTX Amarillo 90.71 319 P **P** **09 38 07.8 +1.0**
baz=37
AMTX Amarillo 90.71 319 P **P** **09 38 07.4 +0.7**
AMTX IAMs_20 IAMs_20 10 18 35.2
comp=Z,32µm,20.0s
WHTX Lake Whitney, 90.74 314 P **P** **09 38 06.4 -0.4**
baz=40,SNR=27
WHTX Lake Whitney, 90.74 314 P **P** **09 38 06.5 -0.4**
WHTX IAmb IAmb 09 38 15.2
comp=Z,134nm,1.0s
SMRI Semarang 90.76 99 IAMs_20 IAMs_20 10 22 54.3
comp=Z,43µm,21.0s
BGU Big Grassy Mou 90.76 330 P **P** **09 38 07.1 +0.1**
H04D Lebanon 90.84 338 P **P** **09 38 09.8 +2.8**
baz=24,SNR=8.8
S22A 4UR Ranch, Cre 90.85 324 P **P** **09 38 07.5 -0.1**
baz=34,SNR=45
ARGC Ariguani, Magd 90.94 284 *eP* **P** **09 38 11.9 +3.9**
COR Corvallis 90.94 338 IAMs_20 IAMs_20 10 18 28.4
comp=Z,30µm,21.0s
PINE Pine Mountain 90.97 336 P **P** **09 38 07.8 -0.1**
PINE IAMs_20 IAMs_20 10 20 12.1
comp=Z,40µm,18.0s
PV22 Blue Mesa, Par 91.06 326 P **P** **09 38 07.9 -0.6**
PV22 IAmb IAmb 09 38 16.8
comp=Z,329nm,1.7s
PV22 IAMs_20 IAMs_20 10 23 22.1
comp=Z,41µm,19.0s
PV07 Paradox Valley 91.08 326 P **P** **09 38 08.2 -0.4**
PV07 IAMs_20 IAMs_20 10 18 33.5
comp=Z,47µm,22.0s
PV15 Paradox Valley 91.09 325 P **P** **09 38 08.3 -0.3**
PV15 IAmb IAmb 09 38 37.8
comp=Z,193nm,1.2s
PV15 IAMs_20 IAMs_20 10 18 23.8
comp=Z,48µm,22.0s
PV21 Cone Mtn., Par 91.12 326 P **P** **09 38 08.3 -0.5**
PV21 IAmb IAmb 09 38 17.2
comp=Z,337nm,1.7s
PV21 IAMs_20 IAMs_20 10 23 23.6
comp=Z,40µm,19.0s
PV23 Carpenter Ridg 91.22 326 P **P** **09 38 09.0 -0.3**
PV23 IAmb IAmb 09 38 39.8
comp=Z,154nm,1.1s
PV04 Paradox Valley 91.23 326 P **P** **09 38 09.1 -0.2**
PV09 Paradox Valley 91.24 326 P **P** **09 38 09.3 -0.1**
PV12 Saucer Basin, 91.25 326 P **P** **09 38 08.8 -0.6**
PV11 David Mesa, Pa 91.29 326 P **P** **09 38 09.1 -0.4**
PV14 Lion Creek, Pa 91.30 326 P **P** **09 38 09.1 -0.5**
PV20 West Nyswonger 91.30 326 P **P** **09 38 09.1 -0.4**
PV20 IAmb IAmb 09 38 18.0
comp=Z,392nm,1.8s
PV20 IAMs_20 IAMs_20 10 23 29.4
comp=Z,41µm,18.0s
PV01 Paradox Valley 91.30 325 P **P** **09 38 09.3 -0.3**
PV01 IAmb IAmb 09 38 18.0
comp=Z,210nm,1.4s
PV01 IAMs_20 IAMs_20 10 18 40.4
comp=Z,46µm,22.0s
PV10 Paradox Valley 91.30 326 P **P** **09 38 09.8 +0.1**
PV10 IAmb IAmb 09 38 39.3
comp=Z,184nm,1.2s
PV16 Nyswonger Mesa 91.30 326 P **P** **09 38 08.9 -0.7**
PV16 IAMs_20 IAMs_20 10 18 30.5
comp=Z,37µm,21.0s
OCAC Ocana 91.30 282 *eP* P 09 38 15.4 +5.6
DUG Dugway, Tooele 91.31 329 P **P** **09 38 09.3 -0.2**
DUG pmax pmax
comp=Z,73nm,1.0s
DUG MLR MLR
comp=Z,43µm,20.0s
DUG Dugway, Tooele 91.31 329 P **P** **09 38 09.0 -0.5**
baz=30,SNR=26
DUG Dugway, Tooele 91.31 329 P **P** **09 38 09.2 -0.2**
DUG IAMs_20 IAMs_20 10 20 05.2
comp=Z,43µm,20.0s
SRU San Rafael Swe 91.31 327 P **P** **09 38 08.6 -1.0**
SRU pmax pmax
comp=Z,56nm,0.9s
SRU San Rafael Swe 91.31 327 P **P** **09 38 08.6 -1.0**
PV02 Paradox Valley 91.31 326 P **P** **09 38 09.3 -0.4**
PV02 IAmb IAmb 09 38 38.3
comp=Z,207nm,1.4s
PV03 Paradox Valley 91.32 326 P **P** **09 38 09.3 -0.3**
PV03 IAmb IAmb 09 38 18.1
comp=Z,337nm,1.6s
PV03 IAMs_20 IAMs_20 10 18 31.0
comp=Z,41µm,20.0s
PV19 Morning Glory 91.33 326 P **P** **09 38 08.8 -1.0**
PV19 IAMs_20 IAMs_20 10 23 30.3
comp=Z,40µm,18.0s
PV17 East Wray Mesa 91.34 326 P **P** **09 38 09.2 -0.6**
PV17 IAmb IAmb 09 38 18.2
comp=Z,336nm,1.6s
PV18 Skein Mesa, Pa 91.35 326 P **P** **09 38 09.4 -0.4**
PV18 IAMs_20 IAMs_20 10 18 42.8
comp=Z,42µm,22.0s
UGM Wanagama 91.38 99 IAMs_20 IAMs_20 10 20 50.7
comp=Z,39µm,22.0s
HKT Hockley 91.38 312 P **P** **09 38 10.0 +0.3**
HKT pmax pmax
comp=Z,119nm,1.3s
HKT MLR MLR
comp=Z,41µm,18.0s
HKT Hockley 91.38 312 P **P** **09 38 10.0 +0.3**
PV13 Radium Mtn., P 91.39 326 P **P** **09 38 09.6 -0.5**
PV13 IAmb IAmb 09 38 38.6
comp=Z,332nm,1.7s
PV13 IAMs_20 IAMs_20 10 18 32.8
comp=Z,40µm,20.0s
I04A Tendick Farm, 91.41 337 P **P** **09 38 09.5 -0.3**
baz=24,SNR=6.3
PARB Paraibuna 91.41 240 *eP* **P** **09 38 11.4 +1.5**
ABTX Abilene, Hawle 91.43 316 P **P** **09 38 10.0 -0.1**
baz=39,SNR=42
ABTX Abilene, Hawle 91.43 316 P **P** **09 38 09.9 -0.1**
ABTX IAmb IAmb 09 38 18.4
comp=Z,205nm,1.2s
ABTX IAMs_20 IAMs_20 10 22 22.6
comp=Z,43µm,19.0s
TMUT Trail Mountain 91.43 328 P **P** **09 38 09.7 -0.6**
WVOR Wild Horse Val 91.45 334 P **P** **09 38 09.7 -0.4**
WVOR pmax pmax
comp=Z,110nm,1.2s
WVOR MLR MLR
comp=Z,32µm,20.0s
WVOR Wild Horse Val 91.45 334 P **P** **09 38 09.7 -0.4**
WVOR IAMs_20 IAMs_20 10 20 03.0
comp=Z,32µm,20.0s
SMLC San Martn de 91.50 283 *eP* **P** **09 38 12.5 +1.9**
J05D Fort Rock, OR 91.52 336 P **P** **09 38 12.7 +2.2**
baz=25,SNR=23
PV05 Paradox Valley 91.57 326 P **P** **09 38 09.8 -1.0**
PV05 IAMs_20 IAMs_20 10 18 45.7
comp=Z,41µm,21.0s
SJCC San Jacinto, C 91.61 284 *eP* **P** **09 38 15.1 +3.9**
435B Jarrell 91.73 314 P **P** **09 38 11.5 0.0**
baz=40,SNR=23
Q16A Castle Valley 91.74 328 P **P** **09 38 10.7 -0.9**
ELK Elko 91.75 331 P **P** **09 38 10.2 -1.4**
ELK pmax pmax
comp=Z,133nm,1.2s
ELK MLR MLR
comp=Z,56µm,20.0s
ELK Elko 91.75 331 P **P** **09 38 10.2 -1.4**
ELK IAmb IAmb 09 38 37.1
comp=Z,133nm,1.2s
I03D Drain, OR 91.77 338 P P 09 38 15.6 +4.3
baz=23
J04D Umpqua Nationa 91.83 337 P **P** **09 38 15.5 +3.6**
baz=24,SNR=6.3
BB19B Bebedouro 91.83 244 *eP* **P** **09 38 14.4 +2.5**
K05A Summer Lake 91.92 336 P **P** **09 38 11.4 -0.9**
K05A IAmb IAmb 09 38 51.6
comp=Z,212nm,1.3s
MSTX Muleshoe 91.98 319 P **P** **09 38 12.7 0.0**
baz=37,SNR=11
MSTX Muleshoe 91.98 319 P **P** **09 38 10.6 -2.0**
MSTX IAmb IAmb 09 38 20.4

comp=Z,258nm,1.9s
MVCO Mesa Verde 92.04 325 P **P** **09 38 13.6 +0.6**
baz=33,SNR=36
MVCO Mesa Verde 92.04 325 P **P** **09 38 12.4 -0.7**
RCLB Rio Claro- Sao 92.06 242 *eP* **P** **09 38 15.8 +2.9**
VAO Valinhos 92.08 241 *eP* **P** **09 38 16.0 +3.0**
ITRB Iturama 92.19 246 *eP* **P** **09 38 16.6 +3.1**
BARC Barichara 92.27 281 *eP* P 09 38 18.8 +4.3
K04D Chiloquin, OR 92.28 336 P **P** **09 38 16.5 +2.6**
baz=24
J01E Myrtle Point 92.43 338 P **P** **09 38 18.1 +3.7**
baz=23
MOD Modoc Plateau 92.48 335 P **P** **09 38 14.5 -0.4**
MSU Marysvale 92.50 328 P **P** **09 38 15.3 +0.2**
MSU Marysvale 92.50 328 P **P** **09 38 15.3 +0.2**
TCRU Three Creeks R 92.52 328 P **P** **09 38 15.2 -0.1**
RUSC La Rusia 92.65 280 *eP* **P** **09 38 18.2 +1.7**
RUSC La Rusia 92.65 280 P **P** **09 38 15.4 -1.1**
K02D Willamette Mer 92.78 338 P **P** **09 38 20.2 +4.0**
baz=23,SNR=6.6
SPB Sao Paulo 92.79 241 IAms_20 IAms_20 10 18 49.5
comp=Z,143µm,20.0s
SPB Sao Paulo 92.79 241 *eP* **P** **09 38 18.8 +2.5**
L04D Klamath Falls 92.82 337 P **P** **09 38 18.6 +2.2**
baz=24,SNR=7.7
KCP Kidapawan 92.88 78⇑ *eP* **P** **09 38 18.4 +1.3**
MTPU Mount Pierson 92.90 328 P **P** **09 38 17.5 +0.3**
ZARC Zaragoza, Cauc 92.94 282 *eP* **P** **09 38 17.6 +0.3**
ANMO Albuquerque 92.98 322 *de* **P** **09 38 16.7 -0.7**
ANMO pmax pmax
comp=Z,107nm,1.9s
ANMO MLR MLR
comp=Z,33µm,16.0s
ANMO Albuquerque 92.98 322 P **P** **09 38 17.3 -0.1**
baz=35
ANMO Albuquerque 92.98 322 P **P** **09 38 17.2 -0.1**
ANMO IAmb IAmb 09 38 25.9
comp=Z,299nm,2.1s
ANMO Albuquerque 92.98 322 IAMs_20 IAMs_20 10 22 30.0
comp=Z,31µm,19.0s
M04C Macdoel 93.07 336 P **P** **09 38 18.8 +1.2**
baz=24,SNR=28
PSUT Pine Spring 93.15 329 P **P** **09 38 18.5 +0.4**
PET01 Itanhaem-SP 93.16 241 *eP* **P** **09 38 20.0 +2.1**
JCT Junction City 93.18 315 P **P** **09 38 16.6 -1.6**
JCT pmax pmax
comp=Z,406nm,1.9s
JCT MLR MLR
comp=Z,48µm,20.0s
JCT Junction City 93.18 315 P **P** **09 38 16.5 -1.6**
baz=39,SNR=26
JCT Junction City 93.18 315 P **P** **09 38 16.6 -1.6**
DAV Davao City (W) 93.20 78⇓ *eP* **P** **09 38 18.7 +0.3**
PTBC PUERTO BERRIO, 93.26 281 *eP* **P** **09 38 20.6 +1.9**
UREC San Jos de Ur 93.27 283 *eP* **P** **09 38 21.0 +2.2**
735A Kenedy 93.33 313 IAMs_20 IAMs_20 10 26 06.3
comp=Z,33µm,19.0s
PKCU Pink Cliffs 93.46 328 P **P** **09 38 19.0 -0.8**
SALV Santo Antonio 93.50 252 *eP* **P** **09 38 23.7 +4.0**
SPBC San Pablo de B 93.55 280 *eP* P 09 38 24.9 +4.7
BNM Barren Site 93.71 322 P **P** **09 38 20.6 -0.2**
M02C Callahan 93.74 337 P **P** **09 38 22.5 +1.9**
baz=24,SNR=11
CCUT Cedar City 93.80 328 P **P** **09 38 20.2 -0.9**
Y22D IRIS PASSCAL I 93.91 322 P **P** **09 38 24.3 +2.7**
baz=34,SNR=7.4
Y22D IRIS PASSCAL I 93.91 322 IAMs_20 IAMs_20 10 23 22.9
comp=Z,35µm,19.0s
CHIC Chingaza 93.96 279 *eP* **P** **09 38 21.5 -0.9**
R11A Troy Canyon, C 93.97 330 P **P** **09 38 21.7 -0.2**
baz=29,SNR=36
R11A Troy Canyon, C 93.97 330 P **P** **09 38 21.9 0.0**
R11A IAMs_20 IAMs_20 10 21 50.0
comp=Z,33µm,19.0s
FRTB Fartura 94.07 243 *eP* **P** **09 38 24.6 +2.4**
N02D Trinity Center 94.07 336 P **P** **09 38 24.0 +1.8**
baz=24,SNR=12
PCMB Pacaembu 94.08 245 *eP* **P** **09 38 25.8 +3.6**
PAHR Pah Rah Range 94.14 333 P **P** **09 38 23.1 +0.5**
PAHR IAmb IAmb 09 38 45.4
comp=Z,241nm,1.9s
PAHR IAMs_20 IAMs_20 10 20 35.2
comp=Z,26µm,22.0s
NORC Norcasia 94.21 281 *eP* **P** **09 38 22.4 -0.8**
DBBC Dabeiba 94.26 283 *eP* **P** **09 38 27.1 +3.7**
ROSC El Rosal 94.26 280 P **P** **09 38 26.2 +2.4**
comp=Z,16nm,0.9s,baz=102,slow=6.7,SNR=6.7
ROSC LR LR 10 19 15.3
comp=Z,9µm,20.0s,baz=40,slow=34
KVN Kaiserville 94.28 332 P **P** **09 38 23.2 -0.1**
KVN pmax pmax
comp=Z,37nm,1.0s
KVN MLR MLR
comp=Z,40µm,18.0s
KVN Kaiserville 94.28 332 P **P** **09 38 23.2 -0.1**
HELC Santa Helena 94.29 282 *eP* **P** **09 38 23.1 -0.9**
U15A North Rim 94.32 327 P **P** **09 38 23.1 -0.5**
W18A Petrified Fore 94.33 325 P **P** **09 38 24.1 +0.5**
baz=33
WDC Whiskeytown Da 94.38 336 P **P** **09 38 22.5 -1.0**
WDC pmax pmax
comp=Z,61nm,1.3s
WDC Whiskeytown Da 94.38 336 P **P** **09 38 22.5 -1.0**
WDC IAMs_20 IAMs_20 10 28 26.4
comp=Z,37µm,21.0s
O03E Paynes Creek 94.41 335 P **P** **09 38 25.3 +1.6**
baz=24,SNR=6.6
JAGI Jajag, Banyuwa 94.48 97 IAMs_20 IAMs_20 10 24 27.9
comp=Z,32µm,22.0s
VCNR Virginia City 94.60 333 IAMs_20 IAMs_20 10 20 40.4
comp=Z,28µm,22.0s
SAML Samuel 94.61 262 *eP* **P** **09 38 27.6 +2.8**
JCC Jacoby Creek, 94.62 337 IAMs_20 IAMs_20 10 22 44.6
comp=Z,40µm,19.0s
833A Chaparral WMA, 94.63 313 P **P** **09 38 25.3 +0.5**
baz=39,SNR=18
WUAZ Wupatki 94.71 326 P **P** **09 38 26.1 +0.8**
baz=32,SNR=7.3
WUAZ Wupatki 94.71 326 P **P** **09 38 24.9 -0.4**
WUAZ IAMs_20 IAMs_20 10 24 23.8
comp=Z,34µm,18.0s
YERR Yerington 94.74 333 P **P** **09 38 26.8 +1.4**
YERR IAmb IAmb 09 38 39.6
comp=Z,190nm,1.6s
YERR IAMs_20 IAMs_20 10 23 42.0
comp=Z,32µm,20.0s
PNTR Pine Nut 94.77 333 IAMs_20 IAMs_20 10 20 54.8
comp=Z,29µm,22.0s
GUY2C Guyana, Caldas 94.80 281 *eP* **P** **09 38 28.3 +2.0**
RYN Ryan 94.81 332 P **P** **09 38 26.3 +0.6**
RYN IAMs_20 IAMs_20 10 22 47.9
comp=Z,33µm,19.0s
O02D Mt. Diablo Mer 94.83 336 P **P** **09 38 27.0 +1.3**
baz=24,SNR=12
NV11 Mina Array Sit 94.85 332 P **P** **09 38 25.9 0.0**
CBOC Ciudad Bolivar 94.87 282 *eP* **P** **09 38 26.3 0.0**
NVAR Mina Array Bea 94.91 332 P **P** **09 38 26.1 -0.1**
comp=Z,6.3nm,0.8s,baz=42,slow=4.6,SNR=21
NVAR PKKPbc **PKKPbc 09 55 23.3 +2.3**
comp=Z,1.8nm,0.8s,baz=216,slow=2.8,SNR=4.6
NVAR PKPPKP **P'P'df 10 03 37.9 -2.4**
comp=Z,0.7nm,0.8s,baz=192,slow=2.9,SNR=4.2
NVAR LR LR 10 23 31.1
comp=Z,53µm,18.6s,baz=22,slow=37
VILB Vilhena 94.92 257 *eP* **P** **09 38 29.0 +2.7**
ORV Oroville 94.98 335 IAMs_20 IAMs_20 10 24 29.4
comp=Z,28µm,20.0s
RUBR Rubicon Trail 94.99 334 IAMs_20 IAMs_20 10 20 53.7
comp=Z,35µm,22.0s
RREF El Recreo 95.00 281 *eP* P 09 38 32.9 +5.4
TIJ01 Guaruva-PR 95.02 241 *eP* **P** **09 38 29.7 +3.1**
MNTX Cornudas Mount 95.11 320 P **P** **09 38 26.0 -0.9**
baz=35
MNTX Cornudas Mount 95.11 320 P **P** **09 38 26.1 -0.9**
WAKR Walker 95.24 333 IAMs_20 IAMs_20 10 21 10.3
comp=Z,40µm,22.0s
AFDM Forest Hills D 95.36 334 IAMs_20 IAMs_20 10 22 29.4
comp=Z,38µm,21.0s
SHPR Sheep Range 95.42 329 P **P** **09 38 28.1 -0.4**
SHPR IAMs_20 IAMs_20 10 23 42.3
comp=Z,32µm,18.0s
TPNV Topopah Spring 95.45 330 P **P** **09 38 29.0 +0.3**
TPNV pmax pmax
comp=Z,42nm,1.2s
TPNV Topopah Spring 95.45 330 P **P** **09 38 29.1 +0.3**
baz=28,SNR=10
TPNV Topopah Spring 95.45 330 P **P** **09 38 28.9 +0.3**
TPNV IAMs_20 IAMs_20 10 28 25.1
comp=Z,35µm,18.0s
ORTC Ortega, Tolima 95.57 280 *eP* **P** **09 38 31.3 +2.0**
121A Cookes Peak, D 95.59 322 P **P** **09 38 29.0 -0.4**
baz=34,SNR=10
121A Cookes Peak, D 95.59 322 P **P** **09 38 28.9 -0.4**
X16A Lo Mia Camp, P 95.67 325 P **P** **09 38 30.1 +0.4**
X16A IAMs_20 IAMs_20 10 21 10.3
comp=Z,38µm,21.0s
PTLB Pontes e Lacer 95.73 255 *eP* **P** **09 38 32.2 +2.3**
MLAC Mammoth, Mammo 95.81 332 P P 09 38 35.0 +4.6
baz=27,SNR=7.5
GRAC Grapevine Rang 95.83 331 P **P** **09 38 32.1 +1.9**
baz=28,SNR=14
CMB Columbia Colle 95.99 333 IAMs_20 IAMs_20 10 24 42.0
comp=Z,29µm,20.0s
HOPS Hopland Field 96.00 336 IAMs_20 IAMs_20 10 24 42.2
comp=Z,41µm,20.0s
FURC Furnace Creek, 96.11 330 P **P** **09 38 34.6 +3.2**
baz=28,SNR=19
TX31 Lajitas Ar. Si 96.14 317 P **P** **09 38 31.4 -0.4**
TX32 Lajitas Array 96.14 317 P **P** **09 38 31.3 -0.5**
TXAR Lajitas Array 96.14 317 P **P** **09 38 31.0 -0.8**
comp=Z,13nm,0.9s,baz=62,slow=4.2,SNR=28
TXAR PKKPbc **PKKPbc 09 55 20.3 +2.9**
comp=Z,0.9nm,0.9s,baz=218,slow=5.7,SNR=3.2
TXAR PKPPKP **P'P'df 10 03 30.6 -6.7**
comp=Z,0.4nm,0.9s,baz=151,slow=5.7,SNR=3.6
TXAR LR LR 10 23 56.6
comp=Z,20µm,18.2s,baz=0.0,slow=37
LUWI Luwuk 96.33 86 IAMs_20 IAMs_20 10 26 28.3
comp=Z,29µm,21.0s
YOTC Yotoco, Valle 96.35 281 *eP* **P** **09 38 32.6 -0.4**
SHOC Shoshone, Teco 96.38 330 P **P** **09 38 34.5 +1.8**
baz=28,SNR=9.0
AQDB Aquidauana 96.46 249 *eP* **P** **09 38 35.7 +2.6**
KAPI Kappang 96.55 91 IAMs_20 IAMs_20 10 24 40.6
comp=Z,34µm,22.0s
TUQ Turquoise Moun 96.65 329 P **P** **09 38 36.9 +2.8**
baz=29
MPMC Manual Prospec 96.71 330 P **P** **09 38 34.4 -0.1**
baz=28,SNR=11
MCCM Marconi Confer 96.71 335 IAMs_20 IAMs_20 10 26 21.1
comp=Z,30µm,18.0s
GSC Goldstone, Bar 97.11 330 P Pdif 09 38 42.7 +6.4
baz=28,SNR=9.9
GSC Goldstone, Bar 97.11 330 IAMs_20 IAMs_20 10 23 45.1
comp=Z,36µm,21.0s
GMRC Granite Mounta 97.12 329 P Pdif 09 38 43.2 +6.9
baz=29
TUC Tucson 97.16 324 P Pdif 09 38 36.5 0.0
TUC pmax pmax
comp=Z,232nm,1.9s
TUC MLR MLR
comp=Z,50µm,18.0s
TUC Tucson 97.16 324 P Pdif 09 38 37.3 +0.8
baz=32
TUC Tucson 97.16 324 P Pdif 09 38 36.5 0.0
319A Douglas 97.25 322 IAMs_20 IAMs_20 10 21 57.2
comp=Z,39µm,22.0s
ISA Isabella, Lake 97.43 331 P Pdif 09 38 38.1 +0.5
ISA pmax pmax
comp=Z,67nm,1.2s
ISA MLR MLR
comp=Z,47µm,20.0s
ISA Isabella, Lake 97.43 331 P Pdif 09 38 39.3 +1.7
baz=27,SNR=14
ISA Isabella, Lake 97.43 331 P Pdif 09 38 38.1 +0.5
ISA IAmb IAmb 09 39 03.3
comp=Z,67nm,1.1s
IRM Iron Mountain 97.46 328 P Pdif 09 38 40.3 +2.6
baz=29,SNR=5.8
SAO San Andreas Ge 97.50 334 IAMs_20 IAMs_20 10 23 54.9
comp=Z,33µm,20.0s
SIV San Ignacio 97.51 256 LR LR 10 21 27.8
comp=Z,18µm,21.3s,baz=82,slow=35
Y12C Blythe 97.55 327 P Pdif 09 38 43.5 +5.4
baz=30
PMPB Monarch Peak 97.77 333 IAMs_20 IAMs_20 10 29 52.2
comp=Z,29µm,19.0s
BELC Belle Mtn. Jos 97.94 328 P Pdif 09 38 45.3 +5.3
baz=29
EDW2 Edwards Air Fo 97.94 330 P Pdif 09 38 44.4 +4.5
baz=27,SNR=12
BC3 Big Chuckawall 98.02 328 P Pdif 09 38 45.4 +5.1
baz=29,SNR=5.2
BBRC Big Bear Solar 98.07 329 P Pdif 09 38 46.3 +5.6
baz=28
113A Mohawk Valley, 98.08 326 IAMs_20 IAMs_20 10 26 10.0
comp=Z,31µm,18.0s
GLA Glamis 98.28 327 P Pdif 09 38 47.6 +6.2
baz=30
GLA Glamis 98.28 327 IAMs_20 IAMs_20 10 26 16.3
comp=Z,38µm,19.0s
BBAC Balboa, Cauca 98.31 280 *eP* Pdif 09 38 46.1 +4.1
214A Organ Pipe Nat 98.37 325 P Pdif 09 38 46.5 +4.7
baz=31,SNR=5.6
214A Organ Pipe Nat 98.37 325 IAMs_20 IAMs_20 10 25 07.6
comp=Z,38µm,19.0s
BFSC Mount Baldy Ra 98.38 330 P Pdif 09 38 46.9 +5.0
baz=28
PFO Pinyon Flats O 98.46 329 P Pdif 09 38 47.4 +5.1
baz=28,SNR=9.0
XPFO Pion Flat 98.46 329 IAMs_20 IAMs_20 10 26 23.8
comp=Z,39µm,20.0s
TPFO Pinon Flats 98.46 329 P Pdif 09 38 47.4 +5.1
baz=28
JTS Las Juntas de 98.47 291 LR LR 10 22 46.3
comp=Z,8µm,18.5s,baz=96,slow=35
MWC Mount Wilson 98.55 330 IAMs_20 IAMs_20 10 26 24.0
comp=Z,37µm,19.0s
PKM Mcpherson Peak 98.61 332 P Pdif 09 38 48.9 +5.9
baz=26
DECC Green Verdugo 98.62 330 P Pdif 09 38 46.4 +3.5
baz=27
PASC Pasadena Art C 98.64 330 IAMs_20 IAMs_20 10 26 27.5
comp=Z,29µm,18.0s
MURC Murrieta 98.76 329 P Pdif 09 38 48.8 +5.3
baz=28
SWSC Sam W. Stewart 98.78 328 P Pdif 09 38 49.0 +5.5
baz=29
MONP2 Monument Peak 99.08 328 P **Pdif** **09 38 49.4 +4.2**
baz=28,SNR=5.2
99.11 317 IAMs_20 IAMs_20 10 29 02.7
HPIG
comp=Z,35µm,18.0s
IKP In-Ko-Pah, Jac 99.16 328 P **Pdif** **09 38 50.9 +5.5**
baz=29
109C Camp Elliot, M 99.35 329 P **Pdif** **09 38 51.7 +5.6**
baz=28
109C Camp Elliot, M 99.35 329 IAMs_20 IAMs_20 10 27 41.5
comp=Z,28µm,19.0s
BAR Barrett 99.36 328 IAMs_20 IAMs_20 10 26 41.8
comp=Z,34µm,21.0s
CIS Catalina Islan 99.41 330 P **Pdif** **09 38 50.8 +4.4**
baz=27
SCI2 San Clemente I 99.84 330 P **Pdif** **09 38 56.3 +8.0**
baz=27
100.01 322 IAMs_20 IAMs_20 10 31 00.2
HSIG
comp=Z,34µm,18.0s
ZAIG Zacatecas 100.74 312 IAMs_20 IAMs_20 10 27 13.6
comp=Z,26µm,19.0s
MMRI Maumere 100.75 92 IAMs_20 IAMs_20 10 32 47.9
comp=Z,33µm,22.0s
CPUP Villa Florida 101.35 245 *eP* **Pdif** **09 38 57.1 +2.2**
LPAZ La Paz 102.97 260 *eP* **Pdif** **09 39 04.7 +1.6**
ITQB Itaqui 102.97 242 *eP* **Pdif** **09 39 03.7 +1.7**
SOEI Soe 103.00 92 IAMs_20 IAMs_20 10 32 50.6
comp=Z,30µm,22.0s
SLBS Sierra La Lagu 103.97 318 IAMs_20 IAMs_20 10 26 48.4
comp=Z,35µm,21.0s
PB16 IPOC Station P 105.26 259 IAMs_20 IAMs_20 10 30 34.6
comp=Z,22µm,20.0s
MBWA Marble Bar 106.58 104 IAMs_20 IAMs_20 10 32 40.8
comp=Z,28µm,19.0s
HOPE Hope Point 108.06 213 IAMs_20 IAMs_20 10 28 11.2
comp=Z,22µm,22.0s
PB10 IPOC Station P 109.14 255 IAMs_20 IAMs_20 10 33 23.7
comp=Z,19µm,20.0s
SYO Syowa Base 109.48 175⇑ *eX* **Pdif** **09 39 37.4 +7.5**
SYO Syowa Base 109.48 175⇑ *eX* **Pdif** **09 39 40.0 +10**
AC02 Maricunga 110.05 251 IAMs_20 IAMs_20 10 31 05.6
comp=Z,26µm,22.0s
WAKE Wake Island 110.64 39 IAMs_20 IAMs_20 10 34 41.8
comp=Z,28µm,20.0s
CO01 Juntas del Tor 112.54 249 IAMs_20 IAMs_20 10 33 58.7
comp=Z,23µm,21.0s
GO04 Tololo Observa 113.16 249 IAMs_20 IAMs_20 10 31 27.9
comp=Z,23µm,22.0s
VNA1 Neumayer--Stat 113.25 192 PKiKP **PKiKP** **09 43 44.7 +4.7**
VNA2 Neumayer--Watz 113.37 191 PKiKP **PKiKP** **09 43 43.9 +3.6**
SNAA Sanae 113.42 189 PKiKP **PKiKP** **09 43 44.7 +4.2**
CO02 Combarbal 113.87 249 IAMs_20 IAMs_20 10 36 46.9
comp=Z,20µm,21.0s
VNA3 Neumayer Olymp 114.00 192 PKiKP **PKiKP** **09 43 45.7 +4.2**
MT02 Curacav 115.10 247 IAMs_20 IAMs_20 10 33 42.3
comp=Z,32µm,21.0s
PATS Pohnpei 116.19 54 IAMs_20 IAMs_20 10 36 45.4
comp=Z,28µm,22.0s
WB0 Warramunga Arr 116.83 94 IAMs_20 IAMs_20 10 38 21.0
comp=Z,21µm,21.0s
WB9 Warramunga Arr 116.84 94 IAMs_20 IAMs_20 10 38 20.2
comp=Z,21µm,21.0s
WB8 Warramunga Arr 116.85 94 IAMs_20 IAMs_20 10 38 20.5
comp=Z,22µm,22.0s
WB6 Warramunga Arr 116.86 94 IAMs_20 IAMs_20 10 38 20.9
comp=Z,20µm,20.0s
WB7 Warramunga Arr 116.86 94 IAMs_20 IAMs_20 10 38 20.6
comp=Z,17µm,21.0s
WC1 Warramunga Arr 116.88 94 IAMs_20 IAMs_20 10 38 10.4
comp=Z,21µm,21.0s
WB4 Warramunga Arr 116.88 94 IAMs_20 IAMs_20 10 38 10.5
comp=Z,22µm,22.0s
WRA Warramunga Arr 116.89 94 PKP **PKiKP** **09 43 50.0 +1.3**
comp=Z,5.3nm,0.9s,baz=307,slow=2.2,SNR=6.1
WRA PKKP **PKKPdf 09 54 35.5 -4.6**
comp=Z,3.6nm,0.9s,baz=114,slow=3.3,SNR=8.0
WRA Warramunga Arr 116.89 94 PKiKP **PKiKP** **09 43 50.0 +1.3**
WB3 Warramunga Arr 116.89 94 IAMs_20 IAMs_20 10 38 11.7
comp=Z,22µm,22.0s
WR1 Warramunga Arr 116.89 94 IAMs_20 IAMs_20 10 38 10.7
comp=Z,19µm,22.0s
WB2 Warramunga Arr 116.90 94 IAMs_20 IAMs_20 10 38 10.9
comp=Z,22µm,22.0s
WC2 Warramunga Arr 116.90 94 IAMs_20 IAMs_20 10 38 11.9
comp=Z,22µm,22.0s
WC4 Warramunga Arr 116.90 94 IAMs_20 IAMs_20 10 38 11.0
comp=Z,23µm,22.0s
WB1 Warramunga Ar. 116.91 94 IAMs_20 IAMs_20 10 38 23.1
comp=Z,18µm,20.0s
WR2 Warramunga Arr 116.91 94 IAMs_20 IAMs_20 10 38 11.2
comp=Z,19µm,21.0s
WC3 Warramunga Arr 116.93 94 IAMs_20 IAMs_20 10 38 11.6
comp=Z,23µm,22.0s
WR3 Warramunga Arr 116.93 94 IAMs_20 IAMs_20 10 38 11.7
comp=Z,23µm,22.0s
WR4 Warramunga Arr 116.95 94 IAMs_20 IAMs_20 10 38 13.1
comp=Z,21µm,21.0s
WR6 Warramunga Arr 116.99 94 IAMs_20 IAMs_20 10 38 14.1
comp=Z,23µm,22.0s
WR7 Warramunga Arr 117.00 94 IAMs_20 IAMs_20 10 38 14.6
comp=Z,24µm,22.0s
WR8 Warramunga Arr 117.02 94 IAMs_20 IAMs_20 10 38 26.1
comp=Z,24µm,21.0s
WR9 Warramunga Arr 117.03 94 IAMs_20 IAMs_20 10 38 26.4
comp=Z,24µm,21.0s
WR0 Warramunga Arr 117.06 94 IAMs_20 IAMs_20 10 38 27.0
comp=Z,24µm,20.0s
KEKH Kekaha 117.88 5 IAMs_20 IAMs_20 10 34 54.9
comp=Z,21µm,22.0s
OPA Opana 118.28 4 IAMs_20 IAMs_20 10 45 42.4
comp=Z,21µm,19.0s
BI03 Tigo 118.30 244 IAMs_20 IAMs_20 10 37 10.1
comp=Z,23µm,20.0s
KIP Kipapa 118.54 4 IAMs_20 IAMs_20 10 39 01.4
comp=Z,24µm,22.0s
PLCA Paso Flores 118.59 239 PKP **PKPdf** **09 43 50.0 -1.4**
comp=Z,2.2nm,0.8s,baz=334,slow=1.0,SNR=5.9
PLCA Paso Flores 118.59 239 PKiKP **PKPdf** **09 43 50.0 -1.4**
PLCA Paso Flores 118.59 239 **PKiKP** **09 43 51.0 -0.4**
HON Honolulu 118.64 4 IAMs_20 IAMs_20 10 39 05.1
comp=Z,24µm,22.0s
ASAR Alice Springs 118.69 98 PKP **PKPdf** **09 43 49.4 -2.6**
comp=Z,5.5nm,0.8s,baz=320,slow=1.4,SNR=6.4
ASAR PKKPbc **PKKPab 09 54 08.1 -1.6**
comp=Z,2.8nm,1.0s,baz=121,slow=3.5,SNR=5.1
KHLH Kahului Airpor 119.12 2 IAMs_20 IAMs_20 10 36 42.7
comp=Z,23µm,21.0s
HLK Haleakala 119.26 2 IAMs_20 IAMs_20 10 36 25.5
comp=Z,21µm,20.0s
HPAH Hawaii Prepara 120.00 1 IAMs_20 IAMs_20 10 37 21.0
comp=Z,21µm,21.0s
RABL Rabaul 120.25 68 IAMs_20 IAMs_20 10 39 11.1
comp=Z,21µm,21.0s
POHA Pohakuloa 120.27 1 IAMs_20 IAMs_20 10 37 29.2
comp=Z,20µm,21.0s
KHLU Kahalu`u 120.43 1 IAMs_20 IAMs_20 10 38 02.4
comp=Z,22µm,21.0s
MLOA Mauna Loa Obse 120.49 1 IAMs_20 IAMs_20 10 37 35.0
comp=Z,22µm,21.0s
LL01 San Ignacio de 120.61 239 IAMs_20 IAMs_20 10 43 33.1
comp=Z,19µm,20.0s
KHU Kahuku 120.78 1 IAMs_20 IAMs_20 10 38 12.6
comp=Z,20µm,21.0s
JOHN Johnston Islan 121.61 17 IAMs_20 IAMs_20 10 34 53.1
comp=Z,31µm,22.0s
CASY Casey 124.25 151 IAMs_20 IAMs_20 10 41 34.0
comp=Z,25µm,19.0s
PMSA Palmer Station 125.34 212 IAMs_20 IAMs_20 10 49 03.1
comp=Z,19µm,20.0s
CTA Charters Tower 126.08 86 PKP **PKPdf** **09 44 04.9 -1.4**
comp=Z,11nm,0.8s,baz=250,slow=2.4,SNR=9.8
CTAO Charters Tower 126.08 86 PKiKP **PKPdf** **09 44 05.1 -1.2**
CTAO Charters Tower 126.08 86 **PKPdf** **09 44 05.0 -1.2**
CTAO Charters Tower 126.08 86 IAMs_20 IAMs_20 10 43 43.0
comp=Z,24µm,20.0s
STKA Stephens Creek 128.76 102 PKP **PKPdf** **09 44 09.6 -1.5**
comp=Z,4.0nm,0.9s,baz=21,slow=3.3,SNR=5.2
STKA Stephens Creek 128.76 102 **PKiKP** **09 44 11.1 -0.6**
HNR Honiara 129.39 65 IAMs_20 IAMs_20 10 47 00.4
comp=Z,18µm,22.0s
QSPA South Pole Qui 130.12 180 PKP **PKPdf** **09 44 11.1 -1.5**
comp=Z,48nm,1.2s,baz=321,slow=0.8,SNR=16
QSPA South Pole Qui 130.12 180 **PKPdf** **09 44 12.1 -0.5**
EIDS Eidsvold 132.72 89 IAMs_20 IAMs_20 10 48 12.8
comp=Z,21µm,21.0s
TOO Toolangi 134.11 107 PKiKP **PKPdf** **09 44 19.1 -2.0**
TOO MLR MLR
comp=Z,46µm,20.0s
TOO Toolangi 134.11 107 **PKPdf** **09 44 19.1 -2.0**
XMAS Kiritimati 137.80 4 IAMs_20 IAMs_20 10 55 16.8
comp=Z,23µm,21.0s
VNDA Vanda 138.52 167 PKhKP PKPpre 09 44 22.4
comp=Z,2.1nm,1.0s,baz=271,slow=3.8,SNR=5.4
LHI Lord Howe Isla 141.85 92 IAMs_20 IAMs_20 10 59 21.6
comp=Z,12µm,19.0s
DZM Mont Dzumac 142.44 73 *e*PKiKP **PKPdf** **09 44 37.5 +0.7**
comp=Z,126nm,1.2s
DZM Mont Dzumac 142.44 73 *e*LR LR 10 31 24.4
comp=Z,76µm,23.3s
TAOE Nuku Hiva Isla 146.15 334 *e*PKPbc **PKPbc** **09 44 43.7 -0.8**
comp=Z,929nm,1.3s
TAOE Nuku Hiva Isla 146.15 334 IAMs_20 IAMs_20 11 02 21.2
comp=Z,17µm,20.0s
MCQ Macquarie Isla 146.17 131 IAMs_20 IAMs_20 10 47 45.1
comp=Z,17µm,22.0s
AFI Afiamalu 149.74 35 PKPdf **PKPdf** **09 44 47.6 -1.8**
AFI **PKPab** **09 44 58.2 -1.1**
DCZ Deep Cove 151.71 113 IAMs_20 IAMs_20 11 03 14.3
comp=Z,18µm,20.0s
MLZ Mavora Lakes 152.38 113 IAMs_20 IAMs_20 10 54 05.1
comp=Z,18µm,22.0s
PMOR Pomariorio Ree 154.14 345 *e*PKPbc **PKiKP** **09 45 04.1 +0.1**
comp=Z,184nm,1.3s
VAH Vaihoa 154.31 344 *e*PKPbc **PKiKP** **09 45 04.3 -0.1**
comp=Z,133nm,1.1s
PTCN Pitcairn Islan 154.49 299 IAMs_20 IAMs_20 10 57 03.7
comp=Z,12µm,20.0s
OXZ Oxford 155.06 108 IAMs_20 IAMs_20 11 00 12.3
comp=Z,18µm,20.0s
NIUE Niue 155.11 36 IAMs_20 IAMs_20 11 00 19.2
comp=Z,18µm,21.0s
RKT Rikitea 156.17 310 *e*SS SS 10 08 54.0 +1.3
comp=Z,445nm,39.8s
RKT Rikitea 156.17 310 *e*LR LR 10 37 33.3
comp=Z,32µm,29.8s
TIAR Tiarei 156.90 347 *e*PKPbc **PKPab** **09 45 29.2 -0.1**
comp=Z,53nm,1.3s
PPT2 Papeete2 156.97 348 *e*PKPbc **PKPab** **09 45 29.2 -0.4**
comp=Z,185nm,1.4s
PPT2 Papeete2 156.97 348 *e*SS SS 10 09 02.3 +2.2
comp=Z,21µm,35.2s
PPT2 Papeete2 156.97 348 *e*LR LR 10 37 50.6
comp=Z,38µm,23.2s

PAE	**Paea**	**157.04**	**348**	*e*PKPbc	**PKPab**	**09 45 29.3**	**-0.5**
	comp=Z,24nm,1.2s							
TVO	**Taravao**	**157.11**	**347**	*e*PKPbc	**PKPab**	**09 45 30.1**	**-0.1**
	comp=Z,74nm,1.4s							
TBI	**Tubuai**	**162.57**	**344**	*e*SS	SS	10 10 03.1	+4.1
	comp=Z,18μm,36.0s							
TBI	**Tubuai**	**162.57**	**344**	*e*LR	LR	10 40 40.0	
	comp=Z,56μm,26.2s							

ATH ***24*** *09:31:18.4,40˚.44N×26˚.21E,h28km±1km,ML4.9/1, Error ellipse: s-maj=1.8km s-min=0.7km az=31.0*
DDA ***24*** *09:31:18.3,40˚.40N×26˚.31E,h7km±3km,MW5.3*
ISK ***24*** *09:31:18.1,40˚.43N×26˚.24E,h7km,ML4.9/35*
THE ***24*** *09:31:19.8,40˚.46N×26˚.16E,h14km±1km,ML4.4/6, Error ellipse: s-maj=1.2km s-min=0.5km az=101.0*

ISC 24 09:31:18.1±1.0,**40˚45N**±0˚.02×**26˚24E**±0˚.02,**h10**km±8km, **n105,σ0°86/135,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GELI	**Tayfur-Gelibol**	**0.18**	**106**	PG	**Pg**	**09 31 22.7**	**+0.7**
ENEZ	**Enez**	**0.29**	**347**	P	**Pb**	**09 31 25.4**	**0.0**
ENEZ				S	**Sb**	**09 31 30.1**	**-0.3**
	141μm,0.4s						
ERIK	**Erikli-Kesan**	**0.30**	**43**	PG	**Pb**	**09 31 25.1**	**-0.5**
GADA	**Gvkgeada**	**0.37**	**226**	P	**Pb**	**09 31 26.3**	**-0.4**
GADA				S	**Sb**	**09 31 31.9**	**-0.5**
GADA	**Gvkgeada**	**0.37**	**226**	PG	**Pb**	**09 31 26.2**	**-0.4**
LPK	**Lapseki**	**0.40**	**101**	PG	**Pg**	**09 31 26.5**	**+0.5**
LPK				SG	**Sb**	**09 31 32.5**	**-0.9**
ALN	**Alexandroupoli**	**0.47**	**342**	P	**Pb**	**09 31 28.6**	**+0.1**
ALN				S	**Sb**	**09 31 35.0**	**-0.4**
ALN	**Alexandroupoli**	**0.47**	**342**	P	**Pb**	**09 31 28.5**	**+0.1**
ALN				S	**Sb**	**09 31 35.1**	**-0.4**
ALN	**Alexandroupoli**	**0.47**	**342**	PG	**Pb**	**09 31 28.1**	**-0.4**
ALN				SG	**Sb**	**09 31 35.4**	**-0.1**
KESN	**Edirne-Kesan**	**0.50**	**41**	*i* P	**Pg**	**09 31 26.0**	**-2.0**
KESN				*i* S	**Sg**	**09 31 35.2**	**+0.6**
KESN				IAML		09 31 42.0	
	comp=E,13μm,0.2s						
KESN				IAML		09 31 44.0	
	comp=N,18μm,0.3s						
SMTH	**Samothraki Isl**	**0.54**	**273**	P	**Pb**	**09 31 29.2**	**-0.5**
SMTH				S	**Sg**	**09 31 36.5**	**+0.6**
	comp=N,24μm,0.4s						
SMTH	**Samothraki Isl**	**0.54**	**273**	P	**Pb**	**09 31 29.3**	**-0.5**
SMTH				S	**Sb**	**09 31 36.9**	**-0.7**
BOZC	**Bozcaada**	**0.62**	**194**	PG	**Pg**	**09 31 29.8**	**-0.4**
BOZC	**Bozcaada**	**0.62**	**194**	*i* P	**Pg**	**09 31 29.7**	**-0.4**
BOZC				*i* S	**Sg**	**09 31 38.8**	**+0.4**
BOZC				IAML		09 31 44.0	
	comp=N,7μm,0.3s						
BOZC				IAML		09 31 45.0	
	comp=E,7μm,0.3s						
EZN	**Ezine**	**0.63**	**174**	PG	**Pg**	**09 31 30.4**	**+0.2**
UKOP	**Uzunkopru-Edir**	**0.74**	**23**	PG	**Pb**	**09 31 33.3**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**0.74**	**162**	*i* P	**Pg**	**09 31 32.3**	**-0.2**
BAYC				*i* S	**Sg**	**09 31 40.5**	**-1.7**
BAYC				IAML		09 31 42.0	
	comp=E,15μm,0.4s						
BAYC				IAML		09 31 42.0	
	comp=N,12μm,0.8s						
RKY	**Sarkoy-Tekirda**	**0.75**	**71**	PG	**Pb**	**09 31 33.1**	**-0.1**
RKY				SG	**Sb**	**09 31 42.9**	**-0.6**
KRBG	**Karabiga-Canak**	**0.81**	**94**	PG	**Pg**	**09 31 33.5**	**-0.1**
RDO	**Rodhopi**	**0.88**	**323**	P	**Pb**	**09 31 35.6**	**+0.2**
RDO	**Rodhopi**	**0.88**	**323**	P	**Pb**	**09 31 35.3**	**-0.1**
RDO				S	**Sb**	**09 31 48.1**	**+0.9**
RDO	**Rodhopi**	**0.88**	**323**	PG	**Pb**	**09 31 35.7**	**+0.3**
LIA	**Limnos Island**	**0.98**	**236**	P	**Pg**	**09 31 37.0**	**+0.1**
LIA				S	**Sg**	**09 31 50.1**	**+0.4**
	comp=N,10μm,0.6s						
LIA	**Limnos Island**	**0.98**	**236**	P	**Pg**	**09 31 37.0**	**+0.1**
LIA				S	**Sg**	**09 31 49.8**	**+0.1**
KNL	**Balıkesir**	**1.00**	**100**	*i* P	**Pg**	**09 31 36.5**	**-0.7**
KNL				*i* S	**Sb**	**09 31 51.1**	**+0.6**
KNL				IAML		09 31 54.0	
	comp=N,13μm,0.4s						
KNL				IAML		09 31 56.0	
	comp=E,12μm,0.5s						
MRMT	**Marmara Adasi**	**1.04**	**81**	PG	**Pg**	**09 31 37.8**	**-0.3**
TKR	**Tekirdag**	**1.12**	**61**	PN	**Pn**	**09 31 40.1**	**+0.3**
THAS	**Thassos island**	**1.17**	**278**	P	**Pb**	**09 31 40.7**	**+0.3**
THAS				S	**Sg**	**09 31 55.1**	**-0.7**
	comp=E,11μm,0.4s						
THAS	**Thassos island**	**1.17**	**278**	P	**Pn**	**09 31 41.1**	**+0.6**
THAS				S	**Sg**	**09 31 55.4**	**-0.4**
GONE	**Gonen-Balikesi**	**1.18**	**110**	PN	**Pn**	**09 31 40.9**	**+0.4**
AYVA	**Ayvalik**	**1.19**	**163**	*i* P	**Pg**	**09 31 40.8**	**-0.2**
AYVA				*i* S	**Sg**	**09 31 55.7**	**-0.7**
AYVA				IAML		09 31 57.0	
	comp=E,13μm,0.7s						
AYVA				IAML		09 31 58.0	
	comp=N,11μm,0.4s						
PRK	**Paraskevi**	**1.20**	**179**	P	**Pn**	**09 31 41.9**	**+1.0**
PRK				S	**Sn**	**09 31 58.8**	**+1.6**
	comp=N,44μm,0.7s						
PRK	**Paraskevi**	**1.20**	**179**	P	**Pn**	**09 31 41.8**	**+0.9**
PRK				S	**Sb**	**09 31 57.5**	**+1.1**
EDC	**Edincik**	**1.24**	**94**	PN	**Pg**	**09 31 41.2**	**-0.7**
BALY	**Balya**	**1.27**	**123**	*i* P	**Pg**	**09 31 40.1**	**-2.4**
BALY				IAML		09 31 56.0	
	comp=N,6μm,1.7s						
BALY				*i* S	**Sg**	**09 31 58.2**	**-0.8**
SIGR	**SIGRI**	**1.27**	**194**	P	**Pn**	**09 31 41.9**	**+0.1**
SIGR				S	**Sb**	**09 31 59.3**	**+0.9**
	comp=N,48μm,0.3s						
SIGR	**SIGRI**	**1.27**	**194**	P	**Pn**	**09 31 41.9**	**+0.1**
SIGR				S	**Sg**	**09 31 59.1**	**+0.1**
SIGR				AML	AML	09 32 00.1	
SIGR				AML	AML	09 32 00.1	
	comp=E,87759μm,0.3s						
SIGR	**SIGRI**	**1.27**	**194**	PN	**Pn**	**09 31 41.7**	**-0.1**
CRLT	**Corlu**	**1.32**	**59**	PN	**Pg**	**09 31 43.6**	**+0.1**
EFSA	**Agios Efstrati**	**1.32**	**227**	P	**Pn**	**09 31 42.6**	**+0.1**
EFSA				S	**Sn**	**09 32 01.4**	**+1.2**
KDZ	**Kurdzhali**	**1.35**	**333**	P	**Pg**	**09 31 45.2**	**+1.1**
KDZ				S	**Sb**	**09 32 00.6**	**-0.2**
KDZ	**Kurdzhali**	**1.35**	**333**	PN	**Pg**	**09 31 43.9**	**-0.2**
KAVA	**Kavala**	**1.42**	**293**	P	**Pn**	**09 31 44.6**	**+0.7**
KAVA				S	**Sb**	**09 32 02.4**	**-0.4**
KAVA	**Kavala**	**1.42**	**293**	P	**Pg**	**09 31 45.2**	**-0.2**
BOTS	**Marmara Eregli**	**1.43**	**67**	PN	**Pn**	**09 31 44.5**	**+0.5**
EDRB	**Edirne**	**1.45**	**15**	P	**Pn**	**09 31 44.1**	**-0.2**
EDRB	**Edirne**	**1.45**	**15**	PN	**Pn**	**09 31 44.7**	**+0.4**
DKL	**Dikili**	**1.47**	**159**	PN	**Pb**	**09 31 45.5**	**+0.1**
BALB	**Balikesir**	**1.49**	**122**	PN	**Pn**	**09 31 45.4**	**+0.5**
KVLA	**Kavala**	**1.49**	**290**	P	**Pn**	**09 31 44.9**	**0.0**
KVLA				S	**Sn**	**09 32 03.6**	**-0.8**
STEP	**BALIKESIR_Sava**	**1.56**	**133**	*i* P	**Pn**	**09 31 45.8**	**0.0**
STEP				IAML		09 32 18.0	
	comp=E,4μm,1.4s						
STEP				IAML		09 32 24.0	
	comp=N,6μm,2.2s						
ZEDA	**zmir-Bergama**	**1.61**	**156**	*i* P	**Pn**	**09 31 45.1**	**-1.4**
ZEDA				*i* S	**Sn**	**09 32 08.0**	**+0.6**
ZEDA				IAML		09 32 36.0	
	comp=E,3μm,1.5s						
KCTX	**Karacabey (Bur**	**1.62**	**96**	PN	**Pn**	**09 31 46.9**	**+0.2**
SLVT	**Silivri**	**1.68**	**62**	PN	**Pb**	**09 31 48.7**	**-0.4**
DIM	**Dimitrovgrad**	**1.69**	**342**	P	**Pn**	**09 31 48.0**	**+0.4**
DIM				S	**Sn**	**09 32 08.0**	**-1.2**
OUR	**Ouranopolis**	**1.73**	**267**	P	**Pn**	**09 31 47.7**	**-0.5**
CTYL	**Yalikoy Yolu**	**1.86**	**56**	PN	**Pn**	**09 31 51.1**	**+1.2**
KRBN	**Karaburun**	**1.87**	**173**	PN	**Pn**	**09 31 50.6**	**+0.6**
CTKS	**Kestanelik-??a**	**1.89**	**65**	PN	**Pb**	**09 31 52.4**	**-0.2**
AVCI	**Avcilar-stanb**	**1.96**	**73**	PN	**Pn**	**09 31 52.4**	**+1.1**
PSRA	**Psara**	**1.98**	**196**	P	**Pn**	**09 31 52.2**	**+0.7**
AKS	**Akhisar**	**1.98**	**142**	PN	**Pn**	**09 31 51.7**	**+0.1**
ARMT	**Armutlu**	**2.00**	**86**	PN	**Pn**	**09 31 53.1**	**+1.2**
DST	**Dursunbey**	**2.01**	**114**	PN	**Pn**	**09 31 53.0**	**+0.9**
PLD	**Plovdiv**	**2.02**	**325**	PN	**Pn**	**09 31 53.7**	**+1.5**
JMB	**Yambol**	**2.03**	**7**	PN	**Pb**	**09 31 53.9**	**-1.2**
SKY	**Skiros Island**	**2.04**	**220**	P	**Pn**	**09 31 51.8**	**-0.7**
HVHR	**Bakirkoy-Istan**	**2.04**	**74**	PN	**Pb**	**09 31 54.2**	**-1.0**
BGKT	**Bogazkoy**	**2.06**	**68**	PN	**Pn**	**09 31 53.8**	**+1.2**
CHOS	**Chios island**	**2.06**	**184**	P	**Pn**	**09 31 52.9**	**+0.1**
URLA	**Izmir**	**2.10**	**172**	PN	**Pn**	**09 31 54.3**	**+1.0**
PLG	**Polygyros**	**2.14**	**269**	P	**Pn**	**09 31 54.0**	**+0.2**
BLCB	**Balcova**	**2.15**	**163**	PN	**Pn**	**09 31 54.5**	**+0.6**
GOMA	**Golmarmara-Man**	**2.17**	**143**	PN	**Pn**	**09 31 55.5**	**+1.3**
AOS	**Alonnisos**	**2.22**	**236**	P	**Pn**	**09 31 55.9**	**+0.9**
KAVV	**Kandilli-Istan**	**2.23**	**73**	PN	**Pn**	**09 31 56.3**	**+1.3**
ALNA	**Alonissos**	**2.25**	**235**	P	**Pn**	**09 31 54.5**	**-0.7**
GEMT	**Gemlik**	**2.25**	**89**	PN	**Pb**	**09 31 57.4**	**-1.3**
TUZL	**Tuzla-Istanbul**	**2.33**	**80**	PN	**Pn**	**09 31 58.2**	**+1.8**
YLV	**Yalova**	**2.39**	**86**	PN	**Pn**	**09 31 59.3**	**+2.0**
YLVH	**Yalova**	**2.40**	**83**	PN	**Pn**	**09 31 59.3**	**+2.0**
DGB	**zmir**	**2.44**	**168**	*i* P	**Pn**	**09 31 57.1**	**-0.8**
KYMI	**Kymi, Euboea I**	**2.46**	**223**	P	**Pn**	**09 31 58.6**	**+0.4**
SKIA	**Skiathos**	**2.49**	**240**	P	**Pn**	**09 31 58.9**	**+0.2**
SMAA	**Simav-Kutahya**	**2.50**	**122**	PN	**Pn**	**09 32 00.9**	**+2.1**
SIMA	**Simav-Kutahya**	**2.51**	**122**	PN	**Pn**	**09 32 00.4**	**+1.4**
TVSB	**Tavsanli**	**2.67**	**111**	PN	**Pn**	**09 32 02.2**	**+1.1**
KULA	**Kula-Manisa**	**2.69**	**135**	PN	**Pn**	**09 32 02.4**	**+1.0**
MRKA	**Markates**	**2.69**	**231**	P	**Pn**	**09 32 01.0**	**-0.4**
SHAP	**Saphane-Kutahy**	**2.70**	**121**	PN	**Pn**	**09 32 02.7**	**+1.1**
ROIA	**ROIAK**	**2.77**	**17**	P	**Pn**	**09 32 03.0**	**+0.5**
SMG	**Samos**	**2.77**	**170**	P	**Pn**	**09 32 02.8**	**+0.3**
KARY	**Karystos**	**2.79**	**211**	P	**Pn**	**09 32 02.5**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**2.81**	**152**	PN	**Pn**	**09 32 03.8**	**+0.7**
GEDZ	**Gediz**	**2.82**	**119**	PN	**Pn**	**09 32 04.3**	**+1.1**
GCAM	**G?zelcami?**	**2.85**	**164**	PN	**Pn**	**09 32 04.4**	**+0.9**
DION	**Dionisos Attik**	**2.97**	**218**	P	**Pn**	**09 32 04.6**	**-0.6**
TNSA	**Tinos**	**3.02**	**196**	P	**Pn**	**09 32 05.4**	**-0.6**
LKR	**Lokris**	**3.08**	**235**	P	**Pn**	**09 32 06.4**	**-0.4**
ATHU	**Athens Univers**	**3.13**	**218**	P	**Pn**	**09 32 06.5**	**-0.9**
BORA	**Eskisehir**	**3.28**	**99**	PN	**Pn**	**09 32 11.9**	**+2.4**
APE	**Apeiranthos**	**3.42**	**190**	P	**Pn**	**09 32 11.0**	**-0.5**
APE	**Apeiranthos**	**3.42**	**190**	PN	**Pn**	**09 32 12.8**	**+1.3**
BODT	**Bodrum**	**3.48**	**166**	PN	**Pn**	**09 32 13.9**	**+1.6**
KALE	**Kalithea**	**3.78**	**238**	P	**Pn**	**09 32 16.3**	**-0.1**

DDA ***24*** *09:33:47.4,40˚.42N×26˚.22E,h7km±4km,ML4.4*
ISK ***24*** *09:33:48.1,40˚.42N×26˚.17E,h8km,ML4.0/11*

ISC 24 09:33:48.3±0.8,**40˚42N**±0˚.02×**26˚17E**±0˚.03,**h17**km±7km, **n33,σ1°05/44,1D,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GELI	**Tayfur-Gelibol**	**0.23**	**95**	PG	**Pg**	**09 33 53.2**	**-0.5**
GELI				SG	**Sg**	**09 33 57.5**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.23**	**95**		Sb	09 33 57.5	-0.4
GADA	**Gvkgeada**	**0.31**	**222**	PG	**Pg**	**09 33 54.8**	**-0.1**
GADA				SG	**Sb**	**09 33 59.7**	**-0.3**
GADA	**Gvkgeada**	**0.31**	**222**		**Pb**	**09 33 55.1**	**-0.2**
ENEZ	**Enez**	**0.32**	**358**	PG	**Pb**	**09 33 55.3**	**-0.2**
ENEZ				SG	**Sg**	**09 33 59.8**	**+0.1**
ERIK	**Erikli-Kesan**	**0.36**	**46**	PG	**Pg**	**09 33 55.6**	**-0.3**
ERIK				SG	**Sg**	**09 34 01.1**	**+0.1**
LPK	**Lapseki**	**0.45**	**96**	PG	**Pg**	**09 33 57.4**	**-0.1**
LPK				SG	**Sb**	**09 34 04.5**	**+0.2**
ALN	**Alexandroupoli**	**0.49**	**349**	PG	**Pg**	**09 33 58.0**	**-0.1**
ALN				SG	**Sg**	**09 34 04.5**	**-0.2**
ALN	**Alexandroupoli**	**0.49**	**349**		**Sb**	**09 34 05.6**	**+0.4**
KESN	**Edirne-Kesan**	**0.56**	**44**	*i* P	**Pn**	**09 34 01.9**	**+0.1**
BOZC	**Bozcaada**	**0.58**	**189**	PG	**Pg**	**09 33 59.4**	**-0.5**
BOZC				SG	**Sb**	**09 34 08.2**	**+0.2**
BOZC	**Bozcaada**	**0.58**	**189**	*i* P	**Pg**	**09 33 58.9**	**-0.9**
BOZC				*i* P	**Pg**	**09 33 59.4**	**-0.5**
BOZC				*i* S	**Sg**	**09 34 07.6**	**-0.1**
EZN	**Ezine**	**0.60**	**169**	PG	**Pb**	**09 34 00.4**	**0.0**
EZN				SG	**Sb**	**09 34 08.9**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**0.74**	**157**	*i* P	**Pb**	**09 34 02.9**	**+0.3**
BAYC				*i* S	**Sg**	**09 34 12.3**	**-0.2**
SART	**Tekirdag**	**0.82**	**70**	*i* P	**Pg**	**09 34 02.7**	**-1.6**
RDO	**Rodhopi**	**0.87**	**327**	PG	**Pg**	**09 34 04.9**	**-0.3**
KNL	**Balıkesir**	**1.05**	**98**	*i* P	Pg	09 33 55.5	-13
KNL				*i* S	**Sg**	**09 34 21.7**	**-0.7**
MRMT	**Marmara Adasi**	**1.10**	**80**	PN	**Pg**	**09 34 09.3**	**-0.4**
AYVA	**Ayvalik**	**1.18**	**160**	*i* P	**Pg**	**09 34 10.1**	**-1.0**
AYVA				*i* S	**Sg**	**09 34 25.4**	**-1.1**
AYVA				IAML		09 34 29.0	
	comp=N,14μm,0.7s						
SIGR	**SIGRI**	**1.23**	**191**		**Pb**	**09 34 11.2**	**+0.1**
KDZ	**Kurdzhali**	**1.35**	**335**	*i* P	**Sb**	**09 34 30.6**	**+0.4**
EDRB	**Edirne**	**1.49**	**17**	PN	**Pn**	**09 34 15.4**	**+1.1**
BALB	**Balikesir**	**1.53**	**120**	PN	**Pn**	**09 34 15.7**	**+1.0**
AVCI	**Avcilar-stanb**	**2.02**	**73**	PN	**Pn**	**09 34 23.2**	**+1.6**
DST	**Dursunbey**	**2.05**	**113**	PN	**Pn**	**09 34 23.7**	**+1.7**
ORLT	**Orhaneli**	**2.12**	**99**	PN	**Pn**	**09 34 24.8**	**+1.8**
ISK	**Istanbul-Kandi**	**2.29**	**73**	PN	**Pn**	**09 34 27.2**	**+2.0**
KAVV	**Kandilli-Istan**	**2.29**	**73**	PN	**Pn**	**09 34 27.6**	**+2.4**
GEMT	**Gemlik**	**2.31**	**89**	PN	**Pn**	**09 34 27.2**	**+1.7**
SMAA	**Simav-Kutahya**	**2.54**	**120**	PN	**Pn**	**09 34 30.9**	**+2.2**
ITM	**Ithomi**	**4.63**	**227**		**Pn**	**09 34 59.4**	**+2.0**
TIR	**Tirane**	**4.87**	**283**	⇓P	**Pb**	**09 35 13.2**	**+0.2**
CLL	**Collm**	**14.21**	**324**	*e*P	**P**	**09 37 14.0**	**-1.9**

SKO ***24*** *09:34:04.9,39˚.43N×25˚.51E,h84km*
IDC ***24*** *09:34:14.1±0.9,40˚.07N×24˚.14E,h0km,mb4.3/7, mb1 4.5/10,mb1mx4.2/40,mbtmp4.4/10,ML4.0/3, Error ellipse: s-maj=20.6km s-min=16.3km az=167.0*
ATH ***24*** *09:34:14.5,40˚.03N×24˚.26E,h28km±1km,ML4.6/11, Error ellipse: s-maj=1.4km s-min=0.8km az=39.0*
NEIC ***24*** *09:34:15.4±1.1,40˚.01N±0˚.04×24˚.24E±0˚.05,h13km±5km, Error ellipse: s-maj=6.5km s-min=5.8km az=207.0*
ISK ***24*** *09:34:15.1,39˚.99N×24˚.12E,h4km,ML5.0/20*
THE ***24*** *09:34:15.4,40˚.02N×24˚.26E,h14km±1km,ML4.4/9, Error ellipse: s-maj=1.3km s-min=0.6km az=55.0*

ISC 24 09:34:15.0±1.0,**40˚02N**±0˚.02×**24˚27E**±0˚.02,**h8**km±7km, **n157,σ1°23/185,mb4.6**/12,**19C-19D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUR	**Ouranopolis**	**0.39**	**325**	P	**Pb**	**09 34 23.2**	**-0.8**
OUR				S	**Sb**	**09 34 28.8**	**-1.4**
	52μm,0.5s						
OUR	**Ouranopolis**	**0.39**	**325**	P	**Pg**	**09 34 22.8**	**+0.3**
OUR				S	**Sg**	**09 34 28.5**	**+0.9**
OUR				AML	AML	09 34 29.3	
OUR				AML	AML	09 34 34.5	
	comp=E,87344μm,0.4s						
OUR	**Ouranopolis**	**0.39**	**325**	PG	**Pg**	**09 34 22.7**	**+0.2**
OUR				SG	**Sg**	**09 34 28.2**	**+0.6**
OUR	**Ouranopolis**	**0.39**	**325**		**Pb**	**09 34 23.2**	**-0.8**
OUR					**Sb**	**09 34 28.8**	**-1.4**
PAIG	**Paliouri**	**0.46**	**259**	P	**Pg**	**09 34 24.4**	**+0.5**
PAIG				S	**Sb**	**09 34 31.6**	**-0.7**
	comp=E,19μm,0.3s						
PAIG	**Paliouri**	**0.46**	**259**	P	**Pg**	**09 34 24.3**	**+0.5**
PAIG				S	**Sb**	**09 34 31.9**	**-0.4**
PAIG				AML	AML	09 34 34.7	
	comp=N,44122μm,0.3s						
PAIG				AML	AML	09 34 35.3	
	comp=E,32817μm,0.2s						
PAIG	**Paliouri**	**0.46**	**259**		**Pg**	**09 34 24.4**	**+0.5**
PAIG					**Sb**	**09 34 31.6**	**-0.7**
THAS	**Thassos island**	**0.68**	**30**	P	**Pb**	**09 34 28.7**	**-0.4**
THAS				S	**Sb**	**09 34 38.6**	**-0.1**
	comp=E,134μm,0.5s						
THAS	**Thassos island**	**0.68**	**30**	P	**Pb**	**09 34 28.6**	**-0.4**
THAS				S	**Sb**	**09 34 38.2**	**-0.5**
THAS				AML	AML	09 34 39.2	
THAS				AML	AML	09 34 39.4	
THAS	**Thassos island**	**0.68**	**30**		**Pb**	**09 34 28.7**	**-0.4**
THAS					**Sb**	**09 34 38.6**	**-0.1**
LIA	**Limnos Island**	**0.71**	**99**	P	**Pg**	**09 34 29.0**	**+0.3**
LIA				S	**Sb**	**09 34 39.5**	**-0.1**
	comp=E,121μm,0.5s						
LIA	**Limnos Island**	**0.71**	**99**	P	**Pb**	**09 34 29.3**	**-0.3**
LIA				S	**Sb**	**09 34 38.9**	**-0.6**
LIA				AML	AML	09 34 40.3	
LIA				AML	AML	09 34 40.4	
PLG	**Polygyros**	**0.72**	**300**	P	**Pg**	**09 34 28.6**	**-0.3**
PLG				S	**Sg**	**09 34 38.8**	**+0.4**
	comp=E,50μm,0.5s						
PLG	**Polygyros**	**0.72**	**300**	P	**Pg**	**09 34 28.9**	**0.0**
PLG				S	**Sg**	**09 34 38.8**	**+0.4**
PLG				AML	AML	09 34 42.6	
PLG				AML	AML	09 34 42.7	
	comp=N,79438μm,0.5s						
PLG	**Polygyros**	**0.72**	**300**		**Pg**	**09 34 28.6**	**-0.3**
EFSA	**Agios Efstrati**	**0.73**	**130**	P	**Pg**	**09 34 29.5**	**+0.5**
EFSA				S	**Sb**	**09 34 39.8**	**-0.3**
EFSA				AML	AML	09 34 41.2	
EFSA				AML	AML	09 34 41.5	
	comp=N,86270μm,0.8s						
AOS	**Alonnisos**	**0.90**	**200**	P	**Pg**	**09 34 32.0**	**-0.2**
AOS				S	**Sb**	**09 34 45.6**	**+0.7**
	comp=N,15μm,0.6s						
AOS	**Alonnisos**	**0.90**	**200**	P	**Pg**	**09 34 32.0**	**-0.2**
AOS				S	**Sb**	**09 34 45.1**	**+0.2**
AOS				AML	AML	09 34 50.2	
	comp=N,23712μm,0.3s						
AOS				AML	AML	09 34 56.4	
	comp=E,34210μm,0.9s						
AOS	**Alonnisos**	**0.90**	**200**	PG	**Pg**	**09 34 31.9**	**-0.2**
AOS				SG	**Sg**	**09 34 44.7**	**+0.8**
ALNA	**Alonissos**	**0.92**	**200**	P	**Pg**	**09 34 32.5**	**-0.2**
ALNA				S	**Sb**	**09 34 46.0**	**+0.5**
ALNA				AML	AML	09 34 51.1	
ALNA				AML	AML	09 34 51.3	
KVLA	**Kavala**	**0.92**	**6**	P	**Pg**	**09 34 32.8**	**+0.1**
KVLA				S	**Sb**	**09 34 45.0**	**-0.7**
KVLA				AML	AML	09 34 47.2	
	comp=E,91877μm,0.5s						
KVLA				AML	AML	09 34 49.3	
	comp=N,51068μm,0.5s						
KAVA	**Kavala**	**1.00**	**11**	P	**Pg**	**09 34 33.1**	**-1.0**
KAVA				S	**Sn**	**09 34 48.3**	**-1.2**
	comp=N,20μm,0.3s						
KAVA	**Kavala**	**1.00**	**11**	P	**Pg**	**09 34 33.0**	**-1.1**
KAVA				S	**Sg**	**09 34 46.7**	**-0.3**
KAVA				AML	AML	09 34 48.5	
	comp=N,40101μm,0.3s						
KAVA				AML	AML	09 34 49.3	
	comp=E,39805μm,0.3s						
XOR	**Xorichti**	**1.05**	**232**	P	**Pg**	**09 34 34.7**	**-0.6**
SOH	**Sokhos**	**1.06**	**319**	P	**Pb**	**09 34 35.5**	**-0.2**
SOH				S	**Sb**	**09 34 49.5**	**-0.3**
	comp=E,30μm,0.5s						
HORT	**Hortiatis**	**1.06**	**303**	P	**Pg**	**09 34 35.2**	**-0.2**
HORT				S	**Sb**	**09 34 49.9**	**+0.1**
	comp=E,12μm,0.4s						
HORT	**Hortiatis**	**1.06**	**303**	P	**Pg**	**09 34 35.3**	**-0.2**
HORT	**Hortiatis**	**1.06**	**303**	PG	**Pg**	**09 34 34.8**	**-0.6**
HORT				SG	**Sg**	**09 34 49.1**	**-0.2**
NEO	**Neokhori**	**1.07**	**229**	P	**Pg**	**09 34 35.1**	**-0.4**
SKY	**Skiros Island**	**1.16**	**169**	P	**Pb**	**09 34 35.9**	**-1.4**
SKY				S	**Sg**	**09 34 52.3**	**+0.1**
SKY				AML	AML	09 34 57.2	
	comp=N,30898μm,0.2s						
SKY				AML	AML	09 34 57.4	
	comp=E,25400μm,0.2s						
SRS	**Serrai**	**1.21**	**335**	P	**Pb**	**09 34 37.3**	**-0.8**
GADA	**Gvkgeada**	**1.26**	**82**	PN	**Pg**	**09 34 41.8**	**+2.6**
LIT	**Litokhoron**	**1.37**	**274**		**Pn**	**09 34 39.5**	**-0.9**
BOZC	**Bozcaada**	**1.38**	**97**	PN	**Pg**	**09 34 43.3**	**+1.8**
RDO	**Rodhopi**	**1.48**	**40**	P	**Pn**	**09 34 40.7**	**-1.2**
RDO	**Rodhopi**	**1.48**	**40**	PN	**Pg**	**09 34 44.5**	**+1.1**
LRSO	**Larissa Observ**	**1.49**	**257**	P	**Pn**	**09 34 41.8**	**-0.1**
KNT	**Kendrikon**	**1.55**	**318**	PN	**Pb**	**09 34 43.8**	**-0.1**
KNT				SN	**Sg**	**09 35 04.1**	**-0.6**
EZN	**Ezine**	**1.59**	**96**	PN	**Pg**	**09 34 46.4**	**+0.9**
ENEZ	**Enez**	**1.61**	**63**	PN	**Pg**	**09 34 46.7**	**+0.9**
ALN	**Alexandroupoli**	**1.62**	**56**	PN	**Pg**	**09 34 46.9**	**+1.0**
ALN	**Alexandroupoli**	**1.62**	**56**	Pn	**Pn**	**09 34 43.1**	**-0.6**
GELI	**Tayfur-Gelibol**	**1.73**	**77**	PN	**Pg**	**09 34 47.9**	**-0.2**
PSRA	**Psara**	**1.78**	**145**	P	**Pn**	**09 34 45.6**	**-0.4**
THL	**Klokotos Trika**	**1.79**	**256**	P	**Pn**	**09 34 45.6**	**-0.6**
AGG	**Agios Georgios**	**1.80**	**237**		**Pn**	**09 34 45.6**	**-0.7**
VAY	**Valandovo**	**1.83**	**316

SORM	**Soroca**	**8.63**	**19**	⇑P		**Pn**	**09 36 19.0 -1.0**
WDD	**Wied Dalam**	**8.76**	**245**	Pn		**Pn**	**09 36 21.2 -0.6**
CORL	**Corleone**	**8.80**	**260**	Pn		**Pn**	**09 36 21.9 -0.6**
CLTB	**Caltabellotta**	**8.97**	**258**	Pn		**Pn**	**09 36 26.7 +1.8**
MURB	**Monte Urbino**	**9.37**	**294**	Pn		**Pn**	**09 36 30.8 +0.5**
CTI	**Castel Tesino**	**11.02**	**307**	Pn		**Pn**	**09 36 52.1 -0.9**
VSL	**Villasalto**	**11.48**	**272**	Pn		**Pn**	**09 36 58.7 -0.4**
GERES	**GERESS Array B**	**11.61**	**323**	Pn		**Pn**	**09 37 04.8 +3.9**
	comp=E,0.1nm,0.3s,baz=155,slow=12,SNR=1.9						
MSSA	**Maissana**	**11.76**	**296**	Pn		**Pn**	**09 37 03.5 +0.5**
FUORN	**Ofenpass-Fuorn**	**12.14**	**308**	Pn		**Pn**	**09 37 09.3 +0.9**
ESDC	**Sonseca Array**	**21.65**	**278**	P		**P**	**09 39 04.4 -1.4**
	comp=E,15nm,1.2s,baz=72,slow=10,SNR=5.9						
EKA	**Eskdalemuir Ar**	**23.78**	**319**	P		**P**	**09 39 26.4 -1.4**
	comp=E,4.6nm,0.8s,baz=108,slow=9.7,SNR=5.5						
PESTR	**Estremoz**	**24.57**	**278**	P		**P**	**09 39 34.8 -0.5**
PESTR				IAmb		IAmb	09 39 43.5
	comp=Z,18nm,1.2s						
COI	**Coimbra**	**24.92**	**281**	P		**P**	**09 39 35.7 -2.7**
PVAQ	**Vaqueiros**	**25.03**	**274**	P		**P**	**09 39 37.9 -1.5**
PVAQ				IAmb		IAmb	09 39 45.5
	comp=Z,34nm,1.4s						
TORD	**Torodi Ar. Bea**	**33.33**	**223**	P		**P**	**09 40 53.8 +0.4**
	comp=Z,3.7nm,0.6s,baz=30,slow=8.9,SNR=7.5						
MK31	**Makanchi Array**	**41.86**	**61**	P		**P**	**09 42 04.0 -1.4**
MKAR	**Makanchi Array**	**41.86**	**61**	P		**P**	**09 42 06.0 +0.6**
	comp=Z,2.8nm,0.7s,baz=283,slow=6.1,SNR=5.4						
ZALV	**Zalesovo Beam**	**42.28**	**50**	P		**P**	**09 42 09.1 +0.4**
	comp=Z,13nm,1.0s,baz=279,slow=8.8,SNR=4.6						
TLY	**Talaya**	**53.89**	**49**	P		**P**	**09 43 38.6 +0.1**
TLY				IAmb		IAmb	09 43 45.5
	comp=Z,10.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**66.78**	**85**	P		**P**	**09 45 09.6 +2.4**
	comp=Z,2.5nm,0.7s,baz=304,slow=8.1,SNR=6.7						
BOSA	**Boshof**	**68.29**	**179**	P		**P**	**09 45 17.0 +0.5**
BOSA				IAmb		IAmb	09 45 21.3
	comp=Z,11nm,1.4s						
C36M	**Paulatuk**	**68.47**	**348**	P		**P**	**09 45 16.6 -0.5**
C36M				IAmb		IAmb	09 45 22.2
	comp=Z,9.1nm,1.3s						
KSRS	**Korea Array**	**75.90**	**53**	P		**P**	**09 46 04.3 +2.2**
	comp=Z,2.1nm,0.8s,baz=325,slow=4.7,SNR=5.5						

ISK 24 09:34:16.7,40°.34N×26°.26E,h5km,ML4.1/10,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GELI	**Tayfur-Gelibol**	**0.18**	**70**	PG	Pg	09 34 20.6	+0.4
GELI				SG	Sg	09 34 24.4	+1.8
ERIK	**Erikli-Kesan**	**0.39**	**30**	PG	Pg	09 34 23.8	-0.4
LPK	**Lapseki**	**0.39**	**85**	PG	Pg	09 34 24.8	+0.6
LPK				SG	Sg	09 34 30.1	+0.9
ENEZ	**Enez**	**0.41**	**349**	PG	Pg	09 34 25.3	+0.7
ENEZ				SG	Sg	09 34 31.1	+1.2
EZN	**Ezine**	**0.51**	**174**	PG	Pb	09 34 27.6	-0.6
EZN				SG	Sb	09 34 35.0	-0.9
BOZC	**Bozcaada**	**0.52**	**198**	PG	Pg	09 34 26.9	+0.2
BOZC				SG	Sg	09 34 34.5	+1.1
ALN	**Alexandroupoli**	**0.58**	**344**	PG	Pg	09 34 28.6	+0.7
MRMT	**Marmara Adasi**	**1.05**	**75**	PG	Pg	09 34 37.1	+0.2
BALB	**Balikesir**	**1.43**	**119**	PN	Pn	09 34 43.2	0.0
EDRB	**Edirne**	**1.55**	**14**	PN	Pb	09 34 45.6	-0.3

*IDC **24** 09:34:26.7±2.6,6°.22S×130°.04E,h103km±29km,mb4.0/2, mb1 4.1/6,mb1mx3.6/44,mbtmp4.4/6,Error ellipse: s-maj=44.8km s-min=16.8km az=83.0*
*NEIC **24** 09:34:29.0±3.0,6°.01S±0°.06×130°.3E±0°.1,h134km±8km, mb4.1/4,Error ellipse: s-maj=19.6km s-min=8.9km az=82.0*

ISC 24 09:34:27.5±0.8,6°.10S±0°.05×130°.18E±0°.10,h146km,n17, σ3§45/24,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.18**	**149**	Pn	**Pn**	**09 35 06.4**	**+1.8**
FAKI	**Fak Fak**	**3.77**	**33**		**Pn**	**09 35 23.9**	**-0.9**
FAKI				Sn	**Sn**	**09 36 04.8**	**-4.3**
SIJI	**Sorong**	**5.30**	**12**	P	**Pn**	**09 35 45.2**	**+0.2**
	15nm,0.3s,baz=36,slow=18,SNR=104						
SIJI				S	**Sn**	**09 36 40.2**	**-5.2**
	18nm,0.3s,baz=236,slow=23,SNR=15						
MTN	**Manton Dam**	**6.77**	**172**		**Pn**	**09 36 06.7**	**+2.2**
MTN				Sn	**Sn**	**09 37 17.9**	**-2.6**
SOEI	**Soe**	**6.89**	**238**	Pn	**Pn**	**09 36 04.0**	**-2.3**
KNRA	**Kununurra**	**9.62**	**188**		**Pn**	**09 36 44.2**	**+1.5**
KNRA					**Sn**	**09 38 24.9**	**-4.3**
FITZ	**Fitzroy Crossi**	**12.72**	**200**	P	**Pn**	**09 37 23.8**	**+0.4**
	1.4nm,0.3s,baz=21,slow=9.7,SNR=40						
FITZ				S	**Sn**	**09 39 39.1**	**-5.0**
	1.2nm,0.3s,baz=284,slow=21,SNR=5.5						
FITZ	**Fitzroy Crossi**	**12.72**	**200**		**Pn**	**09 37 24.1**	**+0.7**
FITZ					**Sn**	**09 39 39.7**	**-4.4**
WRA	**Warramunga Arr**	**14.34**	**164**	P	**Pn**	**09 37 42.6**	**-1.5**
	0.7nm,0.3s,baz=341,slow=12,SNR=34						
WRA				S	Sn	09 40 11.1	-12
	2.3nm,0.3s,baz=345,slow=22,SNR=8.6						
COEN	**Coen**	**14.98**	**122**	Pn	**Pn**	**09 37 53.2**	**+1.1**
AS31	**Alice Springs**	**17.83**	**169**	P	**Pn**	**09 38 28.3**	**+1.6**
AS31				IAmb	IAmb	09 38 29.4	
	comp=Z,3.5nm,0.5s						
ASAR	**Alice Springs**	**17.83**	**169**	P	**Pn**	**09 38 28.4**	**+1.7**
	comp=Z,0.9nm,0.3s,baz=347,slow=9.4,SNR=86						
ASAR				S	**S**	**09 41 35.8**	**-7.2**
	comp=Z,0.3nm,0.3s,baz=348,slow=26,SNR=4.5						
PSA00	**Pilbara Seismi**	**18.35**	**212**	P	**Pn**	**09 38 36.0**	**+3.2**
PSA00				IAmb	IAmb	09 38 36.8	
	comp=Z,9.3nm,0.6s						
BBOO	**Buckleboo**	**27.14**	**169**	P	**P**	**09 39 59.2**	**+2.1**
STKA	**Stephens Creek**	**27.78**	**159**	P	**P**	**09 40 04.7**	**+1.9**
	comp=Z,1.1nm,0.4s,baz=334,slow=8.5,SNR=11						
MKAR	**Makanchi Array**	**67.57**	**327**	P	**P**	**09 45 12.6**	**+4.2**
	comp=Z,2.3nm,0.4s,baz=114,slow=7.8,SNR=26						
MAKZ	**Makanchi**	**67.75**	**326**	P	**P**	**09 45 13.8**	**+4.4**

*ISK **24** 09:40:07.4,40°.20N×25°.18E,h5km,ML4.2/35*
*THE **24** 09:40:08.8,40°.24N×25°.26E,h2km±15km,ML3.4/5,Error ellipse: s-maj=15.1km s-min=0.6km az=137.0*
*ATH **24** 09:40:08.3,40°.20N×25°.19E,h28km±1km,ML3.6/8,Error ellipse: s-maj=3.2km s-min=0.8km az=249.0*
*DDA **24** 09:40:12.3,40°.40N×25°.71E,h7km±2km,ML3.8*

ISC 24 09:40:08.7±0.9,40°.23N±0°.02×25°.24E±0°.02,h13km±9km, n75,σ1§42/88,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIA	**Limnos Island**	**0.33**	**187**	P	**Pg**	**09 40 15.2**	**-0.2**
LIA				S	**Sg**	**09 40 20.1**	**+0.2**
	11µm,0.3s						
LIA	**Limnos Island**	**0.33**	**187**	P	**Pg**	**09 40 15.6**	**+0.2**
LIA				S	**Sg**	**09 40 20.6**	**+0.7**
LIA				AML	AML	09 40 21.0	
	comp=N,19862µm,0.2s						
LIA				AML	AML	09 40 21.2	
	comp=E,30095µm,0.4s						
GADA	**Gvkgeada**	**0.51**	**94**	P	**Pg**	**09 40 18.1**	**-0.5**
GADA	**Gvkgeada**	**0.51**	**94**	PG	**Pg**	**09 40 18.2**	**-0.4**
THAS	**Thassos island**	**0.55**	**314**	P	**Pg**	**09 40 19.4**	**0.0**
THAS	**Thassos island**	**0.55**	**314**	P	**Pg**	**09 40 19.5**	**+0.2**
THAS				S	**Sg**	**09 40 27.1**	**+0.5**
THAS				AML	AML	09 40 30.5	
	comp=E,13470µm,0.3s						
THAS				AML	AML	09 40 30.5	
	comp=N,16518µm,0.2s						
EFSA	**Agios Efstrati**	**0.71**	**196**	P	**Pg**	**09 40 22.4**	**-0.1**
EFSA				S	**Sg**	**09 40 32.3**	**+0.4**
EFSA				AML	AML	09 40 35.9	
	comp=N,16436µm,0.3s						
EFSA				AML	AML	09 40 36.5	
	comp=E,25962µm,0.7s						
BOZC	**Bozcaada**	**0.73**	**121**	PG	**Pb**	**09 40 23.5**	**+0.2**
ENEZ	**Enez**	**0.86**	**54**	P	**Pg**	**09 40 24.8**	**-0.5**
ENEZ				S	**Sb**	**09 40 36.9**	**-0.1**
	comp=E,20µm,0.4s						
ENEZ	**Enez**	**0.86**	**54**	PG	**Pb**	**09 40 26.1**	**+0.6**
ALN	**Alexandroupoli**	**0.91**	**42**	P	**Pg**	**09 40 25.5**	**-0.7**
ALN				S	**Sg**	**09 40 37.7**	**-0.3**
	comp=E,2µm,0.5s						
ALN	**Alexandroupoli**	**0.91**	**42**	PG	**Pb**	**09 40 26.9**	**+0.6**
EZN	**Ezine**	**0.93**	**115**	PG	**Pb**	**09 40 26.8**	**+0.2**
EZN				SG	**Sn**	**09 40 40.5**	**-0.1**
RDO	**Rodhopi**	**0.94**	**14**	PG	**Pb**	**09 40 27.4**	**+0.5**
KAVA	**Kavala**	**0.94**	**324**	P	**Pg**	**09 40 26.9**	**0.0**
KAVA				S	**Sb**	**09 40 40.0**	**+0.6**
	comp=E,3µm,0.3s						
KAVA	**Kavala**	**0.94**	**324**	P	**Pg**	**09 40 27.0**	**+0.1**
KAVA				S	**Sb**	**09 40 39.8**	**+0.5**
KAVA				AML	AML	09 40 41.1	
	comp=N,4730µm,0.5s						
KAVA				AML	AML	09 40 41.3	
	comp=E,5331µm,0.2s						
GELI	**Tayfur-Gelibol**	**0.96**	**79**	PG	**Pb**	**09 40 27.8**	**+0.6**
KVLA	**Kavala**	**0.96**	**318**	P	**Pg**	**09 40 27.0**	**-0.2**
KVLA				S	**Sg**	**09 40 40.2**	**+0.5**
KVLA				AML	AML	09 40 42.0	
	comp=N,6810µm,0.3s						
KVLA				AML	AML	09 40 42.1	
	comp=E,7970µm,0.3s						
OUR	**Ouranopolis**	**0.97**	**277**	P	**Pg**	**09 40 27.4**	**+0.1**
OUR				S	**Sb**	**09 40 41.4**	**+1.4**
	comp=E,3µm,0.3s						
OUR	**Ouranopolis**	**0.97**	**277**	P	**Pg**	**09 40 27.3**	**0.0**
OUR				AML	AML	09 40 43.1	
	comp=E,7120µm,0.3s						
OUR				AML	AML	09 40 43.6	
	comp=N,5374µm,0.4s						
OUR	**Ouranopolis**	**0.97**	**277**	PG	**Pg**	**09 40 26.4**	**-0.9**
OUR				SG	**Sb**	**09 40 40.9**	**+0.9**
ERIK	**Erikli-Kesan**	**1.07**	**65**	PN	**Pn**	**09 40 29.6**	**+0.2**
SIGR	**SIGRI**	**1.12**	**155**	P	**Pg**	**09 40 29.5**	**-0.7**
SIGR				S	**Sg**	**09 40 44.7**	**-0.1**
SIGR				AML	AML	09 40 47.4	
	comp=E,6505µm,0.4s						
SIGR				AML	AML	09 40 49.1	
	comp=N,7056µm,0.8s						
SIGR	**SIGRI**	**1.12**	**155**	PN	**Pg**	**09 40 29.6**	**-0.6**
LPK	**Lapseki**	**1.17**	**82**	PN	**Pg**	**09 40 30.4**	**-0.8**
KESN	**Edirne-Kesan**	**1.25**	**61**	*i* P	Pg	09 40 25.3	-7.4
KESN				*i* S	**Sg**	**09 40 42.8**	**-6.3**
PRK	**Paraskevi**	**1.26**	**141**	P	**Pn**	**09 40 32.8**	**+0.7**
PRK	**Paraskevi**	**1.26**	**141**	P	**Pn**	**09 40 32.7**	**+0.7**
PRK				AML	AML	09 40 53.6	
	comp=E,8517µm,0.4s						
PRK				AML	AML	09 40 53.8	
	comp=N,7607µm,0.4s						
UKOP	**Uzunkopru-Edir**	**1.39**	**49**	PN	**Pg**	**09 40 35.7**	**+0.3**
KDZ	**Kurdzhali**	**1.43**	**5**	PN	**Pn**	**09 40 34.8**	**+0.5**
SKY	**Skiros Island**	**1.45**	**202**	P	**Pn**	**09 40 34.8**	**+0.2**
AOS	**Alonnisos**	**1.49**	**225**	PN	**Pn**	**09 40 35.6**	**+0.4**
SRS	**Serrai**	**1.54**	**306**	P	**Pn**	**09 40 35.3**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.55**	**72**	PN	**Pb**	**09 40 37.8**	**+0.5**
SART	**Tekirdag**	**1.55**	**72**	*i* P	Pn	09 40 29.8	-6.3
HORT	**Hortiatis**	**1.67**	**283**	P	**Pn**	**09 40 35.8**	**-2.0**
HORT	**Hortiatis**	**1.67**	**283**	PN	**Pn**	**09 40 37.6**	**-0.2**
DKL	**Dikili**	**1.73**	**131**	PN	**Pn**	**09 40 39.1**	**+0.6**
SKIA	**Skiathos**	**1.73**	**233**	P	**Pn**	**09 40 37.3**	**-1.2**
KNL	**Balıkesir**	**1.75**	**88**	*i* P	**Pn**	**09 40 38.8**	**0.0**
KNL				IAML		09 40 52.0	
	comp=N,2µm,1.3s						
KNL				*i* S	**Sn**	**09 40 58.4**	**-2.6**
MRMT	**Marmara Adasi**	**1.84**	**78**	PN	**Pn**	**09 40 41.3**	**+1.3**
GONE	**Gonen-Balikesi**	**1.89**	**95**	PN	**Pb**	**09 40 42.4**	**-0.5**
TKR	**Tekirdag**	**1.91**	**66**	PN	**Pb**	**09 40 42.9**	**-0.4**
PLD	**Plovdiv**	**1.92**	**348**	PN	**Pn**	**09 40 42.2**	**+1.1**
KRBN	**Karaburun**	**1.93**	**148**	PN	**Pn**	**09 40 42.2**	**+1.1**
CHOS	**Chios island**	**1.95**	**161**	PN	**Pn**	**09 40 42.6**	**+1.1**
EDRB	**Edirne**	**1.98**	**35**	PN	**Pb**	**09 40 43.9**	**-0.6**
MRKA	**Markates**	**1.99**	**221**	P	**Pn**	**09 40 40.9**	**-1.2**
KNT	**Kendrikon**	**2.01**	**298**	P	**Pn**	**09 40 41.6**	**-0.7**
KNT	**Kendrikon**	**2.01**	**298**	PN	**Pn**	**09 40 42.5**	**+0.2**
EDC	**Edincik**	**2.01**	**86**	PN	**Pn**	**09 40 43.4**	**+1.1**
CRLT	**Corlu**	**2.10**	**64**	PN	**Pb**	**09 40 45.6**	**-1.0**
LIT	**Litokhoron**	**2.11**	**267**	P	**Pn**	**09 40 43.7**	**0.0**
BALB	**Balikesir**	**2.11**	**105**	PN	**Pn**	**09 40 45.7**	**+2.0**
URLA	**Izmir**	**2.14**	**150**	PN	**Pn**	**09 40 44.7**	**+0.5**
BOTS	**Marmara Eregli**	**2.22**	**69**	PN	**Pb**	**09 40 47.8**	**-0.9**
PHSR	**Pinarhisar**	**2.23**	**50**	PN	**Pn**	**09 40 47.3**	**+2.0**
KARY	**Karystos**	**2.28**	**196**	P	**Pn**	**09 40 45.1**	**-1.0**
VAY	**Valandovo**	**2.30**	**299**	*i* Pn	**Pn**	**09 40 47.4**	**+1.1**
VAY	**Valandovo**	**2.30**	**299**	*i* Pn	**Pn**	**09 40 47.4**	**+1.1**
BLCB	**Balcova**	**2.31**	**142**	PN	**Pb**	**09 40 48.3**	**+1.8**
KCTX	**Karacabey (Bur**	**2.39**	**88**	PN	**Pb**	**09 40 50.1**	**-1.4**
AKS	**Akhisar**	**2.40**	**123**	PN	**Pn**	**09 40 49.9**	**+2.1**
SLVT	**Silivri**	**2.47**	**65**	PN	**Pn**	**09 40 50.9**	**+2.3**
CTYL	**Yalikoy Yolu**	**2.63**	**61**	PN	**Pn**	**09 40 53.5**	**+2.7**
DST	**Dursunbey**	**2.67**	**102**	PN	**Pn**	**09 40 53.4**	**+1.9**
CTKS	**Kestanelik-??a**	**2.68**	**67**	PN	**Pn**	**09 40 54.3**	**+2.8**
ARMT	**Armutlu**	**2.79**	**82**	PN	**Pn**	**09 40 55.7**	**+2.7**
ORLT	**Orhaneli**	**2.81**	**93**	PN	**Pn**	**09 40 55.6**	**+2.2**
BGKT	**Bogazkoy**	**2.85**	**69**	PN	**Pn**	**09 40 56.2**	**+2.3**
GCAM	**G?zelcaml?**	**2.97**	**148**	PN	**Pn**	**09 40 57.5**	**+2.1**
ISK	**Istanbul-Kandi**	**3.02**	**73**	PN	**Pn**	**09 40 58.3**	**+2.0**
KAVV	**Kandilli-Istan**	**3.02**	**73**	PN	**Pn**	**09 40 58.8**	**+2.5**
SIMA	**Simav-Kutahya**	**3.11**	**110**	PN	**Pn**	**09 41 00.5**	**+3.0**
YLV	**Yalova**	**3.17**	**83**	PN	**Pn**	**09 41 01.4**	**+3.0**

*ISK **24** 09:42:20.5,40°.39N×25°.92E,h5km,ML3.7/18*
*DDA **24** 09:42:21.3,40°.30N×26°.05E,h7km±4km,ML3.4*

ISC 24 09:42:20.8±1.2,40°.38N±0°.02×26°.00E±0°.03,h2km±12km, n26,σ0§95/31,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.20**	**202**	PG	**Pg**	**09 42 24.9**	**+0.2**
GADA				SG	**Sg**	**09 42 28.3**	**+0.9**
ALN	**Alexandroupoli**	**0.52**	**4**	PG	**Pg**	**09 42 30.9**	**+0.2**
ALN				SG	**Sg**	**09 42 38.2**	**+0.7**
BOZC	**Bozcaada**	**0.54**	**176**	PG	**Pg**	**09 42 31.2**	**+0.1**
BOZC				SG	**Sb**	**09 42 39.1**	**-2.0**
LPK	**Lapseki**	**0.58**	**91**	PG	**Pb**	**09 42 33.4**	**-0.3**
KESN	**Edirne-Kesan**	**0.68**	**49**	*i* P	Pg	09 42 25.1	-8.8
RDO	**Rodhopi**	**0.84**	**336**	PG	**Pg**	**09 42 36.9**	**0.0**
UKOP	**Uzunkopru-Edir**	**0.89**	**33**	PG	**Pb**	**09 42 38.7**	**-0.2**
RKY	**Sarkoy-Tekirda**	**0.95**	**71**	PG	**Pb**	**09 42 40.4**	**+0.4**
SART	**Tekirdag**	**0.95**	**71**	*i* P	**Pg**	**09 42 39.5**	**+0.4**
SART				*i* S	**Sb**	**09 42 52.8**	**-0.3**
KNL	**Balıkesir**	**1.17**	**95**	*i* P	**Pg**	**09 42 39.8**	**-3.5**
KNL				*i* S	**Sg**	**09 42 58.5**	**0.0**
SIGR	**SIGRI**	**1.17**	**185**	PN	**Pb**	**09 42 43.5**	**-0.3**
MRMT	**Marmara Adasi**	**1.24**	**79**	PN	**Pn**	**09 42 45.4**	**+0.2**
TKR	**Tekirdag**	**1.32**	**62**	PN	**Pg**	**09 42 46.5**	**+0.4**
GONE	**Gonen-Balikesi**	**1.33**	**104**	PN	**Pg**	**09 42 47.0**	**+0.6**
GONE				SN	**Sn**	**09 43 06.2**	**+1.5**
KDZ	**Kurdzhali**	**1.34**	**341**	PN	**Pn**	**09 42 45.6**	**-1.0**
EDC	**Edincik**	**1.43**	**91**	PN	**Pb**	**09 42 48.1**	**0.0**
DKL	**Dikili**	**1.48**	**152**	PN	**Pb**	**09 42 48.6**	**-0.4**
CRLT	**Corlu**	**1.52**	**60**	PN	**Pn**	**09 42 49.3**	**+0.4**
EDRB	**Edirne**	**1.57**	**21**	PN	**Pn**	**09 42 49.6**	**-0.1**
BALB	**Balikesir**	**1.62**	**117**	PN	**Pn**	**09 42 50.6**	**+0.2**
BOTS	**Marmara Eregli**	**1.63**	**67**	PN	**Pb**	**09 42 51.3**	**-0.2**
PHSR	**Pinarhisar**	**1.70**	**42**	PN	**Pb**	**09 42 52.2**	**-0.6**
PLD	**Plovdiv**	**1.98**	**331**	PN	**Pn**	**09 42 55.2**	**-0.1**
CHOS	**Chios island**	**1.99**	**179**	PN	**Pn**	**09 42 56.1**	**+0.6**
URLA	**Izmir**	**2.07**	**167**	PN	**Pn**	**09 42 56.9**	**+0.3**
DST	**Dursunbey**	**2.16**	**110**	PN	**Pn**	**09 42 58.7**	**+0.9**

*ATH **24** 09:43:21.9,40°.02N×24°.27E,h30km±1km,ML3.5/13,Error ellipse: s-maj=1.5km s-min=0.8km az=292.0*
*THE **24** 09:43:23.0,40°.01N×24°.22E,h12km±1km,ML3.5/8,Error ellipse: s-maj=2.0km s-min=0.9km az=332.0*

ISC 24 09:43:22.4±1.1,40°.01N±0°.02×24°.29E±0°.03,h19km±3km, n50,σ1§01/70,6C-3D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUR	**Ouranopolis**	**0.40**	**324**	P	**Pb**	**09 43 30.9**	**-0.1**
OUR				S	**Sb**	**09 43 36.1**	**-0.8**
	9µm,0.5s						
OUR	**Ouranopolis**	**0.40**	**324**	P	**Pb**	**09 43 31.0**	**-0.1**
OUR				S	**Sb**	**09 43 36.3**	**-0.6**
OUR				AML	AML	09 43 36.7	
	comp=N,22000µm,0.4s						
OUR				AML	AML	09 43 37.5	
	comp=E,15438µm,0.4s						
PAIG	**Paliouri**	**0.48**	**260**	P	**Pb**	**09 43 32.0**	**-0.2**
PAIG				S	**Sg**	**09 43 37.5**	**-1.2**
	comp=E,3µm,0.5s						
PAIG	**Paliouri**	**0.48**	**260**	P	**Pb**	**09 43 32.0**	**-0.2**
PAIG				AML	AML	09 43 39.0	
	comp=N,6284µm,0.6s						
PAIG				S	**Sb**	**09 43 39.0**	**+0.1**
	comp=E,4623µm,0.3s						
THAS	**Thassos island**	**0.68**	**28**	P	**Pg**	**09 43 35.8**	**-0.1**
THAS				S	**Sn**	**09 43 46.3**	**-0.8**
	comp=E,9µm,0.6s						
THAS	**Thassos island**	**0.68**	**28**	P	**Pg**	**09 43 35.7**	**-0.1**
THAS				S	**Sn**	**09 43 46.0**	**-1.1**
THAS				AML	AML	09 43 46.9	
	comp=N,14451µm,0.5s						
THAS				AML	AML	09 43 47.1	
	comp=E,21725µm,0.7s						
PLG	**Polygyros**	**0.74**	**300**	P	**Pg**	**09 43 36.8**	**-0.3**
PLG				S	**Sb**	**09 43 45.7**	**-0.9**
	comp=E,3µm,0.4s						
PLG	**Polygyros**	**0.74**	**300**	P	**Pg**	**09 43 36.8**	**-0.3**
PLG				S	**Sg**	**09 43 46.2**	**-0.9**
PLG				AML	AML	09 43 49.8	
	comp=E,6085µm,0.4s						
PLG				AML	AML	09 43 49.8	
	comp=N,4699µm,0.4s						
AOS	**Alonnisos**	**0.90**	**201**	P	**Pb**	**09 43 39.7**	**+0.4**
AOS	**Alonnisos**	**0.90**	**201**	P	**Pb**	**09 43 39.2**	**-0.1**
AOS				S	**Sn**	**09 43 52.6**	**+0.2**
AOS				AML	AML	09 43 55.0	
	comp=E,3829µm,0.7s						
AOS				AML	AML	09 44 01.4	
	comp=N,2773µm,0.7s						
ALNA	**Alonissos**	**0.92**	**201**	P	**Pn**	**09 43 40.4**	**+0.1**
KVLA	**Kavala**	**0.93**	**4**	P	**Pn**	**09 43 41.0**	**+0.5**
KVLA				S	**Sg**	**09 43 52.4**	**-0.5**
KVLA				AML	AML	09 43 54.4	
	comp=E,11404µm,0.4s						
KVLA				AML	AML	09 43 54.7	
	comp=N,7647µm,0.3s						
KAVA	**Kavala**	**1.00**	**10**	P	**Pb**	**09 43 41.0**	**-0.2**
KAVA				S	**Sg**	**09 43 54.3**	**-0.9**
KAVA				AML	AML	09 43 56.9	
	comp=E,5713µm,0.3s						
KAVA				AML	AML	09 43 57.0	
	comp=N,4920µm,0.3s						
SKIA	**Skiathos**	**1.06**	**218**	P	**Pb**	**09 43 42.1**	**0.0**
SKIA				S	**Sb**	**09 43 56.1**	**+0.6**
	comp=N,2µm,0.6s						
SKIA	**Skiathos**	**1.06**	**218**	P	**Pn**	**09 43 42.3**	**+0.1**
SKIA				AML	AML	09 43 59.7	
	comp=E,4678µm,0.7s						
SKIA				AML	AML	09 44 03.9	
	comp=N,3364µm,0.5s						
XOR	**Xorichti**	**1.06**	**233**	P	**Pb**	**09 43 42.1**	**-0.1**
XOR				S	**Sn**	**09 43 56.4**	**-0.2**
XOR				AML	AML	09 43 59.9	
	comp=N,6176µm,0.6s						
XOR				AML	AML	09 44 01.3	
	comp=E,4183µm,0.5s						
NEO	**Neokhori**	**1.08**	**230**	P	**Pb**	**09 43 42.3**	**-0.3**
NEO				S	**Sb**	**09 43 56.1**	**-0.2**
NEO				AML	AML	09 44 02.7	
	comp=E,5017µm,0.6s						
NEO				AML	AML	09 44 02.8	
	comp=N,4788µm,0.6s						
SOH	**Sokhos**	**1.08**	**319**	P	**Pg**	**09 43 43.2**	**-0.3**
SOH				S	**Sg**	**09 43 56.9**	**-0.8**
	comp=N,7µm,0.5s						
HORT	**Hortiatis**	**1.09**	**303**	P	**Pg**	**09 43 42.8**	**-0.7**
HORT				S	**Sg**	**09 43 57.4**	**-0.4**
	comp=N,2µm,0.6s						
HORT	**Hortiatis**	**1.09**	**303**	P	**Pb**	**09 43 42.2**	**-0.4**
HORT				S	**Sg**	**09 43 57.6**	**-0.2**
HORT				AML	AML	09 44 00.1	
	comp=N,3639µm,0.8s						
HORT				AML	AML	09 44 00.2	
	comp=E,3385µm,0.5s						
SKY	**Skiros Island**	**1.15**	**170**	P	**Pn**	**09 43 43.7**	**+0.3**
SKY				S	**Sg**	**09 44 01.0**	**+1.3**
	comp=E,3µm,0.6s						
SKY	**Skiros Island**	**1.15**	**170**	P	**Pn**	**09 43 43.7**	**+0.3**
SKY				AML	AML	09 44 02.5	
	comp=E,6608µm,0.4s						
SKY				AML	AML	09 44 06.1	
	comp=N,3448µm,0.5s						
THE	**Thessaloniki**	**1.19**	**302**	P	**Pb**	**09 43 44.4**	**0.0**
SRS	**Serrai**	**1.23**	**335**	P	**Pg**	**09 43 45.6**	**-0.6**
SRS

OUR	**Ouranopolis**	**1.12**	**276**	PN		**Pn**	**09 47 54.1**	**+0.4**
UKOP	**Uzunkopru-Edir**	**1.27**	**45**	PN		**Pg**	**09 47 57.3**	**+0.7**
RKY	**Sarkoy-Tekirda**	**1.40**	**70**	PN		**Pg**	**09 47 59.6**	**+0.6**
SART	**Tekirdag**	**1.40**	**70**	*i* P		**Sn**	**09 48 12.6**	**-3.7**
KDZ	**Kurdzhali**	**1.42**	**359**	PN		**Pn**	**09 47 58.5**	**+0.6**
KRBG	**Karabiga-Canak**	**1.43**	**83**	PN		**Pn**	**09 47 58.9**	**+0.9**
KNL	**Balıkesir**	**1.60**	**88**	*i* P		**Sn**	**09 48 15.7**	**-5.2**
KNL				IAML			09 48 34.0	
	comp=E,1μm,0.5s							
KNL				IAML			09 48 43.0	
	comp=N,1μm,0.7s							
DKL	**Dikili**	**1.62**	**135**	PN		**Pn**	**09 48 01.8**	**+1.2**
MRMT	**Marmara Adasi**	**1.69**	**77**	PN		**Pn**	**09 48 02.9**	**+1.3**
GONE	**Gonen-Balikesi**	**1.73**	**95**	PN		**Pb**	**09 48 04.5**	**+0.6**
BALY	**Balya**	**1.74**	**106**	*i* P		**Sn**	**09 48 20.4**	**-4.3**
BALY				IAML			09 48 35.0	
	comp=N,594nm,1.2s							
BALY				IAML			09 48 40.0	
	comp=E,666nm,0.4s							
TKR	**Tekirdag**	**1.77**	**64**	PN		**Pn**	**09 48 03.9**	**+1.3**
EDC	**Edincik**	**1.86**	**86**	PN		**Pn**	**09 48 05.5**	**+1.6**
EDRB	**Edirne**	**1.89**	**31**	PN		**Pb**	**09 48 06.9**	**+0.2**
CRLT	**Corlu**	**1.96**	**62**	PN		**Pn**	**09 48 07.3**	**+2.0**

IDC ***24*** *09:48:51.7±1.3,40°.40N×25°.13E,h0km,mb3.5/3,*
mb1 3.7/6,mb1mx3.4/48,mbtmp3.5/6,ML3.3/3,Error
ellipse: s-maj=21.1km s-min=20.6km az=127.0
ISK ***24*** *09:48:52.4,40°.24N×25°.34E,h5km,ML3.8/16*
DDA ***24*** *09:48:52.8,40°.23N×25°.45E,h8km±3km,ML3.6*
ISC 24 09:48:52.7±1.2,40°.24N±0°.03×25°.41E±0°.03,h11km±9km,
n40,σ0°77/44,mb3.5/3,4C-1D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.64**	**129**	PG	**Pb**	**09 49 05.9**	**0.0**
BOZC	**Bozcaada**	**0.64**	**129**	*i* P	**Pg**	**09 49 04.0**	**-1.1**
BOZC				IAML		09 49 18.0	
	comp=N,2μm,0.5s						
BOZC				IAML		09 49 18.0	
	comp=E,2μm,0.3s						
ENEZ	**Enez**	**0.75**	**49**	PG	**Pb**	**09 49 08.1**	**+0.3**
ENEZ				SG	**Sn**	**09 49 19.5**	**-1.2**
ALN	**Alexandroupoli**	**0.81**	**37**	PG	**Pb**	**09 49 09.2**	**+0.3**
ALN				SG	**Sn**	**09 49 21.2**	**-1.0**
EZN	**Ezine**	**0.82**	**120**	PG	**Pb**	**09 49 08.9**	**0.0**
GELI	**Tayfur-Gelibol**	**0.83**	**79**	PG	**Pn**	**09 49 10.1**	**-0.2**
GELI				SG	**Sn**	**09 49 22.2**	**-0.4**
RDO	**Rodhopi**	**0.91**	**6**	PG	**Pb**	**09 49 10.3**	**-0.1**
ERIK	**Erikli-Kesan**	**0.95**	**63**	PG	**Pn**	**09 49 11.8**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**1.01**	**119**	*i* P	**Pb**	**09 49 12.1**	**-0.1**
BAYC				*i* S	**Sg**	**09 49 25.5**	**+0.3**
BAYC				IAML		09 49 28.0	
	comp=N,2μm,0.5s						
BAYC				IAML		09 49 29.0	
	comp=E,2μm,0.7s						
LPK	**Lapseki**	**1.04**	**82**	PN	**Pn**	**09 49 13.6**	**+0.3**
SIGR	**SIGRI**	**1.09**	**161**	PN	**Pb**	**09 49 13.5**	**0.0**
OUR	**Ouranopolis**	**1.09**	**275**	PG	**Pb**	**09 49 12.9**	**-0.7**
OUR				SG	**Sg**	**09 49 27.8**	**-0.1**
UKOP	**Uzunkopru-Edir**	**1.28**	**46**	PN	**Pg**	**09 49 18.4**	**+1.1**
AYVA	**Ayvalik**	**1.36**	**133**	*i* P	**Pb**	**09 49 18.0**	**-0.2**
AYVA				IAML		09 49 43.0	
	comp=E,839nm,0.7s						
AYVA				IAML		09 49 44.0	
	comp=N,2μm,0.7s						
KDZ	**Kurdzhali**	**1.40**	**0**	PN	**Pn**	**09 49 18.3**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.42**	**71**	PN	**Pg**	**09 49 19.7**	**-0.3**
KRBG	**Karabiga-Canak**	**1.45**	**84**	PN	**Pg**	**09 49 20.3**	**-0.3**
KNL	**Balıkesir**	**1.62**	**88**	*i* P	**Pn**	**09 49 19.8**	**-1.5**
DKL	**Dikili**	**1.65**	**135**	PN	**Pb**	**09 49 23.1**	**+0.1**
MRMT	**Marmara Adasi**	**1.71**	**77**	PN	**Pb**	**09 49 24.3**	**+0.1**
GONE	**Gonen-Balikesi**	**1.76**	**96**	PN	**Pb**	**09 49 24.8**	**-0.2**
TKR	**Tekirdag**	**1.78**	**65**	PN	**Pb**	**09 49 25.1**	**-0.3**
ZEDA	**zmir-Bergama**	**1.81**	**134**	*i* P	**Pn**	**09 49 24.6**	**+0.7**
ZEDA				IAML		09 49 54.0	
	comp=E,266nm,0.3s						
ZEDA				IAML		09 50 27.0	
	comp=N,544nm,2.4s						
EDC	**Edincik**	**1.88**	**86**	PN	**Pb**	**09 49 26.9**	**-0.2**
EDRB	**Edirne**	**1.89**	**32**	PN	**Pb**	**09 49 26.9**	**-0.4**
CRLT	**Corlu**	**1.98**	**63**	PN	**Pb**	**09 49 27.5**	**-1.2**
BOTS	**Marmara Eregli**	**2.10**	**68**	PN	**Pb**	**09 49 30.0**	**-0.7**
VAY	**Valandovo**	**2.41**	**297**	*i* Pn	**Pg**	**09 49 39.2**	**+0.4**
VAY	**Valandovo**	**2.41**	**297**	*i* Pn	**Pg**	**09 49 39.2**	**+0.4**
HARR	**Harsova**	**4.82**	**22**	⇑P	**Pn**	**09 50 06.3**	**+1.1**
IDI	**Anoyia**	**4.96**	**185**	Pn	**Pn**	**09 50 09.8**	**+2.6**
	comp=N,0.5nm,0.3s,baz=314,slow=15,SNR=2.6						
HERR	**Herculane**	**5.13**	**336**	⇑P	**Pn**	**09 50 08.5**	**-1.0**
MLR	**Muntele Rosu**	**5.26**	**4**	Pn	**Pn**	**09 50 10.6**	**-0.7**
	comp=N,1.3nm,0.3s,baz=251,slow=11,SNR=3.6						
GZR	**Gura Zlata**	**5.50**	**340**	⇑P	**Pn**	**09 50 14.0**	**-0.6**
DOPR	**Dopca**	**5.72**	**360**	⇑P	**Pn**	**09 50 18.3**	**+0.7**
TESR	**Tescani**	**6.33**	**8**	⇓P	**Pn**	**09 50 27.2**	**+1.2**
BRTR	**Keskin Array B**	**6.34**	**92**	Pn	Pn	09 50 31.2	+4.9
	comp=N,0.4nm,0.3s,baz=267,slow=11,SNR=2.9						
BRTR				Lg	Lg	09 52 19.7	
	comp=N,0.0nm,0.3s,baz=269,slow=23,SNR=2.8						
TORD	**Torodi Ar. Bea**	**34.09**	**224**	P	**P**	**09 55 37.4**	**0.0**
	comp=N,0.4nm,0.6s,baz=29,slow=9.1,SNR=3.4						
MKAR	**Makanchi Array**	**40.98**	**61**	P	**P**	**09 56 36.2**	**+0.7**
	comp=N,0.7nm,0.7s,baz=285,slow=6.1,SNR=5.9						
YKA	**Yellowknife Ar**	**72.68**	**342**	P	**P**	**10 00 20.0**	**-0.1**
	comp=N,0.1nm,0.3s,baz=36,slow=5.2,SNR=3.8						

ISK ***24*** *09:54:59.7,40°.35N×25°.94E,h4km,ML3.7/35*
THE ***24*** *09:54:59.7,40°.38N×25°.88E,h11km±1km,ML3.6/6,Error*
ellipse: s-maj=1.4km s-min=0.6km az=316.0
ATH ***24*** *09:54:59.1,40°.39N×25°.87E,h24km±2km,ML3.6/7,Error*
ellipse: s-maj=2.2km s-min=0.9km az=300.0
DDA ***24*** *09:54:59.6,40°.31N×25°.94E,h26km±1km,ML3.5*
IDC ***24*** *09:55:09.8±1.1,40°.17N×25°.23E,h0km,mb3.7/5,*
mb1 3.8/7,mb1mx3.5/50,mbtmp3.7/7,ML3.3/2,Error
ellipse: s-maj=27.8km s-min=18.7km az=156.0
ISC 24 09:55:00.2±1.0,40°.36N±0°.02×25°.88E±0°.02,h4km±9km,
n103,σ1°42/116,mb3.6/5,8C-6D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.17**	**174**	P	**Pg**	**09 55 03.9**	**+0.4**
GADA				S	**Sg**	**09 55 07.0**	**+1.3**
	31μm,0.3s						
GADA	**Gvkgeada**	**0.17**	**174**	PG	**Pg**	**09 55 03.8**	**+0.3**
GADA				SG	**Sg**	**09 55 06.9**	**+1.3**
SMTH	**Samothraki Isl**	**0.29**	**293**	P	**Pg**	**09 55 05.7**	**0.0**
SMTH				S	**Sg**	**09 55 09.7**	**+0.2**
	5μm,0.1s						
SMTH	**Samothraki Isl**	**0.29**	**293**	P	**Pg**	**09 55 05.8**	**+0.1**
SMTH				S	**Sg**	**09 55 10.0**	**+0.5**
SMTH				AML	AML	09 55 10.6	
	comp=N,13082μm,0.4s						
SMTH				AML	AML	09 55 11.2	
	comp=E,6294μm,0.2s						
ENEZ	**Enez**	**0.43**	**29**	P	**Pg**	**09 55 07.6**	**-0.9**
ENEZ	**Enez**	**0.43**	**29**	PG	**Pg**	**09 55 08.8**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.46**	**85**	PG	**Pg**	**09 55 08.5**	**-0.5**
BOZC	**Bozcaada**	**0.53**	**165**	PG	**Pg**	**09 55 09.8**	**-0.6**
BOZC	**Bozcaada**	**0.53**	**165**	*i* P	**Pg**	**09 55 09.3**	**-1.1**
ALN	**Alexandroupoli**	**0.56**	**13**	P	**Pg**	**09 55 09.8**	**-1.0**
ALN				S	**Sg**	**09 55 16.9**	**-1.2**
	comp=E,2μm,0.5s						
ALN	**Alexandroupoli**	**0.56**	**13**	P	**Pg**	**09 55 09.8**	**-1.0**
ALN				S	**Sg**	**09 55 17.3**	**-0.7**
ALN				AML	AML	09 55 17.7	
	comp=N,4249μm,0.7s						
ALN				AML	AML	09 55 23.5	
	comp=E,2241μm,0.3s						
ALN	**Alexandroupoli**	**0.56**	**13**	PG	**Pg**	**09 55 11.2**	**+0.3**
ERIK	**Erikli-Kesan**	**0.58**	**57**	PG	**Pg**	**09 55 10.9**	**-0.4**
EZN	**Ezine**	**0.63**	**147**	PG	**Pg**	**09 55 11.8**	**-0.5**
LPK	**Lapseki**	**0.68**	**88**	PG	**Pg**	**09 55 12.5**	**-0.7**
LPK				SG	**Sg**	**09 55 22.6**	**+0.7**
LIA	**Limnos Island**	**0.70**	**229**	P	**Pg**	**09 55 14.0**	**+0.4**
LIA				S	**Sg**	**09 55 23.4**	**+0.7**
	comp=E,24μm,0.4s						
LIA	**Limnos Island**	**0.70**	**229**	P	**Pg**	**09 55 13.4**	**-0.3**
LIA				S	**Sg**	**09 55 23.1**	**+0.3**
LIA				AML	AML	09 55 23.2	
	comp=E,31802μm,0.5s						
LIA				AML	AML	09 55 23.8	
	comp=N,62632μm,0.4s						

KESN	**Edirne-Kesan**	**0.77**	**52**	*i* P		**Pg**	**09 55 14.8**	**-0.2**
KESN				*i* S		**Sg**	**09 55 25.2**	**+0.2**
KESN				IAML			09 55 27.0	
	comp=N,2μm,0.4s							
BAYC	**CANAKKALE_Bayr**	**0.80**	**140**	*i* P		**Pg**	**09 55 14.7**	**-0.9**
BAYC				IAML			09 55 28.0	
	comp=E,1μm,0.5s							
BAYC				IAML			09 55 28.0	
	comp=N,1μm,0.3s							
RDO	**Rodhopi**	**0.83**	**342**	P		**Pg**	**09 55 14.8**	**-1.3**
RDO	**Rodhopi**	**0.83**	**342**	P		**Pg**	**09 55 15.0**	**-1.1**
RDO				S		**Sg**	**09 55 26.1**	**-0.8**
RDO				AML	AML		09 55 30.1	
	comp=E,2797μm,0.2s							
RDO				AML	AML		09 55 35.8	
	comp=N,2808μm,0.3s							
RDO	**Rodhopi**	**0.83**	**342**	PG		**Pg**	**09 55 16.1**	**0.0**
THAS	**Thassos island**	**0.92**	**286**	P		**Pg**	**09 55 17.4**	**-0.4**
THAS				S		**Sg**	**09 55 29.8**	**+0.2**
	comp=N,12μm,0.5s							
THAS	**Thassos island**	**0.92**	**286**	P		**Pg**	**09 55 17.0**	**-0.7**
THAS				S		**Sg**	**09 55 29.1**	**-0.6**
THAS				AML	AML		09 55 31.6	
	comp=N,22467μm,0.5s							
THAS				AML	AML		09 55 31.8	
	comp=E,23865μm,0.5s							
UKOP	**Uzunkopru-Edir**	**0.96**	**37**	PG		**Pg**	**09 55 17.7**	**-0.9**
RKY	**Sarkoy-Tekirda**	**1.05**	**71**	PG		**Pg**	**09 55 19.1**	**-1.2**
SART	**Tekirdag**	**1.05**	**71**	*i* P		**Pg**	**09 55 18.8**	**-1.5**
SART				IAML			09 55 34.0	
	comp=E,445nm,0.4s							
EFSA	**Agios Efstrati**	**1.06**	**220**	P		**Pg**	**09 55 20.3**	**-0.2**
KRBG	**Karabiga-Canak**	**1.09**	**88**	PG		**Pb**	**09 55 20.3**	**-1.3**
SIGR	**SIGRI**	**1.15**	**181**	P		**Pb**	**09 55 21.1**	**-1.4**
SIGR				S		**Sg**	**09 55 37.3**	**+0.3**
	comp=E,4μm,0.4s							
SIGR	**SIGRI**	**1.15**	**181**	P		**Pb**	**09 55 21.4**	**-1.2**
SIGR				S		**Sn**	**09 55 37.8**	**-1.3**
SIGR				AML	AML		09 55 38.6	
	comp=N,8697μm,0.8s							
SIGR				AML	AML		09 55 39.5	
	comp=E,8043μm,0.4s							
SIGR	**SIGRI**	**1.15**	**181**	PN		**Pb**	**09 55 21.3**	**-1.2**
PRK	**Paraskevi**	**1.15**	**164**	P		**Pb**	**09 55 21.9**	**-0.7**
PRK				S		**Sn**	**09 55 37.9**	**-1.4**
PRK				AML	AML		09 55 39.9	
	comp=N,9536μm,0.6s							
PRK				AML	AML		09 55 40.9	
	comp=E,7451μm,0.7s							
KAVA	**Kavala**	**1.22**	**302**	P		**Pn**	**09 55 22.3**	**-1.7**
KNL	**Balıkesir**	**1.27**	**93**	*i* P		**Pn**	**09 55 22.9**	**-1.8**
KNL				IAML			09 55 42.0	
	comp=N,1μm,0.7s							
KNL				IAML			09 55 42.0	
	comp=E,1μm,0.7s							
KVLA	**Kavala**	**1.27**	**298**	P		**Pn**	**09 55 23.3**	**-1.5**
MRMT	**Marmara Adasi**	**1.33**	**79**	PN		**Pn**	**09 55 24.9**	**-0.8**
KDZ	**Kurdzhali**	**1.34**	**345**	*i* P		**Pn**	**09 55 23.7**	**-2.0**
KDZ	**Kurdzhali**	**1.34**	**345**	PN		**Pg**	**09 55 26.1**	**+0.3**
TKR	**Tekirdag**	**1.41**	**63**	PN		**Pn**	**09 55 26.3**	**-0.4**
GONE	**Gonen-Balikesi**	**1.42**	**102**	PN		**Pn**	**09 55 26.0**	**-0.8**
OUR	**Ouranopolis**	**1.45**	**270**	P		**Pn**	**09 55 25.1**	**-2.1**
OUR	**Ouranopolis**	**1.45**	**270**	PN		**Pg**	**09 55 28.3**	**+0.4**
BALY	**Balya**	**1.47**	**114**	*i* P		**Pn**	**09 55 26.3**	**-1.3**
BALY				IAML			09 55 47.0	
	comp=N,1μm,0.4s							
BALY				IAML			09 55 54.0	
	comp=E,630nm,0.6s							
DKL	**Dikili**	**1.51**	**148**	PN		**Pn**	**09 55 27.7**	**-0.3**
EDC	**Edincik**	**1.52**	**90**	PN		**Pn**	**09 55 27.9**	**-0.3**
RZN	**Rozhen**	**1.59**	**327**	*i* P		**Pb**	**09 55 29.8**	**-0.5**
CRLT	**Corlu**	**1.61**	**61**	PN		**Pb**	**09 55 29.7**	**-0.8**
EDRB	**Edirne**	**1.63**	**24**	PN		**Pb**	**09 55 29.5**	**-0.1**
ZEDA	**zmir-Bergama**	**1.67**	**146**	*i* P		**Pn**	**09 55 28.8**	**-1.4**
ZEDA				*i* S		**Sn**	**09 55 50.1**	**-2.0**
ZEDA				IAML			09 55 53.0	
	comp=E,721nm,0.4s							
ZEDA				IAML			09 56 15.0	
	comp=N,590nm,0.4s							
BALB	**Balikesir**	**1.70**	**114**	PN		**Pn**	**09 55 29.5**	**-1.1**
DIM	**Dimitrovgrad**	**1.71**	**351**	*i* P		**Pn**	**09 55 30.2**	**-0.6**
BOTS	**Marmara Eregli**	**1.72**	**68**	PN		**Pn**	**09 55 30.7**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.72**	**124**	*i* P		**Pn**	**09 55 29.1**	**-1.9**
STEP				*i* S		**Sb**	**09 55 53.0**	**-1.5**
STEP				IAML			09 55 58.0	
	comp=E,1μm,0.6s							
STEP				IAML			09 56 09.0	
	comp=N,788nm,1.0s							
PHSR	**Pinarhisar**	**1.78**	**44**	PN		**Pn**	**09 55 31.9**	**+0.1**
KRBN	**Karaburun**	**1.84**	**163**	PN		**Pn**	**09 55 31.8**	**-0.7**
KCTX	**Karacabey (Bur**	**1.90**	**92**	PN		**Pn**	**09 55 32.8**	**-0.6**
AOS	**Alonnisos**	**1.94**	**233**	PN		**Pb**	**09 55 35.2**	**-0.9**
PLD	**Plovdiv**	**1.96**	**334**	PN		**Pb**	**09 55 35.3**	**-1.1**
CHOS	**Chios island**	**1.97**	**176**	P		**Pn**	**09 55 33.1**	**-1.4**
CHOS	**Chios island**	**1.97**	**176**	PN		**Pn**	**09 55 34.7**	**+0.2**
SLVT	**Silivri**	**1.98**	**63**	PN		**Pn**	**09 55 34.3**	**-0.1**
IURL	**Izmir**	**2.07**	**164**	PN		**Pn**	**09 55 35.5**	**-0.5**
ELBA	**Catalca**	**2.10**	**67**	*i* P		**Pn**	**09 55 33.5**	**-2.6**
AKS	**Akhisar**	**2.10**	**134**	PN		**Pn**	**09 55 36.6**	**+0.4**
HORT	**Hortiatis**	**2.13**	**277**	PN		**Pb**	**09 55 37.9**	**-1.5**
DURS	**Dursunbey**	**2.13**	**110**	*i* P		**Pn**	**09 55 33.7**	**-3.0**
DURS				IAML			09 56 08.0	
	comp=N,616nm,0.4s							
DURS				IAML			09 56 09.0	
	comp=E,845nm,0.3s							
CTYL	**Yalikoy Yolu**	**2.14**	**58**	PN		**Pn**	**09 55 36.6**	**-0.1**
BLCB	**Balcova**	**2.17**	**155**	PN		**Pn**	**09 55 36.3**	**-0.8**
KNT	**Kendrikon**	**2.40**	**291**	PN		**Pb**	**09 55 41.6**	**-2.4**
ISK	**Istanbul-Kandi**	**2.52**	**73**	PN		**Pn**	**09 55 41.9**	**0.0**
KAVV	**Kandilli-Istan**	**2.52**	**73**	PN		**Pn**	**09 55 42.1**	**+0.2**
DEMI	**Demirci**	**2.56**	**120**	*i* P		**Pn**	**09 55 41.4**	**-1.1**
DEMI				IAML			09 56 25.0	
	comp=N,244nm,0.7s							
DEMI				IAML			09 56 27.0	
	comp=E,234nm,0.9s							
KLYT	**Kilyos**	**2.56**	**69**	PN		**Pn**	**09 55 42.8**	**+0.3**
KKB	**Krupnik**	**2.59**	**306**	P		**Pn**	**09 55 39.7**	**-3.2**
KKB				P		**Pb**	**09 55 46.7**	**-0.6**
TVSB	**Tavsanli**	**2.90**	**107**	PN		**Pn**	**09 55 46.8**	**-0.5**
SHAP	**Saphane-Kutahy**	**2.91**	**116**	PN		**Pn**	**09 55 46.6**	**-0.7**
HRT	**Hereke**	**2.92**	**80**	PN		**Pn**	**09 55 47.8**	**+0.3**
VTS	**Vitosha**	**3.01**	**320**	⇑P		**Pb**	**09 55 55.4**	**+1.0**
AGG	**Agios Georgios**	**3.04**	**245**	PN		**Pn**	**09 55 50.7**	**+1.6**
PLVB	**Pleven**	**3.17**	**343**	⇓P		**Pn**	**09 55 49.7**	**-1.1**
RAZG	**Razgrad**	**3.24**	**7**	⇑P		**Pn**	**09 55 50.5**	**-1.3**
APE	**Apeiranthos**	**3.29**	**185**	⇑P		**Pn**	**09 55 50.8**	**-1.8**
BORA	**Eskisehir**	**3.54**	**96**	PN		**Pn**	**09 55 56.1**	**0.0**
ICOR	**Ion Corvin**	**4.02**	**20**	⇑P		**Pg**	**09 56 17.2**	**+0.1**
HARR	**Harsova**	**4.59**	**19**	⇓P		**Pg**	**09 56 24.8**	**-3.3**
TIR	**Tirane**	**4.66**	**284**	⇑P		**Pb**	**09 56 18.0**	**-4.5**
JURR	**Jurilovca**	**4.93**	**26**	⇓P		**Pb**	**09 56 29.1**	**+2.1**
CFR	**Carcaliu**	**5.10**	**18**	⇓P		**Pb**	**09 56 31.6**	**+1.7**
IDI	**Anoyia**	**5.12**	**189**	Pn		Pb	09 56 24.5	-5.9
	comp=E,1.0nm,0.3s,baz=355,slow=17,SNR=7.1							
MLR	**Muntele Rosu**	**5.13**	**1**	⇑P		**Pn**	**09 56 18.6**	**+0.6**
HERR	**Herculane**	**5.19**	**332**	⇑P		**Pn**	**09 56 16.5**	**-2.1**
PDG	**Podgorica**	**5.39**	**295**	⇑P		Pb	09 56 27.8	-7.1
GZR	**Gura Zlata**	**5.52**	**337**	⇓P		**Pn**	**09 56 21.3**	**-1.9**
BRTR	**Keskin Array B**	**5.99**	**94**	Pn		**Pb**	**09 56 47.1**	**+1.8**
	comp=E,0.9nm,0.3s,baz=268,slow=13,SNR=5.8							
BZS	**Buzias**	**6.11**	**331**	⇓P		**Pn**	**09 56 29.6**	**-1.7**
VYHS	**Vyhne**	**9.56**	**331**	ePN		**Pn**	**09 57 16.0**	**-2.6**
FINES	**FINESS Array B**	**21.11**	**0**	P		P	09 59 57.6	+12
	comp=E,1.3nm,0.6s,baz=161,slow=12,SNR=5.4							
KLMR	**Klimovskoe**	**22.18**	**18**	*e*		**P**	**10 00 01.4**	**+4.3**
KLMR				AMP			10 00 09.9	
	comp=Z,13nm,1.1s							
ESDC	**Sonseca Array**	**22.82**	**278**	P		**P**	**10 00 09.2**	**+5.1**
	comp=Z,1.3nm,0.8s,baz=70,slow=10,SNR=5.8							
TORD	**Torodi Ar. Bea**	**34.43**	**225**	P		P	10 01 54.9	+6.1
	comp=Z,1.1nm,0.8s,baz=31,slow=8.4,SNR=6.3							
MKAR	**Makanchi Array**	**40.62**	**62**	P		P	10 02 56.0	+15
	comp=Z,0.8nm,0.8s,baz=280,slow=6.1,SNR=8.3							
ZALV	**Zalesovo Beam**	**41.12**	**50**	P		P	10 02 59.0	+14
	comp=Z,0.6nm,0.3s,baz=267,slow=2.9,SNR=1.3							

SKHL ***24*** *10:01:00.0±0.4,42°.69N×146°.45E,h38km±4km,mb3.8/4*
JMA ***24*** *10:01:01.4±0.2,42°.74N×146°.23E,h51km±3km,M2.8*
ISC 24 10:01:00.4±3.1,42°.7N±0°.2×146°.4E±0°.1,h52km±33km,n13,
σ0°53/21,Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.78**	**324**	P	**Pn**	**10 01 15.6**	**+0.4**
NEM2				*e*S	**Sn**	**10 01 26.4**	**+0.5**
NMR	**Nemuro--Hokkai**	**0.79**	**324**	*i* P	**Pn**	**10 01 15.1**	**-0.2**
NMR				*e*S	**Sn**	**10 01 26.1**	**-0.1**
JKHN	**Kushirohamanak**	**0.95**	**292**	P	**Pn**	**10 01 17.7**	**+0.2**
GLVR	**Golovnino**	**1.18**	**328**	*e*P	**Pn**	**10 01 20.4**	**-0.1**
GLVR				AMB	AMB	10 01 25.0	
	10.0nm,0.3s						
GLVR				*e*S	**Sn**	**10 01 35.7**	**+0.2**
GLVR				A	A	10 01 41.0	
	210nm,0.4s						
GLVR				A	A	10 01 41.0	
	430nm,0.4s						
JAK	**Akkeshi**	**1.25**	**282**	P	**Pn**	**10 01 21.8**	**+0.2**
JAK				*e*S	**Sn**	**10 01 36.3**	**-1.1**
GRPR	**Tuman**	**1.33**	**341**	*e*P	**Pn**	**10 01 22.9**	**+0.3**
GRPR				AMB	AMB	10 01 27.0	
	10.0nm,0.3s						
GRPR				*e*S	**Sn**	**10 01 38.7**	**-0.4**
GRPR				A	A	10 01 41.0	
	180nm,0.4s						
GRPR				A	A	10 01 41.0	
	90nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.35**	**344**	*e*P	**Pn**	**10 01 22.4**	**-0.4**
YUK				AMB	AMB	10 01 26.5	
	90nm,0.3s						
YUK				*e*S	**Sn**	**10 01 39.5**	**-0.1**
YUK				A	A	10 01 40.8	
	90nm,0.3s						
YUK				A	A	10 01 40.8	
	80nm,0.3s						
LAGR	**Lagunnoye**	**1.38**	**342**	*e*P	**Pn**	**10 01 23.8**	**+0.5**
LAGR				AMB	AMB	10 01 25.0	
	90nm,0.3s						
LAGR				*e*S	**Sn**	**10 01 39.9**	**-0.6**
LAGR				A	A	10 01 45.0	
	340nm,0.5s						
LAGR				A	A	10 01 45.0	
	330nm,0.5s						
JNK	**Nakash**	**1.47**	**306**	P	**Pn**	**10 01 24.7**	**+0.1**
JNK				*e*S	**Sn**	**10 01 41.9**	**-0.8**
JRA	**Rausu**	**1.50**	**323**	P	**Pn**	**10 01 25.9**	**+0.9**
JAR	**Ashorobuto**	**1.98**	**287**	P	**Pn**	**10 01 32.1**	**+0.6**
JTKR	**Abashiri--Toko**	**2.17**	**305**	*e*S	**Sn**	**10 01 59.8**	**-0.1**
KUR	**Kuril'sk**	**2.72**	**23**	*e*S	**Sn**	**10 02 12.8**	**-0.4**
KUR				A	A	10 02 21.6	
	60nm,1.0s						
KUR				A	A	10 02 21.6	
	50nm,1.0s						

SOF ***24*** *10:05:16.9,40°.45N×26°.14E,h5km,MD3.3*
ISK ***24*** *10:05:17.9,40°.43N×26°.25E,h7km,ML3.6/43*
DDA ***24*** *10:05:17.4,40°.40N×26°.29E,h7km±3km,ML3.4*
THE ***24*** *10:05:18.7,40°.43N×26°.19E,h7km±1km,ML3.2/9,Error*
ellipse: s-maj=2.0km s-min=0.6km az=298.0
ISC 24 10:05:18.1±0.8,40°.42N±0°.01×26°.24E±0°.02,h13km±7km,
n88,σ0°87/115,5C-2D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GELI	**Tayfur-Gelibol**	**0.18**	**98**	PG	**Pg**	**10 05 22.1**	**-0.1**
GELI				SG	**Sg**	**10 05 25.1**	**+0.1**
ENEZ	**Enez**	**0.32**	**348**	P	**Pg**	**10 05 24.6**	**-0.1**
ENEZ				S	**Sg**	**10 05 29.4**	**+0.4**
	20μm,0.3s						
ENEZ	**Enez**	**0.32**	**348**	PG	**Pg**	**10 05 24.8**	**+0.1**
ENEZ				SG	**Sg**	**10 05 29.5**	**+0.4**

PHSR	**Pinarhisar**	**1.55**	**38**	PN		**Pb**	**10 05 46.1**	**-0.6**
ZEDA	**zmir-Bergama**	**1.59**	**156**	*i* P		**Pn**	**10 05 46.0**	**0.0**
ZEDA				*i* S		**Sb**	**10 06 07.8**	**+0.3**
ZEDA				IAML			10 06 09.0	
	comp=N,484nm,0.3s							
ZEDA				IAML			10 06 10.0	
	comp=E,407nm,0.3s							
ZEDA	**zmir-Bergama**	**1.59**	**156**	*i* P		**Pn**	**10 05 45.5**	**-0.5**
ZEDA				*i* S		**Sb**	**10 06 07.7**	**+0.3**
SLVT	**Silivri**	**1.70**	**61**	PN		**Pn**	**10 05 48.3**	**+0.8**
DIM	**Dimitrovgrad**	**1.71**	**342**	P		**Pn**	**10 05 48.0**	**+0.3**
RZN	**Rozhen**	**1.71**	**318**	P		**Pn**	**10 05 48.2**	**+0.4**
KRBN	**Karaburun**	**1.84**	**172**	PN		**Pb**	**10 05 50.6**	**-1.1**
CTYL	**Yalikoy Yolu**	**1.87**	**55**	PN		**Pn**	**10 05 50.7**	**+0.8**
CTKS	**Kestanelik-??a**	**1.90**	**64**	PN		**Pn**	**10 05 51.3**	**+1.0**
AVCI	**Avcilar-stanb**	**1.97**	**72**	PN		**Pn**	**10 05 52.2**	**+1.0**
DST	**Dursunbey**	**2.00**	**113**	PN		**Pn**	**10 05 52.9**	**+1.2**
ARMT	**Armutlu**	**2.00**	**85**	PN		**Pb**	**10 05 53.3**	**-1.1**
MDNY	**Mudanya-Bursa**	**2.02**	**91**	PN		**Pn**	**10 05 53.2**	**+1.3**
CHOS	**Chios island**	**2.04**	**184**	P		**Pn**	**10 05 52.5**	**+0.2**
CHOS	**Chios island**	**2.04**	**184**	PN		**Pn**	**10 05 53.4**	**+1.1**
PLD	**Plovdiv**	**2.04**	**326**	PN		**Pn**	**10 05 53.6**	**+1.4**
JMB	**Yambol**	**2.06**	**7**	P		**Pb**	**10 05 54.1**	**-1.3**
BGKT	**Bogazkoy**	**2.06**	**68**	PN		**Pn**	**10 05 53.6**	**+1.1**
ORLT	**Orhaneli**	**2.07**	**100**	PN		**Pn**	**10 05 53.7**	**+1.1**
URLA	**Izmir**	**2.08**	**172**	PN		**Pn**	**10 05 54.0**	**+1.2**
BLCB	**Balcova**	**2.13**	**163**	PN		**Pn**	**10 05 54.7**	**+1.3**
AOS	**Alonnisos**	**2.21**	**236**	PN		**Pb**	**10 05 56.6**	**-1.3**
ISK	**Istanbul-Kandi**	**2.23**	**72**	PN		**Pn**	**10 05 55.8**	**+0.9**
KAVV	**Kandilli-Istan**	**2.23**	**72**	PN		**Pn**	**10 05 56.0**	**+1.1**
KLYT	**Kilyos**	**2.28**	**68**	PN		**Pn**	**10 05 56.5**	**+1.0**
YLV	**Yalova**	**2.39**	**86**	PN		**Pn**	**10 05 58.8**	**+1.7**
HORT	**Hortiatis**	**2.40**	**275**	PN		**Pb**	**10 05 59.4**	**-1.9**
SIMA	**Simav-Kutahya**	**2.50**	**121**	PN		**Pn**	**10 05 59.8**	**+1.2**
KULA	**Kula-Manisa**	**2.67**	**135**	PN		**Pn**	**10 06 02.3**	**+1.3**
SILT	**Sile**	**2.68**	**73**	PN		**Pn**	**10 06 02.4**	**+1.4**
AYDB	**Zeytinkoy-Aydi**	**2.79**	**152**	PN		**Pn**	**10 06 03.9**	**+1.3**
GEDZ	**Gediz**	**2.81**	**118**	PN		**Pn**	**10 06 04.1**	**+1.3**
VAY	**Valandovo**	**2.92**	**289**	*i* Pn		**Pb**	**10 06 11.5**	**+1.4**
VAY	**Valandovo**	**2.92**	**289**	*i* Pn		**Pb**	**10 06 11.5**	**+1.4**
APE	**Apeiranthos**	**3.40**	**190**	⇑P		**Pn**	**10 06 11.0**	**+0.1**
BODT	**Bodrum**	**3.46**	**166**	PN		**Pn**	**10 06 13.5**	**+1.8**
HARR	**Harsova**	**4.44**	**16**	⇑P		**Pn**	**10 06 25.0**	**-0.2**
TIR	**Tirane**	**4.92**	**283**	⇓P		**Pn**	**10 06 29.9**	**-1.9**
MLR	**Muntele Rosu**	**5.07**	**358**	⇑P		**Pn**	**10 06 36.4**	**+2.4**
GZR	**Gura Zlata**	**5.56**	**334**	⇑P		**Pn**	**10 06 40.8**	**-0.1**
TESR	**Tescani**	**6.09**	**3**	⇑P		**Pn**	**10 06 49.4**	**+1.5**
BZS	**Buzias**	**6.20**	**328**	⇑P		**Pn**	**10 06 49.2**	**-0.1**

IDC 24 10:05:52.0±3.5, 6°13.5'N×127°44.E, h385km±54km, mb2.6/1, mb1 3.1/5, mb1mx2.8/45, mbtmp3.8/5, Error ellipse: s-maj=71.2km s-min=18.3km az=85.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.48**	**36**	P	Pn	10 07 31.0	+1.5
	1.2nm,0.3s,baz=229,slow=19,SNR=4.0						
SIJI				S	S	10 08 47.7	-1.2
	1.6nm,0.3s,baz=224,slow=23,SNR=2.0						
FITZ	**Fitzroy Crossi**	**12.02**	**188**	P	Pn	10 08 33.5	-0.2
	0.1nm,0.3s,baz=9.5,slow=12,SNR=1.5						
WRA	**Warramunga Arr**	**15.28**	**155**	P	P	10 09 07.8	-0.3
	1.4nm,0.3s,baz=330,slow=11,SNR=136						
ASAR	**Alice Springs**	**18.51**	**161**	P	P	10 09 42.5	-0.3
	0.4nm,0.3s,baz=346,slow=12,SNR=29						
MKAR	**Makanchi Array**	**66.13**	**328**	P	P	10 15 59.4	0.0
	0.2nm,0.5s,baz=117,slow=11,SNR=2.4						

IDC 24 10:11:39.1±0.9, 40°.28N×26°.04E, h0km, mb3.6/10, mb1 3.8/14, mb1mx3.7/43, mbtmp3.6/14, ML3.8/5, Error ellipse: s-maj=15.8km s-min=13.5km az=57.0
SOF 24 10:11:39.5, 40°.38N×26°.03E, h10km, MD4.0
DDA 24 10:11:40.6, 40°.39N×26°.18E, h19km±3km, MW4.6
NEIC 24 10:11:41.0±2.0, 40°.39N±0°.03×26°.06E±0°.07, h12km±3km, Error ellipse: s-maj=7.6km s-min=4.9km az=90.0
ATH 24 10:11:40.6, 40°.41N×26°.04E, h30km±1km, ML4.0/14, Error ellipse: s-maj=1.5km s-min=0.7km az=66.0
ISK 24 10:11:40.5, 40°.40N×26°.15E, h9km, ML4.3/53
THE 24 10:11:41.2, 40°.40N×26°.11E, h12km±1km, ML4.1/9, Error ellipse: s-maj=1.3km s-min=0.6km az=316.0
SKO 24 10:11:42.8, 40°.37N×26°.16E, h54km

ISC 24 10:11:41.2±0.8, 40°.40N±0°.02×26°.09E±0°.02, h17km±5km, n228, σ1s05/261, mb3.9/17, 10C-8D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.26**	**215**	P	**Pg**	**10 11 47.0**	**+0.2**
GADA				S	**Sg**	**10 11 51.7**	**+1.0**
	40μm,0.5s						
GADA	**Gvkgeada**	**0.26**	**215**	PG	**Pg**	**10 11 47.1**	**+0.2**
GADA	**Gvkgeada**	**0.26**	**215**	Pg	**Pg**	**10 11 47.0**	**+0.2**
GELI	**Tayfur-Gelibol**	**0.29**	**90**	PG	**Pg**	**10 11 46.4**	**-1.0**
GELI				SG	**Sg**	**10 11 49.9**	**-1.9**
GELI	**Tayfur-Gelibol**	**0.29**	**90**	Pg	**Pg**	**10 11 46.5**	**-1.0**
ENEZ	**Enez**	**0.34**	**8**	P	**Pg**	**10 11 48.1**	**-0.2**
ENEZ				S	**Sg**	**10 11 53.1**	**-0.1**
	60μm,0.5s						
ENEZ	**Enez**	**0.34**	**8**	PG	**Pg**	**10 11 48.2**	**-0.2**
ENEZ	**Enez**	**0.34**	**8**	Pg	**Pg**	**10 11 48.2**	**-0.2**
ERIK	**Erikli-Kesan**	**0.42**	**50**	PG	**Pg**	**10 11 48.9**	**-0.8**
ERIK	**Erikli-Kesan**	**0.42**	**50**	Pg	**Pg**	**10 11 48.1**	**-1.7**
SMTH	**Samothraki Isl**	**0.43**	**280**	P	**Pb**	**10 11 50.0**	**-0.5**
SMTH				S	**Sb**	**10 11 57.1**	**+0.4**
	18μm,0.3s						
SMTH	**Samothraki Isl**	**0.43**	**280**	P	**Pb**	**10 11 49.9**	**-0.5**
SMTH				S	**Sb**	**10 11 56.0**	**-0.7**
SMTH				AML	AML	10 11 57.5	
	comp=E,37142μm,0.3s						
SMTH				AML	AML	10 12 00.8	
	comp=N,31897μm,0.3s						
SMTH	**Samothraki Isl**	**0.43**	**280**		**Pb**	**10 11 50.0**	**-0.5**
ALN	**Alexandroupoli**	**0.50**	**356**	P	**Pg**	**10 11 50.9**	**-0.3**
ALN				S	**Sg**	**10 11 58.1**	**+0.2**
	comp=N,13μm,0.4s						
ALN	**Alexandroupoli**	**0.50**	**356**	P	**Pg**	**10 11 50.8**	**-0.4**
ALN				S	**Sg**	**10 11 57.9**	**0.0**
ALN				AML	AML	10 11 59.3	
	comp=E,17790μm,0.2s						
ALN				AML	AML	10 12 03.8	
	comp=N,34798μm,0.5s						
ALN	**Alexandroupoli**	**0.50**	**356**	PG	**Pg**	**10 11 50.9**	**-0.3**
ALN	**Alexandroupoli**	**0.50**	**356**		**Pg**	**10 11 50.8**	**-0.4**
ALN				Sg	**Sg**	**10 11 57.4**	**-0.6**
LPK	**Lapseki**	**0.51**	**93**	PG	**Pg**	**10 11 50.5**	**-0.9**
BOZC	**Bozcaada**	**0.56**	**183**	PG	**Pb**	**10 11 51.7**	**-0.8**
BOZC				SG	**Sb**	**10 11 59.9**	**-0.3**
BOZC	**Bozcaada**	**0.56**	**183**	*i* P	**Pb**	**10 11 51.7**	**-0.8**
BOZC				*i* S	**Sb**	**10 11 59.8**	**-0.3**
EZN	**Ezine**	**0.60**	**163**	P	**Pg**	**10 11 52.2**	**-0.8**
EZN				S	**Sg**	**10 12 00.5**	**-0.5**
EZN	**Ezine**	**0.60**	**163**	PG	**Pg**	**10 11 52.2**	**-0.8**
KESN	**Edirne-Kesan**	**0.62**	**46**	*i* P	**Pg**	**10 11 52.1**	**-1.5**
KESN				*i* S	**Sg**	**10 12 00.1**	**-1.8**
KESN				IAML		10 12 05.0	
	comp=Z,8μm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.74**	**152**	*i* P	**Pb**	**10 11 55.9**	**+0.1**
BAYC				*i* S	**Sg**	**10 12 04.5**	**-1.0**
UKOP	**Uzunkopru-Edir**	**0.84**	**29**	PG	**Pg**	**10 11 56.4**	**-1.1**
LIA	**Limnos Island**	**0.86**	**235**	P	**Pn**	**10 11 57.6**	**-0.9**
LIA				S	**Sn**	**10 12 09.9**	**-0.8**
	comp=Z,19μm,0.5s						
LIA	**Limnos Island**	**0.86**	**235**	P	**Pn**	**10 11 57.5**	**-0.9**
LIA				S	**Sb**	**10 12 08.6**	**-0.3**
LIA				AML	AML	10 12 11.4	
	comp=N,30442μm,0.5s						
LIA				AML	AML	10 12 12.2	
	comp=E,42952μm,0.4s						
RDO	**Rodhopi**	**0.86**	**331**	P	**Pb**	**10 11 57.5**	**-0.1**
RDO				S	**Sb**	**10 12 09.6**	**+0.7**
	comp=E,9μm,0.4s						
RDO	**Rodhopi**	**0.86**	**331**	P	**Pg**	**10 11 57.3**	**-0.6**
RDO				S	**Sb**	**10 12 09.1**	**+0.2**
RDO				AML	AML	10 12 12.1	
	comp=N,20705μm,0.5s						
RDO				AML	AML	10 12 12.9	
	comp=E,16882μm,0.3s						
RDO	**Rodhopi**	**0.86**	**331**	PG	**Pb**	**10 11 57.6**	**-0.1**
RDO	**Rodhopi**	**0.86**	**331**		**Pb**	**10 11 57.5**	**-0.1**
RKY	**Sarkoy-Tekirda**	**0.88**	**70**	PG	**Pg**	**10 11 56.0**	**-2.2**
SART	**Tekirdag**	**0.88**	**70**	*i* P	**Pg**	**10 11 56.6**	**-1.7**
KRBG	**Karabiga-Canak**	**0.92**	**90**	PG	**Pg**	**10 11 57.5**	**-1.6**
THAS	**Thassos island**	**1.07**	**282**	P	**Pb**	**10 12 00.5**	**-0.8**
THAS				S	**Sn**	**10 12 16.2**	**+0.4**
	comp=E,14μm,0.4s						
THAS	**Thassos island**	**1.07**	**282**	P	**Pb**	**10 12 00.4**	**-0.8**
THAS				S	**Sb**	**10 12 14.7**	**-0.2**
THAS				AML	AML	10 12 18.1	
	comp=N,34218μm,0.5s						
THAS				AML	AML	10 12 18.5	
	comp=E,23570μm,0.3s						
KNL	**Balıkesir**	**1.10**	**96**	*i* P	**Pg**	**10 12 00.8**	**-1.8**
KNL				*i* S	**Sg**	**10 12 15.3**	**-1.7**
KNL				IAML		10 12 19.0	
	comp=Z,4μm,0.2s						
PRK	**Paraskevi**	**1.16**	**173**	P	**Pn**	**10 12 03.4**	**+0.7**
PRK				S	**Sn**	**10 12 19.0**	**+0.9**
	comp=Z,46μm,0.8s						
PRK	**Paraskevi**	**1.16**	**173**	P	**Pn**	**10 12 03.2**	**+0.6**
PRK				S	**Sn**	**10 12 19.3**	**+1.1**
PRK				AML	AML	10 12 21.1	
	comp=E,51119μm,0.9s						
PRK				AML	AML	10 12 21.4	
AYVA	**Ayvalik**	**1.18**	**157**	*i* P	**Pg**	**10 12 03.0**	**-1.0**
AYVA				IAML		10 12 22.0	
	comp=Z,9μm,0.4s						
SIGR	**SIGRI**	**1.20**	**189**	P	**Pg**	**10 12 02.6**	**-1.7**
SIGR				S	**Sn**	**10 12 19.5**	**+0.3**
	comp=Z,17μm,0.6s						
SIGR	**SIGRI**	**1.20**	**189**	P	**Pb**	**10 12 03.2**	**-0.3**
SIGR				S	**Sn**	**10 12 19.4**	**+0.3**
SIGR				AML	AML	10 12 21.5	
	comp=N,41041μm,0.8s						
SIGR				AML	AML	10 12 21.9	
	comp=E,27981μm,0.5s						
SIGR	**SIGRI**	**1.20**	**189**	PN	**Pn**	**10 12 03.4**	**+0.2**
EFSA	**Agios Efstrati**	**1.21**	**225**	P	**Pn**	**10 12 03.4**	**+0.1**
EFSA				S	**Sn**	**10 12 19.3**	**0.0**
EFSA				AML	AML	10 12 21.8	
	comp=N,26422μm,0.5s						
EFSA				AML	AML	10 12 22.1	
	comp=E,25982μm,0.7s						
TKR	**Tekirdag**	**1.25**	**61**	PN	**Pg**	**10 12 03.5**	**-1.8**
GONE	**Gonen-Balikesi**	**1.27**	**106**	PN	**Pg**	**10 12 04.5**	**-1.2**
KAVA	**Kavala**	**1.34**	**297**	P	**Pg**	**10 12 05.1**	**-2.0**
KAVA	**Kavala**	**1.34**	**297**	P	**Pg**	**10 12 05.0**	**-2.0**
KAVA				S	**Sb**	**10 12 22.3**	**-0.5**
KAVA				AML	AML	10 12 25.2	
	comp=N,5668μm,0.4s						
KAVA				AML	AML	10 12 28.2	
	comp=E,4696μm,0.4s						
BALY	**Balya**	**1.34**	**119**	*i* P	**Pn**	**10 12 05.3**	**0.0**
BALY				IAML		10 12 25.0	
	comp=Z,1μm,0.5s						
KDZ	**Kurdzhali**	**1.35**	**338**	*i* P	**Pg**	**10 12 05.5**	**-1.7**
KDZ	**Kurdzhali**	**1.35**	**338**	PN	**Pb**	**10 12 06.7**	**+0.6**
EDC	**Edincik**	**1.35**	**92**	PN	**Pn**	**10 12 04.8**	**-0.6**
KVLA	**Kavala**	**1.40**	**293**	P	**Pg**	**10 12 06.7**	**-2.6**
KVLA				S	**Sg**	**10 12 23.7**	**-2.8**
KVLA				AML	AML	10 12 28.2	
	comp=N,7111μm,0.5s						
KVLA				AML	AML	10 12 30.4	
	comp=E,5911μm,0.4s						
DKL	**Dikili**	**1.47**	**154**	PN	**Pn**	**10 12 07.4**	**+0.5**
EDRB	**Edirne**	**1.53**	**19**	P	**Pn**	**10 12 07.3**	**-0.5**
EDRB	**Edirne**	**1.53**	**19**	PN	**Pn**	**10 12 08.6**	**+0.8**
BOTS	**Marmara Eregli**	**1.55**	**67**	PN	**Pn**	**10 12 08.2**	**+0.1**
BALB	**Balikesir**	**1.57**	**118**	PN	**Pn**	**10 12 09.0**	**+0.7**
KIRK	**Kırklareli**	**1.58**	**28**	*i* P	**Pn**	**10 12 07.7**	**-0.8**
OUR	**Ouranopolis**	**1.61**	**268**	P	**Pn**	**10 12 08.6**	**-0.3**
OUR				S	**Sn**	**10 12 29.1**	**-0.2**
OUR				AML	AML	10 12 36.2	
	comp=E,12806μm,0.5s						
OUR				AML	AML	10 12 37.3	
	comp=N,13011μm,0.6s						
OUR	**Ouranopolis**	**1.61**	**268**	PN	**Pn**	**10 12 08.8**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.61**	**129**	*i* P	**Pn**	**10 12 10.1**	**+1.1**
STEP				IAML		10 12 34.0	
	comp=Z,1μm,0.5s						
ZEDA	**zmir-Bergama**	**1.62**	**152**	*i* P	**Pb**	**10 12 11.0**	**+0.4**
ZEDA				*i* S	**Sn**	**10 12 28.5**	**-1.0**
PHSR	**Pinarhisar**	**1.64**	**41**	PN	**Pn**	**10 12 08.7**	**-0.6**
RZN	**Rozhen**	**1.66**	**322**	P	**Pn**	**10 12 10.1**	**+0.4**
DIM	**Dimitrovgrad**	**1.70**	**346**	P	**Pn**	**10 12 10.9**	**+0.7**
KCTX	**Karacabey (Bur**	**1.74**	**94**	PN	**Pn**	**10 12 10.7**	**+0.1**
SLVT	**Silivri**	**1.81**	**62**	PN	**Pn**	**10 12 11.8**	**+0.2**
KRBN	**Karaburun**	**1.84**	**169**	PN	**Pn**	**10 12 12.4**	**+0.4**
PSRA	**Psara**	**1.90**	**193**	P	**Pn**	**10 12 13.5**	**+0.7**
PSRA				S	**Sn**	**10 12 37.0**	**+0.7**
PSRA				AML	AML	10 12 48.4	
	comp=N,5433μm,0.5s						
PSRA				AML	AML	10 12 49.9	
	comp=E,3414μm,0.3s						
PAIG	**Paliouri**	**1.91**	**256**	P	**Pn**	**10 12 12.3**	**-0.6**
PAIG				S	**Sn**	**10 12 36.2**	**-0.4**
PAIG				AML	AML	10 12 51.4	
	comp=N,2642μm,1.0s						
PAIG				AML	AML	10 12 51.9	
	comp=E,1800μm,0.4s						
ELBA	**Catalca**	**1.93**	**66**	*i* P	**Pn**	**10 12 12.5**	**-0.8**
CTYL	**Yalikoy Yolu**	**1.98**	**56**	PN	**Pn**	**10 12 13.4**	**-0.6**
DURS	**Dursunbey**	**2.00**	**113**	*i* P	**Pn**	**10 12 16.8**	**+2.5**
DURS				IAML		10 12 45.0	
	comp=Z,2μm,0.5s						
PLD	**Plovdiv**	**2.00**	**329**	*i* P	**Pn**	**10 12 14.9**	**+0.7**
PLD	**Plovdiv**	**2.00**	**329**	PN	**Pn**	**10 12 16.2**	**+1.9**
CHOS	**Chios island**	**2.01**	**181**	P	**Pn**	**10 12 14.6**	**+0.2**
CHOS				S	**Sn**	**10 12 40.1**	**+0.8**
CHOS				AML	AML	10 12 52.1	
	comp=N,3216μm,0.7s						
CHOS				AML	AML	10 12 54.4	
	comp=E,6221μm,0.4s						
CHOS	**Chios island**	**2.01**	**181**	PN	**Pn**	**10 12 14.7**	**+0.2**
CTKS	**Kestanelik-??a**	**2.02**	**65**	PN	**Pn**	**10 12 15.0**	**+0.6**
AKS	**Akhisar**	**2.02**	**138**	PN	**Pn**	**10 12 15.0**	**+0.5**
AKHS	**Akhisar**	**2.02**	**138**	*i* P	**Pn**	**10 12 13.6**	**-0.9**
SRS	**Serrai**	**2.03**	**292**	P	**Pn**	**10 12 14.5**	**-0.2**
URLA	**Izmir**	**2.07**	**169**	PN	**Pn**	**10 12 15.9**	**+0.6**
URLA	**Izmir**	**2.07**	**169**	*i* P	**Pn**	**10 12 15.9**	**+0.6**
URLA				IAML		10 12 50.0	
	comp=Z,1μm,0.7s						
AVCI	**Avcilar-stanb**	**2.09**	**73**	PN	**Pn**	**10 12 16.0**	**+0.6**
DST	**Dursunbey**	**2.10**	**111**	PN	**Pn**	**10 12 16.0**	**+0.4**
JMB	**Yambol**	**2.10**	**10**	PN	**Pn**	**10 12 16.9**	**+1.3**
AOS	**Alonnisos**	**2.10**	**235**	P	**Pn**	**10 12 15.1**	**-0.5**
AOS	**Alonnisos**	**2.10**	**235**	PN	**Pb**	**10 12 17.6**	**-1.2**
ARMT	**Armutlu**	**2.12**	**85**	PN	**Pn**	**10 12 16.9**	**+1.0**
MDNY	**Mudanya-Bursa**	**2.13**	**90**	PN	**Pn**	**10 12 17.2**	**+1.1**
BLCB	**Balcova**	**2.14**	**160**	PN	**Pn**	**10 12 16.8**	**+0.6**
MMB	**Musomiste**	**2.15**	**304**	P	**Pn**	**10 12 16.3**	**0.0**
HVHR	**Bakirkoy-Istan**	**2.17**	**74**	PN	**Pn**	**10 12 17.2**	**+0.6**
ORLT	**Orhaneli**	**2.18**	**98**	PN	**Pn**	**10 12 17.4**	**+0.7**
BGKT	**Bogazkoy**	**2.18**	**68**	PN	**Pn**	**10 12 17.3**	**+0.6**
HORT	**Hortiatis**	**2.29**	**276**	P	**Pn**	**10 12 18.3**	**0.0**
HORT	**Hortiatis**	**2.29**	**276**	PN	**Pn**	**10 12 19.9**	**+1.6**
KYMI	**Kymi, Euboea I**	**2.34**	**222**	P	**Pn**	**10 12 18.4**	**-0.5**
ULDT	**Uludag**	**2.34**	**95**	*i* P	**Pn**	**10 12 18.2**	**-0.9**
ISK	**Istanbul-Kandi**	**2.35**	**73**	PN	**Pn**	**10 12 18.7**	**-0.4**
KAVV	**Kandilli-Istan**	**2.35**	**73**	PN	**Pn**	**10 12 18.8**	**-0.3**
GEMT	**Gemlik**	**2.37**	**88**	PN	**Pn**	**10 12 20.3**	**+1.0**
SKIA	**Skiathos**	**2.37**	**240**	P	**Pn**	**10 12 19.3**	**0.0**
IGD	**Bursa**	**2.38**	**92**	*i* P	**Pn**	**10 12 19.5**	**+0.1**
KLYT	**Kilyos**	**2.40**	**68**	PN	**Pn**	**10 12 19.5**	**-0.2**
DEMI	**Demirci**	**2.44**	**123**	*i* P	**Pn**	**10 12 20.9**	**+0.5**
TUZL	**Tuzla-Istanbul**	**2.45**	**79**	PN	**Pn**	**10 12 21.1**	**+0.7**
XOR	**Xorichti**	**2.46**	**246**	P	**Pn**	**10 12 20.0**	**-0.6**
YLV	**Yalova**	**2.51**	**85**	PN	**Pn**	**10 12 22.6**	**+1.3**
YLVH	**Yalova**	**2.52**	**82**	PN	**Pn**	**10 12 22.4**	**+1.1**
KNT	**Kendrikon**	**2.54**	**288**	PN	**Pn**	**10 12 22.5**	**+0.8**
SIMA	**Simav-Kutahya**	**2.59**	**120**	PN	**Pn**	**10 12 22.8**	**+0.4**
KARY	**Karystos**	**2.69**	**209**	P	**Pn**	**10 12 23.3**	**-0.5**
KULA	**Kula-Manisa**	**2.74**	**133**	PN	**Pn**	**10 12 25.4**	**+0.9**
HRT	**Hereke**	**2.75**	**80**	PN	**Pn**	**10 12 25.5**	**+0.8**
TVSB	**Tavsanli**	**2.76**	**109**	PN	**Pn**	**10 12 25.3**	**+0.5**
LIT	**Litokhoron**	**2.77**	**265**		**Pn**	**10 12 24.3**	**-0.6**
SHAP	**Saphane-Kutahy**	**2.78**	**119**	PN	**Pn**	**10 12 25.9**	**+0.9**
ADVT	**Abdulvahap**	**2.78**	**88**	PN	**Pn**	**10 12 26.4**	**+1.4**
SILT	**Sile**	**2.80**	**73**	PN	**Pn**	**10 12 25.3**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**2.82**	**150**	PN	**Pn**	**10 12 26.4**	**+0.8**
VAY	**Valandovo**	**2.83**	**290**	⇑*i* Pn	**Pn**	**10 12 26.6**	**+1.0**
VAY				*e* Lg	Lg	10 13 16.6	
	comp=N,1μm,1.2s						
VAY	**Valandovo**	**2.83**	**290**	⇑*i* Pn	**Pn**	**10 12 26.6**	**+1.0**
VAY				*e* Lg	Lg	10 13 16.6	
	comp=N,1μm,1.2s						
GCAM	**G?zlecaml?**	**2.84**	**161**	PN	**Pn**	**10 12 27.0**	**+1.3**
SZH	**Strazhica**	**2.87**	**358**	P	**Pn**	**10 12 27.1**	**+0.9**
CAVI	**Cavuskoy**	**2.88**	**93**	PN	**Pn**	**10 12 26.7**	**+0.4**
GEDZ	**Gediz**	**2.90**	**117**	PN	**Pn**	**10 12 28.1**	**+1.5**
TNSA	**Tinos**	**2.94**	**195**	P	**Pn**	**10 12 26.6**	**-0.6**
VTS	**Vitosha**	**3.08**	**317**		**Pn**	**10 12 30.2**	**+0.9**
RAZG	**Razgrad**	**3.18**	**5**	⇓P	**Pn**	**10 12 31.4**	**+0.9**
RAZG	**Razgrad**	**3.18**	**5**		**Pn**	**10 12 31.4**	**+0.9**
PLVB	**Pleven**	**3.18**	**340**	⇑P	**Pn**	**10 12 31.4**	**+0.9**
PLVB	**Pleven**	**3.18**	**340**		**Pn**	**10 12 31.4**	**+0.9**
KAND	**Kocaeli-Kandir**	**3.19**	**76**	*i* P	**Pn**	**10 12 30.7**	**+0.1**
AGG	**Agios Georgios**	**3.21**	**246**	PN	**Pn**	**10 12 32.9**	**+2.0**
AGG	**Agios Georgios**	**3.21**	**246**		**Pn**	**10 12 30.8**	**-0.2**
AGG				Sn	**Sn**	**10 13 10.0**	**+1.1**
SPNC	**Sapanca-Adapaz**	**3.23**	**84**	PN	**Pn**	**10 12 32.4**	**+1.3**
SAUV	**Serdivan-Sakar**	**3.24**	**83**	PN	**Pn**	**10 12 32.2**	**+0.9**
KHAL	**Karahalli**	**3.32**	**126**	*i* P	**Pn**	**10 12 33.5**	**+1.0**
APE	**Apeiranthos**	**3.35**	**188**	⇓P	**Pn**	**10 12 32.3**	**-0.6**
APE	**Apeiranthos**	**3.35**	**188**	PN	**Pn**	**10 12 33.2**	**+0.3**
APE	**Apeiranthos**	**3.35**	**188**		**Pn**	**10 12 32.3**	**-0.6**
BORA	**Eskisehir**	**3.38**	**97**	PN	**Pn**	**10 12 34.3**	**+0.9**
BORA	**Eskisehir**	**3.38**	**97**	*i* P	**Pn**	**10 12 37.0**	**+3.7**
MPEP	**Malo Peshtene**	**3.44**	**330**	P	**Pn**	**10 12 35.2**	**+1.2**
BODT	**Bodrum**	**3.46**	**164**	PN	**Pn**	**10 12 34.8**	**+0.4**
BDRM	**Kayabasi**	**3.49**	**162**	*i* P	**Pn**	**10 12 33.5**	**-1.3**
FNA	**Florina**	**3.61**	**278**	PN	**Pn**	**10 12 38.6**	**+2.1**
FNA	**Florina**	**3.61**	**278**		**Pn**	**10 12 37.0**	**+0.6**
YER	**Yerkesik**	**3.68**	**152**	PN	**Pn**	**10 12 38.1**	**+0.7**
MDUB	**Mudurnu**	**3.90**	**87**		**Pn**	**10 12 41.4**	**+0.9**
ICOR	**Ion Corvin**	**3.93**	**18**	⇑P	**Pn**	**10 12 42.2**	**+1.5**
ICOR	**Ion Corvin**	**3.93**	**18**		**Pn**	**10 12 42.2**	**+1.5**
TURN	**Turunc**	**4.03**	**150**	*i* P	**Pn**	**10 12 45.7**	**+3.5**
SANT	**Santorini**	**4.05**	**187**	Pn	**Pn**	**10 12 42.6**	**+0.1**
BOLV	**Bolvadin**	**4.11**	**113**	*i* P	**Pn**	**10 12 44.9**	**+1.5**
ISP	**Isparta**	**4.30**	**125**	Pn	**Pn**	**10 12 47.0**	**+1.1**
TIRR	**Tirgusor**	**4.41**	**22**		**Pn**	**10 12 47.4**	**+0.1**
HARR	**Harsova**	**4.50**	**17**	⇑P	**Pn**	**10 12 49.4**	**+0.8**
HARR	**Harsova**	**4.50**	**17**		**Pn**	**10 12 49.4**	**+0.8**
ITM	**Ithomi**	**4.57**	**227**		**Pn**	**10 12 50.8**	**+1.2**
ELL	**Elmali**	**4.71**	**139**		**Pn**	**10 12 51.6**	**-0.1**
KARP	**Karpathos**	**4.92**	**170**	Pn	**Pn**	**10 12 54.3**	**-0.1**
CFR	**Carcaliu**	**5.01**	**17**	⇓P	**Pn**	**

OUR				AML	AML	10 19 26.2		
	comp=E,32589μm,0.3s							
OUR				AML	AML	10 19 27.4		
	comp=N,29242μm,0.3s							
PAIG	**Paliouri**	**0.46**	**266**	P	**Pb**	**10 19 20.5**	**-1.2**	
PAIG				S	**Sg**	**10 19 26.6**	**+0.6**	
	comp=N,5μm,0.2s							
PAIG	**Paliouri**	**0.46**	**266**	S	**Sg**	**10 19 26.8**	**+0.7**	
PAIG				AML	AML	10 19 27.6		
	comp=E,8841μm,0.2s							
PAIG				AML	AML	10 19 27.7		
	comp=N,11457μm,0.3s							
EFSA	**Agios Efstrati**	**0.69**	**127**	P	**Pn**	**10 19 26.3**	**-1.2**	
EFSA				S	**Sn**	**10 19 36.5**	**-2.1**	
EFSA				AML	AML	10 19 38.6		
	comp=N,13252μm,0.5s							
EFSA				AML	AML	10 19 39.3		
	comp=E,22612μm,0.6s							
LIA	**Limnos Island**	**0.70**	**95**	P	**Pn**	**10 19 26.2**	**-1.4**	
LIA				S	**Sn**	**10 19 37.3**	**-1.5**	
	comp=E,20μm,0.4s							
LIA	**Limnos Island**	**0.70**	**95**	P	**Pn**	**10 19 26.2**	**-1.4**	
LIA				S	**Sn**	**10 19 37.2**	**-1.6**	
LIA				AML	AML	10 19 38.1		
	comp=N,56985μm,0.4s							
LIA				AML	AML	10 19 38.2		
	comp=E,24368μm,0.3s							
THAS	**Thassos island**	**0.73**	**28**	P	**Pg**	**10 19 25.4**	**+0.2**	
THAS				S	**Sb**	**10 19 36.2**	**-0.3**	
	comp=E,19μm,0.5s							
THAS	**Thassos island**	**0.73**	**28**	P	**Pg**	**10 19 25.4**	**+0.2**	
THAS				S	**Sb**	**10 19 36.3**	**-0.3**	
THAS				AML	AML	10 19 37.4		
	comp=N,25531μm,0.5s							
THAS				AML	AML	10 19 37.6		
	comp=E,49203μm,0.5s							
PLG	**Polygyros**	**0.76**	**303**	P	**Pg**	**10 19 25.6**	**-0.2**	
PLG				S	**Sg**	**10 19 35.3**	**-0.3**	
	comp=E,6μm,0.5s							
PLG	**Polygyros**	**0.76**	**303**	P	**Pg**	**10 19 25.7**	**0.0**	
PLG				AML	AML	10 19 37.8		
	comp=E,11733μm,0.4s							
PLG				AML	AML	10 19 38.6		
	comp=N,7974μm,0.3s							
AOS	**Alonnisos**	**0.85**	**201**	P	**Pn**	**10 19 27.9**	**-1.8**	
AOS				S	**Sn**	**10 19 41.3**	**-1.1**	
	comp=N,5μm,0.6s							
AOS	**Alonnisos**	**0.85**	**201**	P	**Pn**	**10 19 27.8**	**-1.8**	
AOS				AML	AML	10 19 43.5		
	comp=E,10870μm,0.5s							
AOS				AML	AML	10 19 43.8		
	comp=N,7028μm,0.7s							
ALNA	**Alonissos**	**0.87**	**201**	P	**Pn**	**10 19 28.2**	**-1.8**	
ALNA				S	**Sn**	**10 19 41.3**	**-1.7**	
KVLA	**Kavala**	**0.98**	**5**	P	**Pb**	**10 19 30.0**	**-0.6**	
KVLA				S	**Sb**	**10 19 42.5**	**-1.2**	
KVLA				AML	AML	10 19 45.0		
	comp=N,8948μm,0.4s							
KVLA				AML	AML	10 19 45.1		
	comp=E,13921μm,0.3s							
SKIA	**Skiathos**	**1.01**	**218**	P	**Pn**	**10 19 31.0**	**-0.9**	
SKIA				S	**Sn**	**10 19 45.6**	**-0.9**	
	comp=E,3μm,0.6s							
XOR	**Xorichti**	**1.03**	**235**	P	**Pn**	**10 19 31.4**	**-0.8**	
XOR				S	**Sn**	**10 19 45.4**	**-1.5**	
	comp=E,2μm,0.7s							
XOR	**Xorichti**	**1.03**	**235**	P	**Pn**	**10 19 31.4**	**-0.8**	
XOR				AML	AML	10 19 48.7		
	comp=E,4430μm,0.5s							
XOR				AML	AML	10 19 51.2		
	comp=N,5132μm,1.0s							
NEO	**Neokhori**	**1.04**	**231**	P	**Pn**	**10 19 31.3**	**-1.1**	
NEO				S	**Sn**	**10 19 46.5**	**-0.8**	
	comp=N,3μm,0.6s							
NEO	**Neokhori**	**1.04**	**231**	P	**Pn**	**10 19 31.3**	**-1.1**	
NEO				S	**Sn**	**10 19 45.1**	**-2.2**	
NEO				AML	AML	10 19 49.9		
	comp=E,4788μm,0.3s							
NEO				AML	AML	10 19 50.2		
	comp=N,7829μm,0.5s							
KAVA	**Kavala**	**1.05**	**10**	P	**Pb**	**10 19 31.0**	**-0.8**	
KAVA				S	**Sn**	**10 19 46.3**	**-1.1**	
	comp=N,3μm,0.4s							
KAVA	**Kavala**	**1.05**	**10**	P	**Pb**	**10 19 30.9**	**-0.8**	
KAVA				S	**Sb**	**10 19 44.2**	**-1.6**	
KAVA				AML	AML	10 19 44.4		
	comp=E,7584μm,0.4s							
KAVA				AML	AML	10 19 46.6		
	comp=N,5361μm,0.4s							
HORT	**Hortiatis**	**1.10**	**306**	P	**Pb**	**10 19 31.6**	**-1.1**	
HORT				S	**Sb**	**10 19 46.5**	**-0.9**	
	comp=N,3μm,0.7s							
HORT	**Hortiatis**	**1.10**	**306**	P	**Pb**	**10 19 32.1**	**-0.7**	
HORT				S	**Sb**	**10 19 46.8**	**-0.6**	
HORT				AML	AML	10 19 48.0		
	comp=E,3551μm,0.2s							
HORT				AML	AML	10 19 50.2		
	comp=N,6003μm,0.7s							
SKY	**Skiros Island**	**1.10**	**169**	P	**Pg**	**10 19 32.7**	**+0.4**	
SKY	**Skiros Island**	**1.10**	**169**	P	**Pg**	**10 19 32.7**	**+0.4**	
SKY				S	**Sn**	**10 19 48.2**	**-0.5**	
SKY				AML	AML	10 19 52.1		
	comp=N,7535μm,0.2s							
SKY				AML	AML	10 19 53.4		
	comp=E,13580μm,0.7s							
SOH	**Sokhos**	**1.11**	**321**	P	**Pb**	**10 19 32.3**	**-0.6**	
SOH				S	**Sb**	**10 19 47.1**	**-0.5**	
	comp=E,7μm,0.7s							
THE	**Thessaloniki**	**1.21**	**304**	P	**Pb**	**10 19 33.8**	**-0.6**	
THE	**Thessaloniki**	**1.21**	**304**	P	**Pn**	**10 19 33.6**	**-1.0**	
THE				AML	AML	10 19 52.5		
	comp=N,4850μm,1.0s							
THE				AML	AML	10 19 53.4		
	comp=E,2894μm,0.8s							
SRS	**Serrai**	**1.27**	**336**	P	**Pn**	**10 19 34.3**	**-1.2**	
SRS				S	**Sg**	**10 19 52.4**	**+0.5**	
	comp=E,2μm,0.6s							
SRS	**Serrai**	**1.27**	**336**	P	**Pn**	**10 19 34.2**	**-1.2**	
KYMI	**Kymi, Euboea I**	**1.33**	**186**	P	**Pb**	**10 19 35.6**	**-1.0**	
KYMI				S	**Sg**	**10 19 56.7**	**+2.7**	
KYMI	**Kymi, Euboea I**	**1.33**	**186**	P	**Pb**	**10 19 35.6**	**-1.0**	
KYMI				AML	AML	10 19 59.7		
	comp=N,3942μm,0.6s							
KYMI				AML	AML	10 20 00.9		
	comp=E,2688μm,0.3s							
LIT	**Litokhoron**	**1.38**	**276**	P	**Pb**	**10 19 36.5**	**-0.9**	
LIT	**Litokhoron**	**1.38**	**276**	P	**Pb**	**10 19 36.4**	**-0.9**	
LIT				AML	AML	10 19 59.2		
	comp=N,991μm,0.4s							
LIT				AML	AML	10 20 01.4		
	comp=E,1256μm,0.5s							
KNT	**Kendrikon**	**1.59**	**319**	P	**Pn**	**10 19 39.7**	**-0.3**	
KNT				AML	AML	10 20 04.3		
	comp=E,4944μm,0.6s							
KNT				AML	AML	10 20 06.8		
	comp=N,3958μm,0.5s							
LKR	**Lokris**	**1.64**	**217**	P	**Pb**	**10 19 40.1**	**-1.7**	
MMB	**Musomiste**	**1.68**	**346**	*i* P	**Pn**	**10 19 40.0**	**-1.2**	
PRK	**Paraskevi**	**1.70**	**114**	P	**Pg**	**10 19 42.7**	**-1.1**	
RZN	**Rozhen**	**1.76**	**11**	*i* P	**Pn**	**10 19 40.7**	**-1.7**	
VAY	**Valandovo**	**1.88**	**317**	⇓Pn	**Pg**	**10 19 46.9**	**-0.3**	
VAY	**Valandovo**	**1.88**	**317**	⇓*i* Pn	**Pg**	**10 19 46.9**	**-0.3**	
KDZ	**Kurdzhali**	**1.90**	**27**	*i* P	**Pn**	**10 19 42.1**	**-2.0**	
PLD	**Plovdiv**	**2.17**	**8**	*i* P	**Pn**	**10 19 48.1**	**+0.3**	
EVR	**Evrytania**	**2.18**	**242**	P	**Pn**	**10 19 48.2**	**+0.1**	
KPRO	**Kipourio**	**2.24**	**271**	P	**Pn**	**10 19 49.1**	**+0.2**	
VTS	**Vitosha**	**2.77**	**344**	⇓P	Pn	10 19 45.0	-11	
OHR	**Ohrid**	**2.89**	**295**	*i* Pn	**Pb**	**10 20 01.5**	**-1.7**	
OHR	**Ohrid**	**2.89**	**295**	*i* Pn	**Pb**	**10 20 01.5**	**-1.7**	
APE	**Apeiranthos**	**3.05**	**161**	⇓P	**Pn**	**10 19 59.9**	**-0.1**	
PLVB	**Pleven**	**3.43**	**4**	⇓P	**Pg**	**10 20 15.0**	**-2.0**	
IDI	**Anoyia**	**4.69**	**174**	Pn	**Pn**	**10 20 22.7**	**+0.1**	
	comp=N,1.6nm,0.3s,baz=327,slow=13,SNR=8.5							
HERR	**Herculane**	**5.11**	**345**	⇓P	**Pn**	**10 20 27.0**	**-1.2**	
ISR	**Istrita**	**5.42**	**17**	⇓P	Pb	10 20 41.2	-5.1	
HARR	**Harsova**	**5.45**	**29**	⇑P	**Pn**	**10 20 32.8**	**-0.1**	
GZR	**Gura Zlata**	**5.54**	**349**	⇓P	**Pn**	**10 20 31.9**	**-2.4**	
MLR	**Muntele Rosu**	**5.66**	**12**	Pn	**Pn**	**10 20 36.5**	**+0.5**	
	comp=N,1.9nm,0.3s,baz=169,slow=21,SNR=8.4							
MLR				Lg	Lg	10 22 15.9		
	comp=N,1.3nm,0.3s,baz=146,slow=17,SNR=4.8							
MLR	**Muntele Rosu**	**5.66**	**12**	⇑P	**Pn**	**10 20 36.5**	**+0.5**	
CFR	**Carcaliu**	**5.94**	**27**	⇓P	**Pn**	**10 20 39.6**	**0.0**	
BZS	**Buzias**	**5.98**	**342**	⇑P	**Pn**	**10 20 40.1**	**-0.1**	
DOPR	**Dopca**	**6.06**	**7**	⇑P	**Pn**	**10 20 42.1**	**+0.8**	
PLOR	**Plostina**	**6.14**	**16**	⇓P	**Pn**	**10 20 44.1**	**+1.7**	
MDB	**Medias**	**6.18**	**1**	⇑P	**Pn**	**10 20 44.9**	**+2.0**	
TESR	**Tescani**	**6.77**	**14**	⇑P	**Pn**	**10 20 51.7**	**+0.6**	
DRGR		**6.92**	**351**	⇓P	**Pn**	**10 20 52.8**	**-0.4**	
BRTR	**Keskin Array B**	**7.21**	**89**	Pn	**Pn**	**10 20 58.2**	**+0.9**	
	comp=N,0.6nm,0.3s,baz=262,slow=13,SNR=5.4							
AKASG	**Malin Array Be**	**11.29**	**16**	Pn	**Pn**	**10 21 51.3**	**-1.6**	
	comp=N,0.6nm,0.3s,baz=197,slow=13,SNR=3.2							
ESDC	**Sonseca Array**	**21.66**	**278**	P	**P**	**10 24 03.0**	**+0.6**	
	comp=N,1.0nm,0.8s,baz=72,slow=14,SNR=3.0							
NB2	**NORSAR Subarra**	**22.59**	**343**	P	**P**	**10 24 10.7**	**-1.6**	
	comp=Z,2.9nm,0.8s,baz=151,slow=11							
NOA	**NORSAR Array B**	**22.59**	**343**	P	**P**	**10 24 11.3**	**-1.0**	
	comp=Z,2.9nm,0.9s,baz=152,slow=10,SNR=5.7							
KLMR	**Klimovskoe**	**22.95**	**19**	*e*	**P**	**10 24 21.6**	**+5.7**	
KLMR				AMP		10 24 22.8		
	comp=Z,12nm,1.2s							
TORD	**Torodi Ar. Bea**	**33.29**	**223**	P	**P**	**10 25 50.7**	**+1.1**	
	comp=Z,0.4nm,0.6s,baz=32,slow=9.0,SNR=3.1							
KSH	**Kashi**	**39.29**	**73**	P	**P**	**10 26 42.8**	**+1.9**	
KSH				pP	sP	10 26 46.8	+3.7	
KSH				pmax	pmax			
	comp=Z,22nm,1.2s							
MKAR	**Makanchi Array**	**41.88**	**61**	P	**P**	**10 27 03.1**	**+1.0**	
	comp=Z,0.4nm,0.5s,baz=271,slow=8.7,SNR=4.1							

*IDC **24** 10:29:08.6±1.2, 39.°73N×24.°00E, h0km, mb3.5/4, mb1 3.7/8, mb1mx3.5/46, mbtmp3.6/8, ML3.7/4, Error ellipse: s-maj=26.2km s-min=15.7km az=111.0*
*ATH **24** 10:29:09.1, 39.°83N×23.°92E, h29km, ML3.7/17, Error ellipse: s-maj=1.0km s-min=0.6km az=103.0*
*SOF **24** 10:29:09.4, 39.°97N×24.°08E, h5km, MD3.9*
*THE **24** 10:29:10.0, 39.°83N×23.°93E, h14km, ML3.5/5, Error ellipse: s-maj=1.0km s-min=0.5km az=264.0*

ISC 24 10:29:09.8±0.9, 39.°83N±0.°02×23.°95E±0.°02, h13km±7km, n79, σ0.°93/106, mb3.5/4, 6C-3D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	**0.23**	**294**	P	**Pg**	**10 29 14.8**	**+0.1**
PAIG				S	**Sg**	**10 29 18.1**	**0.0**
PAIG	**Paliouri**	**0.23**	**294**	P	**Pg**	**10 29 14.9**	**+0.1**
PAIG				S	**Sg**	**10 29 18.5**	**+0.4**
PAIG				AML	AML	10 29 20.0	
	comp=E,56158μm,0.1s						
PAIG				AML	AML	10 29 20.4	
	comp=N,64029μm,0.2s						
OUR	**Ouranopolis**	**0.50**	**3**	P	**Pb**	**10 29 20.1**	**-0.3**
OUR				S	**Sb**	**10 29 27.4**	**-0.2**
OUR	**Ouranopolis**	**0.50**	**3**	P	**Pb**	**10 29 20.2**	**-0.2**
OUR				S	**Sb**	**10 29 27.4**	**-0.2**
OUR				AML	AML	10 29 31.6	
OUR				AML	AML	10 29 31.6	
	comp=E,66834μm,0.6s						
AOS	**Alonnisos**	**0.67**	**185**	P	**Pg**	**10 29 22.4**	**-0.3**
AOS				S	**Sb**	**10 29 32.6**	**+0.3**
AOS	**Alonnisos**	**0.67**	**185**	P	**Pg**	**10 29 22.5**	**-0.3**
AOS				S	**Sb**	**10 29 31.9**	**-0.4**
AOS				AML	AML	10 29 33.7	
	comp=E,18390μm,0.8s						
AOS				AML	AML	10 29 34.3	
	comp=N,21277μm,0.4s						
PLG	**Polygyros**	**0.67**	**324**	P	**Pg**	**10 29 21.9**	**-0.8**
PLG				S	**Sb**	**10 29 32.6**	**+0.2**
PLG	**Polygyros**	**0.67**	**324**	P	**Pg**	**10 29 21.9**	**-0.8**
PLG				S	**Sg**	**10 29 30.7**	**-0.8**
PLG				AML	AML	10 29 34.1	
	comp=E,20648μm,0.4s						
PLG				AML	AML	10 29 37.3	
	comp=N,11421μm,0.3s						
ALNA	**Alonissos**	**0.69**	**186**	P	**Pg**	**10 29 22.8**	**-0.4**
ALNA				S	**Sb**	**10 29 33.3**	**+0.3**
ALNA				AML	AML	10 29 34.4	
	comp=N,30566μm,0.5s						
ALNA				AML	AML	10 29 34.6	
	comp=E,28090μm,0.5s						
XOR	**Xorichti**	**0.75**	**232**	P	**Pg**	**10 29 24.2**	**-0.1**
XOR				S	**Sg**	**10 29 34.8**	**+0.6**
	comp=E,9μm,0.5s						
XOR	**Xorichti**	**0.75**	**232**	P	**Pg**	**10 29 24.2**	**-0.1**
XOR				S	**Sg**	**10 29 34.3**	**+0.1**
XOR				AML	AML	10 29 35.5	
	comp=E,20249μm,0.4s						
XOR				AML	AML	10 29 37.6	
	comp=N,18098μm,0.3s						
SKIA	**Skiathos**	**0.77**	**210**	P	**Pg**	**10 29 24.2**	**-0.4**
SKIA				S	**Sg**	**10 29 34.9**	**+0.3**
SKIA				AML	AML	10 29 35.8	
	comp=E,20336μm,0.4s						
SKIA				AML	AML	10 29 36.2	
	comp=N,24919μm,0.4s						
NEO	**Neokhori**	**0.77**	**227**	P	**Pg**	**10 29 24.4**	**-0.3**
NEO				S	**Sg**	**10 29 35.4**	**+0.5**
NEO	**Neokhori**	**0.77**	**227**	P	**Pg**	**10 29 24.4**	**-0.3**
NEO				S	**Sg**	**10 29 35.3**	**+0.5**
NEO				AML	AML	10 29 37.3	
	comp=E,28313μm,0.5s						
NEO				AML	AML	10 29 37.9	
	comp=N,27809μm,0.3s						
EFSA	**Agios Efstrati**	**0.85**	**110**	P	**Pn**	**10 29 26.8**	**-0.6**
EFSA				S	**Sn**	**10 29 39.0**	**-0.7**
EFSA				AML	AML	10 29 40.5	
	comp=E,6924μm,0.5s						
EFSA				AML	AML	10 29 43.5	
	comp=N,4031μm,0.6s						
LIA	**Limnos Island**	**0.95**	**86**	P	**Pn**	**10 29 28.1**	**-0.7**
LIA				S	**Sn**	**10 29 42.3**	**+0.1**
	comp=N,5μm,0.6s						
LIA	**Limnos Island**	**0.95**	**86**	P	**Pn**	**10 29 28.2**	**-0.6**
LIA				S	**Sn**	**10 29 41.3**	**-0.9**
LIA				AML	AML	10 29 43.6	
	comp=N,11679μm,0.6s						
LIA				AML	AML	10 29 43.6	
	comp=E,7873μm,0.5s						
THAS	**Thassos island**	**0.97**	**37**	P	**Pg**	**10 29 27.9**	**-0.6**
THAS				S	**Sn**	**10 29 42.0**	**-0.7**
	comp=E,3μm,0.4s						
THAS	**Thassos island**	**0.97**	**37**	P	**Pn**	**10 29 28.1**	**-1.0**
THAS				S	**Sn**	**10 29 42.7**	**0.0**
THAS				AML	AML	10 29 45.5	
	comp=E,6727μm,0.3s						
THAS				AML	AML	10 29 50.5	
	comp=N,3970μm,0.5s						
HORT	**Hortiatis**	**1.00**	**320**	P	**Pb**	**10 29 27.9**	**-1.2**
HORT				S	**Sb**	**10 29 42.0**	**-0.3**
HORT				AML	AML	10 29 45.2	
	comp=N,6293μm,0.2s						
HORT				AML	AML	10 29 45.4	
	comp=E,10596μm,0.2s						
SKY	**Skiros Island**	**1.06**	**154**	P	**Pn**	**10 29 29.8**	**-0.6**
THE	**Thessaloniki**	**1.10**	**317**	P	**Pb**	**10 29 30.5**	**-0.1**
THE				S	**Sb**	**10 29 44.9**	**+0.1**
	comp=E,1μm,0.5s						
THE	**Thessaloniki**	**1.10**	**317**	P	**Pb**	**10 29 30.2**	**-0.4**
THE				S	**Sb**	**10 29 44.8**	**-0.1**
THE				AML	AML	10 29 50.5	
	comp=E,2752μm,0.6s						
THE				AML	AML	10 29 51.0	
	comp=N,2857μm,0.6s						
KVLA	**Kavala**	**1.15**	**17**	P	**Pb**	**10 29 30.9**	**-0.6**
KVLA				S	**Sn**	**10 29 47.7**	**+0.6**
KVLA				AML	AML	10 29 49.4	
	comp=E,4512μm,0.3s						
KVLA				AML	AML	10 29 49.7	
	comp=N,3714μm,0.3s						
LIT	**Litokhoron**	**1.16**	**284**	P	**Pn**	**10 29 30.4**	**-1.3**
LIT				S	**Sn**	**10 29 47.4**	**+0.1**
	comp=N,1μm,0.3s						
LIT	**Litokhoron**	**1.16**	**284**	P	**Pn**	**10 29 30.8**	**-0.8**
LIT				S	**Sb**	**10 29 46.5**	**0.0**
LIT				AML	AML	10 29 49.9	
	comp=E,2078μm,0.3s						
LIT				AML	AML	10 29 53.2	
	comp=N,2040μm,0.4s						
MRKA	**Markates**	**1.16**	**194**	P	**Pn**	**10 29 30.6**	**-1.1**
MRKA	**Markates**	**1.16**	**194**	P	**Pn**	**10 29 30.7**	**-1.0**
KYMI	**Kymi, Euboea I**	**1.21**	**175**	P	**Pn**	**10 29 31.5**	**-0.8**
LRSO	**Larissa Observ**	**1.21**	**263**	P	**Pn**	**10 29 32.0**	**-0.4**
KAVA	**Kavala**	**1.24**	**20**	P	**Pn**	**10 29 31.8**	**-1.0**
KAVA	**Kavala**	**1.24**	**20**	P	**Pn**	**10 29 32.1**	**-0.7**
SRS	**Serrai**	**1.31**	**348**	P	**Pn**	**10 29 33.5**	**-0.3**
SRS				S	**Sn**	**10 29 51.3**	**+0.1**
SRS				AML	AML	10 29 57.1	
	comp=E,2498μm,0.2s						
SRS				AML	AML	10 29 57.9	
	comp=N,3724μm,0.4s						
LKR	**Lokris**	**1.40**	**212**	P	**Pn**	**10 29 34.1**	**-0.8**
AXAR	**Agios Charalam**	**1.46**	**224**	P	**Pn**	**10 29 35.3**	**-0.6**
AGG	**Agios Georgios**	**1.50**	**238**	P	**Pn**	**10 29 35.5**	**-0.8**
AGG	**Agios Georgios**	**1.50**	**238**	P	**Pn**	**10 29 35.6**	**-0.8**
THL	**Klokotos Trika**	**1.52**	**260**	P	**Pn**	**10 29 35.8**	**-0.8**
THL				S	**Sn**	**10 29 55.1**	**-1.1**
THL				AML	AML	10 30 00.1	
	comp=N,1070μm,0.5s						
THL				AML	AML	10 30 04.7	
	comp=E,935μm,0.4s						
KNT	**Kendrikon**	**1.55**	**329**	P	**Pn**	**10 29 37.3**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.63**	**240**	P	**Pn**	**10 29 38.0**	**-0.2**
VIL2	**Platees**	**1.71**	**198**	P	**Pn**	**10 29 38.9**	**-0.3**
KZN	**Kozani**	**1.74**	**286**	P	**Pn**	**10 29 39.6**	**-0.1**
DION	**Dionisos Attik**	**1.75**	**181**	P	**Pn**	**10 29 39.4**	**-0.4**
MMB	**Musomiste**	**1.76**	**355**	*i* P	**Pn**	**10 29 40.3**	**+0.3**
MMB	**Musomiste**	**1.76**	**355**	*i* P	**Pn**	**10 29 40.3**	**+0.3**
PROD	**Prodromos**	**1.77**	**208**	P	**Pn**	**10 29 39.0**	**-1.1**
KARY	**Karystos**	**1.84**	**168**	P	**Pn**	**10 29 40.7**	**-0.3**
ATHU	**Athens Univers**	**1.87**	**184**	P	**Pn**	**10 29 40.4**	**-1.1**
RZN	**Rozhen**	**1.94**	**17**	*i* P	**Pn**	**10 29 42.9**	**+0.3**
RZN	**Rozhen**	**1.94**	**17**	*i* P	**Pn**	**10 29 42.9**	**+0.3**
LTK	**Loutraki**	**1.96**	**203**	P	**Pn**	**10 29 42.1**	**-0.7**
KPRO	**Kipourio**	**2.00**	**274**	P	**Pn**	**10 29 43.5**	**+0.2**
ANX	**Ano Chora**	**2.01**	**233**	P	**Pn**	**10 29 43.4**	**-0.1**
SERG	**Sergoula**	**2.05**	**227**	P	**Pn**	**10 29 43.8**	**-0.1**
KDZ	**Kurdzhali**	**2.13**	**31**	*i* P	**Pn**	**10 29 44.0**	**-1.0**
KDZ	**Kurdzhali**	**2.13**	**31**	*i* P	**Pn**	**10 29 44.0**	**-1.0**
KKB	**Krupnik**	**2.13**	**342**	*i* P	**Pn**	**10 29 45.4**	**+0.3**
KKB	**Krupnik**	**2.13**	**342**	*i* P	**Pn**	**10 29 45.4**	**+0.3**
PLD	**Plovdiv**	**2.34**	**14**	*i* P	**Pn**	**10 29 49.2**	**+1.3**
PLD	**Plovdiv**	**2.34**	**14**	*i* P	**Pn**	**10 29 49.2**	**+1.3**
VTS	**Vitosha**	**2.83**	**349**	⇑P	**Pn**	**10 29 55.7**	**+0.8**
APE	**Apeiranthos**	**3.03**	**155**	⇑P	**Pn**	**10 29 57.6**	**+0.2**
MPEP	**Malo Peshtene**	**3.52**	**357**	P	**Pg**	**10 30 15.2**	**-2.0**
MPEP	**Malo Peshtene**	**3.52**	**357**	P	**Pg**	**10 30 15.2**	**-2.0**
PDG	**Podgorica**	**4.39**	**308**	⇓P	**Pb**	**10 30 24.3**	**-2.4**
IDI	**Anoyia**	**4.60**	**170**	Pn	**Pn**	**10 30 19.6**	**+0.5**
	comp=E,4.5nm,0.3s,baz=354,slow=11,SNR=27						
HERR	**Herculane**	**5.17**	**348**	⇑P	**Pn**	**10 30 26.6**	**-0.2**
GZR	**Gura Zlata**	**5.62**	**352**	⇑P	**Pn**	**10 30 32.3**	**-0.8**
MLR	**Muntele Rosu**	**5.84**	**14**	Pn	**Pn**	**10 30 38.2**	**+2.1**
	comp=E,1.4nm,0.3s,baz=173,slow=3.5,SNR=8.7						
MLR	**Muntele Rosu**	**5.84**	**14**	⇑P	**Pn**	**10 30 38.6**	**+2.4**
DOPR	**Dopca**	**6.22**	**9**	⇑P	**Pn**	**10 30 42.7**	**+1.5**
PLOR	**Plostina**	**6.33**	**17**	⇓P	**Pn**	**10 30 45.7**	**+2.9**
TESR	**Tescani**	**6.96**	**16**	⇓P	**Pn**	**10 30 52.7**	**+1.4**
AKASG	**Malin Array Be**	**11.48**	**17**	Pn	**Pn**	**10 31 53.1**	**-0.2**
	comp=E,0.9nm,0.3s,baz=198,slow=12,SNR=2.6						
GERES	**GERESS Array B**	**11.61**	**324**	Pn	**Pn**	**10 31 59.1**	**+4.0**
	comp=E,1.1nm,0.3s,baz=144,slow=13,SNR=2.4						
ESDC	**Sonseca Array**	**21.43**	**279**	P	**P**	**10 33 57.7**	**+0.2**
	comp=E,0.8nm,0.9s,baz=74,slow=11,SNR=4.3						
FINES	**FINESS Array B**	**21.68**	**3**	P	**P**	**10 34 00.0**	**+0.1**
	comp=E,1.6nm,0.7s,baz=174,slow=15,SNR=3.0						
TORD	**Torodi Ar. Bea**	**33.03**	**223**	P	**P**	**10 35 44.8**	**-0.1**
	comp=E,1.0nm,0.4s,baz=33,slow=9.1,SNR=15						
MKAR	**Makanchi Array**	**42.16**	**61**	P	**P**	**10 37 03.2**	**+1.3**
	comp=E,0.5nm,0.5s,baz=284,slow=6.4,SNR=4.0						

*SOF **24** 10:31:14.7, 40.°33N×25.°74E, h3km, MD3.5*
*DDA **24** 10:31:15.3, 40.°42N×26.°13E, h7km±4km, ML3.3*

ISC 24 10:30:58.5±5.1, 39.°5N±0.°3×26.°2E±0.°2, h11km, n8, σ3.°49/9, 2D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KESN	**Edirne-Kesan**	**1.37**	**16**	*i* P	**Pg**	**10 31 26.4**	**+1.5**
KESN				*i* S	**Sn**	**10 31 35.4**	**-6.8**
SART	**Tekirdag**	**1.40**	**33**	*i* P	Pg	10 31 31.8	+6.4
SART				IAML		10 31 44.0	
	comp=E,216nm,0.4s						
SART				*i* S	**Sb**	**10 31 44.2**	**+1.5**
KDZ	**Kurdzhali**	**2.22**	**345**	*i* P	**Pb**	**10 31 40.7**	**+2.1**
RZN	**Rozhen**	**2.45**	**333**	*i* P	**Pb**	**10 31 44.7**	**+2.1**
DIM	**Dimitrovgrad**	**2.58**	**349**	*i* P	**Pb**	**10 31 47.4**	**+2.5**
PLD	**Plovdiv**	**2.83**	**337**	*i* P	**Pg**	**10 31 53.8**	**+1.1**
VAY	**Valandovo**	**3.30**	**304**	⇓*i* Pn	**Pn**	**10 31 48.4**	**-1.7**
VAY	**Valandovo**	**3.30**	**304**	⇓*i* Pn	**Pn**	**10 31 48.4**	**-1.7**

*DDA **24** 10:35:00.9, 40.°40N×26.°13E, h25km±1km, MW4.3*
*NEIC **24** 10:35:01.7±0.9, 40.°442N±0.°009×26.°

PRK					S		Sn	10 35 40.1	+0.8
	comp=E,27µm,0.7s								
AYVA	**Ayvalik**	**1.19**	**158**	*i*	P		Pn	10 35 23.6	-0.2
AYVA				*i*	S		Sb	10 35 39.1	-0.1
AYVA					IAML			10 35 41.0	
	comp=E,9µm,0.6s								
AYVA					IAML			10 35 42.0	
	comp=N,11µm,0.8s								
SIGR	**SIGRI**	**1.22**	**189**		P		Pn	10 35 23.5	-0.6
SIGR					S		Sn	10 35 40.4	+0.1
	comp=N,9µm,0.6s								
SIGR	**SIGRI**	**1.22**	**189**		PN		Pg	10 35 25.4	+0.5
TKR	**Tekirdag**	**1.23**	**62**		PN		Pg	10 35 24.9	-0.3
KDZ	**Kurdzhali**	**1.34**	**337**	*i*	P		Pg	10 35 26.7	-0.6
KDZ	**Kurdzhali**	**1.34**	**337**		PN		Pg	10 35 27.4	+0.1
KAVA	**Kavala**	**1.34**	**296**		P		Pn	10 35 25.6	-0.2
BALY	**Balya**	**1.34**	**120**	*i*	P		Pb	10 35 26.4	-0.1
BALY				*i*	S		Sn	10 35 44.2	+0.5
BALY					IAML			10 35 46.0	
	comp=E,3µm,0.3s								
BALY					IAML			10 35 46.0	
	comp=N,2µm,0.7s								
EDC	**Edincik**	**1.35**	**92**		PN		Pg	10 35 27.1	-0.3
CRLT	**Corlu**	**1.43**	**60**		PN		Pb	10 35 27.9	-0.1
DKL	**Dikili**	**1.48**	**155**		PN		Pg	10 35 29.3	-0.6
EDRB	**Edirne**	**1.51**	**19**		P		Pn	10 35 28.4	+0.2
EDRB					S		Sn	10 35 47.0	-0.7
	comp=N,1µm,0.3s								
EDRB	**Edirne**	**1.51**	**19**		PN		Pb	10 35 28.9	-0.5
BOTS	**Marmara Eregli**	**1.54**	**67**		PN		Pb	10 35 29.7	-0.1
KIRK	**Kırklareli**	**1.56**	**29**	*i*	P		Pn	10 35 28.2	-0.6
BALB	**Balikesir**	**1.57**	**119**		PN		Pb	10 35 30.1	-0.2
STEP	**BALIKESIR_Sava**	**1.62**	**129**	*i*	P		Pn	10 35 30.2	+0.6
STEP				*i*	S		Sn	10 35 51.0	+0.7
STEP					IAML			10 35 59.0	
	comp=E,2µm,0.9s								
STEP					IAML			10 36 00.0	
	comp=N,2µm,0.7s								
OUR	**Ouranopolis**	**1.62**	**268**		P		Pn	10 35 29.4	-0.3
OUR	**Ouranopolis**	**1.62**	**268**		PN		Pg	10 35 32.1	-0.5
PHSR	**Pinarhisar**	**1.62**	**41**		PN		Pb	10 35 31.0	-0.3
ZEDA	**zmir-Bergama**	**1.63**	**152**	*i*	P		Pn	10 35 29.8	0.0
ZEDA				*i*	S		Sn	10 35 51.0	+0.4
ZEDA					IAML			10 35 54.0	
	comp=N,2µm,0.6s								
ZEDA					IAML			10 35 54.0	
	comp=E,2µm,0.5s								
RZN	**Rozhen**	**1.65**	**321**	*i*	P		Pn	10 35 30.8	+0.5
DIM	**Dimitrovgrad**	**1.69**	**345**	*i*	P		Pn	10 35 31.3	+0.7
KCTX	**Karacabey (Bur**	**1.73**	**94**		PN		Pb	10 35 32.6	-0.5
SLVT	**Silivri**	**1.80**	**62**		PN		Pb	10 35 33.5	-0.7
KRBN	**Karaburun**	**1.85**	**169**		PN		Pb	10 35 34.9	-0.2
ELBA	**Catalca**	**1.91**	**67**	*i*	P		Pn	10 35 33.3	-0.4
ELBA				*i*	S		Sn	10 35 58.4	+0.8
ELBA					IAML			10 36 04.0	
	comp=N,221nm,0.2s								
ELBA					IAML			10 36 06.0	
	comp=E,269nm,0.9s								
CTYL	**Yalikoy Yolu**	**1.97**	**57**		PN		Pb	10 35 35.9	-1.2
PLD	**Plovdiv**	**1.99**	**328**	*i*	P		Pb	10 35 36.7	-0.8
PLD	**Plovdiv**	**1.99**	**328**		PN		Pb	10 35 37.3	-0.2
DURS	**Dursunbey**	**2.00**	**113**	*i*	P		Pb	10 35 37.7	+0.1
DURS				*i*	S		Sb	10 36 02.5	+0.1
DURS					IAML			10 36 06.0	
	comp=N,1µm,0.3s								
DURS					IAML			10 36 06.0	
	comp=E,983nm,0.3s								
CTKS	**Kestanelik-??a**	**2.00**	**65**		PN		Pb	10 35 36.6	-1.1
AKS	**Akhisar**	**2.02**	**139**		PN		Pb	10 35 36.9	-1.2
AKHS	**Akhisar**	**2.02**	**139**	*i*	P		Pg	10 35 39.7	-0.6
AKHS					IAML			10 36 18.0	
	comp=E,191nm,0.6s								
CHOS	**Chios island**	**2.02**	**181**		P		Pn	10 35 35.0	-0.3
CHOS	**Chios island**	**2.02**	**181**		PN		Pb	10 35 37.3	-0.8
JMB	**Yambol**	**2.08**	**10**		PN		Pb	10 35 38.4	-0.7
URLA	**Izmir**	**2.09**	**169**		PN		Pb	10 35 37.6	+1.5
URLA	**Izmir**	**2.09**	**169**	*i*	P		Pn	10 35 37.0	+0.9
URLA					IAML			10 36 11.0	
	comp=E,1µm,0.7s								
URLA					IAML			10 36 11.0	
	comp=N,1µm,0.8s								
DST	**Dursunbey**	**2.10**	**112**		PN		Pb	10 35 38.0	-1.3
ARMT	**Armutlu**	**2.11**	**85**		PN		Pb	10 35 38.8	-0.8
AOS	**Alonnisos**	**2.12**	**235**		PN		Pb	10 35 39.3	-0.3
MDNY	**Mudanya-Bursa**	**2.12**	**90**		PN		Pb	10 35 38.9	-0.9
MMB	**Musomiste**	**2.15**	**304**	*i*	P		Pn	10 35 36.2	-0.8
BLCB	**Balcova**	**2.15**	**160**		PN		Pb	10 35 38.8	-1.5
HVHR	**Bakirkoy-Istan**	**2.16**	**74**		PN		Pb	10 35 39.3	-1.0
BGKT	**Bogazkoy**	**2.17**	**68**		PN		Pb	10 35 39.2	-1.3
ORLT	**Orhaneli**	**2.17**	**99**		PN		Pb	10 35 39.5	-1.1
HORT	**Hortiatis**	**2.30**	**276**		PN		Pb	10 35 42.4	-0.4
ULDT	**Uludag**	**2.34**	**96**	*i*	P		Pn	10 35 39.6	-0.2
ULDT				*i*	S		Sb	10 36 13.6	+1.3
ULDT					IAML			10 36 18.0	
	comp=N,844nm,0.7s								
ULDT					IAML			10 36 20.0	
	comp=E,666nm,0.7s								
ISK	**Istanbul-Kandi**	**2.34**	**73**		PN		Pn	10 35 40.2	+0.6
KAVV	**Kandilli-Istan**	**2.34**	**73**		PN		Pn	10 35 40.4	+0.8
GEMT	**Gemlik**	**2.36**	**88**		PN		Pb	10 35 42.5	-1.2
KLYT	**Kilyos**	**2.38**	**68**		PN		Pn	10 35 42.0	+1.9
DEMI	**Demirci**	**2.44**	**123**	*i*	P		Pn	10 35 41.6	+0.6
DEMI					IAML			10 36 20.0	
	comp=N,381nm,0.3s								
DEMI					IAML			10 36 22.0	
	comp=E,358nm,0.7s								
TUZL	**Tuzla-Istanbul**	**2.44**	**80**		PN		Pb	10 35 43.1	-2.1
YLV	**Yalova**	**2.50**	**85**		PN		Pn	10 35 43.7	+1.9
KNT	**Kendrikon**	**2.54**	**288**		PN		Pb	10 35 45.3	-1.7
PGB	**Panagyurishte**	**2.58**	**326**	*i*	P		Pn	10 35 44.6	+1.6
SIMA	**Simav-Kutahya**	**2.59**	**120**		PN		Pb	10 35 45.7	-2.0
MANT	**Manisa**	**2.70**	**134**				Pn	10 35 45.3	+0.6
LIT	**Litokhoron**	**2.78**	**265**				Pn	10 35 46.0	+0.3
VAY	**Valandovo**	**2.83**	**290**	*i*	Pn		Pn	10 35 47.1	+0.9
VAY	**Valandovo**	**2.83**	**290**	*i*	Pn		Pn	10 35 47.7	+0.9
GCAM	**G?zelcaml?**	**2.85**	**162**		PN		Pn	10 35 48.9	+2.3
VTS	**Vitosha**	**3.08**	**317**		Pn		Pn	10 35 51.8	+1.9
VTS					Sn		Sn	10 36 25.3	-1.3
AGG	**Agios Georgios**	**3.22**	**246**				Pn	10 35 51.3	-0.4
FNA	**Florina**	**3.62**	**277**				Pn	10 35 57.5	+0.3
SKO	**Skopje**	**3.85**	**295**	*e*Pn			Pn	10 36 01.7	+1.4
SKO	**Skopje**	**3.85**	**295**	*e*Pn			Pn	10 36 01.7	+1.4
MDUB	**Mudurnu**	**3.89**	**88**				Pn	10 36 01.8	+0.9
ICOR	**Ion Corvin**	**3.91**	**18**	⇓P			Pn	10 36 01.3	+0.2
CIFT	**Cifteler, Eski**	**3.96**	**104**	*i* P			Pn	10 36 01.8	-0.1
CIFT					IAML			10 36 52.0	
	comp=E,160nm,0.7s								
CIFT					IAML			10 37 25.0	
	comp=N,155nm,0.7s								
OHR	**Ohrid**	**4.09**	**282**	*i* Pn			Pn	10 36 01.2	-2.5
OHR	**Ohrid**	**4.09**	**282**	*i* Pn			Pn	10 36 01.2	-2.5
ISP	**Isparta**	**4.30**	**126**	Pn			Pn	10 36 07.1	+0.5
TIRR	**Tirgusor**	**4.39**	**22**				Pn	10 36 07.3	-0.4
HARR	**Harsova**	**4.48**	**17**	⇑P			Pn	10 36 09.9	+1.0
ITM	**Ithomi**	**4.59**	**227**				Pn	10 36 11.5	+1.0
ELL	**Elmali**	**4.72**	**140**				Pn	10 36 13.0	+0.5
KARP	**Karpathos**	**4.93**	**170**	Pn			Pn	10 36 16.3	+1.1
CFR	**Carcaliu**	**4.99**	**17**	⇓P			Pn	10 36 15.6	-0.3
BR231	**Keskin MP Arra**	**5.15**	**94**				Pn	10 36 19.0	+0.7
ANTO	**Ankara**	**5.16**	**94**				Pn	10 36 19.1	+0.8
IDI	**Anoyia**	**5.21**	**191**	Pn			Pn	10 36 19.6	+0.5
HERR	**Herculane**	**5.23**	**330**	⇑P			Pn	10 36 20.0	+0.8
PDG	**Podgorica**	**5.53**	**294**				Pn	10 36 26.6	+3.2
GZR	**Gura Zlata**	**5.54**	**335**	⇓P			Pn	10 36 23.8	+0.1
ILGA	**Ilgaz**	**5.82**	**81**				Pn	10 36 27.7	+0.1
BR131	**Keskin Array S**	**5.82**	**94**				Pn	10 36 28.3	+0.7
DIVS	**Divibare**	**5.84**	**311**				Pn	10 36 27.7	-0.1
TESR	**Tescani**	**6.11**	**4**	⇑P			Pn	10 36 32.8	+1.4
BZS	**Buzias**	**6.15**	**329**	⇑P			Pn	10 36 31.7	-0.3
BUR08	**Bucovina Ar. S**	**7.26**	**355**				Pn	10 36 47.0	-0.2

*ISK **24** 10:45:41.9, 40°.25N×26°.01E, h7km, ML2.9/17*
*DDA **24** 10:45:43.1, 40°.43N×26°.13E, h6km±7km, ML3.0*
ISC 24 10:45:43.7±1.3,**40°.35N**±0°.03×**26°.07E**±0°.05,**h14**km±9km,
n27,σ1§17/37,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GELI	**Tayfur-Gelibol**	**0.31**	**81**	PG	**Pg**	**10 45 50.0**	**-0.1**
GELI				SG	**Sg**	**10 45 54.9**	**+0.4**
ERIK	**Erikli-Kesan**	**0.47**	**47**	PG	**Pb**	**10 45 53.6**	**-0.1**
LPK	**Lapseki**	**0.53**	**87**	PG	**Pg**	**10 45 53.9**	**-0.2**
LPK				SG	**Sb**	**10 46 01.9**	**-0.4**
ALN	**Alexandroupoli**	**0.55**	**358**	PG	**Pb**	**10 45 54.8**	**-0.2**
ALN				SG	**Sn**	**10 46 04.1**	**-1.9**
UKOP	**Uzunkopru-Edir**	**0.89**	**29**	PG	**Pn**	**10 46 01.7**	**-0.1**
UKOP				SG	**Sn**	**10 46 16.2**	**+1.7**
RDO	**Rodhopi**	**0.89**	**333**	PG	**Pb**	**10 46 00.6**	**-0.3**
RKY	**Sarkoy-Tekirda**	**0.91**	**68**	PG	**Pn**	**10 46 01.6**	**-0.5**
SART	**Tekirdag**	**0.91**	**68**	*i* P	**Pn**	**10 46 05.3**	**+3.1**
SART				*i* S	**Sg**	**10 46 12.5**	**-0.8**
KRBG	**Karabiga-Canak**	**0.94**	**87**	PG	**Pg**	**10 46 01.3**	**-0.5**
KNL	**Balıkesir**	**1.12**	**94**	*i* P	**Pb**	**10 46 02.8**	**-2.0**
KNL				*i* S	**Sg**	**10 46 19.4**	**-0.3**
KNL				IAML		10 46 22.0	
	comp=E,342nm,0.6s						
MRMT	**Marmara Adasi**	**1.19**	**77**	PN	**Pg**	**10 46 06.4**	**-0.2**
GONE	**Gonen-Balikesi**	**1.28**	**103**	PN	**Pn**	**10 46 06.8**	**-0.3**
TKR	**Tekirdag**	**1.29**	**60**	PN	**Pg**	**10 46 08.2**	**-0.2**
BALY	**Balya**	**1.34**	**117**	*i* P	**Pg**	**10 46 09.4**	**0.0**
BALY				*i* S	**Sg**	**10 46 27.1**	**+0.3**
BALY				IAML		10 46 29.0	
	comp=N,180nm,1.1s						
EDC	**Edincik**	**1.37**	**90**	PN	**Pn**	**10 46 08.5**	**+0.1**
KDZ	**Kurdzhali**	**1.39**	**339**	PN	**Pn**	**10 46 08.7**	**0.0**
BALB	**Balikesir**	**1.56**	**116**	PN	**Pn**	**10 46 10.3**	**-0.8**
EDRB	**Edirne**	**1.58**	**19**	PN	**Pb**	**10 46 12.4**	**-0.3**
ZEDA	**zmir-Bergama**	**1.59**	**150**	*i* P	**Pg**	**10 46 15.4**	**+1.3**
ZEDA				*i* S	**Sg**	**10 46 37.2**	**+2.4**
STEP	**BALIKESIR_Sava**	**1.60**	**127**	*i* P	**Pg**	**10 46 15.3**	**+0.9**
STEP				*i* S	**Sg**	**10 46 34.9**	**-0.3**
KCTX	**Karacabey (Bur**	**1.75**	**92**	PN	**Pn**	**10 46 13.7**	**0.0**
SLVT	**Silivri**	**1.85**	**61**	PN	**Pb**	**10 46 16.2**	**-1.0**
CHOS	**Chios island**	**1.96**	**180**	PN	**Pn**	**10 46 14.7**	**-1.9**
DURS	**Dursunbey**	**2.00**	**111**	*i* P	**Pg**	**10 46 23.1**	**+1.2**
DURS				*i* S	**Sb**	**10 46 46.0**	**+1.5**
CTKS	**Kestanelik-??a**	**2.05**	**64**	PN	**Pb**	**10 46 19.1**	**-1.6**
BGKT	**Bogazkoy**	**2.22**	**67**	PN	**Pn**	**10 46 21.1**	**+1.1**
ISK	**Istanbul-Kandi**	**2.38**	**72**	PN	**Pn**	**10 46 23.5**	**+1.2**

*ISK **24** 10:50:13.6, 40°.36N×25°.80E, h10km, ML3.3/13*
*DDA **24** 10:50:14.8, 40°.32N×25°.89E, h6km±3km, ML3.1*
ISC 24 10:50:14.3±1.1,**40°.35N**±0°.02×**25°.82E**±0°.04,**h10**km±10km,
n29,σ0§80/45,1C-2D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GELI	**Tayfur-Gelibol**	**0.50**	**85**	PG	**Pb**	**10 50 24.5**	**-0.7**
GELI				SG	**Sb**	**10 50 31.9**	**-0.6**
BOZC	**Bozcaada**	**0.54**	**161**	*i* P	**Pg**	**10 50 24.5**	**-0.3**
BOZC				*i* S	**Sg**	**10 50 31.8**	**-0.1**
BOZC				IAML		10 50 32.0	
	comp=N,949nm,0.4s						
BOZC				IAML		10 50 32.0	
	comp=E,676nm,0.2s						
ALN	**Alexandroupoli**	**0.57**	**17**	PG	**Pg**	**10 50 25.3**	**-0.1**
ALN				SG	**Sg**	**10 50 33.6**	**+0.8**
ERIK	**Erikli-Kesan**	**0.61**	**59**	PG	**Pg**	**10 50 26.2**	**0.0**
ERIK				SG	**Sg**	**10 50 34.9**	**+0.6**
LPK	**Lapseki**	**0.72**	**88**	PG	**Pg**	**10 50 28.2**	**+0.1**
LPK				SG	**Sb**	**10 50 38.9**	**+0.1**
KESN	**Edirne-Kesan**	**0.81**	**54**	*i* P	**Pb**	**10 50 30.4**	**-0.3**
KESN				*i* S	**Sg**	**10 50 40.5**	**+0.1**
RDO	**Rodhopi**	**0.82**	**345**	PG	**Pg**	**10 50 29.6**	**-0.5**
RDO				SG	**Sg**	**10 50 40.9**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**0.83**	**138**	*i* P	**Pg**	**10 50 30.0**	**-0.2**
BAYC				*i* S	**Sb**	**10 50 41.3**	**-0.7**
BAYC				IAML		10 50 45.0	
	comp=E,399nm,0.3s						
BAYC				IAML		10 50 45.0	
	comp=N,366nm,0.4s						
UKOP	**Uzunkopru-Edir**	**0.99**	**38**	PG	**Pg**	**10 50 32.5**	**-0.8**
UKOP				SG	**Sb**	**10 50 47.5**	**+0.9**
RKY	**Sarkoy-Tekirda**	**1.08**	**72**	PN	**Pg**	**10 50 34.9**	**-0.3**
RKY				SN	**Sn**	**10 50 50.2**	**-0.6**
KRBG	**Karabiga-Canak**	**1.13**	**88**	PN	**Pg**	**10 50 35.9**	**0.0**
AYVA	**Ayvalik**	**1.24**	**147**	*i* P	**Pb**	**10 50 37.6**	**-0.2**
AYVA				*i* S	**Sb**	**10 50 53.5**	**-0.3**
AYVA				IAML		10 50 55.0	
	comp=E,1µm,0.7s						
AYVA				IAML		10 50 56.0	
	comp=N,2µm,0.7s						
KNL	**Balıkesir**	**1.30**	**93**	*i* P	**Pg**	**10 50 39.0**	**-0.3**
KNL				*i* S	**Sg**	**10 50 56.3**	**+0.1**
KNL				IAML		10 50 59.0	
	comp=E,2µm,0.4s						
KNL				IAML		10 51 00.0	
	comp=N,1µm,0.4s						
KDZ	**Kurdzhali**	**1.33**	**347**	*i* P	**Pn**	**10 50 38.7**	**-0.3**
KDZ				S	**Sb**	**10 50 55.9**	**-0.6**
KDZ	**Kurdzhali**	**1.33**	**347**	PN	**Pn**	**10 50 38.3**	**-0.7**
MRMT	**Marmara Adasi**	**1.37**	**79**	PN	**Pn**	**10 50 39.1**	**-0.5**
TKR	**Tekirdag**	**1.45**	**63**	PN	**Pn**	**10 50 40.5**	**-0.1**
BALY	**Balya**	**1.51**	**113**	*i* P	**Pb**	**10 50 42.0**	**-0.4**
BALY				*i* S	**Sg**	**10 51 02.5**	**-0.3**
BALY				IAML		10 51 04.0	
	comp=E,292nm,0.3s						
BALY				IAML		10 51 07.0	
	comp=N,443nm,0.3s						
DKL	**Dikili**	**1.53**	**147**	PN	**Pn**	**10 50 41.7**	**0.0**
EDC	**Edincik**	**1.56**	**90**	PN	**Pn**	**10 50 41.8**	**-0.3**
EDRB	**Edirne**	**1.65**	**25**	PN	**Pn**	**10 50 43.1**	**-0.2**
ZEDA	**zmir-Bergama**	**1.69**	**145**	*i* P	**Pb**	**10 50 44.8**	**-0.6**
ZEDA				*i* S	**Sb**	**10 51 07.2**	**+0.4**
ZEDA				IAML		10 51 08.0	
	comp=N,376nm,0.4s						
ZEDA				IAML		10 51 10.0	
	comp=E,354nm,0.3s						
BALB	**Balikesir**	**1.73**	**114**	PN	**Pn**	**10 50 44.3**	**-0.2**
STEP	**BALIKESIR_Sava**	**1.75**	**123**	*i* P	**Pg**	**10 50 50.7**	**+2.8**
STEP				*i* S	**Sb**	**10 51 08.7**	**0.0**
PHSR	**Pinarhisar**	**1.81**	**45**	PN	**Pn**	**10 50 45.4**	**-0.2**
KCTX	**Karacabey (Bur**	**1.94**	**92**	PN	**Pn**	**10 50 47.2**	**-0.1**
PLOR	**Plostina**	**5.53**	**6**	⇓P	**Pn**	**10 51 39.5**	**+2.8**
DOPR	**Dopca**	**5.62**	**357**	⇓P	**Pn**	**10 51 38.8**	**+0.9**
TESR	**Tescani**	**6.18**	**5**	⇑P	**Pn**	**10 51 47.2**	**+1.6**

DDA 24 10:51:25.9, 40°.38N×26°.17E, h7km±4km, ML2.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.55**	**190**	*i* P	Pg	10 51 36.1	-0.3
BOZC				*i* S	Sg	10 51 43.6	0.0
BAYC	**CANAKKALE_Bayr**	**0.70**	**156**	*i* P	Pb	10 51 40.3	-0.2
BAYC				*i* S	Sb	10 51 50.4	+0.1
BAYC				IAML		10 51 51.0	
	comp=E,42nm,0.3s						
AYVA	**Ayvalik**	**1.15**	**159**	*i* P	Pn	10 51 48.6	+0.2
AYVA				*i* S	Sn	10 52 04.0	-0.2
AYVA				IAML		10 52 05.0	
	comp=N,101nm,0.6s						
AYVA				IAML		10 52 06.0	
	comp=E,66nm,0.5s						

*ATH **24** 10:54:12.9, 40°.00N×24°.30E, h31km±1km, ML2.9/10, Error ellipse: s-maj=1.3km s-min=0.8km az=307.0*
*THE **24** 10:54:13.4, 39°.99N×24°.31E, h12km, ML2.9/11, Error ellipse: s-maj=0.8km s-min=0.4km az=33.0*
ISC 24 10:54:13.7±1.1,**39°.99N**±0°.02×**24°.31E**±0°.02,**h19**km±3km,
n44,σ0§41/66,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.43**	**324**	P	**Pg**	**10 54 22.5**	**0.0**
OUR				S	**Sg**	**10 54 27.8**	**-0.6**
	4µm,0.2s						
OUR	**Ouranopolis**	**0.43**	**324**	P	**Pg**	**10 54 22.5**	**0.0**
OUR				S	**Sg**	**10 54 28.5**	**0.0**
OUR				AML	AML	10 54 31.3	
	comp=E,3597µm,0.2s						
OUR				AML	AML	10 54 31.8	
	comp=N,11360µm,0.2s						
PAIG	**Paliouri**	**0.49**	**263**	P	**Pg**	**10 54 23.4**	**-0.2**
PAIG				S	**Sg**	**10 54 30.4**	**+0.1**
	comp=N,2µm,0.3s						
PAIG	**Paliouri**	**0.49**	**263**	P	**Pg**	**10 54 23.4**	**-0.2**
PAIG				S	**Sg**	**10 54 30.9**	**+0.6**
PAIG				AML	AML	10 54 34.0	
	comp=E,2763µm,0.2s						
PAIG				AML	AML	10 54 34.1	
	comp=N,3415µm,0.4s						
LIA	**Limnos Island**	**0.68**	**98**	P	**Pb**	**10 54 26.7**	**-0.1**
LIA				S	**Sb**	**10 54 35.9**	**+0.1**
	comp=N,2µm,0.4s						
LIA	**Limnos Island**	**0.68**	**98**	P	**Pg**	**10 54 27.5**	**+0.5**
LIA				S	**Sg**	**10 54 36.1**	**0.0**
LIA				AML	AML	10 54 36.4	
	comp=N,3085µm,0.4s						
LIA				AML	AML	10 54 38.3	
	comp=E,3980µm,0.5s						
THAS	**Thassos island**	**0.69**	**27**	P	**Pb**	**10 54 26.3**	**-0.8**
THAS				S	**Sb**	**10 54 36.4**	**+0.2**
	comp=E,2µm,0.2s						
THAS	**Thassos island**	**0.69**	**27**	P	**Pb**	**10 54 26.7**	**-0.4**
THAS				S	**Sb**	**10 54 36.0**	**-0.2**
PLG	**Polygyros**	**0.77**	**300**	P	**Pb**	**10 54 28.4**	**-0.1**
PLG				S	**Sb**	**10 54 38.8**	**+0.2**
	comp=E,722nm,0.2s						
PLG	**Polygyros**	**0.77**	**300**	P	**Pb**	**10 54 28.4**	**-0.1**
PLG				S	**Sb**	**10 54 38.8**	**+0.2**
PLG				AML	AML	10 54 40.4	
	comp=E,1338µm,0.4s						
PLG				AML	AML	10 54 40.5	
	comp=N,1614µm,0.3s						
AOS	**Alonnisos**	**0.89**	**202**	P	**Pb**	**10 54 29.8**	**-0.7**
AOS				S	**Sg**	**10 54 43.4**	**+0.7**
	comp=N,870nm,0.4s						
AOS	**Alonnisos**	**0.89**	**202**	P	**Pb**	**10 54 30.2**	**-0.3**
AOS				S	**Sn**	**10 54 43.8**	**+0.3**
AOS				AML	AML	10 54 45.1	
	comp=E,1992µm,0.6s						
AOS				AML	AML	10 54 46.3	
	comp=N,1400µm,0.3s						
ALNA	**Alonissos**	**0.91**	**202**	P	**Pb**	**10 54 30.8**	**-0.1**
ALNA				S	**Sg**	**10 54 43.5**	**+0.1**
ALNA				AML	AML	10 54 47.3	
	comp=N,2533µm,0.4s						
ALNA				AML	AML	10 54 49.5	
	comp=E,1712µm,0.6s						
KVLA	**Kavala**	**0.95**	**3**	P	**Pb**	**10 54 31.3**	**-0.2**
KVLA				S	**Sb**	**10 54 44.4**	**+0.7**
KAVA	**Kavala**	**1.02**	**9**	P	**Pb**	**10 54 32.3**	**-0.4**
KAVA				S	**Sg**	**10 54 47.4**	**+0.6**
	comp=E,468nm,0.3s						
KAVA	**Kavala**	**1.02**	**9**	P	**Pb**	**10 54 32.2**	**-0.6**
KAVA				S	**Sb**	**10 54 45.5**	**-0.2**
KAVA				AML	AML	10 54 49.7	
	comp=E,1013µm,0.3s						
KAVA				AML	AML	10 54 49.8	
	comp=N,960µm,0.3s						
SKIA	**Skiathos**	**1.05**	**219**	P	**Pb**	**10 54 32.9**	**-0.4**
SKIA				S	**Sn**	**10 54 47.8**	**+0.2**
	comp=N,655nm,0.3s						
SKIA	**Skiathos**	**1.05**	**219**	P	**Pb**	**10 54 32.9**	**-0.4**
SKIA				AML	AML	10 54 54.0	
	comp=N,1490µm,0.4s						
SKIA				AML	AML	10 54 54.5	
	comp=E,1281µm,0.2s						
XOR	**Xorichti**	**1.07**	**235**	P	**Pb**	**10 54 33.1**	**-0.5**
XOR	**Xorichti**	**1.07**	**235**	P	**Pb**	**10 54 33.2**	**-0.5**
NEO	**Neokhori**	**1.08**	**231**	P	**Pb**	**10 54 33.3**	**-0.6**
NEO	**Neokhori**	**1.08**	**231**	P	**Pb**	**10 54 33.5**	**-0.4**
NEO				S	**Sb**	**10 54 47.5**	**-0.2**
SOH	**Sokhos**	**1.11**	**319**	P	**Pn**	**10 54 34.1**	**-0.2**
SOH				S	**Sn**	**10 54 49.9**	**+0.8**
	comp=E,720nm,0.7s						
HORT	**Hortiatis**	**1.11**	**304**	P	**Pn**	**10 54 34.2**	**-0.1**
HORT				S	**Sn**	**10 54 49.8**	**+0.6**
	comp=E,318nm,0.3s						
HORT	**Hortiatis**	**1.11**	**304**	P	**Pn**	**10 54 34.3**	**-0.1**
HORT				AML	AML	10 54 51.7	
	comp=N,784µm,0.3s						
HORT				AML	AML	10 54 51.9	
	comp=E,493µm,0.2s						
SKY	**Skiros Island**	**1.13**	**171**	P	**Pn**	**10 54 33.9**	**-0.6**
SKY				S	**Sg**	**10 54 50.5**	**+0.1**
	comp=E,1µm,0.2s						
SKY	**Skiros Island**	**1.13**	**171**	P	**Pn**	**10 54 34.5**	**0.0**
SKY				S	**Sg**	**10 54 50.4**	**+0.1**
THE	**Thessaloniki**	**1.21**	**302**	P	**Pn**	**10 54 35.5**	**-0.2**
SRS	**Serrai**	**1.25**	**334**	P	**Pn**	**10

*DDA **24** 10:59:15.1,40˙36N×26˙18E,h6km±3km,ML2.9*
ISC 24 10:59:15.3±0.9, 40˚40N±0˙01×26˙13E±0˙02, h15km±7km, n70, σ0893/109, 4C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GELI	**Tayfur-Gelibol**	**0.26**	**91**	PG	**Pg**	**10 59 20.4**	**-0.5**
GADA	**Gvkgeada**	**0.28**	**220**	P	**Pg**	**10 59 21.4**	**+0.3**
GADA				S	**Sg**	**10 59 25.9**	**+0.8**
	3μm,0.2s						
GADA	**Gvkgeada**	**0.28**	**220**	PG	**Pg**	**10 59 21.3**	**+0.2**
GADA				SG	**Sg**	**10 59 25.8**	**+0.7**
ENEZ	**Enez**	**0.34**	**3**	P	**Pb**	**10 59 22.4**	**-0.6**
ENEZ				S	**Sb**	**10 59 27.5**	**-0.7**
	4μm,0.4s						
ENEZ	**Enez**	**0.34**	**3**	PG	**Pb**	**10 59 22.4**	**-0.6**
ERIK	**Erikli-Kesan**	**0.40**	**47**	PG	**Pg**	**10 59 22.9**	**-0.4**
ERIK				SG	**Sb**	**10 59 29.0**	**-0.9**
SMTH	**Samothraki Isl**	**0.46**	**279**	P	**Pg**	**10 59 24.4**	**-0.1**
SMTH				S	**Sg**	**10 59 31.3**	**+0.6**
	1μm,0.1s						
SMTH	**Samothraki Isl**	**0.46**	**279**	P	**Pg**	**10 59 24.3**	**-0.1**
SMTH				S	**Sg**	**10 59 31.4**	**+0.6**
SMTH				AML	AML	10 59 31.5	
	comp=N,2966μm,0.2s						
SMTH				AML	AML	10 59 32.1	
	comp=E,2849μm,0.2s						
LPK	**Lapseki**	**0.48**	**93**	PG	**Pb**	**10 59 24.9**	**-0.5**
ALN	**Alexandroupoli**	**0.50**	**353**	P	**Pg**	**10 59 25.1**	**-0.1**
ALN				S	**Sb**	**10 59 32.3**	**-0.6**
	comp=E,792nm,0.3s						
ALN	**Alexandroupoli**	**0.50**	**353**	P	**Pg**	**10 59 25.1**	**-0.1**
ALN				S	**Sb**	**10 59 32.3**	**-0.6**
ALN				AML	AML	10 59 32.9	
	comp=E,1382μm,0.2s						
ALN				AML	AML	10 59 32.9	
	comp=N,1786μm,0.4s						
BOZC	**Bozcaada**	**0.56**	**186**	PG	**Pg**	**10 59 25.9**	**-0.4**
BOZC				SG	**Sb**	**10 59 35.1**	**+0.5**
BOZC	**Bozcaada**	**0.56**	**186**	*i* P	**Pg**	**10 59 25.7**	**-0.6**
BOZC				*i* P	**Pb**	**10 59 26.2**	**-0.6**
BOZC				IAML		10 59 32.0	
	comp=E,941nm,1.4s						
BOZC				*i* S	**Sg**	**10 59 34.0**	**+0.1**
BOZC				IAML		10 59 35.0	
	comp=E,824nm,0.2s						
BOZC				IAML		10 59 40.0	
	comp=N,732nm,0.2s						
EZN	**Ezine**	**0.59**	**165**	P	**Pg**	**10 59 26.6**	**-0.3**
EZN				S	**Sb**	**10 59 35.5**	**-0.1**
	comp=N,788nm,0.1s						
EZN	**Ezine**	**0.59**	**165**	PG	**Pg**	**10 59 26.3**	**-0.6**
EZN				SG	**Sb**	**10 59 35.4**	**-0.1**
KESN	**Edirne-Kesan**	**0.59**	**44**	*i* P	**Pg**	**10 59 26.4**	**-0.8**
BAYC	**CANAKKALE_Bayr**	**0.73**	**154**	*i* S	**Sg**	**10 59 39.2**	**0.0**
UKOP	**Uzunkopru-Edir**	**0.82**	**27**	PG	**Pb**	**10 59 31.2**	**0.0**
UKOP				SG	**Sn**	**10 59 43.4**	**-0.8**
SART	**Tekirdag**	**0.85**	**70**	*i* P	**Pb**	**10 59 31.6**	**-0.1**
SART				*i* S	**Sb**	**10 59 43.0**	**0.0**
SART				IAML		10 59 45.0	
	comp=E,282nm,0.2s						
RDO	**Rodhopi**	**0.87**	**329**	P	**Pg**	**10 59 31.6**	**-0.5**
RDO				S	**Sg**	**10 59 43.0**	**-0.6**
	comp=E,1μm,0.2s						
RDO	**Rodhopi**	**0.87**	**329**	P	**Pg**	**10 59 31.6**	**-0.5**
RDO				S	**Sg**	**10 59 43.0**	**-0.6**
RDO				AML	AML	10 59 47.1	
	comp=N,2305μm,0.2s						
RDO				AML	AML	10 59 50.3	
	comp=E,2135μm,0.3s						
RDO	**Rodhopi**	**0.87**	**329**	PG	**Pb**	**10 59 32.4**	**+0.3**
RDO				SG	**Sn**	**10 59 45.3**	**-0.1**
LIA	**Limnos Island**	**0.88**	**236**	P	**Pg**	**10 59 32.2**	**-0.2**
LIA				S	**Sg**	**10 59 44.1**	**+0.1**
	comp=E,1μm,0.3s						
LIA	**Limnos Island**	**0.88**	**236**	P	**Pg**	**10 59 32.2**	**-0.2**
LIA				S	**Sg**	**10 59 44.1**	**+0.1**
LIA				AML	AML	10 59 46.3	
	comp=N,2327μm,0.3s						
LIA				AML	AML	10 59 46.5	
	comp=E,2919μm,0.4s						
KRBG	**Karabiga-Canak**	**0.89**	**90**	PG	**Pg**	**10 59 31.9**	**-0.6**
KRBG				SG	**Sb**	**10 59 44.5**	**+0.4**
KNL	**Balıkesir**	**1.07**	**97**	*i* P	Pg	10 59 23.9	-12
KNL				*i* S	**Sb**	**10 59 49.6**	**+0.2**
THAS	**Thassos island**	**1.10**	**281**	P	**Pb**	**10 59 35.1**	**-0.8**
THAS				S	**Sn**	**10 59 51.7**	**+0.7**
	comp=E,458nm,0.3s						
THAS	**Thassos island**	**1.10**	**281**	P	**Pb**	**10 59 34.7**	**-1.3**
THAS				S	**Sb**	**10 59 49.9**	**-0.1**
THAS				AML	AML	10 59 52.7	
	comp=N,904μm,0.2s						
THAS				AML	AML	10 59 52.7	
	comp=E,919μm,0.2s						
MRMT	**Marmara Adasi**	**1.14**	**79**	PN	**Pn**	**10 59 36.6**	**-0.1**
MRMT				SN	**Sn**	**10 59 52.1**	**0.0**
PRK	**Paraskevi**	**1.16**	**175**	P	**Pg**	**10 59 37.9**	**+0.3**
PRK				S	**Sn**	**10 59 54.2**	**+1.7**
	comp=E,4μm,0.5s						
PRK	**Paraskevi**	**1.16**	**175**	P	**Pg**	**10 59 38.0**	**+0.3**
PRK				S	**Sn**	**10 59 53.9**	**+1.4**
PRK				AML	AML	10 59 55.9	
	comp=N,11131μm,0.6s						
PRK				AML	AML	10 59 57.1	
	comp=E,4372μm,0.4s						
AYVA	**Ayvalik**	**1.17**	**158**	*i* P	**Pb**	**10 59 35.9**	**-1.3**
AYVA				*i* S	**Sb**	**10 59 52.1**	**-0.2**
SIGR	**SIGRI**	**1.21**	**190**	P	**Pn**	**10 59 37.7**	**+0.1**
SIGR				S	**Sb**	**10 59 53.9**	**+0.7**
	comp=E,2μm,0.5s						
SIGR	**SIGRI**	**1.21**	**190**	P	**Pn**	**10 59 37.7**	**+0.1**
SIGR				S	**Sg**	**10 59 54.1**	**-0.1**
SIGR				AML	AML	10 59 55.1	
	comp=N,4418μm,0.7s						
SIGR				AML	AML	10 59 56.4	
	comp=E,2689μm,0.3s						
TKR	**Tekirdag**	**1.22**	**61**	PN	**Pg**	**10 59 38.4**	**-0.4**
TKR				SN	**Sn**	**10 59 55.7**	**+1.7**
EFSA	**Agios Efstrati**	**1.23**	**226**	P	**Pn**	**10 59 37.9**	**0.0**
EFSA				S	**Sb**	**10 59 54.2**	**+0.4**
EFSA				AML	AML	10 59 56.1	
	comp=N,3603μm,0.5s						
EFSA				AML	AML	10 59 56.5	
	comp=E,2406μm,0.7s						
GONE	**Gonen-Balikesi**	**1.24**	**106**	PN	**Pg**	**10 59 38.7**	**-0.5**
GONE				SN	**Sn**	**10 59 55.9**	**+1.3**
BALY	**Balya**	**1.32**	**120**	*i* P	Pn	10 59 32.3	-6.9
BALY				*i* S	**Sb**	**10 59 53.9**	**-2.6**
BALY				IAML		10 59 59.0	
	comp=N,342nm,0.4s						
EDC	**Edincik**	**1.32**	**92**	PN	**Pg**	**10 59 40.3**	**-0.5**
EDC				SN	**Sg**	**10 59 58.3**	**+0.3**
KDZ	**Kurdzhali**	**1.36**	**337**	*i* P	**Pb**	**10 59 40.7**	**+0.2**
KDZ				S	**Sb**	**10 59 57.3**	**-0.4**
KDZ	**Kurdzhali**	**1.36**	**337**	PN	**Pg**	**10 59 41.3**	**-0.1**
KAVA	**Kavala**	**1.37**	**296**	P	**Pn**	**10 59 39.6**	**-0.3**
KAVA				S	**Sb**	**10 59 57.5**	**-0.3**
	comp=N,340nm,0.3s						
KAVA	**Kavala**	**1.37**	**296**	P	**Pn**	**10 59 39.5**	**-0.3**
KAVA				S	**Sb**	**10 59 56.4**	**-1.4**
KAVA				AML	AML	11 00 01.9	
	comp=N,828μm,0.3s						
KAVA				AML	AML	11 00 03.3	
	comp=E,529μm,0.4s						
KVLA	**Kavala**	**1.43**	**293**	P	**Pn**	**10 59 40.5**	**-0.2**
DKL	**Dikili**	**1.46**	**156**	PN	**Pb**	**10 59 42.2**	**+0.1**
DKL				SN	**Sg**	**11 00 01.9**	**-0.3**
EDRB	**Edirne**	**1.52**	**18**	PN	**Pb**	**10 59 43.0**	**-0.1**
BALB	**Balikesir**	**1.54**	**119**	PN	**Pb**	**10 59 43.2**	**-0.3**
BALB				SN	**Sg**	**11 00 03.7**	**-1.3**
OUR	**Ouranopolis**	**1.64**	**268**	P	**Pn**	**10 59 42.9**	**-0.7**
OUR	**Ouranopolis**	**1.64**	**268**	P	**Pn**	**10 59 42.9**	**-0.7**
OUR				AML	AML	11 00 11.1	
	comp=E,923μm,0.4s						
OUR				AML	AML	11 00 11.6	
	comp=N,974μm,0.3s						
RZN	**Rozhen**	**1.67**	**321**	P	**Pn**	**10 59 45.0**	**+0.8**
RZN				S	**Sn**	**11 00 05.9**	**+0.4**
DIM	**Dimitrovgrad**	**1.71**	**345**	P	**Pn**	**10 59 45.6**	**+1.1**
PSRA	**Psara**	**1.91**	**193**	P	**Pn**	**10 59 47.7**	**+0.5**
SKY	**Skiros Island**	**1.95**	**219**	P	**Pn**	**10 59 47.1**	**-0.7**
SKY				AML	AML	11 00 19.8	
	comp=N,437μm,0.3s						
SKY				AML	AML	11 00 21.0	
	comp=E,568μm,0.4s						
CHOS	**Chios island**	**2.01**	**182**	P	**Pn**	**10 59 49.3**	**+0.5**
CHOS	**Chios island**	**2.01**	**182**	P	**Pn**	**10 59 49.1**	**+0.3**
CHOS				AML	AML	11 00 22.8	
	comp=N,415μm,0.4s						
CHOS				AML	AML	11 00 27.2	
	comp=E,549μm,0.2s						
PLD	**Plovdiv**	**2.01**	**328**	P	**Pb**	**10 59 51.2**	**-0.4**
PLG	**Polygyros**	**2.05**	**270**	P	**Pn**	**10 59 48.8**	**-0.5**
SRS	**Serrai**	**2.06**	**291**	P	**Pn**	**10 59 48.9**	**-0.5**
SRS				AML	AML	11 00 22.4	
	comp=E,335μm,0.5s						
SRS				AML	AML	11 00 23.3	
	comp=N,260μm,0.5s						
AOS	**Alonnisos**	**2.13**	**235**	P	**Pn**	**10 59 49.5**	**-0.7**
AOS				AML	AML	11 00 25.7	
	comp=E,323μm,0.4s						
AOS				AML	AML	11 00 31.1	
	comp=N,418μm,0.4s						
KYMI	**Kymi, Euboea I**	**2.36**	**222**	P	**Pn**	**10 59 52.9**	**-0.7**
KYMI				AML	AML	11 00 32.3	
	comp=E,188μm,0.5s						
KYMI				AML	AML	11 00 38.1	
	comp=N,233μm,0.6s						
KNT	**Kendrikon**	**2.57**	**288**	P	**Pn**	**10 59 56.6**	**+0.2**
KARY	**Karystos**	**2.71**	**210**	P	**Pn**	**10 59 57.6**	**-0.7**
DION	**Dionisos Attik**	**2.88**	**217**	P	**Pn**	**10 59 59.8**	**-0.9**
VTS	**Vitosha**	**3.10**	**316**	⇑P	**Pg**	**11 00 14.8**	**0.0**
RAZG	**Razgrad**	**3.17**	**5**	⇑P	**Pn**	**11 00 07.7**	**+3.0**
PLVB	**Pleven**	**3.19**	**340**	⇑P	**Pb**	**11 00 11.6**	**0.0**
LTK	**Loutraki**	**3.42**	**227**	P	**Pn**	**11 00 07.5**	**-0.5**
AMGA	**Amorgos Island**	**3.57**	**183**	P	**Pn**	**11 00 10.1**	**-0.1**
TESR	**Tescani**	**6.12**	**3**	⇑P	**Pn**	**11 00 46.7**	**+1.6**
BZS	**Buzias**	**6.17**	**329**	⇑P	**Pn**	**11 00 45.9**	**0.0**

UCR 24 11:00:53.2±1.1, 9˚53N×85˚78W, h28km±3km, MD3.8, MW3.5, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUAI	**GUAI**	**0.78**	**20**	*i* P	Pb	11 01 07.4	-0.9
GUAI				*i* S	Sb	11 01 18.6	+0.2
PLVR	**Palo Verde**	**0.91**	**28**	*e*P	Pn	11 01 09.5	-0.9
PLVR				*e*S	Sb	11 01 22.6	+0.1
JTS	**Las Juntas de**	**1.11**	**47**	*e*P	Pn	11 01 12.8	-0.2
NY14	**Universidad de**	**1.13**	**13**	*i* P	Pn	11 01 13.3	0.0
COLC	**Colonia**	**1.26**	**27**	*i* P	Pn	11 01 14.9	-0.2
COLC				*i* S	Sb	11 01 31.7	-0.5
LIM1	**Limonal**	**1.27**	**24**	*i* P	Pn	11 01 15.1	-0.1
LIM1				*i* S	Sn	11 01 31.9	+0.5
CUI	**Cuipilapa**	**1.27**	**29**	*i* P	Pn	11 01 15.1	-0.2
LAPC	**Finca la Perla**	**1.27**	**16**	*i* P	Pn	11 01 14.9	-0.4
GBS3	**Finca Las Img**	**1.28**	**15**	*i* P	Pn	11 01 15.0	-0.4
GPS1	**Guardaparques**	**1.30**	**19**	*i* P	Pn	11 01 15.6	-0.1
HORNC	**Hornillas**	**1.31**	**27**	*i* P	Pn	11 01 15.5	-0.4
ACAL	**Aguas Claras**	**1.32**	**34**	*i* P	Pn	11 01 16.0	+0.1
ARE1	**Arenal 1**	**1.40**	**49**	*e*P	Pb	11 01 18.0	-0.7
PTEN	**Parque Tenorio**	**1.41**	**34**	*i* P	Pn	11 01 17.3	+0.2
LCR2	**La Lucha 2**	**1.77**	**83**	*e*P	Pn	11 01 22.0	-0.2
DRK0	**Durika**	**2.52**	**96**	*e*P	Pn	11 01 33.1	+0.6
DRK0				*e*S	Sn	11 02 02.7	+0.3

*NEIC **24** 11:09:28.6±1.9, 53˙58N±0˙06×164˙91W±0˙05, h21km±6km, Error ellipse: s-maj=8.5km s-min=4.5km az=171.0*
*AEIC **24** 11:09:29±1.8, 53˙53N±0˙07×164˙88W±0˙05, h26km±5km, ML4.1/62, mb4.3/45(NEIC), Error ellipse: s-maj=9.4km s-min=4.8km az=178.0*
*IDC **24** 11:09:31.8±5.1, 53˙87N×164˙97W, h33km±38km, mb3.8/13, mb1 4.1/16, mb1mx3.7/53, mbtmp4.0/16, ML4.0/3, MS4.7/2, Ms1 4.7/2, ms1mx4.0/60, Error ellipse: s-maj=28.1km s-min=15.1km az=4.0*
ISC 24 11:09:29.1±1.6, 53˚59N±0˙07×164˚86W±0˙04, h22km±11km, n131, σ1927/123, mb4.2/33, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKSA	**Akutan Strait**	**0.74**	**318**		**Pn**	**11 09 43.5**	**-0.7**
AKSA	**Akutan Strait**	**0.74**	**318**		**Pn**	**11 09 43.5**	**-0.7**
AKSA					**Sn**	**11 09 54.5**	**-0.2**
AKUT	**Akutan**	**0.77**	**316**		**Pn**	**11 09 44.0**	**-0.6**
AKUT				Sn	**Sn**	**11 09 54.9**	**-0.5**
AKBBA	**Akutan Broad B**	**0.82**	**309**		**Pn**	**11 09 44.7**	**-0.5**
AKBBA					**Sn**	**11 09 57.0**	**+0.4**
AKMO	**Akutan Morgan**	**0.85**	**307**		**Pn**	**11 09 45.1**	**-0.5**
HSB	**Akutan Spr's B**	**0.87**	**315**		**Pn**	**11 09 45.4**	**-0.5**
AKLV	**Akutan Long Va**	**0.87**	**312**		**Pb**	**11 09 45.3**	**-0.2**
AKRB	**Akutan Reef Bi**	**0.90**	**308**		**Pn**	**11 09 45.9**	**-0.5**
AKGG	**Akutan Green G**	**0.91**	**313**		**Pn**	**11 09 46.1**	**-0.4**
AKGG					**Sn**	**11 09 59.5**	**+0.6**
WESP	**Westdahl Peak**	**0.91**	**5**		**Pn**	**11 09 46.3**	**-0.3**
UNV	**Unalaska Valle**	**1.01**	**286**		**Pn**	**11 09 46.8**	**-1.1**
UNV				Sn	**Sn**	**11 10 00.1**	**-1.2**
WEBT	**Westdahl Beart**	**1.01**	**4**		**Pb**	**11 09 47.9**	**0.0**
MNAT	**Makushin Natee**	**1.12**	**286**		**Pn**	**11 09 48.7**	**-0.8**
MNAT					**Sb**	**11 10 03.7**	**-0.2**
MREP	**Makushin Rep't**	**1.14**	**282**		**Pn**	**11 09 49.0**	**-0.8**
MSW	**Makushin Switc**	**1.19**	**287**		**Pn**	**11 09 49.6**	**-0.7**
MSW					**Sb**	**11 10 05.8**	**0.0**
MGOD	**Makushin Gods**	**1.22**	**281**		**Pn**	**11 09 50.1**	**-0.6**
SSLS	**Shishaldin Sou**	**1.24**	**24**		**Pn**	**11 09 50.1**	**-0.9**
SSBA	**Shishaldin**	**1.27**	**20**		**Pn**	**11 09 51.1**	**-0.3**
FALS	**False Pass**	**1.53**	**33**		**Pn**	**11 09 54.8**	**-0.2**
FALS				Sn	**Sn**	**11 10 14.3**	**+0.2**
OKFG	**Magazine Ridge**	**1.83**	**266**		**Pn**	**11 09 59.5**	**+0.4**
OKFG					**Sb**	**11 10 23.6**	**-0.6**
OKSP	**Okmok Steeple**	**2.08**	**262**		**Pn**	**11 10 02.7**	**+0.1**
DT1	**Dutton Round H**	**2.15**	**44**		**Pn**	**11 10 04.3**	**+0.8**
HAG	**Hague Volcano**	**2.45**	**44**		**Pn**	**11 10 09.5**	**+1.8**
NIKH	**Nikolski High**	**2.48**	**257**		**Pn**	**11 10 07.7**	**-0.3**
PS4A	**Pavlof South-4**	**2.49**	**44**		**Pn**	**11 10 10.1**	**+1.9**
PVV	**Pavlof Volcano**	**2.54**	**44**		**Pn**	**11 10 10.5**	**+1.7**
BLHA	**Black Hill**	**2.67**	**36**		**Pn**	**11 10 12.3**	**+1.6**
SDPT	**Sand Point**	**3.11**	**54**		**Pn**	**11 10 17.6**	**+0.9**
SDPT				Sn	**Sn**	**11 10 54.2**	**+1.1**
CNBA	**Chernabura Isl**	**3.33**	**66**		**Pn**	**11 10 19.8**	**0.0**
CNBA				Sn	**Sn**	**11 10 58.1**	**-0.5**
VNWF	**Veniaminof 8**	**4.00**	**48**		**Pn**	**11 10 30.8**	**+1.8**
VNFG	**Fog Glacier, M**	**4.08**	**46**		**Pn**	**11 10 32.5**	**+2.4**
VNSS	**Veniaminof 8**	**4.09**	**48**		**Pn**	**11 10 33.0**	**+2.6**
VNNF	**Veniaminof 3**	**4.19**	**48**		**Pn**	**11 10 34.4**	**+2.8**
CHGN	**Chignik**	**4.61**	**51**		**Pn**	**11 10 38.3**	**+1.1**
SPIA	**Saint Paul Isl**	**4.73**	**322**		**Pn**	**11 10 39.8**	**+0.9**
KOFP	**Korovin Flat P**	**5.74**	**261**		**Pn**	**11 10 54.3**	**+1.5**
ATKA	**Atka Island**	**5.82**	**260**		**Pn**	**11 10 54.7**	**+0.8**
GSTR	**Great Sitkin T**	**6.95**	**262**		**Pn**	**11 11 10.2**	**+0.7**
GSMY	**Great Sitkin M**	**6.96**	**262**		**Pn**	**11 11 11.3**	**+1.7**
GSTD	**Great Sitkin T**	**7.01**	**262**		**Pn**	**11 11 11.7**	**+1.4**
KABU	**Katmai Buttres**	**7.14**	**45**		**Pn**	**11 11 14.8**	**+2.7**
ADK	**Adak**	**7.38**	**261**		**Pn**	**11 11 15.8**	**+0.5**
OHAK	**Old Harbor**	**7.53**	**56**		**Pn**	**11 11 17.1**	**-0.2**
KIKV	**Kanaga Island**	**7.67**	**262**		**Pn**	**11 11 20.8**	**+1.5**
KIMD	**Kanaga Island**	**7.74**	**261**		**Pn**	**11 11 21.2**	**+0.9**
KDAK	**Kodiak Island**	**8.11**	**54**	Pn	**Pn**	**11 11 25.1**	**-0.2**
	3.3nm,0.3s,baz=242,slow=7.4,SNR=46						
KDAK				Sn	**Sn**	**11 12 52.8**	**-3.3**
	baz=155,slow=22,SNR=1.8						
KDAK	**Kodiak Island**	**8.11**	**54**		**Pn**	**11 11 24.6**	**-0.6**
SVW2	**Sparrevohn**	**9.04**	**30**		**Pn**	**11 11 40.1**	**+2.1**
RSO	**Redoubt South**	**9.53**	**39**		**Pn**	**11 11 47.7**	**+2.7**
CNPM	**China Poot**	**9.58**	**46**		**Pn**	**11 11 46.0**	**+0.5**
BRLK	**Bradley Lake**	**9.86**	**46**		**Pn**	**11 11 50.7**	**+1.4**
TTA	**Tatalina**	**10.45**	**23**		**Pn**	**11 11 57.9**	**+0.5**
SEW	**Seward**	**10.65**	**46**		**Pn**	**11 11 59.5**	**-0.6**
GAMB	**Gambell**	**10.81**	**344**		**Pn**	**11 12 04.9**	**+2.6**
PPLA	**Purkeypile**	**11.45**	**30**		**Pn**	**11 12 12.8**	**+1.7**
PMR	**Palmer**	**11.62**	**40**		**Pn**	**11 12 13.7**	**+0.4**
KNK	**Knik Glacier**	**11.78**	**42**		**Pn**	**11 12 16.2**	**+0.7**
SML	**Sawmill**	**12.05**	**40**		**Pn**	**11 12 19.8**	**+0.5**
HIN	**Hinchinbrook I**	**12.09**	**48**		**Pn**	**11 12 18.6**	**-1.1**
TRF	**Thorofare Moun**	**12.45**	**32**		**Pn**	**11 12 24.3**	**-0.4**
EYAK	**Cordova Ski Ar**	**12.49**	**48**		**Pn**	**11 12 23.7**	**-1.4**
RAGM	**Ragged Mountai**	**12.91**	**50**		**Pn**	**11 12 30.4**	**-0.5**
MCK	**McKinley**	**13.07**	**33**		**Pn**	**11 12 33.4**	**+0.2**
MLY	**Manley**	**13.51**	**26**		**Pn**	**11 12 38.7**	**-0.4**
VRDI	**Verde Repeater**	**13.79**	**48**		**Pn**	**11 12 41.5**	**-1.6**
PAX	**Paxson**	**13.81**	**39**		**Pn**	**11 12 43.1**	**-0.2**
WRH	**Wood River Hil**	**13.86**	**31**		**Pn**	**11 12 43.0**	**-0.8**
COLA	**College**	**14.21**	**31**		**Pn**	**11 12 48.6**	**-0.1**
YAH	**Yahtse**	**14.26**	**52**		**Pn**	**11 12 49.2**	**-0.4**
IL31		**14.44**	**32**		**Pn**	**11 12 50.0**	**-1.7**
ILAR	**Eielson Array**	**14.44**	**32**	Pn	**Pn**	**11 12 48.9**	**-2.9**
	0.3nm,0.3s,baz=225,slow=13,SNR=24						
PRP	**Porcupine Dome**	**15.37**	**31**		**Pn**	**11 13 04.3**	**-0.1**
FYU	**Fort Yukon**	**16.18**	**29**		**Pn**	**11 13 14.5**	**-0.1**
DAWY	**Dawson**	**16.72**	**41**	IAmb	IAmb	11 13 29.2	
	comp=Z,15nm,0.8s						
EPYK	**Eagle Plains**	**18.80**	**36**	IAmb	IAmb	11 13 53.9	
	comp=Z,14nm,0.9s						
H02N1	**VAN INLET T-PH**	**19.18**	**78**	T	T	11 34 04.2	
	SNR=28						
H02S1	**DAWSON INLET T**	**19.23**	**78**	T	T	11 34 06.3	
DLBC	**Dease Lake**	**19.91**	**62**	P	**Pn**	**11 14 01.1**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=285,slow=12,SNR=11						
INK	**Inuvik**	**20.84**	**33**	P	**P**	**11 14 06.6**	**-2.1**
	comp=Z,3.4nm,0.3s,baz=243,slow=10,SNR=14						
INK	**Inuvik**	**20.84**	**33**	P	**P**	**11 14 07.0**	**-1.7**
INK				IAmb	IAmb	11 14 18.6	
	comp=Z,5.4nm,0.6s						
PEA0B	**Petropavlovsk-**	**22.19**	**284**	P	**P**	**11 14 22.0**	**-1.4**
PETK	**Petropavlovsk-**	**22.19**	**284**	P	**P**	**11 14 22.7**	**-0.8**
	comp=Z,3.1nm,0.6s,baz=84,slow=12,SNR=24						
PETK				LR	LR	11 24 01.0	
	comp=Z,1μm,18.9s,baz=136,slow=39						
YKA	**Yellowknife Ar**	**27.37**	**51**	P	**P**	**11 15 12.7**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=278,slow=7.8,SNR=25						
K05A	**Summer Lake**	**30.80**	**93**	P	**P**	**11 15 45.0**	**+2.0**
K05A				IAmb	IAmb	11 15 46.3	
	comp=Z,5.6nm,1.0s						
MOD	**Modoc Plateau**	**31.64**	**93**	P	**P**	**11 15 51.2**	**+0.7**
MOD				IAmb	IAmb	11 16 05.5	
	comp=Z,2.8nm,0.9s						
WVOR	**Wild Horse Val**	**32.32**	**91**	P	**P**	**11 15 57.8**	**+1.5**
WVOR				IAmb	IAmb	11 16 09.9	
	comp=Z,3.6nm,1.1s						
PAHR	**Pah Rah Range**	**33.55**	**96**	P	**P**	**11 16 08.1**	**+0.9**
PAHR				IAmb	IAmb	11 16 13.6	
	comp=Z,3.3nm,1.0s						
PNTR	**Pine Nut**	**33.82**	**97**	P	**P**	**11 16 10.9**	**+1.3**
YERR	**Yerington**	**34.10**	**97**	IAmb	IAmb	11 16 18.6	
	comp=Z,5.2nm,0.9s						
KVN	**Kaiserville**	**34.74**	**95**	P	**P**	**11 16 18.4**	**+0.8**
KVN				IAmb	IAmb	11 16 23.7	
	comp=Z,3.8nm,1.1s						
RYN	**Ryan**	**34.76**	**96**	P	**P**	**11 16 18.3**	**+0.6**
RYN				IAmb	IAmb	11 16 23.9	
	comp=Z,3.7nm,0.9s						
NVAR	**Mina Array Bea**	**35.02**	**96**	P	**P**	**11 16 21.8**	**+1.8**
	comp=Z,2.7nm,0.8s,baz=296,slow=8.4,SNR=11						
OMMB	**Old Mammoth Mi**	**35.15**	**98**	P	**P**	**11 16 22.2**	**+0.9**
OMMB				IAmb	IAmb	11 16 29.0	
	comp=Z,3.1nm,1.1s						
R11A	**Troy Canyon, C**	**36.69**	**94**	IAmb	IAmb	11 16 39.5	
	comp=Z,5.8nm,1.4s						
TPNV	**Topopah Spring**	**37.22**	**96**	IAmb	IAmb	11 16 44.8	
	comp=Z,6.0nm,0.8s						
PDAR	**Pinedale Array**	**37.53**	**84**	P	**P**	**11 16 44.2**	**+2.9**
	comp=Z,0.3nm,0.5s,baz=308,slow=4.4,SNR=2.6						
KLR	**Kul'dur**	**38.62**	**290**	LR	LR	11 33 54.3	
	comp=Z,1μm,18.5s,baz=308,slow=38						
O20A	**White River Ci**	**39.92**	**86**	IAmb	IAmb	11 17 15.2	
	comp=Z,3.9nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**40.16**	**224**	T	T	11 59 52.9	
	baz=25,slow=76,SNR=190						
H11N3	**WAKE ISLAND Hy**	**40.17**	**224**	T	T	11 59 53.1	
	baz=25,slow=76,SNR=164						
H11N1	**WAKE ISLAND Hy**	**40.18**	**224**	T	T	11 59 55.9	
	baz=25,slow=76,SNR=181						
PV13	**Radium Mtn., P**	**40.84**	**89**	P	**P**	**11 17 09.4**	**+0.2**
H11S1	**WAKE ISLAND Hy**	**41.34**	**223**	T	T	12 01 22.6	
	baz=25,slow=76,SNR=438						
H11S2	**WAKE ISLAND Hy**	**41.35**	**223**	T	T	12 01 16.6	
	baz=25,slow

SMTH				S	Sb	11 19 01.4	-1.0		
	11μm,0.4s								
SMTH	**Samothraki Isl**	**0.45**	**277**	P	Pb	**11 18 55.3**	**-0.5**		
SMTH				S	Sb	**11 19 01.4**	**-1.0**		
SMTH				AML	AML	11 19 03.0			
	comp=E,25525μm,0.5s								
SMTH				AML	AML	11 19 03.5			
	comp=N,17840μm,0.3s								
ALN	**Alexandroupoli**	**0.48**	**353**	P	Pb	**11 18 55.7**	**-0.5**		
ALN				S	Sb	**11 19 02.7**	**-0.5**		
	comp=N,2μm,0.4s								
ALN	**Alexandroupoli**	**0.48**	**353**	P	Pb	**11 18 55.7**	**-0.5**		
ALN				S	Sb	**11 19 03.2**	**0.0**		
ALN				AML	AML	11 19 05.2			
	comp=E,4308μm,0.3s								
ALN				AML	AML	11 19 07.6			
	comp=N,3427μm,0.3s								
ALN	**Alexandroupoli**	**0.48**	**353**	PG	Pg	**11 18 55.1**	**-0.3**		
LPK	**Lapseki**	**0.49**	**95**	PG	Pg	**11 18 54.7**	**-0.8**		
BOZC	**Bozcaada**	**0.58**	**185**	PG	Pg	**11 18 56.9**	**-0.2**		
BOZC				SG	Sb	**11 19 05.9**	**0.0**		
BOZC	**Bozcaada**	**0.58**	**185**	*i* P	Pg	**11 18 57.2**	**+0.1**		
BOZC				*i* S	Sb	**11 19 06.3**	**+0.4**		
EZN	**Ezine**	**0.61**	**165**	PG	Pg	**11 18 57.4**	**-0.4**		
EZN				SG	Sg	**11 19 06.7**	**+0.8**		
BAYC	**CANAKKALE_Bayr**	**0.75**	**154**	*i* P	Pg	**11 19 00.1**	**-0.3**		
BAYC				*i* S	Sg	**11 19 09.7**	**-0.6**		
UKOP	**Uzunkopru-Edir**	**0.81**	**29**	PG	Pg	**11 19 01.4**	**-0.2**		
RKY	**Sarkoy-Tekirda**	**0.85**	**71**	PG	Pg	**11 19 00.6**	**-1.7**		
RDO	**Rodhopi**	**0.85**	**329**	P	Pb	**11 19 02.1**	**-0.4**		
RDO				S	Sb	**11 19 14.4**	**+0.5**		
	comp=N,3μm,0.2s								
RDO	**Rodhopi**	**0.85**	**329**	P	Pb	**11 19 02.1**	**-0.4**		
RDO				S	Sb	**11 19 14.1**	**+0.2**		
RDO				AML	AML	11 19 17.9			
	comp=N,5661μm,0.2s								
RDO				AML	AML	11 19 18.6			
	comp=E,6551μm,0.2s								
RDO	**Rodhopi**	**0.85**	**329**	PG	Pn	**11 19 03.1**	**-0.5**		
SART	**Tekirdag**	**0.85**	**71**	*i* P	Pg	**11 19 01.0**	**-1.4**		
SART				*i* S	Sg	**11 19 13.2**	**-0.4**		
LIA	**Limnos Island**	**0.89**	**234**	P	Pb	**11 19 03.1**	**0.0**		
LIA				S	Sn	**11 19 16.2**	**-0.5**		
	comp=E,4μm,0.7s								
LIA	**Limnos Island**	**0.89**	**234**	P	Pb	**11 19 03.2**	**+0.2**		
LIA				S	Sn	**11 19 15.6**	**-1.1**		
LIA				AML	AML	11 19 17.5			
	comp=E,9163μm,0.8s								
LIA				AML	AML	11 19 18.3			
	comp=N,6682μm,0.6s								
KRBG	**Karabiga-Canak**	**0.90**	**91**	PG	Pg	**11 19 02.2**	**-1.1**		
THAS	**Thassos island**	**1.08**	**281**	P	Pb	**11 19 05.9**	**-0.6**		
THAS				S	Sn	**11 19 21.3**	**-0.3**		
	comp=N,3μm,0.5s								
THAS	**Thassos island**	**1.08**	**281**	P	Pg	**11 19 06.2**	**-0.5**		
THAS				S	Sn	**11 19 20.8**	**-0.8**		
THAS				AML	AML	11 19 23.6			
	comp=N,7740μm,0.6s								
THAS				AML	AML	11 19 25.0			
	comp=E,5691μm,0.5s								
KNL	**Balıkesir**	**1.08**	**97**	*i* P	Pb	**11 19 05.4**	**-1.1**		
KNL				*i* S	Sb	**11 19 19.9**	**-0.6**		
KNL				IAML		11 19 23.0			
	comp=N,3μm,0.8s								
KNL				IAML		11 19 23.0			
	comp=E,6μm,0.5s								
MRMT	**Marmara Adasi**	**1.14**	**80**	PN	Pb	**11 19 06.7**	**-0.8**		
PRK	**Paraskevi**	**1.18**	**174**	P	Pb	**11 19 08.2**	**+0.2**		
PRK				S	Sn	**11 19 24.7**	**+0.9**		
	comp=E,10μm,0.8s								
PRK	**Paraskevi**	**1.18**	**174**	P	Pg	**11 19 08.8**	**+0.3**		
PRK				S	Sn	**11 19 24.5**	**+0.6**		
PRK				AML	AML	11 19 27.3			
	comp=N,28695μm,0.8s								
PRK				AML	AML	11 19 28.5			
	comp=E,13302μm,0.7s								
AYVA	**Ayvalik**	**1.19**	**158**	*i* P	Pn	**11 19 08.1**	**-0.1**		
AYVA				*i* S	Sb	**11 19 23.4**	**-0.2**		
AYVA				IAML		11 19 26.0			
	comp=E,4μm,0.7s								
AYVA				IAML		11 19 27.0			
	comp=N,4μm,0.5s								
TKR	**Tekirdag**	**1.22**	**62**	PN	Pn	**11 19 08.2**	**-0.4**		
SIGR	**SIGRI**	**1.22**	**190**	P	Pn	**11 19 08.5**	**-0.1**		
SIGR				S	Sg	**11 19 25.3**	**0.0**		
	comp=N,4μm,0.5s								
SIGR	**SIGRI**	**1.22**	**190**	P	Pn	**11 19 08.7**	**+0.1**		
SIGR				S	Sg	**11 19 25.2**	**0.0**		
SIGR				AML	AML	11 19 26.9			
	comp=N,9024μm,0.7s								
SIGR				AML	AML	11 19 27.4			
	comp=E,5901μm,0.4s								
SIGR	**SIGRI**	**1.22**	**190**	PN	Pn	**11 19 08.8**	**+0.2**		
EFSA	**Agios Efstrati**	**1.23**	**225**	P	Pg	**11 19 09.2**	**-0.4**		
GONE	**Gonen-Balikesi**	**1.25**	**107**	PN	Pn	**11 19 09.0**	**-0.1**		
BALY	**Balya**	**1.33**	**120**	*i* P	Pn	**11 19 10.4**	**+0.1**		
BALY				*i* S	Sb	**11 19 27.6**	**-0.2**		
EDC	**Edincik**	**1.33**	**92**	PN	Pn	**11 19 09.8**	**-0.4**		
KDZ	**Kurdzhali**	**1.34**	**337**	*i* P	Pb	**11 19 10.7**	**-0.2**		
KDZ	**Kurdzhali**	**1.34**	**337**	PN	Pg	**11 19 11.5**	**-0.2**		
KAVA	**Kavala**	**1.35**	**296**	P	Pb	**11 19 10.4**	**-0.6**		
KAVA				S	Sb	**11 19 27.6**	**-0.6**		
KAVA				AML	AML	11 19 32.8			
	comp=E,2168μm,0.4s								
KAVA				AML	AML	11 19 32.8			
	comp=N,2432μm,0.3s								
KVLA	**Kavala**	**1.42**	**292**	P	Pn	**11 19 11.3**	**0.0**		
CRLT	**Corlu**	**1.42**	**59**	PN	Pb	**11 19 12.1**	**-0.1**		
DKL	**Dikili**	**1.47**	**155**	PN	Pb	**11 19 12.9**	**-0.2**		
EDRB	**Edirne**	**1.50**	**18**	P	Pn	**11 19 12.0**	**-0.5**		
EDRB				S	Sb	**11 19 32.4**	**-0.2**		
	comp=N,1μm,0.5s								
EDRB	**Edirne**	**1.50**	**18**	PN	Pb	**11 19 13.9**	**+0.3**		
BOTS	**Marmara Eregli**	**1.53**	**67**	PN	Pn	**11 19 13.5**	**+0.7**		
BALB	**Balikesir**	**1.56**	**119**	PN	Pn	**11 19 13.9**	**+0.7**		
PHSR	**Pinarhisar**	**1.61**	**41**	PN	Pb	**11 19 15.4**	**-0.1**		
ZEDA	**zmir-Bergama**	**1.63**	**153**	*i* P	Pn	**11 19 14.5**	**+0.3**		
ZEDA				*i* S	Sn	**11 19 34.9**	**-0.1**		
OUR	**Ouranopolis**	**1.64**	**268**	P	Pn	**11 19 13.7**	**-0.6**		
OUR	**Ouranopolis**	**1.64**	**268**	P	Pn	**11 19 13.9**	**-0.4**		
OUR	**Ouranopolis**	**1.64**	**268**	PN	Pg	**11 19 16.7**	**-0.6**		
RZN	**Rozhen**	**1.66**	**321**	*i* P	Pn	**11 19 15.8**	**-0.5**		
DIM	**Dimitrovgrad**	**1.69**	**345**	P	Pn	**11 19 15.6**	**+0.5**		
KCTX	**Karacabey (Bur**	**1.72**	**94**	PN	Pn	**11 19 15.5**	**0.0**		
SLVT	**Silivri**	**1.78**	**62**	PN	Pn	**11 19 17.6**	**+1.3**		
KRBN	**Karaburun**	**1.85**	**169**	PN	Pn	**11 19 17.5**	**+0.2**		
PAIG	**Paliouri**	**1.93**	**256**	P	Pn	**11 19 17.6**	**-0.8**		
PAIG	**Paliouri**	**1.93**	**256**	P	Pn	**11 19 17.8**	**-0.6**		
CTYL	**Yalikoy Yolu**	**1.95**	**57**	PN	Pn	**11 19 19.8**	**+1.1**		
DURS	**Dursunbey**	**1.98**	**114**	*i* P	Pn	**11 19 18.6**	**-0.6**		
CTKS	**Kestanelik-??a**	**1.99**	**65**	PN	Pn	**11 19 20.3**	**+1.2**		
PLD	**Plovdiv**	**2.00**	**328**	*i* P	Pg	**11 19 22.8**	**-1.4**		
PLD	**Plovdiv**	**2.00**	**328**	PN	Pb	**11 19 21.7**	**-0.3**		
AKS	**Akhisar**	**2.02**	**139**	PN	Pn	**11 19 20.5**	**+0.9**		
CHOS	**Chios island**	**2.03**	**181**	P	Pn	**11 19 19.7**	**-0.1**		
CHOS	**Chios island**	**2.03**	**181**	P	Pn	**11 19 19.9**	**+0.1**		
CHOS	**Chios island**	**2.03**	**181**	PN	Pn	**11 19 20.2**	**+0.4**		
SRS	**Serrai**	**2.04**	**291**	P	Pn	**11 19 19.5**	**-0.5**		
JMB	**Yambol**	**2.08**	**10**	P	Pb	**11 19 23.6**	**+0.2**		
JMB	**Yambol**	**2.08**	**10**	PN	Pb	**11 19 22.7**	**-0.7**		
DST	**Dursunbey**	**2.08**	**112**	PN	Pn	**11 19 22.0**	**+1.5**		
URLA	**Izmir**	**2.09**	**170**	PN	Pn	**11 19 20.9**	**+0.3**		
ARMT	**Armutlu**	**2.10**	**85**	PN	Pn	**11 19 22.0**	**+1.3**		
MDNY	**Mudanya-Bursa**	**2.11**	**90**	PN	Pn	**11 19 21.8**	**+0.9**		
AOS	**Alonnisos**	**2.13**	**235**	P	Pn	**11 19 21.1**	**0.0**		
AOS	**Alonnisos**	**2.13**	**235**	PN	Pb	**11 19 23.4**	**-0.9**		
HVHR	**Bakirkoy-Istan**	**2.14**	**74**	PN	Pn	**11 19 22.9**	**+1.6**		
BLCB	**Balcova**	**2.15**	**160**	PN	Pn	**11 19 22.9**	**+1.5**		
BGKT	**Bogazkoy**	**2.15**	**68**	PN	Pn	**11 19 22.6**	**+1.2**		
MMB	**Musomiste**	**2.16**	**304**	*i* P	Pn	**11 19 22.8**	**+1.3**		
ORLT	**Orhaneli**	**2.16**	**99**	PN	Pn	**11 19 22.3**	**+0.8**		
GOMA	**Golmarmara-Man**	**2.20**	**140**	PN	Pn	**11 19 22.9**	**+0.8**		
HORT	**Hortiatis**	**2.31**	**275**	PN	Pb	**11 19 26.4**	**-1.0**		
ULDT	**Uludag**	**2.32**	**96**	*i* P	Pn	**11 19 24.1**	**+0.1**		
ISK	**Istanbul-Kandi**	**2.33**	**73**	PN	Pn	**11 19 24.8**	**+1.0**		
KAVV	**Kandilli-Istan**	**2.33**	**73**	PN	Pn	**11 19 24.9**	**+1.1**		
GEMT	**Gemlik**	**2.34**	**89**	PN	Pn	**11 19 25.2**	**+1.1**		
KLYT	**Kilyos**	**2.37**	**68**	PN	Pn	**11 19 26.1**	**+1.7**		
YLV	**Yalova**	**2.48**	**85**	PN	Pn	**11 19 27.0**	**+0.9**		
KNT	**Kendrikon**	**2.56**	**288**	PN	Pb	**11 19 29.6**	**-2.0**		
SIMA	**Simav-Kutahya**	**2.58**	**120**	PN	Pn	**11 19 28.6**	**+1.2**		
PGB	**Panagyurishte**	**2.59**	**326**	P	Pb	**11 19 33.1**	**+1.0**		
VAY	**Valandovo**	**2.84**	**290**	*i* Pn	Pg	**11 19 39.6**	**-0.7**		
VAY	**Valandovo**	**2.84**	**290**	*i* Pn	Pg	**11 19 39.6**	**-0.7**		
RAZG	**Razgrad**	**3.16**	**5**	⇓P	Pn	**11 19 36.4**	**+1.1**		
PLVB	**Pleven**	**3.17**	**340**	⇑P	Pn	**11 19 36.5**	**+1.0**		
APE	**Apeiranthos**	**3.38**	**188**	⇓P	Pn	**11 19 37.4**	**-0.9**		
SKO	**Skopje**	**3.86**	**295**	*i* Pn	Pg	**11 20 00.3**	**+0.6**		
SKO	**Skopje**	**3.86**	**295**	*i* Pn	Pg	**11 20 00.3**	**+0.6**		
OHR	**Ohrid**	**4.10**	**281**	*e*Pn	Pb	**11 20 00.3**	**+2.4**		
OHR	**Ohrid**	**4.10**	**281**	*e*Pn	Pb	**11 20 00.3**	**+2.4**		
HARR	**Harsova**	**4.47**	**17**	⇑P	Pn	**11 19 53.7**	**+0.3**		
CFR	**Carcaliu**	**4.98**	**17**	⇓P	Pn	**11 20 04.0**	**+3.7**		
MLR	**Muntele Rosu**	**5.07**	**359**	⇓P	Pn	**11 20 03.9**	**+2.2**		
PLOR	**Plostina**	**5.45**	**4**	⇑P	Pn	**11 20 09.3**	**+2.6**		
VRI	**Vrincioaia**	**5.46**	**4**	⇑P	Pn	**11 20 07.7**	**+0.7**		
GZR	**Gura Zlata**	**5.55**	**335**	⇑P	Pn	**11 20 07.5**	**-0.7**		
DOPR	**Dopca**	**5.57**	**355**	⇑P	Pn	**11 20 10.2**	**+1.7**		
TESR	**Tescani**	**6.11**	**3**	⇓P	Pn	**11 20 17.3**	**+1.5**		
BZS	**Buzias**	**6.16**	**329**	⇓P	Pn	**11 20 16.7**	**+0.2**		

*ATH **24** 11:28:31.7, 40.02N×24.26E, h29km±1km, ML2.6/7, Error ellipse: s-maj=1.6km s-min=1.0km az=325.0*
*THE **24** 11:28:32.9, 40.02N×24.21E, h18km±1km, ML2.6/11, Error ellipse: s-maj=1.5km s-min=0.7km az=288.0*
ISC 24 11:28:32.3±1.1, 40.02N±0.02×24.26E±0.03, h18km±3km, n33, σ0.29/51, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUR	**Ouranopolis**	**0.38**	**326**	P	**Pg**	**11 28 40.4**	**+0.1**
OUR				S	**Sg**	**11 28 45.7**	**0.0**
	1μm,0.4s						
OUR	**Ouranopolis**	**0.38**	**326**	P	**Pg**	**11 28 40.2**	**0.0**
OUR				S	**Sg**	**11 28 45.9**	**+0.2**
OUR				AML	AML	11 28 46.5	
	comp=E,1825μm,0.4s						
OUR				AML	AML	11 28 46.6	
	comp=N,2127μm,0.4s						
PAIG	**Paliouri**	**0.46**	**259**	P	**Pg**	**11 28 41.6**	**0.0**
PAIG				S	**Sg**	**11 28 47.1**	**-0.7**
	comp=N,322nm,0.4s						
PAIG	**Paliouri**	**0.46**	**259**	P	**Pg**	**11 28 41.6**	**0.0**
PAIG				S	**Sb**	**11 28 48.7**	**+0.4**
PAIG				AML	AML	11 28 49.1	
	comp=N,716μm,0.7s						
PAIG				AML	AML	11 28 49.9	
	comp=E,568μm,0.2s						
THAS	**Thassos island**	**0.69**	**31**	P	**Pb**	**11 28 45.4**	**-0.2**
THAS				S	**Sn**	**11 28 56.4**	**-0.8**
	comp=E,920nm,0.2s						
THAS	**Thassos island**	**0.69**	**31**	P	**Pb**	**11 28 45.2**	**-0.4**
LIA	**Limnos Island**	**0.72**	**99**	P	**Pg**	**11 28 46.6**	**+0.2**
LIA				S	**Sg**	**11 28 56.5**	**+0.5**
LIA				AML	AML	11 28 57.7	
	comp=N,2247μm,0.3s						
LIA				AML	AML	11 28 57.7	
	comp=E,2404μm,0.5s						
PLG	**Polygyros**	**0.72**	**300**	P	**Pb**	**11 28 46.1**	**-0.2**
PLG	**Polygyros**	**0.72**	**300**	P	**Pb**	**11 28 46.4**	**+0.2**
PLG				AML	AML	11 28 59.3	
	comp=E,1004μm,0.4s						
PLG				AML	AML	11 28 59.3	
	comp=N,711μm,0.4s						
AOS	**Alonnisos**	**0.90**	**199**	P	**Pb**	**11 28 49.2**	**0.0**
AOS				S	**Sn**	**11 29 02.2**	**-0.2**
	comp=N,310nm,0.4s						
AOS	**Alonnisos**	**0.90**	**199**	P	**Pb**	**11 28 49.0**	**-0.3**
AOS				AML	AML	11 29 05.7	
	comp=N,634μm,0.3s						
AOS				AML	AML	11 29 05.9	
	comp=E,584μm,0.4s						
ALNA	**Alonissos**	**0.92**	**199**	P	**Pb**	**11 28 49.8**	**+0.1**
KVLA	**Kavala**	**0.92**	**6**	P	**Pg**	**11 28 50.4**	**+0.1**
KVLA				S	**Sg**	**11 29 02.6**	**+0.1**
KAVA	**Kavala**	**1.00**	**11**	P	**Pb**	**11 28 51.0**	**0.0**
SKIA	**Skiathos**	**1.05**	**216**	P	**Pb**	**11 28 51.5**	**-0.4**
SKIA				S	**Sb**	**11 29 05.6**	**+0.4**
	comp=E,258nm,0.5s						
SKIA	**Skiathos**	**1.05**	**216**	P	**Pn**	**11 28 52.0**	**-0.1**
SKIA				S	**Sg**	**11 29 06.5**	**+0.1**
XOR	**Xorichti**	**1.05**	**232**	P	**Pn**	**11 28 52.3**	**+0.2**
XOR				S	**Sb**	**11 29 05.7**	**+0.4**
	comp=E,300nm,0.4s						
XOR	**Xorichti**	**1.05**	**232**	P	**Pb**	**11 28 51.8**	**-0.2**
HORT	**Hortiatis**	**1.06**	**304**	P	**Pb**	**11 28 52.3**	**+0.2**
HORT				S	**Sb**	**11 29 05.7**	**0.0**
	comp=E,168nm,0.5s						
HORT	**Hortiatis**	**1.06**	**304**	P	**Pb**	**11 28 52.3**	**+0.2**
HORT				S	**Sg**	**11 29 07.5**	**+0.7**
HORT				AML	AML	11 29 09.5	
	comp=N,389μm,0.6s						
HORT				AML	AML	11 29 09.7	
	comp=E,292μm,0.4s						
SOH	**Sokhos**	**1.06**	**320**	P	**Pg**	**11 28 52.8**	**-0.1**
SOH				S	**Sn**	**11 29 06.4**	**-0.2**
	comp=E,770nm,0.4s						
NEO	**Neokhori**	**1.07**	**229**	P	**Pb**	**11 28 52.0**	**-0.3**
NEO				S	**Sn**	**11 29 06.4**	**-0.3**
	comp=E,420nm,0.5s						
NEO	**Neokhori**	**1.07**	**229**	P	**Pb**	**11 28 52.2**	**0.0**
SMTH	**Samothraki Isl**	**1.07**	**65**	P	**Pn**	**11 28 52.6**	**+0.2**
SMTH	**Samothraki Isl**	**1.07**	**65**	P	**Pn**	**11 28 52.7**	**+0.4**
SKY	**Skiros Island**	**1.16**	**169**	P	**Pn**	**11 28 53.5**	**-0.1**
SKY				S	**Sn**	**11 29 08.8**	**-0.1**
	comp=E,315nm,0.3s						
SKY	**Skiros Island**	**1.16**	**169**	P	**Pn**	**11 28 53.5**	**-0.1**
SRS	**Serrai**	**1.21**	**335**	P	**Pn**	**11 28 54.7**	**0.0**
SRS				S	**Sb**	**11 29 09.6**	**-0.4**
	comp=E,128nm,0.3s						
SRS	**Serrai**	**1.21**	**335**	P	**Pb**	**11 28 54.6**	**0.0**
SRS				S	**Sn**	**11 29 10.4**	**+0.2**
KYMI	**Kymi, Euboea I**	**1.39**	**185**	P	**Pn**	**11 28 56.3**	**-0.4**
RDO	**Rodhopi**	**1.49**	**40**	P	**Pn**	**11 28 57.7**	**-0.4**
RDO				AML	AML	11 29 13.6	
	comp=E,3429μm,0.3s						
RDO				AML	AML	11 29 13.9	
	comp=N,3364μm,0.3s						
VAY	**Valandovo**	**1.83**	**316**	*i* Pn	**Pg**	**11 29 07.4**	**0.0**
VAY	**Valandovo**	**1.83**	**316**	*i* Pn	**Pg**	**11 29 07.4**	**0.0**

*DDA **24** 11:28:41.7, 40.41N×26.27E, h7km±2km, ML3.5*
*ISK **24** 11:28:41.7, 40.43N×26.26E, h12km, ML3.5/31*
*THE **24** 11:28:42.3, 40.44N×26.25E, h10km±1km, ML3.1/8, Error ellipse: s-maj=2.5km s-min=0.8km az=278.0*
*SOF **24** 11:28:43.8, 40.80N×26.53E, h2km, MD3.3*
ISC 24 11:28:42.2±0.8, 40.44N±0.02×26.28E±0.02, h16km±6km, n72, σ0.81/98, 3C-6D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GELI	**Tayfur-Gelibol**	**0.16**	**104**	PG	**Pg**	**11 28 46.1**	**-0.2**
GELI				SG	**Sg**	**11 28 49.5**	**+0.5**
ERIK	**Erikli-Kesan**	**0.30**	**38**	PG	**Pg**	**11 28 48.6**	**+0.1**
ERIK				SG	**Sg**	**11 28 53.2**	**+0.4**
ENEZ	**Enez**	**0.31**	**343**	P	**Pg**	**11 28 48.9**	**0.0**
ENEZ				S	**Sg**	**11 28 53.7**	**+0.3**
	17μm,0.3s						
ENEZ	**Enez**	**0.31**	**343**	PG	**Pg**	**11 28 48.9**	**0.0**
ENEZ				SG	**Sg**	**11 28 53.5**	**+0.1**
LPK	**Lapseki**	**0.38**	**99**	PG	**Pg**	**11 28 50.1**	**+0.2**
GADA	**Gvkgeada**	**0.38**	**230**	P	**Pg**	**11 28 49.7**	**-0.2**
GADA				S	**Sg**	**11 28 55.2**	**0.0**
	3μm,0.2s						
GADA	**Gvkgeada**	**0.38**	**230**	PG	**Pg**	**11 28 49.7**	**-0.2**
GADA				SG	**Sg**	**11 28 54.9**	**-0.3**
ALN	**Alexandroupoli**	**0.49**	**339**	P	**Pg**	**11 28 51.7**	**-0.4**
ALN				S	**Sg**	**11 28 58.6**	**-0.1**
	1μm,0.4s						
ALN	**Alexandroupoli**	**0.49**	**339**	PG	**Pg**	**11 28 51.7**	**-0.4**
KESN	**Edirne-Kesan**	**0.50**	**38**	*i* P	**Pg**	**11 28 51.6**	**-0.6**
KESN				*i* S	**Sg**	**11 28 59.3**	**+0.3**
KESN				IAML		11 29 06.0	
	comp=E,2μm,0.2s						
EZN	**Ezine**	**0.61**	**176**	P	**Pg**	**11 28 53.5**	**-0.7**
EZN				S	**Sg**	**11 29 01.9**	**-0.4**
	comp=E,838nm,0.1s						
EZN	**Ezine**	**0.61**	**176**	PG	**Pg**	**11 28 53.9**	**-0.3**
BOZC	**Bozcaada**	**0.62**	**196**	PG	**Pg**	**11 28 53.8**	**-0.6**
BOZC	**Bozcaada**	**0.62**	**196**	*i* P	**Pg**	**11 28 53.1**	**-1.2**
BOZC				*i* S	**Sg**	**11 29 02.4**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**0.72**	**163**	*i* P	**Pg**	**11 28 55.9**	**-0.5**
BAYC				*i* S	**Sg**	**11 29 05.6**	**-0.3**
BAYC				IAML		11 29 06.0	
	comp=E,1μm,0.4s						
RKY	**Sarkoy-Tekirda**	**0.73**	**70**	PG	**Pg**	**11 28 55.4**	**-1.1**
RKY				SG	**Sb**	**11 29 06.7**	**+0.2**
SART	**Tekirdag**	**0.73**	**70**	*i* P	**Pg**	**11 28 56.0**	**-0.6**
SART				*i* S	**Sb**	**11 29 07.0**	**+0.4**
UKOP	**Uzunkopru-Edir**	**0.74**	**21**	PG	**Pg**	**11 28 56.6**	**-0.2**
KRBG	**Karabiga-Canak**	**0.78**	**93**	PG	**Pg**	**11 28 57.2**	**-0.3**
RDO	**Rodhopi**	**0.90**	**322**	P	**Pb**	**11 28 59.1**	**-0.5**
RDO				S	**Sg**	**11 29 11.7**	**0.0**
	comp=E,2μm,0.2s						
RDO	**Rodhopi**	**0.90**	**322**	PG	**Pb**	**11 28 58.9**	**-0.7**
KNL	**Balıkesir**	**0.97**	**99**	*i* P	**Pb**	**11 28 59.8**	**-0.8**
KNL				*i* S	**Sg**	**11 29 14.2**	**+0.5**
KNL				IAML		11 29 17.0	
	comp=N,2μm,0.4s						
LIA	**Limnos Island**	**0.99**	**238**	P	**Pg**	**11 29 01.5**	**0.0**
LIA				S	**Sb**	**11 29 14.1**	**+0.2**
MRMT	**Marmara Adasi**	**1.02**	**80**	PG	**Pb**	**11 29 00.9**	**-0.7**
MRMT				SG	**Sn**	**11 29 16.1**	**+0.1**
TKR	**Tekirdag**	**1.11**	**60**	PN	**Pn**	**11 29 03.5**	**+0.4**
GONE	**Gonen-Balikesi**	**1.15**	**109**	PN	**Pn**	**11 29 03.9**	**+0.3**
GONE				SN	**Sg**	**11 29 20.7**	**+1.3**
AYVA	**Ayvalik**	**1.17**	**164**	*i* P	**Pn**	**11 29 03.7**	**-0.3**
AYVA				*i* S	**Sb**	**11 29 19.2**	**+0.2**
AYVA				IAML		11 29 21.0	
	comp=E,1μm,0.4s						
PRK	**Paraskevi**	**1.19**	**180**	P	**Pg**	**11 29 05.3**	**+0.1**
PRK				S	**Sg**	**11 29 21.8**	**+1.1**
	comp=E,2μm,0.3s						
EDC	**Edincik**	**1.22**	**94**	PN	**Pn**	**11 29 04.7**	**+0.1**
BALY	**Balya**	**1.24**	**124**	*i* P	**Pb**	**11 29 05.5**	**+0.1**
BALY				*i* S	**Sn**	**11 29 21.9**	**+0.4**
SIGR	**SIGRI**	**1.27**	**195**	P	**Pn**	**11 29 05.3**	**+0.1**
SIGR				S	**Sn**	**11 29 22.1**	**+0.2**
	comp=E,3μm,0.5s						
SIGR	**SIGRI**	**1.27**	**195**	PN	**Pn**	**11 29 05.3**	**+0.1**
SIGR				SN	**Sn**	**11 29 22.4**	**+0.5**
CRLT	**Corlu**	**1.31**	**58**	PN	**Pb**	**11 29 06.1**	**+0.2**
KDZ	**Kurdzhali**	**1.38**	**332**	P	**Pn**	**11 29 07.3**	**+0.5**
KDZ	**Kurdzhali**	**1.38**	**332**	PN	**Pn**	**11 29 06.9**	**+0.1**
BOTS	**Marmara Eregli**	**1.41**	**66**	PN	**Pn**	**11 29 07.6**	**+0.4**
DKL	**Dikili**	**1.45**	**160**	PN	**Pn**	**11 29 08.1**	**+0.4**
EDRB	**Edirne**	**1.45**	**14**	P	**Pn**	**11 29 07.6**	**-0.3**
EDRB				S	**Sn**	**11 29 26.4**	**-0.2**
	comp=E,355nm,0.3s						
EDRB	**Edirne**	**1.45**	**14**	PN	**Pn**	**11 29 07.5**	**-0.3**
BALB	**Balikesir**	**1.47**	**122**	PN	**Pn**	**11 29 08.6**	**+0.6**
KIRK	**Kırklareli**	**1.48**	**25**	*i* P	**Pn**	**11 29 08.2**	**-0.1**
PHSR	**Pinarhisar**	**1.52**	**38**	PN	**Pn**	**11 29 09.2**	**+0.4**
STEP	**BALIKESIR_Sava**	**1.53**	**133**	*i* P	**Pn**	**11 29 09.9**	**+0.9**
STEP				*i* S	**Sg**	**11 29 31.9**	**+0.2**
ZEDA	**zmir-Bergama**	**1.59**	**157**	*i* P	**Pn**	**11 29 10.0**	**+0.2**
ZEDA				*i* S	**Sb**	**11 29 31.2**	**+0.1**
ZEDA				IAML		11 29 34.0	
	comp=E,329nm,0.4s						
SLVT	**Silivri**	**1.67**	**61**	PN	**Pn**	**11 29 11.4**	**+0.6**
DIM	**Dimitrovgrad**	**1.71**	**341**	*i* P	**Pn**	**11 29 11.9**	**+0.6**
RZN	**Rozhen**	**1.72**	**317**	P	**Pg**	**11 29 15.8**	**+0.5**
CTYL	**Yalikoy Yolu**	**1.84**	**55**	PN	**Pn**	**11 29 13.4**	**+0.2**
ARMT	**Armutlu**	**1.98**	**85**	PN	**Pn**	**11 29 16.4**	**+1.3**
MDNY	**Mudanya-Bursa**	**1.99**	**91**	PN	**Pn**	**11 29 16.0**	**+0.7**
BGKT	**Bogazkoy**	**2.04**	**68**

comp=N,21918µm,0.4s
THAS Thassos island 0.78 294 Pb 11 33 23.6 -0.2
THAS Sg 11 33 33.6 -0.1
LPK Lapseki 0.84 84 PG **Pg 11 33 24.5 -0.1**
RDO Rodhopi 0.86 354 P **Pg 11 33 24.2 -0.6**
RDO S **Sg 11 33 35.5 -0.6**
RDO AML AML 11 33 45.7
comp=E,24073µm,0.8s
RDO AML AML 11 33 48.5
comp=N,29556µm,0.7s
RDO Rodhopi 0.86 354 PG **Pg 11 33 24.2 -0.6**
BAYC CANAKKALE_Bayr 0.88 129 *i* P **Pg 11 33 24.7 -0.5**
BAYC *i* S **Sg 11 33 35.8 -0.9**
BAYC IAML 11 33 41.0
comp=E,7µm,0.8s
BAYC IAML 11 33 42.0
comp=N,6µm,0.8s
EFSA Agios Efstrati 0.91 215 P **Pg 11 33 25.8 -0.1**
EFSA S **Sb 11 33 37.9 -0.2**
EFSA AML AML 11 33 40.8
comp=N,42531µm,0.6s
EFSA AML AML 11 33 44.7
comp=E,25494µm,0.9s
KESN Edirne-Kesan 0.94 55 *i* P **Pg 11 33 25.0 -1.5**
KESN *i* S **Sg 11 33 38.1 -0.7**
KESN IAML 11 33 40.0
comp=N,31µm,0.5s
KESN IAML 11 33 41.0
comp=E,47µm,0.4s
SIGR SIGRI 1.09 172 P **Pb 11 33 28.5 -0.6**
SIGR S **Sg 11 33 43.6 +0.1**
SIGR AML AML 11 33 45.3
SIGR AML AML 11 33 45.8
comp=E,40153µm,0.6s
SIGR SIGRI 1.09 172 PN **Pb 11 33 28.9 -0.2**
UKOP Uzunkopru-Edir 1.11 41 PN **Pb 11 33 29.1 -0.4**
UKOP Uzunkopru-Edir 1.11 41 Pn **Pb 11 33 29.3 -0.2**
KAVA Kavala 1.12 309 P **Pb 11 33 28.7 -0.9**
KAVA S **Sg 11 33 44.1 -0.3**
comp=E,6µm,0.4s
KAVA Kavala 1.12 309 P **Pb 11 33 28.6 -0.9**
KAVA S **Sb 11 33 43.5 -0.6**
KAVA AML AML 11 33 46.8
comp=N,15149µm,0.4s
KAVA AML AML 11 33 47.4
comp=E,14172µm,0.6s
KAVA Kavala 1.12 309 Pb 11 33 28.7 -0.9
KAVA **Sg 11 33 44.1 -0.3**
PRK Paraskevi 1.15 156 P **Pg 11 33 30.7 +0.3**
PRK S **Sn 11 33 47.2 +1.4**
comp=E,18µm,0.8s
PRK Paraskevi 1.15 156 P **Pg 11 33 30.3 0.0**
PRK S **Sg 11 33 45.6 +0.3**
PRK AML AML 11 33 48.1
comp=E,46198µm,0.8s
PRK AML AML 11 33 49.0
comp=N,26922µm,0.8s
PRK Paraskevi 1.15 156 P **Pg 11 33 30.7 +0.3**
PRK 11 33 47.2
PRK Paraskevi 1.15 156 Pg 11 33 30.7 +0.3
PRK **Sn 11 33 47.2 +1.4**
KVLA Kavala 1.16 304 P **Pb 11 33 29.4 -0.9**
KVLA S **Sb 11 33 44.8 -0.6**
KVLA AML AML 11 33 48.1
comp=N,16937µm,0.4s
KVLA AML AML 11 33 48.2
comp=E,10666µm,0.4s
RKY Sarkoy-Tekirda 1.22 71 PN **Pb 11 33 31.4 0.0**
RKY Sarkoy-Tekirda 1.22 71 Pn **Pb 11 33 30.1 -1.2**
SART Tekirdag 1.23 71 *i* P **Pn 11 33 30.2 -1.1**
SART *i* S **Sb 11 33 46.7 -0.5**
SART IAML 11 33 53.0
comp=E,4µm,0.4s
KRBG Karabiga-Canak 1.26 85 PN **Pn 11 33 31.7 +0.1**
KRBG Karabiga-Canak 1.26 85 Pn **Pn 11 33 31.4 -0.2**
AYVA Ayvalik 1.27 141 *i* P **Pn 11 33 31.8 0.0**
AYVA *i* S **Sb 11 33 48.5 +0.2**
AYVA IAML 11 33 50.0
comp=N,26µm,0.6s
AYVA IAML 11 33 50.0
comp=E,17µm,1.0s
OUR Ouranopolis 1.28 272 P **Pn 11 33 30.7 -1.3**
OUR Ouranopolis 1.28 272 P **Pn 11 33 30.8 -1.3**
OUR S **Sb 11 33 48.1 -0.7**
OUR AML AML 11 34 00.7
comp=E,8706µm,0.7s
OUR AML AML 11 34 01.3
comp=N,8518µm,0.5s
OUR Ouranopolis 1.28 272 PN **Pn 11 33 30.9 -1.1**
OUR Ouranopolis 1.28 272 P **Pn 11 33 30.7 -1.3**
OUR Ouranopolis 1.28 272 Pn 11 33 30.7 -1.3
KDZ Kurdzhali 1.37 352 *i* P **Pn 11 33 32.9 -0.3**
KDZ Kurdzhali 1.37 352 PN **Pn 11 33 33.0 -0.3**
KNL Balıkesir 1.43 90 *i* P **Pn 11 33 34.1 +0.1**
KNL *i* S **Sn 11 33 52.0 -0.7**
KNL IAML 11 33 55.0
comp=N,16µm,0.5s
KNL IAML 11 33 55.0
comp=E,22µm,0.4s
MRMT Marmara Adasi 1.51 78 PN **Pb 11 33 36.3 0.0**
DKL Dikili 1.55 141 PN **Pb 11 33 36.5 -0.5**
PAIG Paliouri 1.56 257 P **Pn 11 33 34.4 -1.4**
PAIG S **Sn 11 33 55.2 -0.8**
PAIG AML AML 11 34 03.9
comp=N,2495µm,0.6s
PAIG AML AML 11 34 05.4
comp=E,1711µm,0.5s
RZN Rozhen 1.56 333 *i* P **Pn 11 33 36.4 +0.3**
GONE Gonen-Balikesi 1.57 98 PN **Pb 11 33 37.2 -0.1**
TKR Tekirdag 1.59 63 PN **Pn 11 33 36.9 +0.7**
BALY Balya 1.60 110 *i* P **Pn 11 33 36.9 +0.4**
BALY *i* S **Sn 11 33 56.2 -1.0**
BALY IAML 11 34 00.0
comp=E,6µm,0.5s
BALY IAML 11 34 01.0
comp=N,13µm,0.6s
SKY Skiros Island 1.65 212 P **Pn 11 33 36.1 -1.0**
SKY Skiros Island 1.65 212 P **Pn 11 33 36.1 -1.0**
EDC Edincik 1.69 88 PN **Pb 11 33 38.6 -0.6**
PLG Polygyros 1.69 273 P **Pn 11 33 36.6 -1.1**
PLG Polygyros 1.69 273 P **Pn 11 33 36.7 -1.1**
PLG S **Sn 11 33 57.8 -1.6**
PLG AML AML 11 34 05.4
comp=N,5766µm,0.6s
PLG AML AML 11 34 13.0
comp=E,4531µm,1.0s
PLG Polygyros 1.69 273 P **Pn 11 33 36.6 -1.1**
PLG Polygyros 1.69 273 Pn 11 33 36.6 -1.1
ZEDA zmir-Bergama 1.72 140 *i* P **Pn 11 33 38.2 +0.2**
ZEDA *i* S **Sn 11 34 00.1 +0.2**
ZEDA IAML 11 34 04.0
comp=N,8µm,0.6s
ZEDA IAML 11 34 05.0
comp=E,5µm,0.4s
PSRA Psara 1.75 182 P **Pn 11 33 38.6 +0.2**
PSRA S **Sn 11 34 00.5 -0.1**
PSRA AML AML 11 34 09.8
comp=E,7128µm,0.5s
PSRA AML AML 11 34 10.6
comp=N,5182µm,0.6s
EDRB Edirne 1.75 28 P **Pb 11 33 39.5 -0.9**
EDRB S **Sb 11 34 03.2 +0.8**
comp=N,9µm,0.8s
EDRB Edirne 1.75 28 PN **Pb 11 33 39.4 -0.9**
EDRB Edirne 1.75 28 Pb 11 33 39.5 -0.9
EDRB **Sb 11 34 03.2 +0.8**
DIM Dimitrovgrad 1.76 357 *i* P **Pb 11 33 41.1 +0.7**
AOS Alonnisos 1.77 231 P **Pn 11 33 37.4 -1.4**
AOS S **Sn 11 34 00.4 -0.8**
comp=N,4µm,1.0s
AOS Alonnisos 1.77 231 P **Pn 11 33 37.7 -1.1**
AOS S **Sn 11 34 00.5 -0.7**
AOS AML AML 11 34 16.6
comp=N,8954µm,1.1s
AOS AML AML 11 34 16.9
comp=E,7325µm,0.8s
AOS Alonnisos 1.77 231 PN **Pn 11 33 38.8 0.0**
AOS Alonnisos 1.77 231 Pn 11 33 37.4 -1.4
AOS **Sn 11 34 00.4 -0.8**
SRS Serrai 1.77 298 P **Pn 11 33 37.9 -0.9**
SRS S **Sn 11 34 00.5 -0.8**
comp=E,4µm,0.8s
SRS Serrai 1.77 298 P **Pn 11 33 37.9 -0.9**
SRS S **Sn 11 34 00.1 -1.2**
SRS AML AML 11 34 11.4
comp=E,7310µm,0.8s
SRS AML AML 11 34 16.9
comp=N,6311µm,0.7s
SRS Serrai 1.77 298 Pn 11 33 37.9 -0.9
SRS **Sn 11 34 00.5 -0.8**
CRLT Corlu 1.79 61 PN **Pb 11 33 40.4 -0.5**
BALB Balikesir 1.83 110 PN **Pn 11 33 40.4 +0.9**
STEP BALIKESIR_Sava 1.83 119 *i* P **Pn 11 33 40.1 +0.5**
STEP *i* S **Sn 11 34 02.4 -0.3**
STEP IAML 11 34 11.0
comp=E,4µm,0.6s
STEP IAML 11 34 17.0
comp=N,9µm,0.9s
SOH Sokhos 1.83 287 P **Pn 11 33 38.8 -0.9**
SOH Sokhos 1.83 287 P **Pn 11 33 38.8 -0.9**
SOH Sokhos 1.83 287 Pn 11 33 38.8 -0.9
KIRK Kırklareli 1.84 36 *i* P **Pb 11 33 41.0 -0.8**
KIRK IAML 11 34 13.0
comp=N,3µm,0.5s
CHOS Chios island 1.93 171 P **Pn 11 33 40.7 -0.3**
CHOS S **Sn 11 34 05.0 -0.2**
comp=N,7µm,0.8s
CHOS Chios island 1.93 171 P **Pn 11 33 40.6 -0.3**
CHOS Chios island 1.93 171 PN **Pn 11 33 40.7 -0.3**
PHSR Pinarhisar 1.94 46 PN **Pn 11 33 41.7 +0.6**
PLD Plovdiv 1.95 339 *i* P **Pb 11 33 44.5 +0.8**
PLD Plovdiv 1.95 339 PN **Pn 11 33 42.1 +0.9**
MMB Musomiste 1.95 312 *i* P **Pn 11 33 41.5 +0.2**
HORT Hortiatis 1.98 280 P **Pn 11 33 40.7 -1.0**
HORT Hortiatis 1.98 280 P **Pn 11 33 40.7 -1.0**
HORT S **Sn 11 34 04.5 -1.9**
HORT AML AML 11 34 16.5
comp=E,2217µm,0.5s
HORT AML AML 11 34 22.7
comp=N,5998µm,0.9s
SKIA Skiathos 2.03 237 P **Pn 11 33 40.8 -1.5**
SKIA S **Sn 11 34 05.7 -2.0**
comp=N,3µm,1.0s
SKIA Skiathos 2.03 237 P **Pn 11 33 40.9 -1.5**
KYMI Kymi, Euboea I 2.05 217 P **Pn 11 33 41.3 -1.3**
KYMI Kymi, Euboea I 2.05 217 P **Pn 11 33 41.3 -1.3**
KCTX Karacabey (Bur 2.06 90 PN **Pn 11 33 43.9 +1.1**
URLA Izmir 2.06 159 PN **Pn 11 33 42.7 -0.1**
URLA Izmir 2.06 159 *i* P **Pn 11 33 42.6 -0.1**
URLA IAML 11 34 20.0
comp=N,2µm,0.8s
URLA IAML 11 34 29.0
comp=E,1µm,1.0s
THE Thessaloniki 2.08 280 P **Pn 11 33 43.4 +0.4**
XOR Xorichti 2.11 245 P **Pn 11 33 41.7 -1.8**
XOR Xorichti 2.11 245 P **Pn 11 33 42.0 -1.5**
SLVT Silivri 2.15 63 PN **Pn 11 33 45.3 +1.3**
AKS Akhisar 2.18 130 PN **Pn 11 33 45.5 +1.1**
BLCB Balcova 2.19 150 P **Pn 11 33 44.6 +0.1**
BLCB Balcova 2.19 150 PN **Pn 11 33 45.5 +1.0**
MRKA Markates 2.25 226 P **Pn 11 33 43.8 -1.6**
MRKA Markates 2.25 226 P **Pn 11 33 44.1 -1.3**
KNT Kendrikon 2.27 293 P **Pn 11 33 45.3 -0.3**
KNT Kendrikon 2.27 293 P **Pn 11 33 45.3 -0.3**
KNT S **Sn 11 34 12.2 -1.4**
KNT AML AML 11 34 24.8
comp=N,3648µm,0.8s
KNT AML AML 11 34 31.6
comp=E,3251µm,0.6s
KNT Kendrikon 2.27 293 PN **Pn 11 33 45.9 +0.3**
DURS Dursunbey 2.27 107 *i* P **Pb 11 33 50.3 +1.0**
DURS IAML 11 34 21.0
comp=N,3µm,0.4s
DURS IAML 11 34 22.0
comp=E,4µm,0.5s
JMB Yambol 2.28 17 *i* P **Pg 11 33 51.0 -1.0**
CTYL Yalikoy Yolu 2.32 59 PN **Pb 11 33 48.2 -1.8**
CTKS Kestanelik-??a 2.36 66 PN **Pn 11 33 48.4 +1.6**
DGB zmir 2.43 157 *i* P **Pn 11 33 48.7 +0.8**
DGB IAML 11 34 32.0
comp=N,1µm,0.9s
DGB IAML 11 34 33.0
comp=E,612nm,1.0s
LIT Litokhoron 2.44 266 P **Pn 11 33 46.1 -1.8**
LIT Litokhoron 2.44 266 P **Pn 11 33 46.9 -1.0**
LIT Litokhoron 2.44 266 Pn 11 33 46.9 -1.0
KARY Karystos 2.45 203 P **Pn 11 33 46.7 -1.4**
KARY Karystos 2.45 203 P **Pn 11 33 47.1 -1.0**
ARMT Armutlu 2.46 83 PN **Pn 11 33 49.8 +1.6**
MDNY Mudanya-Bursa 2.47 87 PN **Pn 11 33 50.1 +1.8**
PGB Panagyurishte 2.52 334 P **Pn 11 33 49.7 +0.6**
BGKT Bogazkoy 2.53 68 PN **Pn 11 33 50.7 +1.6**
VAY Valandovo 2.56 295 *i* Pn **Pg 11 33 56.8 -0.6**
VAY Valandovo 2.56 295 *i* Pn **Pg 11 33 56.8 -0.6**
DION Dionisos Attik 2.59 212 P **Pn 11 33 48.8 -1.2**
LKR Lokris 2.63 232 P **Pn 11 33 49.5 -1.1**
LKR Lokris 2.63 232 P **Pn 11 33 49.5 -1.1**
ELND Elena 2.64 3 ⇓P **Pn 11 33 51.5 +0.8**
ELND Elena 2.64 3 **Pn 11 33 51.5 +0.8**
PTL Penteli 2.64 212 P **Pn 11 33 49.6 -1.1**
PTL S **Sn 11 34 23.0 +0.3**
comp=E,892nm,1.4s
ULDT Uludag 2.67 92 *i* P **Pn 11 33 51.1 -0.1**
ULDT IAML 11 34 33.0
comp=E,3µm,0.6s
ULDT IAML 11 34 38.0
comp=N,2µm,0.7s
DEMI Demirci 2.67 117 *i* P **Pn 11 33 51.0 -0.1**
DEMI IAML 11 34 35.0
comp=N,1µm,0.5s
DEMI IAML 11 34 40.0
comp=E,2µm,0.4s
BUY Buyukada 2.69 77 *i* P **Pn 11 33 50.4 -1.0**
BUY IAML 11 34 43.0
comp=N,2µm,0.5s
BUY IAML 11 34 45.0
comp=E,2µm,0.9s
ISK Istanbul-Kandi 2.70 72 PN **Pn 11 33 52.9 +1.4**
KAVV Kandilli-Istan 2.70 72 PN **Pn 11 33 53.0 +1.5**
GEMT Gemlik 2.70 86 PN **Pn 11 33 53.2 +1.7**
IGD Bursa 2.71 89 *i* P **Pn 11 33 52.5 +0.8**
IGD IAML 11 34 37.0
comp=E,1µm,0.8s
IGD IAML 11 34 39.0
comp=N,967nm,0.4s
SMG Samos 2.74 160 P **Pn 11 33 52.0 -0.1**
KLYT Kilyos 2.74 68 PN **Pn 11 33 53.9 +1.8**
ATHU Athens Univers 2.74 213 P **Pn 11 33 50.8 -1.3**
ATH Athens Observa 2.77 214 P **Pn 11 33 51.7 -0.7**
AXAR Agios Charalam 2.78 238 P **Pn 11 33 51.7 -0.9**
VIL2 Platees 2.79 223 P **Pn 11 33 52.0 -0.7**
VILL Villia 2.80 221 P **Pn 11 33 51.9 -1.1**
SIMA Simav-Kutahya 2.83 114 PN **Pn 11 33 55.1 +1.6**
VLY Voula,Athens 2.84 211 P **Pn 11 33 52.4 -1.0**
YLV Yalova 2.85 83 PN **Pn 11 33 55.2 +1.6**
GCAM G?zelcaml? 2.87 154 PN **Pn 11 33 54.3 +0.5**
GCAM G?zelcaml? 2.87 154 *i* P **Pn 11 33 53.9 +0.1**
GCAM IAML 11 34 44.0
comp=E,414nm,1.0s
GCAM IAML 11 34 47.0
comp=N,772nm,1.7s
AGG Agios Georgios 2.87 245 P **Pn 11 33 52.8 -1.0**
AGG Agios Georgios 2.87 245 P **Pn 11 33 53.0 -0.9**
AGG Agios Georgios 2.87 245 Pn 11 33 53.0 -0.9
MANT Manisa 2.88 128 *i* P **Pn 11 33 54.9 +0.7**
MANT IAML 11 34 41.0
comp=E,1µm,0.5s
MANT IAML 11 34 44.0
comp=N,793nm,0.7s
MANT Manisa 2.88 128 Pn 11 33 54.8 +0.7
MANT Sn **Sn 11 34 28.6 -0.3**
THL Klokotos Trika 2.90 257 P **Pn 11 33 53.4 -0.8**
KULA Kula-Manisa 2.93 126 P **Pn 11 33 55.5 +0.8**
VTS Vitosha 2.95 323 ⇑P **Pn 11 33 55.6 +0.5**
VTS Vitosha 2.95 323 P **Pn 11 33 55.8 +0.7**
VTS Vitosha 2.95 323 P **Pn 11 33 55.4 +0.3**
VTS Vitosha 2.95 323 Pn 11 33 55.4 +0.3
PROD Prodromos 2.95 227 P **Pn 11 33 53.9 -1.1**
PROD S **Sn 11 34 28.7 -1.7**
comp=N,960nm,1.6s
KZN Kozani 2.97 271 P **Pn 11 33 55.3 -0.1**
MAKR Makrakomi, Fth 3.01 246 P **Pn 11 33 55.5 -0.3**
LTK Loutraki 3.09 224 P **Pn 11 33 56.1 -0.7**
LOUT Loutraki 3.11 223 P **Pn 11 33 56.2 -0.9**
PLVB Pleven 3.19 346 ⇑P **Pn 11 33 58.7 +0.5**
PLVB Pleven 3.19 346 Pn 11 33 58.7 +0.5
APE Apeiranthos 3.22 182 P **Pn 11 33 58.0 -0.7**
APE S **Sn 11 34 37.3 +0.2**
comp=N,328nm,0.9s
APE Apeiranthos 3.22 182 ⇓P **Pn 11 33 57.8 -0.9**
APE Apeiranthos 3.22 182 *de*P **Pn 11 33 57.6 -1.1**
APE Apeiranthos 3.22 182 Pn 11 33 57.9 -0.9
SERI Serifos 3.26 197 P **Pn 11 33 59.0 -0.3**
SERI Serifos 3.26 197 P **Pn 11 33 58.9 -0.4**
FNA Florina 3.30 280 P **Pn 11 34 00.1 +0.3**
FNA Florina 3.30 280 P **Pn 11 33 59.9 +0.1**
FNA Florina 3.30 280 Pn 11 33 59.9 +0.1
KPRO Kipourio 3.31 266 P **Pn 11 34 00.1 +0.1**
KPRO Kipourio 3.31 266 P **Pn 11 34 00.0 +0.1**
KALE Kalithea 3.33 236 P **Pn 11 33 59.1 -1.0**
RAZG Razgrad 3.33 11 ⇓P **Pn 11 34 00.3 +0.1**
RAZG Razgrad 3.33 11 **Pn 11 34 00.2 +0.1**
ANX Ano Chora 3.36 241 P **Pn 11 34 00.1 -0.5**
DID Didima 3.37 215 P **Pn 11 33 59.7 -1.0**
ZIMR 3.37 356 ⇓P **Pn 11 34 01.2 +0.6**
ZIMR 3.37 356 P **Pn 11 34 01.2 +0.6**
ZIMR 3.37 356 Pn 11 34 01.2 +0.6
MPEP Malo Peshtene 3.38 336 *i* P **Pn 11 34 01.8 +0.9**
AMGA Amorgos Island 3.46 177 P **Pn 11 34 01.3 -0.7**
AMGA S **Sn 11 34 42.7 -0.3**
comp=N,435nm,1.2s
BODT Bodrum 3.48 158 P **Pn 11 34 02.4 +0.2**
KRND KRANIDI 3.51 215 P **Pn 11 34 02.5 -0.1**
BDRM Kayabasi 3.51 156 *i* P **Pn 11 34 02.5 -0.3**
BDRM IAML 11 35 11.0
comp=E,207nm,0.9s
BDRM IAML 11 35 21.0
comp=N,205nm,0.8s
KLV Kalavryta, Ach 3.53 232 P **Pn 11 34 02.3 -0.7**
KHAL Karahalli 3.54 122 *i* P **Pn 11 34 04.2 +1.1**
KHAL IAML 11 35 10.0
comp=E,252nm,0.7s
KHAL IAML 11 35 10.0
comp=N,325nm,0.7s
SKO Skopje 3.60 299 *e*Pn **Pg 11 34 15.7 -1.5**
SKO Skopje 3.60 299 *e*Pn **Pg 11 34 15.7 -1.5**
BORA Eskisehir 3.70 95 *i* P **Pn 11 34 05.1 -0.3**
BORA IAML 11 35 08.0
comp=N,360nm,0.5s
BORA IAML 11 35 11.0
comp=E,220nm,0.3s
MHLO Agia Marina, M 3.73 196 P **Pn 11 34 05.0 -0.7**
YER Yerkesik 3.76 146 P **Pn 11 34 07.0 +0.8**
OHR Ohrid 3.78 284 *i* Pn **Pg 11 34 22.1 +1.3**
OHR Ohrid 3.78 284 *i* Pn **Pg 11 34 22.1 +1.3**
TAVA DENIZLI_Tavas 3.80 137 *i* P **Pn 11 34 07.4 +0.7**
TAVA IAML 11 35 10.0
comp=E,192nm,0.7s
TAVA IAML 11 35 12.0
comp=N,247nm,0.7s
VLAD Vladila 3.82 346 ⇓P **Pn 11 34 07.1 +0.2**
VLAD Vladila 3.82 346 **Pn 11 34 07.1 +0.2**
COPA Copaceanca 3.85 355 ⇓P **Pn 11 34 07.5 +0.1**
COPA Copaceanca 3.85 355 **Pn 11 34 07.5 +0.1**
DRO Drossia 3.86 234 P **Pn 11 34 07.6 +0.1**
DAT Datca 3.87 156 P **Pn 11 34 07.5 -0.1**
DAT Datca 3.87 156 *i* P **Pn 11 34 06.9 -0.7**
DAT IAML 11 35 24.0
comp=E,88nm,1.1s
DAT IAML 11 35 26.0
comp=N,70nm,1.0s
THR5 Thira Island, 3.88 184 P **Pn 11 34 06.8 -0.9**
VLX Vlachokerasia 3.88 222 P **Pn 11 34 07.4 -0.5**
THR3 Thira Island, 3.88 183 P **Pn 11 34 06.9 -0.9**
SANT Santorini 3.92 182 Pn **Pn 11 34 07.6 -0.7**
ANAF Anafi Island 3.93 179 P **Pn 11 34 08.2 -0.3**
BUC1 Bucharest 4.06 4 ⇓P **Pn 11 34 11.2 +1.0**
BUC1 Bucharest 4.06 4 P **Pn 11 34 11.2 +1.0**
BUC1 Bucharest 4.06 4 Pn 11 34 11.2 +1.0
BAIL Bailesti 4.10 336 ⇓P **Pg 11 34 28.7 +1.8**
TURN Turunc 4.12 145 *i* P **Pn 11 34 10.4 -0.6**
TURN IAML 11 35 25.0
comp=N,319nm,1.5s
TURN IAML 11 35 26.0
comp=E,266nm,1.6s
ICOR Ion Corvin 4.14 22 ⇓P **Pn 11 34 11.1 -0.1**
ICOR Ion Corvin 4.14 22 **Pn 11 34 11.1 -0.1**
MANR Mangalia 4.14 31 ⇓P **Pn 11 34 11.7 +0.4**
MANR Mangalia 4.14 31 **Pn 11 34 11.7 +0.4**
VLI Veliai 4.16 212 P **Pn 11 34 10.7 -0.9**
MDUB Mudurnu 4.23 86 **Pn 11 34 13.9 +1.2**
HUMR Humele 4.26 353 ⇓P **Pn 11 34 13.3 +0.3**
HUMR Humele 4.26 353 **Pn 11 34 13.3 +0.3**
LEHL Lehliu 4.26 11 ⇑P **Pn 11 34 13.1 +0.1**
LEHL Lehliu 4.26 11 **Pn 11 34 13.1 +0.1**
ITM Ithomi 4.26 224 P **Pn 11 34 13.8 +0.8**
ITM Ithomi 4.26 224 **Pn 11 34 13.5 +0.5**
BRDR BURDUR-Merkez 4.30 126 *i* P **Pn 11 34 14.7 +1.1**
BRDR IAML 11 35 38.0
comp=E,275nm,0.9s
BRDR IAML 11 35 38.0
comp=N,175nm,0.8s
GOLH Golhisar 4.32 134 *i* P **Pn 11 34 15.6 +1.8**
GOLH IAML 11 35 44.0
comp=N,196nm,1.2s
EFOR EFORIE 4.38 29 ⇓P Pg 11 34 38.9 +6.8
BOLV Bolvadin 4.38 109 *i* P **Pn 11 34 16.5 +1.7**
BOLV IAML 11 35 40.0
comp=E,343nm,0.6s
BOLV IAML 11 35 42.0
comp=N,278nm,0.7s
MFTR Murfatlar 4.39 27 ⇑P **Pn 11 34 15.0 +0.3**
MFTR Murfatlar 4.39 27 **Pn 11 34 15.0 +0.3**
SULR 4.40 6 ⇑P **Pn 11 34 15.2 +0.3**
SULR 4.40 6 **Pn 11 34 15.2 +0.3**
AMRR Amara 4.49 15 ⇑P **Pn 11 34 15.2 -0.9**
AMRR Amara 4.49 15 P **Pn 11 34 15.2 -0.9**
AMRR Amara 4.49 15 Pn 11 34 15.2 -0.9
ISP Isparta 4.52 122 P **Pn 11 34 17.2 +0.6**
ISP Isparta 4.52 122 **Pn 11 34 17.2 +0.6**
TIR Tirane 4.52 285 ⇑P **Pn 11 34 17.8 +1.3**
TIR Tirane 4.52 285 P **Pn 11 34 16.9 +0.4**
TIR Tirane 4.52 285 **Pn 11 34 16.9 +0.4**
FETY Fethiye 4.54 143 P **Pn 11 34 18.5 +1.7**
TLBR Topalu 4.60 22 ⇑P **Pn 11 34 18.2 +0.6**
TIRR Tirgusor 4.63 25 ⇓P **Pn 11 34 17.1 -1.0**
TIRR ⇓P **Pn 11 34 17.1 -1.0**
TIRR Tirgusor 4.63 25 P **Pn 11 34 17.1 -1.0**
TIRR Tirgusor 4.63 25 **Pn 11 34 18.1 0.0**
TIRR Tirgusor 4.63 25 **Pn 11 34 17.1 -1.0**
HARR Harsova 4.70 20 ⇓P **Pn 11 34 18.6 -0.4**
HARR Harsova 4.70 20 P **Pn 11 34 18.6 -0.4**
HARR Harsova 4.70 20 Pn 11 34 18.6 -0.4
PGOR Pogoanele 4.71 12 ⇓P **Pn 11 34 19.3 +0.1**
PGOR Pogoanele 4.71 12 **Pn 11 34 19.3 +0.1**
SRE Strehaia 4.73 338 ⇑P **Pn 11 34 20.3 +1.0**
SRE Strehaia 4.73 338 P **Pn 11 34 20.4 +1.0**
SRE Strehaia 4.73 338 **Pn 11 34 20.4 +1.0**
KIBS BOLU 4.73 86 *i* P **Pn 11 34 20.6 +1.0**
KIBS IAML 11 36 02.0
comp=N,321nm,0.9s
KIBS IAML 11 36 10.0
comp=E,458nm,1.0s
ELL Elmali 4.86 135 P **Pn 11 34 22.9 +1.6**
ELL Elmali 4.86 135 **Pn 11 34 22.9 +1.6**
PVY Plav 4.86 300 ⇑*i*Pn **Pn 11 34 22.1 +0.8**
PVY *i* Sn **Sn 11 35 23.3 +5.7**
ISR Istrita 4.87 7 ⇑P **Pn 11 34 20.9 -0.4**
ISR Istrita 4.87 7 P **Pn 11 34 20.9 -0.4**
ISR Istrita 4.87 7 Pn 11 34 20.9 -0.4
KARP Karpathos 4.89 165 **Pn 11 34 21.6 0.0**
KORT Korkueli 4.93 130 *i* P **Pn 11 34 25.5 +3.3**
KORT IAML 11 36 21.0
comp=N,74nm,1.2s
KORT IAML 11 36 29.0
comp=E,113nm,1.5s
MTUR Matau 4.95 355 ⇓P **Pn 11 34 23.0 +0.5**
MTUR Matau 4.95 355 P **Pn 11 34 23.0 +0.5**
MTUR Matau 4.95 355 **Pn 11 34 23.0 +0.5**
TOPG Topolog 5.00 23 ⇑P **Pn 11 34 23.3 +0.2**
IVA Berane 5.03 303 ⇓*i*Pn **Pn 11 34 24.6 +0.9**
IVA *i* Sn **Sn 11 35 23.1 +1.3**
IDI Anoyia 5.04 187 Pn **Pn 11 34 22.9 -0.8**
comp=E,0.9nm,0.3s,baz=356,slow=10,SNR=15
IDI Anoyia 5.04 187 ⇑P **Pn 11 34 23.3 -0.4**
IDI Anoyia 5.04 187 **Pn 11 34 23.3 -0.4**
JURR Jurilovca 5.06 27 ⇑P **Pn 11 34 23.2 -0.8**
ULC Ulcinj 5.12 291 ⇑*i*Pn **Pn 11 34 25.9 +1.1**
ULC *i* Sn **Sn 11 35 25.6 +1.7**

ARR	**Arges**	**5.13**	**352**	⇑P		**Pn**	**11 34 25.0**	**+0.1**
ARR	**Arges**	**5.13**	**352**			**Pn**	**11 34 25.0**	**+0.1**
HERR	**Herculane**	**5.17**	**333**	⇑P		**Pn**	**11 34 25.4**	**-0.1**
HERR	**Herculane**	**5.17**	**333**			**Pn**	**11 34 25.4**	**-0.1**
GRER		**5.17**	**10**	⇑P		**Pn**	**11 34 26.8**	**+1.3**
MLR	**Muntele Rosu**	**5.20**	**2**	Pn		**Pn**	**11 34 27.0**	**+1.0**
	comp=E,4.7nm,0.3s,baz=183,slow=5.5,SNR=27							
MLR				Lg	Lg		11 35 53.0	
	comp=E,7.9nm,0.3s,baz=116,slow=22,SNR=2.0							
MLR	**Muntele Rosu**	**5.20**	**2**	⇓P		**Pn**	**11 34 26.9**	**+1.0**
MLR	**Muntele Rosu**	**5.20**	**2**	P		**Pn**	**11 34 26.8**	**+0.8**
MLR	**Muntele Rosu**	**5.20**	**2**			**Pn**	**11 34 26.8**	**+0.8**
CFR	**Carcaliu**	**5.21**	**20**	⇑P		**Pn**	**11 34 25.7**	**-0.3**
CFR	**Carcaliu**	**5.21**	**20**	P		**Pn**	**11 34 25.7**	**-0.3**
CFR	**Carcaliu**	**5.21**	**20**			**Pn**	**11 34 25.7**	**-0.3**
DRME	**Dracevica, Mon**	**5.24**	**293**	⇑*i*Pn		**Pn**	**11 34 27.1**	**+0.7**
DRME				*i* Sn		**Sn**	**11 35 27.8**	**+1.2**
KOME	**Kolasin**	**5.27**	**301**	⇓*i*Pn		**Pn**	**11 34 27.5**	**+0.6**
KOME				*i* Sn		**Sn**	**11 35 28.4**	**+0.8**
PDG	**Podgorica**	**5.27**	**296**	⇑P		**Pn**	**11 34 27.8**	**+1.0**
PDG	**Podgorica**	**5.27**	**296**			**Pn**	**11 34 26.5**	**-0.4**
TTG	**Podgorica**	**5.27**	**296**	⇓*i*Pn		**Pn**	**11 34 27.5**	**+0.7**
TTG				*i* Sn		**Sn**	**11 35 28.5**	**+1.0**
BISRR	**Bisoca**	**5.31**	**8**	⇓P		**Pn**	**11 34 28.8**	**+1.4**
LOT	**Lotru**	**5.33**	**346**	⇑P		**Pn**	**11 34 27.7**	**-0.2**
LOT	**Lotru**	**5.33**	**346**			**Pn**	**11 34 27.7**	**-0.2**
MDVR	**Moldovita**	**5.35**	**328**	⇑P		**Pn**	**11 34 27.8**	**-0.2**
MDVR	**Moldovita**	**5.35**	**328**			**Pn**	**11 34 27.8**	**-0.2**
TLCR		**5.41**	**24**	⇑P		**Pn**	**11 34 29.3**	**+0.5**
TLCR		**5.41**	**24**	P		**Pn**	**11 34 29.3**	**+0.5**
TLCR		**5.41**	**24**			**Pn**	**11 34 29.3**	**+0.5**
BUM	**Brajici-Budva**	**5.48**	**294**	⇓*i*Pn		**Pn**	**11 34 30.5**	**+0.8**
BUM				*i* Sn		**Sn**	**11 35 34.1**	**+1.4**
BR231	**Keskin MP Arra**	**5.48**	**92**			**Pn**	**11 34 31.4**	**+1.6**
ANTO	**Ankara**	**5.49**	**92**	⇑P		**Pn**	**11 34 31.9**	**+2.0**
ANTO	**Ankara**	**5.49**	**92**	P		**Pn**	**11 34 32.2**	**+2.3**
ANTO	**Ankara**	**5.49**	**92**			**Pn**	**11 34 32.2**	**+2.3**
TUDR		**5.50**	**15**	⇑P		**Pn**	**11 34 30.1**	**+0.2**
TUDR		**5.50**	**15**			**Pn**	**11 34 30.1**	**+0.2**
SCTE	**Santa Cesarea**	**5.51**	**270**	Pn		**Pn**	**11 34 29.9**	**-0.3**
GZR	**Gura Zlata**	**5.52**	**338**	⇓P		**Pn**	**11 34 30.3**	**0.0**
GZR	**Gura Zlata**	**5.52**	**338**	P		**Pn**	**11 34 30.3**	**0.0**
GZR	**Gura Zlata**	**5.52**	**338**			**Pn**	**11 34 30.3**	**0.0**
CEME	**Cevo**	**5.54**	**296**	⇓*i*Pn		**Pn**	**11 34 31.5**	**+0.8**
CEME				*i* Sn		**Sn**	**11 35 35.8**	**+1.4**
PETR	**Petresti**	**5.55**	**11**	⇓P		**Pn**	**11 34 30.7**	**+0.1**
PETR	**Petresti**	**5.55**	**11**			**Pn**	**11 34 30.7**	**+0.1**
ODBI	**Odobesti**	**5.56**	**10**	⇓P		**Pn**	**11 34 30.1**	**-0.7**
ODBI	**Odobesti**	**5.56**	**10**			**Pn**	**11 34 30.1**	**-0.7**
PLE	**Pljevlja**	**5.58**	**305**	⇓*i*Pn		**Pn**	**11 34 32.1**	**+0.9**
PLE				*i* Sn		**Sn**	**11 35 36.2**	**+0.9**
PLOR	**Plostina**	**5.60**	**7**	⇑P		**Pn**	**11 34 32.0**	**+0.6**
PLOR	**Plostina**	**5.60**	**7**	P		**Pn**	**11 34 32.0**	**+0.6**
PLOR	**Plostina**	**5.60**	**7**			**Pn**	**11 34 32.0**	**+0.6**
NKME	**Niksic**	**5.61**	**298**	⇑*i*Pn		**Pn**	**11 34 32.3**	**+0.8**
NKME				*i* Sn		**Sn**	**11 35 36.7**	**+0.8**
VRI	**Vrincioaia**	**5.62**	**8**	⇑P		**Pn**	**11 34 32.8**	**+1.1**
VRI	**Vrincioaia**	**5.62**	**8**	P		**Pn**	**11 34 32.8**	**+1.1**
VRI	**Vrincioaia**	**5.62**	**8**			**Pn**	**11 34 32.8**	**+1.1**
DIVS	**Divibare**	**5.67**	**314**			**Pn**	**11 34 31.8**	**-0.7**
DOPR	**Dopca**	**5.67**	**358**	⇓P		**Pn**	**11 34 33.2**	**+0.8**
DOPR	**Dopca**	**5.67**	**358**			**Pn**	**11 34 33.2**	**+0.8**
HCV	**Herceg Novi**	**5.80**	**294**	⇓*i*Pn		**Pn**	**11 34 36.5**	**+2.3**
VARL	**Varlezi**	**5.83**	**15**	⇓P		**Pn**	**11 34 35.3**	**+0.8**
GHRR		**5.90**	**12**	⇑P		**Pn**	**11 34 35.5**	**-0.1**
GHRR		**5.90**	**12**			**Pn**	**11 34 35.5**	**-0.1**
MDB	**Medias**	**5.92**	**351**	⇓P		**Pn**	**11 34 36.4**	**+0.7**
MDB	**Medias**	**5.92**	**351**	P		**Pn**	**11 34 36.4**	**+0.7**
MDB	**Medias**	**5.92**	**351**			**Pn**	**11 34 36.4**	**+0.7**
BRY	**Bratogost**	**5.94**	**298**	⇓*i*Pn		**Pn**	**11 34 36.5**	**+0.3**
BRY				*i* Sn		**Sn**	**11 35 44.0**	**-0.2**
DEV	**Deva**	**5.94**	**341**	⇓P		**Pn**	**11 34 37.2**	**+1.2**
DEV	**Deva**	**5.94**	**341**	P		**Pn**	**11 34 37.2**	**+1.2**
DEV	**Deva**	**5.94**	**341**			**Pn**	**11 34 37.2**	**+1.2**
BZS	**Buzias**	**6.09**	**332**	⇑P		**Pn**	**11 34 38.0**	**-0.1**
BZS	**Buzias**	**6.09**	**332**	P		**Pn**	**11 34 38.0**	**-0.1**
BZS	**Buzias**	**6.09**	**332**			**Pn**	**11 34 38.0**	**-0.1**
BR131	**Keskin Array S**	**6.15**	**93**	P		**Pn**	**11 34 39.5**	**+0.4**
BR131	**Keskin Array S**	**6.15**	**93**			**Pn**	**11 34 39.5**	**+0.4**
BRTR	**Keskin Array B**	**6.15**	**93**	Pn		**Pn**	**11 34 39.7**	**+0.6**
	comp=E,4.0nm,0.3s,baz=259,slow=10,SNR=42							
ILGA	**Ilgaz**	**6.17**	**80**			**Pn**	**11 34 39.8**	**+0.3**
TESR	**Tescani**	**6.26**	**6**	⇓P		**Pn**	**11 34 41.3**	**+0.9**
TESR	**Tescani**	**6.26**	**6**			**Pn**	**11 34 41.3**	**+0.9**
LEOM	**Leova**	**6.46**	**16**	⇑P		**Pn**	**11 34 43.9**	**+0.8**
LEOM	**Leova**	**6.46**	**16**	P		**Pn**	**11 34 43.9**	**+0.8**
LEOM	**Leova**	**6.46**	**16**			**Pn**	**11 34 43.9**	**+0.8**
BZK	**Bozkurt**	**6.52**	**72**	⇓P		**Pn**	**11 34 41.8**	**-2.1**
BZK	**Bozkurt**	**6.52**	**72**			**Pn**	**11 34 41.9**	**-2.1**
VASR	**Vaslui**	**6.53**	**13**	⇑P		**Pn**	**11 34 44.3**	**+0.2**
CJR	**Cluj-Napoca**	**6.59**	**348**	⇑P		**Pn**	**11 34 46.1**	**+1.1**
CJR	**Cluj-Napoca**	**6.59**	**348**	P		**Pn**	**11 34 46.1**	**+1.1**
CJR	**Cluj-Napoca**	**6.59**	**348**			**Pn**	**11 34 46.1**	**+1.1**
SIRR	**Siria**	**6.64**	**335**	⇑P		**Pn**	**11 34 45.5**	**-0.2**
SIRR	**Siria**	**6.64**	**335**			**Pn**	**11 34 45.5**	**-0.2**
BIZ	**Bicaz**	**6.65**	**3**	⇑P		**Pn**	**11 34 47.0**	**+1.2**
BIZ	**Bicaz**	**6.65**	**3**			**Pn**	**11 34 47.0**	**+1.2**
DRGR		**6.84**	**343**	⇑P		**Pn**	**11 34 49.0**	**+0.6**
DRGR		**6.84**	**343**	P		**Pn**	**11 34 49.0**	**+0.6**
DRGR		**6.84**	**343**			**Pn**	**11 34 49.0**	**+0.6**
MATE	**Matera**	**6.84**	**276**	⇓P		**Pn**	**11 34 48.9**	**+0.6**
MATE	**Matera**	**6.84**	**276**			**Pn**	**11 34 48.9**	**+0.6**
ARCR	**ARCALIA**	**6.85**	**353**	⇑P		**Pn**	**11 34 49.4**	**+0.8**
ARCR	**ARCALIA**	**6.85**	**353**			**Pn**	**11 34 49.4**	**+0.8**
TIP	**Timpagrande**	**6.95**	**264**	⇓P		**Pn**	**11 34 50.5**	**+0.5**
TIP	**Timpagrande**	**6.95**	**264**			**Pn**	**11 34 50.2**	**+0.3**
MILM	**Milestii Mici**	**7.00**	**18**	⇓P		**Pn**	**11 34 50.9**	**+0.3**
MILM	**Milestii Mici**	**7.00**	**18**			**Pn**	**11 34 50.9**	**+0.3**
IAS	**Iasi**	**7.03**	**11**	⇓P		**Pn**	**11 34 51.7**	**+0.7**
IAS	**Iasi**	**7.03**	**11**	P		**Pn**	**11 34 51.7**	**+0.7**
IAS	**Iasi**	**7.03**	**11**			**Pn**	**11 34 51.7**	**+0.7**
PRAR	**RASCA**	**7.08**	**3**	⇑P		**Pn**	**11 34 51.2**	**-0.4**
PRAR	**RASCA**	**7.08**	**3**			**Pn**	**11 34 51.2**	**-0.4**
KIS	**Kishinev**	**7.08**	**18**	*e*P		**Pn**	**11 34 52.0**	**+0.3**
KIS				*e*S		**Sn**	**11 36 11.0**	**-1.0**
KIS	**Kishinev**	**7.08**	**18**	*e*P		**Pn**	**11 34 52.0**	**+0.3**
KIS				*e*S		**Sn**	**11 36 11.0**	**-1.0**
SEV	**Sevastopol'**	**7.29**	**52**	*e*P		**Pn**	**11 34 53.1**	**-1.4**
SEV				*e*S		**Sn**	**11 36 08.7**	**-8.4**
BURAR	**Bucovina Array**	**7.33**	**358**	⇑P		**Pn**	**11 34 56.4**	**+1.3**
BURAR	**Bucovina Array**	**7.33**	**358**			**Pn**	**11 34 56.4**	**+1.3**
BUR08	**Bucovina Ar. S**	**7.36**	**358**			**Pn**	**11 34 55.8**	**+0.2**
DIKM	**Dikmen**	**7.39**	**76**	⇓P		**Pn**	**11 34 54.2**	**-1.7**
DIKM	**Dikmen**	**7.39**	**76**			**Pn**	**11 34 54.2**	**-1.7**
BMR	**Baia Mare**	**7.54**	**349**	⇑P		**Pn**	**11 34 58.8**	**+0.8**
BMR	**Baia Mare**	**7.54**	**349**	P		**Pn**	**11 34 58.8**	**+0.8**
BMR	**Baia Mare**	**7.54**	**349**			**Pn**	**11 34 58.8**	**+0.8**
YAL	**Yalta**	**7.55**	**54**	*e*P		**Pn**	**11 34 55.9**	**-2.3**
SGRT	**San Giovanni R**	**7.64**	**284**	Pn		**Pn**	**11 34 58.2**	**-1.2**
SIM	**Simferopol'**	**7.78**	**51**	*e*P		**Pn**	**11 35 01.9**	**+0.7**
SIM				*e*S		**Sn**	**11 36 23.6**	**-5.6**
ALU	**Alushta**	**7.81**	**53**	*e*P		**Pn**	**11 35 01.3**	**-0.3**
ALU				*e*S		**Sn**	**11 36 22.8**	**-7.1**
CEL	**Celeste**	**7.84**	**258**	Pn		**Pn**	**11 35 01.9**	**-0.3**
SORM	**Soroca**	**8.07**	**13**	⇓P		**Pn**	**11 35 04.5**	**-0.8**
SORM	**Soroca**	**8.07**	**13**	P		**Pn**	**11 35 04.5**	**-0.8**
SORM	**Soroca**	**8.07**	**13**			**Pn**	**11 35 04.5**	**-0.8**
CSS	**Mathiatis**	**8.08**	**129**	Pn		**Pn**	**11 35 06.1**	**+0.6**
TRPA	**Tarpa**	**8.15**	**345**	⇓P		**Pn**	**11 35 05.9**	**-0.4**
TRPA	**Tarpa**	**8.15**	**345**			**Pn**	**11 35 05.9**	**-0.4**
SUDU	**Sudak**	**8.28**	**53**	*e*P		**Pn**	**11 35 08.3**	**+0.2**
SUDU				*e*S		**Sn**	**11 36 35.3**	**-6.2**
PAOL	**Paolisi**	**8.46**	**279**			**Pn**	**11 35 10.5**	**-0.2**
PSZ	**Piszkesteto**	**8.67**	**333**	⇓P		**Pn**	**11 35 13.1**	**-0.5**
PSZ	**Piszkesteto**	**8.67**	**333**	P		**Pn**	**11 35 12.6**	**-1.0**
PSZ	**Piszkesteto**	**8.67**	**333**			**Pn**	**11 35 12.6**	**-1.0**
PSZ	**Piszkesteto**	**8.67**	**333**			**Pn**	**11 35 13.1**	**-0.5**
UZH	**Uzhgorod**	**8.68**	**345**	*d*/*i*P		**Pn**	**11 35 17.4**	**+3.9**
UZH				*e*S		**Sn**	**11 36 56.4**	**+5.2**
INTR	**Introdacqua**	**9.03**	**285**	Pn		**Pn**	**11 35 19.2**	**+0.7**
AQU	**L'Aquila**	**9.45**	**287**	P		**Pn**	**11 35 25.5**	**+1.3**
AQU	**L'Aquila**	**9.45**	**287**	Pn		**Pn**	**11 35 25.5**	**+1.3**
VYHS	**Vyhne**	**9.54**	**332**	*e*P		**Pn**	**11 35 24.8**	**-0.6**
VYHS	**Vyhne**	**9.54**	**332**	*e*PN		**Pn**	**11 35 24.8**	**-0.6**
GAZ	**Gaziantep**	**9.55**	**105**	Pn		**Pn**	**11 35 27.3**	**+1.7**
LVV	**L'vov**	**9.59**	**354**	*e*P		**Pn**	**11 35 28.0**	**+1.9**
LVV				*e*S		**Sn**	**11 37 19.0**	**+5.2**
LVV					MLR	MLR		
	comp=Z,1μm,9.0s							
NRCA	**Norcia**	**9.74**	**289**			**Pn**	**11 35 27.6**	**-0.6**
ANN	**Anapa**	**9.78**	**59**	*e*P		**Pn**	**11 35 27.8**	**-0.9**
ANN				*e*S		**Sn**	**11 37 19.0**	**+0.6**
ANN				pmax	pmax			
	comp=Z,18nm,0.8s							
ANN				MLR	MLR			
	comp=N,790nm,15.0s							
ANN				MLR	MLR			
	comp=Z,935nm,16.0s							
ANN				MLR	MLR			
	comp=E,524nm,14.0s							
CORL	**Corleone**	**9.90**	**260**	Pn		**Pn**	**11 35 29.5**	**-0.9**
SOKA	**Soboth**	**10.01**	**313**	Pn		**Pn**	**11 35 35.4**	**+3.4**
	comp=E,0.8nm,0.4s							
MODS	**Modra-Piesok**	**10.06**	**326**	*e*P		**Pn**	**11 35 33.2**	**+0.7**
MODS	**Modra-Piesok**	**10.06**	**326**	*e*PN		**Pn**	**11 35 33.1**	**+0.6**
ARSA	**Arzberg**	**10.10**	**317**	*e*Pn		**Pn**	**11 35 34.2**	**+1.1**
	comp=E,2.2nm,0.3s							
OBKA	**Obir**	**10.19**	**311**	*i* Pn		**Pn**	**11 35 34.6**	**+0.2**
	comp=E,1.5nm,0.3s							
MURB	**Monte Urbino**	**10.25**	**291**	Pn		**Pn**	**11 35 35.3**	**+0.1**
JAVC	**Velka Javorina**	**10.28**	**329**	*e*PN		Pn	11 35 41.2	+5.6
JAVC				*e*SN		**Sn**	**11 37 33.3**	**+2.6**
CONA	**Conrad Observa**	**10.38**	**321**	*e*Pn		**Pn**	**11 35 37.8**	**+0.8**
	comp=E,1.9nm,0.5s							
MMAI	**Mount Meron Ar**	**10.67**	**130**	Pn		**Pn**	**11 35 40.0**	**-1.0**
	comp=E,1.2nm,0.3s,baz=317,slow=12,SNR=4.1							
AKASG	**Malin Array Be**	**10.70**	**12**	Pn		**Pn**	**11 35 39.7**	**-1.6**
	comp=E,1.7nm,0.3s,baz=197,slow=14,SNR=5.9							
AKASG				Sn		**Sn**	**11 37 34.4**	**-6.6**
	comp=E,2.5nm,0.3s,baz=200,slow=22,SNR=2.6							
AKBB	**Malin Array Si**	**10.70**	**12**	P		**Pn**	**11 35 40.3**	**-1.0**
AKBB	**Malin Array Si**	**10.70**	**12**			**Pn**	**11 35 40.3**	**-1.0**
OJC	**Ojcow**	**10.75**	**339**	P		**Pn**	**11 35 41.6**	**-0.3**
OJC	**Ojcow**	**10.75**	**339**	Pn		**Pn**	**11 35 41.6**	**-0.3**
KRUC	**Moravsky**	**10.96**	**326**	*e*SN		Sn	11 38 02.0	+15
MORC	**Moravsky Berou**	**11.08**	**332**	*e*PN		**Pn**	**11 35 46.1**	**-0.4**
MORC	**Moravsky Berou**	**11.08**	**332**	*e*SN		**Sn**	**11 37 58.8**	**+8.6**
MORC	**Moravsky Berou**	**11.08**	**332**	P		**Pn**	**11 35 46.0**	**-0.4**
MORC	**Moravsky Berou**	**11.08**	**332**			**Pn**	**11 35 46.0**	**-0.5**
CTI	**Castel Tesino**	**11.73**	**304**	P		**Pn**	**11 35 55.2**	**-0.2**
CTI	**Castel Tesino**	**11.73**	**304**			**Pn**	**11 35 55.2**	**-0.2**
GERES	**GERESS Array B**	**12.06**	**319**	Pn		**Pn**	**11 36 01.0**	**+1.0**
	comp=E,0.1nm,0.3s,baz=126,slow=14,SNR=5.3							
GERES	**GERESS Array B**	**12.06**	**319**	P		**Pn**	**11 36 01.0**	**+1.0**
PRMA	**PARMA**	**12.17**	**297**	Pn		**Pn**	**11 36 01.1**	**-0.3**
WTTA	**Wattenberg**	**12.29**	**309**	*e*Pn		**Pn**	**11 36 06.0**	**+2.9**
	comp=E,4.0nm,0.5s							
SALO	**Salr**	**12.29**	**301**	Pn		**Pn**	**11 36 02.5**	**-0.6**
KHC	**Kasperske Hory**	**12.31**	**320**	*e*P		**Pn**	**11 36 05.0**	**+1.7**
KHC	**Kasperske Hory**	**12.31**	**320**	*e*P		**Pn**	**11 36 05.0**	**+1.7**
KHC				*ex*		x	11 36 18.5	
FUORN	**Ofenpass-Fuorn**	**12.84**	**305**	Pn		**Pn**	**11 36 10.7**	**-0.1**
NEY	**Neytrino**	**13.07**	**71**	⇓*e*P		**Pn**	**11 36 13.9**	**0.0**
DAVOX	**Davos/Dischmat**	**13.15**	**305**	Pn		**Pn**	**11 36 15.6**	**+0.7**
	comp=E,0.2nm,0.3s,baz=154,slow=16,SNR=9.1							
SUW	**Suwalki**	**13.83**	**354**	P		**Pn**	**11 36 24.1**	**+0.2**
SUW	**Suwalki**	**13.83**	**354**	Pn		**Pn**	**11 36 24.1**	**+0.2**
CLL	**Collm**	**14.09**	**326**	*e*(P)		**P**	**11 36 33.0**	**-2.3**
CLL				*i*			11 36 41.5	
CLL				LmV			12 40 00.0	
	comp=Z,2μm,20.3s							
CLL	**Collm**	**14.09**	**326**	*e*P		**P**	**11 36 33.0**	**-2.3**
VSR	**Storozhevoye**	**14.40**	**36**	⇑*e*P		**Pn**	**11 36 29.6**	**-2.2**
VSR				pmax	pmax			
	comp=Z,10.0nm,0.6s							
SENIN	**Lac Senin/Sane**	**14.66**	**300**			**Pn**	**11 36 35.6**	**-0.1**
LPSR	**Galich'ya Gora**	**15.30**	**32**	*e*P		**Pn**	**11 36 40.6**	**-3.3**
LPSR				pmax	pmax			
	comp=Z,10.0nm,0.9s							
VRH	**Novokhopyorsk**	**15.60**	**40**	*e*P		**Pn**	**11 36 45.4**	**-2.5**
VRH				pmax	pmax			
	comp=Z,10.0nm,0.8s							
OBN	**Obninsk**	**16.51**	**22**	⇓*e*P		**Pn**	**11 37 00.3**	**+0.8**
OBN				pmax	pmax			
	comp=Z,14nm,1.0s							
OBN				MLR	MLR			
	comp=Z,1μm,21.0s							
MOS	**Moscow**	**17.36**	**23**	*e*P		**P**	**11 37 14.7**	**+3.2**
VSU	**Vasula**	**18.20**	**2**	⇓*e*P		**Pn**	**11 37 20.0**	**-0.5**
VSU				pmax	pmax			
	comp=Z,62nm,1.0s							
FINES	**FINESS Array B**	**21.18**	**1**	P		**P**	**11 37 54.8**	**+1.6**
	comp=Z,3.6nm,0.7s,baz=179,slow=8.2,SNR=18							
FIA1	**FINESS Array S**	**21.18**	**1**	P		**P**	**11 37 54.1**	**+0.9**
KLMR	**Klimovskoe**	**22.29**	**18**	*e*P		**P**	**11 38 03.9**	**-1.2**
KLMR				pmax	pmax			
	comp=Z,26nm,1.5s							
KLMR	**Klimovskoe**	**22.29**	**18**	*e*P		**P**	**11 38 04.0**	**-1.2**
KLMR				AMP			11 38 19.1	
	comp=Z,26nm,1.5s							
NAO01	**NORSAR Array S**	**22.51**	**341**	P		**P**	**11 38 07.7**	**+0.2**
NB2	**NORSAR Subarra**	**22.60**	**342**	P		**P**	**11 38 08.0**	**-0.5**
	comp=Z,20nm,1.4s,baz=150,slow=11							
NOA	**NORSAR Array B**	**22.60**	**342**	P		**P**	**11 38 09.2**	**+0.7**
	comp=Z,2.5nm,0.7s,baz=146,slow=9.6,SNR=8.8							
ESDC	**Sonseca Array**	**22.66**	**278**	P		**P**	**11 38 11.1**	**+1.7**
	comp=Z,1.6nm,0.7s,baz=72,slow=10,SNR=12							
PAB	**San Pablo**	**22.98**	**278**	P		**P**	**11 38 13.4**	**+0.6**
PAB				pmax	pmax			
	comp=Z,12nm,1.2s							
PAB	**San Pablo**	**22.98**	**278**	P		**P**	**11 38 13.4**	**+0.6**
PAB				IAmb	IAmb		11 38 20.6	
	comp=Z,12nm,1.1s							
RAYN	**Ar Rayn**	**23.65**	**129**	P		**P**	**11 38 18.7**	**-0.8**
RAYN				pmax	pmax			
	comp=Z,5.0nm,1.1s							
RAYN	**Ar Rayn**	**23.65**	**129**	P		**P**	**11 38 18.7**	**-0.8**
EKA	**Eskdalemuir Ar**	**24.27**	**318**	P		**P**	**11 38 25.0**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=111,slow=11,SNR=3.0							
EKA	**Eskdalemuir Ar**	**24.27**	**318**	P		**P**	**11 38 25.0**	**-0.2**
EKA	**Eskdalemuir Ar**	**24.27**	**318**	P		**P**	**11 38 25.0**	**-0.2**
TAM	**Tamanrasset**	**24.38**	**230**	P		**P**	**11 38 26.0**	**-0.6**
TAM				pmax	pmax			
	comp=Z,6.0nm,1.2s							
TAM	**Tamanrasset**	**24.38**	**230**	P		**P**	**11 38 26.0**	**-0.6**
AKTO	**Aktyubinsk**	**24.71**	**55**	P		**P**	**11 38 30.3**	**+1.1**
	comp=Z,1.2nm,0.4s,baz=260,slow=11,SNR=7.0							
GEYT	**Alibeck**	**25.22**	**85**	P		**P**	**11 38 35.5**	**+1.5**
	comp=Z,4.5nm,0.9s,baz=303,slow=13,SNR=1.9							
GYA0B	**ALIBECK ARRAY**	**25.22**	**85**	P		**P**	**11 38 34.5**	**+0.6**
GYA0B				IAmb	IAmb		11 38 48.9	
	comp=Z,6.4nm,0.7s							
MTE	**Manteigas**	**25.23**	**281**	P		**P**	**11 38 33.5**	**-0.5**
ARU	**Arti**	**26.82**	**42**	P		**P**	**11 38 49.8**	**+1.6**
	comp=Z,0.8nm,0.3s,baz=253,slow=7.4,SNR=7.2							
ARU	**Arti**	**26.82**	**42**	*d*/*i*P		**P**	**11 38 47.8**	**-0.4**
ARU							11 39 26.9	
ARU				S		**S**	**11 43 25.8**	**+1.7**
ARU				SS		**SnSn**	**11 44 28.7**	**+0.5**
ARU				pmax	pmax			
	comp=Z,7.0nm,1.7s							
ARU	**Arti**	**26.82**	**42**	P		**P**	**11 38 49.1**	**+0.9**
ARU				IAmb	IAmb		11 38 56.2	
	comp=Z,7.7nm,0.8s							
HRA	**Herat**	**29.53**	**90**	P		**P**	**11 39 13.0**	**+0.1**
HRA				IAmb	IAmb		11 39 20.8	
	comp=Z,8.9nm,1.5s							
KK31	**Karatay Array**	**33.31**	**70**	P		**P**	**11 39 46.9**	**+1.1**
KK31				pmax	pmax			
	comp=Z,5.0nm,0.9s							
KK31	**Karatay Array**	**33.31**	**70**	P		**P**	**11 39 46.9**	**+1.1**
KK31				IAmb	IAmb		11 39 53.7	
	comp=Z,4.9nm,0.8s							
CHGR	**Chuyangaron**	**33.37**	**78**	P		**P**	**11 39 46.9**	**+0.5**
GAR	**Garm**	**34.14**	**77**	P		**P**	**11 39 54.4**	**+1.2**
TOA0	**Torodi Ar. Sit**	**34.27**	**225**	P		**P**	**11 39 54.1**	**-0.1**
TORD	**Torodi Ar. Bea**	**34.27**	**225**	P		**P**	**11 39 54.2**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=28,slow=9.4,SNR=9.5							
AAK	**Ala-Archa**	**36.27**	**70**	⇓*e*P		**P**	**11 40 13.3**	**+1.8**
AAK				pmax	pmax			
	comp=Z,6.0nm,0.9s							
AAK	**Ala-Archa**	**36.27**	**70**	P		**P**	**11 40 11.9**	**+0.4**
AAK				IAmb	IAmb		11 40 19.0	
	comp=Z,5.3nm,0.9s							
KURK	**Kurchatov**	**37.80**	**56**	⇑*e*P		**P**	**11 40 23.7**	**-0.5**
KURK				pmax	pmax			
	comp=Z,2.0nm,0.7s							
KURK	**Kurchatov**	**37.80**	**56**	P		**P**	**11 40 24.2**	**0.0**
KDJ	**Kajisay**	**38.32**	**70**	P		**P**	**11 40 29.9**	**+0.9**
KDJ				pmax	pmax			
	comp=Z,6.0nm,0.9s							
KDJ	**Kajisay**	**38.32**	**70**	P		**P**	**11 40 29.9**	**+0.9**
KDJ				IAmb	IAmb		11 40 36.5	
	comp=Z,5.8nm,0.9s							
TARG	**Taragay, Kyrgy**	**38.88**	**70**	P		**P**	**11 40 34.1**	**+0.1**
PRZ	**Przheval'sk**	**39.10**	**69**	P		**P**	**11 40 36.0**	**+0.5**
PRZ				pmax	pmax			
	comp=Z,10.0nm,1.0s							
PRZ	**Przheval'sk**	**39.10**	**69**	P		**P**	**11 40 36.0**	**+0.5**
PRZ				IAmb	IAmb		11 40 44.1	
	comp=Z,10.0nm,0.9s							
MK31	**Makanchi Array**	**40.79**	**61**	P		**P**	**11 40 49.7**	**+0.4**
MK31				pmax	pmax			
	comp=Z,4.0nm,0.8s							
MK31	**Makanchi Array**	**40.79**	**61**	P		**P**	**11 40 49.7**	**+0.4**
MKAR	**Makanchi Array**	**40.79**	**61**	P		**P**	**11 40 49.9**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=283,slow=6.6,SNR=14							
MKAR	**Makanchi Array**	**40.79**	**61**	*ce*P		**P**	**11 40 50.0**	**+0.7**
MKAR				pmax	pmax			
	comp=Z,3.0nm,0.7s							
ZAA0	**Zalesovo Array**	**41.29**	**50**	P		**P**	**11 40 53.4**	**+0.2**
ZAA0				IAmb	IAmb		11 40 59.0	
	comp=Z,8.2nm,0.8s							
ZALV	**Zalesovo Beam**	**41.29**	**50**	P		**P**	**11 40 53

ALN					AML	AML	11 43 42.4		
	comp=E,188μm,0.2s								
ALN	**Alexandroupoli**	**0.70**	**31**		PG	**Pg**	**11 43 29.6**	**-0.1**	
ALN					SG	**Sb**	**11 43 40.7**	**+0.7**	
GELI	**Tayfur-Gelibol**	**0.70**	**82**		PG	**Pg**	**11 43 29.7**	**0.0**	
GELI					SG	**Sb**	**11 43 39.4**	**-0.6**	
THAS	**Thassos island**	**0.71**	**296**		P	**Pg**	**11 43 29.3**	**-0.7**	
THAS					S	**Sg**	**11 43 38.6**	**-0.8**	
THAS					AML	AML	11 43 39.7		
	comp=N,586μm,0.5s								
THAS					AML	AML	11 43 40.8		
	comp=E,707μm,0.2s								
EZN	**Ezine**	**0.75**	**129**		PG	**Pb**	**11 43 31.3**	**+0.1**	
EZN					SG	**Sb**	**11 43 41.5**	**+0.1**	
ERIK	**Erikli-Kesan**	**0.81**	**62**		PG	**Pg**	**11 43 31.8**	**-0.1**	
ERIK					SG	**Sb**	**11 43 43.2**	**0.0**	
RDO	**Rodhopi**	**0.85**	**359**		PG	**Pb**	**11 43 33.7**	**+0.8**	
EFSA	**Agios Efstrati**	**0.88**	**211**		P	**Pg**	**11 43 32.8**	**-0.3**	
EFSA					S	**Sg**	**11 43 45.0**	**+0.4**	
LPK	**Lapseki**	**0.92**	**85**		PG	**Pb**	**11 43 33.8**	**-0.2**	
LPK					SG	**Sb**	**11 43 46.5**	**+0.3**	
SIGR	**SIGRI**	**1.11**	**168**		P	**Pg**	**11 43 36.7**	**-0.8**	
SIGR					S	**Sg**	**11 43 51.9**	**0.0**	
SIGR					AML	AML	11 43 52.7		
	comp=E,712μm,0.5s								
SIGR					AML	AML	11 43 52.7		
	comp=N,737μm,0.6s								
UKOP	**Uzunkopru-Edir**	**1.16**	**44**		PN	**Pn**	**11 43 38.5**	**+0.2**	
PRK	**Paraskevi**	**1.18**	**152**		P	**Pn**	**11 43 39.3**	**+0.7**	
PRK					S	**Sn**	**11 43 54.8**	**+0.1**	
PRK					AML	AML	11 43 55.9		
	comp=E,755μm,0.5s								
PRK					AML	AML	11 43 57.1		
	comp=N,702μm,0.3s								
OUR	**Ouranopolis**	**1.21**	**272**		P	**Pn**	**11 43 38.3**	**-0.7**	
OUR					S	**Sb**	**11 43 54.5**	**-0.2**	
OUR					AML	AML	11 43 57.4		
	comp=E,363μm,0.3s								
OUR					AML	AML	11 43 58.5		
	comp=N,332μm,0.4s								
KDZ	**Kurdzhali**	**1.35**	**355**		PN	**Pg**	**11 43 42.5**	**+0.3**	
MRMT	**Marmara Adasi**	**1.58**	**78**		PN	**Pb**	**11 43 45.4**	**0.0**	
MRMT					SN	**Sg**	**11 44 06.4**	**-0.6**	
DKL	**Dikili**	**1.60**	**139**		PN	**Pg**	**11 43 46.7**	**-0.2**	
PLG	**Polygyros**	**1.62**	**273**		P	**Pn**	**11 43 45.6**	**+0.9**	
PLG					S	**Sb**	**11 44 07.6**	**+1.0**	
PLG					AML	AML	11 44 08.2		
	comp=N,214μm,0.6s								
PLG					AML	AML	11 44 09.2		
	comp=E,195μm,0.5s								
GONE	**Gonen-Balikesi**	**1.64**	**98**		PN	**Pb**	**11 43 46.4**	**-0.1**	
EDC	**Edincik**	**1.76**	**88**		PN	**Pb**	**11 43 47.6**	**-0.8**	
EDRB	**Edirne**	**1.79**	**30**		PN	**Pb**	**11 43 48.7**	**-0.2**	
BALB	**Balikesir**	**1.90**	**110**		PN	**Pb**	**11 43 49.9**	**-0.8**	
CHOS	**Chios island**	**1.95**	**169**		PN	**Pb**	**11 43 52.2**	**+0.5**	
URLA	**Izmir**	**2.09**	**157**		PN	**Pb**	**11 43 54.1**	**-0.1**	
KCTX	**Karacabey (Bur**	**2.13**	**90**		PN	**Pb**	**11 43 53.4**	**-1.4**	

*BJI **24** 11:49:24.9±0.0, 0.˝56N×26.˝04W, h6km, mB5.9/3, mb5.8/1, Ms5.5/6, Ms7 5.4/6*

*MOS **24** 11:49:24.3±1.1, 0.˝78N×26.˝27W, h10km, mb5.2/30, MS5.3/12, Error ellipse: s-maj=11.3km s-min=7.1km az=50.0*

*IDC **24** 11:49:24.5±0.5, 0.˝74N×26.˝23W, h0km, mb4.4/23, mb1 4.6/23, mb1mx4.5/42, mbtmp4.4/23, MS5.2/17, Ms1 5.2/17, ms1mx5.0/28, Error ellipse: s-maj=17.9km s-min=11.2km az=142.0*

*NEIC **24** 11:49:26.1±1.1, 0.˝7N±0.˝1×26.˝32W±0.˝08, h10km±1km, mb5.2/214, Ms_20 5.4/135, Mwc5.9(GCMT), Error ellipse: s-maj=17.5km s-min=13.7km az=165.0*

*GCMT **24** 11:49:37.1±0.2, 0.˝84N±0.˝01×25.˝82W±0.˝01, h19km±1km, MW5.8/133, Moment Tensor Solution. s63,c77; s133,c253; Duration: 2s0 Moment tensor: Scale 10^17 Nm; Mrr-1.44±.21; Mθθ2.22±.20; Mϕϕ-0.77±.15; Mrθ-0.58±.44; Mrϕ-6.57±.15; Mθϕ0.96±.41; Best double couple: Mo6.81700×10^17 NP1:ϕ1263.00000°, δ82.00000°, λ179.00000°. NP2:ϕ2354.00000°, δ89.00000°, λ8.00000°. Principal axes: T 7.5850, Plg7.0000°, Azm219.0000°; N -1.5300, Plg82.0000°, Azm2.0000°; P -6.0500, Plg5.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **24** 11:49:37.0˝83N×25.˝86W, h20km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr-1.17; Mθθ2.17; Mϕϕ-0.99; Mrθ-0.73; Mθϕ-6.67; Mϕr0.62; Fault plane solution: Mo7.00000×10^17 NP1:ϕ1263.00000°, δ85.00000°, λ176.00000°. NP2:ϕ1353.00000°, δ86.00000°, λ5.00000°. Principal axes: T 7.5465, Plg6.0000°, Azm218.0000°; N -1.2771, Plg84.0000°, Azm34.0000°; P -6.2693, Plg0.0000°, Azm128.0000°;*

ISC 24 11:49:26.1±0.3, 0.˝69N±0.˝06×26.29W±0.˝05, h10km, n571, σ1§10/439, mb5.1/154, MS5.4/103, 12C-13D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
RCBR	**Riachuelo**	**11.57**	**236**	Pn		**Pn**	**11 52 09.1**	**-2.5**
	9.0nm,0.3s,baz=49,slow=12,SNR=75							
RCBR				Sn		Sn	11 54 09.5	-12
	3.8nm,0.3s,baz=338,slow=20,SNR=2.8							
RCBR				LR		LR	11 55 49.6	
	comp=Z,19μm,20.7s,baz=62,slow=33							
RCBR	**Riachuelo**	**11.57**	**236**	P		**Pn**	**11 52 09.2**	**-2.4**
RCBR	**Riachuelo**	**11.57**	**236**			**Pn**	**11 52 09.2**	**-2.4**
RCBR	**Riachuelo**	**11.57**	**236**	*e*P		**Pn**	**11 52 09.2**	**-2.4**
H10N3	**ASCENSION HYDR**	**14.49**	**126**	T		T	12 07 24.9	
	baz=306,slow=75,SNR=2087							
H10N2	**ASCENSION HYDR**	**14.49**	**126**	T		T	12 07 19.1	
	baz=306,slow=75,SNR=2911							
H10N1	**ASCENSION HYDR**	**14.51**	**126**	T		T	12 07 21.1	
	baz=306,slow=75,SNR=2357							
ASCN	**Ascension**	**14.65**	**126**	Pn		**Pn**	**11 52 55.0**	**+1.3**
H10S3	**ASCENSION HYDR**	**15.03**	**130**	T		T	12 08 10.7	
	baz=270,slow=74,SNR=760							
H10S2	**ASCENSION HYDR**	**15.04**	**130**	T		T	12 08 04.9	
	baz=310,slow=74,SNR=295							
GDU01	**Guandu, BA**	**19.45**	**222**	*e*P		**P**	**11 53 53.0**	**0.0**
LIC	**Lamto**	**21.92**	**75**	*e*P		**P**	**11 54 17.4**	**-2.4**
	344nm,1.3s							
TIC	**Toumodi**	**22.03**	**74**	*e*P		**P**	**11 54 21.7**	**+0.7**
DBIC	**Dimbokro**	**22.19**	**74**	P		**P**	**11 54 20.2**	**-2.6**
	20nm,0.9s,baz=238,slow=11,SNR=9.3							
DBIC				S		S	11 58 14.2	-13
	15nm,0.8s,baz=144,slow=12,SNR=4.9							
DBIC				LR		LR	12 00 55.4	
	comp=Z,5μm,18.4s,baz=232,slow=31							
DBIC	**Dimbokro**	**22.19**	**74**	P		**P**	**11 54 20.0**	**-2.7**
DBIC				pmax		pmax		
	comp=Z,129nm,1.0s							
DBIC	**Dimbokro**	**22.19**	**74**	P		**P**	**11 54 20.0**	**-2.7**
KIC	**Kosan Boka**	**22.23**	**75**	*e*P		**P**	**11 54 20.7**	**-2.4**
	comp=Z,242nm,1.3s							
SMTB	**Santa Maria do**	**23.24**	**245**	*e*P		**P**	**11 54 33.9**	**0.0**
JANB	**Januaria**	**23.71**	**228**	*e*P		**P**	**11 54 38.6**	**+0.1**
BSFB	**Barra de Sao F**	**24.10**	**216**	*e*P		**P**	**11 54 43.0**	**+0.9**
SJMB	**Sao Joao De Ma**	**24.20**	**216**	*e*P		**P**	**11 54 44.0**	**+1.0**
PRPB	**Parauapebas**	**24.45**	**253**	*e*P		**P**	**11 54 45.7**	**+0.2**
MC01	**Montes Claros**	**24.53**	**224**	*e*P		**P**	**11 54 46.5**	**+0.3**
BDFB	**Brasilia**	**26.91**	**232**	P		**P**	**11 55 08.2**	**+0.5**
	comp=Z,22nm,0.9s,baz=56,slow=9.0,SNR=16							
BDFB				LR		LR	12 05 00.2	
	comp=Z,10μm,20.2s,baz=102,slow=35							
BDFB	**Brasilia**	**26.91**	**232**	P		**P**	**11 55 06.9**	**-0.9**
BDFB				pmax		pmax		
	comp=Z,36nm,1.0s							
BDFB				MLR		MLR		
	comp=Z,10μm,20.0s							
BDFB	**Brasilia**	**26.91**	**232**	P		**P**	**11 55 06.8**	**-0.9**
BDFB				IAmb		IAmb	11 55 12.6	
	comp=Z,36nm,1.0s							
BDFB				IAMs_20		IAMs_20	12 04 38.5	
	comp=Z,10μm,20.0s							
IPMB	**Ipameri, GO**	**28.45**	**228**	*e*P		**P**	**11 55 21.3**	**-0.2**
NPGB	**Novo Progresso**	**30.00**	**255**	*e*P		**P**	**11 55 35.3**	**0.0**
ARAG	**Araguaiana, MT**	**30.02**	**236**	*e*P		**P**	**11 55 36.5**	**+1.1**
TOB4	**Torodi Ar. Sit**	**30.35**	**65**	IAMs_20		IAMs_20	12 06 16.0	
	comp=Z,11μm,18.0s							
TOB5	**Torodi Ar. Sit**	**30.35**	**65**	IAMs_20		IAMs_20	12 05 37.1	
	comp=Z,11μm,19.0s							
TOC7	**Torodi Ar. Sit**	**30.35**	**65**	IAMs_20		IAMs_20	12 06 16.2	
	comp=Z,11μm,18.0s							
TOC4	**Torodi Ar. Sit**	**30.36**	**65**	IAMs_20		IAMs_20	12 06 15.2	
	comp=Z,11μm,18.0s							
TOA3	**Torodi Ar. Sit**	**30.36**	**65**	IAMs_20		IAMs_20	12 04 59.3	
	comp=Z,12μm,22.0s							
TOA0	**Torodi Ar. Sit**	**30.36**	**65**	P		**P**	**11 55 36.7**	**-1.7**
TOA0				IAMs_20		IAMs_20	12 06 15.4	
	comp=Z,11μm,18.0s							
TORD	**Torodi Ar. Bea**	**30.36**	**65**	P		**P**	**11 55 36.6**	**-1.9**
	comp=Z,5.5nm,0.8s,baz=254,slow=8.9,SNR=13							
TORD				LR		LR	12 06 27.8	
	comp=Z,9μm,19.6s,baz=240,slow=34							
TOB1	**Torodi Ar. Sit**	**30.36**	**65**	IAMs_20		IAMs_20	12 04 59.5	
	comp=Z,12μm,22.0s							
TOA2	**Torodi Ar. Sit**	**30.37**	**65**	IAMs_20		IAMs_20	12 06 15.5	
	comp=Z,12μm,18.0s							
TOB3	**Torodi Ar. Sit**	**30.37**	**65**	IAMs_20		IAMs_20	12 06 15.5	
	comp=Z,11μm,18.0s							
TOC3	**Torodi Ar. Sit**	**30.38**	**65**	IAMs_20		IAMs_20	12 05 37.9	
	comp=Z,11μm,20.0s							
TOC2	**Torodi Ar. Sit**	**30.39**	**65**	IAMs_20		IAMs_20	12 06 17.1	
	comp=Z,11μm,18.0s							
VAO	**Valinhos**	**30.97**	**219**	*e*P		**P**	**11 55 44.7**	**+0.9**
CLDB	**Colider**	**31.51**	**248**	*e*P		**P**	**11 55 48.6**	**0.0**
C2SB	**Chapadao do Su**	**32.47**	**232**	*e*P		**P**	**11 55 58.9**	**+1.9**
FRTB	**Fartura**	**32.91**	**222**	*e*P		**P**	**11 56 01.9**	**+1.2**
PCMB	**Pacaembu**	**32.95**	**226**	*e*P		**P**	**11 56 02.9**	**+1.8**
PMOZ	**Porto Moniz, M**	**33.09**	**14**	*e*LR		LR	12 04 33.0	
	comp=Z,3μm,18.0s							
SALV	**Santo Antonio**	**33.39**	**239**	*e*P		**P**	**11 56 06.5**	**+1.5**
PTGA	**Pitinga**	**33.71**	**268**	P		**P**	**11 56 09.1**	**+1.2**
	comp=Z,1.9nm,0.3s,baz=89,slow=12,SNR=5.3							
PTGA	**Pitinga**	**33.71**	**268**	P		**P**	**11 56 07.4**	**-0.5**
MACA	**Manacapuru-AM**	**34.59**	**263**	*e*P		**P**	**11 56 17.5**	**+1.9**
TRCB	**Terra Rica**	**34.68**	**226**	*e*P		**P**	**11 56 17.3**	**+1.1**
PTLB	**Pontes e Lacer**	**36.20**	**242**	*e*P		**P**	**11 56 30.6**	**+1.3**
VILB	**Vilhena**	**36.26**	**247**	*e*P		**P**	**11 56 31.6**	**+1.7**
H05S1	**Guadeloupe/Mar**	**36.78**	**293**	T		T	12 35 31.5	
	SNR=9.8							
H05N1	**Guadeloupe/Mar**	**37.62**	**296**	T		T	12 36 33.0	
	SNR=5.1							
MDT	**Midelt**	**37.92**	**30**	P		**P**	**11 56 45.1**	**+1.2**
	comp=Z,2.8nm,1.0s,baz=214,slow=4.7,SNR=4.1							
TAM	**Tamanrasset**	**37.93**	**52**	P		**P**	**11 56 43.3**	**-0.9**
TAM				pmax		pmax		
	comp=Z,30nm,1.3s							
TAM				MLR		MLR		
	comp=Z,7μm,21.0s							
TAM	**Tamanrasset**	**37.93**	**52**	P		**P**	**11 56 43.3**	**-0.9**
TAM				IAMs_20		IAMs_20	12 11 30.9	
	comp=Z,7μm,21.0s							
SAML	**Samuel**	**37.98**	**255**	P		**P**	**11 56 44.4**	**-0.1**
SAML				pmax		pmax		
	comp=Z,22nm,1.3s							
SAML	**Samuel**	**37.98**	**255**	P		**P**	**11 56 44.4**	**-0.1**
SAML	**Samuel**	**37.98**	**255**	*e*P		**P**	**11 56 45.9**	**+1.4**
SIV	**San Ignacio**	**38.13**	**243**	P		**P**	**11 56 47.1**	**+1.3**
	comp=Z,8.0nm,0.9s,baz=92,slow=9.1,SNR=32							
CPUP	**Villa Florida**	**40.22**	**226**	LR		LR	12 13 39.6	
	comp=Z,5μm,18.5s,baz=67,slow=36							
CPUP	**Villa Florida**	**40.22**	**226**	P		**P**	**11 57 03.2**	**+0.1**
CPUP				pmax		pmax		
	comp=Z,48nm,1.5s							
CPUP	**Villa Florida**	**40.22**	**226**	P		**P**	**11 57 03.2**	**+0.1**
PVAQ	**Vaqueiros**	**40.36**	**23**	*e*P		P	11 57 09.0	+4.9
	comp=Z,48nm,1.5s							
PVAQ	**Vaqueiros**	**40.36**	**23**	*e*LR		LR	12 08 35.5	
	comp=Z,2μm,20.0s							
PCVE	**Castro Verde**	**40.43**	**23**	*e*P		**P**	**11 57 09.4**	**+4.7**
	comp=Z,35nm,1.3s							
PLTB	**Pedras Altas**	**41.36**	**216**	*e*P		**P**	**11 57 14.4**	**+2.0**
PMRV	**Marv??o**	**42.25**	**22**	*e*P		P	11 57 33.6	+14
	comp=Z,51nm,1.6s							
MTP	**Monte Pirata**	**42.27**	**296**	P		**P**	**11 57 20.2**	**+0.1**
MTP				IAmb		IAmb	11 57 21.5	
	comp=Z,43nm,1.1s							
HUMP	**Col San Antoni**	**42.55**	**296**	P		**P**	**11 57 22.1**	**-0.2**
HUMP				IAmb		IAmb	11 58 08.8	
	comp=Z,48nm,1.3s							
MTE	**Manteigas**	**43.05**	**21**	*e*LR		LR	12 13 21.0	
	comp=Z,2μm,20.0s							
ESDC	**Sonseca Array**	**43.83**	**25**	P		**P**	**11 57 32.6**	**+0.1**
	comp=Z,4.1nm,1.0s,baz=222,slow=8.2,SNR=11							
MVO	**Moncorvo**	**43.91**	**21**	*e*P		**P**	**11 57 35.7**	**+2.6**
	comp=Z,41nm,1.8s							
PGAV	**Gavieira, Arco**	**44.19**	**19**	*e*LR		LR	12 11 00.4	
	comp=Z,2μm,20.0s							
LPAZ	**La Paz**	**44.59**	**246**	P		**P**	**11 57 40.2**	**+0.6**
	comp=Z,8.5nm,0.8s,baz=62,slow=5.2,SNR=24							
LPAZ				LR		LR	12 16 01.6	
	comp=Z,3μm,18.1s,baz=74,slow=36							
LPAZ	**La Paz**	**44.59**	**246**	P		**P**	**11 57 39.7**	**+0.1**
LPAZ				pmax		pmax		
	comp=Z,11nm,0.9s							
LPAZ	**La Paz**	**44.59**	**246**	P		**P**	**11 57 39.7**	**+0.1**
LPAZ	**La Paz**	**44.59**	**246**	*e*P		**P**	**11 57 40.4**	**+0.8**
SDV	**Santo Domingo**	**44.89**	**282**	P		**P**	**11 57 41.1**	**-0.4**
SDV	**Santo Domingo**	**44.89**	**282**	*e*P		**P**	**11 57 43.3**	**+1.8**
RUSC	**La Rusia**	**46.98**	**277**	P		**P**	**11 57 57.6**	**-0.8**
PB12	**IPOC Station P**	**47.32**	**244**	IAMs_20		IAMs_20	12 17 37.4	
	comp=Z,3μm,19.0s							
SC01	**Santiago de lo**	**47.34**	**296**	P		**P**	**11 58 00.3**	**-0.2**
TSUM	**Tsumeb**	**47.36**	**117**	P		**P**	**11 58 01.0**	**+0.1**
	comp=Z,8.3nm,0.9s,baz=237,slow=23,SNR=9.3							
TSUM	**Tsumeb**	**47.36**	**117**	P		**P**	**11 58 01.6**	**+0.7**
PSGCX	**Pisagua**	**47.46**	**242**	IAMs_20		IAMs_20	12 17 54.2	
	comp=Z,4μm,18.0s							
LVC	**Limon Verde**	**47.52**	**238**	P		**P**	**11 58 02.0**	**-0.3**
	comp=Z,4.3nm,0.8s,baz=44,slow=5.7,SNR=6.9							
LVC	**Limon Verde**	**47.52**	**238**	P		**P**	**11 58 01.7**	**-0.6**
LVC				pmax		pmax		
	comp=Z,48nm,1.8s							
LVC				MLR		MLR		
	comp=Z,2μm,18.0s							
LVC	**Limon Verde**	**47.52**	**238**	P		**P**	**11 58 01.7**	**-0.6**
LVC				IAmb		IAmb	11 58 52.5	
	comp=Z,48nm,1.8s							
LVC	**Limon Verde**	**47.52**	**238**	*e*P		**P**	**11 58 02.0**	**-0.3**
SDDR	**Presa de Saban**	**47.71**	**295**	P		**P**	**11 58 02.3**	**-1.1**
SDDR				IAmb		IAmb	11 58 55.4	
	comp=Z,38nm,1.4s							
PB07	**IPOC Station P**	**48.01**	**240**	P		**P**	**11 58 05.3**	**-0.6**
PB07				IAmb		IAmb	11 58 06.7	
	comp=Z,18nm,0.7s							
KEST	**Kesra**	**48.08**	**40**	LR		LR	12 18 08.2	
	comp=Z,7μm,21.4s,baz=188,slow=36							
PB06	**IPOC Station P**	**48.12**	**238**	P		**P**	**11 58 06.0**	**-0.7**
PB06				IAmb		IAmb	11 58 08.9	
	comp=Z,20nm,0.9s							
ROSC	**El Rosal**	**48.14**	**276**	P		**P**	**11 58 06.9**	**-0.4**
PB15	**IPOC Station P**	**48.23**	**238**	P		**P**	**11 58 07.1**	**-0.5**
PB15				IAmb		IAmb	11 58 10.7	
	comp=Z,19nm,0.7s							
PB04	**IPOC Station P**	**48.47**	**239**	P		**P**	**11 58 08.2**	**-1.2**
PB04				IAmb		IAmb	11 58 43.5	
	comp=Z,27nm,1.1s							
GO02	**Mina Guanaco**	**49.12**	**235**	P		**P**	**11 58 14.9**	**+0.3**
PB14	**IPOC Station P**	**49.58**	**236**	P		**P**	**11 58 17.9**	**-0.2**
PB14				IAmb		IAmb	11 59 25.6	
	comp=Z,20nm,1.1s							
GO03	**Copiap**	**50.69**	**233**	P		**P**	**11 58 26.3**	**+0.1**
GO03				IAMs_20		IAMs_20	12 20 12.7	
	comp=Z,3μm,19.0s							
AC05	**El Transito**	**51.28**	**231**	IAmb		IAmb	11 58 54.5	
	comp=Z,32nm,1.2s							
AC04	**Lanos de Chal**	**51.63**	**232**	IAMs_20		IAMs_20	12 20 39.4	
	comp=Z,3μm,19.0s							
CO01	**Juntas del Tor**	**51.67**	**230**	P		**P**	**11 58 34.2**	**+0.5**
CO01				IAmb		IAmb	11 58 57.0	
	comp=Z,28nm,1.4s							
GO04	**Tololo Observa**	**52.30**	**230**	P		**P**	**11 58 38.4**	**0.0**
GO04				IAmb		IAmb	11 59 01.1	
	comp=Z,38nm,1.1s							
BNI	**Bardonecchia**	**52.91**	**29**	P		**P**	**11 58 43.0**	**+0.4**
BNI				pmax		pmax		
	comp=Z,20nm,1.2s							
BNI				MLR		MLR		
	comp=Z,2μm,20.0s							
BNI	**Bardonecchia**	**52.91**	**29**	P		**P**	**11 58 43.0**	**+0.4**
CO02	**Combarbal**	**52.93**	**229**	P		**P**	**11 58 43.1**	**+0.1**
CO02				IAmb		IAmb	11 59 10.3	
	comp=Z,33nm,1.1s							
MT05	**Renca**	**53.79**	**227**	P		**P**	**11 58 49.0**	**-0.3**
CEL	**Celeste**	**53.80**	**41**	P		**P**	**11 58 49.8**	**+0.7**
CEL				IAmb		IAmb	11 59 14.8	
	comp=Z,28nm,1.0s							
VLC	**Villacollemand**	**54.16**	**32**	P		**P**	**11 58 52.4**	**+0.7**
VLC				IAmb		IAmb	11 59 15.8	
	comp=Z,21nm,1.1s							
SENIN	**Lac Senin/Sane**	**54.17**	**28**	P		**P**	**11 58 51.8**	**-0.1**
SENIN				IAMs_20		IAMs_20	12 22 07.1	
	comp=Z,3μm,19.0s							
OSSC	**Osservatorio P**	**54.20**	**33**	P		**P**	**11 58 52.6**	**+0.7**
PRMA	**PARMA**	**54.54**	**31**	P		**P**	**11 58 54.5**	**+0.2**
PRMA				IAMs_20		IAMs_20	12 21 26.9	
	comp=Z,3μm,22.0s							
PAOL	**Paolisi**	**54.55**	**37**	IAMs_20		IAMs_20	12 19 50.6	
	comp=Z,3μm,21.0s							
AQU	**L'Aquila**	**54.67**	**35**	P		**P**	**11 58 55.7**	**+0.3**
AQU				pmax		pmax		
	comp=Z,14nm,0.9s							
AQU				MLR		MLR		
	comp=Z,5μm,19.0s							
AQU	**L'Aquila**	**54.67**	**35**	P		**P**	**11 58 55.7**	**+0.3**
NRCA	**Norcia**	**54.80**	**35**	P		**P**	**11 58 56.7**	**+0.3**
NRCA				IAmb		IAmb	11 59 22.4	
	comp=Z,23nm,1.2s							
NRCA				IAMs_20		IAMs_20	12 23 02.1	
	comp=Z,3μm,19.0s							
HAL	**Halifax**	**54.82**	**328**	P		**P**	**11 58 56.4**	**+0.1**
HAL				pmax		pmax		
	comp=Z,34nm,0.9s							
HAL	**Halifax**	**54.82**	**328**	P		**P**	**11 58 56.4**	**+0.1**
SGRT	**San Giovanni R**	**55.70**	**37**	IAMs_20		IAMs_20	12 25 41.8	
	comp=Z,4μm,18.0s							
FUORN	**Ofenpass-Fuorn**	**55.79**	**30**	P		**P**	**11 59 03.6**	**0.0**
FUORN				IAmb		IAmb	11 59 33.4	
	comp=Z,51nm,1.9s							
BI02	**San Fabin de**	**55.83**	**223**	IAMs_20		IAMs_20	12 22 16.7	
	comp=Z,3μm,20.0s							
LSZ	**Lusaka**	**56.11**	**109**	P		**P**	**11 59 07.0**	**+0.7**
LSZ				pmax		pmax		
	comp=Z,73nm,1.8s							
LSZ	**Lusaka**	**56.11**	**109**	P		**P**	**11 59 07.0**	**+0.7**
WLF	**Walferdange**	**56.13**	**25**	IAMs_20		IAMs_20	12 22 55.8	
	comp=Z,3μm,19.0s							
LMN	**Caledonia Moun**	**56.27**	**328**	P		**P**	**11 59 06.2**	**-0.6**
LMN				IAmb		IAmb	11 59 07.9	
	comp=Z,31nm,1.1s							
FETA	**Feichten**	**56.30**	**30**	*e*P		**P**	**11 59 06.5**	**-0.7**
	comp=Z,6.0nm,0.9s							
SQTA	**Sankt Quirin**	**56.67**	**30**	*e*P		**P**	**11 59 09.5**	**-0.3**
	comp=Z,12nm,1.3s							
MOTA	**Moosalm**	**56.70**	**30**	*i* P		**P**	**11 59 09.6**	**-0.5**
	comp=Z,13nm,1.4s							
WTTA	**Wattenberg**	**56.91**	**30**	*e*P		**P**	**11 59 10.8**	**-0.8**
	comp=Z,8.9nm,1.2s							
H66A	**Whiting**	**56.94**	**326**	P		**P**	**11 59 12.2**	**+0.6**
	baz=129							
EMMW	**East Machias**	**56.97**	**326**	P		**P**	**11 59 11.7**	**-0.1**
EMMW				IAmb		IAmb	11 59 13.7	
	comp=Z,31nm,1.2s							
ABTA	**Abfaltersbach**	**57.01**	**31**	*i* P		**P**	**11 59 11.9**	**-0.2**
	comp=Z,13nm,1.4s							
SKDS	**Skadanscina**	**57.02**	**33**	*i* P		**P**	**11 59 11.8**	**-0.4**
MBAR	**Mbarara**	**57.04**	**91**	P		**P**	**11 59 14.4**	**+1.3**
MBAR				pmax		pmax		
	comp=Z,58nm,1.8s							
MBAR				MLR		MLR		
	comp=Z,5μm,19.0s							
MBAR	**Mbarara**	**57.04**	**91**	P		**P**	**11 59 14.4**	**+1.3**
BI03	**Tigo**	**57.13**	**224**	IAMs_20		IAMs_20	12 23 51.2	
	comp=Z,4μm,19.0s							
BOSA	**Boshof**	**57.24**	**125**	LR		LR	12 18 58.4	
	comp=Z,5μm,19.9s,baz=228,slow=31							
BOSA	**Boshof**	**57.24**	**125**	P		**P**	**11 59 14.8**	**+0.6**
BOSA				pmax		pmax		
	comp=Z,49nm,1.8s							
BOSA	**Boshof**	**57.24**	**125**	P		**P**	**11 59 14.8**	**+0.6**
BOSA				IAmb		IAmb	12 01 12.6	
	comp=Z,49nm,1.8s							
JAVS	**Javornik**	**57.27**	**33**	*i* P		**P**	**11 59 12.1**	**-1.9**
CADS	**Cadrg**	**57.31**	**32**	*e*P		**P**	**11 59 13.6**	**-0.6**
CADS				*e*S		**S**	**12 07 17.3**	**+6.7**
G65A	**Princeton**	**57.34**	**326**	P		**P**	**11 59 14.7**	**+0.3**
	baz=128							
G65A	**Princeton**

J61A	Chester		59.17	322	P		P	11 59 28.2	+0.9
	baz=123								
L61A	Hillsdale 1, H		59.19	321	P		P	11 59 27.9	+0.5
	baz=121								
HNH	Hanover		59.21	323	P		P	11 59 27.6	0.0
K61A	Williamstown		59.26	321	P		P	11 59 29.0	+1.1
	baz=122								
I61A	Oroboro, Fairl		59.28	323	P		P	11 59 29.1	+1.0
	baz=124,SNR=5.3								
LBNH	Lisbon		59.28	323	P		P	11 59 29.5	+1.4
	baz=124								
ODNJ	Ogdensburg		59.31	319	P		P	11 59 27.3	-0.9
ODNJ					IAmb		IAmb	11 59 29.8	
	comp=Z,20nm,1.1s								
NKC	Novy Kostel		59.34	28	AMS		AMS	12 26 20.0	
	comp=Z,2µm,19.2s								
M60A	Port Jervis		59.44	319	P		P	11 59 29.8	+0.6
	baz=120								
H61A	Lyndonville		59.45	324	P		P	11 59 30.2	+1.0
	baz=124								
T59A	Double "B" Far		59.46	314	P		P	11 59 30.6	+1.2
	baz=115								
CONA	Conrad Observa		59.51	32	*e*P		P	11 59 29.0	-0.7
	comp=Z,5.0nm,1.0s								
N60A	Cedar Hill Far		59.53	319	P		P	11 59 30.3	+0.5
	baz=119								
SANT	Santorini		59.56	47	IAMs_20		IAMs_20	12 24 36.4	
	comp=Z,3µm,22.0s								
LL01	San Ignacio de		59.63	218	P		P	11 59 29.8	-0.6
LL01					IAmb		IAmb	11 59 31.1	
	comp=Z,27nm,1.4s								
P59A	Jarrettsville		59.83	317	P		P	11 59 32.8	+0.9
	baz=118								
I60A	Shoreham		59.90	322	P		P	11 59 32.8	+0.6
	baz=122								
H60A	Morristown		59.92	323	P		P	11 59 33.0	+0.5
	baz=123								
N59A	State Game Lan		60.00	318	P		P	11 59 34.1	+1.0
	baz=119								
G60A	Masonville		60.00	324	P		P	11 59 33.7	+0.7
	baz=124								
M59A	Waymart		60.07	319	P		P	11 59 34.4	+0.8
	baz=119								
R58B	Mineral		60.11	314	P		P	11 59 34.7	+0.8
	baz=116								
V58A	Windy Hill, Pi		60.12	312	P		P	11 59 34.8	+0.8
	baz=113								
L59A	Walton		60.14	320	P		P	11 59 34.2	+0.1
	baz=120								
L59A	Walton		60.14	320	IAMs_20		IAMs_20	12 18 33.6	
	comp=Z,3µm,19.0s								
PRU	Pruhonice		60.17	29	AMS		AMS	12 30 20.0	
	comp=Z,3µm,17.3s								
PRA	Prague		60.17	29	AMS		AMS	12 33 00.0	
	comp=Z,1µm,16.5s								
TREC	Trest		60.19	30	AMS		AMS	12 31 10.0	
	comp=Z,3µm,16.1s								
I59A	Olmsteadville		60.23	322	P		P	11 59 35.2	+0.6
	baz=122								
K59A	Cooperstown		60.31	321	P		P	11 59 35.7	+0.5
	baz=120								
CLL	Collm		60.33	27	*e*P		P	11 59 35.0	-0.1
CLL					*e*(sP)		pwP	11 59 42.0	-0.7
	comp=Z,12nm,1.6s								
CLL					*e*			11 59 58.0	
CLL					*e*S		S	12 08 00.0	+10
CLL	Collm		60.33	27	*e*P		P	11 59 35.0	-0.1
CLL					*e*			11 59 42.0	
P58A	Pank, Wackersv		60.37	316	P		P	11 59 36.5	+0.9
	baz=117								
J59A	Piesco		60.45	321	P		P	11 59 36.5	+0.4
	baz=121								
BRG	Berggiesshubel		60.47	28	*e*P		P	11 59 36.9	+0.8
	comp=Z,4.7nm,1.2s								
	comp=N,2µm,17.9s								
	comp=E,1µm,13.6s								
	comp=Z,2µm,16.0s								
BRG	Berggiesshubel		60.47	28	*e*P		P	11 59 36.9	+0.8
BRG					pmax		pmax		
	comp=Z,5.0nm,1.2s								
BRG					MLR		MLR		
	comp=N,2µm,17.9s								
BRG					MLR		MLR		
	comp=E,1µm,13.6s								
BRG					MLR		MLR		
	comp=Z,2µm,16.0s								
KRUC	Moravsky		60.50	31	*e*P		P	11 59 34.8	-1.5
PVCC	Panska Ves		60.54	29	AMS		AMS	12 30 40.0	
	comp=Z,2µm,18.1s								
U57A	Blanch		60.54	312	P		P	11 59 37.0	+0.2
	baz=114								
H59A	Cadyville		60.56	323	P		P	11 59 37.8	+0.9
	baz=122,SNR=8.5								
N58A	Sunbury		60.59	318	P		P	11 59 37.3	+0.3
	baz=118								
L58A	Harry Jones Me		60.59	319	P		P	11 59 38.1	+1.0
	baz=119								
FRNY	Flat Rock		60.60	323	P		P	11 59 36.9	-0.2
FRNY					IAmb		IAmb	11 59 38.5	
	comp=Z,17nm,1.2s								
V57A	Coltrane Farms		60.66	312	P		P	11 59 38.4	+0.8
	baz=113								
M58A	Price's Panora		60.67	318	P		P	11 59 38.3	+0.6
	baz=118,SNR=5.4								
BINY	Binghamton		60.76	319	P		P	11 59 39.5	+1.3
	baz=119,SNR=5.3								
BINY	Binghamton		60.76	319	P		P	11 59 38.3	+0.1
BINY					IAmb		IAmb	11 59 40.2	
	comp=Z,30nm,1.1s								
VRAC	Vranov		60.76	31	*e*P		P	11 59 37.0	-1.1
K58A	Earlville		60.81	320	P		P	11 59 39.6	+1.0
	baz=120,SNR=6.4								
K58A	Earlville		60.81	320	P		P	11 59 38.9	+0.2
VTS	Vitosha		60.85	40	IAMs_20		IAMs_20	12 28 06.3	
	comp=Z,3µm,21.0s								
J58A	Remsen		60.88	321	P		P	11 59 39.9	+0.8
	baz=120,SNR=8.0								
J58A	Remsen		60.88	321	P		P	11 59 39.4	+0.3
J58A					IAmb		IAmb	11 59 40.8	
	comp=Z,19nm,1.1s								
O57A	Amberson		60.93	317	P		P	11 59 40.5	+1.0
	baz=117								
LONY	Lake Ozonia		61.09	322	P		P	11 59 39.9	-0.5
	baz=122								
M57A	Sunshine Farm,		61.10	318	P		P	11 59 41.1	+0.6
	baz=118								
L57A	Andrews Acres		61.22	319	P		P	11 59 42.1	+0.7
	baz=118								
UPC	Upice		61.23	29	AMS		AMS	12 31 40.0	
	comp=Z,2µm,15.5s								
E58A	La Victoria		61.26	325	P		P	11 59 41.9	+0.4
	baz=124								
CHVC	Chvalec		61.30	29	AMS		AMS	12 32 00.0	
	comp=Z,2µm,17.1s								
KRLC	Kraliky		61.33	30	AMS		AMS	12 31 10.0	
	comp=Z,2µm,17.1s								
J57A	Williamstown		61.36	321	P		P	11 59 42.6	+0.4
	baz=120,SNR=5.5								
J57A	Williamstown		61.36	321	P		P	11 59 41.8	-0.5
J57A					IAmb		IAmb	11 59 45.0	
	comp=Z,31nm,1.4s								
OSTC	Ostas		61.36	29	AMS		AMS	12 32 10.0	
	comp=Z,2µm,19.3s								
I57A	Carthage		61.41	321	P		P	11 59 43.3	+0.7
	baz=120,SNR=6.6								
VYHS	Vyhne		61.43	32	*e*P		P	11 59 42.0	-0.7
VYHS	Vyhne		61.43	32	*e*P		P	11 59 42.0	-0.7
D58A	Chemin du LacG		61.44	326	P		P	11 59 43.1	+0.4
	baz=124,SNR=5.6								
P56A	Dayton Farm, R		61.45	316	P		P	11 59 44.1	+1.1
	baz=116								
MORC	Moravsky Berou		61.53	31	*e*P		P	11 59 42.7	-0.7
MORC	Moravsky Berou		61.53	31	⇓P		P	11 59 40.7	-2.7
MORC	Moravsky Berou		61.53	31	⇓P		P	11 59 40.7	-2.7
LATQ	La Tuque		61.54	326	P		P	11 59 43.9	+0.5
	baz=124								
LATQ	La Tuque		61.54	326	P		P	11 59 43.5	0.0
G57A	Newington		61.59	323	P		P	11 59 44.5	+0.7
	baz=122								
PSZ	Piszkesteto		61.67	33	⇓P		P	11 59 54.9	+10
PSZ	Piszkesteto		61.67	33	P		P	11 59 44.4	0.0
PSZ					pmax		pmax		
	comp=Z,23nm,1.0s								
PSZ					MLR		MLR		
	comp=Z,3µm,20.0s								
PSZ	Piszkesteto		61.67	33	P		P	11 59 44.4	0.0
PSZ					IAmb		IAmb	11 59 57.5	
	comp=Z,23nm,1.0s								
PSZ					IAMs_20		IAMs_20	12 30 17.9	
	comp=Z,3µm,20.0s								
N56A	West Decatur		61.69	317	P		P	11 59 45.5	+0.9
	baz=117,SNR=6.8								
V55A	Taylorsville		61.72	311	P		P	11 59 47.0	+2.1
	baz=112								
TGUH	Tegucigalpa,Un		61.74	286	P		P	11 59 45.1	-0.4
L56A	Greenwood		61.76	319	P		P	11 59 45.3	+0.2
	baz=118								
SIRR	Siria		61.76	36	⇑P		P	11 59 40.8	-4.2
E57A	Chemin Saint G		61.78	324	P		P	11 59 45.6	+0.4
	baz=123,SNR=5.2								
J56A	Wolcott		61.84	320	P		P	11 59 44.7	-0.8
	baz=119								
M56A	Emporium		61.87	318	P		P	11 59 46.4	+0.6
	baz=117								
OKC	Ostrava-Krasne		61.88	31	AMS		AMS	12 29 20.0	
	comp=Z,2µm,18.5s								
TRQ	Mont Tremblant		61.92	324	P		P	11 59 45.8	-0.3
D57A	Chemin Vers le		61.97	325	P		P	11 59 46.3	0.0
	baz=123,SNR=5.1								
O55A	Ligonier		62.07	316	P		P	11 59 48.1	+0.9
	baz=115								
ORIO	Orleans, Innes		62.09	323	P		P	11 59 46.5	-0.6
N55A	Marion Center		62.10	317	P		P	11 59 48.1	+0.7
	baz=116,SNR=6.6								
H56A	Elgin		62.11	322	P		P	11 59 47.6	+0.4
	baz=120,SNR=6.4								
M55A	Ridgway		62.26	318	P		P	11 59 49.0	+0.6
	baz=116,SNR=6.1								
M55A	Ridgway		62.26	318	IAmb		IAmb	11 59 51.2	
	comp=Z,21nm,1.1s								
L55A	Hinsdale		62.36	319	P		P	11 59 49.1	0.0
	baz=117								
K55A	Perry		62.36	319	P		P	11 59 49.3	+0.2
	baz=118								
E56A	St. Veronique		62.37	324	P		P	11 59 49.0	0.0
	baz=122								
P54A	Burton		62.64	315	P		P	11 59 51.5	+0.5
	baz=114								
Q54A	Coxs Mills		62.65	314	P		P	11 59 51.9	+0.9
	baz=114								
DRGR			62.65	36	⇑P		P	11 59 45.9	-5.1
DRGR			62.65	36	⇑P		P	11 59 45.9	-5.1
H55A	Tweed		62.66	321	P		P	11 59 50.8	-0.1
	baz=119								
K54A	Basiliko Farm,		62.72	319	P		P	11 59 52.2	+0.7
	baz=117,SNR=7.4								
I55A	Frankford		62.81	321	P		P	11 59 52.2	+0.2
	baz=119								
PLVO	Plevna		62.83	322	P		P	11 59 52.3	+0.1
N54A	Moraine State		62.87	317	P		P	11 59 52.8	+0.3
	baz=115								
M54A	Oil Creek Stat		62.88	317	P		P	11 59 52.7	+0.2
	baz=116								
M54A	Oil Creek Stat		62.88	317	IAmb		IAmb	11 59 54.0	
	comp=Z,14nm,1.1s								
D55A	Sainte-Anne-du		62.88	324	P		P	11 59 52.6	+0.2
	baz=122								
OJC	Ojcow		62.96	31	P		P	11 59 52.3	-0.6
OJC					pmax		pmax		
	comp=Z,15nm,1.1s								
OJC	Ojcow		62.96	31	P		P	11 59 52.3	-0.6
OJC					IAmb		IAmb	12 00 17.6	
	comp=Z,15nm,1.1s								
L54A	Sinclairville		62.96	318	P		P	11 59 53.9	+0.8
	baz=116								
Q53A	Leroy		63.09	314	P		P	11 59 54.6	+0.6
	baz=113								
Y52A	Lilburn		63.24	308	IAmb		IAmb	12 00 38.5	
	comp=Z,20nm,1.3s								
ALLY	Alegheny Colle		63.27	317	P		P	11 59 55.0	-0.1
ALLY					IAmb		IAmb	11 59 56.5	
	comp=Z,20nm,0.9s								
TRPA	Tarpa		63.27	34	⇑P		P	11 59 48.8	-6.2
SCHQ	Schefferville		63.30	335	P		P	11 59 55.0	-0.1
	comp=Z,6.3nm,0.8s,baz=130,slow=7.8,SNR=5.3								
SCHQ					LR		LR	12 21 39.2	
	comp=Z,2µm,21.4s,baz=198,slow=31								
SCHQ	Schefferville		63.30	335	P		P	11 59 55.0	-0.1
SCHQ					IAmb		IAmb	12 00 16.5	
	comp=Z,19nm,1.2s								
ERPA	Erie		63.36	318	P		P	11 59 55.8	+0.1
	baz=116								
N53A	Lisbon		63.39	316	P		P	11 59 56.7	+0.8
	baz=114,SNR=6.1								
UZH	Uzhgorod		63.40	34	*e*P		P	11 59 53.6	-2.2
UZH					*i*			11 59 56.3	
O53A	New Philadelph		63.42	316	P		P	11 59 56.9	+0.8
	baz=114								
L53A	Girard		63.47	318	P		P	11 59 56.9	+0.4
	baz=116								
M53A	WI Miller and		63.54	317	P		P	11 59 57.2	+0.3
	baz=115								
H53A	Bobcaygeon		63.55	321	P		P	11 59 57.0	+0.1
	baz=118								
KMBO	Kilima Mbogo		63.56	92	IAMs_20		IAMs_20	12 24 49.5	
	comp=Z,3µm,19.0s								
E54A	Lac Daplat, Po		63.59	323	P		P	11 59 57.2	0.0
	baz=120								
G54A	Lake Saint Pet		63.63	322	P		P	11 59 57.3	-0.2
	baz=119								
D54A	Lac Fusel, La		63.64	324	P		P	11 59 57.1	-0.4
	baz=121								
O52A	Adamsville		63.80	315	P		P	11 59 59.2	+0.5
	baz=113								
P52A	Corning		63.83	315	P		P	11 59 60.0	+1.2
	baz=113								
G53A	Haliburton		63.84	321	P		P	11 59 58.9	+0.1
	baz=118,SNR=5.8								
CHGQ	Chibougamau		63.84	328	P		P	11 59 58.7	0.0
	baz=124								
E53A	Dumoine, Ponti		63.85	323	P		P	11 59 58.9	0.0
	baz=120								
ALGO	Algonquin Park		63.88	322	P		P	11 59 59.2	+0.1
	baz=119								
J52A	Paris		64.17	319	P		P	12 00 01.2	+0.1
	baz=116								
D53A	Lac Vacive, Po		64.22	324	P		P	12 00 01.3	0.0
	baz=120,SNR=6.8								
D53A	Lac Vacive, Po		64.22	324	IAmb		IAmb	12 00 02.0	
	comp=Z,17nm,1.0s								
I52A	Shelburne		64.34	320	P		P	12 00 02.5	+0.3
	baz=116								
E52A	Mattawa		64.41	322	P		P	12 00 02.2	-0.3
	baz=119								
P51A	Williamsport		64.43	314	IAmb		IAmb	12 00 13.9	
	comp=Z,9.4nm,0.8s								
Z50A	Ashland		64.53	307	P		P	12 00 04.4	+0.8
	baz=107								
Z50A	Ashland		64.53	307	P		P	12 00 03.9	+0.3
Z50A					IAmb		IAmb	12 00 46.9	
	comp=Z,35nm,1.6s								
BURAR	Bucovina Array		64.54	36	⇓P		P	11 59 57.5	-6.0
BURAR	Bucovina Array		64.54	36	⇓P		P	11 59 57.5	-6.0
BUR08	Bucovina Ar. S		64.55	36	P		P	12 00 03.9	+0.3
BUR08					IAmb		IAmb	12 00 35.9	
	comp=Z,18nm,1.4s								
F52A	Sundridge		64.58	322	P		P	12 00 03.8	+0.1
	baz=118,SNR=8.4								
D52A	ZEK Kipawa Sen		64.59	323	P		P	12 00 03.7	-0.1
	baz=119,SNR=8.2								
ACSO	Alum Creek Sta		64.66	315	P		P	12 00 04.7	+0.4
	baz=112								
ACSO	Alum Creek Sta		64.66	315	IAmb		IAmb	12 00 39.0	
	comp=Z,25nm,1.3s								
I51A	Listowel		64.77	319	P		P	12 00 05.1	+0.1
	baz=116								
LSQQ	Lebel-sur-Quev		64.81	326	P		P	12 00 05.1	0.0
	baz=121								
LVV	L'vov		65.00	33	*e*P		P	12 00 05.2	-1.1
P50A	Jamestown		65.01	314	P		P	12 00 07.1	+0.5
	baz=112								
CSS	Mathiatis		65.03	51	IAMs_20		IAMs_20	12 28 35.5	
	comp=Z,3µm,22.0s								
E51A	G1948 Merrick		65.03	322	P		P	12 00 06.9	+0.3
	baz=118,SNR=6.3								
KONO	Kongsberg		65.06	19	IAMs_20		IAMs_20	12 27 21.0	
	comp=Z,2µm,21.0s								
FURI	Furi		65.17	81	IAMs_20		IAMs_20	12 29 55.1	
	comp=Z,3µm,19.0s								
L50A	Kingsville		65.24	317	P		P	12 00 08.1	+0.1
	baz=113								
MATQ	Matagami		65.54	326	P		P	12 00 09.6	-0.2
	baz=121,SNR=7.6								
D50A	G1974 Best Tow		65.54	323	P		P	12 00 09.8	-0.1
	baz=118								
CLTN	Cedars of Leba		65.71	310	IAmb		IAmb	12 00 53.9	
	comp=Z,30nm,1.5s								
E50A	Wahnapitae		65.75	322	P		P	12 00 11.6	+0.4
	baz=117								
V48A	Smith Brothers		65.98	309	IAmb		IAmb	12 00 55.4	
	comp=Z,20nm,1.4s								
J49A	Marlette		65.99	318	P		P	12 00 13.3	+0.5
	baz=114								
F49A	Sandfield		66.27	321	P		P	12 00 14.8	+0.2
	baz=116								
D49A	Beulah Townshi		66.51	323	P		P	12 00 16.5	+0.3
	baz=117,SNR=12								
NB2	NORSAR Subarra		66.64	19	P		P	12 00 16.9	+0.2
	comp=Z,35nm,2.0s,baz=221,slow=6.5								
NB2	NORSAR Subarra		66.64	19	P		P	12 00 16.9	+0.2
	baz=221,slow=6.5								
NOA	NORSAR Array B		66.64	19	P		P	12 00 17.2	+0.5
	comp=Z,1.5nm,0.8s,baz=221,slow=6.3,SNR=4.1								
NOA					LR		LR	12 24 42.8	
	comp=Z,898nm,21.8s,baz=230,slow=32								
SORM	Soroca		66.64	37	⇑P		P	12 00 13.1	-3.8
E48A	Lockeyer		66.66	321	P		P	12 00 17.5	+0.5
	baz=116,SNR=7.3								
F48A	Evansville		66.67	321	P		P	12 00 17.3	+0.2
	baz=115								
PLAL	Pickwick Lake		66.74	308	IAmb		IAmb	12 01 00.0	
	comp=Z,21nm,1.4s								
D48A	Paudash Townsh		66.74	322	P		P	12 00 17.7	+0.1
	baz=116,SNR=9.2								
BR131	Keskin Array S		66.80	47	P		P	12 00 17.7	-0.6
BR131					pmax		pmax		
	comp=Z,9.0nm,0.9s								
BR131	Keskin Array S		66.80	47	P		P	12 00 17.7	-0.6
BRTR	Keskin Array B		66.80	47	P		P	12 00 17.2	-1.1
	comp=Z,4.5nm,0.9s,baz=223,slow=5.1,SNR=12								
BRTR					LR		LR	12 30 30.3	
	comp=Z,2µm,21.3s,baz=206,slow=37								
BRTR	Keskin Array B		66.80	47	*ce*P		P	12 00 20.2	+1.9
BRTR					pmax		pmax		
	comp=Z,5.0nm,0.8s								
BLO	Bloomington		66.84	313	IAMs_20		IAMs_20	12 22 00.9	
	comp=Z,2µm,18.0s								
WVT	Waverly		66.88	309	P		P	12 00 17.9	-0.8
WVT					pmax		pmax		
	comp=Z,9.0nm,1.2s								
WVT	Waverly		66.88	309	P		P	12 00 18.5	-0.2
	baz=107								
WVT	Waverly		66.88	309	P		P	12 00 17.9	-0.8
K47A	Vermontville		66.98	317	P		P	12 00 19.6	+0.4
	baz=112								
G47A	Hillman		67.19	320	P		P	12 00 21.5	+1.0
	baz=114								
E47A	Iron Bridge		67.34	321	P		P	12 00 21.7	+0.2
	baz=115								
D47A	Chapleau		67.49	322	P		P	12 00 22.3	0.0
	baz=115,SNR=8.7								
GLMI	Grayling		67.55	319	P		P	12 00 23.4	+0.6
	baz=113								
SFIN	Lafayette		67.65	314	P		P	12 00 23.4	-0.1
	baz=109								
I46A	Reed City		67.76	318	P		P	12 00 23.8	-0.3
	baz=112								
OLIL	Olney		67.86	312	IAmb		IAmb	12 01 00.4	
	comp=Z,23nm,1.1s								
E46A	Sault Ste Mari		67.96	321	IAmb		IAmb	12 00 26.2	
	comp=Z,18nm,1.1s								
344A	Westbrook Farm		67.99	304	IAMs_20		IAMs_20	12 25 04.6	
	comp=Z,2µm,19.0s								
D46A	Sault St. Mari		68.00	321	P		P	12 00 25.7	+0.2
	baz=114,SNR=8.4								
G45A	Suttons Bay		68.31	319	P		P	12 00 28.0	+0.4
	baz=112								
AKASG	Malin Array Be		68.33	34	P		P	12 00 26.7	-0.9
	comp=Z,9.1nm,0.8s,baz=240,slow=6.7,SNR=18								
AKBB	Malin Array Si		68.33	34	P		P	12 00 26.6	-0.9
AKBB					pmax		pmax		
	comp=Z,42nm,1.3s								
AKBB	Malin Array Si		68.33	34	P		P	12 00 26.6	-0.9
F45A	CMU Biological		68.46	320	P		P	12 00 28.7	+0.2
	baz=113,SNR=9.8								
Q44A	Meyer Farm, Va		68.60	312	IAMs_20		IAMs_20	12 25 28.6	
	comp=Z,2µm,19.0s								
K43A	Burlington		69.30	316	IAmb		IAmb	12 00 35.2	
	comp=Z,33nm,1.4s								
342A	Flagon Creek P		69.30	303	IAMs_20		IAMs_20	12 31 51.4	
	comp=Z,2µm,18.0s								
HDIL	Hopedale		69.30	313	P		P	12 00 33.8	0.0
	baz=108								
LCAR	Lake Charles		69.45	308	P		P	12 00 34.0	-0.9
LCAR					IAmb		IAmb	12 01 15.6	
	comp=Z,17nm,1.3s								
T42A	Van Buren		69.65	309	IAmb		IAmb	12 00 36.2	
	comp=Z,30nm,1.8s								
E43A	Lone Pine Farm		69.68	320	IAmb		IAmb	12 00 36.8	
	comp=Z,15nm,1.1s								
CCM	Cathedral Cave		70.04	310	P		P	12 00 37.6	-0.8
CCM					pmax		pmax		
	comp=Z,25nm,1.4s								
CCM	Cathedral Cave		70.04	310	P		P	12 00 37.9	-0.5
	baz=106								
CCM	Cathedral Cave		70.04	310	P		P	12 00 37.6	-0.8
CCM					IAmb		IAmb	12 01 19.8	
	comp=Z,25nm,1.4s								
UALR	University of		70.07	307	IAmb		IAmb	12 01 21.2	
	comp=Z,14nm,0.9s								
W41B	Gary Mavity, V		70.09	307	P		P	12 00 38.5	-0.3
	baz=104								
MGMO	Mountain Grove		70.59	309	IAmb		IAmb	12 01 16.1	
	comp=Z,28nm,1.4s								
JFWS	Jewell Farm		70.70	316	P		P	12 00 41.8	-0.6
	baz=108								
JFWS	Jewell Farm		70.70	316	IAmb		IAmb	12 00 42.8	
	comp=Z,23nm,1.4s								
U40A	Yellville		70.85	308	P		P	12 00 42.9	-0.6
	baz=104,SNR=6.1								
U40A	Yellville		70.85	308	IAmb		IAmb	12 01 37.0	
	comp=Z,32nm,1.6s								
R40A	Maddies Statio		70.88	310	IAmb		IAmb	12 00 43.9	
	comp=Z,40nm,1.9s								
D41A	Chassel		70.93	320	IAmb		IAmb	12 00 44.7	
	comp=Z,22nm,1.1s								
VSU	Vasula		70.96	26	⇑*e*P		P	12 00 45.1	+1.5
COWI	Conover		70.97	319	IAmb		IAmb	12 00 44.5	
	comp=Z,23nm,1.4s								
MIAR	Mount Ida		71.01	306	P		P	12 00 44.1	-0.4
	baz=103								
ANN	Anapa		71.12	42	*e*P		P	12 00 43.4	-1.5
ANN					*e**PP		pP	12 00 45.9	-0.8
ANN

baz=102
EYMN Ely 73.10 320 P P 12 00 55.5 -1.3
baz=108
SPMN Marine on St. 73.14 317 P P 12 00 56.2 -0.8
baz=107
SPMN Marine on St. 73.14 317 IAmb IAmb 12 00 57.2
comp=Z,22nm,1.2s
735A Kenedy 73.52 300 P P 12 00 60.0 +0.4
SNAA Sanae 73.80 172 P P 12 01 01.3 +0.9
SNAA Sanae 73.80 172 P P 12 01 01.4 +0.9
comp=Z,1.6nm,0.8s,baz=312,slow=3.2,SNR=6.9
SNAA Sanae 73.80 172⇓ *e*P P 12 01 00.7 +0.3
SNAA Sanae 73.80 172 P P 12 01 00.9 +0.4
SNAA IAmb IAmb 12 01 35.5
comp=Z,34nm,1.7s
T35A Sooner Cattle 73.84 308 IAmb IAmb 12 01 43.0
comp=Z,31nm,1.2s
OBN Obninsk 74.23 32 IAMs_20 IAMs_20 12 35 46.9
comp=Z,2μm,21.0s
VORD Divnogorie 74.30 37 *e*P P 12 01 02.5 -1.1
VORD pmax pmax
comp=Z,5.0nm,0.4s
VSR Storozhevoye 74.31 36 *e*P P 12 01 03.0 -0.7
VSR pmax pmax
comp=Z,10.0nm,1.0s
NEY Neytrino 74.35 45⇑ *e*P P 12 01 04.0 -0.4
NEY pmax pmax
comp=Z,1.0nm,1.2s
KIV Kislovodsk 74.50 44⇓ *e*P P 12 01 05.8 +0.7
KIV *e* 12 01 13.5
KIV *e* 12 01 22.3
KIV *e*PPP PPP 12 05 34.4
KIV pmax pmax
comp=Z,17nm,1.7s
KBZ Khabaz 74.59 45 P P 12 01 05.5 +0.1
comp=Z,5.0nm,0.9s,baz=264,slow=4.0,SNR=6.2
LPSR Galich'ya Gora 74.63 35 *e*P P 12 01 04.5 -1.0
LPSR pmax pmax
comp=Z,10.0nm,0.8s
B35A Bob, Littlefor 74.65 320 IAmb IAmb 12 01 06.0
comp=Z,27nm,1.4s
833A Chaparral WMA, 74.82 299 P P 12 01 07.9 +0.7
baz=98
MOS Moscow 75.02 32 *e*P P 12 01 19.5 +12
MOS MLR MLR
comp=Z,2μm,20.0s
ZEI Tsey 75.08 46 *e*P P 12 01 06.6 -2.0
ZEI pmax pmax
comp=Z,12nm,1.5s
WMOK Wichita Mounta 75.26 306 P P 12 01 08.7 -0.9
WMOK pmax pmax
comp=Z,35nm,1.9s
WMOK Wichita Mounta 75.26 306 P P 12 01 09.0 -0.6
baz=100,SNR=7.2
WMOK Wichita Mounta 75.26 306 P P 12 01 08.7 -0.9
WMOK IAmb IAmb 12 01 10.0
comp=Z,35nm,1.9s
ECSD EROS Data Cent 75.39 315 P P 12 01 09.4 -0.8
baz=103,SNR=9.8
JCT Junction City 75.47 301 P P 12 01 11.2 +0.3
baz=98
JCT Junction City 75.47 301 IAmb IAmb 12 01 45.8
comp=Z,39nm,1.4s
ABTX Abilene, Hawle 75.64 303 P P 12 01 11.8 0.0
baz=99,SNR=7.1
ABTX Abilene, Hawle 75.64 303 IAmb IAmb 12 01 46.5
comp=Z,27nm,1.2s
R32A Long Quarter, 75.84 309 IAmb IAmb 12 01 13.6
comp=Z,29nm,1.4s
AGMN Agassiz Nation 76.00 320 P P 12 01 13.1 -0.4
baz=105,SNR=7.2
DAG Danmarks Havn 76.13 2 *i* P P 12 01 14.0 +0.3
DAG pmax pmax
comp=Z,5.0nm,0.8s
DAG Danmarks Havn 76.13 2 *i* P P 12 01 14.0 +0.3
comp=Z,4.6nm,0.8s
ULM Lac du Bonnet 76.53 322 P P 12 01 15.8 -0.7
comp=Z,5.2nm,0.8s,baz=77,slow=5.2,SNR=5.9
ULM LR LR 12 31 12.6
comp=Z,684nm,20.0s,baz=120,slow=33
CBKS Cedar Bluff 76.71 310 IAmb IAmb 12 01 59.6
comp=Z,34nm,1.4s
MAK Makhachkala 77.71 46 *e*P P 12 01 18.5 -4.7
MAK *e*S S 12 11 09.0 -6.6
MAK pmax pmax
comp=Z,131nm,0.9s
MAK MLR MLR
comp=Z,1μm,17.0s
KLMR Klimovskoe 77.82 27 *e*P P 12 01 22.5 -1.0
KLMR pmax pmax
comp=Z,38nm,1.5s
KLMR Klimovskoe 77.82 27 *e*P P 12 01 22.6 -1.0
KLMR AMP 12 01 27.0
comp=Z,38nm,1.5s
APA Apatity 78.19 20⇓ *i*P P 12 01 33.3 +7.8
APA pmax pmax
comp=Z,9.0nm,1.0s
TX31 Lajitas Ar. Si 78.66 300 P P 12 01 28.8 -0.2
TXAR Lajitas Array 78.66 300 P P 12 01 29.0 0.0
comp=Z,2.4nm,0.9s,baz=122,slow=8.2,SNR=20
TXAR LR LR 12 37 32.7
comp=Z,320nm,19.1s,baz=0.0,slow=37
LVZ Lovozero 78.77 20⇑ *e*P P 12 01 30.4 +1.7
OGNE Ogallala 78.80 312 IAMs_20 IAMs_20 12 31 27.6
comp=Z,2μm,20.0s
E28A Huff 78.81 317 IAmb IAmb 12 01 30.5
comp=Z,32nm,1.0s
TULEG Thule 79.39 351 P P 12 01 32.0 +0.1
T25A Trinidad 80.12 307 P P 12 01 38.0 +1.0
baz=97,SNR=6.3
MNTX Cornudas Mount 80.36 302 P P 12 01 38.1 0.0
baz=95,SNR=8.7
MNTX Cornudas Mount 80.36 302 P P 12 01 37.6 -0.5
RSSD Black Hills 80.73 315 P P 12 01 39.8 -0.3
RSSD pmax pmax
comp=Z,9.0nm,1.2s
RSSD Black Hills 80.73 315 P P 12 01 40.6 +0.5
baz=98
RSSD Black Hills 80.73 315 P P 12 01 39.8 -0.3
Q24A Divide 80.91 309 P P 12 01 42.6 +1.3
baz=96,SNR=6.8
SDCO Great Sand Dun 81.05 308 P P 12 01 43.3 +1.3
baz=96,SNR=23
FFC Flin Flon 81.20 325 P P 12 01 41.2 -0.9
FFC pmax pmax
comp=Z,12nm,1.4s
FFC Flin Flon 81.20 325 P P 12 01 41.1 -0.9
ISCO Idaho Springs 81.36 310 P P 12 01 44.9 +1.2
baz=96,SNR=6.9
ISCO Idaho Springs 81.36 310 IAmb IAmb 12 02 19.1
comp=Z,34nm,1.9s
DGMT Dagmar 81.47 319 P P 12 01 45.1 +1.3
baz=99
ANMO Albuquerque 81.55 305⇓ *e*P P 12 01 45.3 +0.7
ANMO pmax pmax
comp=Z,13nm,1.5s
ANMO Albuquerque 81.55 305 P P 12 01 45.8 +1.1
baz=95
ANMO Albuquerque 81.55 305 P P 12 01 44.5 -0.1
N23A Red Feather La 81.73 311 P P 12 01 46.7 +1.1
baz=96,SNR=8.3
S22A 4UR Ranch, Cre 82.10 308 P P 12 01 48.8 +1.3
baz=95,SNR=8.6
SYO Syowa Base 82.17 161⇓ *e*P P 12 01 47.2 +0.3
SYO Syowa Base 82.17 161⇑ *e*PcP PcP 12 01 50.6 -1.6
LAO LASA Array 82.59 317 P P 12 01 50.7 +1.0
baz=97,SNR=12
MVCO Mesa Verde 83.38 307 P P 12 01 55.5 +1.3
baz=94,SNR=6.9
MVCO Mesa Verde 83.38 307 IAmb IAmb 12 02 19.1
comp=Z,35nm,1.7s
O20A White River Ci 83.40 310 P P 12 01 55.3 +1.1
baz=95
O20A White River Ci 83.40 310 IAmb IAmb 12 02 17.3
comp=Z,22nm,1.3s
PV01 Paradox Valley 83.50 308 IAmb IAmb 12 02 42.1
comp=Z,25nm,1.8s
PV04 Paradox Valley 83.78 308 IAMs_20 IAMs_20 12 39 47.6
comp=Z,1μm,18.0s
X18A Snowflake 84.39 304 IAmb IAmb 12 02 34.8
comp=Z,19nm,1.4s
RLMT Red Lodge 84.55 315 P P 12 02 00.5 +0.5
baz=94,SNR=8.4
RLMT Red Lodge 84.55 315 IAmb IAmb 12 02 01.7
comp=Z,10nm,1.0s
PD31 Pinedale Array 84.59 313 P P 12 01 59.6 -0.7

PDAR Pinedale Array 84.59 313 P P 12 01 59.9 -0.4
comp=Z,1.3nm,0.8s,baz=90,slow=8.9,SNR=7.1
PDAR LR LR 12 34 34.4
comp=Z,842nm,21.6s,baz=111,slow=32
GCMT Greycliff 84.89 316 P P 12 02 01.6 0.0
TUC Tucson 84.98 302 P P 12 02 02.2 -0.1
TUC pmax pmax
comp=Z,7.0nm,1.2s
TUC Tucson 84.98 302 P P 12 02 02.2 -0.1
EGMT Eagleton 85.11 318 IAmb IAmb 12 02 03.9
comp=Z,21nm,1.2s
GYA0B ALIBECK ARRAY 85.16 52 IAMs_20 IAMs_20 12 42 35.4
comp=Z,2μm,22.0s
ASHT Ashkhabad 85.37 52 IAMs_20 IAMs_20 12 47 25.0
comp=Z,2μm,22.0s
H17A Grant Village 85.43 314 P P 12 02 06.2 +1.8
baz=94
H17A Grant Village 85.43 314 IAmb IAmb 12 02 09.7
comp=Z,19nm,1.4s
SNOW Snow King Moun 85.51 313 IAmb IAmb 12 02 06.6
comp=Z,23nm,1.3s
WUAZ Wupatki 85.60 305 P P 12 02 06.9 +1.5
baz=92
TPAW Teton Pass 85.65 313 IAmb IAmb 12 02 47.8
comp=Z,18nm,1.0s
IMW Indian Meadow 85.67 314 IAmb IAmb 12 02 07.4
comp=Z,19nm,1.4s
FXWY Fox Creek 85.71 314 IAMs_20 IAMs_20 12 32 39.5
comp=Z,1μm,21.0s
AHID Auburn Hatcher 85.72 313 IAmb IAmb 12 02 07.3
comp=Z,31nm,1.6s
HWUT Hardware Ranch 86.01 311 IAmb IAmb 12 02 08.7
comp=Z,17nm,1.2s
HWUT IAMs_20 IAMs_20 12 34 11.4
comp=Z,2μm,20.0s
ARU Arti 86.58 34 *c i*P P 12 02 10.2 +0.7
ARU 12 05 28.4
ARU S **SKSac** 12 12 36.5 +0.3
ARU SS **SS** 12 18 26.4 -0.4
ARU pmax pmax
comp=Z,10.0nm,1.3s
ARU Arti 86.58 34 P P 12 02 09.9 +0.4
ARU IAmb IAmb 12 02 46.1
comp=Z,23nm,1.4s
DUG Dugway, Tooele 86.90 310 P P 12 02 12.5 +0.9
baz=92,SNR=8.3
DLMT Dillon 86.92 315 IAmb IAmb 12 02 14.0
comp=Z,17nm,1.3s
MSO Missoula 87.89 317 P P 12 02 16.5 +0.3
baz=91
Y12C Blythe 88.15 304 P P 12 02 18.7 +1.1
baz=90
YKA Yellowknife Ar 88.62 332 P P 12 02 18.5 -0.6
comp=Z,0.9nm,0.8s,baz=97,slow=5.7,SNR=14
YKA LR LR 12 39 20.2
comp=Z,707nm,18.6s,baz=0.0,slow=34
IRM Iron Mountain 88.67 304 P P 12 02 21.7 +1.5
baz=90
BC3 Big Chuckawall 88.93 303 P P 12 02 21.8 +0.3
baz=90
R11A Troy Canyon, C 89.03 308 P P 12 02 22.6 +0.7
baz=90
GMRC Granite Mounta 89.10 305 P P 12 02 23.0 +0.7
baz=90,SNR=5.6
TUQ Turquoise Moun 89.31 305 P P 12 02 24.3 +1.0
baz=90
BELC Belle Mtn. Jos 89.38 304 P P 12 02 24.2 +0.6
baz=90
TPNV Topopah Spring 89.56 307 P P 12 02 25.6 +1.1
baz=90
HEC Hector,Ludlow 89.65 305 P P 12 02 26.3 +1.5
baz=89
PFO Pinyon Flats O 89.77 303 P P 12 02 26.9 +1.5
baz=89
FURC Furnace Creek, 90.06 306 P P 12 02 28.2 +1.6
baz=89
QSPA South Pole Qui 90.75 180 P P 12 02 28.8 -0.5
NVAR Mina Array Bea 91.16 308 LR LR 12 41 19.2
comp=Z,492nm,19.1s,baz=86,slow=34
I07A Izee 91.84 314 IAMs_20 IAMs_20 12 35 59.7
comp=Z,1μm,21.0s
MOD Modoc Plateau 92.54 312 IAmb IAmb 12 02 39.9
comp=Z,16nm,1.8s
BRVK Borovoye 93.42 37⇑ *e*P P 12 02 43.2 +1.5
BRVK pmax pmax
comp=Z,9.0nm,2.7s
BTK Batken 95.01 50 IAMs_20 IAMs_20 12 49 36.0
comp=Z,2μm,19.0s
AAK Ala-Archa 97.47 47 IAMs_20 IAMs_20 12 53 33.8
comp=Z,1μm,20.0s
FRU1 Bishkek 97.55 47 IAMs_20 IAMs_20 12 51 18.8
comp=Z,2μm,22.0s
NIL Nilore 97.57 56 IAMs_20 IAMs_20 12 52 19.5
comp=Z,2μm,18.0s
KURK Kurchatov 98.88 38 IAMs_20 IAMs_20 12 48 47.3
comp=Z,1μm,19.0s
KSH Kashi 99.02 50 P **Pdif** 12 03 07.4 -0.3
KSH pP sP 12 03 11.4 +1.2
KSH sP pwP 12 03 14.4 -1.2
KSH pmax pmax
comp=Z,9.0nm,0.5s
KSH pmax pmax
comp=Z,120nm,5.2s
MAKZ Makanchi 101.93 42 IAMs_20 IAMs_20 12 59 11.2
comp=Z,1μm,21.0s
GHO Glory Hole Cre 104.24 336 IAMs_20 IAMs_20 12 38 09.1
comp=Z,1μm,20.0s
BILL Bilibino 110.86 355 IAMs_20 IAMs_20 12 45 04.4
comp=Z,829nm,19.0s
LSA Lhasa 113.27 57 IAMs_20 IAMs_20 13 00 04.5
comp=Z,890nm,20.0s
ULN Ulaanbaatar 116.96 33 IAMs_20 IAMs_20 13 03 30.0
comp=Z,1μm,20.0s
MA2 Magadan 119.87 2⇓ *i*PKIKP **PKPdf** 12 08 15.8 -0.8
LZH Lanzhou 121.00 46 *e*PKP **PKPdf** 12 08 19.0 -0.7
LZH sPKP 12 08 23.6
LZH LR LR
comp=Z,230nm,18.0s
LZH LR LR
comp=Z,240nm,18.2s
LZH LR LR
comp=Z,300nm,20.1s
CD2 Chengdu 123.15 52 PKP **PKPdf** 12 08 22.5 -1.4
HHC Hu-ho-hao-te 123.69 38 *e*PKP **PKPdf** 12 08 22.8 -1.9
HHC LR LR
comp=Z,290nm,21.1s
HHC LR LR
comp=Z,400nm,19.4s
HHC LR LR
comp=Z,440nm,19.3s
RPSI Rantau Prapat 125.13 86 IAMs_20 IAMs_20 12 55 08.2
comp=Z,967nm,22.0s
XAN Xi'an 125.64 46 IAMs_20 IAMs_20 13 07 38.4
comp=Z,1μm,22.0s
KLR Kul'dur 126.80 18⇓ *i*PKIKP **PKiKP** 12 08 30.5 -0.2
GYA Guiyang 127.27 56 *e*Pdif **Pdif** 12 05 13.0 -0.6
GYA PKP **PKPdf** 12 08 30.8 -1.1
GYA PP **PP** 12 10 34.4 +3.4
GYA AMB AMB
comp=Z,120nm,7.8s
MDJ Mudanjiang 130.05 22 IAMs_20 IAMs_20 13 13 27.2
comp=Z,712nm,20.0s
NJ2 Nanjing 133.67 42 *e*PKP **PKPdf** 12 08 42.9 -0.8
HKPS Hong Kong Po S 135.19 57 IAMs_20 IAMs_20 13 10 06.7
comp=Z,725nm,20.0s
INU Inuyama 140.91 22 IAMs_20 IAMs_20 13 09 02.6
comp=Z,678nm,21.0s
STKA Stephens Creek 146.93 161 PKPbc **PKPbc** 12 09 08.9 -0.6
comp=Z,5.3nm,1.0s,baz=236,slow=1.7,SNR=5.8
STKA Stephens Creek 146.93 161 PKP2 **PKPdf** 12 09 08.2 +0.5
STKA Stephens Creek 146.93 161 **PKPdf** 12 09 08.2 +0.5
FITZ Fitzroy Crossi 147.44 124 PKPbc **PKPbc** 12 09 11.8 +0.4
comp=Z,3.5nm,0.8s,baz=243,slow=1.5,SNR=4.0
FITZ Fitzroy Crossi 147.44 124 **PKPdf** 12 09 08.9 +0.1
ASAR Alice Springs 150.15 141 PKPbc **PKPbc** 12 09 17.6 -0.6
comp=Z,5.3nm,0.8s,baz=203,slow=2.1,SNR=16
AS31 Alice Springs 150.15 141 **PKPdf** 12 09 13.6 +0.4
WRA Warramunga Arr 153.06 136 PKPbc **PKiKP** 12 09 25.8 +0.7
comp=Z,3.1nm,1.0s,baz=246,slow=1.9,SNR=6.1
WC3 Warramunga Arr 153.07 137 IAMs_20 IAMs_20 13 04 20.5
comp=Z,673nm,22.0s
WB5 Warramunga Arr 153.12 136 IAMs_20 IAMs_20 13 04 37.9
comp=Z,714nm,20.0s
WR7 Warramunga Arr 153.14 137 IAMs_20 IAMs_20 13 02 34.5
comp=Z,774nm,21.0s
WB8 Warramunga Arr 153.17 136 IAMs_20 IAMs_20 13 11 13.3
comp=Z,974nm,22.0s

*IDC **24** 11:55:58.8±2.8, 32°.44N×141°.75E, h0km, mb3.9/2, mb1 3.7/4, mb1mx3.4/45, mbtmp3.8/4, ML3.2/2, MS4.1/1, Ms1 4.1/1, ms1mx3.6/39, Error ellipse: s-maj=63.6km s-min=28.0km az=56.0*
ISC 24 11:56:01.5±1.2, **32°.55N**±0°.09×**142°.0E**±0°.1, **h39**km, **n7,**
σ2s 01/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**1.97**	**287**	Pn	**Pn**	**11 56 30.7**	**-1.7**
	15nm,0.3s,baz=234,slow=23,SNR=7.2						
JHJ				Sn	**Sn**	**11 56 55.1**	**-0.8**
	34nm,0.3s,baz=230,slow=23,SNR=6.0						
MJAR	**Matsushiro Arr**	**5.08**	**323**	Pn	**Pn**	**11 57 14.4**	**-0.7**
	0.2nm,0.3s,baz=149,slow=11,SNR=12						
JCJ	**Chichijima**	**5.44**	**179**	Pn	**Pn**	**11 57 19.6**	**-0.4**
	4.7nm,0.3s,baz=23,slow=7.3						
JCJ				Sn	**Sn**	**11 58 19.3**	**-2.0**
	4.0nm,0.3s,baz=337,slow=23,SNR=1.2						
JNU	**Nakatsue**	**9.40**	**276**	LR	LR	12 00 48.6	
	comp=Z,1μm,19.9s,baz=108,slow=32						
ASAJ	**Asahikawa**	**11.56**	**2**	Pn	**Pn**	**11 58 41.9**	**-1.9**
	0.5nm,0.3s,baz=203,slow=18,SNR=6.5						
SONM	**Songino Array**	**30.89**	**310**	P	**P**	**12 02 16.6**	**+2.3**
	1.2nm,0.8s,baz=114,slow=10,SNR=4.2						
MKAR	**Makanchi Array**	**47.04**	**306**	P	**P**	**12 04 30.9**	**+1.8**
	1.3nm,0.8s,baz=87,slow=9.4,SNR=3.6						

*IDC **24** 11:59:56.8±5.6, 7°.62S×128°.56E, h170km±65km, mb3.5/3, mb1 3.4/6, mb1mx3.1/29, mbtmp3.9/6, Error ellipse: s-maj=57.0km s-min=23.4km az=37.0*
ISC 24 11:59:54.4±1.0, **7°.75S**±0°.08×**128°.8E**±0°.1, **h150**km, **n7,**
σ2s 41/11, mb3.8/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.65**	**244**	P	**Pn**	**12 01 17.8**	**+1.3**
	58nm,0.3s,baz=68,slow=2.8,SNR=39						
BATI				S	**Sn**	**12 02 19.8**	**-0.9**
	22nm,0.3s,baz=56,slow=23,SNR=5.2						
FITZ	**Fitzroy Crossi**	**10.74**	**196**	P	**Pn**	**12 02 26.4**	**+2.2**
	0.4nm,0.3s,baz=18,slow=10.0,SNR=17						
FITZ				S	**Sn**	**12 04 20.7**	**-2.4**
	1.4nm,0.3s,baz=90,slow=20,SNR=7.4						
WRA	**Warramunga Arr**	**13.25**	**157**	P	**P**	**12 02 59.7**	**-1.5**
	0.7nm,0.3s,baz=342,slow=12,SNR=9.9						
WRA				S	**Sn**	**12 05 21.6**	**-1.9**
	1.1nm,0.3s,baz=321,slow=25,SNR=9.3						
ASAR	**Alice Springs**	**16.56**	**163**	P	**Pn**	**12 03 42.6**	**+4.5**
	0.3nm,0.3s,baz=336,slow=10,SNR=46						
ASAR				S	**S**	**12 06 40.9**	**-1.3**
	0.2nm,0.3s,baz=346,slow=25,SNR=4.1						
PETK	**Petropavlovsk-**	**65.40**	**19**	P	**P**	**12 10 21.3**	**+0.6**
	0.8nm,0.5s,baz=199,slow=8.6,SNR=4.2						
MKAR	**Makanchi Array**	**68.22**	**328**	P	**P**	**12 10 37.2**	**-1.5**
	0.5nm,0.5s,baz=119,slow=9.6,SNR=6.8						
ZALV	**Zalesovo Beam**	**71.74**	**334**	P	**P**	**12 10 58.4**	**-1.6**
	0.8nm,0.4s,baz=178,slow=9.4,SNR=2.3						

*SOF **24** 12:00:14.6, 40°.29N×25°.67E, h5km, MD3.3*
*ISK **24** 12:00:16.5, 40°.29N×25°.64E, h4km, ML3.7/40*
*ATH **24** 12:00:16.1, 40°.31N×25°.63E, h26km±1km, ML3.3/21, Error ellipse: s-maj=1.5km s-min=0.9km az=61.0*
*THE **24** 12:00:16.9, 40°.30N×25°.65E, h12km±1km, ML3.2/12, Error ellipse: s-maj=1.2km s-min=0.6km az=71.0*
*DDA **24** 12:00:18.2, 40°.28N×25°.78E, h6km±2km, ML3.4*
ISC 24 12:00:16.9±0.8, **40°.28N**±0°.01×**25°.62E**±0°.01, **h13**km±6km,
n156, σ0s **89/202, 9C-12D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMTH	**Samothraki Isl**	**0.20**	**341**	P	**Pg**	**12 00 21.5**	**0.0**
SMTH				S	**Sg**	**12 00 24.4**	**-0.2**
	16μm,0.2s						
SMTH	**Samothraki Isl**	**0.20**	**341**	P	**Pg**	**12 00 21.5**	**0.0**
SMTH				S	**Sg**	**12 00 24.5**	**-0.2**
SMTH				AML	AML	12 00 24.8	
	comp=E,27708μm,0.2s						
SMTH				AML	AML	12 00 24.9	
	comp=N,26227μm,0.1s						
GADA	**Gvkgeada**	**0.23**	**112**	P	**Pg**	**12 00 21.9**	**-0.1**
GADA				S	**Sg**	**12 00 25.1**	**-0.3**
	comp=N,10μm,0.5s						
GADA	**Gvkgeada**	**0.23**	**112**	PG	**Pg**	**12 00 21.8**	**-0.2**
GADA				SG	**Sg**	**12 00 25.3**	**-0.1**
LIA	**Limnos Island**	**0.51**	**221**	P	**Pb**	**12 00 27.7**	**0.0**
LIA				S	**Sb**	**12 00 35.3**	**+0.4**
	comp=N,4μm,0.3s						
LIA	**Limnos Island**	**0.51**	**221**	P	**Pb**	**12 00 27.6**	**0.0**
LIA				S	**Sb**	**12 00 35.2**	**+0.4**
LIA				AML	AML	12 00 36.5	
	comp=N,6988μm,0.3s						
LIA				AML	AML	12 00 37.3	
	comp=E,8858μm,0.3s						
BOZC	**Bozcaada**	**0.55**	**142**	PG	**Pg**	**12 00 27.9**	**-0.5**
BOZC				SG	**Sg**	**12 00 35.6**	**-0.6**
BOZC	**Bozcaada**	**0.55**	**142**	*i* P	**Pb**	**12 00 27.9**	**-0.5**
BOZC				*i* P	**Pg**	**12 00 28.1**	**+0.3**
BOZC				*i* S	**Sg**	**12 00 34.8**	**-0.2**
BOZC				*i* S	**Sb**	**12 00 35.2**	**-0.9**
ENEZ	**Enez**	**0.61**	**42**	P	**Pg**	**12 00 28.2**	**-0.7**
ENEZ				S	**Sg**	**12 00 36.4**	**-0.6**
	comp=E,4μm,0.3s						
ENEZ	**Enez**	**0.61**	**42**	PG	**Pg**	**12 00 27.9**	**-1.0**
ENEZ				SG	**Sb**	**12 00 37.4**	**-0.6**
GELI	**Tayfur-Gelibol**	**0.67**	**79**	PG	**Pg**	**12 00 29.4**	**-0.5**
GELI				SG	**Sb**	**12 00 38.4**	**-1.1**
ALN	**Alexandroupoli**	**0.70**	**28**	P	**Pg**	**12 00 29.8**	**-0.7**
ALN				S	**Sg**	**12 00 39.2**	**-0.5**
	comp=E,2μm,0.3s						
ALN	**Alexandroupoli**	**0.70**	**28**	P	**Pg**	**12 00 29.9**	**-0.7**
ALN				S	**Sg**	**12 00 38.8**	**-0.9**
ALN				AML	AML	12 00 39.8	
	comp=N,4805μm,0.4s						
ALN				AML	AML	12 00 42.4	
	comp=E,3555μm,0.3s						
ALN	**Alexandroupoli**	**0.70**	**28**	PG	**Pg**	**12 00 29.8**	**-0.7**
EZN	**Ezine**	**0.71**	**130**	P	**Pg**	**12 00 30.3**	**-0.4**
EZN				S	**Sg**	**12 00 39.8**	**-0.2**
	comp=E,1μm,0.4s						
EZN	**Ezine**	**0.71**	**130**	PG	**Pg**	**12 00 30.0**	**-0.7**
THAS	**Thassos island**	**0.76**	**296**	P	**Pb**	**12 00 31.9**	**-0.1**
THAS				S	**Sb**	**12 00 42.7**	**+0.5**
	comp=E,2μm,0.8s						
THAS	**Thassos island**	**0.76**	**296**	P	**Pb**	**12 00 31.8**	**-0.1**
THAS				S	**Sg**	**12 00 41.9**	**+0.3**
THAS				AML	AML	12 00 53.2	
	comp=N,4826μm,0.6s						
THAS				AML	AML	12 00 53.8	
	comp=E,3478μm,0.6s						
ERIK	**Erikli-Kesan**	**0.79**	**60**	PG	**Pb**	**12 00 32.1**	**-0.3**
RDO	**Rodhopi**	**0.87**	**356**	P	**Pg**	**12 00 33.2**	**-0.6**
RDO				S	**Sg**	**12 00 44.2**	**-0.9**
	comp=E,1μm,0.3s						
RDO	**Rodhopi**	**0.87**	**356**	P	**Pg**	**12 00 33.2**	**-0.6**
RDO				AML	AML	12 00 47.9	
	comp=N,3439μm,0.2s						
RDO				AML	AML	12 00 47.9	
	comp=E,2350μm,0.1s						
RDO	**Rodhopi**	**0.87**	**356**	PG	**Pb**	**12 00 33.7**	**-0.1**
LPK	**Lapseki**	**0.88**	**84**	PG	**Pg**	**12 00 33.3**	**-0.6**
EFSA	**Agios Efstrati**	**0.88**	**213**	P	**Pb**	**12 00 34.9**	**+0.8**
EFSA				AML	AML	12 00 49.9	
	comp=N,9060μm,0.3s						
EFSA				AML	AML	12 00 50.5	
	comp=E,8740μm,0.7s						
BAYC	**CANAKKALE_Bayr**	**0.89**	**127**	*i* P	**Pg**	**12 00 33.8**	**-0.4**
BAYC				*i* S	**Sb**	**12 00 45.7**	**-0.4**
KESN	**Edirne-Kesan**	**0.98**	**56**	*i* P	**Pb**	**12 00 35.3**	**-0.7**
KESN				*i* S	**Sg**	**12 00 47.2**	**-1.5**
KESN				IAML		12 00 50.0	
	comp=N,2μm,0.5s						
KESN				IAML		12 00 50.0	
	comp=E,3μm,0.3s						
SIGR	**SIGRI**	**1.08**	**170**	P	**Pg**	**12 00 37.4**	**-0.4**
SIGR				S	**Sb**	**12 00 52.4**	**+1.0**
	comp=E,6μm,0.8s						
SIGR	**SIGRI**	**1.08**	**170**	P	**Pb**	**12 00 37.8**	**+0.3**
SIGR				S	**Sb**	**12 00 52.4**	**+1.0**
SIGR				AML	AML	12 00 54.2	
	comp=E,7850μm,0.8s						

SIGR					AML	AML	12 00 55.1		
	comp=N,14489μm,0.8s								
SIGR	**SIGRI**	**1.08**	**170**	PN	**Pn**	**Pn**	**12 00 38.1**	**+0.4**	
KAVA	**Kavala**	**1.10**	**311**	P	**Pg**	**Pg**	**12 00 37.8**	**-0.4**	
KAVA				S	**Sb**	**Sb**	**12 00 52.8**	**+0.7**	
	comp=N,712nm,0.3s								
KAVA	**Kavala**	**1.10**	**311**	P	**Pg**	**Pg**	**12 00 37.8**	**-0.4**	
KAVA				S	**Sb**	**Sb**	**12 00 53.1**	**+1.0**	
KAVA				AML	AML	AML	12 00 54.0		
	comp=N,1631μm,0.2s								
KAVA				AML	AML	AML	12 00 55.8		
	comp=E,1198μm,0.2s								
KVLA	**Kavala**	**1.15**	**305**	P	**Pg**	**Pg**	**12 00 38.5**	**-0.5**	
KVLA				S	**Sg**	**Sg**	**12 00 53.5**	**-0.4**	
UKOP	**Uzunkopru-Edir**	**1.15**	**42**	PN	**Pb**	**Pb**	**12 00 38.5**	**-0.1**	
PRK	**Paraskevi**	**1.15**	**154**	P	**Pn**	**Pn**	**12 00 39.8**	**+1.1**	
PRK				AML	AML	AML	12 00 57.9		
	comp=N,6524μm,0.3s								
PRK				AML	AML	AML	12 00 57.9		
	comp=E,6996μm,0.4s								
OUR	**Ouranopolis**	**1.25**	**273**	P	**Pn**	**Pn**	**12 00 39.8**	**-0.3**	
OUR				S	**Sg**	**Sg**	**12 00 55.9**	**-1.4**	
	comp=E,1μm,0.4s								
OUR	**Ouranopolis**	**1.25**	**273**	P	**Pn**	**Pn**	**12 00 40.0**	**-0.1**	
OUR				S	**Sg**	**Sg**	**12 00 56.3**	**-1.0**	
OUR				AML	AML	AML	12 01 00.7		
	comp=N,2584μm,0.5s								
OUR				AML	AML	AML	12 01 00.7		
	comp=E,2842μm,0.3s								
OUR	**Ouranopolis**	**1.25**	**273**	PN	**Pg**	**Pg**	**12 00 41.2**	**+0.2**	
RKY	**Sarkoy-Tekirda**	**1.26**	**71**	PN	**Pg**	**Pg**	**12 00 40.2**	**-1.0**	
SART	**Tekirdag**	**1.26**	**71**	*i* P	**Pg**	**Pg**	**12 00 39.5**	**-1.7**	
SART				*i* S	**Sg**	**Sg**	**12 00 55.7**	**-1.9**	
AYVA	**Ayvalik**	**1.27**	**139**	*i* P	**Pg**	**Pg**	**12 00 40.9**	**-0.6**	
AYVA				*i* S	**Sb**	**Sb**	**12 00 57.6**	**+0.6**	
AYVA				IAML			12 01 00.0		
	comp=N,3μm,0.6s								
AYVA				IAML			12 01 01.0		
	comp=E,2μm,0.5s								
KRBG	**Karabiga-Canak**	**1.29**	**84**	PN	**Pg**	**Pg**	**12 00 41.2**	**-0.5**	
KDZ	**Kurdzhali**	**1.38**	**354**	P	**Pn**	**Pn**	**12 00 41.5**	**-0.3**	
KDZ	**Kurdzhali**	**1.38**	**354**	PN	**Pb**	**Pb**	**12 00 42.5**	**-0.1**	
KNL	**Balıkesir**	**1.46**	**90**	*i* P	**Pb**	**Pb**	**12 00 43.5**	**-0.4**	
KNL				*i* S	**Sb**	**Sb**	**12 01 02.2**	**-0.2**	
KNL				IAML			12 01 04.0		
	comp=N,1μm,0.6s								
KNL				IAML			12 01 04.0		
	comp=E,1μm,0.4s								
PAIG	**Paliouri**	**1.53**	**257**	P	**Pn**	**Pn**	**12 00 43.4**	**-0.5**	
PAIG	**Paliouri**	**1.53**	**257**	P	**Pn**	**Pn**	**12 00 43.5**	**-0.4**	
PAIG				AML	AML	AML	12 01 10.0		
	comp=N,1042μm,0.4s								
PAIG				AML	AML	AML	12 01 12.7		
	comp=E,550μm,0.7s								
MRMT	**Marmara Adasi**	**1.54**	**77**	PN	**Pn**	**Pn**	**12 00 44.6**	**+0.4**	
DKL	**Dikili**	**1.56**	**140**	PN	**Pb**	**Pb**	**12 00 45.4**	**-0.3**	
RZN	**Rozhen**	**1.56**	**334**	P	**Pn**	**Pn**	**12 00 44.9**	**+0.3**	
GONE	**Gonen-Balikesi**	**1.60**	**98**	PN	**Pb**	**Pb**	**12 00 45.9**	**-0.4**	
TKR	**Tekirdag**	**1.62**	**63**	PN	**Pb**	**Pb**	**12 00 46.2**	**-0.5**	
SKY	**Skiros Island**	**1.62**	**211**	P	**Pn**	**Pn**	**12 00 45.0**	**-0.2**	
SKY	**Skiros Island**	**1.62**	**211**	P	**Pn**	**Pn**	**12 00 45.1**	**-0.2**	
SKY				AML	AML	AML	12 01 14.6		
	comp=N,1709μm,0.3s								
SKY				AML	AML	AML	12 01 14.8		
	comp=E,1747μm,0.4s								
BALY	**Balya**	**1.63**	**109**	*i* P	**Pn**	**Pn**	**12 00 46.0**	**+0.6**	
BALY				*i* S	**Sb**	**Sb**	**12 01 07.2**	**-0.1**	
BALY				IAML			12 01 10.0		
	comp=N,1μm,0.6s								
BALY				IAML			12 01 12.0		
	comp=E,598nm,0.7s								
PLG	**Polygyros**	**1.66**	**274**	P	**Pn**	**Pn**	**12 00 45.8**	**0.0**	
PLG	**Polygyros**	**1.66**	**274**	P	**Pn**	**Pn**	**12 00 45.7**	**-0.1**	
PLG				AML	AML	AML	12 01 13.5		
	comp=N,1330μm,0.5s								
PLG				AML	AML	AML	12 01 14.7		
	comp=E,1328μm,0.4s								
EDC	**Edincik**	**1.72**	**87**	PN	**Pb**	**Pb**	**12 00 47.6**	**-0.7**	
ZEDA	**zmir-Bergama**	**1.73**	**139**	*i* P	**Pn**	**Pn**	**12 00 47.3**	**+0.6**	
ZEDA				*i* S	**Sb**	**Sb**	**12 01 10.5**	**+0.4**	
ZEDA				IAML			12 01 13.0		
	comp=N,341nm,0.4s								
ZEDA				IAML			12 01 14.0		
	comp=E,425nm,0.5s								
PSRA	**Psara**	**1.74**	**181**	P	**Pn**	**Pn**	**12 00 48.0**	**+1.3**	
AOS	**Alonnisos**	**1.74**	**231**	P	**Pn**	**Pn**	**12 00 47.0**	**+0.2**	
AOS	**Alonnisos**	**1.74**	**231**	P	**Pn**	**Pn**	**12 00 46.6**	**-0.2**	
AOS				AML	AML	AML	12 01 24.3		
	comp=N,1303μm,1.4s								
AOS				AML	AML	AML	12 01 24.8		
	comp=E,1846μm,0.8s								
AOS	**Alonnisos**	**1.74**	**231**	PN	**Pb**	**Pb**	**12 00 48.4**	**-0.3**	
SRS	**Serrai**	**1.75**	**299**	P	**Pn**	**Pn**	**12 00 47.0**	**0.0**	
SRS	**Serrai**	**1.75**	**299**	P	**Pn**	**Pn**	**12 00 47.1**	**+0.1**	
SRS				AML	AML	AML	12 01 27.6		
	comp=E,2045μm,0.9s								
SRS				AML	AML	AML	12 01 27.8		
	comp=N,946μm,1.2s								
DIM	**Dimitrovgrad**	**1.77**	**358**	P	**Pn**	**Pn**	**12 00 47.3**	**+0.1**	
DIM	**Dimitrovgrad**	**1.77**	**358**	Pg	**Pb**	**Pb**	**12 00 49.7**	**+0.5**	
EDRB	**Edirne**	**1.78**	**28**	P	**Pn**	**Pn**	**12 00 46.8**	**-0.6**	
EDRB				S	**Sn**	**Sn**	**12 01 10.9**	**+1.0**	
	comp=N,712nm,0.5s								
EDRB	**Edirne**	**1.78**	**28**	PN	**Pb**	**Pb**	**12 00 48.4**	**-1.0**	
BALB	**Balikesir**	**1.85**	**109**	PN	**Pn**	**Pn**	**12 00 49.2**	**+0.9**	
STEP	**BALIKESIR_Sava**	**1.85**	**118**	*i* P	**Pn**	**Pn**	**12 00 48.9**	**+0.6**	
STEP				*i* S	**Sb**	**Sb**	**12 01 13.2**	**-0.5**	
STEP				IAML			12 01 18.0		
	comp=N,464nm,1.0s								
STEP				IAML			12 01 21.0		
	comp=E,382nm,0.6s								
KIRK	**Kırklareli**	**1.87**	**36**	*i* P	**Pb**	**Pb**	**12 00 49.9**	**-1.1**	
KIRK				*i* S	**Sb**	**Sb**	**12 01 13.8**	**-0.4**	
CHOS	**Chios island**	**1.92**	**170**	P	**Pn**	**Pn**	**12 00 49.9**	**+0.5**	
CHOS	**Chios island**	**1.92**	**170**	P	**Pn**	**Pn**	**12 00 49.9**	**+0.5**	
CHOS	**Chios island**	**1.92**	**170**	PN	**Pn**	**Pn**	**12 00 50.7**	**+1.4**	
BOTS	**Marmara Eregli**	**1.93**	**68**	PN	**Pb**	**Pb**	**12 00 50.6**	**-1.2**	
MMB	**Musomiste**	**1.94**	**313**	P	**Pn**	**Pn**	**12 00 49.5**	**-0.1**	
HORT	**Hortiatis**	**1.95**	**280**	P	**Pn**	**Pn**	**12 00 49.6**	**-0.1**	
HORT				AML	AML	AML	12 01 31.4		
	comp=N,998μm,0.7s								
HORT				AML	AML	AML	12 01 32.5		
	comp=E,565μm,0.9s								
HORT	**Hortiatis**	**1.95**	**280**	PN	**Pn**	**Pn**	**12 00 51.0**	**+1.3**	
PLD	**Plovdiv**	**1.95**	**340**	*i* P	**Pg**	**Pg**	**12 00 53.9**	**-0.5**	
PLD	**Plovdiv**	**1.95**	**340**	PN	**Pb**	**Pb**	**12 00 51.4**	**-0.9**	
PHSR	**Pinarhisar**	**1.98**	**46**	PN	**Pn**	**Pn**	**12 00 51.2**	**+1.1**	
SKIA	**Skiathos**	**2.00**	**237**	P	**Pn**	**Pn**	**12 00 49.5**	**-0.8**	
SKIA				AML	AML	AML	12 01 27.9		
	comp=N,1621μm,0.6s								
SKIA				AML	AML	AML	12 01 28.8		
	comp=E,1275μm,0.4s								
KYMI	**Kymi, Euboea I**	**2.02**	**216**	P	**Pn**	**Pn**	**12 00 50.2**	**-0.5**	
KYMI	**Kymi, Euboea I**	**2.02**	**216**	P	**Pn**	**Pn**	**12 00 50.4**	**-0.3**	
KYMI				AML	AML	AML	12 01 26.3		
	comp=N,685μm,0.5s								
KYMI				AML	AML	AML	12 01 28.2		
	comp=E,658μm,0.5s								
URLA	**Izmir**	**2.06**	**158**	PN	**Pn**	**Pn**	**12 00 52.7**	**+1.5**	
URLA	**Izmir**	**2.06**	**158**	*i* P	**Pn**	**Pn**	**12 00 51.8**	**+0.6**	
URLA				*i* S	**Sn**	**Sn**	**12 01 15.9**	**-0.9**	
URLA				IAML			12 01 29.0		
	comp=N,195nm,0.8s								
XOR	**Xorichti**	**2.08**	**245**	P	**Pn**	**Pn**	**12 00 50.9**	**-0.6**	
SLVT	**Silivri**	**2.19**	**63**	PN	**Pn**	**Pn**	**12 00 54.5**	**+1.6**	
BLCB	**Balcova**	**2.19**	**149**	PN	**Pn**	**Pn**	**12 00 54.2**	**+1.2**	
AKHS	**Akhisar**	**2.20**	**129**	*i* P	**Pn**	**Pn**	**12 00 53.6**	**+0.5**	
AKHS				*i* S	**Sn**	**Sn**	**12 01 21.6**	**+1.4**	
MRKA	**Markates**	**2.22**	**226**	P	**Pn**	**Pn**	**12 00 53.1**	**-0.3**	
MRKA	**Markates**	**2.22**	**226**	P	**Pn**	**Pn**	**12 00 53.2**	**-0.2**	
MRKA				AML	AML	AML	12 01 35.8		
	comp=N,807μm,0.5s								
MRKA				AML	AML	AML	12 01 38.9		
	comp=E,1034μm,0.6s								
KNT	**Kendrikon**	**2.25**	**294**	P	**Pn**	**Pn**	**12 00 54.1**	**+0.3**	
KNT				AML	AML	AML	12 01 40.2		
	comp=E,686μm,0.5s								
KNT				AML	AML	AML	12 01 40.3		
	comp=N,892μm,0.6s								
KNT	**Kendrikon**	**2.25**	**294**	PN	**Pb**	**Pb**	**12 00 56.2**	**-1.2**	
DURS	**Dursunbey**	**2.30**	**106**	*i* P	**Pb**	**Pb**	**12 00 58.7**	**+0.4**	
DURS				*i* S	**Sg**	**Sg**	**12 01 28.8**	**-2.0**	
DURS				IAML			12 01 31.0		
	comp=N,260nm,0.8s								
DURS				IAML			12 01 31.0		
	comp=E,406nm,0.6s								
JMB	**Yambol**	**2.30**	**18**	P	**Pn**	**Pn**	**12 00 54.8**	**+0.3**	
ELBA	**Catalca**	**2.31**	**67**	*i* P	**Pb**	**Pb**	**12 00 57.9**	**-0.5**	
ELBA				*i* S	**Sg**	**Sg**	**12 01 28.5**	**-2.6**	
CTKS	**Kestanelik-??a**	**2.39**	**66**	PN	**Pn**	**Pn**	**12 00 57.3**	**+1.5**	
LIT	**Litokhoron**	**2.40**	**267**	P	**Pn**	**Pn**	**12 00 55.9**	**0.0**	
DGB	**zmir**	**2.43**	**156**	*i* P	**Pn**	**Pn**	**12 00 57.0**	**+0.8**	
DGB				*i* S	**Sg**	**Sg**	**12 01 33.6**	**-1.5**	
DGB				IAML			12 01 41.0		
	comp=N,149nm,1.0s								
ARMT	**Armutlu**	**2.49**	**82**	PN	**Pn**	**Pn**	**12 00 58.8**	**+1.6**	
PGB	**Panagyurishte**	**2.52**	**335**	P	**Pn**	**Pn**	**12 00 57.9**	**+0.3**	
VAY	**Valandovo**	**2.54**	**295**	*i* Pn	**Pg**	**Pg**	**12 01 05.6**	**+0.1**	
VAY	**Valandovo**	**2.54**	**295**	*i* Pn	**Pg**	**Pg**	**12 01 05.6**	**+0.1**	
DION	**Dionisos Attik**	**2.56**	**211**	P	**Pn**	**Pn**	**12 00 57.9**	**-0.1**	
BGKT	**Bogazkoy**	**2.56**	**68**	PN	**Pn**	**Pn**	**12 01 00.2**	**+2.1**	
DEMI	**Demirci**	**2.69**	**116**	*i* P	**Pn**	**Pn**	**12 01 01.0**	**+1.1**	
DEMI				*i* S	**Sb**	**Sb**	**12 01 39.0**	**+1.1**	
DEMI				IAML			12 01 53.0		
	comp=N,111nm,0.8s								
DEMI				IAML			12 01 55.0		
	comp=E,129nm,0.6s								
ULDT	**Uludag**	**2.70**	**92**	*i* P	**Pn**	**Pn**	**12 01 01.4**	**+1.3**	
ULDT				*i* S	**Sb**	**Sb**	**12 01 39.6**	**+1.4**	
ULDT				IAML			12 01 43.0		
	comp=N,188nm,0.7s								
ULDT				IAML			12 01 44.0		
	comp=E,222nm,0.7s								
BUY	**Buyukada**	**2.73**	**77**	*i* P	**Pb**	**Pb**	**12 01 06.6**	**+1.1**	
GEMT	**Gemlik**	**2.73**	**86**	PN	**Pn**	**Pn**	**12 01 02.6**	**+2.1**	
ISK	**Istanbul-Kandi**	**2.73**	**72**	PN	**Pn**	**Pn**	**12 01 01.9**	**+1.5**	
KAVV	**Kandilli-Istan**	**2.73**	**72**	PN	**Pn**	**Pn**	**12 01 01.9**	**+1.5**	
IGD	**Bursa**	**2.74**	**89**	*i* P	**Pb**	**Pb**	**12 01 06.8**	**+1.0**	
IGD				*i* S	**Sb**	**Sb**	**12 01 40.1**	**+0.8**	
IGD				IAML			12 01 47.0		
	comp=E,104nm,0.7s								
IGD				IAML			12 01 53.0		
	comp=N,104nm,0.8s								
VIL2	**Platees**	**2.75**	**222**	P	**Pn**	**Pn**	**12 01 00.8**	**0.0**	
VIL2				AML	AML	AML	12 01 52.9		
	comp=N,412μm,0.7s								
VIL2				AML	AML	AML	12 01 55.1		
	comp=E,629μm,0.6s								
KLYT	**Kilyos**	**2.78**	**68**	PN	**Pn**	**Pn**	**12 01 02.7**	**+1.7**	
VLY	**Voula,Athens**	**2.81**	**211**	P	**Pn**	**Pn**	**12 01 01.3**	**-0.2**	
AGG	**Agios Georgios**	**2.83**	**245**	P	**Pn**	**Pn**	**12 01 01.2**	**-0.6**	
AGG	**Agios Georgios**	**2.83**	**245**	PN	**Pn**	**Pn**	**12 01 02.9**	**+1.1**	
THL	**Klokotos Trika**	**2.86**	**257**	P	**Pn**	**Pn**	**12 01 02.6**	**+0.4**	
GCAM	**G?zelcaml?**	**2.87**	**153**	*i* P	**Pn**	**Pn**	**12 01 03.4**	**+1.1**	
GCAM				*i* S	**Sg**	**Sg**	**12 01 46.0**	**-3.0**	
GCAM				IAML			12 01 56.0		
	comp=N,108nm,0.7s								
YLV	**Yalova**	**2.88**	**83**	PN	**Pn**	**Pn**	**12 01 04.2**	**+1.6**	
MANT	**Manisa**	**2.90**	**127**	*i* P	**Pn**	**Pn**	**12 01 03.3**	**+0.4**	
MANT				*i* S	**Sn**	**Sn**	**12 01 38.1**	**+0.5**	
AYDB	**Zeytinkoy-Aydi**	**2.92**	**142**	PN	**Pn**	**Pn**	**12 01 04.3**	**+1.1**	
KULA	**Kula-Manisa**	**2.94**	**126**	PN	**Pn**	**Pn**	**12 01 04.6**	**+1.2**	
VTS	**Vitosha**	**2.94**	**323**	⇓P	**Pn**	**Pn**	**12 01 03.5**	**0.0**	
VTS	**Vitosha**	**2.94**	**323**	P	**Pn**	**Pn**	**12 01 03.7**	**+0.2**	
SZH	**Strazhica**	**2.99**	**4**	P	**Pn**	**Pn**	**12 01 04.5**	**+0.4**	
LTK	**Loutraki**	**3.05**	**223**	P	**Pn**	**Pn**	**12 01 05.0**	**+0.1**	
TVSB	**Tavsanli**	**3.07**	**104**	PN	**Pn**	**Pn**	**12 01 07.0**	**+1.8**	
SILT	**Sile**	**3.18**	**73**	PN	**Pn**	**Pn**	**12 01 08.3**	**+1.7**	
PLVB	**Pleven**	**3.19**	**347**	⇓P	**Pn**	**Pn**	**12 01 07.0**	**+0.2**	
APE	**Apeiranthos**	**3.21**	**181**	P	**Pn**	**Pn**	**12 01 06.9**	**-0.1**	
APE	**Apeiranthos**	**3.21**	**181**	⇑P	**Pg**	**Pg**	**12 01 17.3**	**-1.1**	
APE	**Apeiranthos**	**3.21**	**181**	PN	**Pn**	**Pn**	**12 01 08.1**	**+1.1**	
PRD	**Provadia**	**3.21**	**24**	P	**Pn**	**Pn**	**12 01 06.7**	**-0.3**	
ANX	**Ano Chora**	**3.32**	**241**	P	**Pn**	**Pn**	**12 01 09.2**	**+0.6**	
RAZG	**Razgrad**	**3.35**	**11**	⇑P	**Pn**	**Pn**	**12 01 09.5**	**+0.6**	
MPEP	**Malo Peshtene**	**3.38**	**336**	P	**Pn**	**Pn**	**12 01 10.7**	**+1.4**	
BODT	**Bodrum**	**3.48**	**157**	PN	**Pn**	**Pn**	**12 01 11.5**	**+0.8**	
SGRR	**Singureni**	**3.95**	**4**	⇑P	**Pn**	**Pn**	**12 01 16.5**	**-0.7**	
ICOR	**Ion Corvin**	**4.16**	**22**	⇑P	**Pg**	**Pg**	**12 01 40.5**	**+3.8**	
MFTR	**Murfatlar**	**4.42**	**27**	⇑P	**Pn**	**Pn**	**12 01 23.9**	**+0.3**	
SULR		**4.42**	**6**	⇑P	**Pn**	**Pn**	**12 01 24.5**	**+0.8**	
TLBR	**Topalu**	**4.63**	**22**	⇓P	**Pn**	**Pn**	**12 01 27.1**	**+0.6**	
TIRR	**Tirgusor**	**4.66**	**25**	⇓P	**Pn**	**Pn**	**12 01 27.0**	**+0.1**	
HARR	**Harsova**	**4.73**	**20**	⇑P	**Pn**	**Pn**	**12 01 28.4**	**+0.5**	
HERR	**Herculane**	**5.17**	**334**	⇓P	**Pn**	**Pn**	**12 01 34.1**	**+0.2**	
MLR	**Muntele Rosu**	**5.21**	**3**	⇓P	**Pn**	**Pn**	**12 01 34.8**	**+0.1**	
LOT	**Lotru**	**5.34**	**346**	⇓P	**Pn**	**Pn**	**12 01 36.7**	**+0.3**	
GZR	**Gura Zlata**	**5.52**	**339**	⇑P	**Pn**	**Pn**	**12 01 39.5**	**+0.7**	
PLOR	**Plostina**	**5.62**	**7**	⇓P	**Pn**	**Pn**	**12 01 40.6**	**+0.4**	
VRI	**Vrincioaia**	**5.64**	**8**	⇓P	**Pn**	**Pn**	**12 01 41.5**	**+1.0**	
DOPR	**Dopca**	**5.69**	**358**	⇑P	**Pn**	**Pn**	**12 01 42.0**	**+0.9**	
BZS	**Buzias**	**6.09**	**333**	⇓P	**Pn**	**Pn**	**12 01 46.7**	**+0.1**	
TESR	**Tescani**	**6.28**	**7**	⇓P	**Pn**	**Pn**	**12 01 50.0**	**+0.9**	
SIRR	**Siria**	**6.64**	**336**	⇓P	**Pn**	**Pn**	**12 01 54.7**	**+0.5**	

*ATH **24** 12:30:18.1,40°.29N×25°.50E,h28$^{km}_{\pm}$1^{km},ML3.3/21,Error ellipse: s-maj=1.7km s-min=0.9km az=65.0*
*THE **24** 12:30:19.1,40°.30N×25°.52E,h11$^{km}_{\pm}$1^{km},ML3.2/13,Error ellipse: s-maj=1.0km s-min=0.4km az=8.0*
*ISK **24** 12:30:19.6,40°.27N×25°.64E,h2^{km},ML3.8/24*
*DDA **24** 12:30:20.1,40°.28N×25°.68E,h15$^{km}_{\pm}$2^{km},ML3.5*

ISC 24 12:30:18.3±0.9,**40°.28N**±0°.01×**25°.60E**±0°.02,**h19**$^{km}_{\pm}$2^{km}, **n136,**σ**1§11**/184,**20C-2D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SMTH	**Samothraki Isl**	**0.20**	**345**	P	Op	**Pb**	**12 30 23.1**	**+0.2**
SMTH				S		**Sb**	**12 30 25.9**	**+0.1**
	14μm,0.2s							
GADA	**Gvkgeada**	**0.24**	**110**	PG		**Pg**	**12 30 25.5**	**+1.5**
LIA	**Limnos Island**	**0.49**	**220**	P		**Pb**	**12 30 28.7**	**+0.3**
LIA				S		**Sg**	**12 30 35.2**	**+0.2**
	3μm,0.3s							
LIA	**Limnos Island**	**0.49**	**220**	P		**Pb**	**12 30 28.6**	**+0.2**
LIA				S		**Sg**	**12 30 34.7**	**-0.3**
LIA				AML		AML	12 30 37.3	
	comp=E,5102μm,0.3s							
LIA				AML		AML	12 30 41.7	
	comp=N,5580μm,0.4s							
BOZC	**Bozcaada**	**0.56**	**141**	PG		**Pn**	**12 30 30.7**	**-0.6**
BOZC				SG		**Sn**	**12 30 38.9**	**-1.1**
BOZC	**Bozcaada**	**0.56**	**141**	*i* P		**Pn**	**12 30 30.6**	**-0.6**
BOZC				*i* P		**Pg**	**12 30 30.9**	**+1.4**
BOZC				*i* S		**Sn**	**12 30 38.2**	**-1.8**
BOZC				*i* S		**Sn**	**12 30 39.0**	**-1.1**
ENEZ	**Enez**	**0.62**	**42**	PG		**Pn**	**12 30 32.2**	**0.0**
ENEZ				SG		**Sn**	**12 30 41.4**	**-0.3**
GELI	**Tayfur-Gelibol**	**0.68**	**79**	PG		**Pn**	**12 30 33.1**	**+0.1**
ALN	**Alexandroupoli**	**0.71**	**29**	P		**Pn**	**12 30 32.8**	**-0.6**
ALN				S		**Sn**	**12 30 42.8**	**-1.0**
	comp=N,2μm,0.3s							
ALN	**Alexandroupoli**	**0.71**	**29**	P		**Pn**	**12 30 32.9**	**-0.5**
ALN				S		**Sn**	**12 30 42.7**	**-1.1**
ALN				AML		AML	12 30 44.7	
	comp=N,3721μm,0.3s							
ALN				AML		AML	12 30 45.3	
	comp=E,2904μm,0.3s							
EZN	**Ezine**	**0.72**	**129**	PG		**Pn**	**12 30 33.5**	**0.0**
THAS	**Thassos island**	**0.75**	**296**	P		**Pb**	**12 30 32.2**	**-0.5**
THAS				S		**Sb**	**12 30 42.0**	**-0.6**
	comp=E,4μm,0.3s							
THAS	**Thassos island**	**0.75**	**296**	P		**Pb**	**12 30 32.3**	**-0.5**
THAS				S		**Sb**	**12 30 40.8**	**-1.8**
THAS				AML		AML	12 30 44.3	
	comp=N,6537μm,0.3s							
THAS				AML		AML	12 30 44.6	
	comp=E,8995μm,0.4s							
ERIK	**Erikli-Kesan**	**0.80**	**60**	PG		**Pn**	**12 30 34.6**	**0.0**
RDO	**Rodhopi**	**0.87**	**357**	P		**Pg**	**12 30 35.2**	**-0.1**
RDO				S		**Sg**	**12 30 46.8**	**-0.1**
	comp=E,2μm,0.3s							
RDO	**Rodhopi**	**0.87**	**357**	P		**Pg**	**12 30 35.2**	**-0.1**
RDO				S		**Sg**	**12 30 46.7**	**-0.2**
RDO				AML		AML	12 30 49.0	
	comp=N,3498μm,0.4s							
RDO				AML		AML	12 30 50.7	
	comp=E,4023μm,0.3s							
EFSA	**Agios Efstrati**	**0.87**	**213**	P		**Pn**	**12 30 35.6**	**0.0**
EFSA				AML		AML	12 30 49.9	
	comp=N,4471μm,0.8s							
EFSA				AML		AML	12 30 50.0	
	comp=E,4689μm,0.7s							
BAYC	**CANAKKALE_Bayr**	**0.90**	**126**	*i* P		**Pn**	**12 30 36.9**	**+0.8**
BAYC				*i* S		**Sn**	**12 30 49.2**	**+0.6**
KESN	**Edirne-Kesan**	**0.99**	**56**	*i* P		**Pg**	**12 30 38.0**	**+0.3**
KESN				*i* S		**Sn**	**12 30 52.0**	**+0.7**
KESN				IAML			12 30 54.0	
	comp=N,3μm,0.2s							
KESN				IAML			12 30 54.0	
	comp=E,4μm,0.3s							
SIGR	**SIGRI**	**1.08**	**169**	P		**Pg**	**12 30 39.8**	**+0.5**
SIGR				S		**Sg**	**12 30 55.2**	**+1.7**
SIGR	**SIGRI**	**1.08**	**169**	P		**Pg**	**12 30 39.7**	**+0.5**
SIGR				S		**Sg**	**12 30 53.9**	**+0.4**
SIGR				AML		AML	12 30 56.1	
	comp=E,11705μm,0.6s							
SIGR				AML		AML	12 30 56.1	
	comp=N,11244μm,0.7s							
KAVA	**Kavala**	**1.10**	**311**	P		**Pn**	**12 30 38.5**	**-0.2**
KAVA				S		**Sb**	**12 30 53.2**	**+0.6**
	comp=N,1μm,0.3s							
KAVA	**Kavala**	**1.10**	**311**	P		**Pn**	**12 30 38.6**	**-0.2**
KAVA				S		**Sb**	**12 30 53.1**	**+0.5**
KAVA				AML		AML	12 30 54.3	
	comp=N,2358μm,0.4s							
KAVA				AML		AML	12 30 55.6	
	comp=E,2436μm,0.2s							
KVLA	**Kavala**	**1.14**	**306**	P		**Pn**	**12 30 39.3**	**+0.1**
KVLA				S		**Sb**	**12 30 53.7**	**-0.1**
KVLA				AML		AML	12 30 55.5	
	comp=N,2370μm,0.4s							
KVLA				AML		AML	12 30 56.7	
	comp=E,1700μm,0.4s							
PRK	**Paraskevi**	**1.15**	**153**	P		**Pg**	**12 30 40.5**	**-0.1**
PRK				S		**Sg**	**12 30 58.3**	**+2.6**
PRK	**Paraskevi**	**1.15**	**153**	P		**Pg**	**12 30 42.0**	**+1.3**
PRK				AML		AML	12 30 59.2	
	comp=N,7697μm,0.5s							
PRK				AML		AML	12 30 59.3	
	comp=E,7397μm,0.9s							
OUR	**Ouranopolis**	**1.24**	**273**	P		**Pn**	**12 30 40.4**	**-0.2**
OUR				S		**Sg**	**12 30 58.1**	**-0.4**
	comp=E,1μm,0.3s							
OUR	**Ouranopolis**	**1.24**	**273**	P		**Pn**	**12 30 39.8**	**-0.8**
OUR				AML		AML	12 31 00.4	
	comp=E,2652μm,0.4s							
OUR				AML		AML	12 31 01.2	
	comp=N,2187μm,0.3s							
RKY	**Sarkoy-Tekirda**	**1.27**	**71**	PN		**Pg**	**12 30 43.3**	**+0.3**
SART	**Tekirdag**	**1.27**	**71**	*i* P		**Pg**	**12 30 42.4**	**-0.6**
SART				*i* S		**Sg**	**12 31 00.1**	**+0.4**
AYVA	**Ayvalik**	**1.28**	**139**	*i* P		**Pg**	**12 30 43.6**	**+0.5**
AYVA				*i* S		**Sg**	**12 31 01.0

AKHS				*i* S		**Sg**	**12 31 29.1**	**-0.3**
MRKA	**Markates**	**2.21**	**225**	P		**Pn**	**12 30 54.0**	**-0.1**
MRKA				AML		AML	12 31 31.9	
	comp=E,392μm,0.8s							
MRKA				AML		AML	12 31 43.5	
	comp=N,504μm,0.7s							
KNT	**Kendrikon**	**2.23**	**294**	P		**Pn**	**12 30 55.1**	**+0.7**
KNT				S		**Sn**	**12 31 22.2**	**+0.7**
	comp=N,415nm,0.6s							
KNT	**Kendrikon**	**2.23**	**294**	P		**Pn**	**12 30 54.9**	**+0.6**
KNT				AML		AML	12 31 30.3	
	comp=N,809μm,0.6s							
KNT				AML		AML	12 31 30.8	
	comp=E,866μm,0.7s							
DURS	**Dursunbey**	**2.31**	**106**	*i* P		**Pg**	**12 31 02.5**	**-0.2**
DURS				*i* S		**Sg**	**12 31 31.6**	**-1.1**
DURS				IAML			12 31 35.0	
	comp=E,417nm,0.6s							
DURS				IAML			12 31 36.0	
	comp=N,328nm,0.6s							
JMB	**Yambol**	**2.31**	**18**	P		**Pg**	**12 31 01.9**	**-0.8**
LIT	**Litokhoron**	**2.39**	**267**	P		**Pn**	**12 30 57.3**	**+0.8**
DGB	**zmir**	**2.44**	**155**	*i* P		**Pb**	**12 30 59.2**	**-2.3**
DGB				*i* S		**Sg**	**12 31 34.0**	**-2.7**
KKB	**Krupnik**	**2.48**	**311**	P		**Pb**	**12 31 03.4**	**+1.1**
KKB				S		**Sb**	**12 31 35.2**	**+2.8**
ARMT	**Armutlu**	**2.51**	**82**	PN		**Pb**	**12 31 02.9**	**+0.1**
MDNY	**Mudanya-Bursa**	**2.51**	**87**	PN		**Pb**	**12 31 02.1**	**-0.8**
PGB	**Panagyurishte**	**2.52**	**335**	P		**Pn**	**12 30 59.3**	**+1.0**
PGB				S		**Sg**	**12 31 36.8**	**-2.4**
VAY	**Valandovo**	**2.52**	**295**	*i* Pn		**Pg**	**12 31 05.4**	**-1.4**
VAY	**Valandovo**	**2.52**	**295**	*i* Pn		**Pg**	**12 31 05.4**	**-1.4**
DION	**Dionisos Attik**	**2.55**	**211**	P		**Pn**	**12 30 58.8**	**+0.1**
BGKT	**Bogazkoy**	**2.58**	**68**	PN		**Pb**	**12 31 03.1**	**-0.8**
ELND	**Elena**	**2.66**	**4**	⇑P		**Pn**	**12 31 01.7**	**+1.5**
DEMI	**Demirci**	**2.70**	**116**	*i* P		**Pb**	**12 31 03.9**	**-2.3**
DEMI				*i* S		**Sg**	**12 31 45.7**	**+0.4**
DEMI				IAML			12 31 50.0	
	comp=E,143nm,0.6s							
ULDT	**Uludag**	**2.71**	**92**	*i* P		**Pg**	**12 31 08.6**	**-1.8**
ULDT				*i* S		**Sg**	**12 31 45.1**	**-0.4**
ULDT				IAML			12 31 49.0	
	comp=N,142nm,0.7s							
ULDT				IAML			12 31 52.0	
	comp=E,185nm,0.9s							
SMG	**Samos**	**2.74**	**159**	P		**Pn**	**12 31 03.3**	**+2.0**
SMG	**Samos**	**2.74**	**159**	P		**Pn**	**12 31 02.8**	**+1.5**
SMG				AML		AML	12 31 50.5	
	comp=N,573μm,0.4s							
SMG				AML		AML	12 31 51.8	
	comp=E,693μm,0.5s							
GEMT	**Gemlik**	**2.75**	**86**	PN		**Pb**	**12 31 05.4**	**-1.5**
IGD	**Bursa**	**2.76**	**89**	*i* P		**Pg**	**12 31 10.0**	**-1.2**
KLYT	**Kilyos**	**2.79**	**68**	PN		**Pb**	**12 31 05.9**	**-1.7**
VLY	**Voula,Athens**	**2.80**	**211**	P		**Pn**	**12 31 02.1**	**0.0**
AGG	**Agios Georgios**	**2.82**	**245**	P		**Pn**	**12 31 02.8**	**+0.4**
THL	**Klokotos Trika**	**2.85**	**257**	P		**Pn**	**12 31 02.8**	**0.0**
SIMA	**Simav-Kutahya**	**2.87**	**113**	PN		**Pb**	**12 31 07.3**	**-1.7**
YLV	**Yalova**	**2.90**	**83**	PN		**Pb**	**12 31 07.5**	**-1.9**
VTS	**Vitosha**	**2.94**	**324**	⇑P		**Pn**	**12 31 05.7**	**+1.6**
VTS	**Vitosha**	**2.94**	**324**	P		**Pb**	**12 31 12.3**	**+2.1**
VTS				S		**Sg**	**12 31 51.2**	**-1.6**
SZH	**Strazhica**	**3.00**	**5**	P		**Pn**	**12 31 06.3**	**+1.4**
SZH				S		**Sg**	**12 31 54.8**	**+0.1**
PLVB	**Pleven**	**3.19**	**347**	⇑P		**Pn**	**12 31 20.8**	**+1.3**
APE	**Apeiranthos**	**3.20**	**181**	⇑P		**Pb**	**12 31 12.6**	**-2.1**
PRD	**Provadia**	**3.22**	**24**	P		**Pn**	**12 31 09.2**	**+1.4**
NEF	**NEVSHA**	**3.24**	**22**	P		**Pn**	**12 31 09.7**	**+1.5**
ANX	**Ano Chora**	**3.31**	**241**	P		**Pn**	**12 31 09.8**	**+0.6**
DID	**Didima**	**3.32**	**214**	P		**Pn**	**12 31 09.4**	**0.0**
RAZG	**Razgrad**	**3.36**	**11**	⇑P		**Pg**	**12 31 21.8**	**-0.8**
SKO	**Skopje**	**3.57**	**300**	*i* Pn		**Pb**	**12 31 21.4**	**+0.5**
SKO	**Skopje**	**3.57**	**300**	*i* Pn		**Pb**	**12 31 21.4**	**+0.5**
TLBR	**Topalu**	**4.63**	**22**	⇑P		**Pn**	**12 31 28.7**	**+1.4**
TIRR	**Tirgusor**	**4.67**	**26**	⇑P		**Pn**	**12 31 29.4**	**+1.6**
HARR	**Harsova**	**4.74**	**21**	⇑P		**Pn**	**12 31 30.6**	**+1.8**
ARR	**Arges**	**5.14**	**352**	⇑P		Pn	12 31 40.9	+6.6
HERR	**Herculane**	**5.17**	**334**	⇑P		**Pn**	**12 31 34.9**	**+0.2**
MLR	**Muntele Rosu**	**5.22**	**3**	⇑P		**Pn**	**12 31 38.3**	**+2.8**
CFR	**Carcaliu**	**5.24**	**20**	⇓P		**Pn**	**12 31 36.9**	**+1.2**
BISRR	**Bisoca**	**5.33**	**8**	⇑P		**Pb**	**12 31 48.2**	**-2.7**
MDVR	**Moldovita**	**5.34**	**329**	⇑P		**Pn**	**12 31 38.8**	**+1.7**
LOT	**Lotru**	**5.34**	**346**	⇑P		**Pn**	**12 31 38.3**	**+1.1**
TLCR		**5.45**	**25**	⇑P		**Pn**	**12 31 40.6**	**+2.1**
GZR	**Gura Zlata**	**5.52**	**339**	⇑P		**Pn**	**12 31 40.6**	**+1.0**
PLOR	**Plostina**	**5.63**	**8**	⇑P		**Pn**	**12 31 44.3**	**+3.3**
VRI	**Vrincioaia**	**5.65**	**8**	⇑P		**Pn**	**12 31 44.3**	**+3.0**
DOPR	**Dopca**	**5.69**	**359**	⇓P		**Pn**	**12 31 44.0**	**+2.1**
BZS	**Buzias**	**6.08**	**333**	⇑P		**Pn**	**12 31 48.3**	**+1.1**
TESR	**Tescani**	**6.28**	**7**	⇑P		**Pn**	**12 31 52.8**	**+2.9**

*DDA **24** 12:36:54.5, 40.42N×26.31E, h12km±3km, ML2.9*
*THE **24** 12:36:54.7, 40.42N×26.24E, h8km±1km, ML2.5/10, Error ellipse: s-maj=1.5km s-min=0.6km az=281.0*
ISC 24 12:36:54.5±0.9, 40.43N±0.02×26.28E±0.02, h12km±8km, n24, σ0°46/48, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ENEZ	**Enez**	**0.32**	**343**	P		**Pg**	**12 37 01.3**	**+0.4**
ENEZ				S		**Sg**	**12 37 06.1**	**+0.9**
	3μm,0.3s							
GADA	**Gvkgeada**	**0.38**	**230**	P		**Pg**	**12 37 02.0**	**+0.1**
GADA				S		**Sg**	**12 37 07.5**	**+0.6**
	905nm,0.2s							
ALN	**Alexandroupoli**	**0.50**	**340**	P		**Pg**	**12 37 04.1**	**-0.1**
ALN				S		**Sg**	**12 37 10.8**	**0.0**
	268nm,0.3s							
KESN	**Edirne-Kesan**	**0.50**	**38**	*i* P		**Pg**	**12 37 04.0**	**-0.3**
KESN				*i* S		**Sg**	**12 37 11.1**	**+0.1**
SMTH	**Samothraki Isl**	**0.57**	**274**	P		**Pg**	**12 37 05.1**	**-0.5**
SMTH				S		**Sg**	**12 37 12.7**	**-0.4**
	572nm,0.1s							
EZN	**Ezine**	**0.61**	**176**	P		**Pg**	**12 37 05.8**	**-0.5**
EZN				S		**Sg**	**12 37 14.3**	**0.0**
	232nm,0.1s							
BAYC	**CANAKKALE_Bayr**	**0.72**	**163**	*i* P		**Pg**	**12 37 08.4**	**0.0**
BAYC				*i* S		**Sg**	**12 37 18.1**	**+0.2**
SART	**Tekirdag**	**0.74**	**69**	*i* P		**Pg**	**12 37 08.3**	**-0.5**
SART				*i* S		**Sg**	**12 37 18.5**	**+0.1**
RDO	**Rodhopi**	**0.91**	**322**	P		**Pg**	**12 37 11.3**	**-0.7**
RDO				S		**Sb**	**12 37 25.1**	**+0.9**
	300nm,0.2s							
KNL	**Balıkesir**	**0.97**	**99**	*i* P		**Pg**	**12 37 13.3**	**+0.1**
KNL				*i* S		**Sn**	**12 37 28.3**	**+0.6**
KNL				IAML			12 37 29.0	
	comp=E,439nm,0.4s							
LIA	**Limnos Island**	**0.99**	**238**	P		**Pg**	**12 37 13.0**	**-0.6**
LIA				S		**Sg**	**12 37 26.3**	**-0.2**
AYVA	**Ayvalik**	**1.17**	**164**	*i* P		**Pb**	**12 37 16.5**	**-0.1**
AYVA				*i* S		**Sg**	**12 37 31.8**	**-0.3**
PRK	**Paraskevi**	**1.19**	**180**	P		**Pg**	**12 37 17.7**	**+0.5**
PRK				S		**Sn**	**12 37 33.1**	**+0.2**
	comp=E,415nm,0.3s							
THAS	**Thassos island**	**1.20**	**279**	P		**Pb**	**12 37 16.9**	**-0.2**
THAS				S		**Sb**	**12 37 33.0**	**+0.4**
	comp=E,128nm,0.4s							
BALY	**Balya**	**1.24**	**123**	*i* P		**Pb**	**12 37 18.1**	**+0.2**
BALY				*i* S		**Sb**	**12 37 33.8**	**-0.1**
SIGR	**SIGRI**	**1.26**	**195**	P		**Pn**	**12 37 17.5**	**-0.4**
SIGR				S		**Sb**	**12 37 34.4**	**0.0**
	comp=E,492nm,0.3s							
KDZ	**Kurdzhali**	**1.38**	**332**	P		**Pn**	**12 37 19.7**	**+0.1**
KDZ				S		**Sb**	**12 37 37.9**	**+0.1**
EDRB	**Edirne**	**1.46**	**14**	P		**Pn**	**12 37 19.9**	**-0.7**
EDRB				S		**Sb**	**12 37 40.6**	**+0.5**
	comp=E,242nm,0.3s							
STEP	**BALIKESIR_Sava**	**1.53**	**133**	*i* P		**Pb**	**12 37 22.4**	**-0.4**
STEP				*i* S		**Sn**	**12 37 41.9**	**+0.4**
ZEDA	**zmir-Bergama**	**1.59**	**157**	*i* P		**Pn**	**12 37 22.6**	**+0.1**
ZEDA				*i* S		**Sb**	**12 37 44.4**	**+0.6**
RZN	**Rozhen**	**1.72**	**317**	P		**Pn**	**12 37 24.3**	**-0.2**
RZN				S		**Sn**	**12 37 46.8**	**+0.3**
ELBA	**Catalca**	**1.79**	**66**	*i* P		**Pn**	**12 37 25.2**	**0.0**
ELBA				*i* S		**Sn**	**12 37 47.5**	**-0.3**
DURS	**Dursunbey**	**1.88**	**115**	*i* P		**Pb**	**12 37 27.9**	**-0.9**
DURS				*i* S		**Sb**	**12 37 52.3**	**0.0**
DURS				IAML			12 37 55.0	
	comp=N,123nm,0.3s							
DURS				IAML			12 37 55.0	
	comp=E,156nm,0.5s							
AKHS	**Akhisar**	**1.95**	**142**	*i* P		**Pg**	**12 37 31.5**	**-0.4**
AKHS				*i* S		**Sn**	**12 37 53.1**	**+1.1**

*OSPL **24** 12:37:25.9±0.4, 18.08N×67.98W, h18km±9km, ML2.1*
*NEIC **24** 12:37:25.1±1.4, 18.8N±0.2×68.2W±0.1, h67km±18km, Error ellipse: s-maj=33.4km s-min=7.8km az=201.0*
*RSPR **24** 12:37:26.1, 18.81N×68.14W, h68km±1km, MD3.3/10*
ISC 24 12:37:24.7±3.2, 18.90N±0.08×68.00W±0.03, h13km±24km, n37, σ0°71/50, 10C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PCDR	**Punta Cana, DR**	**0.53**	**224**	⇓*e*P		**Pb**	**12 37 36.6**	**+0.7**
PCDR	**Punta Cana, DR**	**0.53**	**224**	*e*S		**Sn**	**12 37 45.8**	**-1.0**
PCDR	**Punta Cana, DR**	**0.53**	**224**			**Pb**	**12 37 36.6**	**+0.7**
PCDR						**Sn**	**12 37 45.8**	**-1.0**
PCDR	**Punta Cana, DR**	**0.53**	**224**	AMP		**Pb**	**12 37 36.6**	**+0.7**
	comp=Z,2μm,0.1s							
PCDR				*i* P		**Pb**	**12 37 36.6**	**+0.7**
PCDR				*e*S		**Sb**	**12 37 44.2**	**+0.7**
PCDR				IAML			12 37 45.7	
	comp=Z,138nm,0.2s							
IDE	**Isla Desecheo**	**0.71**	**136**	⇑*e*P		**Pb**	**12 37 38.4**	**-0.6**
IDE	**Isla Desecheo**	**0.71**	**136**	*e*S		**Sb**	**12 37 49.0**	**+0.3**
IDE	**Isla Desecheo**	**0.71**	**136**			**Pb**	**12 37 38.4**	**-0.6**
IDE						**Sb**	**12 37 49.0**	**+0.3**
AGPR	**Aguadilla, PR**	**0.94**	**117**	*i* P		**Pb**	**12 37 41.8**	**-1.2**
AGPR				*e*S		**Sb**	**12 37 53.9**	**-1.5**
AGPR				IAML			12 38 03.5	
	comp=Z,52nm,0.1s							
LSP	**Las Mesas**	**1.12**	**130**	⇑*e*P		**Pn**	**12 37 46.5**	**+0.2**
LSP	**Las Mesas**	**1.12**	**130**	*e*S		**Sn**	**12 38 01.8**	**+0.2**
LSP	**Las Mesas**	**1.12**	**130**			**Pn**	**12 37 46.5**	**+0.2**
LSP						**Sn**	**12 38 01.8**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.22**	**136**	⇑*e*P		**Pn**	**12 37 47.2**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.22**	**136**	*e*S		**Sb**	**12 38 03.5**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.22**	**136**			**Pn**	**12 37 47.3**	**-0.3**
CRPR						**Sb**	**12 38 03.5**	**+0.1**
MLPR	**Magueyes Islan**	**1.29**	**135**	⇑*e*P		**Pn**	**12 37 48.2**	**-0.3**
MLPR	**Magueyes Islan**	**1.29**	**135**	*e*S		**Sn**	**12 38 04.6**	**-1.0**
MLPR	**Magueyes Islan**	**1.29**	**135**			**Pn**	**12 37 49.1**	**+0.6**
MLPR						**Sn**	**12 38 04.9**	**-0.8**
AOPR	**Arecibo Observ**	**1.30**	**115**	⇑*e*P		**Pn**	**12 37 48.7**	**0.0**
AOPR	**Arecibo Observ**	**1.30**	**115**	*e*S		**Sb**	**12 38 06.4**	**+0.7**
AOPR	**Arecibo Observ**	**1.30**	**115**			**Pn**	**12 37 48.4**	**-0.2**
AOPR						**Sb**	**12 38 06.3**	**+0.7**
DR12	**Loma Pena Alta**	**1.32**	**265**			**Pn**	**12 37 46.5**	**-2.4**
EMPR	**Esperanza - Ma**	**1.45**	**106**	⇑*e*P		**Pn**	**12 37 51.0**	**+0.3**
EMPR	**Esperanza - Ma**	**1.45**	**106**	*e*S		**Sb**	**12 38 10.6**	**+0.6**
OBIP	**Obispado Ponce**	**1.57**	**123**	⇑*e*P		**Pn**	**12 37 52.1**	**-0.2**
OBIP	**Obispado Ponce**	**1.57**	**123**	*e*S		**Sn**	**12 38 12.9**	**+0.3**
OBIP	**Obispado Ponce**	**1.57**	**123**	Pn		**Pn**	**12 37 52.2**	**-0.1**
OBIP						**Sb**	**12 38 13.8**	**+0.3**
IGPR	**InterUniversit**	**2.02**	**117**	*e*S		**Sn**	**12 38 23.2**	**-0.4**
CBYP	**Canovanas**	**2.12**	**107**	⇑*e*P		**Pn**	**12 37 59.8**	**-0.3**
CBYP	**Canovanas**	**2.12**	**107**	*e*S		**Sn**	**12 38 26.9**	**+0.7**
CBYP	**Canovanas**	**2.12**	**107**			**Pn**	**12 37 59.7**	**-0.3**
CBYP						**Sn**	**12 38 26.3**	**0.0**
HUMP	**Col San Antoni**	**2.17**	**110**	⇑*e*P		**Pn**	**12 38 00.3**	**+0.2**
HUMP	**Col San Antoni**	**2.17**	**110**	*e*S		**Sn**	**12 38 27.6**	**+0.2**
HUMP	**Col San Antoni**	**2.17**	**110**			**Pn**	**12 38 00.6**	**0.0**
HUMP						**Sn**	**12 38 28.1**	**+0.7**
MTP	**Monte Pirata**	**2.45**	**109**	*e*S		**Sn**	**12 38 35.1**	**+0.8**
MTP	**Monte Pirata**	**2.45**	**109**	⇑*e*P		**Pn**	**12 38 05.1**	**+0.6**
MTP	**Monte Pirata**	**2.45**	**109**			**Pn**	**12 38 04.6**	**+0.1**
MTP						**Sn**	**12 38 35.1**	**+0.8**
SDDR	**Presa de Saban**	**3.12**	**272**	*i* P		**Pn**	**12 38 14.8**	**+1.0**
SDDR				IAML			12 38 38.7	
	comp=Z,3.5nm,0.4s							

*DDA **24** 12:40:16.9, 40.41N×26.13E, h12km±2km, ML3.0*
*ATH **24** 12:40:17.3, 40.42N×26.02E, h18km±7km, ML2.9/7, Error ellipse: s-maj=7.2km s-min=0.9km az=334.0*
ISC 24 12:40:16.2±1.1, 40.42N±0.02×26.12E±0.02, h3km±10km, n29, σ0°66/56, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SMTH	**Samothraki Isl**	**0.45**	**276**	P		**Pg**	**12 40 25.0**	**+0.2**
SMTH				S		**Sg**	**12 40 30.8**	**+0.1**
SMTH				AML		AML	12 40 33.7	
	comp=N,2970μm,0.3s							
SMTH				AML		AML	12 40 33.8	
	comp=E,2602μm,0.2s							
ALN	**Alexandroupoli**	**0.48**	**354**	P		**Pb**	**12 40 26.8**	**-0.5**
ALN				S		**Sb**	**12 40 33.9**	**-0.8**
BOZC	**Bozcaada**	**0.58**	**185**	*i* P		**Pb**	**12 40 28.3**	**-0.7**
BOZC				*i* P		**Pb**	**12 40 28.4**	**-0.7**
BOZC				*i* S		**Sb**	**12 40 36.4**	**-1.3**
BOZC				*i* S		**Sg**	**12 40 36.6**	**+1.7**
BOZC				IAML			12 40 37.0	
	comp=N,635nm,0.2s							
BOZC				IAML			12 40 37.0	
	comp=E,2μm,0.4s							
KESN	**Edirne-Kesan**	**0.59**	**47**	*i* S		**Sg**	**12 40 36.3**	**+1.1**
BAYC	**CANAKKALE_Bayr**	**0.76**	**154**	*i* P		**Pb**	**12 40 31.8**	**-0.2**
BAYC				*i* S		**Sb**	**12 40 42.0**	**-0.8**
RDO	**Rodhopi**	**0.84**	**329**	P		**Pg**	**12 40 44.8**	**+0.5**
RDO				S		**Sb**	**12 40 44.8**	**-0.5**
RDO				AML		AML	12 40 48.1	
	comp=E,2092μm,0.2s							
RDO				AML		AML	12 40 49.0	
	comp=N,1296μm,0.2s							
SART	**Tekirdag**	**0.85**	**72**	*i* P		**Pb**	**12 40 33.4**	**-0.4**
SART				*i* S		**Sg**	**12 40 43.1**	**-0.5**
LIA	**Limnos Island**	**0.89**	**234**	P		**Pg**	**12 40 33.5**	**+0.4**
LIA				S		**Sg**	**12 40 44.2**	**-0.5**
LIA				AML		AML	12 40 48.7	
	comp=E,1808μm,0.6s							
LIA				AML		AML	12 40 48.7	
	comp=N,1870μm,0.5s							
THAS	**Thassos island**	**1.08**	**280**	P		**Pg**	**12 40 36.8**	**0.0**
THAS				S		**Sg**	**12 40 50.3**	**-0.6**
THAS				AML		AML	12 40 53.6	
	comp=N,1222μm,0.3s							
THAS				AML		AML	12 40 53.7	
	comp=E,1161μm,0.4s							
KNL	**Balıkesir**	**1.09**	**98**	*i* P		**Pg**	**12 40 37.1**	**+0.1**
KNL				*i* S		**Sn**	**12 40 54.8**	**+0.8**
PRK	**Paraskevi**	**1.18**	**174**	P		**Pn**	**12 40 39.7**	**+0.1**
PRK				S		**Sn**	**12 40 56.8**	**+0.6**
PRK				AML		AML	12 40 59.4	
	comp=E,3900μm,0.4s							
PRK				AML		AML	12 40 59.5	
	comp=N,3200μm,0.5s							
AYVA	**Ayvalik**	**1.20**	**158**	*i* P		**Pn**	**12 40 40.1**	**+0.2**
AYVA				*i* S		**Sb**	**12 40 55.3**	**-0.1**
AYVA				IAML			12 40 57.0	
	comp=E,882nm,0.4s							
AYVA				IAML			12 40 59.0	
	comp=N,963nm,0.6s							
SIGR	**SIGRI**	**1.23**	**189**	P		**Pb**	**12 40 39.8**	**-0.2**
SIGR				S		**Sb**	**12 40 56.3**	**+0.1**
SIGR				AML		AML	12 40 57.4	
	comp=N,1216μm,0.7s							
SIGR				AML		AML	12 40 58.5	
	comp=E,1296μm,0.4s							
EFSA	**Agios Efstrati**	**1.23**	**225**	P		**Pb**	**12 40 40.1**	**-0.1**
EFSA				S		**Sb**	**12 40 56.8**	**+0.4**
KDZ	**Kurdzhali**	**1.33**	**337**	P		**Pb**	**12 40 42.3**	**+0.4**
KDZ				S		**Sg**	**12 40 59.3**	**+0.2**
BALY	**Balya**	**1.34**	**120**	*i* P		**Pb**	**12 40 42.4**	**+0.4**
BALY				*i* S		**Sn**	**12 41 01.3**	**+1.0**
BALY				IAML			12 41 02.0	
	comp=N,333nm,0.6s							
BALY				IAML			12 41 03.0	
	comp=E,191nm,0.8s							
KAVA	**Kavala**	**1.34**	**296**	P		**Pn**	**12 40 41.5**	**-0.4**
KAVA				S		**Sg**	**12 40 59.3**	**-0.2**
KAVA				AML		AML	12 41 02.7	
	comp=N,356μm,0.3s							
KAVA				AML		AML	12 41 05.8	
	comp=E,455μm,0.5s							
KVLA	**Kavala**	**1.41**	**292**	P		**Pn**	**12 40 42.4**	**-0.4**
KVLA				S		**Sb**	**12 41 00.9**	**-0.7**
STEP	**BALIKESIR_Sava**	**1.62**	**130**	*i* P		**Pn**	**12 40 46.0**	**+0.3**
STEP				*i* S		**Sg**	**12 41 00.6**	**+0.5**
STEP				IAML			12 41 10.0	
	comp=N,235nm,0.6s							
STEP				IAML			12 41 12.0	
	comp=E,115nm,0.5s							
ZEDA	**zmir-Bergama**	**1.63**	**153**	*i* P		**Pb**	**12 40 46.9**	**-0.1**
ZEDA				*i* S		**Sg**	**12 41 08.4**	**-0.2**
ZEDA				IAML			12 41 10.0	
	comp=N,418nm,0.3s							
ZEDA				IAML			12 41 12.0	
	comp=E,157nm,0.6s							
RZN	**Rozhen**	**1.65**	**321**	S		**Sn**	**12 41 08.2**	**+0.1**
DIM	**Dimitrovgrad**	**1.68**	**345**	*e*P		**Pb**	**12 40 48.1**	**+0.3**
DIM				S		**Sg**	**12 41 10.0**	**-0.3**
ELBA	**Catalca**	**1.90**	**67**	*i* P		**Pn**	**12 40 49.9**	**+0.3**
ELBA				*i* S		**Sn**	**12 41 14.1**	**0.0**
DURS	**Dursunbey**	**1.99**	**114**	*i* P		**Pb**	**12 40 52.0**	**-1.0**
DURS				*i* S		**Sb**	**12 41 17.2**	**-1.1**
DURS				IAML			12 41 23.0	
	comp=E,122nm,0.4s							
DURS				IAML			12 41 24.0	
	comp=N,84nm,0.5s							
PLD	**Plovdiv**	**1.99**	**328**	S		**Sg**	**12 41 21.1**	**+1.0**
JMB	**Yambol**	**2.07**	**10**	P		**Pg**	**12 40 55.7**	**-0.2**
ULDT	**Uludag**	**2.33**	**96**	*i* P		**Pn**	**12 40 56.4**	**+0.8**
ULDT				*i* S		**Sb**	**12 41 27.6**	**-0.6**
ULDT				IAML			12 41 35.0	
	comp=N,63nm,0.7s							
ULDT				IAML			12 41 40.0	
	comp=E,89nm,0.6s							
IGD	**Bursa**	**2.37**	**93**	*i* P		**Pg**	**12 41 01.2**	**-0.3**
IGD				*i* S		**Sg**	**12 41 32.7**	**+0.5**
DEMI	**Demirci**	**2.43**	**124**	*i* P		**Pn**	**12 40 57.6**	**+0.6**
DEMI				*i* S		**Sg**	**12 41 32.7**	**-1.7**

*DDA **24** 12:41:25.2, 40.35N×26.04E, h7km±3km, ML3.1*
ISC 24 12:41:25.5±1.2, 40.36N±0.04×25.99E±0.05, h17km±10km, n12, σ2°66/20, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BOZC	**Bozcaada**	**0.52**	**175**	*i* P		**Pg**	**12 41 35.3**	**-0.5**
BOZC				*i* S		**Sb**	**12 41 42.8**	**-0.5**
BOZC				IAML			12 41 43.0	
	comp=E,1μm,0.2s							
KESN	**Edirne-Kesan**	**0.71**	**48**	*i* P		**Pb**	**12 41 39.2**	**-0.4**
KESN				*i* S		**Sg**	**12 41 48.1**	**-0.8**
AYVA	**Ayvalik**	**1.18**	**152**	*i* P		**Pg**	**12 41 47.3**	**-0.9**
AYVA				*i* S		**Sn**	**12 42 04.5**	**+1.6**
AYVA				IAML			12 42 07.0	
	comp=N,463nm,0.4s							
AYVA				IAML			12 42 07.0	
	comp=E,506nm,0.3s							
KNL	**Balıkesir**	**1.18**	**94**	*i* P		**Pn**	**12 41 47.6**	**+0.4**
KNL				*i* S		**Sn**	**12 42 04.7**	**+1.8**
KNL				IAML			12 42 07.0	
	comp=E,405nm,0.4s							
KDZ	**Kurdzhali**	**1.36**	**342**	P		**Pn**	**12 41 49.2**	**-0.6**
KDZ				S		**Sb**	**12 42 06.3**	**-1.5**
BALY	**Balya**	**1.39**	**116**	*i* P		**Pb**	**12 41 50.9**	**-0.3**
BALY				*i* S		**Sn**	**12 42 10.4**	**+2.1**
RZN	**Rozhen**	**1.64**	**325**	*e*P		**Pn**	**12 41 53.0**	**-0.8**
RZN				S		**Sn**	**12 42 12.8**	**-1.9**
STEP	**BALIKESIR_Sava**	**1.65**	**126**	*i* P		**Pn**	**12 41 54.2**	**+0.4**
STEP				*i* S		**Sg**	**12 42 17.2**	**-1.5**
STEP				IAML			12 42 23.0	
	comp=E,158nm,0.3s							
DIM	**Dimitrovgrad**	**1.73**	**349**	S		**Sg**	**12 42 27.9**	**+6.7**
PLD	**Plovdiv**	**2.00**	**331**	S		**Sn**	**12 42 17.8**	**-5.4**
PGB	**Panagyurishte**	**2.59**	**329**	S		**Sb**	**12 42 43.5**	**+0.5**
KKB	**Krupnik**	**2.67**	**305**	S		**Sn**	**12 42 43.8**	**+4.2**

BEO 24 12:45:23.8±0.3, 44.12N×22.09E, h0km, ML1.4/7, Mining explosion., Romania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ZAGS	**Zajecar**	**0.33**	**162**	*e*Pg		Pg	12 45 29.5	-0.5
ZAGS				*e*Sg		Sg	12 45 34.

ENEZ S Sb 12 46 29.0 -0.6
comp=E,25µm,0.3s
ENEZ Enez 0.89 56 PG Pb 12 46 17.3 -0.4
ENEZ SG Sg 12 46 29.9 +1.5
ENEZ Enez 0.89 56 Pb 12 46 17.2 -0.4
ENEZ Sb 12 46 29.0 -0.6
KAVA Kavala 0.91 326 P Pg 12 46 18.1 +0.8
KAVA S Sg 12 46 30.2 +1.1
comp=E,8µm,0.5s
KAVA Kavala 0.91 326 P Pg 12 46 18.1 +0.8
KAVA S Sg 12 46 30.0 +0.9
KAVA AML AML 12 46 31.4
comp=N,16033µm,0.5s
KAVA AML AML 12 46 31.5
comp=E,14418µm,0.5s
KAVA Kavala 0.91 326 Pg 12 46 18.1 +0.8
KAVA Sg 12 46 30.2 +1.1
KVLA Kavala 0.92 319 P Pn 12 46 18.5 -0.7
KVLA S Sb 12 46 29.6 -0.9
KVLA AML AML 12 46 31.9
comp=N,24103µm,0.5s
KVLA AML AML 12 46 32.0
comp=E,10027µm,0.5s
OUR Ouranopolis 0.92 276 P Pb 12 46 17.4 -0.8
OUR Ouranopolis 0.92 276 P Pb 12 46 17.8 -0.4
OUR S Sg 12 46 30.8 +1.2
OUR AML AML 12 46 32.5
comp=N,12320µm,0.8s
OUR AML AML 12 46 36.6
comp=E,7414µm,0.3s
OUR Ouranopolis 0.92 276 PG Pb 12 46 17.4 -0.8
OUR SG Sg 12 46 30.8 +1.2
OUR Ouranopolis 0.92 276 P Pb 12 46 17.4 -0.8
OUR Ouranopolis 0.92 276 Pb 12 46 17.4 -0.8
ALN Alexandroupoli 0.92 45 P Pb 12 46 17.8 -0.5
ALN S Sg 12 46 30.8 +1.2
comp=E,5µm,0.4s
ALN Alexandroupoli 0.92 45 P Pb 12 46 17.8 -0.5
ALN S Sg 12 46 31.0 +1.3
ALN AML AML 12 46 33.8
comp=E,9140µm,0.5s
ALN AML AML 12 46 34.0
comp=N,12251µm,0.4s
ALN Alexandroupoli 0.92 45 PG Pb 12 46 17.9 -0.3
ALN Alexandroupoli 0.92 45 Pb 12 46 17.8 -0.5
ALN Alexandroupoli 0.92 45 Sg 12 46 30.8 +1.2
RDO Rodhopi 0.94 17 P Pb 12 46 17.7 -0.7
RDO S Sb 12 46 30.6 -0.5
comp=N,4µm,0.5s
RDO Rodhopi 0.94 17 P Pb 12 46 18.0 -0.5
RDO S Sn 12 46 31.7 -1.4
RDO AML AML 12 46 33.0
comp=E,5296µm,0.2s
RDO AML AML 12 46 33.2
comp=N,10868µm,0.7s
RDO Rodhopi 0.94 17 PG Pb 12 46 17.8 -0.7
RDO SG Sg 12 46 31.5 +1.4
RDO Rodhopi 0.94 17 Pb 12 46 17.7 -0.7
RDO Sb 12 46 30.6 -0.5
EZN Ezine 0.97 115 P Pb 12 46 18.7 -0.4
EZN S Sg 12 46 31.9 +0.7
comp=N,12µm,0.5s
EZN Ezine 0.97 115 PG Pb 12 46 18.7 -0.4
EZN SG Sg 12 46 31.9 +0.7
EZN Ezine 0.97 115 P Pb 12 46 18.7 -0.4
EZN 12 46 31.9
EZN Ezine 0.97 115 Pb 12 46 18.7 -0.4
EZN Sg 12 46 31.9 +0.7
GELI Tayfur-Gelibol 1.00 81 PG Pb 12 46 18.9 -0.6
GELI Tayfur-Gelibol 1.00 81 Pb 12 46 18.6 -0.9
ERIK Erikli-Kesan 1.10 67 PN Pb 12 46 20.4 -0.8
ERIK SN Sn 12 46 36.3 -0.8
ERIK Erikli-Kesan 1.10 67 Pn Pg 12 46 21.6 +0.6
SIGR SIGRI 1.16 153 P Pn 12 46 21.8 -0.7
SIGR S Sb 12 46 36.2 -1.2
comp=N,9µm,0.6s
SIGR SIGRI 1.16 153 P Pg 12 46 22.1 0.0
SIGR S Sb 12 46 36.9 -0.5
SIGR AML AML 12 46 38.7
comp=N,26170µm,0.6s
SIGR AML AML 12 46 42.1
comp=E,11312µm,0.6s
SIGR SIGRI 1.16 153 PN Pb 12 46 21.9 -0.3
SIGR SN Sg 12 46 37.4 +0.3
BAYC CANAKKALE_Bayr 1.16 115 *i* P Pb 12 46 22.2 -0.1
BAYC *i* S Sb 12 46 37.2 -0.4
BAYC IAML 12 46 39.0
comp=E,2µm,0.3s
BAYC IAML 12 46 40.0
comp=N,4µm,0.4s
PAIG Paliouri 1.20 255 P Pn 12 46 21.2 -1.8
PAIG Paliouri 1.20 255 P Pn 12 46 21.5 -1.5
PAIG S Sn 12 46 38.4 -1.1
PAIG AML AML 12 46 44.2
comp=E,2189µm,1.1s
PAIG AML AML 12 46 47.5
comp=N,1734µm,0.9s
KESN Edirne-Kesan 1.28 63 *i* P Pn 12 46 22.9 -1.6
KESN IAML 12 46 47.0
comp=E,3µm,0.3s
KESN IAML 12 46 49.0
comp=N,4µm,0.6s
PRK Paraskevi 1.30 140 P Pg 12 46 25.2 +0.3
PRK S Sn 12 46 41.0 -1.2
PRK AML AML 12 46 46.5
comp=E,14918µm,0.5s
PRK AML AML 12 46 46.9
comp=N,14478µm,0.5s
PLG Polygyros 1.33 276 P Pn 12 46 23.8 -1.2
PLG Polygyros 1.33 276 P Pn 12 46 24.1 -0.9
UKOP Uzunkopru-Edir 1.41 51 PN Pn 12 46 25.7 -0.3
UKOP Uzunkopru-Edir 1.41 51 Pn Pn 12 46 25.7 -0.3
KDZ Kurdzhali 1.41 7 P Pn 12 46 24.9 -1.2
KDZ Kurdzhali 1.41 7 PN Pn 12 46 25.1 -1.0
KDZ SN Sn 12 46 43.3 -1.6
KDZ Kurdzhali 1.41 7 P Pn 12 46 25.1 -1.0
KDZ Kurdzhali 1.41 7 Pn Pn 12 46 25.1 -1.0
SKY Skiros Island 1.45 200 P Pn 12 46 25.1 -1.5
AOS Alonnisos 1.47 223 P Pn 12 46 24.9 -1.9
AOS Alonnisos 1.47 223 P Pn 12 46 25.2 -1.6
AOS Alonnisos 1.47 223 PN Pn 12 46 25.2 -1.6
RZN Rozhen 1.48 346 *i* P Pn 12 46 27.1 -0.1
SRS Serrai 1.49 306 P Pn 12 46 26.2 -0.9
SRS S Sn 12 46 44.5 -2.3
comp=N,2µm,0.6s
SRS Serrai 1.49 306 P Pn 12 46 26.4 -0.7
AYVA Ayvalik 1.49 128 *i* P Pb 12 46 27.1 -0.9
AYVA *i* S Sb 12 46 46.1 -1.0
AYVA IAML 12 46 51.0
comp=N,3µm,0.5s
AYVA IAML 12 46 51.0
comp=E,2µm,1.0s
ALNA Alonissos 1.50 223 P Pn 12 46 25.2 -1.9
ALNA AML AML 12 46 54.6
comp=E,3137µm,0.8s
ALNA AML AML 12 47 01.3
comp=N,4292µm,1.0s
SOH Sokhos 1.51 293 P Pn 12 46 26.6 -0.8
RKY Sarkoy-Tekirda 1.58 73 PN Pn 12 46 26.8 -1.6
RKY Sarkoy-Tekirda 1.58 73 Pn Pn 12 46 26.9 -1.5
SART Tekirdag 1.59 73 *i* P Pn 12 46 27.5 -0.9
SART IAML 12 47 00.0
comp=E,520nm,0.4s
KRBG Karabiga-Canak 1.62 84 PN Pn 12 46 28.3 -0.6
KRBG Karabiga-Canak 1.62 84 Pn Pn 12 46 28.3 -0.6
HORT Hortiatis 1.63 283 P Pn 12 46 28.1 -1.0
HORT Hortiatis 1.63 283 P Pn 12 46 28.2 -0.9
HORT S Sn 12 46 48.5 -1.9
HORT AML AML 12 46 56.7
comp=E,1476µm,0.8s
HORT AML AML 12 47 06.9
comp=N,1493µm,1.0s
HORT Hortiatis 1.63 283 PN Pn 12 46 28.1 -1.0
SKIA Skiathos 1.71 231 P Pn 12 46 28.4 -1.7
SKIA S Sn 12 46 51.4 -0.8
SKIA AML AML 12 47 04.7
comp=E,3978µm,0.9s
SKIA AML AML 12 47 08.1
comp=N,2390µm,1.3s
PSRA Psara 1.73 170 P Pb 12 46 30.6 -1.3
MMB Musomiste 1.74 321 *i* P Pn 12 46 29.7 -0.8
THE Thessaloniki 1.74 284 P Pn 12 46 29.7 -0.7
THE Thessaloniki 1.74 284 P Pn 12 46 29.7 -0.7

XOR Xorichti 1.77 241 P Pn 12 46 29.0 -1.9
XOR Xorichti 1.77 241 P Pn 12 46 29.2 -1.8
DKL Dikili 1.77 131 PN Pn 12 46 30.0 -0.9
DKL SN Sn 12 46 52.9 -0.8
DKL Dikili 1.77 131 Pn Pn 12 46 30.0 -0.9
NEO Neokhori 1.78 239 P Pn 12 46 29.5 -1.6
KYMI Kymi, Euboea I 1.82 208 P Pn 12 46 29.9 -1.7
KYMI Kymi, Euboea I 1.82 208 P Pn 12 46 30.0 -1.7
DIM Dimitrovgrad 1.82 8 P Pn 12 46 31.4 -0.2
MRMT Marmara Adasi 1.88 78 PN Pn 12 46 30.9 -1.6
MRMT Marmara Adasi 1.88 78 Pn Pn 12 46 31.1 -1.4
PLD Plovdiv 1.89 349 P Pn 12 46 33.2 +0.6
PLD Plovdiv 1.89 349 PN Pn 12 46 31.9 -0.7
GONE Gonen-Balikesi 1.93 95 Pn Pb 12 46 35.8 +0.4
BALY Balya 1.94 104 *i* P Pn 12 46 33.4 +0.1
BALY IAML 12 47 04.0
comp=N,2µm,0.8s
BALY IAML 12 47 09.0
comp=E,1µm,0.6s
ZEDA zmir-Bergama 1.94 131 *i* P Pg 12 46 37.5 +0.4
KNT Kendrikon 1.96 298 P Pn 12 46 33.6 0.0
KNT Kendrikon 1.96 298 PN Pn 12 46 33.4 -0.2
MRKA Markates 1.97 219 P Pn 12 46 32.3 -1.5
CHOS Chios island 1.98 160 P Pn 12 46 33.4 -0.4
CHOS Chios island 1.98 160 P Pn 12 46 33.5 -0.3
CHOS Chios island 1.98 160 PN Pn 12 46 33.3 -0.5
EDRB Edirne 1.99 36 P Pn 12 46 32.9 -1.0
EDRB Edirne 1.99 36 Pn Pn 12 46 34.4 +0.4
EDC Edincik 2.05 86 PN Pn 12 46 34.3 -0.5
EDC Edincik 2.05 86 P Pn 12 46 35.3 +0.5
EDC Edincik 2.05 86 Pn Pn 12 46 35.3 +0.5
LIT Litokhoron 2.07 267 P Pn 12 46 33.9 -1.2
LIT Litokhoron 2.07 267 P Pn 12 46 33.8 -1.2
LIT Litokhoron 2.07 267 P Pn 12 46 33.8 -1.2
LIT Litokhoron 2.07 267 Pn 12 46 33.8 -1.2
KIRK Kırklareli 2.11 43 *i* P Pn 12 46 35.2 -0.4
KIRK IAML 12 47 12.0
comp=N,430nm,0.3s
CRLT Corlu 2.13 65 PN Pn 12 46 35.7 -0.2
STEP BALIKESIR_Sava 2.14 113 *i* P Pn 12 46 36.2 +0.2
STEP IAML 12 47 15.0
comp=N,2µm,0.7s
STEP IAML 12 47 15.0
comp=E,2µm,0.7s
URLA Izmir 2.18 149 PN Pn 12 46 36.6 0.0
URLA Izmir 2.18 149 *i* P Pn 12 46 36.6 0.0
URLA *i* S Sn 12 47 01.5 -2.4
URLA IAML 12 47 03.0
comp=N,478nm,0.6s
URLA IAML 12 47 22.0
comp=E,264nm,0.5s
PHSR Pinarhisar 2.25 51 PN Pn 12 46 37.5 0.0
BOTS Marmara Eregli 2.25 70 PN Pn 12 46 37.7 +0.1
VAY Valandovo 2.26 299 PN Pn 12 46 37.9 +0.3
VAY Valandovo 2.26 299 *i* Pn Pn 12 46 37.9 +0.3
KKB Krupnik 2.27 316 P Pn 12 46 37.6 -0.2
KARY Karystos 2.29 195 P Pn 12 46 36.8 -1.2
LKR Lokris 2.32 227 P Pn 12 46 37.1 -1.4
BLCB Balcova 2.35 142 PN Pn 12 46 38.9 0.0
BLCB Balcova 2.35 142 Pn Pn 12 46 39.0 0.0
DION Dionisos Attik 2.37 205 P Pn 12 46 37.7 -1.5
PTL Penteli 2.42 205 P Pn 12 46 39.0 -0.9
PGB Panagyurishte 2.42 342 P Pn 12 46 39.7 -0.3
KCTX Karacabey (Bur 2.43 89 PN Pn 12 46 39.5 -0.5
KCTX Karacabey (Bur 2.43 89 Pn Pn 12 46 39.5 -0.5
AXAR Agios Charalam 2.45 234 P Pn 12 46 39.3 -1.0
AKHS Akhisar 2.45 123 *i* P Pn 12 46 40.9 +0.6
AKHS IAML 12 47 19.0
comp=E,436nm,0.6s
JMB Yambol 2.46 25 P Pn 12 46 39.7 -0.7
JMB Yambol 2.46 25 Pg Pg 12 46 46.3 -0.7
SLVT Silivri 2.50 66 PN Pn 12 46 40.1 -0.9
SLVT Silivri 2.50 66 Pn Pn 12 46 40.1 -0.9
VIL2 Platees 2.52 217 P Pn 12 46 40.1 -1.1
AGG Agios Georgios 2.52 242 P Pn 12 46 40.2 -1.1
AGG Agios Georgios 2.52 242 P Pn 12 46 40.1 -1.2
AGG Agios Georgios 2.52 242 Pn 12 46 40.1 -1.2
ATHU Athens Univers 2.52 206 P Pn 12 46 40.4 -0.9
THL Klokotos Trika 2.53 255 P Pn 12 46 40.5 -0.8
VILL Villia 2.54 216 P Pn 12 46 40.0 -1.5
DURS Dursunbey 2.61 103 *i* P Pn 12 46 42.6 0.0
DURS IAML 12 47 24.0
comp=E,812nm,0.9s
DURS IAML 12 47 27.0
comp=N,723nm,0.6s
KZN Kozani 2.61 272 P Pn 12 46 42.6 0.0
VLY Voula,Athens 2.62 205 P Pn 12 46 42.0 -0.7
ELBA Catalca 2.63 69 *i* P Pn 12 46 41.6 -1.2
ELBA IAML 12 47 28.0
comp=E,151nm,0.2s
ELBA IAML 12 47 32.0
comp=N,155nm,0.6s
CTYL Yalikoy Yolu 2.66 61 PN Pn 12 46 41.9 -1.2
CTYL Yalikoy Yolu 2.66 61 Pn Pn 12 46 41.8 -1.3
MAKR Makrakomi, Fth 2.66 243 P Pn 12 46 42.6 -0.6
PROD Prodromos 2.66 222 P Pn 12 46 41.8 -1.4
CTKS Kestanelik-??a 2.71 68 PN Pn 12 46 42.9 -0.9
CTKS Kestanelik-??a 2.71 68 Pn Pn 12 46 42.9 -0.9
VTS Vitosha 2.79 329 ⇓P Pn 12 46 45.8 +0.8
VTS Vitosha 2.79 329 P Pn 12 46 45.5 +0.5
VTS Vitosha 2.79 329 Pn Pn 12 46 45.1 0.0
VTS Sn Sn 12 47 18.1 -0.9
LTK Loutraki 2.81 219 P Pn 12 46 44.1 -1.1
ARMT Armutlu 2.83 82 PN Pn 12 46 44.9 -0.5
ARMT Armutlu 2.83 82 Pn Pn 12 46 45.0 -0.5
LOUT Loutraki 2.84 218 P Pn 12 46 44.6 -1.0
SMG Samos 2.84 153 P Pn 12 46 45.8 +0.1
KPRO Kipourio 2.94 266 P Pn 12 46 47.3 +0.2
FNA Florina 2.95 282 P Pn 12 46 47.1 -0.1
FNA Florina 2.95 282 P Pn 12 46 47.4 +0.2
FNA Florina 2.95 282 P Pn 12 46 47.2 -0.1
FNA Florina 2.95 282 Pn 12 46 47.2 -0.1
PVL Pavlikeni 2.97 2 P Pg 12 46 55.1 -1.7
DEMI Demirci 2.98 113 *i* P Pn 12 46 46.1 -1.6
DEMI IAML 12 47 38.0
comp=N,474nm,0.8s
DEMI IAML 12 47 46.0
comp=E,385nm,0.7s
KALE Kalithea 3.00 233 P Pn 12 46 46.1 -1.8
GCAM G?zelcaml? 3.00 147 *i* P Pn 12 46 45.5 -2.4
GCAM IAML 12 47 44.0
comp=N,221nm,0.7s
GCAM IAML 12 47 53.0
comp=E,136nm,0.7s
ANX Ano Chora 3.02 238 P Pn 12 46 47.5 -0.7
ULDT Uludag 3.03 91 *i* P Pn 12 46 49.2 +0.8
ULDT IAML 12 47 40.0
comp=E,414nm,0.6s
ULDT IAML 12 47 48.0
comp=N,384nm,0.8s
ISK Istanbul-Kandi 3.06 73 P Pn 12 46 47.6 -1.0
ISK Istanbul-Kandi 3.06 73 Pn Pn 12 46 47.6 -1.0
SZH Strazhica 3.07 10 P Pn 12 46 49.1 +0.3
IGD Bursa 3.08 88 *i* P Pn 12 46 48.7 -0.2
IGD IAML 12 47 41.0
comp=E,129nm,0.4s
IGD IAML 12 47 41.0
comp=N,155nm,0.3s
KLYT Kilyos 3.10 70 Pn Pn 12 46 48.1 -1.1
DID Didima 3.13 210 P Pn 12 46 48.4 -1.3
SERI Serifos 3.13 190 P Pn 12 46 47.4 -2.2
SERI AML AML 12 47 21.0
comp=N,413µm,0.8s
SERI AML AML 12 47 48.5
comp=E,494µm,0.8s
MANT Manisa 3.15 123 *i* P Pn 12 46 50.8 +0.7
MANT IAML 12 47 40.0
comp=E,395nm,0.6s
MANT IAML 12 47 40.0
comp=N,299nm,0.6s
MANT Manisa 3.15 123 Pn 12 46 50.4 +0.3
NEST Nestorio 3.17 274 P Pn 12 46 50.7 +0.5
PLVB Pleven 3.17 353 ⇓P Pn 12 46 50.6 +0.5
PLVB Pleven 3.17 353 Pn 12 46 50.6 +0.5
APE Apeiranthos 3.19 175 P Pn 12 46 49.5 -0.9
APE Apeiranthos 3.19 175 ⇑P Pn 12 46 49.5 -0.9
APE Apeiranthos 3.19 175 *de*P Pn 12 46 48.9 -1.5
APE Apeiranthos 3.19 175 Pn 12 46 49.5 -0.9
LAKA Lakka 3.19 232 P Pn 12 46 50.1 -0.5
KLV Kalavryta, Ach 3.23 228 P Pn 12 46 49.9 -1.1
PVO Paravola 3.27 241 P Pn 12 46 51.9 +0.4
ROIA ROIAK 3.29 29 P Pn 12 46 52.3 +0.5

MPEP Malo Peshtene 3.29 341 P Pn 12 46 52.3 +0.5
SKO Skopje 3.31 303 *i* Pn Pn 12 46 52.7 +0.5
SKO Skopje 3.31 303 *i* Pn Pn 12 46 52.7 +0.5
PRD Provadia 3.38 29 P Pn 12 46 52.6 -0.5
OHR Ohrid 3.44 286 *i* Pn Pn 12 46 54.8 +0.8
OHR Ohrid 3.44 286 *i* Pn Pn 12 46 54.8 +0.8
RAZG Razgrad 3.46 16 ⇓P Pn 12 46 54.4 +0.2
RAZG Razgrad 3.46 16 Pn 12 46 54.4 +0.2
BDRM Kayabasi 3.64 150 *i* P Pn 12 46 56.8 +0.1
BDRM IAML 12 47 39.0
comp=N,55nm,0.5s
BDRM IAML 12 48 12.0
comp=E,51nm,0.9s
KHAL Karahalli 3.83 118 *i* P Pn 12 46 58.4 -1.0
KHAL IAML 12 48 09.0
comp=N,90nm,0.9s
KHAL IAML 12 48 16.0
comp=E,64nm,0.7s
SANT Santorini 3.88 177 Pn Pn 12 47 00.4 +0.5
COPA Copaceanca 3.88 0 ⇑P Pn 12 46 59.7 -0.3
COPA Copaceanca 3.88 0 Pn 12 46 59.7 -0.3
GEYV SAKARYA_Geyve 3.91 85 *i* P Pn 12 46 59.2 -1.2
GEYV IAML 12 48 25.0
comp=E,162nm,0.8s
GEYV IAML 12 48 37.0
comp=N,213nm,1.2s
VLI Velíai 3.94 207 P Pn 12 46 59.6 -1.2
DAT Datca 3.98 151 *i* P Pn 12 47 01.6 +0.1
ITM Ithomi 3.98 221 Pn 12 47 01.4 +0.1
SGRR Singureni 4.02 8 ⇓P Sg 12 48 10.7 +1.8
TAVA DENIZLI_Tavas 4.02 132 *i* P Pn 12 47 01.1 -0.9
PSN Preselentsi 4.10 32 P Pn 12 47 02.2 -0.7
SRCK Saricakaya, Es 4.18 91 *i* P Pn 12 47 03.9 -0.2
SRCK IAML 12 48 18.0
comp=N,248nm,1.0s
SRCK IAML 12 48 22.0
comp=E,116nm,0.8s
TIR Tirane 4.18 287 ⇑P Pn 12 47 04.1 0.0
TIR Tirane 4.18 287 P Pn 12 47 03.2 -0.9
TIR Tirane 4.18 287 Pn 12 47 03.2 -0.9
RASA Rasa 4.22 20 ⇓P Pn 12 47 05.3 +0.6
RASA Rasa 4.22 20 Pn 12 47 05.3 +0.6
HUMR Humele 4.28 358 ⇑P Pn 12 47 05.3 -0.1
HUMR Humele 4.28 358 Pn 12 47 05.3 -0.1
ICOR Ion Corvin 4.33 26 ⇓P Pn 12 47 06.5 +0.4
ICOR Ion Corvin 4.33 26 Pn 12 47 06.5 +0.4
MDUB Mudurnu 4.60 85 Pn 12 47 09.8 -0.1
MFTR Murfatlar 4.61 30 ⇑P Pn 12 47 10.4 +0.5
MFTR Murfatlar 4.61 30 Pn 12 47 10.4 +0.5
TLBR Topalu 4.79 25 ⇑P Pn 12 47 04.6 -7.8
SECR 4.83 7 ⇓P Pn 12 47 14.0 +0.9
SECR 4.83 7 Pn 12 47 13.9 +0.9
TIRR Tirgusor 4.84 29 ⇓P Pn 12 47 13.3 +0.2
TIRR Tirgusor 4.84 29 ⇓P Pn 12 47 13.3 +0.2
TIRR Tirgusor 4.84 29 P Pn 12 47 12.6 -0.5
TIRR Tirgusor 4.84 29 Pn 12 47 13.3 +0.2
TIRR Tirgusor 4.84 29 Pn 12 47 12.6 -0.5
HARR Harsova 4.88 24 ⇓P Pn 12 47 14.1 +0.4
HARR Harsova 4.88 24 P Pn 12 47 14.1 +0.4
HARR Harsova 4.88 24 Pn 12 47 14.1 +0.4
KARP Karpathos 4.95 161 Pn Pn 12 47 14.5 -0.1
IDI Anoyia 4.96 183 Pn Pn 12 47 13.8 -1.0
comp=E,1.1nm,0.3s,baz=1.7,slow=9.8,SNR=11
IDI Anoyia 4.96 183 ⇑P Pn 12 47 13.7 -1.2
IDI Anoyia 4.96 183 Pn 12 47 14.1 -0.7
PDG Podgorica 4.97 298 ⇑P Pn 12 47 15.5 +0.7
PDG Podgorica 4.97 298 Pn 12 47 16.0 +1.1
ISR Istrita 4.97 11 ⇓P Pn 12 47 16.0 +1.0
ISR Istrita 4.97 11 P Pn 12 47 16.0 +1.0
ISR Istrita 4.97 11 Pn 12 47 16.0 +1.0
HERR Herculane 5.06 337 ⇑P Pn 12 47 16.1 -0.1
HERR Herculane 5.06 337 Pn 12 47 16.1 -0.1
ELL Elmali 5.09 132 P Pn 12 47 17.7 +0.9
ELL Elmali 5.09 132 Pn 12 47 17.6 +0.9
ARR Arges 5.13 356 ⇑P Pn 12 47 17.6 +0.4
ARR Arges 5.13 356 Pn 12 47 17.6 +0.4
SCTE Santa Cesarea 5.15 270 Pn Pn 12 47 17.0 -0.3
TOPG Topolog 5.19 26 ⇓P Pn 12 47 18.1 +0.1
MDVR Moldovita 5.21 332 ⇑P Pn 12 47 18.4 +0.2
MDVR Moldovita 5.21 332 Pn 12 47 18.4 +0.2
MLR Muntele Rosu 5.27 6 Pn Pn 12 47 20.4 +1.2
comp=E,4.6nm,0.3s,baz=214,slow=5.2,SNR=64
MLR Lg Lg 12 48 52.3
comp=E,5.1nm,0.3s,baz=303,slow=22,SNR=8.2
MLR Muntele Rosu 5.27 6 ⇑P Pn 12 47 20.5 +1.4
MLR Muntele Rosu 5.27 6 P Pn 12 47 20.0 +0.8
MLR Muntele Rosu 5.27 6 Pn 12 47 19.9 +0.8
JURR Jurilovca 5.28 30 ⇑P Pn 12 47 18.6 -0.5
GRER 5.30 14 ⇑P Pn 12 47 20.8 +1.4
GRER 5.30 14 Pn 12 47 20.8 +1.4
LOT Lotru 5.30 349 ⇓P Pn 12 47 19.4 -0.1
LOT Lotru 5.30 349 Pn 12 47 19.4 -0.1
CFR Carcaliu 5.39 23 ⇓P Pn 12 47 20.5 -0.1
CFR Carcaliu 5.39 23 P Pn 12 47 20.5 -0.1
CFR Carcaliu 5.39 23 Pn 12 47 20.5 -0.1
BISRR Bisoca 5.42 11 ⇓P Pn 12 47 21.5 +0.4
BISRR Bisoca 5.42 11 Pn 12 47 21.5 +0.4
GZR Gura Zlata 5.44 342 ⇑P Pn 12 47 21.3 -0.1
GZR Gura Zlata 5.44 342 P Pn 12 47 21.3 -0.1
GZR Gura Zlata 5.44 342 Pn 12 47 21.3 -0.1
DIVS Divibare 5.45 317 Pn 12 47 21.1 -0.5
TLCR 5.61 27 ⇑P Pn 12 47 24.3 +0.6
TLCR 5.61 27 P Pn 12 47 24.3 +0.6
TLCR 5.61 27 Pn 12 47 24.3 +0.6
PLOR Plostina 5.70 10 ⇑P Pn 12 47 26.2 +1.2
PLOR Plostina 5.70 10 P Pn 12 47 26.2 +1.2
PLOR Plostina 5.70 10 Pn 12 47 26.2 +1.2
DOPR Dopca 5.72 1 ⇑P Pn 12 47 26.7 +1.4
DOPR Dopca 5.72 1 Pn 12 47 26.7 +1.4
VRI Vrincioaia 5.73 11 ⇑P Pn 12 47 26.3 +1.0
VRI Vrincioaia 5.73 11 P Pn 12 47 26.3 +1.0
VRI Vrincioaia 5.73 11 Pn 12 47 26.3 +1.0
BR231 Keskin MP Arra 5.84 92 Pn 12 47 27.1 +0.1
ANTO Ankara 5.85 91 ⇑P Pn 12 47 27.4 +0.3
ANTO Ankara 5.85 91 P Pn 12 47 26.6 -0.5
ANTO Ankara 5.85 91 Pn 12 47 26.6 -0.5
DEV Deva 5.88 344 ⇓P Pn 12 47 28.3 +0.9
DEV Deva 5.88 344 P Pn 12 47 28.3 +0.9
DEV Deva 5.88 344 Pn 12 47 28.3 +0.9
MDB Medias 5.92 355 ⇓P Pn 12 47 29.5 +1.5
MDB Medias 5.92 355 P Pn 12 47 29.5 +1.5
MDB Medias 5.92 355 Pn 12 47 29.5 +1.5
VARL Varlezi 5.98 18 ⇑P Pn 12 47 30.2 +1.5
GHRR 6.03 15 ⇑P Pn 12 47 29.8 +0.3
GHRR 6.03 15 Pn 12 47 29.8 +0.3
MATE Matera 6.48 276 ⇓P Pn 12 47 35.5 -0.2
MATE Matera 6.48 276 Pn 12 47 35.5 -0.2
BR131 Keskin Array S 6.51 92 P Pn 12 47 36.3 0.0
BR131 Keskin Array S 6.51 92 Pn 12 47 36.3 0.0
BRTR Keskin Array B 6.51 92 Pn Pn 12 47 36.1 -0.2
comp=E,1.7nm,0.3s,baz=267,slow=12,SNR=22
BRTR Lg Lg 12 49 25.5
baz=274,slow=24,SNR=1.9
SIRR Siria 6.54 338 ⇑P Pn 12 47 36.4 -0.1
SIRR Siria 6.54 338 Pn 12 47 36.5 -0.1
TIP Timpagrande 6.58 263 ⇓P Pn 12 47 37.8 +0.6
TIP Timpagrande 6.58 263 Pn 12 47 37.5 +0.3
LEOM Leova 6.61 19 ⇑P Pn 12 47 38.4 +1.0
LEOM Leova 6.61 19 P Pn 12 47 38.4 +1.0
LEOM Leova 6.61 19 Pn 12 47 38.4 +1.0
VASR Vaslui 6.67 16 ⇓P Pn 12 47 38.7 +0.5
BIZ Bicaz 6.72 5 ⇑P Pn 12 47 40.5 +1.5
BIZ Bicaz 6.72 5 Pn 12 47 40.5 +1.5
DRGR 6.78 345 ⇑P Pn 12 47 41.2 +1.3
DRGR 6.78 345 P Pn 12 47 41.2 +1.3
DRGR 6.78 345 Pn 12 47 41.2 +1.3
ARCR ARCALIA 6.86 355 ⇑P Pn 12 47 42.5 +1.6
ARCR ARCALIA 6.86 355 Pn 12 47 42.5 +1.6
PRAR RASCA 7.15 6 ⇑P Pn 12 47 46.2 +1.3
PRAR RASCA 7.15 6 Pn 12 47 46.2 +1.3
MILM Milestii Mici 7.17 20 ⇓P Pn 12 47 45.5 +0.4
MILM Milestii Mici 7.17 20 Pn 12 47 45.5 +0.4
KIS Kishinev 7.24 20 *e*P Pn 12 47 47.0 +0.9
SGRT San Giovanni R 7.30 285 Pn Pn 12 47 45.9 -1.1
BURAR Bucovina Array 7.37 0 ⇓P Pn 12 47 48.7 +0.8
BURAR Bucovina Array 7.37 0 Pn 12 47 48.7 +0.8
BUR08 Bucovina Ar. S 7.39 0 Pn 12 47 48.0 -0.3
CEL Celeste 7.48 258 Pn Pn 12 47 48.0 -1.4
SEV Sevastopol' 7.61 53 *e*P Pn 12 47 48.9 -2.2
SEV *e*S Sn 12 49 12.9 -4.6
SIM Simferopol' 8.09 52 *ce*P Pn 12 48 02.9 +5.2

SIM					pmax	pmax		
	comp=Z,13nm,0.6s							
PAOL	**Paolisi**	**8.11**	**279**			**Pn**	**12 47 57.6**	**-0.5**
SORM	**Soroca**	**8.21**	**15**	⇑	P	**Pn**	**12 47 58.7**	**-0.6**
SORM	**Soroca**	**8.21**	**15**		P	**Pn**	**12 47 58.7**	**-0.6**
SORM	**Soroca**	**8.21**	**15**			**Pn**	**12 47 58.7**	**-0.6**
SUDU	**Sudak**	**8.60**	**54**	⇓	*e*P	**Pn**	**12 48 03.1**	**-1.6**
SUDU					*e*S	**Sn**	**12 49 36.4**	**-5.5**
VYHS	**Vyhne**	**9.41**	**333**		*e*P	**Pn**	**12 48 13.0**	**-2.9**
VYHS	**Vyhne**	**9.41**	**333**		*e*PN	**Pn**	**12 48 13.0**	**-2.9**
NRCA	**Norcia**	**9.41**	**290**			**Pn**	**12 48 15.6**	**-0.3**
MURB	**Monte Urbino**	**9.93**	**292**			**Pn**	**12 48 22.9**	**-0.1**
ANN	**Anapa**	**10.12**	**59**		*e*P	**Pn**	**12 48 24.9**	**-0.6**
ANN					*e*S	**Sn**	**12 50 19.1**	**-0.1**
ANN					pmax	pmax		
	comp=Z,16nm,0.7s							
CONA	**Conrad Observa**	**10.19**	**322**		*e*Pn	**Pn**	**12 48 29.2**	**+2.7**
	comp=Z,1.5nm,0.6s							
AKASG	**Malin Array Be**	**10.83**	**14**		Pn	**Pn**	**12 48 34.1**	**-1.1**
	comp=Z,1.6nm,0.3s,baz=193,slow=12,SNR=6.0							
AKBB	**Malin Array Si**	**10.83**	**14**		P	**Pn**	**12 48 33.8**	**-1.4**
AKBB	**Malin Array Si**	**10.83**	**14**			**Pn**	**12 48 33.8**	**-1.4**
KBA	**Koelnbreinsper**	**10.96**	**312**		*e*Pn	**Pn**	**12 48 37.5**	**+0.4**
	comp=Z,1.1nm,0.4s							
ABTA	**Abfaltersbach**	**11.26**	**309**		*i* Pn	**Pn**	**12 48 42.6**	**+1.3**
	comp=Z,3.2nm,0.6s							
CTI	**Castel Tesino**	**11.46**	**305**		P	**Pn**	**12 48 43.6**	**-0.3**
CTI	**Castel Tesino**	**11.46**	**305**			**Pn**	**12 48 43.6**	**-0.3**
SQTA	**Sankt Quirin**	**12.27**	**309**		*i* Pn	**Pn**	**12 48 57.3**	**+2.2**
	comp=Z,5.1nm,0.7s							
MOTA	**Moosalm**	**12.39**	**310**		*i* Pn	**Pn**	**12 48 58.6**	**+1.8**
	comp=Z,1.6nm,0.5s							
FUORN	**Ofenpass-Fuorn**	**12.57**	**305**			**Pn**	**12 48 58.7**	**-0.6**
DAVOX	**Davos/Dischmat**	**12.88**	**306**		Pn	**Pn**	**12 49 03.9**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=141,slow=11,SNR=16							
KIV	**Kislovodsk**	**13.51**	**68**	⇑	*e*P	**P**	**12 49 16.7**	**-4.7**
KIV					pmax	pmax		
	comp=Z,3.0nm,0.9s							
SENIN	**Lac Senin/Sane**	**14.37**	**301**		Pn	**Pn**	**12 49 23.9**	**0.0**
VSR	**Storozhevoye**	**14.66**	**37**	⇓	*e*P	**Pn**	**12 49 29.0**	**+1.5**
VSR					pmax	pmax		
	comp=Z,6.0nm,0.5s							
OBN	**Obninsk**	**16.70**	**23**	⇑	*e*P	**P**	**12 49 54.7**	**-1.8**
OBN					pmax	pmax		
	comp=Z,8.0nm,0.5s							
VSU	**Vasula**	**18.26**	**3**	⇓	*e*P	**P**	**12 50 14.5**	**+0.8**
VSU					pmax	pmax		
	comp=Z,20nm,0.7s							
CART	**Cartagena**	**20.52**	**271**		P	**P**	**12 50 36.1**	**-2.5**
CART					IAmb	IAmb	12 50 40.0	
	comp=Z,17nm,1.1s							
FINES	**FINESS Array B**	**21.23**	**1**		P	**P**	**12 50 47.1**	**+1.1**
	comp=Z,2.0nm,0.6s,baz=169,slow=11,SNR=9.0							
FIA1	**FINESS Array S**	**21.23**	**1**		P	**P**	**12 50 46.2**	**+0.1**
ESDC	**Sonseca Array**	**22.31**	**278**		P	**P**	**12 50 57.4**	**-0.6**
	comp=Z,1.1nm,0.9s,baz=74,slow=11,SNR=5.3							
KLMR	**Klimovskoe**	**22.45**	**19**		*e*P	**P**	**12 50 55.7**	**-3.5**
KLMR					pmax	pmax		
	comp=Z,19nm,1.2s							
KLMR	**Klimovskoe**	**22.45**	**19**		*e*P	**P**	**12 50 55.8**	**-3.5**
KLMR					AMP		12 51 02.3	
	comp=Z,19nm,1.2s							
NOA	**NORSAR Array B**	**22.53**	**342**		P	**P**	**12 50 59.3**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=152,slow=11,SNR=2.6							
TAM	**Tamanrasset**	**24.07**	**230**		P	**P**	**12 51 15.9**	**-0.2**
TAM					pmax	pmax		
	comp=Z,6.0nm,1.5s							
TAM	**Tamanrasset**	**24.07**	**230**		P	**P**	**12 51 15.9**	**-0.2**
GEYT	**Alibeck**	**25.59**	**84**		P	**P**	**12 51 31.0**	**+1.3**
	comp=Z,0.9nm,0.4s,baz=286,slow=18,SNR=2.3							
GYA0B	**ALIBECK ARRAY**	**25.59**	**84**			**P**	**12 51 30.3**	**+0.7**
GYA0B					IAmb	IAmb	12 51 45.5	
	comp=Z,4.0nm,0.8s							
ARU	**Arti**	**27.10**	**42**	*d*	*i*P	**P**	**12 51 45.7**	**+2.6**
ARU							12 52 27.7	
ARU					S	**S**	**12 56 26.2**	**+4.9**
ARU					SS	**SnSn**	**12 57 37.2**	**+10**
ARU					pmax	pmax		
	comp=Z,4.0nm,0.8s							
BRVK	**Borovoye**	**32.94**	**52**	⇓	*e*P	**P**	**12 52 36.0**	**+1.2**
BRVK					pmax	pmax		
	comp=Z,7.0nm,1.9s							
KK31	**Karatay Array**	**33.66**	**70**		P	**P**	**12 52 42.3**	**+1.0**
KK31					pmax	pmax		
	comp=Z,2.0nm,1.1s							
KK31	**Karatay Array**	**33.66**	**70**		P	**P**	**12 52 42.3**	**+1.0**
KK31					IAmb	IAmb	12 52 49.5	
	comp=Z,2.0nm,1.1s							
CHGR	**Chuyangaron**	**33.74**	**78**		P	**P**	**12 52 41.7**	**-0.3**
TORD	**Torodi Ar. Bea**	**33.98**	**224**		P	**P**	**12 52 43.9**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=36,slow=9.7,SNR=5.0							
GAR	**Garm**	**34.50**	**77**		P	**P**	**12 52 49.1**	**+0.4**
KURK	**Kurchatov**	**38.13**	**56**	⇓	*e*P	**P**	**12 53 19.9**	**+0.5**
KURK					pmax	pmax		
	comp=Z,3.0nm,1.4s							
MK31	**Makanchi Array**	**41.13**	**61**		P	**P**	**12 53 44.8**	**+0.3**
MK31					pmax	pmax		
	comp=Z,2.0nm,0.7s							
MK31	**Makanchi Array**	**41.13**	**61**		P	**P**	**12 53 44.8**	**+0.3**
MK31					IAmb	IAmb	12 53 51.2	
	comp=Z,2.4nm,0.7s							
MKAR	**Makanchi Array**	**41.13**	**61**		P	**P**	**12 53 45.1**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=272,slow=8.3,SNR=11							
ZAA0	**Zalesovo Array**	**41.60**	**50**		P	**P**	**12 53 48.2**	**0.0**
ZAA0					IAmb	IAmb	12 53 54.7	
	comp=Z,2.8nm,0.7s							
ZALV	**Zalesovo Beam**	**41.60**	**50**		P	**P**	**12 53 48.4**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=270,slow=9.4,SNR=7.2							
ZALV	**Zalesovo Beam**	**41.60**	**50**	*i*	P	**P**	**12 53 48.0**	**-0.2**
ZALV					pmax	pmax		
	comp=Z,1.0nm,0.4s							
TLY	**Talaya**	**53.21**	**50**	⇓	*e*P	**P**	**12 55 20.0**	**+1.4**
TLY					pmax	pmax		
	comp=Z,2.0nm,0.9s							
SONM	**Songino Array**	**56.33**	**53**		P	**P**	**12 55 42.0**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=297,slow=9.5,SNR=1.7							
CMAR	**Chiang Mai Arr**	**66.06**	**86**		P	**P**	**12 56 47.6**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=304,slow=6.4,SNR=2.4							
YKA	**Yellowknife Ar**	**72.63**	**342**		P	**P**	**12 57 30.1**	**+2.5**
	comp=Z,0.3nm,0.8s,baz=40,slow=5.5,SNR=3.7							
ASAR	**Alice Springs**	**118.82**	**98**		PKP	**PKiKP**	**13 04 51.5**	**+2.2**
	comp=Z,0.3nm,0.7s,baz=283,slow=1.4,SNR=6.4							

*DDA **24** 12:51:43.2,40˚.21N×25˚.25E, h9km±2km, ML3.0*
ISC 24 12:51:42.8±1.2**, 40˚.19N**±0˚.06×**25˚.22E**±0˚.06**, h10**km**, n12, σ0°39/17, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.73**	**118**	*i*	P	**Pg**		**12 51 56.6**	**-0.2**
BOZC					P	**Pb**		**12 51 57.4**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**1.11**	**113**	*i*	P	**Pb**		**12 52 04.1**	**0.0**
BAYC					S	**Sn**		**12 52 20.0**	**+0.1**
BAYC					IAML			12 52 25.0	
	comp=N,265nm,0.2s								
KESN	**Edirne-Kesan**	**1.28**	**60**	*i*	P	Pg		12 52 12.7	+5.3
KESN					S	**Sn**		**12 52 24.2**	**-0.3**
AYVA	**Ayvalik**	**1.44**	**127**	*i*	P	**Pg**		**12 52 10.8**	**+0.5**
KDZ	**Kurdzhali**	**1.46**	**6**		P	**Pn**		**12 52 09.4**	**+0.1**
KDZ					S	**Sg**		**12 52 29.6**	**-0.3**
RZN	**Rozhen**	**1.54**	**346**	*e*	P	**Pg**		**12 52 13.1**	**+0.6**
SART	**Tekirdag**	**1.57**	**71**	*i*	P	**Pg**		**12 52 13.0**	**0.0**
ZEDA	**zmir-Bergama**	**1.88**	**130**	*i*	P	**Pb**		**12 52 17.8**	**+0.5**
BALY	**Balya**	**1.90**	**103**	*i*	P	**Pb**		**12 52 17.8**	**+0.2**
BALY					S	**Sg**		**12 52 44.2**	**+0.4**
BALY					IAML			12 52 52.0	
	comp=N,145nm,0.4s								
STEP	**BALIKESIR_Sava**	**2.09**	**112**	*i*	P	**Pg**		**12 52 22.2**	**-0.6**
STEP					S	**Sg**		**12 52 49.6**	**-0.4**
STEP					IAML			12 53 00.0	
	comp=E,198nm,0.9s								
VAY	**Valandovo**	**2.31**	**300**	*i*	Pn	**Pb**		**12 52 24.2**	**-0.3**
VAY	**Valandovo**	**2.31**	**300**	*i*	Pn	**Pb**		**12 52 24.2**	**-0.3**

*GUC **24** 12:53:42.8±0.6,21˚.26S×68˚.78W, h122km±4km, ML4.0*
*IDC **24** 12:53:43.1±1.0,21˚.26S×68˚.39W, h116km±16km, mb3.6/3, mb1 3.7/5, mb1mx3.4/28, mbtmp4.0/5, Error ellipse: s-maj=42.2km s-min=17.3km az=111.0*
*NEIC **24** 12:53:43.0±1.3,21˚.25S±0˚.04×68˚.77W±0˚.08, h123km±6km, Error ellipse: s-maj=11.3km s-min=5.7km az=88.0*
ISC 24 12:53:42.7±0.8**, 21˚.24S**±0˚.04×**68˚.71W**±0˚.07**, h120**km±7km**,**

n50, σ1°25/68, mb3.8/4, 5C-6D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.74**	**222**	⇓	*i*P	**Pn**		**12 54 03.2**	**+0.6**
PB09					*i* S	**Sn**		**12 54 18.4**	**+0.8**
PB09					IAML			12 54 19.7	
	comp=N,3μm,0.6s								
PB09	**IPOC Station P**	**0.74**	**222**			**Pn**		**12 54 02.6**	**0.0**
PB09					Sn	**Sn**		**12 54 17.8**	**+0.2**
PB01	**IPOC Station P**	**0.75**	**285**	⇓	*i*P	**Pn**		**12 54 02.6**	**0.0**
PB01					*e*S	**Sn**		**12 54 17.9**	**+0.4**
PB01					IAML			12 54 18.9	
	comp=N,6μm,0.2s								
PB01	**IPOC Station P**	**0.75**	**285**			**Pn**		**12 54 02.3**	**-0.2**
PB01					Sn	**Sn**		**12 54 17.9**	**+0.4**
PB02	**IPOC Station P**	**1.11**	**266**	⇓	*i*P	**Pn**		**12 54 06.3**	**+0.4**
PB02					*i* S	**Sn**		**12 54 23.6**	**+0.1**
PB02					IAML			12 54 25.6	
	comp=E,8μm,0.2s								
PB08	**IPOC Station P**	**1.17**	**339**	⇓	*i*P	**Pn**		**12 54 07.7**	**+0.7**
PB08					*e*S	**Sn**		**12 54 25.9**	**+0.7**
PB08					IAML			12 54 26.9	
	comp=N,2μm,0.3s								
PB08	**IPOC Station P**	**1.17**	**339**			**Pn**		**12 54 07.6**	**+0.7**
PB08					Sn	**Sn**		**12 54 26.0**	**+0.8**
PB07	**IPOC Station P**	**1.20**	**246**	⇑	*i*P	**Pn**		**12 54 07.2**	**+0.3**
PB07					*e*S	**Sn**		**12 54 25.3**	**+0.1**
PB07					IAML			12 54 26.9	
	comp=E,4μm,0.2s								
PB07	**IPOC Station P**	**1.20**	**246**			**Pn**		**12 54 07.0**	**+0.1**
PB07					Sn	**Sn**		**12 54 25.1**	**-0.2**
PB03	**IPOC Station P**	**1.26**	**230**	⇑	*i*P	**Pn**		**12 54 07.9**	**+0.3**
PB03					*e*S	**Sn**		**12 54 26.5**	**0.0**
PB03					IAML			12 54 27.4	
	comp=N,2μm,0.3s								
LVC	**Limon Verde**	**1.37**	**188**		P	**Pn**		**12 54 09.6**	**+0.5**
	comp=N,164nm,0.3s,baz=11,slow=9.2,SNR=531								
LVC					S	**Sn**		**12 54 29.9**	**+0.8**
	comp=N,38nm,0.3s,baz=115,slow=23,SNR=19								
LVC					LR	LR		12 54 53.2	
	comp=N,177nm,19.2s,baz=16,slow=49								
LVC	**Limon Verde**	**1.37**	**188**	⇑	*i*P	**Pn**		**12 54 09.6**	**+0.5**
LVC					*i* S	**Sn**		**12 54 29.9**	**+0.8**
PATCX	**Punta Patache**	**1.41**	**287**		*e*P	**Pn**		**12 54 09.8**	**+0.6**
PATCX					*e*S	**Sn**		**12 54 29.7**	**+0.4**
PATCX					IAML			12 54 30.5	
	comp=N,3μm,0.2s								
PATCX	**Punta Patache**	**1.41**	**287**			**Pn**		**12 54 09.4**	**+0.3**
PATCX					Sn	**Sn**		**12 54 29.6**	**+0.4**
TA01	**Diego Aracena**	**1.53**	**296**	⇓	*i*P	**Pn**		**12 54 10.6**	**+0.2**
TA01					*i* S	**Sn**		**12 54 31.6**	**+0.1**
TA01					IAML			12 54 32.8	
	comp=E,2μm,0.2s								
TA01	**Diego Aracena**	**1.53**	**296**			**Pn**		**12 54 10.6**	**+0.2**
TA01					Sn	**Sn**		**12 54 31.6**	**+0.1**
GO01	**Chusmiza**	**1.63**	**344**			**Pn**		**12 54 12.7**	**+0.5**
TA02	**Huaiquique**	**1.64**	**306**	*e*	P	**Pn**		**12 54 11.8**	**0.0**
TA02					*e*S	**Sn**		**12 54 33.9**	**0.0**
TA02					IAML			12 54 39.3	
	comp=N,3μm,0.1s								
PB06	**IPOC Station P**	**1.66**	**209**	⇑	*i*P	**Pn**		**12 54 12.6**	**+0.4**
PB06					*i* S	**Sn**		**12 54 35.0**	**+0.4**
PB06					IAML			12 54 36.6	
	comp=E,725nm,0.5s								
PB06	**IPOC Station P**	**1.66**	**209**			**Pn**		**12 54 12.3**	**+0.2**
PB06					Sn	**Sn**		**12 54 35.0**	**+0.4**
PB11	**IPOC Station P**	**1.72**	**329**	⇓	*i*P	**Pn**		**12 54 12.9**	**0.0**
PB11					*e*S	**Sn**		**12 54 36.1**	**+0.2**
PB11					IAML			12 54 37.1	
	comp=E,3μm,0.2s								
PB11	**IPOC Station P**	**1.72**	**329**			**Pn**		**12 54 12.7**	**-0.2**
PB04	**IPOC Station P**	**1.72**	**231**			**Pn**		**12 54 12.9**	**0.0**
PB15	**IPOC Station P**	**2.08**	**200**			**Pn**		**12 54 17.5**	**+0.2**
PSGC	**Pisagua**	**2.10**	**321**	⇓	*i*P	**Pn**		**12 54 17.0**	**-0.6**
PSGC					*i* S	**Sn**		**12 54 43.2**	**-1.0**
PSGC					IAML			12 54 47.3	
	comp=N,617nm,0.8s								
PSGCX	**Pisagua**	**2.10**	**321**			**Pn**		**12 54 17.0**	**-0.6**
MNMC	**Minye Minye**	**2.26**	**338**			**Pn**		**12 54 20.3**	**+0.6**
PB10	**IPOC Station P**	**2.83**	**217**			**Pn**		**12 54 26.4**	**-0.4**
PB12	**IPOC Station P**	**3.02**	**330**			**Pn**		**12 54 28.4**	**-1.0**
PB14	**IPOC Station P**	**3.71**	**205**			**Pn**		**12 54 38.1**	**-0.6**
GO02	**Mina Guanaco**	**3.99**	**192**			**Pn**		**12 54 41.9**	**-0.4**
LPAZ	**La Paz**	**4.96**	**6**		P	**Pn**		**12 54 57.8**	**+2.2**
	comp=N,3.2nm,0.3s,baz=189,slow=4.3,SNR=46								
LPAZ	**La Paz**	**4.96**	**6**			**Pn**		**12 54 57.1**	**+1.4**
AC01	**Pan de Azucar**	**5.18**	**199**			**Pn**		**12 54 56.0**	**-2.1**
GO03	**Copiap**	**6.47**	**192**			**Pn**		**12 55 13.1**	**-2.5**
AC04	**Llanos de Chal**	**7.26**	**197**			**Pn**		**12 55 21.4**	**-4.6**
AC05	**El Transito**	**7.69**	**190**			**Pn**		**12 55 28.8**	**-3.3**
CO01	**Juntas del Tor**	**8.79**	**188**		Pn	**Pn**		**12 55 45.0**	**-2.0**
SIV	**San Ignacio**	**8.93**	**55**		P	**Pn**		**12 55 45.2**	**-3.5**
	comp=N,3.4nm,0.3s,baz=260,slow=15,SNR=54								
VA03	**San Esteban**	**11.59**	**188**		Pn	**Pn**		**12 56 22.1**	**-2.5**
H03N1	**Juan Fernandez**	**15.15**	**215**		T	T		13 12 03.8	
	baz=35,slow=72,SNR=3.3								
H03N2	**Juan Fernandez**	**15.16**	**215**		T	T		13 12 33.4	
	baz=35,slow=72,SNR=2.9								
H03N3	**Juan Fernandez**	**15.16**	**215**		T	T		13 12 35.6	
	baz=35,slow=72,SNR=3.4								
BI02	**San Fabin de**	**15.53**	**188**			**Pn**		**12 57 13.8**	**-1.3**
BI02					IAmb	IAmb		12 57 16.6	
	comp=Z,6.3nm,0.8s								
PTGA	**Pitinga**	**22.10**	**24**		P	**P**		**12 58 26.6**	**-1.7**
	comp=Z,2.7nm,0.3s,baz=196,slow=15,SNR=8.6								
PTGA	**Pitinga**	**22.10**	**24**		P	**P**		**12 58 26.0**	**-2.4**
SNAA	**Sanae**	**62.46**	**161**		P	**P**		**13 03 54.0**	**+1.1**
SNAA					IAmb	IAmb		13 03 54.6	
	comp=Z,1.7nm,0.8s								
QSPA	**South Pole Qui**	**68.95**	**180**		P	**P**		**13 04 36.5**	**+1.9**
TORD	**Torodi Ar. Bea**	**77.09**	**70**		P	**P**		**13 05 23.6**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=250,slow=4.5,SNR=4.1								
YKA	**Yellowknife Ar**	**91.01**	**341**		P	**P**		**13 06 34.0**	**+1.2**
	comp=Z,0.2nm,0.4s,baz=129,slow=4.9,SNR=6.3								

*DDA **24** 12:53:54.6,40˚.42N×26˚.19E, h7km±5km, ML2.6*
ISC 24 12:53:53.8±1.2**, 40˚.42N**±0˚.03×**26˚.15E**±0˚.05**, h13**km±12km**,**
n8, σ0°86/15, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KESN	**Edirne-Kesan**	**0.57**	**45**	*i*	P	**Pg**		**12 54 05.6**	**-0.3**
KESN					*i* S	**Sb**		**12 54 13.2**	**-1.0**
KESN					IAML			12 54 15.0	
	comp=N,637nm,0.2s								
BOZC	**Bozcaada**	**0.58**	**187**	*i*	P	**Pg**		**12 54 04.5**	**-0.6**
BOZC				*i*	P	**Pb**		**12 54 05.1**	**-0.7**
BOZC					*i* S	**Sb**		**12 54 15.6**	**+1.6**
BOZC					IAML			12 54 16.0	
	comp=E,256nm,0.3s								
BAYC	**CANAKKALE_Bayr**	**0.74**	**155**	*i*	P	**Pn**		**12 54 10.1**	**0.0**
AYVA	**Ayvalik**	**1.19**	**159**	*i*	P	**Pg**		**12 54 17.4**	**+0.8**
AYVA					*i* S	**Sn**		**12 54 32.0**	**-0.1**
AYVA					IAML			12 54 36.0	
	comp=N,346nm,0.4s								
BALY	**Balya**	**1.32**	**120**	*i*	P	**Pg**		**12 54 19.6**	**+0.4**
BALY					*i* S	**Sg**		**12 54 37.3**	**+1.0**
BALY					IAML			12 54 39.0	
	comp=E,153nm,0.5s								
KDZ	**Kurdzhali**	**1.35**	**336**		P	**Pg**		**12 54 20.0**	**+0.3**
KDZ					S	**Sg**		**12 54 37.4**	**+0.2**
ZEDA	**zmir-Bergama**	**1.62**	**153**	*i*	P	**Pg**		**12 54 24.9**	**0.0**
ZEDA					*i* S	**Sg**		**12 54 44.8**	**-1.1**
ZEDA					IAML			12 54 49.0	
	comp=N,60nm,0.4s								
RZN	**Rozhen**	**1.67**	**320**		S	**Sb**		**12 54 45.9**	**+0.5**

*KRSC **24** 12:55:56.1±2.1,55˚.47N×166˚.21E, h43km±15km, ML3.8*
*IDC **24** 12:55:57.1±2.1,54˚.83N×166˚.45E, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.2/40, mbtmp3.3/4, ML3.0/1, Error ellipse: s-maj=96.8km s-min=25.5km az=166.0*
ISC 24 12:55:59.4±2.2**, 55˚.51N**±0˚.05×**166˚.2E**±0˚.1**, h20**km**, n44, σ1°48/71, mb3.2/3, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.32**	**199**	*e*	P	**Pb**		**12 56 05.6**	**-0.7**
BKI				*e*	S	**Sb**		**12 56 11.2**	**+0.1**
KBTR	**Krutoberegovo**	**2.01**	**292**	*e*	P	**Pn**		**12 56 28.7**	**-3.4**
KBTR				*e*	S	**Sn**		**12 56 53.8**	**-2.7**
KBG	**Krutoberegovo**	**2.08**	**293**	*e*	P	**Pn**		**12 56 30.2**	**-2.9**
KBG				*e*	S	**Sn**		**12 56 55.1**	**-3.3**
SMKR	**Semkarok**	**2.84**	**294**	*e*	P	**Pn**		**12 56 42.5**	**-1.1**
BDR	**Baidarnaya**	**2.97**	**293**	*e*	P	**Pn**		**12 56 43.8**	**-1.6**
BDR				*e*	S	**Sn**		**12 57 21.6**	**+1.2**
SRKR	**Sorokina**	**3.02**	**294**	*e*	P	**Pn**		**12 56 44.4**	**-1.7**
SRKR				*e*	S	**Sn**		**12 57 22.9**	**+1.2**
ZLN	**Zelenaya**	**3.06**	**282**	*e*	P	**Pn**		**12 56 46.2**	**-0.5**
ZLN				*e*	S	**Sn**		**12 57 24.5**	**+1.7**
CIRR	**Tsirk**	**3.11**	**284**	*e*	P	**Pn**		**12 56 46.7**	**-0.7**
CIRR				*e*	S	**Sn**		**12 57 23.7**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**3.12**	**280**	*e*	P	**Pn**		**12 56 46.7**	**-0.7**
BZGR				*e*	S	**Sn**		**12 57 25.0**	**+0.9**
LGNR	**Loginova**	**3.14**	**283**	*e*	P	**Pn**		**12 56 47.3**	**-0.6**
LGNR				*e*	S	**Sn**		**12 57 26.0**	**+1.2**
KLY	**Klyuchi**	**3.20**	**287**	*e*	P	**Pn**		**12 56 46.0**	**-2.4**
KLY				*e*	S	**Sn**		**12 57 22.1**	**-3.8**
KRSR	**Krestovskiy**	**3.23**	**285**	*e*	P	**Pn**		**12 56 48.0**	**-0.9**
KRSR				*e*	S	**Sn**		**12 57 27.3**	**+0.5**
BZWR	**Bezymyannyi-We**	**3.23**	**280**	*e*	P	**Pn**		**12 56 48.9**	**-0.1**
BZWR				*e*	S	**Sn**		**12 57 27.1**	**+0.1**
TUMD	**Tumrok D**	**3.30**	**267**	*e*	P	**Pn**		**12 56 50.1**	**+0.3**
TUMD				*e*	S	**Sn**		**12 57 27.8**	**-0.6**
KIRR	**Kirishev**	**3.32**	**280**	*e*	P	**Pn**		**12 56 50.0**	**-0.2**
KIRR				*e*	S	**Sn**		**12 57 29.7**	**+0.7**
KMNR	**Kamenistaya**	**3.36**	**277**	*e*	P	**Pn**		**12 56 51.1**	**+0.3**
KMNR				*e*	S	**Sn**		**12 57 31.2**	**+1.1**
KZV	**Kizimen**	**3.37**	**266**	*e*	P	**Pn**		**12 56 50.5**	**-0.5**
KZV				*e*	S	**Sn**		**12 57 29.6**	**-0.8**
KPT	**Kopyto**	**3.38**	**280**	*e*	P	**Pn**		**12 56 50.9**	**-0.2**
KPT				*e*	S	**Sn**		**12 57 31.1**	**+0.5**
TUMR	**Tumrok**	**3.43**	**269**	*e*	P	**Pn**		**12 56 51.7**	**-0.1**
TUMR				*e*	S	**Sn**		**12 57 32.9**	**+1.0**
KOZ	**Kozyrevsk**	**3.59**	**281**	*e*	S	**Sn**		**12 57 37.6**	**+2.0**
SRDR	**Sredinnyy**	**3.71**	**285**	*e*	P	**Pn**		**12 56 54.8**	**-0.7**
SRDR				*e*	S	**Sn**		**12 57 39.6**	**+0.9**
KII	**Karymskiy**	**4.15**	**252**	*e*	P	**Pn**		**12 56 58.2**	**-3.4**
SPN	**Mys Shipunski**	**4.33**	**239**	*e*	P	**Pn**		**12 57 02.8**	**-1.1**
SPN				*e*	S	**Sn**		**12 57 51.1**	**-2.6**
SDLR	**Sedlovina**	**4.80**	**245**	*e*	P	**Pn**		**12 57 10.9**	**+0.4**
SDLR				*e*	S	**Sn**		**12 58 05.6**	**+0.1**
SMAR	**Somma**	**4.85**	**245**	*e*	P	**Pn**		**12 57 11.7**	**+0.4**
SMAR				*e*	S	**Sn**		**12 58 05.8**	**-1.1**
KRER	**Koryakskii**	**4.86**	**246**	*e*	P	**Pn**		**12 57 12.0**	**+0.6**
KRER				*e*	S	**Sn**		**12 58 04.9**	**-2.2**
UGLR	**Uglovaya**	**4.87**	**245**	*e*	P	**Pn**		**12 57 12.0**	**+0.6**
UGLR				*e*	S	**Sn**		**12 58 06.9**	**-0.3**
KRX	**Arik**	**4.88**	**247**	*e*	P	**Pn**		**12 57 12.3**	**+0.6**
KRX				*e*	S	**Sn**		**12 58 06.7**	**-0.9**
AVH	**Avacha**	**4.88**	**246**	*e*	P	**Pn**		**12 57 12.2**	**+0.6**
AVH				*e*	S	**Sn**		**12 58 08.0**	**+0.5**
KOK	**Koryaka**	**4.92**	**246**	*e*	P	**Pn**		**12 57 12.9**	**+0.7**
DALK	**Dalny**	**5.00**	**243**	*e*	P

ENEZ	**Enez**	**0.37**	**22**	PG	**Pg**	**13 17 53.8**	**-0.2**
ENEZ				SG	**Sb**	**13 18 01.9**	**+0.2**
GELI	**Tayfur-Gelibol**	**0.38**	**89**	PG	**Pg**	**13 17 54.5**	**+0.2**
ERIK	**Erikli-Kesan**	**0.50**	**56**	PG	**Pb**	**13 17 58.1**	**+0.2**
BOZC	**Bozcaada**	**0.55**	**173**	PG	**Pg**	**13 17 57.6**	**+0.1**
BOZC				SG	**Sb**	**13 18 06.4**	**-0.6**
BOZC	**Bozcaada**	**0.55**	**173**	*i* P	**Pg**	**13 17 57.6**	**+0.1**
BOZC				*i* P	**Pb**	**13 17 58.0**	**-0.9**
BOZC				*i* S	**Sg**	**13 18 05.2**	**+0.5**
BOZC				*i* S	**Sb**	**13 18 05.8**	**-1.1**
EZN	**Ezine**	**0.63**	**154**	P	**Pg**	**13 17 58.9**	**0.0**
EZN	**Ezine**	**0.63**	**154**	PG	**Pg**	**13 17 59.1**	**+0.2**
EZN				SG	**Sb**	**13 18 09.8**	**+0.7**
KESN	**Edirne-Kesan**	**0.69**	**51**	*i* P	**Pb**	**13 18 01.2**	**-0.2**
KESN				*i* S	**Sg**	**13 18 09.1**	**-0.1**
KESN				IAML		13 18 14.0	
	comp=E,909nm,0.6s						
LIA	**Limnos Island**	**0.78**	**231**	P	**Pg**	**13 18 02.2**	**+0.4**
LIA				S	**Sb**	**13 18 13.8**	**+0.3**
	comp=E,2µm,0.5s						
LIA	**Limnos Island**	**0.78**	**231**	P	**Pg**	**13 18 02.2**	**+0.4**
LIA				S	**Sb**	**13 18 13.7**	**+0.3**
LIA				AML	AML	13 18 17.5	
	comp=E,4250µm,0.6s						
LIA				AML	AML	13 18 21.9	
	comp=N,4081µm,0.5s						
BAYC	**CANAKKALE_Bayr**	**0.79**	**146**	*i* P	**Pg**	**13 18 02.0**	**+0.1**
BAYC				*i* S	**Sg**	**13 18 12.3**	**+0.2**
RDO	**Rodhopi**	**0.82**	**337**	P	**Pg**	**13 18 02.0**	**-0.6**
RDO	**Rodhopi**	**0.82**	**337**	P	**Pg**	**13 18 02.2**	**-0.4**
RDO				S	**Sb**	**13 18 14.2**	**-0.5**
RDO	**Rodhopi**	**0.82**	**337**	PG	**Pg**	**13 18 02.5**	**-0.1**
RDO				SG	**Sb**	**13 18 14.9**	**+0.2**
UKOP	**Uzunkopru-Edir**	**0.89**	**34**	PG	**Pb**	**13 18 04.1**	**-0.5**
UKOP				SG	**Sn**	**13 18 18.2**	**-0.7**
RKY	**Sarkoy-Tekirda**	**0.96**	**72**	PG	**Pb**	**13 18 05.8**	**-0.1**
THAS	**Thassos island**	**0.98**	**283**	P	**Pg**	**13 18 05.0**	**-0.6**
THAS				S	**Sb**	**13 18 20.1**	**+0.9**
	comp=N,1µm,0.6s						
THAS	**Thassos island**	**0.98**	**283**	P	**Pg**	**13 18 05.1**	**-0.6**
THAS				S	**Sg**	**13 18 18.3**	**0.0**
THAS				AML	AML	13 18 20.7	
	comp=N,2492µm,0.6s						
THAS				AML	AML	13 18 20.7	
	comp=E,1736µm,0.5s						
KRBG	**Karabiga-Canak**	**1.01**	**90**	PG	**Pn**	**13 18 07.2**	**-0.2**
EFSA	**Agios Efstrati**	**1.14**	**222**	P	**Pg**	**13 18 08.2**	**-0.4**
EFSA				S	**Sb**	**13 18 24.3**	**+0.6**
EFSA				AML	AML	13 18 31.8	
	comp=N,3573µm,0.5s						
EFSA				AML	AML	13 18 32.1	
	comp=E,3607µm,0.6s						
PRK	**Paraskevi**	**1.17**	**168**	P	**Pg**	**13 18 09.3**	**+0.1**
PRK				S	**Sn**	**13 18 26.0**	**+0.3**
	comp=E,2µm,1.0s						
PRK	**Paraskevi**	**1.17**	**168**	P	**Pn**	**13 18 10.0**	**+0.4**
PRK				S	**Sn**	**13 18 26.7**	**+1.0**
PRK				AML	AML	13 18 33.8	
	comp=E,4552µm,1.1s						
PRK				AML	AML	13 18 35.7	
	comp=N,3336µm,1.0s						
SIGR	**SIGRI**	**1.18**	**184**	P	**Pg**	**13 18 09.2**	**-0.3**
SIGR				S	**Sn**	**13 18 26.5**	**+0.5**
	comp=N,3µm,0.8s						
SIGR	**SIGRI**	**1.18**	**184**	P	**Pg**	**13 18 09.0**	**-0.5**
SIGR				S	**Sn**	**13 18 26.2**	**+0.1**
SIGR				AML	AML	13 18 32.3	
	comp=E,3463µm,0.9s						
SIGR				AML	AML	13 18 33.3	
	comp=N,8658µm,0.9s						
SIGR	**SIGRI**	**1.18**	**184**	PN	**Pg**	**13 18 08.9**	**-0.6**
SIGR				SN	**Sn**	**13 18 26.6**	**+0.5**
KNL	**Balıkesir**	**1.20**	**95**	*i* P	**Pg**	**13 18 09.1**	**-0.6**
KNL				*i* S	**Sn**	**13 18 27.3**	**+0.9**
KNL				IAML		13 18 34.0	
	comp=E,2µm,0.7s						
KNL				IAML		13 18 36.0	
	comp=N,2µm,0.7s						
AYVA	**Ayvalik**	**1.22**	**153**	*i* P	**Pg**	**13 18 10.0**	**-0.1**
AYVA				*i* S	**Sn**	**13 18 27.3**	**+0.4**
AYVA				IAML		13 18 34.0	
	comp=N,2µm,1.0s						
AYVA				IAML		13 18 37.0	
	comp=E,1µm,0.8s						
KAVA	**Kavala**	**1.26**	**299**	P	**Pn**	**13 18 09.8**	**-1.1**
KAVA				S	**Sb**	**13 18 27.6**	**+0.2**
	comp=E,430nm,0.6s						
KAVA	**Kavala**	**1.26**	**299**	P	**Pn**	**13 18 09.9**	**-0.9**
KAVA				S	**Sg**	**13 18 26.5**	**-0.9**
KAVA				AML	AML	13 18 33.1	
	comp=N,839µm,0.5s						
KAVA				AML	AML	13 18 35.4	
	comp=E,855µm,0.5s						
KVLA	**Kavala**	**1.32**	**295**	P	**Pn**	**13 18 10.8**	**-0.9**
KDZ	**Kurdzhali**	**1.32**	**342**	*i* P	**Pn**	**13 18 10.8**	**-0.9**
KDZ				S	**Sb**	**13 18 28.5**	**-0.7**
KDZ	**Kurdzhali**	**1.32**	**342**	PN	**Pn**	**13 18 10.9**	**-0.8**
TKR	**Tekirdag**	**1.33**	**63**	PN	**Pg**	**13 18 13.1**	**+0.8**
GONE	**Gonen-Balikesi**	**1.36**	**104**	PN	**Pg**	**13 18 13.3**	**+0.5**
BALY	**Balya**	**1.42**	**117**	*i* P	**Pn**	**13 18 13.4**	**+0.3**
BALY				*i* S	**Sg**	**13 18 32.6**	**+0.1**
BALY				IAML		13 18 44.0	
	comp=N,611nm,1.0s						
BALY				IAML		13 18 49.0	
	comp=E,356nm,0.8s						
DKL	**Dikili**	**1.50**	**151**	PN	**Pb**	**13 18 14.9**	**-0.1**
OUR	**Ouranopolis**	**1.52**	**268**	P	**Pn**	**13 18 13.4**	**-1.0**
OUR	**Ouranopolis**	**1.52**	**268**	P	**Pn**	**13 18 13.2**	**-1.1**
OUR				S	**Sn**	**13 18 33.9**	**-0.5**
OUR				AML	AML	13 18 39.5	
	comp=E,1923µm,0.7s						
OUR				AML	AML	13 18 40.5	
	comp=N,1256µm,0.5s						
OUR	**Ouranopolis**	**1.52**	**268**	PN	**Pn**	**13 18 13.3**	**-1.1**
EDRB	**Edirne**	**1.57**	**22**	P	**Pn**	**13 18 14.6**	**-0.4**
EDRB				S	**Sn**	**13 18 35.5**	**-0.1**
	comp=N,395nm,0.7s						
EDRB	**Edirne**	**1.57**	**22**	PN	**Pb**	**13 18 15.6**	**-0.5**
RZN	**Rozhen**	**1.60**	**324**	*i* P	**Pn**	**13 18 15.3**	**-0.5**
RZN				S	**Sn**	**13 18 36.9**	**+0.1**
KIRK	**Kırklareli**	**1.63**	**31**	*i* P	**Pb**	**13 18 17.0**	**-0.2**
KIRK				*i* S	**Sn**	**13 18 34.6**	**-2.5**
BALB	**Balikesir**	**1.65**	**117**	PN	**Pg**	**13 18 17.9**	**-0.5**
ZEDA	**zmir-Bergama**	**1.66**	**149**	*i* P	**Pb**	**13 18 17.2**	**-0.5**
ZEDA				*i* S	**Sg**	**13 18 41.1**	**+1.0**
ZEDA				IAML		13 18 47.0	
	comp=N,339nm,0.5s						
ZEDA				IAML		13 18 48.0	
	comp=E,424nm,0.6s						
STEP	**BALIKESIR_Sava**	**1.68**	**126**	*i* P	**Pn**	**13 18 17.2**	**+0.5**
STEP				*i* S	**Sg**	**13 18 42.2**	**+1.3**
STEP				IAML		13 18 50.0	
	comp=E,574nm,0.8s						
STEP				IAML		13 18 56.0	
	comp=N,588nm,1.1s						
DIM	**Dimitrovgrad**	**1.69**	**349**	P	**Pn**	**13 18 16.3**	**-0.4**
PAIG	**Paliouri**	**1.82**	**256**	P	**Pn**	**13 18 19.0**	**+0.5**
KCTX	**Karacabey (Bur**	**1.83**	**93**	PN	**Pb**	**13 18 19.7**	**-0.9**
SLVT	**Silivri**	**1.89**	**63**	PN	**Pb**	**13 18 21.4**	**-0.3**
PLG	**Polygyros**	**1.93**	**270**	P	**Pn**	**13 18 19.0**	**-1.1**
PLG	**Polygyros**	**1.93**	**270**	P	**Pn**	**13 18 18.8**	**-1.2**
PLG				AML	AML	13 18 50.6	
	comp=E,985µm,0.8s						
PLG				AML	AML	13 18 55.7	
	comp=N,925µm,0.7s						
SRS	**Serrai**	**1.95**	**293**	P	**Pn**	**13 18 19.5**	**-0.8**
SRS	**Serrai**	**1.95**	**293**	P	**Pn**	**13 18 19.0**	**-1.3**
SRS				AML	AML	13 18 57.0	
	comp=E,752µm,0.7s						
SRS				AML	AML	13 19 06.6	
	comp=N,594µm,0.8s						
PLD	**Plovdiv**	**1.96**	**331**	PN	**Pn**	**13 18 21.0**	**+0.5**
CHOS	**Chios island**	**2.00**	**178**	P	**Pn**	**13 18 21.0**	**-0.1**
ELBA	**Catalca**	**2.01**	**67**	*i* P	**Pb**	**13 18 23.4**	**-0.4**
ELBA				*i* S	**Sb**	**13 18 48.3**	**-0.7**
AOS	**Alonnisos**	**2.02**	**234**	P	**Pn**	**13 18 21.4**	**+0.1**
AOS	**Alonnisos**	**2.02**	**234**	P	**Pn**	**13 18 21.0**	**-0.3**
AOS				AML	AML	13 19 04.6	
	comp=N,648µm,0.6s						
AOS				AML	AML	13 19 07.9	
	comp=E,733µm,0.7s						
AOS	**Alonnisos**	**2.02**	**234**	PN	**Pn**	**13 18 22.5**	**+1.2**
SOH	**Sokhos**	**2.04**	**283**	P	**Pn**	**13 18 21.0**	**-0.6**
CTYL	**Yalikoy Yolu**	**2.06**	**58**	PN	**Pb**	**13 18 24.2**	**-0.4**
AKHS	**Akhisar**	**2.08**	**136**	*i* P	**Pb**	**13 18 23.7**	**-1.1**
MMB	**Musomiste**	**2.08**	**306**	P	**Pn**	**13 18 21.2**	**-0.9**
DURS	**Dursunbey**	**2.08**	**112**	*i* P	**Pb**	**13 18 24.6**	**-0.3**
DURS				*i* S	**Sb**	**13 18 51.0**	**+0.1**
DURS				IAML		13 19 00.0	
	comp=E,264nm,0.7s						
DURS				IAML		13 19 00.0	
	comp=N,340nm,0.9s						
URLA	**Izmir**	**2.09**	**166**	PN	**Pn**	**13 18 22.1**	**-0.1**
URLA	**Izmir**	**2.09**	**166**	*i* P	**Pn**	**13 18 20.6**	**-1.6**
URLA				*i* S	**Sg**	**13 18 52.9**	**-1.0**
URLA				IAML		13 19 03.0	
	comp=E,132nm,0.8s						
URLA				IAML		13 19 14.0	
	comp=N,121nm,0.8s						
CTKS	**Kestanelik-??a**	**2.10**	**66**	PN	**Pb**	**13 18 24.6**	**-0.6**
HORT	**Hortiatis**	**2.20**	**276**	P	**Pn**	**13 18 23.1**	**-0.8**
HORT	**Hortiatis**	**2.20**	**276**	P	**Pn**	**13 18 23.0**	**-0.8**
HORT				AML	AML	13 19 06.9	
	comp=N,487µm,0.6s						
HORT				AML	AML	13 19 08.2	
	comp=E,520µm,0.6s						
HORT	**Hortiatis**	**2.20**	**276**	PN	**Pn**	**13 18 23.8**	**0.0**
ARMT	**Armutlu**	**2.21**	**85**	PN	**Pb**	**13 18 26.0**	**-1.1**
BGKT	**Bogazkoy**	**2.27**	**69**	PN	**Pn**	**13 18 26.2**	**+1.5**
ULDT	**Uludag**	**2.43**	**95**	*i* P	**Pg**	**13 18 33.7**	**+0.2**
ULDT				*i* S	**Sg**	**13 19 03.6**	**-1.4**
ULDT				IAML		13 19 12.0	
	comp=N,193nm,0.7s						
ULDT				IAML		13 19 19.0	
	comp=E,264nm,0.8s						
BUY	**Buyukada**	**2.44**	**78**	*i* P	**Pg**	**13 18 34.3**	**+0.7**
BUY				*i* S	**Sb**	**13 19 01.1**	**-0.1**
BUY				IAML		13 19 18.0	
	comp=N,97nm,0.7s						
BUY				IAML		13 19 21.0	
	comp=E,105nm,0.6s						
ISK	**Istanbul-Kandi**	**2.44**	**73**	PN	**Pb**	**13 18 29.2**	**-1.8**
KNT	**Kendrikon**	**2.46**	**289**	P	**Pn**	**13 18 27.1**	**-0.2**
KNT	**Kendrikon**	**2.46**	**289**	P	**Pn**	**13 18 27.1**	**-0.2**
KNT	**Kendrikon**	**2.46**	**289**	PN	**Pn**	**13 18 27.7**	**+0.4**
IGD	**Bursa**	**2.47**	**92**	*i* P	**Pg**	**13 18 33.0**	**-1.2**
IGD				*i* S	**Sb**	**13 19 03.1**	**+0.9**
IGD				IAML		13 19 14.0	
	comp=N,80nm,0.9s						
KLYT	**Kilyos**	**2.48**	**69**	PN	**Pn**	**13 18 29.5**	**+1.9**
DEMI	**Demirci**	**2.51**	**122**	*i* P	**Pn**	**13 18 28.3**	**+0.2**
DEMI				*i* S	**Sb**	**13 19 02.2**	**-1.1**
DEMI				IAML		13 19 10.0	
	comp=E,98nm,0.5s						
DEMI				IAML		13 19 28.0	
	comp=N,133nm,1.0s						
ELND	**Elena**	**2.54**	**358**	⇑P	**Pn**	**13 18 29.2**	**+0.9**
PGB	**Panagyurishte**	**2.55**	**328**	P	**Pb**	**13 18 33.9**	**+1.0**
PGB				S	**Sg**	**13 19 07.0**	**-1.6**
KKB	**Krupnik**	**2.63**	**305**	P	**Pn**	**13 18 29.8**	**+0.1**
VAY	**Valandovo**	**2.74**	**291**	*e*Pn	**Pn**	**13 18 31.7**	**+0.5**
VAY				*e*Sn	**Sg**	**13 19 14.3**	**-0.6**
VAY	**Valandovo**	**2.74**	**291**	*i* Pn	**Pn**	**13 18 31.2**	**0.0**
VAY	**Valandovo**	**2.74**	**291**	*i* Pn	**Pn**	**13 18 31.2**	**0.0**
MANT	**Manisa**	**2.76**	**133**	*i* P	**Pn**	**13 18 32.4**	**+0.7**
MANT				*i* S	**Sg**	**13 19 14.2**	**-1.3**
MANT				IAML		13 19 29.0	
	comp=E,82nm,0.7s						
SZH	**Strazhica**	**2.87**	**359**	P	**Pn**	**13 18 32.8**	**-0.2**
GDZ	**Gediz**	**3.00**	**115**	*i* P	**Pn**	**13 18 35.8**	**+0.9**
GDZ				*i* S	**Sb**	**13 19 20.0**	**+2.4**
VTS	**Vitosha**	**3.03**	**318**	*e*Pn	**Pn**	**13 18 35.6**	**+0.3**
VTS				*e*Sn	**Sb**	**13 19 18.0**	**-0.3**
VTS	**Vitosha**	**3.03**	**318**	⇑P	**Pn**	**13 18 34.1**	**-1.2**
VTS	**Vitosha**	**3.03**	**318**	P	**Pn**	**13 18 35.7**	**+0.4**
PLVB	**Pleven**	**3.16**	**342**	⇑P	**Pn**	**13 18 37.4**	**+0.5**
RAZG	**Razgrad**	**3.20**	**7**	⇓P	**Pn**	**13 18 37.4**	**0.0**
BOSS	**Bosilegrad**	**3.36**	**310**	*e*Pn	**Pn**	**13 18 40.7**	**+0.9**
BOSS				*e*Sn	**Sb**	**13 19 27.4**	**-0.4**
MPEP	**Malo Peshtene**	**3.40**	**331**	P	**Pn**	**13 18 40.7**	**+0.5**
VLAD	**Vladila**	**3.79**	**343**	⇓P	**Pn**	**13 18 45.7**	**+0.2**
ZAPS	**Zavoj**	**3.81**	**320**	*e*Pn	**Pn**	**13 18 46.4**	**+0.5**
ZAPS				*e*Sn	**Sb**	**13 19 36.5**	**-4.2**
BARS	**Barje**	**3.95**	**309**	*e*Pn	**Pn**	**13 18 48.4**	**+0.6**
BARS	**Barje**	**3.95**	**309**	*e*Pn	**Pb**	**13 18 56.7**	**0.0**
BARS				*e*Sn	**Sn**	**13 19 39.0**	**+4.7**
ZAGS	**Zajecar**	**4.41**	**322**	*e*Pn	**Pn**	**13 18 53.8**	**-0.3**
HARR	**Harsova**	**4.53**	**18**	⇓P	**Pn**	**13 18 59.6**	**+3.8**
SELS	**Selova**	**4.60**	**309**	*e*Pn	**Pn**	**13 18 56.2**	**-0.5**
SRE	**Strehaia**	**4.73**	**335**	⇓P	**Pn**	**13 18 59.0**	**+0.4**
CFR	**Carcaliu**	**5.04**	**18**	⇓P	**Pn**	**13 19 06.7**	**+3.9**
ARR	**Arges**	**5.07**	**349**	⇑P	**Pn**	**13 19 03.2**	**-0.1**
MLR	**Muntele Rosu**	**5.09**	**360**	⇓P	**Pn**	**13 19 05.7**	**+2.0**
KUBS	**Kucevo**	**5.12**	**323**	*e*Pn	**Pn**	**13 19 02.2**	**-1.7**
HERR	**Herculane**	**5.20**	**331**	⇑P	**Pn**	**13 19 04.4**	**-0.5**
GRUS	**Gruza**	**5.24**	**314**	*e*Pn	**Pn**	**13 19 05.6**	**+0.1**
LOTR	**Lotru**	**5.30**	**343**	⇑P	**Pn**	**13 19 06.3**	**-0.3**
MDVR	**Moldovita**	**5.39**	**326**	⇑P	**Pn**	**13 19 07.5**	**-0.2**
PLOR	**Plostina**	**5.48**	**5**	⇓P	**Pn**	**13 19 10.8**	**+1.9**
VRI	**Vrincioaia**	**5.50**	**6**	⇑P	**Pn**	**13 19 10.6**	**+1.5**
GZR	**Gura Zlata**	**5.52**	**336**	⇓P	**Pn**	**13 19 09.0**	**-0.5**
DOPR	**Dopca**	**5.59**	**356**	⇓P	**Pn**	**13 19 11.1**	**+0.8**
TRUS	**Trudelj**	**5.63**	**315**	*e*Pn	**Pn**	**13 19 09.8**	**-1.1**
DIVS	**Divibare**	**5.78**	**312**	*e*Pn	**Pn**	**13 19 12.6**	**-0.4**
DIVS				*e*Sn	**Sn**	**13 20 24.6**	**+5.0**
BBLS	**Lazići**	**5.99**	**308**	*e*Pn	**Pn**	**13 19 16.0**	**+0.1**
BZS	**Buzias**	**6.12**	**330**	⇑P	**Pn**	**13 19 16.9**	**-0.7**
TESR	**Tescani**	**6.14**	**4**	⇑P	**Pn**	**13 19 19.3**	**+1.4**
DRGR		**6.82**	**341**	⇑P	**Pn**	**13 19 27.0**	**-0.3**
TIP	**Timpagrande**	**7.20**	**263**	⇑P	**Pn**	**13 19 33.1**	**+0.6**
BURAR	**Bucovina Array**	**7.24**	**356**	⇑P	**Pn**	**13 19 34.9**	**+1.8**
VYHS	**Vyhne**	**9.57**	**330**	*e*PN	**Pn**	**13 20 04.1**	**-0.8**

DDA ***24*** *13:22:55.2, 40˚.37N×25˚.98E, h7km±2km, ML2.6*
ISC 24 13:22:54.9±1.3**, 40˚.39N**±0˚.03×**25˚.91E**±0˚.05**, h8**km±11km**,**
n8, σ0**87/16, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.56**	**168**	*i* P	**Pg**	**13 23 06.0**	**+0.4**
BOZC				*i* S	**Sg**	**13 23 13.4**	**+0.5**
KESN	**Edirne-Kesan**	**0.73**	**53**	*i* P	**Pg**	**13 23 08.7**	**-0.3**
KESN				*i* S	**Sg**	**13 23 18.3**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**0.81**	**142**	*i* P	**Pb**	**13 23 10.5**	**-0.8**
BAYC				*i* S	**Sb**	**13 23 21.0**	**-1.3**
AYVA	**Ayvalik**	**1.24**	**150**	*i* P	**Pn**	**13 23 18.5**	**+0.1**
AYVA				*i* S	**Sn**	**13 23 35.1**	**-0.2**
AYVA				IAML		13 23 36.0	
	comp=N,245nm,0.5s						
AYVA				IAML		13 23 38.0	
	comp=E,98nm,0.5s						
KNL	**Balıkesir**	**1.24**	**95**	*i* P	**Pn**	**13 23 20.7**	**+2.2**
KNL				*i* S	**Sn**	**13 23 35.6**	**+0.1**
KNL				IAML		13 23 39.0	
	comp=N,108nm,0.8s						
KDZ	**Kurdzhali**	**1.31**	**344**	P	**Pn**	**13 23 19.9**	**+0.4**
KDZ				S	**Sb**	**13 23 37.0**	**+0.2**
BALY	**Balya**	**1.47**	**116**	*i* P	**Pb**	**13 23 21.7**	**-0.7**
BALY				*i* S	**Sg**	**13 23 42.3**	**+0.3**
RZN	**Rozhen**	**1.58**	**326**	P	**Pn**	**13 23 24.0**	**+0.6**
RZN				S	**Sn**	**13 23 44.0**	**-0.1**

DDA ***24*** *13:26:13.3, 40˚.27N×25˚.86E, h7km±4km, ML2.5*
ISC 24 13:26:12.1±1.4**, 40˚.29N**±0˚.04×**25˚.76E**±0˚.06**, h13**km±10km**,**
n8, σ0**64/17, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.51**	**153**	*i* P	**Pg**	**13 26 22.3**	**+0.3**
BOZC				*i* P	**Pg**	**13 26 22.4**	**+0.3**
BOZC				*i* S	**Sg**	**13 26 28.7**	**0.0**
BOZC				*i* S	**Sb**	**13 26 29.4**	**-0.7**
BAYC	**CANAKKALE_Bayr**	**0.82**	**132**	*i* P	**Pb**	**13 26 28.6**	**+0.4**
BAYC				*i* S	**Sn**	**13 26 40.6**	**-0.7**
KESN	**Edirne-Kesan**	**0.88**	**53**	*i* P	**Pg**	**13 26 29.3**	**+0.1**
KESN				*i* S	**Sg**	**13 26 41.1**	**+0.3**
KESN				IAML		13 26 43.0	
	comp=E,239nm,0.4s						
KESN				IAML		13 26 43.0	
	comp=N,203nm,0.2s						
KNL	**Balıkesir**	**1.35**	**90**	*i* P	**Pg**	**13 26 37.8**	**-0.4**
KNL				*i* S	**Sn**	**13 26 55.9**	**+1.4**
KNL				IAML		13 26 57.0	
	comp=E,168nm,0.6s						
KNL				IAML		13 26 58.0	
	comp=N,86nm,0.3s						
KDZ	**Kurdzhali**	**1.38**	**349**	P	**Pn**	**13 26 36.8**	**-0.2**
KDZ				S	**Sb**	**13 26 54.9**	**-0.3**
BALY	**Balya**	**1.54**	**111**	*i* P	**Pg**	**13 26 41.4**	**-0.2**
BALY				*i* S	**Sg**	**13 27 00.4**	**-1.1**
BALY				IAML		13 27 02.0	
	comp=N,48nm,0.5s						
BALY				IAML		13 27 03.0	
	comp=E,42nm,0.6s						
RZN	**Rozhen**	**1.60**	**331**	S	**Sn**	**13 27 00.8**	**0.0**
STEP	**BALIKESIR_Sava**	**1.77**	**121**	*i* P	**Pb**	**13 26 44.8**	**+0.5**
STEP				*i* S	**Sn**	**13 27 05.3**	**+0.6**
STEP				IAML		13 27 09.0	
	comp=E,39nm,0.5s						
STEP				IAML		13 27 09.0	
	comp=N,41nm,0.8s						

ISK ***24*** *13:30:26.2, 40˚.40N×25˚.95E, h6km, ML2.9/14*
DDA ***24*** *13:30:26.7, 40˚.36N×26˚.03E, h7km±3km, ML2.9*
THE ***24*** *13:30:26.7, 40˚.38N×25˚.92E, h11km±1km, ML2.6/11, Error ellipse: s-maj=1.2km s-min=0.7km az=262.0*
ATH ***24*** *13:30:26.1, 40˚.39N×25˚.90E, h27km±1km, ML2.6/11, Error ellipse: s-maj=1.9km s-min=0.8km az=261.0*
ISC 24 13:30:26.8±0.8**, 40˚.38N**±0˚.02×**25˚.93E**±0˚.02**, h14**km±6km**,**
n68, σ0**64/99, 3C-2D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.19**	**188**	P	**Pg**	**13 30 31.1**	**0.0**
GADA				S	**Sg**	**13 30 34.5**	**+0.4**
	3µm,0.5s						
GADA	**Gvkgeada**	**0.19**	**188**	PG	**Pg**	**13 30 31.1**	**0.0**
SMTH	**Samothraki Isl**	**0.32**	**287**	P	**Pg**	**13 30 33.0**	**-0.4**
SMTH				S	**Sg**	**13 30 38.1**	**+0.2**
SMTH	**Samothraki Isl**	**0.32**	**287**	P	**Pg**	**13 30 33.2**	**-0.2**
SMTH				S	**Sg**	**13 30 38.5**	**+0.7**
SMTH				AML	AML	13 30 42.0	
	comp=N,2354µm,0.2s						
SMTH				AML	AML	13 30 42.4	
	comp=E,2167µm,0.2s						
ENEZ	**Enez**	**0.39**	**25**	P	**Pg**	**13 30 34.1**	**-0.6**
ENEZ				S	**Sg**	**13 30 40.1**	**0.0**
	comp=E,1µm,0.3s						
ENEZ	**Enez**	**0.39**	**25**	PG	**Pg**	**13 30 34.2**	**-0.5**
GELI	**Tayfur-Gelibol**	**0.41**	**87**	PG	**Pg**	**13 30 34.4**	**-0.6**
ERIK	**Erikli-Kesan**	**0.53**	**56**	PG	**Pg**	**13 30 36.6**	**-0.6**
BOZC	**Bozcaada**	**0.54**	**170**	PG	**Pg**	**13 30 37.4**	**-0.1**
BOZC	**Bozcaada**	**0.54**	**170**	*i* P	**Pg**	**13 30 36.8**	**-0.7**
BOZC				*i* P	**Pg**	**13 30 37.3**	**-0.1**
BOZC				*i* S	**Sg**	**13 30 44.5**	**-0.2**
BOZC				*i* S	**Sb**	**13 30 44.7**	**-1.1**
BOZC				IAML		13 30 46.0	
	comp=E,420nm,0.2s						
EZN	**Ezine**	**0.63**	**151**	P	**Pg**	**13 30 38.4**	**-0.7**
EZN				S	**Sg**	**13 30 47.1**	**-0.3**
	comp=E,448nm,0.2s						
EZN	**Ezine**	**0.63**	**151**	PG	**Pg**	**13 30 38.6**	**-0.5**
KESN	**Edirne-Kesan**	**0.72**	**52**	*i* P	**Pg**	**13 30 40.2**	**-0.8**
KESN				*i* S	**Sg**	**13 30 49.2**	**-1.3**
KESN				IAML		13 30 53.0	
	comp=N,525nm,0.2s						
LIA	**Limnos Island**	**0.75**	**230**	P	**Pg**	**13 30 40.9**	**-0.4**
LIA				S	**Sg**	**13 30 51.3**	**+0.1**
	comp=N,375nm,0.5s						
LIA	**Limnos Island**	**0.75**	**230**	P	**Pg**	**13 30 40.9**	**-0.4**
LIA				S	**Sg**	**13 30 51.3**	**+0.1**
LIA				AML	AML	13 30 54.9	
	comp=E,796µm,0.4s						
LIA				AML	AML	13 30 55.8	
	comp=N,696µm,0.6s						
BAYC	**CANAKKALE_Bayr**	**0.79**	**143**	*i* P	**Pg**	**13 30 41.9**	**-0.2**
BAYC				*i* S	**Sg**	**13 30 52.2**	**-0.4**
BAYC				IAML		13 30 53.0	
	comp=N,265nm,0.2s						
RDO	**Rodhopi**	**0.82**	**339**	P	**Pg**	**13 30 41.7**	**-1.0**
RDO				S	**Sb**	**13 30 54.8**	**+1.0**
	comp=N,370nm,0.2s						
RDO	**Rodhopi**	**0.82**	**339**	P	**Pg**	**13 30 42.0**	**-0.7**
RDO				S	**Sg**	**13 30 53.0**	**-0.5**
RDO				AML	AML	13 30 56.4	
	comp=E,707µm,0.2s						
RDO				AML	AML	13 30 58.1	
	comp=N,785µm,0.3s						
RDO

	comp=E,193nm,0.3s						
PAIG	**Paliouri**	**1.79**	**256**	P	**Pn**	**13 30 56.1**	**-1.1**
PAIG	**Paliouri**	**1.79**	**256**	P	**Pn**	**13 30 56.9**	**-0.3**
SKY	**Skiros Island**	**1.84**	**216**	P	**Pn**	**13 30 57.1**	**-0.9**
SKY	**Skiros Island**	**1.84**	**216**	P	**Pn**	**13 30 57.5**	**-0.5**
PSRA	**Psara**	**1.86**	**189**	P	**Pn**	**13 30 58.6**	**+0.4**
PLG	**Polygyros**	**1.90**	**271**	P	**Pn**	**13 30 58.3**	**-0.5**
PLG	**Polygyros**	**1.90**	**271**	P	**Pn**	**13 30 58.6**	**-0.3**
PLG				AML	AML	13 31 28.8	
	comp=N,158μm,0.5s						
PLG				AML	AML	13 31 29.4	
	comp=E,187μm,0.4s						
SRS	**Serrai**	**1.93**	**293**	P	**Pn**	**13 30 59.2**	**0.0**
SRS				S	**Sn**	**13 31 21.8**	**-1.4**
	comp=E,188nm,0.5s						
SRS	**Serrai**	**1.93**	**293**	P	**Pn**	**13 30 58.9**	**-0.3**
SRS				AML	AML	13 31 30.1	
	comp=E,440μm,0.4s						
SRS				AML	AML	13 31 30.6	
	comp=N,309μm,0.5s						
AOS	**Alonnisos**	**1.99**	**233**	P	**Pn**	**13 30 59.2**	**-0.8**
AOS	**Alonnisos**	**1.99**	**233**	P	**Pn**	**13 31 00.2**	**+0.2**
CHOS	**Chios island**	**1.99**	**177**	P	**Pn**	**13 31 00.1**	**-0.1**
CHOS	**Chios island**	**1.99**	**177**	P	**Pn**	**13 31 00.0**	**-0.1**
CHOS				AML	AML	13 31 35.1	
	comp=N,255μm,0.5s						
CHOS				AML	AML	13 31 36.9	
	comp=E,284μm,0.3s						
KNT	**Kendrikon**	**2.43**	**290**	P	**Pn**	**13 31 06.4**	**+0.3**
VTS	**Vitosha**	**3.02**	**319**	⇑P	**Pb**	**13 31 21.4**	**+1.0**
TOPG	**Topolog**	**4.84**	**21**	⇓P	**Pg**	**13 32 02.9**	**+3.4**
MDVR	**Moldovita**	**5.39**	**326**	⇓P	**Pn**	**13 31 47.1**	**+0.3**
GZR	**Gura Zlata**	**5.52**	**336**	⇑P	**Pn**	**13 31 48.5**	**-0.1**
BZS	**Buzias**	**6.12**	**330**	⇑P	**Pn**	**13 31 56.8**	**+0.1**

*BEO **24** 13:36:06.5±1.4,38.°90N×28.°03E,h176^{km}±9^{km},ML3.9/8*
*ATH **24** 13:36:29.3,40.°39N×25.°89E,h28^{km}±1^{km},ML3.1/18,Error ellipse: s-maj=2.1km s-min=0.9km az=264.0*
*THE **24** 13:36:29.8,40.°39N×25.°93E,h10^{km}±1^{km},ML3.0/9,Error ellipse: s-maj=1.1km s-min=0.6km az=335.0*
*ISK **24** 13:36:29.3,40.°39N×25.°94E,h7^{km},ML3.4/23*
*DDA **24** 13:36:30.3,40.°34N×26.°01E,h16^{km}±2^{km},ML3.5*

ISC 24 13:36:29.9±0.8,**40.°38N**±0.°01×**25.°94E**±0.°01,**h15**^{km}±6^{km}, **n121,σ1°08/174,5C-9D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.19**	**189**	P		**Pg**	**13 36 34.4**	**0.0**
GADA				S		**Sg**	**13 36 37.7**	**+0.2**
GADA	**Gvkgeada**	**0.19**	**189**	PG		**Pg**	**13 36 34.4**	**0.0**
GADA				SG		**Sg**	**13 36 37.9**	**+0.4**
SMTH	**Samothraki Isl**	**0.32**	**286**	P		**Pg**	**13 36 36.2**	**-0.4**
SMTH				S		**Sg**	**13 36 41.3**	**0.0**
	3μm,0.3s							
SMTH	**Samothraki Isl**	**0.32**	**286**	P		**Pg**	**13 36 36.3**	**-0.4**
SMTH				S		**Sg**	**13 36 41.3**	**0.0**
SMTH				AML	AML	13 36 45.2		
	comp=E,5367μm,0.3s							
SMTH				AML	AML	13 36 45.5		
	comp=N,5189μm,0.3s							
ENEZ	**Enez**	**0.39**	**25**	P		**Pg**	**13 36 37.3**	**-0.5**
ENEZ				S		**Sg**	**13 36 43.1**	**-0.1**
ENEZ	**Enez**	**0.39**	**25**	PG		**Pg**	**13 36 37.4**	**-0.4**
ENEZ				SG		**Sb**	**13 36 43.3**	**-0.9**
GELI	**Tayfur-Gelibol**	**0.41**	**88**	PG		**Pg**	**13 36 37.7**	**-0.4**
GELI				SG		**Sb**	**13 36 44.3**	**-0.5**
ERIK	**Erikli-Kesan**	**0.53**	**56**	PG		**Pg**	**13 36 39.5**	**-0.8**
BOZC	**Bozcaada**	**0.55**	**171**	PG		**Pg**	**13 36 40.5**	**-0.2**
BOZC				SG		**Sg**	**13 36 48.3**	**+0.3**
BOZC	**Bozcaada**	**0.55**	**171**	*i* P		**Pg**	**13 36 40.3**	**-0.4**
BOZC				*i* S		**Sg**	**13 36 47.9**	**-0.1**
EZN	**Ezine**	**0.63**	**152**	P		**Pg**	**13 36 41.6**	**-0.6**
EZN				S		**Sg**	**13 36 50.5**	**-0.1**
	comp=N,1μm,0.2s							
EZN	**Ezine**	**0.63**	**152**	PG		**Pg**	**13 36 41.7**	**-0.5**
KESN	**Edirne-Kesan**	**0.72**	**52**	*i* P		**Pb**	**13 36 44.0**	**-0.3**
KESN				*i* S		**Sb**	**13 36 53.9**	**-0.2**
KESN				IAML			13 36 57.0	
	comp=E,2μm,0.3s							
LIA	**Limnos Island**	**0.75**	**230**	P		**Pg**	**13 36 44.2**	**-0.3**
LIA				S		**Sb**	**13 36 55.2**	**+0.5**
	comp=E,1μm,0.5s							
LIA	**Limnos Island**	**0.75**	**230**	P		**Pg**	**13 36 44.4**	**-0.2**
LIA				S		**Sg**	**13 36 54.4**	**-0.1**
LIA				AML	AML	13 36 57.7		
	comp=E,2217μm,0.6s							
LIA				AML	AML	13 36 59.0		
	comp=N,2068μm,0.5s							
BAYC	**CANAKKALE_Bayr**	**0.79**	**144**	*i* P		**Pg**	**13 36 44.8**	**-0.5**
BAYC				*i* S		**Sg**	**13 36 55.4**	**-0.3**
RDO	**Rodhopi**	**0.82**	**338**	P		**Pg**	**13 36 44.9**	**-1.0**
RDO				S		**Sb**	**13 36 57.1**	**+0.4**
	comp=N,1μm,0.2s							
RDO	**Rodhopi**	**0.82**	**338**	P		**Pg**	**13 36 44.8**	**-1.0**
RDO				S		**Sg**	**13 36 56.3**	**-0.4**
RDO				AML	AML	13 37 00.5		
	comp=E,2226μm,0.2s							
RDO				AML	AML	13 37 00.8		
	comp=N,2544μm,0.2s							
RDO	**Rodhopi**	**0.82**	**338**	PG		**Pg**	**13 36 44.9**	**-1.0**
THAS	**Thassos island**	**0.96**	**284**	P		**Pb**	**13 36 47.5**	**-0.6**
THAS				S		**Sg**	**13 37 01.0**	**+0.1**
	comp=N,705nm,0.4s							
THAS	**Thassos island**	**0.96**	**284**	P		**Pb**	**13 36 47.4**	**-0.6**
THAS				S		**Sg**	**13 37 01.0**	**+0.1**
THAS				AML	AML	13 37 02.8		
	comp=E,1242μm,0.4s							
THAS				AML	AML	13 37 06.0		
	comp=N,1574μm,0.4s							
RKY	**Sarkoy-Tekirda**	**0.99**	**72**	PG		**Pb**	**13 36 48.4**	**-0.4**
KRBG	**Karabiga-Canak**	**1.04**	**89**	PG		**Pg**	**13 36 49.7**	**-0.2**
EFSA	**Agios Efstrati**	**1.11**	**221**	P		**Pn**	**13 36 50.8**	**0.0**
EFSA				S		**Sn**	**13 37 05.8**	**-0.1**
EFSA				AML	AML	13 37 08.0		
	comp=N,1837μm,0.6s							
EFSA				AML	AML	13 37 08.1		
	comp=E,3174μm,0.5s							
PRK	**Paraskevi**	**1.16**	**167**	P		**Pg**	**13 36 52.5**	**+0.2**
PRK				S		**Sg**	**13 37 08.5**	**+1.0**
	comp=E,3μm,0.4s							
PRK	**Paraskevi**	**1.16**	**167**	P		**Pg**	**13 36 52.6**	**+0.2**
PRK				S		**Sg**	**13 37 08.8**	**+1.3**
PRK				AML	AML	13 37 10.1		
	comp=N,4634μm,0.4s							
PRK				AML	AML	13 37 10.3		
	comp=E,4502μm,1.1s							
SIGR	**SIGRI**	**1.17**	**183**	P		**Pn**	**13 36 51.3**	**-0.4**
SIGR				S		**Sg**	**13 37 08.0**	**+0.3**
	comp=E,3μm,0.4s							
SIGR	**SIGRI**	**1.17**	**183**	P		**Pn**	**13 36 51.2**	**-0.4**
SIGR				S		**Sb**	**13 37 07.0**	**+0.3**
SIGR				AML	AML	13 37 09.8		
	comp=N,6885μm,0.4s							
SIGR				AML	AML	13 37 10.3		
	comp=E,3603μm,0.3s							
SIGR	**SIGRI**	**1.17**	**183**	PN		**Pg**	**13 36 52.1**	**-0.3**
AYVA	**Ayvalik**	**1.22**	**151**	*i* P		**Pb**	**13 36 52.5**	**0.0**
AYVA				*i* S		**Sn**	**13 37 08.6**	**+0.2**
AYVA				IAML			13 37 11.0	
	comp=N,5μm,0.6s							
KNL	**Balıkesir**	**1.22**	**95**	*i* P		**Pb**	**13 36 52.5**	**-0.1**
KNL				*i* S		**Sb**	**13 37 07.3**	**-0.8**
KNL				IAML			13 37 11.0	
	comp=N,945nm,0.6s							
KAVA	**Kavala**	**1.25**	**300**	P		**Pn**	**13 36 52.6**	**-0.1**
KAVA				S		**Sb**	**13 37 08.6**	**-0.2**
	comp=N,295nm,0.3s							
KAVA	**Kavala**	**1.25**	**300**	P		**Pn**	**13 36 52.5**	**-0.2**
KAVA				S		**Sb**	**13 37 08.4**	**-0.5**
KAVA				AML	AML	13 37 12.1		
	comp=N,1128μm,0.3s							
KAVA				AML	AML	13 37 12.6		
	comp=E,792μm,0.4s							
MRMT	**Marmara Adasi**	**1.28**	**80**	PN		**Pn**	**13 36 52.9**	**-0.4**
KVLA	**Kavala**	**1.30**	**296**	P		**Pn**	**13 36 53.6**	**+0.1**
KVLA				AML	AML	13 37 13.0		
	comp=N,2044μm,0.5s							
KVLA				AML	AML	13 37 13.2		
	comp=E,1304μm,0.5s							
KDZ	**Kurdzhali**	**1.33**	**343**	P		**Pb**	**13 36 53.9**	**-0.5**
KDZ				S		**Sg**	**13 37 11.8**	**-0.9**
KDZ	**Kurdzhali**	**1.33**	**343**	PN		**Pb**	**13 36 54.5**	**+0.1**
TKR	**Tekirdag**	**1.36**	**63**	PN		**Pb**	**13 36 55.1**	**+0.2**
GONE	**Gonen-Balikesi**	**1.38**	**103**	PN		**Pb**	**13 36 55.5**	**+0.2**
BALY	**Balya**	**1.44**	**116**	*i* P		**Pb**	**13 36 56.3**	**-0.1**
BALY				*i* S		**Sg**	**13 37 15.6**	**-0.8**
BALY				IAML			13 37 18.0	
	comp=E,585nm,0.4s							
EDC	**Edincik**	**1.47**	**91**	PN		**Pb**	**13 36 57.0**	**+0.1**
OUR	**Ouranopolis**	**1.50**	**269**	P		**Pn**	**13 36 55.6**	**-0.5**
OUR	**Ouranopolis**	**1.50**	**269**	P		**Pn**	**13 36 55.4**	**-0.6**
OUR				AML	AML	13 37 21.1		
	comp=E,843μm,0.3s							
OUR				AML	AML	13 37 21.1		
	comp=N,694μm,0.3s							
OUR	**Ouranopolis**	**1.50**	**269**	PN		**Pb**	**13 36 57.1**	**-0.2**
DKL	**Dikili**	**1.51**	**150**	PN		**Pb**	**13 36 57.2**	**-0.3**
EDRB	**Edirne**	**1.58**	**22**	P		**Pn**	**13 36 57.4**	**+0.1**
EDRB	**Edirne**	**1.58**	**22**	PN		**Pb**	**13 36 58.2**	**-0.6**
RZN	**Rozhen**	**1.60**	**325**	P		**Pn**	**13 36 57.9**	**+0.2**
RZN				Pg		**Pg**	**13 37 00.0**	**-0.6**
RZN				S		**Sn**	**13 37 18.1**	**-0.1**
KIRK	**Kırklareli**	**1.65**	**32**	*i* P		**Pn**	**13 36 58.4**	**+0.2**
ZEDA	**zmir-Bergama**	**1.67**	**148**	*i* P		**Pb**	**13 36 59.9**	**-0.2**
ZEDA				*i* S		**Sg**	**13 37 22.6**	**-0.9**
ZEDA				IAML			13 37 24.0	
	comp=N,620nm,0.6s							
BALB	**Balikesir**	**1.67**	**116**	PN		**Pb**	**13 36 59.4**	**-0.8**
DIM	**Dimitrovgrad**	**1.69**	**350**	P		**Pn**	**13 36 59.1**	**+0.3**
DIM				Pg		**Pg**	**13 37 01.8**	**-0.6**
STEP	**BALIKESIR_Sava**	**1.70**	**126**	*i* P		**Pb**	**13 36 59.8**	**-1.0**
STEP				*i* S		**Sg**	**13 37 23.1**	**-1.4**
STEP				IAML			13 37 26.0	
	comp=N,758nm,0.8s							
PAIG	**Paliouri**	**1.79**	**256**	P		**Pn**	**13 36 59.5**	**-0.6**
SKY	**Skiros Island**	**1.84**	**216**	P		**Pn**	**13 37 00.4**	**-0.5**
KCTX	**Karacabey (Bur**	**1.85**	**93**	PN		**Pb**	**13 37 02.7**	**-0.7**
PLG	**Polygyros**	**1.90**	**271**	P		**Pn**	**13 37 01.1**	**-0.6**
PLG				AML	AML	13 37 32.0		
	comp=N,505μm,0.5s							
PLG				AML	AML	13 37 33.0		
	comp=E,530μm,0.4s							
SRS	**Serrai**	**1.93**	**293**	P		**Pn**	**13 37 01.9**	**-0.2**
SRS	**Serrai**	**1.93**	**293**	P		**Pn**	**13 37 01.8**	**-0.2**
SRS				AML	AML	13 37 33.3		
	comp=E,1084μm,0.4s							
SRS				AML	AML	13 37 33.8		
	comp=N,840μm,0.5s							
PLD	**Plovdiv**	**1.96**	**332**	P		**Pg**	**13 37 06.0**	**-1.4**
PLD				S		**Sg**	**13 37 33.1**	**+0.3**
AOS	**Alonnisos**	**2.00**	**233**	P		**Pn**	**13 37 02.2**	**-0.8**
AOS	**Alonnisos**	**2.00**	**233**	P		**Pn**	**13 37 02.0**	**-1.0**
AOS				AML	AML	13 37 43.8		
	comp=N,419μm,0.6s							
AOS				AML	AML	13 37 44.0		
	comp=E,518μm,0.6s							
AOS	**Alonnisos**	**2.00**	**233**	PN		**Pb**	**13 37 04.9**	**-0.9**
CHOS	**Chios island**	**2.00**	**177**	P		**Pn**	**13 37 03.3**	**+0.3**
CHOS				S		**Sn**	**13 37 27.9**	**+0.1**
	comp=E,428nm,0.4s							
CHOS	**Chios island**	**2.00**	**177**	P		**Pn**	**13 37 02.8**	**-0.3**
CHOS				S		**Sn**	**13 37 27.5**	**-0.2**
CHOS				AML	AML	13 37 38.3		
	comp=N,805μm,0.5s							
CHOS				AML	AML	13 37 39.7		
	comp=E,876μm,0.4s							
CHOS	**Chios island**	**2.00**	**177**	PN		**Pn**	**13 37 04.4**	**+1.4**
ELBA	**Catalca**	**2.04**	**67**	*i* P		**Pn**	**13 37 01.8**	**-1.8**
ELBA				*i* S		**Sn**	**13 37 27.9**	**-1.0**
MMB	**Musomiste**	**2.06**	**307**	P		**Pn**	**13 37 04.2**	**+0.3**
URLA	**Izmir**	**2.08**	**166**	PN		**Pn**	**13 37 04.9**	**+0.7**
URLA	**Izmir**	**2.08**	**166**	*i* P		**Pn**	**13 37 04.9**	**+0.7**
URLA				*i* S		**Sn**	**13 37 31.1**	**+1.3**
CTYL	**Yalikoy Yolu**	**2.09**	**58**	PN		**Pn**	**13 37 05.5**	**+1.2**
DURS	**Dursunbey**	**2.10**	**111**	*i* P		**Pn**	**13 37 05.4**	**+0.9**
DURS				*i* S		**Sn**	**13 37 30.8**	**+0.5**
DURS				IAML			13 37 37.0	
	comp=N,644nm,0.3s							
CTKS	**Kestanelik-??a**	**2.13**	**66**	PN		**Pn**	**13 37 05.5**	**+0.7**
JMB	**Yambol**	**2.14**	**13**	*e*P		**Pb**	**13 37 08.9**	**+0.6**
JMB				S		**Sg**	**13 37 38.4**	**-0.2**
BLCB	**Balcova**	**2.17**	**156**	PN		**Pn**	**13 37 06.6**	**+1.2**
HORT	**Hortiatis**	**2.17**	**277**	P		**Pn**	**13 37 05.5**	**0.0**
HORT				AML	AML	13 37 41.8		
	comp=N,300μm,1.0s							
HORT				AML	AML	13 37 44.9		
	comp=E,175μm,0.5s							
DST	**Dursunbey**	**2.20**	**110**	PN		**Pn**	**13 37 07.2**	**+1.3**
KYMI	**Kymi, Euboea I**	**2.25**	**220**	P		**Pn**	**13 37 05.9**	**-0.7**
KYMI				AML	AML	13 37 44.3		
	comp=E,220μm,0.6s							
KYMI				AML	AML	13 37 46.0		
	comp=N,272μm,0.5s							
KNT	**Kendrikon**	**2.44**	**290**	P		**Pn**	**13 37 09.6**	**+0.6**
KNT				AML	AML	13 37 49.3		
	comp=E,225μm,0.5s							
KNT				AML	AML	13 37 49.8		
	comp=N,245μm,0.4s							
ULDT	**Uludag**	**2.46**	**95**	*i* P		**Pn**	**13 37 09.2**	**-0.3**
ULDT				*i* S		**Sb**	**13 37 44.8**	**+0.9**
ULDT				IAML			13 37 54.0	
	comp=N,100nm,0.9s							
DEMI	**Demirci**	**2.53**	**121**	*i* P		**Pn**	**13 37 10.6**	**+0.2**
PGB	**Panagyurishte**	**2.54**	**329**	P		**Pb**	**13 37 16.4**	**+1.2**
PGB				S		**Sn**	**13 37 38.9**	**-2.4**
ELND	**Elena**	**2.54**	**359**	⇓P		**Pn**	**13 37 11.8**	**+1.2**
KKB	**Krupnik**	**2.62**	**305**	P		**Pn**	**13 37 12.3**	**+0.7**
KARY	**Karystos**	**2.62**	**207**	P		**Pn**	**13 37 11.3**	**-0.3**
VAY	**Valandovo**	**2.72**	**291**	*e*Pn		**Pn**	**13 37 12.6**	**-0.4**
VAY				*e*Sn		**Sb**	**13 37 48.7**	**-2.6**
VAY	**Valandovo**	**2.72**	**291**	*i* Pn		**Pn**	**13 37 13.1**	**+0.1**
VAY	**Valandovo**	**2.72**	**291**	*i* Pn		**Pn**	**13 37 13.1**	**+0.1**
SMG	**Samos**	**2.76**	**165**	P		**Pn**	**13 37 13.8**	**+0.3**
SMG	**Samos**	**2.76**	**165**	P		**Pn**	**13 37 14.0**	**+0.5**
SMG				AML	AML	13 38 01.6		
	comp=E,407μm,0.7s							
SMG				AML	AML	13 38 02.6		
	comp=N,680μm,0.5s							
KULA	**Kula-Manisa**	**2.81**	**131**	P		**Pn**	**13 37 15.6**	**+1.3**
SZH	**Strazhica**	**2.88**	**360**	*e*P		**Pn**	**13 37 15.8**	**+0.6**
VTS	**Vitosha**	**3.02**	**319**	*e*Pn		**Pn**	**13 37 18.4**	**+1.2**
VTS				*e*Sn		**Sb**	**13 37 58.2**	**-1.8**
VTS	**Vitosha**	**3.02**	**319**	⇓P		**Pb**	**13 37 23.9**	**+0.5**
VTS	**Vitosha**	**3.02**	**319**	P		**Pn**	**13 37 18.2**	**+1.0**
VTS				Pg		**Pg**	**13 37 25.7**	**-2.0**
VTS				S		**Sg**	**13 38 06.3**	**-0.5**
PLVB	**Pleven**	**3.16**	**342**	⇓P		**Pn**	**13 37 17.1**	**-1.9**
BOSS	**Bosilegrad**	**3.35**	**310**	*e*Pn		**Pn**	**13 37 23.7**	**+2.1**
BOSS				*e*Sn		**Sn**	**13 38 03.8**	**+2.7**
MPEP	**Malo Peshtene**	**3.39**	**332**	P		**Pn**	**13 37 23.0**	**+0.8**
MPEP				Pg		**Pg**	**13 37 32.3**	**-2.6**
KHAL	**Karahalli**	**3.41**	**125**	*i* P		**Pb**	**13 37 27.4**	**-2.6**
BORA	**Eskisehir**	**3.50**	**97**	*i* P		Pg	13 37 48.0	+11
ZAPS	**Zavoj**	**3.80**	**321**	*e*Pn		**Pn**	**13 37 30.3**	**+2.5**
ZAPS				*e*Sn		**Sn**	**13 38 15.6**	**+3.4**
BARS	**Barje**	**3.93**	**310**	*e*Pn		**Pn**	**13 37 30.6**	**+1.0**
BARS	**Barje**	**3.93**	**310**	*e*Pn		**Pb**	**13 37 38.8**	**0.0**
BARS				*e*Sn		**Sn**	**13 38 19.5**	**+4.0**
ZAGS	**Zajecar**	**4.40**	**322**	*e*Pn		**Pn**	**13 37 36.2**	**+0.2**
ZAGS				*e*Sn		**Sn**	**13 38 29.1**	**+2.2**
BAGO	**Egridir - ISPA**	**4.46**	**121**	*i* P		**Pn**	**13 37 36.5**	**-0.4**
TIRR	**Tirgusor**	**4.47**	**23**	⇓P		**Pb**	**13 37 47.2**	**-0.7**
BOVS	**Bovan**	**4.53**	**317**	*e*Pn		**Pn**	**13 37 38.8**	**+1.0**
SELS	**Selova**	**4.58**	**310**	*e*Pn		**Pn**	**13 37 38.9**	**+0.3**
MLR	**Muntele Rosu**	**5.11**	**0**	⇓P		**Pn**	**13 37 47.9**	**+2.0**
HERR	**Herculane**	**5.19**	**331**	⇑P		**Pn**	**13 37 47.0**	**+0.1**
BISRR	**Bisoca**	**5.19**	**6**	⇑P		**Pn**	**13 37 50.3**	**+3.3**
GRUS	**Gruza**	**5.23**	**314**	*e*Pn		**Pn**	**13 37 47.4**	**0.0**
GRUS				*e*Sn		**Sn**	**13 38 50.7**	**+3.3**
MDVR	**Moldovita**	**5.39**	**326**	⇑P		**Pn**	**13 37 50.3**	**+0.6**
PLOR	**Plostina**	**5.49**	**5**	⇓P		**Pn**	**13 37 54.2**	**+3.2**
VRI	**Vrincioaia**	**5.51**	**6**	⇑P		**Pn**	**13 37 53.9**	**+2.6**
GZR	**Gura Zlata**	**5.52**	**336**	⇓P		**Pn**	**13 37 51.5**	**+0.1**
DOPR	**Dopca**	**5.60**	**356**	⇓P		**Pn**	**13 37 53.9**	**+1.4**
DIVS	**Divibare**	**5.77**	**312**	*e*Pn		**Pn**	**13 37 54.5**	**-0.4**
DIVS				*e*Sn		**Sn**	**13 39 02.5**	**+1.7**
BBLS	**Lazići**	**5.97**	**308**	*e*Pn		**Pn**	**13 37 58.7**	**+1.0**
BZS	**Buzias**	**6.12**	**330**	⇑P		**Pn**	**13 37 59.9**	**+0.4**
TESR	**Tescani**	**6.15**	**5**	⇓P		**Pn**	**13 38 02.4**	**+2.3**

*JMA **24** 13:39:41.9±0.1,24.°43N×121.°35E,h0^{km},M3.6*
*TAP **24** 13:39:42.4,24.°43N×121.°42E,h5^{km},ML4.1,B*

*IDC **24** 13:39:43.6±1.2,24.°09N×120.°84E,h0^{km},mb3.5/4, mb1 3.7/5,mb1mx3.4/45,mbtmp3.6/5,ML3.4/1,Error ellipse: s-maj=67.7km s-min=21.0km az=68.0*

ISC 24 13:39:43.0±0.9,**24.°44N**±0.°01×**121.°43E**±0.°01,**h2**^{km}±6^{km}, **n136,σ0°84/229,mb3.5/4,58C-2D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.04**	**259**	⇑*i*P		**Pg**	**13 39 44.0**	**+0.1**
	baz=267							
NNSB				*i* S		**Sg**	**13 39 44.8**	**+0.2**
	baz=267							
NNSH	**Datong**	**0.04**	**259**	⇑*i*P		**Pg**	**13 39 44.0**	**+0.1**
	baz=270							
NNSH				*i* S		**Sg**	**13 39 44.8**	**+0.3**
	baz=270							
NNS	**Nan Shan**	**0.05**	**275**	⇑*i*P		**Pg**	**13 39 44.0**	**0.0**
	baz=280							
NNS				*i* S		**Sg**	**13 39 44.9**	**+0.2**
	baz=280							
NDT	**Datong Townshi**	**0.18**	**26**	⇑*i*P		**Pg**	**13 39 46.6**	**0.0**
	baz=24							
NDT				S		**Sg**	**13 39 49.4**	**+0.3**
	baz=24							
ETLH	**Xiulin Townshi**	**0.23**	**167**	⇑P		**Pg**	**13 39 48.2**	**+0.7**
	baz=166							
ETLH				*i* S		**Sg**	**13 39 51.5**	**+0.9**
	baz=166							
YHNB	**Yeheng**	**0.24**	**349**	⇑*i*P		**Pg**	**13 39 47.9**	**+0.2**
	baz=350							
YHNB				S		**Sg**	**13 39 50.9**	**+0.1**
	baz=350							
ENTT	**Nioudou**	**0.24**	**32**	⇑*i*P		**Pg**	**13 39 47.8**	**+0.1**
	baz=23							
ENTT				*e*S		**Sg**	**13 39 51.2**	**+0.4**
	baz=23							
NSK	**Sanguang**	**0.25**	**346**	⇑*i*P		**Pg**	**13 39 48.0**	**+0.2**
	baz=349							
NSK				*i* S		**Sg**	**13 39 51.1**	**0.0**
	baz=349							
ENA	**Nanau**	**0.29**	**91**	⇑*i*P		**Pg**	**13 39 48.8**	**+0.3**
	baz=90							
ENA				*e*S		**Sg**	**13 39 52.5**	**+0.2**
	baz=90							
TWT	**Tachien**	**0.29**	**231**	⇑*i*P		**Pg**	**13 39 48.8**	**+0.1**
	baz=233							
NACB	**Ninganchiao**	**0.30**	**149**	⇓*i*P		**Pg**	**13 39 49.4**	**+0.6**
	baz=148							
NACB				*e*S		**Sg**	**13 39 53.7**	**+0.9**
	baz=148							
TDCB	**Techi**	**0.30**	**233**	⇑*i*P		**Pg**	**13 39 48.8**	**-0.1**
	baz=230							
TDCB				*e*S		**Sg**	**13 39 53.1**	**+0.3**
	baz=230							
WHF	**Hehuan Shan**	**0.32**	**207**	⇑*i*P		**Pg**	**13 39 49.5**	**+0.2**
	baz=206							
WHF				*e*S		**Sg**	**13 39 54.2**	**+0.6**
	baz=206							
NWLT	**Wulai**	**0.35**	**12**	⇑*i*P		**Pg**	**13 39 49.9**	**+0.1**
	baz=11							
NWLT				S		**Sg**	**13 39 54.2**	**0.0**
	baz=11							
TWE	**Neicheng**	**0.36**	**38**	⇑*i*P		**Pg**	**13 39 50.2**	**+0.3**
	baz=31							
TWE				S		**Sg**	**13 39 55.1**	**+0.5**
	baz=31							
TWD	**Chiawan**	**0.39**	**156**	*e*P		**Pg**	**13 39 51.0**	**+0.6**
	baz=154							
TWD				*e*S		**Sg**	**13 39 56.3**	**+0.8**
	baz=154							
TWC	**Suao**	**0.42**	**66**	⇑*i*P		**Pg**	**13 39 51.0**	**-0.2**
	baz=64							
TWC				*e*S		**Sg**	**13 39 56.4**	**-0.2**
	baz=64							
LIOB	**Emei**	**0.43**	**299**	*i* P		**Pg**	**13 39 52.0**	**+0.8**
	baz=301							
NSTT	**Nanjuang**	**0.43**	**297**	⇑*i*P		**Pg**	**13 39 52.0**	**+0.7**
	baz=300							
NSTT				S		**Sg**	**13 39 57.6**	**+0.7**
	baz=300							
CHGB	**Renai**	**0.44**	**212**	⇑*i*P		**Pg**	**13 39 51.2**	**-0.2**
	baz=213							
CHGB				S		**Sg**	**13 39 57.8**	**+0.6**
	baz=213							
ILA	**Ilan**	**0.44**	**42**	⇑*i*P		**Pg**	**13 39 51.7**	**+0.2**
	baz=53							
ILA				S		**Sg**	**13 39 58.1**	**+0.9**
	baz

TWS1	**Kuangyinshan**	**0.66**	**359**⇑	*i*P	**Pb**	**13 39 57.2**	**-0.2**
	baz=9.0							
TWS1				S	**Sb**	**13 40 06.4**	**-0.6**
	baz=9.0							
NWF	**Wu-fen Shan**	**0.71**	**27**⇑	*i*P	**Pg**	**13 39 57.0**	**+0.3**
	baz=27							
WFSB	**Wu-fen Shan**	**0.71**	**27**⇑	*i*P	**Pg**	**13 39 57.0**	**+0.3**
	baz=28							
YM01	**YM01**	**0.72**	**11**⇑	*i*P	**Pb**	**13 39 57.7**	**-0.6**
	baz=11							
WDJ	**Dajia District**	**0.72**	**263**	⇑P	**Pb**	**13 39 58.5**	**+0.2**
	baz=265							
WDJ				*e*S	**Sg**	**13 40 07.4**	**+1.2**
	baz=265							
YM04	**YM04**	**0.72**	**8**⇑	*i*P	**Pb**	**13 39 57.6**	**-0.7**
	baz=8.0							
YM04				*e*S	**Sg**	**13 40 06.5**	**+0.2**
	baz=8.0							
NTST	**Danshui**	**0.73**	**2**⇑	*i*P	**Pb**	**13 39 58.3**	**-0.1**
	baz=10.0							
NTST				*e*S	**Sb**	**13 40 08.3**	**-0.5**
	baz=10.0							
VWDT	**VWDT**	**0.73**	**201**⇑	*i*P	**Pg**	**13 39 56.2**	**-0.8**
	baz=208							
VWDT				*e*S	**Sb**	**13 40 07.5**	**-1.3**
	baz=208							
YM10	**YM10**	**0.73**	**10**⇑	*i*P	**Pb**	**13 39 57.8**	**-0.6**
	baz=9.0							
YM10				*e*S	**Sg**	**13 40 06.8**	**+0.4**
	baz=9.0							
SMLT	**Sun Moon Lake**	**0.73**	**221**⇑	*i*P	**Pg**	**13 39 56.8**	**-0.3**
	baz=211							
SMLT				*e*S	**Sg**	**13 40 05.6**	**-0.9**
	baz=211							
YM05	**YM05**	**0.74**	**10**	P	**Pb**	**13 39 58.0**	**-0.6**
	baz=11							
YM11	**YM11**	**0.74**	**11**⇑	*i*P	**Pb**	**13 39 58.1**	**-0.6**
	baz=10.0							
YM11				*e*S	**Sg**	**13 40 06.9**	**+0.1**
	baz=10.0							
TCU	**Taichung**	**0.74**	**247**⇑	*i*P	**Pb**	**13 39 58.6**	**0.0**
	baz=260							
TCU				*e*S	**Sb**	**13 40 09.3**	**0.0**
	baz=260							
YM03	**YM03**	**0.75**	**8**⇑	*i*P	**Pb**	**13 39 58.2**	**-0.6**
	baz=8.0							
YM03				*e*S	**Sg**	**13 40 08.1**	**+1.0**
	baz=8.0							
ANP	**Anpu**	**0.75**	**7**⇑	*i*P	**Pb**	**13 39 58.3**	**-0.6**
	baz=7.0							
ANP				*e*S	**Sg**	**13 40 07.9**	**+0.7**
	baz=7.0							
EGFH	**Guangfu**	**0.76**	**180**	⇑P	**Pg**	**13 39 57.8**	**+0.1**
	baz=179							
EGFH				*e*S	**Sg**	**13 40 07.5**	**0.0**
	baz=179							
YM08	**YM08**	**0.76**	**11**	⇑P	**Pg**	**13 39 58.1**	**+0.5**
	baz=11							
YM08				*e*S	**Sg**	**13 40 08.2**	**+0.6**
	baz=11							
TWB1	**Santiao Chiao**	**0.77**	**42**	*e*P	**Pg**	**13 39 57.3**	**-0.4**
	baz=41							
TWB1				*e*S	**Sg**	**13 40 07.6**	**-0.1**
	baz=41							
SSLB	**Suanglung**	**0.78**	**214**	⇑P	**Pg**	**13 39 57.0**	**-0.9**
	baz=215							
SSLB				*e*S	**Sg**	**13 40 07.5**	**-0.4**
	baz=215							
WCHH	**Zhanghua**	**0.87**	**246**	*e*P	**Pb**	**13 40 01.1**	**+0.3**
	baz=248							
WCHH				*e*S	**Sb**	**13 40 13.3**	**+0.5**
	baz=248							
WNT	**Mingjian**	**0.88**	**231**	*e*P	**Pb**	**13 40 00.7**	**-0.2**
	baz=224							
WNT				*e*S	**Sb**	**13 40 13.5**	**+0.4**
	baz=224							
WJS	**Zhushan**	**0.88**	**226**⇑	*e*P	**Pb**	**13 40 00.5**	**-0.6**
	baz=220							
WJS				*e*S	**Sb**	**13 40 13.7**	**+0.3**
	baz=220							
WHYT	**Xinyi Township**	**0.90**	**215**	*e*P	**Pg**	**13 39 59.5**	**-0.8**
	baz=216							
EHY	**Hungye**	**0.93**	**186**⇑	*e*P	**Pg**	**13 40 00.3**	**-0.5**
	baz=178							
EHY				*e*S	**Sb**	**13 40 13.7**	**-1.0**
	baz=178							
HGSD	**Ruisui**	**0.94**	**180**⇑	*e*P	**Pg**	**13 40 01.2**	**+0.2**
	baz=179							
HGSD				*e*S	**Sb**	**13 40 14.1**	**-0.9**
	baz=179							
YUS	**Yu-Shan**	**1.04**	**205**	*e*P	**Pg**	**13 40 02.3**	**-0.7**
	baz=215							
YULB	**Yu-li**	**1.04**	**186**⇑	*i*P	**Pg**	**13 40 02.6**	**-0.5**
	baz=173							
YULB				*e*S	**Sg**	**13 40 16.2**	**-0.4**
	baz=173							
CHN5	**Tsauling**	**1.08**	**219**	⇑P	**Pg**	**13 40 04.0**	**+0.3**
	baz=222							
CHN5				*e*S	**Sb**	**13 40 19.1**	**+0.1**
	baz=222							
TWF1	**Yuli**	**1.08**	**186**⇑	*e*P	**Pg**	**13 40 03.4**	**-0.4**
	baz=193							
TWF1				*e*S	**Sb**	**13 40 18.4**	**-0.8**
	baz=193							
WGK	**Gukeng**	**1.09**	**227**	*e*P	**Pb**	**13 40 04.5**	**0.0**
	baz=229							
WGK				*e*S	**Sn**	**13 40 21.2**	**+0.3**
	baz=229							
WDLH	**Douliu**	**1.10**	**228**⇑	*i*P	**Pb**	**13 40 04.5**	**-0.3**
	baz=231							
WDLH				*e*S	**Sn**	**13 40 20.8**	**-0.4**
	baz=231							
RLNB	**Erlin**	**1.11**	**241**	*e*P	**Pg**	**13 40 04.3**	**-0.1**
	baz=244							
RLNB				S	**Sb**	**13 40 20.3**	**+0.3**
	baz=244							
FULB	**Fuli**	**1.24**	**186**⇑	*i*P	**Pb**	**13 40 06.9**	**-0.2**
	baz=195							
FULB				*e*S	**Sn**	**13 40 24.7**	**0.0**
	baz=195							
CHN2	**Minshiung**	**1.25**	**224**	*e*P	**Pg**	**13 40 06.7**	**-0.3**
	baz=227							
CHN2				*e*S	**Sn**	**13 40 24.9**	**0.0**
	baz=227							
ELDTW	**Lidau**	**1.30**	**197**	P	**Pg**	**13 40 06.6**	**-1.3**
	baz=186							
ELDTW				*e*S	**Sg**	**13 40 24.5**	**-0.2**
	baz=186							
CHY	**Chiayi**	**1.31**	**225**	*e*P	**Pg**	**13 40 07.8**	**-0.3**
	baz=227							
CHY				*e*S	**Sn**	**13 40 27.3**	**+1.0**
	baz=227							
CHN4	**Tsaushan**	**1.32**	**215**	*e*P	**Pb**	**13 40 08.6**	**0.0**
	baz=217							
CHN4				*e*S	**Sn**	**13 40 28.0**	**+1.3**
	baz=217							
CHKT	**Chengkung**	**1.33**	**182**	*e*P	**Pb**	**13 40 08.8**	**+0.1**
	baz=167							
TPUB	**Ta-pu**	**1.34**	**213**	⇑P	**Pn**	**13 40 08.3**	**-0.6**
	baz=214							
TPUB				*e*S	**Sn**	**13 40 28.8**	**+1.5**
	baz=214							
WSF	**Szhu**	**1.36**	**234**	*e*P	**Pn**	**13 40 07.7**	**-1.3**
	baz=251							
WSF				*e*S	**Sb**	**13 40 27.0**	**+0.1**
	baz=251							
JYNG	**Yonagunijimaku**	**1.39**	**89**	P	**Pn**	**13 40 08.9**	**-0.5**
JYNG				*e*S	**Sn**	**13 40 28.3**	**0.0**
WTP	**Ta-pu**	**1.40**	**212**	⇑P	**Pn**	**13 40 09.3**	**-0.3**
	baz=213							
WTP				*e*S	**Sn**	**13 40 30.4**	**+1.7**
	baz=213							
STYT	**Tauyuan**	**1.41**	**206**	*e*P	**Pn**	**13 40 09.2**	**-0.5**
	baz=221							
STYT				*e*S	**Sn**	**13 40 28.6**	**-0.2**
	baz=221							
TWK	**Hsinying**	**1.45**	**217**	⇓P	**Pb**	**13 40 10.4**	**-0.3**
	baz=218							
TWK				*e*S	**Sn**	**13 40 32.3**	**+2.4**
	baz=218							
YOJ	**Yonaguni jima**	**1.45**	**89**	*e*P	**Pn**	**13 40 09.5**	**-0.7**
	baz=87							
YOJ	**Yonaguni jima**	**1.45**	**89**	P	**Pn**	**13 40 09.9**	**-0.3**
YOJ				*e*S	**Sn**	**13 40 29.5**	**-0.3**
SNST	**Tainan City**	**1.48**	**215**	*e*P	**Pb**	**13 40 11.0**	**-0.2**
	baz=217							
SNST				*e*S	**Sg**	**13 40 31.5**	**+0.9**
	baz=217							

CHN8	**Yiju**	**1.55**	**226**	*e*P	**Pn**	**13 40 11.6**	**-0.1**
	baz=229							
CHN8				*e*S	**Sg**	**13 40 33.5**	**+0.6**
	baz=229							
SGST	**Jiashian**	**1.55**	**210**	*e*P	**Pn**	**13 40 11.6**	**-0.1**
	baz=209							
SGST				*e*S	**Sg**	**13 40 33.9**	**+0.9**
	baz=209							
SLGT	**Liugui**	**1.60**	**207**	*e*P	**Pb**	**13 40 13.4**	**0.0**
	baz=224							
SLGT				*e*S	**Sg**	**13 40 36.0**	**+1.4**
	baz=224							
TWG	**Pinlang**	**1.64**	**191**	*e*P	**Pn**	**13 40 12.5**	**-0.4**
	baz=173							
TWGBT	**Beinan**	**1.64**	**191**	*e*P	**Pn**	**13 40 11.9**	**-1.0**
	baz=174							
TWGBT				*e*S	**Sn**	**13 40 34.0**	**-0.6**
	baz=174							
CHN3	**Shinhua**	**1.67**	**216**	*e*P	**Pg**	**13 40 15.2**	**+0.2**
	baz=217							
SCLT	**Jiali**	**1.69**	**222**	*e*S	**Sg**	**13 40 38.7**	**+1.4**
	baz=225							
TWH	**Lutao**	**1.72**	**178**	*e*P	**Pn**	**13 40 13.9**	**0.0**
	baz=163							
SSD	**Sandimen**	**1.83**	**204**	*e*P	**Pb**	**13 40 17.2**	**-0.1**
	baz=202							
SSD				*e*S	**Sg**	**13 40 42.0**	**0.0**
	baz=202							
PTTC	**Pingtan**	**1.84**	**306**	*e*P	**Pn**	**13 40 13.8**	**-1.8**
	baz=305							
TWM1	**Shoushan**	**1.85**	**210**	*e*P	**Pb**	**13 40 17.9**	**+0.3**
	baz=210							
VWUC	**VWUC**	**1.88**	**288**	*e*P	**Pn**	**13 40 14.0**	**-2.2**
	baz=287							
ECL	**Taimali**	**1.88**	**193**	*e*P	**Pb**	**13 40 17.7**	**-0.4**
	baz=193							
SGLT	**Jiouru**	**1.91**	**207**	*e*P	**Pg**	**13 40 19.6**	**0.0**
	baz=207							
PNG	**Penghu**	**1.92**	**244**	*e*P	**Pb**	**13 40 17.9**	**-0.8**
	baz=244							
PHUB	**P'eng-hu**	**1.93**	**242**	*e*P	**Pn**	**13 40 15.3**	**-1.5**
	baz=243							
SNJT	**Kaohsiung City**	**1.95**	**211**	*e*P	**Pb**	**13 40 19.1**	**-0.2**
	baz=211							
MASBT	**Mashibuluo**	**1.96**	**202**	*e*P	**Pb**	**13 40 19.0**	**-0.3**
	baz=200							
MASBT				*e*S	**Sg**	**13 40 46.3**	**+0.4**
	baz=200							
WDGT	**Dungji**	**2.00**	**234**	*e*P	**Pn**	**13 40 17.4**	**-0.3**
	baz=249							
WDGT				*e*S	**Sn**	**13 40 43.8**	**+0.5**
	baz=249							
SSPT	**Xinbi**	**2.10**	**202**	*e*P	**Pb**	**13 40 21.4**	**-0.4**
	baz=203							
IRIF	**Iriomote-Funau**	**2.10**	**92**	P	**Pn**	**13 40 18.9**	**-0.4**
IRIF				S	**Sn**	**13 40 44.4**	**-1.6**
EAST	**Anshuo**	**2.11**	**195**	*e*P	**Pb**	**13 40 22.0**	**0.0**
	baz=183							
MATB	**Ma-tsu**	**2.17**	**322**	*e*P	**Pn**	**13 40 18.3**	**-1.8**
	baz=322							
PTMZ	**Houxiangcun**	**2.18**	**286**	*e*P	**Pn**	**13 40 18.2**	**-2.1**
	baz=286							
SCZT	**Fangliau**	**2.18**	**200**	*e*P	**Pb**	**13 40 22.0**	**-1.3**
	baz=198							
SCZT				*e*S	**Sb**	**13 40 50.4**	**-0.3**
	baz=198							
HATJ	**Hateruma jima**	**2.21**	**99**	P	**Pb**	**13 40 22.0**	**-1.6**
WLCH	**Liuqiu**	**2.29**	**205**	*e*P	**Pn**	**13 40 22.6**	**+0.8**
	baz=205							
JKRS	**Kuro-shima**	**2.37**	**94**	P	**Pn**	**13 40 23.4**	**+0.5**
JKRS				*e*S	**Sn**	**13 40 53.2**	**+0.7**
LAY	**Lan-yu**	**2.39**	**177**	*e*P	**Pn**	**13 40 22.6**	**-0.7**
	baz=166							
JIJ	**Ishigaki jima**	**2.48**	**91**	P	**Pn**	**13 40 24.0**	**-0.4**
JIJ				S	**Sn**	**13 40 54.9**	**-0.4**
TWK1	**Hengchun**	**2.55**	**193**	*e*P	**Pb**	**13 40 27.4**	**-2.0**
	baz=177							
TWKBT	**Hengchun**	**2.55**	**193**	*e*P	**Pn**	**13 40 27.1**	**+1.8**
	baz=177							
LYJJ	**Jianjiangzhen**	**2.59**	**325**	*e*P	**Pn**	**13 40 25.2**	**-0.7**
	baz=327							
QZH	**Quanzhou**	**2.63**	**282**	Pn	**Pn**	**13 40 26.3**	**-0.1**
QZH				Sn	**Sn**	**13 40 53.8**	**-5.1**
QZH				smax	smax		
	comp=N,220nm,0.8s							
QZH				smax	smax			
	comp=E,120nm,0.6s							
JISG	**Ishigakijimahi**	**2.63**	**86**	P	**Pn**	**13 40 26.2**	**-0.3**
JISG				S	**Sn**	**13 40 58.2**	**-0.9**
XPSS	**Dashiqiu**	**2.72**	**336**	*e*P	**Pn**	**13 40 26.4**	**-1.4**
	baz=338							
KNM	**Kinmen**	**2.73**	**270**	*e*P	**Pn**	**13 40 28.9**	**+1.1**
	baz=269							
MHZQ	**Yeshan**	**2.73**	**308**	*e*P	**Pn**	**13 40 27.0**	**-0.8**
	baz=307							
KNMB	**Chin-men Tao**	**2.77**	**271**	*e*P	**Pn**	**13 40 27.3**	**-1.0**
	baz=271							
JTJ	**Tarama**	**2.99**	**85**	P	**Pn**	**13 40 32.9**	**+1.4**
JTJ				S	**Sn**	**13 41 10.3**	**+2.4**
AXDP	**Jialang**	**3.18**	**279**	*e*P	**Pn**	**13 40 33.0**	**-1.0**
	baz=277							
JIRB	**Irabujima**	**3.43**	**83**	P	**Pn**	**13 40 39.2**	**+1.7**
JMJ2	**Miyako jima3**	**3.57**	**84**	P	**Pn**	**13 40 40.7**	**+1.3**
JMJ2				*e*S	**Sn**	**13 41 24.3**	**+2.2**
KSRS	**Korea Array**	**14.12**	**22**	Pn	**P**	**13 43 13.1**	**+1.2**
	comp=E,0.2nm,0.3s,baz=209,slow=14,SNR=9.4							
SONM	**Songino Array**	**26.22**	**337**	P	**P**	**13 45 20.0**	**+0.6**
	comp=E,0.8nm,0.7s,baz=153,slow=11,SNR=4.5							
MKAR	**Makanchi Array**	**38.31**	**316**	P	**P**	**13 47 05.5**	**+0.4**
	comp=E,0.9nm,0.7s,baz=102,slow=10,SNR=9.0							
WRA	**Warramunga Arr**	**45.87**	**163**	P	**P**	**13 48 05.8**	**-1.2**
	comp=E,0.3nm,0.5s,baz=344,slow=8.7,SNR=10							
ASAR	**Alice Springs**	**49.33**	**165**	P	**P**	**13 48 33.9**	**+0.1**
	comp=E,0.3nm,0.6s,baz=342,slow=7.1,SNR=5.4							

*ISK **24** 13:45:46.9, 40.35N×25.76E, h8km, ML2.9/19*
*DDA **24** 13:45:48.6, 40.30N×25.91E, h7km±3km, ML2.6*
ISC 24 13:45:46.6±0.9, 40.30N±0.02×25.75E±0.03, h10km±7km, n38, σ1s24/50, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.16**	**135**	PG	**Pb**	**13 45 51.5**	**+1.4**
GADA				SG	**Sb**	**13 45 54.8**	**+2.3**
BOZC	**Bozcaada**	**0.52**	**153**	PG	**Pb**	**13 45 57.9**	**+0.2**
BOZC	**Bozcaada**	**0.52**	**153**	*i* P	**Pg**	**13 45 57.0**	**+0.3**
BOZC				*i* P	**Pb**	**13 45 57.7**	**0.0**
BOZC				IAML		13 46 05.0	
	comp=E,233nm,0.2s						
BOZC				IAML		13 46 05.0	
	comp=N,261nm,0.3s						
BOZC				*i* S	**Sb**	**13 46 05.4**	**+0.1**
ENEZ	**Enez**	**0.53**	**35**	PG	**Pg**	**13 45 57.2**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.56**	**80**	PG	**Pg**	**13 45 57.9**	**+0.4**
EZN	**Ezine**	**0.65**	**137**	PG	**Pb**	**13 46 00.0**	**0.0**
ERIK	**Erikli-Kesan**	**0.69**	**58**	PG	**Pg**	**13 46 00.3**	**+0.4**
LPK	**Lapseki**	**0.77**	**85**	PG	**Pb**	**13 46 02.0**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**0.83**	**132**	*i* P	**Pn**	**13 46 03.6**	**-0.8**
BAYC				*i* S	**Sb**	**13 46 14.3**	**0.0**
BAYC				IAML		13 46 19.0	
	comp=N,259nm,0.5s						
RDO	**Rodhopi**	**0.86**	**349**	PG	**Pg**	**13 46 02.7**	**-0.4**
KESN	**Edirne-Kesan**	**0.88**	**53**	*i* P	**Pb**	**13 46 04.5**	**+0.4**
KESN				*i* S	**Sg**	**13 46 14.5**	**-0.5**
SIGR	**SIGRI**	**1.09**	**176**	PN	**Pg**	**13 46 08.8**	**+1.2**
RKY	**Sarkoy-Tekirda**	**1.15**	**70**	PN	**Pb**	**13 46 08.4**	**-0.2**
SART	**Tekirdag**	**1.15**	**70**	*i* P	**Pb**	**13 46 08.1**	**-0.6**
KRBG	**Karabiga-Canak**	**1.18**	**85**	PN	**Pb**	**13 46 09.1**	**0.0**
AYVA	**Ayvalik**	**1.23**	**144**	*i* P	**Pg**	**13 46 10.5**	**+0.3**
KNL	**Balıkesir**	**1.36**	**91**	*i* P	**Pg**	**13 46 12.6**	**0.0**
KNL				IAML	**S**	**13 46 32.0**	**+2.7**
	comp=E,353nm,0.4s						
KNL				*i* S	**S**	**13 46 32.0**	**+2.7**
KDZ	**Kurdzhali**	**1.37**	**349**	P	**Pb**	**13 46 12.4**	**+0.1**
KDZ				S	**Sb**	**13 46 29.4**	**-0.5**
KDZ	**Kurdzhali**	**1.37**	**349**	PN	**Pg**	**13 46 12.6**	**-0.3**
MRMT	**Marmara Adasi**	**1.44**	**77**	PN	**Pb**	**13 46 13.1**	**-0.4**
GONE	**Gonen-Balikesi**	**1.50**	**99**	PN	**Pg**	**13 46 15.6**	**+0.2**
DKL	**Dikili**	**1.52**	**144**	PN	**Pg**	**13 46 15.4**	**-0.3**
TKR	**Tekirdag**	**1.52**	**63**	PN	**Pn**	**13 46 13.8**	**0.0**
BALY	**Balya**	**1.54**	**111**	*i* P	**Pb**	**13 46 15.3**	**+0.1**
BALY				*i* S	**Sb**	**13 46 35.4**	**+0.5**
BALY				IAML		13 46 39.0	
	comp=N,137nm,0.6s						

RZN	**Rozhen**	**1.59**	**331**	P	**Pb**	**13 46 16.1**	**-0.1**
RZN				S	**Sb**	**13 46 36.2**	**-0.2**
EDC	**Edincik**	**1.61**	**88**	PN	**Pn**	**13 46 15.5**	**+0.4**
ZEDA	**zmir-Bergama**	**1.68**	**142**	*i* P	**Pg**	**13 46 18.5**	**-0.4**
ZEDA				*i* S	**Sg**	**13 46 40.0**	**-0.7**
ZEDA				IAML		13 46 42.0	
	comp=N,143nm,0.4s						
EDRB	**Edirne**	**1.71**	**26**	PN	**Pb**	**13 46 17.2**	**-1.0**
BALB	**Balikesir**	**1.76**	**111**	PN	**Pb**	**13 46 18.9**	**-0.1**
AOS	**Alonnisos**	**1.83**	**232**	PN	**Pb**	**13 46 19.6**	**-0.6**
CHOS	**Chios island**	**1.93**	**173**	PN	**Pb**	**13 46 21.6**	**-0.3**
URLA	**Izmir**	**2.05**	**161**	PN	**Pb**	**13 46 22.6**	**-1.3**
DBRK	**Dubrovnik**	**6.18**	**295**	Sn	**Pb**	**13 47 35.6**	**+1.4**
STON	**Ston**	**6.56**	**296**	*e*Pn	**Pn**	**13 47 19.9**	**-3.2**
STON				Sn	**Pb**	**13 47 44.5**	**+3.8**
RICI	**Ricice**	**7.18**	**299**	*e*Pn	**Pn**	**13 47 30.9**	**-0.6**
KIJV	**Kijevo**	**7.87**	**301**	*e*Pn	**Pn**	**13 47 41.6**	**+0.6**
ZIRJ	**Zirje**	**8.24**	**297**	*i* Pn	**Pn**	**13 47 43.3**	**-2.8**
DUGI	**Dugi Otok**	**8.76**	**298**	*e*Pn	**Pn**	**13 47 50.9**	**-2.3**

*ISK **24** 13:53:59.9, 40.38N×25.86E, h8km, ML2.8/18*
*THE **24** 13:54:00.2, 40.38N×25.86E, h7km±2km, ML2.6/5, Error ellipse: s-maj=2.5km s-min=0.8km az=317.0*
*DDA **24** 13:54:00.2, 40.35N×25.91E, h7km±3km, ML2.7*
*ATH **24** 13:54:00.3, 40.39N×25.83E, h16km±4km, ML2.5/6, Error ellipse: s-maj=4.7km s-min=0.8km az=273.0*
ISC 24 13:54:00.3±0.8, 40.38N±0.02×25.86E±0.02, h13km±6km, n49, σ0s60/79, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.19**	**172**	P	**Pg**	**13 54 04.6**	**0.0**
GADA				S	**Sg**	**13 54 07.7**	**+0.3**
	4μm,0.3s						
GADA	**Gvkgeada**	**0.19**	**172**	PG	**Pg**	**13 54 04.5**	**0.0**
GADA				SG	**Sg**	**13 54 07.8**	**+0.3**
SMTH	**Samothraki Isl**	**0.27**	**290**	P	**Pg**	**13 54 05.6**	**-0.4**
SMTH				S	**Sg**	**13 54 09.8**	**-0.1**
SMTH	**Samothraki Isl**	**0.27**	**290**	P	**Pg**	**13 54 05.7**	**-0.4**
SMTH				S	**Sg**	**13 54 09.8**	**-0.1**
SMTH				AML	AML	13 54 10.2	
	comp=N,2974μm,0.2s						
SMTH				AML	AML	13 54 12.2	
	comp=E,2218μm,0.1s						
ENEZ	**Enez**	**0.42**	**31**	P	**Pg**	**13 54 08.4**	**-0.3**
ENEZ				S	**Sg**	**13 54 14.6**	**+0.2**
	comp=E,1μm,0.3s						
ENEZ	**Enez**	**0.42**	**31**	PG	**Pg**	**13 54 08.5**	**-0.3**
ENEZ				SG	**Sg**	**13 54 14.9**	**+0.5**
GELI	**Tayfur-Gelibol**	**0.47**	**87**	PG	**Pg**	**13 54 09.5**	**0.0**
GELI				SG	**Sg**	**13 54 16.4**	**+0.6**
BOZC	**Bozcaada**	**0.55**	**165**	PG	**Pg**	**13 54 11.1**	**-0.1**
BOZC	**Bozcaada**	**0.55**	**165**	*i* P	**Pg**	**13 54 10.3**	**-0.8**
BOZC				*i* P	**Pb**	**13 54 10.8**	**-1.1**
BOZC				*i* S	**Sg**	**13 54 18.4**	**-0.1**
ERIK	**Erikli-Kesan**	**0.58**	**59**	PG	**Pg**	**13 54 11.4**	**-0.2**
EZN	**Ezine**	**0.65**	**147**	P	**Pg**	**13 54 12.5**	**-0.6**
EZN				S	**Sg**	**13 54 21.4**	**-0.3**
EZN	**Ezine**	**0.65**	**147**	PG	**Pg**	**13 54 12.7**	**-0.4**
LIA	**Limnos Island**	**0.71**	**228**	P	**Pb**	**13 54 14.5**	**0.0**
LIA				S	**Sg**	**13 54 23.7**	**+0.3**
	comp=E,468nm,0.4s						
LIA	**Limnos Island**	**0.71**	**228**	P	**Pg**	**13 54 13.7**	**-0.4**
LIA				S	**Sg**	**13 54 23.8**	**+0.4**
LIA				AML	AML	13 54 25.7	
	comp=E,938μm,0.4s						
LIA				AML	AML	13 54 26.3	
	comp=N,1019μm,0.6s						
KESN	**Edirne-Kesan**	**0.77**	**54**	*i* P	**Pg**	**13 54 15.3**	**+0.1**
KESN				*i* S	**Sg**	**13 54 25.1**	**-0.3**
KESN				IAML		13 54 28.0	
	comp=E,304nm,0.3s						
RDO	**Rodhopi**	**0.81**	**342**	P	**Pg**	**13 54 15.3**	**-0.7**
RDO				S	**Sg**	**13 54 26.5**	**-0.1**
	comp=E,348nm,0.2s						
RDO	**Rodhopi**	**0.81**	**342**	P	**Pg**	**13 54 15.4**	**-0.7**
RDO				S	**Sg**	**13 54 26.5**	**-0.1**
RDO				AML	AML	13 54 30.1	
	comp=E,688μm,0.2s						
RDO				AML	AML	13 54 32.6	
	comp=N,693μm,0.2s						
RDO	**Rodhopi**	**0.81**	**342**	PG	**Pg**	**13 54 15.6**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**0.82**	**140**	*i* P	**Pg**	**13 54 15.7**	**-0.6**
BAYC				*i* S	**Sg**	**13 54 26.8**	**-0.2**
THAS	**Thassos island**	**0.90**	**285**	P	**Pg**	**13 54 17.7**	**-0.1**
THAS				S	**Sg**	**13 54 29.3**	**-0.3**
THAS	**Thassos island**	**0.90**	**285**	P	**Pg**	**13 54 16.8**	**-1.0**
THAS				S	**Sg**	**13 54 29.3**	**-0.3**
THAS				AML	AML	13 54 31.6	
	comp=N,705μm,0.2s						
THAS				AML	AML	13 54 32.2	
	comp=E,583μm,0.2s						
UKOP	**Uzunkopru-Edir**	**0.95**	**38**	PG	**Pg**	**13 54 18.5**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.05**	**72**	PG	**Pg**	**13 54 20.3**	**-0.3**
EFSA	**Agios Efstrati**	**1.07**	**219**	P	**Pg**	**13 54 20.5**	**-0.5**
EFSA				S	**Sg**	**13 54 34.7**	**-0.3**
SIGR	**SIGRI**	**1.16**	**180**	P	**Pb**	**13 54 21.8**	**-0.5**
SIGR				S	**Sb**	**13 54 38.2**	**+1.0**
SIGR	**SIGRI**	**1.16**	**180**	P	**Pb**	**13 54 22.2**	**-0.1**
SIGR				S	**Sn**	**13 54 39.0**	**+1.0**
SIGR				AML	AML	13 54 39.2	
	comp=N,838μm,0.4s						
SIGR				AML	AML	13 54 40.0	
	comp=E,537μm,0.3s						
SIGR	**SIGRI**	**1.16**	**180**	PN	**Pb**	**13 54 22.3**	**0.0**
PRK	**Paraskevi**	**1.17**	**164**	P	**Pn**	**13 54 23.1**	**+0.7**
PRK				S	**Sn**	**

ERIK	**Erikli-Kesan**	**0.41**	**46**	PG	Pg	13 55 19.9 +0.4
ERIK				SG	Sg	13 55 25.9 +1.0
BOZC	**Bozcaada**	**0.54**	**186**	PG	Pg	13 55 22.5 +0.6
EZN	**Ezine**	**0.58**	**164**	PG	Pg	13 55 23.2 +0.6
KDZ	**Kurdzhali**	**1.38**	**337**	S	Sb	13 55 54.3 -1.3

*PRU **24** 13:55:56.4±0.0, 41°.01N×19°.35E, h0km*
*IDC **24** 13:55:57.7±2.5, 41°.32N×19°.27E, h0km, mb3.7/3, mb1 3.7/5, mb1mx3.4/39, mbtmp3.6/5, ML3.7/2, Error ellipse: s-maj=30.6km s-min=16.1km az=21.0*
*SKO **24** 13:55:59.7, 41°.20N×19°.33E, h14km*
*RHSSO **24** 13:56:00.8±0.6, 41°.32N×19°.55E, h14km±2km, ML3.5/14*
*TIR **24** 13:56:00.5, 41°.41N×19°.55E, h3km, Md3.5/6*
*THE **24** 13:56:01.4, 41°.44N×19°.50E, h10km±1km, ML3.1/9, Error ellipse: s-maj=2.0km s-min=0.8km az=313.0*
*PDG **24** 13:56:01.8±0.4, 41°.44N×19°.58E, h10km, MD3.5/6, ML3.1/14, Error ellipse: s-maj=0.4km s-min=1.0km az=0.0*
*BEO **24** 13:56:02.2±0.4, 41°.40N×19°.57E, h14km±2km, ML3.1/16*
*ATH **24** 13:56:02.9, 41°.24N×19°.62E, h17km±2km, ML3.0/12, Error ellipse: s-maj=4.4km s-min=2.0km az=349.0*

ISC 24 13:56:00.8±0.9, **41°.35N**±0°.02×**19°.51E**±0°.02, **h17**km±6km, **n160**, σ1§**39**/253, **21C-19D, Albania**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.27**	**90**	*e*Pg	**Pg**		**13 56 06.7**	**0.0**
TIR				*e*Sg	**Sb**		**13 56 11.1**	**-0.3**
TIR	**Tirane**	**0.27**	**90**	P	**Pg**		**13 56 06.7**	**0.0**
TIR				S	**Sb**		**13 56 11.2**	**-0.2**
	3μm,0.4s							
TIR	**Tirane**	**0.27**	**90**	*i* PG	**Pg**		**13 56 06.1**	**-0.6**
TIR				*i* SG	**Sg**		**13 56 10.1**	**-0.6**
TIR	**Tirane**	**0.27**	**90**	⇓P	**Pg**		**13 56 06.8**	**+0.2**
ULC	**Ulcinj**	**0.65**	**342**	⇑*i*Pg	**Pg**		**13 56 12.6**	**-1.0**
ULC				*i* Sg	**Sg**		**13 56 22.0**	**-0.2**
PUK	**Puka**	**0.75**	**22**	*i* PG	**Pb**		**13 56 14.5**	**-1.0**
PUK				*i* SG	**Sb**		**13 56 25.2**	**-0.2**
PHP	**Peshkopia**	**0.77**	**64**	P	**Pb**		**13 56 14.6**	**-1.2**
PHP				S	**Sn**		**13 56 27.4**	**-0.9**
PHP	**Peshkopia**	**0.77**	**64**	*i* PG	**Pb**		**13 56 14.8**	**-1.1**
PHP				*i* SG	**Sg**		**13 56 26.8**	**+0.6**
DRME	**Dracevica, Mon**	**0.87**	**344**	*e*Pg	**Pb**		**13 56 17.1**	**-0.4**
DRME				*e*Sg	**Sg**		**13 56 30.1**	**+0.8**
DRME	**Dracevica, Mon**	**0.87**	**344**	⇑*i*Pg	**Pb**		**13 56 16.8**	**-0.7**
DRME				*i* Sg	**Sg**		**13 56 29.4**	**+0.1**
VLO	**Vlora**	**0.88**	**181**	P	**Pn**		**13 56 19.9**	**+1.5**
VLO				S	**Sn**		**13 56 34.4**	**+3.7**
	3μm,0.5s							
VLO	**Vlora**	**0.88**	**181**	*i* PG	**Pn**		**13 56 19.9**	**+1.5**
VLO				*i* SG	**Sn**		**13 56 33.7**	**+3.0**
OHR	**Ohrid**	**1.00**	**103**	⇑*i*Pg	**Pb**		**13 56 19.9**	**+0.2**
OHR				*i* Sn	**Sn**		**13 56 36.2**	**+2.4**
OHR				*e*Lg	Lg		13 56 36.9	
	comp=N,1μm,0.7s							
OHR	**Ohrid**	**1.00**	**103**	⇑*i*Pg	**Pb**		**13 56 19.9**	**+0.2**
OHR				*i* Sn	**Sn**		**13 56 36.2**	**+2.4**
OHR				*e*Lg	Lg		13 56 36.9	
	comp=N,1μm,0.7s							
BUM	**Brajici-Budva**	**1.06**	**334**	⇑*i*Pg	**Pb**		**13 56 20.3**	**-0.4**
BUM				*i* Sg	**Sg**		**13 56 36.2**	**+1.0**
BCI	**Bajram Curri**	**1.10**	**22**	*i* PG	**Pb**		**13 56 20.4**	**-0.9**
BCI				*i* SG	**Sg**		**13 56 36.6**	**+0.1**
PDG	**Podgorica**	**1.10**	**350**	*e*Pg	**Pb**		**13 56 21.3**	**0.0**
PDG				*e*Sg	**Sg**		**13 56 36.9**	**+0.5**
PDG	**Podgorica**	**1.10**	**350**	⇓P	**Pg**		**13 56 22.8**	**+0.8**
PDG	**Podgorica**	**1.10**	**350**	*e*Pg	**Pb**		**13 56 20.6**	**-0.7**
PDG				*e*Sg	**Sn**		**13 56 36.4**	**+0.3**
TTG	**Podgorica**	**1.10**	**350**	⇓*i*Pg	**Pb**		**13 56 20.4**	**-0.9**
TTG				*i* Sg	**Sn**		**13 56 36.5**	**+0.3**
CEME	**Cevo**	**1.28**	**340**	⇑*i*Pg	**Pn**		**13 56 24.1**	**+0.2**
CEME				*i* Sg	**Sg**		**13 56 43.0**	**+0.9**
PVY	**Plav**	**1.29**	**15**	⇓*i*Pg	**Pn**		**13 56 23.6**	**-0.5**
PVY				*i* Sg	**Sg**		**13 56 42.3**	**-0.2**
HCY	**Herceg Novi**	**1.33**	**326**	⇑*i*Pg	**Pb**		**13 56 25.3**	**-0.1**
HCY				*e*Sg	**Sg**		**13 56 44.8**	**+0.8**
HCY	**Herceg Novi**	**1.33**	**326**	⇑*i*Pg	**Pb**		**13 56 25.4**	**0.0**
HCY				*i* Sg	**Sg**		**13 56 45.7**	**+1.7**
NKME	**Niksic**	**1.48**	**344**	⇓*i*Pg	**Pb**		**13 56 27.5**	**-0.3**
NKME				*i* Sg	**Sg**		**13 56 49.4**	**+0.9**
NEST	**Nestorio**	**1.49**	**128**	P	**Pb**		**13 56 28.5**	**+0.4**
NEST				S	**Sg**		**13 56 48.6**	**-0.4**
	comp=N,470nm,0.6s							
NEST	**Nestorio**	**1.49**	**128**	P	**Pg**		**13 56 29.0**	**-0.6**
NEST				S	**Sb**		**13 56 46.8**	**0.0**
NEST				AML	AML		13 56 55.8	
	comp=N,864μm,0.5s							
NEST				AML	AML		13 56 56.2	
	comp=E,1121μm,0.5s							
KOME	**Kolasin**	**1.50**	**0**	⇓*i*Pg	**Pb**		**13 56 27.9**	**-0.4**
KOME				*i* Sg	**Sg**		**13 56 49.6**	**+0.3**
NKY	**Niksic**	**1.51**	**345**	⇓*i*Pg	**Pb**		**13 56 28.1**	**-0.4**
NKY				*e*Sg	**Sg**		**13 56 49.7**	**0.0**
SRN	**Sarande**	**1.51**	**166**	P	**Pb**		**13 56 28.6**	**+0.2**
SRN	**Sarande**	**1.51**	**166**	*i* PN	**Pg**		**13 56 30.1**	**+0.2**
SRN				*i* SN	**Sg**		**13 56 53.0**	**+3.4**
FNA	**Florina**	**1.52**	**111**	P	**Pb**		**13 56 29.2**	**+0.7**
FNA				S	**Sg**		**13 56 50.2**	**+0.4**
	comp=E,2μm,0.4s							
FNA	**Florina**	**1.52**	**111**	P	**Pg**		**13 56 29.5**	**-0.5**
FNA				S	**Sg**		**13 56 48.9**	**-0.9**
FNA				AML	AML		13 56 53.7	
	comp=N,3607μm,0.5s							
FNA				AML	AML		13 56 56.5	
	comp=E,3104μm,0.4s							
IVA	**Berane**	**1.55**	**10**	⇑*i*Pg	**Pn**		**13 56 28.4**	**+0.7**
IVA				*i* Sg	**Sg**		**13 56 50.8**	**0.0**
SKO	**Skopje**	**1.57**	**66**	*e*Pg	**Pb**		**13 56 29.6**	**+0.2**
SKO				*e*Sg	**Sg**		**13 56 51.3**	**-0.2**
SKO	**Skopje**	**1.57**	**66**	*i* Pn	**Pb**		**13 56 29.4**	**0.0**
SKO				*i* Sn	**Sg**		**13 56 51.8**	**+0.2**
SKO				*e*Lg	Lg		13 56 55.1	
	comp=N,40nm,0.4s							
SKO	**Skopje**	**1.57**	**66**	*i* Pn	**Pb**		**13 56 29.4**	**0.0**
SKO				*i* Sn	**Sg**		**13 56 51.8**	**+0.2**
SKO				*e*Lg	Lg		13 56 55.1	
	comp=N,40nm,0.4s							
TREB	**Trebinje**	**1.62**	**328**	*e*Pn	**Pn**		**13 56 29.2**	**+0.6**
TREB	**Trebinje**	**1.62**	**328**	⇑*i*Pn	**Pn**		**13 56 29.0**	**+0.4**
TREB				*e*Sn	**Sb**		**13 56 51.1**	**+0.8**
KASA	**Kassiopi**	**1.63**	**168**	P	**Pg**		**13 56 32.0**	**-0.2**
KASA				AML	AML		13 57 00.0	
	comp=N,1088μm,0.4s							
KASA				AML	AML		13 57 00.8	
	comp=E,1203μm,0.4s							
KEK	**Kerkira**	**1.65**	**172**	P	**Pb**		**13 56 30.4**	**-0.3**
KEK				S	**Sg**		**13 56 54.0**	**+0.1**
	comp=E,368nm,0.5s							
KEK	**Kerkira**	**1.65**	**172**	P	**Pb**		**13 56 30.6**	**-0.1**
KEK				S	**Sg**		**13 56 53.2**	**-0.7**
KEK				AML	AML		13 56 59.7	
	comp=E,763μm,0.5s							
KEK				AML	AML		13 57 08.0	
	comp=N,721μm,0.6s							
DBRK	**Dubrovnik**	**1.67**	**323**	*i* Pn	**Pn**		**13 56 29.9**	**+0.7**
DBRK				Sn	**Sg**		**13 56 53.7**	**-0.9**
PENT	**Pentalofos**	**1.69**	**132**	P	**Pg**		**13 56 33.1**	**-0.1**
PENT				AML	AML		13 57 04.5	
	comp=N,551μm,0.4s							
PENT				AML	AML		13 57 08.4	
	comp=E,464μm,0.7s							
CGL1	**Ceglie Messapi**	**1.69**	**246**	⇓*i*Pn	**Pn**		**13 56 29.8**	**+0.3**
CGL1				Sn	**Sn**		**13 56 50.9**	**+0.1**
BRY	**Bratogost**	**1.71**	**335**	*e*Pn	**Pn**		**13 56 30.7**	**+0.7**
BRY				*e*Sn	**Sb**		**13 56 52.7**	**-0.5**
BRY	**Bratogost**	**1.71**	**335**	⇓*i*Pn	**Pn**		**13 56 31.0**	**+1.0**
BRY				*i* Sn	**Sg**		**13 56 55.7**	**-0.3**
TAR1	**Taranto**	**1.88**	**245**	*e*Pn	**Pn**		**13 56 32.2**	**+0.1**
UPM	**Unac-Piva**	**1.91**	**347**	*e*Pn	**Pn**		**13 56 34.0**	**+1.3**
UPM				*e*Sn	**Sn**		**13 56 57.3**	**+0.9**
UPM	**Unac-Piva**	**1.91**	**347**	⇑*i*Pn	**Pb**		**13 56 34.4**	**-0.8**
UPM				*i* Sn	**Sb**		**13 57 00.0**	**+1.2**
IGT	**Igoumenitsa**	**1.92**	**161**	P	**Pb**		**13 56 34.5**	**-0.8**
IGT				S	**Sg**		**13 57 00.9**	**-1.7**
	comp=E,308nm,0.6s							
IGT	**Igoumenitsa**	**1.92**	**161**	P	**Pb**		**13 56 34.6**	**-0.7**
IGT				AML	AML		13 57 05.3	
	comp=E,584μm,0.8s							
IGT				AML	AML		13 57 08.2	
	comp=N,638μm,0.5s							
SJES	**Sjenica**	**1.94**	**10**	*e*Pg	**Pb**		**13 56 36.1**	**+0.3**
SJES				*e*Sg	**Sg**		**13 57 02.1**	**-1.2**
JAN	**Janina**	**1.97**	**148**	P	**Pb**		**13 56 35.8**	**-0.5**
JAN	**Janina**	**1.97**	**148**	P	**Pb**		**13 56 35.6**	**-0.7**
JAN				AML	AML		13 57 14.0	
	comp=E,666μm,0.4s							
JAN				AML	AML		13 57 16.6	
	comp=N,798μm,0.6s							
KPRO	**Kipourio**	**1.98**	**134**	P	**Pb**		**13 56 36.9**	**+0.5**
PLE	**Pljevlja**	**1.98**	**357**	⇑*i*Pn	**Pn**		**13 56 35.1**	**+1.4**
PLE				*i* Sn	**Sb**		**13 57 01.6**	**+0.7**
BAI	**Bari**	**2.00**	**264**	⇓*i*Pn	**Pn**		**13 56 34.0**	**+0.2**
BAI				Sn	**Sn**		**13 56 57.5**	**-0.9**
KZN	**Kozani**	**2.00**	**121**	P	**Pb**		**13 56 36.9**	**+0.1**
KZN				S	**Sb**		**13 57 02.6**	**+1.1**
	comp=N,298nm,0.7s							
KZN	**Kozani**	**2.00**	**121**	P	**Pb**		**13 56 37.3**	**+0.5**
KZN				S	**Sb**		**13 57 01.4**	**-0.1**
KZN				AML	AML		13 57 07.0	
	comp=N,602μm,0.8s							
KZN				AML	AML		13 57 09.0	
	comp=E,600μm,0.6s							
STON	**Ston**	**2.03**	**319**	*e*Pn	**Pn**		**13 56 34.6**	**+0.4**
STON				*e*Sn	**Sn**		**13 57 00.0**	**+0.8**
STON	**Ston**	**2.03**	**319**	*e*Pn	**Pn**		**13 56 34.4**	**+0.2**
STON				Sn	**Sn**		**13 56 59.9**	**+0.8**
MEV	**Metsovon**	**2.04**	**140**	P	**Pb**		**13 56 38.1**	**+0.7**
SG1	**Sgolgore (BA)**	**2.20**	**258**	*e*Pn	**Pn**		**13 56 36.9**	**+0.3**
SELS	**Selova**	**2.22**	**32**	*e*Pn	**Pn**		**13 56 37.8**	**+1.0**
SELS				*e*Sn	**Sn**		**13 57 02.5**	**-1.3**
MATE	**Matera**	**2.24**	**253**	⇑P	**Pn**		**13 56 38.9**	**+1.9**
BARS	**Barje**	**2.26**	**49**	*e*Pn	**Pb**		**13 56 39.3**	**-1.8**
BARS	**Barje**	**2.26**	**49**	*e*Pn	Pg		13 56 51.9	+7.8
BARS				*e*Sn	**Sn**		**13 57 04.6**	**-0.2**
BARS				*e*Sn	Sg		13 57 31.1	+18
RUDO	**Rudo**	**2.27**	**357**	*e*Pn	**Pn**		**13 56 38.8**	**+1.3**
VAY	**Valandovo**	**2.30**	**90**	*e*Pn	**Pn**		**13 56 39.5**	**+1.6**
VAY				*e*Sn	**Sn**		**13 57 07.8**	**+1.9**
VAY	**Valandovo**	**2.30**	**90**	*i* Pn	**Pn**		**13 56 39.8**	**+1.9**
VAY				*i* Sn	**Sb**		**13 57 09.5**	**-0.5**
VAY				*e*Lg	Lg		13 57 18.8	
	comp=N,70nm,0.5s							
VAY	**Valandovo**	**2.30**	**90**	*i* Pn	**Pn**		**13 56 39.8**	**+1.9**
VAY				*i* Sn	**Sb**		**13 57 09.5**	**-0.5**
VAY				*e*Lg	Lg		13 57 18.8	
	comp=N,70nm,0.5s							
BOSS	**Bosilegrad**	**2.49**	**62**	*e*Pn	**Pn**		**13 56 42.0**	**+1.4**
BOSS				*e*Sn	**Sn**		**13 57 09.7**	**-0.9**
BBLS	**Lazići**	**2.52**	**358**	*e*Pn	**Pn**		**13 56 42.7**	**+1.7**
BBLS	**Lazići**	**2.52**	**358**	*e*Pn	**Pn**		**13 56 42.6**	**+1.6**
BBLS				*e*Sn	**Sn**		**13 57 13.1**	**+1.8**
LIT	**Litokhoron**	**2.58**	**118**	P	**Pn**		**13 56 44.0**	**+2.2**
THL	**Klokotos Trika**	**2.61**	**132**	P	**Pn**		**13 56 44.4**	**+2.2**
THL				S	**Sb**		**13 57 17.7**	**-1.2**
	comp=N,78nm,0.5s							
THL	**Klokotos Trika**	**2.61**	**132**	P	**Pn**		**13 56 44.3**	**+2.2**
THL				S	**Sn**		**13 57 15.7**	**+2.2**
THL				AML	AML		13 57 24.2	
	comp=N,175μm,0.5s							
THL				AML	AML		13 57 36.9	
	comp=E,142μm,0.7s							
MAKA	**Makarska**	**2.68**	**317**	*e*Pn	**Pn**		**13 56 43.3**	**+0.2**
MAKA				Sn	**Sn**		**13 57 14.4**	**-0.7**
GRUS	**Gruza**	**2.69**	**19**	*e*Pn	**Pn**		**13 56 45.0**	**+1.7**
GRUS				*e*Sn	**Sn**		**13 57 14.3**	**-1.1**
LKD2	**Lefkada island**	**2.70**	**161**	P	**Pn**		**13 56 44.7**	**+1.2**
KKB	**Krupnik**	**2.73**	**78**	P	**Pn**		**13 56 40.2**	**-3.6**
HAPS	**Han Pijesak,BI**	**2.77**	**352**	*e*Pn	**Pn**		**13 56 45.5**	**+1.1**
HAPS	**Han Pijesak,BI**	**2.77**	**352**	*e*Pn	**Pn**		**13 56 45.2**	**+0.8**
HAPS				*e*Sn	**Sn**		**13 57 17.7**	**+0.2**
DIVS	**Divibare**	**2.77**	**7**	*e*Pn	**Pn**		**13 56 45.5**	**+1.1**
DIVS				*e*Sn	**Sn**		**13 57 17.5**	**-0.1**
DIVS	**Divibare**	**2.77**	**7**	*e*Pn	**Pn**		**13 56 45.6**	**+1.1**
DIVS				*e*Sn	**Sn**		**13 57 18.6**	**+1.0**
RICI	**Ricice**	**2.77**	**321**	*e*Pn	**Pn**		**13 56 44.8**	**+0.3**
RICI				Sn	**Sn**		**13 57 18.8**	**+1.2**
TRUS	**Trudelj**	**2.95**	**13**	*e*Pn	**Pn**		**13 56 49.0**	**+2.2**
TRUS				*e*Sn	**Sn**		**13 57 23.6**	**+1.8**
EVR	**Evrytania**	**3.00**	**143**	P	**Pb**		**13 56 51.0**	**-2.8**
EVR	**Evrytania**	**3.00**	**143**	P	**Pb**		**13 56 51.1**	**-2.8**
EVR				AML	AML		13 57 48.2	
	comp=E,157μm,0.5s							
EVR				AML	AML		13 57 50.8	
	comp=N,168μm,0.8s							
ZAPS	**Zavoj**	**3.01**	**49**	*e*Pn	**Pn**		**13 56 50.7**	**+3.0**
ZAPS				*e*Sn	**Sn**		**13 57 25.1**	**+1.7**
TIP	**Timpagrande**	**3.02**	**225**	⇑P	**Pn**		**13 56 48.2**	**+0.3**
VTS	**Vitosha**	**3.05**	**64**	*e*Pn	**Pn**		**13 56 48.3**	**-0.1**
VTS	**Vitosha**	**3.05**	**64**	⇑P	**Pn**		**13 56 50.0**	**+1.6**
VTS	**Vitosha**	**3.05**	**64**	P	**Pn**		**13 56 50.2**	**+1.8**
VTS				S	**Sn**		**13 57 26.8**	**+2.2**
MAKR	**Makrakomi, Fth**	**3.08**	**138**	P	**Pn**		**13 56 51.8**	**+3.1**
MAKR	**Makrakomi, Fth**	**3.08**	**138**	P	**Pn**		**13 56 51.7**	**+3.1**
MAKR				AML	AML		13 57 36.5	
	comp=N,336μm,0.4s							
MAKR				AML	AML		13 57 38.9	
	comp=E,461μm,0.4s							
PVO	**Paravola**	**3.14**	**150**	P	**Pn**		**13 56 51.6**	**+2.2**
AGG	**Agios Georgios**	**3.17**	**136**	P	**Pn**		**13 56 52.7**	**+2.8**
AGG				S	**Sb**		**13 57 31.7**	**-3.4**
	comp=E,95nm,0.4s							
AGG	**Agios Georgios**	**3.17**	**136**	P	**Pn**		**13 56 52.8**	**+2.8**
AGG				AML	AML		13 57 33.2	
	comp=E,196μm,0.4s							
AGG				AML	AML		13 57 38.9	
	comp=N,190μm,0.4s							
ZAGS	**Zajecar**	**3.18**	**38**	*e*Pn	**Pn**		**13 56 51.3**	**+1.3**
ZAGS				*e*Sn	**Sn**		**13 57 27.2**	**-0.3**
TEKS	**Tekeris**	**3.20**	**0**	*e*Pn	**Pn**		**13 56 51.4**	**+1.1**
TEKS	**Tekeris**	**3.20**	**0**	*e*Sn	**Sn**		**13 57 28.3**	**+0.3**
ANX	**Ano Chora**	**3.32**	**145**	P	**Pn**		**13 56 55.3**	**+3.3**
KUBS	**Kucevo**	**3.45**	**27**	*e*Pn	**Pn**		**13 56 54.5**	**+0.8**
KUBS				*e*Sn	**Sn**		**13 57 33.5**	**-0.7**
KIJV	**Kijevo**	**3.51**	**320**	*i* Pn	**Pn**		**13 56 55.4**	**+0.9**
KIJV				Sn	**Sn**		**13 57 37.0**	**+1.4**
MGRS	**Mrkonjic Grad**	**3.55**	**331**	*e*Pn	**Pn**		**13 56 56.6**	**+1.5**
MGRS				*e*Sn	**Sn**		**13 57 37.2**	**+0.6**
KALE	**Kalithea**	**3.58**	**145**	P	**Pn**		**13 56 58.1**	**+2.6**
LAKA	**Lakka**	**3.64**	**148**	P	**Pn**		**13 56 58.9**	**+2.5**
ZIRJ	**Zirje**	**3.67**	**310**	*e*Pn	**Pn**		**13 56 57.1**	**+0.3**
ZIRJ				Sn	**Sn**		**13 57 39.6**	**0.0**
MPEP	**Malo Peshtene**	**3.72**	**56**	P	**Pn**		**13 57 00.2**	**+2.8**
MORI	**Morici**	**3.77**	**313**	*i* Pn	**Pn**		**13 56 58.9**	**+0.8**
MORI				Sn	**Sn**		**13 57 41.0**	**-1.0**
MDVR	**Moldovita**	**3.79**	**24**	⇓P	**Pn**		**13 56 59.9**	**+1.4**
BLY	**Banja Luka**	**3.80**	**334**	*e*Pn	**Pn**		**13 56 59.7**	**+1.1**
BLY				*e*Sn	**Sn**		**13 57 43.7**	**+0.8**
FRGS	**Fruska Gora**	**3.81**	**3**	*e*Pn	**Pn**		**13 56 59.1**	**+0.4**
FRGS	**Fruska Gora**	**3.81**	**3**	*e*Pn	**Pn**		**13 56 58.9**	**+0.2**
FRGS				*e*Sn	**Sn**		**13 57 42.9**	**-0.3**
KLV	**Kalavryta, Ach**	**3.88**	**147**	P	**Pn**		**13 57 02.0**	**+2.3**
PROD	**Prodromos**	**4.04**	**139**	P	**Pn**		**13 57 04.1**	**+2.2**
HERR	**Herculane**	**4.12**	**30**	⇓P	**Pn**		**13 57 04.5**	**+1.6**
DUGI	**Dugi Otok**	**4.21**	**310**	*e*Pn	**Pn**		**13 57 04.9**	**+0.7**
DUGI				Sn	**Sn**		**13 57 53.7**	**+0.7**
SRE	**Strehaia**	**4.28**	**38**	⇓P	**Pn**		**13 57 07.1**	**+2.0**
BZS	**Buzias**	**4.53**	**19**	⇑P	**Pn**		**13 57 10.3**	**+1.7**
AQU	**L'Aquila**	**4.67**	**284**	*e*Pn	**Pn**		**13 57 10.3**	**-0.3**
AQU				*e*Sn	**Sn**		**13 58 04.3**	**-0.1**
NVLJ	**Novalja**	**4.68**	**315**	*e*Pn	**Pn**		**13 57 10.9**	**+0.3**
NVLJ				Sn	**Sn**		**13 58 03.5**	**-1.0**
GZR	**Gura Zlata**	**4.69**	**29**	⇓P	**Pn**		**13 57 12.9**	**+2.1**
MOSL	**Moslavina**	**4.71**	**336**	*e*Pn	**Pn**		**13 57 10.8**	**-0.2**
MOSL				Sn	**Sn**		**13 58 05.0**	**-0.3**
MORH	**Mrgy, Hungar**	**4.91**	**353**	*e*Pn	**Pn**		**13 57 14.5**	**+0.8**
SIRR	**Siria**	**5.16**	**17**	⇑P	**Pn**		**13 57 18.3**	**+1.1**
OZLJ	**Ozalj**	**5.18**	**327**	*e*Pn	**Pn**		**13 57 16.6**	**-0.9**
PTJ	**Puntijarka**	**5.23**	**332**	*e*Pn	**Pn**		**13 57 18.2**	**0.0**
KALN	**Kalnik**	**5.27**	**336**	*e*Pn	**Pn**		**13 57 18.6**	**-0.2**
CRES	**Cresnjev**	**5.36**	**328**	*e*Pn	**Pn**		**13 57 19.7**	**-0.2**
CRES				*e*Sn	**Sn**		**13 58 19.7**	**-1.5**
ARR	**Arges**	**5.48**	**41**	⇓P	**Pn**		**13 57 24.3**	**+2.5**
CEY	**Cerknica**	**5.74**	**322**	*e*Pn	**Pn**		**13 57 25.0**	**-0.2**
CEY				*e*Sn	**Sn**		**13 58 29.6**	**-1.0**
DRGR		**5.91**	**22**	⇑P	**Pn**		**13 57 29.9**	**+2.4**
LJU	**Ljubljana**	**5.92**	**324**	*e*Pn	**Pn**		**13 57 27.5**	**-0.2**
SOKA	**Soboth**	**6.23**	**330**	*e*Pn	**Pn**		**13 57 32.4**	**+0.4**
	comp=N,3.3nm,0.3s,SNR=10							
SOKA				*e*Sn	**Sn**		**13 58 39.6**	**-3.2**
	comp=N,3.1nm,0.5s							
MLR	**Muntele Rosu**	**6.25**	**46**	Pn	**Pn**		**13 57 36.4**	**+4.1**
	comp=N,1.1nm,0.3s,baz=160,slow=9.4,SNR=7.0							
MLR				Sn	**Sn**		**13 58 47.0**	**+3.6**
	comp=N,0.6nm,0.3s,baz=183,slow=21,SNR=1.8							
MLR	**Muntele Rosu**	**6.25**	**46**	⇑P	**Pn**		**13 57 33.7**	**+1.4**
OBKA	**Obir**	**6.28**	**327**	*e*Pn	**Pn**		**13 57 33.9**	**+1.2**
	comp=N,1.7nm,0.2s							
OBKA				*i* Sn	**Sn**		**13 58 44.6**	**+0.6**
	comp=N,9.5nm,0.5s							
DOPR	**Dopca**	**6.28**	**41**	⇑P	**Pn**		**13 57 34.1**	**+1.5**
ARSA	**Arzberg**	**6.56**	**335**	*e*Pn	**Pn**		**13 57 37.3**	**+0.9**
	comp=N,1.2nm,0.3s							
PLOR	**Plostina**	**6.86**	**47**	⇑P	**Pn**		**13 57 43.0**	**+2.4**
VRI	**Vrincioaia**	**6.91**	**47**	⇓P	**Pn**		**13 57 42.6**	**+1.3**
HARR	**Harsova**	**7.01**	**59**	⇓P	**Pn**		**13 57 44.7**	**+2.1**
CFR	**Carcaliu**	**7.37**	**56**	⇓P	**Pn**		**13 57 48.7**	**+1.3**
IDI	**Anoyia**	**7.38**	**143**	Sn	**Sn**		**13 59 08.4**	**-2.8**
	comp=N,1.0nm,0.3s,baz=296,slow=20,SNR=5.9							
ABTA	**Abfaltersbach**	**7.38**	**319**	*i* Pn	**Pn**		**13 57 49.0**	**+1.2**
	comp=N,1.6nm,0.2s							
ABTA				*e*Sn	**Sn**		**13 59 09.2**	**-2.0**
	comp=N,3.2nm,0.3s							
MOA	**Molln**	**7.50**	**332**	*e*Pn	**Pn**		**13 57 51.4**	**+2.0**
	comp=N,2.7nm,0.3s,SNR=4.5							
MOA				*i* Sn	**Sn**		**13 59 12.1**	**-1.9**
	comp=N,3.7nm,0.6s							
TLCR		**7.80**	**57**	⇓P	**Pn**		**13 57 55.2**	**+1.8**
WTTA	**Wattenberg**	**8.17**	**319**	*e*Pn	**Pn**		**13 58 00.3**	**+1.5**
	comp=N,8.6nm,0.5s,SNR=8.9							
WTTA				*e*Sn	**Sn**		**13 59 29.2**	**-1.6**
	comp=N,3.6nm,0.3s							
WATA	**Walderalm**	**8.25**	**319**	*e*Pn	**Pn**		**13 58 01.6**	**+1.8**
	comp=N,3.9nm,0.3s,SNR=4.4							
WATA				*i* Sn	**Sn**		**13 59 31.9**	**-0.7**
	comp=N,1.8nm,0.3s							
SQTA	**Sankt Quirin**	**8.36**	**317**	*e*Pn	**Pn**		**13 58 02.4**	**+1.2**
	comp=N,1.9nm,0.3s							
MOTA	**Moosalm**	**8.50**	**318**	*e*Pn	**Pn**		**13 58 04.2**	**+1.0**
	comp=N,1.9nm,0.3s,SNR=4.4							
GERES	**GERESS Array B**	**8.55**	**333**	Pn	**Pn**		**13 58 04.1**	**+0.3**
	comp=N,0.3nm,0.3s,baz=164,slow=13,SNR=5.8							
GERES				Sn	**Sn**		**13 59 37.2**	**-2.6**
	comp=N,0.4nm,0.3s,baz=153,slow=23,SNR=4.1							
KHC	**Kasperske Hory**	**8.83**	**334**	*e*PN	**Pn**		**13 58 06.3**	**-1.3**
KHC				*e*SN	**Sn**		**13 59 45.5**	**-1.2**
DAVA	**Damuels**	**9.10**	**314**	*i* Pn	**Pn**		**13 58 13.5**	**+2.1**
	comp=N,1.

KDZ	**Kurdzhali**	**1.35**	**340**	P	**Pg**	**13 59 04.4 +0.8**
KDZ				S	**Sn**	**13 59 22.0 +0.4**
BALY	**Balya**	**1.37**	**118**	*i* P	**Pg**	**13 59 04.2 +0.4**
BALY				*i* S	**Sn**	**13 59 21.4 -0.6**
BALY				IAML		13 59 24.0
	comp=E,76nm,0.5s					
ZEDA	**zmir-Bergama**	**1.62**	**150**	*i* P	**Pg**	**13 59 10.6 +1.8**
ZEDA				*i* S	**Sb**	**13 59 29.0 +0.1**
RZN	**Rozhen**	**1.65**	**323**	P	**Pg**	**13 59 09.6 +0.4**
RZN				S	**Sg**	**13 59 29.9 -0.7**

IDC ***24*** *14:02:34.8±1.6, 35°.80N×24°.11E, h60km±21km, mb3.4/6, mb1 3.5/10, mb1mx3.3/48, mbtmp3.7/10, ML4.1/3, Error ellipse: s-maj=27.3km s-min=21.7km az=137.0*
ATH ***24*** *14:02:36.0, 35°.81N×24°.07E, h56km±3km, ML3.4/25, Error ellipse: s-maj=3.3km s-min=0.7km az=205.0*
THE ***24*** *14:02:37.8, 35°.82N×24°.07E, h45km±2km, ML3.4/26, Error ellipse: s-maj=2.6km s-min=0.5km az=203.0*
HLW ***24*** *14:02:39.6, 35°.41N×24°.54E, h17km±20km, Ml3.7*
GII ***24*** *14:02:41.0±0.0, 35°.31N×24°.65E, h30km*

ISC 24 14:02:34.4±0.7, 35°.72N±0°.03×24°.06E±0°.03, h70km±7km, n131, σ1°80/181, mb3.5/6, Crete

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IMMV	**Iera Moni Meta**	**0.27**	**195**	P		**Pn**	**14 02 46.9**	**+1.6**
IMMV				S		**Sn**	**14 02 53.9**	**+0.6**
	4µm,0.2s							
IMMV	**Iera Moni Meta**	**0.27**	**195**	P		**Pn**	**14 02 47.0**	**+1.6**
IMMV				S		**Sn**	**14 02 53.9**	**+0.6**
IMMV				AML		AML	14 02 57.6	
	comp=N,10724µm,0.3s							
IMMV				AML		AML	14 02 58.6	
	comp=E,7369µm,0.2s							
VAM	**Vamos**	**0.33**	**160**	P		**Pn**	**14 02 47.3**	**+1.6**
VAM				S		**Sn**	**14 02 55.1**	**+1.0**
	comp=E,7µm,0.2s							
VAM	**Vamos**	**0.33**	**160**	P		**Pn**	**14 02 47.3**	**+1.6**
VAM				S		**Sn**	**14 02 54.8**	**+0.7**
VAM				AML		AML	14 02 55.6	
	comp=N,9675µm,0.1s							
VAM				AML		AML	14 02 58.6	
	comp=E,16029µm,0.3s							
ANKY	**Antikythira Is**	**0.64**	**284**	P		**Pn**	**14 02 50.1**	**+1.6**
ANKY				S		**Sn**	**14 02 59.1**	**+0.1**
	comp=E,2µm,0.5s							
ANKY	**Antikythira Is**	**0.64**	**284**	P		**Pn**	**14 02 50.2**	**+1.6**
ANKY				S		**Sn**	**14 02 59.9**	**+0.9**
ANKY				AML		AML	14 03 01.3	
	comp=N,3348µm,0.5s							
ANKY				AML		AML	14 03 02.0	
	comp=E,5402µm,0.5s							
IDI	**Anoyia**	**0.80**	**122**	P		**Pn**	**14 02 52.0**	**+1.5**
	comp=E,25nm,0.3s,baz=240,slow=9.1,SNR=174							
IDI				S		**Sn**	**14 03 03.1**	**+0.7**
	comp=E,126nm,0.3s,baz=320,slow=12,SNR=17							
IDI	**Anoyia**	**0.80**	**122**	P		**Pn**	**14 02 52.0**	**+1.5**
IDI				AML		AML	14 03 05.9	
	comp=E,2393µm,0.4s							
IDI				AML		AML	14 03 10.6	
	comp=N,3857µm,0.5s							
GVD	**Gavdhos**	**0.88**	**179**	P		**Pn**	**14 02 54.2**	**+2.8**
GVD	**Gavdhos**	**0.88**	**179**	P		**Pn**	**14 02 53.9**	**+2.5**
GVD				AML		AML	14 03 17.7	
	comp=N,3747µm,0.4s							
GVD				AML		AML	14 03 18.4	
	comp=E,5096µm,0.4s							
SIVA	**Sivas**	**0.93**	**139**	P		**Pn**	**14 02 56.1**	**+4.1**
SIVA				S		**Sn**	**14 03 09.4**	**+4.4**
	comp=E,3µm,0.6s							
SIVA	**Sivas**	**0.93**	**139**	P		**Pn**	**14 02 55.5**	**+3.5**
SIVA				S		**Sn**	**14 03 08.1**	**+3.1**
SIVA				AML		AML	14 03 15.2	
	comp=N,4709µm,0.7s							
SIVA				AML		AML	14 03 17.4	
	comp=E,7344µm,0.5s							
MHLO	**Agia Marina, M**	**1.01**	**16**	P		**Pn**	**14 02 54.4**	**+1.4**
MHLO				S		**Sn**	**14 03 06.9**	**+0.2**
	comp=E,3µm,0.3s							
MHLO	**Agia Marina, M**	**1.01**	**16**	P		**Pn**	**14 02 54.3**	**+1.4**
MHLO				AML		AML	14 03 12.6	
	comp=N,6114µm,0.3s							
MHLO				AML		AML	14 03 16.3	
	comp=E,6652µm,0.5s							
MHLA	**Plaka, Milos I**	**1.06**	**16**	P		**Pn**	**14 02 55.3**	**+1.6**
MHLA				AML		AML	14 03 19.4	
	comp=E,1421µm,0.5s							
MHLA				AML		AML	14 03 19.8	
	comp=N,1408µm,0.6s							
THR5	**Thira Island,**	**1.25**	**56**	P		**Pn**	**14 02 57.9**	**+1.8**
SAP1	**Santorini-Akro**	**1.25**	**59**	P		**Pn**	**14 02 58.3**	**+2.2**
SAP1				S		**Sn**	**14 03 14.0**	**+1.6**
	comp=N,3µm,0.4s							
SAP1	**Santorini-Akro**	**1.25**	**59**	P		**Pn**	**14 02 58.3**	**+2.2**
THR6	**Thira Island,**	**1.25**	**59**	P		**Pn**	**14 02 58.1**	**+2.0**
SAP3	**Santorini-Thir**	**1.26**	**55**	P		**Pn**	**14 02 58.0**	**+1.9**
SAP3				S		**Sn**	**14 03 14.2**	**+1.7**
	comp=N,5µm,0.2s							
SAP3	**Santorini-Thir**	**1.26**	**55**	P		**Pn**	**14 02 58.1**	**+1.9**
MNVA	**Monemvasia**	**1.27**	**320**	P		**Pn**	**14 02 57.9**	**+1.6**
MNVA				S		**Sn**	**14 03 12.9**	**+0.1**
LAST	**Lasithi**	**1.28**	**115**	P		**Pn**	**14 02 58.9**	**+2.4**
LAST	**Lasithi**	**1.28**	**115**	P		**Pn**	**14 02 59.0**	**+2.4**
LAST				AML		AML	14 03 20.2	
	comp=N,1080µm,0.3s							
LAST				AML		AML	14 03 25.8	
	comp=E,726µm,0.6s							
THR3	**Thira Island,**	**1.28**	**57**	P		**Pn**	**14 02 58.3**	**+1.8**
SANT	**Santorini**	**1.30**	**60**	P		**Pn**	**14 02 58.8**	**+2.0**
SANT				S		**Sn**	**14 03 14.0**	**+0.4**
	comp=E,1µm,0.2s							
SANT	**Santorini**	**1.30**	**60**	P		**Pn**	**14 02 58.6**	**+1.8**
SANT				S		**Sn**	**14 03 14.0**	**+0.4**
SANT				AML		AML	14 03 15.9	
	comp=E,3224µm,0.2s							
SANT				AML		AML	14 03 20.2	
	comp=N,1043µm,0.2s							
CMBO	**Columbo, Santo**	**1.32**	**55**	P		**Pn**	**14 02 58.9**	**+1.9**
CMBO				S		**Sn**	**14 03 14.3**	**+0.4**
	comp=N,2µm,0.4s							
CMBO	**Columbo, Santo**	**1.32**	**55**	P		**Pn**	**14 02 58.6**	**+1.7**
CMBO				AML		AML	14 03 16.8	
	comp=E,3088µm,0.4s							
CMBO				AML		AML	14 03 18.4	
	comp=N,2993µm,0.4s							
NPS	**Neapolis**	**1.34**	**109**	P		**Pn**	**14 02 59.4**	**+2.1**
NPS	**Neapolis**	**1.34**	**109**	P		**Pn**	**14 02 59.3**	**+2.0**
NPS				AML		AML	14 03 27.2	
	comp=E,1565µm,0.5s							
NPS				AML		AML	14 03 30.4	
	comp=N,1010µm,0.5s							
VLI	**Velíai**	**1.35**	**318**	P		**Pn**	**14 02 58.6**	**+1.3**
VLI				S		**Sn**	**14 03 14.9**	**+0.3**
	comp=N,1µm,0.2s							
VLI	**Velíai**	**1.35**	**318**	P		**Pn**	**14 02 58.7**	**+1.3**
VLI				S		**Sn**	**14 03 14.7**	**0.0**
VLI				AML		AML	14 03 16.5	
	comp=E,3110µm,0.2s							
VLI				AML		AML	14 03 17.9	
	comp=N,3786µm,0.2s							
IOSP	**Ios island**	**1.41**	**44**	P		**Pn**	**14 02 59.8**	**+1.7**
IOSP				S		**Sn**	**14 03 15.9**	**-0.1**
	comp=N,2µm,0.3s							
IOSP	**Ios island**	**1.41**	**44**	P		**Pn**	**14 02 59.9**	**+1.7**
IOSP				S		**Sn**	**14 03 15.8**	**-0.2**
IOSP				AML		AML	14 03 17.8	
	comp=E,4244µm,0.3s							
IOSP				AML		AML	14 03 17.9	
	comp=N,3687µm,0.3s							
SERI	**Serifos**	**1.48**	**13**	P		**Pn**	**14 03 00.6**	**+1.5**
SERI				S		**Sn**	**14 03 18.4**	**+0.7**
	comp=N,338nm,0.3s							
SERI	**Serifos**	**1.48**	**13**	P		**Pn**	**14 03 00.6**	**+1.5**
SERI				S		**Sn**	**14 03 18.2**	**+0.5**
SERI				AML		AML	14 03 18.9	
	comp=E,562µm,0.5s							
SERI				AML		AML	14 03 20.9	
	comp=N,797µm,0.2s							
ANAF	**Anafi Island**	**1.52**	**65**	P		**Pn**	**14 03 01.9**	**+2.2**
ANAF				S		**Sn**	**14 03 19.3**	**+0.6**
	comp=N,2µm,0.3s							
ANAF	**Anafi Island**	**1.52**	**65**	P		**Pn**	**14 03 01.9**	**+2.2**
ANAF				S		**Sn**	**14 03 19.4**	**+0.6**
ANAF				AML		AML	14 03 23.1	
	comp=E,4420µm,0.2s							
ANAF				AML		AML	14 03 24.1	
	comp=N,4534µm,0.4s							
APE	**Apeiranthos**	**1.79**	**41**	P		**Pn**	**14 03 04.8**	**+1.5**
APE				S		**Sn**	**14 03 26.0**	**+0.7**
APE				AML		AML	14 03 26.8	
	comp=E,974µm,0.4s							
APE				AML		AML	14 03 29.2	
	comp=N,886µm,0.3s							
KRND	**KRANIDI**	**1.82**	**336**	P		**Pn**	**14 03 05.4**	**+1.9**
KRND				S		**Sn**	**14 03 26.2**	**+0.5**
	comp=N,1µm,0.4s							
KRND	**KRANIDI**	**1.82**	**336**	P		**Pn**	**14 03 05.3**	**+1.7**
KRND				S		**Sn**	**14 03 26.4**	**+0.7**
KRND				AML		AML	14 03 30.6	
	comp=E,2071µm,0.4s							
KRND				AML		AML	14 03 31.7	
	comp=N,2026µm,0.3s							
AMGA	**Amorgos Island**	**1.85**	**53**	P		**Pn**	**14 03 05.9**	**+1.9**
AMGA				S		**Sn**	**14 03 27.5**	**+1.0**
	comp=N,662nm,0.3s							
AMGA	**Amorgos Island**	**1.85**	**53**	P		**Pn**	**14 03 05.9**	**+1.9**
AMGA				S		**Sn**	**14 03 27.2**	**+0.7**
AMGA				AML		AML	14 03 28.7	
	comp=N,1271µm,0.4s							
AMGA				AML		AML	14 03 29.6	
	comp=E,1321µm,0.2s							
ZKR	**Zakros**	**1.86**	**108**	P		**Pn**	**14 03 07.3**	**+3.2**
ZKR	**Zakros**	**1.86**	**108**	P		**Pn**	**14 03 07.0**	**+2.8**
DID	**Didima**	**1.90**	**340**	P		**Pn**	**14 03 05.9**	**+1.1**
DID				S		**Sn**	**14 03 28.6**	**+0.8**
	comp=E,668nm,0.3s							
DID	**Didima**	**1.90**	**340**	P		**Pn**	**14 03 06.0**	**+1.2**
DID				S		**Sn**	**14 03 28.4**	**+0.5**
DID				AML		AML	14 03 30.2	
	comp=E,1477µm,0.2s							
DID				AML		AML	14 03 33.4	
	comp=N,1094µm,0.4s							
VLX	**Vlachokerasia**	**2.13**	**321**	P		**Pn**	**14 03 09.5**	**+1.6**
VLX	**Vlachokerasia**	**2.13**	**321**	P		**Pn**	**14 03 09.8**	**+1.9**
VLY	**Voula,Athens**	**2.14**	**354**	P		**Pn**	**14 03 09.6**	**+1.7**
VLY				S		**Sn**	**14 03 33.7**	**+0.2**
	comp=N,318nm,0.4s							
VLY	**Voula,Athens**	**2.14**	**354**	P		**Pn**	**14 03 09.4**	**+1.5**
PYL	**PYLOS**	**2.21**	**303**	P		**Pn**	**14 03 09.6**	**+0.7**
ATHU	**Athens Univers**	**2.25**	**354**	P		**Pn**	**14 03 11.2**	**+1.7**
ATHU				S		**Sn**	**14 03 36.0**	**-0.3**
	comp=N,92nm,0.4s							
ATHU	**Athens Univers**	**2.25**	**354**	P		**Pn**	**14 03 11.1**	**+1.6**
ITM	**Ithomi**	**2.26**	**311**	P		**Pn**	**14 03 11.3**	**+1.8**
ITM	**Ithomi**	**2.26**	**311**	P		**Pn**	**14 03 11.3**	**+1.8**
ATH	**Athens Observa**	**2.27**	**353**	P		**Pn**	**14 03 11.5**	**+1.9**
ATH				AML		AML	14 03 38.2	
	comp=E,512µm,0.3s							
ATH				AML		AML	14 03 44.5	
	comp=N,411µm,0.3s							
TRIP	**Tripoli**	**2.31**	**322**	P		**Pn**	**14 03 12.6**	**+2.3**
TRIP				S		**Sn**	**14 03 38.2**	**+0.5**
TRIP				AML		AML	14 03 48.6	
	comp=N,522µm,0.7s							
TRIP				AML		AML	14 03 52.1	
	comp=E,561µm,0.3s							
KARY	**Karystos**	**2.33**	**7**	P		**Pn**	**14 03 12.5**	**+2.1**
KARY				S		**Sn**	**14 03 38.7**	**+0.7**
	comp=E,132nm,0.3s							
KARY	**Karystos**	**2.33**	**7**	P		**Pn**	**14 03 12.5**	**+2.1**
KARY				S		**Sn**	**14 03 38.5**	**+0.5**
KARY				AML		AML	14 03 40.1	
	comp=E,286µm,0.2s							
KARY				AML		AML	14 03 40.9	
	comp=N,262µm,0.4s							
PTL	**Penteli**	**2.33**	**356**	P		**Pn**	**14 03 12.5**	**+2.0**
PTL				S		**Sn**	**14 03 38.1**	**-0.1**
	comp=N,275nm,0.4s							
PTL	**Penteli**	**2.33**	**356**	P		**Pn**	**14 03 12.6**	**+2.0**
DION	**Dionisos Attik**	**2.36**	**357**	P		**Pn**	**14 03 12.9**	**+2.0**
DION				S		**Sn**	**14 03 39.3**	**+0.5**
	comp=N,1µm,0.3s							
DION	**Dionisos Attik**	**2.36**	**357**	P		**Pn**	**14 03 13.1**	**+2.3**
DION				S		**Sn**	**14 03 38.9**	**+0.2**
DION				AML		AML	14 03 40.0	
	comp=E,3412µm,0.4s							
DION				AML		AML	14 03 42.7	
	comp=N,1620µm,0.3s							
LOUT	**Loutraki**	**2.43**	**339**	P		**Pn**	**14 03 14.0**	**+2.2**
LOUT	**Loutraki**	**2.43**	**339**	P		**Pn**	**14 03 13.6**	**+1.8**
LTK	**Loutraki**	**2.46**	**339**	P		**Pn**	**14 03 14.0**	**+1.7**
LTK				S		**Sn**	**14 03 41.7**	**+0.4**
	comp=N,338nm,0.7s							
LTK	**Loutraki**	**2.46**	**339**	P		**Pn**	**14 03 14.1**	**+1.7**
VILL	**Villia**	**2.51**	**346**	P		**Pn**	**14 03 14.8**	**+1.8**
VILL				S		**Sn**	**14 03 43.4**	**+0.8**
	comp=N,55nm,0.5s							
KARP	**Karpathos**	**2.53**	**93**	P		**Pn**	**14 03 15.3**	**+2.1**
VIL2	**Platees**	**2.57**	**346**	P		**Pn**	**14 03 14.8**	**+1.1**
VIL2				S		**Sn**	**14 03 42.4**	**-1.6**
VIL2				AML		AML	14 03 46.1	
	comp=E,1022µm,0.5s							
VIL2				AML		AML	14 03 48.6	
	comp=N,832µm,0.6s							
PROD	**Prodromos**	**2.70**	**340**	P		**Pn**	**14 03 17.1**	**+1.6**
KLV	**Kalavryta, Ach**	**2.78**	**327**	P		**Pn**	**14 03 18.8**	**+2.2**
KLV				S		**Sn**	**14 03 50.1**	**+0.9**
	comp=N,220nm,0.8s							
KLV	**Kalavryta, Ach**	**2.78**	**327**	P		**Pn**	**14 03 18.8**	**+2.2**
KLV				S		**Sn**	**14 03 49.7**	**+0.6**
KYMI	**Kymi, Euboea I**	**2.91**	**1**	P		**Pn**	**14 03 20.3**	**+2.0**
KYMI	**Kymi, Euboea I**	**2.91**	**1**	P		**Pn**	**14 03 20.3**	**+2.0**
SMG	**Samos**	**2.98**	**47**	P		**Pn**	**14 03 21.1**	**+1.8**
MRKA	**Markates**	**3.00**	**353**	P		**Pn**	**14 03 21.6**	**+2.0**
MRKA				S		**Sn**	**14 03 54.7**	**+0.1**
	comp=N,278nm,0.4s							
MRKA	**Markates**	**3.00**	**353**	P		**Pn**	**14 03 21.7**	**+2.0**
LAKA	**Lakka**	**3.02**	**327**	P		**Pn**	**14 03 21.9**	**+2.0**
LKR	**Lokris**	**3.05**	**344**	P		**Pn**	**14 03 22.0**	**+1.8**
LKR	**Lokris**	**3.05**	**344**	P		**Pn**	**14 03 22.0**	**+1.8**
KALE	**Kalithea**	**3.08**	**331**	P		**Pn**	**14 03 22.7**	**+2.0**
KALE	**Kalithea**	**3.08**	**331**	P		**Pn**	**14 03 22.7**	**+2.0**
TRIZ	**Trizonia**	**3.08**	**329**	P		**Pn**	**14 03 22.9**	**+2.2**
SERG	**Sergoula**	**3.13**	**330**	P		**Pn**	**14 03 23.6**	**+2.2**
ARG	**Arkhangelos**	**3.33**	**80**	P		**Pn**	**14 03 27.2**	**+3.1**
ANX	**Ano Chora**	**3.34**	**330**	P		**Pn**	**14 03 26.4**	**+2.1**
ANX	**Ano Chora**	**3.34**	**330**	P		**Pn**	**14 03 26.3**	**+2.0**
SKIA	**Skiathos**	**3.47**	**352**	P		**Pn**	**14 03 28.3**	**+2.2**
AGG	**Agios Georgios**	**3.57**	**338**	P		**Pn**	**14 03 29.3**	**+1.9**
AGG				S		**Sn**	**14 04 10.3**	**+1.8**
	comp=N,62nm,0.7s							
MAKR	**Makrakomi, Fth**	**3.63**	**335**	P		**Pn**	**14 03 30.0**	**+1.8**
SLUM	**Salum**	**4.32**	**167**	P		**Pn**	**14 03 38.5**	**+0.8**
	baz=171							
SLUM				AMP			14 04 00.0	
	baz=171							
SLUM				S		**Sn**	**14 04 23.4**	**-3.4**
	baz=171							
SWA2		**6.56**	**169**	P		**Pn**	**14 04 08.7**	**+0.4**
	baz=172							
SWA2				S		**Sn**	**14 05 17.4**	**-4.3**
	baz=172							
CSS	**Mathiatis**	**7.61**	**93**	Pn		**Pn**	**14 04 22.3**	**-0.3**
HNAT	**Natroun**	**8.20**	**136**	P		**Pn**	**14 04 31.3**	**+0.6**
	baz=136							
DBRK	**Dubrovnik**	**8.32**	**328**	*e*Pn		**Pn**	**14 04 29.6**	**-2.6**
DBRK				Sn		Sn	14 05 54.7	-10
BRTR	**Keskin Array B**	**8.57**	**59**	P		**Pn**	**14 04 36.1**	**+0.2**
	comp=N,0.1nm,0.3s,baz=238,slow=13,SNR=2.2							
STON	**Ston**	**8.68**	**327**	*e*Pn		**Pn**	**14 04 33.9**	**-3.2**
STON				Sn		Sn	14 06 04.0	-9.2
KOT	**Kottamia**	**8.72**	**129**	P		**Pn**	**14 04 37.2**	**-0.5**
	baz=129							
GLL	**Jalalah**	**8.89**	**131**	P		**Pn**	**14 04 39.9**	**-0.2**
	baz=131							
HFRF	**Wahat Farafira**	**9.28**	**156**	P		**Pn**	**14 04 45.2**	**-0.2**
	baz=157							
HFRF				AMP			14 06 00.0	
	baz=157							
HFRF				S		Sn	14 06 17.5	-11
	baz=157							
MAKA	**Makarska**	**9.31**	**326**	*e*Pn		**Pn**	**14 04 43.4**	**-2.3**
MAKA				Sn		Sn	14 06 18.1	-11
RSH		**9.37**	**118**	P		**Pn**	**14 04 45.9**	**-0.7**
	baz=117							
SUZ	**Suez**	**9.42**	**126**	P		**Pn**	**14 04 47.1**	**-0.3**
	baz=126							
RICI	**Ricice**	**9.42**	**328**	*e*Pn		**Pn**	**14 04 44.9**	**-2.4**
MMA0	**Mount Meron ar**	**9.75**	**103**	Pn		**Pn**	**14 04 52.1**	**+0.2**
MMA0				Sn		**Sn**	**14 06 35.2**	**-4.7**
MMAI	**Mount Meron Ar**	**9.75**	**103**	P		**Pn**	**14 04 50.9**	**-1.0**
	comp=N,2.0nm,0.3s,baz=299,slow=12,SNR=10							
KZIT	**Kziot**	**9.89**	**116**	Pn		**Pn**	**14 04 52.8**	**-0.9**
MMLI	**Mount Malkishu**	**9.97**	**106**	Pn		**Pn**	**14 04 56.8**	**+1.9**
KIJV	**Kijevo**	**10.15**	**327**	*e*Pn		**Pn**	**14 04 55.3**	**-2.0**
KIJV				Sn		Sn	14 06 40.9	-8.5
ZIRJ	**Zirje**	**10.24**	**323**	*e*Pn		**Pn**	**14 04 56.9**	**-1.4**
ZIRJ				Sn		Sn	14 06 40.6	-11
DSI	**Dead Sea**	**10.30**	**110**	Pn		**Pn**	**14 04 58.6**	**-0.7**
MORI	**Morici**	**10.36**	**324**	*e*Pn		**Pn**	**14 04 58.8**	**-1.3**
MORI				Sn		Sn	14 06 45.2	-9.3
KRMI	**Paran Flat**	**10.55**	**119**	Pn		**Pn**	**14 05 01.6**	**-1.2**
GHAJ	**Ghor Haditha**	**10.56**	**111**	Pn		**Pn**	**14 05 02.7**	**-0.2**
PRNI	**Paran**	**10.62**	**117**	Pn		**Pn**	**14 05 02.4**	**-1.4**
PRNI				Sn		**Sn**	**14 06 54.5**	**-6.6**
ZFRI	**Zfri**	**10.64**	**116**	Pn		**Pn**	**14 05 03.2**	**-0.8**
DUGI	**Dugi Otok**	**10.77**	**323**	*e*Pn		**Pn**	**14 05 05.0**	**-0.7**
DUGI				Sn		Sn	14 06 55.1	-9.4
HRFI	**Mount Harif**	**10.82**	**118**	Pn		**Pn**	**14 05 05.6**	**-0.9**
EIL	**Elat**	**10.97**	**120**	P		**Pn**	**14 05 07.8**	**-0.8**
	comp=N,1.1nm,0.3s,baz=282,slow=2.4,SNR=19							
EIL	**Elat**	**10.97**	**120**	Pn		**Pn**	**14 05 07.5**	**-1.0**
AKASG	**Malin Array Be**	**15.43**	**12**	P		**Pn**	**14 06 06.8**	**-1.0**
	comp=N,0.9nm,0.3s,baz=199,slow=10,SNR=1.5							
KHC	**Kasperske Hory**	**15.46**	**333**	*e*P		**P**	**14 06 12.5**	**+1.2**
FINES	**FINESS Array B**	**25.78**	**2**	P		**P**	**14 07 58.2**	**-0.2**
	comp=N,1.3nm,0.8s,baz=168,slow=9.8,SNR=5.8							
EKA	**Eskdalemuir Ar**	**27.07**	**325**	P		**P**	**14 08 10.5**	**+0.4**
	comp=N,0.6nm,0.4s,baz=116,slow=11,SNR=5.8							
TORD	**Torodi Ar. Bea**	**30.19**	**228**	P		**P**	**14 08 40.2**	**+2.0**
	comp=N,0.5nm,0.5s,baz=30,slow=9.6,SNR=5.4							
MKAR	**Makanchi Array**	**44.22**	**57**	P		**P**	**14 10 37.8**	**+1.3**
	comp=N,0.4nm,0.4s,baz=269,slow=7.6,SNR=7.5							
ZALV	**Zalesovo Beam**	**45.27**	**47**	P		**P**	**14 10 45.3**	**+0.6**
	comp=N,0.6nm,0.3s,baz=272,slow=8.0,SNR=4.0							
YKA	**Yellowknife Ar**	**76.64**	**342**	P		**P**	**14 14 18.8**	**+1.6**
	comp=N,0.2nm,0.4s,baz=40,slow=5.1,SNR=2.5							

DDA ***24*** *14:04:14.0, 40°.36N×25°.99E, h6km±5km, ML2.6*

ISC 24 14:04:13.9±1.3, 40°.35N±0°.03×25°.97E±0°.05, h6km±12km, n11, σ0°52/21, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.51**	**173**	*i* P		**Pg**	**14 04 23.2**	**-0.5**
BOZC				*i* P		**Pb**	**14 04 24.1**	**-1.2**
BOZC				*i* S		**Sg**	**14 04 31.5**	**+1.1**
BOZC				*i* S		**Sb**	**14 04 33.1**	**+0.1**
BOZC				IAML			14 04 34.0	
	comp=E,310nm,0.2s							
BOZC				IAML			14 04 34.0	
	comp=E,277nm,0.2s							
KESN	**Edirne-Kesan**	**0.72**	**49**	*i* S		**Sg**	**14 04 37.1**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**0.75**	**144**	*i* P		**Pb**	**14 04 29.4**	**0.0**
BAYC				*i* S		**Sb**	**14 04 39.8**	**-0.2**
SART	**Tekirdag**	**0.98**	**70**	*i* P		**Pb**	**14 04 33.5**	**+0.1**
AYVA	**Ayvalik**	**1.18**	**152**	*i* P		**Pb**	**14 04 36.8**	**+0.1**
AYVA				*i* S		**Sn**	**14 04 53.8**	**+0.5**
AYVA				IAML			14 04 56.0	
	comp=E,74nm,0.3s							
AYVA				IAML			14 04 57.0	
	comp=N,189nm,0.7s							
KNL	**Balıkesir**	**1.19**	**93**	*i* P		**Pn**	**14 04 37.2**	**+0.1**
KNL				*i* S		**Sg**	**14 04 51.8**	**-0.4**
KNL				IAML			14 04 55.0	
	comp=N,196nm,0.5s							
KDZ	**Kurdzhali**	**1.36**	**342**	P		**Pb**	**14 04 39.9**	**+0.1**
KDZ				S		**Sb**	**14 04 57.4**	**-0.2**
BALY	**Balya**	**1.41**	**115**	*i* P		**Pg**	**14 04 40.9**	**+0.1**
BALY				*i* S		**Sb**	**14 04 58.1**	**-0.7**
BALY				IAML			14 05 01.0	
	comp=E,130nm,0.4s							
BALY				IAML			14 05 02.0	
	comp=N,94nm,0.4s							
ZEDA	**zmir-Bergama**	**1.63**	**148**	*i* P		**Pb**	**14 04 44.5**	**+0.2**
ZEDA				*i* S		**Sg**	**14 05 07.0**	**+0.9**
ZEDA				IAML			14 05 09.0	
	comp=N,50nm,0.3s							
RZN	**Rozhen**	**1.64**	**325**	P		**Pg**	**14 04 45.2**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.66**	**125**	*i* P		**Pb**	**14 04 44.8**	**-0.2**
STEP				*i* S		**Sb**	**14 05 05.9**	**-0.2**
STEP				IAML			14 05 09.0	
	comp=E,59nm,0.7s							
STEP				IAML			14 05 10.0	
	comp=N,77nm,0.6s							

MAN ***24*** *14:09:19.6, 9°.91N×124°.06E, h15km, mb4.9, ML3.9, MS3.9*
IDC ***24*** *14:09:27.1±13.0, 9°.86N×124°.26E, h90km±139km, mb3.3/6, mb1 3.6/7, mb1mx3.3/37, mbtmp3.8/7, ML4.8/1, Error ellipse: s-maj=43.7km s-min=19.0km az=67.0*

**ISC 24 14:09:17.3±1.3, 9°.80N±0°.03×124°.10E±0°.03, h4km±10km, n27, σ1°06/36, mb3.6/6,

*ATH **24** 14:18:21.6, 40°.01N×24°.25E, h30$^{km}_{\pm 1km}$, ML3.5/16, Error ellipse: s-maj=1.0km s-min=0.7km az=47.0*
*THE **24** 14:18:22.6, 40°.01N×24°.25E, h14^{km}, ML3.4/19, Error ellipse: s-maj=0.7km s-min=0.4km az=3.0*

ISC 24 14:18:21.9±1.0, 40°.00N±0°.02×24°.25E±0°.02, h13$^{km}_{\pm 9km}$, n139, σ0^{s}.68/179, 12C-1D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.39**	**329**	P	Pb		14 18 30.9	+0.2
OUR				S	Sb		14 18 36.0	-0.7
	8μm,0.6s							
OUR	**Ouranopolis**	**0.39**	**329**	P	Pb		14 18 31.1	+0.4
OUR				S	Sb		14 18 36.1	-0.5
PAIG	**Paliouri**	**0.44**	**261**	P	Pb		14 18 31.5	-0.1
PAIG				S	Sb		14 18 37.9	-0.2
	5μm,0.5s							
PAIG	**Paliouri**	**0.44**	**261**	P	Pb		14 18 31.2	-0.4
PAIG				S	Sb		14 18 38.1	0.0
PAIG				AML	AML		14 18 42.5	
	comp=E,9510μm,0.6s							
PAIG				AML	AML		14 18 43.8	
	comp=N,4534μm,10.4s							
THAS	**Thassos island**	**0.70**	**30**	P	Pg		14 18 35.5	-0.1
THAS				S	Sb		14 18 46.0	+0.4
	comp=N,4μm,0.2s							
THAS	**Thassos island**	**0.70**	**30**	P	Pg		14 18 35.3	-0.3
THAS				S	Sb		14 18 46.1	+0.5
THAS				AML	AML		14 18 46.6	
	comp=N,6870μm,0.2s							
THAS				AML	AML		14 18 47.1	
	comp=E,8627μm,0.2s							
PLG	**Polygyros**	**0.72**	**301**	P	Pb		14 18 36.1	-0.2
PLG				S	Sb		14 18 46.2	0.0
	comp=E,5μm,0.5s							
PLG	**Polygyros**	**0.72**	**301**	P	Pb		14 18 36.0	-0.4
PLG				S	Sg		14 18 45.6	+0.2
PLG				AML	AML		14 18 49.6	
	comp=E,10680μm,0.5s							
PLG				AML	AML		14 18 49.6	
	comp=N,7540μm,0.6s							
LIA	**Limnos Island**	**0.72**	**98**	P	Pb		14 18 36.7	+0.3
LIA				S	Sb		14 18 46.7	+0.5
	comp=N,2μm,0.4s							
LIA	**Limnos Island**	**0.72**	**98**	P	Pb		14 18 36.4	0.0
LIA				S	Sb		14 18 45.9	-0.3
LIA				AML	AML		14 18 48.1	
	comp=E,4816μm,0.3s							
LIA				AML	AML		14 18 48.9	
	comp=N,3641μm,0.4s							
EFSA	**Agios Efstrati**	**0.73**	**129**	P	Pb		14 18 36.9	+0.4
EFSA				S	Sb		14 18 47.2	+0.8
EFSA				AML	AML		14 18 48.7	
	comp=E,12338μm,0.4s							
EFSA				AML	AML		14 18 48.8	
	comp=N,5651μm,0.3s							
AOS	**Alonnisos**	**0.88**	**199**	P	Pg		14 18 38.7	-0.1
AOS				S	Sn		14 18 51.7	-0.8
	comp=N,3μm,0.7s							
AOS	**Alonnisos**	**0.88**	**199**	P	Pb		14 18 38.9	0.0
AOS				S	Sn		14 18 52.1	-0.4
AOS				AML	AML		14 18 55.7	
	comp=N,5942μm,0.4s							
AOS				AML	AML		14 18 57.4	
	comp=E,7099μm,0.7s							
ALNA	**Alonissos**	**0.90**	**199**	P	Pb		14 18 39.5	+0.2
ALNA				S	Sn		14 18 52.6	-0.5
ALNA				AML	AML		14 18 55.3	
	comp=N,11204μm,0.7s							
ALNA				AML	AML		14 18 58.2	
	comp=E,9281μm,0.7s							
KVLA	**Kavala**	**0.94**	**6**	P	Pn		14 18 40.4	-0.4
KVLA				S	Sb		14 18 52.5	+0.1
KVLA				AML	AML		14 18 54.8	
	comp=E,5935μm,0.4s							
KVLA				AML	AML		14 18 55.0	
	comp=N,2982μm,0.4s							
KAVA	**Kavala**	**1.02**	**11**	P	Pb		14 18 41.1	-0.2
KAVA				S	Sg		14 18 55.1	+0.3
	comp=N,1μm,0.6s							
KAVA	**Kavala**	**1.02**	**11**	P	Pb		14 18 41.2	-0.2
SKIA	**Skiathos**	**1.03**	**216**	P	Pb		14 18 41.5	-0.1
SKIA				S	Sn		14 18 55.9	-0.4
	comp=N,4μm,0.6s							
SKIA	**Skiathos**	**1.03**	**216**	P	Pg		14 18 41.6	-0.1
SKIA				S	Sg		14 18 55.1	-0.1
SKIA				AML	AML		14 18 57.7	
	comp=N,7074μm,0.5s							
SKIA				AML	AML		14 18 59.5	
	comp=E,8146μm,0.6s							
XOR	**Xorichti**	**1.03**	**233**	P	Pn		14 18 42.0	-0.1
XOR				S	Sn		14 18 55.9	-0.6
	comp=E,4μm,0.4s							
XOR	**Xorichti**	**1.03**	**233**	P	Pn		14 18 42.4	+0.3
XOR				S	Sb		14 18 54.7	-0.4
XOR				AML	AML		14 19 01.6	
	comp=E,6862μm,0.4s							
XOR				AML	AML		14 19 02.4	
	comp=N,6740μm,0.3s							
NEO	**Neokhori**	**1.05**	**229**	P	Pg		14 18 42.1	-0.1
NEO				S	Sn		14 18 57.5	+0.6
	comp=N,6μm,0.4s							
NEO	**Neokhori**	**1.05**	**229**	P	Pg		14 18 42.0	-0.1
NEO				S	Sg		14 18 56.2	+0.3
NEO				AML	AML		14 19 00.2	
	comp=N,10505μm,0.4s							
NEO				AML	AML		14 19 01.8	
	comp=E,14659μm,0.5s							
HORT	**Hortiatis**	**1.06**	**305**	P	Pn		14 18 42.7	+0.1
HORT				S	Sg		14 18 56.6	+0.3
	comp=E,2μm,0.8s							
HORT	**Hortiatis**	**1.06**	**305**	P	Pb		14 18 42.1	-0.1
HORT				S	Sg		14 18 56.4	+0.1
HORT				AML	AML		14 18 59.5	
	comp=N,4773μm,0.8s							
HORT				AML	AML		14 18 59.6	
	comp=E,2419μm,0.6s							
SOH	**Sokhos**	**1.07**	**320**	P	Pn		14 18 42.9	+0.3
SOH				S	Sn		14 18 57.3	-0.1
	comp=E,4μm,0.5s							
SMTH	**Samothraki Isl**	**1.09**	**64**	P	Pn		14 18 43.1	+0.3
SMTH				S	Sg		14 18 57.0	-0.1
SMTH				AML	AML		14 18 59.8	
	comp=E,1488μm,0.4s							
SMTH				AML	AML		14 19 00.5	
	comp=N,1940μm,0.4s							
SKY	**Skiros Island**	**1.14**	**168**	P	Pb		14 18 43.4	-0.2
SKY				S	Sn		14 18 59.0	-0.1
	comp=N,3μm,0.4s							
SKY	**Skiros Island**	**1.14**	**168**	P	Pb		14 18 43.3	-0.2
SKY				S	Sg		14 18 58.8	0.0
SKY				AML	AML		14 19 03.1	
	comp=E,7598μm,0.5s							
SKY				AML	AML		14 19 04.5	
	comp=N,4801μm,0.3s							
THE	**Thessaloniki**	**1.17**	**303**	P	Pg		14 18 44.2	-0.2
THE				S	Sn		14 18 59.6	-0.1
	comp=N,585nm,0.8s							
THE	**Thessaloniki**	**1.17**	**303**	P	Pn		14 18 43.9	0.0
THE				S	Sb		14 18 58.6	-0.4
THE				AML	AML		14 19 04.1	
	comp=E,911μm,0.8s							
THE				AML	AML		14 19 06.9	
	comp=N,1318μm,0.6s							
SRS	**Serrai**	**1.22**	**336**	P	Pn		14 18 44.6	-0.1
SRS				S	Sb		14 19 00.6	0.0
	comp=N,915nm,0.7s							
SRS	**Serrai**	**1.22**	**336**	P	Pn		14 18 44.4	-0.3
GADA	**Gvkgeada**	**1.28**	**81**	P	Pn		14 18 45.0	-0.5
GADA				S	Sg		14 19 03.6	+0.5
	comp=N,2μm,0.4s							
LIT	**Litokhoron**	**1.35**	**275**	P	Pn		14 18 46.3	-0.3
LIT				S	Sg		14 19 05.3	-0.3
	comp=N,472nm,0.5s							
LIT	**Litokhoron**	**1.35**	**275**	P	Pn		14 18 46.2	-0.3
KYMI	**Kymi, Euboea I**	**1.37**	**185**	P	Pn		14 18 46.1	-0.6
KYMI	**Kymi, Euboea I**	**1.37**	**185**	P	Pn		14 18 46.1	-0.6
KYMI				S	Sg		14 19 06.2	+0.2
KYMI				AML	AML		14 19 11.8	
	comp=N,2218μm,0.4s							
KYMI				AML	AML		14 19 14.0	
	comp=E,2109μm,0.8s							
MRKA	**Markates**	**1.39**	**202**	P	Pn		14 18 46.7	-0.4
MRKA				S	Sg		14 19 06.1	-0.6
	comp=E,1μm,0.7s							
MRKA	**Markates**	**1.39**	**202**	P	Pn		14 18 46.6	-0.4
SIGR	**SIGRI**	**1.47**	**122**	P	Pb		14 18 48.5	-0.5
SIGR				S	Sb		14 19 08.3	+0.7
	comp=E,702nm,0.6s							
SIGR	**SIGRI**	**1.47**	**122**	P	Pn		14 18 48.1	0.0
RDO	**Rodhopi**	**1.51**	**40**	P	Pn		14 18 47.7	-0.9
RDO	Rodhopi	1.51	40	P	Pn		14 18 47.5	-1.1
KNT	**Kendrikon**	**1.55**	**319**	P	Pb		14 18 49.8	-0.7
KNT	**Kendrikon**	**1.55**	**319**	P	Pb		14 18 49.9	-0.6
MMB	**Musomiste**	**1.64**	**346**	P	Pn		14 18 50.2	-0.2
MMB				S	Sn		14 19 10.1	-1.3
LKR	**Lokris**	**1.66**	**216**	P	Pn		14 18 50.5	-0.2
LKR	**Lokris**	**1.66**	**216**	P	Pn		14 18 50.4	-0.2
KTI	**Kastanea**	**1.68**	**284**	P	Pn		14 18 51.4	+0.3
RZN	**Rozhen**	**1.72**	**12**	P	Pn		14 18 51.7	-0.1
AXAR	**Agios Charalam**	**1.74**	**226**	P	Pn		14 18 52.6	+0.7
AGG	**Agios Georgios**	**1.78**	**237**	P	Pn		14 18 52.7	+0.3
AGG	**Agios Georgios**	**1.78**	**237**	P	Pn		14 18 52.5	+0.2
PSRA	**Psara**	**1.78**	**145**	P	Pn		14 18 53.0	+0.7
THL	**Klokotos Trika**	**1.78**	**257**	P	Pn		14 18 52.7	+0.4
THL	**Klokotos Trika**	**1.78**	**257**	P	Pn		14 18 52.3	0.0
VAY	**Valandovo**	**1.84**	**316**	*i* Pn	Pb		14 18 54.1	-1.2
VAY	**Valandovo**	**1.84**	**316**	*i* Pn	Pb		14 18 54.1	-1.2
KDZ	**Kurdzhali**	**1.87**	**28**	P	Pn		14 18 52.4	-1.2
KDZ				Pg	Pb		14 18 56.2	+0.3
KDZ				S	Sb		14 19 20.2	+0.9
MAKR	**Makrakomi, Fth**	**1.91**	**240**	P	Pn		14 18 55.0	+0.8
MAKR	**Makrakomi, Fth**	**1.91**	**240**	P	Pn		14 18 54.9	+0.7
KZN	**Kozani**	**1.93**	**280**	P	Pn		14 18 55.2	+0.8
KZN	**Kozani**	**1.93**	**280**	P	Pn		14 18 55.0	+0.6
DION	**Dionisos Attik**	**1.94**	**187**	P	Pn		14 18 53.6	-0.9
VIL2	**Platees**	**1.94**	**203**	P	Pn		14 18 54.7	+0.1
KARY	**Karystos**	**1.97**	**176**	P	Pn		14 18 54.8	-0.2
KARY	**Karystos**	**1.97**	**176**	P	Pn		14 18 54.6	-0.4
PTL	**Penteli**	**1.97**	**189**	P	Pn		14 18 54.8	-0.2
PTL	**Penteli**	**1.97**	**189**	P	Pn		14 18 54.7	-0.3
VILL	**Villia**	**1.97**	**202**	P	Pn		14 18 54.9	-0.2
PROD	**Prodromos**	**2.03**	**212**	P	Pn		14 18 56.5	+0.6
ATHU	**Athens Univers**	**2.06**	**190**	P	Pn		14 18 56.0	-0.2
ATHU	**Athens Univers**	**2.06**	**190**	P	Pn		14 18 56.0	-0.2
KKB	**Krupnik**	**2.06**	**335**	P	Pn		14 18 56.6	+0.3
ATH	**Athens Observa**	**2.07**	**192**	P	Pn		14 18 56.4	+0.1
CHOS	**Chios island**	**2.14**	**138**	P	Pn		14 18 57.5	+0.2
CHOS	**Chios island**	**2.14**	**138**	P	Pn		14 18 57.4	+0.1
VLY	**Voula,Athens**	**2.17**	**190**	P	Pn		14 18 57.5	-0.3
VLY	**Voula,Athens**	**2.17**	**190**	P	Pn		14 18 57.4	-0.3
EVR	**Evrytania**	**2.18**	**241**	P	Pn		14 18 58.6	+0.7
EVR	**Evrytania**	**2.18**	**241**	P	Pn		14 18 58.6	+0.7
LTK	**Loutraki**	**2.21**	**207**	P	Pn		14 18 58.1	-1.2
LTK	**Loutraki**	**2.21**	**207**	P	Pn		14 18 58.3	-0.1
KPRO	**Kipourio**	**2.22**	**270**	P	Pn		14 18 59.5	+1.0
KPRO	**Kipourio**	**2.22**	**270**	P	Pn		14 18 59.4	+1.0
LOUT	**Loutraki**	**2.24**	**207**	P	Pn		14 18 59.4	+0.7
DIM	**Dimitrovgrad**	**2.27**	**25**	P	Pn		14 18 59.4	+0.4
ANX	**Ano Chora**	**2.29**	**233**	P	Pn		14 19 00.1	+0.7
ANX	**Ano Chora**	**2.29**	**233**	P	Pn		14 19 00.1	+0.7
KALE	**Kalithea**	**2.29**	**226**	P	Pn		14 19 00.4	+0.8
KALE	**Kalithea**	**2.29**	**226**	P	Pn		14 19 00.3	+0.8
SERG	**Sergoula**	**2.33**	**228**	P	Pn		14 19 00.7	+0.8
SERG	**Sergoula**	**2.33**	**228**	P	Pn		14 19 01.0	+1.1
FNA	**Florina**	**2.33**	**291**	P	Pn		14 19 00.9	+0.9
FNA	**Florina**	**2.33**	**291**	P	Pn		14 19 00.8	+0.9
TRIZ	**Trizonia**	**2.35**	**227**	P	Pn		14 19 01.0	+0.8
TRIZ	**Trizonia**	**2.35**	**227**	P	Pn		14 19 00.7	+0.5
EFP	**Efpalio**	**2.41**	**230**	P	Pn		14 19 02.1	+1.2
LAKA	**Lakka**	**2.49**	**226**	P	Pn		14 19 03.1	+0.8
PVO	**Paravola**	**2.52**	**238**	P	Pn		14 19 03.5	+0.9
KLV	**Kalavryta, Ach**	**2.55**	**221**	P	Pn		14 19 03.4	+0.4
KLV	**Kalavryta, Ach**	**2.55**	**221**	P	Pn		14 19 03.3	+0.4
DID	**Didima**	**2.61**	**198**	P	Pn		14 19 03.6	-0.3
DID	**Didima**	**2.61**	**198**	P	Pn		14 19 03.6	-0.3
VTS	**Vitosha**	**2.73**	**344**	⇑P	Pn		14 19 06.8	+1.3
VTS	**Vitosha**	**2.73**	**344**	P	Pn		14 19 06.5	+1.0
SERI	**Serifos**	**2.84**	**176**	P	Pn		14 19 06.6	-0.4
SERI	**Serifos**	**2.84**	**176**	P	Pn		14 19 06.5	-0.4
OHR	**Ohrid**	**2.85**	**294**	*i* Pn	Pn		14 19 09.3	+2.1
OHR	**Ohrid**	**2.85**	**294**	*i* Pn	Pn		14 19 09.3	+2.1
SKO	**Skopje**	**2.90**	**314**	*i* Pn	Pg		14 19 17.8	+0.4
SKO	**Skopje**	**2.90**	**314**	*i* Pn	Pg		14 19 17.8	+0.4
TRIP	**Tripoli**	**2.91**	**213**	P	Pn		14 19 08.6	+0.6
APE	**Apeiranthos**	**3.09**	**161**	P	Pn		14 19 09.9	-0.5
APE	**Apeiranthos**	**3.09**	**161**	⇓P	Pn		14 19 10.0	-0.4
MPEP	**Malo Peshtene**	**3.38**	**354**	P	Pn		14 19 16.2	+1.9
MPEP				Pg	Pg		14 19 25.1	-1.5
PLVB	**Pleven**	**3.40**	**5**	⇓P	Pn		14 19 15.8	+1.3
VLI	**Veliai**	**3.44**	**198**	P	Pn		14 19 15.2	+0.1
RAZG	**Razgrad**	**3.94**	**25**	⇓P	Pn		14 19 22.1	0.0
IDI	**Anoyia**	**4.73**	**174**	⇑P	Pn		14 19 32.9	-0.1
RASA	**Rasa**	**4.73**	**26**	⇓P	Pn		14 19 33.6	+0.8
SULR		**4.91**	**17**	⇓P	Pn		14 19 36.3	+1.0
HERR	**Herculane**	**5.06**	**345**	⇑P	Pn		14 19 37.5	+0.1
MDVR	**Moldovita**	**5.13**	**339**	⇓P	Pn		14 19 38.9	+0.4
ARR	**Arges**	**5.37**	**3**	⇓P	Pn		14 19 42.2	+0.4
TIRR	**Tirgusor**	**5.42**	**33**	⇓P	Pn		14 19 43.3	+0.9
GZR	**Gura Zlata**	**5.50**	**349**	⇑P	Pn		14 19 44.0	+0.4
MLR	**Muntele Rosu**	**5.63**	**12**	⇑P	Pn		14 19 47.0	+1.7
TIP	**Timpagrande**	**5.84**	**264**	⇓P	Pn		14 19 49.3	+1.0
CFR	**Carcaliu**	**5.92**	**28**	⇑P	Pn		14 19 49.3	+0.2
DOPR	**Dopca**	**6.02**	**8**	⇓P	Pn		14 19 51.4	+0.7
PLOR	**Plostina**	**6.11**	**16**	⇑P	Pn		14 19 53.2	+1.4
VRI	**Vrincioaia**	**6.14**	**16**	⇑P	Pn		14 19 52.8	+0.5
TESR	**Tescani**	**6.74**	**14**	⇑P	Pn		14 20 02.2	+1.7
DRGR		**6.88**	**351**	⇑P	Pn		14 20 04.5	+2.0
BIZ	**Bicaz**	**7.07**	**10**	⇑P	Pn		14 20 06.5	+1.5
BURAR	**Bucovina Array**	**7.64**	**5**	⇓P	Pn		14 20 14.7	+1.7
SORM	**Soroca**	**8.65**	**19**	⇑P	Pn		14 20 27.1	+0.4

*TIR **24** 14:22:31.3, 41°.32N×19°.51E, h17^{km}, Md2.5/4*
*SKO **24** 14:22:33.5, 41°.27N×19°.42E, h0^{km}*
*BEO **24** 14:22:36.7±0.3, 41°.51N×19°.87E, h5$^{km}_{\pm 3km}$, ML2.0/7*
*PDG **24** 14:22:36.5±0.4, 41°.54N×19°.21E, h3$^{km}_{\pm 3km}$, ML2.2/8, Error ellipse: s-maj=2.1km s-min=3.5km az=0.0*

ISC 24 14:22:31.9±1.3, 41°.32N±0°.05×19°.47E±0°.04, h10$^{km}_{\pm 8km}$, n30, σ1^{s}.08/56, 5C-4D, Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.30**	**84**	*e*Pg	Pg		14 22 38.4	+0.5
TIR				*e*Sg	Sg		14 22 42.7	+0.8
TIR	**Tirane**	**0.30**	**84**	*i* PG	Pg		14 22 37.7	-0.2
TIR				*i* SG	Sg		14 22 42.0	+0.1
ULC	**Ulcinj**	**0.67**	**345**	⇑*i*Pg	Pg		14 22 44.3	-0.5
ULC				*i* Sg	Sg		14 22 51.8	-1.8
PUK	**Puka**	**0.79**	**23**	*i* PG	Pg		14 22 46.8	-0.4
PUK				*i* SG	Sb		14 22 58.4	-0.2
PHP	**Peshkopia**	**0.82**	**63**	*i* PG	Pg		14 22 46.9	-0.8
PHP				*i* SG	Sb		14 22 58.8	-0.5
DRME	**Dracevica, Mon**	**0.89**	**346**	⇑*i*Pg	Pg		14 22 47.6	-1.5
DRME				*i* Sg	Pn		14 22 51.5	+1.0
OHR	**Ohrid**	**1.02**	**101**	*i* Pg	Pn		14 22 52.7	+0.4
OHR				*i* Sg	Sn		14 23 07.6	+0.8
OHR				*e*Lg	Lg		14 23 08.0	
	comp=N,97nm,1.0s							
OHR	**Ohrid**	**1.02**	**101**	*i* Pg	Pn		14 22 52.7	+0.4
OHR				*i* Sg	Sn		14 23 07.6	+0.8
OHR				*e*Lg	Lg		14 23 08.0	
	comp=N,97nm,1.0s							
PDG	**Podgorica**	**1.12**	**352**	*e*Pg	Pn		14 22 53.9	+0.2
PDG				*e*Sg	Sn		14 23 09.7	+0.5
TTG	**Podgorica**	**1.12**	**352**	⇓*i*Pg	Pb		14 22 52.9	-0.5
TTG				*i* Sg	Sb		14 23 07.0	-1.1
BCI	**Bajram Curri**	**1.14**	**23**	*i* PG	Pb		14 22 52.6	-1.1
BCI				*i* SG	Sn		14 23 09.3	-0.3
PVY	**Plav**	**1.33**	**16**	⇓*i*Pg	Pg		14 22 59.1	+1.7
PVY				*i* Sg	Sg		14 23 17.0	+2.4
NKME	**Niksic**	**1.50**	**345**	⇓*i*Pg	Pn		14 22 59.2	+0.3
NKME				*i* Sg	Sb		14 23 19.2	+0.3
KOME	**Kolasin**	**1.53**	**1**	⇓*i*Pg	Pg		14 23 01.4	+0.1
KOME				*i* Sg	Sg		14 23 21.4	+0.2
NKV	**Niksic**	**1.54**	**347**	⇑*i*Pg	Pg		14 22 00.6	+0.1
NKV				*i* Sg	Sb		14 23 20.6	+0.5
IVA	**Berane**	**1.58**	**11**	⇑*i*Pg	Pg		14 23 02.5	+0.2
IVA				*i* Sg	Sg		14 23 24.5	+1.6
DBRK	**Dubrovnik**	**1.67**	**324**	*e*Pn	Pb		14 23 02.8	+0.1
DBRK				Sn	Sg		14 23 25.2	-0.5
UPM	**Unac-Piva**	**1.93**	**348**	⇑*i*Pn	Pb		14 23 07.3	0.0
UPM				*i* Sn	Sb		14 23 32.6	+1.1
SJES	**Sjenica**	**1.98**	**11**	*e*Pg	Pg		14 23 09.5	-0.3
SJES				*e*Sg	Sb		14 23 32.9	+0.1
STON	**Ston**	**2.04**	**320**	*e*Pn	Pn		14 23 05.8	-0.4
STON				Sn	Sn		14 23 31.9	+0.3
SELS	**Selova**	**2.26**	**32**	*e*Pg	Pn		14 23 10.8	+1.5
SELS				*e*Sg	Sn		14 23 36.9	-0.4
BOSS	**Bosilegrad**	**2.54**	**61**	*e*Pn	Pn		14 23 13.3	+0.2
BOSS				*e*Sn	Sn		14 23 39.8	-4.3
BBLS	**Lazići**	**2.55**	**359**	*e*Pn	Pb		14 23 17.8	+0.1
BBLS				*e*Sn	Sn		14 23 46.0	+1.6
MAKA	**Makarska**	**2.68**	**318**	*e*Pn	Pn		14 23 15.2	+0.2
MAKA				Sn	Sn		14 23 46.1	-1.4
RICI	**Ricice**	**2.78**	**322**	*e*Pn	Pn		14 23 16.4	0.0
RICI				Sn	Sn		14 23 50.4	+0.4
DIVS	**Divibare**	**2.81**	**8**	*e*Pn	Pb		14 23 19.9	-2.2
DIVS				*e*Sn	Sn		14 23 50.6	-0.2
KIJV	**Kijevo**	**3.51**	**321**	*e*Pn	Pn		14 23 27.3	+0.8
ZIRJ	**Zirje**	**3.67**	**311**	*e*Pn	Pn		14 23 29.9	+1.3
MORI	**Morici**	**3.77**	**314**	*e*Pn	Pn		14 23 31.0	+1.0
DUGI	**Dugi Otok**	**4.21**	**311**	*e*Pn	Pn		14 23 36.5	+0.5

*ISK **24** 14:23:41.2, 40°.42N×26°.14E, h8^{km}, ML2.9/16*
*DDA **24** 14:23:41.0, 40°.41N×26°.14E, h7$^{km}_{\pm 2km}$, MW3.2*

ISC 24 14:23:41.4±1.0, 40°.41N±0°.02×26°.14E±0°.02, h14$^{km}_{\pm 8km}$, n34, σ0^{s}.58/50, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GELI	**Tayfur-Gelibol**	**0.26**	**93**	PG	Pg		14 23 46.9	0.0
GELI				SG	Sb		14 23 51.1	-1.1
GADA	**Gvkgeada**	**0.29**	**219**	PG	Pg		14 23 47.6	+0.2
GADA				SG	Sb		14 23 52.1	-0.9
ENEZ	**Enez**	**0.32**	**2**	PG	Pg		14 23 48.2	+0.2
ENEZ				SG	Sg		14 23 53.1	+0.6
ERIK	**Erikli-Kesan**	**0.39**	**48**	PG	Pb		14 23 49.4	-0.7
BOZC	**Bozcaada**	**0.57**	**186**	PG	Pb		14 23 52.8	-0.5
BOZC	**Bozcaada**	**0.57**	**186**	*i* P	Pg		14 23 52.4	-0.3
BOZC				*i* S	Sb		14 24 00.7	-0.6
BOZC				IAML			14 24 02.0	
	comp=N,354nm,0.3s							
KESN	**Edirne-Kesan**	**0.58**	**45**	*i* P	Pg		14 23 52.1	-0.9
KESN				*i* S	Sg		14 24 00.8	0.0
KESN				IAML			14 24 06.0	
	comp=N,566nm,0.4s							
EZN	**Ezine**	**0.60**	**166**	PG	Pb		14 23 53.7	-0.1
BAYC	**CANAKKALE_Bayr**	**0.74**	**155**	*i* P	Pg		14 23 55.7	-0.1
BAYC				*i* S	Sb		14 24 06.6	+0.4
BAYC				IAML			14 24 10.0	
	comp=E,219nm,0.2s							
UKOP	**Uzunkopru-Edir**	**0.81**	**28**	PG	Pb		14 23 57.3	0.0
RKY	**Sarkoy-Tekirda**	**0.84**	**71**	PG	Pg		14 23 56.9	-0.8
SART	**Tekirdag**	**0.84**	**71**	*i* P	Pg		14 23 57.2	-0.5
SART				*i* S	Sb		14 24 09.4	+0.3
SART				IAML			14 24 13.0	
	comp=Z,44nm,0.4s							
RDO	**Rodhopi**	**0.86**	**328**	PG	Pg		14 23 57.8	-0.3
KRBG	**Karabiga-Canak**	**0.89**	**91**	PG	Pg		14 23 58.1	-0.5
KNL	**Balıkesir**	**1.07**	**97**	*i* P	Pg		14 24 01.5	-0.6
KNL				*i* S	Sn		14 24 17.7	+0.9
KNL				IAML			14 24 19.0	
	comp=E,938nm,0.4s							
MRMT	**Marmara Adasi**	**1.13**	**80**	PN	Pg		14 24 02.5	-0.7
AYVA	**Ayvalik**	**1.18**	**159**	*i* P	Pg		14 24 03.4	-0.7
AYVA				*i* S	Sb		14 24 19.3	+0.5
AYVA				IAML			14 24 21.0	
	comp=E,378nm,0.3s							
TKR	**Tekirdag**	**1.21**	**61**	PN	Pn		14 24 04.6	+0.6
SIGR	**SIGRI**	**1.22**	**190**	PN	Pb		14 24 04.1	-0.2
GONE	**Gonen-Balikesi**	**1.24**	**107**	PN	Pg		14 24 05.3	0.0
BALY	**Balya**	**1.32**	**120**	*i* P	Pb		14 24 06.1	0.0
BALY				*i* S	Sn		14 24 24.1	+1.0
BALY				IAML			14 24 26.0	
	comp=N,219nm,0.5s							
EDC	**Edincik**	**1.

TRIB *i* Sg **Sb** 14 35 43.4 +1.1
8µm,0.2s
MULD Muldenberg 0.20 10 *i* Pg **Pb** 14 35 39.5 +0.4
MULD *i* Sg **Sg** 14 35 42.0 0.0
9µm,0.2s
PLN Plauen 0.30 336 *i* Pg **Pb** 14 35 41.8 +1.1
PLN *i* Sg **Sb** 14 35 46.1 +0.8
2µm,0.2s
ROTZ Rotzenmuhle 0.46 191 *e*Pg **Pb** 14 35 44.7 +1.3
ROTZ *e*Sg **Sb** 14 35 51.1 +1.2
SCHF Schoenfels 0.46 4 *i* Pg **Pb** 14 35 44.2 +0.7
SCHF *i* Sg **Sg** 14 35 50.3 +0.8
5µm,0.3s
GRZ1 Mausoleum Wald 0.48 350 *i* Pg **Pb** 14 35 44.8 +1.0
GRZ1 *i* Sg **Sg** 14 35 51.1 +1.0
2µm,0.4s
ZEU Talsperre Zeul 0.51 333 *i* Pg **Pb** 14 35 45.8 +1.4
MLFH Mildenfurth 0.60 344 *i* Pg **Pb** 14 35 47.1 +1.2
HKWD Heukewalde 0.62 355 *e*Pg **Pb** 14 35 47.2 +1.1
HKWD *e*Sg **Sb** 14 35 56.0 +1.5
MOX Moxa 0.64 313 *e*Pg **Pn** 14 35 48.4 +0.3
MOX *e*Sg **Sb** 14 35 57.2 +2.1
MODW Modelwitz 0.73 6 *e*Pg **Pb** 14 35 49.0 +0.9
ABG1 Leinawald 0.77 11 *e*Pg **Pb** 14 35 49.5 +0.8
ABG1 *e*Sg **Sb** 14 35 59.9 +1.1
GRF Grafenberg Arr 0.90 235 *e*Pn **Pn** 14 35 53.5 +1.9
GRF *e*Sg **Sn** 14 36 06.3 +2.1
FBE Freiberg 0.95 42 *e*Pg **Pg** 14 35 52.7 +0.4
FBE *e*Sg **Sb** 14 36 04.9 +0.6
GRB2 Grafenberg Arr 1.04 205 *e*Pn **Pg** 14 35 55.6 +1.6
NEUB Neuenburg 1.06 340 *e*Pn **Pg** 14 35 55.8 +1.4
NEUB *e*Sg **Sn** 14 36 10.4 +2.2
WET Wettzell 1.13 162 *e*Pn **Pg** 14 35 56.2 +0.6
WET *e*Sg **Sn** 14 36 11.3 +1.4
CLL Collm 1.17 21 *e*Pn **Pg** 14 35 57.1 +0.7
CLL *e*Sg **Sg** 14 36 13.1 +1.3
CLL Collm 1.17 21 *i* Pg **Pg** 14 35 57.7 +1.3
CLL *i* Sg **Sg** 14 36 12.4 +0.7
comp=Z,987nm,0.3s
PBCC Pribram 1.19 116 *e*PG **Pn** 14 35 56.1 +0.4
PBCC *e*SG **Sb** 14 36 10.7 -0.3
comp=Z,222nm,0.3s
BRG Berggiesshubel 1.21 56 PG **Pb** 14 35 57.1 +0.8
BRG SG **Sb** 14 36 12.2 +0.5
comp=Z,859nm,0.4s
BRG Berggiesshubel 1.21 56 *e*Pn **Pn** 14 35 56.2 +0.3
BRG *e*Sg **Sb** 14 36 12.2 +0.5
GRC1 Grafenberg Arr 1.33 204 *e*Pn **Pb** 14 35 59.3 +0.9
GRC1 *e*Sg **Sg** 14 36 18.7 +1.9
KHC Kasperske Hory 1.35 143 *e*PG **Pg** 14 35 59.7 -0.1
KHC *e*SG **Sg** 14 36 16.9 -0.5
comp=Z,631nm,0.2s
KHC AMS AMS 14 36 20.0
comp=Z,400nm,5.2s
PRA Prague 1.35 95 *e*SG **Sn** 14 36 15.7 +0.4
comp=Z,225nm,0.2s
PRU Pruhonice 1.43 98 *e*Pn **Pn** 14 35 59.7 +0.7
PRU *e*Sg **Sb** 14 36 18.9 +1.0
PRU Pruhonice 1.43 98 *e*PG **Pb** 14 36 00.4 +0.4
PRU *e*SG **Sb** 14 36 18.7 +0.8
comp=Z,677nm,0.2s
HROE Hohe Rhon--Fla 1.44 284 *e*Pn **Pb** 14 36 01.6 +1.4
HROE *e*Sg **Sg** 14 36 22.7 +2.4
PVCC Panska Ves 1.46 77 *e*Pn **Pb** 14 36 01.0 +0.6
PVCC Panska Ves 1.46 77 AMS AMS 14 36 20.0
comp=Z,500nm,5.6s
PVCC *e*SG **Sg** 14 36 20.1 -0.7
comp=Z,862nm,0.2s
VITZ Vitzeroda 1.59 296 *e*Pn **Pb** 14 36 03.7 +1.0
GEC2 GERESS Array S 1.63 147 *e*Pn **Pb** 14 36 03.3 -0.2
GEC2 *e*Sg **Sg** 14 36 26.0 -0.4
CHRS Christianenhau 1.70 326 *e*Pn **Pb** 14 36 04.7 +0.1
TREC Trest 2.23 113 *e*PN **Pn** 14 36 11.9 +1.9
TREC *e*PG **Pb** 14 36 15.1 +1.4
UPC Upice 2.37 81 *e*PN **Pn** 14 36 13.5 +1.7
UPC *e*PG **Pb** 14 36 17.4 +1.5
UPC *e*SG **Sb** 14 36 46.5 +1.7
comp=Z,323nm,0.7s
CHVC Chvalec 2.40 80 *e*PN **Pn** 14 36 13.8 +1.5
CHVC *e*PG **Pb** 14 36 16.2 -0.4
CHVC *e*SG **Sb** 14 36 48.3 +2.4
comp=Z,170nm,0.6s
DPC Dobruska-Polom 2.55 85 *e*SG **Sb** 14 36 52.0 +1.7
comp=Z,198nm,0.3s
KSP Ksiaz 2.59 74 *e*Pg **Pg** 14 36 22.4 -1.2
KSP *e*Sg **Sb** 14 36 54.5 +3.1
MOA Molln 2.68 151 Pn **Pn** 14 36 17.7 +1.5
comp=Z,2.8nm,0.1s,SNR=21
MOA *e*Sg **Sg** 14 37 02.2 +2.2
comp=Z,103nm,0.2s
KRLC Kraliky 2.86 91 *e*SG **Sg** 14 37 03.2 -2.3
comp=Z,167nm,0.6s
KRUC Moravsky 2.87 112 *e*PN **Pn** 14 36 20.1 +1.3
KRUC *e*PB **Pb** 14 36 25.5 +0.9
KRUC *e*PG **Pb** 14 36 26.9 +2.3
KRUC *e*SN **Sn** 14 36 54.5 +1.5
KRUC *e*SG **Sg** 14 37 03.4 -2.7
KRUC Moravsky 2.87 112 *e*Pn **Pn** 14 36 20.0 +1.3
baz=296
KRUC Moravsky 2.87 112 *e*Pg **Pb** 14 36 26.9 +2.3
baz=296
KRUC *e*Sn **Sn** 14 36 54.4 +1.5
baz=296
KRUC *e*Sg **Sg** 14 37 03.3 -2.8
comp=Z,342nm,0.6s,baz=296
VRAC Vranov 2.90 107 *e*PN **Pn** 14 36 20.1 +0.9
VRAC *e*SN **Sn** 14 36 55.0 +1.4
VRAC *e*SG **Sg** 14 37 04.1 -2.9
VRAC Vranov 2.90 107 ⇩P **Pb** 14 36 25.8 +0.8
VRAC Vranov 2.90 107 *e*Pn **Pn** 14 36 20.1 +0.9
baz=291
VRAC *e*Sn **Sn** 14 36 55.0 +1.4
baz=291
VRAC *e*Sg **Sg** 14 37 04.0 -2.9
comp=Z,396nm,0.6s,baz=291
KTD Kalmit 2.91 254 P **Pb** 14 36 23.7 -1.5
RETA Reutte 2.92 202 Pn **Pn** 14 36 20.6 +1.1
comp=Z,11nm,0.2s,SNR=7.7
RETA *e*Sn **Sn** 14 36 56.5 +2.2
comp=Z,28nm,0.2s
RETA Sg **Sg** 14 37 09.8 +2.1
comp=Z,148nm,0.3s
WATA Walderalm 2.93 190 Pn **Pn** 14 36 20.9 +1.3
comp=Z,11nm,0.2s,SNR=20
WATA *e*Sn **Sn** 14 36 56.9 +2.5
comp=Z,155nm,0.3s
WATA Sg **Sg** 14 37 10.1 +2.3
comp=Z,181nm,0.2s
KOE Koeppel 2.97 276 *e*Pn **Pn** 14 36 23.5 +3.4
MOTA Moosalm 2.99 196 *e*Pn **Pn** 14 36 21.4 +0.8
comp=Z,4.9nm,0.1s,SNR=22
MOTA *e*Sn **Sn** 14 36 57.9 +1.9
comp=Z,21nm,0.1s
MOTA Sg **Sg** 14 37 11.3 +1.5
comp=Z,120nm,0.3s
WTTA Wattenberg 2.99 189 Pn **Pn** 14 36 22.2 +1.6
comp=Z,3.9nm,0.1s,SNR=18
WTTA Sn **Sn** 14 36 58.5 +2.4
comp=Z,29nm,0.3s
WTTA *e*Sg **Sg** 14 37 12.0 +2.1
comp=Z,136nm,0.3s
SQTA Sankt Quirin 3.09 195 *e*Pn **Pn** 14 36 23.1 +1.2
comp=Z,2.5nm,0.1s,SNR=12
SQTA *i* Sn **Sn** 14 37 02.4 +4.0
comp=Z,26nm,0.2s
SQTA *e*Sg **Sg** 14 37 15.6 +2.5
comp=Z,225nm,0.4s
ABH Alteburg 3.11 266 Pn **Pn** 14 36 26.1 +4.0
ABH Alteburg 3.11 266 Sn **Sn** 14 37 02.3 +3.4
LANF Langenberg 3.20 249 Pn **Pn** 14 36 26.8 +3.5
KBA Koelnbreinsper 3.21 168 *e*Pn **Pn** 14 36 26.1 +2.5
comp=Z,8.8nm,0.2s,SNR=9.5
KBA Sg **Sg** 14 37 17.3 +0.4
comp=Z,85nm,0.5s
OPP Oppenau 3.22 239 Pn **Pn** 14 36 24.7 +1.2
BGG Burgeitz 3.22 272 *e*Pn **Pn** 14 36 26.6 +3.1
CONA Conrad Observa 3.25 133 *i* Pn **Pn** 14 36 25.2 +1.2
comp=Z,0.8nm,0.1s,SNR=25
CONA Pg **Pg** 14 36 34.8 -1.3
comp=Z,39nm,0.4s
CONA *i* Sn **Sn** 14 37 05.5 +3.1
comp=Z,17nm,0.2s
HOBG Hohbusch 3.29 285 *e*Pn **Pn** 14 36 27.9 +3.5
HOBG *e*Sn **Sb** 14 37 10.0 -1.3
comp=Z,242nm,0.4s
DAVA Damuels 3.35 210 *e*Pn **Pn** 14 36 26.5 +0.9
comp=Z,2.7nm,0.1s,SNR=13
DAVA *e*Sn **Sn** 14 37 08.7 +3.6
comp=Z,35nm,0.3s
DAVA *e*Sg **Sg** 14 37 23.8 +2.3
comp=Z,58nm,0.2s
FETA Feichten 3.37 199 *e*Pn **Pn** 14 36 27.0 +1.2
comp=Z,2.8nm,0.2s,SNR=15
FETA *i* Sn **Sn** 14 37 07.8 +2.4
comp=Z,6.9nm,0.2s
FETA *e*Sg **Sg** 14 37 22.9 +0.8
comp=Z,48nm,0.4s
MORC Moravsky Berou 3.38 95 *e*PN **Pn** 14 36 26.8 +1.0
MORC *e*SN **Sn** 14 37 06.6 +1.1
MORC *e*SG **Sg** 14 37 18.9 -3.4
MORC Moravsky Berou 3.38 95 ⇧P **Pn** 14 36 26.9 +1.1
MORC Moravsky Berou 3.38 95 *e*Pn **Pn** 14 36 26.8 +1.0
baz=280
MORC *e*Sn **Sn** 14 37 06.6 +1.1
baz=280
MORC *e*Sg **Sg** 14 37 18.9 -3.4
comp=Z,220nm,0.6s,baz=280
ABTA Abfaltersbach 3.47 178 *i* Pn **Pn** 14 36 29.9 +2.8
comp=Z,9.5nm,0.3s,SNR=15
ABTA *e*Sn **Sn** 14 37 11.3 +3.5
comp=Z,24nm,0.3s
STB Steinbach 3.54 278 *e*Pn **Pn** 14 36 31.4 +3.4
ARSA Arzberg 3.64 143 *e*Pn **Pn** 14 36 32.5 +3.2
comp=Z,5.2nm,0.2s,SNR=8.2
ARSA *e*Pg **Pg** 14 36 42.9 -0.6
comp=Z,20nm,0.3s,SNR=16
ARSA Sg **Sg** 14 37 30.3 -0.2
comp=Z,68nm,0.5s
KIZ Kirchzarten 3.69 234 Pn **Pn** 14 36 30.6 +0.6
MYKA Terra Mystica 3.69 166 *i* Pn **Pn** 14 36 33.9 +3.8
comp=Z,5.1nm,0.2s,SNR=11
MYKA *e*Sn **Sn** 14 37 16.3 +3.2
comp=Z,10.0nm,0.2s
MYKA Sg **Sg** 14 37 32.5 +0.2
comp=Z,36nm,0.3s
ZST Bratislava 3.71 121 *e*PN **Pn** 14 36 30.6 +0.3
ZST *e*PG **Pg** 14 36 44.9 0.0
ZST *e*SG **Sg** 14 37 29.4 -3.6
ZST *e*LG Lg 14 37 33.3
MODS Modra-Piesok 3.72 118 *e*PN **Pn** 14 36 31.0 +0.6
MODS *e*SG **Sg** 14 37 28.8 -4.3
MODS *e*LG Lg 14 37 31.5
JAVC Velka Javorina 3.72 109 *e*PN **Pn** 14 36 31.8 +1.2
JAVC *e*PG **Pb** 14 36 42.1 +3.0
JAVC *e*SN **Sn** 14 37 15.6 +1.6
JAVC *e*SG **Sg** 14 37 30.0 -3.4
JAVC Velka Javorina 3.72 109 *e*Pn **Pn** 14 36 31.7 +1.2
baz=294
JAVC Velka Javorina 3.72 109 *e*Pg **Pb** 14 36 42.1 +3.0
baz=294
JAVC *e*Sn **Sn** 14 37 15.5 +1.6
baz=294
JAVC *e*Sg **Sg** 14 37 29.9 -3.4
comp=Z,125nm,0.9s,baz=294
WLS Welschbruch 3.73 243 Pn **Pn** 14 36 33.0 +2.4
SMOL Smolenice 3.73 115 *e*SG **Sg** 14 37 43.9 -2.7
SMOL *e*LG Lg 14 37 35.7
CDF Champ du Feu 3.78 243 *e*Pn **Pn** 14 36 32.6 +1.3
CDF Champ du Feu 3.78 243 *e*Pg **Pg** 14 36 46.5 +0.4
CDF *e*Sn **Sn** 14 37 15.1 -0.2
CDF *e*Sg **Sg** 14 37 35.0 0.0
comp=Z,38nm,0.2s
KLL Kalltalsperre 3.88 279 *e*Pn **Pn** 14 36 35.7 +3.0
DREG Dreilaegerbach 3.93 279 *e*Pn **Pn** 14 36 36.6 +3.2
ECH Echery 3.95 242 Pn **Pn** 14 36 34.5 +0.9
SOKA Soboth 3.96 152 *i* Pn **Pn** 14 36 35.2 +1.3
comp=Z,0.3nm,0.1s,SNR=4.1
SOKA Sg **Sg** 14 37 40.7 -0.3
comp=Z,24nm,0.3s
OBKA Obir 3.99 158 *i* Pn **Pn** 14 36 36.7 +2.5
comp=Z,2.9nm,0.1s,SNR=7.3
OBKA *e*Sg **Sg** 14 37 41.1 -0.7
comp=Z,49nm,0.3s
MOF Molkenrain 4.17 237 Pn **Pn** 14 36 37.4 +0.8
HINF Hinteralfeld 4.34 239 *e*Pn **Pn** 14 36 39.3 +0.3
HINF Hinteralfeld 4.34 239 *e*Pg **Pg** 14 36 56.7 -0.2
HINF *e*Sn **Sn** 14 37 28.4 -0.8
HINF *e*Sg **Sg** 14 37 52.7 -0.3
comp=Z,47nm,0.3s
HAU Haudompre 4.52 243 *e*Pn **Pn** 14 36 42.3 +0.9
HAU Haudompre 4.52 243 *e*Pg **Pg** 14 36 59.9 -0.4
HAU *e*Sn **Sn** 14 37 32.9 -0.6
HAU *e*Sg **Sg** 14 37 58.8 0.0
comp=Z,57nm,0.3s
VYHS Vyhne 4.58 110 *e*PN **Pn** 14 36 43.0 +0.8
THEF They Montfort 4.62 247 Pn **Pn** 14 36 45.2 +2.4
PAGF Fort de Pagny 4.63 252 *e*Pn **Pn** 14 36 45.7 +2.7
baz=71
PAGF Fort de Pagny 4.63 252 *e*Pg **Pg** 14 37 02.2 -0.3
baz=69
PAGF *e*Sn **Sn** 14 37 35.5 -0.8
PAGF *e*Sg **Sg** 14 38 02.0 -0.5
comp=Z,23nm,0.3s
LANS Liptovska Anna 4.74 100 *e*PN **Pn** 14 36 46.4 +1.9
LANS *e*SG **Sg** 14 38 03.0 -3.0
LANS *e*LG Lg 14 38 14.4
CHMF Charmoille 4.80 234 Pn **Pn** 14 36 45.3 0.0
GIVF Givet 4.84 272 *e*Pn **Pn** 14 36 46.8 +1.0
GIVF Givet 4.84 272 *e*Pg **Pg** 14 37 05.5 -0.9
GIVF *e*Sn **Sn** 14 37 40.9 -0.5
GIVF *e*Sg **Sg** 14 38 08.3 -0.7
comp=Z,34nm,0.3s
KALN Kalnik 4.92 145 *e*Pn **Pn** 14 36 48.6 +1.6
PTJ Puntijarka 4.95 149 *e*Pn **Pn** 14 36 49.6 +2.3
MEZF Maizieres J'vi 5.07 253 *e*Pn **Pn** 14 36 49.9 +1.0
baz=70
MEZF Maizieres J'vi 5.07 253 *e*Pg **Pg** 14 37 10.7 -0.1
baz=77
MEZF *e*Sn **Sn** 14 37 45.9 -1.1
MEZF *e*Sg **Sg** 14 38 15.8 -0.5
comp=Z,17nm,0.4s
BSD Bornholm Skovb 5.15 17 *i* P **Pn** 14 36 49.6 -0.4
BSD *i* S **Sn** 14 37 46.7 -2.3
SFTF Sexfontaines 5.20 250 *e*Pn **Pn** 14 36 52.6 +1.9
baz=66
SFTF Sexfontaines 5.20 250 *e*Pg **Pg** 14 37 12.7 -0.5
SFTF *e*Sn **Sn** 14 37 49.2 -1.0
SFTF *e*Sg **Sg** 14 38 19.5 -1.0
comp=Z,13nm,0.2s
BAIF Baives 5.24 271 *e*Pn **Pn** 14 36 52.6 +1.4
BAIF Baives 5.24 271 *e*Pg **Pg** 14 37 13.9 -0.1
BAIF *e*Sn **Sn** 14 37 50.2 -1.0
BAIF *e*Sg **Sg** 14 38 20.8 -1.0
comp=Z,12nm,0.2s
PSZ Piszkesteto 5.47 112 ⇧P **Pn** 14 36 56.4 +1.9
LUNU Lund 5.47 7 Pn **Pn** 14 36 53.5 -0.9
LUNU S **Sn** 14 37 54.0 -2.8
MOSL Moslavina 5.47 146 *i* Pn **Pn** 14 36 55.9 +1.4
MOSL Sn **Sn** 14 37 53.3 -3.7
CABF La Chapelle 5.51 232 *e*Pn **Pn** 14 36 55.1 0.0
CABF La Chapelle 5.51 232 *e*Pg **Pg** 14 37 19.4 +0.1
CABF *e*Sn **Sn** 14 37 55.5 -2.6
CABF *e*Sg **Sg** 14 38 28.7 -1.9
comp=Z,8.5nm,0.3s
KECS Kecovo 5.59 105 *e*PN **Pn** 14 36 59.2 +3.0
KECS *e*LG Lg 14 38 44.3
LPL La Plagne 6.03 221 *e*Pn **Pn** 14 37 04.1 +1.7
LPL La Plagne 6.03 221 *e*Pg **Pg** 14 37 27.9 -1.3
LPL *e*Sn **Sn** 14 38 09.7 -1.4
LPL *e*Sg **Sg** 14 38 45.3 -1.9
comp=Z,3.4nm,0.3s
LPG La Plagne 6.04 221 *e*Pn **Pn** 14 37 03.8 +1.3
LPG La Plagne 6.04 221 *e*Pg **Pg** 14 37 27.8 -1.5
LPG *e*Sn **Sn** 14 38 10.0 -1.3
LPG *e*Sg **Sg** 14 38 45.5 -2.0
comp=Z,1.8nm,0.2s
LOR Lormes 6.34 246 *e*Pn **Pn** 14 37 07.4 +1.0
baz=67
LOR Lormes 6.34 246 *e*Pg **Pg** 14 37 32.4 -2.7
baz=64
LOR *e*Sn **Sn** 14 38 15.8 -2.6
LOR *e*Sg **Sg** 14 38 54.5 -2.6
comp=Z,21nm,0.2s
BLEU Blekinge 6.44 17 P **Pn** 14 37 06.9 -0.9
BLEU S **Sn** 14 38 16.4 -4.4
DUGI Dugi Otok 6.49 162 *i* Pn **Pn** 14 37 09.1 +0.6
SSF Saint Saulge 6.65 245 *e*Pn **Pn** 14 37 11.4 +0.7
SSF Saint Saulge 6.65 245 *e*Pg **Pg** 14 37 40.1 -1.0
SSF *e*Sn **Sn** 14 38 23.6 -2.5
SSF *e*Sg **Sg** 14 39 05.4 -1.8
comp=Z,4.6nm,0.3s
MBDF Montbardon 6.66 217 *e*Pn **Pn** 14 37 12.6 +1.6
MBDF Montbardon 6.66 217 *e*Pg **Pg** 14 37 39.0 -2.3
MBDF *e*Sn **Sn** 14 38 24.5 -2.1
MBDF *e*Sg **Sg** 14 39 05.3 -2.2
comp=Z,2.5nm,0.3s
SMF Signal de Mont 6.69 241 *e*Pn **Pn** 14 37 12.6 +1.4
SMF Signal de Mont 6.69 241 *e*Pg **Pg** 14 37 40.0 -1.8
SMF *e*Sn **Sn** 14 38 25.5 -1.5
SMF *e*Sg **Sg** 14 39 05.2 -3.2
comp=Z,9.3nm,0.3s
MORI Morici 6.75 159 *e*Pn **Pn** 14 37 14.6 +2.6
KIJV Kijevo 6.80 154 *i* Pn **Pn** 14 37 15.8 +3.0
ORIF Oris-en-Rattie 6.87 222 *e*Pn **Pn** 14 37 15.1 +1.3
ORIF Oris-en-Rattie 6.87 222 *e*Pg **Pg** 14 37 43.3 -1.9
ORIF *e*Sn **Sn** 14 38 29.5 -2.1
ORIF *e*Sg **Sg** 14 39 11.3 -2.8
comp=Z,3.2nm,0.3s
AVF Avril sur Loir 6.89 244 *e*Pn **Pn** 14 37 14.9 +1.0
AVF Avril sur Loir 6.89 244 *e*Pg **Pg** 14 37 43.7 -1.9
AVF *e*Sn **Sn** 14 38 30.4 -1.4
AVF *e*Sg **Sg** 14 39 11.5 -3.2
comp=Z,3.1nm,0.2s
ZIRJ Zirje 6.94 160 *e*Pn **Pn** 14 37 16.2 +1.6
ZIRJ Sn **Sn** 14 38 31.1 -2.0
HYF Humbligny 7.06 249 *e*Pn **Pn** 14 37 17.8 +1.5
HYF Humbligny 7.06 249 *e*Pg **Pg** 14 37 46.3 -2.6
HYF *e*Sn **Sn** 14 38 34.4 -1.8
HYF *e*Sg **Sg** 14 39 17.3 -3.0
SBF Sospel 7.18 210 *e*Pn **Pn** 14 37 19.9 +1.8
SBF *e*Sn **Sn** 14 38 37.6 -1.7
comp=Z,2.4nm,0.2s
ONAU Onsala 7.20 358 P **Pn** 14 37 17.6 -0.5
ONAU S **Sn** 14 38 34.6 -4.8
BGF Bois d'Agland 7.31 244 *e*Pn **Pn** 14 37 21.2 +1.5
BGF Bois d'Agland 7.31 244 *e*Pg **Pg** 14 37 51.2 -2.4
BGF *e*Sn **Sn** 14 38 39.8 -2.4
BGF *e*Sg **Sg** 14 39 25.0 -3.1
comp=Z,40nm,0.5s
VIVF Saint-Julien-l 7.46 227 *e*Pn **Pn** 14 37 23.6 +1.8
VIVF Saint-Julien-l 7.46 227 *e*Pg **Pg** 14 37 54.0 -2.5
VIVF *e*Sn **Sn** 14 38 43.1 -2.9
VIVF *e*Sg **Sg** 14 39 29.8 -3.3
comp=Z,3.0nm,0.2s
DRGR 7.69 112 ⇧P **Pn** 14 37 26.6 +1.7
FRF La Foret Royal 7.71 213 *e*Pn **Pn** 14 37 26.3 +1.0
FRF La Foret Royal 7.71 213 *e*Pg **Pb** 14 37 58.6 +12
FRF *e*Sn **Sn** 14 38 50.0 -2.2
FRF *e*Sg **Sb** 14 39 37.4 +19
comp=Z,0.6nm,0.2s
SMRF Simiane la Rot 7.76 219 *e*Pn **Pn** 14 37 27.3 +1.3
SMRF Simiane la Rot 7.76 219 *e*Pg **Pb** 14 37 59.4 +12
SMRF *e*Sn **Sn** 14 38 51.1 -2.3
SMRF *e*Sg **Sb** 14 39 38.8 +19
comp=Z,1.4nm,0.2s
TCF Toulx Ste Croi 7.82 244 *e*Pn **Pn** 14 37 27.3 +0.5
TCF Toulx Ste Croi 7.82 244 *e*Pg **Pb** 14 38 00.6 +12
TCF *e*Sn **Sn** 14 38 52.5 -2.4
TCF *e*Sg **Sb** 14 39 41.3 +20
comp=Z,1.4nm,0.2s
LMR La Mourre 7.96 212 *e*Pn **Pn** 14 37 29.6 +0.9
LMR La Mourre 7.96 212 *e*Pg **Pb** 14 38 02.9 +12
LMR *e*Sn **Sn** 14 38 55.6 -2.7
LMR *e*Sg **Sb** 14 39 45.2 +19
comp=Z,0.9nm,0.2s
PGF Pioggiola 8.01 198 *e*Pn **Pn** 14 37 30.9 +1.5
PGF Pioggiola 8.01 198 *e*Pg **Pb** 14 38 03.8 +12
PGF *e*Sn **Sn** 14 38 56.6 -3.0
PGF *e*Sg **Sb** 14 39 46.3 +19
comp=Z,1.3nm,0.4s
LDF La Druitiere 8.29 264 *e*Pn **Pn** 14 37 35.1 +1.9
LDF La Druitiere 8.29 264 *e*Pg **Pb** 14 38 09.2 +12
LDF *e*Sn **Sn** 14 39 04.5 -1.9
LDF *e*Sg **Sb** 14 39 55.5 +20
comp=Z,1.5nm,0.3s
LASF Ste Croix 8.43 227 *e*Pn **Pn** 14 37 34.5 -0.7
LASF Ste Croix 8.43 227 *e*Pg **Pb** 14 38 11.4 +12
LASF *e*Sn **Sn** 14 39 06.3 -3.6
LASF *e*Sg **Sb** 14 40 00.4 +21
comp=Z,1.3nm,0.3s
FLN La Foliniere 8.48 265 *e*Pn **Pn** 14 37 36.9 +1.2
baz=82
FLN La Foliniere 8.48 265 *e*Pg **Pb** 14 38 12.7 +13
FLN *e*Sn **Sn** 14 39 09.1 -1.9
FLN *e*Sg **Sb** 14 40 01.5 +21
comp=Z,2.3nm,0.3s
CAF Calviac 8.73 237 *e*Pn **Pn** 14 37 40.9 +1.6
CAF Calviac 8.73 237 *e*Pg **Pb** 14 38 17.4 +38
CAF *e*Sn **Sn** 14 39 13.9 -3.4
CAF *e*Sg 14 40 09.1
comp=Z,0.5nm,0.2s
RJF Les Rejaudoux 8.79 240 *e*Pn **Pn** 14 37 41.6 +1.5
RJF Les Rejaudoux 8.79 240 *e*Pg Pn 14 38 18.4 +38
RJF *e*Sn **Sn** 14 39 15.2 -3.5
RJF *e*Sg 14 40 11.7
comp=Z,3.5nm,0.4s
GRR Gorron 8.82 263 *e*Pn **Pn** 14 37 41.5 +1.1
GRR Gorron 8.82 263 *e*Pg Pn 14 38 19.1 +39
GRR *e*Sn **Sn** 14 39 16.4 -3.0
GRR *e*Sg 14 40 11.8
comp=Z,1.7nm,0.2s
BURAR Bucovina Array 8.87 102 ⇧P **Pn** 14 37 41.9 +0.7
MFF Saint Martin d 9.06 251 *e*Pn **Pn** 14 37 44.3 +0.6
MFF Saint Martin d 9.06 251 *e*Pg Pn 14 38 22.9 +39
MFF *e*Sn **Sn** 14 39 22.0 -3.2
MFF *e*Sg 14 40 19.7
comp=Z,0.7nm,0.3s
LFF La Frestale 9.45 240 *e*Pn **Pn** 14 37 51.3 +2.3
LFF La Frestale 9.45 240 *e*Pg Pn 14 38 30.3 +41
LFF *e*Sn **Sn** 14 39 31.2 -3.6
LFF *e*Sg 14 40 31.5
comp=Z,2.8nm,0.3s
SGMF Saint Gilles 9.95 264 *e*Pn **Pn** 14 37 57.7 +1.9
SGMF *e*Sn **Sn** 14 39 43.9 -3.1
comp=Z,0.3nm,0.2s
ROSF Rostrenen 10.38 266 *e*Pn **Pn** 14 38 03.4 +1.6
ROSF Rostrenen 10.38 266 *e*Pg Pn 14 38 47.0 +45
ROSF *e*Sn **Sn** 14 39 53.6 -4.0
ROSF *e*Sg 14 41 00.5
comp=Z,1.0nm,0.3s
QUIF Quistinic 10.44 263 *e*Pn **Pn** 14 38 04.2 +1.7
QUIF *e*Sn **Sn** 14 39 55.4 -3.6
comp=Z,0.6nm,0.2s

BEO ***24*** *14:40:16.0±0.7, 39°.54N×24°.60E, h0km, ML4.3/10*
SOF ***24*** *14:40:20.0, 39°.87N×24°.44E, h10km, MD4.2*
ISK ***24*** *14:40:22.6, 40°.01N×24°.32E, h14km, ML4.3/40*
NEIC ***24*** *14:40:23.9, 40°.03N×24°.31E, h19km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.13; $M_{\theta\theta}$0.80; $M_{\phi\phi}$-0.93; $M_{r\theta}$0.52; $M_{\theta\phi}$-1.64; $M_{r\phi}$-0.10; Fault plane solution: $M_0$1.93000×10^{15} NP1:ϕ_s167.01000°, δ75.33000°, λ7.37000°. NP2:ϕ_s75.14000°, δ82.87000°, λ165.22000°. Principal axes: T 1.9278, Plg15.0000°, Azm30.0000°; N 0.0053, Plg74.0000°, Azm230.0000°; P -1.9331, Plg5.0000°, Azm122.0000°;*
IDC ***24*** *14:40:23.5±0.9, 40°.00N×24°.50E, h0km, mb3.7/7, mb1 3.8/12, mb1mx3.6/45, mbtmp3.7/12, ML3.9/5, MS3.1/3, Ms1 3.1/3, ms1mx2.6/50 Error ellipse: s-maj=15.8km s-min=13.2km az=85.0*
THE ***24*** *14:40:23.9, 40°.03N±24°.31E, h13km±1km, ML4.1/17, Error ellipse: s-maj=1.1km s-min=0.6km az=4.0*
PDG ***24*** *14:40:23.5±0.5, 40°.03N×24°.34E, h19km, ML3.9/13, Error ellipse: s-maj=0.4km s-min=0.4km az=0.0*
ATH ***24*** *14:40:23.3, 40°.02N×24°.36E, h28km, ML4.1/17, Error ellipse: s-maj=0.9km s-min=0.5km az=36.0*
NEIC ***24*** *14:40:24.6±2.4, 40°.01N±0°.04×24°.35E±0°.08, h14km±6km, Error ellipse: s-maj=8.5km s-min=5.9km az=83.0*
DDA ***24*** *14:40:24.3, 40°.13N×24°.42E, h10km±3km, ML4.1*
ISC 24 14:40:23.3±1.1, 40°.02N±0°.01×24°.31E±0°.01, h3km±8km, n276,σ1$27/339, mb3.9/7, 12C-19D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUR	**Ouranopolis**	**0.41**	**322**	P	**Pb**	**14 40 32.0**	**-1.1**
OUR				S	**Sb**	**14 40 37.6**	**-2.0**
	27µm,0.5s						
OUR	**Ouranopolis**	**0.41**	**322**	P	**Pb**	**14 40 32.1**	**-0.9**

OUR				S	Sb	14 40 37.8	-1.8	
OUR				AML	AML	14 40 38.2		
	comp=E,62706µm,0.5s							
OUR				AML	AML	14 40 42.4		
	comp=N,43804µm,0.4s							
OUR	**Ouranopolis**	**0.41**	**322**	PG	**Pb**	**14 40 31.9**	**-1.1**	
OUR				SG	**Sb**	**14 40 37.6**	**-2.0**	
PAIG	**Paliouri**	**0.49**	**260**	P	**Pb**	**14 40 33.6**	**-0.9**	
PAIG				S	**Sb**	**14 40 41.0**	**-1.2**	
	comp=N,14µm,0.5s							
PAIG	**Paliouri**	**0.49**	**260**	P	**Pb**	**14 40 34.0**	**-0.6**	
PAIG				S	**Sb**	**14 40 40.9**	**-1.2**	
PAIG				AML	AML	14 40 41.4		
	comp=N,38420µm,0.8s							
PAIG				AML	AML	14 40 47.3		
	comp=E,18843µm,0.4s							
THAS	**Thassos island**	**0.67**	**28**	P	**Pg**	**14 40 36.5**	**+0.4**	
THAS				S	**Sg**	**14 40 45.5**	**+0.8**	
	comp=E,33µm,0.6s							
THAS	**Thassos island**	**0.67**	**28**	P	**Pg**	**14 40 36.5**	**+0.4**	
THAS				S	**Sb**	**14 40 45.9**	**-1.3**	
THAS				AML	AML	14 40 47.4		
	comp=N,63071µm,0.4s							
THAS				AML	AML	14 40 47.6		
	comp=E,50275µm,0.3s							
LIA	**Limnos Island**	**0.68**	**100**	P	**Pg**	**14 40 36.8**	**+0.5**	
LIA				S	**Sb**	**14 40 46.8**	**-0.7**	
	comp=E,26µm,0.7s							
LIA	**Limnos Island**	**0.68**	**100**	P	**Pb**	**14 40 37.7**	**0.0**	
LIA				S	**Sg**	**14 40 46.2**	**+1.1**	
LIA				AML	AML	14 40 48.6		
	comp=N,68047µm,0.5s							
LIA				AML	AML	14 40 48.9		
	comp=E,35314µm,0.8s							
EFSA	**Agios Efstrati**	**0.70**	**132**	P	**Pb**	**14 40 37.8**	**-0.3**	
EFSA				S	**Sb**	**14 40 48.4**	**+0.2**	
EFSA				AML	AML	14 40 49.8		
	comp=N,25031µm,0.6s							
EFSA				AML	AML	14 40 49.8		
	comp=E,35906µm,0.5s							
PLG	**Polygyros**	**0.75**	**299**	P	**Pb**	**14 40 38.2**	**-0.8**	
PLG				S	**Sb**	**14 40 48.2**	**-1.5**	
	comp=E,18µm,0.4s							
PLG	**Polygyros**	**0.75**	**299**	P	**Pb**	**14 40 38.3**	**-0.8**	
PLG				S	**Sb**	**14 40 48.3**	**-1.4**	
PLG				AML	AML	14 40 51.7		
	comp=N,33026µm,0.4s							
PLG				AML	AML	14 40 51.8		
	comp=E,38751µm,0.4s							
AOS	**Alonnisos**	**0.91**	**202**	P	**Pg**	**14 40 40.6**	**0.0**	
AOS				S	**Sn**	**14 40 54.6**	**-1.9**	
	comp=E,11µm,0.5s							
AOS	**Alonnisos**	**0.91**	**202**	P	**Pg**	**14 40 40.7**	**+0.1**	
AOS				S	**Sn**	**14 40 54.5**	**-1.9**	
AOS				AML	AML	14 40 56.3		
	comp=E,24751µm,0.6s							
AOS				AML	AML	14 40 57.5		
	comp=N,21007µm,0.5s							
AOS	**Alonnisos**	**0.91**	**202**	PG	**Pg**	**14 40 40.6**	**0.0**	
AOS				SG	**Sb**	**14 40 53.4**	**-0.7**	
KVLA	**Kavala**	**0.92**	**3**	P	**Pb**	**14 40 41.5**	**-0.3**	
KVLA				S	**Sb**	**14 40 54.4**	**-0.1**	
KVLA				AML	AML	14 40 55.2		
KVLA				AML	AML	14 40 55.3		
	comp=N,53026µm,0.5s							
ALNA	**Alonissos**	**0.93**	**202**	P	**Pg**	**14 40 41.1**	**0.0**	
ALNA				S	**Sn**	**14 40 55.2**	**-1.8**	
ALNA				AML	AML	14 40 59.3		
	comp=N,31951µm,1.1s							
ALNA				AML	AML	14 41 01.2		
	comp=E,32489µm,0.8s							
KAVA	**Kavala**	**0.99**	**9**	P	**Pb**	**14 40 42.4**	**-0.7**	
KAVA				S	**Sg**	**14 40 55.2**	**+0.1**	
	comp=E,15µm,0.3s							
KAVA	**Kavala**	**0.99**	**9**	P	**Pg**	**14 40 42.3**	**0.0**	
KAVA				S	**Sb**	**14 40 55.5**	**-1.0**	
KAVA				AML	AML	14 40 57.2		
	comp=E,26289µm,0.3s							
KAVA				AML	AML	14 40 57.3		
	comp=N,34916µm,0.3s							
SMTH	**Samothraki Isl**	**1.04**	**64**	P	**Pg**	**14 40 42.5**	**-0.6**	
SKIA	**Skiathos**	**1.07**	**218**	P	**Pg**	**14 40 43.5**	**-0.3**	
SKIA				S	**Sn**	**14 41 00.5**	**0.0**	
	comp=N,8µm,0.6s							
SKIA	**Skiathos**	**1.07**	**218**	P	**Pg**	**14 40 43.6**	**-0.1**	
SKIA				S	**Sn**	**14 40 58.6**	**-1.9**	
SKIA				AML	AML	14 41 02.1		
	comp=E,14397µm,0.6s							
SKIA				AML	AML	14 41 08.1		
	comp=N,16420µm,0.8s							
XOR	**Xorichti**	**1.08**	**233**	P	**Pg**	**14 40 43.5**	**-0.5**	
XOR				S	**Sb**	**14 40 58.4**	**-0.7**	
	comp=N,7µm,0.5s							
XOR	**Xorichti**	**1.08**	**233**	P	**Pg**	**14 40 44.0**	**0.0**	
XOR				S	**Sn**	**14 40 58.9**	**-1.9**	
XOR				AML	AML	14 41 02.2		
	comp=N,15298µm,0.7s							
XOR				AML	AML	14 41 03.2		
	comp=E,11939µm,0.5s							
SOH	**Sokhos**	**1.09**	**318**	P	**Pb**	**14 40 44.3**	**-0.4**	
SOH				S	**Sn**	**14 40 59.3**	**-1.7**	
	comp=E,11µm,0.5s							
HORT	**Hortiatis**	**1.09**	**302**	P	**Pg**	**14 40 44.0**	**-0.3**	
HORT				S	**Sn**	**14 40 59.2**	**-2.0**	
	comp=E,4µm,0.6s							
HORT	**Hortiatis**	**1.09**	**302**	P	**Pb**	**14 40 44.2**	**-0.6**	
HORT				S	**Sn**	**14 40 59.2**	**-2.0**	
HORT				AML	AML	14 41 00.8		
	comp=N,7862µm,0.5s							
HORT				AML	AML	14 41 06.4		
	comp=E,7142µm,0.6s							
HORT	**Hortiatis**	**1.09**	**302**	PN	**Pg**	**14 40 43.9**	**-0.3**	
NEO	**Neokhori**	**1.10**	**230**	P	**Pb**	**14 40 43.9**	**-1.0**	
NEO				S	**Sb**	**14 40 58.7**	**-0.9**	
	comp=E,6µm,0.5s							
NEO	**Neokhori**	**1.10**	**230**	P	**Pb**	**14 40 44.2**	**-0.6**	
NEO				S	**Sg**	**14 40 58.6**	**0.0**	
NEO				AML	AML	14 41 04.9		
	comp=N,15210µm,0.5s							
NEO				AML	AML	14 41 05.0		
	comp=E,11953µm,0.4s							
SKY	**Skiros Island**	**1.15**	**171**	P	**Pb**	**14 40 44.8**	**-1.0**	
SKY				S	**Sn**	**14 41 01.3**	**-1.1**	
	comp=E,9µm,0.3s							
SKY	**Skiros Island**	**1.15**	**171**	P	**Pb**	**14 40 44.9**	**-0.8**	
SKY				S	**Sn**	**14 41 01.4**	**-1.1**	
SKY				AML	AML	14 41 03.4		
	comp=N,18852µm,0.3s							
SKY				AML	AML	14 41 05.9		
	comp=E,17425µm,0.3s							
THE	**Thessaloniki**	**1.20**	**301**	P	**Pb**	**14 40 45.9**	**-0.7**	
THE				S	**Sn**	**14 41 02.1**	**-1.5**	
	comp=E,1µm,0.6s							
THE	**Thessaloniki**	**1.20**	**301**	P	**Pb**	**14 40 45.9**	**-0.7**	
THE				S	**Sn**	**14 41 02.3**	**-1.4**	
THE				AML	AML	14 41 08.1		
	comp=N,3527µm,0.7s							
THE				AML	AML	14 41 11.8		
	comp=E,2275µm,0.7s							
SRS	**Serrai**	**1.23**	**334**	P	**Pn**	**14 40 46.3**	**-1.0**	
SRS				S	**Sb**	**14 41 01.8**	**-1.6**	
	comp=E,5µm,0.7s							
SRS	**Serrai**	**1.23**	**334**	P	**Pn**	**14 40 46.3**	**-1.0**	
GADA	**Gvkgeada**	**1.23**	**81**	P	**Pn**	**14 40 45.7**	**-1.5**	
GADA				S	**Sn**	**14 41 04.0**	**-0.4**	
	comp=E,14µm,0.5s							
GADA	**Gvkgeada**	**1.23**	**81**	PN	**Pn**	**14 40 45.8**	**-1.5**	
BOZC	**Bozcaada**	**1.35**	**97**	PN	**Pn**	**14 40 47.5**	**-1.4**	
BOZC	**Bozcaada**	**1.35**	**97**	*i* P	**Pn**	**14 40 47.2**	**-1.7**	
BOZC				*i* P	**Pn**	**14 40 47.6**	**-1.4**	
BOZC				*i* S	**Sb**	**14 41 04.0**	**-2.8**	
BOZC				*i* S	**Sn**	**14 41 04.3**	**-3.0**	
BOZC				IAML		14 41 08.0		
	comp=N,7µm,1.0s							
BOZC				IAML		14 41 09.0		
	comp=N,6µm,1.0s							
KYMI	**Kymi, Euboea I**	**1.39**	**187**	P	**Pn**	**14 40 48.2**	**-1.3**	
KYMI	**Kymi, Euboea I**	**1.39**	**187**	P	**Pn**	**14 40 48.3**	**-1.3**	
LIT	**Litokhoron**	**1.40**	**274**	P	**Pn**	**14 40 48.5**	**-1.2**	
LIT	**Litokhoron**	**1.40**	**274**	P	**Pn**	**14 40 48.9**	**-0.8**	
LIT	**Litokhoron**	**1.40**	**274**		**Pn**	**14 40 48.5**	**-1.2**	
MRKA	**Markates**	**1.42**	**203**	P	**Pn**	**14 40 48.6**	**-1.4**	
MRKA	**Markates**	**1.42**	**203**	P	**Pn**	**14 40 48.8**	**-1.2**	
SIGR	**SIGRI**	**1.44**	**123**	P	**Pn**	**14 40 49.1**	**-1.0**	
SIGR	**SIGRI**	**1.44**	**123**	P	**Pn**	**14 40 49.2**	**-0.9**	
SIGR	**SIGRI**	**1.44**	**123**	PN	**Pn**	**14 40 49.2**	**-0.9**	
RDO	**Rodhopi**	**1.47**	**39**	P	**Pn**	**14 40 48.9**	**-1.6**	
RDO				S	**Sg**	**14 41 09.9**	**-0.4**	
RDO				AML	AML	14 41 14.9		
	comp=E,3485µm,0.4s							
RDO				AML	AML	14 41 17.5		
	comp=N,4927µm,0.4s							
RDO	**Rodhopi**	**1.47**	**39**	PN	**Pn**	**14 40 48.9**	**-1.6**	
LRSO	**Larissa Observ**	**1.52**	**258**	P	**Pb**	**14 40 51.2**	**-0.8**	
EZN	**Ezine**	**1.56**	**96**	P	**Pn**	**14 40 50.9**	**-0.9**	
EZN				S	**Sn**	**14 41 10.7**	**-1.8**	
	comp=N,9µm,0.8s							
EZN	**Ezine**	**1.56**	**96**	PN	**Pn**	**14 40 51.0**	**-0.9**	
KNT	**Kendrikon**	**1.57**	**317**	P	**Pn**	**14 40 51.4**	**-0.6**	
KNT	**Kendrikon**	**1.57**	**317**	P	**Pb**	**14 40 52.2**	**-0.7**	
KNT	**Kendrikon**	**1.57**	**317**	PN	**Pn**	**14 40 51.3**	**-0.7**	
ENEZ	**Enez**	**1.58**	**62**	P	**Pn**	**14 40 50.5**	**-1.7**	
ENEZ	**Enez**	**1.58**	**62**	PN	**Pn**	**14 40 50.4**	**-1.7**	
MMB	**Musomiste**	**1.63**	**344**	P	**Pn**	**14 40 51.7**	**-1.2**	
PRK	**Paraskevi**	**1.70**	**116**	P	**Pn**	**14 40 53.9**	**-1.1**	
PRK	**Paraskevi**	**1.70**	**116**	P	**Pb**	**14 40 54.0**	**-1.1**	
RZN	**Rozhen**	**1.70**	**10**	*i* P	**Pn**	**14 40 53.2**	**-0.7**	
GELI	**Tayfur-Gelibol**	**1.70**	**76**	PN	**Pn**	**14 40 52.3**	**-1.4**	
LKR	**Lokris**	**1.70**	**217**	P	**Pn**	**14 40 52.6**	**-1.2**	
LKR	**Lokris**	**1.70**	**217**	P	**Pn**	**14 40 52.7**	**-1.1**	
BAYC	**CANAKKALE_Bayr**	**1.74**	**98**	*i* P	**Pn**	**14 40 51.6**	**-2.8**	
BAYC				*i* S	**Sn**	**14 41 14.3**	**-2.7**	
BAYC				IAML		14 41 23.0		
	comp=E,951nm,0.6s							
PSRA	**Psara**	**1.76**	**146**	P	**Pn**	**14 40 54.8**	**+0.2**	
AXAR	**Agios Charalam**	**1.79**	**226**	P	**Pn**	**14 40 54.4**	**-0.6**	
ERIK	**Erikli-Kesan**	**1.81**	**68**	PN	**Pn**	**14 40 53.5**	**-1.7**	
AGG	**Agios Georgios**	**1.83**	**238**	P	**Pn**	**14 40 54.8**	**-0.7**	
AGG	**Agios Georgios**	**1.83**	**238**	P	**Pn**	**14 40 54.8**	**-0.7**	
AGG	**Agios Georgios**	**1.83**	**238**	PN	**Pn**	**14 40 54.1**	**-1.4**	
AGG	**Agios Georgios**	**1.83**	**238**		**Pn**	**14 40 54.9**	**-0.7**	
THL	**Klokotos Trika**	**1.83**	**256**	P	**Pn**	**14 40 54.8**	**-0.7**	
THL	**Klokotos Trika**	**1.83**	**256**	P	**Pn**	**14 40 54.9**	**-0.6**	
KDZ	**Kurdzhali**	**1.83**	**27**	*i* P	**Pn**	**14 40 53.8**	**-1.9**	
KDZ	**Kurdzhali**	**1.83**	**27**	PN	**Pn**	**14 40 53.8**	**-1.9**	
VAY	**Valandovo**	**1.86**	**315**	*e*Pn	**Pb**	**14 40 56.5**	**-1.3**	
VAY				*e*Sn	**Sg**	**14 41 24.1**	**+1.1**	
VAY	**Valandovo**	**1.86**	**315**	*i* Pn	**Pn**	**14 40 56.1**	**+0.1**	
VAY	**Valandovo**	**1.86**	**315**	*i* Pn	**Pn**	**14 40 56.1**	**+0.1**	
DION	**Dionisos Attik**	**1.96**	**189**	P	**Pn**	**14 40 56.2**	**-1.1**	
DION	**Dionisos Attik**	**1.96**	**189**	P	**Pn**	**14 40 56.3**	**-1.0**	
MAKR	**Makrakomi, Fth**	**1.96**	**240**	P	**Pn**	**14 40 57.0**	**-0.4**	
MAKR	**Makrakomi, Fth**	**1.96**	**240**	P	**Pn**	**14 40 57.2**	**-0.2**	
AYVA	**Ayvalik**	**1.97**	**110**	*i* P	**Pn**	**14 40 56.9**	**-0.5**	
AYVA				*i* S	**Sn**	**14 41 18.9**	**-3.6**	
AYVA				IAML		14 41 30.0		
	comp=N,2µm,0.7s							
KZN	**Kozani**	**1.97**	**279**	P	**Pn**	**14 40 57.8**	**+0.2**	
KESN	**Edirne-Kesan**	**1.98**	**65**	*i* P	**Pn**	**14 40 56.0**	**-2.0**	
KESN				*i* S	**Sn**	**14 41 20.0**	**-3.5**	
KESN				IAML		14 41 30.0		
	comp=E,3µm,0.4s							
KARY	**Karystos**	**1.98**	**177**	P	**Pn**	**14 40 56.7**	**-1.0**	
KARY	**Karystos**	**1.98**	**177**	P	**Pn**	**14 40 56.8**	**-0.8**	
PTL	**Penteli**	**2.00**	**190**	P	**Pn**	**14 40 56.8**	**-1.0**	
VILL	**Villia**	**2.01**	**203**	P	**Pn**	**14 40 56.8**	**-1.2**	
PROD	**Prodromos**	**2.07**	**212**	P	**Pn**	**14 40 57.4**	**-1.5**	
KKB	**Krupnik**	**2.07**	**334**	P	**Pn**	**14 40 58.6**	**-0.3**	
ATHU	**Athens Univers**	**2.09**	**192**	P	**Pn**	**14 40 58.1**	**-1.0**	
UKOP	**Uzunkopru-Edir**	**2.09**	**57**	PN	**Pn**	**14 40 58.2**	**-0.9**	
ATH	**Athens Observa**	**2.09**	**193**	P	**Pn**	**14 40 58.2**	**-1.0**	
PLD	**Plovdiv**	**2.11**	**8**	*i* P	**Pn**	**14 40 59.5**	**+0.1**	
PLD	**Plovdiv**	**2.11**	**8**	PN	**Pn**	**14 40 59.2**	**-0.2**	
CHOS	**Chios island**	**2.12**	**140**	P	**Pn**	**14 40 58.9**	**-0.6**	
CHOS	**Chios island**	**2.12**	**140**	P	**Pn**	**14 40 59.0**	**-0.6**	
CHOS	**Chios island**	**2.12**	**140**	PN	**Pn**	**14 40 58.5**	**-1.1**	
DKL	**Dikili**	**2.22**	**114**	PN	**Pn**	**14 41 00.2**	**-0.6**	
EVR	**Evrytania**	**2.23**	**241**	P	**Pn**	**14 41 00.8**	**-0.3**	
EVR	**Evrytania**	**2.23**	**241**	P	**Pn**	**14 41 01.0**	**-0.1**	
DIM	**Dimitrovgrad**	**2.23**	**24**	*i* P	**Pn**	**14 41 00.4**	**-0.7**	
DIM	**Dimitrovgrad**	**2.23**	**24**	Pg	**Pg**	**14 41 06.8**	**+0.8**	
KRBN	**Karaburun**	**2.25**	**129**	PN	**Pn**	**14 41 00.4**	**-0.9**	
LTK	**Loutraki**	**2.25**	**208**	P	**Pn**	**14 41 00.4**	**-1.0**	
KPRO	**Kipourio**	**2.27**	**269**	P	**Pn**	**14 41 02.0**	**+0.4**	
LOUT	**Loutraki**	**2.28**	**208**	P	**Pn**	**14 41 00.8**	**-0.9**	
RKY	**Sarkoy-Tekirda**	**2.29**	**72**	PN	**Pn**	**14 41 01.4**	**-0.5**	
SART	**Tekirdag**	**2.29**	**72**	*i* P	**Pn**	**14 41 00.9**	**-1.0**	
KRBG	**Karabiga-Canak**	**2.32**	**80**	PN	**Pn**	**14 41 01.2**	**-1.0**	
ANX	**Ano Chora**	**2.34**	**233**	P	**Pn**	**14 41 02.5**	**-0.1**	
KALE	**Kalithea**	**2.34**	**227**	P	**Pn**	**14 41 02.0**	**-0.6**	
FNA	**Florina**	**2.37**	**290**	P	**Pn**	**14 41 03.3**	**+0.2**	
FNA	**Florina**	**2.37**	**290**	PN	**Pn**	**14 41 02.3**	**-0.7**	
FNA	**Florina**	**2.37**	**290**		**Pn**	**14 41 03.1**	**0.0**	
SERG	**Sergoula**	**2.37**	**228**	P	**Pn**	**14 41 02.6**	**-0.4**	
ZEDA	**zmir-Bergama**	**2.38**	**115**	*i* P	**Pn**	**14 41 03.8**	**+0.7**	
ZEDA				*i* S	**Sg**	**14 41 40.5**	**+0.7**	
ZEDA				IAML		14 41 45.0		
	comp=N,422nm,0.7s							
TRIZ	**Trizonia**	**2.40**	**227**	P	**Pn**	**14 41 02.7**	**-0.6**	
URLA	**Izmir**	**2.42**	**132**	PN	**Pn**	**14 41 02.8**	**-1.0**	
URLA	**Izmir**	**2.42**	**132**	*i* P	**Pn**	**14 41 02.0**	**-1.8**	
EFP	**Efpalio**	**2.45**	**230**	P	**Pn**	**14 41 03.6**	**-0.5**	
KNL	**Balıkesir**	**2.48**	**83**	*i* P	**Pb**	**14 41 06.7**	**-1.7**	
NEST	**Nestorio**	**2.53**	**280**	P	**Pb**	**14 41 06.6**	**-2.7**	
LAKA	**Lakka**	**2.54**	**226**	P	**Pn**	**14 41 05.1**	**-0.2**	
BALY	**Balya**	**2.56**	**95**	*i* P	**Pb**	**14 41 10.4**	**+0.6**	
BALY				*i* S	**Sb**	**14 41 42.8**	**+1.1**	
PVO	**Paravola**	**2.57**	**238**	P	**Pn**	**14 41 06.4**	**+0.6**	
MRMT	**Marmara Adasi**	**2.58**	**76**	PN	**Pn**	**14 41 05.2**	**-0.7**	
GONE	**Gonen-Balikesi**	**2.59**	**88**	PN	**Pn**	**14 41 05.6**	**-0.4**	
KLV	**Kalavryta, Ach**	**2.59**	**221**	P	**Pn**	**14 41 05.5**	**-0.6**	
EDRB	**Edirne**	**2.60**	**44**	P	**Pn**	**14 41 04.4**	**-1.7**	
EDRB	**Edirne**	**2.60**	**44**	PN	**Pn**	**14 41 04.9**	**-1.2**	
DID	**Didima**	**2.64**	**199**	P	**Pn**	**14 41 05.7**	**-1.0**	
TKR	**Tekirdag**	**2.64**	**67**	PN	**Pn**	**14 41 06.2**	**-0.5**	
BLCB	**Balcova**	**2.67**	**127**	PN	**Pn**	**14 41 06.7**	**-0.4**	
STEP	**BALIKESIR_Sava**	**2.70**	**103**	*i* P	**Pn**	**14 41 07.4**	**-0.2**	
VTS	**Vitosha**	**2.72**	**343**	*e*Pn	**Pn**	**14 41 08.0**	**0.0**	
VTS				*e*Sn	**Sb**	**14 41 47.8**	**+1.3**	
VTS	**Vitosha**	**2.72**	**343**	⇓P	**Pn**	**14 41 08.2**	**+0.2**	
VTS	**Vitosha**	**2.72**	**343**	P	**Pn**	**14 41 07.9**	**0.0**	
VTS	**Vitosha**	**2.72**	**343**		**Pn**	**14 41 08.0**	**0.0**	
EDC	**Edincik**	**2.74**	**82**	PN	**Pn**	**14 41 07.3**	**-0.8**	
KIRK	**Kırklareli**	**2.75**	**49**	*i* P	**Pn**	**14 41 05.3**	**-3.0**	
BALB	**Balikesir**	**2.77**	**97**	PN	**Pn**	**14 41 07.8**	**-0.7**	
PDO	**Prodromos**	**2.81**	**241**	P	**Pn**	**14 41 10.4**	**+1.4**	
CRLT	**Corlu**	**2.83**	**66**	PN	**Pn**	**14 41 09.2**	**-0.2**	
BOSS	**Bosilegrad**	**2.84**	**331**	*e*Pn	**Pn**	**14 41 09.9**	**+0.5**	
BOSS				*e*Sn	**Sb**	**14 41 49.7**	**+0.1**	
SERI	**Serifos**	**2.85**	**177**	P	**Pn**	**14 41 08.5**	**-1.2**	
DRO	**Drossia**	**2.89**	**225**	P	**Pn**	**14 41 08.6**	**-1.5**	
OHR	**Ohrid**	**2.89**	**293**	*i* Pn	**Pb**	**14 41 13.0**	**-2.5**	
OHR	**Ohrid**	**2.89**	**293**	*i* Pn	**Pb**	**14 41 13.0**	**-2.5**	
PHSR	**Pinarhisar**	**2.92**	**55**	PN	**Pn**	**14 41 10.1**	**-0.5**	
SKO	**Skopje**	**2.92**	**313**	*e*Pn	**Pn**	**14 41 09.2**	**-1.4**	
SKO	**Skopje**	**2.92**	**313**	*i* Pn	**Pn**	**14 41 10.9**	**+0.3**	
SKO	**Skopje**	**2.92**	**313**	*i* Pn	**Pn**	**14 41 10.9**	**+0.3**	
AKS	**Akhisar**	**2.94**	**112**	PN	**Pn**	**14 41 09.6**	**-1.2**	
BOTS	**Marmara Eregli**	**2.96**	**70**	PN	**Pn**	**14 41 10.4**	**-0.7**	
JMB	**Yambol**	**2.99**	**34**	P	**Pn**	**14 41 10.2**	**-1.3**	
SMG	**Samos**	**3.03**	**139**	P	**Pn**	**14 41 11.7**	**-0.4**	
LKD2	**Lefkada island**	**3.08**	**248**	P	**Pn**	**14 41 14.3**	**+1.5**	
APE	**Apeiranthos**	**3.09**	**162**	P	**Pn**	**14 41 11.8**	**-1.1**	
APE	**Apeiranthos**	**3.09**	**162**	⇑P	**Pn**	**14 41 12.0**	**-1.0**	
APE	**Apeiranthos**	**3.09**	**162**	PN	**Pn**	**14 41 11.6**	**-1.4**	
IGT	**Igoumenitsa**	**3.10**	**262**	P	**Pn**	**14 41 14.8**	**+1.7**	
KCTX	**Karacabey (Bur**	**3.11**	**84**	PN	**Pn**	**14 41 12.4**	**-0.8**	
SLVT	**Silivri**	**3.21**	**67**	PN	**Pn**	**14 41 14.4**	**-0.1**	
GCAM	**G?zelcaml?**	**3.25**	**134**	PN	**Pn**	**14 41 14.3**	**-0.7**	
GCAM	**G?zelcaml?**	**3.25**	**134**	*i* P	**Pn**	**14 41 13.2**	**-1.9**	
FSK	**Fiskardo**	**3.30**	**243**	P	**Pn**	**14 41 16.8**	**+1.1**	
KFL	**Anninata**	**3.34**	**236**	P	**Pn**	**14 41 17.2**	**+0.9**	
DST	**Dursunbey**	**3.34**	**96**	PN	**Pn**	**14 41 16.0**	**-0.4**	
CTYL	**Yalikoy Yolu**	**3.35**	**63**	PN	**Pn**	**14 41 16.1**	**-0.4**	
MPEP	**Malo Peshtene**	**3.37**	**353**	P	**Pn**	**14 41 16.7**	**0.0**	
BARS	**Barje**	**3.37**	**327**	*e*Pn	**Pn**	**14 41 16.8**	**+0.1**	
BARS	**Barje**	**3.37**	**327**	*e*Pn	**Pg**	**14 41 29.7**	**+1.9**	
BARS				*e*Sn	**Sb**	**14 42 03.5**	**-1.4**	
IOSP	**Ios island**	**3.38**	**167**	P	**Pn**	**14 41 15.6**	**-1.2**	
PLVB	**Pleven**	**3.38**	**4**	⇓P	**Pn**	**14 41 16.8**	**0.0**	
ITM	**Ithomi**	**3.39**	**214**	PN	**Pn**	**14 41 16.4**	**-0.7**	
ITM	**Ithomi**	**3.39**	**214**		**Pn**	**14 41 17.9**	**+0.8**	
AMGA	**Amorgos Island**	**3.41**	**158**	P	**Pn**	**14 41 16.3**	**-1.1**	
CTKS	**Kestanelik-??a**	**3.42**	**68**	PN	**Pn**	**14 41 17.6**	**+0.2**	
SZH	**Strazhica**	**3.47**	**20**	*i* P	**Pn**	**14 41 17.5**	**-0.6**	
AYDB	**Zeytinkoy-Aydi**	**3.47**	**125**	PN	**Pn**	**14 41 18.1**	**-0.1**	
ZAPS	**Zavoj**	**3.49**	**339**	*e*Pn	**Pn**	**14 41 18.6**	**+0.2**	
ZAPS				*e*Sn	**Sb**	**14 42 04.8**	**-3.6**	
MDNY	**Mudanya-Bursa**	**3.52**	**83**	PN	**Pn**	**14 41 17.9**	**-0.9**	
ORLT	**Orhaneli**	**3.52**	**88**	PN	**Pn**	**14 41 18.8**	**0.0**	
ARMT	**Armutlu**	**3.52**	**80**	PN	**Pn**	**14 41 18.5**	**-0.3**	
DEMI	**Demirci**	**3.54**	**105**	*i* P	**Pn**	**14 41 19.6**	**+0.5**	
BGKT	**Bogazkoy**	**3.59**	**70**	PN	**Pn**	**14 41 19.7**	**0.0**	
MANT	**Manisa**	**3.63**	**113**	*i* P	**Pn**	**14 41 19.6**	**-0.9**	
TIR	**Tirane**	**3.63**	**293**	*e*Pn	**Pn**	**14 41 19.7**	**-0.7**	
TIR	**Tirane**	**3.63**	**293**		**Pn**	**14 41 21.6**	**+1.3**	
THT2	**Imerovigli**	**3.68**	**166**	PN	**Pn**	**14 41 20.7**	**-0.3**	
KULA	**Kula-Manisa**	**3.69**	**113**	PN	**Pn**	**14 41 21.3**	**0.0**	
SIMA	**Simav-Kutahya**	**3.73**	**103**	PN	**Pn**	**14 41 20.6**	**-1.1**	
SANT	**Santorini**	**3.75**	**166**		**Pn**	**14 41 19.6**	**-2.4**	
GEMT	**Gemlik**	**3.76**	**82**	PN	**Pn**	**14 41 21.9**	**-0.1**	
ISK	**Istanbul-Kandi**	**3.77**	**72**	PN	**Pn**	**14 41 22.4**	**+0.2**	
KAVV	**Kandilli-Istan**	**3.77**	**72**	PN	**Pn**	**14 41 22.4**	**+0.2**	
KLYT	**Kilyos**	**3.81**	**70**	PN	**Pn**	**14 41 22.3**	**-0.4**	
RAZG	**Razgrad**	**3.91**	**24**	⇓P	**Pn**	**14 41 23.6**	**-0.5**	
YLV	**Yalova**	**3.91**	**80**	PN	**Pn**	**14 41 24.1**	**-0.1**	
PRD	**Provadia**	**3.93**	**35**	P	**Pn**	**14 41 23.3**	**-1.2**	
SELS	**Selova**	**4.00**	**324**	*e*Pn	**Pn**	**14 41 24.6**	**-0.8**	
SELS				*e*Sn	**Sb**	**14 42 17.1**	**-5.9**	
ZAGS	**Zajecar**	**4.10**	**338**	*e*Pn	**Pn**	**14 41 25.8**	**-0.9**	
ZAGS				*e*Sn	**Sb**	**14 42 20.1**	**-5.8**	
PVY	**Plav**	**4.17**	**310**	⇓*i* Pn	**Pn**	**14 41 27.9**	**+0.1**	
PVY				*i* Sn	**Sn**	**14 42 16.1**	**-1.0**	
ULC	**Ulcinj**	**4.30**	**299**	⇑*i* Pn	**Pn**	**14 41 29.8**	**+0.3**	
ULC				*i* Sn	**Sn**	**14 42 19.4**	**-0.8**	
KHAL	**Karahalli**	**4.35**	**111**	*i* P	**Pn**	**14 41 30.9**	**+0.6**	
IVA	**Berane**	**4.38**	**312**	⇑*i* Pn	**Pn**	**14 41 30.8**	**+0.1**	
IVA				*i* Sn	**Sn**	**14 42 21.0**	**-1.2**	
TAVA	**DENIZLI_Tavas**	**4.41**	**124**	*i* P	**Pn**	**14 41 31.5**	**+0.4**	
DRME	**Dracevica, Mon**	**4.44**	**301**	⇓*i* Pn	**Pn**	**14 41 31.7**	**+0.3**	
DRME				*i* Sn	**Sn**	**14 42 22.5**

*IDC **24** 14:49:15.2±0.6,40°.48N×25°.98E,h0^{km},mb4.2/20, mb1 4.3/28,mb1mx4.2/49,mbtmp4.2/28,ML4.0/8,MS3.6/24, Ms1 3.6/24,ms1mx3.5/49 Error ellipse: s-maj=10.7km s-min=8.9km az=22.0*

*NEIC **24** 14:49:16.4±2.0,40°.43N±0°.05×25°.91E±0°.06,h10^{km}±1^{km}, Error ellipse: s-maj=8.8km s-min=7.4km az=195.0*

ISC 24 14:49:15.4±0.9,**40°.41N**±0°.01×**25°.99E**±0°.01,**h5**^{km}±6^{km}, **n536,σ1°55/602,mb4.4/44,MS3.7/22,25C-22D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.23**	**198**	P		**Pg**	**14 49 20.3**	**+0.3**
GADA				S		**Sg**	**14 49 23.5**	**+0.5**
	73μm,0.6s							
GADA	**Gvkgeada**	**0.23**	**198**	PG		**Pg**	**14 49 20.4**	**+0.4**
GADA				SG		**Sg**	**14 49 23.5**	**+0.5**
ENEZ	**Enez**	**0.35**	**21**	P		**Pg**	**14 49 22.7**	**+0.6**
ENEZ	**Enez**	**0.35**	**21**	PG		**Pg**	**14 49 22.8**	**+0.6**
ENEZ				SG		**Sb**	**14 49 28.4**	**-1.5**
SMTH	**Samothraki Isl**	**0.36**	**280**	P		**Pg**	**14 49 22.5**	**+0.1**
SMTH				S		**Sg**	**14 49 28.1**	**+1.0**
	39μm,0.5s							
SMTH	**Samothraki Isl**	**0.36**	**280**	P		**Pg**	**14 49 22.5**	**+0.1**
SMTH				S		**Sg**	**14 49 28.1**	**+1.0**
SMTH				AML	AML		14 49 30.0	
	comp=N,91973μm,0.5s							
SMTH				AML	AML		14 49 33.1	
	comp=E,66172μm,0.5s							
GELI	**Tayfur-Gelibol**	**0.37**	**92**	PG		**Pg**	**14 49 22.8**	**+0.2**
GELI				SG		**Sb**	**14 49 29.3**	**-1.2**
ERIK	**Erikli-Kesan**	**0.47**	**57**	PG		**Pg**	**14 49 24.7**	**+0.1**
ERIK				SG		**Sb**	**14 49 32.4**	**-1.1**
BOZC	**Bozcaada**	**0.57**	**175**	PG		**Pg**	**14 49 26.4**	**0.0**
BOZC				SG		**Sb**	**14 49 34.9**	**-1.4**
BOZC	**Bozcaada**	**0.57**	**175**	*i* P		**Pg**	**14 49 26.1**	**-0.4**
BOZC				*i* S		**Sg**	**14 49 33.9**	**0.0**
BOZC				IAML			14 49 35.0	
	comp=E,19μm,0.6s							
BOZC				IAML			14 49 44.0	
	comp=N,8μm,0.6s							
EZN	**Ezine**	**0.64**	**156**	P		**Pg**	**14 49 27.3**	**-0.4**
EZN	**Ezine**	**0.64**	**156**	PG		**Pg**	**14 49 27.3**	**-0.4**
KESN	**Edirne-Kesan**	**0.67**	**51**	*i* P		**Pg**	**14 49 27.7**	**-0.6**
KESN				*i* S		**Sg**	**14 49 37.3**	**+0.3**
KESN				IAML			14 49 40.0	
	comp=N,13μm,0.6s							
KESN				IAML			14 49 43.0	
	comp=E,18μm,0.6s							
BAYC	**CANAKKALE_Bayr**	**0.79**	**147**	*i* P		**Pg**	**14 49 30.4**	**-0.3**
BAYC				*i* S		**Sg**	**14 49 40.6**	**-0.3**
LIA	**Limnos Island**	**0.81**	**231**	P		**Pg**	**14 49 29.8**	**-1.1**
LIA				S		**Sb**	**14 49 42.6**	**-0.4**
	comp=E,42μm,0.6s							
LIA	**Limnos Island**	**0.81**	**231**	P		**Pg**	**14 49 29.8**	**-1.1**
LIA				S		**Sb**	**14 49 42.0**	**-1.0**
LIA				AML	AML		14 49 45.3	
	comp=N,87606μm,0.5s							
LIA				AML	AML		14 49 46.5	
	comp=E,82377μm,0.6s							
RDO	**Rodhopi**	**0.81**	**335**	P		**Pg**	**14 49 30.7**	**-0.3**
RDO	**Rodhopi**	**0.81**	**335**	P		**Pg**	**14 49 30.7**	**-0.3**
RDO				S		**Sg**	**14 49 41.7**	**+0.2**
RDO				AML	AML		14 49 45.7	
	comp=E,32615μm,0.6s							
RDO				AML	AML		14 49 56.0	
	comp=N,21578μm,0.5s							
RDO	**Rodhopi**	**0.81**	**335**	PG		**Pg**	**14 49 30.8**	**-0.3**
RDO				SG		**Sb**	**14 49 42.9**	**-0.3**
UKOP	**Uzunkopru-Edir**	**0.87**	**34**	PG		**Pb**	**14 49 32.5**	**-0.4**
UKOP				SG		**Sn**	**14 49 45.5**	**-1.7**
RKY	**Sarkoy-Tekirda**	**0.94**	**73**	PG		**Pg**	**14 49 32.3**	**-1.3**
RKY				SG		**Sn**	**14 49 48.3**	**-1.0**
SART	**Tekirdag**	**0.95**	**73**	*i* P		**Pg**	**14 49 32.9**	**-0.7**
SART				IAML			14 49 59.0	
	comp=E,3μm,0.8s							
THAS	**Thassos island**	**0.99**	**282**	P		**Pg**	**14 49 33.7**	**-0.7**
THAS				S		**Sb**	**14 49 47.7**	**-0.7**
	comp=E,25μm,0.5s							
THAS	**Thassos island**	**0.99**	**282**	P		**Pg**	**14 49 33.6**	**-0.8**
THAS				S		**Sg**	**14 49 46.8**	**-0.5**
THAS				AML	AML		14 49 49.7	
	comp=N,58701μm,0.7s							
THAS				AML	AML		14 49 51.6	
	comp=E,39962μm,0.3s							
KRBG	**Karabiga-Canak**	**1.00**	**91**	PG		**Pg**	**14 49 33.9**	**-0.7**
EFSA	**Agios Efstrati**	**1.16**	**222**	P		**Pn**	**14 49 37.4**	**-0.9**
EFSA				S		**Sn**	**14 49 53.6**	**-0.9**
EFSA				AML	AML		14 49 54.8	
	comp=E,67107μm,0.8s							
EFSA				AML	AML		14 50 02.8	
	comp=N,61201μm,1.3s							
KNL	**Balıkesir**	**1.18**	**96**	*i* P		**Pb**	**14 49 37.2**	**-1.1**
KNL				IAML			14 49 57.0	
	comp=N,18μm,0.7s							
PRK	**Paraskevi**	**1.18**	**169**	P		**Pb**	**14 49 37.7**	**-0.6**
PRK				S		**Sn**	**14 49 53.9**	**-1.2**
	comp=N,23μm,0.8s							
PRK	**Paraskevi**	**1.18**	**169**	P		**Pg**	**14 49 38.4**	**+0.2**
PRK				S		**Sn**	**14 49 54.2**	**-0.9**
PRK				AML	AML		14 49 57.0	
	comp=E,64991μm,0.9s							
PRK				AML	AML		14 49 59.8	
	comp=N,32902μm,1.0s							
SIGR	**SIGRI**	**1.20**	**185**	P		**Pb**	**14 49 37.3**	**-1.4**
SIGR				S		**Sn**	**14 49 54.4**	**-1.1**
	comp=N,35μm,0.8s							
SIGR	**SIGRI**	**1.20**	**185**	P		**Pb**	**14 49 37.3**	**-1.4**
SIGR				S		**Sb**	**14 49 53.6**	**-0.9**
SIGR				AML	AML		14 49 55.6	
SIGR				AML	AML		14 49 58.2	
	comp=E,37727μm,0.6s							
SIGR	**SIGRI**	**1.20**	**185**	PN		**Pb**	**14 49 37.7**	**-1.0**
AYVA	**Ayvalik**	**1.23**	**154**	*i* P		**Pg**	**14 49 38.8**	**-0.2**
AYVA				*i* S		**Sb**	**14 49 53.1**	**-2.1**
AYVA				IAML			14 50 06.0	
	comp=E,16μm,0.9s							
MRMT	**Marmara Adasi**	**1.24**	**81**	PN		**Pn**	**14 49 37.6**	**-1.8**
MRMT				SN		**Sn**	**14 49 57.4**	**+0.9**
KAVA	**Kavala**	**1.27**	**298**	P		**Pn**	**14 49 38.7**	**-1.0**
KAVA				S		**Sb**	**14 49 55.6**	**-0.8**
	comp=E,9μm,0.4s							
KAVA	**Kavala**	**1.27**	**298**	P		**Pn**	**14 49 38.7**	**-1.0**
KAVA				S		**Sn**	**14 49 56.1**	**-1.0**
KAVA				AML	AML		14 49 59.3	
	comp=E,21076μm,0.4s							
KAVA				AML	AML		14 50 02.1	
	comp=N,14682μm,0.6s							
TKR	**Tekirdag**	**1.31**	**63**	PN		**Pb**	**14 49 40.2**	**-0.3**
KDZ	**Kurdzhali**	**1.31**	**341**	*i* P		**Pn**	**14 49 39.7**	**-0.7**
KDZ	**Kurdzhali**	**1.31**	**341**	PN		**Pn**	**14 49 39.8**	**-0.7**
KVLA	**Kavala**	**1.33**	**294**	P		**Pn**	**14 49 39.4**	**-1.2**
KVLA				S		**Sb**	**14 49 56.7**	**-1.4**
KVLA				AML	AML		14 50 00.6	
	comp=N,26437μm,0.5s							
KVLA				AML	AML		14 50 00.8	
	comp=E,23683μm,0.4s							
GONE	**Gonen-Balikesi**	**1.35**	**105**	PN		**Pg**	**14 49 41.3**	**0.0**
BALY	**Balya**	**1.42**	**118**	*i* P		**Pn**	**14 49 41.4**	**-0.5**
BALY				*i* S		**Sn**	**14 49 59.0**	**-2.0**
BALY				IAML			14 50 03.0	
	comp=N,7μm,0.7s							
BALY				IAML			14 50 14.0	
	comp=E,6μm,1.0s							
EDC	**Edincik**	**1.43**	**92**	PN		**Pb**	**14 49 42.3**	**-0.3**
CRLT	**Corlu**	**1.51**	**61**	PN		**Pb**	**14 49 43.5**	**-0.4**
DKLI	**Dikili**	**1.51**	**152**	PN		**Pb**	**14 49 43.1**	**-0.8**
OUR	**Ouranopolis**	**1.54**	**268**	P		**Pn**	**14 49 42.0**	**-1.4**
OUR	**Ouranopolis**	**1.54**	**268**	P		**Pn**	**14 49 42.2**	**-1.3**
OUR				AML	AML		14 50 08.2	
	comp=N,26957μm,0.4s							
OUR				AML	AML		14 50 08.5	
	comp=E,37020μm,0.6s							
OUR	**Ouranopolis**	**1.54**	**268**	PN		**Pn**	**14 49 42.1**	**-1.4**
EDRB	**Edirne**	**1.54**	**21**	P		**Pn**	**14 49 42.6**	**-1.0**
EDRB				S		**Sn**	**14 50 03.2**	**-0.8**
	comp=E,7μm,0.7s							
EDRB	**Edirne**	**1.54**	**21**	PN		**Pb**	**14 49 44.0**	**-0.5**
RZN	**Rozhen**	**1.60**	**323**	*i* P		**Pn**	**14 49 44.1**	**-0.4**
KIRK	**Kırklareli**	**1.60**	**31**	*i* P		**Pn**	**14 49 43.3**	**-1.1**
KIRK				IAML			14 50 12.0	
	comp=N,2μm,1.1s							
BOTS	**Marmara Eregli**	**1.62**	**68**	PN		**Pb**	**14 49 45.2**	**-0.6**
BALB	**Balikesir**	**1.64**	**117**	PN		**Pb**	**14 49 45.1**	**-1.1**
ZEDA	**zmir-Bergama**	**1.67**	**150**	*i* P		**Pb**	**14 49 45.6**	**-1.0**
ZEDA				*i* S		**Sb**	**14 50 07.8**	**-0.1**
ZEDA				IAML			14 50 19.0	
	comp=N,4μm,0.9s							
ZEDA				IAML			14 50 19.0	
	comp=E,3μm,0.8s							
DIM	**Dimitrovgrad**	**1.67**	**348**	P		**Pn**	**14 49 45.0**	**-0.4**
PHSR	**Pinarhisar**	**1.68**	**43**	PN		**Pb**	**14 49 45.9**	**-0.9**
STEP	**BALIKESIR_Sava**	**1.68**	**127**	*i* P		**Pb**	**14 49 45.6**	**-1.3**
STEP				*i* S		**Sg**	**14 50 09.7**	**+0.2**
STEP				IAML			14 50 20.0	
	comp=N,8μm,1.0s							
STEP				IAML			14 50 25.0	
	comp=E,7μm,0.8s							
KCTX	**Karacabey (Bur**	**1.81**	**94**	PN		**Pb**	**14 49 47.7**	**-1.4**
PAIG	**Paliouri**	**1.84**	**255**	P		**Pn**	**14 49 45.7**	**-1.9**
PAIG	**Paliouri**	**1.84**	**255**	P		**Pn**	**14 49 46.0**	**-1.6**
KRBN	**Karaburun**	**1.87**	**166**	PN		**Pn**	**14 49 48.0**	**0.0**
SLVT	**Silivri**	**1.87**	**63**	PN		**Pb**	**14 49 48.6**	**-1.5**
SKY	**Skiros Island**	**1.89**	**216**	P		**Pn**	**14 49 46.7**	**-1.7**
SKY	**Skiros Island**	**1.89**	**216**	P		**Pn**	**14 49 47.1**	**-1.3**
SKY				AML	AML		14 50 23.5	
	comp=N,13311μm,0.9s							
SKY				AML	AML		14 50 23.7	
	comp=E,12511μm,0.6s							
PSRA	**Psara**	**1.90**	**190**	P		**Pn**	**14 49 48.6**	**+0.2**
PSRA				AML	AML		14 50 20.4	
	comp=E,7556μm,0.5s							
PSRA				AML	AML		14 50 21.7	
	comp=N,7046μm,0.4s							
PLG	**Polygyros**	**1.94**	**270**	P		**Pn**	**14 49 47.9**	**-1.2**
PLG				S		**Sn**	**14 50 13.3**	**-0.7**
	comp=N,10μm,0.6s							
PLG	**Polygyros**	**1.94**	**270**	P		**Pn**	**14 49 48.0**	**-1.2**
PLG				AML	AML		14 50 19.2	
	comp=N,20121μm,0.6s							
PLG				AML	AML		14 50 19.7	
	comp=E,18602μm,0.6s							
PLD	**Plovdiv**	**1.95**	**331**	P		**Pn**	**14 49 49.2**	**+0.1**
PLD	**Plovdiv**	**1.95**	**331**	PN		**Pn**	**14 49 49.3**	**+0.1**
SRS	**Serrai**	**1.95**	**292**	P		**Pn**	**14 49 48.2**	**-1.0**
SRS	**Serrai**	**1.95**	**292**	P		**Pn**	**14 49 48.3**	**-0.9**
SRS				AML	AML		14 50 21.8	
	comp=E,20576μm,0.6s							
SRS				AML	AML		14 50 21.8	
	comp=N,13522μm,0.6s							
CHOS	**Chios island**	**2.02**	**179**	P		**Pn**	**14 49 49.4**	**-0.8**
CHOS	**Chios island**	**2.02**	**179**	P		**Pn**	**14 49 49.5**	**-0.8**
CHOS				S		**Sn**	**14 50 14.9**	**-1.0**
CHOS				AML	AML		14 50 27.0	
	comp=E,10885μm,0.7s							
CHOS				AML	AML		14 50 36.9	
	comp=N,8847μm,1.0s							
CHOS	**Chios island**	**2.02**	**179**	PN		**Pn**	**14 49 49.5**	**-0.8**
CTYL	**Yalikoy Yolu**	**2.04**	**58**	PN		**Pn**	**14 49 50.7**	**+0.3**
AOS	**Alonnisos**	**2.05**	**233**	P		**Pn**	**14 49 48.8**	**-1.7**
AOS	**Alonnisos**	**2.05**	**233**	P		**Pn**	**14 49 48.6**	**-1.8**
AOS				AML	AML		14 50 33.0	
	comp=N,9959μm,0.7s							
AOS				AML	AML		14 50 33.4	
	comp=E,10763μm,0.8s							
AOS	**Alonnisos**	**2.05**	**233**	PN		**Pn**	**14 49 50.3**	**-0.2**
SOH	**Sokhos**	**2.05**	**282**	P		**Pn**	**14 49 49.5**	**-1.1**
DURS	**Dursunbey**	**2.07**	**112**	*i* P		**Pn**	**14 49 50.9**	**0.0**
DURS				*i* S		**Sn**	**14 50 16.3**	**-0.8**
DURS				IAML			14 50 22.0	
	comp=N,4μm,0.8s							
DURS				IAML			14 50 32.0	
	comp=E,2μm,0.7s							
CTKS	**Kestanelik-??a**	**2.08**	**66**	PN		**Pb**	**14 49 51.7**	**-1.9**
MMB	**Musomiste**	**2.08**	**305**	*i* P		**Pn**	**14 49 50.1**	**-0.9**
AKHS	**Akhisar**	**2.08**	**137**	*i* P		**Pn**	**14 49 51.6**	**+0.6**
AKHS				IAML			14 50 43.0	
	comp=E,1μm,1.6s							
AKS	**Akhisar**	**2.08**	**137**	PN		**Pn**	**14 49 51.3**	**+0.4**
CESE	**eme**	**2.09**	**173**	PN		**Pn**	**14 49 50.7**	**-0.4**
JMB	**Yambol**	**2.10**	**12**	PN		**Pb**	**14 49 52.7**	**-1.3**
URLA	**Izmir**	**2.10**	**167**	PN		**Pn**	**14 49 51.2**	**-0.1**
URLA	**Izmir**	**2.10**	**167**	*i* P		**Pn**	**14 49 50.8**	**-0.5**
URLA				IAML			14 50 36.0	
	comp=N,2μm,0.9s							
URLA				IAML			14 50 46.0	
	comp=E,2μm,0.9s							
YKBL	**Yakuplu-Istanb**	**2.12**	**73**	PN		**Pb**	**14 49 52.4**	**-1.8**
AVCI	**Avcilar-stanb**	**2.16**	**73**	PN		**Pb**	**14 49 53.1**	**-1.8**
DST	**Dursunbey**	**2.17**	**111**	PN		**Pn**	**14 49 52.9**	**+0.6**
BLCB	**Balcova**	**2.18**	**158**	P		**Pn**	**14 49 51.9**	**-0.4**
BLCB	**Balcova**	**2.18**	**158**	PN		**Pn**	**14 49 52.7**	**+0.4**
ARMT	**Armutlu**	**2.19**	**85**	PN		**Pn**	**14 49 53.3**	**+0.8**
MDNY	**Mudanya-Bursa**	**2.21**	**90**	PN		**Pb**	**14 49 53.7**	**-2.1**
HORT	**Hortiatis**	**2.21**	**276**	P		**Pn**	**14 49 51.8**	**-1.1**
HORT				S		**Sn**	**14 50 18.9**	**-1.7**
	comp=E,5μm,0.6s							
HORT	**Hortiatis**	**2.21**	**276**	P		**Pn**	**14 49 51.8**	**-1.1**
HORT	**Hortiatis**	**2.21**	**276**	PN		**Pn**	**14 49 52.3**	**-0.6**
HVHR	**Bakirkoy-Istan**	**2.24**	**75**	PN		**Pb**	**14 49 54.2**	**-2.1**
BGKT	**Bogazkoy**	**2.25**	**69**	PN		**Pb**	**14 49 54.5**	**-2.0**
ORLT	**Orhaneli**	**2.25**	**98**	PN		**Pn**	**14 49 53.8**	**+0.4**
GOMA	**Golmarmara-Man**	**2.26**	**138**	PN		**Pn**	**14 49 53.9**	**+0.5**
KYMI	**Kymi, Euboea I**	**2.30**	**220**	P		**Pn**	**14 49 52.4**	**-1.6**
KYMI	**Kymi, Euboea I**	**2.30**	**220**	P		**Pn**	**14 49 52.3**	**-1.7**
KYMI				AML	AML		14 50 33.4	
	comp=N,6801μm,0.7s							
KYMI				AML	AML		14 50 40.6	
	comp=E,4711μm,0.7s							
SKIA	**Skiathos**	**2.31**	**238**	P		**Pn**	**14 49 52.1**	**-2.0**
SKIA				S		**Sn**	**14 50 21.2**	**-1.7**
	comp=E,10μm,0.8s							
SKIA	**Skiathos**	**2.31**	**238**	P		**Pn**	**14 49 52.3**	**-1.8**
SKIA				AML	AML		14 50 33.0	
	comp=N,21585μm,0.7s							
SKIA				AML	AML		14 50 33.4	
	comp=E,20465μm,0.9s							
THE	**Thessaloniki**	**2.32**	**276**	P		**Pn**	**14 49 53.8**	**-0.4**
THE				S		**Sn**	**14 50 22.7**	**-0.4**
	comp=E,3μm,0.8s							
THE	**Thessaloniki**	**2.32**	**276**	P		**Pn**	**14 49 53.3**	**-0.9**
THE				AML	AML		14 50 32.9	
	comp=E,3511μm,0.6s							
THE				AML	AML		14 50 33.2	
	comp=N,6985μm,1.1s							
XOR	**Xorichti**	**2.39**	**245**	P		**Pn**	**14 49 53.1**	**-2.2**
XOR	**Xorichti**	**2.39**	**245**	P		**Pn**	**14 49 53.5**	**-1.8**
NEO	**Neokhori**	**2.40**	**244**	P		**Pn**	**14 49 53.3**	**-2.1**
NEO	**Neokhori**	**2.40**	**244**	P		**Pn**	**14 49 53.3**	**-2.1**
ISK	**Istanbul-Kandi**	**2.42**	**73**	P		**Pn**	**14 49 54.3**	**-1.3**
ISK	**Istanbul-Kandi**	**2.42**	**73**	PN		**Pn**	**14 49 56.8**	**+1.2**
KAVV	**Kandilli-Istan**	**2.42**	**73**	PN		**Pn**	**14 49 56.9**	**+1.3**
ULDT	**Uludag**	**2.42**	**95**	*i* P		**Pb**	**14 49 57.5**	**-2.1**
ULDT				*i* S		**Sg**	**14 50 31.5**	**-1.7**
ULDT				IAML			14 50 41.0	
	comp=E,2μm,0.7s							
ULDT				IAML			14 50 42.0	
	comp=N,2μm,0.9s							
GEMT	**Gemlik**	**2.44**	**88**	PN		**Pn**	**14 49 57.0**	**+1.1**
IGD	**Bursa**	**2.46**	**92**	*i* P		**Pn**	**14 49 54.5**	**-1.6**
IGD				*i* S		**Sb**	**14 50 31.5**	**+0.9**
IGD				IAML			14 51 06.0	
	comp=E,640nm,1.0s							
IGD				IAML			14 51 07.0	
	comp=N,867nm,1.4s							
KLYT	**Kilyos**	**2.46**	**69**	PN		**Pn**	**14 49 57.4**	**+1.2**
KNT	**Kendrikon**	**2.47**	**289**	P		**Pn**	**14 49 55.7**	**-0.6**
KNT				S		**Sn**	**14 50 25.6**	**-1.2**
	comp=N,3μm,0.7s							
KNT	**Kendrikon**	**2.47**	**289**	P		**Pn**	**14 49 55.9**	**-0.4**
KNT				AML	AML		14 50 36.9	
	comp=E,6060μm,0.6s							
KNT				AML	AML		14 50 38.4	
	comp=N,6967μm,0.6s							
KNT	**Kendrikon**	**2.47**	**289**	PN		**Pn**	**14 49 56.6**	**+0.3**
DEMI	**Demirci**	**2.51**	**122**	*i* P		**Pn**	**14 49 57.4**	**+0.5**
DEMI				IAML			14 50 52.0	
	comp=E,2μm,0.8s							
DEMI				IAML			14 50 54.0	
	comp=N,2μm,1.1s							
MRKA	**Markates**	**2.52**	**228**	P		**Pn**	**14 49 55.3**	**-1.7**
MRKA	**Markates**	**2.52**	**228**	P		**Pn**	**14 49 55.5**	**-1.6**
MRKA				AML	AML		14 50 50.9	
	comp=E,5930μm,0.7s							
MRKA				AML	AML		14 50 51.6	
	comp=N,6212μm,0.9s							
TUZL	**Tuzla-Istanbul**	**2.52**	**80**	PN		**Pb**	**14 49 58.7**	**-2.5**
PGB	**Panagyurishte**	**2.54**	**328**	P		**Pn**	**14 49 56.6**	**-0.7**
YLV	**Yalova**	**2.58**	**85**	PN		**Pn**	**14 49 58.8**	**+0.9**
YLVH	**Yalova**	**2.59**	**83**	PN		**Pn**	**14 49 58.5**	**+0.6**
KKB	**Krupnik**	**2.63**	**304**	P		**Pn**	**14 49 58.0**	**-0.6**
SMAA	**Simav-Kutahya**	**2.65**	**119**	PN		**Pn**	**14 49 59.6**	**+0.7**
SIMA	**Simav-Kutahya**	**2.66**	**119**	PN		**Pn**	**14 49 59.8**	**+0.8**
KARY	**Karystos**	**2.67**	**207**	P		**Pn**	**14 49 57.5**	**-1.5**
KARY	**Karystos**	**2.67**	**207**	P		**Pn**	**14 49 57.7**	**-1.3**
KARY				AML	AML		14 50 51.2	
	comp=N,1554μm,0.9s							
KARY				AML	AML		14 51 02.9	
	comp=E,2262μm,2.6s							
LIT	**Litokhoron**	**2.70**	**265**	P		**Pn**	**14 49 58.0**	**-1.5**
LIT	**Litokhoron**	**2.70**	**265**	P		**Pn**	**14 49 58.1**	**-1.5**
LIT	**Litokhoron**	**2.70**	**265**	P		**Pn**	**14 49 58.0**	**-1.5**
LIT	**Litokhoron**	**2.70**	**265**			**Pn**	**14 49 58.0**	**-1.5**
VAY	**Valandovo**	**2.75**	**290**	*e*Pn		**Pn**	**14 50 00.1**	**-0.1**
VAY				*e*Sn		**Sg**	**14 50 43.8**	**0.0**
VAY	**Valandovo**	**2.75**	**290**	*i* Pn		**Pn**	**14 50 00.0**	**-0.1**
VAY	**Valandovo**	**2.75**	**290**	*i* Pn		**Pn**	**14 50 00.0**	**-0.1**
SMG	**Samos**	**2.78**	**166**	P		**Pn**	**14 50 00.1**	**-0.5**
SMG	**Samos**	**2.78**	**166**	P		**Pn**	**14 49 60.0**	**-0.6**
KULA	**Kula-Manisa**	**2.80**	**132**	P		**Pn**	**14 50 00.7**	**-0.3**
DION	**Dionisos Attik**	**2.83**	**215**	P		**Pn**	**14 49 59.8**	**-1.4**
DION	**Dionisos Attik**	**2.83**	**215**	P		**Pn**	**14 49 59.8**	**-1.4**
PVL	**Pavlikeni**	**2.84**	**350**	P		**Pn**	**14 50 00.8**	**-0.7**
SZH	**Strazhica**	**2.85**	**359**	P		**Pn**	**14 50 01.5**	**-0.1**
GCAM	**G?zelcaml?**	**2.88**	**160**	PN		**Pn**	**14 50 02.5**	**+0.6**
GCAM	**G?zelcaml?**	**2.88**	**160**	*i* P		**Pn**	**14 50 01.9**	**+0.1**
GCAM				IAML			14 50 59.0	
	comp=N,923nm,1.3s							
GCAM				IAML			14 51 04.0	
	comp=E,676nm,1.1s							
PTL	**Penteli**	**2.88**	**216**	P		**Pn**	**14 50 00.5**	**-1.5**
PTL	**Penteli**	**2.88**	**216**	P		**Pn**	**14 50 00.4**	**-1.6**
PTL				AML	AML		14 50 59.4	
	comp=N,3390μm,0.8s							
PTL				AML	AML		14 51 07.4	
	comp=E,3017μm,1.1s							
LKR	**Lokris**	**2.91**	**234**	P		**Pn**	**14 50 00.6**	**-1.7**
KTI	**Kastanea**	**2.96**	**271**	P		**Pn**	**14 50 02.1**	**-1.1**
ATHU	**Athens Univers**	**2.98**	**216**	P		**Pn**	**14 50 02.1**	**-1.3**
GDZ	**Gediz**	**3.00**	**115**	*i* P		**Pn**	**14 50 03.0**	**-0.7**
GDZ				IAML			14 51 01.0	
	comp=E,463nm,0.8s							
GDZ				IAML			14 51 03.0	
	comp=N,874nm,1.5s							
ATH	**Athens Observa**	**3.01**	**217**	P		**Pn**	**14 50 02.2**	**-1.5**
VTS	**Vitosha**	**3.02**	**318**	*e*Pn		**Pn**	**14 50 04.2**	**+0.1**
VTS				*e*Sn		**Sg**	**14 50 51.0**	**-1.6**
VTS	**Vitosha**	**3.02**	**318**	⇓P		**Pn**	**14 50 04.5**	**+0.4**
VTS	**Vitosha**	**3.02**	**318**	*i* P		**Pn**	**14 50 04.3**	**+0.1**
VTS	**Vitosha**	**3.02**	**318**	P		**Pn**	**14 50 04.2**	**+0.1**
VTS	**Vitosha**	**3.02**	**318**			**Pn**	**14 50 04.2**	**+0.1**
VIL2	**Platees**	**3.05**	**225**	P		**Pn**	**14 50 03.1**	**-1.2**
AXAR	**Agios Charalam**	**3.06**	**239**	P		**Pn**	**14 50 03.3**	**-1.1**
AXAR	**Agios Charalam**	**3.06**	**239**	P		**Pn**	**14 50 03.2**	**-1.1**
VILL	**Villia**	**3.06**	**224**	P		**Pn**	**14 50 03.1**	**-1.4**
VLY	**Voula,Athens**	**3.08**	**214**	P		**Pn**	**14 50 03.4**	**-1.2**
VLY	**Voula,Athens**	**3.08**	**214**	P		**Pn**	**14 50 02.9**	**-1.7**
PLVB	**Pleven**	**3.14**	**341**	⇓P		**Pn**	**14 50 05.7**	**+0.1**
PLVB	**Pleven**	**3.14**	**341**			**Pn**	**14 50 05.7**	**+0.1**
AGG	**Agios Georgios**	**3.15**	**245**	P		**Pn**	**14 50 04.2**	**-1.4**
AGG	**Agios Georgios**	**3.15**	**245**	P		**Pn**	**14 50 04.2**	**-1.4**
AGG	**Agios Georgios**	**3.15**	**245**	P		**Pn**	**14 50 03.9**	**-1.7**
AGG	**Agios Georgios**	**3.15**	**245**			**Pn**	**14 50 03.9**	**-1.7**
THL	**Klokotos Trika**	**3.17**	**256**	P		**Pn**	**14 50 04.8**	**-1.1**
THL	**Klokotos Trika**	**3.17**	**256**	P		**Pn**	**14 50 04.8**	**-1.1**
RAZG	**Razgrad**	**3.17**	**7**	⇑P		**Pn**	**14 50 06.5**	**+0.5**
RAZG	**Razgrad**	**3.17**	**7**			**Pn**	**14 50 06.5**	**+0.5**
PROD	**Prodromos**	**3.22**	**229**	P		**Pn**	**14 50 04.8**	**-1.8**
KZN

ELL	**Elmali**	**4.77**	**139**			**Pn**	**14 50 30.0**	**+1.9**
KARP	**Karpathos**	**4.94**	**169**			**Pn**	**14 50 29.9**	**-0.4**
CFR	**Carcaliu**	**5.02**	**18**	⇑	P	**Pn**	**14 50 32.9**	**+1.6**
CFR	**Carcaliu**	**5.02**	**18**		P	**Pn**	**14 50 32.9**	**+1.6**
CFR	**Carcaliu**	**5.02**	**18**			**Pn**	**14 50 32.9**	**+1.6**
PVY	**Plav**	**5.03**	**298**	⇓	*i* Pn	**Pn**	**14 50 31.5**	**-0.1**
PVY					*i* Sn	**Sn**	**14 51 30.7**	**+0.6**
ARR	**Arges**	**5.05**	**349**	⇓	P	**Pn**	**14 50 31.6**	**-0.3**
ARR	**Arges**	**5.05**	**349**			**Pn**	**14 50 31.6**	**-0.3**
MLR	**Muntele Rosu**	**5.08**	**360**		Pn	**Pn**	**14 50 33.4**	**+1.2**
	comp=E,11nm,0.3s,baz=203,slow=3.6,SNR=243							
MLR	**Muntele Rosu**	**5.08**	**360**	⇑	P	**Pn**	**14 50 33.7**	**+1.4**
MLR	**Muntele Rosu**	**5.08**	**360**			**Pn**	**14 50 33.9**	**+1.6**
KUBS	**Kucevo**	**5.12**	**323**		*e*Pn	**Pn**	**14 50 31.3**	**-1.4**
KUBS					*e*Sn	**Sb**	**14 51 40.4**	**-6.8**
BISRR	**Bisoca**	**5.16**	**6**	⇓	P	**Pn**	**14 50 36.0**	**+2.7**
BISRR	**Bisoca**	**5.16**	**6**			**Pn**	**14 50 36.0**	**+2.7**
HERR	**Herculane**	**5.19**	**331**	⇓	P	**Pn**	**14 50 33.1**	**-0.5**
HERR	**Herculane**	**5.19**	**331**			**Pn**	**14 50 33.1**	**-0.5**
IVA	**Berane**	**5.19**	**300**	⇓	*i* Pn	**Pn**	**14 50 33.7**	**-0.1**
IVA					*i* Sn	**Sn**	**14 51 34.3**	**+0.3**
IDI	**Anoyia**	**5.19**	**190**		Pn	**Pn**	**14 50 33.9**	**+0.1**
	comp=E,1.4nm,0.3s,baz=355,slow=16,SNR=10							
IDI	**Anoyia**	**5.19**	**190**			**Pn**	**14 50 32.6**	**-1.1**
GRUS	**Gruza**	**5.24**	**313**		*e*Pn	**Pn**	**14 50 34.2**	**-0.2**
GRUS					*e*Sn	**Sb**	**14 51 44.1**	**-6.5**
ANTO	**Ankara**	**5.24**	**94**		P	**Pn**	**14 50 34.8**	**+0.3**
ANTO	**Ankara**	**5.24**	**94**			**Pn**	**14 50 34.8**	**+0.3**
SJES	**Sjenica**	**5.32**	**304**		*e*Pn	**Pn**	**14 50 36.1**	**+0.5**
ULC	**Ulcinj**	**5.32**	**289**	⇑	*i* Pn	**Pn**	**14 50 35.8**	**+0.3**
ULC					*i* Sn	**Sn**	**14 51 36.2**	**-1.0**
MDVR	**Moldovita**	**5.39**	**326**	⇑	P	**Pn**	**14 50 36.3**	**-0.2**
MDVR	**Moldovita**	**5.39**	**326**			**Pn**	**14 50 36.3**	**-0.2**
DRME	**Dracevica, Mon**	**5.42**	**291**		*e*Pn	**Pn**	**14 50 38.2**	**+1.3**
DRME	**Dracevica, Mon**	**5.42**	**291**	⇓	*i* Pn	**Pn**	**14 50 37.3**	**+0.4**
DRME					*i* Sn	**Sn**	**14 51 38.5**	**-1.2**
KOME	**Kolasin**	**5.43**	**299**	⇑	*i* Pn	**Pn**	**14 50 37.3**	**+0.2**
KOME					*i* Sn	**Sn**	**14 51 38.7**	**-1.3**
PDG	**Podgorica**	**5.45**	**294**		*e*Pn	**Pn**	**14 50 38.6**	**+1.3**
PDG	**Podgorica**	**5.45**	**294**		*e*Pn	**Pn**	**14 50 39.0**	**+1.7**
PDG	**Podgorica**	**5.45**	**294**			**Pn**	**14 50 38.5**	**+1.2**
TTG	**Podgorica**	**5.45**	**294**	⇓	*i* Pn	**Pn**	**14 50 37.3**	**0.0**
TTG					*i* Sn	**Sn**	**14 51 39.2**	**-1.1**
PLOR	**Plostina**	**5.46**	**5**	⇑	P	**Pn**	**14 50 39.1**	**+1.7**
PLOR	**Plostina**	**5.46**	**5**		P	**Pn**	**14 50 39.1**	**+1.7**
PLOR	**Plostina**	**5.46**	**5**			**Pn**	**14 50 39.1**	**+1.7**
VRI	**Vrincioaia**	**5.48**	**5**	⇑	P	**Pn**	**14 50 39.3**	**+1.6**
VRI	**Vrincioaia**	**5.48**	**5**		P	**Pn**	**14 50 39.3**	**+1.6**
VRI	**Vrincioaia**	**5.48**	**5**			**Pn**	**14 50 39.3**	**+1.6**
GZR	**Gura Zlata**	**5.51**	**336**	⇓	P	**Pn**	**14 50 37.4**	**-0.8**
GZR	**Gura Zlata**	**5.51**	**336**		P	**Pn**	**14 50 37.4**	**-0.8**
GZR	**Gura Zlata**	**5.51**	**336**			**Pn**	**14 50 37.4**	**-0.8**
DOPR	**Dopca**	**5.57**	**356**	⇑	P	**Pn**	**14 50 40.0**	**+1.1**
DOPR	**Dopca**	**5.57**	**356**			**Pn**	**14 50 40.0**	**+1.1**
TRUS	**Trudelj**	**5.62**	**314**		*e*Pn	**Pn**	**14 50 39.1**	**-0.6**
BUM	**Brajici-Budva**	**5.67**	**292**	⇑	*i* Pn	**Pn**	**14 50 40.5**	**+0.2**
BUM					*i* Sn	**Sn**	**14 51 46.0**	**+0.3**
CEME	**Cevo**	**5.72**	**294**	⇓	*i* Pn	**Pn**	**14 50 41.3**	**+0.2**
CEME					*i* Sn	**Sn**	**14 51 47.4**	**+0.2**
PLE	**Pljevlja**	**5.73**	**303**	⇓	*i* Pn	**Pn**	**14 50 41.3**	**+0.1**
PLE					*i* Sn	**Sn**	**14 51 47.2**	**-0.1**
NKY	**Niksic**	**5.77**	**297**	⇑	*i* Pn	**Pn**	**14 50 41.7**	**0.0**
NKY					*i* Sn	**Sn**	**14 51 48.5**	**+0.2**
SCTE	**Santa Cesarea**	**5.77**	**269**			**Pn**	**14 50 41.7**	**0.0**
DIVS	**Divibare**	**5.78**	**312**		*e*Pn	**Pn**	**14 50 41.5**	**-0.4**
DIVS					*e*Sn	**Sb**	**14 51 58.9**	**-7.3**
DIVS	**Divibare**	**5.78**	**312**		*e*Pn	**Pn**	**14 50 41.3**	**-0.6**
DIVS	**Divibare**	**5.78**	**312**			**Pn**	**14 50 41.7**	**-0.1**
NKME	**Niksic**	**5.78**	**296**	⇓	*i* Pn	**Pn**	**14 50 42.0**	**+0.2**
NKME					*i* Sn	**Sn**	**14 51 48.8**	**+0.3**
RUDO	**Rudo**	**5.88**	**305**		*e*Pn	**Pn**	**14 50 42.4**	**-0.8**
BR131	**Keskin Array S**	**5.91**	**94**		P	**Pn**	**14 50 44.4**	**+0.7**
BR131	**Keskin Array S**	**5.91**	**94**			**Pn**	**14 50 44.4**	**+0.7**
BRTR	**Keskin Array B**	**5.91**	**94**		Pn	**Pn**	**14 50 44.0**	**+0.4**
	comp=E,5.6nm,0.3s,baz=266,slow=12,SNR=77							
BRTR					Sn	**Sn**	**14 51 50.3**	**-1.5**
	comp=E,1.6nm,0.3s,baz=100,slow=30,SNR=5.2							
UPM	**Unac-Piva**	**5.99**	**300**		*e*Pn	**Pn**	**14 50 45.8**	**+1.0**
UPM	**Unac-Piva**	**5.99**	**300**	⇓	*i* Pn	**Pn**	**14 50 45.0**	**+0.2**
UPM					*i* Sn	**Sn**	**14 51 53.9**	**+0.1**
BBLS	**Lazići**	**5.99**	**307**		*e*Pn	**Pn**	**14 50 44.8**	**0.0**
BBLS	**Lazići**	**5.99**	**307**		*e*Pn	**Pn**	**14 50 44.5**	**-0.3**
HCY	**Herceg Novi**	**5.99**	**292**		*e*Pn	Pn	14 50 50.1	+5.4
HCY	**Herceg Novi**	**5.99**	**292**	⇑	*i* Pn	**Pn**	**14 50 45.0**	**+0.3**
HCY					*i* Sn	**Sn**	**14 51 53.8**	**+0.1**
BZS	**Buzias**	**6.11**	**330**	⇓	P	**Pn**	**14 50 45.8**	**-0.5**
BZS	**Buzias**	**6.11**	**330**		P	**Pn**	**14 50 45.8**	**-0.5**
BZS	**Buzias**	**6.11**	**330**			**Pn**	**14 50 45.8**	**-0.5**
BRY	**Bratogost**	**6.11**	**296**		*e*Pn	**Pn**	**14 50 48.4**	**+1.9**
BRY	**Bratogost**	**6.11**	**296**	⇑	*i* Pn	**Pn**	**14 50 46.6**	**+0.1**
BRY					*i* Sn	**Sn**	**14 51 56.8**	**0.0**
TESR	**Tescani**	**6.12**	**4**	⇑	P	**Pn**	**14 50 47.4**	**+1.0**
TESR	**Tescani**	**6.12**	**4**			**Pn**	**14 50 47.4**	**+1.0**
TREB	**Trebinje**	**6.18**	**294**		*e*Pn	**Pn**	**14 50 49.8**	**+2.5**
DBRK	**Dubrovnik**	**6.30**	**294**		*i* P	**Pn**	**14 50 50.2**	**+1.2**
TEKS	**Tekeris**	**6.32**	**313**		*e*Pn	**Pn**	**14 50 47.6**	**-1.5**
TEKS	**Tekeris**	**6.32**	**313**		*e*Pn	**Pn**	**14 50 47.6**	**-1.6**
HAPS	**Han Pijesak,BI**	**6.38**	**307**		*e*Pn	**Pn**	**14 50 49.3**	**-0.9**
FRGS	**Fruska Gora**	**6.57**	**318**		*e*Pn	**Pn**	**14 50 51.0**	**-1.7**
FRGS	**Fruska Gora**	**6.57**	**318**		*e*Pn	**Pn**	**14 50 51.2**	**-1.5**
STON	**Ston**	**6.68**	**294**		*e*Pn	**Pn**	**14 50 55.2**	**+1.1**
STON	**Ston**	**6.68**	**294**		*i* P	**Pn**	**14 50 56.4**	**+2.3**
DRGR		**6.81**	**341**	⇑	P	**Pn**	**14 50 55.3**	**-0.7**
DRGR		**6.81**	**341**		P	**Pn**	**14 50 55.3**	**-0.7**
DRGR		**6.81**	**341**			**Pn**	**14 50 55.3**	**-0.7**
KIS	**Kishinev**	**6.89**	**16**		*e*P	**Pn**	**14 50 58.0**	**+0.9**
KIS					*i* S	**Sn**	**14 52 16.0**	**+0.2**
KIS					LRM	MLR	14 56 32.0	
	comp=E,3μm,10.0s							
KIS	**Kishinev**	**6.89**	**16**		*e*P	**Pn**	**14 50 58.0**	**+0.9**
KIS					*e*S	**Sn**	**14 52 16.0**	**+0.2**
KIS					MLR	MLR		
	comp=N,3μm,10.0s							
BAI	**Bari**	**6.95**	**279**	⇑	*i* Pn	**Pn**	**14 50 59.0**	**+1.1**
SEV	**Sevastopol'**	**7.02**	**51**		*e*P	**Pn**	**14 50 57.5**	**-1.2**
SEV					*e*S	**Sn**	**14 52 13.9**	**-5.0**
SG1	**Sgolgore (BA)**	**7.10**	**276**	⇑	*i* Pn	**Pn**	**14 50 59.3**	**-0.6**
TIP	**Timpagrande**	**7.22**	**263**			**Pn**	**14 51 01.4**	**-0.2**
BUR08	**Bucovina Ar. S**	**7.25**	**356**			**Pn**	**14 51 02.9**	**+0.8**
RICI	**Ricice**	**7.29**	**298**		P	**Pn**	**14 51 03.5**	**+1.0**
MAKA	**Makarska**	**7.29**	**296**		*i* P	**Pn**	**14 51 03.5**	**+1.0**
SIM	**Simferopol'**	**7.51**	**50**		*e*P	**Pn**	**14 51 05.0**	**-0.5**
SIM					*e*S	**Sn**	**14 52 24.9**	**-6.1**
ALU	**Alushta**	**7.53**	**53**		*e*P	**Pn**	**14 51 06.9**	**+1.1**
ALU					*e*S	**Sn**	**14 52 29.4**	**-2.2**
MGRS	**Mrkonjic Grad**	**7.71**	**304**		*e*Pn	**Pn**	**14 51 09.7**	**+1.4**
BLY	**Banja Luka**	**7.81**	**307**		*e*Pn	**Pn**	**14 51 09.9**	**+0.2**
SGRT	**San Giovanni R**	**7.86**	**283**			**Pn**	**14 51 09.3**	**-1.1**
MORH	**Mrgy, Hungar**	**7.89**	**320**		*e*Pn	**Pn**	**14 51 09.6**	**-1.2**
CSS	**Mathiatis**	**7.96**	**131**			**Pn**	**14 51 14.4**	**+2.6**
KIJV	**Kijevo**	**7.97**	**300**		*i* P	**Pn**	**14 51 14.0**	**+2.1**
SUDU	**Sudak**	**8.01**	**53**		*e*P	**Pn**	**14 51 12.3**	**0.0**
SUDU					*e*S	**Sn**	**14 52 41.4**	**-1.8**
CEL	**Celeste**	**8.12**	**258**			**Pn**	**14 51 13.5**	**-0.4**
ZIRJ	**Zirje**	**8.36**	**296**		*i* P	**Pn**	**14 51 17.7**	**+0.6**
MORI	**Morici**	**8.38**	**298**		*i* P	**Pn**	**14 51 18.3**	**+0.8**
MOSL	**Moslavina**	**8.53**	**311**		*i* P	**Pn**	**14 51 19.4**	**-0.1**
UZH	**Uzhgorod**	**8.63**	**343**		*e*P	Pn	14 51 25.0	+4.1
UZH					*e*S	**Sn**	**14 53 04.5**	**+6.0**
UZH					MLR	MLR		
	comp=N,290nm,12.0s							
UZH					MLR	MLR		
	comp=E,150nm,12.0s							
UZH					MLR	MLR		
	comp=Z,230nm,12.0s							
PSZ	**Piszkesteto**	**8.69**	**332**		P	**Pn**	**14 51 20.7**	**-1.1**
PSZ	**Piszkesteto**	**8.69**	**332**			**Pn**	**14 51 20.7**	**-1.1**
PAOL	**Paolisi**	**8.70**	**278**			**Pn**	**14 51 21.7**	**-0.3**
DUGI	**Dugi Otok**	**8.87**	**297**		*i* P	**Pn**	**14 51 24.2**	**0.0**
KECS	**Kecovo**	**8.98**	**336**		*e*P	**Pn**	**14 51 25.9**	**+0.3**
KECS	**Kecovo**	**8.98**	**336**		*e*PN	**Pn**	**14 51 25.8**	**+0.2**
KALN	**Kalnik**	**9.00**	**313**		*i* P	**Pn**	**14 51 25.4**	**-0.6**
BEHE	**Becsehely**	**9.03**	**315**		*e*Pn	**Pn**	**14 51 29.9**	**+3.5**
PTJ	**Puntijarka**	**9.15**	**310**		P	**Pn**	**14 51 27.8**	**-0.4**
INTR	**Introdacqua**	**9.25**	**284**			**Pn**	**14 51 28.5**	**-1.0**
GCIS	**Gornji Cirnik**	**9.33**	**309**		*i* Pn	**Pn**	**14 51 30.4**	**-0.1**
CRES	**Cresnjev**	**9.41**	**309**		*e*Pn	**Pn**	**14 51 31.7**	**0.0**
CRES	**Cresnjev**	**9.41**	**309**		*e*Pn	**Pn**	**14 51 30.4**	**-1.2**
VAE	**Valguarnera**	**9.48**	**256**		LR	LR	14 55 22.8	
	comp=Z,167nm,19.6s,baz=111,slow=38							
ANN	**Anapa**	**9.51**	**59**		*e*P	**Pn**	**14 51 33.1**	**+0.2**
ANN					*e*S	**Sn**	**14 53 21.7**	**+1.7**
ANN					pmax	pmax		
	comp=Z,23nm,1.1s							
ANN					MLR	MLR		
	comp=E,141nm,7.0s							
ANN					MLR	MLR		
	comp=Z,283nm,9.0s							
ANN					MLR	MLR		
	comp=N,200nm,8.0s							
LVV	**L'vov**	**9.51**	**352**		*e*P	**Pn**	**14 51 35.8**	**+2.9**
LVV					*e*S	Sn	14 53 28.5	+8.4
LVV					MLR	MLR		
	comp=N,1μm,10.0s							
LVV					MLR	MLR		
	comp=E,2μm,10.0s							
LVV					MLR	MLR		
	comp=Z,1μm,9.0s							
LEGS	**Legarje**	**9.56**	**309**		*e*Pn	**Pn**	**14 51 33.5**	**-0.1**
VYHS	**Vyhne**	**9.56**	**330**		*e*P	**Pn**	**14 51 32.7**	**-0.9**
VYHS	**Vyhne**	**9.56**	**330**		*e*PN	**Pn**	**14 51 32.7**	**-0.9**
AQU	**L'Aquila**	**9.66**	**286**		*e*Pn	**Pn**	**14 51 37.7**	**+2.6**
RIY	**Rijeka**	**9.77**	**304**		*e*Pn	**Pn**	**14 51 37.5**	**+1.0**
NRCA	**Norcia**	**9.94**	**288**			**Pn**	**14 51 38.9**	**-0.1**
CEY	**Cerknica**	**9.99**	**306**		*e*Pn	**Pn**	**14 51 39.8**	**+0.2**
ZST	**Bratislava**	**10.05**	**324**		*e*P	**Pn**	**14 51 38.4**	**-2.0**
ZST	**Bratislava**	**10.05**	**324**		*e*PN	**Pn**	**14 51 38.4**	**-2.0**
LJU	**Ljubljana**	**10.08**	**308**		*e*Pn	**Pn**	**14 51 40.3**	**-0.5**
MODS	**Modra-Piesok**	**10.11**	**325**		*e*P	**Pn**	**14 51 39.7**	**-1.4**
MODS	**Modra-Piesok**	**10.11**	**325**		*e*PN	**Pn**	**14 51 39.7**	**-1.4**
SOKA	**Soboth**	**10.12**	**312**		*e*Pn	**Pn**	**14 51 40.8**	**-0.6**
	comp=Z,7.2nm,0.8s,SNR=6.6							
WDD	**Wied Dalam**	**10.12**	**247**			**Pn**	**14 51 40.0**	**-1.4**
CORL	**Corleone**	**10.17**	**260**			**Pn**	**14 51 41.7**	**-0.4**
ARSA	**Arzberg**	**10.19**	**316**		*e*Pn	**Pn**	**14 51 42.8**	**+0.5**
	comp=Z,9.2nm,0.5s,SNR=14							
JAVC	**Velka Javorina**	**10.31**	**328**		*e*PN	**Pn**	**14 51 44.0**	**0.0**
JAVC					*e*SN	**Sn**	**14 53 43.6**	**+3.7**
CONA	**Conrad Observa**	**10.45**	**319**		*e*Pn	**Pn**	**14 51 46.1**	**+0.1**
	comp=Z,159nm,0.0s,SNR=30							
AKASG	**Malin Array Be**	**10.54**	**11**		Pn	**Pn**	**14 51 45.0**	**-2.0**
	comp=Z,1.2nm,0.3s,baz=198,slow=13,SNR=7.5							
AKASG					Sn	**Sn**	**14 53 38.6**	**-6.7**
	comp=Z,1.8nm,0.3s,baz=197,slow=21,SNR=4.8							
AKASG					LR	LR	14 55 44.1	
	comp=Z,351nm,18.7s,baz=195,slow=37							
MMAI	**Mount Meron Ar**	**10.56**	**131**		Pn	**Pn**	**14 51 47.9**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=312,slow=12,SNR=12							
OKC	**Ostrava-Krasne**	**10.93**	**332**		*e*P	**Pn**	**14 51 52.3**	**0.0**
OKC					MLR	MLR		
	comp=Z,1μm,11.1s							
OKC	**Ostrava-Krasne**	**10.93**	**332**		*e*P	**Pn**	**14 51 52.3**	**0.0**
OKC					AMS	AMS	14 57 00.0	
	comp=Z,1μm,11.1s							
KRUC	**Moravsky**	**11.01**	**325**		*e*PN	**Pn**	**14 51 51.7**	**-1.8**
KRUC	**Moravsky**	**11.01**	**325**		*e*SN	**Sn**	**14 53 56.3**	**-0.6**
MORC	**Moravsky Berou**	**11.10**	**330**		*e*PN	**Pn**	**14 51 53.1**	**-1.6**
MORC	**Moravsky Berou**	**11.10**	**330**		*e*SN	**Sn**	**14 54 01.0**	**+1.8**
MORC	**Moravsky Berou**	**11.10**	**330**		P	**Pn**	**14 51 51.6**	**-3.1**
MORC	**Moravsky Berou**	**11.10**	**330**			**Pn**	**14 51 51.6**	**-3.1**
VRAC	**Vranov**	**11.11**	**326**		Pn	**Pn**	**14 51 53.6**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=128,slow=11,SNR=11							
VRAC					LR	LR	14 56 43.4	
	comp=Z,394nm,19.9s,baz=136,slow=41							
VRAC	**Vranov**	**11.11**	**326**		*e*PN	**Pn**	**14 51 53.6**	**-1.3**
MOA	**Molln**	**11.23**	**315**		*e*Pn	**Pn**	**14 51 57.5**	**+1.0**
	comp=Z,5.0nm,0.5s							
STAL	**S STAGIAL**	**11.29**	**306**		Pn	**Pn**	**14 51 57.4**	**-0.1**
KBA	**Koelnbreinsper**	**11.31**	**310**		*e*Pn	**Pn**	**14 51 57.7**	**0.0**
	comp=Z,6.6nm,0.6s,SNR=7.8							
TREC	**Trest**	**11.59**	**324**		AMS	AMS	14 57 10.0	
	comp=Z,2μm,10.8s							
KRLC	**Kraliky**	**11.63**	**329**		*e*P	**Pn**	**14 52 01.5**	**-0.5**
KRLC					MLR	MLR		
	comp=Z,1μm,7.8s							
KRLC	**Kraliky**	**11.63**	**329**		*e*P	**Pn**	**14 52 01.5**	**-0.5**
KRLC					*e*x	x	14 52 03.9	
KRLC					AMS	AMS	14 57 40.0	
	comp=Z,1μm,7.8s							
ABTA	**Abfaltersbach**	**11.64**	**307**		*e*Pn	**Pn**	**14 52 03.3**	**+1.1**
	comp=Z,14nm,0.5s,SNR=9.8							
CTI	**Castel Tesino**	**11.88**	**303**		P	**Pn**	**14 52 04.7**	**-0.8**
CTI	**Castel Tesino**	**11.88**	**303**			**Pn**	**14 52 04.7**	**-0.8**
DPC	**Dobruska-Polom**	**12.03**	**329**		*e*P	**Pn**	**14 52 08.2**	**+0.7**
DPC					MLR	MLR		
	comp=Z,1μm,7.4s							
DPC	**Dobruska-Polom**	**12.03**	**329**		*e*P	**Pn**	**14 52 08.2**	**+0.7**
DPC					AMS	AMS	14 57 40.0	
	comp=Z,1μm,7.4s							
GERES	**GERESS Array B**	**12.14**	**318**		Pn	**Pn**	**14 52 09.7**	**+0.6**
	baz=132,slow=13,SNR=23							
GERES					LR	LR	14 57 49.4	
	comp=Z,500nm,19.2s,baz=129,slow=42							
VLC	**Villacollemand**	**12.15**	**293**			**Pn**	**14 52 07.3**	**-1.8**
OSTC	**Ostas**	**12.23**	**329**		AMS	AMS	14 57 50.0	
	comp=Z,1μm,8.6s							
UPC	**Upice**	**12.28**	**329**		AMS	AMS	14 57 50.0	
	comp=Z,1μm,9.6s							
CHVC	**Chvalec**	**12.32**	**329**		*e*P	**Pn**	**14 52 11.9**	**+0.5**
CHVC					AMS	AMS	14 57 50.0	
	comp=Z,800nm,9.6s							
KHC	**Kasperske Hory**	**12.39**	**319**	⇓	*e*P	**Pn**	**14 52 09.1**	**-3.3**
KHC	**Kasperske Hory**	**12.39**	**319**		*e*P	**Pn**	**14 52 12.5**	**+0.1**
KHC					AMS	AMS	14 57 30.0	
	comp=Z,3μm,10.5s							
WTTA	**Wattenberg**	**12.41**	**308**		*i* Pn	**Pn**	**14 52 16.0**	**+3.2**
	comp=Z,36nm,0.5s,SNR=22							
KSP	**Ksiaz**	**12.43**	**330**		*e*P	**Pn**	**14 52 14.2**	**+1.3**
WATA	**Walderalm**	**12.48**	**308**		*e*Pn	**Pn**	**14 52 16.0**	**+2.2**
	comp=Z,19nm,0.4s,SNR=25							
PRU	**Pruhonice**	**12.51**	**324**		*e*P	**Pn**	**14 52 13.5**	**-0.5**
PRU					MLR	MLR		
	comp=Z,2μm,9.4s							
PRU	**Pruhonice**	**12.51**	**324**		*e*P	**Pn**	**14 52 13.5**	**-0.5**
PRU					AMS	AMS	14 57 40.0	
	comp=Z,2μm,9.4s							
PBCC	**Pribram**	**12.55**	**322**		*e*P	**Pn**	**14 52 12.5**	**-2.1**
PRA	**Prague**	**12.62**	**324**		AMS	AMS	14 57 50.0	
	comp=Z,1μm,9.6s							
SQTA	**Sankt Quirin**	**12.65**	**307**		*e*Pn	**Pn**	**14 52 18.3**	**+2.3**
	comp=Z,23nm,0.6s,SNR=16							
MOTA	**Mosalm**	**12.77**	**308**		*e*Pn	**Pn**	**14 52 19.4**	**+1.6**
	comp=Z,40nm,0.6s,SNR=26							
MSSA	**Maissana**	**12.79**	**293**			**Pn**	**14 52 16.8**	**-1.2**
FETA	**Feichten**	**12.86**	**306**		*e*Pn	**Pn**	**14 52 19.9**	**+1.0**
	comp=Z,8.0nm,0.7s,SNR=7.8							
KIV	**Kislovodsk**	**12.88**	**69**		*de*P	Pn	14 52 24.3	+5.2
KIV					pmax	pmax		
	comp=Z,6.0nm,0.8s							
KIV					MLR	MLR		
	comp=Z,91nm,16.0s							
PVCC	**Panska Ves**	**12.89**	**325**		AMS	AMS	14 57 50.0	
	comp=Z,2μm,10.5s							
EIL	**Elat**	**12.98**	**143**		LR	LR	14 58 48.7	
	comp=Z,120nm,19.3s,baz=280,slow=44							
FUORN	**Ofenpass-Fuorn**	**12.98**	**304**			**Pn**	**14 52 20.7**	**0.0**
DAVOX	**Davos/Dischmat**	**13.29**	**304**		Pn	**Pn**	**14 52 25.5**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=141,slow=14,SNR=22							
DAVOX					LR	LR	14 58 35.0	
	comp=Z,352nm,21.1s,baz=83,slow=42							
BRG	**Berggiesshubel**	**13.41**	**325**		*e*P	**P**	**14 52 36.2**	**+0.3**
	comp=Z,7.5nm,1.3s							
BRG	**Berggiesshubel**	**13.41**	**325**		*e*P	**P**	**14 52 36.2**	**+0.3**
BRG					pmax	pmax		
	comp=Z,8.0nm,1.3s							
DAVA	**Damuels**	**13.49**	**306**		*e*Pn	**Pn**	**14 52 29.3**	**+1.7**
	comp=Z,17nm,0.8s							
ZEI	**Tsey**	**13.61**	**74**		*e*P	**P**	**14 52 41.0**	**+2.6**
ZEI					pmax	pmax		
	comp=Z,15nm,1.2s							
NKC	**Novy Kostel**	**13.66**	**320**		AMS	AMS	14 58 20.0	
	comp=Z,2μm,11.1s							
KEST	**Kesra**	**13.92**	**256**		Pn	**Pn**	**14 52 34.6**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=313,slow=10,SNR=7.4							
VORD	**Divnogorie**	**14.04**	**37**		*e*P	**Pn**	**14 52 37.5**	**+2.7**
VORD					pmax	pmax		
	comp=Z,10.0nm,1.1s							
CLL	**Collm**	**14.14**	**325**		*e*P	**Pn**	**14 52 35.0**	**-1.2**
CLL					*i* (sP)	**P**	**14 52 39.3**	**-4.7**
	comp=Z,12nm,1.4s							
CLL					*i* PP	**PnPn**	**14 52 44.7**	**+0.6**
	comp=Z,13nm,1.1s							
CLL					*i* (sPP)		14 52 47.0	
CLL					*e*		14 52 59.0	
CLL					*e*(S)	**S**	**14 55 37.0**	**+2.3**
CLL					Lmax		14 58 00.0	
CLL	**Collm**	**14.14**	**325**		*e*P	**Pn**	**14 52 35.0**	**-1.2**
VSR	**Storozhevoye**	**14.16**	**36**		*e*P	**Pn**	**14 52 35.9**	**-0.6**
VSR					pmax	pmax		
	comp=Z,20nm,1.4s							
SENIN	**Lac Senin/Sane**	**14.82**	**300**			**Pn**	**14 52 45.8**	**0.0**
BFO	**Black Forest**	**14.88**	**308**		P	**Pn**	**14 52 47.5**	**+1.1**
BFO	**Black Forest**	**14.88**	**308**			**Pn**	**14 52 47.5**	**+1.1**
BNI	**Bardonecchia**	**14.92**	**294**		P	**Pn**	**14 52 45.8**	**-1.3**
BNI	**Bardonecchia**	**14.92**	**294**			**Pn**	**14 52 45.8**	**-1.3**
IIGN	**Ignalina**	**14.95**	**1**		*e*P	**Pn**	**14 52 45.8**	**-1.4**
IIGN					IAmb	IAmb	14 53 02.0	
	comp=Z,14nm,0.5s							
LPSR	**Galich'ya Gora**	**15.07**	**32**		*e*P	**P**	**14 52 50.9**	**-3.3**
LPSR					pmax	pmax		
	comp=Z,20nm,0.8s							
PABE	**Paberze**	**15.16**	**356**		*e*P	**Pn**	**14 52 48.0**	**-2.1**
PABE					IAmb	IAmb	14 53 05.8	
	comp=Z,38nm,1.0s							
ISAL	**Salakas**	**15.17**	**0**		*e*P	**Pn**	**14 52 47.3**	**-2.9**
ISAL					IAmb	IAmb	14 53 03.9	
	comp=Z,20nm,1.0s							
VRH	**Novokhopyorsk**	**15.35**	**40**		*e*P	**Pn**	**14 52 49.8**	**-2.8**
VRH					pmax	pmax		
	comp=Z,20nm,0.8s							
MAK	**Makhachkala**	**16.27**	**74**		*e*P	**P**	**14 53 07.4**	**-0.2**
MAK					*e*

comp=N,13nm,12.7s
WMQ LR LR
comp=E,170nm,19.9s
WMQ LR LR
comp=Z,280nm,14.5s
TLY Talaya 52.63 50 eP P 14 58 32.3 +2.1
TLY pmax pmax
comp=Z,3.0nm,1.0s
GTA Gaotai 55.03 65 eP P 14 58 48.6 +0.5
GTA pP sP 14 58 52.3 +2.0
GTA sP pP 14 58 54.6 +4.9
GTA pmax pmax
comp=Z,3.0nm,1.2s
SONM Songino Array 55.74 53 P P 14 58 54.2 +1.2
comp=Z,1.6nm,1.0s,baz=283,slow=9.0,SNR=9.3
SONM LR LR 15 27 06.7
comp=Z,69nm,18.9s,baz=284,slow=41
TIXI Tiksi 56.04 22 P P 14 58 55.1 +0.4
comp=Z,1.4nm,0.5s,baz=311,slow=6.7,SNR=4.2
TIXI Tiksi 56.04 22 eP P 14 58 54.9 +0.3
TIXI pmax pmax
comp=Z,4.0nm,1.4s
ULN Ulaanbaatar 56.13 53 eP P 14 58 57.4 +1.5
ULN pmax pmax
comp=Z,13nm,3.8s
LZH Lanzhou 59.41 67 eP P 14 59 18.5 -0.6
LZH pP pP 14 59 21.8 +1.0
LZH sP sP 14 59 23.3 +1.9
LZH ePP PP **15 01 31.8 +1.8**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,92nm,7.4s
LZH LR LR
comp=N,340nm,14.1s
LZH LR LR
comp=E,350nm,14.2s
LZH LR LR
comp=Z,450nm,17.3s
CD2 Chengdu 62.02 72 P P 14 59 35.8 -1.0
CD2 pmax pmax
comp=Z,20nm,0.5s
HHC Hu-ho-hao-te 62.26 59 eP P 14 59 39.9 +1.5
HHC sP sP 14 59 48.4 +7.7
HHC pmax pmax
comp=Z,10.0nm,1.0s
HHC pmax pmax
comp=Z,54nm,5.3s
HHC LR LR
comp=N,140nm,15.5s
HHC LR LR
comp=E,180nm,13.2s
HHC LR LR
comp=Z,63nm,14.4s
XAN Xi'an 64.03 66 P P 14 59 57.8 +7.6
XAN pP sP 15 00 05.6 +13
XAN pmax pmax
comp=Z,8.0nm,1.3s
CMAR Chiang Mai Arr 65.44 86 P P 15 00 01.3 +1.8
comp=Z,0.6nm,0.4s,baz=304,slow=8.6,SNR=1.4
CMAR LR LR 15 34 06.3
comp=Z,63nm,18.9s,baz=338,slow=41
BILL Bilibino 67.83 15 eP P 15 00 13.8 -0.2
BILL e 15 00 22.1
BILL eS S **15 09 13.8 +1.6**
BILL pmax pmax
comp=Z,4.0nm,1.2s
BILL MLR MLR
comp=Z,88nm,17.0s
KLR Kul'dur 69.41 42 eP P 15 00 24.8 +0.6
KLR pmax pmax
comp=Z,5.0nm,1.1s
WHN Wuhan 69.79 67 P P 15 00 33.3 +6.5
NJ2 Nanjing 72.02 63 eP P 15 00 37.9 -2.4
NJ2 pmax pmax
comp=Z,11nm,0.5s
YKA Yellowknife Ar 72.66 342 P P 15 00 43.5 -0.1
comp=Z,4.4nm,1.2s,baz=24,slow=6.3,SNR=14
YKA LR LR 15 32 57.0
comp=Z,45nm,18.0s,baz=0.0,slow=36
KSRS Korea Array 74.61 54 P P 15 00 55.4 -0.1
comp=Z,1.6nm,0.9s,baz=324,slow=4.9,SNR=6.3
KSRS LR LR 15 36 52.8
comp=Z,33nm,20.0s,baz=330,slow=38
COLA College 74.94 357 eP P 15 00 57.3 +0.4
COLA pmax pmax
comp=Z,2.0nm,0.9s
ILAR Eielson Array 75.01 357 P P 15 00 58.2 +0.8
comp=Z,0.5nm,0.8s,baz=355,slow=4.3,SNR=7.2
ULM Lac du Bonnet 76.33 326 P P 15 01 05.3 +0.1
comp=Z,3.5nm,0.6s,baz=40,slow=8.4,SNR=3.7
ULM LR LR 15 35 29.1
comp=Z,101nm,18.1s,baz=41,slow=36
PETK Petropavlovsk- 77.94 27 LR LR 15 38 28.4
comp=Z,40nm,19.6s,baz=249,slow=38
PDAR Pinedale Array 87.97 329 LR LR 15 43 19.2
comp=Z,61nm,18.2s,baz=44,slow=37
NVAR Mina Array Bea 95.01 333 P P 15 02 39.6 +0.2
comp=Z,0.4nm,0.7s,baz=49,slow=1.4,SNR=3.7
TXAR Lajitas Array 96.36 317 P P 15 02 45.1 -0.5
comp=Z,0.8nm,0.9s,baz=42,slow=3.9,SNR=6.8
TXAR LR LR 15 46 21.7
comp=Z,20nm,18.1s,baz=0.0,slow=36

*IDC **24** 14:54:00.2±1.4,28.˚15S×177.˚20W,h0km,mb4.1/6, mb1 4.3/6,mb1mx4.0/21,mbtmp4.1/6,MS3.4/3,Ms1 3.4/3, ms1mx3.0/31,Error ellipse: s-maj=42.2km s-min=18.6km az=122.0*
*NEIC **24** 14:54:06.6±1.7,28.˚3S±0.˚1×177.˚3W±0.˚1,h48km±8km, mb4.3/10,Error ellipse: s-maj=21.3km s-min=12.8km az=137.0*
ISC 24 14:54:06.9±0.9,28.˚3S±0.˚1×177.˚3W±0.˚2,h54km,n36, σ1s11/20,mb4.2/12,MS3.4/4,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.11**	**210**	Pn	**Pn**	**14 54 25.8**	**-0.5**
	787nm,0.3s,baz=358,slow=1.2,SNR=44						
RAO				LR	LR	14 54 39.6	
	comp=Z,189nm,18.4s,baz=22,slow=31						
RAO				Sn	**Sn**	**14 54 42.1**	**+1.4**
	2μm,0.3s,baz=98,slow=23,SNR=9.0						
RAO	**Raoul Island**	**1.11**	**210**		**Pn**	**14 54 25.6**	**-0.7**
DZM	**Mont Dzumac**	**15.97**	**289**	eLR	LR	15 01 33.6	
	comp=Z,184nm,24.0s						
DZM	**Mont Dzumac**	**15.97**	**289**	LR	LR	15 02 32.5	
	comp=Z,140nm,20.1s,baz=327,slow=32						
TBI	**Tubuai**	**25.50**	**85**	eLR	LR	15 05 24.0	
	comp=Z,92nm,27.5s						
TBI	**Tubuai**	**25.50**	**85**	eT	T	15 25 22.4	
	8.3nm,0.3s						
PAE	**Paea**	**27.55**	**73**	eT	T	15 27 53.9	
	7.1nm,0.3s						
PPT2	**Papeete2**	**27.59**	**73**	eLR	LR	15 06 32.6	
	comp=Z,106nm,24.8s						
PPT2	**Papeete2**	**27.59**	**73**	eT	T	15 27 59.0	
	3.8nm,0.3s						
CTAO	**Charters Tower**	**34.14**	**276**	P	**P**	**15 00 45.6**	**-1.4**
CTAO				IAmb	IAmb	15 01 04.9	
	comp=Z,3.3nm,0.8s						
STKA	**Stephens Creek**	**35.61**	**254**	P	**P**	**15 01 02.3**	**+2.7**
	comp=Z,1.8nm,0.6s,baz=111,slow=8.0,SNR=4.0						
STKA				LR	LR	15 14 00.4	
	comp=Z,63nm,19.2s,baz=181,slow=34						
STKA	**Stephens Creek**	**35.61**	**254**	IAmb	IAmb	15 01 06.0	
	comp=Z,0.5nm,0.7s						
COEN	**Coen**	**39.35**	**283**	P	**P**	**15 01 29.6**	**-1.7**
COEN				IAmb	IAmb	15 01 42.6	
	comp=Z,19nm,1.4s						
BBOO	**Buckleboo**	**40.18**	**252**	P	**P**	**15 01 37.6**	**-0.5**
AS31	**Alice Springs**	**43.89**	**264**	P	**P**	**15 02 07.9**	**-0.6**
ASAR	**Alice Springs**	**43.89**	**264**	P	**P**	**15 02 08.9**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=101,slow=6.7,SNR=22						
WR0	**Warramunga Arr**	**44.50**	**270**	P	**P**	**15 02 12.1**	**-1.3**
WR0				IAmb	IAmb	15 02 20.2	
	comp=Z,6.8nm,1.2s						
WB2	**Warramunga Arr**	**44.68**	**270**	P	**P**	**15 02 14.9**	**+0.1**
WB2				IAmb	IAmb	15 02 22.0	
	comp=Z,4.4nm,1.1s						
WRA	**Warramunga Arr**	**44.69**	**270**	P	**P**	**15 02 15.3**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=109,slow=7.5,SNR=22						
WB0	**Warramunga Arr**	**44.70**	**270**	P	**P**	**15 02 15.4**	**+0.4**
WB0				IAmb	IAmb	15 02 30.2	
	comp=Z,3.9nm,0.9s						
VNDA	**Vanda**	**50.26**	**186**	P	**P**	**15 02 56.2**	**-1.0**
VNDA				IAmb	IAmb	15 03 09.9	
	comp=Z,2.5nm,1.3s						
QSPA	**South Pole Qui**	**61.82**	**180**	P	**P**	**15 04 20.8**	**+0.7**
MJAR	**Matsushiro Arr**	**76.87**	**325**	P	**P**	**15 05 53.9**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=140,slow=6.2,SNR=2.7						
VNA3	**Neumayer Olymp**	**80.37**	**176**	P	**P**	**15 06 11.5**	**-0.6**
H03S2	**Juan Fernandez**	**81.11**	**124**	T	T	16 36 08.3	
	baz=240,slow=74,SNR=5.6						
H03S1	**Juan Fernandez**	**81.12**	**124**	T	T	16 36 10.9	
	baz=240,slow=74,SNR=4.9						
H03S3	**Juan Fernandez**	**81.13**	**124**	T	T	16 36 13.9	
	baz=240,slow=74,SNR=5.2						
H03N3	**Juan Fernandez**	**81.29**	**123**	T	T	16 36 21.5	
	baz=245,slow=74,SNR=4.1						
H03N1	**Juan Fernandez**	**81.31**	**123**	T	T	16 36 31.3	
	baz=144,slow=74,SNR=4.5						
PETK	**Petropavlovsk-**	**83.93**	**345**	P	**P**	**15 06 31.4**	**+0.7**
	comp=Z,3.1nm,0.7s,baz=130,slow=8.2,SNR=8.8						
YBH	**Yreka Blue Hor**	**85.98**	**38**	LR	LR	15 43 37.1	
	comp=Z,20nm,18.1s,baz=1.5,slow=35						
NVAR	**Mina Array Bea**	**86.26**	**42**	P	**P**	**15 06 43.4**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=221,slow=9.7,SNR=6.6						
H10N3	**ASCENSION HYDR**	**140.42**	**153**	T	T	17 51 08.0	
	baz=204,slow=74,SNR=7.9						
H10N1	**ASCENSION HYDR**	**140.43**	**153**	T	T	17 51 01.5	
	baz=204,slow=74,SNR=10						
H10N2	**ASCENSION HYDR**	**140.44**	**153**	T	T	17 51 08.2	
	baz=204,slow=74,SNR=10.0						
AKASG	**Malin Array Be**	**149.96**	**325**	PKPbc	**PKPbc**	**15 13 50.8**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=48,slow=2.5,SNR=5.6						

ROM 24 15:01:17.6±0.1,43.˚068N±0.˚003×12.˚995E±0.˚005, h16km,ML1.0/3,Error ellipse: s-maj=0.4km s-min=0.2km az=122.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CESI	**CESI - Serrava**	**0.09**	**226**	P	Pg	15 01 21.2	+0.2
CESI				S	Sg	15 01 23.7	+0.5
CESI				AML	AML		
	comp=E,43μm,0.4s						
CESI				AML	AML		
	comp=N,96μm,0.4s						
CESI				AML	AML		
	comp=E,43μm,0.4s						
CESI				AML	AML		
	comp=N,96μm,0.4s						
CSP1	**Cessapalombo**	**0.15**	**81**	P	Pg	15 01 22.0	+0.2
CSP1				S	Sb	15 01 25.2	-0.1
SNTG	**Esanatoglia**	**0.19**	**348**	P	Pg	15 01 22.3	+0.1
SNTG				S	Sb	15 01 25.9	-0.4
ASSB	**Assisi San Ben**	**0.25**	**264**	P	Pg	15 01 23.3	+0.2
ASSB				S	Sb	15 01 27.7	-0.2
ASSB				AML	AML		
	comp=E,40μm,0.5s						
ASSB				AML	AML		
	comp=N,49μm,0.7s						
ASSB				AML	AML		
	comp=E,40μm,0.5s						
NRCA	**Norcia**	**0.25**	**160**	P	Pg	15 01 23.4	+0.2
NRCA				S	Sb	15 01 27.6	-0.4
NRCA				AML	AML		
	comp=E,55μm,0.1s						
NRCA				AML	AML		
	comp=N,81μm,0.1s						
EL6	**Elcito**	**0.27**	**17**	P	Pb	15 01 24.0	-0.2
EL6				S	Sb	15 01 28.5	-0.2

*BEO **24** 15:01:22.5±0.6,39.˚95N×26.˚85E,h0km,ML4.1/12*
*SOF **24** 15:01:28.5,40.˚30N×26.˚25E,h1km,MD4.1*
*IDC **24** 15:01:31.8±1.1,40.˚32N×26.˚21E,h0km,mb3.5/6, mb1 3.6/11,mb1mx3.4/50,mbtmp3.5/11,ML3.7/6,MS3.1/2, Ms1 3.1/2,ms1mx2.5/36,Error ellipse: s-maj=20.0km s-min=11.6km az=50.0*
*DDA **24** 15:01:32.5,40.˚38N×26.˚13E,h16km±2km,MW4.0*
*ISK **24** 15:01:32.6,40.˚38N×26.˚14E,h9km,ML3.9/36*
*NEIC **24** 15:01:32.1±0.9,40.˚38N±0.˚06×26.˚08E±0.˚07,h1km±12km, Error ellipse: s-maj=8.4km s-min=7.9km az=209.0*
*ATH **24** 15:01:33.2,40.˚40N×26.˚04E,h35km±3km,ML3.6/23,Error ellipse: s-maj=3.0km s-min=1.0km az=317.0*
*THE **24** 15:01:33.5,40.˚40N×26.˚07E,h13km,ML3.6/16,Error ellipse: s-maj=0.8km s-min=0.5km az=71.0*
ISC 24 15:01:33.1±0.8,40.˚38N±0.˚01×26.˚11E±0.˚01,h14km±6km, n222,σ1s35/283,mb3.4/6,10C-7D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.25**	**220**	P	**Pb**	**15 01 38.8**	**-0.6**
GADA				S	**Sg**	**15 01 42.9**	**+0.8**
	12μm,0.2s						
GADA	**Gvkgeada**	**0.25**	**220**	PG	**Pb**	**15 01 38.8**	**-0.6**
GADA				SG	**Sg**	**15 01 42.8**	**+0.7**
GELI	**Tayfur-Gelibol**	**0.28**	**87**	PG	**Pg**	**15 01 38.3**	**-0.7**
GELI				SG	**Sg**	**15 01 42.4**	**-0.6**
ENEZ	**Enez**	**0.36**	**6**	P	**Pg**	**15 01 40.4**	**+0.1**
ENEZ				S	**Sg**	**15 01 45.4**	**+0.1**
	20μm,0.5s						
ENEZ	**Enez**	**0.36**	**6**	PG	**Pg**	**15 01 40.5**	**+0.1**
ENEZ				SG	**Sg**	**15 01 45.6**	**+0.3**
ERIK	**Erikli-Kesan**	**0.42**	**47**	PG	**Pg**	**15 01 41.2**	**-0.4**
ERIK				SG	**Sg**	**15 01 47.2**	**-0.1**
SMTH	**Samothraki Isl**	**0.45**	**282**	P	**Pg**	**15 01 41.9**	**-0.1**
SMTH				S	**Sg**	**15 01 48.5**	**+0.4**
	8μm,0.1s						
SMTH	**Samothraki Isl**	**0.45**	**282**	P	**Pg**	**15 01 41.9**	**-0.1**
SMTH				AML	AML	15 01 52.7	
	comp=N,13100μm,0.1s						
SMTH				AML	AML	15 01 53.0	
	comp=E,18818μm,0.1s						
BOZC	**Bozcaada**	**0.54**	**185**	PG	**Pg**	**15 01 43.6**	**-0.1**
BOZC	**Bozcaada**	**0.54**	**185**	P	**Pg**	**15 01 43.5**	**-0.3**
BOZC				S	**Sg**	**15 01 50.9**	**-0.1**
BOZC				IAML		15 01 56.0	
	comp=E,3μm,0.4s						
BOZC				IAML		15 01 57.0	
	comp=N,3μm,0.4s						
EZN	**Ezine**	**0.58**	**163**	P	**Pg**	**15 01 44.1**	**-0.4**
EZN				S	**Sb**	**15 01 53.2**	**+0.1**
EZN	**Ezine**	**0.58**	**163**	PG	**Pg**	**15 01 44.1**	**-0.4**
KESN	**Edirne-Kesan**	**0.62**	**44**	P	**Pg**	**15 01 44.3**	**-1.1**
KESN				S	**Sg**	**15 01 52.9**	**-0.8**
KESN				IAML		15 01 59.0	
	comp=E,8μm,0.2s						
KESN				IAML		15 01 59.0	
	comp=N,7μm,0.5s						
BAYC	**CANAKKALE_Bayr**	**0.72**	**152**	P	**Pg**	**15 01 46.9**	**-0.3**
BAYC				S	**Sb**	**15 01 57.2**	**-0.1**
BAYC				IAML		15 02 01.0	
	comp=E,2μm,0.3s						
BAYC				IAML		15 02 03.0	
	comp=N,1μm,0.3s						
UKOP	**Uzunkopru-Edir**	**0.85**	**28**	PG	**Pg**	**15 01 49.1**	**-0.4**
UKOP				SG	**Sb**	**15 02 01.1**	**+0.3**
LIA	**Limnos Island**	**0.86**	**236**	P	**Pb**	**15 01 49.8**	**0.0**
LIA				S	**Sb**	**15 02 02.1**	**+1.0**
	comp=N,6μm,0.5s						
LIA	**Limnos Island**	**0.86**	**236**	P	**Pb**	**15 01 49.8**	**0.0**
LIA				S	**Sg**	**15 02 00.4**	**-0.6**
LIA				AML	AML	15 02 03.9	
	comp=E,12305μm,0.4s						
LIA				AML	AML	15 02 03.9	
	comp=N,12155μm,0.4s						
RKY	**Sarkoy-Tekirda**	**0.87**	**69**	PG	**Pg**	**15 01 49.3**	**-0.7**
RKY				SG	**Sb**	**15 02 01.6**	**0.0**
SART	**Tekirdag**	**0.87**	**69**	P	**Pg**	**15 01 48.9**	**-1.2**
SART				S	**Sn**	**15 02 03.4**	**-0.2**
SART				IAML		15 02 06.0	
	comp=E,1μm,0.4s						
RDO	**Rodhopi**	**0.88**	**331**	P	**Pg**	**15 01 49.3**	**-0.8**
RDO				S	**Sb**	**15 02 02.1**	**+0.4**
	comp=E,6μm,0.4s						
RDO	**Rodhopi**	**0.88**	**331**	P	**Pg**	**15 01 49.4**	**-0.8**
RDO				S	**Sg**	**15 02 01.1**	**-0.5**
RDO				AML	AML	15 02 05.0	
	comp=N,13290μm,0.6s						
RDO				AML	AML	15 02 06.8	
	comp=E,9551μm,0.3s						
RDO	**Rodhopi**	**0.88**	**331**	PG	**Pg**	**15 01 50.0**	**-0.1**
RDO				SG	**Sn**	**15 02 02.9**	**-0.7**
KRBG	**Karabiga-Canak**	**0.91**	**89**	PG	**Pg**	**15 01 49.9**	**-0.8**
KRBG				SG	**Sb**	**15 02 02.3**	**-0.3**

THAS Thassos island 1.08 282 P Pb 15 01 52.7 -0.9
THAS S **Sb 15 02 07.3 -0.3**
comp=E,3μm,0.4s
THAS Thassos island 1.08 282 P Pb 15 01 52.7 -0.9
THAS S **Sb 15 02 07.6 0.0**
THAS AML AML 15 02 10.3
comp=N,6904μm,0.5s
THAS AML AML 15 02 11.7
comp=E,6108μm,0.4s
KNL Balıkesir 1.09 95 i P Pb 15 01 52.9 -0.9
KNL i S **Sn 15 02 09.5 +0.7**
KNL IAML 15 02 11.0
comp=E,4μm,0.6s
KNL IAML 15 02 12.0
comp=N,3μm,0.5s
PRK Paraskevi 1.14 174 P Pg 15 01 55.3 +0.2
PRK S **Sn 15 02 11.6 +1.6**
comp=N,25μm,0.6s
PRK Paraskevi 1.14 174 P Pg 15 01 55.6 +0.5
PRK S **Sn 15 02 11.7 +1.6**
PRK AML AML 15 02 13.0
comp=E,31132μm,0.4s
PRK AML AML 15 02 14.2
comp=N,66816μm,0.8s
MRMT Marmara Adasi 1.16 78 PN Pb 15 01 53.9 -1.0
AYVA Ayvalik 1.16 157 i P Pn 15 01 54.9 0.0
AYVA i S **Sn 15 02 10.8 +0.2**
AYVA IAML 15 02 14.0
comp=E,9μm,0.5s
SIGR SIGRI 1.19 190 P Pn 15 01 54.4 -0.8
SIGR S **Sn 15 02 11.4 +0.3**
comp=E,12μm,0.6s
SIGR SIGRI 1.19 190 P Pn 15 01 54.9 -0.3
SIGR S **Sn 15 02 11.2 0.0**
SIGR AML AML 15 02 13.1
comp=N,29200μm,0.7s
SIGR AML AML 15 02 13.2
comp=E,17554μm,0.4s
SIGR SIGRI 1.19 190 PN Pg 15 01 55.5 -0.4
EFSA Agios Efstrati 1.20 226 P Pb 15 01 55.6 -0.1
EFSA S **Sb 15 02 11.1 +0.1**
EFSA AML AML 15 02 13.0
comp=E,9129μm,0.6s
EFSA AML AML 15 02 14.3
comp=N,14236μm,0.6s
TKR Tekirdag 1.24 60 PN Pn 15 01 55.9 -0.2
GONE Gonen-Balikesi 1.25 105 PN Pn 15 01 56.2 0.0
BALY Balya 1.32 118 i P Pg 15 01 58.0 -0.6
BALY i S **Sn 15 02 14.9 +0.2**
BALY IAML 15 02 17.0
comp=E,4μm,0.5s
BALY IAML 15 02 17.0
comp=N,5μm,0.6s
EDC Edincik 1.34 91 PN Pn 15 01 57.3 -0.1
KAVA Kavala 1.36 297 P Pn 15 01 57.3 -0.4
KAVA S **Sn 15 02 14.1 -1.4**
comp=N,1μm,0.4s
KAVA Kavala 1.36 297 P Pn 15 01 57.2 -0.4
KAVA S **Sn 15 02 13.5 -2.0**
KAVA AML AML 15 02 18.3
comp=E,3116μm,0.4s
KAVA AML AML 15 02 20.4
comp=N,2749μm,0.4s
KDZ Kurdzhali 1.37 338 P Pn 15 01 57.7 -0.2
KDZ Kurdzhali 1.37 338 Pg Pb 15 01 58.7 +0.1
KDZ Kurdzhali 1.37 338 PN Pb 15 01 58.3 -0.3
KVLA Kavala 1.42 294 P Pn 15 01 58.3 -0.2
KVLA S **Sn 15 02 14.8 -2.2**
KVLA AML AML 15 02 21.5
comp=N,2479μm,0.5s
KVLA AML AML 15 02 22.5
comp=E,2693μm,0.4s
CRLT Corlu 1.45 58 PN Pn 15 01 59.2 +0.4
DKL Dikili 1.45 155 PN Pb 15 01 59.5 -0.3
EDRB Edirne 1.54 18 P Pn 15 01 59.5 -0.7
EDRB S **Sn 15 02 20.4 +0.4**
comp=E,2μm,0.5s
EDRB Edirne 1.54 18 PN Pn 15 02 00.7 +0.5
BALB Balikesir 1.55 118 PN Pb 15 02 00.8 -0.8
BOTS Marmara Eregli 1.55 66 PN Pn 15 02 00.4 +0.2
STEP BALIKESIR_Sava 1.59 128 i P Pb 15 02 01.7 -0.7
STEP i S **Sb 15 02 22.7 +0.3**
STEP IAML 15 02 25.0
comp=N,2μm,0.6s
STEP IAML 15 02 26.0
comp=E,2μm,0.7s
ZEDA zmir-Bergama 1.60 152 i P Pn 15 02 01.3 +0.3
ZEDA i S **Sg 15 02 23.2 -1.3**
ZEDA IAML 15 02 26.0
comp=N,6μm,0.3s
ZEDA IAML 15 02 26.0
comp=E,3μm,0.6s
OUR Ouranopolis 1.62 269 P Pn 15 02 00.5 -0.8
OUR S **Sn 15 02 20.6 -1.4**
comp=E,2μm,0.4s
OUR Ouranopolis 1.62 269 P Pn 15 02 00.6 -0.8
OUR AML AML 15 02 27.4
comp=E,2796μm,0.4s
OUR AML AML 15 02 30.2
comp=N,4340μm,0.5s
OUR Ouranopolis 1.62 269 PN Pn 15 02 00.5 -0.8
PHSR Pinarhisar 1.65 40 PN Pn 15 02 01.9 +0.3
RZN Rozhen 1.68 322 i P Pn 15 02 02.2 0.0
RZN Rozhen 1.68 322 Pg Pg 15 02 04.6 -0.7
DIM Dimitrovgrad 1.72 346 P Pn 15 02 02.7 0.0
KCTX Karacabey (Bur 1.72 93 PN Pn 15 02 02.7 0.0
SLVT Silivri 1.81 61 PN Pn 15 02 04.5 +0.7
KRBN Karaburun 1.82 169 PN Pn 15 02 04.4 +0.4
PSRA Psara 1.89 193 P Pn 15 02 05.4 +0.5
PSRA AML AML 15 02 37.6
comp=E,3360μm,0.3s
PSRA AML AML 15 02 38.3
comp=N,4058μm,0.5s
PAIG Paliouri 1.92 257 P Pn 15 02 04.3 -1.0
PAIG S **Sn 15 02 28.0 -1.2**
comp=N,365nm,0.7s
PAIG Paliouri 1.92 257 P Pn 15 02 04.3 -1.0
PAIG AML AML 15 02 43.0
comp=N,712μm,0.4s
PAIG AML AML 15 02 43.4
comp=E,752μm,0.9s
ELBA Catalca 1.92 66 i P Pn 15 02 04.9 -0.5
ELBA IAML 15 02 42.0
comp=N,426nm,0.6s
SKY Skiros Island 1.92 219 P Pn 15 02 04.6 -0.8
SKY S **Sn 15 02 29.3 -0.1**
comp=N,1μm,0.4s
SKY Skiros Island 1.92 219 P Pn 15 02 04.8 -0.6
SKY AML AML 15 02 37.9
comp=N,2169μm,0.3s
SKY AML AML 15 02 43.4
comp=E,2787μm,0.6s
DURS Dursunbey 1.98 112 i P Pn 15 02 06.9 +0.6
DURS i S **Sb 15 02 33.8 +0.3**
DURS IAML 15 02 36.0
comp=E,2μm,0.4s
DURS IAML 15 02 36.0
comp=N,1μm,0.4s
CTYL Yalıkoy Yolu 1.98 56 PN Pn 15 02 06.4 +0.2
CHOS Chios island 1.99 181 P Pn 15 02 06.5 0.0
CHOS Chios island 1.99 181 P Pn 15 02 06.4 0.0
CHOS AML AML 15 02 42.5
comp=E,5038μm,0.3s
CHOS AML AML 15 02 43.1
comp=N,4387μm,0.6s
CHOS Chios island 1.99 181 PN Pn 15 02 06.9 +0.5
AKS Akhisar 2.00 138 PN Pn 15 02 06.8 +0.4
CTKS Kestanelik-??a 2.01 64 PN Pn 15 02 06.9 +0.3
PLD Plovdiv 2.02 329 P Pn 15 02 07.3 +0.5
PLD Plovdiv 2.02 329 Pg Pg 15 02 11.2 -0.7
PLD Plovdiv 2.02 329 PN Pn 15 02 07.5 +0.7
PLG Polygyros 2.03 271 P Pn 15 02 06.4 -0.6
PLG S **Sn 15 02 32.5 +0.3**
comp=N,770nm,0.5s
PLG Polygyros 2.03 271 P Pn 15 02 06.2 -0.8
PLG AML AML 15 02 39.9
comp=E,1602μm,0.5s
PLG AML AML 15 02 40.9
comp=N,1505μm,0.5s
SRS Serrai 2.05 292 P Pn 15 02 06.7 -0.4
SRS Serrai 2.05 292 P Pn 15 02 06.8 -0.4
SRS AML AML 15 02 39.4
comp=E,2239μm,0.7s
SRS AML AML 15 02 40.1

	comp=N,1857µm,0.7s						
URLA	**Izmir**	**2.05**	**169**	PN	**Pn**	**15 02 07.7**	**+0.5**
AOS	**Alonnisos**	**2.10**	**236**	P	**Pn**	**15 02 06.8**	**-1.0**
AOS	**Alonnisos**	**2.10**	**236**	P	**Pn**	**15 02 06.8**	**-1.0**
AOS				AML	AML	15 02 43.3	
	comp=N,1540µm,0.6s						
AOS				AML	AML	15 02 43.6	
	comp=E,1596µm,0.6s						
AOS	**Alonnisos**	**2.10**	**236**	PN	**Pn**	**15 02 09.1**	**+1.2**
ARMT	**Armutlu**	**2.11**	**84**	PN	**Pn**	**15 02 08.8**	**+0.8**
JMB	**Yambol**	**2.11**	**10**	Pg	**Pb**	**15 02 12.1**	**+0.9**
BLCB	**Balcova**	**2.12**	**160**	P	**Pn**	**15 02 09.0**	**+0.9**
BLCB	**Balcova**	**2.12**	**160**	PN	**Pn**	**15 02 08.7**	**+0.6**
SOH	**Sokhos**	**2.14**	**283**	P	**Pn**	**15 02 08.2**	**-0.3**
SOH				S	**Sn**	**15 02 34.4**	**-0.5**
	comp=E,820nm,0.4s						
MMB	**Musomiste**	**2.17**	**305**	P	**Pn**	**15 02 08.5**	**-0.3**
BGKT	**Bogazkoy**	**2.17**	**68**	PN	**Pn**	**15 02 09.4**	**+0.5**
HORT	**Hortiatis**	**2.31**	**276**	P	**Pn**	**15 02 10.1**	**-0.6**
HORT	**Hortiatis**	**2.31**	**276**	P	**Pn**	**15 02 10.4**	**-0.3**
HORT				AML	AML	15 02 48.8	
	comp=N,961µm,0.5s						
HORT				AML	AML	15 02 50.5	
	comp=E,750µm,0.5s						
ULDT	**Uludag**	**2.33**	**95**	*i* P	**Pn**	**15 02 11.3**	**+0.1**
ULDT				*i* S	**Sg**	**15 02 45.6**	**-2.4**
ULDT				IAML		15 02 47.0	
	comp=N,314nm,0.6s						
ULDT				IAML		15 02 53.0	
	comp=E,328nm,0.6s						
KYMI	**Kymi, Euboea I**	**2.34**	**222**	P	**Pn**	**15 02 10.2**	**-0.9**
KYMI	**Kymi, Euboea I**	**2.34**	**222**	P	**Pn**	**15 02 10.3**	**-0.9**
KYMI				AML	AML	15 02 49.5	
	comp=E,1240µm,0.5s						
KYMI				AML	AML	15 02 49.5	
	comp=N,1134µm,0.7s						
ISK	**Istanbul-Kandi**	**2.34**	**72**	P	**Pn**	**15 02 10.8**	**-0.4**
ISK	**Istanbul-Kandi**	**2.34**	**72**	PN	**Pn**	**15 02 11.6**	**+0.4**
KAVV	**Kandilli-Istan**	**2.34**	**72**	PN	**Pn**	**15 02 11.7**	**+0.5**
IGD	**Bursa**	**2.37**	**92**	*i* P	**Pn**	**15 02 11.6**	**+0.1**
IGD				IAML		15 02 53.0	
	comp=E,210nm,0.4s						
IGD				IAML		15 02 57.0	
	comp=N,259nm,0.8s						
SKIA	**Skiathos**	**2.37**	**240**	P	**Pn**	**15 02 10.5**	**-1.1**
KLYT	**Kilyos**	**2.39**	**68**	PN	**Pn**	**15 02 12.4**	**+0.6**
DEMI	**Demirci**	**2.42**	**123**	*i* P	**Pn**	**15 02 13.4**	**+1.1**
DEMI				*i* S	**Sn**	**15 02 42.7**	**+1.0**
DEMI				IAML		15 02 50.0	
	comp=N,500nm,0.4s						
DEMI				IAML		15 02 56.0	
	comp=E,519nm,0.4s						
XOR	**Xorichti**	**2.46**	**247**	P	**Pn**	**15 02 11.3**	**-1.6**
YLV	**Yalova**	**2.50**	**85**	PN	**Pn**	**15 02 14.1**	**+0.7**
KNT	**Kendrikon**	**2.56**	**289**	P	**Pn**	**15 02 14.5**	**+0.3**
KNT	**Kendrikon**	**2.56**	**289**	P	**Pn**	**15 02 14.4**	**+0.2**
KNT				AML	AML	15 02 56.3	
	comp=E,1042µm,0.6s						
KNT				AML	AML	15 02 58.1	
	comp=N,1040µm,0.5s						
KNT	**Kendrikon**	**2.56**	**289**	PN	**Pn**	**15 02 15.1**	**+0.9**
MRKA	**Markates**	**2.57**	**230**	P	**Pn**	**15 02 13.4**	**-1.0**
MRKA	**Markates**	**2.57**	**230**	P	**Pn**	**15 02 13.3**	**-1.0**
MRKA				AML	AML	15 02 56.6	
	comp=E,1028µm,0.6s						
MRKA				AML	AML	15 03 05.8	
	comp=N,1103µm,0.7s						
PGB	**Panagyurishte**	**2.61**	**327**	P	**Pn**	**15 02 14.9**	**-0.1**
PGB	**Panagyurishte**	**2.61**	**327**	Pg	**Pb**	**15 02 20.9**	**+1.2**
MANT	**Manisa**	**2.68**	**134**		**Pn**	**15 02 17.1**	**+1.1**
KARY	**Karystos**	**2.68**	**209**	P	**Pn**	**15 02 15.2**	**-0.7**
KARY				AML	AML	15 03 02.4	
	comp=E,450µm,0.6s						
KARY				AML	AML	15 03 03.3	
	comp=N,411µm,0.5s						
KULA	**Kula-Manisa**	**2.72**	**133**	P	**Pn**	**15 02 17.5**	**+1.1**
KULA				S	**Sn**	**15 02 50.0**	**+0.9**
KKB	**Krupnik**	**2.72**	**304**	P	**Pn**	**15 02 16.6**	**+0.1**
SMG	**Samos**	**2.73**	**168**	P	**Pn**	**15 02 16.7**	**+0.2**
SMG				S	**Sn**	**15 02 50.8**	**+1.5**
	comp=N,1µm,0.8s						
SMG	**Samos**	**2.73**	**168**	P	**Pn**	**15 02 16.7**	**+0.2**
LIT	**Litokhoron**	**2.78**	**265**		**Pn**	**15 02 17.7**	**+0.4**
GCAM	**G?zelcaml?**	**2.82**	**162**	PN	**Pn**	**15 02 18.4**	**+0.7**
VAY	**Valandovo**	**2.84**	**290**	*e*Pn	**Pn**	**15 02 18.8**	**+0.7**
VAY				*e*Sn	**Sb**	**15 02 59.4**	**+1.1**
VAY	**Valandovo**	**2.84**	**290**	*i* Pn	**Pn**	**15 02 18.7**	**+0.6**
VAY	**Valandovo**	**2.84**	**290**	*i* Pn	**Pn**	**15 02 18.7**	**+0.6**
DION	**Dionisos Attik**	**2.85**	**217**	P	**Pn**	**15 02 17.5**	**-0.7**
SZH	**Strazhica**	**2.89**	**357**	P	**Pn**	**15 02 19.2**	**+0.5**
VIL2	**Platees**	**3.09**	**226**	P	**Pn**	**15 02 21.0**	**-0.5**
VIL2				AML	AML	15 03 20.8	
	comp=N,575µm,0.7s						
VIL2				AML	AML	15 03 27.1	
	comp=E,954µm,0.9s						
VLY	**Voula,Athens**	**3.10**	**216**	P	**Pn**	**15 02 20.8**	**-0.9**
VTS	**Vitosha**	**3.11**	**317**	*e*Pn	**Pn**	**15 02 22.7**	**+0.9**
VTS				*e*Sn	**Sb**	**15 03 06.2**	**+0.2**
VTS	**Vitosha**	**3.11**	**317**	⇓P	**Pn**	**15 02 22.7**	**+0.9**
VTS	**Vitosha**	**3.11**	**317**	P	**Pn**	**15 02 22.5**	**+0.7**
VTS	**Vitosha**	**3.11**	**317**		**Pn**	**15 02 22.5**	**+0.7**
RAZG	**Razgrad**	**3.20**	**5**	⇓P	**Pn**	**15 02 23.9**	**+0.9**
RAZG	**Razgrad**	**3.20**	**5**		**Pn**	**15 02 23.9**	**+0.9**
PLVB	**Pleven**	**3.20**	**340**	⇑P	**Pn**	**15 02 23.6**	**+0.6**
PLVB	**Pleven**	**3.20**	**340**		**Pn**	**15 02 23.6**	**+0.6**
AGG	**Agios Georgios**	**3.21**	**246**	P	**Pn**	**15 02 22.7**	**-0.6**
AGG	**Agios Georgios**	**3.21**	**246**		**Pn**	**15 02 23.6**	**+0.4**
APE	**Apeiranthos**	**3.34**	**188**	P	**Pn**	**15 02 24.3**	**-0.6**
APE	**Apeiranthos**	**3.34**	**188**	P	**Pn**	**15 02 24.5**	**-0.5**
APE	**Apeiranthos**	**3.34**	**188**	⇑P	**Pn**	**15 02 24.3**	**-0.6**
APE	**Apeiranthos**	**3.34**	**188**		**Pn**	**15 02 24.3**	**-0.6**
LTK	**Loutraki**	**3.39**	**227**	P	**Pn**	**15 02 25.3**	**-0.3**
BOSS	**Bosilegrad**	**3.45**	**309**	*e*Pn	**Pn**	**15 02 27.1**	**+0.7**
BOSS				*e*Sn	**Sb**	**15 03 15.5**	**-0.3**
SERI	**Serifos**	**3.46**	**202**	P	**Pn**	**15 02 26.3**	**-0.2**
MPEP	**Malo Peshtene**	**3.46**	**330**	P	**Pn**	**15 02 27.3**	**+0.8**
AMGA	**Amorgos Island**	**3.55**	**183**	P	**Pn**	**15 02 27.2**	**-0.6**
FNA	**Florina**	**3.63**	**278**		**Pn**	**15 02 28.8**	**-0.1**
KLV	**Kalavryta, Ach**	**3.86**	**234**	P	**Pn**	**15 02 31.6**	**-0.5**
SKO	**Skopje**	**3.87**	**296**	*e*Pn	**Pn**	**15 02 33.2**	**+1.1**
SKO	**Skopje**	**3.87**	**296**	*i* Pn	**Pg**	**15 02 45.4**	**-1.7**
SKO	**Skopje**	**3.87**	**296**	*i* Pn	**Pg**	**15 02 45.4**	**-1.7**
ZAPS	**Zavoj**	**3.88**	**319**	*e*Pn	**Pn**	**15 02 33.0**	**+0.6**
ZAPS				*e*Sn	**Sb**	**15 03 26.0**	**-2.3**
MDUB	**Mudurnu**	**3.89**	**87**		**Pn**	**15 02 32.5**	**0.0**
BARS	**Barje**	**4.04**	**308**	*e*Pn	**Pn**	**15 02 35.3**	**+0.8**
BARS	**Barje**	**4.04**	**308**	*e*Pn	**Pb**	**15 02 43.3**	**-0.6**
BARS				*e*Sn	**Sb**	**15 03 27.9**	**-4.7**
BARS				*e*Sn	**Sg**	**15 03 46.5**	**+3.9**
SANT	**Santorini**	**4.04**	**187**	Pn	**Pn**	**15 02 34.0**	**-0.5**
OHR	**Ohrid**	**4.10**	**282**	*i* Pn	**Pg**	**15 02 53.4**	**+1.8**
OHR	**Ohrid**	**4.10**	**282**	*i* Pn	**Pg**	**15 02 53.4**	**+1.8**
ISP	**Isparta**	**4.28**	**125**	Pn	**Pn**	**15 02 38.4**	**+0.4**
TIRR	**Tirgusor**	**4.42**	**22**		**Pn**	**15 02 39.4**	**-0.3**
ZAGS	**Zajecar**	**4.48**	**321**	*e*Pn	**Pn**	**15 02 40.6**	**+0.1**
ZAGS				*e*Sn	**Sb**	**15 03 40.0**	**-5.3**
ITM	**Ithomi**	**4.57**	**227**		**Pn**	**15 02 43.0**	**+1.1**
BOVS	**Bovan**	**4.62**	**316**	*e*Pn	**Pn**	**15 02 43.3**	**+0.8**
BOVS				*e*Sn	**Sb**	**15 03 42.9**	**-6.4**
SELS	**Selova**	**4.68**	**309**	*e*Pn	**Pn**	**15 02 43.4**	**0.0**
SELS				*e*Sn	**Sb**	**15 03 45.3**	**-6.0**
ELL	**Elmali**	**4.69**	**139**		**Pn**	**15 02 46.5**	**+2.8**
KARP	**Karpathos**	**4.90**	**170**	Pn	**Pn**	**15 02 48.6**	**+2.3**
CFR	**Carcaliu**	**5.02**	**17**	⇓P	**Pn**	**15 02 48.5**	**+0.5**
CFR	**Carcaliu**	**5.02**	**17**		**Pn**	**15 02 48.5**	**+0.5**
ARR	**Arges**	**5.10**	**348**	⇑P	**Pn**	**15 02 49.7**	**+0.6**
ARR	**Arges**	**5.10**	**348**		**Pn**	**15 02 49.7**	**+0.6**
MLR	**Muntele Rosu**	**5.11**	**359**	Pn	**Pn**	**15 02 51.0**	**+1.7**
	comp=E,5.9nm,0.3s,baz=216,slow=2.2,SNR=35						
MLR				Lg	Lg	15 04 16.9	
	comp=E,3.1nm,0.3s,baz=208,slow=16,SNR=2.4						
MLR	**Muntele Rosu**	**5.11**	**359**	⇑P	**Pn**	**15 02 51.6**	**+2.3**
MLR	**Muntele Rosu**	**5.11**	**359**		**Pn**	**15 02 51.4**	**+2.1**
ANTO	**Ankara**	**5.15**	**94**		**Pn**	**15 02 50.5**	**+0.6**
IDI	**Anoyia**	**5.18**	**191**	Pn	**Pn**	**15 02 49.2**	**-1.0**
	comp=E,0.7nm,0.3s,baz=7.6,slow=10,SNR=8.0						
IDI				Sn	**Sn**	**15 03 49.0**	**-0.7**
	comp=E,0.8nm,0.3s,baz=134,slow=23,SNR=1.9						
IDI	**Anoyia**	**5.18**	**191**		**Pn**	**15 02 50.3**	**+0.1**
BISRR	**Bisoca**	**5.18**	**5**	⇓P	**Pn**	**15 02 53.1**	**+2.9**
BISRR	**Bisoca**	**5.18**	**5**		**Pn**	**15 02 53.1**	**+2.9**
KUBS	**Kucevo**	**5.20**	**322**	*e*Pn	**Pn**	**15 02 49.6**	**-0.8**
HERR	**Herculane**	**5.26**	**330**	⇑P	**Pn**	**15 02 51.2**	**0.0**
HERR	**Herculane**	**5.26**	**330**		**Pn**	**15 02 51.2**	**0.0**
GRUS	**Gruza**	**5.32**	**313**	*e*Pn	**Pn**	**15 02 52.4**	**+0.2**
GRUS				*e*Sn	**Sn**	**15 04 00.2**	**+6.9**
SJES	**Sjenica**	**5.41**	**304**	*e*Pn	**Pn**	**15 02 52.6**	**-0.9**
MDVR	**Moldovita**	**5.46**	**325**	⇓P	**Pn**	**15 02 54.4**	**+0.2**
MDVR	**Moldovita**	**5.46**	**325**		**Pn**	**15 02 54.4**	**+0.2**
PLOR	**Plostina**	**5.48**	**4**	⇑P	**Pn**	**15 02 56.7**	**+2.3**
PLOR	**Plostina**	**5.48**	**4**		**Pn**	**15 02 56.7**	**+2.3**
VRI	**Vrincioaia**	**5.50**	**5**	⇓P	**Pn**	**15 02 56.5**	**+1.9**
VRI	**Vrincioaia**	**5.50**	**5**		**Pn**	**15 02 56.5**	**+1.9**
PDG	**Podgorica**	**5.54**	**294**	*e*Pn	**Pn**	**15 02 56.7**	**+1.5**
GZR	**Gura Zlata**	**5.57**	**335**	⇓P	**Pn**	**15 02 55.6**	**0.0**
GZR	**Gura Zlata**	**5.57**	**335**		**Pn**	**15 02 55.6**	**0.0**
DOPR	**Dopca**	**5.61**	**355**	⇑P	**Pn**	**15 02 57.7**	**+1.6**
DOPR	**Dopca**	**5.61**	**355**		**Pn**	**15 02 57.7**	**+1.6**
TRUS	**Trudelj**	**5.71**	**314**	*e*Pn	**Pn**	**15 02 57.2**	**-0.3**
BR131	**Keskin Array S**	**5.82**	**94**		**Pn**	**15 02 59.4**	**+0.4**
BRTR	**Keskin Array B**	**5.82**	**94**	Pn	**Pn**	**15 02 59.8**	**+0.7**
	comp=E,2.8nm,0.3s,baz=265,slow=10,SNR=61						
BRTR				Sn	**Sn**	**15 04 04.4**	**-1.2**
	comp=E,0.7nm,0.3s,baz=38,slow=18,SNR=2.6						
DIVS	**Divibare**	**5.86**	**311**	*e*Pn	**Pn**	**15 02 59.6**	**-0.1**
DIVS				*e*Sn	**Sn**	**15 04 11.9**	**+5.2**
DIVS	**Divibare**	**5.86**	**311**		**Pn**	**15 02 59.8**	**+0.1**
BBLS	**Lazići**	**6.08**	**307**	*e*Pn	**Pn**	**15 03 02.2**	**-0.4**
BBLS				*e*Sn	**Sn**	**15 04 18.0**	**+6.0**
TESR	**Tescani**	**6.14**	**3**	⇑P	**Pn**	**15 03 05.0**	**+1.6**
TESR	**Tescani**	**6.14**	**3**		**Pn**	**15 03 05.0**	**+1.6**
BZS	**Buzias**	**6.18**	**329**	⇑P	**Pn**	**15 03 03.4**	**-0.5**
BZS	**Buzias**	**6.18**	**329**		**Pn**	**15 03 03.4**	**-0.5**
TREB	**Trebinje**	**6.27**	**294**	*e*Pn	**Pn**	**15 03 04.4**	**-0.8**
TEKS	**Tekeris**	**6.40**	**313**	*e*Pn	**Pn**	**15 03 05.9**	**-1.1**
HAPS	**Han Pijesak,BI**	**6.47**	**307**	*e*Pn	**Pn**	**15 03 06.9**	**-1.2**
DRGR		**6.87**	**340**	⇑P	**Pn**	**15 03 13.1**	**-0.3**
DRGR		**6.87**	**340**		**Pn**	**15 03 13.1**	**-0.3**
BUR08	**Bucovina Ar. S**	**7.29**	**355**		**Pn**	**15 03 20.6**	**+1.3**
MMAI	**Mount Meron Ar**	**10.47**	**132**	Pn	**Pn**	**15 04 02.5**	**-0.3**
	comp=E,0.9nm,0.3s,baz=306,slow=12,SNR=4.5						
MMAI				Sn	**Sn**	**15 05 59.5**	**-0.4**
	comp=E,0.5nm,0.3s,baz=324,slow=26,SNR=1.6						
ASF	**Jabal al Asfar**	**11.95**	**130**	LR	LR	15 10 27.7	
	comp=E,155nm,20.2s,baz=318,slow=45						
GERES	**GERESS Array B**	**12.22**	**318**	Pn	**Pn**	**15 04 30.7**	**+3.9**
	comp=E,0.1nm,0.3s,baz=124,slow=14,SNR=1.2						
EIL	**Elat**	**12.90**	**143**	Pn	**Pn**	**15 04 35.8**	**-0.3**
	comp=E,0.7nm,0.3s,baz=187,slow=21,SNR=5.4						
EIL				Sn	**Sn**	**15 06 54.5**	**-4.9**
	comp=E,0.3nm,0.3s,baz=75,slow=20,SNR=2.5						
FINES	**FINESS Array B**	**21.09**	**360**	P	**P**	**15 06 16.6**	**-0.2**
	comp=E,1.5nm,0.9s,baz=181,slow=14,SNR=2.0						
FINES				LR	LR	15 15 27.8	
	comp=E,32nm,18.1s,baz=53,slow=40						
NOA	**NORSAR Array B**	**22.62**	**341**	P	**P**	**15 06 34.7**	**+1.4**
	comp=E,0.9nm,0.7s,baz=149,slow=11,SNR=2.9						
EKA	**Eskdalemuir Ar**	**24.44**	**318**	P	**P**	**15 06 52.9**	**+1.7**
	comp=E,0.7nm,0.7s,baz=112,slow=11,SNR=3.5						
GEYT	**Alibeck**	**24.87**	**85**	P	**P**	**15 06 54.8**	**-0.5**
	comp=E,1.1nm,0.5s,baz=302,slow=12,SNR=2.9						
MKAR	**Makanchi Array**	**40.45**	**62**	P	**P**	**15 09 12.1**	**+1.1**
	comp=E,0.3nm,0.6s,baz=280,slow=7.3,SNR=4.9						
ZALV	**Zalesovo Beam**	**40.97**	**50**	P	**P**	**15 09 16.2**	**+1.1**
	comp=E,0.4nm,0.3s,baz=265,slow=10.0,SNR=1.8						

WBNET 24 15:05:01.8, 50°.23N×12°.44E, h9km, MI0.3, 3C-2D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NKC	**Novy Kostel**	**0.01**	**89**	⇑P	Pg	15 05 03.4	0.0
LBCW	**Luby**	**0.04**	**332**	⇓P	Pg	15 05 03.7	+0.1
LBCW				S	Sg	15 05 05.1	+0.2
VAC	**Vackov**	**0.04**	**273**	⇓P	Pg	15 05 03.6	0.0
VAC				S	Sg	15 05 04.9	0.0
STCW	**Studenec**	**0.06**	**63**	⇑P	Pg	15 05 03.7	-0.1
STCW				S	Sg	15 05 05.1	-0.2
KRCW	**Kraslice**	**0.12**	**31**	⇑P	Pg	15 05 04.6	0.0

*PRU **24** 15:05:04.1±0.0, 50°.24N×12°.42E, h6km, West Bohemia Swarm*

WBNET 24 15:05:04.0, 50°.23N×12°.44E, h9km, MI0.6, 4C-3D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NKC	**Novy Kostel**	**0.01**	**40**	*e*PG	Pg	15 05 04.5	-1.2
NKC				*e*SG	Sg	15 05 06.7	-0.2
	comp=Z,17nm,0.2s						
NKC	**Novy Kostel**	**0.01**	**40**	⇑P	Pg	15 05 05.8	+0.1
NKC				S	Sg	15 05 06.9	0.0
VAC	**Vackov**	**0.04**	**282**	⇓P	Pg	15 05 06.0	+0.1
VAC				S	Sg	15 05 07.2	0.0
LBCW	**Luby**	**0.04**	**335**	⇓P	Pg	15 05 06.0	+0.1
LBCW				S	Sg	15 05 07.4	+0.2
STCW	**Studenec**	**0.06**	**58**	⇑P	Pg	15 05 06.1	0.0
STCW				S	Sg	15 05 07.4	-0.2
SKC	**Skalna**	**0.08**	**222**	S	Sg	15 05 07.7	-0.1
POCW	**Potky**	**0.09**	**355**	S	Sg	15 05 08.4	+0.2
KRCW	**Kraslice**	**0.12**	**29**	⇑P	Pg	15 05 06.9	0.0
KRCW				S	Sg	15 05 08.8	-0.1
ZHC	**Zelena Hora**	**0.18**	**208**	⇑P	Pg	15 05 07.8	0.0
ZHC				S	Sg	15 05 10.3	-0.1
LACW	**Lazy**	**0.21**	**146**	⇓P	Pg	15 05 08.4	0.0
LACW				S	Sg	15 05 11.3	0.0
KHC	**Kasperske Hory**	**1.32**	**146**	*e*SG	Sg	15 05 46.9	+0.4

*DDA **24** 15:10:10.5, 40°.41N×26°.05E, h21km±3km, MW3.4*
*ISK **24** 15:10:11.1, 40°.38N×26°.08E, h5km, ML3.4/30*
*THE **24** 15:10:11.9, 40°.39N×26°.11E, h11km±1km, ML3.2/7, Error ellipse: s-maj=1.0km s-min=0.4km az=305.0*
*ATH **24** 15:10:12.5, 40°.39N×26°.04E, h27km±2km, ML3.4/7, Error ellipse: s-maj=3.7km s-min=1.0km az=296.0*

ISC 24 15:10:12.3±0.9, 40°.38N±0°.01×26°.11E±0°.02, h9km±8km, n87, σ0s95/121, 7C-9D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.25**	**221**	P	**Pg**	**15 10 17.4**	**0.0**
GADA				S	**Sg**	**15 10 21.4**	**+0.6**
	8µm,0.5s						
GADA	**Gvkgeada**	**0.25**	**221**	PG	**Pg**	**15 10 17.1**	**-0.3**
GADA				SG	**Sg**	**15 10 21.8**	**+1.0**
GELI	**Tayfur-Gelibol**	**0.28**	**86**	PG	**Pg**	**15 10 17.9**	**+0.1**
ENEZ	**Enez**	**0.36**	**5**	P	**Pg**	**15 10 19.2**	**-0.2**
ENEZ				S	**Sg**	**15 10 24.2**	**+0.1**
	5µm,0.6s						
ENEZ	**Enez**	**0.36**	**5**	PG	**Pg**	**15 10 18.6**	**-0.8**
ERIK	**Erikli-Kesan**	**0.42**	**46**	PG	**Pg**	**15 10 20.1**	**-0.5**
SMTH	**Samothraki Isl**	**0.46**	**282**	P	**Pg**	**15 10 20.9**	**-0.3**
SMTH				S	**Sg**	**15 10 27.3**	**+0.1**
	3µm,0.2s						
SMTH	**Samothraki Isl**	**0.46**	**282**	P	**Pg**	**15 10 20.9**	**-0.3**
SMTH				S	**Sg**	**15 10 27.4**	**+0.2**
SMTH				AML	AML	15 10 31.9	
	comp=E,8259µm,0.1s						
SMTH				AML	AML	15 10 32.1	
	comp=N,7280µm,0.2s						
BOZC	**Bozcaada**	**0.54**	**185**	PG	**Pg**	**15 10 22.3**	**-0.5**
BOZC	**Bozcaada**	**0.54**	**185**	*i* P	**Pg**	**15 10 22.2**	**-0.6**
BOZC				*i* S	**Sg**	**15 10 30.7**	**+0.9**
BOZC				IAML		15 10 35.0	
	comp=N,908nm,0.8s						
EZN	**Ezine**	**0.58**	**164**	P	**Pg**	**15 10 22.9**	**-0.6**
EZN				S	**Sg**	**15 10 31.8**	**+0.7**
	comp=N,800nm,0.3s						
EZN	**Ezine**	**0.58**	**164**	PG	**Pg**	**15 10 22.9**	**-0.6**
EZN				SG	**Sb**	**15 10 33.1**	**+0.2**
KESN	**Edirne-Kesan**	**0.62**	**44**	*i* P	**Pg**	**15 10 23.0**	**-1.4**
KESN				*i* S	**Sg**	**15 10 31.5**	**-1.1**
KESN				IAML		15 10 38.0	
	comp=N,1µm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.72**	**152**	*i* P	**Pg**	**15 10 25.7**	**-0.5**
BAYC				*i* S	**Sg**	**15 10 36.3**	**+0.7**
BAYC				IAML		15 10 39.0	
	comp=N,426nm,0.3s						
UKOP	**Uzunkopru-Edir**	**0.84**	**28**	PG	**Pb**	**15 10 29.2**	**0.0**
UKOP				SG	**Sn**	**15 10 41.9**	**-1.1**
LIA	**Limnos Island**	**0.86**	**236**	P	**Pg**	**15 10 28.2**	**-0.7**
LIA				S	**Sg**	**15 10 40.5**	**+0.4**
	comp=N,2µm,0.6s						
LIA	**Limnos Island**	**0.86**	**236**	P	**Pg**	**15 10 28.6**	**-0.3**
LIA				S	**Sg**	**15 10 40.5**	**+0.4**
LIA				AML	AML	15 10 42.5	
	comp=N,4346µm,0.6s						
LIA				AML	AML	15 10 42.6	
	comp=E,4932µm,0.4s						
RKY	**Sarkoy-Tekirda**	**0.87**	**69**	PG	**Pb**	**15 10 29.6**	**0.0**
SART	**Tekirdag**	**0.87**	**69**	*i* P	**Pg**	**15 10 28.8**	**-0.3**
SART				*i* S	**Sg**	**15 10 40.6**	**+0.3**
SART				IAML		15 10 47.0	
	comp=E,178nm,0.5s						
RDO	**Rodhopi**	**0.88**	**330**	P	**Pg**	**15 10 28.4**	**-0.8**
RDO				S	**Sb**	**15 10 41.3**	**-0.4**
	comp=E,2µm,0.4s						
RDO	**Rodhopi**	**0.88**	**330**	P	**Pg**	**15 10 28.7**	**-0.6**
RDO				S	**Sb**	**15 10 41.4**	**-0.3**
RDO				AML	AML	15 10 44.8	
	comp=N,3816µm,0.4s						
RDO				AML	AML	15 10 46.0	
	comp=E,3886µm,0.2s						
RDO	**Rodhopi**	**0.88**	**330**	PG	**Pg**	**15 10 28.5**	**-0.8**
KRBG	**Karabiga-Canak**	**0.90**	**89**	PG	**Pg**	**15 10 29.9**	**+0.2**
KNL	**Balıkesir**	**1.08**	**95**	*i* P	**Pg**	**15 10 31.9**	**-1.3**
KNL				*i* S	**Sn**	**15 10 48.8**	**-0.1**
KNL				IAML		15 10 50.0	
	comp=N,509nm,0.7s						
THAS	**Thassos island**	**1.09**	**282**	P	**Pg**	**15 10 32.9**	**-0.3**
THAS				S	**Sg**	**15 10 47.2**	**-0.2**
THAS				AML	AML	15 10 48.8	
	comp=E,2393µm,0.2s						
THAS				AML	AML	15 10 49.0	
	comp=N,2560µm,0.2s						
PRK	**Paraskevi**	**1.14**	**174**	P	**Pn**	**15 10 35.1**	**+0.6**
PRK				S	**Sn**	**15 10 51.3**	**+1.0**
PRK				AML	AML	15 10 51.8	
	comp=E,6988µm,0.4s						
PRK				AML	AML	15 10 52.1	
	comp=N,17906µm,0.9s						
MRMT	**Marmara Adasi**	**1.15**	**78**	PN	**Pg**	**15 10 34.2**	**-0.3**
AYVA	**Ayvalik**	**1.16**	**157**	*i* P	**Pg**	**15 10 33.7**	**-0.9**
AYVA				*i* S	**Sg**	**15 10 49.7**	**0.0**
AYVA				IAML		15 10 51.0	
	comp=N,4µm,0.5s						
SIGR	**SIGRI**	**1.19**	**190**	P	**Pb**	**15 10 33.1**	**-1.9**
SIGR				S	**Sg**	**15 10 50.5**	**+0.1**
	comp=N,3µm,0.5s						
SIGR	**SIGRI**	**1.19**	**190**	P	**Pb**	**15 10 34.2**	**-0.8**
SIGR				S	**Sb**	**15 10 50.7**	**+0.3**
SIGR				AML	AML	15 10 51.1	
	comp=N,6425µm,0.7s						
SIGR				AML	AML	15 10 52.0	
	comp=E,4832µm,0.4s						
SIGR	**SIGRI**	**1.19**	**190**	PN	**Pb**	**15 10 34.9**	**-0.1**
EFSA	**Agios Efstrati**	**1.21**	**226**	P	**Pb**	**15 10 34.2**	**-1.1**
EFSA				S	**Sb**	**15 10 51.1**	**0.0**
EFSA				AML	AML	15 10 52.9	
	comp=N,4564µm,0.5s						
EFSA				AML	AML	15 10 56.5	
	comp=E,3183µm,0.5s						
TKR	**Tekirdag**	**1.24**	**60**	PN	**Pg**	**15 10 37.0**	**+0.8**
GONE	**Gonen-Balikesi**	**1.25**	**105**	PN	**Pn**	**15 10 36.1**	**+0.1**
BALY	**Balya**	**1.32**	**118**	*i* P	**Pn**	**15 10 36.2**	**-0.8**
BALY				*i* S

*SKO **24** 15:48:00.4,41°.63N×20°.71E,h15km*
*ATH **24** 15:48:04.5,41°.72N×20°.82E,h11km±5km,ML2.6/3,Error ellipse: s-maj=6.3km s-min=1.3km az=207.0*
*TIR **24** 15:48:04.3,41°.67N×20°.76E,h11km,Md2.8/6*
*PDG **24** 15:48:06.1±0.2,41°.63N×20°.71E,h6km,ML2.6/12,Error ellipse: s-maj=0.3km s-min=0.3km az=0.0*
*BEO **24** 15:48:07.4±0.2,41°.61N×20°.79E,h4km±2km,ML2.4/15*

ISC 24 15:48:05.7±1.0,**41°.64N**±0°.02×**20°.75E**±0°.02,**h8**km±9km,
n68,σ1§**32**/107,**12C-8D,Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.23**	**282**	*i* Pg	**Pg**	**15 48 10.0**	**-0.4**
PHP				*i* Sg	**Sg**	**15 48 13.2**	**-0.5**
OHR	**Ohrid**	**0.52**	**176**	⇑*i* Pg	**Pg**	**15 48 16.1**	**+0.2**
OHR				*i* Sg	**Sb**	**15 48 24.9**	**0.0**
OHR				*e*Lg	Lg	15 48 25.3	
	comp=E,375nm,0.6s						
OHR	**Ohrid**	**0.52**	**176**	⇑*i* Pg	**Pg**	**15 48 16.1**	**+0.2**
OHR				*i* Sg	**Sb**	**15 48 24.9**	**0.0**
OHR				*e*Lg	Lg	15 48 25.3	
	comp=E,375nm,0.6s						
SKO	**Skopje**	**0.62**	**57**	*e*Pg	**Pg**	**15 48 17.2**	**-0.5**
SKO				*e*Sg	**Sb**	**15 48 27.1**	**-0.5**
SKO	**Skopje**	**0.62**	**57**	*i* Pg	**Pg**	**15 48 17.7**	**+0.1**
SKO				*i* Sg	**Sb**	**15 48 27.1**	**-0.5**
SKO				*e*Lg	Lg	15 48 28.5	
	comp=N,52nm,0.4s						
SKO	**Skopje**	**0.62**	**57**	*i* Pg	**Pg**	**15 48 17.7**	**+0.1**
SKO				*i* Sg	**Sb**	**15 48 27.1**	**-0.5**
SKO				*e*Lg	Lg	15 48 28.5	
	comp=N,52nm,0.4s						
TIR	**Tirane**	**0.72**	**247**	*e*Pg	**Pg**	**15 48 19.1**	**-0.5**
TIR				*e*Sg	**Sn**	**15 48 31.8**	**-1.6**
TIR	**Tirane**	**0.72**	**247**	*i* Pg	**Pg**	**15 48 19.4**	**-0.2**
TIR				*i* SG	**Sb**	**15 48 30.6**	**+0.1**
TIR	**Tirane**	**0.72**	**247**	P	**Pb**	**15 48 19.6**	**-0.9**
TIR				S	**Sn**	**15 48 31.6**	**-1.8**
TIR				AML	AML	15 48 34.5	
	comp=N,624μm,0.3s						
TIR				AML	AML	15 48 38.7	
	comp=E,641μm,0.5s						
PUK	**Puka**	**0.76**	**303**	*i* PG	**Pg**	**15 48 19.1**	**-1.2**
PUK				*i* SG	**Sg**	**15 48 30.1**	**-0.1**
BCI	**Bajram Curri**	**0.89**	**326**	*i* PG	**Pg**	**15 48 22.4**	**-0.4**
BCI				*i* SG	**Sb**	**15 48 34.5**	**-0.9**
FNA	**Florina**	**0.97**	**151**	*i* PG	**Pg**	**15 48 24.4**	**0.0**
FNA				*i* SG	**Sn**	**15 48 38.8**	**-0.9**
FNA	**Florina**	**0.97**	**151**	P	**Pb**	**15 48 24.0**	**-0.9**
FNA				S	**Sb**	**15 48 37.9**	**0.0**
FNA				AML	AML	15 48 40.9	
	comp=E,1665μm,0.4s						
FNA				AML	AML	15 48 42.8	
	comp=N,1863μm,0.3s						
PVY	**Plav**	**1.12**	**329**	⇓*i* Pg	**Pb**	**15 48 26.7**	**-0.8**
PVY				*i* Sg	**Sn**	**15 48 44.1**	**+0.6**
ULC	**Ulcinj**	**1.17**	**287**	⇓*i* Pg	**Pb**	**15 48 27.1**	**-1.1**
ULC				*i* Sg	**Sn**	**15 48 45.0**	**+0.5**
NEST	**Nestorio**	**1.24**	**169**	P	**Pg**	**15 48 29.1**	**-0.4**
NEST				S	**Sg**	**15 48 47.6**	**+2.0**
NEST				AML	AML	15 48 54.8	
	comp=E,463μm,0.4s						
NEST				AML	AML	15 48 58.8	
	comp=N,307μm,0.5s						
DRME	**Dracevica, Mon**	**1.29**	**296**	*e*Pn	**Pb**	**15 48 29.6**	**-0.6**
DRME	**Dracevica, Mon**	**1.29**	**296**	⇑*i*Pg	**Pn**	**15 48 29.1**	**-0.9**
DRME				*i* Sg	**Sg**	**15 48 49.3**	**+2.1**
PDG	**Podgorica**	**1.37**	**306**	*e*Pg	**Pg**	**15 48 33.1**	**+1.2**
PDG				*e*Sg	**Sg**	**15 48 52.8**	**+3.2**
PDG	**Podgorica**	**1.37**	**306**	⇑P	**Pg**	**15 48 34.0**	**+2.1**
PDG	**Podgorica**	**1.37**	**306**	*e*Pn	**Pn**	**15 48 29.9**	**-1.1**
TTG	**Podgorica**	**1.37**	**306**	⇓*i*Pg	**Pb**	**15 48 30.9**	**-0.6**
TTG				*i* Sg	**Sg**	**15 48 51.3**	**+1.7**
IVA	**Berane**	**1.39**	**333**	⇑*i*Pg	**Pb**	**15 48 31.5**	**-0.4**
IVA				*i* Sg	**Sg**	**15 48 53.2**	**+2.8**
VAY	**Valandovo**	**1.41**	**102**	*e*Pg	**Pg**	**15 48 32.3**	**-0.4**
VAY				*e*Sg	**Sg**	**15 48 51.1**	**+0.2**
VAY	**Valandovo**	**1.41**	**102**	⇓*i*Pg	**Pg**	**15 48 32.4**	**-0.2**
VAY				*i* Sg	**Sg**	**15 48 52.1**	**+1.2**
VAY				*e*Lg	Lg	15 48 55.0	
	comp=N,119nm,0.5s						
VAY	**Valandovo**	**1.41**	**102**	⇓*i*Pg	**Pg**	**15 48 32.4**	**-0.2**
VAY				*i* Sg	**Sg**	**15 48 52.1**	**+1.2**
VAY				*e*Lg	Lg	15 48 55.0	
	comp=N,119nm,0.5s						
BARS	**Barje**	**1.42**	**34**	*e*Pg	**Pg**	**15 48 33.6**	**+0.6**
BARS				*e*Sg	**Sg**	**15 48 53.2**	**+1.7**
PENT	**Pentalofos**	**1.47**	**168**	P	**Pg**	**15 48 34.0**	**+0.1**
KOME	**Kolasin**	**1.52**	**323**	⇑*i*Pg	**Pb**	**15 48 33.9**	**-0.3**
KOME				*i* Sg	**Sg**	**15 48 57.2**	**+2.6**
BUM	**Brajici-Budva**	**1.53**	**296**	⇑*i*Pg	**Pb**	**15 48 33.9**	**-0.5**
BUM				*i* Sg	**Sg**	**15 48 57.1**	**+2.1**
KZN	**Kozani**	**1.54**	**149**	P	**Pg**	**15 48 34.8**	**-0.4**
BOSS	**Bosilegrad**	**1.55**	**56**	*e*Pn	**Pg**	**15 48 35.3**	**-0.2**
BOSS				*e*Sn	**Sg**	**15 48 54.7**	**-0.9**
SELS	**Selova**	**1.61**	**10**	*e*Pg	**Pg**	**15 48 35.8**	**-0.7**
SELS				*e*Sg	**Sg**	**15 48 58.6**	**+1.2**
CEME	**Cevo**	**1.64**	**304**	⇑*i*Pn	**Pb**	**15 48 35.9**	**-0.3**
CEME				*i* Sn	**Sg**	**15 48 59.9**	**+1.6**
KNT	**Kendrikon**	**1.69**	**106**	P	**Pb**	**15 48 36.0**	**-0.9**
SJES	**Sjenica**	**1.72**	**341**	*e*Pg	**Pg**	**15 48 38.5**	**-0.2**
SJES				*e*Sg	**Sg**	**15 49 02.8**	**+1.7**
KPRO	**Kipourio**	**1.74**	**164**	P	**Pb**	**15 48 37.6**	**-0.3**
NKME	**Niksic**	**1.75**	**311**	⇓*i*Pn	**Pb**	**15 48 37.7**	**-0.3**
NKME				*i* Sn	**Sg**	**15 49 02.6**	**+0.7**
NKY	**Niksic**	**1.75**	**313**	⇑*i*Pn	**Pb**	**15 48 37.8**	**-0.4**
NKY				*i* Sn	**Sg**	**15 49 02.8**	**+0.7**
SRN	**Sarande**	**1.84**	**198**	*i* PN	**Pb**	**15 48 39.5**	**-0.1**
HCY	**Herceg Novi**	**1.86**	**297**	*e*Pn	**Pg**	**15 48 40.9**	**-0.5**
HCY	**Herceg Novi**	**1.86**	**297**	⇑*i*Pn	**Pb**	**15 48 39.1**	**-0.9**
HCY				*i* Sn	**Sg**	**15 49 05.3**	**-0.3**
KEK	**Kerkira**	**2.05**	**201**	P	**Pb**	**15 48 42.6**	**-0.6**
BRY	**Bratogost**	**2.07**	**308**	*e*Pn	**Pg**	**15 48 44.0**	**-1.4**
BRY	**Bratogost**	**2.07**	**308**	⇓*i*Pn	**Pb**	**15 48 42.2**	**-1.4**
BRY				*i* Sn	**Sb**	**15 49 10.0**	**+0.5**
UPM	**Unac-Piva**	**2.08**	**320**	*e*Pn	**Pg**	**15 48 44.3**	**-1.2**
UPM	**Unac-Piva**	**2.08**	**320**	⇑*i*Pn	**Pb**	**15 48 42.3**	**-1.4**
UPM				*i* Sn	**Sg**	**15 49 10.6**	**-1.9**
TREB	**Trebinje**	**2.08**	**302**	*e*Pn	**Pb**	**15 48 43.8**	**+0.1**
TREB				*e*Sn	**Sg**	**15 49 11.0**	**-1.6**
TREB	**Trebinje**	**2.08**	**302**	*e*Pn	**Pb**	**15 48 43.4**	**-0.3**
VTS	**Vitosha**	**2.10**	**61**	⇑P	**Pg**	**15 48 45.8**	**-0.1**
ZAPS	**Zavoj**	**2.15**	**40**	*e*Pn	**Pb**	**15 48 44.9**	**0.0**
ZAPS				*e*Sn	**Sb**	**15 49 11.7**	**-0.1**
DBRK	**Dubrovnik**	**2.19**	**299**	*e*Pn	**Pb**	**15 48 44.1**	**-1.5**
GRUS	**Gruza**	**2.25**	**359**	*e*Pn	**Pb**	**15 48 46.9**	**+0.3**
ZAGS	**Zajecar**	**2.44**	**26**	*e*Pn	**Pb**	**15 48 48.8**	**-0.9**
BBLS	**Lazići**	**2.44**	**337**	*e*Pn	**Pb**	**15 48 47.1**	**-2.7**
BBLS	**Lazići**	**2.44**	**337**	*e*Pn	**Pn**	**15 48 46.6**	**+0.7**
DIVS	**Divibare**	**2.52**	**348**	*e*Pn	**Pn**	**15 48 48.1**	**+1.0**
DIVS	**Divibare**	**2.52**	**348**	*e*Pn	**Pn**	**15 48 48.3**	**+1.2**
STON	**Ston**	**2.58**	**300**	*e*Pn	**Pn**	**15 48 48.7**	**+1.0**
STON	**Ston**	**2.58**	**300**	*e*Pn	**Pn**	**15 48 48.7**	**+1.0**
STON				*e*Sn	**Sb**	**15 49 21.8**	**-2.1**
TRUS	**Trudelj**	**2.60**	**355**	*e*Pn	**Pb**	**15 48 52.1**	**-0.4**
HAPS	**Han Pijesak,BI**	**2.78**	**332**	*e*Pn	**Pb**	**15 48 53.9**	**-1.8**
RICI	**Ricice**	**3.25**	**306**	*i* Pn	**Pb**	**15 48 59.6**	**-4.1**
FRGS	**Fruska Gora**	**3.59**	**349**	*e*Pn	**Pn**	**15 49 02.6**	**+1.0**
KIJV	**Kijevo**	**3.98**	**308**	*e*Pn	**Pn**	**15 49 09.9**	**+3.0**
KIJV					Sn	**Sn**	**15 49 57.7**	**+4.0**
ZIRJ	**Zirje**	**4.27**	**300**	*e*Pn	**Pn**	**15 49 12.7**	**+1.8**
LOT	**Lotru**	**4.40**	**29**	⇓P	**Pn**	**15 49 10.1**	**-2.7**
DUGI	**Dugi Otok**	**4.80**	**301**	*e*Pn	**Pn**	**15 49 20.4**	**+2.2**

*NEIC **24** 16:00:08.8±2.0,20°.2S±0°.2×178°.0W±0°.2,h523km±11km,mb4.1/11,Error ellipse: s-maj=33.2km s-min=18.5km az=155.0*
*IDC **24** 16:00:20.1±7.4,20°.00S×178°.37W,h652km±94km,mb2.9/9,mb1 3.2/9,mb1mx2.9/39,mbtmp3.9/9,Error ellipse: s-maj=44.7km s-min=34.1km az=141.0*

ISC 24 16:00:10.4±0.8,**20°.2S**±0°.2×**178°.0W**±0°.1,**h550**km,**n26,**
σ1§**81**/27,**mb3.9**/16,**1C,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.48**	**302**	P	**P**	**16 01 37.0**	**+0.8**
NIUE	**Niue**	**7.67**	**83**	P	**P**	**16 02 02.6**	**-2.3**
AFI	**Afiamalu**	**8.61**	**44**	P	**P**	**16 02 10.7**	**-3.7**
ARMA	**Armidale**	**29.22**	**244**	P	**P**	**16 05 26.3**	**-2.0**
ARMA				IAmb	IAmb	16 05 28.1	
	comp=E,6.9nm,1.1s						
KRVT	**Keravat (AS076**	**33.19**	**294**	P	**P**	**16 06 01.7**	**-0.6**
	comp=E,7.6nm,0.7s,baz=90,slow=9.1,SNR=4.2						
BBOO	**Buckleboo**	**42.70**	**243**	P	**P**	**16 07 18.3**	**-1.1**
BBOO				IAmb	IAmb	16 07 34.3	
	comp=E,7.2nm,1.1s						
AS31	**Alice Springs**	**44.61**	**256**	P	**P**	**16 07 34.8**	**+0.4**
ASAR	**Alice Springs**	**44.61**	**256**	P	**P**	**16 07 35.1**	**+0.8**
	comp=E,0.3nm,0.8s,baz=94,slow=8.1,SNR=7.1						
WB2	**Warramunga Arr**	**44.65**	**262**	P	**P**	**16 07 35.5**	**+0.7**
WRA	**Warramunga Arr**	**44.66**	**262**	P	**P**	**16 07 36.4**	**+1.6**
	comp=E,0.4nm,0.5s,baz=96,slow=7.9,SNR=4.8						
MJAR	**Matsushiro Arr**	**69.97**	**324**	P	**P**	**16 10 26.6**	**-0.3**
	comp=E,1.1nm,0.8s,baz=157,slow=6.0,SNR=4.7						
PETK	**Petropavlovsk-**	**75.98**	**345**	P	**P**	**16 11 01.5**	**+0.6**
	comp=E,1.5nm,0.6s,baz=124,slow=6.5,SNR=6.0						
NVAR	**Mina Array Bea**	**80.79**	**43**	P	**P**	**16 11 28.9**	**+1.6**
	comp=E,0.8nm,0.7s,baz=228,slow=9.9,SNR=6.8						
TRF	**Thorofare Moun**	**86.14**	**12**	P	**P**	**16 11 53.6**	**+0.5**
TRF				IAmb	IAmb	16 11 54.6	
	comp=E,4.9nm,1.0s						
RND	**Reindeer**	**86.39**	**13**	P	**P**	**16 11 54.7**	**+0.4**
RND				IAmb	IAmb	16 11 55.8	
	comp=E,3.9nm,0.7s						
TXAR	**Lajitas Array**	**86.87**	**57**	P	**P**	**16 11 59.3**	**+2.0**
	comp=E,0.4nm,0.8s,baz=221,slow=9.4,SNR=4.4						
WRH	**Wood River Hil**	**87.50**	**12**	P	**P**	**16 11 59.9**	**+0.6**
WRH				IAmb	IAmb	16 12 00.5	
	comp=E,3.4nm,0.8s						
HDA	**Harding Lake**	**87.68**	**13**	P	**P**	**16 12 00.8**	**+0.7**
CCB	**Clear Creek Bu**	**87.71**	**13**	P	**P**	**16 11 59.5**	**-0.7**
ILAR	**Eielson Array**	**88.01**	**13**	P	**P**	**16 12 01.9**	**+0.2**
	comp=E,1.7nm,0.9s,baz=215,slow=5.5,SNR=14						
PDAR	**Pinedale Array**	**88.72**	**43**	P	**P**	**16 12 07.2**	**+1.3**
	comp=E,0.4nm,0.6s,baz=180,slow=1.5,SNR=4.2						
DAWY	**Dawson**	**89.16**	**16**	P	**P**	**16 12 08.8**	**+1.6**
DAWY				IAmb	IAmb	16 12 09.6	
	comp=E,1.7nm,0.8s						
EGAK	**Eagle**	**89.30**	**15**	P	**P**	**16 12 09.0**	**+1.3**
EGAK				IAmb	IAmb	16 12 09.7	
	comp=E,2.2nm,0.8s						
AKASG	**Malin Array Be**	**142.75**	**331**	PKP	**PKPdf**	**16 18 38.0**	**-3.2**
	comp=E,1.8nm,0.6s,baz=39,slow=4.7,SNR=7.4						
PLOR	**Plostina**	**147.37**	**327**	⇑P	**PKKPdf**	**16 27 49.7**	**+1.7**
CLL	**Collm**	**147.77**	**347**	*i* PKPbc	**PKPab**	**16 18 55.6**	**-2.1**
CLL				*e*PKPab	**PKiKP**	**16 18 59.0**	**+4.2**

*SJA **24** 16:03:51.1±1.0,36°.85S×71°.16W,h178km±8km,ML3.8,MW3.6*
*IDC **24** 16:03:54.5±2.3,36°.94S×70°.33W,h135km±30km,mb3.7/4,mb1 3.6/7,mb1mx3.4/29,mbtmp4.1/7,Error ellipse: s-maj=75.3km s-min=22.4km az=90.0*
*GUC **24** 16:03:54.6±0.8,36°.89S×70°.92W,h120km±17km,ML4.2*

ISC 24 16:03:53.5±0.8,**36°.81S**±0°.05×**71°.12W**±0°.06,**h155**km±8km,
n35,σ1§**97/55,mb3.9**/3,**3C-3D,Central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAJA	**Laja**	**1.36**	**249**	⇓*i*P	**Pn**	**16 04 21.4**	**-0.5**
LAJA				*i* S	**Sn**	**16 04 41.7**	**-2.0**
BI03	**Tigo**	**1.53**	**268**	⇑*i*P	**Pn**	**16 04 24.2**	**+0.5**
BI03				*e*S	**Sn**	**16 04 46.4**	**-0.5**
BI03				IAML		16 04 50.6	
	comp=N,7μm,0.2s						
PUMA	**Malargue**	**1.88**	**46**	*i* P	**Pn**	**16 04 27.6**	**+0.1**
PUMA				*i* S	**Sn**	**16 04 54.5**	**+0.8**
GO05	**Huala**	**1.91**	**340**	⇓*i*P	**Pn**	**16 04 28.5**	**+0.6**
GO05				*e*S	**Sn**	**16 04 53.9**	**-0.5**
GO05	**Huala**	**1.91**	**340**	*e*P	**Pn**	**16 04 28.5**	**+0.6**
GO05				*e*S	**Sn**	**16 04 54.8**	**+0.4**
COIS	**El Sosneado**	**2.10**	**37**	*e*P	**Pn**	**16 04 31.4**	**+1.3**
COIS				*e*S	**Sn**	**16 05 00.1**	**+1.8**
LC01	**Cunco**	**2.17**	**196**	⇑*i*P	**Pn**	**16 04 29.0**	**-1.8**
LC01				*e*S	**Sn**	**16 04 56.6**	**-3.2**
MORA	**Malargue**	**2.28**	**49**	*i* P	**Pn**	**16 04 31.9**	**-0.4**
MORA				*e*S	**Sn**	**16 05 00.2**	**-1.8**
LAMA	**Las Malvinas**	**2.43**	**40**	*i* P	**Pn**	**16 04 34.1**	**+0.1**
LAMA				*i* S	**Sn**	**16 05 05.5**	**+0.3**
MT01	**Popeta**	**2.94**	**358**	⇑*i*P	**Pn**	**16 04 39.8**	**-0.5**
MT01				*e*S	**Sn**	**16 05 14.8**	**-1.6**
MT01				IAML		16 05 20.5	
	comp=N,364nm,0.2s						
LMEL	**Las Melosas**	**3.05**	**14**	⇓*i*P	**Pn**	**16 04 42.5**	**+0.7**
LMEL				*e*S	**Sn**	**16 05 18.8**	**-0.4**
LMEL				IAML		16 05 24.4	
	comp=N,275nm,0.1s						
PEL	**Peldehue**	**3.67**	**6**	*e*P	**Pn**	**16 04 49.1**	**-0.6**
PEL				*e*S	**Sn**	**16 05 31.4**	**-1.9**
ROC1	**El Roble**	**3.82**	**1**	*e*P	**Pn**	**16 04 51.2**	**-0.6**
ROC1				*e*S	**Sn**	**16 05 35.3**	**-1.8**
PLCA	**Paso Flores**	**3.94**	**174**	P	**Pn**	**16 04 51.4**	**-1.8**
	comp=N,0.4nm,0.3s,baz=360,slow=12,SNR=33						
AAGR	**Agrelo**	**4.16**	**28**	*i* P	**Pn**	**16 04 56.6**	**+0.5**
ARCO	**CERRO ARCO**	**4.34**	**25**	*i* P	**Pn**	**16 04 58.4**	**-0.2**
ARCO				*i* S	**Sn**	**16 05 51.5**	**+2.3**
ASAL	**Salagasta**	**4.61**	**25**	*e*P	**Pn**	**16 05 02.3**	**+0.4**
ASAL				*e*S	**Sn**	**16 05 54.9**	**-0.3**
AUSP	**Uspallata**	**4.79**	**18**	*e*P	**Pn**	**16 05 04.7**	**+0.2**
AUSP				*e*S	**Sn**	**16 05 52.0**	**-7.8**
RTLS	**Leoncito**	**5.22**	**17**	*e*P	**Pn**	**16 05 10.4**	**+0.3**
RTLS				*e*S	**Sn**	**16 06 07.8**	**-2.2**
RTLS				IAML		16 06 14.2	
	comp=Z,12nm,0.7s						
RTCV	**Cerro Valdivia**	**5.37**	**24**	*e*P	**Pn**	**16 05 10.8**	**-1.2**
RTCV				*e*S	**Sn**	**16 06 10.9**	**-2.4**
RTCV				IAML		16 06 13.7	
	comp=Z,23nm,0.2s						
RTLL	**Cerro Villicun**	**5.89**	**23**	*e*P	**Pn**	**16 05 17.6**	**-1.2**
RTLL				*e*S	**Sn**	**16 06 22.5**	**-3.1**
RTLL				IAML		16 06 29.5	
	comp=Z,46nm,0.3s						
MRA	**San Martin**	**6.24**	**47**	*e*P	**Pn**	**16 05 23.0**	**-0.5**
ACCO	**Cerro Coronel**	**6.43**	**16**	*e*P	**Pn**	**16 05 25.2**	**-1.2**
ACCO				*e*S	**Sn**	**16 06 35.3**	**-3.7**
ACCO				IAML		16 06 40.7	
	comp=Z,39nm,0.4s						
AROD	**Rodeo**	**6.76**	**12**	*i* P	**Pn**	**16 05 30.0**	**-0.7**
AROD				*e*S	**Sn**	**16 06 44.0**	**-3.0**
TCA	**Tanti**	**7.68**	**47**	*i* P	**Pn**	**16 05 41.2**	**-1.6**
TCA				*i* P		16 05 41.3	
TCA				IAML		16 08 10.0	
	comp=Z,7.8nm,3.2s						
VCA	**Vinchina**	**8.41**	**18**	*e*P	**Pn**	**16 05 51.4**	**-1.1**
CYA	**Choya**	**9.47**	**30**	*e*P	Pn	16 06 02.0	-4.4
CYA				IAML		16 07 48.2	
	comp=Z,6.1nm,1.7s						
LVC	**Limon Verde**	**14.28**	**8**	P	**Pn**	**16 07 13.1**	**+4.1**
	comp=Z,1.4nm,0.3s,baz=186,slow=6.8,SNR=13						
CPUP	**Villa Florida**	**15.70**	**52**	P	**Pn**	**16 07 24.5**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=220,slow=11,SNR=5.3						
LPAZ	**La Paz**	**20.61**	**8**	P	**P**	**16 08 25.0**	**+3.7**
	comp=Z,4.7nm,0.9s,baz=164,slow=5.9,SNR=8.7						
SIV	**San Ignacio**	**22.57**	**26**	P	**P**	**16 08 40.4**	**-0.5**
	comp=Z,3.9nm,0.8s,baz=231,slow=9.2,SNR=19						
VNA3	**Neumayer Olymp**	**46.48**	**157**	P	**P**	**16 12 04.3**	**-0.3**
DBIC	**Dimbokro**	**75.40**	**70**	P	**P**	**16 15 20.8**	**+0.4**
	comp=Z,2.2nm,0.5s,baz=206,slow=4.3,SNR=5.0						
TORD	**Torodi Ar. Bea**	**84.48**	**69**	P	**P**	**16 16 09.9**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=267,slow=5.2,SNR=9.1						
MKAR	**Makanchi Array**	**157.90**	**55**	PKPab	**PKPab**	**16 24 06.0**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=286,slow=4.9,SNR=6.1						

*ISK **24** 16:09:48.8,40°.39N×26°.11E,h8km,ML3.7/26*
*DDA **24** 16:09:48.5,40°.38N×26°.11E,h19km±2km,MW3.6*
*THE **24** 16:09:49.3,40°.39N×26°.07E,h13km±1km,ML3.5/12,Error ellipse: s-maj=1.0km s-min=0.6km az=273.0*
*ATH **24** 16:09:49.4,40°.39N×25°.97E,h32km±1km,ML3.5/22,Error ellipse: s-maj=2.1km s-min=0.9km az=246.0*

ISC 24 16:09:49.5±0.8,**40°.40N**±0°.01×**26°.07E**±0°.02,**h16**km±6km,
n149,σ0§**98**/187,**13C-16D,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.24**	**213**	P	**Pg**	**16 09 54.7**	**-0.2**
GADA				S	**Sg**	**16 09 58.6**	**+0.1**
	16μm,0.4s						
GADA	**Gvkgeada**	**0.24**	**213**	PG	**Pg**	**16 09 54.7**	**-0.2**
GADA				SG	**Sg**	**16 09 58.7**	**+0.2**
GELI	**Tayfur-Gelibol**	**0.31**	**89**	PG	**Pg**	**16 09 54.9**	**-1.1**
GELI				SG	**Sg**	**16 09 59.4**	**-1.1**
ENEZ	**Enez**	**0.35**	**11**	P	**Pg**	**16 09 56.4**	**-0.3**
ENEZ				S	**Sb**	**16 10 01.9**	**-0.7**
	13μm,0.4s						
ENEZ	**Enez**	**0.35**	**11**	PG	**Pg**	**16 09 56.4**	**-0.3**
SMTH	**Samothraki Isl**	**0.42**	**281**	P	**Pg**	**16 09 57.8**	**-0.1**
SMTH				S	**Sg**	**16 10 04.0**	**+0.3**
	5μm,0.1s						
SMTH	**Samothraki Isl**	**0.42**	**281**	P	**Pg**	**16 09 57.9**	**-0.1**
SMTH				S	**Sg**	**16 10 03.7**	**-0.1**
SMTH				AML	AML	16 10 09.5	
	comp=E,10467μm,0.1s						
SMTH				AML	AML	16 10 09.6	
	comp=N,11118μm,0.2s						
ERIK	**Erikli-Kesan**	**0.44**	**51**	PG	**Pg**	**16 09 57.4**	**-0.9**
BOZC	**Bozcaada**	**0.55**	**181**	PG	**Pg**	**16 09 59.5**	**-0.9**
BOZC	**Bozcaada**	**0.55**	**181**	*i* P	**Pg**	**16 09 59.6**	**-0.9**
BOZC				*i* S	**Sg**	**16 10 07.5**	**-0.3**
BOZC				IAML		16 10 08.0	
	comp=N,3μm,0.2s						
BOZC				IAML		16 10 09.0	
	comp=E,3μm,0.2s						
EZN	**Ezine**	**0.60**	**161**	P	**Pg**	**16 10 00.1**	**-1.2**
EZN				S	**Sg**	**16 10 08.3**	**-1.0**
	comp=E,3μm,0.2s						
EZN	**Ezine**	**0.60**	**161**	PG	**Pg**	**16 10 00.2**	**-1.1**
KESN	**Edirne-Kesan**	**0.63**	**47**	*i* P	**Pg**	**16 10 00.4**	**-1.7**
KESN				*i* S	**Sg**	**16 10 09.5**	**-1.1**
KESN				IAML		16 10 15.0	
	comp=E,4μm,0.3s						
KESN				IAML		16 10 17.0	
	comp=N,3μm,0.5s						
BAYC	**CANAKKALE_Bayr**	**0.75**	**150**	*i* P	**Pg**	**16 10 03.0**	**-1.1**
BAYC				*i* S	**Sg**	**16 10 13.5**	**-0.5**
BAYC				IAML		16 10 17.0	
	comp=E,2μm,0.3s						
BAYC				IAML		16 10 17.0	
	comp=N,1μm,0.2s						
LIA	**Limnos Island**	**0.84**	**234**	P	**Pg**	**16 10 05.6**	**-0.2**
LIA				S	**Sg**	**16 10 17.5**	**+0.6**
	comp=N,7μm,0.5s						
LIA	**Limnos Island**	**0.84**	**234**	P	**Pg**	**16 10 05.8**	**-0.1**
LIA				S	**Sg**	**16 10 16.1**	**-0.8**
LIA				AML	AML	16 10 19.8	
	comp=N,14498μm,0.5s						
LIA				AML	AML	16 10 19.8	
	comp=E,12280μm,0.4s						
UKOP	**Uzunkopru-Edir**	**0.85**	**30**	PG	**Pb**	**16 10 06.1**	**+0.3**
RDO	**Rodhopi**	**0.85**	**332**	P	**Pg**	**16 10 05.3**	**-0.8**
RDO				S	**Sg**	**16 10 17.3**	**0.0**
	comp=E,2μm,0.5s						
RDO	**Rodhopi**	**0.85**	**332**	P	**Pg**	**16 10 05.4**	**-0.6**
RDO				S	**Sg**	**16 10 17.2**	**0.0**
RDO				AML	AML	16 10 20.5	
	comp=N,8042μm,0.5s						
RDO				AML	AML	16 10 22.8	
	comp=E,3677μm,0.5s						
RDO	**Rodhopi**	**0.85**	**332**	PG	**Pg**	**16 10 05.4**	**-0.6**
RKY	**Sarkoy-Tekirda**	**0.90**	**71**	PG	**Pg**	**16 10 04.9**	**-2.0**
SART	**Tekirdag**	**0.90**	**71**	*i* P	**Pg**	**16 10 05.3**	**-1.6**
KRBG	**Karabiga-Canak**	**0.94**	**90**	PG	**Pg**	**16 10 06.6**	**-1.1**
THAS	**Thassos island**	**1.05**	**282**	P	**Pg**	**16 10 08.8**	**-1.0**
THAS				S	**Sg**	**16 10 23.1**	**-0.4**
	comp=E,2μm,0.4s						
THAS	**Thassos island**	**1.05**	**282**	P	**Pg**	**16 10 08.7**	**-1.0**
THAS				S	**Sg

PAIG				AML	AML	16 10 56.8
	comp=E,488μm,0.5s					
PAIG				AML	AML	16 10 59.0
	comp=N,809μm,0.5s					
PSRA	**Psara**	**1.89**	**192**	P	**Pn**	**16 10 21.3 +0.2**
PSRA				AML	AML	16 10 52.6
	comp=N,4273μm,0.3s					
PSRA				AML	AML	16 10 53.5
	comp=E,4013μm,0.3s					
SKY	**Skiros Island**	**1.92**	**218**	P	**Pn**	**16 10 20.7 -0.7**
SKY	**Skiros Island**	**1.92**	**218**	P	**Pn**	**16 10 20.7 -0.7**
SKY				AML	AML	16 10 53.2
	comp=N,2617μm,0.2s					
SKY				AML	AML	16 10 59.4
	comp=E,2602μm,0.6s					
PLD	**Plovdiv**	**2.00**	**329**	P	**Pb**	**16 10 26.4 +1.0**
PLD	**Plovdiv**	**2.00**	**329**	PN	**Pn**	**16 10 24.5 +2.0**
CTYL	**Yalikoy Yolu**	**2.00**	**57**	PN	**Pn**	**16 10 22.8 +0.2**
PLG	**Polygyros**	**2.00**	**270**	P	**Pn**	**16 10 22.4 -0.3**
PLG	**Polygyros**	**2.00**	**270**	P	**Pn**	**16 10 22.1 -0.6**
PLG				AML	AML	16 10 56.9
	comp=N,1030μm,0.5s					
PLG				AML	AML	16 10 58.0
	comp=E,996μm,0.4s					
CHOS	**Chios island**	**2.00**	**180**	P	**Pn**	**16 10 22.4 -0.3**
CHOS				S	**Sn**	**16 10 47.0 -0.5**
	comp=E,2μm,0.4s					
CHOS	**Chios island**	**2.00**	**180**	P	**Pn**	**16 10 22.5 -0.2**
CHOS				AML	AML	16 10 58.4
	comp=E,3546μm,0.3s					
CHOS				AML	AML	16 10 59.0
	comp=N,3136μm,0.6s					
CHOS	**Chios island**	**2.00**	**180**	PN	**Pn**	**16 10 23.1 +0.4**
DURS	**Dursunbey**	**2.01**	**112**	*i* P	**Pn**	**16 10 23.9 +1.1**
DURS				*i* S	**Sn**	**16 10 48.1 +0.5**
DURS				IAML		16 10 52.0
	comp=N,678nm,0.6s					
DURS				IAML		16 10 53.0
	comp=E,957nm,0.5s					
SRS	**Serrai**	**2.02**	**292**	P	**Pn**	**16 10 22.8 0.0**
SRS	**Serrai**	**2.02**	**292**	P	**Pn**	**16 10 22.9 +0.1**
SRS				AML	AML	16 10 57.9
	comp=E,1723μm,0.4s					
SRS				AML	AML	16 11 04.8
	comp=N,1330μm,0.6s					
AKS	**Akhisar**	**2.03**	**138**	PN	**Pn**	**16 10 23.9 +0.9**
AKHS	**Akhisar**	**2.03**	**138**	*i* P	**Pn**	**16 10 23.5 +0.5**
CTKS	**Kestanelik-??a**	**2.03**	**65**	PN	**Pn**	**16 10 24.1 +1.1**
CESE	**eme**	**2.07**	**175**	PN	**Pn**	**16 10 23.5 0.0**
URLA	**Izmir**	**2.07**	**168**	PN	**Pn**	**16 10 23.5 -0.1**
URLA	**Izmir**	**2.07**	**168**	*i* P	**Pn**	**16 10 23.3 -0.3**
URLA				*i* S	**Sn**	**16 10 49.9 +0.8**
URLA				IAML		16 10 51.0
	comp=N,368nm,0.9s					
URLA				IAML		16 10 58.0
	comp=E,444nm,0.8s					
AOS	**Alonnisos**	**2.08**	**235**	P	**Pn**	**16 10 23.0 -0.7**
AOS	**Alonnisos**	**2.08**	**235**	P	**Pn**	**16 10 22.7 -1.0**
AOS				AML	AML	16 10 59.2
	comp=N,1372μm,0.6s					
AOS				AML	AML	16 10 59.5
	comp=E,1282μm,0.7s					
AOS	**Alonnisos**	**2.08**	**235**	PN	**Pn**	**16 10 25.8 +2.1**
JMB	**Yambol**	**2.11**	**10**	P	**Pb**	**16 10 28.1 +0.8**
SOH	**Sokhos**	**2.11**	**283**	P	**Pn**	**16 10 24.3 +0.1**
DST	**Dursunbey**	**2.11**	**111**	PN	**Pn**	**16 10 25.6 +1.4**
MMB	**Musomiste**	**2.14**	**305**	P	**Pn**	**16 10 24.5 0.0**
SLCB	**Balcova**	**2.14**	**159**	PN	**Pn**	**16 10 25.2 +0.6**
HORT	**Hortiatis**	**2.27**	**276**	P	**Pn**	**16 10 26.1 -0.3**
HORT	**Hortiatis**	**2.27**	**276**	P	**Pn**	**16 10 26.2 -0.3**
HORT				AML	AML	16 11 05.9
	comp=N,741μm,0.4s					
HORT				AML	AML	16 11 06.3
	comp=E,540μm,0.3s					
HORT	**Hortiatis**	**2.27**	**276**	PN	**Pn**	**16 10 28.6 +2.2**
KYMI	**Kymi, Euboea I**	**2.33**	**222**	P	**Pn**	**16 10 26.2 -0.9**
KYMI	**Kymi, Euboea I**	**2.33**	**222**	P	**Pn**	**16 10 25.9 -1.2**
KYMI				AML	AML	16 11 05.4
	comp=E,1243μm,0.5s					
KYMI				AML	AML	16 11 05.5
	comp=N,1051μm,0.7s					
SKIA	**Skiathos**	**2.35**	**239**	P	**Pn**	**16 10 26.3 -1.1**
SKIA				AML	AML	16 11 08.5
	comp=E,1120μm,0.5s					
SKIA				AML	AML	16 11 09.1
	comp=N,1314μm,0.5s					
DEMI	**Demirci**	**2.45**	**123**	*i* P	**Pn**	**16 10 29.5 +0.6**
DEMI				IAML		16 11 06.0
	comp=N,335nm,0.3s					
DEMI				IAML		16 11 15.0
	comp=E,371nm,0.5s					
KNT	**Kendrikon**	**2.53**	**289**	P	**Pn**	**16 10 30.2 +0.4**
ELND	**Elena**	**2.54**	**357**	⇓P	**Pn**	**16 10 31.3 +1.3**
MRKA	**Markates**	**2.55**	**229**	P	**Pn**	**16 10 29.4 -0.8**
MRKA				AML	AML	16 11 12.5
	comp=E,890μm,0.6s					
MRKA				AML	AML	16 11 14.9
	comp=N,1039μm,0.4s					
PGB	**Panagyurishte**	**2.58**	**327**	P	**Pn**	**16 10 31.1 +0.4**
PGB				Pg	**Pb**	**16 10 36.4 +0.9**
KARY	**Karystos**	**2.68**	**209**	P	**Pn**	**16 10 31.3 -0.7**
KARY				AML	AML	16 11 18.3
	comp=E,373μm,0.6s					
KARY				AML	AML	16 11 19.2
	comp=N,372μm,0.5s					
KKB	**Krupnik**	**2.69**	**304**	P	**Pn**	**16 10 32.5 +0.4**
KKB				Pg	**Pb**	**16 10 38.5 +1.2**
VAY	**Valandovo**	**2.81**	**290**	*i* Pn	**Pn**	**16 10 34.8 +1.1**
VAY	**Valandovo**	**2.81**	**290**	*i* Pn	**Pn**	**16 10 34.8 +1.1**
DION	**Dionisos Attik**	**2.85**	**216**	P	**Pn**	**16 10 33.5 -0.8**
SZH	**Strazhica**	**2.87**	**358**	P	**Pn**	**16 10 35.5 +0.9**
PTL	**Penteli**	**2.90**	**217**	P	**Pn**	**16 10 34.3 -0.7**
PRD	**Provadia**	**2.98**	**19**	P	Pn	16 10 30.4 -5.6
VTS	**Vitosha**	**3.08**	**317**	⇓P	**Pn**	**16 10 36.4 -1.1**
VTS	**Vitosha**	**3.08**	**317**	P	**Pn**	**16 10 38.4 +0.9**
VIL2	**Platees**	**3.08**	**226**	P	**Pn**	**16 10 36.8 -0.6**
VLY	**Voula,Athens**	**3.09**	**216**	P	**Pn**	**16 10 36.8 -0.8**
PLVB	**Pleven**	**3.18**	**341**	⇓P	**Pn**	**16 10 39.8 +1.0**
RAZG	**Razgrad**	**3.19**	**6**	⇓P	**Pn**	**16 10 39.8 +0.9**
AGG	**Agios Georgios**	**3.19**	**246**	P	**Pn**	**16 10 38.9 -0.1**
THL	**Klokotos Trika**	**3.22**	**256**	P	**Pn**	**16 10 39.4 0.0**
MAKR	**Makrakomi, Fth**	**3.33**	**247**	P	**Pn**	**16 10 41.1 +0.1**
APE	**Apeiranthos**	**3.35**	**187**	⇓P	**Pn**	**16 10 40.1 -1.1**
LTK	**Loutraki**	**3.38**	**226**	P	**Pn**	**16 10 41.0 -0.6**
MPEP	**Malo Peshtene**	**3.43**	**330**	P	**Pn**	**16 10 43.3 +1.0**
MPEP				Pg	**Pg**	**16 10 53.1 -2.1**
SERI	**Serifos**	**3.46**	**201**	P	**Pn**	**16 10 42.1 -0.5**
DID	**Didima**	**3.63**	**218**	P	**Pn**	**16 10 44.2 -0.8**
KALE	**Kalithea**	**3.64**	**238**	P	**Pn**	**16 10 44.9 -0.3**
YER	**Yerkesik**	**3.69**	**151**	P	**Pn**	**16 10 46.2 +0.4**
KLV	**Kalavryta, Ach**	**3.84**	**234**	P	**Pn**	**16 10 47.6 -0.4**
SANT	**Santorini**	**4.05**	**187**	⇓P	**Pn**	**16 10 49.9 -0.8**
TIRR	**Tirgusor**	**4.42**	**22**	⇑P	**Pn**	**16 10 57.3 +1.5**
HARR	**Harsova**	**4.51**	**17**	⇓P	**Pn**	**16 10 58.2 +1.1**
TOPG	**Topolog**	**4.79**	**20**	⇑P	**Pn**	**16 11 02.0 +1.1**
CFR	**Carcaliu**	**5.02**	**17**	⇓P	**Pn**	**16 11 04.7 +0.7**
ARR	**Arges**	**5.08**	**349**	⇑P	**Pn**	**16 11 06.1 +1.1**
MLR	**Muntele Rosu**	**5.09**	**359**	⇓P	**Pn**	**16 11 07.0 +1.8**
BISRR	**Bisoca**	**5.17**	**5**	⇑P	**Pn**	**16 11 08.2 +1.9**
IDI	**Anoyia**	**5.18**	**191**	⇑P	**Pn**	**16 11 05.7 -0.7**
HERR	**Herculane**	**5.23**	**330**	⇑P	**Pn**	**16 11 07.5 +0.5**
LOT	**Lotru**	**5.33**	**342**	⇑P	**Pn**	**16 11 08.9 +0.5**
MDVR	**Moldovita**	**5.44**	**325**	⇓P	**Pn**	**16 11 10.5 +0.6**
PLOR	**Plostina**	**5.47**	**4**	⇑P	**Pn**	**16 11 12.3 +2.0**
VRI	**Vrincioaia**	**5.49**	**5**	⇑P	**Pn**	**16 11 12.2 +1.6**
PDG	**Podgorica**	**5.51**	**294**	⇓P	**Pn**	**16 11 09.8 -1.0**
GZR	**Gura Zlata**	**5.55**	**335**	⇑P	**Pn**	**16 11 11.5 0.0**
DOPR	**Dopca**	**5.59**	**355**	⇓P	**Pn**	**16 11 13.5 +1.5**
MDB	**Medias**	**5.88**	**348**	⇑P	**Pn**	**16 11 16.5 +0.6**
TESR	**Tescani**	**6.13**	**4**	⇓P	**Pn**	**16 11 20.9 +1.6**
BZS	**Buzias**	**6.15**	**329**	⇓P	**Pn**	**16 11 19.8 +0.1**
BIZ	**Bicaz**	**6.54**	**0**	⇓P	**Pn**	**16 11 25.8 +0.8**
SIRR	**Siria**	**6.69**	**333**	⇑P	**Pn**	**16 11 27.3 +0.3**
DRGR		**6.84**	**340**	⇓P	**Pn**	**16 11 29.4 +0.2**
BURAR	**Bucovina Array**	**7.24**	**355**	⇑P	**Pn**	**16 11 37.0 +2.3**

*VIE **24** 16:14:28.9±0.3,50.°12N×12.°39E,h3km±4km,ml2.2/1, Error ellipse: s-maj=4.3km s-min=2.0km az=51.0 13 km SSW of Klingenthal*
*WBNET **24** 16:14:30.1,50.°23N×12.°45E,h9km,Ml2.1*
*PRU **24** 16:14:30.4±0.0,50.°21N×12.°51E,h0km,West Bohemia Swarm*
*CLL **24** 16:14:30.5±0.3,50.°23N×12.°44E,h8km±1km,ML2.0/8*
*BGR **24** 16:14:30.2±0.2,50.°23N×12.°41E,h10km±1km,ML2.1/5, Error ellipse: s-maj=3.3km s-min=2.2km az=96.0*

ISC 24 16:14:29.9±0.8,50.°22N±0.°02×12.°46E±0.°02,h11km±3km, n38,σ0°49/70,6C-5D,Germany

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
NKC	**Novy Kostel**	**0.02**	**337**	*i* Pg		**Pg**	**16 14 31.8**	**-0.1**
NKC				*i* Sg		**Sg**	**16 14 33.0**	**-0.3**
NKC	**Novy Kostel**	**0.02**	**337**	*e*PG		**Pg**	**16 14 31.7**	**-0.2**
NKC				*e*SG		**Sg**	**16 14 32.6**	**-0.7**
	comp=Z,645nm,0.2s							
NKC	**Novy Kostel**	**0.02**	**337**	⇑P		**Pg**	**16 14 31.9**	**-0.1**
NKC				S		**Sg**	**16 14 33.0**	**-0.3**
KVC	**Kvetna**	**0.04**	**108**	⇑P		**Pg**	**16 14 32.0**	**-0.1**
KVC				S		**Sg**	**16 14 33.2**	**-0.3**
VAC	**Vackov**	**0.06**	**289**	⇓P		**Pg**	**16 14 32.0**	**-0.1**
VAC				S		**Sg**	**16 14 33.3**	**-0.4**
LBCW	**Luby**	**0.06**	**328**	⇓P		**Pg**	**16 14 32.1**	**-0.1**
LBCW				S		**Sg**	**16 14 33.5**	**-0.3**
STCW	**Studenec**	**0.06**	**44**	⇑P		**Pg**	**16 14 32.1**	**-0.1**
STCW				S		**Sg**	**16 14 33.4**	**-0.4**
SKC	**Skalna**	**0.08**	**232**	⇓P		**Pg**	**16 14 32.4**	**0.0**
SKC				S		**Sg**	**16 14 33.9**	**-0.3**
KACW	**Kaceov**	**0.08**	**153**	⇓P		**Pg**	**16 14 32.6**	**+0.1**
KACW				S		**Sg**	**16 14 34.3**	**0.0**
WERN	**Wernitzgruen**	**0.09**	**323**	*i* Pg		**Pg**	**16 14 32.5**	**-0.1**
WERN				*i* Sg		**Sg**	**16 14 34.0**	**-0.4**
	1μm,0.2s							
ROHR	**Rohrbach**	**0.09**	**280**	*i* Pg		**Pg**	**16 14 32.4**	**-0.2**
ROHR				*i* Sg		**Sg**	**16 14 34.0**	**-0.5**
	996nm,0.1s							
POCW	**Potky**	**0.10**	**349**	⇑P		**Pg**	**16 14 32.7**	**0.0**
POCW				S		**Sg**	**16 14 34.5**	**-0.3**
KRCW	**Kraslice**	**0.12**	**22**	⇑P		**Pg**	**16 14 33.0**	**-0.1**
KRCW				S		**Sg**	**16 14 34.9**	**-0.3**
GUNZ	**Gunzen**	**0.17**	**331**	*i* Pg		**Pg**	**16 14 33.6**	**0.0**
GUNZ				*i* Sg		**Sg**	**16 14 35.9**	**-0.4**
	290nm,0.2s							
ZHC	**Zelena Hora**	**0.18**	**213**	⇑P		**Pg**	**16 14 33.9**	**+0.1**
ZHC				S		**Sg**	**16 14 36.4**	**0.0**
MULD	**Muldenberg**	**0.20**	**350**	*i* Pg		**Pg**	**16 14 34.1**	**-0.1**
MULD				*i* Sg		**Sg**	**16 14 36.7**	**-0.5**
	340nm,0.2s							
LACW	**Lazy**	**0.20**	**147**	⇓P		**Pg**	**16 14 34.5**	**+0.3**
LACW				S		**Sg**	**16 14 37.5**	**+0.4**
VIEL	**Selb-Vielitz**	**0.23**	**262**	*i* Pg		**Pg**	**16 14 34.6**	**-0.1**
VIEL				*i* Sg		**Sg**	**16 14 37.7**	**-0.3**
TRIB	**Obertriebel**	**0.25**	**303**	*i* Pg		**Pg**	**16 14 34.9**	**-0.2**
TRIB				*i* Sg		**Sg**	**16 14 38.1**	**-0.4**
	75nm,0.2s							
MANZ	**Manzenberg**	**0.32**	**224**	*e*Pg		**Pg**	**16 14 36.4**	**0.0**
MANZ				*e*Sg		**Sg**	**16 14 40.7**	**-0.1**
PLN	**Plauen**	**0.33**	**324**	*i* Pg		**Pg**	**16 14 36.4**	**-0.2**
PLN				*i* Sg		**Sg**	**16 14 40.7**	**-0.3**
	138nm,0.2s							
SCHF	**Schoenfels**	**0.46**	**356**	*i* Pg		**Pg**	**16 14 38.8**	**-0.2**
SCHF				*i* Sg		**Sg**	**16 14 44.9**	**-0.2**
	173nm,0.2s							
ROTZ	**Rotzenmuhle**	**0.48**	**200**	*e*Pg		**Pg**	**16 14 39.3**	**0.0**
ROTZ				*e*Sg		**Sg**	**16 14 45.7**	**+0.1**
GRZ1	**Mausoleum Wald**	**0.50**	**342**	*i* Pg		**Pg**	**16 14 39.5**	**-0.2**
GRZ1				*i* Sg		**Sg**	**16 14 45.7**	**-0.6**
	54nm,0.4s							
ZEU	**Talsperre Zeul**	**0.55**	**326**	*i* Pg		**Pg**	**16 14 40.4**	**-0.3**
ZEU				*i* Sg		**Sg**	**16 14 47.9**	**0.0**
MLFH	**Mildenfurth**	**0.62**	**337**	*i* Pg		**Pg**	**16 14 41.7**	**-0.3**
MLFH				*e*Sg		**Sg**	**16 14 50.1**	**-0.1**
MOX	**Moxa**	**0.69**	**309**	*e*Pg		**Pg**	**16 14 43.0**	**-0.3**
FBE	**Freiberg**	**0.91**	**39**	*e*Pg		**Pg**	**16 14 47.3**	**-0.1**
GRF	**Grafenberg Arr**	**0.96**	**237**	*e*Pn		**Pg**	**16 14 48.2**	**-0.1**
WET	**Wettzell**	**1.11**	**166**	*e*Pn		**Pg**	**16 14 50.8**	**-0.4**
PBCC	**Pribram**	**1.13**	**118**	*e*PG		**Pg**	**16 14 50.8**	**-0.8**
PBCC				*e*SG		**Sg**	**16 15 05.2**	**-1.0**
	comp=Z,1.9nm,0.3s							
CLL	**Collm**	**1.15**	**17**	*i* Pg		**Pg**	**16 14 52.2**	**+0.3**
CLL				*i*			16 14 54.3	
CLL				*i*			16 14 55.7	
CLL				*i* Sg		**Sg**	**16 15 07.0**	**+0.2**
	comp=Z,14nm,0.8s							
BRG	**Berggiesshubel**	**1.15**	**55**	*e*Pn		**Pb**	**16 14 51.7**	**-0.2**
KHC	**Kasperske Hory**	**1.31**	**146**	*e*PG		**Pn**	**16 14 54.3**	**+0.1**
KHC				*e*SG		**Sb**	**16 15 10.7**	**-0.7**
	comp=Z,9.2nm,0.2s							
PRU	**Pruhonice**	**1.36**	**99**	*e*PG		**Pn**	**16 14 55.0**	**+0.1**
PRU				*e*SG		**Sn**	**16 15 13.3**	**+0.4**
	comp=Z,8.1nm,0.2s							
GEC2	**GERESS Array S**	**1.59**	**149**	*e*Pn		**Pb**	**16 14 59.2**	**-0.2**
UPC	**Upice**	**2.29**	**81**	*e*SG		**Sb**	**16 15 41.4**	**+1.7**
	comp=Z,11nm,0.4s							
MOA	**Molln**	**2.65**	**153**	*e*Pg		**Pb**	**16 15 19.1**	**+1.6**
	comp=Z,0.2nm,0.1s							
MOA				*e*Sn		**Sn**	**16 15 43.9**	**-0.9**
	comp=Z,0.5nm,0.1s							
MOA				*e*Sg		**Sg**	**16 15 53.3**	**-1.8**
	comp=Z,1.3nm,0.1s							

*VIE **24** 16:15:16.9±0.5,49.°86N×18.°55E,h0km,mb1.8/3,ml2.5/3, Error ellipse: s-maj=6.4km s-min=3.3km az=165.0 21 km E of Ostrava Suspected Mining induced.*
*IPEC **24** 16:15:17.3±0.3,49.°82N×18.°57E,h0km,ML1.9/4,Error ellipse: s-maj=2.1km s-min=1.3km az=74.0*
*PRU **24** 16:15:18.2±0.0,49.°84N×18.°51E,h0km,Mining Induced Event Csm, E=9.1e+04*

ISC 24 16:15:16.3±1.1,49.°81N±0.°04×18.°54E±0.°04,h0km,n24, σ0°71/39,1C-1D,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
OKC	**Ostrava-Krasne**	**0.26**	**276**	*e*PG		**Pb**	**16 15 23.1**	**-0.7**
OKC				*e*SG		**Sg**	**16 15 26.2**	**+1.8**
	comp=Z,66nm,0.4s							
MORC	**Moravsky Berou**	**0.65**	**267**	*e*PG		**Pb**	**16 15 30.2**	**-0.3**
MORC				*e*SG		**Sg**	**16 15 38.2**	**+1.2**
MORC	**Moravsky Berou**	**0.65**	**267**	⇑P		**Pb**	**16 15 30.2**	**-0.3**
MORC	**Moravsky Berou**	**0.65**	**267**	*e*Pg		**Pb**	**16 15 30.2**	**-0.3**
	baz=86							
MORC				*e*Sg		**Sg**	**16 15 38.2**	**+1.2**
	22nm,0.2s,baz=86							
LANS	**Liptovska Anna**	**0.90**	**137**	*e*PG		**Pb**	**16 15 34.8**	**+0.1**
LANS				*e*SG		**Sn**	**16 15 49.1**	**-0.8**
LANS				*e*LG		Lg	16 15 53.0	
JAVC	**Velka Javorina**	**1.11**	**211**	*e*PG		**Pn**	**16 15 39.3**	**+0.1**
JAVC				*e*SG		**Sg**	**16 15 52.5**	**+0.6**
JAVC	**Velka Javorina**	**1.11**	**211**	*e*Pg		**Pn**	**16 15 39.2**	**+0.1**
	baz=31							
JAVC				*e*Sg		**Sg**	**16 15 52.5**	**+0.6**
	12nm,0.2s,baz=31							
KRLC	**Kraliky**	**1.17**	**284**	*e*PG		**Pn**	**16 15 39.7**	**-0.2**
KRLC				*e*SG		**Sb**	**16 15 54.8**	**-0.2**
VYHS	**Vyhne**	**1.33**	**171**	*e*SN		**Sn**	**16 16 00.5**	**-0.1**
VRAC	**Vranov**	**1.36**	**249**	*e*PG		**Pb**	**16 15 42.9**	**+0.2**
VRAC				*e*SG		**Sb**	**16 16 00.8**	**+0.1**
VRAC	**Vranov**	**1.36**	**249**	⇓P		**Pb**	**16 15 42.8**	**+0.2**
VRAC	**Vranov**	**1.36**	**249**	*e*Pg		**Pb**	**16 15 42.9**	**+0.2**
	baz=68							
VRAC				*e*Sg		**Sb**	**16 16 00.7**	**+0.1**
	16nm,0.2s,baz=68							
DPC	**Dobruska-Polom**	**1.53**	**292**	*e*SG		**Pg**	**16 15 45.9**	**+0.4**
	comp=Z,5.2nm,0.3s							
DPC	**Dobruska-Polom**	**1.53**	**292**	*e*PG		**Pg**	**16 15 45.8**	**+0.3**
DPC				*e*SG		**Sn**	**16 16 05.7**	**+0.3**
	comp=Z,13nm,0.2s							
KRUC	**Moravsky**	**1.59**	**243**	*e*PG		**Pb**	**16 15 46.4**	**-0.1**
KRUC				*e*SG		**Sg**	**16 16 07.8**	**+0.5**
KRUC	**Moravsky**	**1.59**	**243**	*e*Pg		**Pb**	**16 15 46.3**	**-0.2**
	baz=61							
KRUC				*e*Sg		**Sg**	**16 16 07.7**	**+0.5**
	17nm,0.2s,baz=61							
MODS	**Modra-Piesok**	**1.66**	**210**	*e*PN		**Pn**	**16 15 46.7**	**0.0**
MODS				*e*SN		**Sn**	**16 16 08.4**	**-0.3**
OSTC	**Ostas**	**1.67**	**297**	*e*SG		**Sg**	**16 16 10.3**	**+0.4**
	comp=Z,13nm,0.7s							
UPC	**Upice**	**1.77**	**294**	*e*SG		**Sg**	**16 16 12.8**	**-0.2**
	comp=Z,13nm,0.5s							
KECS	**Kecovo**	**1.84**	**135**	*e*PN		**Pn**	**16 15 49.3**	**+0.1**
CONA	**Conrad Observa**	**2.58**	**224**	Pn		**Pn**	**16 15 59.9**	**+0.5**
	0.6nm,0.2s							
CONA				Sn		**Sn**	**16 16 32.1**	**+0.5**
	5.0nm,0.4s							
PRU	**Pruhonice**	**2.59**	**275**	*e*SG		**Sg**	**16 16 38.1**	**-1.3**
	comp=Z,4.0nm,0.2s							
KHC	**Kasperske Hory**	**3.31**	**260**	*e*PG		**Pg**	**16 16 19.0**	**-0.6**
KHC				*e*SG		**Sg**	**16 17 00.5**	**-1.9**
	comp=Z,5.3nm,0.3s							
MOA	**Molln**	**3.44**	**237**	Sg		**Sg**	**16 17 05.1**	**-1.6**
	1.9nm,0.3s							

*PRU **24** 16:25:07.9±0.0,50.°18N×12.°42E,h1km,West Bohemia Swarm*

WBNET 24 16:25:07.9,50.°23N×12.°45E,h9km,Ml1.2,6C-5D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
NKC	**Novy Kostel**	**0.01**	**349**	*e*PG		Pg	16 25 09.5	0.0
NKC				*e*SG		Sg	16 25 10.5	-0.1
	comp=Z,143nm,0.2s							
NKC	**Novy Kostel**	**0.01**	**349**	⇑P		Pg	16 25 09.6	+0.1
NKC				S		Sg	16 25 10.7	+0.1
KVC	**Kvetna**	**0.05**	**116**	⇑P		Pg	16 25 09.7	0.0
KVC				S		Sg	16 25 10.9	-0.1
LBCW	**Luby**	**0.05**	**329**	⇓P		Pg	16 25 09.8	+0.1
LBCW				S		Sg	16 25 11.3	+0.2
VAC	**Vackov**	**0.05**	**281**	⇓P		Pg	16 25 09.8	+0.1
VAC				S		Sg	16 25 11.0	0.0
STCW	**Studenec**	**0.06**	**53**	⇑P		Pg	16 25 09.9	0.0
STCW				S		Sg	16 25 11.1	-0.1
SKC	**Skalna**	**0.08**	**225**	⇓P		Pg	16 25 10.1	0.0
SKC				S		Sg	16 25 11.6	-0.1
KACW	**Kaceov**	**0.09**	**152**	⇓P		Pg	16 25 10.3	+0.1
KACW				S		Sg	16 25 12.0	+0.1
POCW	**Potky**	**0.10**	**351**	⇑P		Pg	16 25 10.5	+0.1
POCW				S		Sg	16 25 12.2	+0.1
KRCW	**Kraslice**	**0.12**	**26**	⇑P		Pg	16 25 10.7	+0.1
KRCW				S		Sg	16 25 12.6	0.0
ZHC	**Zelena Hora**	**0.18**	**210**	⇑P		Pg	16 25 11.7	0.0
ZHC				S		Sg	16 25 14.2	-0.1
LACW	**Lazy**	**0.21**	**147**	⇓P		Pg	16 25 12.2	+0.1
LACW				S		Sg	16 25 15.3	+0.2
CLL	**Collm**	**1.14**	**18**	*i* Pg		Pn	16 25 30.1	+0.1
CLL				*i*			16 25 31.8	
CLL				*i*			16 25 33.4	
CLL				*i* Sg		Sn	16 25 45.7	-0.1
PRU	**Pruhonice**	**1.37**	**99**	*e*PG		Pn	16 25 33.2	0.0
PRU				*e*SG		Sb	16 25 51.3	+0.1
	comp=Z,2.9nm,0.2s							

*WBNET **24** 16:25:12.7,50.°23N×12.°44E,h9km,Ml2.1*
*BGR **24** 16:25:13.0±0.2,50.°23N×12.°41E,h9km±1km,ML2.0/5, Error ellipse: s-maj=3.3km s-min=2.2km az=94.0*
*PRU **24** 16:25:13.3±0.0,50.°22N×12.°49E,h1km,West Bohemia Swarm*
*CLL **24** 16:25:13.2±0.3,50.°23N×12.°44E,h8km±1km,ML1.9/8*

ISC 24 16:25:12.7±0.8,50.°22N±0.°02×12.°45E±0.°02,h9km±3km, n37,σ0°48/67,7C-4D,Germany

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
NKC	**Novy Kostel**	**0.01**	**350**	*i* Pg		**Pg**	**16 25 14.4**	**0.0**
NKC				*i* Sg		**Sg**	**16 25 15.5**	**-0.1**
NKC	**Novy Kostel**	**0.01**	**350**	*e*PG		**Pg**	**16 25 14.3**	**-0.1**
NKC				*e*SG		**Sg**	**16 25 15.3**	**-0.3**
	comp=Z,480nm,0.2s							
NKC	**Novy Kostel**	**0.01**	**350**	⇑P		**Pg**	**16 25 14.4**	**0.0**
NKC				S		**Sg**	**16 25 15.5**	**-0.1**
KVC	**Kvetna**	**0.04**	**111**	⇑P		**Pg**	**16 25 14.5**	**-0.1**
KVC				S		**Sg**	**16 25 15.7**	**-0.2**
VAC	**Vackov**	**0.05**	**287**	⇓P		**Pg**	**16 25 14.6**	**0.0**
VAC				S		**Sg**	**16 25 15.9**	**-0.2**
LBCW	**Luby**	**0.05**	**331**	⇑P		**Pg**	**16 25 14.7**	**0.0**
LBCW				S		**Sg**	**16 25 16.1**	**0.0**
STCW	**Studenec**	**0.06**	**49**	⇑P		**Pg**	**16 25 14.7**	**0.0**
STCW				S		**Sg**	**16 25 16.0**	**-0.3**
SKC	**Skalna**	**0.08**	**228**	⇓P		**Pg**	**16 25 14.9**	**0.0**
SKC				S		**Sg**	**16 25 16.4**	**-0.1**
WERN	**Wernitzgruen**

Ms1 2.8/1, ms1mx2.2/47, Error ellipse: s-maj=23.9km s-min=8.7km az=146.0

*NEIC **24** 16:31:11.1±0.9, 43.71N±0.05×105.30W±0.08, h0km±2km, ML3.3/52, Error ellipse: s-maj=9.9km s-min=8.7km az=266.0*

ISC 24 16:31:10.1±0.7, **43.70N**±0.05×**105.31W**±0.06, **h0**km, **n46, s13/45, Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.01**	**65**		**Pb**	**16 31 30.2**	**-0.4**
K22A	**Casper**	**1.38**	**221**		**Pg**	**16 31 36.0**	**-0.5**
K22A				IAML		16 31 58.5	
	comp=E,703nm,0.3s						
K22A				IAML		16 31 58.7	
	comp=N,737nm,0.3s						
PHWY	**Pilot Hill**	**2.40**	**183**		**Pn**	**16 31 52.0**	**+1.1**
PHWY				IAML		16 32 27.1	
	comp=N,114nm,0.4s						
RWWY	**Rawlins**	**2.45**	**216**		**Pn**	**16 31 52.5**	**+0.9**
LAO	**LASA Array**	**3.06**	**348**		**Pn**	**16 32 00.5**	**+0.8**
LAO				IAML		16 32 45.9	
	comp=N,123nm,0.6s						
LAO				IAML		16 32 55.3	
	comp=N,151nm,0.7s						
RLMT	**Red Lodge**	**3.17**	**298**		**Pn**	**16 32 02.6**	**+1.1**
RLMT				IAML		16 32 52.8	
	comp=N,59nm,0.7s						
BW06	**Boulder Array**	**3.25**	**255**		**Pn**	**16 32 03.8**	**+1.3**
BW06				IAML		16 32 52.1	
	comp=N,71nm,0.5s						
PD31	**Pinedale Array**	**3.25**	**255**		**Pn**	**16 32 03.7**	**+1.2**
PDAR	**Pinedale Array**	**3.25**	**255**	Pn	**Pn**	**16 32 03.6**	**+1.2**
	comp=N,6.3nm,0.3s,baz=71,slow=15,SNR=53						
PDAR				Lg	Lg	16 32 47.8	
	comp=N,27nm,0.3s,baz=128,slow=19,SNR=6.0						
YNE	**Yellowstone No**	**3.62**	**293**		**Pn**	**16 32 08.4**	**+0.8**
YMP	**Mirror Lake Pl**	**3.64**	**288**		**Pn**	**16 32 08.9**	**+0.9**
OGNE	**Ogallala**	**3.67**	**138**		**Pn**	**16 32 09.8**	**+1.6**
GCMT	**Greycliff**	**3.75**	**305**		**Pn**	**16 32 10.5**	**+1.3**
LKWY	**Lake**	**3.77**	**285**		**Pn**	**16 32 11.5**	**+1.8**
LKWY				IAML		16 32 36.2	
	comp=N,34nm,0.5s						
LKWY				IAML		16 32 41.6	
	comp=N,42nm,0.8s						
ISCO	**Idaho Springs**	**3.91**	**183**		**Pn**	**16 32 12.3**	**+0.7**
YPP	**Pitchstone Pla**	**4.01**	**280**		**Pn**	**16 32 14.6**	**+1.5**
REDW	**Red Top Meadow**	**4.05**	**267**		**Pn**	**16 32 14.6**	**+1.1**
REDW				IAML		16 33 29.7	
	comp=N,62nm,0.8s						
IMW	**Indian Meadow**	**4.08**	**275**		**Pn**	**16 32 15.7**	**+1.6**
IMW				IAML		16 32 42.2	
	comp=N,57nm,0.5s						
IMW				IAML		16 33 29.7	
	comp=N,26nm,0.6s						
TPAW	**Teton Pass**	**4.11**	**269**	Pn	**Pn**	**16 32 16.0**	**+1.7**
TPAW				IAML		16 33 39.5	
	comp=N,27nm,0.6s						
TPAW				IAML		16 33 46.5	
	comp=N,31nm,0.7s						
YHH	**Holmes Hill**	**4.13**	**287**		**Pn**	**16 32 15.6**	**+0.9**
FXWY	**Fox Creek**	**4.15**	**271**		**Pn**	**16 32 16.5**	**+1.6**
O20A	**White River Ci**	**4.18**	**213**		**Pn**	**16 32 16.3**	**+1.0**
O20A				IAML		16 33 29.0	
	comp=E,64nm,0.7s						
O20A				IAML		16 34 03.3	
	comp=N,45nm,2.0s						
AHID	**Auburn Hatcher**	**4.34**	**260**		**Pn**	**16 32 19.2**	**+1.7**
AHID				IAML		16 33 32.4	
	comp=N,39nm,0.7s						
AHID				IAML		16 33 36.6	
	comp=E,38nm,0.8s						
E28A	**Huff**	**4.35**	**47**		**Pn**	**16 32 19.1**	**+1.7**
YHB	**Horse Butte**	**4.36**	**286**		**Pn**	**16 32 18.4**	**+0.6**
BOZ	**Bozeman (W)**	**4.89**	**295**	Pn	**Pn**	**16 32 25.4**	**+0.4**
HWUT	**Hardware Ranch**	**5.07**	**248**		**Pn**	**16 32 28.5**	**+1.0**
HWUT				IAML		16 34 03.2	
	comp=E,23nm,1.0s						
HWUT				IAML		16 34 03.9	
	comp=E,26nm,0.7s						
KSCO	**Kaye Shedlock***	**5.10**	**156**		**Pn**	**16 32 28.8**	**+0.9**
TCUT	**Toone Canyon**	**5.20**	**242**		**Pn**	**16 32 30.0**	**+0.6**
EGMT	**Eagleton**	**5.32**	**326**		**Pn**	**16 32 31.7**	**+0.8**
PV07	**Paradox Valley**	**5.83**	**207**		**Pn**	**16 32 40.0**	**+2.0**
SDCO	**Great Sand Dun**	**5.95**	**181**		**Pn**	**16 32 40.6**	**+1.0**
SRU	**San Rafael Swe**	**6.03**	**222**		**Pn**	**16 32 41.5**	**+0.7**
TMUT	**Trail Mountain**	**6.24**	**227**		**Pn**	**16 32 45.0**	**+1.2**
ECSD	**EROS Data Cent**	**6.30**	**87**		**Pn**	**16 32 44.5**	**+0.3**
Q16A	**Castle Valley**	**6.51**	**225**		**Pn**	**16 32 48.4**	**+1.2**
DUG	**Dugway, Tooele**	**6.60**	**241**		**Pn**	**16 32 49.4**	**+0.9**
MSU	**Marysvale**	**7.33**	**227**		**Pn**	**16 32 59.7**	**+1.1**
ELK	**Elko**	**7.94**	**252**	Pn	**Pn**	**16 33 06.6**	**-0.4**
	comp=E,0.1nm,0.3s,baz=71,slow=11,SNR=3.1						
ULM	**Lac du Bonnet**	**9.19**	**41**	Pn	**Pn**	**16 33 24.2**	**+0.5**
	comp=E,1.6nm,0.3s,baz=231,slow=12,SNR=4.9						
ULM				Lg	Lg	16 35 55.4	
	comp=E,0.4nm,0.3s,baz=146,slow=22,SNR=1.8						
TXAR	**Lajitas Array**	**14.40**	**174**	Pn	**P**	**16 34 41.5**	**-1.0**
	comp=E,0.0nm,0.3s,baz=344,slow=8.4,SNR=4.1						
SADO	**Sadowa**	**18.76**	**78**	LR	LR	16 43 42.0	
	comp=E,29nm,19.0s,baz=86,slow=40						
YKA	**Yellowknife Ar**	**19.60**	**347**	P	**P**	**16 35 38.8**	**-0.7**
	comp=E,0.1nm,0.3s,baz=158,slow=12,SNR=4.9						
ARCES	**ARCESS Array B**	**61.46**	**18**	P	**P**	**16 41 27.6**	**-0.2**
	comp=E,4.5nm,1.0s,baz=348,slow=5.3,SNR=5.3						
ZALV	**Zalesovo Beam**	**82.34**	**354**	P	**P**	**16 43 33.2**	**-0.2**
	comp=E,0.8nm,0.5s,baz=352,slow=6.1,SNR=2.2						
MKAR	**Makanchi Array**	**89.64**	**355**	P	**P**	**16 44 09.8**	**+0.2**
	comp=E,0.4nm,0.6s,baz=347,slow=4.0,SNR=3.7						

*IDC **24** 16:34:50.1±1.0, 40.33N×25.65E, h0km, mb3.5/7, mb1 3.6/11, mb1mx3.5/49, mbtmp3.5/11, ML3.5/4, MS2.9/3, Ms1 2.9/3, ms1mx2.4/34, Error ellipse: s-maj=14.7km s-min=13.4km az=52.0*

*SOF **24** 16:34:50.7, 40.30N×25.68E, h17km, MD3.9*

*ATH **24** 16:34:51.2, 40.30N×25.61E, h30km±1km, ML3.8/11, Error ellipse: s-maj=1.3km s-min=0.8km az=75.0*

*ISK **24** 16:34:51.0, 40.29N×25.63E, h5km, ML4.0/32*

*THE **24** 16:34:51.6, 40.30N×25.66E, h11km±1km, ML3.7/11, Error ellipse: s-maj=1.6km s-min=0.5km az=53.0*

*DDA **24** 16:34:52.2, 40.27N×25.73E, h19km±1km, MW3.9*

ISC 24 16:34:51.7±0.8, **40.29N**±0.02×**25.63E**±0.02, **h12**km±6km, **n194,** σ **0.73/226, mb3.5/7, 26C-13D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMTH	**Samothraki Isl**	**0.20**	**337**	P	**Pg**	**16 34 56.2**	**+0.2**
SMTH				S	**Sg**	**16 34 59.2**	**+0.2**
	50μm,0.2s						
SMTH	**Samothraki Isl**	**0.20**	**337**	P	**Pg**	**16 34 56.2**	**+0.2**
SMTH				AML	AML	16 34 59.4	
SMTH				AML	AML	16 34 59.6	
	comp=E,65050μm,0.2s						
GADA	**Gvkgeada**	**0.23**	**116**	P	**Pg**	**16 34 56.5**	**-0.1**
GADA				S	**Sg**	**16 34 59.7**	**-0.1**
	comp=E,15μm,0.3s						
GADA	**Gvkgeada**	**0.23**	**116**	PG	**Pg**	**16 34 56.2**	**-0.4**
GADA				SG	**Sg**	**16 34 59.7**	**-0.1**
LIA	**Limnos Island**	**0.52**	**221**	P	**Pg**	**16 35 02.3**	**+0.4**
LIA				S	**Sb**	**16 35 10.1**	**-0.2**
	comp=E,8μm,0.2s						
LIA	**Limnos Island**	**0.52**	**221**	P	**Pg**	**16 35 02.2**	**+0.4**
LIA				S	**Sg**	**16 35 09.6**	**+0.8**
LIA				AML	AML	16 35 11.7	
	comp=E,18426μm,0.2s						
LIA				AML	AML	16 35 11.8	
	comp=N,14978μm,0.3s						
BOZC	**Bozcaada**	**0.55**	**144**	PG	**Pg**	**16 35 02.5**	**0.0**
BOZC				SG	**Sg**	**16 35 09.9**	**0.0**
BOZC	**Bozcaada**	**0.55**	**144**	*i* P	**Pg**	**16 35 02.5**	**0.0**
BOZC				*i* S	**Sg**	**16 35 09.9**	**0.0**
BOZC				IAML		16 35 10.0	
	comp=N,2μm,0.3s						
BOZC				IAML		16 35 16.0	
	comp=E,3μm,0.3s						
ENEZ	**Enez**	**0.60**	**42**	P	**Pg**	**16 35 02.9**	**-0.5**
ENEZ				S	**Sg**	**16 35 11.3**	**0.0**
	comp=E,10μm,0.5s						
ENEZ	**Enez**	**0.60**	**42**	PG	**Pg**	**16 35 02.9**	**-0.5**
ENEZ				SG	**Sb**	**16 35 12.3**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.66**	**80**	PG	**Pg**	**16 35 04.1**	**-0.3**
GELI				SG	**Sg**	**16 35 12.7**	**-0.4**
EZN	**Ezine**	**0.71**	**131**	P	**Pg**	**16 35 04.8**	**-0.6**
EZN				S	**Sg**	**16 35 14.3**	**-0.4**
EZN	**Ezine**	**0.71**	**131**	PG	**Pg**	**16 35 05.1**	**-0.3**
EZN				SG	**Sg**	**16 35 14.4**	**-0.3**
THAS	**Thassos island**	**0.76**	**295**	P	**Pg**	**16 35 06.6**	**+0.1**
THAS				S	**Sb**	**16 35 17.1**	**-0.1**
	comp=E,7μm,0.3s						
THAS	**Thassos island**	**0.76**	**295**	P	**Pb**	**16 35 06.8**	**-0.1**
THAS				S	**Sb**	**16 35 17.3**	**0.0**
THAS				AML	AML	16 35 19.4	
	comp=E,13601μm,0.5s						
THAS				AML	AML	16 35 19.4	
	comp=N,13969μm,0.2s						
ERIK	**Erikli-Kesan**	**0.77**	**60**	PG	**Pg**	**16 35 06.0**	**-0.7**
ERIK				SG	**Sb**	**16 35 17.4**	**-0.2**
RDO	**Rodhopi**	**0.86**	**355**	P	**Pg**	**16 35 07.9**	**-0.4**
RDO				S	**Sg**	**16 35 19.3**	**-0.2**
	comp=N,4μm,0.6s						
RDO	**Rodhopi**	**0.86**	**355**	P	**Pg**	**16 35 07.8**	**-0.4**
RDO				S	**Sg**	**16 35 19.5**	**0.0**
RDO				AML	AML	16 35 21.4	
	comp=N,8475μm,0.4s						
RDO				AML	AML	16 35 27.6	
	comp=E,6653μm,0.4s						
RDO	**Rodhopi**	**0.86**	**355**	PG	**Pg**	**16 35 07.9**	**-0.4**
RDO				SG	**Sg**	**16 35 19.4**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**0.89**	**128**	*i* P	**Pg**	**16 35 08.3**	**-0.7**
BAYC				IAML		16 35 23.0	
	comp=N,1μm,0.2s						
BAYC				IAML		16 35 24.0	
	comp=E,1μm,0.3s						
EFSA	**Agios Efstrati**	**0.90**	**213**	P	**Pb**	**16 35 09.5**	**+0.3**
EFSA				S	**Sb**	**16 35 22.1**	**+1.0**
EFSA				AML	AML	16 35 24.0	
	comp=N,21641μm,0.5s						
EFSA				AML	AML	16 35 24.3	
	comp=E,22650μm,0.6s						
KESN	**Edirne-Kesan**	**0.96**	**56**	*i* P	**Pg**	**16 35 09.6**	**-0.8**
KESN				*i* S	**Sg**	**16 35 22.7**	**-0.2**
KESN				IAML		16 35 24.0	
	comp=E,6μm,0.6s						
KESN				IAML		16 35 24.0	
	comp=N,3μm,0.8s						
SIGR	**SIGRI**	**1.09**	**171**	P	**Pb**	**16 35 11.8**	**-0.7**
SIGR				S	**Sg**	**16 35 27.1**	**+0.2**
	comp=N,6μm,0.6s						
SIGR	**SIGRI**	**1.09**	**171**	P	**Pb**	**16 35 11.9**	**-0.6**
SIGR				AML	AML	16 35 29.4	
	comp=N,15468μm,0.4s						
SIGR				AML	AML	16 35 30.0	
	comp=E,11257μm,0.5s						
SIGR	**SIGRI**	**1.09**	**171**	PN	**Pb**	**16 35 12.2**	**-0.3**
SIGR				SN	**Sn**	**16 35 28.0**	**+0.1**
KAVA	**Kavala**	**1.10**	**310**	P	**Pb**	**16 35 12.4**	**-0.3**
KAVA				S	**Sn**	**16 35 28.1**	**-0.1**
	comp=E,4μm,0.4s						
KAVA	**Kavala**	**1.10**	**310**	P	**Pb**	**16 35 12.4**	**-0.3**
KAVA				AML	AML	16 35 30.2	
	comp=N,8180μm,0.5s						
KAVA				AML	AML	16 35 31.0	
	comp=E,8609μm,0.3s						
UKOP	**Uzunkopru-Edir**	**1.13**	**42**	PN	**Pb**	**16 35 12.9**	**-0.3**
UKOP				SN	**Sn**	**16 35 28.9**	**0.0**
KVLA	**Kavala**	**1.15**	**305**	P	**Pb**	**16 35 13.1**	**-0.4**
KVLA				S	**Sb**	**16 35 28.4**	**+0.2**
KVLA				AML	AML	16 35 31.5	
	comp=N,8846μm,0.5s						
KVLA				AML	AML	16 35 31.8	
	comp=E,5978μm,0.3s						
PRK	**Paraskevi**	**1.16**	**154**	P	**Pg**	**16 35 14.1**	**+0.2**
PRK				S	**Sn**	**16 35 29.9**	**+0.5**
	comp=E,6μm,0.7s						
PRK	**Paraskevi**	**1.16**	**154**	P	**Pg**	**16 35 14.2**	**+0.3**
PRK				S	**Sn**	**16 35 29.9**	**+0.5**
PRK				AML	AML	16 35 31.5	
	comp=E,15055μm,0.9s						
PRK				AML	AML	16 35 32.3	
	comp=N,9707μm,0.6s						
RKY	**Sarkoy-Tekirda**	**1.25**	**71**	PN	**Pb**	**16 35 15.2**	**0.0**
SART	**Tekirdag**	**1.25**	**71**	*i* P	**Pn**	**16 35 14.1**	**-1.0**
SART				IAML		16 35 40.0	
	comp=E,722nm,0.7s						
OUR	**Ouranopolis**	**1.26**	**273**	P	**Pn**	**16 35 14.4**	**-0.7**
OUR	**Ouranopolis**	**1.26**	**273**	P	**Pn**	**16 35 14.4**	**-0.7**
OUR				S	**Sb**	**16 35 30.9**	**-0.7**
OUR				AML	AML	16 35 34.8	
	comp=N,6686μm,0.5s						
OUR				AML	AML	16 35 35.8	
	comp=E,6510μm,0.4s						
OUR	**Ouranopolis**	**1.26**	**273**	PN	**Pn**	**16 35 14.4**	**-0.7**
AYVA	**Ayvalik**	**1.28**	**140**	*i* P	**Pn**	**16 35 15.3**	**-0.1**
AYVA				*i* S	**Sn**	**16 35 32.7**	**+0.3**
AYVA				IAML		16 35 34.0	
	comp=N,4μm,0.8s						
AYVA				IAML		16 35 35.0	
	comp=E,4μm,0.9s						
KRBG	**Karabiga-Canak**	**1.28**	**85**	PN	**Pn**	**16 35 15.1**	**-0.3**
KDZ	**Kurdzhali**	**1.37**	**353**	P	**Pn**	**16 35 16.1**	**-0.6**
KDZ	**Kurdzhali**	**1.37**	**353**	PN	**Pb**	**16 35 17.1**	**-0.2**
KNL	**Balıkesir**	**1.45**	**90**	*i* P	**Pn**	**16 35 17.8**	**0.0**
KNL				*i* S	**Sg**	**16 35 38.8**	**+0.4**
KNL				IAML		16 35 48.0	
	comp=N,2μm,0.7s						
KNL				IAML		16 35 49.0	
	comp=E,3μm,0.6s						
MRMT	**Marmara Adasi**	**1.53**	**78**	PN	**Pb**	**16 35 19.6**	**-0.5**
PAIG	**Paliouri**	**1.54**	**257**	P	**Pn**	**16 35 18.0**	**-1.0**
PAIG	**Paliouri**	**1.54**	**257**	P	**Pn**	**16 35 18.1**	**-0.8**
PAIG				S	**Sn**	**16 35 37.4**	**-1.5**
PAIG				AML	AML	16 35 44.5	
	comp=E,1486μm,0.6s						
PAIG				AML	AML	16 35 48.6	
	comp=N,2198μm,0.7s						
RZN	**Rozhen**	**1.56**	**334**	*i* P	**Pn**	**16 35 19.3**	**-0.1**
DKL	**Dikili**	**1.57**	**141**	PN	**Pn**	**16 35 19.9**	**+0.6**
GONE	**Gonen-Balikesi**	**1.59**	**98**	PN	**Pb**	**16 35 20.5**	**-0.6**
TKR	**Tekirdag**	**1.61**	**64**	PN	**Pb**	**16 35 20.8**	**-0.6**
BALY	**Balya**	**1.62**	**109**	*i* P	**Pn**	**16 35 20.5**	**+0.2**
BALY				*i* S	**Sb**	**16 35 42.9**	**+0.8**
BALY				IAML		16 35 46.0	
	comp=E,701nm,0.7s						
BALY				IAML		16 35 55.0	
	comp=N,1μm,0.7s						
SKY	**Skiros Island**	**1.64**	**211**	P	**Pn**	**16 35 19.6**	**-0.8**
SKY	**Skiros Island**	**1.64**	**211**	P	**Pn**	**16 35 19.6**	**-0.8**
PLG	**Polygyros**	**1.67**	**274**	P	**Pn**	**16 35 20.4**	**-0.5**
PLG				S	**Sn**	**16 35 42.7**	**+0.5**
	comp=N,2μm,0.5s						
PLG	**Polygyros**	**1.67**	**274**	P	**Pn**	**16 35 20.3**	**-0.5**
ZEDA	**zmir-Bergama**	**1.73**	**139**	*i* S	**Sg**	**16 35 47.0**	**-0.5**
PSRA	**Psara**	**1.75**	**182**	P	**Pn**	**16 35 22.1**	**+0.2**
AOS	**Alonnisos**	**1.75**	**231**	P	**Pn**	**16 35 22.8**	**+0.9**
AOS	**Alonnisos**	**1.75**	**231**	PN	**Pb**	**16 35 24.2**	**+0.4**
SRS	**Serrai**	**1.75**	**299**	P	**Pn**	**16 35 21.6**	**-0.4**
DIM	**Dimitrovgrad**	**1.76**	**358**	P	**Pn**	**16 35 21.9**	**-0.1**
EDRB	**Edirne**	**1.77**	**28**	P	**Pn**	**16 35 21.3**	**-0.8**
EDRB				S	**Sn**	**16 35 44.8**	**+0.2**
	comp=N,2μm,0.6s						
EDRB	**Edirne**	**1.77**	**28**	PN	**Pb**	**16 35 23.1**	**-1.0**
ALNA	**Alonissos**	**1.77**	**231**	P	**Pn**	**16 35 21.3**	**-0.9**
CRLT	**Corlu**	**1.81**	**62**	PN	**Pb**	**16 35 24.2**	**-0.5**
KRBN	**Karaburun**	**1.84**	**157**	PN	**Pn**	**16 35 23.8**	**+0.7**
BALB	**Balikesir**	**1.85**	**110**	PN	**Pn**	**16 35 23.7**	**+0.5**
STEP	**BALIKESIR_Sava**	**1.85**	**119**	*i* P	**Pn**	**16 35 23.7**	**+0.4**
STEP				IAML		16 36 07.0	
	comp=E,684nm,0.8s						
STEP				IAML		16 36 14.0	
	comp=N,821nm,0.8s						
BOTS	**Marmara Eregli**	**1.92**	**68**	PN	**Pn**	**16 35 25.2**	**+1.0**
CHOS	**Chios island**	**1.93**	**170**	P	**Pn**	**16 35 24.3**	**-0.2**
CHOS	**Chios island**	**1.93**	**170**	P	**Pn**	**16 35 24.3**	**-0.2**
CHOS	**Chios island**	**1.93**	**170**	PN	**Pn**	**16 35 24.8**	**+0.4**
MMB	**Musomiste**	**1.94**	**313**	*i* P	**Pn**	**16 35 24.1**	**-0.4**
HORT	**Hortiatis**	**1.95**	**280**	P	**Pn**	**16 35 24.3**	**-0.5**
HORT	**Hortiatis**	**1.95**	**280**	P	**Pn**	**16 35 24.3**	**-0.5**
HORT	**Hortiatis**	**1.95**	**280**	PN	**Pn**	**16 35 25.4**	**+0.6**
PHSR	**Pinarhisar**	**1.96**	**46**	PN	**Pn**	**16 35 25.8**	**+1.0**
SKIA	**Skiathos**	**2.01**	**237**	P	**Pn**	**16 35 24.2**	**-1.3**
SKIA	**Skiathos**	**2.01**	**237**	P	**Pn**	**16 35 24.6**	**-0.9**
KYMI	**Kymi, Euboea I**	**2.04**	**216**	P	**Pn**	**16 35 24.8**	**-1.1**
THE	**Thessaloniki**	**2.06**	**280**	P	**Pn**	**16 35 26.2**	**0.0**
URLA	**Izmir**	**2.07**	**158**	PN	**Pn**	**16 35 26.9**	**+0.6**
URLA	**Izmir**	**2.07**	**158**	*i* P	**Pn**	**16 35 26.2**	**-0.1**
URLA				*i* S	**Sn**	**16 35 51.2**	**-0.8**
URLA				IAML		16 36 04.0	
	comp=N,273nm,1.1s						
URLA				IAML		16 36 07.0	
	comp=E,265nm,1.3s						
KCTX	**Karacabey (Bur**	**2.09**	**90**	PN	**Pn**	**16 35 27.5**	**+0.9**
XOR	**Xorichti**	**2.09**	**245**	P	**Pn**	**16 35 25.5**	**-1.1**
NEO	**Neokhori**	**2.10**	**243**	P	**Pn**	**16 35 25.6**	**-1.1**
SLVT	**Silivri**	**2.17**	**64**	PN	**Pn**	**16 35 29.1**	**+1.4**
BLCB	**Balcova**	**2.20**	**150**	PN	**Pn**	**16 35 28.9**	**+0.9**
AKS	**Akhisar**	**2.20**	**129**	PN	**Pn**	**16 35 28.9**	**+0.8**
AKHS	**Akhisar**	**2.20**	**129**	*i* P	**Pn**	**16 35 28.5**	**+0.4**
AKHS				IAML		16 36 02.0	
	comp=E,101nm,0.6s						
MRKA	**Markates**	**2.24**	**226**	P	**Pn**	**16 35 27.9**	**-0.7**
KNT	**Kendrikon**	**2.25**	**294**	P	**Pn**	**16 35 29.0**	**+0.2**
KNT	**Kendrikon**	**2.25**	**294**	PN	**Pn**	**16 35 29.8**	**+1.0**
JMB	**Yambol**	**2.29**	**18**	P	**Pn**	**16 35 29.3**	**0.0**
DURS	**Dursunbey**	**2.29**	**107**	*i* P	**Pn**	**16 35 29.7**	**+0.2**
DURS				IAML		16 36 13.0	
	comp=N,485nm,0.5s						
DURS				IAML		16 36 20.0	
	comp=E,377nm,0.6s						
ELBA	**Catalca**	**2.29**	**67**	*i* P	**Pn**	**16 35 28.6**	**-0.8**
ELBA				IAML		16 36 06.0	
	comp=N,145nm,0.4s						
ELBA				IAML		16 36 12.0	
	comp=E,109nm,0.5s						
CTYL	**Yalikoy Yolu**	**2.34**	**59**	PN	**Pn**	**16 35 30.9**	**+0.9**
CTKS	**Kestanelik-??a**	**2.38**	**66**	PN	**Pn**	**16 35 31.8**	**+1.3**
DST	**Dursunbey**	**2.40**	**106**	PN	**Pn**	**16 35 31.8**	**+0.9**
LIT	**Litokhoron**	**2.41**	**266**	P	**Pn**	**16 35 29.5**	**-1.5**
KARY	**Karystos**	**2.44**	**203**	P	**Pn**	**16 35 30.5**	**-0.9**
AVCI	**Avcilar-stanb**	**2.46**	**72**	PN	**Pn**	**16 35 32.9**	**+1.3**
ARMT	**Armutlu**	**2.48**	**83**	PN	**Pn**	**16 35 33.5**	**+1.5**
KKB	**Krupnik**	**2.49**	**310**	P	**Pn**	**16 35 32.0**	**0.0**
MDNY	**Mudanya-Bursa**	**2.49**	**87**	PN	**Pn**	**16 35 33.8**	**+1.8**
PGB	**Panagyurishte**	**2.51**	**335**	P	**Pn**	**16 35 32.4**	**0.0**
VAY	**Valandovo**	**2.54**	**295**	*i* Pn	**Pn**	**16 35 33.5**	**+0.7**
VAY	**Valandovo**	**2.54**	**295**	*i* Pn	**Pn**	**16 35 33.5**	**+0.7**
BGKT	**Bogazkoy**	**2.55**	**69**	PN	**Pn**	**16 35 34.4**	**+1.5**
DION	**Dionisos Attik**	**2.57**	**211**	⇑P	**Pn**	**16 35 32.5**	**-0.7**
PTL	**Penteli**	**2.62**	**212**	P	**Pn**	**16 35 33.2**	**-0.7**
ELND	**Elena**	**2.64**	**4**	⇑P	**Pn**	**16 35 34.9**	**+0.7**
GEMT	**Gemlik**	**2.72**	**86**	PN	**Pn**	**16 35 36.8**	**+1.5**
ATHU	**Athens Univers**	**2.73**	**212**	P	**Pn**	**16 35 34.6**	**-0.7**
SMG	**Samos**	**2.75**	**160**	P	**Pn**	**16 35 35.4**	**-0.1**
AXAR	**Agios Charalam**	**2.75**	**237**	P	**Pn**	**16 35 35.1**	**-0.6**
KLYT	**Kilyos**	**2.76**	**69**	PN	**Pn**	**16 35 37.2**	**+1.4**
VIL2	**Platees**	**2.77**	**222**	P	**Pn**	**16 35 35.3**	**-0.6**
VLY	**Voula,Athens**	**2.82**	**211**	P	**Pn**	**16 35 35.9**	**-0.7**
AGG	**Agios Georgios**	**2.84**	**245**	P	**Pn**	**16 35 36.8**	**-0.2**
SIMA	**Simav-Kutahya**	**2.85**	**114**	PN	**Pn**	**16 35 38.8**	**+1.6**
VLV	**Yalova**	**2.87**	**83**	PN	**Pn**	**16 35 38.7**	**+1.3**
THL	**Kokotos Trika**	**2.87**	**257**	P	**Pn**	**16 35 37.1**	**-0.2**
GCAM	**G?zelcaml?**	**2.87**	**154**	PN	**Pn**	**16 35 38.4**	**+1.1**
PROD	**Prodromos**	**2.93**	**227**	P	**Pn**	**16 35 38.3**	**+0.1**
VTS	**Vitosha**	**2.94**	**323**	⇑P	**Pn**	**16 35 38.1**	**-0.3**
VTS	**Vitosha**	**2.94**	**323**	*i* P	**Pn**	**16 35 39.0**	**+0.6**
SZH	**Strazhica**	**2.98**	**4**	P	**Pn**	**16 35 39.0**	**+0.2**
MAKR	**Makrakomi, Fth**	**2.99**	**246**	P	**Pn**	**16 35 39.0**	**+0.1**
LTK	**Loutraki**	**3.07**	**223**	P	**Pn**	**16 35 39.5**	**-0.5**
LOUT	**Loutraki**	**3.09**	**223**	P	**Pn**	**16 35 39.7**	**-0.7**
PLVB	**Pleven**	**3.18**	**347**	⇑P	**Pn**	**16 35 42.0**	**+0.4**
SERI	**Serifos**	**3.25**	**196**	P	**Pn**	**16 35 42.0**	**-0.6**
KPRO	**Kipourio**	**3.29**	**266**	P	**Pn**	**16 35 43.4**	**+0.2**
KALE	**Kalithea**	**3.30**	**236**	P	**Pn**	**16 35 43.0**	**-0.4**
ANX	**Ano Chora**	**3.33**	**241**	P	**Pn**	**16 35 43.5**	**-0.3**
RAZG	**Razgrad**	**3.34**	**11**	⇑P	**Pn**	**16 35 44.0**	**+0.3**
SERG	**Sergoula**	**3.34**	**237**	P	**Pn**	**16 35 44.2**	**+0.3**
DID	**Didima**	**3.35**	**215**	P	**Pn**	**16 35 43.0**	**-0.9**
MPEP	**Malo Peshtene**	**3.37**	**336**	P	**Pn**	**16 35 44.5**	**+0.3**
LAKA	**Lakka**	**3.50**	**235**	P	**Pn**	**16 35 45.7**	**-0.3**
KLV	**Kalavryta, Ach**	**3.51**	**231**	P	**Pn**	**16 35 45.8**	**-0.4**
KHAL	**Karahalli**	**3.56**	**121**	*i* P	**Pn**	**16 35 45.4**	**-1.4**
KHAL				IAML		16 36 52.0	
	comp=N,46nm,0.8s						
KHAL				I

SOF ***24*** *16:50:00.2, 40˙.08N×24˙.44E, h2km, MD4.3*
PDG ***24*** *16:50:01.9±0.5, 40˙.02N×24˙.34E, h18km, ML3.6/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
NEIC ***24*** *16:50:01.9, 40˙.02N×24˙.32E, h22km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=0.41; Mθθ=0.25; Mφφ=-0.66; Mrθ=0.63; Mrφ=-5.51; Mθφ=0.64; Fault plane solution: M₀5.61000×10¹⁵ NP1:φ₁177.35000°, δ83.97000°, λ-5.51000°. NP2:φ₂267.93000°, δ84.52000°, λ-173.95000°. Principal axes: T 5.3227, Plg0.0000°, Azm43.0000°; N 0.5340, Plg82.0000°, Azm310.0000°; P -5.8567, Plg8.0000°, Azm133.0000°;*
THE ***24*** *16:50:01.9, 40˙.02N×24˙.32E, h8km, ML4.1/17 Error ellipse: s-maj=0.7km s-min=0.3km az=321.0*
ATH ***24*** *16:50:01.3, 40˙.03N×24˙.32E, h29km, ML4.3/23, Error ellipse: s-maj=1.0km s-min=0.6km az=9.0*
MED_RC ***24*** *16:50:01.0±0.4, 40˙.01N×24˙.33E, h8km, MW4.5/15, Moment Tensor Solution. Mantle waves: s15,c24; Duration: 1ŝ1 Moment tensor: Scale 10¹⁵Nm; Mrr=2.15±.44; Mθθ3.03±.45; Mφφ-0.88±.49; Mrθ1.33±1.92; Mθφ-6.69±.31; Mφr-2.56±1.83; Best double couple: M₀7.50000×10¹⁵ NP1:φ₁81.00000°, δ67.00000°, λ-176.00000°. NP2:φ₂350.00000°, δ87.00000°, λ-23.00000°. Principal axes: T 8.6700, Plg14.0000°, Azm38.0000°; N -2.3600, Plg67.0000°, Azm162.0000°; P -6.3200, Plg19.0000°, Azm303.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
IDC ***24*** *16:50:01.7±0.6, 40˙.00N×24˙.51E, h0km, mb3.8/13, mb1 4.0/23, mb1mx3.9/48, mbtmp3.9/23, ML3.8/11, MS3.5/33, Ms1 3.5/33, ms1mx3.4/49 Error ellipse: s-maj=10.3km s-min=9.7km az=73.0*
ISK ***24*** *16:50:01.4, 40˙.01N×24˙.31E, h11km, ML4.7/18*
NEIC ***24*** *16:50:02.7±2.4, 40˙.00N±0˙.04×24˙.35E±0˙.06, h10km±1km, Error ellipse: s-maj=8.4km s-min=7.5km az=255.0*
MOS ***24*** *16:50:02.7±1.6, 40˙.09N×24˙.45E, h21km, mb4.4/4, Error ellipse: s-maj=6.9km s-min=4.8km az=79.7*

ISC 24 16:50:01.8±1.0, 40°.02N±0°.02×24°.35E±0°.01, h4km±7km, n382,σ1°$36/436, mb4.2/31, MS3.7/26, 28C-19D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUR	**Ouranopolis**	**0.42**	**317**	P	**Pg**	**16 50 10.3**	**+0.4**
OUR				S	**Sg**	**16 50 16.1**	**+0.7**
	28μm,0.4s						
OUR	**Ouranopolis**	**0.42**	**317**	P	**Pg**	**16 50 10.4**	**+0.4**
OUR				S	**Sg**	**16 50 16.1**	**+0.7**
OUR				AML	AML	16 50 17.2	
	comp=E,43156μm,0.4s						
OUR				AML	AML	16 50 21.0	
	comp=N,69587μm,0.4s						
OUR	**Ouranopolis**	**0.42**	**317**	PG	**Pg**	**16 50 10.3**	**+0.4**
OUR				SG	**Sb**	**16 50 16.6**	**-1.9**
PAIG	**Paliouri**	**0.53**	**260**	P	**Pg**	**16 50 11.9**	**0.0**
PAIG				S	**Sb**	**16 50 19.5**	**-2.0**
	comp=N,17μm,0.8s						
PAIG	**Paliouri**	**0.53**	**260**	P	**Pg**	**16 50 12.1**	**+0.2**
PAIG				S	**Sg**	**16 50 19.4**	**+0.6**
PAIG				AML	AML	16 50 20.5	
	comp=N,40084μm,0.7s						
PAIG				AML	AML	16 50 26.1	
	comp=E,22641μm,0.6s						
THAS	**Thassos island**	**0.65**	**26**	P	**Pg**	**16 50 14.3**	**+0.1**
THAS				S	**Sb**	**16 50 24.7**	**-0.2**
	comp=E,108μm,0.5s						
THAS	**Thassos island**	**0.65**	**26**	P	**Pg**	**16 50 14.0**	**-0.1**
THAS				S	**Sb**	**16 50 24.0**	**-0.9**
THAS				AML	AML	16 50 25.9	
THAS				AML	AML	16 50 26.1	
LIA	**Limnos Island**	**0.65**	**101**	P	**Pb**	**16 50 15.2**	**-0.5**
LIA				S	**Sb**	**16 50 24.8**	**-0.2**
	comp=E,78μm,0.4s						
LIA	**Limnos Island**	**0.65**	**101**	P	**Pb**	**16 50 15.1**	**-0.5**
LIA				S	**Sb**	**16 50 24.4**	**-0.7**
LIA				AML	AML	16 50 26.6	
LIA				AML	AML	16 50 27.0	
EFSA	**Agios Efstrati**	**0.69**	**134**	P	**Pb**	**16 50 16.1**	**-0.2**
EFSA				S	**Sb**	**16 50 26.7**	**+0.5**
EFSA				AML	AML	16 50 28.3	
	comp=E,97121μm,0.6s						
EFSA				AML	AML	16 50 28.6	
	comp=N,87327μm,0.7s						
PLG	**Polygyros**	**0.78**	**297**	P	**Pg**	**16 50 16.5**	**-0.2**
PLG				S	**Sg**	**16 50 26.6**	**-0.2**
	comp=N,21μm,0.8s						
PLG	**Polygyros**	**0.78**	**297**	P	**Pg**	**16 50 16.5**	**-0.2**
PLG				S	**Sg**	**16 50 26.6**	**-0.2**
PLG				AML	AML	16 50 30.3	
	comp=E,42028μm,0.6s						
PLG				AML	AML	16 50 30.3	
	comp=N,39870μm,0.7s						
KVLA	**Kavala**	**0.91**	**2**	P	**Pg**	**16 50 19.3**	**0.0**
KVLA				S	**Sg**	**16 50 31.2**	**0.0**
KVLA				AML	AML	16 50 33.8	
	comp=N,76065μm,0.4s						
KVLA				AML	AML	16 50 34.4	
AOS	**Alonnisos**	**0.93**	**203**	P	**Pg**	**16 50 18.8**	**-0.8**
AOS				S	**Sb**	**16 50 32.8**	**-0.3**
	comp=N,15μm,0.6s						
AOS	**Alonnisos**	**0.93**	**203**	P	**Pg**	**16 50 19.0**	**-0.6**
AOS				S	**Sb**	**16 50 32.7**	**-0.3**
AOS				AML	AML	16 50 36.1	
	comp=N,27943μm,0.6s						
AOS				AML	AML	16 50 36.3	
	comp=E,33968μm,0.6s						
AOS	**Alonnisos**	**0.93**	**203**	PG	**Pg**	**16 50 19.3**	**-0.3**
AOS				SG	**Sb**	**16 50 32.3**	**-0.8**
ALNA	**Alonnisos**	**0.95**	**203**	P	**Pg**	**16 50 19.3**	**-0.7**
ALNA				S	**Sb**	**16 50 33.2**	**-0.6**
ALNA				AML	AML	16 50 36.8	
	comp=N,68654μm,1.0s						
ALNA				AML	AML	16 50 39.6	
	comp=E,55182μm,1.0s						
KAVA	**Kavala**	**0.98**	**7**	P	**Pg**	**16 50 20.4**	**-0.2**
KAVA				S	**Sb**	**16 50 33.9**	**-0.6**
	comp=E,27μm,0.5s						
KAVA	**Kavala**	**0.98**	**7**	P	**Pg**	**16 50 20.5**	**0.0**
KAVA				S	**Sb**	**16 50 34.0**	**-0.6**
KAVA				AML	AML	16 50 35.4	
	comp=E,66952μm,0.7s						
KAVA				AML	AML	16 50 35.8	
	comp=N,44626μm,0.3s						
SMTH	**Samothraki Isl**	**1.00**	**63**	P	**Pg**	**16 50 20.9**	**-0.2**
SMTH				S	**Sb**	**16 50 35.3**	**0.0**
	comp=N,22μm,0.4s						
SMTH	**Samothraki Isl**	**1.00**	**63**	P	**Pg**	**16 50 20.9**	**-0.2**
SMTH				S	**Sb**	**16 50 34.9**	**-0.5**
SMTH				AML	AML	16 50 37.6	
	comp=N,45068μm,0.5s						
SMTH				AML	AML	16 50 39.0	
	comp=E,40878μm,0.3s						
SKIA	**Skiathos**	**1.10**	**219**	P	**Pb**	**16 50 21.9**	**-1.4**
SKIA				S	**Sg**	**16 50 37.1**	**+0.1**
	comp=E,12μm,0.6s						
SKIA	**Skiathos**	**1.10**	**219**	P	**Pb**	**16 50 21.9**	**-1.4**
SKIA				S	**Sg**	**16 50 36.9**	**-0.1**
SKIA				AML	AML	16 50 42.4	
	comp=E,23426μm,0.5s						
SKIA				AML	AML	16 50 46.7	
	comp=N,23962μm,0.8s						
SOH	**Sokhos**	**1.10**	**317**	P	**Pb**	**16 50 22.7**	**-0.8**
SOH				S	**Sn**	**16 50 37.9**	**-1.9**
	comp=N,10μm,0.6s						
XOR	**Xorichti**	**1.11**	**234**	P	**Pb**	**16 50 22.3**	**-1.3**
XOR				S	**Sn**	**16 50 38.5**	**-1.4**
	comp=N,10μm,0.5s						
XOR	**Xorichti**	**1.11**	**234**	P	**Pb**	**16 50 22.3**	**-1.3**
XOR				AML	AML	16 50 40.5	
	comp=E,21378μm,0.5s						
XOR				AML	AML	16 50 41.4	
	comp=N,18446μm,0.5s						
HORT	**Hortiatis**	**1.12**	**301**	P	**Pb**	**16 50 22.4**	**-1.3**
HORT				S	**Sg**	**16 50 38.0**	**+0.3**
	comp=N,5μm,1.0s						
HORT	**Hortiatis**	**1.12**	**301**	P	**Pb**	**16 50 22.4**	**-1.3**
HORT				S	**Sb**	**16 50 36.5**	**-2.1**
HORT				AML	AML	16 50 39.4	
	comp=N,9563μm,0.6s						
HORT				AML	AML	16 50 43.2	
	comp=E,10002μm,0.7s						
HORT	**Hortiatis**	**1.12**	**301**	PN	**Pb**	**16 50 22.9**	**-0.8**
HORT				SN	**Sn**	**16 50 38.5**	**-1.6**
NEO	**Neokhori**	**1.13**	**231**	P	**Pb**	**16 50 22.4**	**-1.4**
NEO				S	**Sg**	**16 50 38.1**	**0.0**
	comp=E,8μm,0.6s						
NEO	**Neokhori**	**1.13**	**231**	P	**Pb**	**16 50 22.5**	**-1.4**
NEO				S	**Sg**	**16 50 37.8**	**-0.3**
NEO				AML	AML	16 50 42.8	
	comp=E,14629μm,0.5s						
NEO				AML	AML	16 50 45.1	
	comp=N,17092μm,0.6s						
SKY	**Skiros Island**	**1.16**	**172**	P	**Pb**	**16 50 23.1**	**-1.2**
SKY				S	**Sn**	**16 50 40.8**	**-0.1**
SKY	**Skiros Island**	**1.16**	**172**	P	**Pb**	**16 50 23.0**	**-1.3**
SKY				S	**Sb**	**16 50 38.4**	**-1.2**
SKY				AML	AML	16 50 43.0	
	comp=N,26748μm,0.3s						
SKY				AML	AML	16 50 44.5	
	comp=E,29419μm,0.2s						
GADA	**Gvkgeada**	**1.20**	**82**	P	**Pn**	**16 50 24.1**	**-1.2**
GADA				S	**Sn**	**16 50 42.1**	**+0.2**
	comp=E,43μm,0.5s						
GADA	**Gvkgeada**	**1.20**	**82**	PN	**Pg**	**16 50 24.9**	**+0.2**
GADA				SN	**Sn**	**16 50 42.4**	**+0.5**
THE	**Thessaloniki**	**1.22**	**300**	P	**Pn**	**16 50 24.2**	**-1.4**
THE	**Thessaloniki**	**1.22**	**300**	P	**Pn**	**16 50 24.1**	**-1.5**
SRS	**Serrai**	**1.24**	**332**	P	**Pn**	**16 50 24.5**	**-1.4**
SRS				S	**Sb**	**16 50 41.0**	**-1.0**
	comp=E,6μm,0.7s						
SRS	**Serrai**	**1.24**	**332**	P	**Pn**	**16 50 24.5**	**-1.4**
SRS				S	**Sb**	**16 50 40.6**	**-1.4**
BOZC	**Bozcaada**	**1.32**	**97**	PN	**Pb**	**16 50 26.6**	**-0.5**
BOZC				SN	**Sg**	**16 50 45.3**	**+1.1**
BOZC	**Bozcaada**	**1.32**	**97**	*i* P	**Pn**	**16 50 26.0**	**-1.0**
BOZC				*i* S	**Sb**	**16 50 42.8**	**-1.5**
BOZC				IAML		16 50 53.0	
	comp=E,5μm,0.9s						
BOZC				IAML		16 50 59.0	
	comp=N,4μm,0.9s						
KYMI	**Kymi, Euboea I**	**1.40**	**188**	P	**Pn**	**16 50 26.4**	**-1.7**
KYMI				S	**Sg**	**16 50 47.0**	**+0.1**
	comp=N,7μm,0.9s						
KYMI	**Kymi, Euboea I**	**1.40**	**188**	P	**Pn**	**16 50 26.6**	**-1.5**
KYMI				AML	AML	16 50 54.9	
	comp=E,11069μm,1.0s						
KYMI				AML	AML	16 50 56.8	
	comp=N,15851μm,0.7s						
SIGR	**SIGRI**	**1.42**	**125**	P	**Pn**	**16 50 27.5**	**-0.7**
SIGR				S	**Sg**	**16 50 47.5**	**+0.2**
	comp=N,7μm,0.6s						
SIGR	**SIGRI**	**1.42**	**125**	P	**Pn**	**16 50 27.5**	**-0.7**
SIGR	**SIGRI**	**1.42**	**125**	PN	**Pb**	**16 50 27.9**	**-0.8**
LIT	**Litokhoron**	**1.43**	**274**	P	**Pn**	**16 50 27.0**	**-1.5**
LIT	**Litokhoron**	**1.43**	**274**	P	**Pn**	**16 50 26.9**	**-1.5**
LIT	**Litokhoron**	**1.43**	**274**	P	**Pn**	**16 50 27.1**	**-1.5**
LIT	**Litokhoron**	**1.43**	**274**		**Pn**	**16 50 27.1**	**-1.4**
RDO	**Rodhopi**	**1.44**	**38**	P	**Pn**	**16 50 27.2**	**-1.3**
RDO	**Rodhopi**	**1.44**	**38**	P	**Pn**	**16 50 27.3**	**-1.3**
RDO	**Rodhopi**	**1.44**	**38**	PN	**Pn**	**16 50 27.3**	**-1.3**
MRKA	**Markates**	**1.45**	**205**	P	**Pn**	**16 50 26.8**	**-1.9**
MRKA	**Markates**	**1.45**	**205**	P	**Pn**	**16 50 26.7**	**-1.9**
EZN	**Ezine**	**1.53**	**97**	PN	**Pb**	**16 50 29.7**	**-1.0**
EZN				SN	**Sg**	**16 50 50.5**	**-0.4**
ENEZ	**Enez**	**1.55**	**62**	PN	**Pn**	**16 50 28.9**	**-1.2**
ENEZ				SN	**Sg**	**16 50 51.1**	**-0.4**
KNT	**Kendrikon**	**1.59**	**316**	P	**Pn**	**16 50 30.0**	**-0.7**
KNT	**Kendrikon**	**1.59**	**316**	P	**Pn**	**16 50 29.9**	**-0.8**
KNT	**Kendrikon**	**1.59**	**316**	PN	**Pn**	**16 50 30.0**	**-0.7**
KNT				SN	**Sb**	**16 50 50.8**	**-1.3**
MMB	**Musomiste**	**1.63**	**343**	P	**Pn**	**16 50 30.0**	**-1.3**
GELI	**Tayfur-Gelibol**	**1.67**	**76**	PN	**Pn**	**16 50 31.7**	**0.0**
PRK	**Paraskevi**	**1.67**	**117**	P	**Pb**	**16 50 32.1**	**-1.0**
PRK				AML	AML	16 51 03.0	
	comp=E,38604μm,0.9s						
PRK				AML	AML	16 51 04.3	
	comp=N,18613μm,0.6s						
RZN	**Rozhen**	**1.69**	**9**	*i* P	**Pn**	**16 50 31.6**	**-0.6**
BAYC	**CANAKKALE_Bayr**	**1.71**	**99**	*i* P	**Pn**	**16 50 31.7**	**-0.7**
BAYC				*i* S	**Sn**	**16 50 52.9**	**-1.8**
BAYC				IAML		16 51 04.0	
	comp=N,3μm,0.4s						
BAYC				IAML		16 51 04.0	
	comp=E,2μm,0.4s						
LKR	**Lokris**	**1.73**	**218**	P	**Pn**	**16 50 31.1**	**-1.5**
LKR	**Lokris**	**1.73**	**218**	P	**Pn**	**16 50 31.0**	**-1.5**
PSRA	**Psara**	**1.75**	**147**	P	**Pb**	**16 50 33.1**	**-1.4**
PSRA				AML	AML	16 51 09.9	
	comp=N,6980μm,0.7s						
PSRA				AML	AML	16 51 14.5	
	comp=E,6160μm,0.6s						
ERIK	**Erikli-Kesan**	**1.77**	**68**	PN	**Pn**	**16 50 33.3**	**+0.1**
KDZ	**Kurdzhali**	**1.81**	**26**	P	**Pn**	**16 50 32.1**	**-1.7**
KDZ	**Kurdzhali**	**1.81**	**26**	PN	**Pn**	**16 50 32.3**	**-1.5**
AXAR	**Agios Charalam**	**1.82**	**227**	P	**Pn**	**16 50 32.6**	**-1.2**
AXAR	**Agios Charalam**	**1.82**	**227**	P	**Pn**	**16 50 32.9**	**-1.0**
AGG	**Agios Georgios**	**1.86**	**238**	P	**Pn**	**16 50 33.2**	**-1.2**
AGG	**Agios Georgios**	**1.86**	**238**	P	**Pn**	**16 50 33.2**	**-1.2**
AGG	**Agios Georgios**	**1.86**	**238**	PN	**Pn**	**16 50 33.1**	**-1.2**
AGG	**Agios Georgios**	**1.86**	**238**	P	**Pn**	**16 50 33.2**	**-1.2**
AGG	**Agios Georgios**	**1.86**	**238**		**Pn**	**16 50 33.2**	**-1.2**
THL	**Klokotos Trika**	**1.86**	**256**	P	**Pn**	**16 50 33.1**	**-1.3**
THL	**Klokotos Trika**	**1.86**	**256**	P	**Pn**	**16 50 33.3**	**-1.1**
VAY	**Valandovo**	**1.88**	**314**	*i* Pn	**Pn**	**16 50 34.1**	**-0.5**
VAY	**Valandovo**	**1.88**	**314**	*i* Pn	**Pn**	**16 50 34.1**	**-0.5**
AYVA	**Ayvalik**	**1.94**	**111**	*i* P	**Pn**	**16 50 35.2**	**-0.3**
AYVA				*i* S	**Sg**	**16 51 03.8**	**-0.3**
AYVA				IAML		16 51 10.0	
	comp=N,5μm,0.9s						
AYVA				IAML		16 51 16.0	
	comp=E,4μm,0.6s						
KESN	**Edirne-Kesan**	**1.95**	**65**	*i* P	**Pn**	**16 50 34.3**	**-1.6**
KESN				*i* S	**Sn**	**16 50 59.0**	**-2.0**
KESN				IAML		16 51 08.0	
	comp=E,10μm,0.4s						
KESN				IAML		16 51 08.0	
	comp=N,8μm,0.3s						
DION	**Dionisos Attik**	**1.97**	**190**	P	**Pn**	**16 50 34.7**	**-1.2**
DION	**Dionisos Attik**	**1.97**	**190**	P	**Pn**	**16 50 34.7**	**-1.2**
DION				AML	AML	16 51 10.3	
	comp=N,26609μm,0.8s						
DION				AML	AML	16 51 11.9	
	comp=E,29463μm,0.6s						
KARY	**Karystos**	**1.99**	**178**	P	**Pn**	**16 50 35.1**	**-1.1**
KARY	**Karystos**	**1.99**	**178**	P	**Pn**	**16 50 35.1**	**-1.1**
MAKR	**Makrakomi, Fth**	**1.99**	**240**	P	**Pn**	**16 50 35.5**	**-0.8**
MAKR	**Makrakomi, Fth**	**1.99**	**240**	P	**Pn**	**16 50 35.6**	**-0.6**
VIL2	**Platees**	**2.00**	**205**	P	**Pn**	**16 50 35.3**	**-1.1**
KZN	**Kozani**	**2.00**	**279**	P	**Pn**	**16 50 35.6**	**-0.8**
KZN	**Kozani**	**2.00**	**279**	P	**Pn**	**16 50 35.4**	**-1.0**
PTL	**Penteli**	**2.01**	**191**	P	**Pn**	**16 50 35.2**	**-1.3**
PTL	**Penteli**	**2.01**	**191**	P	**Pn**	**16 50 35.3**	**-1.1**
PTL				AML	AML	16 51 10.2	
	comp=E,8873μm,0.9s						
PTL				AML	AML	16 51 11.3	
	comp=N,5739μm,0.9s						
VILL	**Villia**	**2.03**	**204**	P	**Pn**	**16 50 35.3**	**-1.4**
UKOP	**Uzunkopru-Edir**	**2.06**	**57**	PN	**Pn**	**16 50 36.9**	**-0.2**
KKB	**Krupnik**	**2.08**	**333**	*i* P	**Pn**	**16 50 37.0**	**-0.4**
PROD	**Prodromos**	**2.09**	**213**	P	**Pn**	**16 50 36.1**	**-1.5**
PLD	**Plovdiv**	**2.10**	**7**	P	**Pn**	**16 50 37.9**	**+0.3**
PLD	**Plovdiv**	**2.10**	**7**	PN	**Pn**	**16 50 38.2**	**+0.6**
ATHU	**Athens Univers**	**2.10**	**192**	P	**Pn**	**16 50 36.5**	**-1.2**
ATHU	**Athens Univers**	**2.10**	**192**	P	**Pn**	**16 50 36.5**	**-1.2**
CHOS	**Chios island**	**2.10**	**141**	P	**Pn**	**16 50 37.5**	**-0.4**
CHOS	**Chios island**	**2.10**	**141**	P	**Pn**	**16 50 37.4**	**-0.4**
CHOS	**Chios island**	**2.10**	**141**	PN	**Pn**	**16 50 37.4**	**-0.4**
ATH	**Athens Observa**	**2.11**	**194**	P	**Pn**	**16 50 36.8**	**-1.0**
ATH	**Athens Observa**	**2.11**	**194**	P	**Pn**	**16 50 36.7**	**-1.0**
ATH				AML	AML	16 51 16.1	
	comp=E,7782μm,0.8s						
ATH				AML	AML	16 51 16.5	
	comp=N,9497μm,0.8s						
DKL	**Dikili**	**2.19**	**115**	PN	**Pn**	**16 50 38.9**	**0.0**
DIM	**Dimitrovgrad**	**2.21**	**23**	*i* P	**Pn**	**16 50 38.8**	**-0.4**
VLY	**Voula,Athens**	**2.21**	**192**	P	**Pn**	**16 50 38.1**	**-1.1**
VLY	**Voula,Athens**	**2.21**	**192**	P	**Pn**	**16 50 38.0**	**-1.3**
VLY				AML	AML	16 51 19.6	
	comp=E,8990μm,0.7s						
VLY				AML	AML	16 51 20.6	
	comp=N,9143μm,0.9s						
KRBN	**Karaburun**	**2.23**	**129**	PN	**Pn**	**16 50 38.6**	**-0.8**
RKY	**Sarkoy-Tekirda**	**2.26**	**72**	PN	**Pn**	**16 50 40.4**	**+0.5**
EVR	**Evrytania**	**2.26**	**241**	P	**Pn**	**16 50 39.1**	**-0.9**
EVR	**Evrytania**	**2.26**	**241**	P	**Pn**	**16 50 39.2**	**-0.9**
SART	**Tekirdag**	**2.26**	**72**	*i* P	**Pn**	**16 50 39.1**	**-0.8**
SART				*i* S	**Sn**	**16 51 06.3**	**-2.0**
SART				IAML		16 51 32.0	
	comp=E,1μm,0.8s						
LTK	**Loutraki**	**2.27**	**209**	P	**Pn**	**16 50 38.7**	**-1.4**
KRBG	**Karabiga-Canak**	**2.28**	**80**	PN	**Pn**	**16 50 40.8**	**+0.6**
KPRO	**Kipourio**	**2.30**	**269**	P	**Pn**	**16 50 40.2**	**-0.3**
KPRO	**Kipourio**	**2.30**	**269**	P	**Pn**	**16 50 40.1**	**-0.3**
LOUT	**Loutraki**	**2.30**	**208**	P	**Pn**	**16 50 39.1**	**-1.4**
ZEDA	**zmir-Bergama**	**2.36**	**116**	*i* P	**Pn**	**16 50 41.1**	**-0.1**
ZEDA				*i* S	**Sg**	**16 51 17.6**	**+0.2**
ZEDA				IAML		16 51 23.0	
	comp=E,1μm,0.4s						
ZEDA				IAML		16 51 24.0	
	comp=N,1μm,0.6s						
ANX	**Ano Chora**	**2.37**	**234**	P	**Pn**	**16 50 40.7**	**-0.8**
KALE	**Kalithea**	**2.37**	**227**	P	**Pn**	**16 50 40.1**	**-1.4**
KALE	**Kalithea**	**2.37**	**227**	P	**Pn**	**16 50 40.2**	**-1.3**
FNA	**Florina**	**2.40**	**289**	P	**Pn**	**16 50 41.2**	**-0.6**
FNA	**Florina**	**2.40**	**289**	PN	**Pn**	**16 50 41.4**	**-0.4**
FNA	**Florina**	**2.40**	**289**	P	**Pn**	**16 50 41.8**	**-0.1**
FNA	**Florina**	**2.40**	**289**		**Pn**	**16 50 41.8**	**-0.1**
SERG	**Sergoula**	**2.40**	**229**	P	**Pn**	**16 50 40.9**	**-1.0**
URLA	**Izmir**	**2.41**	**133**	PN	**Pn**	**16 50 41.7**	**-0.3**
URLA	**Izmir**	**2.41**	**133**	*i* P	**Pn**	**16 50 41.7**	**-0.3**
URLA				*i* S	**Sg**	**16 51 25.5**	**+6.4**
URLA				IAML		16 51 45.0	
	comp=N,472nm,1.4s						
URLA				IAML		16 51 46.0	
	comp=E,524nm,0.7s						
PENT	**Pentalofos**	**2.47**	**275**	P	**Pn**	**16 50 42.8**	**-0.1**
EFP	**Efpalio**	**2.48**	**231**	P	**Pn**	**16 50 42.3**	**-0.6**
PGB	**Panagyurishte**	**2.53**	**357**	P	**Pn**	**16 50 43.0**	**-0.6**
BALY	**Balya**	**2.53**	**95**	*i* P	**Pn**	**16 50 43.6**	**0.0**
BALY				*i* S	**Sg**	**16 51 22.8**	**-0.2**
BALY				IAML		16 51 25.0	
	comp=E,5μm,0.6s						
BALY				IAML		16 51 28.0	
	comp=N,5μm,1.1s						
MRMT	**Marmara Adasi**	**2.54**	**76**	PN	**Pn**	**16 50 44.2**	**+0.3**
GONE	**Gonen-Balikesi**	**2.56**	**88**	PN	**Pn**	**16 50 44.3**	**+0.3**
LAKA	**Lakka**	**2.57**	**227**	P	**Pn**	**16 50 43.5**	**-0.6**
EDRB	**Edirne**	**2.57**	**44**	P	**Pn**	**16 50 42.9**	**-1.2**
EDRB	**Edirne**	**2.57**	**44**	PN	**Pn**	**16 50 44.8**	**+0.7**
PVO	**Paravola**	**2.60**	**238**	P	**Pn**	**16 50 44.5**	**-0.1**
TKR	**Tekirdag**	**2.61**	**67**	PN	**Pn**	**16 50 45.2**	**+0.5**
KLV	**Kalavryta, Ach**	**2.62**	**222**	P	**Pn**	**16 50 43.6**	**-1.3**
KLV	**Kalavryta, Ach**	**2.62**	**222**	P	**Pn**	**16 50 43.8**	**-1.1**
BLCB	**Balcova**	**2.65**	**127**	P	**Pn**	**16 50 45.3**	**0.0**
BLCB	**Balcova**	**2.65**	**127**	PN	**Pn**	**16 50 45.7**	**+0.4**
DID	**Didima**	**2.66**	**200**	P	**Pn**	**16 50 44.0**	**-1.5**
STEP	**BALIKESIR_Sava**	**2.67**	**103**	*i* P	**Pn**	**16 50 45.8**	**+0.2**
STEP				*i* S	**Sg**	**16 51 26.8**	**-0.9**
STEP				IAML		16 51 38.0	
	comp=N,4μm,0.8s						
STEP				IAML		16 51 42.0	
	comp=E,3μm,0.9s						
EDC	**Edincik**	**2.71**	**82**	PN	**Pn**	**16 50 47.4**	**+1.3**
KIRK	**Kırklareli**	**2.72**	**49**	*i* P	**Pn**	**16 50 45.0**	**-1.3**
KIRK				*i* S	**Sg**	**16 51 28.2**	**-1.0**
KIRK				IAML		16 51 39.0	
	comp=N,704nm,0.6s						
VTS	**Vitosha**	**2.73**	**342**	⇑P	**Pn**	**16 50 46.3**	**-0.1**
VTS	**Vitosha**	**2.73**	**342**	P	**Pn**	**16 50 46.2**	**-0.2**
VTS	**Vitosha**	**2.73**	**342**	P	**Pn**	**16 50 46.2**	**-0.2**
VTS	**Vitosha**	**2.73**	**342**		**Pn**	**16 50 46.2**	**-0.2**
BALB	**Balikesir**	**2.74**	**97**	PN	**Pn**	**16 50 47.2**	**+0.7**
CRLT	**Corlu**	**2.80**	**66**	PN	**Pn**	**16 50 48.4**	**+1.0**
SERI	**Serifos**	**2.86**	**178**	P	**Pn**	**16 50 46.7**	**-1.5**
SERI	**Serifos**	**2.86**	**178**	P	**Pn**	**16 50 46.7**	**-1.5**
AKHS	**Akhisar**	**2.91**	**112**	*i* P	**Pn**	**16 50 49.1**	**+0.2**
AKHS				*i* S	**Sg**	**16 51 33.3**	**-2.1**
AKHS				IAML		16 51 40.0	
	comp=E,465nm,0.8s						
OHR	**Ohrid**	**2.92**	**293**	*i* Pn	**Pn**	**16 50 49.7**	**+0.7**
OHR	**Ohrid**	**2.92**	**293**	*i* Pn	**Pn**	**16 50 49.7**	**+0.7**
DRO	**Drossia**	**2.92**	**226**	P	**Pn**	**16 50 48.8**	**-0.2**
SKO	**Skopje**	**2.94**	**312**	*i* Pn	Pn	16 50 44.5	-4.8
SKO	**Skopje**	**2.94**	**312**	*i* Pn	Pn	16 50 44.5	-4.8
JMB	**Yambol**	**2.96**	**34**	P	**Pn**	**16 50 48.6**	**-1.0**
TRIP	**Tripoli**	**2.98**	**214**	P	**Pn**	**16 50 49.1**	**-0.7**
SMG	**Samos**	**3.02**	**139**	P	**Pn**	**16 50 50.0**	**-0.3**
VLX	**Vlachokerasia**	**3.07**	**211**	P	**Pn**	**16 50 50.6**	**-0.5**
APE	**Apeiranthos**	**3.09**	**162**	P	**Pn**	**16 50 50.2**	**-1.2**
APE	**Apeiranthos**	**3.09**	**162**	P	**Pn**	**16 50 50.2**	**-1.2**
APE	**Apeiranthos**	**3.09**	**162**	⇑P	**Pn**	**16 50 50.4

baz=275,slow=23,SNR=1.3
IDI LR LR 16 52 53.1
comp=N,166nm,19.8s,baz=342,slow=36
CEME Cevo 4.81 303 ⇓*i* Pn **Pn 16 51 15.1 +0.1**
CEME *i* Sn **Sn 16 52 09.5 -1.7**
ICOR Ion Corvin 4.83 31 ⇑P **Pn 16 51 15.4 +0.3**
NKY Niksic 4.90 306 ⇑*i* Pn **Pn 16 51 16.3 0.0**
NKY *i* Sn **Sn 16 52 11.9 -1.6**
NKME Niksic 4.90 306 ⇓*i* Pn **Pn 16 51 16.5 +0.3**
NKME *i* Sn **Sn 16 52 12.2 -1.2**
PLE Pljevlja 4.97 313 ⇑*i* Pn **Pn 16 51 17.4 +0.1**
PLE *i* Sn **Sn 16 52 13.9 -1.4**
KARP Karpathos 4.99 153 Pn 16 51 16.9 -0.6
HCY Herceg Novi 5.04 301 *e*Pn Pb 16 51 23.9 -6.6
HCY Herceg Novi 5.04 301 ⇑*i* Pn **Pn 16 51 18.4 +0.3**
HCY *i* Sn **Sn 16 52 15.4 -1.3**
HERR Herculane 5.06 344 ⇑P **Pn 16 51 17.3 -1.1**
MDVR Moldovita 5.14 339 ⇓P **Pn 16 51 19.3 -0.3**
UPM Unac-Piva 5.17 310 *e*Pn **Pn 16 51 21.7 +1.6**
UPM Unac-Piva 5.17 310 ⇑*i* Pn **Pn 16 51 20.1 0.0**
UPM *i* Sn **Sn 16 52 18.3 -2.0**
DIVS Divibare 5.21 323 *e*Pn **Pn 16 51 19.7 -0.8**
DIVS Divibare 5.21 323 Pn 16 51 19.8 -0.8
BRY Bratogost 5.23 305 *e*Pn **Pn 16 51 22.5 +1.7**
BRY Bratogost 5.23 305 ⇓*i* Pn **Pn 16 51 21.0 +0.2**
BRY *i* Sn **Sn 16 52 19.6 -2.0**
MDUB Mudurnu 5.26 83 Pn 16 51 21.5 +0.4
TREB Trebinje 5.26 303 *e*Pn Pn 16 51 25.3 +4.2
BBLS Lazići 5.32 318 *e*Pn **Pn 16 51 19.7 -2.4**
ARR Arges 5.34 2 ⇓P **Pn 16 51 22.3 -0.1**
TIRR Tirgusor 5.36 33 P **Pn 16 51 21.6 -0.8**
TIRR Tirgusor 5.36 33 Pn 16 51 21.6 -0.8
HARR Harsova 5.36 28 ⇓P **Pn 16 51 22.6 0.0**
DBRK Dubrovnik 5.37 302 *i* P **Pn 16 51 25.6 +3.0**
LOT Lotru 5.44 356 ⇑P **Pn 16 51 23.3 -0.4**
ELL Elmali 5.45 125 P **Pn 16 51 26.7 +2.8**
ELL Elmali 5.45 125 Pn 16 51 26.6 +2.8
GZR Gura Zlata 5.49 348 ⇓P **Pn 16 51 24.4 +0.1**
MLR Muntele Rosu 5.59 12 Pn **Pn 16 51 26.3 +0.6**
comp=N,5.0nm,0.3s,baz=225,slow=4.6,SNR=67
MLR Sn **Sn 16 52 28.9 -1.5**
comp=N,10nm,0.3s,baz=232,slow=22,SNR=3.9
MLR Lg Lg 16 53 00.6
comp=N,5.6nm,0.3s,baz=120,slow=22,SNR=2.4
MLR LR LR 16 53 31.0
comp=N,246nm,21.2s,baz=140,slow=37
MLR Muntele Rosu 5.59 12 ⇑P **Pn 16 51 26.5 +0.7**
TOPG Topolog 5.69 30 ⇑P **Pn 16 51 26.5 -0.5**
HAPS Han Pijesak,Bl 5.71 317 *e*Pn **Pn 16 51 27.0 -0.5**
STON Ston 5.75 302 *e*Pn **Pn 16 51 28.6 +0.7**
STON Ston 5.75 302 *i* P **Pn 16 51 29.8 +2.0**
TEKS Tekeris 5.77 323 *e*Pn Pn 16 51 21.0 -7.1
BISRR Bisoca 5.79 17 ⇑P **Pn 16 51 29.6 +1.2**
CFR Carcaliu 5.86 27 ⇓P **Pn 16 51 28.8 -0.5**
TIP Timpagrande 5.93 264 Pn 16 51 31.7 +1.4
BZS Buzias 5.94 341 ⇑P **Pn 16 51 29.6 -0.9**
DOPR Dopca 5.99 7 ⇑P **Pn 16 51 32.0 +0.9**
PLOR Plostina 6.06 15 ⇓P **Pn 16 51 34.5 +2.3**
VRI Vrincioaia 6.09 16 ⇓P **Pn 16 51 33.7 +1.1**
FRGS Fruska Gora 6.13 328 *e*Pn **Pn 16 51 32.4 -0.7**
RICI Ricice 6.42 305 P **Pn 16 51 38.1 +1.1**
TESR Tescani 6.70 14 ⇑P **Pn 16 51 41.7 +0.8**
SGRT San Giovanni R 6.75 288 Pn **Pn 16 51 42.0 +0.3**
CEL Celeste 6.81 258 Pn 16 51 41.2 -1.2
BIZ Bicaz 7.03 10 ⇑P **Pn 16 51 46.5 +1.0**
BLY Banja Luka 7.10 314 *e*Pn **Pn 16 51 46.5 +0.1**
KIJV Kijevo 7.13 306 *i* P **Pn 16 51 47.8 +1.0**
BR131 Keskin Array S 7.15 89 P **Pn 16 51 47.7 +0.5**
BR131 Keskin Array S 7.15 89 Pn 16 51 47.6 +0.5
BRTR Keskin Array B 7.15 89 Pn **Pn 16 51 47.5 +0.3**
comp=N,2.5nm,0.3s,baz=261,slow=10.0,SNR=37
BRTR Sn **Sn 16 53 05.9 -3.0**
comp=N,2.6nm,0.3s,baz=328,slow=23,SNR=7.2
BRTR Lg Lg 16 53 46.5
baz=8.1,slow=31,SNR=1.7
BRTR Keskin Array B 7.15 89 *ce*P **Pn 16 51 47.5 +0.3**
BRTR pmax pmax
comp=Z,7.0nm,0.4s
ILGA Ilgaz 7.21 79 Pn **Pn 16 51 47.7 -0.4**
ZIRJ Zirje 7.45 302 *i* P **Pn 16 51 50.5 -0.6**
MORH Mrgy, Hungar 7.46 328 *e*Pn **Pn 16 51 50.2 -1.2**
MORI Morici 7.50 304 *i* P **Pn 16 51 52.0 +0.1**
PAOL Paolisi 7.52 281 Pn 16 51 54.6 +2.3
BURAR Bucovina Array 7.61 4 ⇓P **Pn 16 51 54.5 +1.0**
BUR08 Bucovina Ar. S 7.64 4 Pn 16 51 54.3 +0.4
KIS Kishinev 7.69 23 *e*P **Pn 16 51 54.0 -0.4**
KIS LRM MLR 16 57 44.0
comp=Z,700nm,9.0s
KIS Kishinev 7.69 23 *e*P **Pn 16 51 54.0 -0.4**
KIS MLR MLR
comp=N,700nm,9.0s
MOSL Moslavina 7.90 317 *i* P **Pn 16 51 57.8 +0.4**
DUGI Dugi Otok 7.97 303 *i* P **Pn 16 51 57.5 -1.0**
VAE Valguarnera 8.17 255 Pn **Pn 16 52 03.8 +2.6**
comp=N,0.6nm,0.3s,baz=117,slow=19,SNR=1.8
VAE Sn **Sn 16 53 38.4 +4.4**
comp=N,1.3nm,0.3s,baz=299,slow=17,SNR=4.1
VAE LR LR 16 55 54.1
comp=N,292nm,20.5s,baz=119,slow=42
SEV Sevastopol' 8.25 54 *e*P **Pn 16 52 01.6 -0.5**
SEV *e*S **Sn 16 53 30.0 -5.7**
NVLJ Novalja 8.36 306 *i* P **Pn 16 52 02.9 -0.8**
PSZ Piszkesteto 8.52 339 P **Pn 16 52 06.9 +1.0**
PSZ Piszkesteto 8.52 339 Pn 16 52 06.9 +1.0
CRES Cresnjev 8.73 315 *e*Pn **Pn 16 52 09.8 +1.1**
SIM Simferopol' 8.73 53 *e*P **Pn 16 52 09.0 +0.3**
SIM *e*S **Sn 16 53 44.4 -3.1**
UZH Uzhgorod 8.73 351 *e*P Pn 16 52 12.8 +4.1
UZH *e*S **Sn 16 53 53.5 +6.0**
UZH MLR MLR
comp=N,53μm,11.0s
UZH MLR MLR
comp=E,55μm,11.0s
UZH MLR MLR
comp=Z,22μm,11.0s
CSS Mathiatis 8.74 122 Pn **Pn 16 52 09.5 +0.6**
ALU Alushta 8.77 55 *e*P **Pn 16 52 08.1 -1.2**
ALU *e*S **Sn 16 53 43.0 -5.6**
WDD Wied Dalam 8.82 245 Pn **Pn 16 52 08.6 -1.4**
SUDU Sudak 9.25 55 *e*P **Pn 16 52 15.1 -0.7**
SUDU *e*S **Sn 16 53 57.0 -3.2**
CEY Cerknica 9.26 311 *e*Pn **Pn 16 52 15.7 -0.3**
VYHS Vyhne 9.34 337 *e*P **Pn 16 52 21.0 +3.8**
VYHS Vyhne 9.34 337 *e*PN **Pn 16 52 21.0 +3.8**
SOKA Soboth 9.50 317 Pn **Pn 16 52 19.7 +0.3**
comp=Z,3.2nm,0.7s
ARSA Arzberg 9.65 321 *e*Pn **Pn 16 52 22.5 +1.2**
comp=Z,3.3nm,0.4s
OBKA Obir 9.65 315 *e*Pn **Pn 16 52 23.1 +1.7**
comp=Z,4.7nm,0.4s
LVV L'vov 9.80 359 *e*P Pn 16 52 30.0 +6.7
LVV MLR MLR
comp=N,500nm,10.0s
LVV MLR MLR
comp=E,800nm,10.0s
LVV MLR MLR
comp=Z,400nm,10.0s
CONA Conrad Observa 9.99 325 *e*Pn **Pn 16 52 27.5 +1.4**
comp=Z,1.6nm,0.5s
VRAC Vranov 10.80 332 LR LR 16 56 32.9
comp=Z,114nm,21.3s,baz=146,slow=36
ABTA Abfaltersbach 10.92 312 Pn **Pn 16 52 40.8 +2.0**
comp=Z,5.2nm,0.6s
CTI Castel Tesino 11.07 307 P **Pn 16 52 41.0 +0.1**
CTI Castel Tesino 11.07 307 Pn 16 52 41.0 +0.1
AKASG Malin Array Be 11.21 16 Pn **Pn 16 52 41.1 -1.5**
comp=Z,4.2nm,0.3s,baz=197,slow=13,SNR=16
AKASG Lg Lg 16 55 58.0
baz=196,slow=30,SNR=1.1
AKBB Malin Array Si 11.21 16 P **Pn 16 52 41.8 -0.9**
AKBB Malin Array Si 11.21 16 Pn 16 52 41.8 -0.9
MMAI Mount Meron Ar 11.30 125 Pn **Pn 16 52 41.9 -2.3**
comp=Z,1.3nm,0.3s,baz=312,slow=11,SNR=7.8
MMAI LR LR 16 58 01.2
comp=Z,193nm,19.4s,baz=310,slow=43
GERES GERESS Array B 11.64 323 Pn Pn 16 52 52.7 +4.1
comp=Z,0.1nm,0.3s,baz=264,slow=40,SNR=2.4
GERES LR LR 16 57 32.8
comp=Z,260nm,18.3s,baz=144,slow=38
WATA Walderalm 11.78 313 *e*Pn **Pn 16 52 52.9 +2.2**
comp=Z,4.2nm,0.5s
KHC Kasperske Hory 11.90 323 ⇑*e*P **Pn 16 52 53.8 +1.6**
KHC Kasperske Hory 11.90 323 *e*P Pn 16 53 00.0 +7.8

MOTA Moosalm 12.05 312 *e*Pn **Pn 16 52 57.0 +2.6**
comp=Z,2.7nm,0.6s
FETA Feichten 12.10 310 *e*Pn **Pn 16 52 55.5 +0.4**
comp=Z,2.0nm,0.6s
FUORN Ofenpass-Fuorn 12.19 307 Pn **Pn 16 52 56.6 +0.3**
DAVOX Davos/Dischmat 12.50 307 Pn **Pn 16 53 02.3 +1.8**
comp=Z,0.3nm,0.3s,baz=160,slow=20,SNR=4.8
DAVOX LR LR 16 58 50.1
comp=Z,451nm,19.0s,baz=90,slow=42
KEST Kesra 12.61 255 Pn **Pn 16 53 03.1 +1.2**
comp=Z,0.5nm,0.3s,baz=31,slow=6.0,SNR=4.3
KEST LR LR 16 59 19.2
comp=Z,191nm,18.3s,baz=162,slow=44
KEST Kesra 12.61 255 Pn 16 53 02.9 +1.0
EIL Elat 13.49 137 Pn **Pn 16 53 12.7 -1.3**
comp=Z,0.3nm,0.3s,baz=342,slow=14,SNR=3.3
EIL LR LR 16 59 59.7
comp=Z,81nm,19.0s,baz=294,slow=45
CLL Collm 13.78 329 *e* P 16 53 44.0 +18
CLL Lm MLR 16 57 00.0
comp=N,300nm,21.3s
CLL Lm MLR 16 57 00.0
comp=E,300nm,21.9s
CLL Lm MLR 16 57 00.0
comp=Z,100nm,20.1s
KBZ Khabaz 14.30 69 Pn **Pn 16 53 25.3 +0.4**
comp=Z,0.3nm,0.3s,baz=326,slow=2.5,SNR=2.2
NCK Nalchik 14.77 70 *e*P **Pn 16 53 30.1 -1.3**
VSR Storozhevoye 15.22 38 *e*P **Pn 16 53 34.7 -2.6**
VSR pmax pmax
comp=Z,10.0nm,0.8s
LPSR Galich'ya Gora 16.07 34 *e*P **Pn 16 53 45.8 -2.6**
LPSR pmax pmax
comp=Z,20nm,1.3s
OBN Obninsk 17.16 24 LR LR 17 01 03.7
comp=Z,88nm,18.2s,baz=176,slow=39
OBN Obninsk 17.16 24 ⇓*i* P **16 54 03.6 -0.3**
OBN pmax pmax
comp=Z,19nm,1.1s
OBN MLR MLR
comp=N,78nm,17.0s
MOS Moscow 18.01 25 *e*P **Pn 16 54 09.5 -3.3**
MOS pmax pmax
comp=Z,41nm,0.9s
VSU Vasula 18.52 4 ⇑*e*P **P 16 54 16.3 -2.6**
FINES FINESS Array B 21.47 2 P **P 16 54 52.6 +1.6**
comp=Z,2.0nm,0.8s,baz=191,slow=7.8,SNR=5.3
FINES LR LR 17 03 55.2
comp=Z,329nm,18.2s,baz=182,slow=39
ESDC Sonseca Array 21.71 278 P **P 16 54 55.3 +1.5**
comp=Z,3.3nm,1.1s,baz=74,slow=10,SNR=6.5
NAO01 NORSAR Array S 22.45 343 P **P 16 54 59.3 -2.2**
NB2 NORSAR Subarra 22.55 343 P **P 16 55 01.2 -1.4**
comp=Z,39nm,1.7s,baz=153,slow=11
NOA NORSAR Array B 22.55 343 P **P 16 55 03.3 +0.6**
comp=Z,3.9nm,1.0s,baz=148,slow=9.1,SNR=5.3
NBO00 NORSAR Array S 22.64 343 P **P 16 55 03.5 0.0**
NBO00 IAmb IAmb 16 55 12.2
comp=Z,39nm,1.1s
KLMR Klimovskoe 22.87 19 *e*P **P 16 55 03.9 -2.0**
KLMR pmax pmax
comp=Z,31nm,1.5s
KLMR Klimovskoe 22.87 19 *e*P **P 16 55 03.9 -2.0**
KLMR AMP 16 55 08.9
comp=Z,31nm,1.5s
EKA Eskdalemuir Ar 23.82 319 P **P 16 55 17.3 +1.8**
comp=Z,3.3nm,0.9s,baz=121,slow=11,SNR=5.4
RAYN Ar Rayn 24.28 126 P **P 16 55 20.6 +0.4**
RAYN pmax pmax
comp=Z,17nm,1.2s
RAYN Ar Rayn 24.28 126 P **P 16 55 20.6 +0.4**
RAYN IAmb IAmb 16 55 22.9
comp=Z,17nm,1.2s
KIRV Kirov 24.49 32 P **P 16 55 24.8 +3.1**
comp=Z,12nm,0.9s,baz=247,slow=7.1,SNR=6.2
KIRV LR LR 17 05 12.6
comp=Z,118nm,20.8s,baz=216,slow=37
AKTO Aktyubinsk 25.68 55 LR LR 17 07 48.4
comp=Z,90nm,20.2s,baz=256,slow=42
GEYT Alibeck 26.24 84 P **P 16 55 38.9 +1.0**
comp=Z,1.3nm,0.6s,baz=277,slow=12,SNR=4.2
GEYT LR LR 17 06 51.7
comp=Z,68nm,18.1s,baz=110,slow=39
ARU Arti 27.70 42 LR LR 17 07 36.2
comp=Z,122nm,21.0s,baz=238,slow=38
ARU Arti 27.70 42 *d* P **P**
ARU S **S 17 00 34.6 +1.4**
ARU SS **SnSn 17 01 40.9 -3.5**
ARU pmax pmax
comp=Z,7.0nm,1.6s
ARU MLR MLR
comp=Z,107nm,13.0s
ARCES ARCESS Array B 29.58 1 LR LR 17 08 37.2
comp=Z,178nm,20.5s,baz=171,slow=38
TOA0 Torodi Ar. Sit 33.38 223 P **P 16 56 40.2 -1.0**
TOA0 IAmb IAmb 16 56 46.8
comp=Z,6.3nm,1.1s
TORD Torodi Ar. Bea 33.38 223 P **P 16 56 41.2 -0.1**
comp=Z,1.7nm,0.8s,baz=29,slow=9.3,SNR=8.3
BRVK Borovoye 33.58 52 ⇑*e*P **P 16 56 44.8 +2.1**
BRVK pmax pmax
comp=Z,3.0nm,0.9s
GAR Garm 35.17 77 P **P 16 56 56.7 -0.2**
GAR IAmb IAmb 16 57 08.4
comp=Z,11nm,1.0s
KSH Kashi 39.22 74 P **P 16 57 28.0 -3.2**
KSH pP pP 16 57 31.1 -1.1
KSH sP sP 16 57 33.8 +1.2
KSH pmax pmax
comp=Z,22nm,1.2s
KSH pmax pmax
comp=Z,160nm,4.6s
MAKZ Makanchi 41.58 61 P **P 16 57 50.1 -0.4**
MAKZ pmax pmax
comp=Z,2.0nm,1.1s
MAKZ Makanchi 41.58 61 P **P 16 57 50.1 -0.4**
MAKZ IAmb IAmb 16 58 03.1
comp=Z,2.1nm,1.1s
MK31 Makanchi Array 41.80 61 P **P 16 57 52.1 -0.2**
MK31 pmax pmax
comp=Z,2.0nm,1.0s
MK31 Makanchi Array 41.80 61 P **P 16 57 52.1 -0.2**
MKAR Makanchi Array 41.80 61 P **P 16 57 52.9 +0.6**
comp=Z,1.4nm,0.5s,baz=278,slow=6.9,SNR=25
MKAR LR LR 17 19 44.5
comp=Z,37nm,18.0s,baz=262,slow=43
ZALV Zalesovo Beam 42.23 50 P **P 16 57 55.6 -0.1**
comp=Z,3.4nm,0.8s,baz=272,slow=9.1,SNR=14
ZALV LR LR 17 18 21.7
comp=Z,44nm,18.9s,baz=57,slow=40
DBIC Dimbokro 42.30 226 LR LR 17 16 18.9
comp=Z,44nm,22.0s,baz=54,slow=37
WMQ Urumqi 46.26 64 *e*P **P 16 58 29.8 +1.6**
WMQ pP sP 16 58 33.4 +3.7
WMQ sP pP 16 58 36.8 +7.5
WMQ pmax pmax
comp=Z,15nm,0.7s
WMQ pmax pmax
comp=Z,100nm,3.6s
WMQ LR LR
comp=N,220nm,16.9s
WMQ LR LR
comp=E,250nm,20.1s
WMQ LR LR
comp=Z,170nm,23.5s
GTA Gaotai 56.33 64 *e*P **P 16 59 44.8 +0.9**
GTA pP sP 16 59 48.6 +3.2
GTA sP pP 16 59 50.8 +5.8
GTA pmax pmax
comp=Z,2.0nm,1.1s
TIXI Tiksi 56.86 21 *ce*P **P 16 59 49.1 +2.1**
TIXI pmax pmax
comp=Z,4.0nm,1.8s
SONM Songino Array 56.98 53 P **P 16 59 48.9 +0.5**
comp=Z,0.7nm,0.7s,baz=298,slow=6.2,SNR=5.4
LZH Lanzhou 60.72 66 *e*P **P 17 00 13.0 -1.6**
LZH pP pP 17 00 15.3 -0.4
LZH sP sP 17 00 17.8 +1.7
LZH *e*PP **PP 17 02 29.3 +1.2**
LZH pmax pmax
comp=Z,21nm,1.3s
LZH pmax pmax
comp=Z,67nm,7.2s
LZH LR LR
comp=N,160nm,15.0s
LZH LR LR
comp=E,160nm,14.6s
LZH LR LR
comp=Z,230nm,17.5s
YAK Yakutsk 62.02 31 LR LR 17 32 12.8
comp=Z,34nm,18.1s,baz=267,slow=41
CD2 Chengdu 63.33 71 P **P 17 00 30.3 -1.8**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
HHC Hu-ho-hao-te 63.53 58 *e*P **P 17 00 33.4 0.0**
HHC pmax pmax
comp=Z,14nm,1.1s
HHC pmax pmax
comp=Z,61nm,6.5s
HHC LR LR
comp=N,100nm,15.3s
HHC LR LR
comp=E,94nm,16.4s
HHC LR LR
comp=Z,49nm,16.2s
CMAR Chiang Mai Arr 66.72 85 P **P 17 00 53.7 -0.5**
comp=Z,1.1nm,0.8s,baz=306,slow=7.6,SNR=13
CMAR LR LR 17 33 18.0
comp=Z,19nm,18.5s,baz=165,slow=39
BOSA Boshof 68.29 179 LR LR 17 34 27.3
comp=Z,48nm,19.5s,baz=318,slow=39
KLR Kul'dur 70.53 42 LR LR 17 35 27.7
comp=Z,69nm,18.6s,baz=312,slow=39
MA2 Magadan 71.37 26 LR LR 17 35 39.6
comp=Z,52nm,18.0s,baz=318,slow=38
YKA Yellowknife Ar 72.64 341 P **P 17 01 31.6 +1.6**
comp=Z,0.3nm,0.6s,baz=44,slow=5.5,SNR=4.9
YKA LR LR 17 34 35.4
comp=Z,40nm,18.7s,baz=0.0,slow=37
NJ2 Nanjing 73.31 62 *e*P **P 17 01 32.4 -2.2**
NJ2 pmax pmax
comp=Z,15nm,0.5s
ILAR Eielson Array 75.31 356 P **P 17 01 48.4 +2.7**
comp=Z,0.3nm,0.6s,baz=345,slow=3.6,SNR=3.7
KSRS Korea Array 75.85 53 P **P 17 01 48.8 -0.4**
comp=Z,1.4nm,0.8s,baz=307,slow=4.1,SNR=5.0
KSRS LR LR 17 39 58.6
comp=Z,40nm,18.1s,baz=328,slow=40
ULM Lac du Bonnet 75.94 325 LR LR 17 35 25.9
comp=Z,27nm,18.1s,baz=356,slow=36
PETK Petropavlovsk- 78.85 27 LR LR 17 40 35.2
comp=Z,40nm,18.5s,baz=239,slow=38
MJAR Matsushiro Arr 82.55 48 LR LR 17 42 50.6
comp=Z,29nm,19.8s,baz=245,slow=38
BDFB Brasilia 86.99 247 LR LR 17 43 44.7
comp=Z,36nm,18.0s,baz=134,slow=37
PDAR Pinedale Array 87.64 328 LR LR 17 44 59.8
comp=Z,38nm,18.4s,baz=79,slow=38
NVAR Mina Array Bea 94.76 331 LR LR 17 49 25.1
comp=Z,38nm,20.6s,baz=310,slow=38
TXAR Lajitas Array 95.78 316 LR LR 17 48 12.7
comp=Z,27nm,18.6s,baz=0.0,slow=36
ASAR Alice Springs 119.42 97 PKP **PKPdf 17 08 51.2 -1.5**
comp=Z,0.4nm,0.7s,baz=286,slow=1.1,SNR=7.1

PDG ***24*** *16:58:11.5±0.3, 41.34N×19.51E, h12km, ML2.5/14, Error ellipse: s-maj=1.0km s-min=1.0km az=0.0*
SKO ***24*** *16:58:11.6, 41.23N×19.36E, h0km*
BEO ***24*** *16:58:12.9±0.6, 41.35N×19.56E, h14km±2km, ML2.2/10*
TIR ***24*** *16:58:12.0, 41.41N×19.55E, h11km, Md2.6/5*
ISC 24 16:58:12.0±1.2, 41.34N±0.04×19.52E±0.03, h14km±7km, n50, σ0.90/81, 8C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
						h m s	
TIR	**Tirane**	**0.26**	**88**	*e*Pg	**Pg**	**16 58 17.4**	**-0.2**
TIR				*e*Sg	**Sg**	**16 58 22.6**	**+1.3**
TIR	**Tirane**	**0.26**	**88**	*i* Pg	**Pg**	**16 58 17.6**	**0.0**
TIR				*i* SG	**Sg**	**16 58 21.4**	**+0.1**
ULC	**Ulcinj**	**0.66**	**342**	⇑*i* Pg	**Pg**	**16 58 24.2**	**-0.6**
ULC				*i* Sg	**Sb**	**16 58 35.0**	**+0.8**
PUK	**Puka**	**0.76**	**22**	*i* PG	**Pg**	**16 58 25.7**	**-1.0**
PUK				*i* SG	**Sg**	**16 58 35.9**	**-0.7**
PHP	**Peshkopia**	**0.77**	**63**	*i* PG	**Pg**	**16 58 26.1**	**-1.0**
PHP				*i* SG	**Sb**	**16 58 37.6**	**-0.1**
DRME	**Dracevica, Mon**	**0.88**	**344**	*e*Pg	**Pg**	**16 58 28.4**	**-0.7**
DRME	**Dracevica, Mon**	**0.88**	**344**	⇑*i* Pg	**Pg**	**16 58 27.9**	**-1.2**
DRME				*i* Sg	**Sn**	**16 58 42.1**	**-0.5**
OHR	**Ohrid**	**0.99**	**103**	*i* Pg	**Pn**	**16 58 31.6**	**+0.1**
OHR				*i* Sg	**Sn**	**16 58 47.0**	**+1.6**
OHR				*e*Lg	Lg	16 58 47.3	
	comp=N,136nm,0.8s						
OHR	**Ohrid**	**0.99**	**103**	*i* Pg	**Pn**	**16 58 31.6**	**+0.1**
OHR				*i* Sg	**Sn**	**16 58 47.0**	**+1.6**
OHR				*e*Lg	Lg	16 58 47.3	
	comp=N,136nm,0.8s						
BUM	**Brajici-Budva**	**1.07**	**334**	⇓*i* Pg	**Pb**	**16 58 31.1**	**-1.2**
BUM				*i* Sg	**Sn**	**16 58 48.0**	**+0.8**
BCI	**Bajram Curri**	**1.10**	**22**	*i* PG	**Pb**	**16 58 32.5**	**-0.4**
BCI				*i* SG	**Sg**	**16 58 47.2**	**-0.5**
PDG	**Podgorica**	**1.11**	**350**	*e*Pg	**Pn**	**16 58 33.2**	**+0.2**
PDG				*e*Sg	**Sn**	**16 58 49.1**	**+1.0**
PDG	**Podgorica**	**1.11**	**350**	*e*Pg	**Pb**	**16 58 32.4**	**-0.4**
TTG	**Podgorica**	**1.11**	**350**	⇑*i* Pg	**Pb**	**16 58 32.4**	**-0.4**
TTG				*i* Sg	**Sn**	**16 58 49.2**	**+1.1**
CEME	**Cevo**	**1.29**	**340**	⇓*i* Pg	**Pn**	**16 58 35.2**	**-0.4**
CEME				*i* Sg	**Sg**	**16 58 55.2**	**+1.7**
PVY	**Plav**	**1.30**	**15**	⇑*i* Pg	**Pn**	**16 58 35.5**	**-0.3**
PVY				*i* Sg	**Sg**	**16 58 56.9**	**+3.1**
HCY	**Herceg Novi**	**1.34**	**326**	*e*Pn	**Pn**	**16 58 35.9**	**-0.4**
HCY	**Herceg Novi**	**1.34**	**326**	⇑*i* Pg	**Pn**	**16 58 36.2**	**-0.1**
HCY				*i* Sg	**Sg**	**16 58 57.2**	**+1.8**
NKME	**Niksic**	**1.49**	**344**	⇓*i* Pg	**Pn**	**16 58 38.6**	**+0.3**
NKME				*i* Sg	**Sg**	**16 59 00.7**	**+0.8**
KOME	**Kolasin**	**1.51**	**360**	⇓*i* Pg	**Pb**	**16 58 39.7**	**-0.1**
KOME				*i* Sg	**Sg**	**16 59 01.6**	**+1.0**
FNA	**Florina**	**1.51**	**111**	*i* PN	**Pg**	**16 58 40.6**	**-0.5**
NKY	**Niksic**	**1.52**	**345**	⇓*i* Pg	**Pn**	**16 58 39.3**	**+0.4**
NKY				*i* Sg	**Sg**	**16 59 01.2**	**+0.1**
IVA	**Berane**	**1.56**	**10**	⇑*i* Pg	**Pb**	**16 58 40.0**	**-0.6**
IVA				*i* Sg	**Sg**	**16 59 02.8**	**+0.7**
SKO	**Skopje**	**1.57**	**66**	*e*Pg	**Pg**	**16 58 41.2**	**-1.0**
SKO				*e*Sg	**Sg**	**16 59 01.7**	**-0.9**
TREB	**Trebinje**	**1.63**	**328**	*e*Pn	**Pn**	**16 58 40.1**	**-0.1**
TREB				*e*Sg	**Sg**	**16 59 04.0**	**-0.4**
TREB	**Trebinje**	**1.63**	**328**	*e*Pn	**Pn**	**16 58 40.1**	**-0.1**
DBRK	**Dubrovnik**	**1.68**	**323**	*i* P	**Pn**	**16 58 40.9**	**0.0**
BRY	**Bratogost**	**1.72**	**335**	*e*Pn	**Pn**	**16 58 41.6**	**0.0**
BRY	**Bratogost**	**1.72**	**335**	⇓*i* Pn	**Pn**	**16 58 42.0**	**+0.4**
BRY				*i* Sn	**Sb**	**16 59 06.1**	**+1.1**
UPM	**Unac-Piva**	**1.92**	**346**	*e*Pn	**Pn**	**16 58 45.0**	**+0.6**
UPM	**Unac-Piva**	**1.92**	**346**	⇑*i* Pn	**Pn**	**16 58 45.3**	**+0.9**
UPM				*i* Sn	**Sb**	**16 59 11.5**	**+0.8**
SJES	**Sjenica**	**1.95**	**10**	*e*Pn	**Pn**	**16 58 45.5**	**+0.8**
SJES				*e*Sn	**Sb**	**16 59 10.8**	**-0.7**
PLE	**Pljevlja**	**1.99**	**357**	⇑*i* Pn	**Pn**	**16 58 46.5**	**+1.2**
PLE				*i* Sn	**Sb**	**16 59 12.7**	**0.0**
STON	**Ston**	**2.04**	**319**	*e*Pn	**Pn**	**16 58 44.8**	**-1.1**
STON	**Ston**	**2.04**	**319**	*i* P	**Pn**	**16 58 45.4**	**-0.5**
SELS	**Selova**	**2.22**	**32**	*e*Pn	**Pn**	**16 58 49.8**	**+1.4**
SELS				*e*Sn	**Sn**	**16 59 15.5**	**-0.2**
BARS	**Barje**	**2.26**	**48**	*e*Pn	**Pb**	**16 58 50.6**	**-1.9**
BARS				*e*Sn	**Sn**	**16 59 16.4**	**-0.1**
BOSS	**Bosilegrad**	**2.49**	**61**	*e*Pn	**Pn**	**16 58 53.3**	**+1.2**
BOSS				*e*Sn	**Sn**	**16 59 21.5**	**-0.9**
BBLS	**Lazići**	**2.53**	**358**	*e*Pn	**Pn**	**16 58 53.3**	**+0.7**
BBLS				*e*Sn	**Sn**	**16 59 24.5**	**+1.3**
BBLS	**Lazići**	**2.53**	**358**	*e*Pn	**Pn**	**16 58 54.6**	**+2.0**
HAPS	**Han Pijesak,Bl**	**2.78**	**352**	*e*Pn	**Pn**	**16 58 55.9**	**-0.2**
HAPS	**Han Pijesak,Bl**	**2.78**	**352**	*e*Pn	**Pn**	**16 58 55.8**	**-0.3**
DIVS	**Divibare**	**2.78**	**7**	*e*Pn	**Pn**	**16 58 56.9**	**+0.8**
DIVS				*e*Sn	**Sn**	**16 59 29.4**	**-0.1**
DIVS	**Divibare**	**2.78**	**7**	*e*Pn	**Pn**	**16 58 56.3**	**+0.2**
RICI	**Ricice**	**2.78**	**321**	P	**Pn**	**16 58 55.8**	**-0.3**
ZAPS	**Zavoj**	**3.01**	**49**	*e*Pn	**Pn**	**16 59 00.2**	**+0.9**
ZAPS				*e*Sn	**Sn**	**16 59 34.4**	**-0.8**
KIJV	**Kijevo**	**3.52**	**320**	*i* P	**Pn**	**16 59 06.3**	**+0.1**
ZIRJ	**Zirje**	**3.68**	**310**	*i* P	**Pn**	**16 59 08.2**	**-0.2**
MORI	**Morici**	**3.78**	**313**	*i* P	**Pn**	**16 59 09.9**	**+0.2**
DUGI	**Dugi Otok**	**4.22**	**310**	*i* P	**Pn**	**16 59 16.0**	**+0.1**

IDC ***24*** *17:05:34.1±0.7, 6.88S×125.38E, h527km±10km, mb3.1/8, mb1 3.3/13, mb1mx3.2/31, mbtmp4.2/13, Error ellipse: s-maj=16.7km s-min=8.6km az=69.0*
NEIC ***24*** *17:05:34.0±2.0, 6.88S±0.09×125.4E±0.1, h528km±9km,*

mb4.4/25, Error ellipse: s-maj=15.8km s-min=12.3km az=69.0
*DJA **24** 17:05:34.5±0.2, 7°S×12°5E±°, h515km±5km, M4.1/18, mb4.3/18, mB4.4/7, MLv4.5/18, Mw(mB)3.6/7*
ISC 24 17:05:33.2±0.5, 6°87S±0.05×125°40E±0.07, h511km, n78, σ1°44, mb4.1/15, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**3.07**	**201**	P	**P**	**17 06 47.8**	**+2.1**
SOEI	**Soe**	**3.07**	**201**	P	**P**	**17 06 47.9**	**+2.1**
MMRI	**Maumere**	**3.59**	**241**	P	**P**	**17 06 49.9**	**+0.7**
MMRI	**Maumere**	**3.59**	**241**	P	**P**	**17 06 49.9**	**+0.7**
BATI	**Baumata**	**3.73**	**207**	P	**P**	**17 06 52.4**	**+2.1**
	77nm,0.3s,baz=27,slow=1.5,SNR=168						
BATI				S	**S**	**17 07 55.2**	**+2.2**
	12nm,0.3s,baz=97,slow=23,SNR=2.6						
BATI	**Baumata**	**3.73**	**207**	P	**P**	**17 06 52.1**	**+1.8**
NLAI	**Namlea**	**3.99**	**25**	P	**P**	**17 06 54.3**	**+2.0**
EDFI	**Ende, Flores**	**4.12**	**243**	P	**P**	**17 06 53.5**	**+0.1**
SANI	**Sanana**	**4.83**	**7**	P	**P**	**17 07 00.7**	**+1.3**
BKSI	**Bulukumba**	**5.46**	**286**	P	**P**	**17 07 07.0**	**+2.0**
	0.2nm48nm,0.9s						
BNSI	**Bone**	**5.81**	**295**	P	**P**	**17 07 10.4**	**+2.2**
	0.3nm703nm74nm,0.8s						
KAPI	**Kappang**	**5.91**	**288**	P	**P**	**17 07 11.2**	**+2.0**
	4.8nm,0.3s,baz=120,slow=6.6,SNR=18						
KAPI				S	**S**	**17 08 30.8**	**+3.2**
	1.6nm,0.3s,baz=226,slow=22,SNR=1.7						
KAPI	**Kappang**	**5.91**	**288**	P	**P**	**17 07 10.9**	**+1.7**
SAUI	**Saumlaki**	**5.96**	**101**	P	**P**	**17 07 11.7**	**+2.0**
SPSI	**Sidrap Palu**	**6.30**	**297**	P	**P**	**17 07 14.1**	**+1.1**
	0.2nm65nm,0.8s						
LUWI	**Luwuk**	**6.36**	**336**	P	**P**	**17 07 15.3**	**+1.8**
	0.3nm1µm72nm,1.0s						
LUWI	**Luwuk**	**6.36**	**336**	P	**P**	**17 07 15.5**	**+2.0**
LBMI	**Labuha**	**6.54**	**19**	P	**P**	**17 07 17.6**	**+2.3**
	0.1nm29nm,0.7s						
WBSI	**Waikabubak, Su**	**6.55**	**245**	P	**P**	**17 07 14.6**	**-0.8**
	0.5nm2µm57nm,0.6s						
TTSI	**Tana Toraja**	**6.73**	**304**	P	P	17 07 27.3	+10
APSI	**Ampana**	**7.00**	**328**	P	**P**	**17 07 22.5**	**+2.6**
	0.2nm565nm40nm,0.9s						
KMSI	**Cibinong**	**7.53**	**349**	P	**P**	**17 07 27.9**	**+2.7**
	0.4nm59nm,0.7s						
PLAI	**Plampang**	**7.79**	**255**	P	**P**	**17 07 26.8**	**-1.0**
	0.2nm54nm,0.7s						
TNTI	**Ternate**	**7.84**	**15**	P	**P**	**17 07 30.2**	**+1.9**
FAKI	**Fak Fak**	**7.88**	**60**	P	**P**	**17 07 30.2**	**+1.5**
MTN	**Manton Dam**	**8.19**	**137**	P	**P**	**17 07 33.4**	**+1.5**
SIJI	**Sorong**	**8.36**	**45**	P	**P**	**17 07 35.8**	**+2.2**
	9.8nm,0.3s,baz=224,slow=7.4,SNR=43						
SIJI				S	**S**	**17 09 14.1**	**+1.7**
	1.7nm,0.3s,baz=356,slow=17,SNR=9.4						
MPSI	**Mapaga**	**9.02**	**322**	P	**P**	**17 07 42.8**	**+2.3**
	15nm,1.1s						
KNRA	**Kununurra**	**9.35**	**160**	P	**P**	**17 07 45.5**	**+1.6**
FITZ	**Fitzroy Crossi**	**11.16**	**179**	P	**P**	**17 08 04.0**	**+1.2**
	0.6nm,0.3s,baz=2.2,slow=8.8,SNR=56						
FITZ				S	**S**	**17 10 04.6**	**-1.5**
	0.3nm,0.3s,baz=301,slow=18,SNR=8.7						
FITZ	**Fitzroy Crossi**	**11.16**	**179**	P	**P**	**17 08 03.9**	**+1.0**
JAGI	**Jajag, Banyuwa**	**11.26**	**261**	P	**P**	**17 08 03.4**	**-0.5**
WB0	**Warramunga Arr**	**15.51**	**147**	P	**P**	**17 08 48.3**	**-0.4**
WB0				IAmb	IAmb	17 08 50.7	
	comp=Z,11nm,0.9s						
PSA00	**Pilbara Seismi**	**15.57**	**200**	P	**P**	**17 08 48.8**	**-0.3**
PSA00				IAmb	IAmb	17 08 49.5	
	comp=Z,10nm,0.9s						
WRA	**Warramunga Arr**	**15.62**	**147**	P	**P**	**17 08 49.5**	**-0.3**
	comp=Z,1.7nm,0.3s,baz=337,slow=9.5,SNR=112						
WRA				S	**S**	**17 11 29.8**	**-2.1**
	comp=Z,0.0nm,0.3s,baz=327,slow=16,SNR=6.3						
WB2	**Warramunga Arr**	**15.63**	**147**	P	**P**	**17 08 49.5**	**-0.3**
WB2				IAmb	IAmb	17 08 51.8	
	comp=Z,19nm,1.1s						
WR0	**Warramunga Arr**	**15.75**	**147**	P	**P**	**17 08 50.8**	**-0.3**
KKM	**Kota Kinabalu**	**15.77**	**324**	P	**P**	**17 08 52.0**	**+0.6**
KKM				IAmb	IAmb	17 08 53.0	
	comp=Z,12nm,1.0s						
KSM	**Kuching**	**17.19**	**298**	P	**P**	**17 09 04.6**	**-1.1**
CISI	**Cisompet, Garu**	**17.45**	**267**	P	**P**	**17 09 07.2**	**-1.1**
AS31	**Alice Springs**	**18.59**	**155**	P	**P**	**17 09 19.2**	**+0.7**
AS31				IAmb	IAmb	17 09 20.5	
	comp=Z,3.7nm,0.5s						
ASAR	**Alice Springs**	**18.59**	**155**	P	**P**	**17 09 19.1**	**+0.6**
	comp=Z,2.3nm,0.3s,baz=344,slow=15,SNR=272						
ASAR				S	**S**	**17 12 21.8**	**-0.2**
	baz=344,slow=23,SNR=16						
ASAR				ScP	**ScP**	**17 16 05.2**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=357,slow=2.3,SNR=6.0						
COEN	**Coen**	**18.84**	**113**	P	**P**	**17 09 20.3**	**-0.6**
COEN				IAmb	IAmb	17 09 26.3	
	comp=Z,8.8nm,1.1s						
GIRL	**Giralia**	**19.01**	**213**	P	**P**	**17 09 23.6**	**+1.3**
FORT	**Forrest**	**23.91**	**174**	P	**P**	**17 10 05.7**	**-0.6**
CTA	**Charters Tower**	**24.12**	**125**	P	**P**	**17 10 09.2**	**+0.8**
	comp=Z,1.7nm,0.6s,baz=291,slow=9.6,SNR=3.2						
CTAO	**Charters Tower**	**24.12**	**125**	P	**P**	**17 10 08.6**	**+0.1**
BBOO	**Buckleboo**	**27.65**	**160**	P	**P**	**17 10 39.6**	**+0.2**
BBOO				IAmb	IAmb	17 10 58.7	
	comp=Z,28nm,1.6s						
STKA	**Stephens Creek**	**29.11**	**151**	P	**P**	**17 10 52.7**	**+0.5**
	comp=Z,4.4nm,0.7s,baz=335,slow=9.6,SNR=13						
STKA	**Stephens Creek**	**29.11**	**151**	P	**P**	**17 10 52.8**	**+0.6**
TPUB	**Ta-pu**	**30.35**	**351**	P	**P**	**17 11 01.1**	**-1.9**
TPUB				IAmb	IAmb	17 11 02.1	
	comp=Z,8.1nm,0.5s						
YHNB	**Yeheng**	**31.59**	**353**	P	**P**	**17 11 12.2**	**-1.6**
YHNB				IAmb	IAmb	17 11 15.0	
	comp=Z,22nm,1.3s						
ARMA	**Armidale**	**33.98**	**137**	P	**P**	**17 11 35.9**	**+1.9**
TOO	**Toolangi**	**35.60**	**152**	P	**P**	**17 11 48.7**	**+1.3**
TOO				IAmb	IAmb	17 12 05.0	
	comp=Z,7.9nm,1.1s						
CAN	**Canberra**	**35.66**	**146**	P	**P**	**17 11 50.0**	**+2.0**
CAN				IAmb	IAmb	17 11 52.6	
	comp=Z,9.1nm,1.2s						
CMAR	**Chiang Mai Arr**	**36.26**	**314**	P	**P**	**17 11 53.1**	**0.0**
	comp=Z,0.5nm,0.7s,baz=143,slow=6.9,SNR=6.7						
KSRS	**Korea Array**	**44.16**	**3**	P	**P**	**17 12 56.1**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=180,slow=9.0,SNR=5.3						
MAJO	**Matsushiro**	**44.83**	**15**	P	**P**	**17 13 00.1**	**-1.2**
MJAR	**Matsushiro Arr**	**44.83**	**15**	P	**P**	**17 12 59.7**	**-1.6**
	comp=Z,2.1nm,0.7s,baz=180,slow=8.5,SNR=11						
LSA	**Lhasa**	**49.04**	**320**	P	**P**	**17 13 33.8**	**0.0**
LSA				IAmb	IAmb	17 13 34.7	
	comp=Z,4.5nm,0.6s						
ODAN	**Odare**	**49.80**	**314**	*eP*	**P**	**17 13 38.6**	**-0.6**
	comp=Z,11nm,0.5s						
TAPN	**Taplejung**	**49.87**	**315**	*eP*	**P**	**17 13 39.2**	**-0.6**
	comp=Z,12nm,0.4s						
RAMN	**Ramite**	**50.42**	**313**	*eP*	**P**	**17 13 43.6**	**-0.2**
	comp=Z,22nm,0.6s						
JIRN	**Jiri**	**51.13**	**314**	*eP*	**P**	**17 13 48.5**	**-0.6**
GUN	**Gumba**	**51.50**	**314**	*eP*	**P**	**17 13 51.2**	**-0.5**
	comp=Z,22nm,0.7s						
PKI	**Pulchoki**	**51.64**	**313**	*eP*	**P**	**17 13 51.8**	**-0.9**
	comp=Z,12nm,0.6s						
PKIN	**Phulchoki**	**51.65**	**313**	*eP*	**P**	**17 13 51.8**	**-1.0**
	comp=Z,10nm,0.4s						
DMN	**Daman**	**51.88**	**313**	*eP*	**P**	**17 13 53.4**	**-1.0**
GKN	**Gorkha**	**52.45**	**313**	*eP*	**P**	**17 13 57.7**	**-0.6**
	comp=Z,17nm,0.3s						
KOLN	**Koldanda**	**53.07**	**312**	*eP*	**P**	**17 14 02.3**	**-0.6**
DANN	**Dangsing**	**53.28**	**313**	*eP*	**P**	**17 14 03.6**	**-0.9**
	comp=Z,14nm,0.8s						
THZ	**Tophouse**	**54.51**	**137**	P	**P**	**17 14 11.7**	**-0.9**
THZ				IAmb	IAmb	17 14 18.6	
	comp=Z,39nm,1.1s						
MK31	**Makanchi Array**	**65.69**	**329**	P	**P**	**17 15 26.5**	**-0.2**
MKAR	**Makanchi Array**	**65.69**	**329**	P	**P**	**17 15 26.4**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=120,slow=7.4,SNR=12						
PEA0B	**Petropavlovsk-**	**65.72**	**21**	P	**P**	**17 15 27.1**	**+0.3**
PETK	**Petropavlovsk-**	**65.72**	**21**	P	**P**	**17 15 26.8**	**0.0**
	comp=Z,3.4nm,0.8s,baz=188,slow=3.8,SNR=7.9						
ZALV	**Zalesovo Beam**	**69.52**	**336**	P	**P**	**17 15 48.7**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=172,slow=12,SNR=3.6						
TIXI	**Tiksi**	**78.39**	**1**	P	**P**	**17 16 38.6**	**-1.5**

*DDA **24** 17:25:21.5, 40°17N×23°25E, h6km±1km, MW4.1*
*ISK **24** 17:25:32.4, 40°03N×24°38E, h10km, ML3.9/15*
*ATH **24** 17:25:33.2, 40°02N×24°33E, h31km, ML3.8/16, Error ellipse: s-maj=1.0km s-min=0.6km az=46.0*

*IDC **24** 17:25:33.4±0.9, 40°07N×24°55E, h0km, mb3.4/7, mb1 3.5/13, mb1mx3.4/45, mbtmp3.5/13, ML3.7/7, MS2.8/3, Ms1 2.8/3, ms1mx2.4/30, Error ellipse: s-maj=13.6km s-min=10.9km az=80.0*
*THE **24** 17:25:33.3, 40°01N×24°34E, h8km, ML3.7/20, Error ellipse: s-maj=0.8km s-min=0.4km az=309.0*
*PDG **24** 17:25:33.3±0.4, 40°02N×24°38E, h17km, ML3.4/14, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*SOF **24** 17:25:33.0, 40°14N×24°44E, h8km, MD3.8*
ISC 24 17:25:33.4±1.0, 40°02N±0°01×24°36E±0°02, h6km±8km, n264, σ0°98/320, mb3.5/8, 13C-27D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUR	**Ouranopolis**	**0.43**	**317**	P	**Pg**	**17 25 42.0**	**+0.3**
OUR				S	**Sg**	**17 25 47.6**	**+0.3**
	7µm,0.2s						
OUR	**Ouranopolis**	**0.43**	**317**	P	**Pg**	**17 25 42.1**	**+0.3**
OUR				S	**Sg**	**17 25 48.4**	**+1.2**
OUR				AML	AML	17 25 52.7	
	comp=E,19429µm,0.2s						
OUR				AML	AML	17 25 53.8	
	comp=N,19850µm,0.5s						
OUR	**Ouranopolis**	**0.43**	**317**	PG	**Pg**	**17 25 41.9**	**+0.3**
OUR				SG	**Sg**	**17 25 47.9**	**+0.6**
PAIG	**Paliouri**	**0.53**	**260**	P	**Pg**	**17 25 43.6**	**0.0**
PAIG				S	**Sg**	**17 25 50.6**	**+0.1**
	comp=N,5µm,0.6s						
PAIG	**Paliouri**	**0.53**	**260**	P	**Pg**	**17 25 44.0**	**+0.4**
PAIG				S	**Sg**	**17 25 51.1**	**+0.6**
PAIG				AML	AML	17 25 51.2	
	comp=N,11580µm,0.8s						
PAIG				AML	AML	17 25 55.4	
	comp=E,11441µm,0.3s						
LIA	**Limnos Island**	**0.64**	**101**	P	**Pb**	**17 25 46.3**	**-0.7**
LIA				S	**Sb**	**17 25 55.3**	**-0.9**
	comp=E,19µm,0.5s						
LIA	**Limnos Island**	**0.64**	**101**	P	**Pb**	**17 25 46.6**	**-0.4**
LIA				S	**Sb**	**17 25 56.4**	**+0.1**
LIA				AML	AML	17 25 57.6	
	comp=E,25436µm,0.4s						
LIA				AML	AML	17 25 58.1	
	comp=N,49526µm,0.6s						
THAS	**Thassos island**	**0.65**	**25**	P	**Pg**	**17 25 45.8**	**0.0**
THAS				S	**Sb**	**17 25 56.4**	**+0.1**
	comp=N,34µm,0.3s						
THAS	**Thassos island**	**0.65**	**25**	P	**Pb**	**17 25 47.5**	**+0.4**
THAS				S	**Sb**	**17 25 56.4**	**+0.1**
THAS				AML	AML	17 25 57.3	
	comp=E,86957µm,0.3s						
THAS				AML	AML	17 25 57.5	
	comp=N,51026µm,0.2s						
EFSA	**Agios Efstrati**	**0.68**	**135**	P	**Pb**	**17 25 47.4**	**-0.2**
EFSA				S	**Sb**	**17 25 57.7**	**+0.4**
EFSA				AML	AML	17 25 59.5	
	comp=E,37384µm,0.6s						
EFSA				AML	AML	17 25 59.9	
	comp=N,17374µm,0.3s						
PLG	**Polygyros**	**0.79**	**297**	P	**Pg**	**17 25 48.3**	**-0.2**
PLG				S	**Sg**	**17 25 58.2**	**-0.5**
	comp=N,7µm,0.7s						
PLG	**Polygyros**	**0.79**	**297**	P	**Pg**	**17 25 48.5**	**+0.1**
PLG				S	**Sg**	**17 25 58.9**	**+0.2**
PLG				AML	AML	17 26 00.8	
	comp=N,13847µm,0.8s						
PLG				AML	AML	17 26 01.6	
	comp=E,12197µm,0.6s						
KVLA	**Kavala**	**0.92**	**1**	P	**Pb**	**17 25 51.5**	**-0.2**
KVLA				S	**Sb**	**17 26 03.5**	**-0.6**
KVLA				AML	AML	17 26 05.1	
	comp=N,21926µm,0.6s						
KVLA				AML	AML	17 26 05.4	
	comp=E,53545µm,0.4s						
AOS	**Alonnisos**	**0.93**	**204**	P	**Pg**	**17 25 50.4**	**-0.8**
AOS				S	**Sb**	**17 26 04.0**	**-0.4**
	comp=E,5µm,0.5s						
AOS	**Alonnisos**	**0.93**	**204**	P	**Pg**	**17 25 50.7**	**-0.5**
AOS				S	**Sb**	**17 26 04.4**	**0.0**
AOS				AML	AML	17 26 07.3	
	comp=N,8547µm,0.5s						
AOS				AML	AML	17 26 07.6	
	comp=E,9891µm,0.5s						
AOS	**Alonnisos**	**0.93**	**204**	PG	**Pg**	**17 25 51.0**	**-0.2**
ALNA	**Alonnisos**	**0.95**	**204**	P	**Pg**	**17 25 51.5**	**-0.1**
ALNA				S	**Sg**	**17 26 04.5**	**+0.5**
ALNA				AML	AML	17 26 08.3	
	comp=N,12100µm,0.5s						
ALNA				AML	AML	17 26 11.0	
	comp=E,11061µm,0.7s						
KAVA	**Kavala**	**0.98**	**7**	P	**Pg**	**17 25 52.1**	**-0.1**
KAVA				S	**Sb**	**17 26 05.1**	**-0.9**
	comp=E,8µm,0.3s						
KAVA	**Kavala**	**0.98**	**7**	P	**Pb**	**17 25 52.2**	**-0.6**
KAVA				S	**Sg**	**17 26 05.0**	**0.0**
KAVA				AML	AML	17 26 06.8	
	comp=E,18338µm,0.3s						
KAVA				AML	AML	17 26 07.7	
	comp=N,12159µm,0.3s						
SMTH	**Samothraki Isl**	**1.00**	**63**	P	**Pg**	**17 25 52.3**	**-0.3**
SMTH				S	**Sb**	**17 26 06.4**	**-0.2**
	comp=N,2µm,0.5s						
SMTH	**Samothraki Isl**	**1.00**	**63**	P	**Pg**	**17 25 52.3**	**-0.3**
SMTH				S	**Sb**	**17 26 06.1**	**-0.5**
SMTH				AML	AML	17 26 09.2	
	comp=N,4391µm,0.3s						
SMTH				AML	AML	17 26 10.1	
	comp=E,4284µm,0.3s						
SKIA	**Skiathos**	**1.10**	**219**	P	**Pg**	**17 25 53.4**	**-1.0**
SKIA				S	**Sb**	**17 26 09.4**	**+0.1**
	comp=E,4µm,0.4s						
SKIA	**Skiathos**	**1.10**	**219**	P	**Pg**	**17 25 53.6**	**-0.8**
SOH	**Sokhos**	**1.11**	**316**	P	**Pg**	**17 25 54.4**	**-0.3**
SOH				S	**Sb**	**17 26 09.8**	**+0.1**
	comp=E,4µm,0.4s						
XOR	**Xorichti**	**1.11**	**234**	P	**Pg**	**17 25 53.5**	**-1.2**
XOR				S	**Sg**	**17 26 09.0**	**-0.2**
	comp=E,3µm,0.6s						
XOR	**Xorichti**	**1.11**	**234**	P	**Pg**	**17 25 53.9**	**-0.8**
XOR				S	**Sg**	**17 26 08.8**	**-0.4**
XOR				AML	AML	17 26 11.8	
	comp=E,4933µm,0.5s						
XOR				AML	AML	17 26 13.7	
	comp=N,5364µm,0.6s						
HORT	**Hortiatis**	**1.12**	**301**	P	**Pg**	**17 25 54.2**	**-0.7**
HORT				S	**Sg**	**17 26 09.2**	**-0.3**
HORT	**Hortiatis**	**1.12**	**301**	P	**Pg**	**17 25 54.4**	**-0.6**
HORT				S	**Sg**	**17 26 08.3**	**-1.2**
HORT				AML	AML	17 26 10.8	
	comp=N,4733µm,0.3s						
HORT				AML	AML	17 26 12.2	
	comp=E,4884µm,0.5s						
HORT	**Hortiatis**	**1.12**	**301**	PN	**Pg**	**17 25 54.3**	**-0.7**
NEO	**Neokhori**	**1.13**	**231**	P	**Pg**	**17 25 53.9**	**-1.2**
NEO				S	**Sb**	**17 26 10.7**	**+0.4**
	comp=E,4µm,0.5s						
NEO	**Neokhori**	**1.13**	**231**	P	**Pg**	**17 25 54.2**	**-0.9**
SKY	**Skiros Island**	**1.15**	**173**	P	**Pg**	**17 25 54.6**	**-0.8**
SKY				S	**Sn**	**17 26 11.7**	**-0.4**
	comp=E,4µm,0.5s						
SKY	**Skiros Island**	**1.15**	**173**	P	**Pg**	**17 25 54.6**	**-0.8**
SKY				S	**Sb**	**17 26 10.7**	**-0.2**
SKY				AML	AML	17 26 15.6	
	comp=E,8576µm,0.5s						
SKY				AML	AML	17 26 16.6	
	comp=N,6362µm,0.3s						
GADA	**Gvkgeada**	**1.19**	**81**	P	**Pb**	**17 25 55.4**	**-1.0**
GADA				S	**Sn**	**17 26 12.6**	**-0.5**
	comp=N,3µm,0.6s						
GADA	**Gvkgeada**	**1.19**	**81**	PN	**Pb**	**17 25 55.3**	**-1.1**
THE	**Thessaloniki**	**1.23**	**300**	P	**Pn**	**17 25 55.9**	**-1.2**
THE	**Thessaloniki**	**1.23**	**300**	P	**Pn**	**17 25 56.0**	**-1.0**
THE				S	**Sb**	**17 26 12.4**	**-0.7**
THE				AML	AML	17 26 20.0	
	comp=E,1637µm,0.7s						
THE				AML	AML	17 26 20.1	
	comp=N,1896µm,0.7s						
SRS	**Serrai**	**1.24**	**332**	P	**Pn**	**17 25 56.0**	**-1.3**
SRS				S	**Sb**	**17 26 12.9**	**-0.6**
	comp=N,1µm,0.3s						
SRS	**Serrai**	**1.24**	**332**	P	**Pn**	**17 25 56.1**	**-1.2**
BOZC	**Bozcaada**	**1.31**	**97**	PN	**Pn**	**17 25 57.3**	**-1.0**
BOZC	**Bozcaada**	**1.31**	**97**	*i* P	**Pn**	**17 25 57.2**	**-1.0**
BOZC				*i* S	**Sn**	**17 26 17.5**	**+1.4**
BOZC				IAML		17 26 24.0	
	comp=E,681nm,0.9s						
BOZC				IAML		17 26 24.0	
	comp=N,822nm,0.9s						
KYMI	**Kymi, Euboea I**	**1.40**	**188**	P	**Pn**	**17 25 58.0**	**-1.4**
KYMI	**Kymi, Euboea I**	**1.40**	**188**	P	**Pn**	**17 25 58.2**	**-1.3**
SIGR	**SIGRI**	**1.41**	**125**	P	**Pn**	**17 25 59.0**	**-0.6**
SIGR				S	**Sb**	**17 26 16.7**	**-1.6**
	comp=N,2µm,0.6s						
SIGR	**SIGRI**	**1.41**	**125**	P	**Pn**	**17 25 59.0**	**-0.6**
SIGR				S	**Sb**	**17 26 17.2**	**-1.0**
SIGR				AML	AML	17 26 21.2	
	comp=E,3771µm,0.5s						
SIGR				AML	AML	17 26 22.4	
	comp=N,4820µm,0.5s						
SIGR	**SIGRI**	**1.41**	**125**	PN	**Pn**	**17 25 58.9**	**-0.6**
LIT	**Litokhoron**	**1.44**	**274**	P	**Pn**	**17 25 58.7**	**-1.3**
LIT				S	**Sn**	**17 26 19.0**	**-0.2**
	comp=N,960nm,0.5s						
LIT	**Litokhoron**	**1.44**	**274**	P	**Pn**	**17 25 58.9**	**-1.1**
RDO	**Rodhopi**	**1.44**	**38**	P	**Pn**	**17 25 58.6**	**-1.4**
RDO	**Rodhopi**	**1.44**	**38**	P	**Pn**	**17 25 58.6**	**-1.4**
RDO	**Rodhopi**	**1.44**	**38**	PN	**Pn**	**17 25 58.6**	**-1.4**
MRKA	**Markates**	**1.44**	**205**	P	**Pn**	**17 25 58.5**	**-1.6**
MRKA	**Markates**	**1.44**	**205**	P	**Pn**	**17 25 58.7**	**-1.4**
EZN	**Ezine**	**1.52**	**97**	P	**Pn**	**17 26 00.4**	**-0.7**
EZN				S	**Sb**	**17 26 20.6**	**-1.0**
	comp=N,4µm,0.7s						
EZN	**Ezine**	**1.52**	**97**	PN	**Pb**	**17 26 01.1**	**-0.9**
ENEZ	**Enez**	**1.54**	**62**	P	**Pn**	**17 26 00.1**	**-1.3**
ENEZ				S	**Sg**	**17 26 22.5**	**-0.5**
	comp=N,4µm,0.3s						
ENEZ	**Enez**	**1.54**	**62**	PN	**Pn**	**17 26 00.6**	**-0.8**
KNT	**Kendrikon**	**1.59**	**316**	P	**Pn**	**17 26 01.4**	**-0.7**
KNT	**Kendrikon**	**1.59**	**316**	P	**Pn**	**17 26 01.6**	**-0.6**
KNT	**Kendrikon**	**1.59**	**316**	PN	**Pn**	**17 26 01.6**	**-0.7**
MMB	**Musomiste**	**1.64**	**343**	*i* P	**Pn**	**17 26 01.5**	**-1.3**
GELI	**Tayfur-Gelibol**	**1.66**	**76**	PN	**Pn**	**17 26 01.8**	**-1.2**
PRK	**Paraskevi**	**1.67**	**117**	P	**Pb**	**17 26 03.4**	**-1.1**
PRK	**Paraskevi**	**1.67**	**117**	P	**Pb**	**17 26 03.8**	**-0.6**
RZN	**Rozhen**	**1.69**	**9**	*i* P	**Pn**	**17 26 02.9**	**-0.7**
BAYC	**CANAKKALE_Bayr**	**1.71**	**99**	*i* P	**Pn**	**17 26 03.3**	**-0.4**
BAYC				*i* S	**Sn**	**17 26 25.1**	**-0.7**
BAYC				IAML		17 26 36.0	
	comp=E,431nm,0.4s						
BAYC				IAML		17 26 38.0	
	comp=N,444nm,1.1s						
LKR	**Lokris**	**1.73**	**218**	P	**Pn**	**17 26 02.6**	**-1.3**
LKR	**Lokris**	**1.73**	**218**	P	**Pn**	**17 26 02.6**	**-1.3**
PSRA	**Psara**	**1.75**	**147**	P	**Pn**	**17 26 02.9**	**-1.3**
ERIK	**Erikli-Kesan**	**1.77**	**68**	PN	**Pn**	**17 26 03.1**	**-1.4**
KDZ	**Kurdzhali**	**1.81**	**26**	*i* P	**Pn**	**17 26 03.6**	**-1.6**
KDZ	**Kurdzhali**	**1.81**	**26**	PN	**Pn**	**17 26 03.6**	**-1.6**
AXAR	**Agios Charalam**	**1.82**	**227**	P	**Pn**	**17 26 04.5**	**-0.7**
AGG	**Agios Georgios**	**1.86**	**238**	P	**Pn**	**17 26 04.8**	**-1.0**
AGG				S	**Sn**	**17 26 28.7**	**-0.9**
	comp=N,650nm,0.9s						
AGG	**Agios Georgios**	**1.86**	**238**	P	**Pn**	**17 26 04.9**	**-0.9**
AGG	**Agios Georgios**	**1.86**	**238**	PN	**Pn**	**17 26 04.9**	**-0.9**
THL	**Klokotos Trika**	**1.86**	**257**	P	**Pn**	**17 26 04.9**	**-0.9**
THL	**Klokotos Trika**	**1.86**	**257**	P	**Pn**	**17 26 05.0**	**-0.8**
THL				S	**Sn**	**17 26 27.6**	**-2.0**
LPK	**Lapseki**	**1.87**	**78**	PN	**Pn**	**17 26 05.2**	**-0.7**
VAY	**Valandovo**	**1.88**	**314**	*i* Pn	**Pn**	**17 26 05.9**	**-0.2**
VAY	**Valandovo**	**1.88**	**314**	*i* Pn	**Pn**	**17 26 05.9**	**-0.2**
AYVA	**Ayvalik**	**1.93**	**111**	*i* P	**Pn**	**17 26 06.7**	**-0.1**
AYVA				IAML		17 26 41.0	
	comp=N,960nm,0.5s						
AYVA				IAML		17 26 47.0	
	comp=E,626nm,0.6s						
KESN	**Edirne-Kesan**	**1.94**	**65**	*i* P	**Pn**	**17 26 05.7**	**-1.6**
KESN				*i* S	**Sg**	**17 26 38.3**	**+2.4**
KESN				IAML		17 26 40.0	
	comp=E,802nm,0.3s						
KESN				IAML		17 26 42.0	
	comp=N,515nm,0.3s						
DION	**Dionisos Attik**	**1.97**	**190**	P	**Pn**	**17 26 05.9**	**-1.4**
DION	**Dionisos Attik**	**1.97**	**190**	P	**Pn**	**17 26 06.2**	**-1.1**
KARY	**Karystos**	**1.99**	**178**	P	**Pn**	**17 26 06.3**	**-1.2**
KARY	**Karystos**	**1.99**	**178**	P	**Pn**	**17 26 06.5**	**-1.0**
MAKR	**Makrakomi, Fth**	**2.00**	**240**	P	**Pn**	**17 26 07.1**	**-0.6**
MAKR	**Makrakomi, Fth**	**2.00**	**240**	P	**Pn**	**17 26 07.4**	**-0.3**
VIL2	**Platees**	**2.00**	**206**	P	**Pn**	**17 26 06.9**	**-0.8**
KZN	**Kozani**	**2.00**	**279**	P	**Pn**	**17 26 06.7**	**-1.1**
KZN	**Kozani**	**2.00**	**279**	P	**Pn**	**17 26 07.5**	**-0.3**
PTL	**Penteli**	**2.01**	**191**	P	**Pn**	**17 26 06.4**	**-1.4**
**PTL

SKO	**Skopje**	**2.95**	**312**	*i* Pn	**Pn**	**17 26 21.0**	**+0.2**
SKO	**Skopje**	**2.95**	**312**	*i* Pn	**Pn**	**17 26 21.0**	**+0.2**
TRIP	**Tripoli**	**2.98**	**214**	P	**Pn**	**17 26 20.4**	**-0.8**
TRIP	**Tripoli**	**2.98**	**214**	P	**Pn**	**17 26 20.6**	**-0.6**
RLS	**Riolos of Patr**	**2.99**	**230**	P	**Pn**	**17 26 22.6**	**+1.4**
SMG	**Samos**	**3.01**	**139**	P	**Pn**	**17 26 21.5**	**-0.1**
VLX	**Vlachokerasia**	**3.07**	**211**	P	**Pn**	**17 26 22.3**	**-0.2**
APE	**Apeiranthos**	**3.09**	**162**	P	**Pn**	**17 26 21.6**	**-1.1**
APE	**Apeiranthos**	**3.09**	**162**	P	**Pn**	**17 26 21.1**	**-1.6**
APE	**Apeiranthos**	**3.09**	**162**	⇑P	**Pn**	**17 26 21.8**	**-0.9**
ELND	**Elena**	**3.12**	**21**	⇓P	**Pn**	**17 26 22.7**	**-0.4**
LKD2	**Lefkada island**	**3.12**	**248**	P	**Pn**	**17 26 25.0**	**+1.9**
IGT	**Igoumenitsa**	**3.14**	**262**	P	**Pn**	**17 26 25.6**	**+2.2**
AMT	**Artemida-Makis**	**3.23**	**221**	P	**Pn**	**17 26 25.2**	**+0.5**
AMT	**Artemida-Makis**	**3.23**	**221**	P	**Pn**	**17 26 25.5**	**+0.8**
MPEP	**Malo Peshtene**	**3.37**	**352**	P	**Pn**	**17 26 27.1**	**+0.6**
MPEP	**Malo Peshtene**	**3.37**	**352**	Pg	**Pg**	**17 26 36.5**	**-1.4**
PLVB	**Pleven**	**3.37**	**3**	⇑P	**Pn**	**17 26 27.0**	**+0.5**
IOSP	**Ios island**	**3.37**	**167**	P	**Pn**	**17 26 25.5**	**-1.1**
IOSP	**Ios island**	**3.37**	**167**	P	**Pn**	**17 26 25.5**	**-1.1**
KFL	**Anninata**	**3.37**	**237**	P	**Pn**	**17 26 29.3**	**+2.7**
AMGA	**Amorgos Island**	**3.40**	**159**	P	**Pn**	**17 26 26.2**	**-0.8**
AMGA	**Amorgos Island**	**3.40**	**159**	P	**Pn**	**17 26 26.2**	**-0.8**
VLI	**Veliai**	**3.48**	**199**	P	**Pn**	**17 26 27.2**	**-0.9**
KEK	**Kerkira**	**3.52**	**266**	P	**Pn**	**17 26 30.6**	**+1.9**
KULA	**Kula-Manisa**	**3.66**	**113**	P	**Pn**	**17 26 30.8**	**+0.2**
THR3	**Thira Island,**	**3.70**	**167**	P	**Pn**	**17 26 30.8**	**-0.2**
RAZG	**Razgrad**	**3.89**	**24**	⇑P	**Pn**	**17 26 33.2**	**-0.5**
PVY	**Plav**	**4.20**	**309**	⇓*i* Pn	**Pn**	**17 26 38.4**	**+0.4**
PVY				*i* Sn	**Sn**	**17 27 26.9**	**-0.5**
ULC	**Ulcinj**	**4.33**	**298**	⇓*i* Pn	**Pn**	**17 26 40.3**	**+0.5**
ULC				*i* Sn	**Sn**	**17 27 30.2**	**-0.4**
IVA	**Berane**	**4.40**	**312**	⇓*i* Pn	**Pn**	**17 26 41.3**	**+0.5**
IVA				*i* Sn	**Sn**	**17 27 31.9**	**-0.5**
DRME	**Dracevica, Mon**	**4.47**	**301**	*e*Pn	**Pn**	**17 26 43.3**	**+1.7**
DRME	**Dracevica, Mon**	**4.47**	**301**	⇓*i* Pn	**Pn**	**17 26 42.1**	**+0.5**
DRME				*i* Sn	**Sn**	**17 27 33.5**	**-0.5**
PDG	**Podgorica**	**4.54**	**304**	⇓P	**Pn**	**17 26 42.2**	**-0.4**
PDG	**Podgorica**	**4.54**	**304**	*e*Pn	**Pn**	**17 26 44.2**	**+1.6**
TTG	**Podgorica**	**4.54**	**304**	⇑*i* Pn	**Pn**	**17 26 43.0**	**+0.4**
TTG				*i* Sn	**Sn**	**17 27 35.2**	**-0.5**
KOME	**Kolasin**	**4.61**	**309**	⇓*i* Pn	**Pn**	**17 26 44.7**	**+1.0**
KOME				*i* Sn	**Sn**	**17 27 36.7**	**-0.9**
BUM	**Brajici-Budva**	**4.71**	**301**	⇑*i* Pn	**Pn**	**17 26 45.7**	**+0.6**
BUM				*i* Sn	**Sn**	**17 27 39.6**	**-0.5**
IDI	**Anoyia**	**4.74**	**175**	Pn	**Pn**	**17 26 44.9**	**-0.6**
	comp=N,1.6nm,0.3s,baz=337,slow=12,SNR=13						
IDI				Lg	Lg	17 28 03.4	
	baz=83,slow=22,SNR=1.1						
CEME	**Cevo**	**4.81**	**303**	⇓*i* Pn	**Pn**	**17 26 46.9**	**+0.4**
CEME				*i* Sn	**Sn**	**17 27 42.1**	**-0.5**
ICOR	**Ion Corvin**	**4.83**	**31**	⇓P	**Pn**	**17 26 46.8**	**+0.2**
NKME	**Niksic**	**4.91**	**306**	⇓*i* Pn	**Pn**	**17 26 48.1**	**+0.4**
NKME				*i* Sn	**Sn**	**17 27 44.6**	**-0.2**
NKY	**Niksic**	**4.91**	**306**	⇓*i* Pn	**Pn**	**17 26 48.0**	**+0.3**
NKY				*i* Sn	**Sn**	**17 27 44.5**	**-0.4**
PLE	**Pljevlja**	**4.98**	**313**	⇓*i* Pn	**Pn**	**17 26 48.7**	**-0.1**
PLE				*i* Sn	**Sn**	**17 27 46.1**	**-0.6**
HCY	**Herceg Novi**	**5.04**	**301**	*e*Pn	**Pn**	**17 26 50.5**	**+1.0**
HCY	**Herceg Novi**	**5.04**	**301**	⇓*i* Pn	**Pn**	**17 26 50.1**	**+0.6**
HCY				*i* Sn	**Sn**	**17 27 47.6**	**-0.5**
HERR	**Herculane**	**5.07**	**344**	⇓P	**Pn**	**17 26 48.8**	**-1.0**
MDVR	**Moldovita**	**5.15**	**338**	⇑P	**Pn**	**17 26 50.3**	**-0.7**
UPM	**Unac-Piva**	**5.18**	**310**	*e*Pn	**Pn**	**17 26 52.6**	**+1.0**
UPM	**Unac-Piva**	**5.18**	**310**	⇓*i* Pn	**Pn**	**17 26 52.5**	**+1.0**
UPM				*i* Sn	**Sn**	**17 27 50.5**	**-1.2**
DIVS	**Divibare**	**5.21**	**323**	*e*Pn	**Pn**	**17 26 51.6**	**-0.3**
BRY	**Bratogost**	**5.24**	**305**	*e*Pn	**Pn**	**17 26 53.6**	**+1.3**
BRY	**Bratogost**	**5.24**	**305**	⇑*i* Pn	**Pn**	**17 26 52.8**	**+0.5**
BRY				*i* Sn	**Sn**	**17 27 51.8**	**-1.2**
TREB	**Trebinje**	**5.26**	**303**	*e*Pn	**Pn**	**17 26 56.4**	**+3.8**
BBLS	**Lazići**	**5.33**	**318**	*e*Pn	**Pn**	**17 26 53.9**	**+0.4**
ARR	**Arges**	**5.35**	**2**	⇓P	**Pn**	**17 26 53.8**	**0.0**
HARR	**Harsova**	**5.36**	**28**	⇑P	**Pn**	**17 26 54.0**	**+0.1**
DBRK	**Dubrovnik**	**5.37**	**302**	*i* P	**Pn**	**17 26 54.7**	**+0.6**
LOT	**Lotru**	**5.44**	**356**	⇓P	**Pn**	**17 26 55.0**	**-0.1**
GZR	**Gura Zlata**	**5.50**	**348**	⇑P	**Pn**	**17 26 55.1**	**-0.7**
MLR	**Muntele Rosu**	**5.59**	**12**	Pn	**Pn**	**17 26 57.8**	**+0.7**
	comp=N,3.4nm,0.3s,baz=190,slow=3.1,SNR=14						
MLR				Sn	**Sn**	**17 27 60.0**	**-1.8**
	comp=N,4.1nm,0.3s,baz=171,slow=14,SNR=4.1						
MLR				Lg	Lg	17 28 31.8	
	comp=N,2.5nm,0.3s,baz=294,slow=22,SNR=1.8						
MLR	**Muntele Rosu**	**5.59**	**12**	⇓P	**Pn**	**17 26 57.7**	**+0.5**
TOPG	**Topolog**	**5.69**	**30**	⇑P	**Pn**	**17 26 57.9**	**-0.5**
HAPS	**Han Pijesak,BI**	**5.72**	**317**	*e*Pn	**Pn**	**17 26 58.1**	**-0.8**
STON	**Ston**	**5.76**	**302**	*e*Pn	**Pn**	**17 26 58.2**	**-1.1**
STON	**Ston**	**5.76**	**302**	*i* P	**Pn**	**17 26 60.0**	**+0.7**
BISRR	**Bisoca**	**5.79**	**17**	⇓P	**Pn**	**17 27 00.5**	**+0.7**
CFR	**Carcaliu**	**5.86**	**27**	⇓P	**Pn**	**17 27 00.2**	**-0.5**
MATE	**Matera**	**5.88**	**279**	⇓P	**Pn**	**17 26 59.4**	**-1.7**
BZS	**Buzias**	**5.95**	**341**	⇓P	**Pn**	**17 27 01.2**	**-0.7**
DOPR	**Dopca**	**5.99**	**7**	⇑P	**Pn**	**17 27 03.6**	**+0.9**
PLOR	**Plostina**	**6.07**	**15**	⇓P	**Pn**	**17 27 03.6**	**0.0**
VRI	**Vrincioaia**	**6.09**	**16**	⇑P	**Pn**	**17 27 05.2**	**+1.2**
FRGS	**Fruska Gora**	**6.13**	**328**	*e*Pn	**Pn**	**17 27 03.3**	**-1.2**
RICI	**Ricice**	**6.42**	**305**	P	**Pn**	**17 27 09.3**	**+0.8**
SIRR	**Siria**	**6.55**	**343**	⇓P	**Pn**	**17 27 10.5**	**+0.3**
TESR	**Tescani**	**6.70**	**14**	⇑P	**Pn**	**17 27 13.2**	**+1.0**
BIZ	**Bicaz**	**7.03**	**10**	⇓P	**Pn**	**17 27 18.0**	**+1.2**
BLY	**Banja Luka**	**7.11**	**314**	*e*Pn	**Pn**	**17 27 18.5**	**+0.6**
KIJV	**Kijevo**	**7.14**	**306**	*i* P	**Pn**	**17 27 19.5**	**+1.2**
BRTR	**Keskin Array B**	**7.14**	**89**	Pn	**Pn**	**17 27 18.8**	**+0.3**
	comp=N,1.4nm,0.3s,baz=267,slow=12,SNR=22						
BRTR				Sn	**Sn**	**17 28 36.1**	**-3.9**
	comp=N,0.2nm,0.3s,baz=306,slow=37,SNR=0.8						
BRTR				Lg	Lg	17 29 15.1	
	baz=258,slow=25,SNR=1.6						
ZIRJ	**Zirje**	**7.45**	**302**	*i* P	**Pn**	**17 27 22.5**	**-0.1**
MORH	**Mrgy, Hungar**	**7.47**	**328**	*e*Pn	**Pn**	**17 27 21.5**	**-1.3**
BURAR	**Bucovina Array**	**7.62**	**4**	⇓P	**Pn**	**17 27 26.0**	**+1.1**
MOSL	**Moslavina**	**7.90**	**317**	*i* P	**Pn**	**17 27 28.4**	**-0.4**
CRES	**Cresnjev**	**8.73**	**315**	*e*Pn	**Pn**	**17 27 38.9**	**-1.3**
SOKA	**Soboth**	**9.51**	**317**	*e*Pn	**Pn**	**17 27 51.7**	**+0.9**
	comp=N,1.4nm,0.4s						
OBKA	**Obir**	**9.65**	**315**	*e*Pn	**Pn**	**17 27 53.8**	**+0.9**
	comp=N,2.2nm,0.4s						
KBA	**Koelnbreinsper**	**10.65**	**315**	*e*Pn	**Pn**	**17 28 08.3**	**+1.6**
	comp=N,3.0nm,0.7s						
VRAC	**Vranov**	**10.80**	**332**	LR	LR	17 33 02.9	
	comp=N,37nm,18.7s,baz=152,slow=42						
AKASG	**Malin Array Be**	**11.21**	**16**	Pn	**Pn**	**17 28 12.3**	**-1.7**
	comp=N,2.1nm,0.3s,baz=204,slow=11,SNR=6.3						
MMAI	**Mount Meron Ar**	**11.30**	**125**	Pn	**Pn**	**17 28 14.7**	**-0.7**
	comp=N,0.3nm,0.3s,baz=316,slow=12,SNR=1.1						
MMAI				LR	LR	17 33 10.6	
	comp=N,44nm,19.6s,baz=130,slow=41						
GERES	**GERESS Array B**	**11.65**	**323**	Pn	**Pn**	**17 28 21.3**	**+1.1**
	comp=N,0.1nm,0.3s,baz=152,slow=13,SNR=2.8						
DAVOX	**Davos/Dischmat**	**12.50**	**307**	Pn	**Pn**	**17 28 34.3**	**+2.4**
	comp=N,0.1nm,0.3s,baz=169,slow=17,SNR=1.6						
FINES	**FINESS Array B**	**21.48**	**2**	P	**P**	**17 30 22.9**	**+0.6**
	comp=N,0.3nm,0.5s,baz=198,slow=7.2,SNR=1.1						
ESDC	**Sonseca Array**	**21.72**	**278**	P	**P**	**17 30 27.5**	**+2.2**
	comp=N,0.8nm,0.9s,baz=77,slow=9.6,SNR=4.8						
NOA	**NORSAR Array B**	**22.56**	**343**	P	**P**	**17 30 34.9**	**+0.9**
	comp=N,0.9nm,0.8s,baz=153,slow=10,SNR=2.7						
EKA	**Eskdalemuir Ar**	**23.82**	**319**	P	**P**	**17 30 45.8**	**-1.1**
	comp=N,0.8nm,0.6s,baz=111,slow=9.4,SNR=1.7						
AKTO	**Aktyubinsk**	**25.68**	**55**	LR	LR	17 43 11.0	
	comp=N,23nm,18.6s,baz=271,slow=41						
TORD	**Torodi Ar. Bea**	**33.38**	**223**	P	**P**	**17 32 15.9**	**+3.3**
	comp=N,1.2nm,0.7s,baz=23,slow=8.5,SNR=4.5						
MKAR	**Makanchi Array**	**41.79**	**61**	P	**P**	**17 33 24.0**	**+0.4**
	comp=N,0.7nm,0.6s,baz=279,slow=6.7,SNR=13						
ZALV	**Zalesovo Beam**	**42.23**	**50**	P	**P**	**17 33 26.4**	**-0.6**
	comp=N,0.9nm,0.5s,baz=276,slow=8.2,SNR=5.3						
CMAR	**Chiang Mai Arr**	**66.71**	**85**	P	**P**	**17 36 25.5**	**0.0**
	comp=N,0.3nm,0.7s,baz=310,slow=5.8,SNR=1.9						

*ISK **24** 17:34:44.8, 40°.11N×24°.74E, h9km, ML2.3/15*
*ATH **24** 17:34:48.8, 40°.03N×24°.35E, h19km±8km, ML1.8/2, Error ellipse: s-maj=9.1km s-min=1.4km az=272.0*
*THE **24** 17:34:51.7, 40°.23N×25°.27E, h11km±1km, ML2.1/7, Error ellipse: s-maj=1.2km s-min=0.5km az=355.0*
*DDA **24** 17:34:52.0, 40°.23N×25°.29E, h6km±4km, ML2.1*
ISC 24 17:34:44.0±0.7, 40°.14N±0°.02×24°.74E±0°.02, h10km, n46, σ2°.15/59, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
LIA	**Limnos Island**	**0.42**	**126**	P	**Pn**	**17 34 58.5**		**+2.5**
LIA				S	**Sb**	**17 35 03.6**		**+3.7**
	1μm,0.2s							
LIA	**Limnos Island**	**0.42**	**126**	P	**Pn**	**17 34 58.5**		**+2.5**
LIA				S	**Sb**	**17 35 03.5**		**+3.6**
LIA				AML	AML	17 35 03.9		
	comp=N,1866μm,0.2s							
LIA				AML	AML	17 35 03.9		
	comp=E,2527μm,0.2s							
THAS	**Thassos island**	**0.46**	**358**	P	Pn	17 35 02.4		+5.8
THAS				S		17 35 10.9		
	comp=E,195nm,0.3s							
THAS	**Thassos island**	**0.46**	**358**	P	Pn	17 35 02.6		+6.0
THAS				S		17 35 11.6		
THAS				AML	AML	17 35 12.6		
	comp=N,439μm,0.2s							
THAS				AML	AML	17 35 13.8		
	comp=E,394μm,0.4s							
OUR	**Ouranopolis**	**0.61**	**288**	P	**Pb**	**17 34 57.3**		**+0.6**
OUR				S	**Sg**	**17 35 03.2**		**-0.6**
OUR				AML	AML	17 35 05.9		
	comp=N,345μm,0.1s							
OUR				AML	AML	17 35 08.0		
	comp=E,268μm,0.2s							
OUR	**Ouranopolis**	**0.61**	**288**	PG	**Pb**	**17 34 57.3**		**+0.6**
EFSA	**Agios Efstrati**	**0.63**	**162**	P	Pn	17 35 05.6		+6.7
SMTH	**Samothraki Isl**	**0.69**	**61**	P	**Pg**	**17 34 58.1**		**+0.8**
SMTH				S	**Sg**	**17 35 02.8**		**-3.5**
	comp=E,290nm,0.1s							
SMTH	**Samothraki Isl**	**0.69**	**61**	P	**Pg**	**17 34 58.1**		**+0.8**
SMTH				S	**Sg**	**17 35 02.5**		**-3.8**
SMTH				AML	AML	17 35 02.9		
	comp=N,658μm,0.1s							
SMTH				AML	AML	17 35 02.9		
	comp=E,486μm,0.2s							
PAIG	**Paliouri**	**0.84**	**255**	P	**Pg**	**17 34 59.2**		**-0.9**
PAIG				S	**Sg**	**17 35 06.6**		**-4.5**
GADA	**Gvkgeada**	**0.89**	**87**	P	**Pb**	**17 35 01.5**		**0.0**
GADA				S	**Sg**	**17 35 08.4**		**-4.3**
	comp=E,78nm,0.4s							
GADA	**Gvkgeada**	**0.89**	**87**	PG	**Pb**	**17 35 01.7**		**+0.2**
PLG	**Polygyros**	**1.01**	**283**	P	**Pg**	**17 35 03.9**		**+0.4**
PLG				S	**Sg**	**17 35 14.2**		**-2.5**
PLG				AML	AML	17 35 16.9		
	comp=E,160μm,0.3s							
PLG				AML	AML	17 35 16.9		
	comp=N,143μm,0.5s							
BOZC	**Bozcaada**	**1.05**	**106**	PG	**Pn**	**17 35 05.6**		**+0.9**
BOZC	**Bozcaada**	**1.05**	**106**	*i* P	**Pn**	**17 35 05.7**		**+0.9**
BOZC				*i* S	**Sg**	**17 35 16.9**		**-1.0**
BOZC				IAML		17 35 19.0		
	comp=E,68nm,0.3s							
BOZC				IAML		17 35 19.0		
	comp=N,86nm,0.5s							
RDO	**Rodhopi**	**1.17**	**31**	P	**Pg**	**17 35 09.1**		**+2.6**
RDO	**Rodhopi**	**1.17**	**31**	P	**Pg**	**17 35 09.0**		**+2.6**
RDO				S	**Sg**	**17 35 22.9**		**+1.2**
RDO	**Rodhopi**	**1.17**	**31**	PN	**Pg**	**17 35 08.9**		**+2.4**
AOS	**Alonnisos**	**1.18**	**215**	P	**Pb**	**17 35 06.3**		**0.0**
AOS				S	**Sb**	**17 35 20.2**		**-1.5**
AOS	**Alonnisos**	**1.18**	**215**	PN	**Pn**	**17 35 07.0**		**+0.5**
ENEZ	**Enez**	**1.23**	**61**	P	**Pn**	**17 35 07.1**		**-0.1**
ENEZ				S	**Sb**	**17 35 19.6**		**-3.6**
	comp=N,522nm,0.4s							
ENEZ	**Enez**	**1.23**	**61**	PN	**Pg**	**17 35 08.4**		**+0.8**
EZN	**Ezine**	**1.26**	**104**	P	**Pg**	**17 35 08.7**		**+0.6**
EZN				S	**Sb**	**17 35 21.7**		**-2.3**
	comp=N,90nm,0.4s							
EZN	**Ezine**	**1.26**	**104**	PN	**Pg**	**17 35 08.3**		**+0.2**
SIGR	**SIGRI**	**1.27**	**137**	P	**Pg**	**17 35 12.6**		**+4.3**
SIGR				S	**Sn**	**17 35 28.2**		**+3.4**
	comp=N,112nm,0.4s							
SIGR	**SIGRI**	**1.27**	**137**	P	**Pg**	**17 35 12.6**		**+4.3**
SIGR				S	**Sn**	**17 35 27.7**		**+2.9**
SIGR				AML	AML	17 35 29.4		
	comp=E,173μm,0.4s							
SIGR				AML	AML	17 35 29.4		
	comp=N,283μm,0.4s							
SIGR	**SIGRI**	**1.27**	**137**	PN	**Pg**	**17 35 09.3**		**+1.0**
SRS	**Serrai**	**1.31**	**318**	P	**Pg**	**17 35 11.7**		**+2.7**
HORT	**Hortiatis**	**1.33**	**290**	P	**Pb**	**17 35 10.0**		**+0.9**
HORT	**Hortiatis**	**1.33**	**290**	PN	**Pn**	**17 35 09.7**		**+1.0**
GELI	**Tayfur-Gelibol**	**1.35**	**79**	PN	**Pg**	**17 35 10.2**		**+0.3**
XOR	**Xorichti**	**1.42**	**237**	P	**Pn**	**17 35 09.3**		**-0.6**
BAYC	**CANAKKALE_Bayr**	**1.45**	**106**	*i* P	**Pg**	**17 35 12.3**		**+0.6**
BAYC				*i* S	**Sn**	**17 35 27.5**		**-1.8**
BAYC				IAML		17 35 29.0		
	comp=N,42nm,0.3s							
BAYC				IAML		17 35 29.0		
	comp=E,38nm,0.2s							
ERIK	**Erikli-Kesan**	**1.45**	**68**	PN	**Pb**	**17 35 11.6**		**+0.5**
RZN	**Rozhen**	**1.54**	**359**	P	Pg	**17 35 19.7**		**+6.1**
LPK	**Lapseki**	**1.56**	**81**	PN	**Pb**	**17 35 13.5**		**+0.5**
KDZ	**Kurdzhali**	**1.59**	**19**	P	**Pg**	**17 35 17.6**		**+3.1**
KDZ	**Kurdzhali**	**1.59**	**19**	PN	**Pb**	**17 35 14.2**		**+0.8**
KESN	**Edirne-Kesan**	**1.63**	**65**	*i* P	**Pg**	**17 35 17.3**		**+2.0**
KESN				*i* S	**Sn**	**17 35 32.2**		**-2.1**
KESN				IAML		17 35 33.0		
	comp=N,68nm,0.6s							
KESN				IAML		17 35 34.0		
	comp=E,91nm,0.3s							
KNT	**Kendrikon**	**1.73**	**307**	PN	**Pb**	**17 35 16.7**		**+0.9**
CHOS	**Chios island**	**2.03**	**149**	P	**Pg**	**17 35 24.4**		**+1.6**
CHOS	**Chios island**	**2.03**	**149**	PN	**Pb**	**17 35 20.0**		**-1.0**
AGG	**Agios Georgios**	**2.17**	**240**	PN	**Pn**	**17 35 21.9**		**+1.7**
MRMT	**Marmara Adasi**	**2.23**	**77**	PN	**Pb**	**17 35 23.8**		**-0.6**
EDRB	**Edirne**	**2.28**	**41**	PN	**Pb**	**17 35 24.8**		**-0.4**
URLA	**Izmir**	**2.29**	**140**	PN	**Pb**	**17 35 23.8**		**-1.6**

ATH 24 17:53:22.7, 40°.02N×24°.31E, h30km±1km, ML2.1/12, Error ellipse: s-maj=1.3km s-min=0.9km az=82.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
OUR	**Ouranopolis**	**0.40**	**321**	P	Pb	17 53 31.5		-0.2
OUR				S	Sn	17 53 39.1		0.0
OUR				AML	AML	17 53 40.0		
	comp=N,908μm,0.1s							
OUR				AML	AML	17 53 42.1		
	comp=E,763μm,0.2s							
PAIG	**Paliouri**	**0.50**	**259**	P	Pb	17 53 33.3		+0.2
PAIG				S	Sn	17 53 40.8		-0.6
PAIG				AML	AML	17 53 41.0		
	comp=N,327μm,0.3s							
PAIG				AML	AML	17 53 42.7		
	comp=E,366μm,0.2s							
THAS	**Thassos island**	**0.66**	**28**	P	Pn	17 53 36.2		+0.2
THAS				S	Sn	17 53 46.4		+1.0
THAS				AML	AML	17 53 46.7		
	comp=E,630μm,0.3s							
THAS				AML	AML	17 53 46.8		
	comp=N,864μm,0.2s							
LIA	**Limnos Island**	**0.68**	**100**	P	Pn	17 53 36.5		+0.3
LIA				S	Sn	17 53 46.3		+0.5
LIA				AML	AML	17 53 47.2		
	comp=E,391μm,0.3s							
LIA				AML	AML	17 53 48.1		
	comp=N,577μm,0.3s							
PLG	**Polygyros**	**0.75**	**298**	P	Pb	17 53 37.9		+0.5
PLG				S	Sn	17 53 48.3		+0.6
PLG				AML	AML	17 53 50.9		
	comp=E,365μm,0.3s							
PLG				AML	AML	17 53 51.1		
	comp=N,336μm,0.3s							
AOS	**Alonnisos**	**0.91**	**202**	P	Pb	17 53 40.3		+0.3
AOS				S	Sb	17 53 54.1		+2.2
AOS				AML	AML	17 53 58.0		
	comp=N,201μm,0.3s							
AOS				AML	AML	17 53 58.9		
	comp=E,183μm,0.5s							
KVLA	**Kavala**	**0.92**	**3**	P	Pb	17 53 40.8		+0.7
KVLA				S	Sb	17 53 53.1		+1.2
KAVA	**Kavala**	**0.99**	**9**	P	Pb	17 53 41.7		+0.4
KAVA				S	Sb	17 53 54.7		+0.8
KAVA				AML	AML	17 53 56.2		
	comp=E,483μm,0.3s							
KAVA				AML	AML	17 53 56.5		
	comp=N,391μm,0.2s							
XOR	**Xorichti**	**1.08**	**233**	P	Pb	17 53 43.4		+0.5
XOR				S	Sb	17 53 58.2		+1.4
XOR				AML	AML	17 54 01.0		
	comp=N,144μm,0.5s							
XOR				AML	AML	17 54 01.1		
	comp=E,124μm,0.4s							
HORT	**Hortiatis**	**1.09**	**302**	P	Pb	17 53 43.8		+0.7
HORT				S	Sb	17 53 58.4		+1.3
HORT				AML	AML	17 54 00.3		
	comp=N,80μm,0.1s							
HORT				AML	AML	17 54 01.2		
	comp=E,73μm,0.2s							
SRS	**Serrai**	**1.23**	**334**	P	Pb	17 53 45.6		+0.3
SRS				S	Sb	17 54 02.8		+2.0
SRS				AML	AML	17 54 05.1		
	comp=E,100μm,0.2s							
SRS				AML	AML	17 54 06.6		
	comp=N,116μm,0.2s							
KYMI	**Kymi, Euboea I**	**1.40**	**187**	P	Pb	17 53 47.6		-0.5
KYMI				AML	AML	17 54 12.4		
	comp=E,82μm,0.3s							
KYMI				AML	AML	17 54 12.5		
	comp=N,86μm,0.5s							
MRKA	**Markates**	**1.43**	**203**	P	Pb	17 53 48.4		-0.3
KNT	**Kendrikon**	**1.57**	**317**	P	Pb	17 53 51.4		+0.3
KNT				AML	AML	17 54 16.4		
	comp=E,50μm,0.3s							
KNT				AML	AML	17 54 18.4		
	comp=N,80μm,0.3s							

*DDA **24** 17:54:02.0, 40°.37N×26°.16E, h7km±3km, ML2.2*
ISK 24 17:54:01.8, 40°.38N×26°.13E, h8km, ML2.1/13, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
GADA	**Gvkgeada**	**0.26**	**225**	PG	Pg	17 54 07.4		+0.5
GADA				SG	Sg	17 54 11.7		+1.4
GELI	**Tayfur-Gelibol**	**0.26**	**85**	PG	Pg	17 54 07.7		+0.7
GELI				SG	Sb	17 54 12.0		-1.4
ENEZ	**Enez**	**0.36**	**2**	PG	Pg	17 54 09.4		+0.5
ERIK	**Erikli-Kesan**	**0.41**	**44**	PG	Pg	17 54 10.3		+0.4
ERIK				SG	Sg	17 54 16.2		+0.9
LPK	**Lapseki**	**0.48**	**90**	PG	Pg	17 54 11.7		+0.6
BOZC	**Bozcaada**	**0.54**	**187**	PG	Pb	17 54 12.8		-0.7
BOZC	**Bozcaada**	**0.54**	**187**	*i* P	Pg	17 54 12.6		+0.5
BOZC				*i* P	Pb	17 54 12.7		-0.7
BOZC				*i* S	Sb	17 54 21.3		0.0
BOZC				IAML		17 54 22.0		
	comp=N,96nm,0.9s							
EZN	**Ezine**	**0.57**	**165**	PG	Pg	17 54 13.1		+0.4
KESN	**Edirne-Kesan**	**0.61**	**42**	*i* P	Pg	17 54 13.4		-0.4
KESN				*i* S	Sg	17 54 21.5		-0.3
KESN				IAML		17 54 28.0		
	comp=E,132nm,0.3s							
KESN				IAML		17 54 28.0		
	comp=N,143nm,0.4s							
BAYC	**CANAKKALE_Bayr**	**0.71**	**153**	*i* P	Pg	17 54 15.7		+0.2
BAYC				*i* S	Sb	17 54 25.6		-0.7
UKOP	**Uzunkopru-Edir**	**0.84**	**27**	PG	Pg	17 54 18.3		+0.3
RDO	**Rodhopi**	**0.89**	**330**	PG	Pb	17 54 19.9		+0.3
KNL	**Balıkesir**	**1.07**	**95**	*i* P	Pn	17 54 23.9		+0.8
KNL				*i* S	Sn	17 54 39.3		+1.1
KNL				IAML		17 54 40.0		
	comp=N,45nm,0.3s							
MRMT	**Marmara Adasi**	**1.14**	**78**	PN	Pb	17 54 23.9		+0.1
AYVA	**Ayv

IUG					*e*S	**Sg**	**18 25 48.4**	**+2.6**
	1μm,0.3s								
IUG	**Iuzhnay**	**2.22**	**304**		Pg	**Pg**	**18 25 18.2**	**+1.1**
	101nm,0.6s								
IUG					Lg	Lg	18 25 48.4		
	1μm,0.3s								
AAK	**Ala-Archa**	**2.27**	**40**		Pn	**Pn**	**18 25 13.9**	**+1.2**
	20nm,0.3s,baz=197,slow=2.9,SNR=133								
AAK					Sn	**Sb**	**18 25 45.1**	**+0.7**
	30nm,0.3s,baz=335,slow=23,SNR=22								
AAK	**Ala-Archa**	**2.27**	**40**	⇑	*i*P	**Pn**	**18 25 13.4**	**+0.7**
	baz=34								
AAK				⇑	*i*S	**Sn**	**18 25 43.0**	**+1.9**
	baz=34								
AAK	**Ala-Archa**	**2.27**	**40**		P	**Pn**	**18 25 13.9**	**+1.2**
	SNR=49								
KZA	**Kyzart**	**2.37**	**60**	⇑	*i*P	**Pn**	**18 25 14.1**	**-0.1**
	baz=55								
KZA				⇑	*i*S	**Sn**	**18 25 43.9**	**+0.2**
	baz=55								
KZA	**Kyzart**	**2.37**	**60**		P	**Pn**	**18 25 15.2**	**+1.1**
	SNR=23								
TAS	**Tashkent**	**2.46**	**281**	⇓	*i*P	**Pg**	**18 25 19.2**	**-2.3**
	baz=83								
TAS				⇓	*i*S	**Sg**	**18 25 52.9**	**-0.4**
	baz=83								
FRU1	**Bishkek**	**2.47**	**39**	⇓	*i*P	**Pn**	**18 25 15.9**	**+0.6**
	baz=34								
FRU1				⇓	*i*S	**Sn**	**18 25 47.6**	**+1.8**
	baz=34								
KBK	**Karagaybulak**	**2.52**	**46**	⇓	*i*P	**Pn**	**18 25 16.4**	**+0.3**
	baz=41								
KBK				⇓	*i*S	**Sn**	**18 25 48.4**	**+1.2**
	baz=41								
KBK	**Karagaybulak**	**2.52**	**46**		P	**Pn**	**18 25 17.8**	**+1.7**
	SNR=36								
GAR	**Garm**	**2.55**	**222**	⇓	*i*P	**Pb**	**18 25 18.1**	**-2.5**
	baz=27								
GAR				⇓	*i*S	**Sb**	**18 25 51.1**	**-1.1**
	baz=27								
YNGY	**Yangiyul**	**2.62**	**275**		*e*P	**Pg**	**18 25 25.0**	**+0.3**
YNGY					*e*S	**Sg**	**18 26 01.8**	**+3.1**
KK31	**Karatay Array**	**2.64**	**326**		Pn	**Pb**	**18 25 19.9**	**-2.1**
	8.5nm,0.3s,baz=135,slow=14,SNR=286								
KK31				⇑	Sn	**Sg**	**18 25 55.4**	**-3.8**
	82nm,0.6s,baz=141,slow=25,SNR=13								
CHMS	**Chumysh**	**2.67**	**38**	⇑	*i*P	**Pn**	**18 25 18.9**	**+0.9**
	baz=33								
CHMS				⇑	*i*S	**Sn**	**18 25 52.5**	**+1.8**
	baz=33								
CHMS	**Chumysh**	**2.67**	**38**		P	**Pn**	**18 25 19.3**	**+1.3**
	SNR=15								
USP	**Ospenovka**	**2.78**	**32**	⇓	*i*P	**Pn**	**18 25 20.4**	**+0.9**
	baz=27								
USP				⇓	*i*S	**Sn**	**18 25 55.6**	**+2.3**
	baz=27								
USP	**Ospenovka**	**2.78**	**32**		P	**Pn**	**18 25 20.7**	**+1.2**
	SNR=18								
BRLS	**Borolday**	**2.90**	**318**		*e*P	**Pg**	**18 25 27.7**	**-2.2**
	16nm,0.5s								
BRLS					*e*S	**Sg**	**18 26 04.8**	**-2.7**
	224nm,0.4s								
BRLS	**Borolday**	**2.90**	**318**		Pg	**Pg**	**18 25 27.7**	**-2.2**
	58nm,0.6s								
BRLS					Lg	Lg	18 26 04.8		
	216nm,0.5s								
SGDS	**Sogindy**	**2.98**	**31**		Pg	**Pb**	**18 25 28.1**	**0.0**
	33nm,0.5s								
SGDS					Lg	Lg	18 26 05.3		
	52nm,0.6s								
BOOM	**Boomskoye usch**	**3.02**	**58**	⇑	*i*P	**Pn**	**18 25 22.7**	**-0.2**
	baz=53								
BOOM				⇑	*i*S	**Sn**	**18 25 59.2**	**-0.2**
	baz=53								
TKM2	**Tokmak 2**	**3.06**	**48**	⇑	*e*P	**Pn**	**18 25 23.8**	**+0.4**
	baz=44								
TKM2				⇑	*i*S	**Sn**	**18 26 00.9**	**+0.5**
	baz=44								
TKM2	**Tokmak 2**	**3.06**	**48**		P	**Pn**	**18 25 24.5**	**+1.1**
	SNR=28								
ULHL	**Ulahol**	**3.10**	**64**	⇓	*i*P	**Pn**	**18 25 23.9**	**-0.2**
	baz=60								
ULHL				⇓	*i*S	**Sn**	**18 26 00.7**	**-0.9**
	baz=60								
ULHL	**Ulahol**	**3.10**	**64**		P	**Pb**	**18 25 32.2**	**+2.0**
	SNR=10								
DGS	**Degeres**	**3.36**	**45**		*e*P	**Pb**	**18 25 34.9**	**+0.4**
	7.0nm,0.4s								
DGS					*e*S	**Sb**	**18 26 16.4**	**+0.7**
	100nm,0.9s								
DGS	**Degeres**	**3.36**	**45**		Pg	**Pb**	**18 25 34.9**	**+0.4**
	23nm,0.4s								
DGS					Lg	Lg	18 26 17.9		
	100nm,0.9s								
KRBS	**Karabastau**	**3.64**	**39**		*e*P	**Pb**	**18 25 39.4**	**+0.2**
	15nm,0.6s								
KRBS					*e*S	**Sb**	**18 26 24.6**	**+1.0**
	33nm,0.8s								
KRBS	**Karabastau**	**3.64**	**39**		Pg	**Pb**	**18 25 39.4**	**+0.2**
	15nm,0.6s								
KRBS					Lg	Lg	18 26 24.6		
	33nm,0.8s								
MTBS	**Maitube**	**3.67**	**52**		*e*P	**Pb**	**18 25 41.0**	**+1.4**
	4.4nm,0.2s								
MTBS					*e*S	**Sb**	**18 26 27.2**	**+2.8**
	25nm,0.4s								
KDJ	**Kajisay**	**3.71**	**69**	⇑	*i*P	**Pn**	**18 25 31.8**	**-0.7**
	baz=67								
KDJ				⇑	*i*S	**Sn**	**18 26 14.5**	**-2.2**
	baz=67								
IZV	**Izvestkoviy**	**3.72**	**54**		*e*P	**Pb**	**18 25 42.7**	**+2.0**
	11nm,0.7s								
IZV					*e*S	**Sb**	**18 26 29.9**	**+3.7**
	53nm,1.1s								
IZV	**Izvestkoviy**	**3.72**	**54**		Pg	**Pb**	**18 25 42.7**	**+2.0**
	14nm,0.6s								
IZV					Lg	Lg	18 26 30.8		
	53nm,1.1s								
TNSS	**Tian-Shan**	**3.93**	**56**		*e*P	**Pb**	**18 25 45.8**	**+1.4**
	11nm,0.6s								
TNSS					*e*S	**Sb**	**18 26 35.7**	**+3.4**
	46nm,0.6s								
TNSS	**Tian-Shan**	**3.93**	**56**		Pg	**Pb**	**18 25 45.8**	**+1.4**
	11nm,0.6s								
TNSS					Lg	Lg	18 26 35.7		
	46nm,0.6s								
KNDC	**Almaty**	**4.04**	**54**	⇑	Pg	**Pb**	**18 25 50.1**	**+4.1**
	18nm,0.6s								
KNDC				⇓	Lg	Lg	18 26 36.4		
	108nm,0.8s								
MDOK	**Medeo**	**4.06**	**55**		*e*P	**Pb**	**18 25 47.7**	**+1.3**
	3.2nm,0.4s								
MDOK					*e*S	**Sb**	**18 26 38.7**	**+2.9**
	40nm,0.9s								
MDOK	**Medeo**	**4.06**	**55**		Pg	**Pb**	**18 25 49.7**	**+3.3**
	17nm,0.9s								
MDOK					Lg	Lg	18 26 38.2		
	24nm,0.7s								
KUU	**Kurty**	**4.11**	**42**		*e*P	**Pb**	**18 25 48.6**	**+1.4**
	3.5nm,0.4s								
KUU					*e*S	**Sb**	**18 26 40.4**	**+3.3**
	52nm,0.6s								
KUU	**Kurty**	**4.11**	**42**		Pg	**Pb**	**18 25 48.6**	**+1.4**
	8.4nm,0.5s								
KUU					Lg	Lg	18 26 40.4		
	52nm,0.6s								
KOTS	**Kotyrbulak**	**4.14**	**55**		*e*P	**Pb**	**18 25 49.2**	**+1.5**
	6.3nm,0.3s								
KOTS					*e*S	**Sb**	**18 26 41.5**	**+3.5**
	123nm,0.7s								
KOTS	**Kotyrbulak**	**4.14**	**55**		Pg	**Pb**	**18 25 49.2**	**+1.5**
	22nm,0.8s								
KOTS					Lg	Lg	18 26 42.1		
	123nm,0.7s								
KTBS	**Karatobe**	**4.17**	**47**		*e*P	**Pb**	**18 25 49.1**	**+0.9**
	7.3nm,0.7s								
KTBS					*e*S	**Sb**	**18 26 40.9**	**+2.1**
	62nm,0.9s								
KTBS	**Karatobe**	**4.17**	**47**		Pg	**Pb**	**18 25 49.1**	**+0.9**
	9.7nm,0.6s								
KTBS					Lg	Lg	18 26 41.9		
	62nm,0.9s								
BTLS	**Baital**	**4.27**	**15**		*e*P	**Pb**	**18 25 51.7**	**+1.8**
	2.6nm,0.3s								
BTLS					*e*S	**Sb**	**18 26 45.6**	**+3.9**
	53nm,0.9s								
BTLS	**Baital**	**4.27**	**15**		Pg	**Pb**	**18 25 51.7**	**+1.8**
	11nm,1.1s								
BTLS					Lg	Lg	18 26 45.6		
	53nm,0.9s								
ANVS	**Anan'yevo**	**4.29**	**63**	⇑	*i*P	**Pn**	**18 25 39.7**	**-0.6**
	baz=60								
ANVS				⇑	*i*S	**Sn**	**18 26 28.6**	**-2.1**
	baz=60								
CHKK	**Chushkaly**	**4.43**	**47**		*e*P	**Pb**	**18 25 54.6**	**+2.0**
	2.0nm,0.5s								
CHKK					*e*S	**Sb**	**18 26 50.4**	**+4.1**
	21nm,0.6s								
PRZ	**Przheval'sk**	**4.69**	**69**	⇑	*i*P	**Pn**	**18 25 44.7**	**-1.1**
	baz=66								
PRZ				⇑	*i*S	**Sn**	**18 26 38.5**	**-2.1**
	baz=66								
SATY	**Saty**	**4.89**	**62**		*e*P	**Pb**	**18 26 02.3**	**+1.8**
	7.0nm,0.7s								
SATY					*e*S	**Sb**	**18 27 03.9**	**+4.2**
	38nm,1.5s								
SATY	**Saty**	**4.89**	**62**		Pg	**Pb**	**18 26 02.3**	**+1.8**
	11nm,0.9s								
SATY					Lg	Lg	18 27 03.9		
	38nm,1.5s								
KURS	**Kuram**	**4.93**	**57**		*e*P	**Pb**	**18 26 02.1**	**+0.9**
	2.8nm,0.8s								
KURS					*e*S	**Sb**	**18 27 03.2**	**+2.5**
	16nm,1.9s								
ZHN	**Zhinishke**	**4.96**	**61**		*e*P	**Pb**	**18 26 03.5**	**+1.9**
	12nm,0.1s								
ZHN					*e*S	**Sb**	**18 27 05.8**	**+4.2**
	3.3nm,0.3s								
ARXS	**Arharly**	**5.13**	**48**		*e*P	**Pb**	**18 26 06.7**	**+2.1**
	6.1nm,0.5s								
ARXS					*e*S	**Sb**	**18 27 11.4**	**+4.9**
	27nm,1.3s								
ARXS	**Arharly**	**5.13**	**48**		Pg	**Pb**	**18 26 06.7**	**+2.1**
	17nm,0.6s								
ARXS					Lg	Lg	18 27 12.0		
	27nm,1.3s								
UZB	**Uzynbulak**	**5.34**	**63**		*e*P	**Pb**	**18 26 09.7**	**+1.5**
	3.5nm,0.9s								
UZB					*e*S	**Sb**	**18 27 16.5**	**+3.8**
	13nm,0.8s								
UZB	**Uzynbulak**	**5.34**	**63**		Pg	**Pb**	**18 26 09.7**	**+1.5**
	5.3nm,0.8s								
UZB					Lg	Lg	18 27 16.5		
	13nm,0.8s								
SHLS	**Shalkode**	**5.64**	**64**		*e*P	**Pg**	**18 26 22.1**	**-0.4**
	1.5nm,0.1s								
SHLS					*e*S	**Sg**	**18 27 37.7**	**+2.1**
	16nm,0.7s								
TDK	**Taldyqorghan**	**5.95**	**45**		*e*P	Pb	18 26 25.2	+6.7
	23nm,0.2s								
TDK					*e*S	**Sg**	**18 27 43.0**	**-2.4**
	46nm,0.2s								
MKAR	**Makanchi Array**	**9.19**	**47**		Pn	**Pn**	**18 26 44.1**	**-3.4**
	0.0nm,0.3s,baz=234,slow=10,SNR=3.8								
MKAR					Lg	Lg	18 29 21.7		
	0.1nm,0.3s,baz=234,slow=27,SNR=2.8								
MKAR					LR	LR	18 30 35.7		
	comp=Z,36nm,18.1s,baz=246,slow=40								
KURBB	**Kurchatov Arra**	**10.57**	**21**		Pn	**Pn**	**18 27 04.8**	**-1.5**
	0.0nm,0.3s,baz=214,slow=12,SNR=4.8								
KURBB					Lg	Lg	18 30 08.3		
	0.1nm,0.3s,baz=213,slow=30,SNR=7.9								
KURBB	**Kurchatov Arra**	**10.57**	**21**	⇑	Lg	Lg	18 30 06.2		
	20nm,0.8s								
BVAR	**Borovoye Array**	**12.20**	**354**		Pn	**Pn**	**18 27 27.4**	**-1.1**
	0.1nm,0.3s,baz=161,slow=14,SNR=3.8								
BVB7	**Borovoye Array**	**12.21**	**354**	⇓	Lg	Lg	18 30 55.9		
	12nm,0.9s								
ZALV	**Zalesovo Beam**	**15.44**	**28**		Pn	**Pn**	**18 28 09.6**	**-3.0**
	0.1nm,0.3s,baz=220,slow=8.7,SNR=1.5								
AKASG	**Malin Array Be**	**31.30**	**303**		P	**P**	**18 30 55.0**	**-0.1**
	0.2nm,0.3s,baz=79,slow=7.8,SNR=4.5								
FINES	**FINESS Array B**	**34.59**	**322**		P	**P**	**18 31 23.2**	**-0.5**
	1.4nm,0.7s,baz=98,slow=7.2,SNR=2.9								
GERES	**GERESS Array B**	**41.48**	**301**		P	**P**	**18 32 21.9**	**-0.2**
	0.7nm,0.8s,baz=65,slow=7.5,SNR=8.0								
NOA	**NORSAR Array B**	**41.65**	**320**		P	**P**	**18 32 22.5**	**-0.8**
	0.9nm,0.7s,baz=90,slow=8.0,SNR=3.4								
TORD	**Torodi Ar. Bea**	**67.03**	**268**		P	**P**	**18 35 26.1**	**-2.4**
	0.8nm,0.5s,baz=56,slow=5.8,SNR=5.8								

DDA ***24*** *18:58:28.3,39˚.94N×23˚.03E,h5km±5km,ML3.2*
ATH ***24*** *18:58:40.1,39˚.84N×23˚.94E,h29km,ML3.5/13,Error ellipse: s-maj=0.9km s-min=0.6km az=62.0*
ISK ***24*** *18:58:40.3,39˚.83N×23˚.98E,h19km,ML3.4/12*
THE ***24*** *18:58:41.1,39˚.83N×23˚.92E,h14km,ML3.5/9,Error ellipse: s-maj=0.9km s-min=0.3km az=268.0*

ISC 24 18:58:40.5±0.9,39˚.82N±0˚.02×23˚.95E±0˚.02,h18km±6km, n145,σ1§22/179,9C-10D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
PAIG	**Paliouri**	**0.23**	**298**	P	P	**Pg**	**18 58 45.8**	**-0.1**
PAIG				S	S	**Sg**	**18 58 49.3**	**-0.3**
	13μm,0.3s							
PAIG	**Paliouri**	**0.23**	**298**	P	P	**Pg**	**18 58 45.9**	**-0.1**
PAIG				AML	AML		18 58 51.2	
	comp=E,23102μm,0.3s							
PAIG				AML	AML		18 58 51.3	
	comp=N,27909μm,0.3s							
OUR	**Ouranopolis**	**0.52**	**3**	P	P	**Pb**	**18 58 51.4**	**+0.4**
OUR				S	S	**Sb**	**18 58 58.5**	**+0.3**
	comp=N,16μm,0.4s							
OUR	**Ouranopolis**	**0.52**	**3**	P	P	**Pb**	**18 58 51.4**	**+0.4**
OUR				S	S	**Sb**	**18 58 58.6**	**+0.3**
OUR				AML	AML		18 59 02.6	
	comp=E,28748μm,0.4s							
OUR				AML	AML		18 59 02.7	
	comp=N,34187μm,0.5s							
OUR	**Ouranopolis**	**0.52**	**3**	PG	P	**Pb**	**18 58 51.4**	**+0.4**
OUR				SG	S	**Sb**	**18 58 58.3**	**+0.1**
AOS	**Alonnisos**	**0.65**	**185**	P	P	**Pg**	**18 58 53.5**	**+0.2**
AOS				S	S	**Sn**	**18 59 03.5**	**-1.1**
	comp=N,5μm,0.4s							
AOS	**Alonnisos**	**0.65**	**185**	P	P	**Pg**	**18 58 53.6**	**+0.2**
AOS				S	S	**Sn**	**18 59 03.5**	**-1.1**
AOS				AML	AML		18 59 05.1	
	comp=E,8394μm,0.4s							
AOS				AML	AML		18 59 05.3	
	comp=N,9374μm,0.4s							
AOS	**Alonnisos**	**0.65**	**185**	PG	P	**Pg**	**18 58 53.6**	**+0.2**
AOS				SG	S	**Sn**	**18 59 03.9**	**-0.7**
ALNA	**Alonissos**	**0.67**	**185**	P	P	**Pg**	**18 58 53.8**	**+0.1**
ALNA				S	S	**Sg**	**18 59 04.0**	**+1.3**
ALNA				AML	AML		18 59 05.3	
	comp=N,12757μm,0.4s							
ALNA				AML	AML		18 59 05.6	
	comp=E,9592μm,0.5s							
PLG	**Polygyros**	**0.68**	**325**	P	P	**Pb**	**18 58 53.1**	**-0.7**
PLG	**Polygyros**	**0.68**	**325**	P	P	**Pb**	**18 58 53.1**	**-0.7**
PLG				S	S	**Sg**	**18 59 02.3**	**-0.6**
PLG				AML	AML		18 59 05.2	
	comp=E,5859μm,0.4s							
PLG				AML	AML		18 59 08.3	
	comp=N,3903μm,0.6s							
XOR	**Xorichti**	**0.74**	**232**	P	P	**Pg**	**18 58 55.0**	**0.0**
XOR				S	S	**Sg**	**18 59 05.7**	**+0.9**
	comp=N,4μm,0.6s							
XOR	**Xorichti**	**0.74**	**232**	P	P	**Pn**	**18 58 55.5**	**-0.6**
XOR				S	S	**Sn**	**18 59 05.9**	**-1.0**
XOR				AML	AML		18 59 06.5	
	comp=E,7348μm,0.4s							
XOR				AML	AML		18 59 07.4	
	comp=N,7007μm,0.3s							
SKIA	**Skiathos**	**0.75**	**210**	P	P	**Pg**	**18 58 55.4**	**+0.2**
SKIA				S	S	**Sn**	**18 59 06.5**	**-0.7**
	comp=N,5μm,0.3s							
SKIA	**Skiathos**	**0.75**	**210**	P	P	**Pn**	**18 58 55.7**	**-0.5**
SKIA				S	S	**Sg**	**18 59 05.9**	**+0.8**
SKIA				AML	AML		18 59 06.8	
	comp=E,8211μm,0.4s							
SKIA				AML	AML		18 59 07.2	
	comp=N,10722μm,0.3s							
NEO	**Neokhori**	**0.76**	**228**	P	P	**Pg**	**18 58 55.5**	**+0.2**
NEO				S	S	**Sn**	**18 59 06.4**	**-1.0**
	comp=N,5μm,0.2s							
NEO	**Neokhori**	**0.76**	**228**	P	P	**Pg**	**18 58 55.7**	**+0.4**
NEO				S	S	**Sn**	**18 59 06.3**	**-1.0**
NEO				AML	AML		18 59 08.4	
	comp=E,13923μm,0.6s							
NEO				AML	AML		18 59 09.0	
	comp=N,9070μm,0.4s							
EFSA	**Agios Efstrati**	**0.85**	**109**	P	P	**Pn**	**18 58 57.8**	**+0.2**
EFSA				S	S	**Sn**	**18 59 09.7**	**+0.1**
EFSA				AML	AML		18 59 11.3	
	comp=N,2358μm,0.5s							
EFSA				AML	AML		18 59 11.6	
	comp=E,2596μm,0.5s							
LIA	**Limnos Island**	**0.95**	**85**	P	P	**Pg**	**18 58 59.0**	**0.0**
LIA				S	S	**Sn**	**18 59 13.4**	**+1.2**
	comp=E,2μm,0.4s							
LIA	**Limnos Island**	**0.95**	**85**	P	P	**Pg**	**18 58 59.1**	**+0.1**
LIA				S	S	**Sn**	**18 59 12.2**	**0.0**
LIA				AML	AML		18 59 14.7	
	comp=E,3205μm,0.5s							
LIA				AML	AML		18 59 21.0	
	comp=N,3694μm,0.7s							
THAS	**Thassos island**	**0.98**	**37**	P	P	**Pg**	**18 58 59.1**	**-0.5**
THAS				S	S	**Sn**	**18 59 13.3**	**+0.4**
	comp=N,1μm,0.3s							
THAS	**Thassos island**	**0.98**	**37**	P	P	**Pg**	**18 58 59.1**	**-0.5**
THAS				S	S	**Sg**	**18 59 12.1**	**-0.5**
THAS				AML	AML		18 59 16.6	
	comp=E,2653μm,0.3s							
THAS				AML	AML		18 59 17.0	
	comp=N,2111μm,0.3s							
HORT	**Hortiatis**	**1.01**	**320**	P	P	**Pb**	**18 58 59.1**	**-0.5**
HORT	**Hortiatis**	**1.01**	**320**	P	P	**Pb**	**18 58 59.1**	**-0.5**
HORT				S	S	**Sn**	**18 59 13.3**	**-0.5**
HORT				AML	AML		18 59 16.6	
	comp=E,3242μm,0.3s							
HORT				AML	AML		18 59 17.6	
	comp=N,2325μm,0.4s							
HORT	**Hortiatis**	**1.01**	**320**	PG	P	**Pg**	**18 58 59.9**	**-0.3**
SKY	**Skiros Island**	**1.05**	**153**	P	P	**Pg**	**18 59 00.8**	**0.0**
SKY				S	S	**Sg**	**18 59 15.9**	**+1.3**
	comp=N,3μm,0.2s							
SKY	**Skiros Island**	**1.05**	**153**	P	P	**Pg**	**18 59 00.8**	**0.0**
SKY				S	S	**Sg**	**18 59 15.3**	**+0.7**
SKY				AML	AML		18 59 18.6	
	comp=E,6400μm,0.2s							
SKY				AML	AML		18 59 19.3	
	comp=N,5801μm,0.2s							
SOH	**Sokhos**	**1.10**	**336**	P	P	**Pg**	**18 59 01.2**	**-0.6**
SOH				S	S	**Sg**	**18 59 16.1**	**-0.1**
THE	**Thessaloniki**	**1.11**	**318**	P	P	**Pg**	**18 59 01.1**	**-0.8**
THE	**Thessaloniki**	**1.11**	**318**	P	P	**Pg**	**18 59 01.7**	**-0.3**
MRKA	**Markates**	**1.15**	**194**	P	P	**Pb**	**18 59 01.7**	**-0.1**
MRKA	**Markates**	**1.15**	**194**	P	P	**Pb**	**18 59 01.7**	**-0.1**
LIT	**Litokhoron**	**1.16**	**285**	P	P	**Pb**	**18 59 01.5**	**-0.5**
LIT	**Litokhoron**	**1.16**	**285**	P	P	**Pb**	**18 59 01.7**	**-0.2**
KVLA	**Kavala**	**1.17**	**17**	P	P	**Pb**	**18 59 01.8**	**-0.3**
KYMI	**Kymi, Euboea I**	**1.19**	**174**	P	P	**Pb**	**18 59 02.4**	**-0.2**
KAVA	**Kavala**	**1.25**	**20**	P	P	**Pb**	**18 59 03.1**	**-0.5**
KAVA	**Kavala**	**1.25**	**20**	P	P	**Pb**	**18 59 03.2**	**-0.5**
SRS	**Serrai**	**1.32**	**348**	P	P	**Pb**	**18 59 04.4**	**-0.5**
SRS	**Serrai**	**1.32**	**348**	P	P	**Pb**	**18 59 04.6**	**-0.2**
SMTH	**Samothraki Isl**	**1.38**	**61**	P	P	**Pn**	**18 59 04.6**	**-0.3**
SMTH	**Samothraki Isl**	**1.38**	**61**	P	P	**Pn**	**18 59 04.4**	**-0.4**
LKR	**Lokris**	**1.38**	**213**	P	P	**Pn**	**18 59 05.1**	**+0.2**
AXAR	**Agios Charalam**	**1.45**	**224**	P	P	**Pb**	**18 59 06.5**	**-0.4**
AGG	**Agios Georgios**	**1.48**	**238**	P	P	**Pn**	**18 59 06.5**	**+0.2**
AGG	**Agios Georgios**	**1.48**	**238**	PN	P	**Pn**	**18 59 06.7**	**+0.4**
THL	**Klokotos Trika**	**1.51**	**261**	P	P	**Pn**	**18 59 06.9**	**+0.3**
GADA	**Gvkgeada**	**1.54**	**75**	P	P	**Pb**	**18 59 07.7**	**-0.8**
GADA	**Gvkgeada**	**1.54**	**75**	PN	P	**Pb**	**18 59 07.8**	**-0.8**
KNT	**Kendrikon**	**1.56**	**330**	P	P	**Pb**	**18 59 07.9**	**-1.0**
KNT	**Kendrikon**	**1.56**	**330**	P	P	**Pb**	**18 59 08.4**	**-0.5**
KNT	**Kendrikon**	**1.56**	**330**	PN	P	**Pb**	**18 59 08.2**	**-0.7**
SIGR	**SIGRI**	**1.60**	**112**	P	P	**Pb**	**18 59 08.6**	**-0.8**
SIGR	**SIGRI**	**1.60**	**112**	P	P	**Pn**	**18 59 08.2**	**+0.4**
SIGR	**SIGRI**	**1.60**	**112**	PN	P	**Pn**	**18 59 08.3**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.62**	**241**	P	P	**Pb**	**18 59 09.2**	**-0.6**
BOZC	**Bozcaada**	**1.62**	**89**	PN	P	**Pb**	**18 59 08.9**	**-1.0**
BOZC	**Bozcaada**	**1.62**	**89**	*i* P	P	**Pb**	**18 59 09.1**	**-0.8**
BOZC				*i* P	P	**Pg**	**18 59 11.5**	**-0.2**
BOZC				*i* S	S	**Sg**	**18 59 33.3**	**+0.5**
BOZC				*i* S	S	**Sb**	**18 59 34.0**	**+4.0**
BOZC					IAML		18 59 35.0	
	comp=N,180nm,0.6s							
BOZC					IAML		18 59 35.0	
	comp=N,189nm,0.3s							
BOZC					IAML		18 59 36.0	
	comp=E,207nm,0.3s							
VIL2	**Platees**	**1.69**	**198**	P	P	**Pb**	**18 59 10.0**	**-1.1**
DION	**Dionisos Attik**	**1.74**	**180**	P	P	**Pn**	**18 59 10.4**	**+0.6**
KZN	**Kozani**	**1.74**	**287**	P	P	**Pb**	**18 59 10.8**	**-1.1**
PROD	**Prodromos**	**1.76**	**208**	P	P	**Pn**	**18 59 10.5**	**+0.4**
PTL	**Penteli**	**1.77**	**182**	P	P	**Pn**	**18 59 10.7**	**+0.4**
RDO	**Rodhopi**	**1.80**	**42**	P	P	**Pn**	**18 59 10.6**	**0.0**
RDO	**Rodhopi**	**1.80**	**42**	P	P	**Pn**	**18 59 10.6**	**0.0**
RDO	**Rodhopi**	**1.80**	**42**	PN	P	**Pn**	**18 59 10.7**	**0.0**
KARY	**Karystos**	**1.82**	**168**	P	P	**Pn**	**18 59 11.6**	**+0.6**
VAY	**Valandovo**	**1.83**	**325**	*i* Pn	P	**Pb**	**18 59 11.8**	**-1.7**
VAY	**Valandovo**	**1.83**	**325**	*i* Pn	P	**Pb**	**18 59 11.8**	**-1.7**
EZN	**Ezine**	**1.83**	**89**	P	P	**Pb**	**18 59 12.6**	**-0.9**
ATH	**Athens Observa**	**1.85**	**186**	P	P	**Pn**	**18 59 12.4**	**+1.0**
ATHU	**Athens Univers**	**1.85**	**184**	P	P	**Pn**	**18 59 11.8**	**+0.4**
EVR	**Evrytania**	**1.89**	**242**	P	P	**Pn**	**18 59 12.7

	comp=N,72nm,0.8s					
FSK	**Fiskardo**	**2.96**	**244**	P	**Pn**	**18 59 28.9 +2.3**
APE	**Apeiranthos**	**3.01**	**155**	P	**Pn**	**18 59 28.3 +0.9**
APE	**Apeiranthos**	**3.01**	**155**	⇑P	**Pn**	**18 59 28.3 +0.9**
VLI	**Veliai**	**3.20**	**195**	P	**Pn**	**18 59 30.4 +0.5**
KEK	**Kerkira**	**3.20**	**269**	P	**Pn**	**18 59 32.5 +2.6**
VLMS	**Volimes, Zakyn**	**3.21**	**234**	P	**Pn**	**18 59 33.1 +3.0**
IOSP	**Ios island**	**3.27**	**161**	P	**Pn**	**18 59 31.4 +0.6**
PYL	**PYLOS**	**3.39**	**211**	P	**Pn**	**18 59 35.3 +2.7**
ELND	**Elena**	**3.43**	**24**	⇓P	**Pn**	**18 59 34.0 +0.9**
DURS	**Dursunbey**	**3.50**	**92**	*i* P	**Pb**	**18 59 42.9 +0.9**
DURS				*i* S	**Sg**	**19 09 31.2 -1.6**
PLVB	**Pleven**	**3.60**	**8**	⇑P	**Pn**	**18 59 36.9 +1.5**
ANAF	**Anafi Island**	**3.74**	**157**	P	**Pn**	**18 59 38.3 +0.8**
RAZG	**Razgrad**	**4.21**	**26**	⇓P	**Pn**	**18 59 43.9 +0.1**
HERR	**Herculane**	**5.18**	**348**	⇑P	**Pn**	**18 59 57.8 +0.6**
MDVR	**Moldovita**	**5.23**	**342**	⇑P	**Pn**	**19 00 00.9 +3.1**
ARR	**Arges**	**5.57**	**5**	⇓P	**Pn**	**19 00 03.7 +1.2**
GZR	**Gura Zlata**	**5.64**	**352**	⇑P	**Pn**	**19 00 05.1 +1.7**
HARR	**Harsova**	**5.69**	**30**	⇑P	**Pn**	**19 00 05.5 +1.3**
MLR	**Muntele Rosu**	**5.86**	**14**	⇓P	**Pn**	**19 00 09.5 +2.9**
BZS	**Buzias**	**6.04**	**344**	⇓P	**Pn**	**19 00 10.4 +1.4**
CFR	**Carcaliu**	**6.18**	**29**	⇓P	**Pn**	**19 00 12.0 +1.1**
DOPR	**Dopca**	**6.24**	**9**	⇑P	**Pn**	**19 00 13.7 +2.1**
PLOR	**Plostina**	**6.35**	**17**	⇓P	**Pn**	**19 00 13.7 +0.5**
VRI	**Vrincioaia**	**6.38**	**18**	⇑P	**Pn**	**19 00 16.9 +3.3**
TESR	**Tescani**	**6.97**	**16**	⇓P	**Pn**	**19 00 24.5 +2.8**
BIZ	**Bicaz**	**7.29**	**12**	⇑P	**Pn**	**19 00 29.2 +3.2**
BURAR	**Bucovina Array**	**7.85**	**6**	⇓P	**Pn**	**19 00 36.9 +3.0**

ISC 24 19:08:17.0±1.2, **49°.84N**±0°.05×**18°.40E**±0°.05, **h10**km, **n14, σ0s56/25, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.16**	**271**	*e*PG	**Pg**	**19 08 21.1**	**+0.6**
OKC				*e*SG	**Sg**	**19 08 24.0**	**+1.1**
	comp=Z,93nm,0.5s						
MORC	**Moravsky Berou**	**0.56**	**264**	*e*PG	**Pg**	**19 08 27.8**	**0.0**
MORC				*e*SG	**Sg**	**19 08 34.8**	**-0.3**
LANS	**Liptovska Anna**	**0.98**	**134**	*e*PG	**Pg**	**19 08 35.2**	**-0.6**
LANS				*e*LG	Lg	19 08 57.5	
KRLC	**Kraliky**	**1.07**	**284**	*e*PG	**Pg**	**19 08 36.7**	**-0.8**
KRLC				*e*SG	**Sn**	**19 08 52.4**	**-0.6**
	comp=Z,10nm,0.6s						
JAVC	**Velka Javorina**	**1.09**	**206**	*e*PG	**Pb**	**19 08 38.3**	**+0.4**
JAVC				*e*SG	**Sb**	**19 08 52.1**	**0.0**
VRAC	**Vranov**	**1.29**	**246**	*e*PG	**Pg**	**19 08 41.3**	**-0.3**
VRAC				*e*SG	**Sn**	**19 08 58.1**	**-0.2**
VYHS	**Vyhne**	**1.37**	**168**	*e*PN	**Pn**	**19 08 42.3**	**+0.1**
VYHS				*e*SN	**Sb**	**19 09 01.1**	**+0.8**
DPC	**Dobruska-Polom**	**1.43**	**292**	*e*PG	**Pb**	**19 08 43.8**	**0.0**
DPC				*e*SG	**Sg**	**19 09 03.5**	**+0.5**
	comp=Z,4.2nm,0.3s						
KRUC	**Moravsky**	**1.52**	**240**	*e*PG	**Pb**	**19 08 45.0**	**-0.2**
KRUC				*e*SG	**Sg**	**19 09 05.7**	**0.0**
OSTC	**Ostas**	**1.58**	**298**	*e*PG	**Pb**	**19 08 46.5**	**+0.3**
OSTC				*e*SG	**Sg**	**19 09 07.7**	**+0.1**
UPC	**Upice**	**1.67**	**295**	*e*PG	**Pb**	**19 08 48.0**	**+0.1**
UPC				*e*SG	**Sg**	**19 09 11.1**	**+0.3**
CHVC	**Chvalec**	**1.68**	**298**	*e*PG	**Pb**	**19 08 48.4**	**+0.4**
CHVC				*e*SG	**Sg**	**19 09 11.1**	**+0.1**
PRU	**Pruhonice**	**2.50**	**275**	*e*SG	**Sg**	**19 09 35.6**	**-1.5**
KHC	**Kasperske Hory**	**3.22**	**259**	*e*SG	**Sg**	**19 10 00.4**	**+0.1**

*ATH **24** 19:08:38.3, 40°.20N×25°.17E, h24km±2km, ML2.2/5, Error ellipse: s-maj=2.7km s-min=1.2km az=72.0*
*ISK **24** 19:08:38.2, 40°.21N×25°.16E, h11km, ML2.4/15*
*DDA **24** 19:08:39.6, 40°.23N×25°.23E, h7km±1km, ML2.5*
ISC 24 19:08:38.8±1.4, **40°.21N**±0°.03×**25°.16E**±0°.02, **h13**km±13km, **n29, σ0s54/40, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.31**	**177**	P	**Pb**	**19 08 45.8**	**-0.4**
LIA				S	**Sb**	**19 08 50.2**	**-0.9**
LIA				AML	AML	19 08 50.5	
	comp=E,1387μm,0.2s						
LIA				AML	AML	19 08 51.1	
	comp=N,897μm,0.2s						
SMTH	**Samothraki Isl**	**0.39**	**47**	P	**Pg**	**19 08 46.5**	**-0.1**
SMTH				S	**Sb**	**19 08 52.3**	**-1.2**
SMTH				AML	AML	19 08 53.0	
	comp=E,240μm,0.2s						
SMTH				AML	AML	19 08 55.3	
	comp=N,277μm,0.2s						
THAS	**Thassos island**	**0.52**	**320**	P	**Pb**	**19 08 49.4**	**-0.4**
THAS				S	**Sb**	**19 08 57.1**	**-0.2**
THAS				AML	AML	19 08 59.9	
	comp=N,474μm,0.2s						
THAS				AML	AML	19 09 01.2	
	comp=E,289μm,0.2s						
GADA	**Gvkgeada**	**0.57**	**91**	PG	**Pb**	**19 08 50.2**	**-0.4**
GADA				SG	**Sb**	**19 08 57.8**	**-0.8**
BOZC	**Bozcaada**	**0.78**	**118**	PG	**Pn**	**19 08 54.5**	**-0.9**
BOZC				SG	**Sb**	**19 09 04.9**	**+0.3**
BOZC	**Bozcaada**	**0.78**	**118**	*i* P	**Pb**	**19 08 54.1**	**0.0**
BOZC				*i* S	**Sb**	**19 09 05.2**	**+0.6**
BOZC				IAML		19 09 06.0	
	comp=E,106nm,0.7s						
BOZC				IAML		19 09 06.0	
	comp=N,136nm,0.6s						
OUR	**Ouranopolis**	**0.91**	**279**	P	**Pb**	**19 08 56.2**	**-0.3**
OUR				S	**Sb**	**19 09 09.0**	**+0.5**
OUR				AML	AML	19 09 11.8	
	comp=E,574μm,0.4s						
OUR				AML	AML	19 09 11.8	
	comp=N,436μm,0.3s						
OUR	**Ouranopolis**	**0.91**	**279**	PG	**Pb**	**19 08 56.4**	**0.0**
OUR				SG	**Sb**	**19 09 09.1**	**+0.7**
ENEZ	**Enez**	**0.93**	**55**	PG	**Pb**	**19 08 56.3**	**-0.4**
KAVA	**Kavala**	**0.93**	**328**	P	**Pn**	**19 08 57.2**	**-0.4**
KAVA				S	**Sb**	**19 09 09.5**	**+0.4**
KAVA				AML	AML	19 09 10.8	
	comp=N,383μm,0.4s						
KAVA				AML	AML	19 09 10.9	
	comp=E,477μm,0.1s						
EZN	**Ezine**	**0.97**	**113**	PG	**Pb**	**19 08 57.4**	**-0.1**
EZN				SG	**Sb**	**19 09 10.6**	**+0.4**
RDO	**Rodhopi**	**0.98**	**17**	P	**Pb**	**19 08 57.4**	**-0.2**
RDO	**Rodhopi**	**0.98**	**17**	PG	**Pb**	**19 08 57.3**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.02**	**79**	PG	**Pb**	**19 08 58.1**	**-0.3**
SIGR	**SIGRI**	**1.13**	**151**	P	**Pn**	**19 09 00.5**	**+0.2**
SIGR	**SIGRI**	**1.13**	**151**	PN	**Pn**	**19 09 00.6**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**1.16**	**113**	*i* P	**Pg**	**19 09 00.9**	**-0.3**
BAYC				*i* S	**Sn**	**19 09 16.7**	**+0.2**
PAIG	**Paliouri**	**1.17**	**257**	P	**Pb**	**19 09 00.2**	**-0.6**
LPK	**Lapseki**	**1.24**	**82**	PN	**Pn**	**19 09 01.4**	**-0.4**
KESN	**Edirne-Kesan**	**1.31**	**61**	*i* P	**Pg**	**19 09 05.4**	**+1.2**
PLG	**Polygyros**	**1.32**	**278**	P	**Pn**	**19 09 02.6**	**-0.4**
AOS	**Alonnisos**	**1.43**	**224**	PN	**Pn**	**19 09 04.3**	**-0.1**
UKOP	**Uzunkopru-Edir**	**1.45**	**50**	PN	**Pb**	**19 09 05.1**	**-0.6**
MRMT	**Marmara Adasi**	**1.90**	**77**	PN	**Pn**	**19 09 10.8**	**-0.2**
CHOS	**Chios island**	**1.94**	**159**	P	**Pn**	**19 09 11.9**	**+0.3**
CHOS	**Chios island**	**1.94**	**159**	PN	**Pn**	**19 09 11.9**	**+0.3**
EDRB	**Edirne**	**2.03**	**36**	PN	**Pn**	**19 09 13.6**	**+0.9**
EDC	**Edincik**	**2.07**	**85**	PN	**Pn**	**19 09 13.8**	**+0.5**
URLA	**Izmir**	**2.15**	**148**	PN	**Pn**	**19 09 14.8**	**+0.4**

IDC 24 19:16:49.9±3.9, **8°.72S**×**119°.90E**, **h177**km±23km, **mb3.2**/2, **mb1 3.1**/5, **mb1mx2.8**/30, **mbtmp3.5**/5, **Error ellipse: s-maj=58.0km s-min=33.2km az=25.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.00**	**112**	P	Pn	19 17 50.7	-0.2
	1.1nm,0.3s,baz=304,slow=3.6,SNR=1.6						
BATI				S	Sn	19 18 39.3	+0.6
	1.7nm,0.3s,baz=204,slow=9.2,SNR=1.8						
FITZ	**Fitzroy Crossi**	**10.87**	**150**	P	Pn	19 19 21.6	+0.7
	0.1nm,0.3s,baz=333,slow=12,SNR=1.5						
FITZ				S	Sn	19 21 20.9	-0.7
	0.1nm,0.3s,baz=179,slow=19,SNR=8.5						
WRA	**Warramunga Arr**	**17.88**	**130**	P	P	19 20 45.1	-1.0
	0.1nm,0.3s,baz=309,slow=11,SNR=8.2						
WRA				S	S	19 24 03.2	+0.8
	0.0nm,0.3s,baz=352,slow=12,SNR=2.4						
ASAR	**Alice Springs**	**20.02**	**140**	P	P	19 21 09.4	+0.2
	1.1nm,0.4s,baz=315,slow=8.9,SNR=46						
STKA	**Stephens Creek**	**30.62**	**142**	P	P	19 22 47.6	+0.1
	0.5nm,0.3s,baz=305,slow=12,SNR=5.5						

*IDC **24** 19:55:50.6±1.7, 6°.88S×129°.59E, h155km±15km, mb3.8/13, mb1 4.0/18, mb1mx3.9/30, mbtmp4.4/18, MS3.6/1, Ms1 3.6/1, ms1mx2.6/23, Error ellipse: s-maj=15.3km s-min=11.2km az=68.0*
*DJA **24** 19:55:50.5±0.2, 7°.5±2°×13°.0E±°, h178km±8km, M4.6/16, mb4.8/16, mB5.0/12, MLv5.0/15, Mw(mB)4.4/12*
*NEIC **24** 19:55:50.6±1.7, 6°.89S±0°.07×129°.54E±0°.07, h155km±4km, mb4.5/35, Error ellipse: s-maj=9.6km s-min=9.2km az=201.0*
ISC 24 19:55:49.5±0.3, **7°.01S**±0°.04×**129°.59E**±0°.04, **h150**km, **n115, σ1s98/123, mb4.3/27, 1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.95**	**120**	P	**Pn**	**19 56 27.2**	**+3.1**
SAUI	**Saumlaki**	**1.95**	**120**		**Pn**	**19 56 27.0**	**+2.9**
SAUI				Sn	**Sn**	**19 56 51.9**	**+1.2**
BNDI	**Bandanaira**	**2.50**	**7**	P	**Pn**	**19 56 33.2**	**+2.6**
AAI	**Ambon**	**3.58**	**337**	P	**Pn**	**19 56 45.8**	**+1.4**
MSAI	**Masohi**	**3.70**	**350**	P	**Pn**	**19 56 49.0**	**+3.0**
NLAI	**Namlea**	**4.49**	**326**	P	**Pn**	**19 56 59.2**	**+2.9**
FAKI	**Fak Fak**	**4.86**	**33**	P	**Pn**	**19 57 00.3**	**-0.8**
FAKI	**Fak Fak**	**4.86**	**33**		**Pn**	**19 57 00.4**	**-0.7**
SOEI	**Soe**	**5.92**	**242**	P	**Pn**	**19 57 16.7**	**+1.3**
	2.4nm2μm212nm,0.7s						
SOEI	**Soe**	**5.92**	**242**		**Pn**	**19 57 17.2**	**+1.8**
MTN	**Manton Dam**	**5.99**	**165**		**Pn**	**19 57 17.7**	**+1.5**
SIJI	**Sorong**	**6.33**	**15**	P	**Pn**	**19 57 20.1**	**-0.7**
	8.7nm,0.3s,baz=36,slow=4.4,SNR=128						
SIJI				S	**Sn**	**19 58 26.0**	**-6.1**
	18nm,0.3s,baz=32,slow=20,SNR=20						
BATI	**Baumata**	**6.66**	**241**	P	**Pn**	**19 57 26.7**	**+1.6**
	29nm,0.3s,baz=138,slow=4.0,SNR=44						
BATI				S	**Sn**	**19 58 38.3**	**-1.7**
	31nm,0.3s,baz=105,slow=2.5,SNR=5.4						
BATI	**Baumata**	**6.66**	**241**	P	**Pn**	**19 57 27.0**	**+1.9**
	1.0nm1μm138nm,0.8s						
LBMI	**Labuha**	**6.67**	**342**	P	**Pn**	**19 57 26.2**	**+1.0**
	1.0nm4μm284nm,0.9s						
RKPI	**Ransiki, Papua**	**7.13**	**40**	P	**Pn**	**19 57 33.1**	**+1.7**
	2.7nm8μm207nm,0.6s						
MMRI	**Maumere**	**7.46**	**257**		**Pn**	**19 57 37.8**	**+2.0**
EDFI	**Ende, Flores**	**8.01**	**257**	P	**Pn**	**19 57 45.5**	**+2.3**
	0.1nm370nm30nm,1.1s						
TNTI	**Ternate**	**8.04**	**344**	P	**Pn**	**19 57 45.0**	**+1.4**
	0.3nm648nm83nm,0.7s						
TNTI	**Ternate**	**8.04**	**344**		**Pn**	**19 57 44.1**	**+0.5**
KNRA	**Kununurra**	**8.65**	**185**		**Pn**	**19 57 51.7**	**+0.1**
KMSI	**Cibinong**	**9.38**	**323**	P	**Pn**	**19 58 03.3**	**+1.8**
	40nm,1.0s						
WAMI	**Wamena**	**9.60**	**72**	P	**Pn**	**19 58 06.7**	**+2.4**
	108nm,0.6s						
BNSI	**Bone**	**9.78**	**285**	P	**Pn**	**19 58 10.5**	**+3.8**
	22nm,0.9s						
KAPI	**Kappang**	**9.98**	**281**	P	**Pn**	**19 58 10.6**	**+1.2**
	0.7nm,0.3s,baz=156,slow=5.1,SNR=3.6						
KAPI				S	Sn	19 59 41.7	-18
	2.4nm,0.3s,baz=58,slow=24,SNR=6.3						
KAPI	**Kappang**	**9.98**	**281**		**Pn**	**19 58 10.3**	**+1.0**
SPSI	**Sidrap Palu**	**10.23**	**287**	P	Pn	19 58 26.9	+14
SMPI	**Sarmi**	**10.37**	**62**	P	**Pn**	**19 58 16.1**	**+1.5**
	14nm,1.1s						
WBSI	**Waikabubak, Su**	**10.42**	**255**	P	**Pn**	**19 58 14.9**	**-0.3**
	1μm104nm,0.9s						
FITZ	**Fitzroy Crossi**	**11.67**	**199**	P	**Pn**	**19 58 30.4**	**-1.2**
	4.2nm,0.3s,baz=31,slow=11,SNR=88						
FITZ				S	**Sn**	**20 00 33.4**	**-7.2**
	7.5nm,0.3s,baz=89,slow=19,SNR=5.6						
FITZ	**Fitzroy Crossi**	**11.67**	**199**		**Pn**	**19 58 30.3**	**-1.3**
PLAI	**Plampang**	**11.83**	**260**	P	**Pn**	**19 58 31.5**	**-2.3**
	801m65nm,0.8s						
JAY	**Jayapura**	**11.95**	**69**	P	**Pn**	**19 58 36.8**	**+1.5**
	1.1nm,0.3s,baz=231,slow=9.5,SNR=9.0						
JAY				S	**Sn**	**20 00 46.3**	**-1.2**
	0.2nm,0.3s,baz=120,slow=20,SNR=1.3						
JAY	**Jayapura**	**11.95**	**69**	P	**Pn**	**19 58 36.1**	**+0.8**
WRA	**Warramunga Arr**	**13.65**	**161**	P	**Pn**	**19 58 55.2**	**-1.9**
	1.9nm,0.3s,baz=341,slow=14,SNR=76						
WRA				S	**Sn**	**20 01 20.7**	**-7.8**
	15nm,0.3s,baz=336,slow=22,SNR=7.5						
WB2	**Warramunga Arr**	**13.66**	**161**		**Pn**	**19 58 55.4**	**-1.8**
WR0	**Warramunga Arr**	**13.74**	**160**		**Pn**	**19 58 56.7**	**-1.6**
KCP	**Kidapawan**	**14.63**	**342**	⇓*i* P	**Pn**	**19 59 10.8**	**+1.2**
KCP				*i* S	**S**	**20 01 58.1**	**-1.9**
COEN	**Coen**	**15.03**	**118**		**Pn**	**19 59 15.4**	**+0.9**
COEN				IAmb	IAmb	19 59 19.8	
	comp=Z,26nm,0.8s						
JAGI	**Jajag, Banyuwa**	**15.36**	**264**		**Pn**	**19 59 15.9**	**-2.7**
AS31	**Alice Springs**	**17.07**	**166**	P	**Pn**	**19 59 40.5**	**+1.2**
AS31				IAmb	IAmb	19 59 42.2	
	comp=Z,21nm,0.7s						
ASAR	**Alice Springs**	**17.07**	**166**	P	**Pn**	**19 59 40.4**	**+1.0**
	comp=Z,5.6nm,0.3s,baz=343,slow=10,SNR=547						
ASAR				S	**S**	**20 02 42.8**	**-6.4**
	comp=Z,4.2nm,0.3s,baz=351,slow=27,SNR=6.2						
ASAR				LR	LR	20 06 58.6	
	comp=Z,180nm,18.6s,baz=352,slow=39						
PSA00	**Pilbara Seismi**	**17.26**	**212**	P	**P**	**19 59 42.4**	**+1.5**
PSA00				IAmb	IAmb	19 59 44.0	
	comp=Z,31nm,0.7s						
SPMM	**Sapulut**	**17.52**	**311**	P	**Pn**	**19 59 46.0**	**+1.1**
PMG	**Port Moresby**	**17.55**	**99**	P	**Pn**	**19 59 48.0**	**+2.8**
	comp=Z,0.3nm,0.3s,baz=266,slow=16,SNR=1.6						
PMG				S	**S**	**20 02 51.9**	**-7.3**
	comp=Z,0.2nm,0.3s,baz=146,slow=15,SNR=2.0						
PMG	**Port Moresby**	**17.55**	**99**	P	**Pn**	**19 59 46.4**	**+1.2**
PMG				IAmb	IAmb	19 59 55.7	
	comp=Z,23nm,1.1s						
KKM	**Kota Kinabalu**	**18.61**	**314**	P	**P**	**19 59 55.7**	**0.0**
KKM				IAmb	IAmb	20 00 04.8	
	comp=Z,26nm,1.0s						
UGM	**Wanagama**	**18.92**	**266**	P	**P**	**19 59 59.9**	**+0.8**
SBUM	**Sibu**	**19.72**	**298**	P	**Pn**	**20 00 11.0**	**+0.4**
CTA	**Charters Tower**	**20.74**	**130**	P	**P**	**20 00 21.0**	**+2.4**
	comp=Z,5.5nm,0.9s,baz=309,slow=12,SNR=7.6						
CTAO	**Charters Tower**	**20.74**	**130**	P	Pn	20 00 21.3	-1.5
KSM	**Kuching**	**21.00**	**293**	P	**P**	**20 00 22.3**	**+0.8**
KSM				IAmb	IAmb	20 00 26.5	
	comp=Z,20nm,0.8s						
KSM	**Kuching**	**21.00**	**293**	P	**P**	**20 00 24.0**	**+2.6**
CISI	**Cisompet, Garu**	**21.60**	**267**	P	**P**	**20 00 26.7**	**-1.2**
LEM	**Lembang**	**21.81**	**269**	P	**P**	**20 00 31.7**	**+1.5**
	comp=Z,26nm,0.7s,baz=298,slow=2.7,SNR=8.9						
FORT	**Forrest**	**23.69**	**183**	P	**P**	**20 00 50.1**	**+2.5**
XMIS	**Christmas Isla**	**25.90**	**260**	P	**P**	**20 00 49.6**	**-0.2**
MORW	**Morawa**	**25.39**	**209**	P	**P**	**20 01 03.8**	**+0.7**
BBOO	**Buckleboo**	**26.36**	**168**	P	**P**	**20 01 13.1**	**+1.3**
BBOO				IAmb	IAmb	20 01 28.6	
	comp=Z,33nm,1.5s						
STKA	**Stephens Creek**	**27.16**	**157**	P	**P**	**20 01 20.1**	**+1.2**
	comp=Z,3.5nm,0.7s,baz=333,slow=10,SNR=10						
NWAO	**Narrogin (SRO)**	**28.22**	**202**	P	**P**	**20 01 29.2**	**+0.8**
	comp=Z,20nm,1.1s,baz=95,slow=12,SNR=2.4						
NWAO	**Narrogin (SRO)**	**28.22**	**202**	P	**P**	**20 01 29.0**	**+0.7**
KULM	**Kulim**	**31.36**	**292**	P	**P**	**20 01 56.0**	**-0.3**
KULM				IAmb	IAmb	20 02 10.1	
	comp=Z,13nm,1.1s						
RPSI	**Rantau Prapat**	**32.09**	**286**	P	**P**	**20 02 02.9**	**+0.2**
TOO	**Toolangi**	**33.68**	**157**	P	**P**	**20 02 19.3**	**+3.0**
CM31	**Chiang Mai Arr**	**39.42**	**310**	P	**P**	**20 03 04.9**	**-0.2**
CM31				IAmb	IAmb	20 03 10.8	
	comp=Z,6.8nm,1.1s						
CMAR	**Chiang Mai Arr**	**39.42**	**310**	P	**P**	**20 03 05.1**	**-0.1**
	comp=Z,3.4nm,0.8s,baz=138,slow=7.2,SNR=42						
CHTO	**Chiang Mai**	**39.64**	**311**	P	**P**	**20 03 06.3**	**-0.7**
CHTO				IAmb	IAmb	20 03 07.9	
	comp=Z,8.0nm,0.8s						
WHN	**Wuhan**	**40.10**	**339**	P	**P**	**20 03 11.8**	**+1.3**
MJAR	**Matsushiro Arr**	**44.08**	**10**	P	**P**	**20 03 40.5**	**-2.2**
	comp=Z,1.6nm,0.9s,baz=185,slow=9.8,SNR=5.0						
ODAN	**Odare**	**52.95**	**311**	*e*P	**P**	**20 04 50.6**	**-0.5**
	comp=Z,8.3nm,0.6s						
TAPN	**Taplejung**	**52.99**	**312**	*e*P	**P**	**20 04 50.8**	**-0.6**
	comp=Z,7.3nm,0.3s						
RAMN	**Ramite**	**53.59**	**311**	*e*P	**P**	**20 04 55.4**	**-0.4**
	comp=Z,7.5nm,0.5s						
GTA	**Gaotai**	**53.79**	**332**	P	**P**	**20 04 56.3**	**-0.5**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
JIRN	**Jiri**	**54.28**	**311**	*e*P	**P**	**20 05 00.3**	**-0.6**
	comp=Z,13nm,0.6s						
GUN	**Gumba**	**54.65**	**311**	*e*P	**P**	**20 05 02.9**	**-0.6**
	comp=Z,5.9nm,0.4s						
PKI	**Pulchoki**	**54.82**	**311**	*e*P	**P**	**20 05 04.1**	**-0.7**
PKIN	**Phulchoki**	**54.84**	**311**	*e*P	**P**	**20 05 03.8**	**-1.0**
GKN	**Gorkha**	**55.63**	**311**	*e*P	**P**	**20 05 09.7**	**-0.6**
	comp=Z,7.6nm,0.2s						
KOLN	**Koldanda**	**56.29**	**310**	*e*P	**P**	**20 05 14.5**	**-0.6**
DANN	**Dangsing**	**56.47**	**311**	*e*P	**P**	**20 05 16.1**	**-0.4**
PYUN	**Piuthan**	**56.92**	**310**	*e*P	**P**	**20 05 19.2**	**-0.4**
	comp=Z,20nm,0.7s						
SONM	**Songino Array**	**58.33**	**342**	P	**P**	**20 05 29.7**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=165,slow=6.2,SNR=3.9						
MK31	**Makanchi Array**	**68.01**	**327**	P	**P**	**20 06 32.4**	**-0.2**
MKAR	**Makanchi Array**	**68.01**	**327**	P	**P**	**20 06 32.9**	**+0.3**
	comp=Z,2.4nm,0.4s,baz=114,slow=8.8,SNR=60						
MAKZ	**Makanchi**	**68.19**	**327**	P	**P**	**20 06 33.5**	**-0.3**
MAKZ				IAmb	IAmb	20 06 34.9	
	comp=Z,2.6nm,0.5s						
YAK	**Yakutsk**	**68.84**	**0**	P	**P**	**20 06 37.2**	**-0.1**
YAK				IAmb	IAmb	20 06 38.6	
	comp=Z,7.9nm,0.7s						
AAK	**Ala-Archa**	**70.29**	**320**	P	**P**	**20 06 47.1**	**+0.1**
AAK				IAmb	IAmb	20 06 48.9	
	comp=Z,7.2nm,1.4s						
GAR	**Garm**	**71.38**	**315**	P	**P**	**20 06 53.3**	**-0.3**
GAR				IAmb	IAmb	20 06 56.1	
	comp=Z,8.3nm,1.0s						
ZAA0	**Zalesovo Array**	**71.41**	**334**	P	**P**	**20 06 52.3**	**-0.9**
ZAA0				IAmb	IAmb	20 06 53.5	
	comp=Z,6.1nm,1.1s						
ZALV	**Zalesovo Beam**	**71.41**	**334**	P	**P**	**20 06 52.1**	**-1.1**
	comp=Z,2.3nm,0.7s,baz=130,slow=4.6,SNR=13						
CHGR	**Chuyangaron**	**72.06**	**314**	P	**P**	**20 06 56.8**	**-0.8**
CHGR				IAmb	IAmb	20 06 58.5	
	comp=Z,12nm,1.1s						
KURK	**Kurchatov**	**72.31**	**329**	P	**P**	**20 06 58.2**	**-0.4**
KURK				IAmb	IAmb	20 06 59.7	
	comp=Z,8.3nm,1.2s						
VNDA	**Vanda**	**72.48**	**173**	P	**P**	**20 07 00.5**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=324,slow=5.8,SNR=5.1						
VNDA	**Vanda**	**72.48**	**173**	P	**P**	**20 07 00.6**	**+1.2**
KK31	**Karatay Array**	**73.08**	**319**	P	**P**	**20 07 03.4**	**-0.1**
MAW	**Mawson**	**74.79**	**201**	P	**P**	**20 07 13.8**	**+0.9**
	comp=Z,3.1nm,0.9s,baz=70,slow=5.7,SNR=4.7						
MAW	**Mawson**	**74.79**	**201**	P	**P**	**20 07 13.9**	**+1.1**
BRVK	**Borovoye**	**77.93**	**328**	P	**P**	**20 07 30.3**	**-0.5**
GEYT	**Alibeck**	**79.91**	**310**	P	**P**	**20 07 42.2**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=110,slow=6.5,SNR=4.0						
QSPA	**South Pole Qui**	**82.96**	**180**	P	**P**	**20 07 58.2**	**+0.5**
ARU	**Arti**	**85.50**	**328**	P	**P**	**20 08 09.4**	**-1.0**
ARU				IAmb	IAmb	20 08 11.0	
	comp=Z,6.5nm,0.9s						
RAYN	**Ar Rayn**	**87.38**	**294**	P	**P**	**20 08 19.7**	**-0.7**
RAYN				IAmb	IAmb	20 08 21.4	
	comp=Z,5.4nm,0.9s						
ILAR	**Eielson Array**	**93.53**	**25**	P	**P**	**20 08 46.3**	**-1.8**
	comp=Z,0.2nm,0.6s,baz=260,slow=3.0,SNR=4.4						
YKA	**Yellowknife Ar**	**107.94**	**26**	PKiKP	**PKiKP**	**20 13 58.1**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=297,slow=2.7,SNR=3.1						
PDAR	**Pinedale Array**	**117.19**	**45**	PKP	**PKiKP**	**20 14 18.8**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=345,slow=2.8,SNR=2.1						
ANMO	**Albuquerque**	**121.64**	**53**	PKP	**PKPdf**	**20 14 27.2**	**+0.9**
	comp=Z,0.3nm,0.

comp=E,0.4nm,0.3s,baz=311,slow=19,SNR=1.4
YKA Yellowknife Ar 19.50 347 P **P 20 05 32.9 +0.5**
comp=E,0.1nm,0.3s,baz=156,slow=12,SNR=2.9

*THE **24** 20:05:51.5, 40˙.33N×25˙.99E, h12km, ML2.9/7, Error ellipse: s-maj=0.8km s-min=0.4km az=274.0*
*ISK **24** 20:05:51.1, 40˙.32N×26˙.04E, h14km, ML3.2/20*
*ATH **24** 20:05:51.7, 40˙.33N×25˙.93E, h40km±3km, ML2.9/13, Error ellipse: s-maj=3.2km s-min=1.3km az=26.0*
*DDA **24** 20:05:51.6, 40˙.30N×26˙.08E, h10km±2km, ML3.1*
ISC 24 20:05:51.5±0.9, **40˚.32N**±0˙.01×**26˚.01E**±0˙.01, **h18**km±4km, **n97**, σ0**88**/140, **10C-8D, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GADA	**Gvkgeada**	**0.16**	**214**	P		**Pg**	**20 05 55.5**	**-0.3**
GADA				S		**Sg**	**20 05 57.9**	**-0.8**
	7μm,0.3s							
GADA	**Gvkgeada**	**0.16**	**214**	PG		**Pg**	**20 05 56.0**	**+0.2**
GADA				SG		**Sg**	**20 05 58.9**	**+0.2**
GELI	**Tayfur-Gelibol**	**0.36**	**77**	PG		**Pg**	**20 05 58.7**	**-0.4**
GELI				SG		**Sb**	**20 06 04.1**	**-0.7**
SMTH	**Samothraki Isl**	**0.40**	**292**	P		**Pg**	**20 05 58.5**	**-1.2**
SMTH				S		**Sg**	**20 06 04.8**	**-0.5**
	1μm,0.2s							
ENEZ	**Enez**	**0.43**	**14**	P		**Pg**	**20 06 00.2**	**-0.1**
ENEZ				S		**Sg**	**20 06 06.3**	**+0.1**
	4μm,0.3s							
ENEZ	**Enez**	**0.43**	**14**	PG		**Pg**	**20 06 00.3**	**-0.1**
ENEZ				SG		**Sb**	**20 06 06.7**	**-0.1**
BOZC	**Bozcaada**	**0.48**	**176**	PG		**Pg**	**20 06 01.1**	**-0.1**
BOZC				SG		**Sg**	**20 06 07.8**	**+0.1**
BOZC	**Bozcaada**	**0.48**	**176**	*i* P		**Pg**	**20 06 01.0**	**-0.1**
BOZC				*i* P		**Pg**	**20 06 01.0**	**-0.1**
BOZC				*i* S		**Sg**	**20 06 07.6**	**0.0**
BOZC				*i* S		**Sg**	**20 06 07.7**	**+0.1**
BOZC				IAML			20 06 08.0	
	comp=E,1μm,0.4s							
ERIK	**Erikli-Kesan**	**0.52**	**47**	PG		**Pg**	**20 06 01.6**	**-0.3**
ERIK				SG		**Sb**	**20 06 08.8**	**-0.5**
EZN	**Ezine**	**0.55**	**154**	P		**Pg**	**20 06 01.9**	**-0.6**
EZN	**Ezine**	**0.55**	**154**	PG		**Pg**	**20 06 01.9**	**-0.6**
LPK	**Lapseki**	**0.57**	**84**	PG		**Pg**	**20 06 02.7**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**0.71**	**144**	*i* P		**Pg**	**20 06 05.1**	**-0.3**
BAYC				*i* S		**Sg**	**20 06 14.7**	**-0.1**
KESN	**Edirne-Kesan**	**0.72**	**45**	*i* P		**Pg**	**20 06 05.3**	**-0.4**
KESN				*i* S		**Sg**	**20 06 14.7**	**-0.6**
KESN				IAML			20 06 18.0	
	comp=E,1μm,0.4s							
KESN				IAML			20 06 18.0	
	comp=N,1μm,0.2s							
LIA	**Limnos Island**	**0.76**	**237**	P		**Pg**	**20 06 06.3**	**-0.1**
LIA				S		**Sg**	**20 06 16.8**	**+0.2**
	comp=N,1μm,0.4s							
LIA	**Limnos Island**	**0.76**	**237**	P		**Pg**	**20 06 06.4**	**0.0**
LIA				S		**Sg**	**20 06 16.5**	**0.0**
LIA				AML		AML	20 06 19.4	
	comp=N,3493μm,0.4s							
LIA				AML		AML	20 06 22.5	
	comp=E,1964μm,0.5s							
RDO	**Rodhopi**	**0.90**	**337**	P		**Pb**	**20 06 08.3**	**-0.3**
RDO				S		**Sg**	**20 06 21.5**	**+0.5**
	comp=E,475nm,0.3s							
RDO	**Rodhopi**	**0.90**	**337**	P		**Pb**	**20 06 08.4**	**-0.2**
RDO				S		**Sb**	**20 06 20.7**	**+0.3**
RDO				AML		AML	20 06 21.8	
	comp=E,1096μm,0.5s							
RDO				AML		AML	20 06 22.0	
	comp=N,818μm,0.2s							
RDO	**Rodhopi**	**0.90**	**337**	PG		**Pb**	**20 06 08.5**	**-0.2**
UKOP	**Uzunkopru-Edir**	**0.94**	**30**	PG		**Pg**	**20 06 09.5**	**-0.2**
RKY	**Sarkoy-Tekirda**	**0.96**	**67**	PG		**Pb**	**20 06 09.0**	**-0.7**
SART	**Tekirdag**	**0.96**	**67**	*i* P		**Pb**	**20 06 09.4**	**-0.3**
SART				*i* S		**Sg**	**20 06 22.2**	**-0.7**
KRBG	**Karabiga-Canak**	**0.98**	**85**	PG		**Pb**	**20 06 09.9**	**-0.1**
THAS	**Thassos island**	**1.03**	**287**	P		**Pb**	**20 06 10.1**	**-0.7**
THAS				S		**Sb**	**20 06 25.0**	**+1.1**
	comp=N,662nm,0.3s							
THAS	**Thassos island**	**1.03**	**287**	P		**Pb**	**20 06 10.7**	**0.0**
THAS				S		**Sb**	**20 06 23.4**	**-0.5**
THAS				AML		AML	20 06 26.1	
	comp=N,1567μm,0.3s							
THAS				AML		AML	20 06 26.7	
	comp=E,1075μm,0.3s							
PRK	**Paraskevi**	**1.09**	**169**	P		**Pg**	**20 06 12.8**	**+0.2**
PRK	**Paraskevi**	**1.09**	**169**	P		**Pg**	**20 06 13.0**	**+0.3**
PRK				S		**Sg**	**20 06 26.9**	**-0.1**
PRK				AML		AML	20 06 29.3	
	comp=N,3503μm,0.5s							
PRK				AML		AML	20 06 30.6	
	comp=E,2704μm,0.3s							
EFSA	**Agios Efstrati**	**1.11**	**226**	P		**Pb**	**20 06 12.5**	**+0.4**
EFSA				S		**Sb**	**20 06 27.0**	**+0.7**
EFSA				AML		AML	20 06 28.7	
	comp=N,2387μm,0.5s							
EFSA				AML		AML	20 06 33.3	
	comp=E,2331μm,0.4s							
SIGR	**SIGRI**	**1.11**	**186**	P		**Pb**	**20 06 12.1**	**-0.2**
SIGR				S		**Sn**	**20 06 28.0**	**+0.9**
	comp=E,872nm,0.2s							
SIGR	**SIGRI**	**1.11**	**186**	P		**Pb**	**20 06 12.0**	**-0.2**
SIGR				S		**Sb**	**20 06 26.6**	**+0.2**
SIGR				AML		AML	20 06 29.2	
	comp=N,2250μm,0.3s							
SIGR				AML		AML	20 06 29.8	
	comp=E,1262μm,0.2s							
SIGR	**SIGRI**	**1.11**	**186**	PN		**Pb**	**20 06 12.0**	**-0.2**
AYVA	**Ayvalik**	**1.14**	**152**	*i* P		**Pb**	**20 06 12.8**	**+0.2**
AYVA				IAML			20 06 29.0	
	comp=E,461nm,0.9s							
AYVA				IAML			20 06 30.0	
	comp=N,958nm,0.6s							
KNL	**Balıkesir**	**1.16**	**92**	*i* P		**Pb**	**20 06 12.8**	**-0.2**
KNL				*i* S		**Sb**	**20 06 28.0**	**+0.3**
KNL				IAML			20 06 31.0	
	comp=N,474nm,0.4s							
MRMT	**Marmara Adasi**	**1.24**	**76**	PN		**Pn**	**20 06 13.6**	**-0.5**
GONE	**Gonen-Balikesi**	**1.31**	**101**	PN		**Pb**	**20 06 15.9**	**+0.3**
TKR	**Tekirdag**	**1.34**	**59**	PN		**Pn**	**20 06 15.6**	**+0.3**
BALY	**Balya**	**1.36**	**115**	*i* P		**Pb**	**20 06 17.1**	**+0.5**
BALY				*i* S		**Sg**	**20 06 34.9**	**-0.7**
BALY				IAML			20 06 36.0	
	comp=N,237nm,0.5s							
BALY				IAML			20 06 37.0	
	comp=E,193nm,0.4s							
KDZ	**Kurdzhali**	**1.40**	**341**	P		**Pg**	**20 06 18.1**	**-0.5**
EDC	**Edincik**	**1.42**	**88**	PN		**Pn**	**20 06 16.9**	**+0.5**
DKL	**Dikili**	**1.42**	**151**	PN		**Pb**	**20 06 17.8**	**+0.3**
OUR	**Ouranopolis**	**1.55**	**271**	P		**Pn**	**20 06 17.7**	**-0.6**
OUR	**Ouranopolis**	**1.55**	**271**	P		**Pn**	**20 06 17.6**	**-0.7**
OUR				S		**Sn**	**20 06 36.0**	**-2.0**
OUR				AML		AML	20 06 44.3	
	comp=E,493μm,0.3s							
OUR				AML		AML	20 06 44.3	
	comp=N,525μm,0.4s							
ZEDA	**zmir-Bergama**	**1.58**	**148**	*i* P		**Pn**	**20 06 19.8**	**+1.1**
ZEDA				*i* S		**Sg**	**20 06 42.0**	**-0.5**
ZEDA				IAML			20 06 43.0	
	comp=N,484nm,0.5s							
ZEDA				IAML			20 06 43.0	
	comp=E,335nm,0.3s							
BALB	**Balikesir**	**1.59**	**115**	PN		**Pb**	**20 06 19.9**	**-0.4**
STEP	**BALIKESIR_Sava**	**1.62**	**125**	*i* P		**Pb**	**20 06 20.7**	**-0.2**
STEP				*i* S		**Sb**	**20 06 42.2**	**+1.3**
STEP				IAML			20 06 44.0	
	comp=E,301nm,0.7s							
STEP				IAML			20 06 46.0	
	comp=N,272nm,0.5s							
EDRB	**Edirne**	**1.62**	**20**	P		**Pn**	**20 06 18.7**	**-0.6**
EDRB				S		**Sn**	**20 06 40.4**	**+0.7**
EDRB	**Edirne**	**1.62**	**20**	PN		**Pn**	**20 06 19.5**	**+0.2**
KIRK	**Kırklareli**	**1.68**	**29**	*i* P		**Pn**	**20 06 19.3**	**-0.7**
KIRK				*i* S		**Sb**	**20 06 42.1**	**-0.5**
RZN	**Rozhen**	**1.68**	**325**	P		**Pn**	**20 06 20.4**	**+0.1**
RZN				S		**Sn**	**20 06 42.0**	**+0.5**
PSRA	**Psara**	**1.81**	**191**	P		**Pn**	**20 06 22.9**	**+1.1**
PAIG	**Paliouri**	**1.83**	**258**	P		**Pn**	**20 06 21.3**	**-0.8**
PAIG				AML		AML	20 06 56.3	
	comp=E,90μm,0.5s							
PAIG				AML		AML	20 07 03.5	
	comp=N,110μm,0.6s							
SLVT	**Silivri**	**1.90**	**61**	PN		**Pn**	**20 06 23.1**	**0.0**
CHOS	**Chios island**	**1.93**	**179**	P		**Pn**	**20 06 24.0**	**+0.4**
CHOS	**Chios island**	**1.93**	**179**	P		**Pn**	**20 06 23.7**	**+0.2**
CHOS				AML		AML	20 06 58.0	
	comp=N,395μm,0.3s							
CHOS				AML		AML	20 06 59.4	
	comp=E,594μm,0.2s							
CHOS	**Chios island**	**1.93**	**179**	PN		**Pn**	**20 06 23.9**	**+0.4**
PLG	**Polygyros**	**1.96**	**272**	P		**Pn**	**20 06 23.7**	**-0.2**
PLG				AML		AML	20 06 57.0	
	comp=E,244μm,0.3s							
PLG				AML		AML	20 06 58.5	
	comp=N,183μm,0.4s							
AKHS	**Akhisar**	**2.00**	**135**	*i* P		**Pb**	**20 06 26.6**	**-0.9**
AKHS				*i* S		**Sg**	**20 06 55.8**	**-0.2**
AOS	**Alonnisos**	**2.00**	**236**	P		**Pn**	**20 06 23.9**	**-0.6**
AOS				AML		AML	20 06 58.8	
	comp=N,364μm,0.5s							
AOS				AML		AML	20 06 59.5	
	comp=E,438μm,0.4s							
URLA	**Izmir**	**2.01**	**167**	PN		**Pn**	**20 06 25.1**	**+0.5**
URLA	**Izmir**	**2.01**	**167**	*i* P		**Pn**	**20 06 25.6**	**+1.0**
URLA				*i* S		**Sn**	**20 06 48.7**	**-0.6**
ELBA	**Catalca**	**2.01**	**65**	*i* P		**Pn**	**20 06 24.4**	**-0.3**
ELBA				*i* S		**Sn**	**20 06 50.9**	**+1.5**
DURS	**Dursunbey**	**2.02**	**110**	*i* P		**Pb**	**20 06 27.1**	**-0.7**
DURS				*i* S		**Sg**	**20 06 54.6**	**-2.0**
DURS				IAML			20 06 57.0	
	comp=E,230nm,0.5s							
DURS				IAML			20 06 57.0	
	comp=N,134nm,0.4s							
PLD	**Plovdiv**	**2.04**	**331**	P		**Pb**	**20 06 29.5**	**+1.5**
PLD				S		**Sg**	**20 06 57.0**	**-0.2**
JMB	**Yambol**	**2.19**	**11**	P		**Pb**	**20 06 31.8**	**+1.2**
KYMI	**Kymi, Euboea I**	**2.24**	**222**	P		**Pn**	**20 06 26.9**	**-0.9**
KYMI				AML		AML	20 07 05.7	
	comp=N,287μm,0.5s							
KYMI				AML		AML	20 07 10.0	
	comp=E,127μm,0.4s							
DGB	**zmir**	**2.36**	**163**	*i* P		**Pn**	**20 06 30.3**	**+0.9**
DGB				*i* S		**Sn**	**20 06 58.0**	**+0.1**
ULDT	**Uludag**	**2.40**	**93**	*i* P		**Pn**	**20 06 31.3**	**+1.2**
ULDT				*i* S		**Sg**	**20 07 07.2**	**-1.4**
ULDT				IAML			20 07 09.0	
	comp=N,56nm,0.4s							
BUY	**Buyukada**	**2.42**	**76**	*i* P		**Pn**	**20 06 30.5**	**+0.3**
IGD	**Bursa**	**2.44**	**90**	*i* P		**Pb**	**20 06 36.1**	**+1.2**
IGD				*i* S		**Sg**	**20 07 10.0**	**-2.0**
DEMI	**Demirci**	**2.44**	**121**	*i* P		**Pn**	**20 06 31.5**	**+0.9**
DEMI				*i* S		**Sg**	**20 07 08.1**	**-2.0**
KARY	**Karystos**	**2.59**	**209**	P		**Pn**	**20 06 31.6**	**-0.9**
ELND	**Elena**	**2.61**	**358**	⇑P		**Pn**	**20 06 33.7**	**+0.9**
SMG	**Samos**	**2.69**	**166**	P		**Pn**	**20 06 33.7**	**-0.2**
SMG				AML		AML	20 07 20.2	
	comp=N,201μm,0.4s							
SMG				AML		AML	20 07 21.1	
	comp=E,194μm,0.4s							
MANT	**Manisa**	**2.69**	**132**	*i* P		**Pn**	**20 06 36.8**	**+2.6**
MANT				*i* S		**Sg**	**20 07 15.6**	**-2.3**
VAY	**Valandovo**	**2.80**	**292**	*i* Pn		**Pg**	**20 06 44.2**	**-0.9**
VAY	**Valandovo**	**2.80**	**292**	*i* Pn		**Pg**	**20 06 44.2**	**-0.9**
GDZ	**Gediz**	**2.94**	**114**	*i* P		**Pn**	**20 06 39.4**	**+1.8**
GDZ				*i* S		**Sg**	**20 07 22.8**	**-3.3**
SZH	**Strazhica**	**2.94**	**359**	P		**Pn**	**20 06 38.2**	**+0.8**
VTS	**Vitosha**	**3.10**	**319**	⇓P		**Pn**	**20 06 40.9**	**+1.1**
PLVB	**Pleven**	**3.24**	**342**	⇓P		**Pn**	**20 06 42.4**	**+1.0**
RAZG	**Razgrad**	**3.27**	**6**	⇓P		**Pn**	**20 06 42.8**	**+0.9**
APE	**Apeiranthos**	**3.27**	**187**	⇑P		**Pn**	**20 06 42.0**	**+0.1**
KAND	**Kocaeli-Kandir**	**3.27**	**75**	*i* P		**Pn**	**20 06 42.4**	**+0.6**
MPEP	**Malo Peshtene**	**3.48**	**332**	P		**Pn**	**20 06 45.8**	**+1.1**
HARR	**Harsova**	**4.59**	**17**	⇑P		**Pn**	**20 07 00.2**	**+0.2**
CFR	**Carcaliu**	**5.10**	**17**	⇓P		**Pn**	**20 07 08.2**	**+1.2**
ARR	**Arges**	**5.15**	**349**	⇑P		**Pn**	**20 07 08.2**	**+0.5**
MLR	**Muntele Rosu**	**5.17**	**359**	⇑P		**Pn**	**20 07 10.0**	**+1.9**
HERR	**Herculane**	**5.27**	**331**	⇑P		**Pn**	**20 07 10.6**	**+1.2**
MDVR	**Moldovita**	**5.47**	**326**	⇓P		**Pn**	**20 07 12.4**	**+0.2**
PLOR	**Plostina**	**5.55**	**5**	⇑P		**Pn**	**20 07 14.5**	**+1.3**
VRI	**Vrincioaia**	**5.57**	**5**	⇓P		**Pn**	**20 07 14.7**	**+1.2**
GZR	**Gura Zlata**	**5.60**	**336**	⇓P		**Pn**	**20 07 13.9**	**-0.1**
DOPR	**Dopca**	**5.66**	**356**	⇑P		**Pn**	**20 07 16.2**	**+1.4**
BZS	**Buzias**	**6.20**	**330**	⇑P		**Pn**	**20 07 22.4**	**+0.3**
TESR	**Tescani**	**6.21**	**4**	⇑P		**Pn**	**20 07 23.5**	**+1.3**
BIZ	**Bicaz**	**6.62**	**1**	⇓P		**Pn**	**20 07 29.6**	**+1.8**

IDC 24 20:11:39.1±1.4, **45˚.29N**×**27˚.91W**, **h0**km, **mb3.4**/4, **mb1 3.7**/4, **mb1mx3.3**/40, **mbtmp3.4**/4, **MS3.0**/2, **Ms1 3.0**/2, **ms1mx2.5**/24, **Error ellipse: s-maj=49.5km s-min=30.1km az=27.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KEST	**Kesra**	**29.66**	**96**	LR		LR	20 28 13.1	
	comp=Z,111nm,18.2s,baz=288,slow=34							
AKASG	**Malin Array Be**	**37.79**	**61**	P		P	20 18 57.0	+0.3
	0.2nm,0.4s,baz=276,slow=9.0,SNR=2.4							
TORD	**Torodi Ar. Bea**	**40.71**	**132**	P		P	20 19 21.2	-0.3
	1.0nm,0.8s,baz=325,slow=7.2,SNR=4.2							
TXAR	**Lajitas Array**	**60.21**	**283**	P		P	20 21 49.4	+0.3
	0.3nm,0.9s,baz=77,slow=4.7,SNR=2.8							
TXAR				LR		LR	20 46 20.6	
	comp=Z,22nm,18.2s,baz=0.0,slow=35							
ILAR	**Eielson Array**	**60.44**	**334**	P		P	20 21 49.4	-0.6
	0.3nm,0.6s,baz=31,slow=8.8,SNR=2.6							

*IDC **24** 20:27:25.7±1.1, 2˚.39S×139˚.93E, h0km, mb3.4/4, mb1 3.7/5, mb1mx3.5/28, mbtmp3.5/5, ML3.6/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/21, Error ellipse: s-maj=25.1km s-min=9.5km az=8.0*
ISC 24 20:27:28.4±1.1, **2˚.4S**±0˚.2×**140˚.1E**±0˚.1, **h25**km, **n7**, σ0**53**/6, **mb3.6/4, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JAY	**Jayapura**	**0.62**	**100**	Pg		**Pn**	**20 27 41.6**	**-0.1**
	65nm,0.3s,baz=246,slow=10,SNR=377							
JAY				Lg		Lg	20 27 51.2	
	164nm,0.3s,baz=97,slow=17,SNR=16							
JAY				LR		LR	20 28 11.5	
	comp=Z,164nm,18.9s,baz=177,slow=58							
WRA	**Warramunga Arr**	**18.31**	**197**	P		**Pn**	**20 31 40.8**	**-0.1**
	0.2nm,0.3s,baz=20,slow=12,SNR=8.1							
KAPI	**Kappang**	**20.46**	**262**	LR		LR	20 41 54.3	
	comp=Z,34nm,18.1s,baz=232,slow=43							
FITZ	**Fitzroy Crossi**	**21.07**	**221**	P		**P**	**20 32 10.9**	**0.0**
	2.3nm,1.0s,baz=56,slow=11,SNR=2.3							
ASAR	**Alice Springs**	**21.96**	**195**	P		**P**	**20 32 20.8**	**+0.2**
	0.5nm,0.6s,baz=21,slow=9.9,SNR=13							
CMAR	**Chiang Mai Arr**	**45.49**	**299**	P		**P**	**20 35 45.5**	**-0.6**
	0.5nm,0.7s,baz=128,slow=5.7,SNR=6.0							
MKAR	**Makanchi Array**	**70.40**	**322**	P		**P**	**20 38 41.1**	**+0.6**
	0.6nm,0.8s,baz=116,slow=8.3,SNR=7.5							

*ATH **24** 20:28:57.4, 40˙.32N×25˙.52E, h27km±1km, ML3.1/18, Error ellipse: s-maj=1.9km s-min=0.9km az=75.0*
*ISK **24** 20:28:57.9, 40˙.29N×25˙.49E, h6km, ML3.6/22*
*THE **24** 20:28:58.9, 40˙.29N×25˙.51E, h12km, ML3.0/10, Error ellipse: s-maj=0.9km s-min=0.4km az=56.0*
*DDA **24** 20:28:59.9, 40˙.27N×25˙.61E, h6km±1km, ML3.4*
ISC 24 20:28:58.2±0.9, **40˚.29N**±0˚.02×**25˚.51E**±0˚.02, **h15**km±7km, **n97**, σ0**67**/121, **11C-6D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SMTH	**Samothraki Isl**	**0.19**	**6**	P		**Pb**	**20 29 02.9**	**-0.5**
SMTH				S		**Sg**	**20 29 05.9**	**+0.2**
	5μm,0.1s							
SMTH	**Samothraki Isl**	**0.19**	**6**	P		**Pb**	**20 29 03.0**	**-0.5**
SMTH				S		**Sg**	**20 29 05.8**	**+0.1**
SMTH				AML		AML	20 29 06.0	
	comp=E,9556μm,0.1s							
SMTH				AML		AML	20 29 06.5	
	comp=N,9400μm,0.1s							
GADA	**Gvkgeada**	**0.32**	**107**	P		**Pb**	**20 29 05.5**	**-0.1**
GADA				S		**Sb**	**20 29 09.8**	**-0.8**
	comp=N,4μm,0.5s							
GADA	**Gvkgeada**	**0.32**	**107**	PG		**Pb**	**20 29 05.5**	**-0.1**
GADA				SG		**Sb**	**20 29 09.7**	**-0.8**
LIA	**Limnos Island**	**0.46**	**213**	P		**Pb**	**20 29 08.3**	**+0.3**
LIA				S		**Sb**	**20 29 15.1**	**+0.5**
	comp=N,3μm,0.4s							
LIA	**Limnos Island**	**0.46**	**213**	P		**Pb**	**20 29 08.3**	**+0.3**
LIA				S		**Sb**	**20 29 15.1**	**+0.5**
LIA				AML		AML	20 29 15.6	
	comp=N,4932μm,0.4s							
LIA				AML		AML	20 29 18.5	
	comp=E,4717μm,0.3s							
BOZC	**Bozcaada**	**0.61**	**136**	PG		**Pb**	**20 29 10.8**	**+0.2**
BOZC				SG		**Sb**	**20 29 18.9**	**-0.1**
BOZC	**Bozcaada**	**0.61**	**136**	*i* P		**Pb**	**20 29 10.8**	**+0.2**
BOZC				IAML			20 29 19.0	
	comp=N,1μm,0.4s							
BOZC				*i* S		**Sb**	**20 29 19.0**	**0.0**
BOZC				IAML			20 29 20.0	
	comp=E,992nm,0.2s							
ENEZ	**Enez**	**0.67**	**47**	P		**Pb**	**20 29 11.4**	**-0.2**
ENEZ				S		**Sb**	**20 29 21.6**	**+0.9**
	comp=E,6μm,0.3s							
ENEZ	**Enez**	**0.67**	**47**	PG		**Pb**	**20 29 11.4**	**-0.2**
THAS	**Thassos island**	**0.68**	**298**	P		**Pb**	**20 29 12.0**	**+0.2**
THAS				S		**Sb**	**20 29 22.0**	**+0.9**
	comp=E,1μm,0.2s							
THAS	**Thassos island**	**0.68**	**298**	P		**Pb**	**20 29 11.7**	**-0.1**
THAS				AML		AML	20 29 23.9	
	comp=N,2120μm,0.2s							
THAS				AML		AML	20 29 23.9	
	comp=E,3406μm,0.2s							
GELI	**Tayfur-Gelibol**	**0.75**	**81**	PG		**Pb**	**20 29 12.9**	**-0.1**
EZN	**Ezine**	**0.78**	**126**	P		**Pb**	**20 29 13.5**	**0.0**
EZN				S		**Sn**	**20 29 24.6**	**-1.5**
	comp=E,2μm,0.2s							
EZN	**Ezine**	**0.78**	**126**	PG		**Pb**	**20 29 13.4**	**0.0**
EFSA	**Agios Efstrati**	**0.84**	**208**	P		**Pn**	**20 29 15.6**	**+0.1**
EFSA				S		**Sn**	**20 29 27.0**	**-0.7**
EFSA				AML		AML	20 29 29.4	
	comp=N,2574μm,0.3s							
EFSA				AML		AML	20 29 30.2	
	comp=E,5321μm,0.6s							
ERIK	**Erikli-Kesan**	**0.86**	**63**	PG		**Pb**	**20 29 14.8**	**-0.1**
RDO	**Rodhopi**	**0.86**	**2**	P		**Pn**	**20 29 15.6**	**-0.2**
RDO				S		**Sn**	**20 29 28.0**	**-0.2**
RDO	**Rodhopi**	**0.86**	**2**	P		**Pg**	**20 29 14.5**	**-0.5**
RDO				AML		AML	20 29 28.1	
	comp=N,3706μm,0.6s							
RDO				AML		AML	20 29 30.6	
	comp=E,1562μm,0.3s							
RDO	**Rodhopi**	**0.86**	**2**	PG		**Pb**	**20 29 14.9**	**0.0**
LPK	**Lapseki**	**0.96**	**84**	PG		**Pn**	**20 29 17.0**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**0.97**	**124**	*i* P		**Pn**	**20 29 17.3**	**0.0**
BAYC				*i* S		**Sn**	**20 29 30.2**	**-0.6**
BAYC				IAML			20 29 31.0	
	comp=E,989nm,0.2s							
BAYC				IAML			20 29 31.0	
	comp=N,1μm,0.4s							
KAVA	**Kavala**	**1.04**	**314**	P		**Pg**	**20 29 18.2**	**-0.1**
KAVA				S		**Sn**	**20 29 32.9**	**+0.4**
	comp=N,812nm,0.6s							
KAVA	**Kavala**	**1.04**	**314**	P		**Pg**	**20 29 18.2**	**-0.1**
KAVA				S		**Sg**	**20 29 31.7**	**-0.2**
KAVA				AML		AML	20 29 35.5	
	comp=N,1660μm,0.2s							
KAVA				AML		AML	20 29 35.5	
	comp=E,1592μm,0.5s							
KESN	**Edirne-Kesan**	**1.04**	**58**	*i* P		**Pn**	**20 29 18.9**	**+0.2**
KESN				*i* S		**Sn**	**20 29 32.7**	**-0.5**
KESN				IAML			20 29 34.0	
	comp=E,3μm,0.3s							
KESN				IAML			20 29 34.0	
	comp=N,2μm,0.3s							
KVLA	**Kavala**	**1.07**	**308**	P		**Pn**	**20 29 18.6**	**-0.1**
KVLA				AML		AML	20 29 35.2	
	comp=N,1277μm,0.3s							
KVLA				AML		AML	20 29 35.9	
	comp=E,1822μm,0.2s							
SIGR	**SIGRI**	**1.10**	**166**	P		**Pg**	**20 29 19.7**	**+0.1**
SIGR				S		**Sn**	**20 29 35.1**	**+0.9**
	comp=E,3μm,0.6s							
SIGR	**SIGRI**	**1.10**	**166**	P		**Pg**	**20 29 19.4**	**-0.2**
SIGR				S		**Sn**	**20 29 34.7**	**+0.5**
SIGR				AML		AML	20 29 36.0	
	comp=E,4794μm,0.6s							
SIGR				AML		AML	20 29 36.1	
	comp=N,7025μm,0.7s							
SIGR	**SIGRI**	**1.10**	**166**	PN		**Pg**	**20 29 19.4**	**-0.2**
OUR	**Ouranopolis**	**1.17**	**273**	P		**Pn**	**20 29 19.8**	**-0.2**
OUR	**Ouranopolis**	**1.17**	**273**	P		**Pn**	**20 29 19.5**	**-0.5**
OUR				AML		AML	20 29 40.1	
	comp=E,1958μm,0.3s							
OUR				AML		AML	20 29 40.1	
	comp=N,1976μm,0.3s							
OUR	**Ouranopolis**	**1.17**	**273**	PN		**Pn**	**20 29 19.9**	**-0.1**
PRK	**Paraskevi**	**1.19**	**150**	P		**Pg**	**20 29 21.4**	**+0.2**
PRK				S		**Sg**	**20 29 37.3**	**+0.5**
PRK				AML		AML	20 29 39.1	
	comp=N,5859μm,0.5s			

XOR	**Xorichti**	**2.00**	**244**	P	**Pn**	**20 29 31.1**	**-0.5**
XOR				AML	AML	20 30 11.6	
	comp=E,149μm,0.4s						
XOR				AML	AML	20 30 25.2	
	comp=N,230μm,0.8s						
BOTS	**Marmara Eregli**	**2.01**	**69**	PN	**Pb**	**20 29 33.2**	**-1.3**
URLA	**Izmir**	**2.10**	**156**	PN	**Pn**	**20 29 33.8**	**+0.9**
KCTX	**Karacabey (Bur**	**2.18**	**90**	PN	**Pb**	**20 29 35.6**	**-1.8**
BLCB	**Balcova**	**2.24**	**147**	PN	**Pb**	**20 29 36.8**	**-1.6**
SLVT	**Silivri**	**2.26**	**64**	PN	**Pn**	**20 29 36.4**	**+1.3**
JMB	**Yambol**	**2.33**	**20**	P	**Pn**	**20 29 36.9**	**+0.9**
CTYL	**Yalikoy Yolu**	**2.42**	**60**	PN	**Pn**	**20 29 39.1**	**+1.8**
PGB	**Panagyurishte**	**2.48**	**336**	S	**Sg**	**20 30 16.8**	**-1.1**
DION	**Dionisos Attik**	**2.52**	**210**	P	**Pn**	**20 29 38.8**	**+0.1**
PTL	**Penteli**	**2.57**	**210**	P	**Pn**	**20 29 39.5**	**+0.1**
ELND	**Elena**	**2.66**	**6**	⇑P	**Pn**	**20 29 41.3**	**+0.8**
AGG	**Agios Georgios**	**2.76**	**244**	P	**Pn**	**20 29 41.7**	**-0.3**
VLY	**Voula,Athens**	**2.77**	**209**	P	**Pn**	**20 29 42.2**	**+0.1**
THL	**Klokotos Trika**	**2.78**	**256**	P	**Pn**	**20 29 42.4**	**+0.2**
VTS	**Vitosha**	**2.89**	**325**	⇓P	Pn	20 29 38.6	-5.2
VTS	**Vitosha**	**2.89**	**325**	S	**Sg**	**20 30 30.8**	**-0.3**
PLVB	**Pleven**	**3.17**	**348**	⇑P	**Pn**	**20 29 46.3**	**-1.2**
APE	**Apeiranthos**	**3.21**	**180**	⇑P	**Pn**	**20 29 49.1**	**+0.9**
ANX	**Ano Chora**	**3.25**	**240**	P	**Pn**	**20 29 48.9**	**+0.2**
RAZG	**Razgrad**	**3.36**	**13**	⇑P	**Pn**	**20 29 52.2**	**+1.9**
KLV	**Kalavryta, Ach**	**3.44**	**230**	P	**Pn**	**20 29 51.5**	**+0.2**
HARR	**Harsova**	**4.75**	**21**	⇑P	**Pn**	**20 30 10.4**	**+1.1**
ARR	**Arges**	**5.12**	**353**	⇑P	**Pn**	**20 30 15.4**	**+1.0**
HERR	**Herculane**	**5.13**	**335**	⇓P	**Pn**	**20 30 14.9**	**+0.5**
MLR	**Muntele Rosu**	**5.21**	**3**	⇑P	**Pn**	**20 30 15.9**	**+0.1**
CFR	**Carcaliu**	**5.26**	**21**	⇓P	**Pn**	**20 30 16.6**	**+0.3**
MDVR	**Moldovita**	**5.30**	**329**	⇓P	**Pn**	**20 30 17.7**	**+0.9**
GZR	**Gura Zlata**	**5.49**	**339**	⇑P	**Pn**	**20 30 20.2**	**+0.7**
PLOR	**Plostina**	**5.63**	**8**	⇑P	**Pn**	**20 30 23.0**	**+1.6**
VRI	**Vrincioaia**	**5.65**	**9**	⇓P	**Pn**	**20 30 22.5**	**+0.9**
DOPR	**Dopca**	**5.68**	**359**	⇑P	**Pn**	**20 30 23.9**	**+1.8**
BZS	**Buzias**	**6.04**	**333**	⇑P	**Pn**	**20 30 27.9**	**+0.9**
TESR	**Tescani**	**6.28**	**7**	⇓P	**Pn**	**20 30 32.2**	**+1.9**

*IDC **24** 20:34:17.6±5.1, 17°.42S×178°.28W, h471km±55km, mb3.3/11, mb1 3.4/12, mb1mx3.3/28, mbtmp4.1/12, Error ellipse: s-maj=30.0km s-min=21.5km az=56.0*
*NEIC **24** 20:34:24.0±1.3, 17°.5S±0°.1×178°.5W±0°.2, h540km±6km, mb4.4/27, Error ellipse: s-maj=22.2km s-min=18.0km az=102.0*

ISC 24 20:34:24.9±0.8, 17°.5S±0°.1×178°.6W±0°.1, h547km, n45, σ0s82/47, mb4.3/25, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**3.23**	**266**	P		**P**	**20 35 41.5**	**+0.1**
DZM	**Mont Dzumac**	**14.81**	**250**	P		**P**	**20 37 31.2**	**-1.4**
	0.2nm,0.3s,baz=152,slow=19,SNR=1.7							
DZM	**Mont Dzumac**	**14.81**	**250**	P		**P**	**20 37 33.4**	**+0.8**
URZ	**Urewera**	**20.99**	**190**	P		**P**	**20 38 27.0**	**-2.9**
	4.5nm,0.3s,baz=258,slow=1.2,SNR=10							
EIDS	**Eidsvold**	**29.26**	**249**	P		**P**	**20 39 42.9**	**-0.4**
EIDS				IAmb		IAmb	20 39 43.7	
	comp=Z,5.2nm,0.7s							
MLZ	**Mavora Lakes**	**29.89**	**199**	P		**P**	**20 39 48.6**	**+0.2**
ARMA	**Armidale**	**30.00**	**239**	P		**P**	**20 39 50.4**	**+0.7**
ARMA				IAmb		IAmb	20 39 51.3	
	comp=Z,6.8nm,0.7s							
CTA	**Charters Tower**	**33.36**	**260**	P		**P**	**20 40 18.2**	**-0.2**
	comp=Z,3.9nm,0.6s,baz=82,slow=12,SNR=6.9							
CTAO	**Charters Tower**	**33.36**	**260**	P		**P**	**20 40 18.1**	**-0.4**
CTAO				IAmb		IAmb	20 40 19.5	
	comp=Z,7.1nm,1.0s							
CAN	**Canberra**	**33.81**	**232**	P		**P**	**20 40 21.9**	**-0.1**
CAN				IAmb		IAmb	20 40 37.9	
	comp=Z,9.8nm,1.1s							
PMG	**Port Moresby**	**34.26**	**279**	P		**P**	**20 40 26.8**	**+0.9**
COEN	**Coen**	**36.96**	**270**	P		**P**	**20 40 48.8**	**+0.5**
COEN				IAmb		IAmb	20 40 50.1	
	comp=Z,13nm,1.0s							
TOO	**Toolangi**	**37.29**	**230**	P		**P**	**20 40 51.7**	**+0.9**
TOO				IAmb		IAmb	20 40 52.5	
	comp=Z,5.4nm,1.1s							
STKA	**Stephens Creek**	**38.68**	**241**	P		**P**	**20 41 03.1**	**+0.9**
	comp=Z,3.9nm,0.4s,baz=87,slow=10.0,SNR=35							
STKA	**Stephens Creek**	**38.68**	**241**	P		**P**	**20 41 02.9**	**+0.7**
BBOO	**Buckleboo**	**43.45**	**241**	P		**P**	**20 41 40.4**	**+0.3**
BBOO				IAmb		IAmb	20 41 41.1	
	comp=Z,12nm,0.8s							
WB0	**Warramunga Arr**	**44.52**	**259**	P		**P**	**20 41 47.6**	**-0.8**
WB2	**Warramunga Arr**	**44.54**	**259**	P		**P**	**20 41 47.6**	**-1.0**
WRA	**Warramunga Arr**	**44.55**	**259**	P		**P**	**20 41 47.9**	**-0.8**
	comp=Z,3.8nm,0.7s,baz=83,slow=7.1,SNR=117							
AS31	**Alice Springs**	**44.75**	**254**	P		**P**	**20 41 50.2**	**0.0**
AS31				IAmb		IAmb	20 41 50.8	
	comp=Z,7.9nm,0.6s							
ASAR	**Alice Springs**	**44.75**	**254**	P		**P**	**20 41 50.2**	**0.0**
	comp=Z,25nm,0.5s,baz=88,slow=8.1,SNR=658							
ASAR				PcP		**PcP**	**20 43 21.0**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=101,slow=3.9,SNR=4.2							
ASAR				S		**S**	**20 47 46.4**	**-1.3**
	comp=Z,0.6nm,0.9s,baz=83,slow=17,SNR=4.3							
MTN	**Manton Dam**	**48.66**	**268**	P		**P**	**20 42 19.6**	**-0.2**
MTN				IAmb		IAmb	20 42 20.0	
	comp=Z,14nm,0.8s							
FORT	**Forrest**	**50.03**	**244**	P		**P**	**20 42 29.4**	**-0.3**
FAKI	**Fak Fak**	**50.36**	**281**	P		**P**	**20 42 32.1**	**-0.3**
FAKI				IAmb		IAmb	20 42 49.2	
	comp=Z,14nm,1.1s							
KNRA	**Kununurra**	**50.38**	**264**	P		**P**	**20 42 31.9**	**-0.5**
KNRA				IAmb		IAmb	20 42 33.3	
	comp=Z,11nm,0.7s							
FITZ	**Fitzroy Crossi**	**52.94**	**260**	P		**P**	**20 42 51.1**	**+0.2**
	comp=Z,1.7nm,0.4s,baz=110,slow=6.8,SNR=16							
FITZ	**Fitzroy Crossi**	**52.94**	**260**	P		**P**	**20 42 51.2**	**+0.3**
SOEI	**Soe**	**55.92**	**270**	P		**P**	**20 43 13.3**	**+1.3**
SOEI				IAmb		IAmb	20 43 18.5	
	comp=Z,21nm,0.7s							
MORW	**Morawa**	**60.49**	**246**	P		**P**	**20 43 42.4**	**-0.1**
MORW				IAmb		IAmb	20 43 51.3	
	comp=Z,13nm,1.1s							
VNDA	**Vanda**	**60.80**	**185**	P		**P**	**20 43 44.7**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=23,slow=6.5,SNR=2.4							
VNDA	**Vanda**	**60.80**	**185**	P		**P**	**20 43 44.4**	**+0.8**
GIRL	**Giralia**	**62.86**	**253**	P		**P**	**20 43 59.2**	**+1.1**
MJAR	**Matsushiro Arr**	**67.53**	**323**	P		**P**	**20 44 26.2**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=144,slow=6.2,SNR=6.1							
KKM	**Kota Kinabalu**	**68.51**	**284**	P		**P**	**20 44 33.8**	**+0.2**
KKM				IAmb		IAmb	20 44 48.7	
	comp=Z,18nm,1.1s							
UGM	**Wanagama**	**69.51**	**268**	P		**P**	**20 44 39.4**	**-0.1**
CISI	**Cisompet, Garu**	**72.19**	**268**	P		**P**	**20 44 54.5**	**-0.9**
KSM	**Kuching**	**72.49**	**277**	P		**P**	**20 44 57.3**	**+0.3**
KSM				IAmb		IAmb	20 44 58.3	
	comp=Z,5.0nm,0.6s							
QSPA	**South Pole Qui**	**72.51**	**180**	P		**P**	**20 44 57.0**	**+0.7**
KSRS	**Korea Array**	**74.33**	**318**	P		**P**	**20 45 06.8**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=132,slow=6.1,SNR=2.3							
ILAR	**Eielson Array**	**85.56**	**13**	P		**P**	**20 46 04.0**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=226,slow=4.9,SNR=4.2							
CMAR	**Chiang Mai Arr**	**88.62**	**290**	P		**P**	**20 46 21.7**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=116,slow=2.1,SNR=4.7							
VNA3	**Neumayer Olymp**	**91.11**	**176**	P		**P**	**20 46 31.4**	**+0.3**
SONM	**Songino Array**	**93.18**	**319**	P		**P**	**20 46 40.8**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=102,slow=4.7,SNR=2.4							
CLL	**Collm**	**145.08**	**347**	*e*PKPbc		**PKPab**	**20 53 02.0**	**+0.1**
GERES	**GERESS Array B**	**147.22**	**345**	PKPbc		**PKPbc**	**20 53 06.6**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=28,slow=3.2,SNR=7.3							

DDA 24 20:50:09.1, 40°.35N×26°.10E, h7km±4km, ML1.6, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BOZC	**Bozcaada**	**0.51**	**184**	*i* P		Pg	20 50 18.9	+0.1
BOZC				IAML			20 50 26.0	
	comp=E,62nm,0.2s							
BOZC				*i* S		Sg	20 50 26.5	+1.0
BOZC				IAML			20 50 27.0	
	comp=N,39nm,0.9s							
KESN	**Edirne-Kesan**	**0.65**	**43**	*i* P		Pg	20 50 22.4	+0.7
KESN				*i* S		Sg	20 50 30.4	0.0
KESN				IAML			20 50 32.0	
	comp=E,34nm,0.3s							
KESN				IAML			20 50 34.0	
	comp=N,37nm,0.1s							
BAYC	**CANAKKALE_Bayr**	**0.70**	**150**	*i* P		Pb	20 50 23.2	-0.4
BAYC				*i* S		Sb	20 50 33.3	-0.1
BAYC				IAML			20 50 34.0	
	comp=E,22nm,0.2s							
BAYC				IAML			20 50 35.0	
	comp=N,18nm,0.2s							
AYVA	**Ayvalik**	**1.13**	**156**	*i* P		Pn	20 50 31.5	+0.1
AYVA				*i* S		Sn	20 50 46.9	-0.2
AYVA				IAML			20 50 49.0	
	comp=N,22nm,0.9s							
AYVA				IAML			20 50 53.0	
	comp=E,12nm,0.6s							

ATH 24 20:50:34.6, 40°.01N×24°.25E, h25km±2km, ML1.8/8, Error ellipse: s-maj=2.5km s-min=0.9km az=306.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OUR	**Ouranopolis**	**0.39**	**328**	P		Pb	20 50 42.7	-0.2
OUR				S		Sb	20 50 48.2	-0.4
OUR				AML		AML	20 50 53.8	
	comp=N,236μm,0.2s							
OUR				AML		AML	20 50 54.4	
	comp=E,241μm,0.3s							
PAIG	**Paliouri**	**0.44**	**260**	P		Pb	20 50 44.2	+0.4
PAIG				S		Sb	20 50 51.1	+0.9
PAIG				AML		AML	20 50 51.9	
	comp=N,406μm,0.5s							
PAIG				AML		AML	20 50 53.0	
	comp=E,286μm,0.2s							
THAS	**Thassos island**	**0.70**	**31**	P		Pn	20 50 49.0	+0.1
THAS				S		Sn	20 50 59.1	+0.3
THAS				AML		AML	20 50 59.5	
	comp=E,551μm,0.2s							
THAS				AML		AML	20 50 59.9	
	comp=N,280μm,0.3s							
PLG	**Polygyros**	**0.71**	**301**	P		Pn	20 50 48.9	-0.2
PLG				S		Sn	20 50 58.8	-0.5
PLG				AML		AML	20 51 00.3	
	comp=E,85μm,0.2s							
PLG				AML		AML	20 51 02.1	
	comp=N,124μm,0.4s							
LIA	**Limnos Island**	**0.73**	**98**	P		Pn	20 50 49.0	-0.2
LIA				S		Sb	20 50 58.6	+0.5
LIA				AML		AML	20 51 00.8	
	comp=E,202μm,0.3s							
LIA				AML		AML	20 51 01.0	
	comp=N,217μm,0.3s							
AOS	**Alonnisos**	**0.88**	**199**	P		Pb	20 50 51.3	+0.1
AOS				S		Sn	20 51 03.8	+0.4
KVLA	**Kavala**	**0.93**	**6**	P		Pb	20 50 52.8	+0.7
KVLA				S		Sn	20 51 04.7	0.0
SKIA	**Skiathos**	**1.03**	**216**	P		Pb	20 50 54.4	+0.6
XOR	**Xorichti**	**1.04**	**232**	P		Pb	20 50 54.8	+1.0
XOR				S		Sn	20 51 08.8	+1.6
HORT	**Hortiatis**	**1.06**	**304**	P		Pb	20 50 54.8	+0.5
SKY	**Skiros Island**	**1.15**	**168**	P		Pb	20 50 56.1	+0.3
SKY				AML		AML	20 51 16.3	
	comp=N,137μm,0.2s							
SKY				AML		AML	20 51 16.9	
	comp=E,163μm,0.2s							
SRS	**Serrai**	**1.22**	**336**	P		Pb	20 50 57.5	+0.6
SRS				AML		AML	20 51 15.6	
	comp=E,38μm,0.3s							
SRS				AML		AML	20 51 16.7	
	comp=N,43μm,0.2s							
KNT	**Kendrikon**	**1.54**	**319**	P		Pb	20 51 02.2	-0.3
KNT				AML		AML	20 51 29.2	
	comp=N,26μm,0.3s							
KNT				AML		AML	20 51 29.8	
	comp=E,25μm,0.3s							
AGG	**Agios Georgios**	**1.78**	**237**	P		Pb	20 51 05.8	-0.7

*VIE **24** 20:55:28.1±0.8, 50°.10N×18°.38E, h0km, mb1.9/3, ml2.5/4, Error ellipse: s-maj=5.8km s-min=4.2km az=78.0 31 km NNE of Ostrava Suspected Mining induced.*
*IPEC **24** 20:55:28.4±0.2, 50°.06N×18°.46E, h0km, ML2.0/3, Error ellipse: s-maj=1.6km s-min=1.1km az=164.0*
*PRU **24** 20:55:29.3±0.0, 50°.02N×18°.39E, h0km*

ISC 24 20:55:28.4±1.2, 50°.05N±0°.04×18°.43E±0°.04, h0km, n23, σ0s80/43, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OKC	**Ostrava-Krasne**	**0.28**	**220**	*e*PG		**Pg**	**20 55 34.7**	**+1.0**
OKC				*e*SG		**Sg**	**20 55 38.5**	**+1.2**
	comp=Z,150nm,0.6s							
MORC	**Moravsky Berou**	**0.63**	**245**	*e*PG		**Pg**	**20 55 40.9**	**+0.4**
MORC				*e*SG		**Sg**	**20 55 49.1**	**+0.4**
MORC	**Moravsky Berou**	**0.63**	**245**	*e*Pg		**Pg**	**20 55 40.8**	**+0.3**
	baz=64							
MORC				*e*Sg		**Sg**	**20 55 49.1**	**+0.4**
	46nm,0.3s,baz=64							
KRLC	**Kraliky**	**1.06**	**272**	*e*PG		**Pg**	**20 55 48.0**	**-0.7**
LANS	**Liptovska Anna**	**1.13**	**143**	*e*PG		**Pb**	**20 55 50.8**	**0.0**
LANS				*e*SG		**Sg**	**20 56 03.9**	**-0.6**
LANS				*e*LG		Lg	20 56 11.4	
JAVC	**Velka Javorina**	**1.29**	**203**	*e*PG		**Pb**	**20 55 53.2**	**-0.4**
JAVC				*e*SG		**Sg**	**20 56 09.1**	**-0.7**
JAVC	**Velka Javorina**	**1.29**	**203**	*e*Pg		**Pg**	**20 55 53.1**	**0.0**
	baz=23							
JAVC				*e*Sg		**Sg**	**20 56 09.1**	**-0.7**
	12nm,0.3s,baz=23							
DPC	**Dobruska-Polom**	**1.39**	**283**	*e*PG		**Pg**	**20 55 54.5**	**-0.4**
DPC				*e*SG		**Sg**	**20 56 13.0**	**+0.1**
	comp=Z,36nm,0.3s							
VRAC	**Vranov**	**1.40**	**239**	*e*PG		**Pg**	**20 55 54.8**	**-0.5**
VRAC				*e*SG		**Sg**	**20 56 13.0**	**-0.5**
VRAC	**Vranov**	**1.40**	**239**	*e*Pg		**Pg**	**20 55 54.8**	**-0.5**
	baz=58							
VRAC				*e*Sg		**Sg**	**20 56 12.9**	**-0.5**
	19nm,0.3s,baz=58							
OSTC	**Ostas**	**1.51**	**291**	*e*PG		**Pn**	**20 55 56.6**	**-0.1**
OSTC				*e*SG		**Sg**	**20 56 16.7**	**0.0**
	comp=Z,26nm,0.4s							
VYHS	**Vyhne**	**1.58**	**170**	*e*PN		**Pn**	**20 55 57.8**	**+0.1**
VYHS				*e*SN		**Sg**	**20 56 19.1**	**0.0**
CHVC	**Chvalec**	**1.61**	**290**	*e*PG		**Pn**	**20 55 58.0**	**-0.1**
UPC	**Upice**	**1.61**	**287**	*e*PG		**Pn**	**20 55 58.2**	**0.0**
UPC				*e*SG		**Sg**	**20 56 20.3**	**0.0**
	comp=Z,21nm,0.4s							
KRUC	**Moravsky**	**1.65**	**234**	*e*PG		**Pn**	**20 55 58.7**	**+0.1**
KRUC				*e*SG		**Sb**	**20 56 20.6**	**-0.4**
KRUC	**Moravsky**	**1.65**	**234**	*e*Pg		**Pn**	**20 55 58.6**	**0.0**
	baz=53							
KRUC				*e*Sg		**Sb**	**20 56 20.6**	**-0.4**
	baz=53							
TREC	**Trest**	**2.05**	**250**	*e*PG		**Pb**	**20 56 06.2**	**-0.4**
TREC				*e*SG		**Sb**	**20 56 33.0**	**+0.4**
PRU	**Pruhonice**	**2.51**	**270**	*e*SG		**Sb**	**20 56 45.8**	**+0.2**
	comp=Z,8.0nm,0.5s							
CONA	**Conrad Observa**	**2.71**	**219**	Pn		**Pn**	**20 56 13.9**	**+0.5**
	0.4nm,0.3s							
CONA				*e*Sn		**Sn**	**20 56 46.7**	**-0.2**
	1.6nm,0.2s							
BRG	**Berggiesshubel**	**2.98**	**288**	PG		**Pg**	**20 56 24.1**	**-1.5**
BRG				SG		**Sg**	**20 57 02.3**	**-1.8**
KHC	**Kasperske Hory**	**3.29**	**256**	*e*PG		**Pb**	**20 56 29.0**	**+1.4**
KHC				*e*SG		**Sg**	**20 57 11.7**	**-2.2**
	comp=Z,7.9nm,0.4s							
MOA	**Molln**	**3.52**	**233**	*e*Pn		**Pn**	**20 56 25.0**	**+0.7**
	0.9nm,0.3s							
MOA				*i* Sn		**Sn**	**20 57 06.1**	**-0.5**
	2.6nm,0.4s							
CLL	**Collm**	**3.67**	**292**	*e*Pg		**Pg**	**20 56 41.0**	**+2.3**
CLL				*e*Sg		**Sg**	**20 57 27.0**	**+0.7**
	comp=Z,6.0nm,0.3s							

*DJA **24** 20:58:03.6±0.3, 7°.S±3°×10°.4E±°, h44km±3km, M4.8/54, mB5.3/31, mb5.1/54, MLv5.3/24, Mw(mB)4.7/31, Mwp4.8/1*
*MOS **24** 20:58:03.1±0.9, 6°.09S×104°.22E, h36km, mb5.4/39, MS4.2/5, Error ellipse: s-maj=8.2km s-min=4.8km az=111.9*
*KLM **24** 20:58:03.0, 6°.68S×103°.71E, h41km, mb5.1*
*NEIC **24** 20:58:04.1±1.6, 6°.34S±0°.06×104°.12E±0°.06, h38km±4km, mb5.2/121, Error ellipse: s-maj=9.5km s-min=7.1km az=222.0*
*IDC **24** 20:58:05.0±2.1, 6°.16S×104°.24E, h37km±16km, mb4.7/47, mb1 4.7/50, mb1mx4.6/61, mbtmp4.9/50, ML3.9/2, MS3.9/26, Ms1 3.9/26, ms1mx3.8/43, Error ellipse: s-maj=12.8km s-min=7.8km az=35.0*
*BJI **24** 20:58:05.0±0.0, 6°.30S×104°.20E, h62km, mB5.0/53, mb5.2/71, Ms4.6/52, Ms7 4.4/50*
*GCMT **24** 20:58:06.1±0.5, 6°.73S±0°.04×103°.80E±0°.04, h52km±2km, MW4.8/60, Moment Tensor Solution. s36,c42; s60,c74; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr1.68±.15; Mθθ-1.60±.10; Mφφ-0.08±.14; Mrθ0.90±.09; Mrφ1.11±.08; Mθφ-0.35±.11; Best double couple: Mo2.16200×10¹⁶ NP1:φs303.00000°, δ32.00000°, λ97.00000°. NP2: φs114.00000°, δ58.00000°, λ85.00000°. Principal axes: T 1.9130, Plg76.0000°, Azm10.0000°; N 0.4970, Plg4.0000°, Azm116.0000°; P -2.4110, Plg13.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=80s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 20:58:06.1±0.4, 6°.32S±0°.04×104°.10E±0°.04, h55km±3km, h55km:pP-P, n687, σ1s32/695, mb5.1/159, MS4.2/45, 47C-28D, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LWLI	**Liwa**	**1.30**	**358**	P		**Pn**	**20 58 27.7**	**-0.4**
BLSI	**Bandar Lampung**	**1.48**	**50**	P		**Pn**	**20 58 30.3**	**-0.2**
MNAI	**Manna**	**2.26**	**330**	P		**Pn**	**20 58 41.2**	**+0.1**
MNAI	**Manna**	**2.26**	**330**			**Pn**	**20 58 40.9**	**-0.1**
MNAI				Sn		**Sn**	**20 59 07.8**	**0.0**
TNG	**Tangerang**	**2.54**	**87**	P		**Pn**	**20 58 45.2**	**+0.4**
LHSI	**Lahat**	**2.55**	**347**	P		**Pn**	**20 58 46.3**	**+1.3**
DBJI	**Dramaga**	**2.64**	**95**	P		**Pn**	**20 58 46.6**	**+0.3**
CBJI	**Citeko**	**2.73**	**92**	P		**Pn**	**20 58 50.6**	**+3.1**
CNJI	**Cibinong**	**3.16**	**108**	P		**Pn**	**20 58 54.0**	**+0.6**
PMBI	**Palembang**	**3.44**	**11**	P		**Pn**	**20 58 58.8**	**+1.6**
PMBI	**Palembang**	**3.44**	**11**			**Pn**	**20 58 58.1**	**+0.9**
LEM	**Lembang**	**3.53**	**98**	Pn		**Pn**	**20 59 00.3**	**+1.7**
	24nm,0.3s,baz=192,slow=16,SNR=26							
LEM				Sn		**Sn**	**20 59 35.4**	**-3.8**
	34nm,0.3s,baz=210,slow=20,SNR=4.3							
MASI	**Maura Aman, Be**	**3.67**	**330**	P		**Pn**	**20 59 01.7**	**+1.4**
CISI	**Cisompet, Garu**	**3.89**	**109**	P		**Pn**	**20 59 02.9**	**-0.5**
CISI	**Cisompet, Garu**	**3.89**	**109**			**Pn**	**20 59 02.6**	**-0.8**
KRJI	**Kerinci**	**4.96**	**328**	P		**Pn**	**20 59 18.4**	**+0.2**
	15nm20μm3μm,0.8s							
TPI	**Tanjungpandan**	**5.01**	**45**	P		**Pn**	**20 59 20.0**	**+1.3**
	0.8nm1μm142nm,0.7s							
PPSI	**Pulau Pagai**	**5.40**	**311**	P		**Pn**	**20 59 22.9**	**-1.2**
	15nm11μm873nm,0.6s							
SDSI	**Sungai Dareh**	**5.98**	**333**	P		**Pn**	**20 59 30.7**	**-1.4**
	0.9nm2μm145nm,0.6s							
SMRI	**Semarang**	**6.34**	**97**	P		Pn	20 59 52.3	+15
PDSI	**Padang**	**6.49**	**326**	P		**Pn**	**20 59 37.3**	**-1.7**
	1.3nm2μm159nm,0.4s							
UGM	**Wanagama**	**6.57**	**104**	P		**Pn**	**20 59 42.1**	**+2.0**
	0.8nm168nm,0.7s							
UGM	**Wanagama**	**6.57**	**104**			**Pn**	**20 59 40.1**	**0.0**
WOJI	**Wonogiri, Jawa**	**6.94**	**103**	P		**Pn**	**20 59 47.3**	**+2.1**
	0.3nm51nm,0.9s							
SISI	**Saibi**	**7.04**	**315**	P		**Pn**	**20 59 44.6**	**-2.1**
	1.3nm2μm162nm,0.8s							
TPRI	**Tanjung Pinang**	**7.21**	**3**	P		**Pn**	**20 59 50.4**	**+1.5**
	0.5nm130nm,0.6s							
BKNI	**Bangkinang**	**7.28**	**335**	P		**Pn**	**20 59 49.4**	**-0.5**
	1.6nm2μm227nm,0.7s							
BKNI	**Bangkinang**	**7.28**	**335**			**Pn**	**20 59 48.8**	**-1.0**
MYKOM	**Kota Tinggi**	**8.06**	**358**			**Pn**	**21 00 00.1**	**-0.5**
MYKOM	**Kota Tinggi**	**8.06**	**358**	P		**Pn**	**21 00 02.0**	**+1.4**
MNSI	**Mandailing Nat**	**8.39**	**327**	P		**Pn**	**21 00 02.3**	**-2.8**
	2μm138nm,0.7s							
COCO	**West Island**	**9.24**	**230**	P		**Pn**	**21 00 13.7**	**-3.0**
COCO	**West Island**	**9.24**	**230**	Pn		**Pn**	**21 00 13.7**	**-3.0**
KSM	**Kuching**	**9.92**	**39**			**Pn**	**21 00 26.7**	**+0.7**
KSM	**Kuching**	**9.92**	**39**	P		**Pn**	**21 00 29.0**	**+3.0**
GSI	**Gunungsitoli**	**9.99**	**319**	P		**Pn**	**21 00 23.5**	**-3.5**
	471nm,0.5s							
GSI	**Gunungsitoli**	**9.99**	**319**			**Pn**	**21 00 23.8**	**-3.3**
JAGI	**Jajag, Banyuwa**	**10.19**	**103**	P		**Pn**	**21 00 29.2**	**-0.6**
	4μm296nm,0.7s							
JAGI	**Jajag, Banyuwa**	**10.19**	**103**			**Pn**	**21 00 29.3**	**-0.5**
RPSI	**Rantau Prapat**	**10.34**	**330**			**Pn**	**21 00 28.6**	**-3.3**
PSI	**Prapat**	**10.43**	**330**	Pn		**Pn**	**21 00 28.8**	**-4.4**
	1.4nm,0.3s,baz=180,slow=10,SNR=7.5							
PSI				LR		LR	21 05 27.7	
	comp=Z,430nm,18.4s,baz

comp=Z,574nmcomp=Z,55nm,0.9s
TNTI Ternate 24.27 74 P **P** **21 03 18.1 -0.3**
TNTI lAmb lAmb 21 03 25.2
comp=Z,38nm,0.7s
MEEK Meekatharra 24.48 147 P **P** **21 03 22.9 +2.7**
baz=25,SNR=4.7
CM31 Chiang Mai Arr 25.14 348 P **P** **21 03 25.5 -0.8**
CMAR Chiang Mai Arr 25.14 348 P **P** **21 03 24.5 -1.7**
comp=Z,18nm,0.7s,baz=182,slow=9.1,SNR=74
CMAR PcP **PcP** **21 07 00.3 +1.0**
comp=Z,2.4nm,0.8s,baz=206,slow=3.0,SNR=4.9
CMAR ScP **ScP** **21 10 36.8 +2.8**
comp=Z,2.9nm,1.0s,baz=209,slow=3.8,SNR=10.0
CMAR LR LR 21 13 58.1
comp=Z,423nm,20.4s,baz=214,slow=38
DAV Davao City (W) 25.22 59 P **P** **21 03 27.2 +0.1**
comp=Z,82nm,0.3s,baz=24,slow=2.9,SNR=6.4
DAV LR LR 21 15 55.6
comp=Z,186nm,18.4s,baz=262,slow=43
DAV Davao City (W) 25.22 59 P **P** **21 03 27.4 +0.3**
CHTO Chiang Mai 25.49 349 P **P** **21 03 27.4 -2.0**
CHTO pmax pmax
comp=Z,23nm,0.6s
CHTO Chiang Mai 25.49 349 P **P** **21 03 27.4 -2.0**
RCP Roxas 25.68 46⇓*e*P **P** **21 03 32.0 +0.8**
QIZ Qiongzhong 25.82 13 P **P** **21 03 33.4 +1.0**
QIZ S **S** **21 07 53.5 -4.7**
QIZ sS **sS** **21 08 23.0 +2.5**
QIZ pmax pmax
comp=Z,25nm,1.5s
QIZ LR LR
comp=Z,750nm,17.7s
QIZ LR LR
comp=Z,300nm,19.1s
QIZ LR LR
comp=Z,920nm,17.7s
KNRA Kununurra 25.90 113 P **P** **21 03 32.5 -0.7**
baz=26,SNR=35
KNRA Kununurra 25.90 113 P **P** **21 03 32.5 -0.7**
KNRA lAmb lAmb 21 03 46.5
comp=Z,40nm,0.8s
TGY Tagaytay City 26.29 39 LR LR 21 14 46.0
comp=Z,170nm,19.5s,baz=180,slow=38
MTN Manton Dam 27.41 106 P **P** **21 03 46.5 -0.3**
baz=28,SNR=16
MTN Manton Dam 27.41 106 P **P** **21 03 46.3 -0.5**
SLVN Son La 27.49 360 P **P** **21 03 46.4 -1.0**
SlJl Sorong 27.64 80 P **P** **21 03 46.4 -2.4**
comp=Z,18nm,0.7s,baz=270,slow=8.5,SNR=6.4
SZP Santa 28.70 34 P **P** **21 03 57.8 -0.5**
SZP lAmb lAmb 21 04 33.0
comp=Z,40nm,1.0s
NWAO Narrogin (SRO) 29.16 157 LR LR 21 14 15.6
comp=Z,634nm,21.8s,baz=316,slow=33
NWAO Narrogin (SRO) 29.16 157 P **P** **21 04 01.7 -0.4**
NWAO pmax pmax
comp=Z,129nm,1.7s
NWAO Narrogin (SRO) 29.16 157 P **P** **21 04 01.7 -0.4**
NWAO lAmb lAmb 21 04 07.6
comp=Z,129nm,1.7s
WRKA Warakurna 29.71 131 P **P** **21 04 08.3 +1.1**
baz=30,SNR=5.8
H01W3 Cape Leeuwin H 29.89 163 T T 21 35 37.6
baz=342,slow=76,SNR=92
H01W1 Cape Leeuwin H 29.91 163 T T 21 35 39.6
baz=342,slow=76,SNR=181
H01W2 Cape Leeuwin H 29.91 163 T T 21 35 43.7
baz=342,slow=76,SNR=89
KMI Kunming 31.29 358 P **P** **21 04 24.1 +2.8**
KMI pP pwP 21 04 38.1 +3.3
KMI sP sP 21 04 42.3 +1.2
KMI pmax pmax
comp=Z,14nm,0.7s
KMI pmax pmax
comp=Z,66nm,3.6s
KMI LR LR
comp=Z,1μm,17.4s
KMI LR LR
comp=Z,390nm,16.6s
KMI LR LR
comp=Z,1μm,17.3s
H08S2 Diego Garcia H 31.40 266 T T 21 37 01.7
baz=90,slow=75
H08S3 Diego Garcia H 31.41 266 T T 21 37 10.9
baz=90
H08S1 Diego Carcia H 31.42 266 T T 21 36 57.8
baz=90,slow=75
WB0 Warramunga Arr 32.32 117 P **P** **21 04 30.2 -0.1**
WRA Warramunga Arr 32.33 118 P **P** **21 04 30.3 -0.1**
comp=Z,13nm,0.7s,baz=290,slow=10,SNR=65
WRA PcP **PcP** **21 07 18.4 +1.0**
comp=Z,4.5nm,0.7s,baz=298,slow=2.2,SNR=7.0
WRAB Tennant Creek 32.34 118*ce*P **P** **21 04 30.5 +0.1**
WRAB pmax pmax
comp=Z,11nm,0.6s
WB2 Warramunga Arr 32.34 118 P **P** **21 04 30.5 +0.1**
WR0 Warramunga Arr 32.51 118 P **P** **21 04 32.1 +0.2**
WR0 lAmb lAmb 21 04 46.4
comp=Z,16nm,0.7s
GYA Guiyang 32.68 4⇑*i*P **P** **21 04 32.9 -0.5**
GYA pP pwP 21 04 49.8 +2.9
GYA sP sP 21 04 59.6 +6.4
GYA PP **PP** **21 05 47.5 -0.7**
GYA PcP **PcP** **21 07 19.3 +1.0**
GYA S **S** **21 09 48.0 +2.0**
GYA sS sS 21 10 15.5 +6.9
GYA ScP **ScP** **21 10 57.5 -0.3**
GYA ScS **ScS** **21 14 55.6 -2.2**
GYA pmax pmax
comp=Z,30nm,0.8s
GYA pmax pmax
comp=Z,130nm,4.8s
GYA LR LR
comp=Z,590nm,16.2s
GYA LR LR
comp=Z,520nm,16.6s
GYA LR LR
comp=Z,550nm,16.4s
KOHI KOHIMA 33.30 343 *ex* **P** **21 04 36.9 -2.0**
ASAR Alice Springs 33.44 124 P **P** **21 04 40.7 +0.7**
comp=Z,9.0nm,0.8s,baz=312,slow=8.7,SNR=90
ASAR PcP **PcP** **21 07 21.7 +1.2**
comp=Z,4.8nm,0.7s,baz=301,slow=2.7,SNR=12
ASAR S **S** **21 09 58.7 +0.9**
comp=Z,0.7nm,0.9s,baz=296,slow=13,SNR=4.1
ASAR LR LR 21 19 21.0
comp=Z,254nm,20.3s,baz=302,slow=38
AS31 Alice Springs 33.44 124 P **P** **21 04 40.7 +0.7**
TPUB Ta-pu 33.58 28 P **P** **21 04 41.0 -0.2**
SHL Shillong 33.85 340 *ex* **P** **21 04 41.9 -1.8**
SHL lAmb lAmb 21 04 46.1
comp=Z,17nm,0.6s
SHL Shillong 33.85 340 P **P** **21 04 41.9 -1.8**
SHL pmax pmax
comp=Z,24nm,0.6s
SHL Shillong 33.85 340 P **P** **21 04 41.9 -1.8**
SHL lAmb lAmb 21 04 42.9
comp=Z,24nm,0.6s
YULB Yu-li 33.98 29 P **P** **21 04 44.4 -0.3**
YULB lAmb lAmb 21 04 51.7
comp=Z,14nm,0.7s
SSLB Suanglung 34.15 28 P **P** **21 04 45.9 -0.3**
NACB Ninganchiao 34.78 29 P **P** **21 04 51.5 -0.1**
NACB lAmb lAmb 21 04 52.9
comp=Z,25nm,0.8s
YHNB Yeheng 35.10 28 P **P** **21 04 54.1 -0.3**
YHNB lAmb lAmb 21 04 58.3
comp=Z,20nm,0.8s
YOJ Yonaguni jima 35.72 30 P **P** **21 04 58.8 -0.8**
YOJ pmax pmax
comp=Z,49nm,0.6s
YOJ Yonaguni jima 35.72 30 P **P** **21 04 58.8 -0.8**
JAY Jayapura 36.68 86 P **P** **21 05 07.5 -0.6**
comp=Z,14nm,0.8s,baz=235,slow=8.3,SNR=5.8
JAY LR LR 21 22 10.7
comp=Z,72nm,21.0s,baz=236,slow=40
NGP Nagpur 36.74 319 *ex* **P** **21 05 09.2 +0.8**
ODAN Odare 36.75 335 *e*P **P** **21 05 07.7 -0.9**
comp=Z,56nm,0.5s
ENH Enshi 36.75 8 P **P** **21 05 07.4 -1.0**
ENH lAmb lAmb 21 05 09.1
comp=Z,32nm,0.7s
CD2 Chengdu 37.02 360 P **P** **21 05 12.8 +2.1**
CD2 S **S** **21 10 54.8 +2.2**
CD2 pmax pmax
comp=Z,30nm,0.4s
CD2 pmax pmax
comp=Z,80nm,5.7s
CD2 LR LR
comp=Z,650nm,17.8s
CD2 LR LR
comp=Z,600nm,18.7s
CD2 LR LR
comp=Z,570nm,16.4s
TAPN Taplejung 37.04 335 *e*P **P** **21 05 10.9 -0.3**
comp=Z,73nm,0.8s
RAMN Ramite 37.17 334 *e*P **P** **21 05 12.4 +0.2**
comp=Z,68nm,0.6s
QIS Mount Isa 37.21 116 P **P** **21 05 12.8 +0.3**
baz=37,SNR=4.8
LSA Lhasa 37.92 342 P **P** **21 05 18.8 0.0**
LSA pmax pmax
comp=Z,93nm,0.9s
LSA Lhasa 37.92 342 P **P** **21 05 18.5 -0.3**
LSA Lhasa 37.92 342 P **P** **21 05 18.4 -0.4**
LSA pmax pmax
comp=Z,21nm,0.8s
LSA Lhasa 37.92 342 P **P** **21 05 18.4 -0.4**
LSA lAmb lAmb 21 05 19.9
comp=Z,21nm,0.8s
WHN Wuhan 37.95 14⇑P **P** **21 05 19.8 +1.3**
WHN pmax pmax
comp=Z,46nm,1.0s
WHN LR LR
comp=Z,750nm,15.1s
WHN LR LR
comp=Z,280nm,11.6s
WHN LR LR
comp=Z,960nm,18.9s
JIRN Jiri 37.96 334 *e*P **P** **21 05 18.6 -0.5**
comp=Z,224nm,0.7s
PKI Pulchoki 38.24 333 *e*P **P** **21 05 20.5 -0.8**
comp=Z,33nm,0.5s
PKIN Phulchoki 38.25 333 *e*P **P** **21 05 20.6 -0.8**
comp=Z,44nm,0.6s
GUN Gumba 38.32 333 *e*P **P** **21 05 21.8 -0.2**
comp=Z,215nm,0.6s
DMN Daman 38.41 332 *e*P **P** **21 05 22.3 -0.4**
comp=Z,25nm,0.5s
KKN Kakani 38.48 333 *e*P **P** **21 05 22.8 -0.5**
comp=Z,82nm,0.6s
GKN Gorkha 38.96 332 *e*P **P** **21 05 26.9 -0.3**
comp=Z,58nm,0.4s
COEN Coen 39.16 104 P **P** **21 05 28.3 -0.6**
baz=39,SNR=6.3
KOLN Koldanda 39.26 331 *e*P **P** **21 05 29.8 0.0**
comp=Z,176nm,0.9s
DANN Dangsing 39.67 331 *e*P **P** **21 05 32.8 -0.4**
comp=Z,245nm,0.6s
PYUN Piuthan 39.83 330 *e*P **P** **21 05 34.7 +0.2**
comp=Z,166nm,0.4s
XAN Xi'an 40.40 6 P **P** **21 05 37.4 -1.6**
XAN pP pP 21 05 48.6 -4.0
XAN pmax pmax
comp=Z,21nm,0.8s
XAN pmax pmax
comp=Z,120nm,4.9s
XAN LR LR
comp=Z,260nm,17.7s
XAN LR LR
comp=Z,290nm,19.9s
XAN LR LR
comp=Z,440nm,19.6s
XAN Xi'an 40.40 6 P **P** **21 05 37.8 -1.2**
XAN pmax pmax
comp=Z,24nm,0.6s
XAN Xi'an 40.40 6 P **P** **21 05 37.8 -1.2**
XAN lAmb lAmb 21 05 39.4
comp=Z,24nm,0.6s
MTSU Mount Surprise 40.92 110 P **P** **21 05 44.0 +0.5**
baz=41,SNR=11
HTT Hallett 42.06 135 P **P** **21 05 53.7 +1.0**
baz=42,SNR=6.6
LZH Lanzhou 42.19 360 *e*P **P** **21 05 54.3 +0.6**
LZH pP pwP 21 06 12.1 +2.2
LZH sP sP 21 06 20.8 +7.1
LZH PP **PP** **21 07 38.3 +5.9**
LZH pmax pmax
comp=Z,32nm,1.2s
LZH pmax pmax
comp=Z,120nm,5.7s
LZH LR LR
comp=Z,340nm,15.2s
LZH LR LR
comp=Z,300nm,17.3s
LZH LR LR
comp=Z,310nm,19.5s
PMG Port Moresby 42.74 97 P **P** **21 05 58.2 -0.2**
comp=Z,53nm,0.8s,baz=227,slow=3.0,SNR=12
PMG Port Moresby 42.74 97⇓*i*P **P** **21 05 58.4 0.0**
PMG pmax pmax
comp=Z,204nm,0.6s
PMG Port Moresby 42.74 97 P **P** **21 05 57.7 -0.8**
PMG lAmb lAmb 21 05 59.1
comp=Z,60nm,0.8s
CTA Charters Tower 43.12 113 P **P** **21 06 00.9 -0.5**
comp=Z,2.7nm,0.5s,baz=293,slow=9.3,SNR=4.7
CTAO Charters Tower 43.12 113 P **P** **21 06 01.2 -0.2**
CTAO pmax pmax
comp=Z,10,0nm,0.9s
CTAO Charters Tower 43.12 113 P **P** **21 06 01.1 -0.2**
STKA Stephens Creek 43.24 131 P **P** **21 06 03.4 +1.1**
baz=43,SNR=33
STKA Stephens Creek 43.24 131 P **P** **21 06 03.3 +1.1**
comp=Z,21nm,0.5s,baz=304,slow=8.4,SNR=62
STKA LR LR 21 24 50.2
comp=Z,208nm,19.7s,baz=311,slow=37
STKA Stephens Creek 43.24 131 P **P** **21 06 03.0 +0.7**
NDI New Delhi 43.39 325 *ex* **P** **21 06 02.0 -1.4**
NDI *ex* x 21 06 17.0
TIA Tai'an 44.04 15 P **P** **21 06 07.4 -1.1**
TIA pmax pmax
comp=Z,9.0nm,0.6s
TIA LR LR
comp=Z,270nm,18.5s
TIA LR LR
comp=Z,170nm,16.4s
TIA LR LR
comp=Z,320nm,20.6s
GUMO Guam 45.05 64 P **P** **21 06 15.9 -1.0**
GUMO pmax pmax
comp=Z,250nm,1.3s
GUMO Guam 45.05 64 P **P** **21 06 15.9 -1.0**
GTA Gaotai 45.68 355 P **P** **21 06 21.3 -0.3**
GTA pmax pmax
comp=Z,15nm,0.8s
GTA pmax pmax
comp=Z,130nm,6.2s
GTA LR LR
comp=Z,350nm,17.8s
GTA LR LR
comp=Z,250nm,17.1s
GTA LR LR
comp=Z,430nm,19.4s
CMSA Cobar Meteorol 46.23 128 P **P** **21 06 27.5 +1.4**
baz=46,SNR=19
JNU Nakatsue 46.75 31 P **P** **21 06 29.2 -0.8**
comp=Z,28nm,0.9s,baz=149,slow=11,SNR=16
JNU Nakatsue 46.75 31 P **P** **21 06 29.2 -0.8**
JNU lAmb lAmb 21 06 30.5
comp=Z,33nm,0.9s
BJT Baijiatuau 47.44 13 P **P** **21 06 35.1 -0.1**
BJT pmax pmax
comp=Z,57nm,0.7s
BJT Baijiatuau 47.44 13 P **P** **21 06 35.1 -0.1**
HHC Hu-ho-hao-te 47.44 8 *e*P **P** **21 06 35.3 -0.1**
HHC pP pP 21 06 52.8 +3.5
HHC sP sP 21 07 00.8 +5.4
HHC pmax pmax
comp=Z,31nm,1.0s
HHC pmax pmax
comp=Z,86nm,5.0s
HHC LR LR
comp=Z,280nm,20.0s
HHC LR LR
comp=Z,130nm,16.8s
HHC LR LR
comp=Z,260nm,19.1s
BJI Beijing 47.46 13 P **P** **21 06 35.4 0.0**
BJI pP **pP** **21 06 51.3 +2.0**
BJI PcP **PcP** **21 08 05.8 +0.8**
BJI S **S** **21 13 30.6 +4.7**
BJI pmax pmax
comp=Z,75nm,0.7s
BJI LR LR
comp=Z,240nm,21.8s
BJI LR LR
comp=Z,200nm,17.3s
EIDS Eidsvold 48.69 118 P **P** **21 06 45.5 +0.3**
KSRS Korea Array 48.90 25 P **P** **21 06 46.1 -0.4**
comp=Z,27nm,0.6s,baz=222,slow=7.3,SNR=124
KSRS PcP **PcP** **21 08 10.9 +0.7**
comp=Z,0.5nm,0.3s,baz=211,slow=4.3,SNR=4.8
KSRS Korea Array 48.90 25 *e*P **P** **21 06 46.8 +0.3**
KSRS pmax pmax
comp=Z,27nm,0.6s
KS19 Wonju Array Si 48.92 25 P **P** **21 06 46.9 +0.2**
KS19 lAmb lAmb 21 06 48.3
comp=Z,30nm,0.7s
NIL Nilore 49.35 326 P **P** **21 06 49.8 -0.3**
NIL pmax pmax
comp=Z,68nm,0.6s
NIL Nilore 49.35 326 P **P** **21 06 49.8 -0.3**
JCJ Chichijima 49.62 46 P **P** **21 06 49.6 -2.6**
comp=Z,50nm,0.8s,baz=274,slow=19,SNR=1.9
CAN Canberra 50.30 131 P **P** **21 06 58.1 +0.7**
CAN pmax pmax
comp=Z,59nm,1.8s
CAN Canberra 50.30 131 P **P** **21 06 58.1 +0.7**
CAN lAmb lAmb 21 07 40.8
comp=Z,58nm,1.8s
INU Inuyama 51.75 34 P **P** **21 07 07.0 -1.2**
WMQ Urumqi 52.07 345 P **P** **21 07 11.3 +0.8**
WMQ pP pwP 21 07 27.0 -0.4
WMQ pmax pmax
comp=Z,80nm,1.1s
WMQ pmax pmax
comp=Z,77nm,3.7s
WMQ LR LR
comp=Z,93nm,18.1s
WMQ LR LR
comp=Z,79nm,16.5s
WMQ LR LR
comp=Z,400nm,24.5s
WMQ Urumqi 52.07 345 P **P** **21 07 11.0 +0.5**
WMQ pmax pmax
comp=Z,82nm,0.8s
WMQ Urumqi 52.07 345 P **P** **21 07 11.0 +0.5**
KBL Kabul 52.42 323 P **P** **21 07 13.0 -0.4**
KBL pmax pmax
comp=Z,15nm,0.7s
KBL Kabul 52.42 323 P **P** **21 07 13.0 -0.4**
KBL lAmb lAmb 21 07 15.9
comp=Z,15nm,0.7s
KSH Kashi 52.50 333 P **P** **21 07 12.9 -0.9**
KSH sP sP 21 07 37.9 +4.0
KSH PP **PP** **21 09 11.3 -2.0**
KSH S **S** **21 14 29.0 -7.6**
KSH SS **SS** **21 18 10.8 -4.7**
KSH pmax pmax
comp=Z,130nm,0.6s
KSH pmax pmax
comp=Z,270nm,4.2s
KSH LR LR
comp=Z,220nm,4.8s
KSH LR LR
comp=Z,160nm,5.4s
KSH LR LR
comp=Z,320nm,6.3s
WSAR Wadi Sarin 53.26 305 P **P** **21 07 21.5 +2.0**
comp=Z,4.6nm,0.5s,baz=160,slow=8.5
WSAR LR LR 21 27 48.6
comp=Z,60nm,20.7s,baz=136,slow=34
MAJO Matsushiro 53.28 34⇓*i*P **P** **21 07 17.7 -1.8**
MAJO pmax pmax
comp=Z,26nm,1.5s
MAJO Matsushiro 53.28 34 P **P** **21 07 18.1 -1.4**
MAJO lAmb lAmb 21 07 18.5
comp=Z,23nm,1.3s
MAT Matsushiro 53.28 34 P **P** **21 07 17.0 -2.5**
MJAR Matsushiro Arr 53.28 34 P **P** **21 07 18.0 -1.5**
comp=Z,7.4nm,0.7s,baz=216,slow=8.5,SNR=28
MJAR PcP **PcP** **21 08 27.5 +0.9**
comp=Z,4.4nm,0.7s,baz=199,slow=3.9,SNR=7.0
MJAR LR LR 21 31 55.9
comp=Z,50nm,18.7s,baz=85,slow=38
MJAR Matsushiro Arr 53.28 34 P **P** **21 07 18.0 -1.5**
MJB9 Matsu-Tunnel 53.28 34 P **P** **21 07 18.0 -1.5**
MJB9 lAmb lAmb 21 07 18.8
comp=Z,34nm,1.8s
MJA0 Matsu Arr-Jizo 53.30 34 *e*P **P** **21 07 17.9 -1.8**
MJA0 pmax pmax
comp=Z,8.0nm,0.7s
CN2 Changchun 53.50 19 *e*P **P** **21 07 20.0 -0.9**
CN2 pmax pmax
comp=Z,70nm,1.0s
CN2 pmax pmax
comp=Z,140nm,5.0s
CN2 LR LR
comp=Z,260nm,19.0s
CN2 LR LR
comp=Z,230nm,19.0s
CN2 LR LR
comp=Z,400nm,20.0s
TARG Taragay, Kyrgy 53.52 336 P **P** **21 07 21.9 +0.3**
TARG lAmb lAmb 21 07 49.3
comp=Z,19nm,0.9s
PRZ Przheval'sk 53.92 337 P **P** **21 07 25.2 +0.9**
PRZ pmax pmax
comp=Z,35nm,1.1s
PRZ Przheval'sk 53.92 337 P **P** **21 07 25.2 +0.9**
PRZ lAmb lAmb 21 07 25.9
comp=Z,35nm,1.1s
SONM Songino Array 53.96 2 P **P** **21 07 24.9 +0.5**
comp=Z,41nm,0.8s,baz=179,slow=9.0,SNR=226
SONM PcP **PcP** **21 08 30.0 +0.9**
comp=Z,7.0nm,0.7s,baz=179,slow=5.0,SNR=1.9
SONM ScP **ScP** **21 12 24.1 +1.5**
comp=Z,0.7nm,0.8s,baz=178,slow=3.8,SNR=2.9
SONM LR LR 21 32 47.3
comp=Z,292nm,20.3s,baz=180,slow=39
ULN Ulaanbaatar 54.02 2*c i*P **P** **21 07 24.9 +0.1**
ULN pmax pmax
comp=Z,54nm,1.3s
ULN Ulaanbaatar 54.02 2 P **P** **21 07 25.1 +0.3**
ULN lAmb lAmb 21 07 26.1
comp=Z,30nm,0.8s
KDJ Kajisay 54.12 335 P **P** **21 07 26.0 +0.3**
KDJ pmax pmax
comp=Z,72nm,0.7s
KDJ Kajisay 54.12 335 P **P** **21 07 26.0 +0.3**
MSHR Mys Shultsa 54.55 24⇑*e*P **P** **21 07 28.3 -0.3**
MSHR pmax pmax
comp=Z,16nm,0.7s
ULHL Ulahol 54.60 335 P **P** **21 07 29.1 -0.2**
SNR=30
GAR Garm 54.89 328 P **P** **21 07 30.2 -1.1**
KZA Kyzart 54.89 334 P **P** **21 07 31.8 +0.2**
SNR=36
CHGR Chuyangaron 55.26 327 P **P** **21 07 32.6 -1.3**
VLA Vladivostok 55.29 25*de*P **P** **21 07 34.0 +0.1**
VLA pmax pmax
comp=Z,41nm,1.0s
UCH Uchtor 55.34 334 P **P** **21 07 35.0 +0.1**
SNR=29
BTK Batken 55.41 329 P **P** **21 07 35.2 +0.1**
BTK pmax pmax
comp=Z,41nm,0.6s
BTK Batken 55.41 329 P **P** **21 07 35.1 +0.1**
TKM2 Tokmak 2 55.43 335 P **P** **21 07 35.1 -0.1**
SNR=111
KBK Karagaybulak 55.49 334 P **P** **21 07 36.2 +0.5**
SNR=46
AML Almayashu 55.63 333 P **P** **21 07 37.8 +0.8**
SNR=10
MDJ Mudanjiang 55.65 22 P **P** **21 07 36.6 +0.1**
MDJ pmax pmax
comp=Z,21nm,0.8s
MDJ pmax pmax
comp=Z,120nm,3.5s
MDJ Mudanjiang 55.65 22 P **P** **21 07 36.3 -0.2**
MDJ lAmb lAmb 21 07 37.1
comp=Z,16nm,0.9s
AAK Ala-Archa 55.67 334 P **P** **21 07 37.2 +0.2**
SNR=17
AAK Ala-Archa 55.67 334 *i* P **P** **21 07 37.1 +0.1**
SNR=22
AAK Ala-Archa 55.67 334*ce*P **P** **21 07 37.0 +0.1**

AAK pmax pmax
comp=Z,9.0nm,0.6s
AAK Ala-Archa 55.67 334 P **P** **21 07 36.7 -0.3**
AAK lAmb lAmb 21 07 38.2
comp=Z,11nm,0.7s
FRU1 Bishkek 55.76 334 P **P** **21 07 37.3 -0.1**
FRU1 pmax pmax
comp=Z,42nm,0.7s
FRU1 Bishkek 55.76 334 P **P** **21 07 37.3 -0.1**
CHMS Chumnysh 55.85 334 P **P** **21 07 37.5 -0.5**
SNR=11
ALNE Al Ain 55.98 304 *i* P **P** **21 07 41.1 +1.9**
SNR=10
ASHO Ashiyiah 56.01 305 *i* P **P** **21 07 40.8 +1.3**
SNR=6.4
UOSS Minazif 56.01 306 P **P** **21 07 40.6 +1.1**
UOSS Minazif 56.01 306 P **P** **21 07 40.4 +0.9**
UOSS lAmb lAmb 21 07 56.2
comp=Z,50nm,1.8s
HATD Hatta, Dubai 56.01 306 P **P** **21 07 41.0 +1.5**
EKS2 Erkin-Say 56.01 333 P **P** **21 07 39.7 +0.4**
SNR=35
MDH Madha 56.09 306 P **P** **21 07 40.7 +0.6**
USP Ospenovka 56.18 334 P **P** **21 07 39.7 -0.7**
SNR=20
USA0B Ussuriysk Arra 56.23 24 P **P** **21 07 40.4 -0.2**
USA0B pmax pmax
comp=Z,61nm,0.9s
USA0B Ussuriysk Arra 56.23 24 P **P** **21 07 40.4 -0.2**
USRK Ussuriysk Ar. 56.23 24 P **P** **21 07 40.4 -0.3**
comp=Z,43nm,0.7s,baz=214,slow=5.8,SNR=79
MSFE Esma-Masafi 56.23 306 P **P** **21 07 42.8 +1.7**
MK31 Makanchi Array 56.32 342 P **P** **21 07 40.9 -0.4**
MK31 pmax pmax
comp=Z,25nm,0.7s
MK31 Makanchi Array 56.32 342 P **P** **21 07 40.9 -0.4**
MK31 lAmb lAmb 21 07 41.8
comp=Z,25nm,0.7s
MKAR Makanchi Array 56.32 342 P **P** **21 07 40.9 -0.5**
comp=Z,28nm,0.5s,baz=149,slow=8.3,SNR=348
MKAR LR LR 21 35 53.6
comp=Z,107nm,20.2s,baz=110,slow=40
MKAR Makanchi Array 56.32 342 *eP* **P** **21 07 40.8 -0.5**
MKAR pmax pmax
comp=Z,29nm,0.5s
BANOM Banah 56.38 307 P **P** **21 07 43.8 +1.6**
MAKZ Makanchi 56.43 342 P **P** **21 07 41.4 -0.7**
MAKZ pmax pmax
comp=Z,20nm,1.1s
MAKZ Makanchi 56.43 342 P **P** **21 07 41.4 -0.7**
MAKZ lAmb lAmb 21 07 42.6
comp=Z,20nm,1.1s
NAZ Nazwa, Dubai 56.46 305 *i* P **P** **21 07 44.4 +1.7**
SNR=5.5
ZAK Zakamensk 56.48 359 *eP* **P** **21 07 42.1 -0.4**
ZAK pmax pmax
comp=Z,18nm,1.0s
SHME Shamm 56.56 307 P **P** **21 07 45.5 +2.0**
HRA Herat 56.58 319 P **P** **21 07 43.7 +0.1**
HIA Hailar 57.02 12 P **P** **21 07 45.7 -0.5**
HIA pmax pmax
comp=Z,25nm,0.8s
HIA Hailar 57.02 12 P **P** **21 07 45.7 -0.5**
HIA lAmb lAmb 21 07 46.3
comp=Z,25nm,0.8s
TAS Tashkent 57.13 329 P **P** **21 07 47.2 0.0**
TAS pmax pmax
comp=Z,78nm,0.8s
TAS Tashkent 57.13 329 P **P** **21 07 47.2 0.0**
TLY Talaya 57.78 360 *eP* **P** **21 07 52.0 +0.5**
TLY pmax pmax
comp=Z,77nm,0.8s
TLY MLR MLR
comp=Z,486nm,16.0s
TLY Talaya 57.78 360 P **P** **21 07 51.8 +0.3**
MOY Mondy 57.82 358 *eP* **P** **21 07 52.1 +0.2**
MOY pmax pmax
comp=Z,32nm,1.9s
KK31 Karatay Array 57.86 331 P **P** **21 07 51.4 -0.9**
KK31 pmax pmax
comp=Z,9.0nm,0.6s
KK31 Karatay Array 57.86 331 P **P** **21 07 51.4 -0.9**
KK31 lAmb lAmb 21 07 52.5
comp=Z,9.0nm,0.6s
IRK Irkutsk 58.34 0 *eP* **P** **21 07 55.3 -0.1**
IRK pmax pmax
comp=Z,35nm,1.4s
KLR Kul'dur 60.36 20*c i*P **P** **21 08 08.4 -1.0**
KURK Kurchatov 60.92 342*c i*P **P** **21 08 12.6 -0.6**
KURK pmax pmax
comp=Z,54nm,1.3s
KURK Kurchatov 60.92 342 P **P** **21 08 12.8 -0.4**
ASAJ Asahikawa 61.02 31 P **P** **21 08 13.3 -0.7**
comp=Z,5.6nm,0.5s,baz=244,slow=6.2,SNR=10
ASAJ LR LR 21 35 56.5
comp=Z,21nm,18.1s,baz=254,slow=37
GEYT Alibeck 61.37 320 P **P** **21 08 17.0 +0.5**
comp=Z,16nm,0.7s,baz=152,slow=6.6,SNR=26
GEYT LR LR 21 37 17.1
comp=Z,64nm,21.6s,baz=25,slow=38
GYA0B ALIBECK ARRAY 61.37 320 P **P** **21 08 16.5 0.0**
GYA0B lAmb lAmb 21 08 20.5
comp=Z,17nm,0.8s
DZM Mont Dzumac 62.04 112 *eP* **P** **21 08 24.3 +2.8**
comp=Z,8.1nm,0.6s
DZM Mont Dzumac 62.04 112 *e*LR LR 21 26 52.0
comp=Z,143nm,21.7s
DZM Mont Dzumac 62.04 112 P **P** **21 08 22.7 +1.2**
comp=Z,4.9nm,0.8s,baz=119,slow=19,SNR=2.4
DZM Mont Dzumac 62.04 112 P **P** **21 08 21.7 +0.3**
DZM lAmb lAmb 21 09 30.6
comp=Z,27nm,1.5s
ZAA0 Zalesovo Array 62.20 347 P **P** **21 08 21.1 -0.6**
ZALV Zalesovo Beam 62.20 347 P **P** **21 08 21.1 -0.7**
comp=Z,44nm,0.7s,baz=154,slow=4.6,SNR=181
ZALV LR LR 21 38 15.6
comp=Z,220nm,18.9s,baz=148,slow=39
ZEA Zeya 62.94 15 *eP* **P** **21 08 27.0 +0.3**
ZEA pmax pmax
comp=N,41nm,1.0s
ZEA pmax pmax
comp=Z,52nm,1.0s
ZEA MLR MLR
comp=Z,300nm,18.0s
YSS Yuzh-Sakhalins 63.12 29 *eP* P 21 08 20.5 -7.5
YSS *e* 21 08 36.4
YSS pmax pmax
comp=Z,30nm,1.6s
ATD Arta Tunnel 63.46 286 P **P** **21 08 32.4 +1.4**
comp=Z,3.9nm,0.8s,baz=90,slow=19,SNR=2.3
RAYN Ar Rayn 64.41 300 P **P** **21 08 38.0 +1.0**
RAYN Ar Rayn 64.41 300 P **P** **21 08 37.8 +0.8**
RAYN pmax pmax
comp=Z,43nm,1.6s
RAYN Ar Rayn 64.41 300 P **P** **21 08 37.8 +0.8**
RAYN lAmb lAmb 21 08 54.0
comp=Z,42nm,1.6s
BOD Bodaibo 64.43 6 *eP* **P** **21 08 35.5 -0.9**
BOD pmax pmax
comp=Z,29nm,0.9s
BRVK Borovoye 65.72 338*d i*P **P** **21 08 44.0 -0.9**
BRVK pmax pmax
comp=Z,24nm,1.3s
BRVK Borovoye 65.72 338 P **P** **21 08 44.4 -0.5**
BRVK lAmb lAmb 21 09 02.2
comp=Z,14nm,0.7s
KMBO Kilima Mbogo 66.87 271 P **P** **21 08 56.5 +3.1**
comp=Z,1.6nm,0.6s,baz=47,slow=9.3,SNR=4.1
KMBO LR LR 21 33 06.9
comp=Z,121nm,20.9s,baz=100,slow=31
KMBO Kilima Mbogo 66.87 271 *eP* **P** **21 08 55.3 +1.9**
KMBO pmax pmax
comp=Z,2.0nm,0.7s
MAW Mawson 67.20 196 P **P** **21 08 55.5 +1.4**
comp=Z,1.3nm,0.5s,baz=52,slow=3.4,SNR=7.3
MAW LR LR 21 33 56.7
comp=Z,257nm,18.6s,baz=53,slow=32
MAW Mawson 67.20 196 P **P** **21 08 55.3 +1.2**
MAW pmax pmax
comp=Z,5.0nm,1.5s
MAW Mawson 67.20 196 P **P** **21 08 55.3 +1.2**
AKTO Aktyubinsk 69.10 330 P **P** **21 09 06.1 -0.2**
comp=Z,11nm,0.6s,baz=120,slow=8.6,SNR=33
AKT Akhty 70.03 318 *eP* **P** **21 09 13.3 +0.9**
AKT *e* 21 09 34.9
AKT pmax pmax
comp=Z,17nm,0.7s
YAK Yakutsk 70.96 12*c i*P **P** **21 09 16.2 -1.2**
YAK *e**PP **pP** **21 09 26.5 -5.6**
YAK *e* 21 09 37.8
YAK *e*S **S** **21 18 31.4 +2.6**
YAK *e**SS **pS** **21 18 48.6 +1.4**
YAK *e* 21 19 15.9
YAK pmax pmax
comp=Z,48nm,0.8s
YAK pmax pmax
comp=N,14nm,1.1s
YAK pmax pmax
comp=E,10.0nm,1.4s
YAK pmax pmax
comp=Z,192nm,7.3s
YAK pmax pmax
comp=N,194nm,7.4s
YAK pmax pmax
comp=E,140nm,6.8s
YAK smax smax
comp=N,43nm,5.8s
YAK smax smax
comp=E,58nm,5.5s
YAK MLR MLR
comp=Z,151nm,22.0s
YAK MLR MLR
comp=N,91nm,20.0s
YAK MLR MLR
comp=E,51nm,18.0s
YAK Yakutsk 70.96 12 P **P** **21 09 16.4 -1.0**
MSWZ Moikau Station 71.72 131 P **P** **21 09 21.6 -1.0**
TBLG Delisi 72.15 317 P **P** **21 09 25.3 +0.2**
TBLG pmax pmax
comp=Z,20nm,0.8s
TBLG Delisi 72.15 317 P **P** **21 09 25.3 +0.2**
TBLG lAmb lAmb 21 09 30.0
comp=Z,20nm,0.8s
SVE Sverdlovsk 72.23 337 *eP* **P** **21 09 25.7 +0.5**
SVE pmax pmax
comp=Z,44nm,0.9s
ARU Arti 72.79 335 P **P** **21 09 28.8 +0.2**
comp=Z,11nm,0.6s,baz=131,slow=3.8,SNR=58
ARU Arti 72.79 335*d i*P **P** **21 09 28.5 -0.1**
ARU 21 09 41.3
ARU **PP* **pwP** **21 09 46.3 +0.1**
ARU S **S** **21 18 48.0 -2.1**
ARU pmax pmax
comp=Z,25nm,0.6s
ARU Arti 72.79 335 P **P** **21 09 28.7 +0.2**
ARU lAmb lAmb 21 09 29.7
comp=Z,41nm,1.0s
AKH Akhalkalaki 72.85 317 P **P** **21 09 29.9 +0.4**
AKH pmax pmax
comp=Z,38nm,1.9s
AKH Akhalkalaki 72.85 317 P **P** **21 09 29.9 +0.4**
AKH lAmb lAmb 21 09 31.8
comp=Z,38nm,1.9s
ZEI Tsey 73.17 318 *eP* **P** **21 09 31.4 0.0**
ZEI pmax pmax
comp=Z,14nm,0.5s
MBAR Mbarara 73.40 271*ceP* **P** **21 09 35.5 +2.2**
MBAR pmax pmax
comp=Z,4.0nm,1.0s
NCK Nalchik 73.67 319 *i*P **P** **21 09 35.3 +1.2**
NCK pmax pmax
comp=Z,18nm,0.8s
NEY Neytrino 74.14 318 *eP* **P** **21 09 38.4 +1.3**
NEY pmax pmax
comp=Z,3.0nm,1.0s
KBZ Khabaz 74.23 319 P **P** **21 09 38.2 +0.9**
comp=Z,8.8nm,0.8s,baz=122,slow=4.8,SNR=14
ASF Jabal al Asfar 74.42 306 P **P** **21 09 40.2 +1.4**
comp=Z,9.1nm,0.8s,baz=78,slow=3.3,SNR=27
PETK Petropavlovsk- 74.43 30 P **P** **21 09 37.6 -0.7**
comp=Z,7.0nm,0.7s,baz=258,slow=5.9,SNR=13
PETK LR LR 21 44 38.6
comp=Z,25nm,18.2s,baz=242,slow=38
KVAR Kislovodsk Arr 74.46 319 P **P** **21 09 42.2 +3.4**
comp=Z,1.6nm,0.4s,baz=90,slow=20,SNR=3.1
KIV Kislovodsk 74.47 319*c i*P **P** **21 09 39.2 +0.4**
KIV *e* 21 09 54.9
KIV S S 21 19 19.0 +9.3
KIV pmax pmax
comp=Z,13nm,1.3s
KIV MLR MLR
comp=Z,25nm,19.0s
KIV Kislovodsk 74.47 319 P **P** **21 09 39.2 +0.4**
KIV lAmb lAmb 21 09 56.6
comp=Z,36nm,1.7s
LSZ Lusaka 74.80 256 P **P** **21 09 41.0 -0.4**
LSZ pmax pmax
comp=Z,11nm,1.4s
LSZ Lusaka 74.80 256 P **P** **21 09 41.0 -0.4**
PET Petropavlovsk 74.87 31 P **P** **21 09 40.0 -0.8**
PET pmax pmax
comp=Z,26nm,0.6s
PET Petropavlovsk 74.87 31 P **P** **21 09 40.0 -0.8**
PET lAmb lAmb 21 09 40.6
comp=Z,26nm,0.6s
SYO Syowa Base 75.16 200⇑*i*X P 21 09 49.0 +6.8
EIL Elat 75.28 303 P **P** **21 09 45.2 +1.5**
comp=Z,15nm,0.7s,baz=150,slow=1.8,SNR=16
MA2 Magadan 75.35 22*c i*P **P** **21 09 43.2 -0.2**
MA2 pmax pmax
comp=Z,19nm,0.9s
MA2 Magadan 75.35 22 P **P** **21 09 43.1 -0.3**
MMAI Mount Meron Ar 75.87 306 P **P** **21 09 49.2 +2.1**
comp=Z,11nm,0.7s,baz=96,slow=7.6,SNR=28
VNDA Vanda 77.16 169 P **P** **21 09 54.3 +0.7**
comp=Z,1.5nm,0.8s,baz=273,slow=4.3,SNR=9.5
VNDA LR LR 21 40 16.8
comp=Z,119nm,18.3s,baz=317,slow=33
VNDA Vanda 77.16 169 P **P** **21 09 54.2 +0.7**
VNDA pmax pmax
comp=Z,16nm,1.7s
VNDA Vanda 77.16 169 P **P** **21 09 54.2 +0.7**
BOSA Boshof 77.22 242 P **P** **21 09 56.0 +1.1**
comp=Z,3.7nm,1.1s,baz=59,slow=12,SNR=1.8
BOSA LR LR 21 39 33.9
comp=Z,115nm,18.6s,baz=106,slow=32
BOSA Boshof 77.22 242 P **P** **21 09 55.5 +0.6**
BOSA pmax pmax
comp=Z,59nm,2.0s
BOSA Boshof 77.22 242 P **P** **21 09 55.5 +0.6**
BOSA lAmb lAmb 21 12 14.5
comp=Z,59nm,1.9s
KIRV Kirov 78.01 334 P **P** **21 09 58.1 -0.3**
comp=Z,36nm,0.7s,baz=120,slow=1.1,SNR=20
CSS Mathiatis 78.08 308 P **P** **21 10 00.4 +1.0**
CSS lAmb lAmb 21 10 01.8
comp=Z,32nm,0.8s
VRH Novokhopyorsk 78.18 325 *eP* **P** **21 09 59.3 -0.2**
VRH *e**PP **pP** **21 10 16.4 +2.0**
VRH pmax pmax
comp=Z,20nm,0.7s
ANN Anapa 78.26 318 *eP* **P** **21 09 57.0 -3.1**
ANN *e* 21 10 05.1
ANN *e*PPP PPP 21 14 47.7
ANN *e*S **S** **21 19 44.2 -6.8**
ANN *e*SS **SS** **21 24 52.9 -1.6**
ANN pmax pmax
comp=Z,9.0nm,0.7s
DIKM Dikmen 78.67 315 ⇓P **P** **21 10 03.7 +1.2**
BR131 Keskin Array S 79.24 312 P **P** **21 10 06.0 +0.2**
BR131 pmax pmax
comp=Z,17nm,0.7s
BR131 Keskin Array S 79.24 312 P **P** **21 10 06.0 +0.2**
BR131 lAmb lAmb 21 10 07.0
comp=Z,17nm,0.7s
BRTR Keskin Array B 79.24 312 P **P** **21 10 06.1 +0.2**
comp=Z,13nm,0.6s,baz=135,slow=7.1,SNR=51
BRTR LR LR 21 48 40.7
comp=Z,25nm,19.2s,baz=91,slow=38
VORD Divnogorie 79.47 324 *eP* **P** **21 10 06.2 -0.4**
VORD *e**PP **pwP** **21 10 24.0 -0.3**
VORD pmax pmax
comp=Z,10.0nm,1.3s
TIXI Tiksi 79.51 8*c i*P **P** **21 10 05.0 -1.4**
TIXI pmax pmax
comp=Z,24nm,1.8s
TIXI Tiksi 79.51 8 P **P** **21 10 04.9 -1.4**
ILGA Ilgaz 79.58 314 P **P** **21 10 07.6 -0.2**
VSR Storozhevoye 79.64 325 *eP* **P** **21 10 06.9 -0.7**
VSR *e**PP **pwP** **21 10 24.9 -0.4**
VSR pmax pmax
comp=Z,20nm,1.1s
BZK Bozkurt 79.66 315 ⇓P **P** **21 10 09.3 +1.5**
ANTO Ankara 79.90 312 ⇑P **P** **21 10 10.7 +1.4**
ANTO Ankara 79.90 312 P **P** **21 10 09.9 +0.6**
ANTO pmax pmax
comp=Z,15nm,0.9s
ANTO Ankara 79.90 312 P **P** **21 10 09.9 +0.6**
ANTO lAmb lAmb 21 10 11.1
comp=Z,15nm,0.8s
LPSR Galich'ya Gora 80.34 326 *eP* **P** **21 10 11.2 -0.1**
LPSR *e**PP **pwP** **21 10 29.0 -0.1**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
SIM Simferopol' 80.53 317*ceP* **P** **21 10 13.4 +0.9**
SIM *PP **pwP** **21 10 32.0 +1.8**
SIM pmax pmax
comp=Z,26nm,0.7s
ELL Elmali 81.24 309 lAmb lAmb 21 10 18.7
comp=Z,38nm,0.8s
MDUB Mudurnu 81.25 312 P **P** **21 10 17.3 +0.7**
MOS Moscow 82.29 328 *eP* **P** **21 10 18.4 -3.1**
MOS *e* 21 10 34.3
MOS pmax pmax
comp=Z,36nm,0.8s
OBN Obninsk 82.61 328 P **P** **21 10 24.0 +0.8**
comp=Z,4.9nm,0.6s,baz=43,slow=0.6,SNR=6.6
OBN Obninsk 82.61 328 ⇓P **P** **21 10 24.4 +1.2**
OBN Obninsk 82.61 328*c i*P **P** **21 10 23.9 +0.8**
OBN *i* *PP **pwP** **21 10 41.7 +0.7**
OBN 21 13 29.0
OBN pmax pmax
comp=Z,18nm,0.6s
OBN MLR MLR
comp=Z,47nm,20.0s
OBN Obninsk 82.61 328 P **P** **21 10 24.0 +0.8**
OBN lAmb lAmb 21 10 42.7
comp=Z,37nm,0.9s
ISK Istanbul-Kandi 82.97 313 P **P** **21 10 26.1 +0.7**
KARP Karpathos 83.12 307 P **P** **21 10 27.8 +1.4**
KARP Karpathos 83.12 307 P **P** **21 10 27.2 +0.8**
KLMR Klimovskoe 83.49 334 *eP* **P** **21 10 25.5 -2.1**
KLMR pmax pmax
comp=Z,40nm,1.3s
KLMR Klimovskoe 83.49 334 *eP* **P** **21 10 25.5 -2.1**
KLMR AMP 21 10 29.2
comp=Z,40nm,1.3s
QSPA South Pole Qui 83.66 180 P **P** **21 10 29.2 +0.5**
JURR Jurilovca 84.04 316 ⇓P **P** **21 10 31.0 +0.2**
TIRR Tirgusor 84.28 316 ⇑P **P** **21 10 33.1 +1.0**
LAST Lasithi 84.38 306 P **P** **21 10 34.2 +1.3**
ANAF Anafi Island 84.39 307 P **P** **21 10 33.7 +0.8**
AMGA Amorgos Island 84.39 308 P **P** **21 10 33.5 +0.6**
TOPG Topolog 84.41 316 ⇑P **P** **21 10 33.7 +1.0**
SANT Santorini 84.64 307 ⇓P **P** **21 10 35.0 +0.8**
SANT Santorini 84.64 307 P **P** **21 10 34.5 +0.3**
MILM Milestii Mici 84.64 318 ⇓P **P** **21 10 34.9 +1.1**
CFR Carcaliu 84.66 316 ⇑P **P** **21 10 34.9 +1.0**
KIS Kishinev 84.66 318 *eP* **P** **21 10 35.0 +1.1**
KIS Kishinev 84.66 318 *eP* **P** **21 10 35.0 +1.1**
KIS *e* 21 10 50.0
HARR Harsova 84.67 316 ⇓P **P** **21 10 35.5 +1.4**
THR6 Thira Island, 84.69 307 P **P** **21 10 35.0 +0.7**
THR3 Thira Island, 84.69 307 P **P** **21 10 35.2 +0.9**
APE Apeiranthos 84.73 308 ⇓P **P** **21 10 35.3 +0.7**
THR5 Thira Island, 84.74 307 P **P** **21 10 35.4 +0.8**
IDI Anoyia 84.88 306 P **P** **21 10 36.8 +1.3**
comp=Z,9.1nm,0.6s,baz=77,slow=7.5,SNR=27
IDI Anoyia 84.88 306 ⇓P **P** **21 10 36.5 +1.1**
IDI Anoyia 84.88 306 P **P** **21 10 36.7 +1.3**
IDI lAmb lAmb 21 10 53.0
comp=Z,30nm,1.2s
LEOM Leova 84.91 318 ⇑P **P** **21 10 36.8 +1.7**
VASR Vaslui 85.25 318 ⇑P **P** **21 10 38.5 +1.6**
SORM Soroca 85.26 319 ⇑P **P** **21 10 37.7 +0.8**
AKASG Malin Array Be 85.38 322 P **P** **21 10 37.7 +0.2**
comp=Z,6.1nm,0.6s,baz=88,slow=4.6,SNR=26
AKBB Malin Array Si 85.38 322*ceP* **P** **21 10 37.9 +0.4**
AKBB Malin Array Si 85.38 322 P **P** **21 10 37.7 +0.2**
AKBB lAmb lAmb 21 10 38.3
comp=Z,9.9nm,0.7s
VAM Vamos 85.45 306 P **P** **21 10 40.1 +1.9**
TMCR Tamitsa 85.51 336 *eP* **P** **21 10 38.0 +0.3**
TMCR pmax pmax
comp=Z,19nm,0.6s
BISRR Bisoca 85.72 317 ⇓P P 21 10 47.6 +8.2
ISR Istrita 85.73 316 ⇓P **P** **21 10 41.8 +2.4**
VRI Vrincioaia 85.78 317 ⇑P **P** **21 10 41.6 +1.9**
BILL Bilibino 85.80 19*c i*P **P** **21 10 38.5 -0.7**
BILL *e* 21 10 47.6
BILL *e* 21 14 04.8
BILL *e*SSS SSS 21 30 12.6
BILL pmax pmax
comp=Z,6.0nm,0.6s
BILL MLR MLR
comp=Z,68nm,18.0s
BILL Bilibino 85.80 19 P **P** **21 10 38.3 -0.9**
BILL lAmb lAmb 21 10 39.6
comp=Z,9.2nm,0.8s
PLOR Plostina 85.83 317 ⇑P **P** **21 10 41.8 +2.0**
SULR 85.83 316 ⇓P **P** **21 10 42.1 +2.2**
TESR Tescani 85.98 317 ⇑P **P** **21 10 42.2 +1.6**
MLR Muntele Rosu 86.23 316 P **P** **21 10 43.6 +1.6**
comp=Z,12nm,0.7s,baz=48,slow=0.3,SNR=22
MLR Muntele Rosu 86.23 316 ⇓P **P** **21 10 43.8 +1.8**
BIZ Bicaz 86.45 318 ⇑P **P** **21 10 44.5 +1.6**
PRAR RASCA 86.46 318 ⇑P **P** **21 10 44.4 +1.5**
HUMR Humele 86.69 315 ⇑P **P** **21 10 45.5 +1.4**
PLVB Pleven 86.71 314 ⇓P **P** **21 10 45.9 +1.7**
DOPR Dopca 86.72 317 ⇑P **P** **21 10 45.9 +1.7**
ARR Arges 87.11 316 ⇓P **P** **21 10 47.4 +1.2**
BURAR Bucovina Array 87.19 318 ⇓P **P** **21 10 49.0 +2.4**
BUR08 Bucovina Ar. S 87.20 318 lAmb lAmb 21 10 49.7
comp=Z,21nm,0.8s
PUL Pulkovo 87.36 331⇑*eP* **P** **21 10 46.4 -0.5**
PUL pmax pmax
comp=Z,29nm,0.6s
VTS Vitosha 87.56 313 ⇑P **P** **21 10 49.7 +1.1**
VTS Vitosha 87.56 313 P **P** **21 10 49.4 +0.9**
VTS pmax pmax
comp=Z,14nm,0.9s
VTS Vitosha 87.56 313 P **P** **21 10 49.4 +0.9**
VTS lAmb lAmb 21 10 50.6
comp=Z,14nm,0.9s
ITM Ithomi 87.58 308 P **P** **21 10 48.8 +0.2**
AGG Agios Georgios 87.58 309 P **P** **21 10 48.1 -0.5**
AGG pmax pmax
comp=Z,18nm,0.8s
AGG Agios Georgios 87.58 309 P **P** **21 10 48.1 -0.5**
AGG lAmb lAmb 21 14 12.7
comp=Z,18nm,0.8s
ARCR ARCALIA 87.65 318 ⇓P **P** **21 10 51.0 +2.3**
NACGM Naroch 87.90 326 *e* **P** **21 10 49.0 -0.6**
NACGM *e*LQ LQ 22 17 23.0
CJR Cluj-Napoca 88.08 317 ⇓P **P** **21 10 53.2 +2.4**
LVZ Lovozero 88.24 339 P **P** **21 10 51.0 0.0**
LVZ pmax pmax
comp=Z,217nm,1.8s
LVZ Lovozero 88.24 339 P **P** **21 10 51.0 0.0**
IIGN Ignalina 88.31 326 *eP* **P** **21 10 52.5 +0.8**
BMR Baia Mare 88.34 318 ⇓P **P** **21 10 54.1 +2.2**
GZR Gura Zlata 88.39 316 ⇑P **P** **21 10 54.7 +2.4**
DEV Deva 88.40 316 ⇑P **P** **21 10 54.6 +2.4**
LVV L'vov 88.41 320 *eP* **P** **21 10 53.3 +1.1**
ISAL Salakas 88.42 326 *eP* **P** **21 10 52.9 +0.8**
HERR Herculane 88.55 315 ⇑P **P** **21 10 54.5 +1.5**
FNA Florina 88.60 311 P **P** **21 10 53.5 +0.1**
FNA pmax pmax
comp=Z,11nm,0.6s
FNA Florina 88.60 311 P **P** **21 10 53.5 +0.1**
FNA lAmb lAmb 21 14 21.3
comp=Z,11nm,0.6s
DRGR 88.70 317 ⇑P **P** **21 10 55.5 +1.8**
VSU Vasula 88.78 329 *eP* **P** **21 10 54.7 +1.0**
VSU Vasula 88.78 329*ceP* **P** **21 10 54.4 +0.7**
VSU pmax pmax
comp=Z,44nm,0.8s
MDVR Moldovita 89.03 315 ⇑P **P** **21 10 56.8 +1.4**
TRPA Tarpa 89.06 318 ⇑P **P** **21 10 57.1 +1.8**
BZS Buzias 89.24 316 ⇑P **P** **21 10 57.4 +1.3**
SNAA Sanae 89.30 198 P **P** **21 11 00.2 +4.1**
SNAA Sanae 89.30 198⇑*eP* **P** **21 10 59.3 +3.2**
SNAA Sanae 89.30 198 P **P** **21 10 56.9 +0.7**
UZH Uzhgorod 89.31 319*c i*P **P** **21 10 57.3 +0.9**

UZH				*i*				21 11 05.8	
SRN	**Sarande**		**89.50**	**310**	P		**P**	**21 10 58.6**	**+1.1**
PABE	**Paberze**		**89.60**	**326**	*e*P		**P**	**21 10 58.5**	**+0.8**
KEK	**Kerkira**		**89.63**	**310**	P		**P**	**21 10 59.3**	**+1.1**
SUW	**Suwalki**		**89.76**	**324**	P		**P**	**21 10 58.6**	**+0.2**
SUW					pmax		pmax		
	comp=Z,44nm,1.0s								
SUW	**Suwalki**		**89.76**	**324**	P		**P**	**21 10 58.6**	**+0.2**
FIA1	**FINESS Array S**		**89.82**	**332**	P		**P**	**21 10 58.8**	**+0.2**
FIA1					IAmb		IAmb	21 11 18.0	
	comp=Z,12nm,0.8s								
FINES	**FINESS Array B**		**89.82**	**332**	P		**P**	**21 10 59.2**	**+0.7**
	comp=Z,3.7nm,0.5s,baz=120,slow=6.1,SNR=24								
FINES					PP		**PP**	**21 14 32.2**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=108,slow=13,SNR=3.5								
FINES					LR		LR	21 56 55.1	
	comp=Z,45nm,18.2s,baz=80,slow=39								
TIR	**Tirane**		**89.82**	**311**	P		**P**	**21 10 59.4**	**+0.4**
TIR	**Tirane**		**89.82**	**311**	P		**P**	**21 10 59.4**	**+0.4**
DIVS	**Divibare**		**90.14**	**314**	IAmb		IAmb	21 11 19.0	
	comp=Z,17nm,1.0s								
PDG	**Podgorica**		**90.43**	**312**	⇑P		**P**	**21 11 03.0**	**+1.2**
PDG	**Podgorica**		**90.43**	**312**	IAmb		IAmb	21 11 19.8	
	comp=Z,23nm,1.0s								
PSZ	**Piszkesteto**		**90.77**	**318**	⇓P		**P**	**21 11 04.7**	**+1.3**
PSZ	**Piszkesteto**		**90.77**	**318**	P		**P**	**21 11 03.4**	**0.0**
PSZ					pmax		pmax		
	comp=Z,14nm,1.4s								
PSZ	**Piszkesteto**		**90.77**	**318**	P		**P**	**21 11 03.4**	**0.0**
PSZ					IAmb		IAmb	21 11 08.2	
	comp=Z,14nm,1.4s								
OJC	**Ojcow**		**91.17**	**320**	P		**P**	**21 11 05.2**	**0.0**
OJC					pmax		pmax		
	comp=Z,6.0nm,1.1s								
OJC	**Ojcow**		**91.17**	**320**	P		**P**	**21 11 05.2**	**0.0**
ARCES	**ARCESS Array B**		**91.91**	**340**	P		**P**	**21 11 08.0**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=90,slow=4.9,SNR=19								
ARCES					LR		LR	21 58 11.8	
	comp=Z,73nm,18.4s,baz=146,slow=39								
ARCES	**ARCESS Array B**		**91.91**	**340**	*e*P		**P**	**21 11 08.4**	**+0.3**
ARCES					pmax		pmax		
	comp=Z,3.0nm,0.6s								
ARE0	**ARCESS Array S**		**91.91**	**340**	P		**P**	**21 11 08.3**	**+0.1**
JAVC	**Velka Javorina**		**92.37**	**319**	*e*P		**P**	**21 11 12.5**	**+1.7**
MORC	**Moravsky Berou**		**92.56**	**320**	*e*P		**P**	**21 11 12.8**	**+1.2**
MORC	**Moravsky Berou**		**92.56**	**320**	⇑P		**P**	**21 11 12.9**	**+1.2**
MORC	**Moravsky Berou**		**92.56**	**320**	IAmb		IAmb	21 11 13.4	
	comp=Z,4.6nm,0.7s								
KOGS	**Kog**		**93.05**	**316**	*e*P		**P**	**21 11 15.2**	**+1.3**
KRLC	**Kraliky**		**93.08**	**320**	*e*P		**P**	**21 11 15.4**	**+1.4**
KRLC					*e*			21 11 31.5	
KRLC	**Kraliky**		**93.08**	**320**	*e*P		**P**	**21 11 15.4**	**+1.4**
KRLC					*ex*		x	21 11 31.5	
NIKH	**Nikolski High**		**93.22**	**37**	P		**P**	**21 11 14.1**	**-0.4**
KRUC	**Moravsky**		**93.22**	**319**	*e*P		**P**	**21 11 15.4**	**+0.8**
DPC	**Dobruska-Polom**		**93.40**	**320**	*e*P		**P**	**21 11 17.2**	**+1.7**
DPC	**Dobruska-Polom**		**93.40**	**320**	*e*P		**P**	**21 11 17.2**	**+1.7**
CONA	**Conrad Observa**		**93.46**	**318**	*i* PcP		**P**	**21 11 16.7**	**+0.9**
	comp=Z,2.5nm,1.4s								
OSTC	**Ostas**		**93.49**	**320**	*e*P		**P**	**21 11 17.4**	**+1.5**
OSTC					*ex*		x	21 11 37.6	
GROS	**Grobnik**		**93.57**	**316**	*i* P		**P**	**21 11 17.4**	**+1.0**
CHVC	**Chvalec**		**93.59**	**320**	*e*P		**P**	**21 11 17.8**	**+1.4**
UPC	**Upice**		**93.61**	**320**	*e*P		**P**	**21 11 17.9**	**+1.5**
UPC	**Upice**		**93.61**	**320**	*e*P		**P**	**21 11 17.9**	**+1.5**
ARSA	**Arzberg**		**93.63**	**317**	*e*PcP		**P**	**21 11 17.6**	**+1.1**
	comp=Z,3.2nm,0.9s								
BOJS	**Bojanci**		**93.65**	**315**	*i* P		**P**	**21 11 17.7**	**+1.0**
PERS	**Pernice**		**93.85**	**316**	*i* P		**P**	**21 11 18.8**	**+1.1**
SOKA	**Soboth**		**93.91**	**316**	*e*PcP		**P**	**21 11 19.1**	**+1.1**
	comp=Z,5.4nm,1.1s								
LJU	**Ljubljana**		**94.21**	**316**	*i* P		**P**	**21 11 20.4**	**+1.2**
PBCC	**Pribram**		**94.84**	**319**	*e*P		**P**	**21 11 23.0**	**+0.9**
BRG	**Berggiesshubel**		**94.96**	**321**	*e*PKP		**P**	**21 11 23.4**	**+0.8**
	comp=Z,4.7nm,0.8s								
BRG	**Berggiesshubel**		**94.96**	**321**	*e*P		**P**	**21 11 23.4**	**+0.8**
BRG					pmax		pmax		
	comp=Z,5.0nm,0.8s								
GEC2	**GERESS Array S**		**94.97**	**318**	P		**P**	**21 11 23.1**	**+0.2**
GERES	**GERESS Array B**		**94.97**	**318**	P		**P**	**21 11 23.6**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=94,slow=4.0,SNR=14								
GERES					PP		**PP**	**21 15 13.9**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=81,slow=6.3,SNR=3.3								
SPITS	**Spitsbergen Ar**		**95.68**	**348**	P		**P**	**21 11 24.6**	**-0.7**
	comp=Z,3.9nm,0.7s,baz=102,slow=11,SNR=8.7								
NOA	**NORSAR Array B**		**96.89**	**331**	P		**P**	**21 11 31.3**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=94,slow=6.7,SNR=2.3								
NOA					LR		LR	22 01 07.7	
	comp=Z,34nm,19.5s,baz=105,slow=39								
DAVOX	**Davos/Dischmat**		**97.46**	**316**	P		**P**	**21 11 34.3**	**0.0**
	comp=Z,1.6nm,0.6s,baz=18,slow=19,SNR=2.5								
KEST	**Kesra**		**97.51**	**305**	P		Pdif	21 11 35.5	+0.8
	comp=Z,1.9nm,0.7s,baz=68,slow=19,SNR=1.7								
TORD	**Torodi Ar. Bea**		**103.46**	**282**	Pdiff		**Pdif**	**21 11 59.8**	**-1.7**
	comp=Z,0.3nm,0.8s,baz=80,slow=5.4,SNR=1.3								
PPT2	**Papeete2**		**103.51**	**110**	*e*LR		LR	21 46 12.3	
	comp=Z,137nm,24.0s								
ILAR	**Eielson Array**		**103.75**	**25**	PP		**PKiKP**	**21 16 18.2**	**-1.2**
	comp=Z,0.6nm,0.8s,baz=276,slow=7.1,SNR=4.0								
YKA	**Yellowknife Ar**		**117.20**	**19**	PKP		**PKPdf**	**21 16 44.8**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=322,slow=1.4,SNR=14								
YKA					PP		**PP**	**21 17 56.3**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=328,slow=6.9,SNR=4.2								
YKA					PKKP		PKKPdf	21 27 28.6	-10
	comp=Z,0.3nm,0.5s,baz=119,slow=4.3,SNR=5.1								
J04D	**Umpqua Nationa**		**125.27**	**40**	P		**PKiKP**	**21 17 02.9**	**+1.4**
	baz=299								
J05D	**Fort Rock, OR**		**125.80**	**40**	P		**PKiKP**	**21 17 04.0**	**+1.4**
	baz=299								
F10A	**Beach Ranch, E**		**126.80**	**35**			**PKPdf**	**21 17 03.8**	**-0.1**
FFC	**Flin Flon**		**127.37**	**19**	PKIKP		**PKiKP**	**21 17 05.1**	**0.0**
FFC	**Flin Flon**		**127.37**	**19**			**PKiKP**	**21 17 05.1**	**0.0**
J08A	**Circle Bar Ran**		**127.50**	**38**			**PKiKP**	**21 17 07.0**	**+1.0**
MSO	**Missoula**		**128.10**	**33**	P		**PKiKP**	**21 17 07.5**	**+0.5**
	baz=309								
MSO	**Missoula**		**128.10**	**33**			**PKiKP**	**21 17 06.8**	**-0.2**
NVAR	**Mina Array Bea**		**130.10**	**44**	PKP		**PKiKP**	**21 17 12.1**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=5.7,slow=1.5,SNR=3.8								
PDAR	**Pinedale Array**		**133.10**	**34**	PKP		**PKPdf**	**21 17 15.1**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=270,slow=1.5,SNR=4.9								
PDAR					SKPab		**SKPab**	**21 20 44.7**	**+3.3**
	comp=Z,0.6nm,0.7s,baz=318,slow=2.0,SNR=4.8								
ULM	**Lac du Bonnet**		**133.13**	**17**	PKP		**PKiKP**	**21 17 16.9**	**+0.1**
	comp=Z,2.3nm,0.5s,baz=350,slow=3.8,SNR=3.7								
GMRC	**Granite Mounta**		**133.71**	**47**	P		**PKiKP**	**21 17 19.7**	**+1.0**
	baz=298								
U15A	**North Rim**		**135.24**	**43**			**PKiKP**	**21 17 22.1**	**+0.2**
EYMN	**Ely**		**136.44**	**15**	P		**PKiKP**	**21 17 24.1**	**+0.4**
	baz=337								
CHGQ	**Chibougamau**		**136.54**	**359**	P		**PKPdf**	**21 17 22.2**	**+0.1**
	baz=2.1								
MATQ	**Matagami**		**136.69**	**2**	P		**PKPdf**	**21 17 22.3**	**-0.1**
	baz=357								
ECSD	**EROS Data Cent**		**138.53**	**23**	P		**PKiKP**	**21 17 28.3**	**+0.2**
	baz=328								
ECSD	**EROS Data Cent**		**138.53**	**23**			**PKiKP**	**21 17 27.1**	**-0.9**
D47A	**Chapleau**		**138.95**	**8**	P		**PKPdf**	**21 17 26.6**	**0.0**
	baz=349								
D50A	**G1974 Best Tow**		**139.17**	**4**	P		**PKPdf**	**21 17 28.1**	**+1.1**
	baz=354								
E56A	**St. Veronique**		**139.92**	**359**	P		**PKiKP**	**21 17 30.6**	**-0.2**
	baz=1.3								
G47A	**Hillman**		**140.69**	**9**	P		**PKPdf**	**21 17 30.6**	**+0.8**
	baz=347								
L54A	**Sinclairville**		**144.11**	**4**	P		PKPbc	21 17 34.3	+0.2
	baz=354								
T35A	**Sooner Cattle**		**144.20**	**29**			PKPbc	21 17 34.4	-0.1
L55A	**Hinsdale**		**144.22**	**3**	P		**PKPab**	**21 17 34.2**	**+0.2**
	baz=356								
BINY	**Binghamton**		**144.27**	**0**	P		PKPbc	21 17 34.7	+0.1
	baz=360								
L53A	**Girard**		**144.31**	**6**	P		PKPbc	21 17 34.6	-0.1
	baz=352								
L58A	**Harry Jones Me**		**144.43**	**360**	P		**PKPab**	**21 17 34.9**	**+0.1**
	baz=0.0								
L57A	**Andrews Acres**		**144.46**	**1**	P		**PKPab**	**21 17 35.0**	**0.0**
	baz=358,SNR=5.2								
M50A	**Fremont**		**144.49**	**9**			PKPbc	21 17 35.3	0.0
M52A	**Chesterland**		**144.60**	**7**	P		PKPbc	21 17 35.8	+0.2
	baz=351,SNR=7.6								
M52A	**Chesterland**		**144.60**	**7**			PKPbc	21 17 35.8	+0.2
AC05	**El Transito**		**144.63**	**189**			PKPbc	21 17 37.1	+0.8
SFIN	**Lafayette**		**144.63**	**15**	P		PKPbc	21 17 36.3	+0.6
	baz=340								
N48A	**Decatur**		**144.66**	**12**	P		**PKPab**	**21 17 35.8**	**+0.1**
	baz=344,SNR=14								
WMOK	**Wichita Mounta**		**144.71**	**34**	P		PKPbc	21 17 36.3	+0.1
	baz=318								
M53A	**WI Miller and**		**144.77**	**6**	P		**PKPab**	**21 17 35.9**	**-0.2**
	baz=352,SNR=7.7								
BDFB	**Brasilia**		**144.80**	**231**	PKPbc		**PKPdf**	**21 17 38.5**	**+0.5**
	comp=Z,3.0nm,0.5s,baz=183,slow=15,SNR=5.7								
BDFB	**Brasilia**		**144.80**	**231**	PKIKP		**PKPdf**	**21 17 38.1**	**+0.1**
BDFB	**Brasilia**		**144.80**	**231**			**PKPdf**	**21 17 38.1**	**+0.1**
M54A	**Oil Creek Stat**		**144.80**	**5**	P		**PKPab**	**21 17 36.1**	**-0.1**
	baz=354,SNR=13								
M55A	**Ridgway**		**144.91**	**4**	P		**PKPab**	**21 17 36.5**	**-0.2**
	baz=355,SNR=6.0								
M55A	**Ridgway**		**144.91**	**4**			**PKPab**	**21 17 36.4**	**-0.2**
KSPA	**Keystone Colle**		**144.91**	**360**			**PKPab**	**21 17 36.3**	**-0.3**
M59A	**Waymart**		**144.93**	**359**	P		**PKPab**	**21 17 36.5**	**-0.2**
	baz=0.7								
M56A	**Emporium**		**144.93**	**3**	P		**PKPab**	**21 17 36.2**	**-0.5**
	baz=356,SNR=7.2								
M56A	**Emporium**		**144.93**	**3**			**PKPab**	**21 17 36.2**	**-0.5**
N51A	**Ashland**		**145.07**	**9**	P		**PKPbc**	**21 17 37.0**	**-0.2**
	baz=349,SNR=9.9								
N50A	**Nevada**		**145.09**	**10**	P		**PKPab**	**21 17 37.3**	**+0.1**
	baz=347,SNR=19								
M58A	**Price's Panora**		**145.10**	**1**	P		**PKPbc**	**21 17 37.2**	**0.0**
	baz=359,SNR=18								
M57A	**Sunshine Farm,**		**145.12**	**2**	P		**PKPab**	**21 17 37.4**	**+0.1**
	baz=358,SNR=14								
M60A	**Port Jervis**		**145.13**	**358**	P		**PKPbc**	**21 17 37.1**	**-0.2**
	baz=2.1								
O48A	**Farmland**		**145.21**	**12**	P		**PKPbc**	**21 17 37.4**	**-0.2**
	baz=344,SNR=8.7								
TX31	**Lajitas Ar. Si**		**145.22**	**45**			**PKPdf**	**21 17 39.1**	**+0.6**
TX32	**Lajitas Array**		**145.22**	**45**			**PKPdf**	**21 17 39.1**	**+0.7**
TXAR	**Lajitas Array**		**145.22**	**45**	PKPbc		**PKPdf**	**21 17 39.3**	**+0.9**
	comp=Z,24nm,0.8s,baz=288,slow=1.6,SNR=265								
N52A	**McGinn's Farm,**		**145.27**	**8**	P		**PKPbc**	**21 17 37.9**	**+0.1**
	baz=350,SNR=10								
N54A	**Morgins State**		**145.32**	**5**	P		**PKPbc**	**21 17 37.8**	**-0.2**
	baz=353,SNR=13								
TUL1	**Leonard**		**145.35**	**29**	P		**PKPdf**	**21 17 38.9**	**+0.5**
	baz=324								
ODNJ	**Ogdensburg**		**145.37**	**358**			**PKPbc**	**21 17 38.0**	**-0.1**
N53A	**Lisbon**		**145.38**	**7**	P		**PKPbc**	**21 17 38.1**	**0.0**
	baz=351,SNR=15								
PAL	**Palisades**		**145.42**	**357**	PKIKP		**PKPbc**	**21 17 38.3**	**+0.1**
PAL	**Palisades**		**145.42**	**357**	P		**PKPbc**	**21 17 38.1**	**-0.1**
	baz=3.4,SNR=5.3								
PAL	**Palisades**		**145.42**	**357**			**PKPbc**	**21 17 38.3**	**+0.1**
CCM	**Cathedral Cave**		**145.47**	**22**	PKIKP		**PKPbc**	**21 17 38.3**	**-0.2**
CCM	**Cathedral Cave**		**145.47**	**22**	P		**PKPbc**	**21 17 38.5**	**0.0**
	baz=332								
CCM	**Cathedral Cave**		**145.47**	**22**			**PKPbc**	**21 17 38.3**	**-0.2**
N56A	**West Decatur**		**145.49**	**3**	P		**PKPdf**	**21 17 38.5**	**0.0**
	baz=356,SNR=13								
N59A	**State Game Lan**		**145.56**	**360**	P		**PKPab**	**21 17 39.0**	**0.0**
	baz=0.1,SNR=12								
N59A	**State Game Lan**		**145.56**	**360**			**PKPdf**	**21 17 38.7**	**+0.1**
N55A	**Marion Center**		**145.58**	**4**	P		**PKPdf**	**21 17 38.7**	**0.0**
	baz=354,SNR=19								
N60A	**Cedar Hill Far**		**145.59**	**359**	P		**PKPbc**	**21 17 38.8**	**0.0**
	baz=1.3								
O50A	**Cable**		**145.62**	**11**	P		**PKPbc**	**21 17 39.0**	**+0.1**
	baz=346,SNR=14								
N58A	**Sunbury**		**145.62**	**1**	P		**PKPbc**	**21 17 39.1**	**+0.2**
	baz=358,SNR=19								
ACSO	**Alum Creek Sta**		**145.65**	**10**	P		**PKPbc**	**21 17 39.0**	**0.0**
	baz=347,SNR=26								
N57A	**Milroy**		**145.68**	**2**	P		**PKPbc**	**21 17 39.1**	**0.0**
	baz=357,SNR=11								
N61A	**South Mountain**		**145.69**	**358**	P		**PKPab**	**21 17 39.7**	**+0.2**
	baz=2.7								
ABTX	**Abilene, Hawle**		**145.74**	**37**	P		**PKPab**	**21 17 40.9**	**+0.9**
	baz=315								
O51A	**Pataskala**		**145.79**	**9**	P		**PKPbc**	**21 17 39.5**	**0.0**
	baz=348,SNR=12								
SSPA	**Standing Stone**		**145.79**	**3**	P		**PKPbc**	**21 17 39.5**	**0.0**
	baz=356								
SSPA	**Standing Stone**		**145.79**	**3**			**PKPdf**	**21 17 39.2**	**+0.3**
LUPA	**Lehigh Univers**		**145.87**	**359**			**PKPbc**	**21 17 39.6**	**-0.1**
O53A	**New Philadelph**		**145.89**	**7**	P		**PKPbc**	**21 17 39.7**	**0.0**
	baz=350,SNR=15								
OLIL	**Olney**		**145.90**	**17**			**PKPbc**	**21 17 39.7**	**-0.1**
O52A	**Adamsville**		**145.93**	**8**	P		**PKPbc**	**21 17 39.9**	**0.0**
	baz=349,SNR=10								
P49A	**Miami Univ. Ec**		**145.99**	**12**	P		**PKPbc**	**21 17 39.8**	**-0.3**
	baz=344,SNR=14								
O54A	**Avella**		**146.05**	**6**	P		**PKPbc**	**21 17 40.5**	**+0.3**
	baz=352,SNR=8.0								
P50A	**Jamestown**		**146.10**	**11**	P		**PKPbc**	**21 17 40.1**	**-0.3**
	baz=346,SNR=26								
O56A	**Blue Knob Stat**		**146.12**	**4**	P		**PKPbc**	**21 17 40.7**	**+0.1**
	baz=355,SNR=15								
O55A	**Ligonier**		**146.12**	**5**	P		**PKPbc**	**21 17 40.3**	**-0.2**
	baz=354,SNR=5.8								
O60A	**Telford**		**146.15**	**359**	P		**PKPab**	**21 17 41.1**	**-0.1**
	baz=0.8								
O59A	**Robesonia**		**146.16**	**0**	P		**PKPbc**	**21 17 40.6**	**0.0**
	baz=359,SNR=6.4								
O57A	**Amberson**		**146.22**	**2**	P		**PKPab**	**21 17 42.0**	**+0.5**
	baz=357,SNR=6.0								
U40A	**Yellville**		**146.31**	**25**	P		**PKPbc**	**21 17 41.3**	**+0.1**
	baz=329								
O58A	**Lewisberry**		**146.34**	**1**	P		**PKPbc**	**21 17 40.8**	**-0.3**
	baz=358								
P51A	**Williamsport**		**146.36**	**10**	P		**PKPbc**	**21 17 40.8**	**-0.4**
	baz=347,SNR=6.6								
P52A	**Corning**		**146.36**	**9**	P		**PKPbc**	**21 17 40.8**	**-0.4**
	baz=349,SNR=14								
P54A	**Burton**		**146.61**	**6**	P		**PKPbc**	**21 17 42.1**	**+0.2**
	baz=352,SNR=12								
P53A	**Whipple**		**146.61**	**8**	P		**PKPbc**	**21 17 42.1**	**+0.1**
	baz=350,SNR=9.1								
MCWV	**Mont Chateau**		**146.62**	**6**	P		**PKPbc**	**21 17 42.4**	**+0.4**
	baz=353								
P60A	**Greenville**		**146.66**	**360**	P		**PKPbc**	**21 17 42.0**	**0.0**
	baz=0.4								
P60A	**Greenville**		**146.66**	**360**			**PKPbc**	**21 17 42.1**	**0.0**
P55A	**Reedsville**		**146.77**	**6**	P		**PKPbc**	**21 17 42.4**	**-0.1**
	baz=353,SNR=6.5								
P59A	**Jarrettsville**		**146.86**	**1**	P		**PKPbc**	**21 17 42.8**	**+0.2**
	baz=359								
P56A	**Dayton Farm, R**		**146.86**	**4**	P		**PKPbc**	**21 17 42.4**	**-0.3**
	baz=355,SNR=7.3								
WCI	**Wyandotte Cave**		**146.87**	**15**	PKP2		**PKPbc**	**21 17 42.4**	**-0.3**
WCI	**Wyandotte Cave**		**146.87**	**15**	P		**PKPbc**	**21 17 42.7**	**0.0**
	baz=341								
WCI	**Wyandotte Cave**		**146.87**	**15**			**PKPbc**	**21 17 42.4**	**-0.3**
W39A	**Magazine**		**146.88**	**27**	P		**PKPbc**	**21 17 42.9**	**+0.1**
	baz=326								
P57A	**Homestead Farm**		**146.93**	**3**	P		**PKPbc**	**21 17 42.9**	**+0.1**
	baz=356,SNR=10								
P58A	**Pank, Wackersv**		**146.96**	**2**	P		**PKPbc**	**21 17 43.0**	**+0.1**
	baz=357,SNR=6.7								
Q52A	**Bidwell**		**147.00**	**9**	P		**PKPbc**	**21 17 42.8**	**-0.2**
	baz=348,SNR=11								
JCT	**Junction City**		**147.11**	**40**	PKP2		**PKPdf**	**21 17 42.6**	**+1.1**
JCT	**Junction City**		**147.11**	**40**	P		**PKPab**	**21 17 44.9**	**-0.5**
	baz=312								
JCT	**Junction City**		**147.11**	**40**			**PKPdf**	**21 17 42.6**	**+1.1**
Q54A	**Coxs Mills**		**147.18**	**7**	P		**PKPbc**	**21 17 43.5**	**0.0**
	baz=351,SNR=12								
Q53A	**Leroy**		**147.21**	**8**	P		**PKPbc**	**21 17 43.7**	**+0.1**
	baz=350,SNR=6.3								
Q55A	**Buckhannon**		**147.25**	**6**	P		**PKPbc**	**21 17 43.7**	**-0.1**
	baz=352,SNR=12								
Q57A	**Strasburg**		**147.35**	**4**	P		**PKPbc**	**21 17 44.1**	**0.0**
	baz=355,SNR=6.0								
WHTX	**Lake Whitney,**		**147.48**	**36**	P		**PKPab**	**21 17 45.7**	**-1.0**
	baz=317								
Q58A	**Fox Den Farm,**		**147.49**	**3**	P		**PKPbc**	**21 17 44.6**	**+0.2**
	baz=357								
MIAR	**Mount Ida**		**147.51**	**28**	P		**PKPbc**	**21 17 45.2**	**+0.6**
	baz=326								
W41B	**Gary Mavity, V**		**147.58**	**25**	P		**PKPbc**	**21 17 44.7**	**0.0**
	baz=329								
R53A	**Hurricane**		**147.67**	**9**	P		**PKPbc**	**21 17 45.1**	**+0.2**
	baz=349								
UALR	**University of**		**147.88**	**26**			**PKPbc**	**21 17 46.1**	**+0.5**
X40A	**Basin Creek Fa**		**147.90**	**27**	P		**PKPbc**	**21 17 46.0**	**+0.3**
	baz=327								
X40A	**Basin Creek Fa**		**147.90**	**27**			**PKPbc**	**21 17 46.5**	**+0.8**
R54A	**Victor**		**147.95**	**8**	P		**PKPbc**	**21 17 45.5**	**-0.2**
	baz=350								
R55A	**Marlinton**		**147.96**	**6**	P		**PKiKP**	**21 17 47.5**	**-0.1**
	baz=352								
R55A	**Marlinton**		**147.96**	**6**			**PKPbc**	**21 17 46.0**	**+0.2**
S51A	**Beattyville**		**148.05**	**12**			**PKPbc**	**21 17 45.8**	**-0.2**
R57A	**Stanardsville**		**148.08**	**4**	P		**PKPbc**	**21 17 46.6**	**+0.6**
	baz=355								
R58A	**Rapidan**		**148.11**	**3**	P		**PKPbc**	**21 17 46.4**	**+0.2**
	baz=356								
R59A	**King George, V**		**148.25**	**2**	P		**PKPbc**	**21 17 46.6**	**+0.2**
	baz=358								
S53A	**Williamson**		**148.28**	**9**	P		**PKPbc**	**21 17 46.6**	**0.0**
	baz=348								
S54A	**Dingess, Beckl**		**148.28**	**8**	P		**PKPbc**	**21 17 46.7**	**0.0**
	baz=350								
WVT	**Waverly**		**148.38**	**19**	PKP2		**PKPbc**	**21 17 47.1**	**+0.2**
WVT	**Waverly**		**148.38**	**19**	P		**PKPbc**	**21 17 47.3**	**+0.4**
	baz=337								
WVT	**Waverly**		**148.38**	**19**			**PKPbc**	**21 17 47.1**	**+0.2**
S55A	**Lewisburg**		**148.42**	**7**	P		**PKPbc**	**21 17 46.5**	**-0.5**
	baz=351								
R58B	**Mineral**		**148.45**	**3**	P		**PKPbc**	**21 17 47.0**	**0.0**
	baz=356								
S57A	**Dark Hollow, R**		**148.58**	**5**	P		**PKPbc**	**21 17 47.7**	**+0.3**
	baz=354								
S56A	**Natural Bridge**		**148.61**	**6**	P		**PKPbc**	**21 17 47.5**	**+0.1**
	baz=353								
S59A	**Mechanicsville**		**148.68**	**2**	P		**PKPbc**	**21 17 47.8**	**+0.2**
	baz=357								
S58A	**Poland Farm, P**		**148.79**	**3**	P		**PKPbc**	**21 17 48.4**	**+0.5**
	baz=356								
T53A	**Wise**		**148.89**	**10**	P		**PKPbc**	**21 17 48.4**	**+0.1**
	baz=347								
T54A	**Tazewell**		**148.97**	**9**	P		**PKPbc**	**21 17 48.6**	**+0.2**
	baz=349								
T55A	**Pulaski**		**149.03**	**8**	P		**PKPbc**	**21 17 48.7**	**+0.1**
	baz=350								
TZTN	**Tazewell**		**149.12**	**12**	P		**PKPbc**	**21 17 49.2**	**+0.4**
	baz=345								
T56A	**Rocky Mt**		**149.21**	**6**	P		**PKPbc**	**21 17 49.0**	**0.0**
	baz=352								
OXF	**Oxford**		**149.30**	**22**	P		**PKPbc**	**21 17 49.0**	**-0.3**
	baz=333								
T57A	**Hurt**		**149.31**	**5**	P		**PKPbc**	**21 17 49.7**	**+0.5**
	baz=353								
T58A	**Grand View Acr**		**149.43**	**4**	P		**PKPbc**	**21 17 50.0**	**+0.5**
	baz=355								
T59A	**Double "B" Far**		**149.46**	**3**	P		**PKPbc**	**21 17 50.1**	**+0.6**
	baz=357								
U54A	**Nelsons Funny**		**149.46**	**9**	P		**PKPbc**	**21 17 49.8**	**0.0**
	baz=348								
U55A	**TA2, Sparta**		**149.59**

PSAD2	**Pilbara Seismi**	**36.82**	**241**	P	**P**	**21 07 57.7**	**+0.2**
PSAD2				IAmb	IAmb	21 08 11.7	
	comp=Z,9.2nm,0.9s						
PSAC2	**Pilbara Seismi**	**36.86**	**241**	P	**P**	**21 07 57.1**	**-0.7**
PSAC2				IAmb	IAmb	21 08 08.4	
	comp=Z,4.2nm,0.7s						
PSAD1	**Pilbara Seismi**	**36.88**	**242**	P	**P**	**21 07 57.2**	**-0.7**
PSAB2	**Pilbara Seismi**	**36.89**	**241**	P	**P**	**21 07 57.8**	**-0.2**
PSAA3	**Pilbara Seismi**	**36.90**	**241**	P	**P**	**21 07 57.2**	**-0.9**
PSAA3				IAmb	IAmb	21 08 15.0	
	comp=Z,7.9nm,0.8s						
PSAA2	**Pilbara Seismi**	**36.90**	**241**	P	**P**	**21 07 57.6**	**-0.5**
PSAA2				IAmb	IAmb	21 08 07.8	
	comp=Z,7.7nm,0.9s						
PSA00	**Pilbara Seismi**	**36.91**	**241**	P	**P**	**21 07 57.1**	**-1.0**
PSA00				IAmb	IAmb	21 08 05.0	
	comp=Z,5.5nm,0.8s						
PSAB3	**Pilbara Seismi**	**36.91**	**241**	P	**P**	**21 07 57.5**	**-0.7**
PSAB3				IAmb	IAmb	21 07 59.2	
	comp=Z,6.4nm,0.8s						
PSAA1	**Pilbara Seismi**	**36.92**	**241**	P	**P**	**21 07 57.5**	**-0.7**
PSAC1	**Pilbara Seismi**	**36.93**	**241**	P	**P**	**21 07 57.9**	**-0.4**
PSAC1				IAmb	IAmb	21 08 15.3	
	comp=Z,11nm,1.1s						
PSAC3	**Pilbara Seismi**	**36.94**	**241**	P	**P**	**21 07 58.5**	**+0.1**
PSAC3				IAmb	IAmb	21 08 15.4	
	comp=Z,7.5nm,0.9s						
PSAD3	**Pilbara Seismi**	**36.99**	**241**	P	**P**	**21 07 58.6**	**-0.2**
MORW	**Morawa**	**42.99**	**233**	P	**P**	**21 08 47.2**	**-0.2**
KSM	**Kuching**	**44.54**	**278**	P	**P**	**21 09 00.3**	**+0.5**
JNU	**Nakatsue**	**44.58**	**332**	P	**P**	**21 09 00.6**	**+0.8**
	comp=Z,3.7nm,0.8s,baz=320,slow=7.9,SNR=1.7						
JNU	**Nakatsue**	**44.58**	**332**	IAmb	IAmb	21 09 01.5	
	comp=Z,5.5nm,0.9s						
MJAR	**Matsushiro Arr**	**44.66**	**341**	P	**P**	**21 09 00.4**	**0.0**
	comp=Z,1.9nm,0.6s,baz=147,slow=7.7,SNR=2.8						
MAJO	**Matsushiro**	**44.66**	**341**	P	**P**	**21 09 00.7**	**+0.3**
MJB9	**Matsu-Tunnel**	**44.67**	**341**	P	**P**	**21 09 00.8**	**+0.4**
KSRS	**Korea Array**	**49.50**	**332**	P	**P**	**21 09 38.5**	**+1.3**
	comp=Z,0.7nm,0.4s,baz=151,slow=7.7,SNR=4.1						
PETK	**Petropavlovsk-**	**58.66**	**2**	P	**P**	**21 10 43.0**	**+0.8**
	comp=Z,2.2nm,0.8s,baz=165,slow=6.9,SNR=1.7						
SONM	**Songino Array**	**67.91**	**327**	P	**P**	**21 11 44.6**	**+2.2**
	comp=Z,1.1nm,0.5s,baz=150,slow=5.8,SNR=5.9						
CNPM	**China Poot**	**77.88**	**25**	P	**P**	**21 12 39.8**	**0.0**
TRF	**Thorofare Moun**	**80.46**	**22**	P	**P**	**21 12 54.4**	**+0.7**
TRF				IAmb	IAmb	21 13 08.3	
	comp=Z,3.1nm,1.0s						
RND	**Reindeer**	**80.97**	**22**	P	**P**	**21 12 56.3**	**0.0**
RND				IAmb	IAmb	21 12 57.2	
	comp=Z,2.5nm,0.8s						
MCK	**McKinley**	**81.12**	**22**	P	**P**	**21 12 56.5**	**-0.6**
DHY	**Denali Highway**	**81.37**	**23**	P	**P**	**21 12 59.1**	**+0.6**
MKAR	**Makanchi Array**	**82.01**	**319**	P	**P**	**21 13 03.3**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=102,slow=9.0,SNR=3.1						
CCB	**Clear Creek Bu**	**82.03**	**22**	P	**P**	**21 13 01.3**	**-0.3**
ILAR	**Eielson Array**	**82.43**	**22**	P	**P**	**21 13 03.6**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=246,slow=5.3,SNR=9.5						
DOT	**Dot Lake**	**82.95**	**23**	P	**P**	**21 13 06.3**	**-0.1**
DOT				IAmb	IAmb	21 13 08.0	
	comp=Z,2.7nm,0.8s						
TOLK	**Toolik Lake Re**	**83.61**	**18**	P	**P**	**21 13 09.7**	**0.0**
TOLK				IAmb	IAmb	21 13 27.4	
	comp=Z,2.1nm,0.8s						
HYT	**Haines Junctio**	**84.54**	**27**	P	**P**	**21 13 15.7**	**+1.1**
MAW	**Mawson**	**85.32**	**203**	P	**P**	**21 13 18.1**	**0.0**
WVOR	**Wild Horse Val**	**91.62**	**48**	P	**P**	**21 13 45.1**	**-3.3**
TORD	**Torodi Ar. Bea**	**152.03**	**287**	PKPbc	**PKiKP**	**21 20 35.9**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=56,slow=2.2,SNR=1.5						

*KRNET **24** 21:04:53.3±0.1,39°.27N×76°.89E,mb2.2*
SOME 24 21:04:53.1,42°.27N×81°.03E,h15km,2C-4D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.28**	**337**	*e*P	Pg	21 05 17.6	-0.2
	0.1nm,0.1s						
KTMS				*e*S	Sg	21 05 35.3	+0.8
	1.1nm,0.3s						
SHLS	**Shalkode**	**1.46**	**308**	*e*P	Pn	21 05 16.2	-2.8
	2.7nm,0.2s						
SHLS				*e*S	Sn	21 05 32.8	-5.2
	6.8nm,0.4s						
UZB	**Uzynbulak**	**1.72**	**301**	*e*P	Pb	21 05 25.4	+0.8
	1.0nm,0.2s						
UZB				*e*S	Sg	21 05 48.7	+0.1
	2.3nm,0.2s						
SATY	**Saty**	**2.09**	**293**	*e*P	Pb	21 05 31.5	+0.7
	0.4nm,0.1s						
SATY				*e*S	Sg	21 05 59.1	-1.3
	1.5nm,0.1s						
DJR	**Jarkent**	**2.25**	**337**	*e*P	Pb	21 05 34.7	+1.1
	0.7nm,0.2s						
DJR				*e*S	Sg	21 06 04.6	-1.0
	0.7nm,0.2s						
TARG	**Taragay, Kyrgy**	**2.46**	**258**	⇓*i*P	Pb	21 05 38.3	+0.9
	baz=15						
TARG				⇓*i*S	Sg	21 06 11.2	-1.2
	baz=15						
KDJ	**Kajisay**	**2.87**	**269**	⇑*i*P	Pb	21 05 42.7	-1.3
	baz=4.0						
KDJ				⇑*i*S	Sb	21 06 18.5	-0.5
	baz=4.0						
ULHL	**Ulahol**	**3.56**	**271**	⇓*e*P	Pn	21 05 44.8	-3.2
	baz=51						
ULHL				⇓*i*S	Sn	21 06 22.5	-7.3
	baz=51						

*LJU **24** 21:13:37.0,46°.39N×15°.07E,h0km Rockburst*
VIE 24 21:13:37.0±0.4,46°.40N×15°.09E,h0km,ml0.4/2,Error ellipse: s-maj=3.7km s-min=1.7km az=4.0 23 km NW of Celje Suspected Mining induced.,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOKA	**Soboth**	**0.28**	**352**	*e*Pg	Pg	21 13 42.3	-0.1
	0.9nm,0.2s						
SOKA				*e*Sg	Sg	21 13 46.9	+0.8
	0.3nm,0.1s						
OBKA	**Obir**	**0.39**	**287**	*e*Pg	Pg	21 13 44.6	+0.1
	0.4nm,0.1s						
OBKA				*e*Sg	Sg	21 13 50.3	+0.8
	1.9nm,0.3s						

RHSSO 24 21:14:08.7±0.3,44°.20N×17°.96E,h5km,ML1.3/4,2C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGRS	**Mrkonjic Grad**	**0.66**	**289**	*e*Pg	Pg	21 14 20.7	-0.8
MGRS				*e*Sg	Sg	21 14 30.2	+0.1
HAPS	**Han Pijesak,Bl**	**0.72**	**99**	*e*Pg	Pg	21 14 21.5	-1.1
HAPS				*e*Sg	Sg	21 14 32.3	+0.3
BLY	**Banja Luka**	**0.78**	**315**	*e*Pg	Pg	21 14 23.1	-0.6
BLY				*e*Sg	Sg	21 14 33.8	0.0
RICI	**Ricice**	**0.92**	**221**	*e*Pg	Pg	21 14 25.4	-1.0
RICI				Sg	Sb	21 14 39.1	-0.7
KIJV	**Kijevo**	**1.14**	**261**	*e*Pg	Pg	21 14 29.1	-1.3
KIJV				Sg	Sg	21 14 44.6	-0.6
MAKA	**Makarska**	**1.14**	**217**	*e*Pg	Pg	21 14 28.7	-1.8
STON	**Ston**	**1.34**	**188**	*e*Pg	Pn	21 14 32.4	-1.6
STON				*e*Sg	Sb	21 14 51.5	-0.2
STON	**Ston**	**1.34**	**188**	*i* Pg	Pn	21 14 32.7	-1.4
DIVS	**Divibare**	**1.47**	**93**	*e*Pg	Pn	21 14 35.5	-0.4
DIVS				*e*Sg	Sb	21 14 55.0	-0.5
MORI	**Morici**	**1.66**	**259**	*e*Pn	Pn	21 14 38.4	0.0
ZIRJ	**Zirje**	**1.76**	**253**	*e*Pn	Pn	21 14 39.9	+0.1
ZIRJ				Sn	Sb	21 15 04.0	+0.2
DUGI	**Dugi Otok**	**2.10**	**265**	*e*Pn	Pb	21 14 46.5	-0.8
NVLJ	**Novalja**	**2.24**	**280**	*e*Pn	Pn	21 14 47.4	+0.9
MDVR	**Moldovita**	**2.75**	**76**	⇑P	Pn	21 14 53.6	+0.1
BZS	**Buzias**	**2.96**	**60**	⇓P	Pb	21 15 02.7	+0.8
DRGR		**4.23**	**51**	⇑P	Pn	21 15 17.4	+3.6

*DJA **24** 21:20:05.8±0.8,3°.N±7°.7×12°.8E±°,h117km±11km,M4.3/11, mb4.4/6,mB4.8/3,MLv4.4/11,Mw(mB)4.0/3*
*IDC **24** 21:20:07.0±2.5,2°.98N×128°.33E,h122km±28km,mb3.4/11, mb1 3.6/13,mb1mx3.4/36,mbtmp3.9/13,Error ellipse: s-maj=24.6km s-min=16.7km az=70.0*
ISC 24 21:20:05.5±0.6,2°.93N±0°.06×128°.17E±0°.08,h100km,n40, σ1s87/41,mb3.9/13,1C,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.29**	**201**	P	**Pn**	**21 20 44.6**	**+2.8**
LBMI	**Labuha**	**3.60**	**191**	P	**Pn**	**21 21 02.6**	**+3.2**
DDMP	**Don Marcelino,**	**4.00**	**322**	*e*P	**Pn**	**21 21 04.6**	**0.0**
KMSI	**Cibinong**	**4.79**	**241**	P	**Pn**	**21 21 17.0**	**+1.5**
DAV	**Davao City (W)**	**4.86**	**328**	S	**Sn**	**21 22 16.3**	**+4.9**
	60nm,0.3s,baz=61,slow=19,SNR=2.3						
SIJI	**Sorong**	**4.88**	**141**	P	**Pn**	**21 21 19.3**	**+2.7**
	9.2nm,0.3s,baz=7.0,slow=24,SNR=28						
SIJI				S	**Sn**	**21 22 12.3**	**+0.4**
	8.0nm,0.3s,baz=87,slow=24,SNR=17						
SKMP	**Bagumbayan, Su**	**5.08**	**315**	*e*P	**Pn**	**21 21 20.0**	**+0.7**
KCP	**Kidapawan**	**5.08**	**323**	⇑*i*P	**Pn**	**21 21 21.3**	**+1.9**
KCP				*i* S	**Sn**	**21 22 22.1**	**+5.0**
BUKP	**Musuan**	**5.81**	**328**	*e*P	**Pn**	**21 21 28.3**	**-1.0**
FAKI	**Fak Fak**	**7.09**	**145**	P	**Pn**	**21 21 49.3**	**+2.5**
	0.1nm17nm,0.6s						
APSI	**Ampana**	**7.55**	**240**	P	**Pn**	**21 21 54.9**	**+2.0**
	0.2nm472nm41nm,0.7s						
SPSI	**Sidrap Palu**	**10.83**	**231**	P	**Pn**	**21 22 36.8**	**-0.8**
	26nm,0.7s						
BNSI	**Bone**	**10.86**	**228**	P	**Pn**	**21 22 39.1**	**+1.1**
KAPI	**Kappang**	**11.53**	**227**	P	**Pn**	**21 22 48.4**	**+1.4**
	1.4nm,0.3s,baz=141,slow=0.8,SNR=7.7						
KAPI				S	**Sn**	**21 24 50.1**	**-3.7**
	0.7nm,0.3s,baz=37,slow=20,SNR=2.0						
WRA	**Warramunga Arr**	**23.52**	**165**	P	**P**	**21 25 06.6**	**-0.2**
	1.9nm,0.8s,baz=348,slow=10,SNR=9.6						
ASAR	**Alice Springs**	**27.02**	**168**	P	**P**	**21 25 38.4**	**0.0**
	0.2nm,0.7s,baz=356,slow=6.9,SNR=2.2						
WHN	**Wuhan**	**30.42**	**336**	P	**P**	**21 26 08.8**	**+0.3**
CMAR	**Chiang Mai Arr**	**32.52**	**300**	P	**P**	**21 26 28.1**	**+1.0**
	0.5nm,0.7s,baz=119,slow=7.1,SNR=6.3						
KSRS	**Korea Array**	**34.36**	**360**	P	**P**	**21 26 42.6**	**-0.2**
	0.9nm,0.6s,baz=174,slow=9.8,SNR=5.0						
MJAR	**Matsushiro Arr**	**34.71**	**14**	P	**P**	**21 26 43.4**	**-2.5**
	0.5nm,0.5s,baz=178,slow=9.8,SNR=4.3						
XAN	**Xi'an**	**35.78**	**332**	P	**P**	**21 26 55.4**	**+0.2**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
USRK	**Ussuriysk Ar.**	**41.24**	**4**	P	**P**	**21 27 39.8**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=180,slow=8.3,SNR=2.1						
H11N1	**WAKE ISLAND Hy**	**41.31**	**63**	T	T	22 11 57.4	
	baz=250,slow=75,SNR=8.6						
H11N2	**WAKE ISLAND Hy**	**41.33**	**63**	T	T	22 11 58.5	
	baz=250,slow=75,SNR=4.6						
H11N3	**WAKE ISLAND Hy**	**41.33**	**63**	T	T	22 11 56.2	
	baz=250,slow=75,SNR=9.4						
GTA	**Gaotai**	**44.52**	**328**	*e*P	**P**	**21 28 07.3**	**-0.1**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TAPN	**Taplejung**	**45.65**	**306**	*e*P	**P**	**21 28 16.8**	**+0.1**
ODAN	**Odare**	**45.70**	**305**	*e*P	**P**	**21 28 17.3**	**+0.2**
	comp=Z,13nm,0.8s						
RAMN	**Ramite**	**46.38**	**305**	*e*P	**P**	**21 28 22.8**	**+0.4**
	comp=Z,11nm,0.7s						
JIRN	**Jiri**	**47.00**	**306**	*e*P	**P**	**21 28 27.3**	**-0.1**
	comp=Z,14nm,0.8s						
GUN	**Gumba**	**47.36**	**306**	*e*P	**P**	**21 28 30.0**	**-0.1**
	comp=Z,9.1nm,0.6s						
DMN	**Daman**	**47.87**	**305**	*e*P	**P**	**21 28 34.7**	**+0.7**
SONM	**Songino Array**	**48.52**	**341**	P	**P**	**21 28 37.6**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=152,slow=7.7,SNR=6.8						
SONM				PcP	**PcP**	**21 30 02.5**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=145,slow=3.5,SNR=2.1						
KOLN	**Koldanda**	**49.16**	**305**	*e*P	**P**	**21 28 44.2**	**+0.4**
	comp=Z,17nm,0.7s						
DANN	**Dangsing**	**49.25**	**305**	*e*P	**P**	**21 28 44.7**	**+0.1**
	comp=Z,23nm,0.7s						
PYUN	**Piuthan**	**49.78**	**305**	*e*P	**P**	**21 28 49.0**	**+0.4**
	comp=Z,24nm,0.9s						
MKAR	**Makanchi Array**	**59.03**	**325**	P	**P**	**21 29 54.5**	**-0.6**
	comp=Z,1.9nm,0.5s,baz=119,slow=8.3,SNR=29						
ZALV	**Zalesovo Beam**	**61.95**	**333**	P	**P**	**21 30 12.6**	**-2.1**
	comp=Z,0.7nm,0.6s,baz=116,slow=6.8,SNR=3.5						
KURBB	**Kurchatov Arra**	**63.19**	**327**	P	**P**	**21 30 22.1**	**-0.8**
	comp=Z,2.1nm,0.6s,baz=128,slow=6.2,SNR=24						
ILAR	**Eielson Array**	**85.21**	**25**	P	**P**	**21 32 27.8**	**-2.8**
	comp=Z,0.2nm,0.7s,baz=269,slow=4.5,SNR=2.2						

MAN 24 21:21:18.9,4°.97N×124°.35E,h30km,MS3.9,2C-1D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**1.55**	**7**	*e*P	Pn	21 21 44.5	0.0
SKMP				*e*S	Sn	21 22 03.2	-0.5
DDMP	**Don Marcelino,**	**1.76**	**50**	*e*P	Pn	21 21 47.4	0.0
DDMP				*e*S	Sn	21 22 08.3	-0.5
CTBH	**Cotabato--PC H**	**2.24**	**357**	⇓*i*P	Pn	21 21 55.2	+1.2
CTBH				*i* S	Sn	21 22 21.5	+0.9
DMPH	**Davao City--Mi**	**2.40**	**29**	⇑*i*P	Pn	21 21 58.5	+2.4
DMPH				*i* S	Sn	21 22 23.1	-1.4
MATI	**Mati**	**2.73**	**44**	*e*P	Pn	21 21 52.9	-7.9
BUKP	**Musuan**	**2.98**	**14**	*e*P	Pn	21 22 05.2	+1.0
ZCP	**Zamboanga City**	**2.99**	**311**	⇑*i*P	Pn	21 22 05.1	+0.8
ZCP				*i* S	Sn	21 22 39.4	+0.3
PAGZ	**Pagadian**	**3.02**	**341**	*e*P	Pn	21 22 04.2	-0.5
PAGZ				*e*S	Sn	21 22 39.3	-0.6

ISC 24 21:34:30.9±1.2,44°.40N±0°.04×17°.19E±0°.07,h7km±8km,n9, σ0s46/15,2C,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGRS	**Mrkonjic Grad**	**0.07**	**281**	⇑*i*Pg	**Pg**	**21 34 32.7**	**-0.1**
MGRS				*e*Sg	**Sg**	**21 34 34.0**	**-0.1**
BLY	**Banja Luka**	**0.34**	**360**	⇑*i*Pg	**Pg**	**21 34 37.7**	**+0.1**
BLY				*e*Sg	**Sg**	**21 34 42.6**	**+0.4**
KIJV	**Kijevo**	**0.69**	**235**	*e*Pg	**Pg**	**21 34 44.4**	**+0.3**
KIJV				Sg	**Sg**	**21 34 53.6**	**+0.6**
RICI	**Ricice**	**0.91**	**182**	*e*Pg	**Pb**	**21 34 49.0**	**0.0**
RICI				Sg	**Sb**	**21 35 01.8**	**+0.5**
MAKA	**Makarska**	**1.12**	**186**	*e*Pg	**Pb**	**21 34 52.4**	**-0.1**
MORI	**Morici**	**1.19**	**244**	*e*Pn	**Pb**	**21 34 53.7**	**-0.1**
MORI				Sg	**Sn**	**21 35 10.1**	**-0.3**
MOSL	**Moslavina**	**1.25**	**346**	*e*Pg	**Pg**	**21 34 55.4**	**+0.6**
MOSL				Sg	**Sb**	**21 35 10.6**	**-0.5**
ZIRJ	**Zirje**	**1.34**	**237**	*e*Pn	**Pn**	**21 34 55.3**	**-0.7**
DUGI	**Dugi Otok**	**1.58**	**256**	*i* Pn	**Pb**	**21 35 00.9**	**+0.5**

*NIED **24** 21:37:00,38°.30N×137°.80E,h8km,Mw3.6 Best double couple: M₀2.85000×10¹⁴ NP1:φs43.00000°,δ53.00000°, λ113.00000°. NP2:φs187.00000°,δ42.00000°,λ62.00000°.*
*IDC **24** 21:37:03.9±0.8,38°.25N×137°.79E,h0km,mb3.5/9, mb1 3.7/13,mb1mx3.6/36,mbtmp3.4/13,ML2.7/4,MS3.5/1, Ms1 3.5/1,ms1mx2.4/35,Error ellipse: s-maj=21.5km s-min=15.2km az=89.0*
*JMA **24** 21:37:06.2±0.1,38°.26N×137°.79E,h20km±1km,M3.8*
ISC 24 21:37:06.0±1.5,38°.24N±0°.05×137°.82E±0°.04,h14km±10km, n23,σ0s74/30,mb3.5/9,2C-1D,Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSD	**Sado**	**0.40**	**120**	⇓P	**Pb**	**21 37 14.8**	**-0.1**
JSD				S	**Sb**	**21 37 21.6**	**+0.8**
JHG	**Hegura jima**	**0.81**	**242**	⇑P	**Pb**	**21 37 21.4**	**-0.4**
JHG				S	**Sb**	**21 37 32.3**	**-0.2**
JSZ	**Suzu**	**0.86**	**205**	⇑P	**Pb**	**21 37 22.7**	**-0.1**
JSZ				S	**Sb**	**21 37 34.7**	**+0.6**
JIZZ	**Izumozaki**	**1.00**	**135**	P	**Pg**	**21 37 24.7**	**-0.6**
JIZZ				S	**Sn**	**21 37 39.2**	**-0.1**
JAW	**Awa shima**	**1.15**	**78**	P	**Pb**	**21 37 26.6**	**-1.0**
JJN	**Nakama**	**1.16**	**166**	P	**Pb**	**21 37 27.4**	**-0.5**
JJN				S	**Sn**	**21 37 43.6**	**+0.1**
JNS	**Sasagawa**	**1.25**	**109**	P	**Pg**	**21 37 30.0**	**-0.2**
JNS				*e*S	**Sg**	**21 37 47.3**	**+0.8**
MAT	**Matsushiro**	**1.72**	**169**	P	**Pn**	**21 37 34.8**	**-0.7**
MAT				S	**Sn**	**21 37 55.3**	**-1.9**
MJAR	**Matsushiro Arr**	**1.72**	**169**	Pn	**Pn**	**21 37 35.3**	**-0.2**
	0.8nm,0.3s,baz=343,slow=12,SNR=48						
MJAR				Sn	**Sb**	**21 37 59.2**	**+0.4**
	4.4nm,0.3s,baz=352,slow=17,SNR=5.3						
ASAJ	**Asahikawa**	**6.89**	**30**	Pn	**Pn**	**21 38 47.0**	**+0.5**
	0.2nm,0.3s,baz=45,slow=18,SNR=0.9						
USRK	**Ussuriysk Ar.**	**7.40**	**325**	Pn	**Pn**	**21 38 54.0**	**+0.5**
	baz=141,slow=14,SNR=2.3						
JNU	**Nakatsue**	**7.61**	**230**	Pn	**Pn**	**21 38 56.7**	**+0.2**
	0.1nm,0.3s,baz=316,slow=9.2,SNR=1.9						
KSRS	**Korea Array**	**7.87**	**267**	Pn	**Pn**	**21 39 01.7**	**+1.8**
	0.2nm,0.3s,baz=85,slow=15,SNR=2.9						
SONM	**Songino Array**	**24.74**	**303**	P	**P**	**21 42 26.9**	**-0.1**
	0.4nm,0.8s,baz=108,slow=9.3,SNR=3.8						
MKAR	**Makanchi Array**	**41.06**	**300**	P	**P**	**21 44 48.1**	**-0.8**
	0.2nm,0.6s,baz=95,slow=8.7,SNR=2.3						
PMG	**Port Moresby**	**48.19**	**168**	LR	LR	22 05 15.6	
	comp=Z,44nm,18.7s,baz=192,slow=35						
ILAR	**Eielson Array**	**50.02**	**33**	P	**P**	**21 46 00.1**	**+0.5**
	0.5nm,0.7s,baz=265,slow=5.3,SNR=7.1						
WRA	**Warramunga Arr**	**57.96**	**184**	P	**P**	**21 46 58.1**	**+0.1**
	0.3nm,0.5s,baz=357,slow=7.6,SNR=5.7						
ASAR	**Alice Springs**	**61.68**	**184**	P	**P**	**21 47 24.3**	**+0.7**
	0.3nm,0.8s,baz=16,slow=12,SNR=2.0						
YKA	**Yellowknife Ar**	**64.19**	**29**	P	**P**	**21 47 39.9**	**+0.2**
	0.2nm,0.5s,baz=304,slow=5.1,SNR=2.9						
FINES	**FINESS Array B**	**66.40**	**331**	P	**P**	**21 47 53.1**	**-1.0**
	1.1nm,0.6s,baz=57,slow=7.7,SNR=9.9						
NVAR	**Mina Array Bea**	**76.52**	**52**	P	**P**	**21 48 56.7**	**+0.8**
	0.2nm,0.5s,baz=309,slow=5.7,SNR=2.4						
PDAR	**Pinedale Array**	**78.82**	**44**	P	**P**	**21 49 08.7**	**0.0**
	0.3nm,0.5s,baz=317,slow=3.8,SNR=3.5						

*ATH **24** 21:40:46.9,40°.36N×25°.98E,h33km±1km,ML2.8/9,Error ellipse: s-maj=2.6km s-min=1.2km az=65.0*
*ISK **24** 21:40:46.1,40°.38N×26°.13E,h11km,ML3.1/12*
ISC 24 21:40:46.3±1.0,40°.36N±0°.02×26°.07E±0°.03,h15km±9km, n40,σ0s87/49,5C-6D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.21**	**218**	PG	**Pb**	**21 40 51.7**	**-0.2**
GADA				SG	**Sb**	**21 40 55.9**	**+0.2**
GELI	**Tayfur-Gelibol**	**0.31**	**83**	PG	**Pg**	**21 40 51.9**	**-0.8**
GELI				SG	**Sg**	**21 40 56.2**	**-0.9**
ENEZ	**Enez**	**0.38**	**10**	PG	**Pg**	**21 40 53.6**	**-0.4**
SMTH	**Samothraki Isl**	**0.43**	**285**	P	**Pb**	**21 40 55.9**	**+0.3**
SMTH				S	**Sb**	**21 41 01.8**	**0.0**
SMTH				AML	AML	21 41 05.8	
	comp=N,2256μm,0.2s						
SMTH				AML	AML	21 41 06.7	
	comp=E,2212μm,0.1s						
ERIK	**Erikli-Kesan**	**0.46**	**47**	PG	**Pg**	**21 40 54.6**	**-0.8**
LPK	**Lapseki**	**0.53**	**89**	PG	**Pg**	**21 40 56.3**	**-0.4**
LIA	**Limnos Island**	**0.82**	**236**	P	**Pg**	**21 41 02.2**	**0.0**
LIA				S	**Sg**	**21 41 13.1**	**+0.1**
LIA				AML	AML	21 41 16.6	
	comp=N,1689μm,0.4s						
LIA				AML	AML	21 41 16.8	
	comp=E,1590μm,0.5s						
UKOP	**Uzunkopru-Edir**	**0.88**	**29**	PG	**Pg**	**21 41 03.1**	**-0.2**
RDO	**Rodhopi**	**0.88**	**333**	P	**Pn**	**21 41 04.2**	**0.0**
RDO				AML	AML	21 41 18.0	
	comp=N,1175μm,0.3s						
RDO				AML	AML	21 41 19.0	
	comp=E,1183μm,0.2s						
RDO	**Rodhopi**	**0.88**	**333**	PG	**Pn**	**21 41 03.8**	**-0.4**
RKY	**Sarkoy-Tekirda**	**0.91**	**69**	PG	**Pb**	**21 41 03.1**	**-0.6**
THAS	**Thassos island**	**1.06**	**284**	P	**Pb**	**21 41 05.0**	**-1.3**
THAS				AML	AML	21 41 21.8	
	comp=N,665μm,0.3s						
THAS				AML	AML	21 41 23.0	
	comp=E,531μm,0.4s						
PRK	**Paraskevi**	**1.12**	**172**	P	**Pb**	**21 41 07.4**	**-0.1**
PRK				S	**Sg**	**21 41 23.7**	**+1.1**
PRK				AML	AML	21 41 28.2	
	comp=N,5234μm,0.7s						
PRK				AML	AML	21 41 29.0	
	comp=E,2030μm,0.5s						
SIGR	**SIGRI**	**1.16**	**188**	P	**Pn**	**21 41 07.4**	**-0.6**
SIGR				S	**Sg**	**21 41 24.2**	**+0.5**
SIGR				AML	AML	21 41 25.3	
	comp=N,2063μm,0.8s						
SIGR				AML	AML	21 41 26.1	
	comp=E,1128μm,0.6s						
SIGR	**SIGRI**	**1.16**	**188**	PN	**Pg**	**21 41 08.7**	**+0.1**
EFSA	**Agios Efstrati**	**1.17**	**226**	P	**Pg**	**21 41 08.5**	**-0.3**
EFSA				S	**Sn**	**21 41 23.2**	**-0.6**
EFSA				AML	AML	21 41 27.0	
	comp=N,1284μm,0.4s						
EFSA				AML	AML	21 41 30.6	
	comp=E,696μm,0.6s						
MRMT	**Marmara Adasi**	**1.19**	**78

	0.9nm,0.7s,baz=95,slow=7.4,SNR=12							
ASAR					PcP	**PcP**	**22 03 37.9**	**-0.3**
	0.4nm,0.8s,baz=104,slow=3.9,SNR=2.4							
WRA	**Warramunga Arr**	**46.07**	**266**		P	**P**	**22 02 01.6**	**-2.1**
	2.2nm,0.8s,baz=98,slow=8.4,SNR=14							
VNDA	**Vanda**	**53.98**	**186**		P	**P**	**22 03 05.3**	**+2.4**
	0.4nm,0.6s,baz=1.4,slow=6.9,SNR=4.5							
MJAR	**Matsushiro Arr**	**74.67**	**326**		P	**P**	**22 05 17.9**	**-1.0**
	1.3nm,0.8s,baz=157,slow=5.9,SNR=4.8							
MJAR					LR	LR	22 36 55.6	
	comp=Z,13nm,19.0s,baz=280,slow=35							
KSRS	**Korea Array**	**81.25**	**318**		P	**P**	**22 05 56.0**	**+0.7**
	1.5nm,0.9s,baz=148,slow=7.1,SNR=6.4							
NVAR	**Mina Array Bea**	**82.75**	**42**		P	**P**	**22 06 03.5**	**-0.1**
	1.0nm,0.7s,baz=215,slow=6.5,SNR=5.2							
USA0B	**Ussuriysk Arra**	**83.46**	**325**		P	**P**	**22 06 06.3**	**-0.4**
USA0B					IAmb	IAmb	22 06 18.4	
	comp=Z,5.1nm,1.1s							
USRK	**Ussuriysk Ar.**	**83.46**	**325**		P	**P**	**22 06 06.7**	**0.0**
	comp=Z,7.0nm,0.9s,baz=113,slow=3.3,SNR=12							
MOD	**Modoc Plateau**	**83.81**	**38**		P	**P**	**22 06 07.9**	**-1.0**
MOD					IAmb	IAmb	22 06 10.7	
	comp=Z,2.6nm,0.9s							
SNAA	**Sanae**	**83.82**	**178**		P	**P**	**22 06 08.7**	**+0.2**
VNA3	**Neumayer Olymp**	**83.89**	**176**		P	**P**	**22 06 07.3**	**-1.4**
U15A	**North Rim**	**85.36**	**46**		P	**P**	**22 06 15.9**	**-1.1**
BBB	**Bella Bella**	**87.16**	**27**		P	**P**	**22 06 25.7**	**+0.6**
	comp=Z,10.0nm,0.9s,baz=180,slow=5.1,SNR=3.5							
TXAR	**Lajitas Array**	**87.70**	**56**		P	**P**	**22 06 29.0**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=202,slow=6.5,SNR=4.7							
VRDI	**Verde Repeater**	**89.51**	**15**		P	**P**	**22 06 36.4**	**+0.1**
VRDI					IAmb	IAmb	22 06 38.1	
	comp=Z,3.5nm,1.1s							
BALM	**Baldy**	**89.61**	**16**		P	**P**	**22 06 35.8**	**-0.9**
BALM					IAmb	IAmb	22 06 39.2	
	comp=Z,2.7nm,0.9s							
BARN	**Barnard Glacie**	**89.80**	**16**		P	**P**	**22 06 36.1**	**-1.6**
PDAR	**Pinedale Array**	**90.68**	**42**		P	**P**	**22 06 42.4**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=217,slow=8.8,SNR=2.0							
ILAR	**Eielson Array**	**91.93**	**12**		P	**P**	**22 06 46.3**	**-1.0**
	comp=Z,0.8nm,1.0s,baz=220,slow=5.4,SNR=2.3							
CMAR	**Chiang Mai Arr**	**93.29**	**289**		P	**P**	**22 06 54.7**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=133,slow=4.0,SNR=17							
CHTO	**Chiang Mai**	**93.44**	**289**		P	**P**	**22 06 53.1**	**-2.2**
AKASG	**Malin Array Be**	**147.55**	**330**		PKPbc	**PKPdf**	**22 13 21.3**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=44,slow=3.7,SNR=2.4							

DDA **24** *21:57:36.2, 40.37N×26.11E, h7km±3km, ML1.8*

ISK 24 21:57:35.4, 40.39N×26.08E, h14km, ML1.8/13, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.24**	**215**	PG	Pb	21 57 41.1	-0.4
GADA				SG	Sb	21 57 45.1	-0.5
GELI	**Tayfur-Gelibol**	**0.30**	**88**	PG	Pb	21 57 42.7	+0.1
GELI				SG	Sb	21 57 47.2	-0.2
ENEZ	**Enez**	**0.35**	**9**	PG	Pg	21 57 42.9	+0.3
ENEZ				SG	Sb	21 57 48.3	-0.6
ERIK	**Erikli-Kesan**	**0.44**	**50**	PG	Pg	21 57 44.4	+0.3
ERIK				SG	Sb	21 57 50.9	-0.4
LPK	**Lapseki**	**0.52**	**91**	PG	Pb	21 57 46.7	+0.4
BOZC	**Bozcaada**	**0.55**	**182**	PG	Pg	21 57 46.4	+0.3
BOZC	**Bozcaada**	**0.55**	**182**	*i* P	Pg	21 57 46.4	+0.3
BOZC				*i* S	Sb	21 57 54.7	+0.3
EZN	**Ezine**	**0.59**	**161**	PG	Pg	21 57 46.7	-0.3
KESN	**Edirne-Kesan**	**0.63**	**46**	*i* P	Pb	21 57 48.9	+0.5
KESN				*i* S	Sb	21 57 56.9	-0.5
KESN				IAML		21 58 02.0	
	comp=E,86nm,0.2s						
KESN				IAML		21 58 02.0	
	comp=N,65nm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.74**	**151**	*i* P	Pb	21 57 50.3	+0.3
BAYC				*i* S	Sb	21 58 00.5	+0.4
BAYC				IAML		21 58 03.0	
	comp=N,41nm,0.2s						
UKOP	**Uzunkopru-Edir**	**0.85**	**30**	PG	Pb	21 57 52.3	+0.3
RDO	**Rodhopi**	**0.86**	**332**	PG	Pn	21 57 52.8	-0.3
KRBG	**Karabiga-Canak**	**0.93**	**89**	PG	Pg	21 57 53.4	0.0
KNL	**Balıkesir**	**1.11**	**96**	*i* P	Pg	21 57 57.6	+0.7
KNL				*i* S	Sn	21 58 12.7	+1.0
KNL				IAML		21 58 15.0	
	comp=E,24nm,0.4s						
KNL				IAML		21 58 17.0	
	comp=N,24nm,0.5s						
AYVA	**Ayvalik**	**1.18**	**156**	*i* P	Pg	21 57 57.9	-0.2
AYVA				*i* S	Sg	21 58 13.8	+0.4
AYVA				IAML		21 58 15.0	
	comp=E,21nm,0.4s						
AYVA				IAML		21 58 16.0	
	comp=N,52nm,0.5s						
MRMT	**Marmara Adasi**	**1.18**	**79**	PN	Pn	21 57 57.4	-0.1
SIGR	**SIGRI**	**1.19**	**188**	PN	Pn	21 57 57.6	+0.1
BALY	**Balya**	**1.35**	**118**	*i* P	Pg	21 58 01.4	0.0
BALY				*i* S	Sg	21 58 19.7	+0.8
BALY				IAML		21 58 21.0	
	comp=E,25nm,0.6s						
BALY				IAML		21 58 22.0	
	comp=N,17nm,0.4s						
KDZ	**Kurdzhali**	**1.36**	**339**	PN	Pb	21 58 00.6	0.0
EDC	**Edincik**	**1.37**	**91**	PN	Pb	21 58 00.5	-0.2
EDRB	**Edirne**	**1.54**	**19**	PN	Pb	21 58 03.7	0.0
STEP	**BALIKESIR_Sava**	**1.62**	**128**	*i* P	Pb	21 58 05.1	+0.1
STEP				*i* S	Sg	21 58 27.0	-0.5
STEP				IAML		21 58 29.0	
	comp=N,13nm,0.5s						
CHOS	**Chios island**	**2.00**	**180**	PN	Pn	21 58 08.9	+0.1

ATH 24 21:57:39.8, 40.02N×24.34E, h27km±1km, ML2.1/7, Error ellipse: s-maj=1.9km s-min=0.9km az=12.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUR	**Ouranopolis**	**0.42**	**319**	P	Pb	21 57 48.9	+0.1
OUR				S	Sb	21 57 55.4	+0.5
OUR				AML	AML	21 57 57.5	
	comp=N,481μm,0.2s						
OUR				AML	AML	21 57 59.6	
	comp=E,512μm,0.2s						
PAIG	**Paliouri**	**0.51**	**260**	P	Pb	21 57 50.5	+0.2
PAIG				S	Sb	21 57 57.9	+0.5
PAIG				AML	AML	21 57 60.0	
	comp=N,327μm,0.2s						
PAIG				AML	AML	21 58 02.1	
	comp=E,331μm,0.2s						
THAS	**Thassos island**	**0.66**	**26**	P	Pn	21 57 53.2	-0.1
THAS				S	Sn	21 58 03.0	+0.3
THAS				AML	AML	21 58 03.6	
	comp=E,918μm,0.2s						
THAS				AML	AML	21 58 03.9	
	comp=N,1170μm,0.2s						
LIA	**Limnos Island**	**0.66**	**100**	P	Pn	21 57 53.4	0.0
LIA				S	Sn	21 58 02.3	-0.5
LIA				AML	AML	21 58 04.4	
	comp=E,324μm,0.4s						
LIA				AML	AML	21 58 04.4	
	comp=N,599μm,0.3s						
PLG	**Polygyros**	**0.77**	**298**	P	Pn	21 57 55.3	+0.3
PLG				S	Sn	21 58 05.4	-0.3
PLG				AML	AML	21 58 07.3	
	comp=N,215μm,0.2s						
PLG				AML	AML	21 58 08.2	
	comp=E,225μm,0.3s						
AOS	**Alonnisos**	**0.92**	**203**	P	Pb	21 57 57.8	+0.7
AOS				S	Sn	21 58 11.1	+1.9
AOS				AML	AML	21 58 14.8	
	comp=N,172μm,0.2s						
AOS				AML	AML	21 58 15.4	
	comp=E,130μm,0.3s						
KVLA	**Kavala**	**0.92**	**2**	P	Pb	21 57 58.1	+1.0
KAVA	**Kavala**	**0.99**	**8**	P	Pb	21 57 59.0	+0.8
KAVA				S	Sn	21 58 12.1	+1.1
KAVA				AML	AML	21 58 13.4	
	comp=E,450μm,0.3s						
KAVA				AML	AML	21 58 13.7	
	comp=N,281μm,0.1s						
XOR	**Xorichti**	**1.10**	**234**	P	Pb	21 58 01.0	+0.9
HORT	**Hortiatis**	**1.11**	**302**	P	Pb	21 58 01.2	+0.8
NEO	**Neokhori**	**1.11**	**231**	P	Pb	21 58 00.9	+0.4
SKY	**Skiros Island**	**1.15**	**172**	P	Pb	21 58 01.7	+0.7
KYMI	**Kymi, Euboea I**	**1.40**	**188**	P	Pb	21 58 04.9	-0.3
KNT	**Kendrikon**	**1.58**	**317**	P	Pb	21 58 08.4	0.0

IDC **24** *22:02:13.8±5.8, 68.72N×163.18W, h0km, mb3.1/2, mb1 3.7/4, mb1mx3.3/50, mbtmp3.4/4, ML3.6/2, MS3.5/2, Ms1 3.5/2, ms1mx2.6/21, Error ellipse: s-maj=92.2km s-min=61.4km az=144.0*

AEIC **24** *22:02:17.9±3.5, 67.72N±0.06×162.2W±0.1, h12km±6km, ML3.0/23, Error ellipse: s-maj=10.3km s-min=5.7km az=150.0*

NEIC **24** *22:02:18.8±2.5, 67.76N±0.02×162.7W±0.2, h31km±7km, Error ellipse: s-maj=11.7km s-min=2.6km az=95.0*

ISC 24 22:02:18.4±1.0, 67.83N±0.08×162.11W±0.06, h10km, n35, σ1§69/39, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RDOG	**Red Dog Mine**	**0.37**	**307**		**Pg**	**22 02 26.1**	**+0.4**
RDOG	**Red Dog Mine**	**0.37**	**307**		**Sb**	**22 02 32.3**	**-0.6**
ANM	**Nome**	**3.54**	**203**	Pn	Pn	22 03 10.2	-3.1
IM0		**3.78**	**116**		**Pn**	**22 03 17.4**	**+0.8**
IM03					**Sn**	**22 04 01.0**	**0.0**
COLD	**Coldfoot**	**4.61**	**92**	Pn	Pn	22 03 27.3	-0.7
TOLK	**Toolik Lake Re**	**4.74**	**74**		**Pn**	**22 03 30.4**	**+0.6**
TOLK				Sn	**Sn**	**22 04 27.1**	**+2.4**
MLY	**Manley**	**5.36**	**116**	Pn	**Pn**	**22 03 37.0**	**-1.3**
TTA	**Tatalina**	**5.54**	**150**		**Pn**	**22 03 39.7**	**-1.2**
TT01	**Tatalina**	**5.56**	**150**		**Pn**	**22 03 41.0**	**-0.1**
BPAW	**Bear Paw Mtn.**	**5.89**	**124**		**Pn**	**22 03 44.8**	**-0.7**
NEA	**Nenana**	**6.20**	**116**		**Pn**	**22 03 51.6**	**+1.8**
MDM	**Murphy Dome**	**6.27**	**111**	Pn	**Pn**	**22 03 48.0**	**-2.9**
KTH	**Kantishna Hill**	**6.30**	**128**	Pn	**Pn**	**22 03 49.8**	**-1.5**
PPLA	**Purkeypile**	**6.46**	**135**	Pn	**Pn**	**22 03 51.5**	**-2.0**
TRF	**Thorofare Moun**	**6.57**	**126**	Pn	**Pn**	**22 03 55.4**	**+0.3**
CCB	**Clear Creek Bu**	**6.60**	**112**		**Pn**	**22 03 56.2**	**+1.0**
CCB	**Clear Creek Bu**	**6.60**	**112**		**Pn**	**22 03 57.1**	**+1.8**
WRH	**Wood River Hil**	**6.61**	**114**		**Pn**	**22 03 56.2**	**+0.8**
FYU	**Fort Yukon**	**6.68**	**93**	Pn	**Pn**	**22 03 57.7**	**+1.4**
BMU	**Burnt Mountain**	**6.69**	**85**	Pn	**Pn**	**22 03 57.8**	**+1.2**
MCK	**McKinley**	**6.80**	**121**	Pn	**Pn**	**22 03 59.0**	**+1.0**
IL31		**6.86**	**109**	Pn	**Pn**	**22 04 00.3**	**+1.5**
ILAR	**Eielson Array**	**6.86**	**109**	Pn	**Pn**	**22 04 00.9**	**+2.1**
	1.6nm,0.3s,baz=302,slow=14,SNR=65						
ILAR					Sn	**Sn**	**22 05 15.7**	**-1.1**
	0.6nm,0.3s,baz=307,slow=25,SNR=11						
HDA	**Harding Lake**	**7.04**	**112**		**Pn**	**22 04 01.5**	**+0.1**
HDA					**Pn**	**22 04 01.6**	**+0.3**
RND	**Reindeer**	**7.05**	**123**	Pn	**Pn**	**22 04 02.1**	**+0.6**
SVW2	**Sparrevohn**	**7.32**	**154**	Pn	**Pn**	**22 04 04.9**	**-0.3**
DHY	**Denali Highway**	**7.76**	**121**		**Pn**	**22 04 13.1**	**+1.7**
RIDG	**Independent Ri**	**8.18**	**112**	Pn	**Pn**	**22 04 18.4**	**+1.4**
SCRK	**Sand Creek**	**8.35**	**109**		**Pn**	**22 04 21.1**	**+1.7**
RSO	**Redoubt South**	**8.44**	**147**	Pn	**Pn**	**22 04 21.5**	**+0.7**
DOT	**Dot Lake**	**8.52**	**111**	Pn	**Pn**	**22 04 22.0**	**+0.4**
INK	**Inuvik**	**10.65**	**74**	Pn	**Pn**	**22 04 49.1**	**-1.6**
	0.2nm,0.3s,baz=290,slow=9.0,SNR=5.9						
INK					Sn	**Sn**	**22 06 44.5**	**-5.4**
	0.1nm,0.3s,baz=275,slow=11,SNR=5.1						
DLBC	**Dease Lake**	**17.06**	**108**	LR	LR	22 13 40.9	
	comp=Z,74nm,18.8s,baz=119,slow=39						
YKA	**Yellowknife Ar**	**20.21**	**82**	P	**P**	**22 06 51.4**	**-1.4**
	0.2nm,0.5s,baz=301,slow=10,SNR=2.8						
TXAR	**Lajitas Array**	**51.37**	**108**	P	**P**	**22 11 24.8**	**+1.9**
	0.4nm,0.8s,baz=353,slow=6.7,SNR=3.9						
TXAR				LR	LR	22 34 05.3	
	comp=Z,79nm,19.2s,baz=0.0,slow=37						

SKO **24** *22:04:39.4, 41.23N×20.03E, h5km*

TIR 24 22:04:37.5, 41.22N×20.08E, h4km, Md2.2/3, 2C, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.21**	**308**	*i* PG	Pg	22 04 42.4	+0.8
TIR				*i* SG	Sg	22 04 45.7	+1.4
PHP	**Peshkopia**	**0.54**	**30**	*i* PG	Pb	22 04 48.7	-0.8
PHP				*i* SG	Sb	22 04 57.1	-0.6
OHR	**Ohrid**	**0.55**	**101**	*i*Pg	Pb	22 04 49.8	0.0
OHR				*i* Sg	Sb	22 04 58.9	+0.8
OHR				*e*Lg	Lg	22 04 59.4	
	comp=N,19nm,0.4s						
OHR	**Ohrid**	**0.55**	**101**	*i*Pg	Pb	22 04 49.8	0.0
OHR				*i* Sg	Sb	22 04 58.9	+0.8
OHR				*e*Lg	Lg	22 04 59.4	
	comp=N,19nm,0.4s						
PUK	**Puka**	**0.83**	**350**	*i* PG	Pb	22 04 54.2	-0.4
PUK				*i* SG	Sb	22 05 07.1	+0.9
RICI	**Ricice**	**3.15**	**317**	*e*Pn	Pn	22 05 28.2	+0.3
RICI				Sn	Sn	22 06 07.6	+1.6

DDA 24 22:05:48.9, 40.23N×26.00E, h7km±7km, ML1.2, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.39**	**174**	*i* P	Pg	22 05 55.9	-0.5
BOZC				*i* S	Sb	22 06 04.2	0.0
BOZC				IAML		22 06 08.0	
	comp=E,17nm,0.3s						
BAYC	**CANAKKALE_Bayr**	**0.64**	**139**	*i* P	Pg	22 06 00.2	-1.1
BAYC				*i* S	Sb	22 06 11.2	-0.4
BAYC				IAML		22 06 18.0	
	comp=N,8.0nm,0.2s						
BAYC				IAML		22 06 18.0	
	comp=E,6.2nm,0.2s						
KESN	**Edirne-Kesan**	**0.79**	**41**	*i* P	Pb	22 06 05.0	-0.2
KESN				*i* S	Sg	22 06 15.4	+0.9
KESN				IAML		22 06 16.0	
	comp=E,24nm,0.6s						
KESN				IAML		22 06 17.0	
	comp=N,20nm,0.2s						

DDA **24** *22:08:39.7, 40.14N×24.16E, h6km±2km, MW4.0*

SOF **24** *22:08:41.6, 39.97N×24.42E, h2km, MD3.8*

ATH **24** *22:08:44.7, 40.02N×24.35E, h30km±1km, ML3.8/17, Error ellipse: s-maj=1.1km s-min=0.7km az=25.0*

ISK **24** *22:08:44.2, 40.02N×24.39E, h16km, ML3.9/27*

PDG **24** *22:08:44.6±0.4, 40.01N×24.43E, h18km, ML3.5/13, Error ellipse: s-maj=0.4km s-min=0.4km az=0.0*

THE **24** *22:08:44.6, 40.01N×24.35E, h3km±1km, ML3.7/20, Error ellipse: s-maj=1.1km s-min=0.4km az=338.0*

IDC **24** *22:08:44.3±0.8, 40.01N×24.42E, h0km, mb3.6/8, mb1 3.6/16, mb1mx3.5/42, mbtmp3.6/16, ML3.6/8, MS2.9/9, Ms1 2.9/9, ms1mx2.7/40, Error ellipse: s-maj=13.3km s-min=12.3km az=156.0*

ISC 24 22:08:45.1±1.0, 40.01N±0.01×24.37E±0.02, h8km±7km, n300, σ1§06/353, mb3.6/8, MS2.9/5, 24C-15D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUR	**Ouranopolis**	**0.44**	**317**	P	**Pg**	**22 08 53.8**	**+0.2**
OUR				S	**Sg**	**22 08 59.6**	**+0.2**
	14μm,0.5s						
OUR	**Ouranopolis**	**0.44**	**317**	P	**Pg**	**22 08 53.8**	**+0.2**
OUR				S	**Sb**	**22 09 01.4**	**-0.5**
OUR				AML	AML	22 09 05.8	
	comp=N,33270μm,0.5s						
OUR				AML	AML	22 09 05.8	
	comp=E,23424μm,0.6s						
OUR	**Ouranopolis**	**0.44**	**317**	PG	**Pg**	**22 08 53.9**	**+0.3**
OUR				SG	**Sg**	**22 09 00.2**	**+0.8**
PAIG	**Paliouri**	**0.54**	**261**	P	**Pg**	**22 08 55.3**	**-0.2**
PAIG				S	**Sg**	**22 09 01.8**	**-0.7**
	comp=E,12μm,0.8s						
PAIG	**Paliouri**	**0.54**	**261**	P	**Pg**	**22 08 55.6**	**+0.2**
PAIG				S	**Sg**	**22 09 02.7**	**+0.2**
PAIG				AML	AML	22 09 03.1	
	comp=N,23216μm,0.9s						
PAIG				AML	AML	22 09 07.2	
	comp=E,20438μm,0.4s						
LIA	**Limnos Island**	**0.63**	**100**	P	**Pb**	**22 08 57.8**	**-0.6**
LIA				S	**Sb**	**22 09 06.7**	**-0.7**
	comp=E,7μm,0.5s						
LIA	**Limnos Island**	**0.63**	**100**	P	**Pb**	**22 08 58.4**	**0.0**
LIA				S	**Sb**	**22 09 07.2**	**-0.3**
LIA				AML	AML	22 09 08.9	
	comp=E,11939μm,0.7s						
LIA				AML	AML	22 09 09.8	
	comp=N,15942μm,0.7s						
THAS	**Thassos island**	**0.65**	**24**	P	**Pg**	**22 08 57.3**	**-0.3**
THAS				S	**Sb**	**22 09 07.1**	**-0.8**
	comp=N,17μm,0.3s						
THAS	**Thassos island**	**0.65**	**24**	P	**Pb**	**22 08 58.1**	**-0.6**
THAS				S	**Sb**	**22 09 08.1**	**+0.2**
THAS				AML	AML	22 09 08.7	
	comp=N,31566μm,0.2s						
THAS				AML	AML	22 09 09.0	
	comp=E,34991μm,0.3s						
EFSA	**Agios Efstrati**	**0.67**	**135**	P	**Pb**	**22 08 58.9**	**-0.1**
EFSA				S	**Sb**	**22 09 08.8**	**+0.4**
EFSA				AML	AML	22 09 11.1	
	comp=N,10025μm,0.7s						
EFSA				AML	AML	22 09 18.3	
	comp=E,8351μm,0.7s						
PLG	**Polygyros**	**0.80**	**297**	P	**Pg**	**22 09 00.1**	**-0.3**
PLG				S	**Sg**	**22 09 09.8**	**-1.0**
	comp=E,12μm,0.7s						
PLG	**Polygyros**	**0.80**	**297**	P	**Pg**	**22 09 00.1**	**-0.3**
PLG				S	**Sg**	**22 09 11.0**	**+0.2**
PLG				AML	AML	22 09 13.4	
	comp=N,20974μm,0.4s						
PLG				AML	AML	22 09 13.7	
	comp=E,25304μm,0.5s						
AOS	**Alonnisos**	**0.92**	**204**	P	**Pg**	**22 09 02.2**	**-0.6**
AOS				S	**Sg**	**22 09 14.5**	**-0.2**
	comp=E,5μm,0.8s						
AOS	**Alonnisos**	**0.92**	**204**	P	**Pb**	**22 09 02.9**	**-0.4**
AOS				AML	AML	22 09 18.4	
	comp=E,8173μm,0.7s						
AOS				AML	AML	22 09 19.8	
	comp=N,8761μm,0.6s						
AOS	**Alonnisos**	**0.92**	**204**	PG	**Pb**	**22 09 02.9**	**-0.4**
AOS				SG	**Sb**	**22 09 16.1**	**+0.4**
KVLA	**Kavala**	**0.93**	**1**	P	**Pb**	**22 09 02.7**	**-0.7**
KVLA				S	**Sb**	**22 09 15.0**	**-0.8**
KVLA				AML	AML	22 09 16.7	
	comp=E,65647μm,0.7s						
KVLA				AML	AML	22 09 16.8	
	comp=N,25377μm,0.5s						
ALNA	**Alonissos**	**0.95**	**205**	P	**Pg**	**22 09 03.1**	**-0.1**
ALNA				S	**Sg**	**22 09 15.6**	**0.0**
ALNA				AML	AML	22 09 20.0	
	comp=N,14661μm,1.0s						
ALNA				AML	AML	22 09 24.1	
	comp=E,10424μm,1.2s						
KAVA	**Kavala**	**0.99**	**6**	P	**Pg**	**22 09 03.8**	**-0.3**
KAVA				S	**Sg**	**22 09 16.8**	**-0.1**
	comp=E,8μm,0.4s						
KAVA	**Kavala**	**0.99**	**6**	P	**Pg**	**22 09 03.8**	**-0.3**
KAVA				S	**Sg**	**22 09 16.8**	**-0.1**
KAVA				AML	AML	22 09 18.4	
	comp=E,20342μm,0.5s						
KAVA				AML	AML	22 09 19.2	
	comp=N,10022μm,0.4s						
SMTH	**Samothraki Isl**	**1.00**	**62**	P	**Pg**	**22 09 03.8**	**-0.5**
SMTH				S	**Sg**	**22 09 17.1**	**-0.1**
	comp=N,2μm,0.4s						
SMTH	**Samothraki Isl**	**1.00**	**62**	P	**Pg**	**22 09 03.7**	**-0.5**
SMTH				S	**Sb**	**22 09 17.4**	**-0.5**
SMTH				AML	AML	22 09 19.4	
	comp=E,5244μm,0.4s						
SMTH				AML	AML	22 09 20.3	
	comp=N,4307μm,0.4s						
SKIA	**Skiathos**	**1.10**	**220**	P	**Pg**	**22 09 05.0**	**-1.1**
SKIA				S	**Sg**	**22 09 20.0**	**-0.3**
	comp=N,4μm,0.7s						
SKIA	**Skiathos**	**1.10**	**220**	P	**Pg**	**22 09 05.3**	**-0.8**
SKIA				AML	AML	22 09 28.4	
	comp=N,6985μm,0.5s						
SKIA				AML	AML	22 09 30.7	
	comp=E,8149μm,1.0s						
XOR	**Xorichti**	**1.12**	**235**	P	**Pg**	**22 09 05.2**	**-1.3**
XOR				S	**Sg**	**22 09 20.4**	**-0.5**
	comp=E,4μm,0.5s						
XOR	**Xorichti**	**1.12**	**235**	P	**Pg**	**22 09 05.8**	**-0.7**
XOR				S	**Sg**	**22 09 21.0**	**+0.1**
XOR				AML	AML	22 09 24.2	
	comp=N,9898μm,0.5s						
XOR				AML	AML	22 09 24.4	
	comp=E,7922μm,0.5s						
SOH	**Sokhos**	**1.12**	**316**	P	**Pg**	**22 09 06.2**	**-0.4**
SOH				S	**Sg**	**22 09 20.6**	**-0.6**
	comp=E,7μm,0.5s						
NEO	**Neokhori**	**1.13**	**232**	P	**Pg**	**22 09 05.5**	**-1.3**
NEO				S	**Sg**	**22 09 20.6**	**-0.9**
	comp=E,4μm,0.5s						
NEO	**Neokhori**	**1.13**	**232**	P	**Pg**	**22 09 05.6**	**-1.2**
NEO				AML	AML	22 09 24.6	
	comp=E,8401μm,0.5s						
NEO				AML	AML	22 09 30.8	
	comp=N,9237μm,0.6s						
HORT	**Hortiatis**	**1.14**	**301**	P	**Pg**	**22 09 05.8**	**-1.1**
HORT				S	**Sg**	**22 09 21.4**	**-0.2**
	comp=N,3μm,0.8s						
HORT	**Hortiatis**	**1.14**	**301**	P	**Pg**	**22 09 06.0**	**-0.8**
HORT				AML	AML	22 09 25.7	
	comp=N,7669μm,0.7s						
HORT				AML	AML	22 09 30.0	
	comp=E,6285μm,1.0s						
HORT	**Hortiatis**	**1.14**	**301**	PN	**Pg**	**22 09 05.9**	**-1.0**
SKY	**Skiros Island**	**1.14**	**173**	P	**Pg**	**22 09 06.2**	**-0.7**
SKY				S	**Sn**	**22 09 23.7**	**+0.5**
	comp=E,4μm,0.6s						
SKY	**Skiros Island**	**1.14**	**173**	P	**Pg**	**22 09 06.0**	**-0.9**
SKY				S	**Sb**	**22 09 22.6**	**+0.6**
SKY				AML	AML	22 09 31.8	
	comp=E,8624μm,0.6s						
SKY				AML	AML	22 09 33.0	
	comp=N,6036μm,0.6s						
GADA	**Gvkgeada**	**1.19**	**81**	P	**Pg**	**22 09 06.8**	**-1.0**
GADA				S	**Sb**	**22 09 23.5**	**+0.2**
	comp=N,3μm,1.2s						
GADA	**Gvkgeada**	**1.19**	**81**	PN	**Pg**	**22 09 06.6**	**-1.2**
THE	**Thessaloniki**	**1.24**	**300**	P	**Pg**	**22 09 07.5**	**-1.4**
THE	**Thessaloniki**	**1.24**	**300**	P	**Pg**	**22 09 07.7**	**-1.2**
SRS	**Serrai**	**1.25**	**332**	P	**Pg**	**22 09 07.6**	**-1.5**
SRS				S	**Sn**	**22 09 25.8**	**-0.2**
	comp=N,3μm,0.5s						
SRS	**Serrai**	**1.25**	**332**	P

LKR	Lokris	1.73	219	P	Pn	22 09 14.1	-1.3
PSRA	Psara	1.73	147	P	Pn	22 09 15.9	+0.4
ERIK	Erikli-Kesan	1.76	67	PN	Pn	22 09 14.8	-1.1
KTI	Kastanea	1.77	283	P	Pn	22 09 15.5	-0.6
AXAR	Agios Charalam	1.82	227	P	Pn	22 09 15.8	-0.9
AXAR	Agios Charalam	1.82	227	P	Pn	22 09 15.9	-0.8
KDZ	Kurdzhali	1.82	26	*i* P	Pn	22 09 15.0	-1.7
KDZ	Kurdzhali	1.82	26	PN	Pn	22 09 15.2	-1.5
AGG	Agios Georgios	1.86	239	P	Pn	22 09 16.5	-0.9
AGG	Agios Georgios	1.86	239	P	Pn	22 09 16.4	-0.9
AGG	Agios Georgios	1.86	239	PN	Pn	22 09 16.3	-1.0
THL	Klokotos Trika	1.87	257	P	Pn	22 09 16.5	-0.9
THL	Klokotos Trika	1.87	257	P	Pn	22 09 16.7	-0.7
KESN	Edirne-Kesan	1.94	64	*i* P	Pn	22 09 17.1	-1.6
KESN				IAML		22 09 52.0	
	comp=E,602nm,0.3s						
KESN				IAML		22 09 52.0	
	comp=N,644nm,0.4s						
DION	Dionisos Attik	1.96	190	P	Pn	22 09 17.7	-1.0
DION	Dionisos Attik	1.96	190	P	Pn	22 09 17.8	-0.9
KARY	Karystos	1.98	179	P	Pn	22 09 17.9	-1.0
KARY	Karystos	1.98	179	P	Pn	22 09 18.0	-0.8
VIL2	Platees	1.99	206	P	Pn	22 09 18.5	-0.6
MAKR	Makrakomi, Fth	2.00	241	P	Pn	22 09 18.7	-0.5
MAKR	Makrakomi, Fth	2.00	241	P	Pn	22 09 18.8	-0.4
PTL	Penteli	2.00	192	P	Pn	22 09 18.3	-0.9
PTL	Penteli	2.00	192	P	Pn	22 09 18.2	-1.0
KZN	Kozani	2.02	279	P	Pn	22 09 19.0	-0.5
KZN	Kozani	2.02	279	P	Pn	22 09 19.1	-0.3
VILL	Villia	2.02	204	P	Pn	22 09 18.5	-1.0
UKOP	Uzunkopru-Edir	2.05	56	PN	Pn	22 09 19.4	-0.5
CHOS	Chios island	2.08	141	P	Pn	22 09 20.2	-0.2
CHOS	Chios island	2.08	141	P	Pn	22 09 20.2	-0.2
CHOS	Chios island	2.08	141	PN	Pn	22 09 20.1	-0.3
PROD	Prodromos	2.09	214	P	Pn	22 09 19.4	-1.1
PROD	Prodromos	2.09	214	P	Pn	22 09 19.3	-1.1
ATHU	Athens Univers	2.09	193	P	Pn	22 09 19.4	-1.1
ATHU	Athens Univers	2.09	193	P	Pn	22 09 19.5	-0.9
KKB	Krupnik	2.10	333	P	Pn	22 09 19.5	-1.0
ATH	Athens Observa	2.10	194	P	Pn	22 09 19.5	-1.0
ATH	Athens Observa	2.10	194	P	Pn	22 09 20.9	+0.3
ATH				AML	AML	22 09 56.1	
	comp=N,1977µm,0.6s						
ATH				AML	AML	22 10 05.8	
	comp=E,1862µm,0.9s						
PLD	Plovdiv	2.11	7	P	Pn	22 09 20.9	+0.3
PLD	Plovdiv	2.11	7	PN	Pn	22 09 19.8	-0.8
DKL	Dikili	2.17	115	PN	Pn	22 09 21.2	-0.3
VLY	Voula,Athens	2.20	192	P	Pn	22 09 21.2	-0.8
VLY	Voula,Athens	2.20	192	P	Pn	22 09 21.1	-0.9
DIM	Dimitrovgrad	2.22	23	P	Pn	22 09 21.7	-0.5
RKY	Sarkoy-Tekirda	2.25	72	PN	Pn	22 09 22.1	-0.5
EVR	Evrytania	2.27	242	P	Pn	22 09 22.4	-0.5
EVR	Evrytania	2.27	242	P	Pn	22 09 22.3	-0.6
LTK	Loutraki	2.27	209	P	Pn	22 09 21.9	-1.0
LOUT	Loutraki	2.29	209	P	Pn	22 09 21.6	-1.6
LOUT	Loutraki	2.29	209	P	Pn	22 09 22.3	-1.0
KPRO	Kipourio	2.31	270	P	Pn	22 09 23.6	+0.1
KPRO	Kipourio	2.31	270	P	Pn	22 09 23.7	+0.2
ZEDA	zmir-Bergama	2.34	116	*i* P	Pn	22 09 24.2	+0.4
ZEDA				*i* S	Sg	22 10 01.7	+1.5
ZEDA				IAML		22 10 03.0	
	comp=N,238nm,1.3s						
ZEDA				IAML		22 10 12.0	
	comp=E,247nm,1.2s						
ANX	Ano Chora	2.37	234	P	Pn	22 09 24.0	-0.4
ANX	Ano Chora	2.37	234	P	Pn	22 09 24.4	+0.1
KALE	Kalithea	2.37	228	P	Pn	22 09 23.5	-0.8
KALE	Kalithea	2.37	228	P	Pn	22 09 23.8	-0.6
URLA	Izmir	2.39	133	PN	Pn	22 09 24.4	-0.1
URLA	Izmir	2.39	133	*i* P	Pn	22 09 24.1	-0.4
URLA				IAML		22 10 21.0	
	comp=E,115nm,0.8s						
URLA				IAML		22 10 27.0	
	comp=N,131nm,1.1s						
SERG	Sergoula	2.41	229	P	Pn	22 09 23.9	-0.9
SERG	Sergoula	2.41	229	P	Pn	22 09 23.9	-0.9
FNA	Florina	2.41	290	P	Pn	22 09 24.9	0.0
FNA	Florina	2.41	290	P	Pn	22 09 24.8	-0.1
FNA	Florina	2.41	290	PN	Pn	22 09 24.8	-0.1
TRIZ	Trizonia	2.43	228	P	Pn	22 09 24.3	-0.7
TRIZ	Trizonia	2.43	228	P	Pn	22 09 24.1	-0.9
EFP	Efpalio	2.48	231	P	Pn	22 09 25.7	-0.1
PENT	Pentalofos	2.49	275	P	Pn	22 09 26.1	+0.1
MRMT	Marmara Adasi	2.54	75	PN	Pn	22 09 25.4	-1.2
GONE	Gonen-Balikesi	2.54	88	PN	Pn	22 09 25.2	-1.5
EDRB	Edirne	2.57	44	P	Pn	22 09 26.5	-0.5
EDRB	Edirne	2.57	44	PN	Pn	22 09 26.4	-0.6
LARA	Lakka	2.57	227	P	Pn	22 09 27.0	-0.1
PVO	Paravola	2.61	239	P	Pn	22 09 27.5	-0.1
PVO	Paravola	2.61	239	P	Pn	22 09 27.1	-0.4
KLV	Kalavryta, Ach	2.62	222	P	Pn	22 09 27.1	-0.6
KLV	Kalavryta, Ach	2.62	222	P	Pn	22 09 26.7	-1.0
BLCB	Balcova	2.63	127	P	Pn	22 09 28.3	+0.4
BLCB	Balcova	2.63	127	PN	Pn	22 09 27.9	0.0
DID	Didima	2.65	200	P	Pn	22 09 27.1	-1.1
DID	Didima	2.65	200	P	Pn	22 09 26.9	-1.3
STEP	BALIKESIR_Sava	2.66	103	*i* P	Pn	22 09 28.6	+0.3
STEP				IAML		22 10 13.0	
	comp=E,518nm,0.9s						
STEP				IAML		22 10 20.0	
	comp=N,691nm,1.1s						
EDC	Edincik	2.70	82	PN	Pn	22 09 27.9	-0.8
BALB	Balikesir	2.73	97	PN	Pn	22 09 28.9	-0.3
VTS	Vitosha	2.74	342	⇑P	Pn	22 09 29.8	+0.3
VTS	Vitosha	2.74	342	P	Pn	22 09 29.5	0.0
KRND	KRANIDI	2.79	200	P	Pn	22 09 28.9	-1.2
KRND	KRANIDI	2.79	200	P	Pn	22 09 28.8	-1.2
CRLT	Corlu	2.79	65	PN	Pn	22 09 29.2	-0.9
PDO	Prodromos	2.85	241	P	Pn	22 09 32.3	+1.5
PDO	Prodromos	2.85	241	P	Pn	22 09 32.1	+1.2
SERI	Serifos	2.85	178	P	Pn	22 09 29.8	-1.0
SERI	Serifos	2.85	178	P	Pn	22 09 29.9	-1.0
DRO	Drossia	2.92	226	P	Pn	22 09 32.1	+0.2
DRO	Drossia	2.92	226	P	Pn	22 09 32.2	+0.4
JMB	Yambol	2.97	33	P	Pn	22 09 31.5	-1.0
TRIP	Tripoli	2.97	214	P	Pn	22 09 32.2	-0.5
TRIP	Tripoli	2.97	214	P	Pn	22 09 32.1	-0.5
RLS	Riolos of Patr	2.99	230	P	Pn	22 09 34.0	+1.3
SMG	Samos	3.00	139	P	Pn	22 09 32.7	-0.2
VLX	Vlachokerasia	3.06	211	P	Pn	22 09 33.5	-0.4
VLX	Vlachokerasia	3.06	211	P	Pn	22 09 33.2	-0.7
KCTX	Karacabey (Bur	3.06	84	PN	Pn	22 09 32.8	-1.0
APE	Apeiranthos	3.08	162	P	Pn	22 09 33.1	-0.9
APE	Apeiranthos	3.08	162	P	Pn	22 09 33.1	-0.9
APE	Apeiranthos	3.08	162	⇑P	Pn	22 09 33.2	-0.8
APE	Apeiranthos	3.08	162	PN	Pn	22 09 33.2	-0.8
ELND	Elena	3.13	21	⇓P	Pn	22 09 34.3	-0.4
LKD2	Lefkada island	3.13	248	P	Pn	22 09 36.5	+1.8
IGT	Igoumenitsa	3.15	263	P	Pn	22 09 37.1	+2.1
SLVT	Silivri	3.17	66	PN	Pn	22 09 35.0	-0.2
EVGI	Lefkada island	3.20	245	P	Pn	22 09 37.2	+1.5
GCAM	G?zelcaml?	3.21	135	PN	Pn	22 09 35.6	-0.2
AMT	Artemida-Makis	3.23	221	P	Pn	22 09 36.8	+0.6
ELBA	Catalca	3.29	69	*i* P	Pn	22 09 36.1	-0.9
ELBA				IAML		22 10 53.0	
	comp=N,36nm,0.8s						
ELBA				IAML		22 10 53.0	
	comp=E,42nm,0.9s						
CTYL	Yalikoy Yolu	3.32	63	PN	Pn	22 09 36.6	-0.6
FSK	Fiskardo	3.34	244	P	Pn	22 09 38.9	+1.3
IOSP	Ios island	3.36	167	P	Pn	22 09 36.9	-1.0
SRN	Sarande	3.36	269	P	Pn	22 09 39.4	+1.5
KFL	Anninata	3.38	237	P	Pn	22 09 39.7	+1.6
MPEP	Malo Peshtene	3.38	352	P	Pn	22 09 38.5	+0.4
CTKS	Kestanelik-??a	3.38	67	PN	Pn	22 09 37.6	-0.5
PLVB	Pleven	3.38	3	⇑P	Pn	22 09 38.1	0.0
AMGA	Amorgos Island	3.39	159	P	Pn	22 09 37.3	-1.0
AMGA	Amorgos Island	3.39	159	P	Pn	22 09 37.3	-1.0
ITM	Ithomi	3.42	215	P	Pn	22 09 39.0	+0.3
ITM	Ithomi	3.42	215	PN	Pn	22 09 38.4	-0.3
PHP	Peshkopia	3.42	301	P	Pn	22 09 38.8	+0.1
AYDB	Zeytinkoy-Aydi	3.43	126	PN	Pn	22 09 38.8	-0.2
SZH	Strazhica	3.46	19	P	Pn	22 09 38.9	-0.3
VLS	Valsamata	3.47	239	P	Pn	22 09 40.1	+0.7
VLI	Veliai	3.48	199	P	Pn	22 09 38.6	-0.8
VLI	Veliai	3.48	199	P	Pn	22 09 38.7	-0.8
ARMT	Armutlu	3.48	79	PN	Pn	22 09 38.9	-0.6
KEK	Kerkira	3.53	267	P	Pn	22 09 41.8	+1.6
KULA	Kula-Manisa	3.65	113	P	Pn	22 09 42.8	+0.9
THR5	Thira Island,	3.67	168	P	Pn	22 09 40.4	-1.7
THR3	Thira Island,	3.69	167	P	Pn	22 09 41.8	-0.6
IGD	Bursa	3.71	85	*i* P	Pn	22 09 42.7	0.0
IGD				IAML		22 10 49.0	
	comp=E,53nm,0.9s						
IGD				IAML		22 10 51.0	
	comp=N,59nm,1.0s						
PYL	PYLOS	3.73	214	P	Pn	22 09 44.3	+1.3
PYL	PYLOS	3.73	214	P	Pn	22 09 44.1	+1.1
ANAF	Anafi Island	3.81	163	P	Pn	22 09 43.7	-0.4
ANAF	Anafi Island	3.81	163	P	Pn	22 09 43.6	-0.4
RAZG	Razgrad	3.89	24	⇑P	Pn	22 09 44.8	-0.5
PRD	Provadia	3.91	34	P	Pn	22 09 45.0	-0.4
YER	Yerkesik	4.20	132	P	Pn	22 09 50.4	+0.9
PVY	Plav	4.21	309	⇑*i* Pn	Pn	22 09 50.3	+0.7
PVY				*i* Sn	Sn	22 10 39.2	+0.1
ULC	Ulcinj	4.34	298	⇓*i* Pn	Pn	22 09 52.2	+0.8
ULC				*i* Sn	Sn	22 10 42.3	+0.1
IVA	Berane	4.42	312	⇓*i* Pn	Pn	22 09 52.5	0.0
IVA				*i* Sn	Sn	22 10 44.0	-0.1
DRME	Dracevica, Mon	4.48	301	*e*Pn	Pn	22 09 54.8	+1.5
DRME	Dracevica, Mon	4.48	301	⇓*i* Pn	Pn	22 09 54.1	+0.8
DRME				*i* Sn	Sn	22 10 45.7	+0.1
PDG	Podgorica	4.55	304	⇓P	Pn	22 09 56.0	+1.7
PDG	Podgorica	4.55	304	*e*Pn	Pn	22 09 56.0	+1.7
TTG	Podgorica	4.55	304	⇑*i* Pn	Pn	22 09 54.9	+0.7
TTG				*i* Sn	Sn	22 10 47.2	-0.1
KOME	Kolasin	4.62	309	⇓*i* Pn	Pn	22 09 56.0	+0.7
KOME				*i* Sn	Sn	22 10 49.0	-0.2
PSN	Preselentsi	4.64	37	P	Pn	22 09 54.1	-1.4
BUM	Brajici-Budva	4.72	301	⇓*i* Pn	Pn	22 09 57.3	+0.6
BUM				*i* Sn	Sn	22 10 51.5	-0.2
IDI	Anoyia	4.73	175	Pn	Pn	22 09 56.2	-0.6
	comp=N,1.4nm,0.3s,baz=7.4,slow=10,SNR=17						
IDI				Sn	Sn	22 10 49.8	-2.2
	baz=38,slow=24,SNR=1.3						
IDI				Lg	Lg	22 11 09.6	
	baz=73,slow=20,SNR=1.3						
CEME	Cevo	4.83	303	⇑*i* Pn	Pn	22 09 58.6	+0.5
CEME				*i* Sn	Sn	22 10 53.9	-0.3
NKME	Niksic	4.92	306	⇑*i* Pn	Pn	22 09 59.7	+0.4
NKME				*i* Sn	Sn	22 10 56.3	-0.2
NKY	Niksic	4.92	306	⇑*i* Pn	Pn	22 09 59.9	+0.5
NKY				*i* Sn	Sn	22 10 56.1	-0.4
PLE	Pljevlja	4.99	313	⇓*i* Pn	Pn	22 10 00.8	+0.4
PLE				*i* Sn	Sn	22 10 57.5	-0.9
HCY	Herceg Novi	5.06	301	*e*Pn	Pn	22 10 02.0	+0.8
HCY	Herceg Novi	5.06	301	⇑*i* Pn	Pn	22 10 01.9	+0.8
HCY				*i* Sn	Sn	22 10 59.6	-0.2
HERR	Herculane	5.08	344	⇑P	Pn	22 10 00.5	-0.9
MDVR	Moldovita	5.16	338	⇓P	Pn	22 10 02.2	-0.4
UPM	Unac-Piva	5.19	310	*e*Pn	Pn	22 10 04.1	+0.9
UPM	Unac-Piva	5.19	310	⇓*i* Pn	Pn	22 10 03.3	+0.1
UPM				*i* Sn	Sn	22 11 02.5	-0.9
DIVS	Divibare	5.22	323	*e*Pn	Pn	22 10 03.1	-0.5
BRY	Bratogost	5.25	305	*e*Pn	Pn	22 10 05.5	+1.6
BRY	Bratogost	5.25	305	⇓*i* Pn	Pn	22 10 04.5	+0.6
BRY				*i* Sn	Sn	22 11 04.0	-0.7
TREB	Trebinje	5.28	303	*e*Pn	Pn	22 10 08.4	+4.2
BBLS	Lazići	5.34	318	*e*Pn	Pn	22 10 05.5	+0.3
ARR	Arges	5.36	2	⇑P	Pn	22 10 05.2	-0.2
HARR	Harsova	5.37	28	⇓P	Pn	22 10 05.3	-0.1
DBRK	Dubrovnik	5.38	302	*i* P	Pn	22 10 06.2	+0.6
GZR	Gura Zlata	5.50	348	⇓P	Pn	22 10 06.9	-0.5
MLR	Muntele Rosu	5.60	11	Pn	Pn	22 10 09.4	+0.6
	comp=N,1.6nm,0.3s,baz=212,slow=6.2,SNR=44						
MLR				Sn	Sn	22 11 11.0	-2.3
	comp=N,1.2nm,0.3s,baz=200,slow=14,SNR=3.8						
MLR				Lg	Lg	22 11 42.4	
	comp=N,3.5nm,0.3s,baz=68,slow=19,SNR=1.9						
MLR	Muntele Rosu	5.60	11	⇑P	Pn	22 10 09.4	+0.6
HAPS	Han Pijesak,BI	5.73	317	*e*Pn	Pn	22 10 10.0	-0.6
STON	Ston	5.77	302	*e*Pn	Pn	22 10 11.2	+0.2
BISRR	Bisoca	5.79	16	⇑P	Pn	22 10 13.1	+1.7
BAI	Bari	5.81	283	⇑*i* Pn	Pn	22 10 12.5	+1.0
CFR	Carcaliu	5.86	27	⇑P	Pn	22 10 11.6	-0.6
SG1	Sgolgore (BA)	5.93	280	⇑*i* Pn	Pn	22 10 13.0	-0.2
BZS	Buzias	5.96	341	⇓P	Pn	22 10 12.6	-1.0
DOPR	Dopca	6.00	7	⇑P	Pn	22 10 15.0	+0.9
PLOR	Plostina	6.07	15	⇑P	Pn	22 10 16.5	+1.4
VRI	Vrincioaia	6.10	16	⇑P	Pn	22 10 17.0	+1.5
FRGS	Fruska Gora	6.15	328	*e*Pn	Pn	22 10 15.4	-0.8
RICI	Ricice	6.43	305	P	Pn	22 10 20.6	+0.4
SIRR	Siria	6.56	343	⇑P	Pn	22 10 20.5	-1.3
TESR	Tescani	6.71	14	⇑P	Pn	22 10 24.5	+0.6
DRGR		6.88	350	⇑P	Pn	22 10 25.9	-0.4
BIZ	Bicaz	7.04	10	⇓P	Pn	22 10 29.5	+1.1
BLJ	Banja Luka	7.12	314	*e*Pn	Pn	22 10 30.6	+1.1
BRTR	Keskin Array B	7.13	99	Pn	Pn	22 10 29.9	0.0
	comp=N,0.7nm,0.3s,baz=262,slow=10,SNR=20						
BRTR				Sn	Sn	22 11 46.8	-4.4
	baz=274,slow=39,SNR=1.5						
BRTR				Lg	Lg	22 12 30.2	
	comp=N,0.1nm,0.3s,baz=264,slow=26,SNR=1.4						
KIJV	Kijevo	7.15	307	*i* P	Pn	22 10 30.0	+0.1
ZIRJ	Zirje	7.46	302	*i* P	Pn	22 10 33.0	-1.2
MORH	Mrgy, Hungar	7.48	328	*e*Pn	Pn	22 10 33.3	-1.1
MORI	Morici	7.52	304	*i* P	Pn	22 10 34.5	-0.5
BURAR	Bucovina Array	7.62	4	⇑P	Pn	22 10 37.2	+0.6
KIS	Kishinev	7.69	23	*e*	Sg	22 10 00.0	+8.1
DUGI	Dugi Otok	7.99	303	*i* P	Pn	22 10 40.7	-0.8
VAE	Vaguarnera	8.18	255	Pn	Pn	22 10 45.9	+1.7
	comp=N,0.2nm,0.3s,baz=204,slow=19,SNR=1.7						
VAE				Sn	Sn	22 12 21.5	+4.6
	comp=N,0.4nm,0.3s,baz=315,slow=19,SNR=1.5						
CRES	Cresnjev	8.75	315	*e*Pn	Pn	22 10 51.6	-0.2
CEY	Cerknica	9.27	311	*e*Pn	Pn	22 11 00.0	+0.9
VYHS	Vyhne	9.36	337	*e*PN	Pn	22 11 00.0	-0.3
SOKA	Soboth	9.52	317	*e*Pn	Pn	22 11 03.0	+0.5
	comp=N,1.3nm,0.5s						
ARSA	Arzberg	9.66	321	*e*Pn	Pn	22 11 04.1	-0.4
	comp=N,2.5nm,0.5s						
OBKA	Obir	9.66	315	*e*Pn	Pn	22 11 05.7	+1.2
	comp=N,4.3nm,0.4s						
CONA	Conrad Observa	10.01	325	*e*Pn	Pn	22 11 10.0	+0.9
	comp=N,1.5nm,0.7s						
VRAC	Vranov	10.81	332	LR	LR	22 16 04.4	
	comp=N,51nm,20.7s,baz=148,slow=41						
ABTA	Abfaltersbach	10.94	312	*e*Pn	Pn	22 11 22.9	+1.0
	comp=N,0.6nm,0.3s						
AKASC	Malin Array Be	11.22	16	Pn	Pn	22 11 24.3	-1.3
	comp=N,1.7nm,0.3s,baz=207,slow=12,SNR=4.7						
MMAI	Mount Meron Ar	11.29	125	Pn	Pn	22 11 26.2	-0.5
	comp=N,0.4nm,0.3s,baz=315,slow=16,SNR=1.7						
MMAI				LR	LR	22 16 45.5	
	comp=N,51nm,20.1s,baz=210,slow=43						
GERES	GERESS Array B	11.66	323	Pn	Pn	22 11 33.7	+1.9
	comp=N,0.1nm,0.3s,baz=155,slow=12,SNR=3.0						
WTTA	Wattenberg	11.72	312	*e*Pn	Pn	22 11 33.5	+0.7
	comp=N,1.8nm,0.3s						
WATA	Walderalm	11.80	313	*e*Pn	Pn	22 11 35.4	+1.6
	comp=N,1.1nm,0.4s						
MOTA	Moosalm	12.07	312	*e*Pn	Pn	22 11 38.5	+1.0
	comp=N,2.9nm,0.7s						
FETA	Feichten	12.12	310	*e*Pn	Pn	22 11 38.8	+0.6
	comp=N,0.8nm,0.4s						
DAVOX	Davos/Dischmat	12.52	307	Pn	Pn	22 11 45.2	+1.7
	comp=N,0.2nm,0.3s,baz=146,slow=19,SNR=3.7						
DAVOX				LR	LR	22 17 43.4	
	comp=N,69nm,20.7s,baz=82,slow=43						
KEST	Kesra	12.62	255	Pn	Pn	22 11 47.6	+2.7
	comp=N,0.3nm,0.3s,baz=265,slow=8.0,SNR=4.9						
KEST				LR	LR	22 18 02.8	
	comp=N,74nm,21.0s,baz=162,slow=44						
FINES	FINESS Array B	21.48	2	P	P	22 13 34.4	+0.5
	comp=N,1.3nm,1.0s,baz=186,slow=13,SNR=2.4						
ESDC	Sonseca Array	21.73	278	P	P	22 13 37.1	+0.3
	comp=N,1.4nm,0.8s,baz=74,slow=10,SNR=8.9						
NOA	NORSAR Array B	22.57	343	P	P	22 13 44.1	-1.4
	comp=N,0.8nm,0.7s,baz=161,slow=8.5,SNR=2.6						
NOA				LR	LR	22 22 34.6	
	comp=N,22nm,19.7s,baz=150,slow=37						
KLMR	Klimovskoe	22.88	19	*e*	P	22 13 55.9	+7.1
KLMR				AMP		22 14 04.1	
	comp=Z,20nm,1.4s						
EKA	Eskdalemuir Ar	23.83	319	P	P	22 13 57.9	-0.6
	comp=Z,1.5nm,0.8s,baz=103,slow=9.5,SNR=1.9						
AKTO	Aktyubinsk	25.68	55	LR	LR	22 26 22.1	
	comp=Z,30nm,18.8s,baz=249,slow=41						
GEYT	Alibeck	26.23	84	P	P	22 14 20.9	+0.4
	comp=Z,0.4nm,0.3s,baz=268,slow=4.2,SNR=1.4						
ARU	Arti	27.70	42	LR	LR	22 26 07.7	
	comp=Z,45nm,19.8s,baz=228,slow=38						
TORD	Torodi Ar. Bea	33.38	223	P	P	22 15 24.2	+0.3
	comp=Z,0.6nm,0.5s,baz=23,slow=11,SNR=8.2						
MKAR	Makanchi Array	41.79	61	P	P	22 16 36.1	+1.1
	comp=Z,0.7nm,0.7s,baz=291,slow=6.2,SNR=8.0						
MKAR				LR	LR	22 37 07.5	
	comp=Z,17nm,18.2s,baz=298,slow=41						
ZALV	Zalesovo Beam	42.23	50	P	P	22 16 39.1	+0.7
	comp=Z,1.2nm,0.7s,baz=274,slow=8.8,SNR=5.9						
ZALV				LR	LR	22 35 17.8	
	comp=Z,15nm,19.8s,baz=44,slow=38						

*IDC **24** 22:36:50.6±1.2,24°.32N×127°.26E,h0km,mb3.6/6, mb1 3.8/7,mb1mx3.5/37,mbtmp3.7/7,ML3.0/2,MS2.8/1, Ms1 2.8/1,ms1mx2.2/51,Error ellipse: s-maj=38.5km s-min=24.2km az=83.0*

*JMA **24** 22:36:53.0±0.3,24°.38N×127°.24E,h53km,M3.2*

ISC 24 22:36:54.2±0.9,24°.29N±0°.06×127°.34E±0°.04,h35km,n32, σ2s66/50,mb3.5/6,Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JOGS	Gusukube	1.82	285	S		Sn		22 37 42.6	-2.3
JJT3	Tamagusuku3	1.89	12	P		Pn		22 37 22.4	-1.5
JJT3				S		Sn		22 37 44.4	-2.1
JMJ2	Miyako jima3	1.89	284	P		Pn		22 37 22.4	-1.5
JMJ2				S		Sn		22 37 44.1	-2.4
JIKM	Ikemajima	2.00	289	P		Pn		22 37 24.1	-1.4
JIKM				S		Sn		22 37 47.1	-2.3
JIRB	Irabujima	2.04	286	P		Pn		22 37 23.7	-2.4
JIRB				S		Sn		22 37 47.0	-3.4
JKE	Kume jima 2	2.08	346	P		Pn		22 37 24.8	-1.9
JKE				S		Sn		22 37 48.6	-2.8
JAGN	Aguni-jima	2.29	358	P		Pn		22 37 28.7	-0.7
JAGN				S		Sn		22 37 53.4	-3.0
JNTH	Nagotoyohara	2.30	15	P		Pn		22 37 28.6	-1.0
JTJ	Tarama	2.43	279	P		Pn		22 37 29.7	-1.7
JTJ				S		Sn		22 37 56.2	-3.7
JOW	Kunigami	2.66	18	Pn		Pn		22 37 34.3	-0.3
	1.3nm,0.3s,baz=73,slow=15,SNR=28								
JOW				Sn		Sn		22 38 03.0	-2.7
	3.8nm,0.3s,baz=79,slow=16,SNR=11								
JOW	Kunigami	2.66	18	P		Pn		22 37 34.9	+0.3
JOW				*e*S		Sn		22 38 02.8	-2.9
JISG	Ishigakijimahi	2.78	277	P		Pn		22 37 34.3	-1.9
JISG				S		Sn		22 38 02.5	-6.0
JIH	Iheya	2.79	12	P		Pn		22 37 36.8	+0.5
JIH				S		Sn		22 38 04.8	-3.9
JYRO	Yoronjima	2.90	20	P		Pn		22 37 37.9	+0.1
JYRO				S		Sn		22 38 07.9	-3.5
JIJ	Ishigaki jima	2.92	272	P		Pn		22 37 36.4	-1.7
JIJ				S		Sn		22 38 06.9	-5.0
JKRS	Kuro-shima	3.04	270	P		Pn		22 37 38.6	-1.2
JKRS				*e*S		Sn		22 38 12.2	-2.8
HATJ	Hateruma jima	3.24	267	P		Pn		22 37 40.7	-1.8
JOKE	Okinoerabujima	3.25	20	P		Pn		22 37 39.9	-2.8
IRIF

THAS	**Thassos island**	**0.67**	**29**	P	**Pg**	**22 51 00.1**	**+0.1**
THAS				S	**Sn**	**22 51 10.9**	**-1.0**
THAS				AML	AML	22 51 11.8	
	comp=N,1363µm,0.2s						
THAS				AML	AML	22 51 12.0	
	comp=E,2528µm,0.2s						
LIA	**Limnos Island**	**0.69**	**100**	P	**Pb**	**22 51 01.2**	**+0.6**
LIA				S	**Sn**	**22 51 12.3**	**-0.2**
	comp=E,2µm,0.4s						
LIA	**Limnos Island**	**0.69**	**100**	P	**Pb**	**22 51 01.1**	**+0.5**
LIA				S	**Sn**	**22 51 11.9**	**-0.6**
LIA				AML	AML	22 51 13.1	
	comp=E,3977µm,0.5s						
LIA				AML	AML	22 51 13.4	
	comp=N,4295µm,0.4s						
PLG	**Polygyros**	**0.74**	**299**	P	**Pg**	**22 51 01.6**	**+0.3**
PLG				S	**Sn**	**22 51 12.3**	**-1.5**
	comp=N,432nm,0.3s						
PLG	**Polygyros**	**0.74**	**299**	P	**Pg**	**22 51 01.6**	**+0.3**
PLG				S	**Sb**	**22 51 11.6**	**+0.2**
AOS	**Alonnisos**	**0.91**	**201**	P	**Pb**	**22 51 04.0**	**-0.3**
AOS				S	**Sn**	**22 51 18.0**	**+0.1**
	comp=N,168nm,0.3s						
AOS	**Alonnisos**	**0.91**	**201**	P	**Pb**	**22 51 04.2**	**-0.1**
AOS				AML	AML	22 51 19.3	
	comp=E,368µm,0.3s						
AOS				AML	AML	22 51 21.4	
	comp=N,279µm,0.2s						
AOS	**Alonnisos**	**0.91**	**201**	PG	**Pn**	**22 51 05.0**	**-0.1**
KVLA	**Kavala**	**0.92**	**4**	P	**Pn**	**22 51 05.3**	**+0.1**
KVLA				S	**Sn**	**22 51 17.8**	**-0.3**
KVLA				AML	AML	22 51 19.5	
	comp=N,1107µm,0.4s						
KVLA				AML	AML	22 51 19.7	
	comp=E,2095µm,0.4s						
KAVA	**Kavala**	**0.99**	**10**	P	**Pg**	**22 51 06.2**	**+0.2**
KAVA				S	**Sn**	**22 51 19.7**	**-0.1**
	comp=E,642nm,0.1s						
KAVA	**Kavala**	**0.99**	**10**	P	**Pg**	**22 51 06.2**	**+0.2**
KAVA				S	**Sn**	**22 51 19.4**	**-0.4**
KAVA				AML	AML	22 51 20.9	
	comp=E,1456µm,0.2s						
KAVA				AML	AML	22 51 21.2	
	comp=N,1077µm,0.2s						
SMTH	**Samothraki Isl**	**1.05**	**64**	P	**Pn**	**22 51 06.8**	**-0.2**
SMTH				S	**Sn**	**22 51 21.7**	**+0.4**
	comp=N,240nm,0.3s						
SMTH	**Samothraki Isl**	**1.05**	**64**	P	**Pn**	**22 51 06.7**	**-0.2**
SMTH				AML	AML	22 51 24.1	
	comp=N,526µm,0.2s						
SMTH				AML	AML	22 51 24.4	
	comp=E,430µm,0.4s						
XOR	**Xorichti**	**1.07**	**233**	P	**Pg**	**22 51 07.5**	**-0.2**
XOR				S	**Sn**	**22 51 21.9**	**-0.1**
	comp=E,135nm,0.4s						
XOR	**Xorichti**	**1.07**	**233**	P	**Pg**	**22 51 07.4**	**-0.2**
XOR				S	**Sn**	**22 51 21.9**	**-0.1**
XOR				AML	AML	22 51 25.4	
	comp=N,290µm,0.4s						
XOR				AML	AML	22 51 26.4	
	comp=E,252µm,0.5s						
SOH	**Sokhos**	**1.07**	**318**	P	**Pg**	**22 51 08.0**	**+0.4**
SOH				S	**Sn**	**22 51 23.2**	**+1.1**
	comp=E,440nm,0.3s						
HORT	**Hortiatis**	**1.08**	**303**	P	**Pg**	**22 51 07.5**	**-0.3**
HORT				S	**Sn**	**22 51 21.9**	**-0.4**
	comp=E,182nm,0.3s						
HORT	**Hortiatis**	**1.08**	**303**	P	**Pn**	**22 51 07.4**	**-0.1**
HORT				S	**Sg**	**22 51 21.6**	**-0.3**
HORT	**Hortiatis**	**1.08**	**303**	PN	**Pg**	**22 51 07.8**	**0.0**
NEO	**Neokhori**	**1.09**	**230**	P	**Pg**	**22 51 07.7**	**-0.3**
NEO				S	**Sg**	**22 51 22.4**	**+0.1**
	comp=E,185nm,0.4s						
NEO	**Neokhori**	**1.09**	**230**	P	**Pg**	**22 51 07.7**	**-0.3**
SKY	**Skiros Island**	**1.16**	**170**	P	**Pg**	**22 51 09.1**	**-0.2**
THE	**Thessaloniki**	**1.19**	**301**	P	**Pg**	**22 51 10.1**	**+0.4**
THE	**Thessaloniki**	**1.19**	**301**	P	**Pg**	**22 51 09.6**	**-0.1**
SRS	**Serrai**	**1.22**	**334**	P	**Pb**	**22 51 09.8**	**+0.2**
SRS				S	**Sn**	**22 51 25.0**	**-0.6**
	comp=E,140nm,0.1s						
SRS	**Serrai**	**1.22**	**334**	P	**Pb**	**22 51 09.8**	**+0.2**
KYMI	**Kymi, Euboea I**	**1.40**	**186**	P	**Pn**	**22 51 11.9**	**+0.2**
SIGR	**SIGRI**	**1.45**	**123**	P	**Pb**	**22 51 13.4**	**-0.1**
SIGR				S	**Sb**	**22 51 32.0**	**+0.2**
	comp=E,102nm,0.5s						
SIGR	**SIGRI**	**1.45**	**123**	P	**Pb**	**22 51 13.2**	**-0.4**
RDO	**Rodhopi**	**1.47**	**40**	P	**Pn**	**22 51 12.9**	**+0.2**
RDO				S	**Sn**	**22 51 30.9**	**-0.8**
	comp=E,722nm,0.7s						
RDO	**Rodhopi**	**1.47**	**40**	P	**Pn**	**22 51 12.8**	**+0.1**
RDO	**Rodhopi**	**1.47**	**40**	PN	**Pn**	**22 51 12.9**	**+0.2**
RDO	**Rodhopi**	**1.47**	**40**	PG	**Pn**	**22 51 12.9**	**+0.2**
KNT	**Kendrikon**	**1.56**	**317**	P	**Pb**	**22 51 15.2**	**-0.2**
KNT				S	**Sb**	**22 51 35.4**	**+0.5**
	comp=E,120nm,0.4s						
KNT	**Kendrikon**	**1.56**	**317**	P	**Pb**	**22 51 15.0**	**-0.4**
KNT	**Kendrikon**	**1.56**	**317**	PN	**Pb**	**22 51 14.7**	**-0.7**
MMB	**Musomiste**	**1.62**	**345**	P	**Pn**	**22 51 15.3**	**+0.3**
RZN	**Rozhen**	**1.69**	**11**	P	**Pb**	**22 51 17.1**	**-0.7**
PRK	**Paraskevi**	**1.71**	**116**	P	**Pb**	**22 51 18.4**	**+0.4**
PRK				S	**Sb**	**22 51 38.5**	**-0.8**
	comp=E,135nm,0.4s						
AGG	**Agios Georgios**	**1.82**	**237**	P	**Pn**	**22 51 18.5**	**+0.8**
AGG	**Agios Georgios**	**1.82**	**237**	PN	**Pn**	**22 51 18.3**	**+0.7**
KDZ	**Kurdzhali**	**1.83**	**27**	P	**Pn**	**22 51 17.5**	**-0.3**
KDZ	**Kurdzhali**	**1.83**	**27**	PN	**Pn**	**22 51 17.7**	**-0.1**
VAY	**Valandovo**	**1.85**	**315**	*i* Pn	**Pg**	**22 51 23.1**	**+0.8**
VAY	**Valandovo**	**1.85**	**315**	*i* Pn	**Pg**	**22 51 23.1**	**+0.8**
PLD	**Plovdiv**	**2.10**	**8**	PN	**Pn**	**22 51 22.4**	**+0.9**
FNA	**Florina**	**2.36**	**290**	PN	**Pn**	**22 51 25.5**	**+0.5**
VTS	**Vitosha**	**2.71**	**343**	⇑P	Pn	22 51 24.9	-5.1
PLVB	**Pleven**	**3.37**	**4**	⇓P	**Pn**	**22 51 41.0**	**+2.1**
RASA	**Rasa**	**4.70**	**26**	⇑P	**Pb**	**22 52 06.0**	**-2.9**
IDI	**Anoyia**	**4.75**	**174**	⇑P	**Pn**	**22 51 58.1**	**+0.2**
ARR	**Arges**	**5.35**	**3**	⇓P	**Pn**	**22 52 05.8**	**-0.4**
LOT	**Lotru**	**5.44**	**356**	⇑P	**Pn**	**22 52 03.4**	**-4.0**
MLR	**Muntele Rosu**	**5.60**	**12**	⇑P	**Pn**	**22 52 12.6**	**+2.9**
DOPR	**Dopca**	**6.00**	**7**	⇓P	**Pn**	**22 52 15.8**	**+0.8**
VRI	**Vrincioaia**	**6.11**	**16**	⇑P	**Pn**	**22 52 20.5**	**+3.9**

*DDA **24** 22:50:58.4, 40˚.40N×26˚.06E, h7km±3km, ML1.8*
ISK 24 22:50:57.2, 40˚.38N×26˚.12E, h28km, ML1.8/11, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.25**	**223**	PG	Pn	22 51 04.6	-0.5
GADA				SG	Sn	22 51 09.2	-0.8
GELI	**Tayfur-Gelibol**	**0.27**	**85**	PG	Pn	22 51 04.9	-0.4
ENEZ	**Enez**	**0.36**	**4**	PG	Pn	22 51 06.4	-0.2
ENEZ				SG	Sn	22 51 12.1	-0.7
ERIK	**Erikli-Kesan**	**0.42**	**45**	PG	Pn	22 51 06.9	-0.5
ERIK				SG	Sn	22 51 13.4	-0.8
LPK	**Lapseki**	**0.49**	**90**	PG	Pn	22 51 08.0	-0.3
BOZC	**Bozcaada**	**0.54**	**186**	PG	Pn	22 51 08.7	-0.3
EZN	**Ezine**	**0.57**	**164**	PG	Pn	22 51 09.2	-0.2
KESN	**Edirne-Kesan**	**0.62**	**43**	*i* P	Pn	22 51 10.8	+0.4
KESN				*i* S	Sb	22 51 18.9	+0.7
KESN				IAML		22 51 25.0	
	comp=E,77nm,0.2s						
KESN				IAML		22 51 25.0	
	comp=N,52nm,0.2s						
UKOP	**Uzunkopru-Edir**	**0.85**	**27**	PG	Pb	22 51 13.5	+0.2
RKY	**Sarkoy-Tekirda**	**0.86**	**69**	PG	Pb	22 51 13.7	+0.1
SART	**Tekirdag**	**0.86**	**68**	*i* P	Pb	22 51 18.0	+2.4
KNL	**Balıkesir**	**1.08**	**95**	*i* P	Pb	22 51 20.2	+3.0
KNL				*i* S	Sb	22 51 35.7	+4.8
KNL				IAML		22 51 37.0	
	comp=E,21nm,1.0s						
KNL				IAML		22 51 39.0	
	comp=N,17nm,0.4s						
MRMT	**Marmara Adasi**	**1.15**	**78**	PN	Pn	22 51 17.7	+0.3
AYVA	**Ayvalik**	**1.15**	**158**	*i* P	Pb	22 51 20.6	+2.1
AYVA				*i* S	Sb	22 51 36.0	+3.0
AYVA				IAML		22 51 38.0	
	comp=N,50nm,0.4s						
AYVA				IAML		22 51 40.0	
	comp=E,35nm,0.3s						
BALY	**Balya**	**1.31**	**118**	*i* P	Pb	22 51 24.7	+3.5
BALY				*i* S	Sb	22 51 40.4	+2.7
BALY				IAML		22 51 43.0	
	comp=E,10.0nm,0.2s						
BALY				IAML		22 51 44.0	
	comp=N,11nm,0.4s						
DKL	**Dikili**	**1.44**	**155**	PN	Pn	22 51 21.2	-0.1
EDRB	**Edirne**	**1.54**	**18**	PN	Pn	22 51 22.9	+0.1
STEP	**BALIKESIR_Sava**	**1.58**	**129**	*i* P	Pb	22 51 29.4	+3.6
STEP				*i* S	Sn	22 51 43.4	+0.4
STEP				IAML		22 51 48.0	
	comp=N,9.6nm,0.5s						
STEP				IAML		22 51 48.0	
	comp=E,8.0nm,0.5s						
ZEDA	**zmir-Bergama**	**1.59**	**152**	*i* P	Pb	22 51 25.4	-0.5
ZEDA				*i* S	Sb	22 51 48.6	+3.1

*SOF **24** 23:00:34.6, 40˚.38N×25˚.95E, h7km, MD3.8*
*IDC **24** 23:00:35.9±0.7, 40˚.42N×25˚.93E, h0km, mb3.8/18, mb1 3.9/28, mb1mx3.8/56, mbtmp3.8/28, ML3.6/10, MS3.2/12, Ms1 3.2/12, ms1mx2.9/37, Error ellipse: s-maj=12.3km s-min=8.9km az=37.0*
*ISK **24** 23:00:35.8, 40˚.41N×25˚.93E, h12km, ML4.3/50*
*PDG **24** 23:00:36.2±0.6, 40˚.37N×25˚.93E, h17km, ML3.7/7, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*THE **24** 23:00:36.7, 40˚.40N×25˚.94E, h10km, ML3.7/17, Error ellipse: s-maj=0.5km s-min=0.3km az=39.0*
*DDA **24** 23:00:36.2, 40˚.39N×25˚.99E, h4km±2km, MW4.2*
*ATH **24** 23:00:36.3, 40˚.38N×25˚.90E, h29km±1km, ML3.8/6, Error ellipse: s-maj=1.7km s-min=0.7km az=251.0*
*NEIC **24** 23:00:37.3±1.7, 40˚.40N±0˚.05×25˚.87E±0˚.07, h13km±3km, Error ellipse: s-maj=7.9km s-min=7.4km az=50.0*
ISC 24 23:00:36.9±0.9, 40˚.40N±0˚.01×25˚.94E±0˚.01, h11km±6km, n505, σ1≥25/567, mb3.8/22, MS3.3/9, 53C-36D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.21**	**188**	P	**Pb**	**23 00 41.4**	**-1.2**
GADA				S	**Sg**	**23 00 43.7**	**-0.7**
	28µm,0.7s						
GADA	**Gvkgeada**	**0.21**	**188**	PG	**Pb**	**23 00 41.5**	**-1.2**
GADA				SG	**Sg**	**23 00 44.6**	**+0.2**
SMTH	**Samothraki Isl**	**0.32**	**283**	P	**Pb**	**23 00 43.3**	**-1.3**
SMTH				S	**Sb**	**23 00 48.2**	**-1.5**
	7µm,0.3s						
SMTH	**Samothraki Isl**	**0.32**	**283**	P	**Pb**	**23 00 43.4**	**-1.2**
SMTH				S	**Sb**	**23 00 48.6**	**-1.2**
ENEZ	**Enez**	**0.37**	**26**	P	**Pg**	**23 00 44.2**	**-0.2**
ENEZ				S	**Sg**	**23 00 49.7**	**+0.3**
	36µm,0.3s						
ENEZ	**Enez**	**0.37**	**26**	PG	**Pg**	**23 00 44.2**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.41**	**90**	PG	**Pg**	**23 00 44.5**	**-0.5**
GELI				SG	**Sg**	**23 00 50.6**	**+0.1**
ERIK	**Erikli-Kesan**	**0.52**	**58**	PG	**Pg**	**23 00 46.3**	**-0.7**
BOZC	**Bozcaada**	**0.56**	**171**	PG	**Pg**	**23 00 47.5**	**-0.4**
BOZC	**Bozcaada**	**0.56**	**171**	⇑*i* P	**Pg**	**23 00 47.5**	**-0.4**
BOZC				*i* S	**Sb**	**23 00 55.6**	**-1.2**
BOZC				IAML		23 00 56.0	
	comp=E,4µm,0.4s						
BOZC				IAML		23 01 00.0	
	comp=N,4µm,0.5s						
LPK	**Lapseki**	**0.63**	**92**	PG	**Pg**	**23 00 48.7**	**-0.4**
EZN	**Ezine**	**0.65**	**152**	P	**Pg**	**23 00 48.6**	**-0.8**
EZN				S	**Sg**	**23 00 57.6**	**-0.3**
	comp=N,6µm,0.6s						
EZN	**Ezine**	**0.65**	**152**	PG	**Pg**	**23 00 48.7**	**-0.7**
KESN	**Edirne-Kesan**	**0.71**	**53**	⇑*i* P	**Pg**	**23 00 49.1**	**-1.6**
KESN				*i* S	**Sg**	**23 00 59.1**	**-0.9**
KESN				IAML		23 01 03.0	
	comp=N,13µm,0.2s						
KESN				IAML		23 01 04.0	
	comp=E,22µm,0.3s						
LIA	**Limnos Island**	**0.77**	**229**	P	**Pb**	**23 00 51.5**	**-0.7**
LIA				S	**Sb**	**23 01 02.6**	**+0.1**
	comp=E,8µm,0.7s						
LIA	**Limnos Island**	**0.77**	**229**	P	**Pb**	**23 00 51.6**	**-0.5**
LIA				S	**Sb**	**23 01 02.2**	**-0.3**
LIA				AML	AML	23 01 04.6	
	comp=N,13381µm,0.6s						
LIA				AML	AML	23 01 06.6	
	comp=E,18132µm,0.5s						
RDO	**Rodhopi**	**0.81**	**338**	P	**Pg**	**23 00 51.9**	**-0.6**
RDO				S	**Sb**	**23 01 03.8**	**+0.1**
	comp=E,4µm,0.5s						
RDO	**Rodhopi**	**0.81**	**338**	P	**Pb**	**23 00 52.0**	**-0.8**
RDO				S	**Sb**	**23 01 03.8**	**+0.1**
RDO				AML	AML	23 01 08.0	
	comp=E,9448µm,0.3s						
RDO				AML	AML	23 01 10.6	
	comp=N,8660µm,0.5s						
RDO	**Rodhopi**	**0.81**	**338**	PG	**Pg**	**23 00 51.9**	**-0.6**
BAYC	**CANAKKALE_Bayr**	**0.81**	**144**	⇑*i* P	**Pg**	**23 00 51.8**	**-0.7**
BAYC				*i* S	**Sg**	**23 01 02.6**	**-0.4**
BAYC				IAML		23 01 10.0	
	comp=E,2µm,0.6s						
BAYC				IAML		23 01 12.0	
	comp=N,2µm,0.6s						
UKOP	**Uzunkopru-Edir**	**0.90**	**36**	PG	**Pg**	**23 00 53.3**	**-0.9**
UKOP				SG	**Sb**	**23 01 06.5**	**+0.1**
THAS	**Thassos island**	**0.95**	**283**	P	**Pg**	**23 00 54.4**	**-0.8**
THAS				S	**Sn**	**23 01 08.1**	**-1.5**
	comp=N,2µm,0.4s						
THAS	**Thassos island**	**0.95**	**283**	P	**Pb**	**23 00 54.7**	**-0.7**
THAS				S	**Sn**	**23 01 08.1**	**-1.5**
THAS				AML	AML	23 01 10.9	
	comp=N,5025µm,0.6s						
THAS				AML	AML	23 01 14.1	
	comp=E,2638µm,0.7s						
RKY	**Sarkoy-Tekirda**	**0.99**	**73**	PG	**Pg**	**23 00 53.8**	**-2.1**
RKY				SG	**Sn**	**23 01 09.7**	**-1.0**
SART	**Tekirdag**	**0.99**	**73**	⇑*i* P	**Pg**	**23 00 54.5**	**-1.5**
SART				*i* S	**Sb**	**23 01 09.0**	**-0.1**
SART				IAML		23 01 12.0	
	comp=E,2µm,0.6s						
KRBG	**Karabiga-Canak**	**1.04**	**90**	PG	**Pb**	**23 00 55.6**	**-1.2**
EFSA	**Agios Efstrati**	**1.13**	**221**	P	**Pg**	**23 00 58.2**	**-0.4**
PRK	**Paraskevi**	**1.18**	**167**	P	**Pg**	**23 00 59.3**	**-0.3**
PRK				S	**Sn**	**23 01 15.1**	**-0.2**
	comp=E,14µm,0.9s						
PRK	**Paraskevi**	**1.18**	**167**	P	**Pg**	**23 00 59.1**	**-0.5**
PRK				S	**Sn**	**23 01 14.8**	**-0.4**
PRK				AML	AML	23 01 17.6	
	comp=E,29645µm,0.9s						
PRK				AML	AML	23 01 18.6	
	comp=N,26400µm,0.9s						
SIGR	**SIGRI**	**1.19**	**183**	P	**Pn**	**23 00 58.4**	**-1.0**
SIGR				S	**Sn**	**23 01 15.0**	**-0.5**
	comp=N,15µm,0.6s						
SIGR	**SIGRI**	**1.19**	**183**	P	**Pn**	**23 00 58.2**	**-1.1**
SIGR				S	**Sn**	**23 01 14.6**	**-0.8**
SIGR				AML	AML	23 01 16.1	
	comp=E,13945µm,0.6s						
SIGR				AML	AML	23 01 16.2	
	comp=N,44838µm,0.7s						
SIGR	**SIGRI**	**1.19**	**183**	PN	**Pb**	**23 00 58.6**	**-0.8**
KNL	**Balıkesir**	**1.22**	**96**	⇑*i* P	**Pn**	**23 00 58.9**	**-1.0**
KNL				*i* S	**Sg**	**23 01 15.7**	**-0.6**
KNL				IAML		23 01 19.0	
	comp=N,9µm,0.5s						
AYVA	**Ayvalik**	**1.23**	**152**	⇑*i* P	**Pb**	**23 00 59.5**	**-0.7**
AYVA				*i* S	**Sg**	**23 01 16.1**	**-0.5**
AYVA				IAML		23 01 20.0	
	comp=E,7µm,0.6s						
KAVA	**Kavala**	**1.24**	**299**	P	**Pb**	**23 00 59.4**	**-0.8**
KAVA				S	**Sg**	**23 01 16.0**	**-0.7**
	comp=E,2µm,0.6s						
KAVA	**Kavala**	**1.24**	**299**	P	**Pg**	**23 00 59.7**	**-0.9**
KAVA				S	**Sg**	**23 01 16.5**	**-0.2**
KAVA				AML	AML	23 01 19.2	
	comp=N,3733µm,0.6s						
KAVA				AML	AML	23 01 19.4	
	comp=E,4879µm,0.6s						
MRMT	**Marmara Adasi**	**1.28**	**80**	PN	**Pn**	**23 00 59.3**	**-1.4**
KVLA	**Kavala**	**1.30**	**295**	P	**Pb**	**23 01 00.5**	**-0.8**
KDZ	**Kurdzhali**	**1.31**	**343**	PN	**Pn**	**23 01 00.4**	**-0.7**
TKR	**Tekirdag**	**1.35**	**64**	PN	**Pn**	**23 01 01.1**	**-0.5**
GONE	**Gonen-Balikesi**	**1.39**	**104**	PN	**Pb**	**23 01 01.7**	**-1.0**
BALY	**Balya**	**1.45**	**116**	⇑*i* P	**Pb**	**23 01 03.1**	**-0.8**
BALY				*i* S	**Sg**	**23 01 23.8**	**+0.3**
BALY				IAML		23 01 32.0	
	comp=E,3µm,0.5s						
BALY				IAML		23 01 32.0	
	comp=N,3µm,0.8s						
EDC	**Edincik**	**1.47**	**91**	PN	**Pn**	**23 01 02.9**	**-0.4**
OUR	**Ouranopolis**	**1.50**	**268**	P	**Pn**	**23 01 02.7**	**-0.9**
OUR				S	**Sn**	**23 01 22.2**	**-0.9**
	comp=N,2µm,0.6s						
OUR	**Ouranopolis**	**1.50**	**268**	P	**Pn**	**23 01 02.8**	**-0.9**
OUR	**Ouranopolis**	**1.50**	**268**	PN	**Pn**	**23 01 02.4**	**-1.2**
DKL	**Dikili**	**1.52**	**150**	PN	**Pb**	**23 01 03.8**	**-1.3**
CRLT	**Corlu**	**1.55**	**61**	PN	**Pn**	**23 01 04.1**	**-0.2**
EDRB	**Edirne**	**1.57**	**23**	P	**Pn**	**23 01 03.8**	**-0.8**
EDRB				S	**Sn**	**23 01 24.7**	**-0.2**
	comp=N,4µm,0.5s						
EDRB	**Edirne**	**1.57**	**23**	PN	**Pn**	**23 01 03.9**	**-0.7**
RZN	**Rozhen**	**1.58**	**325**	*i* P	**Pb**	**23 01 05.0**	**-1.3**
KIRK	**Kırklareli**	**1.64**	**32**	⇑*i* P	**Pn**	**23 01 04.5**	**-1.0**
KIRK				*i* S	**Sb**	**23 01 26.6**	**-1.0**
KIRK				IAML		23 01 29.0	
	comp=N,962nm,0.7s						
BOTS	**Marmara Eregli**	**1.66**	**69**	PN	**Pn**	**23 01 05.6**	**-0.3**
BALB	**Balikesir**	**1.67**	**116**	PN	**Pn**	**23 01 05.8**	**-0.2**
DIM	**Dimitrovgrad**	**1.68**	**350**	P	**Pn**	**23 01 06.2**	**+0.1**
ZEDA	**zmir-Bergama**	**1.68**	**148**	⇓*i* P	**Pb**	**23 01 06.2**	**-1.6**
ZEDA				*i* S	**Sg**	**23 01 30.3**	**-0.6**
ZEDA				IAML		23 01 31.0	
	comp=N,2µm,0.4s						
ZEDA				IAML		23 01 31.0	
	comp=E,3µm,0.5s						
STEP	**BALIKESIR_Sava**	**1.71**	**126**	⇓*i* P	**Pb**	**23 01 07.0**	**-1.3**
STEP				*i* S	**Sg**	**23 01 31.2**	**-0.6**
STEP				IAML		23 01 33.0	
	comp=E,2µm,0.4s						
STEP				IAML		23 01 34.0	
	comp=N,3µm,0.7s						
PHSR	**Pinarhisar**	**1.72**	**44**	PN	**Pn**	**23 01 06.0**	**-0.7**
PAIG	**Paliouri**	**1.79**	**255**	P	**Pn**	**23 01 06.4**	**-1.3**
PAIG	**Paliouri**	**1.79**	**255**	P	**Pn**	**23 01 06.3**	**-1.3**
KCTX	**Karacabey (Bur**	**1.85**	**93**	PN	**Pn**	**23 01 08.4**	**-0.2**
SKY	**Skiros Island**	**1.86**	**216**	P	**Pn**	**23 01 07.6**	**-1.0**
SKY	**Skiros Island**	**1.86**	**216**	P	**Pn**	**23 01 07.6**	**-1.0**
KRBN	**Karaburun**	**1.87**	**165**	PN	**Pn**	**23 01 08.5**	**-0.2**
PSRA	**Psara**	**1.88**	**189**	P	**Pn**	**23 01 09.1**	**+0.3**
PLG	**Polygyros**	**1.90**	**270**	P	**Pn**	**23 01 08.6**	**-0.7**
PLG				S	**Sn**	**23 01 32.7**	**-0.5**
	comp=N,1µm,0.6s						
PLG	**Polygyros**	**1.90**	**270**	P	**Pn**	**23 01 08.6**	**-0.7**
SLVT	**Silivri**	**1.91**	**64**	PN	**Pn**	**23 01 08.8**	**-0.6**
SRS	**Serrai**	**1.92**	**293**	P	**Pn**	**23 01 08.9**	**-0.6**
SRS				S	**Sn**	**23 01 32.9**	**-0.7**
	comp=N,2µm,0.6s						
SRS	**Serrai**	**1.92**	**293**	P	**Pn**	**23 01 08.9**	**-0.6**
PLD	**Plovdiv**	**1.94**	**332**	P	**Pn**	**23 01 10.1**	**+0.4**
PLD	**Plovdiv**	**1.94**	**332**	PN	**Pn**	**23 01 09.4**	**-0.3**
AOS	**Alonnisos**	**2.00**	**233**	P	**Pn**	**23 01 09.5**	**-1.1**
AOS				S	**Sb**	**23 01 36.6**	**-1.6**
	comp=N,1µm,0.8s						
AOS	**Alonnisos**	**2.00**	**233**	P	**Pn**	**23 01 09.5**	**-1.1**
AOS	**Alonnisos**	**2.00**	**233**	PN	**Pn**	**23 01 09.5**	**-1.1**
SOH	**Sokhos**	**2.01**	**283**	P	**Pn**	**23 01 10.2**	**-0.6**
CHOS	**Chios island**	**2.01**	**177**	P	**Pn**	**23 01 10.4**	**-0.4**
CHOS				S	**Sn**	**23 01 36.1**	**+0.2**
	comp=N,2µm,0.6s						
CHOS	**Chios island**	**2.01**	**177**	P	**Pn**	**23 01 10.6**	**-0.2**
CHOS	**Chios island**	**2.01**	**177**	PN	**Pn**	**23 01 10.6**	**-0.2**
ELBA	**Catalca**	**2.04**	**68**	⇑*i* P	**Pn**	**23 01 10.1**	**-1.0**
ELBA				*i* S	**Sn**	**23 01 36.2**	**-0.2**
ELBA				IAML		23 01 48.0	
	comp=N,894nm,0.5s						
ELBA				IAML		23 01 48.0	
	comp=E,780nm,1.1s						
MMB	**Musomiste**	**2.05**	**306**	*i* P	**Pn**	**23 01 10.9**	**-0.4**
CTYL	**Yalikoy Yolu**	**2.08**	**58**	PN	**Pn**	**23 01 10.9**	**-0.7**
CESE	**eme**	**2.08**	**172**	PN	**Pn**	**23 01 11.1**	**-0.6**
AKS	**Akhisar**	**2.10**	**136**	PN	**Pn**	**23 01 11.2**	**-0.7**
AKHS	**Akhisar**	**2.10**	**136**	⇓*i* P	**Pn**	**23 01 12.0**	**+0.1**
AKHS				*i* S	**Sg**	**23 01 43.3**	**-1.0**
AKHS				IAML		23 01 46.0	
	comp=E,497nm,0.4s						
URLA	**Izmir**	**2.10**	**166**	PN	**Pn**	**23 01 11.9**	**0.0**
URLA	**Izmir**	**2.10**	**166**	⇑*i* P	**Pn**	**23 01 11.8**	**-0.2**
URLA				*i* S	**Sn**	**23 01 37.4**	**-0.6**
URLA				IAML		23 01 47.0	
	comp=N,810nm,1.2s						
URLA				IAML		23 01 50.0	
	comp=E,737nm,1.2s						
DURS	**Dursunbey**	**2.10**	**111**	⇓*i* P	**Pn**	**23 01 12.2**	**+0.1**
DURS				*i* S	**Sn**	**23 01 38.2**	**-0.1**
DURS				IAML		23 01 44.0	
	comp=N,5µm,0.5s						
DURS				IAML		23 01 45.0	
	comp=E,4µm,0.6s						
CTKS	**Kestanelik-??a**	**2.12**	**66**	PN	**Pn**	**23 01 11.4**	**-0.8**
JMB	**Yambol**	**2.12**	**13**	PN	**Pn**	**23 01 11.8**	**-0.4**
YKBL	**Yakuplu-Istanb**	**2.16**	**73**	PN	**Pn**	**23 01 12.4**	**-0.3**
HORT	**Hortiatis**	**2.17**	**276**	P	**Pn**	**23 01 12.6**	**-0.4**
HORT	**Hortiatis**	**2.17**	**276**

LIT	Litokhoron	2.66	265	P		Pn	23 01 18.8	-0.8
LIT	Litokhoron	2.66	265	P		Pn	23 01 18.8	-0.8
LIT	Litokhoron	2.66	265			Pn	23 01 19.0	-0.6
SMAA	Simav-Kutahya	2.68	118	PN		Pn	23 01 20.1	+0.1
SIMA	Simav-Kutahya	2.69	118	PN		Pn	23 01 20.5	+0.4
VAY	Valandovo	2.71	291	*i* Pn		Pn	23 01 21.0	+0.6
VAY	Valandovo	2.71	291	*i* Pn		Pn	23 01 21.0	+0.6
SMG	Samos	2.78	165	P		Pn	23 01 20.9	-0.3
SMG	Samos	2.78	165	P		Pn	23 01 21.2	-0.1
MANT	Manisa	2.78	132	*i* P		Pn	23 01 21.9	+0.3
MANT				*i* S		Sg	23 02 04.4	-2.0
MANT				IAML			23 02 07.0	
	comp=N,409nm,0.7s							
MANT				IAML			23 02 09.0	
	comp=E,459nm,0.7s							
MANT	Manisa	2.78	132			Pn	23 01 22.1	+0.5
DION	Dionisos Attik	2.79	215	P		Pn	23 01 20.4	-1.0
DION	Dionisos Attik	2.79	215	P		Pn	23 01 20.5	-1.0
KULA	Kula-Manisa	2.83	131	PN		Pn	23 01 22.1	+0.1
PTL	Penteli	2.85	215	P		Pn	23 01 20.9	-1.4
PTL	Penteli	2.85	215	P		Pn	23 01 20.8	-1.4
SZH	Strazhica	2.87	360	P		Pn	23 01 23.2	+0.8
HRT	Hereke	2.87	80	PN		Pn	23 01 21.5	-1.1
TVSB	Tavsanli	2.87	108	PN		Pn	23 01 22.8	+0.2
GCAM	G?zelcaml?	2.88	159	PN		Pn	23 01 22.7	+0.1
GCAM	G?zelcaml?	2.88	159	*i* P		Pn	23 01 22.7	+0.1
GCAM				*i* S		Sg	23 02 07.6	-1.8
GCAM				IAML			23 02 12.0	
	comp=N,392nm,1.0s							
GCAM				IAML			23 02 21.0	
	comp=E,368nm,0.9s							
AYDB	Zeytinkoy-Aydi	2.88	148	PN		Pn	23 01 23.2	+0.4
SHAP	Saphane-Kutahy	2.88	117	PN		Pn	23 01 23.0	+0.2
ROIA	ROIAK	2.90	21	P		Pn	23 01 23.3	+0.4
ADVT	Abdulvahap	2.90	88	PN		Pn	23 01 23.2	+0.3
SILT	Sile	2.91	74	PN		Pn	23 01 22.9	-0.2
ATHU	Athens Univers	2.95	215	P		Pn	23 01 22.8	-0.9
ATHU	Athens Univers	2.95	215	P		Pn	23 01 22.7	-0.9
CAVI	Cavuskoy	2.99	93	PN		Pn	23 01 24.4	+0.2
GEDZ	Gediz	3.00	116	PN		Pn	23 01 24.7	+0.3
PRD	Provadia	3.00	21	P		Pn	23 01 24.0	-0.3
VTS	Vitosha	3.00	318	⇓P		Pn	23 01 24.3	-0.2
VTS	Vitosha	3.00	318	*i* P		Pn	23 01 25.1	+0.6
VTS	Vitosha	3.00	318			Pn	23 01 24.3	-0.2
VIL2	Platees	3.01	224	P		Pn	23 01 23.6	-0.9
AXAR	Agios Charalam	3.01	238	P		Pn	23 01 23.8	-0.7
AXAR	Agios Charalam	3.01	238	P		Pn	23 01 23.9	-0.6
VILL	Villia	3.02	223	P		Pn	23 01 23.7	-1.0
GDZ	Gediz	3.03	114	*i* P		Pn	23 01 25.8	+0.9
GDZ				*i* S		Sg	23 02 11.9	-2.3
GDZ				IAML			23 02 18.0	
	comp=N,366nm,0.7s							
GDZ				IAML			23 02 19.0	
	comp=E,268nm,0.5s							
VLY	Voula,Athens	3.04	214	P		Pn	23 01 23.9	-1.0
VLY	Voula,Athens	3.04	214	P		Pn	23 01 23.7	-1.1
AGG	Agios Georgios	3.10	245	P		Pn	23 01 24.9	-0.9
AGG	Agios Georgios	3.10	245	P		Pn	23 01 24.6	-1.2
AGG	Agios Georgios	3.10	245	PN		Pn	23 01 25.8	0.0
AGG	Agios Georgios	3.10	245			Pn	23 01 25.2	-0.6
AYDN	Tasoluk	3.12	150	*i* P		Pn	23 01 26.2	+0.1
AYDN				*i* S		Sg	23 02 13.3	-3.9
AYDN				IAML			23 02 26.0	
	comp=N,154nm,0.9s							
AYDN				IAML			23 02 32.0	
	comp=E,155nm,0.8s							
THL	Klokotos Trika	3.13	256	P		Pn	23 01 25.5	-0.5
PLVB	Pleven	3.14	342	⇓P		Pn	23 01 26.8	+0.6
PLVB	Pleven	3.14	342			Pn	23 01 26.8	+0.6
PROD	Prodromos	3.18	229	P		Pn	23 01 25.9	-0.9
PROD	Prodromos	3.18	229	P		Pn	23 01 26.0	-0.8
KZN	Kozani	3.19	270	P		Pn	23 01 26.9	0.0
RAZG	Razgrad	3.19	7	⇑P		Pn	23 01 28.4	+1.4
RAZG	Razgrad	3.19	7			Pn	23 01 28.4	+1.4
MAKR	Makrakomi, Fth	3.25	246	P		Pn	23 01 27.2	-0.5
MAKR	Makrakomi, Fth	3.25	246	P		Pn	23 01 27.5	-0.2
ZIMR		3.28	353	⇓P		Pn	23 01 29.2	+1.0
ZIMR		3.28	353			Pn	23 01 29.2	+1.0
KAND	Kocaeli-Kandir	3.31	77	*i* P		Pn	23 01 28.0	-0.5
KAND				*i* S		Sb	23 02 16.3	+0.6
KAND				IAML			23 02 29.0	
	comp=E,280nm,0.4s							
KAND				IAML			23 02 29.0	
	comp=N,382nm,0.8s							
LTK	Loutraki	3.31	225	P		Pn	23 01 27.9	-0.7
LTK	Loutraki	3.31	225	P		Pn	23 01 27.8	-0.8
GEYV	SAKARYA_Geyve	3.33	87	*i* P		Pn	23 01 29.6	+0.8
GEYV				*i* S		Sg	23 02 19.9	-3.8
GEYV				IAML			23 02 34.0	
	comp=E,425nm,0.6s							
GEYV				IAML			23 02 37.0	
	comp=N,324nm,0.8s							
LOUT	Loutraki	3.33	225	P		Pn	23 01 28.1	-0.7
LOUT	Loutraki	3.33	225	P		Pn	23 01 28.1	-0.7
APE	Apeiranthos	3.34	186	P		Pn	23 01 28.2	-0.8
APE	Apeiranthos	3.34	186	P		Pn	23 01 28.2	-0.8
APE	Apeiranthos	3.34	186	⇓P		Pn	23 01 27.8	-1.3
APE	Apeiranthos	3.34	186	PN		Pn	23 01 29.8	+0.4
APE	Apeiranthos	3.34	186			Pn	23 01 27.8	-1.3
MPEP	Malo Peshtene	3.38	332	P		Pn	23 01 30.0	+0.5
KHAL	Karahalli	3.42	125	*i* P		Pn	23 01 31.1	+0.9
KHAL				*i* S		Sg	23 02 25.8	-0.9
KHAL				IAML			23 02 32.0	
	comp=N,133nm,0.5s							
KHAL				IAML			23 02 36.0	
	comp=E,171nm,0.8s							
SERI	Serifos	3.43	200	P		Pn	23 01 29.4	-0.8
SERI	Serifos	3.43	200	P		Pn	23 01 29.2	-1.0
FNA	Florina	3.49	278	P		Pn	23 01 31.5	+0.4
FNA	Florina	3.49	278	P		Pn	23 01 31.2	+0.1
FNA	Florina	3.49	278			Pn	23 01 31.6	+0.4
BODT	Bodrum	3.50	162	P		Pn	23 01 31.3	+0.1
EVR	Evrytania	3.51	246	P		Pn	23 01 31.1	-0.4
EVR	Evrytania	3.51	246	P		Pn	23 01 30.7	-0.7
BDRM	Kayabasi	3.53	160	*i* P		Pn	23 01 31.7	+0.1
BDRM				IAML			23 02 32.0	
	comp=N,146nm,0.8s							
BDRM				IAML			23 02 38.0	
	comp=E,197nm,1.0s							
KPRO	Kipourio	3.53	264	P		Pn	23 01 32.0	+0.3
KPRO	Kipourio	3.53	264	P		Pn	23 01 31.9	+0.3
KALE	Kalithea	3.56	237	P		Pn	23 01 31.1	-1.0
KALE	Kalithea	3.56	237	P		Pn	23 01 31.2	-0.9
AMGA	Amorgos Island	3.56	181	P		Pn	23 01 30.8	-1.3
AMGA	Amorgos Island	3.56	181	P		Pn	23 01 31.2	-0.8
DID	Didima	3.58	217	P		Pn	23 01 31.5	-0.7
DID	Didima	3.58	217	P		Pn	23 01 31.2	-1.1
ANX	Ano Chora	3.59	241	P		Pn	23 01 32.1	-0.4
ANX	Ano Chora	3.59	241	P		Pn	23 01 32.1	-0.4
SERG	Sergoula	3.60	238	P		Pn	23 01 31.5	-1.1
SRCK	Saricakaya, Es	3.61	94	*i* P		Pn	23 01 33.4	+0.7
SRCK				IAML			23 02 34.0	
	comp=N,508nm,1.0s							
SRCK				IAML			23 02 37.0	
	comp=E,299nm,0.7s							
TRIZ	Trizonia	3.62	237	P		Pn	23 01 31.9	-0.9
EFP	Efpalio	3.69	239	P		Pn	23 01 33.6	-0.2
IOSP	Ios island	3.71	188	P		Pn	23 01 32.8	-1.2
KRND	KRANIDI	3.71	217	P		Pn	23 01 33.2	-0.9
AFYO	Afyonkarahisar	3.73	114	*i* P		Pn	23 01 35.9	+1.4
AFYO				IAML			23 02 58.0	
	comp=N,496nm,1.2s							
AFYO				IAML			23 03 04.0	
	comp=E,588nm,1.1s							
TAVA	DENIZLI_Tavas	3.74	141	*i* P		Pb	23 01 38.6	-4.3
TAVA				IAML			23 02 40.0	
	comp=E,103nm,0.9s							
TAVA				IAML			23 02 42.0	
	comp=N,112nm,0.9s							
SKO	Skopje	3.74	296	*i* Pn		Pg	23 01 49.2	+0.7
SKO	Skopje	3.74	296	*i* Pn		Pg	23 01 49.2	+0.7
YER	Yerkesik	3.74	150	P		Pn	23 01 34.9	+0.4
LAKA	Lakka	3.75	236	P		Pn	23 01 34.5	-0.2
LAKA	Lakka	3.75	236	P		Pn	23 01 34.4	-0.2
KLV	Kalavryta, Ach	3.77	233	P		Pn	23 01 34.2	-0.7
KLV	Kalavryta, Ach	3.77	233	P		Pn	23 01 34.0	-0.9
SAHE	Sakarya_HENDEK	3.77	82	*i* P		Pn	23 01 38.3	+3.4
SAHE				IAML			23 02 50.0	
	comp=E,195nm,0.7s							
COPA	Copaceanca	3.77	352	⇓P		Pn	23 01 35.3	+0.5
COPA	Copaceanca	3.77	352			Pn	23 01 35.3	+0.5
VLAD	Vladila	3.77	343	⇑P		Pn	23 01 35.3	+0.4
VLAD	Vladila	3.77	343			Pn	23 01 35.3	+0.4
SGRR	Singureni	3.82	0	⇓P		Pn	23 01 36.8	+1.3
SGRR	Singureni	3.82	0			Pn	23 01 36.8	+1.3
PVO	Paravola	3.85	244	P		Pn	23 01 37.0	+1.0
DAT	Datca	3.88	160	P		Pn	23 01 36.5	-0.1
DAT	Datca	3.88	160	*i* P		Pn	23 01 31.9	-4.6
RASA	Rasa	3.92	13	⇑P		Pn	23 01 38.8	+2.0
RASA	Rasa	3.92	13			Pn	23 01 38.8	+2.0
ICOR	Ion Corvin	3.96	20	⇑P		Pn	23 01 38.4	+0.8
ICOR	Ion Corvin	3.96	20			Pn	23 01 38.4	+0.8
OHR	Ohrid	3.97	282	*i* Pn		Pn	23 01 35.7	-2.0
OHR	Ohrid	3.97	282	*i* Pn		Pn	23 01 35.7	-2.0
THR5	Thira Island,	4.00	187	P		Pn	23 01 37.1	-1.0
THR3	Thira Island,	4.01	186	P		Pn	23 01 38.0	-0.1
MDUB	Mudurnu	4.01	87			Pn	23 01 39.7	+1.3
ANAF	Anafi Island	4.04	182	P		Pn	23 01 37.8	-0.8
ANAF	Anafi Island	4.04	182	P		Pn	23 01 37.8	-0.8
SANT	Santorini	4.04	185	⇓P		Pn	23 01 37.6	-1.0
SANT	Santorini	4.04	185			Pn	23 01 37.6	-1.0
TRIP	Tripoli	4.05	226	P		Pn	23 01 38.3	-0.5
TRIP	Tripoli	4.05	226	P		Pn	23 01 38.4	-0.4
THR6	Thira Island,	4.06	186	P		Pn	23 01 38.2	-0.7
CIFT	Cifteler, Eski	4.08	103	*i* P		Pn	23 01 40.3	+1.1
CIFT				IAML			23 02 54.0	
	comp=N,434nm,0.6s							
CIFT				IAML			23 02 57.0	
	comp=E,449nm,0.6s							
TURN	Turunc	4.09	149	*i* P		Pn	23 01 38.9	-0.4
TURN				IAML			23 02 54.0	
	comp=N,66nm,0.9s							
TURN				IAML			23 03 01.0	
	comp=E,113nm,0.9s							
DRO	Drossia	4.09	235	P		Pn	23 01 39.4	0.0
DRO	Drossia	4.09	235	P		Pn	23 01 38.9	-0.4
PDO	Prodromos	4.09	245	P		Pn	23 01 40.3	+1.0
VLX	Vlachokerasia	4.11	224	P		Pn	23 01 39.1	-0.5
VLX	Vlachokerasia	4.11	224	P		Pn	23 01 39.1	-0.5
LEHL	Lehliu	4.12	9	⇑P		Pn	23 01 40.6	+0.9
LEHL	Lehliu	4.12	9			Pn	23 01 40.6	+0.9
EFOR	EFORIE	4.19	28	⇓P		Pn	23 01 41.6	+1.0
EFOR	EFORIE	4.19	28	P		Pn	23 01 41.6	+1.0
HUMR	Humele	4.19	351	⇓P		Pn	23 01 40.6	0.0
HUMR	Humele	4.19	351			Pn	23 01 40.6	+0.0
RLS	Riolos of Patr	4.19	237	P		Pn	23 01 42.5	+1.9
BRDR	BURDUR-Merkez	4.19	129	*i* P		Pb	23 01 45.4	-5.3
BRDR				IAML			23 03 10.0	
	comp=E,83nm,1.3s							
BRDR				IAML			23 03 12.0	
	comp=N,114nm,1.9s							
BOLV	Bolvadin	4.22	112	*i* P		Pn	23 01 42.9	+1.6
BOLV				IAML			23 02 55.0	
	comp=E,167nm,0.5s							
BOLV				IAML			23 03 15.0	
	comp=N,188nm,0.8s							
GOLH	Golhisar	4.24	137	*i* P		Pb	23 01 46.3	-5.2
GOLH				IAML			23 03 08.0	
	comp=N,156nm,1.2s							
SULR		4.28	3	⇑P		Pn	23 01 43.6	+1.7
SULR		4.28	3			Pn	23 01 43.6	+1.7
AMRR	Amara	4.33	13	⇑P		Pn	23 01 43.6	+1.0
AMRR	Amara	4.33	13			Pn	23 01 43.6	+1.0
AMT	Artemida-Makis	4.37	230	P		Pn	23 01 44.1	+1.0
AMT	Artemida-Makis	4.37	230	P		Pn	23 01 43.0	-0.1
IGT	Igoumenitsa	4.39	260	P		Pn	23 01 45.2	+1.7
ISP	Isparta	4.40	124			Pn	23 01 48.1	+4.5
TIRR	Tirgusor	4.45	23	⇑P		Pn	23 01 45.3	+1.1
TIRR	Tirgusor	4.45	23			Pn	23 01 44.2	0.0
TIRR	Tirgusor	4.45	23			Pn	23 01 45.3	+1.1
EVGI	Lefkada island	4.45	248	P		Pn	23 01 46.4	+2.1
PUNG	Punghina	4.47	331	⇑P		Pn	23 01 44.6	+0.1
PUNG	Punghina	4.47	331			Pn	23 01 44.6	+0.1
ITM	Ithomi	4.49	226	P		Pn	23 01 45.4	+0.6
ITM	Ithomi	4.49	226			Pn	23 01 45.7	+0.9
FETY	Fethiye	4.50	146	P		Pn	23 01 46.1	+1.2
FETY	Fethiye	4.50	146	*i* P		Pn	23 01 46.3	+1.4
FETY				IAML			23 03 20.0	
	comp=N,42nm,1.7s							
KIBS	BOLU	4.52	88	*i* P		Pn	23 01 49.0	+3.8
KIBS				IAML			23 03 18.0	
	comp=N,124nm,0.9s							
KIBS				IAML			23 03 26.0	
	comp=E,193nm,1.3s							
ARG	Arkhangelos	4.52	157	P		Pn	23 01 45.7	+0.5
HARR	Harsova	4.53	18	⇑P		Pn	23 01 45.9	+0.6
HARR	Harsova	4.53	18			Pn	23 01 45.9	+0.6
SECR		4.63	1	⇑P		Pn	23 01 47.4	+0.6
SECR		4.63	1			Pn	23 01 47.4	+0.6
TIR	Tirane	4.70	284			Pn	23 01 51.2	+3.6
SRE	Strehaia	4.71	336	⇑P		Pn	23 01 48.4	+0.5
SRE	Strehaia	4.71	336			Pn	23 01 48.4	+0.5
ISR	Istrita	4.74	5	⇑P		Pn	23 01 49.3	+1.0
ISR	Istrita	4.74	5			Pn	23 01 49.3	+1.0
ELL	Elmali	4.79	138			Pn	23 01 52.9	+3.8
PYL	PYLOS	4.80	225	P		Pn	23 01 49.6	+0.6
TOPG	Topolog	4.82	21	⇓P		Pn	23 01 50.7	+1.4
JURR	Jurilovca	4.87	25	⇓P		Pn	23 01 51.0	+1.0
KARP	Karpathos	4.94	168			Pn	23 01 51.3	+0.3
PVY	Plav	5.00	298	⇓*i* Pn		Pn	23 01 51.3	+0.4
PVY				*i* Sn		Sn	23 02 49.6	0.0
GRER		5.04	8	⇑P		Pn	23 01 53.9	+1.6
GRER		5.04	8			Pn	23 01 53.9	+1.6
CFR	Carcaliu	5.04	18	⇑P		Pn	23 01 53.2	+0.9
CFR	Carcaliu	5.04	18			Pn	23 01 53.2	+0.9
ARR	Arges	5.06	350	⇑P		Pn	23 01 52.8	+0.2
ARR	Arges	5.06	350			Pn	23 01 52.8	+0.2
MLR	Muntele Rosu	5.09	0	Pn		Pn	23 01 54.8	+1.7
	comp=E,2.7nm,0.3s,baz=191,slow=6.8,SNR=43							
MLR				Sn		Sn	23 02 53.3	+1.4
	comp=E,3.6nm,0.3s,baz=231,slow=14,SNR=3.3							
MLR				Lg		Lg	23 03 19.5	
	comp=E,2.1nm,0.3s,baz=236,slow=21,SNR=4.0							
MLR				LR		LR	23 04 17.2	
	comp=E,318nm,19.5s,baz=122,slow=44							
MLR	Muntele Rosu	5.09	0	⇓P		Pn	23 01 55.1	+1.9
MLR	Muntele Rosu	5.09	0			Pn	23 01 55.1	+1.9
IVA	Berane	5.16	301	⇑*i* Pn		Pn	23 01 54.6	+0.6
IVA				*i* Sn		Sn	23 02 53.5	-0.1
IDI	Anoyia	5.17	190	Pn		Pn	23 01 54.0	-0.2
	comp=E,0.3nm,0.3s,baz=0.0,slow=13,SNR=3.7							
IDI				Sn		Sn	23 02 52.4	-1.5
	comp=E,1.8nm,0.3s,baz=282,slow=20,SNR=2.0							
IDI	Anoyia	5.17	196	⇑P		Pn	23 01 53.7	-0.5
BISRR	Bisoca	5.18	6	⇑P		Pn	23 01 56.1	+1.9
BISRR	Bisoca	5.18	6			Pn	23 01 56.1	+1.9
HERR	Herculane	5.18	331	⇓P		Pn	23 01 54.0	-0.2
HERR	Herculane	5.18	331			Pn	23 01 54.0	-0.2
TLCR		5.23	23	⇓P		Pn	23 01 55.9	+0.9
TLCR		5.23	23			Pn	23 01 55.9	+0.9
ZKR	Zakros	5.28	178	P		Pn	23 01 55.4	-0.3
ANTO	Ankara	5.28	94	⇑P		Pn	23 01 56.5	+0.7
ANTO	Ankara	5.28	94			Pn	23 01 56.5	+0.7
ULC	Ulcinj	5.29	289	⇓*i* Pn		Pn	23 01 56.1	+0.4
ULC				*i* Sn		Sn	23 02 56.4	-0.2
LOT	Lotru	5.29	343	⇑P		Pn	23 01 55.7	-0.2
LOT	Lotru	5.29	343			Pn	23 01 55.7	-0.2
MDVR	Moldovita	5.38	326	⇑P		Pn	23 01 57.3	+0.3
MDVR	Moldovita	5.38	326			Pn	23 01 57.3	+0.3
DRME	Dracevica, Mon	5.39	292	*e*Pn		Pn	23 01 57.6	+0.4
DRME	Dracevica, Mon	5.39	292	⇑*i* Pn		Pn	23 01 57.8	+0.6
DRME				*i* Sn		Sn	23 02 59.2	0.0
KOME	Kolasin	5.40	299	⇓*i* Pn		Pn	23 01 57.9	+0.5
KOME				*i* Sn		Sn	23 02 59.4	-0.1
PETR	Petresti	5.40	10	⇓P		Pn	23 01 59.2	+1.9
PETR	Petresti	5.40	10			Pn	23 01 59.2	+1.9
PDG	Podgorica	5.42	294	⇑P		Pn	23 01 56.5	-1.0
PDG	Podgorica	5.42	294	*e*Pn		Pn	23 01 59.8	+2.3
PDG	Podgorica	5.42	294			Pn	23 01 56.5	-1.0
TTG	Podgorica	5.42	294	⇓*i* Pn		Pn	23 01 58.1	+0.6
TTG				*i* Sn		Sn	23 02 59.8	0.0
ODBI	Odobesti	5.42	8	⇓P		Pn	23 01 59.5	+2.0
ODBI	Odobesti	5.42	8			Pn	23 01 59.5	+2.0
PLOR	Plostina	5.47	5	⇓P		Pn	23 01 59.9	+1.5
PLOR	Plostina	5.47	5			Pn	23 01 59.9	+1.5
VRI	Vrincioaia	5.50	6	⇓P		Pn	23 02 00.5	+1.9
VRI	Vrincioaia	5.50	6			Pn	23 02 00.5	+1.9
GZR	Gura Zlata	5.50	336	⇑P		Pn	23 01 58.5	-0.2
GZR	Gura Zlata	5.50	336			Pn	23 01 58.5	-0.2
DOPR	Dopca	5.58	356	⇑P		Pn	23 02 00.5	+0.7
DOPR	Dopca	5.58	356			Pn	23 02 00.5	+0.7
BUM	Brajici-Budva	5.63	292	⇓*i* Pn		Pn	23 02 01.1	+0.6
BUM				*i* Sn		Sn	23 03 04.9	-0.3
VARL	Varlezi	5.67	14	⇑P		Pn	23 02 02.3	+1.4
CEME	Cevo	5.69	294	⇓*i* Pn		Pn	23 02 02.0	+0.6
CEME				*i* Sn		Sn	23 03 06.5	-0.2
PLE	Pljevlja	5.70	303	⇑*i* Pn		Pn	23 02 02.0	+0.5
PLE				*i* Sn		Sn	23 03 06.5	-0.4
NKY	Niksic	5.74	297	⇑*i* Pn		Pn	23 02 02.5	+0.5
NKY				*i* Sn		Sn	23 03 07.3	-0.5
DIVS	Divibare	5.75	312	*e*Pn		Pn	23 02 02.1	-0.1
MDB	Medias	5.85	349	⇓P		Pn	23 02 04.8	+1.3
MDB	Medias	5.85	349			Pn	23 02 04.8	+1.3
RUDO	Rudo	5.85	305	*e*Pn		Pn	23 02 03.6	+0.1
DEV	Deva	5.91	339	⇓P		Pn	23 02 04.4	+0.1
DEV	Deva	5.91	339			Pn	23 02 04.5	+0.1
BRTR	Keskin Array B	5.95	94	Pn		Pn	23 02 06.0	+1.1
	comp=E,6.4nm,0.3s,baz=261,slow=10,SNR=30							
BRTR				Sn		Sn	23 03 11.4	-1.7
	comp=E,1.4nm,0.3s,baz=290,slow=28,SNR=1.5							
BRTR				Lg		Lg	23 03 47.6	
	baz=278,slow=22,SNR=2.0							
UPM	Unac-Piva	5.96	300	*e*Pn		Pn	23 02 06.5	+1.4
UPM	Unac-Piva	5.96	300	⇓*i* Pn		Pn	23 02 05.5	+0.4
UPM				*i* Sn		Sn	23 03 12.3	-1.0
HCY	Herceg Novi	5.96	293	*e*Pn		Pn	23 02 06.5	+1.6
BBLS	Lazići	5.96	308	*e*Pn		Pn	23 02 05.5	+0.4
BIR	Birlad	5.99	11	⇑P		Pn	23 02 06.7	+1.3
BIR	Birlad	5.99	11			Pn	23 02 06.7	+1.3
BRY	Bratogost	6.08	297	*e*Pn		Pn	23 02 09.5	+2.8
BZS	Buzias	6.10	330	⇑P		Pn	23 02 06.8	-0.1
BZS	Buzias	6.10	330			Pn	23 02 06.8	-0.1
BANR	Banloc	6.10	326	⇑P		Pn	23 02 07.4	+0.5
BANR	Banloc	6.10	326			Pn	23 02 07.4	+0.5
TESR	Tescani	6.13	5	⇑P		Pn	23 02 08.6	+1.2
TESR	Tescani	6.13	5			Pn	23 02 08.6	+1.2
TREB	Trebinje	6.14	295	*e*Pn		Pn	23 02 10.0	+2.5
BZK	Bozkurt	6.28	73	⇑P		Pn	23 02 11.6	+2.2
BZK	Bozkurt	6.28	73			Pn	23 02 11.6	+2.2
HAPS	Han Pijesak,BI	6.36	308	*e*Pn		Pn	23 02 10.3	-0.3
VASR	Vaslui	6.38	12	⇑P		Pn	23 02 11.6	+0.8
CJR	Cluj-Napoca	6.54	346	⇑P		Pn	23 02 14.2	+1.3
CJR	Cluj-Napoca	6.54	346			Pn	23 02 14.2	+1.3
BIZ	Bicaz	6.54	1	⇑P		Pn	23 02 14.0	+1.0
BIZ	Bicaz	6.54	1			Pn	23 02 14.0	+1.0
FRGS	Fruska Gora	6.55	319	*e*Pn		Pn	23 02 12.7	-0.4
STON	Ston	6.65	294	*e*Pn		Pn	23 02 15.8	+1.4
STON	Ston	6.65	294	*i* P		Pn	23 02 17.2	+2.8
ARCR	ARCALIA	6.78	351	⇓P		Pn	23 02 16.8	+0.5
ARCR	ARCALIA	6.78	351			Pn	23 02 16.8	+0.5
DRGR		6.80	341	⇑P		Pn	23 02 17.1	+0.5
DRGR		6.80	341			Pn	23 02 17.1	+0.5
MILM	Milestii Mici	6.84	17	⇓P		Pn	23 02 17.7	+0.6
MILM	Milestii Mici	6.84	17			Pn	23 02 17.7	+0.6
KIS	Kishinev	6.92	17	*e*		Pg	23 02 45.0	-4.3
PRAR	RASCA	6.96	2	⇓P		Pn	23 02 20.5	+1.7
PRAR	RASCA	6

AKTO	**Aktyubinsk**	**24.48**	**55**	P		**P**	**23 05 55.6**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=270,slow=13,SNR=2.3							
AKTO				LR		LR	23 17 40.6	
	comp=Z,36nm,19.1s,baz=246,slow=42							
GEYT	**Alibeck**	**25.00**	**85**	P		**P**	**23 06 01.4**	**+0.7**
	comp=Z,3.0nm,0.9s,baz=11,slow=1.5,SNR=2.3							
GYA0B	**ALIBECK ARRAY**	**25.00**	**85**	P		**P**	**23 06 00.4**	**-0.2**
GYA0B				IAmb		IAmb	23 06 17.1	
	comp=Z,7.5nm,1.0s							
MDT	**Midelt**	**25.57**	**263**	P		**P**	**23 06 07.3**	**+1.4**
	comp=Z,1.8nm,0.9s,baz=90,slow=19,SNR=2.1							
ARU	**Arti**	**26.60**	**42**	P		**P**	**23 06 17.4**	**+2.5**
	comp=Z,1.1nm,0.6s,baz=228,slow=8.0,SNR=5.7							
ARU	**Arti**	**26.60**	**42**	P		**P**	**23 06 15.6**	**+0.7**
ARU				IAmb		IAmb	23 06 21.6	
	comp=Z,6.0nm,1.0s							
ARCES	**ARCESS Array B**	**29.20**	**360**	P		**P**	**23 06 40.3**	**+2.3**
	comp=Z,1.7nm,0.9s,baz=181,slow=9.9,SNR=4.9							
ARCES				LR		LR	23 18 38.7	
	comp=Z,82nm,18.9s,baz=183,slow=37							
TORD	**Torodi Ar. Bea**	**34.49**	**225**	P		**P**	**23 07 25.3**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=29,slow=8.5,SNR=3.5							
AAK	**Ala-Archa**	**36.03**	**70**	P		**P**	**23 07 39.9**	**+1.7**
	comp=Z,1.3nm,0.7s,baz=319,slow=11,SNR=1.9							
AAK	**Ala-Archa**	**36.03**	**70**	P		**P**	**23 07 37.3**	**-0.9**
AAK				IAmb		IAmb	23 07 44.1	
	comp=Z,1.9nm,0.8s							
KURBB	**Kurchatov Arra**	**37.52**	**56**	P		**P**	**23 07 51.2**	**+0.7**
	comp=Z,1.3nm,0.9s,baz=282,slow=8.5,SNR=7.9							
KURK	**Kurchatov**	**37.56**	**56**	P		**P**	**23 07 51.2**	**+0.3**
KURK	**Kurchatov**	**37.56**	**56**	IAmb		IAmb	23 07 55.5	
	comp=Z,2.6nm,1.1s							
NIL	**Nilore**	**38.01**	**85**	P		**P**	**23 07 55.3**	**+0.4**
NIL				IAmb		IAmb	23 08 00.7	
	comp=Z,2.6nm,0.8s							
MK31	**Makanchi Array**	**40.55**	**62**	P		**P**	**23 08 16.6**	**+0.5**
MKAR	**Makanchi Array**	**40.55**	**62**	P		**P**	**23 08 16.1**	**0.0**
	comp=Z,0.9nm,0.7s,baz=286,slow=6.2,SNR=9.4							
ZAA0	**Zalesovo Array**	**41.06**	**50**	P		**P**	**23 08 20.4**	**+0.3**
ZAA0				IAmb		IAmb	23 08 25.2	
	comp=Z,2.4nm,0.8s							
ZALV	**Zalesovo Beam**	**41.06**	**50**	P		**P**	**23 08 20.6**	**+0.5**
	comp=Z,2.2nm,0.8s,baz=282,slow=7.4,SNR=6.5							
ZALV				LR		LR	23 27 24.6	
	comp=Z,16nm,20.5s,baz=223,slow=39							
SONM	**Songino Array**	**55.78**	**53**	P		**P**	**23 10 14.6**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=264,slow=8.6,SNR=3.5							
SONM				LR		LR	23 37 10.1	
	comp=Z,28nm,18.7s,baz=258,slow=39							
TIXI	**Tiksi**	**56.07**	**22**	P		**P**	**23 10 16.1**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=319,slow=3.8,SNR=5.2							
TIXI	**Tiksi**	**56.07**	**22**	IAmb		IAmb	23 10 20.6	
	comp=Z,1.3nm,1.0s							
YKA	**Yellowknife Ar**	**72.66**	**342**	P		**P**	**23 12 04.6**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=30,slow=6.4,SNR=6.2							
KSRS	**Korea Array**	**74.65**	**54**	P		**P**	**23 12 15.6**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=316,slow=3.4,SNR=2.6							
KSRS				LR		LR	23 48 45.9	
	comp=Z,16nm,18.5s,baz=220,slow=39							
ULM	**Lac du Bonnet**	**76.32**	**326**	LR		LR	23 46 28.7	
	comp=Z,26nm,18.6s,baz=40,slow=36							
PETK	**Petropavlovsk-**	**77.97**	**27**	LR		LR	23 51 57.4	
	comp=Z,26nm,18.6s,baz=238,slow=40							
PDAR	**Pinedale Array**	**87.95**	**329**	P		**P**	**23 13 25.5**	**-1.6**
	comp=Z,0.2nm,0.4s,baz=66,slow=10.0,SNR=1.7							
CPUP	**Villa Florida**	**101.80**	**246**	P		**Pdif**	**23 14 31.6**	**+1.6**
	comp=Z,2.9nm,1.0s,baz=229,slow=5.7,SNR=3.5							

*TAP **24** 23:22:31.9,24˚.01N×121˚.78E,h2km,ML3.1,D*
*JMA **24** 23:22:32.3±0.3,24˚.00N×121˚.76E,h0km,M2.4*
ISC 24 23:22:30.9±1.1,23˚.95N±0˚.03×121˚.89E±0˚.02,h6km±9km, n47,σ0°73/78,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.26**	**277**	*eP*	**Pb**	**23 22 36.9**	**-1.2**
	baz=257						
HWA				*eS*	**Sb**	**23 22 41.5**	**-1.2**
	baz=257						
TWD	**Chiawan**	**0.30**	**296**	*eP*	**Pg**	**23 22 36.4**	**-0.3**
	baz=301						
TWD				*eS*	**Sg**	**23 22 40.7**	**0.0**
	baz=301						
NACB	**Ninganchiao**	**0.35**	**310**	*eP*	**Pg**	**23 22 37.5**	**-0.3**
	baz=314						
NACB				*eS*	**Sg**	**23 22 41.9**	**-0.4**
	baz=314						
ESL	**Shilin**	**0.44**	**253**	P	**Pb**	**23 22 40.4**	**-0.7**
	baz=228						
ESL				*eS*	**Sb**	**23 22 47.3**	**-0.6**
	baz=228						
ETLH	**Xiulin Townshi**	**0.45**	**305**	*eP*	**Pg**	**23 22 39.3**	**-0.3**
	baz=306						
ETLH				*eS*	**Sg**	**23 22 45.5**	**-0.2**
	baz=306						
ENA	**Nanau**	**0.50**	**344**	*eP*	**Pb**	**23 22 41.6**	**-0.5**
	baz=356						
ENA				*eS*	**Sb**	**23 22 48.8**	**-0.8**
	baz=356						
EGFH	**Guangfu**	**0.51**	**237**	P	**Pb**	**23 22 42.7**	**+0.5**
	baz=223						
WHF	**Hehuan Shan**	**0.60**	**289**	*eP*	**Pg**	**23 22 42.3**	**-0.3**
	baz=286						
WHF				*eS*	**Sg**	**23 22 50.6**	**+0.1**
	baz=286						
HGSD	**Ruisui**	**0.62**	**223**	*eP*	**Pn**	**23 22 45.7**	**-0.6**
	baz=212						
TWC	**Suao**	**0.66**	**357**	*eP*	**Pn**	**23 22 45.8**	**-1.0**
	baz=360						
TWC				*eS*	**Sn**	**23 22 56.8**	**-0.7**
	baz=360						
CHGB	**Renai**	**0.66**	**280**	*eP*	**Pg**	**23 22 44.0**	**+0.3**
	baz=274						
CHGB				*eS*	**Sb**	**23 22 54.0**	**-0.6**
	baz=274						
NNSB	**Datong**	**0.67**	**316**	*eP*	**Pg**	**23 22 43.7**	**0.0**
	baz=319						
NNSB				*eS*	**Sg**	**23 22 52.2**	**-0.2**
	baz=319						
NNSH	**Datong**	**0.67**	**316**	*eP*	**Pg**	**23 22 43.8**	**+0.1**
	baz=319						
NNSH				*eS*	**Sg**	**23 22 52.2**	**-0.2**
	baz=319						
NNS	**Nan Shan**	**0.68**	**316**	P	**Pg**	**23 22 44.1**	**+0.1**
	baz=320						
NNS				*eS*	**Sg**	**23 22 53.5**	**+0.6**
	baz=320						
VWDT	**VWDT**	**0.71**	**255**	*eP*	**Pb**	**23 22 45.7**	**0.0**
	baz=245						
VWDT				*eS*	**Sb**	**23 22 56.0**	**+0.3**
	baz=245						
TWT	**Tachien**	**0.72**	**295**	P	**Pg**	**23 22 45.2**	**+0.4**
	baz=293						
TWT				*eS*	**Sb**	**23 22 56.1**	**-0.1**
	baz=293						
TDCB	**Techi**	**0.73**	**295**	*eP*	**Pg**	**23 22 45.2**	**+0.2**
	baz=293						
TDCB				*eS*	**Sg**	**23 22 56.0**	**+1.4**
	baz=293						
NDT	**Datong Townshi**	**0.74**	**332**	P	**Pb**	**23 22 45.8**	**-0.3**
	baz=338						
NDT				*eS*	**Sb**	**23 22 56.2**	**-0.4**
	baz=338						
ENTT	**Nioudou**	**0.75**	**337**	*eP*	**Pb**	**23 22 46.4**	**0.0**
	baz=331						
ENTT				*eS*	**Sb**	**23 22 56.7**	**-0.2**
	baz=331						
YULB	**Yu-li**	**0.77**	**225**	*eP*	**Pn**	**23 22 48.2**	**-0.2**
	baz=213						
YULB				*eS*	**Sn**	**23 23 00.3**	**0.0**
	baz=213						
TWF1	**Yuli**	**0.80**	**223**	*eP*	**Pn**	**23 22 48.6**	**-0.2**
	baz=211						
TWF1				*eS*	**Sn**	**23 23 01.7**	**+0.6**
	baz=211						
YHNB	**Yeheng**	**0.86**	**327**	*eP*	**Pb**	**23 22 48.0**	**-0.3**
	baz=321						
YHNB				*eS*	**Sg**	**23 22 59.5**	**+0.9**
	baz=321						
SSLB	**Suanglung**	**0.87**	**260**	*eP*	**Pb**	**23 22 48.2**	**-0.2**
	baz=264						
SSLB				*eS*	**Sb**	**23 23 00.5**	**+0.1**
	baz=264						
NSK	**Sanguang**	**0.87**	**326**	P	**Pb**	**23 22 48.2**	**-0.3**
	baz=320						
NSK				*eS*	**Sg**	**23 22 59.5**	**+0.4**
	baz=320						
DPDB	**Guoxing**	**0.89**	**276**	*eP*	**Pb**	**23 22 48.5**	**-0.2**
	baz=271						
DPDB				*eS*	**Sb**	**23 23 00.5**	**-0.3**
	baz=271						
NWLT	**Wulai**	**0.90**	**337**	*eP*	**Pb**	**23 22 49.2**	**+0.3**
	baz=342						
NWLT				*eS*	**Sb**	**23 23 01.5**	**+0.3**
	baz=342						
NTC	**Toucheng**	**0.91**	**357**	*eP*	**Pn**	**23 22 49.6**	**-0.5**
	baz=2.0						
SMLT	**Sun Moon Lake**	**0.91**	**266**	*eP*	**Pb**	**23 22 49.1**	**-0.1**
	baz=272						
SMLT				*eS*	**Sb**	**23 23 02.0**	**+0.5**
	baz=272						
WHP	**Taichung City**	**0.92**	**291**	*eP*	**Pb**	**23 22 49.1**	**-0.3**
	baz=289						
WHP				*eS*	**Sb**	**23 23 02.2**	**+0.3**
	baz=289						
FULB	**Fuli**	**0.92**	**216**	*eP*	**Pn**	**23 22 51.9**	**+1.4**
	baz=193						
WHYT	**Xinyi Township**	**0.98**	**255**	*eP*	**Pn**	**23 22 50.6**	**-0.6**
	baz=259						
WHYT				*eS*	**Sn**	**23 23 04.5**	**-1.0**
	baz=259						
TIPB	**Shuangxi**	**1.02**	**357**	*eP*	**Pn**	**23 22 52.2**	**+0.4**
	baz=351						
TIPB				*eS*	**Sn**	**23 23 06.1**	**-0.4**
	baz=351						
LIOB	**Emei**	**1.06**	**311**	*eP*	**Pb**	**23 22 51.7**	**0.0**
	baz=320						
NSTT	**Nanjuang**	**1.06**	**310**	*eP*	**Pb**	**23 22 51.6**	**0.0**
	baz=312						
NSTT				*eS*	**Sg**	**23 23 05.4**	**+0.4**
	baz=312						
WJS	**Zhushan**	**1.07**	**264**	*eP*	**Pn**	**23 22 53.3**	**+0.8**
	baz=258						
ELDTW	**Lidau**	**1.10**	**227**	*eP*	**Pn**	**23 22 53.8**	**+0.9**
	baz=219						
WNT	**Mingjian**	**1.10**	**267**	*eP*	**Pn**	**23 22 53.6**	**+0.7**
	baz=262						
NSY	**Sanyi**	**1.13**	**295**	*eP*	**Pg**	**23 22 51.9**	**-0.7**
	baz=293						
YOJ	**Yonaguni jima**	**1.15**	**63**	P	**Pn**	**23 22 56.2**	**+2.7**
CHN5	**Tsauling**	**1.16**	**253**	*eP*	**Pn**	**23 22 54.6**	**+0.8**
	baz=247						
NMLH	**Miaoli**	**1.16**	**301**	*eP*	**Pn**	**23 22 54.8**	**+1.1**
	baz=299						
YM01	**YM01**	**1.23**	**346**	*eP*	**Pg**	**23 22 56.1**	**+1.6**
	baz=330						
YM11	**YM11**	**1.25**	**347**	*eP*	**Pg**	**23 22 55.7**	**+0.9**
	baz=331						
IRIF	**Iriomote-Funau**	**1.73**	**77**	P	**Pg**	**23 23 04.7**	**+0.7**
JKRS	**Kuro-shima**	**1.96**	**81**	P	**Pg**	**23 23 09.0**	**+0.6**
JIJ	**Ishigaki jima**	**2.10**	**78**	P	**Pg**	**23 23 09.6**	**-1.5**
JIJ				S	**Sg**	**23 23 38.4**	**0.0**
JISG	**Ishigakijimahi**	**2.30**	**73**	P	**Pb**	**23 23 12.2**	**-0.6**
JISG				S	**Sg**	**23 23 42.8**	**-2.0**

*IDC **24** 23:24:06.0±1.2,40˚.18N×25˚.25E,h0km,mb3.3/4, mb1 3.4/9,mb1mx3.3/36,mbtmp3.3/9,ML3.2/5,MS2.9/1, Ms1 2.9/1,ms1mx2.0/27,Error ellipse: s-maj=17.2km s-min=12.9km az=74.0*
*DDA **24** 23:24:06.4,40˚.27N×25˚.15E,h23km±2km,MW3.7*
*ISK **24** 23:24:06.9,40˚.27N×25˚.17E,h18km,ML3.5/29*
*ATH **24** 23:24:06.6,40˚.23N×25˚.17E,h29km,ML3.1/14,Error ellipse: s-maj=1.2km s-min=0.7km az=42.0*
*THE **24** 23:24:07.7,40˚.23N×25˚.17E,h14km±1km,ML3.3/11,Error ellipse: s-maj=1.1km s-min=0.6km az=52.0*
ISC 24 23:24:07.7±0.8,40˚.23N±0˚.02×25˚.17E±0˚.02,h16km±6km, n214,σ0°80/248,mb3.3/4,23C-22D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.34**	**178**	P	**Pg**	**23 24 14.7**	**+0.1**
LIA				S	**Sg**	**23 24 19.2**	**-0.2**
	6μm,0.5s						
LIA	**Limnos Island**	**0.34**	**178**	P	**Pg**	**23 24 14.7**	**+0.1**
LIA				S	**Sg**	**23 24 19.8**	**+0.4**
LIA				AML	AML	23 24 20.3	
	comp=N,13440μm,0.5s						
LIA				AML	AML	23 24 20.5	
	comp=E,8729μm,0.5s						
SMTH	**Samothraki Isl**	**0.36**	**49**	P	**Pg**	**23 24 14.8**	**-0.4**
SMTH				S	**Sg**	**23 24 20.2**	**-0.2**
SMTH	**Samothraki Isl**	**0.36**	**49**	P	**Pg**	**23 24 14.8**	**-0.4**
SMTH				S	**Sg**	**23 24 20.0**	**-0.3**
SMTH				AML	AML	23 24 21.4	
	comp=E,3211μm,0.2s						
SMTH				AML	AML	23 24 24.9	
	comp=N,3719μm,0.1s						
THAS	**Thassos island**	**0.51**	**318**	P	**Pg**	**23 24 17.4**	**-0.4**
THAS				S	**Sb**	**23 24 25.4**	**+0.1**
	comp=N,3μm,0.3s						
THAS	**Thassos island**	**0.51**	**318**	P	**Pg**	**23 24 17.2**	**-0.5**
THAS				S	**Sg**	**23 24 24.2**	**-0.4**
THAS				AML	AML	23 24 28.2	
	comp=N,4891μm,0.3s						
THAS				AML	AML	23 24 28.3	
	comp=E,5494μm,0.3s						
GADA	**Gvkgeada**	**0.56**	**94**	P	**Pg**	**23 24 18.9**	**+0.1**
GADA				S	**Sg**	**23 24 26.5**	**+0.2**
	comp=E,2μm,0.4s						
GADA	**Gvkgeada**	**0.56**	**94**	PG	**Pg**	**23 24 18.9**	**+0.1**
GADA				SG	**Sb**	**23 24 27.1**	**+0.3**
EFSA	**Agios Efstrati**	**0.71**	**191**	P	**Pb**	**23 24 21.8**	**+0.2**
EFSA				S	**Sb**	**23 24 31.7**	**+0.8**
EFSA				AML	AML	23 24 32.6	
	comp=N,5241μm,0.3s						
EFSA				AML	AML	23 24 34.5	
	comp=E,7863μm,0.8s						
BOZC	**Bozcaada**	**0.78**	**120**	PG	**Pg**	**23 24 22.9**	**-0.1**
BOZC	**Bozcaada**	**0.78**	**120**	*i* P	**Pg**	**23 24 22.8**	**-0.1**
BOZC				*i* S	**Sb**	**23 24 33.7**	**+0.5**
BOZC				IAML		23 24 35.0	
	comp=E,2μm,0.5s						
BOZC				IAML		23 24 35.0	
	comp=N,2μm,0.8s						
ENEZ	**Enez**	**0.90**	**56**	P	**Pb**	**23 24 24.6**	**-0.3**
ENEZ				S	**Sg**	**23 24 37.7**	**+0.6**
	comp=N,5μm,0.4s						
ENEZ	**Enez**	**0.90**	**56**	PG	**Pb**	**23 24 24.7**	**-0.2**
KAVA	**Kavala**	**0.91**	**327**	P	**Pg**	**23 24 25.5**	**+0.1**
KAVA				S	**Sg**	**23 24 37.7**	**+0.3**
	comp=N,2μm,0.5s						
KAVA	**Kavala**	**0.91**	**327**	P	**Pg**	**23 24 25.5**	**+0.1**
KAVA				S	**Sg**	**23 24 37.6**	**+0.2**
KAVA				AML	AML	23 24 38.9	
	comp=N,2441μm,0.2s						
KAVA				AML	AML	23 24 39.7	
	comp=E,3246μm,0.1s						
OUR	**Ouranopolis**	**0.91**	**277**	P	**Pb**	**23 24 24.8**	**-0.3**
OUR				S	**Sg**	**23 24 37.9**	**+0.5**
	comp=E,1μm,0.5s						
OUR	**Ouranopolis**	**0.91**	**277**	P	**Pb**	**23 24 24.9**	**-0.2**
OUR				S	**Sg**	**23 24 37.6**	**+0.2**
OUR				AML	AML	23 24 38.4	
	comp=N,3385μm,0.6s						
OUR				AML	AML	23 24 40.2	
	comp=E,2434μm,0.5s						
OUR	**Ouranopolis**	**0.91**	**277**	PG	**Pb**	**23 24 24.9**	**-0.2**
OUR				SG	**Sg**	**23 24 37.9**	**+0.5**
KVLA	**Kavala**	**0.92**	**320**	P	**Pg**	**23 24 25.7**	**+0.2**
KVLA				S	**Sb**	**23 24 37.5**	**+0.3**
KVLA				AML	AML	23 24 39.2	
	comp=N,5417μm,0.6s						
KVLA				AML	AML	23 24 39.3	
	comp=E,2535μm,0.4s						
RDO	**Rodhopi**	**0.95**	**17**	P	**Pb**	**23 24 25.2**	**-0.6**
RDO				S	**Sg**	**23 24 38.6**	**-0.1**
RDO	**Rodhopi**	**0.95**	**17**	P	**Pb**	**23 24 25.3**	**-0.6**
RDO				S	**Sb**	**23 24 38.2**	**0.0**
RDO				AML	AML	23 24 40.7	
	comp=N,2325μm,0.6s						
RDO				AML	AML	23 24 41.1	
	comp=E,983μm,0.2s						
RDO	**Rodhopi**	**0.95**	**17**	PG	**Pb**	**23 24 25.2**	**-0.6**
EZN	**Ezine**	**0.98**	**114**	P	**Pb**	**23 24 26.1**	**-0.1**
EZN				S	**Sb**	**23 24 38.4**	**-0.4**
	comp=E,3μm,0.5s						
EZN	**Ezine**	**0.98**	**114**	PG	**Pb**	**23 24 26.2**	**0.0**
GELI	**Tayfur-Gelibol**	**1.01**	**80**	PG	**Pb**	**23 24 26.1**	**-0.7**
ERIK	**Erikli-Kesan**	**1.11**	**66**	PN	**Pb**	**23 24 27.7**	**-0.8**
SIGR	**SIGRI**	**1.15**	**152**	P	**Pb**	**23 24 29.2**	**+0.1**
SIGR				S	**Sb**	**23 24 43.6**	**-0.2**
	comp=E,2μm,0.6s						
SIGR	**SIGRI**	**1.15**	**152**	P	**Pb**	**23 24 29.2**	**+0.1**
SIGR				S	**Sn**	**23 24 44.5**	**+0.1**
SIGR				AML	AML	23 24 46.0	
	comp=N,5880μm,0.7s						
SIGR				AML	AML	23 24 49.8	
	comp=E,2669μm,0.6s						
SIGR	**SIGRI**	**1.15**	**152**	PN	**Pb**	**23 24 29.3**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**1.17**	**114**	*i* P	**Pb**	**23 24 29.6**	**+0.2**
BAYC				*i* S	**Sg**	**23 24 45.3**	**-0.1**
BAYC				IAML		23 24 47.0	
	comp=E,406nm,0.2s						
BAYC				IAML		23 24 47.0	
	comp=N,696nm,0.4s						
PAIG	**Paliouri**	**1.18**	**256**	P	**Pn**	**23 24 28.7**	**-0.8**
PAIG	**Paliouri**	**1.18**	**256**	P	**Pn**	**23 24 28.7**	**-0.8**
PAIG				S	**Sb**	**23 24 44.8**	**+0.1**
PAIG				AML	AML	23 24 46.1	
	comp=E,491μm,0.7s						
PAIG				AML	AML	23 24 49.0	
	comp=N,463μm,0.5s						
LPK	**Lapseki**	**1.23**	**83**	PN	**Pn**	**23 24 29.8**	**-0.3**
KESN	**Edirne-Kesan**	**1.29**	**62**	*i* P	**Pn**	**23 24 30.3**	**-1.1**
KESN				*i* S	**Sg**	**23 24 49.2**	**-0.4**
KESN				IAML		23 24 52.0	
	comp=E,689nm,0.5s						
KESN				IAML		23 24 56.0	
	comp=N,617nm,0.3s						
PRK	**Paraskevi**	**1.30**	**139**	P	**Pg**	**23 24 32.6**	**-0.2**
PRK				S	**Sg**	**23 24 49.2**	**-0.6**
	comp=N,2μm,0.5s						
PRK	**Paraskevi**	**1.30**	**139**	P	**Pn**	**23 24 31.2**	**+0.1**
PRK				S	**Sg**	**23 24 49.1**	**-0.6**
PRK				AML	AML	23 24 53.2	
	comp=E,3866μm,0.5s						
PRK				AML	AML	23 24 53.6	
	comp=N,2317μm,0.9s						
PLG	**Polygyros**	**1.32**	**277**	P	**Pn**	**23 24 31.4**	**-0.1**
PLG	**Polygyros**	**1.32**	**277**	P	**Pn**	**23 24 31.4**	**-0.1**
PLG				AML	AML	23 24 48.7	
	comp=E,846μm,0.5s						
PLG				AML	AML	23 24 52.8	
	comp=N,958μm,1.0s						
KDZ	**Kurdzhali**	**1.43**	**7**	P	**Pn**	**23 24 32.4**	**-0.5**
KDZ	**Kurdzhali**	**1.43**	**7**	PN	**Pn**	**23 24 32.4**	**-0.5**
UKOP	**Uzunkopru-Edir**	**1.43**	**51**	PN	**Pn**	**23 24 32.6**	**-0.3**
SKY	**Skiros Island**	**1.44**	**200**	P	**Pn**	**23 24 32.4**	**-0.6**
AOS	**Alonnisos**	**1.45**	**224**	P	**Pn**	**23 24 32.5**	**-0.7**
AOS	**Alonnisos**	**1.45**	**224**	P	**Pn**	**23 24 32.6**	**-0.7**
AOS				S	**Sn**	**23 24 51.7**	**-0.2**
AOS				AML	AML	23 24 57.3	
	comp=N,577μm,0.5s						
AOS				AML	AML	23 25 01.7	
	comp=E,652μm,0.6s						
AOS	**Alonnisos**	**1.45**	**224**	PN	**Pn**	**23 24 32.6**	**-0.7**
SRS	**Serrai**	**1.49**	**307**	P	**Pn**	**23 24 33.5**	**-0.2**
SRS				S	**Sn**	**23 24 52.4**	**-0.5**
	comp=E,460nm,0.6s						
SRS	**Serrai**	**1.49**	**307**	P	**Pn**	**23 24 33.6**	**-0.1**
SRS				S	**Sn**	**23 24 52.1**	**-0.8**
AYVA	**Ayvalik**	**1.49**	**128**	*i* P	**Pn**	**23 24 34.5**	**+0.8**
AYVA				*i* S	**Sb**	**23 24 53.6**	**0.0**
AYVA				IAML		23 24 59.0	
	comp=E,473nm,0.8s						
AYVA				IAML		23 25 01.0	
	comp=N,567nm,0.6s						
RZN	**Rozhen**	**1.49**	**347**	P	**Pn**	**23 24 34.4**	**+0.4**
RZN				S	**Sn**	**23 24 53.2**	**0.0**
SOH	**Sokhos**	**1.50**	**294**	P	**Pn**	**23 24 34.0**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.60**	**73**	PN	**Pn**	**23 24 34.2**	**-1.1**
SART	**Tekirdag**	**1.60**	**73**	*i* P	**Pn**	**23 24 35.0**	**-0.3**
HORT	**Hortiatis**	**1.62**	**284**	P	**Pn**	**23 24 35.5**	**-0.2**
HORT	**Hortiatis**	**1.62**	**284**	P	**Pn**	**23 24 35.4**	**-0.2**
HORT	**Hortiatis**	**1.62**	**284**	PN	**Pn**	**23 24 35.1**	**-0.5**
KRBG	**Karabiga-Canak**	**1.64**	**84**	PN	**Pn**	**23 24 35.5**	**-0.2**
SKIA	**Skiathos**	**1.69**	**232**	P	**Pn**	**23 24 35.5**	**-1.0**
SKIA	**Skiathos**	**1.69**	**232**	P	**Pn**	**23 24 35.7**	**-0.8**
PSRA	**Psara**	**1.72**	**170**	P	**Pn**	**23 24 37.4**	**+0.6**
THE	**Thessaloniki**	**1.73**	**284**	P	**Pn**	**23 24 36.8**	**-0.2**
THE	**Thessaloniki**	**1.73**	**284**	P	**Pn**	**23 24 36.9**	**-0.1**
MMB	**Musomiste**	**1.74**	**322**	*i* P	**Pn**	**23 24 37.2**	**0.0**
MMB				S	**Sn**	**23 24 57.9**	**-1.2**
XOR	**Xorichti**	**1.75**	**241**	P	**Pn**	**23 24 36.3**	**-1.1**
NEO	**Neokhori**	**1.76**	**239**	P	**Pn**	**23 24 36.7**	**-1.2**
NEO	**Neokhori**	**1.76**	**239**	P	**Pn**	**23 24 36.7**	**-0.8**
DKL	**Dikili**	**1.77**	**130**	PN	**Pn**	**23 24 37.8**	**+0.2**
KYMI	**Kymi, Euboea I**	**1.80**	**208**	P	**Pn**	**23 24 37.3**	**-0.7**
KYMI	**Kymi, Euboea I**	**1.80**	**208**	P	**Pn**	**23 24 37.2**	**-0.8**
KNL	**Balıkesir**	**1.81**	**88**	*i* P	**Pn**	**23 24 39.1**	**+1.0**
KNL				*i* S	**Sg**	**23 25 05.2**	**-0.6**
KNL				IAML		23 25 07.0	
	comp=E,415nm,0.9s						
KNL				IAML		23 25 22.0	
	comp=N,338nm,0.9s						
DIM	**Dimitrovgrad**	**1.84**	**9**	P	**Pn**	**23 24 39.3**	**+0.8**
DIM				S	**Sg**	**23 25 06.6**	**-0.2**
MRMT	**Marmara Adasi**	**1.89**	**78**	PN	**Pn**	**23 24 38.5**	**-0.8**
PLD	**Plovdiv**	**1.90**	**350**	PN	**Pn**	**23 24 39.2**	**-0.2**
GONE	**Gonen-Balikesi**	**1.94**	**95**	PN	**Pn**	**23 24 39.9**	**0.0**
BALY	**Balya**	**1.95**	**104**	*i* P	**Pn**	**23 24 40.8**	**+0.8**
BALY				IAML		23 25 11.0	
	comp=N,366nm,0.7s						
BALY				IAML		23 25 17.0	
	comp=E,249nm,0.5s						
TKR	**Tekirdag**	**1.95**	**66**	PN	**Pn**	**23 24 39.7**	**-0.4**
MRKA	**Markates**	**1.96**	**219**	P	**Pn**	**23 24 39.5**	**-0.7**
MRKA	**Markates**	**1.96**	**219**	P	**Pn**	**23 24 39.3**	**-0.8**
KNT	**Kendrikon**	**1.96**	**299**	P	**Pn**	**23 24 40.8**	**+0.6**
KNT	**Kendrikon**	**1.96**	**299**	P	**Pn**	**23 24

VTS	**Vitosha**	**2.79**	**329**	⇓P		**Pn**	**23 24 52.9**	**+1.1**
VTS	**Vitosha**	**2.79**	**329**	P		**Pn**	**23 24 53.0**	**+1.2**
LTK	**Loutraki**	**2.79**	**219**	P		**Pn**	**23 24 51.4**	**-0.3**
SMG	**Samos**	**2.84**	**152**	P		**Pn**	**23 24 52.8**	**+0.6**
SMG	**Samos**	**2.84**	**152**	P		**Pn**	**23 24 52.8**	**+0.6**
ARMT	**Armutlu**	**2.84**	**82**	PN		**Pn**	**23 24 52.2**	**-0.1**
MDNY	**Mudanya-Bursa**	**2.84**	**86**	PN		**Pn**	**23 24 52.1**	**-0.2**
KPRO	**Kipourio**	**2.93**	**266**	P		**Pn**	**23 24 53.8**	**+0.2**
KPRO	**Kipourio**	**2.93**	**266**	P		**Pn**	**23 24 54.9**	**+1.3**
FNA	**Florina**	**2.94**	**282**	P		**Pn**	**23 24 54.5**	**+0.7**
FNA	**Florina**	**2.94**	**282**	P		**Pn**	**23 24 54.7**	**+0.9**
KALE	**Kalithea**	**2.98**	**233**	P		**Pn**	**23 24 54.1**	**-0.2**
ANX	**Ano Chora**	**3.00**	**238**	P		**Pn**	**23 24 54.7**	**+0.1**
ANX	**Ano Chora**	**3.00**	**238**	P		**Pn**	**23 24 54.5**	**-0.1**
SZH	**Strazhica**	**3.08**	**10**	P		**Pn**	**23 24 56.4**	**+0.7**
DID	**Didima**	**3.11**	**210**	P		**Pn**	**23 24 55.5**	**-0.5**
DID	**Didima**	**3.11**	**210**	P		**Pn**	**23 24 55.6**	**-0.5**
SERI	**Serifos**	**3.11**	**190**	P		**Pn**	**23 24 54.9**	**-1.2**
NEST	**Nestorio**	**3.15**	**275**	P		**Pn**	**23 24 57.8**	**+1.1**
APE	**Apeiranthos**	**3.17**	**175**	P		**Pn**	**23 24 56.1**	**-0.8**
APE	**Apeiranthos**	**3.17**	**175**	⇑P		**Pn**	**23 24 56.4**	**-0.5**
PLVB	**Pleven**	**3.18**	**353**	⇑P		**Pn**	**23 24 58.3**	**+1.4**
KLV	**Kalavryta, Ach**	**3.21**	**228**	P		**Pn**	**23 24 57.2**	**-0.2**
KLV	**Kalavryta, Ach**	**3.21**	**228**	P		**Pn**	**23 24 57.2**	**-0.2**
MPEP	**Malo Peshtene**	**3.30**	**342**	P		**Pn**	**23 24 59.6**	**+1.0**
PRD	**Provadia**	**3.40**	**29**	P		**Pn**	**23 25 00.0**	**0.0**
AMGA	**Amorgos Island**	**3.44**	**170**	P		**Pn**	**23 25 00.5**	**-0.2**
RAZG	**Razgrad**	**3.48**	**16**	⇓P		**Pn**	**23 25 02.0**	**+0.9**
PDO	**Prodromos**	**3.49**	**243**	P		**Pn**	**23 25 02.3**	**+1.0**
TRIP	**Tripoli**	**3.52**	**231**	P		**Pn**	**23 25 02.3**	**+0.5**
DRO	**Drossia**	**3.52**	**231**	P		**Pn**	**23 25 02.3**	**+0.6**
VLX	**Vlachokerasia**	**3.59**	**218**	P		**Pn**	**23 25 03.0**	**+0.2**
VLX	**Vlachokerasia**	**3.59**	**218**	P		**Pn**	**23 25 03.0**	**+0.2**
IGT	**Igoumenitsa**	**3.79**	**261**	P		**Pn**	**23 25 07.2**	**+1.9**
AMT	**Artemida-Makis**	**3.82**	**226**	P		**Pn**	**23 25 07.0**	**+1.2**
EVGI	**Lefkada island**	**3.85**	**247**	P		**Pn**	**23 25 07.4**	**+1.2**
ANAF	**Anafi Island**	**3.90**	**173**	P		**Pn**	**23 25 06.7**	**-0.1**
COPA	**Copaceanca**	**3.90**	**1**	⇓P		**Pn**	**23 25 07.9**	**+1.1**
VLI	**Velíai**	**3.92**	**207**	P		**Pn**	**23 25 06.9**	**-0.2**
PSN	**Preselentsi**	**4.12**	**32**	P		**Pn**	**23 25 09.8**	**0.0**
KEK	**Kerkira**	**4.16**	**265**	P		**Pn**	**23 25 12.1**	**+1.7**
SRCK	**Saricakaya, Es**	**4.19**	**91**	*i* P		**Pn**	**23 25 11.9**	**+1.1**
SRCK				IAML			23 26 26.0	
	comp=N,45nm,1.0s							
SRCK				IAML			23 26 43.0	
	comp=E,22nm,0.7s							
RASA	**Rasa**	**4.24**	**20**	⇑P		**Pn**	**23 25 12.7**	**+1.1**
HUMR	**Humele**	**4.29**	**358**	⇑P		**Pn**	**23 25 13.6**	**+1.3**
ICOR	**Ion Corvin**	**4.35**	**26**	⇓P		**Pn**	**23 25 13.8**	**+0.8**
MANR	**Mangalia**	**4.39**	**34**	⇑P		**Pn**	**23 25 14.1**	**+0.5**
SULR		**4.51**	**10**	⇑P		**Pn**	**23 25 16.7**	**+1.4**
SRE	**Strehaia**	**4.66**	**342**	⇓P		**Pn**	**23 25 18.4**	**+1.2**
TIRR	**Tirgusor**	**4.86**	**29**	⇓P		**Pn**	**23 25 20.4**	**+0.4**
HARR	**Harsova**	**4.90**	**24**	⇑P		**Pn**	**23 25 21.7**	**+1.1**
IDI	**Anoyia**	**4.94**	**183**	Pn		**Pn**	**23 25 20.7**	**-0.6**
	comp=E,0.2nm,0.3s,baz=312,slow=16,SNR=2.6							
IDI	**Anoyia**	**4.94**	**183**	⇓P		**Pn**	**23 25 20.5**	**-0.7**
PDG	**Podgorica**	**4.96**	**298**	⇓P		**Pn**	**23 25 22.4**	**+1.0**
ISR	**Istrita**	**4.99**	**11**	⇓P		**Pn**	**23 25 22.4**	**+0.6**
HERR	**Herculane**	**5.07**	**337**	⇑P		**Pn**	**23 25 23.3**	**+0.4**
ARR	**Arges**	**5.15**	**356**	⇑P		**Pn**	**23 25 25.3**	**+1.2**
TOPG	**Topolog**	**5.21**	**26**	⇓P		**Pn**	**23 25 25.4**	**+0.5**
MDVR	**Moldovita**	**5.21**	**332**	⇑P		**Pn**	**23 25 25.7**	**+0.7**
MLR	**Muntele Rosu**	**5.29**	**6**	Pn		**Pn**	**23 25 28.0**	**+1.9**
	comp=E,0.8nm,0.3s,baz=230,slow=4.1,SNR=36							
MLR				Sn		**Sn**	**23 26 28.0**	**+1.4**
	comp=E,0.7nm,0.3s,baz=93,slow=18,SNR=1.3							
MLR				Lg		Lg	23 26 56.2	
	comp=E,0.3nm,0.3s,baz=103,slow=16,SNR=1.5							
MLR	**Muntele Rosu**	**5.29**	**6**	⇑P		**Pn**	**23 25 27.3**	**+1.3**
JURR	**Jurilovca**	**5.29**	**30**	⇑P		Pn	23 25 16.7	-9.3
LOT	**Lotru**	**5.31**	**349**	⇓P		**Pn**	**23 25 26.7**	**+0.3**
CFR	**Carcaliu**	**5.40**	**23**	⇑P		**Pn**	**23 25 27.9**	**+0.4**
BISRR	**Bisoca**	**5.43**	**12**	⇓P		**Pn**	**23 25 29.0**	**+1.0**
GZR	**Gura Zlata**	**5.45**	**342**	⇓P		**Pn**	**23 25 28.8**	**+0.6**
PLOR	**Plostina**	**5.72**	**10**	⇑P		**Pn**	**23 25 32.9**	**+1.0**
DOPR	**Dopca**	**5.73**	**2**	⇑P		**Pn**	**23 25 33.9**	**+1.9**
VRI	**Vrincioaia**	**5.75**	**11**	⇑P		**Pn**	**23 25 33.4**	**+1.2**
MDB	**Medias**	**5.93**	**355**	⇑P		**Pn**	**23 25 35.7**	**+0.9**
BZS	**Buzias**	**5.98**	**335**	⇓P		**Pn**	**23 25 36.3**	**+0.9**
VARL	**Varlezi**	**5.99**	**18**	⇓P		**Pn**	**23 25 36.0**	**+0.4**
STON	**Ston**	**6.19**	**298**	Sg		**Sb**	**23 27 04.5**	**-4.3**
TESR	**Tescani**	**6.37**	**9**	⇑P		**Pn**	**23 25 42.1**	**+1.3**
BRTR	**Keskin Array B**	**6.53**	**92**	Pn		**Pn**	**23 25 43.9**	**+0.8**
	comp=E,0.4nm,0.3s,baz=271,slow=14,SNR=9.6							
BRTR				Sn		**Sn**	**23 26 55.4**	**-1.9**
	comp=E,0.1nm,0.3s,baz=268,slow=37,SNR=1.2							
BRTR				Lg		Lg	23 27 33.0	
	baz=271,slow=36,SNR=1.5							
VASR	**Vaslui**	**6.68**	**16**	⇓P		**Pn**	**23 25 45.3**	**+0.2**
BIZ	**Bicaz**	**6.74**	**5**	⇓P		**Pn**	**23 25 47.3**	**+1.4**
DRGR		**6.79**	**346**	⇓P		**Pn**	**23 25 48.5**	**+1.8**
MAKA	**Makarska**	**6.81**	**299**	Sg		**Sn**	**23 27 03.3**	**-0.7**
RICI	**Ricice**	**6.83**	**301**	*e*Pg		Pg	23 26 55.0	+37
RICI				Sg		**Sn**	**23 27 01.0**	**-3.4**
ARCR	**ARCALIA**	**6.88**	**355**	⇑P		Pn	23 25 42.1	-5.6
PRAR	**RASCA**	**7.17**	**6**	⇓P		**Pn**	**23 25 52.9**	**+1.1**
MILM	**Milestii Mici**	**7.19**	**20**	⇑P		**Pn**	**23 25 53.0**	**+1.0**
BURAR	**Bucovina Array**	**7.38**	**0**	⇑P		**Pn**	**23 25 56.0**	**+1.3**
TRPA	**Tarpa**	**8.12**	**347**	⇑P		**Pn**	**23 26 05.6**	**+0.9**
SORM	**Soroca**	**8.22**	**15**	⇑P		**Pn**	**23 26 06.1**	**-0.1**
AKASG	**Malin Array Be**	**10.85**	**14**	Pn		**Pn**	**23 26 41.6**	**-0.5**
	comp=E,0.3nm,0.3s,baz=200,slow=13,SNR=1.4							
AKASG				Lg		Lg	23 29 51.8	
	comp=E,0.7nm,0.3s,baz=206,slow=28,SNR=1.7							
DAVOX	**Davos/Dischmat**	**12.87**	**306**	Pn		**Pn**	**23 27 11.6**	**+1.5**
	comp=E,0.1nm,0.3s,baz=144,slow=15,SNR=5.0							
CLL	**Collm**	**13.93**	**327**	*e*			23 27 47.0	+15
FINES	**FINESS Array B**	**21.25**	**1**	P		**P**	**23 28 54.3**	**+1.6**
	comp=E,0.6nm,0.7s,baz=230,slow=11,SNR=1.3							
MDT	**Midelt**	**24.97**	**262**	LR		LR	23 39 59.3	
	comp=E,27nm,19.0s,baz=155,slow=38							
TORD	**Torodi Ar. Bea**	**33.96**	**224**	P		**P**	**23 30 51.0**	**+0.7**
	comp=E,0.6nm,1.1s,baz=28,slow=6.5,SNR=1.6							
MKAR	**Makanchi Array**	**41.15**	**61**	P		**P**	**23 31 51.9**	**+0.9**
	comp=E,0.2nm,0.5s,baz=272,slow=4.7,SNR=2.5							
ZALV	**Zalesovo Beam**	**41.62**	**50**	P		**P**	**23 31 54.1**	**-0.6**
	comp=E,0.3nm,0.4s,baz=264,slow=8.5,SNR=3.0							

*IDC **24** 23:44:27.9±1.2, 40.29N×62.90E, h0km, mb3.3/2, mb1 3.4/7, mb1mx3.2/49, mbtmp3.4/7, ML3.4/5, MS3.6/2, Ms1 3.6/2, ms1mx2.3/37, Error ellipse: s-maj=18.9km s-min=11.5km az=157.0*

ISC 24 23:44:28.7±0.8, 40.49N±0.09×62.93E±0.07, h15km, n11, σ1§97/15, 3C-2D, Northwestern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEYT	**Alibeck**	**4.53**	**237**	Pn	**Pn**	**23 45 37.2**	**+0.4**
	2.3nm,0.3s,baz=59,slow=12,SNR=25						
GEYT				Sn	**Sn**	**23 46 27.4**	**-1.7**
	4.1nm,0.3s,baz=76,slow=12,SNR=2.4						
GEYT				Lg	Lg	23 46 48.8	
	2.3nm,0.3s,baz=174,slow=39,SNR=2.1						
GYA0B	**ALIBECK ARRAY**	**4.53**	**237**	⇑Pn	**Pn**	**23 45 37.1**	**+0.3**
GYA0B				⇑Pg	**Pb**	**23 45 46.3**	**-1.6**
GYA0B				⇑Sn	**Sn**	**23 46 29.1**	**0.0**
GYA0B				⇓Lg	Lg	23 46 47.2	
KK31	**Karatay Array**	**6.24**	**63**	Pg	**Pg**	**23 46 28.6**	**+0.4**
	0.9nm,0.5s,baz=244,slow=18,SNR=4.3						
KK31				⇓Lg	Lg	23 47 47.2	
	6.1nm,0.6s,baz=240,slow=32,SNR=6.2						
AAK	**Ala-Archa**	**8.93**	**72**	Pn	**Pn**	**23 46 38.2**	**+0.8**
	0.3nm,0.3s,baz=202,slow=5.4,SNR=3.6						
AAK				Sn	**Sn**	**23 48 16.9**	**-0.8**
	0.2nm,0.3s,baz=345,slow=20,SNR=1.6						
AAK				Lg	Lg	23 49 15.0	
	0.3nm,0.3s,baz=161,slow=18,SNR=1.8						
AKTO	**Aktyubinsk**	**10.53**	**343**	Pn	**Pn**	**23 47 01.5**	**+2.5**
	0.5nm,0.3s,baz=155,slow=6.5,SNR=6.3						
AKTO				Sn	**Sn**	**23 48 55.5**	**-1.1**
	0.1nm,0.3s,baz=240,slow=20,SNR=2.1						
AKTO				Lg	Lg	23 50 07.7	
	0.2nm,0.3s,baz=123,slow=17,SNR=1.8						
BVAR	**Borovoye Array**	**13.53**	**20**	Pn	**Pn**	**23 47 40.8**	**+0.8**
	0.2nm,0.3s,baz=217,slow=12,SNR=2.8						
BVAR				Sn	**Sn**	**23 50 05.6**	**-4.5**
	0.1nm,0.3s,baz=210,slow=20,SNR=2.3						
MKAR	**Makanchi Array**	**15.35**	**59**	Pn	**Pn**	**23 48 02.6**	**-2.2**
	0.1nm,0.3s,baz=251,slow=11,SNR=5.6						
ZALV	**Zalesovo Beam**	**19.95**	**40**	P	**Pn**	**23 49 04.1**	**+2.3**
	0.3nm,0.4s,baz=220,slow=8.7,SNR=1.9						
MBAR	**Mbarara**	**50.31**	**224**	LR	LR	00 18 20.1	
	comp=E,47nm,18.0s,baz=206,slow=40						
TGY	**Tagaytay City**	**56.73**	**100**	LR	LR	00 19 36.0	
	comp=E,70nm,20.6s,baz=172,slow=37						
TORD	**Torodi Ar. Bea**	**59.75**	**261**	P	**P**	**23 54 33.8**	**+0.6**
	0.6nm,0.9s,baz=63,slow=6.1,SNR=3.4						

*NEIC **24** 23:54:51.4±1.8, 10.62S±0.08×161.69E±0.08, h64km±7km, mb4.2/15, Error ellipse: s-maj=12.8km s-min=10.3km az=222.0*

*IDC **24** 23:54:56.7±2.9, 10.54S×161.37E, h103km±20km, mb3.7/4, mb1 3.8/5, mb1mx3.4/38, mbtmp4.0/5, MS3.1/3, Ms1 3.0/3, ms1mx2.6/31, Error ellipse: s-maj=45.2km s-min=22.9km az=54.0*

ISC 24 23:54:51.2±0.7, 10.62S±0.08×161.71E±0.09, h61km, n35, σ1§52/29, mb4.2/10, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.10**	**304**	P	**Pn**	**23 55 26.5**	**+2.5**
	126nm,0.3s,baz=0.7,slow=21,SNR=27						
HNR				S	**Sn**	**23 55 49.7**	**+0.5**
	910nm,0.3s,baz=32,slow=22,SNR=23						
HNR	**Honiara**	**2.10**	**304**		**Pn**	**23 55 26.3**	**+2.2**
HNR					**Sn**	**23 55 49.5**	**+0.4**
RABL	**Rabaul**	**11.42**	**303**	Pn	**Pn**	**23 57 28.4**	**-3.2**
DZM	**Mont Dzumac**	**12.25**	**159**	P	**P**	**23 57 50.1**	**-3.3**
	0.2nm,0.3s,baz=27,slow=10,SNR=14						
DZM				S	**Sn**	**23 59 58.7**	**+0.6**
	0.2nm,0.3s,baz=300,slow=23,SNR=13						
DZM	**Mont Dzumac**	**12.25**	**159**		**Pn**	**23 57 44.4**	**+1.4**
PMG	**Port Moresby**	**14.38**	**274**	LR	LR	00 03 09.6	
	comp=Z,83nm,20.8s,baz=96,slow=35						
MSVF	**Nonsavu**	**17.34**	**116**		**P**	**23 58 50.3**	**+0.4**
MSVF				IAmb	IAmb	23 59 06.8	
	comp=Z,11nm,1.0s						
CTA	**Charters Tower**	**17.61**	**236**	P	**P**	**23 58 56.0**	**+3.2**
	comp=Z,0.5nm,0.3s,baz=65,slow=14,SNR=7.4						
CTAO	**Charters Tower**	**17.61**	**236**	P	**P**	**23 58 53.2**	**+0.3**
CTAO				IAmb	IAmb	23 58 58.4	
	comp=Z,6.7nm,0.7s						
PATS	**Pohnpei**	**17.67**	**349**		**Pn**	**23 58 52.8**	**-0.5**
EIDS	**Eidsvold**	**17.79**	**213**		**Pn**	**23 58 54.5**	**-0.3**
COEN	**Coen**	**18.41**	**258**	P	**P**	**23 59 01.0**	**-0.6**
COEN				IAmb	IAmb	23 59 06.5	
	comp=Z,8.9nm,0.9s						
WR0	**Warramunga Arr**	**27.77**	**247**	P	**P**	**00 00 33.8**	**-0.7**
WR0				IAmb	IAmb	00 00 34.4	
	comp=Z,2.4nm,0.5s						
WB0	**Warramunga Arr**	**27.85**	**248**	P	**P**	**00 00 34.9**	**-0.4**
WB0				IAmb	IAmb	00 00 35.3	
	comp=Z,5.4nm,0.6s						
WB2	**Warramunga Arr**	**27.93**	**247**	P	**P**	**00 00 34.9**	**-1.1**
WRA	**Warramunga Arr**	**27.94**	**247**	P	**P**	**00 00 35.4**	**-0.7**
	comp=Z,2.9nm,0.6s,baz=78,slow=8.7,SNR=15						
STKA	**Stephens Creek**	**28.16**	**218**	P	**P**	**00 00 38.7**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=43,slow=18,SNR=2.2						
STKA				LR	LR	00 11 31.7	
	comp=Z,45nm,18.3s,baz=23,slow=36						
STKA	**Stephens Creek**	**28.16**	**218**	IAmb	IAmb	00 00 39.3	
	comp=Z,0.5nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**29.35**	**10**	T	T	00 29 51.9	
	baz=194,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.35**	**10**	T	T	00 29 50.1	
	baz=194						
H11S1	**WAKE ISLAND Hy**	**29.36**	**10**	T	T	00 29 55.5	
	baz=194,slow=74						
ASAR	**Ali Sirges**	**29.49**	**240**	P	**P**	**00 00 48.8**	**-1.1**
	comp=Z,1.0nm,0.5s,baz=63,slow=9.8,SNR=18						
TOO	**Toolangi**	**30.54**	**206**	P	**P**	**00 00 59.0**	**+0.1**
TOO				IAmb	IAmb	00 01 01.3	
	comp=Z,6.0nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**30.57**	**10**	T	T	00 31 43.4	
	baz=193,slow=76,SNR=5.1						
H11N3	**WAKE ISLAND Hy**	**30.58**	**10**	T	T	00 31 44.7	
	baz=193,slow=76,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	**30.59**	**10**	T	T	00 31 45.1	
	baz=193,slow=76,SNR=6.3						
BBOO	**Buckleboo**	**32.32**	**223**	P	**P**	**00 01 15.1**	**+0.5**
BBOO				IAmb	IAmb	00 01 16.0	
	comp=Z,5.0nm,0.7s						
KNRA	**Kununurra**	**32.45**	**258**	P	**P**	**00 01 15.9**	**0.0**
KNRA				IAmb	IAmb	00 01 18.2	
	comp=Z,8.2nm,0.8s						
CMWZ	**Cape Campbell**	**32.89**	**163**	P	**P**	**00 01 19.5**	**0.0**
FITZ	**Fitzroy Crossi**	**35.67**	**254**	P	**P**	**00 01 42.3**	**-1.6**
FITZ				IAmb	IAmb	00 01 45.9	
	comp=Z,3.6nm,1.1s						
KSRS	**Korea Array**	**57.36**	**328**	LR	LR	00 27 03.3	
	comp=Z,9.3nm,20.3s,baz=15,slow=34						
RPSI	**Rantau Prapat**	**63.86**	**278**		**PcP**	**00 05 54.0**	**+0.6**
SDPT	**Sand Point**	**72.95**	**21**	P	**P**	**00 06 13.0**	**-0.9**
MDM	**Murphy Dome**	**84.10**	**19**	P	**P**	**00 07 17.5**	**+2.4**
MKAR	**Makanchi Array**	**90.52**	**318**	P	**P**	**00 07 45.9**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=86,slow=6.5,SNR=1.7						

UCR 25 00:01:24.3±1.2, 10.38N×84.15W, h114km±4km, MD3.8, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRA1	**San Ramn**	**0.44**	**228**	*e*P	Pn	00 01 43.0	+1.6
SRA1				*e*S	Sn	00 01 55.7	+1.4
CVTR	**Volcan Turrial**	**0.52**	**133**	*e*P	Pn	00 01 42.2	-0.1
ARE1	**Arenal 1**	**0.57**	**278**	*e*P	Pn	00 01 42.2	+0.1
ARE1				*e*S	Sn	00 01 56.6	+1.1
LCR2	**La Lucha 2**	**0.65**	**167**	*e*P	Pn	00 01 42.7	-0.2
LCR2				*e*S	Sn	00 01 56.7	-0.3
JTS	**Las Juntas de**	**0.80**	**264**	*e*P	Pn	00 01 44.0	0.0
JTS				*e*S	Sn	00 01 59.0	+0.2
CUI	**Cuipilapa**	**1.04**	**285**	*i* P	Pn	00 01 46.3	0.0
CUI				*i* S	Sn	00 02 03.6	+0.7
EDDO	**Dominical**	**1.16**	**166**	*e*P	Pn	00 01 48.1	+0.6
EDDO				*e*S	Sn	00 02 05.9	+0.9
PLVR	**Palo Verde**	**1.19**	**269**	*e*P	Pn	00 01 48.2	+0.3
PLVR				*e*S	Sn	00 02 07.0	+1.1
EDLM	**Las Mercedes**	**1.23**	**153**	*e*P	Pn	00 01 48.5	+0.1
EDLM				*e*S	Sn	00 02 06.9	+0.4
LAPC	**Finca la Perla**	**1.32**	**287**	*i* P	Pn	00 01 48.8	-0.6
GUAI	**GUAI**	**1.35**	**265**	*i* P	Pn	00 01 49.8	+0.2
GUAI				*i* S	Sn	00 02 08.2	-0.6
NY14	**Universidad de**	**1.39**	**281**	*i* P	Pn	00 01 51.1	+1.0
DRK0	**Durika**	**1.42**	**141**	*e*P	Pn	00 01 50.8	+0.1
DRK0				*e*S	Sn	00 02 10.5	-0.2
EDBA	**Buenos Aires**	**1.48**	**145**	*e*S	Sn	00 02 11.4	-0.2
EDPN	**Palmar Norte**	**1.56**	**154**	*e*S	Sn	00 02 14.1	+0.8
PTJ1	**Puerto Jimnez**	**2.01**	**156**	*e*S	Sn	00 02 25.4	+2.2
BRU2	**Volcan**	**2.13**	**138**	*e*P	Pn	00 02 00.5	+1.1
BRU2				*e*S	Sn	00 02 26.2	+0.1

*IDC **25** 00:03:55.3±0.8, 12.27N×144.03E, h0km, mb3.9/12, mb1 4.2/12, mb1mx3.8/51, mbtmp3.9/12, MS3.2/7, Ms1 3.2/7, ms1mx2.8/40, Error ellipse: s-maj=28.2km s-min=19.6km az=100.0*

*NEIC **25** 00:03:56.8±2.8, 12.1N±0.1×144.0E±0.1, h18km±6km, mb4.3/10, Error ellipse: s-maj=23.8km s-min=8.5km az=123.0*

ISC 25 00:03:58.1±0.7, 12.14N±0.09×144.0E±0.1, h26km, n34, σ1§57/24, mb4.2/17, MS3.2/5, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.66**	**29**	Pn	**Pn**	**00 04 25.3**	**-0.2**
GUMO				Sn	**Sb**	**00 04 45.9**	**-2.5**
KRVT	**Keravat (AS076**	**18.17**	**154**	LR	LR	00 13 12.2	
	comp=Z,47nm,21.6s,baz=130,slow=30						
DAV	**Davao City (W)**	**18.88**	**256**	LR	LR	00 13 57.6	
	comp=Z,50nm,21.5s,baz=156,slow=32						
H11S3	**WAKE ISLAND Hy**	**22.73**	**71**	T	T	00 32 14.3	
	baz=255						
H11S1	**WAKE ISLAND Hy**	**22.75**	**71**	T	T	00 32 13.7	
	baz=255						
H11S2	**WAKE ISLAND Hy**	**22.75**	**71**	T	T	00 32 13.7	
	baz=255						
H11N1	**WAKE ISLAND Hy**	**23.21**	**68**	T	T	00 33 15.6	
	baz=255,slow=75,SNR=4.2						
H11N2	**WAKE ISLAND Hy**	**23.23**	**68**	T	T	00 33 13.7	
	baz=255,slow=75,SNR=4.6						
H11N3	**WAKE ISLAND Hy**	**23.23**	**68**	T	T	00 33 17.5	
	baz=255,slow=75,SNR=4.8						
YULB	**Yu-li**	**24.34**	**300**	P	**P**	**00 09 11.6**	**-2.3**
NACB	**Ninganchiao**	**24.41**	**302**	P	**P**	**00 09 12.2**	**-2.4**
NACB				IAmb	IAmb	00 09 15.1	
	comp=Z,15nm,0.9s						
WB0	**Warramunga Arr**	**33.09**	**197**	P	**P**	**00 10 29.6**	**-2.5**
WB0				IAmb	IAmb	00 10 47.8	
	comp=Z,4.8nm,1.1s						
WR0	**Warramunga Arr**	**33.24**	**196**	P	**P**	**00 10 32.8**	**-0.5**
WR0				IAmb	IAmb	00 10 36.3	
	comp=Z,4.0nm,1.1s						
WB2	**Warramunga Arr**	**33.27**	**197**	P	**P**	**00 10 31.7**	**-1.9**
WB2				IAmb	IAmb	00 10 42.8	
	comp=Z,4.2nm,1.1s						
WRA	**Warramunga Arr**	**33.28**	**197**	P	**P**	**00 10 35.5**	**+1.9**
	comp=Z,0.8nm,0.6s,baz=19,slow=9.9,SNR=6.4						
WRA				LR	LR	00 25 54.1	
	comp=Z,45nm,18.2s,baz=225,slow=40						
AS31	**Alice Springs**	**36.94**	**196**	P	**P**	**00 11 05.1**	**0.0**
ASAR	**Alice Springs**	**36.94**	**196**	P	**P**	**00 11 07.3**	**+2.1**
	comp=Z,0.8nm,0.7s,baz=20,slow=10,SNR=13						
KLR	**Kul'dur**	**38.36**	**347**	LR	LR	00 25 48.1	
	comp=Z,33nm,18.5s,baz=322,slow=34						
PSAD2	**Pilbara Seismi**	**41.03**	**215**	P	**P**	**00 11 37.9**	**-1.6**
PSAB2	**Pilbara Seismi**	**41.04**	**215**	P	**P**	**00 11 39.4**	**-0.2**
PSAB2				IAmb	IAmb	00 11 47.0	
	comp=Z,7.6nm,1.1s						
CMAR	**Chiang Mai Arr**	**43.86**	**284**	P	**P**	**00 12 03.7**	**+1.1**
	comp=Z,1.0nm,0.3s,baz=94,slow=5.7,SNR=4.9						
CMAR				LR	LR	00 28 13.4	
	comp=Z,19nm,19.7s,baz=206,slow=33						
BBOO	**Buckleboo**	**45.34**	**189**	P	**P**	**00 12 12.6**	**-1.5**
SONM	**Songino Array**	**47.46**	**326**	P	**P**	**00 12 31.6**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=150,slow=8.9,SNR=4.1						
MKAR	**Makanchi Array**	**61.97**	**317**	P	**P**	**00 14 16.7**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=89,slow=8.6,SNR=5.6						
KURBB	**Kurchatov Arra**	**65.21**	**320**	P	**P**	**00 14 37.6**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=104,slow=6.2,SNR=6.2						
ILAR	**Eielson Array**	**70.22**	**25**	P	**P**	**00 15 08.2**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=254,slow=5.7,SNR=6.8						
BVAR	**Borovoye Array**	**70.56**	**322**	P	**P**	**00 15 11.7**	**+0.8**
	comp=Z,1.4nm,0.5s,baz=100,slow=7.9,SNR=13						
INK	**Inuvik**	**76.01**	**22**	P	**P**	**00 15 43.2**	**+0.6**
	comp=Z,1.8nm,0.9s,baz=242,slow=6.7,SNR=6.6						
INK	**Inuvik**	**76.01**	**22**	P	**P**	**00 15 42.6**	**-0.1**
INK				IAmb	IAmb	00 15 46.1	
	comp=Z,1.9nm,0.9s						
BBB	**Bella Bella**	**79.21**	**39**	LR	LR	00 47 57.6	
	comp=Z,22nm,18.7s,baz=12,slow=33						
YBH	**Yreka Blue Hor**	**84.43**	**49**	LR	LR	00 46 31.9	
	comp=Z,16nm,21.5s,baz

AOS Alonnisos 0.93 202 PG Pg 00 08 17.0 -1.4
AOS SG Sg 00 08 30.4 +0.1
ALNA Alonissos 0.95 202 P Pg 00 08 17.9 -0.9
ALNA S Sg 00 08 30.7 -0.4
ALNA AML AML 00 08 35.8
comp=N,76245µm,1.0s
ALNA AML AML 00 08 40.2
comp=E,51583µm,1.2s
KAVA Kavala 0.98 8 P Pg 00 08 18.5 -0.8
KAVA S Sg 00 08 32.0 0.0
comp=E,25µm,0.4s
KAVA Kavala 0.98 8 P Pg 00 08 18.6 -0.7
KAVA S Sg 00 08 31.8 -0.2
KAVA AML AML 00 08 33.5
comp=E,54974µm,0.5s
KAVA AML AML 00 08 33.9
comp=N,46542µm,0.3s
SMTH Samothraki Isl 1.02 64 P Pg 00 08 18.6 -1.5
SMTH S Sg 00 08 33.2 -0.2
comp=N,13µm,0.6s
SMTH Samothraki Isl 1.02 64 P Pg 00 08 18.9 -1.2
SMTH S Sg 00 08 33.0 -0.4
SOH Sokhos 1.09 317 P Pg 00 08 20.7 -0.7
SKIA Skiathos 1.09 218 P Pg 00 08 19.7 -1.7
SKIA Skiathos 1.09 218 P Pg 00 08 20.0 -1.4
SKIA S Sg 00 08 34.5 -1.1
SKIA AML AML 00 08 46.0
comp=E,28148µm,1.4s
SKIA AML AML 00 08 47.2
comp=N,26678µm,0.7s
HORT Hortiatis 1.10 302 P Pg 00 08 20.4 -1.2
HORT S Sg 00 08 35.3 -0.6
comp=N,9µm,0.6s
HORT Hortiatis 1.10 302 P Pg 00 08 20.7 -0.9
HORT AML AML 00 08 42.9
comp=N,19088µm,0.7s
HORT AML AML 00 08 44.9
comp=E,17049µm,0.7s
HORT Hortiatis 1.10 302 PN Pg 00 08 20.4 -1.2
HORT SN Sg 00 08 35.8 -0.1
XOR Xorichti 1.10 233 P Pg 00 08 19.8 -1.8
XOR S Sg 00 08 34.5 -1.4
comp=E,18µm,0.6s
XOR Xorichti 1.10 233 P Pg 00 08 20.2 -1.4
XOR S Sg 00 08 35.2 -0.7
XOR AML AML 00 08 38.6
comp=N,41367µm,0.7s
XOR AML AML 00 08 40.1
comp=E,31972µm,0.4s
NEO Neokhori 1.12 230 P Pg 00 08 20.5 -1.5
NEO Neokhori 1.12 230 P Pg 00 08 20.5 -1.5
SKY Skiros Island 1.16 171 P Pg 00 08 21.2 -1.6
SKY S Sg 00 08 37.5 -0.4
comp=E,15µm,0.3s
SKY Skiros Island 1.16 171 P Pg 00 08 21.3 -1.5
SKY AML AML 00 08 41.2
comp=N,30770µm,0.3s
SKY AML AML 00 08 42.4
comp=E,28403µm,0.2s
THE Thessaloniki 1.20 300 P Pb 00 08 22.1 -1.5
THE Thessaloniki 1.20 300 P Pb 00 08 22.3 -1.3
GADA Gvkgeada 1.22 82 P Pb 00 08 21.3 -2.5
GADA Gvkgeada 1.22 82 PN Pb 00 08 21.5 -2.3
SRS Serrai 1.22 333 P Pb 00 08 22.3 -1.7
SRS Serrai 1.22 333 P Pb 00 08 22.5 -1.4
SRS AML AML 00 08 43.6
comp=E,18798µm,0.6s
SRS AML AML 00 08 44.0
comp=N,13753µm,0.3s
BOZC Bozcaada 1.34 97 PN Pn 00 08 23.6 -2.0
BOZC SN Sb 00 08 41.9 -1.3
BOZC Bozcaada 1.34 97 i P Pn 00 08 23.7 -1.8
BOZC i S Sb 00 08 42.0 -1.2
BOZC IAML 00 08 45.0
comp=E,5µm,0.8s
BOZC IAML 00 08 45.0
comp=N,13µm,1.1s
LIT Litokhoron 1.41 273 P Pn 00 08 24.8 -1.8
LIT Litokhoron 1.41 273 P Pn 00 08 25.0 -1.7
LIT AML AML 00 08 50.1
comp=E,6692µm,0.8s
LIT AML AML 00 08 50.5
comp=N,8249µm,0.7s
LIT Litokhoron 1.41 273 P Pn 00 08 24.9 -1.7
LIT Litokhoron 1.41 273 Pn 00 08 24.9 -1.8
SIGR SIGRI 1.44 124 P Pn 00 08 25.4 -1.5
SIGR SIGRI 1.44 124 P Pn 00 08 25.4 -1.5
SIGR AML AML 00 08 51.3
comp=N,13455µm,0.6s
SIGR AML AML 00 08 58.4
comp=E,8649µm,1.0s
SIGR SIGRI 1.44 124 PN Pn 00 08 25.2 -1.7
MRKA Markates 1.44 204 P Pn 00 08 24.9 -2.1
MRKA Markates 1.44 204 P Pn 00 08 25.1 -1.9
RDO Rodhopi 1.45 39 P Pn 00 08 25.1 -1.9
RDO Rodhopi 1.45 39 P Pn 00 08 25.2 -1.9
RDO Rodhopi 1.45 39 PN Pn 00 08 25.1 -1.9
LRSO Larissa Observ 1.53 257 P Pn 00 08 26.9 -1.3
LRSO Larissa Observ 1.53 257 P Pn 00 08 27.1 -1.1
EZN Ezine 1.55 97 P Pn 00 08 26.8 -1.7
EZN Ezine 1.55 97 PN Pn 00 08 26.5 -2.0
ENEZ Enez 1.56 63 P Pn 00 08 26.7 -1.9
ENEZ Enez 1.56 63 PN Pn 00 08 27.1 -1.6
KNT Kendrikon 1.57 317 P Pn 00 08 27.3 -1.5
KNT Kendrikon 1.57 317 P Pn 00 08 27.9 -0.9
KNT AML AML 00 08 54.0
comp=E,16252µm,0.7s
KNT AML AML 00 08 54.0
comp=N,14423µm,0.4s
KNT Kendrikon 1.57 317 PN Pn 00 08 27.7 -1.1
MMB Musomiste 1.62 344 P Pn 00 08 28.1 -1.5
RZN Rozhen 1.68 10 i P Pn 00 08 29.5 -1.0
GELI Tayfur-Gelibol 1.68 77 PN Pn 00 08 28.7 -1.6
PRK Paraskevi 1.69 117 P Pn 00 08 30.1 -0.3
LKR Lokris 1.72 217 P Pn 00 08 28.9 -1.9
LKR Lokris 1.72 217 P Pn 00 08 29.0 -1.8
BAYC CANAKKALE_Bayr 1.73 99 i P Pn 00 08 29.6 -1.4
BAYC i S Sn 00 08 51.0 -2.3
BAYC IAML 00 08 57.0
comp=N,2µm,1.4s
BAYC IAML 00 08 59.0
comp=E,2µm,0.7s
PSRA Psara 1.77 147 P Pn 00 08 31.1 -0.4
ERIK Erikli-Kesan 1.79 68 PN Pn 00 08 30.0 -1.8
AXAR Agios Charalam 1.81 226 P Pn 00 08 31.1 -1.0
KDZ Kurdzhali 1.82 27 P Pn 00 08 30.0 -2.1
KDZ Kurdzhali 1.82 27 PN Pn 00 08 30.1 -2.1
THL Klokotos Trika 1.84 256 P Pn 00 08 31.1 -1.4
AGG Agios Georgios 1.84 238 P Pn 00 08 31.1 -1.5
AGG Agios Georgios 1.84 238 P Pn 00 08 31.2 -1.4
AGG Agios Georgios 1.84 238 PN Pn 00 08 31.2 -1.4
AGG Agios Georgios 1.84 238 P Pn 00 08 31.2 -1.4
AGG Agios Georgios 1.84 238 Pn 00 08 31.2 -1.4
VAY Valandovo 1.86 315 ePn Pn 00 08 33.0 +0.3
VAY eSn Sg 00 09 00.1 -0.2
VAY Valandovo 1.86 315 ePn Pn 00 08 32.6 -0.1
VAY Valandovo 1.86 315 ePn Pn 00 08 32.6 -0.1
LPK Lapseki 1.89 79 PN Pn 00 08 31.2 -2.0
AYVA Ayvalik 1.96 111 i P Pn 00 08 32.3 -0.9
AYVA i S Sn 00 08 57.1 -1.8
AYVA IAML 00 09 06.0
comp=N,5µm,0.7s
AYVA IAML 00 09 09.0
comp=E,2µm,0.8s
KESN Edirne-Kesan 1.96 65 i P Pn 00 08 32.2 -2.3
KESN i S Sg 00 09 04.0 +0.3
KESN IAML 00 09 07.0
comp=E,5µm,0.5s
KESN IAML 00 09 07.0
comp=N,2µm,0.6s
DION Dionisos Attik 1.97 189 P Pn 00 08 32.5 -1.8
DION Dionisos Attik 1.97 189 P Pn 00 08 32.5 -1.8
KZN Kozani 1.98 279 P Pn 00 08 33.7 -0.8
MAKR Makrakomi, Fth 1.98 240 P Pn 00 08 33.3 -1.1
MAKR Makrakomi, Fth 1.98 240 P Pn 00 08 33.8 -0.6
VIL2 Platees 1.99 205 P Pn 00 08 33.1 -1.5
KARY Karystos 2.00 178 P Pn 00 08 33.0 -1.6
KARY Karystos 2.00 178 P Pn 00 08 33.2 -1.4
PTL Penteli 2.01 190 P Pn 00 08 33.1 -1.8
VILL Villia 2.02 203 P Pn 00 08 33.1 -2.0
KKB Krupnik 2.06 333 P Pn 00 08 35.0 -0.6
UKOP Uzunkopru-Edir 2.07 57 PN Pn 00 08 34.5 -1.1
PROD Prodromos 2.09 213 P Pn 00 08 33.9 -2.0
PLD Plovdiv 2.09 8 P Pn 00 08 35.8 -0.2
PLD Plovdiv 2.09 8 PN Pn 00 08 35.0 -1.0
ATHU Athens Univers 2.10 192 P Pn 00 08 34.1 -2.0
ATH Athens Observa 2.11 193 P Pn 00 08 34.4 -1.7
CHOS Chios island 2.12 140 P Pn 00 08 35.3 -1.1
CHOS Chios island 2.12 140 P Pn 00 08 35.3 -1.1
CHOS Chios island 2.12 140 PN Pn 00 08 35.0 -1.4
DKL Dikili 2.21 115 PN Pn 00 08 36.5 -1.0
VLY Voula,Athens 2.21 191 P Pn 00 08 35.9 -1.7
VLY Voula,Athens 2.21 191 P Pn 00 08 35.8 -1.8
DIM Dimitrovgrad 2.21 24 P Pn 00 08 36.7 -0.9
KRBN Karaburun 2.24 129 PN Pn 00 08 36.4 -1.6
EVR Evrytania 2.25 241 P Pn 00 08 37.2 -1.0
LTK Loutraki 2.27 208 P Pn 00 08 36.6 -1.8
RKY Sarkoy-Tekirda 2.27 72 PN Pn 00 08 36.2 -2.3
KPRO Kipourio 2.28 269 P Pn 00 08 38.1 -0.5
CESE eme 2.29 137 PN Pn 00 08 37.1 -1.5
LOUT Loutraki 2.29 208 P Pn 00 08 37.2 -1.5
KRBG Karabiga-Canak 2.30 80 PN Pn 00 08 37.4 -1.4
ANX Ano Chora 2.35 233 P Pn 00 08 38.6 -1.0
ANX Ano Chora 2.35 233 P Pn 00 08 38.7 -1.0
KALE Kalithea 2.36 227 P Pn 00 08 38.9 -0.8
FNA Florina 2.38 289 P Pn 00 08 39.4 -0.5
FNA Florina 2.38 289 PN Pn 00 08 39.1 -0.8
FNA Florina 2.38 289 P Pn 00 08 39.6 -0.3
FNA Florina 2.38 289 Pn 00 08 39.6 -0.3
ZEDA zmir-Bergama 2.38 116 i P Pn 00 08 39.1 -0.8
ZEDA i S Sg 00 09 18.0 +1.1
ZEDA IAML 00 09 20.0
comp=E,1µm,0.7s
ZEDA IAML 00 09 21.0
comp=N,1µm,0.6s
SERG Sergoula 2.39 228 P Pn 00 08 38.9 -1.2
TRIZ Trizonia 2.42 227 P Pn 00 08 39.7 -0.7
URLA Izmir 2.42 133 PN Pn 00 08 39.3 -1.3
URLA Izmir 2.42 133 i P Pn 00 08 39.6 -1.0
URLA IAML 00 09 37.0
comp=E,543nm,0.9s
URLA IAML 00 09 39.0
comp=N,436nm,1.4s
PGB Panagyurishte 2.52 357 P Pn 00 08 41.1 -0.8
NEST Nestorio 2.54 280 P Pn 00 08 42.1 -0.1
BALY Balya 2.55 95 i P Pn 00 08 41.5 -0.8
BALY i S Sg 00 09 21.1 -1.3
BALY IAML 00 09 23.0
comp=E,5µm,0.6s
BALY IAML 00 09 23.0
comp=N,4µm,0.6s
LAKA Lakka 2.56 226 P Pn 00 08 42.1 -0.3
MRMT Marmara Adasi 2.56 76 PN Pn 00 08 40.6 -1.9
TNSA Tinos 2.57 165 P Pn 00 08 40.7 -1.8
EDRB Edirne 2.58 44 P Pn 00 08 40.8 -1.8
EDRB Edirne 2.58 44 PN Pn 00 08 40.8 -1.8
GONE Gonen-Balikesi 2.58 89 PN Pn 00 08 41.4 -1.2
PVO Paravola 2.59 238 P Pn 00 08 42.2 -0.6
KLV Kalavryta, Ach 2.61 221 P Pn 00 08 41.6 -1.5
TKR Tekirdag 2.63 68 PN Pn 00 08 41.9 -1.4
DID Didima 2.66 199 P Pn 00 08 41.9 -1.9
BLCB Balcova 2.67 127 P Pn 00 08 42.4 -1.5
BLCB Balcova 2.67 127 PN Pn 00 08 42.7 -1.2
STEP BALIKESIR_Sava 2.69 103 i P Pn 00 08 43.7 -0.6
STEP i S Sg 00 09 28.5 +1.4
STEP IAML 00 09 29.0
comp=E,2µm,1.0s
STEP IAML 00 09 37.0
comp=N,3µm,0.8s
VTS Vitosha 2.71 343 ePn Pn 00 08 44.5 -0.2
VTS eSn Sn 00 09 19.0 +1.2
VTS Vitosha 2.71 343 ⇑P Pn 00 08 44.3 -0.3
VTS Vitosha 2.71 343 P Pn 00 08 44.0 -0.7
VTS Vitosha 2.71 343 P Pn 00 08 44.4 -0.2
VTS Vitosha 2.71 343 Pn 00 08 44.4 -0.3
EDC Edincik 2.73 82 PN Pn 00 08 43.5 -1.2
KIRK Kırklareli 2.73 49 i P Pn 00 08 42.8 -1.9
KIRK IAML 00 09 42.0
comp=N,477nm,0.9s
BALB Balikesir 2.76 97 PN Pn 00 08 43.7 -1.4
KRND KRANIDI 2.80 200 P Pn 00 08 43.8 -1.9
DGB zmir 2.80 134 i P Pn 00 08 42.6 -3.1
DGB IAML 00 09 37.0
comp=E,288nm,1.1s
DGB IAML 00 09 38.0
comp=N,194nm,0.8s
CRLT Corlu 2.82 66 PN Pn 00 08 44.4 -1.5
PDO Prodromos 2.83 241 P Pn 00 08 46.2 +0.2
BOSS Bosilegrad 2.83 331 ePn Pn 00 08 46.1 0.0
BOSS eSn Sb 00 09 24.4 -1.8
SERI Serifos 2.87 177 P Pn 00 08 44.9 -1.8
OHR Ohrid 2.90 293 i Pn Pn 00 08 47.3 +0.2
OHR Ohrid 2.90 293 i Pn Pn 00 08 47.3 +0.2
PHSR Pinarhisar 2.91 56 PN Pn 00 08 45.8 -1.3
DRO Drossia 2.91 225 P Pn 00 08 46.7 -0.5
SKO Skopje 2.92 313 ePn Pn 00 08 47.3 -0.1
SKO eSn Sb 00 09 27.0 -1.9
SKO Skopje 2.92 313 i Pn Pn 00 08 47.6 +0.2
SKO Skopje 2.92 313 i Pn Pn 00 08 47.6 +0.2
AKS Akhisar 2.93 112 PN Pn 00 08 46.4 -1.1
AKHS Akhisar 2.93 112 i P Pn 00 08 47.0 -0.6
AKHS IAML 00 09 38.0
comp=E,414nm,0.8s
BOTS Marmara Eregli 2.94 70 PN Pn 00 08 46.7 -1.0
JMB Yambol 2.97 34 P Pn 00 08 47.0 -1.0
JMB Yambol 2.97 34 PN Pn 00 08 47.6 -0.4
TRIP Tripoli 2.97 213 P Pn 00 08 46.9 -1.2
RLS Riolos of Patr 2.97 229 P Pn 00 08 48.5 +0.4
SMG Samos 3.03 139 P Pn 00 08 47.9 -1.0
SMG Samos 3.03 139 P Pn 00 08 47.7 -1.2
VLX Vlachokerasia 3.06 210 P Pn 00 08 48.2 -1.2
VLX Vlachokerasia 3.06 210 P Pn 00 08 48.2 -1.2
GOMA Golmarmara-Man 3.08 114 PN Pn 00 08 48.3 -1.2
KCTX Karacabey (Bur 3.10 84 PN Pn 00 08 48.3 -1.5
APE Apeiranthos 3.10 162 P Pn 00 08 48.0 -1.9
APE Apeiranthos 3.10 162 P Pn 00 08 48.1 -1.8
APE Apeiranthos 3.10 162 ⇓P Pn 00 08 48.0 -1.8
APE Apeiranthos 3.10 162 PN Pn 00 08 48.1 -1.8
APE Apeiranthos 3.10 162 d iP Pn 00 08 48.0 -1.8
IGT Igoumenitsa 3.12 262 P Pn 00 08 51.0 +0.9
ELND Elena 3.12 21 ⇓P Pn 00 08 49.5 -0.6
SLVT Silivri 3.19 67 PN Pn 00 08 49.5 -1.5
AMT Artemida-Makis 3.23 220 P Pn 00 08 51.5 0.0
GCAM G?zelcaml? 3.25 135 PN Pn 00 08 50.8 -1.0
MHLA Plaka, Milos I 3.28 179 P Pn 00 08 50.4 -1.9
ELBA Catalca 3.32 69 i P Pn 00 08 49.9 -3.0
ELBA IAML 00 09 51.0
comp=E,131nm,0.9s
ELBA IAML 00 10 02.0
comp=N,179nm,1.4s
DST Dursunbey 3.33 96 PN Pn 00 08 52.0 -1.0
CTYL Yalikoy Yolu 3.34 63 PN Pn 00 08 51.2 -1.8
MPEP Malo Peshtene 3.35 353 P Pn 00 08 53.1 -0.2
PLVB Pleven 3.36 4 ⇓P Pn 00 08 53.4 0.0
PLVB Pleven 3.36 4 Pn 00 08 53.4 0.0
BARS Barje 3.37 327 ePn Pn 00 08 53.4 -0.1
BARS Barje 3.37 327 ePn Pg 00 09 05.7 +0.7
BARS eSn Sn 00 09 36.4 +2.8
CTKS Kestanelik-??a 3.40 68 PN Pn 00 08 52.6 -1.3
ITM Ithomi 3.41 214 P Pn 00 08 54.1 0.0
ITM Ithomi 3.41 214 PN Pn 00 08 53.7 -0.4
ITM Ithomi 3.41 214 Pn 00 08 54.9 +0.8
AMGA Amorgos Island 3.42 158 P Pn 00 08 52.5 -1.7
SZH Strazhica 3.45 20 P Pn 00 08 54.0 -0.6
AYDB Zeytinkoy-Aydi 3.47 126 PN Pn 00 08 54.3 -0.7
ZAPS Zavoj 3.48 339 ePn Pn 00 08 55.6 +0.5
ZAPS eSn Sn 00 09 38.2 +1.7
AVCI Avcilar-stanb 3.49 73 PN Pn 00 08 54.2 -0.9
MDNY Mudanya-Bursa 3.50 83 PN Pn 00 08 54.3 -1.1
ORLT Orhaneli 3.51 88 PN Pn 00 08 54.7 -0.7
ARMT Armutlu 3.51 80 PN Pn 00 08 54.7 -0.7
DEMI Demirci 3.53 105 i P Pn 00 08 55.6 -0.3
DEMI IAML 00 09 56.0
comp=E,905nm,0.7s
DEMI IAML 00 09 58.0
comp=N,463nm,0.6s
HVHR Bakirkoy-Istan 3.57 73 PN Pn 00 08 55.7 -0.5
BGKT Bogazkoy 3.57 70 PN Pn 00 08 55.6 -0.7
MANT Manisa 3.62 114 Pn 00 08 57.5 +0.3
TIR Tirane 3.64 293 ePn Pn 00 08 57.9 +0.7
TIR Tirane 3.64 293 P Pn 00 08 58.2 +0.9
TIR Tirane 3.64 293 Pn 00 08 58.2 +0.9
CMBO Columbo, Santo 3.65 166 P Pn 00 08 56.0 -1.4
KULA Kula-Manisa 3.69 113 PN Pn 00 08 57.2 -0.8
THT2 Imerovigli 3.69 166 PN Pn 00 08 57.1 -0.8
ULDT Uludag 3.69 87 i P Pn 00 08 57.1 -1.0
ULDT IAML 00 10 00.0
comp=N,595nm,0.5s
ULDT IAML 00 10 12.0
comp=E,753nm,0.9s
ZIMR 3.71 12 ⇑P Pn 00 08 57.6 -0.5
ZIMR 3.71 12 P Pn 00 08 57.6 -0.5
ZIMR 3.71 12 Pn 00 08 57.6 -0.5
SMAA Simav-Kutahya 3.71 103 PN Pn 00 08 57.7 -0.6
SIMA Simav-Kutahya 3.72 103 PN Pn 00 08 57.9 -0.5
GEMT Gemlik 3.74 82 PN Pn 00 08 57.8 -0.8
ISK Istanbul-Kandi 3.75 72 PN Pn 00 08 57.9 -0.8
KAVV Kandilli-Istan 3.75 72 PN Pn 00 08 57.0 -1.7
SANT Santorini 3.76 166 ⇓P Pn 00 09 02.2 +3.3
SANT Santorini 3.76 166 Pn Pn 00 08 57.4 -1.5
SANT Pg 00 09 12.7 +0.1
BODT Bodrum 3.77 141 P Pn 00 08 58.4 -0.7
KLYT Kilyos 3.79 70 PN Pn 00 08 58.4 -0.8
BDRM Kayabasi 3.84 139 i P Pn 00 08 59.3 -0.6
BDRM IAML 00 10 33.0
comp=E,102nm,0.4s
BDRM IAML 00 10 33.0
comp=N,79nm,0.3s
ANAF Anafi Island 3.84 162 P Pn 00 08 58.4 -1.6
TUZL Tuzla-Istanbul 3.85 77 PN Pn 00 08 59.4 -0.7
RAZG Razgrad 3.89 24 ⇓P Pn 00 08 59.8 -0.9
RAZG Razgrad 3.89 24 Pn 00 08 59.8 -0.9
YLV Yalova 3.90 80 PN Pn 00 09 00.1 -0.7
YLVH Yalova 3.91 79 PN Pn 00 09 00.4 -0.5
PRD Provadia 3.92 35 P Pn 00 09 00.1 -0.9
VLAD Vladila 3.97 1 ⇑P Pn 00 09 01.3 -0.4
VLAD Vladila 3.97 1 Pn 00 09 01.3 -0.4
SELS Selova 3.99 324 ePn Pn 00 09 01.1 -1.0
SELS eSn Sn 00 09 51.2 +2.1
BAIL Bailesti 4.05 350 ⇓P Pn 00 09 02.2 -0.7
BAIL Bailesti 4.05 350 Pn 00 09 02.2 -0.7
ZAGS Zajecar 4.09 338 ePn Pn 00 09 02.2 -1.2
ZAGS eSn Sn 00 09 52.5 +1.0
GDZ Gediz 4.09 102 i P Pn 00 09 04.1 +0.5
GDZ IAML 00 10 19.0
comp=N,217nm,1.2s
GDZ IAML 00 10 21.0
comp=E,125nm,1.1s
BOVS Bovan 4.10 332 ePn Pn 00 09 03.0 -0.6
BOVS eSn Sn 00 09 54.8 +3.1
COPA Copaceanca 4.16 9 ⇓P Pn 00 09 03.1 -1.2
COPA Copaceanca 4.16 9 Pn 00 09 03.1 -1.2
DAT Datca 4.17 141 i P Pn 00 09 05.4 +0.8
PVY Plav 4.17 309 ⇑iPn Pn 00 09 04.5 -0.1
PVY i Sn Sn 00 09 52.9 -0.8
YER Yerkesik 4.24 132 P Pn 00 09 05.4 -0.1
ULC Ulcinj 4.30 298 ⇓iPn Pn 00 09 06.5 +0.1
ULC i Sn Sn 00 09 56.4 -0.4
KHAL Karahalli 4.34 111 i P Pn 00 09 07.2 +0.3
KHAL IAML 00 10 31.0
comp=E,148nm,1.0s
KHAL IAML 00 10 32.0
comp=N,115nm,1.2s
SGRR Singureni 4.37 16 ⇑P Pn 00 09 07.5 +0.3
SGRR Singureni 4.37 16 Pn 00 09 07.5 +0.3
PUNG Punghina 4.37 347 ⇑P Pn 00 09 05.9 -1.3
PUNG Punghina 4.37 347 Pn 00 09 05.9 -1.3
IVA Berane 4.38 312 ⇑iPn Pn 00 09 07.3 -0.2
IVA i Sn Sn 00 09 57.9 -0.8
TAVA DENIZLI_Tavas 4.40 124 i P Pn 00 09 08.0 +0.2
TAVA IAML 00 10 34.0
comp=N,104nm,1.5s
TAVA IAML 00 10 35.0
comp=E,87nm,1.0s
DRME Dracevica, Mon 4.44 301 ePn Pn 00 09 09.6 +1.3
DRME Dracevica, Mon 4.44 301 ⇓iPn Pn 00 09 08.4 +0.1
DRME i Sn Sn 00 09 59.4 -0.8
BUC1 Bucharest 4.50 16 ⇓P Pn 00 09 08.7 -0.3
BUC1 Bucharest 4.50 16 P Pn 00 09 08.7 -0.3
BUC1 Bucharest 4.50 16 Pn 00 09 08.7 -0.3
SCTE Santa Cesarea 4.50 272 Pn 00 09 09.1 +0.1
PDG Podgorica 4.51 304 ePn Pn 00 09 09.2 0.0
PDG Podgorica 4.51 304 ⇓P Pn 00 09 09.4 +0.2
PDG Podgorica 4.51 304 ePn Pn 00 09 10.2 +1.0
PDG Podgorica 4.51 304 Pn 00 09 09.4 +0.2
TTG Podgorica 4.51 304 ⇓iPn Pn 00 09 09.3 0.0
TTG i Sn Sn 00 10 01.5 -0.4
HUMR Humele 4.52 6 ⇓P Pn 00 09 09.0 -0.4
HUMR Humele 4.52 6 Pn 00 09 08.9 -0.4
KOME Kolasin 4.59 309 ⇓iPn Pn 00 09 10.1 -0.2
KOME i Sn Sn 00 10 03.1 -0.7
GEYV SAKARYA_Geyve 4.59 82 i P Pn 00 09 09.8 -0.5
GEYV IAML 00 10 38.0
comp=E,442nm,1.5s
GEYV IAML 00 10 47.0
comp=N,416nm,1.1s
SJES Sjenica 4.59 316 ePn Pn 00 09 10.6 +0.2
KAND Kocaeli-Kandir 4.59 75 i P Pn 00 09 08.2 -2.1
KAND IAML 00 10 40.0
comp=N,167nm,0.7s
KAND IAML 00 11 04.0
comp=E,181nm,1.1s
PSN Preselentsi 4.65 37 P Pn 00 09 09.4 -1.7
RASA Rasa 4.68 26 ⇑P Pn 00 09 10.8 -0.6
RASA Rasa 4.68 26 Pn 00 09 10.8 -0.6
BUM Brajici-Budva 4.69 301 ⇑iPn Pn 00 09 11.5 -0.2
BUM i Sn Sn 00 10 05.7 -0.6
GRUS Gruza 4.70 326 ePn Pn 00 09 11.0 -0.8
SRE Strehaia 4.70 350 ⇓P Pn 00 09 11.7 -0.1
SRE Strehaia 4.70 350 P Pn 00 09 11.8 -0.1
SRE Strehaia 4.70 350 Pn 00 09 11.8 -0.1
IDI Anoyia 4.75 174 Pn Pn 00 09 11.4 -1.2
comp=E,2.0nm,0.3s,baz=336,slow=12,SNR=36
IDI Sn Sn 00 10 04.0 -4.0
comp=E,3.5nm,0.3s,baz=344,slow=6.0,SNR=3.5
IDI Lg Lg 00 10 34.6
comp=E,1.1nm,0.3s,baz=94,slow=21,SNR=7.4
IDI Anoyia 4.75 174 ⇓P Pn 00 09 16.5 +3.9
IDI Anoyia 4.75 174 Pn 00 09 10.9 -1.7
CEME Cevo 4.79 303 ⇓iPn Pn 00 09 13.0 -0.1
CEME i Sn Sn 00 10 08.3 -0.5
KUBS Kucevo 4.80 337 ePn Pn 00 09 11.3 -1.9
LEHL Lehliu 4.81 22 ⇓P Pn 00 09 13.6 +0.4
LEHL Lehliu 4.81 22 Pn 00 09 13.6 +0.4
ICOR Ion Corvin 4.83 31 ⇓P Pn 00 09 13.2 -0.4
ICOR Ion Corvin 4.83 31 Pn 00 09 13.2 -0.4
SRCK Saricakaya, Es 4.83 88 i P Pn 00 09 13.6 -0.1
SRCK IAML 00 10 44.0
comp=N,395nm,0.9s
SRCK IAML 00 10 46.0
comp=E,300nm,0.8s
SULR 4.86 16 ⇓P Pn 00 09 14.1 +0.1
SULR 4.86 16 Pn 00 09 14.1 +0.1
NKME Niksic 4.88 306 ⇑iPn Pn 00 09 14.2 -0.1
NKME i Sn Sn 00 10 09.9 -1.2
NKY Niksic 4.88 306 ⇑iPn Pn 00 09 14.3 -0.1
NKY i Sn Sn 00 10 10.0 -1.1
MANR Mangalia 4.94 39 ⇑P Pn 00 09 14.3 -0.8
MANR Mangalia 4.94 39 Pn 00 09 14.3 -0.8
PLE Pljevlja 4.96 313 ⇓iPn Pn 00 09 15.3 -0.1
PLE i Sn Sn 00 10 12.2 -0.8
KARP Karpathos 5.00 152 Pn 00 09 15.0 -1.0
HCY Herceg Novi 5.02 301 ePn Pn 00 09 16.7 +0.5
HCY Herceg Novi 5.02 301 ⇑iPn Pn 00 09 16.1 -0.1
HCY i Sn Sn 00 10 13.8 -0.6
PLAR PLOIESTI 5.04 14 ⇓P Pn 00 09 15.8 -0.6
PLAR PLOIESTI 5.04 14 Pn 00 09 15.8 -0.6
HERR Herculane 5.05 344 ⇓P Pn 00 09 15.5 -1.1
HERR Herculane 5.05 344 Pn 00 09 15.4 -1.1
TRUS Trudelj 5.11 326 ePn Pn 00 09 16.5 -0.9
CVDA Cernavoda 5.11 31 ⇑P Pn 00 09 17.4 0.0
CVDA Cernavoda 5.11 31 Pn 00 09 17.4 0.0
MDVR Moldovita 5.13 339 ⇑P Pn 00 09 16.8 -0.9
MDVR Moldovita 5.13 339 Pn 00 09 16.8 -0.9
MFTR Murfatlar 5.14 35 ⇑P Pn 00 09 17.3 -0.6
MFTR Murfatlar 5.14 35 Pn 00 09 17.3 -0.6
RUDO Rudo 5.16 316 ePn Pn 00 09 16.1 -2.0
UPM Unac-Piva 5.16 310 ePn Pn 00 09 19.1 +0.9
UPM Unac-Piva 5.16 310 ⇑iPn Pn 00 09 18.4 +0.2
UPM i Sn Sn 00 10 16.5 -1.5
EFOR EFORIE 5.16 37 ⇑P Pn 00 09 17.4 -0.7
EFOR EFORIE 5.16 37 Pn 00 09 17.4 -0.7
SECR 5.17 14 ⇑P Pn 00 09 17.1 -1.1
SECR 5.17 14 Pn 00 09 17.1 -1.1
DIVS Divibare 5.19 323 ePn Pn 00 09 17.7 -0.9

DIVS eSn Sn 00 10 20.1 +1.4
DIVS Divibare 5.19 323 ePn Pn 00 09 16.2 -2.4
DIVS Divibare 5.19 323 Pn 00 09 17.9 -0.8
BRY Bratogost 5.21 305 ePn Pn 00 09 20.1 +1.2
BRY Bratogost 5.21 305⇑ iPn Pn 00 09 18.9 0.0
BRY i Sn Sn 00 10 17.8 -1.5
MTUR Matau 5.22 6 ⇑P Pn 00 09 19.3 +0.3
MTUR Matau 5.22 6 P Pn 00 09 19.3 +0.3
MTUR Matau 5.22 6 Pn 00 09 19.3 +0.3
TREB Trebinje 5.24 303 ePn Pn 00 09 20.1 +0.9
PGOR Pogoanele 5.26 21 ⇑P Pn 00 09 19.5 +0.1
PGOR Pogoanele 5.26 21 Pn 00 09 19.5 +0.1
MDUB Mudurnu 5.27 83 Pn 00 09 20.8 +1.0
TLBR Topalu 5.29 30 ⇓P Pn 00 09 19.2 -0.6
BBLS Lazići 5.31 318 ePn Pn 00 09 20.3 +0.1
BBLS Lazići 5.31 318 ePn Pn 00 09 20.4 +0.2
ISP Isparta 5.31 113 P Pn 00 09 20.3 0.0
ISP Isparta 5.31 113 Pn Pn 00 09 20.3 0.0
ARR Arges 5.34 2 ⇑P Pn 00 09 20.1 -0.6
ARR Arges 5.34 2 Pn 00 09 20.1 -0.6
ISR Istrita 5.34 17 ⇓P Pn 00 09 21.1 +0.4
ISR Istrita 5.34 17 P Pn 00 09 21.1 +0.4
ISR Istrita 5.34 17 Pn 00 09 21.1 +0.4
TIRR Tirgusor 5.36 33 ⇑P Pn 00 09 20.4 -0.4
TIRR Tirgusor 5.36 33 P Pn 00 09 19.6 -1.3
TIRR Tirgusor 5.36 33 Pn 00 09 19.6 -1.3
TIRR Tirgusor 5.36 33 Pn 00 09 20.4 -0.4
HARR Harsova 5.37 29 ⇓P Pn 00 09 20.5 -0.5
HARR Harsova 5.37 29 P Pn 00 09 20.5 -0.5
HARR Harsova 5.37 29 Pn 00 09 20.5 -0.5
LOT Lotru 5.43 356 ⇓P Pn 00 09 21.0 -0.9
LOT Lotru 5.43 356 Pn 00 09 21.0 -0.9
ELL Elmali 5.47 125 P Pn 00 09 22.8 +0.2
ELL Elmali 5.47 125 Pn 00 09 22.8 +0.2
GZR Gura Zlata 5.48 348 ⇓P Pn 00 09 21.5 -1.1
GZR Gura Zlata 5.48 348 P Pn 00 09 21.5 -1.1
GZR Gura Zlata 5.48 348 Pn 00 09 21.5 -1.1
MLR Muntele Rosu 5.59 12 Pn Pn 00 09 24.5 +0.4
comp=E,3.3nm,0.3s,baz=203,slow=6.3,SNR=128
MLR Sn Sn 00 10 26.5 -2.0
comp=E,5.5nm,0.3s,baz=182,slow=17,SNR=1.3
MLR Lg Lg 00 10 55.3
baz=205,slow=14,SNR=1.4
MLR LR LR 00 11 29.1
comp=E,325nm,20.9s,baz=142,slow=38
MLR Muntele Rosu 5.59 12 ⇑P Pn 00 09 23.9 -0.2
MLR Muntele Rosu 5.59 12 Pn 00 09 23.9 -0.2
KORT Korkueli 5.61 121 *i* P Pn 00 09 26.6 +2.2
KORT IAML 00 11 55.0
comp=N,47nm,2.9s
KORT IAML 00 11 59.0
comp=E,49nm,1.6s
GRER 5.69 19 ⇑P Pn 00 09 25.7 +0.3
GRER 5.69 19 Pn 00 09 25.7 +0.3
TOPG Topolog 5.69 30 ⇓P Pn 00 09 24.6 -0.9
HAPS Han Pijesak,BI 5.70 317 ePn Pn 00 09 24.7 -0.9
STON Ston 5.73 302 ePn Pn 00 09 25.9 0.0
TEKS Tekeris 5.75 323 ePn Pn 00 09 26.5 +0.3
TEKS Tekeris 5.75 323 ePn Pn 00 09 25.8 -0.4
BISRR Bisoca 5.79 17 ⇑P Pn 00 09 26.9 +0.1
BISRR Bisoca 5.79 17 Pn 00 09 26.9 +0.1
JURR Jurilovca 5.81 34 ⇓P Pn 00 09 26.2 -0.8
BANR Banloc 5.84 337 ⇑P Pn 00 09 26.2 -1.2
BANR Banloc 5.84 337 Pn 00 09 26.2 -1.2
MATE Matera 5.86 279 ⇑P Pn 00 09 28.8 +1.1
MATE Matera 5.86 279 Pn 00 09 28.8 +1.1
CFR Carcaliu 5.86 27 ⇑P Pn 00 09 26.7 -1.1
CFR Carcaliu 5.86 27 P Pn 00 09 26.7 -1.1
CFR Carcaliu 5.86 27 Pn 00 09 26.6 -1.1
TIP Timpagrande 5.91 264 ⇓P Pn 00 09 28.9 +0.4
TIP Timpagrande 5.91 264 Pn 00 09 28.9 +0.4
BZS Buzias 5.93 341 ⇓P Pn 00 09 27.3 -1.4
BZS Buzias 5.93 341 P Pn 00 09 27.3 -1.4
BZS Buzias 5.93 341 Pn 00 09 27.3 -1.4
DEV Deva 5.94 350 ⇑P Pn 00 09 29.0 +0.1
DEV Deva 5.94 350 P Pn 00 09 29.0 +0.1
DEV Deva 5.94 350 Pn 00 09 29.0 +0.1
DOPR Dopca 5.99 7 ⇑P Pn 00 09 29.1 -0.4
DOPR Dopca 5.99 7 Pn 00 09 29.1 -0.4
PLOR Plostina 6.06 16 ⇑P Pn 00 09 30.5 0.0
PLOR Plostina 6.06 16 P Pn 00 09 30.5 0.0
PLOR Plostina 6.06 16 Pn 00 09 30.5 0.0
ODBI Odobesti 6.07 18 ⇑P Pn 00 09 30.5 -0.1
ODBI Odobesti 6.07 18 Pn 00 09 30.5 -0.1
PETR Petresti 6.08 20 ⇓P Pn 00 09 30.2 -0.5
PETR Petresti 6.08 20 Pn 00 09 30.2 -0.5
TUDR 6.08 23 ⇑P Pn 00 09 30.4 -0.3
TUDR 6.08 23 Pn 00 09 30.4 -0.3
VRI Vrincioaia 6.09 16 ⇑P Pn 00 09 31.0 +0.1
VRI Vrincioaia 6.09 16 P Pn 00 09 31.0 +0.1
VRI Vrincioaia 6.09 16 Pn 00 09 31.0 +0.1
MDB Medias 6.11 0 ⇑P Pn 00 09 31.4 +0.3
MDB Medias 6.11 0 P Pn 00 09 31.5 +0.3
MDB Medias 6.11 0 Pn 00 09 31.4 +0.3
FRGS Fruska Gora 6.11 328 ePn Pn 00 09 29.7 -1.5
FRGS Fruska Gora 6.11 328 ePn Pn 00 09 30.3 -0.9
TLCR 6.12 31 ⇑P Pn 00 09 30.9 -0.4
TLCR 6.12 31 P Pn 00 09 30.9 -0.4
TLCR 6.12 31 Pn 00 09 30.9 -0.4
VARL Varlezi 6.41 23 ⇑P Pn 00 09 34.9 -0.3
BR231 Keskin MP Arra 6.50 89 Pn 00 09 37.4 +0.8
ANTO Ankara 6.51 89 ⇓P Pn 00 09 38.5 +1.8
ANTO Ankara 6.51 89 P Pn 00 09 38.7 +2.0
ANTO Ankara 6.51 89 Pn Pn 00 09 38.7 +2.0
ANTO Pg 00 10 06.0 +0.9
SIRR Siria 6.53 344 ⇓P Pn 00 09 43.5 +6.5
BIR Birlad 6.68 20 ⇑P Pn 00 09 39.1 +0.1
BIR Birlad 6.68 20 P Pn 00 09 39.1 +0.1
BIR Birlad 6.68 20 Pn 00 09 39.1 +0.1
TESR Tescani 6.70 14 ⇓P Pn 00 09 39.0 -0.2
TESR Tescani 6.70 14 Pn 00 09 39.0 -0.2
CJR Cluj-Napoca 6.70 356 ⇓P Pn 00 09 39.5 +0.2
CJR Cluj-Napoca 6.70 356 P Pn 00 09 39.5 +0.2
CJR Cluj-Napoca 6.70 356 Pn 00 09 39.5 +0.2
DRGR 6.86 351 ⇑P Pn 00 09 40.7 -0.8
DRGR 6.86 351 P Pn 00 09 40.7 -0.8
DRGR 6.86 351 Pn 00 09 40.7 -0.8
MGRS Mrkonjic Grad 6.94 312 ePn Pn 00 09 44.7 +2.2
BIZ Bicaz 7.03 10 ⇑P Pn 00 09 43.5 -0.3
BIZ Bicaz 7.03 10 Pn 00 09 43.5 -0.3
LEOM Leova 7.05 23 ⇑P Pn 00 09 44.2 +0.2
LEOM Leova 7.05 23 P Pn 00 09 44.2 +0.2
LEOM Leova 7.05 23 Pn 00 09 44.2 +0.2
ARCR ARCALIA 7.05 0 ⇓P Pn 00 09 43.7 -0.4
ARCR ARCALIA 7.05 0 Pn 00 09 43.7 -0.4
VASR Vaslui 7.07 20 ⇑P Pn 00 09 44.0 -0.4
BLV Banja Luka 7.08 314 ePn Pn 00 09 45.3 +0.8
BRTR Keskin Array B 7.17 89 Pn Pn 00 09 45.8 0.0
comp=E,1.9nm,0.3s,baz=267,slow=12,SNR=41
BRTR Sn Sn 00 11 03.3 -4.3
baz=270,slow=17,SNR=1.0
BRTR Lg Lg 00 11 45.4
baz=257,slow=26,SNR=2.3
BRTR Keskin Array B 7.17 89 *ce*P Pn 00 09 45.7 -0.1
BRTR pmax pmax
comp=E,6.0nm,0.4s
ILGA Ilgaz 7.22 79 Pn Pn 00 09 46.8 +0.1
MORH Mrgy, Hungar 7.45 328 ePn Pn 00 09 47.3 -2.2
PRAR RASCA 7.46 10 ⇓P Pn 00 09 50.0 +0.3
PRAR RASCA 7.46 10 Pn 00 09 50.0 +0.3
IAS Iasi 7.54 17 ⇓P Pn 00 09 49.8 -0.9
IAS Iasi 7.54 17 P Pn 00 09 49.8 -0.9
IAS Iasi 7.54 17 Pn 00 09 49.8 -0.9
BZK Bozkurt 7.57 72 ⇑P Pn 00 09 52.9 +1.7
BZK Bozkurt 7.57 72 Pn 00 09 52.9 +1.7
BURAR Bucovina Array 7.61 5 ⇑P Pn 00 09 52.5 +0.7
BURAR Bucovina Array 7.61 5 Pn 00 09 52.5 +0.7
MILM Milestii Mici 7.62 24 ⇑P Pn 00 09 51.6 -0.2
MILM Milestii Mici 7.62 24 Pn 00 09 51.6 -0.2
BUR08 Bucovina Ar. S 7.64 4 Pn Pn 00 09 52.3 0.0
BMR Baia Mare 7.67 356 ⇑P Pn 00 09 52.3 -0.2
BMR Baia Mare 7.67 356 P Pn 00 09 52.3 -0.2
BMR Baia Mare 7.67 356 Pn 00 09 52.3 -0.2
KIS Kishinev 7.69 24 *e*P Pn 00 09 52.5 -0.3
KIS eS Sn 00 11 22.0 +1.9
KIS Kishinev 7.69 24 ⇑P Pn 00 09 52.7 -0.1
KIS Kishinev 7.69 24 *i* P Pn 00 09 52.5 -0.3
KIS eS Sn 00 11 22.0 +1.9
KIS Kishinev 7.69 24 Pn 00 09 52.7 -0.1
VAE Valguarnera 8.16 255 Pn Pn 00 10 02.4 +3.0
comp=Z,0.9nm,0.3s,baz=350,slow=6.1,SNR=2.6
VAE Sn Sn 00 11 33.2 +1.5
comp=Z,0.6nm,0.3s,baz=119,slow=19,SNR=1.4
VAE LR LR 00 13 51.9
comp=Z,361nm,21.1s,baz=144,slow=42
TRPA Tarpa 8.20 352 ⇓P Pn 00 09 59.0 -0.8
TRPA Tarpa 8.20 352 Pn 00 09 59.0 -0.8
SEV Sevastopol' 8.26 54 *e*P Pn 00 09 58.1 -2.6
SEV eS Sn 00 11 27.4 -6.8
ZAG Zagreb 8.42 316 ePn Pn 00 10 06.7 +3.8
DIKM Dikmen 8.44 75 ⇓P Pn 00 10 04.0 +0.8
DIKM Dikmen 8.44 75 Pn 00 10 04.0 +0.8
BEHE Becsehely 8.47 322 ePn Pn 00 10 07.6 +4.0
PSZ Piszkesteto 8.51 339 ⇑P Pn 00 10 03.2 -0.9
PSZ Piszkesteto 8.51 339 P Pn 00 10 05.6 +1.5
PSZ Piszkesteto 8.51 339 Pn 00 10 03.2 -0.9
PSZ Piszkesteto 8.51 339 Pn 00 10 05.6 +1.5
AQU L'Aquila 8.56 289 ePn Pn 00 10 08.1 +3.3
AQU L'Aquila 8.56 289 P Pn 00 10 05.8 +0.9
AQU L'Aquila 8.56 289 Pn 00 10 05.8 +0.9
SORM Soroca 8.60 18 ⇑P Pn 00 10 03.5 -1.8
SORM Soroca 8.60 18 P Pn 00 10 03.6 -1.8
SORM Soroca 8.60 18 Pn 00 10 03.5 -1.8
BOJS Bojanci 8.63 312 ePn Pn 00 10 05.9 +0.2
BOJS eSn Sg 00 12 23.4 -14
CRES Cresnjev 8.71 315 ePn Pn 00 10 07.4 +0.6
UZH Uzhgorod 8.72 351 *e*P Pn 00 10 08.0 +1.0
UZH eS Sn 00 11 47.0 +1.5
UZH MLR MLR
comp=N,200nm,10.0s
UZH MLR MLR
comp=E,100nm,10.0s
UZH MLR MLR
comp=E,8.0nm,10.0s
SIM Simferopol' 8.74 53 *e*P Pn 00 10 06.3 -1.0
SIM eS Sn 00 11 46.0 0.0
SIM pmax pmax
comp=Z,20nm,0.4s
CSS Mathiatis 8.76 122 Pn Pn 00 10 08.8 +1.2
WDD Wied Dalam 8.80 245 Pn Pn 00 10 08.2 +0.1
CORL Corleone 8.85 260 Pn Pn 00 10 09.4 +0.6
NRCA Norcia 8.88 292 Pn 00 10 09.2 0.0
RIY Rijeka 8.97 309 ePn Pn 00 10 10.3 -0.1
CLTB Caltabellotta 9.01 258 Pn Pn 00 10 11.6 +0.5
CEY Cerknica 9.24 311 ePn Pn 00 10 13.8 -0.3
SUDU Sudak 9.26 55 *e*P Pn 00 10 13.1 -1.2
SUDU eS Sn 00 11 56.0 -2.7
VYHS Vyhne 9.33 337 *e*P Pn 00 10 17.1 +1.7
VYHS Vyhne 9.33 337 *e*PN Pn 00 10 17.0 +1.7
LJU Ljubljana 9.36 313 ePn Pn 00 10 16.1 +0.4
SOKA Soboth 9.48 318 *i* Pn Pn 00 10 18.2 +0.7
comp=Z,1.4nm,0.4s,SNR=8.2
SOKA *i* Sn Sn 00 11 56.4 -7.9
comp=Z,5.1nm,0.9s
TRI Trieste 9.61 310 P Pn 00 10 20.2 +1.1
TRI Trieste 9.61 310 Pn Pn 00 10 20.1 +1.1
OBKA Obir 9.63 315 *i* Pn Pn 00 10 20.6 +1.1
comp=Z,1.6nm,0.2s
ARSA Arzberg 9.63 321 *i* Pn Pn 00 10 20.2 +0.8
comp=Z,10nm,0.7s,SNR=11
ARSA *i* Sn Sn 00 12 00.5 -7.3
comp=Z,5.4nm,0.6s
LATE Laterza 9.77 289 Pn Pn 00 10 21.6 +0.2
LVV L'vov 9.79 359 *e*P Pn 00 10 24.1 +2.5
LVV eS Sn 00 12 19.8 +8.1
LVV MLR MLR
comp=N,600nm,10.0s
LVV MLR MLR
comp=E,800nm,10.0s
LVV MLR MLR
comp=Z,700nm,11.0s
CONA Conrad Observa 9.97 325 *e*Pn Pn 00 10 24.6 +0.4
comp=Z,0.7nm,0.4s
CONA *i* Sn Sn 00 12 10.7 -5.6
comp=Z,2.8nm,0.5s
MYKA Terra Mystica 10.20 314 *i* Pn Pn 00 10 29.4 +2.1
comp=Z,1.2nm,0.3s
OSSC Osservatorio P 10.38 294 Pn Pn 00 10 30.2 +0.5
STAL STALIGIAL 10.52 310 Pn 00 10 31.8 +0.1
KBA Koelnbreinsper 10.63 315 *e*Pn Pn 00 10 35.0 +1.7
comp=Z,0.1nm,0.2s
MOA Molln 10.66 320 *e*Pn Pn 00 10 35.2 +1.7
comp=Z,1.4nm,0.4s,SNR=4.5
MOA *i* Sn Sn 00 12 27.6 -5.4
comp=Z,2.8nm,0.4s
OJC Ojcow 10.68 344 P Pn 00 10 34.1 +0.3
OJC Ojcow 10.68 344 Pn Pn 00 10 34.1 +0.3
OKC Ostrava-Krasne 10.74 338 AMS AMS 00 14 50.0
comp=Z,400nm,15.9s
VRAC Vranov 10.78 332 Pn Pn 00 10 36.7 +1.5
comp=Z,0.5nm,0.3s,baz=144,slow=14,SNR=1.9
VRAC LR LR 00 14 41.3
comp=Z,121nm,21.6s,baz=144,slow=37
ZCCA Zocca 10.80 298 Pn 00 10 37.0 +1.4
MORC Moravsky Berou 10.86 336 P Pn 00 10 37.2 +0.9
MORC Moravsky Berou 10.86 336 Pn Pn 00 10 37.2 +0.9
ABTA Abfaltersbach 10.90 312 *i* Pn Pn 00 10 37.2 +0.2
comp=Z,1.6nm,0.5s
VLC Villacollemand 11.15 296 Pn Pn 00 10 40.3 0.0
TREC Trest 11.19 329 AMS AMS 00 15 30.0
comp=Z,500nm,8.8s
AKASG Malin Array Be 11.21 16 Pn Pn 00 10 39.5 -1.5
comp=Z,4.5nm,0.3s,baz=208,slow=12,SNR=11
AKASG Sn Sn 00 12 38.4 -8.1
comp=Z,1.1nm,0.3s,baz=206,slow=23,SNR=2.0
AKASG Lg Lg 00 13 58.2
baz=203,slow=26,SNR=1.4
AKASG LR LR 00 14 52.1
comp=Z,198nm,19.4s,baz=200,slow=37
AKASG Malin Array Be 11.21 16 *ce*P Pn 00 10 39.7 -1.3
AKASG pmax pmax
comp=Z,3.0nm,0.3s
AKBB Malin Array Si 11.21 16 *ce*P Pn 00 10 40.6 -0.4
AKBB Malin Array Si 11.21 16 Pn Pn 00 10 40.0 -1.0
MMAI Mount Meron Ar 11.32 125 Pn Pn 00 10 42.4 -0.4
comp=Z,1.2nm,0.3s,baz=319,slow=12,SNR=6.1
MMAI LR LR 00 15 59.3
comp=Z,212nm,19.0s,baz=275,slow=42
KRLC Kraliky 11.37 335 *e*P Pn 00 10 46.9 +3.7
KRLC MLR MLR
comp=Z,500nm,9.3s
KRLC Kraliky 11.37 335 *e*PN Pn 00 10 46.9 +3.7
KRLC AMS AMS 00 16 00.0
comp=Z,500nm,9.3s
VSL Villasalto 11.52 272 Pn Pn 00 10 45.4 0.0
SALO Salr 11.57 303 Pn Pn 00 10 46.3 +0.3
GEC2 GERESS Array S 11.62 323 Pn 00 10 47.6 +0.8
GERES GERESS Array B 11.62 323 Pn Pn 00 10 48.9 +2.1
comp=Z,0.2nm,0.3s,baz=150,slow=13,SNR=11
GERES Sn Sn 00 12 56.4 -0.4
comp=Z,0.2nm,0.3s,baz=141,slow=25,SNR=1.9
GERES LR LR 00 15 30.5
comp=Z,360nm,18.1s,baz=144,slow=39
WTTA Wattenberg 11.69 312 *i* Pn Pn 00 10 50.8 +3.1
comp=Z,2.5nm,0.3s
WTTA *i* Sn Sn 00 13 00.7 +2.2
comp=Z,5.1nm,0.7s
DPC Dobruska-Polom 11.76 334 AMS AMS 00 16 30.0
comp=Z,500nm,9.3s
WATA Walderalm 11.76 313 *i* Pn Pn 00 10 51.4 +2.6
comp=Z,8.8nm,0.6s,SNR=11
KHC Kasperske Hory 11.89 323 *e*P Pn 00 10 51.5 +1.2
KHC Kasperske Hory 11.89 323 *e*PN Pn 00 10 51.5 +1.2
SQTA Sankt Quirin 11.91 311 *i* Pn Pn 00 10 52.4 +1.7
comp=Z,3.8nm,0.5s
OSTC Ostas 11.97 334 *e*PN Pn 00 10 56.5 +5.1
OSTC AMS AMS 00 15 30.0
comp=Z,500nm,11.5s
UPC Upice 11.99 334 AMS AMS 00 15 30.0
comp=Z,500nm,12.3s
MOTA Moosalm 12.04 312 *i* Pn Pn 00 10 54.4 +1.9
comp=Z,2.4nm,0.4s,SNR=6.7
CHVC Chvalec 12.05 334 *e*PN Pn 00 10 57.5 +5.0
CHVC AMS AMS 00 15 30.0
comp=Z,400nm,11.2s
FETA Feichten 12.08 310 Pn Pn 00 10 54.0 +0.8
comp=Z,2.5nm,0.7s,SNR=4.5
PRU Pruhonice 12.12 328 AMS AMS 00 16 10.0
comp=Z,400nm,11.6s
PRA Prague 12.22 328 AMS AMS 00 16 10.0
comp=Z,200nm,11.2s
DAVOX Davos/Dischmat 12.48 307 Pn Pn 00 10 59.3 +0.7
comp=Z,0.6nm,0.3s,baz=124,slow=14,SNR=11
DAVOX LR LR 00 16 39.0
comp=Z,630nm,18.8s,baz=106,slow=41
PVCC Panska Ves 12.54 330 AMS AMS 00 17 00.0
comp=Z,400nm,9.7s
KEST Kesra 12.59 255 Pn Pn 00 11 02.0 +2.0
comp=Z,0.4nm,0.3s,baz=225,slow=9.1,SNR=12
KEST LR LR 00 16 25.0
comp=Z,196nm,21.8s,baz=5.0,slow=40
KEST Kesra 12.59 255 Pn 00 11 00.7 +0.6
DAVA Damuels 12.72 310 *i* Pn Pn 00 11 03.9 +2.1
comp=Z,2.2nm,0.5s
ASF Jabal al Asfar 12.83 124 Pn Pn 00 11 04.0 +0.7
comp=Z,0.1nm,0.3s,baz=91,slow=9.0,SNR=1.8
BRG Berggiesshubel 13.05 330 *e*P P 00 11 14.4 -2.3
comp=Z,1.7nm,0.9s
BRG Berggiesshubel 13.05 330 *e*P P 00 11 14.4 -2.3
BRG pmax pmax
comp=Z,2.0nm,0.9s
NKC Novy Kostel 13.19 325 AMS AMS 00 16 30.0
comp=Z,700nm,11.5s
WERN Wernitzgruen 13.26 325 ePn P 00 11 23.5 +4.5
FBE Freiberg 13.32 328 ePn P 00 11 23.2 +3.5
GRA1 Grafenberg Arr 13.39 321 Pn Pn 00 11 10.8 0.0
GRF Grafenberg Arr 13.39 321 *e*Pn P 00 11 23.4 +2.9
GRF *e*L L 00 16 06.1
comp=Z,213nm,21.3s
GRF Grafenberg Arr 13.39 321 P Pn 00 11 10.8 0.0
PLN Plauen 13.50 325 *e*Pn P 00 11 25.4 +3.7
CLL Collm 13.76 329 *e*PP P 00 11 26.0 +1.5
CLL *e* 00 11 32.0
CLL *e* 00 13 06.0
CLL LmH 00 15 00.0
comp=N,400nm,21.9s
CLL LmH 00 15 00.0
comp=E,500nm,20.3s
CLL LmV 00 16 00.0
comp=Z,200nm,19.8s
CLL Lmax 00 18 00.0
CLL Collm 13.76 329 P Pn 00 11 15.9 0.0
CLL Collm 13.76 329 Pn Pn 00 11 15.9 0.0
MOX Moxa 13.86 324 *e*Pn P 00 11 29.1 +3.5
MOX *e*L L 00 18 34.8
comp=Z,337nm,18.3s
SENIN Lac Senin/Sane 13.93 303 Pn Pn 00 11 19.8 +1.4
BNI Bardonecchia 13.94 297 P Pn 00 11 19.3 +0.8
BNI Bardonecchia 13.94 297 Pn Pn 00 11 19.3 +0.8
BFO Black Forest 14.14 311 P Pn 00 11 23.6 +2.4
BFO Black Forest 14.14 311 Pn 00 11 23.6 +2.4
NEUB Neuenburg 14.19 326 *e*Pn P 00 11 34.0 +4.7
KIV Kislovodsk 14.20 68 *e*P Pn 00 11 23.7 +1.6
KIV pmax pmax
comp=Z,7.0nm,1.5s
KIV MLR MLR
comp=Z,63nm,20.0s
KIV Kislovodsk 14.20 68 Pn Pn 00 11 22.6 +0.6
KBZ Khabaz 14.32 69 Pn Pn 00 11 24.3 +0.8
comp=Z,0.1nm,0.3s,baz=270,slow=16,SNR=1.4
KBZ LR LR 00 19 01.2
comp=Z,166nm,20.0s,baz=252,slow=47
AKH Akhalkalaki 14.60 78 P Pn 00 11 26.8 -0.8
AKH Akhalkalaki 14.60 78 Pn Pn 00 11 26.8 -0.8
ECH Echery 14.78 309 P Pn 00 11 31.4 +1.6
ECH Echery 14.78 309 Pn Pn 00 11 31.4 +1.6
ZEI Tsey 14.94 73 *e*P P 00 11 43.6 +5.6
ZEI pmax pmax
comp=Z,6.0nm,1.0s
TNS Taunus Mts 15.12 318 *e*Pn P 00 11 40.5 +0.8
VORD Divnogorie 15.12 39 *e*P Pn 00 11 31.7 -2.7
VORD pmax pmax
comp=Z,10.0nm,1.1s
VSR Storozhevoye 15.23 38 *e*P Pn 00 11 32.6 -3.2
VSR pmax pmax
comp=Z,10.0nm,0.7s
GTTG Gottingen 15.23 324 *e*Pn P 00 11 44.8 +3.9
CLZ Clausthal 15.26 325 *e*Pn P 00 11 44.6 +3.4
IIGN Ignalina 15.38 4 *e*P Pn 00 11 35.2 -2.6
IIGN IAmb IAmb 00 11 42.4
comp=Z,8.2nm,1.1s
PABE Paberze 15.49 359 *e*P P 00 11 42.2 -1.4
PABE IAmb IAmb 00 11 43.7
comp=Z,34nm,1.2s
TBLG Delisi 15.53 77 P Pn 00 11 39.5 -0.4
TBLG pmax pmax
comp=Z,3.0nm,1.1s
TBLG Delisi 15.53 77 Pn Pn 00 11 39.5 -0.4
ISAL Salakas 15.60 4 *e*P P 00 11 42.5 -2.4
ISAL IAmb IAmb 00 11 46.0
comp=Z,6.4nm,0.8s
LPSR Galich'ya Gora 16.08 34 *e*P Pn 00 11 43.2 -3.6
LPSR pmax pmax
comp=Z,20nm,1.1s
VRH Novokhopyorsk 16.47 42 *e*P Pn 00 11 48.9 -3.0
VRH pmax pmax
comp=Z,30nm,1.2s
MEM Membach 16.62 316 PnPn P 00 12 00.5 +4.1
OBN Obninsk 17.16 24 P Pn 00 12 00.2 -0.3
comp=Z,0.3nm,0.3s,baz=208,slow=15,SNR=3.6
OBN LR LR 00 18 53.2
comp=Z,100nm,19.7s,baz=182,slow=38
OBN Obninsk 17.16 24 *e*P Pn 00 11 57.3 -3.2
OBN pmax pmax
comp=Z,23nm,1.3s
OBN MLR MLR
comp=Z,372nm,17.0s
OBN Obninsk 17.16 24 P Pn 00 11 56.7 -3.8
MOS Moscow 18.02 25 *e*P Pn 00 12 07.1 -4.1
MOS pmax pmax
comp=Z,44nm,1.0s
MOS MLR MLR
comp=Z,300nm,17.0s
VSU Vasula 18.52 4 *e*P P 00 12 14.2 -2.9
VSU IAmb IAmb 00 12 20.4
comp=Z,77nm,1.1s
VSU Vasula 18.52 4⇑ *e*P P 00 12 14.4 -2.7
VSU pmax pmax
comp=Z,47nm,1.1s
FINES FINESS Array B 21.47 2 P P 00 12 49.8 +0.6
comp=Z,3.6nm,0.9s,baz=172,slow=11,SNR=3.3
FINES LR LR 00 21 53.5
comp=Z,431nm,18.5s,baz=183,slow=39
FINES FINESS Array B 21.47 2 *i* P P 00 12 47.2 -2.0
FINES pmax pmax
comp=Z,2.0nm,0.9s
FIA1 FINESS Array S 21.47 2 P P 00 12 50.4 +1.2
ESDC Sonseca Array 21.69 278 P P 00 12 54.3 +2.4
comp=Z,1.8nm,0.9s,baz=73,slow=10,SNR=12
KONO Kongsberg 21.72 340 P P 00 12 52.2 +0.2
KONO pmax pmax
comp=Z,18nm,1.0s
KONO Kongsberg 21.72 340 P P 00 12 52.2 +0.2
KONO IAmb IAmb 00 12 57.3
comp=Z,18nm,1.0s
PAB San Pablo 22.01 278 P P 00 12 55.0 -0.3
PAB pmax pmax
comp=Z,5.0nm,0.9s
PAB San Pablo 22.01 278 P P 00 12 55.0 -0.3
NC602 NORSAR Array S 22.20 343 P P 00 12 55.9 -1.2
NAO01 NORSAR Array S 22.44 343 P P 00 13 00.0 +0.3
NC405 NORSAR Array S 22.50 344 P P 00 13 00.0 -0.3
NC405 IAmb IAmb 00 13 18.9
comp=Z,17nm,1.1s
NB201 NORSAR Array S 22.53 343 P P 00 13 00.4 -0.3
NB2 NORSAR Subarra 22.54 343 P P 00 12 59.8 -1.0
comp=Z,14nm,0.9s,baz=150,slow=11
NOA NORSAR Array B 22.54 343 P P 00 13 01.6 +0.8
comp=Z,4.2nm,0.7s,baz=147,slow=8.8,SNR=9.3
NOA LR LR 00 21 48.5
comp=Z,122nm,18.1s,baz=160,slow=37
NBO00 NORSAR Array S 22.63 343 P P 00 13 00.8 -1.0
NC303 NORSAR Array S 22.67 344 P P 00 13 02.8 +0.6
NC303 IAmb IAmb 00 13 12.0
comp=Z,13nm,0.8s
NC204 NORSAR Array S 22.85 343 P P 00 13 03.9 -0.2
KLMR Klimovskoe 22.87 19 *e*P P 00 13 01.4 -2.8
KLMR *e*S S 00 17 09.6 -4.3
KLMR pmax pmax
comp=Z,34nm,1.2s
KLMR Klimovskoe 22.87 19 *e*P P 00 13 01.5 -2.8
KLMR AMP 00 13 20.4
comp=Z,34nm,1.2s
KLMR *e*S S 00 17 09.7 -4.2
KLMR *e*S S 00 17 09.7 -4.2
KLMR LQ LQ 00 20 00.0
KLMR LQ LQ 00 20 00.0
KLMR LR LR 00 20 57.7
TAM Tamanrasset 23.43 228 P P 00 13 09.5 -1.0

TAM	Tamanrasset	23.43	228	P		P		00 13 09.5	-1.0
EKA	Eskdalemuir Ar	23.80	319	P		P		00 13 14.0	+0.4
	comp=Z,3.5nm,0.6s,baz=114,slow=9.5,SNR=11								
ESK	Eskdalemuir	23.81	319	P		P		00 13 13.9	+0.1
ESK				pmax		pmax			
	comp=Z,13nm,1.0s								
ESK	Eskdalemuir	23.81	319	P		P		00 13 13.9	+0.1
ESK				IAmb		IAmb		00 13 21.7	
	comp=Z,13nm,1.0s								
MTE	Manteigas	24.28	281	P		P		00 13 17.8	-0.5
MTE				IAmb		IAmb		00 13 30.0	
	comp=Z,7.2nm,0.9s								
RAYN	Ar Rayn	24.29	126	P		P		00 13 18.4	-0.2
RAYN				pmax		pmax			
	comp=Z,7.0nm,1.1s								
RAYN	Ar Rayn	24.29	126	P		P		00 13 18.4	-0.2
RAYN				IAmb		IAmb		00 13 29.6	
	comp=Z,7.4nm,1.1s								
MDT	Midelt	24.30	262	P		P		00 13 21.2	+2.6
	comp=Z,1.8nm,0.7s,baz=98,slow=11,SNR=5.2								
MDT				LR		LR		00 24 43.3	
	comp=Z,56nm,18.9s,baz=87,slow=41								
KIRV	Kirov	24.50	32	P		P		00 13 21.3	+1.3
	comp=Z,7.7nm,0.7s,baz=227,slow=14,SNR=2.4								
KIRV				LR		LR		00 23 00.4	
	comp=Z,148nm,20.9s,baz=222,slow=37								
PVAQ	Vaqueiros	25.07	274	P		P		00 13 25.2	-0.2
PVAQ				IAmb		IAmb		00 13 35.0	
	comp=Z,11nm,1.0s								
AKTO	Aktyubinsk	25.70	55	P		P		00 13 32.2	+1.1
	comp=Z,0.8nm,0.7s,baz=252,slow=13,SNR=5.3								
AKTO				LR		LR		00 25 36.5	
	comp=Z,127nm,21.1s,baz=252,slow=41								
PFVI	Vila Bisbo	26.00	274	P		P		00 13 33.7	-0.2
GEYT	Alibeck	26.26	84	P		P		00 13 37.2	+0.9
	comp=Z,0.9nm,0.5s,baz=260,slow=8.6,SNR=1.7								
GEYT				LR		LR		00 24 49.4	
	comp=Z,88nm,18.4s,baz=325,slow=39								
GYA0B	ALIBECK ARRAY	26.26	84	P		P		00 13 37.1	+0.7
ARU	Arti	27.70	42	P		P		00 13 51.1	+2.0
	comp=Z,0.4nm,0.4s,baz=244,slow=11,SNR=3.2								
ARU				LR		LR		00 24 59.1	
	comp=Z,126nm,21.6s,baz=244,slow=37								
ARU	Arti	27.70	42	*c iP*		P		00 13 52.1	+3.0
ARU								00 14 37.7	
ARU				SS		SS		00 19 47.7	-40
ARU				pmax		pmax			
	comp=Z,5.0nm,1.4s								
ARU				MLR		MLR			
	comp=Z,92nm,11.0s								
ARU	Arti	27.70	42	P		P		00 13 48.8	-0.3
LVZ	Lovozero	28.49	8	P		P		00 13 54.6	-1.4
LVZ	Lovozero	28.49	8	P		P		00 13 54.6	-1.4
ARCES	ARCESS Array B	29.57	1	LR		LR		00 27 12.9	
	comp=Z,227nm,18.6s,baz=171,slow=39								
ATD	Arta Tunnel	32.77	145	LR		LR		00 28 40.7	
	comp=Z,28nm,18.6s,baz=19,slow=38								
TOA0	Torodi Ar. Sit	33.37	223	P		P		00 14 40.0	+0.5
TOA0				IAmb		IAmb		00 14 45.5	
	comp=Z,7.2nm,1.1s								
TORD	Torodi Ar. Bea	33.37	223	P		P		00 14 39.1	-0.3
	comp=Z,2.1nm,0.7s,baz=35,slow=9.3,SNR=13								
TORD				PcP		PcP		00 17 25.0	+3.8
	comp=Z,0.6nm,0.8s,baz=348,slow=1.7,SNR=4.0								
TORD				LR		LR		00 29 53.1	
	comp=Z,71nm,19.4s,baz=25,slow=39								
BRVK	Borovoye	33.59	52⇑	*eP*		P		00 14 41.4	+0.3
BRVK				pmax		pmax			
	comp=Z,3.0nm,1.2s								
BRVK	Borovoye	33.59	52	P		P		00 14 41.8	+0.8
BRVK				IAmb		IAmb		00 14 54.5	
	comp=Z,4.0nm,1.1s								
BVAR	Borovoye Array	33.65	52	P		P		00 14 42.2	+0.6
	comp=Z,1.0nm,0.9s,baz=243,slow=6.3,SNR=4.8								
KURBB	Kurchatov Arra	38.74	56	P		P		00 15 25.1	0.0
	comp=Z,0.4nm,0.2s,baz=281,slow=9.2,SNR=5.4								
KURK	Kurchatov	38.79	55	P		P		00 15 25.2	-0.4
KURK				pmax		pmax			
	comp=Z,2.0nm,0.8s								
KURK	Kurchatov	38.79	55	P		P		00 15 25.1	-0.4
KSH	Kashi	39.23	74	P		P		00 15 24.4	-5.2
KSH				pP		sP		00 15 32.1	-0.3
KSH				sP		pP		00 15 35.9	+4.3
KSH				pmax		pmax			
	comp=Z,60nm,0.9s								
KSH				pmax		pmax			
	comp=Z,73nm,3.7s								
JMU	Jammu	40.91	84	*ex*		P		00 15 32.5	-11
MK31	Makanchi Array	41.81	61	P		P		00 15 50.2	-0.5
MK31				pmax		pmax			
	comp=Z,1.0nm,0.8s								
MK31	Makanchi Array	41.81	61	P		P		00 15 50.2	-0.5
MKAR	Makanchi Array	41.81	61	P		P		00 15 51.1	+0.5
	comp=Z,1.8nm,0.7s,baz=281,slow=6.3,SNR=16								
MKAR				LR		LR		00 36 03.7	
	comp=Z,53nm,19.6s,baz=262,slow=40								
MKAR	Makanchi Array	41.81	61	*i* P		P		00 15 51.0	+0.3
MKAR				pmax		pmax			
	comp=Z,2.0nm,0.7s								
ZAA0	Zalesovo Array	42.24	50	P		P		00 15 53.6	-0.5
ZALV	Zalesovo Beam	42.24	50	P		P		00 15 54.2	+0.2
	comp=Z,2.6nm,0.5s,baz=275,slow=8.6,SNR=14								
ZALV				LR		LR		00 35 42.9	
	comp=Z,56nm,21.2s,baz=256,slow=40								
DBIC	Dimbokro	42.28	226	P		P		00 15 58.5	+3.8
	comp=Z,5.1nm,0.9s,baz=7.6,slow=10,SNR=4.4								
DBIC				LR		LR		00 33 41.9	
	comp=Z,60nm,21.9s,baz=40,slow=36								
TIC	Toumodi	42.40	226	*eP*		P		00 16 01.1	+5.4
KIC	Kosan Boka	42.48	226	*eP*		P		00 16 00.4	+4.1
	comp=Z,16nm,1.1s								
LIC	Lamto	42.75	226	*eP*		P		00 16 04.1	+5.6
	comp=Z,25nm,0.8s								
WMQ	Urumqi	46.28	64	*eP*		P		00 16 29.8	+3.2
WMQ				pmax		pmax			
	comp=Z,14nm,0.7s								
WMQ				pmax		pmax			
	comp=Z,8.0nm,4.9s								
WMQ				LR		LR			
	comp=N,57nm,25.1s								
WMQ				LR		LR			
	comp=E,40nm,28.9s								
WMQ				LR		LR			
	comp=Z,16nm,28.9s								
TLY	Talaya	53.85	49⇑	*eP*		P		00 17 24.1	+0.2
TLY				pmax		pmax			
	comp=Z,7.0nm,0.9s								
TIXI	Tiksi	56.87	21⇑	*eP*		P		00 17 44.6	-0.6
TIXI				pmax		pmax			
	comp=Z,2.0nm,1.1s								
SONM	Songino Array	56.99	53	P		P		00 17 46.5	-0.2
	comp=Z,0.6nm,0.8s,baz=287,slow=7.7,SNR=4.5								
SONM				LR		LR		00 44 55.5	
	comp=Z,56nm,18.6s,baz=276,slow=39								
ULN	Ulaanbaatar	57.38	52⇓	*eP*		P		00 17 51.5	+2.0
ULN				pmax		pmax			
	comp=Z,6.0nm,2.1s								
RES	Resolute Bay	58.80	344	LR		LR		00 43 34.8	
	comp=Z,52nm,18.9s,baz=247,slow=36								
SCHQ	Schefferville	59.10	318	LR		LR		00 41 55.1	
	comp=Z,34nm,20.1s,baz=2.5,slow=34								
LZH	Lanzhou	60.73	66	*eP*		P		00 18 12.6	-0.3
LZH				pP		sP		00 18 15.8	-0.1
LZH				sP		pP		00 18 17.4	+2.3
LZH				*eP*		PP		00 20 28.8	+2.3
LZH				pmax		pmax			
	comp=Z,20nm,1.3s								
LZH				pmax		pmax			
	comp=Z,68nm,7.6s								
LZH				LR		LR			
	comp=N,150nm,15.0s								
LZH				LR		LR			
	comp=E,160nm,14.9s								
LZH				LR		LR			
	comp=Z,210nm,17.4s								
HHC	Hu-ho-hao-te	63.54	58	*eP*		P		00 18 33.8	+2.1
HHC				pmax		pmax			
	comp=Z,16nm,0.9s								
HHC				pmax		pmax			
	comp=Z,88nm,4.9s								
CHTO	Chiang Mai	66.53	85	P		P		00 18 51.5	+0.3
CHTO				pmax		pmax			
	comp=Z,3.0nm,1.0s								
CHTO	Chiang Mai	66.53	85	P		P		00 18 51.5	+0.3
CHTO				IAmb		IAmb		00 19 02.2	
	comp=Z,3.5nm,1.0s								
CMAR	Chiang Mai Arr	66.74	85	P		P		00 18 53.9	+1.3
	comp=Z,1.3nm,0.7s,baz=298,slow=7.5,SNR=6.4								
CMAR				LR		LR		00 55 05.5	
	comp=Z,51nm,18.1s,baz=306,slow=42								
MOQ	Mont Orford	66.93	310	P		P		00 18 53.5	0.0
C36M	Paulatuk	68.47	348	P		P		00 19 03.0	+0.3
C36M				IAmb		IAmb		00 19 07.9	
	comp=Z,3.5nm,1.1s								
BILL	Bilibino	68.52	14	*eP*		P		00 19 02.4	-0.6
BILL				*e*				00 19 22.1	
BILL				*e*				00 21 31.8	
BILL				*e*PPP		PPP		00 23 18.8	
BILL				pmax		pmax			
	comp=Z,6.0nm,1.9s								
SADO	Sadowa	71.20	313	LR		LR		00 49 11.9	
	comp=Z,41nm,18.5s,baz=40,slow=35								
TOLK	Toolik Lake Re	71.55	358	P		P		00 19 22.1	+0.3
TOLK				IAmb		IAmb		00 19 27.2	
	comp=Z,2.7nm,0.7s								
RDOG	Red Dog Mine	72.10	3	P		P		00 19 25.2	+0.2
RDOG				IAmb		IAmb		00 19 38.2	
	comp=Z,5.8nm,1.0s								
YKA	Yellowknife Ar	72.62	341	P		P		00 19 29.9	+1.7
	comp=Z,0.3nm,0.6s,baz=31,slow=6.1,SNR=6.0								
YKA				LR		LR		00 51 45.2	
	comp=Z,44nm,19.8s,baz=0.0,slow=36								
NJ2	Nanjing	73.33	62	*eP*		P		00 19 32.1	-0.8
NJ2				pmax		pmax			
	comp=Z,11nm,0.5s								
V61A	Roper	75.23	304	P		P		00 19 43.0	-0.9
ILAR	Eielson Array	75.31	356	P		P		00 19 46.0	+2.2
	comp=Z,0.4nm,0.9s,baz=3.9,slow=4.0,SNR=4.9								
KSRS	Korea Array	75.86	53	LR		LR		00 58 24.1	
	comp=Z,44nm,18.1s,baz=328,slow=40								
SCRK	Sand Creek	75.92	355	P		P		00 19 48.8	+1.3
ULM	Lac du Bonnet	75.92	325	LR		LR		00 51 58.7	
	comp=Z,50nm,21.5s,baz=64,slow=35								
BPAW	Bear Paw Mtn.	76.14	358	P		P		00 19 49.1	+0.4
BPAW				IAmb		IAmb		00 19 53.6	
	comp=Z,3.2nm,1.0s								
RIDG	Independent Ri	76.22	355	P		P		00 19 47.2	-2.0
RIDG				IAmb		IAmb		00 20 03.7	
	comp=Z,3.3nm,1.1s								
DOT	Dot Lake	76.25	355	P		P		00 19 48.8	-0.5
ACSO	Alum Creek Sta	76.28	311	P		P		00 19 49.8	0.0
MCK	McKinley	76.44	357	P		P		00 19 51.0	+0.6
MCK				pmax		pmax			
	comp=Z,7.0nm,1.1s								
MCK	McKinley	76.44	357	P		P		00 19 51.0	+0.6
MCK				IAmb		IAmb		00 19 55.5	
	comp=Z,6.8nm,1.1s								
N49A	Columbus Grove	76.51	312	P		P		00 19 49.6	-1.6
N49A				IAmb		IAmb		00 19 55.2	
	comp=Z,4.8nm,0.9s								
DHY	Denali Highway	77.03	356	P		P		00 19 53.6	-0.2
DHY				IAmb		IAmb		00 19 59.1	
	comp=Z,5.7nm,1.2s								
O49A	Covington	77.08	312	P		P		00 19 54.0	-0.3
YSS	Yuzh-Sakhalins	77.51	38	*eP*		P		00 19 59.2	+2.6
SCM	Sheep Creek Mo	78.26	356	P		P		00 20 00.9	+0.2
SCM				pmax		pmax			
	comp=Z,6.0nm,1.2s								
SCM	Sheep Creek Mo	78.26	356	P		P		00 20 00.9	+0.2
SCM				IAmb		IAmb		00 20 17.5	
	comp=Z,5.7nm,1.2s								
M44A	Midewin, Midew	78.34	315	P		P		00 19 59.7	-1.7
BIRD	Birdtown, Kers	78.41	306	P		P		00 20 02.2	+0.4
BIRD				IAmb		IAmb		00 20 04.2	
	comp=Z,7.0nm,1.2s								
MCARA	McCarthy VSAT	78.41	354	P		P		00 20 01.9	+0.4
GLB	Gilahina Butte	78.42	354	P		P		00 20 01.0	-0.6
GLB				IAmb		IAmb		00 20 08.6	
	comp=Z,2.8nm,1.1s								
VRDI	Verde Repeater	78.60	354	P		P		00 20 02.4	-0.3
VRDI				IAmb		IAmb		00 20 07.6	
	comp=Z,4.4nm,1.1s								
PETK	Petropavlovsk-	78.86	27	LR		LR		00 57 37.8	
	comp=Z,63nm,19.4s,baz=249,slow=38								
MJAR	Matsushiro Arr	82.56	48	LR		LR		00 59 13.1	
	comp=Z,38nm,18.8s,baz=305,slow=37								
HHAR	Hobbs	85.20	314	P		P		00 20 36.6	-1.1
HHAR				IAmb		IAmb		00 20 41.7	
	comp=Z,3.8nm,1.0s								
U38A	Gravette	85.33	315	P		P		00 20 38.4	0.0
U38A				IAmb		IAmb		00 20 43.1	
	comp=Z,2.9nm,0.8s								
BDFB	Brasília	86.98	247	LR		LR		01 01 15.2	
	comp=Z,44nm,18.1s,baz=102,slow=37								
PDAR	Pinedale Array	87.62	328	LR		LR		01 02 37.5	
	comp=Z,59nm,18.3s,baz=56,slow=37								
TXAR	Lajitas Array	95.77	316	P		P		00 21 29.5	+1.9
	comp=Z,0.5nm,1.0s,baz=104,slow=5.3,SNR=3.6								
TXAR				LR		LR		01 04 14.5	
	comp=Z,28nm,18.2s,baz=0.0,slow=35								

IDC ***25*** *00:13:29.9±3.8, 35°.77N×70°.88E, h67km±30km, mb3.5/13, mb1 3.7/18, mb1mx3.5/53, mbtmpg3.9/18, ML4.0/5, Error ellipse: s-maj=29.6km s-min=19.2km az=158.0*

NEIC ***25*** *00:13:34.6±2.6, 36°.16N±0°.06×70°.70E±0°.08, h109km±6km, mb4.0/19, Error ellipse: s-maj=9.9km s-min=8.5km az=100.0*

NNC ***25*** *00:13:40.6±4.4, 36°.88N×69°.88E, h0km, mb4.8, mpv4.2, Error ellipse: s-maj=39.8km s-min=18.1km az=141.0*

ISC 25 00:13:34.6±0.5, 36°.16N±0°.06×70°.68E±0°.05, h110km, n79, σ2s 43/85, mb3.8/17, 3C-6D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.10	220			Pn	Pn	00 14 10.8	+1.8
CHGR	Chuyangaron	2.77	335				Pn	00 14 17.9	+0.2
GAR	Garm	2.85	354			Pn	Pn	00 14 18.8	+0.1
NIL	Nilore	3.27	139			Pn	Pn	00 14 24.6	+0.3
BTK	Batken	3.90	2			Pn	Pn	00 14 32.7	+0.1
BTK						Sn	Sn	00 15 17.8	+0.3
TAS	Tashkent	5.27	349			Pn	Pn	00 14 51.1	0.0
KSH	Kashi	5.37	50			Pn	Pn	00 14 48.8	-3.6
KSH						Sn	Sn	00 15 41.9	-11
KSH						smax	smax		
	comp=N,280nm,0.5s								
KSH						smax	smax		
	comp=E,230nm,0.4s								
THN	Thein Dam	5.58	130	*eP*		Pn	Pn	00 14 55.5	+0.3
THN				*ex*			x	00 15 55.0	
KK31	Karatay Array	6.94	359	⇓P			Sn	00 15 13.5	-0.1
	comp=E,8.1nm,0.3s,baz=178,slow=12,SNR=471								
KK31				⇑S			Sn	00 16 27.1	-3.9
	comp=E,5.3nm,0.3s,baz=188,slow=24,SNR=6.6								
KK31	Karatay Array	6.94	359				Pn	00 15 13.6	0.0
AAK	Ala-Archa	7.11	23	P			Pn	00 15 16.3	+0.2
	comp=E,5.2nm,0.3s,baz=189,slow=8.8,SNR=37								
AAK				S			Sn	00 16 33.9	-1.5
	comp=E,3.0nm,0.3s,baz=112,slow=22,SNR=10								
AAK	Ala-Archa	7.11	23	*d* P			Pn	00 15 16.1	0.0
AAK				pmax			pmax		
	comp=Z,17nm,0.8s								
AAK	Ala-Archa	7.11	23				Pn	00 15 16.0	-0.1
HRA	Herat	7.12	258			Pn	Pn	00 15 16.2	-0.2
FRU1	Bishkek	7.31	23	P			Pn	00 15 18.8	+0.1
FRU1	Bishkek	7.31	23	Pn			Pn	00 15 18.8	+0.1
SMLA	Simla	7.37	131	*eP*			Pn	00 15 17.9	-1.7
SMLA				*ex*			x	00 16 36.7	
BOOM	Boomskoye usch	7.52	31	P			Pn	00 15 21.4	-0.3
BOOM	Boomskoye usch	7.52	31				Pn	00 15 21.4	-0.3
KDJ	Kajisay	7.81	38	P			Pn	00 15 24.7	-0.9
KDJ	Kajisay	7.81	38				Pn	00 15 24.7	-1.0
TARG	Taragay, Kyrgy	7.86	43	Pn			Pn	00 15 24.9	-1.5
PRZ	Przheval'sk	8.70	41	P			Pn	00 15 37.0	-0.6
PRZ	Przheval'sk	8.70	41				Pn	00 15 37.0	-0.6
GEYT	Alibeck	10.20	284	P			Pn	00 15 56.8	-1.1
	comp=Z,1.3nm,0.3s,baz=107,slow=9.7,SNR=17								
GEYT				S			Sn	00 17 46.6	-3.7
	comp=Z,1.4nm,0.3s,baz=144,slow=20,SNR=3.6								
GYA0B	ALIBECK ARRAY	10.20	284	⇓P			Pn	00 15 58.0	+0.1
GYA0B				⇑S			Sn	00 17 45.8	-4.4
GYA0B	ALIBECK ARRAY	10.20	284	Pn			Pn	00 15 57.6	-0.3
PYUN	Piuthan	13.16	124	*eP*			Pn	00 16 32.9	-4.5
	comp=Z,40nm,0.4s								
DANN	Dangsing	13.52	121	*eP*			Pn	00 16 37.2	-5.0
	comp=Z,17nm,0.3s								
MAKZ	Makanchi	13.58	35	Pn			Pn	00 16 41.1	-1.5
MK31	Makanchi Array	13.72	36	Pn			Pn	00 16 44.5	+0.1
MKAR	Makanchi Array	13.72	36	P			Pn	00 16 46.8	+2.4
	comp=Z,0.1nm,0.3s,baz=224,slow=14,SNR=6.2								
KOLN	Koldanda	13.78	124	*eP*			Pn	00 16 41.0	-4.5
	comp=Z,10nm,0.3s								
DMN	Daman	14.91	121	*eP*			Pn	00 16 56.4	-3.6
	comp=Z,14nm,0.3s								
KKN	Kakani	14.92	120	*eP*			Pn	00 16 55.5	-4.6
	comp=Z,18nm,0.5s								
PKIN	Phulchoki	15.13	120	*eP*			Pn	00 16 58.1	-4.7
	comp=Z,18nm,0.4s								
PKI	Pulchoki	15.15	120	*eP*			Pn	00 16 59.2	-3.8
AB31	Akbulak array	15.26	332	⇓P			Pn	00 17 03.8	-0.2
	comp=Z,9.5nm,0.3s,baz=149,slow=12,SNR=99								
AB31				⇓S			Sn	00 19 45.2	-7.4
	comp=Z,13nm,0.3s,baz=159,slow=22,SNR=5.0								
KURBB	Kurchatov Arra	15.53	19	P			Pn	00 17 07.5	+0.2
	comp=Z,0.1nm,0.3s,baz=209,slow=10,SNR=4.2								
KURK	Kurchatov	15.64	19	P			Pn	00 17 07.5	-1.2
JIRN	Jiri	15.64	118	*eP*			Pn	00 17 06.3	-3.0
	comp=Z,22nm,0.2s								
RAMN	Ramite	16.36	120	*eP*			Pn	00 17 15.2	-2.9
	comp=Z,14nm,0.3s								
UOSS	Minazif	16.72	232	Pn			Pn	00 17 20.3	-2.0
UOSS				IAmb			IAmb	00 17 37.2	
	comp=Z,4.0nm,1.0s								
BVAR	Borovoye Array	16.87	359	P			P	00 17 24.5	+0.4
	comp=Z,0.7nm,0.3s,baz=168,slow=11,SNR=11								
BRVK	Borovoye	16.90	359	P			P	00 17 24.7	+0.2
TAPN	Taplejung	16.92	116	*eP*			Pn	00 17 22.4	-2.5
	comp=Z,26nm,0.5s								
AKTO	Aktyubinsk	16.95	331	P			P	00 17 27.5	+2.5
	comp=Z,0.9nm,0.3s,baz=146,slow=14,SNR=20								
AKTO				S			Sn	00 20 26.4	-6.9
	comp=Z,0.2nm,0.3s,baz=52,slow=18,SNR=2.6								
AKTO	Aktyubinsk	16.95	331	⇑P			P	00 17 27.2	+2.2
	comp=Z,13nm,1.1s								
AKTO				⇓S			Sn	00 20 27.9	-5.4
	comp=Z,2.5nm,0.7s								
ODAN	Odare	16.98	118	*eP*			Pn	00 17 22.4	-3.2
	comp=Z,14nm,0.6s								
ZAA0	Zalesovo Array	20.33	25	P			P	00 18 02.8	+0.9
ZAA0				IAmb			IAmb	00 18 04.6	
	comp=Z,7.0nm,0.6s								
ZALV	Zalesovo Beam	20.33	25	P			P	00 18 03.0	+1.1
	comp=Z,7.7nm,0.5s,baz=218,slow=10,SNR=30								
ARU	Arti	21.88	342	P			P	00 18 22.3	+4.0
	comp=Z,0.7nm,0.4s,baz=45,slow=8.6,SNR=2.8								
ARU	Arti	21.88	342	P			P	00 18 20.8	+2.5
ARU				IAmb			IAmb	00 18 24.8	
	comp=Z,3.9nm,1.0s								
RAYN	Ar Rayn	25.13	247	P			P	00 18 48.5	-0.9
AKASG	Malin Array Be	32.96	309	P			P	00 20 01.4	+2.8
	comp=Z,0.3nm,0.3s,baz=79,slow=7.0,SNR=4.1								
MLR	Muntele Rosu	34.73	300	P			P	00 20 15.6	+1.6
	comp=Z,1.2nm,0.8s,baz=143,slow=5.1,SNR=3.5								
MLR	Muntele Rosu	34.73	300	IAmb			IAmb	00 20 21.6	
	comp=Z,3.2nm,1.1s								
IDI	Anoyia	36.92	283	P			P	00 20 34.7	+1.8
	comp=Z,0.6nm,0.5s,baz=102,slow=13,SNR=1.7								
IDI	Anoyia	36.92	283	P			P	00 20 32.1	-0.7
IDI				IAmb			IAmb	00 20 46.0	
	comp=Z,2.5nm,1.1s								
FIA1	FINESS Array S	37.62	326	P			P	00 20 39.4	+1.0
FINES	FINESS Array B	37.63	326	P			P	00 20 41.1	+2.7
	comp=Z,0.8nm,0.6s,baz=120,slow=9.4,SNR=11								
ARCES	ARCESS Array B	41.36	338	P			P	00 21 12.7	+3.4
	comp=Z,2.9nm,0.7s,baz=112,slow=7.4,SNR=12								
ARE0	ARCESS Array S	41.36	338	P			P	00 21 10.0	+0.7
SGRT	San Giovanni R	42.48	295	P			P	00 21 18.3	-0.5
SGRT				IAmb			IAmb	00 21 29.9	
	comp=Z,4.8nm,1.0s								
NB2	NORSAR Subarra	44.50	323	P			P	00 21 38.5	+3.8
	comp=Z,0.5nm,0.5s,baz=97,slow=7.9								
NOA	NORSAR Array B	44.50	323	P			P	00 21 37.4	+2.7
	comp=Z,0.9nm,0.5s,baz=97,slow=7.8,SNR=4.7								
NBO00	NORSAR Array S	44.71	323	P			P	00 21 36.7	+0.3
NBO00				IAmb			IAmb	00 21 50.1	
	comp=Z,2.3nm,0.8s								
KBS	Kingsbay	48.89	347	P			P	00 22 10.3	+1.7
KEST	Kesra	48.90	289	P			P	00 22 07.9	-1.5
ESDC	Sonseca Array	57.39	298	P			P	00 23 13.8	+2.2
	comp=Z,0.6nm,0.9s,baz=50,slow=5.9,SNR=4.3								
TOA0	Torodi Ar. Sit	65.45	269	P			P	00 24 05.0	-1.1
TOA0				IAmb			IAmb	00 24 19.2	
	comp=Z,2.3nm,1.1s								
TORD	Torodi Ar. Bea	65.45	269	P			P	00 24 06.8	+0.7
	comp=Z,0.9nm,0.6s,baz=51,slow=6.2,SNR=19								
INK	Inuvik	74.28	9	P			P	00 25 01.7	+2.4
	comp=Z,0.7nm,0.6s,baz=332,slow=8.5,SNR=5.5								
INK	Inuvik	74.28	9	P			P	00 25 00.1	+0.9
INK				IAmb			I

	comp=N,210nm,0.5s							
KNL				IAML		00 33 04.0		
	comp=E,366nm,0.5s							
PRK	**Paraskevi**	**1.17**	**172**	P	**Pg**	**00 32 46.4**	**0.0**	
PRK				S	**Sn**	**00 33 02.6**	**+0.8**	
	comp=E,422nm,0.5s							
MRMT	**Marmara Adasi**	**1.19**	**80**	PN	**Pn**	**00 32 45.8**	**-0.5**	
AYVA	**Ayvalik**	**1.20**	**156**	*i* P	**Pb**	**00 32 46.5**	**+0.1**	
AYVA				*i* S	**Sg**	**00 32 02.5**	**-0.1**	
AYVA				IAML		00 33 03.0		
	comp=E,117nm,0.7s							
AYVA				IAML		00 33 05.0		
	comp=N,327nm,0.4s							
SIGR	**SIGRI**	**1.21**	**187**	P	**Pn**	**00 32 46.1**	**-0.3**	
SIGR				S	**Sn**	**00 33 02.6**	**0.0**	
	comp=N,300nm,0.5s							
SIGR	**SIGRI**	**1.21**	**187**	PN	**Pn**	**00 32 45.8**	**-0.6**	
TKR	**Tekirdag**	**1.27**	**62**	PN	**Pn**	**00 32 46.3**	**-0.9**	
GONE	**Gonen-Balikesi**	**1.30**	**106**	PN	**Pn**	**00 32 47.5**	**-0.2**	
KDZ	**Kurdzhali**	**1.33**	**339**	P	**Pn**	**00 32 48.4**	**+0.2**	
KDZ	**Kurdzhali**	**1.33**	**339**	PN	**Pn**	**00 32 47.1**	**-1.1**	
BALY	**Balya**	**1.37**	**119**	*i* P	**Pb**	**00 32 49.4**	**0.0**	
BALY				*i* S	**Sg**	**00 33 09.0**	**+0.9**	
BALY				IAML		00 33 10.0		
	comp=E,83nm,0.3s							
BALY				IAML		00 33 10.0		
	comp=N,88nm,0.5s							
EDC	**Edincik**	**1.38**	**92**	PN	**Pn**	**00 32 48.1**	**-0.8**	
CRLT	**Corlu**	**1.47**	**60**	PN	**Pn**	**00 32 49.1**	**-0.9**	
DKL	**Dikili**	**1.49**	**154**	PN	**Pn**	**00 32 49.8**	**-0.5**	
EDRB	**Edirne**	**1.53**	**20**	P	**Pn**	**00 32 50.8**	**-0.1**	
EDRB	**Edirne**	**1.53**	**20**	PN	**Pn**	**00 32 50.9**	**0.0**	
KIRK	**Kırklareli**	**1.58**	**30**	*i* P	**Pn**	**00 32 51.5**	**-0.1**	
KIRK				*i* S	**Sg**	**00 33 14.3**	**-0.5**	
BALB	**Balikesir**	**1.60**	**118**	PN	**Pn**	**00 32 51.7**	**-0.1**	
RZN	**Rozhen**	**1.63**	**322**	P	**Pb**	**00 32 53.6**	**-0.3**	
ZEDA	**zmir-Bergama**	**1.64**	**151**	*i* P	**Pb**	**00 32 53.5**	**-0.5**	
ZEDA				*i* S	**Sg**	**00 33 16.0**	**-0.7**	
ZEDA				IAML		00 33 17.0		
	comp=N,152nm,0.3s							
ZEDA				IAML		00 33 17.0		
	comp=E,141nm,0.3s							
STEP	**BALIKESIR_Sava**	**1.64**	**128**	*i* P	**Pb**	**00 32 53.4**	**-0.6**	
STEP				*i* S	**Sb**	**00 33 15.1**	**+0.5**	
STEP				IAML		00 33 21.0		
	comp=N,45nm,0.5s							
STEP				IAML		00 33 23.0		
	comp=E,49nm,0.3s							
KCTX	**Karacabey (Bur**	**1.77**	**94**	PN	**Pn**	**00 32 54.1**	**0.0**	
SLVT	**Silivri**	**1.83**	**63**	PN	**Pn**	**00 32 54.8**	**-0.2**	
ELBA	**Catalca**	**1.95**	**67**	*i* P	**Pn**	**00 32 56.6**	**0.0**	
ELBA				*i* S	**Sg**	**00 33 26.5**	**0.0**	
ELBA				IAML		00 33 30.0		
	comp=E,28nm,0.2s							
PLD	**Plovdiv**	**1.98**	**329**	PN	**Pn**	**00 32 56.8**	**-0.2**	
CTYL	**Yalikoy Yolu**	**2.00**	**57**	PN	**Pn**	**00 32 57.2**	**-0.1**	
CHOS	**Chios island**	**2.02**	**180**	P	**Pn**	**00 32 58.0**	**+0.3**	
CHOS	**Chios island**	**2.02**	**180**	PN	**Pn**	**00 32 57.3**	**-0.4**	
DURS	**Dursunbey**	**2.03**	**113**	*i* P	**Pn**	**00 32 58.7**	**+0.9**	
DURS				*i* S	**Sn**	**00 33 24.0**	**+1.0**	
DURS				IAML		00 33 29.0		
	comp=N,41nm,0.4s							
DURS				IAML		00 33 30.0		
	comp=E,68nm,0.3s							
CTKS	**Kestanelik-??a**	**2.04**	**65**	PN	**Pn**	**00 32 57.5**	**-0.3**	
AKHS	**Akhisar**	**2.04**	**138**	*i* P	**Pn**	**00 32 58.7**	**+0.8**	
AKHS				*i* S	**Sg**	**00 33 27.9**	**-1.6**	
URLA	**Izmir**	**2.09**	**168**	PN	**Pn**	**00 32 58.3**	**-0.3**	
URLA	**Izmir**	**2.09**	**168**	*i* P	**Pn**	**00 32 58.7**	**+0.2**	
URLA				*i* S	**Sn**	**00 33 24.3**	**-0.2**	
ARMT	**Armutlu**	**2.15**	**85**	PN	**Pn**	**00 32 59.1**	**-0.3**	
BLCB	**Balcova**	**2.16**	**159**	PN	**Pn**	**00 32 59.9**	**+0.4**	
MDNY	**Mudanya-Bursa**	**2.16**	**90**	PN	**Pn**	**00 32 59.4**	**-0.1**	
BGKT	**Bogazkoy**	**2.20**	**69**	PN	**Pn**	**00 33 00.1**	**0.0**	
ULDT	**Uludag**	**2.37**	**95**	*i* P	**Pn**	**00 33 02.3**	**+0.6**	
ULDT				*i* S	**Sg**	**00 33 39.0**	**-1.1**	
ULDT				IAML		00 33 43.0		
	comp=E,21nm,0.3s							
ISK	**Istanbul-Kandi**	**2.38**	**73**	PN	**Pn**	**00 33 02.5**	**0.0**	
KAVV	**Kandilli-Istan**	**2.38**	**73**	PN	**Pn**	**00 33 02.7**	**+0.2**	
KLYT	**Kilyos**	**2.42**	**69**	PN	**Pn**	**00 33 03.2**	**+0.1**	
DGB	**zmir**	**2.44**	**164**	*i* P	**Pn**	**00 33 03.5**	**+0.2**	
DGB				*i* S	**Sg**	**00 33 40.4**	**-1.8**	
DEMI	**Demirci**	**2.46**	**123**	*i* P	**Pn**	**00 33 05.1**	**+1.3**	
DEMI				*i* S	**Sn**	**00 33 35.3**	**+1.5**	
ELND	**Elena**	**2.52**	**357**	⇑P	**Sb**	**00 33 39.8**	**-0.1**	
YLV	**Yalova**	**2.54**	**85**	PN	**Pn**	**00 33 05.0**	**+0.2**	
SIMA	**Simav-Kutahya**	**2.62**	**119**	PN	**Pn**	**00 33 05.9**	**0.0**	
MANT	**Manisa**	**2.72**	**134**	*i* P	**Pn**	**00 33 08.5**	**+1.0**	
MANT				*i* S	**Sb**	**00 33 48.4**	**+2.4**	
VTS	**Vitosha**	**3.06**	**317**	⇓P	**Pg**	**00 33 22.7**	**+0.3**	
MLR	**Muntele Rosu**	**5.08**	**359**	⇑P	**Pn**	**00 33 42.9**	**+3.1**	
PLOR	**Plostina**	**5.46**	**4**	⇑P	**Pn**	**00 33 47.2**	**+2.3**	
VRI	**Vrincioaia**	**5.48**	**5**	⇑P	**Pn**	**00 33 41.0**	**-4.2**	

IDC 25 00:46:13.4±9.5, 22°.15S×67°.03W, h85km±74km, mb3.4/1, mb1 3.6/2, mb1mx3.2/16, mbtmp3.8/2, ML4.0/1, Error ellipse: s-maj=141.7km s-min=65.3km az=68.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.92**	**350**	P	Pn	00 47 39.2	0.0
	2.0nm,0.3s,baz=163,slow=11,SNR=22						
LPAZ				S	Sn	00 48 46.7	+0.7
	0.7nm,0.3s,baz=359,slow=7.2,SNR=2.6						
TORD	**Torodi Ar. Bea**	**75.94**	**69**	P	P	00 57 51.5	+0.1
	0.3nm,0.4s,baz=248,slow=5.4,SNR=8.7						
MKAR	**Makanchi Array**	**145.10**	**38**	PKPbc	PKPbc	01 05 39.7	-0.9
	0.3nm,0.3s,baz=316,slow=4.0,SNR=2.8						

IDC 25 00:55:18.3±1.2, 7°.68N×127°.47E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/33, mbtmp3.8/5, MS3.2/1, Ms1 3.2/1, ms1mx2.4/39, Error ellipse: s-maj=30.8km s-min=22.8km az=69.0

MAN 25 00:55:21.4, 7°.14N×127°.19E, h1km, mb4.6, ML3.5, MS3.3

ISC 25 00:55:23.0±2.5, 7°.30N±0°.08×127°.2E±0°.1, h27km±16km, n14, σ2s46/21, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.00**	**250**	*e*P	**Pb**	**00 55 40.3**	**-1.4**
MATI				*e*S	**Sn**	**00 55 55.0**	**+0.5**
DAV	**Davao City (W)**	**1.62**	**262**	Pn	**Pb**	**00 55 53.4**	**+1.0**
	68nm,0.3s,baz=77,slow=22,SNR=4.4						
DAV				Sn	**Sb**	**00 56 18.6**	**+6.2**
	48nm,0.3s,baz=270,slow=22,SNR=11						
DAV				LR	LR	00 56 41.4	
	comp=Z,95nm,21.0s,baz=124,slow=42						
DMPH	**Davao City--Mi**	**1.69**	**263**	⇓*e*P	**Pn**	**00 55 49.3**	**-1.5**
DMPH				*e*S	**Sn**	**00 56 11.6**	**0.0**
DDMP	**Don Marcelino,**	**1.90**	**231**	*e*P	**Pn**	**00 55 53.4**	**-0.2**
DDMP				*e*S	**Sb**	**00 56 19.7**	**-0.5**
KCP	**Kidapawan**	**2.11**	**262**	⇑*i*P	**Pb**	**00 55 59.5**	**-1.2**
KCP				*i* S	**Sb**	**00 56 27.0**	**+0.4**
BUKP	**Musuan**	**2.20**	**285**	*e*P	**Pn**	**00 55 59.5**	**+1.7**
BUKP				*e*S	**Sb**	**00 56 29.4**	**+0.4**
CGP	**Cagayan de Oro**	**2.74**	**295**	⇓*e*P	**Pn**	**00 56 07.6**	**+2.4**
CGP				*e*S	**Sb**	**00 56 42.5**	**-2.0**
SKMP	**Bagumbayan, Su**	**2.75**	**254**	*e*P	**Pn**	**00 56 07.1**	**+1.8**
SKMP				*e*S	**Sb**	**00 56 40.4**	**-4.4**
JCJ	**Chichijima**	**24.29**	**34**	LR	LR	01 07 51.1	
	comp=Z,64nm,21.4s,baz=102,slow=32						
WRA	**Warramunga Arr**	**27.96**	**166**	P	**P**	**01 01 12.8**	**+1.2**
	0.4nm,0.8s,baz=346,slow=10,SNR=5.5						
ASAR	**Alice Springs**	**31.46**	**168**	P	**P**	**01 01 46.0**	**+3.5**
	0.2nm,0.8s,baz=354,slow=8.4,SNR=1.5						
MKAR	**Makanchi Array**	**54.94**	**324**	P	**P**	**01 04 50.1**	**-1.6**
	0.3nm,0.5s,baz=119,slow=7.5,SNR=6.3						
ARCES	**ARCESS Array B**	**87.28**	**340**	P	**P**	**01 08 05.2**	**-1.8**
	1.1nm,0.6s,baz=82,slow=7.4,SNR=3.5						
FINES	**FINESS Array B**	**88.93**	**332**	P	**P**	**01 08 13.3**	**-1.6**
	2.6nm,1.0s,baz=67,slow=4.7,SNR=4.7						

ISK 25 01:01:11.9, 40°.37N×25°.81E, h16km, ML2.5/22
ATH 25 01:01:12.2, 40°.37N×25°.77E, h21km±2km, ML2.2/7, Error ellipse: s-maj=2.9km s-min=1.0km az=275.0
THE 25 01:01:12.7, 40°.38N×25°.78E, h12km±1km, ML2.1/9, Error ellipse: s-maj=1.1km s-min=0.6km az=45.0

DDA 25 01:01:13.2, 40°.35N×25°.90E, h7km±1km, ML2.3

ISC 25 01:01:12.5±0.8, 40°.38N±0°.02×25°.80E±0°.02, h16km±6km, n60, σ0s40/88, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.20**	**159**	P	**Pg**	**01 01 17.5**	**+0.2**
GADA				S	**Sg**	**01 01 20.6**	**+0.1**
	368nm,0.3s						
GADA	**Gvkgeada**	**0.20**	**159**	PG	**Pg**	**01 01 17.5**	**+0.2**
GADA				SG	**Sg**	**01 01 20.4**	**-0.1**
SMTH	**Samothraki Isl**	**0.23**	**294**	P	**Pg**	**01 01 17.6**	**-0.1**
SMTH				S	**Sg**	**01 01 21.0**	**-0.2**
	1μm,0.1s						
SMTH	**Samothraki Isl**	**0.23**	**294**	P	**Pg**	**01 01 17.7**	**-0.1**
SMTH				S	**Sg**	**01 01 20.9**	**-0.3**
SMTH				AML	AML	01 01 21.3	
	comp=E,1904μm,0.1s						
SMTH				AML	AML	01 01 21.4	
	comp=N,3113μm,0.1s						
ENEZ	**Enez**	**0.45**	**37**	P	**Pg**	**01 01 21.5**	**0.0**
ENEZ				S	**Sb**	**01 01 28.4**	**0.0**
	comp=N,252nm,0.3s						
ENEZ	**Enez**	**0.45**	**37**	PG	**Pg**	**01 01 21.5**	**0.0**
ENEZ				SG	**Sb**	**01 01 28.4**	**0.0**
GELI	**Tayfur-Gelibol**	**0.51**	**88**	PG	**Pg**	**01 01 22.8**	**+0.1**
GELI				SG	**Sg**	**01 01 30.2**	**+0.6**
BOZC	**Bozcaada**	**0.57**	**160**	PG	**Pg**	**01 01 23.7**	**-0.1**
BOZC				SG	**Sg**	**01 01 31.3**	**-0.1**
BOZC	**Bozcaada**	**0.57**	**160**	*i* P	**Pg**	**01 01 23.7**	**-0.1**
BOZC				IAML		01 01 31.0	
	comp=E,202nm,0.2s						
BOZC				IAML		01 01 31.0	
	comp=N,215nm,0.2s						
BOZC				*i* S	**Sg**	**01 01 31.6**	**+0.2**
ERIK	**Erikli-Kesan**	**0.61**	**62**	PG	**Pg**	**01 01 24.1**	**-0.5**
ERIK				SG	**Sg**	**01 01 33.2**	**+0.4**
LIA	**Limnos Island**	**0.68**	**225**	P	**Pg**	**01 01 25.5**	**-0.3**
LIA				S	**Sg**	**01 01 34.8**	**+0.1**
	comp=N,185nm,0.3s						
LIA	**Limnos Island**	**0.68**	**225**	P	**Pg**	**01 01 25.5**	**-0.3**
LIA				S	**Sg**	**01 01 34.9**	**+0.1**
LIA				AML	AML	01 01 36.7	
	comp=E,443μm,0.3s						
LIA				AML	AML	01 01 37.3	
	comp=N,290μm,0.2s						
EZN	**Ezine**	**0.68**	**144**	P	**Pg**	**01 01 25.4**	**-0.5**
EZN				S	**Sg**	**01 01 35.5**	**+0.5**
	comp=N,102nm,0.1s						
EZN	**Ezine**	**0.68**	**144**	PG	**Pg**	**01 01 24.9**	**-1.0**
LPK	**Lapseki**	**0.73**	**90**	PG	**Pb**	**01 01 26.4**	**-0.5**
RDO	**Rodhopi**	**0.79**	**345**	P	**Pb**	**01 01 27.6**	**-0.3**
RDO				S	**Sg**	**01 01 39.1**	**+0.7**
	comp=N,132nm,0.3s						
RDO	**Rodhopi**	**0.79**	**345**	P	**Pb**	**01 01 27.6**	**-0.3**
RDO				S	**Sg**	**01 01 39.2**	**+0.7**
RDO				AML	AML	01 01 40.9	
	comp=N,270μm,0.3s						
RDO				AML	AML	01 01 41.0	
	comp=E,262μm,0.2s						
RDO	**Rodhopi**	**0.79**	**345**	PG	**Pb**	**01 01 27.6**	**-0.3**
KESN	**Edirne-Kesan**	**0.80**	**56**	*i* P	**Pg**	**01 01 28.8**	**+0.5**
KESN				*i* S	**Sg**	**01 01 38.6**	**-0.3**
KESN				IAML		01 01 40.0	
	comp=E,143nm,0.2s						
KESN				IAML		01 01 42.0	
	comp=N,137nm,0.2s						
THAS	**Thassos island**	**0.86**	**286**	P	**Pb**	**01 01 28.6**	**-0.5**
THAS				S	**Sg**	**01 01 40.6**	**+0.1**
THAS	**Thassos island**	**0.86**	**286**	P	**Pb**	**01 01 28.5**	**-0.5**
THAS				S	**Sb**	**01 01 40.2**	**-0.1**
THAS				AML	AML	01 01 42.7	
	comp=N,211μm,0.2s						
THAS				AML	AML	01 01 43.9	
	comp=E,158μm,0.3s						
BAYC	**CANAKKALE_Bayr**	**0.86**	**138**	*i* P	**Pb**	**01 01 28.9**	**-0.2**
BAYC				*i* S	**Sb**	**01 01 40.1**	**-0.2**
BAYC				IAML		01 01 43.0	
	comp=E,94nm,0.2s						
UKOP	**Uzunkopru-Edir**	**0.98**	**40**	PG	**Pb**	**01 01 31.2**	**+0.1**
EFSA	**Agios Efstrati**	**1.05**	**217**	P	**Pb**	**01 01 32.1**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.09**	**73**	PN	**Pb**	**01 01 32.3**	**-0.8**
KAVA	**Kavala**	**1.16**	**303**	P	**Pn**	**01 01 33.8**	**-0.3**
KAVA				S	**Sb**	**01 01 49.1**	**+0.1**
	comp=E,42nm,0.4s						
KAVA	**Kavala**	**1.16**	**303**	P	**Pn**	**01 01 33.7**	**-0.3**
KAVA				S	**Sb**	**01 01 49.0**	**+0.1**
KAVA				AML	AML	01 01 50.3	
	comp=N,85μm,0.3s						
KAVA				AML	AML	01 01 51.7	
	comp=E,85μm,0.4s						
SIGR	**SIGRI**	**1.17**	**178**	P	**Pn**	**01 01 34.1**	**-0.1**
SIGR				S	**Sb**	**01 01 49.3**	**+0.1**
	comp=E,250nm,0.4s						
SIGR	**SIGRI**	**1.17**	**178**	P	**Pn**	**01 01 34.2**	**0.0**
SIGR				S	**Sb**	**01 01 49.6**	**+0.4**
SIGR				AML	AML	01 01 51.9	
	comp=N,488μm,0.4s						
SIGR				AML	AML	01 01 52.3	
	comp=E,506μm,0.4s						
SIGR	**SIGRI**	**1.17**	**178**	PN	**Pn**	**01 01 33.7**	**-0.5**
PRK	**Paraskevi**	**1.19**	**162**	P	**Pg**	**01 01 35.5**	**0.0**
PRK				S	**Sg**	**01 01 51.4**	**+0.4**
	comp=E,212nm,0.4s						
PRK	**Paraskevi**	**1.19**	**162**	P	**Pg**	**01 01 35.5**	**0.0**
PRK				S	**Sn**	**01 01 50.7**	**+0.4**
PRK				AML	AML	01 01 52.3	
	comp=N,427μm,0.5s						
PRK				AML	AML	01 01 53.4	
	comp=E,405μm,0.4s						
AYVA	**Ayvalik**	**1.27**	**147**	*i* P	**Pb**	**01 01 36.3**	**+0.2**
KDZ	**Kurdzhali**	**1.30**	**347**	PN	**Pn**	**01 01 35.4**	**-0.7**
MRMT	**Marmara Adasi**	**1.39**	**80**	PN	**Pn**	**01 01 36.8**	**-0.5**
OUR	**Ouranopolis**	**1.39**	**269**	P	**Pn**	**01 01 36.5**	**-0.8**
OUR	**Ouranopolis**	**1.39**	**269**	P	**Pb**	**01 01 38.7**	**+0.6**
TKR	**Tekirdag**	**1.45**	**65**	PN	**Pn**	**01 01 38.3**	**+0.2**
GONE	**Gonen-Balikesi**	**1.48**	**102**	PN	**Pn**	**01 01 38.3**	**-0.2**
BALY	**Balya**	**1.53**	**114**	*i* P	**Pn**	**01 01 40.1**	**+0.8**
BALY				*i* S	**Sg**	**01 02 01.6**	**-0.4**
BALY				IAML		01 02 05.0	
	comp=N,34nm,0.6s						
DKL	**Dikili**	**1.56**	**147**	PN	**Pn**	**01 01 39.4**	**-0.2**
EDC	**Edincik**	**1.57**	**91**	PN	**Pn**	**01 01 39.8**	**0.0**
EDRB	**Edirne**	**1.63**	**26**	PN	**Pn**	**01 01 40.3**	**-0.3**
CRLT	**Corlu**	**1.65**	**62**	PN	**Pn**	**01 01 40.9**	**+0.1**
PAIG	**Palicuri**	**1.69**	**255**	P	**Pn**	**01 01 42.1**	**+0.7**
ZEDA	**zmir-Bergama**	**1.72**	**145**	*i* P	**Pn**	**01 01 42.3**	**+0.4**
ZEDA				*i* S	**Sb**	**01 02 05.0**	**-0.2**
ZEDA				IAML		01 02 08.0	
	comp=N,47nm,0.3s						
ZEDA				IAML		01 02 08.0	
	comp=E,30nm,0.3s						
BALB	**Balikesir**	**1.76**	**114**	PN	**Pn**	**01 01 41.9**	**-0.4**
STEP	**BALIKESIR_Sava**	**1.78**	**124**	*i* P	**Pn**	**01 01 43.8**	**+1.1**
STEP				*i* S	**Sg**	**01 02 10.0**	**0.0**
STEP				IAML		01 02 10.0	
	comp=N,38nm,0.5s						
STEP				IAML		01 02 10.0	
	comp=E,61nm,0.8s						
SRS	**Serrai**	**1.83**	**294**	P	**Pn**	**01 01 44.0**	**+0.6**
PLD	**Plovdiv**	**1.91**	**335**	PN	**Pn**	**01 01 44.9**	**+0.4**
KCTX	**Karacabey (Bur**	**1.96**	**93**	PN	**Pn**	**01 01 44.8**	**-0.3**
CHOS	**Chios island**	**2.00**	**174**	P	**Pn**	**01 01 45.5**	**-0.3**
CHOS	**Chios island**	**2.00**	**174**	PN	**Pn**	**01 01 45.5**	**-0.3**
SLVT	**Silivri**	**2.02**	**64**	PN	**Pn**	**01 01 45.9**	**0.0**
URLA	**Izmir**	**2.11**	**163**	PN	**Pn**	**01 01 47.2**	**0.0**
BLCB	**Balcova**	**2.21**	**154**	PN	**Pn**	**01 01 48.7**	**+0.1**
CTKS	**Kestanelik-??a**	**2.22**	**67**	PN	**Pn**	**01 01 48.6**	**-0.1**
ARMT	**Armutlu**	**2.34**	**84**	PN	**Pn**	**01 01 50.6**	**+0.2**
MDNY	**Mudanya-Bursa**	**2.35**	**89**	PN	**Pn**	**01 01 51.3**	**+0.8**
SIMA	**Simav-Kutahya**	**2.77**	**117**	PN	**Pn**	**01 01 56.3**	**-0.1**

KRNET 25 01:13:28.8±0.1, 41°.47N×79°.48E, h35km, mb2.2, 4C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.30**	**322**	⇑*i*P	Pn	01 13 52.2	+1.6
	baz=22						
PRZ				⇑*i*S	Sn	01 14 09.2	+2.4
	baz=22						
KDJ	**Kajisay**	**1.85**	**292**	⇓*i*P	Pn	01 13 59.8	+1.7
	baz=92						
KDJ				⇓*i*S	Sn	01 14 22.5	+2.2
	baz=92						
ANVS	**Anan'yevo**	**1.89**	**315**	⇓*i*P	Pn	01 14 00.5	+1.8
	baz=15						
ANVS				⇓*i*S	Sn	01 14 23.8	+2.5
	baz=15						
BOOM	**Boomskoye usch**	**2.83**	**292**	⇑*i*P	Pn	01 14 13.7	+2.0
	baz=92						
BOOM				⇑*i*S	Sn	01 14 46.6	+1.9
	baz=92						

SOME 25 01:14:22.5, 43°.27N×78°.67E, h0km

NNC 25 01:14:22.9±1.4, 43°.21N×78°.67E, h1km±8km, mpv2.4, Error ellipse: s-maj=5.9km s-min=2.8km az=177.0, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZHN	**Zhinishke**	**0.18**	**255**	*e*P	Pg	01 14 26.2	0.0
	3.3nm,0.1s						
ZHN				*e*S	Sg	01 14 29.0	+0.4
	20nm,0.1s						
ZHN	**Zhinishke**	**0.18**	**255**	P	Pg	01 14 26.2	0.0
	16nm,0.2s						
ZHN				S	Sg	01 14 28.9	+0.3
	22nm,0.2s						
SATY	**Saty**	**0.25**	**231**	*e*P	Pg	01 14 28.1	+0.5
	2.6nm,0.1s						
SATY				*e*S	Sg	01 14 32.1	+1.3
	19nm,0.1s						
SATY	**Saty**	**0.25**	**231**	P	Pg	01 14 28.0	+0.4
	2.5nm,0.1s						
SATY				S	Sg	01 14 32.1	+1.3
	32nm,0.2s						
UZB	**Uzynbulak**	**0.27**	**104**	*e*P	Pg	01 14 28.2	+0.2
	1.0nm,0.0s						
UZB				*e*S	Sg	01 14 32.3	+0.8
	11nm,0.1s						
UZB	**Uzynbulak**	**0.27**	**104**	P	Pg	01 14 28.1	+0.1
	1.4nm,0.2s						
UZB				S	Sg	01 14 32.3	+0.8
	18nm,0.1s						
MNBS	**Baschi**	**0.89**	**347**	P	Pg	01 14 38.4	-1.5
MNBS				S	Sg	01 14 49.5	-1.9

NIED 25 01:29:00, 32°.50N×142°.00E, h5km, Mw4.2 Best double couple: M₀2.33000×10¹⁵ NP1:φ₀s23.00000°, δ59.00000°, λ102.00000°. NP2:φ₀s181.00000°, δ33.00000°, λ71.00000°.

IDC 25 01:29:27.6±0.7, 32°.45N×141°.80E, h0km, mb4.0/15, mb1 4.2/18, mb1mx4.0/36, mbtmp4.0/18, ML3.5/3, MS3.3/5, Ms1 3.3/5, ms1mx2.9/29, Error ellipse: s-maj=19.7km s-min=14.8km az=60.0

MOS 25 01:29:28.5±0.8, 32°.43N×141°.73E, h17km, mb4.7/20, Error ellipse: s-maj=15.5km s-min=7.2km az=123.2

JMA 25 01:29:29.0±0.5, 32°.48N×142°.01E, h50km, M4.0

NEIC 25 01:29:30.4±1.3, 32°.48N±0°.08×141°.81E±0°.06, h19km±5km, mb4.5/28, Error ellipse: s-maj=12.8km s-min=5.5km az=204.0

ISC 25 01:29:33.5±0.6, 32°.63N±0°.06×141°.90E±0°.06, h39km, n111, σ1s54/118, mb4.4/44, MS3.8/6, 4C-7D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.81**	**265**	P	**Pn**	**01 29 59.6**	**-2.7**
JHJ2	**Mitsune**	**1.82**	**286**	P	**Pn**	**01 30 00.8**	**-1.5**
JHJ2	**Mitsune**	**1.82**	**286**		**Pn**	**01 29 59.8**	**-2.5**
JHCJ	**Hachijojimakas**	**1.83**	**285**	P	**Pn**	**01 30 01.0**	**-1.4**
JHCJ				*e*S	**Sn**	**01 30 23.3**	**-1.0**
JHJ	**Hachijo jima 2**	**1.85**	**286**	Pn	**Pn**	**01 30 00.3**	**-2.4**
	74nm,0.3s,baz=68,slow=16,SNR=23						
JHJ				Sn	**Sn**	**01 30 25.6**	**+0.8**
	131nm,0.3s,baz=66,slow=22,SNR=5.8						
JHJ				LR	LR	01 30 48.2	
	comp=Z,648nm,21.0s,baz=352,slow=45						
BSO1	**Boso 1**	**2.16**	**339**	P	**Pn**	**01 30 05.7**	**-0.8**
BSO1				*e*S	**Sn**	**01 30 33.2**	**+1.4**
BSO3	**Boso 3**	**2.46**	**332**	P	**Pn**	**01 30 10.3**	**-0.5**
BSO3				*e*S	**Sn**	**01 30 38.3**	**-1.2**
JYN	**Shimob**	**3.99**	**317**	P	**Pn**	**01 30 32.2**	**-0.1**
JRY	**Ryogami san**	**4.19**	**325**	P	**Pn**	**01 30 33.9**	**-1.1**
JRY				*e*S	**Sn**	**01 31 22.6**	**-0.1**
JAG	**Ashikaga**	**4.29**	**333**	P	**Pn**	**01 30 35.5**	**-0.8**
INU	**Inuyama**	**4.88**	**305**		**Pn**	**01 30 42.9**	**-1.5**
MJAR	**Matsushiro Arr**	**4.95**	**323**	Pn	**Pn**	**01 30 44.7**	**-0.6**
	0.3nm,0.3s,baz=149,slow=12,SNR=30						
MJAR				Sn	**Sn**	**01 31 42.4**	**+1.1**
	0.3nm,0.3s,baz=172,slow=22,SNR=5.2						
MJAR				LR	LR	01 32 48.8	
	comp=Z,344nm,19.0s,baz=155,slow=40						
MAJO	**Matsushiro**	**4.95**	**323**	*d* P	**Pn**	**01 30 45.2**	**-0.2**
MAJO	**Matsushiro**	**4.95**	**323**		**Pn**	**01 30 44.3**	**-1.1**
MAT	**Matsushiro**	**4.95**	**323**	P	**Pn**	**01 30 44.8**	**-0.6**
MAT				S	**Sn**	**01 31 42.5**	**+1.1**
**MJB

LZH				*e*PP		**PnPn**	**01 36 56.3 +0.8**
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,65nm,5.2s						
LZH				LR	LR		
	comp=N,320nm,12.9s						
LZH				LR	LR		
	comp=E,340nm,13.2s						
LZH				LR	LR		
	comp=Z,430nm,16.3s						
BOD	**Bodaibo**	**31.52**	**331**	*e*P		**P**	**01 35 55.8 +4.2**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA	**Gaotai**	**34.47**	**293**	*e*P		**P**	**01 36 16.6 -1.2**
GTA				pP	pP		01 36 20.8 -6.2
GTA				sP	sP		01 36 23.6 -8.3
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,46nm,5.0s						
GTA				LR	LR		
	comp=N,98nm,17.1s						
GTA				LR	LR		
	comp=E,140nm,17.5s						
GTA				LR	LR		
	comp=Z,95nm,15.5s						
BILL	**Bilibino**	**38.15**	**15**	*e*P		**P**	**01 36 49.3 +0.6**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
TIXI	**Tiksi**	**39.70**	**354**	P		**P**	**01 37 02.0 +0.5**
	comp=Z,0.7nm,0.3s,baz=128,slow=9.9,SNR=1.7						
TIXI	**Tiksi**	**39.70**	**354**	*e*P		**P**	**01 37 01.8 +0.3**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**40.97**	**261**	LR	LR		01 54 44.6
	comp=Z,16nm,19.5s,baz=30,slow=37						
WMQ	**Urumqi**	**43.33**	**301**	*e*P		**P**	**01 37 31.3 -0.4**
WMQ				pmax	pmax		
	comp=Z,33nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,79nm,3.8s						
WMQ				LR	LR		
	comp=N,230nm,24.7s						
WMQ				LR	LR		
	comp=E,280nm,24.9s						
WMQ				LR	LR		
	comp=Z,180nm,21.9s						
ZAA0	**Zalesovo Aray**	**45.26**	**316**	P		**P**	**01 37 45.9 -1.0**
ZAA0				IAmb	IAmb		01 37 47.2
	comp=Z,5.5nm,1.1s						
ZALV	**Zalesovo Beam**	**45.26**	**316**	P		**P**	**01 37 46.5 -0.4**
	comp=Z,3.5nm,0.9s,baz=95,slow=7.4,SNR=9.0						
ZALV				PcP		**PcP**	**01 39 26.0 -0.3**
	comp=Z,0.7nm,0.5s,baz=72,slow=4.7,SNR=2.5						
MK31	**Makanchi Array**	**46.91**	**306**	P		**P**	**01 37 59.9 -0.2**
MK31				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MK31	**Makanchi Array**	**46.91**	**306**	P		**P**	**01 37 59.9 -0.2**
MKAR	**Makanchi Array**	**46.91**	**306**	P		**P**	**01 38 00.1 0.0**
	comp=Z,7.1nm,0.8s,baz=88,slow=9.3,SNR=35						
MKAR	**Makanchi Array**	**46.91**	**306**	*ce*P		**P**	**01 38 00.5 +0.4**
MKAR				pmax	pmax		
	comp=Z,12nm,1.0s						
MAKZ	**Makanchi**	**47.12**	**306**	P		**P**	**01 38 01.7 -0.1**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAKZ	**Makanchi**	**47.12**	**306**	P		**P**	**01 38 01.7 -0.1**
MAKZ				IAmb	IAmb		01 38 04.0
	comp=Z,4.6nm,0.8s						
KURK	**Kurchatov**	**49.05**	**311**	*e*P		**P**	**01 38 14.8 -1.7**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KURK	**Kurchatov**	**49.05**	**311**	P		**P**	**01 38 15.3 -1.2**
KURK				IAmb	IAmb		01 38 25.4
	comp=Z,6.9nm,1.0s						
PRZ	**Przheval'sk**	**50.24**	**301**	P		**P**	**01 38 26.2 +0.2**
PRZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PRZ	**Przheval'sk**	**50.24**	**301**	P		**P**	**01 38 26.1 +0.2**
TARG	**Taragay, Kyrgy**	**50.82**	**300**	P		**P**	**01 38 30.4 -0.3**
TARG				IAmb	IAmb		01 38 35.2
	comp=Z,4.5nm,0.8s						
KDJ	**Kajisay**	**51.20**	**300**	P		**P**	**01 38 33.4 +0.2**
KDJ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KDJ	**Kajisay**	**51.20**	**300**	P		**P**	**01 38 33.4 +0.2**
BOOM	**Boomskoye usch**	**52.02**	**301**	P		**P**	**01 38 39.4 0.0**
BOOM	**Boomskoye usch**	**52.02**	**301**	P		**P**	**01 38 39.4 0.0**
WB0	**Warramunga Arr**	**52.59**	**189**	P		**P**	**01 38 42.6 -0.9**
KSH	**Kashi**	**52.68**	**297**	P		P	01 38 56.3 +12
KSH				pP		sP	01 38 59.6 +1.1
KSH				sP		pwP	01 39 04.1 +2.5
KSH				pmax	pmax		
	comp=Z,29nm,1.1s						
WRAB	**Tennant Creek**	**52.76**	**189**	*e*P		**P**	**01 38 43.1 -1.6**
WB2	**Warramunga Arr**	**52.77**	**189**	P		**P**	**01 38 42.6 -2.2**
WRA	**Warramunga Arr**	**52.77**	**189**	P		**P**	**01 38 42.9 -1.9**
	comp=Z,2.3nm,0.6s,baz=5.3,slow=7.7,SNR=34						
AAK	**Ala-Archa**	**53.03**	**301**	*e*P		**P**	**01 38 46.6 -0.2**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AAK	**Ala-Archa**	**53.03**	**301**	P		**P**	**01 38 46.4 -0.4**
IL31		**53.03**	**31**	P		**P**	**01 38 45.2 -1.0**
ILAR	**Eielson Array**	**53.03**	**31**	P		**P**	**01 38 47.6 +1.3**
	comp=Z,0.4nm,0.8s,baz=262,slow=6.3,SNR=3.0						
KK31	**Karatay Array**	**55.77**	**303**	P		**P**	**01 39 06.4 -0.1**
KK31				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KK31	**Karatay Array**	**55.77**	**303**	P		**P**	**01 39 06.4 -0.1**
BTK	**Batken**	**56.36**	**299**	P		**P**	**01 39 10.3 -0.6**
BTK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BTK	**Batken**	**56.36**	**299**	P		**P**	**01 39 10.3 -0.6**
BTK				IAmb	IAmb		01 39 57.8
	comp=Z,4.9nm,1.1s						
NIL	**Nilore**	**56.48**	**291**	P		**P**	**01 39 11.8 0.0**
NIL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NIL	**Nilore**	**56.48**	**291**	P		**P**	**01 39 11.8 0.0**
ASAR	**Alice Springs**	**56.50**	**189**	P		**P**	**01 39 10.1 -1.7**
	comp=Z,0.6nm,0.4s,baz=8.7,slow=8.4,SNR=21						
GAR	**Garm**	**57.04**	**298**	P		**P**	**01 39 15.0 -0.8**
CHGR	**Chuyangaron**	**58.01**	**298**	P		**P**	**01 39 22.1 -0.4**
KBL	**Kabul**	**59.46**	**294**	P		**P**	**01 39 32.0 -0.8**
KBL				pmax	pmax		
	comp=Z,11nm,1.5s						
KBL	**Kabul**	**59.46**	**294**	P		**P**	**01 39 32.0 -0.8**
ARU	**Arti**	**59.96**	**320**	*d* iP		**P**	**01 39 35.3 -0.3**
ARU							01 40 20.9
ARU				S		**S**	**01 47 45.3 +0.3**
ARU				SS		**SS**	**01 51 39.0 -2.3**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ARU	**Arti**	**59.96**	**320**	P		**P**	**01 39 34.8 -0.8**
GEYT	**Alibeck**	**66.38**	**301**	P		**P**	**01 40 18.8 +0.2**
	comp=Z,1.5nm,0.9s,baz=149,slow=3.1,SNR=4.4						
YKA	**Yellowknife Ar**	**67.42**	**29**	P		**P**	**01 40 25.7 +1.0**
	comp=Z,0.2nm,0.6s,baz=289,slow=6.9,SNR=3.3						
AKT	**Akhty**	**72.06**	**308**	*e*P		**P**	**01 40 53.3 -0.5**
AKT				*e*			01 41 11.8
AKT				pmax	pmax		
	comp=Z,5.0nm,0.6s						
FINES	**FINESS Array B**	**72.90**	**333**	P		**P**	**01 40 58.7 +0.4**
	comp=Z,1.6nm,1.0s,baz=58,slow=4.7,SNR=4.9						
KBZ	**Khabaz**	**74.10**	**312**	P		**P**	**01 41 06.2 +0.6**
	comp=Z,3.3nm,0.9s,baz=52,slow=4.3,SNR=5.5						
LRM	**Limekiln Ridge**	**77.03**	**44**	P		**P**	**01 41 23.9 +1.2**
FFC	**Flin Flon**	**77.19**	**32**	P		**P**	**01 41 24.8 +1.6**
FFC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FFC	**Flin Flon**	**77.19**	**32**	P		**P**	**01 41 24.8 +1.6**
FFC				IAmb	IAmb		01 41 37.8
	comp=Z,3.6nm,0.8s						
NVAR	**Mina Array Bea**	**77.32**	**52**	P		**P**	**01 41 27.1 +2.6**
	comp=Z,0.2nm,0.4s,baz=305,slow=3.2,SNR=1.3						
AKASG	**Malin Array Be**	**78.04**	**323**	P		**P**	**01 41 27.4 -0.5**
	comp=Z,0.3nm,0.3s,baz=49,slow=5.5,SNR=2.4						
NOA	**NORSAR Array B**	**78.40**	**338**	P		**P**	**01 41 30.2 +0.4**
	comp=Z,0.9nm,0.8s,baz=39,slow=5.7,SNR=2.5						
LKWY	**Lake**	**78.93**	**44**	P		**P**	**01 41 35.2 +1.8**
LKWY				pmax	pmax		
	comp=Z,9.0nm,1.4s						
LKWY	**Lake**	**78.93**	**44**	P		**P**	**01 41 35.2 +1.8**
LKWY				IAmb	IAmb		01 41 53.7
	comp=Z,9.2nm,1.4s						
SRU	**San Rafael Swe**	**82.01**	**48**	P		**P**	**01 41 52.3 +2.4**
SRU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SRU	**San Rafael Swe**	**82.01**	**48**	P		**P**	**01 41 52.2 +2.4**
MDUB	**Mudurnu**	**83.14**	**314**	P		**P**	**01 41 55.3 -0.3**
PV14	**Lion Creek, Pa**	**83.39**	**48**	P		**P**	**01 41 59.4 +2.3**
WUAZ	**Wupatki**	**83.55**	**52**	P		**P**	**01 42 00.1 +2.2**
WUAZ				IAmb	IAmb		01 42 14.5
	comp=Z,4.6nm,1.2s						
PSZ	**Piszkesteto**	**84.48**	**325**	P		**P**	**01 42 02.6 +0.3**
PSZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PSZ	**Piszkesteto**	**84.48**	**325**	P		**P**	**01 42 02.6 +0.3**
PSZ				IAmb	IAmb		01 42 26.6
	comp=Z,3.2nm,0.8s						
VYHS	**Vyhne**	**84.58**	**326**	*e*P		**P**	**01 42 03.3 +0.6**
VYHS	**Vyhne**	**84.58**	**326**	*e*P		**P**	**01 42 03.3 +0.6**
CLL	**Collm**	**85.12**	**331**	*e*P		**P**	**01 42 06.0 +0.7**
CLL	**Collm**	**85.12**	**331**	*e*P		**P**	**01 42 06.0 +0.7**
TXAR	**Lajitas Array**	**92.47**	**53**	P		**P**	**01 42 42.1 +1.3**
	comp=Z,1.1nm,1.0s,baz=328,slow=4.4,SNR=7.5						

NCEDC ***25*** *01:33:15.3±2.3, 40°.39N±0°.03×124°.99W±0°.04, h1km±6km, ML3.0/21, Error ellipse: s-maj=4.7km s-min=4.0km az=61.0*

NEIC ***25*** *01:33:16.4±1.2, 40°.37N±0°.04×125°.03W±0°.06, h25km±10km, Error ellipse: s-maj=7.7km s-min=5.1km az=59.0*

ANF ***25*** *01:33:18.8±2.1, 40°.57N×124°.60W, h1km, ML2.9/11, Error ellipse: s-maj=21.8km s-min=7.6km az=55.0*

ISC 25 01:33:14.3±1.9, 40°.35N±0°.04×125°.12W±0°.08, h16km±11km, n106, σ1§13/112, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTM	**Capetown**	**0.61**	**78**		**Pb**	**01 33 28.1**	**+1.4**
KCTM					**Sb**	**01 33 36.8**	**+1.8**
KSMM	**Slide Mountain**	**0.74**	**103**		**Pg**	**01 33 29.4**	**+0.5**
KMPM	**Mount Pierce**	**0.77**	**85**		**Pb**	**01 33 30.1**	**+0.7**
KMPM					**Sb**	**01 33 39.7**	**+0.1**
JCC	**Jacoby Creek,**	**0.95**	**61**		**Pg**	**01 33 32.3**	**-0.6**
JCC	**Jacoby Creek,**	**0.95**	**61**	Pg	**Pg**	**01 33 32.1**	**-0.7**
KCRM	**Chalk Rock**	**1.00**	**85**		**Pg**	**01 33 33.6**	**-0.1**
KMRM	**Mail Ridge**	**1.09**	**96**		**Pg**	**01 33 35.3**	**-0.2**
KRPM	**Rodgers**	**1.16**	**46**		**Pg**	**01 33 35.5**	**-1.3**
KHMM	**Horse Mountain**	**1.18**	**63**		**Pg**	**01 33 36.1**	**-1.1**
KCSM	**Cold Springs**	**1.24**	**81**		**Pg**	**01 33 37.2**	**-1.1**
KBSM	**Bell Springs**	**1.25**	**110**		**Pg**	**01 33 37.4**	**-1.1**
KPPM	**Pickett Peak**	**1.35**	**90**		**Pg**	**01 33 39.0**	**-1.3**
KCPM	**Cahto Peak**	**1.36**	**119**		**Pg**	**01 33 39.1**	**-1.5**
KIPM	**Iron Peak**	**1.37**	**113**		**Pg**	**01 33 39.2**	**-1.6**
KHBM	**Hayfork Bally**	**1.48**	**77**		**Pg**	**01 33 40.3**	**-2.6**
KFPM	**Farley Peak**	**1.49**	**118**		**Pn**	**01 33 40.7**	**+0.3**
KRMB	**Red Mountain**	**1.49**	**38**		**Pn**	**01 33 39.8**	**-0.7**
GTC	**Three Chop Rid**	**1.54**	**128**		**Pn**	**01 33 41.1**	**0.0**
KBNM	**Bluenose Ridge**	**1.55**	**107**		**Pn**	**01 33 41.9**	**+0.6**
KOMM	**Orleans Mounta**	**1.57**	**53**		**Pn**	**01 33 41.4**	**-0.2**
GNAM	**Navarro Ridge**	**1.63**	**135**		**Pn**	**01 33 42.4**	**+0.1**
LBPM	**Beegum Peak**	**1.71**	**90**		**Pn**	**01 33 43.7**	**+0.1**
KSXB	**Camp Six Broad**	**1.75**	**32**		**Pn**	**01 33 43.5**	**-0.6**
GHOM	**Hamilton Openi**	**1.79**	**136**		**Pn**	**01 33 44.8**	**+0.2**
O02D	**Mt. Diablo Mer**	**1.79**	**95**	P	**Pn**	**01 33 45.1**	**+0.4**
	baz=278,SNR=385						
O02D				S	**Sn**	**01 34 05.9**	**-1.3**
	baz=278						
O02D	**Mt. Diablo Mer**	**1.79**	**95**		**Pn**	**01 33 45.1**	**+0.4**
GWRM	**Wonder Ranch**	**1.81**	**129**		**Pn**	**01 33 44.9**	**0.0**
LGPM	**Granite Peak**	**1.83**	**72**		**Pn**	**01 33 45.2**	**-0.1**
GHMM	**Hull Mountain**	**1.89**	**116**		**Pn**	**01 33 46.5**	**+0.5**
GROM	**Round Mountain**	**1.93**	**102**		**Pn**	**01 33 47.1**	**+0.5**
N02D	**Trinity Center**	**1.94**	**71**	P	**Pn**	**01 33 46.6**	**-0.1**
	baz=252,SNR=355						
N02D	**Trinity Center**	**1.94**	**71**		**Pn**	**01 33 46.6**	**-0.1**
GGUM	**Gualala**	**1.95**	**139**		**Pn**	**01 33 47.2**	**+0.3**
GVV	**Valley View**	**1.96**	**106**		**Pn**	**01 33 47.5**	**+0.4**
GASB	**Alder Springs**	**1.98**	**110**		**Pn**	**01 33 47.4**	**+0.2**
WDC	**Whiskeytown Da**	**1.98**	**83**		**Pn**	**01 33 47.5**	**+0.3**
WDC	**Whiskeytown Da**	**1.98**	**83**	Pn	**Pn**	**01 33 46.9**	**-0.3**
LBKM	**Bonanza King**	**2.01**	**68**		**Pn**	**01 33 47.5**	**-0.1**
M02C	**Callahan**	**2.01**	**58**	P	**Pn**	**01 33 47.3**	**-0.3**
	baz=239,SNR=39						
M02C	**Callahan**	**2.01**	**58**		**Pn**	**01 33 47.4**	**-0.3**
KTRM	**Thompson Ridge**	**2.04**	**40**		**Pn**	**01 33 48.3**	**+0.2**
GSNM	**Snow Mountain**	**2.05**	**133**		**Pn**	**01 33 48.7**	**+0.5**
HOPS	**Hopland Field**	**2.09**	**130**	Pn	**Pn**	**01 33 48.8**	**+0.2**
GHLM	**Highland Sprin**	**2.09**	**128**		**Pn**	**01 33 48.7**	**0.0**
GDCM	**Dry Creek**	**2.15**	**137**		**Pn**	**01 33 50.1**	**+0.5**
GTSM	**Trough Springs**	**2.20**	**117**		**Pn**	**01 33 51.1**	**+0.8**
GCK	**Clark Valley**	**2.22**	**111**		**Pn**	**01 33 51.7**	**+1.3**
LAMM	**Antelope Mount**	**2.27**	**56**		**Pn**	**01 33 51.4**	**+0.1**
GCVM	**Cloverdale**	**2.27**	**133**		**Pn**	**01 33 51.4**	**+0.3**
YBH	**Yreka Blue Hor**	**2.29**	**52**		**Pn**	**01 33 51.6**	**+0.1**
YBH	**Yreka Blue Hor**	**2.29**	**52**	Pn	**Pn**	**01 33 51.4**	**-0.1**
GACM	**Adobe Creek**	**2.29**	**130**		**Pn**	**01 33 51.6**	**+0.2**
GHCM	**House Creek**	**2.29**	**139**		**Pn**	**01 33 52.4**	**+0.9**
LTCM	**Tuscan Springs**	**2.30**	**93**		**Pn**	**01 33 52.0**	**+0.5**
GSSM	**Skaggs Springs**	**2.32**	**135**		**Pn**	**01 33 52.3**	**+0.5**
LCSM	**College of the**	**2.33**	**62**		**Pn**	**01 33 52.5**	**+0.4**
FTR	**Fort Ross**	**2.38**	**140**		**Pn**	**01 33 53.2**	**+0.5**
LSHM	**Sage Hen Hill**	**2.39**	**78**		**Pn**	**01 33 53.4**	**+0.6**
GFC	**Funks Creek**	**2.41**	**114**		**Pn**	**01 33 54.9**	**+1.9**
LGBM	**Gray Butte**	**2.43**	**65**		**Pn**	**01 33 54.4**	**+0.8**
NMCNC	**Mill Creek, So**	**2.45**	**135**		**Pn**	**01 33 54.1**	**+0.4**
M03C	**McCloud**	**2.46**	**67**		**Pn**	**01 33 54.5**	**+0.8**
LMPM	**Military Pass**	**2.51**	**62**		**Pn**	**01 33 56.0**	**+1.3**
B040	**Montague**	**2.52**	**53**		**Pn**	**01 33 55.2**	**+0.6**
O03E	**Paynes Creek**	**2.54**	**90**	P	**Pn**	**01 33 54.8**	**-0.1**
	baz=273,SNR=259						
O03E				S	**Sn**	**01 34 24.3**	**-1.3**
	baz=273						
O03E	**Paynes Creek**	**2.54**	**90**		**Pn**	**01 33 54.9**	**-0.1**
LHEM	**Herd Peak**	**2.54**	**59**		**Pn**	**01 33 56.1**	**+1.0**
MNRC	**McLaughlin Min**	**2.54**	**125**		**Pn**	**01 33 56.8**	**+1.9**
LDBM	**Digger Butte**	**2.55**	**87**		**Pn**	**01 33 55.1**	**0.0**
NMTM	**Middletown**	**2.58**	**126**		**Pn**	**01 33 56.7**	**+1.2**
K02D	**Willamette Mer**	**2.58**	**25**	P	**Pn**	**01 33 55.4**	**-0.1**
	baz=204,SNR=92						
K02D				S	**Sn**	**01 34 23.7**	**-3.0**
	baz=204						
MAC	**Mark West Spri**	**2.59**	**133**		**Pn**	**01 33 56.2**	**+0.7**
LBFM	**Black Fox Moun**	**2.65**	**67**		**Pn**	**01 33 57.6**	**+1.1**
LMEM	**Manzanita Entr**	**2.72**	**85**		**Pn**	**01 33 59.1**	**+1.6**
OSUM	**Sutter Buttes**	**2.74**	**112**		**Pn**	**01 33 57.7**	**+0.1**
LCMM	**Colby Mountain**	**2.77**	**93**		**Pn**	**01 33 58.5**	**+0.4**
LGMM	**Garner Mountai**	**2.78**	**62**		**Pn**	**01 33 59.4**	**+1.1**
MGL	**Magalia**	**2.79**	**100**		**Pn**	**01 33 58.3**	**-0.1**
SUTB	**Sutter Butte**	**2.81**	**113**		**Pn**	**01 33 59.1**	**+0.6**
L04D	**Klamath Falls**	**2.83**	**48**	P	**Pn**	**01 34 00.4**	**+1.5**
	baz=229,SNR=50						
L04D				S	**Sn**	**01 34 32.6**	**-0.1**
	baz=229						
L04D	**Klamath Falls**	**2.83**	**48**		**Pn**	**01 34 01.4**	**+2.5**
M04C	**Macdoel**	**2.86**	**59**	P	**Pn**	**01 34 00.0**	**+0.6**
	baz=241,SNR=12						
ORV	**Oroville**	**2.90**	**105**		**Pn**	**01 34 00.4**	**+0.7**
J01E	**Myrtle Point**	**2.94**	**17**	S	**Sn**	**01 34 33.3**	**-2.1**
	baz=196						
CPMM	**Point Molate**	**3.20**	**138**		**Pn**	**01 34 04.4**	**+0.6**
K04D	**Chiloquin, OR**	**3.40**	**47**	P	**Pn**	**01 34 08.7**	**+1.9**
	baz=228,SNR=6.5						
AFDM	**Forest Hills D**	**3.50**	**112**		**Pn**	**01 34 09.5**	**+1.4**
I03D	**Drain, OR**	**3.59**	**21**	P	**Pn**	**01 34 11.9**	**+2.5**
	baz=201,SNR=8.7						
I03D				S	**Sn**	**01 34 49.9**	**-1.5**
	baz=201						
BEKR	**Beckworth**	**3.69**	**96**		**Pn**	**01 34 13.0**	**+2.3**
MOD	**Modoc Plateau**	**3.96**	**65**	Pn	**Pn**	**01 34 14.3**	**-0.2**
K05A	**Summer Lake**	**3.96**	**52**		**Pn**	**01 34 16.0**	**+1.4**
I04A	**Tendick Farm,**	**3.99**	**30**	P	**Pn**	**01 34 17.7**	**+2.9**
	baz=210						
J05D	**Fort Rock, OR**	**4.13**	**44**	P	**Pn**	**01 34 19.0**	**+2.2**
	baz=225,SNR=16						
VCNR	**Virginia City**	**4.34**	**102**	Pn	**Pn**	**01 34 21.7**	**+1.8**
PNTR	**Pine Nut**	**4.44**	**105**		**Pn**	**01 34 22.8**	**+1.6**
PAHR	**Pah Rah Range**	**4.45**	**96**		**Pn**	**01 34 21.8**	**+0.5**
SAO	**San Andreas Ge**	**4.60**	**140**	Pn	**Pn**	**01 34 22.8**	**-0.3**
PINE	**Pine Mountain**	**4.64**	**41**		**Pn**	**01 34 27.0**	**+3.1**
YERR	**Yerington**	**4.74**	**105**		**Pn**	**01 34 24.8**	**-0.5**
H04A	**Detroit Lake**	**4.84**	**26**	Pn	**Pn**	**01 34 27.9**	**+1.4**
HAST	**Hastings Reser**	**4.85**	**144**		**Pn**	**01 34 26.8**	**+0.2**
BBGB	**Big Mountain B**	**4.95**	**138**		Pn	01 34 33.6	+5.6
MDPB	**Devils Postpil**	**5.44**	**118**	Pn	**Pn**	**01 34 37.0**	**+2.0**
KVN	**Kaiserville**	**5.57**	**101**	Pn	**Pn**	**01 34 37.5**	**+0.8**
J08A	**Circle Bar Ran**	**5.80**	**57**		**Pn**	**01 34 39.7**	**-0.1**
BMO	**Blue Mountains**	**7.31**	**49**		**Pn**	**01 35 01.8**	**+1.3**

ATH 25 01:37:46.5, 40°.26N×24°.49E, h26km±7km, ML1.3/3, Error ellipse: s-maj=11.1km s-min=1.3km az=339.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THAS	**Thassos island**	**0.39**	**27**	P	Pb	01 37 55.2	+0.1
THAS				S	Sb	01 38 01.5	+0.6
THAS				AML	AML	01 38 04.8	
	comp=E,115μm,0.3s						
THAS				AML	AML	01 38 05.1	
	comp=N,86μm,0.2s						
OUR	**Ouranopolis**	**0.40**	**282**	P	Pb	01 37 55.1	0.0
OUR				S	Sb	01 38 01.6	+0.7
OUR				AML	AML	01 38 05.3	
	comp=N,92μm,0.3s						
OUR				AML	AML	01 38 05.6	
	comp=E,119μm,0.3s						
PLG	**Polygyros**	**0.81**	**279**	P	Pn	01 38 02.4	+0.2
PLG				S	Sn	01 38 13.8	+0.4
PLG				AML	AML	01 38 15.0	
	comp=N,50μm,0.3s						
PLG				AML	AML	01 38 15.3	
	comp=E,70μm,0.4s						

DDA ***25*** *01:38:03.3, 40°.39N×26°.06E, h7km±4km, ML1.9*

ISK 25 01:38:02.9, 40°.40N×26°.06E, h11km, ML1.9/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.24**	**210**	PG	Pg	01 38 08.5	+0.6
GADA				SG	Sg	01 38 12.7	+1.5
GELI	**Tayfur-Gelibol**	**0.32**	**90**	PG	Pg	01 38 09.9	+0.6
GELI				SG	Sb	01 38 15.1	-0.7
ENEZ	**Enez**	**0.34**	**12**	PG	Pg	01 38 10.4	+0.6
ERIK	**Erikli-Kesan**	**0.44**	**52**	PG	Pg	01 38 11.9	+0.3
ERIK				SG	Sb	01 38 18.4	-0.9
LPK	**Lapseki**	**0.54**	**93**	PG	Pg	01 38 13.8	+0.4
BOZC	**Bozcaada**	**0.56**	**180**	PG	Pg	01 38 14.1	+0.4
BOZC				SG	Sb	01 38 21.9	-0.7
BOZC	**Bozcaada**	**0.56**	**180**	*i* P	Pb	01 38 14.2	-0.4
BOZC				*i* S	Sb	01 38 21.9	-0.7
BOZC				IAML		01 38 22.0	
	comp=N,40nm,0.4s						
BOZC				IAML		01 38 22.0	
	comp=E,45nm,0.6s						
EZN	**Ezine**	**0.61**	**160**	PG	Pg	01 38 14.5	-0.2
KESN	**Edirne-Kesan**	**0.64**	**48**	*i* P	Pg	01 38 15.5	+0.1
KESN				*i* S	Sg	01 38 24.6	+0.7
KESN				IAML		01 38 27.0	
	comp=E,79nm,0.4s						
KESN				IAML		01 38 30.0	
	comp=N,91nm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.76**	**150**	*i* P	Pn	01 38 19.0	-0.5
BAYC				*i* S	Sb	01 38 28.8	+0.4
BAYC				IAML		01 38 30.0	
	comp=N,20nm,0.2s						
BAYC				IAML		01 38 30.0	
	comp=E,25nm,0.2s						
RDO	**Rodhopi**	**0.84**	**332**	PG	Pb	01 38 19.5	-0.1
UKOP	**Uzunkopru-Edir**	**0.85**	**31**	PG	Pb	01 38 20.1	+0.4
KNL	**Balıkesir**	**1.13**	**96**	*i* P	Pn	01 38 25.0	+0.4
KNL				*i* S	Sn	01 38 43.0	+2.8
KNL				IAML		01 38 43.0	
	comp=E,62nm,0.4s						
AYVA	**Ayvalik**	**1.19**	**156**	*i* P	Pg	01 38 26.9	+1.1
AYVA				*i* S	Sn	01 38 42.1	+0.4
AYVA				IAML		01 38 43.0	
	comp=E,25nm,1.1s						
AYVA				IAML		01 38 44.0	
	comp=N,48nm,0.6s						
SIGR	**SIGRI**	**1.20**	**188**	PN	Pb	01 38 25.7	+0.2
TKR	**Tekirdag**	**1.27**	**62**	PN	Pg	01 38 27.3	0.0
KDZ	**Kurdzhali**	**1.34**	**339**	PN	Pn	01 38 27.7	+0.1
BALY	**Balya**	**1.37**	**118**	*i* P	Pg	01 38 29.3	+0.1
BALY				*i* S	Sg	01 38 48.8	+1.9
BALY				IAML		01 38 49.0	
	comp=E,18nm,0.3s						
BALY				IAML		01 38 50.0	
	comp=N,17nm,0.4s						
EDC	**Edincik**	**1.38**	**92**	PN	Pb	01 38 28.7	0.0
CRLT	**Corlu**	**1.47**	**60**

RCBR S S 01 47 40.5 -29
5.5nm,0.6s,baz=61,slow=19,SNR=5.4
RCBR LR LR 01 50 09.7
comp=Z,260nm,19.7s,baz=73,slow=30
RCBR Riachuelo 21.81 257 IAmb IAmb 01 44 23.8
comp=Z,24nm,1.2s
TAM Tamanrasset 30.77 38 P **P** **01 45 32.4 +0.6**
MDT Midelt 35.02 15 P **P** **01 46 09.7 +1.0**
comp=Z,0.6nm,0.5s,baz=204,slow=5.3,SNR=1.6
BDFB Brasilia 36.03 245 LR LR 01 58 09.2
comp=Z,185nm,20.5s,baz=90,slow=32
ESDC Sonseca Array 41.72 12 P **P** **01 47 07.0 +2.0**
comp=Z,0.2nm,0.9s,baz=190,slow=6.5,SNR=1.1
ESDC LR LR 02 04 22.3
comp=Z,365nm,21.2s,baz=200,slow=36
KEST Kesra 42.89 29 LR LR 02 05 42.6
comp=Z,329nm,18.6s,baz=170,slow=37
LSZ Lusaka 44.47 111 P **P** **01 47 26.7 -1.1**
comp=Z,3.0nm,1.1s,baz=247,slow=5.2,SNR=4.0
LSZ Lusaka 44.47 111 IAmb IAmb 01 47 32.5
comp=Z,16nm,1.6s
MBAR Mbarara 45.29 90 P **P** **01 47 35.9 +1.5**
LBTB Lobatse 45.47 125 P **P** **01 47 32.3 -3.3**
comp=Z,6.6nm,1.1s,baz=290,slow=9.6,SNR=6.0
BOSA Boshof 46.82 129 P **P** **01 47 42.6 -3.6**
comp=Z,2.8nm,0.6s,baz=285,slow=6.9,SNR=11
BOSA LR LR 02 03 20.4
comp=Z,161nm,19.7s,baz=280,slow=31
BOSA Boshof 46.82 129 P **P** **01 47 48.6 +2.4**
BNI Bardonecchia 49.67 20 P **P** **01 48 10.1 +2.1**
BNI IAmb IAmb 01 48 19.4
comp=Z,6.4nm,0.9s
INTR Introdacqua 50.03 28 P **P** **01 48 10.7 0.0**
INTR IAmb IAmb 01 48 34.5
comp=Z,7.5nm,1.0s
AQU L'Aquila 50.07 27 *e*Pn **P** **01 48 14.1 +3.2**
AQU L'Aquila 50.07 27 P **P** **01 48 12.6 +1.6**
NRCA Norcia 50.32 26 P **P** **01 48 15.0 +2.1**
SENIN Lac Senin/Sane 51.03 19 P **P** **01 48 20.1 +1.8**
KMBO Kilima Mbogo 51.80 91 LR LR 02 08 57.4
comp=Z,429nm,19.5s,baz=259,slow=34
FUORN Ofenpass-Fuorn 52.29 21 P **P** **01 48 29.4 +1.6**
CTI Castel Tesino 52.33 23 P **P** **01 48 28.9 +0.9**
CTI IAmb IAmb 01 48 40.5
comp=Z,6.0nm,1.0s
ECH Echery 52.62 18 P **P** **01 48 31.1 +1.2**
DAVA Damuels 52.72 21 *i* P **P** **01 48 31.9 +1.1**
comp=Z,8.5nm,0.7s,SNR=7.6
FETA Feichten 52.80 22 *e*P **P** **01 48 32.2 +0.8**
comp=Z,3.4nm,0.7s
PDG Podgorica 52.97 31 P **P** **01 48 33.7 +1.1**
PDG IAmb IAmb 01 48 42.8
comp=Z,7.0nm,0.8s
BFO Black Forest 53.09 19 P **P** **01 48 34.8 +1.3**
BFO IAmb IAmb 01 48 43.7
comp=Z,7.0nm,1.1s
UBR Ueberruh 53.13 21 *e*P **P** **01 48 34.7 +0.9**
comp=Z,11nm,0.7s,baz=212,slow=7.2
SQTA Sankt Quirin 53.14 22 *e*P **P** **01 48 35.1 +1.2**
comp=Z,6.9nm,0.7s,SNR=5.9
RETA Reutte 53.20 21 *i* P **P** **01 48 35.0 +0.6**
comp=Z,3.1nm,0.6s,SNR=5.6
MOTA Moosalm 53.21 22 *i* P **P** **01 48 35.4 +1.0**
comp=Z,2.6nm,0.7s
ABTA Abfaltersbach 53.24 23 *e*P **P** **01 48 36.0 +1.4**
comp=Z,2.9nm,0.8s
WTTA Wattenberg 53.34 22 P **P** **01 48 36.7 +1.2**
comp=Z,7.1nm,0.9s,SNR=6.4
WATA Walderalm 53.38 22 *e*P **P** **01 48 37.4 +1.7**
comp=Z,3.8nm,0.8s
FUR Furstenfeldbru 53.96 21 *e*P **P** **01 48 40.8 +1.0**
comp=Z,10nm,0.8s,baz=212,slow=7.2
RJOB Jochberg 54.17 22 *e*P **P** **01 48 41.9 +0.5**
comp=Z,6.2nm,0.7s,baz=212,slow=7.2
SOKA Soboth 54.21 25 *i* P **P** **01 48 43.3 +1.6**
comp=Z,5.4nm,1.5s
ARSA Arzberg 54.87 25 sP sP 01 48 52.7 +3.4
comp=Z,4.3nm,0.8s
LPAZ La Paz 54.87 251 LR LR 02 10 44.9
comp=Z,255nm,19.8s,baz=127,slow=35
GEC2 GERESS Array S 55.43 22 P **P** **01 48 51.0 +0.5**
GEC2 IAmb IAmb 01 49 00.4
comp=Z,5.1nm,1.0s
GERES GERESS Array B 55.43 22 P **P** **01 48 49.1 -1.4**
comp=Z,1.6nm,0.7s,baz=224,slow=5.6,SNR=21
GERES LR LR 02 12 47.4
comp=Z,190nm,21.0s,baz=240,slow=36
CONA Conrad Observa 55.54 24 *i* pP pP 01 48 56.2 +2.8
comp=Z,4.2nm,1.0s
KHC Kasperske Hory 55.61 22 *e*P P 01 48 42.0 -10
KHC *ex* x 01 48 49.5
NKC Novy Kostel 56.12 21 AMS AMS 02 12 40.0
comp=Z,200nm,21.8s
PBCC Pribram 56.23 22 *e*P **P** **01 48 56.6 +0.5**
PBCC *ex* x 01 49 00.8
TREC Trest 56.48 23 AMS AMS 02 16 50.0
comp=Z,200nm,14.9s
PRU Pruhonice 56.68 22 AMS AMS 02 11 20.0
comp=Z,200nm,28.8s
PRA Prague 56.70 22 AMS AMS 02 12 30.0
comp=Z,100nm,14.5s
PVCC Panska Ves 57.13 22 *e*P **P** **01 49 04.2 +1.7**
PVCC AMS AMS 02 13 00.0
comp=Z,200nm,14.6s
BRG Berggiesshubel 57.18 21 *e*P **P** **01 49 04.3 +1.4**
comp=Z,3.2nm,0.9s
BRG S **S** **01 57 06.0 +7.7**
comp=N,149nm,15.1s
comp=E,154nm,17.0s
comp=Z,263nm,13.0s
CLL Collm 57.21 20 *e*(P) **P** **01 49 07.0 +3.9**
comp=Z,6.0nm,1.4s
CLL *e*PP **PP** **01 51 12.0 +1.8**
CLL *e*S **S** **01 56 58.0 -0.7**
comp=N,200nm,25.4s
CLL *e*S **S** **01 56 58.0 -0.7**
comp=E,100nm,24.5s
CLL *e*(SS) 02 01 17.0
CLL *e*SSS SSS 02 03 00.0
VYHS Vyhne 57.24 26 *e*P **P** **01 49 04.4 +1.0**
KRLC Kraliky 57.61 23 *e*P **P** **01 49 07.1 +1.1**
KRLC *ex* x 01 49 14.4
KRLC *ex* x 01 49 21.8
KRLC AMS AMS 02 17 00.0
comp=E,200nm,13.7s
DPC Dobruska-Polom 57.65 23 *e*P **P** **01 49 07.3 +1.1**
DPC AMS AMS 02 14 10.0
comp=E,200nm,13.2s
UPC Upice 57.65 23 AMS AMS 02 12 20.0
comp=E,200nm,19.4s
CHVC Chvalec 57.73 23 AMS AMS 02 15 20.0
comp=E,200nm,18.0s
OSTC Ostas 57.77 23 AMS AMS 02 17 50.0
comp=E,200nm,16.9s
TIRR Tirgusor 59.30 35 P **P** **01 49 17.8 0.0**
BRTR Keskin Array B 59.88 42 P **P** **01 49 21.6 -0.5**
comp=E,2.5nm,0.9s,baz=226,slow=6.7,SNR=5.6
BRTR LR LR 02 15 11.7
comp=E,87nm,21.9s,baz=202,slow=36
AKASG Malin Array Be 63.62 29 P **P** **01 49 47.3 +0.4**
comp=E,1.7nm,0.7s,baz=232,slow=5.3,SNR=7.0
AKBB Malin Array Si 63.62 29 P **P** **01 49 48.7 +1.8**
PLCA Paso Flores 64.07 224 LR LR 02 12 49.6
comp=E,183nm,21.7s,baz=69,slow=32
NB2 NORSAR Subarra 65.07 13 P **P** **01 49 57.0 +0.7**
comp=Z,2.9nm,0.9s,baz=207,slow=6.9
NOA NORSAR Array B 65.07 13 P **P** **01 49 56.6 +0.4**
comp=Z,1.5nm,0.8s,baz=208,slow=6.7,SNR=4.7
KBZ Khabaz 67.86 41 P **P** **01 50 15.3 +0.9**
comp=Z,3.3nm,0.9s,baz=167,slow=1.8,SNR=4.4
KBZ LR LR 02 24 11.3
comp=Z,39nm,18.2s,baz=247,slow=40
FINES FINESS Array B 69.64 19 P **P** **01 50 22.1 -3.0**
comp=Z,2.7nm,0.8s,baz=222,slow=2.6,SNR=9.9
FINES LR LR 02 21 50.8
comp=Z,122nm,19.9s,baz=228,slow=37
SCHQ Schefferville 70.22 331 LR LR 02 16 51.6
comp=Z,86nm,19.4s,baz=20,slow=32
ARCES ARCESS Array B 75.44 14 P **P** **01 50 60.0 +0.4**
comp=Z,2.0nm,0.8s,baz=234,slow=4.3,SNR=4.7
ARCES LR LR 02 25 24.4
comp=Z,186nm,20.4s,baz=186,slow=37
SYO Syowa Base 76.78 163⇑ *e*PcP **PcP** **01 51 20.2 +1.8**
GEYT Alibeck 77.07 51 P **P** **01 51 08.0 -1.6**
GEYT LR LR 02 28 07.6
comp=Z,144nm,18.9s,baz=190,slow=38

MAW Mawson 84.20 158 LR LR 02 21 58.3
comp=Z,110nm,19.7s,baz=256,slow=31
TXAR Lajitas Array 89.75 299 P **P** **01 52 14.0 -1.1**
comp=Z,0.2nm,0.5s,baz=129,slow=7.2,SNR=2.8
KSH Kashi 91.10 51 P **P** **01 52 22.8 +1.6**
KSH pP pwP 01 52 27.6 -2.0
KSH sP sP 01 52 31.3 +7.8
KSH pmax pmax
comp=Z,59nm,1.5s
KSH pmax pmax
comp=Z,180nm,4.4s
MKAR Makanchi Array 95.49 43 LR LR 02 40 09.4
comp=Z,33nm,21.5s,baz=284,slow=38
YKA Yellowknife Ar 95.61 333 P **P** **01 52 40.3 -1.0**
comp=Z,0.1nm,0.7s,baz=82,slow=4.6,SNR=1.9
ZALV Zalesovo Beam 96.41 36 LR LR 02 39 26.8
comp=Z,52nm,19.9s,baz=84,slow=37
ASAR Alice Springs 140.69 131 PKP **PKPdf** **01 58 43.3 -3.5**
comp=Z,0.8nm,0.8s,baz=223,slow=2.2,SNR=3.0
WRA Warramunga Arr 143.03 126 PKP PKPbc 01 58 47.0 -0.7
comp=Z,0.7nm,0.8s,baz=236,slow=2.6,SNR=2.8

VIE 25 01:40:34.8±0.5, 46°19N×12°44E, h2km±11km, ml1.5/6, 2C-2D, Error ellipse: s-maj=4.0km s-min=2.2km az=166.0 18 km ENE of Belluno, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
CSO	**Casso**	**0.12**	**317**⇑	*e*Pg	Pg	01 40 36.8	-0.3
CSO				*e*Sg	Sg	01 40 38.7	+0.1
CIMO	**Cimolais**	**0.12**	**0**⇓	*e*Pg	Pg	01 40 36.8	-0.4
CIMO				*e*Sg	Sg	01 40 38.8	0.0
MLNI	**Malnisio**	**0.12**	**108**⇓	*e*Pg	Pg	01 40 37.0	-0.2
MLNI				*e*Sg	Sg	01 40 39.3	+0.4
CAE	**Caneva**	**0.18**	**180**⇑	*e*Pg	Pg	01 40 37.9	-0.4
CAE				*e*Sg	Sg	01 40 40.8	+0.1
ABTA	**Abfaltersbach** 0.1nm,0.0s	**0.56**	**5**	*e*Pg	Pg	01 40 45.5	0.0
ABTA				*e*Sg	Sg	01 40 52.9	+0.1
	1.1nm,0.1s						
WATA	**Walderalm** 0.2nm,0.1s	**1.29**	**333**	*e*Pg	Pn	01 41 00.2	+0.1
SQTA	**Sankt Quirin** 0.4nm,0.1s	**1.33**	**321**	*e*Pg	Pn	01 41 00.6	0.0

*DDA **25** 01:46:09.0, 40°30N×23°65E, h3km±4km, ML3.1*
*BEO **25** 01:46:13.7±0.8, 39°63N×24°70E, h0km, ML3.5/8*
*ATH **25** 01:46:19.9, 40°01N×24°27E, h29km±1km, ML3.4/12, Error ellipse: s-maj=1.0km s-min=0.7km az=21.0*
*ISK **25** 01:46:19.2, 40°00N×24°33E, h10km, ML3.5/37*
*THE **25** 01:46:20.8, 40°02N×24°27E, h17km±1km, ML3.3/14, Error ellipse: s-maj=1.3km s-min=0.6km az=319.0*
ISC 25 01:46:20.2±1.0, 40°00N±0°02×24°30E±0°01, h9km±9km, n209,σ1s06/253, 10C-18D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
OUR	**Ouranopolis**	**0.41**	**324**	P	**Pg**	**01 46 28.6**	**+0.3**
OUR				S	**Sg**	**01 46 34.4**	**+0.6**
	5μm,0.3s						
OUR	**Ouranopolis**	**0.41**	**324**	P	**Pg**	**01 46 28.7**	**+0.3**
OUR				S	**Sg**	**01 46 34.2**	**+0.4**
OUR				AML	AML	01 46 34.6	
	comp=E,8537μm,0.4s						
OUR				AML	AML	01 46 36.9	
	comp=N,11406μm,0.2s						
OUR	**Ouranopolis**	**0.41**	**324**	PG	**Pg**	**01 46 28.6**	**+0.3**
OUR				SG	**Sg**	**01 46 34.7**	**+0.9**
PAIG	**Paliouri**	**0.48**	**262**	P	**Pg**	**01 46 29.7**	**+0.1**
PAIG				S	**Sb**	**01 46 37.1**	**-1.0**
	comp=N,4μm,0.3s						
PAIG	**Paliouri**	**0.48**	**262**	P	**Pg**	**01 46 30.1**	**+0.5**
PAIG				S	**Sg**	**01 46 36.7**	**+0.7**
PAIG				AML	AML	01 46 37.8	
	comp=N,9239μm,0.4s						
PAIG				AML	AML	01 46 37.8	
	comp=E,7640μm,0.3s						
LIA	**Limnos Island**	**0.69**	**98**	P	**Pg**	**01 46 33.8**	**+0.4**
LIA				S	**Sb**	**01 46 45.4**	**+1.5**
	comp=E,4μm,0.4s						
LIA	**Limnos Island**	**0.69**	**98**	P	**Pg**	**01 46 33.9**	**+0.4**
LIA				S	**Sb**	**01 46 45.0**	**+1.1**
LIA				AML	AML	01 46 46.3	
	comp=E,8137μm,0.5s						
LIA				AML	AML	01 46 46.5	
	comp=N,8554μm,0.3s						
THAS	**Thassos island**	**0.69**	**28**	P	**Pg**	**01 46 32.9**	**-0.5**
THAS				S	**Sb**	**01 46 44.2**	**+0.3**
	comp=N,7μm,0.3s						
THAS	**Thassos island**	**0.69**	**28**	P	**Pg**	**01 46 33.5**	**+0.1**
THAS				S	**Sb**	**01 46 44.1**	**+0.2**
THAS				AML	AML	01 46 45.0	
	comp=E,14340μm,0.3s						
THAS				AML	AML	01 46 45.5	
	comp=N,13672μm,0.3s						
EFSA	**Agios Efstrati**	**0.70**	**131**	P	**Pb**	**01 46 34.6**	**0.0**
EFSA				S	**Sb**	**01 46 45.5**	**+1.2**
PLG	**Polygyros**	**0.76**	**300**	P	**Pg**	**01 46 34.5**	**-0.2**
PLG				S	**Sg**	**01 46 44.9**	**+0.3**
	comp=N,3μm,0.3s						
PLG	**Polygyros**	**0.76**	**300**	P	**Pg**	**01 46 34.5**	**-0.2**
PLG				S	**Sg**	**01 46 44.2**	**-0.4**
PLG				AML	AML	01 46 47.9	
	comp=N,6080μm,0.3s						
PLG				AML	AML	01 46 48.1	
	comp=E,5820μm,0.3s						
AOS	**Alonnisos**	**0.89**	**202**	P	**Pg**	**01 46 36.9**	**-0.4**
AOS				S	**Sb**	**01 46 50.6**	**+0.8**
	comp=E,2μm,0.4s						
AOS	**Alonnisos**	**0.89**	**202**	P	**Pg**	**01 46 37.1**	**-0.2**
AOS				S	**Sb**	**01 46 50.3**	**+0.5**
AOS				AML	AML	01 46 53.8	
	comp=N,4276μm,0.4s						
AOS				AML	AML	01 46 56.0	
	comp=E,3295μm,0.8s						
AOS	**Alonnisos**	**0.89**	**202**	PG	**Pg**	**01 46 36.9**	**-0.4**
ALNA	**Alonissos**	**0.91**	**202**	P	**Pg**	**01 46 37.4**	**-0.4**
KVLA	**Kavala**	**0.94**	**4**	P	**Pg**	**01 46 38.2**	**-0.1**
KAVA	**Kavala**	**1.01**	**9**	P	**Pg**	**01 46 39.0**	**-0.6**
KAVA				S	**Sg**	**01 46 52.2**	**-0.5**
	comp=E,2μm,0.3s						
KAVA	**Kavala**	**1.01**	**9**	P	**Pg**	**01 46 39.2**	**-0.4**
KAVA				AML	AML	01 46 54.3	
	comp=N,4010μm,0.2s						
KAVA				AML	AML	01 46 54.8	
	comp=E,4160μm,0.4s						
SMTH	**Samothraki Isl**	**1.05**	**63**	P	**Pg**	**01 46 39.1**	**-1.3**
SMTH				S	**Sg**	**01 46 54.0**	**-0.1**
	comp=E,980nm,0.3s						
SMTH	**Samothraki Isl**	**1.05**	**63**	P	**Pg**	**01 46 39.6**	**-0.8**
SMTH				S	**Sg**	**01 46 54.6**	**+0.5**
SMTH				AML	AML	01 46 57.0	
	comp=N,2510μm,0.3s						
SMTH				AML	AML	01 46 59.4	
	comp=E,1334μm,0.3s						
SKIA	**Skiathos**	**1.05**	**218**	P	**Pg**	**01 46 39.9**	**-0.5**
SKIA				S	**Sb**	**01 46 54.6**	**+0.1**
	comp=E,1μm,0.5s						
SKIA	**Skiathos**	**1.05**	**218**	P	**Pg**	**01 46 40.1**	**-0.3**
SKIA				AML	AML	01 46 58.5	
	comp=N,1985μm,0.6s						
SKIA				AML	AML	01 46 58.6	
	comp=E,2886μm,0.5s						
XOR	**Xorichti**	**1.06**	**234**	P	**Pg**	**01 46 40.0**	**-0.6**
XOR				S	**Sg**	**01 46 54.5**	**0.0**
	comp=E,2μm,0.6s						
XOR	**Xorichti**	**1.06**	**234**	P	**Pg**	**01 46 40.2**	**-0.4**
XOR				S	**Sg**	**01 46 54.0**	**-0.5**
XOR				AML	AML	01 46 56.4	
	comp=E,3021μm,0.6s						
XOR				AML	AML	01 47 00.2	
	comp=N,3595μm,0.4s						
NEO	**Neokhori**	**1.08**	**231**	P	**Pg**	**01 46 40.2**	**-0.8**
NEO				S	**Sb**	**01 46 55.2**	**-0.1**
	comp=N,2μm,0.5s						
NEO	**Neokhori**	**1.08**	**231**	P	**Pg**	**01 46 40.6**	**-0.4**
NEO				AML	AML	01 46 56.6	
	comp=E,3576μm,0.5s						
NEO				AML	AML	01 46 58.2	
	comp=N,3369μm,0.5s						
SOH	**Sokhos**	**1.09**	**319**	P	**Pg**	**01 46 40.9**	**-0.3**
HORT	**Hortiatis**	**1.10**	**303**	P	**Pg**	**01 46 40.4**	**-0.8**
HORT				S	**Sg**	**01 46 55.1**	**-0.4**
	comp=N,870nm,0.4s						
HORT	**Hortiatis**	**1.10**	**303**	P	**Pg**	**01 46 40.5**	**-0.8**
HORT				S	**Sg**	**01 46 55.3**	**-0.2**
HORT	**Hortiatis**	**1.10**	**303**	PN	**Pg**	**01 46 39.9**	**-1.4**
SKY	**Skiros Island**	**1.14**	**170**	P	**Pb**	**01 46 41.9**	**-0.1**
SKY	**Skiros Island**	**1.14**	**170**	P	**Pb**	**01 46 41.8**	**-0.2**
SKY				AML	AML	01 47 00.6	
	comp=E,6924μm,0.2s						
SKY				AML	AML	01 47 01.1	
	comp=N,8080μm,0.2s						
THE	**Thessaloniki**	**1.20**	**302**	P	**Pb**	**01 46 42.1**	**-1.0**
THE	**Thessaloniki**	**1.20**	**302**	P	**Pb**	**01 46 42.2**	**-1.0**
GADA	**Gvkgeada**	**1.24**	**81**	P	**Pn**	**01 46 42.8**	**-0.9**
GADA				S	**Sn**	**01 47 01.0**	**+0.5**
	comp=N,3μm,0.5s						
GADA	**Gvkgeada**	**1.24**	**81**	PN	**Pn**	**01 46 42.6**	**-1.1**
GADA				SN	**Sb**	**01 47 00.2**	**+0.3**
SRS	**Serrai**	**1.24**	**334**	P	**Pn**	**01 46 43.0**	**-0.7**
SRS	**Serrai**	**1.24**	**334**	P	**Pn**	**01 46 43.1**	**-0.7**
BOZC	**Bozcaada**	**1.36**	**96**	PN	**Pn**	**01 46 44.2**	**-1.1**
BOZC	**Bozcaada**	**1.36**	**96**	*i* P	**Pn**	**01 46 44.7**	**-0.6**
BOZC				IAML		01 47 07.0	
	comp=E,307nm,0.7s						
BOZC				IAML		01 47 08.0	
	comp=N,188nm,0.3s						
LIT	**Litokhoron**	**1.39**	**275**	P	**Pn**	**01 46 45.0**	**-0.8**
LIT				S	**Sb**	**01 47 02.6**	**-1.7**
	comp=N,298nm,0.5s						
LIT	**Litokhoron**	**1.39**	**275**	P	**Pn**	**01 46 45.0**	**-0.8**
MRKA	**Markates**	**1.41**	**203**	P	**Pn**	**01 46 45.2**	**-0.8**
MRKA	**Markates**	**1.41**	**203**	P	**Pn**	**01 46 45.2**	**-0.8**
SIGR	**SIGRI**	**1.44**	**123**	P	**Pn**	**01 46 46.1**	**-0.3**
SIGR	**SIGRI**	**1.44**	**123**	P	**Pn**	**01 46 46.0**	**-0.4**
SIGR	**SIGRI**	**1.44**	**123**	PN	**Pn**	**01 46 45.9**	**-0.4**
RDO	**Rodhopi**	**1.48**	**39**	P	**Pn**	**01 46 45.9**	**-1.1**
RDO	**Rodhopi**	**1.48**	**39**	P	**Pn**	**01 46 46.0**	**-1.1**
RDO	**Rodhopi**	**1.48**	**39**	PN	**Pn**	**01 46 45.9**	**-1.1**
LRSO	**Larissa Observ**	**1.51**	**258**	P	**Pn**	**01 46 47.4**	**+0.1**
EZN	**Ezine**	**1.57**	**96**	P	**Pn**	**01 46 47.8**	**-0.4**
EZN	**Ezine**	**1.57**	**96**	PN	**Pn**	**01 46 47.3**	**-0.9**
KNT	**Kendrikon**	**1.58**	**318**	P	**Pn**	**01 46 48.3**	**-0.1**
KNT	**Kendrikon**	**1.58**	**318**	PN	**Pn**	**01 46 48.1**	**-0.3**
ENEZ	**Enez**	**1.59**	**62**	P	**Pn**	**01 46 47.5**	**-1.0**
ENEZ	**Enez**	**1.59**	**62**	PN	**Pn**	**01 46 47.6**	**-1.0**
MMB	**Musomiste**	**1.65**	**345**	P	**Pn**	**01 46 48.3**	**-1.1**
MMB				S	**Sn**	**01 47 10.4**	**-0.3**
LKR	**Lokris**	**1.68**	**217**	P	**Pn**	**01 46 49.1**	**-0.7**
LKR	**Lokris**	**1.68**	**217**	P	**Pn**	**01 46 49.1**	**-0.7**
PRK	**Paraskevi**	**1.70**	**116**	P	**Pn**	**01 46 50.6**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.71**	**76**	PN	**Pn**	**01 46 49.5**	**-0.7**
RZN	**Rozhen**	**1.72**	**10**	P	**Pn**	**01 46 50.1**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**1.75**	**98**	*i* P	**Pn**	**01 46 50.6**	**-0.1**
BAYC				*i* S	**Sn**	**01 47 12.6**	**-0.5**
BAYC				IAML		01 47 20.0	
	comp=N,120nm,0.3s						
BAYC				IAML		01 47 20.0	
	comp=E,93nm,0.6s						
AXAR	**Agios Charalam**	**1.77**	**226**	P	**Pn**	**01 46 50.9**	**-0.1**
AGG	**Agios Georgios**	**1.81**	**238**	P	**Pn**	**01 46 51.2**	**-0.4**
AGG	**Agios Georgios**	**1.81**	**238**	P	**Pn**	**01 46 51.2**	**-0.4**
AGG	**Agios Georgios**	**1.81**	**238**	PN	**Pn**	**01 46 51.4**	**-0.2**
THL	**Klokotos Trika**	**1.81**	**257**	P	**Pn**	**01 46 51.3**	**-0.3**
ERIK	**Erikli-Kesan**	**1.82**	**68**	PN	**Pn**	**01 46 50.5**	**-1.2**
KDZ	**Kurdzhali**	**1.85**	**27**	P	**Pn**	**01 46 50.6**	**-1.6**
KDZ	**Kurdzhali**	**1.85**	**27**	PN	**Pn**	**01 46 50.9**	**-1.3**
VAY	**Valandovo**	**1.86**	**316**	*e*Pn	**Pb**	**01 46 53.8**	**-0.6**
VAY				*e*Sn	**Sg**	**01 47 10.6**	**+2.2**
VAY	**Valandovo**	**1.86**	**316**	*i* Pn	**Pg**	**01 46 55.5**	**-0.5**
VAY	**Valandovo**	**1.86**	**316**	*i* Pn	**Pg**	**01 46 55.5**	**-0.5**
LPK	**Lapseki**	**1.92**	**78**	PN	**Pn**	**01 46 52.1**	**-1.0**
DION	**Dionisos Attik**	**1.94**	**189**	P	**Pn**	**01 46 52.6**	**-0.8**
MAKR	**Makrakomi, Fth**	**1.95**	**240**	P	**Pn**	**01 46 53.8**	**+0.4**
VIL2	**Platees**	**1.96**	**205**	P	**Pn**	**01 46 53.1**	**-0.5**
KARY	**Karystos**	**1.97**	**177**	P	**Pn**	**01 46 53.3**	**-0.4**
AYVA	**Ayvalik**	**1.97**	**110**	*i* P	**Pn**	**01 46 54.2**	**+0.5**
AYVA				*i* S	**Sn**	**01 47 16.3**	**-2.2**
AYVA				IAML		01 47 18.0	
	comp=N,148nm,0.5s						
AYVA				IAML		01 47 19.0	
	comp=E,74nm,0.5s						
PTL	**Penteli**	**1.98**	**190**	P	**Pn**	**01 46 53.1**	**-0.7**
KESN	**Edirne-Kesan**	**2.00**	**65**	*i* S	**Sb**	**01 47 23.1**	**+1.1**
PROD	**Prodromos**	**2.05**	**213**	P	**Pn**	**01 46 54.1**	**-0.8**
ATHU	**Athens Univers**	**2.07**	**191**	P	**Pn**	**01 46 54.5**	**-0.6**
UKOP	**Uzunkopru-Edir**	**2.10**	**57**	PN	**Pn**	**01 46 55.4**	**-0.2**
CHOS	**Chios island**	**2.11**	**139**	P	**Pn**	**01 46 55.8**	**0.0**
CHOS	**Chios island**	**2.11**	**139**	PN	**Pn**	**01 46 55.6**	**-0.1**
PLD	**Plovdiv**	**2.13**	**8**	P	**Pn**	**01 46 56.3**	**+0.4**
PLD	**Plovdiv**	**2.13**	**8**	PN	**Pn**	**01 46 56.0**	**+0.1**
EVR	**Evrytania**	**2.21**	**242**	P	**Pn**	**01 46 57.0**	**-0.2**
DKL	**Dikili**	**2.22**	**114**	PN	**Pn**	**01 46 57.3**	**+0.2**
LTK	**Loutraki**	**2.23**	**208**	P	**Pn**	**01 46 56.8**	**-0.6**
DIM	**Dimitrovgrad**	**2.25**	**24**	P	**Pn**	**01 46 57.2**	**-0.4**
KPRO	**Kipourio**	**2.26**	**270**	P	**Pn**	**01 46 58.3**	**+0.5**
LOUT	**Loutraki**	**2.26**	**208**	P	**Pn**	**01 46 57.0**	**-0.7**
RKY	**Sarkoy-Tekirda**	**2.30**	**72**	PN	**Pn**	**01 46 58.2**	**-0.2**
ANX	**Ano Chora**	**2.32**	**234**	P	**Pn**	**01 46 58.8**	**+0.1**
KALE	**Kalithea**	**2.32**	**227**	P	**Pn**	**01 46 58.5**	**-0.2**
KRBG	**Karabiga-Canak**	**2.33**	**79**	PN	**Pn**	**01 46 58.6**	**-0.1**
SERG	**Sergoula**	**2.36**	**228**	P	**Pn**	**01 46 58.9**	**-0.2**
FNA	**Florina**	**2.37**	**290**	P	**Pn**	**01 46 59.2**	**0.0**
FNA	**Florina**	**2.37**	**290**	PN	**Pn**	**01 46 59.1**	**-0.2**
TRIZ	**Trizonia**	**2.38**	**227**	P	**Pn**	**01 46 59.3**	**-0.1**
ZEDA	**zmir-Bergama**	**2.38**	**115**	*i* P	**Pn**	**01 47 00.0**	**+0.6**
ZEDA				*i* S	**Sb**	**01 47 34.6**	**+1.9**
ZEDA				IAML		01 47 44.0	
	comp=N,68nm,0.4s						
ZEDA				IAML		01 47 44.0	
	comp=E,37nm,0.4s						
URLA	**Izmir**	**2.42**	**132**	PN	**Pn**	**01 46 59.7**	**-0.3**
URLA	**Izmir**	**2.42**	**132**	*i* P	**Pn**	**01 46 59.7**	**-0.3**
URLA				*i* S	**Sn**	**01 47 27.0**	**-2.7**
KNL	**Balıkesir**	**2.49**	**83**	*i* S	**Sg**	**01 47 38.8**	**-1.2**
LAKA	**Lakka**	**2.52**	**227**	P	**Pn**	**01 47 01.7**	**+0.3**
PGB	**Panagyurishte**	**2.55**	**358**	P	**Pb**	**01 47 07.6**	**+1.4**
PGB				S	**Sb**	**01 47 39.9**	**+2.2**
PVO	**Paravola**	**2.56**	**238**	P	**Pn**	**01 47 02.2**	**+0.4**
BALY	**Balya**	**2.57**	**95**	*i* S	**Sg**	**01 47 41.5**	**-1.1**
KLV	**Kalavryta, Ach**	**2.57**	**221**	P	**Pn**	**01 47 01.8**	**-0.3**
GONE	**Gonen-Balikesi**	**2.60**	**88**	PN	**Pn**	**01 47 02.2**	**-0.2**
EDRB	**Edirne**	**2.61**	**44**	PN	**Pn**	**01 47 01.9**	**-0.7**
DID	**Didima**	**2.62**	**199**	P	**Pn**	**01 47 02.0**	**-0.8**
TKR	**Tekirdag**	**2.66**	**67**	PN	**Pn**	**01 47 03.3**	**+0.1**
BLCB	**Balcova**	**2.67**	**126**	PN	**Pn**	**01 47 03.2**	**-0.2**
STEP	**BALIKESIR_Sava**	**2.71**	**102**	*i* P	**Pn**	**01 47 04.8**	**+0.8**
STEP				*i* S	**Sb**	**01 47 44.5**	**+2.3**
STEP				IAML		01 47 57.0	
	comp=N,168nm,0.8s						
STEP				IAML		01

ITM	Ithomi	3.37	214		PN	Pn	01 47 13.6	+0.5
BARS	Barje	3.38	327	*e*	Pn	Pn	01 47 13.1	0.0
BARS					eSn	Sb	01 47 58.5	-3.0
MPEP	Malo Peshtene	3.38	353		P	Pn	01 47 13.8	+0.6
MPEP					Pg	Pg	01 47 23.1	-1.9
MPEP					S	Sg	01 48 08.2	-0.5
PLVB	Pleven	3.39	4	⇓	P	Pn	01 47 14.2	+0.8
CTKS	Kestanelik-??a	3.43	68		PN	Pn	01 47 14.2	+0.4
AYDB	Zeytinkoy-Aydi	3.47	125		PN	Pn	01 47 14.8	+0.3
SZH	Strazhica	3.49	20		P	Pn	01 47 14.6	0.0
ZAPS	Zavoj	3.50	340	*e*	Pn	Pn	01 47 16.1	+1.2
ZAPS					eSn	Sb	01 48 02.5	-2.5
MDNY	Mudanya-Bursa	3.53	83		PN	Pn	01 47 14.7	-0.5
ARMT	Armutlu	3.53	79		PN	Pn	01 47 15.6	+0.3
BGKT	Bogazkoy	3.60	69		PN	Pn	01 47 16.4	+0.2
TIR	Tirane	3.63	293	⇓	P	Pn	01 47 18.6	+1.9
KULA	Kula-Manisa	3.69	112		PN	Pn	01 47 17.9	+0.4
SIMA	Simav-Kutahya	3.73	103		PN	Pn	01 47 18.6	+0.5
ISK	Istanbul-Kandi	3.78	72		PN	Pn	01 47 19.3	+0.7
KAVV	Kandilli-Istan	3.78	72		PN	Pn	01 47 18.9	+0.3
KLYT	Kilyos	3.82	69		PN	Pn	01 47 19.9	+0.8
ROIA	ROIAK	3.86	36		P	Pn	01 47 20.3	+0.6
RAZG	Razgrad	3.93	24	⇓	P	Pn	01 47 20.6	0.0
SELS	Selova	4.00	324	*e*	Pn	Pn	01 47 21.4	-0.4
SELS				*e*	Sn	Sn	01 48 14.1	+5.3
ZAGS	Zajecar	4.11	339	*e*	Pn	Pn	01 47 22.6	-0.6
ZAGS				*e*	Sn	Sb	01 48 17.4	-5.1
COPA	Copaceanca	4.19	9	⇓	P	Pn	01 47 24.2	0.0
DRME	Dracevica, Mon	4.44	301	*e*	Pn	Pn	01 47 30.6	+2.9
PDG	Podgorica	4.51	304	*e*	Pn	Pn	01 47 30.7	+2.0
PDG	Podgorica	4.51	304	⇓	P	Pn	01 47 29.7	+0.9
PDG	Podgorica	4.51	304	*e*	Pn	Pn	01 47 30.4	+1.7
SJES	Sjenica	4.60	317	*e*	Pn	Pn	01 47 30.9	+0.9
RASA	Rasa	4.71	26	⇓	P	Pn	01 47 31.2	-0.3
GRUS	Gruza	4.72	327	*e*	Pn	Pn	01 47 31.3	-0.2
GRUS				*e*	Sn	Sn	01 48 30.7	+4.4
IDI	Anoyia	4.73	174	⇓	P	Pn	01 47 31.6	-0.1
SRE	Strehaia	4.73	350	⇓	P	Pn	01 47 32.7	+1.0
ICOR	Ion Corvin	4.87	31	⇓	P	Pn	01 47 33.6	0.0
HERR	Herculane	5.07	345	⇑	P	Pn	01 47 37.3	+0.9
TRUS	Trudelj	5.12	327	*e*	Pn	Pn	01 47 37.5	+0.5
UPM	Unac-Piva	5.16	310	*e*	Pn	Pn	01 47 39.1	+1.3
DIVS	Divibare	5.20	323	*e*	Pn	Pn	01 47 37.7	-0.6
DIVS	Divibare	5.20	323	*e*	Pn	Pn	01 47 38.4	+0.1
BRY	Bratogost	5.21	306	*e*	Pn	Pn	01 47 38.4	0.0
TREB	Trebinje	5.24	303	*e*	Pn	Pn	01 47 39.4	+0.7
BBLS	Lazići	5.32	318	*e*	Pn	Pn	01 47 42.9	+3.1
DBRK	Dubrovnik	5.35	302	*i*	P	Pn	01 47 42.5	+2.3
ARR	Arges	5.37	3	⇓	P	Pn	01 47 40.6	0.0
HARR	Harsova	5.40	29	⇓	P	Pn	01 47 40.9	0.0
LOT	Lotru	5.46	356	⇓	P	Pn	01 47 41.9	0.0
GZR	Gura Zlata	5.51	349	⇓	P	Pn	01 47 42.4	0.0
MLR	Muntele Rosu	5.62	12	⇓	P	Pn	01 47 44.8	+0.8
HAPS	Han Pijesak,Bl	5.70	317	*e*	Pn	Pn	01 47 44.9	-0.3
STON	Ston	5.73	302	*e*	Pn	Pn	01 47 42.8	-2.6
BISRR	Bisoca	5.82	17	⇑	P	Pn	01 47 46.7	-0.1
BZS	Buzias	5.95	342	⇑	P	Pn	01 47 48.8	+0.3
DOPR	Dopca	6.02	7	⇓	P	Pn	01 47 50.5	+1.1
PLOR	Plostina	6.10	16	⇑	P	Pn	01 47 51.6	+1.1
FRGS	Fruska Gora	6.13	329	*e*	Pn	Pn	01 47 48.4	-2.5
VRI	Vrincioaia	6.13	16	⇑	P	Pn	01 47 51.9	+1.0
RICI	Ricice	6.40	305		P	Pn	01 47 53.9	-0.7
TESR	Tescani	6.73	14	⇑	P	Pn	01 47 59.5	+0.4
DRGR		6.89	351	⇑	P	Pn	01 48 01.4	0.0
BIZ	Bicaz	7.06	10	⇓	P	Pn	01 48 04.6	+0.9
BLY	Banja Luka	7.09	314	*e*	Pn	Pn	01 48 04.7	+0.6
KJIV	Kijevo	7.11	307	*i*	P	Pn	01 48 05.7	+1.3
ZIRJ	Zirje	7.42	302	*i*	P	Pn	01 48 08.2	-0.5
MORH	Mrgy, Hungar	7.46	328	*e*	Pn	Pn	01 48 10.8	+1.6
MORI	Morici	7.48	304	*i*	P	Pn	01 48 08.5	-1.0
PRAR	RASCA	7.49	10	⇑	P	Pn	01 48 09.6	0.0
SORM	Soroca	8.64	18	⇓	P	Pn	01 48 24.7	-0.6
CRES	Cresnjev	8.72	315	*e*	Pn	Pn	01 48 23.2	-3.2

*ISK **25** 01:50:54.5,40˚.40′N×25˚.93′E, h8km, ML3.5/38*
*THE **25** 01:50:55.5,40˚.39′N×25˚.95′E, h8km± 1km, ML2.9/8, Error ellipse: s-maj=1.5km s-min=0.7km az=276.0*
*ATH **25** 01:50:55.1,40˚.40′N×25˚.89′E, h28km± 1km, ML2.9/15, Error ellipse: s-maj=1.9km s-min=0.9km az=252.0*
*DDA **25** 01:50:55.4,40˚.37′N×26˚.01′E, h7km, 3km, ML3.2*

ISC 25 01:50:55.5±0.8, **40˚.39′N**±0˚.01×**25˚.93′E**±0˚.02, **h15**km±6km, **n144**, **σ1§07/189**, **17C-9D**, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.20	187	P	Pg	01 51 00.0	-0.1
GADA				S	Sg	01 51 03.5	+0.4
	3μm,0.6s						
GADA	Gvkgeada	0.20	187	PG	Pg	01 51 00.0	-0.1
GADA				SG	Sg	01 51 03.6	+0.4
SMTH	Samothraki Isl	0.31	285	P	Pg	01 51 01.9	-0.1
SMTH				S	Sb	01 51 07.0	-0.8
SMTH	Samothraki Isl	0.31	285	P	Pg	01 51 02.0	-0.1
SMTH				S	Sg	01 51 06.6	+0.1
SMTH				AML	AML	01 51 08.4	
	comp=N,3540μm,0.4s						
SMTH				AML	AML	01 51 12.4	
	comp=E,2160μm,0.1s						
ENEZ	Enez	0.39	26	P	Pg	01 51 02.8	-0.5
ENEZ				S	Sg	01 51 08.3	-0.3
	comp=E,5μm,0.3s						
ENEZ	Enez	0.39	26	PG	Pg	01 51 02.8	-0.5
ENEZ				SG	Sg	01 51 08.4	-0.2
GELI	Tayfur-Gelibol	0.42	89	PG	Pg	01 51 03.2	-0.6
GELI				SG	Sg	01 51 09.6	+0.1
ERIK	Erikli-Kesan	0.53	58	PG	Pg	01 51 04.9	-1.0
ERIK				SG	Sg	01 51 12.6	-0.3
BOZC	Bozcaada	0.56	170	PG	Pg	01 51 06.1	-0.3
BOZC				SG	Sg	01 51 13.9	0.0
BOZC	Bozcaada	0.56	170	*i* P	Pg	01 51 06.0	-0.5
BOZC				*i* S	Sg	01 51 13.7	-0.1
BOZC				IAML		01 51 18.0	
	comp=E,517nm,0.6s						
BOZC				IAML		01 51 21.0	
	comp=N,581nm,0.6s						
LPK	Lapseki	0.64	91	PG	Pg	01 51 07.4	-0.5
LPK				SG	Sg	01 51 16.6	+0.3
EZN	Ezine	0.64	152	P	Pg	01 51 07.3	-0.7
EZN				S	Sg	01 51 15.8	-0.7
	comp=N,1μm,0.5s						
EZN	Ezine	0.64	152	PG	Pg	01 51 07.1	-0.9
EZN				SG	Sg	01 51 16.1	-0.4
KESN	Edirne-Kesan	0.72	53	*i* P	Pg	01 51 08.6	-1.0
KESN				*i* S	Sg	01 51 17.6	-1.5
KESN				IAML		01 51 22.0	
	comp=E,2μm,0.3s						
KESN				IAML		01 51 22.0	
	comp=N,2μm,0.4s						
LIA	Limnos Island	0.75	230	P	Pb	01 51 10.1	-0.2
LIA				S	Sn	01 51 21.8	-1.0
	comp=N,1μm,0.6s						
LIA	Limnos Island	0.75	230	P	Pb	01 51 10.2	-0.2
LIA				S	Sg	01 51 19.9	-0.2
LIA				AML	AML	01 51 23.9	
	comp=N,2704μm,0.6s						
LIA				AML	AML	01 51 25.0	
	comp=E,2734μm,0.6s						
BAYC	CANAKKALE_Bayr	0.80	144	*i* P	Pb	01 51 10.5	-0.7
BAYC				*i* S	Sb	01 51 21.0	-0.9
BAYC				IAML		01 51 22.0	
	comp=N,394nm,0.3s						
BAYC				IAML		01 51 26.0	
	comp=E,290nm,0.6s						
RDO	Rodhopi	0.81	339	P	Pb	01 51 10.7	-0.6
RDO				S	Sn	01 51 24.4	+0.2
	comp=E,480nm,0.1s						
RDO	Rodhopi	0.81	339	P	Pb	01 51 10.8	-0.6
RDO				S	Sg	01 51 21.9	0.0
RDO				AML	AML	01 51 25.9	
	comp=E,932μm,0.1s						
RDO				AML	AML	01 51 28.9	
	comp=N,1010μm,0.2s						
RDO	Rodhopi	0.81	339	PG	Pb	01 51 10.5	-0.8
UKOP	Uzunkopru-Edir	0.91	36	PG	Pb	01 51 12.1	-0.9
UKOP				SG	Sg	01 51 25.1	0.0
THAS	Thassos island	0.95	284	P	Pb	01 51 13.2	-0.4
THAS				S	Sg	01 51 26.4	+0.2
	comp=N,418nm,0.5s						
THAS	Thassos island	0.95	284	P	Pb	01 51 13.2	-0.4
THAS				S	Sg	01 51 26.6	+0.4
	comp=N,1031μm,0.5s						
THAS				AML	AML	01 51 28.1	
	comp=E,597μm,0.2s						
RKY	Sarkoy-Tekirda	1.00	72	PG	Pb	01 51 12.5	-2.0
SART	Tekirdag	1.00	72	*i* P	Pb	01 51 13.7	-0.9
SART				*i* S	Sb	01 51 27.5	-0.1
KRBG	Karabiga-Canak	1.04	89	PG	Pb	01 51 14.3	-1.0
EFSA	Agios Efstrati	1.11	221	P	Pg	01 51 16.9	-0.1
EFSA				S	Sg	01 51 32.0	+0.4
EFSA				AML	AML	01 51 33.4	
	comp=E,3152μm,0.9s						
EFSA				AML	AML	01 51 33.9	
	comp=N,2069μm,0.7s						
PRK	Paraskevi	1.17	167	P	Pg	01 51 18.1	0.0
PRK				S	Sg	01 51 34.5	+1.1
	comp=N,2μm,1.0s						
PRK	Paraskevi	1.17	167	P	Pg	01 51 18.2	+0.1
PRK				S	Sg	01 51 34.1	+0.7
PRK				AML	AML	01 51 36.3	
	comp=E,3778μm,1.1s						
PRK				AML	AML	01 51 37.2	
	comp=N,3294μm,0.9s						
SIGR	SIGRI	1.18	183	P	Pn	01 51 17.1	-0.4
SIGR				S	Sg	01 51 33.8	+0.2
SIGR	SIGRI	1.18	183	P	Pn	01 51 17.0	-0.4
SIGR				S	Sg	01 51 33.6	0.0
SIGR				AML	AML	01 51 34.8	
	comp=N,4850μm,0.7s						
SIGR				AML	AML	01 51 42.1	
	comp=E,2477μm,0.6s						
SIGR	SIGRI	1.18	183	PN	Pn	01 51 17.0	-0.4
KNL	Balıkesir	1.23	95	*i* P	Pn	01 51 17.8	-0.4
KNL				*i* S	Sb	01 51 33.3	-0.8
KNL				IAML		01 51 37.0	
	comp=E,1μm,0.5s						
AYVA	Ayvalik	1.23	151	*i* P	Pb	01 51 18.5	0.0
AYVA				*i* S	Sb	01 51 33.9	-0.2
AYVA				IAML		01 51 37.0	
	comp=N,2μm,0.6s						
AYVA				IAML		01 51 38.0	
	comp=E,1μm,0.6s						
KAVA	Kavala	1.23	300	P	Pn	01 51 17.9	-0.3
KAVA	Kavala	1.23	300	P	Pn	01 51 18.0	-0.3
KAVA				S	Sn	01 51 34.6	-0.1
KAVA				AML	AML	01 51 37.4	
	comp=N,355μm,0.2s						
KAVA				AML	AML	01 51 37.9	
	comp=E,402μm,0.3s						
KVLA	Kavala	1.29	295	P	Pb	01 51 19.4	-0.1
KDZ	Kurdzhali	1.32	343	P	Pb	01 51 19.4	-0.6
KDZ				S	Sn	01 51 36.9	+0.1
KDZ	Kurdzhali	1.32	343	PN	Pn	01 51 19.3	-0.1
TKR	Tekirdag	1.36	63	PN	Pn	01 51 20.1	+0.1
GONE	Gonen-Balikesi	1.39	104	PN	Pb	01 51 20.9	-0.3
BALY	Balya	1.45	116	*i* P	Pb	01 51 22.3	0.0
BALY				*i* S	Sb	01 51 41.0	+0.4
BALY				IAML		01 51 51.0	
	comp=E,314nm,0.6s						
BALY				IAML		01 51 54.0	
	comp=N,666nm,0.6s						
EDC	Edincik	1.48	91	PN	Pn	01 51 21.8	+0.2
OUR	Ouranopolis	1.49	268	P	Pn	01 51 21.2	-0.5
OUR	Ouranopolis	1.49	268	P	Pn	01 51 21.2	-0.5
OUR				AML	AML	01 51 45.6	
	comp=N,583μm,0.7s						
OUR				AML	AML	01 51 46.1	
	comp=E,750μm,0.6s						
OUR	Ouranopolis	1.49	268	PN	Pn	01 51 21.1	-0.6
DKL	Dikili	1.52	150	PN	Pb	01 51 22.9	-0.5
CRLT	Corlu	1.56	61	PN	Pn	01 51 22.8	+0.1
EDRB	Edirne	1.58	23	P	Pn	01 51 22.6	-0.4
EDRB				S	Sb	01 51 43.5	-0.7
	comp=E,500nm,0.4s						
EDRB	Edirne	1.58	23	PN	Pn	01 51 22.7	-0.3
RZN	Rozhen	1.59	325	P	Pn	01 51 23.6	+0.3
RZN				S	Sb	01 51 45.3	+0.6
KIRK	Kırklareli	1.65	32	*i* P	Pn	01 51 23.8	-0.1
KIRK				*i* S	Sn	01 51 44.0	-0.9
KIRK				IAML		01 51 48.0	
	comp=N,120nm,0.7s						
BOTS	Marmara Eregli	1.67	68	PN	Pn	01 51 24.4	+0.2
BALB	Balikesir	1.68	116	PN	Pb	01 51 25.1	-1.0
ZEDA	zmir-Bergama	1.68	148	*i* P	Pb	01 51 25.3	-0.8
ZEDA				*i* S	Sb	01 51 46.2	-0.8
ZEDA				IAML		01 51 49.0	
	comp=E,513nm,0.5s						
ZEDA				IAML		01 51 50.0	
	comp=N,309nm,0.3s						
DIM	Dimitrovgrad	1.68	350	P	Pn	01 51 24.7	+0.2
STEP	BALIKESİR_Sava	1.71	126	*i* P	Pb	01 51 26.0	-0.6
STEP				*i* S	Sb	01 51 48.7	+0.7
STEP				IAML		01 51 58.0	
	comp=E,528nm,0.6s						
STEP				IAML		01 51 59.0	
	comp=N,652nm,1.3s						
PHSR	Pinarhisar	1.73	44	PN	Pn	01 51 25.5	+0.4
SKY	Skiros Island	1.85	216	P	Pn	01 51 26.3	-0.4
KRBN	Karaburun	1.86	165	PN	Pn	01 51 27.9	+1.1
KCTX	Karacabey (Bur	1.86	93	PN	Pn	01 51 26.8	-0.1
PSRA	Psara	1.87	189	P	Pn	01 51 27.9	+0.9
PLG	Polygyros	1.90	270	P	Pn	01 51 27.1	-0.3
PLG				S	Sn	01 51 51.0	-0.1
PLG				AML	AML	01 51 58.1	
	comp=E,542μm,0.6s						
PLG				AML	AML	01 52 00.7	
	comp=N,401μm,0.8s						
SRS	Serrai	1.92	293	P	Pn	01 51 27.6	-0.1
SRS	Serrai	1.92	293	P	Pn	01 51 27.6	-0.1
SRS				AML	AML	01 51 58.0	
	comp=E,536μm,0.9s						
SRS				AML	AML	01 52 00.8	
	comp=N,433μm,0.6s						
SLVT	Silivri	1.92	63	PN	Pn	01 51 27.9	+0.2
PLD	Plovdiv	1.95	332	P	Pn	01 51 28.9	+0.9
PLD	Plovdiv	1.95	332	PN	Pn	01 51 28.4	+0.4
AOS	Alonnisos	2.00	233	P	Pn	01 51 28.3	-0.4
AOS				AML	AML	01 52 05.1	
	comp=E,420μm,0.7s						
AOS				AML	AML	01 52 10.8	
	comp=N,409μm,1.1s						
AOS	Alonnisos	2.00	233	PN	Pn	01 51 29.6	+0.9
CHOS	Chios island	2.00	177	P	Pn	01 51 29.0	+0.1
CHOS	Chios island	2.00	177	P	Pn	01 51 28.9	-0.1
CHOS				AML	AML	01 52 03.7	
	comp=E,642μm,0.5s						
CHOS				AML	AML	01 52 10.9	
	comp=N,774μm,0.8s						
CHOS	Chios island	2.00	177	PN	Pn	01 51 29.0	+0.1
MMB	Musomiste	2.05	306	P	Pn	01 51 29.2	-0.3
CTYL	Yalikoy Yolu	2.09	58	PN	Pn	01 51 29.5	-0.5
URLA	Izmir	2.09	165	PN	Pn	01 51 30.4	+0.3
URLA	Izmir	2.09	165	*i* P	Pn	01 51 30.5	+0.3
URLA				*i* S	Sb	01 51 57.5	-1.5
URLA				IAML		01 52 06.0	
	comp=N,128nm,1.1s						
URLA				IAML		01 52 08.0	
	comp=E,117nm,0.6s						
AKHS	Akhisar	2.10	135	*i* P	Pn	01 51 31.2	+1.0
AKHS				*i* S	Sg	01 52 01.4	-1.6
AKHS				IAML		01 52 15.0	
	comp=E,54nm,0.9s						
AKS	Akhisar	2.10	135	PN	Pn	01 51 31.1	+1.0
DURS	Dursunbey	2.11	111	*i* P	Pn	01 51 31.4	+1.1
DURS				*i* S	Sb	01 52 00.9	+1.3
DURS				IAML		01 52 02.0	
	comp=N,492nm,0.5s						
DURS				IAML		01 52 04.0	
	comp=E,430nm,0.4s						
CTKS	Kestanelik-??a	2.13	66	PN	Pn	01 51 30.8	+0.2
HORT	Hortiatis	2.17	276	P	Pn	01 51 31.2	0.0
HORT				AML	AML	01 52 08.0	
	comp=E,131μm,0.7s						
HORT				AML	AML	01 52 11.1	
	comp=N,180μm,0.8s						
HORT	Hortiatis	2.17	276	PN	Pn	01 51 30.7	-0.5
BLCB	Balcova	2.18	156	P	Pn	01 51 32.1	+0.8
BLCB	Balcova	2.18	156	PN	Pn	01 51 32.3	+1.0
AVCI	Avcilar-stanb	2.21	73	PN	Pn	01 51 32.5	+0.9
DST	Dursunbey	2.21	110	PN	Pn	01 51 32.7	+1.0
ARMT	Armutlu	2.24	85	PN	Pn	01 51 32.9	+0.7
MDNY	Mudanya-Bursa	2.26	90	PN	Pn	01 51 33.1	+0.8
SKIA	Skiathos	2.26	238	P	Pn	01 51 31.7	-0.6
SKIA				AML	AML	01 52 11.5	
	comp=N,572μm,0.8s						
SKIA				AML	AML	01 52 12.4	
	comp=E,378μm,0.8s						
GOMA	Golmarmara-Man	2.28	137	PN	Pn	01 51 33.8	+1.2
HVHR	Bakirkoy-Istan	2.29	74	PN	Pn	01 51 33.5	+0.7
ORLT	Orhaneli	2.30	98	PN	Pn	01 51 33.8	+0.9
BGKT	Bogazkoy	2.30	69	PN	Pn	01 51 33.8	+0.9
XOR	Xorichti	2.34	245	P	Pn	01 51 32.6	-0.9
NEO	Neokhori	2.35	243	P	Pn	01 51 32.5	-1.1
KNT	Kendrikon	2.43	289	P	Pn	01 51 35.0	+0.3
KNT	Kendrikon	2.43	289	P	Pn	01 51 35.1	+0.4
KNT	Kendrikon	2.43	289	PN	Pn	01 51 34.9	+0.3
DGB	zmir	2.45	162	*i* P	Pn	01 51 35.6	+0.6
DGB				*i* S	Sb	01 52 11.9	+2.6
DGB				IAML		01 52 17.0	
	comp=N,62nm,0.6s						
DGB				IAML		01 52 19.0	
	comp=E,54nm,0.7s						
ULDT	Uludag	2.47	95	*i* P	Pn	01 51 36.6	+1.2
ULDT				*i* S	Sb	01 52 10.9	+0.9
ULDT				IAML		01 52 13.0	
	comp=N,108nm,0.5s						
ULDT				IAML		01 52 20.0	
	comp=E,127nm,0.5s						
ISK	Istanbul-Kandi	2.47	73	PN	Pn	01 51 35.4	+0.1
KAVV	Kandilli-Istan	2.47	73	PN	Pn	01 51 36.0	+0.7
KLYT	Kilyos	2.51	69	PN	Pn	01 51 36.4	+0.6
ELND	Elena	2.54	359	⇓	P	Pn	01 51 37.2	+1.0
DEMI	Demirci	2.54	121	*i* P	Pn	01 51 37.7	+1.5
DEMI				*i* S	Sb	01 52 14.2	+2.4
DEMI				IAML		01 52 23.0	
	comp=E,127nm,0.8s						
DEMI				IAML		01 52 31.0	
	comp=N,112nm,0.7s						
KARY	Karystos	2.62	207	P	Pn	01 51 37.2	-0.2
YLV	Yalova	2.63	85	PN	Pn	01 51 38.3	+0.7
SMAA	Simav-Kutahya	2.68	118	PN	Pn	01 51 39.3	+1.1
SIMA	Simav-Kutahya	2.69	118	PN	Pn	01 51 39.1	+0.7
DION	Dionisos Attik	2.78	214	P	Pn	01 51 38.8	-0.7
GCAM	G?zelcaml?	2.87	159	PN	Pn	01 51 41.0	+0.2
SZH	Strazhica	2.87	0	P	Pn	01 51 42.0	+1.2
VTS	Vitosha	3.01	319	⇑	P	Pn	01 51 42.5	-0.3
VTS	Vitosha	3.01	319	P	Pn	01 51 43.7	+0.9
AGG	Agios Georgios	3.09	245	P	Pn	01 51 43.9	+0.1
PLVB	Pleven	3.15	342	⇓	P	Pn	01 51 45.9	+1.3
APE	Apeiranthos	3.33	185	P	Pn	01 51 46.6	-0.5
APE	Apeiranthos	3.33	185	⇑	P	Pn	01 51 46.2	-1.0
MPEP	Malo Peshtene	3.38	332	P	Pn	01 51 49.1	+1.3
DID	Didima	3.56	217	P	Pn	01 51 50.1	-0.2
KLV	Kalavryta, Ach	3.76	233	P	Pn	01 51 52.8	-0.2
COPA	Copaceanca	3.78	352	⇓	P	Pn	01 51 54.7	+1.5
LEHL	Lehliu	4.13	9	⇓	P	Pn	01 52 01.3	+3.2
HUMR	Humele	4.19	351	⇑	P	Pn	01 52 00.6	+1.7
SULR		4.29	3	⇑	P	Pn	01 52 02.8	+2.5
TIRR	Tirgusor	4.46	24	⇑	P	Pn	01 52 06.4	+3.8
HARR	Harsova	4.54	18	⇑	P	Pn	01 52 05.9	+2.1
ISR	Istrita	4.75	5	⇑	P	Pn	01 52 09.5	+2.9
TOPG	Topolog	4.83	21	⇑	P	Pn	01 52 11.4	+3.7
JURR	Jurilovca	4.88	25	⇑	P	Pn	01 52 11.3	+2.9
CFR	Carcaliu	5.05	18	⇑	P	Pn	01 52 14.1	+3.4
ARR	Arges	5.06	350	⇓	P	Pn	01 52 12.2	+1.2
MLR	Muntele Rosu	5.10	0	⇓	P	Pn	01 52 14.3	+2.9
HERR	Herculane	5.18	331	⇑	P	Pn	01 52 12.6	+0.1
MDVR	Moldovita	5.38	326	⇑	P	Pn	01 52 15.8	+0.5
PLOR	Plostina	5.48	5	⇓	P	Pn	01 52 19.0	+2.3
VRI	Vrincioaia	5.50	6	⇑	P	Pn	01 52 19.8	+2.8
GZR	Gura Zlata	5.51	336	⇑	P	Pn	01 52 17.3	+0.2
DOPR	Dopca	5.59	356	⇓	P	Pn	01 52 19.5	+1.4
VARL	Varlezi	5.68	14	⇓	P	Pn	01 52 20.5	+3.3
BZS	Buzias	6.10	330	⇑	P	Pn	01 52 25.2	0.0
TESR	Tescani	6.14	5	⇓	P	Pn	01 52 27.7	+2.0
BIZ	Bicaz	6.55	1	⇑	P	Pn	01 52 33.2	+1.9

IDC 25 01:52:41.3±3.7, **11˚.66S**×**120˚.36E**, **h0**km, **mb3.6**/1, **mb1 3.4**/3, **mb1mx3.3**/20, **mbtmp3.3**/3, **ML3.0**/2, **Error ellipse: s-maj=268.7km s-min=34.4km az=48.0, South of Sumba**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.76	123	Pn	Pn	01 56 24.0	-0.9
	0.1nm,0.3s,baz=296,slow=13,SNR=1.4						
WRA				Sn	Sn	01 59 06.6	-14
	0.1nm,0.3s,baz=254,slow=22,SNR=1.7						
ASAR	Alice Springs	17.57	135	P	P	01 56 48.4	-0.6
	0.1nm,0.3s,baz=313,slow=12,SNR=6.0						
ASAR				S	Sn	01 59 52.5	-12
	baz=304,slow=22,SNR=2.0						
MKAR	Makanchi Array	67.42	333	P	P	02 03 38.7	0.0
	0.2nm,0.3s,baz=138,slow=6.4,SNR=2.2						

*TEH **25** 02:20:07.8,27˚.76′N×56˚.82′E, h6km, ML3.0*
*OMAN **25** 02:20:13.1±0.5,27˚.25′N×57˚.01′E, h54km±23km, ml3.1/12, Error ellipse: s-maj=47.9km s-min=3.6km az=7.0*

**ISC 25 02:20:09

-0.6030, Plg80.0000°, Azm106.0000°; P -5.5940, Plg5.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 25 02:30:11.5±2.6, 6°07N±0°04×82°36W±0°04, h27km±19km, n399,σ1ᵗ95/354, mb4.6/81, MS4.1/22, 15C-6D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CACAO	**El Cacao, Vera**	1.96	50	⇓*iP*	Pn	02 30 40.1	-2.8
CACAO				*eS*	Sn	02 31 03.3	-3.3
GMAL	**Guarumal, Vera**	2.02	34	⇓*iP*	Pn	02 30 41.5	-2.3
GMAL				*eS*	Sn	02 31 05.5	-2.7
MARI3	**Mariato, Verag**	2.08	41	*eP*	Pn	02 30 42.6	-2.0
RSUS3	**Rio de Jesus,**	2.24	32	*eP*	Pn	02 30 44.6	-2.3
RSUS3				*eS*	Sn	02 31 10.7	-3.0
PONU3	**Ponuga, Veragu**	2.27	37	*eP*	Pn	02 30 45.5	-1.7
PONU3				*eS*	Sn	02 31 08.9	-5.4
SBAR3	**San Bartolo, C**	2.29	347	*eP*	Pn	02 30 43.2	-4.3
PEDE3	**Pedregal, Chir**	2.30	359	*eP*	Pn	02 30 46.2	-1.4
CHIR3	**Chiriqui UPA,**	2.31	1	*eP*	Pn	02 30 45.2	-2.6
CHIR3				*eS*	Sn	02 31 14.8	-0.5
LOCO3	**Loma Colorada,**	2.32	359	⇓*iP*	Pn	02 30 46.4	-1.6
LOMA3	**Las Lomas, Chi**	2.34	359	*eP*	Pn	02 30 46.9	-1.3
DVD	**David**	2.35	358	⇑*iP*	Pn	02 30 45.6	-2.7
DVD				*eS*	Sn	02 31 11.1	-5.2
MESA3	**La Mesa, Verag**	2.37	29	*eP*	Pn	02 30 47.4	-1.2
MESA3				*eS*	Sn	02 31 12.4	-4.4
OCU3	**Ocu, Herrera**	2.44	40	*eP*	Pn	02 30 47.8	-1.8
STIA3	**Santiago, Vera**	2.44	34	*eP*	Pn	02 30 47.4	-2.3
STIA3			⇑	*eS*	Sn	02 31 15.2	-3.4
PESE3	**Pese, Herrera**	2.52	44	*eP*	Pn	02 30 49.0	-1.6
ACHO3	**Achotines, Los**	2.55	58	*eP*	Pn	02 30 48.5	-2.6
ACHO3			⇑	*eS*	Sn	02 31 14.1	-7.2
SFRA3	**San Francisco,**	2.56	32	*eP*	Pn	02 30 49.1	-2.2
SFRA3				*eS*	Sn	02 31 20.4	-1.3
PTJ1	**Puerto Jimnez**	2.62	339	⇑*iP*	Pn	02 30 48.6	-3.5
PTJ1	**Puerto Jimnez**	2.62	339	*eP*	Pn	02 30 48.5	-3.6
PTJ1				*eS*	Sn	02 31 20.6	-2.4
BCO2	**Palmira**	2.63	356	*eP*	Pn	02 30 49.3	-3.1
BCO2				*eS*	Sn	02 31 18.9	-4.7
AZU	**Azuero**	2.69	50	⇓*iP*	Pn	02 30 50.8	-2.1
AZU				*eS*	Sn	02 31 22.0	-2.6
AZU	**Azuero**	2.69	50	*eP*	Pn	02 30 50.9	-2.1
BRU2	**Volcan**	2.72	353	⇑*iP*	Pn	02 30 50.4	-3.2
BRU2				*eS*	Sn	02 31 18.3	-7.4
BRU2	**Volcan**	2.72	353	*eP*	Pn	02 30 51.2	-2.4
BRU2				*eS*	Sn	02 31 25.0	-0.8
PCRI3	**Pocri, Los San**	2.73	55	*eP*	Pn	02 30 51.8	-1.8
PCRI3				*eS*	Sn	02 31 22.8	-2.9
BC3P	**Paso Ancho**	2.74	355	*eP*	Pn	02 30 51.8	-2.0
MLIR3	**Monte Lirio, C**	2.74	350	*eP*	Pn	02 30 51.5	-2.3
EDSV	**San Vito**	2.80	348	*eP*	Pn	02 30 52.5	-2.1
EDSV				*eS*	Sn	02 31 25.7	-1.8
CHGR2	**Aguacate**	2.85	4	*eP*	Pn	02 30 53.2	-2.1
CHGR2				*eS*	Sn	02 31 28.3	-0.6
EDPN	**Palmar Norte**	3.07	339	*eP*	Pn	02 30 55.1	-3.1
EDPN				*eS*	Sn	02 31 31.2	-2.8
PNME	**Penonome**	3.13	40	*eP*	Pn	02 30 58.1	-1.1
PNME				*eS*	Sn	02 31 34.3	-1.4
PNME	**Penonome**	3.13	40	⇓*iP*	Pn	02 30 57.8	-1.4
EDBA	**Buenos Aires**	3.20	344	*eP*	Pn	02 30 58.3	-1.8
DRK0	**Durika**	3.29	345	*eP*	Pn	02 30 58.8	-2.7
DRK0				*eS*	Sn	02 31 31.5	-8.2
DRK0	**Durika**	3.29	345	*eP*	Pn	02 30 59.0	-2.4
DRK0				*eS*	Sn	02 31 38.9	-0.8
VTON	**El Valle, Cocl**	3.37	41	*eP*	Pn	02 31 02.0	-0.4
VTON				*eS*	Sn	02 31 39.7	-1.8
EDLM	**Las Mercedes**	3.41	339	*eP*	Pn	02 31 00.8	-2.3
EDLM				*eS*	Sn	02 31 39.7	-2.9
EDDO	**Dominical**	3.49	335	*eP*	Pn	02 31 01.3	-2.8
EDDO				*eS*	Sn	02 31 42.3	-2.2
ZANG	**Zanguenga, Cho**	3.79	41	*eP*	Pn	02 31 07.5	-0.6
BCIP	**Isla Barro Col**	3.96	39	*eP*	Pn	02 31 10.1	-0.5
BCIP	**Isla Barro Col**	3.96	39	*eP*	Pn	02 31 09.8	-0.8
BCIP	**Isla Barro Col**	3.96	39		Pn	02 31 09.6	-1.0
LCR2	**La Lucha 2**	3.99	336	*eP*	Pn	02 31 08.8	-2.4
LCR2				*eS*	Sn	02 31 54.7	-2.4
MLIR	**Monte Lirio**	4.01	38	*eP*	Pn	02 31 12.6	+1.4
UPA	**Univ. de Panam**	4.03	44	*eP*	Pn	02 31 10.5	-0.9
UPA				*eS*	Sn	02 31 55.9	-1.8
UPA	**Univ. de Panam**	4.03	44	*eP*	Pn	02 31 09.8	-1.6
UPA	**Univ. de Panam**	4.03	44	*eP*	Pn	02 31 10.5	-0.9
UPA				*eS*	Sn	02 31 56.5	-1.2
CVTR	**Volcan Turrial**	4.16	341	*eP*	Pn	02 31 12.0	-1.6
CVTR				*eS*	Sn	02 32 02.2	+0.7
SJS	**Escuela Geolog**	4.19	337	*eP*	Pn	02 31 12.0	-1.8
SJS				*eS*	Sn	02 32 00.6	-1.4
SRA1	**San Ramn**	4.50	332	*eP*	Pn	02 31 15.3	-2.8
PTAC	**Punta Ardita,**	4.65	76	*eP*	Pn	02 31 19.9	0.0
JTS	**Las Juntas de**	4.91	329	Pn	Pn	02 31 20.9	-2.7
	20nm,0.3s,baz=159,slow=9.4,SNR=98						
JTS				Sn	Sn	02 32 17.2	-2.5
	15nm,0.3s,baz=342,slow=19,SNR=1.4						
JTS	**Las Juntas de**	4.91	329	*eP*	Pn	02 31 20.2	-3.4
JTS				*eS*	Sn	02 32 18.3	-1.4
JTS	**Las Juntas de**	4.91	329		Pn	02 31 20.7	-3.0
ARE1	**Arenal 1**	4.94	332	*eP*	Pn	02 31 21.9	-2.2
UPD2	**Meteti**	4.96	60	*eP*	Pn	02 31 27.1	+2.8
UPD2	**Meteti**	4.96	60	⇑*eP*	Pn	02 31 27.5	+3.2
PIZC	**Pizarro, Choco**	5.10	102	*eP*	Pn	02 31 24.6	-1.6
PLVR	**Palo Verde**	5.18	325	*eP*	Pn	02 31 24.7	-2.7
PLVR				*eS*	Sn	02 32 22.8	-3.5
GR1C	**Gorgona, Isla**	5.18	126	*eP*	Pn	02 31 24.6	-2.7
GUAI	**GUAI**	5.21	323	*eP*	Pn	02 31 25.2	-2.5
ACAL	**Aguas Claras**	5.25	330	*eP*	Pn	02 31 26.4	-1.9
PTEN	**Parque Tenorio**	5.29	331	⇑*eP*	Pn	02 31 26.9	-2.0
CUI	**Cuipilapa**	5.33	329	*eP*	Pn	02 31 26.9	-2.5
COLC	**Colonia**	5.36	329	*eP*	Pn	02 31 27.6	-2.2
HORNC	**Hornillas**	5.39	329	*eP*	Pn	02 31 27.8	-2.4
GUAB	**Guayabo de Bag**	5.41	329	*eP*	Pn	02 31 29.0	-1.5
MALC	**Bahia Malaga**	5.41	12	⇓*iP*	Pn	02 31 30.3	-0.1
LIM1	**Limonal**	5.41	328	*eP*	Pn	02 31 28.4	-2.2
NY14	**Universidad de**	5.52	326	*eP*	Pn	02 31 30.4	-1.6
GPS1	**Guardaparques**	5.53	328	*eP*	Pn	02 31 31.2	-1.0
LAPC	**Finca la Perla**	5.57	327	*eP*	Pn	02 31 30.4	-2.2
GBS3	**Finca Las Img**	5.59	327	*eP*	Pn	02 31 31.1	-1.9
BUAI	**Buenos Aires**	5.60	329	*eP*	Pn	02 31 30.8	-2.4
PLMC	**San Jos del P**	6.16	101	*eP*	Pn	02 31 41.2	+0.4
DBBC	**Dabeiba**	6.19	81	*eP*	Pn	02 31 42.9	+1.7
HORQ	**Saladito**	6.27	114	*eP*	Pn	02 31 41.0	-1.6
CBOC	**Ciudad Bolivar**	6.32	92	*eP*	Pn	02 31 42.1	-1.0
YOTC	**Yotoco, Valle**	6.34	109	⇑*iP*	Pn	02 31 42.4	-1.0
ESPN	**Las Esperanzas**	6.38	343	*eP*	Pn	02 31 42.2	-1.6
ACON	**Acoyapa**	6.48	335	*eP*	Pn	02 31 42.5	-2.7
ACON	**Acoyapa**	6.48	335		Pn	02 31 42.9	-2.3
PAC1	**Pacto, Paraso**	6.78	148	*eP*	Pn	02 31 45.7	-3.7
CMBC	**Cumbal**	6.82	138	*eP*	Pn	02 31 49.2	-1.0
GCUF	**Volcan Galeras**	6.95	134	*eP*	Pn	02 31 51.0	-1.0
SOTA	**Rioblanco**	6.95	124	*eP*	Pn	02 31 52.6	+0.6
CUSE	**Cuicocha Este**	6.96	145	*eP*	Pn	02 31 49.7	-2.5
URES	**San Jos de Ur**	6.98	76	*eP*	Pn	02 31 53.1	+1.0
CRUC	**La Cruz**	7.01	129	*eP*	Pn	02 31 52.8	-0.1
GUY2C	**Guyana, Caldas**	7.01	97	*eP*	Pn	02 31 54.6	+1.6
PCON	**Cinco Dias**	7.02	122	*eP*	Pn	02 31 52.9	-0.2
RREF	**El Recreo**	7.08	99	*eP*	Pn	02 31 55.6	+1.6
TOLC	**Tolima**	7.17	102	*eP*	Pn	02 31 56.6	+1.7
ORTC	**Ortega, Tolima**	7.41	107	⇑*iP*	Pn	02 31 59.3	+1.3
NORC	**Norcasia**	7.47	93	*eP*	Pn	02 32 01.4	+2.5
ZARC	**Zaragoza, Cauc**	7.58	79	*eP*	Pn	02 32 01.6	+1.2
MATN	**Matagalpa**	7.67	333		Pn	02 31 59.3	-2.3
BETC	**Betania**	7.68	116	⇑*iP*	Pn	02 32 03.2	+1.5
GARC	**Garzon, Huila**	7.86	119	⇑*iP*	Pn	02 32 04.9	+0.5
PTBC	**PUERTO BERRIO,**	7.87	86	⇑*iP*	Pn	02 32 07.5	+3.1
SJCC	**San Jacinto, C**	8.06	61	*eP*	Pn	02 32 08.9	+1.9
ROSC	**El Rosal**	8.10	98	Pn	Pn	02 32 11.3	+3.5
	24nm,0.3s,baz=347,slow=2.2,SNR=36						
ROSC				LR	LR	02 35 05.7	
	comp=Z,1μm,20.3s,baz=298,slow=36						
ROSC	**El Rosal**	8.10	98	*eP*	Pn	02 32 11.9	+4.1
ROSC	**El Rosal**	8.10	98		Pn	02 32 10.8	+3.0
SPBC	**San Pablo de B**	8.26	92	*eP*	Pn	02 32 13.0	+3.3
CVER	**Cruz Verde, Cu**	8.40	100	*eP*	Pn	02 32 16.3	+4.4
BRRC	**Barranca, Sant**	8.66	83	⇑*iP*	Pn	02 32 18.1	+3.1
SMLC	**San Martn de**	8.66	71	*eP*	Pn	02 32 17.0	+1.9
CHIC	**Chingaza**	8.71	99	⇑*iP*	Pn	02 32 19.2	+3.0
VILC	**Villavicencio,**	8.85	102	*eP*	Pn	02 32 20.1	+2.2
RUSC	**La Rusia**	9.23	91	*eP*	Pn	02 32 27.4	+4.0
RUSC	**La Rusia**	9.23	91		Pn	02 32 26.1	+2.7
MACC	**Macarena, Meta**	9.35	114	*eP*	Pn	02 32 24.6	+0.1
PTLC	**Puerto Leguiza**	9.56	128	*eP*	Pn	02 32 31.9	+4.4
SNET	**Serv Nac Est T**	10.15	319		Pn	02 32 35.3	-0.3
GUVC	**San Jose del G**	10.32	109	*eP*	Pn	02 32 38.0	0.0
PTGC	**Puerto Gaitan,**	10.36	100	*eP*	Pn	02 32 40.0	+1.5
SOCV	**Socops**	11.63	78	*eP*	Pn	02 33 00.3	+4.5
SDV	**Santo Domingo**	11.96	76	Pn	Pn	02 33 01.8	+1.3
	1.1nm,0.3s,baz=238,slow=12,SNR=9.1						
SDV				Sn	Sn	02 35 11.3	-2.0
	1.4nm,0.3s,baz=17,slow=17,SNR=1.6						
SDV	**Santo Domingo**	11.96	76	*eP*	Pn	02 33 02.3	+1.7
SDV	**Santo Domingo**	11.96	76		Pn	02 33 02.1	+1.5
SDV	**Santo Domingo**	11.96	76	*eP*	Pn	02 33 02.6	+2.1
ELOV	**Elorza**	12.83	85	⇑*iP*	Pn	02 33 13.3	+1.0
ATAH	**Atahualpa**	13.71	163	Pn	Pn	02 33 24.3	-0.2
	2.2nm,0.3s,baz=2.6,slow=9.2,SNR=12						
ATAH				LR	LR	02 38 09.3	
	comp=Z,3μm,19.3s,baz=340,slow=35						
CCIG	**Comitan**	13.95	317		Pn	02 33 27.0	-0.7
TEIG	**Tepich**	15.20	338	Pn	Pn	02 33 43.8	-0.6
	1.3nm,0.3s,baz=139,slow=3.7,SNR=9.5						
TEIG				LR	LR	02 39 42.1	
	comp=Z,1μm,18.3s,baz=228,slow=38						
CMIG	**Matias Romero**	16.43	313	Pn	Pn	02 33 59.7	-0.6
	1.1nm,0.3s,baz=104,slow=10,SNR=12						
CMIG				LR	LR	02 39 35.8	
	comp=Z,945nm,19.5s,baz=120,slow=35						
SDDR	**Presa de Saban**	16.76	39	Pn	Pn	02 34 05.2	+0.6
SDDR				lAmb	lAmb	02 34 14.8	
	comp=Z,68nm,1.2s						
BANI	**BANI**	16.94	43	Pn	Pn	02 34 07.4	+0.5
SC01	**Santiago de lo**	17.45	39	Pn	Pn	02 34 11.1	-2.0
PCRV	**Puerto La Cruz**	18.01	76	P	P	02 34 23.1	+2.6
	comp=Z,0.9nm,0.3s,baz=275,slow=13,SNR=2.3						
PCRV				LR	LR	02 42 59.7	
	comp=Z,591nm,21.3s,slow=42						
PLCV	**Puerto La Cruz**	18.06	76	P	P	02 34 23.1	+2.1
NNA	**Nana**	18.76	163	P	P	02 34 28.7	0.0
	comp=Z,1.3nm,0.3s,baz=350,slow=11,SNR=5.6						
NNA				LR	LR	02 41 02.1	
	comp=Z,501nm,20.0s,baz=322,slow=35						
NNA	**Nana**	18.76	163	P	Pn	02 34 31.5	+2.2
NNA				lAmb	lAmb	02 34 33.4	
	comp=Z,72nm,1.2s						
ICMP	**Isla Caja de M**	19.42	51	P	P	02 34 34.9	-0.9
OBIP	**Obispado Ponce**	19.45	51	lAmb	lAmb	02 34 51.9	
	comp=Z,34nm,0.9s						
SJG	**San Juan**	19.84	51	P	Pn	02 34 42.0	-0.1
	comp=Z,1.2nm,0.3s,baz=241,slow=10.0,SNR=5.0						
SJG				LR	LR	02 41 44.7	
	comp=Z,609nm,21.9s,baz=226,slow=35						
SJG	**San Juan**	19.84	51	*eP*	Pn	02 34 43.6	+1.5
HUMP	**Col San Antoni**	20.09	52	lAmb	lAmb	02 34 51.1	
	comp=Z,32nm,0.8s						
CBYP	**Canovanas**	20.16	52	lAmb	lAmb	02 34 50.3	
	comp=Z,39nm,0.9s						
MTP	**Monte Pirata**	20.30	52	P	Pn	02 34 47.6	+0.1
CUPR	**Culebra, Puert**	20.63	52	P	P	02 34 50.0	+1.0
CDVI	**St. Croix**	20.74	54	P	Pn	02 34 51.8	-0.9
STVI	**Saint Thomas**	20.91	53	P	P	02 34 52.7	+0.6
PTGA	**Pitinga**	23.36	106	P	P	02 35 19.9	+1.8
	comp=Z,9.0nm,1.0s,baz=295,slow=11,SNR=9.7						
PTGA				LR	LR	02 44 20.8	
	comp=Z,625nm,20.4s,baz=286,slow=36						
PTGA	**Pitinga**	23.36	106	P	P	02 35 20.5	+2.4
PTGA				lAmb	lAmb	02 35 26.8	
	comp=Z,18nm,1.0s						
PTGA	**Pitinga**	23.36	106	*eP*	P	02 35 17.4	-0.7
MACA	**Manacapuru-AM**	23.51	112	*eP*	P	02 35 18.9	-0.7
SAML	**Samuel**	24.25	128	P	P	02 35 26.2	-0.3
SAML	**Samuel**	24.25	128	*eP*	P	02 35 25.9	-0.6
TIGA	**Tifton**	25.26	358	P	P	02 35 38.0	+2.5
	baz=177						
ZAIG	**Zacatecas**	25.60	312	P	P	02 35 41.6	+2.6
LPAZ	**La Paz**	26.30	148	P	P	02 35 46.2	+0.5
	comp=Z,1.6nm,0.6s,baz=324,slow=13,SNR=2.4						
LPAZ				LR	LR	02 47 13.8	
	comp=Z,2μm,20.8s,baz=309,slow=39						
LPAZ	**La Paz**	26.30	148	P	P	02 35 49.3	+3.5
LPAZ	**La Paz**	26.30	148	*eP*	P	02 35 46.3	+0.5
152A	**Waverly Hall**	26.55	356	lAmb	lAmb	02 35 52.9	
	comp=Z,13nm,0.9s						
VBMS	**Vicksburg**	27.11	345	P	P	02 35 53.1	+0.9
LRAL	**Lakeview Retre**	27.17	351	P	P	02 35 52.2	-0.6
	baz=170						
LRAL	**Lakeview Retre**	27.17	351	P	P	02 35 53.1	+0.3
GOGA	**Godfrey**	27.22	358	P	P	02 35 53.2	0.0
	baz=178						
GOGA	**Godfrey**	27.22	358	lAmb	lAmb	02 35 58.1	
	comp=Z,18nm,1.4s						
Z51A	**Franklin**	27.23	355	lAmb	lAmb	02 36 01.1	
	comp=Z,29nm,1.6s						
Z47A	**Carrollton**	27.51	350	lAmb	lAmb	02 36 19.4	
	comp=Z,18nm,1.2s						
Y52A	**Lilburn**	27.70	357	lAmb	lAmb	02 36 02.9	
	comp=Z,22nm,1.4s						
Y55A	**Saluda**	27.73	1	P	P	02 35 58.2	+0.4
	baz=181						
X55A	**Gracelyn & Ava**	28.27	1	P	P	02 36 04.9	+2.4
	baz=182						
X56A	**White Oak**	28.31	2	P	P	02 36 05.5	+2.6
	baz=183						
KMSC	**Kings Mountain**	28.94	2	P	P	02 36 09.5	+0.9
	baz=182						
VILB	**Vilhena**	29.02	131	*eP*	P	02 36 09.1	-0.4
W50A	**Signal Mountai**	29.11	355	lAmb	lAmb	02 36 18.0	
	comp=Z,17nm,1.4s						
MALB	**Monte Alegre**	29.14	105	*eP*	P	02 36 08.7	-1.9
SWET	**Sewanee**	29.19	354	lAmb	lAmb	02 36 14.9	
	comp=Z,18nm,1.3s						
JCT	**Junction City**	29.30	328	P	P	02 36 12.2	+0.3
	baz=143						
JCT	**Junction City**	29.30	328	P	P	02 36 11.6	-0.2
CPCT	**Cooper Cave**	29.30	356	lAmb	lAmb	02 36 22.0	
	comp=Z,15nm,1.2s						
TKL	**Tuckaleechee C**	29.47	358	P	P	02 36 13.7	+0.4
	comp=Z,2.7nm,0.8s,baz=165,slow=12,SNR=4.1						
TKL				LR	LR	02 48 17.5	
	comp=Z,441nm,19.1s,baz=180,slow=37						
TKL	**Tuckaleechee C**	29.47	358	lAmb	lAmb	02 36 58.7	
	comp=Z,26nm,1.8s						
MDP	**Montagnes des**	29.59	90	LR	LR	02 47 45.8	
	comp=Z,292nm,18.1s,baz=276,slow=36						
V48A	**Smith Brothers**	29.81	353	lAmb	lAmb	02 36 21.1	
	comp=Z,8.3nm,0.9s						
NPGB	**Novo Progresso**	29.93	115	*eP*	P	02 36 15.6	-2.0
U55A	**TA2, Sparta**	30.31	2	P	P	02 36 23.3	+2.5
	baz=183						
WVT	**Waverly**	30.33	351	P	P	02 36 19.7	-1.1
	baz=169						
U57A	**Blanch**	30.34	5	P	P	02 36 21.6	+0.7
	baz=186						
TZTN	**Tazewell**	30.35	358	P	P	02 36 23.3	+2.3
	baz=178						
TZTN	**Tazewell**	30.35	358	lAmb	lAmb	02 36 24.3	
	comp=Z,11nm,1.0s						
W41B	**Gary Mavity, V**	30.36	344	P	P	02 36 20.2	-1.0
	baz=160						
SIV	**San Ignacio**	30.41	136	P	P	02 36 21.2	-0.6
	comp=Z,5.5nm,0.7s,baz=316,slow=8.6,SNR=21						
U49A	**Red Boiling Sp**	30.46	355	lAmb	lAmb	02 36 26.2	
	comp=Z,10nm,1.1s						
WHAR	**Wooly Hollow**	30.48	344	lAmb	lAmb	02 36 26.5	
	comp=Z,12nm,1.2s						
TXAR	**Lajitas Array**	30.66	322	P	P	02 36 24.1	+0.1
	comp=Z,0.7nm,0.7s,baz=145,slow=8.4,SNR=9.9						
TXAR				LR	LR	02 50 57.5	
	comp=Z,194nm,19.9s,baz=0.0,slow=41						
W39A	**Magazine**	30.84	342	P	P	02 36 25.1	-0.2
	baz=158						
W39A	**Magazine**	30.84	342	lAmb	lAmb	02 37 03.5	
	comp=Z,22nm,1.7s						
T54A	**Tazewell**	30.85	1	P	P	02 36 25.4	-0.2
	baz=182						
T50A	**Nancy**	30.89	356	lAmb	lAmb	02 36 30.0	
	comp=Z,10nm,1.1s						
LCAR	**Lake Charles**	30.93	346	P	P	02 36 25.9	-0.2
LCAR				lAmb	lAmb	02 36 26.0	
	comp=Z,13nm,1.0s						
ABTX	**Abilene, Hawle**	30.94	331	P	P	02 36 26.5	+0.1
	baz=145						
ABTX	**Abilene, Hawle**	30.94	331	lAmb	lAmb	02 36 28.5	
	comp=Z,7.8nm,0.7s						
T47A	**Sharon Grove**	31.07	353	lAmb	lAmb	02 36 35.5	
	comp=Z,14nm,1.2s						
CLDB	**Colider**	31.35	122	*eP*	P	02 36 27.0	-3.1
LVC	**Limon Verde**	31.40	156	*eP*	P	02 36 32.3	+1.5
PTLB	**Pontes e Lacer**	31.41	133	*eP*	P	02 36 29.4	-1.2
S53A	**Williamson**	31.46	0	P	P	02 36 33.1	+2.2
	baz=180						
S55A	**Lewisburg**	31.60	3	P	P	02 36 35.0	+2.9
	baz=184						
U40A	**Yellville**	31.64	344	P	P	02 36 31.9	-0.5
	baz=160						
U40A	**Yellville**	31.64	344	lAmb	lAmb	02 36 43.6	
	comp=Z,11nm,1.4s						
T42A	**Van Buren**	31.83	347	lAmb	lAmb	02 36 42.7	
	comp=Z,7.1nm,0.9s						
R54A	**Victor**	31.99	2	P	P	02 36 35.8	+0.3
	baz=183						
WCI	**Wyandotte Cave**	32.21	354	P	P	02 36 36.4	-1.0
	baz=173						
WCI	**Wyandotte Cave**	32.21	354	P	P	02 36 36.9	-0.5
WMOK	**Wichita Mounta**	32.31	334	P	P	02 36 36.7	-1.6
	baz=148						
Q53A	**Leroy**	32.65	1	P	P	02 36 41.6	+0.4
	baz=182						
Q52A	**Bidwell**	32.74	0	P	P	02 36 42.2	+0.1
	baz=180						
Q54A	**Coxs Mills**	32.79	2	P	P	02 36 44.9	+2.4
	baz=183						
Q55A	**Buckhannon**	32.84	3	P	P	02 36 44.0	+1.0
	baz=184						
CCM	**Cathedral Cave**	32.84	347	P	P	02 36 41.7	-1.2
	baz=164						
CCM	**Cathedral Cave**	32.84	347	P	P	02 36 41.8	-1.1
CCM				lAmb	lAmb	02 36 44.9	
	comp=Z,11nm,1.0s						
P51A	**Williamsport**	33.27	359	P	P	02 36 46.3	-0.3
	baz=179						
P53A	**Whipple**	33.28	1	P	P	02 36 47.1	+0.4
	baz=182						
P53A	**Whipple**	33.28	1	P	P	02 36 47.1	+0.4
P55A	**Reedsville**	33.37	4	P	P	02 36 48.8	+1.2
	baz=185						
MNTX	**Cornudas Mount**	33.37	323	P	P	02 36 48.4	+0.7
	baz=135,SNR=6.5						
P49A	**Miami Univ. Ec**	33.38	357	P	P	02 36 46.4	-1.3
	baz=176						
P50A	**Jamestown**	33.41	358	P	P	02 36 47.3	-0.6
	baz=178						
P56A	**Dayton Farm, R**	33.44	5	P	P	02 36 51.1	+3.0
	baz=186						
GO02	**Mina Guanaco**	33.44	159	P	P	02 36 51.9	+3.3
GO02				lAmb	lAmb	02 36 54.1	
	comp=Z,12nm,1.1s						
MSTX	**Muleshoe**	33.59	328	P	P	02 36 49.1	-0.6
	baz=141						
MSTX	**Muleshoe**	33.59	328	lAmb	lAmb	02 36 51.8	
	comp=Z,6.4nm,0.8s						
AMTX	**Amarillo**	33.76	331	P	P	02 36 50.8	-0.3
AMTX				lAmb	lAmb	02 36 56.7	
	comp=Z,8.4nm,1.1s						
O51A	**Pataskala**	33.93	360	P	P	02 36 51.9	-0.4
	baz=180,SNR=6.0						
O50A	**Cable**	33.94	358	P	P	02 36 51.8	-0.7
	baz=178						
O54A	**Avella**	34.01	3	P	P	02 36 53.2	+0.1
	baz=184						
O49A	**Covington**	34.01	357	lAmb	lAmb	02 36 54.8	
	comp=Z,9.5nm,0.9s						
ACSO	**Alum Creek Sta**	34.02	359	P	P	02 36 52.7	-0.5
	baz=179						

PV15	Paradox Valley	39.91	327	IAmb	IAmb	02 37 55.5		
	comp=Z,14nm,1.1s							
PV02	Paradox Valley	39.95	327	IAmb	IAmb	02 37 46.3		
	comp=Z,11nm,0.8s							
PV13	Radium Mtn., P	39.96	327	IAmb	IAmb	02 37 46.3		
	comp=Z,13nm,0.8s							
PV03	Paradox Valley	40.04	327	IAmb	IAmb	02 37 46.8		
	comp=Z,10nm,0.8s							
SPMN	Marine on St.	40.05	349	P	P	02 37 42.5	-1.8	
	baz=164							
SPMN	Marine on St.	40.05	349	IAmb	IAmb	02 37 43.1		
	comp=Z,11nm,0.8s							
PV05	Paradox Valley	40.05	327	IAmb	IAmb	02 37 46.6		
	comp=Z,10nm,0.8s							
E47A	Iron Bridge	40.24	359	P	P	02 37 44.9	-1.0	
	baz=179							
E48A	Lockeyer	40.26	0	P	P	02 37 45.1	-1.0	
	baz=180,SNR=5.6							
BDFB	Brasilia	40.28	123	P	P	02 37 46.3	-0.5	
	comp=Z,4.4nm,0.8s,baz=287,slow=14,SNR=4.4							
BDFB				LR	LR	02 54 22.4		
	comp=Z,305nm,20.9s,baz=297,slow=36							
BDFB	Brasilia	40.28	123	IAmb	IAmb	02 37 50.4		
	comp=Z,10nm,1.1s							
ROC1	El Roble	40.30	165	P	P	02 37 48.0	+1.1	
COWI	Conover	40.30	353	P	P	02 37 45.2	-1.3	
E51A	G1948 Merrick	40.38	3	P	P	02 37 46.2	-0.9	
	baz=184							
N23A	Red Feather La	40.58	332	P	P	02 37 50.1	+1.0	
	baz=142							
D47A	Chapleau	40.84	359	P	P	02 37 49.4	-1.4	
	baz=179							
TRCB	Terra Rica	40.85	136	*e*P	P	02 37 51.3	0.0	
W13A	Hualapai Mount	40.95	319	P	P	02 37 53.2	+1.0	
D48A	Paudash Townsh	40.95	1	P	P	02 37 50.3	-1.5	
	baz=181							
PCMB	Pacaembu	41.07	133	*e*P	P	02 37 53.1	0.0	
O20A	White River Ci	41.11	329	P	P	02 37 54.9	+1.5	
	baz=139							
O20A	White River Ci	41.11	329	IAmb	IAmb	02 38 05.0		
	comp=Z,12nm,0.9s							
D41A	Chassel	41.18	354	IAmb	IAmb	02 37 56.5		
	comp=Z,18nm,1.1s							
D54A	Lac Fusel, La	41.22	6	P	P	02 37 54.9	+0.9	
	baz=189							
IPMB	Ipameri, GO	41.32	126	*e*P	P	02 37 53.4	-1.8	
F33A	5 Mile Ranch,	41.42	345	IAmb	IAmb	02 37 54.4		
	comp=Z,9.9nm,0.8s							
SRU	San Rafael Swe	41.57	326	P	P	02 37 58.1	+0.9	
K22A	Casper	42.24	333	P	P	02 38 03.7	+1.1	
	baz=143							
RSSD	Black Hills	42.40	337	P	P	02 38 05.1	+1.1	
	baz=147							
RSSD	Black Hills	42.40	337	P	P	02 38 04.5	+0.5	
EYMN	Ely	42.45	351	P	P	02 38 01.7	-2.4	
	baz=166							
PTGB	Pitanga	42.51	137	*e*P	P	02 38 04.6	-0.3	
SHPR	Sheep Range	42.63	320	P	P	02 38 07.1	+1.2	
BB19B	Bebedouro	42.78	130	*e*P	P	02 38 05.3	-1.8	
JANB	Januaria	43.16	119	*e*P	P	02 38 07.8	-2.5	
ITQB	Itaqui	43.29	147	*e*P	P	02 38 10.6	-0.5	
TPNV	Topopah Spring	43.59	320	P	P	02 38 15.4	+1.8	
	baz=126							
DUG	Dugway, Tooele	43.59	326	P	P	02 38 14.6	+1.0	
	baz=133							
MATQ	Matagami	43.72	4	P	P	02 38 15.5	+1.2	
	baz=187							
BW06	Boulder Array	43.74	331	P	P	02 38 15.2	+0.3	
	baz=139,SNR=5.9							
BW06	Boulder Array	43.74	331	IAmb	IAmb	02 38 16.5		
	comp=Z,19nm,1.7s							
PD31	Pinedale Array	43.74	331	IAmb	IAmb	02 38 16.5		
	comp=Z,18nm,1.7s							
PDAR	Pinedale Array	43.74	331	P	P	02 38 14.8	0.0	
	comp=Z,2.5nm,0.9s,baz=125,slow=7.8,SNR=10							
PDAR				PcP	PcP	02 40 03.3	+1.8	
	comp=Z,0.7nm,0.9s,baz=164,slow=4.6,SNR=2.3							
PDAR				LR	LR	02 58 23.3		
	comp=Z,272nm,19.8s,baz=132,slow=39							
HWUT	Hardware Ranch	43.90	328	P	P	02 38 16.6	+0.5	
HWUT				IAmb	IAmb	02 38 19.9		
	comp=Z,11nm,0.8s							
R11A	Troy Canyon, C	44.02	322	P	P	02 38 18.4	+1.3	
	baz=128							
ITAB	Concordia	44.18	140	*e*P	P	02 38 17.1	-1.2	
MC01	Montes Claros	44.22	121	*e*P	P	02 38 17.4	-1.4	
REDW	Red Top Meadow	44.82	330	IAmb	IAmb	02 38 25.2		
	comp=Z,13nm,1.1s							
TPAW	Teton Pass	44.96	330	IAmb	IAmb	02 38 30.1		
	comp=Z,12nm,1.1s							
IMW	Indian Meadow	45.26	331	IAmb	IAmb	02 38 30.0		
	comp=Z,10nm,1.2s							
FLWY	Flagg Ranch	45.28	331	P	P	02 38 27.9	+0.7	
RLMT	Red Lodge	45.41	333	P	P	02 38 28.7	+0.6	
	baz=141,SNR=6.4							
RLMT	Red Lodge	45.41	333	IAmb	IAmb	02 38 29.3		
	comp=Z,8.0nm,0.8s							
ULM	Lac du Bonnet	45.47	348	P	P	02 38 26.5	-1.7	
	comp=Z,6.6nm,0.7s,baz=170,slow=7.0,SNR=6.4							
ULM	Lac du Bonnet	45.47	348	IAmb	IAmb	02 38 27.0		
	comp=Z,8.6nm,0.8s							
NVAR	Mina Array Bea	45.78	320	P	P	02 38 32.2	+1.0	
	comp=Z,1.9nm,0.7s,baz=122,slow=7.1,SNR=12							
NVAR				PcP	PcP	02 40 09.2	+0.6	
	comp=Z,0.4nm,0.7s,baz=167,slow=4.4,SNR=1.8							
NVAR				LR	LR	02 58 14.4		
	comp=Z,325nm,18.1s,baz=142,slow=37							
GDU01	Guandu, BA	46.80	115	*e*P	P	02 38 38.1	-1.1	
SJMB	Sao Joao De Ma	47.47	122	*e*P	P	02 38 43.0	-1.5	
PLCA	Paso Flores	47.83	168	P	P	02 38 46.5	-0.4	
	comp=Z,2.2nm,0.7s,baz=10.0,slow=8.7,SNR=4.8							
PLCA	Paso Flores	47.83	168	*e*P	P	02 38 47.3	+0.4	
EGMT	Eagleton	47.88	335	P	P	02 38 48.1	+0.8	
	baz=142							
EGMT	Eagleton	47.88	335	IAmb	IAmb	02 38 48.7		
	comp=Z,8.1nm,1.1s							
MSO	Missoula	48.84	331	P	P	02 38 55.4	+0.6	
	baz=136,SNR=5.4							
SCHQ	Schefferville	50.20	12	P	P	02 39 04.3	-0.5	
	comp=Z,6.3nm,0.9s,baz=196,slow=7.6,SNR=6.1							
SCHQ				LR	LR	03 02 02.5		
	comp=Z,80nm,20.4s,baz=152,slow=38							
SCHQ	Schefferville	50.20	12	P	P	02 39 05.7	+0.8	
SCHQ				IAmb	IAmb	02 39 08.4		
	comp=Z,9.7nm,1.1s							
WALA	Waterton Lakes	50.46	333	IAmb	IAmb	02 39 17.7		
	comp=Z,9.6nm,1.0s							
YKA	Yellowknife Ar	61.08	344	P	P	02 40 22.4	-0.4	
	comp=Z,3.8nm,0.9s,baz=139,slow=6.8,SNR=30							
YKA				PcP	PcP	02 41 05.8	+0.1	
	comp=Z,0.5nm,0.7s,baz=136,slow=4.3,SNR=1.2							
DLBC	Dease Lake	63.79	334	P	P	02 40 42.3	+1.2	
YAH	Yahtse	69.94	333	IAmb	IAmb	02 41 22.9		
	comp=Z,5.7nm,0.9s							
BARN	Barnard Glacie	70.20	334	IAmb	IAmb	02 41 23.7		
	comp=Z,6.6nm,1.2s							
PPT	Papeete	70.37	249	LR	LR	03 03 56.1		
	comp=Z,293nm,18.4s,baz=82,slow=29							
PPT2	Papeete2	70.38	249	*e*LR	LR	03 02 49.8		
	comp=Z,397nm,24.8s,baz=58							
PPT2	Papeete2	70.38	249	*e*LR	LR	02 40 38.4		
	comp=Z,103nm,24.8s							
DAWY	Dawson	70.59	337	P	P	02 41 24.6	+0.4	
EPYK	Eagle Plains	70.75	340	P	P	02 41 26.1	+1.1	
	baz=121							
MCARA	McCarthy VSAT	70.93	334	IAmb	IAmb	02 41 28.5		
	comp=Z,5.3nm,0.8s							
A36M	Sachs Harbour	70.94	347	P	P	02 41 25.9	-0.1	
	baz=134,SNR=11							
GLB	Gilahina Butte	71.30	334	IAmb	IAmb	02 41 45.5		
	comp=Z,8.8nm,1.3s							
SUMG	Summit	71.58	13	P	P	02 41 31.1	+0.7	
SUMG	Summit	71.58	13	*i* P	P	02 41 29.0	-1.4	
	comp=Z,36nm,1.0s							
EGAK	Eagle	71.60	337	IAmb	IAmb	02 41 31.6		
	comp=Z,4.6nm,0.8s							
TBI	Tubuai	71.68	243	*e*LR	LR	03 03 22.8		
	comp=Z,523nm,28.8s,baz=74							
DOT	Dot Lake	72.28	336	IAmb	IAmb	02 41 36.1		
	comp=Z,5.7nm,0.9s							
SCRK	Sand Creek	72.37	336	P	P	02 41 35.7	+0.7	
RIDG	Independent Ri	72.63	336	IAmb	IAmb	02 41 51.8		
	comp=Z,6.3nm,1.0s							
HDA	Harding Lake	73.74	336	P	P	02 41 43.5	+0.6	
	baz=111							
HDA	Harding Lake	73.74	336	IAmb	IAmb	02 41 53.2		
	comp=Z,4.3nm,0.8s							

IL31		73.84	336	P	P	02 41 43.3	-0.2	
IL31				IAmb	IAmb	02 41 58.8		
	comp=Z,15nm,1.6s							
ILAR	Eielson Array	73.84	336	P	P	02 41 43.8	+0.3	
	comp=Z,2.1nm,0.8s,baz=119,slow=4.4,SNR=18							
ILAR				LR	LR	03 17 42.1		
	comp=Z,92nm,18.4s,baz=114,slow=39							
FYU	Fort Yukon	73.88	338	IAmb	IAmb	02 42 00.8		
	comp=Z,9.6nm,1.1s							
RND	Reindeer	74.19	335	IAmb	IAmb	02 41 47.2		
	comp=Z,8.4nm,1.0s							
BPAW	Bear Paw Mtn.	75.31	335	P	P	02 41 52.5	+0.4	
BPAW				IAmb	IAmb	02 42 08.0		
	comp=Z,4.9nm,0.9s							
TOLK	Toolik Lake Re	76.18	340	P	P	02 41 57.6	+0.6	
	baz=109							
DBIC	Dimbokro	76.95	85	LR	LR	03 15 44.0		
	comp=Z,588nm,18.5s,baz=256,slow=36							
ESDC	Sonseca Array	77.22	51	P	P	02 42 05.8	+2.3	
	comp=Z,2.2nm,0.7s,baz=266,slow=5.4,SNR=23							
TORD	Torodi Ar. Bea	82.88	78	P	P	02 42 35.5	+1.1	
	comp=Z,0.8nm,0.6s,baz=283,slow=5.5,SNR=7.4							
TORD				LR	LR	03 19 44.9		
	comp=Z,61nm,20.4s,baz=265,slow=36							
NOA	NORSAR Array B	86.47	29	P	P	02 42 52.2	+0.6	
	comp=Z,2.0nm,1.0s,baz=273,slow=4.6,SNR=4.4							
NOA				LR	LR	03 21 03.9		
	comp=Z,35nm,18.3s,baz=275,slow=35							
KEST	Kesra	87.88	54	LR	LR	03 24 05.5		
	comp=Z,37nm,18.6s,baz=208,slow=37							
CLL	Collm	88.66	39	*e*P	P	02 43 05.0	+2.7	
GERES	GERESS Array B	89.46	41	P	P	02 43 06.5	+0.3	
	comp=Z,0.3nm,0.6s,baz=254,slow=3.8,SNR=5.4							
ARCES	ARCESS Array B	90.51	20	LR	LR	03 22 04.1		
	comp=Z,40nm,18.9s,baz=302,slow=34							
FINES	FINESS Array B	93.38	27	LR	LR	03 23 40.7		
	comp=Z,56nm,19.9s,baz=278,slow=34							
AKASG	Malin Array Be	98.72	37	LR	LR	03 24 06.5		
	comp=Z,53nm,22.0s,baz=305,slow=33							
DZM	Mont Dzumac	111.88	249	*e*LR	LR	03 22 05.0		
	comp=Z,136nm,24.6s							
KSRS	Korea Array	128.30	329	PKP	PKPdf	02 49 16.4	+0.3	
	comp=Z,0.6nm,0.4s,baz=17,slow=1.4,SNR=2.7							
KSH	Kashi	130.41	22	PKP	PKPdf	02 49 16.4	-3.8	
LZH	Lanzhou	137.66	353	*e*PKP	PKPdf	02 49 33.3	-0.6	
LZH				pPKP	pPKPdf	02 49 40.5	-1.6	
LZH				sPKP		02 49 43.1		
LZH				LR	LR			
	comp=N,53nm,18.0s							
LZH				LR	LR			
	comp=E,59nm,17.9s							
LZH				LR	LR			
	comp=Z,92nm,19.8s							
ASAR	Alice Springs	141.00	240	PKhKP	PKPpre	02 49 32.7		
	comp=Z,1.0nm,0.8s,baz=116,slow=3.9,SNR=5.3							
ASAR				PKP	PKPdf	02 49 39.9	-0.2	
	comp=Z,1.9nm,0.8s,baz=104,slow=2.7,SNR=6.5							
WRA	Warramunga Arr	141.79	245	PKP	PKPdf	02 49 40.5	-1.1	
	comp=Z,1.2nm,0.8s,baz=101,slow=2.1,SNR=4.8							
H01W1	Cape Leeuwin H	147.52	206	T	T	05 35 21.5		
	baz=150,slow=76,SNR=14							
H01W2	Cape Leeuwin H	147.52	206	T	T	05 35 21.7		
	baz=150,slow=76,SNR=16							
H01W3	Cape Leeuwin H	147.54	206	T	T	05 35 19.6		
	baz=150,slow=76,SNR=16							
FITZ	Fitzroy Crossi	150.18	244	PKPbc	PKPbc	02 49 59.9	-1.0	
	comp=Z,10nm,0.9s,baz=147,slow=2.6,SNR=7.0							

SOME ***25*** *02:31:35.0,39°.52N×73°.62E,h0km*
KRNET ***25*** *02:31:41.8±0.1,39°.43N×74°.04E,mb2.8*
ISC 25 02:31:41.9±2.6,**39°.4N**±0°.1×**74°.07E**±0°.08,**h10**km,**n8,**
σ1°78/16,10C,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	2.07	337	⇑	*i*P		Pb	02 32 18.0	-1.7
	baz=37								
ARSB				⇑	*i*S		Sb	02 32 44.3	-1.3
	baz=37								
BTK	Batken	2.59	285	⇑	*i*P		Pn	02 32 24.6	+0.7
	baz=85								
BTK				⇑	*i*S		Sn	02 32 56.6	+1.2
	baz=85								
AML	Almayashu	2.72	354	⇑	*i*P		Pn	02 32 27.3	+1.3
	baz=55								
AML				⇑	*i*S		Sn	02 33 00.3	+1.1
	baz=55								
KZA	Kyzart	2.80	18	⇑	*e*P		Pn	02 32 27.7	+0.6
	baz=19								
KZA				⇑	*i*S		Sn	02 33 02.2	+1.0
	baz=19								
UCH	Uchtor	2.82	7	⇑	*e*P		Pn	02 32 28.1	+0.6
	baz=7.0								
UCH				⇑	*i*S		Sn	02 33 03.3	+1.5
	baz=7.0								
MRKS	Merke	3.38	349	*e*P			Pn	02 32 36.6	+1.8
	1.0nm,0.1s								
MRKS				*e*S			Sb	02 33 21.0	-2.1
	2.2nm,0.1s								
DGS	Degeres	4.03	18	*e*P			Pb	02 32 50.2	-2.8
	0.9nm,0.2s								
DGS				*e*S			Sb	02 33 44.2	+2.5
	1.4nm,0.3s								
IUG	Iuzhnay	4.10	313	*e*P			Pn	02 32 44.9	+0.2
	0.5nm,0.1s								
IUG				*e*S			Sn	02 33 35.4	+2.6
	3.1nm,0.1s								

DDA ***25*** *02:34:12.8,40°.45N×25°.61E,h5km±2km,MW3.8*
THE ***25*** *02:34:16.9,40°.38N×25°.91E,h7km±1km,ML2.9/5,Error ellipse: s-maj=1.4km s-min=0.6km az=131.0*
ISK ***25*** *02:34:16.3,40°.38N×25°.90E,h7km,ML3.6/37*
ISC 25 02:34:16.7±0.9,**40°.38N**±0°.02×**25°.86E**±0°.02,**h11**km±8km,
n113,σ1°36/117,14C-11D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GADA	Gvkgeada	0.19	171	P			Pg	02 34 20.8	+0.1
GADA				S			Sg	02 34 24.0	+0.5
	11μm,0.5s								
GADA	Gvkgeada	0.19	171	PG			Pg	02 34 20.8	+0.1
GADA				SG			Sg	02 34 23.9	+0.5
SMTH	Samothraki Isl	0.27	291	P			Pb	02 34 23.0	-0.6
SMTH				S			Sb	02 34 27.8	-0.4
	3μm,0.1s								
ENEZ	Enez	0.42	32	P			Pb	02 34 24.9	-1.3
ENEZ				S			Sb	02 34 30.9	-1.8
	3μm,0.6s								
ENEZ	Enez	0.42	32	PG			Pb	02 34 24.9	-1.3
GELI	Tayfur-Gelibol	0.47	87	PG			Pg	02 34 25.5	-0.4
BOZC	Bozcaada	0.55	164	PG			Pg	02 34 27.3	-0.2
ERIK	Erikli-Kesan	0.58	59	PG			Pg	02 34 27.4	-0.6
EZN	Ezine	0.66	147	P			Pg	02 34 28.6	-0.8
EZN				S			Sb	02 34 39.1	-0.2
	748nm,0.2s								
EZN	Ezine	0.66	147	PG			Pg	02 34 28.7	-0.7
LPK	Lapseki	0.69	90	PG			Pg	02 34 29.5	-0.5
LIA	Limnos Island	0.70	228	P			Pb	02 34 31.4	+0.4
LIA				S			Sb	02 34 41.7	+1.0
	2μm,0.5s								
KESN	Edirne-Kesan	0.77	54	*i* P			Pn	02 34 33.1	-0.8
KESN				*i* S			Sn	02 34 46.2	+0.5
RDO	Rodhopi	0.81	342	P			Pg	02 34 31.2	-1.1
RDO	Rodhopi	0.81	342	PG			Pb	02 34 32.1	-0.7
BAYC	CANAKKALE_Bayr	0.82	140	*i* P			Pg	02 34 31.8	-0.8
THAS	Thassos island	0.90	285	P			Pb	02 34 34.0	-0.3
UKOP	Uzunkopru-Edir	0.95	38	PG			Pb	02 34 34.8	-0.5
RKY	Sarkoy-Tekirda	1.05	72	PG			Pb	02 34 36.4	-0.6
KRBG	Karabiga-Canak	1.10	89	PG			Pg	02 34 36.4	-1.4
SIGR	SIGRI	1.16	180	P			Pb	02 34 38.7	-0.1
SIGR	SIGRI	1.16	180	PN			Pb	02 34 38.9	+0.1
PRK	Paraskevi	1.17	164	P			Pg	02 34 38.0	-1.2
KAVA	Kavala	1.20	302	P			Pn	02 34 39.6	+0.2
KNL	Balıkesir	1.28	94	*i* P			Pn	02 34 40.8	+0.3
KNL				IAML				02 35 09.0	
	comp=E,2μm,0.8s								
KNL				IAML				02 35 18.0	
	comp=N,2μm,0.6s								
KDZ	Kurdzhali	1.32	345	P			Pb	02 34 41.7	+0.2
KDZ	Kurdzhali	1.32	345	PN			Pn	02 34 40.8	-0.3
TKR	Tekirdag	1.42	64	PN			Pn	02 34 42.4	0.0
OUR	Ouranopolis	1.44	269	P			Pn	02 34 42.2	-0.4
OUR	Ouranopolis	1.44	269	PN			Pn	02 34 42.3	-0.4

GONE	Gonen-Balikesi	1.44	103	PN		Pn	02 34 42.9	+0.2
BALY	Balya	1.49	115	*i* P		Pb	02 34 44.3	-0.2
BALY				IAML			02 35 21.0	
	comp=E,486nm,0.6s							
BALY				IAML			02 35 23.0	
	comp=N,971nm,0.9s							
EDC	Edincik	1.53	90	PN		Pn	02 34 43.6	-0.4
DKL	Dikili	1.53	148	PN		Pn	02 34 44.1	+0.1
RZN	Rozhen	1.57	327	P		Pg	02 34 48.2	+1.3
CRLT	Corlu	1.61	62	PN		Pn	02 34 45.2	+0.1
EDRB	Edirne	1.61	24	P		Pn	02 34 44.8	-0.4
EDRB	Edirne	1.61	24	PN		Pn	02 34 44.4	-0.8
DIM	Dimitrovgrad	1.69	352	*e*P		Pb	02 34 46.9	-0.9
ZEDA	zmir-Bergama	1.69	146	*i* P		Pg	02 34 48.3	-0.9
ZEDA				*i* S		Sg	02 35 14.8	+3.7
ZEDA				IAML			02 35 21.0	
	comp=N,458nm,0.5s							
ZEDA				IAML			02 35 21.0	
	comp=E,406nm,0.5s							
BALB	Balikesir	1.72	115	PN		Pn	02 34 46.7	+0.1
BOTS	Marmara Eregli	1.73	68	PN		Pn	02 34 46.9	+0.2
PAIG	Paliouri	1.73	256	P		Pn	02 34 46.8	+0.1
STEP	BALIKESIR_Sava	1.74	124	*i* P		Pg	02 34 50.7	+0.6
STEP				IAML			02 35 31.0	
	comp=E,997nm,0.7s							
STEP				IAML			02 35 34.0	
	comp=N,876nm,0.8s							
PLG	Polygyros	1.84	271	P		Pn	02 34 47.8	-0.6
KRBN	Karaburun	1.86	163	PN		Pn	02 34 49.4	+0.9
SRS	Serrai	1.88	294	P		Pn	02 34 49.0	+0.2
KCTX	Karacabey (Bur	1.91	92	PN		Pn	02 34 49.4	+0.1
PLD	Plovdiv	1.94	334	P		Pg	02 34 53.2	-0.6
PLD	Plovdiv	1.94	334	PN		Pb	02 34 50.7	-1.3
AOS	Alonnisos	1.94	232	P		Pb	02 34 51.0	-1.1
AOS	Alonnisos	1.94	232	PN		Pb	02 34 51.1	-1.1
SOH	Sokhos	1.96	284	P		Pn	02 34 50.5	+0.5
SLVT	Silivri	1.98	64	PN		Pn	02 34 50.7	+0.5
CHOS	Chios island	1.99	176	P		Pn	02 34 50.2	-0.2
CHOS	Chios island	1.99	176	PN		Pg	02 34 51.1	+0.7
MMB	Musomiste	2.02	308	P		Pg	02 34 54.8	+0.6
URLA	Izmir	2.09	164	PN		Pn	02 34 51.7	-0.1
HORT	Hortiatis	2.12	277	P		Pb	02 34 53.4	-1.8
HORT	Hortiatis	2.12	277	PN		Pb	02 34 53.6	-1.6
AKS	Akhisar	2.12	134	PN		Pn	02 34 52.9	+0.7
CTYL	Yalikoy Yolu	2.14	58	PN		Pn	02 34 52.8	+0.4
CTKS	Kestanelik-??a	2.19	66	PN		Pn	02 34 53.1	+0.1
BLCB	Balcova	2.19	155	P		Pn	02 34 53.6	+0.6
BLCB	Balcova	2.19	155	PN		Pn	02 34 53.9	+0.9
SKIA	Skiathos	2.21	238	P		Pn	02 34 54.1	+0.8
DST	Dursunbey	2.26	109	PN		Pn	02 34 54.5	+0.5
ARMT	Armutlu	2.30	84	PN		Pn	02 34 55.2	+0.6
GOMA	Golmarmara-Man	2.30	136	PN		Pn	02 34 55.2	+0.6
MDNY	Mudanya-Bursa	2.31	89	PN		Pn	02 34 55.5	+0.8
HVHR	Bakirkoy-Istan	2.35	74	PN		Pn	02 34 55.9	+0.7
ORLT	Orhaneli	2.35	97	PN		Pn	02 34 55.9	+0.6
BGKT	Bogazkoy	2.35	69	PN		Pn	02 34 56.9	-0.4
KNT	Kendrikon	2.38	290	P		Pn	02 34 56.4	+0.7
KNT	Kendrikon	2.38	290	PN		Pn	02 34 57.0	+1.3
MRKA	Markates	2.42	227	P		Pn	02 34 57.1	+0.8
ISK	Istanbul-Kandi	2.53	73	PN		Pn	02 34 58.2	+0.5
KAVV	Kandilli-Istan	2.53	73	PN		Pn	02 34 58.2	+0.5
ELND	Elena	2.55	0	⇑P		Pb	02 35 02.0	-0.5
ELND				⇓S		Sg	02 35 39.0	+0.3
KLYT	Kilyos	2.57	69	PN		Pn	02 34 59.3	+1.0
KKB	Krupnik	2.57	306	P		Pb	02 35 02.6	-0.3
YLV	Yalova	2.69	85	PN		Pn	02 35 00.1	+0.1
SMAA	Simav-Kutahya	2.72	117	PN		Pn	02 35 00.9	+0.4
SIMA	Simav-Kutahya	2.73	117	PN		Pn	02 35 01.3	+0.7
DION	Dionisos Attik	2.74	214	P		Pn	02 35 01.0	+0.3
GCAM	G?zelcaml?	2.88	158	PN		Pn	02 35 03.9	+1.4
SZH	Strazhica	2.89	1	P		Pb	02 35 06.6	-1.7
VTS	Vitosha	2.98	320	⇑P		Pn	02 35 04.4	+0.3
VTS	Vitosha	2.98	320	P		Pb	02 35 08.3	-1.7
PLVB	Pleven	3.15	343	⇓P		Pb	02 35 10.5	-2.1
RAZG	Razgrad	3.23	8	⇓P		Pb	02 35 11.3	-2.7
APE	Apeiranthos	3.31	185	⇓P		Pn	02 35 05.1	-3.5
MPEP	Malo Peshtene	3.37	333	P		Pn	02 35 10.7	+1.4
YER	Yerkesik	3.75	149	P		Pn	02 35 14.3	-0.3
ICOR	Ion Corvin	4.01	20	⇓P		Pb	02 35 22.4	-4.9
TIRR	Tirgusor	4.50	24	⇓P		Pb	02 35 30.2	-5.4
TOPG	Topolog	4.87	22	⇑P		Pn	02 35 33.4	+3.6
ARR	Arges	5.07	350	⇑P		Pn	02 35

MNSI	Mandailing Nat	11.19	322	P		Pn	02 45 13.4	-1.6	
	12nm,0.4s								
PBSI	Pulau Batu	11.43	314	P		Pn	02 45 17.3	-1.0	
	69nm,1.0s								
GSI	Gunungsitoli	12.88	316	P		Pn	02 45 34.9	-3.3	
GSI	Gunungsitoli	12.88	316			Pn	02 45 36.8	-1.4	
KAPI	Kappang	13.50	78	LR		LR	02 51 16.2		
	comp=Z,98nm,18.7s,baz=252,slow=39								
TPTI		14.60	320	P		Pn	02 45 58.2	-3.4	
EDFI	Ende, Flores	15.04	94	P		Pn	02 46 02.7	-4.9	
MPSI	Mapaga	15.74	59	P		Pn	02 46 17.6	+0.9	
BATI	Baumata	17.07	98	P		Pn	02 46 33.5	-0.1	
	5.7nm,0.3s,baz=256,slow=4.2,SNR=3.0								
BATI				S		S	02 49 48.0	-3.3	
	3.5nm,0.3s,baz=300,slow=20,SNR=1.7								
BATI	Baumata	17.07	98	P		Pn	02 46 32.3	-1.3	
	35nm,1.0s								
SOEI	Soe	17.62	97			Pn	02 46 40.5	0.0	
SOEI				IAmb		IAmb	02 47 09.5		
	comp=Z,33nm,0.8s								
SOEI						S	02 50 00.4	-2.4	
DLV	T Lat	19.97	6	P		P	02 47 06.6	-0.5	
FITZ	Fitzroy Crossi	21.11	120	P		P	02 47 20.1	+0.9	
	comp=Z,8.1nm,0.8s,baz=289,slow=7.8,SNR=13								
FITZ	Fitzroy Crossi	21.11	120	P		P	02 47 20.5	+1.2	
FITZ				IAmb		IAmb	02 47 36.6		
	comp=Z,30nm,1.3s								
DAV	Davao City (W)	24.24	52	LR		LR	02 57 52.3		
	comp=Z,58nm,20.9s,baz=239,slow=38								
SIJI	Sorong	25.68	75	P		P	02 48 04.3	-0.2	
	comp=Z,3.8nm,0.6s,baz=53,slow=20,SNR=2.0								
NWAO	Narrogin (SRO)	26.66	160	LR		LR	02 57 22.1		
	comp=Z,198nm,21.8s,baz=315,slow=33								
CMAR	Chiang Mai Arr	27.39	344	P		P	02 48 17.5	-2.2	
	comp=Z,1.1nm,0.3s,baz=173,slow=8.9,SNR=7.8								
CMAR				LR		LR	03 00 29.5		
	comp=Z,63nm,19.4s,baz=205,slow=40								
H01W3	Cape Leeuwin H	27.60	166	T		T	03 18 10.2		
	baz=341,slow=79,SNR=8.7								
H01W1	Cape Leeuwin H	27.61	166	T		T	03 18 07.8		
	baz=341,slow=79,SNR=18								
H01W2	Cape Leeuwin H	27.61	166	T		T	03 18 12.1		
	baz=341,slow=79,SNR=11								
WRA	Warramunga Arr	29.41	117	P		P	02 48 38.1	+0.2	
	comp=Z,1.2nm,0.9s,baz=290,slow=11,SNR=5.9								
WRAB	Tennant Creek	29.42	117	P		P	02 48 37.9	-0.1	
ASAR	Alice Springs	30.49	124	P		P	02 48 48.0	+0.6	
	comp=Z,1.0nm,0.8s,baz=286,slow=8.5,SNR=6.6								
ASAR	Alice Springs	30.49	124	P		P	02 48 48.0	+0.6	
H08S2	Diego Garcia H	33.69	268	T		T	03 24 51.2		
	baz=91,slow=75,SNR=22								
H08S3	Diego Garcia H	33.70	268	T		T	03 24 49.5		
	baz=91,slow=75,SNR=43								
H08S1	Diego Carcia H	33.71	268	T		T	03 24 51.1		
	baz=91,slow=75,SNR=26								
SHL	Shillong	36.33	337	P		P	02 49 38.4	0.0	
WHN	Wuhan	39.12	11	⇓P		P	02 50 13.9	+12	
STKA	Stephens Creek	40.30	131	P		P	02 50 12.4	+0.9	
	comp=Z,3.6nm,0.7s,baz=304,slow=7.7,SNR=7.4								
STKA	Stephens Creek	40.30	131	P		P	02 50 11.7	+0.1	
NJ2	Nanjing	41.60	16	*e*P		P	02 50 21.8	-0.3	
NJ2				pmax		pmax			
	comp=Z,13nm,0.6s								
NJ2				pmax		pmax			
	comp=Z,17nm,0.6s								
LZH	Lanzhou	43.99	357	*e*P		P	02 50 44.3	+2.7	
LZH				pP		pwP	02 50 56.5	+1.5	
LZH				sP		sP	02 51 01.0	+6.1	
LZH				*e*PP		PcP	02 52 29.3	+2.3	
LZH				pmax		pmax			
	comp=Z,20nm,1.3s								
LZH				pmax		pmax			
	comp=Z,110nm,5.4s								
LZH				LR		LR			
	comp=N,230nm,13.5s								
LZH				LR		LR			
	comp=E,240nm,13.2s								
LZH				LR		LR			
	comp=Z,360nm,16.7s								
GTA	Gaotai	47.64	353	P		P	02 51 11.4	+1.0	
GTA				pP		pP	02 51 21.6	+1.7	
GTA				sP		pwP	02 51 25.6	+1.7	
GTA				pmax		pmax			
	comp=Z,4.0nm,1.1s								
GTA				pmax		pmax			
	comp=Z,47nm,4.8s								
GTA				LR		LR			
	comp=N,77nm,15.2s								
GTA				LR		LR			
	comp=E,85nm,16.8s								
GTA				LR		LR			
	comp=Z,60nm,18.1s								
HHC	Hu-ho-hao-te	48.89	5	*e*P		P	02 51 20.3	+0.3	
HHC				pmax		pmax			
	comp=Z,23nm,0.9s								
HHC				pmax		pmax			
	comp=Z,43nm,5.7s								
KSRS	Korea Array	49.52	22	P		P	02 51 23.6	-1.1	
	comp=Z,1.9nm,0.8s,baz=208,slow=9.8,SNR=6.2								
NIL	Nilore	52.13	325	P		P	02 51 44.4	-0.2	
WMQ	Urumqi	54.39	343	*e*P		P	02 52 01.9	+0.9	
WMQ				pmax		pmax			
	comp=Z,14nm,0.7s								
WMQ				pmax		pmax			
	comp=Z,54nm,6.7s								
WMQ				LR		LR			
	comp=N,150nm,22.3s								
WMQ				LR		LR			
	comp=E,190nm,28.9s								
WMQ				LR		LR			
	comp=Z,320nm,29.1s								
KSH	Kashi	55.15	331	P		P	02 52 10.1	+3.4	
KSH				pP		pP	02 52 17.0	+0.7	
KSH				sP		pwP	02 52 22.9	+2.6	
KSH				pmax		pmax			
	comp=Z,11nm,0.6s								
KSH				pmax		pmax			
	comp=Z,81nm,4.2s								
KBL	Kabul	55.24	322	P		P	02 52 07.1	-0.4	
KBL				IAmb		IAmb	02 52 25.7		
	comp=Z,4.1nm,0.6s								
SONM	Songino Array	55.66	360	P		P	02 52 09.3	-0.9	
	comp=Z,0.9nm,0.6s,baz=181,slow=7.2,SNR=5.9								
SONM				PcP		PcP	02 53 09.3	-0.1	
	comp=Z,3.0nm,0.7s,baz=176,slow=3.8,SNR=11								
ULN	Ulaanbaatar	55.69	0	P		P	02 52 10.0	-0.4	
PRZ	Przheval'sk	56.47	335	P		P	02 52 16.3	+0.2	
USRK	Ussuriysk Ar.	56.90	22	P		P	02 52 17.0	-1.9	
	comp=Z,1.4nm,0.6s,baz=203,slow=6.3,SNR=3.6								
KZA	Kyzart	57.51	333	P		P	02 52 23.9	+0.1	
	SNR=9.0								
BOOM	Boomskoye usch	57.53	334	IAmb		IAmb	02 52 25.3		
	comp=Z,3.2nm,0.7s								
GAR	Garm	57.63	327	P		P	02 52 23.7	-0.7	
GAR						P	02 52 24.0	-0.3	
CHGR	Chuyangaron	58.02	326	P		P	02 52 25.9	-1.1	
TKM2	Tokmak 2	58.03	334	P		P	02 52 26.9	-0.2	
	SNR=27								
KBK	Karagaybulak	58.11	333	P		P	02 52 28.1	+0.4	
	SNR=5.2								
AML	Almayashu	58.27	332	P		P	02 52 29.1	0.0	
	SNR=11								
AAK	Ala-Archa	58.30	333	P		P	02 52 28.7	-0.3	
AAK				IAmb		IAmb	02 53 21.5		
	comp=Z,3.0nm,0.7s								
EKS2	Erkin-Say	58.64	332	P		P	02 52 31.9	+0.5	
	SNR=7.3								
MK31	Makanchi Array	58.72	341	P		P	02 52 30.8	-0.9	
MK31				IAmb		IAmb	02 52 32.3		
	comp=Z,3.6nm,0.6s								
MKAR	Makanchi Array	58.72	341	P		P	02 52 30.2	-1.5	
	comp=Z,5.3nm,0.5s,baz=152,slow=7.3,SNR=54								
MAKZ	Makanchi	58.84	341	P		P	02 52 32.7	+0.2	
MAKZ				IAmb		IAmb	02 52 33.9		
	comp=Z,7.0nm,1.4s								
KK31	Karatay Array	60.54	330	P		P	02 52 43.8	-0.5	
KK31				IAmb		IAmb	02 52 44.7		
	comp=Z,2.3nm,0.6s								
KURK	Kurchatov	63.33	341	P		P	02 53 02.8	0.0	
GEYT	Alibeck	64.24	319	P		P	02 53 09.5	+0.3	
	comp=Z,1.3nm,0.3s,baz=177,slow=5.2,SNR=4.8								
GYA0B	ALIBECK ARRAY	64.24	319	P		P	02 53 09.5	+0.4	
GYA0B				IAmb		IAmb	02 53 23.2		
	comp=Z,5.4nm,0.8s								
ZAA0	Zalesovo Array	64.44	346	P		P	02 53 08.6	-1.5	
ZALV	Zalesovo Beam	64.44	346	P		P	02 53 09.4	-0.7	
	comp=Z,3.4nm,0.4s,baz=155,slow=5.7,SNR=11								
MAW	Mawson	66.21	197	P		P	02 53 23.4	+2.0	
	comp=Z,1.4nm,0.5s,baz=43,slow=6.5,SNR=4.3								
BRVK	Borovoye	68.22	337	P		P	02 53 34.0	-0.4	
AKTO	Aktyubinsk	71.79	330	P		P	02 53 56.1	-0.2	
	comp=Z,3.0nm,0.7s,baz=133,slow=3.6,SNR=14								
VNDA	Vanda	75.02	169	P		P	02 54 16.1	+1.2	
	comp=Z,2.6nm,0.9s,baz=311,slow=4.6,SNR=14								
VNDA	Vanda	75.02	169	P		P	02 54 15.5	+0.6	
TBLG	Delisi	75.04	317	P		P	02 54 16.8	+1.1	
ARU	Arti	75.37	335	P		P	02 54 17.1	-0.1	
	comp=Z,1.4nm,0.3s,baz=133,slow=7.0,SNR=7.5								
ARU	Arti	75.37	335	P		P	02 54 16.8	-0.5	
KBZ	Khabaz	77.11	318	P		P	02 54 27.8	+0.5	
	comp=Z,4.6nm,0.9s,baz=120,slow=2.6,SNR=8.2								
KIV	Kislovodsk	77.34	318	P		P	02 54 27.7	-1.1	
KIV				IAmb		IAmb	02 54 31.4		
	comp=Z,3.8nm,0.7s								
ASF	Jabal al Asfar	77.37	305	P		P	02 54 29.7	+0.5	
	comp=Z,3.1nm,0.7s,baz=137,slow=3.4,SNR=7.2								
TIXI	Tiksi	80.92	7	P		P	02 54 45.9	-1.7	
TIXI				IAmb		IAmb	02 54 46.8		
	comp=Z,4.0nm,0.8s								
BR131	Keskin Array S	82.17	312	P		P	02 54 55.0	-0.2	
BR131				IAmb		IAmb	02 54 56.5		
	comp=Z,5.0nm,0.7s								
BRTR	Keskin Array B	82.17	312	P		P	02 54 55.7	+0.5	
	comp=Z,3.5nm,0.6s,baz=142,slow=7.2,SNR=9.1								
MDUB	Mudurnu	84.18	312	P		P	02 55 06.1	+0.6	
OBN	Obninsk	85.35	327	P		P	02 55 10.8	0.0	
TIRR	Tirgusor	87.19	315	P		P	02 55 20.3	+0.1	
AKASG	Malin Array Be	88.22	322	P		P	02 55 24.8	-0.2	
	comp=Z,1.5nm,0.7s,baz=88,slow=4.9,SNR=5.5								
SNAA	Sanae	88.37	197	P		P	02 55 27.7	+2.3	
VNA1	Neumayer--Stat	90.39	198	P		P	02 55 42.2	+7.3	
FINES	FINESS Array B	92.47	332	P		P	02 55 45.0	+0.5	
	comp=Z,1.0nm,0.7s,baz=86,slow=4.3,SNR=2.4								
YKA	Yellowknife Ar	118.02	20	PKP		PKPdf	03 01 19.7	-0.6	
	comp=Z,0.3nm,0.8s,baz=350,slow=2.3,SNR=4.0								
F36A	Milaca	138.57	21			PKPpre	03 01 49.7		
LONY	Lake Ozonia	143.57	1	P		PKPbc	03 02 05.9	-0.3	
	baz=358								
K48A	Perry	144.16	13	P		PKPbc	03 02 08.0	+0.1	
	baz=342								
I57A	Carthage	144.22	3	P		PKPab	03 02 07.6	-0.1	
	baz=356								
I60A	Shoreham	144.36	360	P		PKPbc	03 02 08.5	0.0	
	baz=0.3								
I59A	Olmsteadville	144.41	0	P		PKPbc	03 02 08.8	+0.1	
	baz=359								
I58A	Old Forge	144.49	2	P		PKPab	03 02 07.8	-1.0	
	baz=357								
TX32	Lajitas Array	144.63	49			PKPbc	03 02 10.6	+0.6	
TXAR	Lajitas Array	144.63	49	PKP		PKPbc	03 02 10.5	+0.4	
	comp=Z,1.2nm,0.7s,baz=283,slow=1.5,SNR=21								
HDIL	Hopedale	144.71	21	P		PKPab	03 02 09.3	-0.4	
	baz=332								
J57A	Williamstown	144.72	3	P		PKPab	03 02 09.5	-0.1	
	baz=356,SNR=7.0								
WMOK	Wichita Mounta	144.73	38	P		PKPab	03 02 10.0	+0.1	
	baz=313								
J59A	Piesco	144.73	1	P		PKPab	03 02 08.6	-1.1	
	baz=358								
J56A	Wolcott	144.80	4	P		PKPab	03 02 09.4	-0.5	
	baz=354								
J56A	Wolcott	144.80	4			PKPab	03 02 08.7	-1.2	
J58A	Remsen	144.81	2	P		PKPab	03 02 09.4	-0.6	
	baz=357								
J61A	Chester	144.85	359	P		PKPbc	03 02 10.4	+0.3	
	baz=1.6,SNR=5.1								
J62A	Henniker	144.95	358	P		PKPbc	03 02 10.6	+0.2	
	baz=2.8								
J60A	Lant Hill Farm	144.96	360	P		PKPab	03 02 10.4	-0.1	
	baz=0.1								
L50A	Kingsville	145.17	12	P		PKPbc	03 02 10.8	-0.4	
	baz=344								
K55A	Perry	145.24	6	P		PKPbc	03 02 11.0	-0.5	
	baz=352,SNR=6.9								
K54A	Basiliko Farm,	145.29	7	P		PKPbc	03 02 11.2	-0.5	
	baz=351								
K56A	Middlesex	145.34	5	P		PKPbc	03 02 11.3	-0.4	
	baz=353								
K57A	Scipio Center	145.37	4	P		PKPbc	03 02 11.5	-0.3	
	baz=355,SNR=10.0								
K58A	Earlville	145.39	3	P		PKPbc	03 02 11.9	0.0	
	baz=356								
K59A	Cooperstown	145.41	2	P		PKPbc	03 02 11.3	-0.7	
	baz=358								
P43A	Skaggs, Pawnee	145.43	22			PKPbc	03 02 11.4	-0.7	
K63A	Dunstable	145.47	357	P		PKPbc	03 02 11.7	-0.4	
	baz=3.4								
BDFB	Brasilia	145.48	227	PKPbc		PKPab	03 02 14.7	+1.4	
	comp=Z,3.4nm,0.7s,baz=153,slow=2.3,SNR=3.6								
K62A	Royalston	145.52	358	P		PKPdf	03 02 12.1	-0.2	
	baz=2.1								
K61A	Williamstown	145.53	360	P		PKPab	03 02 12.8	+0.2	
	baz=0.3								
ABTX	Abilene, Hawle	145.57	41	P		PKPab	03 02 13.6	+0.5	
	baz=310								
ABTX	Abilene, Hawle	145.57	41			PKPab	03 02 13.7	+0.5	
L54A	Sinclairville	145.58	8	P		PKPdf	03 02 12.2	-0.1	
	baz=350,SNR=6.8								
K60A	Five Rivers En	145.59	1	P		PKPab	03 02 13.1	+0.3	
	baz=359								
ERPA	Erie	145.60	9	P		PKPdf	03 02 12.4	0.0	
	baz=349								
TUL1	Leonard	145.60	33	P		PKPdf	03 02 12.7	+0.1	
	baz=318								
SFIN	Lafayette	145.61	19	P		PKPdf	03 02 12.6	+0.2	
	baz=336,SNR=9.8								
HRV	Adam Dziewonsk	145.65	357	P		PKPdf	03 02 12.6	+0.2	
	baz=3.3								
L53A	Girard	145.72	9	P		PKPdf	03 02 12.5	-0.1	
	baz=348								
L55A	Hinsdale	145.74	7	P		PKPdf	03 02 12.7	0.0	
	baz=351,SNR=7.8								
N48A	Decatur	145.77	16	P		PKPdf	03 02 12.5	-0.2	
	baz=339,SNR=8.2								
L56A	Greenwood	145.88	5	P		PKPdf	03 02 13.1	+0.2	
	baz=353,SNR=5.1								
BINY	Binghamton	145.93	3	P		PKPbc	03 02 13.6	0.0	
	baz=356,SNR=5.7								
M52A	Chesterland	145.94	11	P		PKPdf	03 02 13.1	+0.1	
	baz=346								
L59A	Walton	145.99	2	P		PKPdf	03 02 13.3	+0.2	
	baz=357								
L57A	Andrews Acres	146.07	4	P		PKPbc	03 02 14.4	+0.3	
	baz=354,SNR=5.3								
L58A	Harry Jones Me	146.09	3	P		PKPbc	03 02 14.1	0.0	
	baz=356,SNR=8.8								
CCM	Cathedral Cave	146.10	26	P		PKPdf	03 02 13.6	+0.2	
	baz=327								
CCM	Cathedral Cave	146.10	26			PKPbc	03 02 14.0	-0.2	
M53A	WI Miller and	146.16	10	P		PKPdf	03 02 13.7	+0.3	
	baz=347								
M54A	Oil Creek Stat	146.25	8	P		PKPab	03 02 15.1	-0.2	
	baz=349								
O48A	Farmland	146.29	16	P		PKPdf	03 02 14.2	+0.6	
	baz=339								
N50A	Nevada	146.31	13	P		PKPbc	03 02 14.5	-0.4	
	baz=343								
N51A	Ashland	146.34	12	P		PKPdf	03 02 14.2	+0.5	
	baz=344								
M55A	Ridgway	146.41	7	P		PKPdf	03 02 14.4	+0.6	
	baz=350								
M56A	Emporium	146.46	6	P		PKPbc	03 02 14.9	-0.3	
	baz=352								
N52A	McGinn's Farm,	146.58	11	P		PKPbc	03 02 15.2	-0.4	
	baz=345								
M59A	Waymart	146.62	3	P		PKPbc	03 02 15.1	-0.6	
	baz=356								
M57A	Sunshine Farm,	146.71	5	P		PKPbc	03 02 16.1	+0.1	
	baz=353								
M57A	Sunshine Farm,	146.71	5			PKPdf	03 02 15.2	+0.9	
M58A	Price's Panora	146.73	4	P		PKPbc	03 02 15.9	-0.1	
	baz=355								
N54A	Moraine State	146.73	9	P		PKPbc	03 02 15.7	-0.4	
	baz=348								
N53A	Lisbon	146.75	10	P		PKPbc	03 02 15.9	-0.2	
	baz=347,SNR=5.8								
U40A	Yellville	146.76	29	P		PKPbc	03 02 15.8	-0.4	
	baz=323								
JCT	Junction City	146.79	44	P		PKPbc	03 02 16.9	+0.3	
	baz=307								
O50A	Cable	146.79	14	P		PKPbc	03 02 16.0	-0.2	
	baz=342								
M66A	Nantucket	146.81	355	P		PKPdf	03 02 13.3	-1.2	
	baz=6.0								
M60A	Port Jervis	146.86	2	P		PKPbc	03 02 16.1	-0.2	
	baz=358								
ACSO	Alum Creek Sta	146.87	13	P		PKPbc	03 02 16.2	-0.3	
	baz=343,SNR=6.7								
BLO	Bloomington	146.89	19			PKPbc	03 02 15.9	-0.6	
N56A	West Decatur	147.01	7	P		PKPbc	03 02 16.5	-0.3	
	baz=351,SNR=5.9								
O51A	Pataskala	147.03	13	P		PKPbc	03 02 16.6	-0.3	
	baz=343,SNR=10								
N55A	Marion Center	147.06	8	P		PKPbc	03 02 16.6	-0.4	
	baz=350								
P49A	Miami Univ. Ec	147.09	16	P		PKPbc	03 02 16.6	-0.5	
	baz=339								
W39A	Magazine	147.21	32	P		PKPbc	03 02 17.0	-0.6	
	baz=321								
O53A	New Philadelph	147.22	11	P		PKPbc	03 02 17.5	0.0	
	baz=346								
N59A	State Game Lan	147.22	3	P		PKPbc	03 02 17.4	0.0	
	baz=356,SNR=7.4								
O52A	Adamsville	147.22	12	P		PKPbc	03 02 17.2	-0.3	
	baz=345								
N58A	Sunbury	147.24	5	P		PKPbc	03 02 17.0	-0.5	
	baz=354,SNR=6.5								
N57A	Milroy	147.25	6	P		PKPbc	03 02 17.3	-0.2	
	baz=352								
P50A	Jamestown	147.26	15	P		PKPbc	03 02 17.1	-0.5	
	baz=341,SNR=9.8								
SSPA	Standing Stone	147.33	6	P		PKPbc	03 02 17.5	-0.3	
	baz=352								
SSPA	Standing Stone	147.33	6			PKPbc	03 02 16.9	-0.8	
O54A	Avella	147.43	10	P		PKPbc	03 02 18.0	-0.1	
	baz=347								
P51A	Williamsport	147.56	14	P		PKPbc	03 02 18.0	-0.4	
	baz=342								
O56A	Blue Knob Stat	147.61	7	P		PKPbc	03 02 18.2	-0.4	
	baz=351								
P52A	Corning	147.63	13	P		PKPbc	03 02 17.8	-0.8	
	baz=344,SNR=9.4								
O59A	Robesonia	147.80	4	P		PKPbc	03 02 18.6	-0.5	
	baz=355								
MIAR	Mount Ida	147.82	32	P		PKPbc	03 02 19.5	+0.2	
	baz=320								
WCI	Wyandotte Cave	147.82	19	P		PKPbc	03 02 19.0	-0.1	
	baz=336								
WCI	Wyandotte Cave	147.82	19			PKPbc	03 02 19.0	-0.1	
P53A	Whipple	147.92	12	P		PKPbc	03 02 19.2	-0.2	
	baz=345,SNR=6.2								
O58A	Lewisberry	147.93	5	P		PKPbc	03 02 18.7	-0.7	
	baz=354								
P54A	Burton	147.98	10	P		PKPbc	03 02 19.5	0.0	
	baz=347								
MCWV	Mont Chateau	148.03	9	P		PKPbc	03 02 19.5	-0.1	
	baz=348								
P55A	Reedsville	148.18	9	P		PKPbc	03 02 19.8	-0.3	
	baz=348								
PSUB	Penn St. - Bra	148.22	3			PKPbc	03 02 20.0	-0.2	
Q52A	Bidwell	148.24	13	P		PKPbc	03 02 19.9	-0.3	
	baz=343								
P56A	Dayton Farm, R	148.33	8	P		PKPbc	03 02 20.5	0.0	
	baz=350								
P60A	Greenville	148.33	3	P		PKPbc	03 02 20.4	0.0	
	baz=356								
P57A	Homestead Farm	148.46	7	P		PKPbc	03 02 20.8	0.0	
	baz=351								
P59A	Jarrettsville	148.48	4	P		PKPbc	03 02 20.8	0.0	
	baz=354								
Q53A	Leroy	148.50	12	P		PKPbc	03 02 20.8	-0.1	
	baz=345								
Q54A	Coxs Mills	148.51	11	P		PKPbc	03 02 20.5	-0.5	
	baz=346								
P58A	Pank, Wackersv	148.53	6	P		PKPbc	03 02 19.5	-1.5	
	baz=353								
Q55A	Buckhannon	148.64	10	P		PKPbc	03 02 21.3	-0.1	
	baz=347								
Q57A	Strasburg	148.85	7	P		PKPbc	03 02 21.6	-0.3	
	baz=350								
R53A	Hurricane	148.91	13	P		PKPbc	03 02 21.9	-0.2	
	baz=344								
Q58A	Fox Den Farm,	149.03	6	P		PKPbc	03 02 22.3	0.0	
	baz=352								
WVT	Waverly	149.15	23	P		PKPbc	03 02 22.8	+0.1	
	baz=332								
WVT	Waverly	149.15	23			PKPbc	03 02 22.5	-0.2	
OXF	Oxford	149.88	27	P		PKPbc	03 02 24.0	-0.5	
	baz=327								
S56A	Natural Bridge	150.01	10	P		PKPbc	03 02 24.0	-0.7	
	baz=348								
S57A	Dark Hollow, R	150.03	9	P		PKPbc	03 02 23.0	-1.8	
	baz=349								
PLAL	Pickwick Lake	150.05	24			PKPbc	03 02 24.4	-0.5	
T53A	Wise	150.06	15	P		PKPbc	03 02 24.3	-0.7	
	baz=342								
TZTN	Tazewell	150.21	16	P		PKPbc	03 02 25.2	-0.1	
	baz=340								
T54A	Tazewell	150.22	13	P		PKPbc	03 02 24.9	-0.4	
	baz=344								
S58A	Poland Farm, P	150.30	7	P		PKPbc	03 02 25.4	0.0	
	baz=351								
T56A	Rocky Mt	150.56	11	P		PKPbc	03 02 25.9	-0.2	
	baz=347								
U55A	TA2, Sparta	150.87	13	P		PKPbc	03 02 26.6	-0.3	
	baz=344								
T58A	Grand View Acr	150.89	8	P		PKPbc	03 02 26.8	0.0	
	baz=350								
T59A	Double "B" Far	150.99	7	P		PKiKP	03 02 27.7	0.0	
	baz=352								
V54A	Nebo	151.35	14	P		PKPbc	03 02 28.1	0.0	
	baz=342								
U58A

comp=E,2µm,0.2s
THAS Thassos island 0.47 330 P **Pb** 02 49 42.1 +0.7
THAS S **Sb** 02 49 48.8 +0.1
THAS Thassos island 0.47 330 P **Pb** 02 49 42.3 +0.8
THAS AML AML 02 50 00.6
comp=E,30129µm,0.3s
THAS AML AML 02 50 00.9
comp=N,40118µm,0.4s
GADA Gvkgeada 0.66 90 P **Pg** 02 49 43.3 0.0
GADA S **Sg** 02 49 49.8 -2.1
comp=N,2µm,0.4s
GADA Gvkgeada 0.66 90 PG **Pg** 02 49 43.4 +0.1
GADA SG **Sg** 02 49 51.9 0.0
OUR Ouranopolis 0.81 280 P **Pg** 02 49 45.7 -0.5
OUR AML AML 02 49 52.2
comp=E,14786µm,0.2s
OUR AML AML 02 49 57.1
comp=N,14528µm,0.2s
OUR Ouranopolis 0.81 280 PG **Pg** 02 49 45.7 -0.5
BOZC Bozcaada 0.86 114 PG **Pg** 02 49 47.4 +0.4
BOZC SG **Sb** 02 49 58.6 -1.3
BOZC Bozcaada 0.86 114 *i* P **Pg** 02 49 47.4 +0.4
BOZC *i* S **Sg** 02 49 58.1 -0.1
BOZC IAML 02 50 00.0
comp=N,3µm,0.7s
BOZC IAML 02 50 00.0
comp=E,2µm,0.6s
KVLA Kavala 0.89 327 P **Pn** 02 49 50.3 +0.6
KAVA Kavala 0.89 334 P **Pn** 02 49 50.2 +0.4
KAVA S **Sn** 02 50 02.2 -1.0
KAVA Kavala 0.89 334 P **Pn** 02 49 50.3 +0.5
KAVA AML AML 02 50 10.3
comp=E,10562µm,0.3s
KAVA AML AML 02 50 11.2
comp=N,6123µm,0.4s
ENEZ Enez 1.01 57 P **Pg** 02 49 49.1 -0.8
ENEZ S **Sg** 02 50 01.8 -1.2
comp=N,5µm,0.4s
ENEZ Enez 1.01 57 PG **Pg** 02 49 49.1 -0.8
ENEZ SG **Sg** 02 50 02.4 -0.6
RDO Rodhopi 1.02 22 P **Pg** 02 49 49.7 -0.4
RDO S **Sb** 02 50 04.0 -0.6
RDO Rodhopi 1.02 22 PG **Pg** 02 49 49.7 -0.4
EZN Ezine 1.06 110 P **Pg** 02 49 50.6 -0.2
EZN S **Sg** 02 50 03.6 -1.0
comp=N,3µm,0.5s
EZN Ezine 1.06 110 PG **Pg** 02 49 50.7 -0.1
EZN SG **Sb** 02 50 04.9 -0.7
PAIG Paliouri 1.07 256 P Pg 02 49 47.6 -3.5
PAIG AML AML 02 49 55.8
comp=N,10165µm,0.3s
PAIG AML AML 02 49 59.3
comp=E,9353µm,0.2s
GELI Tayfur-Gelibol 1.12 79 PG **Pg** 02 49 50.8 -1.2
SIGR SIGRI 1.17 147 P **Pn** 02 49 53.8 +0.2
SIGR S **Sg** 02 50 08.6 +0.4
SIGR SIGRI 1.17 147 P **Pn** 02 49 54.0 +0.4
SIGR AML AML 02 50 10.6
comp=N,7326µm,0.5s
SIGR AML AML 02 50 11.7
comp=E,4028µm,0.5s
SIGR SIGRI 1.17 147 PN **Pn** 02 49 53.9 +0.3
SIGR SN **Sb** 02 50 09.2 +0.4
ERIK Erikli-Kesan 1.23 67 PN **Pg** 02 49 52.3 -1.7
PLG Polygyros 1.23 279 P **Pn** 02 49 52.0 -2.5
PLG AML AML 02 50 05.5
comp=E,11131µm,0.5s
PLG AML AML 02 50 05.6
comp=N,10390µm,0.5s
BAYC CANAKKALE_Bayr 1.25 111 *i* P **Pg** 02 49 54.1 -0.4
BAYC *i* S **Sg** 02 50 09.8 -0.9
BAYC IAML 02 50 12.0
comp=N,811nm,0.4s
BAYC IAML 02 50 12.0
comp=E,605nm,0.6s
LPK Lapseki 1.33 82 PN **Pn** 02 49 54.2 -1.7
AOS Alonnisos 1.36 221 P **Pn** 02 49 54.1 -2.2
AOS AML AML 02 50 11.6
comp=N,6243µm,0.6s
AOS AML AML 02 50 13.6
comp=E,6815µm,0.4s
ALNA Alonissos 1.38 221 P **Pn** 02 49 54.7 -1.8
ALNA S **Sb** 02 50 08.0 -6.8
ALNA AML AML 02 50 11.9
comp=N,10002µm,1.1s
ALNA AML AML 02 50 17.3
comp=E,8519µm,1.2s
KESN Edirne-Kesan 1.40 63 *i* P **Pn** 02 49 54.9 -2.3
KESN IAML 02 50 21.0
comp=E,617nm,0.3s
KESN IAML 02 50 21.0
comp=N,522nm,0.4s
SRS Serrai 1.43 310 P **Pb** 02 49 58.5 +0.7
SRS S **Sn** 02 50 16.8 +0.4
SRS AML AML 02 50 17.3
comp=E,3697µm,0.4s
SRS AML AML 02 50 23.1
comp=N,2430µm,0.3s
KDZ Kurdzhali 1.48 11 P **Pn** 02 49 57.0 -0.9
KDZ S **Sn** 02 50 15.3 -2.4
KDZ Kurdzhali 1.48 11 PN **Pn** 02 49 56.4 -1.5
RZN Rozhen 1.51 351 P **Pn** 02 49 58.9 +0.4
HORT Hortiatis 1.53 286 P **Pn** 02 49 57.7 -0.9
HORT Hortiatis 1.53 286 PN **Pn** 02 49 57.8 -0.9
UKOP Uzunkopru-Edir 1.53 52 PN **Pn** 02 49 57.6 -1.0
AYVA Ayvalik 1.56 124 *i* P **Pn** 02 49 59.1 +0.1
AYVA *i* S **Sn** 02 50 18.2 -1.3
AYVA IAML 02 50 23.0
comp=N,822nm,0.4s
AYVA IAML 02 50 23.0
comp=E,496nm,0.8s
THE Thessaloniki 1.64 286 P **Pn** 02 49 59.6 -0.5
XOR Xorichti 1.64 240 P **Pn** 02 49 57.5 -2.6
XOR AML AML 02 50 15.1
comp=E,4261µm,0.4s
XOR AML AML 02 50 20.1
comp=N,3970µm,0.5s
NEO Neokhori 1.65 238 P **Pn** 02 49 57.7 -2.6
NEO AML AML 02 50 16.5
comp=E,5253µm,0.7s
NEO AML AML 02 50 22.6
comp=N,3633µm,0.6s
PSRA Psara 1.70 166 P **Pb** 02 50 02.8 +0.4
MMB Musomiste 1.71 325 P **Pn** 02 50 01.9 +0.8
RKY Sarkoy-Tekirda 1.71 73 PN **Pn** 02 49 58.7 -2.4
KRBG Karabiga-Canak 1.74 83 PN **Pn** 02 50 00.2 -1.3
DKL Dikili 1.83 127 PN **Pn** 02 50 01.9 -0.8
MRKA Markates 1.86 217 P **Pn** 02 50 02.2 -1.0
MRKA AML AML 02 50 29.5
comp=N,2970µm,0.6s
MRKA AML AML 02 50 32.1
comp=E,3033µm,0.6s
KNT Kendrikon 1.89 301 P **Pb** 02 50 05.6 +0.1
DIM Dimitrovgrad 1.89 11 P **Pn** 02 50 03.6 +0.1
DIM Pg **Pg** 02 50 06.6 -0.1
KNL Balıkesir 1.91 87 *i* P **Pn** 02 50 03.6 -0.2
KNL IAML 02 50 57.0
comp=E,511nm,0.5s
KNL IAML 02 50 58.0
comp=N,597nm,0.7s
PLD Plovdiv 1.92 353 PN **Pn** 02 50 02.7 -1.3
LIT Litokhoron 1.95 268 P **Pn** 02 50 02.4 -2.0
LIT AML AML 02 50 27.4
comp=N,940µm,0.5s
LIT AML AML 02 50 27.7
comp=E,1128µm,0.5s
CHOS Chios island 1.98 156 P **Pn** 02 50 05.5 +0.7
CHOS Chios island 1.98 156 PN **Pn** 02 50 04.3 -0.5
ZEDA zmir-Bergama 2.00 127 *i* P **Pg** 02 50 09.0 +0.1
ZEDA *i* S **Sg** 02 50 34.7 -0.2
ZEDA IAML 02 50 37.0
comp=N,252nm,0.4s
ZEDA IAML 02 50 56.0
comp=E,224nm,0.8s
BALY Balya 2.04 102 *i* P **Pn** 02 50 05.3 -0.3
BALY IAML 02 50 59.0
comp=E,563nm,0.6s
BALY IAML 02 51 03.0
comp=N,505nm,1.1s
GONE Gonen-Balikesi 2.04 93 PN **Pn** 02 50 04.3 -1.3
TKR Tekirdag 2.06 67 PN **Pn** 02 50 04.1 -1.8
EDRB Edirne 2.10 38 PN **Pn** 02 50 05.0 -1.4
EDC Edincik 2.17 85 PN **Pn** 02 50 06.5 -0.9
VAY Valandovo 2.18 302 *e*Pn **Pb** 02 50 09.8 -0.7
VAY *e*Sn **Sn** 02 50 30.2 -4.8
VAY Valandovo 2.18 302 *i* Pn **Pb** 02 50 10.1 -0.4
VAY Valandovo 2.18 302 *i* Pn **Pb** 02 50 10.1 -0.4
URLA Izmir 2.20 146 PN **Pn** 02 50 07.4 -0.4
URLA Izmir 2.20 146 *i* P **Pn** 02 50 08.4 +0.6
LKR Lokris 2.21 226 P **Pn** 02 50 06.2 -1.7
KARY Karystos 2.21 192 P **Pn** 02 50 08.6 +0.7
KARY AML AML 02 50 44.9
comp=N,463µm,0.6s
KARY AML AML 02 50 49.1
comp=E,695µm,0.7s
KKB Krupnik 2.23 319 P **Pn** 02 50 09.6 +1.4
STEP BALIKESIR_Sava 2.23 111 *i* P **Pn** 02 50 08.2 0.0
STEP IAML 02 50 47.0
comp=E,403nm,0.6s
STEP IAML 02 51 12.0
comp=N,623nm,0.8s
CRLT Corlu 2.26 65 PN **Pn** 02 50 07.0 -1.6
BALB Balikesir 2.26 103 PN **Pn** 02 50 07.6 -1.0
DION Dionisos Attik 2.28 202 P **Pn** 02 50 09.6 +0.7
AXAR Agios Charalam 2.33 233 P **Pn** 02 50 08.0 -1.6
PTL Penteli 2.33 203 P **Pn** 02 50 09.7 +0.1
PHSR Pinarhisar 2.37 52 PN **Pn** 02 50 08.8 -1.3
BLCB Balcova 2.39 139 PN **Pn** 02 50 09.7 -0.7
AGG Agios Georgios 2.39 242 P **Pn** 02 50 08.4 -2.1
THL Klokotos Trika 2.41 256 P **Pn** 02 50 08.6 -2.0
VIL2 Platees 2.41 215 P **Pn** 02 50 10.5 -0.2
ATHU Athens Univers 2.43 204 P **Pn** 02 50 11.5 +0.5
KZN Kozani 2.50 274 P **Pn** 02 50 11.3 -0.7
MAKR Makrakomi, Fth 2.53 243 P **Pn** 02 50 10.9 -1.6
KCTX Karacabey (Bur 2.55 87 PN **Pn** 02 50 11.3 -1.3
SLVT Silivri 2.63 66 PN **Pn** 02 50 11.9 -1.8
GOMA Golmarmara-Man 2.68 123 PN **Pn** 02 50 14.2 -0.2
LTK Loutraki 2.70 217 P **Pn** 02 50 13.8 -0.9
VTS Vitosha 2.77 331 *e*Pn **Pn** 02 50 17.7 +1.9
VTS *e*Sn **Sn** 02 50 48.3 -1.5
VTS Vitosha 2.77 331 ⇑P **Pn** 02 50 17.8 +2.0
VTS Vitosha 2.77 331 P **Pn** 02 50 17.5 +1.7
CTYL Yalikoy Yolu 2.78 62 PN **Pn** 02 50 13.9 -1.9
ELND Elena 2.80 13 ⇑P **Pn** 02 50 15.6 -0.5
ELND ⇓S **Sg** 02 50 57.9 -2.6
EVR Evrytania 2.80 244 P **Pn** 02 50 14.4 -1.8
DSY Dursunbey 2.82 101 PN **Pn** 02 50 15.5 -0.9
KPRO Kipourio 2.83 266 P **Pn** 02 50 15.6 -0.9
CTKS Kestanelik-??a 2.84 67 PN **Pn** 02 50 14.6 -1.9
KALE Kalithea 2.88 232 P **Pn** 02 50 15.6 -1.6
ANX Ano Chora 2.89 237 P **Pn** 02 50 16.0 -1.5
SERG Sergoula 2.92 233 P **Pn** 02 50 15.7 -1.9
TRIZ Trizonia 2.94 232 P **Pn** 02 50 16.4 -1.5
ARMT Armutlu 2.95 82 PN **Pn** 02 50 17.1 -1.0
MDNY Mudanya-Bursa 2.95 85 PN **Pn** 02 50 17.3 -0.8
ORLT Orhaneli 2.97 92 PN **Pn** 02 50 17.5 -0.9
BOSS Bosilegrad 2.99 321 *e*Pn **Pn** 02 50 21.2 +2.4
BOSS *e*Sn **Sn** 02 50 53.1 -2.0
HVHR Bakirkoy-Istan 3.00 74 PN **Pn** 02 50 17.8 -1.0
BGKT Bogazkoy 3.01 70 PN **Pn** 02 50 17.7 -1.2
GCAM G?zelcaml? 3.03 145 PN **Pn** 02 50 18.7 -0.5
DID Didima 3.03 208 P **Pn** 02 50 19.2 -0.1
NEST Nestorio 3.05 275 P **Pn** 02 50 19.7 +0.1
SERI Serifos 3.06 188 P **Pn** 02 50 20.0 +0.3
LAKA Lakka 3.07 231 P **Pn** 02 50 18.2 -1.6
KLV Kalavryta, Ach 3.11 227 P **Pn** 02 50 19.0 -1.3
SZH Strazhica 3.14 12 P **Pn** 02 50 21.0 +0.3
ULDT Uludag 3.15 90 *i* P **Pb** 02 50 25.6 -1.5
ULDT IAML 02 51 39.0
comp=N,100nm,0.7s
ULDT IAML 02 51 41.0
comp=E,118nm,0.8s
APE Apeiranthos 3.15 173 ⇑P **Pn** 02 50 21.2 +0.3
KRND KRANIDI 3.17 208 P **Pn** 02 50 21.1 -0.1
ISK Istanbul-Kandi 3.19 73 PN **Pn** 02 50 20.3 -1.0
KAVV Kandilli-Istan 3.19 73 PN **Pn** 02 50 20.4 -0.9
PLVB Pleven 3.20 355 ⇑P **Pn** 02 50 22.5 +0.9
KLYT Kilyos 3.22 70 PN **Pn** 02 50 20.6 -1.3
SMAA Simav-Kutahya 3.24 109 PN **Pn** 02 50 21.2 -1.0
SKO Skopje 3.24 304 *e*Pn **Pn** 02 50 24.4 +2.2
SKO Skopje 3.24 304 *i* Pn **Pn** 02 50 24.7 +2.5
SKO Skopje 3.24 304 *i* Pn **Pn** 02 50 24.7 +2.5
SIMA Simav-Kutahya 3.25 109 PN **Pn** 02 50 21.6 -0.7
MPEP Malo Peshtene 3.30 343 P **Pn** 02 50 25.1 +2.1
YLV Yalova 3.34 82 PN **Pn** 02 50 22.5 -1.0
AYDN Tasoluk 3.37 138 *i* P **Pn** 02 50 22.7 -1.2
TRIP Tripoli 3.43 220 P **Pn** 02 50 24.1 -0.6
IOSP Ios island 3.48 177 P **Pn** 02 50 25.7 +0.4
RAZG Razgrad 3.54 18 ⇑P **Pn** 02 50 26.5 +0.3
ZAPS Zavoj 3.56 331 *e*Pn **Pn** 02 50 29.7 +3.2
ZAPS *e*Sn **Sn** 02 51 08.4 -0.7
BARS Barje 3.56 318 *e*Pn **Pn** 02 50 28.5 +2.0
BARS Barje 3.56 318 *e*Pn **Pg** 02 50 42.9 +4.2
BARS *e*Sn **Sn** 02 51 06.8 -2.3
GDZ Gediz 3.61 106 *i* P **Pn** 02 50 25.7 -1.6
VLAD Vladila 3.83 353 ⇓P **Pn** 02 50 31.2 +1.0
ORH Orhaniye 3.90 79 P **Pn** 02 50 27.7 -3.4
GEYV SAKARYA_Geyve 4.03 84 *i* P **Pn** 02 50 31.0 -2.0
GEYV IAML 02 52 08.0
comp=N,84nm,1.2s
TIR Tirane 4.09 288 *e*Pn **Pn** 02 50 36.2 +2.4
ZAGS Zajecar 4.17 331 *e*Pn **Pn** 02 50 36.3 +1.4
ZAGS *e*Sn **Sn** 02 51 23.1 -1.0
SELS Selova 4.21 317 *e*Pn **Pn** 02 50 36.6 +1.2
SELS *e*Sn **Sn** 02 51 19.3 -5.7
SRCK Saricakaya, Es 4.29 90 *i* P **Pn** 02 50 36.1 -0.4
SRCK IAML 02 51 50.0
comp=N,85nm,1.0s
SRCK IAML 02 52 22.0
comp=E,48nm,1.1s
ICOR Ion Corvin 4.42 27 ⇑P **Pn** 02 50 37.5 -0.8
MANR Mangalia 4.48 35 ⇑P **Pn** 02 50 38.8 -0.3
PVY Plav 4.50 304 ⇑*i* Pn **Pn** 02 50 40.8 +1.2
PVY *i* Sn **Sn** 02 51 32.7 +0.2
IVA Berane 4.69 306 ⇓*i* Pn **Pn** 02 50 43.2 +1.1
IVA *i* Sn **Sn** 02 51 36.9 -0.1
MFTR Murfatlar 4.71 31 ⇓P **Pn** 02 50 42.1 -0.2
ULC Ulcinj 4.72 294 ⇓*i* Pn **Pn** 02 50 43.8 +1.4
ULC *i* Sn **Sn** 02 51 38.1 +0.5
DRME Dracevica, Mon 4.84 296 *e*Pn **Pn** 02 50 47.7 +3.6
DRME Dracevica, Mon 4.84 296 ⇑*i* Pn **Pn** 02 50 45.4 +1.3
DRME *i* Sn **Sn** 02 51 40.9 +0.4
SJES Sjenica 4.87 311 *e*Pn **Pn** 02 50 46.7 +2.1
PDG Podgorica 4.89 299 *e*Pn **Pn** 02 50 47.0 +2.3
PDG *e*Sn **Sn** 02 51 35.0 -6.7
PDG Podgorica 4.89 299 ⇑P **Pn** 02 50 45.8 +1.0
PDG Podgorica 4.89 299 *e*Pn **Pn** 02 50 48.6 +3.9
TTG Podgorica 4.89 299 ⇓*i* Pn **Pn** 02 50 46.2 +1.5
TTG *i* Sn **Sn** 02 51 42.3 +0.6
GRUS Gruza 4.89 320 *e*Pn **Pn** 02 50 46.4 +1.6
KUBS Kucevo 4.89 331 *e*Pn **Pn** 02 50 46.4 +1.6
IDI Anoyia 4.90 181 Pn **Pn** 02 50 45.5 +0.5
comp=E,1.2nm,0.3s,baz=352,slow=14,SNR=8.8
IDI Sn **Sn** 02 51 40.4 -1.8
comp=E,1.0nm,0.3s,baz=17,slow=23,SNR=1.9
IDI Lg Lg 02 52 10.4
comp=E,0.7nm,0.3s,baz=277,slow=19,SNR=3.9
KOME Kolasin 4.92 304 ⇓*i* Pn **Pn** 02 50 46.5 +1.3
KOME *i* Sn **Sn** 02 51 43.2 +0.6
TIRR Tirgusor 4.94 29 ⇑P **Pn** 02 50 45.1 -0.3
HARR Harsova 4.97 25 ⇑P **Pn** 02 50 44.0 -1.9
HERR Herculane 5.06 338 ⇑P **Pn** 02 50 48.0 +0.8
BUM Brajici-Budva 5.08 296 ⇓*i* Pn **Pn** 02 50 48.8 +1.3
BUM *i* Sn **Sn** 02 51 46.7 +0.1
CEME Cevo 5.16 299 ⇓*i* Pn **Pn** 02 50 49.9 +1.3
CEME *i* Sn **Sn** 02 51 49.0 +0.3
ARR Arges 5.18 357 ⇑P **Pn** 02 50 49.4 +0.7
MDVR Moldovita 5.20 333 ⇑P **Pn** 02 50 50.6 +1.5
NKY Niksic 5.23 302 ⇑*i* Pn **Pn** 02 50 50.5 +0.9
NKY *i* Sn **Sn** 02 51 50.4 0.0
NKME Niksic 5.24 301 ⇓*i* Pn **Pn** 02 50 50.9 +1.3
NKME *i* Sn **Sn** 02 51 50.4 0.0
PLE Pljevlja 5.25 308 ⇓*i* Pn **Pn** 02 50 51.0 +1.1
PLE *i* Sn **Sn** 02 51 50.9 0.0
TOPG Topolog 5.29 27 ⇓P **Pn** 02 50 49.7 +1.5
TRUS Trudelj 5.29 321 *e*Pn **Pn** 02 50 51.2 +0.9
MLR Muntele Rosu 5.33 7 Pn **Pn** 02 50 52.6 +1.6
comp=E,1.4nm,0.3s,baz=180,slow=10,SNR=49
MLR Sn **Sn** 02 51 59.5 +6.6
baz=36,slow=21,SNR=1.1
MLR Lg Lg 02 52 21.7
comp=E,1.1nm,0.3s,baz=277,slow=23,SNR=3.2
MLR Muntele Rosu 5.33 7 ⇑P **Pn** 02 50 52.5 +1.6
JURR Jurilovca 5.38 31 ⇓P **Pn** 02 50 50.5 -0.9
DIVS Divibare 5.41 318 *e*Pn **Pn** 02 50 53.3 +1.3
DIVS *e*Sn **Sn** 02 51 49.3 -5.3
DIVS Divibare 5.41 318 *e*Pn **Pn** 02 50 53.3 +1.3
HCY Herceg Novi 5.41 297 *e*Pn **Pn** 02 50 55.4 +3.4
HCY Herceg Novi 5.41 297 ⇓*i* Pn **Pn** 02 50 53.0 +1.0
HCY *i* Sn **Sn** 02 51 54.8 +0.1
GZR Gura Zlata 5.45 343 ⇑P **Pn** 02 50 53.3 +0.8
CFR Carcaliu 5.48 24 ⇓P **Pn** 02 50 52.5 -0.3
UPM Unac-Piva 5.48 305 *e*Pn **Pn** 02 50 56.6 +3.5
UPM Unac-Piva 5.48 305 ⇑*i* Pn **Pn** 02 50 54.3 +1.2
UPM *i* Sn **Sn** 02 51 56.1 -0.6
BISRR Bisoca 5.49 12 ⇑P **Pn** 02 50 55.2 +2.1
BBLS Lazići 5.57 313 *e*Pn **Pn** 02 50 57.0 +2.9
BRY Bratogost 5.57 301 *e*Pn **Pn** 02 50 58.6 +4.3
BRY Bratogost 5.57 301 ⇓*i* Pn **Pn** 02 50 55.6 +1.3
BRY *i* Sn **Sn** 02 51 58.4 -0.4
TREB Trebinje 5.62 299 *e*Pn Pn 02 51 00.1 +5.3
DBRK Dubrovnik 5.73 298 *i* P **Pn** 02 51 00.0 +3.7
DOPR Dopca 5.77 2 ⇑P **Pn** 02 50 58.5 +1.6
PLOR Plostina 5.77 11 ⇑P **Pn** 02 50 57.7 +0.7
VRI Vrincioaia 5.80 12 ⇑P **Pn** 02 50 59.0 +1.7
HAPS Han Pijesak,Bl 5.96 313 *e*Pn **Pn** 02 51 01.1 +1.5
VARL Varlezi 6.06 19 ⇑P **Pn** 02 51 02.5 +1.7
STON Ston 6.12 298 *e*Pn **Pn** 02 51 05.9 +4.3
STON Ston 6.12 298 *i* P **Pn** 02 51 05.3 +3.8
FRGS Fruska Gora 6.27 324 *e*Pn **Pn** 02 51 00.3 -3.5
TESR Tescani 6.42 10 ⇑P **Pn** 02 51 06.9 +1.1
SIRR Siria 6.55 339 ⇓P **Pn** 02 51 07.7 +0.2
BRTR Keskin Array B 6.63 91 Pn **Pn** 02 51 08.3 -0.5
comp=E,0.7nm,0.3s,baz=270,slow=13,SNR=12
BRTR Lg Lg 02 52 56.2
comp=E,0.1nm,0.3s,baz=293,slow=19,SNR=2.4
BRTR LR LR 02 53 14.6
comp=E,11nm,19.9s,baz=264,slow=35
MAKA Makarska 6.74 300 *i* P **Pn** 02 51 13.0 +2.8
RICI Ricice 6.75 302 *i* P **Pn** 02 51 14.0 +3.6
BIZ Bicaz 6.78 6 ⇑P **Pn** 02 51 12.2 +1.4
BLY Banja Luka 7.37 311 *e*Pn **Pn** 02 51 22.1 +3.3
BURAR Bucovina Array 7.42 1 ⇑P **Pn** 02 51 22.0 +2.5
KIJV Kijevo 7.46 303 *i* P **Pn** 02 51 23.5 +3.5
MORH Mrgy, Hungar 7.61 324 *e*Pn **Pn** 02 51 23.2 +1.1
ZIRJ Zirje 7.80 299 *i* P **Pn** 02 51 25.6 +0.8
MORI Morici 7.85 301 *i* P **Pn** 02 51 27.0 +1.7
MOSL Moslavina 8.13 314 *i* P **Pn** 02 51 32.8 +3.4
SORM Soroca 8.29 16 ⇑P **Pn** 02 51 30.5 -0.8
DUGI Dugi Otok 8.33 300 *i* P **Pn** 02 51 35.0 +3.0
VAE Valguarnera 8.72 255 Pn Pn 02 51 42.8 +5.4
comp=E,0.6nm,0.3s,baz=72,slow=13,SNR=1.5
CRES Cresnjev 8.99 312 *e*Pn **Pn** 02 51 43.5 +2.5
CEY Cerknica 9.54 309 *e*Pn **Pn** 02 51 51.2 +2.6
ARSA Arzberg 9.85 319 *e*Pn Pn 02 52 00.8 +8.0
comp=E,2.4nm,0.8s
ARSA *e*Sn **Sn** 02 53 38.3 -5.4
comp=E,1.4nm,0.7s
OBKA Obir 9.90 313 Pn **Pn** 02 51 57.9 +4.3
comp=E,2.8nm,0.6s
AKASG Malin Array Be 10.91 14 Pn **Pn** 02 52 06.6 -0.7
comp=E,0.6nm,0.3s,baz=200,slow=13,SNR=2.5
MMAI Mount Meron Ar 10.99 127 LR LR 02 57 12.2
comp=E,53nm,18.2s,baz=210,slow=42
GERES GERESS Array B 11.83 321 Pn **Pn** 02 52 23.3 +3.4
comp=E,0.1nm,0.3s,baz=158,slow=14,SNR=1.8
WTTA Wattenberg 11.98 311 *e*Pn Pn 02 52 28.1 +5.9
comp=E,0.6nm,0.3s
WATA Walderalm 12.05 311 *e*Pn Pn 02 52 28.3 +5.2
comp=E,0.6nm,0.3s
FETA Feichten 12.40 308 *i* Sn **Sn** 02 54 46.2 -0.3
comp=E,3.3nm,1.4s
DAVOX Davos/Dischmat 12.81 306 Pn **Pn** 02 52 36.6 +3.1
comp=E,0.2nm,0.3s,baz=132,slow=18,SNR=8.6
DAVOX LR LR 02 58 16.8
comp=E,84nm,18.2s,baz=150,slow=40
FINES FINESS Array B 21.28 1 P **P** 02 54 19.2 +1.5
comp=E,0.7nm,0.6s,baz=157,slow=14,SNR=2.1
ESDC Sonseca Array 22.20 278 P **P** 02 54 31.9 +4.1
comp=E,0.6nm,0.8s,baz=66,slow=9.7,SNR=6.8
ARU Arti 27.22 42 LR LR 03 05 28.8
comp=E,18nm,20.9s,baz=234,slow=35
TORD Torodi Ar. Bea 33.86 224 P **P** 02 56 16.6 +2.4
comp=E,0.6nm,0.6s,baz=34,slow=9.1,SNR=4.6
MKAR Makanchi Array 41.26 61 P **P** 02 57 17.0 +0.4
comp=E,0.4nm,0.6s,baz=272,slow=6.7,SNR=3.4
ZALV Zalesovo Beam 41.72 50 P **P** 02 57 20.7 +0.4
comp=E,0.5nm,0.3s,baz=248,slow=7.6,SNR=1.4

ROM 25 02:49:33.9±0.1,**43°447N**±0'.004×**12°448E**±0'.005,
h8km,ML1.3/8,Error ellipse: s-maj=0.5km s-min=0.3km
az=158.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATPI	**Pietralunga -**	**0.03**	**277**	P	Pg	02 49 35.5	0.0
ATPI				S	Sg	02 49 36.4	-0.3
ATPI				AML	AML		
	comp=N,1096µm,0.5s						
ATPI				AML	AML		
	comp=E,604µm,0.3s						
ATVO	**AVT- Monte Val**	**0.07**	**205**	P	Pg	02 49 36.3	+0.4
ATVO				S	Sg	02 49 37.8	+0.5
ATVO				AML	AML		
	comp=E,900µm,0.3s						
ATVO				AML	AML		
	comp=N,686µm,0.4s						
PIEI	**Pieia**	**0.11**	**35**	P	Pg	02 49 37.0	+0.5
PIEI				S	Sg	02 49 39.3	+1.1
PIEI				AML	AML		
	comp=E,335µm,1.6s						
PIEI				AML	AML		
	comp=N,482µm,0.3s						
APEC	**Apecchio**	**0.11**	**350**	P	Pg	02 49 37.0	+0.5
APEC				S	Sg	02 49 38.7	+0.4
APEC				AML	AML		
	comp=E,297µm,0.8s						
APEC				AML	AML		
	comp=N,342µm,1.6s						
APEC				AML	AML		
	comp=E,380µm,0.2s						
APEC				AML	AML		
	comp=N,358µm,0.3s						
CDCA	**Citt' di Caste**	**0.16**	**274**	P	Pg	02 49 38.6	+1.4
CDCA				S	Sg	02 49 40.7	+1.3
ATMI	**Monte Miggiano**	**0.17**	**229**	P	Pg	02 49 38.2	+0.7
ATMI				S	Sg	02 49 40.8	+0.9
NARO	**Abbazia di Nar**	**0.19**	**30**	P	Pg	02 49 38.3	+0.5
NARO				S	Sg	02 49 41.2	+0.8
NARO				AML	AML		
	comp=E,87µm,1.2s						
NARO				AML	AML		
	comp=N,65µm,0.9s						
FRON	**Frontone**	**0.21**	**71**	P	Pg	02 49 38.8	+0.6
FRON				S	Sg	02 49 42.7	+1.5
SSFR	**Montelago di S**	**0.24**	**92**	P	Pg	02 49 39.4	+0.6
SSFR				S	Sg	02 49 43.9	+1.8
PE3	**Peglio**	**0.25**	**8**	P	Pg	02 49 39.8	+0.9
PE3				S	Sb	02 49 45.0	-0.3
PARC	**Parchiule**	**0.25**	**323**	P	Pg	02 49 39.7	+0.7
PARC				S	Sb	02 49 44.2	-1.2
FOSV	**Fossato di Vic**	**0.27**	**124**	P	Pg	02 49 40.1	+0.8
FOSV				S	Sb	02 49 45.3	-0.7
MPAG	**Monte Paganucc**	**0.29**	**51**	P	Pg	02 49 40.2	+0.8
MPAG				S	Sb	02 49 45.3	-1.2
FSSB	**Fossombrone**	**0.34**	**44**	P	Pg	02 49 41.2	+0.6
FSSB				S	Sb	02 49 47.5	-0.4
FSSB				AML	AML		
	comp=E,46µm,1.1s						
FSSB				AML	AML		
	comp=N,40µm,1.1s						
ARVD	**Arcevia**	**0.36**	**82**	P	Pg	02 49 41.6	+0.6
ARVD				S	Sb	02 49 47.8	-0.7
ARVD				AML	AML		
	comp=N,16µm,1.2s						
ARVD				AML	AML		
	comp=E,19µm,1.2s						
CAFI	**Castiglion Fio**	**0.37**	**252**	P	Pg	02 49 41.9	+0.7
ASSB	**Assisi San Ben**	**0.43**	**159**	P	Pb	02 49 43.3	-0.6
ASSB				AML	AML		
	comp=N,24µm,0.2s						
ASSB				AML	AML		
	comp=E,18µm,0.8s						
SENI	**Senigallia**	**0.63**	**65**	S	Sn	02 50 02.0	+2.7
TERO	**Teramo**	**1.18**	**134**	S	Sn	02 50 17.0	+3.9
MA9	**Marino**	**1.68**	**175**	P	Pn	02 49 59.3	-4.4
MA9				AML	AML		
	comp=E,73µm,1.0s						

MA9					AML	AML		
	comp=N,83µm,0.1s							
MSSA	**Maissana**	**2.29**	**293**	S	Sn	02 50 23.0		-18

ISK ***25*** *02:55:53.8, 40˚.40N×25˚.84E, h5km, ML3.5/31*
THE ***25*** *02:55:55.3, 40˚.39N×25˚.92E, h8km±1km, ML3.0/4, Error ellipse: s-maj=1.6km s-min=0.9km az=22.0*
ATH ***25*** *02:55:55.1, 40˚.40N×25˚.86E, h25km±1km, ML3.2/5, Error ellipse: s-maj=2.9km s-min=1.1km az=244.0*
DDA ***25*** *02:55:57.6, 40˚.34N×26˚.01E, h7km±5km, MW3.9*
ISC 25 02:55:55.5±1.0,**40˚.38N**±0˚.02×**25˚.90E**±0˚.02,**h6**km±9km, **n73**,σ0**95**/94,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.19**	**181**	P	**Pg**	**02 55 59.1**	**-0.2**
GADA				S	**Sg**	**02 56 02.9**	**+1.0**
GADA	**Gvkgeada**	**0.19**	**181**	PG	**Pg**	**02 55 58.8**	**-0.5**
GADA				SG	**Sg**	**02 56 01.5**	**-0.4**
SMTH	**Samothraki Isl**	**0.30**	**287**	P	**Pg**	**02 56 00.7**	**-0.6**
SMTH				S	**Sg**	**02 56 06.6**	**+1.3**
SMTH	**Samothraki Isl**	**0.30**	**287**	P	**Pg**	**02 56 01.1**	**-0.2**
SMTH				S	**Sg**	**02 56 06.5**	**+1.2**
SMTH				AML	AML	02 56 07.2	
	comp=E,2901µm,0.3s						
SMTH				AML	AML	02 56 07.3	
	comp=N,3389µm,0.3s						
ENEZ	**Enez**	**0.40**	**28**	P	**Pg**	**02 56 02.7**	**-0.6**
ENEZ				S	**Sg**	**02 56 07.5**	**-1.0**
ENEZ	**Enez**	**0.40**	**28**	PG	**Pg**	**02 56 02.7**	**-0.6**
GELI	**Tayfur-Gelibol**	**0.44**	**88**	PG	**Pg**	**02 56 02.8**	**-1.1**
ERIK	**Erikli-Kesan**	**0.55**	**58**	PG	**Pg**	**02 56 05.1**	**-0.9**
BOZC	**Bozcaada**	**0.55**	**168**	PG	**Pg**	**02 56 05.6**	**-0.5**
BOZC	**Bozcaada**	**0.55**	**168**	*i* P	**Pg**	**02 56 07.7**	**+1.5**
BOZC				IAML		02 56 24.0	
	comp=N,893nm,1.4s						
BOZC				IAML		02 56 24.0	
	comp=E,940nm,0.9s						
EZN	**Ezine**	**0.64**	**150**	P	**Pg**	**02 56 07.9**	**0.0**
EZN	**Ezine**	**0.64**	**150**	PG	**Pg**	**02 56 07.2**	**-0.7**
LPK	**Lapseki**	**0.65**	**91**	PG	**Pg**	**02 56 07.5**	**-0.6**
LIA	**Limnos Island**	**0.73**	**229**	P	**Pg**	**02 56 09.3**	**-0.3**
LIA				S	**Sg**	**02 56 21.0**	**+1.8**
	comp=E,2µm,0.7s						
LIA	**Limnos Island**	**0.73**	**229**	P	**Pg**	**02 56 09.8**	**+0.2**
LIA				S	**Sg**	**02 56 19.6**	**+0.5**
LIA				AML	AML	02 56 25.0	
	comp=N,4011µm,0.9s						
LIA				AML	AML	02 56 27.0	
	comp=E,3245µm,0.5s						
BAYC	**CANAKKALE_Bayr**	**0.81**	**142**	*i* P	**Pg**	**02 56 11.1**	**+0.1**
BAYC				*i* S	**Sg**	**02 56 23.0**	**+1.4**
BAYC				IAML		02 56 28.0	
	comp=E,381nm,0.5s						
BAYC				IAML		02 56 37.0	
	comp=N,288nm,1.0s						
RDO	**Rodhopi**	**0.81**	**340**	P	**Pg**	**02 56 11.1**	**0.0**
RDO				S	**Sb**	**02 56 23.6**	**+0.4**
	comp=N,702nm,0.3s						
RDO	**Rodhopi**	**0.81**	**340**	P	**Pg**	**02 56 10.8**	**-0.3**
RDO	**Rodhopi**	**0.81**	**340**	PG	**Pg**	**02 56 09.3**	**-1.8**
UKOP	**Uzunkopru-Edir**	**0.93**	**36**	PG	**Pg**	**02 56 12.3**	**-1.0**
UKOP				SG	**Sg**	**02 56 25.7**	**+0.3**
THAS	**Thassos island**	**0.93**	**284**	P	**Pg**	**02 56 12.5**	**-0.9**
THAS				S	**Sg**	**02 56 26.2**	**+0.8**
THAS	**Thassos island**	**0.93**	**284**	P	**Pg**	**02 56 12.4**	**-0.9**
THAS				S	**Sg**	**02 56 25.5**	**+0.1**
THAS				AML	AML	02 56 30.9	
	comp=N,2687µm,0.9s						
THAS				AML	AML	02 56 33.0	
	comp=E,1237µm,0.3s						
RKY	**Sarkoy-Tekirda**	**1.02**	**72**	PG	**Pg**	**02 56 14.5**	**-0.5**
KRBG	**Karabiga-Canak**	**1.06**	**89**	PN	**Pg**	**02 56 15.6**	**-0.3**
EFSA	**Agios Efstrati**	**1.10**	**220**	P	**Pb**	**02 56 16.2**	**-0.7**
PRK	**Paraskevi**	**1.17**	**166**	P	**Pb**	**02 56 17.2**	**-0.9**
PRK				S	**Sn**	**02 56 35.3**	**+0.7**
PRK	**Paraskevi**	**1.17**	**166**	P	**Pb**	**02 56 17.3**	**-0.9**
PRK				S	**Sn**	**02 56 35.1**	**+0.5**
PRK				AML	AML	02 56 42.2	
	comp=N,3201µm,0.7s						
PRK				AML	AML	02 56 46.8	
	comp=E,4618µm,0.7s						
SIGR	**SIGRI**	**1.17**	**182**	P	**Pb**	**02 56 16.7**	**-1.4**
SIGR				S	**Sb**	**02 56 33.2**	**-0.3**
SIGR	**SIGRI**	**1.17**	**182**	P	**Pb**	**02 56 17.1**	**-1.0**
SIGR				S	**Sb**	**02 56 33.6**	**+0.1**
SIGR				AML	AML	02 56 38.6	
	comp=E,2403µm,0.9s						
SIGR				AML	AML	02 56 46.8	
	comp=N,5068µm,0.7s						
SIGR	**SIGRI**	**1.17**	**182**	PN	**Pb**	**02 56 16.9**	**-1.2**
KAVA	**Kavala**	**1.22**	**301**	P	**Pn**	**02 56 18.1**	**-1.0**
KAVA				S	**Sb**	**02 56 35.4**	**+0.4**
	comp=N,790nm,0.5s						
KAVA	**Kavala**	**1.22**	**301**	P	**Pn**	**02 56 18.0**	**-1.1**
AYVA	**Ayvalik**	**1.23**	**150**	*i* P	**Pn**	**02 56 18.0**	**-1.2**
AYVA				*i* S	**Sg**	**02 56 36.5**	**+1.4**
AYVA				IAML		02 56 41.0	
	comp=N,1µm,0.6s						
AYVA				IAML		02 56 51.0	
	comp=E,829nm,1.0s						
KVLA	**Kavala**	**1.28**	**296**	P	**Pn**	**02 56 18.9**	**-1.0**
KDZ	**Kurdzhali**	**1.32**	**344**	P	**Pn**	**02 56 18.7**	**-1.7**
KDZ				S	**Sb**	**02 56 37.2**	**-0.6**
KDZ	**Kurdzhali**	**1.32**	**344**	PN	**Pn**	**02 56 18.7**	**-1.7**
TKR	**Tekirdag**	**1.38**	**63**	PN	**Pn**	**02 56 20.1**	**-1.2**
GONE	**Gonen-Balikesi**	**1.41**	**103**	PN	**Pn**	**02 56 21.4**	**-0.2**
OUR	**Ouranopolis**	**1.47**	**269**	P	**Pn**	**02 56 20.9**	**-1.6**
OUR				S	**Sn**	**02 56 41.5**	**-0.5**
	comp=E,632nm,0.4s						
OUR	**Ouranopolis**	**1.47**	**269**	P	**Pn**	**02 56 21.4**	**-1.0**
OUR	**Ouranopolis**	**1.47**	**269**	PN	**Pn**	**02 56 20.8**	**-1.7**
EDC	**Edincik**	**1.50**	**91**	PN	**Pn**	**02 56 21.9**	**-1.0**
DKL	**Dikili**	**1.52**	**149**	PN	**Pn**	**02 56 22.8**	**-0.4**
CRLT	**Corlu**	**1.58**	**61**	PN	**Pn**	**02 56 23.8**	**-0.2**
RZN	**Rozhen**	**1.58**	**326**	P	**Pn**	**02 56 25.1**	**+0.9**
EDRB	**Edirne**	**1.59**	**23**	PN	**Pn**	**02 56 23.4**	**-0.8**
DIM	**Dimitrovgrad**	**1.69**	**351**	P	**Pn**	**02 56 26.4**	**+0.9**
BALB	**Balikesir**	**1.69**	**115**	PN	**Pn**	**02 56 24.4**	**-1.1**
BOTS	**Marmara Eregli**	**1.69**	**68**	PN	**Pn**	**02 56 25.3**	**-0.2**
KRBN	**Karaburun**	**1.86**	**164**	PN	**Pn**	**02 56 27.6**	**-0.2**
KCTX	**Karacabey (Bur**	**1.88**	**93**	PN	**Pn**	**02 56 28.2**	**+0.1**
PLD	**Plovdiv**	**1.94**	**333**	P	**Pb**	**02 56 32.8**	**+1.5**
PLD	**Plovdiv**	**1.94**	**333**	PN	**Pn**	**02 56 27.8**	**-1.2**
SLVT	**Silivri**	**1.94**	**63**	PN	**Pn**	**02 56 28.4**	**-0.6**
AOS	**Alonnisos**	**1.98**	**233**	PN	**Pn**	**02 56 28.3**	**-1.1**
CHOS	**Chios island**	**2.00**	**177**	PN	**Pn**	**02 56 29.4**	**-0.4**
MMB	**Musomiste**	**2.04**	**307**	P	Pn	02 56 20.0	-10
URLA	**Izmir**	**2.09**	**165**	PN	**Pn**	**02 56 30.7**	**-0.4**
AKS	**Akhisar**	**2.10**	**135**	PN	**Pn**	**02 56 31.3**	**+0.1**
CTYL	**Yalikoy Yolu**	**2.11**	**58**	PN	**Pn**	**02 56 31.3**	**0.0**
HORT	**Hortiatis**	**2.15**	**277**	PN	**Pn**	**02 56 29.8**	**-2.1**
CTKS	**Kestanelik-??a**	**2.15**	**66**	PN	**Pn**	**02 56 31.8**	**0.0**
BLCB	**Balcova**	**2.18**	**156**	PN	**Pn**	**02 56 31.9**	**-0.4**
DST	**Dursunbey**	**2.23**	**110**	PN	**Pn**	**02 56 33.0**	**0.0**
ARMT	**Armutlu**	**2.26**	**84**	PN	**Pn**	**02 56 33.9**	**+0.5**
MDNY	**Mudanya-Bursa**	**2.28**	**89**	PN	**Pn**	**02 56 34.0**	**+0.4**
GOMA	**Golmarmara-Man**	**2.29**	**136**	PN	**Pn**	**02 56 33.9**	**+0.2**
HVHR	**Bakirkoy-Istan**	**2.31**	**74**	PN	**Pn**	**02 56 34.2**	**+0.1**
ORLT	**Orhaneli**	**2.32**	**97**	PN	**Pn**	**02 56 34.2**	**0.0**
BGKT	**Bogazkoy**	**2.32**	**69**	PN	**Pn**	**02 56 34.3**	**+0.1**
KNT	**Kendrikon**	**2.41**	**290**	PN	**Pn**	**02 56 33.6**	**-1.9**
KKB	**Krupnik**	**2.59**	**306**	P	**Pn**	**02 56 37.9**	**-0.1**
KKB				S	**Sb**	**02 57 16.7**	**+2.2**
VTS	**Vitosha**	**3.00**	**319**	P	**Pb**	**02 56 51.1**	**+1.7**
VTS				S	**Sg**	**02 57 33.0**	**+1.1**

IDC ***25*** *03:21:25.5±1.8, 3˚.28S×135˚.50E, h64km±28km, mb3.4/2, mb1 3.8/6, mb1mx3.4/30, mbtmp3.8/6, ML3.4/4, MS2.4/1, Ms1 2.4/1, ms1mx2.2/23, Error ellipse: s-maj=23.2km s-min=12.9km az=12.0*
ISC 25 03:21:12.9±1.0,**2˚.6S**±0˚.1×**135˚.66E**±0˚.06,**h10**km,**n7**, σ0**97**/8,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.72**	**292**	P	**Pb**	**03 22 36.8**	**+1.1**
	4.2nm,0.3s,baz=130,slow=16,SNR=35						
SIJI				S	**Sb**	**03 23 31.3**	**-1.4**
	6.2nm,0.3s,baz=178,slow=22,SNR=8.7						
JAY	**Jayapura**	**5.04**	**89**	P	**Pb**	**03 22 41.8**	**+0.4**
	0.2nm,0.3s,baz=250,slow=15,SNR=1.3						
JAY				S	**Sb**	**03 23 41.3**	**-0.8**
	0.3nm,0.3s,baz=180,slow=20,SNR=2.1						
JAY				LR	LR	03 24 53.5	
	comp=Z,40nm,21.0s,baz=248,slow=40						
KRVT	**Keravat (AS076**	**16.43**	**96**	S	**Sn**	**03 28 06.0**	**-0.2**
	12nm,0.3s,baz=48,slow=12,SNR=4.9						
WRA	**Warramunga Arr**	**17.27**	**184**	P	**Pn**	**03 25 14.7**	**+0.4**
	0.3nm,0.3s,baz=7.0,slow=12,SNR=16						
WRA				S	Sn	03 28 00.3	-26
	0.1nm,0.3s,baz=9.0,slow=23,SNR=3.2						
FITZ	**Fitzroy Crossi**	**18.25**	**212**	P	**Pn**	**03 25 25.6**	**-0.8**
	0.0nm,0.3s,baz=24,slow=11,SNR=2.3						
FITZ				S	Sn	03 28 28.4	-22
	0.1nm,0.3s,baz=163,slow=15,SNR=2.3						
ASAR	**Alice Springs**	**20.99**	**184**	P	**P**	**03 25 56.5**	**0.0**
	5.3nm,0.6s,baz=8.6,slow=11,SNR=55						
ASAR				S	S	03 29 31.8	-19
	0.4nm,0.7s,baz=4.5,slow=28,SNR=2.4						
ILAR	**Eielson Array**	**87.02**	**25**	P	P	03 34 07.0	+8.7
	0.1nm,0.5s,baz=263,slow=4.9,SNR=1.5						

GCG ***25*** *03:27:12.0±0.4, 13˚.01N×89˚.58W, h9km±33km, MD4.4*
SNET ***25*** *03:27:17.2±0.9, 13˚.26N×89˚.65W, h38km±25km, ML4.7*
NEIC ***25*** *03:27:18.4±2.5, 13˚.31N±0˚.07×89˚.60W±0˚.07, h72km±3km, mb4.4/88, Md4.7(SNET), Md4.3/11(MEX), Error ellipse: s-maj=12.3km s-min=7.0km az=220.0*
UCR ***25*** *03:27:18.2±1.4, 13˚.34N×89˚.61W, h46km±13km, ML4.6, mb4.4(NEIC)*
INET ***25*** *03:27:20.7, 13˚.42N×89˚.39W, h33km, ML4.4*
IDC ***25*** *03:27:22.9±2.0, 13˚.57N×89˚.15W, h112km±17km, mb3.7/16, mb1 3.9/19, mb1mx3.8/39, mbtmp4.1/19, MS3.3/14, Ms1 3.3/14, ms1mx3.2/31, Error ellipse: s-maj=24.6km s-min=9.8km az=56.0*
ISC 25 03:27:17.9±0.4,**13˚.36N**±0˚.05×**89˚.59W**±0˚.04,**h66**km,**n190**, σ1**28**/174,**mb4.3**/44,**2C-49D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEVE	**Cerro Verde**	**0.47**	**356**	↓*i* P	**Pn**	**03 27 29.3**	**-1.1**
CEVE				*eS*	**Sn**	**03 27 38.9**	**-0.6**
CEVE	**Cerro Verde**	**0.47**	**356**	↓*i* P	**Pn**	**03 27 29.3**	**-1.1**
CEVE				*eS*	**Sn**	**03 27 38.9**	**-0.6**
SNET	**Serv Nac Est T**	**0.48**	**47**	↓*i* P	**Pn**	**03 27 29.4**	**-0.9**
SNET				*eS*	**Sn**	**03 27 38.8**	**-0.5**
SNET				IAML		03 27 40.9	
	comp=Z,33µm,0.4s						
SNET	**Serv Nac Est T**	**0.48**	**47**		**Pn**	**03 27 29.3**	**-1.0**
SNET	**Serv Nac Est T**	**0.48**	**47**	↓*i* P	**Pn**	**03 27 29.4**	**-0.9**
SNET				*eS*	**Sn**	**03 27 38.8**	**-0.5**
SNET				IAML		03 27 40.9	
	comp=Z,33µm,0.4s						
SBLS	**San Blas**	**0.48**	**357**	↓*i* P	**Pn**	**03 27 29.4**	**-1.1**
SBLS	**San Blas**	**0.48**	**357**	↓*i* P	**Pn**	**03 27 29.4**	**-1.1**
BOQS	**Boqueron**	**0.48**	**39**	↓*i* P	**Pn**	**03 27 29.8**	**-0.7**
BOQS	**Boqueron**	**0.48**	**39**	↓*i* P	**Pn**	**03 27 29.8**	**-0.7**
UEES	**Universidad Ev**	**0.50**	**44**	↓*i* P	**Pn**	**03 27 29.7**	**-0.7**
UEES	**Universidad Ev**	**0.50**	**44**	↓*i* P	**Pn**	**03 27 29.7**	**-0.7**
UTEC	**Universidad Te**	**0.51**	**48**	↓*i* P	**Pn**	**03 27 29.9**	**-0.7**
UTEC	**Universidad Te**	**0.51**	**48**	↓*i* P	**Pn**	**03 27 29.9**	**-0.7**
OPAM	**Oficina de Pla**	**0.52**	**47**	↓*i* P	**Pn**	**03 27 30.1**	**-0.6**
OPAM				IAML		03 27 41.6	
	comp=Z,40µm,0.5s						
OPAM	**Oficina de Pla**	**0.52**	**47**	↓*i* P	**Pn**	**03 27 30.1**	**-0.6**
OPAM				IAML		03 27 41.6	
	comp=Z,40µm,0.5s						
RTR	**El Retiro**	**0.54**	**355**	↓*i* P	**Pn**	**03 27 30.2**	**-0.8**
RTR	**El Retiro**	**0.54**	**355**	↓*i* P	**Pn**	**03 27 30.2**	**-0.8**
UDBS	**Universidad Do**	**0.56**	**50**	↓*i* P	**Pn**	**03 27 30.6**	**-0.5**
UDBS	**Universidad Do**	**0.56**	**50**	↓*i* P	**Pn**	**03 27 30.6**	**-0.5**
AEIL	**Aeropuerto Ilo**	**0.57**	**54**	↓*i* P	**Pn**	**03 27 30.9**	**-0.3**
AEIL				IAML		03 27 46.5	
	comp=Z,97µm,0.3s						
AEIL	**Aeropuerto Ilo**	**0.57**	**54**	↓*i* P	**Pn**	**03 27 30.9**	**-0.3**
AEIL				IAML		03 27 46.5	
	comp=Z,97µm,0.3s						
LFRS	**El Faro**	**0.58**	**63**	↓*i* P	**Pn**	**03 27 30.7**	**-0.7**
LFRS	**El Faro**	**0.58**	**63**	↓*i* P	**Pn**	**03 27 30.7**	**-0.7**
UNIC	**Universidad Ca**	**0.62**	**4**	↓*eP*	**Pn**	**03 27 31.3**	**-0.5**
UNIC	**Universidad Ca**	**0.62**	**4**	↓*eP*	**Pn**	**03 27 31.3**	**-0.5**
LBRS	**Las Brisas**	**0.66**	**54**	↓*i* P	**Pn**	**03 27 32.1**	**-0.1**
LBRS	**Las Brisas**	**0.66**	**54**	↓*i* P	**Pn**	**03 27 32.1**	**-0.1**
COEG	**Centro de Oper**	**0.74**	**69**	↓*i* P	**Pn**	**03 27 32.7**	**-0.4**
COEG				IAML		03 27 47.4	
	comp=Z,23µm,0.3s						
COEG	**Centro de Oper**	**0.74**	**69**	↓*i* P	**Pn**	**03 27 32.7**	**-0.4**
COEG				IAML		03 27 47.4	
	comp=Z,23µm,0.3s						
ALJI	**Alcalda de J**	**0.99**	**91**	↓*i* P	**Pn**	**03 27 35.3**	**-0.8**
ALJI				IAML		03 27 53.8	
	comp=Z,9µm,0.3s						
ALJI	**Alcalda de J**	**0.99**	**91**	↓*i* P	**Pn**	**03 27 35.3**	**-0.8**
ALJI				IAML		03 27 53.8	
	comp=Z,9µm,0.3s						
LLGN	**La Laguna**	**1.02**	**38**	↓*i* P	**Pn**	**03 27 36.6**	**0.0**
LLGN				*eS*	**Sn**	**03 27 52.5**	**+2.1**
LLGN	**La Laguna**	**1.02**	**38**	↓*i* P	**Pn**	**03 27 36.6**	**0.0**
LLGN				*eS*	**Sn**	**03 27 52.5**	**+2.1**
COEB	**Comit de Eme**	**1.04**	**82**	↓*i* P	**Pn**	**03 27 36.5**	**-0.4**
COEB				*eS*	**Sn**	**03 27 51.0**	**+0.1**
COEB	**Comit de Eme**	**1.04**	**82**	↓*i* P	**Pn**	**03 27 36.5**	**-0.4**
COEB				*eS*	**Sn**	**03 27 51.0**	**+0.1**
MTO3	**Montecristo**	**1.06**	**12**	↓*i* P	**Pn**	**03 27 37.2**	**0.0**
MTO3	**Montecristo**	**1.06**	**12**	↓*i* P	**Pn**	**03 27 37.2**	**0.0**
TECA	**Tecapa**	**1.07**	**82**	↓*i* P	**Pn**	**03 27 36.9**	**-0.4**
TECA	**Tecapa**	**1.07**	**82**	↓*i* P	**Pn**	**03 27 36.9**	**-0.4**
IXG	**Ixpaco**	**1.16**	**315**	*eP*	**Pn**	**03 27 37.9**	**-0.5**
ESQI	**Esquipulas**	**1.22**	**11**	↓*i* P	**Pn**	**03 27 39.6**	**+0.4**
PACA	**Pacayal**	**1.24**	**85**	↓*i* P	**Pn**	**03 27 39.5**	**+0.1**
PACA	**Pacayal**	**1.24**	**85**	↓*i* P	**Pn**	**03 27 39.5**	**+0.1**
LCY	**Lacayo**	**1.27**	**87**	↓*i* P	**Pn**	**03 27 40.2**	**+0.4**
LCY	**Lacayo**	**1.27**	**87**	↓*i* P	**Pn**	**03 27 40.2**	**+0.4**
JUCU	**Jucuar¡n**	**1.31**	**94**	↓*i* P	**Pn**	**03 27 39.6**	**-0.7**
JUCU				IAML		03 28 05.1	
	comp=Z,12µm,0.5s						
JUCU	**Jucuar¡n**	**1.31**	**94**	↓*i* P	**Pn**	**03 27 39.6**	**-0.7**
JUCU				IAML		03 28 05.1	
	comp=Z,12µm,0.5s						
BLLM	**Bellamira**	**1.32**	**86**	↓*i* P	**Pn**	**03 27 40.9**	**+0.4**
BLLM	**Bellamira**	**1.32**	**86**	↓*i* P	**Pn**	**03 27 40.9**	**+0.4**
PCG	**Pacaya**	**1.43**	**316**	*eP*	**Pn**	**03 27 42.4**	**+0.4**
NBG	**Las Nubes**	**1.43**	**329**	*eP*	**Pn**	**03 27 42.8**	**+0.7**
FAGO	**Alcalda de S**	**1.48**	**77**	↓*i* P	**Pn**	**03 27 42.3**	**-0.3**
FAGO				IAML		03 28 06.4	
	comp=Z,1µm,0.6s						
FAGO	**Alcalda de S**	**1.48**	**77**	↓*i* P	**Pn**	**03 27 42.3**	**-0.3**
FAGO				IAML		03 28 06.4	
	comp=Z,1µm,0.6s						
FUG	**Fuego 3**	**1.63**	**312**	*eP*	**Pn**	**03 27 44.7**	**0.0**
LCND	**La Caada**	**1.66**	**91**	↓*i* P	**Pn**	**03 27 44.9**	**0.0**
LCND				IAML		03 28 10.6	
	comp=Z,14µm,0.5s						
LCND	**La Caada**	**1.66**	**91**	↓*i* P	**Pn**	**03 27 44.9**	**0.0**
LCND				IAML		03 28 10.6	
	comp=Z,14µm,0.5s						
MRL	**Marmol**	**1.72**	**357**	*eP*	**Pn**	**03 27 47.3**	**+1.3**
ERG	**Entre ros, C**	**2.20**	**300**	*eP*	**Pn**	**03 27 53.1**	**+0.9**
STG3	**Santiaguito 3,**	**2.34**	**305**	*eP*	**Pn**	**03 27 54.1**	**-0.2**
CRIN	**San Cristobal**	**2.56**	**104**		**Pn**	**03 27 58.0**	**+0.8**
THIG		**3.02**	**301**		**Pn**	**03 28 02.2**	**-1.1**
MATN	**Matagalpa**	**3.60**	**96**		**Pn**	**03 28 10.0**	**-1.3**
CCIG	**Comitan**	**3.81**	**320**		**Pn**	**03 28 15.1**	**+0.7**
PCIG		**4.22**	**304**		**Pn**	**03 28 19.4**	**-0.3**
ACON	**Acoyapa**	**4.53**	**107**		**Pn**	**03 28 24.1**	**+0.1**
GBS3	**Finca Las Img**	**4.79**	**122**	*eP*	**Pn**	**03 28 29.1**	**+1.5**
NY14	**Universidad de**	**4.80**	**124**	*eP*	**Pn**	**03 28 29.2**	**+1.5**
LAPC	**Finca la Perla**	**4.81**	**122**	*eP*	**Pn**	**03 28 27.8**	**-0.1**
GB1A	**Borinquen Arri**	**4.81**	**121**	*eP*	**Pn**	**03 28 29.6**	**+1.6**
BUEV	**Buena Vista**	**4.82**	**121**	*eP*	**Pn**	**03 28 29.4**	**+1.4**
BUAI	**Buenos Aires**	**4.84**	**120**	*eP*	**Pn**	**03 28 30.0**	**+1.7**
GPS3	**Bodega del ICE**	**4.88**	**122**	*eP*	**Pn**	**03 28 29.6**	**+0.8**
GPS1	**Guardaparques**	**4.88**	**121**	*eP*	**Pn**	**03 28 30.4**	**+1.5**
GPS2	**Hotel Rincn d**	**4.89**	**121**	*eP*	**Pn**	**03 28 30.7**	**+1.7**
LIM1	**Limonal**	**5.00**	**121**	*eP*	**Pn**	**03 28 31.9**	**+1.4**
GUAB	**Guayabo de Bag**	**5.01**	**121**	*eP*	**Pn**	**03 28 32.0**	**+1.3**
GUAI	**GUAI**	**5.04**	**127**	*eP*	**Pn**	**03 28 31.9**	**+1.0**
HORNC	**Hornillas**	**5.05**	**121**	*eP*	**Pn**	**03 28 32.5**	**+1.2**
COLC	**Colonia**	**5.06**	**121**	*eP*	**Pn**	**03 28 32.6**	**+1.3**
CUI	**Cuipilapa**	**5.09**	**121**	*eP*	**Pn**	**03 28 32.9**	**+1.1**
PLVR	**Palo Verde**	**5.12**	**125**	*eP*	**Pn**	**03 28 33.6**	**+1.4**
PTEN	**Parque Tenorio**	**5.21**	**120**	*eP*	**Pn**	**03 28 34.3**	**+0.8**
ACAL	**Aguas Claras**	**5.21**	**121**	*eP*	**Pn**	**03 28 34.2**	**+0.7**
ESPN	**Las Esperanzas**	**5.29**	**102**	*eP*	**Pn**	**03 28 34.4**	**-0.1**
JTS	**Las Juntas de**	**5.47**	**123**	P	**Pn**	**03 28 37.9**	**+1.0**
	comp=Z,9.3nm,0.3s,baz=4.6,slow=20,SNR=76						
JTS				S	**Sn**	**03 29 38.2**	**-0.3**
	comp=Z,8.7nm,0.3s,baz=7.0,slow=19,SNR=1.4						
JTS	**Las Juntas de**	**5.47**	**123**	*eP*	**Pn**	**03 28 38.7**	**+1.8**
SRA1	**San Ramn**	**5.97**	**122**	*eP*	**Pn**	**03 28 45.9**	**+2.1**
CMIG	**Matias Romero**	**6.32**	**307**	P	**Pn**	**03 28 50.0**	**+1.5**
	comp=Z,3.4nm,0.3s,baz=100,slow=9.3,SNR=48						
CMIG				S	**Sn**	**03 30 00.9**	**+1.7**
	comp=Z,3.2nm,0.3s,baz=252,slow=21,SNR=6.6						
LCR2	**La Lucha 2**	**6.55**	**123**	*eP*	**Pn**	**03 28 53.8**	**+1.9**
CVTR	**Volcan Turrial**	**6.61**	**120**	*eP*	**Pn**	**03 28 56.1**	**+3.3**
TEIG	**Tepich**	**6.95**	**10**	P	**Pn**	**03 28 58.8**	**+1.7**
	comp=Z,47nm,0.3s,baz=139,slow=0.3,SNR=212						
TEIG				LR	LR	03 32 07.1	
	comp=Z,302nm,19.9s,baz=228,slow=43						
TEIG	**Tepich**	**6.95**	**10**		**Pn**	**03 28 58.4**	**+1.3**
DRK0	**Durika**	**7.43**	**122**	*eP*	**Pn**	**03 29 05.7**	**+1.8**
EDBA	**Buenos Aires**	**7.47**	**123**	*eP*	**Pn**	**03 29 05.6**	**+1.3**
BRU2	**Volcan**	**8.15**	**123**	*eP*	**Pn**	**03 29 15.5**	**+1.8**
SJCC	**San Jacinto, C**	**14.53**	**102**	*eP*	**Pn**	**03 30 44.2**	**+4.0**
UREC	**San Jos de Ur**	**14.90**	**111**	*eP*	**Pn**	**03 30 46.8**	**+1.8**
ZARC	**Zaragoza, Cauc**	**15.61**	**110**	*eP*	**Pn**	**03 30 56.2**	**+2.1**
SMLC	**San Martn de**	**15.89**	**105**	*eP*	**Pn**	**03 30 57.5**	**-0.1**
YOTC	**Yotoco, Valle**	**16.06**	**124**	*eP*	**Pn**	**03 31 01.9**	**+2.0**
GUY2C	**Guyana, Caldas**	**16.19**	**119**	*eP*	**Pn**	**03 31 02.8**	**+0.9**
RREF	**El Recreo**	**16.37**	**120**	*eP*	**Pn**	**03 31 06.3**	**+2.0**
NORC	**Norcasia**	**16.45**	**117**	*eP*	**Pn**	**03 31 04.5**	**-0.1**
ORTC	**Ortega, Tolima**	**17.00**	**122**	*eP*	**Pn**	**03 31 13.4**	**+1.9**
SOTA	**Rioblanco**	**17.01**	**130**	*eP*	**P**	**03 31 16.1**	**+3.0**
PCON	**Cinco Dias**	**17.04**	**129**	*eP*	**P**	**03 31 16.1**	**+2.6**
HKT	**Hockley**	**17.50**	**342**		**Pn**	**03 31 19.4**	**+2.0**
RUSC	**La Rusia**	**17.88**	**113**	*eP*	**P**	**03 31 22.3**	**-0.3**
CHIC	**Chingaza**	**17.89**	**118**	*eP*	**P**	**03 31 24.6**	**+1.9**
3444A	**Westbrook Farm**	**18.04**	**357**	P	**P**	**03 31 26.5**	**+2.7**
3444A				IAmb	IAmb	03 31 43.3	
	comp=Z,48nm,1.2s						
342A	**Flagon Creek P**	**18.11**	**352**		**Pn**	**03 31 28.0**	**+3.1**
352A	**Blakely**	**18.54**	**13**	P	**P**	**03 31 31.8**	**+2.5**
VBMS	**Vicksburg**

LPAZ	**La Paz**	**36.30**	**144**	LR	LR	03 48 50.3		
	comp=Z,47nm,21.0s,baz=142,slow=36							
ULM	**Lac du Bonnet**	**37.15**	**353**	LR	LR	03 52 20.7		
	comp=Z,62nm,18.8s,baz=158,slow=40							
F10A	**Beach Ranch, E**	**40.02**	**330**	P	**P**	**03 34 46.9**	**+0.4**	
F10A				IAmb	IAmb	03 35 14.0		
	comp=Z,4.1nm,1.0s							
SIV	**San Ignacio**	**40.56**	**135**	P	**P**	**03 34 50.6**	**-0.6**	
	comp=Z,3.1nm,0.7s,baz=322,slow=6.8,SNR=28							
SIV				PcP	**PcP**	**03 36 52.6**	**0.0**	
	comp=Z,3.0nm,0.6s,baz=268,slow=3.2,SNR=12							
LVC	**Limon Verde**	**41.09**	**150**	P	**P**	**03 34 56.5**	**+0.7**	
	comp=Z,1.8nm,0.8s,baz=325,slow=9.6,SNR=2.4							
B06A	**Marblemount**	**43.87**	**330**	P	**P**	**03 35 17.8**	**+0.1**	
SCHQ	**Schefferville**	**45.05**	**18**	P	**P**	**03 35 24.8**	**-2.2**	
	comp=Z,7.1nm,0.6s,baz=224,slow=6.6,SNR=16							
SCHQ				PcP	**PcP**	**03 37 04.8**	**-2.1**	
	comp=Z,1.2nm,0.5s,baz=225,slow=5.7,SNR=1.8							
SCHQ				LR	LR	03 53 33.4		
	comp=Z,47nm,20.6s,baz=357,slow=35							
H03N2	**Juan Fernandez**	**47.63**	**168**	T	T	04 26 22.7		
	baz=347,slow=76,SNR=4.1							
H03N1	**Juan Fernandez**	**47.64**	**168**	T	T	04 26 42.8		
	baz=347,slow=76,SNR=5.4							
H03N3	**Juan Fernandez**	**47.65**	**168**	T	T	04 26 33.1		
	baz=347,slow=76,SNR=6.7							
BDFB	**Brasilia**	**50.21**	**124**	P	**P**	**03 36 05.8**	**-1.9**	
	comp=Z,2.2nm,0.7s,baz=342,slow=2.5,SNR=3.6							
YKA	**Yellowknife Ar**	**52.21**	**346**	P	**P**	**03 36 20.6**	**-1.2**	
	comp=Z,2.3nm,0.8s,baz=129,slow=7.8,SNR=52							
YKA				PcP	**PcP**	**03 37 31.8**	**-0.8**	
	comp=Z,0.4nm,0.6s,baz=139,slow=4.0,SNR=5.2							
YKA				LR	LR	04 02 19.6		
	comp=Z,28nm,18.9s,baz=0.0,slow=40							
PLCA	**Paso Flores**	**56.63**	**163**	P	**P**	**03 36 54.8**	**+0.5**	
	comp=Z,1.6nm,0.7s,baz=5.2,slow=5.0,SNR=3.0							
ILAR	**Eielson Array**	**64.36**	**336**	P	**P**	**03 37 45.2**	**-1.4**	
	comp=Z,0.8nm,1.0s,baz=133,slow=5.2,SNR=7.6							
ESDC	**Sonseca Array**	**78.28**	**52**	P	P	03 39 07.8	-3.3	
	comp=Z,0.4nm,0.6s,baz=290,slow=5.1,SNR=6.5							
ESDC				LR	LR	04 10 10.0		
	comp=Z,14nm,18.9s,baz=115,slow=33							
DBIC	**Dimbokro**	**83.39**	**85**	LR	LR	04 12 21.6		
	comp=Z,22nm,20.6s,baz=126,slow=32							
ARCES	**ARCESS Array B**	**86.01**	**19**	P	P	03 39 48.3	-2.5	
	comp=Z,3.0nm,0.8s,baz=270,slow=3.6,SNR=4.3							
TORD	**Torodi Ar. Bea**	**88.25**	**77**	P	P	03 39 58.9	-3.8	
	comp=Z,0.3nm,0.5s,baz=293,slow=5.7,SNR=5.8							
TORD				LR	LR	04 16 43.2		
	comp=Z,23nm,19.8s,baz=115,slow=34							
FINES	**FINESS Array B**	**90.08**	**26**	P	**P**	**03 40 08.3**	**-2.0**	
	comp=Z,1.5nm,1.0s,baz=243,slow=6.1,SNR=1.9							
SONM	**Songino Array**	**117.44**	**348**	PKP	**PKPdf**	**03 45 55.6**	**-0.9**	
	comp=Z,0.4nm,0.5s,baz=15,slow=2.8,SNR=2.5							
MKAR	**Makanchi Array**	**119.69**	**6**	PKP	**PKPdf**	**03 45 58.5**	**-2.2**	
	comp=Z,0.2nm,0.4s,baz=311,slow=3.3,SNR=4.4							
LZH	**Lanzhou**	**129.21**	**346**	*e*PKP	**PKPdf**	**03 46 19.0**	**-0.4**	
LZH				pPKP	pPKPdf	03 46 36.5	-2.0	
LZH				sPKP		03 46 43.6		
WRA	**Warramunga Arr**	**137.50**	**255**	PKhKP	PKPpre	03 46 25.4		
	comp=Z,0.4nm,0.9s,baz=87,slow=2.7,SNR=1.7							
WRA				PKP	**PKPdf**	**03 46 35.7**	**+0.6**	
	comp=Z,1.2nm,0.6s,baz=20,slow=0.7,SNR=19							
ASAR	**Alice Springs**	**137.64**	**250**	PKhKP	PKPpre	03 46 23.2		
	comp=Z,0.6nm,0.9s,baz=107,slow=3.7,SNR=3.0							
ASAR				PKP	**PKPdf**	**03 46 35.6**	**+0.3**	
	comp=Z,0.7nm,0.7s,baz=105,slow=2.0,SNR=4.4							
CMAR	**Chiang Mai Arr**	**147.29**	**345**	PKPbc	**PKPdf**	**03 46 52.8**	**+0.3**	
	comp=Z,2.1nm,0.4s,baz=335,slow=3.3,SNR=9.7							

IDC 25 03:35:47.0±3.7, 17°22S×73°36W, h0km, mb3.8/2, mb1 3.8/5, mb1mx3.6/27, mbtmp3.8/5, ML3.6/3, Error ellipse: s-maj=58.4km s-min=50.4km az=139.0, Off coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.09**	**80**	Pn	Pn	03 37 05.3	+0.1
	2.1nm,0.3s,baz=254,slow=9.7,SNR=20						
LPAZ				Sn	Sn	03 38 05.5	+0.6
	baz=186,slow=18,SNR=1.2						
NNA	**Nana**	**6.20**	**327**	Lg	Lg	03 39 06.1	
	1.2nm,0.3s,baz=215,slow=21,SNR=1.1						
LVC	**Limon Verde**	**6.80**	**143**	Pn	Pn	03 37 28.2	-0.2
	1.0nm,0.3s,baz=329,slow=12,SNR=11						
LVC				Sn	Sn	03 38 36.2	-11
	1.1nm,0.3s,baz=83,slow=20,SNR=8.0						
SIV	**San Ignacio**	**11.84**	**86**	Pn	Pn	03 38 37.3	0.0
	0.3nm,0.3s,baz=269,slow=14,SNR=8.8						
H03N1	**Juan Fernandez**	**16.91**	**196**	T	T	03 57 22.9	
	baz=21,slow=73,SNR=65						
H03N2	**Juan Fernandez**	**16.91**	**196**	T	T	03 57 20.0	
	baz=21,slow=73,SNR=25						
H03N3	**Juan Fernandez**	**16.93**	**196**	T	T	03 57 24.8	
	baz=21,slow=73,SNR=32						
BDFB	**Brasilia**	**24.35**	**90**	P	P	03 41 07.3	+0.2
	1.2nm,0.5s,baz=258,slow=9.3,SNR=3.1						
TORD	**Torodi Ar. Bea**	**80.00**	**73**	P	P	03 47 58.7	-0.1
	0.9nm,1.0s,baz=260,slow=4.6,SNR=2.9						
H11N3	**WAKE ISLAND Hyl**	**23.04**	**283**	T	T	06 10 45.7	
	baz=98,slow=74,SNR=4.3						
H11S2	**WAKE ISLAND Hyl**	**23.05**	**281**	T	T	06 10 48.8	
	baz=99,slow=75,SNR=4.3						
H11N2	**WAKE ISLAND Hyl**	**23.06**	**283**	T	T	06 10 47.2	
	baz=98,slow=74,SNR=4.9						
H11N1	**WAKE ISLAND Hyl**	**23.06**	**283**	T	T	06 10 47.1	
	baz=98,slow=74,SNR=4.3						
H11S1	**WAKE ISLAND Hyl**	**23.06**	**281**	T	T	06 10 49.1	
	baz=99,slow=75,SNR=5.5						
H11S3	**WAKE ISLAND Hyl**	**23.07**	**281**	T	T	06 10 49.4	
	baz=99,slow=75,SNR=5.7						

*IDC **25** 04:06:47.6±1.6, 35°10N×6°39E, h0km, mb3.3/5, mb1 3.4/7, mb1mx3.3/31, mbtmp3.3/7, ML2.8/2, Error ellipse: s-maj=36.7km s-min=24.4km az=149.0*
*CRAAG **25** 04:06:47.1, 35°22N×6°57E, MI3.6*
*LDG **25** 04:06:53.8±0.5, 35°51N×6°65E, h10km, MI2.8/9, Error ellipse: s-maj=10.1km s-min=4.0km az=138.0*
*TUN **25** 04:07:07.8, 34°69N×8°04E, h76km±2km, MD3.5*

ISC 25 04:06:50.1±1.0, 35°02N±0°08×6°50E±0°06, h10km, n28, σ1°44/25, mb3.1/5, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASM	**Ain Smara**	**1.24**	**360**	P	**Pn**	**04 07 12.3**	**-1.3**
CKFL	**Kef-Lekhel**	**1.39**	**7**	P	**Pb**	**04 07 16.6**	**+0.3**
SET	**Setif**	**1.48**	**323**	P	**Pb**	**04 07 18.0**	**+0.2**
DFRA	**Djebel Bou Aff**	**1.61**	**342**	P	**Pb**	**04 07 20.3**	**+0.4**
OAR	**Oum El Arais**	**1.64**	**107**	*i* P	**Pg**	**04 07 22.3**	**+0.8**
CMAH	**Djebel Manchou**	**1.77**	**25**	P	**Pn**	**04 07 19.7**	**-1.2**
CAEH	**'Ain El Ouahch**	**1.78**	**9**	P	**Pn**	**04 07 19.2**	**-1.8**
SYA	**Sidi Yaiche**	**1.92**	**98**	*i* P	**Pn**	**04 07 24.9**	**-0.3**
BERT	**Berda**	**2.21**	**110**	*i* P	**Pn**	**04 07 28.3**	**+1.4**
KEST	**Kesra**	**2.44**	**72**	Pn	**Pn**	**04 07 30.9**	**+0.9**
	2.3nm,0.3s,baz=250,slow=6.1,SNR=31						
KEST				Sn	**Sn**	**04 08 01.7**	**+1.8**
	3.3nm,0.3s,baz=131,slow=20,SNR=2.1						
TROT	**Trozza**	**2.60**	**77**	*i* P	**Pb**	**04 07 36.4**	**-0.4**
BTHT	**Jabal bu Thady**	**3.11**	**87**	*i* P	**Pn**	**04 07 41.1**	**+2.0**
PGF	**Pioggiola**	**7.77**	**14**	*e*Pn	Pn	04 08 37.8	-5.5
PGF				*e*Sn	Sn	04 09 55.7	-16
	1.4nm,0.4s						
LMR	**La Mourre**	**8.31**	**0**	*e*Pn	Pn	04 08 44.6	-5.9
LMR				*e*Sn	Sn	04 10 08.3	-16
	0.8nm,0.3s						
FRF	**La Foret Royal**	**8.54**	**1**	*e*Pn	Pn	04 08 48.5	-5.2
FRF				*e*Sn	Sn	04 10 13.8	-16
	1.2nm,0.5s						
MTLF	**Montolieu**	**8.95**	**340**	*e*P	**Pn**	**04 08 59.6**	**+0.2**
MTLF				*e*Sn	Sn	04 10 25.8	-14
	0.5nm,0.4s						
SMRF	**Simiane la Rot**	**8.98**	**356**	*e*Pn	Pn	04 08 54.9	-4.9
SMRF				*e*Sn	Sn	04 10 24.9	-16
	0.2nm,0.3s						
LASF	**Ste Croix**	**9.28**	**348**	*e*P	**Pn**	**04 09 04.3**	**+0.5**
LASF				*e*Sn	Sn	04 10 32.6	-16
	0.4nm,0.3s						
EPF	**Esparros**	**9.32**	**331**	*e*P	**Pn**	**04 09 06.9**	**+2.3**
ESDC	**Sonseca Array**	**9.54**	**302**	Pn	**Pn**	**04 09 05.9**	**-1.6**
	0.0nm,0.3s,baz=109,slow=13,SNR=2.6						
ETSF	**Etsaut**	**9.60**	**327**	*e*P	**Pn**	**04 09 11.0**	**+2.7**
VIVF	**Saint-Julien-l**	**9.93**	**352**	*e*P	**Pn**	**04 09 13.0**	**+0.2**
VIVF				*e*Sn	Sn	04 10 48.0	-16
	0.3nm,0.3s						

LFF	**La Frestale**	**10.85**	**338**	*e*P	**Pn**	**04 09 26.2**	**+0.9**	
BRTR	**Keskin Array B**	**22.04**	**70**	P	**P**	**04 11 44.6**	**-0.4**	
	0.6nm,0.8s,baz=260,slow=8.6,SNR=1.7							
TORD	**Torodi Ar. Bea**	**22.20**	**192**	P	**P**	**04 11 45.8**	**-0.8**	
	0.6nm,0.8s,baz=8.8,slow=11,SNR=3.0							
AKASG	**Malin Array Be**	**22.74**	**39**	P	**P**	**04 11 49.0**	**-3.1**	
	0.1nm,0.3s,baz=236,slow=8.6,SNR=1.7							
ZALV	**Zalesovo Beam**	**56.02**	**44**	P	**P**	**04 16 27.5**	**-1.2**	
	0.6nm,0.4s,baz=273,slow=8.4,SNR=1.9							
MKAR	**Makanchi Array**	**56.40**	**53**	P	**P**	**04 16 31.2**	**-0.4**	
	0.2nm,0.4s,baz=274,slow=8.2,SNR=4.1							

*IPEC **25** 05:12:12.8±0.3, 51°57N×16°28E, h0km, ML2.7/3, Error ellipse: s-maj=1.9km s-min=1.5km az=33.0*
*IDC **25** 05:12:14.1±0.8, 51°54N×16°10E, h0km, mb3.1/1, mb1 3.5/7, mb1mx3.3/43, mbtmp3.3/7, ML3.1/6, Error ellipse: s-maj=11.3km s-min=6.9km az=119.0*
*BGR **25** 05:12:14.6±0.4, 51°51N×16°16E, h1km, ML3.2/15, Error ellipse: s-maj=5.6km s-min=3.3km az=13.0*
*LDG **25** 05:12:16.4±0.2, 51°28N×15°95E, h1km, Ml3.1/5, Error ellipse: s-maj=4.6km s-min=3.6km az=21.0, Suspected Mining induced.*

ISC 25 05:12:11.0±0.6, 51°64N±0°03×16°18E±0°02, h0km, n85, σ1°77/135, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.80**	**175**	*e*Pg	**Pg**	**05 12 27.2**	**+0.8**
KSP				*e*Sg	**Sg**	**05 12 36.5**	**-0.2**
CHVC	**Chvalec**	**1.05**	**184**	*e*PG	**Pg**	**05 12 32.0**	**+0.8**
CHVC				*e*SG	**Sg**	**05 12 44.5**	**-0.3**
	comp=Z,133nm,0.5s						
OSTC	**Ostas**	**1.08**	**179**	*e*PG	**Pg**	**05 12 32.3**	**+0.5**
OSTC				*e*SG	**Sg**	**05 12 45.5**	**-0.3**
	comp=Z,99nm,0.3s						
UPC	**Upice**	**1.14**	**185**	*e*PG	**Pg**	**05 12 33.2**	**+0.4**
UPC				*e*SG	**Sg**	**05 12 46.8**	**-0.7**
	comp=Z,178nm,0.2s						
DPC	**Dobruska-Polom**	**1.29**	**176**	*e*Pg	**Pg**	**05 12 36.0**	**+0.2**
DPC				*e*Sg	**Sg**	**05 12 51.6**	**-0.9**
DPC	**Dobruska-Polom**	**1.29**	**176**	*e*PG	**Pg**	**05 12 35.8**	**0.0**
DPC				*e*SG	**Sg**	**05 12 51.8**	**-0.7**
	comp=Z,89nm,0.4s						
PVCC	**Panska Ves**	**1.50**	**223**	*e*PG	**Pn**	**05 12 39.9**	**+0.7**
PVCC				*e*SG	**Sb**	**05 12 59.9**	**+0.5**
	comp=Z,309nm,0.8s						
BRG	**Berggiesshubel**	**1.60**	**242**	PN	**Pn**	**05 12 41.0**	**+0.5**
BRG				PG	**Pg**	**05 12 42.7**	**+1.0**
BRG				SG	**Sg**	**05 13 02.9**	**+0.5**
	118nm,0.3s						
BRG	**Berggiesshubel**	**1.60**	**242**	*e*Pn	**Pg**	**05 12 42.4**	**+0.8**
BRG				*e*Sg	**Sg**	**05 13 03.1**	**+0.8**
KRLC	**Kraliky**	**1.61**	**166**	*e*PG	**Pn**	**05 12 41.0**	**+0.2**
KRLC				*e*SG	**Sn**	**05 13 01.4**	**-0.8**
	comp=Z,89nm,0.4s						
FBE	**Freiberg**	**1.91**	**249**	*e*Pn	**Pg**	**05 12 48.2**	**+0.6**
FBE				*e*Sg	**Sg**	**05 13 13.5**	**+1.1**
PRA	**Prague**	**1.92**	**216**	*e*PN	**Pn**	**05 12 45.7**	**+0.8**
PRA				*e*SG	**Sb**	**05 13 11.5**	**+0.2**
	comp=Z,27nm,0.6s						
PRU	**Pruhonice**	**1.95**	**213**	*e*PG	**Pb**	**05 12 47.6**	**+0.2**
PRU				*e*SG	**Sb**	**05 13 12.1**	**-0.1**
	comp=Z,88nm,0.6s						
CLL	**Collm**	**2.01**	**262**	*e*Pn	**Pn**	**05 12 48.1**	**+1.8**
CLL	**Collm**	**2.01**	**262**	*e*Pn	**Pn**	**05 12 48.0**	**+1.8**
CLL				*e*Pg	**Pg**	**05 12 51.0**	**+1.4**
CLL				*i*		05 12 55.2	
CLL				*e*Sg	**Sg**	**05 13 18.0**	**+2.4**
	comp=Z,49nm,0.4s						
MORC	**Moravsky Berou**	**2.06**	**154**	*e*PN	**Pn**	**05 12 47.3**	**+0.5**
MORC				*e*SG	**Sn**	**05 13 14.5**	**+1.3**
MORC	**Moravsky Berou**	**2.06**	**154**	*e*Pn	**Pn**	**05 12 47.4**	**+0.5**
MORC	**Moravsky Berou**	**2.06**	**154**	*e*Pn	**Pn**	**05 12 47.3**	**+0.5**
	baz=336						
MORC				*e*Sg	**Sn**	**05 13 14.5**	**+1.3**
	comp=Z,37nm,0.4s,baz=336						
OKC	**Ostrava-Krasne**	**2.19**	**144**	*e*Pn	**Pn**	**05 12 49.0**	**+0.3**
OKC	**Ostrava-Krasne**	**2.19**	**144**	*e*PG	**Pb**	**05 12 52.2**	**+0.6**
OKC				*e*SG	**Sb**	**05 13 20.5**	**+1.2**
	comp=Z,73nm,0.4s						
VRAC	**Vranov**	**2.35**	**173**	Pn	**Pn**	**05 12 52.1**	**+1.2**
	comp=Z,5.7nm,0.3s,baz=355,slow=16,SNR=17						
VRAC				Pg	**Pg**	**05 12 56.4**	**+0.4**
	comp=Z,5.7nm,0.3s,baz=354,slow=16,SNR=18						
VRAC				Lg	Lg	05 13 25.1	
	comp=Z,4.2nm,0.3s,baz=73,slow=23,SNR=4.6						
VRAC	**Vranov**	**2.35**	**173**	*e*PN	**Pn**	**05 12 51.6**	**+0.8**
VRAC				*e*SG	**Sb**	**05 13 24.3**	**+0.6**
VRAC	**Vranov**	**2.35**	**173**	*e*Pn	**Pn**	**05 12 51.6**	**+0.8**
	baz=355						
VRAC				*e*Sg	**Sb**	**05 13 24.3**	**+0.6**
	comp=Z,46nm,0.5s,baz=355						
TREC	**Trest**	**2.39**	**191**	*e*PG	**Pb**	**05 12 55.2**	**+0.3**
TREC				*e*SG	**Sb**	**05 13 25.7**	**+0.9**
	comp=Z,62nm,0.6s						
PBCC	**Pribram**	**2.40**	**216**	*e*PG	**Pb**	**05 12 55.6**	**+0.6**
PBCC				*e*SG	**Sg**	**05 13 27.5**	**-0.5**
KRUC	**Moravsky**	**2.58**	**177**	*e*PN	**Pn**	**05 12 55.1**	**+1.0**
KRUC				*e*PG	**Pb**	**05 12 58.8**	**+0.6**
KRUC				*e*SG	**Sb**	**05 13 31.4**	**+0.9**
KRUC	**Moravsky**	**2.58**	**177**	*e*Pn	**Pn**	**05 12 55.0**	**+1.0**
	baz=358						
KRUC	**Moravsky**	**2.58**	**177**	*e*Pg	**Pb**	**05 12 58.8**	**+0.6**
	baz=358						
KRUC				*e*Sg	**Sb**	**05 13 31.4**	**+0.9**
	comp=Z,25nm,0.4s,baz=358						
OJC	**Ojcow**	**2.70**	**120**	*e*Pn	**Pn**	**05 12 55.8**	**+0.1**
OJC				*e*Sg	**Sg**	**05 13 39.8**	**+2.2**
NKC	**Novy Kostel**	**2.75**	**241**	*e*PN	**Pn**	**05 12 58.0**	**+1.7**
NKC				*e*PG	**Pg**	**05 13 03.4**	**-0.2**
NKC				*e*SG	**Sg**	**05 13 40.7**	**+1.5**
	comp=Z,101nm,0.5s						
JAVC	**Velka Javorina**	**2.94**	**160**	*e*PN	**Pn**	**05 12 59.9**	**+0.8**
JAVC	**Velka Javorina**	**2.94**	**160**	*e*Pn	**Pn**	**05 12 59.8**	**+0.7**
	baz=342						
KHC	**Kasperske Hory**	**3.01**	**215**	*e*PN	**Pn**	**05 13 00.0**	**0.0**
KHC				*e*PG	**Pb**	**05 13 06.5**	**+1.0**
KHC				*e*SN	**Sn**	**05 13 35.0**	**-1.8**
KHC				*e*SG	**Sb**	**05 13 44.9**	**+2.1**
MOX	**Moxa**	**3.04**	**253**	*e*Pn	**Pn**	**05 13 01.4**	**+1.0**
MOX				*e*Sg	**Sg**	**05 13 50.1**	**+1.5**
MANZ	**Manzenberg**	**3.06**	**239**	*e*Pn	**Pn**	**05 13 01.9**	**+1.2**
ROTZ	**Rotzenmuhle**	**3.14**	**235**	*e*Pn	**Pn**	**05 13 02.9**	**+1.1**
ROTZ				*e*Sg	**Sg**	**05 13 51.4**	**-0.5**
GEC2	**GERESS Array S**	**3.22**	**211**	*e*Pn	**Pn**	**05 13 04.5**	**+1.6**
GEC2				*e*Sg	**Sg**	**05 13 52.3**	**-2.0**
GERES	**GERESS Array B**	**3.22**	**211**	Pn	**Pn**	**05 13 04.2**	**+1.4**
	comp=Z,2.2nm,0.3s,baz=29,slow=12,SNR=65						
GERES				Pg	**Pb**	**05 13 10.7**	**+1.7**
	comp=Z,5.9nm,0.3s,baz=32,slow=17,SNR=34						
GERES				Lg	Lg	05 13 53.4	
	comp=Z,9.4nm,0.3s,baz=27,slow=29,SNR=7.5						
SMOL	**Smolenice**	**3.23**	**165**	*e*PG	**Pg**	**05 13 13.7**	**+0.8**
SMOL				*e*SG	**Sg**	**05 13 54.7**	**0.0**
SMOL				*e*LG	Lg	05 13 58.6	
LANS	**Liptovska Anna**	**3.26**	**138**	*e*PN	**Pn**	**05 13 06.5**	**+3.1**
LANS				*e*LG	Lg	05 14 10.6	
WET	**Wettzell**	**3.27**	**221**	*e*Pn	**Pn**	**05 13 04.3**	**+0.8**
MODS	**Modra-Piesok**	**3.34**	**167**	*e*PN	**Pn**	**05 13 06.0**	**+1.4**
MODS				*e*PG	**Pg**	**05 13 15.8**	**+0.7**
MODS				*e*SG	**Sg**	**05 13 57.2**	**-1.2**
MODS				*e*LG	Lg	05 14 06.4	
ZST	**Bratislava**	**3.50**	**170**	*e*SG	**Sg**	**05 14 01.6**	**-1.7**
ZST				*e*LG	Lg	05 14 05.6	
BSD	**Bornholm Skovb**	**3.56**	**348**	*i* P	**Pn**	**05 13 09.5**	**+2.0**
BSD				*i* S	**Sn**	**05 13 49.2**	**-1.1**
VYHS	**Vyhne**	**3.58**	**150**	*e*PN	**Pn**	**05 13 08.3**	**+0.5**
CLZ	**Clausthal**	**3.61**	**276**	*e*Pn	**Pn**	**05 13 10.2**	**+1.9**
GRF	**Grafenberg Arr**	**3.71**	**240**	*e*Pn	**Pn**	**05 13 10.9**	**+1.4**
CONA	**Conrad Observa**	**3.72**	**183**	*i* Pn	**Pn**	**05 13 11.1**	**+1.3**
	comp=Z,2.6nm,0.4s,baz=8.0						
CONA				*i* Sg	**Sg**	**05 14 07.4**	**-3.1**
	comp=Z,25nm,0.4s						
MOA	**Molln**	**3.99**	**199**	*i* Pn	**Pn**	**05 13 14.6**	**+1.1**
	comp=Z,3.7nm,0.3s,baz=7.9						
MOA				Sg	**Sg**	**05 14 16.3**	**-2.9**
	comp=Z,22nm,0.4s						
ARSA	**Arzberg**	**4.41**	**186**	*i* Pn	**Pn**	**05 13 22.6**	**+3.3**
	comp=Z,2.3nm,0.3s						
ARSA				Sg	**Sg**	**05 14 32.0**	**-0.7**
	comp=Z,12nm,0.4s						
OBKA	**Obir**	**5.24**	**192**	*e*Sg	**Sg**	**05 14 58.3**	**-1.1**
	comp=Z,15nm,0.7s						
WATA	**Walderalm**	**5.25**	**217**	*e*Pn	**Pn**	**05 13 32.7**	**+1.9**
	comp=Z,2.8nm,0.3s,SNR=8.2						
WTTA	**Wattenberg**	**5.28**	**216**	*i* Pn	**Pn**	**05 13 33.5**	**+2.2**
	comp=Z,2.0nm,0.4s,SNR=5.0						
MOTA	**Moosalm**	**5.42**	**220**	*i* Pn	**Pn**	**05 13 33.7**	**+0.5**
	comp=Z,1.1nm,0.2s						
ABTA	**Abfaltersbach**	**5.45**	**208**	*e*Pn	**Pn**	**05 13 36.0**	**+2.4**
	comp=Z,1.5nm,0.4s						
ABTA				Sg	**Sg**	**05 15 04.7**	**-1.4**
	comp=Z,17nm,0.7s						
SQTA	**Sankt Quirin**	**5.48**	**218**	*i* Pn	**Pn**	**05 13 36.3**	**+2.3**
	comp=Z,3.2nm,0.3s,SNR=4.8						
FETA	**Feichten**	**5.83**	**220**	*e*Pn	**Pn**	**05 13 41.5**	**+2.6**
	comp=Z,0.8nm,0.3s						
FETA				*i* Sg	**Sg**	**05 15 18.8**	**+0.5**
	comp=Z,2.6nm,0.5s						
DAVA	**Damuels**	**5.98**	**226**	*e*Pn	**Pn**	**05 13 41.9**	**+0.9**
	comp=Z,1.3nm,0.3s						
DAVA				Sg	**Sg**	**05 15 23.7**	**+0.6**
	comp=Z,9.9nm,0.7s						
DAVOX	**Davos/Dischmat**	**6.37**	**223**	Pn	**Pn**	**05 13 47.9**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=23,slow=15,SNR=3.0						
DAVOX				Lg	Lg	05 15 34.4	
	comp=Z,0.5nm,0.3s,baz=244,slow=18,SNR=4.3						
CDF	**Champ du Feu**	**6.58**	**244**	*e*Pn	**Pn**	**05 13 49.6**	**+0.5**
CDF	**Champ du Feu**	**6.58**	**244**	*e*Pg	**Pg**	**05 14 14.3**	**-2.7**
CDF				*e*Sn	Sn	05 14 56.4	-8.4
CDF				*e*Sg	**Sg**	**05 15 34.7**	**-7.5**
	comp=Z,11nm,0.6s						
HINF	**Hinteralfeld**	**7.15**	**241**	*e*Pn	**Pn**	**05 13 55.7**	**-1.1**
HINF	**Hinteralfeld**	**7.15**	**241**	*e*Pg	**Pg**	**05 14 24.7**	**-3.2**
HINF				*e*Sg	**Sb**	**05 15 50.6**	**+8.8**
	comp=Z,9.5nm,0.6s						
HAU	**Haudompre**	**7.32**	**244**	*e*Pn	**Pn**	**05 13 59.0**	**-0.2**
HAU	**Haudompre**	**7.32**	**244**	*e*Pg	**Pg**	**05 14 27.5**	**-3.7**
HAU				*e*Sg	Sg	05 15 57.4	-8.6
	comp=Z,1.6nm,0.3s						
GIVF	**Givet**	**7.35**	**262**	*e*Pn	**Pn**	**05 14 00.4**	**+0.9**
PAGF	**Fort de Pagny**	**7.40**	**249**	*e*Pn	**Pn**	**05 13 59.8**	**-0.4**
	baz=72						
PAGF				*e*Sn	Sn	05 15 15.8	-8.9
	comp=Z,2.3nm,0.5s						
BAIF	**Baives**	**7.74**	**263**	*e*Pn	**Pn**	**05 14 05.4**	**+0.5**
MEZF	**Maizieres J'vi**	**7.81**	**251**	*e*Pn	**Pn**	**05 14 05.5**	**-0.4**
SFTF	**Sexfontaines**	**7.97**	**249**	*e*Pn	**Pn**	**05 14 07.5**	**-0.5**
SFTF	**Sexfontaines**	**7.97**	**249**	*e*Pg	**Pg**	**05 14 40.4**	**-3.1**
AKASG	**Malin Array Be**	**8.26**	**91**	Pn	**Pn**	**05 14 11.4**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=281,slow=12,SNR=5.7						
AKASG				Sn	**Sn**	**05 15 43.7**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=286,slow=22,SNR=4.2						
AKASG				Lg	Lg	05 16 39.4	
	comp=Z,0.2nm,0.3s,baz=274,slow=30,SNR=1.3						
CABF	**La Chapelle**	**8.31**	**237**	*e*Pn	**Pn**	**05 14 11.6**	**-1.2**
CABF	**La Chapelle**	**8.31**	**237**	*e*Pg	Pg	05 14 45.9	-4.2
CABF				*e*Sn	Sn	05 15 36.9	-10
CABF				*e*Sg	Sg	05 16 27.7	-10
	comp=Z,1.7nm,0

n266,σ1ꝝ01/322, mb3.5/7, MS2.7/5, 34C-30D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.25**	**207**	P	**Pg**	**05 44 28.6**	**+0.4**
GADA				S	**Sb**	**05 44 32.9**	**+1.2**
	8μm,0.6s						
GADA	**Gvkgeada**	**0.25**	**207**	PG	**Pb**	**05 44 28.7**	**-0.7**
GADA				SG	**Sb**	**05 44 33.1**	**+1.4**
GELI	**Tayfur-Gelibol**	**0.33**	**92**	PG	**Pg**	**05 44 29.3**	**-0.4**
GELI				SG	**Sg**	**05 44 34.2**	**+0.1**
ENEZ	**Enez**	**0.33**	**14**	P	**Pg**	**05 44 29.6**	**-0.2**
ENEZ				S	**Sg**	**05 44 34.6**	**+0.3**
	35μm,0.5s						
ENEZ	**Enez**	**0.33**	**14**	PG	**Pg**	**05 44 29.7**	**-0.1**
ENEZ				SG	**Sg**	**05 44 34.8**	**+0.5**
SMTH	**Samothraki Isl**	**0.40**	**279**	P	**Pg**	**05 44 30.8**	**-0.1**
SMTH				S	**Sg**	**05 44 36.6**	**+0.4**
	13μm,0.2s						
SMTH	**Samothraki Isl**	**0.40**	**279**	P	**Pg**	**05 44 30.8**	**-0.1**
SMTH				S	**Sg**	**05 44 36.6**	**+0.4**
SMTH				AML	AML	05 44 37.8	
	comp=N,30284μm,0.4s						
SMTH				AML	AML	05 44 38.4	
	comp=E,25834μm,0.2s						
ERIK	**Erikli-Kesan**	**0.44**	**54**	PG	**Pg**	**05 44 31.2**	**-0.5**
ERIK				SG	**Sg**	**05 44 37.2**	**-0.4**
LPK	**Lapseki**	**0.55**	**94**	PG	**Pg**	**05 44 33.4**	**-0.4**
BOZC	**Bozcaada**	**0.57**	**179**	PG	**Pg**	**05 44 33.9**	**-0.2**
BOZC				SG	**Sb**	**05 44 42.2**	**-0.8**
BOZC	**Bozcaada**	**0.57**	**179**	*i* P	**Pg**	**05 44 34.0**	**-0.2**
BOZC				*i* P	**Pg**	**05 44 34.0**	**-0.2**
BOZC				*i* S	**Sg**	**05 44 40.8**	**-0.9**
BOZC				IAML		05 44 43.0	
	comp=N,2μm,0.7s						
BOZC				IAML		05 44 43.0	
	comp=E,6μm,0.5s						
BOZC				IAML		05 44 43.0	
	comp=N,3μm,0.7s						
BOZC				IAML		05 44 43.0	
	comp=E,6μm,0.5s						
EZN	**Ezine**	**0.62**	**160**	P	**Pg**	**05 44 34.6**	**-0.6**
EZN				S	**Sb**	**05 44 44.2**	**-0.4**
EZN	**Ezine**	**0.62**	**160**	PG	**Pg**	**05 44 34.7**	**-0.5**
KESN	**Edirne-Kesan**	**0.64**	**49**	*i* P	**Pg**	**05 44 34.2**	**-1.3**
KESN				IAML		05 44 47.0	
	comp=E,3μm,0.7s						
KESN				IAML		05 44 49.0	
	comp=N,5μm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.77**	**150**	*i* P	**Pg**	**05 44 37.6**	**-0.4**
BAYC				*i* S	**Sg**	**05 44 47.5**	**-0.7**
BAYC				IAML		05 44 51.0	
	comp=N,1μm,0.2s						
RDO	**Rodhopi**	**0.83**	**333**	P	**Pg**	**05 44 38.3**	**-0.7**
RDO				S	**Sb**	**05 44 50.5**	**0.0**
	comp=N,4μm,0.3s						
RDO	**Rodhopi**	**0.83**	**333**	P	**Pg**	**05 44 38.4**	**-0.6**
RDO				S	**Sg**	**05 44 50.3**	**+0.4**
RDO				AML	AML	05 44 54.0	
	comp=E,9060μm,0.4s						
RDO				AML	AML	05 44 55.4	
	comp=N,8066μm,0.3s						
RDO	**Rodhopi**	**0.83**	**333**	PG	**Pg**	**05 44 38.7**	**-0.3**
LIA	**Limnos Island**	**0.84**	**232**	P	**Pg**	**05 44 39.1**	**0.0**
LIA				S	**Sb**	**05 44 51.4**	**+0.7**
	comp=N,4μm,0.4s						
LIA	**Limnos Island**	**0.84**	**232**	P	**Pg**	**05 44 39.1**	**0.0**
LIA				S	**Sb**	**05 44 51.3**	**+0.7**
LIA				AML	AML	05 44 53.1	
	comp=N,9283μm,0.4s						
LIA				AML	AML	05 45 01.2	
	comp=E,8001μm,0.7s						
UKOP	**Uzunkopru-Edir**	**0.84**	**32**	PG	**Pg**	**05 44 38.9**	**-0.4**
RKY	**Sarkoy-Tekirda**	**0.91**	**72**	PG	**Pg**	**05 44 38.7**	**-1.8**
KRBG	**Karabiga-Canak**	**0.96**	**91**	PG	**Pb**	**05 44 40.3**	**-1.3**
THAS	**Thassos island**	**1.03**	**281**	P	**Pb**	**05 44 42.0**	**-0.8**
THAS				S	**Sn**	**05 44 57.7**	**+0.1**
	comp=E,3μm,0.3s						
THAS	**Thassos island**	**1.03**	**281**	P	**Pb**	**05 44 42.1**	**-0.6**
THAS				S	**Sb**	**05 44 54.4**	**-1.8**
THAS				AML	AML	05 44 59.4	
	comp=N,6506μm,0.3s						
THAS				AML	AML	05 44 59.6	
	comp=E,5691μm,0.3s						
KNL	**Balıkesir**	**1.14**	**97**	*i* P	**Pb**	**05 44 43.8**	**-0.9**
KNL				*i* S	**Sg**	**05 44 59.3**	**-0.6**
PRK	**Paraskevi**	**1.18**	**171**	P	**Pg**	**05 44 45.9**	**+0.3**
PRK	**Paraskevi**	**1.18**	**171**	P	**Pg**	**05 44 46.0**	**+0.3**
PRK				S	**Sn**	**05 45 01.0**	**-0.3**
PRK				AML	AML	05 45 04.2	
	comp=E,19198μm,0.7s						
PRK				AML	AML	05 45 05.2	
	comp=N,32235μm,0.9s						
EFSA	**Agios Efstrati**	**1.19**	**223**	P	**Pb**	**05 44 45.4**	**-0.1**
EFSA				S	**Sg**	**05 45 01.6**	**+0.2**
EFSA				AML	AML	05 45 03.3	
	comp=N,16655μm,0.5s						
EFSA				AML	AML	05 45 09.9	
	comp=E,8481μm,0.6s						
SIGR	**SIGRI**	**1.21**	**187**	P	**Pn**	**05 44 44.9**	**-0.8**
SIGR	**SIGRI**	**1.21**	**187**	P	**Pn**	**05 44 45.2**	**-0.6**
SIGR				S	**Sg**	**05 45 02.4**	**+0.4**
SIGR				AML	AML	05 45 03.0	
	comp=N,10809μm,0.6s						
SIGR				AML	AML	05 45 08.1	
	comp=E,5038μm,0.6s						
SIGR	**SIGRI**	**1.21**	**187**	PN	**Pn**	**05 44 45.1**	**-0.6**
SIGR				SN	**Sg**	**05 45 02.3**	**+0.4**
AYVA	**Ayvalik**	**1.21**	**155**	*i* P	**Pb**	**05 44 45.6**	**-0.3**
AYVA				*i* S	**Sb**	**05 45 01.2**	**-0.3**
TKR	**Tekirdag**	**1.27**	**63**	PN	**Pn**	**05 44 46.1**	**-0.5**
KAVA	**Kavala**	**1.30**	**297**	P	**Pn**	**05 44 46.4**	**-0.6**
KAVA				S	**Sb**	**05 45 03.7**	**-0.4**
KAVA	**Kavala**	**1.30**	**297**	P	**Pn**	**05 44 46.7**	**-0.3**
KAVA				S	**Sb**	**05 45 02.4**	**-1.6**
KAVA				AML	AML	05 45 08.1	
	comp=E,2324μm,0.7s						
KAVA				AML	AML	05 45 09.9	
	comp=N,2847μm,0.4s						
GONE	**Gonen-Balikesi**	**1.31**	**106**	PN	**Pn**	**05 44 46.7**	**-0.4**
KDZ	**Kurdzhali**	**1.32**	**339**	P	**Pn**	**05 44 47.0**	**-0.4**
KDZ	**Kurdzhali**	**1.32**	**339**	PN	**Pn**	**05 44 47.2**	**-0.2**
KVLA	**Kavala**	**1.36**	**293**	P	**Pn**	**05 44 47.5**	**-0.4**
KVLA				S	**Sn**	**05 45 05.2**	**-0.8**
KVLA				AML	AML	05 45 09.8	
	comp=E,2935μm,0.5s						
KVLA				AML	AML	05 45 10.0	
	comp=N,4697μm,0.4s						
BALY	**Balya**	**1.38**	**119**	*i* P	**Pb**	**05 44 48.6**	**-0.3**
BALY				*i* S	**Sb**	**05 45 06.4**	**-0.1**
EDC	**Edincik**	**1.39**	**92**	PN	**Pn**	**05 44 47.9**	**-0.4**
CRLT	**Corlu**	**1.47**	**60**	PN	**Pn**	**05 44 49.1**	**-0.3**
DKL	**Dikili**	**1.50**	**153**	PN	**Pn**	**05 44 49.6**	**-0.1**
EDRB	**Edirne**	**1.53**	**20**	P	**Pn**	**05 44 49.0**	**-1.2**
EDRB	**Edirne**	**1.53**	**20**	PN	**Pn**	**05 44 49.7**	**-0.5**
OUR	**Ouranopolis**	**1.58**	**268**	P	**Pn**	**05 44 49.8**	**-1.0**
OUR	**Ouranopolis**	**1.58**	**268**	P	**Pn**	**05 44 49.9**	**-0.9**
OUR				S	**Sn**	**05 45 09.6**	**-1.5**
OUR	**Ouranopolis**	**1.58**	**268**	PN	**Pn**	**05 44 50.2**	**-0.6**
BOTS	**Marmara Eregli**	**1.58**	**68**	PN	**Pn**	**05 44 50.8**	**-0.1**
KIRK	**Kırklareli**	**1.58**	**30**	*i* P	**Pn**	**05 44 49.7**	**-1.2**
BALB	**Balikesir**	**1.61**	**118**	PN	**Pn**	**05 44 51.1**	**-0.1**
RZN	**Rozhen**	**1.62**	**322**	*i* P	**Pn**	**05 44 51.5**	**-0.1**
ZEDA	**zmir-Bergama**	**1.65**	**151**	*i* P	**Pn**	**05 44 52.1**	**+0.3**
ZEDA				*i* S	**Sg**	**05 45 14.6**	**-1.4**
STEP	**BALIKESIR_Sava**	**1.65**	**128**	*i* P	**Pb**	**05 44 52.9**	**-0.6**
STEP				*i* S	**Sb**	**05 45 13.3**	**-1.0**
PHSR	**Pinarhisar**	**1.65**	**42**	PN	**Pn**	**05 44 51.5**	**-0.4**
DIM	**Dimitrovgrad**	**1.68**	**347**	P	**Pn**	**05 44 52.1**	**-0.2**
KCTX	**Karacabey (Bur**	**1.77**	**94**	PN	**Pn**	**05 44 53.1**	**-0.5**
SLVT	**Silivri**	**1.84**	**63**	PN	**Pn**	**05 44 54.6**	**+0.2**
PAIG	**Paliouri**	**1.88**	**256**	P	**Pn**	**05 44 54.0**	**-1.0**
PAIG	**Paliouri**	**1.88**	**256**	P	**Pn**	**05 44 53.9**	**-1.0**
PAIG				AML	AML	05 45 28.0	
	comp=E,945μm,0.5s						
PAIG				AML	AML	05 45 32.7	
	comp=N,1630μm,0.9s						
PSRA	**Psara**	**1.90**	**191**	P	**Pn**	**05 44 55.8**	**+0.5**
SKY	**Skiros Island**	**1.92**	**217**	P	**Pn**	**05 44 54.7**	**-0.8**
SKY	**Skiros Island**	**1.92**	**217**	P	**Pn**	**05 44 54.7**	**-0.8**
SKY				AML	AML	05 45 27.8	
	comp=E,2893μm,0.6s						
SKY				AML	AML	05 45 35.3	
	comp=N,2457μm,0.6s						

ELBA	**Catalca**	**1.96**	**67**	*i* P	**Pn**	**05 44 55.0**	**-1.1**
PLD	**Plovdiv**	**1.97**	**330**	P	**Pn**	**05 44 56.6**	**+0.4**
PLD	**Plovdiv**	**1.97**	**330**	PN	**Pn**	**05 44 56.6**	**+0.4**
PLG	**Polygyros**	**1.98**	**270**	P	**Pn**	**05 44 55.8**	**-0.7**
PLG	**Polygyros**	**1.98**	**270**	P	**Pn**	**05 44 56.1**	**-0.4**
PLG				AML	AML	05 45 28.7	
	comp=E,1864μm,0.3s						
PLG				AML	AML	05 45 29.3	
	comp=N,2534μm,0.5s						
SRS	**Serrai**	**1.99**	**292**	P	**Pn**	**05 44 56.0**	**-0.5**
SRS	**Serrai**	**1.99**	**292**	P	**Pn**	**05 44 56.2**	**-0.4**
SRS				AML	AML	05 45 30.4	
	comp=E,2367μm,0.4s						
SRS				AML	AML	05 45 30.4	
	comp=N,1764μm,0.7s						
CTYL	**Yalikoy Yolu**	**2.00**	**57**	PN	**Pn**	**05 44 56.6**	**-0.1**
CHOS	**Chios island**	**2.02**	**180**	P	**Pn**	**05 44 56.7**	**-0.3**
CHOS	**Chios island**	**2.02**	**180**	P	**Pn**	**05 44 56.5**	**-0.5**
CHOS				AML	AML	05 45 32.8	
	comp=N,2172μm,0.6s						
CHOS				AML	AML	05 45 35.5	
	comp=E,3162μm,0.6s						
CHOS	**Chios island**	**2.02**	**180**	PN	**Pn**	**05 44 56.9**	**-0.1**
DURS	**Dursunbey**	**2.04**	**113**	*i* P	**Pn**	**05 44 57.8**	**+0.6**
DURS				*i* S	**Sn**	**05 45 22.8**	**+0.2**
CTKS	**Kestanelik-??a**	**2.04**	**65**	PN	**Pn**	**05 44 57.2**	**0.0**
AKS	**Akhisar**	**2.05**	**138**	PN	**Pn**	**05 44 57.2**	**-0.2**
AKHS	**Akhisar**	**2.05**	**138**	*i* P	**Pn**	**05 44 57.7**	**+0.3**
AOS	**Alonnisos**	**2.08**	**234**	P	**Pn**	**05 44 56.7**	**-1.0**
AOS	**Alonnisos**	**2.08**	**234**	P	**Pn**	**05 44 56.4**	**-1.3**
AOS	**Alonnisos**	**2.08**	**234**	PN	**Pn**	**05 44 58.1**	**+0.4**
SOH	**Sokhos**	**2.09**	**282**	P	**Pn**	**05 44 57.5**	**-0.4**
URLA	**Izmir**	**2.09**	**168**	PN	**Pn**	**05 44 57.9**	**-0.1**
URLA	**Izmir**	**2.09**	**168**	*i* P	**Pn**	**05 44 57.9**	**-0.1**
MMB	**Musomiste**	**2.11**	**305**	*i* P	**Pn**	**05 44 57.9**	**-0.3**
AVCI	**Avcilar-stanb**	**2.12**	**73**	PN	**Pn**	**05 44 58.3**	**0.0**
DST	**Dursunbey**	**2.14**	**111**	PN	**Pn**	**05 44 58.1**	**-0.5**
ARMT	**Armutlu**	**2.15**	**85**	PN	**Pn**	**05 44 59.2**	**+0.4**
BLCB	**Balcova**	**2.17**	**159**	P	**Pn**	**05 44 59.5**	**+0.6**
BLCB	**Balcova**	**2.17**	**159**	PN	**Pn**	**05 44 59.7**	**+0.8**
MDNY	**Mudanya-Bursa**	**2.17**	**90**	PN	**Pn**	**05 44 59.0**	**0.0**
HVHR	**Bakirkoy-Istan**	**2.20**	**74**	PN	**Pn**	**05 44 59.4**	**0.0**
BGKT	**Bogazkoy**	**2.21**	**69**	PN	**Pn**	**05 44 59.3**	**-0.2**
ORLT	**Orhaneli**	**2.21**	**99**	PN	**Pn**	**05 44 59.8**	**+0.2**
GOMA	**Golmarmara-Man**	**2.23**	**139**	PN	**Pn**	**05 44 59.2**	**-0.7**
HORT	**Hortiatis**	**2.25**	**276**	P	**Pn**	**05 44 59.8**	**-0.3**
HORT	**Hortiatis**	**2.25**	**276**	P	**Pn**	**05 44 59.9**	**-0.3**
HORT				AML	AML	05 45 40.6	
	comp=E,884μm,0.6s						
HORT				AML	AML	05 45 42.3	
	comp=N,1068μm,0.9s						
HORT	**Hortiatis**	**2.25**	**276**	PN	**Pn**	**05 45 00.5**	**+0.3**
SKIA	**Skiathos**	**2.34**	**239**	P	**Pn**	**05 45 00.0**	**-1.4**
SKIA	**Skiathos**	**2.34**	**239**	P	**Pn**	**05 45 00.0**	**-1.4**
SKIA				AML	AML	05 45 42.0	
	comp=E,2075μm,0.8s						
SKIA				AML	AML	05 45 50.3	
	comp=N,1984μm,0.7s						
BUY	**Buyukada**	**2.38**	**78**	*i* P	**Pn**	**05 45 00.8**	**-1.1**
ULDT	**Uludag**	**2.38**	**96**	*i* P	**Pn**	**05 45 01.9**	**-0.1**
ISK	**Istanbul-Kandi**	**2.38**	**73**	P	**Pn**	**05 45 01.1**	**-0.8**
ISK	**Istanbul-Kandi**	**2.38**	**73**	PN	**Pn**	**05 45 01.4**	**-0.5**
KAVV	**Kandilli-Istan**	**2.38**	**73**	PN	**Pn**	**05 45 01.7**	**-0.2**
GEMT	**Gemlik**	**2.40**	**88**	PN	**Pn**	**05 45 02.7**	**+0.5**
IGD	**Bursa**	**2.42**	**92**	*i* P	**Pn**	**05 45 02.2**	**-0.2**
IGD				*i* S	**Sn**	**05 45 31.5**	**-0.5**
KLYT	**Kilyos**	**2.42**	**69**	PN	**Pn**	**05 45 02.1**	**-0.4**
XOR	**Xorichti**	**2.43**	**245**	P	**Pn**	**05 45 01.3**	**-1.3**
XOR	**Xorichti**	**2.43**	**245**	P	**Pn**	**05 45 01.4**	**-1.2**
NEO	**Neokhori**	**2.44**	**244**	P	**Pn**	**05 45 01.5**	**-1.2**
NEO	**Neokhori**	**2.44**	**244**	P	**Pn**	**05 45 01.7**	**-0.9**
NEO				AML	AML	05 45 56.2	
	comp=E,603μm,0.7s						
NEO				AML	AML	05 45 59.1	
	comp=N,635μm,0.7s						
DGB	**zmir**	**2.44**	**164**	*i* P	**Pn**	**05 45 02.5**	**-0.3**
DEMI	**Demirci**	**2.47**	**123**	*i* P	**Pn**	**05 45 04.2**	**+1.0**
KNT	**Kendrikon**	**2.50**	**288**	P	**Pn**	**05 45 03.8**	**+0.2**
KNT	**Kendrikon**	**2.50**	**288**	P	**Pn**	**05 45 03.5**	**-0.1**
KNT				AML	AML	05 45 45.6	
	comp=N,1225μm,0.6s						
KNT				AML	AML	05 45 47.7	
	comp=E,702μm,0.5s						
KNT	**Kendrikon**	**2.50**	**288**	PN	**Pn**	**05 45 03.9**	**+0.3**
ELND	**Elena**	**2.52**	**357**	⇑P	**Pn**	**05 45 03.7**	**-0.1**
ELND				⇓S	**Sn**	**05 45 36.7**	**+2.3**
YLV	**Yalova**	**2.54**	**85**	PN	**Pn**	**05 45 04.7**	**+0.5**
MRKA	**Markates**	**2.55**	**229**	P	**Pn**	**05 45 03.5**	**-0.8**
MRKA				AML	AML	05 45 47.2	
	comp=E,1126μm,0.6s						
MRKA				AML	AML	05 45 55.4	
	comp=N,1412μm,0.7s						
YLVH	**Yalova**	**2.55**	**83**	PN	**Pn**	**05 45 04.5**	**+0.3**
PGB	**Panagyurishte**	**2.56**	**327**	P	**Pn**	**05 45 04.1**	**-0.3**
SIMA	**Simav-Kutahya**	**2.63**	**119**	PN	**Pn**	**05 45 05.4**	**+0.1**
KKB	**Krupnik**	**2.67**	**304**	P	**Pn**	**05 45 06.0**	**+0.2**
KARY	**Karystos**	**2.68**	**208**	P	**Pn**	**05 45 05.2**	**-0.8**
MANT	**Manisa**	**2.73**	**134**	*i* P	**Pn**	**05 45 07.7**	**+0.7**
SMG	**Samos**	**2.77**	**167**	P	**Pn**	**05 45 07.1**	**-0.1**
KULA	**Kula-Manisa**	**2.77**	**132**	P	**Pn**	**05 45 07.6**	**+0.2**
VAY	**Valandovo**	**2.79**	**290**	*e*Pn	**Pn**	**05 45 07.7**	**+0.3**
VAY				*e*Sn	**Sn**	**05 45 42.9**	**+1.9**
VAY	**Valandovo**	**2.79**	**290**	*e*Pn	**Pg**	**05 45 15.8**	**-0.6**
VAY	**Valandovo**	**2.79**	**290**	*e*Pn	**Pg**	**05 45 15.8**	**-0.6**
DION	**Dionisos Attik**	**2.85**	**216**	P	**Pn**	**05 45 07.6**	**-0.7**
SZH	**Strazhica**	**2.85**	**358**	*i* P	**Pn**	**05 45 08.9**	**+0.5**
GCAM	**G?zelcaml?**	**2.86**	**161**	PN	**Pn**	**05 45 08.7**	**+0.2**
GCAM	**G?zelcaml?**	**2.86**	**161**	P	**Pn**	**05 45 08.2**	**-0.3**
PTL	**Penteli**	**2.90**	**216**	P	**Pn**	**05 45 08.3**	**-0.8**
PTL				AML	AML	05 45 59.4	
	comp=N,515μm,0.6s						
PTL				AML	AML	05 46 05.0	
	comp=E,532μm,0.9s						
LKR	**Lokris**	**2.94**	**234**	P	**Pn**	**05 45 08.4**	**-1.2**
GDZ	**Gediz**	**2.96**	**115**	*i* P	**Pn**	**05 45 11.1**	**+1.1**
PRD	**Provadia**	**2.96**	**20**	P	**Pn**	**05 45 09.3**	**-0.6**
VTS	**Vitosha**	**3.05**	**317**	*e*Pn	**Pn**	**05 45 12.0**	**+0.8**
VTS				*e*Sn	**Sb**	**05 45 52.2**	**-2.4**
VTS	**Vitosha**	**3.05**	**317**	⇑P	**Pn**	**05 45 10.0**	**-1.2**
VTS	**Vitosha**	**3.05**	**317**	P	**Pn**	**05 45 12.1**	**+0.8**
VIL2	**Platees**	**3.08**	**225**	P	**Pn**	**05 45 10.7**	**-0.8**
VIL2				AML	AML	05 46 06.0	
	comp=N,604μm,0.8s						
VIL2				AML	AML	05 46 13.1	
	comp=E,999μm,0.8s						
AYDN	**Tasoluk**	**3.10**	**152**	*i* P	**Pn**	**05 45 12.1**	**+0.4**
PLVB	**Pleven**	**3.16**	**341**	⇓P	**Pn**	**05 45 12.7**	**+0.2**
RAZG	**Razgrad**	**3.17**	**6**	⇓P	**Pn**	**05 45 13.2**	**+0.5**
AGG	**Agios Georgios**	**3.18**	**245**	P	**Pn**	**05 45 12.4**	**-0.5**
AGG				AML	AML	05 46 17.8	
	comp=E,246μm,1.0s						
AGG				AML	AML	05 46 18.5	
	comp=N,318μm,1.3s						
THL	**Klokotos Trika**	**3.21**	**256**	P	**Pn**	**05 45 13.0**	**-0.3**
KAND	**Kocaeli-Kandir**	**3.22**	**76**	*i* P	**Pn**	**05 45 13.5**	**0.0**
MAKR	**Makrakomi, Fth**	**3.33**	**246**	P	**Pn**	**05 45 13.9**	**-1.0**
KHAL	**Karahalli**	**3.36**	**126**	*i* P	**Pn**	**05 45 16.4**	**+0.9**
APE	**Apeiranthos**	**3.36**	**187**	P	**Pn**	**05 45 14.7**	**-0.8**
APE	**Apeiranthos**	**3.36**	**187**	⇑P	**Pn**	**05 45 15.1**	**-0.4**
LTK	**Loutraki**	**3.38**	**226**	P	**Pn**	**05 45 15.2**	**-0.4**
BOSS	**Bosilegrad**	**3.39**	**309**	*e*Pn	**Pn**	**05 45 17.0**	**+1.2**
BOSS				*e*Sn	**Sn**	**05 46 00.2**	**+4.2**
MPEP	**Malo Peshtene**	**3.41**	**330**	P	**Pn**	**05 45 16.5**	**+0.5**
BORA	**Eskisehir**	**3.42**	**98**	*i* P	**Pn**	**05 45 16.8**	**+0.5**
SERI	**Serifos**	**3.47**	**201**	P	**Pn**	**05 45 16.5**	**-0.3**
BDRM	**Kayabasi**	**3.52**	**161**	*i* P	**Pn**	**05 45 17.7**	**+0.2**
SRCK	**Saricakaya, Es**	**3.53**	**95**	*i* P	**Pn**	**05 45 18.8**	**+1.1**
FNA	**Florina**	**3.57**	**277**	*e*Pn	**Pn**	**05 45 19.1**	**+0.8**
DID	**Didima**	**3.63**	**218**	P	**Pn**	**05 45 18.6**	**-0.6**
AUKIR	**Kırka- Seyitga**	**3.64**	**107**	*i* P	**Pn**	**05 45 20.4**	**+1.1**
AFYO	**Afyonkarahisar**	**3.67**	**115**	*i* P	**Pn**	**05 45 21.1**	**+1.4**
SERG	**Sergoula**	**3.68**	**238**	P	**Pn**	**05 45 19.5**	**-0.2**
TAVA	**DENIZLI_Tavas**	**3.70**	**142**	*i* P	**Pn**	**05 45 20.8**	**+0.7**
COPA	**Copaceanca**	**3.77**	**351**	⇑P	**Sn**	**05 46 03.8**	**-1.5**
VLAD	**Vladila**	**3.79**	**342**	⇓P	**Pn**	**05 45 21.5**	**+0.3**
SGRR	**Singureni**	**3.81**	**359**	⇑P	**Pn**	**05 45 22.2**	**+0.7**
ZAPS	**Zavoj**	**3.83**	**319**	*e*Pn	**Pn**	**05 45 23.6**	**+1.8**
ZAPS				*e*Sn	**Sb**	**05 46 12.0**	**-4.9**
KZIL	**AFYON_Kizioren**	**3.84**	**123**	*i* P	**Pn**	**05 45 24.0**	**+1.9**
KLV	**Kalavryta, Ach**	**3.84**	**233**	P	**Pn**	**05 45 21.3**	**-0.7**
DAT	**Datca**	**3.87**	**161**	*i* P	**Pn**	**05 45 20.6**	**-1.8**
RASA	**Rasa**	**3.89**	**12**	⇓P	**Pg**	**05 45 38.1**	**+0.6**

MANR	**Mangalia**	**3.89**	**28**	⇑P	**Pn**	**05 45 24.5**	**+1.9**
ICOR	**Ion Corvin**	**3.92**	**19**	⇑P	**Pn**	**05 45 23.7**	**+0.6**
BARS	**Barje**	**3.98**	**309**	*e*Pn	**Pn**	**05 45 24.8**	**+1.0**
BARS	**Barje**	**3.98**	**309**	*e*Pn	**Pb**	**05 45 33.0**	**0.0**
BARS				*e*Sn	**Sn**	**05 46 13.8**	**+3.4**
SANT	**Santorini**	**4.06**	**187**	⇓P	**Pn**	**05 45 24.3**	**-0.7**
TURN	**Turunc**	**4.06**	**150**	*i* P	**Pn**	**05 45 24.5**	**-0.5**
LEHL	**Lehliu**	**4.10**	**8**	⇑P	**Pn**	**05 45 23.8**	**-1.7**
TRIP	**Tripoli**	**4.12**	**227**	P	**Pn**	**05 45 25.7**	**-0.1**
BAIL	**Bailesti**	**4.12**	**332**	⇑P	**Sg**	**05 46 38.1**	**+2.7**
EFOR	**EFORIE**	**4.14**	**27**	⇑P	**Pn**	**05 45 27.6**	**+1.6**
MFTR	**Murfatlar**	**4.16**	**24**	⇓P	**Pn**	**05 45 27.1**	**+0.8**
HUMR	**Humele**	**4.19**	**350**	⇓P	**Pn**	**05 45 26.9**	**+0.2**
AMRR	**Amara**	**4.30**	**12**	⇑P	**Pg**	**05 45 46.1**	**+0.7**
TLBR	**Topalu**	**4.39**	**19**	⇓P	**Pn**	**05 45 29.7**	**+0.3**
TIRR	**Tirgusor**	**4.41**	**23**	⇓P	**Pn**	**05 45 29.3**	**-0.4**
ZAGS	**Zajecar**	**4.42**	**321**	*e*Pn	**Pn**	**05 45 29.8**	**-0.2**
ZAGS				*e*Sn	**Sn**	**05 46 26.3**	**+4.9**
KIBS	**BOLU**	**4.43**	**88**	*i* P	**Pn**	**05 45 30.1**	**-0.1**
FETY	**Fethiye**	**4.46**	**147**	*i* P	**Pn**	**05 45 32.1**	**+1.6**
PUNG	**Punghina**	**4.50**	**330**	⇓P	**Pb**	**05 45 38.9**	**-3.0**
BOVS	**Bovan**	**4.56**	**316**	*e*Pn	**Pn**	**05 45 32.8**	**+1.0**
SELS	**Selova**	**4.63**	**309**	*e*Pn	**Pn**	**05 45 32.7**	**-0.1**
SELS				*e*Sn	**Sn**	**05 46 30.6**	**+4.2**
ISR	**Istrita**	**4.72**	**4**	⇓P	**Pn**	**05 45 35.5**	**+1.4**
SRE	**Strehaia**	**4.74**	**335**	⇑P	**Pn**	**05 45 34.6**	**+0.3**
TOPG	**Topolog**	**4.78**	**20**	⇓P	**Pn**	**05 45 35.3**	**+0.4**
JURR	**Jurilovca**	**4.83**	**25**	⇓P	**Pg**	**05 45 55.1**	**-0.4**
CFR	**Carcaliu**	**5.01**	**17**	⇑P	**Pn**	**05 45 37.7**	**-0.2**
ARR	**Arges**	**5.06**	**349**	⇑P	**Pn**	**05 45 38.9**	**+0.1**
PVY	**Plav**	**5.06**	**297**	⇓*i*Pn	**Pn**	**05 45 39.1**	**+0.2**
PVY				*i* Sn	**Sn**	**05 46 37.0**	**-0.3**
MLR	**Muntele Rosu**	**5.08**	**359**	Pn	**Pn**	**05 45 40.1**	**+1.0**
	comp=N,5.1nm,0.3s,baz=204,slow=3.3,SNR=50						
MLR				Sn	**Sn**	**05 46 40.2**	**+2.5**
	comp=N,2.6nm,0.3s,baz=247,slow=13,SNR=4.3						
MLR				Lg	Lg	05 47 06.7	
	comp=N,2.9nm,0.3s,baz=246,slow=19,SNR=8.0						
MLR				LR	LR	05 47 21.1	
	comp=N,28nm,21.6s,baz=119,slow=35						
MLR	**Muntele Rosu**	**5.08**	**359**	⇓P	**Pn**	**05 45 39.7**	**+0.7**
KUBS	**Kucevo**	**5.14**	**322**	*e*Pn	**Pn**	**05 45 38.9**	**-0.9**
BISRR	**Bisoca**	**5.16**	**5**	⇓P	**Pn**	**05 45 41.7**	**+1.6**
TLCR		**5.19**	**22**	⇓P	**Pn**	**05 45 40.8**	**+0.4**
IDI	**Anoyia**	**5.20**	**190**	Pn	**Pn**	**05 45 40.2**	**-0.5**
	comp=N,0.1nm,0.3s,baz=34

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRG	**Fergana**	**0.60**	**264**	*i* P	**Pn**	**06 23 07.9**	**+2.9**
FRG				*i* S	**Sn**	**06 23 19.5**	**+4.4**
ARSB	**Arslanbob**	**0.61**	**31**	⇑*i*P	**Pg**	**06 23 00.7**	**-0.9**
	baz=25						
ARSB				⇑*i*S	**Sg**	**06 23 08.1**	**-1.5**
	baz=25						
CHMI	**Chimion**	**0.96**	**237**	*e*P	**Pn**	**06 23 12.5**	**+2.6**
CHMI				*e*S	**Sn**	**06 23 29.6**	**+5.6**
ARK	**Arkit**	**1.10**	**336**	⇑*i*P	**Pg**	**06 23 11.2**	**+0.3**
	baz=30						
ARK				⇑*i*S	**Sg**	**06 23 25.7**	**+0.6**
	baz=30						
ARK	**Arkit**	**1.10**	**336**	*e*P	**Pg**	**06 23 10.9**	**0.0**
ARK				*e*S	**Sn**	**06 23 29.8**	**+2.2**
BTK	**Batken**	**1.53**	**242**	⇑*i*P	**Pb**	**06 23 20.6**	**+2.0**
	baz=42						
BTK				⇑*i*S	**Sn**	**06 23 43.1**	**+5.0**
	baz=42						
BTK	**Batken**	**1.53**	**242**	*e*P	**Pb**	**06 23 20.6**	**+2.0**
BTK				*i* S	**Sn**	**06 23 43.8**	**+5.7**
AML	**Almayashu**	**1.58**	**32**	⇑*i*P	**Pn**	**06 23 18.2**	**-0.6**
	baz=30						
AML				⇑*i*S	**Sn**	**06 23 38.7**	**-1.1**
	baz=30						
AML	**Almayashu**	**1.58**	**32**	P	**Pn**	**06 23 18.1**	**-0.8**
	SNR=529						
PSK	**Pskem**	**2.00**	**305**	*i* P	**Pg**	**06 23 27.4**	**-0.7**
PSK				*i* S	**Sg**	**06 23 54.7**	**+0.7**
MRKS	**Merke**	**2.01**	**14**	*e*P	**Pn**	**06 23 26.1**	**+1.7**
	70nm,0.1s						
MRKS				*e*S	**Sn**	**06 23 52.9**	**+2.9**
	432nm,0.2s						
MRKS	**Merke**	**2.01**	**14**	Pg	**Pn**	**06 23 26.1**	**+1.7**
	70nm,0.1s						
MRKS				Lg	Lg	06 23 52.9	
	432nm,0.2s						
UCH	**Uchtor**	**2.04**	**45**	⇓*i*P	**Pn**	**06 23 26.5**	**+1.2**
	baz=44						
UCH				⇓*i*S	**Sn**	**06 23 52.6**	**+1.2**
	baz=44						
UCH	**Uchtor**	**2.04**	**45**	P	**Pn**	**06 23 26.3**	**+1.0**
	SNR=627						
EKS2	**Erkin-Say**	**2.07**	**26**	⇑*i*P	**Pn**	**06 23 26.8**	**+1.5**
	baz=24						
EKS2				⇑*i*S	**Sn**	**06 23 53.2**	**+1.6**
	baz=24						
EKS2	**Erkin-Say**	**2.07**	**26**	P	**Pn**	**06 23 26.8**	**+1.5**
	SNR=191						
CHRV	**Charvak**	**2.15**	**294**	*e*P	**Pg**	**06 23 31.9**	**+1.0**
CHRV				*e*S	**Sg**	**06 24 00.7**	**+2.0**
DZA	**Taraz**	**2.29**	**337**	*e*P	**Pb**	**06 23 31.2**	**-0.3**
	58nm,0.1s						
DZA				*e*S	**Sb**	**06 24 01.1**	**+0.9**
	1μm,0.2s						
DZA	**Taraz**	**2.29**	**337**	Pg	**Pb**	**06 23 31.2**	**-0.3**
	58nm,0.1s						
DZA				Lg	Lg	06 24 01.1	
	1μm,0.2s						
IUG	**Iuzhnay**	**2.33**	**306**	*e*P	**Pg**	**06 23 33.8**	**-0.7**
	10nm,0.2s						
IUG				*e*S	**Sg**	**06 24 05.6**	**+0.8**
	1μm,0.4s						
IUG	**Iuzhnay**	**2.33**	**306**	Pg	**Pg**	**06 23 33.8**	**-0.7**
	10nm,0.2s						
IUG				Lg	Lg	06 24 05.6	
	1μm,0.4s						
AAK	**Ala-Archa**	**2.34**	**38**	Pn	**Pn**	**06 23 30.9**	**+1.9**
	68nm,0.3s,baz=172,slow=2.3,SNR=269						
AAK				Lg	Lg	06 24 01.9	
	55nm,0.3s,baz=15,slow=17,SNR=24						
AAK	**Ala-Archa**	**2.34**	**38**	⇑*i*P	**Pn**	**06 23 30.9**	**+1.9**
	baz=36						
AAK				⇑*i*S	**Sn**	**06 23 59.5**	**+1.3**
	baz=36						
AAK	**Ala-Archa**	**2.34**	**38**	P	**Pn**	**06 23 30.9**	**+1.9**
	SNR=284						
KZA	**Kyzart**	**2.39**	**57**	⇓*i*P	**Pn**	**06 23 31.1**	**+1.1**
	baz=57						
KZA				⇓*i*S	**Sn**	**06 24 00.6**	**+0.8**
	baz=57						
KZA	**Kyzart**	**2.39**	**57**	P	**Pn**	**06 23 31.7**	**+1.7**
	SNR=108						
GAR	**Garm**	**2.50**	**225**	⇓*i*P	**Pg**	**06 23 35.4**	**-2.2**
	baz=25						
GAR				⇓*i*S	**Sg**	**06 24 08.1**	**-1.8**
	baz=25						
TAS	**Tashkent**	**2.53**	**283**	⇑*e*P	**Pb**	**06 23 35.5**	**-0.2**
	baz=82						
TAS				⇑*e*S	**Sg**	**06 24 08.3**	**-2.7**
	baz=82						
FRU1	**Bishkek**	**2.53**	**37**	⇓*i*P	**Pn**	**06 23 33.0**	**+1.3**
	baz=36						
FRU1				⇓*i*S	**Sn**	**06 24 03.7**	**+0.8**
	baz=36						
KBK	**Karagaybulak**	**2.57**	**43**	⇑*i*P	**Pn**	**06 23 33.6**	**+1.3**
	baz=42						
KBK				⇑*i*S	**Sn**	**06 24 05.0**	**+0.9**
	baz=42						
KBK	**Karagaybulak**	**2.57**	**43**	P	**Pn**	**06 23 34.6**	**+2.3**
	SNR=9.3						
YNGY	**Yangiyul**	**2.69**	**278**	*e*P	**Pg**	**06 23 42.2**	**+0.9**
YNGY				*e*S	**Sg**	**06 24 18.9**	**+2.7**
CHM	**Chimkent**	**2.69**	**305**	*e*P	**Pg**	**06 23 40.7**	**-0.7**
	52nm,0.1s						
CHM				*e*S	**Sg**	**06 24 17.9**	**+1.6**
	1μm,0.4s						
CHMS	**Chumysh**	**2.74**	**36**	⇑*i*P	**Pn**	**06 23 35.8**	**+1.4**
	baz=35						
CHMS				⇑*i*S	**Sn**	**06 24 08.8**	**+0.9**
	baz=35						
CHMS	**Chumysh**	**2.74**	**36**	P	**Pn**	**06 23 36.4**	**+1.9**
	SNR=24						
KK31	**Karatay Array**	**2.77**	**327**	⇑Pn	**Pn**	**06 23 37.0**	**+2.2**
	33nm,0.5s,baz=134,slow=13,SNR=422						
KK31				⇓Lg	Lg	06 24 12.3	
	92nm,0.4s,baz=138,slow=25,SNR=12						
USP	**Ospenovka**	**2.86**	**30**	⇑*i*P	**Pn**	**06 23 37.7**	**+1.6**
	baz=29						
USP				⇑*i*S	**Sn**	**06 24 11.7**	**+0.8**
	baz=29						
USP	**Ospenovka**	**2.86**	**30**	P	**Pn**	**06 23 37.7**	**+1.6**
	SNR=28						
BRLS	**Borolday**	**3.02**	**318**	*e*P	**Pb**	**06 23 43.1**	**-0.9**
	12nm,0.1s						
BRLS				*e*S	**Sb**	**06 24 21.5**	**+0.2**
	325nm,0.3s						
BRLS	**Borolday**	**3.02**	**318**	Pg	**Pb**	**06 23 43.2**	**-0.9**
	12nm,0.1s						
BRLS				Lg	Lg	06 24 21.5	
	325nm,0.3s						
BOOM	**Boomskoye usch**	**3.04**	**55**	⇑*e*P	**Pn**	**06 23 40.2**	**+1.5**
	baz=55						
BOOM				⇑*i*S	**Sn**	**06 24 16.1**	**+0.5**
	baz=55						
SGDS	**Sogindy**	**3.06**	**29**	Pg	**Pn**	**06 23 41.3**	**+2.3**
	36nm,0.2s						
SGDS				Lg	Lg	06 24 18.3	
	100nm,0.2s						
TKM2	**Tokmak 2**	**3.10**	**46**	⇓*i*P	**Pn**	**06 23 40.7**	**+1.1**
	baz=45						
TKM2				⇓*e*S	**Sn**	**06 24 17.7**	**+0.6**
	baz=45						
TKM2	**Tokmak 2**	**3.10**	**46**	P	**Pn**	**06 23 41.5**	**+1.9**
	SNR=119						
ULHL	**Ulahol**	**3.12**	**61**	⇓*i*P	**Pn**	**06 23 40.8**	**+1.0**
	baz=61						
ULHL				⇓*i*S	**Sn**	**06 24 18.1**	**+0.6**
	baz=61						
ULHL	**Ulahol**	**3.12**	**61**	P	**Pn**	**06 23 41.2**	**+1.5**
	SNR=19						
KST	**Kastek**	**3.38**	**47**	*e*P	**Pb**	**06 23 49.1**	**-1.2**
	20nm,0.3s						
KST				*e*S	**Sb**	**06 24 31.9**	**0.0**
	100nm,0.7s						
CHGR	**Chuyangaron**	**3.39**	**232**	⇑*i*P	**Pb**	**06 23 47.4**	**-3.0**
	baz=32						
CHGR				⇑*i*S	**Sb**	**06 24 29.4**	**-2.5**
	baz=32						
DGS	**Degeres**	**3.42**	**43**	*e*P	**Pb**	**06 23 50.5**	**-0.4**
	28nm,0.4s						
DGS				*e*S	**Sb**	**06 24 34.4**	**+1.7**
	105nm,0.3s						
DGS	**Degeres**	**3.42**	**43**	Pg	**Pb**	**06 23 50.5**	**-0.4**
	28nm,0.4s						
DGS				Lg	Lg	06 24 34.4	
	105nm,0.3s						
KRBS	**Karabastau**	**3.70**	**38**	*e*P	**Pb**	**06 23 55.2**	**-0.6**
	2.9nm,0.2s						
KRBS				*e*S	**Sb**	**06 24 42.3**	**+1.4**
	27nm,0.6s						
KRBS	**Karabastau**	**3.70**	**38**	Pg	**Pb**	**06 23 55.2**	**-0.6**
	2.9nm,0.2s						
KRBS				Lg	Lg	06 24 42.3	
	27nm,0.6s						
MTBS	**Maitube**	**3.70**	**50**	*e*P	**Pb**	**06 23 55.6**	**-0.2**
	3.3nm,0.1s						
MTBS				*e*S	**Sb**	**06 24 43.1**	**+2.1**
	37nm,0.2s						
MTBS	**Maitube**	**3.70**	**50**	Pg	**Pb**	**06 23 55.6**	**-0.2**
	3.3nm,0.1s						
MTBS				Lg	Lg	06 24 43.1	
	37nm,0.2s						
KDJ	**Kajisay**	**3.71**	**68**	⇓*e*P	**Pn**	**06 23 49.5**	**+1.5**
	baz=68						
KDJ				⇓*i*S	**Sn**	**06 24 32.4**	**+0.2**
	baz=68						
IZV	**Izvestkoviy**	**3.76**	**52**	*e*P	**Pb**	**06 23 57.0**	**+0.3**
	11nm,0.3s						
IZV				*e*S	**Sb**	**06 24 45.3**	**+2.7**
	56nm,0.7s						
IZV	**Izvestkoviy**	**3.76**	**52**	Pg	**Pb**	**06 23 57.0**	**+0.3**
	11nm,0.3s						
IZV				Lg	Lg	06 24 45.3	
	56nm,0.7s						
TNSS	**Tian-Shan**	**3.96**	**54**	*e*P	**Pb**	**06 24 01.3**	**+1.0**
	11nm,0.4s						
TNSS				*e*S	**Sb**	**06 24 52.8**	**+4.1**
	40nm,0.4s						
TNSS	**Tian-Shan**	**3.96**	**54**	Pg	**Pb**	**06 24 01.3**	**+1.0**
	11nm,0.4s						
TNSS				Lg	Lg	06 24 52.8	
	40nm,0.4s						
KNDC	**Almaty**	**4.07**	**52**	⇓Pg	**Pb**	**06 24 06.3**	**+4.3**
	47nm,0.7s						
KNDC				⇑Lg	Lg	06 24 56.8	
	185nm,0.9s						
MDOK	**Medeo**	**4.09**	**53**	*e*P	**Pb**	**06 24 02.6**	**+0.2**
	5.6nm,0.2s						
MDOK				*e*S	**Sb**	**06 24 55.2**	**+3.0**
	34nm,0.6s						
MDOK	**Medeo**	**4.09**	**53**	Pn	**Pn**	**06 23 54.5**	**+1.4**
	12nm,1.0s						
MDOK				Pg	**Pb**	**06 24 05.4**	**+3.0**
	17nm,0.5s						
MDOK				Lg	Lg	06 24 55.6	
	42nm,0.6s						
MDOK	**Medeo**	**4.09**	**53**	Pg	**Pb**	**06 24 02.6**	**+0.2**
	5.6nm,0.2s						
MDOK				Lg	Lg	06 24 55.2	
	34nm,0.6s						
KUU	**Kurty**	**4.17**	**41**	*e*P	**Pb**	**06 24 04.7**	**+1.0**
	8.0nm,0.3s						
KUU				*e*S	**Sb**	**06 24 58.7**	**+4.4**
	44nm,0.5s						
KUU	**Kurty**	**4.17**	**41**	Pg	**Pb**	**06 24 04.7**	**+1.0**
	8.0nm,0.3s						
KUU				Lg	Lg	06 24 58.7	
	44nm,0.5s						
KOTS	**Kotyrbulak**	**4.17**	**53**	*e*P	**Pb**	**06 24 04.9**	**+1.2**
	10.0nm,0.2s						
KOTS				*e*S	**Sb**	**06 24 59.3**	**+4.8**
	46nm,0.4s						
KOTS	**Kotyrbulak**	**4.17**	**53**	Pg	**Pb**	**06 24 04.9**	**+1.2**
	10.0nm,0.2s						
KOTS				Lg	Lg	06 24 59.3	
	46nm,0.4s						
KTBS	**Karatobe**	**4.22**	**45**	*e*P	**Pb**	**06 24 04.7**	**+0.2**
	11nm,0.3s						
KTBS				*e*S	**Sb**	**06 24 58.4**	**+2.7**
	104nm,0.6s						
KTBS	**Karatobe**	**4.22**	**45**	Pg	**Pb**	**06 24 04.7**	**+0.2**
	11nm,0.3s						
KTBS				Lg	Lg	06 24 58.4	
	104nm,0.6s						
ANVS	**Anan'yevo**	**4.30**	**61**	⇓*i*P	**Pn**	**06 23 57.5**	**+1.5**
	baz=61						
ANVS				⇓*i*S	**Sn**	**06 24 46.2**	**-0.4**
	baz=61						
CHKK	**Chushkaly**	**4.48**	**46**	*e*P	**Pb**	**06 24 09.7**	**+0.8**
	2.8nm,0.2s						
CHKK				*e*S	**Sb**	**06 25 07.3**	**+4.0**
	34nm,0.4s						
CHKK	**Chushkaly**	**4.48**	**46**	Pg	**Pb**	**06 24 09.7**	**+0.8**
	2.8nm,0.2s						
CHKK				Lg	Lg	06 25 07.3	
	34nm,0.4s						
SATY	**Saty**	**4.91**	**61**	*e*P	**Pb**	**06 24 17.2**	**+0.9**
	10nm,0.4s						
SATY				*e*S	**Sb**	**06 25 20.0**	**+4.4**
	28nm,0.7s						
SATY	**Saty**	**4.91**	**61**	Pg	**Pb**	**06 24 17.2**	**+0.9**
	10nm,0.4s						
SATY				Lg	Lg	06 25 20.0	
	28nm,0.7s						
KURS	**Kuram**	**4.96**	**55**	*e*P	**Pb**	**06 24 18.6**	**+1.5**
	4.7nm,0.4s						
KURS				*e*S	**Sb**	**06 25 22.5**	**+5.5**
	20nm,0.5s						
ZHN	**Zhinishke**	**4.97**	**60**	*e*P	**Pb**	**06 24 18.8**	**+1.4**
	1.6nm,0.1s						
ZHN				*e*S	**Sb**	**06 25 22.7**	**+5.2**
	15nm,0.3s						
ZHN	**Zhinishke**	**4.97**	**60**	Pg	**Pb**	**06 24 18.8**	**+1.4**
	1.6nm,0.1s						
ZHN				Lg	Lg	06 25 22.7	
	15nm,0.3s						
ARXS	**Arharly**	**5.17**	**47**	*e*P	**Pb**	**06 24 22.6**	**+1.8**
	10nm,0.3s						
ARXS				*e*S	**Sb**	**06 25 29.0**	**+5.8**
	43nm,0.5s						
UZB	**Uzynbulak**	**5.35**	**62**	*e*P	**Pb**	**06 24 24.9**	**+1.0**
	6.3nm,0.4s						
UZB				*e*S	**Sb**	**06 25 33.1**	**+4.6**
	18nm,0.6s						
UZB	**Uzynbulak**	**5.35**	**62**	Pg	**Pb**	**06 24 24.9**	**+1.0**
	6.3nm,0.4s						
UZB				Lg	Lg	06 25 33.1	
	18nm,0.6s						
MNBS	**Baschi**	**5.42**	**51**	*e*P	**Pb**	**06 24 26.7**	**+1.7**
	3.2nm,0.3s						
MNBS				*e*S	**Sb**	**06 25 36.6**	**+6.3**
	29nm,0.5s						
MNBS	**Baschi**	**5.42**	**51**	Pg	**Pb**	**06 24 26.7**	**+1.7**
	3.2nm,0.3s						
MNBS				Lg	Lg	06 25 36.6	
	29nm,0.5s						
PDGK	**Podgornoye**	**5.74**	**62**	⇓Pg	Pb	06 24 35.2	+4.8
	6.8nm,0.7s						
PDGK				⇑Lg	Lg	06 25 47.9	
	33nm,0.8s						
CEP	**Cherat**	**6.98**	**185**	P	Pb	06 24 42.1	-10
CEP					S	Sn	06 26 01.0	+8.3
OTUK	**Ortayu**	**7.45**	**359**	⇑Pg	**Pb**	**06 25 00.6**	**+1.2**
	5.5nm,1.1s						
OTUK				⇑Lg	Lg	06 26 38.1	
	74nm,1.0s						
MK31	**Makanchi Array**	**9.23**	**46**	⇑Pn	**Pn**	**06 25 02.3**	**-1.3**
	1.6nm,0.6s,baz=231,slow=8.9,SNR=4.3						
MK31				⇑Lg	Lg	06 27 37.9	
	6.1nm,0.8s						
MKAR	**Makanchi Array**	**9.23**	**46**	Pn	**Pn**	**06 25 03.6**	**0.0**
	0.2nm,0.3s,baz=229,slow=15,SNR=6.1						
MKAR				Lg	Lg	06 27 45.5	
	0.3nm,0.3s,baz=248,slow=26,SNR=3.0						
KURBB	**Kurchatov Arra**	**10.67**	**21**	Pn	**Pn**	**06 25 20.7**	**-2.4**
	0.1nm,0.3s,baz=214,slow=13,SNR=4.5						
KURBB				Lg	Lg	06 28 24.1	
	0.1nm,0.3s,baz=213,slow=29,SNR=8.1						
KURBB	**Kurchatov Arra**	**10.67**	**21**	⇓Pn	**Pn**	**06 25 21.2**	**-2.0**
	1.2nm,0.7s						
KURBB				⇑Lg	Lg	06 28 22.4	
	22nm,0.7s						
GEYT	**Alibeck**	**11.55**	**260**	Pn	**Pn**	**06 25 34.4**	**-1.0**
	0.3nm,0.3s,baz=81,slow=9.2,SNR=2.1						
BVAR	**Borovoye Array**	**12.32**	**354**	Pn	**Pn**	**06 25 44.6**	**-1.2**
	0.1nm,0.3s,baz=158,slow=12,SNR=4.6						
BVAR				Lg	Lg	06 29 21.0	
	0.5nm,0.3s,baz=172,slow=23,SNR=5.6						
AKTO	**Aktyubinsk**	**13.99**	**318**	Pn	**Pn**	**06 26 06.5**	**-2.2**
	0.1nm,0.3s,baz=131,slow=13,SNR=2.6						
ZALV	**Zalesovo Beam**	**15.52**	**28**	Pn	**Pn**	**06 26 28.3**	**-0.9**
	0.4nm,0.3s,baz=223,slow=14,SNR=2.4						
KVAR	**Kislovodsk Arr**	**22.23**	**288**	P	**P**	**06 27 46.0**	**-1.4**
	1.7nm,0.3s,baz=266,slow=19,SNR=1.7						
AKASG	**Malin Array Be**	**31.41**	**303**	P	**P**	**06 29 11.3**	**-0.3**
	1.5nm,0.8s,baz=80,slow=7.6,SNR=4.9						
FINES	**FINESS Array B**	**34.72**	**322**	P	**P**	**06 29 40.4**	**0.0**
	1.1nm,0.6s,baz=111,slow=10,SNR=8.2						
ARCES	**ARCESS Array B**	**37.70**	**335**	P	**P**	**06 30 05.5**	**-0.3**
	2.5nm,0.9s,baz=106,slow=8.5,SNR=3.5						
GERES	**GERESS Array B**	**41.59**	**302**	P	**P**	**06 30 39.2**	**+0.7**
	0.7nm,0.6s,baz=70,slow=7.7,SNR=9.1						
KLR	**Kul'dur**	**41.71**	**58**	LR	LR	06 47 58.0	
	comp=Z,95nm,21.3s,baz=146,slow=36						
NOA	**NORSAR Array B**	**41.78**	**320**	P	**P**	**06 30 39.0**	**-0.8**
	1.4nm,0.7s,baz=92,slow=8.0,SNR=3.9						
TORD	**Torodi Ar. Bea**	**67.08**	**268**	P	**P**	**06 33 43.3**	**-1.1**
	1.2nm,0.5s,baz=43,slow=6.1,SNR=12						
DBIC	**Dimbokro**	**76.15**	**267**	P	**P**	**06 34 38.6**	**-0.6**
	8.3nm,1.1s,baz=134,slow=7.5,SNR=2.6						
YKA	**Yellowknife Ar**	**76.89**	**3**	P	**P**	**06 34 41.4**	**-1.2**
	0.1nm,0.6s,baz=349,slow=5.6,SNR=2.0						
ASAR	**Alice Springs**	**85.75**	**126**	P	**P**	**06 35 27.2**	**-2.9**
	0.5nm,0.7s,baz=323,slow=5.0,SNR=6.4						

ISK ***25*** *06:27:30.2,40.39N×26.13E,h14km,ML2.8/12*
ATH ***25*** *06:27:30.8,40.41N×26.04E,h30km±1km,ML2.7/7, Error ellipse: s-maj=2.3km s-min=1.0km az=268.0*
THE ***25*** *06:27:30.9,40.39N×26.09E,h11km±1km,ML2.6/8, Error ellipse: s-maj=1.7km s-min=0.9km az=47.0*
DDA ***25*** *06:27:30.2,40.36N×26.14E,h15km±4km,ML2.9*

ISC 25 06:27:30.7±0.8,40.39N±0.01×26.12E±0.02,h15km±6km, n75,σ0.89/111,2C-11D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.26**	**221**	P	**Pg**	**06 27 36.2**	**0.0**
GADA				S	**Sg**	**06 27 40.5**	**+0.5**
	1μm,0.3s						
GADA	**Gvkgeada**	**0.26**	**221**	PG	**Pg**	**06 27 36.6**	**+0.4**
GADA				SG	**Sg**	**06 27 41.1**	**+1.1**
GELI	**Tayfur-Gelibol**	**0.27**	**87**	PG	**Pg**	**06 27 36.4**	**0.0**
GELI				SG	**Sg**	**06 27 40.5**	**+0.1**
ENEZ	**Enez**	**0.35**	**4**	P	**Pg**	**06 27 38.0**	**+0.2**
ENEZ				S	**Sg**	**06 27 43.1**	**+0.3**
	1μm,0.3s						
ENEZ	**Enez**	**0.35**	**4**	PG	**Pg**	**06 27 38.1**	**+0.2**
ENEZ				SG	**Sg**	**06 27 43.0**	**+0.3**
ERIK	**Erikli-Kesan**	**0.41**	**46**	PG	**Pg**	**06 27 38.9**	**-0.1**
ERIK				SG	**Sg**	**06 27 44.8**	**+0.2**
SMTH	**Samothraki Isl**	**0.46**	**281**	P	**Pg**	**06 27 39.4**	**-0.4**
SMTH				S	**Sg**	**06 27 46.2**	**+0.2**
	1μm,0.1s						
SMTH	**Samothraki Isl**	**0.46**	**281**	P	**Pg**	**06 27 39.5**	**-0.3**
SMTH				S	**Sg**	**06 27 45.9**	**-0.2**
SMTH				AML	AML	06 27 50.6	
	comp=E,2089μm,0.1s						
SMTH				AML	AML	06 27 51.7	
	comp=N,2056μm,0.1s						
LPK	**Lapseki**	**0.49**	**91**	PG	**Pg**	**06 27 40.5**	**+0.2**
LPK				SG	**Sb**	**06 27 47.3**	**-0.6**
BOZC	**Bozcaada**	**0.55**	**186**	PG	**Pg**	**06 27 41.1**	**-0.3**
BOZC				SG	**Sg**	**06 27 49.2**	**+0.5**
BOZC	**Bozcaada**	**0.55**	**186**	*i* P	**Pg**	**06 27 40.9**	**-0.5**
BOZC				*i* P	**Pg**	**06 27 41.0**	**-0.5**
BOZC				*i* S	**Sg**	**06 27 47.5**	**-1.2**
BOZC				IAML		06 27 48.0	
	comp=E,1μm,1.7s						
EZN	**Ezine**	**0.58**	**164**	P	**Pg**	**06 27 41.7**	**-0.4**
EZN				S	**Sg**	**06 27 49.6**	**-0.2**
EZN	**Ezine**	**0.58**	**164**	PG	**Pg**	**06 27 41.6**	**-0.5**
KESN	**Edirne-Kesan**	**0.61**	**44**	*i* P	**Pg**	**06 27 42.2**	**-0.6**
KESN				*i* S	**Sg**	**06 27 50.0**	**-1.0**
KESN				IAML		06 27 57.0	
	comp=N,681nm,0.2s						
KESN				IAML		06 27 57.0	
	comp=E,984nm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.72**	**153**	*i* P	**Pg**	**06 27 44.4**	**-0.3**
BAYC				*i* S	**Sg**	**06 27 53.1**	**-1.1**
UKOP	**Uzunkopru-Edir**	**0.84**	**27**	PG	**Pb**	**06 27 46.5**	**-0.4**
RKY	**Sarkoy-Tekirda**	**0.86**	**69**	PG	**Pb**	**06 27 45.8**	**-1.5**
SART	**Tekirdag**	**0.86**	**69**	*i* P	**Pb**	**06 27 46.5**	**-0.8**
LIA	**Limnos Island**	**0.87**	**236**	P	**Pb**	**06 27 47.4**	**0.0**
LIA				S	**Sg**	**06 27 59.4**	**+0.5**
	comp=E,418nm,0.2s						
LIA	**Limnos Island**	**0.87**	**236**	P	**Pb**	**06 27 47.4**	**0.0**
LIA				S	**Sb**	**06 27 59.2**	**+0.4**
LIA				AML	AML	06 28 01.4	
	comp=E,919μm,0.5s						
LIA				AML	AML	06 28 04.1	
	comp=N,840μm,0.3s						
RDO	**Rodhopi**	**0.88**	**330**	P	**Pb**	**06 27 47.1**	**-0.5**
RDO				S	**Sg**	**06 27 59.3**	**0.0**
	comp=N,455nm,0.2s						
RDO	**Rodhopi**	**0.88**	**330**	P	**Pb**	**06 27 47.1**	**-0.5**
RDO				S	**Sg**	**06 27 59.5**	**+0.2**
RDO				AML	AML	06 28 03.8	
	comp=N,991μm,0.3s						
RDO				AML	AML	06 28 04.4	
	comp=E,818μm,0.2s						
RDO	**Rodhopi**	**0.88**	**330**	PG	**Pb**	**06 27 47.2**	**-0.4**
KRBG	**Karabiga-Canak**	**0.90**	**89**	PG	**Pb**	**06 27 47.4**	**-0.5**
KNL	**Balıkesir**	**1.08**	**96**	*i* P	**Pb**	**06 27 50.8**	**-0.2**
KNL				*i* S	**Sn**	**06 28 07.2**	**+1.3**
KNL				IAML		06 28 09.0	
	comp=E,266nm,0.4s						
THAS	**Thassos island**	**1.09**	**282**	P	**Pb**	**06 27 50.8**	**-0.4**
THAS				S	**Sb**	**06 28 04.9**	**-0.4**
	comp=E,198nm,0.3s						
THAS	**Thassos island**	**1.09**	**282**	P	**Pb**	**06 27 50.2**	**-1.0**
THAS				S	**Sb**	**06 28 04.3**	**-0.9**
THAS				AML	AML	06 28 07.2	
	comp=N,384μm,0.3s						
THAS				AML	AML	06 28 07.8	
	comp=E,418μm,0.3s						
PRK	**Paraskevi**	**1.14**	**174**	P	**Pg**	**06 27 53.2**	**+0.5**
PRK				S	**Sg**	**06 28 09.5**	**+1.9**
	comp=E,2μm,0.6s						
PRK	**Paraskevi**	**1.14**	**174**	P	**Pg**	**06 27 53.1**	**+0.5**
PRK				S	**Sg**	**06 28 09.3**	**+1.7**
PRK				AML	AML	06 28 10.5	
	comp=E,1888μm,0.4s						
PRK				AML	AML	06 28 11.7	
	comp=N,4304μm,0.9s						
AYVA	**Ayvalik**	**1.16**	**158**	*i* P	**Pn**	**06 27 51.9**	**-0.4**
AYVA				*i* S	**Sn**	**06 28 08.1**	**+0.2**
AYVA				IA

comp=E,107nm,0.4s
STEP IAML 06 28 22.0
comp=N,91nm,0.5s
ZEDA zmir-Bergama 1.60 152 *i* P **Pb 06 27 59.4 -0.4**
ZEDA *i* S **Sb 06 28 20.0 +0.2**
ZEDA IAML 06 28 23.0
comp=N,310nm,0.3s
ZEDA IAML 06 28 23.0
comp=E,181nm,0.5s
OUR Ouranopolis 1.64 269 P **Pn 06 27 58.0 -0.9**
OUR Ouranopolis 1.64 269 P **Pn 06 27 58.2 -0.6**
ELBA Catalca 1.91 66 *i* P **Pn 06 28 02.7 0.0**
ELBA *i* S **Sn 06 28 26.3 -0.2**
DURS Dursunbey 1.97 113 *i* P **Pb 06 28 05.2 -1.1**
DURS *i* S **Sn 06 28 29.1 +1.0**
DURS IAML 06 28 34.0
comp=E,115nm,0.5s
DURS IAML 06 28 35.0
comp=N,78nm,0.4s
CHOS Chios island 2.00 182 P **Pn 06 28 04.6 +0.6**
URLA Izmir 2.06 170 *i* P **Pn 06 28 05.0 +0.3**
URLA *i* S **Sn 06 28 30.7 +0.6**
IGD Bursa 2.36 92 *i* P **Pn 06 28 09.2 +0.4**
DGB zmir 2.40 166 *i* P **Pn 06 28 07.9 -1.5**
DEMI Demirci 2.41 123 *i* P **Pn 06 28 09.9 +0.3**
DEMI *i* S **Sn 06 28 39.4 +0.5**
ELND Elena 2.55 356 ⇓P **Pn 06 28 13.2 +1.8**
MANT Manisa 2.67 134 *i* P **Pn 06 28 14.5 +1.2**
AYDN Tasoluk 3.05 153 *i* P **Pn 06 28 18.3 0.0**
VTS Vitosha 3.11 317 ⇓P **Pn 06 28 19.3 0.0**
RAZG Razgrad 3.19 5 ⇓P **Pg 06 28 33.5 +1.7**
KHAL Karahalli 3.30 127 *i* P **Pn 06 28 22.6 +0.7**
KHAL *i* S **Sn 06 28 58.8 -2.1**
BORA Eskisehir 3.36 97 *i* P **Pn 06 28 23.5 +0.8**
SRCK Saricakaya, Es 3.47 94 *i* P **Pn 06 28 22.9 -1.1**
SGRR Singureni 3.84 358 ⇓P **Pn 06 28 33.3 +4.2**
TIRR Tirgusor 4.41 22 ⇓P **Pg 06 28 54.1 -1.0**
HARR Harsova 4.50 17 ⇓P **Pg 06 29 00.1 +3.2**
SRE Strehaia 4.79 334 ⇑P **Pn 06 28 39.8 -2.4**
TLCR 5.19 22 ⇓P **Pn 06 28 47.0 -0.7**
MDVR Moldovita 5.47 325 ⇓P **Pn 06 28 51.8 +0.3**
PLOR Plostina 5.48 4 ⇑P **Pn 06 28 51.7 0.0**
VRI Vrincioaia 5.50 4 ⇓P **Pn 06 28 52.8 +0.8**
DOPR Dopca 5.61 355 ⇓P Pg 06 29 25.4 +7.4
BURAR Bucovina Array 7.26 355 ⇓P Pn 06 29 22.9 +6.7

IDC 25 06:31:45.5E1.9,**7.10**S×**129.09E, h0**km,**mb3.8**/2, **mb1 3.8**/4,**mb1mx3.5**/41,**mbtmp3.6**/4,**ML3.6**/2,**Error ellipse: s-maj=151.8km s-min=29.8km az=67.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**13.75**	**159**			Pn	06 35 01.9	0.0
	0.3nm,0.3s,baz=341,slow=12,SNR=7.6							
WRA						Sn	06 37 20.0	-15
	0.3nm,0.3s,baz=336,slow=22,SNR=3.7							
ASAR	**Alice Springs**	**17.11**	**165**	P		Pn	06 35 46.2	0.0
	0.2nm,0.3s,baz=338,slow=9.9,SNR=19							
ASAR				S		Sn	06 38 43.8	-14
	0.1nm,0.3s,baz=356,slow=27,SNR=5.7							
MKAR	**Makanchi Array**	**67.81**	**327**	P		P	06 42 45.4	0.0
	0.4nm,0.4s,baz=121,slow=7.7,SNR=9.2							
KURBB	**Kurchatov Arra**	**72.12**	**329**	P		P	06 43 11.9	+0.1
	0.4nm,0.4s,baz=133,slow=6.0,SNR=4.9							

*TEH **25** 06:42:39.7,37.°19N×59.°23E,h17km,ML3.5*
ISC 25 06:42:39.6E1.0,**37.°22N**E0.°05×**59.°21E**E0.°06,**h10**km,**n21,** σ**1§44/22,1C-2D,Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IEMG	**Emamgholi**	**0.49**	**294**	*e*Pg		**Pb**	**06 42 50.6**	**+0.1**
IKRD	**Kardeh**	**0.71**	**232**	*e*Pg		**Pg**	**06 42 49.4**	**-4.1**
IKRD				*e*			06 42 56.3	
IAKL	**Akhelmad**	**0.72**	**211**	*e*Pg		**Pg**	**06 42 53.4**	**-0.1**
IAKL				*e*			06 43 04.2	
IPAY	**Payeh**	**0.79**	**193**	*e*Pg		**Pg**	**06 42 54.7**	**-0.2**
IPAY				*e*			06 43 07.1	
ISFR	**Sfrayin**	**0.98**	**261**	*e*Pg		**Pg**	**06 42 58.7**	**+0.1**
IMOG	**Moghan**	**1.12**	**175**	*e*Pg		**Pg**	**06 43 00.1**	**-1.0**
IMOG				*e*			06 43 14.6	
BJRD	**Bojnurd**	**1.51**	**289**	*e*Pg		**Pb**	**06 43 08.2**	**+0.3**
SBZV	**Sabzevar**	**1.53**	**238**	*e*Pn		**Pb**	**06 43 08.0**	**-0.2**
JRKH	**Jarkhoshk**	**1.60**	**145**	*e*Pn		**Pn**	**06 43 08.1**	**+0.1**
SHRO	**Shahrood**	**2.86**	**245**	*e*Pn		**Pn**	**06 43 26.6**	**+1.3**
SHRT	**Shahrakht**	**3.67**	**166**	*e*Pn		**Pn**	**06 43 37.0**	**+0.4**
AFRZ	**Afriz**	**3.79**	**183**	*e*Pn		**Pn**	**06 43 39.6**	**+1.4**
TKDS	**Koohdasht(Taba**	**3.98**	**206**	*e*Pn		**Pn**	**06 43 42.0**	**+1.1**
IMON	**Monand**	**4.04**	**175**	*e*Pn		**Pn**	**06 43 43.1**	**+1.4**
IMON				*e*			06 43 43.9	
IANJ	**Anjilo**	**4.62**	**249**	*e*Pn		**Pn**	**06 43 51.3**	**+1.6**
TPRV	**Parvadeh(Tabas**	**4.67**	**207**	*e*Pn		**Pn**	**06 43 51.5**	**+1.3**
IKOO	**Kooshah**	**4.79**	**182**	*e*Pn		**Pn**	**06 43 53.0**	**+0.9**
BSRN	**Basiran**	**5.25**	**181**	*e*Pn		**Pn**	**06 43 59.9**	**+1.7**
ANAR	**Anarak**	**6.03**	**230**	*e*Pn		**Pn**	**06 44 09.0**	**+0.1**
AB31	**Akbulak array**	**12.04**	**2**	⇓Pn		**Pn**	**06 45 30.1**	**-1.0**
	1.0nm,0.3s,baz=165,slow=12,SNR=4.9							
AB31				Sn		Sn	06 47 37.1	-8.3
	1.5nm,0.4s,baz=164,slow=24,SNR=4.0							
AKTO	**Aktyubinsk**	**13.24**	**357**	⇓Pn		**Pn**	**06 45 49.3**	**+1.8**
	0.8nm,0.7s							
AKTO				⇑Sn		**Sn**	**06 48 13.1**	**-1.6**
	0.9nm,0.6s							

*IDC **25** 06:45:16.0*E2.2,9.°16S×122.°61E,h77km±22km,mb3.9/5, *mb1 3.8/7,mb1mx3.5/52,mbtmp4.1/7,MS2.7/2,Ms1 2.7/2, ms1mx2.5/32,Error ellipse: s-maj=53.9km s-min=19.3km az=60.0*
*NEIC **25** 06:45:16.6*E2.4,9.°19S±0.°07×122.°74E±0.°06,h91km±7km, *mb4.0/11,Error ellipse: s-maj=12.5km s-min=5.0km az=215.0*
*DJA **25** 06:45:17.2*±1.1,9.°S±4.°×122.°3E±.°,h33km±19km,M4.3/11, *mB5.2/2,mb4.6/5,MLv4.2/11,Mw(mB)4.5/2*
ISC 25 06:45:16.0±0.7,**9.°25S**±0.°05×**122.°88E**±0.°05,**h86**km±7km, **n42,** σ**2§51/52,mb4.1/7,Savu Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MMRI	**Maumere**	**0.88**	**314**	P		**Pn**	**06 45 33.6**	**-0.5**
MMRI				S		**Sn**	**06 45 45.9**	**-1.7**
MMRI	**Maumere**	**0.88**	**314**			**Pn**	**06 45 33.7**	**-0.4**
MMRI					Sn	**Sn**	**06 45 46.6**	**-1.0**
BATI	**Baumata**	**1.22**	**141**	P		**Pn**	**06 45 41.9**	**+3.7**
	226nm,0.3s,baz=267,slow=3.4,SNR=99							
BATI				S		**Sn**	**06 45 59.7**	**+4.9**
	211nm,0.3s,baz=7.8,slow=19,SNR=7.7							
BATI				LR		LR	06 46 08.9	
	comp=Z,62nm,19.2s,baz=41,slow=36							
BATI	**Baumata**	**1.22**	**141**	P		**Pn**	**06 45 38.9**	**+0.7**
EDFI	**Ende, Flores**	**1.28**	**293**	P		**Pn**	**06 45 39.2**	**+0.3**
EDFI				S		**Sn**	**06 45 56.0**	**-0.1**
SOEI	**Soe**	**1.46**	**110**	P		**Pn**	**06 45 41.4**	**+0.3**
SOEI				S		**Sn**	**06 45 59.8**	**-0.3**
SOEI	**Soe**	**1.46**	**110**			**Pn**	**06 45 44.7**	**+3.6**
SOEI					Sn	**Sn**	**06 46 05.0**	**+4.9**
BASI	**Baing, Sumba**	**2.47**	**247**	P		**Pn**	**06 45 56.2**	**+1.9**
WBSI	**Waikabubak, Su**	**3.46**	**263**	P		**Pn**	**06 46 10.1**	**+2.3**
BBSI	**Bau Bau**	**3.75**	**355**	P		**Pn**	**06 46 12.7**	**+1.0**
BKSI	**Bulukumba**	**4.77**	**325**	P		**Pn**	**06 46 27.0**	**+1.5**
PLAI	**Plampang**	**5.06**	**274**	P		**Pn**	**06 46 32.3**	**+2.8**
	0.8nm2µm75nm,0.4s							
KAPI	**Kappang**	**5.23**	**323**	P		**Pn**	**06 46 34.8**	**+2.9**
	3.7nm,0.3s,baz=172,slow=7.9,SNR=6.1							
KAPI				LR		LR	06 48 35.8	
	comp=Z,66nm,21.6s,baz=180,slow=40							
BNSI	**Bone**	**5.55**	**330**	P		**Pn**	**06 46 39.0**	**+2.8**
	0.2nm40nm,1.4s							
KNRA	**Kununurra**	**8.59**	**139**			**Pn**	**06 47 17.6**	**-0.1**
KNRA					Sn	**Sn**	**06 48 50.0**	**-2.9**
JAGI	**Jajag, Banyuwa**	**8.66**	**274**	P		**Pn**	**06 47 18.7**	**+0.1**
JAGI	**Jajag, Banyuwa**	**8.66**	**274**		Pn	**Pn**	**06 47 19.2**	**+0.6**
MTN	**Manton Dam**	**8.85**	**115**			**Pn**	**06 47 22.3**	**+1.1**
MTN					Sn	**Sn**	**06 48 56.2**	**-3.1**
FITZ	**Fitzroy Crossi**	**9.19**	**163**	P		**Pn**	**06 47 26.5**	**+0.6**
	0.4nm,0.3s,baz=356,slow=8.2,SNR=57							
FITZ				S		**Sn**	**06 49 03.4**	**-4.2**
	3.5nm,0.3s,baz=147,slow=3.6,SNR=14							
FITZ	**Fitzroy Crossi**	**9.19**	**163**			**Pn**	**06 47 26.8**	**+0.9**
FITZ						**Sn**	**06 49 05.3**	**-2.3**
FAKI	**Fak Fak**	**11.24**	**57**	Pn		**Pn**	**06 47 55.1**	**+1.3**
UGM	**Wanagama**	**12.29**	**275**	Pn		**Pn**	**06 48 06.5**	**-1.6**
WB0	**Warramunga Arr**	**15.27**	**134**	Pn		**Pn**	**06 48 45.2**	**-1.8**
WB0				IAmb		IAmb	06 48 54.8	
	comp=Z,3.8nm,0.7s							
WRA	**Warramunga Arr**	**15.35**	**135**	P		**Pn**	**06 48 46.0**	**-2.0**
	comp=Z,0.4nm,0.3s,baz=300,slow=13,SNR=5.9							
WRA				S		**Sn**	**06 51 27.5**	**-10**
	comp=Z,1.6nm,0.3s,baz=54,slow=27,SNR=7.1							
WRAB	**Tennant Creek**	**15.35**	**135**	Pn		**Pn**	**06 48 49.4**	**+1.5**
WB2	**Warramunga Arr**	**15.36**	**135**	Pn		**Pn**	**06 48 46.6**	**-1.5**
WB2				IAmb		IAmb	06 49 02.2	
	comp=Z,7.6nm,1.2s							
WR0	**Warramunga Arr**	**15.50**	**135**			**Pn**	**06 48 48.3**	**-1.6**
WR0				IAmb		IAmb	06 49 07.2	
	comp=Z,14nm,1.4s							
AS31	**Alice Springs**	**17.79**	**145**	P		**Pn**	**06 49 20.7**	**+2.5**
ASAR	**Alice Springs**	**17.79**	**145**	P		**Pn**	**06 49 20.2**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=326,slow=12,SNR=30							
ASAR				S		Sn	06 52 24.7	-12
	comp=Z,0.5nm,0.3s,baz=313,slow=22,SNR=7.4							
ASAR				ScP		**ScP**	**06 57 21.5**	**+2.6**
	comp=Z,0.0nm,0.3s,baz=342,slow=2.2,SNR=4.5							
COEN	**Coen**	**20.42**	**105**	P		**P**	**06 49 47.4**	**+0.9**
COEN				IAmb		IAmb	06 49 55.1	
	comp=Z,9.9nm,0.8s							
PMG	**Port Moresby**	**23.96**	**92**	LR		LR	07 02 25.5	
	comp=Z,29nm,21.2s,baz=284,slow=42							
USRK	**Ussuriysk Ar.**	**53.84**	**8**	P		**P**	**06 54 29.9**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=202,slow=8.5,SNR=4.4							
SONM	**Songino Array**	**58.69**	**347**	P		**P**	**06 55 04.8**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=163,slow=7.0,SNR=2.6							
MK31	**Makanchi Array**	**66.48**	**331**	P		**P**	**06 55 56.3**	**-0.2**
MK31				IAmb		IAmb	06 56 00.1	
	comp=Z,1.4nm,0.8s							
MKAR	**Makanchi Array**	**66.48**	**331**	P		**P**	**06 55 56.7**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=138,slow=7.3,SNR=21							
ZAA0	**Zalesovo Array**	**70.69**	**337**	P		**P**	**06 56 21.7**	**-0.8**
ZALV	**Zalesovo Beam**	**70.69**	**337**	P		**P**	**06 56 21.4**	**-1.1**
	comp=Z,4.5nm,0.4s,baz=142,slow=4.6,SNR=12							
KURBB	**Kurchatov Arra**	**70.94**	**332**	P		**P**	**06 56 23.6**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=140,slow=5.5,SNR=10							
KURK	**Kurchatov**	**70.97**	**332**	P		**P**	**06 56 23.6**	**-0.6**
KURK	**Kurchatov**	**70.97**	**332**	IAmb		IAmb	06 56 28.6	
	comp=Z,3.7nm,1.0s							
YAK	**Yakutsk**	**71.26**	**3**	P		**P**	**06 56 23.5**	**-2.2**
TORD	**Torodi Ar. Bea**	**122.28**	**280**	PKP		**PKiKP**	**07 04 02.8**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=76,slow=2.1,SNR=5.8							

*NEIC **25** 06:49:27.8*±1.8, 19.°21N±0.°03×121.°11E±0.°07,h20km±4km, *mb4.5/71,Error ellipse: s-maj=9.9km s-min=4.3km az=94.0*
*BJI **25** 06:49:28.7*±0.0, 19.°50N×120.°98E,h14km,mB4.7/26, *mb4.5/32,ML4.1/2,Ms4.1/29,Ms7 4.0/27*
*MAN **25** 06:49:30.2, 19.°28N×121.°20E,h13km,mb4.8,ML3.7, MS3.7*
*IDC **25** 06:49:31.6*±2.2, 19.°23N×121.°35E,h44km±21km,mb4.1/31, *mb1 4.2/35,mb1mx4.1/60,mbtmp4.3/35,ML3.7/3,MS3.7/18, Ms1 3.8/18,ms1mx3.6/35,Error ellipse: s-maj=15.1km s-min=9.4km az=87.0*
ISC 25 06:49:28.8±1.1,**19.°25N**±0.°03×**121.°12E**±0.°04,**h25**km±8km, **n175,** σ**1§68/183,mb4.5/65,MS3.9/20,12C-3D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SGCP	**Mt. Cagua**	**1.33**	**139**	*e*P		**Pb**	**06 49 53.5**	**+0.4**
SGCP				*e*S		**Sb**	**06 50 12.2**	**+2.4**
APYP	**Conner**	**1.39**	**175**	*e*P		**Pb**	**06 49 54.4**	**+0.3**
APYP				*e*S		**Sb**	**06 50 15.4**	**+4.0**
BBP	**Basco**	**1.43**	**34**	*e*P		**Pb**	**06 49 53.9**	**-0.9**
BBP				*e*S		**Sb**	**06 50 13.2**	**+0.7**
SIPP	**Brgy, Tapao**	**1.46**	**206**	*e*P		**Pb**	**06 49 55.6**	**+0.2**
SIPP				*e*S		Sb	06 50 28.2	+15
SZP	**Santa**	**1.81**	**201**			**Pn**	**06 49 58.4**	**0.0**
SZP					Sn	**Sn**	**06 50 18.6**	**-1.8**
CAUP	**Cauayan**	**2.39**	**164**	*e*P		**Pb**	**06 50 11.3**	**+0.1**
CAUP				*e*S		**Sb**	**06 50 40.2**	**-0.1**
PALP	**Palanan**	**2.51**	**150**	*e*P		**Pb**	**06 50 11.4**	**-1.7**
PALP				*e*S		**Sb**	**06 50 42.0**	**-1.6**
BOLP	**Bolinao**	**3.08**	**202**	*e*P		**Pb**	**06 50 20.1**	**-2.8**
BOLP				*e*S		**Sb**	**06 50 59.0**	**-1.1**
SMPP	**San Manuel, Pa**	**3.11**	**188**	*e*P		**Pb**	**06 50 20.2**	**-3.3**
SMPP				*e*S		**Sb**	**06 51 02.3**	**+1.2**
BALP	**Baler**	**3.52**	**173**	*e*P		**Pn**	**06 50 24.8**	**+2.9**
BALP				*e*S		**Sb**	**06 51 08.9**	**-3.8**
TWG	**Pinlang**	**3.55**	**359**			**Pn**	**06 50 21.4**	**-0.9**
TWG					Sn	**Sn**	**06 51 02.0**	**-1.5**
TPUB	**Ta-pu**	**4.05**	**354**			**Pn**	**06 50 28.2**	**-1.1**
TPUB					Sn	**Sn**	**06 51 12.9**	**-3.1**
YULB	**Yu-li**	**4.12**	**2**			**Pn**	**06 50 30.7**	**+0.5**
YULB					Sn	**Sn**	**06 51 17.3**	**-0.4**
SSLB	**Suanglung**	**4.52**	**358**			**Pn**	**06 50 35.5**	**-0.2**
SSLB					Sn	**Sn**	**06 51 25.1**	**-2.3**
POLP	**Polilio Island**	**4.57**	**170**	*e*P		Pn	06 50 41.2	+4.9
POLP				*e*S		**Sn**	**06 51 35.0**	**+6.4**
NACB	**Ninganchiao**	**4.92**	**5**	Pn		**Pn**	**06 50 41.1**	**0.0**
TGY	**Tagaytay City**	**5.12**	**182**	P		**Pn**	**06 50 47.7**	**+3.6**
	baz=185,slow=4.9,SNR=6.2							
TGY				S		**Sb**	**06 51 53.1**	**-5.9**
	31nm,0.3s,baz=145,slow=16,SNR=0.8							
LQP	**Lukban**	**5.13**	**175**	*e*P		**Pn**	**06 50 45.3**	**+1.0**
LUBP	**Lubang**	**5.55**	**189**	*e*P		Pn	06 50 55.8	+5.9
LUBP				*e*S		**Sn**	**06 51 57.1**	**+4.2**
PGP	**Puerto Galera**	**5.72**	**182**	*e*P		**Pn**	**06 50 56.2**	**+3.9**
KNMB	**Chin-men Tao**	**5.77**	**334**	Pn		**Pn**	**06 50 51.1**	**-1.8**
HKPS	**Hong Kong Po S**	**7.19**	**296**			**Pn**	**06 51 10.2**	**-2.2**
JOW	**Kunigami**	**10.01**	**40**	P		**Pn**	**06 51 51.9**	**+0.8**
	0.7nm,0.3s,baz=72,slow=12,SNR=7.1							
JOW	**Kunigami**	**10.01**	**40**	Pn		**Pn**	**06 51 52.4**	**+1.3**
QIZ	**Qiongzhong**	**10.66**	**271**	P		**Pn**	**06 51 58.0**	**-2.0**
QIZ				S		**Sn**	**06 53 57.0**	**-1.7**
QIZ				LR		LR		
	comp=N,370nm,14.0s							
QIZ				LR		LR		
	comp=E,560nm,16.9s							
QIZ				LR		LR		
	comp=Z,640nm,16.5s							
QIZ	**Qiongzhong**	**10.66**	**271**			**Pn**	**06 51 58.7**	**-1.3**
NJ2	**Nanjing**	**12.91**	**351**	*e*P		**Pn**	**06 52 31.5**	**+0.8**
NJ2				pmax		pmax		
	comp=Z,14nm,0.6s							
GYA	**Guiyang**	**15.12**	**301**	P		**Pn**	**06 53 01.0**	**0.0**
GYA				sP		pP	06 53 11.0	-0.9
GYA				S		**Sn**	**06 55 48.5**	**+0.6**
GYA				sS		S	06 55 59.0	-5.7
GYA				SS		**SnSn**	**06 56 06.5**	**+5.8**
GYA				pmax		pmax		
	comp=Z,10.0nm,0.6s							
GYA				pmax		pmax		
	comp=Z,90nm,4.2s							
GYA				LR		LR		
	comp=N,390nm,11.2s							
GYA				LR		LR		
	comp=E,320nm,12.6s							
GYA				LR		LR		
	comp=Z,250nm,11.4s							
ENH	**Enshi**	**15.22**	**318**	Pn		**Pn**	**06 53 03.1**	**+0.9**
ENH				IAmb		IAmb	06 53 04.6	
	comp=Z,47nm,1.4s							
SLVN	**Son La**	**16.28**	**280**			**Pn**	**06 53 16.1**	**+0.1**
JNU	**Nakatsue**	**16.34**	**30**	P		**Pn**	**06 53 17.6**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=205,slow=7.9,SNR=8.0							
JNU				LR		LR	06 59 22.3	
	comp=Z,84nm,21.3s,baz=180,slow=36							
JNU	**Nakatsue**	**16.34**	**30**			**Pn**	**06 53 17.1**	**+0.4**
JNU				IAmb		IAmb	06 53 34.9	
	comp=Z,35nm,1.1s							
XAN	**Xi'an**	**18.30**	**326**	P		**Pn**	**06 53 43.3**	**+2.3**
XAN				pmax		pmax		
	comp=Z,11nm,1.1s							
XAN				pmax		pmax		
	comp=Z,170nm,5.4s							
XAN				LR		LR		
	comp=Z,460nm,15.3s							
XAN				LR		LR		
	comp=Z,310nm,14.8s							
XAN				LR		LR		
	comp=Z,630nm,17.1s							
XAN	**Xi'an**	**18.30**	**326**	P		**P**	**06 53 40.4**	**-0.7**
INCN	**Inchon**	**18.79**	**14**	P		**P**	**06 53 44.8**	**-1.6**
INCN				IAmb		IAmb	06 53 50.1	
	comp=Z,51nm,1.4s							
SBUM	**Sibu**	**18.83**	**209**	P		**Pn**	**06 53 47.2**	**-0.4**
KSRS	**Korea Array**	**19.09**	**17**	P		**P**	**06 53 49.4**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=196,slow=12,SNR=16							
KSRS				LR		LR	07 02 12.0	
	comp=Z,287nm,19.7s,baz=198,slow=40							
KS19	**Wonju Array Si**	**19.12**	**17**	P		**P**	**06 53 48.3**	**-1.6**
CD2	**Chengdu**	**19.52**	**310**	P		**P**	**06 53 54.8**	**+0.4**
CD2				S		**Sn**	**06 57 35.0**	**+0.8**
CD2				sS		sS	06 57 39.8	-4.5
CD2				SS		**SnSn**	**06 57 53.0**	**+4.4**
CD2				pmax		pmax		
	comp=Z,30nm,1.0s							
CD2				pmax		pmax		
	comp=Z,270nm,5.9s							
CD2				LR		LR		
	comp=Z,550nm,17.2s							
CD2				LR		LR		
	comp=Z,520nm,17.3s							
CD2				LR		LR		
	comp=Z,840nm,14.1s							
APSI	**Ampana**	**20.04**	**178**	P		Pn	06 54 04.2	+2.2
	comp=Z,28nm,0.8s							
KSM	**Kuching**	**20.60**	**212**	P		Pn	06 54 07.7	-0.9
KSM				IAmb		IAmb	06 54 12.6	
	comp=Z,20nm,0.9s							
JCJ	**Chichijima**	**20.86**	**64**	P		**P**	**06 54 06.1**	**-2.9**
	comp=Z,44nm,0.6s,baz=270,slow=20,SNR=1.9							
JCJ				LR		LR	07 00 35.6	
	comp=Z,195nm,20.8s,baz=266,slow=32							
CHTO	**Chiang Mai**	**20.97**	**272**	P		**P**	**06 54 10.2**	**0.0**
CM31	**Chiang Mai Arr**	**21.00**	**271**	P		**P**	**06 54 10.2**	**-0.4**
CMAR	**Chiang Mai Arr**	**21.00**	**271**	P		**P**	**06 54 12.6**	**+2.0**
	comp=Z,2.7nm,0.7s,baz=79,slow=10,SNR=15							
CMAR				PcP		**PcP**	**06 58 19.3**	**+1.8**
	comp=Z,1.9nm,0.7s,baz=67,slow=1.4,SNR=7.7							
CMAR				LR		LR	07 01 52.4	
	comp=Z,104nm,19.5s,baz=134,slow=35							
BJT	**Baijiatuau**	**21.13**	**349**	P		**P**	**06 54 11.9**	**+0.1**
BJT				IAmb		IAmb	06 54 26.4	
	comp=Z,17nm,1.0s							
BJI	**Beijing**	**21.15**	**349**	P		**P**	**06 54 11.5**	**-0.5**
BJI				pmax		pmax		
	comp=Z,5.0nm,1.0s							
BJI				LR		LR		
	comp=Z,270nm,15.3s							
BJI				LR		LR		
	comp=Z,190nm,12.9s							
INU	**Inuyama**	**21.32**	**38**	P		**P**	**06 54 13.0**	**-0.9**
INU				IAmb		IAmb	06 54 22.8	
	comp=Z,33nm,0.9s							
SANI	**Sanana**	**21.70**	**167**	P		**P**	**06 54 15.1**	**-3.0**
	comp=Z,17nm,0.7s							
LZH	**Lanzhou**	**22.64**	**321**	*e*P		**P**	**06 54 29.0**	**+0.8**
LZH				pP		pP	06 54 35.0	+0.4
LZH				sP		pwP	06 54 38.3	+1.2
LZH				*e*S		**S**	**06 58 31.8**	**-3.1**
LZH				sS		pS	06 58 41.5	-1.1
LZH				pmax		pmax		
	comp=Z,26nm,1.0s							
LZH				pmax		pmax		
	comp=Z,180nm,5.2s							
LZH				LR		LR		
	comp=Z,470nm,12.0s							
LZH				LR		LR		
	comp=Z,330nm,12.3s							
LZH				LR		LR		
	comp=Z,600nm,13.6s							
MAJO	**Matsushiro**	**22.84**	**38**	P		**P**	**06 54 29.4**	**-0.9**
MAJO				IAmb		IAmb	06 54 35.1	
	comp=Z,17nm,1.4s							
MAT	**Matsushiro**	**22.84**	**38**	P		**P**	**06 54 29.1**	**-1.1**
MJAR	**Matsushiro Arr**	**22.85**	**38**	P		**P**	**06 54 30.1**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=205,slow=9.8,SNR=9.1							
MJB9	**Matsu-Tunnel**	**22.85**	**38**	P		**P**	**06 54 29.4**	**-0.8**
HHC	**Hu-ho-hao-te**	**23.03**	**341**	*e*P		**P**	**06 54 29.5**	**-2.7**
HHC				S		**S**	**06 58 36.8**	**-4.7**
HHC				pmax		pmax		
	comp=Z,24nm,0.9s							
HHC				pmax		pmax		
	comp=Z,69nm,6.1s							
HHC				LR		LR		
	comp=Z,400nm,16.2s							
HHC				LR		LR		
	comp=Z,140nm,16.7s							
HHC				LR		LR		
	comp=Z,300nm,14.9s							
SPSI	**Sidrap Palu**	**23.11**	**183**	P		**P**	**06 54 33.4**	**+0.4**
	comp=Z,22nm,0.8s							
IPM	**Ipoh**	**24.49**	**236**	P		**P**	**06 54 43.7**	**-2.6**
IPM				IAmb		IAmb	06 55 00.3	
	comp=Z,22nm,1.2s							
USRK	**Ussuriysk Ar.**	**26.49**	**18**	P		**P**	**06 55 05.1**	**+1.1**
	comp=Z,2.8nm,0.7s,baz=201,slow=10,SNR=3.8							
USRK				LR		LR	07 05 44.1	
	comp=Z,121nm,21.0s,baz=190,slow=37							
PSI	**Prapat**	**27.17**	**236**	LR		LR	07 05 35.8	
	comp=Z,135nm,20.0s,baz=270,slow=35							
JAY	**Jayapura**	**28.96**	**136**	LR		LR	07 05 01.9

comp=Z,66nm,20.5s,baz=242,slow=37
ZAA0 Zalesovo Array 44.40 330 P **P 06 57 37.6 +0.4**
ZALV Zalesovo Beam 44.40 330 P **P 06 57 39.6 +2.3**
comp=Z,3.1nm,0.9s,baz=103,slow=7.0,SNR=4.4
ZALV LR LR 07 17 16.3
comp=Z,183nm,18.4s,baz=89,slow=37
AS31 Alice Springs 44.44 163 P **P 06 57 36.8 -1.1**
ASAR Alice Springs 44.44 163 P **P 06 57 37.4 -0.6**
comp=Z,4.4nm,0.5s,baz=348,slow=6.8,SNR=51
ASAR PcP **PcP 06 59 20.9 -0.5**
comp=Z,1.1nm,0.7s,baz=340,slow=2.9,SNR=2.8
NIL Nilore 44.81 299 P **P 06 57 41.7 +0.8**
KURK Kurchatov 45.91 323 P **P 06 57 50.2 +1.0**
KURK IAmb IAmb 06 57 59.6
comp=Z,10nm,1.2s
KURBB Kurchatov Arra 45.92 323 P **P 06 57 51.0 +1.7**
comp=Z,3.4nm,0.6s,baz=121,slow=7.8,SNR=16
GAR Garm 47.88 306 P **P 06 58 04.8 -0.3**
MORW Morawa 48.29 186 P **P 06 58 07.4 -0.6**
KK31 Karatay Array 48.53 311 P **P 06 58 11.6 +1.7**
SEY Seymchan 48.63 18 P **P 06 58 10.9 +0.6**
comp=Z,1.4nm,0.6s,baz=221,slow=19,SNR=1.6
FORT Forrest 50.19 172 P **P 06 58 21.7 -0.8**
BRVK Borovoye 51.58 323 P **P 06 58 33.7 +0.9**
BRVK IAmb IAmb 06 58 46.0
comp=Z,4.2nm,0.8s
NWAO Narrogin (SRO) 52.02 184 P **P 06 58 36.6 +0.4**
comp=Z,13nm,0.6s,baz=8.7,slow=7.4,SNR=12
NWAO Narrogin (SRO) 52.02 184 P **P 06 58 36.1 -0.1**
TIXI Tiksi 52.60 3 P **P 06 58 39.7 -0.4**
comp=Z,3.2nm,0.6s,baz=160,slow=4.4,SNR=7.9
TIXI Tiksi 52.60 3 P **P 06 58 39.1 -1.0**
TIXI IAmb IAmb 06 58 53.5
comp=Z,11nm,1.4s
BBOO Buckleboo 53.70 164 P **P 06 58 48.5 -0.2**
STKA Stephens Creek 54.50 159 P **P 06 58 54.2 -0.3**
comp=Z,3.2nm,0.6s,baz=346,slow=6.2,SNR=11
STKA Stephens Creek 54.50 159 P **P 06 58 54.4 -0.1**
BILL Bilibino 56.34 19 P **P 06 59 07.2 -0.2**
BILL IAmb IAmb 06 59 22.1
comp=Z,4.4nm,0.7s
GEYT Alibeck 57.33 303 P **P 06 59 18.0 +3.0**
comp=Z,2.0nm,0.9s,baz=102,slow=6.4,SNR=3.6
GEYT LR LR 07 27 18.5
comp=Z,142nm,18.4s,baz=40,slow=39
ARU Arti 59.04 325 LR LR 07 26 41.6
comp=Z,76nm,19.4s,baz=153,slow=38
ARU Arti 59.04 325 P **P 06 59 26.6 0.0**
MLY Manley 71.95 26 P **P 07 00 49.0 -1.0**
MLY IAmb IAmb 07 00 58.6
comp=Z,5.9nm,1.0s
BPAW Bear Paw Mtn. 71.96 27 P **P 07 00 50.3 +0.3**
BPAW IAmb IAmb 07 01 00.9
comp=Z,4.8nm,1.0s
KDAK Kodiak Island 71.97 34 P **P 07 00 50.0 -0.1**
comp=Z,6.4nm,0.7s,baz=271,slow=8.5,SNR=9.5
KDAK Kodiak Island 71.97 34 P **P 07 00 50.2 +0.1**
TOLK Toolik Lake Re 71.99 23 P **P 07 00 50.6 +0.4**
TOLK IAmb IAmb 07 00 53.0
comp=Z,3.9nm,0.7s
CNPM China Poot 72.44 32 P **P 07 00 52.2 -0.7**
NEA Nenana 72.72 27 P **P 07 00 54.8 +0.4**
NEA IAmb IAmb 07 01 02.0
comp=Z,3.3nm,0.7s
MCK McKinley 72.91 28 P **P 07 00 55.2 -0.4**
MCK IAmb IAmb 07 01 04.2
comp=Z,6.1nm,1.0s
RND Reindeer 72.99 28 P **P 07 00 55.6 -0.6**
RND IAmb IAmb 07 01 02.5
comp=Z,7.1nm,0.9s
WRH Wood River Hil 73.16 27 P **P 07 00 57.3 +0.2**
WRH IAmb IAmb 07 01 04.2
comp=Z,3.1nm,0.7s
IL31 73.62 27 P **P 07 00 59.3 -0.4**
ILAR Eielson Array 73.62 27 P **P 07 00 58.5 -1.3**
comp=Z,0.6nm,0.6s,baz=266,slow=4.8,SNR=13
HDA Harding Lake 73.66 27 P **P 07 00 58.8 -1.2**
HDA IAmb IAmb 07 01 10.8
comp=Z,7.8nm,1.4s
SCM Sheep Creek Mo 73.96 30 P **P 07 01 01.4 -0.5**
ARCES ARCESS Array B 74.08 339 P **P 07 01 03.1 +0.7**
comp=Z,1.5nm,0.5s,baz=76,slow=6.8,SNR=9.6
ARCES LR LR 07 37 26.9
comp=Z,58nm,20.4s,baz=146,slow=39
SCRK Sand Creek 75.01 27 P **P 07 01 07.9 -0.2**
MENT Mentasta 75.37 28 P **P 07 01 10.5 +0.5**
MENT IAmb IAmb 07 01 12.3
comp=Z,8.4nm,1.4s
FINES FINESS Array B 75.67 330 P **P 07 01 11.7 0.0**
comp=Z,1.8nm,0.8s,baz=42,slow=5.5,SNR=4.4
FINES LR LR 07 38 51.4
comp=Z,78nm,19.9s,baz=76,slow=39
GLB Gilahina Butte 75.68 30 P **P 07 01 12.3 +0.4**
GLB IAmb IAmb 07 01 20.9
comp=Z,5.3nm,1.1s
EGAK Eagle 76.01 26 P **P 07 01 13.8 +0.2**
EGAK IAmb IAmb 07 01 20.0
comp=Z,4.3nm,0.7s
AKASG Malin Array Be 76.52 319 P **P 07 01 16.1 -0.6**
comp=Z,0.8nm,0.5s,baz=63,slow=5.5,SNR=4.8
DAWY Dawson 76.95 26 P **P 07 01 18.3 -0.7**
DAWY IAmb IAmb 07 01 28.1
comp=Z,3.2nm,0.8s
CTGM Chitina Glacie 76.96 30 P **P 07 01 19.8 +0.6**
CTGM IAmb IAmb 07 01 26.3
comp=Z,5.3nm,0.7s
EPYK Eagle Plains 77.31 24 P **P 07 01 20.9 -0.1**
EPYK IAmb IAmb 07 01 21.9
comp=Z,4.4nm,0.6s
RPZ Rata Peaks 77.57 145 P **P 07 01 22.1 -0.5**
comp=Z,16nm,0.7s,baz=153,slow=3.4,SNR=5.5
RPZ Rata Peaks 77.57 145 IAmb IAmb 07 01 28.3
comp=Z,133nm,1.5s
INK Inuvik 77.81 22 P **P 07 01 23.2 -0.4**
comp=Z,1.5nm,0.7s,baz=263,slow=14,SNR=3.8
INK Inuvik 77.81 22 P **P 07 01 23.4 -0.2**
INK IAmb IAmb 07 01 36.8
comp=Z,3.7nm,0.9s
CFR Carcaliu 78.64 314 ⇑P **P 07 01 28.0 -0.7**
HYT Haines Junctio 78.79 29 P **P 07 01 29.1 -0.3**
HYT IAmb IAmb 07 01 31.3
comp=Z,6.0nm,1.3s
ISP Isparta 78.91 306 P **P 07 01 29.9 -0.5**
ISP IAmb IAmb 07 01 30.8
comp=Z,9.7nm,1.1s
HARR Harsova 78.92 313 ⇑P **P 07 01 31.0 +0.8**
PETR Petresti 79.11 315 ⇑P P 07 01 39.2 +8.0
TESR Tescani 79.27 316 ⇑P **P 07 01 32.4 +0.2**
VRI Vrincioaia 79.40 315 ⇑P **P 07 01 34.1 +1.2**
BISRR Bisoca 79.51 315 ⇓P P 07 01 42.7 +9.1
BURAR Bucovina Array 79.89 317 ⇑P **P 07 01 36.6 +1.0**
BUR08 Bucovina Ar. S 79.89 317 P **P 07 01 36.1 +0.4**
MLR Muntele Rosu 80.04 315 ⇓P **P 07 01 37.7 +1.2**
MLR Muntele Rosu 80.04 315 P **P 07 01 36.9 +0.4**
WHY Whitehorse 80.06 29 P **P 07 01 36.9 +0.6**
WHY IAmb IAmb 07 01 43.1
comp=Z,2.8nm,0.6s
SKAG Skagway 80.28 30 P **P 07 01 37.5 +0.1**
SKAG IAmb IAmb 07 01 46.8
comp=Z,4.0nm,0.8s
C36M Paulatuk 80.46 19 P **P 07 01 37.7 -0.4**
ARR Arges 80.95 315 ⇑P **P 07 01 41.3 0.0**
TRPA Tarpa 81.44 318 ⇑P P 07 01 49.4 +5.7
DRGR 81.77 317 ⇓P **P 07 01 46.3 +0.6**
NB2 NORSAR Subarra 82.54 333 P **P 07 01 48.5 -0.9**
comp=Z,6.4nm,1.4s,baz=66,slow=5.6
NOA NORSAR Array B 82.54 333 P **P 07 01 48.7 -0.7**
comp=Z,0.3nm,0.5s,baz=332,slow=19,SNR=3.5
NOA LR LR 07 41 38.8
comp=Z,174nm,19.3s,baz=65,slow=38
VTS Vitosha 82.79 313 P **P 07 01 51.3 +0.1**
VTS IAmb IAmb 07 01 52.8
comp=Z,3.2nm,0.9s
JAVC Velka Javorina 84.20 320 *e*P **P 07 01 59.9 +1.7**
KMBO Kilima Mbogo 84.58 267 P **P 07 02 04.1 +3.2**
comp=Z,2.4nm,1.0s,baz=259,slow=5.2,SNR=2.8
KMBO LR LR 07 37 20.9
comp=Z,23nm,21.1s,baz=152,slow=34
VRAC Vranov 84.68 320 *e*P **P 07 02 01.1 +0.5**
VRAC Vranov 84.68 320 ⇑P **P 07 01 57.2 -3.4**
PDG Podgorica 85.61 313 ⇑P **P 07 02 05.1 -0.2**
CASY Casey 85.64 184 P **P 07 02 04.9 +0.2**
CLL Collm 85.94 323 *e*P **P 07 02 09.0 +2.2**
GERES GERESS Array B 86.61 321 P **P 07 02 10.0 -0.3**
comp=Z,0.3nm,0.6s,baz=37,slow=3.3,SNR=4.5
YKA Yellowknife Ar 87.52 23 P **P 07 02 14.3 +0.1**
comp=Z,7.6nm,0.8s,baz=315,slow=4.3,SNR=110
PPT Papeete 95.01 107 LR LR 07 41 29.7
comp=Z,34nm,18.1s,baz=302,slow=33
NVAR Mina Array Bea 100.05 43 P **Pdif 07 03 13.8 +1.1**
comp=Z,0.3nm,0.7s,baz=309,slow=5.7,SNR=4.3
TXAR Lajitas Array 115.20 43 PKP **PKPdf 07 08 09.4 +0.7**
comp=Z,1.1nm,0.7s,baz=238,slow=0.7,SNR=18
ROSC El Rosal 151.64 34 PKPbc **PKiKP 07 09 23.3 +0.4**
comp=Z,12nm,0.5s,baz=92,slow=17,SNR=7.1
ROSC El Rosal 151.64 34 PKPdf **PKPdf 07 09 14.3 -1.9**
ROSC **PKPbc 07 09 22.4 0.0**

*ATH **25** 06:54:28.0,40.14N×25.02E,h25km±1km, ML2.8/7, Error ellipse: s-maj=1.9km s-min=0.7km az=67.0*
*ISK **25** 06:54:28.1,40.16N×25.05E,h19km, ML2.9/13*
*DDA **25** 06:54:29.6,40.17N×25.19E,h30km±2km, ML2.7*
THE 25 06:54:28.9,40.15N±25.03E,h14km,ML2.9/9,6C-6D, Error ellipse: s-maj=0.8km s-min=0.4km az=19.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIA	**Limnos Island**	**0.28**	**155**	P	Pg	06 54 34.9	+0.2
LIA				S	Sg	06 54 39.1	+0.5
	9μm,0.2s						
LIA	**Limnos Island**	**0.28**	**155**	P	Pg	06 54 34.9	+0.2
LIA				S	Sg	06 54 39.1	+0.5
LIA				AML	AML	06 54 39.2	
	comp=N,15495μm,0.2s						
LIA				AML	AML	06 54 39.2	
	comp=E,19102μm,0.3s						
SMTH	**Samothraki Isl**	**0.50**	**50**	P	Pg	06 54 38.3	-0.5
SMTH				S	Sg	06 54 45.7	+0.2
	comp=E,472nm,0.3s						
SMTH	**Samothraki Isl**	**0.50**	**50**	P	Pg	06 54 38.5	-0.3
SMTH				S	Sg	06 54 45.8	+0.4
SMTH				AML	AML	06 54 46.9	
	comp=E,1068μm,0.1s						
SMTH				AML	AML	06 54 47.1	
	comp=N,830μm,0.2s						
THAS	**Thassos island**	**0.51**	**333**	P	Pg	06 54 38.8	-0.2
THAS				S	Sb	06 54 46.8	-0.3
	comp=N,2μm,0.3s						
THAS	**Thassos island**	**0.51**	**333**	P	Pg	06 54 38.7	-0.3
THAS				S	Sg	06 54 45.8	0.0
THAS				AML	AML	06 54 49.0	
	comp=N,4352μm,0.3s						
THAS				AML	AML	06 54 49.0	
	comp=E,2532μm,0.3s						
GADA	**Gvkgeada**	**0.67**	**86**	P	Pg	06 54 41.9	0.0
GADA				S	Sb	06 54 51.4	-0.1
	comp=E,822nm,0.4s						
GADA	**Gvkgeada**	**0.67**	**86**	PG	Pg	06 54 41.8	-0.1
GADA				SG	Sg	06 54 50.7	0.0
OUR	**Ouranopolis**	**0.82**	**283**	P	Pg	06 54 44.7	-0.1
OUR				S	Sb	06 54 56.3	+0.4
	comp=E,752nm,0.4s						
OUR	**Ouranopolis**	**0.82**	**283**	P	Pg	06 54 44.7	-0.1
OUR	**Ouranopolis**	**0.82**	**283**	PG	Pg	06 54 44.8	0.0
BOZC	**Bozcaada**	**0.84**	**111**	PG	Pg	06 54 44.8	-0.5
BOZC	**Bozcaada**	**0.84**	**111**	*i* P	Pg	06 54 44.6	-0.7
BOZC				*i* P	Pb	06 54 44.9	-0.5
BOZC				*i* S	Sg	06 54 55.3	-1.0
BOZC				*i* S	Sb	06 54 55.5	-1.1
BOZC				IAML		06 54 56.0	
	comp=N,263nm,1.2s						
BOZC				IAML		06 54 56.0	
	comp=E,615nm,1.5s						
BOZC				IAML		06 54 58.0	
	comp=N,333nm,0.6s						
BOZC				IAML		06 54 58.0	
	comp=E,392nm,0.4s						
KVLA	**Kavala**	**0.93**	**328**	P	Pb	06 54 46.2	-0.6
KVLA				S	Sb	06 54 59.4	+0.4
KAVA	**Kavala**	**0.93**	**335**	P	Pb	06 54 46.5	-0.4
KAVA				S	Sb	06 54 59.8	+0.7
	comp=E,2μm,0.3s						
KAVA	**Kavala**	**0.93**	**335**	P	Pb	06 54 46.3	-0.6
KAVA				S	Sb	06 54 59.2	+0.1
KAVA				AML	AML	06 55 00.8	
	comp=N,2904μm,0.3s						
KAVA				AML	AML	06 55 00.9	
	comp=E,3242μm,0.4s						
ENEZ	**Enez**	**1.04**	**55**	P	Pb	06 54 47.7	-1.0
ENEZ				S	Sn	06 55 03.3	-0.1
	comp=E,1μm,0.3s						
ENEZ	**Enez**	**1.04**	**55**	PG	Pb	06 54 47.8	-0.9
EZN	**Ezine**	**1.05**	**108**	P	Pb	06 54 48.3	-0.5
EZN				S	Sn	06 55 03.4	-0.2
	comp=E,350nm,0.5s						
EZN	**Ezine**	**1.05**	**108**	PG	Pb	06 54 47.6	-1.2
PAIG	**Paliouri**	**1.06**	**258**	P	Pb	06 54 48.0	-1.0
PAIG	**Paliouri**	**1.06**	**258**	P	Pb	06 54 47.7	-1.3
RDO	**Rodhopi**	**1.07**	**21**	P	Pb	06 54 48.2	-1.0
RDO	**Rodhopi**	**1.07**	**21**	P	Pb	06 54 48.3	-0.9
RDO	**Rodhopi**	**1.07**	**21**	PG	Pb	06 54 48.2	-1.0
GELI	**Tayfur-Gelibol**	**1.13**	**77**	PN	Pb	06 54 49.0	-1.3
SIGR	**SIGRI**	**1.13**	**145**	P	Pb	06 54 49.7	-0.6
SIGR				S	Sb	06 55 05.1	+0.2
	comp=E,470nm,0.5s						
SIGR	**SIGRI**	**1.13**	**145**	P	Pb	06 54 49.7	-0.6
SIGR				S	Sg	06 55 05.6	+0.1
SIGR				AML	AML	06 55 06.9	
	comp=N,949μm,0.5s						
SIGR				AML	AML	06 55 07.8	
	comp=E,868μm,0.5s						
SIGR	**SIGRI**	**1.13**	**145**	PN	Pb	06 54 49.7	-0.6
SIGR				SN	Sb	06 55 04.9	0.0
PLG	**Polygyros**	**1.23**	**281**	P	Pn	06 54 51.1	-0.7
PLG	**Polygyros**	**1.23**	**281**	P	Pn	06 54 51.2	-0.6
BAYC	**CANAKKALE_Bayr**	**1.24**	**109**	*i* P	Pn	06 54 51.2	-0.6
BAYC				*i* S	Sb	06 55 06.6	-1.3
BAYC				IAML		06 55 08.0	
	comp=N,138nm,0.4s						
BAYC				IAML		06 55 09.0	
	comp=E,150nm,0.3s						
ERIK	**Erikli-Kesan**	**1.25**	**65**	PN	Pn	06 54 50.4	-1.5
PRK	**Paraskevi**	**1.32**	**133**	P	Pb	06 54 53.6	+0.2
PRK	**Paraskevi**	**1.32**	**133**	P	Pb	06 54 53.3	-0.1
AOS	**Alonnisos**	**1.32**	**223**	P	Pn	06 54 51.8	-1.2
AOS	**Alonnisos**	**1.32**	**223**	P	Pn	06 54 52.0	-0.9
AOS				AML	AML	06 55 16.4	
	comp=N,290μm,0.3s						
AOS				AML	AML	06 55 17.6	
	comp=E,310μm,0.4s						
SKY	**Skiros Island**	**1.32**	**196**	P	Pn	06 54 52.1	-0.9
LPK	**Lapseki**	**1.34**	**80**	PN	Pn	06 54 52.1	-1.2
KESN	**Edirne-Kesan**	**1.43**	**61**	*i* P	Pn	06 54 53.2	-1.6
KESN				*i* S	Sn	06 55 11.8	-1.8
KESN				IAML		06 55 18.0	
	comp=E,185nm,0.3s						
KESN				IAML		06 55 19.0	
	comp=N,157nm,0.3s						
SRS	**Serrai**	**1.46**	**312**	P	Pn	06 54 54.0	-0.9
SRS	**Serrai**	**1.46**	**312**	P	Pn	06 54 54.1	-0.8
KDZ	**Kurdzhali**	**1.53**	**11**	PN	Pn	06 54 54.5	-1.3
AYVA	**Ayvalik**	**1.53**	**123**	*i* P	Pn	06 54 55.1	-0.8
AYVA				*i* S	Sn	06 55 14.0	-1.6
AYVA				IAML		06 55 17.0	
	comp=N,163nm,0.5s						
AYVA				IAML		06 55 17.0	
	comp=E,65nm,0.4s						
HORT	**Hortiatis**	**1.54**	**288**	P	Pn	06 54 55.3	-0.7
RZN	**Rozhen**	**1.55**	**351**	P	Pn	06 54 55.9	-0.5
SKIA	**Skiathos**	**1.56**	**231**	P	Pn	06 54 55.0	-1.2
SKIA				AML	AML	06 55 21.5	
	comp=E,302μm,0.4s						
SKIA				AML	AML	06 55 22.4	
	comp=N,296μm,0.5s						
UKOP	**Uzunkopru-Edir**	**1.56**	**51**	PN	Pn	06 54 54.7	-1.6
RKY	**Sarkoy-Tekirda**	**1.73**	**71**	PN	Pn	06 54 57.6	-1.0
DKL	**Dikili**	**1.81**	**126**	PN	Pn	06 54 59.1	-0.5
MRKA	**Markates**	**1.82**	**218**	P	Pn	06 54 58.9	-1.0
CHOS	**Chios island**	**1.93**	**155**	P	Pn	06 55 01.1	-0.4
CHOS	**Chios island**	**1.93**	**155**	P	Pn	06 55 01.2	-0.3
ZEDA	**zmir-Bergama**	**1.98**	**126**	*i* P	Pn	06 55 02.6	+0.6
ZEDA				*i* S	Sn	06 55 23.7	-2.9
BALY	**Balya**	**2.03**	**101**	*i* P	Pg	06 55 06.8	-1.1
BALY				IAML		06 55 38.0	
	comp=E,40nm,0.4s						
EDRB	**Edirne**	**2.13**	**37**	PN	Pn	06 55 03.6	-0.6
URLA	**Izmir**	**2.16**	**145**	*i* P	Pn	06 55 04.2	-0.3
URLA				*i* S	Sn	06 55 26.3	-4.9
EDC	**Edincik**	**2.18**	**84**	PN	Pn	06 55 04.5	-0.3
STEP	**BALIKESIR_Sava**	**2.21**	**110**	*i* P	Pn	06 55 05.4	+0.2
STEP				IAML		06 55 43.0	
	comp=E,51nm,0.4s						
STEP				IAML		06 55 47.0	
	comp=N,58nm,0.5s						
BALB	**Balikesir**	**2.25**	**102**	PN	Pn	06 55 04.5	-1.3
KIRK	**Kirklareli**	**2.26**	**43**	*i* P	Pn	06 55 07.0	+1.1
VTS	**Vitosha**	**2.81**	**332**	⇓P	Pb	06 55 20.3	+1.3
APE	**Apeiranthos**	**3.10**	**173**	⇓P	Pn	06 55 17.5	0.0
PLVB	**Pleven**	**3.25**	**355**	⇑P	Pg	06 55 30.3	-0.8
PLVB				⇓S	Sg	06 56 12.9	-0.3
AYDN	**Tasoluk**	**3.33**	**137**	*i* P	Pn	06 55 20.5	-0.3
RAZG	**Razgrad**	**3.59**	**17**	⇓S	Sg	06 56 22.6	-1.4
MDVR	**Moldovita**	**5.24**	**333**	⇑P	Pn	06 55 47.5	+0.7
MLR	**Muntele Rosu**	**5.38**	**7**	⇓P	Pn	06 55 49.9	+1.0
GZR	**Gura Zlata**	**5.50**	**343**	⇑P	Pn	06 55 50.3	-0.1
CFR	**Carcaliu**	**5.52**	**23**	⇑P	Pn	06 55 50.6	0.0
BZS	**Buzias**	**6.01**	**336**	⇓P	Pn	06 55 53.3	-4.1
BZS				⇑S	Sg	06 57 40.7	-1.0
BURAR	**Bucovina Array**	**7.46**	**1**	⇑P	Pn	06 56 19.6	+2.1

*IDC **25** 06:55:33.6±1.1,7.84S×155.90E,h0km,mb4.1/7, mb1 4.4/9,mb1mx4.0/35,mbtmp4.1/9,ML4.0/2,MS3.1/2, Ms1 3.1/2,ms1mx2.6/27, Error ellipse: s-maj=31.9km s-min=23.1km az=125.0*
*NEIC **25** 06:55:39.9±1.9,7.8S±0.2×155.7E±0.1,h35km±1km, mb4.4/18, Error ellipse: s-maj=28.0km s-min=20.0km az=147.0*
ISC 25 06:55:36.3±0.6,7.98S±0.09×155.98E±0.09,h18km,n37, σ1.935/32,mb4.4/16,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**5.36**	**313**	Pn	**Pn**	**06 56 55.0**	**-0.5**
	7.8nm,0.3s,baz=21,slow=14,SNR=3.5						
KRVT				Sn	**Sn**	**06 57 58.5**	**+1.6**
	15nm,0.3s,baz=154,slow=22,SNR=6.3						
KRVT				LR	LR	06 58 31.7	
	comp=Z,81nm,19.4s,baz=55,slow=34						
PMG	**Port Moresby**	**8.84**	**260**	Pn	**Pn**	**06 57 42.5**	**-0.7**
DZM	**Mont Dzumac**	**17.26**	**145**	*e*P	**Pn**	**06 59 36.4**	**-0.2**
	5.8nm,0.7s						
DZM	**Mont Dzumac**	**17.26**	**145**	*e*LR	LR	07 17 32.0	
	comp=Z,138nm,22.6s						
DZM	**Mont Dzumac**	**17.26**	**145**	P	**Pn**	**06 59 36.7**	**+0.1**
	0.3nm,0.3s,baz=216,slow=22,SNR=7.8						
DZM	**Mont Dzumac**	**17.26**	**145**	P	**Pn**	**06 59 37.3**	**+0.6**
FUNA	**Funafuti**	**22.98**	**93**	P	**P**	**07 00 39.6**	**-0.6**
WR0	**Warramunga Arr**	**23.94**	**238**	P	**P**	**07 00 50.5**	**+0.9**
WB0	**Warramunga Arr**	**23.98**	**239**	P	**P**	**07 00 51.4**	**+1.4**
WB0				IAmb	IAmb	07 00 54.2	
	comp=Z,15nm,1.4s						
WRAB	**Tennant Creek**	**24.09**	**238**	P	**P**	**07 00 53.3**	**+2.3**
WRAB				IAmb	IAmb	07 00 55.2	
	comp=Z,12nm,1.1s						
WB2	**Warramunga Arr**	**24.09**	**238**	P	**P**	**07 00 51.0**	**-0.1**
WB2				IAmb	IAmb	07 00 55.3	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**24.10**	**238**	P	**P**	**07 00 51.3**	**+0.2**
	comp=Z,5.9nm,1.0s,baz=60,slow=9.9,SNR=8.8						
ASAR	**Alice Springs**	**26.29**	**231**	P	**P**	**07 01 12.3**	**+1.2**
	comp=Z,1.7nm,0.9s,baz=60,slow=7.6,SNR=7.4						
STKA	**Stephens Creek**	**27.30**	**207**	LR	LR	07 11 55.8	
	comp=Z,96nm,18.9s,baz=29,slow=36						
STKA	**Stephens Creek**	**27.30**	**207**	P	**P**	**07 01 22.5**	**+2.5**
KNRA	**Kununurra**	**27.70**	**251**	P	**P**	**07 01 25.4**	**+1.7**
H11S3	**WAKE ISLAND Hy**	**28.34**	**22**	T	T	07 29 57.0	
	baz=203,slow=75,SNR=8.2						
H11S2	**WAKE ISLAND Hy**	**28.35**	**22**	T	T	07 29 58.8	
	baz=203,slow=75,SNR=8.1						
H11S1	**WAKE ISLAND Hy**	**28.36**	**22**	T	T	07 29 57.9	
	baz=203,slow=75,SNR=4.1						
FITZ	**Fitzroy Crossi**	**31.18**	**248**	P	**P**	**07 01 53.9**	**-0.7**
FITZ				IAmb	IAmb	07 01 54.2	
	comp=Z,4.7nm,0.8s						
TUWZ	**Tuamarina**	**36.93**	**157**	P	**P**	**07 02 43.4**	**-0.8**
PPT2	**Papeete2**	**53.79**	**106**	*e*LR	LR	07 33 25.9	
	comp=Z,60nm,24.0s						
PETK	**Petropavlovsk-**	**60.86**	**1**	P	**P**	**07 05 46.4**	**-1.2**
	comp=Z,5.1nm,1.0s,baz=163,slow=9.2,SNR=3.5						
CMAR	**Chiang Mai Arr**	**62.09**	**296**	P	**P**	**07 05 54.8**	**-1.7**
	comp=Z,1.2nm,0.3s,baz=98,slow=6.5,SNR=6.4						
CASY	**Casey**	**65.97**	**198**	P	**P**	**07 06 19.1**	**-2.1**
TTA	**Tatalina**	**79.59**	**20**	P	**P**	**07 07 43.8**	**+1.6**
TTA				IAmb	IAmb	07 07 44.5	
	comp=Z,4.1nm,1.2s						
SML	**Sawmill**	**81.73**	**23**	P	**P**	**07 07 55.0**	**+1.4**
QSPA	**South Pole Qui**	**82.01**	**180**	P	**P**	**07 07 56.4**	**+1.2**
QSPA				IAmb	IAmb	07 08 06.8	
	comp=Z,3.5nm,1.2s						
MCK	**McKinley**	**82.60**	**22**	P	**P**	**07 07 58.8**	**+0.7**
MCK				IAmb	IAmb	07 07 59.4	
	comp=Z,5.2nm,0.9s						
CCB	**Clear Creek Bu**	**83.53**	**21**	P	**P**	**07 08 03.2**	**+0.4**
CCB				IAmb	IAmb	07 08 11.5	
	comp=Z,3.7nm,1.4s						
IL31		**83.92**	**21**	P	**P**	**07 08 05.2**	**+0.4**
ILAR	**Eielson Array**	**83.92**	**21**	P	**P**	**07 08 05.0**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=248,slow=5.4,SNR=19						
MKAR	**Makanchi Array**	**84.78**	**319**	P	**P**	**07 08 07.7**	**-1.9**
	comp=Z,0.4nm,0.6s,baz=92,slow=8.5,SNR=4.2						
TOLK	**Toolik Lake Re**	**85.25**	**17**	P	**P**	**07 08 12.7**	**+1.1**
TOLK				IAmb	IAmb	07 08 13.9	
	comp=Z,3.2nm,0.8s						
EPYK	**Eagle Plains**	**88.40**	**22**	P	**P**	**07 08 29.4**	**+2.4**
YKA	**Yellowknife Ar**	**96.74**	**28**	P	**P**	**07 09 06.9**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=264,slow=4.1,SNR=9.7						
TORD	**Torodi Ar. Bea**	**154.22**	**284**	PKPbc	**PKiKP**	**07 15 36.7**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=69,slow=3.5,SNR=2.7						

*DDA **25** 06:55:38.9,40.43N×26.29E,h7km±2km,ML2.5*
ISK 25 06:55:38.4,40.43N×26.29E,h17km,ML2.6/10,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GELI	**Tayfur-Gelibol**	**0.14**	**103**	PG	Pb	06 55 42.7	+0.1
GELI				SG	Sb	06 55 45.5	+0.1
ERIK	**Erikli-Kesan**	**0.29**	**35**	PG	Pb	06 55 45.2	0.0
ERIK				SG	Sb	06 55 49.5	-0.3
ENEZ	**Enez**	**0.32**	**341**	PG	Pb	06 55 45.8	+0.1
ENEZ				SG	Sb	06 55 50.7	0.0
LPK	**Lapseki**	**0.36**	**99**	PG	Pb	06 55 46.7	+0.3
LPK				SG	Sb	06 55 52.6	+0.8
GADA	**Gvkgeada**	**0.39**	**232**	PG	Pb	06 55 47.1	+0.3
GADA				SG	Sb	06 55 52.9	+0.5
KESN	**Edirne-Kesan**	**0.49**	**37**	*i* P	Pg	06 55 48.2	-0.3
KESN				*i* S	Sg	06 55 55.2	0.0
KESN				IAML		06 56 02.0	
	comp=N,274nm,0.3s						
KESN				IAML		06 56 02.0	

BALY			*i* S	Sg	06 56 17.7	-0.5	
BALY			IAML		06 56 20.0		
	comp=N,72nm,0.8s						
BALY	**Balya**	**1.23 124**	IAML		06 56 20.0		
	comp=N,72nm,0.8s						
SIGR	**SIGRI**	**1.26 196**	PN	Pn	06 56 01.2	-0.1	
BALB	**Balikesir**	**1.45 122**	PN	Pb	06 56 04.5	-0.5	
STEP	**BALIKESIR_Sava**	**1.52 133**	*i* P	Pb	06 56 06.5	+0.4	
STEP			*i* S	Sg	06 56 27.9	+0.4	
STEP			IAML		06 56 30.0		
	comp=E,48nm,0.3s						
STEP			IAML		06 56 32.0		
	comp=N,42nm,0.5s						
ZEDA	**zmir-Bergama**	**1.58 157**	*i* P	Pb	06 56 07.1	-0.1	
ZEDA			*i* S	Sb	06 56 27.1	+0.2	
ZEDA			IAML		06 56 30.0		
	comp=N,54nm,0.3s						

*THE **25** 07:02:50.0,40°.03N×24°.27E,h14km,ML2.8/10,Error ellipse: s-maj=0.9km s-min=0.4km az=352.0*

ATH 25 07:02:49.0,40°.03N×24°.29E,h26km±2km,ML2.8/14,10D, Error ellipse: s-maj=2.5km s-min=0.8km az=295.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.38**	**323**	P	Pb	07 02 57.6	+0.2
OUR				S	Sb	07 03 03.5	+0.4
	3μm,0.3s						
OUR	**Ouranopolis**	**0.38**	**323**	P	Pb	07 02 57.4	0.0
OUR				S	Sb	07 03 03.4	+0.2
OUR				AML	AML	07 03 03.6	
	comp=E,3974μm,0.2s						
OUR				AML	AML	07 03 05.9	
	comp=N,5529μm,0.2s						
PAIG	**Paliouri**	**0.48**	**258**	P	Pb	07 02 59.4	+0.5
PAIG				S	Sb	07 03 05.8	+0.2
	comp=N,722nm,0.4s						
PAIG	**Paliouri**	**0.48**	**258**	P	Pb	07 02 59.2	+0.3
PAIG				S	Sb	07 03 05.9	+0.3
PAIG				AML	AML	07 03 07.4	
	comp=E,1584μm,0.3s						
PAIG				AML	AML	07 03 08.7	
	comp=N,1451μm,0.3s						
THAS	**Thassos island**	**0.67**	**30**	P	Pb	07 03 02.3	+0.2
THAS				S	Sn	07 03 12.9	+0.6
	comp=N,1μm,0.5s						
THAS	**Thassos island**	**0.67**	**30**	P	Pb	07 03 01.9	-0.1
THAS				S	Sn	07 03 12.3	0.0
THAS				AML	AML	07 03 13.6	
	comp=E,2164μm,0.2s						
THAS				AML	AML	07 03 13.8	
	comp=N,1610μm,0.2s						
LIA	**Limnos Island**	**0.70**	**100**	P	Pn	07 03 03.3	+0.1
LIA				S	Sn	07 03 14.2	+1.0
	comp=N,2μm,0.4s						
LIA	**Limnos Island**	**0.70**	**100**	P	Pn	07 03 03.1	-0.2
LIA				S	Sn	07 03 13.0	-0.2
LIA				AML	AML	07 03 14.9	
	comp=E,3580μm,0.4s						
LIA				AML	AML	07 03 15.1	
	comp=N,5568μm,0.4s						
PLG	**Polygyros**	**0.73**	**298**	P	Pn	07 03 03.7	0.0
PLG				S	Sn	07 03 14.3	+0.3
	comp=N,868nm,0.3s						
PLG	**Polygyros**	**0.73**	**298**	P	Pn	07 03 03.8	+0.1
PLG				S	Sb	07 03 13.3	+0.5
PLG				AML	AML	07 03 16.8	
	comp=E,1868μm,0.4s						
PLG				AML	AML	07 03 16.9	
	comp=N,1624μm,0.3s						
KVLA	**Kavala**	**0.91**	**5**	P	Pb	07 03 07.0	+0.8
KVLA				S	Sn	07 03 19.8	+1.4
AOS	**Alonnisos**	**0.91**	**200**	P	Pb	07 03 06.9	+0.7
AOS				S	Sn	07 03 20.6	+2.2
	comp=N,450nm,0.4s						
AOS	**Alonnisos**	**0.91**	**200**	P	Pb	07 03 06.3	+0.1
AOS				S	Sn	07 03 19.8	+1.4
AOS				AML	AML	07 03 23.8	
	comp=N,880μm,0.4s						
AOS				AML	AML	07 03 24.1	
	comp=E,1079μm,0.3s						
KAVA	**Kavala**	**0.98**	**10**	P	Pb	07 03 08.1	+0.7
KAVA				S	Sn	07 03 22.5	+2.3
	comp=E,712nm,0.2s						
KAVA	**Kavala**	**0.98**	**10**	P	Pb	07 03 08.0	+0.6
KAVA				S	Sn	07 03 22.2	+2.1
KAVA				AML	AML	07 03 23.0	
	comp=N,1154μm,0.3s						
KAVA				AML	AML	07 03 23.5	
	comp=E,1666μm,0.2s						
SMTH	**Samothraki Isl**	**1.05**	**65**	P	Pb	07 03 09.8	+1.2
SMTH	**Samothraki Isl**	**1.05**	**65**	P	Pb	07 03 08.6	0.0
SMTH				S	Sb	07 03 23.7	+1.8
SMTH				AML	AML	07 03 25.2	
	comp=N,1163μm,0.4s						
SMTH				AML	AML	07 03 27.4	
	comp=E,496μm,0.3s						
SOH	**Sokhos**	**1.06**	**318**	P	Pb	07 03 10.0	+1.2
SOH				S	Sb	07 03 24.6	+2.2
	comp=E,770nm,0.4s						
SKIA	**Skiathos**	**1.07**	**217**	P	Pb	07 03 09.5	+0.6
SKIA				S	Sb	07 03 24.8	+2.4
	comp=E,398nm,0.4s						
SKIA	**Skiathos**	**1.07**	**217**	P	Pb	07 03 09.6	+0.7
SKIA				AML	AML	07 03 29.3	
	comp=N,889μm,0.3s						
SKIA				AML	AML	07 03 31.0	
	comp=E,892μm,0.5s						
HORT	**Hortiatis**	**1.07**	**302**	P	Pb	07 03 09.8	+0.9
HORT	**Hortiatis**	**1.07**	**302**	P	Pb	07 03 09.8	+0.8
HORT				S	Sb	07 03 24.3	+1.7
HORT				AML	AML	07 03 27.6	
	comp=E,479μm,0.3s						
HORT				AML	AML	07 03 30.8	
	comp=N,454μm,0.5s						
XOR	**Xorichti**	**1.07**	**232**	P	Pb	07 03 09.6	+0.7
XOR				S	Sb	07 03 24.4	+1.8
	comp=N,362nm,0.6s						
XOR	**Xorichti**	**1.07**	**232**	P	Pb	07 03 09.5	+0.6
XOR				AML	AML	07 03 27.1	
	comp=E,531μm,0.6s						
XOR				AML	AML	07 03 29.7	
	comp=N,1035μm,0.4s						
SKY	**Skiros Island**	**1.17**	**170**	P	Pb	07 03 10.7	+0.1
SKY				AML	AML	07 03 30.4	
	comp=N,1424μm,0.2s						
SKY				AML	AML	07 03 31.7	
	comp=E,1113μm,0.2s						
SRS	**Serrai**	**1.21**	**334**	P	Pb	07 03 11.9	+0.6
SRS	**Serrai**	**1.21**	**334**	P	Pb	07 03 11.8	+0.5
SRS				AML	AML	07 03 30.6	
	comp=E,484μm,0.3s						
SRS				AML	AML	07 03 31.6	
	comp=N,490μm,0.2s						
SIGR	**SIGRI**	**1.46**	**123**	P	Pb	07 03 15.3	-0.2
SIGR	**SIGRI**	**1.46**	**123**	P	Pb	07 03 14.8	-0.7
RDO	**Rodhopi**	**1.47**	**40**	P	Pn	07 03 14.7	+0.9
KNT	**Kendrikon**	**1.55**	**317**	P	Pb	07 03 16.9	-0.1
KNT				AML	AML	07 03 42.1	
	comp=E,316μm,0.6s						
KNT				AML	AML	07 03 42.5	
	comp=N,536μm,0.3s						
MMB	**Musomiste**	**1.61**	**345**	P	Pb	07 03 17.2	-1.0
AGG	**Agios Georgios**	**1.82**	**237**	P	Pn	07 03 20.1	+1.5
KDZ	**Kurdzhali**	**1.83**	**28**	P	Pn	07 03 19.6	+0.8
VAY	**Valandovo**	**1.83**	**315**	*i* Pn	Pb	07 03 24.8	+2.9
VAY	**Valandovo**	**1.83**	**315**	*i* Pn	Pb	07 03 24.8	+2.9
VTS	**Vitosha**	**2.71**	**343**	||P	Pn	07 03 33.5	+2.6
APE	**Apeiranthos**	**3.11**	**161**	||P	Pn	07 03 37.5	+1.1
ELND	**Elena**	**3.13**	**22**	||P	Pn	07 03 38.7	+2.0
PLVB	**Pleven**	**3.37**	**4**	||P	Pn	07 03 43.0	+3.1
VLAD	**Vladila**	**3.97**	**1**	||P	Pb	07 04 05.9	+7.7
SRE	**Strehaia**	**4.70**	**351**	||P	Pn	07 04 00.6	+2.4
ARR	**Arges**	**5.34**	**3**	||P	Pn	07 04 09.3	+2.2
MLR	**Muntele Rosu**	**5.59**	**12**	||P	Pn	07 04 13.8	+3.2
DOPR	**Dopca**	**5.99**	**7**	||P	Pn	07 04 18.2	+2.3
VRI	**Vrincioaia**	**6.10**	**16**	||P	Pn	07 04 19.9	+2.4

*DDA **25** 07:03:41.0,40°.39N×26°.18E,h18km±3km,ML2.7*

ISK 25 07:03:40.4,40°.41N×26°.16E,h20km,ML2.9/20,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GELI	**Tayfur-Gelibol**	**0.24**	**94**	PG	Pb	07 03 46.7	+0.3
GELI				SG	Sb	07 03 50.5	0.0
GADA	**Gvkgeada**	**0.30**	**222**	PG	Pb	07 03 47.7	+0.6
GADA				SG	Sb	07 03 52.4	+0.8
ERIK	**Erikli-Kesan**	**0.37**	**46**	PG	Pb	07 03 48.9	+0.7
ERIK				SG	Sb	07 03 54.5	+1.0
LPK	**Lapseki**	**0.46**	**95**	PG	Pn	07 03 50.8	-1.0
LPK				SG	Sb	07 03 57.7	+1.6
KESN	**Edirne-Kesan**	**0.57**	**44**	*i* P	Pb	07 03 52.2	+0.2
KESN				*i* S	Sb	07 03 60.0	0.0
KESN				IAML		07 04 07.0	
	comp=N,598nm,0.2s						
KESN				IAML		07 04 07.0	
	comp=E,692nm,0.3s						
BOZC	**Bozcaada**	**0.58**	**188**	PG	Pn	07 03 52.9	-0.5
BOZC				SG	Sb	07 04 00.6	+0.9
BOZC	**Bozcaada**	**0.58**	**188**	*i* P	Pb	07 03 52.4	+0.5
BOZC				*i* P	Pn	07 03 52.5	-0.9
BOZC				*i* S	Sb	07 04 00.4	+0.7
BOZC				*i* S	Sn	07 04 00.8	-1.5
BOZC				IAML		07 04 01.0	
	comp=E,811nm,1.3s						
BOZC				IAML		07 04 02.0	
	comp=E,357nm,0.2s						
BOZC				IAML		07 04 06.0	
	comp=N,265nm,0.3s						
EZN	**Ezine**	**0.60**	**168**	PG	Pn	07 03 53.2	-0.5
EZN				SG	Sn	07 04 02.1	-0.7
BAYC	**CANAKKALE_Bayr**	**0.73**	**156**	*i* P	Pb	07 03 54.9	+0.3
BAYC				*i* S	Sb	07 04 05.1	+1.0
UKOP	**Uzunkopru-Edir**	**0.80**	**27**	PG	Pn	07 03 56.7	+0.2
RKY	**Sarkoy-Tekirda**	**0.82**	**70**	PG	Pb	07 03 56.2	+0.2
SART	**Tekirdag**	**0.82**	**70**	*i* P	Pb	07 03 56.3	+0.2
SART				*i* S	Sn	07 04 09.0	+0.5
KRBG	**Karabiga-Canak**	**0.87**	**91**	PG	Pn	07 03 57.7	+0.3
RDO	**Rodhopi**	**0.87**	**327**	PG	Pn	07 03 58.1	+0.6
KNL	**Balıkesir**	**1.05**	**97**	*i* P	Pn	07 04 01.1	+1.1
KNL				*i* S	Sn	07 04 15.2	+1.2
KNL				IAML		07 04 18.0	
	comp=N,224nm,0.4s						
KNL				IAML		07 04 19.0	
	comp=E,513nm,0.6s						
AYVA	**Ayvalik**	**1.18**	**160**	*i* P	Pb	07 04 03.4	+1.3
AYVA				*i* S	Sn	07 04 19.2	+2.1
AYVA				IAML		07 04 21.0	
	comp=E,211nm,0.5s						
AYVA				IAML		07 04 22.0	
	comp=N,382nm,0.6s						
TKR	**Tekirdag**	**1.19**	**61**	PN	Pb	07 04 03.0	+0.7
SIGR	**SIGRI**	**1.22**	**191**	PN	Pb	07 04 03.0	+0.2
GONE	**Gonen-Balikesi**	**1.23**	**107**	PN	Pb	07 04 02.8	0.0
EDC	**Edincik**	**1.30**	**92**	PN	Pb	07 04 04.0	-0.2
BALY	**Balya**	**1.31**	**121**	*i* P	Pb	07 04 06.0	+1.8
BALY				*i* S	Sb	07 04 21.7	+1.1
BALY				IAML		07 04 25.0	
	comp=E,127nm,0.3s						
BALY				IAML		07 04 29.0	
	comp=N,115nm,1.0s						
KDZ	**Kurdzhali**	**1.36**	**336**	PN	Pn	07 04 04.6	+0.4
EDRB	**Edirne**	**1.50**	**17**	PN	Pn	07 04 06.6	+0.5
BOTS	**Marmara Eregli**	**1.50**	**67**	PN	Pn	07 04 06.6	+0.5
BALB	**Balikesir**	**1.53**	**120**	PN	Pn	07 04 06.8	+0.3
KIRK	**Kırklareli**	**1.54**	**27**	*i* P	Pb	07 04 08.0	-0.2
KIRK				*i* S	Sn	07 04 26.5	+0.5
STEP	**BALIKESIR_Sava**	**1.58**	**130**	*i* P	Pb	07 04 09.7	+0.7
STEP				*i* S	Sb	07 04 29.9	+1.3
STEP				IAML		07 04 34.0	
	comp=E,107nm,0.5s						
STEP				IAML		07 04 34.0	
	comp=N,93nm,0.3s						
ZEDA	**zmir-Bergama**	**1.61**	**154**	*i* P	Pb	07 04 09.3	-0.1
ZEDA				*i* S	Sb	07 04 31.4	+2.2
ZEDA				IAML		07 04 34.0	
	comp=N,73nm,0.3s						
KCTX	**Karacabey (Bur**	**1.69**	**94**	PN	Pn	07 04 08.7	0.0
ELBA	**Catalca**	**1.87**	**66**	*i* P	Pb	07 04 12.9	-1.0
CTYL	**Yalikoy Yolu**	**1.93**	**56**	PN	Pn	07 04 12.4	+0.4
DURS	**Dursunbey**	**1.96**	**114**	*i* P	Pb	07 04 15.8	+0.4
DURS				*i* S	Sb	07 04 39.7	+0.4
DURS				IAML		07 04 44.0	
	comp=N,107nm,0.3s						
DURS				IAML		07 04 45.0	
	comp=E,161nm,0.3s						
CTKS	**Kestanelik-??a**	**1.96**	**64**	PN	Pn	07 04 13.4	+1.0
CHOS	**Chios island**	**2.03**	**182**	PN	Pn	07 04 13.8	+0.4
URLA	**Izmir**	**2.08**	**171**	PN	Pn	07 04 14.2	+0.1
URLA	**Izmir**	**2.08**	**171**	*i* P	Pn	07 04 14.4	+0.3
URLA				*i* S	Sb	07 04 42.9	+0.1
URLA				IAML		07 04 50.0	
	comp=N,47nm,0.6s						
URLA				IAML		07 04 51.0	
	comp=E,42nm,0.5s						
BLCB	**Balcova**	**2.14**	**161**	PN	Pn	07 04 15.4	+0.5
ULDT	**Uludag**	**2.29**	**96**	*i* P	Pb	07 04 19.4	-1.7
ULDT				*i* S	Sn	07 04 46.2	+1.2
ULDT				IAML		07 04 55.0	
	comp=N,26nm,0.8s						
ULDT				IAML		07 04 57.0	
	comp=E,25nm,0.3s						
BUY	**Buyukada**	**2.29**	**78**	*i* P	Pb	07 04 23.1	+2.1
BUY				IAML		07 05 03.0	
	comp=E,28nm,0.3s						
BUY				IAML		07 05 05.0	
	comp=N,29nm,0.7s						
IGD	**Bursa**	**2.33**	**93**	*i* P	Pb	07 04 23.8	+2.1
IGD				IAML		07 05 00.0	
	comp=E,17nm,0.4s						
IGD				IAML		07 05 55.0	
	comp=N,19nm,2.6s						
DGB	**zmir**	**2.42**	**166**	*i* P	Pn	07 04 20.7	+1.9
MANT	**Manisa**	**2.67**	**135**	*i* P	Pn	07 04 24.2	+1.8
USAK	**Uak-Merkez**	**2.79**	**127**	*i* P	Pb	07 04 26.9	-2.6
USAK				IAML		07 05 01.0	
	comp=E,25nm,1.3s						
USAK				IAML		07 05 01.0	
	comp=N,20nm,1.1s						

IDC 25 07:05:09.2±3.0,22°.04N×142°.61E,h272km±27km,mb3.1/3, mb1 3.3/4,mb1mx2.8/36,mbtmp3.8/4,Error ellipse: s-maj=73.5km s-min=26.4km az=99.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.05**	**356**	P	Pn	07 06 26.2	0.0
	7.5nm,0.3s,baz=0.3,slow=21,SNR=19						
WRA	**Warramunga Arr**	**42.50**	**192**	P	P	07 12 38.1	-0.2
	0.6nm,0.7s,baz=6.0,slow=7.5,SNR=1.7						
YKA	**Yellowknife Ar**	**76.41**	**28**	P	P	07 16 28.4	-0.1
	0.2nm,0.5s,baz=292,slow=5.6,SNR=5.8						
FINES	**FINESS Array B**	**82.64**	**334**	P	P	07 17 02.2	+0.2
	0.7nm,0.5s,baz=54,slow=7.1,SNR=6.0						

*TAP **25** 07:16:05.8,23°.92N×122°.89E,h23km±1km,ML3.3,D*
*JMA **25** 07:16:07.4±0.2,24°.05N×122°.76E,h26km±4km,M3.1*

ISC 25 07:16:06.7±1.2,23°.97N±0°.03×122°.81E±0°.02,h19km±3km, n84,σ0°.73/157,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.50**	**14**	P	**Pg**	**07 16 16.4**	**-0.4**
JYNG				*eS*	**Sg**	**07 16 22.6**	**-0.9**
YOJ	**Yonaguni jima**	**0.53**	**20**	*eP*	**Pb**	**07 16 17.1**	**-0.1**
	baz=10.0						
YOJ				*eS*	**Sg**	**07 16 23.9**	**-0.5**
	baz=10.0						
YOJ	**Yonaguni jima**	**0.53**	**20**	P	**Pb**	**07 16 17.1**	**-0.1**
YOJ				*eS*	**Sg**	**07 16 23.7**	**-0.7**
EOS1	**EOS1**	**0.85**	**313**	*eP*	**Pb**	**07 16 22.9**	**0.0**
	baz=312						
EOS1				*eS*	**Sg**	**07 16 35.3**	**+0.6**
	baz=312						
HATJ	**Hateruma jima**	**0.91**	**84**	P	**Pg**	**07 16 24.9**	**+0.4**
HATJ				*eS*	**Sn**	**07 16 37.3**	**+0.2**
IRIF	**Iriomote-Funau**	**0.92**	**66**	P	**Pb**	**07 16 24.1**	**+0.2**
IRIF				S	**Sn**	**07 16 37.5**	**+0.3**
ENA	**Nanau**	**1.08**	**295**	*eP*	**Pb**	**07 16 26.3**	**-0.4**
	baz=296						
ENA				*eS*	**Sb**	**07 16 41.0**	**+0.5**
	baz=296						

TWC	**Suao**	**1.09**	**306**	*eP*	**Pb**	**07 16 26.2**	**-0.7**
	baz=306						
TWC				*eS*	**Sb**	**07 16 41.1**	**+0.4**
	baz=306						
TWD	**Chiawan**	**1.12**	**276**	*eP*	**Pn**	**07 16 26.6**	**-0.7**
	baz=277						
TWD				*eS*	**Sb**	**07 16 41.5**	**-0.1**
	baz=277						
JKRS	**Kuro-shima**	**1.13**	**76**	P	**Pb**	**07 16 27.9**	**+0.4**
JKRS				S	**Sg**	**07 16 44.6**	**+1.3**
NACB	**Ninganchiao**	**1.13**	**281**	*eP*	**Pn**	**07 16 26.4**	**-1.1**
	baz=282						
NACB				*eS*	**Sn**	**07 16 42.6**	**0.0**
	baz=282						
ETLH	**Xiulin Townshi**	**1.24**	**281**	*eP*	**Pn**	**07 16 28.4**	**-0.7**
	baz=282						
ETLH				*eS*	**Sb**	**07 16 45.0**	**-0.1**
	baz=282						
NTC	**Toucheng**	**1.26**	**315**	*eP*	**Pn**	**07 16 29.5**	**+0.3**
	baz=314						
NTC				*eS*	**Sn**	**07 16 46.0**	**+0.4**
	baz=314						
JIJ	**Ishigaki jima**	**1.28**	**72**	P	**Pb**	**07 16 30.2**	**+0.1**
JIJ				S	**Sb**	**07 16 47.3**	**+1.1**
TWB1	**Santiao Chiao**	**1.28**	**324**	*eP*	**Pn**	**07 16 28.8**	**-0.7**
	baz=323						
TWB1				*eS*	**Sn**	**07 16 46.1**	**-0.1**
	baz=323						
TWE	**Neicheng**	**1.29**	**306**	*eP*	**Pn**	**07 16 29.7**	**+0.1**
	baz=305						
TWE				*eS*	**Sn**	**07 16 46.5**	**+0.2**
	baz=305						
EGFH	**Guangfu**	**1.30**	**257**	*eP*	**Pn**	**07 16 29.0**	**-0.9**
	baz=259						
EGFH				*eS*	**Sn**	**07 16 46.4**	**-0.3**
	baz=259						
ENTT	**Nioudou**	**1.32**	**301**	*eP*	**Pn**	**07 16 30.3**	**+0.2**
	baz=300						
ENTT				*eS*	**Sb**	**07 16 47.9**	**+0.5**
	baz=300						
NDT	**Datong Townshi**	**1.34**	**298**	P	**Pb**	**07 16 31.3**	**+0.1**
	baz=298						
NDT				*eS*	**Sn**	**07 16 47.8**	**0.0**
	baz=298						
TIPB	**Shuangxi**	**1.34**	**318**	*eP*	**Pn**	**07 16 30.4**	**-0.1**
	baz=317						
TIPB				*eS*	**Sn**	**07 16 47.6**	**-0.3**
	baz=317						
HGSD	**Ruisui**	**1.36**	**250**	*eP*	**Pn**	**07 16 29.5**	**-1.1**
	baz=252						
HGSD				*eS*	**Sn**	**07 16 48.1**	**0.0**
	baz=252						
NNSB	**Datong**	**1.38**	**290**	*eP*	**Pn**	**07 16 30.9**	**-0.2**
	baz=290						
NNSB				*eS*	**Sb**	**07 16 49.5**	**+0.1**
	baz=290						
NNSH	**Datong**	**1.38**	**290**	*eP*	**Pn**	**07 16 31.0**	**-0.1**
	baz=290						
NNSH				*eS*	**Sb**	**07 16 49.5**	**+0.1**
	baz=290						
NNS	**Nan Shan**	**1.40**	**290**	*eP*	**Pn**	**07 16 31.4**	**+0.1**
	baz=290						
NNS				*eS*	**Sn**	**07 16 49.6**	**+0.3**
	baz=290						
WHF	**Hehuan Shan**	**1.43**	**277**	*eP*	**Pn**	**07 16 31.2**	**-0.7**
	baz=278						
WHF				*eS*	**Sn**	**07 16 49.4**	**-1.0**
	baz=278						
EHY	**Hungye**	**1.44**	**252**	*eP*	**Pn**	**07 16 30.9**	**-0.9**
	baz=253						
EHY				*eS*	**Sn**	**07 16 49.4**	**-0.7**
	baz=253						
NWLT	**Wulai**	**1.44**	**304**	*eP*	**Pn**	**07 16 32.4**	**+0.5**
	baz=304						
NWLT				*eS*	**Sn**	**07 16 50.3**	**+0.1**
	baz=304						
NWF	**Wu-fen Shan**	**1.45**	**320**	*eP*	**Pn**	**07 16 31.9**	**0.0**
	baz=318						
NWF				*eS*	**Sn**	**07 16 50.2**	**-0.2**
	baz=318						
WFSB	**Wu-fen Shan**	**1.45**	**320**	*eP*	**Pn**	**07 16 31.7**	**-0.2**
	baz=318						
WFSB				*eS*	**Sn**	**07 16 49.8**	**-0.5**
	baz=318						
YHNB	**Yeheng**	**1.48**	**298**	*eP*	**Pn**	**07 16 32.3**	**-0.2**
	baz=298						
YHNB				*eS*	**Sb**	**07 16 52.2**	**-0.1**
	baz=298						
JISG	**Ishigakijimahi**	**1.50**	**65**	P	**Pn**	**07 16 32.7**	**+0.1**
JISG				*eS*	**Sb**	**07 16 52.6**	**0.0**
CHGB	**Renai**	**1.50**	**274**	*eP*	**Pn**	**07 16 32.0**	**-0.8**
	baz=275						
CHGB				*eS*	**Sn**	**07 16 51.4**	**-0.6**
	baz=275						
YULB	**Yu-li**	**1.50**	**248**	*eP*	**Pn**	**07 16 32.1**	**-0.5**
	baz=250						
YULB				*eS*	**Sn**	**07 16 51.0**	**-0.7**
	baz=250						
NSK	**Sanguang**	**1.50**	**298**	*eP*	**Pn**	**07 16 32.9**	**+0.3**
	baz=298						
NSK				*eS*	**Sb**	**07 16 52.6**	**-0.1**
	baz=298						
TWA	**Mucha**	**1.51**	**312**	*eP*	**Pn**	**07 16 33.1**	**+0.4**
	baz=311						
TWA				*eS*	**Sb**	**07 16 52.6**	**-0.2**
	baz=311						
TWF1	**Yuli**	**1.52**	**247**	*eP*	**Pn**	**07 16 32.0**	**-0.8**
	baz=248						
TWF1				*eS*	**Sn**	**07 16 51.1**	**-1.0**
	baz=248						
TWT	**Tachien**	**1.52**	**281**	*eP*	**Pn**	**07 16 33.9**	**+0.8**
	baz=281						
TDCB	**Techi**	**1.54**	**281**	*eP*	**Pn**	**07 16 33.8**	**+0.6**
	baz=281						
VWDT	**VWDT**	**1.54**	**262**	*eP*	**Pn**	**07 16 32.6**	**-0.6**
	baz=264						
VWDT				*eS*	**Sn**	**07 16 52.2**	**-0.5**
	baz=264						
TATO	**Taipei**	**1.57**	**310**	*eP*	**Pn**	**07 16 33.1**	**-0.5**
	baz=309						
TATO				*eS*	**Sn**	**07 16 53.9**	**+0.6**
	baz=309						
FULB	**Fuli**	**1.59**	**242**	*eP*	**Pn**	**07 16 32.9**	**-0.9**
	baz=243						
FULB				*eS*	**Sn**	**07 16 52.8**	**-1.1**
	baz=243						
YM01	**YM01**	**1.63**	**316**	*eP*	**Pn**	**07 16 34.1**	**-0.3**
	baz=315						
YM04	**YM04**	**1.66**	**316**	*eP*	**Pn**	**07 16 34.4**	**-0.4**
	baz=315						
YM04				*eS*	**Sb**	**07 16 56.7**	**-0.5**
	baz=315						
SSLB	**Suanglung**	**1.71**	**264**	*eP*	**Pn**	**07 16 36.0**	**+0.5**
	baz=265						
SSLB				*eS*	**Sb**	**07 16 58.1**	**-0.6**
	baz=265						
DPDB	**Guoxing**	**1.73**	**273**	*eP*	**Pn**	**07 16 35.5**	**-0.3**
	baz=273						
DPDB				*eS*	**Sb**	**07 16 58.7**	**-0.5**
	baz=273						
WHP	**Taichung City**	**1.73**	**281**	*eP*	**Pn**	**07 16 36.7**	**+0.8**
	baz=281						
WHP				*eS*	**Sn**	**07 16 58.2**	**+0.7**
	baz=281						
SMLT	**Sun Moon Lake**	**1.75**	**268**	*eP*	**Pn**	**07 16 35.7**	**-0.4**
	baz=268						
SMLT				*eS*	**Sn**	**07 16 58.5**	**+0.4**
	baz=268						
TWH	**Lutao**	**1.75**	**225**	*eP*	**Pn**	**07 16 35.0**	**-1.0**
	baz=226						
TWH				*eS*	**Sn**	**07 16 56.0**	**-1.8**

JTJ	**Tarama**	**1.85**	**68**	P		**Pb**	07 16 39.1	**-0.8**
WJS	**Zhushan**	**1.91**	**266**	*e*P		**Pn**	07 16 39.3	**+1.0**
	baz=267							
WJS				*e*S		**Sn**	07 17 03.2	**+1.4**
	baz=267							
NSY	**Sanyi**	**1.93**	**284**	*e*P		**Pn**	07 16 39.2	**+0.7**
	baz=284							
CHN5	**Tsauling**	**1.99**	**260**	*e*P		**Pn**	07 16 39.8	**+0.4**
	baz=261							
CHN5				*e*S		**Sn**	07 17 05.2	**+1.4**
	baz=261							
STYT	**Tauyuan**	**2.05**	**247**	*e*P		**Pn**	07 16 40.6	**+0.4**
	baz=248							
STYT				*e*S		**Sn**	07 17 05.8	**+0.5**
	baz=248							
WDLH	**Douliu**	**2.10**	**263**	*e*P		**Pn**	07 16 41.9	**+1.1**
	baz=263							
WDLH				*e*S		**Sn**	07 17 07.3	**+0.9**
	baz=263							
TPUB	**Ta-pu**	**2.11**	**252**	*e*P		**Pn**	07 16 41.5	**+0.6**
	baz=253							
TPUB				*e*S		**Sn**	07 17 07.4	**+0.7**
	baz=253							
CHN4	**Tsaushan**	**2.12**	**254**	*e*P		**Pn**	07 16 42.5	**+1.3**
	baz=255							
CHN4				*e*S		**Sn**	07 17 07.9	**+0.8**
	baz=255							
WTP	**Ta-pu**	**2.14**	**251**	*e*P		**Pn**	07 16 42.0	**+0.5**
	baz=252							
WTP				*e*S		**Sn**	07 17 07.9	**+0.4**
	baz=252							
ECL	**Taimali**	**2.19**	**232**	*e*P		**Pn**	07 16 41.3	**-0.7**
	baz=233							
SLGT	**Liugui**	**2.21**	**244**	*e*P		**Pn**	07 16 43.1	**+0.7**
	baz=245							
SLGT				*e*S		**Sn**	07 17 09.5	**+0.3**
	baz=245							
SGST	**Jiashian**	**2.23**	**247**	*e*P		**Pn**	07 16 43.3	**+0.7**
	baz=248							
SGST				*e*S		**Sn**	07 17 09.7	**+0.1**
	baz=248							
CHN1	**Nanshi**	**2.24**	**250**	*e*P		**Pn**	07 16 43.7	**+0.9**
	baz=251							
CHN1				*e*S		**Sn**	07 17 10.4	**+0.5**
	baz=251							
CHY	**Chiayi**	**2.24**	**258**	*e*S		**Sn**	07 17 10.6	**+0.7**
	baz=259							
TWK	**Hsinying**	**2.24**	**252**	*e*P		**Pn**	07 16 43.9	**+1.0**
	baz=253							
TWK				*e*S		**Sn**	07 17 10.4	**+0.3**
	baz=253							
RLNB	**Erlin**	**2.25**	**269**	*e*S		**Sn**	07 17 11.3	**+1.3**
	baz=269							
SNST	**Tainan City**	**2.25**	**251**	*e*P		**Pn**	07 16 44.0	**+1.1**
	baz=252							
SNST				*e*S		**Sn**	07 17 10.7	**+0.6**
	baz=252							
SSD	**Sandimen**	**2.34**	**239**	*e*P		**Pn**	07 16 45.1	**+0.9**
	baz=240							
SSD				*e*S		**Sn**	07 17 13.1	**+0.7**
	baz=240							
EAST	**Anshuo**	**2.40**	**229**	*e*P		**Pn**	07 16 45.5	**+0.5**
	baz=230							
EAST				*e*S		**Sn**	07 17 13.7	**-0.2**
	baz=230							
JMJ	**Miyako jima 2**	**2.41**	**69**	*e*P		**Pn**	07 16 44.4	**-0.7**
	baz=67							
JMJ				*e*S		**Sn**	07 17 12.0	**-2.2**
	baz=67							
JIKM	**Ikemajima**	**2.42**	**66**	*e*S		**Sn**	07 17 16.4	**+2.2**
MASBT	**Mashibuluo**	**2.42**	**236**	*e*P		**Pn**	07 16 45.9	**+0.7**
	baz=237							
MASBT				*e*S		**Sn**	07 17 14.8	**+0.5**
	baz=237							
JMJ2	**Miyako jima3**	**2.42**	**71**	*e*S		**Sb**	07 17 17.9	**-1.2**
SCZT	**Fangliau**	**2.57**	**232**	*e*P		**Pn**	07 16 47.9	**+0.6**
	baz=233							
SCZT				*e*S		**Sn**	07 17 17.7	**-0.3**
	baz=233							
TWKBT	**Hengchun**	**2.73**	**223**	*e*P		**Pn**	07 16 50.1	**+0.5**
	baz=224							
TWKBT				*e*S		**Sn**	07 17 21.9	**-0.2**
	baz=224							
TWK1	**Hengchun**	**2.73**	**223**	*e*P		**Pn**	07 16 50.3	**+0.7**
	baz=224							
TWK1				*e*S		**Sn**	07 17 22.1	**-0.1**
	baz=224							
WLCH	**Liuqiu**	**2.76**	**235**	*e*P		**Pn**	07 16 51.9	**+2.0**
	baz=235							
WDGT	**Dungji**	**2.98**	**257**	*e*P		**Pn**	07 16 53.9	**+1.0**
	baz=257							
WDGT				*e*S		**Sn**	07 17 27.7	**-0.3**
	baz=257							
PHUB	**P'eng-hu**	**3.00**	**262**	*e*P		**Pn**	07 16 53.0	**-0.3**
	baz=262							
PHUB				*e*S		**Sn**	07 17 28.1	**-0.6**
	baz=262							
PNG	**Penghu**	**3.01**	**263**	*e*P		**Pn**	07 16 54.5	**+1.1**
	baz=263							
PNG				*e*S		**Sn**	07 17 29.0	**+0.1**
	baz=263							
VWUC	**VWUC**	**3.23**	**289**	*e*P		**Pn**	07 16 57.0	**+0.7**
	baz=288							
VWUC				*e*S		**Sn**	07 17 34.1	**-0.2**
	baz=288							
PTMZ	**Houxiangcun**	**3.53**	**288**	*e*P		**Pn**	07 17 01.6	**+1.1**
	baz=288							
PTMZ				*e*S		**Sn**	07 17 41.6	**-0.1**
	baz=288							

*ECX **25** 07:19:58.1±0.8,30.°08N×114.°59W,h5km±9km,MD3.1, ML3.3*
*MEX **25** 07:20:00.3±0.7,30.°11N×114.°60W,h5km,MD4.0*

ISC 25 07:20:00.8±1.7,30.°46N±0.°06×114.°70W±0.°04,h0km±13km, n13,σ1°39/23,2C-2D,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SFX	**San Felipe**	**0.59**	**347**	*e*P		**Pb**	**07 20 14.3**	**+0.3**
SFX				*e*S		**Sn**	**07 20 27.6**	**+1.0**
SPX	**San Pedro Mart**	**0.87**	**311**	*e*P		**Pn**	**07 20 19.8**	**-0.8**
SPX				*e*S		**Sn**	**07 20 35.9**	**+1.6**
SPX				IAML			07 20 37.4	
	comp=E,383nm,0.3s							
SPX				⇓*e*			07 20 37.5	
SPX				IAML			07 20 37.5	
	comp=N,521nm,0.3s							
SPX	**San Pedro Mart**	**0.87**	**311**	*e*P		**Pn**	**07 20 19.6**	**-1.0**
SPX				*i*S		**Sn**	**07 20 35.8**	**+1.6**
SPIG	**San Pedro Mart**	**0.88**	**312**	*e*P		**Pn**	**07 20 19.8**	**-0.9**
SPIG				*e*S		**Sn**	**07 20 35.8**	**+1.4**
SPIG	**San Pedro Mart**	**0.88**	**312**	⇓*e*P		**Pn**	**07 20 19.8**	**-0.9**
	baz=142,slow=16							
SPIG				*i*S		**Sn**	**07 20 36.0**	**+1.6**
SQX	**San Quintin**	**1.02**	**277**	*e*P		**Pg**	**07 20 19.6**	**-0.9**
SQX				*e*S		**Sn**	**07 20 35.2**	**-2.1**
BAHB	**Baha de los**	**1.11**	**117**	*e*P		**Pn**	**07 20 23.6**	**0.0**
BAHB				*e*S		**Sn**	**07 20 41.9**	**+2.3**
ESJX	**Sierra Juarez**	**1.87**	**326**	*e*P		**Pn**	**07 20 34.1**	**-0.2**
ESJX				*e*S		**Sg**	**07 21 03.3**	**+2.3**
MBIG	**Mexicali**	**1.98**	**348**	*i*P		**Pg**	**07 20 38.3**	**-0.6**
214A	**Organ Pipe Nat**	**2.20**	**47**	*i*P		**Pn**	**07 20 36.9**	**-1.8**
214A				*i*S		**Sn**	**07 21 05.1**	**-1.4**
CBX	**Cerro Bola**	**2.50**	**318**	IAML			07 21 30.9	
	comp=N,132nm,0.6s							
CBX				⇑*e*			07 21 30.9	
CBX				⇑*e*			07 21 34.2	
CBX				IAML			07 21 34.2	
	comp=E,136nm,1.2s							
CBX	**Cerro Bola**	**2.50**	**318**	*i*P		**Pn**	**07 20 42.6**	**-0.2**
CBX				*i*S		**Sn**	**07 21 13.0**	**-1.0**
TJIG	**Tijuana**	**2.59**	**320**	*e*P		**Pn**	**07 20 43.4**	**-0.6**
TJIG				*e*S		**Sn**	**07 21 16.3**	**+0.1**

WEL 25 07:26:31.8±0.3,44.°5±2.°×16.°9E±.°,h5km,M4.2/31,ML4.0/6, MLv4.2/31,South Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JCZ	**Jackson Bay**	**0.49**	**259**	P		Pb	07 26 42.3	-0.8
JCZ				S		Sg	07 26 49.0	+1.3
LBZ	**Lake Benmore**	**0.66**	**128**	P		Pb	07 26 45.5	-0.4
LBZ				S		Sb	07 26 54.5	-0.8
WKZ	**Wanaka**	**0.90**	**200**	P		Pg	07 26 49.1	0.0
WKZ				S		Sg	07 27 00.6	-0.2
RPZ	**Rata Peaks**	**1.19**	**77**	P		Pg	07 26 54.4	-0.2
RPZ				S		Sg	07 27 09.2	-0.7
EAZ	**Earnscleugh**	**1.25**	**185**	P		Pg	07 26 55.5	-0.3
EAZ				S		Sg	07 27 11.9	-0.2
MSZ	**Milford Sound**	**1.30**	**237**	P		Pn	07 26 55.9	-0.7
MSZ				S		Sg	07 27 12.6	-0.9
WVZ	**Waitaha Valley**	**1.30**	**46**	P		Pb	07 26 56.8	0.0
WVZ				S		Sg	07 27 13.5	-0.1
ODZ	**Otahua Downs**	**1.36**	**142**	P		Pb	07 26 57.7	0.0
ODZ				S		Sb	07 27 15.4	0.0
MLZ	**Mavora Lakes**	**1.68**	**214**	P		Pb	07 27 03.4	+0.1
INZ	**Inchbonnie**	**1.92**	**50**	P		Pn	07 27 04.6	-0.6
TUZ	**Tuapeka**	**1.97**	**176**	P		Pb	07 27 07.5	-0.7
OXZ	**Oxford**	**1.99**	**72**	P		Pn	07 27 05.9	-0.2
HHSZ	**Highcliff Hill**	**2.06**	**157**	P		Pb	07 27 09.9	+0.1
WHZ	**Wether Hill Ro**	**2.19**	**209**	P		Pb	07 27 11.9	0.0
MQZ	**McQueen's Vall**	**2.33**	**84**	P		Pn	07 27 10.6	-0.2
LTZ	**Lake Taylor**	**2.38**	**61**	P		Pn	07 27 12.0	+0.5
AMCZ	**Amberley**	**2.46**	**72**	P		Pn	07 27 13.0	+0.4
AKCZ	**Akaroa Harbour**	**2.50**	**89**	P		Pn	07 27 13.5	+0.4
SYZ	**Scrubby Hill**	**2.56**	**185**	P		Pn	07 27 15.1	+1.1
OKCZ	**Okains Bay**	**2.62**	**86**	P		Pn	07 27 16.3	+1.5
DSZ	**Denniston Nort**	**2.83**	**38**	P		Pn	07 27 16.7	-1.0
APZ	**The Paps**	**3.03**	**199**	P		Pn	07 27 21.6	+1.1
THZ	**Tophouse**	**3.37**	**50**	P		Pn	07 27 25.3	+0.2
KHZ	**Kahutara**	**3.37**	**64**	P		Pn	07 27 25.2	+0.1
QRZ	**Quartz Range**	**3.89**	**37**	P		Pn	07 27 31.8	-0.5
BSWZ	**Blackbirch Sta**	**3.96**	**57**	P		Pn	07 27 36.4	+3.2
NNZ	**Nelson**	**4.00**	**48**	P		Pn	07 27 34.1	+0.3
KIWZ	**Kapiti Island**	**5.10**	**54**	P		Pn	07 27 49.4	+0.5
TRWZ	**Traveller**	**5.27**	**63**	P		Pn	07 27 51.4	+0.2
OGWZ	**Otaki Gorge**	**5.28**	**55**	P		Pn	07 27 54.9	+3.5
MRZ	**Mangatainoka R**	**5.62**	**56**	P		Pn	07 27 56.5	+0.4
NMEZ	**Namu Road**	**5.64**	**37**	P		Pn	07 27 57.1	+0.8
NBEZ	**Newall Road No**	**5.76**	**37**	P		Pn	07 27 57.6	-0.3
KHEZ	**Kahui Hut**	**5.80**	**38**	P		Pn	07 27 58.7	+0.1
LREZ	**Lake Rotokare**	**5.84**	**41**	P		Pn	07 28 00.6	+1.5
PKE	**Pukeiti**	**5.87**	**37**	P		Pn	07 27 59.9	+0.4
WAZ	**Wanganui**	**5.91**	**46**	P		Pn	07 28 01.1	+1.1
TSZ	**Takapari Road**	**6.23**	**53**	P		Pn	07 28 03.5	-1.0
VRZ	**Vera Road**	**6.28**	**41**	P		Pn	07 28 05.6	+0.6
PNHZ	**Pukenui**	**6.47**	**53**	P		Pn	07 28 13.1	+5.4
TRVZ	**Turoa**	**6.54**	**46**	P		Pn	07 28 11.4	+2.6
FWVZ	**Far West T-bar**	**6.57**	**46**	P		Pn	07 28 10.0	+0.7
BHHZ	**Black Hill Sta**	**6.68**	**50**	P		Pn	07 28 09.3	-1.3
WTVZ	**West Tongariro**	**6.69**	**45**	P		Pn	07 28 13.0	+2.1
HIZ	**Hauiti**	**6.81**	**38**	P		Pn	07 28 12.2	-0.2
RATZ	**Rangitukua**	**6.97**	**45**	P		Pn	07 28 17.1	+2.4
TOZ	**Tahuroa Road**	**7.75**	**38**	P		Pn	07 28 24.6	-0.6
AWAZ	**Awhitu Peninsu**	**7.96**	**31**	P		Pn	07 28 28.5	+0.3
MKAZ	**Moumakai**	**8.13**	**34**	P		Pn	07 28 31.1	+0.7
ETAZ	**East Tamaki Re**	**8.17**	**33**	P		Pn	07 28 31.5	+0.5
WCZ	**Waipu Caves**	**8.87**	**27**	P		Pn	07 28 39.7	-0.8

*UPA **25** 07:46:12.7±1.4,6.°86N×79.°60W,h30km±17km,MW4.3*
*NEIC **25** 07:46:13.3±1.9,6.°86N±0.°06×79.°51W±0.°07,h26km±3km, mb4.3/17,Error ellipse: s-maj=10.2km s-min=8.0km az=69.0*
*IDC **25** 07:46:14.1±3.5,6.°79N×79.°60W,h36km±30km,mb3.6/13, mb1 3.9/15,mb1mx3.7/29,mbtmp3.8/15,ML3.5/3,MS3.2/9, Ms1 3.2/9,ms1mx2.9/32,Error ellipse: s-maj=26.1km s-min=13.0km az=49.0*

ISC 25 07:46:09.3±1.7,6.°84N±0.°04×79.°52W±0.°04,h3km±11km, n103,σ2°26/129,mb4.2/20,MS3.2/6,10C-11D,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TOSI3	**Tonosi**	**1.07**	**302**	⇓*i*P		**Pg**	**07 46 29.6**	**-0.3**
TOSI3				*e*S		**Sg**	**07 46 42.6**	**-1.2**
AZU	**Azuero**	**1.20**	**322**	⇑*i*P		**Pb**	**07 46 31.7**	**-1.0**
AZU				*e*S		**Sb**	**07 46 48.8**	**-1.9**
CACAO	**El Cacao, Vera**	**1.42**	**291**	⇓*i*P		Pn	07 46 33.9	-2.0
CACAO				*e*S		**Sn**	**07 46 51.0**	**-4.1**
OCU3	**Ocu, Herrera**	**1.66**	**311**	⇑*i*P		**Pn**	**07 46 39.1**	**-0.1**
OCU3				*e*S		**Sn**	**07 46 58.4**	**-2.6**
PTAC	**Punta Ardita,**	**1.73**	**80**	⇓*i*P		Pn	07 46 38.3	-1.9
PTAC				*e*S		**Sn**	**07 46 57.9**	**-4.8**
PTAC	**Punta Ardita,**	**1.73**	**80**	*e*P		Pn	07 46 38.2	-1.9
PTAC				*e*S		**Sn**	**07 46 56.5**	**-6.2**
PONU3	**Ponuga, Veragu**	**1.78**	**306**	*e*P		**Pn**	**07 46 40.6**	**-0.2**
PONU3				*e*S		**Sn**	**07 47 00.2**	**-3.8**
PNME	**Penonome**	**1.82**	**334**	⇑*i*P		**Pn**	**07 46 41.4**	**0.0**
PNME				*e*S		**Sn**	**07 47 03.6**	**-1.4**
PNME	**Penonome**	**1.82**	**334**	⇑*i*P		**Pn**	**07 46 41.2**	**-0.3**
PNME				*e*S		**Sn**	**07 47 03.3**	**-1.7**
VTON	**El Valle, Cocl**	**1.85**	**342**	⇑*i*P		**Pn**	**07 46 41.9**	**-0.1**
VTON				*e*S		**Sn**	**07 47 03.7**	**-2.2**
STIA3	**Santiago, Vera**	**1.91**	**311**	*e*P		**Pn**	**07 46 42.7**	**+0.1**
STIA3				*e*S		**Sn**	**07 47 04.7**	**-2.5**
GMAL	**Guarumal, Vera**	**1.93**	**298**	⇓*i*P		**Pn**	**07 46 42.6**	**-0.3**
GMAL				*e*S		**Sn**	**07 47 05.6**	**-2.1**
FLAM	**Flamenco Islan**	**2.06**	**360**	*e*P		**Pn**	**07 46 45.0**	**+0.2**
FLAM				*e*P		Pb	07 46 45.3	-2.0
FLAM				*e*S		**Sn**	**07 47 08.2**	**-2.7**
UPA	**Univ. de Panam**	**2.13**	**360**	⇑*i*P		**Pn**	**07 46 45.7**	**+0.1**
UPA				*e*S		**Sn**	**07 47 10.7**	**-1.9**
UPA	**Univ. de Panam**	**2.13**	**360**	⇑*i*P		**Pn**	**07 46 45.5**	**-0.2**
UPA				*e*S		**Sn**	**07 47 10.3**	**-2.3**
ZANG	**Zanguenga, Cho**	**2.13**	**351**	⇑*i*P		**Pn**	**07 46 46.2**	**+0.5**
ZANG				*e*S		**Sn**	**07 47 13.0**	**+0.4**
PML3	**Paraiso**	**2.17**	**358**	⇓*e*P		**Pn**	**07 46 46.9**	**+0.7**
PML3				*e*S		**Sn**	**07 47 12.5**	**-1.0**
UPD2	**Meteti**	**2.26**	**41**	*e*P		**Pn**	**07 46 47.9**	**+0.4**
UPD2				*e*S		**Sn**	**07 47 12.3**	**-3.6**
UPD2	**Meteti**	**2.26**	**41**	*e*P		**Pn**	**07 46 48.5**	**+1.0**
UPD2				*e*S		**Sn**	**07 47 18.8**	**+2.9**
BCIP	**Isla Barro Col**	**2.33**	**352**	⇑*e*P		**Pn**	**07 46 48.7**	**+0.2**
BCIP				*e*S		**Sn**	**07 47 16.1**	**-1.6**
BCIP	**Isla Barro Col**	**2.33**	**352**			**Pn**	**07 46 49.0**	**+0.5**
BCIP					Sn	**Sn**	**07 47 18.2**	**+0.5**
CHPO	**Chepo, Panama**	**2.35**	**10**	⇓*i*P		**Pn**	**07 46 49.3**	**+0.6**
CHPO				*e*S		**Sn**	**07 47 12.7**	**-5.3**
MLIR	**Monte Lirio**	**2.41**	**352**	*e*P		**Pn**	**07 46 50.0**	**+0.5**
CNTA3	**Canitas, Panam**	**2.44**	**15**	⇓*i*P		**Pn**	**07 46 50.1**	**+0.1**
CNTA3				*e*S		**Sn**	**07 47 17.4**	**-3.0**
DBBC	**Dabeiba**	**3.29**	**87**	⇓*i*P		**Pn**	**07 47 02.0**	**+0.2**
MALC	**Bahia Malaga**	**3.55**	**142**	*e*P		**Pn**	**07 47 04.9**	**-0.4**
MALC				*e*S		**Sn**	**07 47 44.3**	**-3.5**
CBOC	**Ciudad Bolivar**	**3.62**	**105**	⇓*i*P		**Pn**	**07 47 05.2**	**-1.2**
CBOC				*e*S		**Sn**	**07 47 44.4**	**-5.4**
LCBC	**Los crdobas,**	**3.71**	**57**	*e*P		**Pn**	**07 47 10.6**	**+3.2**
LCBC				*e*S		**Sn**	**07 47 47.0**	**-4.7**
PLMC	**San Jos del P**	**3.75**	**121**	*e*P		Pn	07 47 06.2	-1.9
PLMC				*e*S		**Sn**	**07 47 48.0**	**-4.9**
URCC	**San Jos de Ur**	**4.06**	**77**	⇓*i*P		**Pn**	**07 47 13.8**	**+1.5**
URCC				*e*S		**Sn**	**07 47 54.6**	**-5.7**
YOTC	**Yotoco, Valle**	**4.25**	**132**	*e*P		Pn	07 47 13.1	-1.9
YOTC				*e*S		**Sn**	**07 48 00.5**	**-4.7**
HORQ	**Saladito**	**4.41**	**139**	*e*P		Pn	07 47 15.4	-1.9
GUY2C	**Guyana, Caldas**	**4.43**	**111**	*e*P		**Pn**	**07 47 17.6**	**-0.2**
GUY2C				*e*S		**Sn**	**07 48 06.4**	**-3.8**
RREF	**El Recreo**	**4.58**	**115**	*e*P		**Pn**	**07 47 20.7**	**+0.7**
RREF				*e*S		**Sn**	**07 48 08.2**	**-5.8**
ZARC	**Zaragoza, Cauc**	**4.67**	**82**	⇓*i*P		**Pn**	**07 47 22.0**	**+1.3**
ZARC				*e*S		**Sn**	**07 48 11.1**	**-4.3**
TOLC	**Tolima**	**4.74**	**118**	*e*P		**Pn**	**07 47 22.4**	**+0.4**
NORC	**Norcasia**	**4.80**	**105**	⇓*e*P		**Pn**	**07 47 23.5**	**+1.0**
NORC				*e*S		**Sn**	**07 48 15.2**	**-3.4**
PTBC	**PUERTO BERRIO,**	**5.04**	**93**	*e*P		**Pn**	**07 47 27.0**	**+1.3**
ORTC	**Ortega, Tolima**	**5.16**	**124**	*e*P		**Pn**	**07 47 28.7**	**+1.3**
ORTC				*e*S		Sn	07 48 20.2	-7.3
SJCC	**San Jacinto, C**	**5.26**	**54**	*e*P		**Pn**	**07 47 31.0**	**+2.2**
PCON	**Cinco Dias**	**5.46**	**145**	*e*P		**Pn**	**07 47 34.7**	**+2.7**
SOTA	**Rioblanco**	**5.50**	**148**	*e*P		**Pn**	**07 47 34.1**	**+1.5**
ROSC	**El Rosal**	**5.54**	**111**	Pn		**Pn**	**07 47 36.8**	**+3.7**
	8.3nm,0.3s,baz=346,slow=2.8,SNR=19							
ROSC					Sn	**Sn**	**07 48 38.1**	**+0.7**
	3.5nm,0.3s,baz=79,slow=23,SNR=1.5							
ROSC	**El Rosal**	**5.54**	**111**			**Pn**	**07 47 36.0**	**+2.9**
SPBC	**San Pablo de B**	**5.54**	**102**	*e*P		**Pn**	**07 47 34.8**	**+2.1**
CTAB	**Cerro Tablazo,**	**5.59**	**109**	*e*P		**Pn**	**07 47 37.9**	**+4.1**
SMLC	**San Martn de**	**5.74**	**70**	*e*P		**Pn**	**07 47 37.0**	**+1.6**
BRRC	**Barranca, Sant**	**5.77**	**87**	*e*P		**Pn**	**07 47 37.9**	**+2.1**
BETC	**Betania**	**5.80**	**135**	*e*P		**Pn**	**07 47 38.3**	**+2.1**
CRUC	**La Cruz**	**5.83**	**154**	*e*P		**Pn**	**07 47 37.3**	**+0.3**
CVER	**Cruz Verde, Cu**	**5.89**	**113**	*e*P		Pn	07 47 43.3	+5.4
GCUF	**Volcan Galeras**	**5.99**	**159**	*e*P		**Pn**	**07 47 42.0**	**+2.8**
GARC	**Garzon, Huila**	**6.12**	**139**	*e*P		**Pn**	**07 47 42.6**	**+1.7**
CHIC	**Chingaza**	**6.17**	**111**	*e*P		**Pn**	**07 47 44.6**	**+3.0**
OCAC	**Ocana**	**6.30**	**77**	*e*P		**Pn**	**07 47 44.6**	**+1.3**
JTS	**Las Juntas de**	**6.37**	**303**	Pn		**Pn**	**07 47 45.5**	**+1.4**
	1.1nm,0.3s,baz=343,slow=10,SNR=12							
JTS					Sn	**Sn**	**07 48 55.6**	**-1.8**
	0.1nm,0.3s,baz=200,slow=12,SNR=1.1							
JTS					LR	LR	07 50 33.5	
	comp=Z,174nm,18.2s,baz=192,slow=41							
JTS	**Las Juntas de**	**6.37**	**303**			**Pn**	**07 47 45.8**	**+1.7**
VILC	**Villavicencio,**	**6.40**	**115**	*e*P		**Pn**	**07 47 47.4**	**+2.8**
RUSC	**La Rusia**	**6.47**	**98**	*e*P		**Pn**	**07 47 47.5**	**+1.7**
RUSC	**La Rusia**	**6.47**	**98**			**Pn**	**07 47 47.8**	**+1.9**
MACC	**Macarena, Meta**	**7.33**	**129**	*e*P		**Pn**	**07 47 57.9**	**+0.6**
TAMC	**Tame, Arauca**	**7.69**	**93**	*e*P		**Pn**	**07 48 03.8**	**+1.5**
SOCV	**Socops**	**8.71**	**80**	*e*P		**Pn**	**07 48 16.7**	**+0.5**
SDV	**Santo Domingo**	**9.04**	**76**	Pn		**Pn**	**07 48 22.3**	**+1.4**
	30nm,0.3s,baz=344,slow=21,SNR=328							
SDV					Sn	**Sn**	**07 49 58.5**	**-4.7**
	0.9nm,0.3s,baz=325,slow=21,SNR=1.1							
SDV					LR	LR	07 52 08.2	
	comp=Z,72nm,21.2s,baz=240,slow=39							
SDV	**Santo Domingo**	**9.04**	**76**	*e*P		**Pn**	**07 48 22.3**	**+1.4**
SDV	**Santo Domingo**	**9.04**	**76**			**Pn**	**07 48 22.1**	**+1.2**
SDV					Sn	**Sn**	**07 50 02.0**	**-1.3**
ELOV	**Elorza**	**9.97**	**88**	*e*P		**Pn**	**07 48 33.6**	**+0.1**
ATAH	**Atahualpa**	**13.93**	**175**	LR		LR	07 54 32.3	
	comp=Z,90nm,19.3s,baz=353,slow=36							
PCRV	**Puerto La Cruz**	**15.09**	**76**	Pn		**Pn**	**07 49 42.4**	**-1.2**
	3.4nm,0.3s,baz=246,slow=3.4,SNR=18							
PLCV	**Puerto La Cruz**	**15.13**	**76**			**Pn**	**07 49 42.4**	**-1.7**
PTGA	**Pitinga**	**20.91**	**110**	P		**P**	**07 50 53.4**	**+0.3**
	2.0nm,0.4s,baz=309,slow=22,SNR=2.6							
PTGA					LR	LR	07 58 33.0	
	comp=Z,48nm,21.6s,baz=286,slow=35							
SAML	**Samuel**	**22.61**	**134**	P		**P**	**07 51 12.2**	**+0.9**
LPAZ	**La Paz**	**25.60**	**154**	P		**P**	**07 51 40.4**	**-0.2**
	1.7nm,0.7s,baz=16,slow=9.5,SNR=2.5							
LPAZ	**La Paz**	**25.60**	**154**	P		**P**	**07 51 41.6**	**+1.0**
152A	**Waverly Hall**	**26.15**	**350**	P		**P**	**07 51 46.7**	**+2.0**
152A					IAmb	IAmb	07 51 46.8	
	comp=Z,6.2nm,0.8s							
GOGA	**Godfrey**	**26.69**	**353**	P		**P**	**07 51 50.8**	**+1.2**
MDP	**Montagnes des**	**26.79**	**92**	LR		LR	08 02 04.4	
	comp=Z,53nm,21.4s,baz=296,slow=35							
LRAL	**Lakeview Retre**	**26.97**	**346**	P		**P**	**07 51 53.5**	**+1.3**
LRAL					IAmb	IAmb	07 51 59.2	
	comp=Z,7.4nm,1.3s							
Z47A	**Carrollton**	**27.40**	**344**	P		**P**	**07 51 57.3**	**+1.3**
MNMC	**Minye Minye**	**27.60**	**159**	P		**P**	**07 52 01.4**	**+3.1**
W50A	**Signal Mountai**	**28.72**	**350**	P		**P**	**07 52 09.4**	**+1.5**
W50A					IAmb	IAmb	07 52 21.9	
	comp=Z,3.7nm,0.8s							
CPCT	**Cooper Cave**	**28.84**	**352**	P		**P**	**07 52 10.6**	**+1.7**
CPCT					IAmb	IAmb	07 52 21.6	
	comp=Z,7.2nm,1.2s							
V53A	**Saluda**	**28.85**	**354**	P		**P**	**07 52 10.8**	**+1.8**
TKL	**Tuckaleechee C**	**28.94**	**353**	P		**P**	**07 52 09.7**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=225,slow=19,SNR=1.6							
TKL

RDO	**Rodhopi**	**0.86**	**329**	P	**Pb**	**08 13 58.7**	**+0.1**
RDO	**Rodhopi**	**0.86**	**329**	P	**Pn**	**08 13 59.0**	**-0.2**
RDO				S	**Sn**	**08 14 10.7**	**-0.4**
RDO				AML	AML	08 14 14.5	
	comp=N,238μm,0.2s						
RDO				AML	AML	08 14 16.6	
	comp=E,291μm,0.2s						
RDO	**Rodhopi**	**0.86**	**329**	PG	**Pn**	**08 13 59.1**	**0.0**
LIA	**Limnos Island**	**0.89**	**235**	P	**Pb**	**08 13 59.0**	**0.0**
LIA				S	**Sn**	**08 14 11.6**	**-0.1**
	comp=E,198nm,0.4s						
LIA	**Limnos Island**	**0.89**	**235**	P	**Pb**	**08 13 59.0**	**0.0**
LIA				S	**Sb**	**08 14 10.2**	**-0.3**
LIA				AML	AML	08 14 12.4	
	comp=E,340μm,0.4s						
LIA				AML	AML	08 14 12.6	
	comp=N,446μm,0.4s						
THAS	**Thassos island**	**1.10**	**281**	P	**Pn**	**08 14 02.2**	**-0.1**
THAS	**Thassos island**	**1.10**	**281**	P	**Pn**	**08 14 02.2**	**-0.1**
THAS				S	**Sb**	**08 14 16.4**	**-0.1**
THAS				AML	AML	08 14 19.6	
	comp=E,188μm,0.2s						
THAS				AML	AML	08 14 19.8	
	comp=N,250μm,0.2s						
MRMT	**Marmara Adasi**	**1.13**	**80**	PN	**Pb**	**08 14 02.5**	**-0.7**
PRK	**Paraskevi**	**1.17**	**175**	P	**Pb**	**08 14 05.1**	**+1.4**
PRK				S	**Sn**	**08 14 21.4**	**+2.9**
	comp=N,698nm,0.4s						
PRK	**Paraskevi**	**1.17**	**175**	P	**Pb**	**08 14 05.2**	**+1.5**
PRK				S	**Sn**	**08 14 20.8**	**+2.3**
PRK				AML	AML	08 14 22.6	
	comp=N,1687μm,0.5s						
PRK				AML	AML	08 14 23.9	
	comp=E,1058μm,0.3s						
AYVA	**Ayvalik**	**1.18**	**159**	*i* P	**Pb**	**08 14 04.7**	**+0.7**
AYVA				*i* S	**Sn**	**08 14 20.0**	**+1.2**
AYVA				IAML		08 14 22.0	
	comp=N,830nm,0.6s						
AYVA				IAML		08 14 22.0	
	comp=E,334nm,0.5s						
TKR	**Tekirdag**	**1.21**	**61**	PN	**Pb**	**08 14 04.3**	**-0.2**
SIGR	**SIGRI**	**1.22**	**190**	P	**Pb**	**08 14 04.6**	**0.0**
SIGR	**SIGRI**	**1.22**	**190**	P	**Pb**	**08 14 04.7**	**+0.1**
SIGR				S	**Sb**	**08 14 20.8**	**+0.9**
SIGR				AML	AML	08 14 22.4	
	comp=N,878μm,0.4s						
SIGR				AML	AML	08 14 22.4	
	comp=E,498μm,0.5s						
SIGR	**SIGRI**	**1.22**	**190**	PN	**Pb**	**08 14 04.1**	**-0.5**
GONE	**Gonen-Balikesi**	**1.24**	**106**	PN	**Pb**	**08 14 04.9**	**-0.1**
BALY	**Balya**	**1.32**	**120**	*i* P	**Pb**	**08 14 06.9**	**+0.5**
BALY				*i* S	**Sb**	**08 14 24.3**	**+1.4**
BALY				IAML		08 14 26.0	
	comp=N,95nm,0.7s						
BALY				IAML		08 14 27.0	
	comp=E,86nm,0.5s						
EDC	**Edincik**	**1.32**	**92**	PN	**Pb**	**08 14 06.6**	**+0.2**
KDZ	**Kurdzhali**	**1.35**	**337**	PN	**Pb**	**08 14 06.9**	**0.0**
KAVA	**Kavala**	**1.36**	**296**	P	**Pn**	**08 14 06.5**	**+0.5**
KAVA	**Kavala**	**1.36**	**296**	P	**Pb**	**08 14 06.6**	**-0.5**
DKL	**Dikili**	**1.46**	**156**	PN	**Pb**	**08 14 08.7**	**-0.1**
KIRK	**Kırklareli**	**1.55**	**28**	*i* P	**Pn**	**08 14 08.8**	**+0.2**
KIRK				*i* S	**Sb**	**08 14 29.4**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.60**	**130**	*i* P	**Pb**	**08 14 10.9**	**-0.2**
STEP				*i* S	**Sb**	**08 14 32.2**	**+1.4**
STEP				IAML		08 14 35.0	
	comp=E,73nm,0.3s						
STEP				IAML		08 14 43.0	
	comp=N,61nm,0.9s						
ZEDA	**zmir-Bergama**	**1.61**	**153**	*i* P	**Pb**	**08 14 11.0**	**-0.4**
ZEDA				*i* S	**Sb**	**08 14 30.9**	**-0.3**
ZEDA				IAML		08 14 34.0	
	comp=N,136nm,0.3s						
ZEDA				IAML		08 14 34.0	
	comp=E,87nm,0.4s						
RZN	**Rozhen**	**1.67**	**320**	P	**Pb**	**08 14 11.5**	**-0.9**
ELBA	**Catalca**	**1.89**	**66**	*i* P	**Pb**	**08 14 15.1**	**-1.0**
ELBA				*i* S	**Sb**	**08 14 38.8**	**-0.5**
SKY	**Skiros Island**	**1.96**	**219**	P	**Pn**	**08 14 14.6**	**+0.4**
DURS	**Dursunbey**	**1.97**	**113**	*i* P	**Pb**	**08 14 16.3**	**-1.2**
DURS				*i* S	**Sb**	**08 14 41.3**	**-0.3**
DURS				IAML		08 14 46.0	
	comp=N,39nm,0.6s						
DURS				IAML		08 14 46.0	
	comp=E,68nm,0.4s						
AKHS	**Akhisar**	**2.00**	**139**	*i* P	**Pb**	**08 14 16.2**	**-1.8**
AKHS				*i* S	**Sb**	**08 14 41.7**	**-0.9**
CHOS	**Chios island**	**2.02**	**182**	P	**Pb**	**08 14 16.3**	**-2.1**
CHOS	**Chios island**	**2.02**	**182**	P	**Pb**	**08 14 16.3**	**-2.1**
URLA	**Izmir**	**2.08**	**170**	*i* P	**Pn**	**08 14 16.9**	**+1.0**
URLA				*i* S	**Sn**	**08 14 41.7**	**+0.7**
AOS	**Alonnisos**	**2.13**	**235**	P	**Pn**	**08 14 17.0**	**+0.5**
DEMI	**Demirci**	**2.41**	**124**	*i* P	**Pb**	**08 14 22.3**	**-2.8**
DEMI				*i* S	**Sn**	**08 14 49.5**	**0.0**
DEMI				IAML		08 14 59.0	
	comp=N,23nm,0.3s						
KHAL	**Karahalli**	**3.30**	**127**	*i* P	**Pn**	**08 14 35.0**	**+2.3**

ROM 25 08:15:33.8±0.3, 43°13N±0°01×13°41E±0°02, h22km±2km, ML1.0/3, Error ellipse: s-maj=1.4km s-min=1.1km az=297.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNTP	**Montappone**	**0.04**	**79**	P	Pb	08 15 37.3	-0.4
MNTP				S	Sb	08 15 40.6	+0.2
CSP1	**Cessapalombo**	**0.15**	**256**	P	Pb	08 15 38.5	-0.6
CSP1				S	Sb	08 15 42.5	-0.2
CSP1				AML	AML		
	comp=E,55μm,1.6s						
CSP1				AML	AML		
	comp=N,180μm,1.6s						
FDMO	**Fiordimonte**	**0.25**	**249**	P	Pb	08 15 39.8	-0.2
FDMO				S	Sb	08 15 45.1	+0.9
FDMO				AML	AML		
	comp=E,34μm,0.2s						
FDMO				AML	AML		
	comp=N,15μm,0.2s						
PP3	**Marolino**	**0.29**	**30**	P	Pb	08 15 40.9	+0.5
PP3				S	Sb	08 15 46.2	+1.3
CING	**Cingoli**	**0.29**	**328**	P	Pb	08 15 40.4	-0.1
CING				S	Sb	08 15 45.3	+0.2
NRCA	**Norcia**	**0.37**	**216**	P	Pb	08 15 41.5	-0.2
NRCA				S	Sb	08 15 48.1	+1.1
NRCA				AML	AML		
	comp=N,24μm,0.2s						
NRCA				AML	AML		
	comp=E,41μm,0.2s						
GUMA	**Gualdo di Mace**	**0.39**	**100**	P	Pb	08 15 37.9	-4.2
GUMA				S	Sb	08 15 41.7	-6.0

DJA 25 08:21:40.3±0.6, 9°S±6°×11°9E±°, h35km±14km, M3.4/7, MLv3.4/7, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.58**	**144**	P	Pn	08 21 52.9	+0.8
PLAI	**Plampang**	**1.30**	**285**	P	Pn	08 22 02.6	+0.6
PLAI				S	Sn	08 22 19.6	+1.4
BASI	**Baing, Sumba**	**1.83**	**125**	P	Pn	08 22 09.9	+0.6
EDFI	**Ende, Flores**	**2.64**	**81**	P	Pn	08 22 20.9	+0.4
EDFI				S	Sn	08 22 51.6	+0.1
MMRI	**Maumere**	**3.19**	**81**	P	Pn	08 22 28.6	+0.5
BKSI	**Bulukumba**	**3.97**	**16**	P	Pn	08 22 39.2	+0.5
JAGI	**Jajag, Banyuwa**	**4.89**	**278**	P	Pn	08 22 50.2	-1.2

IDC 25 08:22:49.1±2.1, 6°49S×129°82E, h0km, mb4.2/1, mb1 4.2/3, mb1mx3.7/22, mbtmp4.0/3, ML4.1/2, Error ellipse: s-maj=140.0km s-min=30.2km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.08**	**162**	Pn	Pn	08 26 09.1	-0.9
	0.8nm,0.3s,baz=345,slow=13,SNR=37						
WRA				Sn	Sn	08 28 31.5	-16
	1.6nm,0.3s,baz=334,slow=23,SNR=13						
ASAR	**Alice Springs**	**17.53**	**167**	P	P	08 26 55.7	-0.6
	0.8nm,0.3s,baz=341,slow=8.8,SNR=45						
ASAR				S	Sn	08 29 56.3	-15
	0.6nm,0.3s,baz=348,slow=27,SNR=7.2						
MKAR	**Makanchi Array**	**67.70**	**327**	P	P	08 33 48.4	0.0
	1.3nm,0.5s,baz=122,slow=7.9,SNR=16						

IDC 25 08:40:06.5±1.6, 15°37S×168°10E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.7/39, mbtmp3.9/5, ML3.5/1, MS3.7/2, Ms1 3.7/2, ms1mx2.7/25, Error ellipse: s-maj=59.5km s-min=28.0km az=132.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.85**	**193**	Pn	Pn	08 41 48.1	-0.3
	0.8nm,0.3s,baz=58,slow=9.4,SNR=22						
DZM				Sn	Sn	08 43 02.9	-4.2
	0.2nm,0.3s,baz=315,slow=21,SNR=1.0						
RPZ	**Rata Peaks**	**28.37**	**175**	LR	LR	08 55 24.7	
	comp=Z,236nm,19.8s,baz=150,slow=32						
ASAR	**Alice Springs**	**33.20**	**250**	P	P	08 46 45.1	-0.3
	0.4nm,0.8s,baz=74,slow=9.3,SNR=5.6						
FITZ	**Fitzroy Crossi**	**40.69**	**260**	P	P	08 47 49.4	+0.3
	2.3nm,0.9s,baz=68,slow=5.4,SNR=2.2						
FITZ				LR	LR	09 03 03.0	
	comp=Z,63nm,19.8s,baz=214,slow=34						
ILAR	**Eielson Array**	**86.88**	**18**	P	P	08 52 52.3	-0.5
	0.7nm,0.8s,baz=227,slow=6.0,SNR=8.7						
YKA	**Yellowknife Ar**	**97.74**	**27**	P	Pdif	08 53 43.5	+0.3
	0.6nm,0.8s,baz=260,slow=4.2,SNR=9.0						

*PDG **25** 08:45:00.6±0.3, 43°57N×20°78E, h18km, ML2.3/13, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*BEO **25** 08:45:01.2±0.2, 43°56N×20°77E, h8km, 3km, ML2.6/15*
*RHSSO **25** 08:45:02.1±0.6, 43°58N×20°70E, h4km, 2km, ML2.6/11*
ISC 25 08:45:00.6±1.0, 43°55N±0°02×20°75E±0°01, h10km±8km, n77, σ1°910/140, 24C-20D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRUS	**Gruza**	**0.34**	**355**	*e*Pg	**Pg**	**08 45 07.4**	**+0.1**
GRUS				*e*Sg	**Sg**	**08 45 13.0**	**+1.2**
SELS	**Selova**	**0.43**	**141**	*e*Pg	**Pg**	**08 45 08.9**	**-0.1**
SELS				*e*Sg	**Sg**	**08 45 14.9**	**+0.3**
SJES	**Sjenica**	**0.64**	**243**	*e*Pg	**Pg**	**08 45 12.8**	**-0.2**
SJES				*e*Sg	**Sb**	**08 45 22.3**	**-0.8**
BOVS	**Bovan**	**0.70**	**83**	*e*Pg	**Pg**	**08 45 12.8**	**-1.3**
BOVS				*e*Sg	**Sb**	**08 45 24.3**	**-0.2**
TRUS	**Trudelj**	**0.71**	**340**	*e*Pg	**Pg**	**08 45 14.3**	**-0.1**
TRUS				*e*Sg	**Sb**	**08 45 25.3**	**+0.2**
DIVS	**Divibare**	**0.78**	**315**	*e*Pg	**Pg**	**08 45 15.3**	**-0.3**
DIVS				*e*Sg	**Sb**	**08 45 27.2**	**+0.3**
DIVS	**Divibare**	**0.78**	**315**	*e*Pg	**Pg**	**08 45 15.1**	**-0.5**
DIVS				*e*Sg	**Sg**	**08 45 26.1**	**+0.4**
SVIS	**Svilajnac**	**0.79**	**25**	*e*Pg	**Pg**	**08 45 15.8**	**0.0**
SVIS				*e*Sg	**Sb**	**08 45 27.0**	**-0.1**
IVA	**Berane**	**0.93**	**223**	⇓*i*Pg	**Pg**	**08 45 17.9**	**-0.6**
IVA				*i* Sg	**Sg**	**08 45 30.4**	**-0.2**
RUDO	**Rudo**	**1.01**	**274**	*e*Pg	**Pb**	**08 45 18.9**	**-1.3**
RUDO				*e*Sg	**Sb**	**08 45 32.6**	**-0.9**
PLE	**Pljevlja**	**1.02**	**258**	⇑*i*Pg	**Pb**	**08 45 19.7**	**-0.8**
PLE				*i* Sg	**Sb**	**08 45 33.5**	**-0.5**
BBLS	**Lazi?i**	**1.03**	**288**	*e*Pg	**Pb**	**08 45 20.1**	**-0.5**
BBLS				*e*Sg	**Sg**	**08 45 34.4**	**+0.7**
BBLS	**Lazi?i**	**1.03**	**288**	*e*Pg	**Pb**	**08 45 19.7**	**-0.9**
BBLS				*e*Sg	**Sb**	**08 45 33.7**	**-0.5**
BARS	**Barje**	**1.07**	**133**	*e*Pg	**Pb**	**08 45 19.3**	**-2.0**
BARS	**Barje**	**1.07**	**133**	*e*Pg	**Pb**	**08 45 20.7**	**-0.6**
BARS				*e*Sg	**Sb**	**08 45 33.4**	**-1.9**
BARS				*e*Sg	**Sg**	**08 45 36.0**	**+0.9**
KUBS	**Kucevo**	**1.08**	**37**	*e*Pg	**Pb**	**08 45 20.9**	**-0.6**
KUBS				*e*Sg	**Sb**	**08 45 34.6**	**-1.2**
ZAGS	**Zajecar**	**1.10**	**76**	*e*Pg	**Pb**	**08 45 21.0**	**-0.8**
ZAGS				*e*Sg	**Sb**	**08 45 36.3**	**0.0**
PVY	**Plav**	**1.12**	**212**	⇓*i*Pg	**Pb**	**08 45 21.6**	**-0.6**
PVY				*i* Sg	**Sb**	**08 45 36.6**	**-0.4**
KOME	**Kolasin**	**1.15**	**233**	⇓*i*Pg	**Pb**	**08 45 22.3**	**-0.3**
KOME				*i* Sg	**Sg**	**08 45 37.7**	**+0.1**
BEO	**Beograd**	**1.27**	**351**	*e*Pg	**Pn**	**08 45 23.4**	**-1.1**
BEO				*e*Sg	**Sb**	**08 45 40.2**	**-0.9**
TEKS	**Tekeris**	**1.33**	**319**	*e*Pg	**Pb**	**08 45 25.9**	**+0.2**
TEKS				*e*Sg	**Sb**	**08 45 42.3**	**-0.6**
TEKS	**Tekeris**	**1.33**	**319**	*e*Pg	**Pb**	**08 45 25.5**	**-0.2**
TEKS				*e*Sg	**Sn**	**08 45 42.7**	**-0.5**
UPM	**Unac-Piva**	**1.39**	**256**	⇓*i*Pg	**Pb**	**08 45 26.9**	**+0.1**
UPM				*e*Sg	**Sg**	**08 45 45.2**	**-0.3**
UPM	**Unac-Piva**	**1.39**	**256**	⇓*i*Pg	**Pb**	**08 45 27.0**	**+0.1**
UPM				*i* Sg	**Sg**	**08 45 45.7**	**+0.2**
BLKB	**Belogradchik**	**1.40**	**87**	⇓S	**Sb**	**08 45 45.4**	**+0.7**
ZAPS	**Zavoj**	**1.40**	**101**	*e*Pg	**Pb**	**08 45 27.4**	**+0.5**
ZAPS				*e*Sg	**Sg**	**08 45 45.7**	**+0.1**
MDVR	**Moldovita**	**1.41**	**29**	⇑P	**Pn**	**08 45 26.1**	**-0.3**
MDVR				⇑S	**Sg**	**08 45 46.0**	**+0.1**
HAPS	**Han Pijesak,Bl**	**1.41**	**293**	⇑*i*Pg	**Pn**	**08 45 25.7**	**-0.8**
HAPS				*e*Sg	**Sb**	**08 45 45.3**	**+0.1**
NKY	**Niksic**	**1.49**	**241**	⇑*i*Pg	**Pb**	**08 45 28.2**	**-0.2**
NKY				*i* Sg	**Sg**	**08 45 48.9**	**+0.5**
NKME	**Niksic**	**1.54**	**240**	⇓*i*Pg	**Pb**	**08 45 28.8**	**-0.4**
NKME				*i* Sg	**Sg**	**08 45 50.3**	**+0.3**
PDG	**Podgorica**	**1.57**	**225**	⇓P	**Pb**	**08 45 29.2**	**-0.6**
PDG				⇓S	**Sb**	**08 45 50.4**	**+0.7**
PDG	**Podgorica**	**1.57**	**225**	*e*Pg	**Pb**	**08 45 29.4**	**-0.4**
PDG				*e*Sg	**Sg**	**08 45 51.6**	**+0.4**
TTG	**Podgorica**	**1.57**	**225**	⇓*i*Pn	**Pb**	**08 45 29.1**	**-0.7**
TTG				*i* Sn	**Sg**	**08 45 51.1**	**-0.1**
BOSS	**Bosilegrad**	**1.65**	**129**	*e*Pg	**Pn**	**08 45 29.9**	**+0.2**
BOSS				*e*Sg	**Sg**	**08 45 53.4**	**-0.2**
CEME	**Cevo**	**1.68**	**234**	⇓*i*Pn	**Pb**	**08 45 30.9**	**-0.8**
CEME				*i* Sn	**Sg**	**08 45 53.8**	**-0.9**
FRGS	**Fruska Gora**	**1.74**	**337**	*e*Pg	**Pn**	**08 45 30.7**	**-0.3**
FRGS				*e*Sg	**Sg**	**08 45 56.9**	**+0.3**
FRGS	**Fruska Gora**	**1.74**	**337**	*e*Pn	**Pb**	**08 45 32.1**	**-0.6**
FRGS				*e*Sn	**Sb**	**08 45 54.6**	**0.0**
BRY	**Bratogost**	**1.75**	**249**	*e*Pn	**Pb**	**08 45 33.0**	**+0.1**
BRY	**Bratogost**	**1.75**	**249**	⇑*i*Pn	**Pn**	**08 45 31.8**	**+0.7**
BRY				*i* Sn	**Sb**	**08 45 55.4**	**+0.5**
HERR	**Herculane**	**1.79**	**41**	⇓P	**Pn**	**08 45 31.8**	**+0.3**
HERR				⇓S	**Sb**	**08 45 55.8**	**-0.1**
DRME	**Dracevica, Mon**	**1.79**	**221**	*e*Pn	**Pb**	**08 45 33.5**	**0.0**
DRME				*e*Sn	**Sg**	**08 45 57.1**	**-1.0**
DRME	**Dracevica, Mon**	**1.79**	**221**	⇓*i*Pn	**Pn**	**08 45 32.2**	**+0.6**
DRME				*i* Sn	**Sb**	**08 45 56.0**	**0.0**
BUM	**Brajici-Budva**	**1.85**	**228**	⇑*i*Pn	**Pn**	**08 45 33.2**	**+0.6**
BUM				*i* Sn	**Sb**	**08 45 58.0**	**+0.1**
ULC	**Ulcinj**	**1.94**	**215**	⇓*i*Pn	**Pn**	**08 45 33.9**	**+0.2**
ULC				*i* Sn	**Sb**	**08 46 00.0**	**-0.4**
TREB	**Trebinje**	**1.95**	**245**	⇓*i*Pn	**Pb**	**08 45 36.1**	**-0.1**
TREB				*e*Sn	**Sb**	**08 46 00.6**	**0.0**
HCY	**Herceg Novi**	**1.99**	**237**	*e*Pn	**Pb**	**08 45 36.5**	**-0.5**
HCY	**Herceg Novi**	**1.99**	**237**	⇑*i*Pn	**Pn**	**08 45 35.4**	**+1.0**
HCY				*i* Sn	**Sb**	**08 46 01.5**	**-0.4**
VTS	**Vitosha**	**2.04**	**116**	⇓P	**Pn**	**08 45 35.6**	**+0.3**
VTS				⇓S	**Sb**	**08 46 02.6**	**-0.9**
SRE	**Strehaia**	**2.08**	**57**	⇑P	**Pn**	**08 45 37.8**	**-0.7**
SRE				⇑S	**Sn**	**08 46 02.3**	**+0.6**
DBRK	**Dubrovnik**	**2.10**	**246**	*i* Pn	**Pb**	**08 45 38.3**	**-0.6**
DBRK				Sn	**Sb**	**08 46 06.5**	**+1.4**
BZS	**Buzias**	**2.15**	**16**	⇑P	**Pn**	**08 45 35.9**	**-0.7**
BZS				⇑S	**Sb**	**08 46 05.1**	**-1.4**
STON	**Ston**	**2.33**	**254**	*e*Pn	**Pn**	**08 45 40.5**	**+1.4**
STON				*e*Sn	**Sb**	**08 46 09.4**	**-2.3**
STON	**Ston**	**2.33**	**254**	*e*Pn	**Pb**	**08 45 40.9**	**-1.9**
STON				Sn	**Sb**	**08 46 11.9**	**+0.3**
GZR	**Gura Zlata**	**2.34**	**38**	⇑P	**Pn**	**08 45 39.1**	**-0.1**
GZR				⇓S	**Sn**	**08 46 09.2**	**+1.1**
RICI	**Ricice**	**2.63**	**270**	*e*Pn	**Pn**	**08 45 45.0**	**+1.7**
RICI				Sn	**Sb**	**08 46 19.8**	**-0.5**
MAKA	**Makarska**	**2.73**	**266**	*i* Pn	**Pn**	**08 45 46.5**	**+1.9**
MAKA				Sn	**Sb**	**08 46 20.9**	**-2.3**
MGRS	**Mrkonjic Grad**	**2.79**	**289**	*e*Pn	**Pn**	**08 45 47.2**	**+1.9**
MGRS				*e*Sn	**Sn**	**08 46 19.9**	**+0.8**
SIRR	**Siria**	**2.79**	**13**	⇑P	**Pn**	**08 45 45.0**	**-0.4**
SIRR				⇓S	**Sn**	**08 46 19.7**	**+0.6**
PLVB	**Pleven**	**2.82**	**92**	⇑P	**Pn**	**08 45 45.1**	**-0.7**
PLVB				⇑S	**Sn**	**08 46 22.7**	**+2.9**
BLY	**Banja Luka**	**2.83**	**296**	*e*Sn	**Sn**	**08 46 21.5**	**+1.3**
LOT	**Lotru**	**2.87**	**48**	⇓S	**Sn**	**08 46 23.1**	**+1.8**
KIJV	**Kijevo**	**3.18**	**280**	*e*Pn	**Pn**	**08 45 51.5**	**+0.7**
KIJV				Sn	**Sn**	**08 46 30.8**	**+2.0**
ARR	**Arges**	**3.32**	**56**	⇑P	**Pn**	**08 45 52.1**	**-0.6**
ARR				⇑S	**Sg**	**08 46 50.8**	**+3.7**
DRGR		**3.52**	**22**	⇑P	**Pn**	**08 45 55.1**	**-0.4**
DRGR				⇑S	**Sn**	**08 46 34.3**	**-3.0**
MOSL	**Moslavina**	**3.52**	**307**	*e*Pn	**Pn**	**08 45 55.6**	**+0.2**
MOSL				Sn	**Sn**	**08 46 34.7**	**-2.5**
MORI	**Morici**	**3.67**	**277**	*e*Pn	**Pn**	**08 45 58.8**	**+1.3**
MORI				Sn	**Sn**	**08 46 41.3**	**+0.4**
ZIRJ	**Zirje**	**3.71**	**273**	*i* Pn	**Pn**	**08 45 58.9**	**+0.9**
ZIRJ				Sn	**Sn**	**08 46 42.9**	**+1.1**
DUGI	**Dugi Otok**	**4.15**	**278**	*e*Pn	**Pn**	**08 46 06.3**	**+2.3**
MATE	**Matera**	**4.18**	**227**	⇑S	Sn	08 46 35.4	-18
MLR	**Muntele Rosu**	**4.19**	**61**	⇑P	Pg	08 46 26.6	+5.8
MLR				⇑S	**Sg**	**08 47 17.4**	**+2.3**
CRES	**Cresnjev**	**4.41**	**303**	*e*Pn	**Pn**	**08 46 08.5**	**+0.9**
CEY	**Cerknica**	**5.01**	**298**	*e*Pn	**Pn**	**08 46 17.4**	**+1.4**
VYHS	**Vyhne**	**5.12**	**346**	*e*PN	**Pn**	**08 46 17.7**	**+0.3**
ARSA	**Arzberg**	**5.22**	**317**	*i* Pn	**Pn**	**08 46 19.2**	**+0.5**
	1.0nm,0.2s						
ARSA				*i* Sn	**Sn**	**08 47 15.6**	**-3.4**
	2.0nm,0.4s						
MODS	**Modra-Piesok**	**5.39**	**335**	*e*PN	**Pn**	**08 46 21.0**	**-0.2**
CONA	**Conrad Observa**	**5.55**	**324**	*i* Pn	**Pn**	**08 46 25.2**	**+1.7**
	0.4nm,0.2s						
CONA				*i* Sn	**Sn**	**08 47 26.5**	**-0.8**
	1.1nm,0.4s						
WTTA	**Wattenberg**	**7.41**	**303**	*e*Pn	**Pn**	**08 46 52.8**	**+3.8**
	0.8nm,0.2s						

*DJA **25** 08:51:01.8±0.5, 8°S±3°×122°8E±°, h224km±14km, M4.4/10, mB5.0/2, mb4.4/6, MLv4.2/10, MLv4.5/2, Mw(mB)4.3/2*
*NEIC **25** 08:51:02.3±1.5, 7°79S±0°08×127°83E±0°07, h170km±4km, mb4.3/13, Error ellipse: s-maj=11.6km s-min=8.8km az=150.0*
*IDC **25** 08:51:03.0±2.0, 7°60S×127°57E, h158km±19km, mb3.5/6, mb1 3.7/9, mb1mx3.4/42, mbtmp4.1/9, MS3.3/1, Ms1 3.5/1, ms1mx2.4/16, Error ellipse: s-maj=20.4km s-min=15.9km az=85.0*
ISC 25 08:51:01.3±0.5, 7°78S±0°05×127°79E±0°05, h150km, n47, σ2°912/56, mb4.1/14, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.48**	**94**	P	Pn	08 52 02.3	+7.5
SAUI	**Saumlaki**	**3.48**	**94**	Pn	**Pn**	**08 51 55.8**	**+1.1**
SAUI				Sn	**Sn**	**08 52 35.4**	**-0.8**
SOEI	**Soe**	**4.00**	**240**	P	**Pn**	**08 52 02.8**	**+1.1**
SOEI	**Soe**	**4.00**	**240**		**Pn**	**08 52 03.3**	**+1.6**
SOEI				Sn	**Sn**	**08 52 49.1**	**+0.5**
AAI	**Ambon**	**4.08**	**6**	P	**Pn**	**08 52 03.7**	**+1.0**
BATI	**Baumata**	**4.74**	**239**	P	**Pn**	**08 52 13.4**	**+2.1**
	20nm,0.3s,baz=121,slow=2.7,SNR=7.7						
BATI				S	**Sn**	**08 53 05.2**	**-0.7**
	46nm,0.3s,baz=88,slow=18,SNR=13						
SANI	**Sanana**	**5.97**	**342**	P	**Pn**	**08 52 28.4**	**+0.8**
	0.1nm0.1nm19nm,1.1s						
MTN	**Manton Dam**	**6.01**	**147**		**Pn**	**08 52 30.3**	**+2.1**
MTN				Sn	**Sn**	**08 53 37.1**	**+1.0**
FAKI	**Fak Fak**	**6.55**	**43**	Pn	**Pn**	**08 52 35.8**	**+0.4**
FAKI				Sn	**Sn**	**08 53 49.7**	**+0.5**
SIJI	**Sorong**	**7.69**	**27**	P	**Pn**	**08 52 52.5**	**+1.9**
	1.7nm,0.3s,baz=347,slow=7.7,SNR=3.9						
KNRA	**Kununurra**	**7.91**	**173**		**Pn**	**08 52 55.2**	**+1.7**
KNRA				Sn	**Sn**	**08 54 20.3**	**-1.4**
KMSI	**Cibinong**	**9.13**	**335**	P	**Pn**	**08 53 06.7**	**-3.1**
FITZ	**Fitzroy Crossi**	**10.47**	**191**	P	**Pn**	**08 53 27.1**	**-0.4**
	4.0nm,0.3s,baz=22,slow=9.4,SNR=85						
FITZ				S	**Sn**	**08 55 18.3**	**-5.1**
	1.7nm,0.3s,baz=286,slow=23,SNR=6.0						
FITZ	**Fitzroy Crossi**	**10.47**	**191**		**Pn**	**08 53 27.4**	**-0.1**
FITZ				Sn	**Sn**	**08 55 23.7**	**+0.2**
WB0	**Warramunga Arr**	**13.53**	**152**		**Pn**	**08 54 07.6**	**+0.3**
WRAB	**Tennant Creek**	**13.65**	**153**		**Pn**	**08 54 09.2**	**+0.3**
WRA	**Warramunga Arr**	**13.66**	**153**	P	**Pn**	**08 54 09.0**	**+0.1**
	2.7nm,0.3s,baz=321,slow=14,SNR=76						
WRA				S	**Sn**	**08 56 33.7**	**-6.5**
	1.7nm,0.3s,baz=319,slow=26,SNR=11

ARK				⇑*i*	S	**Sn**	**09 01 44.4**	**-0.7**
	baz=43							
BTK	**Batken**	**1.44**	**238**	⇑*i*	P	**Pn**	**09 01 37.1**	**+0.6**
BTK	baz=39			⇑*i*	S	**Sn**	**09 01 55.9**	**+0.2**
	baz=39							
AML	**Almayashu**	**1.61**	**36**	⇑*i*	P	**Pg**	**09 01 41.5**	**+0.7**
AML	baz=36			⇑*i*	S	**Sg**	**09 02 03.9**	**+2.2**
	baz=36							
MRKS	**Merke**	**2.00**	**18**	*e*	P	**Pg**	**09 01 48.6**	**+0.3**
	2.6nm,0.1s							
MRKS	7.5nm,0.1s			*e*	S	**Sg**	**09 02 15.9**	**+1.8**
UCH	**Uchtor**	**2.10**	**48**	⇑*e*	P	**Pb**	**09 01 49.4**	**+0.8**
UCH	baz=48			⇑*i*	S	**Sg**	**09 02 17.3**	**-0.2**
	baz=48							
IUG	**Iuzhnay**	**2.21**	**307**	*e*	P	**Pg**	**09 01 51.8**	**-0.6**
	0.4nm,0.1s							
IUG	5.5nm,0.1s			*e*	S	**Sg**	**09 02 21.3**	**+0.3**
AAK	**Ala-Archa**	**2.38**	**40**	⇑*i*	P	**Pb**	**09 01 52.9**	**-0.2**
AAK	baz=40			⇑*i*	S	**Sb**	**09 02 23.7**	**+1.0**
	baz=40							
KZA	**Kyzart**	**2.47**	**59**	⇑*i*	P	**Pb**	**09 01 54.5**	**-0.3**
KZA	baz=58			⇑*i*	S	**Sb**	**09 02 25.9**	**+0.4**
	baz=58							
BRLS	**Boroldaу**	**2.91**	**320**	*e*	P	**Pb**	**09 02 01.6**	**-0.5**
	1.0nm,0.1s							
BRLS	5.6nm,0.2s			*e*	S	**Sb**	**09 02 38.1**	**+0.3**
KST	**Kastek**	**3.44**	**49**	*e*	P	**Pg**	**09 02 14.6**	**-1.4**
	1.0nm,0.1s							
KST	3.0nm,0.2s			*e*	S	**Sg**	**09 03 00.4**	**-0.1**
DGS	**Degeres**	**3.47**	**45**	*e*	P	**Pg**	**09 02 15.0**	**-1.4**
	0.4nm,0.1s							
DGS	2.2nm,0.3s			*e*	S	**Sg**	**09 03 01.1**	**-0.2**
KRBS	**Karabastau**	**3.74**	**39**	*e*	P	**Pg**	**09 02 20.0**	**-1.6**
	0.1nm,0.1s							
KRBS	0.9nm,0.2s			*e*	S	**Sg**	**09 03 09.5**	**-0.6**

TUL ***25*** *09:10:34.9±1.4,36.80N±0.02×97.67W±0.03,h5km±1km, ML3.0,Error ellipse: s-maj=3.4km s-min=2.0km az=59.0*
NEIC ***25*** *09:10:35.3±1.1,36.78N±0.02×97.64W±0.02,h4km±7km, Error ellipse: s-maj=3.4km s-min=1.4km az=52.0*
ANF ***25*** *09:10:37.0±1.5,36.80N×97.69W,h18km±11km,ML3.7/7, Error ellipse: s-maj=5.0km s-min=2.8km az=51.0*

ISC 25 09:10:35.3±0.9, 36.79N±0.04×97.66W±0.04, h10km, n48, σ0.84/52, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**0.93**	**82**		**Pg**	**Pg**	**09 10 52.6**	**-0.7**
T35A					Sg	**Sg**	**09 11 04.8**	**-0.6**
U32A	**Winter Ranch,**	**1.15**	**250**			**Pn**	**09 10 56.5**	**-0.9**
ADOK	**Arcadia Dam**	**1.16**	**168**	Pg		**Pb**	**09 10 56.8**	**-0.6**
OKCFA	**Oklahoma City**	**1.38**	**173**			**Pn**	**09 11 00.6**	**0.0**
OKCSW	**OKLAHOMA CITY**	**1.39**	**172**			**Pn**	**09 11 00.9**	**+0.1**
FNO	**Franklin**	**1.54**	**172**			**Pn**	**09 11 03.6**	**+0.8**
TUL1	**Leonard**	**1.75**	**119**	P		**Pn**	**09 11 06.6**	**+0.9**
	baz=301							
TUL1				S		**Sb**	**09 11 30.0**	**+0.6**
	baz=301							
TUL1	**Leonard**	**1.75**	**119**			**Pn**	**09 11 06.3**	**+0.6**
W35A	**Tecumseh**	**1.75**	**158**			**Pn**	**09 11 06.4**	**+0.7**
R32A	**Long Quarter,**	**1.83**	**333**			**Pn**	**09 11 07.8**	**+0.9**
WMOK	**Wichita Mounta**	**2.24**	**204**	P		**Pn**	**09 11 13.0**	**+0.6**
	baz=23							
WMOK	**Wichita Mounta**	**2.24**	**204**			**Pn**	**09 11 13.1**	**+0.6**
KSU1	**Kansas State U**	**2.46**	**19**			**Pn**	**09 11 16.5**	**+1.0**
CBKS	**Cedar Bluff**	**2.61**	**322**	P		**Pn**	**09 11 18.5**	**+0.9**
	baz=140							
CBKS				Sb		**Sb**	**09 11 55.6**	**+1.3**
	baz=140							
CBKS	**Cedar Bluff**	**2.61**	**322**			**Pn**	**09 11 18.4**	**+0.8**
U38A	**Gravette**	**2.66**	**96**			**Pn**	**09 11 18.9**	**+0.6**
X37A	**Clayton**	**2.88**	**139**			**Pn**	**09 11 22.8**	**+1.6**
HHAR	**Hobbs**	**3.04**	**98**			**Pn**	**09 11 24.6**	**+1.1**
Z35A	**Perchaven, San**	**3.46**	**174**			**Pn**	**09 11 30.7**	**+1.4**
W39A	**Magazine**	**3.52**	**116**			**Pn**	**09 11 31.7**	**+1.6**
S39A	**Bolivar**	**3.58**	**74**			**Pn**	**09 11 32.2**	**+1.3**
U40A	**Yellville**	**3.90**	**95**	P		**Pn**	**09 11 36.1**	**+0.9**
	baz=278							
U40A				S		**Sn**	**09 12 21.5**	**+0.4**
	baz=278							
U40A	**Yellville**	**3.90**	**95**			**Pn**	**09 11 36.0**	**+0.7**
N33A	**J Bar K, Exete**	**3.95**	**2**	Pn		**Pn**	**09 11 35.7**	**-0.3**
MIAR	**Mount Ida**	**4.01**	**123**			**Pn**	**09 11 37.5**	**+0.7**
P38A	**Dawn**	**4.32**	**48**			**Pn**	**09 11 41.5**	**+0.5**
MGMO	**Mountain Grove**	**4.33**	**84**			**Pn**	**09 11 42.6**	**+1.3**
N35A	**Tabor**	**4.37**	**21**			**Pn**	**09 11 42.4**	**+0.7**
KSCO	**Kaye Shedlock'**	**4.51**	**301**	P		**Pn**	**09 11 44.5**	**+0.7**
	baz=118							
KSCO	**Kaye Shedlock'**	**4.51**	**301**			**Pn**	**09 11 44.3**	**+0.5**
R40A	**Maddies Statio**	**4.54**	**69**			**Pn**	**09 11 44.6**	**+0.5**
X40A	**Basin Creek Fa**	**4.55**	**119**			**Pn**	**09 11 45.7**	**+1.4**
FCAR	**Ozark Folk Cen**	**4.56**	**100**			**Pn**	**09 11 45.1**	**+0.7**
BGNE	**Belgrade**	**4.63**	**355**	P		**Pn**	**09 11 46.0**	**+0.6**
	baz=175							
BGNE	**Belgrade**	**4.63**	**355**	Pn		**Pn**	**09 11 45.7**	**+0.3**
UALR	**University of**	**4.77**	**113**	Pn		**Pn**	**09 11 47.0**	**-0.3**
WHTX	**Lake Whitney,**	**4.79**	**178**	P		**Pn**	**09 11 48.1**	**+0.6**
	baz=358							
WHTX	**Lake Whitney,**	**4.79**	**178**	Pn		**Pn**	**09 11 47.6**	**+0.1**
WLAR	**White Oak Lake**	**4.84**	**128**	Pn		**Pn**	**09 11 48.7**	**+0.5**
237A	**Washetta, Mont**	**5.01**	**162**	Pn		**Pn**	**09 11 51.7**	**+1.1**
L34A	**Svendsen Farm,**	**5.27**	**11**			**Pn**	**09 11 53.3**	**-0.8**
N38A	**Joes South For**	**5.29**	**39**			**Pn**	**09 11 54.0**	**-0.4**
LCAR	**Lake Charles**	**5.30**	**96**			**Pn**	**09 11 55.0**	**+0.6**
SCIA	**State Center**	**6.17**	**33**			**Pn**	**09 12 06.4**	**0.0**
SDCO	**Great Sand Dun**	**6.33**	**281**	Pn		**Pn**	**09 12 07.6**	**-1.3**
ISCO	**Idaho Springs**	**6.94**	**298**			**Pn**	**09 12 17.7**	**+0.4**
ECSD	**EROS Data Cent**	**6.99**	**6**	Pn		**Pn**	**09 12 16.6**	**-1.1**
HDIL	**Hopedale**	**7.55**	**58**			**Pn**	**09 12 26.0**	**+0.6**

DDA 25 09:14:18.2,38.71N×26.23E,h7km±7km, ML2.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.45**	**141**	*i*	P	Pg	09 14 27.2	+0.2
URLA				*i*	S	Sb	09 14 37.8	+2.3
ZEDA	**zmir-Bergama**	**0.71**	**69**	*i*	P	Pg	09 14 30.7	-1.1
ZEDA				*i*	S	Sg	09 14 41.7	+0.7
DGB	**zmir**	**0.83**	**142**	*i*	P	Pg	09 14 33.3	-0.9
DGB				*i*	S	Sb	09 14 47.6	+1.2
BAYC	**CANAKKALE_Bayr**	**1.06**	**13**	*i*	S	Sn	09 14 54.6	+0.2

THE ***25*** *09:14:31.4,40.39N×26.07E,h10km±1km,ML2.0/8,Error ellipse: s-maj=1.4km s-min=0.6km az=37.0*

ISK 25 09:14:30.5,40.37N×26.14E,h10km,ML2.1/10, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GELI	**Tayfur-Gelibol**	**0.25**	**84**		PG	Pb	09 14 36.5	-0.7
GELI					SG	Sb	09 14 40.6	-1.0
GADA	**Gvkgeada**	**0.26**	**226**		P	Pg	09 14 36.3	+0.5
GADA					S	Sb	09 14 40.7	-1.1
	300nm,0.2s							
GADA	**Gvkgeada**	**0.26**	**226**		PG	Pg	09 14 36.4	+0.6
ENEZ	**Enez**	**0.36**	**1**		P	Pg	09 14 38.1	+0.4
ENEZ					S	Sb	09 14 43.7	-1.1
	502nm,0.3s							
ENEZ	**Enez**	**0.36**	**1**		PG	Pg	09 14 38.2	+0.5
ENEZ					SG	Sb	09 14 43.8	-1.0
ERIK	**Erikli-Kesan**	**0.41**	**43**		PG	Pg	09 14 38.9	+0.3
ERIK					SG	Sg	09 14 44.8	+0.8
LPK	**Lapseki**	**0.47**	**90**		PG	Pg	09 14 39.3	-0.4
BOZC	**Bozcaada**	**0.53**	**187**		PG	Pg	09 14 40.9	0.0
BOZC					SG	Sb	09 14 49.2	-0.4
BOZC	**Bozcaada**	**0.53**	**187**	*i*	P	Pg	09 14 41.0	+0.1
BOZC					IAML		09 14 49.0	
	comp=E,83nm,0.5s							
BOZC					IAML		09 14 50.0	
	comp=N,59nm,0.3s							
EZN	**Ezine**	**0.56**	**166**		P	Pb	09 14 43.2	+0.8
EZN					S	Sb	09 14 51.0	+0.5
	comp=N,108nm,0.1s							
RKY	**Sarkoy-Tekirda**	**0.85**	**68**		PG	Pg	09 14 46.8	-0.1
LIA	**Limnos Island**	**0.88**	**238**		P	Pb	09 14 47.7	0.0
LIA					S	Sb	09 14 59.3	-0.2
	comp=N,150nm,0.2s							
KRBG	**Karabiga-Canak**	**0.88**	**88**		PG	Pb	09 14 47.9	0.0
RDO	**Rodhopi**	**0.90**	**329**		P	Pg	09 14 47.1	-0.7
RDO					S	Sb	09 15 00.5	+0.3
	comp=N,110nm,0.2s							
RDO	**Rodhopi**	**0.90**	**329**		PG	Pn	09 14 48.7	-0.5
THAS	**Thassos island**	**1.11**	**283**		P	Pb	09 14 50.9	-0.9
THAS					S	Sb	09 15 06.2	-0.1
	comp=N,80nm,0.4s							
PRK	**Paraskevi**	**1.13**	**175**		P	Pn	09 14 53.4	+1.1
PRK					S	Sn	09 15 09.7	+1.9
	comp=N,320nm,0.7s							
MRMT	**Marmara Adasi**	**1.13**	**78**		PN	Pn	09 14 52.6	+0.2
SIGR	**SIGRI**	**1.18**	**191**		P	Pb	09 14 52.7	-0.2
SIGR					S	Sn	09 15 09.7	+0.6
	comp=N,130nm,0.4s							
SIGR	**SIGRI**	**1.18**	**191**		PN	Pg	09 14 53.4	+0.2
KDZ	**Kurdzhali**	**1.39**	**337**		PN	Pn	09 14 55.3	-0.6

JMA ***25*** *09:21:44.9×0.1,23.69N×121.53E,h0km,M3.1*
TAP ***25*** *09:21:46.3,23.75N×121.42E,h17km,ML3.5,C*

ISC 25 09:21:46.1±0.8, 23.74N±0.01×121.44E±0.02, h17km±4km, n108, σ0.58/176, 10C-11D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.07**	**189**	⇑*i*	P	**Pg**	**09 21 49.6**	**+0.2**
EGFH	baz=177			*e*	S	**Sg**	**09 21 51.9**	**+0.2**
	baz=177							
ESL	**Shilin**	**0.08**	**356**	⇑*i*	P	**Pg**	**09 21 49.7**	**+0.1**
ESL	baz=14				S	**Sg**	**09 21 51.7**	**-0.1**
	baz=14							
HGSD	**Ruisui**	**0.24**	**183**	⇑*i*	P	**Pg**	**09 21 52.1**	**+0.4**
HGSD	baz=185			*e*	S	**Sg**	**09 21 56.1**	**+0.6**
	baz=185							
EHY	**Hungye**	**0.25**	**205**	⇑*i*	P	**Pg**	**09 21 51.5**	**-0.4**
EHY	baz=200			*e*	S	**Sg**	**09 21 55.6**	**-0.2**
	baz=200							
VWDT	**VWDT**	**0.27**	**274**	⇑*i*	P	**Pb**	**09 21 52.4**	**-0.2**
VWDT	baz=266			*e*	S	**Sb**	**09 21 56.4**	**-0.5**
	baz=266							
HWA	**Hwalien**	**0.28**	**32**	*e*	P	**Pb**	**09 21 53.1**	**+0.3**
HWA	baz=33			*e*	S	**Sb**	**09 21 57.9**	**+0.7**
	baz=33							
OWD	**Renai**	**0.32**	**312**	⇓*i*	P	**Pg**	**09 21 53.1**	**0.0**
OWD	baz=312			*i*	S	**Sg**	**09 21 57.3**	**-0.6**
	baz=312							
YULB	**Yu-li**	**0.37**	**201**	⇑*i*	P	**Pg**	**09 21 53.5**	**-0.4**
YULB	baz=194			*e*	S	**Sg**	**09 21 58.3**	**-0.7**
	baz=194							
TWD	**Chiawan**	**0.37**	**23**	*e*	P	**Pg**	**09 21 54.1**	**+0.2**
TWD	baz=27			*i*	S	**Sg**	**09 21 59.5**	**+0.3**
	baz=27							
CHGB	**Renai**	**0.40**	**323**	⇓*i*	P	**Pb**	**09 21 54.7**	**-0.3**
CHGB	baz=331			*i*	S	**Sg**	**09 21 59.9**	**-0.4**
	baz=331							
TWF1	**Yuli**	**0.40**	**199**	*e*	P	**Pg**	**09 21 53.7**	**-0.7**
TWF1	baz=199			*e*	S	**Sg**	**09 21 59.5**	**-0.6**
	baz=199							
WHF	**Hehuan Shan**	**0.44**	**339**	⇓*i*	P	**Pg**	**09 21 55.0**	**-0.2**
WHF	baz=341			*e*	S	**Sg**	**09 22 00.9**	**-0.5**
	baz=341							
SSLB	**Suanglung**	**0.45**	**277**	⇓*i*	P	**Pg**	**09 21 54.9**	**-0.4**
SSLB	baz=282			*i*	S	**Sg**	**09 22 00.3**	**-1.1**
	baz=282							
NACB	**Ninganchiao**	**0.46**	**18**	⇑*i*	P	**Pg**	**09 21 54.9**	**-0.5**
NACB	baz=20			*e*	S	**Sg**	**09 22 01.6**	**-0.1**
	baz=20							
ETLH	**Xiulin Townshi**	**0.47**	**5**	*e*	P	**Pg**	**09 21 55.5**	**-0.2**
ETLH	baz=7.0			*e*	S	**Sg**	**09 22 01.8**	**-0.3**
	baz=7.0							
SMLT	**Sun Moon Lake**	**0.52**	**287**	⇓*i*	P	**Pg**	**09 21 56.3**	**-0.2**
SMLT	baz=286			*e*	S	**Sg**	**09 22 03.1**	**-0.4**
	baz=286							
WHYT	**Xinyi Township**	**0.54**	**266**	*e*	P	**Pg**	**09 21 56.9**	**0.0**
WHYT	baz=265			*e*	S	**Sg**	**09 22 03.7**	**-0.5**
	baz=265							
FULB	**Fuli**	**0.55**	**194**	*e*	P	**Pg**	**09 21 56.9**	**-0.3**
FULB	baz=202			*i*	S	**Sb**	**09 22 06.8**	**+1.8**
	baz=202							
DPDB	**Guoxing**	**0.56**	**302**	⇓	P	**Pb**	**09 21 57.2**	**-0.2**
DPDB	baz=307			*e*	S	**Sg**	**09 22 04.4**	**-0.3**
	baz=307							
TYC	**Yuchr**	**0.56**	**287**	⇓*i*	P	**Pg**	**09 21 56.9**	**-0.3**
TYC	baz=292			*e*	S	**Sg**	**09 22 04.1**	**-0.6**
	baz=292							
TWT	**Tachien**	**0.57**	**335**	⇓*i*	P	**Pb**	**09 21 57.8**	**0.0**
TWT	baz=334			*e*	S	**Sg**	**09 22 04.5**	**-0.7**
	baz=334							
TDCB	**Techi**	**0.57**	**333**	⇓	P	**Pb**	**09 21 57.8**	**-0.1**
TDCB	baz=334			*e*	S	**Sg**	**09 22 04.7**	**-0.7**
	baz=334							
CHKT	**Chengkung**	**0.64**	**186**	*e*	P	**Pg**	**09 21 58.9**	**+0.1**
CHKT	baz=171			*e*	S	**Sb**	**09 22 08.1**	**+0.7**
	baz=171							
WJS	**Zhushan**	**0.66**	**278**	⇓*i*	P	**Pn**	**09 21 59.9**	**-0.7**
WJS	baz=277			*e*	S	**Sn**	**09 22 09.7**	**-1.0**
	baz=277							
ELDTW	**Lidau**	**0.67**	**216**	*e*	P	**Pg**	**09 21 58.1**	**-1.2**
ELDTW	baz=207			*e*	S	**Sg**	**09 22 07.1**	**-1.2**
	baz=207							
NNSB	**Datong**	**0.69**	**356**	⇑*i*	P	**Pg**	**09 21 59.6**	**-0.1**
NNSB	baz=4.0			*e*	S	**Sg**	**09 22 08.8**	**-0.2**
	baz=4.0							
NNSH	**Datong**	**0.69**	**356**	⇑	P	**Pg**	**09 21 59.6**	**-0.2**
NNSH	baz=1.0			*e*	S	**Sg**	**09 22 08.5**	**-0.5**
	baz=1.0							
NNS	**Nan Shan**	**0.70**	**355**	⇑*i*	P	**Pg**	**09 21 59.9**	**-0.1**
NNS	baz=3.0			*i*	S	**Sg**	**09 22 09.2**	**-0.2**
	baz=3.0							
WHP	**Taichung City**	**0.70**	**320**	⇓*i*	P	**Pg**	**09 21 59.8**	**-0.2**
WHP	baz=320			*e*	S	**Sb**	**09 22 09.7**	**+0.3**
	baz=320							
WNT	**Mingjian**	**0.71**	**282**	*e*	P	**Pn**	**09 22 00.8**	**-0.5**
WNT	baz=283			*e*	S	**Sn**	**09 22 11.5**	**-0.3**
	baz=283							
CHN5	**Tsauling**	**0.71**	**259**	*e*	P	**Pb**	**09 22 00.5**	**+0.4**
CHN5	baz=252			*e*	S	**Sb**	**09 22 09.9**	**+0.2**
	baz=252							
ENA	**Nanau**	**0.74**	**22**	*e*	P	**Pb**	**09 21 59.5**	**-1.1**
	baz=25							
WGK	**Gukeng**	**0.81**	**267**	*e*	P	**Pg**	**09 22 02.2**	**+0.3**
WGK	baz=267			*e*	S	**Sg**	**09 22 12.9**	**+0.3**
	baz=267							
TCU	**Taichung**	**0.81**	**301**	*e*	P	**Pn**	**09 22 02.6**	**-0.1**
TCU	baz=302			*e*	S	**Sn**	**09 22 14.4**	**+0.1**
	baz=302							
WDLH	**Douliu**	**0.83**	**267**	*e*	P	**Pn**	**09 22 02.7**	**-0.3**
	baz=267							
WDLH				*e*	S	**Sn**	**09 22 14.2**	**-0.6**
	baz=267							
STYT	**Tauyuan**	**0.85**	**228**	*e*	P	**Pb**	**09 22 02.5**	**0.0**
	baz=226							
STYT				*e*	S	**Sb**	**09 22 13.2**	**-0.3**
	baz=226							
TPUB	**Ta-pu**	**0.86**	**240**		P	**Pg**	**09 22 03.2**	**+0.3**
	baz=239							
TPUB				*e*	S	**Sg**	**09 22 14.2**	**-0.1**
	baz=239							
TWQ1	**Liyutan**	**0.86**	**315**	*e*	P	**Pn**	**09 22 03.4**	**-0.1**
	baz=321							
TWQ1				*e*	S	**Sn**	**09 22 15.2**	**-0.5**
	baz=321							
NDT	**Datong Townshi**	**0.86**	**4**	*e*	P	**Pb**	**09 22 02.8**	**+0.1**
	baz=6.0							
NDT				*e*	S	**Sb**	**09 22 13.7**	**-0.3**
	baz=6.0							
CHN4	**Tsaushan**	**0.87**	**244**	*e*	P	**Pn**	**09 22 03.5**	**0.0**
	baz=243							
CHN4				*e*	S	**Sn**	**09 22 15.9**	**+0.1**
	baz=243							
WCHH	**Zhanghua**	**0.88**	**293**	*e*	P	**Pg**	**09 22 03.3**	**+0.1**
	baz=292							
WCHH				*e*	S	**Sn**	**09 22 16.4**	**+0.4**
	baz=292							
WTP	**Ta-pu**	**0.90**	**237**		P	**Pg**	**09 22 04.0**	**+0.2**
	baz=236							
WTP				*e*	S	**Sg**	**09 22 15.9**	**+0.2**
	baz=236							
ENTT	**Nioudou**	**0.91**	**7**	*e*	P	**Pb**	**09 22 02.8**	**-0.6**
	baz=9.0							
ENTT				*e*	S	**Sg**	**09 22 15.4**	**-0.3**
	baz=9.0							
CHN2	**Minshiung**	**0.91**	**257**	*e*	P	**Pg**	**09 22 03.7**	**-0.1**
	baz=257							
CHN2				*e*	S	**Sn**	**09 22 17.1**	**+0.3**
	baz=257							
NSY	**Sanyi**	**0.92**	**318**	*e*	P	**Pn**	**09 22 05.1**	**+0.8**
	baz=318							
NSY				*e*	S	**Sn**	**09 22 18.9**	**+1.8**
	baz=318							
YHNB	**Yeheng**	**0.93**	**356**	*e*	P	**Pg**	**09 22 04.1**	**-0.2**
	baz=357							
YHNB				*e*	S	**Sb**	**09 22 15.7**	**-0.3**
	baz=357							
NSK	**Sanguang**	**0.94**	**355**		P	**Pg**	**09 22 04.3**	**-0.2**
	baz=357							
NSK					S	**Sg**	**09 22 16.5**	**-0.3**
	baz=357							
TWC	**Suao**	**0.95**	**23**	*e*	P	**Pb**	**09 22 03.4**	**-0.7**
	baz=19							
TWC				*e*	S	**Sb**	**09 22 16.3**	**0.0**
	baz=19							
WDJ	**Dajia District**	**0.95**	**310**	*e*	P	**Pn**	**09 22 05.2**	**+0.5**
	baz=322							
WDJ				*e*	S	**Sn**	**09 22 19.5**	**+1.7**
	baz=322							
CHY	**Chiayi**	**0.96**	**256**	*e*	P	**Pn**	**09 22 05.0**	**+0.1**
	baz=256							
CHY				*e*	S	**Sn**	**09 22 17.9**	**-0.2**
	baz=256							
TWG	**Pinlang**	**0.97**	**200**	*e*	P	**Pb**	**09 22 04.2**	**-0.3**
	baz=184							
TWGBT	**Beinan**	**0.97**	**200**	*e*	P	**Pb**	**09 22 03.9**	**-0.6**
	baz=186							
TWGBT				*e*	S	**Sn**	**09 22 18.9**	**+0.5**
	baz=186							
PTSB	**Yuanli**	**0.97**	**317**	*e*	P	**Pn**	**09 22 05.8**	**+0.8**
	baz=317							
NSTT	**Nanjuang**	**0.98**	**336**	*e*	P	**Pn**	**09 22 05.3**	**+0.2**
	baz=337							
NSTT				*e*	S	**Sg**	**09 22 17.8**	**-0.2**
	baz=337							
LIOB	**Emei**	**0.98**	**337**		P	**Pn**	**09 22 05.7**	**+0.5**
	baz=338							
TWK	**Hsinying**	**0.99**	**242**	*e*	P	**Pg**	**09 22 05.6**	**+0.2**
	baz=242							
TWK				*e*	S	**Sn**	**09 22 19.0**	**+0.1**
	baz=242							
NMLH	**Miaoli**	**0.99**	**324**	*e*	P	**Pg**	**09 22 05.8**	**+0.4**
	baz=324							
CHN1	**Nanshi**	**1.00**	**237**	*e*	P	**Pg**	**09 22 05.9**	**+0.3**
	baz=237							
CHN1				*e*	S	**Sn**	**09 22 19.6**	**+0.5**
	baz=237							
RLNB	**Erlin**	**1.00**	**279**	*e*	P	**Pb**	**09 22 04.4**	**-0.6**
	baz=279							
RLNB				*e*	S	**Sn**	**09 22 19.9**	**+0.9**
	baz=279							
TWE	**Neicheng**	**1.00**	**12**	*e*	P	**Pb**	**09 22 05.2**	**+0.1**
	baz=23							
TWE				*e*	S	**Sg**	**09 22 18.9**	**+0.1**
	baz=23							
SNST	**Tainan City**	**1.01**	**239**	*e*	P	**Pg**	**09 22 05.9**	**+0.3**
	baz=239							
SNST				*e*	S	**Sn**	**09 22 19.2**	**0.0**
	baz=239							
SGST	**Jiashian**	**1.02**	**231**	*e*	P	**Pb**	**09 22 04.9**	**-0.5**
	baz=230							
SGST				*e*	S	**Sg**	**09 22 19.3**	**-0.1**
	baz=230							
TWH	**Lutao**	**1.02**	**178**	*e*	P	**Pb**	**09 22 03.5**	**-1.9**
	baz=174							
EOS1	**EOS1**	**1.02**	**38**	*e*	P	**Pb**	**09 22 05.6**	**+0.2**
	baz=58							
NWLT	**Wulai**	**1.04**	**3**	*e*	P	**Pn**	**09 22 05.9**	**0.0**
	baz=17							
SLGT	**Liugui**	**1.04**	**225**	*e*	P	**Pb**	**09 22 05.7**	**0.0**
	baz=211							
WLGB	**Puzi**	**1.08**	**256**	*e*	P	**Pn**	**09 22 06.5**	**+0.1**
	baz=257							
WLGB				*e*	S	**Sg**	**09 22 21.8**	**+0.7**
	baz=257							
SBCB	**Hsinchu**	**1.13**	**339**	*e*	P	**Pg**	**09 22 08.7**	**+0.6**
	baz=329							
NTC	**Toucheng**	**1.17**	**18**	*e*	P	**Pn**	**09 22 07.0**	**-0.7**
	baz=21							
ECL	**Taimali**	**1.22**	**202**	*e*	P	**Pn**	**09 22 08.1**	**-0.3**
	baz=184							
NHDH	**Xindian Distri**	**1.22**	**4**	*e*	P	**Pn**	**09 22 08.7**	**+0.2**
	baz=15							
SSD	**Sandimen**	**1.23**	**217**	*e*	P	**Pn**	**09 22 08.6**	**0.0**
	baz=207							
TATO	**Taipei**	**1.23**	**2**	*e*	P	**Pn**	**09 22 07.9**	**-0.7**
	baz=13							
TWA	**Mucha**	**1.25**	**6**	*e*	P	**Pg**	**09 22 11.0**	**+0.7**
	baz=19							
NCUH	**Zhongli**	**1.25**	**349**	*e*	P	**Pb**	**09 22 09.5**	**+0.2**
	baz=353							
TIPB	**Shuangxi**	**1.28**	**16**	*e*	P	**Pn**	**09 22 08.7**	**-0.6**
	baz=17							
TIPB				*e*	S	**Sg**	**09 22 27.2**	**-0.4**
	baz=17							
TAP1	**Taipei**	**1.30**	**3**	*e*	P	**Pg**	**09 22 11.5**	**+0.2**
	baz=20							
TWM1	**Shoushan**	**1.30**	**226**	*e*	P	**Pg**	**09 22 12.3**	**+1.0**
	baz=237							
MASBT	**Mashibuluo**	**1.34**	**214**		P	**Pb**	**09 22 11.1**	**+0.2**
	baz=205							
TWS1	**Kuangyinshan**	**1.36**	**359**	*e*	P	**Pn**	**09 22 10

	baz=65								
YOJ	**Yonaguni jima**	**1.61**	**63**	P		**Pn**	**09 22 13.7**	**-0.1**
YOJ				S		**Sn**	**09 22 34.9**	**+0.8**
PHUB	**P'eng-hu**	**1.73**	**263**	*e*P		**Pn**	**09 22 15.2**	**-0.1**
	baz=261								
PNG	**Penghu**	**1.74**	**265**	*e*P		**Pn**	**09 22 15.7**	**+0.2**
	baz=263								
VCHM	**Qimei**	**1.92**	**255**	*e*P		**Pn**	**09 22 17.9**	**-0.1**
	baz=252								
PCYT	**Pengchaiyu**	**1.97**	**17**	*e*P		**Pn**	**09 22 19.0**	**+0.3**
	baz=21								
IRIF	**Iriomote-Funau**	**2.18**	**74**	P		**Pn**	**09 22 21.7**	**+0.1**
IRIF				S		**Sn**	**09 22 49.0**	**+0.9**
HATJ	**Hateruma jima**	**2.19**	**81**	P		**Pn**	**09 22 21.5**	**-0.2**
HATJ				S		**Sn**	**09 22 47.8**	**-0.6**
VWUC	**VWUC**	**2.20**	**305**	*e*P		**Pn**	**09 22 21.5**	**-0.4**
	baz=304								
JKRS	**Kuro-shima**	**2.40**	**78**	P		**Pn**	**09 22 25.2**	**+0.5**
JKRS				S		**Sn**	**09 22 54.5**	**+0.8**
PTMZ	**Houxiangcun**	**2.48**	**302**	*e*P		**Pn**	**09 22 25.8**	**0.0**
	baz=301								
JIJ	**Ishigaki jima**	**2.55**	**75**	P		**Pn**	**09 22 26.4**	**-0.3**
JIJ				S		**Sn**	**09 22 56.5**	**-0.8**
JISG	**Ishigakijimahi**	**2.76**	**72**	P		**Pn**	**09 22 29.3**	**-0.2**
JISG				*e*S		**Sn**	**09 23 01.2**	**-1.2**
MHZQ	**Yeshan**	**3.21**	**318**	*e*P		**Pn**	**09 22 35.8**	**0.0**
	baz=317								
JIKM	**Ikemajima**	**3.67**	**70**	P		**Pn**	**09 22 43.6**	**+1.5**
JIKM				S		**Sn**	**09 23 22.2**	**-2.8**
JMJ2	**Miyako jima3**	**3.69**	**73**	P		**Pn**	**09 22 43.4**	**+1.1**
JMJ2				*e*S		**Sn**	**09 23 26.0**	**+0.6**

*THE **25** 09:24:30.2, 40˚.34N×25˚.75E, h9km±1km, ML1.7/4, Error ellipse: s-maj=1.4km s-min=0.4km az=14.0*
*DDA **25** 09:24:32.1, 40˚.35N×25˚.93E, h25km±1km, ML2.6*
*ISK **25** 09:24:32.1, 40˚.36N×25˚.93E, h22km, ML2.5/17*
*ATH **25** 09:24:34.8, 40˚.36N×25˚.85E, h15km±5km, ML2.3/4, Error ellipse: s-maj=5.9km s-min=0.9km az=280.0*

ISC 25 09:24:31.7±1.0, **40˚.36N**±0˚.02×**25˚.83E**±0˚.02, **h6**km±8km, **n54**, σ1§**44**/**79**, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.17**	**163**	P	**Pg**	**09 24 34.0**	**-1.2**
GADA				S	**Sg**	**09 24 37.1**	**-0.5**
	490nm,0.3s						
GADA	**Gvkgeada**	**0.17**	**163**	PG	**Pg**	**09 24 37.5**	**+2.3**
GADA				SG	**Sg**	**09 24 40.7**	**+3.1**
SMTH	**Samothraki Isl**	**0.26**	**296**	P	**Pg**	**09 24 34.7**	**-2.1**
SMTH				S	**Sg**	**09 24 38.0**	**-2.2**
	148nm,0.1s						
SMTH	**Samothraki Isl**	**0.26**	**296**	P	**Pb**	**09 24 40.4**	**+1.7**
SMTH				S	**Sb**	**09 24 44.7**	**+1.3**
SMTH				AML	AML	09 24 45.5	
	comp=N,1609µm,0.2s						
SMTH				AML	AML	09 24 50.7	
	comp=E,1467µm,0.1s						
ENEZ	**Enez**	**0.45**	**33**	P	**Pg**	**09 24 39.4**	**-1.0**
ENEZ				S	**Sg**	**09 24 47.3**	**+1.0**
	comp=E,482nm,0.5s						
ENEZ	**Enez**	**0.45**	**33**	PG	**Pb**	**09 24 41.7**	**-0.3**
ENEZ				SG	**Sg**	**09 24 47.6**	**+1.3**
GELI	**Tayfur-Gelibol**	**0.49**	**85**	PG	**Pg**	**09 24 41.6**	**+0.4**
GELI				SG	**Sg**	**09 24 48.1**	**+0.5**
BOZC	**Bozcaada**	**0.54**	**162**	PG	**Pb**	**09 24 43.6**	**0.0**
BOZC	**Bozcaada**	**0.54**	**162**	*i* P	**Pg**	**09 24 40.5**	**-1.6**
ERIK	**Erikli-Kesan**	**0.61**	**59**	PG	**Pg**	**09 24 43.6**	**+0.2**
EZN	**Ezine**	**0.65**	**144**	P	**Pg**	**09 24 42.9**	**-1.3**
EZN	**Ezine**	**0.65**	**144**	PG	**Pg**	**09 24 44.9**	**+0.7**
LIA	**Limnos Island**	**0.68**	**228**	P	**Pg**	**09 24 42.2**	**-2.5**
LIA				S	**Sg**	**09 24 50.9**	**-2.6**
	comp=E,60nm,0.2s						
LIA	**Limnos Island**	**0.68**	**228**	P	**Pn**	**09 24 48.1**	**+0.3**
LIA				S	**Sn**	**09 24 58.2**	**-0.4**
LPK	**Lapseki**	**0.71**	**88**	PG	**Pg**	**09 24 45.5**	**+0.2**
KESN	**Edirne-Kesan**	**0.80**	**54**	*i* P	**Pg**	**09 24 47.3**	**+0.2**
KESN				IAML		09 25 02.0	
	comp=E,232nm,0.3s						
RDO	**Rodhopi**	**0.82**	**344**	P	**Pg**	**09 24 45.5**	**-2.0**
RDO	**Rodhopi**	**0.82**	**344**	P	**Pn**	**09 24 50.8**	**+1.0**
RDO				S	**Sn**	**09 25 02.4**	**+0.3**
RDO				AML	AML	09 25 04.9	
	comp=N,572µm,0.2s						
RDO				AML	AML	09 25 05.0	
	comp=E,594µm,0.2s						
RDO	**Rodhopi**	**0.82**	**344**	PG	**Pb**	**09 24 49.0**	**+0.7**
BAYC	**CANAKKALE_Bayr**	**0.82**	**138**	*i* P	**Pg**	**09 24 46.5**	**-1.0**
BAYC				*i* S	**Sg**	**09 24 58.5**	**+0.2**
THAS	**Thassos island**	**0.89**	**287**	P	**Pg**	**09 24 45.9**	**-2.8**
THAS	**Thassos island**	**0.89**	**287**	P	**Pn**	**09 24 52.2**	**+1.6**
THAS				S	**Sn**	**09 25 04.0**	**+0.3**
THAS				AML	AML	09 25 06.2	
	comp=E,206µm,0.2s						
THAS				AML	AML	09 25 06.4	
	comp=N,299µm,0.2s						
UKOP	**Uzunkopru-Edir**	**0.98**	**38**	PG	**Pg**	**09 24 49.1**	**-1.4**
EFSA	**Agios Efstrati**	**1.04**	**219**	P	**Pn**	**09 24 54.8**	**+2.0**
EFSA				S	**Sn**	**09 25 09.4**	**+1.8**
RKY	**Sarkoy-Tekirda**	**1.08**	**72**	PG	**Pg**	**09 24 50.7**	**-1.7**
KRBG	**Karabiga-Canak**	**1.12**	**88**	PG	**Pg**	**09 24 51.5**	**-1.7**
SIGR	**SIGRI**	**1.15**	**179**	P	**Pg**	**09 24 51.5**	**-2.2**
SIGR	**SIGRI**	**1.15**	**179**	P	**Pn**	**09 24 54.7**	**+0.5**
SIGR				AML	AML	09 25 12.0	
	comp=N,904µm,0.5s						
SIGR				AML	AML	09 25 13.5	
	comp=E,405µm,0.3s						
SIGR	**SIGRI**	**1.15**	**179**	PN	**Pg**	**09 24 53.2**	**-0.5**
PRK	**Paraskevi**	**1.16**	**163**	P	**Pn**	**09 24 56.2**	**+1.8**
PRK				S	**Sn**	**09 25 12.5**	**+2.0**
KAVA	**Kavala**	**1.19**	**303**	P	**Pn**	**09 24 57.2**	**+2.4**
KAVA				S	**Sn**	**09 25 13.3**	**+2.1**
AYVA	**Ayvalik**	**1.24**	**148**	*i* P	**Pn**	**09 24 56.2**	**+0.7**
AYVA				*i* S	**Sb**	**09 25 11.9**	**+0.3**
AYVA				IAML		09 25 14.0	
	comp=N,469nm,0.5s						
AYVA				IAML		09 25 14.0	
	comp=E,194nm,0.6s						
KDZ	**Kurdzhali**	**1.33**	**346**	P	**Pg**	**09 24 58.8**	**+1.6**
KDZ	**Kurdzhali**	**1.33**	**346**	PN	**Pn**	**09 24 55.9**	**-0.9**
MRMT	**Marmara Adasi**	**1.37**	**79**	PN	**Pn**	**09 24 55.1**	**-2.2**
OUR	**Ouranopolis**	**1.42**	**270**	PN	**Pn**	**09 24 57.9**	**0.0**
GONE	**Gonen-Balikesi**	**1.45**	**102**	PN	**Pn**	**09 24 56.8**	**-1.6**
BALY	**Balya**	**1.50**	**114**	*i* P	**Pn**	**09 24 59.2**	**0.0**
BALY				*i* S	**Sn**	**09 25 18.3**	**-0.8**
BALY				IAML		09 25 21.0	
	comp=E,103nm,0.6s						
BALY				IAML		09 25 29.0	
	comp=N,111nm,0.5s						
DKL	**Dikili**	**1.53**	**147**	PN	**Pn**	**09 24 57.9**	**-1.6**
EDC	**Edincik**	**1.55**	**90**	PN	**Pn**	**09 24 58.1**	**-1.7**
EDRB	**Edirne**	**1.64**	**25**	PN	**Pn**	**09 24 59.9**	**-1.1**
ZEDA	**zmir-Bergama**	**1.69**	**145**	*i* P	**Pn**	**09 25 02.4**	**+0.7**
ZEDA				*i* S	**Sn**	**09 25 23.9**	**+0.3**
ZEDA				IAML		09 25 27.0	
	comp=N,116nm,0.4s						
ZEDA				IAML		09 25 27.0	
	comp=E,79nm,0.3s						
KIRK	**Kırklareli**	**1.71**	**33**	*i* P	**Pn**	**09 25 01.1**	**-1.0**
KIRK				*i* S	**Sn**	**09 25 23.6**	**-0.6**
BALB	**Balikesir**	**1.73**	**114**	PN	**Pn**	**09 25 00.2**	**-2.0**
STEP	**BALIKESIR_Sava**	**1.75**	**123**	*i* P	**Pb**	**09 25 03.7**	**-0.5**
STEP				*i* S	**Sn**	**09 25 25.4**	**+0.2**
STEP				IAML		09 25 29.0	
	comp=E,96nm,0.6s						
STEP				IAML		09 25 30.0	
	comp=N,133nm,0.5s						
CHOS	**Chios island**	**1.98**	**175**	P	**Pn**	**09 25 02.9**	**-2.8**
URLA	**Izmir**	**2.08**	**163**	*i* P	**Pn**	**09 25 08.0**	**+0.9**
URLA				*i* S	**Sn**	**09 25 32.2**	**-1.1**
DURS	**Dursunbey**	**2.17**	**110**	*i* P	**Pn**	**09 25 08.3**	**0.0**
DURS				*i* S	**Sn**	**09 25 34.5**	**-1.0**
DURS				IAML		09 25 41.0	
	comp=N,37nm,0.4s						
DURS				IAML		09 25 51.0	
	comp=E,41nm,0.6s						
ULDT	**Uludag**	**2.54**	**94**	*i* P	**Pn**	**09 25 15.1**	**+1.5**
ULDT				*i* S	**Sb**	**09 25 50.4**	**+1.2**
ULDT				IAML		09 26 04.0	
	comp=E,22nm,0.5s						
ULDT				IAML		09 26 04.0	
	comp=N,23nm,0.7s						
IGD	**Bursa**	**2.58**	**91**	*i* P	**Pb**	**09 25 17.2**	**-1.1**
IGD				*i* S	**Sb**	**09 25 51.5**	**+1.3**
DEMI	**Demirci**	**2.58**	**120**	*i* P	**Pn**	**09 25 15.8**	**+1.7**
DEMI				IAML		09 26 47.0	
	comp=N,25nm,2.8s						
DEMI				IAML		09 26 47.0	
	comp=E,40nm,2.8s						
MANT	**Manisa**	**2.82**	**131**	*i* P	**Pg**	**09 25 25.1**	**-0.6**
MANT				*i* S	**Sg**	**09 26 01.1**	**-1.1**
GDZ	**Gediz**	**3.08**	**113**	*i* P	**Pn**	**09 25 21.3**	**+0.3**
KHAL	**Karahalli**	**3.46**	**124**	*i* P	**Pn**	**09 25 26.6**	**+0.5**

*ISK **25** 09:41:37.5, 40˚.33N×25˚.63E, h14km, ML2.7/14*
*ATH **25** 09:41:37.8, 40˚.37N×25˚.59E, h19km±2km, ML2.3/4, Error ellipse: s-maj=2.5km s-min=1.1km az=72.0*
*DDA **25** 09:41:37.9, 40˚.31N×25˚.66E, h22km, ML2.8*
*THE **25** 09:41:38.2, 40˚.33N×25˚.64E, h5km±3km, ML2.2/6, Error ellipse: s-maj=3.8km s-min=0.3km az=61.0*

ISC 25 09:41:38.0±0.9, **40˚.33N**±0˚.02×**25˚.64E**±0˚.02, **h19**km±1km, **n43**, σ0§**56**/**68**, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMTH	**Samothraki Isl**	**0.17**	**329**	P	**Pb**	**09 41 41.5**	**0.0**
SMTH				S	**Sb**	**09 41 44.2**	**+0.5**
	5µm,0.1s						
SMTH	**Samothraki Isl**	**0.17**	**329**	P	**Pb**	**09 41 41.5**	**0.0**
SMTH				S	**Sb**	**09 41 44.1**	**+0.4**
SMTH				AML	AML	09 41 44.3	
	comp=E,12684µm,0.1s						
SMTH				AML	AML	09 41 44.6	
	comp=N,7196µm,0.1s						
GADA	**Gvkgeada**	**0.24**	**125**	P	**Pb**	**09 41 43.3**	**-0.1**
GADA				S	**Sb**	**09 41 46.3**	**-0.7**
	comp=N,1µm,0.6s						
GADA	**Gvkgeada**	**0.24**	**125**	PG	**Pg**	**09 41 43.5**	**-0.1**
GADA				SG	**Sb**	**09 41 46.2**	**-0.7**
LIA	**Limnos Island**	**0.56**	**220**	P	**Pb**	**09 41 48.9**	**-0.2**
LIA				S	**Sg**	**09 41 56.8**	**+0.2**
	comp=N,220nm,0.5s						
LIA	**Limnos Island**	**0.56**	**220**	P	**Pg**	**09 41 49.1**	**-0.1**
LIA				S	**Sg**	**09 41 57.3**	**+0.7**
LIA				AML	AML	09 42 01.2	
	comp=E,499µm,0.4s						
LIA				AML	AML	09 42 05.6	
	comp=N,407µm,0.4s						
ENEZ	**Enez**	**0.56**	**43**	P	**Pb**	**09 41 48.8**	**-0.4**
ENEZ				S	**Sg**	**09 41 57.4**	**+0.5**
ENEZ	**Enez**	**0.56**	**43**	PG	**Pb**	**09 41 48.9**	**-0.3**
ENEZ				SG	**Sg**	**09 41 57.6**	**+0.7**
BOZC	**Bozcaada**	**0.58**	**147**	PG	**Pg**	**09 41 49.5**	**-0.1**
BOZC				SG	**Sg**	**09 41 57.7**	**+0.4**
BOZC	**Bozcaada**	**0.58**	**147**	*i* P	**Pg**	**09 41 49.4**	**-0.2**
BOZC				*i* S	**Sg**	**09 41 57.6**	**+0.4**
GELI	**Tayfur-Gelibol**	**0.64**	**83**	PG	**Pg**	**09 41 50.8**	**+0.1**
GELI				SG	**Sn**	**09 42 00.4**	**-1.3**
EZN	**Ezine**	**0.72**	**133**	P	**Pb**	**09 41 51.9**	**-0.1**
EZN				S	**Sg**	**09 42 02.4**	**+0.5**
	comp=N,80nm,0.2s						
EZN	**Ezine**	**0.72**	**133**	PG	**Pb**	**09 41 52.0**	**-0.1**
ERIK	**Erikli-Kesan**	**0.75**	**62**	PG	**Pb**	**09 41 52.1**	**-0.3**
THAS	**Thassos island**	**0.76**	**292**	P	**Pg**	**09 41 52.7**	**-0.2**
THAS				S	**Sn**	**09 42 03.8**	**-0.9**
	comp=N,338nm,0.2s						
THAS	**Thassos island**	**0.76**	**292**	P	**Pb**	**09 41 51.8**	**-0.8**
RDO	**Rodhopi**	**0.82**	**354**	P	**Pb**	**09 41 53.7**	**0.0**
RDO	**Rodhopi**	**0.82**	**354**	P	**Pb**	**09 41 53.2**	**-0.5**
RDO				S	**Sb**	**09 42 04.2**	**-0.2**
RDO				AML	AML	09 42 09.2	
	comp=N,248µm,0.2s						
RDO				AML	AML	09 42 10.0	
	comp=E,254µm,0.2s						
RDO	**Rodhopi**	**0.82**	**354**	PG	**Pg**	**09 41 53.9**	**-0.2**
LPK	**Lapseki**	**0.85**	**87**	PG	**Pg**	**09 41 54.7**	**0.0**
BAYC	**CANAKKALE_Bayr**	**0.91**	**130**	*i* P	**Pb**	**09 41 55.2**	**0.0**
BAYC				*i* S	**Sn**	**09 42 08.4**	**0.0**
KESN	**Edirne-Kesan**	**0.93**	**57**	*i* P	**Pb**	**09 41 55.8**	**0.0**
KESN				*i* S	**Sg**	**09 42 08.9**	**+0.2**
KESN				IAML		09 42 11.0	
	comp=E,201nm,0.3s						
KAVA	**Kavala**	**1.09**	**308**	P	**Pg**	**09 41 58.8**	**-0.4**
KAVA				S	**Sg**	**09 42 14.1**	**+0.6**
	comp=E,105nm,0.2s						
UKOP	**Uzunkopru-Edir**	**1.10**	**43**	PN	**Pb**	**09 41 58.5**	**+0.1**
SIGR	**SIGRI**	**1.13**	**172**	P	**Pg**	**09 41 59.8**	**0.0**
SIGR				S	**Sg**	**09 42 15.7**	**+1.1**
SIGR				AML	AML	09 42 17.4	
	comp=N,545µm,0.3s						
SIGR				AML	AML	09 42 17.5	
	comp=E,283µm,0.7s						
SIGR	**SIGRI**	**1.13**	**172**	PN	**Pg**	**09 41 59.6**	**-0.2**
PRK	**Paraskevi**	**1.18**	**156**	P	**Pg**	**09 42 01.6**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.22**	**72**	PN	**Pb**	**09 42 00.1**	**-0.1**
KRBG	**Karabiga-Canak**	**1.27**	**86**	PN	**Pb**	**09 42 00.9**	**-0.4**
AYVA	**Ayvalik**	**1.30**	**141**	*i* P	**Pb**	**09 42 01.8**	**0.0**
AYVA				*i* S	**Sg**	**09 42 20.1**	**+0.1**
AYVA				IAML		09 42 21.0	
	comp=N,316nm,0.5s						
KDZ	**Kurdzhali**	**1.33**	**353**	PN	**Pn**	**09 42 01.8**	**+0.1**
KNL	**Balıkesir**	**1.44**	**92**	*i* P	**Pb**	**09 42 04.8**	**+0.6**
KNL				*i* S	**Sg**	**09 42 24.7**	**+0.1**
KNL				IAML		09 42 29.0	
	comp=N,130nm,0.3s						
MRMT	**Marmara Adasi**	**1.52**	**79**	PN	**Pb**	**09 42 05.1**	**-0.5**
DKL	**Dikili**	**1.59**	**142**	PN	**Pb**	**09 42 06.0**	**-0.7**
GONE	**Gonen-Balikesi**	**1.59**	**99**	PN	**Pn**	**09 42 05.8**	**+0.6**
BALY	**Balya**	**1.63**	**110**	*i* P	**Pg**	**09 42 08.3**	**-1.0**
BALY				*i* S	**Sg**	**09 42 29.6**	**-1.0**
BALY				IAML		09 42 37.0	
	comp=N,85nm,0.7s						
PLG	**Polygyros**	**1.68**	**272**	P	**Pb**	**09 42 07.3**	**-1.1**
ZEDA	**zmir-Bergama**	**1.75**	**140**	*i* P	**Pb**	**09 42 09.9**	**+0.3**
ZEDA				*i* S	**Sg**	**09 42 34.0**	**-0.6**
KIRK	**Kırklareli**	**1.82**	**37**	*i* P	**Pb**	**09 42 10.3**	**-0.5**
KIRK				*i* S	**Sb**	**09 42 34.6**	**+1.3**
BALB	**Balikesir**	**1.85**	**111**	PN	**Pn**	**09 42 08.8**	**+0.1**
STEP	**BALIKESIR_Sava**	**1.86**	**120**	*i* P	**Pb**	**09 42 12.3**	**+1.0**
STEP				*i* S	**Sb**	**09 42 34.6**	**+0.3**
URLA	**Izmir**	**2.10**	**159**	*i* P	**Pn**	**09 42 12.0**	**-0.2**
URLA				*i* S	**Sn**	**09 42 39.3**	**+1.5**
ULDT	**Uludag**	**2.68**	**93**	*i* P	**Pn**	**09 42 20.8**	**+0.4**

*ATH **25** 09:52:08.8, 36˚.58N×26˚.90E, h147km±5km, ML3.5/11, Error ellipse: s-maj=5.5km s-min=1.8km az=84.0*
*HLW **25** 09:52:09.1, 36˚.43N×26˚.92E, h5km±19km, Ml4.1*
*IDC **25** 09:52:09.5±1.0, 36˚.52N×26˚.92E, h125km±14km, mb3.4/8, mb1 3.4/14, mb1mx3.2/39, mbtmp3.7/14, Error ellipse: s-maj=20.2km s-min=12.0km az=161.0*
*ISK **25** 09:52:10.6, 36˚.61N×26˚.88E, h127km±1km, ML3.0/19*
*DDA **25** 09:52:10.8, 36˚.70N×27˚.05E, h129km±1km, ML3.1*
*THE **25** 09:52:11.8, 36˚.60N×26˚.90E, h154km±2km, ML3.4/5, Error ellipse: s-maj=2.8km s-min=0.6km az=69.0*
*GII **25** 09:52:13.6±0.0, 36˚.21N×27˚.22E, h100km±1km, MD2.8/3, Mm3.4/4*

ISC 25 09:52:09.5±0.7, **36˚.52N**±0˚.04×**26˚.98E**±0˚.04, **h136**km±6km, **n120**, σ1§**75**/163, **mb3.5**/8, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.53**	**66**	P	**Pn**	**09 52 30.2**	**+0.7**
DAT	**Datca**	**0.53**	**66**	PG	**Pn**	**09 52 30.4**	**+0.8**
DAT	**Datca**	**0.53**	**66**	*i* P	**Pn**	**09 52 30.3**	**+0.7**
BODT	**Bodrum**	**0.60**	**26**	P	**Pn**	**09 52 30.2**	**+0.3**
BODT				S	**Sn**	**09 52 44.6**	**-0.9**
BODT	**Bodrum**	**0.60**	**26**	PG	**Pn**	**09 52 30.1**	**+0.2**
BODT				SG	**Sn**	**09 52 44.6**	**-0.9**
BDRM	**Kayabasi**	**0.66**	**34**	*i* P	**Pn**	**09 52 30.1**	**-0.2**
BDRM				*i* P		09 52 30.2	
AMGA	**Amorgos Island**	**0.93**	**290**	P	**Pn**	**09 52 32.3**	**0.0**
AMGA	**Amorgos Island**	**0.93**	**290**	P	**Pn**	**09 52 32.3**	**0.0**
ARG	**Arkhangelos**	**0.97**	**108**	P	**Pn**	**09 52 34.5**	**+1.8**
ARG				S	**Sn**	**09 52 51.7**	**+1.3**
	932nm,0.2s						
ARG	**Arkhangelos**	**0.97**	**108**	P	**Pn**	**09 52 34.5**	**+1.8**
ARG				S	**Sn**	**09 52 52.2**	**+1.8**
ARG				AML	AML	09 52 53.9	
	comp=N,1603µm,0.2s						
ARG				AML	AML	09 52 54.8	
	comp=E,2190µm,0.3s						
ARG	**Arkhangelos**	**0.97**	**108**	PN	**Pn**	**09 52 34.6**	**+1.8**
ARG				SN	**Sn**	**09 52 52.2**	**+1.8**
KARP	**Karpathos**	**0.98**	**171**	P	**Pn**	**09 52 34.1**	**+1.2**
KARP	**Karpathos**	**0.98**	**171**	P	**Pn**	**09 52 34.1**	**+1.2**
KARP				AML	AML	09 52 54.2	
	comp=E,2115µm,0.1s						
KARP				AML	AML	09 52 55.1	
	comp=N,3159µm,0.4s						
KARP	**Karpathos**	**0.98**	**171**	PN	**Pn**	**09 52 34.2**	**+1.3**
KARP				SN	**Sn**	**09 52 51.6**	**+1.0**
ANAF	**Anafi Island**	**0.99**	**261**	P	**Pn**	**09 52 33.4**	**+0.5**
ANAF	**Anafi Island**	**0.99**	**261**	P	**Pn**	**09 52 33.4**	**+0.5**
MRSB	**Marmaris-Mugla**	**1.00**	**78**	PG	**Pn**	**09 52 34.4**	**+1.4**
SMG	**Samos**	**1.19**	**355**	P	**Pn**	**09 52 34.5**	**-0.3**
SMG	**Samos**	**1.19**	**355**	P	**Pn**	**09 52 34.3**	**-0.5**
GCAM	**G?zelcaml?**	**1.20**	**10**	PN	**Pn**	**09 52 35.1**	**+0.3**
GCAM				SN	**Sn**	**09 52 52.9**	**-1.3**
GCAM	**G?zelcaml?**	**1.20**	**10**	*i* P	**Pn**	**09 52 34.5**	**-0.4**
GCAM				*i* S	**Sn**	**09 52 52.7**	**-1.4**
YER	**Yerkesik**	**1.21**	**59**	P	**Pn**	**09 52 36.5**	**+1.5**
YER				S	**Sn**	**09 52 55.2**	**+0.6**
YER	**Yerkesik**	**1.21**	**59**	PN	**Pn**	**09 52 36.6**	**+1.5**
SANT	**Santorini**	**1.23**	**264**	P	**Pn**	**09 52 35.6**	**+0.3**
SANT	**Santorini**	**1.23**	**264**	P	**Pn**	**09 52 35.5**	**+0.3**
SANT	**Santorini**	**1.23**	**264**	PN	**Pn**	**09 52 35.6**	**+0.3**
THR3	**Thira Island,**	**1.28**	**266**	P	**Pn**	**09 52 35.7**	**0.0**
APE	**Apeiranthos**	**1.29**	**296**	P	**Pn**	**09 52 35.8**	**-0.1**
APE	**Apeiranthos**	**1.29**	**296**	P	**Pn**	**09 52 35.8**	**-0.1**
APE	**Apeiranthos**	**1.29**	**296**	PN	**Pn**	**09 52 35.7**	**-0.1**
THR6	**Thira Island,**	**1.29**	**263**	P	**Pn**	**09 52 36.1**	**+0.3**
THR5	**Thira Island,**	**1.32**	**266**	P	**Pn**	**09 52 36.8**	**+0.7**
TURN	**Turunc**	**1.35**	**74**	PN	**Pn**	**09 52 34.6**	**-1.8**
TURN	**Turunc**	**1.35**	**74**	*i* P	**Pn**	**09 52 34.5**	**-2.0**
TURN				*i* S	**Sn**	**09 52 51.4**	**-5.6**
TURN				IAML		09 52 52.0	
	comp=N,610nm,0.4s						
TURN				IAML		09 52 52.0	
	comp=E,638nm,0.3s						
IOSP	**Ios island**	**1.38**	**279**	P	**Pn**	**09 52 36.8**	**+0.1**
DALY	**Dalyan (Mula)**	**1.38**	**77**	PN	**Pn**	**09 52 38.8**	**+2.1**
DALY				SN	**Sn**	**09 52 58.9**	**+1.5**
DALY	**Dalyan (Mula)**	**1.38**	**77**	*i* P	**Pn**	**09 52 38.9**	**+2.1**
DALY				*i* S	**Sn**	**09 52 58.8**	**+1.4**
DALY				IAML		09 53 00.0	
	comp=E,466nm,0.2s						
DALY				IAML		09 53 00.0	
	comp=N,408nm,0.2s						
DGB	**zmir**	**1.53**	**357**	*i* P	**Pn**	**09 52 37.8**	**-0.6**
DGB				*i* S	**Sn**	**09 52 57.3**	**-3.2**
ZKR	**Zakros**	**1.53**	**204**	P	**Pn**	**09 52 40.0**	**+1.5**
ZKR				S	**Sn**	**09 53 02.0**	**+1.5**
	comp=N,820nm,0.5s						
ZKR	**Zakros**	**1.53**	**204**	P	**Pn**	**09 52 39.9**	**+1.5**
ZKR				S	**Sn**	**09 53 02.1**	**+1.6**
ZKR				AML	AML	09 53 03.7	
	comp=E,2574µm,0.5s						
ZKR				AML	AML	09 53 06.3	
	comp=N,724µm,0.4s						
ZKR	**Zakros**	**1.53**	**204**	PN	**Pn**	**09 52 40.8**	**+2.3**
ZKR				SN	**Sn**	**09 53 01.9**	**+1.5**
AYDB	**Zeytinkoy-Aydi**	**1.60**	**27**	PN	**Pn**	**09 52 39.7**	**+0.4**
AYDB				SN	**Sn**	**09 53 01.3**	**-0.8**
NPS	**Neapolis**	**1.68**	**222**	P	**Pn**	**09 52 40.6**	**+0.5**
NPS	**Neapolis**	**1.68**	**222**	P	**Pn**	**09 52 40.7**	**+0.7**
NPS				AML	AML	09 53 03.4	
	comp=E,1999µm,0.2s						
NPS				AML	AML	09 53 03.8	
	comp=N,1695µm,0.2s						
FETY	**Fethiye**	**1.70**	**85**	P	**Pn**	**09 52 41.7**	**+1.4**
FETY				S	**Sn**	**09 53 04.3**	**+0.5**
FETY	**Fethiye**	**1.70**	**85**	PN	**Pn**	**09 52 41.9**	**+1.6**
FETY				SN	**Sn**	**09 53 05.3**	**+1.5**
FETY	**Fethiye**	**1.70**	**85**	*i* P	**Pn**	**09 52 41.4**	**+1.1**
FETY				*i* S	**Sn**	**09 53 04.0**	**+0.2**
FETY				IAML		09 53 05.0	
	comp=N,149nm,0.3s						
FETY				IAML		09 53 05.0	
	comp=E,149nm,0.1s						
TAVA	**DENIZLI_Tavas**	**1.81**	**58**	*i* P	**Pn**	**09 52 42.5**	**+0.8**
TAVA				*i* S	**Sn**	**09 53 04.5**	**-1.8**
TAVA				IAML		09 53 07.0	
	comp=E,95nm,0.5s						
LAST	**Lasithi**	**1.82**	**222**	P	**Pn**	**09 52 42.4**	**+0.6**
LAST	**Lasithi**	**1.82**	**222**	P	**Pn**	**09 52 42.4**	**+0.6**
LAST				AML	AML	09 53 06.3	
	comp=E,520µm,0.4s						
LAST				AML	AML	09 53 08.9	
	comp=N,627µm,0.4

VLI					S	Sn	09 53 34.8	-3.6
	comp=E,178nm,0.2s								
VLI	Veliai	3.26	275		P	Pn	09 52 59.4	-0.2
KEPZ	Antalya-Kepez	3.73	83	*i*	P	Pn	09 53 08.0	+2.0
KEPZ				*i*	S	Sn	09 53 50.9	+1.2
KEPZ					IAML		09 53 55.0	
	comp=N,44nm,0.5s								
KEPZ					IAML		09 53 56.0	
	comp=E,31nm,0.9s								
SLUM	Salum	5.22	197		P	Pn	09 53 26.3	+0.6
	baz=197								
SLUM					AMP		09 54 00.0	
	baz=197								
CSS	Mathiatis	5.39	105		Pn	Pn	09 53 28.3	+0.3
BRTR	Keskin Array B	6.15	57		P	Pn	09 53 39.9	+1.8
	comp=E,0.2nm,0.3s,baz=236,slow=13,SNR=8.7								
SWA2		7.37	190		P	Pn	09 53 54.4	-0.1
	baz=191								
SWA2					AMP		09 55 00.0	
	baz=191								
SWA2					S	Sn	09 55 12.1	-4.6
	baz=191								
KOT	Kottamia	7.73	147		P	Pn	09 53 60.0	+0.6
	baz=146								
KOT					AMP		09 55 00.0	
	baz=146								
KOT					S	Sn	09 55 21.5	-3.9
	baz=146								
MMA0B	Mount Meron ar	7.76	114		Pn	Pn	09 54 00.5	+0.7
MMA0B					Sn	Sn	09 55 23.9	-2.4
MMAI	Mount Meron Ar	7.76	114		P	Pn	09 53 60.0	+0.1
	comp=E,2.8nm,0.3s,baz=304,slow=12,SNR=6.1								
MMAI					S	Sn	09 55 24.2	-2.1
	comp=E,10nm,0.3s,baz=305,slow=24,SNR=12								
HHAG	Hagoal	7.83	145		P	Pn	09 54 01.8	+1.2
	baz=144								
HHAG					S	Sn	09 55 22.8	-5.0
	baz=144								
GEM	Giv'at Ha'Em	7.86	112		Pn	Pn	09 54 01.3	+0.2
GEM					Sn	Sn	09 55 25.0	-3.6
KSDI	Kefar Szold	7.87	112		Pn	Pn	09 54 01.3	+0.1
KSDI					Sn	Sn	09 55 26.1	-2.6
RSH		7.89	133		P	Pn	09 54 02.4	+0.9
	baz=132								
NATI	Neve Ativ	7.89	112		Pn	Pn	09 54 01.5	0.0
NATI					Sn	Sn	09 55 26.4	-2.9
GLL	Jalalah	7.98	149		P	Pn	09 54 03.6	+0.9
	baz=148								
HMDT	Nahal Hemdat	8.24	119		Sn	Sn	09 55 35.2	-2.7
SUZ	Suez	8.27	142		P	Pn	09 54 07.8	+1.2
	baz=141								
KZIT	Kziot	8.34	130		Sn	Sn	09 55 35.5	-4.6
YTIR	Yattir	8.49	125		Sn	Sn	09 55 40.6	-3.4
DSI	Dead Sea	8.54	123		Sn	Sn	09 55 42.4	-2.6
ZNM	Zenema	8.67	144		P	Pn	09 54 13.7	+1.6
	baz=142								
PRNI	Paran	9.10	130		Pn	Pn	09 54 17.5	-0.2
PRNI					Sn	Sn	09 55 54.5	-4.0
ASF	Jabal al Asfar	9.27	115		S	Sn	09 56 01.9	-1.0
	comp=E,0.4nm,0.3s,baz=313,slow=6.5,SNR=1.8								
HRFI	Mount Harif	9.34	131		Sn	Sn	09 56 00.7	-3.7
HFRF	Wahat Farafira	9.41	173		P	Pn	09 54 22.3	+0.4
	baz=172								
HFRF					S	Sn	09 56 00.6	-5.5
	baz=172								
EIL	Elat	9.55	133		P	Pn	09 54 23.2	-0.7
	comp=E,0.4nm,0.3s,baz=321,slow=3.1,SNR=7.1								
EIL					S	Sn	09 56 05.7	-3.8
	comp=E,2.7nm,0.3s,baz=221,slow=16,SNR=10								
EIL	Elat	9.55	133		Pn	Pn	09 54 23.8	0.0
EIL					Sn	Sn	09 56 05.0	-4.5
KBZ	Khabaz	14.14	54		P	P	09 55 27.5	+0.5
	comp=E,0.2nm,0.3s,baz=251,slow=6.1,SNR=11								
KEST	Kesra	14.28	272		P	Pn	09 55 26.2	+0.6
	comp=E,0.0nm,0.3s,baz=244,slow=7.1,SNR=2.8								
GERES	GERESS Array B	15.69	326		P	Pn	09 55 42.2	-0.8
	comp=E,0.1nm,0.3s,baz=140,slow=10,SNR=5.6								
ESDC	Sonseca Array	24.49	287		P	P	09 57 14.7	-1.4
	comp=E,0.4nm,0.6s,baz=75,slow=8.6,SNR=5.3								
FINES	FINESS Array B	24.95	359		P	P	09 57 20.0	+0.1
	comp=E,1.9nm,1.0s,baz=166,slow=12,SNR=3.9								
EKA	Eskdalemuir Ar	27.83	322		P	P	09 57 47.7	+1.9
	comp=E,0.4nm,0.4s,baz=119,slow=10.0,SNR=2.2								
TORD	Torodi Ar. Bea	32.49	231		P	P	09 58 28.8	+1.5
	comp=E,2.5nm,0.4s,baz=33,slow=9.0,SNR=40								
ARCES	ARCESS Array B	33.08	359		P	P	09 58 30.9	-1.0
	comp=E,1.5nm,0.9s,baz=184,slow=8.1,SNR=1.3								
MKAR	Makanchi Array	41.80	58		P	P	09 59 46.8	+1.2
	comp=E,0.4nm,0.4s,baz=271,slow=9.4,SNR=6.3								
SPITS	Spitsbergen Ar	42.01	357		P	P	09 59 49.1	+2.3
	comp=E,2.0nm,0.6s,baz=338,slow=6.3,SNR=18								
ZALV	Zelesovo Beam	43.00	47		P	P	09 59 55.7	+0.6
	comp=E,0.4nm,0.4s,baz=302,slow=6.3,SNR=1.8								

ATH 25 10:03:58.4, 40°03'N×24°33'E, h26km±4km, ML1.8/7, Error ellipse: s-maj=4.0km s-min=1.0km az=277.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUR	Ouranopolis	0.41	319	P	Pb	10 04 07.3	+0.2
OUR				AML	AML	10 04 18.0	
	comp=N,211μm,0.2s						
OUR				AML	AML	10 04 18.1	
	comp=E,292μm,0.3s						
PAIG	Paliouri	0.51	259	P	Pb	10 04 09.2	+0.4
PAIG				S	Sb	10 04 16.5	+0.6
PAIG				AML	AML	10 04 17.2	
	comp=N,146μm,0.2s						
PAIG				AML	AML	10 04 18.6	
	comp=E,159μm,0.2s						
THAS	Thassos island	0.65	27	P	Pb	10 04 11.0	-0.2
THAS				S	Sn	10 04 21.3	0.0
THAS				AML	AML	10 04 22.4	
	comp=N,501μm,0.3s						
THAS				AML	AML	10 04 23.3	
	comp=E,369μm,0.4s						
LIA	Limnos Island	0.67	101	P	Pb	10 04 11.3	-0.1
LIA				AML	AML	10 04 22.9	
	comp=E,146μm,0.3s						
LIA				AML	AML	10 04 23.4	
	comp=N,217μm,0.2s						
PLG	Polygyros	0.76	297	P	Pn	10 04 13.8	+0.3
PLG				S	Sb	10 04 23.4	+0.4
PLG				AML	AML	10 04 26.9	
	comp=E,229μm,0.4s						
PLG				AML	AML	10 04 27.1	
	comp=N,185μm,0.3s						
AOS	Alonnisos	0.93	202	P	Pb	10 04 16.3	+0.4
AOS				S	Sn	10 04 29.4	+1.3
AOS				AML	AML	10 04 32.7	
	comp=N,88μm,0.5s						
AOS				AML	AML	10 04 32.9	
	comp=E,81μm,0.4s						
KAVA	Kavala	0.98	8	P	Pb	10 04 17.5	+0.8
KAVA				S	Sn	10 04 30.4	+1.0
KAVA				AML	AML	10 04 32.0	
	comp=E,169μm,0.2s						
KAVA				AML	AML	10 04 32.3	
	comp=N,168μm,0.2s						
SKIA	Skiathos	1.09	218	P	Pb	10 04 19.0	+0.4
HORT	Hortiatis	1.10	301	P	Pb	10 04 19.8	+1.0
SRS	Serrai	1.22	333	P	Pb	10 04 21.4	+0.5

*DDA **25** 10:04:20.2, 40°45'N×26°22'E, h7km±4km, ML1.5*
ISK 25 10:04:21.5, 40°43'N×26°26'E, h11km, ML1.5/10, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GELI	Tayfur-Gelibol	0.16	102	PG	Pb	10 04 25.9	-0.7
GELI				SG	Sg	10 04 28.6	+0.9
ERIK	Erikli-Kesan	0.31	38	PG	Pg	10 04 27.9	+0.2
ENEZ	Enez	0.32	345	PG	Pb	10 04 28.7	-0.5
ENEZ				SG	Sg	10 04 33.1	+0.9
GADA	Gvkgeada	0.37	229	PG	Pb	10 04 30.8	+0.8
LPK	Lapseki	0.38	99	PG	Pg	10 04 29.4	+0.3
KESN	Edirne-Kesan	0.51	39	*i* P	Pg	10 04 30.0	-1.5
KESN				*i* S	Sg	10 04 37.5	-0.8
EZN	Ezine	0.61	176	PG	Pg	10 04 33.5	+0.2
EZN				SG	Sb	10 04 42.7	+0.1
BOZC	Bozcaada	0.61	195	PG	Pb	10 04 34.6	+0.4
BOZC				SG	Sb	10 04 42.5	-0.3
BOZC	Bozcaada	0.61	195	*i* S	Sg	10 04 41.4	0.0
BAYC	CANAKKALE_Bayr	0.72	162	*i* P	Pg	10 04 32.1	-3.4
BAYC					IAML	10 04 46.0	
	comp=E,17nm,0.2s						
BAYC				*i* S	Sb	10 04 46.1	+0.1
RKY	Sarkoy-Tekirda	0.74	70	PG	Pb	10 04 36.2	-0.3
MRMT	Marmara Adasi	1.03	80	PG	Pb	10 04 41.4	0.0
EDRB	Edirne	1.46	14	PN	Pn	10 04 48.2	+0.4

*IDC **25** 10:07:26.3±0.8, 60°24S×46°87W, h0km, mb4.0/6, mb1 4.0/6, mb1mx3.8/18, mbtmp3.9/6, MS3.3/4, Ms1 3.3/4, ms1mx3.1/17, Error ellipse: s-maj=33.8km s-min=24.6km az=61.0*
*NEIC **25** 10:07:28.0±2.7, 60°09S±0°09×47°2W±0°2, h10km±1km, mb4.6/5, Error ellipse: s-maj=21.0km s-min=12.2km az=243.0*
ISC 25 10:07:27.8±0.7, 60°2S±0°1×47°0W±0°1, h10km, n29, σ1s09/20, mb4.2/7, MS3.1/3, 1C, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	8.25	48	Pn	Pn	10 09 27.2	-0.2
PMSA	Palmer Station	9.08	233	LR	LR	10 12 48.4	
	comp=Z,132nm,18.3s,baz=112,slow=35						
SNAA	Sanae	20.71	141	P	Pn	10 12 10.3	+0.1
	14nm,0.9s,baz=277,slow=9.9,SNR=27						
SNAA	Sanae	20.71	141	P	Pn	10 12 11.7	+1.5
SNAA				IAmb	IAmb	10 12 12.5	
	comp=Z,17nm,0.9s						
PLCA	Paso Flores	24.37	313	P	P	10 12 46.6	+0.7
	comp=Z,0.9nm,0.6s,baz=149,slow=10,SNR=4.6						
PLCA				LR	LR	10 21 26.6	
	comp=Z,66nm,19.0s,baz=158,slow=34						
PLCA	Paso Flores	24.37	313	P	P	10 12 46.8	+0.9
QSPA	South Pole Qui	29.99	180	P	P	10 13 36.9	+0.7
	comp=Z,5.1nm,0.9s,baz=193,slow=2.8,SNR=9.3						
QSPA	South Pole Qui	29.99	180	P	P	10 13 37.3	+1.0
QSPA				IAmb	IAmb	10 13 43.2	
	comp=Z,11nm,1.1s						
CPUP	Villa Florida	34.63	344	LR	LR	10 29 35.6	
	comp=Z,37nm,18.8s,baz=180,slow=38						
SYO	Syowa Base	35.00	141	*ep*	P	10 14 19.2	-0.5
SIV	San Ignacio	45.36	341	P	P	10 15 44.3	-1.7
	comp=Z,0.6nm,0.8s,baz=191,slow=16,SNR=2.0						
H10S2	ASCENSION HYDR	56.61	39	T	T	11 18 56.9	
	baz=200						
H10S3	ASCENSION HYDR	56.61	39	T	T	11 18 57.1	
	baz=20,SNR=9.6						
BOSA	Boshof	56.88	90	P	P	10 17 11.5	-1.2
	comp=Z,1.8nm,0.7s,baz=230,slow=8.2,SNR=8.1						
BOSA				LR	LR	10 35 40.6	
	comp=Z,56nm,19.6s,baz=152,slow=30						
BOSA	Boshof	56.88	90	P	P	10 17 12.2	-0.5
H10N3	ASCENSION HYDR	57.71	39	T	T	11 20 19.4	
	baz=199,slow=75,SNR=16						
H10N1	ASCENSION HYDR	57.71	39	T	T	11 20 18.7	
	baz=199,slow=75,SNR=14						
H10N2	ASCENSION HYDR	57.73	39	T	T	11 20 19.5	
	baz=199,slow=75,SNR=17						
LBTB	Lobatse	60.02	88		P	10 17 35.1	+0.4
LBTB				IAmb	IAmb	10 17 39.5	
	comp=Z,7.0nm,0.9s						
TORD	Torodi Ar. Bea	82.83	48	P	P	10 19 53.3	+1.2
	comp=Z,1.7nm,0.7s,baz=222,slow=1.9,SNR=7.1						
ASAR	Alice Springs	96.39	181	P	P	10 20 55.0	-1.9
	comp=Z,0.2nm,0.7s,baz=190,slow=4.4,SNR=1.2						
ASAR	Alice Springs	96.39	181	P	P	10 20 55.0	-1.9
YKA	Yellowknife Ar	132.79	324	PKP	PKiKP	10 26 42.8	+0.3
	comp=Z,0.2nm,0.7s,baz=132,slow=1,SNR=6.6						
FINES	FINESS Array B	133.66	39	PKP	PKiKP	10 26 45.1	+0.9
	comp=Z,2.3nm,0.8s,baz=163,slow=10,SNR=4.4						
MIDW	Midway	133.84	249	PKPdf	PKiKP	10 26 46.2	+0.5
ILAR	Eielson Array	145.06	313	PKPbc	PKPbc	10 27 02.6	-0.5
	comp=Z,1.6nm,0.7s,baz=150,slow=2.7,SNR=12						
RND	Reindeer	145.09	310	PKPdf	PKPbc	10 27 03.3	0.0
MK31	Makanchi Array	147.87	92		PKPab	10 27 15.5	+0.9
MKAR	Makanchi Array	147.87	92	PKPbc	PKPdf	10 27 10.2	+1.2
	comp=Z,2.7nm,0.6s,baz=179,slow=1.0,SNR=34						

*MOS **25** 10:10:49.3±0.8, 50°57N×157°39E, h75km, mb4.6/24, Error ellipse: s-maj=13.2km s-min=3.4km az=75.4*
MOS Felt (II) at Severo-Kuril'sk.
*KRSC **25** 10:10:50.0±2.1, 50°76N×157°24E, h90km±24km, ML4.5*
*IDC **25** 10:10:52.5±0.7, 50°92N×156°75E, h100km±5km, mb3.7/15, mb1 3.9/20, mb1mx3.7/47, mbtmp4.0/20, MS2.6/5, Ms1 2.6/5, ms1mx2.5/42, Error ellipse: s-maj=13.9km s-min=8.1km az=122.0*
*NEIC **25** 10:10:53.5±1.4, 51°06N±0°09×156°6E±0°1, h108km±5km, mb4.4/103, Error ellipse: s-maj=15.4km s-min=9.2km az=132.0*
ISC 25 10:10:52.1±0.5, 50°89N±0°05×156°92E±0°05, h100km±4km, n314, σ1s41/351, mb4.3/69, 6C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	0.55	248	*ep*	Pn	10 11 08.0	-0.1
SKR				*es*	Sn	10 11 19.9	-0.3
SKR	Severo-Kuril's	0.55	248	*i* P	Pn	10 11 08.1	-0.1
SKR				*es*	Sn	10 11 19.9	-0.3
SKR				pmax	pmax		
	comp=Z,4μm,0.5s						
SKR				smax	smax		
	comp=N,6μm,0.5s						
SKR				smax	smax		
	comp=E,8μm,0.5s						
PAU	Pauzhetka	0.58	353	*ep*	Pn	10 11 08.1	-0.3
PAU				*es*	Sn	10 11 20.4	-0.3
PAU	Pauzhetka	0.58	353	PN	Pn	10 11 08.1	-0.3
PAU				S	Sn	10 11 20.4	-0.3
ALID	Alaid	0.87	269	*i* P	Pn	10 11 11.1	-0.1
ALID	Alaid	0.87	269	PN	Pn	10 11 11.1	-0.1
ALID				S	Sn	10 11 24.9	-0.7
MIPR	Malaya Ipel'ka	1.39	356	*ep*	Pn	10 11 17.0	0.0
MIPR				*es*	Sn	10 11 35.4	-0.4
MIPR	Malaya Ipel'ka	1.39	356	PN	Pn	10 11 17.0	0.0
MIPR				S	Sn	10 11 35.4	-0.4
ASAK	Asacha	1.61	22	*i* P	Pn	10 11 20.5	+0.7
ASAK				*es*	Sn	10 11 40.3	-0.5
ASAK	Asacha	1.61	22	PN	Pn	10 11 20.5	+0.7
ASAK				S	Sn	10 11 40.3	-0.5
MTVR	Mutnovka	1.78	26	*ep*	Pn	10 11 22.7	+0.8
MTVR				*es*	Sn	10 11 45.0	+0.4
MTVR	Mutnovka	1.78	26	PN	Pn	10 11 22.7	+0.8
MTVR				S	Sn	10 11 45.0	+0.4
GRL	Gorelyy	1.81	23	*i* P	Pn	10 11 23.2	+0.9
GRL				*es*	Sn	10 11 45.9	+0.6
GRL	Gorelyy	1.81	23	PN	Pn	10 11 23.2	+0.9
GRL				S	Sn	10 11 45.9	+0.6
RUS	Russkaya	1.83	32	*ep*	Pn	10 11 22.2	-0.2
RUS				*es*	Sn	10 11 44.5	-1.1
RUS	Russkaya	1.83	32	PN	Pn	10 11 22.2	-0.2
RUS				S	Sn	10 11 44.5	-1.1
APC	Apacha	2.04	4	*ep*	Pn	10 11 25.3	+0.2
KRMR	Karymshinskiy	2.08	21	*ep*	Pn	10 11 26.0	+0.4
KRMR				*es*	Sn	10 11 51.1	-0.2
KRMR	Karymshinskiy	2.08	21	PN	Pn	10 11 26.0	+0.4
KRMR				S	Sn	10 11 51.1	-0.2
PEA0B	Petropavlovsk-	2.27	12	*ce*	Pn	10 11 28.7	+0.6
PEA0B	Petropavlovsk-	2.27	12		Pn	10 11 28.9	+0.7
PEA0B				Sn	Sn	10 11 57.7	+1.9
PETK	Petropavlovsk-	2.27	12	P	Sn	10 11 28.8	+0.7
	comp=E,22nm,0.3s,baz=181,slow=13,SNR=452						
PETK				S	Sn	10 11 58.2	+2.4
	comp=E,10nm,0.3s,baz=161,slow=20,SNR=7.6						
PET	Petropavlovsk	2.39	26	*i* P	Pn	10 11 30.3	+0.7
PET				*es*	Sn	10 11 58.6	+0.2
PET	Petropavlovsk	2.39	26	*ep*	Pn	10 11 29.6	0.0
PET				*es*	Sn	10 11 59.8	+1.3
PET				pmax	pmax		
	comp=Z,80nm,0.4s						
PET				smax	smax		
	comp=N,540nm,0.8s						
PET				smax	smax		
	comp=E,443nm,0.7s						
PET	Petropavlovsk	2.39	26		Pn	10 11 30.0	+0.4
PET				Sn	Sn	10 11 59.7	+1.3
DALK	Dalny	2.42	27	*ep*	Pn	10 11 30.9	+0.8
DALK				*es*	Sn	10 12 01.7	+2.4
DALK	Dalny	2.42	27	PN	Pn	10 11 30.9	+0.8
DALK				S	Sn	10 12 01.7	+2.4
UGLR	Uglovaya	2.60	26	*i* P	Pn	10 11 34.0	+1.4
UGLR				*es*	Sn	10 12 05.4	+1.8
KOK	Koryaka	2.63	23	*i* P	Pn	10 11 34.7	+1.8
KOK				*es*	Sn	10 12 06.6	+2.4
KOK	Koryaka	2.63	23	PN	Pn	10 11 34.7	+1.8
KOK				S	Sn	10 12 07.9	+3.7
AVH	Avacha	2.63	25	*i* P	Pn	10 11 34.6	+1.7
AVH				*es*	Sn	10 12 05.1	+0.9
AVH	Avacha	2.63	25	PN	Pn	10 11 34.6	+1.7
AVH				S	Sn	10 12 07.3	+3.1
SMAR	Somma	2.64	25	*ep*	Pn	10 11 34.3	+1.1
SMAR	Somma	2.64	25	PN	Pn	10 11 34.3	+1.1
KRER	Koryakskii	2.67	24	*ep*	Pn	10 11 34.7	+1.2
KRER				*es*	Sn	10 12 05.3	0.0
KRER	Koryakskii	2.67	24	PN	Pn	10 11 32.6	-0.9
KRER				S	Sn	10 12 07.6	+2.3
SDLR	Sedlovina	2.68	26	*ep*	Pn	10 11 34.1	+0.5
SDLR				*es*	Sn	10 12 07.0	+1.5
SDLR	Sedlovina	2.68	26	PN	Pn	10 11 34.1	+0.5
SDLR				S	Sn	10 12 08.3	+2.8
KRX	Arik	2.69	23	*i* P	Pn	10 11 35.3	+1.5
KRX	Arik	2.69	23	PN	Pn	10 11 35.3	+1.5
NLC	Nalytchevo	2.73	32	*ep*	Pn	10 11 34.0	-0.1
NLC				*es*	Sn	10 12 08.0	+1.5
NLC	Nalytchevo	2.73	32	PN	Pn	10 11 34.0	-0.1
NLC				S	Sn	10 12 08.0	+1.5
SPN	Mys Shipunski	2.93	40	*ep*	Pn	10 11 36.8	+0.1
SPN				*es*	Sn	10 12 10.4	-0.8
SPN	Mys Shipunski	2.93	40	PN	Pn	10 11 36.8	+0.1
SPN				S	Sn	10 12 10.4	-0.8
KII	Karymskiy	3.51	25	*ep*	Pn	10 11 46.6	+2.0
KII				*es*	Sn	10 12 25.3	+0.1
KII	Karymskiy	3.51	25	PN	Pn	10 11 46.6	+2.0
KII				S	Sn	10 12 25.3	+0.1
KZV	Kizimen	4.69	24	*ep*	Pn	10 12 01.7	+1.0
KZV				*es*	Sn	10 12 55.8	+1.8
KZV	Kizimen	4.69	24	PN	Pn	10 12 01.7	+1.0
KZV				S	Sn	10 12 58.4	+4.4
TUMD	Tumrok D	4.80	25	*ep*	Pn	10 12 03.5	+1.5
TUMD				*es*	Sn	10 12 55.2	-1.2
TUMR	Tumrok	4.81	23	*ep*	Pn	10 12 04.1	+1.9
TUMR	Tumrok	4.81	23	PN	Pn	10 12 03.5	+1.3
KMNR	Kamenistaya	5.26	21	*ep*	Pn	10 12 09.7	+1.4
KMNR	Kamenistaya	5.26	21	PN	Pn	10 12 09.7	+1.4
KPT	Kopyto	5.45	20	*ep*	Pn	10 12 11.8	+0.9
KPT	Kopyto	5.45	20	PN	Pn	10 12 11.8	+0.9
KIRR	Kirishev	5.47	21	*ep*	Pn	10 12 13.5	+2.4
KIRR	Kirishev	5.47	21	PN	Pn	10 12 13.5	+2.4
KOZ	Kozyrevsk	5.47	18	*ep*	Pn	10 12 14.1	+3.1
KOZ	Kozyrevsk	5.47	18	PN	Pn	10 12 14.1	+3.1
BZWR	Bezymyannyi-We	5.51	21	*ep*	Pn	10 12 13.5	+1.7
BZWR	Bezymyannyi-We	5.51	21	PN	Pn	10 12 13.5	+1.7
BZGR	Bezymyannyi-Gr	5.54	23	*ep*	Pn	10 12 13.6	+1.5
BZGR	Bezymyannyi-Gr	5.54	23	PN	Pn	10 12 13.6	+1.5
ZLN	Zelenaya	5.63	23	*ep*	Pn	10 12 15.5	+2.2
ZLN	Zelenaya	5.63	23	PN	Pn	10 12 15.5	+2.2
LGNR	Loginova	5.67	22	*ep*	Pn	10 12 15.6	+1.6
LGNR	Loginova	5.67	22	PN	Pn	10 12 15.6	+1.6
SRDR	Sredinnyy	5.69	16	*ep*	Pn	10 12 16.0	+2.0
SRDR	Sredinnyy	5.69	16	PN	Pn	10 12 16.0	+2.0
CIRR	Tsirk	5.71	22	*ep*	Pn	10 12 16.5	+2.1
CIRR	Tsirk	5.71	22	PN	Pn	10 12 16.5	+2.1
KRSR	Krestovskiy	5.76	21	*ep*	Pn	10 12 15.4	+0.3
KRSR	Krestovskiy	5.76	21	PN	Pn	10 12 15.4	+0.3
KLY	Klyuchi	5.87	21	*ep*	Pn	10 12 18.2	+1.8
KLY	Klyuchi	5.87	21	PN	Pn	10 12 18.2	+1.8
SRKR	Sorokina	6.30	22	*ep*	Pn	10 12 23.0	+0.7
SRKR	Sorokina	6.30	22	PN	Pn	10 12 23.0	+0.7
KBTR	Krutoberegovo	6.38	31	*ep*	Pn	10 12 22.6	-0.8
KBTR				*es*	Sn	10 13 32.5	-2.1
KBTR	Krutoberegovo	6.38	31	PN	Pn	10 12 22.6	-0.8
KBTR				S	Sn	10 13 35.4	+0.8
BKI	Bering	6.96	48	*ep*	Pn	10 12 30.0	-1.2
BKI				*es*	Sn	10 13 39.3	-9.4
BKI	Bering	6.96	48	PN	Pn	10 12 30.0	-1.2
KUR	Kuril'sk	8.29	230	*ep*	Pn	10 12 53.2	+3.8
KUR				S	Sn	10 14 27.0	+5.7
KUR				pmax	pmax		
	comp=Z,21nm,0.7s						
KUR				smax	smax		
	comp=N,34nm,0.5s						
KUR				smax	smax		
	comp=E,10.0nm,0.4s						
MA2	Magadan	9.38	340	LR	LR	10 16 30.3	
	comp=E,22nm,21.2s,baz=93,slow=36						
MA2	Magadan	9.38	340	*i* PN	Pn	10 13 03.9	-0.2
MA2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MA2				MLR	MLR		
	comp=Z,14nm,7.0s						
YSS	Yuzh-Sakhalins	10.12	253	*ep*	Pn	10 13 17.1	+2.9
YUK	Yuzh-Kuril'sk	10.15	232	*i* PN	Pn	10 13 14.9	+0.3
NMR	Nemuro--Hokkai	10.70	230	*ep*	Pn	10 13 19.1	-3.1
SMY	Shemya	10.80	74	PN	Pn	10 13 25.9	+2.5
SMY	Shemya	10.80	74	Pn	Pn	10 13 25.9	+2.5
JKA	Kamikawa-asahi	11.81	241		Pn	10 13 38.9	+1.8
ASAJ	Asahikawa	11.81	241	P	Pn	10 13 38.9	+1.8
	comp=Z,0.7nm,0.3s,baz=72,slow=14,SNR=12						
ASAJ				LR	LR	10 18 11.2	
	comp=Z,18nm,20.9s,baz=344,slow=37						
SEY	Seymchan	12.32	350	P	Pn	10 13 44.0	+0.3
	comp=E,0.1nm,0.3s,baz=140,slow=7.8,SNR=8.5						
ERM	Erimo	12.98	232	*i* PN	Pn	10 13 52.3	-0.2
ERM	Erimo	12.98	232	Pn	Pn	10 13 50.4	-2.1
KLR

	baz=263,SNR=7.1							
TOLK	**Toolik Lake Re**	**30.90**	**35**	P	**P**	**10 16 58.7**	**-0.1**
TOLK				IAmb	IAmb	10 16 59.4	
	comp=Z,4.2nm,0.5s						
SML	**Sawmill**	**31.28**	**48**	P	**P**	**10 17 02.3**	**+0.1**
SML				IAmb	IAmb	10 17 11.1	
	comp=Z,6.3nm,1.0s						
TCOL	**CIGO, UAF Yank**	**31.34**	**42**	P	**P**	**10 17 03.1**	**+0.5**
	baz=271						
COLA	**College**	**31.35**	**42**	*i* P	**P**	**10 17 02.8**	**+0.2**
COLA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HDA	**Harding Lake**	**31.75**	**43**	P	**P**	**10 17 06.0**	**-0.2**
ILAR	**Eielson Array**	**31.76**	**43**	P	**P**	**10 17 05.9**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=265,slow=9.7,SNR=14						
H11N2	**WAKE ISLAND Hy**	**32.08**	**162**	T	T	10 50 58.5	
	baz=348,slow=76,SNR=34						
H11N1	**WAKE ISLAND Hy**	**32.10**	**162**	T	T	10 51 01.3	
	baz=348,slow=76,SNR=27						
H11N3	**WAKE ISLAND Hy**	**32.10**	**162**	T	T	10 51 01.2	
	baz=348,slow=76,SNR=60						
ULN	**Ulaanbaatar**	**32.11**	**284**	*ce* P	**P**	**10 17 09.1**	**-0.6**
ULN				pmax	pmax		
	comp=Z,9.0nm,2.5s						
FID	**Port Fidalgo**	**32.29**	**50**	P	**P**	**10 17 12.8**	**+1.9**
FID				IAmb	IAmb	10 17 25.4	
	comp=Z,9.1nm,1.1s						
FYU	**Fort Yukon**	**32.43**	**39**	P	**P**	**10 17 12.9**	**+0.9**
FYU				IAmb	IAmb	10 17 13.6	
	comp=Z,7.1nm,0.8s						
SONM	**Songino Array**	**32.53**	**285**	P	**P**	**10 17 12.3**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=49,slow=10.0,SNR=2.8						
SCRK	**Sand Creek**	**33.07**	**44**	P	**P**	**10 17 17.4**	**-0.5**
H11S1	**WAKE ISLAND Hy**	**33.23**	**163**	T	T	10 52 22.7	
	baz=349,slow=76,SNR=183						
H11S3	**WAKE ISLAND Hy**	**33.24**	**163**	T	T	10 52 25.8	
	baz=349,slow=76,SNR=50						
H11S2	**WAKE ISLAND Hy**	**33.25**	**163**	T	T	10 52 24.0	
	baz=349,slow=76,SNR=61						
EGAK	**Eagle**	**34.21**	**42**	P	**P**	**10 17 27.0**	**-0.5**
BARN	**Barnard Glacie**	**34.56**	**49**	P	**P**	**10 17 32.0**	**+1.2**
DAWY	**Dawson**	**35.07**	**43**		**P**	**10 17 35.4**	**+0.4**
EPYK	**Eagle Plains**	**35.85**	**39**	P	**P**	**10 17 42.3**	**+0.7**
	baz=278,SNR=5.2						
EPYK	**Eagle Plains**	**35.85**	**39**	P	**P**	**10 17 42.4**	**+0.8**
EPYK				IAmb	IAmb	10 17 43.1	
	comp=Z,6.2nm,0.9s						
INK	**Inuvik**	**36.81**	**36**	P	**P**	**10 17 49.9**	**+0.2**
INK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
INK	**Inuvik**	**36.81**	**36**	P	**P**	**10 17 49.9**	**+0.2**
WHY	**Whitehorse**	**37.88**	**48**	P	**P**	**10 18 00.7**	**+1.8**
WHY				IAmb	IAmb	10 18 01.0	
	comp=Z,2.4nm,0.7s						
SKAG	**Skagway**	**38.02**	**50**	P	**P**	**10 18 01.5**	**+1.5**
SKAG				IAmb	IAmb	10 18 02.8	
	comp=Z,4.2nm,0.9s						
YULB	**Yu-li**	**38.88**	**239**	P	**P**	**10 18 07.1**	**-0.5**
A36M	**Sachs Harbour**	**39.01**	**29**	P	**P**	**10 18 08.7**	**+0.5**
	baz=281,SNR=17						
TPUB	**Ta-pu**	**39.31**	**239**	P	**P**	**10 18 12.2**	**+1.0**
TPUB				IAmb	IAmb	10 18 26.2	
	comp=Z,11nm,1.2s						
C36M	**Paulatuk**	**39.97**	**33**	P	**P**	**10 18 16.4**	**+0.2**
	baz=285,SNR=15						
C36M	**Paulatuk**	**39.97**	**33**	P	**P**	**10 18 16.4**	**+0.2**
DLBC	**Dease Lake**	**40.95**	**50**	P	**P**	**10 18 26.5**	**+2.0**
DLBC				IAmb	IAmb	10 18 27.8	
	comp=Z,8.3nm,1.4s						
YKA	**Yellowknife Ar**	**46.11**	**40**	P	**P**	**10 19 06.0**	**+0.3**
	comp=Z,2.6nm,0.7s,baz=299,slow=7.3,SNR=33						
YKA				PcP	**PcP**		
	comp=Z,0.6nm,0.8s,baz=307,slow=3.4,SNR=5.8						
KURK	**Kurchatov**	**47.23**	**302**	*ce* P	**P**	**10 19 13.4**	**-1.2**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KURK	**Kurchatov**	**47.23**	**302**	P	**P**	**10 19 13.0**	**-1.6**
KURK				IAmb	IAmb	10 19 14.5	
	comp=Z,3.1nm,0.6s						
MK31	**Makanchi Array**	**47.34**	**296**	P	**P**	**10 19 14.0**	**-1.5**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK31	**Makanchi Array**	**47.34**	**296**	P	**P**	**10 19 14.0**	**-1.5**
MKAR	**Makanchi Array**	**47.34**	**296**	P	**P**	**10 19 14.0**	**-1.6**
	comp=Z,0.5nm,0.4s,baz=64,slow=7.2,SNR=11						
MKAR				pP	**pP**	**10 19 39.1**	**+0.1**
	comp=Z,1.4nm,1.0s,baz=60,slow=8.5,SNR=5.4						
D03D	**Eldon**	**49.93**	**61**	P	**P**	**10 19 37.0**	**+1.7**
	baz=306						
E04D	**Cinebar**	**50.79**	**61**	P	**P**	**10 19 43.7**	**+1.9**
	baz=307						
KDJ	**Kajisay**	**53.05**	**294**	P	**P**	**10 19 57.8**	**-1.1**
KDJ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KDJ	**Kajisay**	**53.05**	**294**	P	**P**	**10 19 57.8**	**-1.1**
KDJ				IAmb	IAmb	10 19 59.3	
	comp=Z,3.8nm,1.2s						
L04D	**Klamath Falls**	**53.59**	**66**	P	**P**	**10 20 04.7**	**+1.9**
	baz=309						
YBH	**Yreka Blue Hor**	**53.66**	**66**	P	**P**	**10 20 05.9**	**+2.6**
YBH				pmax	pmax		
	comp=Z,8.0nm,1.3s						
YBH	**Yreka Blue Hor**	**53.66**	**66**	P	**P**	**10 20 05.9**	**+2.6**
YBH				IAmb	IAmb	10 20 06.7	
	comp=Z,8.0nm,1.2s						
M04C	**Macdoel**	**54.14**	**66**	P	**P**	**10 20 08.9**	**+2.1**
	baz=310						
N02D	**Trinity Center**	**54.15**	**67**	P	P	10 20 09.6	+2.8
	baz=310						
AAK	**Ala-Archa**	**54.28**	**296**	*ce* P	**P**	**10 20 07.0**	**-0.8**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AAK	**Ala-Archa**	**54.28**	**296**	P	**P**	**10 20 05.8**	**-1.9**
JTMT	**Jette**	**54.55**	**56**	P	**P**	**10 20 11.0**	**+1.4**
JTMT				IAmb	IAmb	10 20 11.3	
	comp=Z,2.6nm,0.6s						
MOD	**Modoc Plateau**	**54.95**	**65**	P	**P**	**10 20 14.8**	**+2.2**
O03E	**Paynes Creek**	**55.11**	**67**	P	**P**	**10 20 15.4**	**+1.6**
	baz=311						
MSO	**Missoula**	**55.31**	**57**	P	**P**	**10 20 16.1**	**+1.0**
	baz=310						
WVOR	**Wild Horse Val**	**55.55**	**63**	P	**P**	**10 20 18.8**	**+1.9**
WVOR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WVOR	**Wild Horse Val**	**55.55**	**63**	P	**P**	**10 20 18.8**	**+1.9**
WVOR				IAmb	IAmb	10 20 19.8	
	comp=Z,4.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**55.78**	**257**	P	**P**	**10 20 19.9**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=30,slow=7.9,SNR=7.8						
BEKR	**Beckworth**	**56.23**	**67**	P	**P**	**10 20 23.1**	**+1.3**
BEKR				IAmb	IAmb	10 20 23.9	
	comp=Z,3.4nm,1.0s						
SUMG	**Summit**	**56.36**	**6**	P	**P**	**10 20 22.0**	**-0.6**
SUMG				pmax	pmax		
	comp=Z,12nm,1.4s						
SUMG	**Summit**	**56.36**	**6**	P	**P**	**10 20 22.0**	**-0.6**
FCC	**Fort Churchill**	**56.42**	**36**	P	**P**	**10 20 22.4**	**-0.3**
FCC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FCC	**Fort Churchill**	**56.42**	**36**	P	**P**	**10 20 22.4**	**-0.3**
MFID	**Camas Ranch**	**56.49**	**61**	P	**P**	**10 20 25.1**	**+1.5**
EGMT	**Eagleton**	**56.71**	**53**	P	**P**	**10 20 25.9**	**+0.9**
	baz=311						
LRM	**Limekiln Ridge**	**56.75**	**57**	P	**P**	**10 20 26.9**	**+1.4**
PAHR	**Pah Rah Range**	**56.90**	**66**	P	**P**	**10 20 27.7**	**+1.1**
PAHR				IAmb	IAmb	10 20 29.1	
	comp=Z,5.7nm,1.3s						
VCNR	**Virginia City**	**57.02**	**67**	P	**P**	**10 20 29.5**	**+2.0**
VCNR				IAmb	IAmb	10 20 30.2	
	comp=Z,2.7nm,0.7s						
PNTR	**Pine Nut**	**57.18**	**67**	P	**P**	**10 20 30.4**	**+1.7**
YHL	**Hebgen Lake**	**58.06**	**57**	P	**P**	**10 20 35.2**	**+0.4**
KVN	**Kaiserville**	**58.08**	**66**	P	**P**	**10 20 35.9**	**+1.0**
KVN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KVN	**Kaiserville**	**58.08**	**66**	P	**P**	**10 20 35.9**	**+1.0**
KVN				IAmb	IAmb	10 20 37.7	
	comp=Z,4.2nm,0.9s						
RYN	**Ryan**	**58.12**	**67**	P	**P**	**10 20 36.4**	**+1.3**
RYN				IAmb	IAmb	10 20 37.8	
	comp=Z,3.3nm,0.8s						
YHH	**Holmes Hill**	**58.28**	**57**	P	**P**	**10 20 38.0**	**+1.7**
YMR	**Madison River**	**58.30**	**57**	P	**P**	**10 20 37.6**	**+1.2**
NVAR	**Mina Array Bea**	**58.38**	**67**	P	**P**	**10 20 38.8**	**+1.7**
	comp=Z,2.5nm,0.7s,baz=294,slow=7.3,SNR=25						
NV11	**Mina Array Sit**	**58.46**	**67**	P	**P**	**10 20 38.9**	**+1.4**
YNE	**Yellowstone No**	**58.58**	**56**	P	**P**	**10 20 39.5**	**+1.2**
ELK	**Elko**	**58.58**	**63**	P	**P**	**10 20 39.8**	**+1.4**
ELK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ELK	**Elko**	**58.58**	**63**	P	**P**	**10 20 39.8**	**+1.4**
LKWY	**Lake**	**58.67**	**57**	P	**P**	**10 20 41.4**	**+2.4**
LKWY				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LKWY	**Lake**	**58.67**	**57**	P	**P**	**10 20 41.4**	**+2.4**
H17A	**Grant Village**	**58.69**	**57**	P	**P**	**10 20 42.2**	**+3.1**
	baz=313,SNR=5.4						
H17A	**Grant Village**	**58.69**	**57**	P	**P**	**10 20 41.2**	**+2.0**
RLMT	**Red Lodge**	**58.89**	**56**	P	**P**	**10 20 42.5**	**+2.1**
	baz=313,SNR=5.4						
RLMT	**Red Lodge**	**58.89**	**56**	P	**P**	**10 20 41.5**	**+1.1**
FXWY	**Fox Creek**	**58.96**	**58**	P	**P**	**10 20 42.3**	**+1.3**
FXWY				IAmb	IAmb	10 20 44.2	
	comp=Z,2.4nm,0.8s						
TPAW	**Teton Pass**	**59.10**	**58**	P	**P**	**10 20 44.4**	**+2.4**
AHID	**Auburn Hatcher**	**59.51**	**59**	P	**P**	**10 20 46.1**	**+1.4**
AHID				IAmb	IAmb	10 20 47.3	
	comp=Z,4.5nm,1.1s						
SPUT	**South Promonto**	**59.76**	**61**	P	**P**	**10 20 48.0**	**+1.6**
GRAC	**Grapevine Rang**	**59.90**	**67**	P	**P**	**10 20 49.1**	**+1.8**
	baz=314						
R11A	**Troy Canyon, C**	**60.00**	**65**	P	**P**	**10 20 49.9**	**+1.7**
	baz=313,SNR=5.7						
R11A	**Troy Canyon, C**	**60.00**	**65**	P	**P**	**10 20 49.2**	**+1.0**
R11A				IAmb	IAmb	10 20 50.6	
	comp=Z,2.4nm,0.9s						
HWUT	**Hardware Ranch**	**60.04**	**60**	P	**P**	**10 20 49.8**	**+1.4**
HWUT				IAmb	IAmb	10 20 51.0	
	comp=Z,3.6nm,0.8s						
DUG	**Dugway, Tooele**	**60.31**	**62**	P	**P**	**10 20 50.9**	**+0.6**
DUG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DUG	**Dugway, Tooele**	**60.31**	**62**	P	**P**	**10 20 52.1**	**+1.9**
	baz=314,SNR=5.1						
DUG	**Dugway, Tooele**	**60.31**	**62**	P	**P**	**10 20 50.9**	**+0.6**
DUG				IAmb	IAmb	10 20 52.8	
	comp=Z,3.4nm,0.9s						
BW06	**Boulder Array**	**60.34**	**58**	P	**P**	**10 20 52.0**	**+1.5**
	baz=314,SNR=7.7						
BW06	**Boulder Array**	**60.34**	**58**	P	**P**	**10 20 51.4**	**+0.9**
PD31	**Pinedale Array**	**60.34**	**58**	P	**P**	**10 20 51.4**	**+0.9**
PDAR	**Pinedale Array**	**60.34**	**58**	P	**P**	**10 20 51.8**	**+1.3**
	comp=Z,4.8nm,0.7s,baz=317,slow=2.6,SNR=34						
MPMC	**Manual Prospec**	**60.47**	**68**	P	**P**	**10 20 52.6**	**+1.2**
	baz=314						
FURC	**Furnace Creek,**	**60.55**	**67**	P	**P**	**10 20 53.7**	**+2.0**
	baz=314,SNR=7.3						
TPNV	**Topopah Spring**	**60.58**	**67**	P	**P**	**10 20 53.5**	**+1.4**
TPNV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TPNV	**Topopah Spring**	**60.58**	**67**	P	**P**	**10 20 53.8**	**+1.7**
	baz=314,SNR=5.4						
TPNV	**Topopah Spring**	**60.58**	**67**	P	**P**	**10 20 53.5**	**+1.4**
TPNV				IAmb	IAmb	10 20 54.6	
	comp=Z,4.2nm,0.9s						
NLU	**North Lily Min**	**60.89**	**62**	P	**P**	**10 20 55.8**	**+1.5**
FINES	**FINESS Array B**	**61.34**	**336**	P	**P**	**10 20 54.7**	**-1.9**
	comp=Z,0.4nm,0.5s,baz=38,slow=9.6,SNR=6.5						
GSC	**Goldstone, Bar**	**61.39**	**68**	P	**P**	**10 20 59.1**	**+1.6**
	baz=314						
CCUT	**Cedar City**	**61.83**	**64**	P	**P**	**10 21 02.0**	**+1.4**
MSU	**Marysvale**	**61.83**	**63**	P	**P**	**10 21 02.8**	**+2.2**
MSU	**Marysvale**	**61.83**	**63**	P	**P**	**10 21 02.8**	**+2.2**
RDMU	**Red Mountain**	**61.85**	**60**	P	**P**	**10 21 02.0**	**+1.3**
P17A	**Butcher Ranch,**	**61.97**	**61**	P	**P**	**10 21 02.6**	**+1.1**
MTPU	**Mount Pierson**	**62.16**	**63**	P	**P**	**10 21 04.8**	**+1.9**
LCMT	**Little Creek M**	**62.27**	**65**	P	**P**	**10 21 05.3**	**+1.9**
RSSD	**Black Hills**	**62.28**	**53**	P	**P**	**10 21 04.2**	**+0.7**
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.7s						
RSSD	**Black Hills**	**62.28**	**53**	P	**P**	**10 21 04.4**	**+0.9**
	baz=315						
RSSD	**Black Hills**	**62.28**	**53**	P	**P**	**10 21 04.2**	**+0.7**
SRU	**San Rafael Swe**	**62.34**	**61**	P	**P**	**10 21 05.5**	**+1.5**
SRU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SRU	**San Rafael Swe**	**62.34**	**61**	P	**P**	**10 21 05.5**	**+1.5**
GMRC	**Granite Mounta**	**62.42**	**68**	P	**P**	**10 21 05.9**	**+1.4**
	baz=315						
KNB	**Kanab**	**62.51**	**64**	P	**P**	**10 21 07.1**	**+2.0**
KNB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KNB	**Kanab**	**62.51**	**64**	P	**P**	**10 21 07.1**	**+2.0**
O20A	**White River Ci**	**62.88**	**59**	P	**P**	**10 21 08.6**	**+1.1**
	baz=315						
O20A	**White River Ci**	**62.88**	**59**	P	**P**	**10 21 07.9**	**+0.3**
O20A				IAmb	IAmb	10 21 09.5	
	comp=Z,3.8nm,0.9s						
OBN	**Obninsk**	**63.29**	**326**	*eP*	**P**	**10 21 09.8**	**+0.1**
OBN				*e*		10 23 35.8	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.4s						
N23A	**Red Feather La**	**63.57**	**57**	P	**P**	**10 21 13.7**	**+1.5**
	baz=316						
PV03	**Paradox Valley**	**63.87**	**61**	P	**P**	**10 21 15.2**	**+1.0**
PV03				IAmb	IAmb	10 21 16.3	
	comp=Z,7.7nm,1.0s						
WUAZ	**Wupatki**	**64.39**	**65**	P	**P**	**10 21 19.9**	**+2.4**
	baz=316						
ISCO	**Idaho Springs**	**64.53**	**58**	P	**P**	**10 21 19.7**	**+1.2**
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ISCO	**Idaho Springs**	**64.53**	**58**	P	**P**	**10 21 20.2**	**+1.7**
	baz=316,SNR=6.7						
ISCO	**Idaho Springs**	**64.53**	**58**	P	**P**	**10 21 19.7**	**+1.2**
ISCO				IAmb	IAmb	10 21 21.1	
	comp=Z,3.6nm,0.8s						
MVCO	**Mesa Verde**	**64.81**	**62**	P	**P**	**10 21 21.9**	**+1.6**
	baz=316,SNR=5.2						
MVCO	**Mesa Verde**	**64.81**	**62**	P	**P**	**10 21 21.7**	**+1.4**
MVCO				IAmb	IAmb	10 21 22.5	
	comp=Z,5.0nm,0.9s						
X16A	**Lo Mia Camp, P**	**65.14**	**66**	P	**P**	**10 21 23.9**	**+1.5**
S22A	**4UR Ranch, Cre**	**65.35**	**60**	P	**P**	**10 21 25.6**	**+1.7**
	baz=316,SNR=5.6						
EYMN	**Ely**	**65.40**	**43**	P	**P**	**10 21 23.6**	**-0.1**
	baz=320						
EYMN	**Ely**	**65.40**	**43**	P	**P**	**10 21 23.3**	**-0.4**
EYMN				IAmb	IAmb	10 21 25.1	
	comp=Z,3.3nm,0.8s						
OGNE	**Ogallala**	**65.59**	**55**	P	**P**	**10 21 26.4**	**+1.4**
	baz=317,SNR=6.3						
OGNE	**Ogallala**	**65.59**	**55**	P	**P**	**10 21 25.7**	**+0.6**
X18A	**Snowflake**	**65.91**	**65**	P	**P**	**10 21 28.8**	**+1.4**
X18A				IAmb	IAmb	10 21 30.1	
	comp=Z,3.5nm,0.9s						
SDCO	**Great Sand Dun**	**66.08**	**59**	P	**P**	**10 21 29.7**	**+1.1**
	baz=317						
SDCO	**Great Sand Dun**	**66.08**	**59**	P	**P**	**10 21 29.6**	**+1.1**
ECSD	**EROS Data Cent**	**66.24**	**49**	P	**P**	**10 21 29.1**	**0.0**
	baz=319,SNR=7.6						
ECSD	**EROS Data Cent**	**66.24**	**49**	P	**P**	**10 21 28.8**	**-0.3**
ECSD				IAmb	IAmb	10 21 29.6	
	comp=Z,3.9nm,0.8s						
E38A	**The Farm, Brul**	**66.40**	**44**	P	**P**	**10 21 29.9**	**-0.2**
E38A				IAmb	IAmb	10 21 31.8	
	comp=Z,6.0nm,1.2s						
SPMN	**Marine on St.**	**66.90**	**46**	P	**P**	**10 21 33.5**	**+0.3**
	baz=320						
TUC	**Tucson**	**67.03**	**67**	P	**P**	**10 21 36.4**	**+2.0**
	baz=317						
T25A	**Trinidad**	**67.11**	**59**	P	**P**	**10 21 36.2**	**+1.2**
	baz=318						
I37A	**Lemond, Waseca**	**67.54**	**47**	P	**P**	**10 21 37.7**	**+0.4**
ANMO	**Albuquerque**	**67.59**	**62**	P	**P**	**10 21 39.4**	**+1.4**
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ANMO	**Albuquerque**	**67.59**	**62**	P	**P**	**10 21 39.5**	**+1.4**
	baz=318						
ANMO	**Albuquerque**	**67.59**	**62**	P	**P**	**10 21 39.4**	**+1.4**
LENM	**Lemitar**	**67.87**	**63**	P	**P**	**10 21 41.9**	**+2.1**
SCIA	**State Center**	**69.25**	**49**	P	**P**	**10 21 48.6**	**+0.6**
	baz=321						
KIV	**Kislovodsk**	**69.67**	**315**	*eP*	**P**	**10 21 50.1**	**-0.5**
KIV				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MSTX	**Muleshoe**	**70.35**	**60**	P	**P**	**10 21 56.4**	**+1.4**
	baz=319						
MNTX	**Cornudas Mount**	**70.59**	**64**	P	**P**	**10 21 57.9**	**+1.5**
	baz=319						
MNTX	**Cornudas Mount**	**70.59**	**64**	P	**P**	**10 21 57.3**	**+0.9**
WMOK	**Wichita Mounta**	**71.93**	**57**	P	**P**	**10 22 04.9**	**+0.4**
	baz=320						
R40A	**Maddies Statio**	**72.51**	**50**	P	**P**	**10 22 07.5**	**-0.3**
TUL1	**Leonard**	**72.60**	**54**	P	**P**	**10 22 08.6**	**+0.2**
	baz=321						
K48A	**Perry**	**72.65**	**42**	P	**P**	**10 22 09.0**	**+0.5**
	baz=325						
D57A	**Chemin Vers le**	**73.11**	**34**	P	**P**	**10 22 10.9**	**-0.3**
	baz=330						
HHAR	**Hobbs**	**73.25**	**53**	P	**P**	**10 22 11.9**	**-0.4**
HHAR				IAmb	IAmb	10 22 12.6	
	comp=Z,3.0nm,0.7s						
WRAB	**Tennant Creek**	**73.26**	**202**	P	**P**	**10 22 13.0**	**+0.7**
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.3s						
WRAB	**Tennant Creek**	**73.26**	**202**	P	**P**	**10 22 13.0**	**+0.7**
WRAB				IAmb	IAmb	10 22 22.8	
	comp=Z,7.0nm,1.2s						
WRA	**Warramunga Arr**	**73.28**	**202**	P	**P**	**10 22 12.1**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=17,slow=6.1,SNR=9.5						
WRA				pP	**pP**	**10 22 37.0**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=19,slow=6.5,SNR=2.4						
TX31	**Lajitas Ar. Si**	**73.34**	**64**	P	**P**	**10 22 13.8**	**+0.9**
TX32	**Lajitas Array**	**73.34**	**64**	P	**P**	**10 22 13.7**	**+0.7**
TX32				IAmb	IAmb	10 22 15.0	
	comp=Z,4.4nm,0.8s						
TXAR	**Lajitas Array**	**73.34**	**64**	P	**P**	**10 22 14.1**	**+1.2**
	comp=Z,3.1nm,0.7s,baz=294,slow=4.3,SNR=41						
TXAR				pP	**pP**	**10 22 37.4**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=302,slow=4.6,SNR=2.4						
U40A	**Yellville**	**73.74**	**52**	P	**P**	**10 22 14.6**	**-0.4**
	baz=322						
U40A	**Yellville**	**73.74**	**52**	P	**P**	**10 22 14.3**	**-0.8**
U40A				IAmb	IAmb	10 22 15.4	
	comp=Z,4.8nm,0.7s						
L50A	**Kingsville**	**73.83**	**42**	P	**P**	**10 22 15.2**	**-0.2**
	baz=326						
FITZ	**Fitzroy Crossi**	**73.98**	**211**	P	**P**	**10 22 17.6**	**+1.1**
	comp=Z,2.2nm,1.0s,baz=63,slow=6.8,SNR=2.4						
FITZ	**Fitzroy Crossi**	**73.98**	**211**	P	**P**	**10 22 17.7**	**+1.2**
FITZ				IAmb	IAmb	10 22 22.7	
	comp=Z,8.8nm,1.4s						
MIAR	**Mount Ida**	**74.79**	**54**	P	**P**	**10 22 21.6**	**+0.4**
	baz=322						
W41B	**Gary Mavity, V**	**74.97**	**52**	P	**P**	**10 22 22.6**	**+0.4**
	baz=323						
T45A	**Paducah**	**75.27**	**49**	P	**P**	**10 22 25.7**	**+1.8**
HICK	**Hickman**	**75.37**	**50**	P	**P**	**10 22 25.9**	**+1.5**
P50A	**Jamestown**	**75.40**	**44**	P	**P**	**10 22 23.9**	**-0.7**
	baz=325						
WCI	**Wyandotte Cave**	**75.40**	**47**	P	**P**	**10 22 24.6**	**0.0**
	baz=325						
L59A	**Walton**	**76.83**	**37**	P	**P**	**10 22 32.1**	**-0.6**
L59A				IAmb	IAmb	10 22 34.0	
	comp=Z,5.3nm,1.1s						
AS31	**Alice Springs**	**76.96**	**202**	P	**P**	**10 22 34.6**	**+1.1**
ASAR	**Alice Springs**	**76.96**	**202**	P	**P**	**10 22 35.0**	**+1.5**
	comp=Z,1.0nm,0.7s,baz=11,slow=5.4,SNR=21						
ASAR				pP	**pP**	**10 22 59.0**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=12,slow=5.2,SNR=2.4						
ASAR	**Alice Springs**	**76.96**	**202**	P	**P**	**10 22 35.0**	**+1.5**
ASAR				*PP	**pP**	**10 22 59.0**	**-0.1**
U49A	**Red Boiling Sp**	**77.03**	**47**	P	**P**	**10 22 34.4**	**+0.6**
SWET	**Sewanee**	**78.02**	**48**	P	**P**	**10 22 39.5**	**+0.1**
ESDC	**Sonseca Array**	**88.27**	**345**	P	**P**	**10 23 30.4**	**-1.7**
	comp=Z,0.6nm,0.7s,baz=2.8,slow=4.2,SNR=8.2						
H03N2	**Juan Fernandez**	**136.20**	**89**	T	T	13 00 58.1	
	baz=314,slow=77,SNR=66						
H03N1	**Juan Fernandez**	**136.21**	**89**	T	T	13 00 59.4	
	baz=314,slow=77,SNR=93						
H03N3	**Juan Fernandez**	**136.21**	**89**	T	T	13 00 58.8	
	baz=314,slow=77,SNR=80						
QSPA	**South Pole Qui**	**140.63**	**180**	PKPpre	PKPpre	10 30 02.5	
CPUP	**Villa Florida**	**144.22**	**60**	PKP	**PKPdf**	**10 30 14.7**	**-1.2**
	comp=Z,1.4nm,1.0s,baz=345,slow=1.6,SNR=2.9						
PLCA	**Paso Flores**	**145.93**	**91**	PKPbc	**PKPab**	**10 30 19.4**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=285,slow=2.7,SNR=6.6						
PLCA	**Paso Flores**	**145.93**	**91**	PKPbc	**PKiKP**	**10 30 20.3**	**-2.4**

MAN 25 10:28:17.9, 10.09N×123.49E, h17km, mb4.5, ML3.4, MS3.2, 1C-2D, Cebu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.52**	**64**	*eP*	Pg	10 28 27.9	-0.4
LLP				*eS*	Sg	10 28 35.5	+0.2
TBP	**Tagbilaran**	**0.54**	**137**	*eP*	Pb	10 28 29.6	+0.7
SNPH	**Sibulan**	**0.78**	**199**	*i* P	Pb	10 28 32.9	-0.2
SNPH				*i* S	Sg	10 28 44.3	+0.7
CNOP	**Candoni, Negro**	**0.88**	**253**	*eP*	Pb	10 28 34.0	-0.6
CNO

CHOS	**Chios island**	**1.98 178**	PN	**Pn**	**10 50 38.1**	**-0.7**
DURS	**Dursunbey**	**2.08 111**	*i* P	**Pb**	**10 50 43.2**	**0.0**
DURS			*i* S	**Sg**	**10 51 12.2**	**-0.5**

DJA ***25*** *11:22:54.2±1.1,2°S±3°×12°8E±°, h22km±11km, M3.9/12, mB4.7/1, mb4.5/1, MLv3.6/12, Mw(mB)3.9/1*
IDC ***25*** *11:22:55.9±2.3,2.02S×128.44E, h43km±25km, mb3.8/3, mb1 4.0/7, mb1mx3.5/43, mbtmp4.0/7, ML4.0/4, Error ellipse: s-maj=23.8km s-min=15.8km az=137.0*
NEIC ***25*** *11:22:55.1±2.3,2.01S±0.05×128.38E±0.07, h41km±11km, mb4.0/10, Error ellipse: s-maj=11.5km s-min=3.2km az=125.0*

ISC 25 11:22:54.4±0.7**,2.02S**±0.05×**128.36E**±0.06**, h34**km**, n33,** σ**2**§**34/38, mb4.1/5, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.44**	**157**	P		**Pb**		**11 23 21.7**	**+1.0**
LBMI	**Labuha**	**1.62**	**328**	P		**Pn**		**11 23 20.5**	**-0.1**
LBMI				S		**Sn**		**11 23 39.0**	**-1.2**
AAI	**Ambon**	**1.67**	**186**	P		**Pb**		**11 23 23.8**	**-0.8**
NLAI	**Namlea**	**1.75**	**226**	P		**Pn**		**11 23 23.6**	**+1.2**
SANI	**Sanana**	**2.37**	**269**	P		**Pn**		**11 23 29.2**	**-1.7**
BNDI	**Bandanaira**	**2.93**	**148**	P		**Pn**		**11 23 41.2**	**+2.6**
TNTI	**Ternate**	**2.94**	**340**	P		**Pn**		**11 23 38.6**	**-0.2**
TNTI	**Ternate**	**2.94**	**340**			**Pn**		**11 23 39.4**	**+0.6**
SIJI	**Sorong**	**3.12**	**69**	P		**Pn**		**11 23 41.9**	**+0.6**
	15nm,0.3s,baz=77,slow=7.3,SNR=77								
SIJI				S		**Sn**		**11 24 17.3**	**-0.1**
	15nm,0.3s,baz=13,slow=24,SNR=13								
FAKI	**Fak Fak**	**3.99**	**103**	P		**Pn**		**11 23 54.0**	**+0.8**
FAKI	**Fak Fak**	**3.99**	**103**			**Pn**		**11 23 54.0**	**+0.8**
FAKI				Sn		**Sn**		**11 24 38.0**	**-0.8**
APSI	**Ampana**	**6.80**	**279**	P		**Pn**		**11 24 32.2**	**+0.4**
KAPI	**Kappang**	**9.09**	**251**	P		**Pn**		**11 25 07.4**	**+4.1**
	1.2nm,0.3s,baz=97,slow=7.0,SNR=6.8								
KAPI	**Kappang**	**9.09**	**251**			**Pn**		**11 25 08.0**	**+4.6**
MTN	**Manton Dam**	**11.10**	**166**	Pn		**Pn**		**11 25 33.2**	**+2.3**
KNRA	**Kununurra**	**13.58**	**178**	Pn		**Pn**		**11 26 05.0**	**+0.3**
FITZ	**Fitzroy Crossi**	**16.20**	**189**	P		**Pn**		**11 26 40.0**	**+0.3**
	0.4nm,0.3s,baz=42,slow=8.1,SNR=13								
FITZ	**Fitzroy Crossi**	**16.20**	**189**			**Pn**		**11 26 40.8**	**+1.1**
WB0	**Warramunga Arr**	**18.60**	**162**	P		**P**		**11 27 08.2**	**-0.8**
WB0				IAmb		IAmb		11 27 12.6	
	comp=Z,9.9nm,1.2s								
WRAB	**Tennant Creek**	**18.75**	**162**	P		**P**		**11 27 09.8**	**-0.8**
WRAB				IAmb		IAmb		11 27 20.9	
	comp=Z,9.4nm,1.2s								
WRA	**Warramunga Arr**	**18.75**	**162**	P		**P**		**11 27 09.2**	**-1.4**
	comp=Z,0.7nm,0.3s,baz=340,slow=13,SNR=33								
WRA				S		**Sn**		**11 30 32.5**	**-7.7**
	comp=Z,0.1nm,0.3s,baz=358,slow=22,SNR=2.5								
WB2	**Warramunga Arr**	**18.75**	**162**	P		**P**		**11 27 09.9**	**-0.8**
WR0	**Warramunga Arr**	**18.83**	**162**	P		**P**		**11 27 11.0**	**-0.5**
WR0				IAmb		IAmb		11 27 25.9	
	comp=Z,11nm,1.4s								
COEN	**Coen**		**18.85 130**	P		**Pn**		**11 27 13.5**	**+1.0**
COEN				IAmb		IAmb		11 27 26.9	
	comp=Z,11nm,1.2s								
PSA00	**Pilbara Seismi**	**21.13**	**202**	P		**P**		**11 27 36.3**	**-0.3**
PSA00				IAmb		IAmb		11 27 36.4	
	comp=Z,44nm,1.5s								
AS31	**Alice Springs**	**22.18**	**166**	P		**P**		**11 27 48.6**	**+0.7**
AS31				IAmb		IAmb		11 27 49.9	
	comp=Z,4.2nm,0.6s								
ASAR	**Alice Springs**	**22.18**	**166**	P		**P**		**11 27 47.9**	**0.0**
	comp=Z,8.3nm,0.5s,baz=345,slow=12,SNR=210								
ASAR				S		**S**		**11 31 42.9**	**-7.5**
	comp=Z,1.0nm,0.8s,baz=347,slow=17,SNR=3.3								
FORT	**Forrest**	**28.61**	**181**	P		**P**		**11 28 49.2**	**+1.5**
BBOO	**Buckleboo**	**31.48**	**168**	P		**P**		**11 29 13.7**	**+0.7**
STKA	**Stephens Creek**	**32.22**	**159**	P		**P**		**11 29 20.0**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=351,slow=8.2,SNR=4.3								
MKAR	**Makanchi Array**	**63.19**	**326**	P		**P**		**11 33 18.8**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=134,slow=7.8,SNR=4.5								
VNDA	**Vanda**	**77.56**	**173**	P		**P**		**11 34 48.1**	**+1.7**
CPUP	**Villa Florida**	**151.29**	**169**	PKPbc		**PKiKP**		**11 42 46.5**	**+0.7**
	baz=166,slow=4.2								

BEO ***25*** *11:38:35.9±0.5,40.28N×26.35E, h0km, ML4.8/21*
SOF ***25*** *11:38:37.9,40.41N×26.18E, h10km, MD4.8*
DDA ***25*** *11:38:38.9,40.41N×26.19E, h21km±1km, MW4.8*
MOS ***25*** *11:38:38.0±1.3,40.48N×26.19E, h13km, mb4.6/15, MS4.0/12, Error ellipse: s-maj=4.9km s-min=3.0km az=90.4*
ISK ***25*** *11:38:38.9,40.42N×26.15E, h13km, ML4.8/19*
IDC ***25*** *11:38:38.0±0.6,40.39N×26.15E, h0km, mb3.9/25, mb1 4.1/36, mb1mx4.0/55, mbtmp3.9/36, ML4.0/12, MS4.1/36, Ms1 4.1/36, ms1mx4.0/48, Error ellipse: s-maj=10.3km s-min=8.2km az=30.0*
NEIC ***25*** *11:38:39.4,40.40N×26.09E, h10km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=0.03; Mθθ1.61; Mφφ-1.58; Mrθ-0.43; Mθφ-2.21; Mφr0.92; Fault plane solution: Ms2.91000×10¹⁶ NP1:φs251.64000°, δ69.79000°, λ178.25000°. NP2:φs342.24000°, δ88.36000°, λ20.22000°. Principal axes: T 2.9613, Plg15.0000°, Azm209.0000°; N -0.1088, Plg70.0000°, Azm347.0000°; P -2.8525, Plg13.0000°, Azm115.0000°;*
MED_RC ***25*** *11:38:39.0±0.3,40.47N×26.22E, h19km±1km, MW4.9/25, Moment Tensor Solution.Mantle waves: s25,c44; Duration: 1s2 Moment tensor: Scale 10¹⁶Nm; Mrr-0.56±.11; Mθθ1.36±.11; Mφφ-0.80±.08; Mrθ-0.47±.14; Mθφ-2.73±.09; Mφr-0.11±.15; Best double couple: Ms2.98000×10¹⁶ NP1:φs349.00000°, δ80.00000°, λ-3.00000°. NP2:φs80.00000°, δ87.00000°, λ-170.00000°. Principal axes: T 3.2400, Plg5.0000°, Azm214.0000°; N -0.5300, Plg79.0000°, Azm97.0000°; P -2.7100, Plg9.0000°, Azm305.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
NEIC ***25*** *11:38:39.5±2.1,40.41N±0.05×26.12E±0.06, h10km±1km Error ellipse: s-maj=8.1km s-min=7.5km az=137.0*
PDG ***25*** *11:38:39.8±0.6,40.34N×25.84E, h10km±1km, ML4.0/13, Error ellipse: s-maj=1.0km s-min=2.1km az=0.0*
THE ***25*** *11:38:39.5,40.43N×26.12E, h13km, ML4.5/11, Error ellipse: s-maj=0.7km s-min=0.4km az=318.0*
ATH ***25*** *11:38:39.4,40.43N×26.02E, h31km, ML4.4/22, Error ellipse: s-maj=1.8km s-min=0.8km az=260.0*
GCMT ***25*** *11:38:43.0±0.2,40.41N±0.01×26.22E±0.01, h20km±1km, MW4.9/125, Moment Tensor Solution. s31,c35; s125,c192; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.83±.10; Mθθ1.87±.10; Mφφ-1.05±.08; Mrθ-0.65±.17; Mθφ-2.78±.07; Mφr0.47±.15; Best double couple: Ms3.21200×10¹⁶ NP1:φs256.00000°, δ81.00000°, λ174.00000°. NP2:φs346.00000°, δ84.00000°, λ9.00000°. Principal axes: T 3.6920, Plg10.0000°, Azm211.0000°; N -0.9660, Plg80.0000°, Azm19.0000°; P -2.7330, Plg2.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 11:38:39.6±0.8**,40.42N**±0.01×**26.15E**±0.01**, h11**km±5km**, n753,** σ**1**§**58/845, mb4.2/48, MS4.2/32, 54C-50D, Turkey**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GELI	**Tayfur-Gelibol**	**0.25**	**94**	PG		**Pg**		**11 38 44.6**	**-0.1**
GELI				SG		**Sg**		**11 38 48.7**	**+0.5**
GADA	**Gvkgeada**	**0.30**	**221**	P		**Pg**		**11 38 45.8**	**+0.2**
GADA				S		**Sg**		**11 38 50.1**	**+0.5**
	62µm,0.5s								
GADA	**Gvkgeada**	**0.30**	**221**	PG		**Pg**		**11 38 45.9**	**+0.3**
GADA				SG		**Sb**		**11 38 50.9**	**-0.9**
ENEZ	**Enez**	**0.32**	**0**	P		**Pg**		**11 38 46.0**	**0.0**
ENEZ				S		**Sg**		**11 38 50.9**	**+0.6**
	347µm,0.7s								
ENEZ	**Enez**	**0.32**	**0**	PG		**Pg**		**11 38 46.1**	**0.0**
ENEZ				SG		**Sg**		**11 38 51.2**	**+0.9**
ERIK	**Erikli-Kesan**	**0.38**	**47**	PG		**Pg**		**11 38 46.8**	**-0.3**
ERIK				SG		**Sg**		**11 38 52.9**	**+0.8**
LPK	**Lapseki**	**0.47**	**95**	PG		**Pg**		**11 38 48.7**	**-0.1**
LPK				SG		**Sb**		**11 38 56.5**	**-0.2**
SMTH	**Samothraki Isl**	**0.48**	**277**	P		**Pg**		**11 38 48.3**	**-0.6**
SMTH				S		**Sg**		**11 38 55.3**	**+0.1**
	44µm,0.3s								
SMTH	**Samothraki Isl**	**0.48**	**277**	P		**Pg**		**11 38 48.4**	**-0.6**
SMTH				S		**Sg**		**11 38 54.0**	**-1.3**
SMTH				AML		AML		11 38 56.6	
	comp=E,90381µm,0.3s								
SMTH				AML		AML		11 38 57.4	
	comp=N,84121µm,0.2s								
KESN	**Edirne-Kesan**	**0.57**	**44**	*i* P		**Pg**		**11 38 49.9**	**-1.0**
KESN				*i* S		**Sg**		**11 38 57.8**	**-0.7**
KESN				IAML				11 39 00.0	
	comp=N,68µm,0.6s								
KESN				IAML				11 39 05.0	
	comp=E,78µm,0.5s								
BOZC	**Bozcaada**	**0.58**	**187**	PG		**Pg**		**11 38 50.5**	**-0.4**
BOZC				SG		**Sg**		**11 38 59.2**	**+0.7**
BOZC	**Bozcaada**	**0.58**	**187**	*i* P		**Pg**		**11 38 50.5**	**-0.4**
BOZC				*i* P		**Pg**		**11 38 50.5**	**-0.4**
BOZC				*i* S		**Sg**		**11 38 58.8**	**+0.3**
BOZC				IAML				11 39 00.0	
	comp=N,25µm,0.7s								
BOZC				IAML				11 39 00.0	
	comp=N,22µm,0.9s								
BOZC				IAML				11 39 00.0	
	comp=E,40µm,0.8s								
BOZC				IAML				11 39 00.0	
	comp=E,36µm,0.6s								
EZN	**Ezine**	**0.60**	**167**	P		**Pg**		**11 38 50.9**	**-0.5**
EZN				S		**Sb**		**11 39 00.3**	**-0.4**
	comp=E,27µm,0.4s								
EZN	**Ezine**	**0.60**	**167**	PG		**Pg**		**11 38 51.4**	**0.0**
BAYC	**CANAKKALE_Bayr**	**0.74**	**156**	*i* P		**Pg**		**11 38 53.5**	**-0.4**
BAYC				*i* S		**Sg**		**11 39 02.7**	**-0.9**
BAYC				IAML				11 39 05.0	
	comp=N,12µm,0.8s								
BAYC				IAML				11 39 09.0	
	comp=E,12µm,0.4s								
UKOP	**Uzunkopru-Edir**	**0.80**	**27**	PG		**Pg**		**11 38 54.9**	**-0.2**
RKY	**Sarkoy-Tekirda**	**0.83**	**71**	PG		**Pg**		**11 38 54.7**	**-0.9**
SART	**Tekirdag**	**0.83**	**71**	*i* P		**Pg**		**11 38 54.5**	**-1.1**
SART				*i* S		**Sg**		**11 39 06.0**	**-0.5**
SART				IAML				11 39 08.0	
	comp=E,31µm,0.9s								
RDO	**Rodhopi**	**0.86**	**328**	P		**Pg**		**11 38 55.3**	**-1.0**
RDO				S		**Sg**		**11 39 07.8**	**+0.2**
	comp=E,32µm,0.3s								
RDO	**Rodhopi**	**0.86**	**328**	P		**Pg**		**11 38 55.4**	**-0.9**
RDO				S		**Sg**		**11 39 06.6**	**-0.9**
RDO				AML		AML		11 39 09.9	
	comp=E,68430µm,0.3s								
RDO				AML		AML		11 39 10.5	
	comp=N,57507µm,0.3s								
RDO	**Rodhopi**	**0.86**	**328**	PG		**Pg**		**11 38 55.4**	**-0.9**
KRBG	**Karabiga-Canak**	**0.88**	**91**	PG		**Pg**		**11 38 55.5**	**-1.0**
LIA	**Limnos Island**	**0.90**	**235**	P		**Pg**		**11 38 56.3**	**-0.7**
LIA				S		**Sb**		**11 39 09.4**	**+0.1**
	comp=N,30µm,0.9s								
LIA	**Limnos Island**	**0.90**	**235**	P		**Pg**		**11 38 56.4**	**-0.7**
LIA				S		**Sg**		**11 39 08.7**	**-0.1**
LIA				AML		AML		11 39 11.4	
	comp=E,61334µm,0.9s								
LIA				AML		AML		11 39 12.4	
	comp=N,58267µm,0.8s								
KNL	**Balıkesir**	**1.06**	**97**	*i* P		**Pb**		**11 38 58.9**	**-1.0**
KNL				*i* S		**Sb**		**11 39 13.2**	**-0.6**
THAS	**Thassos island**	**1.11**	**280**	P		**Pb**		**11 38 59.1**	**-1.6**
THAS				S		**Sb**		**11 39 14.8**	**-0.3**
	comp=N,18µm,0.4s								
THAS	**Thassos island**	**1.11**	**280**	P		**Pb**		**11 38 59.3**	**-1.4**
THAS				S		**Sb**		**11 39 11.9**	**-3.2**
THAS				AML		AML		11 39 16.1	
	comp=N,39460µm,0.6s								
THAS				AML		AML		11 39 18.9	
	comp=E,30129µm,0.3s								
MRMT	**Marmara Adasi**	**1.12**	**80**	PN		**Pb**		**11 38 59.8**	**-1.2**
PRK	**Paraskevi**	**1.17**	**175**	P		**Pn**		**11 39 02.0**	**+0.1**
PRK				S		**Sg**		**11 39 17.7**	**+0.3**
PRK	**Paraskevi**	**1.17**	**175**	P		**Pg**		**11 39 02.4**	**+0.3**
PRK				S		**Sn**		**11 39 18.3**	**+0.5**
PRK				AML		AML		11 39 19.9	
PRK				AML		AML		11 39 20.3	
AYVA	**Ayvalik**	**1.18**	**159**	*i* P		**Pb**		**11 39 01.6**	**-0.4**
AYVA				*i* S		**Sb**		**11 39 16.8**	**-0.5**
AYVA				IAML				11 39 19.0	
	comp=E,84µm,0.7s								
TKR	**Tekirdag**	**1.20**	**61**	PN		**Pn**		**11 39 01.7**	**-0.6**
TKR				SN		**Sn**		**11 39 18.5**	**0.0**
SIGR	**SIGRI**	**1.23**	**191**	P		**Pn**		**11 39 01.5**	**-1.1**
SIGR				S		**Sb**		**11 39 18.3**	**-0.2**
	comp=E,45µm,0.5s								
SIGR	**SIGRI**	**1.23**	**191**	P		**Pn**		**11 39 02.0**	**-0.6**
SIGR				S		**Sb**		**11 39 18.2**	**-0.3**
SIGR				AML		AML		11 39 22.0	
	comp=E,84162µm,0.4s								
SIGR				AML		AML		11 39 22.5	
SIGR	**SIGRI**	**1.23**	**191**	PN		**Pn**		**11 39 01.8**	**-0.8**
SIGR				SN		**Sg**		**11 39 19.1**	**+0.1**
GONE	**Gonen-Balikesi**	**1.23**	**107**	PN		**Pn**		**11 39 02.2**	**-0.5**
GONE				SN		**Sg**		**11 39 19.1**	**-0.2**
EFSA	**Agios Efstrati**	**1.25**	**226**	P		**Pn**		**11 39 02.2**	**-0.7**
EFSA				S		**Sb**		**11 39 18.1**	**-1.2**
EFSA				AML		AML		11 39 20.4	
	comp=N,34419µm,0.6s								
EFSA				AML		AML		11 39 29.3	
	comp=E,41062µm,0.9s								
EDC	**Edincik**	**1.31**	**93**	PN		**Pn**		**11 39 02.9**	**-0.9**
EDC				SN		**Sb**		**11 39 21.0**	**0.0**
BALY	**Balya**	**1.31**	**120**	*i* P		**Pn**		**11 39 03.5**	**-0.4**
BALY				*i* S		**Sn**		**11 39 21.5**	**+0.1**
BALY				IAML				11 39 23.0	
	comp=E,34µm,0.5s								
BALY				IAML				11 39 23.0	
	comp=N,39µm,0.7s								
KDZ	**Kurdzhali**	**1.35**	**336**	P		**Pn**		**11 39 03.9**	**-0.5**
KDZ	**Kurdzhali**	**1.35**	**336**	P		**Pn**		**11 39 03.8**	**-0.6**
KDZ	**Kurdzhali**	**1.35**	**336**	PN		**Pn**		**11 39 03.7**	**-0.6**
KDZ				SN		**Sb**		**11 39 22.1**	**-0.1**
KAVA	**Kavala**	**1.37**	**295**	P		**Pn**		**11 39 03.4**	**-1.2**
KAVA	**Kavala**	**1.37**	**295**	P		**Pn**		**11 39 03.5**	**-1.1**
KAVA				AML		AML		11 39 26.3	
	comp=N,18339µm,0.5s								
KAVA				AML		AML		11 39 27.1	
	comp=E,12752µm,0.3s								
CRLT	**Corlu**	**1.40**	**59**	PN		**Pn**		**11 39 04.7**	**-0.3**
CRLT				SN		**Sb**		**11 39 23.5**	**-0.1**
KVLA	**Kavala**	**1.44**	**292**	P		**Pn**		**11 39 04.2**	**-1.3**
KVLA				AML		AML		11 39 27.0	
	comp=N,12619µm,0.6s								
KVLA				AML		AML		11 39 32.0	
	comp=E,13608µm,0.5s								
DKL	**Dikili**	**1.47**	**156**	PN		**Pn**		**11 39 05.9**	**0.0**
DKL				SN		**Sn**		**11 39 25.2**	**+0.2**
EDRB	**Edirne**	**1.50**	**17**	P		**Pn**		**11 39 04.9**	**-1.5**
EDRB				S		**Sn**		**11 39 24.9**	**-1.0**
	comp=E,12µm,0.4s								
EDRB	**Edirne**	**1.50**	**17**	PN		**Pn**		**11 39 05.1**	**-1.3**
EDRB				SN		**Sn**		**11 39 25.4**	**-0.5**
BOTS	**Marmara Eregli**	**1.50**	**67**	PN		**Pn**		**11 39 06.6**	**+0.1**
BALB	**Balikesir**	**1.54**	**120**	PN		**Pn**		**11 39 06.9**	**0.0**
KIRK	**Kırklareli**	**1.54**	**27**	*i* P		**Pn**		**11 39 05.5**	**-1.5**
KIRK				IAML				11 39 29.0	
	comp=N,4µm,0.8s								
STEP	**BALIKESİR_Sava**	**1.59**	**130**	*i* P		**Pn**		**11 39 07.9**	**+0.2**
STEP				*i* S		**Sb**		**11 39 29.6**	**+0.4**
STEP				IAML				11 39 36.0	
	comp=E,26µm,0.8s								
STEP				IAML				11 39 47.0	
	comp=N,18µm,0.7s								
PHSR	**Pinarhisar**	**1.60**	**40**	PN		**Pn**		**11 39 06.7**	**-1.1**
ZEDA	**zmir-Bergama**	**1.62**	**153**	*i* P		**Pn**		**11 39 08.0**	**0.0**
ZEDA				*i* S		**Sn**		**11 39 28.2**	**-0.5**
ZEDA				IAML				11 39 33.0	
	comp=N,8µm,0.4s								
ZEDA				IAML				11 39 38.0	
	comp=E,11µm,0.6s								
OUR	**Ouranopolis**	**1.66**	**268**	P		**Pn**		**11 39 06.9**	**-1.6**
OUR				S		**Sn**		**11 39 28.9**	**-0.9**
	comp=E,12µm,0.7s								
OUR	**Ouranopolis**	**1.66**	**268**	P		**Pn**		**11 39 07.0**	**-1.6**
OUR				AML		AML		11 39 36.7	
	comp=N,25341µm,0.5s								
OUR				AML		AML		11 39 37.7	
	comp=E,22053µm,0.8s								
OUR	**Ouranopolis**	**1.66**	**268**	PN		**Pn**		**11 39 07.4**	**-1.2**
RZN	**Rozhen**	**1.67**	**320**	P		**Pn**		**11 39 08.1**	**-0.8**
RZN	**Rozhen**	**1.67**	**320**	Pg		**Pb**		**11 39 10.6**	**+0.1**
RZN	**Rozhen**	**1.67**	**320**	P		**Pn**		**11 39 08.3**	**-0.6**
KCTX	**Karacabey (Bur**	**1.69**	**94**	PN		**Pn**		**11 39 08.5**	**-0.6**
DIM	**Dimitrovgrad**	**1.70**	**344**	P		**Pn**		**11 39 08.7**	**-0.4**
SLVT	**Silivri**	**1.76**	**62**	PN		**Pn**		**11 39 10.1**	**+0.1**
ELBA	**Catalca**	**1.88**	**66**	*i* P		**Pn**		**11 39 10.4**	**-1.2**
ELBA				IAML				11 39 39.0	
	comp=N,6µm,0.9s								
ELBA				IAML				11 39 43.0	
	comp=E,8µm,0.9s								
PSRA	**Psara**	**1.93**	**194**	P		**Pn**		**11 39 12.3**	**0.0**
PSRA				AML		AML		11 39 45.9	
	comp=N,18720µm,0.3s								
PSRA				AML		AML		11 39 46.6	
	comp=E,22538µm,0.7s								
CTYL	**Yalikoy Yolu**	**1.94**	**56**	PN		**Pn**		**11 39 12.1**	**-0.3**
PAIG	**Paliouri**	**1.96**	**256**	P		**Pn**		**11 39 10.8**	**-1.8**
PAIG	**Paliouri**	**1.96**	**256**	P		**Pn**		**11 39 10.9**	**-1.8**
PAIG				AML		AML		11 39 50.0	
	comp=E,5545µm,1.0s								
PAIG				AML		AML		11 39 50.6	
	comp=N,9417µm,1.5s								
DURS	**Dursunbey**	**1.96**	**114**	*i* P		**Pn**		**11 39 12.9**	**0.0**
DURS				IAML				11 39 42.0	
	comp=N,20µm,1.0s								
DURS				IAML				11 39 42.0	
	comp=E,15µm,0.6s								
CTKS	**Kestanelik-??a**	**1.97**	**65**	PN		**Pn**		**11 39 13.2**	**+0.4**
SKY	**Skiros Island**	**1.97**	**219**	PN		**Pn**		**11 39 11.5**	**-1.4**
SKY	**Skiros Island**	**1.97**	**219**	P		**Pn**		**11 39 11.4**	**-1.4**
AKS	**Akhisar**	**2.00**	**140**	PN		**Pn**		**11 39 13.2**	**-0.1**
PLD	**Plovdiv**	**2.01**	**328**	*e*Pg		**Pn**		**11 39 13.2**	**-0.2**
PLD				*e*Sg		**Sg**		**11 39 44.0**	**-0.1**
PLD	**Plovdiv**	**2.01**	**328**	*e*Pg		**Pb**		**11 39 16.4**	**+0.3**
PLD				*e*Sg		**Sg**		**11 39 44.5**	**+0.3**
PLD	**Plovdiv**	**2.01**	**328**	P		**Pn**		**11 39 13.1**	**-0.3**
PLD	**Plovdiv**	**2.01**	**328**	Pg		**Pb**		**11 39 17.1**	**+1.0**
PLD	**Plovdiv**	**2.01**	**328**	PN		**Pn**		**11 39 13.3**	**-0.2**
CHOS	**Chios island**	**2.03**	**182**	P		**Pn**		**11 39 13.1**	**-0.7**
CHOS	**Chios island**	**2.03**	**182**	P		**Pn**		**11 39 13.5**	**-0.3**
CHOS				AML		AML		11 39 50.9	
	comp=E,35246µm,0.6s								
CHOS				AML		AML		11 39 51.5	
	comp=N,27449µm,0.6s								
CHOS	**Chios island**	**2.03**	**182**	PN		**Pn**		**11 39 13.3**	**-0.5**
DST	**Dursunbey**	**2.06**	**112**	PN		**Pn**		**11 39 14.6**	**+0.4**
SRS	**Serrai**	**2.06**	**291**	P		**Pn**		**11 39 13.1**	**-1.1**
SRS	**Serrai**	**2.06**	**291**	P		**Pn**		**11 39 13.1**	**-1.1**
SRS				AML		AML		11 39 53.2	
	comp=E,10582µm,0.6s								
SRS				AML		AML		11 40 01.4	
	comp=N,12038µm,0.6s								
PLG	**Polygyros**	**2.07**	**270**	P		**Pn**		**11 39 12.9**	**-1.3**
PLG	**Polygyros**	**2.07**	**270**	P		**Pn**		**11 39 12.9**	**-1.3**
PLG				AML		AML		11 39 47.0	
	comp=N,13767µm,0.7s								
PLG				AML		AML		11 39 48.8	
	comp=E,10002µm,0.4s								
JMB	**Yambol**	**2.07**	**9**	*e*Pg		**Pn**		**11 39 14.5**	**+0.2**
JMB				*e*Sg		**Sg**		**11 39 46.1**	**-0.1**
JMB	**Yambol**	**2.07**	**9**	*e*Pg		**Pb**		**11 39 15.9**	**-1.3**
JMB				*e*Sg		**Sg**		**11 39 46.1**	**-0.1**
JMB	**Yambol**	**2.07**	**9**	P		**Pn**		**11 39 13.8**	**-0.5**
URLA	**Izmir**	**2.08**	**170**	PN		**Pn**		**11 39 14.1**	**-0.4**
URLA	**Izmir**	**2.08**	**170**	*i* P		**Pn**		**11 39 14.1**	**-0.4**
URLA				IAML				11 39 48.0	
	comp=E,8µm,0.8s								
URLA				IAML				11 39 49.0	
	comp=N,8µm,0.6s								
BLCB	**Balcova**	**2.14**	**161**	PN		**Pn**		**11 39 15.2**	**0.0**
AOS	**Alonnisos**	**2.15**	**235**	P		**Pn**		**11 39 13.3**	**-2.0**
AOS	**Alonnisos**	**2.15**	**235**	P		**Pn**		**11 39 14.1**	**-1.2**
AOS				AML		AML		11 39 56.2	
	comp=E,9605µm,0.6s								
AOS				AML		AML		11 40 00.4	
	comp=N,9118µm,0.9s								
AOS	**Alonnisos**	**2.15**	**235**	PN		**Pn**		**11 39 15.3**	**0.0**
SOH	**Sokhos**	**2.17**	**282**	P		**Pn**		**11 39 14.5**	**-1.1**
ALNA	**Alonissos**	**2.17**	**235**	P		**Pn**		**11 39 14.2**	**-1.4**
ALNA				AML		AML		11 39 53.1	
	comp=E,13022µm,0.9s								
ALNA				AML		AML		11 39 54.0	
	comp=N,18687µm,1.1s								
MMB	**Musomiste**	**2.17**	**303**	P		**Pn**		**11 39 14.6**	**-1.1**
GOMA	**Golmarmara-Man**	**2.19**	**141**	PN		**Pn**		**11 39 16.2**	**+0.4**
ULDT	**Uludag**	**2.30**	**96**	*i* P		**Pn**		**11 39 17.2**	**-0.4**
ULDT				IAML				11 39 55.0	
	comp=N,20µm,0.8s								
ULDT				IAML				11 39 58.0

AYDN IAML 11 40 32.0
comp=E,1µm,2.0s
VTS Vitosha 3.10 316 *e*Pn **Pn** 11 39 28.7 +0.1
VTS *e*Sn **Sn** 11 40 06.7 +1.0
VTS Vitosha 3.10 316 *e*Pn **Pn** 11 39 28.7 +0.1
VTS *e*Sn **Sb** 11 40 10.2 -2.5
VTS Vitosha 3.10 316 ⇓P **Pn** 11 39 28.6 0.0
VTS ⇓S **Pb** 11 39 36.5 +1.7
VTS Vitosha 3.10 316 P **Pn** 11 39 28.5 0.0
VTS Vitosha 3.10 316 Pg **Pb** 11 39 36.5 +1.7
VTS Vitosha 3.10 316 P **Pn** 11 39 28.4 -0.2
VTS Vitosha 3.10 316 P **Pn** 11 39 28.6 0.0
VTS Vitosha 3.10 316 **Pn** 11 39 28.6 0.0
VIL2 Platees 3.14 226 P **Pn** 11 39 27.7 -1.3
KAND Kocaeli-Kandir 3.14 76 *i* P **Pn** 11 39 29.0 0.0
VLY Voula,Athens 3.15 216 P **Pn** 11 39 27.8 -1.3
RAZG Razgrad 3.16 5 ⇑P **Pn** 11 39 29.4 +0.1
RAZG ⇑S **Pg** 11 39 43.0 +2.9
RAZG Razgrad 3.16 5 **Pn** 11 39 29.4 +0.1
AXAR Agios Charalam 3.16 240 P **Pn** 11 39 28.2 -1.1
GEYV SAKARYA_Geyve 3.16 87 *i* P **Pn** 11 39 29.9 +0.6
GEYV *i* S **Sg** 11 40 19.6 -1.6
PLVB Pleven 3.18 339 ⇓P **Pn** 11 39 29.5 0.0
PLVB Pleven 3.18 339 **Pn** 11 39 29.5 0.0
AGG Agios Georgios 3.26 246 P **Pn** 11 39 29.0 -1.6
AGG Agios Georgios 3.26 246 P **Pn** 11 39 29.6 -1.0
AGG Agios Georgios 3.26 246 **Pn** 11 39 29.6 -1.0
THL Klokotos Trika 3.29 256 P **Pn** 11 39 29.9 -1.1
ZIMR 3.29 350 ⇑P **Pn** 11 39 31.4 +0.4
ZIMR 3.29 350 P **Pn** 11 39 31.4 +0.4
ZIMR 3.29 350 **Pn** 11 39 31.4 +0.4
KHAL Karahalli 3.30 127 *i* P **Pn** 11 39 32.2 +1.0
KHAL IAML 11 40 14.0
comp=E,994nm,0.4s
KHAL IAML 11 40 46.0
comp=N,723nm,0.7s
BORA Eskisehir 3.34 98 *i* P **Pn** 11 39 31.8 -0.1
BORA IAML 11 40 28.0
comp=E,1µm,0.6s
BORA IAML 11 40 30.0
comp=N,3µm,1.2s
APE Apeiranthos 3.38 188 ⇑P **Pn** 11 39 30.9 -1.4
APE Apeiranthos 3.38 188 *c* P **Pn** 11 39 30.8 -1.5
APE Apeiranthos 3.38 188 **Pn** 11 39 30.9 -1.4
MAKR Makrakomi, Fth 3.40 247 P **Pn** 11 39 32.0 -0.6
MAKR AML AML 11 40 52.5
comp=N,2660µm,1.2s
MAKR AML AML 11 41 00.7
comp=E,2181µm,0.8s
LTK Loutraki 3.44 227 P **Pn** 11 39 31.9 -1.2
MPEP Malo Peshtene 3.44 329 P **Pn** 11 39 32.9 -0.2
MPEP Malo Peshtene 3.44 329 Pg **Pg** 11 39 43.2 -2.4
SRCK Saricakaya, Es 3.45 95 *i* P **Pn** 11 39 33.1 -0.1
SRCK IAML 11 40 33.0
comp=N,5µm,0.7s
SRCK IAML 11 40 35.0
comp=E,5µm,0.7s
BOSS Bosilegrad 3.45 308 *e*Pn **Pn** 11 39 34.1 +0.8
BOSS *e*Sn **Sn** 11 40 15.7 +1.5
BOSS Bosilegrad 3.45 308 *e*Pn **Pn** 11 39 34.1 +0.8
BOSS *e*Sn **Sn** 11 40 15.6 +1.4
BDRM Kayabasi 3.50 163 *i* P Pn 11 39 28.1 -5.8
BDRM *i* P Pn 11 39 28.1 -5.8
BDRM IAML 11 40 35.0
comp=E,638nm,0.7s
BDRM IAML 11 40 35.0
comp=E,641nm,0.7s
BDRM IAML 11 40 38.0
comp=N,1µm,0.8s
AUKIR Kırka- Seyitga 3.56 107 *i* P **Pn** 11 39 35.6 +0.8
AUKIR *i* S **Sg** 11 40 30.7 -3.2
AFYO Afyonkarahisar 3.59 116 *i* P **Pn** 11 39 36.3 +1.0
AFYO *i* S **Sg** 11 40 33.6 -1.4
AFYO IAML 11 40 46.0
comp=E,7µm,1.1s
AFYO IAML 11 40 49.0
comp=N,6µm,1.6s
PSN Preselentsi 3.60 24 P **Pn** 11 39 33.7 -1.5
SAHE Sakarya_HENDEK 3.61 82 *i* P Pn 11 39 28.9 -6.5
SAHE IAML 11 40 49.0
comp=E,2µm,0.8s
TAVA DENIZLI_Tavas 3.65 143 *i* P **Pn** 11 39 36.2 +0.1
TAVA IAML 11 40 21.0
comp=N,394nm,0.5s
TAVA IAML 11 40 45.0
comp=E,484nm,1.2s
FNA Florina 3.65 277 P **Pn** 11 39 35.7 -0.4
FNA Florina 3.65 277 P **Pn** 11 39 35.8 -0.3
FNA Florina 3.65 277 **Pn** 11 39 35.8 -0.3
EVR Evrytania 3.67 247 P **Pn** 11 39 35.7 -0.6
DID Didima 3.69 219 P **Pn** 11 39 35.3 -1.2
BTAS Taskesti 3.70 86 *i* P **Pn** 11 39 37.7 +1.0
KALE Kalithea 3.71 238 P **Pn** 11 39 35.7 -1.1
ANX Ano Chora 3.74 242 P **Pn** 11 39 36.5 -0.9
TRIZ Trizonia 3.77 238 P **Pn** 11 39 36.5 -1.1
KZIL AFYON_Kizioren 3.77 124 *i* P **Pn** 11 39 38.8 +1.0
KZIL IAML 11 40 52.0
comp=N,1µm,0.7s
KZIL IAML 11 40 56.0
comp=E,941nm,0.8s
COPA Copaceanca 3.78 350 ⇓P **Pn** 11 39 37.9 +0.2
COPA ⇑S Pg 11 39 58.7 +6.8
COPA Copaceanca 3.78 350 **Pn** 11 39 37.9 +0.2
SGRR Singureni 3.81 358 ⇑P **Pn** 11 39 37.7 -0.4
SGRR Singureni 3.81 358 **Pn** 11 39 37.7 -0.4
VLAD Vladila 3.81 341 ⇑P **Pn** 11 39 37.7 -0.4
VLAD Vladila 3.81 341 **Pn** 11 39 37.7 -0.4
DAT Datca 3.85 163 *i* P **Pn** 11 39 38.6 -0.3
DAT IAML 11 40 47.0
comp=E,345nm,2.0s
MANR Mangalia 3.85 27 ⇓P **Pn** 11 39 38.5 -0.2
MANR Mangalia 3.85 27 **Pn** 11 39 38.5 -0.2
MDUB Mudurnu 3.85 88 **Pn** 11 39 39.6 +0.8
RASA Rasa 3.87 11 ⇓P **Pn** 11 39 39.5 +0.6
RASA Rasa 3.87 11 **Pn** 11 39 39.5 +0.6
SKO Skopje 3.88 295 *e*Pn **Pn** 11 39 41.1 +2.0
SKO Skopje 3.88 295 *e*Pn **Pn** 11 39 39.0 -0.1
ZAPS Zavoj 3.88 319 *e*Pn **Pn** 11 39 40.2 +1.0
ZAPS *e*Sn **Sn** 11 40 28.0 +3.3
ZAPS Zavoj 3.88 319 *e*Pn **Pn** 11 39 40.2 +1.0
ZAPS *e*Sn **Sn** 11 40 28.0 +3.3
ICOR Ion Corvin 3.90 18 ⇑P **Pn** 11 39 40.2 +0.9
ICOR Ion Corvin 3.90 18 **Pn** 11 39 40.2 +0.9
LAKA Lakka 3.90 237 P **Pn** 11 39 38.9 -0.5
KLV Kalavryta, Ach 3.91 234 P **Pn** 11 39 38.4 -1.2
CIFT Cifteler, Eski 3.92 104 *i* P **Pn** 11 39 40.1 +0.3
CIFT IAML 11 40 52.0
comp=N,5µm,0.6s
CIFT IAML 11 40 54.0
comp=E,4µm,0.6s
BUC1 Bucharest 3.93 359 ⇑P **Pg** 11 39 55.3 +0.4
TURN Turunc 4.03 151 *i* P **Pn** 11 39 40.5 -0.6
TURN IAML 11 40 59.0
comp=E,579nm,1.7s
TURN IAML 11 41 00.0
comp=N,466nm,0.8s
BARS Barje 4.04 308 *e*Pn **Pn** 11 39 41.4 +0.1
BARS Barje 4.04 308 *e*Pn **Pb** 11 39 49.9 -0.8
BARS *e*Sn **Sn** 11 40 31.2 +2.6
BARS Barje 4.04 308 *e*Pn **Pn** 11 39 41.4 +0.1
BARS Barje 4.04 308 *e*Pn **Pb** 11 39 49.3 -1.4
BARS *e*Sn **Sn** 11 40 31.2 +2.6
YIGI Dzce 4.07 81 *i* P **Pn** 11 39 42.4 +0.7
SANT Santorini 4.08 188 ⇓P **Pn** 11 39 40.2 -1.7
SANT Santorini 4.08 188 **Pn** 11 39 40.5 -1.4
BOLV Bolvadin 4.08 113 *i* P **Pn** 11 39 43.3 +1.3
BOLV IAML 11 41 03.0
comp=N,1µm,0.9s
BOLV IAML 11 41 07.0
comp=E,2µm,0.9s
BRDR BURDUR-Merkez 4.08 130 *i* P **Pn** 11 39 42.6 +0.6
BRDR IAML 11 41 07.0
comp=E,674nm,0.9s
BRDR IAML 11 41 21.0
comp=N,704nm,2.6s
LEHL Lehliu 4.08 7 ⇑P **Pb** 11 39 53.9 +2.4
DALY Dalyan (Mula) 4.09 151 *i* P **Pn** 11 39 42.4 +0.4
DALY IAML 11 40 59.0
comp=E,709nm,1.6s
DALY IAML 11 41 03.0
comp=N,695nm,1.4s
KDZE Karadeniz Ereo 4.11 76 ⇓P **Pg** 11 39 57.1 -1.2

MFTR Murfatlar 4.12 23 ⇑P **Pn** 11 39 41.4 -1.0
MFTR Murfatlar 4.12 23 **Pn** 11 39 41.4 -1.0
GOLH Golhisar 4.14 139 *i* P **Pn** 11 39 43.9 +1.0
GOLH IAML 11 41 18.0
comp=N,707nm,1.7s
TRIP Tripoli 4.18 228 P **Pn** 11 39 42.6 -0.7
TSCT Constanta Port 4.18 26 ⇑P **Pn** 11 39 42.8 -0.5
TSCT Constanta Port 4.18 26 **Pn** 11 39 42.8 -0.5
HUMR Humele 4.20 348 ⇑P **Pn** 11 39 43.3 -0.2
HUMR Humele 4.20 348 **Pn** 11 39 43.3 -0.2
AUSIV SIVRIHISAR 4.26 102 *i* P **Pn** 11 39 44.6 +0.2
AUSIV IAML 11 41 07.0
comp=N,1µm,0.8s
AUSIV IAML 11 41 10.0
comp=E,587nm,0.9s
SULR 4.26 1 ⇑P **Pn** 11 39 45.2 +0.9
SULR 4.26 1 **Pn** 11 39 45.2 +0.9
ISP Isparta 4.27 126 P **Pn** 11 39 45.0 +0.3
ISP Isparta 4.27 126 Pn **Pn** 11 39 44.5 -0.2
ISP Isparta 4.27 126 **Pn** 11 39 45.0 +0.3
AMRR Amara 4.28 11 ⇑P **Pn** 11 39 42.2 -2.4
AMRR Amara 4.28 11 P **Pn** 11 39 42.2 -2.4
AMRR Amara 4.28 11 **Pn** 11 39 42.2 -2.4
BAGO Egridir - ISPA 4.34 122 *i* P **Pn** 11 39 46.3 +0.8
KIBS BOLU 4.35 88 *i* P **Pn** 11 39 45.8 +0.1
KIBS IAML 11 41 15.0
comp=E,3µm,1.3s
KIBS IAML 11 41 21.0
comp=N,1µm,1.4s
TLBR Topalu 4.36 18 ⇑P **Pn** 11 39 44.8 -0.9
TIRR Tirgusor 4.37 22 ⇑P **Pn** 11 39 45.6 -0.2
TIRR Tirgusor 4.37 22 P **Pn** 11 39 45.0 -0.8
TIRR Tirgusor 4.37 22 **Pn** 11 39 45.0 -0.8
FETY Fethiye 4.42 148 *i* P **Pn** 11 39 47.7 +1.1
FETY *i* S **Sn** 11 40 34.4 -3.6
HARR Harsova 4.47 17 ⇓P **Pn** 11 39 47.4 +0.2
HARR Harsova 4.47 17 P **Pn** 11 39 47.4 +0.2
HARR Harsova 4.47 17 **Pn** 11 39 47.4 +0.2
ZAGS Zajecar 4.47 321 *e*Pn **Pn** 11 39 46.5 -0.8
ZAGS Zajecar 4.47 321 *e*Pn **Pn** 11 39 46.5 -0.8
PLAR PLOIESTI 4.50 359 ⇓P **Pn** 11 39 48.5 +0.9
PLAR PLOIESTI 4.50 359 **Pn** 11 39 48.5 +0.9
BCAM Yenicaga 4.52 83 *i* P **Pn** 11 39 47.6 -0.4
BCAM IAML 11 41 17.0
comp=N,909nm,1.4s
BCAM IAML 11 41 21.0
comp=E,871nm,1.2s
PGOR Pogoanele 4.53 8 ⇓P **Pg** 11 40 06.5 +0.2
PUNG Punghina 4.54 329 ⇑P **Pn** 11 39 47.9 -0.2
PUNG Punghina 4.54 329 **Pn** 11 39 47.9 -0.2
BOVS Bovan 4.62 316 *e*Pn **Pn** 11 39 49.4 +0.2
BOVS *e*Sn **Sn** 11 40 44.9 +2.1
BOVS Bovan 4.62 316 *e*Pn **Pn** 11 39 49.4 +0.2
BOVS *e*Sn **Sn** 11 40 44.9 +2.1
ITM Ithomi 4.62 227 **Pn** 11 39 49.1 -0.2
SELS Selova 4.69 308 *e*Pn **Pn** 11 39 49.6 -0.7
SELS *e*Sn **Sn** 11 40 46.7 +2.1
SELS Selova 4.69 308 *e*Pn **Pn** 11 39 49.6 -0.7
SELS *e*Sn **Sn** 11 40 46.7 +2.1
ELL Elmali 4.70 140 P **Pn** 11 39 52.4 +1.8
ELL Elmali 4.70 140 **Pn** 11 39 52.4 +1.8
ISR Istrita 4.71 3 ⇓P **Pn** 11 39 50.9 +0.4
ISR Istrita 4.71 3 P **Pn** 11 39 50.9 +0.4
ISR Istrita 4.71 3 **Pn** 11 39 50.9 +0.4
KORT Korkueli 4.74 135 *i* P **Pn** 11 39 50.2 -0.8
TOPG Topolog 4.75 20 ⇑P **Pn** 11 39 50.6 -0.5
BTIN Bartın 4.77 73 *i* P **Pn** 11 39 50.4 -1.0
JURR Jurilovca 4.79 24 ⇑P **Pn** 11 39 50.4 -1.2
CMDR Camlidere-ANKA 4.83 87 *i* P **Pn** 11 39 52.3 +0.1
CMDR IAML 11 41 28.0
comp=E,2µm,1.1s
CMDR IAML 11 41 32.0
comp=N,2µm,1.6s
TIR Tirane 4.85 283 *e*Pn **Pn** 11 39 53.0 +0.5
TIR Tirane 4.85 283 *e*Pn **Pn** 11 39 53.2 +0.7
TIR Tirane 4.85 283 P **Pn** 11 39 54.7 +2.2
TIR Tirane 4.85 283 **Pn** 11 39 54.7 +2.2
DOGA KONYA_Doganhis 4.87 117 *i* P **Pn** 11 39 54.0 +1.1
MTUR Matau 4.87 351 ⇓P **Pn** 11 39 53.6 +0.8
MTUR Matau 4.87 351 P **Pn** 11 39 53.6 +0.8
MTUR Matau 4.87 351 **Pn** 11 39 53.6 +0.8
KARP Karpathos 4.93 170 **Pn** 11 39 53.2 -0.4
CFR Carcaliu 4.98 16 ⇑P **Pn** 11 39 53.7 -0.5
CFR Carcaliu 4.98 16 P **Pn** 11 39 53.7 -0.5
CFR Carcaliu 4.98 16 **Pn** 11 39 53.7 -0.5
KBUK KARABUK-Merkez 4.98 78 *i* P **Pn** 11 39 54.2 -0.1
AKAS Kas 4.98 146 *i* P **Pn** 11 39 55.6 +1.2
KDHN Kadinhani 4.99 110 *i* P **Pn** 11 39 55.3 +0.8
GRER 5.00 7 ⇑P **Pn** 11 39 56.8 +2.3
GRER 5.00 7 **Pn** 11 39 56.8 +2.3
ARR Arges 5.07 348 ⇓P **Pn** 11 39 55.3 -0.2
ARR Arges 5.07 348 **Pn** 11 39 55.3 -0.2
MLR Muntele Rosu 5.07 358 *e*Pn **Pn** 11 39 53.2 -2.5
MLR Muntele Rosu 5.07 358 *e*Pn **Pn** 11 39 54.9 -0.8
MLR Muntele Rosu 5.07 358 Pn **Pn** 11 39 57.1 +1.5
comp=N,10nm,0.3s,baz=200,slow=5.9,SNR=100
MLR Lg Lg 11 41 23.8
comp=N,30nm,0.3s,baz=120,slow=20,SNR=7.5
MLR Muntele Rosu 5.07 358 ⇑P **Pn** 11 39 56.7 +1.0
MLR Muntele Rosu 5.07 358 P **Pn** 11 39 56.8 +1.1
MLR Muntele Rosu 5.07 358 **Pn** 11 39 56.8 +1.1
BR231 Keskin MP Arra 5.11 94 **Pn** 11 39 56.6 +0.5
ANTO Ankara 5.12 94 ⇓P **Pn** 11 39 55.9 -0.3
ANTO Ankara 5.12 94 P **Pn** 11 39 56.1 -0.2
ANTO Ankara 5.12 94 **Pn** 11 39 56.1 -0.2
PVY Plav 5.13 297 ⇑*i*Pn **Pn** 11 39 56.1 -0.4
PVY *i* Sn **Sn** 11 40 51.7 -4.0
BISRR Bisoca 5.14 4 ⇓P **Pn** 11 39 58.4 +1.8
BISRR Bisoca 5.14 4 **Pn** 11 39 58.4 +1.8
TLCR 5.15 21 ⇑P **Pn** 11 39 56.4 -0.2
TLCR 5.15 21 P **Pn** 11 39 56.4 -0.2
TLCR 5.15 21 **Pn** 11 39 56.4 -0.2
KUBS Kucevo 5.19 322 *e*Pn **Pn** 11 39 55.6 -1.5
KUBS Kucevo 5.19 322 *e*Pn **Pn** 11 39 55.7 -1.4
IDI Anoyia 5.22 191 Pn **Pn** 11 39 56.4 -1.2
comp=N,4.0nm,0.3s,baz=15,slow=12,SNR=42
IDI Sn **Sn** 11 40 56.9 -0.9
comp=N,5.2nm,0.3s,baz=291,slow=21,SNR=1.9
IDI LR LR 11 42 08.1
comp=N,2µm,20.3s,baz=339,slow=40
IDI Anoyia 5.22 191 ⇓P **Pn** 11 39 56.1 -1.5
IDI Anoyia 5.22 191 **Pn** 11 39 56.4 -1.2
IDI Anoyia 5.22 191 **Sn** 11 40 56.9 -0.9
HERR Herculane 5.24 330 ⇑P **Pn** 11 39 57.0 -0.8
HERR Herculane 5.24 330 **Pn** 11 39 57.0 -0.8
AKUM Antalya-Kumluc 5.25 140 *i* P **Pn** 11 39 59.3 +1.3
IVA Berane 5.29 300 ⇓*i*Pn **Pn** 11 39 58.4 -0.2
IVA *i* Sn **Sn** 11 40 56.1 -3.5
LOT Lotru 5.32 342 ⇓P **Pn** 11 39 57.9 -1.2
LOT Lotru 5.32 342 **Pn** 11 39 57.9 -1.2
GRUS Gruza 5.32 312 *e*Pn **Pn** 11 39 58.3 -0.7
GRUS *e*Sn **Sn** 11 41 02.5 +2.2
GRUS Gruza 5.32 312 *e*Pn **Pn** 11 39 58.3 -0.7
GRUS *e*Sn **Sn** 11 41 00.5 +0.2
KKUL Konya-Kulu 5.36 101 *i* P **Pn** 11 40 00.2 +0.7
PETR Petresti 5.36 8 ⇓P **Pn** 11 40 01.1 +1.6
PETR Petresti 5.36 8 **Pn** 11 40 01.1 +1.6
SJES Sjenica 5.42 304 *e*Pn **Pn** 11 40 00.6 +0.2
SJES Sjenica 5.42 304 *e*Pn **Pn** 11 40 00.6 +0.2
KONT Konya--Tatoy 5.42 115 *i* P **Pn** 11 40 01.8 +1.4
BBAL Bala 5.43 97 *i* P **Pn** 11 40 00.9 +0.4
ULC Ulcinj 5.43 289 ⇑*i*Pn **Pn** 11 40 00.3 -0.2
ULC *i* Sn **Sn** 11 40 59.4 -3.6
PLOR Plostina 5.44 4 ⇑P **Pn** 11 40 01.6 +1.0
PLOR Plostina 5.44 4 P **Pn** 11 40 01.6 +1.0
PLOR Plostina 5.44 4 **Pn** 11 40 01.6 +1.0
MDVR Moldovita 5.45 325 ⇓P **Pn** 11 40 00.2 -0.6
MDVR ⇓S **Pg** 11 40 19.9 -4.1
MDVR Moldovita 5.45 325 **Pn** 11 40 00.2 -0.6
VRI Vrincioaia 5.46 4 ⇓P **Pn** 11 40 01.7 +0.8
VRI Vrincioaia 5.46 4 P **Pn** 11 40 01.7 +0.8
VRI Vrincioaia 5.46 4 **Pn** 11 40 01.7 +0.8
IVAS Ivanjica 5.47 307 *e*Pn **Pn** 11 40 00.4 -0.7
IVAS Ivanjica 5.47 307 *e*Pn **Pn** 11 40 00.4 -0.7
PELI Kastamonı-Ara 5.50 78 *i* P **Pn** 11 40 01.6 +0.1
KMER Konya-Meram 5.51 117 *i* P **Pn** 11 40 03.3 +1.6
KEPZ Antalya-Kepez 5.53 128 *i* P **Pn** 11 40 03.1 +1.3
KOME Kolasin 5.53 298 ⇑*i*Pn **Pn** 11 40 01.8 -0.1
KOME *i* Sn **Sn** 11 41 01.5 -4.1
DRME Dracevica, Mon 5.54 291 ⇓*i*Pn **Pn** 11 40 03.3 +1.4
DRME Dracevica, Mon 5.54 291 ⇑*i*Pn **Pn** 11 40 01.8 -0.1

DRME *i* Sn **Sn** 11 41 01.3 -4.2
GZR Gura Zlata 5.56 335 *e*Pn **Pn** 11 40 01.4 -0.9
GZR Gura Zlata 5.56 335 *e*Pn **Pn** 11 40 01.4 -0.9
GZR Gura Zlata 5.56 335 ⇑P **Pn** 11 40 01.3 -0.9
GZR Gura Zlata 5.56 335 P **Pn** 11 40 01.3 -0.9
GZR Gura Zlata 5.56 335 **Pn** 11 40 01.3 -0.9
PDG Podgorica 5.56 293 *e*Pn **Pn** 11 40 02.9 +0.7
PDG Podgorica 5.56 293 *e*Pn **Pn** 11 40 02.2 0.0
PDG Podgorica 5.56 293 ⇑P **Pn** 11 40 03.5 +1.3
PDG Podgorica 5.56 293 *e*Pn **Pn** 11 40 03.8 +1.6
PDG Podgorica 5.56 293 **Pn** 11 40 03.7 +1.6
TTG Podgorica 5.56 293 ⇑*i*Pn **Pn** 11 40 02.2 0.0
TTG *i* Sn **Sn** 11 41 02.8 -3.2
DOPR Dopca 5.58 355 ⇓P **Pn** 11 40 03.2 +0.8
DOPR Dopca 5.58 355 **Pn** 11 40 03.2 +0.8
VARL Varlezi 5.62 12 ⇓P **Pn** 11 40 03.5 +0.5
TRUS Trudelj 5.71 314 *e*Pn **Pn** 11 40 03.4 -0.9
TRUS Trudelj 5.71 314 *e*Pn **Pn** 11 40 03.4 -0.9
BUM Brajici-Budva 5.78 291 ⇓*i*Pn **Pn** 11 40 04.9 -0.3
BUM *i* Sn **Sn** 11 41 07.0 -4.5
ILGA Ilgaz 5.78 81 *i* P **Pn** 11 40 10.1 +4.6
BR131 Keskin Array S 5.79 94 P **Pn** 11 40 05.9 +0.4
BR131 Keskin Array S 5.79 94 **Pn** 11 40 05.9 +0.4
BRTR Keskin Array B 5.79 94 Pn **Pn** 11 40 05.8 +0.4
comp=N,13nm,0.3s,baz=262,slow=10,SNR=172
BRTR Sn **Sn** 11 41 10.2 -1.7
comp=N,11nm,0.3s,baz=292,slow=29,SNR=6.5
BRTR Lg Lg 11 41 46.1
comp=N,5.4nm,0.3s,baz=273,slow=27,SNR=6.0
BRTR Keskin Array B 5.79 94 *ce*P **Pn** 11 40 05.9 +0.4
BRTR pmax pmax
comp=Z,34nm,0.5s
BRTR Keskin Array B 5.79 94 **Pn** 11 40 05.8 +0.4
BRTR **Sn** 11 41 10.2 -1.7
PLE Pljevlja 5.83 302 ⇑*i*Pn **Pn** 11 40 05.8 -0.2
PLE *i* Sn **Sn** 11 41 08.8 -4.0
CEME Cevo 5.83 294 ⇑*i*Pn **Pn** 11 40 05.9 -0.1
CEME *i* Sn **Sn** 11 41 08.4 -4.5
DIVS Divibare 5.87 311 *e*Pn **Pn** 11 40 05.8 -0.7
DIVS Divibare 5.87 311 *e*Pn **Pn** 11 40 05.8 -0.7
DIVS Divibare 5.87 311 ⇓*i*Pn **Pn** 11 40 05.6 -0.9
DIVS Divibare 5.87 311 **Pn** 11 40 05.7 -0.7
MDB Medias 5.87 348 ⇑P **Pn** 11 40 07.7 +1.3
MDB Medias 5.87 348 P **Pn** 11 40 07.7 +1.3
MDB Medias 5.87 348 **Pn** 11 40 07.7 +1.3
NKY Niksic 5.87 296 ⇑*i*Pn **Pn** 11 40 06.4 -0.2
NKY *i* Sn **Sn** 11 41 08.7 -5.3
NKME Niksic 5.88 296 ⇑*i*Pn **Pn** 11 40 06.5 -0.2
NKME *i* Sn **Sn** 11 41 09.7 -4.5
SCTE Santa Cesarea 5.89 269 **Pn** 11 40 06.4 -0.3
BIR Birlad 5.95 10 ⇓P **Pn** 11 40 08.3 +0.8
BIR Birlad 5.95 10 P **Pn** 11 40 08.3 +0.8
BIR Birlad 5.95 10 **Pn** 11 40 08.3 +0.8
DELI KIRIKKALE 5.96 92 *i* P **Pn** 11 40 07.6 -0.3
RUDO Rudo 5.98 305 *e*Pn **Pn** 11 40 07.0 -1.0
BBLS Lazići 6.08 307 *e*Pn **Pn** 11 40 09.4 -0.1
BBLS Lazići 6.08 307 *e*Pn **Pn** 11 40 09.4 -0.1
BBLS Lazići 6.08 307 ⇓*i*Pn **Pn** 11 40 09.2 -0.3
UPM Unac-Piva 6.09 300 *e*Pn **Pn** 11 40 10.6 +1.0
UPM Unac-Piva 6.09 300 ⇑*i*Pn **Pn** 11 40 09.3 -0.3
UPM *i* Sn **Sn** 11 41 14.7 -4.6
HCY Herceg Novi 6.10 292 *e*Pn **Pn** 11 40 11.6 +1.9
HCY Herceg Novi 6.10 292 ⇑*i*Pn **Pn** 11 40 09.2 -0.5
HCY *i* Sn **Sn** 11 41 14.7 -4.7
TESR Tescani 6.10 3 ⇓P **Pn** 11 40 10.1 +0.5
TESR Tescani 6.10 3 **Pn** 11 40 10.1 +0.5
KIRS Kırehir-Merke 6.12 100 *i* P **Pn** 11 40 10.4 +0.4
KIRS *i* S **Sn** 11 41 14.3 -5.7
AKSY AKSARAY - Alti 6.14 104 *i* P **Pn** 11 40 11.3 +1.0
BZS Buzias 6.17 329 *e*Pn **Pn** 11 40 09.4 -1.1
BZS Buzias 6.17 329 *e*Pn **Pn** 11 40 09.4 -1.1
BZS Buzias 6.17 329 ⇓P **Pn** 11 40 09.6 -0.9
BZS Buzias 6.17 329 P **Pn** 11 40 09.6 -0.9
BZS Buzias 6.17 329 **Pn** 11 40 09.6 -0.9
BRY Bratogost 6.22 296 *e*Pn **Pn** 11 40 13.7 +2.3
BRY Bratogost 6.22 296 ⇓*i*Pn **Pn** 11 40 10.5 -0.9
BRY *i* Sn **Sn** 11 41 16.9 -5.6
LEOM Leova 6.24 13 ⇑P **Pn** 11 40 11.9 +0.3
LEOM Leova 6.24 13 P **Pn** 11 40 11.9 +0.3
LEOM Leova 6.24 13 **Pn** 11 40 11.9 +0.3
TREB Trebinje 6.29 294 *e*Pn **Pn** 11 40 12.8 +0.6
TREB Trebinje 6.29 294 *e*Pn **Pn** 11 40 12.7 +0.6
TREB Trebinje 6.29 294 *e*Pn **Pn** 11 40 14.4 +2.2
CDAG Cicekdag 6.36 95 *i* P **Pn** 11 40 13.5 +0.2
GAZI Gazipasa 6.40 129 *i* P **Pn** 11 40 12.8 -1.0
TEKS Tekeris 6.40 312 *e*Pn **Pn** 11 40 12.7 -1.1
DBRK Dubrovnik 6.41 293 *i* P **Pn** 11 40 15.8 +1.9
HAPS Han Pijesak,BI 6.48 307 *e*Pn **Pn** 11 40 13.8 -1.1
ERMK Ermenek 6.50 123 *i* P **Pn** 11 40 20.0 +4.6
BIZ Bicaz 6.52 360 ⇓P **Pn** 11 40 15.9 +0.5
BIZ Bicaz 6.52 360 **Pn** 11 40 15.9 +0.5
CJR Cluj-Napoca 6.56 344 ⇓P **Pn** 11 40 16.2 +0.2
CJR Cluj-Napoca 6.56 344 P **Pn** 11 40 16.2 +0.2
CJR Cluj-Napoca 6.56 344 **Pn** 11 40 16.2 +0.2
CTAK Corum_Osmancik 6.59 85 *i* P **Pn** 11 40 17.3 +0.8
FRGS Fruska Gora 6.65 318 *e*Pn **Pn** 11 40 16.2 -1.0
FRGS Fruska Gora 6.65 318 *e*Pn **Pn** 11 40 16.2 -1.0
FRGS Fruska Gora 6.65 318 ⇓*i*Pn **Pn** 11 40 15.7 -1.5
SIRR Siria 6.70 332 ⇑P **Pn** 11 40 17.1 -0.8
SIRR Siria 6.70 332 **Pn** 11 40 17.1 -0.8
COAL Corum-Alaca 6.75 89 *i* P **Pn** 11 40 19.3 +0.6
MILM Milestii Mici 6.78 16 ⇓P **Pn** 11 40 17.9 -1.0
MILM Milestii Mici 6.78 16 **Pn** 11 40 17.9 -1.0
STON Ston 6.79 294 *e*Pn **Pn** 11 40 21.1 +2.1
STON Ston 6.79 294 *e*Pn **Pn** 11 40 18.3 -0.7
STON Ston 6.79 294 *e*Pn **Pn** 11 40 21.1 +2.1
STON Ston 6.79 294 *i* P **Pn** 11 40 19.9 +0.8
ARCR ARCALIA 6.79 350 ⇓P **Pn** 11 40 19.7 +0.6
ARCR ARCALIA 6.79 350 **Pn** 11 40 19.7 +0.6
DRGR 6.84 340 ⇑P **Pn** 11 40 18.9 -1.0
DRGR 6.84 340 P **Pn** 11 40 18.9 -1.0
DRGR 6.84 340 **Pn** 11 40 18.9 -1.0
IAS Iasi 6.85 8 ⇓P **Pn** 11 40 20.3 +0.4
IAS Iasi 6.85 8 P **Pn** 11 40 20.3 +0.4
IAS Iasi 6.85 8 **Pn** 11 40 20.3 +0.4
KIS Kishinev 6.86 15 ⇓P **Pn** 11 40 23.1 +3.2
KIS Kishinev 6.86 15 P **Pn** 11 40 23.2 +3.2
KIS Kishinev 6.86 15 **Pn** 11 40 23.1 +3.2
KERG Konya-Eregli 6.90 113 *i* P **Pn** 11 40 21.4 +0.6
AVNS Nevsehir-Avano 6.91 101 *i* P **Pn** 11 40 21.2 +0.4
SEV Sevastopol' 6.92 51 *be*P **Pn** 11 40 18.3 -2.5
SEV *e*S **Sn** 11 41 33.2 -6.3
PRAR RASCA 6.94 0 ⇓P **Pn** 11 40 22.1 +0.9
PRAR RASCA 6.94 0 **Pn** 11 40 22.1 +0.9
SIRC Yozgat 7.00 96 *i* P **Pn** 11 40 23.2 +1.0
YAL Yalta 7.18 53 ⇑*e*P **Pn** 11 40 22.0 -2.4
YAL *e*S **Sn** 11 41 38.7 -7.2
GULN MERSIN_Gulnar 7.19 124 *i* P **Pn** 11 40 27.7 +3.1
BURAR Bucovina Array 7.23 355 ⇓P **Pn** 11 40 26.6 +1.4
BURAR Bucovina Array 7.23 355 **Pn** 11 40 26.6 +1.4
BUR08 Bucovina Ar. S 7.26 355 Pn **Pn** 11 40 26.9 +1.3
TIP Timpagrande 7.34 263 ⇑P **Pn** 11 40 25.4 -1.3
RICI Ricice 7.39 298 P **Pn** 11 40 28.4 +1.1
MAKA Makarska 7.39 296 *i* P **Pn** 11 40 28.6 +1.2
KIZK Mersin 7.40 120 *i* P **Pn** 11 40 30.6 +3.1
SIM Simferopol' 7.41 50 *c* P **Pn** 11 40 26.4 -1.2
SIM *e*S **Sn** 11 41 51.0 -0.7
SIM pmax pmax
comp=Z,92nm,0.9s
SIM smax smax
comp=N,381nm,0.9s
ALU Alushta 7.43 52 ⇓*i*P **Pn** 11 40 26.1 -1.8
ALU *e*S **Sn** 11 41 45

CEL	Celeste	8.23	258			Pn	11 40 40.3	+1.3
ZIRJ	Zirje	8.46	296	*i*	P	Pn	11 40 41.9	-0.1
MORI	Morici	8.49	297	*i*	P	Pn	11 40 42.7	+0.4
MOSL	Moslavina	8.62	310	*i*	P	Pn	11 40 43.6	-0.6
UZH	Uzhgorod	8.66	343	*e*	P	Pn	11 40 46.5	+1.8
UZH				*e*	S	Sn	11 42 23.6	+1.3
UZH					MLR	MLR		
	comp=N,610nm,12.0s							
UZH					MLR	MLR		
	comp=E,2µm,12.0s							
UZH					MLR	MLR		
	comp=Z,330nm,12.0s							
PSZ	Piszkesteto	8.74	331		P	Pn	11 40 44.9	-1.0
PSZ	Piszkesteto	8.74	331			Pn	11 40 44.9	-1.0
PAOL	Paolisi	8.82	278			Pn	11 40 46.9	-0.1
DUGI	Dugi Otok	8.97	297	*i*	P	Pn	11 40 49.2	+0.1
KALN	Kalnik	9.09	312	*i*	P	Pn	11 40 49.5	-1.1
GAZ	Gaziantep	9.22	107		Pn	Pn	11 40 53.2	+0.6
NVLJ	Novalja	9.30	300	*i*	P	Pn	11 40 53.4	-0.2
INTR	Introdacqua	9.37	284			Pn	11 40 53.8	-0.7
OZLJ	Ozalj	9.39	307	*i*	P	Pn	11 40 54.8	+0.1
ANN	Anapa	9.40	59	*e*	P	Pn	11 40 49.1	-5.8
ANN					pmax	pmax		
	comp=Z,40nm,1.3s							
BOJS	Bojanci	9.47	306	*e*	Pn	Pn	11 40 56.4	+0.6
BOJS				*e*			11 41 39.8	
BOJS				*e*			11 41 53.5	
BOJS				*e*	Sn	Sn	11 42 48.7	+6.5
BOJS				*e*			11 43 48.6	
	comp=Z,3µm,7.5s							
CRES	Cresnjev	9.50	308	*i*	Pn	Pn	11 40 55.4	-0.9
LVV	L'vov	9.52	352	*e*	P	Pn	11 40 54.1	-2.4
LVV				*e*	S	Sn	11 42 42.3	-1.1
LVV					pmax	pmax		
	comp=Z,130nm,1.5s							
LVV					MLR	MLR		
	comp=E,4µm,10.0s							
LVV					MLR	MLR		
	comp=N,2µm,11.0s							
LVV					MLR	MLR		
	comp=Z,2µm,11.0s							
VAE	Valguarnera	9.60	256		LR	LR	11 45 30.8	
	comp=Z,1µm,19.8s,baz=112,slow=43							
VYHS	Vyhne	9.62	330	*e*	P	Pn	11 40 56.9	-0.9
VYHS	Vyhne	9.62	330	*e*	PN	Pn	11 40 56.9	-0.9
AQU	L'Aquila	9.78	286	*e*	Pn	Pn	11 40 59.1	-1.0
AQU	L'Aquila	9.78	286		P	Pn	11 40 59.5	-0.6
AQU	L'Aquila	9.78	286			Pn	11 40 59.5	-0.6
RIY	Rijeka	9.87	304	*e*	Pn	Pn	11 41 02.3	+1.0
NRCA	Norcia	10.06	288			Pn	11 41 03.6	-0.4
CEY	Cerknica	10.09	306	*e*	Pn	Pn	11 41 04.6	+0.3
MODS	Modra-Piesok	10.17	324	*e*	P	Pn	11 41 05.4	-0.1
MODS	Modra-Piesok	10.17	324	*e*	PN	Pn	11 41 05.4	-0.1
SOKA	Soboth	10.21	311	*i*	P	Pn	11 41 06.5	+0.5
	comp=Z,5.7nm,0.9s							
ARSA	Arzberg	10.27	315	*i*	P	Pn	11 41 07.0	+0.2
	comp=Z,5.8nm,0.5s,SNR=8.3							
JAVC	Velka Javorina	10.37	327	*e*	PN	Pn	11 41 08.8	+0.5
OBKA	Obir	10.40	310	*e*	P	Pn	11 41 08.3	-0.3
	comp=Z,6.5nm,1.1s							
MMA0B	Mount Meron ar	10.47	132		Pn	Pn	11 41 07.8	-1.9
MMAI	Mount Meron Ar	10.47	132		Pn	Pn	11 41 08.8	-0.9
	comp=Z,4.8nm,0.3s,baz=317,slow=12,SNR=8.6							
MMAI					LR	LR	11 46 01.8	
	comp=Z,920nm,20.2s,baz=280,slow=42							
MMAI	Mount Meron Ar	10.47	132			Pn	11 41 08.8	-0.9
GEM	Giv'at Ha'Em	10.48	130		Pn	Pn	11 41 08.9	-0.8
NATI	Neve Ativ	10.48	130		Pn	Pn	11 41 09.1	-0.6
KSDI	Kefar Szold	10.49	130		Pn	Pn	11 41 10.3	+0.5
AKASG	Malin Array Be	10.51	11		Pn	Pn	11 41 08.4	-1.6
	comp=Z,2.0nm,0.3s,baz=198,slow=12,SNR=8.2							
AKASG					Sn	Sn	11 43 03.0	-4.6
	comp=Z,4.5nm,0.3s,baz=199,slow=21,SNR=2.2							
AKASG					Lg	Lg	11 44 10.2	
	baz=190,slow=29,SNR=1.7							
AKASG					LR	LR	11 45 57.3	
	comp=Z,600nm,21.4s,baz=200,slow=42							
AKASG	Malin Array Be	10.51	11	*i*	P	Pn	11 41 08.3	-1.7
AKASG					pmax	pmax		
	comp=Z,2.0nm,0.4s							
AKASG	Malin Array Be	10.51	11			Pn	11 41 08.4	-1.6
AKASG						Sn	11 43 03.0	-4.6
AKBB	Malin Array Si	10.51	11		P	Pn	11 41 10.1	+0.1
AKBB	Malin Array Si	10.51	11		Pn	Pn	11 41 10.1	+0.1
CONA	Conrad Observa	10.53	319	*i*	P	Pn	11 41 10.1	-0.3
	comp=Z,12nm,0.8s,SNR=12							
SOC	Sochi	10.58	68	*e*	P	Pn	11 41 09.3	-1.8
SOC				*e*			11 43 10.0	
SOC					pmax	pmax		
	comp=Z,6.0nm,0.4s							
SOC					MLR	MLR		
	comp=Z,601nm,12.0s							
OJC	Ojcow	10.77	338		P	Pn	11 41 12.3	-1.3
OJC	Ojcow	10.77	338			Pn	11 41 12.3	-1.3
MMLI	Mount Malkishu	10.91	134		Pn	Pn	11 41 15.8	+0.1
OKC	Ostrava-Krasne	10.98	332		AMS	AMS	11 45 50.0	
	comp=Z,2µm,10.8s							
MYKA	Terra Mystica	11.00	309	*i*	P	Pn	11 41 17.2	+0.4
	comp=Z,4.0nm,0.7s							
KRUC	Moravsky	11.07	325	*e*	PN	Pn	11 41 17.1	-0.7
HMDT	Nahal Hemdat	11.11	134		Pn	Pn	11 41 17.9	-0.4
MORC	Moravsky Berou	11.15	330	*e*	PN	Pn	11 41 18.5	-0.4
MORC	Moravsky Berou	11.15	330		P	Pn	11 41 18.3	-0.6
MORC	Moravsky Berou	11.15	330			Pn	11 41 18.3	-0.6
VRAC	Vranov	11.17	326		Pn	Pn	11 41 19.2	+0.1
	comp=Z,0.4nm,0.3s,baz=138,slow=13,SNR=8.3							
VRAC					LR	LR	11 46 00.6	
	comp=Z,791nm,19.1s,baz=132,slow=40							
VRAC	Vranov	11.17	326	*e*	PN	Pn	11 41 19.0	-0.1
VRAC	Vranov	11.17	326		P	Pn	11 41 19.2	+0.1
VRAC	Vranov	11.17	326			Pn	11 41 19.2	+0.1
STAL	STALIGIAL	11.39	305			Pn	11 41 23.4	+1.2
OSSC	Osservatorio P	11.52	291			Pn	11 41 24.1	+0.1
KZIT	Kziot	11.61	142		Pn	Pn	11 41 24.2	-1.1
TREC	Trest	11.65	323		AMS	AMS	11 46 20.0	
	comp=Z,2µm,12.5s							
KRLC	Kraliky	11.69	329	*e*	P	Pn	11 41 26.5	+0.3
KRLC					MLR	MLR		
	comp=Z,1µm,11.4s							
KRLC	Kraliky	11.69	329	*e*	PN	Pn	11 41 26.5	+0.3
KRLC					AMS	AMS	11 46 10.0	
	comp=Z,1µm,11.4s							
ABTA	Abfaltersbach	11.73	307	*i*	P	Pn	11 41 27.8	+0.9
	comp=Z,3.1nm,0.5s							
ZCCA	Zocca	11.89	294			Pn	11 41 29.9	+0.9
ASF	Jabal al Asfar	11.94	130		Pn	Pn	11 41 29.5	-0.3
	comp=Z,0.2nm,0.3s,baz=252,slow=13,SNR=3.5							
ASF	Jabal al Asfar	11.94	130		P	Pn	11 41 29.5	-0.3
ASF	Jabal al Asfar	11.94	130			Pn	11 41 29.5	-0.3
CTI	Castel Tesino	11.97	303		P	Pn	11 41 28.9	-1.3
CTI	Castel Tesino	11.97	303			Pn	11 41 28.9	-1.3
DPC	Dobruska-Polom	12.09	329	*e*	P	P	11 41 38.4	-6.2
DPC					MLR	MLR		
	comp=Z,2µm,10.3s							
DPC	Dobruska-Polom	12.09	329	*e*	PN	P	11 41 38.4	-6.2
DPC					AMS	AMS	11 47 00.0	
	comp=Z,2µm,10.3s							
GERES	GERESS Array B	12.22	318		Pn	Pn	11 41 34.1	+0.6
	comp=Z,0.2nm,0.3s,baz=126,slow=14,SNR=11							
GERES					LR	LR	11 46 06.7	
	comp=Z,890nm,21.7s,baz=132,slow=37							
GERES	GERESS Array B	12.22	318		P	Pn	11 41 34.2	+0.6
GERES	GERESS Array B	12.22	318			Pn	11 41 34.1	+0.6
VLC	Villacollemand	12.26	293			Pn	11 41 32.7	-1.4
OSTC	Ostas	12.29	329	*e*	PN	Pn	11 41 36.8	+2.3
OSTC					AMS	AMS	11 47 10.0	
	comp=Z,2µm,9.7s							
UPC	Upice	12.33	328		AMS	AMS	11 47 10.0	
	comp=Z,1µm,10.7s							
PRNI	Paran	12.36	142		Pn	Pn	11 41 34.0	-1.5
CHVC	Chvalec	12.38	329	*e*	PN	Pn	11 41 36.3	+0.6
CHVC					AMS	AMS	11 47 10.0	
	comp=Z,1µm,10.4s							
PRMA	PARMA	12.45	296			Pn	11 41 36.2	-0.4
KHC	Kasperske Hory	12.46	319	*e*	P	Pn	11 41 35.0	-1.8
KHC	Kasperske Hory	12.46	319	*e*	PN	Pn	11 41 35.0	-1.8
WTTA	Wattenberg	12.51	308	*i*	P	Pn	11 41 40.8	+3.3
	comp=Z,10nm,0.6s,SNR=8.4							
SALO	Salr	12.56	300			Pn	11 41 36.2	-1.9
WATA	Walderalm	12.57	308	*i*	P	Pn	11 41 41.7	+3.3
	comp=Z,7.3nm,0.5s							
PRU	Pruhonice	12.58	323		AMS	AMS	11 46 50.0	
	comp=Z,2µm,12.6s							
HRFI	Mount Harif	12.64	142		Pn	Pn	11 41 38.1	-1.2
NEY	Neytrino	12.68	72	*i*	P	Pn	11 41 39.4	-0.6
PRA	Prague	12.69	323		AMS	AMS	11 47 00.0	
	comp=Z,900nm,12.1s							
SQTA	Sankt Quirin	12.74	307	*i*	P	Pn	11 41 43.6	+2.9
	comp=Z,5.3nm,0.6s,SNR=6.2							
KIV	Kislovodsk	12.76	69	*e*	P	Pn	11 41 39.6	-1.4
KIV					pmax	pmax		
	comp=Z,1.0nm,0.2s							
KIV					MLR	MLR		
	comp=Z,183nm,16.0s							
KVAR	Kislovodsk Arr	12.77	69		Pn	Pn	11 41 40.9	-0.2
	baz=261,slow=19,SNR=1.4							
KVAR					Sn	Sn	11 43 54.0	-9.3
	baz=273,slow=19,SNR=3.9							
KVAR	Kislovodsk Arr	12.77	69			Pn	11 41 40.9	-0.2
KVAR						Sn	11 43 54.0	-9.3
MOTA	Moosalm	12.86	308	*i*	P	Pn	11 41 45.6	+3.2
	comp=Z,8.8nm,0.6s,SNR=8.6							
KBZ	Khabaz	12.88	70		Pn	Pn	11 41 46.0	+3.6
	comp=Z,0.2nm,0.3s,baz=228,slow=4.0,SNR=3.6							
KBZ					Sn	Sn	11 44 00.1	-5.5
	comp=Z,0.3nm,0.3s,baz=88,slow=21,SNR=1.5							
KBZ	Khabaz	12.88	70		P	Pn	11 41 46.0	+3.6
KBZ	Khabaz	12.88	70			Pn	11 41 46.0	+3.6
KBZ						Sn	11 44 00.1	-5.5
VSL	Villasalto	12.90	271		Pn	Pn	11 41 42.0	-0.9
FETA	Feichten	12.95	306	*i*	P	Pn	11 41 46.1	+2.5
	comp=Z,5.0nm,0.7s							
PVCC	Panska Ves	12.96	325		AMS	AMS	11 47 10.0	
	comp=Z,1µm,12.4s							
FUORN	Ofenpass-Fuorn	13.08	304			Pn	11 41 43.5	-2.0
RETA	Reutte	13.13	308	*i*	P	Pn	11 41 51.0	+4.9
	comp=Z,2.8nm,0.6s							
GOF	Gofitskoye	13.25	64	*e*	P	P	11 42 01.2	+3.7
GOF				*e*	S	Sn	11 44 21.0	+6.2
GOF					pmax	pmax		
	comp=Z,32nm,0.6s							
GOF					smax	smax		
	comp=N,153nm,1.0s							
DAVOX	Davos/Dischmat	13.39	304		Pn	Pn	11 41 50.6	+1.0
	comp=N,0.7nm,0.3s,baz=150,slow=11,SNR=9.2							
DAVOX					LR	LR	11 48 21.4	
	comp=N,552nm,19.6s,baz=84,slow=44							
DAVOX	Davos/Dischmat	13.39	304		P	Pn	11 41 50.6	+1.0
DAVOX	Davos/Dischmat	13.39	304			Pn	11 41 50.6	+1.0
BRG	Berggiesshubel	13.48	325	*e*	P	P	11 42 06.3	+6.3
	comp=N,21nm,1.8s							
BRG					S	S	11 44 43.0	-1.0
	comp=N,3µm,14.7s							
	comp=E,2µm,15.2s							
	comp=Z,1µm,18.4s							
BRG	Berggiesshubel	13.48	325	*e*	P	P	11 42 06.3	+6.3
BRG					pmax	pmax		
	comp=Z,21nm,1.8s							
BRG					MLR	MLR		
	comp=N,3µm,14.7s							
BRG					MLR	MLR		
	comp=E,2µm,15.2s							
BRG					MLR	MLR		
	comp=Z,1µm,18.4s							
ZEI	Tsey	13.50	74	*e*	P	Pn	11 41 54.7	+3.6
ZEI					pmax	pmax		
	comp=Z,5.0nm,0.4s							
DAVA	Damuels	13.59	306	*i*	P	Pn	11 41 56.2	+3.9
	comp=Z,6.9nm,0.8s							
NKC	Novy Kostel	13.73	320		AMS	AMS	11 46 30.0	
	comp=Z,1µm,17.4s							
SUW	Suwalki	13.75	353		P	Pn	11 41 53.2	-1.1
SUW	Suwalki	13.75	353		Pn	Pn	11 41 53.1	-1.1
GRF	Grafenberg Arr	14.03	316	*e*	Pn	Pn	11 41 56.2	-1.9
KEST	Kesra	14.04	256		Pn	P	11 42 03.1	-3.2
	comp=Z,0.3nm,0.3s,baz=349,slow=6.4,SNR=6.4							
KEST					LR	LR	11 48 17.3	
	comp=Z,415nm,19.4s,baz=359,slow=41							
KEST	Kesra	14.04	256		P	P	11 42 03.1	-3.2
VSR	Storozhevoye	14.08	36	*e*	P	Pn	11 41 55.6	-3.3
VSR					pmax	pmax		
	comp=Z,10.0nm,0.5s							
VSR					MLR	MLR		
	comp=Z,900nm,13.0s							
MICGM	Minsk	14.14	4	*e*	P	P	11 42 10.0	+2.7
MICGM				*e*	LQ	LQ	11 46 10.0	
MICGM					LQM		11 47 06.0	
	comp=E,6.2nm,14.0s							
MICGM				*e*	LR	LR	11 47 34.0	
MICGM				*e*	S	S	11 45 00.0	+2.5
MNK	Minsk	14.14	4	*e*	P	P	11 42 10.0	+2.7
CLL	Collm	14.21	324	*e*	PP	P	11 42 08.0	0.0
CLL				*i*			11 42 13.3	
CLL				*i*			11 42 22.9	
CLL				*e*	S	Sn	11 44 36.0	-2.0
CLL					Lmax		11 48 00.0	
CLL					LmV		11 56 00.0	
	comp=Z,200nm,22.0s							
CLL	Collm	14.21	324		P	Pn	11 42 00.1	-0.4
CLL	Collm	14.21	324			Pn	11 42 00.1	-0.4
VORR	Voronezh	14.43	34		P	P	11 42 07.0	-3.5
VORR					pmax	pmax		
	comp=Z,250nm,1.0s							
NACGM	Naroch	14.50	1	*e*	P	P	11 42 10.0	-1.3
NACGM				*e*	S	Sn	11 44 49.0	+3.8
NACGM				*e*	SS	S	11 45 09.0	+4.1
NACGM				*e*	LQ	LQ	11 45 32.0	
NACGM				*e*	LR	LR	11 46 40.0	
NACGM					LRM	MLR	11 47 28.0	
	comp=Z,5.6nm,12.0s							
SENIN	Lac Senin/Sane	14.93	300			Pn	11 42 09.3	-1.3
IIGN	Ignalina	14.94	0	*e*	P	Pn	11 42 10.1	-0.5
IIGN					IAmb	IAmb	11 42 19.3	
	comp=Z,9.9nm,0.8s							
BFO	Black Forest	14.98	308		P	Pn	11 42 13.0	+1.9
BFO	Black Forest	14.98	308		P	Pn	11 42 13.0	+1.9
LPSR	Galich'ya Gora	15.00	31	*e*	P	Pn	11 42 07.9	-3.4
LPSR					pmax	pmax		
	comp=Z,40nm,1.6s							
LPSR					MLR	MLR		
	comp=Z,480nm,11.0s							
BNI	Bardonecchia	15.03	294		P	Pn	11 42 11.4	-0.6
BNI					pmax	pmax		
	comp=Z,14nm,1.0s							
BNI	Bardonecchia	15.03	294			Pn	11 42 11.4	-0.6
BNI					IAmb	IAmb	11 42 27.3	
	comp=Z,14nm,1.0s							
ISAL	Salakas	15.16	360	*e*	P	Pn	11 42 10.0	-3.6
ISAL					IAmb	IAmb	11 42 20.4	
	comp=Z,19nm,1.1s							
PABE	Paberze	15.17	355	*e*	P	Pn	11 42 10.9	-2.6
PABE					IAmb	IAmb	11 42 23.4	
	comp=Z,92nm,1.1s							
VRH	Novokhopyorsk	15.27	40	*e*	P	Pn	11 42 10.7	-4.2
VRH					pmax	pmax		
	comp=Z,30nm,0.8s							
VRH					MLR	MLR		
	comp=Z,740nm,14.0s							
ECH	Echery	15.64	306		P	Pn	11 42 21.2	+1.3
ECH					pmax	pmax		
	comp=Z,5.0nm,0.9s							
ECH	Echery	15.64	306		P	Pn	11 42 21.2	+1.3
MAK	Makhachkala	16.15	74	*e*	P	Pn	11 42 24.2	-2.2
MAK				*e*	S	Sn	11 45 23.9	-1.5
MAK					pmax	pmax		
	comp=Z,51nm,0.5s							
MAK					MLR	MLR		
	comp=Z,744nm,14.0s							
OBN	Obninsk	16.26	22		Pn	Pn	11 42 22.8	-4.9
	comp=Z,0.8nm,0.3s,baz=315,slow=11,SNR=3.7							
OBN					LR	LR	11 48 52.0	
	comp=Z,242nm,18.9s,baz=200,slow=38							
OBN	Obninsk	16.26	22	*e*	P	Pn	11 42 26.8	-0.9
OBN					pmax	pmax		
	comp=Z,71nm,2.5s							
OBN					MLR	MLR		
	comp=Z,938nm,19.0s							
OBN	Obninsk	16.26	22		Pn	Pn	11 42 23.6	-4.1
OBN					IAmb	IAmb	11 42 33.4	
	comp=Z,32nm,1.1s							
MOS	Moscow	17.10	22	*e*	P	Pn	11 42 37.8	-0.6
MOS				*e*			11 45 42.2	
MOS					pmax	pmax		
	comp=Z,54nm,1.0s							
MOS					MLR	MLR		
	comp=Z,700nm,15.0s							
MEM	Membach	17.36	313		PnPn	PnPn	11 42 52.6	+1.0
BMRD	Maredsous	17.93	311		PnPn	PnPn	11 43 00.8	+1.3
VSU	Vasula	18.07	1	*e*	P	Pn	11 42 46.8	-3.6
VSU					IAmb	IAmb	11 42 59.2	
	comp=Z,104nm,0.8s							
VSU	Vasula	18.07	1	*i*	P	Pn	11 42 49.8	-0.5
VSU					pmax	pmax		
	comp=Z,70nm,0.8s							
FINES	FINESS Array B	21.05	360		P	P	11 43 25.2	+1.9
	comp=Z,4.4nm,0.8s,baz=158,slow=11,SNR=15							
FINES					LR	LR	11 52 00.3	
	comp=Z,1µm,19.4s,baz=176,slow=38							
FINES	FINESS Array B	21.05	360		P	P	11 43 25.2	+1.9
FINES	FINESS Array B	21.05	360		P	P	11 43 25.2	+1.9
KLMR	Klimovskoe	22.06	18	*e*	P	P	11 43 31.9	-2.2
KLMR				*e*	S	S	11 47 35.2	-1.9
KLMR					pmax	pmax		
	comp=Z,56nm,1.5s							
KLMR	Klimovskoe	22.06	18	*e*	P	P	11 43 31.9	-2.2
KLMR					AMP		11 43 47.4	
	comp=Z,56nm,1.5s							
KLMR				*e*	S	S	11 47 35.2	-1.9
KLMR				*e*	S	S	11 47 35.2	-1.9
KLMR					LQ	LQ	11 49 58.2	
KLMR					LQ	LQ	11 49 58.2	
KLMR					LR	LR	11 51 10.3	
NC602	NORSAR Array S	22.26	341		P	P	11 43 34.6	-1.7
NAO01	NORSAR Array S	22.52	340		P	P	11 43 37.3	-1.7
NB2	NORSAR Subarra	22.60	341		P	P	11 43 38.3	-1.6
	comp=Z,49nm,1.4s,baz=153,slow=10							
NOA	NORSAR Array B	22.60	341		P	P	11 43 38.4	-1.6
	comp=Z,3.6nm,0.7s,baz=147,slow=11,SNR=8.4							
NOA					LR	LR	11 53 20.8	
	comp=Z,612nm,18.7s,baz=145,slow=39							
NOA	NORSAR Array B	22.60	341		P	P	11 43 38.4	-1.6
NBO00	NORSAR Array S	22.70	340		P	P	11 43 40.3	-0.7
ESDC	Sonseca Array	23.02	278		P	P	11 43 45.0	+0.5
	comp=Z,3.3nm,0.9s,baz=71,slow=9.2,SNR=16							
ESDC					LR	LR	11 54 17.2	
	comp=Z,294nm,18.1s,baz=65,slow=41							
ESDC	Sonseca Array	23.02	278		P	P	11 43 45.0	+0.5
KIRV	Kirov	23.43	31		P	P	11 43 52.6	+4.2
	comp=Z,9.4nm,0.7s,baz=240,slow=9.6,SNR=9.1							
KIRV					LR	LR	11 52 26.7	
	comp=Z,510nm,21.9s,baz=231,slow=35							
KIRV	Kirov	23.43	31		P	P	11 43 52.6	+4.2
KIRV	Kirov	23.43	31		P	P	11 43 52.6	+4.2
RAYN	Ar Rayn	23.44	130		P	P	11 43 48.9	0.0
RAYN					pmax	pmax		
	comp=Z,11nm,1.0s							
RAYN	Ar Rayn	23.44	130		P	P	11 43 48.9	0.0
RAYN					IAmb	IAmb	11 44 05.3	
	comp=Z,11nm,1.0s							
AKTO	Aktyubinsk	24.33	55		P	P	11 43 57.1	-0.1
	comp=Z,1.1nm,0.4s,baz=248,slow=10,SNR=5.4							
AKTO					LR	LR	11 57 39.9	
	comp=Z,209nm,18.0s,baz=253,slow=47							
AKTO	Aktyubinsk	24.33	55		P	P	11 43 57.1	-0.1
AKTO	Aktyubinsk	24.33	55		P	P	11 43 57.1	-0.1
EKA	Eskdalemuir Ar	24.44	317		P	P	11 43 56.9	-1.2
	comp=Z,3.6nm,0.8s,baz=110,slow=9.9,SNR=11							
EKA	Eskdalemuir Ar	24.44	317		P	P	11 43 56.9	-1.2
EKA	Eskdalemuir Ar	24.44	317		P	P	11 43 56.9	-1.2
TMCR	Tamitsa	24.79	12	*e*	P	P	11 44 04.4	+3.3
TMCR					pmax	pmax		
	comp=Z,10.0nm,0.5s							
GEYT	Alibeck	24.84	85		P	P	11 44 02.8	+0.9
	comp=Z,3.4nm,0.6s,baz=278,slow=10.0,SNR=6.7							
GEYT					LR	LR	11 56 09.3	
	comp=Z,484nm,20.1s,baz=225,slow=42							
GEYT	Alibeck	24.84	85		P	P	11 44 02.8	+0.9
GYA0B	ALIBECK ARRAY	24.84	85		P	P	11 44 03.2	+1.3
GYA0B					IAmb	IAmb	11 44 10.9	
	comp=Z,26nm,1.1s							
MDT	Midelt	25.73	263		P	P	11 44 15.8	+5.7
	comp=Z,5.8nm,1.0s,baz=68,slow=10,SNR=6.7							
MDT					LR	LR	11 56 04.3	
	comp=Z,206nm,18.1s,baz=64,slow=41							
MDT	Midelt	25.73	263		P	P	11 44 15.8	+5.7
ARU	Arti	25.48	42		P	P	11 44 17.8	+1.2
	comp=Z,1.9nm,0.3s,baz=243,slow=7.9,SNR=14							
ARU					LR	LR	11 55 46.6	
	comp=Z,641nm,18.7s,baz=228,slow=39							
ARU	Arti	26.48	42	*d*	P	P	11 44 16.4	-0.2
ARU							11 44 57.4	
ARU					S	S	11 48 52.0	+1.8
ARU					SS	SnSn	11 49 51.0	-0.3
ARU					pmax	pmax		
	comp=Z,15nm,0.8s							
ARU					MLR	MLR		
	comp=Z,594nm,15.0s							
ARU	Arti	26.48	42		P	P	11 44 17.4	+0.8
HRA	Herat	29.16	90			P	11 44 41.8	+0.9
HRA					IAmb	IAmb	11 44 48.6	
	comp=Z,16nm,1.4s							
ARCES	ARCESS Array B	29.18	360		P	P	11 44 42.8	+2.2
	comp=Z,2.9nm,0.7s,baz=191,slow=5.8,SNR=7.2							
ARCES					LR	LR	11 56 52.1	
	comp=Z,899nm,20.2s,baz=172,slow=38							
ARCES	ARCESS Array B	29.18	360		P	P	11 44 42.8	+2.2
ARCES	ARCESS Array B	29.18	360		P	P	11 44 42.8	+2.2
BRVK	Borovoye	32.26	52	*i*	P	P	11 45 06.7	-1.2
BVAR	Borovoye Array	32.32	52		P	P	11 45 08.2	-0.2
	comp=Z,0.4nm,0.3s,baz=244,slow=13,SNR=2.0							
BVAR	Borovoye Array	32.32	52		P	P	11 45 08.

ZAA0 Zalesovo Array 40.92 50 P P 11 46 22.2 +0.5
ZAA0 IAmb IAmb 11 46 33.1
comp=Z,6.5nm,0.9s
ZALV Zalesovo Beam 40.92 50 P P 11 46 21.6 -0.1
comp=Z,1.8nm,0.5s,baz=273,slow=9.0,SNR=8.2
ZALV LR LR 12 05 32.8
comp=Z,236nm,20.2s,baz=266,slow=39
ZALV Zalesovo Beam 40.92 50 P P 11 46 21.6 -0.1
ZALV Zalesovo Beam 40.92 50 P P 11 46 21.6 -0.1
KMBO Kiiima Mbogo 42.57 163 LR LR 12 08 11.5
comp=Z,98nm,18.1s,baz=280,slow=42
DBIC Dimbokro 43.57 228 P P 11 46 43.7 +0.1
comp=Z,1.8nm,0.8s,baz=338,slow=11,SNR=1.5
DBIC LR LR 12 08 03.4
comp=Z,155nm,18.7s,baz=16,slow=40
DBIC Dimbokro 43.57 228 P P 11 46 43.7 +0.1
DBIC pmax pmax
comp=Z,12nm,1.2s
DBIC Dimbokro 43.57 228 P P 11 46 43.7 +0.1
DBIC Dimbokro 43.57 228 IAmb IAmb 11 46 51.5
comp=Z,12nm,1.1s
WMQ Urumqi 44.85 64 *e*P **P 11 46 55.5 +1.7**
WMQ LR LR
comp=N,340nm,8.3s
WMQ LR LR
comp=E,39nm,5.7s
WMQ LR LR
comp=Z,130nm,29.5s
ZAK Zakamensk 52.77 52 *e*P **P 11 47 55.8 +1.3**
ZAK pmax pmax
comp=Z,3.0nm,1.1s
GTA Gaotai 54.92 65 *e*P P 11 47 58.8 -12
GTA pP pP 11 48 02.3 -12
GTA sP sP 11 48 04.8 -10
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,91nm,5.8s
GTA LR LR
comp=N,130nm,22.5s
GTA LR LR
comp=E,160nm,19.0s
GTA LR LR
comp=Z,140nm,21.6s
SONM Songino Array 55.64 54 P **P 11 48 15.3 -0.2**
comp=Z,0.4nm,0.7s,baz=292,slow=7.8,SNR=3.9
SONM LR LR 12 15 55.0
comp=Z,219nm,18.6s,baz=295,slow=40
SONM Songino Array 55.64 54 P P 11 48 15.3 -0.2
SONM Songino Array 55.64 54 P P 11 48 15.3 -0.2
TIXI Tiksi 55.99 22 *e*P **P 11 48 18.5 +1.0**
TIXI pmax pmax
comp=Z,1.0nm,1.0s
LZH Lanzhou 59.30 67 *e*P **P 11 48 41.5 -0.1**
LZH pP pP 11 48 45.0 -0.1
LZH sP sP 11 48 46.5 +0.1
LZH *e*PP **PP 11 50 54.3 +2.0**
LZH pmax pmax
comp=Z,20nm,1.3s
LZH pmax pmax
comp=Z,67nm,5.5s
LZH LR LR
comp=N,150nm,15.1s
LZH LR LR
comp=E,150nm,14.8s
LZH LR LR
comp=Z,220nm,17.3s
SCHQ Schefferville 59.75 318 LR LR 12 14 46.3
comp=Z,196nm,18.4s,baz=76,slow=36
HHC Hu-ho-hao-te 62.15 59 *e*P **P 11 49 02.5 +1.6**
HHC sP sP 11 49 16.3 +11
HHC S **S 11 57 23.0 -3.1**
HHC pmax pmax
comp=Z,10.0nm,0.9s
HHC pmax pmax
comp=Z,58nm,6.2s
HHC LR LR
comp=N,120nm,17.1s
HHC LR LR
comp=E,170nm,14.9s
HHC LR LR
comp=Z,110nm,13.2s
CMAR Chiang Mai Arr 65.32 86 P **P 11 49 22.5 +0.6**
comp=Z,0.4nm,0.4s,baz=297,slow=4.0,SNR=1.7
CMAR LR LR 12 23 14.6
comp=Z,110nm,19.4s,baz=338,slow=41
CMAR Chiang Mai Arr 65.32 86 P P 11 49 22.5 +0.6
CMAR Chiang Mai Arr 65.32 86 P P 11 49 22.5 +0.6
BILL Bilibino 67.79 15 *e*P **P 11 49 35.7 -1.2**
BILL pmax pmax
comp=Z,2.0nm,1.1s
BOSA Boshof 68.68 181 LR LR 12 23 18.6
comp=Z,121nm,18.3s,baz=358,slow=39
KLR Kul'dur 69.32 42 *e*P **P 11 49 46.7 -0.1**
KLR pmax pmax
comp=Z,2.0nm,0.9s
INK Inuvik 70.53 352 P **P 11 49 55.0 +1.2**
comp=Z,0.9nm,0.6s,baz=86,slow=2.1,SNR=3.3
INK Inuvik 70.53 352 P P 11 49 55.1 +1.2
INK Inuvik 70.53 352 P P 11 49 55.7 +1.9
INK IAmb IAmb 11 49 57.7
comp=Z,3.3nm,1.1s
NJ2 Nanjing 71.91 63 *e*P **P 11 50 01.8 -1.1**
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
YKA Yellowknife Ar 72.69 342 P **P 11 50 07.0 0.0**
comp=Z,0.9nm,1.1s,baz=26,slow=5.5,SNR=4.0
YKA LR LR 12 22 06.6
comp=Z,171nm,19.0s,baz=0.0,slow=36
YKA Yellowknife Ar 72.69 342 P P 11 50 07.0 0.0
YKA Yellowknife Ar 72.69 342 P P 11 50 07.0 0.0
KSRS Korea Array 74.51 54 P **P 11 50 17.5 -0.6**
comp=Z,1.0nm,0.6s,baz=298,slow=3.6,SNR=4.0
KSRS LR LR 12 28 07.7
comp=Z,123nm,18.4s,baz=306,slow=40
KSRS Korea Array 74.51 54 P P 11 50 17.5 -0.6
KSRS Korea Array 74.51 54 P P 11 50 17.5 -0.6
ILAR Eielson Array 75.01 357 P **P 11 50 22.5 +1.9**
comp=Z,0.2nm,0.5s,baz=316,slow=2.5,SNR=3.2
ILAR LR LR 12 23 06.0
comp=Z,58nm,21.6s,baz=26,slow=36
ILAR Eielson Array 75.01 357 P P 11 50 22.5 +1.9
ILAR Eielson Array 75.01 357 P P 11 50 22.5 +1.9
ULM Lac du Bonnet 76.39 326 P **P 11 50 29.3 +0.6**
comp=Z,3.1nm,0.6s,baz=27,slow=4.5,SNR=1.7
ULM LR LR 12 25 05.9
comp=Z,147nm,18.3s,baz=28,slow=36
ULM Lac du Bonnet 76.39 326 P **P 11 50 29.3 +0.6**
ULM pmax pmax
comp=Z,6.0nm,1.0s
ULM Lac du Bonnet 76.39 326 P P 11 50 29.3 +0.6
ULM Lac du Bonnet 76.39 326 IAmb IAmb 11 50 40.2
comp=Z,5.6nm,0.9s
PETK Petropavlovsk- 77.88 27 LR LR 12 28 01.2
comp=Z,164nm,18.9s,baz=256,slow=38
SKI Saint Kitts 78.15 283 P **P 11 50 40.0 +0.9**
SKI pmax pmax
comp=Z,74nm,0.8s
SKI Saint Kitts 78.15 283 P P 11 50 40.0 +0.9
MJAR Matsushiro Arr 81.26 49 P **P 11 50 55.5 -0.3**
comp=Z,0.7nm,0.8s,baz=311,slow=4.7,SNR=2.8
MJAR Matsushiro Arr 81.26 49 P P 11 50 55.5 -0.3
MJAR Matsushiro Arr 81.26 49 P P 11 50 55.5 -0.3
PMBI Palembang 83.24 100 P P 11 51 05.0 -1.4
LRAL Lakeview Retre 84.36 309 P P 11 51 12.9 +1.0
PDAR Pinedale Array 88.02 329 LR LR 12 32 38.6
comp=Z,120nm,19.5s,baz=34,slow=37
BDFB Brasília 88.41 248 LR LR 12 33 26.1
comp=Z,106nm,18.2s,baz=81,slow=37
NVAR Mina Array Bea 95.06 333 P **P 11 52 04.8 +2.0**
comp=Z,0.1nm,0.6s,baz=26,slow=6.4,SNR=1.3
NVAR LR LR 12 38 16.4
comp=Z,112nm,19.3s,baz=9.0,slow=38
NVAR Mina Array Bea 95.06 333 P P 11 52 04.8 +2.0
TXAR Lajitas Array 96.44 318 P **P 11 52 08.6 -0.5**
comp=Z,0.3nm,0.9s,baz=352,slow=5.5,SNR=2.5
TXAR LR LR 12 37 25.7
comp=Z,129nm,18.7s,baz=0.0,slow=37
TXAR Lajitas Array 96.44 318 P P 11 52 08.6 -0.5
TXAR Lajitas Array 96.44 318 P P 11 52 08.6 -0.5
ASAR Alice Springs 118.11 98 PKP **PKPdf 11 57 26.3 -0.5**
comp=Z,0.5nm,1.0s,baz=298,slow=2.0,SNR=2.4
ASAR Alice Springs 118.11 98 PKIKP **PKPdf 11 57 26.3 -0.5**
ASAR Alice Springs 118.11 98 PKPdf 11 57 26.3 -0.5

BEO ***25*** *11:47:49.9±0.6, 40.°34N×26.°82E, h0km, ML4.6/10*
SOF ***25*** *11:47:53.7, 40.°40N×26.°12E, h3km, MD4.2*
BJI ***25*** *11:47:54.0±0.0, 40.°40N×26.°10E, h5km, mB4.8/7, mb4.7/8, Ms4.6/4, Ms7 4.2/4*
DDA ***25*** *11:47:54.5, 40.°44N×26.°04E, h29km, MW4.5*
ATH ***25*** *11:47:55.6, 40.°44N×26.°10E, h31km±1km, ML4.0/27, Error ellipse: s-maj=1.8km s-min=0.7km az=56.0*
IDC ***25*** *11:47:55.9±0.8, 40.°42N×26.°27E, h0km, mb3.7/14, mb1 3.9/23, mb1mx3.8/51, mbtmp3.7/23, ML3.7/9, MS3.2/2, Ms1 3.2/2, ms1mx2.9/48, Error ellipse: s-maj=14.4km s-min=10.8km az=31.0*
MOS ***25*** *11:47:55.3±1.2, 40.°38N×26.°14E, h16km, mb4.3/7, Error ellipse: s-maj=5.5km s-min=3.7km az=89.1*
ISK ***25*** *11:47:55.5, 40.°41N×26.°09E, h7km, ML4.5/50*
PDG ***25*** *11:47:55.5±0.5, 40.°39N×26.°07E, h13km, ML3.8/14, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
NEIC ***25*** *11:47:56.7±2.0, 40.°36N±0.°03×26.°08E±0.°07, h11km±5km, Error ellipse: s-maj=7.5km s-min=4.2km az=98.0*
THE ***25*** *11:47:56.8, 40.°44N×26.°08E, h13km, ML4.0/10, Error ellipse: s-maj=0.7km s-min=0.4km az=290.0*
ISC 25 11:47:56.4±0.9, 40.°39N±0.°01×26.°10E±0.°01, h8km±6km, n512, σ1s45/600, mb4.0/29, 53C-33D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.25**	**218**	P	**Pb**	**11 48 02.5**	**-0.7**
GADA				S	**Sb**	**11 48 07.1**	**-0.6**
	17μm,0.6s						
GADA	**Gvkgeada**	**0.25**	**218**	PG	**Pb**	**11 48 02.6**	**-0.7**
GELI	**Tayfur-Gelibol**	**0.28**	**89**	PG	**Pb**	**11 48 02.9**	**-0.8**
ENEZ	**Enez**	**0.34**	**7**	P	**Pg**	**11 48 02.7**	**-0.5**
ENEZ				S	**Sg**	**11 48 07.8**	**0.0**
	135μm,0.5s						
ENEZ	**Enez**	**0.34**	**7**	PG	**Pg**	**11 48 02.2**	**-1.0**
ENEZ				SG	**Sg**	**11 48 07.9**	**+0.1**
ERIK	**Erikli-Kesan**	**0.42**	**48**	PG	**Pg**	**11 48 03.4**	**-1.2**
ERIK				SG	**Sg**	**11 48 10.3**	**+0.2**
SMTH	**Samothraki Isl**	**0.44**	**280**	P	**Pg**	**11 48 05.2**	**+0.2**
SMTH				S	**Sb**	**11 48 11.9**	**-1.3**
	17μm,0.4s						
SMTH	**Samothraki Isl**	**0.44**	**280**	P	**Pg**	**11 48 05.1**	**+0.2**
SMTH				S	**Sb**	**11 48 12.3**	**-0.9**
SMTH				AML	AML	11 48 13.3	
	comp=E,41308μm,0.3s						
SMTH				AML	AML	11 48 17.0	
	comp=N,29693μm,0.2s						
LPK	**Lapseki**	**0.50**	**92**	PG	**Pg**	**11 48 05.3**	**-0.8**
LPK				SG	**Sg**	**11 48 13.1**	**+0.3**
BOZC	**Bozcaada**	**0.55**	**184**	PG	**Pg**	**11 48 07.2**	**+0.2**
BOZC	**Bozcaada**	**0.55**	**184**	*i* P	**Pg**	**11 48 07.2**	**+0.2**
BOZC				*i* P	**Pb**	**11 48 07.7**	**-0.6**
BOZC				*i* S	**Sb**	**11 48 15.5**	**-0.8**
BOZC				IAML		11 48 21.0	
	comp=N,4μm,0.5s						
BOZC				IAML		11 48 21.0	
	comp=E,6μm,0.4s						
BOZC				IAML		11 48 21.0	
	comp=E,6μm,0.4s						
BOZC				IAML		11 48 24.0	
	comp=N,4μm,0.7s						
EZN	**Ezine**	**0.59**	**163**	PG	**Pg**	**11 48 07.8**	**0.0**
KESN	**Edirne-Kesan**	**0.62**	**45**	*i* P	**Pg**	**11 48 06.6**	**-1.8**
KESN				*i* S	**Sg**	**11 48 16.9**	**+0.4**
KESN				IAML		11 48 22.0	
	comp=N,16μm,0.4s						
KESN				IAML		11 48 22.0	
	comp=E,16μm,0.4s						
BAYC	**CANAKKALE_Bayr**	**0.73**	**152**	*i* P	**Pg**	**11 48 10.2**	**-0.3**
BAYC				*i* S	**Sg**	**11 48 20.0**	**-0.1**
UKOP	**Uzunkopru-Edir**	**0.84**	**29**	PG	**Pg**	**11 48 12.0**	**-0.5**
LIA	**Limnos Island**	**0.86**	**235**	P	**Pb**	**11 48 13.2**	**-0.3**
LIA				S	**Sb**	**11 48 25.9**	**+0.7**
	comp=E,17μm,0.7s						
LIA	**Limnos Island**	**0.86**	**235**	P	**Pb**	**11 48 13.3**	**-0.2**
LIA				S	**Sb**	**11 48 25.9**	**+0.7**
LIA				AML	AML	11 48 31.9	
	comp=E,36115μm,0.9s						
LIA				AML	AML	11 48 32.0	
	comp=N,32400μm,0.5s						
RDO	**Rodhopi**	**0.87**	**331**	P	**Pg**	**11 48 12.1**	**-1.0**
RDO				S	**Sg**	**11 48 24.0**	**-0.3**
	comp=N,15μm,0.5s						
RDO	**Rodhopi**	**0.87**	**331**	P	**Pg**	**11 48 12.1**	**-1.0**
RDO				S	**Sg**	**11 48 23.8**	**-0.5**
RDO				AML	AML	11 48 30.3	
	comp=E,29994μm,0.6s						
RDO				AML	AML	11 48 30.6	
	comp=N,29540μm,0.4s						
RDO	**Rodhopi**	**0.87**	**331**	PG	**Pg**	**11 48 12.2**	**-0.9**
RKY	**Sarkoy-Tekirda**	**0.87**	**70**	PG	**Pg**	**11 48 12.7**	**-0.5**
RKY				SG	**Sb**	**11 48 25.1**	**-0.5**
SART	**Tekirdag**	**0.87**	**70**	*i* P	**Pg**	**11 48 11.9**	**-1.3**
SART				*i* S	**Sb**	**11 48 25.4**	**-0.3**
SART				IAML		11 48 27.0	
	comp=E,5μm,0.5s						
KRBG	**Karabiga-Canak**	**0.91**	**90**	PG	**Pg**	**11 48 12.9**	**-1.0**
KRBG				SG	**Sb**	**11 48 26.8**	**+0.1**
THAS	**Thassos island**	**1.07**	**282**	P	**Pg**	**11 48 16.1**	**-0.9**
THAS				S	**Sb**	**11 48 31.4**	**0.0**
	comp=E,7μm,0.5s						
THAS	**Thassos island**	**1.07**	**282**	P	**Pg**	**11 48 16.2**	**-0.8**
THAS				S	**Sb**	**11 48 31.9**	**+0.5**
THAS				AML	AML	11 48 32.8	
	comp=N,8889μm,0.4s						
THAS				AML	AML	11 48 34.4	
	comp=E,14316μm,0.4s						
KNL	**Balıkesir**	**1.10**	**96**	*i* P	**Pg**	**11 48 15.7**	**-1.7**
KNL				*i* S	**Sn**	**11 48 32.8**	**-0.5**
PRK	**Paraskevi**	**1.15**	**173**	P	**Pn**	**11 48 19.2**	**+0.4**
PRK				S	**Sn**	**11 48 35.1**	**+0.5**
PRK	**Paraskevi**	**1.15**	**173**	P	**Pn**	**11 48 19.4**	**+0.6**
PRK				S	**Sn**	**11 48 35.2**	**+0.5**
PRK				AML	AML	11 48 37.1	
	comp=E,91151μm,0.8s						
PRK				AML	AML	11 48 39.9	
	comp=N,45272μm,2.6s						
MRMT	**Marmara Adasi**	**1.16**	**79**	PN	**Pg**	**11 48 17.6**	**-1.0**
AYVA	**Ayvalik**	**1.17**	**157**	*i* P	**Pg**	**11 48 18.4**	**-0.5**
AYVA				*i* S	**Sg**	**11 48 33.6**	**-0.6**
AYVA				IAML		11 48 38.0	
	comp=E,10μm,0.7s						
AYVA				IAML		11 48 39.0	
	comp=N,16μm,0.6s						
SIGR	**SIGRI**	**1.20**	**189**	P	**Pb**	**11 48 18.8**	**-0.4**
SIGR				S	**Sn**	**11 48 35.7**	**0.0**
	comp=N,14μm,0.6s						
SIGR	**SIGRI**	**1.20**	**189**	P	**Pb**	**11 48 18.8**	**-0.4**
SIGR				S	**Sn**	**11 48 35.7**	**0.0**
SIGR				AML	AML	11 48 37.8	
	comp=E,17112μm,0.4s						
SIGR				AML	AML	11 48 40.3	
	comp=N,31004μm,0.7s						
SIGR	**SIGRI**	**1.20**	**189**	PN	**Pb**	**11 48 19.1**	**-0.1**
SIGR				SN	**Sn**	**11 48 36.1**	**+0.4**
EFSA	**Agios Efstrati**	**1.21**	**225**	P	**Pb**	**11 48 19.3**	**-0.1**
EFSA				S	**Sn**	**11 48 36.2**	**+0.2**
EFSA				AML	AML	11 48 42.0	
	comp=E,19791μm,0.9s						
EFSA				AML	AML	11 48 47.7	
	comp=N,16454μm,0.6s						
TKR	**Tekirdag**	**1.24**	**61**	PN	**Pb**	**11 48 19.7**	**-0.4**
GONE	**Gonen-Balikesi**	**1.26**	**105**	PN	**Pn**	**11 48 19.7**	**-0.6**
BALY	**Balya**	**1.33**	**119**	*i* P	**Pn**	**11 48 20.2**	**-1.2**
BALY				*i* S	**Sn**	**11 48 40.2**	**+0.9**
BALY				IAML		11 48 43.0	
	comp=E,10μm,0.6s						
BALY				IAML		11 48 43.0	
	comp=N,14μm,0.8s						
EDC	**Edincik**	**1.35**	**91**	PN	**Pn**	**11 48 21.1**	**-0.4**
KAVA	**Kavala**	**1.35**	**297**	P	**Pn**	**11 48 20.4**	**-1.1**
KAVA				S	**Sb**	**11 48 37.7**	**-1.6**
	comp=N,3μm,0.5s						
KAVA	**Kavala**	**1.35**	**297**	P	**Pn**	**11 48 20.4**	**-1.1**
KAVA				S	**Sb**	**11 48 38.4**	**-0.9**
KAVA				AML	AML	11 48 42.4	
	comp=E,6054μm,0.4s						
KAVA				AML	AML	11 48 44.2	
	comp=N,6148μm,0.4s						
KDZ	**Kurdzhali**	**1.36**	**338**	P	**Pn**	**11 48 20.8**	**-0.9**
KDZ	**Kurdzhali**	**1.36**	**338**	PN	**Pn**	**11 48 20.9**	**-0.8**
KDZ				SN	**Sn**	**11 48 39.6**	**-0.3**
KVLA	**Kavala**	**1.41**	**293**	P	**Pn**	**11 48 21.5**	**-0.8**
KVLA				S	**Sb**	**11 48 38.5**	**-2.7**
KVLA				AML	AML	11 48 44.5	
	comp=E,5390μm,0.4s						
KVLA				AML	AML	11 48 45.5	
	comp=N,6420μm,0.6s						
CRLT	**Corlu**	**1.44**	**59**	PN	**Pn**	**11 48 22.2**	**-0.6**
DKL	**Dikili**	**1.46**	**155**	PN	**Pn**	**11 48 22.7**	**-0.3**
EDRB	**Edirne**	**1.53**	**18**	P	**Pn**	**11 48 22.3**	**-1.7**
EDRB				S	**Sn**	**11 48 42.8**	**-1.3**
	comp=N,6μm,0.7s						
EDRB	**Edirne**	**1.53**	**18**	PN	**Pn**	**11 48 23.1**	**-0.9**
BOTS	**Marmara Eregli**	**1.55**	**67**	PN	**Pn**	**11 48 23.8**	**-0.4**
BALB	**Balikesir**	**1.56**	**118**	PN	**Pn**	**11 48 23.8**	**-0.6**
KIRK	**Kırklareli**	**1.58**	**28**	*i* P	**Pn**	**11 48 22.7**	**-2.0**
KIRK				*i* S	**Sn**	**11 48 43.0**	**-2.2**
STEP	**BALIKESIR_Sava**	**1.60**	**129**	*i* P	**Pn**	**11 48 24.8**	**-0.2**
STEP				*i* S	**Sb**	**11 48 47.2**	**+0.5**
STEP				IAML		11 48 52.0	
	comp=N,4μm,0.8s						
STEP				IAML		11 48 52.0	
	comp=E,5μm,0.8s						
ZEDA	**zmir-Bergama**	**1.61**	**152**	*i* P	**Pn**	**11 48 24.7**	**-0.3**
ZEDA				*i* S	**Sn**	**11 48 46.4**	**+0.4**
ZEDA				IAML		11 48 55.0	
	comp=E,2μm,0.6s						
ZEDA				IAML		11 48 57.0	
	comp=N,2μm,0.8s						
OUR	**Ouranopolis**	**1.62**	**269**	P	**Pn**	**11 48 24.1**	**-1.1**
OUR	**Ouranopolis**	**1.62**	**269**	P	**Pn**	**11 48 24.0**	**-1.1**
OUR				S	**Sn**	**11 48 44.5**	**-1.7**
OUR				AML	AML	11 48 52.4	
	comp=N,17301μm,0.5s						
OUR				AML	AML	11 48 53.5	
	comp=E,9237μm,0.4s						
OUR	**Ouranopolis**	**1.62**	**269**	PN	**Pn**	**11 48 24.2**	**-1.0**
PHSR	**Pinarhisar**	**1.64**	**41**	PN	**Pn**	**11 48 25.2**	**-0.3**
RZN	**Rozhen**	**1.67**	**321**	P	**Pn**	**11 48 25.3**	**-0.7**
RZN	**Rozhen**	**1.67**	**321**	Pg	**Pb**	**11 48 27.3**	**-0.1**
DIM	**Dimitrovgrad**	**1.71**	**346**	*e*P	**Pn**	**11 48 26.8**	**+0.3**
KCTX	**Karacabey (Bur**	**1.73**	**93**	PN	**Pn**	**11 48 26.2**	**-0.5**
SLVT	**Silivri**	**1.81**	**62**	PN	**Pn**	**11 48 27.5**	**-0.3**
KRBN	**Karaburun**	**1.83**	**169**	PN	**Pn**	**11 48 27.8**	**-0.3**
PSRA	**Psara**	**1.90**	**193**	P	**Pn**	**11 48 29.3**	**+0.4**
PSRA				S	**Sn**	**11 48 53.8**	**+0.8**
PSRA				AML	AML	11 49 03.3	
	comp=E,4434μm,0.4s						
PSRA				AML	AML	11 49 04.6	
	comp=N,3759μm,0.4s						
PAIG	**Paliouri**	**1.91**	**257**	P	**Pn**	**11 48 27.8**	**-1.4**
PAIG				S	**Sn**	**11 48 52.5**	**-1.0**
	comp=N,1μm,0.6s						
PAIG	**Paliouri**	**1.91**	**257**	P	**Pn**	**11 48 27.8**	**-1.4**
PAIG				S	**Sn**	**11 48 51.0**	**-2.4**
PAIG				AML	AML	11 49 12.0	
	comp=N,2605μm,0.6s						
PAIG				AML	AML	11 49 13.0	
	comp=E,2847μm,0.8s						
ELBA	**Catalca**	**1.92**	**66**	*i* P	**Pn**	**11 48 28.0**	**-1.4**
ELBA				*i* S	**Sn**	**11 48 53.5**	**-0.2**
ELBA				IAML		11 49 02.0	
	comp=E,613nm,0.2s						
ELBA				IAML		11 49 03.0	
	comp=N,955nm,0.4s						
SKY	**Skiros Island**	**1.93**	**219**	P	**Pn**	**11 48 28.6**	**-0.9**
SKY	**Skiros Island**	**1.93**	**219**	P	**Pn**	**11 48 28.5**	**-1.0**
SKY				AML	AML	11 49 08.6	
	comp=E,4107μm,0.6s						
SKY				AML	AML	11 49 19.0	
	comp=N,4326μm,0.9s						
CTYL	**Yalikoy Yolu**	**1.98**	**56**	PN	**Pn**	**11 48 30.0**	**-0.1**
DURS	**Dursunbey**	**1.99**	**113**	*i* P	**Pn**	**11 48 29.7**	**-0.7**
DURS				*i* S	**Sb**	**11 48 57.8**	**0.0**
DURS				IAML		11 49 01.0	
	comp=N,5μm,0.8s						
DURS				IAML		11 49 02.0	
	comp=E,6μm,0.8s						
CHOS	**Chios island**	**2.00**	**181**	P	**Pn**	**11 48 29.6**	**-1.0**
CHOS	**Chios island**	**2.00**	**181**	P	**Pn**	**11 48 30.2**	**-0.3**
CHOS				S	**Sn**	**11 48 54.6**	**-1.2**
CHOS				AML	AML	11 49 09.1	
	comp=N,6034μm,0.7s						
CHOS				AML	AML	11 49 11.1	
	comp=E,7558μm,0.6s						
CHOS	**Chios island**	**2.00**	**181**	PN	**Pn**	**11 48 30.6**	**0.0**
CHOS				SN	**Sn**	**11 48 56.5**	**+0.7**
AKS	**Akhisar**	**2.01**	**138**	PN	**Pn**	**11 48 30.9**	**+0.3**
PLD	**Plovdiv**	**2.01**	**329**	P	**Pn**	**11 48 30.1**	**-0.5**
PLD	**Plovdiv**	**2.01**	**329**	Pg	**Pb**	**11 48 33.6**	**+0.5**
PLD	**Plovdiv**	**2.01**	**329**	PN	**Pn**	**11 48 29.9**	**-0.7**
CTKS	**Kestenalik-??a**	**2.01**	**64**	PN	**Pn**	**11 48 30.6**	**0.0**
PLG	**Polygyros**	**2.03**	**270**	P	**Pn**	**11 48 30.0**	**-0.8**
PLG	**Polygyros**	**2.03**	**270**	P	**Pn**	**11 48 30.1**	**-0.8**
PLG				S	**Sn**	**11 48 54.3**	**-2.2**
PLG				AML	AML	11 49 03.9	
	comp=N,6472μm,0.5s						
PLG				AML	AML	11 49 05.3	
	comp=E,8484μm,0.4s						
SRS	**Serrai**	**2.04**	**292**	P	**Pn**	**11 48 30.0**	**-1.0**
SRS	**Serrai**	**2.04**	**292**	P	**Pn**	**11 48 30.2**	**-0.8**
SRS				S	**Sn**	**11 48 54.6**	**-2.0**
SRS				AML	AML	11 49 04.9	
	comp=E,10847μm,0.4s						
SRS				AML	AML	11 49 05.0	
	comp=N,4970μm,0.8s						
YKBL	**Yakuplu-Istanb**	**2.04**	**72**	PN	**Pn**	**11 48 31.7**	**+0.7**
CESE	**eme**	**2.06**	**176**	PN	**Pn**	**11 48 31.6**	**+0.3**
URLA	**Izmir**	**2.06**	**169**	PN	**Pn**	**11 48 31.6**	**+0.2**
URLA	**Izmir**	**2.06**	**169**	*i* P	**Pn**	**11 48 31.1**	**-0.3**
URLA				IAML		11 49 05.0	
	comp=E,2μm,0.6s						
URLA				IAML		11 49 06.0	
	comp=N,1μm,0.7s						
AVCI	**Avcilar-stanb**	**2.08**	**72**	PN	**Pn**	**11 48 31.6**	**0.0**
DST	**Dursunbey**	**2.09**	**111**	PN	**Pn**	**11 48 31.8**	**+0.1**
AOS	**Alonnisos**	**2.10**	**235**	P	**Pn**	**11 48 30.6**	**-1.2**
AOS	**Alonnisos**	**2.10**	**235**	P	**Pn**	**11 48 30.6**	**-1.2**
AOS				AML	AML	11 49 16.7	
	comp=N,4061μm,0.7s						
AOS				AML	AML	11 49 16.9	
	comp=E,4091μm,0.6s						
AOS	**Alonnisos**	**2.10**	**235**	PN	**Pn**	**11 48 31.6**	**-0.2**
JMB	**Yambol**	**2.10**	**10**	PN	**Pn**	**11 48 32.1**	**+0.2**
ARMT	**Armutlu**	**2.11**	**84**	PN	**Pn**	**11 48 33.1**	**+1.1**
ALNA	**Alonissos**	**2.12**	**235**	P	**Pn**	**11 48 30.7**	**-1.4**
ALNA				AML	AML	11 49 19.1	
	comp=E,7350μm,0.7s						
ALNA				AML	AML	11 49 19.9	
	comp=N,9002μm,1.1s						
MDNY	**Mudanya-Bursa**	**2.13**	**90**	PN	**Pn**	**11 48 32.9**	**+0.7**
BLCB	**Balcova**	**2.13**	**160**	P	**Pn**	**11 48 32.6**	**+0.3**
BLCB	**Balcova**	**2.13**	**160**	PN	**Pn**	**11 48 32.6**	**+0.3**
SOH	**Sokhos**	**2.13**	**282**	P	**Pn**	**11 48 31.5**	**-0.9**
MMB	**Musomiste**	**2.16**	**304**	*i* P	**Pn**	**11 48 31.7**	**-1.0**
HVHR	**Bakirkoy-Istan**	**2.16**	**74**	PN	**Pn**	**11 48 32.8**	**+0.1**
ORLT	**Orhaneli**	**2.17**	**98**	PN	**Pn**	**11 48 33.3**	**+0.5**
BGKT	**Bogazkoy**	**2.18**	**68**	PN	**Pn**	**11 48 33.5**	**+0.7**
GOMA	**Golmarmara-Man**	**2.19**	**140**	PN	**Pn**	**11 48 33.5**	**+0.4**
HORT	**Hortiatis**	**2.30**	**276**	P	**Pn**	**11 48 33.7**	**-0.9**
HORT	**Hortiatis**	**2.30**	**276**	P	**Pn**	**11 48 33.9**	**-0.8**
HORT				S	**Sn**	**11 49 01.2**	**-2.0**
HORT				AML	AML	11 49 12.3	
	comp=N,3135μm,0.9s						
HORT				AML	AML	11 49 18.2	
	comp=E,2246μm,0.8s						
HORT	**Hortiatis**	**2.30**	**276**	PN	**Pn**	**11 48 34.4**	**-0.2**
ULDT	**Uludag**	**2.33**	**95**	*i* P	**Pn**	**11 48 34.4**	**-0.9**
ULDT				IAML		11 49 16.0	
	comp=N,1μm,0.6s						
ULDT				IAML		11 49 20.0	
	comp=E,2μm,0.6s						
KYMI	**Kymi, Euboea I**	**2.34**	**222**	P	**Pn**	**11 48 33.9**	**-1.2**
KYMI	**Kymi, Euboea I**	**2.34**	**222**	P	**Pn**	**11 48 34.0**	**-1.2**
KYMI				AML	AML	11 49 17.7	
	comp=E,1750μm,0.6s						
KYMI				AML	AML	11 49 18.5	

SKIA					AML	AML	11 49 20.5		ZAPS				*e*Sn	Sn	11 49 44.3 +2.4		TRUS	**Trudelj**		5.70 314	*e*Pn	Pn	11 49 20.4 -0.9
	comp=N,3621µm,0.5s								**MANR**	**Mangalia**		3.89 28	⇓P	Pn	11 48 57.5 +1.1		**BUM**	**Brajici-Budva**		5.75 292	⇑/Pn	Pn	11 49 22.1 +0.1
SKIA					AML	AML	11 49 20.8		**MANR**	**Mangalia**		3.89 28		Pn	11 48 57.5 +1.1		BUM				*/* Sn	Sn	11 50 25.8 -2.4
	comp=E,5191µm,0.6s								**MDUB**	**Mudurnu**		3.89 87		Pn	11 48 55.9 -0.6		**PLE**	**Pljevlja**		5.81 303	⇓/Pn	Pn	11 49 22.5 -0.4
IGD	**Bursa**		2.37 92	*/* P	Pn		**11 48 37.2 +1.7**		**RASA**	**Rasa**		3.90 11	⇑P	Pn	11 48 57.7 +1.2		PLE				*/* Sn	Sn	11 50 27.1 -2.6
IGD					IAML		11 49 15.0		**RASA**	**Rasa**		3.90 11		Pn	11 48 57.7 +1.2		**CEME**	**Cevo**		5.81 294	⇑/Pn	Pn	11 49 22.8 -0.1
	comp=N,1µm,0.7s								**ICOR**	**Ion Corvin**		3.93 18	⇑P	Pn	11 48 58.0 +1.0		CEME				*/* Sn	Sn	11 50 27.2 -2.5
IGD					IAML		11 49 18.0		**ICOR**	**Ion Corvin**		3.93 18		Pn	11 48 58.0 +1.0		**BR131**	**Keskin Array S**		5.82 94	P	Pn	11 49 22.5 -0.6
	comp=E,914nm,0.4s								**CIFT**	**Cifteler, Eski**		3.95 104	*/* P	Pn	11 48 57.4 0.0		**BR131**	**Keskin Array S**		5.82 94		Pn	11 49 22.5 -0.6
KLYT	**Kilyos**		2.39 68	PN	Pn		**11 48 36.1 +0.3**		CIFT				IAML		11 49 49.0		**BRTR**	**Keskin Array B**		5.82 94	Pn	Pn	11 49 22.6 -0.5
THE	**Thessaloniki**		2.40 277	P	Pn		**11 48 36.0 0.0**			comp=E,934nm,0.6s								comp=E,5.1nm,0.3s,baz=263,slow=10.0,SNR=70					
DEMI	**Demirci**		2.43 123	*/* P	Pn		**11 48 36.3 -0.1**		CIFT				IAML		11 49 49.0		BRTR				Lg	Lg	11 51 05.5
DEMI					IAML		11 49 21.0			comp=N,973nm,0.5s								comp=E,1.5nm,0.3s,baz=275,slow=22,SNR=2.8					
	comp=N,946nm,0.7s								**PVO**	**Paravola**		3.96 245	P	Pn	11 48 56.9 -0.5		**ILGA**	**Ilgaz**		5.82 81	Pn	Pn	**11 49 24.7 +1.5**
DEMI					IAML		11 49 23.0		**BARS**	**Barje**		4.02 308	*e*Pn	Pn	11 48 58.4 +0.1		**NKY**	**Niksic**		5.85 297	⇓/Pn	Pn	11 49 23.7 +0.2
	comp=E,2µm,0.8s								**BARS**	**Barje**		4.02 308	*e*Pn	Pb	11 49 06.6 -0.9		NKY				*/* Sn	Sn	11 50 28.1 -2.7
TUZL	**Tuzla-Istanbul**		2.45 79	PN	Pn		**11 48 37.1 +0.6**		BARS				*e*Sn	Sn	11 49 48.8 +3.2		**SCTE**	**Santa Cesarea**		5.85 269		Pn	11 49 23.3 -0.1
XOR	**Xorichti**		2.46 246	P	Pn		**11 48 35.2 -1.6**		**ANAF**	**Anafi Island**		4.04 184	P	Pn	11 48 57.4 -1.0		**DIVS**	**Divibare**		5.85 311	*e*Pn	Pn	11 49 22.9 -0.6
XOR					AML	AML	11 49 28.2		**SANT**	**Santorini**		4.05 187	⇑P	Pn	11 48 56.8 -1.8		DIVS				*e*Sn	Sn	11 50 34.4 +3.6
	comp=N,1037µm,0.7s								**SANT**	**Santorini**		4.05 187		Pn	11 48 57.8 -0.8		**DIVS**	**Divibare**		5.85 311	Pn	Pn	11 49 22.4 -1.1
XOR					AML	AML	11 49 29.9		**BRDR**	**BURDUR-Merkez**		4.09 130	*/* P	Pn	11 48 59.4 +0.1		**NKME**	**Niksic**		5.86 296	⇓/Pn	Pn	11 49 23.5 -0.1
	comp=E,932µm,0.5s								BRDR				IAML		11 50 20.0		NKME				*/* Sn	Sn	11 50 28.4 -2.5
NEO	**Neokhori**		2.47 245	P	Pn		**11 48 35.2 -1.7**			comp=N,212nm,1.1s							**MDB**	**Medias**		5.88 348	⇑P	Pn	11 49 24.2 +0.4
YLV	**Yalova**		2.50 85	PN	Pn		**11 48 37.7 +0.3**		BRDR				IAML		11 50 26.0		**MDB**	**Medias**		5.88 348	P	Pn	11 49 24.2 +0.4
YLVH	**Yalova**		2.51 82	PN	Pn		**11 48 37.9 +0.5**			comp=E,171nm,1.7s							**MDB**	**Medias**		5.88 348		Pn	11 49 24.2 +0.4
ELND	**Elena**		2.54 356	⇓P	Pn		**11 48 37.7 -0.2**		**LEHL**	**Lehliu**		4.11 7	⇓P	Pg	11 49 15.5 +0.3		**DEV**	**Deva**		5.96 338	⇑P	Pn	11 49 26.2 +1.3
ELND				⇑S	Sn		**11 49 10.5 +1.5**		**TRIP**	**Tripoli**		4.13 227	P	Pn	11 48 59.6 -0.2		**DEV**	**Deva**		5.96 338	P	Pn	11 49 26.2 +1.3
ELND	**Elena**		2.54 356		Pn		**11 48 37.7 -0.2**		**MFTR**	**Murfatlar**		4.16 24	⇑P	Pn	11 49 00.2 +0.2		**DEV**	**Deva**		5.96 338		Pn	11 49 26.2 +1.3
ELND					Sn		**11 49 10.5 +1.5**		**MFTR**	**Murfatlar**		4.16 24		Pn	11 49 00.2 +0.2		**UPM**	**Unac-Piva**		6.07 300	⇓/Pn	Pn	11 49 26.4 -0.1
KNT	**Kendrikon**		2.55 289	P	Pn		**11 48 37.8 -0.3**		**DRO**	**Drossia**		4.19 236	P	Pn	11 49 01.0 +0.4		UPM				*/* Sn	Sn	11 50 33.3 -2.9
KNT	**Kendrikon**		2.55 289	PN	Pn		**11 48 37.9 -0.1**		**PDO**	**Prodromos**		4.21 246	P	Pn	11 49 00.7 -0.1		**BBLS**	**Lazići**		6.07 307	*e*Pn	Pn	11 49 27.3 +0.9
SMAA	**Simav-Kutahya**		2.57 119	PN	Pn		**11 48 38.3 0.0**		**HUMR**	**Humele**		4.21 349	⇑P	Pn	11 49 02.4 +1.5		**HCY**	**Herceg Novi**		6.08 292	⇑/Pn	Pn	11 49 26.6 +0.1
MRKA	**Markates**		2.57 230	P	Pn		**11 48 37.2 -1.1**		**HUMR**	**Humele**		4.21 349		Pn	11 49 02.4 +1.5		HCY				*/* Sn	Sn	11 50 33.4 -2.7
MRKA					AML	AML	11 49 34.9		**TSCT**	**Constanta Port**		4.22 26	⇑P	Pn	11 49 03.0 +2.1		**TESR**	**Tescani**		6.13 4	⇓P	Pn	11 49 27.7 +0.5
	comp=N,1991µm,0.6s								**TSCT**	**Constanta Port**		4.22 26		Pn	11 49 03.0 +2.1		**TESR**	**Tescani**		6.13 4		Pn	11 49 27.7 +0.5
MRKA					AML	AML	11 49 36.9		**SULR**			4.29 1	⇑P	Pn	11 49 02.8 +1.0		**BZS**	**Buzias**		6.17 329	*e*Pn	Pn	11 49 26.6 -1.1
	comp=E,2027µm,0.8s								**SULR**			4.29 1		Pn	11 49 02.8 +1.0		**BZS**	**Buzias**		6.17 329	⇓P	Pn	11 49 26.6 -1.1
SIMA	**Simav-Kutahya**		2.58 120	PN	Pn		**11 48 38.9 +0.4**		**RLS**	**Riolos of Patr**		4.29 239	P	Pn	11 49 01.7 -0.2		**BZS**	**Buzias**		6.17 329	P	Pn	11 49 26.6 -1.1
PGB	**Panagyurishte**		2.60 327	P	Pn		**11 48 38.1 -0.7**		**ISP**	**Isparta**		4.29 125	P	Pn	11 49 01.4 -0.6		**BZS**	**Buzias**		6.17 329		Pn	11 49 26.6 -1.1
KARY	**Karystos**		2.69 209	P	Pn		**11 48 38.7 -1.2**		**ISP**	**Isparta**		4.29 125		Pn	11 49 01.4 -0.6		**BRY**	**Bratogost**		6.19 296	⇑/Pn	Pn	11 49 28.2 0.0
KARY					AML	AML	11 49 34.3		**TLBR**	**Topalu**		4.39 18	⇓P	Pn	11 49 04.4 +1.1		BRY				*/* Sn	Sn	11 50 36.3 -3.0
	comp=N,417µm,0.8s								**TIRR**	**Tirgusor**		4.41 22	⇓P	Pn	11 49 05.2 +1.7		**VASR**	**Vaslui**		6.37 11	⇑P	Pn	11 49 31.5 +1.0
KARY					AML	AML	11 49 37.6		**TIRR**	**Tirgusor**		4.41 22	⇓P	Pn	11 49 05.2 +1.7		**TEKS**	**Tekeris**		6.39 313	*e*Pn	Pn	11 49 29.7 -1.1
	comp=E,676µm,0.9s								**TIRR**	**Tirgusor**		4.41 22	P	Pn	11 49 05.2 +1.7		**BIZ**	**Bicaz**		6.54 0	⇑P	Pn	11 49 34.7 +1.8
MANT	**Manisa**		2.69 134	*/* P	Pn		**11 48 39.8 -0.3**		**TIRR**	**Tirgusor**		4.41 22		Pn	11 49 02.3 -1.2		**BIZ**	**Bicaz**		6.54 0		Pn	11 49 34.7 +1.8
MANT	**Manisa**		2.69 134		Pn		**11 48 39.9 -0.3**		**TIRR**	**Tirgusor**		4.41 22		Pn	11 49 05.2 +1.7		**CJR**	**Cluj-Napoca**		6.57 345	⇓P	Pn	11 49 33.4 +0.1
KKB	**Krupnik**		2.71 304	P	Pn		**11 48 39.8 -0.5**		**VLI**	**Velial**		4.43 215	P	Pn	11 49 03.1 -0.8		**CJR**	**Cluj-Napoca**		6.57 345	P	Pn	11 49 33.4 +0.1
KULA	**Kula-Manisa**		2.73 133	P	Pn		**11 48 40.4 -0.1**		**AMT**	**Artemida-Makis**		4.46 232	P	Pn	11 49 04.3 +0.1		**CJR**	**Cluj-Napoca**		6.57 345		Pn	11 49 33.4 +0.1
KULA	**Kula-Manisa**		2.73 133	PN	Pn		**11 48 40.7 +0.2**		**ARG**	**Arkhangelos**		4.46 158	P	Pn	11 49 04.7 +0.4		**FRGS**	**Fruska Gora**		6.64 318	*e*Pn	Pn	11 49 33.7 -0.5
SMG	**Samos**		2.74 168	P	Pn		**11 48 39.8 -0.8**		**ZAGS**	**Zajecar**		4.47 321	*e*Pn	Pn	11 49 03.3 -1.1		**SIRR**	**Siria**		6.71 333	⇓P	Pn	11 49 34.4 -0.7
SMG					AML	AML	11 49 27.6		ZAGS				*e*Sn	Sn	11 50 00.3 +3.8		**SIRR**	**Siria**		6.71 333		Pn	11 49 34.4 -0.7
	comp=N,5099µm,0.6s								**LKD2**	**Lefkada island**		4.50 251	P	Pn	11 49 04.7 -0.1		**MILM**	**Milestii Mici**		6.81 16	⇑P	Pn	11 49 38.1 +1.5
SMG					AML	AML	11 49 28.2		**HARR**	**Harsova**		4.50 17	⇑P	Pn	11 49 06.8 +2.0		**MILM**	**Milestii Mici**		6.81 16		Pn	11 49 38.1 +1.5
	comp=E,3224µm,0.6s								**HARR**	**Harsova**		4.50 17	P	Pn	11 49 06.9 +2.0		**DRGR**			6.85 340	⇑P	Pn	11 49 37.8 +0.6
HRT	**Hereke**		2.75 80	PN	Pn		**11 48 41.9 +1.1**		**HARR**	**Harsova**		4.50 17		Pn	11 49 06.8 +2.0		**DRGR**			6.85 340	P	Pn	11 49 37.8 +0.6
TVSB	**Tavsanli**		2.75 109	PN	Pn		**11 48 41.5 +0.6**		**IGT**	**Igoumenitsa**		4.51 261	P	Pn	11 49 06.4 +1.4		**DRGR**			6.85 340		Pn	11 49 37.8 +0.6
SHAP	**Saphane-Kutahy**		2.77 119	PN	Pn		**11 48 41.8 +0.7**		IGT				S	Sn	11 49 55.8 -2.0		**SEV**	**Sevastopol'**		6.96 51	⇑*e*P	Pn	11 49 36.2 -2.4
ADVT	**Abdulvahap**		2.78 88	PN	Pn		**11 48 42.0 +0.9**		**PUNG**	**Punghina**		4.54 330	⇓P	Pn	11 49 07.3 +2.0		SEV				*e*S	Sn	11 50 50.9 -7.0
LIT	**Litokhoron**		2.78 265	P	Pn		**11 48 40.0 -1.2**		**PUNG**	**Punghina**		4.54 330		Pn	11 49 07.3 +2.0		**PRAR**	**RASCA**		6.97 1	⇑P	Pn	11 49 40.4 +1.7
LIT	**Litokhoron**		2.78 265	P	Pn		**11 48 40.2 -1.0**		**PGOR**	**Pogoanele**		4.56 81	⇓P	Pb	11 49 07.1 +0.6		**PRAR**	**RASCA**		6.97 1		Pn	11 49 40.4 +1.7
LIT	**Litokhoron**		2.78 265		Pn		**11 48 40.2 -1.0**		**ITM**	**Ithomi**		4.58 227		Pn	11 49 06.0 +0.2		**YAL**	**Yalta**		7.22 53	*e*P	Pn	11 49 41.5 -0.7
SILT	**Sile**		2.79 73	PN	Pn		**11 48 41.9 +0.5**		**BOVS**	**Bovan**		4.61 316	*e*Pn	Pn	11 49 06.4 +0.1		YAL				*e*S	Sn	11 50 58.5 -5.9
USAK	**Uak-Merkez**		2.81 126	*/* P	Pn		**11 48 41.9 +0.3**		**SECR**			4.64 360	⇑P	Pn	11 49 08.4 +1.6		**BUR08**	**Bucovina Ar. S**		7.28 355	Pn	Pn	11 49 44.0 +0.9
AYDB	**Zeytinkoy-Aydi**		2.81 150	PN	Pn		**11 48 41.5 -0.2**		**SECR**			4.64 360		Pn	11 49 08.4 +1.6		**TIP**	**Timpagrande**		7.30 263	⇓P	Pn	11 49 42.7 -0.6
GCAM	**G?zelcaml?**		2.83 161	PN	Pn		**11 48 42.5 +0.7**		**SELS**	**Selova**		4.67 309	*e*Pn	Pn	11 49 06.6 -0.6		**TIP**	**Timpagrande**		7.30 263		Pn	11 49 43.4 +0.1
VAY	**Valandovo**		2.83 290	*e*Pn	Pn		**11 48 42.2 +0.3**		SELS				*e*Sn	Sn	11 50 06.9 +5.3		**SIM**	**Simferopol'**		7.46 50	*c*e*P	Pn	11 49 43.8 -1.6
VAY				*e*Sn	Sb		**11 49 22.3 +0.3**		**FSK**	**Fiskardo**		4.70 248	P	Pn	11 49 09.1 +1.5		SIM				*e*S	Sn	11 51 07.0 -3.1
DION	**Dionisos Attik**		2.86 217	P	Pn		**11 48 41.2 -1.1**		**ELL**	**Elmali**		4.71 139	P	Pn	11 49 08.0 +0.2		SIM				pmax	pmax	
CAVI	**Cavuskoy**		2.87 93	PN	Pn		**11 48 43.2 +0.8**		**ELL**	**Elmali**		4.71 139		Pn	11 49 08.0 +0.2			comp=Z,89nm,0.6s					
SZH	**Strazhica**		2.88 358	P	Pn		**11 48 42.5 0.0**		**ISR**	**Istrita**		4.74 4	⇑P	Pn	11 49 08.1 0.0		SIM				smax	smax	
GEDZ	**Gediz**		2.88 117	PN	Pn		**11 48 43.2 +0.5**		**ISR**	**Istrita**		4.74 4	P	Pn	11 49 08.1 0.0			comp=N,107nm,0.9s					
PTL	**Penteli**		2.92 217	P	Pn		**11 48 42.1 -1.0**		**ISR**	**Istrita**		4.74 4		Pn	11 49 08.1 0.0		**ALU**	**Alushta**		7.48 52	*e*P	Pn	11 49 45.9 +0.2
PTL					AML	AML	11 49 44.5		**SRE**	**Strehaia**		4.77 334	⇑P	Pn	11 49 09.6 +1.1		ALU				*e*S	Sn	11 51 04.7 -5.9
	comp=E,889µm,1.2s								**SRE**	**Strehaia**		4.77 334	P	Pn	11 49 09.6 +1.1		**CSS**	**Mathiatis**		7.89 131	Pn	Pn	11 49 51.3 -0.1
PTL					AML	AML	11 49 48.3		**SRE**	**Strehaia**		4.77 334		Pn	11 49 09.6 +1.1		**SORM**	**Soroca**		7.91 11	⇓P	Pn	11 49 52.3 +0.8
	comp=N,786µm,0.7s								**TOPG**	**Topolog**		4.79 20	⇑P	Pn	11 49 09.8 +1.1		**SORM**	**Soroca**		7.91 11	P	Pn	11 49 52.3 +0.8
TNSA	**Tinos**		2.94 195	P	Pn		**11 48 42.1 -1.3**		**TIR**	**Tirane**		4.82 283	*e*Pn	Pn	11 49 11.4 +2.1		**SORM**	**Soroca**		7.91 11		Pn	11 49 52.3 +0.8
LKR	**Lokris**		2.96 235	P	Pn		**11 48 42.7 -1.0**		**TIR**	**Tirane**		4.82 283	⇓P	Pn	11 49 13.2 +3.9		**SORM**	**Soroca**		7.91 11		Pn	11 49 52.3 +0.8
PRD	**Provadia**		2.97 19	P	Pn		**11 48 42.0 -1.7**		**TIR**	**Tirane**		4.82 283	P	Pn	11 49 08.7 -0.6		**SGRT**	**San Giovanni R**		7.94 283		Pn	11 49 52.0 -0.2
ATHU	**Athens Univers**		3.02 217	P	Pn		**11 48 43.5 -1.0**		**TIR**	**Tirane**		4.82 283		Pn	11 49 08.7 -0.6		**SUDU**	**Sudak**		7.95 53	⇓*e*P	Pn	11 49 50.7 -1.4
VIL2	**Platees**		3.09 226	P	Pn		**11 48 44.7 -0.8**		**JURR**	**Jurilovca**		4.83 24	⇑P	Pn	11 49 08.7 -0.6		SUDU				*e*S	Sn	11 51 17.0 -5.2
VIL2					AML	AML	11 49 43.5		**PYL**	**PYLOS**		4.88 226	P	Pn	11 49 11.0 +0.9		**TRPA**	**Tarpa**		8.15 343	⇑P	Pn	11 49 56.1 +1.3
	comp=N,1041µm,0.7s								**KEK**	**Kerkira**		4.88 264	P	Pn	11 49 11.6 +1.5		**TRPA**	**Tarpa**		8.15 343		Pn	11 49 56.1 +1.3
VIL2					AML	AML	11 49 50.2		**MTUR**	**Matau**		4.89 351	⇓P	Pn	11 49 11.6 +1.3		**CEL**	**Celeste**		8.19 258	Pn	Pn	11 49 55.4 -0.2
	comp=E,1172µm,1.5s								**MTUR**	**Matau**		4.89 351	P	Pn	11 49 11.6 +1.3		**UZH**	**Uzhgorod**		8.67 343	*e*P	Pn	11 50 01.4 -0.7
VTS	**Vitosha**		3.10 317	*e*Pn	Pn		**11 48 46.2 +0.6**		**MTUR**	**Matau**		4.89 351		Pn	11 49 11.6 +1.3		**PSZ**	**Piszkesteto**		8.74 331	⇓P	Pn	11 50 04.3 +1.2
VTS				*e*Sn	Sb		**11 49 27.3 -2.4**		**KARP**	**Karpathos**		4.91 170	P	Pn	11 49 10.4 -0.1		**PSZ**	**Piszkesteto**		8.74 331	P	Pn	11 50 03.1 0.0
VTS	**Vitosha**		3.10 317	⇓P	Pn		**11 48 45.8 +0.1**		**KARP**	**Karpathos**		4.91 170		Pn	11 49 10.3 -0.2		**PSZ**	**Piszkesteto**		8.74 331	Pn	Pn	11 50 03.1 0.0
VTS				⇓S	Sn		**11 49 23.4 +0.5**		**VLMS**	**Volimes, Zakyn**		4.92 241	P	Pn	11 49 11.4 +0.8		**PSZ**	**Piszkesteto**		8.74 331		Pn	11 50 04.3 +1.2
VTS	**Vitosha**		3.10 317	P	Pn		**11 48 45.5 -0.1**		**CFR**	**Carcaliu**		5.01 17	⇑P	Pn	11 49 12.3 +0.5		**PAOL**	**Paolisi**		8.78 278		Pn	11 50 03.6 0.0
VTS	**Vitosha**		3.10 317	Pg	Pg		**11 48 54.5 -1.2**		**CFR**	**Carcaliu**		5.01 17	P	Pn	11 49 12.3 +0.5		**GAZ**	**Gaziantep**		9.25 107	Pn	Pn	11 50 09.2 -0.9
VTS	**Vitosha**		3.10 317	P	Pn		**11 48 45.2 -0.5**		**CFR**	**Carcaliu**		5.01 17		Pn	11 49 12.3 +0.5		**INTR**	**Introdacqua**		9.34 284		Pn	11 50 12.7 +1.4
VTS	**Vitosha**		3.10 317		Pn		**11 48 45.2 -0.5**		**ANKY**	**Antikythira Is**		5.03 207	P	Pn	11 49 11.8 -0.3		**ANN**	**Anapa**		9.44 58	*e*P	Pn	11 50 10.6 -2.0
VLY	**Voula,Athens**		3.11 216	P	Pn		**11 48 44.6 -1.0**		**ARR**	**Arges**		5.09 348	⇑P	Pn	11 49 12.6 -0.3		ANN				*e*S	Sn	11 51 57.1 -1.8
AXAR	**Agios Charalam**		3.12 240	P	Pn		**11 48 45.0 -0.8**		**ARR**	**Arges**		5.09 348		Pn	11 49 12.6 -0.3		ANN				pmax	pmax	
KAND	**Kocaeli-Kandir**		3.19 76	*/* P	Pn		**11 48 45.9 -0.9**		**MLR**	**Mumle Rosu**		5.10 359	Pn	Pn	11 49 14.1 +1.0			comp=Z,48nm,1.2s					
KAND					IAML		11 49 41.0			comp=E,2.0nm,0.3s,baz=225,slow=2.2,SNR=23							ANN				MLR	MLR	
	comp=N,596nm,0.5s								MLR				Lg	Lg	11 50 43.2			comp=Z,313nm,9.0s					
KAND					IAML		11 49 45.0			comp=E,7.6nm,0.3s,baz=63,slow=22,SNR=6.6							**LVV**	**L'vov**		9.54 352	*e*P	Pn	11 50 22.4 +8.5
	comp=E,614nm,0.5s								**MLR**	**Muntele Rosu**		5.10 359	⇓P	Pn	11 49 13.9 +0.8		LVV				*e*S	Sn	**11 52 08.9 +7.7**
RAZG	**Razgrad**		3.19 5	⇓P	Pn		**11 48 46.4 -0.4**		**MLR**	**Muntele Rosu**		5.10 359	P	Pn	11 49 13.6 +0.4		LVV				MLR	MLR	
RAZG	**Razgrad**		3.19 5		Pn		**11 48 46.4 -0.4**		**MLR**	**Muntele Rosu**		5.10 359		Pn	11 49 13.6 +0.4			comp=E,1µm,10.0s					
PLVB	**Pleven**		3.19 340	⇑P	Pn		**11 48 46.7 -0.1**		**PVY**	**Plav**		5.11 297	⇓/Pn	Pn	11 49 13.0 -0.3		LVV				MLR	MLR	
PLVB	**Pleven**		3.19 340		Pn		**11 48 46.7 -0.1**		PVY				*/* Sn	Sn	11 50 10.5 -2.0			comp=N,600nm,9.0s					
AGG	**Agios Georgios**		3.21 246	P	Pn		**11 48 46.1 -1.1**		**BR231**	**Keskin MP Arra**		5.15 94	Pn	Pn	11 49 13.3 -0.5		LVV				MLR	MLR	
AGG	**Agios Georgios**		3.21 246	PN	Pn		**11 48 47.2 0.0**		**ANTO**	**Ankara**		5.16 94	⇑P	Pn	11 49 14.7 +0.8			comp=Z,500nm,10.0s					
AGG	**Agios Georgios**		3.21 246	P	Pn		**11 48 46.0 -1.1**		**ANTO**	**Ankara**		5.16 94	P	Pn	11 49 13.6 -0.3		**VYHS**	**Vyhne**		9.62 330	*e*P	Pn	**11 50 14.1 -0.9**
AGG	**Agios Georgios**		3.21 246		Pn		**11 48 46.0 -1.1**		**ANTO**	**Ankara**		5.16 94		Pn	11 49 13.6 -0.3		**VYHS**	**Vyhne**		9.62 330	*e*PN	Pn	**11 50 14.1 -0.9**
THL	**Klokotos Trika**		3.25 257	P	Pn		**11 48 46.9 -0.7**		**BISRR**	**Bisoca**		5.17 5	⇑P	Pn	11 49 14.5 +0.4		**NRCA**	**Norcia**		10.03 288	Pn	Pn	**11 50 23.3 +2.6**
PROD	**Prodromos**		3.27 230	P	Pn		**11 48 46.9 -1.0**		**BISRR**	**Bisoca**		5.17 5		Pn	11 49 14.5 +0.4		**ARSA**	**Arzberg**		10.26 315	*/* P	Pn	**11 50 27.5 +3.6**
ZIMR			3.31 351	⇑P	Pn		**11 48 48.4 0.0**		**KUBS**	**Kucevo**		5.18 322	*e*Pn	Pn	11 49 13.4 -0.8			comp=Z,6.9nm,0.7s					
ZIMR			3.31 351	P	Pn		**11 48 48.4 0.0**		**IDI**	**Anoyia**		5.18 191	Pn	Pn	11 49 13.5 -0.8		**MMAI**	**Mount Meron Ar**		10.48 132	Pn	Pn	**11 50 26.4 -0.6**
ZIMR			3.31 351		Pn		**11 48 48.4 0.0**			comp=E,1.1nm,0.3s,baz=21,slow=11,SNR=18								comp=Z,0.8nm,0.3s,baz=300,slow=6.5,SNR=1.9					
KZN	**Kozani**		3.31 270	P	Pn		**11 48 48.5 0.0**		**IDI**	**Anoyia**		5.18 191	⇑P	Pn	11 49 13.3 -1.0		**CONA**	**Conrad Observa**		10.52 319	*/* P	Pn	**11 50 28.0 +0.5**
KHAL	**Karahalli**		3.31 126	*/* P	Pn		**11 48 49.1 +0.5**		**IDI**	**Anoyia**		5.18 191		Pn	11 49 12.8 -1.5			comp=Z,9.8nm,0.8s					
KHAL					IAML		11 49 54.0		**TLCR**			5.19 22	⇑P	Pn	11 49 15.7 +1.4		**AKASG**	**Malin Array Be**		10.54 11	Pn	Pn	**11 50 25.2 -2.3**
	comp=E,328nm,1.1s								**TLCR**			5.19 22	P	Pn	11 49 15.7 +1.4			comp=Z,0.8nm,0.3s,baz=201,slow=11,SNR=4.3					
KHAL					IAML		11 49 59.0		**TLCR**			5.19 22		Pn	11 49 15.7 +1.4		AKASG				Sn	Sn	**11 52 18.8 -6.9**
	comp=N,186nm,0.8s								**HERR**	**Herculane**		5.24 330	⇑P	Pn	11 49 14.2 -0.9			comp=Z,1.4nm,0.3s,baz=196,slow=21,SNR=3.1					
APE	**Apeiranthos**		3.35 188	P	Pn		**11 48 47.8 -1.2**		**HERR**	**Herculane**		5.24 330		Pn	11 49 14.2 -0.9		AKASG				Lg	Lg	11 53 30.9
APE	**Apeiranthos**		3.35 188	⇑P	Pn		**11 48 47.9 -1.2**		**IVA**	**Berane**		5.27 300	⇓/Pn	Pn	11 49 15.4 -0.1			baz=190,slow=25,SNR=1.2					
APE	**Apeiranthos**		3.35 188	PN	Pn		**11 48 48.1 -0.9**		IVA				*/* Sn	Sn	11 50 14.3 -2.1		**SOC**	**Sochi**		10.62 68	*e*P	Pn	**11 50 27.6 -1.2**
APE	**Apeiranthos**		3.35 188	*c*/P	Pn		**11 48 47.7 -1.3**		**ZKR**	**Zakros**		5.27 179	P	Pn	11 49 15.2 -0.2		SOC				*e*		11 52 25.6
APE	**Apeiranthos**		3.35 188		Pn		**11 48 47.9 -1.2**		**GRUS**	**Gruza**		5.31 313	*e*Pn	Pn	11 49 15.5 -0.5		SOC				pmax	pmax	
MAKR	**Makrakomi, Fth**		3.36 247	P	Pn		**11 48 48.8 -0.4**		GRUS				*e*Sn	Sn	11 50 22.5 +5.2			comp=Z,32nm,0.7s					
LTK	**Loutraki**		3.40 227	P	Pn		**11 48 49.0 -0.7**		**TUDR**			5.32 12	⇓P	Pn	11 49 14.1 -2.0		SOC				MLR	MLR	
LOUT	**Loutraki**		3.42 226	P	Pn		**11 48 49.4 -0.6**		**LOT**	**Lotru**		5.33 342	⇓P	Pn	11 49 16.7 +0.3			comp=Z,275nm,12.0s					
BOSS	**Bosilegrad**		3.44 309	*e*Pn	Pn		**11 48 50.6 +0.4**		**LOT**	**Lotru**		5.33 342		Pn	11 49 16.7 +0.3		**MORC**	**Moravsky Berou**	

DAVA	**Damuels**	**13.57**	**306**	*i* P		**Pn**	**11 51 12.2**	**+2.9**
	comp=Z,5.0nm,1.0s							
VORD	**Divnogorie**	**14.01**	**37**	*e*P		**Pn**	**11 51 15.9**	**+0.9**
VORD				pmax		pmax		
	comp=Z,8.0nm,0.5s							
VSR	**Storozhevoye**	**14.12**	**36**	*e*P		**Pn**	**11 51 15.6**	**-1.0**
VSR				pmax		pmax		
	comp=Z,20nm,1.4s							
BNI	**Bardonecchia**	**15.01**	**294**	P		**Pn**	**11 51 29.2**	**+0.4**
BNI	**Bardonecchia**	**15.01**	**294**			**Pn**	**11 51 29.2**	**+0.4**
LPSR	**Galich'ya Gora**	**15.04**	**31**	*e*P		**P**	**11 51 32.9**	**-1.6**
LPSR				pmax		pmax		
	comp=Z,20nm,0.6s							
VRH	**Novokhopyorsk**	**15.31**	**40**	*e*P		**Pn**	**11 51 32.6**	**0.0**
VRH				pmax		pmax		
	comp=Z,10.0nm,0.4s							
MAK	**Makhachkala**	**16.19**	**74**	*e*P		**Pn**	**11 51 43.1**	**-1.0**
MAK				*e*S		**Sn**	**11 54 42.6**	**-1.2**
MAK				pmax		pmax		
	comp=Z,110nm,1.0s							
OBN	**Obninsk**	**16.30**	**22**	LR		LR	11 58 48.2	
	comp=Z,34nm,20.3s,baz=181,slow=40							
OBN	**Obninsk**	**16.30**	**22**	*e*P		**Pn**	**11 51 45.3**	**0.0**
OBN				pmax		pmax		
	comp=Z,36nm,2.2s							
OBN				MLR		MLR		
	comp=Z,126nm,16.0s							
MOS	**Moscow**	**17.14**	**23**	*e*P		**P**	**11 52 02.7**	**+5.0**
MOS				*e*			11 55 00.6	
VSU	**Vasula**	**18.09**	**1**	*i* P		**P**	**11 52 09.1**	**+0.9**
VSU				pmax		pmax		
	comp=Z,30nm,0.9s							
FINES	**FINESS Array B**	**21.08**	**360**	P		**P**	**11 52 39.6**	**-1.1**
	comp=Z,2.0nm,0.9s,baz=187,slow=11,SNR=1.6							
KONO	**Kongsberg**	**21.88**	**337**	*i* P		**P**	**11 52 49.8**	**+0.4**
KONO				pmax		pmax		
	comp=Z,10.0nm,1.1s							
NAO01	**NORSAR Array S**	**22.53**	**340**	P		**P**	**11 52 54.9**	**-1.5**
NB2	**NORSAR Subarra**	**22.61**	**341**	P		**P**	**11 52 55.8**	**-1.5**
	comp=Z,8.9nm,1.0s,baz=149,slow=11							
NOA	**NORSAR Array B**	**22.61**	**341**	P		**P**	**11 52 56.9**	**-0.4**
	comp=Z,3.0nm,0.8s,baz=146,slow=11,SNR=6.7							
ESDC	**Sonseca Array**	**22.98**	**278**	P		**P**	**11 53 04.2**	**+2.8**
	comp=Z,1.4nm,0.9s,baz=72,slow=10,SNR=8.5							
AKTO	**Aktyubinsk**	**24.38**	**55**	P		**P**	**11 53 15.4**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=274,slow=13,SNR=4.0							
EKA	**Eskdalemuir Ar**	**24.43**	**318**	P		**P**	**11 53 17.0**	**+1.8**
	comp=Z,2.0nm,0.7s,baz=114,slow=9.3,SNR=7.4							
EKA	**Eskdalemuir Ar**	**24.43**	**318**	P		**P**	**11 53 17.0**	**+1.8**
GEYT	**Alibeck**	**24.88**	**85**	P		**P**	**11 53 20.0**	**+0.5**
	comp=Z,3.2nm,0.6s,baz=231,slow=9.4,SNR=3.3							
GYA0B	**ALIBECK ARRAY**	**24.88**	**85**	P		**P**	**11 53 21.1**	**+1.6**
GYA0B				IAmb		IAmb	11 53 30.0	
	comp=Z,6.4nm,0.8s							
SFS	**San Fernando**	**25.53**	**272**	P		**P**	**11 53 24.2**	**-1.2**
SFS				pmax		pmax		
	comp=Z,231nm,1.2s							
SFS	**San Fernando**	**25.53**	**272**	P		**P**	**11 53 24.2**	**-1.2**
ARU	**Arti**	**26.53**	**42**	P		**P**	**11 53 35.2**	**+1.0**
	comp=Z,2.0nm,0.6s,baz=254,slow=9.3,SNR=6.0							
ARU	**Arti**	**26.53**	**42***c*	*i* P		**P**	**11 53 36.4**	**+2.2**
ARU							11 54 13.4	
ARU				S		**S**	**11 58 13.0**	**+4.6**
ARU				SS		**SnSn**	**11 59 14.2**	**+4.5**
ARU				pmax		pmax		
	comp=Z,15nm,1.0s							
ARU	**Arti**	**26.53**	**42**	P		**P**	**11 53 32.6**	**-1.5**
ARU				IAmb		IAmb	11 53 39.4	
	comp=Z,12nm,0.9s							
BRVK	**Borovoye**	**32.30**	**52**	*i* P		**P**	**11 54 26.2**	**+0.7**
BRVK				pmax		pmax		
	comp=Z,2.0nm,0.9s							
KK31	**Karatay Array**	**32.95**	**70**	P		**P**	**11 54 32.1**	**+0.7**
KK31				pmax		pmax		
	comp=Z,2.0nm,1.1s							
KK31	**Karatay Array**	**32.95**	**70**	P		**P**	**11 54 32.1**	**+0.7**
GAR	**Garm**	**33.79**	**78**			**P**	**11 54 40.0**	**+1.2**
GAR				IAmb		IAmb	11 54 47.6	
	comp=Z,12nm,0.8s							
TORD	**Torodi Ar. Bea**	**34.57**	**225**	P		**P**	**11 54 47.5**	**+1.8**
	comp=Z,0.6nm,0.8s,baz=28,slow=9.2,SNR=3.2							
AAK	**Ala-Archa**	**35.92**	**70**	*i* P		**P**	**11 54 57.4**	**+0.2**
AAK				pmax		pmax		
	comp=Z,2.0nm,1.2s							
AAK	**Ala-Archa**	**35.92**	**70**	P		**P**	**11 54 58.3**	**+1.1**
AAK				IAmb		IAmb	11 55 06.5	
	comp=Z,6.2nm,1.4s							
KSH	**Kashi**	**37.83**	**75**	P		**P**	**11 55 08.8**	**-4.7**
KSH				pP		sP	11 55 17.5	+0.6
KSH				sP		pP	11 55 20.5	+4.6
KSH				pmax		pmax		
	comp=Z,28nm,1.2s							
KSH				pmax		pmax		
	comp=Z,180nm,6.1s							
MK31	**Makanchi Array**	**40.45**	**62**	P		**P**	**11 55 35.9**	**+0.7**
MK31				pmax		pmax		
	comp=Z,3.0nm,1.2s							
MK31	**Makanchi Array**	**40.45**	**62**	P		**P**	**11 55 35.9**	**+0.7**
MKAR	**Makanchi Array**	**40.45**	**62**	P		**P**	**11 55 34.3**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=243,slow=1.6,SNR=4.4							
ZALV	**Zalesovo Beam**	**40.97**	**50**	P		**P**	**11 55 38.8**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=254,slow=11,SNR=5.1							
KMBO	**Kilima Mbogo**	**42.56**	**163**	P		**P**	**11 55 48.8**	**-4.1**
KMBO				pmax		pmax		
	comp=Z,10.0nm,1.5s							
KMBO	**Kilima Mbogo**	**42.56**	**163**	P		**P**	**11 55 48.8**	**-4.1**
KMBO				IAmb		IAmb	11 55 52.2	
	comp=Z,9.7nm,1.5s							
WMQ	**Urumqi**	**44.90**	**64**	*e*P		**P**	**11 56 13.8**	**+2.4**
SONM	**Songino Array**	**55.68**	**54**	P		**P**	**11 57 36.1**	**+3.0**
	comp=Z,0.8nm,1.0s,baz=269,slow=5.9,SNR=4.5							
TIXI	**Tiksi**	**56.03**	**22**	P		**P**	**11 57 34.4**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=326,slow=3.6,SNR=1.4							
LZH	**Lanzhou**	**59.34**	**67**	*e*P		**P**	**11 57 58.0**	**-1.1**
LZH				pP		pP	11 58 01.3	-0.4
LZH				sP		sP	11 58 02.8	+0.1
LZH				*e*PP		**PP**	**12 00 10.5**	**+0.6**
LZH				pmax		pmax		
	comp=Z,19nm,1.3s							
LZH				pmax		pmax		
	comp=Z,62nm,7.4s							
LZH				LR		LR		
	comp=Z,140nm,15.0s							
LZH				LR		LR		
	comp=Z,150nm,14.7s							
LZH				LR		LR		
	comp=Z,210nm,17.5s							
HHC	**Hu-ho-hao-te**	**62.20**	**59**	*e*P		**P**	**11 58 19.3**	**+0.9**
HHC				pP		sP	11 58 24.5	+2.5
HHC				S		**S**	**12 06 40.3**	**-4.0**
HHC				sS		sS	12 06 54.8	+6.3
HHC				pmax		pmax		
	comp=Z,14nm,0.9s							
HHC				pmax		pmax		
	comp=Z,58nm,5.2s							
HHC				LR		LR		
	comp=Z,120nm,17.3s							
HHC				LR		LR		
	comp=Z,170nm,14.7s							
HHC				LR		LR		
	comp=Z,110nm,13.7s							
CMAR	**Chiang Mai Arr**	**65.35**	**86**	P		**P**	**11 58 39.6**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=260,slow=5.4,SNR=4.1							
CMAR	**Chiang Mai Arr**	**65.35**	**86**	*i* P		**P**	**11 58 38.5**	**-0.9**
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.4s							
YKA	**Yellowknife Ar**	**72.71**	**342**	P		**P**	**11 59 26.1**	**+1.7**
	comp=Z,0.4nm,0.9s,baz=25,slow=4.8,SNR=3.7							
RIDG	**Independent Ri**	**75.96**	**356**	P		**P**	**11 59 42.5**	**-0.9**
RIDG				IAmb		IAmb	12 00 01.0	
	comp=Z,4.6nm,1.2s							
I40A	**Norwalk**	**78.60**	**319**	P		**P**	**11 59 58.1**	**-0.3**
I40A				IAmb		IAmb	12 00 17.5	
	comp=Z,4.1nm,1.1s							
TXAR	**Lajitas Array**	**96.43**	**318**	P		**P**	**12 01 25.6**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=38,slow=6.3,SNR=2.2							

*IDC **25** 12:13:11.6±3.4, 8°.09S×109°.13E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/43, mbtmp3.5/4, Error ellipse: s-maj=198.7km s-min=29.4km az=51.0*
*DJA **25** 12:13:17.1±0.8, 8°.5S×107°.9E±°, h20km±6km, M3.8/6, MLv3.8/6*
ISC 25 12:13:16.5±1.7, **8°.3S**±0°.1×**109°.11E**±0°.04, **h30**km±14km, **n13**,σ1§**60**/15, **mb3.4**/4, **Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
UGM	**Wanagama**	**1.45**	**74**	P		**Pb**	**12 13 43.4**	**+0.4**
UGM				S		**Sb**	**12 13 59.9**	**-1.2**
CISI	**Cisompet, Garu**	**1.49**	**300**	P		**Pb**	**12 13 44.1**	**+0.5**
CISI				S		**Sb**	**12 14 04.2**	**+2.1**
SMRI	**Semarang**	**1.82**	**47**	Pg		**Pb**	**12 13 49.9**	**+0.7**
SMRI				S		**Sb**	**12 14 10.9**	**-0.7**
WOJI	**Wonogiri, Jawa**	**1.86**	**75**	P		**Pb**	**12 13 48.2**	**-1.6**
WOJI				S		**Sn**	**12 14 07.8**	**-1.0**
CNJI	**Cibinong**	**2.20**	**297**	P		**Pb**	**12 13 54.7**	**-1.0**
CNJI				S		**Sb**	**12 14 20.0**	**-2.6**
GRJI	**Gresik**	**3.62**	**68**	P		**Pn**	**12 14 12.9**	**+2.4**
WRA	**Warramunga Arr**	**27.01**	**118**	P		**P**	**12 18 56.3**	**+0.1**
	0.3nm,0.6s,baz=289,slow=12,SNR=2.5							
ASAR	**Alice Springs**	**28.23**	**126**	P		**P**	**12 19 07.9**	**+0.8**
	0.4nm,0.5s,baz=305,slow=9.2,SNR=6.5							
H08S2	**Diego Garcia H**	**36.26**	**268**	T		T	12 58 42.2	
	baz=93,slow=76,SNR=3.8							
H08S3	**Diego Garcia H**	**36.27**	**268**	T		T	12 58 43.2	
	baz=93,slow=76,SNR=2.8							
H08S1	**Diego Carcia H**	**36.28**	**268**	T		T	12 58 44.0	
	baz=93,slow=76,SNR=3.0							
STKA	**Stephens Creek**	**39.22**	**132**	P		**P**	**12 20 34.2**	**+0.4**
	0.9nm,0.8s,baz=323,slow=14,SNR=2.8							
MKAR	**Makanchi Array**	**59.84**	**339**	P		**P**	**12 23 17.4**	**-1.8**
	0.1nm,0.4s,baz=165,slow=6.0,SNR=1.6							

*NEIC **25** 12:21:03.0±2.8, 4°.20S±0°.08×142°.08E±0°.08, h35km±2km, mb4.2/8, Error ellipse: s-maj=15.8km s-min=10.2km az=222.0*
*IDC **25** 12:21:05.8±1.5, 4°.10S×142°.01E, h76km±15km, mb3.5/4, mb1 3.8/6, mb1mx3.4/30, mbtmp4.0/6, MS2.7/2, Ms1 2.7/2, ms1mx2.5/35, Error ellipse: s-maj=26.9km s-min=11.5km az=57.0*
*DJA **25** 12:21:05.3±0.5, 4°S±6°×14°2E±°, h85km±12km, M4.4/6, mb4.3/6, MLv4.5/6*
ISC 25 12:21:04.9±0.9, **3°.99S**±0°.07×**142°.10E**±0°.07, **h109**km, **n26**, σ1§**80**/31, **mb3.6**/4, **Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
JAY	**Jayapura**	**2.02**	**317**	P		**Pn**	**12 21 37.2**	**-0.9**
	13nm,0.3s,baz=148,slow=11,SNR=134							
JAY				S		**Sn**	**12 22 03.7**	**+0.2**
	59nm,0.3s,baz=300,slow=17,SNR=16							
JAY				LR		LR	12 22 23.4	
	comp=Z,136nm,18.6s,baz=104,slow=38							
JAY	**Jayapura**	**2.02**	**317**	P		**Pn**	**12 21 37.4**	**-0.7**
JAY				S		**Sn**	**12 22 02.8**	**-0.7**
GENI	**Genyem**	**2.37**	**306**	P		**Pn**	**12 21 42.0**	**-0.6**
GENI				S		**Sn**	**12 22 09.9**	**-1.7**
SMPI	**Sarmi**	**3.92**	**300**	P		**Pn**	**12 22 03.1**	**-0.1**
MMPI	**Merauke**	**4.76**	**201**	P		**Pn**	**12 22 12.6**	**-1.9**
PMG	**Port Moresby**	**7.36**	**137**	P		**Pn**	**12 22 51.5**	**+1.7**
	1.6nm,0.3s,baz=339,slow=6.0,SNR=5.7							
PMG				S		**Sn**	**12 24 12.5**	**+0.7**
	1.7nm,0.3s,baz=97,slow=22,SNR=2.5							
PMG	**Port Moresby**	**7.36**	**137**			**Pn**	**12 22 47.0**	**-2.7**
FAKI	**Fak Fak**	**9.89**	**276**	P		**Pn**	**12 23 23.7**	**-0.3**
	14nm,0.6s							
FAKI	**Fak Fak**	**9.89**	**276**	Pn		**Pn**	**12 23 23.6**	**-0.5**
FAKI				Sn		**Sn**	**12 25 12.1**	**-1.1**
COEN	**Coen**	**9.96**	**174**	Pn		**Pn**	**12 23 22.6**	**-2.4**
RABL	**Rabaul**	**10.04**	**91**	Pn		**Pn**	**12 23 25.4**	**-0.8**
SIJI	**Sorong**	**11.25**	**286**	LR		LR	12 28 29.5	
	comp=Z,56nm,21.1s,baz=232,slow=40							
MTN	**Manton Dam**	**13.95**	**230**			**Pn**	**12 24 16.4**	**-1.6**
WB0	**Warramunga Arr**	**17.39**	**205**	Pn		**P**	**12 24 59.3**	**-1.2**
WR0	**Warramunga Arr**	**17.50**	**204**	P		**P**	**12 25 01.0**	**-0.7**
WR0				IAmb		IAmb	12 25 03.7	
	comp=Z,30nm,0.8s							
KNRA	**Kununurra**	**17.52**	**228**	P		**Pn**	**12 25 02.2**	**-0.1**
WRAB	**Tennant Creek**	**17.55**	**205**	P		**P**	**12 25 01.0**	**-1.3**
WRAB				IAmb		IAmb	12 25 06.3	
	comp=Z,9.4nm,0.7s							
WB2	**Warramunga Arr**	**17.56**	**205**	P		**P**	**12 25 01.3**	**-1.1**
WB2				IAmb		IAmb	12 25 08.5	
	comp=Z,33nm,1.4s							
WRA	**Warramunga Arr**	**17.57**	**205**	P		**P**	**12 25 00.8**	**-1.6**
	comp=Z,0.7nm,0.3s,baz=24,slow=12,SNR=26							
WRA				S		**Sn**	**12 28 14.6**	**-4.3**
	baz=8.9,slow=20,SNR=1.0							
AS31	**Alice Springs**	**21.10**	**201**	P		**P**	**12 25 43.9**	**+3.1**
ASAR	**Alice Springs**	**21.10**	**201**	P		**P**	**12 25 42.6**	**+1.8**
	comp=Z,16nm,0.8s,baz=30,slow=10,SNR=118							
ASAR				S		**S**	**12 29 29.9**	**+0.3**
	comp=Z,1.0nm,1.1s,baz=14,slow=27,SNR=2.5							
FITZ	**Fitzroy Crossi**	**21.35**	**228**			**P**	**12 25 45.3**	**+1.8**
	comp=Z,3.2nm,0.7s,baz=61,slow=7.4,SNR=12							
FITZ				S		**S**	**12 29 35.4**	**+0.8**
	comp=Z,2.1nm,0.5s,baz=91,slow=18,SNR=4.6							
FITZ	**Fitzroy Crossi**	**21.35**	**228**	P		**P**	**12 25 45.5**	**+2.0**
FITZ				IAmb		IAmb	12 25 51.4	
	comp=Z,7.5nm,0.9s							
MORW	**Morawa**	**35.11**	**222**	P		**P**	**12 27 51.8**	**+3.8**
MKAR	**Makanchi Array**	**72.87**	**322**	P		P	12 32 27.1	+5.0
	comp=Z,0.4nm,0.9s,baz=114,slow=7.0,SNR=5.4							
ILAR	**Eielson Array**	**85.61**	**24**	P		P	12 33 35.4	+4.5
	comp=Z,0.3nm,0.7s,baz=257,slow=4.3,SNR=4.6							

*ISK **25** 12:22:51.4, 34°.24N×35°.65E, h2km, ML3.7/9*
*IDC **25** 12:22:52.5±1.2, 34°.22N×35°.59E, h0km, mb3.7/5, mb1 3.9/8, mb1mx3.5/39, mbtmp3.7/8, ML3.6/3, MS2.7/2, Ms1 2.7/2, ms1mx2.3/38, Error ellipse: s-maj=31.7km s-min=10.6km az=83.0*
*GII **25** 12:22:54.4±0.0, 34°.18N×35°.46E, h8km, mb4.0/5, MD3.9/5, Mm3.5/14*
*NIC **25** 12:22:55.1±0.0, 34°.18N×35°.55E, h25km±2km, MlI4.2/5*
*NEIC **25** 12:22:55.9±2.2, 34°.15N±0°.04×35°.47E±0°.04, h22km±6km, mb3.8/9, Md4.1(GRAL), Error ellipse: s-maj=5.8km s-min=4.6km az=167.0*
*GRAL **25** 12:22:55.9±0.6, 34°.20N×35°.59E, h15km±5km, MD4.2*
*HLW **25** 12:23:06.0, 33°.60N×35°.18E, h23km±32km, Ml4.1*
ISC 25 12:22:54.5±1.1, **34°.18N**±0°.02×**35°.49E**±0°.04, **h12**km±8km, **n134**, σ1§**22**/153, **mb3.8**/10, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
BEYL	**Beirut**	**0.31**	**179**	*e*P		**Pb**	**12 23 02.7**	**+0.8**
BEYL	**Beirut**	**0.31**	**179**			**Pb**	**12 23 02.7**	**+0.8**
BHL	**Bhannes**	**0.31**	**153**	*e*P		**Pb**	**12 23 01.8**	**-0.1**
BHL				*e*S		**Sb**	**12 23 06.3**	**-0.7**
BHL	**Bhannes**	**0.31**	**153**			**Pb**	**12 23 01.8**	**-0.1**
BHL						**Sb**	**12 23 06.5**	**-0.5**
HWQ	**Hawqa**	**0.39**	**76**	*e*P		**Pg**	**12 23 02.1**	**-0.2**
HWQ				*e*S		**Sg**	**12 23 07.4**	**-0.3**
HWQ	**Hawqa**	**0.39**	**76**			**Pg**	**12 23 02.1**	**-0.2**
DQRL	**Deir Qamar**	**0.48**	**172**	*e*P		**Pg**	**12 23 04.9**	**+1.0**
DQRL				*e*S		**Sb**	**12 23 11.7**	**-0.2**
QRWL	**Qaraoun**	**0.65**	**165**	*e*P		**Pg**	**12 23 07.4**	**+0.3**
RCY	**Rachaya**	**0.74**	**157**	*e*P		**Pg**	**12 23 08.6**	**-0.2**
RCY				*e*S		**Sg**	**12 23 18.4**	**-0.3**
SHBL	**Chebaa**	**0.86**	**165**	*e*P		**Pg**	**12 23 10.7**	**-0.4**
SHBL				*e*S		**Sg**	**12 23 22.1**	**-0.3**
NATI	**Neve Ativ**	**0.94**	**167**	P		**Pb**	**12 23 11.9**	**-0.8**
NATI	**Neve Ativ**	**0.94**	**167**	Pg		**Pb**	**12 23 11.9**	**-0.8**
NATI				Sg		**Sb**	**12 23 24.6**	**-0.4**
GEM	**Giv'at Ha'Em**	**0.98**	**171**	P		**Pb**	**12 23 13.0**	**-0.3**
GEM	**Giv'at Ha'Em**	**0.98**	**171**	Pg		**Pb**	**12 23 12.7**	**-0.6**
GEM				Sg		**Sb**	**12 23 25.3**	**-0.9**
KSDI	**Kefar Szold**	**1.00**	**172**	P		**Pb**	**12 23 13.0**	**-0.6**
KSDI	**Kefar Szold**	**1.00**	**172**	Pg		**Pb**	**12 23 12.9**	**-0.6**
KSDI				Sg		**Sb**	**12 23 26.1**	**-0.6**
KSDI	**Kefar Szold**	**1.00**	**172**	P		**Pb**	**12 23 13.1**	**-0.6**
KSDI				S		**Sb**	**12 23 26.6**	**-0.1**
HNTI	**Hanita**	**1.12**	**193**	P		**Pb**	**12 23 14.8**	**-1.1**
HNTI	**Hanita**	**1.12**	**193**	Pg		**Pb**	**12 23 14.7**	**-1.1**
HNTI				Sg		**Sb**	**12 23 31.2**	**+0.8**
MMA0B	**Mount Meron ar**	**1.16**	**183**	Pg		**Pn**	**12 23 15.9**	**-0.7**
MMA0B				Sg		**Sb**	**12 23 31.5**	**-0.1**
MMAI	**Mount Meron Ar**	**1.16**	**183**	Pg		**Pn**	**12 23 15.9**	**-0.7**
	2μm,0.3s,baz=19,slow=16,SNR=1883							
MMAI				Lg		Lg	12 23 31.8	
	1μm,0.3s,baz=12,slow=29,SNR=6.7							
PARAL	**Paralimni**	**1.44**	**305**	P		**Pn**	**12 23 20.4**	**+0.1**
PARAL				S		**Sn**	**12 23 39.3**	**+0.1**
PARAL				AML		AML	12 23 41.3	
	2.0nm,0.5s							
PARAL				AML		AML	12 23 41.3	
	2.0nm,0.5s							
PARAL				AML		AML	12 23 44.0	
	2.1nm,0.6s							
PARAL				AML		AML	12 23 44.0	
	2.1nm,0.6s							
BLGI	**Bet Lehem HaGe**	**1.46**	**190**	P		**Pn**	**12 23 19.9**	**-0.8**
BLGI	**Bet Lehem HaGe**	**1.46**	**190**	Pn		**Pn**	**12 23 20.1**	**-0.6**
BLGI				Sn		**Sn**	**12 23 40.4**	**+0.7**
SHMJ	**Saham**	**1.47**	**171**	P		**Pn**	**12 23 20.5**	**-0.2**
OFRI	**`Ofer**	**1.61**	**195**	P		**Pn**	**12 23 22.0**	**-0.8**
OFRI	**`Ofer**	**1.61**	**195**	Pn		**Pn**	**12 23 21.9**	**-0.8**
EREN	**Erenkoy**	**1.72**	**299**	PN		**Pn**	**12 23 24.7**	**+0.4**
MMLI	**Mount Malkishu**	**1.74**	**182**	PN		**Pn**	**12 23 24.5**	**0.0**
MMLI				SN		**Sb**	**12 23 48.7**	**+0.6**
MMLI	**Mount Malkishu**	**1.74**	**182**	P		**Pn**	**12 23 24.3**	**-0.2**
MMLI	**Mount Malkishu**	**1.74**	**182**	Pn		**Pn**	**12 23 23.9**	**-0.6**
MMLI	**Mount Malkishu**	**1.74**	**182**	P		**Pn**	**12 23 23.9**	**-0.6**
MVOU	**Mavrovouni**	**1.74**	**299**	P		**Pn**	**12 23 24.1**	**-0.4**
MVOU						AML	12 23 48.6	
	1.0nm,0.4s							
MVOU						AML	12 23 53.5	
	1.0nm,0.4s							
QRNJ	**Al-Qirein**	**1.84**	**178**	P		**Pn**	**12 23 26.2**	**+0.4**
QRNJ	**Al-Qirein**	**1.84**	**178**	Pn		**Pn**	**12 23 25.8**	**0.0**
YAYL	**Yayladag**	**1.92**	**15**	PN		**Pn**	**12 23 25.5**	**-1.5**
HMDT	**Nahal Hemdat**	**1.92**	**179**	Pn		**Pn**	**12 23 26.5**	**-0.5**
CSS	**Mathiatis**	**1.94**	**294**	PN		**Pn**	**12 23 28.2**	**+0.9**
CSS	**Mathiatis**	**1.94**	**294**	P		**Pn**	**12 23 27.3**	**+0.1**
CSS	**Mathiatis**	**1.94**	**294**	Pn		**Pn**	**12 23 27.0**	**-0.3**
CSS				Sn		**Sn**	**12 23 50.8**	**-0.8**
CSS	**Mathiatis**	**1.94**	**294**	P		**Pn**	**12 23 27.5**	**+0.2**
CSS				S		**Sn**	**12 23 51.2**	**-0.4**
CSS	**Mathiatis**	**1.94**	**294**			**Pn**	**12 23 27.4**	**+0.1**
ASGA	**Asgata**	**1.94**	**289**	P		**Pn**	**12 23 27.0**	**-0.3**
ASGA				S		**Sn**	**12 23 51.3**	**-0.3**
ASGA				AML		AML	12 23 52.5	
	1.9nm,0.4s							
ASGA				AML		AML	12 23 52.5	
	1.9nm,0.4s							
ASGA				AML		AML	12 23 54.5	
	2.7nm,0.3s							
ASGA				AML		AML	12 23 54.5	
	2.7nm,0.3s							
ATHAL	**Athalassa**	**1.97**	**300**	S		**Sn**	**12 23 52.0**	**-0.3**
SLTI	**Sal'it**	**1.97**	**191**	P		**Pn**	**12 23 27.5**	**-0.1**
HSUJ	**Al Zarqa**	**2.15**	**164**	P		**Pn**	**12 23 31.1**	**+0.9**
UJAP	**Al Uja**	**2.22**	**180**	P		**Pn**	**12 23 33.4**	**-1.1**
SZAC	**Souni**	**2.23**	**286**	P		**Pn**	**12 23 31.2**	**0.0**
SZAC				S		**Sn**	**12 23 58.3**	**-0.3**
SZAC				AML		AML	12 23 59.6	
	7.7nm,0.6s							
SZAC				AML		AML	12 23 59.6	
	7.7nm,0.6s							
SZAC				AML		AML	12 24 02.7	
	9.4nm,0.3s							
SZAC				AML		AML	12 24 02.7	
	9.4nm,0.3s							
TAHT	**Tahtakopru-Hat**	**2.26**	**14**	PN		**Pn**	**12 23 29.7**	**-2.0**
ASF	**Jabal al Asfar**	**2.33**	**149**	Pn		**Pn**	**12 23 32.7**	**+0.1**
	20nm,0.3s,baz=294,slow=6.9,SNR=66							
ASF						Sn	**12 24 01.0**	**-0.2**
	40nm,0.3s,baz=341,slow=21,SNR=22							
ASF	**Jabal al Asfar**	**2.33**	**149**	P		**Pn**	**12 23 32.3**	**-0.3**
LEF	**Lefka**	**2.33**	**294**	PN		**Pn**	**12 23 34.1**	**+1.5**
AKDN	**Akdeniz- Kıbrı**	**2.35**	**299**	PN		**Pn**	**12 23 34.1**	**+1.2**
KRTS	**Karatas**	**2.39**	**358**	PN		**Pn**	**12 23 32.1**	**-1.3**
TISA	**Tisan-Mersin**	**2.47**	**324**	PN		**Pn**	**12 23 34.8**	**+0.3**
KARG	**Kargicak-Mersi**	**2.49**	**325**	PN		**Pn**	**12 23 35.3**	**+0.5**
YESI	**Yesilovacik-Me**	**2.51**	**324**	PN		**Pn**	**12 23 34.8**	**-0.3**
AKK2	**Akkuyu-Mersin**	**2.52**	**321**	PN		**Pn**	**12 23 34.1**	**-1.0**
AKK1	**Akkuyu-Mersin**	**2.52**	**321**	PN		**Pn**	**12 23 35.1**	**+0.3**
IKL	**Isikli**	**2.53**	**325**	PN		**Pn**	**12 23 35.3**	**0.0**
SILI	**Silifke-Mersin**	**2.53**	**330**	PN		**Pn**	**12 23 35.7**	**+0.4**
AKKU	**Akkuyu-Mersin**	**2.53**	**322**	PN		**Pn**	**12 23 35.5**	**+0.2**
SLFK	**Silif

GERES	**GERESS Array B**	**21.82**	**319**	P	**P**	**12**	**27**	**46.0 -0.5**
	comp=Z,3.3nm,0.5s,baz=118,slow=8.6,SNR=26							
FUORN	**Ofenpass-Fuorn**	**22.77**	**311**	P	**P**	**12**	**27**	**58.7 +1.8**
FUORN				IAmb	IAmb	12	28	06.2
	comp=Z,4.3nm,1.1s							
CLL	**Collm**	**23.63**	**323**	*eP*	**P**	**12**	**28**	**06.0 +0.7**
CLL				*e*PPP	PPP	12	28	43.0
SENIN	**Lac Senin/Sane**	**24.57**	**308**	P	**P**	**12**	**28**	**13.8 -0.6**
SENIN				IAmb	IAmb	12	28	26.0
	comp=Z,3.8nm,1.1s							
BNI	**Bardonecchia**	**24.58**	**305**	P	**P**	**12**	**28**	**14.8 +0.4**
BNI				IAmb	IAmb	12	28	17.7
	comp=Z,3.2nm,1.2s							
ECH	**Echery**	**25.34**	**312**	P	**P**	**12**	**28**	**20.6 -0.4**
FINES	**FINESS Array B**	**27.94**	**350**	P	**P**	**12**	**28**	**43.2 -1.2**
	comp=Z,1.2nm,0.9s,baz=156,slow=10,SNR=4.2							
KK31	**Karatay Array**	**28.60**	**61**	P	**P**	**12**	**28**	**52.5 +2.0**
NOA	**NORSAR Array B**	**31.09**	**337**	P	**P**	**12**	**29**	**14.1 +1.7**
	comp=Z,0.7nm,0.8s,baz=143,slow=11,SNR=2.4							
ESDC	**Sonseca Array**	**31.82**	**292**	P	**P**	**12**	**29**	**19.7 +0.7**
	comp=Z,0.8nm,0.9s,baz=81,slow=9.4,SNR=5.4							
KMBO	**Kilima Mbogo**	**35.16**	**177**	LR	LR	12	46	00.5
	comp=Z,35nm,18.9s,baz=94,slow=39							
YKA	**Yellowknife Ar**	**80.70**	**346**	P	**P**	**12**	**35**	**06.0 -1.0**
	comp=Z,0.4nm,0.9s,baz=30,slow=5.7,SNR=4.2							

MEX 25 12:25:01.0±0.5,**15.25N**×**93.92W**,**h16**km±550km,**MD3.8,**
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.81**	**56**	*e*P	Pb	12 25 13.8	-2.9
PCIG				*i* S	Sb	12 25 24.0	-3.5

*NEIC **25** 12:33:42.1±2.9,29.77N±0.06×105.70W±0.04,h12km±5km, ML3.1/22, Error ellipse: s-maj=8.3km s-min=4.6km az=195.0*
*MEX **25** 12:33:42.2±1.0,29.66N×105.36W,h10km,MD4.1*
ISC 25 12:33:41.2±0.9,**29.80N**±0.07×**105.63W**±0.04,**h10**km,**n36,** σ1**9**67/40,**Chihuahua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TX31	**Lajitas Ar. Si**	**1.77**	**105**		**Pg**	**12 34 13.9**	**-1.2**
TX31				Sn	**Sg**	**12 34 39.0**	**+0.8**
TX32	**Lajitas Array**	**1.77**	**105**		**Pg**	**12 34 14.0**	**-1.2**
TX32				Sn	**Sg**	**12 34 38.3**	**+0.2**
MNTX	**Cornudas Mount**	**1.90**	**6**	*e*P	**Pn**	**12 34 13.5**	**-0.2**
MNTX				*e*S	**Sn**	**12 34 37.8**	**0.0**
MNTX	**Cornudas Mount**	**1.90**	**6**		**Pn**	**12 34 13.5**	**-0.2**
MNTX	**Cornudas Mount**	**1.90**	**6**	IAML		12 34 42.4	
	198nm,0.4s						
CGIG		**2.11**	**286**	*e*P	**Pn**	**12 34 18.4**	**+1.6**
	baz=2.7						
CGIG				*i* S	**Sb**	**12 34 46.4**	**+0.3**
CGIG		**2.11**	**286**		**Sb**	**12 34 46.4**	**+0.3**
GDL2	**Guadalupe Moun**	**2.62**	**24**		**Pn**	**12 34 25.8**	**+2.0**
HPIG		**2.86**	**181**		**Pn**	**12 34 28.1**	**+1.1**
HPIG				IAML		12 35 12.5	
	comp=E,56nm,0.7s						
HPIG				IAML		12 35 15.1	
	comp=N,48nm,0.4s						
CLNB	**Carlsbad**	**2.88**	**31**		**Pn**	**12 34 29.8**	**+2.6**
121A	**Cookes Peak, D**	**3.29**	**326**	*e*P	**Pn**	**12 34 32.6**	**-0.4**
121A				*i* S	**Sn**	**12 35 11.7**	**-0.5**
121A	**Cookes Peak, D**	**3.29**	**326**		**Pn**	**12 34 32.5**	**-0.4**
121A				IAML		12 35 12.1	
	comp=N,57nm,0.5s						
121A				IAML		12 35 31.0	
	comp=E,54nm,0.5s						
319A	**Douglas**	**3.52**	**297**		**Pn**	**12 34 34.9**	**-1.2**
CPRX	**Cap Rock**	**3.55**	**25**		**Pb**	**12 34 46.0**	**+1.8**
Y22D	**IRIS PASSCAL I**	**4.40**	**346**	Pn	**Pn**	**12 34 49.1**	**+1.0**
Y22D				IAML		12 36 23.2	
	comp=N,50nm,1.2s						
BNM	**Barren Site**	**4.42**	**349**		**Pn**	**12 34 48.8**	**+0.3**
LENM	**Lemitar**	**4.50**	**346**		**Pn**	**12 34 47.6**	**-1.9**
HSIG		**4.71**	**262**	Pn	**Pn**	**12 34 50.9**	**-1.4**
HSIG				IAML		12 36 10.6	
	comp=N,19nm,0.7s						
MSTX	**Muleshoe**	**4.81**	**30**		**Pn**	**12 34 55.4**	**+1.6**
TUC	**Tucson**	**5.08**	**301**	*e*P	**Pb**	**12 35 11.6**	**+1.4**
TUC				*e*S	**Sb**	**12 36 14.4**	**+3.0**
TUC	**Tucson**	**5.08**	**301**	Pn	**Pn**	**12 34 56.1**	**-1.4**
JCT	**Junction City**	**5.09**	**81**	*e*P	Pn	12 34 49.9	-7.7
JCT	**Junction City**	**5.09**	**81**	Pn	**Pn**	**12 35 01.0**	**+3.4**
ANMO	**Albuquerque**	**5.17**	**352**	Pn	**Pn**	**12 34 59.2**	**+0.4**
ANMO				IAML		12 36 36.4	
	comp=N,6.4nm,2.8s						
ABTX	**Abilene, Hawle**	**5.85**	**60**	Pn	**Pn**	**12 35 09.7**	**+1.8**
X18A	**Snowflake**	**5.97**	**323**	Pn	**Pn**	**12 35 10.0**	**+0.2**
AMTX	**Amarillo**	**6.07**	**32**		**Pn**	**12 35 11.2**	**+0.2**
214A	**Organ Pipe Nat**	**6.54**	**291**	Pn	**Pn**	**12 35 16.6**	**-0.8**
X16A	**Lo Mia Camp, P**	**6.74**	**315**		**Pn**	**12 35 20.2**	**-0.2**
WHTX	**Lake Whitney,**	**7.35**	**71**		**Pg**	**12 35 57.3**	**-4.7**
WMOK	**Wichita Mounta**	**7.60**	**48**		**Pn**	**12 35 32.8**	**+0.8**
MVCO	**Mesa Verde**	**7.77**	**343**	Pn	**Pn**	**12 35 36.0**	**+1.5**
PV13	**Radium Mtn., P**	**8.74**	**343**	Pn	**Pn**	**12 35 49.6**	**+1.6**
PV23	**Carpenter Ridg**	**9.07**	**343**	Pn	**Pn**	**12 35 55.6**	**+3.1**
X37A	**Clayton**	**9.91**	**59**	Pn	**Pn**	**12 36 04.4**	**+0.7**
PAGB	**Antelope Grade**	**13.64**	**299**	Pn	**Pn**	**12 36 52.8**	**-2.0**

*IDC **25** 12:35:06.5±0.9, 15.17S×173.68W, h0km, mb4.0/8, mb1 4.3/8, mb1mx3.9/52, mbtmp4.0/8, Error ellipse: s-maj=51.2km s-min=19.7km az=140.0*
*NEIC **25** 12:35:07.2±2.9, 15.03S±0.06×173.52W±0.10, h10km±1km, mb4.3/6, Error ellipse: s-maj=18.9km s-min=4.3km az=301.0*
ISC 25 12:35:07.7±0.6,**15.04S**±0.09×**173.4W**±0.1,**h10**km,**n26,** σ1**9**95/21,**mb4.1**/11,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.96**	**55**		**Pn**	**12 35 41.4**	**+0.2**
AFI				Sn	**Sn**	**12 36 01.1**	**-4.8**
NIUE	**Niue**	**5.24**	**141**	Pn	**Pn**	**12 36 26.0**	**-0.2**
KNTN	**Kanton**	**12.30**	**8**	Pn	**Pn**	**12 38 01.9**	**-1.2**
URZ	**Urewera**	**24.59**	**198**	P	**P**	**12 40 26.4**	**-1.7**
	14nm,0.9s,baz=332,slow=18,SNR=3.5						
TUWZ	**Tuamarina**	**28.48**	**200**	P	**P**	**12 41 01.9**	**-1.1**
H11S2	**WAKE ISLAND Hy**	**38.63**	**329**	T	T	13 23 11.0	
	baz=146,slow=76,SNR=5.9						
H11S3	**WAKE ISLAND Hy**	**38.65**	**329**	T	T	13 23 14.5	
	baz=146,slow=76,SNR=5.3						
H11S1	**WAKE ISLAND Hy**	**38.65**	**329**	T	T	13 23 19.5	
	baz=146,slow=76,SNR=6.2						
H11N3	**WAKE ISLAND Hy**	**39.58**	**330**	T	T	13 25 03.3	
	baz=150						
H11N1	**WAKE ISLAND Hy**	**39.58**	**330**	T	T	13 25 06.0	
	baz=150,SNR=3.0						
H11N2	**WAKE ISLAND Hy**	**39.59**	**330**	T	T	13 24 55.4	
	baz=150						
WRAB	**Tennant Creek**	**49.88**	**256**	P	**P**	**12 44 00.1**	**-1.6**
WRAB				IAmb	IAmb	12 44 14.8	
	comp=Z,6.5nm,1.4s						
WRA	**Warramunga Arr**	**49.89**	**256**	P	**P**	**12 44 00.1**	**-1.7**
	comp=Z,0.6nm,0.5s,baz=99,slow=5.7,SNR=42						
AS31	**Alice Springs**	**50.18**	**252**	P	**P**	**12 44 02.3**	**-1.7**
ASAR	**Alice Springs**	**50.18**	**252**	P	**P**	**12 44 02.1**	**-1.9**
	comp=Z,2.8nm,0.6s,baz=88,slow=8.0,SNR=68						
FAKI	**Fak Fak**	**54.83**	**277**	P	**P**	**12 44 37.7**	**-0.9**
YBH	**Yreka Blue Hor**	**73.34**	**37**	P	**P**	**12 46 41.8**	**+2.0**
	comp=Z,2.1nm,0.8s,baz=21,slow=2.1,SNR=5.5						
YBH	**Yreka Blue Hor**	**73.34**	**37**	P	**P**	**12 46 42.9**	**+3.1**
YBH				IAmb	IAmb	12 46 43.0	
	comp=Z,2.7nm,0.9s						
NVAR	**Mina Array Bea**	**74.09**	**42**	P	**P**	**12 46 46.9**	**+2.4**
	comp=Z,0.9nm,0.7s,baz=230,slow=11,SNR=8.9						
QSPA	**South Pole Qui**	**75.00**	**180**	P	**P**	**12 46 50.2**	**+1.0**
QSPA				IAmb	IAmb	12 46 56.9	
	comp=Z,4.7nm,1.4s						
TXAR	**Lajitas Array**	**80.45**	**56**	P	**P**	**12 47 22.1**	**+1.8**
	comp=Z,0.6nm,1.1s,baz=208,slow=7.0,SNR=3.5						
CCB	**Clear Creek Bu**	**81.82**	**11**	P	**P**	**12 47 27.7**	**+1.2**
CCB				IAmb	IAmb	12 47 28.4	
	comp=Z,1.5nm,0.8s						
ILAR	**Eielson Array**	**82.10**	**11**	P	**P**	**12 47 28.4**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=230,slow=6.6,SNR=7.4						
YKA	**Yellowknife Ar**	**89.78**	**23**	P	**P**	**12 48 07.0**	**+0.9**
	comp=Z,0.3nm,0.8s,baz=234,slow=4.3,SNR=6.5						
GERES	**GERESS Array B**	**145.78**	**352**	PKPbc	**PKPab**	**12 54 48.4**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=12,slow=5.0,SNR=1.9						
BRTR	**Keskin Array B**	**145.85**	**321**	PKPbc	**PKPab**	**12 54 48.5**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=116,slow=2.1,SNR=3.3						

*ATH **25** 12:39:39.8, 40.24N×25.23E, h31km±1km, ML2.4/9, Error ellipse: s-maj=1.4km s-min=0.8km az=65.0*
*THE **25** 12:39:39.6, 40.28N×25.36E, h11km±1km, ML2.2/5, Error ellipse: s-maj=1.1km s-min=0.5km az=32.0*
*ISK **25** 12:39:41.9, 40.39N×25.90E, h21km, ML2.5/13*
*DDA **25** 12:39:42.5, 40.38N×25.96E, h18km±3km, ML2.5*
ISC 25 12:39:39.5±0.9,**40.34N**±0.02×**25.46E**±0.02,**h28**km±6km, **n60,** σ1**9**92/90,**3C-1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMTH	**Samothraki Isl**	**0.14**	**23**	P	**Pb**	**12 39 44.4**	**-0.6**
SMTH				S	**Pn**	**12 39 47.9**	**+2.0**
	490nm,0.3s						
SMTH	**Samothraki Isl**	**0.14**	**23**	P	**Pn**	**12 39 47.9**	**+2.0**
SMTH				S	**Sb**	**12 39 54.4**	**+5.6**
SMTH				AML	AML	12 39 55.4	
	comp=N,1601μm,0.1s						
SMTH				AML	AML	12 39 55.5	
	comp=E,1252μm,0.1s						
GADA	**Gvkgeada**	**0.37**	**114**	P	**Pb**	**12 39 48.0**	**+0.3**
GADA	**Gvkgeada**	**0.37**	**114**	PG	**Pb**	**12 39 48.1**	**+0.3**
GADA				SG	**Sb**	**12 39 51.5**	**-1.9**
LIA	**Limnos Island**	**0.49**	**206**	P	**Pb**	**12 39 47.8**	**-1.8**
LIA				S	**Sb**	**12 39 53.6**	**-2.9**
	comp=E,715nm,0.3s						
LIA	**Limnos Island**	**0.49**	**206**	P	**Pb**	**12 39 47.8**	**-1.8**
LIA				S	**Sb**	**12 39 53.5**	**-3.1**
LIA				AML	AML	12 39 53.9	
	comp=N,1104μm,0.2s						
LIA				AML	AML	12 39 53.9	
	comp=E,1042μm,0.2s						
THAS	**Thassos island**	**0.62**	**296**	P	**Pb**	**12 39 51.0**	**-0.9**
THAS				S	**Sb**	**12 39 59.4**	**-0.9**
	comp=E,162nm,0.4s						
THAS	**Thassos island**	**0.62**	**296**	P	**Pb**	**12 39 50.9**	**-0.9**
THAS				S	**Sb**	**12 39 59.0**	**-1.3**
THAS				AML	AML	12 40 01.2	
	comp=E,504μm,0.1s						
THAS				AML	AML	12 40 01.4	
	comp=N,856μm,0.2s						
ENEZ	**Enez**	**0.66**	**53**	PG	**Pb**	**12 39 50.8**	**-1.7**
ENEZ				SG	**Sb**	**12 39 57.5**	**-3.9**
BOZC	**Bozcaada**	**0.67**	**137**	PG	**Pb**	**12 39 52.9**	**+0.2**
BOZC				SG	**Sb**	**12 40 01.9**	**+0.2**
BOZC	**Bozcaada**	**0.67**	**137**	*i* P	**Pb**	**12 39 53.0**	**+0.2**
BOZC				*i* S	**Sb**	**12 40 01.6**	**-0.1**
BOZC				IAML		12 40 02.0	
	comp=N,169nm,0.2s						
BOZC				IAML		12 40 08.0	
	comp=E,211nm,0.3s						
GELI	**Tayfur-Gelibol**	**0.78**	**85**	PG	**Pb**	**12 39 51.3**	**-3.2**
GELI				SG	**Sb**	**12 39 58.1**	**-6.6**
RDO	**Rodhopi**	**0.81**	**4**	P	**Pn**	**12 39 56.3**	**+1.3**
RDO	**Rodhopi**	**0.81**	**4**	P	**Pn**	**12 39 56.8**	**+1.8**
RDO	**Rodhopi**	**0.81**	**4**	PG	**Pn**	**12 39 57.7**	**+2.7**
EZN	**Ezine**	**0.84**	**127**	P	**Pb**	**12 39 55.6**	**+0.1**
EZN	**Ezine**	**0.84**	**127**	PG	**Pb**	**12 39 55.2**	**-0.3**
EZN				SG	**Sb**	**12 40 04.1**	**-2.3**
ERIK	**Erikli-Kesan**	**0.87**	**67**	PG	**Pb**	**12 39 52.9**	**-3.1**
EFSA	**Agios Efstrati**	**0.88**	**205**	P	**Pb**	**12 39 55.2**	**-0.9**
EFSA				S	**Sb**	**12 40 05.3**	**-2.2**
EFSA				AML	AML	12 40 08.7	
	comp=E,616μm,0.4s						
EFSA				AML	AML	12 40 08.7	
	comp=N,691μm,0.3s						
KAVA	**Kavala**	**0.97**	**313**	P	**Pn**	**12 39 57.7**	**+0.4**
KAVA	**Kavala**	**0.97**	**313**	P	**Pn**	**12 39 57.8**	**+0.5**
KAVA				S	**Sn**	**12 40 10.8**	**+0.7**
KAVA				AML	AML	12 40 13.0	
	comp=N,208μm,0.2s						
KAVA				AML	AML	12 40 14.0	
	comp=E,269μm,0.3s						
LPK	**Lapseki**	**0.99**	**88**	PG	**Pn**	**12 39 55.6**	**-2.0**
KVLA	**Kavala**	**1.01**	**307**	P	**Pn**	**12 39 58.3**	**+0.5**
KVLA				S	**Sn**	**12 40 12.0**	**+0.9**
BAYC	**CANAKKALE_Bayr**	**1.03**	**125**	*i* P	**Pn**	**12 39 58.6**	**+0.6**
BAYC				*i* S	**Sb**	**12 40 09.1**	**-2.7**
BAYC				IAML		12 40 14.0	
	comp=N,146nm,0.2s						
BAYC				IAML		12 40 15.0	
	comp=E,98nm,0.3s						
KESN	**Edirne-Kesan**	**1.05**	**62**	*i* P	**Pn**	**12 39 56.1**	**-2.6**
KESN				*i* S	**Sb**	**12 40 06.3**	**-6.5**
KESN				IAML		12 40 10.0	
	comp=N,315nm,0.1s						
KESN				IAML		12 40 12.0	
	comp=E,349nm,0.2s						
OUR	**Ouranopolis**	**1.13**	**270**	P	**Pn**	**12 39 59.0**	**-0.4**
OUR				S	**Sb**	**12 40 14.2**	**-0.5**
	comp=E,185nm,0.4s						
OUR	**Ouranopolis**	**1.13**	**270**	P	**Pn**	**12 39 58.7**	**-0.7**
OUR				S	**Sn**	**12 40 12.0**	**-2.0**
OUR				AML	AML	12 40 15.8	
	comp=E,345μm,0.4s						
OUR				AML	AML	12 40 16.1	
	comp=N,395μm,0.3s						
SIGR	**SIGRI**	**1.17**	**165**	P	**Pb**	**12 40 00.8**	**-0.2**
SIGR				S	**Sb**	**12 40 16.8**	**+1.1**
	comp=N,125nm,0.5s						
SIGR	**SIGRI**	**1.17**	**165**	P	**Pb**	**12 40 01.0**	**-0.1**
SIGR				S	**Sb**	**12 40 16.3**	**+0.6**
SIGR				AML	AML	12 40 23.6	
	comp=N,1157μm,0.4s						
SIGR				AML	AML	12 40 24.0	
	comp=E,542μm,0.4s						
SIGR	**SIGRI**	**1.17**	**165**	PN	**Pb**	**12 40 02.9**	**+1.9**
PRK	**Paraskevi**	**1.26**	**150**	P	**Pb**	**12 40 03.3**	**+0.8**
PRK				S	**Sb**	**12 40 20.8**	**+2.5**
PRK				AML	AML	12 40 23.8	
	comp=N,612μm,0.4s						
PRK				AML	AML	12 40 24.1	
	comp=E,662μm,0.4s						
KDZ	**Kurdzhali**	**1.31**	**359**	PN	**Pb**	**12 40 04.7**	**+1.2**
RKY	**Sarkoy-Tekirda**	**1.36**	**75**	PG	**Pn**	**12 40 01.5**	**-1.1**
SART	**Tekirdag**	**1.36**	**75**	*i* P	**Pn**	**12 40 02.5**	**-0.1**
AYVA	**Ayvalik**	**1.40**	**137**	*i* P	**Pb**	**12 40 04.6**	**-0.4**
AYVA				*i* S	**Sb**	**12 40 22.7**	**+0.3**
AYVA				IAML		12 40 25.0	
	comp=N,488nm,0.5s						
AYVA				IAML		12 40 26.0	
	comp=E,199nm,0.6s						
PAIG	**Paliouri**	**1.43**	**254**	P	**Pn**	**12 40 02.7**	**-0.8**
RZN	**Rozhen**	**1.46**	**338**	P	**Pb**	**12 40 06.1**	**0.0**
PLG	**Polygyros**	**1.54**	**272**	P	**Pn**	**12 40 05.0**	**-0.1**
PLG				S	**Sn**	**12 40 22.4**	**-1.8**
PLG				AML	AML	12 40 30.4	
	comp=N,124μm,0.4s						
PLG				AML	AML	12 40 30.4	
	comp=E,153μm,0.5s						
KNL	**Balıkesir**	**1.58**	**92**	*i* P	**Pn**	**12 40 05.8**	**+0.1**
KNL				*i* S	**Sn**	**12 40 24.1**	**-1.1**
KNL				IAML		12 40 33.0	
	comp=E,125nm,0.7s						
KNL				IAML		12 40 52.0	
	comp=N,76nm,1.3s						
SRS	**Serrai**	**1.62**	**299**	P	**Pn**	**12 40 06.4**	**+0.3**
SKY	**Skiros Island**	**1.62**	**206**	P	**Pn**	**12 40 05.8**	**-0.4**
MRMT	**Marmara Adasi**	**1.65**	**80**	PN	**Pn**	**12 40 05.7**	**-1.0**
AOS	**Alonnisos**	**1.69**	**227**	P	**Pn**	**12 40 06.5**	**-0.6**
DKL	**Dikili**	**1.69**	**138**	PN	**Pn**	**12 40 08.9**	**+1.8**
BALY	**Balya**	**1.76**	**109**	*i* P	**Pn**	**12 40 10.0**	**+1.8**
BALY				*i* S	**Sn**	**12 40 29.4**	**-0.3**
BALY				IAML		12 40 38.0	
	comp=N,69nm,0.4s						
BALY				IAML		12 40 41.0	
	comp=E,61nm,0.5s						
EDRB	**Edirne**	**1.79**	**32**	PN	**Pn**	**12 40 09.2**	**+0.7**
ZEDA	**zmir-Bergama**	**1.85**	**137**	*i* P	**Pn**	**12 40 11.4**	**+2.0**
ZEDA				*i* S	**Sb**	**12 40 35.5**	**0.0**
ZEDA				IAML		12 40 38.0	
	comp=N,76nm,0.5s						
ZEDA				IAML		12 40 38.0	
	comp=E,38nm,0.3s						
KIRK	**Kırklareli**	**1.90**	**40**	*i* P	**Pn**	**12 40 10.6**	**+0.6**
KIRK				*i* S	**Sn**	**12 40 32.8**	**-0.2**
BALB	**Balikesir**	**1.99**	**110**	PN	**Pn**	**12 40 10.8**	**-0.4**
STEP	**BALIKESIR_Sava**	**1.99**	**118**	*i* P	**Pn**	**12 40 11.0**	**-0.2**
STEP				*i* S	**Sn**	**12 40 36.7**	**+1.5**
STEP				IAML		12 40 40.0	
	comp=N,69nm,0.7s						
STEP				IAML		12 40 41.0	
	comp=E,61nm,0.3s						
CHOS	**Chios island**	**2.00**	**166**	P	**Pn**	**12 40 12.3**	**+0.7**
URLA	**Izmir**	**2.16**	**156**	*i* P	**Pn**	**12 40 14.6**	**+0.9**
URLA				*i* S	**Sb**	**12 40 45.4**	**+1.0**
ELBA	**Catalca**	**2.40**	**69**	*i* P	**Pn**	**12 40 16.6**	**-0.2**
DURS	**Dursunbey**	**2.43**	**107**	*i* P	**Pn**	**12 40 18.9**	**+1.5**
DURS				*i* S	**Sn**	**12 40 48.6**	**+2.3**
DURS				IAML		12 40 52.0	
	comp=E,41nm,0.2s						
DURS				IAML		12 40 59.0	
	comp=N,57nm,0.6s						
ULDT	**Uludag**	**2.82**	**93**	*i* P	**Pb**	**12 40 31.6**	**+2.3**
VTS	**Vitosha**	**2.82**	**324**	⇑P	**Sb**	**12 41 05.8**	**+2.3**
MANT	**Manisa**	**3.03**	**127**	*i* P	**Pb**	**12 40 34.7**	**+1.8**
MANT				*i* S	**Sb**	**12 41 11.3**	**+1.9**
MANT				IAML		12 41 15.0	
	comp=E,14nm,0.6s						
ARR	**Arges**	**5.06**	**353**	⇑P	Pb	12 41 31.1	+24
ANTO	**Ankara**	**5.64**	**92**	⇑P	Pn	12 40 51.7	-10
BZS	**Buzias**	**5.98**	**333**	⇓P	**Pn**	**12 41 09.0**	**+2.9**

IDC 25 12:40:49.1±3.8,**25.26N**×**141.14E**,**h0**km,**mb3.8**/4, **mb1 4.1**/4,**mb1mx3.6**/48,**mbtmp3.8**/4,**ML3.5**/1,**MS3.4**/2, **Ms1 3.4**/2,**ms1mx2.6**/41,**Error ellipse: s-maj=261.0km s-min=18.9km az=112.0,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.06**	**27**	Pn	Pn	12 41 23.5	-1.5
	16nm,0.3s,baz=90,slow=23,SNR=40						
JCJ				Sn	Sn	12 41 50.4	-1.0
	49nm,0.3s,baz=136,slow=23,SNR=17						
SIJI	**Sorong**	**27.68**	**202**	LR	LR	12 54 46.6	
	comp=Z,86nm,19.4s,baz=22,slow=30						
WRA	**Warramunga Arr**	**45.41**	**189**	P	P	12 49 09.8	0.0
	2.0nm,0.3s,baz=7.2,slow=8.6,SNR=57						
ASAR	**Alice Springs**	**49.14**	**189**	P	P	12 49 38.1	-0.6
	0.2nm,0.3s,baz=4.3,slow=4.8,SNR=13						
ASAR				LR	LR	13 08 24.4	
	comp=Z,36nm,21.8s,baz=6.5,slow=34						
STKA	**Stephens Creek**	**56.81**	**180**	P	P	12 50 34.3	-1.0
	1.1nm,0.8s,baz=343,slow=9.3,SNR=3.1						
NVAR	**Mina Array Bea**	**82.39**	**51**	P	P	12 53 14.6	+1.0
	0.4nm,0.7s,baz=299,slow=3.7,SNR=2.9						
LPAZ	**La Paz**	**151.26**	**78**	PKPbc	PKiKP	13 00 47.5	+0.9
	0.7nm,0.4s,baz=258,slow=6.7,SNR=2.3						

*IDC **25** 12:41:10.3±0.4,22.96N×121.47E, h0km, mb4.4/24, mb1 4.5/26, mb1mx4.4/45, mbtmp4.4/26, ML3.2/3, MS3.7/23, Ms1 3.7/23, ms1mx3.5/43, Error ellipse: s-maj=14.7km s-min=10.8km az=80.0*
*JMA **25** 12:41:10.8±0.1, 23.00N×121.39E, h0km, M4.5*
*MOS **25** 12:41:11.0±0.9, 22.91N×121.36E, h14km, mb5.2/52, MS4.1/5, Error ellipse: s-maj=7.8km s-min=4.9km az=115.1*
*NEIC **25** 12:41:12.8±1.9, 23.05N±0.02×121.30E±0.05, h10km±1km, mb4.9/87, ML5.1(TAP), Error ellipse: s-maj=8.5km s-min=3.6km az=68.0*
*BJI **25** 12:41:12.5±0.0, 23.05N×121.19E, h9km, mB4.8/48, mb4.6/59, ML4.8/8, Ms4.7/67, Ms7 4.5/63*
*TAP **25** 12:41:13.2, 23.06N×121.16E, h13km, ML5.0, C*
ISC 25 12:41:13.7±0.5,**23.04N**±0.01×**121.26E**±0.02,**h16**km±2km, **h16**km:**pP-P**,**n497,** σ1**9**50/606,**mb4.9**/135,**MS3.9**/26, **35C-46D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.12**	**60**	⇓*i*P	**Pb**	**12 41 18.3**	**+0.6**
	baz=96						
CHKT				S	**Sb**	**12 41 22.5**	**+2.2**
	baz=96						
FULB	**Fuli**	**0.16**	**13**	⇑*i*P	**Pg**	**12 41 18.1**	**+0.1**
	baz=32						
FULB				*i* S	**Sb**	**12 41 21.8**	**+0.2**
	baz=32						
ELDTW	**Lidau**	**0.27**	**304**	P	**Pg**	**12 41 17.1**	**-2.4**
	baz=313						
ELDTW				*e*S	**Sg**	**12 41 20.0**	**-3.5**
	baz=313						
TWGBT	**Beinan**	**0.27**	**216**	⇑*i*P	**Pg**	**12 41 18.7**	**-0.9**
	baz=206						
TWGBT				S	**Sg**	**12 41 23.1**	**-0.6**
	baz=206						
TWG	**Pinlang**	**0.28**	**218**	*e*P	**Pg**	**12 41 18.8**	**-0.8**
	baz=206						
TWG				S	**Sg**	**12 41 23.2**	**-0.5**
	baz=206						
TWG	**Pinlang**	**0.28**	**218**		**Pg**	**12 41 18.9**	**-0.8**
TWG				Sg	**Sg**	**12 41 22.9**	**-0.8**
TTN	**Taitung**	**0.30**	**199**	⇓*i*P	**Pb**	**12 41 21.1**	**+0.3**
	baz=195						
TTN				S	**Sn**	**12 41 28.2**	**-1.4**
	baz=195						
TWF1	**Yuli**	**0.31**	**7**	*i* P	**Pg**	**12 41 19.6**	**-0.7**
	baz=13						
TWF1				S	**Sg**	**12 41 24.1**	**-0.8**
	baz=13						
YULB	**Yu-li**	**0.35**	**6**	P	**Pg**	**12 41 19.9**	**-1.2**
	ba

VWDT VWDT 0.72 352⇓iP Pg 12 41 26.1 -1.7
baz=351
VWDT S Sg 12 41 36.2 -1.1
baz=351
SNST Tainan City 0.72 285⇓iP Pg 12 41 26.7 -1.1
baz=284
SNST eS Sg 12 41 36.4 -1.0
baz=284
TWK Hsinying 0.74 288⇓iP Pg 12 41 27.2 -1.0
baz=288
TWK eS Sg 12 41 36.8 -1.2
baz=288
WHYT Xinyi Township 0.75 331⇓iP Pg 12 41 27.0 -1.4
baz=333
WHYT eS Sg 12 41 35.8 -2.6
baz=333
EAST Anshuo 0.75 210 eP Pg 12 41 26.7 -1.7
baz=195
EAST eS Sg 12 41 37.7 -0.7
baz=195
TAW Tawu 0.76 206 P Pg 12 41 26.8 -1.7
baz=201
TAW eS Sg 12 41 36.6 -1.8
baz=201
CHN5 Tsauling 0.77 316⇓iP Pg 12 41 27.4 -1.3
baz=310
SGLT Jiouru 0.77 246 eP Pg 12 41 28.2 -0.5
baz=240
ESL Shilin 0.79 12 P Pg 12 41 28.0 -1.1
baz=23
ESL eS Sg 12 41 37.7 -1.8
baz=23
SSLB Suanglung 0.79 340⇓iP Pg 12 41 27.1 -2.2
baz=342
SSLB eS Sg 12 41 38.1 -1.6
baz=342
SSLB Suanglung 0.79 340 Pg 12 41 27.0 -2.2
SSLB Sg Sg 12 41 38.1 -1.6
TWM1 Shoushan 0.80 254 eP Pg 12 41 29.1 -0.2
baz=251
TWM1 eS Sb 12 41 40.5 +0.7
baz=251
CHN3 Shinhua 0.82 273⇓iP Pg 12 41 29.8 +0.1
baz=281
CHN3 eS Sb 12 41 41.2 +0.8
baz=281
SSPT Xinbi 0.84 229 ⇑P Pb 12 41 29.2 -0.8
baz=222
SSPT eS Sb 12 41 40.5 -0.6
baz=222
SCZT Fangliau 0.89 222 eP Pb 12 41 29.3 -1.4
baz=222
SCZT eS Sb 12 41 40.6 -1.7
baz=222
CHY Chiayi 0.89 301⇓eP Pb 12 41 30.1 -0.7
baz=301
CHY eS Sb 12 41 42.1 -0.4
baz=301
SNJT Kaohsiung City 0.90 252 eP Pn 12 41 32.5 +0.8
baz=249
SNJT eS Sn 12 41 46.7 +2.3
baz=249
SMLT Sun Moon Lake 0.90 339⇓iP Pb 12 41 29.6 -1.5
baz=346
SMLT eS Sn 12 41 43.8 -0.9
baz=346
WGK Gukeng 0.91 315⇓iP Pb 12 41 30.6 -0.5
baz=317
WGK eS Sn 12 41 44.0 -0.7
baz=317
OWD Renai 0.91 355 eP Pb 12 41 29.6 -1.7
baz=348
OWD eS Sb 12 41 41.3 -2.0
baz=348
WJS Zhushan 0.92 328 eP Pb 12 41 31.1 -0.2
baz=331
WJS eS Sn 12 41 43.8 +0.2
baz=331
WDLH Douliu 0.92 315 ⇓P Pb 12 41 31.1 -0.3
baz=315
WDLH eS Sg 12 41 44.1 +0.3
baz=315
TAI1 Yung-k'ang 0.95 270 eP Pn 12 41 32.2 -0.1
baz=269
TAI1 eS Sn 12 41 45.8 +0.3
baz=269
SCLT Jiali 0.99 278 eP Pb 12 41 31.9 -0.6
baz=288
SCLT eS Sn 12 41 46.9 +0.3
baz=288
WNT Mingjian 0.99 328⇓iP Pb 12 41 32.3 -0.1
baz=329
WNT eS Sg 12 41 45.6 -0.2
baz=329
HWA Hwalien 0.99 19 eP Pb 12 41 32.3 -0.2
baz=12
HWA eS Sn 12 41 46.4 -0.2
baz=12
KAU Kaohsiung 0.99 242⇑iP Pn 12 41 34.3 +1.3
baz=239
KAU eS Sn 12 41 49.4 +2.7
baz=239
CHN8 Yiju 1.01 288⇓iP Pb 12 41 31.8 -1.1
baz=288
CHN8 eS Sg 12 41 46.6 +0.1
baz=288
CHGB Renai 1.02 356⇓iP Pb 12 41 31.6 -1.6
baz=356
CHGB eS Sg 12 41 46.7 -0.2
baz=356
LAY Lan-yu 1.03 165 P Pb 12 41 31.8 -1.5
baz=177
DPDB Guoxing 1.03 343⇑iP Pb 12 41 32.1 -1.2
baz=355
DPDB eS Sb 12 41 46.1 -0.6
baz=355
WLCH Liuqiu 1.06 230 eP Pg 12 41 36.4 +2.2
baz=222
WLCH eS Sn 12 41 49.3 +0.8
baz=222
TWP Hsiaoliuchiu 1.07 230⇑iP Pg 12 41 36.1 +1.6
baz=229
TWD Chiawan 1.08 17 eP Pb 12 41 33.2 -0.9
baz=17
TWD eS Sn 12 41 49.0 0.0
baz=17
WHF Hehuan Shan 1.10 0 ⇓P Pb 12 41 33.1 -1.6
baz=1.0
WHF eS Sb 12 41 48.4 -0.6
baz=1.0
WSF Szhu 1.12 302 P Pb 12 41 33.7 -1.1
baz=302
WSF eS Sb 12 41 49.1 0.0
baz=302
HEN Hengchun 1.14 205 eP Pn 12 41 34.5 -0.5
baz=194
TWK1 Hengchun 1.17 201 eP Pg 12 41 36.3 0.0
baz=190
TWKBT Hengchun 1.17 201 eP Pb 12 41 35.7 +0.1
baz=190
NACB Ninganchiao 1.17 15 eP Pn 12 41 34.2 -1.3
baz=15
NACB eS Sb 12 41 49.8 -0.8
baz=15
NACB Ninganchiao 1.17 15 Pn 12 41 34.9 -0.6
ETLH Xiulin Townshi 1.18 10 ⇓P Pn 12 41 34.4 -1.3
baz=21
ETLH eS Sb 12 41 50.9 0.0
baz=21
RLNB Erlin 1.18 316 P Pn 12 41 35.1 -0.5
baz=316
RLNB eS Sn 12 41 51.3 -0.1
baz=316
TSEB Hengchuen, Pin 1.18 196 eP Pn 12 41 35.7 +0.1
baz=184
TDCB Techi 1.21 356 eP Pn 12 41 35.1 -1.1
baz=355
TDCB eS Sb 12 41 50.9 -1.0
baz=355
WTCT Ta-ch'eng 1.21 313 eP Pn 12 41 35.2 -0.8
baz=300
WTCT eS Sn 12 41 52.4 +0.2
baz=300
WMLT Mailiao 1.22 309 eP Pn 12 41 35.2 -0.9
baz=309
WMLT eS Sb 12 41 51.8 -0.1
baz=309
WCHH Zhanghua 1.22 328 eP Pn 12 41 35.9 -0.3
baz=328
WCHH eS Sn 12 41 52.1 -0.2
baz=328
TCU Taichung 1.22 334 eP Pn 12 41 36.3 +0.1
baz=334
TCU eS Sb 12 41 51.8 -0.3
baz=334
WHP Taichung City 1.27 347 eP Pg 12 41 37.7 -0.5
baz=351
WHP eS Sg 12 41 54.8 +0.1
baz=351
TWQ1 Liyutan 1.38 341 eP Pb 12 41 39.1 0.0
baz=327
TWQ1 eS Sg 12 41 58.0 -0.1
baz=327
NNSB Datong 1.39 5 P Pn 12 41 37.9 -0.7
baz=3.0
NNSB eS Sg 12 41 57.9 -0.7
baz=3.0
NNSH Datong 1.39 5⇓eP Pn 12 41 38.9 +0.2
baz=3.0
NNSH eS Sn 12 41 55.9 -0.8
baz=3.0
NNS Nan Shan 1.40 4 P Pn 12 41 38.6 -0.2
baz=3.0
NNS eS Sb 12 41 57.5 +0.3
baz=3.0
WDJ Dajia District 1.42 337 eP Pb 12 41 39.9 +0.1
baz=335
WDJ eS Sg 12 41 59.7 +0.1
baz=335
ENA Nanau 1.45 18 eP Pn 12 41 39.2 -0.2
baz=16
ENA eS Sn 12 41 57.8 -0.3
baz=16
WDGT Dungji 1.48 279 ⇑P Pn 12 41 38.6 -1.2
baz=279
WDGT eS Sn 12 41 57.1 -1.8
baz=279
PTSB Yuanli 1.49 340 ⇓P Pb 12 41 40.9 -0.2
baz=338
PTSB eS Sg 12 42 01.6 -0.2
baz=338
NMLH Miaoli 1.55 344 eP Pb 12 41 41.9 -0.2
baz=342
NMLH eS Sg 12 42 02.7 -1.0
baz=342
NDT Datong Townshi 1.57 9 ⇓P Pb 12 41 42.2 -0.3
baz=17
NDT eS Sb 12 42 02.5 +0.3
baz=17
NSTT Nanjuang 1.60 352 eP Pb 12 41 42.7 -0.3
baz=351
NSTT eS Sg 12 42 04.0 -1.4
baz=351
ENTT Nioudou 1.62 10 eP Pn 12 41 42.0 +0.3
baz=22
ENTT eS Sn 12 42 01.9 -0.3
baz=22
PHUB P'eng-hu 1.62 287 P Pn 12 41 40.5 -1.1
baz=287
PHUB iS Sn 12 42 00.0 -2.2
baz=287
YHNB Yeheng 1.63 4 eP Pn 12 41 41.5 -0.3
baz=1.0
YHNB eS Sb 12 42 03.6 -0.2
baz=1.0
YHNB Yeheng 1.63 4 Pn 12 41 42.3 +0.4
NSK Sanguang 1.63 3 eP Pn 12 41 41.8 -0.1
baz=1.0
NSK eS Sb 12 42 03.8 -0.1
baz=1.0
PNG Penghu 1.65 289⇓eP Pn 12 41 41.1 -1.0
baz=289
PNG eS Sn 12 42 00.9 -2.1
baz=289
TWC Suao 1.65 19 eP Pn 12 41 42.7 +0.6
baz=16
TWC eS Sb 12 42 03.9 -0.6
baz=16
VCHM Qimei 1.69 276 ⇑P Pn 12 41 41.4 -1.3
baz=277
VCHM eS Sn 12 42 01.9 -2.1
baz=277
EOS1 EOS1 1.70 28 eP Pn 12 41 43.3 +0.5
baz=49
TWE Neicheng 1.72 13 eP Pn 12 41 44.0 -1.0
baz=24
NWLT Wulai 1.75 7 ⇓P Pb 12 41 45.1 -0.4
baz=16
NWLT eS Sb 12 42 07.8 +0.7
baz=16
SBCB Hsinchu 1.76 352 eP Pn 12 41 44.4 +0.7
baz=349
SBCB eS Sg 12 42 09.3 -1.3
baz=349
HSN Hsinchu 1.77 352 eP Pb 12 41 45.2 -0.7
baz=349
ILA Ilan 1.78 15 eP Pn 12 41 46.2 +0.2
baz=24
ILA eS Sn 12 42 06.2 0.0
baz=24
NTC Toucheng 1.88 16 eP Pn 12 41 46.1 +0.8
baz=13
EGS 1.90 19 eP Pn 12 41 46.2 +0.6
baz=16
NCUH Zhongli 1.92 358 eP Pn 12 41 47.8 -0.6
baz=355
NCUH eS Sb 12 42 11.2 -0.9
baz=355
NCU National Centr 1.92 358 eP Pb 12 41 47.9 -0.5
baz=353
NHDH Xindian Distri 1.93 7 eP Pn 12 41 46.7 +0.7
baz=20
NHDH eS Sb 12 42 12.5 0.0
baz=20
TATO Taipei 1.94 6 eP Pb 12 41 48.7 0.0
baz=20
TATO eS Sg 12 42 14.3 -1.9
baz=20
TATO Taipei 1.94 6 Pn 12 41 46.0 -0.1
TWA Mucha 1.96 9 eP Pb 12 41 48.5 -0.5
baz=18
TIPB Shuangxi 1.99 15 eP Pn 12 41 46.6 -0.3
baz=11
TIPB eS Sn 12 42 11.0 -0.5
baz=11
TAP Taipei 2.00 7 eP Pb 12 41 49.5 -0.3
baz=20
TWS1 Kuangyinshan 2.06 4 eP Pb 12 41 50.3 -0.5
baz=19
TWS1 eS Sb 12 42 17.8 +1.7
baz=19
TWB1 Santiao Chiao 2.07 19 eP Pn 12 41 47.8 -0.1
baz=15
NWF Wu-fen Shan 2.08 13 eP Pn 12 41 49.3 +1.2
baz=21
WFSB Wu-fen Shan 2.08 13 eP Pn 12 41 49.1 +1.1
baz=21
JYNG Yonagunijimaku 2.09 47 P Pn 12 41 47.6 -0.6
JYNG S Sn 12 42 13.8 -0.1
YM01 YM01 2.12 8 eP Pn 12 41 49.8 +1.2
baz=21
YM04 YM04 2.12 7 eP Pn 12 41 49.3 +0.7
baz=20
YM04 eS Sn 12 42 14.1 -0.6
baz=20
NTST Danshui 2.12 5 eP Pb 12 41 51.3 -0.6
baz=17
YM10 YM10 2.12 8 eP Pn 12 41 48.9 +0.1
baz=20
YM11 YM11 2.14 8 eP Pb 12 41 50.9 -1.3
baz=20
YOJ Yonaguni jima 2.14 48 eP Pn 12 41 48.1 -0.8
baz=56
YOJ eS Sn 12 42 14.7 -0.5
baz=56
YOJ Yonaguni jima 2.14 48 P Pn 12 41 48.4 -0.4
YOJ S Sn 12 42 15.0 -0.2
YOJ Yonaguni jima 2.14 48 P Pn 12 41 48.5 -0.4
YOJ Yonaguni jima 2.14 48 Pn 12 41 48.5 -0.4
YM03 YM03 2.15 7 eP Pn 12 41 49.5 +0.5
baz=20
YM03 eS Sn 12 42 16.7 +1.3
baz=20
ANP Anpu 2.15 6 eP Pb 12 41 51.4 -1.0
baz=19
YM08 YM08 2.16 8 eP Pb 12 41 51.1 -1.4
baz=21
TWY Chenhua 2.25 8 eP Pn 12 41 51.5 +1.2
baz=20
HATJ Hateruma jima 2.55 66 P Pn 12 41 53.9 -0.6
HATJ S Sn 12 42 25.2 0.0
VWUC VWUC 2.55 320 eP Pn 12 41 53.7 -0.8
baz=319
IRIF Iriomote-Funau 2.61 60 P Pn 12 41 55.0 -0.3
IRIF S Sn 12 42 27.0 +0.3
PCYT Pengchaiyu 2.68 16 eP Pn 12 41 55.6 -0.7
baz=10.0
PTMZ Houxiangcun 2.79 316 eP Pn 12 41 56.8 -0.9
baz=316
JKRS Kuro-shima 2.79 64 P Pn 12 41 57.8 0.0
JKRS S Sn 12 42 31.4 +0.2
PTTC Pingtan 2.80 331 eP Pn 12 41 57.2 -0.7
baz=329
KNM Kinmen 2.93 298 eP Pn 12 42 00.0 +0.3
baz=297
JIJ Ishigaki jima 2.96 63 P Pn 12 41 59.2 -0.9
JIJ S Sn 12 42 34.2 -1.1
KNMB Chin-men Tao 2.98 299 eP Pn 12 41 59.2 -1.2
baz=299
KNMB Chin-men Tao 2.98 299 Pn 12 41 59.3 -1.2
QZH Quanzhou 3.09 308⇑iPn Pn 12 42 01.3 -0.5
QZH Sn Sn 12 42 37.0 -1.4
QZH LR LR
comp=N,6μm,10.0s
QZH LR LR
comp=E,3μm,7.1s
QZH LR LR
comp=Z,6μm,9.6s
JISG Ishigakijimahi 3.19 61 P Pn 12 42 02.3 -1.0
JISG S Sn 12 42 40.2 -0.9
MATB Ma-tsu 3.32 339 eP Pn 12 42 04.6 -0.5
baz=335
ZPLA Ao Xicun 3.34 286 eP Pn 12 42 04.5 -0.9
baz=286
AXDP Jialang 3.53 302 eP Pn 12 42 06.6 -1.4
baz=302
JTJ Tarama 3.54 63 P Pn 12 42 07.1 -0.9
JTJ S Sn 12 42 49.0 -0.6
ZZJH Jiuhuzhen 3.61 294 eP Pn 12 42 08.0 -1.1
baz=294
MHZQ Yeshan 3.66 327 eP Pn 12 42 09.4 -0.3
baz=326
LYJJ Jianjiangzhen 3.75 339 eP Pn 12 42 10.5 -0.5
baz=337
XPSS Dashiqiu 3.99 346 eP Pn 12 42 13.4 -0.9
baz=341
JIRB Irabujima 4.00 63 P Pn 12 42 13.8 -0.7
JIRB eS Sn 12 42 59.6 -1.5
JMJ2 Miyako jima3 4.09 65 P Pn 12 42 15.3 -0.4
JMJ2 S Sn 12 43 02.7 -0.6
JMJ Miyako jima 2 4.10 64 eP Pn 12 42 15.2 -0.5
baz=76
JIKM Ikemajima 4.11 62 P Pn 12 42 15.2 -0.7
JIKM S Sn 12 43 02.0 -1.6
JOGS Gusukube 4.17 65 P Pn 12 42 17.0 +0.3
JOGS S Sn 12 43 05.8 +0.7
VDOS Pratas Island 4.80 242 eP Pn 12 42 26.1 +0.6
baz=242
HKPS Hong Kong Po S 6.61 265 eP Pn 12 42 50.1 -0.3
baz=264
HKPS Hong Kong Po S 6.61 265 Pn 12 42 49.5 -0.9
GZH Guangzhou 7.29 272 P Pn 12 42 56.0 -3.6
JOW Kunigami 7.41 58 Pn Pn 12 42 59.3 -1.9
0.6nm,0.3s,baz=70,slow=16,SNR=5.6
JOW Sn Sn 12 44 22.1 -2.9
0.2nm,0.3s,baz=84,slow=16,SNR=2.0
JOW Kunigami 7.41 58 Pn Pn 12 42 58.0 -3.3
SSE Sheshan 8.03 360 P Pn 12 43 11.5 +1.8
SSE S Sn 12 44 45.0 +4.8
SSE pmax pmax
comp=Z,12nm,1.0s
SSE pmax pmax
comp=Z,52nm,5.2s
SSE LR LR
comp=N,810nm,7.7s
SSE LR LR
comp=E,1μm,13.1s
SSE Sheshan 8.03 360 Pn Pn 12 43 10.3 +0.6
TGY Tagaytay City 8.89 182 LR LR 12 46 47.2
comp=Z,330nm,20.2s,baz=24,slow=38
NJ2 Nanjing 9.23 347 eP Pn 12 43 25.8 -0.4
NJ2 S Sn 12 45 04.5 -5.2
NJ2 pmax pmax
comp=Z,29nm,0.6s
NJ2 smax smax
comp=N,430nm,0.9s
NJ2 smax smax
comp=E,300nm,1.1s
NJ2 LR LR
comp=N,3μm,10.0s
NJ2 LR LR
comp=E,2μm,8.5s
NJ2 LR LR
comp=Z,3μm,10.9s
WHN Wuhan 9.69 322 ⇓P Pn 12 43 32.8 +0.3
WHN S Sn 12 45 16.5 -4.6
WHN LR LR
comp=N,4μm,11.1s
WHN LR LR
comp=E,5μm,7.6s
WHN LR LR
comp=Z,5μm,16.5s
QIZ Qiongzhong 11.38 252 P Pn 12 43 54.0 -1.7
QIZ S Sn 12 46 03.8 +1.1
QIZ pmax pmax
comp=Z,14nm,1.6s
QIZ LR LR
comp=N,1μm,15.4s
QIZ LR LR
comp=E,910nm,12.9s
QIZ LR LR
comp=Z,1μm,14.7s
JNU Nakatsue 13.15 38 LR LR 12 50 32.9
comp=Z,454nm,19.0s,baz=224,slow=43
TIA Tai'an 13.61 346 P Pn 12 44 29.3 +3.2
TIA pmax pmax
comp=Z,9.0nm,1.0s
TIA LR LR
comp=N,2μm,11.4s
TIA LR LR
comp=E,1μm,11.4s
TIA LR LR
comp=Z,3μm,9.8s
GYA Guiyang 13.69 287⇑iP Pn 12 44 29.8 +2.4
GYA PP P 12 44 40.3 +4.2
GYA SS S 12 47 18.5 -3.5
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.6s
GYA LR LR
comp=N,790nm,15.2s
GYA LR LR
comp=E,620nm,15.6s
GYA LR LR
comp=Z,650nm,15.4s
XAN Xi'an 15.40 318 P Pn 12 44 52.3 +1.8
XAN pP P 12 44 56.8 +1.8
XAN PP sP 12 45 08.0 +6.3
XAN pmax pmax
comp=Z,7.0nm,1.2s
XAN pmax pmax
comp=Z,190nm,6.7s
XAN LR LR
comp=N,2μm,11.3s
XAN LR LR
comp=E,2μm,10.2s
XAN LR LR
comp=Z,3μm,10.9s
XAN Xi'an 15.40 318 P Pn 12 44 51.0 +0.5
XAN pmax pmax
comp=Z,12nm,1.0s
XAN Xi'an 15.40 318 P Pn 12 44 51.0 +0.5
KSRS Korea Array 15.47 20 Pn Pn 12 44 51.4 +0.1
comp=Z,0.4nm,0.3s,baz=198,slow=12,SNR=25
KSRS LR LR 12 50 53.4
comp=Z,73nm,20.2s,baz=202,slow=38
KS19 Wonju Array Si 15.50 20 P Pn 12 44 52.1 +0.4
DL2 Dalian 15.82 1 P P 12 45 01.0 +1.4
DL2 S S 12 48 02.0 -3.3
DL2 pmax pmax
comp=Z,17nm,1.0s

DL2 pmax pmax
comp=Z,86nm,4.5s
DL2 LR LR
comp=Z,960nm,10.1s
DL2 LR LR
comp=Z,580nm,7.7s
DL2 LR LR
comp=Z,1µm,10.7s
DAV Davao City (W) 16.41 165 LR LR 12 51 13.3
comp=Z,296nm,19.8s,baz=333,slow=37
TIY Taiyuan 16.47 335 *e*P **P** **12 45 08.8 +1.9**
TIY PP **sP** **12 45 19.3 +5.7**
TIY SS **S** **12 48 28.3 +9.5**
TIY pmax pmax
comp=Z,28nm,1.0s
TIY LR LR
comp=Z,5µm,9.3s
TIY LR LR
comp=Z,3µm,9.8s
TIY LR LR
comp=Z,5µm,10.3s
KMI Kunming 17.04 281 P **Pn** **12 45 12.0 +0.3**
KMI pP pP 12 45 16.5 -1.6
KMI sP sP 12 45 21.5 +1.2
KMI PP P 12 45 28.8 +15
KMI S **Sn** **12 48 22.0 +1.1**
KMI sS S 12 48 29.0 -1.7
KMI SS **SnSn** **12 48 36.8 +2.6**
KMI pmax pmax
comp=Z,18nm,0.5s
KMI pmax pmax
comp=Z,100nm,4.1s
KMI LR LR
comp=Z,940nm,13.1s
KMI LR LR
comp=Z,1µm,12.4s
KMI LR LR
comp=Z,1µm,13.1s
CD2 Chengdu 17.44 300 P **P** **12 45 18.3 +0.6**
CD2 S **S** **12 48 34.8 -3.9**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,190nm,6.7s
CD2 LR LR
comp=Z,3µm,9.2s
CD2 LR LR
comp=Z,2µm,12.0s
CD2 LR LR
comp=Z,4µm,11.4s
BJT Baijiatuau 17.47 347 P **P** **12 45 18.4 +0.6**
BJT pmax pmax
comp=Z,18nm,0.9s
BJT Baijiatuau 17.47 347 P **P** **12 45 18.4 +0.6**
BJI Beijing 17.49 347 P **P** **12 45 19.0 +1.0**
BJI S **S** **12 48 39.0 -0.3**
BJI pmax pmax
comp=Z,17nm,1.2s
BJI LR LR
comp=Z,1µm,11.4s
BJI LR LR
comp=Z,530nm,10.0s
BJI LR LR
comp=Z,410nm,13.7s
KKM Kota Kinabalu 17.58 197 P **P** **12 45 19.3 -0.1**
JCJ Chichijima 19.38 74 LR LR 12 51 38.5
comp=Z,107nm,18.3s,baz=136,slow=33
HHC Hu-ho-hao-te 19.54 338 *e*P **Pn** **12 45 43.5 +1.4**
HHC sP sP 12 45 51.0 +3.5
HHC PP pP 12 46 01.8 +16
HHC S **S** **12 49 19.8 -1.3**
HHC sS sS 12 49 30.0 +1.6
HHC pmax pmax
comp=Z,24nm,0.9s
HHC pmax pmax
comp=Z,160nm,8.5s
HHC LR LR
comp=Z,740nm,10.2s
HHC LR LR
comp=Z,350nm,9.6s
HHC LR LR
comp=Z,500nm,12.8s
MAJO Matsushiro 19.90 44 P **P** **12 45 44.0 -0.6**
MAJO pmax pmax
comp=Z,14nm,1.0s
MAJO Matsushiro 19.90 44 P **P** **12 45 44.0 -0.6**
MAT Matsushiro 19.90 44 P **P** **12 45 42.4 -2.2**
MJAR Matsushiro Arr 19.90 44 P **P** **12 45 42.7 -1.9**
comp=Z,0.0nm,0.3s,baz=226,slow=8.4,SNR=5.8
MJAR LR LR 12 53 45.5
comp=Z,326nm,21.9s,baz=235,slow=38
LZH Lanzhou 19.92 315 *e*P **Pn** **12 45 46.5 -0.2**
LZH pP pP 12 45 49.3 -0.3
LZH *e*S **S** **12 49 26.5 -2.3**
LZH SS **SnSn** **12 49 52.0 +7.0**
LZH pmax pmax
comp=Z,37nm,1.0s
LZH pmax pmax
comp=Z,390nm,4.6s
LZH LR LR
comp=Z,900nm,11.4s
LZH LR LR
comp=Z,2µm,11.6s
LZH LR LR
comp=Z,2µm,13.0s
PBKT Sadao Pong 20.13 255 P **P** **12 45 47.5 +0.3**
PBKT lAmb lAmb 12 45 53.3
comp=Z,46nm,1.2s
CN2 Changchun 21.00 8 *e*P Pn 12 45 58.0 -1.0
CN2 *e*S **S** **12 49 46.8 -3.0**
CN2 LR LR
comp=Z,470nm,13.0s
CN2 LR LR
comp=Z,350nm,13.0s
CN2 LR LR
comp=Z,530nm,12.0s
CHTO Chiang Mai 21.25 263 P **P** **12 46 00.0 +0.6**
CHTO pmax pmax
comp=Z,21nm,1.0s
CHTO Chiang Mai 21.25 263 P **P** **12 46 00.0 +0.6**
CM31 Chiang Mai Arr 21.35 262 P **P** **12 46 02.3 +1.9**
CMAR Chiang Mai Arr 21.35 262 P **P** **12 46 01.5 +1.0**
comp=Z,18nm,1.0s,baz=67,slow=8.8,SNR=47
CMAR PcP **PcP** **12 50 05.0 +0.5**
comp=Z,1.4nm,0.7s,baz=45,slow=1.2,SNR=8.3
CMAR LR LR 12 55 30.8
comp=Z,305nm,18.6s,baz=108,slow=40
SBUM Sibu 22.26 204 P **P** **12 46 11.2 +1.0**
MPSI Mapaga 22.61 184 P **P** **12 46 15.4 +1.5**
comp=Z,19nm,0.9s
USRK Ussuriysk Ar. 22.88 20 P **P** **12 46 16.7 +0.1**
comp=Z,2.3nm,0.6s,baz=195,slow=8.3,SNR=4.8
TNTI Ternate 22.92 164 P **P** **12 46 16.9 -0.3**
comp=Z,20nm,0.9s
TNTI Ternate 22.92 164 P **P** **12 46 16.3 -0.9**
TNTI lAmb lAmb 12 46 28.6
comp=Z,13nm,0.7s
APSI Ampana 23.81 179 P **P** **12 46 26.6 +0.5**
comp=Z,423nmcomp=Z,39nm,1.0s
KSM Kuching 23.93 208 P **P** **12 46 27.2 0.0**
LBMI Labuha 24.31 165 P **P** **12 46 31.1 +0.3**
comp=Z,2µmcomp=Z,36nm,0.9s
GTA Gaotai 24.45 317 P **P** **12 46 32.8 +0.7**
GTA pP sP 12 46 39.5 +0.4
GTA sP pP 12 46 42.8 +5.8
GTA S **S** **12 50 49.5 -2.2**
GTA sS sS 12 51 00.3 +0.1
GTA pmax pmax
comp=Z,18nm,1.3s
GTA pmax pmax
comp=Z,190nm,5.3s
GTA LR LR
comp=Z,610nm,10.8s
GTA LR LR
comp=Z,640nm,10.2s
GTA LR LR
comp=Z,850nm,12.7s
SANI Sanana 25.36 169 P **P** **12 46 41.4 +1.1**
comp=Z,1µmcomp=Z,18nm,0.8s
TTSI Tana Toraja 25.96 183 P P 12 47 03.4 +18
KULM Kulim 26.59 232 P **P** **12 46 52.5 +1.1**
KULM lAmb lAmb 12 46 54.7
comp=Z,40nm,1.4s
NLAI Namlea 26.73 167 P **P** **12 46 53.3 +0.6**
comp=Z,608nmcomp=Z,51nm,1.1s
SHL Shillong 26.86 281 P **P** **12 46 54.3 +0.2**
SHL pmax pmax
comp=Z,24nm,0.9s
SHL Shillong 26.86 281 P **P** **12 46 54.3 +0.2**
SHL lAmb lAmb 12 47 00.5
comp=Z,24nm,0.9s
IPM Ipoh 26.88 230 P **P** **12 46 54.6 +0.5**
IPM lAmb lAmb 12 46 55.7
comp=Z,26nm,0.9s
MYKOM Kota Tinggi 27.05 221 P **P** **12 46 56.5 +0.9**
MYKOM lAmb lAmb 12 46 59.9
comp=Z,26nm,1.0s
ULN Ulaanbaatar 27.25 339*ce*P **P** **12 46 57.6 +0.3**
ULN pmax pmax
comp=Z,55nm,1.7s
ULN Ulaanbaatar 27.25 339 P **P** **12 46 57.0 -0.3**
ULN lAmb lAmb 12 46 59.6
comp=Z,25nm,0.9s
ASAJ Asahikawa 27.39 35 P **P** **12 46 58.0 -0.3**
comp=Z,3.5nm,0.8s,baz=229,slow=11,SNR=1.8
JKA Kamikawa-asahi 27.39 35 P **P** **12 46 58.0 -0.3**
KLR Kul'dur 27.42 15 P **P** **12 46 57.7 -1.0**
comp=Z,1.7nm,0.8s,baz=222,slow=5.4,SNR=4.4
KLR LR LR 12 57 30.0
comp=Z,89nm,20.8s,baz=22,slow=36
KLR Kul'dur 27.42 15*ce*P **P** **12 46 58.9 +0.2**
KLR pmax pmax
comp=Z,4.0nm,0.9s
SONM Songino Array 27.45 338 P **P** **12 46 58.8 -0.2**
comp=Z,11nm,0.7s,baz=156,slow=9.2,SNR=51
SONM LR LR 12 59 17.7
comp=Z,554nm,19.3s,baz=135,slow=39
LSA Lhasa 27.73 290 P **P** **12 47 04.8 +2.6**
LSA Lhasa 27.73 290 P **P** **12 47 03.9 +1.7**
LSA pmax pmax
comp=Z,12nm,0.8s
LSA Lhasa 27.73 290 P **P** **12 47 03.9 +1.7**
LSA lAmb lAmb 12 47 08.4
comp=Z,12nm,0.8s
KAPI Kappang 27.92 183 LR LR 12 58 02.4
comp=Z,129nm,20.8s,baz=13,slow=36
TPI Tanjungpandan 28.87 209 P **P** **12 47 14.7 +2.9**
comp=Z,18nm,1.3s
TSI Tuntungan 29.32 232 P **P** **12 47 16.3 +0.4**
YSS Yuzh-Sakhalins 29.47 31⇑ *e*P **P** **12 47 18.8 +1.9**
YSS *e* 12 50 18.5
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=Z,300nm,14.0s
YSS MLR MLR
comp=N,200nm,13.0s
YSS MLR MLR
comp=E,200nm,13.0s
PSI Prapat 29.54 230 P **P** **12 47 18.8 +0.7**
comp=E,7.9nm,0.6s,baz=360,slow=3.5,SNR=12
PSI LR LR 12 59 54.0
comp=E,131nm,18.5s,baz=280,slow=38
RPSI Rantau Prapat 29.62 230 P **P** **12 47 18.8 +0.2**
KCSI Kotacane, Aceh 29.88 233 P **P** **12 47 21.4 +0.5**
comp=E,7.6nm,0.9s
BKNI Bangkinang 29.93 224 P **P** **12 47 22.6 +1.3**
MNSI Mandailing Nat 30.53 227 P **P** **12 47 27.5 +0.9**
comp=E,38nm,1.0s
ZAK Zakamensk 30.69 337 *e*P **P** **12 47 26.4 -1.5**
ZAK pmax pmax
comp=Z,5.0nm,1.3s
ZEA Zeya 30.99 7 *e*P **P** **12 47 33.2 +2.9**
ZEA pmax pmax
comp=Z,23nm,1.0s
ZEA MLR MLR
comp=Z,800nm,15.0s
ZEA MLR MLR
comp=N,500nm,12.0s
GSI Gunungsitoli 31.55 230 P **P** **12 47 36.0 +0.4**
GSI lAmb lAmb 12 47 50.9
comp=Z,32nm,1.5s
EDFI Ende, Flores 31.60 179 P **P** **12 47 34.8 -1.3**
comp=Z,19nm,0.7s
TLY Talaya 31.66 339 LR LR 13 02 11.1
comp=Z,142nm,18.5s,baz=144,slow=40
TLY Talaya 31.66 339 *e*P **P** **12 47 37.3 +1.0**
TLY *e*S **S** **12 52 45.1 +0.2**
TLY pmax pmax
comp=Z,13nm,0.7s
TLY MLR MLR
comp=Z,2µm,11.0s
TLY Talaya 31.66 339 P **P** **12 47 36.0 -0.3**
TLY lAmb lAmb 12 47 37.7
comp=Z,9.8nm,1.1s
JAY Jayapura 31.70 141 LR LR 12 57 09.1
comp=Z,107nm,20.4s,baz=331,slow=30
MDSI Maura Dua 32.04 213 P **P** **12 47 41.2 +1.3**
comp=Z,30nm,1.0s
MOY Mondy 32.58 336 *e*P **P** **12 47 45.4 +1.0**
WMQ Urumqi 34.50 315 *e*P **P** **12 48 02.3 +1.1**
WMQ pP sP 12 48 07.5 -0.8
WMQ S **S** **12 53 33.8 +4.5**
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ pmax pmax
comp=Z,74nm,4.1s
WMQ LR LR
comp=Z,220nm,11.9s
WMQ LR LR
comp=Z,350nm,13.1s
WMQ LR LR
comp=Z,240nm,14.3s
MK31 Makanchi Array 39.21 317 P **P** **12 48 42.1 +0.9**
MK31 pmax pmax
comp=Z,17nm,0.8s
MK31 Makanchi Array 39.21 317 P **P** **12 48 42.1 +0.9**
MK31 lAmb lAmb 12 48 43.2
comp=Z,17nm,0.8s
MKAR Makanchi Array 39.21 317 P **P** **12 48 42.2 +1.0**
comp=Z,18nm,0.7s,baz=113,slow=9.9,SNR=100
MKAR PcP **PcP** **12 50 49.2 -1.0**
comp=Z,3.9nm,0.9s,baz=98,slow=5.3,SNR=5.3
MKAR LR LR 13 06 30.6
comp=Z,293nm,18.2s,baz=82,slow=39
YAK Yakutsk 39.40 6 *e*P **P** **12 48 42.6 +0.1**
YAK *e**PP **pP** **12 48 45.9 -1.6**
YAK *e* 12 50 14.3
YAK *e* 12 50 52.1
YAK *e*S **S** **12 54 46.1 +2.9**
YAK *e**SS **sS** **12 54 50.4 -1.1**
YAK *e* 12 58 42.8
YAK pmax pmax
comp=Z,9.0nm,1.1s
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=Z,66nm,4.2s
YAK pmax pmax
comp=N,33nm,3.8s
YAK pmax pmax
comp=E,36nm,3.5s
YAK smax smax
comp=E,40nm,3.8s
YAK MLR MLR
comp=Z,214nm,19.0s
YAK MLR MLR
comp=N,156nm,17.0s
YAK Yakutsk 39.40 6 P **P** **12 48 42.8 +0.3**
PRZ Przheval'sk 40.41 309 P **P** **12 48 53.9 +2.4**
PRZ pmax pmax
comp=Z,37nm,1.1s
PRZ Przheval'sk 40.41 309 P **P** **12 48 53.9 +2.4**
PRZ lAmb lAmb 12 48 55.0
comp=Z,37nm,1.1s
RABL Rabaul 40.53 128 P **P** **12 48 51.5 -1.1**
RABL lAmb lAmb 12 48 58.5
comp=Z,31nm,1.0s
PETK Petropavlovsk- 40.78 33 P **P** **12 48 55.2 +1.0**
comp=Z,3.6nm,0.8s,baz=192,slow=5.1,SNR=4.4
PETK LR LR 13 05 52.6
comp=Z,124nm,20.5s,baz=239,slow=36
FITZ Fitzroy Crossi 41.11 174 P **P** **12 48 53.8 -3.3**
comp=Z,2.9nm,1.0s,baz=335,slow=2.1,SNR=8.8
FITZ Fitzroy Crossi 41.11 174 P **P** **12 48 55.0 -2.1**
KDJ Kajisay 41.20 308 P **P** **12 48 59.7 +1.7**
KDJ pmax pmax
comp=Z,18nm,0.9s
KDJ Kajisay 41.20 308 P **P** **12 48 59.7 +1.7**
KDJ lAmb lAmb 12 49 00.9
comp=Z,18nm,0.8s
PET Petropavlovsk 41.22 34 P **P** **12 48 58.4 +0.7**
PET pmax pmax
comp=Z,28nm,1.0s
PET Petropavlovsk 41.22 34 P **P** **12 48 58.4 +0.7**
PET lAmb lAmb 12 49 00.7
comp=Z,28nm,1.0s
ZALV Zalesovo Beam 41.24 328 P **P** **12 48 58.0 +0.2**
comp=Z,38nm,0.7s,baz=116,slow=7.8,SNR=159
ZALV PcP **PcP** **12 50 55.0 -1.6**
comp=Z,1.5nm,0.5s,baz=126,slow=2.6,SNR=2.8
ZALV LR LR 13 06 42.6
comp=Z,61nm,19.3s,baz=116,slow=37
KSH Kashi 41.58 304 P **P** **12 49 05.0 +3.9**
KSH sP sP 12 49 10.0 +1.9
KSH PcP **PcP** **12 51 02.5 +4.3**
KSH S **S** **12 55 22.5 +5.7**
KSH SS **SS** **12 58 22.0 +0.3**
KSH pmax pmax
comp=Z,57nm,1.2s
KSH pmax pmax
comp=Z,160nm,4.7s
KSH LR LR
comp=Z,150nm,5.6s
KSH LR LR
comp=Z,290nm,6.6s
KSH LR LR
comp=Z,210nm,12.3s
ULHL Ulahol 41.91 308 P **P** **12 49 05.6 +1.7**
SNR=16
H11N1 WAKE ISLAND Hy 42.50 86 T T 13 34 21.2
baz=282,slow=74,SNR=152
H11N2 WAKE ISLAND Hy 42.50 86 T T 13 34 21.3
baz=282,slow=74,SNR=212
H11N3 WAKE ISLAND Hy 42.52 86 T T 13 34 26.5
baz=282,slow=74,SNR=169
TKM2 Tokmak 2 42.52 309 P **P** **12 49 10.6 +1.7**
SNR=24
H11S3 WAKE ISLAND Hy 42.59 87 T T 13 34 27.9
baz=284,slow=75,SNR=380
KZA Kyzart 42.59 308 P **P** **12 49 11.9 +2.2**
SNR=13
H11S1 WAKE ISLAND Hy 42.60 87 T T 13 34 28.5
baz=284,slow=75,SNR=204
H11S2 WAKE ISLAND Hy 42.61 87 T T 13 34 30.8
baz=284,slow=75,SNR=201
KBK Karagaybulak 42.93 308 P **P** **12 49 14.1 +2.0**
SNR=7.8
KURK Kurchatov 43.01 321*ce*P **P** **12 49 12.6 +0.2**
KURK pmax pmax
comp=Z,46nm,1.7s
KURK Kurchatov 43.01 321 P **P** **12 49 12.5 +0.1**
KURK lAmb lAmb 12 49 14.2
comp=Z,26nm,1.1s
CHMS Chumysh 43.15 309 P **P** **12 49 15.5 +1.8**
SNR=7.5
UCH Uchtor 43.16 308 P **P** **12 49 16.7 +2.3**
SNR=26
NIL Nilore 43.22 295 P **P** **12 49 15.2 +0.8**
NIL pmax pmax
comp=Z,35nm,0.9s
NIL Nilore 43.22 295 P **P** **12 49 15.2 +0.8**
NIL lAmb lAmb 12 49 16.4
comp=Z,35nm,0.9s
AAK Ala-Archa 43.26 308*ce*P **P** **12 49 16.2 +1.5**
AAK pmax pmax
comp=Z,13nm,1.3s
AAK Ala-Archa 43.26 308 P **P** **12 49 15.4 +0.7**
AML Almayashu 43.74 307 P **P** **12 49 21.0 +2.1**
SNR=22
EKS2 Erkin-Say 43.78 308 P **P** **12 49 20.7 +1.8**
SNR=5.3
WRA Warramunga Arr 44.59 162 P **P** **12 49 22.5 -2.9**
comp=Z,3.5nm,0.7s,baz=344,slow=8.8,SNR=20
SEY Seymchan 45.03 20 P **P** **12 49 25.7 -2.7**
comp=Z,0.4nm,0.3s,baz=180,slow=3.0,SNR=1.6
SEY PcP **PcP** **12 51 07.5 -1.6**
comp=Z,1.3nm,0.6s,baz=154,slow=8.9,SNR=2.3
BTK Batken 45.59 304 P **P** **12 49 34.7 +1.3**
BTK pmax pmax
comp=Z,11nm,1.1s
BTK Batken 45.59 304 P **P** **12 49 34.7 +1.3**
BTK lAmb lAmb 12 49 36.0
comp=Z,11nm,1.1s
GAR Garm 45.88 303 P **P** **12 49 36.7 +1.1**
GIRL Giralia 45.92 189 P **P** **12 49 36.3 +0.5**
KK31 Karatay Array 46.22 308 P **P** **12 49 39.3 +1.1**
KK31 pmax pmax
comp=Z,14nm,1.0s
KK31 Karatay Array 46.22 308 P **P** **12 49 39.3 +1.1**
KK31 lAmb lAmb 12 49 40.6
comp=Z,14nm,0.9s
KBL Kabul 46.72 296 P **P** **12 49 43.8 +1.3**
KBL pmax pmax
comp=Z,29nm,1.0s
KBL Kabul 46.72 296 P **P** **12 49 43.8 +1.3**
CHGR Chuyangaron 46.75 302 P **P** **12 49 43.4 +0.8**
AS31 Alice Springs 48.03 164 P **P** **12 49 52.1 -0.2**
ASAR Alice Springs 48.03 164 P **P** **12 49 50.6 -1.7**
comp=Z,0.9nm,0.5s,baz=344,slow=7.1,SNR=33
ASAR PcP **PcP** **12 51 18.2 -2.1**
comp=Z,0.9nm,0.7s,baz=350,slow=3.9,SNR=4.3
BRVK Borovoye 48.67 321*ce*P **P** **12 49 57.7 +0.6**
BRVK pmax pmax
comp=Z,37nm,1.1s
BRVK Borovoye 48.67 321 P **P** **12 49 58.0 +1.0**
TIXI Tiksi 48.83 3*ce*P **P** **12 49 58.4 +0.4**
TIXI pmax pmax
comp=Z,8.0nm,1.7s
TIXI Tiksi 48.83 3 P **P** **12 49 57.8 -0.2**
CTA Charters Tower 49.32 148 P **P** **12 50 00.1 -2.3**
comp=Z,8.6nm,0.8s,baz=343,slow=11,SNR=7.9
CTAO Charters Tower 49.32 148 P **P** **12 50 02.0 -0.4**
CTAO pmax pmax
comp=Z,11nm,0.9s
CTAO Charters Tower 49.32 148 P **P** **12 50 02.0 -0.4**
CTAO lAmb lAmb 12 50 02.6
comp=Z,11nm,0.8s
BILL Bilibino 52.73 20 *e*P **P** **12 50 27.1 -0.4**
BILL *e* 12 51 35.3
BILL *e* 12 52 26.5
BILL pmax pmax
comp=Z,5.0nm,1.3s
BILL Bilibino 52.73 20 P **P** **12 50 27.8 +0.3**
GEYT Alibeck 55.44 301 P **P** **12 50 49.6 +1.9**
comp=Z,13nm,1.1s,baz=92,slow=3.6,SNR=21
GEYT LR LR 13 18 53.4
comp=Z,82nm,18.3s,baz=75,slow=41
ARU Arti 56.06 323*d*iP **P** **12 50 50.0 -1.8**
ARU S **S** **12 58 37.5 -2.3**
ARU pmax pmax
comp=Z,48nm,0.9s
ARU MLR MLR
comp=Z,122nm,13.0s
ARU Arti 56.06 323 P **P** **12 50 51.9 +0.1**
DGAR Diego Garcia 56.51 243*ce*P **P** **12 50 53.7 -1.9**
DGAR pmax pmax
comp=Z,281nm,1.3s
STKA Stephens Creek 57.97 160 P **P** **12 51 04.4 -1.2**
comp=Z,6.6nm,0.6s,baz=338,slow=7.0,SNR=22
STKA LR LR 13 18 12.4
comp=Z,33nm,19.6s,baz=8.2,slow=38
STKA Stephens Creek 57.97 160 P **P** **12 51 05.0 -0.6**
STKA pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 57.97 160 P **P** **12 51 05.0 -0.6**
ARMA Armidale 60.63 150 P **P** **12 51 23.7 -0.5**
ARMA lAmb lAmb 12 51 29.6
comp=Z,15nm,1.1s
DZM Mont Dzumac 62.82 132 LR LR 13 17 17.7
comp=Z,48nm,18.5s,baz=354,slow=35
AKT Akhty 63.06 306 *e*P **P** **12 51 41.5 +0.9**
AKT *e* 12 52 18.3
AKT pmax pmax
comp=Z,25nm,1.2s
TOO Toolangi 64.46 159 P **P** **12 51 49.8 +0.3**
TOO pmax pmax
comp=Z,15nm,0.9s
TOO Toolangi 64.46 159 P **P** **12 51 49.8 +0.3**
ZEI Tsey 65.68 308 *e*P **P** **12 51 56.5 -1.3**
ZEI pmax pmax
comp=Z,27nm,1.0s
CHGN Chignik 65.84 37 P **P** **12 51 58.8 +0.5**
CHGN lAmb lAmb 12 52 00.4
comp=Z,16nm,1.2s
GOF Gofitskoye 65.93 311⇑ *e*P **P** **12 52 00.5 +1.4**
VRH Novokhopyorsk 65.94 317 *e*P **P** **12 51 58.6 -0.4**
VRH pmax pmax

comp=Z,60nm,1.0s
KLMR Klimovskoe 66.16 328 *e*P **P** 12 51 59.4 -0.8
KLMR pmax pmax
comp=Z,47nm,1.2s
KLMR Klimovskoe 66.16 328 *e*P **P** **12 51 59.5 -0.8**
KLMR AMP 12 52 01.8
comp=Z,47nm,1.2s
AKH Akhalkalaki 66.22 307 P **P** **12 52 02.9 +1.6**
AKH pmax pmax
comp=Z,27nm,0.9s
AKH Akhalkalaki 66.22 307 P **P** **12 52 02.9 +1.6**
KBZ Khabaz 66.25 309 P **P** **12 52 02.6 +1.4**
comp=Z,22nm,0.9s,baz=84,slow=4.9,SNR=31
KBZ LR LR 13 25 09.7
comp=Z,63nm,19.9s,baz=70,slow=40
KIV Kislovodsk 66.36 309 *e*P **P** **12 52 01.5 -0.5**
KIV *e* 12 52 08.7
KIV *e* 12 52 26.8
KIV *e* 12 54 26.9
KIV *e*PPP PPP 12 56 05.5
KIV pmax pmax
comp=Z,39nm,1.1s
NEY Neytrino 66.45 309 *i* P **P** **12 52 02.6 -0.2**
TTA Tatalina 66.46 30 P **P** **12 52 02.3 0.0**
TTA pmax pmax
comp=Z,6.0nm,1.2s
TTA Tatalina 66.46 30 P **P** **12 52 02.2 0.0**
TTA IAmb IAmb 12 52 04.9
comp=Z,5.7nm,1.2s
TMCR Tamitsa 66.58 332 *e*P **P** **12 52 02.6 -0.3**
TMCR pmax pmax
comp=Z,52nm,1.4s
LPSR Galich'ya Gora 67.46 319 *e*P **P** **12 52 08.7 0.0**
LPSR pmax pmax
comp=Z,50nm,1.6s
VORD Divnogorie 67.48 317 *e*P **P** **12 52 09.2 +0.3**
VORD pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 67.53 318 *e*P **P** **12 52 09.3 +0.1**
VSR pmax pmax
comp=Z,40nm,1.7s
MOS Moscow 67.75 323 *e*P **P** **12 52 09.3 -1.1**
MOS pmax pmax
comp=Z,35nm,0.8s
OBN Obninsk 68.44 322 *e*P **P** **12 52 15.1 +0.3**
OBN pmax pmax
comp=Z,18nm,0.7s
OBN Obninsk 68.44 322 P **P** **12 52 15.0 +0.2**
TOLK Toolik Lake Re 68.47 23 P **P** **12 52 15.0 +0.1**
TOLK IAmb IAmb 12 52 19.0
comp=Z,4.1nm,0.8s
SOC Sochi 68.54 309 *e*P **P** **12 52 15.8 +0.1**
SOC *e*PPP PPP 12 56 24.1
SOC *e*S **S** **13 01 17.7 +0.3**
SOC *e*SS **SS** **13 05 41.6 +0.4**
SOC pmax pmax
comp=Z,15nm,0.6s
SOC MLR MLR
comp=Z,104nm,14.0s
BPAW Bear Paw Mtn. 68.57 28 P **P** **12 52 15.5 0.0**
BPAW IAmb IAmb 12 52 25.6
comp=Z,3.3nm,0.8s
RAYN Ar Rayn 68.74 287 P **P** **12 52 17.6 +0.2**
RAYN pmax pmax
comp=Z,17nm,1.2s
RAYN Ar Rayn 68.74 287 P **P** **12 52 17.6 +0.2**
RAYN IAmb IAmb 12 52 19.0
comp=Z,17nm,1.2s
NEA Nenana 69.31 27 P **P** **12 52 19.9 -0.2**
NEA IAmb IAmb 12 52 26.6
comp=Z,7.1nm,1.0s
MCK McKinley 69.52 28 P **P** **12 52 20.9 -0.6**
MCK pmax pmax
comp=Z,7.0nm,1.3s
MCK McKinley 69.52 28 P **P** **12 52 20.9 -0.6**
MCK IAmb IAmb 12 52 22.8
comp=Z,7.1nm,1.3s
RND Reindeer 69.62 29 P **P** **12 52 20.5 -1.6**
RND pmax pmax
comp=Z,9.0nm,0.8s
RND Reindeer 69.62 29 P **P** **12 52 20.5 -1.6**
RND IAmb IAmb 12 52 28.3
comp=Z,9.1nm,0.8s
ANN Anapa 69.89 311 *e*P **P** **12 52 24.5 +0.5**
ANN pmax pmax
comp=Z,104nm,1.0s
ILAR Eielson Array 70.20 27 P **P** **12 52 25.4 -0.1**
comp=Z,0.8nm,0.6s,baz=294,slow=6.5,SNR=11
ARCES ARCESS Array B 70.62 338 P **P** **12 52 27.1 -0.9**
comp=Z,4.9nm,0.8s,baz=72,slow=5.7,SNR=10
SCRK Sand Creek 71.61 28 P **P** **12 52 34.5 +0.2**
GAZ Gaziantep 71.91 303 P **P** **12 52 37.7 +1.1**
SIM Simferopol' 72.14 312 *e*P **P** **12 52 37.1 -0.6**
SIM pmax pmax
comp=Z,26nm,1.1s
FIA1 FINESS Array S 72.46 330 P **P** **12 52 39.8 +0.6**
FIA1 IAmb IAmb 12 52 41.2
comp=Z,22nm,1.1s
FINES FINESS Array B 72.46 330 P **P** **12 52 38.9 -0.4**
comp=Z,5.5nm,0.8s,baz=89,slow=12,SNR=16
EGAK Eagle 72.57 26 P **P** **12 52 40.8 +0.9**
NOR Nord 73.48 354 *i* P **P** **12 52 47.0 +2.0**
NOR pmax pmax
comp=Z,3.0nm,0.7s
NOR Nord 73.48 354 *i* P **P** **12 52 47.0 +2.0**
comp=Z,2.8nm,0.7s
DAWY Dawson 73.52 27 P **P** **12 52 44.6 -1.0**
CTGM Chitina Glacie 73.64 30 P **P** **12 52 45.4 -1.0**
CTGM IAmb IAmb 12 52 52.8
comp=Z,12nm,1.3s
AKASG Malin Array Be 73.77 319 P **P** **12 52 47.2 0.0**
comp=Z,5.4nm,0.9s,baz=60,slow=5.9,SNR=27
AKASG Malin Array Be 73.77 319 *i* P **P** **12 52 47.2 0.0**
AKASG pmax pmax
comp=Z,8.0nm,0.9s
AKBB Malin Array Si 73.77 319 *ce*P **P** **12 52 47.5 +0.3**
EPYK Eagle Plains 73.81 24 P **P** **12 52 46.9 -0.4**
BR131 Keskin Array S 73.90 307 P **P** **12 52 48.8 +0.4**
BR131 pmax pmax
comp=Z,14nm,1.1s
BR131 Keskin Array S 73.90 307 P **P** **12 52 48.8 +0.4**
BR131 IAmb IAmb 12 52 50.1
comp=Z,14nm,1.1s
BRTR Keskin Array B 73.90 307 P **P** **12 52 49.1 +0.7**
comp=Z,7.3nm,0.9s,baz=114,slow=6.0,SNR=26
INK Inuvik 74.26 22 P **P** **12 52 48.8 -1.0**
comp=Z,1.8nm,0.9s,baz=263,slow=14,SNR=3.8
INK Inuvik 74.26 22 P **P** **12 52 50.5 +0.8**
INK pmax pmax
comp=Z,4.0nm,0.9s
INK Inuvik 74.26 22 P **P** **12 52 50.5 +0.8**
ANTO Ankara 74.48 307 P **P** **12 52 52.2 +0.5**
ANTO pmax pmax
comp=Z,18nm,0.7s
ANTO Ankara 74.48 307 P **P** **12 52 52.2 +0.5**
CSS Mathiatis 75.56 302 P **P** **12 52 58.4 +0.4**
CSS IAmb IAmb 12 52 59.5
comp=Z,18nm,0.9s
JURR Jurilovca 75.77 313 ⇑P **P** **12 52 57.3 -1.6**
TOPG Topolog 76.07 313 ⇑P **P** **12 52 58.2 -2.4**
CFR Carcaliu 76.13 313 ⇓P **P** **12 52 58.4 -2.6**
TIRR Tirgusor 76.18 313 ⇓P **P** **12 52 59.0 -2.3**
TIRR Tirgusor 76.18 313 P **P** **12 53 01.1 -0.2**
TIRR pmax pmax
comp=Z,36nm,1.1s
TIRR Tirgusor 76.18 313 P **P** **12 53 01.1 -0.2**
SUW Suwalki 76.24 323 P **P** **12 53 01.3 -0.1**
SUW pmax pmax
comp=Z,45nm,0.9s
SUW Suwalki 76.24 323 P **P** **12 53 01.3 -0.1**
HARR Harsova 76.43 313 ⇓P **P** **12 52 59.8 -2.9**
ISP Isparta 76.80 306 P **P** **12 53 04.2 -0.9**
ISP pmax pmax
comp=Z,27nm,1.2s
ISP Isparta 76.80 306 P **P** **12 53 04.2 -0.9**
VRI Vrincioaia 76.84 314 ⇑P **P** **12 53 02.0 -3.1**
VRI Vrincioaia 76.84 314 ⇑P **P** **12 53 02.0 -3.1**
C36M Paulatuk 76.86 19 P **P** **12 53 04.0 -0.6**
C36M IAmb IAmb 12 53 12.3
comp=Z,6.2nm,1.0s
BIZ Bicaz 76.89 316 ⇑P **P** **12 53 01.7 -3.6**
LVV L'vov 77.21 319 *e*P **P** **12 53 07.2 +0.2**
BURAR Bucovina Array 77.23 316 ⇑P P 12 53 02.4 -4.9
BURAR Bucovina Array 77.23 316 ⇑P P 12 53 02.4 -4.9

MLR Muntele Rosu 77.49 314 ⇑P P 12 53 03.6 -5.2
MLR Muntele Rosu 77.49 314 ⇑P P 12 53 03.6 -5.2
MLR Muntele Rosu 77.49 314 P **P** **12 53 09.5 +0.6**
MLR IAmb IAmb 12 53 11.1
comp=Z,13nm,1.0s
DAG Danmarks Havn 77.50 351 *i* P **P** **12 53 09.4 +1.2**
DAG pmax pmax
comp=Z,7.0nm,0.9s
DAG Danmarks Havn 77.50 351 *i* P **P** **12 53 09.4 +1.2**
comp=Z,7.3nm,0.9s
ELL Elmali 77.62 305 P **P** **12 53 09.9 +0.2**
ELL pmax pmax
comp=Z,46nm,0.8s
ELL Elmali 77.62 305 P **P** **12 53 09.9 +0.2**
ARR Arges 78.40 314 ⇓P P 12 53 08.2 -5.6
CJR Cluj-Napoca 78.58 316 ⇓P P 12 53 10.0 -4.8
CJR Cluj-Napoca 78.58 316 ⇓P P 12 53 10.0 -4.8
UZH Uzhgorod 78.70 318 *e*P **P** **12 53 16.5 +1.2**
UZH *e* 12 53 19.7
UZH *e* 12 53 23.0
LOT Lotru 78.94 315 ⇓P P 12 53 11.1 -5.8
NC405 NORSAR Array S 79.01 332 P **P** **12 53 15.2 -1.6**
DRGR 79.12 316 ⇓P P 12 53 11.5 -6.3
DRGR 79.12 316 ⇓P P 12 53 11.5 -6.3
NB2 NORSAR Subarra 79.26 332 P **P** **12 53 16.9 -1.3**
comp=Z,1.2nm,0.6s,baz=56,slow=5.9
NOA NORSAR Array B 79.26 332 P **P** **12 53 17.2 -1.0**
comp=Z,4.7nm,0.9s,baz=58,slow=5.6,SNR=8.2
OJC Ojcow 79.59 320 *e*P **P** **12 53 20.5 +0.3**
OJC Ojcow 79.59 320 P **P** **12 53 19.9 -0.3**
OJC pmax pmax
comp=Z,18nm,0.7s
OJC Ojcow 79.59 320 P **P** **12 53 19.9 -0.3**
HERR Herculane 80.04 314 ⇓P P 12 53 15.6 -7.1
KARP Karpathos 80.12 304 P **P** **12 53 23.1 -0.3**
BSD Bornholm Skovb 80.23 326 *i* P **P** **12 53 22.9 -0.6**
BSD pmax pmax
comp=Z,16nm,1.0s
BSD Bornholm Skovb 80.23 326 *i* P **P** **12 53 22.9 -0.6**
comp=Z,16nm,1.0s
VTS Vitosha 80.35 312 ⇑P P 12 53 10.0 -15
VTS Vitosha 80.35 312 ⇑P P 12 53 10.0 -15
VTS Vitosha 80.35 312 P **P** **12 53 25.6 +1.0**
VTS IAmb IAmb 12 53 26.6
comp=Z,14nm,0.9s
PSZ Piszkesteto 80.45 318 P **P** **12 53 25.2 +0.2**
PSZ pmax pmax
comp=Z,12nm,1.1s
PSZ Piszkesteto 80.45 318 P **P** **12 53 25.2 +0.2**
PSZ IAmb IAmb 12 53 31.0
comp=Z,12nm,1.1s
MDVR Moldovita 80.54 315 ⇓P P 12 53 17.5 -7.9
OKC Ostrava-Krasne 80.72 320 *e*P **P** **12 53 21.7 -4.6**
OKC *e* 12 53 27.7
OKC Ostrava-Krasne 80.72 320 *e*P **P** **12 53 21.7 -4.6**
OKC *e*pP **pP** **12 53 27.7 -3.8**
VYHS Vyhne 80.86 319 *e*P **P** **12 53 27.6 +0.5**
VYHS pmax pmax
comp=Z,16nm,1.0s
VYHS Vyhne 80.86 319 *e*P **P** **12 53 27.6 +0.5**
MORC Moravsky Berou 81.10 320 *e*P **P** **12 53 28.6 +0.2**
MORC Moravsky Berou 81.10 320 ⇓P P 12 53 20.9 -7.4
MORC Moravsky Berou 81.10 320 ⇓P P 12 53 20.9 -7.5
MORC Moravsky Berou 81.10 320 P **P** **12 53 28.8 +0.4**
MORC IAmb IAmb 12 53 30.2
comp=Z,7.6nm,1.1s
SANT Santorini 81.10 306 P **P** **12 53 26.8 -1.8**
SANT IAmb IAmb 12 53 31.5
comp=Z,23nm,1.1s
KSP Ksiaz 81.36 322 *e*P **P** **12 53 30.0 +0.3**
JAVC Velka Javorina 81.41 320 *e*P **P** **12 53 31.3 +1.2**
KRLC Kraliky 81.42 321 *e*P **P** **12 53 30.6 +0.6**
KRLC *e* 12 53 38.9
KRLC Kraliky 81.42 321 *e*P **P** **12 53 30.6 +0.6**
KRLC *ex* x 12 53 38.9
OSTC Ostas 81.53 321 *e*P **P** **12 53 32.4 +1.8**
OSTC *ex* x 12 53 36.2
DPC Dobruska-Polom 81.56 321 *e*P **P** **12 53 31.3 +0.5**
DPC Dobruska-Polom 81.56 321 *e*P **P** **12 53 31.3 +0.5**
CHVC Chvalec 81.61 322 *e*P **P** **12 53 30.4 -0.6**
CHVC *ex* x 12 53 34.9
UPC Upice 81.67 321 *e*P **P** **12 53 32.6 +1.3**
UPC Upice 81.67 321 *e*P **P** **12 53 32.6 +1.3**
VRAC Vranov 81.86 320 *e*P **P** **12 53 32.5 +0.1**
VRAC Vranov 81.86 320 ⇑P P 12 53 23.9 -8.4
VRAC Vranov 81.86 320 ⇑P P 12 53 23.9 -8.5
IDI Anoyia 81.94 305 ⇓P P 12 53 25.2 -7.9
DIVS Divibare 81.94 314 P **P** **12 53 33.1 +0.1**
DIVS IAmb IAmb 12 53 34.8
comp=Z,6.6nm,1.2s
KRUC Moravsky 82.08 320 *e*P **P** **12 53 33.2 -0.3**
FNA Florina 82.34 311 P **P** **12 53 34.6 -0.5**
FNA pmax pmax
comp=Z,9.0nm,1.2s
FNA Florina 82.34 311 P **P** **12 53 34.6 -0.5**
FNA IAmb IAmb 12 53 35.3
comp=Z,8.7nm,1.2s
AGG Agios Georgios 82.37 309 P **P** **12 53 33.9 -1.4**
AGG pmax pmax
comp=Z,17nm,1.5s
AGG Agios Georgios 82.37 309 P **P** **12 53 33.9 -1.4**
AGG IAmb IAmb 12 53 35.5
comp=Z,16nm,1.5s
MUD Monsted U'grnd 82.45 329 *i* P **P** **12 53 35.8 +0.6**
MUD pmax pmax
comp=Z,25nm,1.1s
MUD Monsted U'grnd 82.45 329 *i* P **P** **12 53 35.8 +0.6**
comp=Z,25nm,1.1s
BRG Berggiesshubel 82.68 322 *e*P **P** **12 53 35.0 -1.6**
comp=Z,11nm,1.5s
BRG Berggiesshubel 82.68 322 *e*P **P** **12 53 35.0 -1.6**
BRG pmax pmax
comp=Z,11nm,1.5s
PRU Pruhonice 82.75 321 *e*P **P** **12 53 37.3 +0.3**
PRU Pruhonice 82.75 321 *e*P **P** **12 53 37.3 +0.3**
CONA Conrad Observa 82.90 319 *i* pP **P** **12 53 39.6 +1.7**
comp=Z,6.4nm,1.2s
CLL Collm 83.00 323 *i* P **P** **12 53 38.6 +0.4**
comp=Z,10.0nm,1.1s
CLL *i* pP **PcP** **12 53 42.0 -0.9**
CLL *e*SS SS 13 08 54.0 -26
CLL Collm 83.00 323 *i* P **P** **12 53 38.6 +0.4**
CLL *i* 12 53 42.0
CLL pmax pmax
comp=Z,10.0nm,1.1s
CLL Collm 83.00 323 P **P** **12 53 38.7 +0.5**
CLL IAmb IAmb 12 53 40.5
comp=Z,7.2nm,0.9s
PBCC Pribram 83.20 321 *e*P **P** **12 53 39.4 0.0**
ITM Ithomi 83.40 307 P **P** **12 53 39.3 -1.4**
ARSA Arzberg 83.41 319 *i* P **P** **12 53 41.0 +0.5**
comp=Z,3.8nm,1.2s
SUMG Summit 83.64 354 P **P** **12 53 40.9 -0.8**
SUMG pmax pmax
comp=Z,16nm,1.1s
SUMG Summit 83.64 354 P **P** **12 53 40.9 -0.8**
SUMG Summit 83.64 354 *i* P **P** **12 53 42.2 +0.5**
comp=Z,26nm,0.9s
KHC Kasperske Hory 83.70 321 *e*P **P** **12 53 42.0 0.0**
KHC Kasperske Hory 83.70 321 *e*P **P** **12 53 42.0 0.0**
GERES GERESS Array B 83.76 321 P **P** **12 53 42.8 +0.4**
comp=Z,4.5nm,0.8s,baz=57,slow=4.9,SNR=25
GROS Grobnik 83.78 318 *i* P **P** **12 53 42.0 -0.5**
MOA Molln 83.90 320 *i* P **P** **12 53 43.0 0.0**
comp=Z,12nm,1.6s
SOKA Soboth 83.97 318 *i* P **P** **12 53 43.9 +0.4**
comp=Z,5.2nm,0.7s
YKA Yellowknife Ar 83.99 23 P **P** **12 53 41.2 -1.9**
comp=Z,1.6nm,0.7s,baz=314,slow=4.2,SNR=9.5
YKA PKKPbc **PKKPbc** **13 11 54.5 -4.6**
comp=Z,0.1nm,0.5s,baz=131,slow=2.7,SNR=4.1
YKA LR LR 13 33 37.4
comp=Z,40nm,20.3s,baz=0.0,slow=38
OBKA Obir 84.35 318 *i* P **P** **12 53 45.3 -0.1**
comp=Z,5.6nm,0.8s
MYKA Terra Mystica 84.84 319 *i* PcP **P** **12 53 49.9 +2.1**
comp=Z,7.5nm,1.2s
KMBO Kilima Mbogo 84.92 267 P **P** **12 53 51.8 +2.8**
comp=Z,4.7nm,0.9s,baz=48,slow=7.4,SNR=7.8
CADS Cadrg 84.97 318 *i* P **P** **12 53 47.3 -1.2**
ABTA Abfaltersbach 85.47 319 *i* P **P** **12 53 50.2 -0.8**
comp=Z,5.6nm,1.0s
STAL STALIGIAL 85.58 319 P **P** **12 53 51.0 -0.5**
WATA Walderalm 85.74 320 *i* PcP **P** **12 53 53.1 +0.7**

comp=Z,3.6nm,0.7s
WTTA Wattenberg 85.74 320 *i* P **P** **12 53 52.4 -0.1**
comp=Z,6.5nm,1.1s
MOTA Moosalm 86.02 320 *i* P **P** **12 53 53.5 -0.3**
comp=Z,4.3nm,0.9s
SQTA Sankt Quirin 86.02 320 *i* P **P** **12 53 53.7 0.0**
comp=Z,5.0nm,0.9s
RETA Reutte 86.14 320 *i* sP **P** **12 53 57.8 +3.5**
comp=Z,3.6nm,1.4s
FETA Feichten 86.40 320 *i* PcP **P** **12 53 55.8 +0.1**
comp=Z,3.2nm,0.9s
FUORN Ofenpass-Fuorn 86.88 320 P **P** **12 53 56.2 -1.9**
FUORN IAmb IAmb 12 54 02.6
comp=Z,11nm,1.2s
WLF Walferdange 87.60 324 P **P** **12 54 01.6 +0.3**
BMRD Maredsous 87.99 325 P **P** **12 54 02.0 -1.1**
DOU Dourbes 88.19 325 P **P** **12 54 04.0 -0.1**
PPT Papeete 95.97 106 LR LR 13 36 06.5
comp=Z,23nm,18.4s,baz=219,slow=34
ESDC Sonseca Array 99.36 320 LR LR 13 43 54.9
comp=Z,37nm,18.6s,baz=325,slow=38
VNDA Vanda 103.16 172 PKiKP **PKiKP** **12 59 28.8 -2.1**
comp=Z,0.9nm,0.7s,baz=72,slow=3.2,SNR=6.2
TXAR Lajitas Array 112.33 42 PKiKP **PKiKP** **12 59 50.6 +0.9**
comp=Z,0.4nm,0.9s,baz=303,slow=2.5,SNR=4.5
SDV Santo Domingo 146.20 21 **PKPdf** **13 00 51.7 -1.9**
RUSC La Rusia 148.01 28 **PKPdf** **13 00 57.8 +0.8**
ROSC El Rosal 148.39 31 PKPbc **PKPbc** **13 01 01.4 +0.5**
comp=Z,6.3nm,0.4s,baz=71,slow=8.6,SNR=4.9
ROSC El Rosal 148.39 31 **PKPbc** **13 01 00.8 -0.1**
LPAZ La Paz 168.90 54 PKP **PKPdf** **13 01 21.6 -0.1**
comp=Z,1.4nm,0.8s,baz=39,slow=1.4,SNR=4.4
LPAZ La Paz 168.90 54 PKIKP **PKPdf** **13 01 21.1 -0.6**
LPAZ La Paz 168.90 54 **PKPdf** **13 01 21.1 -0.6**

*THR **25** 12:42:10.7±0.3,29.56N×51.26E,h11km±9km, ML3.4*
*TEH **25** 12:42:10.6,29.55N×51.28E,h8km, ML3.5*
ISC 25 12:42:12.2±1.3, 29.53N±0.05×51.21E±0.07, h20km, n22, σ1s49/23, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
AHBU	**AHRAM**	**0.67**	**174**	*e*Pg		**Pb**	**12 42 24.1**	**-1.1**
SHI	**Shiraz**	**1.14**	**84**	*e*Pg		**Pb**	**12 42 31.7**	**-1.7**
SHI				*e*			12 42 53.3	
KLNJ	**Kolanjah**	**1.51**	**13**	*e*Pg		**Pb**	**12 42 38.9**	**-0.9**
KLNJ				*e*			12 43 04.5	
JHRM	**Jahrom**	**2.31**	**116**	*e*Pn		**Pn**	**12 42 50.2**	**+0.9**
IRAM	**Ramesheh**	**2.49**	**24**	*e*Pn		**Pn**	**12 42 52.9**	**+1.1**
JHBN	**Jahan bin**	**2.73**	**350**	*e*Pn		**Pb**	**12 42 57.8**	**-2.8**
JHBN				*e*			12 43 50.8	
ROKH	**ROKH**	**2.81**	**357**	*e*Pn		**Pn**	**12 42 57.4**	**+1.1**
ISAD	**Sadrabad**	**3.19**	**41**	*e*Pn		**Pn**	**12 43 03.5**	**+1.9**
IMEH	**Mehriz**	**3.48**	**57**	*e*Pn		**Pn**	**12 43 06.9**	**+1.5**
IZEF	**Zefreh**	**3.49**	**16**	*e*Pn		**Pn**	**12 43 07.6**	**+2.0**
IKLH	**Kolahrood**	**3.79**	**5**	*e*Pn		**Pn**	**12 43 11.7**	**+1.9**
ICHK	**Chekchek**	**3.86**	**45**	*e*Pn		**Pn**	**12 43 11.5**	**+0.9**
YZKH	**Yazd**	**4.07**	**45**	*e*Pn		**Pn**	**12 43 14.7**	**+1.2**
YZKH				*e*S		**Sn**	**12 44 01.1**	**+0.5**
YZKH	**Yazd**	**4.07**	**45**	*e*Pn		**Pn**	**12 43 14.7**	**+1.2**
ANAR	**Anarak**	**4.24**	**30**	*e*Pn		**Pn**	**12 43 16.2**	**+0.4**
IBAF	**Bafgh**	**4.28**	**60**	*e*Pn		**Pn**	**12 43 17.5**	**+1.1**
KHMZ	**Khomeyn**	**4.33**	**346**	*e*Pn		**Pn**	**12 43 18.5**	**+1.4**
KHMZ	**Khomeyn**	**4.33**	**346**	*e*Pn		**Pn**	**12 43 18.5**	**+1.4**
NGRK	**Negar Kerman**	**4.81**	**87**	*e*Pn		**Pn**	**12 43 24.7**	**+0.8**
NGRK				*e*			12 44 24.6	
TVBK	**TV Kerman**	**4.85**	**83**	*e*Pn		**Pn**	**12 43 25.4**	**+1.0**
TVBK				*e*			12 44 27.6	
ASAO	**Ashtian**	**5.10**	**349**	*e*Pn		**Pn**	**12 43 29.2**	**+1.4**
ASAO				IAML			12 44 30.2	
	comp=E,24nm,0.6s							
ASAO	**Ashtian**	**5.10**	**349**	*e*Pn		**Pn**	**12 43 29.2**	**+1.4**

*IDC **25** 12:48:49.0±2.5,50.31N×130.51W,h0km, mb3.1/1, mb1 3.6/4, mb1mx3.3/42, mbtmp3.1/4, ML2.9/3, Error ellipse: s-maj=54.4km s-min=19.4km az=59.0*
*PGC **25** 12:48:51.6±0.9,50.44N×130.11W, h10km, MLSn2.8/32, Mw3.4/32, 192km west of Pt. Hardy, Bc Vancouver Island, Canada Region*
ISC 25 12:48:50.0±1.9, 50.52N±0.05×130.03W±0.05, h2km±12km, n56, σ1s62/70, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.22**	**84**	P		**Pg**	**12 49 13.4**	**+0.1**
HOLB				Sn		**Sg**	**12 49 28.4**	**-0.6**
BPBC	**Brooks Peninsu**	**1.49**	**103**	Pn		Pn	12 49 16.1	-1.7
BPBC				Sn		**Sg**	**12 49 35.2**	**-2.7**
PACB	**Port Alice, BC**	**1.62**	**92**	Pn		**Pn**	**12 49 18.4**	**-1.1**
PACB				Sn		**Sn**	**12 49 37.8**	**-3.2**
PHC	**Port Hardy**	**1.67**	**83**	Pn		**Pn**	**12 49 19.8**	**-0.3**
PHC				Sn		**Sn**	**12 49 40.0**	**-2.0**
MAYB	**Maynard**	**1.83**	**93**	Pn		**Pn**	**12 49 21.6**	**-0.9**
MAYB				Sn		**Sn**	**12 49 43.8**	**-2.6**
FHRB	**Fair Harbour**	**1.93**	**103**	Pn		**Pn**	**12 49 22.5**	**-1.1**
EDB	**Eliza Dome**	**1.98**	**108**	Pn		**Pn**	**12 49 23.1**	**-1.3**
EDB				Sn		**Sn**	**12 49 46.4**	**-3.4**
TLCB	**Telegraph Cove**	**2.04**	**88**	Pn		**Pn**	**12 49 25.2**	**-0.1**
TLCB				Sn		**Sn**	**12 49 48.8**	**-2.5**
BBB	**Bella Bella**	**2.06**	**35**	Pn		**Pn**	**12 49 26.0**	**+0.6**
BBB				Sn		**Sn**	**12 49 50.0**	**-1.7**
HG3B	**Hotspring**	**2.24**	**337**	Pn		**Pn**	**12 49 27.2**	**-0.8**
HG3B				Sn		**Sn**	**12 49 54.5**	**-1.6**
BNB	**Barry Inlet**	**2.32**	**333**	Pn		**Pn**	**12 49 28.4**	**-0.8**
BNB				Sn		**Sn**	**12 49 55.6**	**-2.6**
NTKA	**Nootka**	**2.39**	**112**	Pn		**Pn**	**12 49 28.8**	**-1.2**
NTKA				Sn		**Sn**	**12 49 57.3**	**-2.5**
GDR	**Gold River**	**2.68**	**105**	Pn		**Pn**	**12 49 33.1**	**-0.9**
BCBC	**Bella Coola**	**2.77**	**47**	Sn		**Sn**	**12 50 08.3**	**-0.8**
SPLB	**Strathcona Par**	**2.88**	**101**	Pn		**Pn**	**12 49 36.7**	**-0.1**
MOBC	**Moresby Island**	**2.89**	**336**	Pn		**Pn**	**12 49 36.3**	**-0.7**
MOBC				Sn		**Sn**	**12 50 09.8**	**-2.4**
TOFB	**Tofino**	**3.00**	**116**	Sn		**Sn**	**12 50 12.8**	**-2.0**
BNAB	**Bonilla**	**3.00**	**353**	Pn		**Pn**	**12 49 38.1**	**-0.3**
BNAB				Sn		**Sn**	**12 50 12.9**	**-2.0**
CBB	**Campbell River**	**3.03**	**97**	Pn		**Pn**	**12 49 39.0**	**+0.1**
CBB				Sn		**Sn**	**12 50 13.6**	**-2.1**
DIB	**Dawson Inlet,**	**3.08**	**332**	Pn		**Pn**	**12 49 40.0**	**+0.4**
DIB				Sn		**Sn**	**12 50 15.3**	**-1.6**
H02S1	**DAWSON INLET T**	**3.08**	**332**	Pn		**Pn**	**12 49 39.5**	**0.0**
H02S1				Sn		**Sn**	**12 50 15.5**	**-1.5**
	SNR=14							
BTB	**Buttle Lake**	**3.10**	**108**	Pn		**Pn**	**12 49 39.4**	**-0.5**
MWAB	**Mount Washingt**	**3.14**	**103**	Pn		**Pn**	**12 49 40.5**	**0.0**
H02N1	**VAN INLET T-PH**	**3.15**	**331**	Pn		**Pn**	**12 49 40.5**	**0.0**
H02N1				Sn		**Sn**	**12 50 16.8**	**-1.9**
	SNR=6.3							
VIB	**Van Inlet**	**3.15**	**331**	Pn		**Pn**	**12 49 40.9**	**+0.3**
VIB				Sn		**Sn**	**12 50 16.6**	**-2.1**
OZB	**Mount Ozzard**	**3.33**	**116**	Pn		**Pn**	**12 49 43.1**	**+0.1**
B927	**Port Alberni**	**3.62**	**109**	Pn		**Pn**	**12 49 47.1**	**+0.2**
TXB	**Texada**	**3.69**	**101**	Pn		**Pn**	**12 49 48.3**	**+0.2**
MGB	**Mount Grey**	**3.78**	**112**	Pn		**Pn**	**12 49 49.7**	**+0.4**
RUBB	**Prince Rupert**	**3.81**	**358**	Pn		**Pn**	**12 49 50.2**	**+0.6**
SHB	**Sechelt**	**4.07**	**101**	Pn		**Pn**	**12 49 53.7**	**+0.4**
YOUB	**Youbou, Lake C**	**4.08**	**111**	Pn		**Pn**	**12 49 54.6**	**+1.3**
PFB	**Port Renfrew**	**4.13**	**116**	Pn		**Pn**	**12 49 54.6**	**+0.6**
OCP	**Olym-Cheeka Pk**	**4.17**	**120**	Pn		**Pn**	**12 49 55.5**	**+0.9**
UBRB	**Upper Beezaeko**	**4.40**	**55**	Pn		**Pn**	**12 49 59.9**	**+2.2**
LZB	**Mount Lazard**	**4.47**	**113**	Pn		**Pn**	**12 49 59.7**	**+1.0**
WPB	**Watts Point**	**4.48**	**98**	Pn		**Pn**	**12 50 00.0**	**+1.3**
BIB	**Bowen Island**	**4.48**	**102**	Pn		**Pn**	**12 49 59.4**	**+0.7**
GOBB	**Galiano Island**	**4.51**	**108**	Pn		**Pn**	**12 50 00.2**	**+1.0**
B009	**North Saanich**	**4.67**	**111**	Pn		**Pn**	**12 50 03.0**	**+1.7**
PGC	**Sidney**	**4.67**	**111**	Pn		**Pn**	**12 50 02.9**	**+1.5**
B011	**North Saanich**	**4.67**	**111**	Pn		**Pn**	**12 50 03.0**	**+1.6**
SNB	**Saturna Island**	**4.79**	**109**	Pn		**Pn**	**12 50 04.9**	**+1.9**
HNBB	**Haney**	**4.98**	**101**	Pn		**Pn**	**12 50 07.2**	**+1.6**
MCW	**Mount Constitu**	**5.03**	**109**	Pn		**Pn**	**12 50 08.4**	**+2.0**
VDB	**Vedder Mountai**	**5.35**	**103**	Pn		**Pn**	**12 50 12.8**	**+2.0**
MBW	**Mount Baker**	**5.56**	**105**	Pn		**Pn**	**12 50 15.4**	**+1.6**
CMW	**Cultus Mountai**	**5.57**	**109**	Pn		**Pn**	**12 50 16.0**	**+2.2**
JCW	**Jim Creek**	**5.78**	**111**	Pn		**Pn**	**12 50 18.9**	**+2.2**
YKA	**Yellowknife Ar**	**14.66**	**29**	Pn		**Pn**	**12 52 18.1**	**+0.1**
	0.0nm,0.3s,baz=223,slow=12,SNR=3.0							
NVAR	**Mina Array Bea**	**14.68**	**141**	Pn		**Pn**	**12 52 18.8**	**+0.1**
	0.1nm,0.3s,baz=337,slow=13,SNR=1.8							
PDAR	**Pinedale Array**	**16.02**	**111**	Pn		**Pn**	**12 52 40.5**	**+4.1**
	0.0nm,0.3s,baz=316,slow=12,SNR=7.2							

TXAR	**Lajitas Array**	**29.00**	**127**	P	**P**	**12 54 52.9 +1.8**
	0.2nm,0.7s,baz=324,slow=12,SNR=2.5					
H11N2	**WAKE ISLAND Hy**	**57.95**	**262**	T	T	14 01 29.3
	baz=42,slow=76,SNR=33					
H11N3	**WAKE ISLAND Hy**	**57.95**	**262**	T	T	14 01 14.2
	baz=42,slow=76,SNR=29					
H11N1	**WAKE ISLAND Hy**	**57.97**	**262**	T	T	14 01 28.1
	baz=42,slow=76,SNR=23					

ATH 25 12:48:54.9,39°52.N×24°24.19E,h30km±2km,ML1.7/8,Error ellipse: s-maj=2.3km s-min=0.8km az=248.0,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AOS	**Alonnisos**	**0.43**	**215**	P	Pb	12 49 04.1	-0.2
AOS				S	Sb	12 49 10.8	+0.2
AOS				AML	AML	12 49 11.0	
	comp=E,364μm,0.3s						
AOS				AML	AML	12 49 11.3	
	comp=N,238μm,0.3s						
PAIG	**Paliouri**	**0.56**	**316**	P	Pn	12 49 06.8	-0.2
PAIG				S	Sn	12 49 15.3	0.0
PAIG				AML	AML	12 49 17.3	
	comp=E,141μm,0.3s						
PAIG				AML	AML	12 49 17.7	
	comp=N,135μm,0.4s						
EFSA	**Agios Efstrati**	**0.61**	**88**	P	Pn	12 49 07.4	-0.2
SKIA	**Skiathos**	**0.67**	**238**	P	Pb	12 49 08.3	+0.1
SKIA				S	Sn	12 49 18.6	+0.7
SKIA				AML	AML	12 49 20.5	
	comp=E,308μm,0.4s						
SKIA				AML	AML	12 49 20.6	
	comp=N,244μm,0.3s						
SKY	**Skiros Island**	**0.70**	**157**	P	Pn	12 49 09.3	+0.4
NEO	**Neokhori**	**0.78**	**254**	P	Pb	12 49 10.8	+0.7
NEO				S	Sn	12 49 22.0	+1.3
NEO				AML	AML	12 49 22.4	
	comp=E,116μm,0.3s						
NEO				AML	AML	12 49 23.3	
	comp=N,128μm,0.3s						
XOR	**Xorichti**	**0.79**	**259**	P	Pb	12 49 11.0	+0.8
XOR				S	Sn	12 49 21.9	+0.9
XOR				AML	AML	12 49 22.5	
	comp=E,95μm,0.4s						
XOR				AML	AML	12 49 24.6	
	comp=N,78μm,0.2s						
OUR	**Ouranopolis**	**0.83**	**349**	P	Pb	12 49 11.2	+0.4
OUR				S	Sn	12 49 23.3	+1.5
OUR				AML	AML	12 49 24.2	
	comp=E,67μm,0.2s						
OUR				AML	AML	12 49 25.6	
	comp=N,86μm,0.2s						
LIA	**Limnos Island**	**0.85**	**64**	P	Pb	12 49 11.4	+0.3
LIA				S	Sn	12 49 24.0	+1.7
LIA				AML	AML	12 49 25.7	
	comp=N,47μm,0.4s						
LIA				AML	AML	12 49 25.7	
	comp=E,46μm,0.2s						
KYMI	**Kymi, Euboea I**	**0.89**	**185**	P	Pb	12 49 12.6	+0.7
THAS	**Thassos island**	**1.15**	**20**	P	Pb	12 49 16.4	+0.1
THAS				S	Sb	12 49 32.6	+1.7
THAS				AML	AML	12 49 35.7	
	comp=N,71μm,0.3s						
THAS				AML	AML	12 49 36.4	
	comp=E,80μm,0.3s						
DION	**Dionisos Attik**	**1.46**	**188**	P	Pb	12 49 21.0	-0.4

DDA 25 12:49:30.6,40°33N×25°.89E,h7km±3km,ML1.1,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.50**	**166**	*i* P	Pg	12 49 40.9	+0.6
BOZC				*i* S	Sg	12 49 47.7	+1.0
BOZC				IAML		12 49 49.0	
	comp=E,11nm,0.4s						
BAYC	**CANAKKALE_Bayr**	**0.77**	**139**	*i* P	Pb	12 49 45.9	-0.4
BAYC				*i* S	Sb	12 49 56.9	-0.1
BAYC				IAML		12 49 59.0	
	comp=E,7.6nm,0.3s						
KESN	**Edirne-Kesan**	**0.78**	**50**	*i* P	Pg	12 49 39.6	-6.0
KESN				*i* S	Sg	12 49 56.4	+0.6
KESN				IAML		12 49 58.0	
	comp=N,12nm,0.2s						
KESN				IAML		12 49 59.0	
	comp=E,19nm,0.3s						

*ISK **25** 13:08:22.3,39°.73N×24°.10E,h17km, ML3.5/20*
*ATH **25** 13:08:22.1,39°.72N×24°.14E,h26km, ML3.4/33,Error ellipse: s-maj=0.8km s-min=0.6km az=169.0*
*THE **25** 13:08:22.9,39°.73N×24°.12E,h9km±1km,ML3.5/10,Error ellipse: s-maj=1.3km s-min=0.6km az=241.0*
*DDA **25** 13:08:26.2,39°.69N×24°.45E,h39km±1km,MW3.5*

ISC 25 13:08:21.8±1.0,39°.69N±0°.02×24°.09E±0°.01,h12km±9km,n172,σ1$06/217,11C-9D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	**0.40**	**307**	P	**Pb**	**13 08 30.9**	**+0.1**
PAIG				S	**Sb**	**13 08 37.3**	**+0.5**
	11μm,0.5s						
PAIG	**Paliouri**	**0.40**	**307**	P	**Pb**	**13 08 31.0**	**+0.2**
PAIG				S	**Sb**	**13 08 37.2**	**+0.5**
PAIG				AML	AML	13 08 38.6	
	comp=E,21587μm,0.4s						
PAIG				AML	AML	13 08 39.0	
	comp=N,20925μm,0.6s						
AOS	**Alonnisos**	**0.54**	**197**	P	**Pb**	**13 08 34.0**	**+0.8**
AOS				S	**Sn**	**13 08 43.0**	**-1.3**
	comp=N,5μm,0.4s						
AOS	**Alonnisos**	**0.54**	**197**	P	**Pb**	**13 08 34.0**	**+0.8**
AOS				S	**Sn**	**13 08 43.0**	**-1.3**
AOS				AML	AML	13 08 46.0	
	comp=E,9954μm,0.4s						
AOS				AML	AML	13 08 47.9	
	comp=N,9870μm,0.4s						
AOS	**Alonnisos**	**0.54**	**197**	PG	**Pb**	**13 08 34.0**	**+0.8**
AOS				SG	**Sn**	**13 08 43.3**	**-1.1**
ALNA	**Alonissos**	**0.57**	**198**	P	**Pb**	**13 08 34.3**	**+0.7**
ALNA				S	**Sn**	**13 08 43.2**	**-1.7**
ALNA				AML	AML	13 08 47.5	
	comp=E,11744μm,0.4s						
ALNA				AML	AML	13 08 47.6	
	comp=N,11992μm,0.5s						
OUR	**Ouranopolis**	**0.65**	**353**	P	**Pb**	**13 08 35.0**	**-0.1**
OUR				S	**Sg**	**13 08 43.4**	**+0.3**
	comp=N,13μm,0.3s						
OUR	**Ouranopolis**	**0.65**	**353**	P	**Pb**	**13 08 35.0**	**-0.1**
OUR				S	**Sb**	**13 08 44.0**	**-0.2**
OUR				AML	AML	13 08 47.0	
	comp=E,21299μm,0.4s						
OUR				AML	AML	13 08 47.1	
	comp=N,31111μm,0.3s						
OUR	**Ouranopolis**	**0.65**	**353**	PG	**Pb**	**13 08 35.0**	**-0.1**
OUR				SG	**Sb**	**13 08 43.9**	**-0.2**
SKIA	**Skiathos**	**0.71**	**223**	P	**Pn**	**13 08 37.0**	**-0.7**
SKIA				S	**Sn**	**13 08 48.1**	**-0.4**
	comp=N,5μm,0.4s						
SKIA	**Skiathos**	**0.71**	**223**	P	**Pn**	**13 08 36.9**	**-0.7**
SKIA				S	**Sn**	**13 08 47.3**	**-1.2**
SKIA				AML	AML	13 08 51.0	
	comp=E,9825μm,0.3s						
SKIA				AML	AML	13 08 51.6	
	comp=N,10059μm,0.6s						
EFSA	**Agios Efstrati**	**0.71**	**102**	P	**Pb**	**13 08 36.3**	**+0.2**
EFSA				S	**Sg**	**13 08 44.9**	**-0.1**
EFSA				AML	AML	13 08 49.1	
	comp=N,11222μm,0.6s						
EFSA				AML	AML	13 08 51.0	
	comp=E,4236μm,0.7s						
XOR	**Xorichti**	**0.76**	**245**	P	**Pn**	**13 08 38.3**	**-0.2**
XOR				S	**Sn**	**13 08 49.7**	**-0.2**
	comp=E,4μm,0.4s						
XOR	**Xorichti**	**0.76**	**245**	P	**Pn**	**13 08 38.5**	**+0.1**
XOR				S	**Sn**	**13 08 49.9**	**0.0**
XOR				AML	AML	13 08 51.6	
	comp=N,11019μm,0.4s						
XOR				AML	AML	13 08 53.0	
	comp=E,5795μm,0.4s						
NEO	**Neokhori**	**0.77**	**241**	P	**Pn**	**13 08 38.3**	**-0.2**
NEO				S	**Sn**	**13 08 49.6**	**-0.5**
	comp=E,5μm,0.4s						
NEO	**Neokhori**	**0.77**	**241**	P	**Pn**	**13 08 38.7**	**+0.2**
NEO				S	**Sn**	**13 08 48.8**	**-1.2**
NEO				AML	AML	13 08 51.0	
	comp=E,9324μm,0.4s						
NEO				AML	AML	13 08 52.3	
	comp=N,9516μm,0.3s						
PLG	**Polygyros**	**0.84**	**324**	P	**Pg**	**13 08 38.0**	**-0.1**
PLG				S	**Sg**	**13 08 49.4**	**+0.2**
	comp=N,3μm,0.4s						
PLG	**Polygyros**	**0.84**	**324**	P	**Pg**	**13 08 38.1**	**-0.1**
PLG				S	**Sb**	**13 08 50.4**	**+0.6**
PLG				AML	AML	13 08 50.9	
	comp=N,4949μm,0.3s						
PLG				AML	AML	13 08 51.0	
	comp=E,5622μm,0.5s						
LIA	**Limnos Island**	**0.87**	**76**	P	**Pg**	**13 08 38.6**	**0.0**
LIA				S	**Sb**	**13 08 51.2**	**+0.8**
	comp=E,5μm,0.7s						
LIA	**Limnos Island**	**0.87**	**76**	P	**Pb**	**13 08 38.8**	**0.0**
LIA				S	**Sb**	**13 08 50.5**	**0.0**
LIA				AML	AML	13 08 52.1	
	comp=N,8243μm,0.8s						
LIA				AML	AML	13 08 52.2	
	comp=E,11565μm,0.6s						
SKY	**Skiros Island**	**0.89**	**156**	P	**Pn**	**13 08 40.4**	**+0.3**
SKY				S	**Sn**	**13 08 52.6**	**-0.2**
	comp=E,7μm,0.3s						
SKY	**Skiros Island**	**0.89**	**156**	P	**Pn**	**13 08 40.5**	**+0.3**
SKY				S	**Sn**	**13 08 52.8**	**0.0**
SKY				AML	AML	13 08 55.7	
	comp=E,18585μm,0.2s						
SKY				AML	AML	13 08 57.8	
	comp=N,14325μm,0.2s						
THAS	**Thassos island**	**1.04**	**28**	P	**Pb**	**13 08 41.0**	**-0.7**
THAS	**Thassos island**	**1.04**	**28**	P	**Pb**	**13 08 41.0**	**-0.7**
THAS				S	**Sb**	**13 08 55.0**	**-0.2**
THAS				AML	AML	13 08 56.5	
	comp=N,4114μm,0.6s						
THAS				AML	AML	13 08 56.6	
	comp=E,5305μm,0.3s						
KYMI	**Kymi, Euboea I**	**1.05**	**180**	P	**Pn**	**13 08 43.0**	**+0.6**
KYMI	**Kymi, Euboea I**	**1.05**	**180**	P	**Pn**	**13 08 43.1**	**+0.7**
KYMI				S	**Sn**	**13 08 58.4**	**+1.4**
KYMI				AML	AML	13 09 00.5	
	comp=E,3762μm,0.5s						
KYMI				AML	AML	13 09 01.9	
	comp=N,4971μm,0.6s						
MRKA	**Markates**	**1.05**	**202**	P	**Pn**	**13 08 43.0**	**+0.6**
MRKA	**Markates**	**1.05**	**202**	P	**Pn**	**13 08 43.0**	**+0.6**
MRKA				S	**Sn**	**13 08 59.4**	**+2.3**
MRKA				AML	AML	13 09 02.2	
	comp=E,3504μm,0.4s						
MRKA				AML	AML	13 09 03.6	
	comp=N,3374μm,0.5s						
HORT	**Hortiatis**	**1.18**	**320**	P	**Pg**	**13 08 45.5**	**+0.9**
HORT	**Hortiatis**	**1.18**	**320**	P	**Pg**	**13 08 44.5**	**-0.1**
HORT				S	**Sn**	**13 09 00.7**	**+0.3**
HORT				AML	AML	13 09 03.2	
	comp=N,1495μm,0.7s						
HORT				AML	AML	13 09 06.8	
	comp=E,1799μm,0.5s						
HORT	**Hortiatis**	**1.18**	**320**	PN	**Pb**	**13 08 44.2**	**-0.1**
HORT				SN	**Sn**	**13 09 00.3**	**-0.1**
SOH	**Sokhos**	**1.26**	**334**	P	**Pg**	**13 08 46.0**	**-0.1**
SOH				S	**Sb**	**13 09 02.0**	**+0.1**
	comp=E,2μm,0.6s						
KVLA	**Kavala**	**1.27**	**10**	P	**Pn**	**13 08 44.9**	**-0.4**
KVLA				S	**Sg**	**13 09 03.3**	**+0.6**
KVLA				AML	AML	13 09 05.0	
	comp=E,3127μm,0.4s						
KVLA				AML	AML	13 09 05.9	
	comp=N,2370μm,0.3s						
THE	**Thessaloniki**	**1.28**	**318**	P	**Pg**	**13 08 46.1**	**-0.3**
THE				S	**Sg**	**13 09 03.4**	**+0.4**
THE				AML	AML	13 09 06.9	
	comp=N,894μm,0.6s						
THE				AML	AML	13 09 10.1	
	comp=E,893μm,0.8s						
LIT	**Litokhoron**	**1.30**	**289**	P	**Pg**	**13 08 46.9**	**+0.1**
LIT	**Litokhoron**	**1.30**	**289**	P	**Pg**	**13 08 46.7**	**-0.1**
LIT				S	**Sg**	**13 09 05.6**	**+1.9**
LIT				AML	AML	13 09 11.0	
	comp=N,1020μm,0.5s						
LIT				AML	AML	13 09 17.9	
	comp=E,784μm,0.5s						
LKR	**Lokris**	**1.34**	**220**	P	**Pg**	**13 08 46.9**	**-0.6**
KAVA	**Kavala**	**1.35**	**14**	P	**Pn**	**13 08 45.8**	**-0.6**
KAVA	**Kavala**	**1.35**	**14**	P	**Pn**	**13 08 45.9**	**-0.5**
KAVA				S	**Sg**	**13 09 05.7**	**+0.5**
KAVA				AML	AML	13 09 07.3	
	comp=E,2003μm,0.6s						
KAVA				AML	AML	13 09 08.0	
	comp=N,1814μm,0.6s						
SMTH	**Samothraki Isl**	**1.35**	**54**	P	**Pn**	**13 08 45.8**	**-0.8**
SMTH	**Samothraki Isl**	**1.35**	**54**	P	**Pn**	**13 08 45.8**	**-0.8**
SMTH				S	**Sb**	**13 09 04.5**	**+0.1**
SMTH				AML	AML	13 09 06.7	
	comp=E,1083μm,0.3s						
SMTH				AML	AML	13 09 07.3	
	comp=N,1448μm,0.5s						
AXAR	**Agios Charalam**	**1.44**	**231**	P	**Pg**	**13 08 49.1**	**-0.4**
SIGR	**SIGRI**	**1.45**	**109**	P	**Pn**	**13 08 48.2**	**+0.4**
SIGR	**SIGRI**	**1.45**	**109**	P	**Pn**	**13 08 48.1**	**+0.3**
SIGR				S	**Sb**	**13 09 07.4**	**+0.3**
SIGR				AML	AML	13 09 11.5	
	comp=N,1111μm,0.5s						
SIGR				AML	AML	13 09 18.5	
	comp=E,1150μm,0.7s						
SIGR	**SIGRI**	**1.45**	**109**	PN	**Pn**	**13 08 48.3**	**+0.4**
SRS	**Serrai**	**1.48**	**345**	P	**Pn**	**13 08 48.3**	**0.0**
SRS	**Serrai**	**1.48**	**345**	P	**Pn**	**13 08 48.2**	**0.0**
SRS				AML	AML	13 09 16.6	
	comp=N,959μm,0.4s						
SRS				AML	AML	13 09 18.7	
	comp=E,1129μm,0.6s						
GADA	**Gvkgeada**	**1.48**	**70**	P	**Pn**	**13 08 47.9**	**-0.3**
GADA	**Gvkgeada**	**1.48**	**70**	PN	**Pn**	**13 08 48.0**	**-0.3**
AGG	**Agios Georgios**	**1.52**	**245**	P	**Pb**	**13 08 50.0**	**+0.1**
AGG	**Agios Georgios**	**1.52**	**245**	P	**Pb**	**13 08 49.9**	**+0.1**
BOZC	**Bozcaada**	**1.52**	**84**	PN	**Pn**	**13 08 48.6**	**-0.3**
BOZC	**Bozcaada**	**1.52**	**84**	*i* P	**Pn**	**13 08 48.6**	**-0.3**
BOZC				*i* S	**Sn**	**13 09 07.2**	**-1.4**
BOZC				IAML		13 09 13.0	
	comp=N,326nm,1.1s						
BOZC				IAML		13 09 29.0	
	comp=E,217nm,0.9s						
THL	**Klokotos Trika**	**1.61**	**266**	P	**Pb**	**13 08 51.3**	**-0.1**
THL	**Klokotos Trika**	**1.61**	**266**	P	**Pb**	**13 08 51.3**	**-0.1**
VIL2	**Platees**	**1.61**	**204**	P	**Pb**	**13 08 51.4**	**0.0**
DION	**Dionisos Attik**	**1.61**	**184**	P	**Pb**	**13 08 51.2**	**-0.3**
DION				AML	AML	13 09 19.9	
	comp=E,5093μm,0.5s						
DION				AML	AML	13 09 24.3	
	comp=N,4080μm,0.5s						
PSRA	**Psara**	**1.62**	**134**	P	**Pb**	**13 08 51.3**	**-0.3**
PSRA				AML	AML	13 09 21.6	
	comp=N,2120μm,0.5s						
PSRA				AML	AML	13 09 22.4	
	comp=E,1899μm,0.3s						
PTL	**Penteli**	**1.65**	**186**	P	**Pb**	**13 08 51.7**	**-0.4**
PTL				AML	AML	13 09 20.6	
	comp=E,1596μm,0.5s						
PTL				AML	AML	13 09 21.3	
	comp=N,1151μm,0.5s						
MAKR	**Makrakomi, Fth**	**1.66**	**247**	P	**Pb**	**13 08 52.7**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.66**	**247**	P	**Pb**	**13 08 52.6**	**+0.3**
MAKR				S	**Sg**	**13 09 14.4**	**-0.8**
MAKR				AML	AML	13 09 27.8	
	comp=E,1300μm,0.5s						
MAKR				AML	AML	13 09 30.5	
	comp=N,1192μm,0.8s						
KARY	**Karystos**	**1.68**	**171**	P	**Pb**	**13 08 52.0**	**-0.6**
KARY	**Karystos**	**1.68**	**171**	P	**Pb**	**13 08 52.0**	**-0.6**
KARY				AML	AML	13 09 23.2	
	comp=N,825μm,0.4s						
KARY				AML	AML	13 09 25.6	
	comp=E,1017μm,0.5s						
PROD	**Prodromos**	**1.70**	**213**	P	**Pb**	**13 08 52.3**	**-0.7**
EZN	**Ezine**	**1.73**	**85**	PN	**Pb**	**13 08 52.7**	**-0.8**
KNT	**Kendrikon**	**1.73**	**329**	P	**Pb**	**13 08 52.7**	**-0.9**
KNT	**Kendrikon**	**1.73**	**329**	P	**Pb**	**13 08 52.6**	**-0.9**
KNT				AML	AML	13 09 23.4	
	comp=E,956μm,0.4s						
KNT				AML	AML	13 09 26.0	
	comp=N,973μm,0.5s						
ATHU	**Athens Univers**	**1.73**	**188**	P	**Pb**	**13 08 52.8**	**-0.8**
ATHU	**Athens Univers**	**1.73**	**188**	P	**Pb**	**13 08 52.6**	**-1.0**
ATHU				AML	AML	13 09 23.3	
	comp=N,616μm,0.6s						
ATHU				AML	AML	13 09 28.6	
	comp=E,294μm,0.8s						
ATH	**Athens Observa**	**1.74**	**190**	P	**Pb**	**13 08 53.1**	**-0.6**
ATH				AML	AML	13 09 24.1	
	comp=E,2162μm,0.5s						
ATH				AML	AML	13 09 24.4	
	comp=N,3026μm,0.5s						
PRK	**Paraskevi**	**1.75**	**104**	P	**Pb**	**13 08 53.6**	**-0.2**
PRK				AML	AML	13 09 23.6	
	comp=N,1776μm,0.7s						
PRK				AML	AML	13 09 32.7	
	comp=E,2507μm,0.8s						
RDO	**Rodhopi**	**1.83**	**37**	P	**Pn**	**13 08 52.3**	**-0.8**
RDO	**Rodhopi**	**1.83**	**37**	P	**Pn**	**13 08 52.5**	**-0.6**
RDO	**Rodhopi**	**1.83**	**37**	PN	**Pn**	**13 08 52.4**	**-0.6**
VLY	**Voula,Athens**	**1.85**	**187**	P	**Pb**	**13 08 54.4**	**-1.1**
VLY	**Voula,Athens**	**1.85**	**187**	P	**Pb**	**13 08 54.4**	**-1.1**
VLY				AML	AML	13 09 29.1	
	comp=N,2680μm,0.7s						
VLY				AML	AML	13 09 29.4	
	comp=E,2474μm,0.4s						
LTK	**Loutraki**	**1.88**	**208**	P	**Pb**	**13 08 55.4**	**-0.7**
KZN	**Kozani**	**1.88**	**290**	P	**Pb**	**13 08 55.6**	**-0.6**
ENEZ	**Enez**	**1.90**	**56**	PN	**Pn**	**13 08 54.1**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**1.90**	**88**	*i* P	**Pn**	**13 08 54.0**	**0.0**
BAYC				*i* S	**Sn**	**13 09 15.9**	**-1.9**
BAYC				IAML		13 09 23.0	
	comp=E,112nm,0.5s						
BAYC				IAML		13 09 24.0	
	comp=N,134nm,0.5s						
LOUT	**Loutraki**	**1.91**	**207**	P	**Pb**	**13 08 55.2**	**-1.3**
MMB	**Musomiste**	**1.92**	**352**	*i* P	**Pn**	**13 08 54.3**	**-0.1**
EVR	**Evrytania**	**1.93**	**247**	P	**Pb**	**13 08 56.2**	**-0.8**
EVR	**Evrytania**	**1.93**	**247**	P	**Pb**	**13 08 56.5**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.96**	**68**	PN	**Pn**	**13 08 55.4**	**+0.5**
KALE	**Kalithea**	**2.00**	**230**	P	**Pn**	**13 08 56.5**	**+1.1**
KALE				S	**Sb**	**13 09 22.7**	**-0.2**
KALE				AML	AML	13 09 23.1	
	comp=E,465μm,0.8s						
KALE				AML	AML	13 09 49.7	
	comp=N,497μm,0.8s						
VAY	**Valandovo**	**2.00**	**325**	*e*Pn	**Pb**	**13 08 58.9**	**+0.8**
VAY	**Valandovo**	**2.00**	**325**	*e*Pn	**Pb**	**13 08 58.9**	**+0.8**
CHOS	**Chios island**	**2.01**	**130**	P	**Pn**	**13 08 56.7**	**+1.1**
CHOS	**Chios island**	**2.01**	**130**	P	**Pn**	**13 08 56.7**	**+1.1**
CHOS	**Chios island**	**2.01**	**130**	PN	**Pn**	**13 08 56.4**	**+0.8**
SERG	**Sergoula**	**2.03**	**232**	P	**Pb**	**13 08 57.4**	**-1.3**
AYVA	**Ayvalik**	**2.05**	**100**	*i* P	**Pn**	**13 08 57.1**	**+1.1**
AYVA				IAML		13 09 44.0	
	comp=N,192nm,0.9s						
AYVA				IAML		13 09 44.0	
	comp=E,125nm,0.7s						
TRIZ	**Trizonia**	**2.05**	**231**	P	**Pb**	**13 08 57.7**	**-1.3**
RZN	**Rozhen**	**2.05**	**13**	*i* P	**Pn**	**13 08 56.4**	**+0.1**
ERIK	**Erikli-Kesan**	**2.10**	**61**	PN	**Pn**	**13 08 57.6**	**+0.8**
KPRO	**Kipourio**	**2.12**	**278**	P	**Pb**	**13 08 59.1**	**-1.0**
LPK	**Lapseki**	**2.16**	**71**	PN	**Pn**	**13 08 58.5**	**+0.9**
LAKA	**Lakka**	**2.19**	**229**	P	**Pb**	**13 08 60.0**	**-1.4**
KDZ	**Kurdzhali**	**2.21**	**27**	P	**Pn**	**13 08 57.1**	**-1.2**
KDZ	**Kurdzhali**	**2.21**	**27**	PN	**Pn**	**13 08 57.6**	**-0.7**
MEV	**Metsovon**	**2.21**	**273**	P	**Pb**	**13 09 01.1**	**-0.7**
KLV	**Kalavryta, Ach**	**2.23**	**223**	P	**Pn**	**13 08 59.9**	**+1.2**
PVO	**Paravola**	**2.26**	**243**	P	**Pb**	**13 09 01.4**	**-1.2**
DKL	**Dikili**	**2.27**	**105**	PN	**Pn**	**13 09 00.3**	**+1.2**
DID	**Didima**	**2.28**	**197**	P	**Pn**	**13 09 00.4**	**+1.1**
KESN	**Edirne-Kesan**	**2.29**	**59**	*i* P	**Pb**	**13 09 01.8**	**-1.4**
KESN				*i* S	**Sn**	**13 09 25.8**	**-2.1**
KESN				IAML		13 09 37.0	
	comp=N,239nm,0.6s						
KESN				IAML		13 09 38.0	
	comp=E,312nm,0.3s						
KKB	**Krupnik**	**2.31**	**341**	P	**Pn**	**13 09 00.2**	**+0.5**
FNA	**Florina**	**2.35**	**299**	P	**Pb**	**13 09 02.2**	**-1.9**
URLA	**Izmir**	**2.36**	**123**	PN	**Pn**	**13 09 01.8**	**+1.4**
URLA	**Izmir**	**2.36**	**123**	*i* P	**Pn**	**13 09 01.3**	**+0.9**
URLA				IAML		13 09 44.0	
	comp=E,69nm,0.8s						
URLA				IAML		13 09 50.0	
	comp=N,49nm,0.5s						
KRND	**KRANIDI**	**2.42**	**198**	P	**Pn**	**13 09 01.6**	**+0.5**
ZEDA	**zmir-Bergama**	**2.43**	**106**	*i* P	**Pn**	**13 09 02.3**	**+1.0**
ZEDA				*i* S	**Sg**	**13 09 39.3**	**-0.5**
ZEDA				IAML		13 09 44.0	
	comp=N,58nm,0.5s						
ZEDA				IAML		13 09 56.0	
	comp=E,53nm,0.9s						
NEST	**Nestorio**	**2.44**	**288**	P	**Pb**	**13 09 03.6**	**-2.1**
PLD	**Plovdiv**	**2.46**	**11**	PN	**Pn**	**13 09 02.9**	**+1.2**
JAN	**Janina**	**2.50**	**270**	P	**Pb**	**13 09 05.5**	**-1.1**
PDO	**Prodromos**	**2.51**	**245**	P	**Pn**	**13 09 04.4**	**+2.0**
DRO	**Drossia**	**2.54**	**228**	P	**Pb**	**13 09 04.9**	**-2.4**
SERI	**Serifos**	**2.54**	**173**	P	**Pn**	**13 09 03.8**	**+0.9**
RKY	**Sarkoy-Tekirda**	**2.57**	**66**	PN	**Pn**	**13 09 04.3**	**+1.0**
TRIP	**Tripoli**	**2.58**	**214**	P	**Pn**	**13 09 05.3**	**+1.8**
DIM	**Dimitrovgrad**	**2.60**	**24**	P	**Pn**	**13 09 04.0**	**+0.3**
BALY	**Balya**	**2.72**	**88**	*i* P	**Pn**	**13 09 06.4**	**+1.0**
BALY				*i* S	**Sb**	**13 09 46.2**	**+2.3**
BALY				IAML		13 09 55.0	
	comp=N,162nm,0.6s						
BALY				IAML		13 10 02.0	
	comp=E,76nm,1.1s						
GONE	**Gonen-Balikesi**	**2.79**	**81**	PN	**Pn**	**13 09 07.9**	**+1.6**
LKD2	**Lefkada island**	**2.81**	**252**	P	**Pb**	**13 09 09.7**	**-2.3**
STEP	**BALIKESIR_Sava**	**2.82**	**95**	*i* P	**Pn**	**13 09 08.1**	**+1.3**
STEP				IAML		13 09 56.0	
	comp=E,119nm,0.8s						
STEP				IAML		13 10 13.0	
	comp=N,151nm,1.1s						
MRMT	**Marmara Adasi**	**2.84**	**70**	PN	**Pn**	**13 09 08.3**	**+1.3**
AMT	**Artemida-Makis**	**2.85**	**222**	P	**Pn**	**13 09 09.2**	**+2.1**
APE	**Apeiranthos**	**2.85**	**156**	P	**Pn**	**13 09 08.0**	**+0.8**
APE	**Apeiranthos**	**2.85**	**156**	⇑P	**Pn**	**13 09 07.3**	**+0.2**
APE				⇓S	**Sn**	**13 09 40.6**	**-0.8**
IGT	**Igoumenitsa**	**2.91**	**268**	P	**Pb**	**13 09 10.6**	**-2.9**
BALB	**Balikesir**	**2.93**	**90**	PN	**Pn**	**13 09 09.3**	**+1.1**
EDRB	**Edirne**	**2.95**	**42**	PN	**Pn**	**13 09 09.5**	**+1.0**
EDC	**Edincik**	**2.97**	**76**	PN	**Pn**	**13 09 09.9**	**+1.1**
VTS	**Vitosha**	**3.00**	**348**	⇑P	**Pn**	**13 09

IGD	**Bursa**	**3.97**	**80**	*i* P	**Pn**	**13 09 24.1**	**+1.6**
IGD				IAML		13 10 29.0	
	comp=N,26nm,0.8s						
IGD				IAML		13 10 31.0	
	comp=E,23nm,0.5s						
GDZ	**Gediz**	**4.22**	**96**	*i* P	**Pn**	**13 09 27.9**	**+1.8**
RAZG	**Razgrad**	**4.28**	**24**	⇓P	**Pn**	**13 09 26.9**	**+0.1**
IDI	**Anoyia**	**4.44**	**171**	⇑P	**Pn**	**13 09 29.8**	**+0.8**
PDG	**Podgorica**	**4.57**	**308**	⇓P	**Pn**	**13 09 32.8**	**+2.1**
BUC1	**Bucharest**	**4.88**	**17**	⇑P	**Pn**	**13 09 35.4**	**+0.5**
HERR	**Herculane**	**5.33**	**347**	⇓P	**Pn**	**13 09 41.0**	**-0.3**
ARR	**Arges**	**5.69**	**4**	⇑P	**Pn**	**13 09 47.0**	**+0.8**
TIP	**Timpagrande**	**5.70**	**267**	⇑P	**Pn**	**13 09 48.5**	**+2.2**
MATE	**Matera**	**5.74**	**282**	⇑P	**Pn**	**13 09 48.8**	**+2.0**
LOT	**Lotru**	**5.76**	**358**	⇑P	**Pn**	**13 09 48.0**	**+0.8**
MLR	**Muntele Rosu**	**5.96**	**13**	⇓P	**Pn**	**13 09 50.1**	**+0.2**
CFR	**Carcaliu**	**6.25**	**27**	⇑P	**Pn**	**13 09 53.9**	**+0.1**
DOPR	**Dopca**	**6.35**	**8**	⇓P	**Pn**	**13 09 55.7**	**+0.5**
VRI	**Vrincioaia**	**6.47**	**17**	⇓P	**Pn**	**13 09 57.2**	**+0.3**
TESR	**Tescani**	**7.07**	**15**	⇓P	**Pn**	**13 10 04.9**	**-0.2**
BIZ	**Bicaz**	**7.39**	**11**	⇑P	**Pn**	**13 10 09.8**	**+0.3**

*DDA **25** 13:23:40.1, 40°.31N×25°.90E, h7km±6km, ML1.8*
ISK 25 13:23:40.1, 40°.27N×25°.93E, h13km, ML1.6/8, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.08**	**195**	PG	Pg	13 23 42.8	-0.1
GADA				SG	Sg	13 23 45.6	+0.8
GELI	**Tayfur-Gelibol**	**0.44**	**73**	PG	Pb	13 23 49.7	0.0
BOZC	**Bozcaada**	**0.44**	**167**	PG	Pb	13 23 49.3	-0.4
BOZC				SG	Sb	13 23 56.2	0.0
BOZC	**Bozcaada**	**0.44**	**167**	*i* P	Pb	13 23 49.5	-0.2
BOZC				*i* S	Sb	13 23 56.6	+0.4
BOZC	**Bozcaada**	**0.44**	**167**	*i* P	Pb	13 23 49.3	-0.4
BOZC				*i* S	Sb	13 23 56.5	+0.3
ENEZ	**Enez**	**0.50**	**20**	PG	Pg	13 23 50.2	+0.3
EZN	**Ezine**	**0.54**	**145**	PG	Pg	13 23 50.9	+0.2
ERIK	**Erikli-Kesan**	**0.60**	**48**	PG	Pg	13 23 51.9	+0.1
LPK	**Lapseki**	**0.65**	**81**	PG	Pb	13 23 53.3	+0.1
BAYC	**CANAKKALE_Bayr**	**0.71**	**138**	*i* P	Pn	13 23 55.3	-0.6
BAYC				*i* S	Sn	13 24 06.1	-0.6
BAYC				IAML		13 24 09.0	
	comp=N,9.0nm,0.4s						
BAYC				IAML		13 24 10.0	
	comp=E,9.3nm,0.1s						
BAYC	**CANAKKALE_Bayr**	**0.71**	**138**	*i* P	Pn	13 23 55.2	-0.7
BAYC				*i* S	Sn	13 24 06.5	-0.2
KESN	**Edirne-Kesan**	**0.80**	**46**	*i* P	Pn	13 23 58.3	+0.9
KESN				*i* S	Sg	13 24 04.1	-2.1
KESN				IAML		13 24 09.0	
	comp=N,16nm,0.4s						
KESN				IAML		13 24 09.0	
	comp=E,30nm,0.3s						
KESN	**Edirne-Kesan**	**0.80**	**46**	*i* P	Pb	13 23 56.3	+0.3
KESN				*i* S	Sg	13 24 05.2	-0.9
KESN				IAML		13 24 08.0	
	comp=N,28nm,0.2s						
KESN				IAML		13 24 08.0	
	comp=E,39nm,0.4s						
RDO	**Rodhopi**	**0.92**	**341**	PG	Pn	13 23 58.5	-0.3
SIGR	**SIGRI**	**1.06**	**183**	PG	Pn	13 24 01.1	+0.5
SIGR				SG	Sn	13 24 15.7	+0.5
MRMT	**Marmara Adasi**	**1.32**	**75**	PN	Pn	13 24 04.0	-0.3
KDZ	**Kurdzhali**	**1.43**	**345**	PN	Pb	13 24 06.5	-0.1

*IDC **25** 13:25:45.0±34.0, 38°.06N×13°.91E, h0km, mb3.9/3, mb1 3.9/3, mb1mx3.4/27, mbtmp3.9/3, Error ellipse: s-maj=673.1km s-min=69.9km az=44.0*
*ROM **25** 13:26:25.6±0.2, 39°.49N±0°.01×15°.67E±0°.04, h266km±1km, ML3.0/9, Error ellipse: s-maj=3.0km s-min=1.2km az=100.0*
ISC 25 13:26:26.4±1.1, 39°.50N±0°.08×15°.7E±0°.1, h260km±7km, n37, σ0s73/40, mb3.8/3, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CET2	**Cetraro**	**0.24**	**83**	P	**Pn**	**13 27 00.2**	**+0.4**
CET2				S	**S**	**13 27 25.2**	**-1.0**
CET2				AML	AML		
	comp=N,412μm,0.3s						
CET2				AML	AML		
	comp=N,412μm,0.3s						
CET2				AML	AML		
	comp=E,398μm,0.5s						
T0702	**Acquaformosa (**	**0.40**	**57**	P	**Pn**	**13 27 00.6**	**+0.4**
T0702				S	**S**	**13 27 25.8**	**-1.0**
MMN	**Mormanno**	**0.47**	**34**	P	**Pn**	**13 27 00.5**	**+0.3**
CAR1	**CAROLEI**	**0.50**	**119**	P	**Pn**	**13 27 00.7**	**+0.2**
CAR1				S	**S**	**13 27 26.1**	**-1.2**
CAR1				AML	AML		
	comp=E,505μm,0.4s						
CAR1				AML	AML		
	comp=N,303μm,0.5s						
CUC	**Castrocucco**	**0.51**	**15**	P	**Pn**	**13 27 00.8**	**+0.3**
CUC				S	**S**	**13 27 27.5**	**+0.2**
TDS	**Terranova Siba**	**0.56**	**73**	P	**Pn**	**13 27 01.3**	**+0.7**
TDS				S	**S**	**13 27 27.4**	**0.0**
TDS				AML	AML		
	comp=E,79μm,1.1s						
TDS				AML	AML		
	comp=N,45μm,0.6s						
TDS				AML	AML		
	comp=E,79μm,1.1s						
TDS				AML	AML		
	comp=N,56μm,0.5s						
BULG	**Bulgheria - Ca**	**0.61**	**340**	P	**Pn**	**13 27 01.3**	**+0.6**
MGR	**Morigerati**	**0.64**	**354**	P	**Pn**	**13 27 01.1**	**+0.4**
MGR				S	**S**	**13 27 28.5**	**+0.6**
MGR				AML	AML		
	comp=N,33μm,0.5s						
MGR				AML	AML		
	comp=E,41μm,0.7s						
MGR				AML	AML		
	comp=N,36μm,1.4s						
SALB	**San Lorenzo Be**	**0.66**	**55**	P	**Pn**	**13 27 01.5**	**+0.5**
SALB				S	**S**	**13 27 27.8**	**-0.5**
SALB				AML	AML		
	comp=E,142μm,1.5s						
SALB				AML	AML		
	comp=N,108μm,0.6s						
CELI	**Celico**	**0.67**	**98**	S	**S**	**13 27 27.9**	**-0.5**
CELI				AML	AML		
	comp=E,180μm,0.8s						
CELI				AML	AML		
	comp=N,212μm,0.5s						
CELI				AML	AML		
	comp=N,582μm,0.5s						
CELI				AML	AML		
	comp=E,450μm,0.8s						
SIRI	**Monte Sirino -**	**0.70**	**14**	AML	AML		
	comp=E,36μm,1.2s						
SIRI				AML	AML		
	comp=N,53μm,0.2s						
SIRI				AML	AML		
	comp=N,60μm,0.6s						
SIRI				AML	AML		
	comp=N,60μm,0.6s						
SIRI				AML	AML		
	comp=E,58μm,1.1s						
SCHR	**S. Chirico Rap**	**0.77**	**25**	P	**Pn**	**13 27 02.2**	**+0.9**
SCHR				S	**S**	**13 27 28.8**	**-0.2**
MCEL	**Monticello**	**0.83**	**8**	P	**Pn**	**13 27 02.3**	**+0.7**
MCEL				AML	AML		
	comp=N,84μm,1.4s						
MCEL				AML	AML		
	comp=N,84μm,1.4s						
MCEL				AML	AML		
	comp=E,85μm,1.5s						
ORI	**Oriolo Calabro**	**0.83**	**47**	P	**Pn**	**13 27 02.7**	**+1.1**
ORI				S	**S**	**13 27 29.2**	**-0.1**
ORI				AML	AML		
	comp=N,377μm,0.4s						
ORI				AML	AML		
	comp=E,404μm,0.5s						
ORI				AML	AML		
	comp=N,376μm,0.4s						
SLCN	**Sala Consilina**	**0.89**	**359**	AML	AML		
	comp=E,100μm,1.2s						
SLCN				AML	AML		
	comp=N,51μm,0.8s						
SLCN				AML	AML		
	comp=E,100μm,1.2s						
SLCN				AML	AML		
	comp=N,418μm,1.3s						
PIPA	**Pietrapaola**	**0.90**	**91**	AML	AML		
	comp=N,191μm,0.5s						
PIPA				AML	AML		
	comp=E,194μm,1.0s						
PIPA				AML	AML		
	comp=E,194μm,1.0s						
GRI	**Girifalco**	**0.91**	**138**	P	**Pn**	**13 27 02.9**	**+0.9**
GRI				S	**S**	**13 27 30.0**	**-0.2**
GRI				AML	AML		
	comp=E,190μm,0.3s						
GRI				AML	AML		
	comp=N,158μm,0.3s						
JOPP	**Joppolo**	**0.91**	**168**	P	**Pn**	**13 27 02.5**	**+0.4**
JOPP				S	**S**	**13 27 29.2**	**-1.0**
JOPP				AML	AML		
	comp=N,191μm,1.1s						
JOPP				AML	AML		
	comp=N,192μm,1.1s						
JOPP				AML	AML		
	comp=E,196μm,1.1s						
TIP	**Timpagrande**	**0.92**	**110**	P	**Pn**	**13 27 03.2**	**+1.1**
TIP				S	**S**	**13 27 30.0**	**-0.3**
TIP				AML	AML		
	comp=E,144μm,1.6s						
TIP				AML	AML		
	comp=N,108μm,0.5s						
TIP				AML	AML		
	comp=E,164μm,0.5s						
TIP				AML	AML		
	comp=N,108μm,0.5s						
TIP				AML	AML		
	comp=N,126μm,0.5s						
SERS	**Sersale**	**0.93**	**120**	AML	AML		
	comp=N,212μm,1.4s						
SERS				AML	AML		
	comp=E,319μm,1.1s						
SERS				AML	AML		
	comp=N,214μm,0.6s						
SERS				AML	AML		
	comp=E,163μm,1.2s						
SERS				AML	AML		
	comp=E,162μm,1.2s						
LADO	**San Nicola del**	**1.05**	**101**	AML	AML		
	comp=N,93μm,0.3s						
LADO				AML	AML		
	comp=E,104μm,1.0s						
LADO				AML	AML		
	comp=E,105μm,1.0s						
LADO				AML	AML		
	comp=N,93μm,0.3s						
LLI	**Lipari**	**1.19**	**208**	P	**Pn**	**13 27 04.5**	**+0.9**
PLAC	**Placanica**	**1.22**	**149**	AML	AML		
	comp=E,198μm,0.8s						
PLAC				AML	AML		
	comp=N,136μm,0.6s						
VPL	**Vulcano Piano**	**1.23**	**205**	P	**Pn**	**13 27 04.8**	**+0.9**
MSRU	**Castanea**	**1.24**	**185**	P	**Pn**	**13 27 04.0**	**+0.1**
MSRU				S	**S**	**13 27 33.0**	**-0.6**
CEL	**Celeste**	**1.25**	**171**	P	**Pn**	**13 27 04.5**	**+0.4**
IFIL	**Filicudi I Eol**	**1.26**	**222**	P	**Pn**	**13 27 04.9**	**+0.9**
MILZ	**Milazzo**	**1.27**	**195**	P	**Pn**	**13 27 04.9**	**+0.8**
MILZ				S	**S**	**13 27 34.0**	**+0.2**
MSCL	**Scilla**	**1.27**	**175**	P	**Pn**	**13 27 04.3**	**+0.1**
SOI	**Samo**	**1.46**	**167**	AML	AML		
	comp=N,42μm,1.1s						
SOI				AML	AML		
	comp=E,36μm,1.2s						
MCSR	**Castroreale**	**1.47**	**192**	AML	AML		
	comp=N,131μm,0.3s						
MCSR				AML	AML		
	comp=N,132μm,0.3s						
MCSR				AML	AML		
	comp=E,122μm,0.4s						
MCPD	**Capo d'Orlando**	**1.56**	**208**	AML	AML		
	comp=N,68μm,0.5s						
MCPD				AML	AML		
	comp=E,55μm,0.5s						
MPAZ	**Palizzi**	**1.57**	**170**	AML	AML		
	comp=N,69μm,1.5s						
MPAZ				AML	AML		
	comp=E,71μm,0.9s						
AMUR	**Altamura**	**1.58**	**27**	AML	AML		
	comp=N,20μm,1.3s						
AMUR				AML	AML		
	comp=E,28μm,1.1s						
FINES	**FINESS Array B**	**22.89**	**13**	P	**P**	**13 31 06.5**	**-0.7**
	comp=E,2.0nm,0.7s,baz=191,slow=7.8,SNR=8.0						
ARCES	**ARCESS Array B**	**30.55**	**7**	P	**P**	**13 32 14.1**	**-1.4**
	comp=E,3.5nm,0.9s,baz=204,slow=8.6,SNR=3.6						
MKAR	**Makanchi Array**	**47.85**	**58**	P	**P**	**13 34 39.1**	**+1.0**
	comp=E,0.2nm,0.4s,baz=289,slow=5.7,SNR=4.7						

*IDC **25** 13:55:37.5±2.6, 36°.25N×70°.50E, h166km±23km, mb3.4/10, mb1 3.5/16, mb1mx3.3/57, mbtmp3.9/16, Error ellipse: s-maj=19.4km s-min=15.4km az=1.0*
*BJI **25** 13:55:39.3±0.0, 36°.60N×70°.37E, h189km, mB4.6/11, mb4.6/10*
*NEIC **25** 13:55:41.0±1.9, 36°.51N±0°.06×70°.4E±0°.1, h192km±5km, mb4.4/21, Error ellipse: s-maj=14.5km s-min=7.8km az=111.0*
*NNC **25** 13:55:47.0±5.8, 37°.03N×69°.89E, h162km±77km, mb3.8, mpv4.2, Error ellipse: s-maj=53.1km s-min=26.5km az=142.0*
ISC 25 13:55:41.7±0.5, 36°.58N±0°.05×70°.37E±0°.05, h204km, n83, σ2s00/91, mb4.2/19, 6C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGR	**Chuyangaron**	**2.28**	**335**		**Pn**	**13 56 22.6**	**-0.9**
KBL	**Kabul**	**2.31**	**208**		**Pn**	**13 56 22.5**	**-1.5**
GAR	**Garm**	**2.42**	**359**		**Pn**	**13 56 24.0**	**-1.0**
CEP	**Cherat**	**3.03**	**155**	P	**Pn**	**13 56 33.6**	**+1.6**
CEP				S	**S**	**13 57 10.0**	**-0.8**
BTK	**Batken**	**3.49**	**6**		**Pn**	**13 56 37.3**	**-0.1**
CHIP	**Chirah Chowk**	**3.76**	**140**	P	**Pn**	**13 56 38.9**	**-1.8**
THW	**Thanme Wali**	**3.94**	**163**	P	**Pn**	**13 56 41.0**	**-2.0**
SARP	**Sargodha**	**5.02**	**157**	P	**Pn**	**13 56 53.9**	**-2.6**
KSH	**Kashi**	**5.30**	**55**	P	Pn	13 56 54.5	-5.6
KSH				S	S	13 57 50.0	-12
KSH				smax	smax		
	comp=N,470nm,0.6s						
KSH				smax	smax		
	comp=E,260nm,0.5s						
AML	**Almayashu**	**6.11**	**24**	P	**Pn**	**13 57 08.7**	**-2.1**
	SNR=53						
UCH	**Uchtor**	**6.49**	**28**	P	**Pn**	**13 57 14.3**	**-1.3**
	SNR=20						
KK31	**Karatay Array**	**6.51**	**1**	⇓P	**Pn**	**13 57 14.6**	**-0.9**
	7.4nm,0.3s,baz=181,slow=12,SNR=177						
KK31				⇓S	**S**	**13 58 24.3**	**-5.6**
	17nm,0.4s,baz=190,slow=24,SNR=20						
KK31	**Karatay Array**	**6.51**	**1**		**Pn**	**13 57 14.7**	**-0.9**
EKS2	**Erkin-Say**	**6.62**	**22**	P	**Pn**	**13 57 16.8**	**-0.2**
	SNR=5.4						
AAK	**Ala-Archa**	**6.83**	**26**	P	**Pn**	**13 57 18.9**	**-0.9**
	3.3nm,0.3s,baz=171,slow=4.9,SNR=20						
AAK				S	**S**	**13 58 33.7**	**-3.9**
	1.7nm,0.3s,baz=340,slow=20,SNR=4.6						
AAK	**Ala-Archa**	**6.83**	**26**	P	**Pn**	**13 57 18.8**	**-1.1**
	SNR=11						
AAK	**Ala-Archa**	**6.83**	**26**		**Pn**	**13 57 18.6**	**-1.2**
FRU1	**Bishkek**	**7.03**	**27**	Pn	**Pn**	**13 57 21.9**	**-0.5**
CHMS	**Chumysh**	**7.24**	**26**	P	**Pn**	**13 57 23.9**	**-1.1**
	SNR=5.9						
BOOM	**Boomskoye usch**	**7.30**	**34**		**Pn**	**13 57 25.1**	**-0.8**
USP	**Ospenovka**	**7.39**	**24**	P	**Pn**	**13 57 25.0**	**-2.0**
	SNR=6.0						
TKM2	**Tokmak 2**	**7.50**	**31**	P	**Pn**	**13 57 27.3**	**-1.3**
	SNR=32						
KDJ	**Kajisay**	**7.65**	**42**	Pn	**Pn**	**13 57 29.6**	**-0.8**
TARG	**Taragay, Kyrgy**	**7.73**	**46**	Pn	**Pn**	**13 57 30.8**	**-0.9**
SMLA	**Simla**	**7.84**	**132**	*e*P	**Pn**	**13 57 29.4**	**-3.5**
GEYT	**Alibeck**	**9.86**	**282**	P	**Pn**	**13 57 58.0**	**-1.1**
	0.8nm,0.3s,baz=108,slow=9.5,SNR=14						
GEYT				S	**S**	**13 59 48.8**	**-0.7**
	0.6nm,0.3s,baz=108,slow=17,SNR=4.3						

GYA0B	**ALIBECK ARRAY**	**9.86**	**282**	⇑P	**Pn**	**13 57 57.1**	**-1.9**
GYA0B				⇓S	**S**	**13 59 46.6**	**-2.9**
GYA0B	**ALIBECK ARRAY**	**9.86**	**282**		**Pn**	**13 57 58.0**	**-1.1**
MK31	**Makanchi Array**	**13.53**	**37**		**Pn**	**13 58 45.1**	**-0.4**
MKAR	**Makanchi Array**	**13.53**	**37**	P	**Pn**	**13 58 45.3**	**-0.2**
	0.5nm,0.3s,baz=211,slow=10,SNR=16						
DANN	**Dangsing**	**13.96**	**122**	*e*P	**Pn**	**13 58 47.7**	**-3.6**
	29nm,0.4s						
KOLN	**Koldanda**	**14.23**	**124**	*e*P	**Pn**	**13 58 50.0**	**-4.5**
	17nm,0.3s						
AB31	**Akbulak array**	**14.77**	**332**	⇓P	**Pn**	**13 59 00.4**	**-0.4**
	22nm,0.3s,baz=142,slow=12,SNR=35						
AB31				⇑S	**S**	**14 01 37.3**	**-7.1**
	2.4nm,0.4s,baz=148,slow=23,SNR=2.7						
GKN	**Gorkha**	**14.78**	**121**	*e*P	**Pn**	**13 58 58.4**	**-2.8**
	44nm,0.2s						
WMQ	**Urumqi**	**15.07**	**56**	*e*P	**P**	**13 59 06.0**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,23nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,130nm,5.9s						
WMQ				LR	LR		
	comp=N,43nm,4.1s						
WMQ				LR	LR		
	comp=E,210nm,6.3s						
KURBB	**Kurchatov Arra**	**15.21**	**20**	P	**Pn**	**13 59 06.0**	**-0.1**
	0.1nm,0.3s,baz=212,slow=9.0,SNR=2.4						
KURK	**Kurchatov**	**15.32**	**20**	P	**Pn**	**13 59 06.0**	**-1.4**
DMN	**Daman**	**15.35**	**121**	*e*P	**Pn**	**13 59 05.8**	**-2.5**
	22nm,0.4s						
KKN	**Kakani**	**15.35**	**121**	*e*P	**Pn**	**13 59 05.9**	**-2.4**
	18nm,0.4s						
PKIN	**Phulchoki**	**15.57**	**121**	*e*P	**P**	**13 59 08.2**	**-2.7**
	18nm,0.4s						
PKI	**Pulchoki**	**15.58**	**121**	*e*P	**P**	**13 59 08.5**	**-2.6**
	22nm,0.5s						
GUN	**Gumba**	**15.70**	**119**	*e*P	**P**	**13 59 09.9**	**-2.5**
	22nm,0.3s						
JIRN	**Jiri**	**16.07**	**119**	*e*P	**P**	**13 59 15.1**	**-1.4**
	89nm,0.3s						
BVAR	**Borovoye Array**	**16.44**	**0**	P	**Pn**	**13 59 21.4**	**+0.5**
	0.5nm,0.3s,baz=165,slow=10,SNR=11						
AKTO	**Aktyubinsk**	**16.46**	**331**	P	**Pn**	**13 59 22.8**	**+1.7**
	0.5nm,0.3s,baz=142,slow=12,SNR=20						
AKTO	**Aktyubinsk**	**16.46**	**331**	⇑P	**Pn**	**13 59 21.3**	**+0.1**
	6.5nm,0.7s						
AKTO				⇑S	**S**	**14 02 22.2**	**+0.2**
	3.1nm,1.1s						
BRVK	**Borovoye**	**16.48**	**360**		**Pn**	**13 59 22.6**	**+1.3**
RAMN	**Ramite**	**16.79**	**120**	*e*P	**P**	**13 59 23.1**	**-1.3**
	28nm,0.4s						
TAPN	**Taplejung**	**17.33**	**117**	*e*P	**P**	**13 59 30.6**	**+0.3**
	20nm,0.4s						
ODAN	**Odare**	**17.40**	**119**	*e*P	**P**	**13 59 31.0**	**0.0**
	13nm,0.4s						
ZAA0	**Zalesovo Array**	**20.06**	**25**	P	**P**	**13 59 59.9**	**+0.8**
ZAA0				lAmb	lAmb	14 00 03.6	
	comp=Z,3.1nm,0.4s						
ZALV	**Zalesovo Beam**	**20.06**	**25**	P	**P**	**14 00 00.2**	**+1.1**
	comp=Z,2.8nm,0.3s,baz=215,slow=11,SNR=16						
TBLG	**Delisi**	**20.50**	**292**	P	**P**	**14 00 04.6**	**+0.6**
TBLG				lAmb	lAmb	14 00 24.2	
	comp=Z,11nm,0.4s						
BCA	**Borcka**	**22.80**	**291**	⇑P	**P**	**14 00 30.2**	**+3.3**
LZH	**Lanzhou**	**26.90**	**81**	⇑P	**P**	**14 01 05.8**	**+1.8**
LZH				pP	pP	14 01 43.5	-3.0
LZH				PP	**PnPn**	**14 02 00.3**	**+1.4**
LZH				sP	PP	14 02 05.5	-3.4
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,93nm,4.7s						
HHC	**Hu-ho-hao-te**	**32.21**	**70**	*e*P	**P**	**14 01 54.5**	**+3.8**
HHC				pmax	pmax		
	comp=Z,16nm,0.9s						
HHC				pmax	pmax		
	comp=Z,47nm,6.9s						
FIA1	**FINESS Array S**	**37.13**	**326**	P	**P**	**14 02 35.1**	**+2.7**
FIA1				lAmb	lAmb	14 03 54.0	
	comp=Z,29nm,1.5s						
FINES	**FINESS Array B**	**37.13**	**326**	P	**P**	**14 02 35.1**	**+2.7**
	comp=Z,0.6nm,0.3s,baz=113,slow=9.1,SNR=11						
ARCES	**ARCESS Array B**	**40.88**	**338**	P	**P**	**14 03 05.1**	**+1.8**
	comp=Z,3.0nm,0.9s,baz=99,slow=7.9,SNR=10						
NB2	**NORSAR Subarra**	**44.01**	**323**	P	**P**	**14 03 30.9**	**+2.2**
	comp=Z,0.6nm,0.5s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.01**	**323**	P	**P**	**14 03 30.6**	**+1.9**
	comp=Z,1.1nm,0.6s,baz=97,slow=7.8,SNR=3.6						
TIXI	**Tiksi**	**45.89**	**22**	P	**P**	**14 03 44.7**	**+1.5**
ECH	**Echery**	**46.86**	**305**	P	**P**	**14 03 52.5**	**+1.3**
ECH				lAmb	lAmb	14 04 22.6	
	comp=Z,20nm,2.0s						
TOA0	**Torodi Ar. Sit**	**65.21**	**268**	P	**P**	**14 06 01.9**	**+0.4**
TOA0				lAmb	lAmb	14 07 07.0	
	comp=Z,19nm,1.8s						
TORD	**Torodi Ar. Bea**	**65.21**	**268**	P	**P**	**14 06 01.6**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=45,slow=6.2,SNR=11						
TOLK	**Toolik Lake Re**	**70.97**	**14**	P	**P**	**14 06 38.4**	**+1.9**
C36M	**Paulatuk**	**73.84**	**5**	P	**P**	**14 06 54.9**	**+1.5**
C36M				lAmb	lAmb	14 06 55.3	
	comp=Z,2.5nm,0.5s						
INK	**Inuvik**	**73.91**	**9**	P	**P**	**14 06 55.7**	**+1.9**
	comp=Z,0.9nm,0.6s,baz=356,slow=7.4,SNR=3.8						
INK	**Inuvik**	**73.91**	**9**	P	**P**	**14 06 56.0**	**+2.3**
INK				lAmb	lAmb	14 09 23.2	
	comp=Z,9.8nm,1.7s						
ROSA	**Rosais**	**74.02**	**306**	P	**P**	**14 06 55.5**	**+0.4**
TTA	**Tatalina**	**74.12**	**20**	P	**P**	**14 06 57.3**	**+2.1**
PSA00	**Pilbara Seismi**	**74.34**	**133**	P	**P**	**14 06 57.8**	**+0.9**
LBTB	**Lobatse**	**74.40**	**222**	P	**P**	**14 06 57.6**	**+0.2**
BPAW	**Bear Paw Mtn.**	**74.47**	**18**	P	**P**	**14 06 58.6**	**+1.5**
BPAW				lAmb	lAmb	14 09 14.2	
	comp=Z,9.1nm,1.6s						
ILAR	**Eielson Array**	**74.84**	**16**	P	**P**	**14 07 00.2**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=297,slow=4.8,SNR=5.5						
FITZ	**Fitzroy Crossi**	**75.35**	**126**	P	**P**	**14 07 02.8**	**0.0**
KNRA	**Kununurra**	**75.70**	**122**	P	**P**	**14 07 04.7**	**-0.1**
RIDG	**Independent Ri**	**76.18**	**15**	P	**P**	**14 07 08.1**	**+1.1**
RIDG				lAmb	lAmb	14 08 23.1	
	comp=Z,5.0nm,1.0s						
DHY	**Denali Highway**	**76.20**	**17**	P	**P**	**14 07 08.8**	**+1.6**
DHY				lAmb	lAmb	14 07 23.7	
	comp=Z,11nm,1.7s						
OHAK	**Old Harbor**	**79.56**	**22**	P	**P**	**14 07 27.5**	**+1.9**
OHAK				lAmb	lAmb	14 08 18.0	
	comp=Z,20nm,1.6s						
YKA	**Yellowknife Ar**	**81.19**	**2**	P	**P**	**14 07 36.1**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=354,slow=5.3,SNR=11						
YKA				pP	**pP**	**14 08 23.6**	**-0.7**
	comp=Z,0.1nm,0.6s,baz=350,slow=4.7,SNR=4.4						
WRA	**Warramunga Arr**	**82.47**	**121**	P	**P**	**14 07 40.0**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=322,slow=4.9,SNR=14						
ASAR	**Alice Springs**	**84.72**	**124**	P	**P**	**14 07 51.9**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=313,slow=4.7,SNR=31						

IDC 25 14:10:36.0±2.6, 8°.20S×118°.50E, h0km, mb3.2/2, mb1 3.6/5, mb1mx3.4/27, mbtmp3.5/5, ML3.2/3, Error ellipse: s-maj=77.9km s-min=27.7km az=63.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.04**	**145**	Pn	Pn	14 13 30.4	+1.4
	0.1nm,0.3s,baz=334,slow=11,SNR=1.6						
FITZ

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.22**	**81**	P	**Pg**	**14 15 16.0**	**-0.7**
HOLB				S	**Sg**	**14 15 31.2**	**-1.3**
BPBC	**Brooks Peninsu**	**1.48**	**102**	Pn	**Pn**	**14 15 18.8**	**-1.6**
PACB	**Port Alice, BC**	**1.62**	**90**	Pn	**Pn**	**14 15 20.9**	**-1.3**
PACB				Sn	**Sn**	**14 15 40.2**	**-3.0**
PHC	**Port Hardy**	**1.67**	**81**	Pn	**Pn**	**14 15 22.2**	**-0.7**
PHC				Sn	**Sn**	**14 15 42.4**	**-2.1**
MAYB	**Maynard**	**1.83**	**91**	Pn	**Pn**	**14 15 24.2**	**-1.0**
FHRB	**Fair Harbour**	**1.91**	**102**	Pn	**Pn**	**14 15 25.1**	**-1.1**
EDB	**Eliza Dome**	**1.96**	**107**	Pn	**Pn**	**14 15 25.6**	**-1.4**
EDB				Sn	**Sn**	**14 15 48.2**	**-3.6**
TLCB	**Telegraph Cove**	**2.04**	**87**	Pn	**Pn**	**14 15 27.8**	**-0.1**
TLCB				Sn	**Sn**	**14 15 52.2**	**-1.4**
BBB	**Bella Bella**	**2.09**	**34**	Pn	**Pn**	**14 15 28.7**	**0.0**
	5.8nm,0.3s,baz=218,slow=7.3,SNR=144						
BBB				Sn	**Sn**	**14 15 53.0**	**-1.9**
	18nm,0.3s,baz=326,slow=19,SNR=22						
BBB	**Bella Bella**	**2.09**	**34**	Pn	**Pn**	**14 15 28.7**	**0.0**
BBB				Sn	**Sn**	**14 15 52.7**	**-2.2**
HG3B	**Hotspring**	**2.28**	**338**	Pn	**Pn**	**14 15 30.2**	**-1.2**
HG3B				Sn	**Sn**	**14 15 57.8**	**-1.9**
BNB	**Barry Inlet**	**2.36**	**334**	Pn	**Pn**	**14 15 31.5**	**-1.0**
NTKA	**Nootka**	**2.37**	**111**	Pn	**Pn**	**14 15 31.2**	**-1.3**
NTKA				Sn	**Sn**	**14 15 58.5**	**-3.3**
GDR	**Gold River**	**2.66**	**104**	Pn	**Pn**	**14 15 35.7**	**-0.9**
BCBC	**Bella Coola**	**2.79**	**46**	Sn	**Sn**	**14 16 12.6**	**+0.4**
SPLB	**Strathcona Par**	**2.87**	**100**	Pn	**Pn**	**14 15 39.2**	**-0.3**
MOBC	**Moresby Island**	**2.93**	**336**	Pn	**Pn**	**14 15 39.9**	**-0.4**
MOBC				Sn	**Sn**	**14 16 13.8**	**-2.0**
TOFB	**Tofino**	**2.98**	**115**	Sn	**Sn**	**14 16 14.6**	**-2.1**
CBB	**Campbell River**	**3.02**	**97**	Pn	**Pn**	**14 15 41.5**	**0.0**
CBB				Sn	**Sn**	**14 16 15.2**	**-2.7**
BNAB	**Bonilla**	**3.05**	**353**	Pn	**Pn**	**14 15 40.9**	**-0.9**
BNAB				Sn	**Sn**	**14 16 15.1**	**-3.4**
BTB	**Buttle Lake**	**3.08**	**107**	Pn	**Pn**	**14 15 41.8**	**-0.7**
BTB				Sn	**Sn**	**14 16 17.3**	**-2.3**
DIB	**Dawson Inlet,**	**3.13**	**332**	Sn	**Sn**	**14 16 17.6**	**-2.8**
MWAB	**Mount Washingt**	**3.13**	**102**	Pn	**Pn**	**14 15 42.9**	**-0.1**
VIB	**Van Inlet**	**3.19**	**332**	Pn	**Pn**	**14 15 42.9**	**-1.0**
VIB				Sn	**Sn**	**14 16 19.3**	**-2.8**
B012	**Ucluelet**	**3.30**	**116**	Pn	**Pn**	**14 15 45.9**	**+0.6**
OZB	**Mount Ozzard**	**3.31**	**116**	Pn	**Pn**	**14 15 46.0**	**+0.5**
TXB	**Texada**	**3.68**	**100**	Pn	**Pn**	**14 15 51.1**	**+0.5**
MGB	**Mount Grey**	**3.76**	**111**	Pn	**Pn**	**14 15 52.3**	**+0.5**
RUBB	**Prince Rupert**	**3.86**	**358**	Pn	**Pn**	**14 15 53.4**	**+0.4**
RUBB				Sn	**Sn**	**14 16 36.5**	**-2.0**
YOUB	**Youbou, Lake C**	**4.06**	**111**	Pn	**Pn**	**14 15 56.8**	**+0.9**
SHB	**Sechelt**	**4.06**	**100**	Pn	**Pn**	**14 15 56.2**	**+0.3**
NLLB	**Nanaimo Lost L**	**4.10**	**105**	Pn	**Pn**	**14 15 56.2**	**-0.2**
PFB	**Port Renfrew**	**4.11**	**116**	Pn	**Pn**	**14 15 56.8**	**+0.3**
OCP	**Olym-Cheeka Pk**	**4.15**	**120**	Pn	**Pn**	**14 15 58.2**	**+1.2**
UBRB	**Upper Baezaeko**	**4.42**	**55**	Pn	**Pn**	**14 16 02.8**	**+1.9**
LZB	**Mount Lazard**	**4.45**	**112**	Pn	**Pn**	**14 16 03.1**	**+1.9**
WPB	**Watts Point**	**4.47**	**98**	Pn	**Pn**	**14 16 02.2**	**+0.8**
BIB	**Bowen Island**	**4.47**	**101**	Pn	**Pn**	**14 16 03.1**	**+1.7**
GOBB	**Galiano Island**	**4.50**	**107**	Pn	**Pn**	**14 16 02.7**	**+1.0**
OBC	**Olympics--Boni**	**4.60**	**120**	Pn	**Pn**	**14 16 04.9**	**+1.7**
B010	**North Saanich**	**4.65**	**111**	Pn	**Pn**	**14 16 05.3**	**+1.5**
PGC	**Sidney**	**4.65**	**111**	Pn	**Pn**	**14 16 05.3**	**+1.4**
B009	**North Saanich**	**4.65**	**111**	Pn	**Pn**	**14 16 05.3**	**+1.4**
B011	**North Saanich**	**4.65**	**111**	Pn	**Pn**	**14 16 05.0**	**+1.0**
PA12	**PA12 Sannich**	**4.65**	**111**	Pn	**Pn**	**14 16 05.6**	**+1.6**
SNB	**Saturna Island**	**4.77**	**108**	Pn	**Pn**	**14 16 07.4**	**+1.8**
HNBB	**Haney**	**4.96**	**101**	Pn	**Pn**	**14 16 10.1**	**+1.9**
MCW	**Mount Constitu**	**5.01**	**108**	Pn	**Pn**	**14 16 11.0**	**+2.1**
LLLB	**Lillooet**	**5.20**	**85**	Pn	**Pn**	**14 16 12.3**	**+0.9**
VDB	**Vedder Mountai**	**5.34**	**103**	Pn	**Pn**	**14 16 15.2**	**+1.9**
MBW	**Mount Baker**	**5.54**	**105**	Pn	**Pn**	**14 16 18.5**	**+2.1**
CMW	**Cultus Mountai**	**5.55**	**109**	Pn	**Pn**	**14 16 18.3**	**+2.0**
JCW	**Jim Creek**	**5.76**	**110**	Pn	**Pn**	**14 16 21.4**	**+2.2**
B06A	**Marblemount**	**5.90**	**106**	Pn	**Pn**	**14 16 22.8**	**+1.8**
GPW	**Glacier Peak**	**6.27**	**109**	Pn	**Pn**	**14 16 28.6**	**+2.2**
FMW	**Mount Fremont**	**6.57**	**119**	Pn	**Pn**	**14 16 32.0**	**+1.6**
DLBC	**Dease Lake**	**7.98**	**360**	Pn	**Pn**	**14 16 52.9**	**+3.2**
	0.2nm,0.3s,baz=185,slow=19,SNR=2.0						
NVAR	**Mina Array Bea**	**14.64**	**141**	Pn	**P**	**14 18 28.1**	**+0.6**
	0.0nm,0.3s,baz=292,slow=14,SNR=3.0						
YKA	**Yellowknife Ar**	**14.69**	**29**	Pn	**Pn**	**14 18 20.9**	**-0.4**
	0.0nm,0.3s,baz=216,slow=12,SNR=4.8						
PDAR	**Pinedale Array**	**16.00**	**111**	Pn	**P**	**14 18 43.1**	**+0.6**
	0.1nm,0.3s,baz=316,slow=12,SNR=7.3						
ILAR	**Eielson Array**	**16.85**	**335**	Pn	**P**	**14 18 55.3**	**+3.8**
	0.0nm,0.3s,baz=156,slow=8.9,SNR=5.0						
H11N2	**WAKE ISLAND Hy**	**57.95**	**262**	T	T	15 27 26.8	
	baz=42,slow=75,SNR=25						
H11N3	**WAKE ISLAND Hy**	**57.95**	**262**	T	T	15 27 25.6	
	baz=42,slow=75,SNR=19						
H11N1	**WAKE ISLAND Hy**	**57.97**	**262**	T	T	15 27 28.1	
	baz=42,slow=75,SNR=18						

ISC 25 14:26:50.5±1.1, 44°49N±0°04×17°10E±0°07, h4km±10km, n9, σ0±99/15, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGRS	**Mrkonjic Grad**	**0.07**	**191**	*i* Pg	**Pg**	**14 26 51.9**	**-0.2**
MGRS				*e*Sg	**Sg**	**14 26 53.1**	**-0.1**
BLY	**Banja Luka**	**0.27**	**13**	*e*Pg	**Pg**	**14 26 56.3**	**+0.6**
BLY				*e*Sg	**Sg**	**14 27 00.0**	**+0.8**
KIJV	**Kijevo**	**0.70**	**226**	*e*Pg	**Pg**	**14 27 03.3**	**-0.5**
KIJV				Sg	**Sb**	**14 27 13.7**	**-1.4**
RICI	**Ricice**	**0.99**	**179**	*i* Pg	**Pg**	**14 27 10.7**	**+1.2**
MOSL	**Moslavina**	**1.15**	**348**	*e*Pg	**Pb**	**14 27 11.3**	**-1.6**
MOSL				Sg	**Sb**	**14 27 28.4**	**+0.1**
MORI	**Morici**	**1.18**	**239**	*e*Pn	**Pg**	**14 27 13.0**	**-0.1**
ZIRJ	**Zirje**	**1.34**	**232**	*i* Pn	**Pn**	**14 27 15.4**	**-0.5**
ZIRJ				Sg	**Sn**	**14 27 35.3**	**+0.8**
DUGI	**Dugi Otok**	**1.55**	**252**	*i* Pn	**Pb**	**14 27 19.9**	**+0.2**
DUGI				Sn	**Sg**	**14 27 41.6**	**+1.3**
NVLJ	**Novalja**	**1.60**	**273**	*i* Pn	**Pb**	**14 27 21.4**	**+0.8**

ISK 25 14:38:07.6, 40°40N×26°09E, h14km, ML1.4/8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.25**	**215**	PG	Pb	14 38 13.9	0.0
GADA				SG	Sb	14 38 17.5	-0.7
GELI	**Tayfur-Gelibol**	**0.30**	**90**	PG	Pb	14 38 14.6	-0.1
GELI				SG	Sb	14 38 19.1	-0.3
ENEZ	**Enez**	**0.34**	**9**	PG	Pb	14 38 15.1	-0.4
ENEZ				SG	Sb	14 38 20.6	-0.2
ERIK	**Erikli-Kesan**	**0.42**	**50**	PG	Pg	14 38 16.3	+0.2
ERIK				SG	Sb	14 38 22.7	-0.4
BOZC	**Bozcaada**	**0.56**	**183**	PG	Pg	14 38 18.8	+0.3
BOZC				SG	Sb	14 38 27.4	+0.5
EZN	**Ezine**	**0.60**	**162**	PG	Pg	14 38 19.5	+0.1
RDO	**Rodhopi**	**0.85**	**331**	PG	Pg	14 38 24.2	0.0
MRMT	**Marmara Adasi**	**1.17**	**79**	PN	Pb	14 38 29.7	+0.1
SIGR	**SIGRI**	**1.20**	**189**	PN	Pb	14 38 30.1	0.0
KDZ	**Kurdzhali**	**1.35**	**338**	PN	Pb	14 38 33.1	+0.4

*NEIC **25** 14:38:53±1.0, 17°7S±0°2×178°70W±0°10, h587km±10km, mb4.5/18, Error ellipse: s-maj=27.2km s-min=13.1km az=176.0*
*IDC **25** 14:38:55.0±5.2, 17°65S×178°78W, h605km±63km, mb3.2/6, mb1 3.4/7, mb1mx3.0/40, mbtmp4.1/7, Error ellipse: s-maj=60.4km s-min=27.6km az=153.0*

ISC 25 14:38:53.9±0.9, 17°7S±0°3×178°7W±0°2, h600km, n28, σ0±77/30, mb4.4/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.11**	**268**	P	**P**	**14 40 12.1**	**-1.7**
AFI	**Afiamalu**	**7.63**	**62**	P	**P**	**14 40 49.2**	**-0.7**
DZM	**Mont Dzumac**	**14.66**	**250**	P	**P**	**14 42 00.4**	**+1.4**
	0.3nm,0.3s,baz=32,slow=17,SNR=10						
DZM	**Mont Dzumac**	**14.66**	**250**	P	**P**	**14 42 00.7**	**+1.6**
KNTN	**Kanton**	**16.31**	**26**	P	**P**	**14 42 13.5**	**-0.7**
EIDS	**Eidsvold**	**29.10**	**249**	P	**P**	**14 44 07.3**	**-0.7**
EIDS				IAmb	IAmb	14 44 58.7	
	comp=Z,18nm,1.8s						
ARMA	**Armidale**	**29.83**	**239**	P	**P**	**14 44 14.3**	**0.0**
ARMA				IAmb	IAmb	14 45 15.0	
	comp=Z,38nm,1.9s						
CTAO	**Charters Tower**	**33.23**	**260**	P	**P**	**14 44 43.3**	**+0.2**
CTAO				IAmb	IAmb	14 44 48.0	
	comp=Z,9.8nm,1.1s						
CAN	**Canberra**	**33.64**	**232**	P	**P**	**14 44 46.1**	**-0.3**
CAN				IAmb	IAmb	14 45 45.1	
	comp=Z,32nm,1.7s						
TOO	**Toolangi**	**37.12**	**230**	P	**P**	**14 45 14.8**	**-0.3**
TOO				IAmb	IAmb	14 46 59.6	
	comp=Z,16nm,1.5s						
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**	**14 45 26.6**	**+0.1**
	comp=Z,2.5nm,0.6s,baz=82,slow=10,SNR=13						
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**	**14 45 26.6**	**+0.1**
BBOO	**Buckleboo**	**43.29**	**241**	P	**P**	**14 46 03.6**	**-0.6**
WR0	**Warramunga Arr**	**44.23**	**259**	P	**P**	**14 46 10.9**	**-0.7**
WR0				IAmb	IAmb	14 47 14.2	
	comp=Z,24nm,1.9s						
WB0	**Warramunga Arr**	**44.38**	**260**	P	**P**	**14 46 12.2**	**-0.6**
WB2	**Warramunga Arr**	**44.41**	**259**	P	**P**	**14 46 12.5**	**-0.5**
WB2				IAmb	IAmb	14 47 18.1	
	comp=Z,16nm,1.6s						
WRAB	**Tennant Creek**	**44.41**	**259**	P	**P**	**14 46 12.4**	**-0.6**
WRA	**Warramunga Arr**	**44.42**	**259**	P	**P**	**14 46 12.6**	**-0.5**
	comp=Z,1.3nm,0.2s,baz=89,slow=8.1,SNR=70						
WRA				PcP	**PcP**	**14 47 43.5**	**0.0**
	comp=Z,0.8nm,1.0s,baz=98,slow=3.3,SNR=1.8						
AS31	**Alice Springs**	**44.60**	**254**	P	**P**	**14 46 14.4**	**-0.1**
ASAR	**Alice Springs**	**44.60**	**254**	P	**P**	**14 46 14.4**	**0.0**
	comp=Z,13nm,0.6s,baz=87,slow=8.8,SNR=363						
ASAR				PcP	**PcP**	**14 47 44.0**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=103,slow=4.0,SNR=4.6						
MTN	**Manton Dam**	**48.54**	**268**	P	**P**	**14 46 44.3**	**+0.2**
MTN				IAmb	IAmb	14 47 29.7	
	comp=Z,22nm,1.6s						
FORT	**Forrest**	**49.87**	**244**	P	**P**	**14 46 52.8**	**-0.9**
KNRA	**Kununurra**	**50.25**	**264**	P	**P**	**14 46 56.6**	**-0.1**
KNRA				IAmb	IAmb	14 47 47.5	
	comp=Z,31nm,1.6s						
SIJI	**Sorong**	**51.93**	**283**	P	**P**	**14 47 09.9**	**+1.1**
	comp=Z,3.9nm,0.4s,baz=65,slow=19,SNR=4.5						
FITZ	**Fitzroy Crossi**	**52.81**	**260**	P	**P**	**14 47 15.2**	**+0.2**
FITZ				IAmb	IAmb	14 48 21.9	
	comp=Z,40nm,1.9s						
PSA00	**Pilbara Seismi**	**57.71**	**255**	P	**P**	**14 47 48.2**	**-0.8**
NVAR	**Mina Array Bea**	**79.44**	**44**	P	**P**	**14 49 60.0**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=217,slow=6.3,SNR=3.7						
TXAR	**Lajitas Array**	**86.09**	**58**	P	**P**	**14 50 34.1**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=232,slow=4.4,SNR=2.7						

ATH 25 14:39:06.0, 40°01N×24°22E, h39km±3km, ML1.4/1, Error ellipse: s-maj=5.5km s-min=1.7km az=317.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.38**	**331**	P	Pn	14 39 15.7	+0.7
OUR				S	Sn	14 39 22.4	+0.9
PAIG	**Paliouri**	**0.42**	**259**	P	Pn	14 39 16.1	+0.5
PAIG				S	Sn	14 39 23.1	+0.6
PLG	**Polygyros**	**0.70**	**302**	P	Pn	14 39 21.1	+1.6
THAS	**Thassos island**	**0.71**	**32**	P	Pn	14 39 20.6	+1.0
THAS				S	Sn	14 39 30.2	+0.9
THAS				AML	AML	14 39 30.8	
	comp=E,80μm,0.2s						
THAS				AML	AML	14 39 31.1	
	comp=N,39μm,0.2s						
KAVA	**Kavala**	**1.01**	**13**	P	Pn	14 39 25.9	+2.2
SRS	**Serrai**	**1.21**	**337**	P	Pn	14 39 26.8	+0.4

*IDC **25** 14:55:06.8±1.2, 40°.1N×25°.14E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.3/36, mbtmp3.5/7, ML3.7/2, Error ellipse: s-maj=24.7km s-min=17.3km az=166.0*
*DDA **25** 14:55:07.3, 40°.24N×25°.26E, h19km±1km, MW3.8*
*ISK **25** 14:55:07.1, 40°.25N×25°.25E, h13km, ML3.9/29*
*ATH **25** 14:55:07.2, 40°.24N×25°.21E, h30km±1km, ML3.7/9, Error ellipse: s-maj=1.9km s-min=1.1km az=69.0*
*THE **25** 14:55:08.0, 40°.25N×25°.23E, h14km±1km, ML3.7/10, Error ellipse: s-maj=1.0km s-min=0.5km az=63.0*
*BEO **25** 14:55:08.0±0.6, 40°.20N×25°.40E, h27km±7km, ML3.8/18*

ISC 25 14:55:07.3±1.0, 40°22N±0°02×25°24E±0°01, h8km±8km, n194, σ0±98/258, mb3.4/5, 22C-7D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.33**	**188**	P	**Pb**	**14 55 15.5**	**+0.1**
LIA				S	**Sb**	**14 55 20.3**	**-0.5**
	11μm,0.3s						
LIA	**Limnos Island**	**0.33**	**188**	P	**Pb**	**14 55 15.3**	**-0.1**
LIA				S	**Sb**	**14 55 20.2**	**-0.6**
LIA				AML	AML	14 55 22.1	
	comp=N,21643μm,0.4s						
LIA				AML	AML	14 55 24.1	
	comp=E,25084μm,0.4s						
SMTH	**Samothraki Isl**	**0.33**	**41**	P	**Pb**	**14 55 14.5**	**-1.0**
SMTH				S	**Sg**	**14 55 19.0**	**+0.8**
	comp=E,8μm,0.1s						
SMTH	**Samothraki Isl**	**0.33**	**41**	P	**Pb**	**14 55 14.5**	**-1.0**
SMTH				S	**Sg**	**14 55 19.1**	**+0.9**
SMTH				AML	AML	14 55 19.4	
	comp=E,18955μm,0.2s						
SMTH				AML	AML	14 55 20.0	
	comp=N,12499μm,0.1s						
GADA	**Gvkgeada**	**0.50**	**93**	P	**Pb**	**14 55 18.4**	**0.0**
GADA				S	**Sb**	**14 55 25.1**	**-0.8**
	comp=N,4μm,0.3s						
GADA	**Gvkgeada**	**0.50**	**93**	PG	**Pb**	**14 55 18.4**	**0.0**
GADA				SG	**Sb**	**14 55 25.3**	**-0.6**
THAS	**Thassos island**	**0.56**	**314**	P	**Pg**	**14 55 18.4**	**+0.4**
THAS				S	**Sg**	**14 55 26.0**	**+0.7**
	comp=N,14μm,0.3s						
THAS	**Thassos island**	**0.56**	**314**	P	**Pb**	**14 55 18.8**	**-0.5**
THAS				S	**Sg**	**14 55 25.9**	**+0.7**
THAS				AML	AML	14 55 28.7	
	comp=E,23827μm,0.3s						
THAS				AML	AML	14 55 28.9	
	comp=N,32343μm,0.3s						
EFSA	**Agios Efstrati**	**0.71**	**196**	P	**Pn**	**14 55 22.9**	**-0.7**
EFSA				S	**Sb**	**14 55 32.9**	**+1.2**
EFSA				AML	AML	14 55 35.1	
	comp=E,26479μm,0.5s						
EFSA				AML	AML	14 55 35.5	
	comp=N,27208μm,0.4s						
BOZC	**Bozcaada**	**0.73**	**121**	PG	**Pb**	**14 55 22.7**	**+0.4**
BOZC				SG	**Sb**	**14 55 32.4**	**0.0**
BOZC	**Bozcaada**	**0.73**	**121**	*i* P	**Pb**	**14 55 22.6**	**+0.4**
BOZC				*i* S	**Sb**	**14 55 32.3**	**-0.1**
BOZC				IAML		14 55 34.0	
	comp=N,5μm,0.6s						
BOZC				IAML		14 55 34.0	
	comp=E,4μm,0.6s						
ENEZ	**Enez**	**0.86**	**53**	P	**Pb**	**14 55 24.1**	**-0.4**
ENEZ				S	**Sb**	**14 55 36.4**	**+0.1**
	comp=E,12μm,0.4s						
ENEZ	**Enez**	**0.86**	**53**	PG	**Pb**	**14 55 24.2**	**-0.3**
ENEZ				SG	**Sb**	**14 55 36.2**	**-0.1**
EZN	**Ezine**	**0.92**	**115**	P	**Pn**	**14 55 25.8**	**-0.7**
EZN				S	**Sb**	**14 55 38.3**	**+0.4**
	comp=E,7μm,0.4s						
EZN	**Ezine**	**0.92**	**115**	PG	**Pb**	**14 55 25.6**	**+0.1**
EZN				SG	**Sb**	**14 55 38.2**	**+0.4**
RDO	**Rodhopi**	**0.95**	**14**	P	**Pg**	**14 55 25.3**	**-0.3**
RDO				S	**Sg**	**14 55 38.0**	**+0.1**
	comp=E,2μm,0.3s						
RDO	**Rodhopi**	**0.95**	**14**	P	**Pg**	**14 55 25.3**	**-0.3**
RDO				S	**Sg**	**14 55 36.8**	**-1.1**
RDO				AML	AML	14 55 39.6	
	comp=N,3546μm,0.3s						
RDO				AML	AML	14 55 41.9	
	comp=E,3855μm,0.2s						
RDO	**Rodhopi**	**0.95**	**14**	PG	**Pg**	**14 55 25.2**	**-0.3**
RDO				SG	**Sb**	**14 55 38.2**	**-0.6**
KAVA	**Kavala**	**0.95**	**325**	P	**Pb**	**14 55 26.0**	**-0.1**
KAVA				S	**Sg**	**14 55 38.1**	**+0.1**
	comp=E,5μm,0.2s						
KAVA	**Kavala**	**0.95**	**325**	P	**Pb**	**14 55 26.0**	**-0.1**
KAVA				S	**Sg**	**14 55 37.7**	**-0.3**
KAVA				AML	AML	14 55 39.0	
	comp=N,8347μm,0.3s						
KAVA				AML	AML	14 55 40.2	
	comp=E,10000μm,0.1s						
GELI	**Tayfur-Gelibol**	**0.96**	**79**	PG	**Pb**	**14 55 25.8**	**-0.3**
GELI				SG	**Sb**	**14 55 39.1**	**+0.1**
KVLA	**Kavala**	**0.97**	**318**	P	**Pb**	**14 55 26.2**	**-0.1**
KVLA				S	**Sg**	**14 55 38.6**	**+0.1**
OUR	**Ouranopolis**	**0.97**	**277**	P	**Pb**	**14 55 26.3**	**-0.1**
OUR				S	**Sg**	**14 55 39.0**	**+0.4**
	comp=E,9μm,0.5s						
OUR	**Ouranopolis**	**0.97**	**277**	P	**Pb**	**14 55 26.3**	**-0.1**
OUR				S	**Sg**	**14 55 37.7**	**-0.8**
OUR	**Ouranopolis**	**0.97**	**277**	PG	**Pb**	**14 55 26.3**	**-0.1**
ERIK	**Erikli-Kesan**	**1.07**	**65**	PG	**Pg**	**14 55 27.3**	**-0.5**
BAYC	**CANAKKALE_Bayr**	**1.11**	**115**	*i* P	**Pn**	**14 55 29.1**	**-0.1**
BAYC				*i* S	**Sn**	**14 55 43.8**	**-0.9**
BAYC				IAML		14 55 45.0	
	comp=N,2μm,0.7s						
BAYC				IAML		14 55 47.0	
	comp=E,2μm,0.2s						
SIGR	**SIGRI**	**1.11**	**155**	P	**Pn**	**14 55 29.1**	**-0.1**
SIGR				S	**Sn**	**14 55 44.6**	**-0.1**
	comp=E,4μm,0.4s						
SIGR	**SIGRI**	**1.11**	**155**	P	**Pn**	**14 55 29.1**	**-0.1**
SIGR				S	**Sn**	**14 55 44.2**	**-0.6**
SIGR				AML	AML	14 55 46.1	
	comp=E,8791μm,0.4s						
SIGR				AML	AML	14 55 46.1	
	comp=N,9132μm,0.4s						
SIGR	**SIGRI**	**1.11**	**155**	PN	**Pn**	**14 55 29.1**	**-0.1**
LPK	**Lapseki**	**1.17**	**82**	PN	**Pb**	**14 55 29.3**	**-0.5**
PAIG	**Paliouri**	**1.23**	**257**	P	**Pn**	**14 55 29.6**	**-1.3**
PAIG	**Paliouri**	**1.23**	**257**	P	**Pn**	**14 55 29.7**	**-1.2**
KESN	**Edirne-Kesan**	**1.25**	**61**	*i* P	**Pb**	**14 55 30.3**	**-1.1**
KESN				*i* S	**Sb**	**14 55 47.6**	**-0.2**
KESN				IAML		14 55 50.0	
	comp=E,2μm,0.3s						
KESN				IAML		14 55 52.0	
	comp=N,2μm,0.3s						
PRK	**Paraskevi**	**1.26**	**141**	P	**Pg**	**14 55 32.3**	**+0.9**
PRK	**Paraskevi**	**1.26**	**141**	P	**Pg**	**14 55 32.1**	**+0.7**
PRK				S	**Sn**	**14 55 49.2**	**+0.9**
PRK				AML	AML	14 55 53.6	
	comp=E,7614μm,0.3s						
PRK				AML	AML	14 55 54.3	
	comp=N,10274μm,0.3s						
PLG	**Polygyros**	**1.38**	**277**	P	**Pn**	**14 55 32.2**	**-0.7**
PLG	**Polygyros**	**1.38**	**277**	P	**Pn**	**14 55 32.3**	**-0.7**
UKOP	**Uzunkopru-Edir**	**1.39**	**49**	PN	**Pn**	**14 55 32.4**	**-0.6**
KDZ	**Kurdzhali**	**1.43**	**5**	P	**Pn**	**14 55 32.4**	**-1.2**
KDZ				S	**Sn**	**14 55 51.5**	**-1.2**
KDZ	**Kurdzhali**	**1.43**	**5**	PN	**Pn**	**14 55 32.5**	**-1.2**
AYVA	**Ayvalik**	**1.44**	**129**	*i* P	**Pb**	**14 55 34.3**	**-0.1**
AYVA				*i* S	**Sg**	**14 55 53.1**	**-0.5**
AYVA				IAML		14 55 57.0	
	comp=E,1μm,0.4s						
AYVA				IAML		14 56 01.0	
	comp=N,2μm,0.6s						
SKY	**Skiros Island**	**1.45**	**202**	P	**Pn**	**14 55 32.8**	**-1.0**
AOS	**Alonnisos**	**1.49**	**225**	P	**Pn**	**14 55 33.3**	**-1.0**
AOS	**Alonnisos**	**1.49**	**225**	P	**Pn**	**14 55 33.4**	**-0.9**
AOS	**Alonnisos**	**1.49**	**225**	PN	**Pn**	**14 55 33.4**	**-0.9**
RZN	**Rozhen**	**1.52**	**345**	P	**Pn**	**14 55 34.6**	**-0.4**
SRS	**Serrai**	**1.54**	**306**	P	**Pn**	**14 55 34.2**	**-0.9**
SRS	**Serrai**	**1.54**	**306**	P	**Pn**	**14 55 34.3**	**-0.9**
SRS				S	**Sn**	**14 55 53.3**	**-2.0**
SRS				AML	AML	14 55 58.3	
	comp=E,6792μm,0.4s						
SRS				AML	AML	14 56 00.6	
	comp=N,4122μm,0.2s						
RKY	**Sarkoy-Tekirda**	**1.55**	**72**	PN	**Pn**	**14 55 34.5**	**-0.7**
SART	**Tekirdag**	**1.55**	**72**	*i* P	**Pn**	**14 55 34.3**	**-1.0**
SART				IAML		14 56 16.0	
	comp=E,212nm,1.1s						
SOH	**Sokhos**	**1.56**	**293**	P	**Pn**	**14 55 34.8**	**-0.6**
KRBG	**Karabiga-Canak**	**1.58**	**83**	PN	**Pn**	**14 55 35.2**	**-0.4**
HORT	**Hortiatis**	**1.68**	**284**	P	**Pn**	**14 55 36.3**	**-0.7**
HORT	**Hortiatis**	**1.68**	**284**	P	**Pn**	**14 55 36.4**	**-0.7**
HORT	**Hortiatis**	**1.68**	**284**	PN	**Pn**	**14 55 36.4**	**-0.7**
DKL	**Dikili**	**1.72**	**131**	PN	**Pn**	**14 55 37.9**	**+0.3**
SKIA	**Skiathos**	**1.73**	**233**	P	**Pn**	**14 55 36.4**	**-1.3**
KNL	**Balıkesir**	**1.75**	**88**	*i* P	**Pb**	**14 55 38.6**	**-1.0**
KNL				*i* S	**Sg**	**14 56 02.5**	**-1.0**
KNL				IAML		14 56 05.0	
	comp=E,1μm,0.4s

DURS				IAML		14 56 30.0	
	comp=N,514nm,0.5s						
DURS				IAML		14 56 30.0	
	comp=E,630nm,0.6s						
GOMA	**Golmarmara-Man**	**2.56**	**125**	PN	**Pn**	**14 55 49.3**	**+0.2**
THL	**Klokotos Trika**	**2.57**	**256**	P	**Pn**	**14 55 48.8**	**-0.4**
ELBA	**Catalca**	**2.59**	**68**	*i* P	**Pn**	**14 55 48.4**	**-1.2**
ELBA				*i* S	**Sg**	**14 56 29.6**	**-1.0**
ELBA				IAML		14 56 32.0	
	comp=N,90nm,0.2s						
ELBA				IAML		14 56 36.0	
	comp=E,82nm,0.2s						
CTYL	**Yalikoy Yolu**	**2.63**	**61**	PN	**Pn**	**14 55 49.1**	**-0.9**
KZN	**Kozani**	**2.66**	**273**	P	**Pn**	**14 55 50.4**	**-0.1**
DST	**Dursunbey**	**2.67**	**102**	PN	**Pn**	**14 55 51.3**	**+0.7**
CTKS	**Kestanelik-??a**	**2.68**	**67**	PN	**Pn**	**14 55 50.2**	**-0.5**
MAKR	**Makrakomi, Fth**	**2.69**	**244**	P	**Pn**	**14 55 50.7**	**-0.2**
ELND	**Elena**	**2.75**	**10**	⇑P	**Pn**	**14 55 52.5**	**+0.8**
ELND				⇑S	**Sn**	**14 56 26.7**	**+1.6**
ARMT	**Armutlu**	**2.78**	**82**	PN	**Pn**	**14 55 52.8**	**+0.6**
MDNY	**Mudanya-Bursa**	**2.79**	**86**	PN	**Pn**	**14 55 52.7**	**+0.5**
ORLT	**Orhaneli**	**2.81**	**92**	PN	**Pn**	**14 55 52.7**	**+0.2**
LTK	**Loutraki**	**2.82**	**220**	P	**Pn**	**14 55 52.2**	**-0.5**
VTS	**Vitosha**	**2.83**	**328**	*e*Pn	**Pn**	**14 55 53.2**	**+0.2**
VTS				*e*Sn	**Sn**	**14 56 25.5**	**-1.9**
VTS	**Vitosha**	**2.83**	**328**	⇑P	**Pn**	**14 55 53.4**	**+0.4**
VTS				⇓S	**Sb**	**14 56 31.8**	**-1.3**
VTS	**Vitosha**	**2.83**	**328**	*i* P	**Pn**	**14 55 53.2**	**+0.2**
LOUT	**Loutraki**	**2.84**	**219**	P	**Pn**	**14 55 52.6**	**-0.4**
BGKT	**Bogazkoy**	**2.85**	**69**	PN	**Pn**	**14 55 53.3**	**+0.2**
DEMI	**Demirci**	**2.93**	**113**	*i* P	**Pn**	**14 55 55.4**	**+1.1**
DEMI				*i* S	**Sg**	**14 56 39.7**	**-1.7**
DEMI				IAML		14 56 43.0	
	comp=E,336nm,0.4s						
DEMI				IAML		14 56 44.0	
	comp=N,284nm,0.4s						
ULDT	**Uludag**	**2.98**	**90**	*i* P	**Pn**	**14 55 55.6**	**+0.5**
ULDT				*i* S	**Sb**	**14 56 39.3**	**+1.8**
ULDT				IAML		14 56 45.0	
	comp=N,278nm,0.5s						
ULDT				IAML		14 56 47.0	
	comp=E,232nm,0.4s						
FNA	**Florina**	**3.00**	**282**	*e*Pn	**Pn**	**14 55 55.2**	**0.0**
ISK	**Istanbul-Kandi**	**3.02**	**73**	PN	**Pn**	**14 55 55.7**	**+0.2**
KAVV	**Kandilli-Istan**	**3.02**	**73**	PN	**Pn**	**14 55 55.8**	**+0.3**
GEMT	**Gemlik**	**3.02**	**85**	PN	**Pn**	**14 55 55.9**	**+0.4**
IGD	**Bursa**	**3.03**	**88**	*i* P	**Pn**	**14 55 55.0**	**-0.6**
IGD				*i* S	**Sb**	**14 56 39.5**	**+0.9**
IGD				IAML		14 56 45.0	
	comp=E,86nm,0.4s						
IGD				IAML		14 56 46.0	
	comp=N,83nm,0.3s						
KLYT	**Kilyos**	**3.06**	**69**	PN	**Pn**	**14 55 56.4**	**+0.4**
TRIZ	**Trizonia**	**3.08**	**234**	P	**Pn**	**14 55 55.8**	**-0.4**
BOSS	**Bosilegrad**	**3.08**	**318**	*e*Pn	**Pn**	**14 55 56.8**	**+0.5**
BOSS				*e*Sn	**Sn**	**14 56 34.2**	**+0.9**
SZH	**Strazhica**	**3.09**	**9**	*i* P	**Pn**	**14 55 56.4**	**+0.1**
SZH				S	**Sg**	**14 56 45.0**	**-1.4**
MANT	**Manisa**	**3.10**	**123**	*i* P	**Pn**	**14 55 57.4**	**+0.7**
SIMA	**Simav-Kutahya**	**3.10**	**110**	PN	**Pn**	**14 55 57.2**	**+0.6**
DID	**Didima**	**3.13**	**211**	P	**Pn**	**14 55 56.1**	**-0.9**
APE	**Apeiranthos**	**3.16**	**176**	⇓P	**Pn**	**14 55 55.9**	**-1.4**
APE				⇓S	**Sn**	**14 56 32.6**	**-2.6**
YLV	**Yalova**	**3.17**	**82**	PN	**Pn**	**14 55 57.7**	**+0.1**
PLVB	**Pleven**	**3.20**	**352**	⇑P	**Pn**	**14 55 58.3**	**+0.4**
KLV	**Kalavryta, Ach**	**3.24**	**229**	P	**Pn**	**14 55 58.1**	**-0.5**
MPEP	**Malo Peshtene**	**3.33**	**341**	P	**Pn**	**14 56 00.0**	**+0.3**
GDZ	**Gediz**	**3.46**	**108**	*i* P	**Pn**	**14 56 02.3**	**+0.7**
GDZ				*i* S	**Sg**	**14 56 55.5**	**-3.0**
GDZ				IAML		14 56 59.0	
	comp=N,61nm,0.6s						
GDZ				IAML		14 56 59.0	
	comp=E,71nm,0.4s						
RAZG	**Razgrad**	**3.47**	**15**	⇑P	**Pn**	**14 56 01.8**	**+0.1**
ZAPS	**Zavoj**	**3.62**	**328**	*e*Pn	**Pn**	**14 56 04.1**	**+0.4**
ZAPS				*e*Sn	**Sn**	**14 56 44.3**	**-2.4**
BARS	**Barje**	**3.65**	**316**	*e*Pn	**Pn**	**14 56 04.4**	**+0.3**
BARS	**Barje**	**3.65**	**316**	*e*Pn	**Pg**	**14 56 14.8**	**-2.5**
BARS				*e*Sn	**Sn**	**14 56 46.4**	**-1.0**
BARS				*e*Sn	**Sg**	**14 57 08.2**	**+3.6**
ZAGS	**Zajecar**	**4.23**	**329**	*e*Pn	**Pn**	**14 56 11.6**	**-0.5**
ZAGS				*e*Sn	**Sn**	**14 56 59.6**	**-2.1**
SELS	**Selova**	**4.30**	**315**	*e*Pn	**Pn**	**14 56 12.4**	**-0.7**
SELS				*e*Sn	**Sn**	**14 57 01.9**	**-1.5**
BOVS	**Bovan**	**4.31**	**323**	*e*Pn	**Pn**	**14 56 12.7**	**-0.5**
TIRR	**Tirgusor**	**4.84**	**28**	⇑P	**Pn**	**14 56 20.5**	**0.0**
HARR	**Harsova**	**4.89**	**23**	⇑P	**Pn**	**14 56 21.4**	**+0.3**
IDI	**Anoyia**	**4.93**	**183**	⇑P	**Pn**	**14 56 21.3**	**-0.5**
KUBS	**Kucevo**	**4.95**	**329**	*e*Pn	**Pn**	**14 56 21.0**	**-1.0**
SJES	**Sjenica**	**4.98**	**309**	*e*Pn	**Pn**	**14 56 22.5**	**+0.1**
GRUS	**Gruza**	**4.98**	**319**	*e*Pn	**Pn**	**14 56 22.0**	**-0.3**
GRUS				*e*Sn	**Sn**	**14 57 19.2**	**-0.9**
PDG	**Podgorica**	**5.02**	**298**	*e*Pn	**Pn**	**14 56 24.7**	**+1.8**
PDG	**Podgorica**	**5.02**	**298**	⇑P	**Pn**	**14 56 25.0**	**+2.1**
IVAS	**Ivanjica**	**5.07**	**313**	*e*Pn	**Pn**	**14 56 22.9**	**-0.7**
IVAS				*e*Sn	**Sn**	**14 57 19.9**	**-2.4**
HERR	**Herculane**	**5.10**	**337**	⇑P	**Pn**	**14 56 23.1**	**-0.9**
ARR	**Arges**	**5.16**	**355**	⇑P	**Pn**	**14 56 24.8**	**-0.1**
TOPG	**Topolog**	**5.20**	**25**	⇑P	**Pn**	**14 56 22.9**	**-2.4**
MDVR	**Moldovita**	**5.25**	**331**	⇓P	**Pn**	**14 56 26.3**	**+0.1**
JURR	**Jurilovca**	**5.28**	**29**	⇓P	**Pn**	**14 56 26.1**	**-0.3**
MLR	**Muntele Rosu**	**5.29**	**5**	*e*Pn	**Pn**	**14 56 25.3**	**-1.5**
MLR	**Muntele Rosu**	**5.29**	**5**	⇑P	**Pn**	**14 56 27.8**	**+1.0**
TRUS	**Trudelj**	**5.37**	**320**	*e*Pn	**Pn**	**14 56 26.6**	**-1.2**
CFR	**Carcaliu**	**5.39**	**22**	⇑P	**Pn**	**14 56 27.9**	**-0.1**
GZR	**Gura Zlata**	**5.48**	**341**	*e*Pn	**Pn**	**14 56 28.5**	**-0.8**
GZR	**Gura Zlata**	**5.48**	**341**	⇑P	**Pn**	**14 56 28.7**	**-0.5**
DIVS	**Divibare**	**5.50**	**317**	*e*Pn	**Pn**	**14 56 28.9**	**-0.7**
DIVS				*e*Sn	**Sn**	**14 57 30.5**	**-2.5**
BBLS	**Lazići**	**5.67**	**312**	*e*Pn	**Pn**	**14 56 31.6**	**-0.3**
DOPR	**Dopca**	**5.74**	**1**	⇑P	**Pn**	**14 56 33.9**	**+1.0**
VRI	**Vrincioaia**	**5.75**	**10**	⇑P	**Pn**	**14 56 34.6**	**+1.7**
TESR	**Tescani**	**6.37**	**9**	⇑P	**Pn**	**14 56 42.6**	**+1.2**
BRTR	**Keskin Array B**	**6.47**	**92**	Pn	**Pn**	**14 56 43.7**	**+0.8**
	comp=E,1.3nm,0.3s,baz=227,slow=25,SNR=21						
BRTR				Sn	**Sn**	**14 57 53.6**	**-3.4**
	comp=E,0.2nm,0.3s,baz=292,slow=15,SNR=1.0						
BRTR				Lg	Lg	14 58 39.0	
	comp=E,0.2nm,0.3s,baz=264,slow=27,SNR=5.3						
MATE	**Matera**		**6.53**	**277**	⇑P	**Pn**	**14 56 44.0**	**+0.4**
SIRR	**Siria**		**6.58**	**338**	⇓P	**Pn**	**14 56 43.9**	**-0.5**
TIP	**Timpagrande**		**6.63**	**264**	⇓P	**Pn**	**14 56 46.0**	**+0.9**
DRGR			**6.82**	**345**	⇑P	**Pn**	**14 56 47.6**	**-0.1**
RICI	**Ricice**		**6.88**	**301**	P	**Pn**	**14 56 50.0**	**+1.5**
BURAR	**Bucovina Array**		**7.39**	**360**	⇑P	**Pn**	**14 56 57.1**	**+1.6**
KIJV	**Kijevo**		**7.58**	**303**	*i* P	**Pn**	**14 57 01.1**	**+3.0**
ZIRJ	**Zirje**		**7.94**	**299**	*i* P	**Pn**	**14 57 03.0**	**+0.1**
MORI	**Morici**		**7.97**	**300**	*i* P	**Pn**	**14 57 04.1**	**+0.7**
SORM	**Soroca**		**8.22**	**15**	⇑P	**Pn**	**14 57 05.8**	**-1.0**
AKASG	**Malin Array Be**		**10.84**	**14**	Pn	**Pn**	**14 57 43.3**	**+0.5**
	comp=E,0.5nm,0.3s,baz=200,slow=12,SNR=1.1							
FINES	**FINESS Array B**		**21.26**	**1**	P	**P**	**14 59 54.9**	**+1.2**
	comp=E,1.3nm,0.8s,baz=174,slow=16,SNR=2.3							
ESDC	**Sonseca Array**		**22.36**	**278**	P	**P**	**15 00 05.3**	**-0.5**
	comp=E,0.4nm,0.6s,baz=70,slow=11,SNR=5.2							
TORD	**Torodi Ar. Bea**		**33.99**	**224**	P	**P**	**15 01 51.7**	**+0.1**
	comp=E,0.4nm,0.5s,baz=31,slow=9.8,SNR=6.0							
MKAR	**Makanchi Array**		**41.10**	**61**	P	**P**	**15 02 52.9**	**+1.3**
	comp=E,0.4nm,0.6s,baz=276,slow=5.9,SNR=3.0							
ZALV	**Zalesovo Beam**		**41.58**	**50**	P	**P**	**15 02 58.2**	**+2.9**
	comp=E,0.7nm,0.5s,baz=268,slow=10,SNR=4.4							

*NEIC **25** 14:55:43.8±2.0, 23°.42S±0°.05×68°.9W±0°.1, h111km±6km, Error ellipse: s-maj=17.1km s-min=6.4km az=99.0*
*VAO **25** 14:55:43.7±0.9, 23°.33S×69°.10W, h113km±4km, mb4.3*
*GUC **25** 14:55:44.9±0.6, 23°.42S×68°.88W, h109km±3km, ML4.0*
*IDC **25** 14:55:46.0±1.3, 23°.32S×68°.64W, h107km±7km, mb3.7/3, mb1 3.7/4, mb1mx3.4/17, mbtmp3.9/4, MS2.6/1, Ms1 2.7/1, ms1mx2.5/18, Error ellipse: s-maj=41.6km s-min=32.6km az=172.0*

ISC 25 14:55:44.2±0.6, **23°.42S**±0°.04×**68°.89W**±0°.06, **h108**km±5km, **n71**, σ1§**17**/86, **mb4.0**/4, **9C**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**			**0.57**	**291**	⇑*i*P	**Pn**	**14 56 02.2**	**+0.6**
PB15						*e*S	**Sn**	**14 56 15.2**	**+0.5**
PB15	**IPOC Station P**			**0.57**	**291**		**Pn**	**14 56 01.7**	**0.0**
LVC	**Limon Verde**			**0.81**	**359**	⇑*i*P	**Pn**	**14 56 04.2**	**+0.4**
LVC						*i* S	**Sn**	**14 56 18.3**	**-0.1**
LVC	**Limon Verde**			**0.81**	**359**	*e*P	**Pn**	**14 56 04.3**	**+0.4**
LVC						*e*S	**Sn**	**14 56 18.5**	**0.0**
PB06	**IPOC Station P**			**0.95**	**318**	⇑*i*P	**Pn**	**14 56 05.7**	**+0.8**
PB06						*e*S	**Sn**	**14 56 21.0**	**+0.5**
PB06						IAML		14 56 22.0	
	comp=E,7μm,0.2s								
PB06	**IPOC Station P**			**0.95**	**318**		**Pn**	**14 56 05.1**	**+0.2**
PB05	**IPOC Station P**			**1.33**	**295**	⇑*i*P	**Pn**	**14 56 09.8**	**+0.8**
PB05						*i* S	**Sn**	**14 56 28.3**	**+0.4**
PB10	**IPOC Station P**			**1.53**	**266**	⇑*i*P	**Pn**	**14 56 12.3**	**+1.0**
PB10						*e*S	**Sn**	**14 56 32.9**	**+1.1**
PB10	**IPOC Station P**			**1.53**	**266**		**Pn**	**14 56 11.9**	**+0.6**
PB03	**IPOC Station P**			**1.58**	**330**	*e*P	**Pn**	**14 56 13.0**	**+0.9**
PB03						*i* S	**Sn**	**14 56 33.7**	**+0.5**
PB03						IAML		14 56 34.6	
	comp=N,3μm,0.3s								
PB04	**IPOC Station P**			**1.59**	**313**	⇑*i*P	**Pn**	**14 56 12.9**	**+0.8**
PB04						*e*S	**Sn**	**14 56 33.7**	**+0.4**
PB04						IAML		14 56 42.0	
	comp=N,2μm,0.5s								
PB04	**IPOC Station P**			**1.59**	**313**		**Pn**	**14 56 12.8**	**+0.7**
PB09	**IPOC Station P**			**1.65**	**349**	*e*P	**Pn**	**14 56 14.4**	**+1.5**
PB09						*i* S	**Sn**	**14 56 35.8**	**+1.1**
PB09	**IPOC Station P**			**1.65**	**349**	Pn	**Pn**	**14 56 14.4**	**+1.5**
PB14	**IPOC Station P**			**1.83**	**229**	*e*P	**Pn**	**14 56 16.4**	**+1.1**
PB14						*e*S	**Sn**	**14 56 40.2**	**+1.2**
PB14	**IPOC Station P**			**1.83**	**229**		**Pn**	**14 56 16.0**	**+0.6**
GO02	**Mina Guanaco**			**1.85**	**200**	⇑*i*P	**Pn**	**14 56 16.7**	**+1.1**
GO02						*i* S	**Sn**	**14 56 40.6**	**+1.2**
GO02						IAML		14 56 46.7	
	comp=N,1μm,0.3s								
GO02	**Mina Guanaco**			**1.85**	**200**		**Pn**	**14 56 16.6**	**+1.1**
PB07	**IPOC Station P**			**1.92**	**331**	⇑*i*P	**Pn**	**14 56 17.1**	**+0.8**
PB07						*e*S	**Sn**	**14 56 41.3**	**+0.6**
PB07						IAML		14 56 45.9	
	comp=E,1μm,0.1s								
PB07	**IPOC Station P**			**1.92**	**331**		**Pn**	**14 56 15.2**	**-1.0**
PB02	**IPOC Station P**			**2.29**	**336**	*e*P	**Pn**	**14 56 21.8**	**+0.9**
PB02						*e*S	**Sn**	**14 56 49.5**	**+0.5**
PB02						IAML		14 56 54.8	
	comp=E,1μm,0.3s								
PB01	**IPOC Station P**			**2.43**	**347**	*e*P	**Pn**	**14 56 23.7**	**+0.9**
PB01	**IPOC Station P**			**2.43**	**347**		**Pn**	**14 56 23.3**	**+0.6**
PATCX	**Punta Patache**			**2.84**	**335**		**Pn**	**14 56 27.9**	**-0.3**
TA01	**Diego Aracena**			**3.08**	**337**		**Pn**	**14 56 30.8**	**-0.5**
AC01	**Pan de Azucar**			**3.13**	**209**		**Pn**	**14 56 31.3**	**-0.6**
PB08	**IPOC Station P**			**3.27**	**356**		**Pn**	**14 56 34.0**	**-0.1**
AC02	**Maricunga**			**3.41**	**184**	*e*P	**Pn**	**14 56 37.6**	**+1.5**
AC02	**Maricunga**			**3.41**	**184**		**Pn**	**14 56 37.2**	**+1.1**
PB11	**IPOC Station P**			**3.71**	**349**		**Pn**	**14 56 39.0**	**-0.8**
GO01	**Chusmiza**			**3.74**	**356**		**Pn**	**14 56 40.5**	**0.0**
PSGCX	**Pisagua**			**3.97**	**343**		**Pn**	**14 56 41.1**	**-2.2**
MNMC	**Minye Minye**			**4.32**	**351**		**Pn**	**14 56 47.2**	**-0.9**
GO03	**Copiap**			**4.33**	**196**		**Pn**	**14 56 44.5**	**-3.5**
PB12	**IPOC Station P**			**4.97**	**344**	Pn	**Pn**	**14 56 55.2**	**-1.4**
AC04	**Llanos de Chal**			**5.16**	**202**	Pn	**Pn**	**14 56 57.0**	**-2.1**
AP01	**Chacalluta**			**5.20**	**345**	Pn	**Pn**	**14 56 59.4**	**-0.4**
AC05	**El Transito**			**5.54**	**193**		**Pn**	**14 57 02.6**	**-1.8**
CO01	**Juntas del Tor**			**6.62**	**189**	Pn	**Pn**	**14 57 15.5**	**-3.7**
LPAZ	**La Paz**			**7.13**	**6**	P	**Pn**	**14 57 27.2**	**+0.7**
	comp=E,0.2nm,0.3s,baz=197,slow=14,SNR=3.2								
LPAZ						LR	LR	15 00 31.5	
	comp=E,44nm,20.1s,baz=123,slow=41								
LPAZ	**La Paz**			**7.13**	**6**		**Pn**	**14 57 27.4**	**+0.9**
CO02	**Combarbal**			**7.98**	**193**	Pn	**Pn**	**14 57 36.3**	**-1.2**
VA03	**San Esteban**			**9.43**	**189**	Pn	**Pn**	**14 57 56.0**	**-1.1**
ROC1	**El Roble**			**9.70**	**191**	Pn	**Pn**	**14 58 00.8**	**-0.2**
MT02	**Curacav**			**10.00**	**191**	Pn	**Pn**	**14 58 03.8**	**-1.0**
MT05	**Renca**			**10.07**	**189**	Pn	**Pn**	**14 58 04.3**	**-1.4**
SALV	**Santo Antonio**			**14.50**	**61**	*e*P	**Pn**	**14 59 04.7**	**+0.4**
TRCB	**Terra Rica**			**14.97**	**91**	*e*P	**P**	**14 59 13.4**	**+0.3**
LC01	**Cunco**			**15.64**	**189**	Pn	**Pn**	**14 59 17.7**	**-0.8**
LC01						IAmb	IAmb	14 59 55.0	
	comp=Z,49nm,1.9s								
CLDB	**Colider**			**17.65**	**47**	*e*P	**P**	**14 59 42.0**	**-0.8**
FRTB	**Fartura**			**17.75**	**94**	*e*P	**Pn**	**14 59 44.5**	**+0.1**
ARAG	**Araguaiana, MT**			**17.82**	**68**	*e*P	**Pn**	**14 59 45.2**	**-0.2**
IPMB	**Ipameri, GO**			**20.08**	**78**	*e*P	**P**	**15 00 09.4**	**+0.2**
NPGB	**Novo Progresso**			**20.84**	**41**	*e*P	**P**	**15 00 17.8**	**+0.4**
BDFB	**Brasilia**			**21.12**	**72**	P	**P**	**15 00 19.3**	**-1.3**
	comp=Z,4.0nm,0.4s,baz=238,slow=13,SNR=8.0								
BDFB	**Brasilia**			**21.12**	**72**	P	**P**	**15 00 19.4**	**-1.2**
BDFB						IAmb	IAmb	15 00 21.6	
	comp=Z,9.6nm,0.9s								
PTGA	**Pitinga**			**24.16**	**22**	P	**P**	**15 00 49.9**	**-0.6**
PTGA						IAmb	IAmb	15 01 15.9	
	comp=Z,9.9nm,1.4s								
JANB	**Januaria**			**24.62**	**75**	*e*P	**P**	**15 00 55.0**	**+0.2**
MALB	**Monte Alegre**			**25.70**	**36**	*e*P	**P**	**15 01 04.7**	**+0.2**
BSFB	**Barra de Sao F**			**26.53**	**85**	*e*P	**P**	**15 01 12.7**	**+0.7**
NAN01	**Guarapari, ES**			**27.46**	**84**	*e*P	**P**	**15 01 20.9**	**+0.6**
GDU01	**Guandu, BA**			**29.36**	**76**	*e*P	**P**	**15 01 37.7**	**+0.5**
TORD	**Torodi Ar. Bea**			**77.99**	**70**	P	**P**	**15 07 32.3**	**+1.2**
	comp=Z,1.5nm,0.6s,baz=254,slow=5.2,SNR=14								
TORD						pP	**pP**	**15 07 58.6**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=251,slow=5.6,SNR=2.9								
RAR	**Rarotonga**			**82.59**	**250**	LR	LR	15 37 27.3	
	comp=Z,351nm,21.7s,baz=152,slow=30								
YKA	**Yellowknife Ar**			**92.99**	**341**	P	**P**	**15 08 46.7**	**+1.8**
	comp=Z,0.2nm,0.8s,baz=126,slow=3.1,SNR=2.3								
YKA						pP	**pP**	**15 09 14.2**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=133,slow=5.5,SNR=2.9								
ASAR	**Alice Springs**			**128.22**	**207**	PKP	**PKiKP**	**15 14 40.9**	**+1.7**
	comp=Z,0.2nm,0.5s,baz=91,slow=2.2,SNR=1.7								
WRA	**Warramunga Arr**			**131.31**	**210**	PKP	**PKiKP**	**15 14 46.4**	**+0.9**
	comp=Z,0.4nm,0.9s,baz=150,slow=1.7,SNR=1.7								
ZALV	**Zalesovo Beam**			**143.67**	**26**	pPKP	pPKPdf	15 15 34.5	-2.1
	comp=Z,0.5nm,0.5s,baz=338,slow=3.4,SNR=2.5								
MKAR	**Makanchi Array**			**147.15**	**38**	PKPbc	**PKPbc**	**15 15 13.7**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=3.8,slow=2.2,SNR=2.9								
MKAR						pPKPbc	**pPKPbc**	**15 14 44.5**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=317,slow=2.7,SNR=5.5								
LZH	**Lanzhou**			**165.89**	**25**	⇑PKP	**PKPdf**	**15 15 33.0**	**-3.8**
LZH						pPKP	pPKPdf	15 16 07.5	+0.1
LZH						sPKP		15 16 20.5	
LZH						PKP	**PKPab**	**15 16 35.3**	**-1.6**

*IDC **25** 15:24:55.3±2.4, 4°.61N×128°.36E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/39, mbtmp3.4/3, Error ellipse: s-maj=175.1km s-min=25.2km az=67.0*

ISC 25 15:24:56.8±1.5, **4°.6N**±0°.2×**128°.1E**±0°.3, **h10**km, **n6**, σ0§**65**/8, **mb3.2**/3, **1C**, **North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**			**2.85**	**303**	*e*P	**Pn**	**15 25 42.2**	**-0.2**
DDMP						*e*S	**Sb**	**15 26 23.6**	**+0.7**
MATI	**Mati**			**3.02**	**322**	*e*P	**Pg**	**15 25 54.6**	**-0.1**
MATI						*e*S	Sg	15 26 46.3	+12
KCP	**Kidapawan**			**3.88**	**309**	⇑*e*P	**Pb**	**15 26 04.6**	**-0.9**
KCP						*i* S	**Sb**	**15 26 53.2**	**+0.6**
WRA	**Warramunga Arr**			**25.10**	**166**	P	**P**	**15 30 21.9**	**0.0**
	0.3nm,0.5s,baz=347,slow=10,SNR=6.9								
ASAR	**Alice Springs**			**28.61**	**169**	P	**P**	**15 30 53.6**	**0.0**
	0.2nm,0.6s,baz=355,slow=7.7,SNR=5.5								
MKAR	**Makanchi Array**			**57.69**	**324**	P	**P**	**15 34 48.3**	**+0.6**
	0.7nm,0.5s,baz=122,slow=7.6,SNR=12								

*IDC **25** 15:24:59.2±1.2, 3°.96N×71°.43W, h0km, mb3.8/5, mb1 4.0/8, mb1mx3.8/33, mbtmp3.9/8, ML3.1/3, MS3.1/3, Ms1 3.1/3, ms1mx2.7/31, Error ellipse: s-maj=23.4km s-min=20.3km az=133.0*
*NEIC **25** 15:25:02.4±1.7, 4°.00N±0°.09×71°.40W±0°.07, h15km±5km, mb4.5/24, Error ellipse: s-maj=12.6km s-min=10.1km az=172.0*
*RSNC **25** 15:25:03.8±0.9, 3°.91N×71°.56W, h4km±4km, ML3.7, Mw3.8*

ISC 25 15:25:02.0±1.9, **4°.01N**±0°.03×**71°.45W**±0°.04, **h13**km±12km, **n73**, σ1§**99**/102, **mb4.3**/18, **Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PTGC	**Puerto Gaitan,**			**0.71**	**286**	*e*Pg	**Pb**	**15 25 14.7**	**-1.6**
PTGC						*e*Sg	**Sb**	**15 25 24.3**	**-1.7**
PTGC						*i*		15 25 42.8	
	comp=Z,2μm,0.5s								
GUVC	**San Jose del G**			**1.87**	**219**	*e*P	**Pn**	**15 25 32.9**	**-0.9**
GUVC						*e*S	**Sn**	**15 25 55.8**	**-1.4**
GUVC						*i*		15 26 01.2	
	comp=Z,2μm,0.2s								
VILC	**Villavicencio,**			**2.24**	**273**	*e*P	**Pn**	**15 25 39.6**	**+0.6**
VILC						*e*S	**Sn**	**15 26 06.1**	**-0.6**
VILC						*i*		15 26 13.2	
	comp=Z,2μm,0.3s								
CHIC	**Chingaza**			**2.36**	**285**	*e*P	**Pn**	**15 25 41.5**	**+0.7**
CHIC						*e*S	**Sn**	**15 26 11.3**	**+1.4**
CHIC						*i*		15 26 17.7	
	comp=Z,617nm,0.3s								
TAMC	**Tame, Arauca**			**2.44**	**352**	*e*P	**Pb**	**15 25 44.3**	**-1.4**
TAMC						*e*S	**Sb**	**15 26 15.9**	**+0.1**
TAMC						*i*		15 26 28.2	
	comp=Z,563nm,0.4s								
RUSC	**La Rusia**			**2.48**	**319**	*e*P	**Pn**	**15 25 44.4**	**+1.8**
RUSC						*e*S	**Sn**	**15 26 15.9**	**+2.8**
RUSC						*i*		15 26 31.7	
	comp=Z,305nm,0.4s								
RUSC	**La Rusia**			**2.48**	**319**		**Pn**	**15 25 43.9**	**+1.3**
CVER	**Cruz Verde, Cu**			**2.67**	**281**	*e*P	**Pn**	**15 25 45.6**	**+0.5**
CVER						*e*S	**Sn**	**15 26 17.6**	**-0.1**
ROSC	**El Rosal**			**2.98**	**286**	Pn	**Pn**	**15 25 50.6**	**+1.2**
	comp=Z,16nm,0.3s,baz=134,slow=8.7,SNR=24								
ROSC						Pg	**Pg**	**15 25 59.2**	**-0.1**
	comp=Z,50nm,0.3s,baz=137,slow=15,SNR=28								
ROSC						Sn	**Sn**	**15 26 24.9**	**-0.3**
	comp=Z,45nm,0.3s,baz=37,slow=15,SNR=4.6								
ROSC	**El Rosal**			**2.98**	**286**	*e*P	**Pn**	**15 25 50.8**	**+1.4**
ROSC						*e*S	**Sn**	**15 26 26.2**	**+0.9**
ROSC						*i*		15 26 40.4	
	comp=Z,199nm,0.5s								
MACC	**Macarena, Meta**			**3.03**	**232**	*e*P	**Pn**	**15 25 47.0**	**-2.7**
MACC						*e*S	**Sn**	**15 26 23.7**	**-2.2**
MACC						*i*		15 26 44.5	
	comp=Z,634nm,0.6s								
SPBC	**San Pablo de B**			**3.08**	**302**	*e*P	**Pn**	**15 25 51.4**	**+0.8**
SPBC						*e*S	**Sn**	**15 26 29.6**	**+2.2**
SPBC						*i*		15 26 42.2	

	comp=Z,5.0nm,0.8s						
J57A	**Williamstown**	**39.45 355**	P	**P**	**15 32 32.2**	**+0.3**
MEDO	**Medina**	**39.49 352**	P	**P**	**15 32 33.3**	**+1.1**
MEDO			IAmb	IAmb	15 32 34.0	
	comp=Z,12nm,0.7s						
TXAR	**Lajitas Array**	**39.58 313**	P	**P**	**15 32 33.5**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=126,slow=9.0,SNR=17						
TX31	**Lajitas Ar. Si**	**39.58 313**	P	**P**	**15 32 33.2**	**-0.2**
TX31			IAmb	IAmb	15 32 36.1		
	comp=Z,28nm,1.8s						
TX32	**Lajitas Array**	**39.58 313**	P	**P**	**15 32 33.2**	**-0.2**
WMOK	**Wichita Mounta**	**39.72 324**	P	**P**	**15 32 33.4**	**-1.0**
AMTX	**Amarillo**	**41.58 321**	P	**P**	**15 32 49.6**	**-0.2**
MNTX	**Cornudas Mount**	**42.12 315**	P	**P**	**15 32 54.3**	**+0.1**
MNTX			IAmb	IAmb	15 32 55.3		
	comp=Z,5.0nm,0.7s						
LENM	**Lemitar**	**44.60 317**	P	**P**	**15 33 14.2**	**-0.3**
PV13	**Radium Mtn., P**	**48.11 320**	P	**P**	**15 33 42.2**	**+0.2**
PV13			IAmb	IAmb	15 33 43.1		
	comp=Z,2.3nm,0.8s						
Q16A	**Castle Valley**	**50.06 319**	P	**P**	**15 33 58.1**	**+1.2**
SCHQ	**Schefferville**	**50.81 3**	P	**P**	**15 34 01.5**	**-0.6**
	comp=Z,2.8nm,0.6s,baz=175,slow=7.0,SNR=5.2						
SCHQ	**Schefferville**	**50.81 3**	P	**P**	**15 34 02.3**	**+0.3**
YKA	**Yellowknife Ar**	**66.46 340**	P	**P**	**15 35 49.8**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=133,slow=6.7,SNR=12						
ESDC	**Sonseca Array**	**70.19 49**	P	**P**	**15 36 15.9**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=260,slow=3.5,SNR=2.6						
SUMG	**Summit**	**71.44 10**	P	**P**	**15 36 22.2**	**-0.1**
SUMG			IAmb	IAmb	15 36 23.2		
	comp=Z,5.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**72.69 78**	P	**P**	**15 36 29.5**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=265,slow=6.2,SNR=2.0						
ASAR	**Alice Springs**	**148.68 229**	PKPbc	**PKPbc**	**15 44 47.5**	**-2.5**
	comp=Z,0.6nm,0.6s,baz=119,slow=3.3,SNR=16						

*IDC **25** 15:26:44.0±2.4, 23.58S×66.64W, h182km±17km, mb3.1/3, mb1 3.4/7, mb1mx3.2/33, mbtmp3.7/7, Error ellipse: s-maj=46.2km s-min=19.9km az=175.0*
*GUC **25** 15:26:46.4±0.6, 23.51S×67.22W, h242km±7km, ML4.1*
ISC 25 15:26:44.8±1.2, **23.56S**±0.0°07×**66.8W**±0.1, **h196**km±12km, **n21**, σ1836/34, **7D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.14**	**296**	P		**Pn**		**15 27 25.9**	**+1.1**
	20nm,0.3s,baz=126,slow=7.1,SNR=93								
LVC				S		**Sn**		15 27 56.7	**+0.9**
	12nm,0.3s,baz=262,slow=21,SNR=30								
LVC	**Limon Verde**	**2.14**	**296**	*e*P		**Pn**		**15 27 26.2**	**+1.4**
LVC				*e*S		**Sn**		**15 27 56.8**	**+0.9**
PB15	**IPOC Station P**	**2.45**	**278**	↓*i*P		**Pn**		**15 27 29.1**	**+1.0**
PB15				*i* S		**Sn**		**15 28 02.1**	**+0.3**
PB06	**IPOC Station P**	**2.66**	**288**	↓*i*P		**Pn**		**15 27 31.4**	**+1.0**
PB06				*i* S		**Sn**		**15 28 05.7**	**-0.3**
PB06				IAML				15 28 07.7	
	comp=N,420nm,0.3s								
PB09	**IPOC Station P**	**2.83**	**308**	*e*P		**Pn**		**15 27 34.0**	**+1.5**
PB09				*i* S		**Sn**		**15 28 10.5**	**+0.8**
GO02	**Mina Guanaco**	**2.98**	**237**	↓*i*P		**Pn**		**15 27 34.9**	**+0.6**
GO02				*i* S		**Sn**		**15 28 12.5**	**-0.5**
PB03	**IPOC Station P**	**3.09**	**299**	↓*i*P		**Pn**		**15 27 36.1**	**+0.7**
PB03				*i* S		**Sn**		**15 28 13.5**	**-1.5**
PB03				IAML				15 28 15.0	
	comp=N,328nm,0.5s								
PB05	**IPOC Station P**	**3.18**	**282**	*e*P		**Pn**		**15 27 36.8**	**+0.2**
PB05				*i* S		**Sn**		**15 28 14.9**	**-2.0**
PB05				IAML				15 28 18.6	
	comp=N,154nm,0.4s								
PB04	**IPOC Station P**	**3.29**	**291**	↓*i*P		**Pn**		**15 27 38.4**	**+0.5**
PB04				*i* S		**Sn**		**15 28 17.6**	**-1.8**
PB07	**IPOC Station P**	**3.36**	**302**	↓*i*P		**Pn**		**15 27 39.3**	**+0.5**
PB07				*i* S		**Sn**		**15 28 18.9**	**-2.0**
PB10	**IPOC Station P**	**3.42**	**270**	↓*i*P		**Pn**		**15 27 39.6**	**+0.4**
PB10				*i* S		**Sn**		**15 28 19.5**	**-2.4**
PB14	**IPOC Station P**	**3.43**	**251**	*i* S		**Sn**		**15 28 20.4**	**-2.3**
PB01	**IPOC Station P**	**3.51**	**315**	*e*P		**Pn**		**15 27 41.1**	**+0.6**
PB01				*i* S		**Sn**		**15 28 22.9**	**-1.2**
PB02	**IPOC Station P**	**3.61**	**308**	*e*P		**Pn**		**15 27 42.0**	**+0.3**
PB02				*i* S		**Sn**		**15 28 24.1**	**-2.2**
LPAZ	**La Paz**	**7.34**	**350**	P		**Pn**		**15 28 30.1**	**0.0**
	comp=N,0.6nm,0.3s,baz=141,slow=5.5,SNR=11								
LPAZ				S		Sn		15 29 41.8	-12
	comp=N,0.2nm,0.3s,baz=355,slow=14,SNR=4.3								
SIV	**San Ignacio**	**9.28**	**37**	P		**Pn**		**15 28 52.6**	**-2.2**
	comp=N,1.4nm,0.3s,baz=237,slow=8.1,SNR=25								
BDFB	**Brasilia**	**19.38**	**69**	P		**P**		**15 30 56.0**	**-0.2**
	comp=N,0.5nm,0.3s,baz=278,slow=4.0,SNR=4.6								
TXAR	**Lajitas Array**	**63.41**	**324**	P		**P**		**15 36 56.5**	**+2.7**
	comp=N,0.0nm,0.3s,baz=142,slow=4.6,SNR=1.5								
TORD	**Torodi Ar. Bea**	**76.27**	**69**	P		**P**		**15 38 11.4**	**-0.9**
	comp=N,0.9nm,0.6s,baz=257,slow=5.9,SNR=9.6								
YKA	**Yellowknife Ar**	**93.77**	**340**	P		**P**		**15 39 38.7**	**-0.2**
	comp=N,0.2nm,0.5s,baz=128,slow=4.1,SNR=5.2								
MKAR	**Makanchi Array**	**146.09**	**39**	PKPbc		**PKPbc**		**15 46 02.2**	**+0.5**
	comp=N,0.8nm,0.6s,baz=308,slow=2.8,SNR=9.5								

*IDC **25** 15:31:19.1±4.4, 6.48S×147.00E, h120km±56km, mb3.0/3, mb1 3.1/5, mb1mx2.9/33, mbtmp3.4/5, MS3.3/1, Ms1 3.3/1, ms1mx2.5/13, Error ellipse: s-maj=77.1km s-min=33.6km az=115.0*
ISC 25 15:31:13.9±1.8, **6.2S**±0.1×**146.5E**±0.3, **h49**km, **n7**, σ0.896/7, **mb3.5/3, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.26**	**169**	P		**Pn**		**15 32 02.6**	**+0.1**
	2.5nm,0.3s,baz=356,slow=14,SNR=14								
PMG				S		**Sn**		**15 32 40.2**	**0.0**
	5.4nm,0.3s,baz=19,slow=9.0,SNR=16								
WRA	**Warramunga Arr**	**18.09**	**220**	P		**P**		**15 35 22.4**	**+0.7**
	0.1nm,0.3s,baz=51,slow=11,SNR=6.0								
ASAR	**Alice Springs**	**21.21**	**214**	P		**P**		**15 35 55.6**	**0.0**
	0.3nm,0.5s,baz=48,slow=9.3,SNR=16								
FITZ	**Fitzroy Crossi**	**23.57**	**238**	P		**P**		**15 36 20.3**	**0.0**
	1.0nm,0.4s,baz=52,slow=10,SNR=8.3								
DZM	**Mont Dzumac**	**24.89**	**131**	LR		LR		15 44 42.1	
	comp=Z,76nm,20.2s,baz=27,slow=33								
SONM	**Songino Array**	**64.34**	**331**	P		**P**		**15 41 45.5**	**+0.8**
	0.2nm,0.4s,baz=122,slow=2.2,SNR=1.6								
TORD	**Torodi Ar. Bea**	**144.68**	**284**	PKPbc		**PKPab**		**15 50 43.5**	**-1.6**
	0.4nm,0.7s,baz=78,slow=2.4,SNR=2.2								

*JMA **25** 15:37:27.2±0.3, 22.29N×122.46E, h42km, M3.7*
*TAP **25** 15:37:27.7, 22.22N×122.45E, h44km, ML3.7, D*
ISC 25 15:37:22.9±1.4, **22.24N**±0.04×**122.51E**±0.03, **h3**km±10km, **n119**, σ1827/218, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.91**	**257**	*e*P		**Pn**		**15 37 42.9**	**+0.3**
	baz=257								
LAY				*i* S		**Sb**		**15 37 54.0**	**+0.1**
	baz=257								
TWH	**Lutao**	**1.06**	**296**	*e*P		**Pn**		**15 37 44.6**	**-0.1**
	baz=297								
TWH				S		**Sb**		**15 37 57.3**	**-0.9**
	baz=297								
CHKT	**Chengkung**	**1.35**	**309**	P		**Pn**		**15 37 49.2**	**+0.4**
	baz=319								
CHKT				S		**Sg**		**15 38 05.0**	**-1.5**
	baz=319								
TTN	**Taitung**	**1.36**	**292**	P		**Pg**		**15 37 49.4**	**+0.5**
	baz=300								
TTN				*e*S		**Sn**		**15 38 06.5**	**-0.8**
	baz=300								
TWGBT	**Beinan**	**1.44**	**294**	*i* P		**Pg**		**15 37 51.4**	**+0.9**
	baz=300								
TWGBT				S		**Sn**		**15 38 08.7**	**-0.7**
	baz=300								
TWG	**Pinlang**	**1.45**	**294**	P		**Pg**		**15 37 51.4**	**+0.8**
	baz=300								
TWG				*e*S		**Sn**		**15 38 09.5**	**-0.1**
	baz=300								
FULB	**Fuli**	**1.47**	**311**	*e*P		**Pn**		**15 37 50.8**	**+0.4**
	baz=320								
ECL	**Taimali**	**1.48**	**284**	P		**Pg**		**15 37 51.9**	**+0.7**
	baz=285								
ECL				*e*S		**Sg**		**15 38 10.5**	**+0.1**
	baz=285								
TSEB	**Hengchuen, Pin**	**1.53**	**257**	P		**Pg**		**15 37 53.4**	**+1.2**
	baz=258								
TSEB				S		**Sg**		**15 38 12.8**	**+0.8**
	baz=258								
EAST	**Anshuo**	**1.54**	**275**	*e*P		**Pg**		**15 37 52.7**	**+0.3**
	baz=276								
EAST				*e*S		**Sn**		**15 38 11.1**	**-0.9**
	baz=276								
TWF1	**Yuli**	**1.57**	**315**	*e*P		**Pn**		**15 37 52.6**	**+0.8**
	baz=317								
TWF1				S		**Sn**		**15 38 12.3**	**-0.3**
	baz=317								
HGSD	**Ruisui**	**1.59**	**321**	*e*P		**Pn**		**15 37 52.5**	**+0.4**
	baz=323								
HGSD				*e*S		**Sn**		**15 38 10.1**	**-3.1**
	baz=323								
YULB	**Yu-li**	**1.60**	**316**	P		**Pn**		**15 37 53.0**	**+0.9**
	baz=317								
YULB				*e*S		**Sn**		**15 38 12.4**	**-1.0**
	baz=317								
TWKBT	**Hengchun**	**1.60**	**259**	P		**Pg**		**15 37 54.2**	**+0.7**
	baz=259								
TWKBT				S		**Sg**		**15 38 13.3**	**-1.0**
	baz=259								
TWK1	**Hengchun**	**1.61**	**260**	P		**Pb**		**15 37 53.2**	**0.0**
	baz=259								
TWK1				S		**Sn**		**15 38 13.0**	**-0.5**
	baz=259								
HEN	**Hengchun**	**1.66**	**262**	*e*P		**Pg**		**15 37 54.8**	**+0.1**
	baz=262								
HEN				S		**Sb**		**15 38 14.7**	**-0.7**
	baz=262								
EHY	**Hungye**	**1.67**	**319**	*e*P		**Pn**		**15 37 54.1**	**+1.0**
	baz=321								
EHY				*e*S		**Sn**		**15 38 13.5**	**-1.5**
	baz=321								
ELDTW	**Lidau**	**1.67**	**305**	*e*P		**Pn**		**15 37 53.9**	**+0.7**
	baz=312								
ELDTW				*e*S		**Sn**		**15 38 14.0**	**-1.1**
	baz=312								
EGFH	**Guangfu**	**1.73**	**325**	*e*P		**Pn**		**15 37 55.3**	**+1.3**
	baz=327								
EGFH				S		**Sn**		**15 38 15.4**	**-1.2**
	baz=327								
SCZT	**Fangliau**	**1.75**	**275**	P		**Pg**		**15 37 56.4**	**0.0**
	baz=275								
SCZT				*e*S		**Sn**		**15 38 16.1**	**-1.0**
	baz=275								
MASBT	**Mashibuluo**	**1.77**	**282**	P		**Pg**		**15 37 56.7**	**-0.2**
	baz=283								
MASBT				S		**Sb**		**15 38 17.6**	**-1.1**
	baz=283								
SSD	**Sandimen**	**1.81**	**286**	*e*P		**Pb**		**15 37 56.6**	**0.0**
	baz=291								
SSD				*e*S		**Sn**		**15 38 17.8**	**-0.6**
	baz=291								
SSPT	**Xinbi**	**1.81**	**278**	*e*P		**Pg**		**15 37 59.6**	**+2.0**
	baz=270								
SSPT				*e*S		**Sn**		**15 38 18.3**	**-0.2**
	baz=270								
ESL	**Shilin**	**1.85**	**328**	*e*P		**Pn**		**15 37 56.8**	**+1.2**
	baz=338								
ESL				*e*S		**Sn**		**15 38 17.8**	**-1.7**
	baz=338								
STYT	**Tauyuan**	**1.86**	**300**	*e*P		**Pb**		**15 37 57.3**	**-0.2**
	baz=301								
STYT				*e*S		**Sn**		**15 38 19.5**	**-0.3**
	baz=301								
SLGT	**Liugui**	**1.87**	**294**	P		**Pb**		**15 37 57.7**	**-0.1**
	baz=297								
SLGT				*e*S		**Sb**		**15 38 20.4**	**-1.3**
	baz=297								
HWA	**Hwalien**	**1.92**	**334**	*e*S		**Sn**		**15 38 21.2**	**+0.1**
	baz=345								
VWDT	**VWDT**	**1.96**	**320**	P		**Pb**		**15 37 59.1**	**-0.2**
	baz=329								
VWDT				*e*S		**Sn**		**15 38 21.2**	**-1.0**
	baz=329								
SGST	**Jiashian**	**1.96**	**296**	P		**Pb**		**15 37 59.7**	**+0.4**
	baz=297								
SGST				*e*S		**Sb**		**15 38 23.6**	**-0.6**
	baz=297								
WLCH	**Liuqiu**	**1.97**	**274**	*e*P		**Pg**		**15 38 02.5**	**+1.8**
	baz=274								
WLCH				*e*S		**Sg**		**15 38 25.2**	**-1.1**
	baz=274								
TWP	**Hsiaoliuchiu**	**1.99**	**273**	*e*P		**Pg**		**15 38 00.8**	**-0.2**
	baz=274								
TWP				*e*S		**Sb**		**15 38 24.7**	**-0.3**
	baz=274								
TWD	**Chiawan**	**2.01**	**336**	P		**Pn**		**15 37 59.1**	**+1.3**
	baz=337								
TWD				*e*S		**Sn**		**15 38 22.3**	**-1.2**
	baz=337								
TWM1	**Shoushan**	**2.01**	**287**	*e*P		**Pg**		**15 38 01.5**	**0.0**
	baz=288								
TWM1				*e*S		**Sg**		**15 38 26.4**	**-1.1**
	baz=288								
WTP	**Ta-pu**	**2.01**	**300**	*e*P		**Pg**		**15 38 01.5**	**0.0**
	baz=301								
WTP				*e*S		**Sb**		**15 38 25.5**	**-0.2**
	baz=301								
TPUB	**Ta-pu**	**2.03**	**302**	*e*P		**Pg**		**15 38 01.7**	**-0.1**
	baz=309								
TPUB				*e*S		**Sn**		**15 38 24.0**	**+0.1**
	baz=309								
CHN1	**Nanshi**	**2.05**	**298**	*e*P		**Pg**		**15 38 02.6**	**+0.4**
	baz=286								
CHN1				*e*S		**Sg**		**15 38 27.9**	**-0.9**
	baz=286								
CHN4	**Tsaushan**	**2.08**	**302**	*e*P		**Pg**		**15 38 02.7**	**-0.1**
	baz=310								
CHN4				*e*S		**Sg**		**15 38 28.8**	**-1.0**
	baz=310								
SNST	**Tainan City**	**2.09**	**298**	*e*P		**Pg**		**15 38 03.2**	**+0.1**
	baz=286								
SNST				*e*S		**Sg**		**15 38 29.5**	**-0.7**
	baz=286								
NACB	**Ninganchiao**	**2.10**	**337**	*e*P		**Pn**		**15 38 00.2**	**+1.3**
	baz=347								
NACB				*e*S		**Sn**		**15 38 23.5**	**-2.1**
	baz=347								
SSLB	**Suanglung**	**2.10**	**317**	*e*P		**Pb**		**15 38 01.1**	**-0.6**
	baz=326								
SSLB				*e*S		**Sn**		**15 38 25.7**	**0.0**
	baz=326								
WHYT	**Xinyi Township**	**2.10**	**314**	*e*P		**Pb**		**15 38 02.3**	**+0.6**
	baz=322								
WHYT				*e*S		**Sn**		**15 38 25.7**	**-0.1**
	baz=322								
TWK	**Hsinying**	**2.12**	**299**	*e*P		**Pb**		**15 38 03.0**	**+0.9**
	baz=287								
TWK				S		**Sg**		**15 38 30.2**	**-1.0**
	baz=287								
CHN3	**Shinhua**	**2.15**	**293**	*e*P		**Pg**		**15 38 04.0**	**0.0**
	baz=281								
CHN3				*e*S		**Sg**		**15 38 30.9**	**-1.0**
	baz=281								
CHN5	**Tsauling**	**2.16**	**309**	P		**Pb**		**15 38 03.0**	**+0.3**
	baz=318								
CHN5				*e*S		**Sb**		**15 38 28.8**	**-1.1**
	baz=318								
HATJ	**Hateruma jima**	**2.16**	**33**	P		**Pn**		**15 38 01.8**	**+1.9**
HATJ				*e*S		**Sn**		**15 38 26.4**	**-0.9**
ETLH	**Xiulin Townshi**	**2.17**	**334**	*e*P		**Pn**		**15 38 01.1**	**+1.1**
	baz=345								
ETLH				*e*S		**Sn**		**15 38 25.7**	**-1.8**
	baz=345								
CHGB	**Renai**	**2.19**	**326**	P		**Pn**		**15 38 02.4**	**+2.0**
	baz=327								
CHGB				S		**Sn**		**15 38 26.8**	**-1.4**
	baz=327								
SMLT	**Sun Moon Lake**	**2.20**	**318**	*e*P		**Pn**		**15 38 02.3**	**+1.8**
	baz=326								
SMLT				S		**Sn**		**15 38 27.9**	**-0.4**
	baz=326								
WHF	**Hehuan Shan**	**2.21**	**329**	*e*P		**Pn**		**15 38 02.0**	**+1.1**
	baz=330								
WHF				S		**Sn**		**15 38 28.4**	**-0.7**
	baz=330								
JYNG	**Yonagunijimaku**	**2.23**	**10**	P		**Pn**		**15 38 03.5**	**+2.7**
JYNG				*e*S		**Sn**		**15 38 29.3**	**+0.3**
TYC	**Yuchr**	**2.25**	**318**	*e*P		**Pb**		**15 38 03.5**	**-0.6**
	baz=325								
TYC				*e*S		**Sn**		**15 38 30.4**	**+1.1**
	baz=325								
YOJ	**Yonaguni jima**	**2.26**	**12**	*e*P		**Pn**		**15 38 03.7**	**+2.5**
	baz=3.0								
YOJ				*e*S		**Sn**		**15 38 30.2**	**+0.7**
	baz=3.0								
YOJ	**Yonaguni jima**	**2.26**	**12**	P		**Pn**		**15 38 03.9**	**+2.8**
YOJ				S		**Sn**		**15 38 30.4**	**+0.9**
WJS	**Zhushan**	**2.27**	**314**	*e*P		**Pn**		**15 38 03.2**	**+1.8**
	baz=315								
WJS				*e*S		**Sb**		**15 38 33.1**	**0.0**
	baz=315								
CHN2	**Minshiung**	**2.27**	**305**	*e*P		**Pb**		**15 38 05.2**	**+0.7**
	baz=289								
CHN2				*e*S		**Sb**		**15 38 33.8**	**+0.7**
	baz=289								
ENA	**Nanau**	**2.29**	**342**	P		**Pn**		**15 38 03.2**	**+1.6**
	baz=344								
ENA				*e*S		**Sn**		**15 38 29.7**	**-0.6**
	baz=344								
CHY	**Chiayi**	**2.29**	**303**	*e*P		**Pb**		**15 38 06.0**	**+1.1**
	baz=290								
CHY				*e*S		**Sb**		**15 38 31.9**	**-1.7**
	baz=290								
WGK	**Gukeng**	**2.30**	**309**	P		**Pb**		**15 38 06.1**	**+1.1**
	baz=320								
WGK				S		**Sb**		**15 38 34.3**	**+0.5**
	baz=320								
DPDB	**Guoxing**	**2.30**	**321**	*e*P		**Pb**		**15 38 04.2**	**-0.9**
	baz=329								
DPDB				*e*S		**Sb**		**15 38 32.8**	**-1.2**
	baz=329								
WDLH	**Douliu**	**2.32**	**309**	*e*P		**Pb**		**15 38 05.4**	**+0.1**
	baz=319								
WDLH				*e*S		**Sb**		**15 38 35.2**	**+0.8**
	baz=319								
EOS1	**EOS1**	**2.32**	**351**	*e*P		**Pb**		**15 38 04.9**	**-0.5**
	baz=353								
EOS1				*e*S		**Sn**		**15 38 32.1**	**+1.0**
	baz=353								
WNT	**Mingjian**	**2.34**	**314**	P		**Pb**		**15 38 06.5**	**+0.7**
	baz=315								
WNT				S		**Sb**		**15 38 34.8**	**-0.2**
	baz=315								
TWT	**Tachien**	**2.34**	**329**	*e*S		**Sn**		**15 38 30.5**	**-1.5**
	baz=330								
TDCB	**Techi**	**2.35**	**328**	*e*S		**Sn**		**15 38 31.7**	**-0.4**
	baz=330								
IRIF	**Iriomote-Funau**	**2.37**	**28**	P		**Pn**		**15 38 04.7**	**+2.0**
IRIF				*e*S		**Sn**		**15 38 32.1**	**-0.1**
WLGB	**Puzi**	**2.38**	**302**	*e*P		**Pb**		**15 38 07.1**	**+0.8**
	baz=289								
WLGB				*e*S		**Sb**		**15 38 36.9**	**+0.8**
	baz=289								
CHN8	**Yiju**	**2.39**	**298**	*e*P		**Pb**		**15 38 05.8**	**-0.8**
	baz=284								
CHN8				*e*S		**Sb**		**15 38 34.5**	**-1.9**
	baz=284								
NNSB	**Datong**	**2.41**	**335**	*e*P		**Pn**		**15 38 05.8**	**+2.4**
	baz=336								
NNSB				*e*S		**Sn**		**15 38 33.3**	**-0.2**
	baz=336								
NNSH	**Datong**	**2.41**	**335**	*e*P		**Pn**		**15 38 05.1**	**+1.7**
	baz=336								
NNSH				*e*S		**Sn**		**15 38 32.8**	**-0.7**
	baz=336								
JKRS	**Kuro-shima**	**2.42**	**35**	P		**Pn**		**15 38 05.6**	**+2.2**
JKRS				S		**Sn**		**15 38 33.0**	**-0.5**
NNS	**Nan Shan**	**2.42**	**335**	*e*P		**Pb**		**15 38 07.1**	**-0.1**
	baz=336								
NNS				*e*S		**Sn**		**15 38 32.9**	**-0.9**
	baz=336								
TWC	**Suao**	**2.43**	**346**	*e*P		**Pn**		**15 38 05.6**	**+2.0**
	baz=356								
TWC				*e*S		**Sn**		**15 38 33.8**	**0.0**
	baz=356								
WHP	**Taichung City**	**2.48**	**325**	*e*P		**Pb**		**15 38 07.8**	**-0.4**
	baz=332								
WHP				*e*S		**Sn**		**15 38 37.1**	**+1.8**
	baz=332								
NDT	**Datong Townshi**	**2.52**	**339**	*e*P		**Pb**		**15 38 08.2**	**-0.6**
	baz=348								
NDT				S		**Sn**		**15 38 36.7**	**+0.7**
	baz=348								
WSF	**Szhu**	**2.52**	**304**	*e*P		**Pb**		**15 38 08.7**	**-0.2**
	baz=304								
WSF				*e*S		**Sb**		**15 38 38.6**	**-1.7**
	baz=304								
TCU	**Taichung**	**2.54**	**319**	*e*P		**Pb**		**15 38 10.4**	**+1.3**
	baz=320								
TCU				*e*S		**Sb**		**15 38 40.5**	**-0.2**
	baz=320								
ENTT	**Nioudou**	**2.54**	**340**	*e*P		**Pn**		**15 38 07.0**	**+1.9**
	baz=349								
ENTT				*e*S		**Sn**		**15 38 36.7**	**+0.2**
	baz=349								
WCHH	**Zhanghua**	**2.56**	**316**	*e*S		**Sb**		**15 38 40.7**	**-0.7**
	baz=316								
RLNB	**Erlin**	**2.57**	**310**	*e*S		**Sb**		**15 38 40.0**	**-1.7**
	baz=311								
TWE	**Neicheng**	**2.58**	**343**	*e*P		**Pn**		**15 38 07.5**	**+1.8**
	baz=344								
TWE				*e*S		**Sn**		**15 38 37.6**	**0.0**
	baz=344								
JIJ	**Ishigaki jima**	**2.59**	**35**	P		**Pn**		**15 38 07.3**	**+1.5**
JIJ				S		**Sn**		**15 38 35.8**	**-2.0**
WTCT	**Ta-ch'eng**	**2.61**	**309**	*e*S		**Sb**		**15 38 40.2**	**-2.6**
	baz=296								
YHNB	**Yeheng**	**2.63**	**337**	*e*P		**Pn**		**15 38 08.2**	**+1.8**
	baz=338								
YHNB				*e*S		**Sn**		**15 38 39.1**	**+0.3**
	baz=338								
TWQ1	**Liyutan**	**2.63**	**323**	P		**Pb**		**15 38 10.4**	**-0.3**
	baz=333								
TWQ1				S		**Sb**		**15 38 41.7**	**-1.8**
	baz=333								
NSK	**Sanguang**	**2.64**	**337**	*e*P		**Pb**		**15 38 09.9**	**-1.0**
	baz=338								
NSK				S		**Sn**		**15 38 39.4**	**+0.2**
	baz=338								
NTC	**Toucheng**	**2.67**	**347**	*e*P		**Pb**		**15 38 10.4**	**-1.0**
	baz=356								
NTC				*e*S		**Sn**		**15 38 40.0**	**+0.2**
	baz=356								
NWLT	**Wulai**

TWS1	**Kuangyinshan** baz=342	**3.02**	**341**	*e*S	**Sn**	**15 38 50.5**	**+2.2**
YM01	**YM01** baz=356	**3.02**	**344**	*e*S	**Sn**	**15 38 48.4**	**+0.1**
PNG	**Penghu** baz=287	**3.02**	**296**	*e*P	**Pn**	**15 38 14.5**	**+2.8**
PNG	baz=287			*e*S	**Sn**	**15 38 46.5**	**-1.9**
YM10	**YM10** baz=355	**3.03**	**344**	*e*P	**Pn**	**15 38 14.9**	**+3.1**
YM10	baz=355			*e*S	**Sn**	**15 38 49.5**	**+0.8**
YM04	**YM04** baz=344	**3.03**	**343**	P	**Pb**	**15 38 16.1**	**-1.5**
YM04	baz=344			S	**Sn**	**15 38 51.0**	**+2.3**
YM11	**YM11** baz=332	**3.03**	**344**	*e*P	**Pb**	**15 38 16.6**	**-1.0**
YM11	baz=332			*e*S	**Sn**	**15 38 49.5**	**+0.6**
YM03	**YM03** baz=344	**3.05**	**343**	*e*S	**Sn**	**15 38 50.5**	**+1.1**
JTJ	**Tarama**	**3.12**	**40**	P	**Pn**	**15 38 14.6**	**+1.5**
JTJ				S	**Sn**	**15 38 49.6**	**-1.3**
JIRB	**Irabujima**	**3.55**	**43**	P	**Pn**	**15 38 20.1**	**+1.2**
JIRB				*e*S	**Sn**	**15 38 59.4**	**-2.1**
JMJ2	**Miyako jima3**	**3.59**	**46**	P	**Pn**	**15 38 20.8**	**+1.3**
JMJ2				*e*S	**Sn**	**15 39 01.1**	**-1.3**
JMJ	**Miyako jima 2** baz=45	**3.62**	**44**	*e*S	**Sn**	**15 39 01.3**	**-1.8**
JOGS	**Gusukube**	**3.66**	**46**	S	**Sn**	**15 39 03.3**	**-0.8**
JIKM	**Ikemajima**	**3.67**	**43**	*e*S	**Sn**	**15 39 03.1**	**-1.2**
VWUC	**VWUC** baz=315	**3.92**	**315**	P	**Pn**	**15 38 25.9**	**+1.9**
VWUC	baz=315			S	**Sn**	**15 39 09.9**	**-0.6**
PTTC	**Pingtan** baz=323	**4.10**	**323**	*e*S	**Sn**	**15 39 14.4**	**-0.6**
PTMZ	**Houxiangcun** baz=312	**4.17**	**313**	P	**Pn**	**15 38 29.5**	**+2.0**
PTMZ	baz=312			S	**Sn**	**15 39 17.3**	**+0.6**
MATB	**Ma-tsu** baz=330	**4.54**	**330**	*e*P	**Pn**	**15 38 34.3**	**+1.8**
MATB	baz=330			*e*S	**Sn**	**15 39 26.1**	**+0.2**

*KRNET **25** 15:49:35.0±0.1, 40˚.28N×77˚.57E, mb3.3*
*SOME **25** 15:49:40.7, 40˚.55N×77˚.18E, h0km*
*NNC **25** 15:49:41.2±1.2, 40˚.47N×77˚.19E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=8.1km s-min=6.9km az=178.0*

ISC 25 15:49:39.7±1.6**, 40˚.47N**±0˚.07×**77˚.14E**±0˚.03**, h10**km**, n67,**
σ1§**74**/101**, 16C-16D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay** baz=51	**1.66**	**1**	⇑*i*P	**Pb**	**15 50 09.8**	**-0.8**
KDJ	baz=51			⇑*i*S	**Sg**	**15 50 35.3**	**+2.1**
ULHL	**Ulahol** SNR=11	**1.90**	**339**	P	**Pg**	**15 50 15.4**	**-0.8**
KZA	**Kyzart** baz=16	**2.15**	**319**	⇓*i*P	**Pb**	**15 50 19.4**	**+0.4**
KZA	baz=16			⇓*i*S	**Sg**	**15 50 51.7**	**+2.8**
KZA	**Kyzart** SNR=21	**2.15**	**319**	P	**Pg**	**15 50 20.6**	**-0.4**
BOOM	**Boomskoye usch** baz=32	**2.21**	**336**	⇑*i*P	**Pb**	**15 50 19.4**	**-0.5**
BOOM	baz=32			⇑*i*S	**Sg**	**15 50 51.5**	**+0.6**
PRZ	**Przheval'sk** baz=16	**2.23**	**25**	⇓*e*P	**Pn**	**15 50 16.1**	**-0.8**
PRZ	baz=16			⇓*i*S	**Sb**	**15 50 46.1**	**-1.8**
ANVS	**Anan'yevo** baz=2.0	**2.35**	**10**	⇑*e*P	**Pn**	**15 50 19.1**	**+0.6**
ANVS	baz=2.0			⇑*i*S	**Sb**	**15 50 51.4**	**0.0**
TNSS	**Tian-Shan** 11nm,0.4s	**2.57**	**357**	*e*P	**Pg**	**15 50 28.3**	**-0.8**
TNSS	22nm,0.3s			*e*S	**Sg**	**15 51 02.7**	**+0.3**
TNSS	**Tian-Shan** 11nm,0.4s	**2.57**	**357**	Pg	**Pg**	**15 50 28.3**	**-0.8**
TNSS	22nm,0.3s			Lg	Lg	15 51 02.7	
IZV	**Izvestkoviy** 1.9nm,0.2s	**2.60**	**351**	*e*P	**Pg**	**15 50 29.9**	**+0.3**
IZV	40nm,0.4s			*e*S	**Sg**	**15 51 05.0**	**+1.8**
IZV	**Izvestkoviy** 1.9nm,0.2s	**2.60**	**351**	Pg	**Pg**	**15 50 29.9**	**+0.3**
IZV	40nm,0.4s			Lg	Lg	15 51 05.0	
UCH	**Uchtor** baz=11	**2.65**	**313**	⇓*e*P	**Pb**	**15 50 26.2**	**-1.3**
UCH	baz=11			⇓*i*S	**Sg**	**15 51 03.4**	**-1.4**
UCH	**Uchtor** SNR=11	**2.65**	**313**	P	**Pb**	**15 50 27.1**	**-0.4**
MDOK	**Medeo** 4.0nm,0.2s	**2.70**	**359**	*e*P	**Pg**	**15 50 30.9**	**-0.5**
MDOK	32nm,0.4s			*e*S	**Sg**	**15 51 07.2**	**+0.9**
MDOK	**Medeo** 12nm,0.8s	**2.70**	**359**	Pg	**Pb**	**15 50 28.4**	**+0.2**
MDOK	29nm,0.6s			Lg	Lg	15 51 07.4	
MDOK	**Medeo** 4.0nm,0.2s	**2.70**	**359**	Pg	**Pg**	**15 50 30.9**	**-0.5**
MDOK	32nm,0.4s			Lg	Lg	15 51 07.2	
TKM2	**Tokmak 2** baz=31	**2.71**	**335**	⇓*i*P	**Pb**	**15 50 26.3**	**-2.1**
TKM2	baz=31			⇓*i*S	**Sg**	**15 51 03.6**	**-3.2**
TKM2	**Tokmak 2** SNR=5.5	**2.71**	**335**	P	**Pb**	**15 50 26.4**	**-2.0**
MTBS	**Maitube** 1.5nm,0.1s	**2.71**	**349**	*e*P	**Pg**	**15 50 31.3**	**-0.5**
MTBS	10.0nm,0.2s			*e*S	**Sg**	**15 51 07.7**	**+0.8**
MTBS	**Maitube** 1.5nm,0.1s	**2.71**	**349**	Pg	**Pg**	**15 50 31.3**	**-0.5**
MTBS	10.0nm,0.2s			Lg	Lg	15 51 07.7	
KST	**Kastek** 3.1nm,0.2s	**2.72**	**342**	*e*P	**Pg**	**15 50 31.8**	**-0.1**
KST	13nm,0.3s			*e*S	**Sg**	**15 51 08.3**	**+1.1**
KST	**Kastek** 3.1nm,0.2s	**2.72**	**342**	Pg	**Pg**	**15 50 31.8**	**-0.1**
KST	13nm,0.3s			Lg	Lg	15 51 08.3	
KBK	**Karagaybulak** baz=21	**2.74**	**324**	⇓*i*P	**Pb**	**15 50 27.0**	**-1.9**
KBK	baz=21			⇓*i*S	**Sg**	**15 51 05.0**	**-2.7**
KBK	**Karagaybulak** SNR=9.9	**2.74**	**324**	P	**Pg**	**15 50 30.8**	**-1.4**
KNDC	**Almaty** 4.1nm,0.3s	**2.75**	**357**	⇑Pg	**Pb**	**15 50 28.6**	**-0.4**
KNDC	66nm,0.4s			⇑Lg	Lg	15 51 08.5	
SATY	**Saty** 3.1nm,0.2s	**2.76**	**20**	*e*P	**Pg**	**15 50 31.8**	**-0.8**
SATY	20nm,0.3s			*e*S	**Sg**	**15 51 08.8**	**+0.5**
SATY	**Saty** 3.1nm,0.2s	**2.76**	**20**	Pg	**Pg**	**15 50 31.8**	**-0.8**
SATY	20nm,0.3s			Lg	Lg	15 51 08.8	
KOTS	**Kotyrbulak** 4.6nm,0.1s	**2.77**	**360**	*e*P	**Pg**	**15 50 33.0**	**+0.3**
KOTS	28nm,0.3s			*e*S	**Sg**	**15 51 10.5**	**+1.9**
KOTS	**Kotyrbulak** 4.6nm,0.1s	**2.77**	**360**	Pg	**Pg**	**15 50 33.0**	**+0.3**
KOTS	135nm,0.6s			Lg	Lg	15 51 10.5	
ZHN	**Zhinishke** 3.3nm,0.1s	**2.87**	**19**	*e*P	**Pg**	**15 50 34.2**	**-0.5**
ZHN	17nm,0.1s			*e*S	**Sg**	**15 51 12.6**	**+0.7**
ZHN	**Zhinishke** 3.3nm,0.1s	**2.87**	**19**	Pg	**Pg**	**15 50 34.2**	**-0.5**
ZHN	17nm,0.1s			Lg	Lg	15 51 12.6	
AAK	**Ala-Archa** baz=17	**2.94**	**318**	⇑*i*P	**Pb**	**15 50 30.1**	**-2.2**
AAK	baz=17			⇑*i*S	**Sb**	**15 51 10.4**	**+2.0**
AAK	**Ala-Archa** SNR=12	**2.94**	**318**	P	**Pb**	**15 50 34.1**	**+1.8**
DGS	**Degeres** 3.3nm,0.2s	**2.96**	**340**	*e*P	**Pg**	**15 50 35.8**	**-0.6**
DGS	11nm,0.3s			*e*S	**Sg**	**15 51 15.7**	**+1.0**
DGS	**Degeres** 3.3nm,0.2s	**2.96**	**340**	Pg	**Pg**	**15 50 35.8**	**-0.6**
DGS	11nm,0.3s			Lg	Lg	15 51 15.7	
UZB	**Uzynbulak** 3.0nm,0.2s	**3.03**	**27**	*e*P	**Pg**	**15 50 36.9**	**-0.8**
UZB	16nm,0.5s			*e*S	**Sg**	**15 51 17.3**	**+0.4**
UZB	**Uzynbulak** 3.0nm,0.2s	**3.03**	**27**	Pg	**Pg**	**15 50 36.9**	**-0.8**
UZB	16nm,0.5s			Lg	Lg	15 51 17.3	
AML	**Almayashu** baz=4.0	**3.08**	**304**	⇓*e*P	**Pn**	**15 50 32.4**	**+3.6**
AML	baz=4.0			⇓*e*S	**Sb**	**15 51 14.5**	**+1.8**
AML	**Almayashu** SNR=10	**3.08**	**304**	P	**Pb**	**15 50 33.1**	**-1.8**
CHMS	**Chumysh** baz=23	**3.10**	**326**	⇑*i*P	**Pn**	**15 50 31.8**	**+3.1**
CHMS	baz=23			⇑*i*S	**Sb**	**15 51 13.3**	**+0.5**
CHMS	**Chumysh** SNR=5.5	**3.10**	**326**	P	**Pb**	**15 50 33.7**	**-1.2**
KURS	**Kuram** 3.4nm,0.2s	**3.12**	**14**	*e*P	**Pg**	**15 50 38.5**	**-0.9**
KURS	8.8nm,0.4s			*e*S	**Sg**	**15 51 20.0**	**+0.2**
KURS	**Kuram** 3.4nm,0.2s	**3.12**	**14**	Pg	**Pg**	**15 50 38.5**	**-0.9**
KURS	8.8nm,0.4s			Lg	Lg	15 51 20.0	
SHLS	**Shalkode** 3.3nm,0.0s	**3.20**	**32**	*e*P	**Pg**	**15 50 43.3**	**+2.2**
SHLS	21nm,0.6s			*e*S	**Sg**	**15 51 28.0**	**+5.5**
SHLS	**Shalkode** 3.3nm,0.0s	**3.20**	**32**	Pg	**Pg**	**15 50 43.3**	**+2.2**
SHLS	21nm,0.6s			Lg	Lg	15 51 28.0	
KTBS	**Karatobe** 1.9nm,0.3s	**3.26**	**354**	*e*P	**Pg**	**15 50 40.8**	**-1.4**
KTBS	24nm,0.3s			*e*S	**Sg**	**15 51 23.9**	**-0.5**
KTBS	**Karatobe** 1.9nm,0.3s	**3.26**	**354**	Pg	**Pg**	**15 50 40.7**	**-1.4**
KTBS	24nm,0.3s			Lg	Lg	15 51 23.9	
EKS2	**Erkin-Say** baz=11	**3.34**	**312**	⇓*e*P	**Pn**	**15 50 35.6**	**+3.4**
EKS2	baz=11			⇓*i*S	**Sb**	**15 51 20.6**	**+0.7**
EKS2	**Erkin-Say** SNR=8.9	**3.34**	**312**	P	**Pb**	**15 50 37.5**	**-1.7**
PDGK	**Podgornoye** 3.1nm,0.5s	**3.35**	**31**	⇓Pg	**Pb**	**15 50 40.0**	**+0.6**
PDGK	19nm,0.7s			⇓Lg	Lg	15 51 25.8	
CHKK	**Chushkaly** 1.2nm,0.1s	**3.39**	**358**	*e*P	**Pg**	**15 50 43.5**	**-1.1**
CHKK	19nm,0.2s			*e*S	**Sg**	**15 51 28.8**	**+0.3**
CHKK	**Chushkaly** 1.2nm,0.1s	**3.39**	**358**	Pg	**Pg**	**15 50 43.6**	**-1.1**
CHKK	19nm,0.2s			Lg	Lg	15 51 28.8	
KRBS	**Karabastau** 2.3nm,0.2s	**3.41**	**342**	*e*P	**Pg**	**15 50 43.9**	**-1.1**
KRBS	4.0nm,0.4s			*e*S	**Sg**	**15 51 29.3**	**+0.2**
KRBS	**Karabastau** 2.3nm,0.2s	**3.41**	**342**	Pg	**Pg**	**15 50 43.9**	**-1.1**
KRBS	4.0nm,0.4s			Lg	Lg	15 51 29.3	
USP	**Ospenovka** baz=23	**3.42**	**326**	⇑*i*P	**Pn**	**15 50 36.8**	**+3.6**
USP	baz=23			⇑*i*S	**Sb**	**15 51 21.4**	**-0.8**
KUU	**Kurty** 3.1nm,0.1s	**3.48**	**350**	*e*P	**Pg**	**15 50 45.0**	**-1.3**
KUU	12nm,0.4s			*e*S	**Sg**	**15 51 31.0**	**-0.3**
KUU	**Kurty** 3.1nm,0.1s	**3.48**	**350**	Pg	**Pg**	**15 50 45.0**	**-1.3**
KUU	12nm,0.4s			Lg	Lg	15 51 31.0	
SGDS	**Sogindy** 2.6nm,0.2s	**3.52**	**329**	Pg	**Pg**	**15 50 46.3**	**-0.9**
SGDS	4.3nm,0.2s			Lg	Lg	15 51 33.5	
MNBS	**Baschi** 2.2nm,0.3s	**3.73**	**14**	*e*P	**Pg**	**15 50 49.3**	**-1.9**
MNBS	8.5nm,0.3s			*e*S	**Sg**	**15 51 38.5**	**-1.0**
MNBS	**Baschi** 2.2nm,0.3s	**3.73**	**14**	Pg	**Pg**	**15 50 49.3**	**-1.9**
MNBS	8.5nm,0.3s			Lg	Lg	15 51 38.5	
ARXS	**Arharly** 2.9nm,0.3s	**3.78**	**8**	*e*P	**Pg**	**15 50 50.6**	**-1.5**
ARXS	15nm,0.5s			*e*S	**Sg**	**15 51 40.6**	**-0.5**
DJR	**Jarkent** 0.6nm,0.1s	**4.33**	**26**	*e*P	**Pg**	**15 50 59.2**	**-3.5**
DJR	4.0nm,0.2s			*e*S	**Sg**	**15 51 55.4**	**-3.4**
DJR	**Jarkent** 0.6nm,0.1s	**4.33**	**26**	Pg	**Pg**	**15 50 59.2**	**-3.5**
DJR	4.0nm,0.2s			Lg	Lg	15 51 55.4	
KAPS	**Kapalarasan** 1.1nm,0.2s	**5.08**	**18**	*e*P	**Pg**	**15 51 13.6**	**-3.5**
KAPS	3.5nm,0.4s			*e*S	**Sg**	**15 52 20.3**	**-2.6**
KAPS	**Kapalarasan** 1.1nm,0.2s	**5.08**	**18**	Pg	**Pg**	**15 51 13.6**	**-3.5**
KAPS	3.5nm,0.4s			Lg	Lg	15 52 20.3	
IUG	**Iuzhnay** 0.4nm,0.1s	**5.61**	**290**	*e*P	**Pg**	**15 51 25.0**	**-2.1**
IUG	4.0nm,0.4s			*e*S	**Sg**	**15 52 39.6**	**-0.3**
KK31	**Karatay Array** 0.7nm,0.6s,baz=115,slow=16,SNR=3.9	**5.61**	**300**	⇑Pg	**Pg**	**15 51 23.5**	**-3.7**
KK31	2.0nm,0.7s,baz=111,slow=27,SNR=4.8			⇑Lg	Lg	15 52 36.4	

*NEIC **25** 15:52:53.2±1.6, 5˚.5S±0˚.1×80˚.7W±0˚.1, h76km±5km, mb4.4/23, Error ellipse: s-maj=21.4km s-min=13.0km az=225.0*
*IDC **25** 15:52:55.9±3.0, 5˚.42S×80˚.50W, h98km±32km, mb3.2/4, mb1 3.6/8, mb1mx3.4/30, mbtmp3.8/8, MS2.8/4, Ms1 2.8/4, ms1mx2.7/11, Error ellipse: s-maj=39.6km s-min=26.8km az=70.0*

ISC 25 15:52:54.5±0.7**, 5˚.61S**±0˚.10×**80˚.8W**±0˚.1**, h100**km**, n35,**
σ1§**49**/34**, mb4.3**/13**, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa** 14nm,0.3s,baz=312,slow=4.2,SNR=31	**2.82**	**123**	P	**Pn**	**15 53 38.1**	**-0.1**
ATAH	18nm,0.3s,baz=46,slow=12,SNR=4.1			S	Sn	15 54 21.2	+9.4
NNA	**Nana** 1.1nm,0.3s,baz=281,slow=9.5,SNR=1.8	**7.44**	**149**	P	**Pn**	**15 54 41.4**	**+0.9**
NNA	comp=Z,41nm,19.8s,baz=302,slow=36			LR	LR	15 57 21.6	
NNA	**Nana**	**7.44**	**149**	Pn	**Pn**	**15 54 38.9**	**-1.6**
PAYG	**Puerto Ayora**	**10.67**	**297**	Pn	**Pn**	**15 55 20.2**	**-4.2**
ROSC	**El Rosal** 2.1nm,0.3s,baz=104,slow=18,SNR=2.1	**12.22**	**32**	P	**Pn**	**15 55 44.5**	**-1.0**
AP01	**Chacalluta**	**16.27**	**142**		**P**	**15 56 38.0**	**-0.4**

LPAZ	**La Paz** 0.2nm,0.3s,baz=342,slow=10,SNR=5.7	**16.33**	**132**	P	**P**	**15 56 40.5**	**+0.8**
LPAZ	comp=Z,16nm,20.8s,baz=326,slow=37			LR	LR	16 02 57.3	
LPAZ	**La Paz**	**16.33**	**132**	Pn	**P**	**15 56 38.7**	**-0.9**
MNMC	**Minye Minye**	**17.31**	**142**	P	**Pn**	**15 56 51.8**	**+1.5**
MNMC	comp=Z,67nm,2.0s			IAmb	IAmb	15 57 08.6	
SDV	**Santo Domingo** comp=Z,64nm,19.0s,baz=45,slow=42	**17.60**	**35**	LR	LR	16 05 03.8	
SAML	**Samuel**	**17.77**	**102**	P	**Pn**	**15 56 54.3**	**-1.3**
PTGA	**Pitinga** comp=Z,3.2nm,0.6s,baz=229,slow=12,SNR=4.4	**21.34**	**78**	P	**P**	**15 57 30.9**	**-2.9**
PTGA	comp=Z,45nm,18.3s,baz=63,slow=42			LR	LR	16 07 30.5	
U49A	**Red Boiling Sp**	**42.16**	**354**	P	**P**	**16 00 37.4**	**+0.2**
U49A	comp=Z,19nm,1.9s			IAmb	IAmb	16 00 41.6	
X37A	**Clayton**	**42.28**	**342**	P	**P**	**16 00 39.8**	**+1.6**
FCAR	**Ozark Folk Cen**	**42.63**	**346**	P	**P**	**16 00 41.5**	**+0.6**
FCAR	comp=Z,6.7nm,1.2s			IAmb	IAmb	16 01 04.6	
FNO	**Franklin**	**43.55**	**340**	P	**P**	**16 00 49.1**	**+0.6**
WMOK	**Wichita Mounta**	**43.57**	**338**	P	**P**	**16 00 49.2**	**+0.5**
TUL1	**Leonard**	**43.64**	**342**	P	**P**	**16 00 50.1**	**+1.0**
TUL1	comp=Z,5.4nm,0.7s			IAmb	IAmb	16 00 50.9	
R40A	**Maddies Statio**	**44.96**	**347**	P	**P**	**16 00 60.0**	**+0.4**
R40A	comp=Z,6.1nm,1.3s			IAmb	IAmb	16 01 00.1	
ANMO	**Albuquerque**	**47.03**	**331**	P	**P**	**16 01 16.7**	**+0.5**
SDCO	**Great Sand Dun**	**48.89**	**334**	P	**P**	**16 01 32.1**	**+1.5**
SDCO	comp=Z,3.6nm,1.3s			IAmb	IAmb	16 01 34.8	
PV17	**East Wray Mesa**	**50.91**	**331**	P	**P**	**16 01 46.7**	**+0.9**
PV17	comp=Z,2.4nm,0.8s			IAmb	IAmb	16 01 47.5	
HWUT	**Hardware Ranch**	**54.76**	**332**	P	**P**	**16 02 14.9**	**+0.9**
HWUT	comp=Z,3.8nm,0.8s			IAmb	IAmb	16 02 16.1	
PDAR	**Pinedale Array** comp=Z,0.6nm,0.7s,baz=129,slow=12,SNR=4.4	**54.78**	**334**	P	**P**	**16 02 15.1**	**+0.9**
B35A	**Bob, Littlefor**	**54.93**	**349**	P	**P**	**16 02 15.8**	**+0.9**
NVAR	**Mina Array Bea** comp=Z,0.4nm,0.7s,baz=126,slow=8.4,SNR=4.8	**55.95**	**325**	P	**P**	**16 02 24.6**	**+1.9**
YHL	**Hebgen Lake**	**57.15**	**335**	P	**P**	**16 02 33.2**	**+2.0**
MFID	**Camas Ranch**	**58.17**	**330**	P	**P**	**16 02 40.2**	**+2.0**
MFID	comp=Z,2.1nm,0.7s			IAmb	IAmb	16 02 40.9	
K05A	**Summer Lake**	**60.31**	**327**	P	**P**	**16 02 55.0**	**+2.0**
F10A	**Beach Ranch, E**	**60.74**	**332**	P	**P**	**16 02 57.5**	**+1.8**
F10A	comp=Z,4.2nm,1.1s			IAmb	IAmb	16 03 13.3	
FCC	**Fort Churchill**	**65.04**	**352**	P	**P**	**16 03 24.4**	**+0.6**
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.7s,baz=308,slow=12,SNR=4.9	**72.67**	**344**	P	**P**	**16 04 11.9**	**+0.8**
ZALV	**Zalesovo Beam** comp=Z,0.6nm,0.5s,baz=211,slow=0.9,SNR=3.7	**130.40**	**11**	PKP	**PKiKP**	**16 11 55.7**	**+1.6**
ASAR	**Alice Springs** comp=Z,0.3nm,0.8s,baz=100,slow=2.7,SNR=4.5	**135.37**	**228**	PKP	**PKiKP**	**16 12 05.5**	**+0.3**
WRA	**Warramunga Arr** comp=Z,0.9nm,1.0s,baz=120,slow=1.8,SNR=3.6	**137.13**	**233**	PKP	**PKiKP**	**16 12 08.8**	**0.0**

*IDC **25** 16:18:37.7±1.0, 34˚.15N×72˚.46E, h0km, mb3.5/9, mb1 3.7/14, mb1mx3.5/51, mbtmp3.6/14, ML3.6/5, Error ellipse: s-maj=26.2km s-min=19.7km az=77.0*
*NNC **25** 16:18:54.5±6.1, 34˚.66N×72˚.59E, h156km±46km, mb3.3, mpv4.5, Error ellipse: s-maj=47.8km s-min=33.3km az=24.0*

ISC 25 16:18:41.2±0.7**, 34˚.06N**±0˚.05×**72˚.68E**±0˚.07**, h34**km**, n36,**
σ2§**73**/37**, mb3.4**/10**, 5C-4D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**3.02**	**122**	*e*P	**Pb**	**16 19 31.0**	**-3.3**
THN				*e*S	**Sb**	**16 20 13.5**	**+2.7**
BHK	**Bhakra**	**4.11**	**129**	*ex*	Pb	16 19 57.6	+4.7
AML	**Almayashu** SNR=61	**8.10**	**5**	P	**Pn**	**16 20 40.6**	**+3.9**
KZA	**Kyzart** SNR=5.9	**8.25**	**13**	P	**Pn**	**16 20 42.0**	**+3.2**
UCH	**Uchtor** SNR=19	**8.28**	**10**	P	**Pn**	**16 20 42.7**	**+3.4**
EKS2	**Erkin-Say** SNR=7.8	**8.63**	**5**	P	Pn	16 20 48.7	+5.0
AAK	**Ala-Archa** 1.6nm,0.3s,baz=179,slow=6.2,SNR=20	**8.68**	**9**	Pn	**Pn**	**16 20 48.0**	**+3.6**
AAK	0.1nm,0.3s,baz=329,slow=23,SNR=1.5			Sn	**Sn**	**16 22 23.1**	**+1.9**
AAK	**Ala-Archa** SNR=7.8	**8.68**	**9**	P	Pn	16 20 49.6	+5.1
TKM2	**Tokmak 2** SNR=7.4	**9.13**	**14**	P	**Pn**	**16 20 55.3**	**+4.5**
KK31	**Karatay Array** 15nm,0.7s,baz=172,slow=12,SNR=97	**9.18**	**350**	⇓P	**Pn**	**16 20 53.8**	**+2.6**
KK31	4.4nm,0.8s,baz=175,slow=25,SNR=4.5			⇓S	**Sn**	**16 22 34.5**	**+1.1**
MDOK	**Medeo** 3.5nm,0.8s	**9.71**	**19**	P	Pn	16 21 03.8	+5.2
MDOK	2.7nm,0.8s			S	**Sn**	**16 22 45.5**	**-0.9**
PYUN	**Piuthan**	**10.65**	**121**	*e*Pn	**Pn**	**16 21 10.5**	**-1.1**
PYUN	38nm,0.4s			*e*Sn	Sn	16 22 49.5	-20
PDGK	**Podgornoye** 2.7nm,0.7s	**10.67**	**28**	⇓P	**Pn**	**16 21 13.8**	**+2.1**
PDGK	2.3nm,0.8s			⇑S	**Sn**	**16 23 09.9**	**-0.1**
DANN	**Dangsing**	**11.06**	**118**	*e*Pn	**Pn**	**16 21 16.4**	**-0.9**
KOLN	**Koldanda**	**11.28**	**121**	*e*Pn	Pn	16 21 13.9	-6.3
GKN	**Gorkha**	**11.90**	**117**	*e*Pn	**Pn**	**16 21 26.5**	**-2.1**
PKIN	**Phulchoki**	**12.70**	**117**	*e*Pn	**Pn**	**16 21 37.3**	**-2.3**
PKI	**Pulchoki**	**12.71**	**117**	*e*Pn	**Pn**	**16 21 37.3**	**-2.5**
JIRN	**Jiri**	**13.24**	**115**	*e*Pn	**Pn**	**16 21 44.7**	**-2.5**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=195,slow=13,SNR=3.4	**14.66**	**27**	Pn	**Pn**	**16 22 07.3**	**+1.3**
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=196,slow=11,SNR=8.4	**17.09**	**13**	P	**Pn**	**16 22 36.1**	**-1.3**
KURBB	**Kurchatov Arra** 2.1nm,0.7s	**17.09**	**13**	⇑P	**Pn**	**16 22 35.1**	**-2.3**
AB31	**Akbulak array** 12nm,0.3s,baz=143,slow=13,SNR=25	**17.88**	**332**	⇑P	**P**	**16 22 47.8**	**+0.3**
AB31	0.6nm,0.7s			⇑S	**Sn**	**16 25 56.0**	**-9.1**
BVAR	**Borovoye Array** 0.5nm,0.3s,baz=170,slow=10,SNR=11	**19.02**	**356**	P	**P**	**16 23 00.5**	**+0.4**
AKTO	**Aktyubinsk** 0.3nm,0.3s,baz=120,slow=11,SNR=6.6	**19.57**	**331**	P	**P**	**16 23 06.6**	**+0.5**
AKTO	**Aktyubinsk** 1.8nm,0.6s	**19.57**	**331**	⇓P	**P**	**16 23 04.6**	**-1.4**
ZAA0	**Zalesovo Array** 0.4nm,0.8s	**21.65**	**20**	⇑P	**P**	**16 23 27.9**	**-0.6**
ZALV	**Zalesovo Beam** 2.3nm,0.3s,baz=214,slow=11,SNR=16	**21.65**	**20**	P	**P**	**16 23 28.9**	**+0.4**
FINES	**FINESS Array B** 0.7nm,0.8s,baz=127,slow=12,SNR=5.7	**40.27**	**327**	P	**P**	**16 26 14.4**	**-0.2**
ARCES	**ARCESS Array B** 1.8nm,0.8s,baz=112,slow=6.9,SNR=3.7	**43.91**	**338**	P	**P**	**16 26 45.0**	**+0.7**
NOA	**NORSAR Array B** 0.2nm,0.3s,baz=103,slow=8.2,SNR=1.5	**47.15**	**324**	P	**P**	**16 27 09.4**	**-0.6**
ESDC	**Sonseca Array** 0.2nm,0.6s,baz=64,slow=8.7,SNR=1.6	**59.83**	**300**	P	**P**	**16 28 45.2**	**+1.9**
TORD	**Torodi Ar. Bea** 0.2nm,0.6s,baz=45,slow=7.7,SNR=1.6	**67.07**	**271**	P	**P**	**16 29 31.0**	**-0.5**
WRA	**Warramunga Arr** 0.2nm,0.6s,baz=321,slow=4.7,SNR=2.4	**79.53**	**123**	P	**P**	**16 30 46.5**	**+1.7**
ASAR	**Alice Springs** 0.3nm,0.8s,baz=309,slow=5.3,SNR=8.2	**81.73**	**126**	P	**P**	**16 31 01.0**	**+4.5**
YKA	**Yellowknife Ar** 0.1nm,0.4s,baz=354,slow=5.3,SNR=2.6	**83.60**	**3**	P	**P**	**16 31 05.3**	**-0.4**

*NAO **25** 16:23:27.8±2.3, 79˚.96N×5˚.43E, ML3.5*
*BER **25** 16:23:31.2±2.8, 79˚.61N×3˚.61E, h26km±33km, ML2.5, ML3.5(NAO), Confirmed Earthquake*
*IEPN **25** 16:23:32.0, 79˚.63N×5˚.25E, h15km*

ISC 25 16:23:27.9±1.0**, 79˚.58N**±0˚.07×**4˚.07E**±0˚.07**, h10**km**, n24,**
σ1§**64**/38**, 3C, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.61**	**110**	Pn	**Pn**	**16 23 56.9**	**+0.5**
KBS				Lg	Lg	16 24 16.3	
KBS	**Kingsbay**	**1.61**	**110**	⇑*i*P	**Pn**	**16 23 56.9**	**+0.5**

KBS				*e*S		**Sn**	**16 24 15.1**	**-2.1**
KBS	**Kingsbay**	**1.61**	**110**	*i*P		**Pn**	**16 23 56.9**	**+0.5**
KBS				*e*S		**Sn**	**16 24 16.0**	**-1.2**
KBS				IAML			16 24 22.7	
	comp=Z,43nm,0.4s							
BRBA	**Barentsburg A**	**2.50**	**123**	Pn		**Pn**	**16 24 10.3**	**+1.9**
BRBA				Sn		**Sn**	**16 24 39.4**	**+0.5**
BRBA	**Barentsburg A**	**2.50**	**123**	*e*P		**Pn**	**16 24 10.6**	**+2.1**
BRBA				*e*S		**Sn**	**16 24 38.2**	**-0.7**
BRBA				IAML			16 24 45.2	
	comp=Z,27nm,0.3s							
SPA0	**Spitsbergen Ar**	**2.77**	**114**	Pn		**Pn**	**16 24 13.5**	**+1.3**
	baz=316,slow=12							
SPA0				Sn		**Sn**	**16 24 44.6**	**-1.0**
SPA0	**Spitsbergen Ar**	**2.77**	**114**	⇑*i*P		**Pn**	**16 24 13.6**	**+1.4**
SPA0				*e*S		**Sn**	**16 24 43.9**	**-1.7**
SPA0	**Spitsbergen Ar**	**2.77**	**114**	Pn		**Pn**	**16 24 13.5**	**+1.3**
	baz=316,slow=12							
SPA0				*e*S		**Sn**	**16 24 46.6**	**+1.0**
HSPB	**Hornsund (broa**	**3.48**	**132**	Pn		**Pn**	**16 24 23.1**	**+1.2**
HSPB				Sn		**Sn**	**16 25 00.2**	**-3.0**
HSPB	**Hornsund (broa**	**3.48**	**132**	*e*P		**Pn**	**16 24 23.0**	**+1.0**
HSPB				*e*S		**Sn**	**16 25 01.1**	**-2.0**
HSPB				IAML			16 25 06.8	
	comp=Z,22nm,0.4s							
NOR	**Nord**	**3.94**	**311**	Pn		**Pn**	**16 24 27.0**	**-1.3**
NOR	**Nord**	**3.94**	**311**	Pn		**Pn**	**16 24 27.0**	**-1.3**
NOR				*i* P		**Pn**	**16 24 28.0**	**-0.3**
HOPEN	**Hopen**	**5.30**	**115**	*e*P		**Pn**	**16 24 48.0**	**+1.0**
HOPEN				*e*S		**Sn**	**16 25 45.3**	**-2.6**
HOPEN	**Hopen**	**5.30**	**115**	*e*P		**Pn**	**16 24 48.2**	**+1.3**
HOPEN				*e*S		**Sn**	**16 25 45.6**	**-2.3**
HOPEN				IAML			16 25 47.2	
	comp=Z,23nm,0.8s							
DAG	**Danmarks Havn**	**5.42**	**250**	*i* P		**Pn**	**16 24 46.6**	**-1.9**
DAG				*i*			16 25 41.0	
DAG	**Danmarks Havn**	**5.42**	**250**	*e*		Pn	16 24 45.8	-2.8
	baz=52,slow=16							
DAG				*i* P		**Pn**	**16 24 46.7**	**-1.9**
DAG				*i*			16 25 41.0	
DAG				IAML			16 25 51.5	
	comp=Z,14nm,0.3s							
BJO1	**Bjornoya**	**6.08**	**139**	Pn		**Pn**	**16 25 00.2**	**+2.6**
BJO1				Sn		**Sn**	**16 26 07.6**	**+0.5**
BJO1	**Bjornoya**	**6.08**	**139**	*e*P		**Pn**	**16 24 59.9**	**+2.4**
BJO1				*e*S		**Sn**	**16 26 05.2**	**-1.9**
BJO1	**Bjornoya**	**6.08**	**139**	*e*P		**Pn**	**16 25 00.0**	**+2.4**
ZFI2	**Zemlya Franca-**	**7.39**	**60**	*e*P		**Pn**	**16 25 16.5**	**+1.0**
ZFI2				*e*S		Sn	16 26 33.6	-5.6
	comp=Z,8.5nm,0.4s							
DBG	**Daneborg**	**7.55**	**238**	*i* P		**Pn**	**16 25 16.0**	**-1.8**
DBG				*i* S		Sn	16 26 32.9	-10
DBG				IAML			16 26 39.1	
	comp=Z,5.6nm,0.3s							
ARA0	**ARCESS Array S**	**11.46**	**140**	Pn		**Pn**	**16 26 11.9**	**+0.7**
	baz=352,slow=14							
ARA0	**ARCESS Array S**	**11.46**	**140**	Pn		**Pn**	**16 26 11.9**	**+0.7**
	baz=352,slow=14							
SUMG	**Summit**	**12.03**	**258**	*i* P		**Pn**	**16 26 20.1**	**+0.6**
SUMG				IAML			16 28 26.5	
	comp=Z,5.3nm,0.4s							

*IDC **25** 16:26:14.4±9.8,30.˚77S×178.˚77W,h64km±94km,mb3.8/3, mb1 3.9/4,mb1mx3.5/23,mbtmp4.0/4,ML3.4/1,Error ellipse: s-maj=74.1km s-min=52.1km az=166.0*
*NEIC **25** 16:26:25.1±0.7,30.˚96S±0.˚07×179.˚3E±0.˚2,h41km±15km, mb4.5/7,Error ellipse: s-maj=20.9km s-min=6.2km az=111.0*

ISC 25 16:26:25.3±0.9,30.˚9S±0.˚1×179.˚3E±0.˚1,h35km,n15, σ1§83/15,mb4.5/7,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.90**	**57**	Pn	**Pn**	**16 27 09.8**	**+0.9**
URZ	**Urewera**	**7.61**	**193**	P	**Pn**	**16 28 11.3**	**-2.2**
	0.5nm,0.3s,baz=12,slow=20,SNR=13						
URZ				S	**Sn**	**16 29 41.7**	**+3.2**
	1.5nm,0.3s,baz=73,slow=16,SNR=9.0						
TUWZ	**Tuamarina**	**11.40**	**201**	Pn	**Pn**	**16 29 02.0**	**-3.6**
THZ	**Tophouse**	**12.04**	**204**	Pn	**Pn**	**16 29 14.5**	**+0.1**
STKA	**Stephens Creek**	**32.10**	**258**	P	**P**	**16 32 51.4**	**+2.2**
	1.7nm,0.7s,baz=99,slow=12,SNR=4.4						
STKA	**Stephens Creek**	**32.10**	**258**	P	**P**	**16 32 50.4**	**+1.2**
STKA				IAmb	IAmb	16 33 51.2	
	comp=Z,5.6nm,1.8s						
AS31	**Alice Springs**	**40.76**	**269**	P	**P**	**16 34 02.5**	**-0.6**
ASAR	**Alice Springs**	**40.76**	**269**	P	**P**	**16 34 02.5**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=107,slow=7.3,SNR=28						
WR0	**Warramunga Arr**	**41.61**	**274**	P	**P**	**16 34 09.3**	**-0.8**
WR0				IAmb	IAmb	16 35 02.5	
	comp=Z,28nm,1.9s						
WB2	**Warramunga Arr**	**41.78**	**274**	P	**P**	**16 34 10.7**	**-0.9**
WB2				IAmb	IAmb	16 34 55.2	
	comp=Z,16nm,1.6s						
WRAB	**Tennant Creek**	**41.78**	**274**	P	**P**	**16 34 10.6**	**-1.1**
WRAB				IAmb	IAmb	16 34 44.8	
	comp=Z,24nm,1.9s						
WRA	**Warramunga Arr**	**41.79**	**274**	P	**P**	**16 34 10.8**	**-0.9**
	comp=Z,1.3nm,0.3s,baz=109,slow=8.0,SNR=72						
WB0	**Warramunga Arr**	**41.82**	**274**	P	**P**	**16 34 10.9**	**-1.0**
WB0				IAmb	IAmb	16 35 22.1	
	comp=Z,20nm,1.6s						
PTCN	**Pitcairn Islan**	**44.77**	**96**	P	**P**	**16 34 35.2**	**-0.4**
FINES	**FINESS Array B**	**144.73**	**338**	PKPbc	PKPbc	16 45 43.0	-14
	comp=Z,0.7nm,0.4s,baz=45,slow=4.1,SNR=10						

*KRNET **25** 16:29:54.4±0.1,40.˚46N×77.˚24E,mb3.2*
*SOME **25** 16:29:54.6,40.˚48N×77.˚15E,h0km*
*NNC **25** 16:29:55.8±0.8,40.˚44N×77.˚15E,h0km,mb3.6,mpv3.5, Error ellipse: s-maj=5.6km s-min=4.5km az=169.0*

ISC 25 16:29:53.1±2.3,40.˚40N±0.˚09×77.˚10E±0.˚03,h10km±16km, n66,σ1§36/99,23C-7D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.73**	**2**	⇑*i*P	**Pg**	**16 30 25.9**	**-0.4**
	baz=59						
KDJ				⇑*i*S	**Sg**	**16 30 48.6**	**-0.1**
	baz=59						
ULHL	**Ulahol**	**1.95**	**341**	⇑*i*P	**Pg**	**16 30 30.5**	**-0.1**
	baz=38						
ULHL				⇑*i*S	**Sg**	**16 30 57.0**	**+1.1**
	baz=38						
ULHL	**Ulahol**	**1.95**	**341**	P	**Pg**	**16 30 30.7**	**+0.1**
	SNR=5.7						
KZA	**Kyzart**	**2.18**	**321**	⇑*i*P	**Pg**	**16 30 34.8**	**-0.1**
	baz=18						
KZA				⇑*i*S	**Sg**	**16 31 03.7**	**+0.5**
	baz=18						
KZA	**Kyzart**	**2.18**	**321**	P	**Pg**	**16 30 35.9**	**+1.0**
	SNR=30						
PRZ	**Przheval'sk**	**2.30**	**25**	⇑*e*P	**Pb**	**16 30 34.6**	**-0.2**
	baz=23						
PRZ				⇑*i*S	**Sb**	**16 31 03.6**	**+0.3**
	baz=23						
ANVS	**Anan'yevo**	**2.42**	**10**	⇑*e*P	**Pb**	**16 30 36.7**	**-0.1**
	baz=8.0						
ANVS				⇑*i*S	**Sb**	**16 31 07.4**	**+0.7**
	baz=8.0						
TNSS	**Tian-Shan**	**2.63**	**358**	*e*P	**Pg**	**16 30 43.4**	**-0.3**
	9.5nm,0.2s						
TNSS				*e*S	**Sg**	**16 31 18.8**	**+1.0**
	30nm,0.3s						
TNSS	**Tian-Shan**	**2.63**	**358**	Pg	**Pg**	**16 30 43.3**	**-0.3**
	9.6nm,0.2s						
TNSS				Lg	Lg	16 31 18.8	
	32nm,0.4s						
IZV	**Izvestkoviy**	**2.66**	**352**	*e*P	**Pg**	**16 30 44.6**	**+0.5**
	9.4nm,0.2s						
IZV				*e*S	**Sg**	**16 31 20.5**	**+2.0**
	38nm,0.2s						
IZV	**Izvestkoviy**	**2.66**	**352**	Pg	**Pg**	**16 30 44.6**	**+0.5**
	9.4nm,0.2s						
IZV				Lg	Lg	16 31 20.5	
	38nm,0.2s						
UCH	**Uchtor**	**2.67**	**314**	⇑*e*P	**Pb**	**16 30 41.4**	**+0.2**
	baz=12						
UCH				⇑*i*S	**Sb**	**16 31 16.1**	**+1.9**
	baz=12						
UCH	**Uchtor**	**2.67**	**314**	P	**Pb**	**16 30 42.5**	**+1.3**
	SNR=16						
TKM2	**Tokmak 2**	**2.76**	**336**	⇑*i*P	**Pb**	**16 30 42.0**	**-0.6**
	baz=34						
TKM2				⇑*i*S	**Sb**	**16 31 16.9**	**+0.4**
	baz=34						
TKM2	**Tokmak 2**	**2.76**	**336**	P	**Pb**	**16 30 42.9**	**+0.3**
	SNR=7.4						
MDOK	**Medeo**	**2.76**	**359**	*e*P	**Pg**	**16 30 45.5**	**-0.5**
	4.5nm,0.2s						
MDOK				*e*S	**Sg**	**16 31 22.4**	**+0.7**
	25nm,0.4s						
MDOK	**Medeo**	**2.76**	**359**	Pg	**Pb**	**16 30 44.3**	**+1.7**
	13nm,0.8s						
MDOK				Lg	Lg	16 31 21.0	
	29nm,0.8s						
MDOK	**Medeo**	**2.76**	**359**	Pg	**Pg**	**16 30 45.5**	**-0.5**
	4.5nm,0.2s						
MDOK				Lg	Lg	16 31 22.4	
	25nm,0.4s						
KBK	**Karagaybulak**	**2.77**	**325**	⇓*i*P	**Pb**	**16 30 42.4**	**-0.4**
	baz=23						
KBK				⇓*i*S	**Sb**	**16 31 17.5**	**+0.6**
	baz=23						
KBK	**Karagaybulak**	**2.77**	**325**	P	**Pg**	**16 30 45.9**	**-0.3**
	SNR=11						
MTBS	**Maitube**	**2.77**	**350**	*e*P	**Pg**	**16 30 45.9**	**-0.4**
	5.0nm,0.1s						
MTBS				*e*S	**Sg**	**16 31 23.0**	**+0.9**
	13nm,0.1s						
MTBS	**Maitube**	**2.77**	**350**	Pg	**Pg**	**16 30 45.8**	**-0.4**
	5.0nm,0.1s						
MTBS				Lg	Lg	16 31 23.0	
	13nm,0.1s						
KST	**Kastek**	**2.77**	**343**	*e*P	**Pg**	**16 30 46.2**	**-0.1**
	2.1nm,0.1s						
KST				*e*S	**Sg**	**16 31 23.5**	**+1.3**
	25nm,0.3s						
KST	**Kastek**	**2.77**	**343**	Pg	**Pg**	**16 30 46.2**	**-0.1**
	2.1nm,0.1s						
KST				Lg	Lg	16 31 23.5	
	25nm,0.3s						
KNDC	**Almaty**	**2.81**	**358**	⇑Pg	**Pg**	**16 30 48.2**	**+1.1**
	11nm,0.5s						
KNDC				⇓Lg	Lg	16 31 24.8	
	66nm,0.3s						
KOTS	**Kotyrbulak**	**2.83**	**0**	*e*P	**Pg**	**16 30 47.5**	**+0.1**
	7.9nm,0.2s						
KOTS				*e*S	**Sg**	**16 31 25.4**	**+1.4**
	52nm,0.4s						
KOTS	**Kotyrbulak**	**2.83**	**0**	Pg	**Pg**	**16 30 47.5**	**+0.1**
	7.9nm,0.2s						
KOTS				Lg	Lg	16 31 25.5	
	52nm,0.4s						
SATY	**Saty**	**2.83**	**20**	*e*P	**Pg**	**16 30 46.3**	**-1.1**
	2.9nm,0.1s						
SATY				*e*S	**Sg**	**16 31 23.9**	**-0.1**
	27nm,0.5s						
SATY	**Saty**	**2.83**	**20**	Pg	**Pg**	**16 30 46.3**	**-1.1**
	2.9nm,0.1s						
SATY				Lg	Lg	16 31 23.9	
	27nm,0.5s						
ZHN	**Zhinishke**	**2.94**	**19**	*e*P	**Pg**	**16 30 48.3**	**-1.2**
	21nm,0.1s						
ZHN				*e*S	**Sg**	**16 31 26.9**	**-0.7**
	10.0nm,0.2s						
ZHN	**Zhinishke**	**2.94**	**19**	Pg	**Pg**	**16 30 48.3**	**-1.2**
	8.5nm,0.0s						
ZHN				Lg	Lg	16 31 26.9	
	16nm,0.1s						
AAK	**Ala-Archa**	**2.97**	**320**	⇑*e*P	**Pb**	**16 30 45.3**	**-0.9**
	baz=18						
AAK				⇑*i*S	**Sb**	**16 31 22.7**	**+0.1**
	baz=18						
AAK	**Ala-Archa**	**2.97**	**320**	P	**Pg**	**16 30 49.3**	**-0.7**
	SNR=18						
DGS	**Degeres**	**3.00**	**341**	*e*P	**Pg**	**16 30 50.9**	**+0.2**
	3.8nm,0.4s						
DGS				*e*S	**Sg**	**16 31 31.6**	**+1.9**
	11nm,0.3s						
DGS	**Degeres**	**3.00**	**341**	Pg	**Pg**	**16 30 50.9**	**+0.2**
	3.8nm,0.4s						
DGS				Lg	Lg	16 31 31.6	
	11nm,0.3s						
AML	**Almayashu**	**3.09**	**305**	⇑*e*P	**Pb**	**16 30 47.7**	**-0.8**
	baz=3.0						
AML				⇑*i*S	**Sb**	**16 31 26.8**	**+0.4**
	baz=3.0						
AML	**Almayashu**	**3.09**	**305**	P	**Pb**	**16 30 48.8**	**+0.4**
	SNR=13						
UZB	**Uzynbulak**	**3.10**	**27**	*e*P	**Pg**	**16 30 51.4**	**-1.1**
	1.8nm,0.2s						
UZB				*e*S	**Sg**	**16 31 32.4**	**-0.2**
	13nm,0.4s						
UZB	**Uzynbulak**	**3.10**	**27**	Pg	**Pg**	**16 30 51.4**	**-1.1**
	1.8nm,0.2s						
UZB				Lg	Lg	16 31 32.4	
	13nm,0.4s						
CHMS	**Chumysh**	**3.13**	**327**	⇑*i*P	**Pb**	**16 30 47.3**	**-1.6**
	baz=25						
CHMS				⇑*i*S	**Sb**	**16 31 26.1**	**-1.1**
	baz=25						
KURS	**Kuram**	**3.19**	**14**	*e*P	**Pg**	**16 30 52.8**	**-1.4**
	3.2nm,0.3s						
KURS				*e*S	**Sg**	**16 31 34.6**	**-0.8**
	10nm,0.5s						
KURS	**Kuram**	**3.19**	**14**	Pg	**Pg**	**16 30 52.8**	**-1.4**
	3.2nm,0.3s						
KURS				Lg	Lg	16 31 34.6	
	10nm,0.5s						
SHLS	**Shalkode**	**3.27**	**32**	*e*P	**Pg**	**16 30 57.8**	**+2.0**
	3.1nm,0.1s						
SHLS				*e*S	**Sg**	**16 31 43.2**	**+5.0**
	26nm,0.6s						
SHLS	**Shalkode**	**3.27**	**32**	Pg	**Pg**	**16 30 57.8**	**+2.0**
	3.1nm,0.1s						
SHLS				Lg	Lg	16 31 43.2	
	26nm,0.6s						
KTBS	**Karatobe**	**3.32**	**355**	*e*P	**Pg**	**16 30 55.2**	**-1.6**
	4.4nm,0.3s						
KTBS				*e*S	**Sg**	**16 31 38.9**	**-0.9**
	20nm,0.3s						
KTBS	**Karatobe**	**3.32**	**355**	Pg	**Pg**	**16 30 55.2**	**-1.6**
	4.4nm,0.3s						
KTBS				Lg	Lg	16 31 38.9	
	20nm,0.3s						
EKS2	**Erkin-Say**	**3.36**	**313**	⇓*i*P	**Pb**	**16 30 50.8**	**-2.1**
	baz=11						
EKS2				⇓*i*S	**Sb**	**16 31 32.6**	**-1.3**
	baz=11						
PDGK	**Podgornoye**	**3.43**	**31**	⇓Pg	**Pb**	**16 30 55.8**	**+1.8**
	3.5nm,0.7s						
PDGK				⇑Lg	Lg	16 31 41.9	
	25nm,1.1s						
CHKK	**Chushkaly**	**3.45**	**359**	*e*P	**Pg**	**16 30 58.2**	**-1.0**
	2.5nm,0.1s						
CHKK				*e*S	**Sg**	**16 31 43.9**	**0.0**
	17nm,0.2s						
CHKK	**Chushkaly**	**3.45**	**359**	Pg	**Pg**	**16 30 58.2**	**-1.0**
	2.5nm,0.1s						
CHKK				Lg	Lg	16 31 43.9	
	17nm,0.2s						
KRBS	**Karabastau**	**3.46**	**343**	*e*P	**Pg**	**16 30 58.7**	**-0.7**
	2.6nm,0.3s						
KRBS				*e*S	**Sg**	**16 31 44.5**	**+0.4**
	3.6nm,0.4s						
KRBS	**Karabastau**	**3.46**	**343**	Pg	**Pg**	**16 30 58.7**	**-0.7**
	2.6nm,0.3s						
KRBS				Lg	Lg	16 31 44.5	
	3.6nm,0.4s						
KUU	**Kurty**	**3.53**	**351**	*e*P	**Pg**	**16 30 59.8**	**-1.1**
	0.6nm,0.1s						
KUU				*e*S	**Sg**	**16 31 46.9**	**+0.3**
	6.3nm,0.4s						
KUU	**Kurty**	**3.53**	**351**	Pg	**Pg**	**16 30 59.8**	**-1.1**
	0.6nm,0.1s						
KUU				Lg	Lg	16 31 46.9	
	6.3nm,0.4s						
SGDS	**Sogindy**	**3.56**	**330**	Pg	**Pg**	**16 31 00.5**	**-0.8**
	2.2nm,0.1s						
SGDS				Lg	Lg	16 31 48.1	
	3.6nm,0.2s						
MRKS	**Merke**	**3.73**	**310**	*e*P	**Pb**	**16 31 03.0**	**+3.8**
	3.9nm,0.1s						
MRKS				*e*S	**Sg**	**16 31 52.4**	**-0.6**
	3.3nm,0.3s						
MRKS	**Merke**	**3.73**	**310**	Pg	**Pb**	**16 31 03.0**	**+3.8**
	3.9nm,0.1s						
MRKS				Lg	Lg	16 31 52.3	
	3.3nm,0.3s						
MNBS	**Baschi**	**3.80**	**14**	*e*P	**Pg**	**16 31 04.5**	**-1.4**
	2.5nm,0.2s						
MNBS				*e*S	**Sg**	**16 31 54.6**	**-0.5**
	8.2nm,0.2s						
MNBS	**Baschi**	**3.80**	**14**	Pg	**Pg**	**16 31 04.5**	**-1.4**
	2.5nm,0.2s						
MNBS				Lg	Lg	16 31 54.6	
	8.2nm,0.2s						
ARXS	**Arharly**	**3.85**	**8**	*e*P	**Pg**	**16 31 05.2**	**-1.6**
	1.8nm,0.2s						
ARXS				*e*S	**Sg**	**16 31 56.0**	**-0.6**
	8.4nm,0.3s						
ARXS	**Arharly**	**3.85**	**8**	Pg	**Pg**	**16 31 05.2**	**-1.6**
	1.8nm,0.2s						
ARXS				Lg	Lg	16 31 56.0	
	8.4nm,0.3s						
DJR	**Jarkent**	**4.40**	**26**	*e*P	**Pg**	**16 31 15.2**	**-2.3**
	0.8nm,0.1s						
DJR				*e*S	**Sg**	**16 32 13.3**	**-1.2**
	3.2nm,0.3s						
DJR	**Jarkent**	**4.40**	**26**	Pg	**Pg**	**16 31 15.2**	**-2.3**
	0.8nm,0.1s						
DJR				Lg	Lg	16 32 13.3	
	3.2nm,0.3s						
KAPS	**Kapalarasan**	**5.15**	**18**	*e*P	**Pg**	**16 31 29.2**	**-2.6**
	0.5nm,0.1s						
KAPS				*e*S	**Sg**	**16 32 37.2**	**-1.4**
	2.4nm,0.5s						
KAPS	**Kapalarasan**	**5.15**	**18**	Pg	**Pg**	**16 31 29.2**	**-2.6**
	0.5nm,0.1s						
KAPS				Lg	Lg	16 32 37.2	
	2.4nm,0.5s						
KK31	**Karatay Array**	**5.62**	**301**	⇑Pg	**Pg**	**16 31 37.8**	**-2.9**
	0.5nm,0.6s,baz=124,slow=15,SNR=6.3						
KK31				⇓Lg	Lg	16 32 51.7	
	1.3nm,0.7s,baz=128,slow=23,SNR=4.4						

IDC 25 16:34:37.9±47.0,17.˚61S×173.˚23W,h0km,mb4.1/3, mb1 4.3/3,mb1mx3.7/27,mbtmp4.1/3,Error ellipse: s-maj=898.2km s-min=169.4km az=81.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**43.11**	**242**	P	P	16 42 40.6	+0.4
	1.4nm,0.5s,baz=93,slow=10,SNR=8.4						
WRA	**Warramunga Arr**	**49.53**	**259**	P	P	16 43 30.6	-0.3
	0.9nm,0.4s,baz=97,slow=8.1,SNR=34						
ASAR	**Alice Springs**	**49.61**	**254**	P	P	16 43 31.1	-0.4
	1.5nm,0.4s,baz=87,slow=8.1,SNR=91						

*IDC **25** 16:42:26.4±4.6,31.˚28N×141.˚94E,h0km,mb3.4/5, mb1 3.6/7,mb1mx3.4/37,mbtmp3.5/7,ML3.2/2,MS2.1/1, Ms1 2.1/1,ms1mx1.8/31,Error ellipse: s-maj=173.5km s-min=17.0km az=71.0*

ISC 25 16:42:27.1±3.2,31.˚4N±0.˚2×142.˚2E±0.˚7,h10km,n8, σ1§10/9,mb3.5/5,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**4.24**	**181**	Pn	**Pn**	**16 43 32.6**	**+0.9**
	5.1nm,0.3s,baz=20,slow=17,SNR=16						
JCJ				Sn	**Sn**	**16 44 20.5**	**-0.8**
	5.2nm,0.3s,baz=52,slow=19,SNR=1.8						
MJAR	**Matsushiro Arr**	**6.17**	**328**	Pn	**Pn**	**16 43 58.0**	**-0.3**
	0.2nm,0.3s,baz=143,slow=11,SNR=14						
MJAR				Sn	**Sn**	**16 45 09.2**	**+0.3**
	0.0nm,0.3s,baz=160,slow=18,SNR=1.7						
KSRS	**Korea Array**	**13.29**	**301**	LR	LR	16 50 11.4	
	comp=Z,7.6nm,19.7s,baz=100,slow=35						
SONM	**Songino Array**	**31.81**	**312**	P	**P**	**16 48 53.5**	**+1.5**
	0.5nm,0.9s,baz=93,slow=8.7,SNR=1.7						
MKAR	**Makanchi Array**	**47.89**	**307**	P	**P**	**16 51 04.3**	**-1.0**
	0.2nm,0.5s,baz=91,slow=6.5,SNR=1.8						
KURBB	**Kurchatov Arra**	**50.17**	**312**	P	**P**	**16 51 21.3**	**-1.5**
	0.3nm,0.4s,baz=89,slow=8.0,SNR=5.9						
WRA	**Warramunga Arr**	**51.56**	**190**	P	**P**	**16 51 33.2**	**-0.2**
	0.3nm,0.3s,baz=6.6,slow=7.8,SNR=9.9						
ASAR	**Alice Springs**	**55.28**	**189**	P	**P**	**16 52 00.8**	**0.0**
	0.2nm,0.5s,baz=4.5,slow=6.0,SNR=16						

*NNC **25** 16:47:06.1±2.4,41.˚31N×79.˚91E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=16.2km s-min=12.2km az=158.0*
*SOME **25** 16:47:10.9,41.˚63N×80.˚08E,h15km*
*KRNET **25** 16:47:11.6±0.1,41.˚80N×79.˚99E,mb2.5*

ISC 25 16:47:12.2±2.7,41.˚65N±0.˚09×80.˚03E±0.˚06,h5km±12km, n34,σ1§62/59,7C-4D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**1.48**	**305**	⇑*i*P	**Pn**	**16 47 37.3**	**-2.4**
	baz=1.0						
PRZ				⇑*i*S	**Sn**	**16 47 56.0**	**-3.4**
	baz=1.0						
SHLS	**Shalkode**	**1.57**	**345**	*e*P	**Pn**	**16 47 40.0**	**-0.9**
	14nm,0.2s						
SHLS				*e*S	**Sb**	**16 48 01.0**	**-1.0**
	25nm,0.4s						
SHLS	**Shalkode**	**1.57**	**345**	P	**Pn**	**16 47 40.0**	**-0.9**
	20nm,0.2s						
SHLS				S	**Sg**	**16 48 05.5**	**+2.8**
	20nm,0.3s						
UZB	**Uzynbulak**	**1.68**	**334**	*e*P	**Pb**	**16 47 42.7**	**-1.0**
	4.4nm,0.2s						
UZB				*e*S	**Sg**	**16 48 05.6**	**-0.5**
	17nm,0.5s						
UZB	**Uzynbulak**	**1.68**	**334**	Pg	**Pn**	**16 47 41.9**	**-0.5**
	3.3nm,0.1s						
UZB				Lg	Lg	16 48 08.6	
	10nm,0.3s						
PDGK	**Podgornoye**	**1.73**	**347**	⇓Pn	**Pn**	**16 47 41.5**	**-1.6**
	8.0nm,0.4s						
PDGK				⇑Sn	**Sg**	**16 48 09.4**	**+1.6**
	21nm,0.5s						
KTMS	**Ketmen**	**1.81**	**7**	*e*P	**Pb**	**16 47 45.9**	**-0.1**
	0.4nm,0.1s						
KTMS				*e*S	**Sg**	**16 48 11.0**	**+0.4**
	16nm,0.3s						
KTMS	**Ketmen**	**1.81**	**7**	Pg	**Pn**	**16 47 44.2**	**-0.1**
	0.5nm,0.1s						
KTMS				Lg	Lg	16 48 12.5	
	14nm,0.3s						
SATY	**Saty**	**1.86**	**320**	*e*P	**Pg**	**16 47 47.8**	**-0.1**
	4.2nm,0.1s						
SATY				*e*S	**Sg**	**16 48 14.4**	**+2.4**
	14nm,0.2s						
SATY	**Saty**	**1.86**	**320**	Pg	**Pb**	**16 47 45.3**	**-1.5**
	1.9nm,0.2s						
SATY				Lg	Lg	16 48 14.4	
	21nm,0.2s						
ZHN	**Zhinishke**	**1.93**	**323**	*e*P	**Pg**	**16 47 49.0**	**-0.2**
	9.2nm,0.1s

	9.5nm,0.3s							
KOTS	**Kotyrbulak**	**2.68**	**307**	*e*P		**Pb**	**16 48 01.3**	**+0.5**
	2.9nm,0.1s							
KOTS				*e*S		**Sg**	**16 48 37.1**	**-1.3**
	6.5nm,0.2s							
DJR	**Jarkent**	**2.69**	**356**	*e*P		**Pb**	**16 48 00.3**	**-0.7**
	1.1nm,0.1s							
DJR				*e*S		**Sb**	**16 48 35.7**	**+1.4**
	7.7nm,0.3s							
MNBS	**Baschi**	**2.71**	**334**	Pg	Pn		**16 47 58.0**	**+1.4**
	2.3nm,0.2s							
MNBS				Lg	Lg		16 48 36.3	
	10nm,0.3s							
IZV	**Izvestkoviy**	**2.89**	**300**	*e*P		**Pb**	**16 48 04.3**	**-0.1**
	1.4nm,0.1s							
IZV				*e*S		**Sb**	**16 48 42.4**	**+2.3**
	8.4nm,0.2s							
IZV	**Izvestkoviy**	**2.89**	**300**	Pg		**Pb**	**16 48 01.6**	**-2.7**
	1.7nm,0.2s							
IZV				Lg	Lg		16 48 42.4	
	9.4nm,0.2s							
ARXS	**Arharly**	**3.03**	**328**	*e*P		**Pb**	**16 48 05.7**	**-1.1**
	1.0nm,0.2s							
ARXS				*e*S		**Sb**	**16 48 44.8**	**+0.6**
	7.0nm,0.5s							
CHKK	**Chushkaly**	**3.15**	**316**	*e*P		**Pb**	**16 48 09.5**	**+0.8**
	0.6nm,0.0s							
CHKK				*e*S		**Sg**	**16 48 51.3**	**-2.0**
	11nm,0.1s							
KTBS	**Karatobe**	**3.22**	**311**	*e*P		**Pb**	**16 48 08.9**	**-1.0**
	0.8nm,0.2s							
KTBS				*e*S		**Sb**	**16 48 50.2**	**+0.8**
	7.1nm,0.4s							
KST	**Kastek**	**3.32**	**296**	*e*P		**Pb**	**16 48 12.1**	**+0.3**
	1.9nm,0.2s							
KST				*e*S		**Sb**	**16 48 55.7**	**+3.2**
	4.1nm,0.3s							
KST	**Kastek**	**3.32**	**296**	Pg		**Pn**	**16 48 07.5**	**+2.5**
	1.0nm,0.1s							
KST				Lg	Lg		16 48 52.4	
	6.1nm,0.4s							
KUU	**Kurty**	**3.53**	**311**	*e*P		**Pb**	**16 48 15.2**	**+0.1**
	0.7nm,0.1s							
KUU				*e*S		**Sb**	**16 49 01.0**	**+2.7**
	4.0nm,0.3s							
DGS	**Degeres**	**3.53**	**298**	*e*P		**Pb**	**16 48 15.7**	**+0.4**
	1.5nm,0.3s							
DGS				*e*S		**Sb**	**16 49 02.0**	**+3.5**
	2.8nm,0.4s							
KAPS	**Kapalarasan**	**3.67**	**353**	*e*P		**Pb**	**16 48 18.5**	**+0.9**
	0.1nm,0.1s							
KAPS				*e*S		**Sg**	**16 49 06.8**	**-3.3**
	1.5nm,0.1s							
KRBS	**Karabastau**	**3.81**	**304**	*e*P		**Pb**	**16 48 19.8**	**-0.2**
	0.3nm,0.1s							
KRBS				*e*S		**Sb**	**16 49 08.8**	**+2.4**
	2.6nm,0.3s							
MK31	**Makanchi Array**	**5.40**	**17**	⇑Pn		**Pn**	**16 48 32.4**	**-1.0**
	0.4nm,0.7s,baz=200,slow=13,SNR=14							
MK31				⇓Sn		**Sn**	**16 49 37.9**	**+2.1**
	0.6nm,0.7s,baz=194,slow=19							
MK31				⇑Lg		Lg	16 50 10.0	
	0.8nm,0.5s,baz=206,slow=30							

KRNET 25 16:53:45.0±0.1, 40°36'N×78°88'E, mb2.3, 8C, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PRZ	**Przheval'sk**	**2.16**	**350**	⇑*i*	P	Pn	16 54 20.8	-1.6
	baz=51							
PRZ				⇑*i*	S	Sn	16 54 46.9	-3.1
	baz=51							
KDJ	**Kajisay**	**2.19**	**325**	⇑*i*	P	Pn	16 54 21.2	-1.6
	baz=25							
KDJ				⇑*i*	S	Sn	16 54 47.5	-3.2
	baz=25							
ANVS	**Anan'yevo**	**2.59**	**340**	⇑*e*	P	Pn	16 54 26.9	-1.5
	baz=40							
ANVS				⇑*i*	S	Sn	16 54 57.8	-2.9
	baz=40							
BOOM	**Boomskoye usch**	**3.07**	**315**	⇑*e*	P	Pn	16 54 33.3	-1.7
	baz=15							
BOOM				⇑*i*	S	Sn	16 55 09.1	-3.4
	baz=15							

SOME 25 16:54:00.7, 40°63'N×77°17'E, h0km, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNSS	**Tian-Shan**	**2.41**	**356**	*e*P		Pg	16 54 46.2	-0.7
	0.7nm,0.2s							
TNSS				*e*S		Sg	16 55 19.2	+1.1
	2.6nm,0.4s							
IZV	**Izvestkoviy**	**2.44**	**350**	*e*P		Pg	16 54 47.2	-0.2
	0.7nm,0.1s							
IZV				*e*S		Sg	16 55 20.9	+1.9
	6.7nm,0.2s							
MDOK	**Medeo**	**2.53**	**358**	*e*P		Pg	16 54 48.5	-0.7
	0.1nm,0.1s							
MDOK				*e*S		Sg	16 55 22.9	+1.0
	1.9nm,0.3s							
KST	**Kastek**	**2.57**	**340**	*e*P		Pg	16 54 49.5	-0.4
	0.4nm,0.1s							
KST				*e*S		Sg	16 55 24.7	+1.4
	1.7nm,0.2s							
SATY	**Saty**	**2.59**	**20**	*e*P		Pg	16 54 49.7	-0.7
	0.4nm,0.1s							
SATY				*e*S		Sg	16 55 24.9	+0.8
	2.0nm,0.2s							
KOTS	**Kotyrbulak**	**2.60**	**359**	*e*P		Pg	16 54 50.3	-0.2
	1.4nm,0.1s							
KOTS				*e*S		Sg	16 55 26.0	+1.7
	2.7nm,0.3s							
DGS	**Degeres**	**2.81**	**339**	*e*P		Pb	16 54 52.7	+0.9
	0.5nm,0.2s							
DGS				*e*S		Sg	16 55 30.1	-0.7
	1.2nm,0.3s							
KTBS	**Karatobe**	**3.10**	**353**	*e*P		Pb	16 54 58.4	+1.7
	0.4nm,0.2s							
KTBS				*e*S		Sg	16 55 40.0	-0.2
	2.2nm,0.4s							
MNBS	**Baschi**	**3.56**	**14**	*e*P		Pg	16 55 07.2	-1.8
MNBS				*e*S		Sg	16 55 54.9	-0.3

*IDC **25** 17:08:28.0±1.9, 6°.30S×152°.17E, h0km, mb3.5/4, mb1 3.9/5, mb1mx3.6/31, mbtmp3.7/5, ML2.1/1, Error ellipse: s-maj=57.9km s-min=19.0km az=113.0*

ISC 25 17:08:32.9±1.6, 6°.4S±0°.1×152°.1E±0°.2, h37km, n7, σ1°33/9, mb3.6/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.05**	**357**	Pn		**Pn**	**17 09 04.0**	**-0.8**
	28nm,0.3s,baz=144,slow=1.0,SNR=119							
KRVT				Sn		**Sn**	**17 09 29.4**	**+0.3**
	100nm,0.3s,baz=234,slow=21,SNR=54							
PMG	**Port Moresby**	**5.78**	**238**	Pn		**Pn**	**17 09 55.5**	**-0.7**
	3.2nm,0.3s,baz=34,slow=4.5,SNR=13							
PMG				Sn		**Sn**	**17 11 00.2**	**-1.1**
	3.4nm,0.3s,baz=92,slow=22,SNR=1.9							
WRA	**Warramunga Arr**	**21.93**	**230**	P		**P**	**17 13 23.0**	**-0.4**
	0.7nm,0.9s,baz=52,slow=11,SNR=5.0							
ASAR	**Alice Springs**	**24.56**	**224**	P		**P**	**17 13 50.0**	**+0.5**
	1.1nm,0.6s,baz=56,slow=9.4,SNR=38							
FITZ	**Fitzroy Crossi**	**28.35**	**243**	P		**P**	**17 14 26.2**	**+2.5**
	1.9nm,0.9s,baz=54,slow=8.8,SNR=6.6							
ILAR	**Eielson Array**	**83.85**	**22**	P		**P**	**17 20 57.2**	**-1.1**
	0.4nm,1.0s,baz=258,slow=4.5,SNR=2.1							
TORD	**Torodi Ar. Bea**	**150.12**	**285**	PKPbc		**PKiKP**	**17 28 22.3**	**+0.6**
	0.4nm,0.6s,baz=74,slow=3.7,SNR=2.3							

*IDC **25** 17:08:32.7±1.4, 69°.04N×49°.83W, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.3/56, mbtmp3.6/3, MS3.6/3, Ms1 3.6/3, ms1mx2.8/42, Error ellipse: s-maj=35.8km s-min=15.2km az=103.0*

ISC 25 17:08:33.3±1.1, 69°.1N±0°.1×49°.2W±0°.2, h10km, n8, σ2°51/6, mb3.8/3, MS3.4/3, Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SFJD	**Kangerlussuaq**	**2.13**	**195**	Pg		**Pb**	**17 09 10.9**	**-1.1**
	9.5nm,0.3s,baz=8.9,slow=14,SNR=5.6							
SFJD				Lg		Lg	17 09 38.4	
	16nm,0.3s,baz=268,slow=21,SNR=8.3							
SUMG	**Summit**	**5.01**	**40**	*i* P		**Pn**	**17 09 48.7**	**-0.1**
SUMG				*e*S		**Sb**	**17 10 58.9**	**-2.6**
ARCES	**ARCESS Array B**	**24.94**	**54**	P		**P**	**17 13 59.3**	**+3.2**
	3.7nm,0.9s,baz=298,slow=7.7,SNR=4.6							
YKA	**Yellowknife Ar**	**26.36**	**288**	P		**P**	**17 14 08.4**	**-0.6**
	0.1nm,0.5s,baz=51,slow=9.2,SNR=2.0							
ULM	**Lac du Bonnet**	**29.08**	**254**	LR		LR	17 25 57.2	
	comp=Z,53nm,21.5s,baz=14,slow=36							
MKAR	**Makanchi Array**	**59.05**	**37**	LR		LR	17 49 00.7	
	comp=Z,31nm,19.6s,baz=345,slow=41							
PCRV	**Puerto La Cruz**	**59.66**	**198**	LR		LR	17 41 32.3	
	comp=Z,246nm,20.5s,slow=33							
CMAR	**Chiang Mai Arr**	**89.79**	**30**	P		**P**	**17 21 32.5**	**+0.7**
	0.4nm,0.7s,baz=329,slow=5.7,SNR=5.3							

*INET **25** 17:11:43.3, 12°.39N×86°.51W, h15km, ML4.0*
*IDC **25** 17:11:43.5±1.3, 12°.52N×86°.27W, h0km, mb3.6/5, mb1 4.0/7, mb1mx3.8/45, mbtmp3.7/7, ML3.5/2, MS3.5/14, Ms1 3.5/14, ms1mx3.3/33, Error ellipse: s-maj=49.8km s-min=19.8km az=50.0*
*SNET **25** 17:11:43.8±1.2, 12°.47N×86°.19W, h35km±999km, ML4.0*
*UCR **25** 17:11:45.3±2.4, 12°.45N×86°.40W, h20km, MD4.3, ML3.8*

ISC 25 17:11:43.9±0.7, 12°.37N±0°.07×86°.47W±0°.06, h10km, n69, σ1°27/76, mb3.8/5, MS3.6/11, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MASN	**Masaya**	**0.50**	**141**	*e*P		**Pb**	**17 11 53.6**	**-1.1**
CRIN	**San Cristobal**	**0.65**	**300**	*e*P		**Pg**	**17 11 55.1**	**-1.4**
CSGN	**Cosiguina Volc**	**1.22**	**300**	*e*P		**Pn**	**17 12 06.1**	**-1.0**
ACON	**Acoyapa**	**1.33**	**108**	*e*P		**Pb**	**17 12 07.5**	**-1.5**
CNCH	**Conchagua**	**1.60**	**304**	*e*P		**Pn**	**17 12 12.1**	**-0.3**
CNCH				*e*S		**Sg**	**17 12 34.9**	**-0.6**
CNCH	**Conchagua**	**1.60**	**304**	*e*P		**Pn**	**17 12 12.1**	**-0.3**
CNCH				*e*S		**Sg**	**17 12 34.9**	**-0.6**
LCND	**La Caada**	**1.67**	**304**	*e*P		**Pn**	**17 12 12.8**	**-0.4**
LCND				*e*S		**Sb**	**17 12 36.4**	**+0.6**
LCND				IAML			17 12 39.5	
	comp=Z,2µm,0.2s							
LCND	**La Caada**	**1.67**	**304**	*e*P		**Pn**	**17 12 12.8**	**-0.4**
LCND				*e*S		**Sb**	**17 12 36.4**	**+0.6**
LCND				IAML			17 12 39.5	
	comp=Z,2µm,0.2s							
BUAI	**Buenos Aires**	**1.86**	**143**	*i* P		**Pn**	**17 12 15.0**	**-0.9**
GBS3	**Finca Las Img**	**1.87**	**148**	*i* P		**Pn**	**17 12 15.6**	**-0.4**
LAPC	**Finca la Perla**	**1.89**	**147**	*i* P		**Pn**	**17 12 15.4**	**-0.9**
JUCU	**Jucuar¡n**	**1.94**	**297**	*e*P		**Pn**	**17 12 16.9**	**-0.1**
JUCU				*e*S		**Sb**	**17 12 43.0**	**-0.8**
JUCU	**Jucuar¡n**	**1.94**	**297**	*e*P		**Pn**	**17 12 16.9**	**-0.1**
JUCU				*e*S		**Sb**	**17 12 43.0**	**-0.8**
NY14	**Universidad de**	**1.95**	**152**	*i* P		**Pn**	**17 12 16.6**	**-0.4**
LIM1	**Limonal**	**2.05**	**144**	*i* P		**Pb**	**17 12 19.5**	**-1.8**
LIM1				*i* S		**Sb**	**17 12 45.3**	**-1.5**
GUAB	**Guayabo de Bag**	**2.06**	**144**	*i* P		**Pb**	**17 12 20.5**	**-0.9**
LCY	**Lacayo**	**2.06**	**301**	*e*P		**Pb**	**17 12 19.7**	**-1.8**
LCY	**Lacayo**	**2.06**	**301**	*e*P		**Pb**	**17 12 19.7**	**-1.8**
FAGO	**Alcalda de S**	**2.06**	**310**	*e*P		**Pn**	**17 12 18.3**	**-0.4**
FAGO				*e*S		**Sb**	**17 12 45.4**	**-1.9**
FAGO	**Alcalda de S**	**2.06**	**310**	*e*P		**Pn**	**17 12 18.3**	**-0.4**
FAGO				*e*S		**Sb**	**17 12 45.4**	**-1.9**
PACA	**Pacayal**	**2.11**	**301**	*e*P		**Pb**	**17 12 20.4**	**-1.9**
PACA				*e*S		**Sb**	**17 12 48.2**	**-0.5**
PACA	**Pacayal**	**2.11**	**301**	*e*P		**Pb**	**17 12 20.4**	**-1.9**
PACA				*e*S		**Sb**	**17 12 48.2**	**-0.5**
ESPN	**Las Esperanzas**	**2.13**	**95**	*e*P		**Pn**	**17 12 19.3**	**-0.2**
CUI	**Cuipilapa**	**2.13**	**143**	*i* P		**Pn**	**17 12 20.1**	**+0.4**
CUI				*i* S		**Sb**	**17 12 48.4**	**-0.8**
PTEN	**Parque Tenorio**	**2.20**	**138**	*i* P		**Pb**	**17 12 23.1**	**-0.8**
ACAL	**Aguas Claras**	**2.23**	**141**	*i* P		**Pb**	**17 12 22.2**	**-2.2**
ALJI	**Alcalda de J**	**2.26**	**295**	*e*P		**Pn**	**17 12 22.5**	**+1.2**
ALJI	**Alcalda de J**	**2.26**	**295**	*e*P		**Pn**	**17 12 22.5**	**+1.2**
TECA	**Tecapa**	**2.27**	**300**	*e*P		**Pn**	**17 12 22.7**	**+1.0**
TECA				*e*S		**Sb**	**17 12 52.9**	**-0.5**
TECA	**Tecapa**	**2.27**	**300**	*e*P		**Pn**	**17 12 22.7**	**+1.0**
TECA				*e*S		**Sb**	**17 12 52.9**	**-0.5**
PLVR	**Palo Verde**	**2.29**	**151**	*e*P		**Pn**	**17 12 22.2**	**+0.3**
COEB	**Comit de Eme**	**2.30**	**299**	*e*P		**Pn**	**17 12 22.4**	**+0.5**
COEB				IAML			17 12 56.6	
	comp=Z,575nm,0.4s							
COEB	**Comit de Eme**	**2.30**	**299**	*e*P		**Pn**	**17 12 22.4**	**+0.5**
COEB				IAML			17 12 56.6	
	comp=Z,575nm,0.4s							
JTS	**Las Juntas de**	**2.55**	**144**	Pn		**Pn**	**17 12 25.5**	**+0.2**
	comp=Z,15nm,0.3s,baz=174,slow=23,SNR=76							
JTS				Sn		**Sb**	**17 13 00.4**	**-0.9**
	comp=Z,18nm,0.3s,baz=200,slow=23,SNR=9.0							
JTS				LR		LR	17 13 39.1	
	comp=Z,875nm,21.6s,baz=33,slow=45							
JTS	**Las Juntas de**	**2.55**	**144**	*e*P		**Pn**	**17 12 25.2**	**-0.2**
ARE1	**Arenal 1**	**2.56**	**138**	*e*P		**Pb**	**17 12 30.2**	**+0.2**
COEG	**Centro de Oper**	**2.66**	**298**	*e*P		**Pn**	**17 12 27.3**	**+0.4**
COEG				IAML			17 13 15.2	
	comp=Z,381nm,0.2s							
COEG	**Centro de Oper**	**2.66**	**298**	*e*P		**Pn**	**17 12 27.3**	**+0.4**
COEG				IAML			17 13 15.2	
	comp=Z,381nm,0.2s							
LFRS	**El Faro**	**2.81**	**296**	*e*P		**Pn**	**17 12 29.4**	**+0.3**
LFRS				*e*S		**Sn**	**17 13 05.4**	**+2.3**
LFRS	**El Faro**	**2.81**	**296**	*e*P		**Pn**	**17 12 29.4**	**+0.3**
LFRS				*e*S		**Sn**	**17 13 05.4**	**+2.3**
LBRS	**Las Brisas**	**2.85**	**299**	*e*P		**Pn**	**17 12 30.5**	**+1.0**
LBRS	**Las Brisas**	**2.85**	**299**	*e*P		**Pn**	**17 12 30.5**	**+1.0**
BOQS	**Boqueron**	**3.05**	**297**	*e*P		**Pn**	**17 12 33.9**	**+1.4**
BOQS				*e*S		**Sb**	**17 13 12.5**	**-3.4**
BOQS	**Boqueron**	**3.05**	**297**	*e*P		**Pn**	**17 12 33.9**	**+1.4**
BOQS				*e*S		**Sb**	**17 13 12.5**	**-3.4**
CEVE	**Cerro Verde**	**3.40**	**296**	*e*P		**Pn**	**17 12 37.8**	**+0.6**
CEVE				IAML			17 13 25.3	
	comp=Z,483nm,0.5s							
CEVE	**Cerro Verde**	**3.40**	**296**	*e*P		**Pn**	**17 12 37.8**	**+0.6**
CEVE				IAML			17 13 25.3	
	comp=Z,483nm,0.5s							
SNJE	**San Jose**	**3.40**	**296**	*e*P		**Pn**	**17 12 38.1**	**+1.0**
SNJE	**San Jose**	**3.40**	**296**	*e*P		**Pn**	**17 12 38.1**	**+1.0**
MTO3	**Montecristo**	**3.46**	**306**	*e*P		**Pn**	**17 12 37.9**	**-0.1**
MTO3	**Montecristo**	**3.46**	**306**	*e*P		**Pn**	**17 12 37.9**	**-0.1**
LCR2	**La Lucha 2**	**3.56**	**137**	*e*P		**Pn**	**17 12 42.5**	**+3.0**
CMIG	**Matias Romero**	**9.39**	**301**	Pn		**Pn**	**17 14 02.0**	**+2.7**
	comp=Z,0.3nm,0.3s,baz=100,slow=12,SNR=4.0							
ROSC	**El Rosal**	**14.15**	**121**	LR		LR	17 21 43.3	
	comp=Z,127nm,21.4s,baz=100,slow=43							
SDV	**Santo Domingo**	**15.95**	**101**	LR		LR	17 21 51.5	
	comp=Z,148nm,21.7s,baz=268,slow=38							
SJG	**San Juan**	**20.41**	**71**	LR		LR	17 24 31.2	
	comp=Z,297nm,19.5s,baz=270,slow=38							
ATAH	**Atahualpa**	**20.98**	**157**	LR		LR	17 23 50.7	
	comp=Z,283nm,20.7s,baz=329,slow=35							
TXAR	**Lajitas Array**	**23.25**	**319**	P		**P**	**17 16 51.3**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=139,slow=8.2,SNR=6.0							
TKL	**Tuckaleechee C**	**23.31**	**6**	LR		LR	17 26 06.7	
	comp=Z,67nm,18.1s,baz=177,slow=37							
LPIG	**La Paz**	**25.42**	**301**	LR		LR	17 26 49.3	
	comp=Z,198nm,21.2s,baz=109,slow=36							
SADO	**Sadowa**	**32.89**	**10**	LR		LR	17 31 37.3	
	comp=Z,53nm,18.3s,baz=232,slow=36							
MDP	**Montagnes des**	**34.18**	**99**	LR		LR	17 33 13.5	
	comp=Z,75nm,19.6s,baz=240,slow=38							
NVAR	**Mina Array Bea**	**38.39**	**318**	P		**P**	**17 19 07.7**	**+1.9**
	comp=Z,0.6nm,0.9s,baz=133,slow=6.3,SNR=4.2							
SCHQ	**Schefferville**	**45.08**	**16**	LR		LR	17 40 10.3	
	comp=Z,51nm,18.7s,baz=128,slow=38							
BDFB	**Brasilia**	**47.15**	**125**	LR		LR	17 43 09.5	
	comp=Z,111nm,18.5s,baz=326,slow=40							
YKA	**Yellowknife Ar**	**53.94**	**344**	P		**P**	**17 21 07.6**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=137,slow=7.9,SNR=12							
ILAR	**Eielson Array**	**66.48**	**336**	P		**P**	**17 22 35.2**	**+1.9**
	comp=Z,0.7nm,1.1s,baz=117,slow=4.0,SNR=5.7							
ILAR				LR		LR	17 54 33.7	
	comp=Z,56nm,20.7s,baz=132,slow=39							
ESDC	**Sonseca Array**	**76.48**	**52**	P		**P**	**17 23 34.5**	**+0.1**
	comp=Z,1.5nm,1.1s,baz=271,slow=4.9,SNR=6.0							
NOA	**NORSAR Array B**	**82.97**	**29**	LR		LR	17 58 07.3	
	comp=Z,18nm,20.0s,baz=270,slow=34							
GERES	**GERESS Array B**	**87.37**	**41**	LR		LR	18 00 20.6	
	comp=Z,28nm,21.7s,baz=170,slow=34							

*NEIC **25** 17:12:06.8±2.1, 68°.82N±0°.05×50°.7W±0°.4, h15km±6km, mb4.2/3, Error ellipse: s-maj=20.5km s-min=3.8km az=70.0*
*IDC **25** 17:12:07.9±1.1, 69°.02N×49°.81W, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.4/54, mbtmp3.6/4, MS3.2/7, Ms1 3.2/7, ms1mx2.9/42, Error ellipse: s-maj=33.8km s-min=14.2km az=105.0*

ISC 25 17:12:07.0±0.8, 68°.90N±0°.05×50°.6W±0°.1, h10km, n18, σ2°12/13, mb4.1/6, MS3.2/6, Western Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ILULI	**Ilulissat**	**0.36**	**331**			**Pg**	**17 12 14.6**	**+0.5**
ILULI				Sg		**Sb**	**17 12 21.6**	**+0.5**
SFJD	**Kangerlussuaq**	**1.91**	**180**	Pg		**Pg**	**17 12 46.4**	**+2.8**
	16nm,0.3s,baz=12,slow=17,SNR=16							
SFJD				Lg		Lg	17 13 12.4	
	21nm,0.3s,baz=279,slow=22,SNR=7.6							
SFJD	**Kangerlussuaq**	**1.91**	**180**			**Pb**	**17 12 39.8**	**-2.1**
SUMG	**Summit**	**5.46**	**42**			Pn	17 13 20.2	-8.3
IVI	**Ivigtut**	**7.79**	**171**	Pn		**Pn**	**17 13 58.5**	**-1.8**
TULEG	**Thule**	**9.33**	**333**	Pn		**Pn**	**17 14 20.5**	**-0.7**
BORG	**Borgarnes**	**12.18**	**96**	LR		LR	17 18 52.4	
	comp=Z,86nm,18.1s,baz=166,slow=34							
DRLN	**Deer Lake**	**19.99**	**193**	P		**P**	**17 16 37.5**	**-1.8**
DRLN				IAmb		IAmb	17 16 50.0	
	comp=Z,28nm,1.2s							
FCC	**Fort Churchill**	**21.17**	**263**	P		**P**	**17 16 50.3**	**-1.6**
FCC				IAmb		IAmb	17 16 56.8	
	comp=Z,14nm,1.4s							
BATG	**Bathurst New B**	**23.03**	**208**	P		**P**	**17 17 11.1**	**-0.8**
BATG				IAmb		IAmb	17 17 24.6	
	comp=Z,8.3nm,1.1s							
ARCES	**ARCESS Array B**	**25.43**	**53**	P		**P**	**17 17 33.6**	**-0.6**
	comp=Z,8nm,0.7s,baz=319,slow=9.0,SNR=5.0							
YKA	**Yellowknife Ar**	**25.93**	**287**	P		**P**	**17 17 43.2**	**+4.3**
	comp=Z,0.2nm,0.7s,baz=49,slow=10.0,SNR=4.8							
YKA				LR		LR	17 28 16.1	
	comp=Z,71nm,19.7s,baz=0.0,slow=37							
NOA	**NORSAR Array B**	**26.17**	**77**	LR		LR	17 26 35.2	
	comp=Z,40nm,20.6s,baz=310,slow=34							
GERES	**GERESS Array B**	**36.54**	**90**	LR		LR	17 34 36.9	
	comp=Z,38nm,18.1s,baz=298,slow=37							
MKAR	**Makanchi Array**	**59.48**	**36**	P		**P**	**17 22 09.9**	**+0.3**
	comp=Z,0.3nm,0.9s,baz=358,slow=4.3,SNR=2.6							
KSRS	**Korea Array**	**73.96**	**1**	LR		LR	17 58 22.7	
	comp=Z,6.4nm,18.3s,baz=250,slow=38							
SIV	**San Ignacio**	**84.99**	**190**	LR		LR	18 01 14.8	
	comp=Z,23nm,18.2s,baz=186,slow=35							
CMAR	**Chiang Mai Arr**	**90.17**	**29**	P		**P**	**17 25 08.9**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=327,slow=5.5,SNR=11							
CMAR				LR		LR	18 12 46.9	
	comp=Z,11nm,18.2s,baz=180,slow=40							

*IDC **25** 17:12:26.3±1.7, 20°.06S×70°.79W, h0km, mb4.0/3, mb1 4.1/5, mb1mx3.7/37, mbtmp4.0/5, ML3.7/2, MS3.1/4, Ms1 3.1/4, ms1mx2.8/31, Error ellipse: s-maj=45.7km s-min=19.0km az=64.0*
*GUC **25** 17:12:28.9±0.6, 20°.17S×70°.96W, h34km±2km, ML3.7*

ISC 25 17:12:26.8±1.7, 20°.11S±0°.03×70°.92W±0°.06, h13km±10km, n31, σ1°05/41, mb4.0/3, 3C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TA02	**Huaiquique**	**0.75**	**102**	*e*P		**Pn**	**17 12 42.4**	**-0.8**
TA02				*e*S		**Sn**	**17 12 53.1**	**-1.4**
TA02				IAML			17 12 54.8	
	comp=E,13µm,0.3s							
TA01	**Diego Aracena**	**0.82**	**123**	⇓*i*	P	**Pg**	**17 12 43.4**	**+0.6**
TA01				*i*	S	**Sg**	**17 12 53.9**	**+0.3**
PSGC	**Pisagua**	**0.90**	**56**	⇓*i*	P	**Pn**	**17 12 45.0**	**-0.3**
PSGC				*i*	S	**Sn**	**17 12 58.0**	**-0.4**
PSGC				IAML			17 13 00.2	
	comp=N,6µm,0.3s							
PATCX	**Punta Patache**	**1.00**	**135**	*e*P		**Pb**	**17 12 46.0**	**-0.1**
PATCX				*i*	S	**Sg**	**17 12 59.2**	**-0.1**
PATCX				IAML			17 13 03.8	
	comp=N,2µm,0.2s							
PB11	**IPOC Station P**	**1.23**	**74**	⇓*i*	P	**Pb**	**17 12 50.4**	**+0.3**
PB11				*i*	S	**Sg**	**17 13 07.2**	**+0.5**
PB11				IAML			17 13 09.3	
	comp=N,5µm,0.6s							
PB02	**IPOC Station P**	**1.54**	**142**	⇑*i*	P	**Pn**	**17 12 54.3**	**+0.3**
PB02				*i*	S	**Sn**	**17 13 13.3**	**-0.6**
PB02				IAML			17 13 18.2	
	comp=E,3µm,0.5s							
MNMC	**Minye Minye**	**1.58**	**52**

ASAR	**Alice Springs**	**25.74**	**222**	P		**P**	**17 21 43.7**	**+0.8**
	0.2nm,0.3s,baz=54,slow=9.0,SNR=15							
FITZ	**Fitzroy Crossi**	**29.21**	**241**	P		**P**	**17 22 13.2**	**-0.7**
	1.0nm,0.4s,baz=61,slow=6.6,SNR=9.9							
CMAR	**Chiang Mai Arr**	**57.58**	**295**	P		**P**	**17 26 01.4**	**+0.1**
	0.4nm,0.5s,baz=116,slow=5.5,SNR=6.3							
ILAR	**Eielson Array**	**82.48**	**22**	P		**P**	**17 28 32.3**	**-0.3**
	0.4nm,0.6s,baz=249,slow=5.6,SNR=5.3							

*IDC **25** 17:17:05.5±1.2, 19°.21S×70°.46W, h0km, mb3.7/6, mb1 3.9/9, mb1mx3.8/33, mbtmp3.8/9, ML3.9/3, Error ellipse: s-maj=29.3km s-min=23.1km az=67.0*
*NEIC **25** 17:17:07.6±2.3, 19°.37S±0°.03×70°.53W±0°.06, h21km±3km, mb4.0/4, Error ellipse: s-maj=8.9km s-min=4.0km az=82.0*
*GUC **25** 17:17:09.5±0.6, 19°.37S×70°.45W, h20km±3km, ML3.9*
ISC 25 17:17:06.1±1.5, **19°.36S**±0°.03×**70°.53W**±0°.05, **h8**km±9km, **n60**, σ1°13/72, **mb3.8/6, 3C-10D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
PSGC	**Pisagua**	**0.45**	**122**	⇓	*iP*		**Pb**	**17 17 16.6**	**+0.2**
PSGC					*eS*		**Sg**	**17 17 22.2**	**+1.4**
PSGCX	**Pisagua**	**0.45**	**122**		Pg		**Pb**	**17 17 16.3**	**-0.1**
PSGCX					Sg		**Sg**	**17 17 22.0**	**+1.2**
PB12	**IPOC Station P**	**0.76**	**14**	⇓	*iP*		**Pb**	**17 17 22.6**	**+0.9**
PB12					*eS*		**Sb**	**17 17 32.9**	**+0.6**
PB12					IAML			17 17 33.9	
	comp=E,8μm,0.3s								
PB12	**IPOC Station P**	**0.76**	**14**				**Pb**	**17 17 22.6**	**+0.9**
PB12					Sg		**Sb**	**17 17 32.7**	**+0.4**
MNMC	**Minye Minye**	**0.91**	**76**	⇑	*iP*		**Pb**	**17 17 24.6**	**+0.2**
MNMC					*eS*		**Sb**	**17 17 36.2**	**-0.5**
MNMC					IAML			17 17 38.8	
	comp=E,12μm,0.2s								
MNMC	**Minye Minye**	**0.91**	**76**				**Pb**	**17 17 24.4**	**0.0**
PB11	**IPOC Station P**	**0.92**	**116**	⇓	*iP*		**Pg**	**17 17 24.3**	**+0.5**
PB11					*iS*		**Sg**	**17 17 35.4**	**-0.3**
PB11					IAML			17 17 35.9	
	comp=E,5μm,0.2s								
PB11	**IPOC Station P**	**0.92**	**116**				**Pg**	**17 17 24.2**	**+0.5**
PB11					Sg		**Sg**	**17 17 35.4**	**-0.3**
TA02	**Huaiquique**	**0.98**	**158**		*eP*		**Pg**	**17 17 24.9**	**-0.2**
TA02					*eS*		**Sg**	**17 17 37.5**	**-0.3**
TA02					IAML			17 17 38.0	
	comp=N,5μm,0.1s								
AP01	**Chacalluta**	**1.00**	**10**	⇑	*iP*		**Pb**	**17 17 26.2**	**+0.6**
AP01					*eS*		**Sb**	**17 17 39.6**	**+0.7**
AP01					IAML			17 17 42.7	
	comp=N,14μm,0.3s								
AP01	**Chacalluta**	**1.00**	**10**				**Pn**	**17 17 26.4**	**0.0**
TA01	**Diego Aracena**	**1.25**	**165**	⇓	*iP*		**Pn**	**17 17 29.5**	**-0.4**
TA01					*iS*		**Sb**	**17 17 45.1**	**-1.0**
TA01	**Diego Aracena**	**1.25**	**165**				**Pn**	**17 17 29.5**	**-0.4**
GO01	**Chusmiza**	**1.29**	**104**	⇑	*iP*		**Pg**	**17 17 30.7**	**-0.3**
GO01					*eS*		**Sg**	**17 17 47.2**	**-0.7**
GO01					IAML			17 17 49.5	
	comp=N,7μm,0.1s								
GO01	**Chusmiza**	**1.29**	**104**				**Pg**	**17 17 30.9**	**-0.1**
PATCX	**Punta Patache**	**1.50**	**166**	⇓	*iP*		**Pn**	**17 17 33.4**	**0.0**
PATCX					*eS*		**Sn**	**17 17 52.6**	**-0.6**
PATCX					IAML			17 17 59.3	
	comp=E,2μm,0.3s								
PATCX	**Punta Patache**	**1.50**	**166**				**Pn**	**17 17 33.4**	**0.0**
PB08	**IPOC Station P**	**1.51**	**121**	⇓	*iP*		**Pn**	**17 17 33.9**	**+0.1**
PB08					*eS*		**Sn**	**17 17 53.2**	**-0.8**
PB08					IAML			17 17 54.2	
	comp=E,2μm,0.2s								
PB08	**IPOC Station P**	**1.51**	**121**				**Pn**	**17 17 33.4**	**-0.5**
PB01	**IPOC Station P**	**1.94**	**150**	⇓	*iP*		**Pn**	**17 17 39.7**	**+0.2**
PB01					*eS*		**Sn**	**17 18 04.2**	**+0.1**
PB01					IAML			17 18 11.0	
	comp=E,1μm,0.3s								
PB01	**IPOC Station P**	**1.94**	**150**				**Pn**	**17 17 39.8**	**+0.2**
PB02	**IPOC Station P**	**2.04**	**163**	⇓	*iP*		**Pn**	**17 17 41.7**	**+0.8**
PB02					*eS*		**Sn**	**17 18 07.8**	**+1.2**
PB02					IAML			17 18 12.0	
	comp=E,2μm,0.4s								
PB07	**IPOC Station P**	**2.43**	**166**	⇓	*iP*		**Pn**	**17 17 47.6**	**+1.3**
PB07					*eS*		**Sn**	**17 18 17.9**	**+1.4**
PB07					IAML			17 18 24.1	
	comp=E,552nm,0.4s								
PB07	**IPOC Station P**	**2.43**	**166**				**Pn**	**17 17 47.5**	**+1.1**
PB09	**IPOC Station P**	**2.71**	**154**		*eP*		**Pn**	**17 17 52.2**	**+2.0**
PB09					IAML			17 18 37.0	
	comp=E,612nm,0.7s								
PB09	**IPOC Station P**	**2.71**	**154**				**Pn**	**17 17 52.0**	**+1.9**
PB03	**IPOC Station P**	**2.77**	**165**	⇓	*iP*		**Pn**	**17 17 52.2**	**+1.2**
PB03					*eS*		**Sn**	**17 18 26.2**	**+1.4**
PB03					IAML			17 18 36.9	
	comp=E,471nm,0.8s								
PB04	**IPOC Station P**	**2.98**	**173**		*eP*		**Pn**	**17 17 54.2**	**+0.2**
PB04					IAML			17 18 55.6	
	comp=N,416nm,0.8s								
PB04	**IPOC Station P**	**2.98**	**173**				**Pn**	**17 17 54.1**	**+0.2**
PB06	**IPOC Station P**	**3.45**	**165**		*eP*		**Pn**	**17 18 00.9**	**+0.5**
PB06					IAML			17 19 01.5	
	comp=E,262nm,0.4s								
PB06	**IPOC Station P**	**3.45**	**165**				**Pn**	**17 18 00.8**	**+0.4**
PB05	**IPOC Station P**	**3.49**	**175**		*eP*		**Pn**	**17 18 01.2**	**+0.4**
PB05					*eS*		**Sn**	**17 18 43.8**	**+1.3**
PB05					IAML			17 19 01.6	
	comp=N,184nm,0.7s								
LVC	**Limon Verde**	**3.57**	**155**	Pn			**Pn**	**17 18 04.6**	**+2.4**
	comp=N,14nm,0.3s,baz=346,slow=9.1,SNR=55								
LVC	**Limon Verde**	**3.57**	**155**		*eP*		**Pn**	**17 18 04.1**	**+1.9**
LPAZ	**La Paz**	**3.81**	**37**	Pn			**Pb**	**17 18 10.8**	**-3.2**
	comp=N,3.7nm,0.3s,baz=236,slow=7.2,SNR=34								
LPAZ	**La Paz**	**3.81**	**37**				**Pb**	**17 18 11.2**	**-2.9**
PB14	**IPOC Station P**	**5.25**	**179**	Pn			**Pn**	**17 18 23.9**	**-1.3**
GO02	**Mina Guanaco**	**5.84**	**172**	Pn			**Pn**	**17 18 33.7**	**+0.3**
AC01	**Pan de Azucar**	**6.76**	**181**	Pn			**Pn**	**17 18 43.0**	**-2.7**
AC02	**Maricunga**	**7.55**	**170**	Pn			**Pn**	**17 18 57.3**	**+0.2**
SIV	**San Ignacio**	**9.61**	**71**	Pn			**Pn**	**17 19 25.3**	**+0.3**
	comp=N,1.3nm,0.3s,baz=274,slow=12,SNR=13								
GO04	**Tololo Observa**	**10.77**	**181**	Pn			**Pn**	**17 19 40.2**	**-0.7**
CPUP	**Villa Florida**	**14.00**	**122**	Pn			**Pn**	**17 20 25.6**	**+0.8**
	comp=N,0.1nm,0.3s,baz=302,slow=9.2,SNR=3.1								
CPUP	**Villa Florida**	**14.00**	**122**	Pn			**Pn**	**17 20 24.8**	**-0.1**
PTGA	**Pitinga**	**21.21**	**30**	P			**P**	**17 21 51.0**	**-1.4**
	comp=N,1.7nm,0.3s,baz=256,slow=23,SNR=7.1								
PTGA	**Pitinga**	**21.21**	**30**	P			**P**	**17 21 50.4**	**-2.1**
PTGA				IAmb			IAmb	17 21 59.6	
	comp=Z,8.0nm,1.4s								
PLCA	**Paso Flores**	**21.31**	**180**	P			**P**	**17 21 55.4**	**+2.0**
	comp=Z,1.5nm,0.9s,baz=346,slow=4.2,SNR=1.5								
PLCA	**Paso Flores**	**21.31**	**180**	P			**P**	**17 21 51.3**	**-2.1**
PLCA				IAmb			IAmb	17 22 05.4	
	comp=Z,11nm,1.2s								
BDFB	**Brasilia**	**21.78**	**84**	P			**P**	**17 21 59.2**	**+0.5**
	comp=Z,1.4nm,0.4s,baz=220,slow=7.9,SNR=3.8								
RUSC	**La Rusia**	**25.22**	**354**	P			**P**	**17 22 34.2**	**+1.1**
TXAR	**Lajitas Array**	**58.01**	**326**	P			**P**	**17 27 00.7**	**+0.9**
	comp=Z,0.1nm,0.5s,baz=143,slow=6.7,SNR=2.0								
TORD	**Torodi Ar. Bea**	**78.09**	**71**	P			**P**	**17 29 05.1**	**-1.1**
	comp=Z,1.5nm,0.9s,baz=256,slow=5.7,SNR=4.4								
YKA	**Yellowknife Ar**	**88.67**	**341**	P			**P**	**17 29 59.8**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=133,slow=5.2,SNR=15								
H11S2	**WAKE ISLAND Hyd**	**26.07**	**279**	T			T	19 55 07.0	
	baz=101,slow=75,SNR=100								
H11S1	**WAKE ISLAND Hyd**	**26.08**	**279**	T			T	19 55 06.5	
	baz=101,slow=75,SNR=151								
H11S3	**WAKE ISLAND Hyd**	**26.09**	**279**	T			T	19 55 08.0	
	baz=101,slow=75,SNR=129								
H11N3	**WAKE ISLAND Hyd**	**26.10**	**281**	T			T	19 55 06.9	
	baz=100,slow=74,SNR=72								
H11N2	**WAKE ISLAND Hyd**	**26.12**	**281**	T			T	19 55 06.6	
	baz=100,slow=74,SNR=78								
H11N1	**WAKE ISLAND Hyd**	**26.12**	**281**	T			T	19 55 07.8	
	baz=100,slow=74,SNR=55								
MKAR	**Makanchi Array**	**144.73**	**33**	PKP			**PKPab**	**17 36 42.5**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=315,slow=2.6,SNR=4.5								

*IDC **25** 17:23:34.6±1.2, 19°.17S×70°.39W, h0km, mb3.8/6, mb1 4.1/9, mb1mx3.9/29, mbtmp3.9/9, ML3.9/3, Error ellipse: s-maj=34.7km s-min=23.0km az=34.0*
*GUC **25** 17:23:38.6±0.4, 19°.37S×70°.45W, h20km±2km, ML3.9*
*NEIC **25** 17:23:38.0±1.8, 19°.34S±0°.02×70°.42W±0°.05, h29km±5km, mb4.0/3, Error ellipse: s-maj=7.0km s-min=1.8km az=74.0*
ISC 25 17:23:36.6±1.0, **19°.33S**±0°.02×**70°.51W**±0°.05, **h19**km±3km, **n59**, σ1°25/73, **mb3.9/6, 7D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
PSGC	**Pisagua**	**0.45**	**126**		*eP*		**Pg**	**17 23 45.7**	**-0.3**
PSGC					*iS*		**Sg**	**17 23 51.4**	**-0.9**
PSGCX	**Pisagua**	**0.45**	**126**				**Pg**	**17 23 45.4**	**-0.6**
PSGCX					Sg		**Sg**	**17 23 51.5**	**-0.8**
PB12	**IPOC Station P**	**0.73**	**14**	⇓	*iP*		**Pn**	**17 23 51.7**	**-0.3**
PB12					*iS*		**Sg**	**17 24 01.9**	**+1.0**
PB12					IAML			17 24 02.9	
	comp=E,10μm,0.4s								
PB12	**IPOC Station P**	**0.73**	**14**				**Pg**	**17 23 51.1**	**0.0**
PB12					Sg		**Sg**	**17 24 01.8**	**+0.9**
MNMC	**Minye Minye**	**0.89**	**77**	⇓	*iP*		**Pb**	**17 23 53.7**	**+0.2**
MNMC					*iS*		**Sb**	**17 24 05.3**	**+0.3**
MNMC	**Minye Minye**	**0.89**	**77**				**Pb**	**17 23 53.3**	**-0.2**
MNMC							**Sb**	**17 24 05.5**	**+0.5**
PB11	**IPOC Station P**	**0.91**	**118**	⇓	*iP*		**Pb**	**17 23 53.4**	**-0.5**
PB11					*iS*		**Sb**	**17 24 04.7**	**-1.1**
PB11					IAML			17 24 05.3	
	comp=E,4μm,0.2s								
PB11	**IPOC Station P**	**0.91**	**118**				**Pb**	**17 23 53.5**	**-0.5**
PB11					Sg		**Sb**	**17 24 04.5**	**-1.2**
AP01	**Chacalluta**	**0.96**	**9**	⇓	*iP*		**Pg**	**17 23 55.4**	**0.0**
AP01					*iS*		**Sn**	**17 24 08.8**	**+0.5**
AP01	**Chacalluta**	**0.96**	**9**				**Pg**	**17 23 55.5**	**0.0**
TA02	**Huaiquique**	**1.00**	**159**		*eP*		**Pb**	**17 23 54.5**	**-0.9**
TA02					*eS*		**Sb**	**17 24 06.7**	**-1.5**
TA02					IAML			17 24 13.2	
	comp=E,8μm,0.2s								
TA01	**Diego Aracena**	**1.27**	**166**	⇓	*iP*		**Pn**	**17 23 58.6**	**-0.7**
TA01					*iS*		**Sb**	**17 24 14.4**	**-1.5**
TA01	**Diego Aracena**	**1.27**	**166**				**Pn**	**17 23 58.7**	**-0.7**
GO01	**Chusmiza**	**1.28**	**106**		*eP*		**Pn**	**17 24 00.0**	**0.0**
GO01					*iS*		**Sb**	**17 24 16.5**	**-0.3**
GO01					IAML			17 24 18.9	
	comp=N,5μm,0.2s								
GO01	**Chusmiza**	**1.28**	**106**				**Pn**	**17 24 00.3**	**+0.3**
PB08	**IPOC Station P**	**1.51**	**123**	⇓	*iP*		**Pn**	**17 24 03.2**	**+0.2**
PB08					*iS*		**Sn**	**17 24 21.7**	**-0.7**
PB08					IAML			17 24 29.1	
	comp=N,2μm,0.2s								
PB08	**IPOC Station P**	**1.51**	**123**				**Pn**	**17 24 02.7**	**-0.3**
PATCX	**Punta Patache**	**1.52**	**167**	⇓	*iP*		**Pn**	**17 24 02.5**	**-0.4**
PATCX					*iS*		**Sn**	**17 24 21.6**	**-0.6**
PATCX					IAML			17 24 33.0	
	comp=E,1μm,0.5s								
PATCX	**Punta Patache**	**1.52**	**167**				**Pn**	**17 24 02.6**	**-0.4**
PB01	**IPOC Station P**	**1.96**	**151**		*eP*		**Pn**	**17 24 09.4**	**+0.4**
PB01					*eS*		**Sn**	**17 24 33.7**	**+0.7**
PB01					IAML			17 24 36.6	
	comp=E,1μm,0.2s								
PB01	**IPOC Station P**	**1.96**	**151**				**Pn**	**17 24 09.3**	**+0.4**
PB02	**IPOC Station P**	**2.06**	**164**		*eP*		**Pn**	**17 24 11.0**	**+0.6**
PB02					*eS*		**Sn**	**17 24 36.9**	**+1.2**
PB02					IAML			17 24 41.5	
	comp=E,2μm,0.3s								
PB07	**IPOC Station P**	**2.46**	**166**		*eP*		**Pn**	**17 24 16.9**	**+1.0**
PB07					*eS*		**Sn**	**17 24 46.9**	**+1.4**
PB07					IAML			17 24 59.6	
	comp=E,801nm,0.4s								
PB07	**IPOC Station P**	**2.46**	**166**				**Pn**	**17 24 16.8**	**+1.0**
PB09	**IPOC Station P**	**2.73**	**154**		*eP*		**Pn**	**17 24 21.5**	**+1.9**
PB09					*eS*		**Sn**	**17 24 54.9**	**+2.8**
PB09					IAML			17 25 04.8	
	comp=E,690nm,0.5s								
PB09	**IPOC Station P**	**2.73**	**154**				**Pn**	**17 24 21.5**	**+1.9**
PB03	**IPOC Station P**	**2.80**	**165**		*eP*		**Pn**	**17 24 21.5**	**+1.0**
PB03					*eS*		**Sn**	**17 24 55.5**	**+1.6**
PB03					IAML			17 25 05.7	
	comp=E,489nm,0.4s								
PB04	**IPOC Station P**	**3.01**	**174**		*eP*		**Pn**	**17 24 23.7**	**+0.3**
PB04					IAML			17 25 19.7	
	comp=E,466nm,0.7s								
PB04	**IPOC Station P**	**3.01**	**174**				**Pn**	**17 24 23.6**	**+0.1**
PB06	**IPOC Station P**	**3.47**	**166**		*eP*		**Pn**	**17 24 30.1**	**+0.3**
PB06	**IPOC Station P**	**3.47**	**166**				**Pn**	**17 24 30.1**	**+0.3**
PB05	**IPOC Station P**	**3.52**	**175**		*eP*		**Pn**	**17 24 30.1**	**-0.3**
LVC	**Limon Verde**	**3.59**	**156**	Pn			**Pn**	**17 24 33.8**	**+2.1**
	comp=E,15nm,0.3s,baz=349,slow=9.1,SNR=148								
LVC				Sn			**Sn**	**17 25 18.4**	**+4.7**
	comp=E,24nm,0.3s,baz=223,slow=18,SNR=8.8								
LPAZ	**La Paz**	**3.78**	**37**	Pn			**Pb**	**17 24 40.5**	**-2.6**
	comp=E,5.1nm,0.3s,baz=236,slow=7.0,SNR=59								
PB15	**IPOC Station P**	**3.98**	**166**				**Pn**	**17 24 37.1**	**+0.3**
PB10	**IPOC Station P**	**4.17**	**181**	Pn			**Pn**	**17 24 38.5**	**-0.7**
PB14	**IPOC Station P**	**5.27**	**179**				**Pn**	**17 24 52.9**	**-1.8**
GO02	**Mina Guanaco**	**5.87**	**172**				**Pn**	**17 25 02.8**	**-0.1**
AC02	**Maricunga**	**7.58**	**171**				**Pn**	**17 25 26.5**	**-0.1**
SIV	**San Ignacio**	**9.59**	**71**	Pn			**Pn**	**17 25 53.6**	**-0.1**
	comp=E,1.4nm,0.3s,baz=261,slow=11,SNR=20								
MT02	**Curacav**	**13.89**	**182**	Pn			**Pn**	**17 26 54.8**	**+2.3**
CPUP	**Villa Florida**	**14.00**	**122**	Pn			**Pn**	**17 26 55.2**	**+1.2**
	comp=E,0.1nm,0.3s,baz=321,slow=13,SNR=3.0								
PTGA	**Pitinga**	**21.17**	**30**	P			**P**	**17 28 19.7**	**-1.3**
	comp=E,1.8nm,0.3s,baz=213,slow=19,SNR=6.8								
PTGA	**Pitinga**	**21.17**	**30**	P			**P**	**17 28 17.4**	**-3.6**
PTGA				IAmb			IAmb	17 28 32.3	
	comp=Z,15nm,1.5s								
BDFB	**Brasilia**	**21.76**	**84**	P			**P**	**17 28 26.8**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=263,slow=11,SNR=3.1								
BDFB	**Brasilia**	**21.76**	**84**	P			**P**	**17 28 25.8**	**-1.7**
BDFB				IAmb			IAmb	17 28 41.8	
	comp=Z,3.3nm,0.9s								
RUSC	**La Rusia**	**25.19**	**354**	P			**P**	**17 29 02.2**	**+0.6**
TXAR	**Lajitas Array**	**58.00**	**326**	P			**P**	**17 33 29.3**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=148,slow=7.9,SNR=3.7								
NVAR	**Mina Array Bea**	**72.87**	**322**	P			**P**	**17 35 04.9**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=154,slow=4.8,SNR=2.8								
TORD	**Torodi Ar. Bea**	**78.06**	**71**	P			**P**	**17 35 33.8**	**-0.9**
	comp=Z,1.6nm,0.9s,baz=258,slow=4.1,SNR=5.8								
YKA	**Yellowknife Ar**	**88.65**	**341**	P			**P**	**17 36 29.2**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=135,slow=5.2,SNR=27								
H11S2	**WAKE ISLAND Hyd**	**26.09**	**279**	T			T	20 01 35.6	
	baz=101,slow=74,SNR=326								
H11S1	**WAKE ISLAND Hyd**	**26.09**	**279**	T			T	20 01 34.5	
	baz=101,slow=74,SNR=304								
H11S3	**WAKE ISLAND Hyd**	**26.10**	**279**	T			T	20 01 36.6	
	baz=101,slow=74,SNR=431								
H11N3	**WAKE ISLAND Hyd**	**26.11**	**281**	T			T	20 01 39.2	
	baz=100,slow=74,SNR=57								
H11N2	**WAKE ISLAND Hyd**	**26.13**	**281**	T			T	20 01 36.3	
	baz=100,slow=74,SNR=52								
H11N1	**WAKE ISLAND Hyd**	**26.13**	**281**	T			T	20 01 52.8	
	baz=100,slow=74,SNR=51								
MKAR	**Makanchi Array**	**144.70**	**33**	PKP			**PKPdf**	**17 43 12.0**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=340,slow=3.3,SNR=6.0								
SONM	**Songino Array**	**151.45**	**4**	PKPbc			**PKiKP**	**17 43 30.4**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=255,slow=1.5,SNR=3.4								

*BJI **25** 17:26:10.9±0.0, 25°.01N×97°.82E, h12km, ML3.5/7*
IDC 25 17:26:10.2±1.2, **25°.07N**×**98°.38E**, **h0**km, **mb3.5**/4, **mb1 3.6**/5, **mb1mx3.3**/36, **mbtmp3.4**/5, **ML3.7**/1, **MS3.0**/2, **Ms1 3.0**/2, **ms1mx2.5**/42, **Error ellipse: s-maj=52.3km s-min=17.3km az=73.0, Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
CMAR	**Chiang Mai Arr**	**6.60**	**175**			Pn		17 27 48.4	-0.1
	0.4nm,0.3s,baz=345,slow=12,SNR=11								
CMAR						Pg	Pg	17 28 11.8	-4.9
	0.4nm,0.3s,baz=345,slow=18,SNR=15								
CMAR						Lg	Lg	17 29 38.2	
	1.9nm,0.3s,baz=357,slow=30,SNR=8.5								
MKAR	**Makanchi Array**	**25.20**	**333**	P		P	P	17 31 36.7	-0.8
	0.7nm,0.7s,baz=142,slow=9.7,SNR=8.7								
TLY	**Talaya**	**26.88**	**7**	LR		LR	LR	17 43 04.4	
	comp=Z,35nm,19.0s,baz=346,slow=38								
ZALV	**Zalesovo Beam**	**30.57**	**344**	P		P	P	17 32 26.2	+0.8
	0.6nm,0.5s,baz=170,slow=9.0,SNR=3.9								
JCJ	**Chichijima**	**39.25**	**77**	LR		LR	LR	17 48 53.2	
	comp=Z,21nm,21.9s,baz=114,slow=35								
WRA	**Warramunga Arr**	**56.78**	**139**	P		P	P	17 35 56.6	+0.2
	0.6nm,0.8s,baz=328,slow=7.5,SNR=1.4								
ASAR	**Alice Springs**	**59.43**	**142**	P		P	P	17 36 14.8	-0.1
	0.4nm,0.9s,baz=335,slow=6.4,SNR=2.5								

*ISK **25** 17:34:01.8, 40°.40N×26°.08E, h12km, ML2.5/20*
*DDA **25** 17:34:02.0, 40°.38N×26°.11E, h13km±3km, ML2.5*
*THE **25** 17:34:02.1, 40°.40N×26°.13E, h16km±1km, ML2.2/3, Error ellipse: s-maj=1.5km s-min=0.4km az=256.0*

ATH 25 17:34:00.3, 40°.21N×25°.12E, h27km±1km, **ML2.4/5, Error ellipse: s-maj=2.1km s-min=1.4km az=74.0, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
LIA	**Limnos Island**	**0.32**	**171**			P	Pb	17 34 08.0	+0.3
LIA						AML	AML	17 34 12.6	
	comp=E,3110μm,0.3s								
LIA						S	Sb	17 34 12.7	0.0
LIA						AML	AML	17 34 13.5	
	comp=N,1574μm,0.4s								
SMTH	**Samothraki Isl**	**0.41**	**50**			P	Pb	17 34 09.4	+0.4
SMTH						S	Sn	17 34 16.3	-0.9
SMTH						AML	AML	17 34 19.8	
	comp=E,530μm,0.1s								
SMTH						AML	AML	17 34 20.6	
	comp=N,672μm,0.1s								
THAS	**Thassos island**	**0.50**	**322**			P	Pb	17 34 11.0	+0.4
GADA	**Gvkgeada**	**0.60**	**92**			P	Pb	17 34 08.1	-4.0
GADA						S	Sb	17 34 12.3	-7.9
	comp=N,752nm,0.2s								
GADA	**Gvkgeada**	**0.60**	**92**			PG	Pb	17 34 07.9	-4.2
GADA						SG	Sb	17 34 12.1	-8.1
GOKA	**anakkale-Gk**	**0.60**	**92**		*iP*	P	Pb	17 34 07.8	-4.4
GOKA					*iS*	S	Sb	17 34 11.6	-8.8
GOKA						IAML		17 34 13.0	
	comp=N,2μm,0.2s								
EFSA	**Agios Efstrati**	**0.68**	**189**			P	Pn	17 34 14.4	+0.3
BOZC	**Bozcaada**	**0.81**	**117**			PG	Pb	17 34 12.9	-2.7
BOZC	**Bozcaada**	**0.81**	**117**		*iP*	P	Pb	17 34 13.0	-2.6
BOZC					*iP*	P	Pn	17 34 13.2	-2.6
BOZC					*iS*	S	Sb	17 34 20.5	-5.6
OUR	**Ouranopolis**	**0.88**	**278**			P	Pb	17 34 18.1	+1.1
KAVA	**Kavala**	**0.91**	**330**			P	Pb	17 34 18.6	+1.2
ENEZ	**Enez**	**0.94**	**56**			P	Pn	17 34 09.3	-8.5
ENEZ						S	Sb	17 34 14.5	-16
	comp=N,788nm,0.3s								
ENEZ	**Enez**	**0.94**	**56**			PG	Pn	17 34 09.1	-8.7
ENEZ						SG	Sb	17 34 14.3	-16
RDO	**Rodhopi**	**0.99**	**19**			P	Pn	17 34 18.2	-0.1
RDO	**Rodhopi**	**0.99**	**19**			P	Pn	17 34 18.3	-0.1
RDO						AML	AML	17 34 33.9	
	comp=N,291μm,0.2s								
RDO						AML	AML	17 34 34.1	
	comp=E,315μm,0.2s								
RDO	**Rodhopi**	**0.99**	**19**			PG	Pn	17 34 18.1	-0.2
EZN	**Ezine**	**1.00**	**112**			P	Pn	17 34 13.8	-4.7
EZN						S	Sb	17 34 22.2	-10
	comp=E,165nm,0.1s								
EZN	**Ezine**	**1.00**	**112**			PG	Pn	17 34 13.5	-5.0
GELI	**Tayfur-Gelibol**	**1.05**	**79**			PG	Pn	17 34 08.5	-11
SIGR	**SIGRI**	**1.15**	**150**			P	Pn	17 34 22.6	+1.1
SIGR						S	Sb	17 34 37.7	+1.8
SIGR						AML	AML	17 34 42.4	
	comp=E,307μm,0.3s								
SIGR						AML	AML	17 34

CTAO IAmb IAmb 17 55 43.6
comp=Z,22nm,1.0s
PMG Port Moresby 35.27 283 P P 17 55 58.0 -0.2
comp=Z,40nm,0.7s,baz=75,slow=4.6,SNR=10
PMG Port Moresby 35.27 283 P P 17 55 57.6 -0.6
TOO Toolangi 35.89 234 P P 17 56 03.7 +0.7
TOO IAmb IAmb 17 56 04.3
comp=Z,9.9nm,0.9s
STKA Stephens Creek 37.77 244 P P 17 56 19.0 +0.5
comp=Z,2.9nm,0.5s,baz=85,slow=11,SNR=13
STKA Stephens Creek 37.77 244 IAmb IAmb 17 56 19.4
comp=Z,0.8nm,0.7s
JAY Jayapura 43.97 288 P P 17 57 08.2 +0.1
comp=Z,44nm,0.5s,baz=143,slow=4.8,SNR=81
WR0 Warramunga Arr 44.36 262 P P 17 57 10.1 -1.0
WR0 IAmb IAmb 17 57 11.3
comp=Z,10.0nm,0.3s
AS31 Alice Springs 44.48 257 P P 17 57 11.6 -0.3
ASAR Alice Springs 44.48 257 P P 17 57 11.7 -0.3
comp=Z,19nm,0.5s,baz=91,slow=7.8,SNR=660
ASAR PcP **PcP 17 58 44.0 +0.1**
comp=Z,4.2nm,0.7s,baz=106,slow=4.1,SNR=12
ASAR ScP **ScP 18 01 47.4 +2.2**
comp=Z,1.0nm,0.9s,baz=103,slow=4.0,SNR=4.8
ASAR S **S 18 03 05.2 -3.2**
comp=Z,3.1nm,0.8s,baz=94,slow=17,SNR=17
WB0 Warramunga Arr 44.53 262 P P 17 57 11.3 -1.0
WB2 Warramunga Arr 44.54 262 P P 17 57 10.8 -1.7
WB2 IAmb IAmb 17 57 12.4
comp=Z,18nm,0.9s
WRAB Tennant Creek 44.55 262 P P 17 57 11.6 -0.8
WRAB IAmb IAmb 17 57 12.3
comp=Z,16nm,0.9s
WRA Warramunga Arr 44.55 262 P P 17 57 11.5 -1.1
comp=Z,6.9nm,0.3s,baz=97,slow=7.5,SNR=239
MTN Manton Dam 49.11 271 P P 17 57 46.0 -1.0
KNRA Kununurra 50.61 266 P P 17 57 57.5 -0.4
KNRA IAmb IAmb 17 57 58.3
comp=Z,19nm,0.6s
FITZ Fitzroy Crossi 52.98 262 P P 17 58 15.1 0.0
comp=Z,5.0nm,0.5s,baz=99,slow=3.7,SNR=53
FITZ Fitzroy Crossi 52.98 262 P P 17 58 15.1 0.0
SIJI Sorong 53.17 285 P P 17 58 16.3 -0.2
comp=Z,69nm,0.7s,baz=96,slow=5.9,SNR=60
SOEI Soe 56.44 272 P P 17 58 40.0 +0.5
comp=Z,88nm,0.8s
SOEI Soe 56.44 272 P P 17 58 40.3 +0.8
LBMI Labuha 56.69 283 P P 17 58 41.5 +0.4
comp=Z,757nmcomp=Z,34nm,0.9s
BATI Baumata 56.87 271 P P 17 58 42.5 +0.2
comp=Z,18nm,0.6s,baz=261,slow=0.6,SNR=7.9
TNTI Ternate 57.39 285 P P 17 58 45.4 -0.5
TNTI IAmb IAmb 17 58 46.6
comp=Z,30nm,0.9s
VNDA Vanda 57.96 185 P P 17 58 50.7 +2.0
comp=Z,3.4nm,0.6s,baz=358,slow=8.2,SNR=36
VNDA Vanda 57.96 185 P P 17 58 50.8 +2.1
EDFI Ende, Flores 59.17 272 P P 17 58 57.4 -0.6
comp=Z,15nm,0.8s
LUWI Luwuk 60.87 281 P P 17 59 10.4 +1.2
comp=Z,44nm,1.0s
LUWI Luwuk 60.87 281 P P 17 59 09.2 0.0
LUWI IAmb IAmb 17 59 10.3
comp=Z,40nm,1.0s
APSI Ampana 61.95 280 P P 17 59 16.7 +0.4
comp=Z,24nm,1.0s
KCP Kidapawan 62.16 290 ⇓*i*P **P 17 59 17.5 -0.2**
PLAI Plampang 62.82 270 P P 17 59 21.9 0.0
comp=Z,46nm,1.0s
MPSI Mapaga 64.05 281 P P 17 59 29.7 0.0
comp=Z,24nm,0.8s
JHJ Hachijo jima 2 66.76 322 P P 17 59 45.9 -0.4
comp=Z,61nm,0.5s,baz=242,slow=23,SNR=7.9
QSPA South Pole Qui 69.63 180 P P 18 00 04.8 +1.4
QSPA IAmb IAmb 18 00 05.7
comp=Z,21nm,0.8s
MJAR Matsushiro Arr 70.13 324 P P 18 00 06.0 -0.6
comp=Z,5.4nm,0.5s,baz=138,slow=6.0,SNR=37
MAJO Matsushiro 70.13 324 P P 18 00 06.6 -0.1
MAJO IAmb IAmb 18 00 07.3
comp=Z,6.6nm,0.6s
MAT Matsushiro 70.13 324 P P 18 00 06.3 -0.4
MJB9 Matsu-Tunnel 70.13 324 P P 18 00 06.6 -0.1
TPUB Ta-pu 73.90 303 P P 18 00 27.2 -1.6
TPUB IAmb IAmb 18 00 28.7
comp=Z,24nm,0.9s
YSS Yuzh-Sakhalins 75.82 333 P P 18 00 39.5 +0.5
YSS IAmb IAmb 18 00 40.8
comp=Z,32nm,1.1s
PEA0B Petropavlovsk- 76.20 345 P P 18 00 40.4 -0.6
PEA0B IAmb IAmb 18 00 41.8
comp=Z,28nm,0.9s
PETK Petropavlovsk- 76.20 345 P P 18 00 40.8 -0.2
comp=Z,12nm,0.7s,baz=142,slow=6.4,SNR=25
KSRS Korea Array 76.81 319 P P 18 00 45.2 +0.6
comp=Z,1.9nm,0.8s,baz=131,slow=6.3,SNR=6.5
USRK Ussuriysk Ar. 78.88 326 P P 18 00 56.9 +1.2
comp=Z,6.5nm,0.8s,baz=116,slow=3.0,SNR=10
NJ2 Nanjing 79.80 310 *eP* **P 18 01 01.0 +0.2**
NJ2 pmax pmax
comp=Z,11nm,0.5s
RGRI Rengat 80.14 273 P P 18 01 14.6 +12
YBH Yreka Blue Hor 80.28 39 P P 18 01 04.5 +1.2
comp=Z,5.6nm,0.7s,baz=208,slow=2.2,SNR=21
YBH Yreka Blue Hor 80.28 39 P P 18 01 05.4 +2.1
PNTR Pine Nut 80.57 42 P P 18 01 07.3 +2.3
PNTR IAmb IAmb 18 01 07.9
comp=Z,7.8nm,0.7s
YERR Yerington 80.74 42 P P 18 01 06.0 +0.1
NVAR Mina Array Bea 81.02 43 P P 18 01 09.0 +1.6
comp=Z,1.6nm,0.7s,baz=227,slow=9.5,SNR=15
PAHR Pah Rah Range 81.07 42 P P 18 01 08.4 +0.9
NV11 Mina Array Sit 81.12 43 P P 18 01 08.3 +0.5
KVN Kaiserville 81.50 43 P P 18 01 09.9 +0.1
MOD Modoc Plateau 81.81 40 P P 18 01 12.1 +0.8
K05A Summer Lake 81.95 39 P P 18 01 13.8 +1.8
K05A IAmb IAmb 18 01 14.3
comp=Z,9.6nm,0.6s
PINE Pine Mountain 82.57 38 P P 18 01 16.8 +1.7
PINE IAmb IAmb 18 01 17.8
comp=Z,9.9nm,0.8s
WVOR Wild Horse Val 83.12 40 P P 18 01 18.1 +0.2
MA2 Magadan 83.71 345 P P 18 01 19.4 -0.8
comp=Z,9.0nm,0.7s,baz=105,slow=20,SNR=2.2
SCM Sheep Creek Mo 85.59 14 P P 18 01 28.5 -0.9
YAH Yahtse 85.74 17 P P 18 01 31.4 +1.1
YAH IAmb IAmb 18 01 31.9
comp=Z,13nm,0.9s
BJI Beijing 85.81 315 P P 18 01 30.5 -0.3
BJI pmax pmax
comp=Z,6.0nm,0.9s
F10A Beach Ranch, E 85.99 38 P P 18 01 31.7 0.0
F10A IAmb IAmb 18 01 33.4
comp=Z,9.8nm,0.8s
GLB Gilahina Butte 86.10 16 P P 18 01 31.8 0.0
GLB IAmb IAmb 18 01 32.4
comp=Z,5.2nm,0.7s
BALM Baldy 86.14 17 P P 18 01 32.5 +0.4
BALM IAmb IAmb 18 01 33.3
comp=Z,7.1nm,0.8s
SEY Seymchan 86.30 347 P P 18 01 32.7 +0.1
comp=Z,15nm,0.6s,baz=144,slow=5.6,SNR=40
BARN Barnard Glacie 86.34 17 P P 18 01 32.7 -0.5
BARN IAmb IAmb 18 01 34.6
comp=Z,10nm,0.9s
TRF Thorofare Moun 86.40 12 P P 18 01 33.2 -0.1
RND Reindeer 86.65 13 P P 18 01 34.6 +0.2
SYO Syowa Base 86.77 193⇑*e*P **P 18 01 33.2 -1.7**
SYO Syowa Base 86.77 193⇑*e*PcP **PcP 18 01 35.8 -0.7**
TX31 Lajitas Ar. Si 87.07 57 P P 18 01 38.4 +1.2
TX31 IAmb IAmb 18 01 39.9
comp=Z,6.3nm,0.9s
TXAR Lajitas Array 87.07 57 P P 18 01 39.1 +1.9
comp=Z,1.6nm,0.8s,baz=220,slow=6.9,SNR=21
WRH Wood River Hil 87.76 13 P P 18 01 39.2 -0.2
DOT Dot Lake 87.92 14 P P 18 01 40.5 +0.2
DOT IAmb IAmb 18 01 41.3
comp=Z,6.2nm,1.0s
HDA Harding Lake 87.94 13 P P 18 01 40.0 -0.3
MCMT McKenzie Canyo 87.94 40 P P 18 01 39.3 -1.9
CCB Clear Creek Bu 87.97 13 P P 18 01 40.0 -0.4
SNAA Sanae 88.07 178 P P 18 01 40.7 -0.4
SNAA Sanae 88.07 178 P P 18 01 40.7 -0.4
comp=Z,1.0nm,0.6s,baz=208,slow=8.4,SNR=7.4
SNAA Sanae 88.07 178 P P 18 01 39.2 -2.0

VNA3 Neumayer Olymp 88.20 176 P P 18 01 41.7 0.0
ILAR Eielson Array 88.27 13 P P 18 01 41.2 -0.7
comp=Z,6.1nm,0.9s,baz=226,slow=5.7,SNR=31
ILAR pP **pP 18 03 40.0 +1.4**
comp=Z,0.7nm,0.9s,baz=238,slow=6.1,SNR=4.0
VNA2 Neumayer--Watz 88.65 177 P P 18 01 43.7 0.0
baz=191,slow=3.6
VNA1 Neumayer--Stat 88.87 177 P P 18 01 45.1 +0.4
PDAR Pinedale Array 88.96 43 P P 18 01 46.5 +0.6
comp=Z,1.3nm,0.6s,baz=204,slow=3.9,SNR=11
HHC Hu-ho-hao-te 89.27 314 *eP* **P 18 01 46.8 -0.4**
HHC pmax pmax
comp=Z,9.0nm,0.9s
HHC pmax pmax
comp=Z,36nm,7.6s
DAWY Dawson 89.42 16 P P 18 01 47.8 +0.5
DAWY IAmb IAmb 18 01 48.6
comp=Z,9.5nm,0.8s
EGAK Eagle 89.56 15 P P 18 01 47.5 -0.4
EGAK IAmb IAmb 18 01 49.0
comp=Z,10nm,0.8s
CMAR Chiang Mai Arr 90.04 290 P P 18 01 52.5 +1.3
comp=Z,4.4nm,0.9s,baz=117,slow=2.8,SNR=33
CHTO Chiang Mai 90.17 290 P P 18 01 51.8 +0.1
CHTO IAmb IAmb 18 01 53.6
comp=Z,8.1nm,0.7s
LZH Lanzhou 92.69 307 ⇑**P P 18 02 03.5 +0.3**
LZH pP pP 18 04 02.0 +1.6
LZH sP sP 18 04 54.5 +0.7
LZH PP **PP 18 05 58.3 +3.6**
LZH pmax pmax
comp=Z,21nm,1.4s
LZH pmax pmax
comp=Z,85nm,6.3s
INK Inuvik 94.23 15 P P 18 02 09.2 0.0
comp=Z,1.8nm,0.8s,baz=229,slow=2.8,SNR=5.4
SONM Songino Array 95.67 319 P P 18 02 16.1 -0.3
comp=Z,0.6nm,0.5s,baz=113,slow=3.4,SNR=4.2
KURBB Kurchatov Arra 113.97 317 PKiKP **PKiKP 18 07 24.8 -1.2**
comp=Z,1.1nm,0.7s,baz=107,slow=2.0,SNR=12
KSH Kashi 114.81 305 PKP **PKiKP 18 07 29.5 +1.3**
BVAR Borovoye Array 119.00 320 PKP **PKPdf 18 07 34.7 -0.9**
comp=Z,2.2nm,0.4s,baz=116,slow=2.0,SNR=20
ARU Arti 125.12 325 PKP **PKPdf 18 07 47.1 -0.1**
comp=Z,1.1nm,0.4s,baz=81,slow=6.6,SNR=5.9
ARU Arti 125.12 325 PKPdf 18 07 47.2 0.0
AKTO Aktyubinsk 126.98 318 PKP **PKPdf 18 07 50.4 -0.6**
comp=Z,2.3nm,0.8s,baz=62,slow=2.4,SNR=7.4
GEYT Alibeck 128.71 303 PKP **PKPdf 18 07 54.8 0.0**
comp=Z,1.1nm,0.6s,baz=318,slow=2.0,SNR=4.6
ARCES ARCESS Array B 128.85 350 PKP **PKPdf 18 07 53.3 -0.8**
comp=Z,1.8nm,0.6s,baz=329,slow=1.0,SNR=10
FINES FINESS Array B 135.70 344 PKP **PKPdf 18 08 07.3 +0.2**
comp=Z,2.3nm,0.7s,baz=50,slow=3.0,SNR=10
FINES SKPbc **SKPbc 18 10 49.5 +1.0**
comp=Z,0.8nm,0.5s,baz=48,slow=2.8,SNR=5.2
NB2 NORSAR Subarra 138.91 353 PKP PKPdf 18 08 05.4 -7.7
comp=Z,5.1nm,1.2s,baz=16,slow=3.2
NOA NORSAR Array B 138.91 353 PKhKP PKPdf 18 08 03.8 -9.3
comp=Z,1.6nm,0.9s,baz=16,slow=4.6,SNR=4.2
NOA SKPbc **SKPbc 18 10 58.2 +0.3**
comp=Z,1.7nm,0.9s,baz=17,slow=4.6,SNR=3.4
AKASG Malin Array Be 142.94 331 PKhKP **PKPdf 18 08 17.1 -3.4**
comp=Z,21nm,0.5s,baz=42,slow=4.4,SNR=160
AKASG SKPbc **SKPbc 18 11 08.9 +0.5**
comp=Z,0.6nm,0.5s,baz=42,slow=2.5,SNR=5.4
AKBB Malin Array Si 142.94 331 PKPdf 18 08 17.4 -3.2
SORM Soroca 145.12 329 ⇓**P PKPdf 18 08 24.6 +0.1**
MILM Milestii Mici 145.71 327 ⇓**P PKPbc 18 08 26.4 -0.6**
LEOM Leova 146.30 326 ⇑**P PKPbc 18 08 27.2 +0.7**
BR131 Keskin Array S 146.76 312 PKPbc 18 08 30.2 -0.2
BRTR Keskin Array B 146.76 312 PKPbc **PKPbc 18 08 29.9 -0.6**
comp=Z,6.4nm,0.6s,baz=135,slow=4.0,SNR=30
TLCR 146.83 324 ⇓**P PKPbc 18 08 30.1 -0.1**
BURAR Bucovina Array 146.98 331 ⇓**P PKPbc 18 08 31.3 +0.6**
GHRR 147.01 327 ⇑**P PKPbc 18 08 31.5 +0.9**
BIZ Bicaz 147.05 329 ⇑**P PKPbc 18 08 31.0 +0.2**
JURR Jurilovca 147.06 324 ⇑**P PKPbc 18 08 29.8 -1.0**
TESR Tescani 147.08 328 ⇑**P PKPbc 18 08 30.9 0.0**
CFR Carcaliu 147.20 325 ⇓**P PKPbc 18 08 30.8 -0.3**
TOPG Topolog 147.26 324 ⇓**P PKPbc 18 08 31.5 +0.1**
ODBI Odobesti 147.39 327 ⇓**P PKPab 18 08 36.6 +1.3**
VRI Vrincioaia 147.49 327 ⇑**P PKPbc 18 08 32.0 0.0**
TIRR Tirgusor 147.51 324 ⇑**P PKPbc 18 08 31.3 -0.6**
PLOR Plostina 147.54 327 ⇑**P PKPbc 18 08 31.9 -0.2**
HARR Harsova 147.63 324 ⇑**P PKPbc 18 08 32.5 +0.2**
MFTR Murfatlar 147.68 323 ⇑**P PKPbc 18 08 32.5 0.0**
BMR Baia Mare 147.71 332 ⇓**P PKPbc 18 08 32.5 +0.1**
BISRR Bisoca 147.71 327 ⇑**P PKPbc 18 08 32.0 -0.7**
TRPA Tarpa 147.76 334 ⇑**P PKPbc 18 08 32.9 +0.3**
ARCR ARCALIA 147.77 331 ⇑**P PKiKP 18 08 33.9 -0.2**
MANR Mangalia 147.81 322 ⇓**P PKPbc 18 08 33.4 +0.6**
OSTC Ostas 147.90 343⇑*e*PKP **PKPbc 18 08 33.4 +0.5**
OSTC *e*PKPAB **PKPab 18 08 38.1 +0.8**
CHVC Chvalec 147.91 343⇑*e*PKP **PKPbc 18 08 33.4 +0.5**
CHVC *e*PKPAB **PKPab 18 08 37.7 +0.3**
OKC Ostrava-Krasne 147.96 340⇑*e*PKP **PKPbc 18 08 33.2 +0.2**
CLL Collm 147.99 347⇓*i*PKPbc **PKiKP 18 08 34.2 -0.2**
comp=Z,29nm,0.9s
CLL ⇑*i*PKPab **PKPab 18 08 38.3 +0.7**
comp=Z,17nm,0.7s
CLL *ep*PKPbc **pPKPdf 18 10 33.0 -1.8**
UPC Upice 148.00 343⇑*e*PKP **PKPbc 18 08 33.5 +0.4**
UPC *e*PKPAB **PKPab 18 08 37.4 -0.3**
DPC Dobruska-Polom 148.05 343⇑*e*PKP **PKPbc 18 08 33.4 +0.1**
DPC *e*PKPAB **PKPab 18 08 38.5 +0.5**
ISR Istrita 148.09 326 ⇓**P PKPbc 18 08 33.5 0.0**
MLR Muntele Rosu 148.14 327 ⇑**P PKPbc 18 08 33.9 +0.1**
KRLC Kraliky 148.17 342⇑*e*PKP **PKPbc 18 08 33.7 +0.1**
KRLC *e*PKPAB **PKPab 18 08 38.5 0.0**
BRG Berggiesshubel 148.19 346 *e*PKP **PKPdf 18 08 29.8 +0.3**
comp=Z,2.5nm,1.2s
BRG Berggiesshubel 148.19 346 *i* PKP **PKPbc 18 08 33.6 +0.1**
comp=Z,13nm,0.9s
BRG Berggiesshubel 148.19 346 *i* PKP **PKPab 18 08 38.2 -0.3**
comp=Z,14nm,0.8s
PVCC Panska Ves 148.36 345⇑*e*PKP **PKPbc 18 08 34.2 +0.2**
PVCC *e*PKPAB **PKPab 18 08 39.3 +0.1**
LEHL Lehliu 148.37 325 ⇓**P PKPbc 18 08 34.5 +0.4**
CJR Cluj-Napoca 148.39 331 ⇓**P PKPbc 18 08 34.2 -0.1**
DRGR 148.73 332 ⇓**P PKPbc 18 08 34.9 -0.2**
CSS Mathiatis 148.82 304 PKPbc 18 08 35.4 -0.2
PRU Pruhonice 148.86 344⇑*e*PKP **PKPbc 18 08 35.5 +0.3**
PRU *e*PKPAB **PKPab 18 08 41.7 +0.4**
ARR Arges 148.89 328 ⇑**P PKiKP 18 08 36.4 -0.1**
NKC Novy Kostel 149.12 347⇑*e*PKP **PKPbc 18 08 36.3 +0.4**
NKC *e*PKPAB **PKPab 18 08 42.6 +0.2**
LOT Lotru 149.25 329 ⇓**P PKPbc 18 08 35.9 -0.6**
PBCC Pribram 149.28 345⇑*e*PKP **PKPbc 18 08 35.8 -0.5**
PBCC *e*PKPAB **PKPab 18 08 42.7 -0.3**
DEV Deva 149.33 331 ⇑**P PKPbc 18 08 36.4 -0.1**
MEM Membach 149.72 355 PKiKP **PKPbc 18 08 37.3 0.0**
GZR Gura Zlata 149.76 330 ⇑**P PKPbc 18 08 37.2 -0.4**
BSTI Sart Tilman 149.78 355 PKiKP **PKPbc 18 08 37.1 -0.3**
BSTI PKPab **PKPab 18 08 44.2 -0.9**
KHC Kasperske Hory 149.89 345⇑*e*PKP **PKPbc 18 08 37.5 -0.3**
KHC *e*PKPAB **PKPab 18 08 45.5 -0.1**
ELND Elena 149.90 324 ⇑**P PKPbc 18 08 36.6 -1.4**
SNF Seneffe 149.94 357 PKPdf **PKPdf 18 08 32.2 -0.1**
SNF PKiKP **PKPbc 18 08 37.8 0.0**
SNF PKPab **PKPab 18 08 45.5 -0.2**
BMRD Maredsous 150.12 356 PKiKP **PKPbc 18 08 38.4 +0.2**
BMRD PKPab **PKPab 18 08 46.1 -0.4**
GERES GERESS Array B 150.13 344 PKPbc **PKPbc 18 08 38.3 -0.1**
comp=Z,4.6nm,0.9s,baz=40,slow=2.3,SNR=24
GERES PKPab **PKPab 18 08 46.7 0.0**
comp=Z,2.3nm,0.7s,baz=24,slow=4.5,SNR=8.7
PLVB Pleven 150.28 325 ⇑**P PKPbc 18 08 38.0 -0.8**
HERR Herculane 150.31 330 ⇑**P PKPbc 18 08 38.4 -0.5**
DOU Dourbes 150.33 357 PKiKP **PKPbc 18 08 38.9 +0.2**
DOU PKPab **PKPab 18 08 45.0 -2.4**
CONA Conrad Observa 150.35 341 *i* PKiKP **PKPbc 18 08 39.3 +0.3**
comp=Z,6.7nm,0.7s,SNR=7.8
CONA *i* PKPab **PKPab 18 08 47.7 +0.1**
comp=Z,12nm,1.4s
WLF Walferdange 150.65 354 PKiKP **PKiKP 18 08 40.2 +0.3**
WLF PKPab **PKPab 18 08 48.4 -0.3**
MDVR Moldovita 150.72 330 ⇑**P PKPbc 18 08 39.3 -0.6**
MOA Molln 150.89 343 *i* PKPbc **PKPbc 18 08 40.1 -0.1**
comp=Z,2.2nm,0.5s
ARSA Arzberg 151.06 341 *i* PKPab **PKPab 18 08 49.4 -1.2**
comp=Z,1.3nm,0.6s
VTS Vitosha 151.54 326 ⇓**P PKPbc 18 08 41.9 -0.1**

VTS Vitosha 151.54 326 PKPbc 18 08 41.7 -0.2
SOKA Soboth 151.73 341 *i* PKPbc **PKPbc 18 08 41.2 -0.9**
comp=Z,3.5nm,0.8s
SOKA *i* PKPab **PKPab 18 08 53.3 -0.2**
comp=Z,3.1nm,0.7s
KBA Koelnbreinsper 151.85 343 *e*PKPdf **PKPdf 18 08 35.1 -0.4**
comp=Z,2.6nm,1.3s
KBA *i* PKiKP **PKPbc 18 08 42.4 -0.2**
comp=Z,3.2nm,0.5s
WATA Walderalm 152.05 346 *e*PKPbc **PKPbc 18 08 42.6 -0.3**
comp=Z,2.9nm,0.5s
WATA *i* PKPab **PKPab 18 08 54.6 -0.3**
comp=Z,14nm,1.2s
RETA Reutte 152.08 347 *i* PKiKP **PKPbc 18 08 42.9 0.0**
comp=Z,3.8nm,1.2s
RETA *i* PKPab **PKPab 18 08 54.9 0.0**
comp=Z,4.2nm,0.8s
WTTA Wattenberg 152.10 346 *e*PKiKP **PKPbc 18 08 42.9 -0.2**
comp=Z,4.8nm,0.5s,SNR=5.9
WTTA *i* PKPab **PKPab 18 08 55.6 +0.4**
comp=Z,7.3nm,0.6s
MOTA Moosalm 152.15 347 *i* PKiKP **PKPbc 18 08 42.9 -0.2**
comp=Z,5.7nm,1.0s
MOTA *i* PKPab **PKPab 18 08 55.4 +0.1**
comp=Z,11nm,1.0s
MYKA Terra Mystica 152.18 343 *i* PKPbc **PKPbc 18 08 42.3 -0.8**
comp=Z,2.9nm,0.4s
MYKA *i* PKPab **PKPab 18 08 54.8 -0.6**
comp=Z,4.9nm,0.5s
SQTA Sankt Quirin 152.24 346 *i* PKPdf **PKPdf 18 08 35.1 -1.0**
comp=Z,2.6nm,1.0s
SQTA *i* PKiKP **PKPbc 18 08 43.1 -0.2**
comp=Z,3.7nm,0.9s
ABTA Abfaltersbach 152.37 344 *i* PKPbc **PKPbc 18 08 42.6 -0.9**
comp=Z,6.0nm,0.6s,SNR=5.3
ABTA *i* PKPab **PKPab 18 08 55.9 -0.4**
comp=Z,7.4nm,0.6s
LJU Ljubljana 152.45 341 *i* PKPbc **PKPbc 18 08 43.1 -0.5**
LJU *i* PKPab **PKPab 18 08 56.0 -0.4**
DAVA Damuels 152.45 348 *i* PKiKP **PKPbc 18 08 43.6 -0.2**
comp=Z,5.6nm,1.1s
DAVA *i* PKPab **PKPab 18 08 56.0 -0.6**
comp=Z,5.1nm,0.8s
FETA Feichten 152.53 347 *i* PKiKP **PKPbc 18 08 44.0 0.0**
comp=Z,4.2nm,1.0s
FETA *i* PKPab **PKPab 18 08 57.2 +0.2**
comp=Z,5.2nm,1.0s
BOJS Bojanci 152.70 339 *i* PKPbc **PKPbc 18 08 44.0 -0.1**
BOJS *i* PKPab **PKPab 18 08 57.4 -0.2**
CTI Castel Tesino 153.24 345 PKPab 18 08 59.5 -0.5
LIT Litokhoron 153.68 323 PKPab 18 09 02.0 +0.1
SENIN Lac Senin/Sane 153.77 352 PKPab 18 09 02.7 +0.4
ESDC Sonseca Array 160.17 14 PKPab **PKPab 18 09 29.9 -0.2**
comp=Z,2.2nm,1.0s,baz=337,slow=4.0,SNR=9.6
KEST Kesra 163.43 338 PKPab **PKPab 18 09 44.0 -0.5**
comp=Z,3.8nm,0.8s,baz=197,slow=23,SNR=2.7
DBIC Dimbokro 164.81 153 PKPab **PKPab 18 09 51.4 +0.4**
comp=Z,1.9nm,0.7s,baz=151,slow=5.8,SNR=3.6
TORD Torodi Ar. Bea 172.75 178 PKP **PKPdf 18 08 55.5 -1.0**
comp=Z,0.6nm,0.8s,baz=20,slow=0.4,SNR=3.6
TORD PKPab **PKPab 18 10 25.8 -0.1**
comp=Z,1.0nm,0.7s,baz=182,slow=3.9,SNR=5.4

*IDC **25** 17:54:18.2±1.1,5.°60N×93.°38E, h0km, mb4.1/13, mb1 4.1/15, mb1mx3.9/59, mbtmp4.1/15, ML3.5/2, Error ellipse: s-maj=37.6km s-min=18.6km az=45.0*
*NEIC **25** 17:54:21.2±1.6,5.°6N±0.°1×93.°4E±0.°1, h22km±6km, mb4.3/15, Error ellipse: s-maj=23.0km s-min=10.9km az=224.0*

ISC 25 17:54:22.0±0.8,5.°6N±0.°1×93.°40E±0.°10, h29km, n43, σ0884/41, mb4.2/21, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**3.54**	**95**	Pn	**Pn**	**17 55 16.4**	**+1.3**
LHMI				Sn	**Sn**	**17 55 57.1**	**+1.0**
PBA	**Port Blair**	**6.10**	**354**	Pn	Pn	17 55 49.5	-0.8
PSI	**Prapat**	**6.15**	**116**	Pn	**Pn**	**17 55 50.3**	**-0.8**
	2.2nm,0.3s,baz=360,slow=11,SNR=5.3						
RPSI	**Rantau Prapat**	**6.20**	**117**		**Pn**	**17 55 50.3**	**-1.3**
CMAR	**Chiang Mai Arr**	**13.92**	**22**	Pn	**Pn**	**17 57 37.6**	**+0.2**
	0.1nm,0.3s,baz=219,slow=14,SNR=14						
CHTO	**Chiang Mai**	**14.24**	**22**		**Pn**	**17 57 40.8**	**-1.1**
SHL	**Shillong**	**19.95**	**356**	P	**P**	**17 58 50.5**	**-1.6**
LSA	**Lhasa**	**24.11**	**355**	P	**P**	**17 59 35.9**	**0.0**
LSA				IAmb	IAmb	17 59 38.6	
	comp=Z,5.2nm,0.6s						
H08S3	**Diego Garcia H**	**24.64**	**238**	T	T	18 25 04.3	
	baz=58,slow=76,SNR=314						
H08S2	**Diego Garcia H**	**24.64**	**238**	T	T	18 25 05.4	
	baz=58,slow=76,SNR=312						
H08S1	**Diego Garcia H**	**24.66**	**238**	T	T	18 25 06.6	
	baz=58,slow=76,SNR=292						
XAN	**Xi'an**	**31.79**	**25**	P	**P**	**18 00 43.3**	**-0.9**
XAN				pP	sP	18 00 54.5	-1.1
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XAN	**Xi'an**	**31.79**	**25**	P	**P**	**18 00 43.2**	**-0.9**
KDJ	**Kajisay**	**39.18**	**341**	P	**P**	**18 01 47.2**	**-0.5**
KDJ				IAmb	IAmb	18 01 48.9	
	comp=Z,4.0nm,1.1s						
BTK	**Batken**	**39.91**	**333**	P	**P**	**18 01 54.8**	**+1.1**
BTK				IAmb	IAmb	18 01 55.7	
	comp=Z,3.5nm,0.8s						
AAK	**Ala-Archa**	**40.56**	**338**	P	**P**	**18 01 59.6**	**+0.5**
	comp=Z,2.0nm,0.9s,baz=146,slow=5.1,SNR=5.6						
AAK	**Ala-Archa**	**40.56**	**338**	P	**P**	**18 02 00.2**	**+1.1**
AAK				IAmb	IAmb	18 02 00.8	
	comp=Z,4.5nm,1.2s						
MK31	**Makanchi Array**	**42.19**	**349**	P	**P**	**18 02 12.4**	**+0.2**
MKAR	**Makanchi Array**	**42.19**	**349**	P	**P**	**18 02 12.2**	**-0.1**
	comp=Z,2.2nm,0.7s,baz=168,slow=8.7,SNR=23						
KK31	**Karatay Array**	**42.52**	**335**	P	**P**	**18 02 15.1**	**+0.1**
SONM	**Songino Array**	**43.57**	**13**	P	**P**	**18 02 23.7**	**+0.1**
	comp=Z,2.8nm,0.8s,baz=195,slow=10,SNR=11						
GEYT	**Alibeck**	**45.46**	**320**	P	**P**	**18 02 39.7**	**+0.9**
	comp=Z,5.9nm,0.7s,baz=154,slow=8.2,SNR=14						
GYA0B	**ALIBECK ARRAY**	**45.46**	**320**	P	**P**	**18 02 40.0**	**+1.2**
KURBB	**Kurchatov Arra**	**46.61**	**347**	P	**P**	**18 02 47.8**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=169,slow=6.7,SNR=25						
KURBB				PcP	**PcP**	**18 04 21.9**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=155,slow=2.4,SNR=5.3						
KURK	**Kurchatov**	**46.68**	**347**	P	**P**	**18 02 48.3**	**+0.3**
KURK				IAmb	IAmb	18 02 49.3	
	comp=Z,4.7nm,1.1s						
KURK					**PcP**	**18 04 21.5**	**+0.1**
WB0	**Warramunga Arr**	**47.52**	**123**	P	**P**	**18 02 55.5**	**+0.4**
WB0				IAmb	IAmb	18 03 08.0	
	comp=Z,6.1nm,1.1s						
WRA	**Warramunga Arr**	**47.56**	**123**	P	**P**	**18 02 56.5**	**+1.1**
	comp=Z,2.0nm,0.6s,baz=302,slow=9.1,SNR=12						
WRAB	**Tennant Creek**	**47.57**	**123**	P	**P**	**18 02 54.4**	**-1.1**
WB2	**Warramunga Arr**	**47.57**	**123**	P	**P**	**18 02 54.6**	**-0.9**
WB2				IAmb	IAmb	18 02 57.5	
	comp=Z,3.3nm,0.7s						
ZAA0	**Zalesovo Array**	**48.75**	**353**	P	**P**	**18 03 04.7**	**+0.7**
ZALV	**Zalesovo Beam**	**48.75**	**353**	P	**P**	**18 03 04.6**	**+0.6**
	comp=Z,2.5nm,0.4s,baz=168,slow=7.6,SNR=16						
AS31	**Alice Springs**	**49.04**	**128**	P	**P**	**18 03 06.6**	**-0.2**
BVAR	**Borovoye Array**	**50.95**	**342**	P	**P**	**18 03 20.3**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=142,slow=7.5,SNR=15						
BRVK	**Borovoye**	**51.01**	**342**	P	**P**	**18 03 21.0**	**-0.3**
BRVK				IAmb	IAmb	18 03 21.6	
	comp=Z,3.6nm,1.1s						
MJAR	**Matsushiro Arr**	**51.26**	**47**	P	**P**	**18 03 24.1**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=237,slow=3.9,SNR=4.6						
ARU	**Arti**	**57.74**	**338**	P	**P**	**18 04 09.7**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=9,slow=4.6,SNR=4.6						
ARU	**Arti**	**57.74**	**338**	IAmb	IAmb	18 04 10.0	
	comp=Z,4.9nm,1.1s						
**T

*NNC **25** 18:01:55.5±5.5, 34.°44N×80.°88E, h0km, mb4.2, mpv4.1, Error ellipse: s-maj=88.6km s-min=45.6km az=83.0*
*IDC **25** 18:02:06.3±1.2, 35.°34N×81.°16E, h0km, mb3.4/6, mb1 3.5/11, mb1mx3.3/51, mbtmp3.3/11, ML3.0/5, MS2.7/2, Ms1 2.7/2, ms1mx2.3/30, Error ellipse: s-maj=31.5km s-min=17.5km az=61.0*
*BJI **25** 18:02:09.6±0.0, 35.°40N×81.°48E, h7km, mb3.6/1, ML3.6/4, Ms3.2/2*

ISC 25 18:02:08.0±1.0, 35.°4N±0.°1×81.°2E±0.°1, h10km, n15, σ1°51/13, mb3.4/6, 2C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PDGK	**Podgornoye**	**8.05**	**351**	⇑Pn	**Pn**	**18 04 07.3**	**+2.1**
	6.2nm,0.8s						
PDGK				⇓Lg	Lg	18 06 38.5	
	32nm,1.2s						
MDOK	**Medeo**	**8.42**	**339**	Pg	Pb	18 04 43.1	+9.1
	11nm,1.2s						
MDOK				Lg	Lg	18 06 46.1	
	24nm,1.0s						
AAK	**Ala-Archa**	**8.94**	**326**	Pn	**Pn**	**18 04 18.2**	**+0.8**
	0.1nm,0.3s,baz=192,slow=19,SNR=1.5						
AAK				Lg	Lg	18 06 54.7	
	0.5nm,0.3s,baz=265,slow=14,SNR=3.8						
AAK				LR	LR	18 08 26.5	
	comp=Z,43nm,20.4s,baz=148,slow=42						
MK31	**Makanchi Array**	**11.43**	**4**	⇓Pn	**Pn**	**18 04 51.2**	**-0.1**
	1.3nm,0.7s,baz=182,slow=12,SNR=7.4						
MK31				⇑Sn	Sn	18 07 14.2	+15
	1.6nm,0.6s,baz=187,slow=25,SNR=2.6						
MKAR	**Makanchi Array**	**11.43**	**4**	Pn	**Pn**	**18 04 51.5**	**+0.1**
	0.2nm,0.3s,baz=179,slow=12,SNR=6.4						
KURBB	**Kurchatov Array**	**15.36**	**354**	Pn	**Pn**	**18 05 42.3**	**-2.5**
	0.0nm,0.3s,baz=171,slow=11,SNR=1.6						
KURBB				Lg	Lg	18 10 15.7	
	0.1nm,0.3s,baz=177,slow=30,SNR=4.9						
GEYT	**Alibeck**	**18.71**	**285**	LR	LR	18 15 02.5	
	comp=Z,22nm,20.1s,baz=15,slow=42						
ZALV	**Zalesovo Beam**	**18.74**	**7**	P	**P**	**18 06 26.1**	**-0.7**
	0.2nm,0.3s,baz=183,slow=12,SNR=3.8						
BVAR	**Borovoye Array**	**19.24**	**340**	P	**P**	**18 06 32.3**	**0.0**
	0.2nm,0.3s,baz=139,slow=7.3,SNR=3.1						
SONM	**Songino Array**	**22.45**	**49**	P	**P**	**18 07 09.0**	**+1.8**
	0.3nm,0.4s,baz=248,slow=7.8,SNR=3.6						
CMAR	**Chiang Mai Arr**	**23.04**	**132**	P	**P**	**18 07 15.2**	**+1.7**
	0.8nm,1.0s,baz=315,slow=10,SNR=4.6						
FINES	**FINESS Array B**	**43.12**	**325**	P	**P**	**18 10 07.7**	**-0.5**
	2.5nm,1.0s,baz=123,slow=10,SNR=3.1						
TORD	**Torodi Ar. Bea**	**74.04**	**275**	P	**P**	**18 13 45.0**	**+0.5**
	0.5nm,0.6s,baz=35,slow=4.7,SNR=3.4						
ASAR	**Alice Springs**	**77.04**	**132**	P	**P**	**18 13 59.8**	**-1.6**
	0.3nm,0.8s,baz=302,slow=4.0,SNR=2.0						
YKA	**Yellowknife Ar**	**81.64**	**7**	P	**P**	**18 14 24.8**	**-1.1**
	0.2nm,0.7s,baz=325,slow=6.1,SNR=2.5						

*IDC **25** 18:22:27.2±0.9, 34.°10N×37.°48W, h0km, mb3.9/18, mb1 4.1/18, mb1mx3.9/42, mbtmp3.9/18, MS3.5/20, Ms1 3.5/20, ms1mx3.4/42, Error ellipse: s-maj=26.5km s-min=15.7km az=175.0*
*NEIC **25** 18:22:28.9±1.0, 34.°1N±0.°1×37.°47W±0.°10, h10km±1km, mb4.4/12, Error ellipse: s-maj=22.9km s-min=12.7km az=194.0*

ISC 25 18:22:29.0±0.7, 34.°0N±0.°1×37.°53W±0.°09, h13km, n48, σ1°08/36, mb4.0/26, MS3.6/20, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESDC	**Sonseca Array**	**27.34**	**68**	P	**P**	**18 28 14.1**	**+0.2**
	1.4nm,1.0s,baz=271,slow=8.4,SNR=7.3						
SCHQ	**Schefferville**	**29.16**	**324**	LR	LR	18 39 04.8	
	comp=Z,128nm,19.9s,baz=102,slow=34						
FRB	**Frobisher Bay**	**35.38**	**337**	P	**P**	**18 29 23.7**	**-0.3**
	3.3nm,0.9s,baz=113,slow=7.7,SNR=2.2						
CTI	**Castel Tesino**	**38.94**	**57**	P	**P**	**18 29 54.5**	**-0.3**
CLL	**Collm**	**40.10**	**49**	*eP*	**P**	**18 30 05.0**	**+0.8**
CLL				*eS*	**S**	**18 36 14.0**	**+4.1**
CLL				*eSSS*	SSS	18 39 30.0	
GERES	**GERESS Array B**	**40.39**	**53**	P	**P**	**18 30 06.4**	**-0.3**
	0.6nm,0.7s,baz=265,slow=13,SNR=5.1						
GERES				LR	LR	18 43 06.2	
	comp=Z,33nm,21.3s,baz=294,slow=31						
DBIC	**Dimbokro**	**40.65**	**125**	LR	LR	18 44 18.7	
	comp=Z,87nm,21.1s,baz=286,slow=32						
BRG	**Berggiesshubel**	**40.66**	**50**	*eP*	**P**	**18 30 05.6**	**-3.2**
	3.6nm,1.2s						
NB2	**NORSAR Subarra**	**41.15**	**34**	P	**P**	**18 30 12.5**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=254,slow=9.3						
NOA	**NORSAR Array B**	**41.15**	**34**	P	**P**	**18 30 12.3**	**-0.5**
	comp=Z,4.6nm,1.0s,baz=253,slow=8.7,SNR=4.8						
NOA				LR	LR	18 45 01.1	
	comp=Z,23nm,18.6s,baz=265,slow=33						
TORD	**Torodi Ar. Bea**	**41.18**	**111**	P	**P**	**18 30 13.8**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=307,slow=7.6,SNR=2.8						
TORD				LR	LR	18 45 43.8	
	comp=Z,153nm,19.6s,baz=295,slow=34						
ULM	**Lac du Bonnet**	**45.02**	**309**	LR	LR	18 48 57.3	
	comp=Z,178nm,19.6s,baz=105,slow=35						
ECSD	**EROS Data Cent**	**46.14**	**300**	P	**P**	**18 30 52.1**	**-1.1**
ECSD				IAmb	IAmb	18 30 54.8	
	comp=Z,3.3nm,0.9s						
H10N2	**ASCENSION HYDR**	**47.00**	**148**	T	T	19 20 52.9	
	baz=334,slow=75,SNR=167						
H10N3	**ASCENSION HYDR**	**47.01**	**148**	T	T	19 20 54.2	
	baz=334,slow=75,SNR=156						
H10N1	**ASCENSION HYDR**	**47.02**	**148**	T	T	19 20 54.3	
	baz=334,slow=75,SNR=158						
H10S3	**ASCENSION HYDR**	**47.93**	**149**	T	T	19 22 04.5	
	baz=334,slow=74,SNR=392						
H10S2	**ASCENSION HYDR**	**47.94**	**149**	T	T	19 22 05.5	
	baz=246,slow=74,SNR=240						
FINES	**FINESS Array B**	**48.26**	**35**	P	**P**	**18 31 09.1**	**-0.3**
	comp=Z,3.9nm,0.9s,baz=258,slow=9.0,SNR=7.4						
FINES				LR	LR	18 49 02.2	
	comp=Z,30nm,18.4s,baz=254,slow=33						
AKASG	**Malin Array Be**	**50.34**	**49**	P	**P**	**18 31 24.2**	**-1.2**
	comp=Z,2.0nm,0.7s,baz=273,slow=7.2,SNR=12						
AKASG				LR	LR	18 51 19.7	
	comp=Z,39nm,18.1s,baz=255,slow=34						
YKA	**Yellowknife Ar**	**54.59**	**326**	P	**P**	**18 31 56.9**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=83,slow=7.6,SNR=2.7						
YKA				PcP	**PcP**	**18 32 59.1**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=84,slow=4.8,SNR=7.0						
YKA				LR	LR	18 54 14.7	
	comp=Z,131nm,20.5s,baz=0.0,slow=35						
PDAR	**Pinedale Array**	**55.56**	**302**	P	**P**	**18 32 04.8**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=76,slow=9.3,SNR=9.2						
PDAR				LR	LR	18 53 51.3	
	comp=Z,43nm,20.8s,baz=108,slow=34						
TXAR	**Lajitas Array**	**55.61**	**285**	P	**P**	**18 32 05.5**	**+0.7**
	comp=Z,0.8nm,1.0s,baz=97,slow=6.4,SNR=6.4						
TXAR				LR	LR	18 54 29.9	
	comp=Z,96nm,19.2s,baz=0.0,slow=35						
BRTR	**Keskin Array B**	**55.86**	**62**	P	**P**	**18 32 06.3**	**-0.2**
	comp=Z,1.4nm,0.9s,baz=260,slow=7.4,SNR=4.8						
BRTR				LR	LR	18 53 39.3	
	comp=Z,9.9nm,19.8s,baz=222,slow=34						
IMW	**Indian Meadow**	**56.21**	**304**	P	**P**	**18 32 10.2**	**+1.1**
IMW				IAmb	IAmb	18 32 11.3	
	comp=Z,3.5nm,0.9s						
LPAZ	**La Paz**	**57.90**	**215**	P	**P**	**18 32 22.4**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=39,slow=2.9,SNR=4.5						
LPAZ	**La Paz**	**57.90**	**215**	P	**P**	**18 32 22.1**	**+0.4**
PSUT	**Pine Spring**	**60.03**	**298**	P	**P**	**18 32 36.9**	**+1.0**
INK	**Inuvik**	**61.01**	**335**	P	**P**	**18 32 41.5**	**-0.2**
	comp=Z,1.5nm,1.0s,baz=45,slow=10,SNR=3.8						
INK				LR	LR	18 57 45.8	
	comp=Z,44nm,19.0s,baz=92,slow=35						
INK	**Inuvik**	**61.01**	**335**	IAmb	IAmb	18 32 42.6	
	comp=Z,2.2nm,0.9s						
KVN	**Kaiserville**	**62.91**	**300**	P	**P**	**18 32 55.6**	**+0.3**
KVN				IAmb	IAmb	18 33 08.4	
	comp=Z,4.7nm,1.3s						
NVAR	**Mina Array Bea**	**63.30**	**300**	P	**P**	**18 32 57.6**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=70,slow=5.4,SNR=3.8						
NVAR				LR	LR	19 00 34.1	
	comp=Z,55nm,18.7s,baz=42,slow=36						
K05A	**Summer Lake**	**63.44**	**305**	P	**P**	**18 32 59.5**	**+0.7**
PFO	**Pinyon Flats O**	**63.90**	**294**	LR	LR	19 01 37.6	
	comp=Z,56nm,18.1s,baz=37,slow=37						
ILAR	**Eielson Array**	**67.35**	**334**	P	**P**	**18 33 24.2**	**+0.7**
	comp=Z,0.6nm,0.9s,baz=75,slow=4.8,SNR=3.8						
ILAR				LR	LR	19 02 02.1	
	comp=Z,34nm,18.8s,baz=146,slow=35						
AKTO	**Aktyubinsk**	**67.86**	**43**	LR	LR	19 01 53.6	
	comp=Z,9.5nm,21.7s,baz=285,slow=35						
BRVK	**Borovoye**	**73.10**	**37**	P	**P**	**18 33 59.1**	**+0.3**
BRVK				IAmb	IAmb	18 34 00.3	
	comp=Z,3.4nm,0.9s						
GEYT	**Alibeck**	**73.96**	**55**	P	**P**	**18 34 03.6**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=289,slow=4.4,SNR=2.5						
TIXI	**Tiksi**	**74.19**	**4**	P	**P**	**18 34 05.9**	**+1.0**
TIXI				IAmb	IAmb	18 34 07.0	
	comp=Z,3.6nm,1.1s						
BILL	**Bilibino**	**76.70**	**351**	P	**P**	**18 34 19.1**	**-0.2**
KURK	**Kurchatov**	**78.63**	**36**	P	**P**	**18 34 30.7**	**+0.2**
KURK				IAmb	IAmb	18 34 31.4	
	comp=Z,5.4nm,1.0s						
ZALV	**Zalesovo Beam**	**79.25**	**31**	P	**P**	**18 34 33.1**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=309,slow=9.4,SNR=5.8						
UOSS	**Minazif**	**79.37**	**67**	P	**P**	**18 34 34.3**	**-0.7**
UOSS				IAmb	IAmb	18 34 35.0	
	comp=Z,5.0nm,0.8s						
MK31	**Makanchi Array**	**83.06**	**37**	P	**P**	**18 34 54.4**	**+0.1**
MKAR	**Makanchi Array**	**83.06**	**37**	P	**P**	**18 34 54.3**	**0.0**
	comp=Z,2.0nm,0.9s,baz=316,slow=5.1,SNR=15						
BOSA	**Boshof**	**86.06**	**128**	LR	LR	19 11 17.4	
	comp=Z,50nm,18.1s,baz=36,slow=34						
PETK	**Petropavlovsk-**	**92.23**	**351**	LR	LR	19 16 28.3	
	comp=Z,21nm,18.8s,baz=232,slow=35						
SONM	**Songino Array**	**92.34**	**23**	LR	LR	19 16 46.7	
	comp=Z,26nm,20.5s,baz=142,slow=35						

*IDC **25** 18:41:30.0±1.3, 23.°3N×144.°06E, h0km, mb3.5/7, mb1 3.6/10, mb1mx3.5/59, mbtmp3.5/10, ML3.0/3, MS3.3/2, Ms1 3.3/2, ms1mx2.6/40, Error ellipse: s-maj=51.5km s-min=19.3km az=79.0*

ISC 25 18:41:34.2±1.2, 23.°3N±0.°1×144.°0E±0.°3, h28km, n12, σ0°70/11, mb3.4/7, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**4.08**	**337**	Pn	**Pn**	**18 42 35.2**	**+0.4**
	1.8nm,0.3s,baz=280,slow=20,SNR=1.4						
JCJ				Sn	**Sn**	**18 43 22.1**	**+0.5**
	12nm,0.3s,baz=109,slow=24,SNR=8.1						
MJAR	**Matsushiro Arr**	**14.08**	**341**	Pn	**Pn**	**18 44 50.6**	**-1.1**
	0.0nm,0.3s,baz=143,slow=12,SNR=1.9						
KSRS	**Korea Array**	**19.71**	**319**	P	**P**	**18 46 01.2**	**-0.1**
	0.1nm,0.3s,baz=128,slow=11,SNR=2.3						
SIJI	**Sorong**	**27.06**	**209**	LR	LR	18 56 29.4	
	comp=Z,122nm,18.8s,baz=145,slow=33						
WRA	**Warramunga Arr**	**44.03**	**193**	P	**P**	**18 49 39.6**	**0.0**
	0.2nm,0.3s,baz=17,slow=8.8,SNR=8.4						
ASAR	**Alice Springs**	**47.74**	**193**	P	**P**	**18 50 08.7**	**-0.1**
	0.2nm,0.6s,baz=19,slow=6.2,SNR=1.8						
ZALV	**Zalesovo Beam**	**53.41**	**321**	P	**P**	**18 50 50.8**	**-0.5**
	0.4nm,0.6s,baz=86,slow=6.1,SNR=1.6						
MKAR	**Makanchi Array**	**54.16**	**312**	P	**P**	**18 50 57.2**	**+0.3**
	0.1nm,0.5s,baz=86,slow=11,SNR=2.3						
BVAR	**Borovoye Array**	**61.92**	**319**	P	**P**	**18 51 52.6**	**+1.4**
	1.3nm,0.5s,baz=96,slow=7.1,SNR=11						
KIRV	**Kirov**	**72.71**	**327**	LR	LR	19 26 36.8	
	comp=Z,10nm,19.1s,baz=241,slow=37						
YKA	**Yellowknife Ar**	**74.66**	**28**	P	**P**	**18 53 11.0**	**+0.2**
	0.2nm,0.6s,baz=294,slow=6.1,SNR=2.5						
FINES	**FINESS Array B**	**82.03**	**335**	P	**P**	**18 53 51.5**	**0.0**
	1.3nm,0.9s,baz=62,slow=6.9,SNR=1.2						

IDC 25 18:47:36.7±2.3, 6.°39S×130.°39E, h160km±35km, mb2.8/1, mb1 2.9/5, mb1mx2.7/47, mbtmp3.3/5, Error ellipse: s-maj=69.9km s-min=16.9km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.55**	**9**	P	Pn	18 48 59.1	+1.4
	0.3nm,0.3s,baz=139,slow=4.7,SNR=15						
SIJI				S	Sn	18 50 00.8	-0.3
	1.1nm,0.3s,baz=232,slow=23,SNR=12						
FITZ	**Fitzroy Crossi**	**12.53**	**201**	P	Pn	18 50 28.1	-1.5
	0.1nm,0.3s,baz=32,slow=14,SNR=1.4						
FITZ				S	Sn	18 52 36.7	-12
	0.1nm,0.3s,baz=295,slow=20,SNR=1.9						
WRA	**Warramunga Arr**	**14.01**	**164**	P	Pn	18 50 47.7	-0.7
	0.2nm,0.3s,baz=347,slow=11,SNR=16						
WRA				S	Sn	18 53 15.4	-8.5
	0.3nm,0.3s,baz=350,slow=33,SNR=9.6						
ASAR	**Alice Springs**	**17.50**	**169**	P	Pn	18 51 31.4	+0.2
	0.1nm,0.3s,baz=347,slow=10,SNR=11						
MKAR	**Makanchi Array**	**67.94**	**327**	P	P	18 58 18.1	-0.2
	0.1nm,0.5s,baz=110,slow=7.0,SNR=2.3						

*BJI **25** 18:50:48.8±0.0, 5.°43N×125.°83E, h141km, mB4.8/35, mb4.5/48*
*MAN **25** 18:50:51.8, 5.°70N×125.°90E, h127km, mb5.3, ML4.3, MS4.5*
*NEIC **25** 18:50:53.3±1.5, 5.°83N±0.°06×125.°87E±0.°09, h148km±4km, mb4.8/73, Error ellipse: s-maj=12.9km s-min=7.8km az=69.0*
*DJA **25** 18:50:53.2±0.2, 6.°N±2.°×12.°6E±.°, h129km±2km, M4.8/78, mB5.3/42, mb5.1/78, MLv5.6/11, Mw(mB)4.7/42*
*IDC **25** 18:50:53.3±0.5, 5.°85N×125.°76E, h145km±3km, mb4.2/38, mb1 4.3/40, mb1mx4.1/57, mbtmp4.6/40, MS3.3/4, Ms1 3.3/4, ms1mx2.9/35, Error ellipse: s-maj=10.9km s-min=6.6km az=72.0*
*GCMT **25** 18:50:54.3±0.4, 5.°78N±0.°02×126.°01E±0.°03, h134km±3km, MW4.9/80, Moment Tensor Solution. s21,c21; s80,c98; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr0.65±.10; Mθθ0.49±.11; Mϕϕ-1.14±.13; Mrθ-0.57±.08; Mrϕ-2.30±.11; Mθϕ1.05±.09; Best double couple: M0 2.77200×10^16^ NP1:ϕ=257.00000°, δ63.00000°, λ166.00000°. NP2: ϕ=354.00000°, δ77.00000°, λ27.00000°. Principal axes: T 2.6940, Plg28.0000°, Azm218.0000°; N 0.1550, Plg60.0000°, Azm17.0000°; P -2.8500, Plg9.0000°, Azm123.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KLM **25** 18:50:54.0, 5.°89N×126.°12E, h164km, mb5.0*

ISC 25 18:50:53.1±0.4, 5.°82N±0.°03×125.°87E±0.°04, h144km±3km, n286, σ1°41/310, mb4.7/94, 5C-9D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.32**	**332**	*eP*	**Pn**	**18 51 11.9**	**-1.2**
DDMP				*eS*	**Sn**	**18 51 26.0**	**-2.3**
GSPH	**General Santos**	**0.95**	**286**	*eP*	**Pn**	**18 51 15.5**	**-1.6**
GSPH				*i S*	**Sn**	**18 51 33.0**	**-2.2**
MATI	**Mati**	**1.19**	**19**	*eP*	**Pn**	**18 51 18.4**	**-0.7**
MATI				*eS*	**Sn**	**18 51 37.2**	**-1.7**
DAV	**Davao City (W)**	**1.28**	**347**	P	**Pn**	**18 51 19.2**	**-0.8**
	328nm,0.3s,baz=109,slow=1.8,SNR=140						
DAV				S	**Sn**	**18 51 40.2**	**-0.4**
	3μm,0.3s,baz=79,slow=22,SNR=14						
DAV	**Davao City (W)**	**1.28**	**347**	⇓*eP*	**Pn**	**18 51 15.9**	**-4.0**
DAV	**Davao City (W)**	**1.28**	**347**		**Pn**	**18 51 19.7**	**-0.3**
DMPH	**Davao City--Mi**	**1.31**	**344**	⇓*iP*	**Pn**	**18 51 19.9**	**-0.4**
DMPH				*i S*	**Sn**	**18 51 40.3**	**-0.8**
KCP	**Kidapawan**	**1.41**	**327**	⇓*iP*	**Pn**	**18 51 21.9**	**+0.5**
KCP				*i S*	**Sn**	**18 51 43.6**	**+0.5**
SKMP	**Bagumbayan, Su**	**1.49**	**298**	*eP*	**Pn**	**18 51 21.6**	**-0.5**
SKMP				*eS*	**Sn**	**18 51 43.7**	**-0.6**
CTBH	**Cotabato--PC H**	**2.13**	**311**	⇓*iP*	**Pn**	**18 51 29.3**	**-0.1**
BUKP	**Musuan**	**2.20**	**339**	*eP*	**Pn**	**18 51 30.4**	**0.0**
BUKP				*eS*	**Sn**	**18 52 00.1**	**+1.1**
BIPH	**Bislig**	**2.40**	**12**	⇓*iP*	Pn	18 51 42.7	+10
BIPH				*i S*	Sn	18 52 12.9	+10
CGP	**Cagayan de Oro**	**2.87**	**336**	⇑*iP*	**Pn**	**18 51 38.6**	**0.0**
CGP				*i S*	Sn	18 52 23.6	+10
BUTP	**Butuan**	**3.14**	**356**	*eP*	**Pn**	**18 51 42.9**	**+0.8**
BUTP				*eS*	**Sn**	**18 52 23.6**	**+3.6**
PAGZ	**Pagadian**	**3.19**	**309**	*eP*	**Pn**	**18 51 43.2**	**+0.5**
DCPH	**Dipolog City**	**3.71**	**318**	⇑*eP*	**Pn**	**18 51 50.9**	**+1.4**
ZCP	**Zamboanga City**	**3.93**	**287**	⇑*iP*	**Pn**	**18 51 53.0**	**+0.7**
ZCP				*i S*	**Sn**	**18 52 38.2**	**0.0**
SCPH	**Surigao**	**3.96**	**355**	⇑*eP*	**Pn**	**18 51 52.5**	**-0.2**
SCPH				*eS*	**Sn**	**18 52 41.5**	**+2.6**
TBP	**Tagbilaran**	**4.33**	**333**	*eP*	**Pn**	**18 52 00.8**	**+3.1**
SNPH	**Sibulan**	**4.37**	**323**	*eP*	**Pn**	**18 51 59.5**	**+1.4**
MSLP	**Maasin**	**4.40**	**347**	*eP*	**Pn**	**18 51 58.5**	**-0.1**
LLP	**Lapu-Lapu**	**4.85**	**337**	⇓*eP*	**Pn**	**18 52 07.3**	**+2.8**
LLP				*i S*	**Sn**	**18 53 03.0**	**+2.9**
CNOP	**Candoni, Negro**	**5.11**	**321**	*eP*	**Pn**	**18 52 08.6**	**+0.6**
TNTI	**Ternate**	**5.23**	**163**	P	**Pn**	**18 52 08.8**	**-0.8**
	3.5nm10μm633nm,0.9s						
TNTI	**Ternate**	**5.23**	**163**		**Pn**	**18 52 08.7**	**-0.9**
OCLP	**Ormoc**	**5.35**	**347**	*eP*	**Pn**	**18 52 12.4**	**+1.3**
OCLP				*eS*	**Sn**	**18 53 14.0**	**+2.0**
KMSI	**Cibinong**	**5.54**	**200**	P	**Pn**	**18 52 15.3**	**+1.6**
	3.0nm7μm921nm,0.9s						
GUIM	**Jordan**	**5.78**	**326**	*eP*	**Pn**	**18 52 16.8**	**0.0**
RCP	**Roxas**	**6.49**	**332**	⇓*eP*	**Pn**	**18 52 27.9**	**+1.5**
LBMI	**Labuha**	**6.62**	**166**	P	**Pn**	**18 52 27.2**	**-0.9**
	8.4nm4μm344nm,0.7s						
CUYO	**Cuyo Island**	**6.93**	**317**	*eP*	**Pn**	**18 52 32.4**	**+0.2**
LUWI	**Luwuk**	**7.48**	**204**	P	**Pn**	**18 52 41.5**	**+1.8**
	1.7nm4μm501nm,1.0s						
LUWI	**Luwuk**	**7.48**	**204**		**Pn**	**18 52 42.0**	**+2.3**
APSI	**Ampana**	**7.90**	**212**	P	**Pn**	**18 52 46.2**	**+0.9**
	2μm128nm,1.0s						
MPSI	**Mapaga**	**8.07**	**228**	P	**Pn**	**18 52 48.9**	**+1.4**
	787nm43nm,1.0s						
ENPP	**El Nido**	**8.32**	**310**	*eP*	**Pn**	**18 52 51.3**	**+0.4**
SIJI	**Sorong**	**8.55**	**141**	P	**Pn**	**18 52 52.9**	**-1.2**
	26nm,0.3s,baz=332,slow=9.3,SNR=142						
SIJI				S	**Sn**	**18 54 25.1**	**-4.0**
	6.6nm,0.3s,baz=167,slow=21,SNR=8.9						
LQP	**Lukban**	**9.28**	**333**	*eP*	**Pn**	**18 53 06.2**	**+2.3**
KKM	**Kota Kinabalu**	**9.60**	**272**	Pn	**Pn**	**18 53 10.0**	**+1.8**
LUBP	**Lubang**	**9.62**	**325**	*eP*	**Pn**	**18 53 10.4**	**+2.2**
SMKI	**Samarinda**	**10.65**	**235**	P	Pn	18 53 27.6	+5.6
	3μm169nm,1.1s						
TTSI	**Tana Toraja**	**10.68**	**215**	P	**Pn**	**18 53 24.9**	**+2.6**
	4μm355nm,1.1s						
FAKI	**Fak Fak**	**10.77**	**144**	P	**Pn**	**18 53 23.7**	**+0.2**
	3μm293nm,1.1s						
FAKI	**Fak Fak**	**10.77**	**144**		**Pn**	**18 53 22.9**	**-0.6**
RKPI	**Ransiki, Papua**	**11.04**	**131**	P	**Pn**	**18 53 28.1**	**+1.0**
	10μm249nm,1.2s						
BKB	**Balikpapan**	**11.39**	**232**	P	**Pn**	**18 53 34.1**	**+2.4**
	3μm189nm,1.4s						
BKB	**Balikpapan**	**11.39**	**232**		**Pn**	**18 53 32.0**	**+0.3**
SPSI	**Sidrap Palu**	**11.47**	**212**	P	**Pn**	**18 53 35.2**	**+2.5**
	1μm71nm,1.1s						
BNSI	**Bone**	**11.67**	**210**	P	**Pn**	**18 53 38.8**	**+3.5**
	2μm119nm,1.4s						
BBSI	**Bau Bau**	**11.70**	**196**	P	**Pn**	**18 53 38.6**	**+2.8**
	118nm14nm,1.1s						
KAPI	**Kappang**	**12.37**	**210**	P	**Pn**	**18 53 44.5**	**0.0**
	4.4nm,0.3s,baz=32,slow=7.5,SNR=29						
KAPI	**Kappang**	**12.37**	**210**		**Pn**	**18 53 45.5**	**+1.0**
BKSI	**Bulukumba**	**12.46**	**208**	P	**Pn**	**18 53 47.3**	**+1.6**
	58nm,1.1s						
SRPI	**Serui, Papua**	**12.87**	**126**	P	**Pn**	**18 53 52.0**	**+1.0**
	0.7nm,0.8s						
KBKI	**Kotabaru**	**13.26**	**227**	P	**Pn**	**18 53 57.3**	**+1.3**
	669nm80nm,1.0s						
SBUM	**Sibu**	**14.02**	**257**	P	**P**	**18 54 08.7**	**-0.2**
SBUM	**Sibu**	**14.02**	**257**	P	**P**	**18 54 09.0**	**+0.1**
SAUI	**Saumlaki**	**14.74**	**158**	Pn	**Pn**	**18 54 14.3**	**-0.4**
MMRI	**Maumere**	**14.81**	**194**	P	**Pn**	**18 54 15.6**	**0.0**
	3μm259nm,1.0s						
MMRI	**Maumere**	**14.81**	**194**		**Pn**	**18 54 15.5**	**0.0**
SMPI	**Sarmi**	**14.99**	**121**	P	**P**	**18 54 20.6**	**+0.9**
	32nm,1.0s						
EDFI	**Ende, Flores**	**15.06**	**196**	P	**Pn**	**18 54 19.0**	**+0.2**
	701nm58nm,0.8s						
SOEI	**Soe**	**15.55**	**186**	P	**P**	**18 54 26.9**	**+0.8**
	2μm194nm,1.0s						
SOEI	**Soe**	**15.55**	**186**	P	**P**	**18 54 26.5**	**+0.4**
BATI	**Baumata**	**16.07**	**188**	P	**P**	**18 54 32.0**	**+0.3**
	30nm,0.3s,baz=37,slow=0.4,SNR=32						
BATI				S	**S**	**18 57 33.6**	**+3.0**
	5.4nm,0.3s,baz=121,slow=20,SNR=5.7						
BATI	**Baumata**	**16.07**	**188**	P	**P**	**18 54 33.2**	**+1.5**
	1μm175nm,1.0s						
KSM	**Kuching**	**16.11**	**255**	P	**P**	**18 54 34.7**	**+2.5**
KSM				IAmb	IAmb	18 54 36.7	
	comp=Z,53nm,1.1s						
KSM	**K

	comp=Z,33nm,1.4s						
KULM	**Kulim**	**25.10 270**	P	**P**	**18 56 04.0**	**-0.8**
MASI	**Maura Aman, Be**	**25.22 250**	P	**P**	**18 56 11.2**	**+5.3**
	comp=Z,376nm,0.9s						
SDSI	**Sungai Dareh**	**25.31 255**	P	**P**	**18 56 08.6**	**+2.0**
	comp=Z,48nm,1.5s						
KRJI	**Kerinci**	**25.61 253**	P	**P**	**18 56 14.8**	**+5.4**
	comp=Z,83nm,1.0s						
PMG	**Port Moresby**	**26.06 125**	P	**P**	**18 56 13.5**	**+0.1**
	comp=Z,42nm,0.8s,baz=55,slow=4.7,SNR=13						
PMG	**Port Moresby**	**26.06 125**	P	**P**	**18 56 13.2**	**-0.2**
COEN	**Coen**	**26.10 139**	P	**P**	**18 56 14.1**	**+0.4**
	baz=26,SNR=19						
COEN	**Coen**	**26.10 139**	P	**P**	**18 56 13.8**	**+0.1**
PDSI	**Padang**	**26.23 256**	P	**P**	**18 56 16.7**	**+1.7**
	comp=Z,510nmcomp=Z,47nm,1.0s						
JCJ	**Chichijima**	**26.25 34**	P	**P**	**18 56 13.4**	**-1.6**
	comp=Z,24nm,0.4s,baz=254,slow=3.7,SNR=9.4						
MNSI	**Mandailing Nat**	**26.70 260**	P	**P**	**18 56 20.9**	**+1.7**
	comp=Z,844nmcomp=Z,13nm,0.8s						
NJ2	**Nanjing**	**26.91 347**	*e*P	**P**	**18 56 22.5**	**+1.7**
NJ2			pmax	pmax			
	comp=Z,111nm,0.5s						
WRAB	**Tennant Creek**	**26.92 162**	P	**P**	**18 56 20.7**	**-0.3**
WRAB			IAmb	IAmb	18 56 33.9		
	comp=Z,64nm,1.4s						
WRA	**Warramunga Arr**	**26.92 162**	P	**P**	**18 56 20.5**	**-0.5**
	comp=Z,2.4nm,0.3s,baz=343,slow=10,SNR=7.8						
WRA			S	**S**	**19 00 45.1**	**-2.4**
	comp=Z,2.5nm,0.8s,baz=328,slow=15,SNR=7.3						
WB2	**Warramunga Arr**	**26.93 162**	P	**P**	**18 56 20.6**	**-0.4**
WB2			IAmb	IAmb	18 56 34.0		
	comp=Z,61nm,1.4s						
WR0	**Warramunga Arr**	**27.00 162**	P	**P**	**18 56 21.8**	**+0.1**
WR0			IAmb	IAmb	18 56 34.6		
	comp=Z,32nm,1.0s						
PSI	**Prapat**	**27.03 265**	P	**P**	**18 56 20.4**	**-1.9**
	comp=Z,11nm,0.9s,baz=360,slow=2.5,SNR=12						
PSI			ScP	**ScP**	**19 03 04.7**	**-2.5**
	comp=Z,8.1nm,0.8s,baz=180,slow=2.6,SNR=9.9						
RPSI	**Rantau Prapat**	**27.04 265**		**ScP**	**19 03 04.7**	**-2.3**
GYA	**Guiyang**	**27.52 320**	*e*P	**P**	**18 56 27.5**	**+1.1**
GYA			pmax	pmax			
	comp=Z,10.0nm,0.8s						
SISI	**Saibi**	**27.66 256**	P	**P**	**18 56 29.0**	**+1.2**
	comp=Z,62nm,0.9s						
PSA00	**Pilbara Seismi**	**27.85 192**	P	**P**	**18 56 29.4**	**+0.1**
KRVT	**Keravat (AS076**	**27.99 110**	P	**P**	**18 56 31.9**	**+1.2**
	comp=Z,113nm,0.8s,baz=130,slow=0.6,SNR=21						
RABL	**Rabaul**	**28.08 110**	P	**P**	**18 56 32.0**	**+0.5**
KCSI	**Kotacane, Aceh**	**28.09 267**	P	**P**	**18 56 32.2**	**+0.6**
	comp=Z,36nm,0.9s						
GSI	**Gunungsitoli**	**28.58 262**	P	**P**	**18 56 36.1**	**+0.2**
	comp=Z,248nm,0.8s						
GSI	**Gunungsitoli**	**28.58 262**	P	**P**	**18 56 35.4**	**-0.6**
CMAR	**Chiang Mai Arr**	**29.11 298**	ScP	**ScP**	**19 03 13.4**	**+0.1**
	comp=Z,3.1nm,0.9s,baz=105,slow=1.5,SNR=20						
KMI	**Kunming**	**29.32 313**	P	**P**	**18 56 45.5**	**+2.9**
KMI			pmax	pmax			
	comp=Z,13nm,0.5s						
KMI			pmax	pmax			
	comp=Z,120nm,5.0s						
KMI			LR	LR			
	comp=Z,150nm,8.2s						
KMI			LR	LR			
	comp=Z,160nm,7.4s						
KMI			LR	LR			
	comp=Z,120nm,10.4s						
QIS	**Mount Isa**	**29.48 153**	P	**P**	**18 56 44.7**	**+0.9**
	baz=30,SNR=14						
MTSU	**Mount Surprise**	**29.96 143**	P	**P**	**18 56 48.9**	**+0.8**
	baz=30,SNR=11						
AS31	**Alice Springs**	**30.34 165**	P	**P**	**18 56 51.5**	**+0.2**
ASAR	**Alice Springs**	**30.34 165**	P	**P**	**18 56 51.8**	**+0.5**
	comp=Z,6.6nm,0.5s,baz=337,slow=7.5,SNR=121						
ASAR			PcP	**PcP**	**18 59 48.5**	**+0.4**
	comp=Z,3.6nm,0.7s,baz=334,slow=2.3,SNR=6.2						
ASAR			S	**S**	**19 01 42.6**	**+1.5**
	comp=Z,3.6nm,0.8s,baz=351,slow=20,SNR=10.0						
ASAR			ScP	**ScP**	**19 03 17.5**	**+0.3**
	comp=Z,2.9nm,0.9s,baz=346,slow=3.5,SNR=8.7						
GIRL	**Giralia**	**30.49 202**	P	**P**	**18 56 54.2**	**+1.6**
	baz=31,SNR=4.6						
GIRL	**Giralia**	**30.49 202**	P	**P**	**18 56 53.6**	**+1.0**
WRKA	**Warakurna**	**30.76 176**	P	**P**	**18 56 55.5**	**+0.5**
	baz=31,SNR=10						
INU	**Inuyama**	**31.13 18**	P	**P**	**18 56 58.0**	**-0.1**
INU			IAmb	IAmb	18 57 11.6		
	comp=Z,7.7nm,0.7s						
KSRS	**Korea Array**	**31.55 3**	P	**P**	**18 57 01.1**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=188,slow=10.0,SNR=9.8						
KSRS			ScP	**ScP**	**19 03 22.1**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=219,slow=2.4,SNR=4.5						
KSRS			LR	LR	19 11 17.0		
	comp=Z,21nm,19.5s,baz=190,slow=39						
XAN	**Xi'an**	**32.18 333**	P	**P**	**18 57 06.5**	**-0.9**
XAN			pmax	pmax			
	comp=Z,9.0nm,0.7s						
XAN	**Xi'an**	**32.18 333**	P	**P**	**18 57 06.8**	**-0.6**
XAN			IAmb	IAmb	18 57 26.1		
	comp=Z,11nm,0.7s						
CD2	**Chengdu**	**32.47 323**	P	**P**	**18 57 09.8**	**-0.2**
CD2			pmax	pmax			
	comp=Z,10.0nm,0.7s						
MAT	**Matsushiro**	**32.60 19**	P	**P**	**18 57 09.7**	**-1.4**
MJAR	**Matsushiro Arr**	**32.60 19**	P	**P**	**18 57 09.9**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=180,slow=8.6,SNR=5.6						
CTAO	**Charters Tower**	**32.63 143**	P	**P**	**18 57 12.8**	**+1.4**
CTAO			IAmb	IAmb	18 57 17.9		
	comp=Z,17nm,0.9s						
MEEK	**Meekatharra**	**33.02 192**	P	**P**	**18 57 15.0**	**+0.2**
	baz=33,SNR=19						
BJI	**Beijing**	**35.17 347**	P	**P**	**18 57 32.8**	**-0.3**
BJI			pmax	pmax			
	comp=Z,7.0nm,0.7s						
MORW	**Morawa**	**35.95 195**	P	**P**	**18 57 40.4**	**+0.4**
	baz=36,SNR=6.0						
MORW	**Morawa**	**35.95 195**	P	**P**	**18 57 39.9**	**0.0**
MORW			IAmb	IAmb	18 57 41.3		
	comp=Z,26nm,0.9s						
LZH	**Lanzhou**	**36.28 329**	⇑P	**P**	**18 57 43.8**	**+0.9**
LZH			pP	pP	18 58 16.0	+1.8
LZH			sP	sP	18 58 33.3	+2.5
LZH			PP	**PnPn**	**18 59 12.0**	**+2.2**
LZH			pmax	pmax			
	comp=Z,25nm,1.1s						
LZH			pmax	pmax			
	comp=Z,93nm,5.4s						
FORT	**Forrest**	**36.45 177**	P	**P**	**18 57 45.1**	**+0.9**
	baz=37,SNR=11						
FORT	**Forrest**	**36.45 177**	P	**P**	**18 57 44.6**	**+0.5**
QLP	**Quilpie**	**36.80 152**	P	**P**	**18 57 47.4**	**+0.2**
	baz=37,SNR=3.1						
HHC	**Hu-ho-hao-te**	**37.16 342**	*e*P	**P**	**18 57 52.3**	**+2.1**
HHC			pmax	pmax			
	comp=Z,22nm,0.9s						
HHC			pmax	pmax			
	comp=Z,45nm,6.2s						
KMBL	**Kambalda**	**37.17 186**	P	**P**	**18 57 51.1**	**+0.8**
	baz=37,SNR=20						
HNR	**Honiara**	**37.19 114**	P	**P**	**18 57 51.0**	**+0.3**
	comp=Z,40nm,0.6s,baz=272,slow=1.2,SNR=3.0						
HNR	**Honiara**	**37.19 114**	P	**P**	**18 57 50.3**	**-0.3**
BLDU	**Ballidu**	**37.27 193**	P	**P**	**18 57 51.4**	**+0.3**
	baz=38,SNR=20						
SHL	**Shillong**	**37.97 305**	P	**P**	**18 57 56.6**	**-0.7**
SHL			IAmb	IAmb	18 57 59.8		
	comp=Z,18nm,0.9s						
KLBR	**Kellerberrin**	**38.00 191**	P	**P**	**18 57 57.8**	**+0.6**
	baz=38,SNR=31						
USRK	**Ussuriysk Ar.**	**38.60 7**	P	**P**	**18 58 03.5**	**+1.3**
	comp=Z,3.8nm,0.7s,baz=195,slow=8.4,SNR=8.0						
MUN	**Mundaring**	**38.70 193**	P	**P**	**18 58 03.8**	**+0.7**
	baz=39,SNR=10						
RMQ	**Roma**	**39.03 146**	P	**P**	**18 58 06.8**	**+0.8**
	baz=39,SNR=4.5						
NWAO	**Narrogin (SRO)**	**39.39 191**	P	**P**	**18 58 10.0**	**+1.2**
	baz=40,SNR=20						
NWAO	**Narrogin (SRO)**	**39.39 191**	P	**P**	**18 58 08.7**	**-0.1**
	comp=Z,70nm,0.8s,baz=25,slow=7.1,SNR=26						
NWAO	**Narrogin (SRO)**	**39.39 191**	P	**P**	**18 58 09.6**	**+0.8**
EIDS	**Eidsvold**	**39.52 143**	P	**P**	**18 58 10.2**	**+0.2**
	baz=40,SNR=4.8						
EIDS	**Eidsvold**	**39.52 143**	P	**P**	**18 58 09.8**	**-0.2**
EIDS			IAmb	IAmb	18 58 19.6		
	comp=Z,9.8nm,0.8s						
BBOO	**Buckleboo**	**39.62 166**	P	**P**	**18 58 11.9**	**+1.2**
	baz=40,SNR=110						
BBOO	**Buckleboo**	**39.62 166**	P	**P**	**18 58 11.7**	**+1.0**
STKA	**Stephens Creek**	**40.37 159**	P	**P**	**18 58 18.3**	**+1.3**
	baz=40,SNR=14						
STKA	**Stephens Creek**	**40.37 159**	P	**P**	**18 58 18.2**	**+1.3**
	comp=Z,14nm,0.9s,baz=333,slow=7.3,SNR=16						
STKA			LR	LR	19 18 19.8		
	comp=Z,55nm,18.3s,baz=265,slow=41						
STKA	**Stephens Creek**	**40.37 159**	P	**P**	**18 58 17.9**	**+1.0**
GTA	**Gaotai**	**40.88 329**	*e*P	**P**	**18 58 19.5**	**-1.7**
GTA			PcP	**PcP**	**19 00 19.8**	**+0.7**
GTA			ScP	**ScP**	**19 03 56.0**	**+0.5**
GTA			ScS	**ScS**	**19 08 08.5**	**-2.5**
GTA			pmax	pmax			
	comp=Z,4.0nm,0.8s						
GTA			pmax	pmax			
	comp=Z,36nm,3.7s						
GTA			LR	LR			
	comp=Z,99nm,17.5s						
GTA			LR	LR			
	comp=Z,96nm,17.8s						
GTA			LR	LR			
	comp=Z,71nm,14.0s						
HTT	**Hallett**	**40.95 163**	P	**P**	**18 58 23.6**	**+1.9**
	baz=41,SNR=11						
CMSA	**Cobar Meteorol**	**41.69 154**	P	**P**	**18 58 29.3**	**+1.6**
	baz=42,SNR=5.5						
H11S3	**WAKE ISLAND Hy**	**41.73 69**	T	T	19 42 40.8		
	SNR=15						
H11S1	**WAKE ISLAND Hy**	**41.75 69**	T	T	19 42 43.5		
	SNR=6.3						
H11S2	**WAKE ISLAND Hy**	**41.75 69**	T	T	19 42 38.8		
	SNR=13						
TAPN	**Taplejung**	**42.11 305**	*e*P	**P**	**18 58 32.6**	**+1.0**
	comp=Z,22nm,0.7s						
ODAN	**Odare**	**42.18 304**	*e*P	**P**	**18 58 32.9**	**+0.8**
	comp=Z,38nm,0.7s						
H11N1	**WAKE ISLAND Hy**	**42.19 67**	T	T	19 43 42.0		
	baz=264,slow=75,SNR=9.2						
H11N2	**WAKE ISLAND Hy**	**42.20 67**	T	T	19 43 35.9		
	baz=264,slow=75,SNR=3.6						
H11N3	**WAKE ISLAND Hy**	**42.21 67**	T	T	19 43 36.1		
	baz=264,slow=75,SNR=10.0						
RAMN	**Ramite**	**42.87 304**	*e*P	**P**	**18 58 38.4**	**+0.7**
	comp=Z,35nm,0.8s						
JIRN	**Jiri**	**43.47 305**	*e*P	**P**	**18 58 43.3**	**+0.6**
	comp=Z,41nm,0.7s						
KLR	**Kul'dur**	**43.55 6**	P	**P**	**18 58 43.1**	**+0.7**
	comp=Z,1.4nm,0.4s,baz=197,slow=6.2,SNR=8.4						
ARMA	**Armidale**	**43.67 147**	P	**P**	**18 58 45.3**	**+1.4**
	baz=44,SNR=9.6						
ARMA	**Armidale**	**43.67 147**	P	**P**	**18 58 45.0**	**+1.1**
GUN	**Gumba**	**43.82 305**	*e*P	**P**	**18 58 46.1**	**+0.6**
	comp=Z,43nm,0.7s						
PKI	**Pulchoki**	**44.08 304**	*e*P	**P**	**18 58 47.1**	**-0.4**
PKIN	**Phulchoki**	**44.09 304**	*e*P	**P**	**18 58 47.4**	**-0.1**
KKN	**Kakani**	**44.27 304**	*e*P	**P**	**18 58 49.2**	**+0.3**
DMN	**Maman**	**44.34 304**	*e*P	**P**	**18 58 50.2**	**+0.7**
ARPS	**Mount Arapiles**	**44.92 162**	P	**P**	**18 58 55.3**	**+1.8**
	baz=45,SNR=15						
SONM	**Songino Array**	**45.06 342**	P	**P**	**18 58 54.3**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=148,slow=8.1,SNR=5.2						
SONM			PcP	**PcP**	**19 00 33.5**	**+0.5**
	comp=Z,3.8nm,0.8s,baz=169,slow=3.7,SNR=9.3						
SONM			ScP	**ScP**	**19 04 12.1**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=157,slow=4.1,SNR=3.7						
KOLN	**Koldanda**	**45.65 304**	*e*P	**P**	**18 59 00.3**	**+0.5**
	comp=Z,67nm,0.6s						
DANN	**Dangsing**	**45.72 304**	*e*P	**P**	**18 59 00.6**	**+0.2**
	comp=Z,67nm,0.7s						
PYUN	**Piuthan**	**46.27 304**	*e*P	**P**	**18 59 05.5**	**+0.9**
	comp=Z,39nm,0.5s						
DZM	**Mont Dzumac**	**48.45 126**	P	**P**	**18 59 22.5**	**+1.2**
	comp=Z,23nm,0.7s,baz=261,slow=9.1,SNR=25						
LHI	**Lord Howe Isla**	**48.80 142**	P	**P**	**18 59 23.8**	**0.0**
	baz=49,SNR=3.1						
WMQ	**Urumqi**	**50.53 325**	*e*P	**P**	**18 59 38.0**	**+1.1**
WMQ			pmax	pmax			
	comp=Z,39nm,7.3s						
WMQ			LR	LR			
	comp=Z,110nm,11.9s						
WMQ			LR	LR			
	comp=Z,190nm,21.7s						
WMQ			LR	LR			
	comp=Z,38nm,23.9s						
PETK	**Petropavlovsk-**	**53.85 23**	P	**P**	**19 00 02.9**	**+1.8**
	comp=Z,5.1nm,0.7s,baz=198,slow=8.9,SNR=5.6						
MK31	**Makanchi Array**	**55.36 325**	P	**P**	**19 00 11.7**	**-0.5**
MKAR	**Makanchi Array**	**55.36 325**	P	**P**	**19 00 11.9**	**-0.3**
	comp=Z,4.1nm,0.5s,baz=118,slow=7.2,SNR=76						
MKAR			PcP	**PcP**	**19 01 10.4**	**-0.5**
	comp=Z,3.2nm,0.5s,baz=127,slow=3.1,SNR=7.3						
MKAR			ScP	**ScP**	**19 04 55.4**	**-0.9**
	comp=Z,1.8nm,0.7s,baz=123,slow=4.3,SNR=8.0						
PRZ	**Przheval'sk**	**55.58 319**	P	**P**	**19 00 14.2**	**+0.2**
PRZ			IAmb	IAmb	19 00 15.8		
	comp=Z,8.9nm,0.8s						
NIL	**Nilore**	**55.98 307**	P	**P**	**19 00 16.3**	**-0.5**
YAK	**Yakutsk**	**56.16 2**	P	**P**	**19 00 17.6**	**+0.1**
YAK			IAmb	IAmb	19 00 24.2		
	comp=Z,15nm,0.8s						
KDJ	**Kajisay**	**56.23 318**	P	**P**	**19 00 18.4**	**-0.2**
KDJ			IAmb	IAmb	19 00 20.5		
	comp=Z,4.8nm,0.6s						
MSVF	**Nonsavu**	**56.57 116**	P	**P**	**19 00 21.8**	**+0.5**
AAK	**Ala-Archa**	**58.25 317**	P	**P**	**19 00 32.3**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=81,slow=9.8,SNR=7.5						
AAK			PcP	**PcP**	**19 01 22.2**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=113,slow=7.3,SNR=4.1						
AAK	**Ala-Archa**	**58.25 317**	P	**P**	**19 00 32.4**	**-0.4**
ZALV	**Zalesovo Beam**	**58.35 333**	P	**P**	**19 00 31.8**	**-1.3**
	comp=Z,1.7nm,0.6s,baz=129,slow=5.8,SNR=9.5						
KURBB	**Kurchatov Arra**	**59.53 327**	P	**P**	**19 00 40.6**	**-0.6**
	comp=Z,5.1nm,0.7s,baz=124,slow=6.2,SNR=70						
KURK	**Kurchatov**	**59.53 327**	P	**P**	**19 00 40.5**	**-0.7**
KURK			IAmb	IAmb	19 00 41.5		
	comp=Z,8.3nm,0.7s						
KBL	**Kabul**	**59.59 307**	P	**P**	**19 00 41.4**	**-0.8**
KBL			IAmb	IAmb	19 00 43.1		
	comp=Z,13nm,0.8s						
BTK	**Batken**	**59.87 313**	P	**P**	**19 00 43.6**	**-0.2**
BTK			IAmb	IAmb	19 00 45.6		
	comp=Z,15nm,1.2s						
GAR	**Garm**	**59.89 312**	P	**P**	**19 00 43.5**	**-0.6**
CHGR	**Chuyangaron**	**60.65 311**	P	**P**	**19 00 48.6**	**-0.6**
CHGR			IAmb	IAmb	19 00 50.7		
	comp=Z,13nm,1.0s						
KK31	**Karatay Array**	**61.13 317**	P	**P**	**19 00 51.5**	**-0.8**
KK31			IAmb	IAmb	19 00 53.4		
	comp=Z,11nm,1.5s						
HRA	**Herat**	**65.03 305**	P	**P**	**19 01 17.4**	**-1.0**
HRA			IAmb	IAmb	19 01 18.6		
	comp=Z,6.8nm,0.8s						
BVAR	**Borovoye Array**	**65.11 327**	P	**P**	**19 01 17.8**	**-0.5**
	comp=Z,2.7nm,0.7s,baz=128,slow=9.6,SNR=20						
BRVK	**Borovoye**	**65.19 327**	P	**P**	**19 01 17.8**	**-1.0**
BRVK			IAmb	IAmb	19 01 19.0		
	comp=Z,5.1nm,0.7s						
TIXI	**Tiksi**	**65.78 1**	P	**P**	**19 01 21.8**	**-0.5**
WSAR	**Wadi Sarin**	**66.82 293**	P	**P**	**19 01 29.2**	**-0.6**
	comp=Z,1.8nm,0.5s,baz=120,slow=3.1,SNR=4.4						
GEYT	**Alibeck**	**68.93 308**	P	**P**	**19 01 42.9**	**+0.1**
	comp=Z,6.3nm,0.9s,baz=157,slow=4.2,SNR=14						
GYA0B	**ALIBECK ARRAY**	**68.93 308**	P	**P**	**19 01 42.4**	**-0.4**
GYA0B			IAmb	IAmb	19 01 43.9		
	comp=Z,9.0nm,0.9s						
ARU	**Arti**	**72.72 328**	P	**P**	**19 02 03.7**	**-1.6**
ARU			IAmb	IAmb	19 02 04.8		
	comp=Z,10.0nm,0.6s						
CASY	**Casey**	**72.78 186**	P	**P**	**19 02 05.6**	**+0.3**
CASY			IAmb	IAmb	19 02 07.4		
	comp=Z,15nm,1.1s						
GAMB	**Gambell**	**72.86 24**	P	**P**	**19 02 03.7**	**-2.2**
GAMB			IAmb	IAmb	19 02 16.1		
	comp=Z,16nm,1.0s						
RAYN	**Ar Rayn**	**78.88 293**	P	**P**	**19 02 39.7**	**-1.4**
AKH	**Akhalkalaki**	**80.46 311**	P	**P**	**19 02 49.1**	**-0.3**
KBZ	**Khabaz**	**80.93 313**	P	**P**	**19 02 51.5**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=144,slow=8.1,SNR=4.9						
BPAW	**Bear Paw Mtn.**	**81.80 26**	P	**P**	**19 02 55.2**	**-0.6**
TOLK	**Toolik Lake Re**	**82.63 22**	P	**P**	**19 03 01.5**	**+1.4**
MCK	**McKinley**	**82.69 27**	P	**P**	**19 03 00.9**	**+0.4**
MCK			IAmb	IAmb	19 03 01.9		
	comp=Z,7.0nm,0.9s						
RND	**Reindeer**	**82.72 27**	P	**P**	**19 03 00.3**	**-0.3**
SML	**Sawmill**	**82.92 29**	P	**P**	**19 03 01.7**	**0.0**
SML			IAmb	IAmb	19 03 04.0		
	comp=Z,12nm,1.2s						
KLMR	**Klimovskoe**	**83.18 331**	*e*P	**P**	**19 03 00.7**	**-2.2**
KLMR			AMP		19 03 03.1		
	comp=Z,10.0nm,0.7s						
KLMR			*e*pP	**pP**	**19 03 42.0**	**+2.9**
CCB	**Clear Creek Bu**	**83.21 26**	P	**P**	**19 03 02.6**	**-0.3**
HDA	**Harding Lake**	**83.57 26**	P	**P**	**19 03 04.3**	**-0.6**
ILAR	**Eielson Array**	**83.60 26**	P	**P**	**19 03 04.4**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=236,slow=5.6,SNR=11						
RIDG	**Independent Ri**	**84.51 27**	P	**P**	**19 03 09.5**	**-0.2**
RIDG			IAmb	IAmb	19 03 14.6		
	comp=Z,12nm,1.4s						
MAW	**Mawson**	**85.41 200**	P	**P**	**19 03 13.7**	**-0.2**
	comp=Z,7.7nm,0.8s,baz=44,slow=3.3,SNR=9.0						
MAW	**Mawson**	**85.41 200**	IAmb	IAmb	19 03 15.0		
	comp=Z,1.9nm,0.8s						
VNDA	**Vanda**	**85.59 173**	P	**P**	**19 03 15.3**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=311,slow=5.7,SNR=14						
VNDA			LR	LR	19 44 28.5		
	comp=Z,26nm,18.1s,baz=262,slow=38						
ASF	**Jabal al Asfar**	**86.07 302**	P	**P**	**19 03 17.4**	**-0.8**
	comp=Z,1.2nm,0.4s,baz=110,slow=2.9,SNR=4.6						
EPYK	**Eagle Plains**	**87.69 24**	P	**P**	**19 03 24.9**	**-0.3**
EPYK			IAmb	IAmb	19 03 40.7		
	comp=Z,6.3nm,1.2s						
BRTR	**Keskin Array B**	**88.04 310**	P	**P**	**19 03 25.8**	**-1.8**
	comp=Z,2.9nm,0.8s,baz=99,slow=5.5,SNR=11						
ARCES	**ARCESS Array B**	**88.20 340**	P	**P**	**19 03 26.6**	**-1.0**
	comp=Z,3.7nm,0.7s,baz=82,slow=5.6,SNR=10						
SPITS	**Spitsbergen Ar**	**88.28 349**	P	**P**	**19 03 27.5**	**-0.3**
	comp=Z,1.7nm,0.4s,baz=81,slow=11,SNR=25						
FINES	**FINESS Array B**	**89.60 332**	P	**P**	**19 03 33.1**	**-1.1**
	comp=Z,1.9nm,0.5s,baz=64,slow=4.7,SNR=23						
AKASG	**Malin Array Be**	**89.74 321**	P	**P**	**19 03 33.1**	**-2.0**
	comp=Z,0.4nm,0.3s,baz=71,slow=4.2,SNR=4.7						
MLR	**Muntele Rosu**	**92.81 316**	P	**P**	**19 03 48.0**	**-1.7**
	comp=Z,2.3nm,0.7s,baz=272,slow=2.2,SNR=9.1						
MLR	**Muntele Rosu**	**92.81 316**	P	**P**	**19 03 47.9**	**-1.7**
MLR			IAmb	IAmb	19 03 49.3		
	comp=Z,2.9nm,0.7s						
SYO	**Syowa Base**	**94.05 201**	‖*e*P	**P**	**19 03 53.4**	**-1.2**
SYO	**Syowa Base**	**94.05 201**	‖*e*PcP	**PcP**	**19 03 56.0**	**+1.1**
HFS	**Hagfors**	**95.78 332**	P	**P**	**19 04 00.9**	**-1.8**
	comp=Z,1.4nm,0.6s,baz=106,slow=5.3,SNR=4.7						
NOA	**NORSAR Array B**	**96.55 334**	P	**P**	**19 04 04.3**	**-1.9**
	comp=Z,1.6nm,0.8s,baz=66,slow=4.6,SNR=4.1						
NOA			LR	LR	19 52 53.8		
	comp=Z,13nm,19.2s,baz=215,slow=39						
YKA	**Yellowknife Ar**	**97.96 24**	P	**P**	**19 04 12.3**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=303,slow=4.8,SNR=7.0						
YKA			PKKPbc	**PKKPbc**	**19 20 45.3**	**-3.1**
	comp=Z,0.9nm,0.8s,baz=110,slow=2.6,SNR=7.3						
BRG	**Berggiesshubel**	**99.06 323**	*e*PKP	**Pdif**	**19 04 17.2**	**-0.6**
	comp=Z,2.2nm,0.8s						
GERES	**GERESS Array B**	**99.93 322**	P	**Pdif**	**19 04 20.4**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=81,slow=8.5,SNR=3.6						
NVAR	**Mina Array Bea**	**106.15 47**	PKKPbc	PKKPbc	19 20 24.6	+0.6
	comp=Z,0.3nm,0.4s,baz=134,slow=4.3,SNR=5.8						
PDAR	**Pinedale Array**	**110.34 40**	PKKPbc	PKKPbc	19 20 17.5	+6.5
	comp=Z,0.6nm,0.5s,baz=107,slow=5.1,SNR=4.9						
TXAR	**Lajitas Array**	**120.98 51**	PKP	**PKPdf**	**19 09 28.9**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=304,slow=0.9,SNR=7.6						
TXAR			PKKPbc	**PKKPab**	**19 19 34.3**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=139,slow=5.9,SNR=3.8						
TOA0	**Torodi Ar. Sit**	**121.44 289**		**PKPdf**	**19 09 30.4**	**-0.1**
TORD	**Torodi Ar. Bea**	**121.44 289**	PKP	**PKPdf**	**19 09 29.9**	**-0.6**
	comp=Z,6.3nm,0.6s,baz=51,slow=2.0,SNR=39						
KIC	**Kosan Boka**	**129.24 283**	*e*PKP1	**PKPdf**	**19 09 45.0**	**-0.4**
	comp=Z,25nm,0.9s						
DBIC	**Dimbokro**	**129.28 283**	PKP	**PKiKP**	**19 09 46.1**	**-0.1**
	comp=Z,5.2nm,0.6s,baz=34,slow=2.9,SNR=9.9						
DBIC			SKPbc	SKPab	19 12 53.4	+0.4
	comp=Z,8.6nm,0.7s,baz=74,slow=4.2,SNR=17						
TIC	**Toumodi**	**129.45 283**	*e*PKP1	**PKPdf**	**19 09 45.6**	**-0.2**
LIC	**Lamto**	**129.55 283**	*e*PKP1	**PKPdf**	**19 09 45.6**	**-0.4**
	comp=Z,14nm,0.6s						
TKL	**Tuckaleechee C**	**130.22 32**	PKP	**PKiKP**	**19 09 47.2**	**-0.3**
	comp=Z,2.3nm,0.3s,baz=258,slow=1.9,SNR=8.6						
TKL			SKPbc	**SKPbc**	**19 12 56.8**	**+0.1**
	comp=Z,5.6nm

GUAB	**Guayabo de Bag**	**0.85**	**333**	*i* P		Pn	18 53 44.3	0.0
GUAB				*i* S		Sn	18 53 56.5	+0.8
LIM1	**Limonal**	**0.86**	**331**	*i* P		Pn	18 53 44.4	0.0
GPS1	**Guardaparques**	**0.97**	**329**	*i* P		Pn	18 53 46.0	0.0
GPS1				*i* S		Sn	18 53 59.5	+0.9
NY14	**Universidad de**	**0.98**	**316**	*i* P		Pn	18 53 46.7	+0.6
LAPC	**Finca la Perla**	**1.01**	**324**	*i* P		Pn	18 53 46.5	+0.1
LAPC				*i* S		Sn	18 54 00.4	+0.9
GBS3	**Finca Las Img**	**1.03**	**324**	*i* P		Pn	18 53 47.0	+0.2
BUAI	**Buenos Aires**	**1.05**	**332**	*i* P		Pn	18 53 46.7	-0.4
CVTR	**Volcan Turrial**	**1.06**	**86**	⇓*i* P		Pn	18 53 47.9	+0.3
EDDO	**Dominical**	**1.18**	**125**	*eP*		Pn	18 53 49.0	+0.2
EDLM	**Las Mercedes**	**1.40**	**118**	*eP*		Pn	18 53 52.1	+0.3
DRK0	**Durika**	**1.71**	**113**	*eP*		Pn	18 53 56.1	-0.1
EDBA	**Buenos Aires**	**1.72**	**117**	*eP*		Pn	18 53 56.2	0.0
ACON	**Acoyapa**	**2.04**	**351**	*eP*		Pn	18 54 00.2	-0.4
ESPN	**Las Esperanzas**	**2.30**	**13**	*eP*		Pn	18 54 03.6	-0.5

*IDC **25** 19:28:08.1±8.3,38°.12N×144°.32E,h0km,mb3.3/2, mb1 3.4/4,mb1mx3.1/59,mbtmp3.3/4,ML2.1/2,Error ellipse: s-maj=133.8km s-min=62.7km az=123.0*
*JMA **25** 19:28:33.0,38°.35N×141°.88E,h64km±1km,M3.0*
ISC 25 19:28:28.1±1.9,**38°.20N**±0°.06×**142°.2E**±0°.1,**h71**km±12km, **n18**,σ1§**95**/26,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.61**	**280**	P	**Pn**	**19 28 43.8**	**+1.7**
JIKH				S	**Sn**	**19 28 51.4**	**-1.0**
JIO	**Ouri**	**0.74**	**290**	P	**Pn**	**19 28 44.8**	**+1.3**
JIO				S	**Sn**	**19 28 53.0**	**-1.8**
JKMT	**Kesennumamotoy**	**0.85**	**316**	P	**Pn**	**19 28 46.1**	**+1.3**
JKMT				S	**Sn**	**19 28 55.5**	**-1.7**
OFUJ	**Ofunato**	**0.98**	**334**	P	**Pn**	**19 28 48.1**	**+1.7**
JMK	**Ichinoseki**	**1.09**	**314**	P	**Pn**	**19 28 48.9**	**+1.1**
JMK				S	**Sn**	**19 29 00.5**	**-1.9**
JMM	**Marumori**	**1.18**	**254**	P	**Pn**	**19 28 50.6**	**+1.6**
JMM				S	**Sn**	**19 29 03.7**	**-0.9**
JOU	**Okura**	**1.24**	**278**	P	**Pn**	**19 28 50.8**	**+1.0**
JOU				S	**Sn**	**19 29 03.9**	**-2.1**
JFK	**Kawauchi**	**1.36**	**233**	P	**Pn**	**19 28 54.6**	**+3.3**
JOM	**Ohasama**	**1.46**	**330**	P	**Pn**	**19 28 54.2**	**+1.6**
JOM				S	**Sn**	**19 29 10.2**	**-0.9**
JYK	**Kaneyama**	**1.63**	**297**	P	**Pn**	**19 28 55.6**	**+0.7**
JFT	**Otama**	**1.65**	**246**	P	**Pn**	**19 28 57.8**	**+2.7**
JFT				S	**Sn**	**19 29 16.4**	**+0.9**
JYS	**Shirataka**	**1.71**	**271**	P	**Pn**	**19 28 57.2**	**+1.4**
JYS				S	**Sn**	**19 29 15.6**	**-1.2**
JRG	**Rokugo**	**1.72**	**314**	P	**Pn**	**19 28 57.1**	**+1.0**
MJAR	**Matsushiro Arr**	**3.61**	**244**	Pn	Pn	19 29 25.6	+3.9
	0.1nm,0.3s,baz=80,slow=13,SNR=5.4						
MJAR				Sn	Sn	19 30 12.3	+9.2
	0.1nm,0.3s,baz=124,slow=8.3,SNR=4.1						
JHJ	**Hachijo jima 2**	**5.45**	**202**	Sn	**Sn**	**19 30 43.8**	**-4.3**
	12nm,0.3s,baz=159,slow=22,SNR=8.4						
USRK	**Ussuriysk Ar.**	**9.77**	**311**	Pn	**Pn**	**19 30 48.0**	**+2.3**
	baz=120,slow=13,SNR=5.1						
ZALV	**Zalesovo Beam**	**41.62**	**311**	P	**P**	**19 36 07.5**	**-1.5**
	0.2nm,0.3s,baz=69,slow=7.9,SNR=2.0						
MKAR	**Makanchi Array**	**44.06**	**301**	P	**P**	**19 36 29.5**	**+0.6**
	0.3nm,0.8s,baz=90,slow=9.1,SNR=2.5						

*DJA **25** 19:31:13.3±1.0,9°.5S±4°.4×12°.4E±°,h29km±14km,M3.0/5, MLv3.0/5*
*IDC **25** 19:31:13.3±1.7,9°.61S×123°.89E,h122km±16km,mb3.0/1, mb1 3.0/4,mb1mx2.8/38,mbtmp3.3/4,Error ellipse: s-maj=74.0km s-min=20.7km az=63.0*
ISC 25 19:31:10.1±1.2,**9°.32S**±0°.09×**124°.2E**±0°.1,**h100**km,**n8**, σ2§**90**/13,**Timor region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**0.44**	**175**	P	**Pn**	**19 31 26.3**	**+0.7**
BATI	**Baumata**	**1.04**	**212**	P	**Pn**	**19 31 32.8**	**+1.8**
	14nm,0.3s,baz=35,slow=3.4,SNR=27						
BATI				S	**Sn**	**19 31 48.2**	**+1.4**
	40nm,0.3s,baz=44,slow=6.3,SNR=11						
BATI	**Baumata**	**1.04**	**212**	P	**Pn**	**19 31 32.7**	**+1.7**
BATI				S	**Sn**	**19 31 46.9**	**+0.1**
MMRI	**Maumere**	**2.08**	**289**	P	**Pn**	**19 31 42.8**	**-0.8**
MMRI				S	**Sn**	**19 32 05.7**	**-3.6**
FITZ	**Fitzroy Crossi**	**8.84**	**171**	P	**Pn**	**19 33 16.1**	**+1.1**
	0.2nm,0.3s,baz=354,slow=9.9,SNR=21						
FITZ				S	**Sn**	**19 34 49.0**	**-3.9**
	2.4nm,0.3s,baz=307,slow=22,SNR=17						
WRA	**Warramunga Arr**	**14.39**	**138**	P	**Pn**	**19 34 30.8**	**+1.7**
	0.1nm,0.3s,baz=315,slow=15,SNR=13						
WRA				S	Sn	19 37 00.5	-7.3
	0.4nm,0.3s,baz=318,slow=24,SNR=6.5						
ASAR	**Alice Springs**	**17.01**	**148**	P	**P**	**19 35 04.8**	**+2.6**
	0.1nm,0.3s,baz=321,slow=11,SNR=10						
ASAR				S	**Sn**	**19 38 05.1**	**-5.9**
	0.2nm,0.3s,baz=256,slow=20,SNR=6.8						
MKAR	**Makanchi Array**	**67.19**	**330**	P	**P**	**19 41 54.5**	**+1.1**
	0.2nm,0.5s,baz=134,slow=6.9,SNR=3.8						

MAN 25 19:33:13.7,11°.88N×121°.69E,h21km,mb3.8,ML2.5, MS2.0,1D,Panay

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OTRP	**Odiongan**	**0.58**	**33**	*eP*	Pn	19 33 26.4	-0.3
OTRP				*eS*	Sn	19 33 36.1	+0.5
SJMP	**San Jose**	**0.81**	**316**	*eP*	Pb	19 33 28.4	-0.6
SJMP				*eS*	Sb	19 33 38.6	-0.9
RCP	**Roxas**	**1.08**	**107**	⇓*eP*	Pb	19 33 36.5	+2.9
CUYO	**Cuyo Island**	**1.22**	**213**	*eP*	Pn	19 33 34.7	-0.8
CUYO				*eS*	Sn	19 33 51.9	+0.6
BUSP	**Coron**	**1.47**	**275**	*eP*	Pn	19 33 38.1	-0.8
BUSP				*eS*	Sb	19 33 58.7	+0.2
BOAC	**Boac**	**1.58**	**5**	*eP*	Pn	19 33 40.6	+0.1
BOAC				*eS*	Sb	19 34 01.2	-0.6
ENPP	**El Nido**	**2.32**	**254**	*eP*	Pn	19 33 48.9	-1.7
ENPP				*eS*	Sn	19 34 14.1	-4.5

*UPA **25** 19:41:08.6±0.4,7°.59N×82°.39W,h9km±3km,MW4.1*
*UCR **25** 19:41:08.2±1.9,7°.64N×82°.39W,h0km±24km,MW3.7*
ISC 25 19:41:07.0±1.6,**7°.55N**±0°.06×**82°.41W**±0°.04,**h6**km±10km, **n30**,σ0§**87**/54,**South of Panama**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PEDE3	**Pedregal, Chir**	**0.83**	**359**	*eP*	**Pb**	**19 41 24.0**	**+0.1**
PEDE3				*eS*	**Sb**	**19 41 35.7**	**+0.4**
CHIR3	**Chiriqui UPA,**	**0.84**	**5**	*eP*	**Pb**	**19 41 24.0**	**-0.1**
CHIR3				*eS*	**Sb**	**19 41 35.9**	**+0.2**
LOCO3	**Loma Colorada,**	**0.85**	**359**	*eP*	**Pb**	**19 41 24.3**	**0.0**
LOCO3				*eS*	**Sb**	**19 41 36.6**	**+0.5**
DVD	**David**	**0.88**	**357**	*eP*	**Pg**	**19 41 24.6**	**+0.7**
DVD				*eS*	**Sb**	**19 41 36.4**	**-0.5**
SBAR3	**San Bartolo, C**	**0.90**	**328**	*eP*	**Pb**	**19 41 25.3**	**+0.3**
SBAR3				*eS*	**Sb**	**19 41 37.6**	**+0.3**
PVID3	**Puerto Vidal,**	**0.93**	**58**	*eP*	**Pg**	**19 41 25.5**	**+0.5**
PVID3				*eS*	**Sb**	**19 41 38.4**	**0.0**
BCO2	**Palmira**	**1.17**	**354**	*i* P	**Pg**	**19 41 29.2**	**-0.2**
BCO2				*eS*	**Sb**	**19 41 45.5**	**+0.3**
GMAL	**Guarumal, Vera**	**1.18**	**80**	*eP*	**Pg**	**19 41 29.2**	**-0.6**
GMAL				*eS*	**Sg**	**19 41 45.6**	**+0.4**
GMAL	**Guarumal, Vera**	**1.18**	**80**	*eP*	**Pg**	**19 41 29.0**	**-0.8**
BRU2	**Volcan**	**1.27**	**347**	*eP*	**Pg**	**19 41 31.0**	**-0.4**
BRU2				*eS*	**Sb**	**19 41 48.4**	**+0.3**
BRU2	**Volcan**	**1.27**	**347**	*eP*	**Pg**	**19 41 31.0**	**-0.4**
BRU2				*eS*	**Sn**	**19 41 48.6**	**-0.4**
BC3P	**Paso Ancho**	**1.27**	**351**	*eP*	**Pg**	**19 41 31.5**	**0.0**
BC3P				*eS*	**Sb**	**19 41 48.7**	**+0.3**
PTJ1	**Puerto Jimnez**	**1.32**	**318**	*eP*	**Pg**	**19 41 31.9**	**-0.5**
PTJ1				*eS*	**Sg**	**19 41 49.5**	**0.0**
CHGR2	**Aguacate**	**1.40**	**11**	*eP*	**Pn**	**19 41 32.4**	**-0.9**
CHGR2				*eS*	**Sg**	**19 41 51.0**	**-1.2**
MARI3	**Mariato, Verag**	**1.41**	**86**	*eP*	**Pn**	**19 41 33.0**	**-0.3**
MARI3				*eS*	**Sb**	**19 41 52.2**	**+0.2**
PONU3	**Ponuga, Veragu**	**1.46**	**77**	*eP*	**Pn**	**19 41 33.3**	**-0.6**
CACAO	**El Cacao, Vera**	**1.55**	**97**	*eP*	**Pn**	**19 41 35.3**	**+0.1**
CACAO				*eS*	**Sn**	**19 41 55.0**	**-0.7**
CALO3	**Calobre, Verag**	**1.73**	**64**	*eP*	**Pn**	**19 41 37.9**	**+0.1**
CALO3				*eS*	**Sn**	**19 41 59.8**	**-0.4**
DRK0	**Durika**	**1.89**	**334**	*eP*	**Pn**	**19 41 40.2**	**0.0**
DRK0				*eS*	**Sn**	**19 42 04.4**	**-0.1**
DRK0	**Durika**	**1.89**	**334**	*eP*	**Pn**	**19 41 40.0**	**-0.1**
AZU	**Azuero**	**2.13**	**83**	*eP*	**Pn**	**19 41 44.0**	**+0.8**
AZU				*eS*	**Sn**	**19 42 09.4**	**-0.6**
AZU	**Azuero**	**2.13**	**83**	*eP*	**Pn**	**19 41 45.0**	**+1.9**
PNME	**Penonome**	**2.26**	**66**	*eP*	**Pn**	**19 41 45.0**	**0.0**
PNME				*eS*	**Sn**	**19 42 12.7**	**-0.6**
VTON	**El Valle, Cocl**	**2.50**	**65**	*eP*	**Pn**	**19 41 49.3**	**+0.8**
VTON				*eS*	**Sn**	**19 42 19.1**	**-0.3**
LCR2	**La Lucha 2**	**2.69**	**324**	*eP*	**Pn**	**19 41 51.5**	**+0.4**
ZANG	**Zanguenga, Cho**	**2.88**	**61**	*eP*	**Pn**	**19 41 56.5**	**+3.0**
ZANG				*eS*	**Sn**	**19 42 26.5**	**-2.0**
BCIP	**Isla Barro Col**	**3.01**	**58**	*eP*	**Pn**	**19 41 57.2**	**+1.9**
BCIP				*eS*	**Sn**	**19 42 31.5**	**-0.3**
BCIP	**Isla Barro Col**	**3.01**	**58**	*eP*	**Pn**	**19 41 58.1**	**+2.8**
UPA	**Univ. de Panam**	**3.18**	**63**	*eP*	**Pn**	**19 41 57.5**	**-0.1**
UPA				*eS*	**Sn**	**19 42 35.4**	**-0.6**
JTS	**Las Juntas de**	**3.71**	**317**	*eP*	**Pn**	**19 42 05.7**	**+0.7**
JTS				*eS*	**Sn**	**19 42 48.6**	**-0.4**

TAP 25 19:45:47.2,24°.17N×121°.58E,h19km,ML1.2,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**0.02**	**66**	P	Pg	19 45 51.0	+0.5
	baz=66						
NACB				S	Sg	19 45 53.5	+0.7
	baz=66						
TWD	**Chiawan**	**0.09**	**169**	P	Pg	19 45 51.6	+0.7
	baz=163						
TWD				S	Sg	19 45 53.9	+0.5
	baz=163						
ETLH	**Xiulin Townshi**	**0.10**	**294**	P	Pg	19 45 51.7	+0.6
	baz=294						
ETLH				S	Sg	19 45 54.3	+0.6
	baz=294						
HWA	**Hwalien**	**0.19**	**173**	*eP*	Pg	19 45 52.9	+0.8
	baz=170						
HWA				*eS*	Sg	19 45 56.5	+1.0
	baz=170						
WHF	**Hehuan Shan**	**0.29**	**266**	*eP*	Pb	19 45 54.3	+0.4
	baz=265						
WHF				*eS*	Sg	19 45 59.1	+0.6
	baz=265						
ENA	**Nanau**	**0.30**	**30**	*eP*	Pb	19 45 54.5	+0.6
	baz=31						
ENA				*eS*	Sb	19 45 59.0	+0.5
	baz=31						
NNSB	**Datong**	**0.32**	**326**	P	Pb	19 45 55.0	+0.7
	baz=325						
NNSB				S	Sb	19 45 59.9	+0.8
	baz=325						
NNSH	**Datong**	**0.32**	**326**	P	Pb	19 45 55.0	+0.7
	baz=325						
NNSH				S	Sb	19 45 59.8	+0.7
	baz=325						
NNS	**Nan Shan**	**0.33**	**326**	P	Pb	19 45 55.3	+0.7
	baz=326						
NNS				S	Sb	19 46 00.4	+0.9
	baz=326						
ESL	**Shilin**	**0.38**	**201**	*eP*	Pg	19 45 55.1	0.0
	baz=199						
ESL				*eS*	Sb	19 46 01.4	+0.5
	baz=199						
TWT	**Tachien**	**0.38**	**283**	*eP*	Pb	19 45 55.7	+0.2
	baz=282						
TWT				*eS*	Sb	19 46 02.1	+1.0
	baz=282						
CHGB	**Renai**	**0.38**	**254**	*eP*	Pg	19 45 55.3	-0.1
	baz=253						
CHGB				*eS*	Sb	19 46 01.9	+0.6
	baz=253						
OWD	**Renai**	**0.42**	**240**	*eP*	Pb	19 45 56.7	+0.4
	baz=240						
OWD				*eS*	Sb	19 46 03.6	+1.2
	baz=240						
ENTT	**Nioudou**	**0.47**	**359**	*eP*	Pg	19 45 56.6	-0.2
	baz=359						
ENTT				*eS*	Sb	19 46 04.2	+0.6
	baz=359						
TWC	**Suao**	**0.51**	**29**	*eP*	Pb	19 45 57.5	+0.1
	baz=30						
TWC				*eS*	Sb	19 46 05.5	+1.1
	baz=30						
EGFH	**Guangfu**	**0.52**	**196**	*eP*	Pb	19 45 58.2	+0.6
	baz=195						
EGFH				*eS*	Sb	19 46 05.7	+1.1
	baz=195						
YHNB	**Yeheng**	**0.53**	**340**	*eP*	Pg	19 45 58.9	+0.9
	baz=339						
YHNB				*eS*	Sb	19 46 06.2	+1.0
	baz=339						
NSK	**Sanguang**	**0.55**	**338**	*eP*	Pg	19 45 58.8	+0.6
	baz=339						
NSK				*eS*	Sg	19 46 06.3	+0.7
	baz=339						
VWDT	**VWDT**	**0.57**	**224**	*eP*	Pn	19 45 59.7	-0.6
	baz=224						
VWDT				*eS*	Sn	19 46 09.0	-0.3
	baz=224						

TAP 25 19:45:51.0,23°.10N×121°.15E,h18km±1km,ML1.1,A, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELDTW	**Lidau**	**0.15**	**307**	P	Pg	19 45 55.8	+0.3
	baz=307						
ELDTW				S	Sg	19 45 58.4	-0.1
	baz=307						
FULB	**Fuli**	**0.17**	**53**	P	Pg	19 45 56.4	+0.9
	baz=52						
FULB				S	Sg	19 46 00.2	+1.6
	baz=52						
CHKT	**Chengkung**	**0.20**	**90**	*eP*	Pg	19 45 56.8	+0.9
	baz=89						
CHKT				*eS*	Sg	19 46 00.9	+1.7
	baz=89						
TWG	**Pinlang**	**0.28**	**195**	*eP*	Pb	19 45 57.4	-0.1
	baz=193						
TWG				*eS*	Sb	19 46 02.6	+0.8
	baz=193						
TWGBT	**Beinan**	**0.29**	**193**	*eP*	Pb	19 45 58.6	+1.1
	baz=193						
TWGBT				*eS*	Sb	19 46 03.1	+1.3
	baz=193						
TWF1	**Yuli**	**0.29**	**28**	P	Pb	19 45 58.0	+0.5
	baz=29						
TWF1				S	Sb	19 46 02.2	+0.3
	baz=29						
YULB	**Yu-li**	**0.32**	**25**	*eP*	Pb	19 45 58.3	+0.1
	baz=24						
YULB				S	Sb	19 46 03.1	0.0
	baz=24						
TTN	**Taitung**	**0.34**	**180**	*eP*	Pb	19 45 58.9	+0.4
	baz=179						
TTN				*eS*	Sg	19 46 03.2	0.0
	baz=179						
STYT	**Tauyuan**	**0.37**	**280**	*eP*	Pb	19 45 59.6	+0.6
	baz=280						
STYT				*eS*	Sb	19 46 04.8	+0.3
	baz=280						
EHY	**Hungye**	**0.44**	**21**	*eP*	Pb	19 46 00.6	+0.4
	baz=22						
EHY				*eS*	Sb	19 46 06.5	0.0
	baz=22						
HGSD	**Ruisui**	**0.47**	**33**	*eP*	Pb	19 46 00.9	+0.2
	baz=191						
HGSD				*eS*	Sn	19 46 10.7	+0.2
	baz=191						
HGSD	**Ruisui**	**0.47**	**33**	*eP*	Pb	19 46 00.8	+0.2
	baz=32						
HGSD				*eS*	Sn	19 46 10.3	-0.2
	baz=32						
SLGT	**Liugui**	**0.48**	**257**	*eP*	Pb	19 46 01.5	+0.7
	baz=257						
SLGT				*eS*	Sb	19 46 08.4	+0.9
	baz=257						
TWH	**Lutao**	**0.49**	**142**	P	Pb	19 46 01.3	+0.3
	baz=143						
TWH				S	Sn	19 46 10.0	-1.0
	baz=143						
WTP	**Ta-pu**	**0.52**	**287**	*eP*	Pn	19 46 02.5	-0.9
	baz=286						
WTP				*eS*	Sb	19 46 09.4	+0.8
	baz=286						
TPUB	**Ta-pu**	**0.52**	**293**	*eP*	Pn	19 46 03.5	0.0
	baz=292						
TPUB				*eS*	Sn	19 46 10.5	-1.3
	baz=292						
ECL	**Taimali**	**0.53**	**200**	*eP*	Pb	19 46 02.1	+0.4
	baz=199						
ECL				*eS*	Sb	19 46 10.0	+1.1
	baz=199						
CHN4	**Tsaushan**	**0.57**	**296**	*eP*	Pn	19 46 04.3	+0.2
	baz=296						
CHN4				*eS*	Sn	19 46 12.7	-0.4
	baz=296						
SSD	**Sandimen**	**0.59**	**234**	*eP*	Pg	19 46 02.8	+0.1
	baz=233						
SSD				*eS*	Sg	19 46 11.9	+1.2
	baz=233						
TWK	**Hsinying**	**0.63**	**286**	*eP*	Pg	19 46 03.5	0.0
	baz=285						
TWK				*eS*	Sn	19 46 13.8	-0.8
	baz=285						
CHN5	**Tsauling**	**0.66**	**319**	*eP*	Pg	19 46 04.6	+0.5
	baz=318						
CHN5				*eS*	Sg	19 46 13.7	+0.8
	baz=318						
MASBT	**Mashibuluo**	**0.68**	**225**	*eP*	Pg	19 46 04.5	+0.2
	baz=224						
MASBT				*eS*	Sn	19 46 14.8	-0.9
	baz=224						

ISC 25 19:46:57.9±1.1,**44°.51N**±0°.05×**17°.04E**±0°.07,**h8**km±11km, **n6**,σ1§**20**/12,**1C,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MGRS	**Mrkonjic Grad**	**0.10**	**163**	⇑*i*Pg	**Pg**	**19 47 00.1**	**-0.1**
MGRS				*e*Sg	**Sg**	**19 47 01.3**	**-0.5**
BLY	**Banja Luka**	**0.26**	**23**	*e*Pg	**Pb**	**19 47 04.0**	**-0.9**
BLY				*e*Sg	**Sg**	**19 47 08.5**	**+1.9**
KIJV	**Kijevo**	**0.68**	**223**	*e*Pg	**Pg**	**19 47 11.1**	**0.0**
KIJV				Sg	**Sg**	**19 47 20.0**	**+0.1**
RICI	**Ricice**	**1.02**	**176**	*e*Pg	**Pb**	**19 47 17.4**	**-0.3**
RICI				Sg	**Sg**	**19 47 32.4**	**+1.8**
MORI	**Morici**	**1.16**	**237**	*i* Pg	**Pg**	**19 47 19.6**	**-0.5**
MORI				Sg	**Sn**	**19 47 36.0**	**-0.4**
ZIRJ	**Zirje**	**1.32**	**230**	*e*Pn	**Pg**	**19 47 23.2**	**-0.1**
ZIRJ				Sg	**Sg**	**19 47 42.1**	**+1.7**

*ISU **25** 19:47:46.0,41°.00N×73°.70E,h10km*
*SOME **25** 19:47:46.8,40°.87N×73°.68E,h0km*
*KRNET **25** 19:47:48.9±0.1,40°.99N×73°.64E,h15km,mb3.3*
*KNET **25** 19:47:49.7±0.5,41°.04N×73°.70E,h0km,ml2.8,Error ellipse: s-maj=3.4km s-min=2.8km az=110.0*
*NNC **25** 19:47:50.1±0.8,41°.00N×73°.64E,h0km,mb3.9,mpv3.6, Error ellipse: s-maj=7.1km s-min=3.3km az=173.0*
ISC 25 19:47:49.0±1.1,**40°.99N**±0°.03×**73°.63E**±0°.02,**h14**km±10km, **n71**,σ1§**54**/115,**36C-21D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARSB	**Arslanbob**	**0.59**	**304**	⇑*i*P	**Pg**	**19 48 00.5**	**-0.2**
	baz=4.0						
ARSB				⇑*i*S	**Sg**	**19 48 09.0**	**+0.4**
	baz=4.0						
ARSB	**Arslanbob**	**0.59**	**304**	*eP*	**Pg**	**19 47 59.6**	**-1.1**
ARSB				*eS*	**Sb**	**19 48 09.4**	**-0.2**
AML	**Almayashu**	**1.14**	**2**	⇑*i*P	**Pn**	**19 48 10.7**	**-0.2**
	baz=2.0						
AML				⇑*i*S	**Sn**	**19 48 26.2**	**-0.3**
	baz=2.0						
AML	**Almayashu**	**1.14**	**2**	⇓P	**Pg**	**19 48 10.9**	**-0.1**
	43nm,0.1s,SNR=62						
AML				⇑S	**Sn**	**19 48 27.9**	**+1.4**
	180nm,0.2s						
UCH	**Uchtor**	**1.40**	**28**	⇑*i*P	**Pb**	**19 48 15.2**	**0.0**
	baz=28						
UCH				⇑*i*S	**Sg**	**19 48 34.5**	**+0.3**
	baz=28						
UCH	**Uchtor**	**1.40**	**28**	⇑P	**Pg**	**19 48 15.5**	**-0.5**
	20nm,0.2s,SNR=32						
UCH				⇑S	**Sg**	**19 48 35.9**	**+1.7**
	52nm,0.2s						
FRG	**Fergana**	**1.43**	**260**	*i* P	**Pg**	**19 48 17.6**	**+1.1**
FRG				*i* S	**Sg**	**19 48 39.0**	**+4.0**
ARK	**Arkit**	**1.49**	**303**	⇓*i*P	**Pb**	**19 48 16.5**	**-0.1**
	baz=3.0						
ARK				⇓*i*S	**Sg**	**19 48 36.8**	**-0.3**
	baz=3.0						
KZA	**Kyzart**	**1.62**	**48**	⇓*i*P	**Pb**	**19 48 19.0**	**0.0**
	baz=47						
KZA				⇓*i*S	**Sg**	**19 48 41.5**	**0.0**
	baz=47						
KZA	**Kyzart**	**1.62**	**48**	⇓P	**Pb**	**19 48 19.4**	**+0.3**
	18nm,0.2s,SNR=17						
KZA				⇓S	**Sg**	**19 48 43.9**	**+2.4**
	39nm,0.2s						
EKS2	**Erkin-Say**	**1.67**	**4**	⇑*i*P	**Pb**	**19 48 19.9**	**+0.3**
	baz=3.0						
EKS2				⇑*i*S	**Sg**	**19 48 42.7**	**-0.1**
	baz=3.0						
EKS2	**Erkin-Say**	**1.67**	**4**	⇓P	**Pg**	**19 48 20.5**	**-0.6**
	12nm,0.1s,SNR=36						
AAK	**Ala-Archa**	**1.76**	**21**	⇑*i*P	**Pb**	**19 48 21.4**	**+0.2**
	baz=21						
AAK				⇑*i*S	**Sg**	**19 48 45.5**	**-0.3**
	baz=21						
AAK	**Ala-Archa**	**1.76**	**21**	⇓P	**Pg**	**19 48 22.1**	**-0.8**
	16nm,0.2s,SNR=26						
AAK				⇑S	**Sg**	**19 48 46.6**	**+0.8**
	62nm,0.3s						
CHMI	**Chimion**	**1.76**	**246**	*eP*	**Pb**	**19 48 20.6**	**-0.6**
CHMI				*eS*	**Sg**	**19 48 46.8**	**+1.0**
MRKS	**Merke**	**1.78**	**350**	*eP*	**Pg**	**19 48 22.4**	**-0.7**
	55nm,0.1s						
MRKS				*eS*	**Sg**	**19 48 46.9**	**+0.7**
	169nm,0.3s						
MRKS	**Merke**	**1.78**	**350**	P	**Pg**	**19 48 22.4**	**-0.7**
	66nm,0.2s						
MRKS				S	**Sg**	**19 48 46.9**	**+0.7**
	169nm,0.3s						
KBK	**Karagaybulak**	**1.93**	**30**	⇑*i*P	**Pb**	**19 48 24.7**	**+0.6**
	baz=30						
KBK				⇑*i*S	**Sg**	**19 48 50.6**	**-0.5**
	baz=30						
KBK	**Karagaybulak**	**1.93**	**30**	⇑P	**Pg**	**19 48

	55nm,0.5s								
KST	**Kastek**	**2.68**	**40**	*e*P		**Pg**	**19 48 39.6**	**-0.8**
	5.4nm,0.2s								
KST				*e*S		**Sg**	**19 49 15.9**	**+0.6**
	55nm,0.5s								
KST	**Kastek**	**2.68**	**40**	Pg		**Pg**	**19 48 39.1**	**-1.4**
	16nm,0.3s								
KST				Lg		Lg	19 49 15.6		
	54nm,0.6s								
DGS	**Degeres**	**2.75**	**35**	*e*P		**Pg**	**19 48 41.0**	**-0.7**
	8.5nm,0.3s								
DGS				*e*S		**Sg**	**19 49 18.1**	**+0.7**
	62nm,0.4s								
DGS	**Degeres**	**2.75**	**35**	Pg		**Pg**	**19 48 40.5**	**-1.3**
	11nm,0.6s								
DGS				Lg		Lg	19 49 18.0		
	65nm,0.9s								
CHRV	**Charvak**	**2.85**	**284**	*e*P		**Pb**	**19 48 39.1**	**-0.6**
KDJ	**Kajisay**	**2.89**	**66**	⇑*i*P		**Pb**	**19 48 38.1**	**-2.4**
	baz=66								
KDJ				⇑*i*S		**Sb**	**19 49 14.1**	**-1.7**
	baz=66								
IUG	**Iuzhnay**	**2.94**	**294**	*e*P		**Pg**	**19 48 43.5**	**-1.9**
	3.0nm,0.2s								
IUG				*e*S		**Sg**	**19 49 22.5**	**-0.9**
	91nm,0.3s								
IUG	**Iuzhnay**	**2.94**	**294**	Pg		**Pb**	**19 48 42.9**	**+1.6**
	5.5nm,0.4s								
IUG				Lg		Lg	19 49 21.6		
	100nm,0.5s								
MTBS	**Maitube**	**2.98**	**43**	*e*P		**Pg**	**19 48 45.3**	**-0.9**
	3.6nm,0.1s								
MTBS				*e*S		**Sg**	**19 49 25.7**	**+0.9**
	32nm,0.3s								
MTBS	**Maitube**	**2.98**	**43**	Pg		**Pg**	**19 48 44.0**	**-2.2**
	9.0nm,0.4s								
MTBS				Lg		Lg	19 49 23.7		
	51nm,0.7s								
IZV	**Izvestkoviy**	**3.01**	**46**	*e*P		**Pg**	**19 48 46.1**	**-0.8**
	7.6nm,0.2s								
IZV				*e*S		**Sg**	**19 49 26.7**	**+0.8**
	28nm,0.4s								
IZV	**Izvestkoviy**	**3.01**	**46**	Pg		**Pg**	**19 48 46.3**	**-0.6**
	7.9nm,0.4s								
IZV				Lg		Lg	19 49 26.3		
	46nm,0.7s								
KRBS	**Karabastau**	**3.10**	**29**	*e*P		**Pg**	**19 48 46.0**	**-2.3**
	4.3nm,0.3s								
KRBS				*e*S		**Sg**	**19 49 26.7**	**-1.8**
	20nm,0.6s								
KRBS	**Karabastau**	**3.10**	**29**	Pg		**Pg**	**19 48 46.7**	**-1.7**
	4.3nm,0.3s								
KRBS				Lg		Lg	19 49 27.7		
	20nm,0.6s								
KK31	**Karatay Array**	**3.14**	**313**	⇑Pn		**Pb**	**19 48 42.1**	**-2.5**
	4.5nm,0.4s,baz=129,slow=12,SNR=44								
KK31				⇑Lg		Lg	19 49 27.8		
	28nm,0.6s,baz=131,slow=29,SNR=8.6								
TNSS	**Tian-Shan**	**3.20**	**49**	*e*P		**Pg**	**19 48 49.3**	**-1.1**
	7.4nm,0.1s								
TNSS				*e*S		**Sg**	**19 49 32.6**	**+0.6**
	20nm,0.3s								
TNSS	**Tian-Shan**	**3.20**	**49**	Pg		**Pg**	**19 48 48.9**	**-1.6**
	17nm,0.5s								
TNSS				Lg		Lg	19 49 31.6		
	21nm,0.5s								
TAS	**Tashkent**	**3.29**	**277**	⇓*e*P		**Pb**	**19 48 43.8**	**-3.4**
	baz=77								
TAS				⇓*e*S		**Sb**	**19 49 23.3**	**-3.8**
	baz=77								
AAA	**Alma-Ata**	**3.29**	**47**	*e*P		**Pg**	**19 48 50.8**	**-1.4**
	4.3nm,0.0s								
AAA				*e*S		**Sg**	**19 49 35.1**	**+0.2**
	16nm,0.2s								
AAA	**Alma-Ata**	**3.29**	**47**	Pg		**Pg**	**19 48 51.0**	**-1.2**
	8.4nm,0.2s								
AAA				Lg		Lg	19 49 35.2		
	25nm,0.4s								
CHM	**Chimkent**	**3.30**	**295**	*e*P		**Pg**	**19 48 51.0**	**-1.2**
	18nm,0.1s								
CHM				*e*S		**Sg**	**19 49 35.4**	**+0.4**
	127nm,0.3s								
KNDC	**Almaty**	**3.33**	**47**	⇑Pg		**Pg**	**19 48 50.4**	**-2.4**
	9.2nm,0.5s								
KNDC				⇓Lg		Lg	19 49 36.2		
	33nm,0.6s								
MDOK	**Medeo**	**3.34**	**48**	*e*P		**Pg**	**19 48 51.8**	**-1.2**
	7.9nm,0.3s								
MDOK				*e*S		**Sg**	**19 49 36.2**	**-0.1**
	15nm,0.4s								
MDOK	**Medeo**	**3.34**	**48**	Pg		**Pg**	**19 48 49.7**	**+1.6**
	8.6nm,0.5s								
MDOK				Lg		Lg	19 49 34.5		
	14nm,0.5s								
MDOK	**Medeo**	**3.34**	**48**	Pg		**Pg**	**19 48 51.2**	**-1.8**
	11nm,0.4s								
MDOK				Lg		Lg	19 49 35.9		
	16nm,0.4s								
KOTS	**Kotyrbulak**	**3.42**	**48**	*e*P		**Pg**	**19 48 53.5**	**-1.0**
	12nm,0.2s								
KOTS				*e*S		**Sg**	**19 49 39.2**	**+0.3**
	18nm,0.4s								
KOTS	**Kotyrbulak**	**3.42**	**48**	Pg		**Pg**	**19 48 52.9**	**-1.7**
	14nm,0.6s								
KOTS				Lg		Lg	19 49 38.0		
	89nm,0.5s								
BRLS	**Boroldaу**	**3.48**	**307**	*e*P		**Pg**	**19 48 53.8**	**-2.0**
	16nm,0.2s								
BRLS				*e*S		**Sg**	**19 49 40.1**	**-0.8**
	37nm,0.2s								
BRLS	**Boroldaу**	**3.48**	**307**	Pg		**Pb**	**19 48 52.5**	**+2.0**
	16nm,0.3s								
BRLS				Lg		Lg	19 49 37.8		
	46nm,0.4s								
ANVS	**Anan'yevo**	**3.50**	**58**	⇑*i*P		**Pn**	**19 48 46.3**	**+3.1**
	baz=58								
ANVS				⇑*i*S		**Sb**	**19 49 28.7**	**-4.6**
	baz=58								
KUU	**Kurty**	**3.52**	**34**	*e*P		**Pg**	**19 48 54.0**	**-2.4**
	4.7nm,0.3s								
KUU				*e*S		**Sg**	**19 49 40.5**	**-1.6**
	20nm,0.3s								
KUU	**Kurty**	**3.52**	**34**	Pg		**Pb**	**19 48 53.6**	**+2.5**
	5.2nm,0.3s								
KUU				Lg		Lg	19 49 40.0		
	29nm,0.4s								
KTBS	**Karatobe**	**3.53**	**39**	*e*P		**Pg**	**19 48 54.4**	**-2.4**
	1.5nm,0.2s								
KTBS				*e*S		**Sg**	**19 49 40.9**	**-1.5**
	25nm,0.4s								
KTBS	**Karatobe**	**3.53**	**39**	Pg		**Pg**	**19 48 54.2**	**-2.5**
	2.1nm,0.2s								
KTBS				Lg		Lg	19 49 40.6		
	31nm,0.6s								
CHKK	**Chushkaly**	**3.79**	**40**	*e*P		**Pg**	**19 48 58.9**	**-2.7**
	0.6nm,0.1s								
CHKK				*e*S		**Sg**	**19 49 48.6**	**-1.9**
	8.1nm,0.2s								
CHKK	**Chushkaly**	**3.79**	**40**	Pg		**Pg**	**19 48 58.5**	**-3.0**
	0.6nm,0.1s								
CHKK				Lg		Lg	19 49 48.2		
	18nm,0.4s								
BTLS	**Baital**	**4.06**	**4**	*e*P		**Pg**	**19 49 06.8**	**0.0**
	2.1nm,0.2s								
BTLS				*e*S		**Sg**	**19 50 01.9**	**+2.7**
	21nm,0.4s								
KURS	**Kuram**	**4.19**	**52**	*e*P		**Pg**	**19 49 07.1**	**-2.2**
	1.1nm,0.3s								
KURS				*e*S		**Sg**	**19 50 02.3**	**-1.2**
	4.9nm,0.6s								
PDGK	**Podgornoye**	**4.94**	**60**	⇓Pg		**Pb**	**19 49 18.3**	**+3.0**
	3.8nm,0.8s								
PDGK				⇓Lg		Lg	19 50 25.4		
	12nm,0.9s								
OTUK	**Ortayu**	**7.31**	**353**	⇓Pg		Pg	19 50 03.9	-5.0	
	0.8nm,0.6s								
OTUK				⇓Lg		Lg	19 51 35.4		
	26nm,0.8s								

*IDC **25** 19:52:43.0±1.7,7.21S×129.42E,h140km±24km,mb2.7/1, mb1 3.3/6,mb1mx3.0/37,mbtmp3.7/6,Error ellipse: s-maj=27.1km s-min=13.6km az=116.0*

ISC 25 19:52:42.5±0.9,7.35S±0.06×129.5E±0.1,h150km,n6, σ2s97/11,Banda Sea

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

BATI	**Baumata**	**6.46**	**244**	P		**Pn**	**19 54 16.4**	**+1.0**
	8.7nm,0.3s,baz=224,slow=0.9,SNR=14								
BATI				S		**Sn**	**19 55 26.9**	**-1.3**
	8.6nm,0.3s,baz=71,slow=20,SNR=9.1								
SIJI	**Sorong**	**6.66**	**15**	P		**Pn**	**19 54 18.9**	**+0.8**
	0.4nm,0.3s,baz=167,slow=15,SNR=6.9								
SIJI				S		**Sn**	**19 55 29.7**	**-3.3**
	1.5nm,0.3s,baz=251,slow=23,SNR=9.1								
FITZ	**Fitzroy Crossi**	**11.34**	**199**	P		**Pn**	**19 55 22.6**	**+2.4**
	0.2nm,0.3s,baz=42,slow=9.0,SNR=15								
FITZ				S		**Sn**	**19 57 20.1**	**-5.5**
	1.4nm,0.3s,baz=56,slow=21,SNR=11								
WRA	**Warramunga Arr**	**13.36**	**160**	P		**Pn**	**19 55 48.0**	**+1.7**
	0.9nm,0.3s,baz=332,slow=12,SNR=40								
WRA				S		**Sn**	**19 58 11.4**	**-2.8**
	0.9nm,0.3s,baz=329,slow=22,SNR=8.3								
ASAR	**Alice Springs**	**16.76**	**166**	P		**Pn**	**19 56 31.5**	**+3.0**
	0.3nm,0.3s,baz=334,slow=8.9,SNR=24								
ASAR				S		**Sn**	**19 59 35.4**	**-0.5**
	0.3nm,0.3s,baz=329,slow=14,SNR=5.9								
MKAR	**Makanchi Array**	**68.27**	**327**	P		**P**	**20 03 27.6**	**+0.4**
	0.1nm,0.5s,baz=139,slow=6.8,SNR=1.9								

TAP 25 19:53:27.3,23.20N×121.09E,h20km,ML0.9,A,Taiwan

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

ELDTW	**Lidau**	**0.07**	**260**	P		Pb	19 53 31.6	+0.4	
	baz=256								
ELDTW				S		Sb	19 53 34.2	+0.4	
	baz=256								
FULB	**Fuli**	**0.19**	**91**	P		Pb	19 53 32.5	-0.2	
	baz=90								
FULB				S		Sb	19 53 36.6	+0.2	
	baz=90								
TWF1	**Yuli**	**0.24**	**52**	*e*P		Pb	19 53 34.0	+0.8	
	baz=53								
TWF1				*e*S		Sb	19 53 38.4	+1.1	
	baz=53								
YULB	**Yu-li**	**0.27**	**45**	*e*P		Pb	19 53 34.5	+0.9	
	baz=45								
YULB				S		Sb	19 53 39.1	+1.2	
	baz=45								
CHKT	**Chengkung**	**0.27**	**112**	*e*P		Pb	19 53 34.1	+0.5	
	baz=111								
STYT	**Tauyuan**	**0.31**	**263**	*e*P		Pb	19 53 35.3	+1.1	
	baz=262								
EHY	**Hungye**	**0.37**	**35**	*e*P		Pb	19 53 36.0	+0.8	
	baz=36								
EHY				*e*S		Sb	19 53 41.8	+1.2	
	baz=36								
TWG	**Pinlang**	**0.38**	**182**	*e*P		Pb	19 53 35.6	+0.3	
	baz=181								
TPUB	**Ta-pu**	**0.43**	**283**	*e*S		Sb	19 53 43.8	+1.4	
	baz=283								
WTP	**Ta-pu**	**0.44**	**276**	*e*P		Pb	19 53 36.9	+0.5	
	baz=275								
TTN	**Taitung**	**0.45**	**173**	*e*P		Pn	19 53 37.6	-1.0	
	baz=172								
TTN				*e*S		Sb	19 53 44.2	+1.5	
	baz=172								
SLGT	**Liugui**	**0.46**	**243**	*e*P		Pb	19 53 37.2	+0.6	
	baz=243								
CHN1	**Nanshi**	**0.52**	**268**	*e*P		Pb	19 53 37.9	+0.1	
	baz=268								
WHYT	**Xinyi Township**	**0.54**	**336**	*e*P		Pb	19 53 38.0	-0.2	
	baz=336								
WHYT				*e*S		Sb	19 53 46.6	+1.0	
	baz=336								
SNST	**Tainan City**	**0.55**	**272**	*e*P		Pb	19 53 38.5	+0.3	
	baz=271								
CHN5	**Tsauling**	**0.55**	**316**	*e*P		Pb	19 53 38.8	+0.5	
	baz=316								
CHN5				*e*S		Sb	19 53 45.7	-0.1	
	baz=316								
VWDT	**VWDT**	**0.55**	**5**	*e*P		Pb	19 53 38.7	+0.3	
	baz=5.0								
VWDT				*e*S		Sn	19 53 47.3	-1.3	
	baz=5.0								
TWK	**Hsinying**	**0.56**	**277**	*e*P		Pb	19 53 39.0	+0.6	
	baz=276								
TWH	**Lutao**	**0.60**	**144**	*e*P		Pn	19 53 41.5	+0.8	
	baz=145								
TWH				*e*S		Sn	19 53 49.9	-0.1	
	baz=145								
MASBT	**Mashibuluo**	**0.72**	**216**	*e*P		Pn	19 53 41.8	-0.6	
	baz=215								
MASBT				*e*S		Sn	19 53 51.9	-0.9	
	baz=215								

TAP 25 19:53:33.2,23.14N×121.13E,h27km±1km,ML1.0,B, Taiwan

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

ELDTW	**Lidau**	**0.11**	**295**	*i* P		Pn	19 53 39.2	-0.2	
	baz=295								
ELDTW				*i* S		Sb	19 53 41.9	+0.1	
	baz=295								
FULB	**Fuli**	**0.16**	**70**	*e*P		Pn	19 53 39.9	-0.2	
	baz=69								
FULB				S		Sb	19 53 43.9	+1.5	
	baz=69								
CHKT	**Chengkung**	**0.22**	**101**	P		Pb	19 53 39.6	+0.3	
	baz=101								
CHKT				*e*S		Sb	19 53 44.5	+1.1	
	baz=101								
CHKT	**Chengkung**	**0.22**	**101**	*e*S		Pb	19 53 39.6	+0.3	
	baz=111								
TWF1	**Yuli**	**0.26**	**37**	*e*P		Pn	19 53 40.9	-0.5	
	baz=38								
TWF1				*e*S		Sb	19 53 44.7	+0.3	
	baz=38								
YULB	**Yu-li**	**0.29**	**32**	*e*P		Pn	19 53 41.4	-0.5	
	baz=31								
YULB				*e*S		Sb	19 53 46.0	+0.8	
	baz=31								
TWG	**Pinlang**	**0.32**	**189**	*e*P		Pn	19 53 41.7	-0.5	
	baz=187								
TWG				*e*S		Sb	19 53 46.6	+0.8	
	baz=187								
TWG	**Pinlang**	**0.32**	**189**	*e*S		Pn	19 53 42.2	0.0	
	baz=181								
TWGBT	**Beinan**	**0.33**	**188**	*e*P		Pb	19 53 41.0	+0.3	
	baz=187								
TWGBT				*e*S		Sn	19 53 47.3	-0.8	
	baz=187								
STYT	**Tauyuan**	**0.34**	**274**	*e*P		Pb	19 53 40.7	-0.4	
	baz=273								
STYT				*e*S		Sn	19 53 47.6	-1.0	
	baz=273								
STYT	**Tauyuan**	**0.34**	**274**	*e*S		Pb	19 53 40.3	-0.7	
	baz=262								
TTN	**Taitung**	**0.39**	**177**	*e*P		Pn	19 53 42.5	-0.6	
	baz=176								
TTN				*e*S		Sb	19 53 48.2	+0.8	
	baz=176								
EHY	**Hungye**	**0.40**	**26**	*e*P		Pn	19 53 43.4	+0.1	
	baz=27								
EHY				*e*S		Sn	19 53 49.5	-0.6	
	baz=27								
HGSD	**Ruisui**	**0.44**	**38**	*e*P		Pb	19 53 43.1	+0.5	
	baz=37								
HGSD				*e*S		Sb	19 53 49.9	+1.0	
	baz=37								
SLGT	**Liugui**	**0.47**	**252**	*e*P		Pn	19 53 43.7	-0.5	
	baz=251								
SLGT				*e*S		Sn	19 53 51.2	-0.4	
	baz=251								
WTP	**Ta-pu**	**0.48**	**282**	*e*P		Pb	19 53 43.4	+0.1	
	baz=282								
WTP				*e*S		Sb	19 53 51.0	+0.9	
	baz=282								
WTP	**Ta-pu**	**0.48**	**282**	*e*S		Pb	19 53 43.6	+0.3	
	baz=275								
TWH	**Lutao**	**0.54**	**143**	*e*P		Pn	19 53 45.2	+0.1	
	baz=144								
TWH				*e*S		Sn	19 53 53.8	+0.5	
	baz=144								
CHN1	**Nanshi**	**0.55**	**275**	*e*P		Pn	19 53 45.0	-0.4	
	baz=274								
CHN1				*e*S		Sn	19 53 53.6	-0.2	
	baz=274								

*IDC **25** 20:03:02.9±1.9,38.25N×120.71E,h0km,mb3.4/2, mb1 3.7/4,mb1mx3.3/34,mbtmp3.5/4,ML2.9/2,MS2.6/2, Ms1 2.6/2,ms1mx2.2/33,Error ellipse: s-maj=32.9km s-min=26.7km az=152.0*

*BJI **25** 20:03:08.0±0.0,38.38N×120.80E,h5km,mb3.9/2, ML3.9/13,Ms3.4/2,Ms7 3.2/1*

ISC 25 20:03:07.4±0.9,38.44N±0.07×120.80E±0.04,h10km,n9, σ2s05/14,1C-1D,Northeastern China

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

DL2	**Dalian**	**0.80**	**54**	⇓*i*Pg		**Pg**	**20 03 22.3**	**-0.5**	
DL2				Sg		**Sg**	**20 03 32.3**	**-0.9**	
DL2				smax	smax				
	comp=N,6μm,0.4s								
DL2				smax	smax				
	comp=E,5μm,0.5s								
TIA	**Tai'an**	**3.68**	**234**	Pg		**Pg**	**20 04 18.8**	**+0.9**	
TIA				Sg		**Sb**	**20 04 59.5**	**+2.3**	
TIA				smax	smax				
	comp=N,88nm,0.6s								
TIA				smax	smax				
	comp=E,59nm,0.8s								
BJI	**Beijing**	**3.93**	**295**	Pn		**Pn**	**20 04 07.0**	**-0.8**	
BJI				Pg		**Pg**	**20 04 21.5**	**-1.2**	
BJI				Sn		**Sn**	**20 04 54.0**	**0.0**	
BJI				Sg		**Sg**	**20 05 13.0**	**-0.7**	
BJI				smax	smax				
	comp=N,76nm,0.5s								
BJI				smax	smax				
	comp=E,74nm,0.4s								
SNY	**Shenyang**	**4.00**	**31**	⇑Pg		**Pb**	**20 04 19.8**	**+1.9**	
SNY				Sn		**Sn**	**20 04 53.3**	**-2.3**	
SNY				Sg		**Sb**	**20 05 11.0**	**+4.7**	
SNY				smax	smax				
	comp=N,220nm,0.4s								
SNY				smax	smax				
	comp=E,170nm,0.4s								
KSRS	**Korea Array**	**5.71**	**98**	Pn		**Pn**	**20 04 30.9**	**-1.4**	
	1.7nm,0.3s,baz=282,slow=13,SNR=25								
KSRS				Lg		Lg	20 06 03.9		
	5.3nm,0.3s,baz=282,slow=28,SNR=7.3								
KSRS				LR		LR	20 06 23.8		
	comp=Z,33nm,20.3s,baz=21,slow=35								
USRK	**Ussuriysk Ar.**	**10.19**	**52**	Pn		**Pn**	**20 05 34.5**	**+0.9**	
	baz=237,slow=13,SNR=4.3								
USRK				Lg		Lg	20 08 28.6		
	baz=245,slow=27,SNR=7.1								
AKTO	**Aktyubinsk**	**45.12**	**307**	LR		LR	20 33 10.1		
	comp=Z,13nm,19.9s,baz=76,slow=40								
WRA	**Warramunga Arr**	**59.45**	**165**	P		P	20 13 05.7	-4.7	
	0.3nm,0.7s,baz=342,slow=5.2,SNR=2.3								
YKA	**Yellowknife Ar**	**70.04**	**24**	P		**P**	**20 14 17.4**	**-1.7**	
	0.3nm,0.7s,baz=321,slow=5.6,SNR=4.3								

*DDA **25** 20:16:53.0,37.01N×27.40E,h6km,ML1.3*

ISK 25 20:16:52.9,37.06N×27.44E,h16km±2km,ML1.6/5, Turkey

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

BDRM	**Kayabasi**	**0.01**	**6**	*i* P		Pg	20 16 54.6	-1.2	
BDRM				*i* S		Sg	20 16 56.1	-1.6	
BDRM				*i* S		Sg	20 16 56.1	-1.6	
BODT	**Bodrum**	**0.11**	**272**	PG		Pb	20 16 56.8	+0.2	
BODT				SG		Sb	20 16 59.3	+0.3	
DAT	**Datca**	**0.35**	**162**	PG		Pg	20 17 00.0	-0.1	
DAT				SG		Sb	20 17 06.3	+0.3	
DAT	**Datca**	**0.35**	**162**	*i* P		Pg	20 16 59.3	-0.8	
DAT	**Datca**	**0.35**	**162**	*i* P		Pg	20 16 59.3	-0.8	
DAT				*i* S		Sg	20 17 04.7	-0.4	
GCAM	**G?zelcaml?**	**0.66**	**345**	PG		Pb	20 17 06.5	+0.4	
GCAM				SG		Sn	20 17 16.9	-0.8	
GCAM	**G?zelcaml?**	**0.66**	**345**	*i* P		Pb	20 17 06.8	+0.7	
YER	**Yerkesik**	**0.68**	**83**	PG		Pb	20 17 06.4	+0.1	
YER				SG		Sb	20 17 16.5	+1.0	
TURN	**Turunc**	**0.95**	**101**	PG		Pb	20 17 06.9	-4.0	
TURN				SG		Sb	20 17 17.6	-5.6	
TURN	**Turunc**	**0.95**	**101**	*i* P		Pb	20 17 06.8	-4.1	
TURN				*i* S		Sb	20 17 17.3	-5.9	
TURN				IAML			20 17 21.0		
	comp=N,15nm,0.5s								

*ATH **25** 20:17:08.3,40.49N×25.83E,h26km±1km,ML2.3/7,Error ellipse: s-maj=2.9km s-min=1.2km az=254.0*

*DDA **25** 20:17:09.4,40.43N×25.94E,h14km±1km,ML2.4*

*THE **25** 20:17:09.2,40.48N×25.86E,h5km±1km,ML2.3/7,Error ellipse: s-maj=2.0km s-min=0.9km az=333.0*

ISK 25 20:17:08.6,40.48N×25.89E,h9km,ML2.3/16,Aegean Sea

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

SMTH	**Samothraki Isl**	**0.28**	**269**	P		Pg	20 17 14.3	+0.1	
SMTH				S		Sg	20 17 18.1	+0.2	
	542nm,0.2s								
SMTH	**Samothraki Isl**	**0.28**	**269**	P		Pg	20 17 14.4	+0.2	
SMTH				S		Sg	20 17 18.3	+0.4	
SMTH				AML	AML		20 17 18.4		
	comp=E,882μm,0.2s								
SMTH				AML	AML		20 17 18.6		
	comp=N,1254μm,0.2s								
GADA	**Gvkgeada**	**0.28**	**179**	P		Pb	20 17 15.2	-0.7	
GADA				S		Sg	20 17 19.4	+1.3	
	comp=N,158nm,0.3s								
GADA	**Gvkgeada**	**0.28**	**179**	PG		Pb	20 17 15.2	-0.7	
GADA				SG		Sg	20 17 19.4	+1.3	
GOKA	**anakkale-Gk**	**0.28**	**178**	*i* P		Pg	20 17 15.0	+0.7	
GOKA				*i* S		Sg	20 17 19.0	+0.8	
GOKA				IAML			20 17 26.0		
	comp=E,444nm,0.3s								
ENEZ	**Enez**	**0.33**	**37**	P		Pg	20 17 15.8	+0.7	
ENEZ				S		Sb	20 17 20.9	-1.0	
	comp=E,692nm,0.2s								
ENEZ	**Enez**	**0.33**	**37**	PG		Pg	20 17 15.7	+0.6	
ENEZ				SG		Sb	20 17 20.9	-1.0	
GELI	**Tayfur-Gelibol**	**0.45**	**100**	PG		Pg	20 17 17.7	+0.3	
GELI				SG		Sb	20 17 24.5	-1.0	
ERIK	**Erikli-Kesan**	**0.51**	**67**	PG		Pg	20 17 18.7	+0.2	
BOZC	**Bozcaada**	**0.65**	**169**	PG		Pg	20 17 21.2	+0.1	
BOZC	**Bozcaada**	**0.65**	**169**	*i* P		Pg	20 17 21.0	0.0	
BOZC				*i* S		Sg	20 17 30.2	+0.7	
LPK	**Lapseki**	**0.67**	**99**	PG		Pg	20 17 21.9	+0.4	
KESN	**Edirne-Kesan**	**0.69**	**59**	*i* P		Pb	20 17 23.3	+0.2	
KESN				*i* S		Sb	20 17 32.4	-0.5	
KESN				IAML			20 17 37.0		
	comp=E,146nm,0.4s								
RDO	**Rodhopi**	**0.72**	**338**	P		Pg	20 17 22.4	-0.1	
RDO	**Rodhopi**	**0.72**	**338**	P		Pg	20 17 22.4	-0.1	
RDO				AML	AML		20 17 36.4		
	comp=E,728μm,0.2s								
RDO				AML	AML		20 17 36.7		
	comp=N,1008μm,0.2s								
RDO	**Rodhopi**	**0.72**	**338**	PG		Pg	20 17

	comp=N,156µm,0.3s						
KAVA				AML	AML	20 17 49.1	
	comp=E,156µm,0.5s						
KDZ	**Kurdzhali**	**1.23**	**343**	PN	Pg	20 17 32.2	0.0
KNL	**Balıkesir**	**1.26**	**99**	*i* P	Pn	20 17 31.4	-0.9
KNL				*i* S	Sb	20 17 48.1	-0.8
KNL				IAML		20 17 53.0	
	comp=N,66nm,0.5s						
PRK	**Paraskevi**	**1.26**	**167**	P	Pg	20 17 33.7	+0.9
PRK				S	Sn	20 17 51.8	+2.4
	comp=N,135nm,0.4s						
SIGR	**SIGRI**	**1.26**	**181**	P	Pn	20 17 32.3	-0.1
SIGR				S	Sn	20 17 49.9	+0.5
	comp=N,158nm,0.4s						
SIGR	**SIGRI**	**1.26**	**181**	P	Pn	20 17 32.2	-0.1
SIGR				S	Sn	20 17 49.7	+0.3
SIGR				AML	AML	20 17 50.5	
	comp=N,363µm,0.5s						
SIGR				AML	AML	20 17 52.0	
	comp=E,240µm,0.4s						
SIGR	**SIGRI**	**1.26**	**181**	PN	Pn	20 17 32.4	0.0
MRMT	**Marmara Adasi**	**1.30**	**84**	PN	Pn	20 17 32.5	-0.5
AYVA	**Ayvalik**	**1.32**	**152**	*i* P	Pg	20 17 33.8	-0.1
AYVA				*i* S	Sb	20 17 50.4	0.0
AYVA				IAML		20 17 53.0	
	comp=N,125nm,0.4s						
TKR	**Tekirdag**	**1.35**	**67**	PN	Pb	20 17 33.8	-0.2
GONE	**Gonen-Balikesi**	**1.44**	**107**	PN	Pb	20 17 35.5	0.0
OUR	**Ouranopolis**	**1.47**	**265**	P	Pn	20 17 34.2	-1.0
OUR	**Ouranopolis**	**1.47**	**265**	P	Pn	20 17 34.2	-0.9
OUR				AML	AML	20 17 57.2	
	comp=N,149µm,0.3s						
OUR				AML	AML	20 17 57.7	
	comp=E,142µm,0.2s						
OUR	**Ouranopolis**	**1.47**	**265**	PN	Pn	20 17 34.4	-0.8
EDC	**Edincik**	**1.51**	**94**	PN	Pn	20 17 35.9	+0.1
EDRB	**Edirne**	**1.51**	**25**	PN	Pn	20 17 36.1	+0.3
BALY	**Balya**	**1.51**	**119**	*i* P	Pn	20 17 36.3	+0.4
BALY				*i* S	Sb	20 17 56.1	-0.1
BALY				IAML		20 18 00.0	
	comp=N,41nm,0.7s						
CRLT	**Corlu**	**1.54**	**64**	PN	Pb	20 17 36.8	-0.5
KIRK	**Kırklareli**	**1.59**	**34**	*i* P	Pn	20 17 37.1	+0.2
DKL	**Dikili**	**1.60**	**151**	PN	Pn	20 17 37.7	+0.6
BALB	**Balikesir**	**1.74**	**118**	PN	Pn	20 17 39.4	+0.5
ZEDA	**zmir-Bergama**	**1.76**	**148**	*i* P	Pn	20 17 38.6	-0.7
ZEDA				*i* S	Sn	20 18 01.9	+0.1
STEP	**BALIKESIR_Sava**	**1.78**	**127**	*i* P	Pn	20 17 40.1	+0.6
STEP				*i* S	Sb	20 18 03.4	-0.4
PAIG	**Paliouri**	**1.78**	**253**	P	Pn	20 17 38.9	-0.6
PAIG	**Paliouri**	**1.78**	**253**	P	Pn	20 17 38.5	-1.0
SRS	**Serrai**	**1.86**	**291**	P	Pn	20 17 40.2	-0.5
PLG	**Polygyros**	**1.87**	**268**	P	Pn	20 17 39.9	-0.9
ELBA	**Catalca**	**2.04**	**70**	*i* P	Pn	20 17 42.8	-0.2
DURS	**Dursunbey**	**2.17**	**113**	*i* P	Pn	20 17 46.3	+1.4
KNT	**Kendrikon**	**2.38**	**288**	P	Pn	20 17 46.6	-1.1
DEMI	**Demirci**	**2.60**	**122**	*i* P	Pn	20 17 45.2	-5.7

IDC ***25*** *20:39:43.2±0.5, 6°56′S×154°41′E, h0km, mb4.6/21, mb1 4.7/26, mb1mx4.6/37, mbtmp4.6/26, ML3.6/5, MS4.2/23, Ms1 4.2/23, ms1mx4.1/34, Error ellipse: s-maj=15.8km s-min=12.6km az=101.0*

NEIC ***25*** *20:39:48.5±2.4, 6°57′S±0°08′×154°41′E±0°07′, h35km±1km, mb4.9/26, Error ellipse: s-maj=13.8km s-min=11.2km az=33.0*

BJI ***25*** *20:39:49.0±0.0, 6°70′S×154°40′E, h51km, mB5.2/36, mb5.0/44, Ms4.7/26, Ms7 4.4/25*

GCMT ***25*** *20:39:50.5±0.2, 6°80′S±0°02′×154°32′E±0°02′, h18km, MW5.1/111, Moment Tensor Solution. s63,c76; s111,c151; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr3.84±.14; Mθθ-2.00±.09; Mφφ-1.84±.09; Mrθ2.92±.23; Mθφ1.43±.06; Mrφ-3.04±.23; Best double couple: M○5.54100×10^16 NP1:φs312.00000°, δ20.00000°, λ87.00000°. NP2:φs135.00000°, δ70.00000°, λ91.00000°. Principal axes: T 5.7860, Plg65.0000°, Azm47.0000°; N -0.4920, Plg1.0000°, Azm315.0000°; P -5.2950, Plg25.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***25*** *20:39:52.6±0.5, 7°S±3°×15°E±°, h49km±6km, M4.8/27, mb4.9/27, mB5.2/10, MLv5.1/3, Mw(mB)4.6/10, Mwp5.1/1*

ISC 25 20:39:49.0±0.4, 6°61S±0°05×154°43E±0°06, h35km, n93, σ1°74/99, mb4.8/37, MS4.2/25, 1C-1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.29**	**317**		**Pn**	**20 40 38.8**	**+0.7**
KRVT	**Keravat (AS076**	**3.31**	**314**	Pn	**Pn**	**20 40 36.8**	**-1.6**
	42nm,0.3s,baz=216,slow=9.0,SNR=21						
KRVT				Sn	**Sn**	**20 41 17.3**	**+0.9**
	102nm,0.3s,baz=47,slow=17,SNR=8.6						
HNR	**Honiara**	**6.14**	**118**	Pn	**Pn**	**20 41 19.9**	**+2.6**
	8.6nm,0.3s,baz=223,slow=8.3,SNR=1.7						
HNR				LR	LR	20 43 41.6	
	comp=Z,2µm,19.3s,baz=282,slow=39						
HNR	**Honiara**	**6.14**	**118**	*i* P	Pn	20 41 29.5	+12
PMG	**Port Moresby**	**7.71**	**248**	Pn	**Pn**	**20 41 37.5**	**-1.4**
	14nm,0.3s,baz=59,slow=5.4,SNR=14						
PMG				Sn	**Sn**	**20 43 07.0**	**+1.9**
	1.2nm,0.3s,baz=79,slow=22,SNR=11						
PMG				LR	LR	20 44 21.1	
	comp=Z,2µm,19.5s,baz=37,slow=36						
PMG	**Port Moresby**	**7.71**	**248**		**Pn**	**20 41 39.8**	**+0.9**
JAY	**Jayapura**	**14.27**	**286**	Pn	**Pn**	**20 43 08.2**	**-0.5**
	0.2nm,0.3s,baz=90,slow=23,SNR=6.2						
JAY				LR	LR	20 48 33.0	
	comp=Z,1µm,19.5s,baz=106,slow=37						
CTA	**Charters Tower**	**15.57**	**210**	Pn	**Pn**	**20 43 26.0**	**0.0**
	0.1nm,0.3s,baz=47,slow=11,SNR=3.0						
CTA				LR	LR	20 49 29.4	
	comp=Z,2µm,18.5s,baz=26,slow=38						
CTAO	**Charters Tower**	**15.57**	**210**	P	**P**	**20 43 29.6**	**-0.3**
CTAO				IAmb	IAmb	20 43 31.5	
	comp=Z,72nm,1.1s						
EIDS	**Eidsvold**	**18.93**	**189**	P	**P**	**20 44 07.3**	**+0.3**
DZM	**Mont Dzumac**	**19.26**	**144**	*e*Pn	**Pn**	**20 44 11.9**	**0.0**
	comp=Z,36nm,0.8s						
DZM				*e*LR	LR	20 48 05.5	
	comp=Z,1µm,22.0s						
DZM	**Mont Dzumac**	**19.26**	**144**	P	**P**	**20 44 10.7**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=9.5,slow=7.6,SNR=10						
DZM	**Mont Dzumac**	**19.26**	**144**	P	**P**	**20 44 09.3**	**-1.5**
WRD	**Warramunga Arr**	**23.43**	**234**	P	**P**	**20 44 53.0**	**-2.2**
WRAB	**Tennant Creek**	**23.56**	**234**	P	**P**	**20 44 55.1**	**-1.5**
WB2	**Warramunga Arr**	**23.57**	**234**	P	**P**	**20 44 55.3**	**-1.3**
WRA	**Warramunga Arr**	**23.58**	**234**	P	**P**	**20 44 54.7**	**-2.0**
	comp=Z,32nm,0.9s,baz=53,slow=8.6,SNR=66						
WRA				S	**S**	**20 49 08.4**	**-0.3**
	comp=Z,2.5nm,1.1s,baz=62,slow=15,SNR=3.7						
WRA				LR	LR	20 54 34.8	
	comp=Z,1µm,18.0s,baz=50,slow=38						
MTN	**Manton Dam**	**23.77**	**253**	P	**P**	**20 44 54.9**	**-3.6**
MTN				IAmb	IAmb	20 45 11.3	
	comp=Z,47nm,1.1s						
SIJI	**Sorong**	**23.79**	**283**	P	**P**	**20 44 56.5**	**-2.3**
	comp=Z,15nm,0.9s,baz=76,slow=6.1,SNR=14						
ARMA	**Armidale**	**23.83**	**186**	P	**P**	**20 44 58.6**	**-0.5**
ARMA				IAmb	IAmb	20 45 13.6	
	comp=Z,50nm,1.2s						
MSVF	**Nonsavu**	**25.57**	**118**	P	**P**	**20 45 15.0**	**-0.1**
MSVF				IAmb	IAmb	20 45 17.6	
	comp=Z,42nm,1.2s						
AS31	**Alice Springs**	**26.01**	**227**	P	**P**	**20 45 17.9**	**-1.0**
ASAR	**Alice Springs**	**26.01**	**227**	P	**P**	**20 45 18.1**	**-0.8**
	comp=Z,14nm,1.0s,baz=58,slow=9.0,SNR=57						
ASAR				ScP	**ScP**	**20 52 27.8**	**+3.9**
	comp=Z,3.9nm,1.1s,baz=60,slow=3.5,SNR=10						
ASAR				LR	LR	20 55 00.2	
	comp=Z,382nm,18.2s,baz=52,slow=35						
KNRA	**Kununurra**	**26.71**	**248**	P	**P**	**20 45 24.8**	**-0.6**
KNRA				IAmb	IAmb	20 45 40.2	
	comp=Z,45nm,1.0s						
LBMI	**Labuha**	**27.51**	**281**	P	**P**	**20 45 35.3**	**+2.8**
	comp=Z,2µmcomp=Z,90nm,1.5s						
STKA	**Stephens Creek**	**27.85**	**204**	P	**P**	**20 45 34.0**	**-1.4**
	comp=Z,9.0nm,0.5s,baz=36,slow=15,SNR=33						
STKA				LR	LR	20 57 16.8	
	comp=Z,649nm,18.3s,baz=21,slow=38						
STKA	**Stephens Creek**	**27.85**	**204**	P	**P**	**20 45 33.8**	**-1.6**
FITZ	**Fitzroy Crossi**	**30.30**	**245**	P	**P**	**20 45 55.5**	**-1.8**
	comp=Z,6.7nm,0.5s,baz=70,slow=8.4,SNR=38						
FITZ				LR	LR	20 58 58.4	
	comp=Z,653nm,18.2s,baz=76,slow=38						
FITZ	**Fitzroy Crossi**	**30.30**	**245**	P	**P**	**20 45 56.1**	**-1.2**
FITZ				IAmb	IAmb	20 46 11.2	
	comp=Z,29nm,1.2s						
BATI	**Baumata**	**30.63**	**261**	LR	LR	20 59 39.5	
	comp=Z,392nm,19.5s,baz=113,slow=39						
BBOO	**Buckleboo**	**31.17**	**211**	P	**P**	**20 46 02.6**	**-2.2**
BBOO				IAmb	IAmb	20 46 03.4	
	comp=Z,34nm,1.4s						
KMSI	**Cibinong**	**31.21**	**282**	P	P	20 46 13.9	+8.5
DAV	**Davao City (W)**	**31.83**	**295**	LR	LR	20 58 38.5	
	comp=Z,278nm,18.1s,baz=100,slow=36						
APSI	**Ampana**	**33.18**	**278**	P	P	20 46 35.5	+13
FORT	**Forrest**	**34.48**	**222**	P	**P**	**20 46 32.9**	**-0.9**
MPSI	**Mapaga**	**35.14**	**280**	P	**P**	**20 46 41.4**	**+1.7**
	comp=Z,20nm,1.9s						
YULB	**Yu-li**	**44.01**	**314**	P	**P**	**20 47 53.9**	**+0.5**
YULB				IAmb	IAmb	20 48 08.8	
	comp=Z,48nm,1.5s						
TPUB	**Ta-pu**	**44.43**	**313**	P	**P**	**20 47 56.0**	**-0.9**
TPUB				IAmb	IAmb	20 48 10.9	
	comp=Z,26nm,1.0s						
SSLB	**Suanglung**	**44.50**	**314**	P	**P**	**20 47 57.8**	**+0.5**
JNU	**Nakatsue**	**45.41**	**332**	P	**P**	**20 48 03.1**	**-1.3**
	comp=Z,16nm,0.9s,baz=207,slow=23,SNR=5.1						
JNU	**Nakatsue**	**45.41**	**332**	P	**P**	**20 48 02.9**	**-1.6**
MJAR	**Matsushiro Arr**	**45.54**	**342**	P	**P**	**20 48 03.2**	**-2.2**
	comp=Z,0.9nm,0.5s,baz=158,slow=7.1,SNR=5.3						
MJAR				PcP	**PcP**	**20 49 43.1**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=143,slow=3.0,SNR=4.6						
MJAR				LR	LR	21 07 06.0	
	comp=Z,92nm,18.1s,baz=175,slow=36						
KSRS	**Korea Array**	**50.34**	**333**	P	**P**	**20 48 40.9**	**-1.6**
	comp=Z,4.8nm,0.9s,baz=155,slow=8.4,SNR=14						
KSRS				LR	LR	21 09 05.0	
	comp=Z,88nm,18.4s,baz=144,slow=35						
ASAJ	**Asahikawa**	**51.61**	**349**	LR	LR	21 09 14.7	
	comp=Z,250nm,19.9s,baz=157,slow=34						
KRJI	**Kerinci**	**52.98**	**272**	P	P	20 49 14.9	+12
WHN	**Wuhan**	**53.27**	**316**	⇓P	**P**	**20 49 05.8**	**+1.3**
WHN				S	**S**	**20 56 39.3**	**+5.5**
WHN				LR	LR		
	comp=Z,670nm,20.5s						
USRK	**Ussuriysk Ar.**	**54.48**	**340**	P	**P**	**20 49 12.6**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=128,slow=5.8,SNR=5.0						
MNSI	**Mandailing Nat**	**55.22**	**276**	P	P	20 49 33.8	+15
PPT2	**Papeete2**	**55.65**	**107**	*e*S	S	20 56 56.9	-9.5
	comp=Z,84nm,27.5s						
PPT2				*e*LR	LR	21 04 40.7	
	comp=Z,121nm,20.5s						
XAN	**Xi'an**	**59.04**	**316**	P	**P**	**20 49 46.0**	**+0.2**
XAN				pP	pP	20 49 57.5	+3.0
XAN				PP	**PP**	**20 52 01.0**	**+4.4**
XAN				S	**S**	**20 57 51.0**	**+0.6**
XAN				SS	**SS**	**21 01 39.0**	**-6.0**
XAN				pmax	pmax		
	comp=Z,27nm,1.4s						
XAN				pmax	pmax		
	comp=Z,170nm,3.9s						
XAN				LR	LR		
	comp=Z,170nm,21.6s						
XAN				LR	LR		
	comp=Z,260nm,19.2s						
XAN				LR	LR		
	comp=Z,380nm,18.2s						
KMI	**Kunming**	**59.33**	**304**	P	**P**	**20 49 51.5**	**+3.3**
KMI				pP	sP	20 50 00.8	+0.9
KMI				sP	pwP	20 50 10.3	+4.5
KMI				S	**S**	**20 57 49.8**	**-5.1**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,130nm,4.0s						
KMI				LR	LR		
	comp=Z,200nm,10.7s						
KMI				LR	LR		
	comp=Z,150nm,11.5s						
KMI				LR	LR		
	comp=Z,170nm,13.6s						
PETK	**Petropavlovsk-**	**59.55**	**2**	P	**P**	**20 49 47.4**	**-1.5**
	comp=Z,3.4nm,1.0s,baz=152,slow=8.1,SNR=2.3						
PETK				LR	LR	21 14 48.4	
	comp=Z,84nm,19.5s,baz=234,slow=35						
CMAR	**Chiang Mai Arr**	**60.11**	**296**	P	**P**	**20 49 54.4**	**+1.0**
	comp=Z,6.4nm,1.1s,baz=114,slow=5.1,SNR=38						
CMAR				LR	LR	21 16 05.3	
	comp=Z,93nm,18.8s,baz=170,slow=36						
LZH	**Lanzhou**	**63.65**	**316**	*e*P	**P**	**20 50 18.3**	**+1.2**
LZH				*e*S	**S**	**20 58 49.8**	**+0.7**
LZH				SS	**SS**	**21 03 00.0**	**+2.6**
LZH				pmax	pmax		
	comp=Z,34nm,1.3s						
LZH				pmax	pmax		
	comp=Z,210nm,7.2s						
LZH				LR	LR		
	comp=Z,220nm,16.0s						
LZH				LR	LR		
	comp=Z,260nm,16.3s						
LZH				LR	LR		
	comp=Z,360nm,18.0s						
GTA	**Gaotai**	**68.08**	**317**	⇑P	**P**	**20 50 46.3**	**+0.8**
GTA				pP	pP	20 50 55.5	+1.2
GTA				S	**S**	**20 59 46.3**	**+3.4**
GTA				pmax	pmax		
	comp=Z,22nm,1.4s						
GTA				pmax	pmax		
	comp=Z,130nm,5.1s						
GTA				LR	LR		
	comp=Z,110nm,19.4s						
GTA				LR	LR		
	comp=Z,150nm,21.6s						
GTA				LR	LR		
	comp=Z,230nm,20.6s						
SONM	**Songino Array**	**68.71**	**327**	P	**P**	**20 50 49.2**	**0.0**
	comp=Z,2.3nm,0.6s,baz=143,slow=5.0,SNR=13						
SONM				LR	LR	21 21 26.0	
	comp=Z,143nm,18.3s,baz=110,slow=36						
LSA	**Lhasa**	**70.59**	**305**	P	**P**	**20 51 03.5**	**+1.8**
LSA				pmax	pmax		
	comp=Z,36nm,1.0s						
LSA	**Lhasa**	**70.59**	**305**	P	**P**	**20 51 02.1**	**+0.4**
LSA				IAmb	IAmb	20 51 18.7	
	comp=Z,11nm,0.8s						
VNDA	**Vanda**	**70.98**	**178**	P	**P**	**20 51 03.4**	**+0.7**
	comp=Z,1.4nm,0.9s,baz=322,slow=6.7,SNR=6.3						
VNDA	**Vanda**	**70.98**	**178**	P	**P**	**20 51 03.3**	**+0.7**
VNDA				IAmb	IAmb	20 51 18.1	
	comp=Z,10.0nm,1.2s						
TAPN	**Taplejung**	**72.72**	**301**	*e*P	**P**	**20 51 15.0**	**+0.7**
	comp=Z,34nm,1.1s						
ODAN	**Odare**	**72.85**	**301**	*e*P	**P**	**20 51 16.2**	**+1.2**
	comp=Z,26nm,0.6s						
RAMN	**Ramite**	**73.55**	**300**	*e*P	**P**	**20 51 20.6**	**+1.4**
	comp=Z,12nm,0.5s						
JIRN	**Jiri**	**74.10**	**301**	*e*P	**P**	**20 51 23.5**	**+0.9**
	comp=Z,44nm,1.0s						
GUN	**Gumba**	**74.44**	**301**	*e*P	**P**	**20 51 25.3**	**+0.8**
PKI	**Pulchoki**	**74.74**	**301**	*e*P	**P**	**20 51 26.5**	**+0.3**
	comp=Z,15nm,0.6s						
PKIN	**Phulchoki**	**74.75**	**301**	*e*P	**P**	**20 51 26.6**	**+0.4**
	comp=Z,14nm,0.5s						
KKN	**Kakani**	**74.91**	**301**	*e*P	**P**	**20 51 28.1**	**+1.0**
	comp=Z,20nm,0.5s						
DMN	**Daman**	**75.01**	**301**	*e*P	**P**	**20 51 28.3**	**+0.6**
	comp=Z,33nm,0.6s						
GKN	**Gorkha**	**75.52**	**301**	*e*P	**P**	**20 51 31.5**	**+1.0**
DANN	**Dangsing**	**76.36**	**301**	*e*P	**P**	**20 51 35.9**	**+0.5**
	comp=Z,32nm,0.6s						
TTA	**Tatalina**	**78.86**	**21**	P	**P**	**20 51 48.1**	**-0.3**
MK31	**Makanchi Array**	**82.74**	**319**	P	**P**	**20 52 10.0**	**+0.6**
MK31				IAmb	IAmb	20 52 10.8	
	comp=Z,18nm,1.3s						
MKAR	**Makanchi Array**	**82.74**	**319**	P	**P**	**20 52 09.8**	**+0.4**
	comp=Z,5.4nm,0.5s,baz=100,slow=6.4,SNR=49						
MKAR				LR	LR	21 28 42.2	
	comp=Z,106nm,20.4s,baz=93,slow=36						
ILAR	**Eielson Array**	**83.23**	**22**	P	**P**	**20 52 09.4**	**-2.0**
	comp=Z,2.9nm,0.9s,baz=257,slow=5.1,SNR=25						
ILAR				LR	LR	21 26 35.1	
	comp=Z,231nm,20.0s,baz=252,slow=34						
QSPA	**South Pole Qui**	**83.36**	**180**	P	**P**	**20 52 12.8**	**+0.4**
ZALV	**Zalesovo Beam**	**83.55**	**326**	P	**P**	**20 52 12.1**	**-1.3**
	comp=Z,2.3nm,0.5s,baz=122,slow=4.7,SNR=15						
ZALV				LR	LR	21 30 20.2	
	comp=Z,78nm,20.0s,baz=108,slow=36						
MAW	**Mawson**	**84.53**	**203**	P	**P**	**20 52 18.8**	**+0.7**
	comp=Z,4.6nm,0.9s,baz=88,slow=11,SNR=4.1						
KURK	**Kurchatov**	**86.18**	**322**	P	**P**	**20 52 26.1**	**-0.6**
KURK				IAmb	IAmb	20 52 28.0	
	comp=Z,15nm,1.3s						
INK	**Inuvik**	**89.56**	**21**	P	**P**	**20 52 40.4**	**-2.0**
	comp=Z,2.5nm,1.0s,baz=225,slow=4.3,SNR=4.3						
NVAR	**Mina Array Bea**	**91.93**	**52**	P	**P**	**20 52 55.2**	**+0.8**
	comp=Z,11nm,1.0s,baz=254,slow=6.0,SNR=28						
NVAR				LR	LR	21 32 27.2	
	comp=Z,142nm,18.0s,baz=268,slow=34						
YKA	**Yellowknife Ar**	**96.26**	**28**	P	**P**	**20 53 13.0**	**-0.5**
	comp=Z,1.4nm,1.0s,baz=268,slow=4.1,SNR=11						
YKA				LR	LR	21 33 36.4	
	comp=Z,72nm,19.1s,baz=0.0,slow=34						
PDAR	**Pinedale Array**	**98.86**	**48**	P	**P**	**20 53 25.5**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=270,slow=1.5,SNR=6.6						
PDAR				LR	LR	21 36 56.4	
	comp=Z,127nm,18.1s,baz=300,slow=35						
GEYT	**Alibeck**	**98.99**	**307**	LR	LR	21 40 56.6	
	comp=Z,77nm,19.4s,baz=60,slow=37						
TXAR	**Lajitas Array**	**103.58**	**62**	Pdiff	**Pdif**	**20 53 44.7**	**-2.4**
	comp=Z,0.1nm,0.4s,baz=201,slow=4.8,SNR=1.1						
AKASG	**Malin Array Be**	**116.90**	**324**	PKP	**PKPdf**	**20 58 29.2**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=55,slow=2.0,SNR=4.4						
BRG	**Berggiesshubel**	**125.03**	**331**	*e*PKP	**PKPdf**	**20 58 45.6**	**0.0**
	comp=Z,9.9nm,1.4s						
CLL	**Collm**	**125.21**	**331**	*e*PKiKP	**PKPdf**	**20 58 47.0**	**+1.1**
CLL				*e*PS	**PS**	**21 10 36.0**	**-0.7**
CLL				*e*PPS	PPS	21 12 12.0	
CLL				*e*SS	SS	21 17 36.0	+6.4
CLL				LmV		21 55 00.0	
	comp=Z,100nm,20.3s						
KHC	**Kasperske Hory**	**126.32**	**329**	*e*PKPDF	**PKPdf**	**20 58 48.0**	**-0.2**
GERES	**GERESS Array B**	**126.43**	**329**	PKP	**PKPdf**	**20 58 49.0**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=111,slow=3.0,SNR=5.9						
LPAZ	**La Paz**	**132.14**	**119**	PKP	**PKPdf**	**20 59 01.1**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=246,slow=3.1,SNR=2.8						
BDFB	**Brasilia**	**148.65**	**135**	PKP	**PKPdf**	**20 59 29.5**	**-0.4**
	comp=Z,2.0nm,0.5s,baz=132,slow=9.1,SNR=3.4						
BDFB				PKPbc	**PKPbc**	**20 59 33.5**	**-0.2**
	comp=Z,6.0nm,0.7s,baz=32,slow=7.2,SNR=4.4						
TORD	**Torodi Ar. Bea**	**152.38**	**286**	PKP	**PKPdf**	**20 59 35.0**	**-0.6**
	comp=Z,1.3nm,0.9s,baz=35,slow=2.5,SNR=5.5						
TORD				PKPbc	**PKPbc**	**20 59 41.6**	**-0.8**
	comp=Z,8.0nm,0.9s,baz=52,slow=1.9,SNR=31						

IDC 25 20:45:19.7±3.0, 6°70S×154°60E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.6/28, mbtmp3.9/4, ML3.6/1, Error ellipse: s-maj=64.7km s-min=35.9km az=85.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.50**	**313**	Pn	Pn	20 46 15.6	+0.2
	5.5nm,0.3s,baz=208,slow=3.1,SNR=6.8						
KRVT				Sn	Sn	20 46 53.0	-4.5
	13nm,0.3s,baz=33,slow=21,SNR=1.9						
WRA	**Warramunga Arr**	**23.67**	**234**	P	P	20 50 32.4	-0.7
	2.5nm,0.9s,baz=62,slow=9.8,SNR=4.7						
ASAR	**Alice Springs**	**26.08**	**227**	P	P	20 50 55.1	-0.2
	1.1nm,0.9s,baz=59,slow=11,SNR=3.1						
STKA	**Stephens Creek**	**27.84**	**204**	P	P	20 51 12.0	+1.0
	0.9nm,0.5s,baz=31,slow=16,SNR=3.1						
TORD	**Torodi Ar. Bea**	**152.57**	**286**	PKPbc	PKPbc	21 05 18.9	-0.4
	0.4nm,0.7s,baz=68,slow=3.3,SNR=2.5						

IDC 25 20:49:31.6±3.4, 6°63S×154°62E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.3/27, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=73.2km s-min=43.1km az=93.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.46**	**312**	Pn	Pn	20 50 28.0	+1.2
	5.0nm,0.3s,baz=224,slow=23,SNR=1.9						
KRVT				Sn	Sn	20 51 06.4	-2.1
	5.6nm,0.3s,baz=106,slow=15,SNR=2.1						
WRA	**Warramunga Arr**	**23.72**	**234**	P	P	20 54 44.7	-0.8
	1.1nm,0.9s,baz=53,slow=9.6,SNR=4.1						
ASAR	**Alice Springs**	**26.13**	**227**	P	P	20 55 08.2	+0.6
	0.3nm,0.8s,baz=58,slow=8.8,SNR=2.7						
TORD	**Torodi Ar. Bea**	**152.56**	**286**	PKPbc	PKPbc	21 09 30.8	-0.4
	0.3nm,0.5s,baz=82,slow=1.8,SNR=1.8						

SOME ***25*** *20:54:12.9, 40°90′N×72°70′E, h5km*
KRNET ***25*** *20:54:12.8±0.1, 40°81′N×72°77′E, h17km, mb3.6*
NNC ***25*** *20:54:15.7±1.5, 41°02′N×72°77′E, h5km±17km, mb3.7, mpv3.3, Error ellipse: s-maj=10.5km s-min=7.9km az=8.0*

ISC 25 20:54:10.0±1.2, 40°83N±0°03′×72°76E±0°02, h2km±11km, n62, σ1°36/107, 28C-14D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.52**	**19**	⇑*i*P	**Pn**	**20 54 23.1**	**-1.6**
	baz=17						
ARSB				⇑*i*S	**Sb**	**20 54 31.2**	**+1.1**
	baz=17						
ARK	**Arkit**	**1.14**	**328**	⇑*e*P	**Pn**	**20 54 34.0**	**+0.8**
	baz=29						
ARK				⇑*i*S	**Sn**	**20 54 50.0**	**+0.6**
	baz=29						
AML	**

GAR	**Garm**	**2.62**	**227**	⇓*i*P		**Pb**	**20 54 57.4**	**-0.5**
	baz=27								
GAR				⇓*i*S		**Sb**	**20 55 29.8**	**-0.8**
	baz=27								
CHMS	**Chumysh**	**2.62**	**34**	⇑*i*P		**Pb**	**20 54 57.9**	**+0.1**
	baz=33								
CHMS				⇑*i*S		**Sb**	**20 55 30.6**	**0.0**
	baz=33								
TAS	**Tashkent**	**2.67**	**282**	⇓*e*P		**Pb**	**20 54 58.2**	**-0.3**
	baz=82								
TAS				⇓*e*S		**Sb**	**20 55 31.5**	**-0.2**
	baz=82								
USP	**Ospenovka**	**2.75**	**27**	⇑*i*P		**Pb**	**20 54 59.8**	**-0.3**
	baz=27								
USP				⇑*i*S		**Sb**	**20 55 33.7**	**-0.6**
	baz=27								
USP	**Ospenovka**	**2.75**	**27**	P		**Pb**	**20 54 59.8**	**-0.3**
	SNR=5.7								
CHM	**Chimkent**	**2.80**	**303**	*e*P		**Pg**	**20 55 03.6**	**-0.1**
	22nm,0.1s								
CHM				*e*S		**Sg**	**20 55 40.2**	**+0.4**
	155nm,0.3s								
KK31	**Karatay Array**	**2.82**	**324**	⇓Pn		**Pb**	**20 54 59.4**	**-1.8**
	8.5nm,0.5s,baz=131,slow=16,SNR=47								
KK31				⇑Lg		Lg	20 55 34.2		
	11nm,0.3s,baz=139,slow=25,SNR=4.0								
BOOM	**Boomskoye usch**	**2.90**	**54**	⇑*i*P		**Pb**	**20 55 01.6**	**-1.0**
	baz=54								
BOOM				⇑*i*S		**Sb**	**20 55 37.0**	**-1.6**
	baz=54								
ULHL	**Ulahol**	**2.97**	**60**	⇑*i*P		**Pb**	**20 55 02.6**	**-1.2**
	baz=60								
ULHL				⇑*i*S		**Sb**	**20 55 38.7**	**-2.0**
	baz=60								
TKM2	**Tokmak 2**	**2.97**	**44**	⇓*i*P		**Pb**	**20 55 02.8**	**-1.1**
	baz=44								
TKM2				⇓*i*S		**Sb**	**20 55 39.0**	**-1.7**
	baz=44								
TKM2	**Tokmak 2**	**2.97**	**44**	P		**Pb**	**20 55 03.9**	**+0.1**
	SNR=7.9								
BRLS	**Borolday**	**3.10**	**316**	*e*P		**Pb**	**20 55 07.4**	**+1.5**
	8.4nm,0.1s								
BRLS				*e*S		**Sg**	**20 55 47.0**	**-2.5**
	58nm,0.5s								
KST	**Kastek**	**3.25**	**46**	*e*P		**Pg**	**20 55 11.4**	**-1.0**
	3.2nm,0.1s								
KST				*e*S		**Sg**	**20 55 53.5**	**-1.1**
	18nm,0.4s								
KST	**Kastek**	**3.25**	**46**	Pg		**Pg**	**20 55 11.4**	**-1.0**
	2.6nm,0.4s								
KST				Pg		**Pg**	**20 55 11.4**	**-1.0**
	2.6nm,0.4s								
KST				Lg		Lg	20 55 53.1		
	31nm,0.6s								
KST				Lg		Lg	20 55 53.1		
	31nm,0.6s								
DGS	**Degeres**	**3.29**	**42**	*e*P		**Pg**	**20 55 13.2**	**+0.1**
	5.6nm,0.3s								
DGS				*e*S		**Sg**	**20 55 56.7**	**+1.0**
	38nm,0.3s								
DGS	**Degeres**	**3.29**	**42**	Pg		**Pg**	**20 55 12.9**	**-0.2**
	11nm,0.5s								
DGS				Pg		**Pg**	**20 55 12.9**	**-0.2**
	11nm,0.5s								
DGS				Lg		Lg	20 55 55.7		
	40nm,0.6s								
DGS				Lg		Lg	20 55 55.7		
	40nm,0.6s								
CHGR	**Chuyangaron**	**3.53**	**233**	⇓*i*P		**Pb**	**20 55 09.9**	**-3.3**
	baz=34								
CHGR				⇓*i*S		**Sn**	**20 55 51.5**	**+3.2**
	baz=34								
MTBS	**Maitube**	**3.57**	**49**	Pg		**Pg**	**20 55 16.9**	**-1.6**
	1.9nm,0.2s								
MTBS				Pg		**Pg**	**20 55 16.9**	**-1.6**
	1.9nm,0.2s								
MTBS				Lg		Lg	20 56 02.9		
	15nm,0.6s								
MTBS				Lg		Lg	20 56 02.9		
	15nm,0.6s								
KRBS	**Karabastau**	**3.59**	**36**	*e*P		**Pg**	**20 55 18.7**	**-0.1**
	3.0nm,0.2s								
KRBS				*e*S		**Sg**	**20 56 06.0**	**+0.7**
	13nm,0.4s								
KRBS	**Karabastau**	**3.59**	**36**	Pg		**Pg**	**20 55 18.5**	**-0.2**
	5.6nm,1.0s								
KRBS				Pg		**Pg**	**20 55 18.5**	**-0.2**
	5.6nm,1.0s								
KRBS				Lg		Lg	20 56 05.4		
	13nm,0.8s								
KRBS				Lg		Lg	20 56 05.4		
	13nm,0.8s								
IZV	**Izvestkoviy**	**3.62**	**51**	*e*P		**Pg**	**20 55 20.3**	**+0.9**
	2.3nm,0.3s								
IZV				*e*S		**Sg**	**20 56 08.6**	**+2.3**
	18nm,0.3s								
TNSS	**Tian-Shan**	**3.82**	**53**	*e*P		**Pg**	**20 55 22.5**	**-0.8**
	2.0nm,0.2s								
TNSS				*e*S		**Sg**	**20 56 12.6**	**-0.2**
	12nm,0.5s								
TNSS	**Tian-Shan**	**3.82**	**53**	Pg		**Pg**	**20 55 23.4**	**+0.1**
	3.3nm,0.3s								
TNSS				Lg		Lg	20 56 13.6		
	16nm,0.8s								
KNDC	**Almaty**	**3.94**	**51**	⇑Pg		**Pg**	**20 55 28.2**	**+2.7**
	9.9nm,0.6s								
KNDC				⇑Lg		Lg	20 56 18.1		
	55nm,0.8s								
MDOK	**Medeo**	**3.95**	**53**	*e*P		**Pg**	**20 55 25.1**	**-0.7**
	2.7nm,0.2s								
MDOK				*e*S		**Sg**	**20 56 17.3**	**+0.2**
	11nm,0.7s								
MDOK	**Medeo**	**3.95**	**53**	Pg		**Pg**	**20 55 26.8**	**+1.0**
	8.2nm,0.8s								
MDOK				Lg		Lg	20 56 17.0		
	18nm,0.8s								
MDOK	**Medeo**	**3.95**	**53**	Pg		**Pg**	**20 55 25.3**	**-0.4**
	3.1nm,0.5s								
MDOK				Pg		**Pg**	**20 55 25.3**	**-0.4**
	3.1nm,0.5s								
MDOK				Lg		Lg	20 56 17.5		
	15nm,0.7s								
MDOK				Lg		Lg	20 56 17.5		
	15nm,0.7s								
KOTS	**Kotyrbulak**	**4.03**	**52**	*e*P		**Pg**	**20 55 26.9**	**-0.4**
	8.8nm,0.3s								
KOTS				*e*S		**Sg**	**20 56 20.0**	**+0.5**
	12nm,0.7s								
KOTS	**Kotyrbulak**	**4.03**	**52**	Pg		**Pg**	**20 55 26.6**	**-0.7**
	7.7nm,0.7s								
KOTS				Pg		**Pg**	**20 55 26.6**	**-0.7**
	7.7nm,0.7s								
KOTS				Lg		Lg	20 56 19.2		
	56nm,0.8s								
KOTS				Lg		Lg	20 56 19.2		
	56nm,0.8s								
KUU	**Kurty**	**4.05**	**40**	*e*P		**Pg**	**20 55 27.0**	**-0.6**
	2.7nm,0.2s								
KUU				*e*S		**Sg**	**20 56 20.2**	**+0.2**
	12nm,0.4s								
KUU	**Kurty**	**4.05**	**40**	Pg		**Pg**	**20 55 27.0**	**-0.6**
	2.8nm,0.3s								
KUU				Pg		**Pg**	**20 55 27.0**	**-0.6**
	2.8nm,0.3s								
KUU				Lg		Lg	20 56 19.9		
	25nm,0.5s								
KUU				Lg		Lg	20 56 19.9		
	25nm,0.5s								
KTBS	**Karatobe**	**4.09**	**44**	*e*P		**Pg**	**20 55 27.2**	**-1.2**
	4.0nm,0.2s								
KTBS				*e*S		**Sg**	**20 56 20.6**	**-0.9**
	13nm,0.3s								
KTBS	**Karatobe**	**4.09**	**44**	Pg		**Pg**	**20 55 28.1**	**-0.4**
	4.2nm,0.5s								
KTBS				Pg		**Pg**	**20 55 28.1**	**-0.4**
	4.2nm,0.5s								
KTBS				Lg		Lg	20 56 21.8		
	31nm,0.8s								
KTBS				Lg		Lg	20 56 21.8		
	31nm,0.8s								
BTLS	**Baital**	**4.31**	**12**	*e*P		**Pg**	**20 55 30.0**	**-2.7**
	0.9nm,0.2s								
BTLS				*e*S		**Sg**	**20 56 25.2**	**-3.3**
	18nm,0.3s								
CHKK	**Chushkaly**	**4.35**	**45**	*e*P		**Pg**	**20 55 32.5**	**-0.9**
	1.4nm,0.1s								
CHKK				*e*S		**Sg**	**20 56 29.6**	**-0.2**
	13nm,0.3s								
CHKK	**Chushkaly**	**4.35**	**45**	Pg		**Pg**	**20 55 32.0**	**-1.4**
	2.7nm,0.6s								
CHKK				Pg		**Pg**	**20 55 32.0**	**-1.4**
	2.7nm,0.6s								
CHKK				Lg		Lg	20 56 28.4		
	17nm,0.6s								
CHKK				Lg		Lg	20 56 28.4		
	17nm,0.6s								
SATY	**Saty**	**4.76**	**60**	Pg		**Pg**	**20 55 41.3**	**0.0**
	1.1nm,0.3s								
SATY				Lg		Lg	20 56 44.2		
	16nm,0.8s								
KURS	**Kuram**	**4.82**	**55**	*e*P		**Pg**	**20 55 41.4**	**-0.9**
	1.1nm,0.2s								
KURS				*e*S		**Sg**	**20 56 44.9**	**+0.2**
	6.2nm,0.5s								
ARXS	**Arharly**	**5.04**	**46**	Pg		**Pg**	**20 55 45.2**	**-1.5**
	5.5nm,0.5s								
ARXS				Lg		Lg	20 56 52.0		
	14nm,0.8s								
UZB	**Uzynbulak**	**5.21**	**62**	*e*P		**Pg**	**20 55 49.1**	**-0.7**
	1.5nm,0.3s								
UZB				*e*S		**Sg**	**20 56 58.1**	**+0.9**
	5.3nm,0.5s								
UZB	**Uzynbulak**	**5.21**	**62**	Pg		**Pg**	**20 55 49.2**	**-0.7**
	1.9nm,0.5s								
UZB				Lg		Lg	20 56 57.7		
	4.8nm,1.0s								
PDGK	**Podgornoye**	**5.59**	**61**	⇑Pg		**Pg**	**20 55 57.4**	**+0.2**
	3.0nm,0.7s								
PDGK				⇓Lg		Lg	20 57 10.4		
	12nm,1.2s								
OTUK	**Ortayu**	**7.42**	**358**	⇓Pg		**Pb**	**20 56 22.9**	**+3.5**
	4.5nm,1.3s								
OTUK				⇓Lg		Lg	20 58 00.2		
	17nm,0.9s								

*ATH **25** 21:03:50.9,40°.43N×25°.87E,h28km±1km,ML2.1/5,Error ellipse: s-maj=3.0km s-min=1.5km az=265.0*
*ISK **25** 21:03:50.9,40°.43N×25°.96E,h14km,ML2.3/17*
*DDA **25** 21:03:51.8,40°.38N×26°.04E,h7km±2km,ML2.3*
*THE **25** 21:03:51.7,40°.42N×25°.92E,h13km,ML2.0/4,Error ellipse: s-maj=1.0km s-min=0.6km az=85.0*

ISC 25 21:03:51.4±0.8, 40°.42N±0°.02×25°.94E±0°.02, h15km±6km, n51, σ0°70/81, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GOKA	**anakkale-Gk**	**0.23**	**187**	*i* P		**Pg**	**21 03 56.5**	**-0.1**
GOKA				*i* S		**Sg**	**21 04 00.3**	**+0.3**
GOKA				IAML			21 04 01.0	
	comp=E,875nm,0.5s							
GADA	**Gvkgeada**	**0.23**	**189**	P		**Pg**	**21 03 56.8**	**+0.2**
GADA				S		**Sg**	**21 04 00.7**	**+0.6**
	comp=E,478nm,0.3s							
GADA	**Gvkgeada**	**0.23**	**189**	PG		**Pg**	**21 03 56.6**	**0.0**
GADA				SG		**Sg**	**21 04 00.3**	**+0.2**
SMTH	**Samothraki Isl**	**0.32**	**279**	P		**Pg**	**21 03 57.7**	**-0.4**
SMTH				S		**Sg**	**21 04 02.4**	**-0.2**
SMTH	**Samothraki Isl**	**0.32**	**279**	P		**Pg**	**21 03 57.6**	**-0.5**
SMTH				S		**Sg**	**21 04 02.1**	**-0.5**
SMTH				AML		AML	21 04 02.8	
	comp=N,3272μm,0.2s							
SMTH				AML		AML	21 04 03.1	
	comp=E,2166μm,0.1s							
ENEZ	**Enez**	**0.35**	**27**	P		**Pg**	**21 03 58.6**	**-0.1**
ENEZ				S		**Sg**	**21 04 04.1**	**+0.6**
ENEZ	**Enez**	**0.35**	**27**	PG		**Pg**	**21 03 58.5**	**-0.1**
ENEZ				SG		**Sg**	**21 04 03.7**	**+0.2**
GELI	**Tayfur-Gelibol**	**0.41**	**93**	PG		**Pg**	**21 03 59.5**	**-0.1**
GELI				SG		**Sg**	**21 04 05.4**	**+0.3**
ERIK	**Erikli-Kesan**	**0.50**	**60**	PG		**Pg**	**21 04 00.9**	**-0.4**
ERIK				SG		**Sg**	**21 04 08.4**	**+0.4**
BOZC	**Bozcaada**	**0.59**	**172**	PG		**Pg**	**21 04 02.8**	**-0.1**
BOZC	**Bozcaada**	**0.59**	**172**	*i* P		**Pg**	**21 04 01.5**	**-1.4**
BOZC				*i* P		**Pb**	**21 04 02.6**	**-0.8**
BOZC				*i* S		**Sg**	**21 04 10.4**	**-0.2**
BOZC				*i* S		**Sg**	**21 04 10.5**	**-0.2**
BOZC				IAML			21 04 11.0	
	comp=N,113nm,0.2s							
LPK	**Lapseki**	**0.62**	**94**	PG		**Pg**	**21 04 03.5**	**-0.2**
KESN	**Edirne-Kesan**	**0.69**	**54**	*i* P		**Pg**	**21 04 05.0**	**0.0**
KESN				*i* S		**Sg**	**21 04 13.7**	**-0.5**
KESN				IAML			21 04 18.0	
	comp=E,232nm,0.2s							
LIA	**Limnos Island**	**0.78**	**228**	P		**Pg**	**21 04 06.2**	**-0.4**
LIA				S		**Sb**	**21 04 17.9**	**+0.8**
LIA	**Limnos Island**	**0.78**	**228**	P		**Pg**	**21 04 06.2**	**-0.4**
LIA				S		**Sg**	**21 04 16.1**	**-0.8**
RDO	**Rodhopi**	**0.79**	**337**	P		**Pg**	**21 04 06.2**	**-0.5**
RDO				S		**Sn**	**21 04 18.8**	**-0.7**
RDO	**Rodhopi**	**0.79**	**337**	P		**Pg**	**21 04 06.0**	**-0.7**
RDO				S		**Sg**	**21 04 16.3**	**-0.7**
RDO				AML		AML	21 04 21.3	
	comp=E,245μm,0.2s							
RDO				AML		AML	21 04 22.1	
	comp=N,204μm,0.2s							
RDO	**Rodhopi**	**0.79**	**337**	PG		**Pg**	**21 04 06.5**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**0.82**	**146**	*i* P		**Pg**	**21 04 07.0**	**-0.4**
BAYC				*i* S		**Sg**	**21 04 18.2**	**0.0**
UKOP	**Uzunkopru-Edir**	**0.88**	**36**	PG		**Pb**	**21 04 08.0**	**-0.3**
THAS	**Thassos island**	**0.95**	**282**	P		**Pb**	**21 04 09.0**	**-0.6**
THAS				S		**Sg**	**21 04 22.3**	**0.0**
	comp=N,110nm,0.2s							
THAS	**Thassos island**	**0.95**	**282**	P		**Pb**	**21 04 08.9**	**-0.6**
THAS				S		**Sb**	**21 04 20.9**	**-1.1**
THAS				AML		AML	21 04 23.0	
	comp=N,244μm,0.2s							
THAS				AML		AML	21 04 24.8	
	comp=E,231μm,0.2s							
RKY	**Sarkoy-Tekirda**	**0.98**	**74**	PG		**Pb**	**21 04 09.8**	**-0.3**
KRBG	**Karabiga-Canak**	**1.03**	**91**	PG		**Pb**	**21 04 10.8**	**-0.2**
SIGR	**SIGRI**	**1.21**	**183**	P		**Pn**	**21 04 13.8**	**0.0**
SIGR				S		**Sn**	**21 04 29.8**	**-0.1**
	comp=E,78nm,0.4s							
SIGR	**SIGRI**	**1.21**	**183**	P		**Pn**	**21 04 13.6**	**-0.2**
SIGR				S		**Sb**	**21 04 28.6**	**-0.9**
SIGR				AML		AML	21 04 32.4	
	comp=N,181μm,0.5s							
SIGR				AML		AML	21 04 32.8	
	comp=E,148μm,0.2s							
SIGR	**SIGRI**	**1.21**	**183**	PN		**Pn**	**21 04 13.7**	**0.0**
KAVA	**Kavala**	**1.23**	**298**	P		**Pn**	**21 04 14.0**	**0.0**
KAVA				S		**Sb**	**21 04 29.8**	**-0.2**
KAVA	**Kavala**	**1.23**	**298**	P		**Pn**	**21 04 13.8**	**-0.3**
KAVA				S		**Sb**	**21 04 29.2**	**-0.8**
KAVA				AML		AML	21 04 33.7	
	comp=E,91μm,0.2s							
KAVA				AML		AML	21 04 34.2	
	comp=N,104μm,0.2s							
AYVA	**Ayvalik**	**1.25**	**152**	*i* P		**Pn**	**21 04 14.2**	**-0.1**
AYVA				*i* S		**Sb**	**21 04 30.8**	**+0.2**
AYVA				IAML			21 04 33.0	
	comp=N,84nm,0.4s							
MRMT	**Marmara Adasi**	**1.27**	**81**	PN		**Pn**	**21 04 14.3**	**-0.4**
KDZ	**Kurdzhali**	**1.29**	**342**	PN		**Pn**	**21 04 14.9**	**0.0**
TKR	**Tekirdag**	**1.34**	**64**	PN		**Pn**	**21 04 15.4**	**-0.1**
GONE	**Gonen-Balikesi**	**1.39**	**105**	PN		**Pn**	**21 04 16.2**	**0.0**
BALY	**Balya**	**1.46**	**117**	*i* P		**Pb**	**21 04 17.9**	**-0.3**
BALY				*i* S		**Sb**	**21 04 36.9**	**+0.3**
EDC	**Edincik**	**1.47**	**92**	PN		**Pn**	**21 04 17.1**	**-0.2**
OUR	**Ouranopolis**	**1.50**	**267**	P		**Pn**	**21 04 16.9**	**-0.9**
OUR				S		**Sb**	**21 04 37.8**	**0.0**
	comp=N,68nm,0.4s							
OUR	**Ouranopolis**	**1.50**	**267**	P		**Pn**	**21 04 16.7**	**-1.0**
OUR	**Ouranopolis**	**1.50**	**267**	PN		**Pn**	**21 04 16.6**	**-1.2**
CRLT	**Corlu**	**1.53**	**62**	PN		**Pn**	**21 04 18.8**	**+0.6**
DKL	**Dikili**	**1.54**	**151**	PN		**Pn**	**21 04 18.1**	**-0.2**
EDRB	**Edirne**	**1.55**	**23**	P		**Pn**	**21 04 18.6**	**+0.2**
EDRB	**Edirne**	**1.55**	**23**	PN		**Pn**	**21 04 18.1**	**-0.3**
KIRK	**Kirklareli**	**1.61**	**32**	*i* P		**Pn**	**21 04 18.6**	**-0.7**
KIRK				*i* S		**Sn**	**21 04 40.4**	**+0.5**
BALB	**Balikesir**	**1.68**	**117**	PN		**Pn**	**21 04 20.0**	**-0.2**
PAIG	**Paliouri**	**1.80**	**255**	P		**Pn**	**21 04 20.8**	**-1.1**
AOS	**Alonnisos**	**2.02**	**232**	P		**Pn**	**21 04 24.4**	**-0.6**
CHOS	**Chios island**	**2.04**	**178**	P		**Pn**	**21 04 25.1**	**-0.1**
CHOS				S		**Sn**	**21 04 51.5**	**+1.1**
DION	**Dionisos Attik**	**2.81**	**214**	P		**Pn**	**21 04 34.6**	**-1.3**
TPE	**Tepelena**	**4.54**	**270**	P		**Pg**	**21 05 20.6**	**+2.4**
VLO	**Vlora**	**4.92**	**273**	P		**Pb**	**21 05 19.5**	**+2.3**
VLO				S		**Pg**	**21 05 27.8**	**+2.2**

ISK 25 21:04:25.7, 40°.43N×25°.97E, h14km, ML2.0/11, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.25**	**193**	PG		**Pb**	**21 04 31.6**	**-0.3**
GADA				SG		**Sg**	**21 04 35.0**	**+0.4**
ENEZ	**Enez**	**0.34**	**25**	PG		**Pb**	**21 04 33.3**	**-0.2**
ENEZ				SG		**Sb**	**21 04 38.2**	**-0.5**
GELI	**Tayfur-Gelibol**	**0.39**	**95**	PG		**Pb**	**21 04 34.4**	**+0.1**
GELI				SG		**Sb**	**21 04 40.1**	**-0.1**
ERIK	**Erikli-Kesan**	**0.48**	**60**	PG		**Pb**	**21 04 35.6**	**-0.3**
ERIK				SG		**Sb**	**21 04 42.5**	**-0.3**
BOZC	**Bozcaada**	**0.59**	**174**	PG		**Pb**	**21 04 37.8**	**0.0**
LPK	**Lapseki**	**0.61**	**95**	PG		**Pg**	**21 04 37.7**	**+0.1**
EZN	**Ezine**	**0.66**	**156**	PG		**Pb**	**21 04 39.1**	**+0.1**
RDO	**Rodhopi**	**0.79**	**335**	PG		**Pb**	**21 04 41.4**	**+0.3**
UKOP	**Uzunkopru-Edir**	**0.86**	**36**	PG		**Pg**	**21 04 42.3**	**-0.1**
KRBG	**Karabiga-Canak**	**1.01**	**92**	PG		**Pn**	**21 04 45.8**	**+0.3**
SIGR	**SIGRI**	**1.22**	**184**	PN		**Pb**	**21 04 48.6**	**0.0**
MRMT	**Marmara Adasi**	**1.25**	**82**	PN		**Pn**	**21 04 48.5**	**-0.3**

*PRU **25** 21:05:08.0±0.0,42°.08N×21°.71E,h0km*
*IDC **25** 21:05:08.1±1.1,42°.20N×21°.14E,h0km,mb3.5/6, mb1 3.6/11,mb1mx3.5/37,mbtmp3.5/11,ML3.2/5,MS2.4/3, Ms1 2.4/3,ms1mx2.2/36,Error ellipse: s-maj=18.8km s-min=16.1km az=40.0*
*SOF **25** 21:05:08.1,42°.14N×21°.31E,h5km,MD3.5*
*TIR **25** 21:05:09.3,41°.96N×21°.25E,h7km,Md4.0/5*
*BEO **25** 21:05:09.6±0.2,42°.12N×21°.29E,h5km±2km,ML3.4/19*
*PDG **25** 21:05:09.4±0.5,42°.11N×21°.30E,h9km,MD3.4/1, ML3.5/14,Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*SKO **25** 21:05:09.8,42°.12N×21°.26E,h1km*
*LDG **25** 21:05:10.4±0.1,42°.09N×21°.33E,h10km,Ml3.7/2,Error ellipse: s-maj=4.2km s-min=3.1km az=27.0*
*NEIC **25** 21:05:10.2±1.8,42°.09N±0°.04×21°.27E±0°.04,h10km±6km, Error ellipse: s-maj=5.5km s-min=4.8km az=190.0*

ISC 25 21:05:09.1±0.8, 42°.10N±0°.01×21°.28E±0°.01, h10km±5km, n273, σ1°89/349, mb3.7/5, 54C-23D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SKO	**Skopje**	**0.17**	**137**	*e*Pg		**Pg**	**21 05 12.7**	**-0.1**
SKO				*e*Sg		**Sg**	**21 05 15.0**	**-0.3**
SKO	**Skopje**	**0.17**	**137**	⇑*i*Pg		**Pg**	**21 05 12.9**	**+0.1**
SKO				*i* Sg		**Sg**	**21 05 15.2**	**-0.2**
SKO				*e*Lg		Lg	21 05 15.3	
	comp=E,654nm,0.3s							
SKO				*e*Lg		Lg	21 05 17.1	
	comp=N,2μm,0.3s						

ULC				*i* Sg	**Sg**	**21 06 00.9 +2.8**
KNT	**Kendrikon**	**1.53**	**127**	*e*P	**Pb**	**21 05 36.8 -0.7**
KNT	**Kendrikon**	**1.53**	**127**	*e*P	**Pb**	**21 05 36.9 -0.6**
VTS	**Vitosha**	**1.54**	**70**	*e*Pg	**Pb**	**21 05 37.0 -0.7**
VTS				*e*Sg	**Sg**	**21 05 58.5 -0.1**
VTS	**Vitosha**	**1.54**	**70**	⇓P	**Pb**	**21 05 37.0 -0.7**
VTS				⇑S	**Sn**	**21 05 53.0 -3.8**
VTS	**Vitosha**	**1.54**	**70**	P	**Pb**	**21 05 37.0 -0.7**
VTS	**Vitosha**	**1.54**	**70**		**Pb**	**21 05 37.0 -0.7**
VTS				Sn	**Sg**	**21 05 58.3 -0.3**
PDG	**Podgorica**	**1.54**	**283**	⇑P	**Pn**	**21 05 32.3 -4.3**
PDG				⇑S	**Sn**	**21 05 51.3 -5.2**
PDG	**Podgorica**	**1.54**	**283**	*e*Pn	**Pb**	**21 05 37.4 -0.3**
PDG	**Podgorica**	**1.54**	**283**	Pn	**Pb**	**21 05 37.0 -0.6**
PDG				Sn	**Sb**	**21 05 57.1 -0.1**
TTG	**Podgorica**	**1.54**	**283**	⇓*i*Pg	**Pb**	**21 05 37.8 +0.1**
TTG				*i* Sg	**Sg**	**21 06 00.9 +2.3**
ZAPS	**Zavoj**	**1.54**	**40**	*e*Pg	**Pb**	**21 05 37.6 -0.1**
ZAPS				*e*Sg	**Sg**	**21 05 58.3 -0.4**
DRME	**Dracevica, Mon**	**1.56**	**274**	*e*Pn	**Pg**	**21 05 38.6 -0.4**
DRME	**Dracevica, Mon**	**1.56**	**274**	⇓*i*Pg	**Pg**	**21 05 38.6 -0.4**
DRME				*i* Sg	**Sg**	**21 06 01.9 +2.6**
BOVS	**Bovan**	**1.57**	**11**	*e*Pg	**Pb**	**21 05 37.4 -0.8**
BOVS				*e*Sg	**Sb**	**21 05 58.1 0.0**
SOF	**Sofiya**	**1.63**	**68**	P	**Pg**	**21 05 40.8 +0.5**
NEST	**Nestorio**	**1.69**	**186**	P	**Pb**	**21 05 40.3 0.0**
IVAS	**Ivanjica**	**1.70**	**331**	*e*Pg	**Pb**	**21 05 39.3 -1.1**
IVAS				*e*Sg	**Sb**	**21 06 02.1 +0.3**
BUM	**Brajici-Budva**	**1.79**	**277**	⇑*i*Pn	**Pb**	**21 05 41.8 -0.1**
BUM				*i* Sn	**Sg**	**21 06 07.2 +0.7**
CEME	**Cevo**	**1.81**	**285**	⇑*i*Pn	**Pb**	**21 05 42.0 -0.3**
CEME				*i* Sn	**Sg**	**21 06 07.4 +0.1**
KZN	**Kozani**	**1.83**	**168**	P	**Pb**	**21 05 42.8 +0.2**
BLKB	**Belogradchik**	**1.84**	**33**	⇑S	**Sg**	**21 06 07.5 -0.7**
GRUS	**Gruza**	**1.84**	**347**	*e*Pg	**Pb**	**21 05 41.3 +0.6**
GRUS				*e*Sg	**Sg**	**21 06 07.5 -0.7**
NKY	**Niksic**	**1.84**	**294**	⇑*i*Pn	**Pb**	**21 05 42.6 -0.2**
NKY				*i* Sn	**Sg**	**21 06 08.4 +0.2**
NKME	**Niksic**	**1.85**	**292**	⇑*i*Pn	**Pb**	**21 05 42.3 -0.7**
NKME				*i* Sn	**Sg**	**21 06 08.3 -0.2**
ZAGS	**Zajecar**	**1.85**	**22**	*e*Pg	**Pn**	**21 05 41.4 +0.6**
ZAGS				*e*Sg	**Sg**	**21 06 07.8 -0.8**
PLE	**Pljevlja**	**1.86**	**312**	⇑*i*Pn	**Pb**	**21 05 42.6 -0.6**
PLE				*i* Sn	**Sg**	**21 06 08.7 -0.2**
MMB	**Musomiste**	**1.90**	**105**	P	**Pb**	**21 05 43.1 -0.7**
HORT	**Hortiatis**	**2.03**	**137**	*e*P	**Pn**	**21 05 43.9 +0.5**
RUDO	**Rudo**	**2.07**	**318**	*e*Pn	**Pn**	**21 05 44.1 +0.2**
UPM	**Unac-Piva**	**2.07**	**303**	*e*Pn	**Pb**	**21 05 46.0 -0.9**
UPM	**Unac-Piva**	**2.07**	**303**	⇓*i*Pn	**Pb**	**21 05 45.6 -1.3**
UPM				*i* Sn	**Sb**	**21 06 11.9 +1.2**
HCY	**Herceg Novi**	**2.10**	**281**	*e*Pn	**Pb**	**21 05 47.8 +0.6**
HCY	**Herceg Novi**	**2.10**	**281**	⇑*i*Pn	**Pb**	**21 05 46.1 -1.1**
HCY				*i* Sn	**Sb**	**21 06 14.3 +1.0**
SVIS	**Svilajnac**	**2.17**	**359**	*e*Pn	**Pn**	**21 05 46.1 +0.9**
BRY	**Bratogost**	**2.18**	**293**	*e*Pn	**Pb**	**21 05 48.5 -0.2**
BRY	**Bratogost**	**2.18**	**293**	⇑*i*Pn	**Pb**	**21 05 47.3 -1.4**
BRY				*i* Sn	**Sb**	**21 06 16.5 +0.7**
PGB	**Panagyurishte**	**2.19**	**77**	P	**Pn**	**21 05 46.2 +0.7**
LIT	**Litokhoron**	**2.19**	**155**		**Pn**	**21 05 46.5 +0.9**
MPEP	**Malo Peshtene**	**2.21**	**54**	P	**Pb**	**21 05 47.0 -2.0**
MPEP	**Malo Peshtene**	**2.21**	**54**	Pg	**Pg**	**21 05 51.2 -0.1**
DIVS	**Divibare**	**2.21**	**335**	*e*Pn	**Pn**	**21 05 46.5 +0.6**
DIVS	**Divibare**	**2.21**	**335**	*e*Pn	**Pn**	**21 05 46.4 +0.6**
DIVS	**Divibare**	**2.21**	**335**		**Pn**	**21 05 46.5 +0.6**
DIVS				Sn	**Sb**	**21 06 16.2 -0.4**
TRUS	**Trudelj**	**2.22**	**344**	*e*Pn	**Pn**	**21 05 46.6 +0.7**
TRUS				*e*Sg	**Sg**	**21 06 19.0 -0.6**
BBLS	**Lazići**	**2.24**	**323**	*e*Pn	**Pn**	**21 05 47.2 +0.9**
BBLS	**Lazići**	**2.24**	**323**	*e*Pn	**Pn**	**21 05 47.2 +0.9**
TREB	**Trebinje**	**2.26**	**287**	*e*Pn	**Pb**	**21 05 50.1 +0.2**
KUBS	**Kucevo**	**2.33**	**7**	*e*Pn	**Pn**	**21 05 47.1 -0.4**
KUBS				*e*Sg	**Sg**	**21 06 22.8 -1.2**
DBRK	**Dubrovnik**	**2.39**	**285**	*i* Pn	**Pb**	**21 05 51.1 -1.1**
DBRK				Sn	**Sg**	**21 06 27.5 +1.6**
BAIL	**Bailesti**	**2.45**	**37**	⇑P	**Pn**	**21 05 49.3 +0.3**
BAIL				⇓S	**Sg**	**21 06 25.6 -2.0**
BAIL	**Bailesti**	**2.45**	**37**		**Pn**	**21 05 49.3 +0.3**
BAIL					**Sg**	**21 06 25.6 -2.0**
PUNG	**Punghina**	**2.49**	**28**	⇓P	**Pn**	**21 05 50.8 +1.2**
PUNG				⇑S	**Sg**	**21 06 28.8 -0.3**
PUNG	**Punghina**	**2.49**	**28**		**Pn**	**21 05 50.8 +1.2**
PLD	**Plovdiv**	**2.55**	**89**	*e*P	**Pb**	**21 05 52.6 -2.2**
HAPS	**Han Pijesak,BI**	**2.62**	**320**	*e*Pn	**Pn**	**21 05 51.6 +0.1**
OUR	**Ouranopolis**	**2.69**	**130**	*e*P	**Pn**	**21 05 53.2 +0.8**
MDVR	**Moldovita**	**2.70**	**7**	⇑P	**Pn**	**21 05 52.9 +0.3**
MDVR				⇑S	**Sg**	**21 06 34.7 -1.1**
MDVR	**Moldovita**	**2.70**	**7**		**Pn**	**21 05 52.9 +0.3**
STON	**Ston**	**2.76**	**287**	*e*Pn	**Pb**	**21 05 56.7 -1.8**
STON	**Ston**	**2.76**	**287**	*e*Pn	**Pb**	**21 05 56.6 -1.8**
STON				Sn	**Sb**	**21 06 33.5 +1.2**
TEKS	**Tekeris**	**2.77**	**333**	*e*Pn	**Pn**	**21 05 54.4 +1.0**
TEKS	**Tekeris**	**2.77**	**333**	*e*Pn	**Pn**	**21 05 53.7 +0.3**
PLVB	**Pleven**	**2.78**	**61**	⇑P	**Pn**	**21 05 54.3 +0.8**
PLVB				⇑S	**Sb**	**21 06 33.2 +0.4**
PLVB	**Pleven**	**2.78**	**61**		**Pn**	**21 05 54.3 +0.8**
PLVB					**Sb**	**21 06 33.2 +0.4**
HERR	**Herculane**	**2.90**	**16**	⇑P	**Pn**	**21 05 56.3 +1.0**
HERR				⇓S	**Sg**	**21 06 39.8 -2.5**
HERR	**Herculane**	**2.90**	**16**		**Pn**	**21 05 56.3 +1.0**
SRE	**Strehaia**	**2.92**	**28**	⇑P	**Pn**	**21 05 56.3 +0.7**
SRE	**Strehaia**	**2.92**	**28**		**Pn**	**21 05 56.3 +0.7**
VLAD	**Vladila**	**2.98**	**49**	⇑P	**Pn**	**21 05 58.0 +2.3**
VLAD				⇓S	**Sb**	**21 06 41.0 +2.5**
VLAD	**Vladila**	**2.98**	**49**		**Pn**	**21 05 58.6 +2.3**
KDZ	**Kurdzhali**	**3.12**	**97**	*e*P	**Pn**	**21 05 59.9 +1.6**
AGG	**Agios Georgios**	**3.17**	**165**	*e*P	**Pn**	**21 06 00.2 +1.2**
AGG	**Agios Georgios**	**3.17**	**165**		**Pn**	**21 06 00.7 +1.7**
AGG					**Sb**	**21 06 40.6 -3.6**
FRGS	**Fruska Gora**	**3.24**	**341**	*e*Pn	**Pn**	**21 06 00.5 +0.5**
FRGS	**Fruska Gora**	**3.24**	**341**	*e*Pn	**Pn**	**21 06 00.5 +0.5**
BANR	**Banloc**	**3.29**	**358**	⇑P	**Pn**	**21 06 01.9 +1.4**
BANR				⇑S	**Sb**	**21 06 47.1 -0.3**
BANR	**Banloc**	**3.29**	**358**		**Pn**	**21 06 01.9 +1.4**
RDO	**Rodhopi**	**3.33**	**105**	*e*P	**Pn**	**21 06 02.4 +1.3**
RICI	**Ricice**	**3.36**	**296**	*e*Pn	**Pn**	**21 06 04.2 +2.6**
RICI				Sn	**Sb**	**21 06 46.9 -2.7**
MAKA	**Makarska**	**3.36**	**292**	*e*Pn	**Pn**	**21 06 04.0 +2.5**
MAKA				Sn	**Sb**	**21 06 47.0 -2.5**
BAI	**Bari**	**3.45**	**255**	*e*Pn	**Pn**	**21 06 05.0 +2.3**
GZR	**Gura Zlata**	**3.47**	**18**	⇑P	**Pn**	**21 06 03.8 +0.7**
GZR	**Gura Zlata**	**3.47**	**18**		**Pn**	**21 06 03.8 +0.7**
ELND	**Elena**	**3.50**	**75**	⇑P	**Pn**	**21 06 05.3 +1.8**
ELND				⇓S	**Sn**	**21 06 48.2 +3.3**
ELND	**Elena**	**3.50**	**75**		**Pn**	**21 06 05.3 +1.8**
ELND					**Sn**	**21 06 48.2 +3.3**
BZS	**Buzias**	**3.53**	**4**	⇑P	**Pn**	**21 06 03.9 0.0**
BZS	**Buzias**	**3.53**	**4**		**Pn**	**21 06 03.9 0.0**
COPA	**Copaceanca**	**3.53**	**53**	⇑P	**Pn**	**21 06 05.7 +1.9**
COPA	**Copaceanca**	**3.53**	**53**		**Pn**	**21 06 05.7 +1.9**
AOS	**Alonnisos**	**3.53**	**145**	*e*P	**Pn**	**21 06 04.4 +0.5**
HUMR	**Humele**	**3.63**	**47**	⇑P	**Pn**	**21 06 07.6 +2.3**
HUMR	**Humele**	**3.63**	**47**		**Pn**	**21 06 07.7 +2.3**
TIM	**Timisoara**	**3.64**	**359**	⇓P	**Pn**	**21 06 06.6 +1.2**
TIM	**Timisoara**	**3.64**	**359**		**Pn**	**21 06 06.6 +1.2**
SG1	**Sgolgore (BA)**	**3.68**	**252**	*e*Pn	**Pn**	**21 06 09.5 +3.5**
MATE	**Matera**	**3.73**	**249**	⇑P	**Pn**	**21 06 02.2 -4.5**
LOT	**Lotru**	**3.80**	**27**	⇓P	**Pn**	**21 06 08.4 +0.6**
LOT	**Lotru**	**3.80**	**27**		**Pn**	**21 06 08.4 +0.6**
MGRS	**Mrkonjic Grad**	**3.84**	**309**	*e*Pn	**Pn**	**21 06 10.9 +2.6**
ENEZ	**Enez**	**3.91**	**109**	*e*P	**Pn**	**21 06 10.1 +1.0**
GADA	**Gvkgeada**	**3.97**	**117**	*e*P	**Pn**	**21 06 11.8 +1.8**
BLY	**Banja Luka**	**3.99**	**313**	*e*Pn	**Pn**	**21 06 11.3 +1.0**
SGRR	**Singureni**	**4.04**	**57**	⇑P	**Pn**	**21 06 13.3 +2.4**
SGRR	**Singureni**	**4.04**	**57**		**Pn**	**21 06 13.3 +2.4**
KIJV	**Kijevo**	**4.05**	**300**	*i* Pn	**Pn**	**21 06 14.6 +3.5**
KIJV				Sn	**Sb**	**21 07 04.5 -5.0**
ARR	**Arges**	**4.07**	**35**	⇑P	**Pn**	**21 06 12.7 +1.3**
ARR	**Arges**	**4.07**	**35**		**Pn**	**21 06 12.8 +1.3**
EDRB	**Edirne**	**4.08**	**92**	*e*P	**Pn**	**21 06 12.0 +0.5**
RAZG	**Razgrad**	**4.12**	**67**	⇓P	**Pn**	**21 06 13.5 +1.6**
RAZG	**Razgrad**	**4.12**	**67**		**Pn**	**21 06 13.6 +1.6**
UKOP	**Uzunkopru-Edir**	**4.13**	**102**	*e*P	**Pn**	**21 06 14.0 +1.9**
SGRT	**San Giovanni R**	**4.15**	**267**		**Pn**	**21 06 13.8 +1.4**
SGRT				Sn	**Sn**	**21 07 02.4 +1.4**
SIRR	**Siria**	**4.18**	**4**	⇑P	**Pn**	**21 06 14.2 +1.4**
SIRR	**Siria**	**4.18**	**4**		**Pn**	**21 06 14.2 +1.4**
ERIK	**Erikli-Kesan**	**4.19**	**108**	*e*P	**Pn**	**21 06 12.9 0.0**
ZIRJ	**Zirje**	**4.43**	**292**	*e*Pn	**Pn**	**21 06 18.0 +1.8**
SULR		**4.45**	**53**	⇑P	**Pn**	**21 06 18.6 +2.0**
SULR		**4.45**	**53**		**Pn**	**21 06 18.6 +2.0**
MORI	**Morici**	**4.46**	**295**	*i* Pn	**Pn**	**21 06 19.1 +2.4**
TIP	**Timpagrande**	**4.51**	**231**	⇑P	**Pn**	21 06 11.4 -6.1
TIP	**Timpagrande**	**4.51**	**231**	Pn	**Pn**	**21 06 18.4 +1.0**
TIP				Sn	**Sn**	**21 07 12.5 +2.5**
SIGR	**SIGRI**	**4.52**	**128**	*e*P	**Pn**	**21 06 17.5 0.0**
MORH	**Mrgy, Hungar**	**4.53**	**336**	*e*Pn	**Pn**	**21 06 18.2 +0.5**
MLR	**Muntele Rosu**	**4.79**	**43**	Pn	**Pn**	**21 06 23.7 +2.4**
	comp=N,0.7nm,0.3s,baz=183,slow=4.3,SNR=12					
MLR				Lg	Lg	21 07 45.0
	comp=N,1.1nm,0.3s,baz=283,slow=19,SNR=3.4					
MLR				LR	LR	21 09 02.6
	comp=N,62nm,20.6s,baz=118,slow=49					
MLR	**Muntele Rosu**	**4.79**	**43**	⇓P	**Pn**	**21 06 23.4 +2.1**
MLR	**Muntele Rosu**	**4.79**	**43**		**Pn**	**21 06 22.9 +1.6**
MOSL	**Moslavina**	**4.80**	**319**	*e*Pn	**Pn**	**21 06 22.2 +0.8**
DRGR		**4.80**	**12**	⇑P	**Pn**	**21 06 21.8 +0.3**
DRGR		**4.80**	**12**		**Pn**	**21 06 21.8 +0.3**
ISR	**Istrita**	**4.87**	**50**	⇑P	**Pn**	**21 06 24.7 +2.3**
ISR	**Istrita**	**4.87**	**50**		**Pn**	**21 06 24.7 +2.3**
DOPR	**Dopca**	**4.87**	**36**	⇓P	**Pn**	**21 06 23.8 +1.5**
DOPR	**Dopca**	**4.87**	**36**		**Pn**	**21 06 23.8 +1.5**
CJR	**Cluj-Napoca**	**4.91**	**19**	⇑P	**Pn**	**21 06 24.5 +1.6**
CJR	**Cluj-Napoca**	**4.91**	**19**		**Pn**	**21 06 24.5 +1.6**
ITM	**Ithomi**	**4.94**	**174**	*e*P	**Pn**	**21 06 25.0 +1.7**
ITM	**Ithomi**	**4.94**	**174**		**Pn**	**21 06 26.4 +3.1**
DUGI	**Dugi Otok**	**4.94**	**295**	*e*Pn	**Pn**	**21 06 25.0 +1.7**
MRMT	**Marmara Adasi**	**4.98**	**105**	*e*P	**Pn**	**21 06 22.9 -1.0**
PAOL	**Paolisi**	**5.15**	**260**		**Pn**	**21 06 27.7 +1.5**
PAOL				Sn	**Sn**	**21 07 28.2 +2.5**
ICOR	**Ion Corvin**	**5.18**	**65**	⇑P	**Pn**	**21 06 29.1 +2.5**
ICOR	**Ion Corvin**	**5.18**	**65**		**Pn**	**21 06 29.1 +2.5**
DKL	**Dikili**	**5.24**	**123**	*e*P	**Pn**	**21 06 29.6 +2.2**
NVLJ	**Novalja**	**5.29**	**300**	*e*Pn	**Pn**	**21 06 29.5 +1.5**
BEHE	**Becsehely**	**5.44**	**325**	*e*Pn	**Pn**	**21 06 32.9 +2.8**
CTKS	**Kestanelik-??a**	**5.48**	**97**	*e*P	**Pn**	**21 06 31.6 +0.9**
OZLJ	**Ozalj**	**5.48**	**312**	*i* Pn	**Pn**	**21 06 32.0 +1.3**
INTR	**Introdacqua**	**5.49**	**272**		**Pn**	**21 06 32.4 +1.4**
HARR	**Harsova**	**5.49**	**60**	⇓P	**Pn**	**21 06 32.2 +1.3**
HARR	**Harsova**	**5.49**	**60**		**Pn**	**21 06 32.2 +1.3**
URLA	**Izmir**	**5.52**	**131**	*e*P	**Pn**	**21 06 33.3 +2.0**
CRES	**Cresnjev**	**5.62**	**314**	*e*Pn	**Pn**	**21 06 33.6 +1.0**
TIRR	**Tirgusor**	**5.71**	**63**		**Pn**	**21 06 35.7 +1.8**
CFR	**Carcaliu**	**5.85**	**56**	⇑P	**Pn**	**21 06 37.9 +2.2**
CFR	**Carcaliu**	**5.85**	**56**		**Pn**	**21 06 37.9 +2.2**
AQU	**L'Aquila**	**5.86**	**275**	*e*Pn	**Pn**	**21 06 38.3 +2.4**
AQU	**L'Aquila**	**5.86**	**275**		**Pn**	**21 06 37.6 +1.7**
TOPG	**Topolog**	**5.86**	**59**	⇑P	**Pn**	**21 06 37.3 +1.4**
RIY	**Rijeka**	**5.89**	**306**	*e*Pn	**Pn**	**21 06 40.4 +4.1**
PSZ	**Piszkesteto**	**5.90**	**351**	⇑P	**Pn**	**21 06 37.3 +0.7**
PSZ	**Piszkesteto**	**5.90**	**351**		**Pn**	**21 06 37.3 +0.7**
PSZ	**Piszkesteto**	**5.90**	**351**		**Pn**	**21 06 37.5 +0.9**
APE	**Apeiranthos**	**6.00**	**145**	⇑P	**Pn**	**21 06 37.0 -0.9**
APE	**Apeiranthos**	**6.00**	**145**	*e*P	**Pn**	**21 06 38.6 +0.7**
APE	**Apeiranthos**	**6.00**	**145**		**Pn**	**21 06 37.0 -0.9**
SRO2	**Moca**	**6.03**	**341**	*e*PN	**Pn**	**21 06 39.4 +1.3**
SRO2				*e*SN	**Sn**	**21 07 49.5 +2.4**
SRO2				*e*LG	Lg	21 07 55.3
NRCA	**Norcia**	**6.09**	**280**		**Pn**	**21 06 40.4 +1.3**
SRO	**Srobarova**	**6.09**	**341**	*e*PN	**Pn**	**21 06 41.3 +2.2**
CEY	**Cerknica**	**6.14**	**309**	*e*Pn	**Pn**	**21 06 41.9 +2.0**
BURAR	**Bucovina Array**	**6.18**	**26**	⇓P	**Pn**	**21 06 42.7 +2.2**
BURAR	**Bucovina Array**	**6.18**	**26**		**Pn**	**21 06 42.7 +2.2**
BUR08	**Bucovina Ar. S**	**6.21**	**25**	Pn	**Pn**	**21 06 41.9 +1.2**
TLCR		**6.28**	**58**	⇓P	**Pn**	**21 06 43.4 +1.8**
TLCR		**6.28**	**58**		**Pn**	**21 06 43.4 +1.8**
SOKA	**Soboth**	**6.40**	**318**	Pn	**Pn**	**21 06 44.7 +1.3**
	comp=N,1.6nm,0.3s,SNR=8.4					
SOKA				*i* Sn	**Sn**	**21 07 54.6 -2.0**
	comp=N,2.0nm,0.4s					
OBKA	**Obir**	**6.54**	**315**	Pn	**Pn**	**21 06 47.8 +2.5**
	comp=N,6.7nm,0.4s,SNR=5.4					
AYDB	**Zeytinkoy-Aydi**	**6.55**	**127**	*e*P	**Pn**	**21 06 47.9 +2.4**
ARSA	**Arzberg**	**6.59**	**323**	Pn	**Pn**	**21 06 47.5 +1.6**
	comp=N,12nm,0.3s,SNR=22					
ARSA				*i* Sn	**Sn**	**21 07 58.0 -3.1**
	comp=N,2.9nm,0.4s					
MANT	**Manisa**	**6.62**	**121**		**Pn**	**21 06 47.3 +0.7**
VYHS	**Vyhne**	**6.63**	**346**	*e*PN	**Pn**	**21 06 48.2 +1.8**
VYHS				*e*SN	**Sn**	**21 07 59.6 -2.4**
RODP	**Rodopos**	**6.81**	**163**	*e*P	**Pn**	**21 06 52.9 +4.0**
MODS	**Modra-Piesok**	**6.88**	**337**	*e*PN	**Pn**	**21 06 50.8 +0.8**
MODS				*e*SN	**Sn**	**21 08 04.0 -4.3**
MODS				*e*LG	Lg	21 08 10.8
IMMV	**Iera Moni Meta**	**6.95**	**161**	*e*P	**Pn**	**21 06 53.7 +2.7**
SMOL	**Smolenice**	**6.97**	**338**	*e*PN	**Pn**	**21 06 53.1 +2.0**
CONA	**Conrad Observa**	**6.98**	**328**	*i* Pn	**Pn**	**21 06 53.3 +2.0**
	comp=N,2.5nm,0.5s					
CONA				*i* Sn	**Sn**	**21 08 12.3 +1.5**
	comp=N,3.6nm,0.6s					
LATE	**Laterza**	**7.04**	**277**	Pn	**Pn**	**21 06 53.3 +1.1**
MYKA	**Terra Mystica**	**7.11**	**312**	*i* Pn	Pn	21 06 57.5 +4.4
	comp=N,3.6nm,0.5s					
IDI	**Anoyia**	**7.36**	**156**	Pn	**Pn**	**21 06 57.3 +0.7**
	comp=N,0.6nm,0.3s,baz=314,slow=14,SNR=9.5					
IDI	**Anoyia**	**7.36**	**156**	⇑P	**Pn**	**21 06 54.7 -1.9**
IDI	**Anoyia**	**7.36**	**156**	*e*P	**Pn**	**21 06 58.8 +2.2**
IDI	**Anoyia**	**7.36**	**156**		**Pn**	**21 06 57.5 +0.9**
IDI				Sn	**Sn**	**21 08 21.4 +1.2**
STAL	**STALIGIAL**	**7.43**	**307**		**Pn**	**21 06 58.6 +1.0**
OSSC	**Osservatorio P**	**7.52**	**284**	Pn	**Pn**	**21 07 02.7 +4.0**
KBA	**Koelnbreinsper**	**7.54**	**314**	*i* Pn	**Pn**	**21 07 03.2 +4.0**
	comp=N,4.4nm,0.8s					
MOA	**Molln**	**7.60**	**322**	*i* Pn	**Pn**	**21 07 02.5 +2.7**
	comp=N,1.7nm,0.3s					
MOA				*i* Sn	**Sn**	**21 08 24.4 -1.6**
	comp=N,2.2nm,0.4s					
ABTA	**Abfaltersbach**	**7.81**	**310**	*i* Pn	**Pn**	**21 07 06.4 +3.6**
	comp=N,4.3nm,0.5s					
ZCCA	**Zocca**	**7.86**	**290**		**Pn**	**21 07 06.9 +3.5**
VRAC	**Vranov**	**7.92**	**337**	Pn	**Pn**	**21 07 04.6 +0.4**
	comp=N,0.2nm,0.3s,baz=159,slow=11,SNR=4.9					
VRAC				LR	LR	21 10 46.0
	comp=N,22nm,18.9s,baz=125,slow=43					
CTI	**Castel Tesino**	**7.98**	**303**		**Pn**	**21 07 06.7 +1.6**
CTI					**Sn**	**21 08 34.8 -0.6**
VLC	**Villacollemand**	**8.23**	**288**	Pn	**Pn**	**21 07 10.8 +2.3**
KRLC	**Kraliky**	**8.57**	**340**	*e*PN	**Pn**	**21 07 17.2 +4.1**
KRLC				*e*SN	**Sn**	**21 08 51.0 +1.2**
GEC2	**GERESS Array S**	**8.59**	**324**		**Pn**	**21 07 15.2 +1.7**
GERES	**GERESS Array B**	**8.59**	**324**	Pn	**Pn**	**21 07 11.6 -1.9**
	comp=N,0.1nm,0.3s,baz=145,slow=12,SNR=1.8					
WTTA	**Wattenberg**	**8.59**	**310**	*i* Pn	**Pn**	**21 07 17.4 +3.8**
	comp=N,2.2nm,0.2s					
WTTA				*i* Sn	**Sn**	**21 08 57.2 +6.6**
	comp=N,4.7nm,0.7s					
WATA	**Walderalm**	**8.67**	**310**	*i* Pn	Pn	21 07 19.8 +5.3
	comp=N,2.6nm,0.3s					
SQTA	**Sankt Quirin**	**8.82**	**309**	*i* Pn	**Pn**	**21 07 20.0 +3.4**
	comp=N,1.4nm,0.2s					
KHC	**Kasperske Hory**	**8.86**	**325**	*e*PN	**Pn**	**21 07 20.0 +2.8**
MSSA	**Maissana**	**8.88**	**288**	Pn	**Pn**	**21 07 19.4 +2.1**
DPC	**Dobruska-Polom**	**8.94**	**339**	*e*PN	**Pn**	**21 07 22.2 +4.0**
MOTA	**Moosalm**	**8.94**	**309**	*i* Pn	**Pn**	**21 07 21.9 +3.5**
	comp=N,1.7nm,0.5s					
FETA	**Feichten**	**9.00**	**307**	*i* Pn	Pn	21 07 23.4 +4.3
	comp=N,1.4nm,0.5s					
FUORN	**Ofenpass-Fuorn**	**9.09**	**304**	Pn	**Pn**	**21 07 24.0 +3.5**
SBF	**Sospel**	**10.30**	**285**	*e*Pn	**Pn**	**21 07 35.8 -1.1**
FRF	**La Foret Royal**	**10.85**	**283**	*e*P	Pn	21 07 49.9 +5.5
MBDF	**Montbardon**	**10.88**	**289**	*e*P	Pn	21 07 50.3 +5.4
SENIN	**Lac Senin/Sane**	**10.90**	**298**	Pn	**Pn**	**21 07 45.7 +0.5**
BNI	**Bardonecchia**	**11.00**	**291**	Pn	**Pn**	**21 07 46.8 +0.3**
LPLA	**La Plagne**	**11.04**	**293**	*e*Pn	**Pn**	**21 07 46.8 -0.4**
LPG	**La Plagne**	**11.04**	**293**	*e*P	Pn	21 07 52.7 +5.5
LPG				*e*Sn	**Sn**	**21 09 44.5 -6.3**
	comp=N,4.3nm,0.7s					
BFO	**Black Forest**	**11.05**	**309**	Pn	**Pn**	**21 07 48.1 +0.9**
LPL	**La Plagne**	**11.06**	**293**	*e*P	Pn	21 07 52.8 +5.4
LPL				*e*Sn	**Sn**	**21 09 44.9 -6.2**
	comp=N,4.0nm,0.5s					
ORIF	**Oris-en-Rattie**	**11.54**	**289**	*e*Pn	**Pn**	**21 07 53.8 0.0**
ORIF	**Oris-en-Rattie**	**11.54**	**289**	*e*P	Pn	21 07 58.9 +5.1
HINF	**Hinteralfeld**	**11.71**	**304**	*e*Pn	**Pn**	**21 07 55.3 -0.8**
CABF	**La Chapelle**	**11.77**	**298**	*e*P	Pn	21 08 02.5 +5.5
VIVF	**Saint-Julien-l**	**12.38**	**288**	*e*Pn	**Pn**	**21 08 05.3 0.0**
SMF	**Signal de Mont**	**13.28**	**296**	*e*Pn	**Pn**	**21 08 17.1 -0.4**
SMF				*e*Sn	**Sn**	**21 10 37.3 -7.8**
EPF	**Esparros**	**15.46**	**281**	*e*Pn	**Pn**	**21 08 46.8 -0.3**
FINES	**FINESS Array B**	**19.59**	**7**	P	**P**	**21 09 35.5 -1.5**
	comp=N,0.1nm,0.3s,baz=178,slow=11,SNR=7.2					
NOA	**NORSAR Array B**	**19.93**	**346**	LR	LR	21 18 44.2
	comp=N,9.7nm,21.6s,baz=340,slow=41					
EKA	**Eskdalemuir Ar**	**20.73**	**318**	P	**P**	**21 09 48.5 -1.0**
	comp=N,1.1nm,0.8s,baz=115,slow=9.8,SNR=2.7					
ARCES	**ARCESS Array B**	**27.59**	**3**	P	**P**	**21 10 54.8 -1.2**
	comp=N,1.1nm,0.6s,baz=183,slow=7.3,SNR=5.9					
TORD	**Torodi Ar. Bea**	**33.49**	**216**	P	**P**	**21 11 51.0 +2.5**
	comp=N,0.7nm,0.7s,baz=22,slow=9.5,SNR=3.8					
ZALV	**Zalesovo Beam**	**42.71**	**51**	P	**P**	**21 13 06.0 +0.1**
	comp=N,0.3nm,0.3s,baz=281,slow=9.9,SNR=1.8					
MKAR	**Makanchi Array**	**42.85**	**62**	P	**P**	**21 13 08.8 +1.6**
	comp=N,0.1nm,0.4s,baz=270,slow=8.4,SNR=2.1					
CMAR	**Chiang Mai Arr**	**68.83**	**84**	P	**P**	**21 16 14.2 +0.4**
	comp=N,0.5nm,0.6s,baz=306,slow=7.7,SNR=5.8					

ISK ***25*** *21:19:31.9, 41.37N×43.94E, h10km, ML2.5/6*
TIF ***25*** *21:19:31.8, 41.34N×43.94E, h14km*
DDA ***25*** *21:19:32.

DZM	**Mont Dzumac**	**18.87**	**261**	*e*Pn		**Pn**	**21 24 09.3**	**+0.6**
	52nm,0.8s								
DZM				*e*LR		LR	21 28 33.3		
	comp=Z,665nm,22.9s								
DZM	**Mont Dzumac**	**18.87**	**261**	P		**P**	**21 24 07.2**	**-0.6**
	0.6nm,0.3s,baz=73,slow=15,SNR=15								
DZM				LR		LR	21 30 29.4		
	comp=Z,591nm,18.6s,baz=64,slow=35								
DZM	**Mont Dzumac**	**18.87**	**261**	P		**P**	**21 24 05.5**	**-2.3**
URZ	**Urewera**	**19.79**	**202**	P		**Pn**	**21 24 20.0**	**+0.6**
	2.4nm,0.3s,baz=221,slow=2.1,SNR=7.3								
URZ				LR		LR	21 31 00.8		
	comp=Z,268nm,21.1s,baz=9.0,slow=34								
TBI	**Tubuai**	**22.47**	**102**	*e*T		T	21 48 47.2		
	9.7nm,0.3s								
PAE	**Paea**	**22.69**	**88**	*e*T		T	21 48 46.3		
	2.5nm,0.3s								
PPT2	**Papeete2**	**22.71**	**87**	*e*LQ		LQ	21 29 15.3		
	378nm,26.5s								
PPT2				*e*LR		LR	21 30 26.3		
	comp=Z,532nm,25.8s								
PPT	**Papeete**	**22.71**	**87**	LR		LR	21 31 30.9		
	comp=Z,148nm,20.5s,baz=206,slow=30								
MEH	**Mehetia**	**24.08**	**89**	*e*T		T	21 50 31.6		
	15nm,0.2s								
HNR	**Honiara**	**27.83**	**289**	LR		LR	21 34 51.6		
	comp=Z,271nm,19.8s,baz=159,slow=33								
TAOE	**Nuku Hiva Isla**	**34.05**	**76**	*e*LR		LR	21 35 08.3		
	comp=Z,390nm,29.3s								
PMG	**Port Moresby**	**39.49**	**280**	LR		LR	21 41 43.7		
	comp=Z,229nm,18.8s,baz=143,slow=34								
STKA	**Stephens Creek**	**41.79**	**244**	P		**P**	**21 27 36.4**	**+0.2**
	2.8nm,0.5s,baz=93,slow=11,SNR=13								
STKA				LR		LR	21 42 39.9		
	comp=Z,107nm,19.1s,baz=40,slow=33								
STKA	**Stephens Creek**	**41.79**	**244**	P		**P**	**21 27 34.7**	**-1.5**
AS31	**Alice Springs**	**48.76**	**256**	P		**P**	**21 28 30.1**	**-1.5**
ASAR	**Alice Springs**	**48.76**	**256**	P		**P**	**21 28 32.1**	**+0.6**
	4.6nm,0.6s,baz=100,slow=7.8,SNR=38								
ASAR				PcP		**PcP**	**21 29 59.8**	**+3.8**
	2.8nm,0.7s,baz=99,slow=4.4,SNR=8.9								
ASAR				LR		LR	21 49 27.0		
	comp=Z,152nm,18.1s,baz=99,slow=37								
WB2	**Warramunga Arr**	**48.88**	**261**	P		**P**	**21 28 30.4**	**-2.1**
WB2				IAmb		IAmb	21 28 36.5		
	comp=Z,13nm,1.1s								
WRAB	**Tennant Creek**	**48.88**	**261**	P		**P**	**21 28 30.7**	**-1.8**
WRAB				IAmb		IAmb	21 28 36.4		
	comp=Z,14nm,1.1s								
WRA	**Warramunga Arr**	**48.89**	**261**	P		**P**	**21 28 32.1**	**-0.5**
	comp=Z,4.7nm,0.6s,baz=97,slow=7.5,SNR=40								
VNDA	**Vanda**	**58.64**	**186**	P		P	21 29 48.0	+5.1	
	comp=Z,2.1nm,1.0s,baz=350,slow=6.7,SNR=7.0								
VNDA	**Vanda**	**58.64**	**186**	P		**P**	**21 29 42.9**	**0.0**
VNDA				IAmb		IAmb	21 29 53.8		
	comp=Z,3.6nm,1.0s								
SOEI	**Soe**	**60.79**	**270**	P		**P**	**21 29 56.5**	**-2.3**
QSPA	**South Pole Qui**	**69.89**	**180**	P		**P**	**21 30 56.5**	**-0.4**
MJAR	**Matsushiro Arr**	**72.59**	**321**	P		**P**	**21 31 17.7**	**+4.3**
	comp=Z,15nm,0.7s,baz=149,slow=6.1,SNR=62								
MJAR				LR		LR	21 58 15.1		
	comp=Z,35nm,21.4s,baz=80,slow=32								
MAJO	**Matsushiro**	**72.59**	**321**	P		**P**	**21 31 13.8**	**+0.3**
MAT	**Matsushiro**	**72.59**	**321**	P		**P**	**21 31 17.7**	**+4.3**
MJB9	**Matsu-Tunnel**	**72.59**	**321**	P		**P**	**21 31 13.2**	**-0.3**
MJB9				IAmb		IAmb	21 31 18.8		
	comp=Z,13nm,0.8s								
PETK	**Petropavlovsk-**	**77.16**	**343**	P		P	21 31 45.2	+5.8	
	comp=Z,11nm,0.7s,baz=136,slow=8.2,SNR=18								
PETK				LR		LR	21 58 51.5		
	comp=Z,58nm,21.8s,baz=238,slow=30								
SSLB	**Suanglung**	**77.43**	**301**	P		**P**	**21 31 39.9**	**-1.8**
SSLB				IAmb		IAmb	21 31 46.5		
	comp=Z,8.8nm,0.7s								
TPUB	**Ta-pu**	**77.46**	**301**	P		**P**	**21 31 39.7**	**-2.1**
YSS	**Yuzh-Sakhalins**	**77.62**	**331**	P		**P**	**21 31 42.3**	**+0.2**
KSM	**Kuching**	**77.63**	**276**	P		**P**	**21 31 41.9**	**-1.1**
KSM				IAmb		IAmb	21 31 48.8		
	comp=Z,12nm,0.8s								
NVAR	**Mina Array Bea**	**77.91**	**41**	P		P	21 31 51.8	+7.6	
	comp=Z,1.6nm,0.8s,baz=225,slow=7.6,SNR=8.7								
NVAR				LR		LR	22 04 14.9		
	comp=Z,83nm,18.0s,baz=260,slow=34								
SHPR	**Sheep Range**	**78.76**	**44**	P		**P**	**21 31 48.4**	**-0.6**
Y14A	**Wickenburg**	**78.76**	**47**	P		**P**	**21 31 47.6**	**-1.3**
KSRS	**Korea Array**	**79.56**	**316**	P		**P**	**21 31 57.5**	**+4.4**
	comp=Z,5.5nm,0.8s,baz=136,slow=6.1,SNR=16								
KSRS				LR		LR	22 01 41.4		
	comp=Z,50nm,20.0s,baz=136,slow=32								
X16A	**Lo Mia Camp, P**	**80.11**	**48**	P		**P**	**21 31 54.9**	**-1.5**
CCUT	**Cedar City**	**80.54**	**44**	P		**P**	**21 31 57.7**	**-0.9**
U15A	**North Rim**	**80.62**	**46**	P		**P**	**21 31 57.5**	**-1.7**
PKCU	**Pink Cliffs**	**81.17**	**45**	P		**P**	**21 32 00.3**	**-1.9**
USRK	**Ussuriysk Ar.**	**81.19**	**324**	P		P	21 32 07.0	+5.4	
	comp=Z,2.5nm,0.6s,baz=121,slow=4.1,SNR=14								
USRK				LR		LR	22 04 07.1		
	comp=Z,120nm,19.5s,baz=135,slow=33								
MTPU	**Mount Pierson**	**81.59**	**44**	P		**P**	**21 32 03.3**	**-1.1**
H03S2	**Juan Fernandez**	**82.60**	**123**	T		T	23 04 36.3		
	baz=249,slow=75,SNR=19								
H03S1	**Juan Fernandez**	**82.61**	**123**	T		T	23 04 38.7		
	baz=249,slow=75,SNR=19								
H03S3	**Juan Fernandez**	**82.62**	**123**	T		T	23 04 43.9		
	baz=249,slow=75,SNR=17								
H03N2	**Juan Fernandez**	**82.73**	**123**	T		T	23 04 39.8		
	baz=257,slow=71,SNR=9.7								
H03N3	**Juan Fernandez**	**82.73**	**123**	T		T	23 04 40.9		
	baz=257,slow=71,SNR=7.1								
H03N1	**Juan Fernandez**	**82.74**	**123**	T		T	23 04 40.5		
	baz=257,slow=71,SNR=6.7								
TMUT	**Trail Mountain**	**82.91**	**44**	P		**P**	**21 32 10.6**	**-0.6**
SRU	**San Rafael Swe**	**83.26**	**44**	P		**P**	**21 32 11.7**	**-1.2**
TXAR	**Lajitas Array**	**83.31**	**56**	P		P	21 32 21.8	+8.6	
	comp=Z,0.8nm,0.8s,baz=214,slow=8.8,SNR=8.0								
PV05	**Paradox Valley**	**83.66**	**46**	P		**P**	**21 32 14.4**	**-0.6**
PV05				IAmb		IAmb	21 32 25.2		
	comp=Z,8.0nm,1.2s								
PV09	**Paradox Valley**	**83.85**	**45**	P		**P**	**21 32 14.8**	**-1.3**
PV14	**Lion Creek, Pa**	**83.86**	**45**	P		**P**	**21 32 15.2**	**-0.8**
PV14				IAmb		IAmb	21 32 25.1		
	comp=Z,6.8nm,1.0s								
PV13	**Radium Mtn., P**	**83.89**	**46**	P		**P**	**21 32 14.5**	**-1.6**
ANMO	**Albuquerque**	**83.90**	**49**	P		**P**	**21 32 15.2**	**-1.1**
TTA	**Tatalina**	**83.97**	**8**	P		**P**	**21 32 14.9**	**-0.9**
TTA				IAmb		IAmb	21 32 24.1		
	comp=Z,4.6nm,1.0s								
PV12	**Saucer Basin,**	**83.98**	**46**	P		**P**	**21 32 14.7**	**-1.9**
PV12				IAmb		IAmb	21 32 26.5		
	comp=Z,6.7nm,1.1s								
PV21	**Cone Mtn., Par**	**83.99**	**45**	P		**P**	**21 32 15.4**	**-1.4**
PV21				IAmb		IAmb	21 32 25.8		
	comp=Z,4.3nm,0.8s								
VRDI	**Verde Repeater**	**84.64**	**14**	P		**P**	**21 32 18.0**	**-1.4**
VRDI				IAmb		IAmb	21 32 29.2		
	comp=Z,4.2nm,1.1s								
CN2	**Changchun**	**84.73**	**320**	*e*P		P	21 32 25.3	+5.3	
TRF	**Thorofare Moun**	**85.31**	**10**	P		**P**	**21 32 20.4**	**-2.2**
TRF				IAmb		IAmb	21 32 31.7		
	comp=Z,8.6nm,1.0s								
RND	**Reindeer**	**85.52**	**11**	P		**P**	**21 32 22.8**	**-0.8**
RND				IAmb		IAmb	21 32 32.9		
	comp=Z,8.0nm,0.8s								
WHN	**Wuhan**	**85.76**	**305**	⇑P		P	21 32 30.5	+5.1	
MCK	**McKinley**	**85.80**	**11**	P		**P**	**21 32 24.9**	**0.0**
MCK				IAmb		IAmb	21 32 34.4		
	comp=Z,9.3nm,0.9s								
PDAR	**Pinedale Array**	**85.84**	**42**	P		P	21 32 33.3	+7.4	
	comp=Z,0.5nm,0.7s,baz=282,slow=4.5,SNR=2.0								
PDAR				LR		LR	22 08 51.7		
	comp=Z,65nm,18.3s,baz=300,slow=34								
PLCA	**Paso Flores**	**86.34**	**132**	LR		LR	22 05 49.4		
	comp=Z,52nm,18.2s,baz=222,slow=32								
NEA	**Nenana**	**86.56**	**10**	IAmb		IAmb	21 32 52.3		
	comp=Z,3.9nm,0.8s								
WRH	**Wood River Hil**	**86.63**	**11**	P		**P**	**21 32 28.5**	**-0.4**
WRH				IAmb		IAmb	21 32 44.2		
	comp=Z,8.9nm,1.0s								
HDA	**Harding Lake**	**86.78**	**11**	P		**P**	**21 32 29.5**	**-0.2**
HDA				IAmb		IAmb	21 32 38.7		
	comp=Z,7.1nm,1.0s								
CCB	**Clear Creek Bu**	**86.84**	**11**	P		**P**	**21 32 29.1**	**-0.8**
CCB				IAmb		IAmb	21 32 38.4		
	comp=Z,4.8nm,0.8s								
SCRK	**Sand Creek**	**86.96**	**13**	P		**P**	**21 32 30.1**	**-0.7**
IL31		**87.12**	**11**	P		**P**	**21 32 30.2**	**-1.0**
IL31				IAmb		IAmb	21 32 44.6		
	comp=Z,2.8nm,1.0s								
ILAR	**Eielson Array**	**87.12**	**11**	P		P	21 32 37.5	+6.2	
	comp=Z,1.5nm,0.9s,baz=222,slow=4.8,SNR=11								
ILAR				LR		LR	22 08 46.1		
	comp=Z,23nm,19.8s,baz=144,slow=34								
IPM	**Ipoh**	**87.36**	**276**	P		**P**	**21 32 32.2**	**-1.5**
KULM	**Kulim**	**87.99**	**276**	P		**P**	**21 32 34.9**	**-1.8**
DAWY	**Dawson**	**88.04**	**14**	P		**P**	**21 32 36.1**	**+0.3**
DAWY				IAmb		IAmb	21 32 44.0		
	comp=Z,5.0nm,1.1s								
SNAA	**Sanae**	**88.16**	**177**	P		**P**	**21 32 35.5**	**-1.0**
SNAA				IAmb		IAmb	21 32 52.0		
	comp=Z,4.2nm,1.1s								
EGAK	**Eagle**	**88.26**	**13**	P		**P**	**21 32 37.3**	**+0.6**
EGAK				IAmb		IAmb	21 32 44.3		
	comp=Z,5.0nm,0.9s								
ENH	**Enshi**	**89.45**	**303**	P		**P**	**21 32 42.2**	**-1.0**
GSI	**Gunungsitoli**	**89.50**	**272**	P		**P**	**21 32 43.0**	**-0.8**
XAN	**Xi'an**	**91.39**	**306**	P		**P**	**21 32 51.1**	**-1.1**
PBKT	**Sadao Pong**	**91.61**	**287**	P		**P**	**21 32 51.9**	**-1.6**
KMI	**Kunming**	**93.06**	**296**	P		P	21 33 06.5	+6.1	
KMI				pP		sP	21 33 17.3	-1.3	
KMI				pmax		pmax			
	comp=Z,9.0nm,0.5s								
KMI				pmax		pmax			
	comp=Z,130nm,4.2s								
KMI				LR		LR			
	comp=Z,100nm,5.6s								
KMI				LR		LR			
	comp=Z,110nm,6.7s								
KMI				LR		LR			
	comp=Z,110nm,7.3s								
CM31	**Chiang Mai Arr**	**94.08**	**288**	P		**P**	**21 33 03.0**	**-1.9**
CMAR	**Chiang Mai Arr**	**94.08**	**288**	P		P	21 33 09.8	+4.9	
	comp=Z,5.5nm,1.0s,baz=118,slow=2.8,SNR=30								
CMAR				LR		LR	22 12 39.7		
	comp=Z,26nm,20.2s,baz=250,slow=34								
CHTO	**Chiang Mai**	**94.19**	**288**	P		**P**	**21 33 03.8**	**-1.6**
CHTO				IAmb		IAmb	21 33 22.2		
	comp=Z,5.8nm,0.9s								
YKA	**Yellowknife Ar**	**94.47**	**23**	P		P	21 33 14.5	+8.8	
	comp=Z,0.4nm,0.7s,baz=233,slow=4.0,SNR=7.5								
ECSD	**EROS Data Cent**	**94.64**	**45**	P		**P**	**21 33 04.8**	**-2.2**
ECSD				IAmb		IAmb	21 33 22.1		
	comp=Z,4.6nm,1.1s								
SONM	**Songino Array**	**98.37**	**318**	P		Pdif	21 33 28.9	+5.0	
	comp=Z,0.5nm,0.5s,baz=119,slow=1.9,SNR=4.1								
MKAR	**Makanchi Array**	**114.11**	**313**	PKiKP		**PKiKP**	**21 38 29.9**	**+4.8**
	comp=Z,0.4nm,0.5s,baz=54,slow=2.1,SNR=7.7								
ARCES	**ARCESS Array B**	**129.32**	**352**	PKP		**PKiKP**	**21 38 60.0**	**+5.7**
	comp=Z,2.0nm,0.8s,baz=52,slow=2.0,SNR=7.5								
FINES	**FINESS Array B**	**136.57**	**347**	PKP		**PKiKP**	**21 39 13.8**	**+4.7**
	comp=Z,1.2nm,0.7s,baz=160,slow=6.1,SNR=5.4								
KMBO	**Kilima Mbogo**	**143.23**	**238**	PKP		**PKiKP**	**21 39 25.4**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=74,slow=7.7,SNR=2.0								
AKASG	**Malin Array Be**	**144.69**	**335**	PKP		**PKiKP**	**21 39 26.3**	**+0.3**
	comp=Z,5.8nm,0.6s,baz=41,slow=4.7,SNR=34								
AKBB	**Malin Array Si**	**144.69**	**335**			PKPbc	21 39 21.4	+0.1	
SORM	**Soroca**	**147.03**	**333**	⇓P		**PKiKP**	**21 39 34.3**	**+3.4**
MILM	**Milestii Mici**	**147.75**	**331**	⇑P		**PKPab**	**21 39 36.6**	**+3.7**
OJC	**Ojcow**	**148.24**	**344**			**PKPab**	**21 39 35.0**	**+0.2**
VASR	**Vaslui**	**148.42**	**332**	⇓P		**PKPab**	**21 39 38.9**	**+3.2**
GAZ	**Gaziantep**	**148.42**	**309**			**PKPbc**	**21 39 32.3**	**-0.4**
KSP	**Ksiaz**	**148.46**	**348**	*e*PKP		**PKPab**	**21 39 39.0**	**+3.4**
CLL	**Collm**	**148.53**	**352**	⇑*i*PKPbc		**PKPab**	**21 39 39.4**	**+3.5**
	comp=Z,10.0nm,0.9s								
CLL				⇓*i*PKPab		**pPKPdf**	**21 39 42.7**	**+0.3**	
	comp=Z,10.0nm,0.7s								
CLL				*e*pPKPab		**sPKPab**	**21 39 59.0**	**+4.5**
CLL	**Collm**	**148.53**	**352**	PKPbc		**PKPbc**	**21 39 32.1**	**-0.3**
MBAR	**Mbarara**	**148.58**	**232**			**PKPab**	**21 39 37.4**	**0.0**
BURAR	**Bucovina Array**	**148.73**	**335**	⇓P		**PKPab**	**21 39 40.1**	**+3.1**
OSTC	**Ostas**	**148.75**	**348**	⇑*e*PKP		**PKPab**	**21 39 40.0**	**+3.2**
CHVC	**Chvalec**	**148.75**	**348**	⇑*e*PKP		**PKPab**	**21 39 43.4**	**+6.5**
BRG	**Berggiesshubel**	**148.83**	**351**	*e*PKP		**PKPab**	**21 39 39.7**	**+2.6**
	comp=Z,6.0nm,1.0s								
BRG				*e*			21 49 21.1		
	comp=Z,2.5nm,1.0s								
	comp=N,73nm,15.0s								
	comp=E,102nm,18.0s								
	comp=Z,161nm,19.4s								
UPC	**Upice**	**148.83**	**348**	*e*PKPAB		**PKPab**	**21 39 43.6**	**+6.4**
NIE	**Niedzica**	**148.84**	**343**	*e*PKP		**PKPab**	**21 39 40.6**	**+3.3**
BIZ	**Bicaz**	**148.92**	**344**	⇑P		**PKPab**	**21 39 40.2**	**+2.5**
DPC	**Dobruska-Polom**	**148.92**	**348**	⇑*e*PKP		**PKPab**	**21 39 40.2**	**+2.6**
DPC				*e*pPKP		**sPKPab**	**21 39 55.1**	**-1.1**
ILGA	**Ilgaz**	**148.94**	**318**			**PKPab**	**21 39 37.3**	**-0.9**
VARL	**Varlezi**	**148.96**	**331**	⇑P		**PKPab**	**21 39 40.6**	**+2.8**
TESR	**Tescani**	**149.02**	**333**	⇓P		**PKPab**	**21 39 40.0**	**+1.9**
GHRR		**149.04**	**331**	⇓P		**PKPab**	**21 39 41.1**	**+2.9**
PVCC	**Panska Ves**	**149.06**	**350**	⇑*e*PKP		**PKPab**	**21 39 41.3**	**+3.2**
KRLC	**Kraliky**	**149.09**	**347**	⇑*e*PKP		**PKPab**	**21 39 40.5**	**+2.2**
KRLC				*ex*		x	21 39 54.0		
MORC	**Moravsky Berou**	**149.21**	**346**	*e*PKP		**PKPab**	**21 39 40.4**	**+1.6**
MORC	**Moravsky Berou**	**149.21**	**346**	⇓P		**PKPab**	**21 39 41.0**	**+2.2**
TRPA	**Tarpa**	**149.28**	**339**	⇑P		**PKPab**	**21 39 40.8**	**+1.7**
JURR	**Jurilovca**	**149.29**	**328**	⇑P		**PKPab**	**21 39 39.8**	**+0.6**
CFR	**Carcaliu**	**149.36**	**329**	⇑P		**PKPab**	**21 39 40.7**	**+1.3**
TOPG	**Topolog**	**149.46**	**329**	⇓P		**PKPab**	**21 39 41.5**	**+1.6**
VRI	**Vrincioaia**	**149.49**	**332**	⇓P		**PKPab**	**21 39 41.2**	**+1.2**
PLOR	**Plostina**	**149.54**	**332**	⇓P		**PKPab**	**21 39 41.3**	**+1.0**
PRU	**Pruhonice**	**149.59**	**350**	⇑*e*PKP		**PKPab**	**21 39 41.7**	**+1.4**
PRU				*ex*		x	21 39 55.2		
BR131	**Keskin Array S**	**149.71**	**316**	PKPab		**PKPab**	**21 39 40.9**	**-0.5**
BRTR	**Keskin Array B**	**149.71**	**316**	PKPbc		**PKPab**	**21 39 41.5**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=132,slow=4.1,SNR=9.3								
TIRR	**Tirgusor**	**149.75**	**328**	⇑P		**PKPab**	**21 39 42.3**	**+1.2**
TIRR	**Tirgusor**	**149.75**	**328**	PKPbc		**PKPbc**	**21 39 34.9**	**-0.8**
HARR	**Harsova**	**149.81**	**329**	⇓P		**PKPab**	**21 39 42.5**	**+1.1**
VRAC	**Vranov**	**149.85**	**347**	*e*PKP		**PKPab**	**21 39 41.8**	**+0.4**
DOPR	**Dopca**	**149.99**	**333**	⇓P		**PKPab**	**21 39 43.4**	**+1.3**
JAVC	**Velka Javorina**	**150.03**	**345**	*e*PKP		**PKPab**	**21 39 43.4**	**+1.2**
TREC	**Trest**	**150.09**	**348**	⇑*e*PKP		**PKPab**	**21 39 42.8**	**+0.4**
CJR	**Cluj-Napoca**	**150.10**	**336**	⇑P		**PKPab**	**21 39 42.7**	**+0.1**
MANR	**Mangalia**	**150.12**	**327**	⇑P		**PKPab**	**21 39 43.7**	**+1.1**
MLR	**Muntele Rosu**	**150.13**	**332**	⇓P		**PKPab**	**21 39 45.1**	**+2.3**
MLR	**Muntele Rosu**	**150.13**	**332**	PKPbc		**PKPbc**	**21 39 35.8**	**-1.0**
KRUC	**Moravsky**	**150.13**	**347**	*e*PKP		**PKPab**	**21 39 42.2**	**-0.3**
PSZ	**Piszkesteto**	**150.30**	**342**	⇑P		**PKPab**	**21 39 43.2**	**+0.1**
PSZ	**Piszkesteto**	**150.30**	**342**	PKPbc		**PKPbc**	**21 39 36.6**	**-0.4**
DRGR		**150.37**	**337**	⇑P		**PKPab**	**21 39 43.3**	**-0.3**
KHC	**Kasperske Hory**	**150.58**	**351**	⇑*e*PKP		**PKPab**	**21 39 44.0**	**-0.4**
KHC				*e*PKPAB		**sPKPdf**	**21 39 50.5**	**-0.3**
KHC				*ex*		x	21 39 56.5		
MODS	**Modra-Piesok**	**150.58**	**345**	*e*PKP		**PKPab**	**21 39 43.8**	**-0.6**
ARR	**Arges**	**150.79**	**333**	⇓P		**PKPab**	**21 39 45.4**	**0.0**
GEC2	**GERESS Array S**	**150.84**	**350**	PKPbc		**PKPbc**	**21 39 38.2**	**-0.2**
GERES	**GERESS Array B**	**150.84**	**350**	PKPbc		**PKPab**	**21 39 44.1**	**-1.4**
	comp=Z,2.1nm,0.8s,baz=46,slow=3.9,SNR=12								
DEV	**Deva**	**151.06**	**336**	⇓P		**PKPab**	**21 39 45.2**	**-1.2**
LOT	**Lotru**	**151.08**	**335**	⇑P		**PKPab**	**21 39 44.9**	**-1.8**
SIRR	**Siria**	**151.19**	**338**	⇓P		**PKPab**	**21 39 45.8**	**-1.2**
CONA	**Conrad Observa**	**151.32**	**347**	*i*PKPab		**PKPab**	**21 39 46.1**	**-1.5**
	comp=Z,7.1nm,0.8s								
CONA				*i*pPKPab		**sPKPbc**	**21 39 57.8**	**0.0**	
	comp=Z,7.7nm,0.8s								
GZR	**Gura Zlata**	**151.52**	**336**	⇑P		**PKPab**	**21 39 45.6**	**-2.9**
MOA	**Molln**	**151.71**	**349**	*i*pPKPdf		**PKPab**	**21 39 46.6**	**-2.5**
	comp=Z,1.4nm,0.5s								
MOA				*i*pPKPab		**sPKPbc**	**21 39 58.8**	**+0.1**	
	comp=Z,4.1nm,0.9s								
BZS	**Buzias**	**151.76**	**337**	⇓P		**PKPab**	**21 39 46.8**	**-2.5**
ARSA	**Arzberg**	**152.03**	**347**	*i*pPKPdf		**PKPab**	**21 39 47.9**	**-2.6**
	comp=Z,2.2nm,1.1s								
ARSA				*i*pPKPbc		**sPKPdf**	**21 39 53.6**	**+0.6**	
	comp=Z,2.9nm,1.0s								
HERR	**Herculane**	**152.09**	**336**	⇓P		**PKPab**	**21 39 47.4**	**-3.4**
PLVB	**Pleven**	**152.36**	**331**	⇑P		**PKPab**	**21 39 47.6**	**-4.4**
MDVR	**Moldovita**	**152.44**	**336**	⇓P		**PKPab**	**21 39 48.5**	**-3.8**
KBA	**Koelnbreinsper**	**152.61**	**350**	*i*pPKPdf		**PKPab**	**21 39 48.8**	**-4.3**
	comp=Z,2.4nm,0.8s								
WATA	**Walderalm**	**152.61**	**353**	*i*pPKPdf		**PKPab**	**21 39 48.8**	**-4.3**
	comp=Z,0.6nm,0.4s								
WATA				*i*pPKiKP		**sPKPbc**	**21 40 01.1**	**+0.1**	
	comp=Z,3.6nm,0.5s								
MOTA	**Moosalm**	**152.66**	**353**	*i*pPKPdf		**PKPab**	**21 39 48.8**	**-4.5**
	comp=Z,4.4nm,1.1s								
MOTA				*i*pPKiKP		**sPKPbc**	**21 39 59.9**	**-1.1**	
	comp=Z,4.9nm,0.7s								
WTTA	**Wattenberg**	**152.68**	**352**	*i*pPKPdf		**PKPab**	**21 39 49.2**	**-4.2**
	comp=Z,4.3nm,0.7s								
SOKA	**Soboth**	**152.68**	**347**	*i*pPKPdf		**PKPab**	**21 39 48.2**	**-5.1**
	comp=Z,3.3nm,0.7s								
SQTA	**Sankt Quirin**	**152.77**	**353**	*i*pPKPdf		**PKPab**	**21 39 49.3**	**-4.4**
	comp=Z,3.4nm,0.9s								
DAVA	**Damuels**	**152.83**	**355**	*i*pPKPdf		**PKPab**	**21 39 50.1**	**-3.9**
	comp=Z,3.7nm,0.9s								
OBKA	**Obir**	**152.94**	**348**	*i*pPKiKP		**PKPab**	**21 40 00.5**	**+6.1**
	comp=Z,3.8nm,0.7s								
MYKA	**Terra Mystica**	**153.00**	**349**	*i*pPKPdf		**PKPab**	**21 39 48.5**	**-6.1**
	comp=Z,3.0nm,0.9s								
MYKA				*i*pPKiKP		**sPKPbc**	**21 40 01.4**	**-0.3**	
	comp=Z,5.8nm,0.9s								
FETA	**Feichten**	**153.02**	**354**	*i*pPKPdf		**PKPab**	**21 39 50.0**	**-4.8**
	comp=Z,2.7nm,1.0s								
FETA				*i*pPKiKP		**sPKPbc**	**21 40 01.7**	**-0.2**	
	comp=Z,3.9nm,0.7s								
ABTA	**Abfaltersbach**	**153.06**	**351**	*i*pPKPdf		**PKPab**	**21 39 49.3**	**-5.6**
	comp=Z,4.9nm,0.8s								
CRNS	**Crni Vrh**	**153.41**	**348**	*i*PKPbc		**PKiKP**	**21 39 49.4**	**+5.1**
FUORN	**Ofenpass-Fuorn**	**153.46**	**354**			**PKPbc**	**21 39 42.9**	**-1.6**
VTS	**Vitosha**	**153.59**	**332**			**PKPab**	**21 39 56.9**	**-0.5**
DIVS	**Divibare**	**153.66**	**338**			**PKPbc**	**21 39 44.6**	**-0.2**
BOJS	**Bojanci**	**153.75**	**346**	*i*PKPbc		**PKiKP**	**21 39 51.1**	**+6.2**
BOJS				*e*			21 40 03.4		
SANT	**Santorini**	**156.90**	**318**			**PKPab**	**21 40 10.4**	**-1.2**
IDI	**Anoyia**	**157.94**	**317**	⇑P		**PKPab**	**21 40 19.0**	**+2.8**

*IDC **25** 21:31:52.0±5.9, 17.°39S×178.°79W, h508km±69km, mb3.4/11, mb1 3.7/12, mb1mx3.4/41, mbtmp4.3/12, Error ellipse: s-maj=41.9km s-min=24.5km az=157.0*
*NEIC **25** 21:31:53.0±0.8, 17.°7S±0.°2×178.°70W±0.°09, h535km±10km, mb4.2/19, Error ellipse: s-maj=26.0km s-min=5.3km az=152.0*

ISC 25 21:31:53.9±0.6, 17.°7S±0.°1×178.°7W±0.°1, h547km, n37, σ0.883/37, mb4.1/22, Fiji Islands region

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

MRMT	**Marmara Adasi**	**1.18**	**80**	PN	Pb	21 32 55.1	+0.1
SIGR	**SIGRI**	**1.20**	**188**	PN	Pb	21 32 55.4	+0.2
GONE	**Gonen-Balikesi**	**1.29**	**105**	PN	Pb	21 32 56.7	0.0
KDZ	**Kurdzhali**	**1.34**	**339**	PN	Pb	21 32 57.4	-0.2
EDC	**Edincik**	**1.37**	**92**	PN	Pn	21 32 57.7	+0.4
DKL	**Dikili**	**1.48**	**154**	PN	Pn	21 32 59.1	+0.3
EDRB	**Edirne**	**1.53**	**19**	PN	Pn	21 32 59.9	+0.4

*DDA **25** 22:07:34.9, 39˚.70N×27˚.58E, h11km±3km, ML2.3*
ISK 25 22:07:48.2, 40˚.79N×27˚.74E, h20km, ML2.1/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRMT	**Marmara Adasi**	**0.22**	**210**	PG	Pb	22 07 54.5	+0.5
MRMT				SG	Sb	22 07 57.9	-0.1
TKR	**Tekirdag**	**0.25**	**322**	PG	Pb	22 07 54.7	+0.5
TKR				SG	Sb	22 07 58.5	+0.2
BOTS	**Marmara Eregli**	**0.27**	**43**	PG	Pb	22 07 55.3	+0.9
BOTS				SG	Sb	22 07 59.7	+1.0
CRLT	**Corlu**	**0.33**	**360**	PG	Pb	22 07 56.3	+0.9
RKY	**Sarkoy-Tekirda**	**0.44**	**256**	PG	Pb	22 07 57.3	+0.1
EDC	**Edincik**	**0.46**	**168**	PG	Pb	22 07 58.1	+0.6
KRBG	**Karabiga-Canak**	**0.52**	**220**	PG	Pb	22 07 59.2	+0.5
KNL	**Balıkesir**	**0.55**	**197**	*i* P	Pn	22 08 00.8	0.0
KNL				*i* S	Sb	22 08 07.0	+0.4
KNL				IAML		22 08 08.0	
	comp=E,32nm,0.4s						
SLVT	**Silivri**	**0.56**	**39**	PG	Pb	22 07 59.4	0.0
KCTX	**Karacabey (Bur**	**0.71**	**138**	PG	Pb	22 08 02.3	+0.4
CTKS	**Kestanelik-??a**	**0.73**	**53**	PG	Pn	22 08 02.8	-0.5
GONE	**Gonen-Balikesi**	**0.75**	**183**	PG	Pn	22 08 03.3	-0.3
CTYL	**Yalikoy Yolu**	**0.80**	**31**	PG	Pb	22 08 03.8	+0.4
KESN	**Edirne-Kesan**	**0.80**	**273**	*i* P	Pb	22 08 03.8	+0.1
KESN				*i* S	Sb	22 08 13.5	-0.8
KESN				IAML		22 08 17.0	
	comp=E,90nm,0.3s						
LPK	**Lapseki**	**0.86**	**241**	PG	Pn	22 08 04.9	-0.2
BGKT	**Bogazkoy**	**0.87**	**63**	PG	Pn	22 08 05.1	-0.2
ARMT	**Armutlu**	**0.88**	**105**	PG	Pn	22 08 05.9	+0.4
UKOP	**Uzunkopru-Edir**	**0.90**	**292**	PG	Pn	22 08 05.9	+0.2
ERIK	**Erikli-Kesan**	**0.94**	**263**	PG	Pn	22 08 06.6	+0.4
MDNY	**Mudanya-Bursa**	**0.97**	**116**	PG	Pn	22 08 07.0	+0.4
ISK	**Istanbul-Kandi**	**1.04**	**74**	PG	Pb	22 08 07.4	0.0
KAVV	**Kandilli-Istan**	**1.04**	**75**	PG	Pn	22 08 07.8	+0.2
GELI	**Tayfur-Gelibol**	**1.04**	**248**	PG	Pn	22 08 07.9	+0.3
BALY	**Balya**	**1.06**	**185**	*i* P	Pn	22 08 10.0	+2.2
BALY				*i* S	Sn	22 08 25.5	+3.5
BALY				IAML		22 08 26.0	
	comp=N,34nm,0.2s						
KLYT	**Kilyos**	**1.09**	**65**	PN	Pb	22 08 08.5	+0.2
BALB	**Balikesir**	**1.16**	**175**	PN	Pb	22 08 09.6	+0.1
ENEZ	**Enez**	**1.21**	**268**	PN	Pb	22 08 10.4	+0.1
YLV	**Yalova**	**1.26**	**100**	PN	Pb	22 08 11.2	-0.1
EDRB	**Edirne**	**1.29**	**325**	PN	Pn	22 08 11.3	+0.2
HRT	**Hereke**	**1.47**	**88**	PN	Pn	22 08 13.8	+0.3
SILT	**Sile**	**1.49**	**75**	PN	Pn	22 08 13.9	+0.2
ADVT	**Abdulvahap**	**1.56**	**103**	PN	Pn	22 08 15.4	+0.6

*THE **25** 22:13:02.5, 40˚.48N×25˚.86E, h14km, ML2.3/6, Error ellipse: s-maj=1.4km s-min=0.4km az=107.0*
*ATH **25** 22:13:02.6, 40˚.47N×25˚.80E, h26km±1km, ML2.5/9, Error ellipse: s-maj=2.4km s-min=1.1km az=267.0*
*ISK **25** 22:13:02.3, 40˚.47N×25˚.89E, h8km, ML2.5/18*
*DDA **25** 22:13:03.5, 40˚.43N×25˚.95E, h7km±2km, ML2.6*
ISC 25 22:13:02.7±0.8, 40˚.48N±0˚.02×25˚.87E±0˚.02, h16km±6km, n63, σ0°68/87, 3C-1D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMTH	**Samothraki Isl**	**0.26**	**269**	P	**Pg**	**22 13 08.2**	**-0.2**
SMTH				S	**Sg**	**22 13 12.0**	**-0.1**
SMTH				AML	AML	22 13 16.5	
	comp=N,1913µm,0.2s						
SMTH				AML	AML	22 13 18.4	
	comp=E,2173µm,0.1s						
GADA	**Gvkgeada**	**0.28**	**175**	P	**Pg**	**22 13 08.8**	**0.0**
GADA				S	**Sg**	**22 13 12.9**	**-0.1**
	comp=E,458nm,0.2s						
GADA	**Gvkgeada**	**0.28**	**175**	PG	**Pg**	**22 13 09.0**	**+0.2**
GADA				SG	**Sg**	**22 13 12.9**	**-0.1**
GOKA	**anakkale-Gk**	**0.29**	**174**	*i* P	**Pg**	**22 13 09.0**	**+0.2**
GOKA				*i* S	**Sg**	**22 13 13.2**	**+0.2**
GOKA				IAML		22 13 14.0	
	comp=N,879nm,0.2s						
ENEZ	**Enez**	**0.34**	**40**	P	**Pg**	**22 13 09.3**	**-0.5**
ENEZ				S	**Sg**	**22 13 14.7**	**+0.1**
	comp=N,1µm,0.3s						
ENEZ	**Enez**	**0.34**	**40**	PG	**Pg**	**22 13 09.6**	**-0.2**
ENEZ				SG	**Sg**	**22 13 14.5**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.47**	**99**	PG	**Pg**	**22 13 11.7**	**-0.4**
GELI				SG	**Sg**	**22 13 17.9**	**-0.6**
ERIK	**Erikli-Kesan**	**0.53**	**68**	PG	**Pg**	**22 13 13.1**	**-0.1**
BOZC	**Bozcaada**	**0.65**	**167**	PG	**Pg**	**22 13 15.1**	**-0.3**
BOZC	**Bozcaada**	**0.65**	**167**	*i* P	**Pg**	**22 13 15.1**	**-0.3**
BOZC				*i* P	**Pb**	**22 13 15.2**	**-0.3**
LPK	**Lapseki**	**0.69**	**98**	PG	**Pg**	**22 13 15.5**	**-0.7**
KESN	**Edirne-Kesan**	**0.71**	**60**	*i* P	**Pg**	**22 13 15.7**	**-1.0**
KESN				*i* S	**Sg**	**22 13 26.2**	**0.0**
KESN				IAML		22 13 29.0	
	comp=N,225nm,0.1s						
RDO	**Rodhopi**	**0.71**	**340**	P	**Pb**	**22 13 16.3**	**-0.4**
RDO				S	**Sn**	**22 13 27.6**	**-1.1**
RDO				AML	AML	22 13 30.3	
	comp=E,1006µm,0.2s						
RDO				AML	AML	22 13 30.7	
	comp=N,1816µm,0.2s						
RDO	**Rodhopi**	**0.71**	**340**	PG	**Pb**	**22 13 16.3**	**-0.4**
EZN	**Ezine**	**0.74**	**151**	P	**Pb**	**22 13 16.3**	**-0.8**
EZN				S	**Sg**	**22 13 27.6**	**+0.8**
	comp=N,202nm,0.2s						
EZN	**Ezine**	**0.74**	**151**	PG	**Pb**	**22 13 16.4**	**-0.7**
LIA	**Limnos Island**	**0.78**	**222**	P	**Pg**	**22 13 17.8**	**0.0**
LIA				S	**Sg**	**22 13 28.8**	**+0.7**
LIA				AML	AML	22 13 31.1	
	comp=N,718µm,0.4s						
LIA				AML	AML	22 13 31.6	
	comp=E,1048µm,0.5s						
UKOP	**Uzunkopru-Edir**	**0.88**	**41**	PG	**Pb**	**22 13 19.2**	**-0.2**
THAS	**Thassos island**	**0.88**	**279**	P	**Pb**	**22 13 19.4**	**-0.2**
THAS				S	**Sb**	**22 13 30.5**	**-0.6**
THAS				AML	AML	22 13 33.7	
	comp=N,581µm,0.2s						
THAS				AML	AML	22 13 34.5	
	comp=E,569µm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.90**	**144**	*i* P	**Pb**	**22 13 19.6**	**-0.3**
BAYC				*i* S	**Sg**	**22 13 31.7**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.02**	**78**	PG	**Pg**	**22 13 22.5**	**+0.1**
KRBG	**Karabiga-Canak**	**1.10**	**94**	PG	**Pb**	**22 13 22.9**	**-0.3**
EFSA	**Agios Efstrati**	**1.15**	**216**	P	**Pg**	**22 13 24.9**	**0.0**
EFSA				S	**Sg**	**22 13 39.8**	**-0.1**
KAVA	**Kavala**	**1.15**	**297**	P	**Pb**	**22 13 24.4**	**+0.2**
KAVA				AML	AML	22 13 41.7	
	comp=N,281µm,0.2s						
KAVA				AML	AML	22 13 42.3	
	comp=E,321µm,0.4s						
KVLA	**Kavala**	**1.22**	**293**	P	**Pg**	**22 13 25.8**	**-0.3**
KDZ	**Kurdzhali**	**1.22**	**344**	P	**Pg**	**22 13 26.0**	**-0.2**
KDZ	**Kurdzhali**	**1.22**	**344**	PN	**Pg**	**22 13 26.0**	**-0.2**
SIGR	**SIGRI**	**1.26**	**180**	P	**Pb**	**22 13 25.9**	**-0.1**
SIGR				S	**Sg**	**22 13 43.0**	**-0.4**
SIGR				AML	AML	22 13 44.3	
	comp=N,741µm,0.5s						
SIGR				AML	AML	22 13 45.7	
	comp=E,502µm,0.4s						
SIGR	**SIGRI**	**1.26**	**180**	PN	**Pb**	**22 13 25.9**	**-0.1**
PRK	**Paraskevi**	**1.27**	**166**	P	**Pg**	**22 13 27.3**	**+0.2**
PRK				AML	AML	22 13 45.9	
	comp=E,478µm,0.3s						
PRK				AML	AML	22 13 46.8	
	comp=N,590µm,0.6s						
KNL	**Balıkesir**	**1.28**	**99**	*i* P	**Pb**	**22 13 26.4**	**0.0**
KNL				*i* S	**Sn**	**22 13 43.2**	**+0.5**
KNL				IAML		22 13 46.0	
	comp=E,99nm,0.6s						
KNL				IAML		22 13 47.0	
	comp=N,127nm,0.4s						
MRMT	**Marmara Adasi**	**1.32**	**84**	PN	**Pb**	**22 13 26.7**	**-0.4**
AYVA	**Ayvalik**	**1.33**	**151**	*i* P	**Pb**	**22 13 27.6**	**+0.5**
AYVA				*i* S	**Sg**	**22 13 45.0**	**-0.6**
AYVA				IAML		22 13 47.0	
	comp=N,198nm,0.5s						
TKR	**Tekirdag**	**1.37**	**67**	PN	**Pb**	**22 13 28.0**	**+0.1**
OUR	**Ouranopolis**	**1.45**	**265**	P	**Pn**	**22 13 28.1**	**0.0**
OUR				AML	AML	22 13 51.1	
	comp=N,331µm,0.4s						
OUR				AML	AML	22 13 51.6	
	comp=E,298µm,0.4s						
OUR	**Ouranopolis**	**1.45**	**265**	PN	**Pn**	**22 13 27.9**	**-0.2**
GONE	**Gonen-Balikesi**	**1.46**	**107**	PN	**Pb**	**22 13 29.5**	**+0.1**
RZN	**Rozhen**	**1.49**	**325**	P	**Pb**	**22 13 30.5**	**+0.4**
EDRB	**Edirne**	**1.52**	**26**	P	**Pn**	**22 13 28.1**	**-1.1**
EDRB				S	**Sn**	**22 13 48.9**	**+0.3**
	comp=E,70nm,0.3s						
EDRB	**Edirne**	**1.52**	**26**	PN	**Pn**	**22 13 29.6**	**+0.4**
EDC	**Edincik**	**1.53**	**94**	PN	**Pb**	**22 13 30.4**	**-0.2**
BALY	**Balya**	**1.53**	**118**	*i* P	**Pb**	**22 13 30.6**	**0.0**
BALY				*i* S	**Sb**	**22 13 50.6**	**+0.7**
BALY				IAML		22 13 52.0	
	comp=N,97nm,0.4s						
CRLT	**Corlu**	**1.56**	**65**	PN	**Pb**	**22 13 30.8**	**-0.4**
KIRK	**Kırklareli**	**1.60**	**35**	*i* P	**Pn**	**22 13 29.7**	**-0.6**
DKL	**Dikili**	**1.61**	**150**	PN	**Pb**	**22 13 31.2**	**-0.8**
BALB	**Balikesir**	**1.76**	**118**	PN	**Pb**	**22 13 33.4**	**-1.1**
PAIG	**Paliouri**	**1.76**	**253**	P	**Pn**	**22 13 32.0**	**-0.4**
ZEDA	**zmir-Bergama**	**1.77**	**148**	*i* P	**Pb**	**22 13 34.8**	**0.0**
ZEDA				*i* S	**Sb**	**22 13 56.0**	**-0.8**
STEP	**BALIKESIR_Sava**	**1.80**	**127**	*i* P	**Pn**	**22 13 33.7**	**+0.7**
STEP				*i* S	**Sn**	**22 13 55.1**	**-0.3**
STEP				IAML		22 14 03.0	
	comp=E,48nm,0.4s						
SRS	**Serrai**	**1.84**	**291**	P	**Pn**	**22 13 33.7**	**+0.2**
PLG	**Polygyros**	**1.85**	**268**	P	**Pn**	**22 13 33.4**	**-0.3**
PLG				AML	AML	22 14 04.3	
	comp=E,156µm,0.3s						
PLG				AML	AML	22 14 04.4	
	comp=N,122µm,0.5s						
SKY	**Skiros Island**	**1.89**	**213**	P	**Pn**	**22 13 33.9**	**-0.4**
CHOS	**Chios island**	**2.09**	**176**	P	**Pn**	**22 13 37.6**	**+0.6**
HORT	**Hortiatis**	**2.11**	**274**	P	**Pn**	**22 13 38.5**	**+1.1**
SKIA	**Skiathos**	**2.26**	**235**	P	**Pn**	**22 13 39.0**	**-0.4**
SKIA				S	**Sn**	**22 14 06.6**	**-0.3**
	comp=N,55nm,0.5s						
KNT	**Kendrikon**	**2.35**	**288**	P	**Pn**	**22 13 41.5**	**+0.9**
ELND	**Elena**	**2.45**	**0**	⇑P	**Pb**	**22 13 45.9**	**-0.4**
MRKA	**Markates**	**2.49**	**226**	P	**Pn**	**22 13 42.1**	**-0.5**
MRKA				S	**Sn**	**22 14 13.4**	**+0.8**
	comp=N,30nm,0.6s						
SMG	**Samos**	**2.86**	**164**	P	**Pn**	**22 13 48.4**	**+0.7**
VTS	**Vitosha**	**2.91**	**318**	⇑P	**Pg**	**22 13 57.1**	**-1.4**
BODT	**Bodrum**	**3.59**	**161**	P	**Pn**	**22 13 57.6**	**0.0**
VRI	**Vrincioaia**	**5.42**	**6**	⇑P	**Pn**	**22 14 26.8**	**+4.0**
BZS	**Buzias**	**6.01**	**330**	⇓P	**Pn**	**22 14 32.1**	**+1.3**

*IDC **25** 22:15:22.1±1.4, 16˚.65S×174˚.20W, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.8/42, mbtmp4.0/5, Error ellipse: s-maj=43.6km s-min=29.1km az=108.0*
*NEIC **25** 22:15:30.7±1.6, 16˚.82S±0˚.08×174˚.15W±0˚.06, h73km±10km, mb4.4/6, Error ellipse: s-maj=11.5km s-min=7.8km az=182.0*
ISC 25 22:15:32.9±0.8, 16˚.5S±0˚.2×174˚.1W±0˚.2, h111km, n14, σ1°44/13, mb4.2/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.43**	**41**		**Pn**	**22 16 25.3**	**+0.5**
AFI				Sn	**Sn**	**22 17 03.8**	**-1.0**
NIUE	**Niue**	**4.71**	**123**		Pn	22 16 38.1	-3.8
NIUE				Sn	Sn	22 17 25.2	-10
URZ	**Urewera**	**22.99**	**198**	P	**P**	**22 20 26.7**	**-1.4**
	6.3nm,0.3s,baz=294,slow=3.2,SNR=11						
BKZ	**Black Stump Fm**	**24.02**	**198**	P	**P**	**22 20 35.5**	**-2.0**
BKZ				IAmb	IAmb	22 20 39.3	
	comp=Z,16nm,1.0s						
QRZ	**Quartz Range**	**26.84**	**203**	P	**P**	**22 21 01.2**	**-1.8**
EIDS	**Eidsvold**	**33.61**	**249**	P	**P**	**22 22 01.1**	**-1.9**
EIDS				IAmb	IAmb	22 22 02.9	
	comp=Z,5.8nm,1.1s						
ARMA	**Armidale**	**34.20**	**240**	P	**P**	**22 22 08.6**	**+0.6**
ARMA				IAmb	IAmb	22 22 11.1	
	comp=Z,4.8nm,1.1s						
WRA	**Warramunga Arr**	**48.95**	**258**	P	**P**	**22 24 09.3**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=93,slow=7.5,SNR=7.7						
ASAR	**Alice Springs**	**49.13**	**253**	P	**P**	**22 24 10.9**	**+1.2**
	comp=Z,1.7nm,0.6s,baz=89,slow=8.2,SNR=26						
VNDA	**Vanda**	**62.20**	**186**	P	**P**	**22 25 44.0**	**+1.8**
	comp=Z,1.0nm,1.0s,baz=11,slow=7.6,SNR=5.4						
VNDA	**Vanda**	**62.20**	**186**	P	**P**	**22 25 41.8**	**-0.4**
QSPA	**South Pole Qui**	**73.53**	**180**	P	**P**	**22 26 54.4**	**+0.9**
QSPA				IAmb	IAmb	22 26 55.5	
	comp=Z,4.0nm,0.8s						
ILAR	**Eielson Array**	**83.67**	**11**	P	P	22 27 52.9	+4.1
	comp=Z,0.4nm,0.5s,baz=222,slow=5.1,SNR=9.6						
CLL	**Collm**	**144.84**	**352**	*i* PKPbc	**PKiKP**	**22 35 00.2**	**-0.3**

IDC 25 22:25:47.4±1.8, 6˚.23S×129˚.87E, h0km, mb3.7/1, mb1 3.5/4, mb1mx3.3/28, mbtmp3.4/4, ML3.2/3, Error ellipse: s-maj=73.3km s-min=28.6km az=81.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.51**	**15**	Pn	Pn	22 27 12.7	+2.0
	1.5nm,0.3s,baz=227,slow=1.8,SNR=14						
SIJI				Sn	Sn	22 28 08.3	-6.5
	4.4nm,0.3s,baz=212,slow=22,SNR=14						
WRA	**Warramunga Arr**	**14.30**	**163**	Pn	Pn	22 29 10.6	-0.8
	0.1nm,0.3s,baz=347,slow=10,SNR=2.0						
WRA				Sn	Sn	22 31 40.8	-10
	0.4nm,0.3s,baz=339,slow=22,SNR=9.5						
ASAR	**Alice Springs**	**17.76**	**168**	P	P	22 29 57.4	+0.1
	0.1nm,0.3s,baz=352,slow=11,SNR=6.0						
MKAR	**Makanchi Array**	**67.52**	**327**	P	P	22 36 44.9	-0.6
	0.5nm,0.6s,baz=122,slow=8.2,SNR=5.9						

*UPA **25** 22:36:14.1±5.6, 10˚.62N×92˚.48W, h10km±999km, MW5.0*
*MOS **25** 22:36:14.7±1.2, 13˚.63N×90˚.69W, h0km, mb5.1/12, MS4.7/5, Error ellipse: s-maj=10.4km s-min=6.3km az=108.1*
*IDC **25** 22:36:16.2±0.4, 13˚.66N×90˚.52W, h0km, mb4.7/29, mb1 4.9/31, mb1mx4.8/40, mbtmp4.8/31, ML5.2/2, MS4.5/28, Ms1 4.5/28, ms1mx4.4/32, Error ellipse: s-maj=17.0km s-min=10.4km az=50.0*
*INET **25** 22:36:18.9, 13˚.07N×91˚.20W, h15km, ML5.2*
*UCR **25** 22:36:20.8±1.4, 13˚.53N×90˚.90W, h16km±5km, ML5.0, mb5.0(NEIC)*
*NEIC **25** 22:36:20.8±1.5, 13˚.49N±0˚.07×90˚.84W±0˚.05, h42km±4km, mb5.0/457, Md5.3(SNET), Md5.1/10(MEX), Error ellipse: s-maj=10.6km s-min=6.2km az=212.0*
*SNET **25** 22:36:20.3±1.4, 13˚.49N×90˚.91W, h16km±5km, ML5.3*
*GCMT **25** 22:36:21.6±0.1, 13˚.41N±0˚.01×91˚.31W±0˚.01, h31km, MW5.3/132, Moment Tensor Solution. s132,c228; s122,c209; Duration: 1ŝ2 Moment tensor: Scale 10¹⁷ Nm; Mrr1.16±.02; Mθθ-0.88±.01; Mϕϕ-0.28±.02; Mrθ0.51±.02; Mϕϕ0.42±.01; Mθr-0.52±.02; Best double couple: M₀1.34300×10¹⁷ NP1:ϕs289.00000°, δ30.00000°, λ75.00000°. NP2:ϕs127.00000°, δ61.00000°, λ99.00000°. Principal axes: T 1.3910, Plg72.0000°, Azm57.0000°; N -0.0950, Plg8.0000°, Azm303.0000°; P -1.2950, Plg16.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **25** 22:36:23.0±0.0, 13˚.60N×90˚.70W, h40km, mB5.5/9, Ms5.2/15, Ms7 4.9/16*
*GCG **25** 22:36:28.5±1.1, 14˚.06N×90˚.99W, h50km±22km, MD5.2*
ISC 25 22:36:19.8±0.8, 13˚.40N±0˚.04×90˚.89W±0˚.03, h30km±5km, n960, σ1°66/824, mb5.0/255, MS4.7/50, 10C-5D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.88**	**29**	*e*P	**Pn**	**22 36 36.4**	**+0.1**
IXG	**Ixpaco**	**0.88**	**29**	⇑*i*P	**Pb**	**22 36 37.6**	**+0.9**
IXG	**Ixpaco**	**0.88**	**29**	*e*P	**Pn**	**22 36 36.4**	**+0.1**
PCG	**Pacaya**	**1.02**	**15**	*e*P	**Pb**	**22 36 39.9**	**+0.8**
FUG	**Fuego 3**	**1.04**	**2**	⇓*e*P	**Pb**	**22 36 39.8**	**+0.4**
ERG	**Entre ros, C**	**1.23**	**327**	⇓*i*P	**Pb**	**22 36 42.3**	**-0.2**

NBG	**Las Nubes**	**1.29**	**24**	*e*P	**Pb**	**22 36 44.8**	**+1.1**
CEVE	**Cerro Verde**	**1.30**	**71**	*e*P	**Pb**	**22 36 43.5**	**-0.3**
CEVE				*e*S	**Sb**	**22 37 02.8**	**+2.6**
CEVE				IAML		22 37 09.6	
	comp=Z,105µm,0.4s						
CEVE	**Cerro Verde**	**1.30**	**71**	*e*P	**Pb**	**22 36 43.5**	**-0.3**
CEVE				*e*S	**Sb**	**22 37 02.8**	**+2.6**
CEVE				IAML		22 37 09.6	
	comp=Z,105µm,0.4s						
RTR	**El Retiro**	**1.30**	**68**	*e*P	**Pb**	**22 36 43.2**	**-0.6**
RTR	**El Retiro**	**1.30**	**68**	*e*P	**Pb**	**22 36 43.2**	**-0.6**
SBLS	**San Blas**	**1.30**	**70**	*e*P	**Pb**	**22 36 43.3**	**-0.6**
SBLS	**San Blas**	**1.30**	**70**	*e*P	**Pb**	**22 36 43.3**	**-0.6**
SNJE	**San Jose**	**1.33**	**69**	*e*P	**Pb**	**22 36 43.8**	**-0.5**
SNJE	**San Jose**	**1.33**	**69**	*e*P	**Pb**	**22 36 43.8**	**-0.5**
RTAL	**Retalhuleu**	**1.37**	**325**	*e*P	**Pn**	**22 36 42.7**	**-0.2**
RTAL				*e*S	**Sn**	**22 36 59.8**	**-0.3**
STG3	**Santiaguito 3,**	**1.46**	**333**	*e*P	**Pn**	**22 36 44.5**	**+0.1**
LALI	**Alcalda de L**	**1.52**	**86**	*e*P	**Pb**	**22 36 46.5**	**-0.9**
LALI	**Alcalda de L**	**1.52**	**86**	*e*P	**Pb**	**22 36 46.5**	**-0.9**
BOQS	**Boqueron**	**1.60**	**78**	*e*P	**Pb**	**22 36 48.2**	**-0.6**
BOQS	**Boqueron**	**1.60**	**78**	*e*P	**Pb**	**22 36 48.2**	**-0.6**
UEES	**Universidad Ev**	**1.63**	**79**	*e*P	**Pb**	**22 36 48.5**	**-0.9**
UEES				*e*S	**Sb**	**22 37 10.8**	**+1.3**
UEES	**Universidad Ev**	**1.63**	**79**	*e*P	**Pb**	**22 36 48.5**	**-0.9**
UEES				*e*S	**Sb**	**22 37 10.8**	**+1.3**
SNET	**Serv Nac Est T**	**1.63**	**80**	*e*P	**Pb**	**22 36 48.5**	**-0.9**
SNET				*e*S	**Sb**	**22 37 10.0**	**+0.3**
SNET				IAML		22 37 17.0	
	comp=Z,23µm,0.3s						
SNET	**Serv Nac Est T**	**1.63**	**80**		**Pb**	**22 36 48.9**	**-0.5**
SNET	**Serv Nac Est T**	**1.63**	**80**	*e*P	**Pb**	**22 36 48.5**	**-0.9**
SNET				*e*S	**Sb**	**22 37 10.0**	**+0.3**
SNET				IAML		22 37 17.0	
	comp=Z,23µm,0.3s						
OPAM	**Oficina de Pla**	**1.67**	**79**	*e*P	**Pb**	**22 36 49.3**	**-0.7**
OPAM				*e*S	**Sb**	**22 37 11.5**	**+0.9**
OPAM				IAML		22 37 20.0	
	comp=Z,26µm,0.4s						
OPAM	**Oficina de Pla**	**1.67**	**79**	*e*P	**Pb**	**22 36 49.3**	**-0.7**
OPAM				*e*S	**Sb**	**22 37 11.5**	**+0.9**
OPAM				IAML		22 37 20.0	
	comp=Z,26µm,0.4s						
AEIL	**Aeropuerto Ilo**	**1.75**	**80**	*e*P	**Pb**	**22 36 50.6**	**-0.6**
AEIL	**Aeropuerto Ilo**	**1.75**	**80**	*e*P	**Pb**	**22 36 50.6**	**-0.6**
MTO3	**Montecristo**	**1.78**	**56**	*e*P	**Pb**	**22 36 51.1**	**-0.9**
MTO3	**Montecristo**	**1.78**	**56**	*e*P	**Pb**	**22 36 51.1**	**-0.9**
LFRS	**El Faro**	**1.79**	**83**	*e*P	**Pb**	**22 36 50.5**	**-1.5**
LFRS	**El Faro**	**1.79**	**83**	*e*P	**Pb**	**22 36 50.5**	**-1.5**
LBRS	**Las Brisas**	**1.82**	**79**	*e*P	**Pb**	**22 36 51.3**	**-1.2**
LBRS	**Las Brisas**	**1.82**	**79**	*e*P	**Pb**	**22 36 51.3**	**-1.2**
COEG	**Centro de Oper**	**1.96**	**83**	*e*P	**Pb**	**22 36 53.7**	**-1.2**
COEG				IAML		22 37 33.2	
	comp=Z,33µm,0.6s						
COEG	**Centro de Oper**	**1.96**	**83**	*e*P	**Pb**	**22 36 53.7**	**-1.2**
COEG				IAML		22 37 33.2	
	comp=Z,33µm,0.6s						
HUEH	**Huehuetenango**	**2.00**	**343**	*e*P	**Pb**	**22 36 54.1**	**-1.6**
HUEH				*e*S	**Sn**	**22 37 17.0**	**+1.1**
HUEH				IAML		22 37 31.3	
	comp=Z,25µm,0.6s						
THIG		**2.01**	**318**		**Pn**	**22 36 51.4**	**-0.3**
LLGN	**La Laguna**	**2.03**	**68**	*e*P	**Pb**	**22 36 54.2**	**-1.9**
LLGN	**La Laguna**	**2.03**	**68**	*e*P	**Pb**	**22 36 54.2**	**-1.9**
MRL	**Marmol**	**2.04**	**35**	*e*P	**Pb**	**22 36 55.7**	**-0.6**
ALJI	**Alcalda de J**	**2.25**	**92**	*e*P	**Pb**	**22 36 57.6**	**-2.2**
ALJI	**Alcalda de J**	**2.25**	**92**	*e*P	**Pb**	**22 36 57.6**	**-2.2**
COEB	**Comit de Eme**	**2.29**	**87**	*e*P	**Pb**	**22 36 58.3**	**-2.3**
COEB				IAML		22 37 39.1	
	comp=Z,12µm,0.5s						
COEB	**Comit de Eme**	**2.29**	**87**	*e*P	**Pb**	**22 36 58.3**	**-2.3**
COEB				IAML		22 37 39.1	
	comp=Z,12µm,0.5s						
TECA	**Tecapa**	**2.32**	**87**	*e*P	**Pn**	**22 36 57.9**	**+1.7**
TECA	**Tecapa**	**2.32**	**87**	*e*P	**Pn**	**22 36 57.9**	**+1.7**
PACA	**Pacayal**	**2.49**	**88**	*e*P	**Pn**	**22 37 01.2**	**+2.7**
PACA	**Pacayal**	**2.49**	**88**	*e*P	**Pn**	**22 37 01.2**	**+2.7**
LCY	**Lacayo**	**2.52**	**89**	*e*P	**Pn**	**22 37 01.6**	**+2.7**
LCY	**Lacayo**	**2.52**	**89**	*e*P	**Pn**	**22 37 01.6**	**+2.7**
JUCU	**Jucuarn**	**2.57**	**93**	*e

833A	**Chaparral WMA,** baz=150,SNR=5.9	16.83	333	P		P		22 40 15.6	+0.3
DWPF	**Disney Wildern**	17.09	30	P		Pn		22 40 15.2	-1.3
HKT	**Hockley**	17.10	345	P		Pn		22 40 15.5	-1.1
HKT	comp=Z,41nm,1.0s			pmax		pmax			
HKT	**Hockley**	17.10	345	P		Pn		22 40 15.5	-1.1
YOTC	**Yotoco, Valle**	17.14	122	eP		P		22 40 19.4	+0.6
GUY2C	**Guyana, Caldas**	17.33	117	eP		P		22 40 22.1	+0.8
RREF	**El Recreo**	17.50	117	eP		P		22 40 25.7	+2.3
PTBC	**PUERTO BERRIO,**	17.55	111	eP		P		22 40 26.0	+2.7
NORC	**Norcasia**	17.60	115	eP		P		22 40 24.4	+0.5
TOLC	**Tolima**	17.68	118	leP		P		22 40 29.6	+4.5
553A	**Crawfordville**	17.74	19	P		Pn		22 40 23.4	-1.3
451A	**Vernon** comp=Z,198nm,1.0s	17.78	15	IAmb		IAmb		22 40 34.6	
342A	**Flagon Creek P** comp=Z,137nm,0.9s	17.94	356	IAmb		IAmb		22 40 37.3	
346A	**Big Creek Wild**	17.95	4	P		Pn		22 40 25.0	-2.2
OCAC	**Ocana**	18.00	105	eP		Pn		22 40 26.8	-1.2
BRRC	**Barranca, Sant**	18.01	109	eP		Pn		22 40 26.3	-1.8
SOTA	**Rioblanco**	18.02	127	eP		P		22 40 32.2	+3.2
GCUF	**Volcan Galeras**	18.05	131	eP		P		22 40 32.6	+3.3
PCON	**Cinco Dias**	18.07	126	eP		P		22 40 33.0	+3.5
ORTC	**Ortega, Tolima**	18.09	120	eP		P		22 40 31.8	+2.4
CRUC	**La Cruz**	18.12	129	eP		P		22 40 32.9	+3.0
435B	**Jarrell** baz=159,SNR=7.3	18.37	341	P		Pn		22 40 33.8	+1.4
ROSC	**El Rosal** comp=Z,2.2nm,0.3s,baz=134,slow=6.0,SNR=39	18.42	116	P		Pn		22 40 35.9	+2.4
ROSC	**El Rosal**	18.42	116	eP		Pn		22 40 37.1	+3.6
ROSC	**El Rosal**	18.42	116	P		Pn		22 40 33.9	+0.4
ROSC	comp=Z,87nm,0.9s			IAmb		IAmb		22 40 41.1	
URIC	**Uribia, Colomb**	18.52	93	P		P		22 40 34.1	+0.2
NATX	**Nacogdoches** baz=168,SNR=8.5	18.60	350	P		Pn		22 40 35.7	+0.5
NATX	**Nacogdoches** comp=Z,100nm,1.0s	18.60	350	IAmb		IAmb		22 40 40.3	
BETC	**Betania**	18.62	124	eP		Pn		22 40 38.4	+2.8
VBMS	**Vicksburg** baz=181,SNR=9.2	18.74	1	P		Pn		22 40 38.2	+1.4
352A	**Blakely** comp=Z,157nm,0.8s	18.81	16	IAmb		IAmb		22 40 42.5	
GARC	**Garzon, Huila**	18.87	125	eP		Pn		22 40 39.6	+0.9
JCT	**Junction City** baz=152,SNR=19	18.89	336	P		Pn		22 40 39.8	+1.1
250A	**Grady** comp=Z,115nm,1.1s	18.97	12	IAmb		IAmb		22 40 51.0	
CHIC	**Chingaza**	19.04	116	eP		Pn		22 40 43.1	+2.2
237A	**Washetta, Mont** comp=Z,90nm,0.9s	19.06	347	IAmb		IAmb		22 40 58.5	
RUSC	**La Rusia**	19.06	111	eP		Pn		22 40 41.6	+0.3
RUSC	**La Rusia**	19.06	111	P		P		22 40 40.5	+0.1
TIGA	**Tifton** baz=202,SNR=15	19.17	19	P		Pn		22 40 42.6	+0.6
143A	**Socs Landing,**	19.22	359	P		P		22 40 39.7	-1.8
HPIG		19.31	316	P		Pn		22 40 43.3	-0.7
VILC	**Villavicencio,**	19.32	117	eP		Pn		22 40 46.8	+2.7
WHTX	**Lake Whitney,** baz=160,SNR=12	19.46	343	P		P		22 40 44.5	+0.3
WHTX	**Lake Whitney,**	19.46	343	P		P		22 40 43.4	-0.8
WHTX	comp=Z,58nm,0.6s			IAmb		IAmb		22 40 60.0	
SDDR	**Presa de Saban**	19.62	71	P		P		22 40 45.9	-0.1
TX31	**Lajitas Ar. Si**	19.80	325	P		P		22 40 48.1	+0.1
TXAR	**Lajitas Array** comp=Z,3.7nm,0.3s,baz=153,slow=13,SNR=635	19.80	325	P		Pn		22 40 50.1	+0.4
TXAR				PcP		PcP		22 45 07.2	+1.7
TXAR	comp=Z,0.5nm,0.3s,baz=167,slow=2.4,SNR=8.5			LR		LR		22 50 21.3	
Z41A	**Richland Creek** baz=174,SNR=18	19.85	355	P		Pn		22 40 49.5	-0.5
LRAL	**Lakeview Retre** baz=191,SNR=52	19.87	10	P		Pn		22 40 50.6	+0.3
LRAL	**Lakeview Retre**	19.87	10			P		22 40 48.7	+0.1
LRAL	comp=Z,98nm,0.9s			IAmb		IAmb		22 41 00.6	
152A	**Waverly Hall** comp=Z,49nm,0.8s	19.99	15	IAmb		IAmb		22 40 52.8	
TAMC	**Tame, Arauca**	20.03	108	eP		P		22 40 51.4	+0.8
Z38A	**Mt. Pleasant** comp=Z,157nm,1.1s	20.12	350	IAmb		IAmb		22 41 09.4	
MACC	**Macarena, Meta**	20.23	122	eP		Pn		22 40 55.2	+0.5
SC01	**Santiago de lo**	20.24	70	P		P		22 40 52.0	-0.7
SDV	**Santo Domingo** comp=Z,34nm,0.6s,baz=271,slow=5.5,SNR=30	20.37	101	P		P		22 40 53.5	-0.9
SDV				PcP		PcP		22 45 08.8	+1.9
SDV	comp=Z,15nm,0.9s,baz=50,slow=2.7,SNR=4.2			LR		LR		22 50 34.0	
SDV	comp=Z,2μm,18.9s,baz=278,slow=43 **Santo Domingo**	20.37	101	eP		P		22 40 53.3	-1.1
SDV	**Santo Domingo**	20.37	101	P		P		22 40 54.8	+0.4
SDV	comp=Z,48nm,0.7s			IAmb		IAmb		22 41 00.7	
SDV	**Santo Domingo**	20.37	101	eP		P		22 40 54.3	-0.1
SDV				eS		S		22 44 41.3	-0.1
Y45A	**Yeager Farm, C**	20.41	3	P		P		22 40 53.6	-0.9
CCAR	**Cane Creek**	20.44	358	P		P		22 40 53.7	-1.1
PTGC	**Puerto Gaitan,**	20.64	115	eP		P		22 40 58.1	+0.9
PTLC	**Puerto Leguiza**	20.66	128	eP		Pn		22 41 01.4	+1.6
Z35A	**Perchaven, San** comp=Z,83nm,0.8s	20.67	345	IAmb		IAmb		22 41 13.5	
ABTX	**Abilene, Hawle** baz=155,SNR=31	20.75	339	P		P		22 40 59.2	+1.0
ABTX	**Abilene, Hawle** comp=Z,122nm,1.1s	20.75	339	IAmb		IAmb		22 41 01.1	
Y49A	**Blount Mountai**	20.77	11	P		P		22 40 57.4	-1.1
Y49A	comp=Z,91nm,0.8s			IAmb		IAmb		22 41 01.2	
X43A	**Marvell** baz=180	21.03	0	P		P		22 41 08.4	+7.3
GOGA	**Godfrey** baz=200,SNR=44	21.04	18	P		P		22 41 01.9	+0.7
GOGA	**Godfrey** comp=Z,70nm,0.8s	21.04	18	IAmb		IAmb		22 41 18.7	
OXF	**Oxford** baz=184,SNR=17	21.06	3	P		P		22 41 01.6	+0.1
X40A	**Basin Creek Fa** baz=174,SNR=20	21.07	356	P		P		22 41 01.8	+0.2
MIAR	**Mount Ida** baz=172,SNR=39	21.19	354	P		P		22 41 03.0	+0.1
MIAR	**Mount Ida** comp=Z,107nm,0.9s	21.19	354	IAmb		IAmb		22 41 21.8	
157A	**Early Branch** baz=207,SNR=6.1	21.21	24	P		P		22 41 07.3	+4.1
LPIG	**La Paz** comp=Z,28nm,0.3s,baz=138,slow=3.9,SNR=5.0	21.22	303	P		P		22 41 07.3	+4.0
LPIG				LR		LR		22 50 03.5	
X48A	comp=Z,1μm,18.5s,baz=122,slow=39 **Hartselle**	21.25	9	IAmb		IAmb		22 41 20.0	
UALR	comp=Z,90nm,0.9s **University of**	21.32	357	IAmb		IAmb		22 41 22.3	
FPAL	comp=Z,105nm,1.1s **Fort Paine**	21.59	12	IAmb		IAmb		22 41 10.4	
PLAL	comp=Z,71nm,0.9s **Pickwick Lake**	21.64	6	IAmb		IAmb		22 41 27.5	
W41B	comp=Z,70nm,0.8s **Gary Mavity, V**	21.71	357	P		P		22 41 08.4	-0.1
X51A	baz=176,SNR=26 **Calhoun**	21.77	14	IAmb		IAmb		22 41 27.5	
WHAR	comp=Z,54nm,0.8s **Wooly Hollow**	21.83	357	IAmb		IAmb		22 41 24.8	
W39A	comp=Z,73nm,1.0s **Magazine**	21.86	354	P		P		22 41 10.2	+0.1
W39A	baz=172,SNR=34 **Magazine**	21.86	354	IAmb		IAmb		22 41 27.4	
Z57A	comp=Z,93nm,1.1s **Bowman**	21.88	23	P		P		22 41 12.3	+2.0
NHSC	baz=207,SNR=6.6 **New Hope**	21.92	25	P		P		22 41 11.6	+0.9
LPAR	baz=209,SNR=7.6 **Lepanto**	22.11	1	IAmb		IAmb		22 41 32.3	
HODGE	comp=Z,78nm,0.7s **Hodges**	22.17	19	IAmb		IAmb		22 41 26.9	
SWET	comp=Z,53nm,1.0s **Sewanee**	22.18	11	IAmb		IAmb		22 41 27.5	
Z58A	comp=Z,63nm,0.8s **St. Stephen**	22.27	25	P		P		22 41 15.5	+1.0
W50A	baz=209,SNR=5.4 **Signal Mountai**	22.28	12	IAmb		IAmb		22 41 34.5	
WMOK	comp=Z,73nm,0.9s **Wichita Mounta**	22.42	343	P		P		22 41 14.7	-1.4
WMOK	comp=Z,18nm,0.9s			pmax		pmax			
WMOK	**Wichita Mounta** baz=159,SNR=28	22.42	343	P		P		22 41 15.1	-1.0
WMOK	**Wichita Mounta**	22.42	343	P		P		22 41 14.7	-1.4
X54A	**Belton** baz=202	22.42	19	P		P		22 41 17.4	+1.2
W52A	**Murphy** comp=Z,40nm,0.7s	22.50	15	IAmb		IAmb		22 41 26.3	
V48A	**Smith Brothers** comp=Z,109nm,1.1s	22.55	9	IAmb		IAmb		22 41 37.1	
MNTX	**Comidas Mount** baz=140,SNR=479	22.56	326	P		P		22 41 18.8	+1.1
X55A	**Gracelyn & Ava** baz=204,SNR=10	22.59	20	P		P		22 41 18.2	+0.3
Y57A	**Sumter** baz=207,SNR=7.0	22.63	23	P		P		22 41 19.2	+0.8
Y57A	**Sumter** comp=Z,83nm,1.1s	22.63	23	IAmb		IAmb		22 41 28.1	
BG3	**Lake Jocassee** comp=Z,34nm,0.8s	22.67	17	IAmb		IAmb		22 41 38.0	
CPCT	**Cooper Cave** comp=Z,84nm,1.1s	22.69	14	IAmb		IAmb		22 41 35.1	
OKCFA	**Oklahoma City** comp=Z,63nm,0.8s	22.71	346	IAmb		IAmb		22 41 34.1	
WVT	**Waverly**	22.80	6	P		P		22 41 19.1	-1.0
WVT	comp=Z,99nm,1.0s			pmax		pmax			
WVT	**Waverly** baz=188	22.80	6	P		P		22 41 20.2	+0.1
WVT	**Waverly**	22.80	6	P		P		22 41 19.1	-1.0
X56A	**White Oak** baz=205,SNR=18	22.82	21	P		P		22 41 20.5	+0.1
Y58A	**Scranton** baz=209,SNR=5.2	22.82	25	P		P		22 41 21.3	+0.9
TUL1	**Leonard** baz=167,SNR=16	22.85	350	P		P		22 41 19.4	-1.2
TUL1	**Leonard**	22.85	350	P		P		22 41 19.2	-1.4
TUL1	comp=Z,55nm,0.8s			IAmb		IAmb		22 41 38.5	
PAULI	**Pauline** comp=Z,38nm,0.8s	22.85	20	IAmb		IAmb		22 41 36.2	
U40A	**Yellville** baz=175,SNR=63	22.93	356	P		P		22 41 21.1	-0.4
U40A	**Yellville** comp=Z,65nm,0.8s	22.93	356	IAmb		IAmb		22 41 22.5	
HHAR	**Hobbs** comp=Z,80nm,0.9s	22.95	354	IAmb		IAmb		22 41 22.6	
CLTN	**Cedars of Leba** comp=Z,33nm,0.8s	22.96	9	IAmb		IAmb		22 41 23.5	
W54A	**Cherokee Point** baz=202,SNR=25	22.98	19	P		P		22 41 22.9	+0.9
TKL	**Tuckaleechee C** comp=Z,44nm,1.0s,baz=189,slow=10,SNR=50	23.07	15	P		P		22 41 21.6	-1.3
TKL				LR		LR		22 51 05.3	
TKL	comp=Z,2μm,19.4s,baz=188,slow=39 **Tuckaleechee C**	23.07	15	IAmb		IAmb		22 41 32.2	
V51A	comp=Z,104nm,1.1s **Loudon**	23.07	14	IAmb		IAmb		22 41 32.1	
MSTX	comp=Z,36nm,0.8s **Muleshoe**	23.15	334	P		P		22 41 24.1	+0.1
MSTX	baz=149,SNR=32 **Muleshoe**	23.15	334	IAmb		IAmb		22 41 27.4	
U38A	comp=Z,41nm,0.8s **Gravette**	23.16	353	P		P		22 41 22.6	-1.2
U38A				IAmb		IAmb		22 41 25.0	
U38A	comp=Z,55nm,0.8s			PcP		PcP		22 45 11.4	-0.3
BIRD	**Birdtown, Kers** comp=Z,44nm,1.0s	23.16	22	IAmb		IAmb		22 41 42.6	
V52A	**Sevierville** comp=Z,61nm,0.9s	23.29	15	IAmb		IAmb		22 41 39.7	
KMSC	**Kings Mountain** baz=204,SNR=13	23.31	20	P		P		22 41 25.6	+0.3
V53A	**Saluda** comp=Z,79nm,1.1s	23.34	17	IAmb		IAmb		22 41 42.4	
AMTX	**Amarillo** baz=153	23.52	337	P		P		22 41 27.8	+0.3
X58A	**Rowland** baz=209	23.52	24	P		P		22 41 27.4	0.0
X58A	**Rowland** comp=Z,27nm,0.6s	23.52	24	IAmb		IAmb		22 41 39.0	
W56A	**Indian Trail** baz=206,SNR=12	23.56	22	P		P		22 41 27.5	-0.2
MGMO	**Mountain Grove** comp=Z,66nm,1.0s	23.69	357	IAmb		IAmb		22 41 47.2	
V54A	**Nebo** baz=202,SNR=23	23.69	18	P		P		22 41 29.2	+0.1
W57A	**Gilead** baz=207	23.79	23	P		P		22 41 29.3	-0.7
W57A	**Gilead** comp=Z,30nm,0.8s	23.79	23	IAmb		IAmb		22 41 43.5	
OBIP	**Obispado Ponce**	23.81	76	P		P		22 41 29.6	-0.7
X59A	**McDuffie Farm,** baz=211	23.84	26	P		P		22 41 31.0	+0.6
ATAH	**Atahualpa** comp=Z,18nm,0.7s,baz=327,slow=7.3,SNR=10	23.88	148	P		P		22 41 34.1	+2.7
ATAH				LR		LR		22 49 43.5	
T35A	comp=Z,2μm,18.4s,baz=334,slow=34 **Sooner Cattle**	23.95	349	P		P		22 41 30.3	-1.3
T35A	comp=Z,58nm,0.8s			IAmb		IAmb		22 41 32.2	
W58A	**Raeford** baz=209,SNR=11	23.97	24	P		P		22 41 31.2	-0.4
TZTN	**Tazewell** baz=198,SNR=22	23.97	15	P		P		22 41 31.9	+0.2
TZTN	**Tazewell** comp=Z,48nm,0.8s	23.97	15	IAmb		IAmb		22 41 46.0	
V55A	**Taylorsville** baz=204,SNR=13	23.99	20	P		P		22 41 32.0	+0.1
V55A	**Taylorsville** comp=Z,40nm,0.9s	23.99	20	IAmb		IAmb		22 41 45.6	
U32A	**Winter Ranch,** comp=Z,40nm,0.9s	24.02	344	IAmb		IAmb		22 41 45.7	
X60A	**Albert Glenn T** baz=212,SNR=14	24.11	27	P		P		22 41 33.7	+0.7
T50A	**Nancy** comp=Z,87nm,1.1s	24.14	12	IAmb		IAmb		22 41 49.6	
V56A	**Mocksville** baz=205,SNR=16	24.20	21	P		P		22 41 33.5	-0.2
S44A	**Carbondale** comp=Z,64nm,0.9s	24.24	3	IAmb		IAmb		22 41 52.0	
SJG	**San Juan** comp=Z,8.3nm,0.5s,baz=276,slow=9.5,SNR=5.5	24.25	76	P		P		22 41 33.1	-1.4
SJG				PcP		PcP		22 45 14.7	+0.3
HSIG	comp=Z,14nm,0.6s,baz=329,slow=5.9,SNR=5.3	24.26	313	IAmb		IAmb		22 41 38.7	
U54A	comp=Z,42nm,1.0s **Nelsons Funny**	24.42	18	P		P		22 41 36.0	+0.2
V57A	baz=202,SNR=30 **Coltrane Farms**	24.52	22	P		P		22 41 36.4	-0.4
121A	baz=207,SNR=13 **Cookes Peak, D**	24.53	324	P		P		22 41 40.0	+2.9
HUMP	baz=137,SNR=128 **Col San Antoni**	24.54	76	P		P		22 41 36.0	-1.0
HUMP						PcP		22 45 14.9	-0.1
CCM	**Cathedral Cave**	24.56	359	P		P		22 41 36.2	-0.8
CCM	comp=Z,103nm,1.2s			pmax		pmax			
CCM	**Cathedral Cave** baz=179	24.56	359	P		P		22 41 37.0	-0.1
CCM	**Cathedral Cave**	24.56	359	P		P		22 41 36.2	-0.8
W60A	**Pink Hill** baz=202	24.63	27	P		P		22 41 37.4	-0.3
USIN	**University of** comp=Z,70nm,0.9s	24.63	6	IAmb		IAmb		22 41 40.1	
U55A	**TA2, Sparta** baz=203,SNR=15	24.64	19	P		P		22 41 37.8	-0.1
T53A	**Wise** baz=200,SNR=16	24.65	16	P		P		22 41 37.7	-0.2
V58A	**Windy Hill, Pi** baz=208,SNR=22	24.69	23	P		P		22 41 37.8	-0.5
V58A	**Windy Hill, Pi** comp=Z,34nm,0.8s	24.69	23	IAmb		IAmb		22 41 39.7	
U56A	**King** baz=205,SNR=12	24.72	21	P		P		22 41 38.5	0.0
U56A	**King** comp=Z,33nm,0.8s	24.72	21	IAmb		IAmb		22 41 54.4	
MTP	**Monte Pirata**	24.82	76	P		P		22 41 37.0	-2.6
MTP	comp=Z,34nm,1.0s			IAmb		IAmb		22 41 39.4	
R40A	**Maddies Statio** comp=Z,68nm,1.0s	24.82	357	IAmb		IAmb		22 41 55.0	
T54A	**Tazewell** baz=202,SNR=8.2	24.99	18	P		P		22 41 40.7	-0.4
S51A	**Beattyville** comp=Z,63nm,1.1s	25.00	14	IAmb		IAmb		22 41 51.5	
V59A	**Middlesex** baz=210	25.01	25	P		P		22 41 40.3	-0.8
W61A	**Ground Anchor**	25.05	28	P		P		22 41 42.4	+0.9
WCI	**Wyandotte Cave** baz=213	25.07	9	P		P		22 41 40.9	-0.7
WCI	comp=Z,100nm,0.8s			pmax		pmax			
WCI	**Wyandotte Cave** baz=190	25.07	9	P		P		22 41 41.6	0.0
WCI	**Wyandotte Cave**	25.07	9	P		P		22 41 40.9	-0.7
SLM	**Saint Louis** comp=Z,24nm,0.6s	25.14	1	IAmb		IAmb		22 41 47.6	
U57A	**Blanch** baz=207,SNR=14	25.17	22	P		P		22 41 42.4	-0.2
Y22D	**IRIS PASSCAL I** baz=141,SNR=9.9	25.21	327	P		P		22 41 46.6	+3.4
T55A	**Pulaski** baz=203	25.29	19	P		P		22 41 44.2	+0.5
R49A	**Shelbyville** comp=Z,30nm,0.7s	25.31	11	IAmb		IAmb		22 42 02.0	
OLIL	**Olney** comp=Z,43nm,0.8s	25.36	5	IAmb		IAmb		22 41 48.5	
S53A	**Williamson** baz=200,SNR=9.9	25.41	16	P		P		22 41 44.4	-0.4
V60A	**Jim Taylor Roa** baz=212	25.43	26	P		P		22 41 46.9	+2.0
V60A	**Jim Taylor Roa** comp=Z,36nm,0.8s	25.43	26	IAmb		IAmb		22 41 59.9	
U58A	**Oxford** baz=209,SNR=5.1	25.44	24	P		P		22 41 44.2	-0.8
Q44A	**Meyer Farm, Va** comp=Z,77nm,1.1s	25.46	3	IAmb		IAmb		22 42 02.5	
T56A	**Rocky Mt** baz=205	25.46	21	P		P		22 41 45.1	-0.1
R50A	**Paris** comp=Z,50nm,1.1s	25.46	12	IAmb		IAmb		22 41 48.9	
BLA	**Blacksburg** baz=204,SNR=10.0	25.49	20	P		P		22 41 45.9	+0.3
BLA	**Blacksburg** comp=Z,32nm,1.0s	25.49	20	IAmb		IAmb		22 42 04.4	
ANMO	**Albuquerque** comp=Z,15nm,0.7s,baz=147,slow=12,SNR=54	25.66	329	P		P		22 41 49.6	+2.3
ANMO				PcP		PcP		22 45 19.0	+1.5
ANMO	comp=Z,8.0nm,0.8s,baz=200,slow=3.2,SNR=6.1			LR		LR		22 53 31.4	
ANMO	comp=Z,720nm,20.5s,baz=138,slow=40 **Albuquerque**	25.66	329	ceP		P		22 41 48.4	+1.1
ANMO	comp=Z,20nm,0.8s			pmax		pmax			
ANMO	**Albuquerque** baz=143	25.66	329	P		P		22 41 49.6	+2.3
ANMO	**Albuquerque**	25.66	329	P		P		22 41 46.5	-0.8
T57A	**Hurt** baz=207,SNR=7.9	25.70	22	P		P		22 41 47.2	-0.2
V61A	**Roper** baz=214	25.75	28	P		P		22 41 50.4	+2.5
S54A	**Dingess, Beckl** baz=202,SNR=12	25.75	18	P		P		22 41 47.5	-0.4
R32A	**Long Quarter,** comp=Z,30nm,0.8s	25.87	346	IAmb		IAmb		22 41 50.8	
PCRV	**Puerto La Cruz** comp=Z,13nm,0.9s,baz=299,slow=4.4,SNR=6.7	25.89	94	P		P		22 41 49.1	-0.2
PCRV				LR		LR		22 53 42.9	
T58A	comp=Z,938nm,19.8s,slow=41 **Grand View Acr** baz=208	25.92	23	P		P		22 41 49.3	-0.1
BLO	**Bloomington** comp=Z,35nm,1.1s	25.96	8	IAmb		IAmb		22 42 03.7	
S55A	**Lewisburg** baz=204	25.98	19	P		P		22 41 49.7	-0.3
P40A	**Paris** comp=Z,33nm,0.8s	26.05	358	IAmb		IAmb		22 42 04.9	
R53A	**Hurricane** baz=200,SNR=6.4	26.07	16	P		P		22 41 50.6	-0.1
U60A	**Pendleton** baz=212	26.07	26	P		P		22 41 50.2	-0.5
KSU1	**Kansas State U** baz=167,SNR=14	26.10	350	P		P		22 41 51.7	+0.7
KSU1	**Kansas State U** comp=Z,39nm,0.8s	26.10	350	IAmb		IAmb		22 41 55.8	
P43A	**Skaggs, Pawnee** comp=Z,30nm,0.8s	26.17	2	IAmb		IAmb		22 42 11.1	
TUC	**Tucson**	26.19	319	P		P		22 41 51.5	-0.5
TUC	comp=Z,49nm,1.0s			pmax		pmax			
TUC	**Tucson** baz=131	26.19	319	P		P		22 41 54.7	+2.7
TUC	**Tucson**	26.19	319	P		P		22 41 51.5	-0.5
TUC	comp=Z,49nm,0.9s			IAmb		IAmb		22 41 58.7	
R54A	**Victor** baz=202	26.20	18	P		P		22 41 52.2	+0.2
P38A	**Dawn** comp=Z,28nm,0.7s	26.23	355	IAmb		IAmb		22 41 54.5	
P46A	**Rosedale** comp=Z,37nm,0.9s	26.32	6	IAmb		IAmb		22 42 08.3	
T59A	**Double "B" Far** baz=210,SNR=6.3	26.33	25	P		P		22 41 52.6	-0.5
P48A	**Milroy** comp=Z,29nm,0.8s	26.40	10	IAmb		IAmb		22 42 07.3	
S57A	**Dark Hollow, R** baz=207	26.49	22	P		P		22 41 54.7	+0.1
T25A	**Trinidad** baz=149,SNR=6.5	26.55	335	P		P		22 41 57.5	+2.1
R55A	**Marlinton** baz=204,SNR=12	26.57	19	P		P		22 41 55.4	+0.1
Q52A	**Bidwell** baz=199,SNR=8.9	26.58	15	P		P		22 41 55.3	0.0
P49A	**Miami Univ. Ec** baz=193	26.60	11	P		P		22 41 55.7	+0.3
Q53A	**Leroy** baz=200	26.68	16	P		P		22 41 56.1	-0.2
S58A	**Poland Farm, P** baz=209	26.69	23	P		P		22 41 55.8	-0.5
T60A	**Surry** baz=212	26.82	26	P		P		22 41 56.9	-0.5
P50A	**Jamestown** baz=195,SNR=12	26.85	12	P		P		22 41 57.4	-0.4
P51A	**Williamsport** baz=197	26.88	13	P		P		22 41 57.9	-0.2
P51A	**Williamsport** comp=Z,26nm,0.6s	26.88	13	IAmb		IAmb		22 42 04.0	
Q54A	**Coxs Mills** baz=202,SNR=12	26.99	17	P		P		22 41 59.0	-0.1
Q54A	**Coxs Mills** comp=Z,34nm,0.8s	26.99	17	IAmb		IAmb		22 42 15.4	
R58B	**Mineral** baz=209	27.07	23	P		P		22 41 59.2	-0.5
SFIN	**Lafayette** baz=188	27.08	6	P		P		22 41 58.9	-1.0
SFIN	**Lafayette** comp=Z,21nm,0.8s	27.08	6	IAmb		IAmb		22 42 14.6	
HDIL	**Hopedale**	27.09	3	P		P		22 41 59.3	-0.6
HDIL				PcP		PcP		22 45 19.9	-0.5
S59A	**Mechanicsville** baz=210	27.12	24	P		P		22 42 01.6	+1.4
R57A	**Stanardsville** baz=207,SNR=7.0	27.12	22	P		P		22 41 59.7	-0.5
X18A	**Snowflake** comp=Z,49nm,0.8s	27.22	324	IAmb		IAmb		22 42 05.8	
O48A	**Farmland** baz=192,SNR=7.0	27.23	10	P		P		22 42 00.2	-0.9
Q55A	**Buckhannon** baz=203	27.23	19	P		P		22 42 01.1	-0.1
P52A	**Corning** baz=199,SNR=6.3	27.25	15	P		P		22 42 00.9	-0.4
214A	**Organ Pipe Nat** baz=127,SNR=27	27.30	316	P		P		22 42 04.7	+2.8
214A	**Organ Pipe Nat** comp=Z,26nm,0.9s	27.30	316	IAmb		IAmb		22 42 05.7	
P53A	**Whipple** baz=200	27.30	16	P		P		22 42 01.8	0.0
R58A	**Rapidan** baz=208	27.31	22	P		P		22 42 02.8	+0.9
CBN	**Corbin Frederi** baz=209	27.47	24	P		P		22 42 04.0	+0.7
CBN	**Corbin Frederi** comp=Z,29nm,0.8s	27.47	24	IAmb		IAmb		22 42 19.9	
W18A	**Petrified Fore** baz=137,SNR=30	27.52	325	P		P		22 42 06.8	+2.7
SDCO	**Great Sand Dun** baz=148	27.52	334	P		P		22 42 07.3	+3.1
KSCO	**Kaye Shedlock'** baz=154	27.55	340	P		P		22 42 04.6	+0.4
R59A	**King George, V** baz=210	27.57	24	P		P		22 42 07.0	+2.8
ACSO	**Alum Creek Sta** baz=197,SNR=15	27.62	13	P		P		22 42 04.5	-0.1
ACSO	**Alum Creek Sta** comp=Z,42nm,0.8s	27.62	13	IA

baz=197,SNR=7.2
P54A **Burton** 27.67 17 P P 22 42 05.0 -0.2
baz=202,SNR=9.3
N35A **Tabor** 27.67 352 IAmb IAmb 22 42 08.9
comp=Z,65nm,1.1s
N47A **Urbana** 27.75 8 P P 22 42 04.5 -1.3
N47A IAmb IAmb 22 42 20.3
comp=Z,31nm,0.9s
P55A **Reedsville** 27.78 19 P P 22 42 06.9 +0.7
baz=204
O52A **Adamsville** 27.78 15 P P 22 42 05.8 -0.3
baz=199,SNR=7.0
O52A **Adamsville** 27.78 15 IAmb IAmb 22 42 22.5
comp=Z,29nm,0.9s
Q57A **Strasburg** 27.82 21 P P 22 42 06.0 -0.5
baz=207
N48A **Decatur** 27.83 10 P P 22 42 06.4 -0.1
baz=192,SNR=7.3
Q58A **Fox Den Farm,** 28.00 22 P P 22 42 08.2 +0.2
baz=208
O53A **New Philadelph** 28.07 16 P P 22 42 08.1 -0.5
baz=200,SNR=9.6
P56A **Dayton Farm, R** 28.09 20 P P 22 42 09.0 +0.1
baz=205
N50A **Nevada** 28.10 13 P P 22 42 08.7 -0.3
baz=196,SNR=6.0
S22A **4UR Ranch, Cre** 28.10 332 P P 22 42 11.2 +1.8
baz=145,SNR=28
O54A **Avella** 28.23 17 P P 22 42 09.8 -0.4
baz=202
P57A **Homestead Farm** 28.36 21 P P 22 42 11.5 +0.3
baz=207,SNR=9.7
P57A **Homestead Farm** 28.36 21 IAmb IAmb 22 42 13.4
comp=Z,26nm,0.9s
N51A **Ashland** 28.41 14 P P 22 42 11.2 -0.5
baz=198,SNR=5.9
N51A **Ashland** 28.41 14 IAmb IAmb 22 42 13.6
comp=Z,45nm,1.1s
MVCO **Mesa Verde** 28.46 330 P P 22 42 15.0 +2.5
baz=142,SNR=28
MVCO **Mesa Verde** 28.46 330 IAmb IAmb 22 42 15.8
comp=Z,38nm,0.9s
N52A **McGinn's Farm,** 28.47 15 P P 22 42 11.8 -0.5
baz=199
L40A **Anamosa** 28.56 359 IAmb IAmb 22 42 29.5
comp=Z,22nm,0.8s
O55A **Ligonier** 28.58 19 P P 22 42 12.4 -0.9
baz=204
P58A **Pank, Wackersv** 28.62 22 P P 22 42 13.6 +0.1
baz=208
Y14A **Wickenburg** 28.66 319 IAmb IAmb 22 42 18.6
comp=Z,25nm,0.8s
N53A **Lisbon** 28.69 16 P P 22 42 13.8 -0.4
baz=201
N53A **Lisbon** 28.69 16 IAmb IAmb 22 42 30.0
comp=Z,27nm,0.8s
M50A **Fremont** 28.73 12 IAmb IAmb 22 42 16.4
comp=Z,41nm,1.0s
WUAZ **Wupatki** 28.74 324 P P 22 42 18.1 +3.1
baz=135,SNR=55
L46A **Eue Claire** 28.79 7 P P 22 42 15.5 +0.5
baz=189
NNA **Nana** 28.81 150 LR LR 22 51 42.9
comp=Z,1µm,20.9s,baz=313,slow=32
O56A **Blue Knob Stat** 28.87 20 P P 22 42 15.7 -0.2
baz=205,SNR=5.6
N54A **Moraine State** 29.07 17 P P 22 42 17.2 -0.3
baz=202
N54A **Moraine State** 29.07 17 IAmb IAmb 22 42 33.5
comp=Z,25nm,1.0s
O57A **Amberson** 29.14 21 P P 22 42 17.8 -0.4
baz=207
N55A **Marion Center** 29.20 19 P P 22 42 18.4 -0.4
baz=204
PV01 **Paradox Valley** 29.22 331 IAmb IAmb 22 42 30.7
comp=Z,24nm,1.0s
M52A **Chesterland** 29.24 15 P P 22 42 18.8 -0.3
baz=199
M52A **Chesterland** 29.24 15 P P 22 42 18.4 -0.8
M52A IAmb IAmb 22 42 28.4
comp=Z,18nm,0.8s
GLA **Glamis** 29.31 316 P P 22 42 23.1 +3.2
baz=126
O58A **Lewisberry** 29.32 22 P P 22 42 19.4 -0.4
baz=208
M53A **WI Miller and** 29.32 16 P P 22 42 19.6 -0.3
baz=200
ISCO **Idaho Springs** 29.32 336 P P 22 42 22.7 +2.5
baz=150,SNR=13
PV02 **Paradox Valley** 29.36 330 IAmb IAmb 22 42 24.7
comp=Z,33nm,1.1s
PV13 **Radium Mtn., P** 29.36 330 IAmb IAmb 22 42 24.5
comp=Z,50nm,1.0s
L50A **Kingsville** 29.39 12 P P 22 42 20.1 -0.3
baz=196
JFWS **Jewell Farm** 29.41 1 P P 22 42 20.2 -0.4
baz=181,SNR=6.7
SSPA **Standing Stone** 29.43 20 P P 22 42 20.3 -0.5
baz=206
SSPA **Standing Stone** 29.43 20 P P 22 42 20.1 -0.7
PV05 **Paradox Valley** 29.43 330 IAmb IAmb 22 42 24.8
comp=Z,54nm,1.0s
PV03 **Paradox Valley** 29.45 330 IAmb IAmb 22 42 25.2
comp=Z,37nm,1.1s
PV18 **Skein Mesa, Pa** 29.48 330 P P 22 42 21.0 -0.5
PV18 IAmb IAmb 22 42 25.3
comp=Z,42nm,1.0s
PV18 PcP 22 45 26.5 -0.2
PV12 **Saucer Basin,** 29.48 331 IAmb IAmb 22 42 27.7
comp=Z,44nm,0.9s
PV11 **David Mesa, Pa** 29.50 330 IAmb IAmb 22 42 34.0
comp=Z,34nm,1.0s
PV07 **Paradox Valley** 29.50 331 IAmb IAmb 22 42 26.2
comp=Z,34nm,0.9s
PV17 **East Wray Mesa** 29.53 330 IAmb IAmb 22 42 25.7
comp=Z,49nm,1.0s
PV16 **Nyswonger Mesa** 29.53 330 IAmb IAmb 22 42 25.8
comp=Z,45nm,1.1s
Y12C **Blythe** 29.53 317 P P 22 42 24.7 +2.9
baz=127
N56A **West Decatur** 29.55 20 P P 22 42 21.4 -0.5
baz=205,SNR=11
PV19 **Morning Glory** 29.56 330 IAmb IAmb 22 42 25.4
comp=Z,37nm,1.1s
PV20 **West Nyswonger** 29.58 330 IAmb IAmb 22 42 26.1
comp=Z,37nm,1.1s
PV04 **Paradox Valley** 29.59 331 IAmb IAmb 22 42 26.4
comp=Z,52nm,1.1s
PDMCI **Parker Dam,Lak** 29.62 319 P P 22 42 25.3 +2.7
baz=129,SNR=7.0
PV14 **Lion Creek, Pa** 29.63 330 IAmb IAmb 22 42 26.6
comp=Z,39nm,1.1s
PV10 **Paradox Valley** 29.64 330 P P 22 42 21.6 -1.4
PV10 IAmb IAmb 22 42 26.1
comp=Z,41nm,1.0s
PV10 PcP 22 45 26.5 -0.7
PV22 **Blue Mesa, Par** 29.65 331 IAmb IAmb 22 42 27.2
comp=Z,26nm,0.8s
N57A **Milroy** 29.65 21 P P 22 42 21.9 -0.8
baz=207
M54A **Oil Creek Stat** 29.66 17 P P 22 42 23.0 +0.1
baz=202
PV23 **Carpenter Ridg** 29.69 330 IAmb IAmb 22 42 35.2
comp=Z,35nm,0.9s
O59A **Robesonia** 29.75 23 P P 22 42 23.3 -0.4
baz=210
M55A **Ridgway** 29.90 18 P P 22 42 24.7 -0.2
baz=204
L53A **Girard** 29.91 16 P P 22 42 24.2 -0.8
baz=201,SNR=6.5
SWSC **Sam W. Stewart** 29.92 315 P P 22 42 28.0 +2.8
baz=124,SNR=12
IKP **In-Ko-Pah, Jac** 29.97 314 P P 22 42 29.0 +3.2
baz=124,SNR=9.2
W13A **Hualapai Mount** 29.97 320 IAmb IAmb 22 42 30.9
comp=Z,28nm,0.8s
K49A **Clarkson** 29.98 11 P P 22 42 25.0 -0.6
baz=194
BC3 **Big Chuckawall** 30.09 316 P P 22 42 30.1 +3.2
baz=126,SNR=33
M56A **Emporium** 30.09 19 P P 22 42 26.0 -0.7
baz=205,SNR=7.1
ERPA **Erie** 30.14 16 P P 22 42 26.5 -0.5
baz=201
ERPA **Erie** 30.14 16 IAmb IAmb 22 42 40.1
comp=Z,18nm,0.6s
IRM **Iron Mountain** 30.19 317 P P 22 42 30.6 +3.0
baz=127,SNR=15

M57A **Sunshine Farm,** 30.31 21 P P 22 42 28.1 -0.5
baz=207,SNR=6.4
M57A **Sunshine Farm,** 30.31 21 IAmb IAmb 22 42 42.5
comp=Z,16nm,0.8s
MONP2 **Monument Peak** 30.32 314 P P 22 42 32.0 +2.9
baz=124,SNR=10
N23A **Red Feather La** 30.40 337 P P 22 42 30.8 +1.2
baz=150
L54A **Sinclairville** 30.43 17 P P 22 42 30.6 +0.9
baz=202
N59A **State Game Lan** 30.44 23 P P 22 42 29.3 -0.4
baz=210
BBSR **BB Station** 30.50 47 P P 22 42 29.3 -1.0
M58A **Price's Panora** 30.58 22 P P 22 42 30.6 -0.4
baz=208
I37A **Lemond, Waseca** 30.59 356 P P 22 42 30.0 -1.0
I37A IAmb IAmb 22 42 47.1
comp=Z,24nm,1.1s
J49A **Marlette** 30.59 11 P P 22 42 29.4 -1.6
baz=195,SNR=6.4
ECSD **EROS Data Cent** 30.63 352 P P 22 42 30.7 -0.6
baz=169,SNR=13
ECSD **EROS Data Cent** 30.63 352 P P 22 42 29.9 -1.4
L55A **Hinsdale** 30.65 18 P P 22 42 31.0 -0.6
baz=204
N60A **Cedar Hill Far** 30.66 24 P P 22 42 31.0 -0.6
baz=211
BELC **Belle Mtn. Jos** 30.66 316 P P 22 42 35.2 +3.3
baz=126,SNR=15
O20A **White River Ci** 30.69 333 P P 22 42 34.2 +2.0
baz=145,SNR=10
O20A **White River Ci** 30.69 333 IAmb IAmb 22 42 35.9
comp=Z,31nm,1.1s
BRNJ **Basking Ridge** 30.71 25 IAmb IAmb 22 42 35.3
comp=Z,23nm,0.9s
TPFO **Pinon Flats** 30.74 315 P P 22 42 36.0 +3.3
baz=124,SNR=5.8
XPFO **Pion Flat** 30.75 315 P P 22 42 32.8 +0.1
PFO **Pinyon Flats O** 30.75 315 P P 22 42 32.8 +0.1
PFO 22 45 33.8
comp=Z,13nm,1.0s
PFO pmax pmax
PFO **Pinyon Flats O** 30.75 315 P P 22 42 36.1 +3.4
baz=124,SNR=10
PFO **Pinyon Flats O** 30.75 315 P P 22 42 32.8 +0.1
PFO PcP 22 45 33.8 +3.8
I45A **Fountain** 30.79 7 P P 22 42 31.6 -1.2
WVNY **West Valley, N** 30.80 18 IAmb IAmb 22 42 48.8
comp=Z,16nm,0.8s
L56A **Greenwood** 30.88 20 P P 22 42 32.8 -0.9
baz=206
GMRC **Granite Mounta** 30.91 318 P P 22 42 37.1 +3.1
baz=127,SNR=34
K54A **Basiliko Farm,** 30.96 18 P P 22 42 35.0 +0.7
baz=203
L57A **Andrews Acres** 31.00 21 P P 22 42 34.3 -0.4
baz=207
J52A **Paris** 31.06 15 P P 22 42 34.3 -0.9
baz=200,SNR=7.6
M59A **Waymart** 31.11 23 P P 22 42 35.0 -0.6
baz=210,SNR=6.7
M60A **Port Jervis** 31.23 24 P P 22 42 35.8 -0.9
baz=212
MURC **Murrieta** 31.25 315 P P 22 42 40.4 +3.4
baz=124
PAL **Palisades** 31.25 25 P P 22 42 35.2 -1.7
baz=213
K55A **Perry** 31.26 18 P P 22 42 36.3 -0.6
baz=204
CCUT **Cedar City** 31.30 324 P P 22 42 36.3 -1.4
CCUT PcP 22 45 29.5 -2.0
HEC **Hector,Ludlow** 31.38 317 P P 22 42 41.7 +3.5
baz=126,SNR=20
L58A **Harry Jones Me** 31.39 22 P P 22 42 37.6 -0.5
baz=209
H46A **Fife Lake** 31.41 8 P P 22 42 43.3 +5.0
baz=190
I51A **Listowel** 31.46 14 P P 22 42 37.6 -1.1
baz=198,SNR=9.5
K56A **Middlesex** 31.46 19 P P 22 42 38.2 -0.6
baz=206,SNR=8.2
TUQ **Turquoise Moun** 31.47 319 P P 22 42 42.2 +3.1
baz=128,SNR=15
BINY **Binghamton** 31.48 21 P P 22 42 38.2 -0.6
baz=208,SNR=6.7
BINY **Binghamton** 31.48 21 IAmb IAmb 22 42 40.2
comp=Z,19nm,0.8s
M61A **Granite Spring** 31.57 25 P P 22 42 38.5 -1.1
baz=213
RWWY **Rawlins** 31.57 336 IAmb IAmb 22 42 42.3
comp=Z,17nm,0.8s
J54A **Appleton** 31.59 17 P P 22 42 39.0 -0.8
baz=203
J54A **Appleton** 31.59 17 IAmb IAmb 22 42 54.9
comp=Z,21nm,0.8s
SHPR **Sheep Range** 31.67 321 IAmb IAmb 22 42 45.6
comp=Z,23nm,0.9s
K57A **Scipio Center** 31.76 20 P P 22 42 40.5 -0.9
baz=207
SPMN **Marine on St.** 31.76 357 P P 22 42 41.1 -0.2
baz=176,SNR=7.0
SPMN **Marine on St.** 31.76 357 P P 22 42 40.2 -1.1
G40A **Rib Lake** 31.77 1 P P 22 42 39.2 -2.2
L59A **Walton** 31.81 23 P P 22 42 41.3 -0.5
baz=210
L59A **Walton** 31.81 23 IAmb IAmb 22 42 44.8
comp=Z,12nm,0.7s
J55A **Hilton** 31.82 18 P P 22 42 43.3 +1.5
baz=204
J55A **Hilton** 31.82 18 IAmb IAmb 22 42 57.4
comp=Z,22nm,0.9s
G45A **Suttons Bay** 31.85 7 P P 22 42 41.0 -1.0
baz=190
I52A **Shelburne** 31.91 15 P P 22 42 42.3 -0.4
baz=200
BFSC **Mount Baldy Ra** 31.93 315 P P 22 42 46.0 +2.9
baz=124,SNR=7.3
L60A **Shokan** 31.95 24 P P 22 42 42.4 -0.6
baz=212
GSC **Goldstone, Bar** 31.97 318 P P 22 42 46.4 +3.0
baz=126,SNR=8.9
SHOC **Shoshone, Teco** 31.98 319 P P 22 42 46.5 +3.0
baz=128,SNR=9.6
CIS **Catalina Islan** 32.00 313 P P 22 42 46.7 +3.1
baz=122
K58A **Earlville** 32.09 21 P P 22 42 43.4 -0.9
baz=209,SNR=11
K58A **Earlville** 32.09 21 IAmb IAmb 22 42 45.3
comp=Z,28nm,0.8s
J56A **Wolcott** 32.13 19 P P 22 42 43.9 -0.7
baz=206,SNR=8.4
K22A **Casper** 32.13 338 P P 22 42 45.3 +0.4
baz=150,SNR=9.0
MWC **Mount Wilson** 32.19 315 IAmb IAmb 22 42 49.6
comp=Z,34nm,1.1s
G47A **Hillman** 32.23 9 P P 22 42 48.6 +3.2
baz=193,SNR=8.1
K59A **Cooperstown** 32.39 22 P P 22 42 46.4 -0.4
baz=210
DECC **Green Verdugo** 32.40 315 P P 22 42 50.7 +3.6
baz=123
EDW2 **Edwards Air Fo** 32.52 316 P P 22 42 50.9 +2.7
baz=124,SNR=8.7
H52A **Wyevale** 32.52 15 P P 22 42 47.3 -0.7
baz=200
J57A **Williamstown** 32.54 20 P P 22 42 47.1 -1.0
baz=208,SNR=6.6
J57A **Williamstown** 32.54 20 P P 22 42 47.1 -1.0
J57A IAmb IAmb 22 43 03.6
comp=Z,22nm,0.8s
TPNV **Topopah Spring** 32.62 320 P P 22 42 52.5 +3.4
baz=129,SNR=36
TPNV **Topopah Spring** 32.62 320 P P 22 42 48.8 -0.4
TPNV IAmb IAmb 22 42 58.9
comp=Z,31nm,0.9s
TPNV PcP 22 45 35.1 +0.1
RSSD **Black Hills** 32.62 342 P P 22 42 48.4 -0.8
RSSD pmax pmax
comp=Z,5.0nm,0.9s
RSSD **Black Hills** 32.62 342 P P 22 42 49.3 +0.1
baz=156
RSSD **Black Hills** 32.62 342 P P 22 42 48.4 -0.8
COWI **Conover** 32.63 2 P P 22 42 47.9 -1.1
COWI IAmb IAmb 22 42 51.8
comp=Z,16nm,0.6s
LRMC **Laurel Mtn Rad** 32.65 317 P P 22 42 52.5 +3.1
baz=125,SNR=13

PECO **Prince Edward** 32.68 19 IAmb IAmb 22 43 04.8
comp=Z,16nm,0.9s
FURC **Furnace Creek,** 32.71 319 P P 22 42 53.2 +3.5
baz=128,SNR=20
I55A **Frankford** 32.73 18 P P 22 42 48.9 -0.9
baz=204,SNR=19
J58A **Remsen** 32.74 21 P P 22 42 48.5 -1.4
baz=209,SNR=9.0
J58A **Remsen** 32.74 21 P P 22 42 48.9 -1.1
J58A IAmb IAmb 22 42 50.8
comp=Z,13nm,0.7s
H53A **Bobcaygeon** 32.80 16 P P 22 42 49.8 -0.6
baz=202,SNR=12
TRY **Troy** 32.80 24 IAmb IAmb 22 42 53.6
comp=Z,27nm,1.0s
SADO **Sadowa** 32.83 16 P P 22 42 49.7 -1.0
MPMC **Manual Prospec** 32.86 318 P P 22 42 54.1 +2.7
baz=126,SNR=64
OSI **Osito Audit: C** 32.87 315 IAmb IAmb 22 42 55.2
comp=Z,34nm,1.1s
K61A **Williamstown** 32.91 24 P P 22 42 51.3 -0.1
baz=213
DUG **Dugway, Tooele** 32.91 328 P P 22 42 54.2 +2.6
baz=138,SNR=25
DUG **Dugway, Tooele** 32.91 328 IAmb IAmb 22 43 06.3
comp=Z,20nm,1.0s
QUA2 **Belchertown** 32.96 26 IAmb IAmb 22 42 54.0
comp=Z,16nm,0.9s
E43A **Lone Tree Farm** 33.03 5 P P 22 42 50.6 -1.8
E43A IAmb IAmb 22 42 57.6
comp=Z,17nm,0.8s
F48A **Evansville** 33.07 11 P P 22 42 51.3 -1.5
baz=195
E38A **The Farm, Brul** 33.11 359 P P 22 42 52.2 -0.8
J59A **Piesco** 33.11 22 P P 22 42 53.0 -0.2
baz=210,SNR=5.1
F49A **Sandfield** 33.12 11 P P 22 42 51.6 -1.6
baz=196
I57A **Carthage** 33.12 20 P P 22 42 51.7 -1.5
baz=208
R11A **Troy Canyon, C** 33.13 323 P P 22 42 56.6 +3.0
baz=132,SNR=77
R11A **Troy Canyon, C** 33.13 323 IAmb IAmb 22 42 58.1
comp=Z,35nm,1.1s
I58A **Old Forge** 33.14 21 P P 22 42 52.7 -0.8
baz=209,SNR=14
H55A **Tweed** 33.18 18 P P 22 42 52.8 -0.9
baz=205,SNR=6.2
ARVC **Arvin** 33.22 315 P P 22 42 57.7 +3.4
baz=124,SNR=11
ISA **Isabella, Lake** 33.28 317 P P 22 42 58.2 +3.3
baz=125,SNR=10
ISA **Isabella, Lake** 33.28 317 P P 22 42 54.0 -0.9
ISA P 22 42 57.7 +2.9
ISA PcP 22 45 36.3 -0.5
G53A **Haliburton** 33.30 16 P P 22 42 53.8 -1.0
baz=202,SNR=14
E46A **Sault Ste Mari** 33.33 8 P P 22 42 53.4 -1.6
E46A IAmb IAmb 22 43 09.0
comp=Z,13nm,0.8s
J60A **Lant Hill Farm** 33.33 24 P P 22 42 55.7 +0.7
baz=212
GRAC **Grapevine Rang** 33.35 320 P P 22 42 59.1 +3.7
baz=128,SNR=7.3
PDAR **Pinedale Array** 33.42 335 P P 22 42 56.6 +0.4
comp=Z,3.3nm,0.7s,baz=133,slow=10,SNR=17
PDAR PcP PcP 22 45 37.9 +0.6
comp=Z,8.6nm,1.0s,baz=143,slow=3.7,SNR=13
PDAR PKiKP PKiKP 22 53 04.2 +1.6
comp=Z,0.3nm,0.5s,baz=104,slow=6.3,SNR=4.1
PDAR LR LR 22 59 07.6
comp=Z,733nm,20.8s,baz=147,slow=41
CWC **Cottonwood Cre** 33.47 318 P P 22 42 59.6 +3.0
baz=126
H56A **Elgin** 33.51 19 P P 22 42 56.1 -0.4
baz=206
E47A **Iron Bridge** 33.57 10 P P 22 42 56.5 -0.6
baz=193
D41A **Chassel** 33.61 3 P P 22 42 56.5 -1.0
D41A IAmb IAmb 22 43 02.2
comp=Z,12nm,0.7s
I59A **Olmsteadville** 33.63 22 P P 22 42 57.5 -0.2
baz=211
NCB **Newcomb** 33.65 22 P P 22 42 56.1 -1.8
PLVO **Plevna** 33.66 18 P P 22 42 55.3 -2.6
PLVO IAmb IAmb 22 43 13.4
comp=Z,29nm,1.0s
G54A **Lake Saint Pet** 33.70 16 P P 22 42 57.2 -1.0
baz=203,SNR=14
PTGA **Pitinga** 33.71 112 P P 22 42 57.6 -1.1
PTGA **Pitinga** 33.71 112 eP P 22 42 59.3 +0.5
F51A **Arnstein** 33.73 14 P P 22 42 57.6 -0.8
baz=199
F52A **Sundridge** 33.74 15 P P 22 42 57.5 -1.1
baz=200,SNR=16
PKM **Mcpherson Peak** 33.77 314 P P 22 43 02.6 +3.4
baz=122,SNR=7.2
E48A **Lockeyer** 33.79 11 P P 22 42 59.3 +0.3
baz=195
VES **Vestal, Richgr** 33.79 316 P P 22 43 02.8 +3.6
baz=124,SNR=42
D46A **Sault St. Mari** 33.88 8 P P 22 42 58.4 -1.4
baz=192
I60A **Shoreham** 33.89 23 P P 22 42 58.9 -1.0
baz=212
TIN **Tinemaha, Big** 33.94 319 P P 22 43 04.0 +3.4
baz=127
G55A **Calabogie** 33.96 18 P P 22 42 59.7 -0.8
baz=205,SNR=13
E50A **Wahnapitae** 34.01 13 P P 22 42 59.6 -1.4
baz=198
H58A **Gabriels** 34.05 22 P P 22 43 00.2 -1.2
baz=210,SNR=7.8
AHID **Auburn Hatcher** 34.08 333 IAmb IAmb 22 43 04.7
comp=Z,20nm,0.9s
LONY **Lake Ozonia** 34.09 21 P P 22 43 00.6 -1.1
baz=209,SNR=8.9
LONY **Lake Ozonia** 34.09 21 IAmb IAmb 22 43 17.3
comp=Z,27nm,1.1s
SMMC **Simmler** 34.12 315 P P 22 43 05.9 +3.7
baz=122,SNR=8.1
D47A **Chapleau** 34.18 9 P P 22 43 00.9 -1.6
baz=193
MACA **Manacapuru-AM** 34.19 117 eP P 22 43 04.0 +1.1
E52A **Mattawa** 34.37 15 P P 22 43 02.5 -1.6
baz=201
G57A **Newington** 34.37 20 P P 22 43 03.0 -1.0
baz=208
E51A **G1948 Merrick** 34.40 14 P P 22 43 03.3 -1.0
baz=200,SNR=17
H59A **Cadyville** 34.43 22 P P 22 43 03.7 -0.9
baz=210
EYMN **Ely** 34.45 359 P P 22 43 03.1 -1.6
baz=179,SNR=9.8
EYMN **Ely** 34.45 359 P P 22 43 03.2 -1.6
D48A **Paudash Townsh** 34.52 11 P P 22 43 05.3 0.0
baz=196
ELK **Elko** 34.59 326 IAmb IAmb 22 43 11.2
comp=Z,22nm,0.8s
F55A **Otter Lake** 34.59 18 P P 22 43 06.0 0.0
baz=205
TPAW **Teton Pass** 34.60 334 IAmb IAmb 22 43 16.8
comp=Z,35nm,1.1s
FRNY **Flat Rock** 34.63 22 P P 22 43 05.2 -1.1
FRNY IAmb IAmb 22 43 21.9
comp=Z,18nm,1.1s
E53A **Dumoine, Ponti** 34.71 16 P P 22 43 06.3 -0.8
baz=203,SNR=5.4
H60A **Morristown** 34.72 23 P P 22 43 07.3 +0.2
baz=212
NV11 **Mina Array Sit** 34.73 321 P P 22 43 07.5 0.0
NV11 PcP 22 45 41.0 +0.1
FXWY **Fox Creek** 34.75 334 P P 22 43 06.8 -0.9
FXWY PcP 22 45 41.2 +0.2
NVAR **Mina Array Bea** 34.82 321 P P 22 43 10.9 +2.5
comp=Z,75nm,0.7s,baz=132,slow=7.8,SNR=255
NVAR PcP PcP 22 45 42.8 +1.5
comp=Z,21nm,0.8s,baz=136,slow=3.3,SNR=17
NVAR ScP ScP 22 49 28.3 +3.5
comp=Z,1.0nm,0.7s,baz=136,slow=4.5,SNR=4.3
NVAR LR LR 22 59 10.2
comp=Z,2µm,19.2s,baz=138,slow=40
E54A **Lac Daplat, Po** 34.90 17 P P 22 43 08.1 -0.5
baz=204,SNR=16
D50A **G1974 Best Tow** 34.91 13 P P 22 43 07.7 -1.0
baz=199,SNR=5.1
IMW **Indian Meadow** 34.92 334 P P 22 43 08.2 -1.0

IMW PcP 22 45 39.7 -1.9
B35A Bob, Littlefor 34.94 357 P P **22 43 08.0 -0.9**
B35A IAmb IAmb 22 43 09.1
comp=Z,14nm,0.6s
D51A Lot 18 Range I 34.95 14 P P **22 43 08.2 -0.9**
baz=200
AGMN Agassiz Nation 35.04 354 P P **22 43 09.1 -0.8**
baz=171,SNR=9.4
D52A ZEK Kipawa Sen 35.07 15 P P **22 43 09.6 -0.5**
baz=201,SNR=15
RYN Ryan 35.08 321 IAmb IAmb 22 43 15.0
comp=Z,27nm,0.9s
MDND Maddock 35.11 350 P P **22 43 10.2 -0.2**
baz=165,SNR=6.7
RLMT Red Lodge 35.27 337 P P **22 43 12.8 +0.6**
baz=148,SNR=9.8
G60A Masonville 35.32 23 P P **22 43 11.4 -0.9**
baz=212
SAML Samuel 35.35 127 P P **22 43 13.4 +0.5**
SAML pmax pmax
comp=Z,30nm,1.1s
SAML Samuel 35.35 127 P P **22 43 13.4 +0.5**
SAML IAmb IAmb 22 43 17.6
comp=Z,30nm,1.1s
D53A Lac Vacive, Po 35.35 16 P P **22 43 12.2 -0.4**
baz=202,SNR=16
WAKR Walker 35.57 320 IAmb IAmb 22 43 20.1
comp=Z,26nm,0.8s
E56A St. Veronique 35.63 19 P P **22 43 14.2 -0.8**
baz=207
D54A Lac Fusel, La 35.70 17 P P **22 43 14.9 -0.7**
baz=204,SNR=21
E57A Chemin Saint G 35.80 20 P P **22 43 16.0 -0.4**
baz=208
SAO San Andreas Ge 35.89 316 IAmb IAmb 22 43 23.1
comp=Z,22nm,0.9s
CMB Columbia Colle 35.90 318 IAmb IAmb 22 43 22.3
comp=Z,18nm,0.9s
D55A Sainte-Anne-du 35.92 18 P P **22 43 16.5 -0.9**
baz=206,SNR=20
E58A La Victoria 36.06 21 P P **22 43 17.7 -1.0**
baz=210
G62A West of Eustis 36.12 25 P P **22 43 18.5 -0.8**
baz=215
G62A West of Eustis 36.12 25 IAmb IAmb 22 43 34.3
comp=Z,17nm,0.9s
D56A ZEC Mazanza, M 36.17 19 P P **22 43 20.5 +0.9**
baz=207
F60A Warwick 36.20 23 P P **22 43 18.6 -1.2**
baz=212,SNR=6.0
PAHR Pah Rah Range 36.27 322 IAmb IAmb 22 43 25.0
comp=Z,31nm,1.0s
VLDQ Val d'Or 36.37 15 IAmb IAmb 22 43 21.1
comp=Z,23nm,1.1s
D57A Chemin Vers le 36.42 20 P P **22 43 20.8 -0.9**
baz=208
DGMT Dagmar 36.67 345 P P **22 43 24.6 +0.8**
baz=158
DGMT Dagmar 36.67 345 IAmb IAmb 22 43 26.1
comp=Z,19nm,0.7s
E60A Ste Agathe de 36.72 23 P P **22 43 23.9 -0.4**
baz=213
AFDM Forest Hills D 36.80 319 P P **22 43 24.9 -0.2**
AFDM PcP **22 45 47.6 +0.7**
MFID Camas Ranch 36.81 329 IAmb IAmb 22 43 35.7
comp=Z,26nm,1.1s
D58A Chemin du LacG 36.83 21 P P **22 43 24.1 -1.1**
baz=210,SNR=7.8
ULM Lac du Bonnet 36.97 355 P P **22 43 25.0 -1.3**
comp=Z,37nm,0.9s,baz=180,slow=9.9,SNR=20
ULM PcP PcP **22 45 47.4 +0.3**
comp=Z,4.0nm,0.7s,baz=150,slow=5.2,SNR=3.2
ULM LR LR 23 01 44.4
comp=Z,500nm,19.8s,baz=176,slow=42
ULM Lac du Bonnet 36.97 355 P P **22 43 25.4 -1.0**
LPAZ La Paz 37.09 142 P P **22 43 29.6 +1.2**
comp=Z,3.5nm,0.7s,baz=329,slow=7.3,SNR=22
LPAZ PcP PcP **22 45 50.0 +1.2**
comp=Z,2.7nm,0.7s,baz=7.1,slow=8.1,SNR=2.9
LPAZ LR LR 22 58 41.2
comp=Z,1µm,21.1s,baz=324,slow=36
LPAZ La Paz 37.09 142 P P **22 43 28.2 -0.3**
LPAZ pmax pmax
comp=Z,4.0nm,0.8s
LPAZ La Paz 37.09 142 P P **22 43 28.2 -0.3**
F63A Nahmakanta, Br 37.11 26 P P **22 43 27.4 -0.2**
baz=217
D60A Saint Jean D'O 37.38 23 P P **22 43 29.2 -0.5**
baz=213
G65A Princeton 37.38 27 P P **22 43 30.0 +0.1**
baz=219
ORV Oroville 37.48 320 P P **22 43 30.2 -0.7**
ORV IAmb IAmb 22 43 41.1
comp=Z,28nm,1.1s
ORV PcP PcP **22 45 48.7 -0.2**
E62A Clayton Lake 37.68 24 P P **22 43 30.7 -1.7**
GDXM Geysers 37.90 318 IAmb IAmb 22 43 42.1
comp=Z,16nm,0.8s
EGMT Eagleton 37.92 339 P P **22 43 35.8 +1.3**
baz=149,SNR=11
E63A Oxbow 37.97 25 P P **22 43 33.7 -1.1**
baz=217
O03E Paynes Creek 38.10 320 P P **22 43 38.3 +2.1**
baz=126,SNR=36
MOD Modoc Plateau 38.19 324 IAmb IAmb 22 43 40.5
comp=Z,36nm,1.1s
D62A Allapoint, All 38.24 24 P P **22 43 36.1 -1.0**
baz=216,SNR=6.1
D62A Allapoint, All 38.24 24 P P **22 43 35.4 -1.7**
D62A IAmb IAmb 22 43 52.0
comp=Z,23nm,1.1s
MNMC Minye Minye 38.53 147 P P **22 43 40.0 -0.2**
MNMC IAmb IAmb 22 43 58.5
comp=Z,19nm,0.9s
MSO Missoula 38.54 334 P P **22 43 40.8 +1.1**
baz=142,SNR=13
BMO Blue Mountains 38.58 330 IAmb IAmb 22 43 41.9
comp=Z,21nm,1.1s
D63A Stockholm 38.59 25 P P **22 43 39.2 -0.8**
baz=217
O02D Mt. Diablo Mer 38.65 320 P P **22 43 42.0 +1.2**
baz=124,SNR=20
WDC Whiskeytown Da 38.73 320 P P **22 43 40.0 -1.3**
WDC 22 45 51.7
WDC pmax pmax
comp=Z,13nm,0.9s
WDC Whiskeytown Da 38.73 320 P P **22 43 40.0 -1.3**
WDC PcP **22 45 51.7 -1.0**
M04C Macdoel 39.01 322 P P **22 43 46.2 +2.3**
baz=127,SNR=31
K05A Summer Lake 39.05 324 IAmb IAmb 22 43 53.0
comp=Z,30nm,1.1s
N02D Trinity Center 39.06 321 P P **22 43 45.3 +1.1**
baz=125,SNR=6.6
I07A Izee 39.17 327 IAmb IAmb 22 43 49.0
comp=Z,43nm,0.9s
GO01 Chusmiza 39.19 147 P P **22 43 46.0 0.0**
MALB Monte Alegre 39.35 110 eP P **22 43 47.4 +0.5**
M02C Callahan 39.39 321 P P **22 43 47.7 +0.7**
baz=126,SNR=15
JTMT Jette 39.41 335 P P **22 43 44.0 -3.0**
JTMT PcP **22 45 51.8 -3.2**
K04D Chiloquin, OR 39.48 323 P P **22 43 50.5 +2.8**
baz=128
YBH Yreka Blue Hor 39.51 322 P P **22 43 46.9 -1.1**
YBH IAmb IAmb 22 43 51.6
comp=Z,16nm,0.8s
YBH PcP PcP **22 45 55.1 -0.2**
L04D Klamath Falls 39.55 323 P P **22 43 50.1 +1.7**
baz=127,SNR=39
J05D Fort Rock, OR 39.60 325 P P **22 43 50.7 +1.9**
baz=129,SNR=14
KHMM Horse Mountain 39.64 320 P P **22 43 48.2 -0.9**
KHMM PcP **22 45 56.1 +0.3**
G08A Pilot Rock 39.72 329 P P **22 43 47.9 -1.8**
G08A PcP **22 45 54.1 -1.8**
J04D Umpqua Nationa 40.07 324 P P **22 43 55.7 +3.0**
baz=128,SNR=9.7
KRMB Red Mountain 40.12 321 IAmb IAmb 22 43 56.8
comp=Z,26nm,0.8s
VILB Vilhena 40.13 129 eP P **22 43 54.2 +0.9**
I05D Terrebonne, OR 40.33 326 P P **22 43 56.5 +1.8**
baz=130,SNR=16
G06A Carlson Farm, 40.54 327 IAmb IAmb 22 44 00.6
comp=Z,25nm,1.0s
I04A Tendick Farm, 40.58 324 P P **22 43 58.2 +1.4**
baz=128,SNR=27

K02D Willamette Mer 40.65 322 P P **22 43 59.4 +2.0**
baz=126,SNR=17
NPGB Novo Progresso 40.71 118 eP P **22 43 57.3 -0.9**
G05D Wamic, OR 40.91 327 P P **22 44 01.9 +2.5**
baz=131,SNR=19
D08A Wollman Farm, 40.95 331 IAmb IAmb 22 44 01.8
comp=Z,21nm,0.9s
NEW Newport 41.01 333 P P **22 44 01.3 +1.0**
baz=139
E07A Sunnyside 41.05 329 IAmb IAmb 22 44 03.3
comp=Z,30nm,0.8s
I03D Drain, OR 41.06 324 P P **22 44 02.7 +2.1**
baz=127,SNR=33
J01E Myrtle Point 41.08 323 P P **22 44 03.6 +2.8**
baz=126,SNR=31
C09A Chrisman Ranch 41.19 332 IAmb IAmb 22 44 04.4
comp=Z,33nm,1.1s
H04D Lebanon 41.22 325 P P **22 44 03.3 +1.3**
baz=129,SNR=29
F05D White Salmon 41.41 328 P P **22 44 06.2 +2.7**
baz=131,SNR=16
COR Corvallis 41.58 325 P P **22 44 02.2 -2.7**
COR pmax pmax
comp=Z,96nm,1.0s
COR Corvallis 41.58 325 P P **22 44 02.2 -2.7**
I02D Swisshome 41.59 324 P P **22 44 07.9 +2.9**
baz=127,SNR=7.9
G03D McMinnville, O 41.94 326 P P **22 44 10.1 +2.2**
baz=129,SNR=24
F04A Amboy 41.95 327 IAmb IAmb 22 44 11.0
comp=Z,25nm,0.9s
B08A Colville Reser 42.08 332 P P **22 44 07.6 -1.4**
FFC Flin Flon 42.14 350 P P **22 44 08.0 -1.3**
FFC pmax pmax
comp=Z,24nm,0.9s
FFC Flin Flon 42.14 350 P P **22 44 08.0 -1.3**
FFC IAmb IAmb 22 44 10.2
comp=Z,24nm,0.9s
CLDB Colider 42.35 123 eP P **22 44 10.4 -1.2**
F04D Rainier, OR 42.36 327 P P **22 44 13.6 +2.4**
baz=130,SNR=13
E04D Cinebar 42.43 328 P P **22 44 13.4 +1.6**
baz=131,SNR=15
PTLB Pontes e Lacer 42.52 131 eP P **22 44 12.7 -0.2**
B06A Marblemount 43.20 330 IAmb IAmb 22 44 20.3
comp=Z,52nm,1.0s
B05A Bryant 43.33 330 P P **22 44 19.5 +0.5**
baz=133,SNR=10.0
D03D Eldon 43.34 328 P P **22 44 20.2 +1.0**
baz=131,SNR=12
GO02 Mina Guanaco 43.59 151 P P **22 44 21.1 -0.8**
A04D Lummi Island 43.94 330 P P **22 44 25.4 +1.5**
baz=132,SNR=11
LLLB Lillooet 44.85 332 IAmb IAmb 22 44 33.6
comp=Z,34nm,1.1s
PRPB Parauapebas 45.18 113 eP P **22 44 34.2 -0.2**
AC02 Maricunga 45.24 152 P P **22 44 33.4 -1.7**
AC02 IAmb IAmb 22 44 49.4
comp=Z,20nm,1.1s
FCC Fort Churchill 45.34 358 IAmb IAmb 22 44 34.9
comp=Z,20nm,0.8s
SALV Santo Antonio 45.37 129 eP P **22 44 36.2 +0.4**
SCHQ Schefferville 45.42 19 P P **22 44 33.6 -2.1**
comp=Z,12nm,0.4s,baz=225,slow=6.0,SNR=52
SCHQ PcP PcP **22 46 14.1 -0.4**
comp=Z,5.7nm,0.4s,baz=232,slow=5.3,SNR=1.6
SCHQ LR LR 23 04 26.1
comp=Z,1µm,20.2s,baz=211,slow=38
SCHQ Schefferville 45.42 19 P P **22 44 34.4 -1.3**
AC05 El Transito 46.48 155 IAmb IAmb 22 45 01.6
comp=Z,18nm,0.8s
GO04 Tololo Observa 47.45 156 IAmb IAmb 22 45 00.6
comp=Z,16nm,0.9s
H03N2 Juan Fernandez 47.95 167 T T 23 36 17.3
baz=346,slow=76,SNR=17
H03N1 Juan Fernandez 47.96 166 T T 23 36 24.3
baz=346,slow=76,SNR=17
H03N3 Juan Fernandez 47.97 167 T T 23 36 10.1
baz=346,slow=76,SNR=36
CO03 El Pedregal 48.08 156 IAmb IAmb 22 44 59.8
comp=Z,20nm,0.8s
ARAG Araguaiana, MT 48.27 126 eP P **22 44 58.7 +0.2**
ROSB Rosrio 49.14 106 eP P **22 45 05.3 +0.1**
C2SB Chapadao do Su 49.27 130 eP P **22 45 07.7 +1.5**
MT02 Curacav 50.08 158 IAmb IAmb 22 45 23.6
comp=Z,13nm,1.1s
MT05 Renca 50.34 158 IAmb IAmb 22 45 16.9
comp=Z,23nm,0.9s
BDFB Brasilia 51.29 123 P P **22 45 22.4 +0.8**
comp=Z,12nm,0.8s,baz=297,slow=9.6,SNR=18
BDFB LR LR 23 09 29.0
comp=Z,369nm,18.2s,baz=297,slow=39
BDFB Brasilia 51.29 123 IAmb IAmb 22 45 24.4
comp=Z,13nm,0.8s
GO05 Huala 51.39 160 P P **22 45 22.1 +0.1**
GO05 IAmb IAmb 22 45 24.7
comp=Z,13nm,0.8s
YKA Yellowknife Ar 51.86 346 P P **22 45 24.6 -0.4**
comp=Z,11nm,0.9s,baz=148,slow=7.8,SNR=112
YKA PcP PcP **22 46 37.6 0.0**
comp=Z,3.2nm,0.6s,baz=143,slow=4.1,SNR=12
YKA PKiKP PKiKP **22 53 19.3 +0.7**
comp=Z,0.3nm,0.8s,baz=117,slow=1.9,SNR=4.5
YKA LR LR 23 10 24.0
comp=Z,311nm,21.5s,baz=0.0,slow=40
IPMB Ipameri, GO 52.39 125 eP P **22 45 29.6 -0.2**
BI02 San Fabin de 53.12 160 P P **22 45 33.8 -1.0**
DLBC Dease Lake 53.64 336 IAmb IAmb 22 45 42.0
comp=Z,21nm,0.9s
TAOE Nuku Hiva Isla 53.67 248 eT T 23 43 05.4
comp=Z,121nm,0.3s
JANB Januaria 54.07 120 eP P **22 45 42.3 +0.2**
ITAB Concordia 55.19 137 eP P **22 45 50.6 +0.6**
MC01 Montes Claros 55.19 121 eP P **22 45 51.0 +0.8**
VAO Valinhos 56.19 130 eP P **22 45 58.2 +0.8**
BSCB Bom Sucesso 56.75 126 eP P **22 46 02.6 +1.2**
PLCA Paso Flores 57.06 162 P P **22 46 04.5 +1.3**
comp=Z,6.3nm,1.1s,baz=348,slow=7.3,SNR=5.2
PLCA LR LR 23 05 07.3
comp=Z,693nm,20.7s,baz=0.5,slow=30
PLTB Pedras Altas 57.39 142 eP P **22 46 06.2 +0.6**
GDU01 Guandu, BA 57.53 116 eP P **22 46 07.5 +0.6**
RCBR Riachuelo 57.84 106 P P **22 46 07.5 -1.7**
RCBR pmax pmax
comp=Z,59nm,0.9s
RCBR Riachuelo 57.84 106 P P **22 46 07.5 -1.7**
RCBR Riachuelo 57.84 106 eP P **22 46 10.5 +1.3**
VAS01 Vassouras-RJ 58.48 127 eP P **22 46 15.1 +1.6**
C36M Paulatuk 59.72 347 P P **22 46 20.1 -1.2**
baz=142,SNR=5.4
C36M Paulatuk 59.72 347 P P **22 46 19.1 -2.2**
WAX Waxell Ridge 60.19 333 IAmb IAmb 22 46 27.6
comp=Z,9.2nm,0.9s
BALM Baby 60.25 334 IAmb IAmb 22 46 27.7
comp=Z,16nm,1.1s
VRDI Verde Repeater 60.81 334 IAmb IAmb 22 46 38.0
comp=Z,9.4nm,0.8s
EPYK Eagle Plains 61.05 341 P P **22 46 30.9 +0.3**
baz=127
GLB Gilahina Butte 61.06 334 IAmb IAmb 22 46 33.6
comp=Z,16nm,0.9s
RES Resolute Bay 61.32 359 P P **22 46 31.1 -1.1**
RES pmax pmax
comp=Z,23nm,0.9s
RES Resolute Bay 61.32 359 P P **22 46 31.1 -1.1**
INK Inuvik 61.32 343 IAmb IAmb 22 46 32.9
comp=Z,14nm,0.7s
HIN Hinchinbrook I 61.79 332 P P **22 46 35.4 -0.2**
FID Port Fidalgo 61.92 333 IAmb IAmb 22 46 39.0
comp=Z,16nm,0.8s
A36M Sachs Harbour 62.05 349 P P **22 46 36.2 -0.9**
baz=141,SNR=19
DOT Dot Lake 62.20 336 IAmb IAmb 22 46 40.1
comp=Z,16nm,1.2s
RIDG Independent Ri 62.55 336 IAmb IAmb 22 46 42.5
comp=Z,11nm,1.0s
SCM Sheep Creek Mo 62.75 334 IAmb IAmb 22 46 57.2
comp=Z,12nm,0.9s
PMR Palmer 63.44 333 IAmb IAmb 22 46 48.2
comp=Z,12nm,0.6s
HDA Harding Lake 63.68 336 P P **22 46 48.4 +0.3**
baz=116,SNR=7.7
KDAK Kodiak Island 63.80 328 P P **22 46 47.0 -1.9**
KDAK pmax pmax
comp=Z,39nm,0.9s
KDAK Kodiak Island 63.80 328 P P **22 46 47.0 -1.9**

ILAR Eielson Array 63.82 337 P P **22 46 48.8 -0.2**
comp=Z,4.5nm,0.4s,baz=122,slow=5.3,SNR=88
ILAR LR LR 23 17 17.6
comp=Z,800nm,20.6s,baz=133,slow=39
POKR Poker Plat Res 64.18 337 P P **22 46 52.0 +0.6**
baz=116
MCK McKinley 64.19 335 IAmb IAmb 22 47 02.1
comp=Z,8.4nm,0.8s
TULEG Thule 64.20 6 P P **22 46 50.1 -1.2**
TULEG IAmb IAmb 22 46 51.2
comp=Z,12nm,1.0s
COLA College 64.23 337 *i* P P **22 46 51.2 -0.5**
COLA pmax pmax
comp=Z,8.0nm,1.1s
MEH Mehetia 64.40 243 *e*T T 23 56 30.3
comp=Z,18nm,0.2s
TRF Thorofare Moun 64.64 335 IAmb IAmb 22 46 58.2
comp=Z,17nm,0.8s
KTH Kantishna Hill 64.94 335 IAmb IAmb 22 47 00.6
comp=Z,16nm,0.9s
BPAW Bear Paw Mtn. 65.17 335 IAmb IAmb 22 46 59.0
comp=Z,20nm,1.1s
PPLA Purkeypile 65.25 334 IAmb IAmb 22 46 59.7
comp=Z,20nm,1.2s
PPT Papeete 65.59 244 LR LR 23 08 35.7
comp=Z,716nm,18.4s,baz=3.5,slow=29
PPT2 Papeete2 65.59 243 *e*S S **22 55 43.4 -2.0**
comp=Z,239nm,24.5s
PPT2 Papeete2 65.59 243 *e*LR LR 23 06 36.0
comp=Z,1µm,24.0s,baz=54
SVW2 Sparrevohn 66.21 331 IAmb IAmb 22 47 05.7
comp=Z,12nm,0.6s
TOLK Toolik Lake Re 66.45 340 P P **22 47 06.7 +0.6**
baz=115,SNR=9.8
SUMG Summit 66.53 15 P P **22 47 05.2 -1.8**
SUMG pmax pmax
comp=Z,25nm,1.1s
SUMG Summit 66.53 15 P P **22 47 05.2 -1.8**
SUMG IAmb IAmb 22 47 08.4
comp=Z,25nm,1.1s
SUMG Summit 66.53 15 *i* P P **22 47 05.5 -1.5**
comp=Z,52nm,1.0s
TBI Tubuai 67.94 238 *e*S S **22 56 11.5 -2.0**
comp=Z,462nm,34.8s
TBI Tubuai 67.94 238 *e*LR LR 23 07 51.1
comp=Z,813nm,27.0s,baz=62
TBI Tubuai 67.94 238 *e*T T 00 00 55.7
comp=Z,16nm,0.3s
DAG Danmarks Havn 73.00 13 *i* P P **22 47 44.1 -2.1**
DAG pmax pmax
comp=Z,13nm,0.9s
DAG Danmarks Havn 73.00 13 *i* P P **22 47 44.1 -2.1**
comp=Z,13nm,0.9s
NOR Nord 74.53 8 *i* P P **22 47 53.2 -2.0**
NOR pmax pmax
comp=Z,10.0nm,1.0s
NOR Nord 74.53 8 *i* P P **22 47 53.2 -2.0**
comp=Z,10.0nm,1.0s
ADK Adak 77.00 321 P P **22 48 10.0 +0.2**
ADK pmax pmax
comp=Z,76nm,1.2s
ADK Adak 77.00 321 P P **22 48 10.0 +0.2**
EKA Eskdalemuir Ar 77.82 36 P P **22 48 11.6 -2.7**
comp=Z,9.2nm,0.8s,baz=274,slow=5.4,SNR=18
ESDC Sonseca Array 79.24 52 P P **22 48 20.0 -2.6**
comp=Z,5.3nm,0.9s,baz=289,slow=4.5,SNR=30
ESDC LR LR 23 20 41.8
comp=Z,113nm,18.9s,baz=255,slow=34
KBS Kingsbay 79.39 11 *ce*P P **22 48 23.1 +0.6**
KBS pmax pmax
comp=Z,13nm,0.9s
KBS Kingsbay 79.39 11 P P **22 48 21.9 -0.7**
KBS IAmb IAmb 22 48 26.3
comp=Z,12nm,0.9s
SPITS Spitsbergen Ar 80.46 12 P P **22 48 28.2 -0.2**
comp=Z,4.6nm,0.7s,baz=221,slow=1.9,SNR=9.2
BILL Bilibino 82.42 338 *e*P P **22 48 37.2 -1.6**
BILL *e* 22 51 45.4
BILL *e*PPP PPP 22 53 36.4
BILL MLR MLR
comp=Z,464nm,24.0s
BILL Bilibino 82.42 338 P P **22 48 38.2 -0.6**
BILL IAmb IAmb 22 48 51.1
comp=Z,15nm,0.9s
DOU Dourbes 83.32 40 P P **22 48 41.1 -2.7**
BGES Gesves 83.56 40 P P **22 48 43.7 -1.4**
BGES PcP PcP **22 48 48.3 -1.1**
BCLA Clavier 83.69 40 P P **22 48 42.7 -3.1**
BCLA PcP PcP **22 48 48.5 -1.5**
NB2 NORSAR Subarra 84.15 29 P P **22 48 47.3 -0.7**
comp=Z,12nm,1.4s,baz=287,slow=5.1
NOA NORSAR Array B 84.15 29 P P **22 48 47.6 -0.3**
comp=Z,3.4nm,0.9s,baz=290,slow=4.8,SNR=4.7
NOA LR LR 23 24 45.0
comp=Z,168nm,20.6s,baz=290,slow=35
TIC Toumodi 84.48 85 *e*PKP2 P **22 48 50.3 -0.3**
LIC Lamto 84.57 85 *e*PKP2 P **22 48 49.2 -1.8**
comp=Z,175nm,0.6s
DBIC Dimbokro 84.64 84 P P **22 48 50.2 -1.1**
comp=Z,34nm,0.5s,baz=272,slow=4.7,SNR=111
DBIC LR LR 23 22 57.2
comp=Z,297nm,21.8s,baz=256,slow=33
KIC Kosan Boka 84.81 85 *e*PKP2 P **22 48 50.3 -1.9**
comp=Z,137nm,0.7s
HFS Hagfors 85.60 29 P P **22 48 54.3 -0.9**
comp=Z,3.1nm,0.8s,baz=224,slow=6.2,SNR=4.5
ARCES ARCESS Array B 86.36 18 P P **22 48 58.5 -0.4**
comp=Z,3.5nm,0.7s,baz=298,slow=5.1,SNR=7.1
ARCES LR LR 23 28 01.6
comp=Z,173nm,19.2s,baz=326,slow=36
DAVA Damuels 87.43 42 *e*PcP P **22 49 04.5 -0.2**
comp=Z,15nm,1.0s,SNR=6.3
FUORN Ofenpass-Fuorn 87.87 43 P P **22 49 05.6 -1.4**
FUORN IAmb IAmb 22 49 08.0
comp=Z,12nm,0.9s
RETA Reutte 87.94 42 *e*PcP P **22 49 06.4 -0.6**
comp=Z,10nm,0.6s,SNR=4.5
FETA Feichten 88.06 42 *i* PcP P **22 49 07.2 -0.5**
comp=Z,7.6nm,0.8s
CLL Collm 88.13 38 *e*P P **22 49 07.0 -0.7**
comp=Z,8.0nm,0.9s
CLL *e*pP **sP** **22 49 21.0 +0.3**
CLL *e* 22 49 33.0
CLL *e*SKKSac **SKSac** **22 59 39.0 +4.7**
CLL *e*PS **PnS** **23 00 54.0 -0.6**
CLL *e*SS **SS** **23 05 42.0 +3.9**
CLL *e*SSS SSS 23 09 06.0
CLL *e* 23 12 18.0
CLL Collm 88.13 38 *e*P P **22 49 07.0 -0.7**
CLL *e*S **SKSac** **22 59 39.0 +4.7**
CLL pmax pmax
comp=Z,8.0nm,0.9s
CLL Collm 88.13 38 P P **22 49 04.8 -3.0**
CLL IAmb IAmb 22 49 09.8
comp=Z,7.6nm,0.8s
NKC Novy Kostel 88.14 39 *e*P P **22 49 07.5 -0.4**
NKC MLR MLR
comp=Z,300nm,21.3s
NKC Novy Kostel 88.14 39 *e*P P **22 49 07.5 -0.4**
NKC AMS AMS 23 32 40.0
comp=Z,300nm,21.3s
MOTA Moosalm 88.20 42 *i* PcP P **22 49 07.8 -0.6**
comp=Z,13nm,0.8s,SNR=8.0
SQTA Sankt Quirin 88.31 42 *e*P P **22 49 07.4 -1.5**
comp=Z,6.2nm,0.9s
WTTA Wattenberg 88.57 42 P P 22 49 05.0 -5.1
comp=Z,9.1nm,1.5s
BRG Berggiesshubel 88.83 38 *e*P P **22 49 09.4 -1.6**
comp=Z,4.0nm,1.0s
BRG SS SS 23 06 08.0 +20
comp=N,147nm,23.5s
comp=E,189nm,16.1s
comp=Z,381nm,22.9s
BRG Berggiesshubel 88.83 38 *e*P P **22 49 09.4 -1.6**
BRG pmax pmax
comp=Z,4.0nm,1.0s
BRG MLR MLR
comp=N,147nm,23.5s
BRG MLR MLR
comp=E,189nm,16.1s
BRG MLR MLR
comp=Z,381nm,22.9s
KHC Kasperske Hory 89.20 40 *e*P P **22 49 12.0 -0.9**
KHC Kasperske Hory 89.20 40 *e*P P **22 49 12.0 -0.9**
ABTA Abfaltersbach 89.31 42 PcP P **22 49 12.5 -1.0**
comp=Z,7.4nm,0.8s,SNR=6.3

PVCC	**Panska Ves**	**89.33**	**38**	AMS	AMS	23 28 00.0				
	comp=Z,300nm,22.4s									
GERES	**GERESS Array B**	**89.37**	**40**	P	**P**	**22 49 12.4**	**-1.4**			
	comp=Z,2.0nm,0.7s,baz=289,slow=4.1,SNR=14									
GERES				LR	LR	23 25 01.4				
	comp=Z,358nm,21.8s,baz=279,slow=33									
PRA	**Prague**	**89.40**	**38**	AMS	AMS	23 29 20.0				
	comp=Z,200nm,17.1s									
TOA0	**Torodi Ar. Sit**	**89.46**	**77**	P	**P**	**22 49 11.8**	**-2.9**			
TORD	**Torodi Ar. Bea**	**89.46**	**77**	P	**P**	**22 49 12.1**	**-2.6**			
	comp=Z,3.8nm,0.6s,baz=296,slow=4.1,SNR=38									
TORD				LR	LR	23 25 09.2				
	comp=Z,318nm,21.9s,baz=295,slow=33									
PRU	**Pruhonice**	**89.50**	**38**	*e*P	**P**	**22 49 14.5**	**+0.3**			
PRU				MLR	MLR					
	comp=Z,400nm,19.8s									
PRU	**Pruhonice**	**89.50**	**38**	*e*P	**P**	**22 49 14.5**	**+0.3**			
PRU				AMS	AMS	23 29 00.0				
	comp=Z,400nm,19.8s									
KBA	**Koelnbreinsper**	**89.74**	**41**	*i* PcP	**P**	**22 49 14.7**	**-0.9**			
	comp=Z,7.9nm,1.5s									
MYKA	**Terra Mystica**	**90.08**	**42**	*i* PcP	**P**	**22 49 17.1**	**0.0**			
	comp=Z,4.5nm,0.9s									
CHVC	**Chvalec**	**90.19**	**38**	*e*P	**P**	**22 49 16.5**	**-1.0**			
CHVC				AMS	AMS	23 28 40.0				
	comp=Z,300nm,20.5s									
UPC	**Upice**	**90.19**	**38**	AMS	AMS	23 28 40.0				
	comp=Z,400nm,22.5s									
OSTC	**Ostas**	**90.30**	**38**	*e*P	**P**	**22 49 18.0**	**0.0**			
OSTC				AMS	AMS	23 29 10.0				
	comp=Z,400nm,24.0s									
TREC	**Trest**	**90.32**	**39**	AMS	AMS	23 29 20.0				
	comp=Z,400nm,21.9s									
KEST	**Kesra**	**90.39**	**53**	P	**P**	**22 49 17.3**	**-1.5**			
	comp=Z,3.1nm,0.8s,baz=279,slow=6.7,SNR=4.2									
KEST	**Kesra**	**90.39**	**53**	IAmb	IAmb	22 49 30.5				
	comp=Z,8.1nm,1.1s									
DPC	**Dobruska-Polom**	**90.44**	**38**	*e*P	**P**	**22 49 18.8**	**+0.1**			
DPC				MLR	MLR					
	comp=Z,300nm,22.3s									
DPC	**Dobruska-Polom**	**90.44**	**38**	*e*P	**P**	**22 49 18.8**	**+0.1**			
DPC				AMS	AMS	23 28 50.0				
	comp=Z,300nm,22.3s									
FINES	**FINESS Array B**	**90.58**	**25**	P	**P**	**22 49 18.2**	**-0.8**			
	comp=Z,2.7nm,0.9s,baz=349,slow=3.9,SNR=4.1									
FINES				LR	LR	23 29 49.1				
	comp=Z,207nm,19.7s,baz=310,slow=36									
KRLC	**Kraliky**	**90.81**	**38**	*e*P	**P**	**22 49 20.2**	**-0.2**			
KRLC				MLR	MLR					
	comp=Z,300nm,21.3s									
KRLC	**Kraliky**	**90.81**	**38**	*e*P	**P**	**22 49 20.2**	**-0.2**			
KRLC				*ex*	x	22 49 35.6				
KRLC				AMS	AMS	23 30 20.0				
	comp=Z,300nm,21.3s									
SOKA	**Soboth**	**90.96**	**41**	*e*PcP	**P**	**22 49 19.9**	**-1.3**			
	comp=Z,2.2nm,0.8s									
VRAC	**Vranov**	**90.99**	**39**	P	**P**	**22 49 19.6**	**-1.6**			
	comp=Z,0.7nm,0.4s,baz=306,slow=8.5,SNR=4.8									
CONA	**Conrad Observa**	**91.04**	**40**	*e*PcP	**P**	**22 49 21.1**	**-0.5**			
	comp=Z,3.5nm,0.8s									
TIXI	**Tiksi**	**91.06**	**348**	P	**P**	**22 49 20.2**	**-0.9**			
	comp=Z,4.2nm,0.7s,baz=26,slow=5.5,SNR=8.8									
TIXI	**Tiksi**	**91.06**	**348**	P	**P**	**22 49 20.1**	**-1.0**			
TIXI				IAmb	IAmb	22 49 23.4				
	comp=Z,4.7nm,0.8s									
ARSA	**Arzberg**	**91.07**	**41**	*i* PcP	**P**	**22 49 21.5**	**-0.1**			
	comp=Z,2.5nm,0.9s									
PET	**Petropavlovsk**	**91.26**	**326**	*e*P	P	22 49 13.5	-8.8			
OKC	**Ostrava-Krasne**	**91.72**	**38**	AMS	AMS	23 30 30.0				
	comp=Z,400nm,21.6s									
PEA0B	**Petropavlovsk-**	**91.75**	**326**	*ce*P	**P**	**22 49 25.7**	**+1.1**			
PETK	**Petropavlovsk-**	**91.75**	**326**	P	**P**	**22 49 25.6**	**+1.0**			
	comp=Z,17nm,0.8s,baz=92,slow=8.9,SNR=20									
PETK				LR	LR	23 31 05.9				
	comp=Z,58nm,19.6s,baz=62,slow=36									
MODS	**Modra-Piesok**	**91.76**	**39**	*e*P	**P**	**22 49 23.2**	**-1.6**			
MODS	**Modra-Piesok**	**91.76**	**39**	*e*P	**P**	**22 49 23.2**	**-1.6**			
MA2	**Magadan**	**92.12**	**333**	*ce*P	**P**	**22 49 27.1**	**+0.9**			
MA2				pmax	pmax					
	comp=Z,17nm,1.0s									
VYHS	**Vyhne**	**92.67**	**39**	*e*P	**P**	**22 49 29.2**	**+0.2**			
AKASG	**Malin Array Be**	**97.63**	**34**	LR	LR	23 35 04.9				
	comp=Z,196nm,18.9s,baz=355,slow=36									
MLR	**Muntele Rosu**	**98.35**	**39**	P	**P**	**22 49 53.8**	**-1.4**			
	comp=Z,2.1nm,0.8s,baz=300,slow=2.4,SNR=5.0									
OBN	**Obninsk**	**98.72**	**27**	*e*P	**P**	**22 49 52.3**	**-4.0**			
OBN				*e*		22 53 52.4				
OBN				*e*PPP	PPP	22 56 02.2				
OBN				pmax	pmax					
	comp=Z,3.0nm,0.8s									
OBN				MLR	MLR					
	comp=Z,201nm,19.0s									
VSR	**Storozhevoye**	**102.41**	**30**	*i* P	**Pdif**	**22 50 13.1**	**+0.3**			
QSPA	**South Pole Qui**	**103.35**	**180**	Pdiff	**Pdif**	**22 50 19.7**	**+2.9**			
	comp=Z,1.0nm,0.7s,baz=175,slow=1.3,SNR=7.6									
QSPA	**South Pole Qui**	**103.35**	**180**	Pdif	**Pdif**	**22 50 16.5**	**-0.3**			
DZM	**Mont Dzumac**	**106.50**	**251**	*e*PS	PS	23 04 11.2	-5.5			
	comp=Z,137nm,26.4s									
DZM	**Mont Dzumac**	**106.50**	**251**	*e*LR	LR	23 25 39.5				
	comp=Z,359nm,26.9s									
ZALV	**Zalesovo Beam**	**112.82**	**3**	PKiKP	**PKiKP**	**22 54 53.9**	**+0.2**			
	comp=Z,2.0nm,0.5s,baz=294,slow=1.8,SNR=14									
TLY	**Talaya**	**113.97**	**350**	*i* PKiKP	**PKiKP**	**22 54 58.9**	**+2.9**			
TLY				pmax	pmax					
	comp=Z,6.0nm,0.9s									
KURK	**Kurchatov**	**115.50**	**7**	*c i*PKIKP	**PKPdf**	**22 54 59.9**	**+1.0**			
KURK				pmax	pmax					
	comp=Z,5.0nm,0.8s									
SYO	**Syowa Base**	**116.26**	**162**	*e*PKPdf	**PKPdf**	**22 54 56.2**	**-3.5**			
ULN	**Ulaanbaatar**	**116.95**	**347**	*c i*PKIKP	**PKiKP**	**22 55 03.6**	**+1.6**			
ULN				pmax	pmax					
	comp=Z,9.0nm,2.5s									
SONM	**Songino Array**	**117.12**	**347**	PKP	**PKiKP**	**22 55 03.2**	**+0.9**			
	comp=Z,5.7nm,1.1s,baz=310,slow=1.3,SNR=14									
SONM				PKKPbc	**PKKPbc**	**23 05 27.4**	**-1.0**			
	comp=Z,0.6nm,0.6s,baz=187,slow=3.0,SNR=5.3									
KSRS	**Korea Array**	**117.65**	**326**	PKP	**PKiKP**	**22 55 04.8**	**+1.3**			
	comp=Z,7.8nm,0.9s,baz=8.9,slow=1.8,SNR=20									
BOSA	**Boshof**	**119.12**	**115**	PKP	**PKiKP**	**22 55 07.7**	**+1.0**			
	comp=Z,16nm,0.8s,baz=225,slow=1.6,SNR=20									
BOSA	**Boshof**	**119.12**	**115**	PKIKP	**PKPdf**	**22 55 04.8**	**-1.8**			
BOSA	**Boshof**	**119.12**	**115**		**PKPdf**	**22 55 04.8**	**-1.8**			
LBTB	**Lobatse**	**119.38**	**111**	PKIKP	**PKPdf**	**22 55 07.0**	**-0.2**			
LBTB	**Lobatse**	**119.38**	**111**		**PKPdf**	**22 55 07.0**	**-0.2**			
MKAR	**Makanchi Array**	**119.77**	**5**	PKP	**PKiKP**	**22 55 07.4**	**0.0**			
	comp=Z,5.3nm,0.8s,baz=339,slow=2.2,SNR=45									
BJI	**Beijing**	**121.18**	**336**	PKP	**PKiKP**	**22 55 13.8**	**+3.5**			
BJI				PP	**PP**	**22 56 41.5**	**+2.2**			
BJI				AMB	AMB					
	comp=Z,92nm,3.5s									
BJI				LR	LR					
	comp=Z,180nm,15.5s									
BJI				LR	LR					
	comp=Z,300nm,20.8s									
GEYT	**Alibeck**	**121.24**	**28**	PKP	**PKiKP**	**22 55 11.2**	**+0.6**			
	comp=Z,9.5nm,0.8s,baz=276,slow=4.0,SNR=30									
USP	**Ospenovka**	**122.05**	**13**	P	**PKiKP**	**22 55 13.4**	**+1.4**			
	SNR=13									
HHC	**Hu-ho-hao-te**	**122.16**	**340**	*e*PKP	**PKiKP**	**22 55 14.8**	**+2.5**			
HHC				PP	**PP**	**22 56 50.5**	**+4.5**			
HHC				AMB	AMB					
	comp=Z,48nm,9.8s									
HHC				LR	LR					
	comp=Z,140nm,22.1s									
HHC				LR	LR					
	comp=Z,140nm,21.8s									
HHC				LR	LR					
	comp=Z,140nm,20.8s									
EKS2	**Erkin-Say**	**122.47**	**13**	P	**PKiKP**	**22 55 14.6**	**+1.6**			
	SNR=7.2									
TKM2	**Tokmak 2**	**122.60**	**12**	P	**PKiKP**	**22 55 14.4**	**+1.1**			
	SNR=8.4									
AAK	**Ala-Archa**	**122.64**	**13**	P	**PKiKP**	**22 55 14.8**	**+1.4**			
	SNR=6.7									
AAK	**Ala-Archa**	**122.64**	**13**	*i* PKiKP	**PKiKP**	**22 55 14.6**	**+1.3**			
	SNR=9.2									
AAK	**Ala-Archa**	**122.64**	**13**	*c i*PKIKP	**PKiKP**	**22 55 14.6**	**+1.3**			
AAK				pmax	pmax					
	comp=Z,10.0nm,1.3s									
AAK	**Ala-Archa**	**122.64**	**13**		**PKPdf**	**22 55 12.2**	**-0.9**			
KBK	**Karagaybulak**	**122.72**	**12**	P	**PKiKP**	**22 55 14.8**	**+1.2**			
	SNR=6.6									
AML	**Almayashu**	**122.95**	**14**	P	**PKiKP**	**22 55 15.9**	**+1.6**			
	SNR=14									
UCH	**Uchtor**	**123.04**	**13**	P	**PKiKP**	**22 55 16.3**	**+1.8**			
	SNR=17									
WMQ	**Urumqi**	**123.04**	**1**	*e*PKP	**PKiKP**	**22 55 14.0**	**0.0**			
WMQ				LR	LR					
	comp=Z,150nm,25.7s									
WMQ				LR	LR					
	comp=Z,200nm,26.1s									
WMQ				LR	LR					
	comp=Z,370nm,21.3s									
KZA	**Kyzart**	**123.34**	**12**	P	**PKiKP**	**22 55 16.8**	**+1.7**			
	SNR=5.4									
ULHL	**Ulahol**	**123.38**	**11**	P	**PKiKP**	**22 55 16.4**	**+1.5**			
	SNR=19									
RAYN	**Ar Rayn**	**123.73**	**50**	*i* PKiKP	**PKiKP**	**22 55 16.2**	**+0.3**			
	SNR=8.9									
RAYN	**Ar Rayn**	**123.73**	**50**	PKIKP	**PKPdf**	**22 55 14.2**	**-1.4**			
RAYN	**Ar Rayn**	**123.73**	**50**		**PKPdf**	**22 55 14.2**	**-1.4**			
CTA	**Charters Tower**	**125.09**	**255**	PKP	**PKiKP**	**22 55 19.1**	**+0.6**			
	comp=Z,5.1nm,0.7s,baz=356,slow=22,SNR=3.6									
KSH	**Kashi**	**125.95**	**13**	PKP	**PKiKP**	**22 55 21.8**	**+1.9**			
KSH				sPKP		22 55 37.5				
KSH				PP	PP	22 57 20.8	+9.4			
KSH				PKS	**PKSdf**	**22 58 58.0**	**+1.7**			
KSH				SKKS		23 04 08.5				
KSH				SS	**SS**	**23 14 14.5**	**+4.3**			
KSH				AMB	AMB					
	comp=Z,140nm,4.9s									
KSH				LR	LR					
	comp=Z,110nm,8.5s									
KSH				LR	LR					
	comp=Z,68nm,7.1s									
KSH				LR	LR					
	comp=Z,190nm,10.4s									
GTA	**Gaotai**	**126.53**	**350**	⇓PKP	PKPdf	22 55 12.8	-7.8			
GTA				sPKP		22 55 29.0				
GTA				LR	LR					
	comp=N,170nm,21.6s									
GTA				LR	LR					
	comp=E,170nm,21.3s									
GTA				LR	LR					
	comp=Z,150nm,19.7s									
NJ2	**Nanjing**	**126.58**	**328**	*e*PKP	**PKPdf**	**22 55 20.5**	**-0.2**			
KBL	**Kabul**	**128.65**	**21**	PKIKP	**PKPdf**	**22 55 23.7**	**-1.2**			
KBL	**Kabul**	**128.65**	**21**		**PKPdf**	**22 55 23.7**	**-1.2**			
STKA	**Stephens Creek**	**128.70**	**240**	PKP	**PKiKP**	**22 55 25.1**	**-0.2**			
	comp=Z,8.3nm,0.8s,baz=341,slow=1.5,SNR=8.3									
LZH	**Lanzhou**	**128.85**	**345**	*e*PKP	**PKiKP**	**22 55 27.0**	**+1.1**			
LZH				LR	LR					
	comp=Z,200nm,18.1s									
LZH				LR	LR					
	comp=Z,200nm,18.0s									
LZH				LR	LR					
	comp=Z,260nm,20.3s									
XAN	**Xi'an**	**129.20**	**339**	PKP	**PKiKP**	**22 55 26.5**	**0.0**			
XAN	**Xi'an**	**129.20**	**339**	PKIKP	**PKPdf**	**22 55 24.3**	**-1.5**			
XAN	**Xi'an**	**129.20**	**339**		**PKPdf**	**22 55 24.3**	**-1.5**			
SHME	**Shamm**	**129.33**	**39**	PKiKP	**PKPdf**	**22 55 26.5**	**+0.3**			
UMQ	**Umm Al-Quwin**	**129.41**	**40**	PKiKP	**PKiKP**	**22 55 27.9**	**+0.8**			
BANOM	**Banah**	**129.52**	**39**	*i* PKiKP	**PKPdf**	**22 55 26.7**	**+0.2**			
	SNR=8.1									
NAZ	**Nazwa, Dubai**	**129.80**	**41**	PKiKP	**PKiKP**	**22 55 27.5**	**-0.4**			
MSFE	**Esma-Masafi**	**129.84**	**40**	*i* PKiKP	**PKiKP**	**22 55 27.6**	**-0.4**			
	SNR=22									
UOSS	**Minazif**	**130.17**	**40**	*i* PKPdf	**PKPdf**	**22 55 27.6**	**-0.2**			
	SNR=7.5									
UOSS	**Minazif**	**130.17**	**40**		**PKPdf**	**22 55 26.1**	**-1.7**			
HATD	**Hatta, Dubai**	**130.21**	**40**	*i* PKiKP	**PKPdf**	**22 55 28.1**	**+0.2**			
	SNR=14									
ASHO	**Ashiyiah**	**130.26**	**41**	*i* PKPdf	**PKPdf**	**22 55 27.7**	**-0.3**			
	SNR=7.7									
ALNE	**Al Ain**	**130.51**	**41**	*i* PKiKP	**PKPdf**	**22 55 28.9**	**+0.4**			
	SNR=5.9									
NIL	**Nilore**	**130.83**	**18**	PKIKP	**PKPdf**	**22 55 28.5**	**-0.4**			
NIL	**Nilore**	**130.83**	**18**		**PKPdf**	**22 55 28.5**	**-0.4**			
CD2	**Chengdu**	**133.75**	**342**	PKP	**PKPdf**	**22 55 33.3**	**-1.2**			
SMLA	**Simla**	**134.26**	**14**	*ex*	**PKPdf**	**22 55 29.6**	**-5.7**			
SMLA				*i* x	**PKiKP**	**22 55 36.1**	**-0.6**			
SMLA				*ex*	x	22 56 14.9				
WB2	**Warramunga Arr**	**136.28**	**255**		**PKPdf**	**22 55 39.1**	**-0.3**			
WRAB	**Tennant Creek**	**136.28**	**255**	*c i*PKIKP	**PKiKP**	**22 55 42.4**	**+1.3**			
WRAB				pmax	pmax					
	comp=Z,9.0nm,1.0s									
WRAB	**Tennant Creek**	**136.28**	**255**		**PKPdf**	**22 55 38.8**	**-0.6**			
WRA	**Warramunga Arr**	**136.29**	**255**	PKP	**PKiKP**	**22 55 40.9**	**-0.2**			
	comp=Z,6.8nm,0.8s,baz=87,slow=1.8,SNR=19									
ASAR	**Alice Springs**	**136.48**	**250**	PKP	**PKiKP**	**22 55 40.8**	**-0.6**			
	comp=Z,3.1nm,0.7s,baz=100,slow=2.4,SNR=11									
ASAR				PKKP	**PKKPdf**	**23 05 18.1**	**+0.1**			
	comp=Z,0.3nm,0.4s,baz=308,slow=1.7,SNR=6.1									
GYA	**Guiyang**	**136.86**	**337**	*e*Pdif	**Pdif**	**22 52 45.0**	**-1.8**			
GYA				PKP	**PKPdf**	**22 55 40.3**	**-0.2**			
GYA				PP	**PP**	**22 58 26.3**	**+4.2**			
GYA				AMB	AMB					
	comp=Z,120nm,7.8s									
LSA	**Lhasa**	**137.11**	**357**	PKiKP	**PKiKP**	**22 55 43.2**	**0.0**			
LSA	**Lhasa**	**137.11**	**357**	PKIKP	**PKPdf**	**22 55 40.2**	**-1.1**			
LSA	**Lhasa**	**137.11**	**357**		**PKPdf**	**22 55 40.2**	**-1.1**			
KMI	**Kunming**	**139.47**	**341**	PKP	**PKiKP**	**22 55 47.0**	**-0.8**			
KMI				LR	LR					
	comp=Z,200nm,20.8s									
SHL	**Shillong**	**141.18**	**356**	*ex*	**PKPdf**	**22 55 46.7**	**-1.8**			
BOK	**Bokaro**	**142.90**	**5**	*i x*	**PKPdf**	**22 55 49.4**	**-2.0**			
FITZ	**Fitzroy Crossi**	**144.58**	**258**	PKP	**PKPdf**	**22 55 54.6**	**+0.2**			
	baz=85,slow=4.1									
FITZ	**Fitzroy Crossi**	**144.58**	**258**		PKPbc	22 55 53.4	+0.4			
CHTO	**Chiang Mai**	**146.56**	**343**	PKIKP	**PKPdf**	**22 55 56.9**	**-0.9**			
CHTO	**Chiang Mai**	**146.56**	**343**		**PKPdf**	**22 55 56.9**	**-0.9**			
CM31	**Chiang Mai Arr**	**146.90**	**343**		**PKPbc**	**22 56 00.4**	**+0.2**			
CMAR	**Chiang Mai Arr**	**146.90**	**343**	PKPbc	**PKPab**	**22 56 00.9**	**-0.5**			
	comp=Z,46nm,0.7s,baz=341,slow=3.2,SNR=183									
HYB	**Hyderabad**	**147.65**	**19**	*ex*	**PKPbc**	**22 56 02.1**	**-0.3**			
NWAO	**Narrogin (SRO)**	**147.82**	**228**	PKPbc	**PKiKP**	**22 56 03.5**	**-0.9**			
	comp=Z,19nm,0.7s,baz=127,slow=4.5,SNR=8.6									
NWAO	**Narrogin (SRO)**	**147.82**	**228**	PKP2	**PKPbc**	**22 56 02.8**	**+0.4**			
NWAO	**Narrogin (SRO)**	**147.82**	**228**		**PKPbc**	**22 56 02.8**	**+0.4**			
PSA00	**Pilbara Seismi**	**149.63**	**250**	PKPbc	**PKPbc**	**22 56 07.1**	**-0.2**			
KSM	**Kuching**	**154.31**	**304**	PKPdf	**PKPdf**	**22 56 10.2**	**+0.2**			
IPM	**Ipoh**	**158.66**	**326**		**PKPdf**	**22 56 14.1**	**-1.5**			
PSI	**Prapat**	**161.19**	**328**	PKP	**PKPdf**	**22 56 18.6**	**0.0**			
	comp=Z,6.6nm,0.8s,baz=180,slow=5.6,SNR=6.1									
PSI				PKPab	**PKPab**	**22 57 03.1**	**+1.2**			
	comp=Z,8.8nm,0.5s,baz=360,slow=8.8,SNR=9.2									

*IDC **25** 22:40:55.7±1.0,30.89N×110.73E,h0km,mb3.6/7, mb1 3.8/10,mb1mx3.6/68,mbtmp3.7/10,ML3.4/3,MS3.1/1, Ms1 3.1/1,ms1mx2.5/39,Error ellipse: s-maj=29.8km s-min=20.9km az=71.0*

*BJI **25** 22:40:56.9±0.0,30.93N×110.76E,h6km,mB4.1/1, mb4.0/5,ML4.0/24,Ms3.6/9,Ms7 3.4/8*

ISC 25 22:40:57.4±0.6,30.89N±0.04×110.77E±0.04,h10km,n16, σ2s63/26,mb3.7/7,1C,Southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WHN	**Wuhan**	**3.11**	**96**	Pn	**Pn**	**22 41 46.8**	**+0.3**
WHN				Pg	**Pb**	**22 41 53.3**	**+0.6**
WHN				Sg	**Sg**	**22 42 36.3**	**-0.9**
WHN				smax	smax		
	comp=N,610nm,0.6s						
WHN				smax	smax		
	comp=E,620nm,0.4s						
XAN	**Xi'an**	**3.50**	**334**	Pn	**Pn**	**22 41 53.5**	**+1.5**
XAN				Pg	**Pb**	**22 41 59.5**	**0.0**
XAN				Sn	**Sb**	**22 42 44.0**	**+1.9**
XAN				Sg	**Sg**	**22 42 48.5**	**-1.4**
XAN				smax	smax		
	comp=N,500nm,0.8s						
XAN				smax	smax		
	comp=E,340nm,1.0s						
XAN				LR	LR		
	comp=N,1μm,5.0s						
XAN				LR	LR		
	comp=Z,440nm,4.4s						
GYA	**Guiyang**	**5.70**	**220**	⇑Pn	**Pn**	**22 42 25.5**	**+3.2**
GYA				Sn	**Sn**	**22 43 27.5**	**-0.4**
GYA				Sg	**Sg**	**22 43 54.0**	**-6.5**
GYA				smax	smax		
	comp=N,80nm,0.9s						
GYA				smax	smax		
	comp=E,70nm,0.9s						
TIA	**Tai'an**	**7.50**	**43**	Pn	**Pn**	**22 42 46.8**	**-0.1**
TIA				Sg	Sb	22 44 45.8	+8.7
TIA				smax	smax		
	comp=N,48nm,0.8s						
TIA				smax	smax		
	comp=E,32nm,0.8s						
LZH	**Lanzhou**	**7.76**	**314**	*e*Pg	**Pg**	**22 43 27.0**	**+1.0**
LZH				Sg	**Sg**	**22 45 01.0**	**-5.4**
LZH				smax	smax		
	comp=N,110nm,1.1s						
LZH				smax	smax		
	comp=E,130nm,1.1s						
LZH				LR	LR		
	comp=N,650nm,5.2s						
LZH				LR	LR		
	comp=E,230nm,4.9s						
LZH				LR	LR		
	comp=Z,380nm,7.6s						
KMI	**Kunming**	**9.13**	**233**	P	**Pn**	**22 43 11.5**	**+2.1**
KMI				pP		22 43 16.3	
KMI				sP		22 43 18.5	
KMI				PP	**PnPn**	**22 43 23.5**	**+6.4**
KMI				S	**Sn**	**22 44 55.5**	**+3.1**
KMI				sS		22 45 03.5	
KMI				pmax	pmax		
	comp=Z,18nm,0.7s						
KMI				LR	LR		
	comp=Z,260nm,9.5s						
KMI				LR	LR		
	comp=Z,150nm,8.8s						
KSRS	**Korea Array**	**15.63**	**61**	Pn	**P**	**22 44 39.1**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=241,slow=11,SNR=13						
CMAR	**Chiang Mai Arr**	**16.38**	**224**	Pn	**Pn**	**22 44 48.1**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=30,slow=10,SNR=15						
SONM	**Songino Array**	**17.25**	**350**	P	**P**	**22 44 59.6**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=163,slow=11,SNR=4.8						
KLR	**Kul'dur**	**24.22**	**35**	P	**P**	**22 46 14.6**	**+0.4**
	comp=Z,3.1nm,1.0s,baz=255,slow=8.0,SNR=6.6						
KLR				LR	LR	22 56 39.0	
	comp=Z,41nm,19.4s,baz=39,slow=39						
MKAR	**Makanchi Array**	**27.08**	**314**	P	**P**	**22 46 40.3**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=105,slow=12,SNR=6.6						
ZALV	**Zalesovo Beam**	**29.66**	**328**	P	**P**	**22 47 02.8**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=125,slow=9.6,SNR=3.7						
WRA	**Warramunga Arr**	**55.39**	**153**	P	**P**	**22 50 31.5**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=341,slow=8.0,SNR=3.2						
ASAR	**Alice Springs**	**58.61**	**155**	P	**P**	**22 50 54.8**	**0.0**
	comp=Z,0.2nm,0.3s,baz=342,slow=6.4,SNR=4.1						
ILAR	**Eielson Array**	**67.49**	**27**	P	**P**	**22 51 52.4**	**-0.8**
	comp=Z,0.3nm,0.9s,baz=308,slow=4.4,SNR=2.4						
NOA	**NORSAR Array B**	**67.86**	**329**	P	**P**	**22 51 54.4**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=80,slow=8.1,SNR=2.7						

*DDA **25** 22:41:41.9,40.36N×26.13E,h21km±2km,MW3.3*
*ISK **25** 22:41:41.8,40.38N×26.12E,h11km,ML3.2/17*
*SOF **25** 22:41:41.5,40.35N×25.84E,h5km,MD3.0*
*THE **25** 22:41:42.7,40.38N×26.09E,h11km±1km,ML3.1/10,Error ellipse: s-maj=1.4km s-min=0.7km az=40.0*
*ATH **25** 22:41:42.6,40.38N×26.01E,h30km±1km,ML3.1/9,Error ellipse: s-maj=2.2km s-min=1.0km az=249.0*
*BEO **25** 22:41:44.5±0.6,40.51N×26.28E,h23km±6km,ML3.9/22*

ISC 25 22:41:42.6±0.9,40.38N±0.02×26.10E±0.02,h19km±2km, n114,σ1s10/156,16C-3D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.25**	**219**	P	**Pb**	**22 41 48.0**	**-0.2**
GADA				S	**Sb**	**22 41 52.0**	**+0.2**
	5μm,0.4s						
GADA	**Gvkgeada**	**0.25**	**219**	PG	**Pb**	**22 41 47.9**	**-0.2**
GADA				SG	**Sb**	**22 41 51.7**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.28**	**87**	PG	**Pb**	**22 41 48.0**	**-1.0**
GELI				SG	**Sb**	**22 41 51.9**	**-1.3**
ENEZ	**Enez**	**0.36**	**6**	P	**Pg**	**22 41 49.7**	**-0.5**
ENEZ				S	**Sg**	**22 41 55.4**	**+0.1

EFSA	Agios Efstrati	1.20	226	P	Pb	22 42 04.8	+0.2
EFSA				AML	AML	22 42 22.2	
	comp=E,2010μm,0.7s						
EFSA				AML	AML	22 42 23.5	
	comp=N,3391μm,0.5s						
TKR	Tekirdag	1.25	60	PN	Pb	22 42 05.5	0.0
GONE	Gonen-Balikesi	1.26	105	PN	Pb	22 42 05.8	+0.2
BALY	Balya	1.33	118	*i* P	Pb	22 42 07.2	+0.3
BALY				*i* S	Sb	22 42 23.5	0.0
BALY				IAML		22 42 30.0	
	comp=N,346nm,0.8s						
EDC	Edincik	1.35	91	PN	Pb	22 42 06.8	-0.3
KAVA	Kavala	1.36	297	P	Pn	22 42 06.5	+0.1
KAVA				S	Sb	22 42 25.1	+0.9
	comp=N,528nm,0.3s						
KAVA	Kavala	1.36	297	P	Pn	22 42 06.7	+0.3
KAVA				S	Sb	22 42 24.6	+0.3
KAVA				AML	AML	22 42 28.4	
	comp=E,1073μm,0.3s						
KAVA				AML	AML	22 42 29.4	
	comp=N,981μm,0.2s						
KDZ	Kurdzhali	1.37	338	P	Pb	22 42 07.4	-0.2
KDZ	Kurdzhali	1.37	338	PN	Pn	22 42 07.2	+0.6
KVLA	Kavala	1.42	294	P	Pn	22 42 07.7	+0.4
DKL	Dikili	1.45	154	PN	Pb	22 42 08.4	-0.4
CRLT	Corlu	1.45	58	PN	Pb	22 42 08.4	-0.5
EDRB	Edirne	1.54	18	PN	Pn	22 42 09.7	+0.7
BALB	Balikesir	1.55	118	PN	Pn	22 42 09.6	+0.5
KIRK	Kırklareli	1.59	28	*i* P	Pn	22 42 09.4	-0.2
STEP	BALIKESIR_Sava	1.60	128	*i* P	Pb	22 42 10.8	-0.7
STEP				*i* S	Sb	22 42 31.3	+0.1
STEP				IAML		22 42 44.0	
	comp=N,229nm,0.7s						
ZEDA	zmir-Bergama	1.60	152	*i* P	Pn	22 42 10.6	+0.8
ZEDA				*i* S	Sb	22 42 31.5	+0.2
ZEDA				IAML		22 42 34.0	
	comp=N,415nm,0.5s						
ZEDA				IAML		22 42 35.0	
	comp=E,290nm,0.6s						
OUR	Ouranopolis	1.62	269	P	Pn	22 42 09.8	-0.2
OUR	Ouranopolis	1.62	269	P	Pn	22 42 09.8	-0.2
OUR				S	Sn	22 42 30.1	-0.3
OUR				AML	AML	22 42 37.6	
	comp=E,772μm,0.3s						
OUR				AML	AML	22 42 38.8	
	comp=N,774μm,0.4s						
OUR	Ouranopolis	1.62	269	PN	Pn	22 42 09.9	-0.1
RZN	Rozhen	1.68	322	P	Pb	22 42 11.7	+0.7
DIM	Dimitrovgrad	1.72	346	P	Pb	22 42 12.7	-0.8
PSRA	Psara	1.88	193	P	Pb	22 42 15.1	-1.2
PAIG	Paliouri	1.91	257	P	Pn	22 42 13.8	-0.2
SKY	Skiros Island	1.92	219	P	Pn	22 42 14.2	0.0
ELBA	Catalca	1.93	66	*i* P	Pn	22 42 14.9	+0.7
CHOS	Chios island	1.99	181	P	Pn	22 42 15.9	+0.6
PLD	Plovdiv	2.02	329	*e*Pn	Pn	22 42 16.7	+1.2
PLD				*e*Sg	Sg	22 42 47.9	+0.3
PLG	Polygyros	2.03	271	P	Pn	22 42 15.8	+0.1
URLA	Izmir	2.05	169	*i* P	Pn	22 42 16.7	+0.7
JMB	Yambol	2.12	10	P	Pb	22 42 21.2	+1.0
MMB	Musomiste	2.17	305	P	Pn	22 42 17.9	+0.3
DGB	zmir	2.40	165	*i* P	Pn	22 42 21.5	+0.7
DEMI	Demirci	2.42	123	*i* P	Pn	22 42 21.9	+0.7
ELND	Elena	2.55	356	⇑P	Pn	22 42 24.3	+1.4
ELND				⇑S	Sn	22 42 55.8	+2.4
KNT	Kendrikon	2.56	289	P	Pn	22 42 23.8	+0.8
VAY	Valandovo	2.84	290	*e*Pn	Pb	22 42 29.9	-2.7
VAY				*e*Sn	Sb	22 43 04.5	-2.4
SZH	Strazhica	2.89	358	P	Pn	22 42 28.5	+1.0
GDZ	Gediz	2.91	115	*i* P	Pn	22 42 29.8	+1.9
VTS	Vitosha	3.10	317	*e*Pn	Pn	22 42 33.5	+2.9
VTS				*e*Sn	Sn	22 43 08.5	+1.3
VTS	Vitosha	3.10	317	⇑P	Pn	22 42 30.7	+0.1
VTS	Vitosha	3.10	317	P	Pn	22 42 33.2	+2.6
RAZG	Razgrad	3.20	5	⇓P	Pn	22 42 33.3	+1.6
PLVB	Pleven	3.20	340	⇑P	Pn	22 42 31.8	0.0
APE	Apeiranthos	3.34	188	⇓P	Pn	22 42 34.1	+0.3
BOSS	Bosilegrad	3.45	309	*e*Pn	Pn	22 42 37.5	+2.3
BOSS				*e*Sn	Sn	22 43 17.9	+2.4
FNA	Florina	3.62	278	*e*Pn	Pn	22 42 41.3	+3.7
ZAPS	Zavoj	3.88	319	*e*Pn	Pn	22 42 43.8	+2.6
ZAPS				*e*Sn	Sn	22 43 27.9	+1.7
BARS	Barje	4.03	309	*e*Pn	Pn	22 42 44.8	+1.6
BARS				*e*Sn	Sn	22 43 30.8	+0.9
HUMR	Humele	4.23	349	⇑P	Pn	22 42 47.2	+1.3
ZAGS	Zajecar	4.48	321	*e*Pn	Pn	22 42 49.9	+0.6
HARR	Harsova	4.51	17	⇑P	Pn	22 42 51.4	+1.6
SELS	Selova	4.68	309	*e*Pn	Pn	22 42 55.0	+2.8
SELS				*e*Sn	Sn	22 43 47.2	+1.3
TIR	Tirane	4.83	284	*e*Pn	Pn	22 42 55.6	+1.5
CFR	Carcaliu	5.02	17	⇑P	Pn	22 42 58.7	+1.9
ARR	Arges	5.10	348	⇑P	Pn	22 42 59.0	+1.1
MLR	Muntele Rosu	5.11	359	*e*Pn	Pn	22 42 58.0	-0.1
MLR	Muntele Rosu	5.11	359	⇑P	Pn	22 42 59.5	+1.3
IDI	Anoyia	5.17	191	⇑P	Pn	22 43 05.1	+6.1
HERR	Herculane	5.25	330	⇓P	Pn	22 43 00.2	+0.2
GRUS	Gruza	5.32	313	*e*Pn	Pn	22 43 01.1	+0.2
GRUS	Gruza	5.32	313	*e*Pn	Pn	22 43 03.7	+2.8
GRUS				*e*Sn	Sn	22 44 02.0	+0.3
LOT	Lotru	5.35	342	⇑P	Pn	22 43 02.9	+1.5
SJES	Sjenica	5.41	304	*e*Sn	Sn	22 44 02.4	+1.6
MDVR	Moldovita	5.46	325	⇑P	Pn	22 43 03.8	+0.9
IVAS	Ivanjica	5.46	308	*e*Pn	Pn	22 43 03.5	+0.6
IVAS				*e*Sn	Sn	22 44 04.5	-0.8
VRI	Vrincioaia	5.50	5	⇑P	Pn	22 43 05.7	+2.3
GZR	Gura Zlata	5.57	335	*e*Pn	Pn	22 43 04.9	+0.5
TRUS	Trudelj	5.71	314	*e*Pn	Pn	22 43 06.7	+0.5
DIVS	Divibare	5.86	311	*e*Pn	Pn	22 43 09.2	+0.8
DIVS				*e*Sn	Sn	22 44 14.5	-0.6
BBLS	Lazići	6.08	307	*e*Pn	Pn	22 43 12.7	+1.3
BBLS				*e*Sn	Sn	22 44 19.3	-1.0
HCY	Herceg Novi	6.08	292	*e*Pn	Pn	22 43 08.9	-2.5
BZS	Buzias	6.18	329	⇑P	Pn	22 43 13.2	+0.5
TREB	Trebinje	6.27	294	*e*Pn	Pn	22 43 15.9	+2.0
TREB	Trebinje	6.27	294	*e*Pn	Pn	22 43 13.1	-0.8
HAPS	Han Pijesak,BI	6.47	307	*e*Pn	Pn	22 43 17.9	+1.1
BIZ	Bicaz	6.56	0	⇑P	Pn	22 43 19.3	+1.4
BURAR	Bucovina Array	7.26	355	⇑P	Pn	22 43 28.5	+1.8
KJJV	Kijevo	8.06	300	*e*Pn	Pn	22 43 38.1	-0.4
NVLJ	Novalja	9.29	300	*e*Pn	Pn	22 43 52.9	-2.4

IDC ***25*** *22:42:02.3±0.8,38°.56N×20°.59E,h0km,mb4.2/17, mb1 4.1/27,mb1mx4.0/59,mbtmp4.0/27,ML3.7/9,MS2.8/3, Ms1 2.8/3,ms1mx2.5/44,Error ellipse: s-maj=15.3km s-min=12.7km az=177.0*

ATH ***25*** *22:42:04.3,38°.42N×20°.63E,h17km±1km,ML3.9/20,Error ellipse: s-maj=1.3km s-min=0.6km az=271.0*

PDG ***25*** *22:42:04.3±1.2,38°.45N×20°.55E,h10km±2km,ML3.9/13, Error ellipse: s-maj=1.3km s-min=1.4km az=0.0*

NEIC ***25*** *22:42:05.3±1.3,38°.56N±0°.05×20°.59E±0°.03,h20km±5km, Error ellipse: s-maj=8.0km s-min=0.7km az=159.0*

THE ***25*** *22:42:05.0,38°.41N×20°.65E,h0km±1km,ML3.9/5,Error ellipse: s-maj=1.3km s-min=0.5km az=272.0*

ISC 25 22:42:04.2±0.6,38°.43N±0°.01×20°.61E±0°.02,h13km±3km, n268,σ1§54/340,mb4.3/31,6C-11D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VSK1	VASILIKIADES	0.04	238	P	Pg	22 42 06.8	+0.2
VSK1				S	Sg	22 42 08.1	-0.2
FSK	Fiskardo	0.04	312	P	Pg	22 42 07.0	+0.4
FSK				S	Sg	22 42 08.4	+0.1
FSK	Fiskardo	0.04	312	P	Pg	22 42 07.0	+0.4
FSK				S	Sg	22 42 08.7	+0.4
FSK				AML	AML	22 42 09.2	
FSK				AML	AML	22 42 09.7	
EVGI	Lefkada island	0.20	12	P	Pb	22 42 09.3	-0.3
EVGI	Lefkada island	0.20	12	P	Pb	22 42 09.4	-0.3
EVGI				S	Sb	22 42 13.1	-0.1
KEF4	Livadi, Kephal	0.22	220	P	Pg	22 42 09.6	+0.6
KEF4				S	Sb	22 42 13.8	-0.2
AGT1	Agia Thekli	0.25	224	P	Pg	22 42 09.9	+0.5
AGT1				S	Sb	22 42 14.1	-0.7
VLS	Valsamata	0.25	183	P	Pg	22 42 09.5	0.0
VLS				S	Sg	22 42 13.4	+0.3
VLS	Valsamata	0.25	183	P	Pg	22 42 09.5	0.0
VLS				S	Sg	22 42 13.6	+0.5
VLS				AML	AML	22 42 13.9	
VLS				AML	AML	22 42 14.1	
LXRA	Lixouri, Kepha	0.26	210	P	Pg	22 42 10.3	+0.6
LXRA				S	Sb	22 42 15.1	-0.1
ARG2	Argostoli	0.27	200	P	Pg	22 42 10.1	+0.4
ARG2				S	Sg	22 42 14.3	+0.8
MGNA	Meganis	0.27	33	P	Pg	22 42 10.3	+0.5
MGNA				S	Sb	22 42 14.8	-0.5
MGNA				AML	AML	22 42 15.2	
MGNA				AML	AML	22 42 15.3	
ARGA	Argostoli. Kep	0.27	202	P	Pg	22 42 10.1	+0.3
ARGA				S	Sb	22 42 14.9	-0.4
KEF3	Kipouria, Keph	0.30	222	P	Pg	22 42 10.8	+0.4
KEF3				S	Sb	22 42 16.1	-0.2
KFL	Anninata	0.35	156	P	Pg	22 42 11.2	0.0
KFL				S	Sg	22 42 16.6	+0.6
KFL	Anninata	0.35	156	P	Pg	22 42 11.2	0.0
KFL				S	Sg	22 42 17.1	+1.1
KFL				AML	AML	22 42 18.1	
	comp=N,7579μm,0.4s						
KFL				AML	AML	22 42 22.7	
LKD2	Lefkada island	0.36	7	P	Pb	22 42 12.1	-0.4
LKD2	Lefkada island	0.36	7	P	Pb	22 42 12.2	-0.4
LKD2				S	Sg	22 42 16.8	+0.4
LKD2				AML	AML	22 42 21.6	
	comp=N,46656μm,0.7s						
LKD2				AML	AML	22 42 24.0	
	comp=E,45156μm,0.6s						
AST1	Astakos	0.40	73	P	Pg	22 42 12.5	+0.4
AST1				S	Sb	22 42 18.4	-0.6
PDO	Prodromos	0.48	69	P	Pg	22 42 13.9	+0.2
PDO	Prodromos	0.48	69	P	Pg	22 42 14.2	+0.4
PDO				AML	AML	22 42 22.4	
	comp=E,81277μm,0.3s						
PDO				AML	AML	22 42 25.5	
	comp=N,95746μm,0.3s						
VLMS	Volimes, Zakyn	0.55	175	P	Pg	22 42 14.9	-0.2
VLMS				S	Sg	22 42 23.2	+0.8
ZAK2	Zakynthos	0.68	160	P	Pg	22 42 17.2	-0.2
ZAK2				S	Sb	22 42 28.3	+1.1
VTN	Vitineika	0.69	138	P	Pg	22 42 17.6	+0.1
VTN	Vitineika	0.69	138	P	Pg	22 42 17.5	+0.1
VTN				S	Sg	22 42 27.2	+0.7
PVO	Paravola	0.75	75	P	Pg	22 42 18.9	+0.3
PVO	Paravola	0.75	75	P	Pb	22 42 19.0	0.0
PVO				S	Sb	22 42 29.1	0.0
PVO				AML	AML	22 42 32.2	
	comp=E,36052μm,0.3s						
PVO				AML	AML	22 42 33.1	
	comp=N,27052μm,0.4s						
RLS	Riolos of Patr	0.77	118	P	Pg	22 42 18.6	-0.5
RLS	Riolos of Patr	0.77	118	P	Pg	22 42 18.8	-0.3
RLS				S	Sg	22 42 28.7	-0.6
RLS				AML	AML	22 42 34.3	
	comp=E,9241μm,0.4s						
RLS				AML	AML	22 42 37.7	
	comp=N,11055μm,0.4s						
KRI1	kERI	0.78	168	P	Pg	22 42 18.8	-0.5
DRO	Drossia	0.99	118	P	Pb	22 42 22.3	-0.9
DRO				S	Sg	22 42 37.0	+0.7
	comp=N,13μm,0.4s						
DRO	Drossia	0.99	118	P	Pb	22 42 22.6	-0.6
DRO				S	Sg	22 42 36.8	+0.6
DRO				AML	AML	22 42 40.3	
	comp=N,25067μm,0.5s						
DRO				AML	AML	22 42 41.5	
	comp=E,23703μm,0.2s						
EFP	Efpalio	1.02	90	P	Pb	22 42 22.7	-1.0
EFP				S	Sn	22 42 38.0	-0.4
ANX	Ano Chora	1.04	81	P	Pb	22 42 23.4	-0.8
ANX				S	Sn	22 42 39.7	+0.6
	comp=E,7μm,0.4s						
ANX	Ano Chora	1.04	81	P	Pb	22 42 23.6	-0.5
ANX				S	Sg	22 42 38.3	+0.3
ANX				AML	AML	22 42 44.9	
	comp=N,16915μm,0.5s						
ANX				AML	AML	22 42 45.5	
	comp=E,12789μm,0.4s						
EVR	Evrytania	1.06	62	P	Pb	22 42 23.9	-0.6
EVR	Evrytania	1.06	62	P	Pb	22 42 23.9	-0.6
EVR				AML	AML	22 42 46.4	
	comp=E,7917μm,0.9s						
EVR				AML	AML	22 42 51.6	
	comp=N,9391μm,0.8s						
LAKA	Lakka	1.10	99	P	Pb	22 42 24.1	-0.9
LAKA	Lakka	1.10	99	P	Pb	22 42 24.2	-0.9
LAKA				S	Sn	22 42 40.2	-0.1
LAKA				AML	AML	22 42 45.2	
	comp=E,9115μm,0.8s						
LAKA				AML	AML	22 42 49.6	
	comp=N,6125μm,0.4s						
IGT	Igoumenitsa	1.12	349	P	Pg	22 42 25.8	0.0
IGT				S	Sn	22 42 43.8	+2.9
IGT	Igoumenitsa	1.12	349	P	Pg	22 42 26.2	+0.4
IGT				S	Sn	22 42 41.9	+1.0
IGT				AML	AML	22 42 45.0	
	comp=E,13198μm,0.6s						
IGT				AML	AML	22 42 45.2	
	comp=N,6219μm,0.5s						
SERG	Sergoula	1.14	90	P	Pb	22 42 24.9	-0.8
SERG				S	Sn	22 42 41.8	+0.4
	comp=N,6μm,0.4s						
SERG	Sergoula	1.14	90	P	Pb	22 42 24.9	-0.8
ALIK	Aliki, Aigiali	1.20	98	P	Pn	22 42 25.9	-0.7
ALIK				S	Sg	22 42 44.4	+1.6
KALE	Kalithea	1.21	91	P	Pn	22 42 25.9	-0.9
KALE	Kalithea	1.21	91	P	Pn	22 42 26.0	-0.9
KALE				AML	AML	22 42 50.3	
	comp=N,13092μm,0.4s						
KALE				AML	AML	22 42 56.5	
	comp=E,9247μm,0.5s						
JAN	Janina	1.24	9	P	Pg	22 42 28.2	+0.2
JAN				S	Sg	22 42 47.1	+2.9
JAN	Janina	1.24	9	P	Pg	22 42 28.5	+0.5
AMT	Artemida-Makis	1.25	135	P	Pn	22 42 27.1	-0.3
AMT	Artemida-Makis	1.25	135	P	Pn	22 42 27.5	+0.2
KLV	Kalavryta, Ach	1.28	107	P	Pn	22 42 27.1	-0.7
KLV	Kalavryta, Ach	1.28	107	P	Pn	22 42 27.2	-0.5
KLV				S	Sg	22 42 45.9	+0.5
KLV				AML	AML	22 42 52.3	
	comp=E,4456μm,0.5s						
KLV				AML	AML	22 42 54.1	
	comp=N,3599μm,0.5s						
MAKR	Makrakomi, Fth	1.33	64	P	Pb	22 42 28.9	-0.1
MAKR	Makrakomi, Fth	1.33	64	P	Pb	22 42 28.9	-0.1
MAKR				S	Sg	22 42 47.0	-0.1
MAKR				AML	AML	22 42 56.6	
	comp=E,17148μm,0.8s						
MAKR				AML	AML	22 42 58.0	
	comp=N,8840μm,0.6s						
KASA	Kassiopi	1.42	339	P	Pg	22 42 31.3	0.0
KASA				AML	AML	22 42 55.0	
	comp=E,14652μm,0.6s						
KASA				AML	AML	22 42 57.7	
	comp=N,4611μm,0.5s						
KEK	Kerkira	1.43	334	P	Pb	22 42 30.8	+0.2
KEK				S	Sg	22 42 52.9	+2.8
KEK	Kerkira	1.43	334	P	Pb	22 42 31.1	+0.5
KEK				AML	AML	22 42 57.6	
	comp=N,4887μm,0.5s						
KEK				AML	AML	22 43 03.3	
	comp=E,4273μm,0.5s						
AGG	Agios Georgios	1.47	66	P	Pb	22 42 31.5	+0.1
AGG				S	Sg	22 42 53.1	+1.5
	comp=E,4μm,1.0s						
AGG	Agios Georgios	1.47	66	P	Pb	22 42 31.6	+0.1
AGG	Agios Georgios	1.47	66		Pb	22 42 31.6	+0.1
DLFA	Delphi	1.48	88	P	Pn	22 42 30.6	0.0
SRN	Sarande	1.52	342	P	Pb	22 42 32.3	+0.1
SRN				S	Sg	22 42 55.5	+2.3
	comp=E,2μm,0.6s						
THL	Klokotos Trika	1.58	44	P	Pb	22 42 33.1	-0.1
TRIP	Tripoli	1.59	124	P	Pb	22 42 33.1	-0.4
TRIP	Tripoli	1.59	124	P	Pb	22 42 33.1	-0.4
ITM	Ithomi	1.63	140	P	Pb	22 42 34.0	0.0
ITM	Ithomi	1.63	140	P	Pb	22 42 34.1	0.0
ITM	Ithomi	1.63	140		Pb	22 42 34.5	+0.5
KPRO	Kipourio	1.63	21	P	Pg	22 42 35.4	-0.1
AXAR	Agios Charalam	1.64	78	P	Pn	22 42 33.2	+0.4
AXAR	Agios Charalam	1.64	78	P	Pb	22 42 34.2	-0.1
VLX	Vlachokerasia	1.76	126	P	Pb	22 42 36.2	-0.1
VLX	Vlachokerasia	1.76	126	P	Pb	22 42 36.2	-0.1
VLX				AML	AML	22 43 09.0	
	comp=N,6068μm,0.6s						
VLX				AML	AML	22 43 12.3	
	comp=E,4469μm,0.5s						
PYL	PYLOS	1.78	149	P	Pn	22 42 35.6	+1.0
PYL	PYLOS	1.78	149	P	Pb	22 42 35.9	-0.7
PENT	Pentalofos	1.81	13	P	Pb	22 42 38.1	+0.8
PROD	Prodromos	1.81	95	P	Pb	22 42 36.6	-0.6
PROD	Prodromos	1.81	95	P	Pb	22 42 36.7	-0.6
PROD				S	Sb	22 42 59.6	-0.3
PROD				AML	AML	22 43 09.3	
	comp=E,5841μm,0.7s						
PROD				AML	AML	22 43 13.0	
	comp=N,5079μm,0.5s						
LKR	Lokris	1.89	83	P	Pb	22 42 38.2	-0.3
LKR	Lokris	1.89	83	P	Pb	22 42 38.3	-0.3
LTK	Loutraki	1.90	102	P	Pb	22 42 38.3	-0.5
LOUT	Loutraki	1.92	103	P	Pb	22 42 38.7	-0.3
TPE	Tepelena	1.92	346	P	Pb	22 42 38.2	-0.8
NEST	Nestorio	2.01	10	P	Pb	22 42 41.1	+0.4
KZN	Kozani	2.08	25	P	Pb	22 42 41.5	-0.3
VIL2	Platees	2.11	95	P	Pb	22 42 42.0	-0.2
VILL	Villia	2.15	96	P	Pn	22 42 40.6	+0.9
LIT	Litokhoron	2.22	41		Pb	22 42 42.5	-1.7
KRND	KRANIDI	2.27	117	P	Pb	22 42 43.3	-1.6
DID	Didima	2.27	113	P	Pn	22 42 42.9	+1.4
SCTE	Santa Cesarea	2.33	315		Pn	22 42 41.2	-1.0
MRKA	Markates	2.35	82	P	Pb	22 42 44.8	-1.7
FNA	Florina	2.43	14		Pn	22 42 43.3	-0.3
ATH	Athens Observa	2.49	100	P	Pn	22 42 46.3	+1.9
ATH	Athens Observa	2.49	100	P	Pn	22 42 46.3	+1.9
ATHU	Athens Univers	2.55	99	P	Pn	22 42 46.5	+1.3
DION	Dionisos Attik	2.64	97	P	Pn	22 42 47.8	+1.3
OHR	Ohrid	2.68	3	*i* Pn	Pb	22 42 49.8	-2.3
OHR	Ohrid	2.68	3	*i* Pn	Pb	22 42 49.8	-2.3
TIR	Tirane	2.97	349	⇑P	Pn	22 42 53.1	+2.1
TIR	Tirane	2.97	349		Pn	22 42 49.3	-1.6
KARY	Karystos	3.04	96	P	Pn	22 42 54.1	+2.1
KARY	Karystos	3.04	96	P	Pn	22 42 54.1	+2.1
TIP	Timpagrande	3.10	285		Pn	22 42 53.1	+0.3
CGL1	Ceglie Messapi	3.29	314	⇑*i* Pn	Pn	22 42 56.0	+0.7
TAR1	Taranto	3.31	310	*e*Pn	Pn	22 42 56.5	+0.8
SERI	Serifos	3.32	111	P	Pn	22 42 59.2	+3.3
ULC	Ulcinj	3.68	344	⇓*i* Pn	Pn	22 43 01.1	+0.3
ULC				*i* Sn	Sn	22 43 45.3	+1.3
CEL	Celeste	3.71	269		Pn	22 43 02.0	+0.8
SG1	Sgolgore (BA)	3.87	310	⇓*i* Pn	Pn	22 43 04.2	+0.8
DRME	Dracevica, Mon	3.91	344	*e*Pn	Pn	22 43 04.5	+0.6
DRME	Dracevica, Mon	3.91	344	⇓*i* Pn	Pn	22 43 04.8	+0.9
DRME				*i* Sn	Sn	22 43 51.1	+1.5
BUM	Brajici-Budva	4.08	342	⇓*i* Pn	Pn	22 43 06.9	+0.6
BUM				*i* Sn	Sn	22 43 54.9	+0.9
PDG	Podgorica	4.13	346	*e*Pn	Pn	22 43 07.3	+0.4
PDG	Podgorica	4.13	346	*e*Pn	Pn	22 43 07.2	+0.3
PDG	Podgorica	4.13	346		Pn	22 43 06.3	-0.6
TTG	Podgorica	4.13	346	⇓*i* Pn	Pn	22 43 07.7	+0.8
TTG				*i* Sn	Sn	22 43 56.0	+1.0
PVY	Plav	4.19	353	⇓*i* Pn	Pn	22 43 09.5	+1.6
PVY				*i* Sn	Sn	22 43 57.7	+1.0
CEME	Cevo	4.31	343	⇑*i* Pn	Pn	22 43 09.6	+0.2
CEME				*i* Sn	Sn	22 43 59.6	0.0
HCY	Herceg Novi	4.33	339	⇓*i* Pn	Pn	22 43 09.5	-0.1
HCY				*i* Sn	Sn	22 44 00.6	+0.7
SANT	Santorini	4.38	117		Pn	22 43 12.1	+1.7
IVA	Berane	4.47	353	⇑*i* Pn	Pn	22 43 13.3	+1.6
IVA				*i* Sn	Sn	22 44 04.4	+0.8
KOME	Kolasin	4.49	350	⇓*i* Pn	Pn	22 43 13.4	+1.4
KOME				*i* Sn	Sn	22 44 04.8	+0.6
NKME	Niksic	4.51	344	⇓*i* Pn	Pn	22 43 12.7	+0.5
NKME				*i* Sn	Sn	22 44 05.2	+0.6
NKY	Niksic	4.55	345	⇑*i* Pn	Pn	22 43 13.7	+0.9
NKY				*i* Sn	Sn	22 44 06.5	+1.0
DBRK	Dubrovnik	4.63	337	*i* Pn	Pn	22 43 13.1	-0.7
DBRK				Sn	Sn	22 44 03.9	-3.5
VTS	Vitosha	4.64	25	Pn	Pn	22 43 12.1	-1.9
IDI	Anoyia	4.65	131	Pn	Pn	22 43 14.9	+0.7
	comp=N,0.4nm,0.3s,baz=22,slow=16,SNR=4.7						
IDI				Sn	Sn	22 44 10.9	+2.8
	comp=N,7.1nm,0.3s,baz=264,slow=7.1,SNR=9.7						
IDI				LR	LR	22 45 27.9	
	comp=N,82nm,20.8s,baz=280,slow=43						
IDI	Anoyia	4.65	131	Pn	Pn	22 43 16.2	+2.0
BRY	Bratogost	4.74	341	*e*Pn	Pn	22 43 14.9	-0.5
BRY	Bratogost	4.74	341	⇓*i* Pn	Pn	22 43 15.2	-0.2
BRY				*i* Sn	Sn	22 44 11.1	+0.9
UPM	Unac-Piva	4.94	345	*e*Pn	Pn	22 43 18.8	+0.6
UPM	Unac-Piva	4.94	345	⇓*i* Pn	Pn	22 43 19.2	+1.0
UPM				*i* Sn	Sn	22 44 16.3	+1.0
STON	Ston	4.96	334	*e*Pn	Pn	22 43 17.4	-0.8
STON	Ston	4.96	334	*i* Pn	Pn	22 43 17.7	-0.5
STON				Sn	Sn	22 44 11.8	-3.6
PLE	Pljevlja	4.98	350	⇑*i* Pn	Pn	22 43 19.8	+1.1
PLE				*i* Sn	Sn	22 44 17.6	+1.4
VAE	Valguarnera	4.99	261	Pn	Pn	22 43 18.6	-0.2
	comp=N,2.3nm,0.3s,baz=164

	comp=N,1.7nm,0.4s									
KBA					*i* Sn		**Sn**	**22 46 16.8**	**-6.7**
	comp=N,5.6nm,0.4s									
BR131	**Keskin Array S**	**10.22**	**79**		Pn		**Pn**	**22 44 32.6**	**+2.0**
BRTR	**Keskin Array B**	**10.22**	**79**		Pn		Pn	22 44 35.6	+5.0
	comp=N,0.4nm,0.3s,baz=271,slow=14,SNR=3.1									
BRTR					LR		LR	22 49 11.0		
	comp=N,60nm,21.7s,baz=176,slow=42									
ABTA	**Abfaltersbach**	**10.23**	**327**	*i*	Pn		**Pn**	**22 44 30.4**	**-0.3**
	comp=N,2.9nm,0.4s,SNR=6.1									
ABTA					*e*Sn		**Sn**	**22 46 21.3**	**-3.8**
	comp=N,37nm,0.9s									
SALO	**Salr**	**10.38**	**317**		Pn		**Pn**	**22 44 32.0**	**-0.7**
MOA	**Molln**	**10.49**	**336**	*i*	Pn		**Pn**	**22 44 34.1**	**-0.1**
	comp=N,8.5nm,0.7s,SNR=12									
MOA					*i* Sn		**Sn**	**22 46 27.4**	**-4.0**
	comp=N,6.0nm,0.5s									
WTTA	**Wattenberg**	**11.01**	**326**	*e*	Pn		**Pn**	**22 44 41.2**	**-0.2**
	comp=N,6.6nm,0.3s,SNR=16									
WTTA					*e*Sn		**Sn**	**22 46 39.8**	**-4.6**
	comp=N,21nm,0.8s									
WATA	**Walderalm**	**11.09**	**326**	*i*	Pn		**Pn**	**22 44 43.0**	**+0.5**
	comp=N,4.4nm,0.4s,SNR=6.6									
WATA					*e*Sn		**Sn**	**22 46 42.5**	**-3.8**
	comp=N,12nm,0.6s									
SQTA	**Sankt Quirin**	**11.16**	**325**	*i*	Pn		**Pn**	**22 44 45.1**	**+1.6**
	comp=N,4.1nm,0.3s,SNR=5.7									
SQTA					*e*Sn		**Sn**	**22 46 44.7**	**-3.4**
	comp=N,12nm,0.6s									
FUORN	**Ofenpass-Fuorn**	**11.18**	**320**				**Pn**	**22 44 43.1**	**-0.7**
FETA	**Feichten**	**11.24**	**323**	*e*	Pn		**Pn**	**22 44 47.0**	**+2.4**
	comp=N,1.3nm,0.5s									
FETA					*e*Sn		**Sn**	**22 46 46.3**	**-3.7**
	comp=N,5.0nm,0.6s									
MOTA	**Moosalm**	**11.30**	**325**	*i*	Pn		**Pn**	**22 44 46.5**	**+1.0**
	comp=N,7.3nm,0.8s,SNR=13									
MOTA					*i* Sn		**Sn**	**22 46 48.3**	**-3.4**
	comp=N,8.1nm,0.7s									
GEC2	**GERESS Array S**	**11.54**	**337**				**Pn**	**22 44 47.4**	**-1.3**
GERES	**GERESS Array B**	**11.54**	**337**		Pn		**Pn**	**22 44 47.2**	**-1.4**
	comp=N,0.5nm,0.3s,baz=157,slow=14,SNR=16									
GERES					Sn		**Sn**	**22 46 51.7**	**-5.7**
	comp=N,0.5nm,0.3s,baz=154,slow=23,SNR=6.7									
MORC	**Moravsky Berou**	**11.55**	**350**		Pn		**Pn**	**22 44 48.0**	**-0.8**
DAVA	**Damuels**	**11.83**	**322**	*e*	Pn		**Pn**	**22 44 54.4**	**+1.7**
	comp=N,2.5nm,0.6s									
DAVA					*i* Sn		**Sn**	**22 46 58.8**	**-5.8**
	comp=N,14nm,0.6s									
KHC	**Kasperske Hory**	**11.84**	**337**	*e*	PN		**Pn**	**22 44 51.5**	**-1.1**
SENIN	**Lac Senin/Sane**	**12.62**	**313**				**Pn**	**22 45 03.3**	**-0.2**
MMAI	**Mount Meron Ar**	**13.18**	**110**		Pn		**Pn**	**22 45 13.5**	**+2.4**
	comp=N,1.0nm,0.3s,baz=310,slow=12,SNR=3.6									
BFO	**Black Forest**	**13.31**	**322**		Pn		**Pn**	**22 45 11.4**	**-1.4**
AKASG	**Malin Array Be**	**13.71**	**24**		Pn		**Pn**	**22 45 16.9**	**-1.2**
	comp=N,0.5nm,0.3s,baz=212,slow=12,SNR=5.2									
ECH	**Echery**	**13.82**	**319**		Pn		**Pn**	**22 45 19.6**	**0.0**
CLL	**Collm**	**13.95**	**340**	*e*	P		**Pn**	**22 45 22.0**	**+0.6**
CLL					ePP		P	**22 45 32.0**	**+2.5**
ASF	**Jabal al Asfar**	**14.69**	**110**		Pn		**P**	**22 45 36.3**	**-1.6**
	comp=N,0.2nm,0.3s,baz=235,slow=6.7,SNR=8.5									
EIL	**Elat**	**14.74**	**122**		Pn		**P**	**22 45 36.4**	**-2.0**
	comp=N,0.6nm,0.3s,baz=348,slow=15,SNR=7.0									
WLF	**Walferdange**	**15.27**	**322**		P		**P**	**22 45 44.7**	**+0.6**
WLF					PnPn		**PnPn**	**22 45 47.1**	**-0.3**
WLF	**Walferdange**	**15.27**	**322**				**Pn**	**22 45 36.7**	**-2.6**
WLF					IAmb		IAmb	22 45 48.0		
	comp=Z,12nm,1.1s									
SUW	**Suwalki**	**15.69**	**6**		P		**Pn**	**22 45 45.2**	**+0.5**
SUW					IAmb		IAmb	22 45 50.0		
	comp=Z,22nm,0.9s									
MEM	**Membach**	**15.98**	**324**		sP		sP	22 45 55.9	-1.5
BSTI	**Sart Tilman**	**16.17**	**324**		pP		**pP**	**22 45 56.6**	**-1.2**
BSTI					sP		sP	22 45 57.9	-1.5
BSTI					PbPb		PbPb	22 46 42.7	-2.2
BSTI					PgPg		**PgPg**	**22 47 14.2**	**+0.6**
DOU	**Dourbes**	**16.32**	**321**		pP		pP	22 45 58.5	-0.9
KIV	**Kislovodsk**	**17.49**	**65**				**Pn**	**22 46 07.3**	**-0.5**
KBZ	**Khabaz**	**17.60**	**65**		P		**P**	**22 46 09.9**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=282,slow=12,SNR=3.5									
ESDC	**Sonseca Array**	**19.11**	**281**		P		**P**	**22 46 25.8**	**-0.9**
	baz=74,slow=10.0,SNR=4.5									
OBN	**Obninsk**	**19.87**	**28**		P		**P**	**22 46 32.7**	**-2.1**
TAM	**Tamanrasset**	**20.24**	**224**		P		**P**	**22 46 40.2**	**+0.9**
HFS	**Hagfors**	**22.16**	**351**		P		**P**	**22 46 57.5**	**-2.0**
	comp=Z,4.4nm,0.6s,baz=156,slow=9.2,SNR=14									
NC602	**NORSAR Array S**	**23.05**	**349**		P		**P**	**22 47 08.2**	**-0.7**
NC602					IAmb		IAmb	22 47 10.0		
	comp=Z,9.2nm,0.6s									
NAO01	**NORSAR Array S**	**23.25**	**348**		P		**P**	**22 47 10.8**	**-0.2**
PFVI	**Vila Bisbo**	**23.26**	**276**		P		**P**	**22 47 12.1**	**+0.9**
EKA	**Eskdalemuir Ar**	**23.26**	**324**		P		**P**	**22 47 11.2**	**+0.1**
	comp=Z,3.5nm,0.8s,baz=128,slow=10,SNR=12									
ESK	**Eskdalemuir**	**23.27**	**324**		P		**P**	**22 47 11.8**	**+0.6**
ESK					IAmb		IAmb	22 47 17.4		
	comp=Z,9.6nm,1.1s									
FINES	**FINESS Array B**	**23.29**	**7**		P		**P**	**22 47 10.2**	**-1.2**
	comp=Z,11nm,0.8s,baz=174,slow=9.7,SNR=28									
FIA1	**FINESS Array S**	**23.29**	**7**		P		**P**	**22 47 09.6**	**-1.7**
FIA1					IAmb		IAmb	22 47 12.6		
	comp=Z,13nm,0.9s									
NC405	**NORSAR Array S**	**23.38**	**349**		P		**P**	**22 47 11.7**	**-0.6**
NC405					IAmb		IAmb	22 47 18.2		
	comp=Z,11nm,0.8s									
NB201	**NORSAR Array S**	**23.38**	**349**		P		**P**	**22 47 11.7**	**-0.6**
NB201					IAmb		IAmb	22 47 16.3		
	comp=Z,11nm,1.0s									
NB2	**NORSAR Subarra**	**23.39**	**348**		P		**P**	**22 47 11.5**	**-0.9**
	comp=Z,6.1nm,0.9s,baz=161,slow=11									
NOA	**NORSAR Array B**	**23.39**	**348**		P		**P**	**22 47 11.0**	**-1.3**
	comp=Z,2.7nm,0.8s,baz=159,slow=9.6,SNR=7.9									
NBO00	**NORSAR Array S**	**23.45**	**348**		P		**P**	**22 47 12.1**	**-0.9**
NBO00					IAmb		IAmb	22 47 13.1		
	comp=Z,15nm,1.1s									
NC303	**NORSAR Array S**	**23.54**	**349**		P		**P**	**22 47 12.8**	**-1.0**
KLMR	**Klimovskoe**	**25.38**	**22**	*e*	P		**P**	**22 47 27.8**	**-3.0**
KLMR					AMP			22 47 38.7		
	comp=Z,15nm,1.3s									
RAYN	**Ar Rayn**	**25.90**	**118**		P		**P**	**22 47 36.7**	**+0.7**
AKTO	**Aktyubinsk**	**28.98**	**53**		P		**P**	**22 48 02.4**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=278,slow=9.7,SNR=6.3									
GEYT	**Alibeck**	**29.36**	**79**		P		**P**	**22 48 06.5**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=270,slow=10,SNR=4.4									
TOA0	**Torodi Ar. Sit**	**30.27**	**219**		P		**P**	**22 48 15.8**	**+0.9**
TOA0					IAmb		IAmb	22 48 21.1		
	comp=Z,5.1nm,1.1s									
TORD	**Torodi Ar. Bea**	**30.27**	**219**		P		**P**	**22 48 15.8**	**+0.8**
	comp=Z,2.9nm,0.7s,baz=30,slow=8.8,SNR=14									
ARU	**Arti**	**30.83**	**42**		P		**P**	**22 48 18.1**	**-1.5**
	comp=Z,0.7nm,0.4s,baz=197,slow=13,SNR=4.0									
ARU	**Arti**	**30.83**	**42**		P		**P**	**22 48 18.3**	**-1.2**
ARU					IAmb		IAmb	22 48 19.3		
	comp=Z,2.1nm,0.6s									
ARCES	**ARCESS Array B**	**31.28**	**3**		P		**P**	**22 48 22.0**	**-1.4**
	comp=Z,2.2nm,0.8s,baz=193,slow=9.1,SNR=9.5									
UOSS	**Minazif**	**32.93**	**104**		P		**P**	**22 48 37.5**	**-0.8**
UOSS					IAmb		IAmb	22 48 43.7		
	comp=Z,2.8nm,0.8s									
CHGR	**Chuyangaron**	**37.62**	**74**		P		**P**	**22 49 19.0**	**+0.3**
KK31	**Karatay Array**	**37.63**	**67**		P		**P**	**22 49 18.2**	**-0.5**
AAK	**Ala-Archa**	**40.60**	**66**		P		**P**	**22 49 43.6**	**-0.1**
MK31	**Makanchi Array**	**45.11**	**59**		P		**P**	**22 50 19.3**	**-0.8**
MK31					IAmb		IAmb	22 50 19.8		
	comp=Z,2.4nm,0.6s									
MKAR	**Makanchi Array**	**45.11**	**59**		P		**P**	**22 50 19.2**	**-0.9**
	comp=Z,3.6nm,0.5s,baz=274,slow=7.6,SNR=82									
ZAA0	**Zalesovo Array**	**45.47**	**48**		P		**P**	**22 50 21.9**	**-0.9**
ZALV	**Zalesovo Beam**	**45.47**	**48**		P		**P**	**22 50 22.1**	**-0.7**
	comp=Z,8.4nm,0.4s,baz=270,slow=8.9,SNR=45									
WMQ	**Urumqi**	**49.58**	**61**	*e*	P		**P**	**22 50 57.3**	**+2.4**
WMQ					pmax		pmax			
	comp=Z,14nm,0.7s									
WMQ					pmax		pmax			
	comp=Z,66nm,4.1s									
WMQ					LR		LR			
	comp=N,130nm,6.5s									
WMQ					LR		LR			
	comp=E,66nm,6.5s									
WMQ					LR		LR			
	comp=Z,26nm,24.1s									
SCHQ	**Schefferville**	**58.32**	**317**		P		**P**	**22 51 57.3**	**-1.3**
	comp=Z,2.2nm,0.4s,baz=74,slow=6.1,SNR=9.9									
SCHQ	**Schefferville**	**58.32**	**317**		P		**P**	**22 51 57.8**	**-0.8**
SCHQ					IAmb		IAmb	22 51 59.9		
	comp=Z,3.2nm,1.0s									
SONM	**Songino Array**	**60.25**	**51**		P		**P**	**22 52 11.7**	**-0.5**
	comp=Z,1.7nm,1.0s,baz=292,slow=8.2,SNR=5.2									
LZH	**Lanzhou**	**64.03**	**63**	*e*	P		**P**	**22 52 42.3**	**+4.5**
LZH					pP		sP	22 52 45.5	+1.9
LZH					sP		pP	22 52 57.0	+15
LZH					*e*PP		PcP	22 53 04.5	-8.6
LZH					pmax		pmax			
	comp=Z,18nm,1.3s									
LZH					pmax		pmax			
	comp=Z,52nm,7.6s									
LZH					LR		LR			
	comp=N,78nm,15.0s									
LZH					LR		LR			
	comp=E,83nm,14.9s									
LZH					LR		LR			
	comp=Z,100nm,17.6s									
HHC	**Hu-ho-hao-te**	**66.84**	**56**	*e*	P		**P**	**22 52 58.3**	**+2.5**
HHC					pmax		pmax			
	comp=Z,11nm,0.9s									
HHC					pmax		pmax			
	comp=Z,57nm,6.0s									
YKA	**Yellowknife Ar**	**73.18**	**340**		P		**P**	**22 53 34.9**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=41,slow=5.4,SNR=9.1									
KLR	**Kul'dur**	**73.64**	**40**		P		**P**	**22 53 37.2**	**0.0**
	comp=Z,2.2nm,0.8s,baz=300,slow=6.0,SNR=6.4									
ILAR	**Eielson Array**	**76.67**	**355**		P		**P**	**22 53 55.2**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=354,slow=2.8,SNR=7.4									
HDA	**Harding Lake**	**77.03**	**354**		P		**P**	**22 53 55.6**	**-0.8**
HDA					IAmb		IAmb	22 53 57.8		
	comp=Z,2.8nm,0.8s									
DHY	**Denali Highway**	**78.38**	**354**		P		**P**	**22 54 03.9**	**-0.3**
DHY					IAmb		IAmb	22 54 05.7		
	comp=Z,3.4nm,0.7s									
KSRS	**Korea Array**	**79.12**	**51**		P		**P**	**22 54 08.0**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=296,slow=4.6,SNR=4.2									
VRDI	**Verde Repeater**	**79.84**	**352**		P		**P**	**22 54 12.4**	**+0.2**
MJAR	**Matsushiro Arr**	**85.76**	**46**		LR		LR	23 36 37.3		
	comp=Z,128nm,20.8s,baz=95,slow=38									
WRA	**Warramunga Arr**	**120.48**	**92**		PKP		**PKPdf**	**23 00 55.1**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=325,slow=2.0,SNR=1.2									

IDC ***25*** *22:46:54.4±0.7, 0.°72S×122.°50E, h0km, mb4.3/11, mb1 4.4/14, mb1mx4.1/48, mbtmp4.3/14, ML4.1/3, MS3.5/8, Ms1 3.5/8, ms1mx3.3/30, Error ellipse: s-maj=27.4km s-min=13.0km az=63.0*

BJI ***25*** *22:46:56.0±0.0, 0.°90S×122.°00E, h10km, mB4.9/15, mb4.7/21, Ms4.1/4, Ms7 3.9/4*

DJA ***25*** *22:46:58.1±0.2, 1.°S±2.°×12.°2E±.°, h10km, M4.7/19, mb4.8/19, mB5.1/7, MLv5.0/14, Mw(mB)4.4/7*

NEIC ***25*** *22:46:58.9±1.9, 0.°87S±0.°08×122.°29E±0.°04, h51km±9km, mb4.7/27, Error ellipse: s-maj=11.2km s-min=5.4km az=175.0*

KLM ***25*** *22:46:59.0, 0.°96S×122.°50E, h18km, mb4.7*

ISC 25 22:46:55.5±0.4, 0.°89S±0.°05×122.°14E±0.°03, h10km, n100, σ1°97/97, mb4.6/28, MS3.3/5, 2C, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APSI	**Ampana**	**0.49**	**268**	P	**Pg**	**22 47 04.9**	**-0.2**
APSI				S	**Sb**	**22 47 13.0**	**-0.5**
LUWI	**Luwuk**	**0.65**	**103**	P	**Pn**	**22 47 11.2**	**+0.4**
LUWI				S	**Sn**	**22 47 22.4**	**+1.2**
LUWI	**Luwuk**	**0.65**	**103**		**Pn**	**22 47 11.1**	**+0.3**
LUWI				Sn	**Sb**	**22 47 18.5**	**+0.3**
KMSI	**Cibinong**	**2.35**	**52**	P	**Pb**	**22 47 38.7**	**+0.7**
KMSI				S	**Sg**	**22 48 13.0**	**+1.9**
MPSI	**Mapaga**	**2.55**	**299**	P	**Pn**	**22 47 37.5**	**+0.5**
TTSI	**Tana Toraja**	**3.15**	**227**	P	**Pn**	**22 47 46.6**	**+1.3**
TTSI				S	**Sn**	**22 48 24.1**	**+1.1**
SPSI	**Sidrap Palu**	**3.86**	**218**	P	**Pn**	**22 47 56.4**	**+1.4**
SPSI				S	**Sn**	**22 48 42.3**	**+1.8**
BNSI	**Bone**	**4.03**	**210**	P	**Pn**	**22 47 58.8**	**+1.4**
BNSI				S	**Sn**	**22 48 46.1**	**+1.4**
BBSI	**Bau Bau**	**4.59**	**175**	P	**Pn**	**22 48 07.0**	**+2.0**
KAPI	**Kappang**	**4.74**	**210**	Pn	**Pn**	**22 48 08.4**	**+1.3**
	150nm,0.3s,baz=21,slow=6.1,SNR=464						
KAPI				Sn	**Sn**	**22 49 03.2**	**+1.1**
	10.0nm,0.3s,baz=197,slow=19,SNR=1.4						
KAPI	**Kappang**	**4.74**	**210**		**Pn**	**22 48 08.8**	**+1.8**
KAPI					**Sn**	**22 49 05.2**	**+3.1**
BKSI	**Bulukumba**	**4.84**	**205**	P	**Pn**	**22 48 09.3**	**+0.8**
SMKI	**Samarinda**	**4.95**	**275**	P	**Pb**	**22 48 19.8**	**-2.5**
BKB	**Balikpapan**	**5.25**	**266**	P	**Pn**	**22 48 15.5**	**+1.3**
	1.9nm3µm258nm,0.6s						
BKB	**Balikpapan**	**5.25**	**266**		**Pn**	**22 48 16.6**	**+2.4**
BKB				Sn	**Sn**	**22 49 18.1**	**+3.3**
LBMI	**Labuha**	**5.37**	**87**	P	**Pn**	**22 48 19.5**	**+3.7**
	1.4nm2µm157nm,0.8s						
NLAI	**Namlea**	**5.48**	**115**	P	**Pn**	**22 48 19.8**	**+2.5**
	0.5nm2µm72nm,0.7s						
KBKI	**Kotabaru**	**6.43**	**248**	P	**Pn**	**22 48 31.1**	**+0.8**
	0.3nm815nm79nm,1.0s						
MMRI	**Maumere**	**7.69**	**179**	P	**Pn**	**22 48 49.4**	**+1.7**
	0.8nm196nm,0.7s						
MMRI	**Maumere**	**7.69**	**179**		**Pn**	**22 48 48.0**	**+0.3**
SKMP	**Bagumbayan, Su**	**7.74**	**18**	*e*P	**Pn**	**22 48 50.3**	**+1.9**
DDMP	**Don Marcelino,**	**7.81**	**27**	*e*P	**Pn**	**22 48 52.9**	**+3.6**
CTBH	**Cotabato--PC H**	**8.33**	**151**	*i*P	**Pn**	**22 49 01.1**	**+4.7**
KCP	**Kidapawan**	**8.38**	**211**	*e*P	**Pn**	**22 49 01.1**	**+3.9**
DAV	**Davao City (W)**	**8.62**	**23**	LR	LR	22 52 34.8	
	comp=Z,450nm,19.7s,baz=176,slow=41						
PAGZ	**Pagadian**	**8.77**	**8**	*e*P	**Pn**	**22 49 03.7**	**+1.2**
PLAI	**Plampang**	**9.00**	**209**	P	**Pn**	**22 49 06.6**	**+0.9**
	68nm,0.9s						
SOEI	**Soe**	**9.06**	**167**	P	Pn	22 49 12.6	+6.0
SOEI	**Soe**	**9.06**	**167**		**Pn**	**22 49 07.0**	**+0.5**
WBSI	**Waikabubak, Su**	**9.11**	**197**	P	Pn	22 49 12.4	+5.2
SIJI	**Sorong**	**9.13**	**90**	Pn	**Pn**	**22 49 03.8**	**-3.7**
	0.8nm,0.3s,baz=300,slow=20,SNR=1.5						
BUKP	**Musuan**	**9.19**	**18**	*e*P	**Pn**	**22 49 09.8**	**+1.5**
BATI	**Baumata**	**9.38**	**171**	Pn	**Pn**	**22 49 12.2**	**+1.3**
	4.8nm,0.3s,baz=178,slow=1.6,SNR=13						
BATI				LR	LR	22 53 19.6	
	comp=Z,301nm,20.9s,baz=278,slow=41						
BATI	**Baumata**	**9.38**	**171**	P	Pn	22 49 16.3	+5.4
SBUM	**Sibu**	**10.46**	**289**		**Pn**	**22 49 25.9**	**+0.3**
SBUM	**Sibu**	**10.46**	**289**	P	Pn	22 49 33.0	+7.4
KSM	**Kuching**	**12.06**	**281**	P	Pn	22 49 56.0	+8.4
TGY	**Tagaytay City**	**14.94**	**355**	LR	LR	22 56 13.2	
	comp=Z,205nm,19.0s,baz=286,slow=38						
LEM	**Lemheng**	**15.63**	**247**	LR	LR	22 57 55.8	
	comp=Z,153nm,21.4s,baz=32,slow=41						
FITZ	**Fitzroy Crossi**	**17.44**	**169**	P	**Pn**	**22 50 58.9**	**-0.2**
	0.4nm,0.3s,baz=9.0,slow=9.0,SNR=12						
FITZ	**Fitzroy Crossi**	**17.44**	**169**	P	**Pn**	**22 50 58.6**	**-0.5**
PSA00	**Pilbara Seismi**	**20.68**	**186**	P	**P**	**22 51 35.8**	**0.0**
PSA00				IAmb	IAmb	22 51 37.9	
	comp=Z,39nm,0.8s						
PDSI	**Padang**	**21.67**	**270**	P	**P**	**22 51 50.6**	**+3.9**
	comp=Z,15nm,1.0s						
IPM	**Ipoh**	**21.76**	**284**	P	**P**	**22 51 48.7**	**+1.1**
IPM				IAmb	IAmb	22 51 56.5	
	comp=Z,36nm,1.0s						
IPM	**Ipoh**	**21.76**	**284**	P	**P**	**22 51 53.0**	**+5.4**
WB0	**Warramunga Arr**	**22.27**	**148**	P	**P**	**22 51 51.2**	**-1.8**
WB0				IAmb	IAmb	22 51 59.4	
	comp=Z,48nm,1.1s						
KULM	**Kulim**	**22.32**	**286**	P	**P**	**22 51 53.8**	**+0.2**
KULM	**Kulim**	**22.32**	**286**	P	**P**	**22 51 59.0**	**+5.4**
WRAB	**Tennant Creek**	**22.38**	**148**	P	**P**	**22 51 52.5**	**-1.7**
WRAB				IAmb	IAmb	22 51 57.7	
	comp=Z,20nm,0.8s						
WRA	**Warramunga Arr**	**22.39**	**149**	P	**P**	**22 51 54.9**	**+0.7**
	comp=Z,21nm,0.8s,baz=335,slow=9.8,SNR=91						
WRA				LR	LR	23 02 30.7	
	comp=Z,63nm,19.1s,baz=345,slow=42						
WB2	**Warramunga Arr**	**22.39**	**149**	P	**P**	**22 51 53.0**	**-1.3**
WB2				IAmb	IAmb	22 51 57.7	
	comp=Z,23nm,0.8s						
WB2				PcP	PcP	22 55 40.3	-9.2
WR0	**Warramunga Arr**	**22.51**	**148**	P	**P**	**22 51 52.5**	**-3.0**
WR0				IAmb	IAmb	22 51 58.2	
	comp=Z,32nm,0.8s						
MNSI	**Mandailing Nat**	**22.62**	**274**	P	P	22 52 07.0	+10
PSI	**Prapat**	**23.49**	**279**	P	**P**	**22 52 10.4**	**+4.4**
	comp=Z,9.3nm,0.9s,baz=167,slow=0.1,SNR=6.5						
TWG	**Pinlang**	**23.59**	**358**	P	**P**	**22 52 04.2**	**-2.4**
TSI	**Tuntungan**	**23.96**	**281**	P	**P**	**22 52 09.1**	**-1.2**
	comp=Z,131nm,0.5s						
TPUB	**Ta-pu**	**24.09**	**357**	P	**P**	**22 52 10.5**	**-1.0**
YULB	**Yu-li**	**24.15**	**358**	P	**P**	**22 52 10.8**	**-1.2**
YULB				IAmb	IAmb	22 52 18.5	
	comp=Z,24nm,0.9s						
SSLB	**Suanglung**	**24.56**	**357**	P	**P**	**22 52 12.6**	**-3.1**
SSLB				IAmb	IAmb	22 52 24.1	
	comp=Z,29nm,0.9s						
GSI	**Gunungsitoli**	**24.66**	**275**	P	P	22 52 25.6	+8.8
KCSI	**Kotacane, Aceh**	**24.75**	**280**	P	P	22 52 29.1	+12
AS31	**Alice Springs**	**25.35**	**154**	P	**P**	**22 52 20.4**	**-2.6**
ASAR	**Alice Springs**	**25.36**	**154**	P	**P**	**22 52 24.0**	**+1.0**
	comp=Z,4.6nm,0.7s,baz=324,slow=6.8,SNR=37						
ASAR				LR	LR	23 03 26.3	
	comp=Z,157nm,18.9s,baz=339,slow=39						
PBKT	**Sadao Pong**	**27.15**	**311**	P	**P**	**22 52 39.4**	**+0.2**
CMAR	**Chiang Mai Arr**	**29.83**	**311**	P	**P**	**22 53 05.0**	**+1.8**
	comp=Z,2.5nm,0.7s,baz=134,slow=7.4,SNR=15						
CHTO	**Chiang Mai**	**30.05**	**312**	P	**P**	**22 53 04.1**	**-1.0**
KMI	**Kunming**	**31.96**	**325**	P	P	22 53 29.3	+7.2
KMI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,78nm,4.2s						
KMI				LR	LR		
	comp=Z,150nm,7.9s						
KMI				LR	LR		
	comp=Z,120nm,6.3s						
KMI				LR	LR		
	comp=Z,110nm,14.7s						
ENH	**Enshi**	**33.25**	**340**	P	**P**	**22 53 32.3**	**-0.8**
STKA	**Stephens Creek**	**35.88**	**151**	P	**P**	**22 53 56.8**	**+0.9**
	comp=Z,3.2nm,0.6s,baz=330,slow=7.2,SNR=6.4						
STKA	**Stephens Creek**	**35.88**	**151**	P	**P**	**22 53 54.2**	**-1.7**
XAN	**Xi'an**	**36.90**	**342**	P	**P**	**22 54 02.8**	**-1.8**
XAN				IAmb	IAmb	22 54 19.4	
	comp=Z,12nm,1.1s						
KOHI	**KOHIMA**	**37.86**	**316**	*ex*	**P**	**22 54 13.6**	**+0.6**
KSRS	**Korea Array**	**38.53**	**7**	LR	LR	23 10 40.7	
	comp=Z,48nm,19.5s,baz=170,slow=37						
SHL	**Shillong**	**39.33**	**314**	P	**P**	**22 54 24.7**	**-0.7**
SHL				IAmb	IAmb	22 54 33.0	
	comp=Z,16nm,1.0s						
MJAR	**Matsushiro Arr**	**40.13**	**20**	P	**P**	**22 54 28.9**	**-2.8**
	comp=Z,3.5nm,0.8s,baz=193,slow=9.4,SNR=11						
MJAR				LR	LR	23 08 57.3	
	comp=Z,47nm,21.9s,baz=225,slow=33						
LSA	**Lhasa**	**42.42**	**318**	P	**P**	**22 54 50.2**	**-1.0**
LSA				IAmb	IAmb	22 54 58.7	
	comp=Z,7.5nm,0.7s						
ODAN	**Odare**	**43.37**	**312**	*e*P	**P**	**22 55 00.0**	**+1.4**
	comp=Z,33nm,0.8s						
TAPN	**Taplejung**	**43.40**	**313**	*e*P	**P**	**22 55 00.5**	**+1.5**
	comp=Z,30nm,1.0s						
RAMN	**Ramite**	**44.00**	**312**	*e*P	**P**	**22 55 05.3**	**+1.5**
	comp=Z,47nm,0.8s						
JIRN	**Jiri**	**44.70**	**312**	*e*P	**P**	**22 55 10.8**	**+1.3**
	comp=Z,69nm,0.9s						
GUN	**Gumba**	**45.06**	**312**	*e*P	**P**	**22 55 13.5**	**+1.1**
	comp=Z,71nm,0.9s						
PKI	**Pulchoki**	**45.23**	**312**	*e*P	**P**	**22 55 14.4**	**+0.7**
PKIN	**Phulchoki**	**45.24**	**312**	*e*P	**P**	**22 55 14.8**	**+1.1**
**KK

KIF	**Kilpisjarvi**	**1.22**	**10**	*e*PB	**Pg**	**23 41 51.6**	**-0.7**
KIF				MSG		23 42 07.4	
	comp=Z,17nm,0.2s						
KIF				*e*SB	**Sb**	**23 42 08.8**	**-0.3**
KIF	**Kilpisjarvi**	**1.22**	**10**	Pg	**Pg**	**23 41 51.5**	**-0.7**
KIF				Sg	**Sb**	**23 42 08.8**	**-0.3**
PAJU	**Pajala**	**1.38**	**124**	P	**Pg**	**23 41 53.8**	**-1.4**
PAJU	**Pajala**	**1.38**	**124**	*e*P	**Pg**	**23 41 53.8**	**-1.4**
HEF	**Hetta**	**1.43**	**64**	Pg	**Pn**	**23 41 54.7**	**-1.4**
HEF				Lg	Lg	23 42 16.0	
HEF	**Hetta**	**1.43**	**64**	*e*P	**Pn**	**23 41 54.1**	**-2.0**
HEF				MSG		23 42 12.6	
	comp=Z,9.9nm,0.2s						
HEF	**Hetta**	**1.43**	**64**	Pg	**Pn**	**23 41 54.7**	**-1.4**
HEF				Sg	**Sn**	**23 42 16.0**	**+0.4**
ERTU	**Ertsjaerv**	**1.48**	**147**	P	**Pn**	**23 41 55.8**	**-0.9**
ERTU	**Ertsjaerv**	**1.48**	**147**	*e*P	**Pn**	**23 41 55.8**	**-0.9**
ERTU				*e*SN	**Sn**	**23 42 17.7**	**+0.9**
KTK1	**Kautokeino**	**1.65**	**42**	Pn	**Pn**	**23 41 58.4**	**-0.7**
KTK1				Sn	**Sg**	**23 42 21.9**	**0.0**
KTK1	**Kautokeino**	**1.65**	**42**	*e*P	**Pn**	**23 41 58.5**	**-0.7**
KTK1				*e*S	**Sb**	**23 42 21.3**	**-0.2**
KTK1				IAML		23 42 26.8	
	comp=Z,11nm,0.4s						
STEI	**Steigen**	**1.88**	**276**	*e*P	**Pn**	**23 42 03.1**	**+1.0**
STEI				*e*S	**Sg**	**23 42 28.8**	**-0.3**
STEI				IAML		23 42 35.2	
	comp=Z,20nm,0.3s						
TRO	**Tromso**	**1.89**	**346**	*e*P	**Pn**	**23 42 02.9**	**+0.6**
TRO				*e*S	**Sn**	**23 42 25.6**	**-1.1**
TRO				IAML		23 42 31.9	
	comp=Z,13nm,0.5s						
TOF	**Tornio**	**2.38**	**135**	*e*PB	**Pn**	**23 42 10.2**	**+1.1**
	baz=322						
TOF				MSG		23 42 39.0	
	comp=Z,12nm,0.2s						
TOF				*e*SG	**Sb**	**23 42 43.5**	**+1.1**
SGF	**Sodankyl**	**2.45**	**96**	*e*PB	**Pn**	**23 42 11.7**	**+1.6**
	baz=283						
SGF				*e*SG	**Sg**	**23 42 46.9**	**-0.7**
RNF	**Rovaniemi**	**2.57**	**115**	*e*PB	**Pn**	**23 42 13.4**	**+1.7**
RNF				*e*SG	**Sb**	**23 42 48.6**	**+0.8**
ARA0	**ARCESS Array S**	**2.60**	**46**	Pn	**Pn**	**23 42 12.9**	**+0.7**
	baz=237,slow=14						
ARA0				Sn	**Sn**	**23 42 46.4**	**+1.9**
	baz=229,slow=28						
ARA0	**ARCESS Array S**	**2.60**	**46**	Pn	**Pn**	**23 42 12.9**	**+0.7**
	baz=237,slow=14						
ARA0				Sn	**Sn**	**23 42 46.4**	**+1.9**
	baz=229,slow=28						
ARE0	**ARCESS Array S**	**2.60**	**46**	*e*S	**Sn**	**23 42 41.8**	**-2.7**
BURU	**Burvik**	**3.28**	**171**	*e*PB	**Pb**	**23 42 26.6**	**-1.1**
KU6	**Riekki**	**4.22**	**111**	*e*PG	**Pb**	**23 42 46.0**	**+2.2**
	baz=296						
APA0	**Apatity Array**	**4.88**	**86**	Pn	**Pn**	**23 42 42.3**	**-1.1**
	baz=276,slow=11						
APA0				Sn	**Sn**	**23 43 39.3**	**-1.2**
	baz=256,slow=22						
APA0				Lg	Lg	23 43 59.1	
	baz=279,slow=28						
APA0	**Apatity Array**	**4.88**	**86**	Pn	**Pn**	**23 42 42.3**	**-1.1**
	baz=276,slow=11						
APA0				Sn	**Sn**	**23 43 39.3**	**-1.2**
	baz=256,slow=22						
APA0				Sg	**Sb**	**23 43 59.1**	**+4.9**
	baz=279,slow=28						
FIA0	**FINESS Array S**	**6.87**	**156**	Sn	**Sn**	**23 44 29.4**	**-0.1**
	baz=348,slow=22						
FIA0				Lg	Lg	23 45 06.0	
	baz=339,slow=28						
FIA0	**FINESS Array S**	**6.87**	**156**	Sn	**Sn**	**23 44 29.4**	**-0.1**
	baz=348,slow=22						
FIA0				Sg	**Sg**	**23 45 06.0**	**-3.3**
	baz=339,slow=28						

UPP 25 23:41:30.9±0.1, 67°.82N×20°.20E, h1km, ML2.2, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.14**	**20**	S	Sg	23 41 35.7	+0.2
KOVU	**Salmi**	**0.41**	**358**	P	Pg	23 41 38.6	0.0
KOVU				S	Sg	23 41 44.4	+0.5
NIKU	**Nikkaluokta**	**0.45**	**277**	P	Pg	23 41 39.4	0.0
NIKU				S	Sg	23 41 45.5	+0.3
MASU	**Masugnsbyn**	**0.78**	**117**	S	Sg	23 41 56.1	+0.3
PAJU	**Pajala**	**1.38**	**124**	P	Pg	23 41 56.2	-1.1
PAJU				S	Sg	23 42 14.6	-0.5

*IDC **25** 23:46:58.1±2.3, 11°.38S×162°.99E, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.8/27, mbtmp4.1/5, ML4.5/1, MS3.2/4, Ms1 3.2/4, ms1mx2.9/29, Error ellipse: s-maj=48.0km s-min=36.8km az=105.0*

ISC 25 23:47:02.4±1.5, 11°.55S±0°.2×163°.0E±0°.2, h35km, n10, σ1§25/7, mb4.0/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.64**	**303**	Pn	**Pn**	**23 47 54.8**	**-1.6**
	40nm,0.3s,baz=356,slow=11,SNR=7.5						
HNR				Sn	**Sn**	**23 48 38.8**	**+0.7**
	92nm,0.3s,baz=14,slow=23,SNR=6.8						
HNR				LR	LR	23 48 50.8	
	comp=Z,83nm,19.2s,baz=140,slow=32						
KRVT	**Keravat (AS076**	**13.01**	**302**	LR	LR	23 54 53.6	
	comp=Z,146nm,18.8s,baz=116,slow=37						
WRA	**Warramunga Arr**	**28.84**	**249**	P	**P**	**23 52 58.4**	**+0.5**
	0.6nm,0.8s,baz=78,slow=9.1,SNR=2.9						
ASAR	**Alice Springs**	**30.24**	**242**	P	**P**	**23 53 10.8**	**+0.7**
	1.0nm,0.7s,baz=70,slow=10,SNR=8.5						
PETK	**Petropavlovsk-**	**64.47**	**356**	LR	LR	00 24 48.0	
	comp=Z,20nm,18.3s,baz=61,slow=35						
SONM	**Songino Array**	**77.44**	**325**	P	**P**	**23 58 55.7**	**+1.4**
	1.6nm,0.6s,baz=140,slow=4.8,SNR=8.4						
MKAR	**Makanchi Array**	**92.01**	**317**	P	**P**	**00 00 07.6**	**-0.2**
	0.8nm,0.6s,baz=94,slow=5.9,SNR=11						
MKAR				LR	LR	00 40 29.9	
	comp=Z,35nm,21.1s,baz=218,slow=35						
VNA3	**Neumayer Olymp**	**97.34**	**182**	P	Pdif	00 00 34.0	+2.1
VNA2	**Neumayer--Watz**	**97.55**	**183**	P	Pdif	00 00 38.2	+5.4
VNA1	**Neumayer--Stat**	**97.87**	**183**	P	**P**	**00 00 33.3**	**-0.8**

*NEIC **26** 00:05:59.2±2.0, 1°.51S±0°.08×77°.68W±0°.09, h190km±5km, Error ellipse: s-maj=14.4km s-min=10.0km az=62.0*
*IDC **26** 00:05:59.8±1.6, 1°.50S×77°.49W, h183km±16km, mb3.7/17, mb1 3.8/25, mb1mx3.6/49, mbtmp4.2/25, Error ellipse: s-maj=16.3km s-min=10.2km az=39.0*

ISC 26 00:05:58.6±0.5, 1°.59S±0°.05×77°.60W±0°.07, h181km, n192, σ1§56/195, mb4.2/51, 1C, Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RETU	**Refugio**	**0.86**	**279**		**Pn**	**00 06 26.9**	**+0.9**
VC1	**Cotopaxi 1**	**1.23**	**320**		**Pn**	**00 06 30.2**	**+1.3**
YANA	**Yana**	**1.75**	**326**		**Pn**	**00 06 34.3**	**+0.6**
CUSE	**Cuicocha Este**	**2.04**	**337**	*e*P	**Pn**	**00 06 37.8**	**+1.1**
PAC1	**Pacto, Paraso**	**2.19**	**327**	*e*P	**Pn**	**00 06 38.4**	**+0.4**
GCUF	**Volcan Galeras**	**2.81**	**5**	*i* P	**Pn**	**00 06 47.5**	**+2.0**
CPAS2	**Pasto**	**2.81**	**7**	*e*P	**Pn**	**00 06 46.9**	**+1.5**
PTLC	**Puerto Leguiza**	**3.30**	**58**	*e*P	**Pn**	**00 06 49.9**	**-1.2**
SOTA	**Rioblanco**	**3.83**	**15**	*e*P	**Pn**	**00 07 00.1**	**+2.0**
PCON	**Cinco Dias**	**4.07**	**17**	*e*P	**Pn**	**00 07 02.4**	**+1.1**
GARC	**Garzon, Huila**	**4.30**	**29**	*e*P	**Pn**	**00 07 05.9**	**+2.0**
GR1C	**Gorgona, Isla**	**4.59**	**353**	*e*P	**Pn**	**00 07 05.1**	**-2.3**
BETC	**Betania**	**4.76**	**27**	*e*P	**Pn**	**00 07 12.2**	**+2.6**
MACC	**Macarena, Meta**	**5.28**	**45**	*e*P	**Pn**	**00 07 17.6**	**+1.3**
ATAH	**Atahualpa**	**5.57**	**188**	P	**Pn**	**00 07 22.5**	**+2.1**
	31nm,0.3s,baz=24,slow=8.5,SNR=170						
ATAH				S	**Sn**	**00 08 24.4**	**-0.4**
	12nm,0.3s,baz=137,slow=22,SNR=17						
YOTC	**Yotoco, Valle**	**5.67**	**13**	*e*P	**Pn**	**00 07 19.8**	**-1.7**
ORTC	**Ortega, Tolima**	**5.95**	**23**	*e*P	**Pn**	**00 07 28.3**	**+3.3**
TOLC	**Tolima**	**6.54**	**20**	*e*P	**Pn**	**00 07 33.5**	**+0.4**
PLMC	**San Jos del P**	**6.58**	**12**	*e*P	**Pn**	**00 07 32.8**	**-0.6**
RREF	**El Recreo**	**6.83**	**19**	*e*P	**Pn**	**00 07 38.1**	**+0.9**
VILC	**Villavicencio,**	**6.88**	**35**	*e*P	**Pn**	**00 07 39.7**	**+2.4**
ROSC	**El Rosal**	**7.18**	**27**	P	**Pn**	**00 07 41.8**	**+0.3**
	3.1nm,0.3s,baz=352,slow=23,SNR=3.0						
ROSC	**El Rosal**	**7.18**	**27**	Pn	**Pn**	**00 07 42.9**	**+1.4**
NORC	**Norcasia**	**7.61**	**21**	*e*P	**Pn**	**00 07 47.0**	**+0.2**
SPBC	**San Pablo de B**	**8.01**	**26**	*e*P	**Pn**	**00 07 52.7**	**+0.5**
RUSC	**La Rusia**	**8.69**	**31**	*e*P	**Pn**	**00 08 04.7**	**+3.1**
RUSC	**La Rusia**	**8.69**	**31**		**Pn**	**00 08 02.8**	**+1.3**
UREC	**San Jos de Ur**	**9.50**	**13**	*e*P	**Pn**	**00 08 12.1**	**+0.3**
NNA	**Nana**	**10.36**	**176**	P	**Pn**	**00 08 25.3**	**+2.3**
	3.0nm,0.3s,baz=338,slow=13,SNR=6.1						
NNA				S	**Sn**	**00 10 11.3**	**-7.0**
	5.5nm,0.3s,baz=335,slow=23,SNR=3.7						
NNA	**Nana**	**10.36**	**176**	Pn	**Pn**	**00 08 23.2**	**+0.3**
OCAC	**Ocana**	**10.65**	**24**	*e*P	**Pn**	**00 08 25.4**	**-1.4**
BCIP	**Isla Barro Col**	**10.91**	**348**	Pn	**Pn**	**00 08 29.2**	**-0.9**
SDV	**Santo Domingo**	**12.51**	**34**	P	**Pn**	**00 08 50.2**	**-0.6**
	2.0nm,0.3s,baz=241,slow=11,SNR=14						
SDV	**Santo Domingo**	**12.51**	**34**		**Pn**	**00 08 51.8**	**+1.0**
JTS	**Las Juntas de**	**13.88**	**328**	P	**Pn**	**00 09 07.7**	**-0.3**
	0.4nm,0.3s,baz=13,slow=13,SNR=1.8						
JTS	**Las Juntas de**	**13.88**	**328**		**Pn**	**00 09 06.7**	**-1.3**
URIC	**Uribia, Colomb**	**14.33**	**23**		**Pn**	**00 09 12.8**	**-0.7**
ESPN	**Las Esperanzas**	**15.22**	**334**		**Pn**	**00 09 23.0**	**-1.5**
SAML	**Samuel**	**16.10**	**118**	P	**Pn**	**00 09 36.0**	**+0.8**
SAML				IAmb	IAmb	00 09 52.4	
	comp=Z,15nm,0.9s						
LPAZ	**La Paz**	**17.33**	**148**	P	**P**	**00 09 50.5**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=191,slow=5.8,SNR=3.2						
LPAZ	**La Paz**	**17.33**	**148**	P	**P**	**00 09 50.4**	**+1.2**
PCRV	**Puerto La Cruz**	**17.41**	**48**	P	**P**	**00 09 47.8**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=34,slow=1.1,SNR=1.8						
PLCV	**Puerto La Cruz**	**17.44**	**48**	P	**P**	**00 09 47.8**	**-2.0**
PTGA	**Pitinga**	**17.65**	**87**	P	**P**	**00 09 51.1**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=266,slow=23,SNR=1.2						
PTGA	**Pitinga**	**17.65**	**87**	P	**Pn**	**00 09 53.4**	**-0.3**
TGUH	**Tegucigalpa,Un**	**18.26**	**329**	P	**P**	**00 09 56.7**	**-2.1**
TOSP	**Speyside**	**21.26**	**53**	P	**P**	**00 10 29.8**	**-1.0**
SIV	**San Ignacio**	**21.68**	**132**	P	**P**	**00 10 36.7**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=309,slow=7.2,SNR=8.1						
SJG	**San Juan**	**22.59**	**29**	P	**P**	**00 10 43.8**	**-0.2**
	comp=Z,6.4nm,0.6s,baz=348,slow=20,SNR=2.4						
CBYP	**Canovanas**	**22.87**	**30**	P	**P**	**00 10 46.5**	**-0.1**
GRTK	**Grand Turk**	**23.81**	**15**	P	**P**	**00 10 51.4**	**-3.7**
TEIG	**Tepich**	**24.07**	**335**	P	**P**	**00 10 58.0**	**+0.6**
	comp=Z,4.8nm,0.3s,baz=138,slow=0.6,SNR=11						
TEIG	**Tepich**	**24.07**	**335**	P	**P**	**00 10 56.2**	**-1.2**
CMIG	**Matias Romero**	**25.20**	**318**	P	**P**	**00 11 09.1**	**+1.3**
	comp=Z,7.3nm,0.7s,baz=120,slow=6.9,SNR=16						
MDP	**Montagnes des**	**25.80**	**75**	P	**P**	**00 11 13.6**	**+0.4**
	comp=Z,6.6nm,0.8s,baz=258,slow=8.1,SNR=7.6						
GOGA	**Godfrey**	**35.25**	**351**	P	**P**	**00 12 37.3**	**+1.4**
	baz=169						
Y58A	**Scranton**	**35.36**	**357**	P	**P**	**00 12 37.0**	**+0.2**
	baz=176						
Y58A	**Scranton**	**35.36**	**357**	P	**P**	**00 12 36.7**	**-0.1**
CPCT	**Cooper Cave**	**37.41**	**351**	P	**P**	**00 12 52.5**	**-1.7**
U56A	**King**	**37.83**	**356**	P	**P**	**00 12 59.7**	**+1.9**
	baz=175						
U57A	**Blanch**	**37.86**	**358**	P	**P**	**00 12 59.1**	**+1.1**
	baz=177						
V48A	**Smith Brothers**	**38.12**	**348**	P	**P**	**00 12 59.9**	**-0.3**
V48A				IAmb	IAmb	00 13 01.0	
	comp=Z,4.0nm,0.7s						
JCT	**Junction City**	**38.27**	**328**	P	**P**	**00 13 02.8**	**+1.3**
	baz=142						
TZTN	**Tazewell**	**38.34**	**352**	P	**P**	**00 13 02.1**	**+0.1**
	baz=170						
TZTN	**Tazewell**	**38.34**	**352**	P	**P**	**00 13 00.9**	**-1.1**
TZTN				IAmb	IAmb	00 13 14.1	
	comp=Z,4.8nm,1.1s						
WVT	**Waverly**	**38.72**	**347**	P	**P**	**00 13 04.3**	**-0.9**
	baz=163						
WVT	**Waverly**	**38.72**	**347**	P	**P**	**00 13 02.6**	**-2.5**
W41B	**Gary Mavity, V**	**39.06**	**341**	P	**P**	**00 13 07.8**	**-0.2**
	baz=156						
WHAR	**Wooly Hollow**	**39.18**	**341**	P	**P**	**00 13 07.8**	**-1.2**
WHAR				IAmb	IAmb	00 13 09.5	
	comp=Z,4.1nm,0.9s						
LCAR	**Lake Charles**	**39.54**	**343**	P	**P**	**00 13 10.7**	**-1.3**
LCAR				IAmb	IAmb	00 13 12.2	
	comp=Z,4.6nm,0.7s						
TXAR	**Lajitas Array**	**39.59**	**323**	P	**P**	**00 13 13.6**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=139,slow=7.8,SNR=6.5						
TXAR				PcP	**PcP**		
	comp=Z,0.5nm,0.6s,baz=140,slow=4.4,SNR=2.8					**00 15 16.3**	**+0.1**
TX31	**Lajitas Ar. Si**	**39.59**	**323**	P	**P**	**00 13 12.8**	**+0.1**
W39A	**Magazine**	**39.60**	**339**	P	**P**	**00 13 13.0**	**+0.5**
	baz=154						
W39A	**Magazine**	**39.60**	**339**	P	**P**	**00 13 10.6**	**-1.9**
W39A				IAmb	IAmb	00 13 13.8	
	comp=Z,4.0nm,0.9s						
ABTX	**Abilene, Hawle**	**39.90**	**330**	P	**P**	**00 13 16.3**	**+1.2**
	baz=143,SNR=5.2						
ABTX	**Abilene, Hawle**	**39.90**	**330**	P	**P**	**00 13 13.3**	**-1.8**
SLBS	**Sierra La Lagu**	**40.25**	**311**	P	**P**	**00 13 16.8**	**-1.3**
U40A	**Yellville**	**40.34**	**341**	P	**P**	**00 13 18.4**	**-0.1**
	baz=156,SNR=5.3						
U40A	**Yellville**	**40.34**	**341**	P	**P**	**00 13 17.7**	**-0.9**
U40A				IAmb	IAmb	00 13 19.2	
	comp=Z,5.8nm,0.7s						
T42A	**Van Buren**	**40.41**	**343**	P	**P**	**00 13 17.6**	**-1.5**
HHAR	**Hobbs**	**40.63**	**340**	P	**P**	**00 13 17.7**	**-3.3**
HHAR				IAmb	IAmb	00 13 21.5	
	comp=Z,6.1nm,1.1s						
MGMO	**Mountain Grove**	**40.88**	**342**	P	**P**	**00 13 20.3**	**-2.7**
MGMO				IAmb	IAmb	00 13 23.4	
	comp=Z,6.4nm,0.8s						
TUL1	**Leonard**	**40.99**	**337**	P	**P**	**00 13 24.2**	**+0.3**
	baz=151						
WMOK	**Wichita Mounta**	**41.23**	**333**	P	**P**	**00 13 26.7**	**+0.7**
	baz=146,SNR=8.3						
WMOK	**Wichita Mounta**	**41.23**	**333**	P	**P**	**00 13 25.2**	**-0.8**
WMOK				IAmb	IAmb	00 13 27.5	
	comp=Z,4.8nm,1.0s						
CCM	**Cathedral Cave**	**41.41**	**344**	P	**P**	**00 13 27.4**	**+0.1**
	baz=159						
N55A	**Marion Center**	**42.19**	**358**	P	**P**	**00 13 34.6**	**+1.1**
	baz=178						
MNTX	**Cornudas Mount**	**42.31**	**324**	P	**P**	**00 13 36.1**	**+1.4**
	baz=135,SNR=5.7						
MNTX	**Cornudas Mount**	**42.31**	**324**	P	**P**	**00 13 33.0**	**-1.8**
MSTX	**Muleshoe**	**42.56**	**328**	P	**P**	**00 13 38.1**	**+1.3**
	baz=140						
MSTX	**Muleshoe**	**42.56**	**328**	P	**P**	**00 13 35.8**	**-1.0**
MSTX				IAmb	IAmb	00 13 38.5	
	comp=Z,5.8nm,0.6s						
AMTX	**Amarillo**	**42.73**	**330**	P	**P**	**00 13 39.1**	**+1.0**
	baz=142						
M56A	**Emporium**	**42.87**	**359**	P	**P**	**00 13 37.6**	**-1.4**
M54A	**Oil Creek Stat**	**42.94**	**358**	P	**P**	**00 13 37.2**	**-2.4**
KSU1	**Kansas State U**	**44.10**	**339**	P	**P**	**00 13 48.9**	**-0.1**
	baz=152						
319A	**Douglas**	**44.49**	**320**	P	**P**	**00 13 52.4**	**+0.1**
J56A	**Wolcott**	**44.67**	**1**	P	P	00 13 47.9	-5.4
J56A				IAmb	IAmb	00 14 06.2	
	comp=Z,4.9nm,0.8s						
CBKS	**Cedar Bluff**	**45.07**	**335**	P	**P**	**00 13 57.8**	**+1.1**
	baz=147						
L40A	**Anamosa**	**45.17**	**346**	P	**P**	**00 13 54.4**	**-2.9**
ANMO	**Albuquerque**	**45.29**	**326**	P	**P**	**00 14 00.4**	**+1.8**
	comp=Z,10nm,0.6s,baz=141,slow=8.9,SNR=41						
ANMO	**Albuquerque**	**45.29**	**326**	P	**P**	**00 14 00.6**	**+2.0**
	baz=136						
ANMO	**Albuquerque**	**45.29**	**326**	P	**P**	**00 13 58.6**	**0.0**
T25A	**Trinidad**	**45.86**	**330**	P	**P**	**00 14 05.2**	**+2.1**
	baz=140						
TUC	**Tucson**	**46.07**	**320**	P	**P**	**00 14 06.0**	**+1.4**
	baz=130						
TUC	**Tucson**	**46.07**	**320**	P	**P**	**00 14 04.8**	**+0.1**
I42A	**Draeger Farm,**	**46.40**	**349**	P	**P**	**00 14 04.5**	**-2.4**
SDCO	**Great Sand Dun**	**46.88**	**329**	P	**P**	**00 14 13.1**	**+2.0**
	baz=139,SNR=13						
SDCO	**Great Sand Dun**	**46.88**	**329**	P	**P**	**00 14 10.0**	**-1.1**
SDCO				IAmb	IAmb	00 14 13.9	
	comp=Z,7.5nm,0.9s						
214A	**Organ Pipe Nat**	**47.17**	**318**	P	**P**	**00 14 15.2**	**+2.1**
	baz=127						
214A	**Organ Pipe Nat**	**47.17**	**318**	P	**P**	**00 14 09.1**	**-4.1**
214A				IAmb	IAmb	00 14 15.6	
	comp=Z,5.9nm,0.7s						
W18A	**Petrified Fore**	**47.30**	**324**	P	**P**	**00 14 12.3**	**-2.0**
W18A				IAmb	IAmb	00 14 15.0	
	comp=Z,8.8nm,0.7s						
S22A	**4UR Ranch, Cre**	**47.56**	**328**	P	**P**	**00 14 18.8**	**+2.4**
	baz=138						
X16A	**Lo Mia Camp, P**	**47.86**	**322**	P	**P**	**00 14 18.3**	**-0.4**
D57A	**Chemin Vers le**	**48.51**	**3**	P	**P**	**00 14 24.1**	**+1.0**
	baz=185						
WUAZ	**Wupatki**	**48.55**	**323**	P	**P**	**00 14 25.9**	**+2.1**
	baz=131,SNR=8.2						
PV02	**Paradox Valley**	**48.92**	**327**	P	**P**	**00 14 25.7**	**-1.0**
PV02				IAmb	IAmb	00 14 29.2	
	comp=Z,5.6nm,0.7s						
PV13	**Radium Mtn., P**	**48.93**	**327**	P	**P**	**00 14 26.8**	**0.0**
PV13				IAmb	IAmb	00 14 29.3	
	comp=Z,12nm,1.0s						
PV03	**Paradox Valley**	**49.02**	**327**	P	**P**	**00 14 25.4**	**-2.0**
PV03				IAmb	IAmb	00 14 29.8	
	comp=Z,7.8nm,1.0s						
PV05	**Paradox Valley**	**49.02**	**327**	P	**P**	**00 14 27.1**	**-0.4**
PV05				IAmb	IAmb	00 14 29.6	
	comp=Z,6.5nm,0.7s						
PV12	**Saucer Basin,**	**49.04**	**327**	P	**P**	**00 14 25.6**	**-1.9**
PV12				IAmb	IAmb	00 14 30.2	
	comp=Z,7.9nm,0.9s						
PV18	**Skein Mesa, Pa**	**49.04**	**327**	P	**P**	**00 14 26.4**	**-1.2**
PV18				IAmb	IAmb	00 14 29.9	
	comp=Z,6.3nm,0.7s						
PV17	**East Wray Mesa**	**49.09**	**327**	P	**P**	**00 14 26.6**	**-1.4**
PV17				IAmb	IAmb	00 14 30.3	
	comp=Z,5.4nm,0.8s						
W13A	**Hualapai Mount**	**49.84**	**321**	P	**P**	**00 14 33.7**	**0.0**
IRM	**Iron Mountain**	**50.07**	**319**	P	**P**	**00 14 37.2**	**+2.0**
	baz=127						
MONP2	**Monument Peak**	**50.18**	**317**	P	**P**	**00 14 38.2**	**+1.9**
	baz=124						
SRU	**San Rafael Swe**	**50.54**	**327**	P	**P**	**00 14 37.4**	**-1.4**
GMRC	**Granite Mounta**	**50.79**	**319**	P	**P**	**00 14 42.8**	**+2.1**
	baz=126						
P17A	**Butcher Ranch,**	**50.92**	**327**	P	**P**	**00 14 40.3**	**-1.4**
MSU	**Marysvale**	**51.05**	**325**	P	**P**	**00 14 41.2**	**-1.6**
RDMU	**Red Mountain**	**51.09**	**329**	P	**P**	**00 14 41.0**	**-2.0**
HEC	**Hector,Ludlow**	**51.26**	**319**	P	**P**	**00 14 45.5**	**+1.4**
	baz=126						
AGMN	**Agassiz Nation**	**52.16**	**345**	P	**P**	**00 14 50.3**	**-0.2**
	baz=156						
EDW2	**Edwards Air Fo**	**52.39**	**318**	P	**P**	**00 14 54.3**	**+1.8**
	baz=124						
TCUT	**Toone Canyon**	**52.45**	**328**	P	**P**	**00 14 53.3**	**+0.3**
TPNV	**Topopah Spring**	**52.49**	**321**	P	**P**	**00 14 55.2**	**+1.9**
	baz=127,SNR=8.8						
TPNV	**Topopah Spring**	**52.49**	**321**	P	**P**	**00 14 52.9**	**-0.4**
TPNV				IAmb	IAmb	00 14 56.5	
	comp=Z,4.8nm,0.9s						
DUG	**Dugway, Tooele**	**52.56**	**326**	P	**P**	**00 14 55.7**	**+1.9**
	baz=133,SNR=7.8						
DUG	**Dugway, Tooele**	**52.56**	**326**	P	**P**	**00 14 53.6**	**-0.2**
FURC	**Furnace Creek,**	**52.58**	**320**	P	**P**	**00 14 56.1**	**+2.3**
	baz=126						
PDAR	**Pinedale Array**	**52.70**	**331**	P	**P**	**00 14 55.5**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=119,slow=7.3,SNR=1.9						
PDAR				PcP	**PcP**	**00 16 02.6**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=124,slow=4.8,SNR=2.5						
HWUT	**Hardware Ranch**	**52.88**	**328**	P	**P**	**00 14 55.7**	**-0.4**
HWUT				IAmb	IAmb	00 14 57.9	
	comp=Z,4.6nm,0.7s						
R11A	**Troy Canyon, C**	**52.95**	**323**	P	**P**	**00 14 58.7**	**+2.0**
	baz=129						
R11A	**Troy Canyon, C**	**52.95**	**323**	P	**P**	**00 14 56.7**	**0.0**
SPUT	**South Promonto**	**53.13**	**327**	P	**P**	**00 14 57.7**	**-0.3**
BGU	**Big Grassy Mou**	**53.19**	**327**	P	**P**	**00 14 56.7**	**-1.7**
CWC	**Cottonwood Cre**	**53.35**	**319**	P	**P**	**00 15 01.7**	**+2.1**
	baz=125						
VES	**Vestal, Richgr**	**53.67**	**318**	P	**P**	**00 15 04.4**	**+2.7**
	baz=124						
ELK	**Elko**	**54.30**	**325**	P	**P**	**00 15 07.7**	**+1.1**
	comp=Z,0.8nm,0.4s,baz=136,slow=6.0,SNR=5.1						
ELK	**Elko**	**54.30**	**325**	P	**P**	**00 15 05.1**	**-1.5**
NV11	**Mina Array Sit**	**54.59**	**321**	P	**P**	**00 15 08.5**	**0.0**
NVAR	**Mina Array Bea**	**54.68**	**321**	P	**P**	**00 15 10.6**	**+1.3**
	comp=Z,1.0nm,0.5s,baz=134,slow=6.6,SNR=9.5						
NVAR				PcP	**PcP**	**00 16 11.1**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=109,slow=4.9,SNR=2.3						
KVN	**Kaiserville**	**54.93**	**322**	P	**P**	**00 15 09.5**	**-1.6

mb4.5/2,MLv3.9/6
ISC 26 00:18:55.3±1.5,2°0.N±0°.2×127°.4E±0°.2,h35km,n7,σ1°84/7, mb3.8/4,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.21**	**182**	P	**Pn**	**00 19 17.1**	**+1.3**
LBMI	**Labuha**	**2.62**	**178**	P	**Pn**	**00 19 36.4**	**+1.3**
KMSI	**Cibinong**	**3.70**	**248**	P	**Pn**	**00 19 50.4**	**+0.3**
WRA	**Warramunga Arr**	**22.84**	**163**	P	**P**	**00 23 53.3**	**-2.3**
	0.9nm,0.4s,baz=339,slow=10.0,SNR=19						
ASAR	**Alice Springs**	**26.28**	**166**	P	**P**	**00 24 25.7**	**-1.9**
	1.0nm,1.0s,baz=341,slow=11,SNR=3.3						
MKAR	**Makanchi Array**	**59.36**	**326**	P	**P**	**00 28 55.1**	**+1.0**
	2.2nm,0.7s,baz=123,slow=8.5,SNR=24						
ZALV	**Zalesovo Beam**	**62.43**	**333**	P	**P**	**00 29 15.0**	**+0.2**
	0.4nm,0.4s,baz=120,slow=8.5,SNR=2.0						

ATA 26 00:23:15.4±0.8,38°.74N×43°.32E,h18km±10km,ML1.7, MW3.3
ISK 26 00:23:16.2,38°.74N×43°.30E,h7km,ML1.8/7
DDA 26 00:23:16.3,38°.75N×43°.30E,h7km±2km,ML1.9
ISC 26 00:23:16.7±0.9,38°.76N±0°.03×43°.31E±0°.03,h16km±8km, n19,σ0°81/29,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.18**	**159**	PG	**Pg**	**00 23 21.6**	**+0.3**
VANB				SG	**Sg**	**00 23 25.4**	**+1.1**
TVAN	**Van**	**0.24**	**161**	*e*P	**Pg**	**00 23 21.4**	**-0.9**
TVAN				*e*S	**Sg**	**00 23 25.9**	**-0.3**
TVAN				IAML		00 23 26.4	
	comp=Z,134nm,0.3s						
TVAN	**Van**	**0.24**	**161**	*i* P	**Pg**	**00 23 21.5**	**-0.9**
TVAN				*i* S	**Sg**	**00 23 25.5**	**-0.7**
TVAN				IAML		00 23 26.0	
	comp=N,309nm,0.2s						
TVAN				IAML		00 23 27.0	
	comp=E,240nm,0.2s						
ERCV	**ERCIS-VAN**	**0.26**	**5**	PG	**Pg**	**00 23 22.2**	**-0.4**
ERCV				SG	**Sb**	**00 23 27.6**	**+0.1**
VMUR	**Van-Muradiye**	**0.31**	**42**	*i* P	**Pg**	**00 23 23.2**	**-0.3**
VMUR				*i* S	**Sg**	**00 23 28.0**	**0.0**
VMUR				IAML		00 23 29.0	
	comp=E,237nm,0.4s						
VMUR				IAML		00 23 29.0	
	comp=N,275nm,0.2s						
AKDM	**Akdamar-Van**	**0.50**	**211**	PG	**Pg**	**00 23 26.5**	**-0.3**
CLDR	**Caldiran**	**0.61**	**51**	PG	**Pg**	**00 23 28.2**	**-0.7**
CLDR	**Caldiran**	**0.61**	**51**	*i* P	**Pg**	**00 23 27.5**	**-1.4**
CLDR				*i* S	**Sg**	**00 23 37.0**	**0.0**
MLAZ	**Malazgirt-MUS**	**0.70**	**303**	PG	**Pg**	**00 23 30.1**	**-0.4**
TUTA	**Tutak**	**0.75**	**329**	*e*P	**Pg**	**00 23 31.3**	**-0.1**
TUTA				*e*S	**Sb**	**00 23 42.8**	**+1.3**
TUTA				IAML		00 23 43.8	
	comp=Z,26nm,0.2s						
TUTA	**Tutak**	**0.75**	**329**	*i* P	**Pg**	**00 23 31.2**	**-0.2**
TUTA				*i* S	**Sb**	**00 23 42.0**	**+0.4**
TUTA				IAML		00 23 42.0	
	comp=N,27nm,0.2s						
AGRB	**Hanur-Agry**	**0.85**	**343**	PG	**Pg**	**00 23 32.9**	**-0.4**
BLIS	**Bitlis-Merkez**	**0.99**	**250**	*e*P	**Pg**	**00 23 35.2**	**-0.9**
BLIS				*e*S	**Sb**	**00 23 49.6**	**+1.1**
BLIS				IAML		00 23 53.0	
	comp=Z,10nm,0.4s						
BLIS	**Bitlis-Merkez**	**0.99**	**250**	*i* P	**Pg**	**00 23 34.4**	**-1.6**
BLIS				*i* S	**Sg**	**00 23 48.0**	**-1.1**
BLIS				IAML		00 23 50.0	
	comp=N,18nm,0.4s						
GURO	**Guroymak-BITLI**	**1.02**	**259**	PG	**Pg**	**00 23 35.8**	**-0.7**
IGDI	**IGDIR**	**1.26**	**28**	*e*P	**Pn**	**00 23 39.3**	**-0.4**
SRTM	**Siirt_Merkez**	**1.33**	**235**	*i* P	**Pn**	**00 23 40.5**	**-0.2**
MUSM	**Mu-Merkez**	**1.40**	**269**	*i* P	**Pn**	**00 23 42.4**	**+0.7**
CUKT	**Cukurca**	**1.53**	**171**	PN	**Pn**	**00 23 44.4**	**+1.0**

IDC 26 00:25:33.3±1.6,20°.36S×169°.85E,h0km,mb4.2/9, mb1 4.4/10,mb1mx4.2/31,mbtmp4.2/10,ML3.8/1,MS3.3/5, Ms1 3.3/5,ms1mx3.0/26,Error ellipse: s-maj=72.3km s-min=18.4km az=151.0
NEIC 26 00:25:38.4±1.7,20°.3S±0°.2×169°.8E±0°.1,h37km±9km, mb4.5/16,Error ellipse: s-maj=28.4km s-min=7.5km az=149.0
ISC 26 00:25:38.5±0.7,20°.3S±0°.1×169°.78E±0°.10,h35km,n41, σ0°92/33,mb4.4/15,MS3.4/3,1C-1D,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.56**	**240**	*e*Pn	**Pn**	**00 26 31.2**	**-0.1**
	54nm,0.2s						
DZM				*e*Sn	**Sn**	**00 27 12.0**	**-0.2**
	105nm,0.3s						
DZM	**Mont Dzumac**	**3.56**	**240**	Pn	**Pn**	**00 26 31.4**	**+0.1**
	8.7nm,0.3s,baz=106,slow=14,SNR=156						
DZM				LR	LR	00 27 12.3	
	comp=Z,141nm,20.9s,baz=44,slow=28						
DZM				Sn	**Sn**	**00 27 13.0**	**+0.8**
	16nm,0.3s,baz=41,slow=22,SNR=4.7						
DZM	**Mont Dzumac**	**3.56**	**240**		**Pn**	**00 26 31.2**	**-0.1**
HNR	**Honiara**	**14.41**	**317**	LR	LR	00 33 36.2	
	comp=Z,95nm,19.0s,baz=156,slow=33						
EIDS	**Eidsvold**	**17.94**	**250**		**P**	**00 29 45.8**	**+0.2**
MXZ	**Matakaoa Point**	**18.70**	**158**	P	**Pn**	**00 29 55.4**	**+1.0**
ARMA	**Armidale**	**19.20**	**235**	P	**P**	**00 29 60.0**	**+0.4**
BKZ	**Black Stump Fm**	**19.64**	**164**	P	**Pn**	**00 30 05.4**	**-0.4**
BKZ				IAmb	IAmb	00 30 06.8	
	comp=Z,21nm,1.1s						
CTA	**Charters Tower**	**22.07**	**267**	P	**P**	**00 30 32.6**	**+2.0**
	comp=Z,5.8nm,0.4s,baz=90,slow=11,SNR=15						
CTAO	**Charters Tower**	**22.07**	**267**	P	**P**	**00 30 30.5**	**-0.1**
CTAO				IAmb	IAmb	00 30 36.0	
	comp=Z,18nm,1.1s						
PMG	**Port Moresby**	**24.38**	**293**	LR	LR	00 39 16.4	
	comp=Z,124nm,19.3s,baz=234,slow=34						
STKA	**Stephens Creek**	**27.71**	**240**	P	**P**	**00 31 24.3**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=236,slow=18,SNR=3.4						
RAR	**Rarotonga**	**28.46**	**97**	LR	LR	00 40 34.2	
	comp=Z,62nm,19.1s,baz=252,slow=38						
BBOO	**Buckleboo**	**32.47**	**241**	P	**P**	**00 32 04.8**	**-1.0**
BBOO				IAmb	IAmb	00 32 13.0	
	comp=Z,11nm,1.1s						
WR0	**Warramunga Arr**	**33.04**	**264**	P	**P**	**00 32 10.3**	**-0.6**
WR0				IAmb	IAmb	00 32 11.4	
	comp=Z,5.6nm,1.1s						
WB0	**Warramunga Arr**	**33.20**	**265**	P	**P**	**00 32 10.8**	**-1.5**
WB0				IAmb	IAmb	00 32 12.9	
	comp=Z,7.6nm,1.1s						
WB2	**Warramunga Arr**	**33.22**	**264**	P	**P**	**00 32 10.3**	**-2.1**
WB2				IAmb	IAmb	00 32 24.3	
	comp=Z,3.9nm,0.9s						
WRAB	**Tennant Creek**	**33.23**	**264**	P	**P**	**00 32 10.4**	**-2.0**
WRA	**Warramunga Arr**	**33.23**	**264**	P	**P**	**00 32 11.7**	**-0.9**
	comp=Z,2.8nm,0.9s,baz=98,slow=6.4,SNR=17						
AS31	**Alice Springs**	**33.37**	**258**	P	**P**	**00 32 13.1**	**-0.6**
ASAR	**Alice Springs**	**33.37**	**258**	P	**P**	**00 32 13.6**	**-0.2**
	comp=Z,8.3nm,0.8s,baz=81,slow=9.1,SNR=66						
ASAR				LR	LR	00 45 29.5	
	comp=Z,116nm,18.7s,baz=284,slow=36						
H11S2	**WAKE ISLAND Hy**	**38.70**	**355**	T	T	01 13 56.2	
	baz=181,slow=76,SNR=7.8						
H11S3	**WAKE ISLAND Hy**	**38.71**	**355**	T	T	01 13 56.6	
	baz=181,slow=76,SNR=6.0						
H11S1	**WAKE ISLAND Hy**	**38.72**	**355**	T	T	01 13 57.4	
	baz=181,slow=76,SNR=4.8						
H11N1	**WAKE ISLAND Hy**	**39.90**	**356**	T	T	01 15 27.4	
	baz=173,slow=74						
H11N3	**WAKE ISLAND Hy**	**39.91**	**356**	T	T	01 15 28.1	
	baz=173,slow=74						
H11N2	**WAKE ISLAND Hy**	**39.92**	**356**	T	T	01 15 28.2	
	baz=173						
FITZ	**Fitzroy Crossi**	**41.65**	**265**	P	**P**	**00 33 23.5**	**-0.2**
FITZ				IAmb	IAmb	00 33 25.3	
	comp=Z,6.7nm,0.8s						
CMAR	**Chiang Mai Arr**	**79.41**	**294**	P	**P**	**00 37 43.2**	**+1.6**
	comp=Z,1.2nm,0.3s,baz=133,slow=4.0,SNR=6.5						
SYO	**Syowa Base**	**84.03**	**196**	⇑*e*P	**P**	**00 38 04.6**	**-0.4**
SYO	**Syowa Base**	**84.03**	**196**	⇓*e*sP	sP	00 38 18.2	-1.4
YBH	**Yreka Blue Hor**	**87.73**	**44**	P	**P**	**00 38 24.7**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=168,slow=9.3,SNR=3.0						
SONM	**Songino Array**	**88.40**	**323**	P	**P**	**00 38 26.5**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=134,slow=4.2,SNR=2.2						
NVAR	**Mina Array Bea**	**89.15**	**48**	P	**P**	**00 38 31.0**	**+0.2**
	comp=Z,1.9nm,0.9s,baz=226,slow=6.0,SNR=6.4						
KVN	**Kaiserville**	**89.57**	**48**	P	**P**	**00 38 33.1**	**+0.4**
KVN				IAmb	IAmb	00 38 39.9	
	comp=Z,4.0nm,1.0s						
WVOR	**Wild Horse Val**	**90.73**	**45**	P	**P**	**00 38 38.6**	**+0.6**
PGC	**Sidney**	**90.75**	**38**	P	**P**	**00 38 37.6**	**0.0**
ILAR	**Eielson Array**	**91.12**	**17**	P	**P**	**00 38 39.2**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=239,slow=5.1,SNR=2.3						
X16A	**Lo Mia Camp, P**	**92.49**	**54**	P	**P**	**00 38 45.9**	**-0.5**
YKA	**Yellowknife Ar**	**101.41**	**27**	P	**Pdif**	**00 39 25.1**	**-0.7**
	comp=Z,0.2nm,0.8s,baz=258,slow=4.6,SNR=4.1						
GERES	**GERESS Array B**	**145.69**	**332**	PKPbc	**PKPab**	**00 45 13.8**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=56,slow=3.7,SNR=7.0						

NNC 26 00:43:06.8±1.7,36°.70N×69°.49E,h0km,mb4.7,mpv4.5, Error ellipse: s-maj=17.0km s-min=8.4km az=158.0
IDC 26 00:43:07.5±2.9,36°.09N×69°.81E,h125km±26km,mb3.6/12, mb1 3.7/17,mb1mx3.4/44,mbtmp4.0/17,Error ellipse: s-maj=21.7km s-min=16.3km az=26.0
MOS 26 00:43:08.7±1.1,36°.24N×70°.00E,h142km,mb4.0/6,Error ellipse: s-maj=12.8km s-min=6.1km az=79.8
NEIC 26 00:43:08.8±2.5,36°.28N±0°.05×69°.77E±0°.08,h151km±3km, mb4.0/13,Error ellipse: s-maj=9.5km s-min=7.1km az=92.0
ISC 26 00:43:09.3±0.4,36°.29N±0°.04×69°.75E±0°.04,h150km,n109, σ2°.24/129,mb3.7/20,15C-6D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.84**	**198**	PN	**Pn**	**00 43 43.2**	**+0.4**
KBL						00 44 08.8	
KBL	**Kabul**	**1.84**	**198**		**Pn**	**00 43 43.2**	**+0.4**
KBL				Sn	**Sn**	**00 44 08.8**	**+0.3**
CHGR	**Chuyangaron**	**2.41**	**349**		**Pn**	**00 43 49.7**	**+0.4**
CHGR				Sn	**Sn**	**00 44 18.4**	**-1.8**
GAR	**Garm**	**2.74**	**9**		**Pn**	**00 43 53.7**	**+0.3**
GAR				Sn	**Sn**	**00 44 24.5**	**-3.1**
CEP	**Cherat**	**3.04**	**144**	P	**Pn**	**00 44 00.5**	**+3.3**
CEP				S	**Sn**	**00 44 36.0**	**+1.7**
BTK	**Batken**	**3.85**	**12**	PN	**Pn**	**00 44 08.2**	**+0.6**
BTK						00 44 53.5	
BTK	**Batken**	**3.85**	**12**		**Pn**	**00 44 08.2**	**+0.6**
BTK				Sn	**Sn**	**00 44 53.5**	**+0.5**
THW	**Thamme Wali**	**3.86**	**154**	P	**Pn**	**00 44 07.2**	**-0.5**
NIL	**Nilore**	**3.90**	**131**		**Pn**	**00 44 08.1**	**-0.2**
NIL				Sn	**Sn**	**00 44 51.1**	**-3.0**
CHCP	**Chirah Chowk**	**3.90**	**131**	P	**Pn**	**00 44 08.0**	**-0.3**
SARP	**Sargodha**	**4.99**	**150**	P	**Pn**	**00 44 21.0**	**-1.6**
TAS	**Tashkent**	**5.04**	**356**	PN	**Pn**	**00 44 24.0**	**+0.8**
TAS	**Tashkent**	**5.04**	**356**	Pn	**Pn**	**00 44 23.9**	**+0.8**
THN	**Thein Dam**	**6.26**	**126**	*e*P	**Pn**	**00 44 40.0**	**+0.6**
THN				*e*S	**Sn**	**00 45 46.0**	**-3.9**
HRA	**Herat**	**6.42**	**255**	Pn	**Pn**	**00 44 40.5**	**-1.9**
AML	**Almayashu**	**6.58**	**27**	P	**Pn**	**00 44 43.8**	**-0.3**
	SNR=138						
KK31	**Karatay Array**	**6.83**	**5**	⇑P	**Pn**	**00 44 43.2**	**-3.8**
	23nm,0.5s,baz=195,slow=17,SNR=305						
KK31				⇑S	**Sn**	**00 45 58.3**	**-5.2**
	20nm,0.6s,baz=153,slow=31,SNR=4.4						
KK31	**Karatay Array**	**6.83**	**5**	PN	**Pn**	**00 44 47.3**	**+0.3**
KK31	**Karatay Array**	**6.83**	**5**		**Pn**	**00 44 47.2**	**+0.3**
UCH	**Uchtor**	**6.98**	**30**	P	**Pn**	**00 44 49.1**	**-0.4**
	SNR=206						
EKS2	**Erkin-Say**	**7.08**	**25**	P	**Pn**	**00 44 50.4**	**-0.1**
	SNR=25						
KZA	**Kyzart**	**7.18**	**35**	P	**Pn**	**00 44 51.7**	**-0.4**
	SNR=11						
AAK	**Ala-Archa**	**7.32**	**29**	P	**Pn**	**00 44 53.7**	**+0.1**
	5.1nm,0.3s,baz=193,slow=6.9,SNR=103						
AAK				S	**Sn**	**00 46 13.5**	**-2.1**
	4.3nm,0.3s,baz=118,slow=19,SNR=11						
AAK	**Ala-Archa**	**7.32**	**29**	P	**Pn**	**00 44 53.6**	**-0.1**
	SNR=34						
AAK	**Ala-Archa**	**7.32**	**29**	*de*PN	**Pn**	**00 44 53.6**	**-0.1**
AAK				pmax	pmax		
	comp=Z,27nm,0.7s						
AAK	**Ala-Archa**	**7.32**	**29**		**Pn**	**00 44 53.6**	**-0.1**
AAK				Sn	**Sn**	**00 46 14.8**	**-0.8**
BHK	**Bhakra**	**7.38**	**129**	*ex*	**Sn**	**00 46 16.0**	**-0.8**
KBK	**Karagaybulak**	**7.52**	**31**	P	**Pn**	**00 44 56.5**	**+0.2**
	SNR=20						
FRU1	**Bishkek**	**7.52**	**29**	PN	**Pn**	**00 44 57.9**	**+1.7**
FRU1	**Bishkek**	**7.52**	**29**		**Pn**	**00 44 57.9**	**+1.7**
CHMS	**Chumysh**	**7.73**	**28**	P	**Pn**	**00 44 59.1**	**+0.1**
	SNR=64						
ULHL	**Ulahol**	**7.79**	**38**	P	**Pn**	**00 44 59.9**	**-0.1**
	SNR=16						
BOOM	**Boomskoye usch**	**7.83**	**36**	PN	**Pn**	**00 45 00.0**	**-0.4**
BOOM	**Boomskoye usch**	**7.83**	**36**		**Pn**	**00 44 60.0**	**-0.4**
USP	**Ospenovka**	**7.87**	**26**	P	**Pn**	**00 45 00.9**	**+0.1**
	SNR=13						
TKM2	**Tokmak 2**	**8.01**	**32**	P	**Pn**	**00 45 03.2**	**+0.3**
	SNR=10						
SMLA	**Simla**	**8.04**	**128**	*e*P	**Pn**	**00 45 01.9**	**-1.3**
SMLA				*e*S	**Sn**	**00 46 25.4**	**-7.4**
SMLA				IAML		00 46 27.3	
SMLA				IAML		00 46 29.9	
	comp=E,112nm,0.1s						
SMLA				IAML		00 46 30.2	
	comp=N,104nm,0.3s						
KDJ	**Kajisay**	**8.20**	**42**	PN	**Pn**	**00 45 04.6**	**-0.8**
KDJ	**Kajisay**	**8.20**	**42**		**Pn**	**00 45 04.6**	**-0.8**
TARG	**Taragay, Kyrgy**	**8.29**	**47**		**Pn**	**00 45 05.6**	**-1.3**
MDOK	**Medeo**	**8.87**	**37**	⇑P	**Pn**	**00 45 14.4**	**+0.1**
	comp=N,17nm,0.7s						
MDOK				⇑S	**Sn**	**00 46 53.4**	**+0.6**
	comp=N,11nm,0.8s						
GEYT	**Alibeck**	**9.43**	**283**	P	**Pn**	**00 45 21.8**	**0.0**
	comp=N,1.1nm,0.3s,baz=97,slow=11,SNR=24						
GEYT				S	**Sn**	**00 47 00.1**	**-6.2**
	comp=N,0.2nm,0.3s,baz=76,slow=20,SNR=1.6						
GYA0B	**ALIBECK ARRAY**	**9.43**	**283**	⇑P	**Pn**	**00 45 21.2**	**-0.5**
GYA0B				⇑S	**Sn**	**00 47 04.1**	**-2.2**
GYA0B	**ALIBECK ARRAY**	**9.43**	**283**		**Pn**	**00 45 21.8**	**0.0**
NDI	**New Delhi**	**9.86**	**138**	*e*S	Sn	00 47 05.0	-12
PDGK	**Podgornoye**	**10.27**	**44**	⇑P	**Pn**	**00 45 31.2**	**-1.6**
	comp=N,4.3nm,0.8s						
PDGK				⇓S	**Sn**	**00 47 29.2**	**+2.8**
	comp=N,8.8nm,0.9s						
OTUK	**Ortayu**	**12.10**	**8**	⇓P	**Pn**	**00 45 55.9**	**-0.7**
	comp=N,16nm,0.9s						
OTUK				⇓S	**Sn**	**00 48 09.4**	**-0.9**
	comp=N,27nm,1.0s						
MK31	**Makanchi Array**	**14.06**	**38**	P	**Pn**	**00 46 21.1**	**-0.7**
MK31	**Makanchi Array**	**14.06**	**38**		**Pn**	**00 46 21.1**	**-0.7**
MKAR	**Makanchi Array**	**14.06**	**38**	P	**Pn**	**00 46 21.3**	**-0.5**
	comp=N,0.1nm,0.3s,baz=225,slow=12,SNR=12						
DANN	**Dangsing**	**14.24**	**120**	*e*P	**Pn**	**00 46 21.4**	**-3.1**
	comp=N,7.1nm,0.2s						
AB31	**Akbulak array**	**14.80**	**334**	⇑P	**Pn**	**00 46 31.1**	**0.0**
	comp=N,3.4nm,0.2s,baz=146,slow=12,SNR=53						
AB31				⇑S	**Sn**	**00 49 10.5**	**-4.7**
	comp=N,7.1nm,0.5s,baz=156,slow=24,SNR=11						
GKN	**Gorkha**	**15.07**	**119**	*e*P	**Pn**	**00 46 32.3**	**-2.4**
	comp=N,16nm,0.2s						
WMQ	**Urumqi**	**15.65**	**56**	*e*P	**P**	**00 46 42.0**	**-0.6**
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,53nm,3.6s						
WMQ				smax	smax		
	comp=N,16nm,0.5s						
WMQ				smax	smax		
	comp=E,12nm,0.7s						
KKN	**Kakani**	**15.65**	**118**	*e*P	**Pn**	**00 46 38.8**	**-3.1**
	comp=E,39nm,0.8s						
KURBB	**Kurchatov Arra**	**15.66**	**21**	P	**Pn**	**00 46 40.4**	**-1.2**
	comp=E,0.1nm,0.3s,baz=210,slow=11,SNR=15						
KURK	**Kurchatov**	**15.77**	**21**	*ce*P	**Pn**	**00 46 42.7**	**-0.3**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KURK	**Kurchatov**	**15.77**	**21**	P	**Pn**	**00 46 41.8**	**-1.1**
KURK				IAmb	IAmb	00 46 49.0	
	comp=Z,6.9nm,0.8s						
PKIN	**Phulchoki**	**15.86**	**119**	*e*P	**Pn**	**00 46 41.7**	**-2.9**
	comp=Z,17nm,0.5s						
PKI	**Pulchoki**	**15.87**	**119**	*e*P	**Pn**	**00 46 42.6**	**-2.2**
GUN	**Gumba**	**16.01**	**117**	*e*P	**P**	**00 46 46.1**	**-0.9**
	comp=Z,59nm,0.9s						
UOSS	**Minazif**	**16.22**	**230**		**P**	**00 46 49.1**	**0.0**
JIRN	**Jiri**	**16.38**	**117**	*e*P	**Pn**	**00 46 49.6**	**-1.4**
	comp=Z,55nm,0.6s						
AKTO	**Aktyubinsk**	**16.48**	**333**	P	**Pn**	**00 46 53.5**	**+1.8**
	comp=Z,0.7nm,0.3s,baz=145,slow=13,SNR=22						
AKTO				S	**S**	**00 49 45.5**	**-9.1**
	comp=Z,0.0nm,0.3s,baz=156,slow=21,SNR=3.2						
AKTO	**Aktyubinsk**	**16.48**	**333**	⇓P	**Pn**	**00 46 53.4**	**+1.7**
	comp=Z,7.7nm,0.8s						
AKTO				⇑S	**S**	**00 49 52.0**	**-2.6**
	comp=Z,10nm,0.8s						
BVAR	**Borovoye Array**	**16.74**	**1**	P	**Pn**	**00 46 55.3**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=181,slow=8.9,SNR=18						
BVAR				S	**S**	**00 49 56.4**	**-4.2**
	comp=Z,0.2nm,0.3s,baz=169,slow=24,SNR=4.0						
BRVK	**Borovoye**	**16.77**	**1**	*ce*P	**P**	**00 46 54.6**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	**Borovoye**	**16.77**	**1**	P	**Pn**	**00 46 56.0**	**+0.9**
BRVK				IAmb	IAmb	00 46 59.3	
	comp=Z,11nm,1.5s						
BRVK					**S**	**00 49 59.2**	**-2.1**
RAMN	**Ramite**	**17.09**	**118**	*e*P	**P**	**00 46 57.5**	**-1.3**
	comp=Z,28nm,0.8s						
TAPN	**Taplejung**	**17.66**	**115**	*e*P	**Pn**	**00 47 06.9**	**+0.6**
	comp=Z,56nm,0.8s						
ODAN	**Odare**	**17.71**	**117**	*e*P	**Pn**	**00 47 05.9**	**-1.0**
	comp=Z,17nm,0.6s						
LSA	**Lhasa**	**19.10**	**104**	P	**P**	**00 47 19.1**	**-1.9**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LSA	**Lhasa**	**19.10**	**104**	P	**P**	**00 47 19.1**	**-1.9**
LSA				IAmb	IAmb	00 47 27.5	
	comp=Z,5.0nm,0.6s						
TBLG	**Delisi**	**20.15**	**293**	P	**P**	**00 47 31.3**	**-0.4**
TBLG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TBLG	**Delisi**	**20.15**	**293**	P	**P**	**00 47 31.3**	**-0.4**
TBLG				IAmb	IAmb	00 47 32.8	
	comp=Z,3.4nm,0.6s						
ZAA0	**Zalesovo Array**	**20.53**	**26**	P	**P**	**00 47 36.8**	**+1.1**
ZALV	**Zalesovo Beam**	**20.53**	**26**	P	Pn	00 47 37.6	-2.0
	comp=Z,25nm,0.6s,baz=221,slow=11,SNR=53						
SVE	**Sverdlovsk**	**21.44**	**346**	*e*P	**P**	**00 47 48.7**	**+3.4**
ARU	**Arti**	**21.52**	**343**	P	**P**	**00 47 48.5**	**+2.4**
	comp=Z,1.8nm,0.7s,baz=173,slow=5.9,SNR=9.8						
ARU	**Arti**	**21.52**	**343**	*d* P	**P**	**00 47 49.0**	**+2.9**
ARU						00 48 34.2	
ARU				S	**S**	**00 51 42.5**	**+7.4**
ARU				SS		00 52 27.7	
ARU				pmax	pmax		
	comp=Z,11nm,0.9s						
ARU	**Arti**	**21.52**	**343**	P	**P**	**00 47 45.9**	**-0.3**
ARU				IAmb	IAmb	00 47 52.2	
	comp=Z,8.8nm,0.9s						
SHL	**Shillong**	**21.74**	**113**	P	**P**	**00 47 48.0**	**-1.1**
SHL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SHL	**Shillong**	**21.74**	**113**	P	**P**	**00 47 48.0**	**-1.1**
KBZ	**Khabaz**	**21.80**	**298**	*i* P	**P**	**00 47 53.8**	**+4.5**
KIV	**Kislovodsk**	**22.00**	**299**	P	**P**	**00 47 50.2**	**-1.2**
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV	**Kislovodsk**	**22.00**	**299**	P	**P**	**00 47 50.1**	**-1.2**
GTA	**Gaotai**	**23.89**	**73**	*e*P	**P**	**00 48 12.5**	**+3.3**
GTA				pP	pP	00 48 42.3	+2.5
GTA				sP	sP	00 48 58.5	-0.4
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
RAYN	**Ar Rayn**	**24.49**	**245**	P	**P**	**00 48 15.6**	**+0.9**
RAYN				pmax	pmax		
	comp=Z,2.0nm,1.2s						
RAYN	**Ar Rayn**	**24.49**	**245**	P	**P**	**00 48 15.6**	**+0.9**
KIRV	**Kirov**	**26.00**	**335**	P	**P**	**00 48 31.1**	**+3.3**
	comp=Z,5.1nm,0.6s,baz=180,slow=2.0,SNR=2.4						
GAZ	**Gaziantep**	**26.03**	**282**		**P**	**00 48 26.0**	**-2.5**
GAZ				IAmb	IAmb	00 48 29.7	
	comp=Z,7.0nm,1.5s						
LZH	**Lanzhou**	**27.44**	**80**	⇑P	**P**	**00 48 41.0**	**-0.2**
LZH				pP	pP	00 49 12.8	-1.2
LZH				sP	sP	00 49 30.5	-1.5
LZH				PP	**PnPn**	**00 49 36.3**	**+1.6**
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,52nm,4.9s						
SONM	**Songino Array**	**29.28**	**55**	P	**P**	**00 48 59.2**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=248,slow=7.6,SNR=2.2						
CMAR	**Chiang Mai Arr**	**31.25**	**117**	P	**P**	**00 49 15.0**	**+0.1**
	comp=Z,1.6nm,0.3s,baz=293,slow=7.4,SNR=6.2						
CMAR	**Chiang Mai Arr**	**31.25**	**117**	P	**P**	**00 49 15.0**	**+0.1**
HHC	**Hu-ho-hao-te**	**32.78**	**69**	*e*P	**P**	**00 49 28.0**	**-0.2**

	0.7nm,0.5s						
MOA	**Molln**	**3.94**	**198**	*i* Pn	**Pn**	**00 44 31.3**	**0.0**
	0.2nm,0.2s						
MOA				*i* Sg	**Sb**	**00 45 31.2**	**+3.1**
	0.3nm,0.2s						
ARSA	**Arzberg**	**4.38**	**185**	*i* Sg	**Sb**	**00 45 40.7**	**-0.1**
	0.6nm,0.3s						

ATH 26 00:44:20.0, 40°28N×24°83E, h23km±6km, ML1.3/4, Error ellipse: s-maj=6.5km s-min=1.2km az=73.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THAS	**Thassos island**	**0.34**	**346**	P	Pb	00 44 27.2	-0.3
THAS				S	Sb	00 44 32.0	-0.7
THAS				AML	AML	00 44 33.1	
	comp=E,128μm,0.2s						
THAS				AML	AML	00 44 33.2	
	comp=N,69μm,0.1s						
LIA	**Limnos Island**	**0.46**	**144**	P	Pb	00 44 29.7	+0.2
LIA				S	Sb	00 44 36.2	+0.2
SMTH	**Samothraki Isl**	**0.57**	**70**	P	Pb	00 44 31.1	-0.2
OUR	**Ouranopolis**	**0.65**	**275**	P	Pn	00 44 33.4	-0.4
OUR				S	Sb	00 44 42.3	+1.0
OUR				AML	AML	00 44 45.0	
	comp=E,259μm,0.3s						
OUR				AML	AML	00 44 45.1	
	comp=N,183μm,0.3s						
KAVA	**Kavala**	**0.76**	**342**	P	Pn	00 44 35.4	0.0
KAVA				S	Sn	00 44 45.9	-0.3
KAVA				AML	AML	00 44 47.7	
	comp=E,47μm,0.2s						
KAVA				AML	AML	00 44 48.2	
	comp=N,45μm,0.2s						
PAIG	**Paliouri**	**0.95**	**249**	P	Pn	00 44 38.8	+0.9
PAIG				S	Sn	00 44 51.2	+0.4
PLG	**Polygyros**	**1.06**	**276**	P	Pb	00 44 40.4	+0.6
PLG				S	Sn	00 44 54.2	+0.6
PLG				AML	AML	00 44 55.0	
	comp=E,21μm,0.5s						
PLG				AML	AML	00 44 57.0	
	comp=N,24μm,0.3s						
SRS	**Serrai**	**1.26**	**312**	P	Pb	00 44 43.5	+0.3
SRS				S	Sb	00 45 01.9	+2.9

ISK 26 00:44:30.9, 40°37N×26°16E, h7km, ML1.6/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GELI	**Tayfur-Gelibol**	**0.24**	**83**	PG	Pg	00 44 36.4	+0.8
GELI				SG	Sg	00 44 40.0	+1.2
GADA	**Gvkgeada**	**0.27**	**229**	PG	Pg	00 44 37.0	+0.8
GADA				SG	Sg	00 44 41.2	+1.4
ENEZ	**Enez**	**0.37**	**359**	PG	Pg	00 44 38.6	+0.6
ERIK	**Erikli-Kesan**	**0.40**	**41**	PG	Pg	00 44 39.1	+0.4
LPK	**Lapseki**	**0.46**	**90**	PG	Pb	00 44 40.5	-0.7
BOZC	**Bozcaada**	**0.54**	**189**	PG	Pg	00 44 41.5	+0.3
RKY	**Sarkoy-Tekirda**	**0.83**	**67**	PG	Pb	00 44 47.7	-0.1
UKOP	**Uzunkopru-Edir**	**0.84**	**25**	PG	Pb	00 44 47.7	-0.1
RDO	**Rodhopi**	**0.91**	**329**	PG	Pb	00 44 48.7	-0.3
MRMT	**Marmara Adasi**	**1.12**	**78**	PN	Pg	00 44 51.9	-0.4
SIGR	**SIGRI**	**1.18**	**192**	PN	Pg	00 44 53.1	-0.5
EDC	**Edincik**	**1.30**	**90**	PN	Pg	00 44 56.0	+0.2
DKL	**Dikili**	**1.42**	**156**	PN	Pb	00 44 57.4	-0.2
BALB	**Balikesir**	**1.51**	**118**	PN	Pb	00 44 58.8	-0.4
EDRB	**Edirne**	**1.54**	**16**	PN	Pn	00 44 59.0	+0.2

*NIED **26** 01:09:00.26°00N×125°40E, h11km, Mw4.2 Best double couple: M₀2.31000×10¹⁵ NP1:φs18.00000°, δ88.00000°, λ155.00000°. NP2:φs109.00000°, δ65.00000°, λ2.00000°.*
*IDC **26** 01:09:35.6±0.9, 25°82N×125°33E, h0km, mb3.6/8, mb1 3.7/9, mb1mx3.6/38, mbtmp3.6/9, ML2.9/2, MS3.5/16, Ms1 3.5/16, ms1mx3.3/32, Error ellipse: s-maj=29.8km s-min=18.5km az=72.0*
*JMA **26** 01:09:36.6±0.3, 26°05N×125°45E, h13km, M3.7*
ISC 26 01:09:36.3±2.4, 25°93N±0°06×125°44E±0°07, h1km±16km, n30, σ1°25/25, mb3.7/8, MS3.4/14, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKM	**Ikemajima**	**1.01**	**190**	P	**Pn**	**01 09 57.8**	**+0.2**
JIKM				*e*S	**Sn**	**01 10 12.2**	**-0.3**
JIRB	**Irabujima**	**1.12**	**192**	P	**Pn**	**01 09 59.2**	**+0.1**
JIRB				S	**Sn**	**01 10 15.1**	**0.0**
JOGS	**Gusukube**	**1.16**	**181**	*e*S	**Sn**	**01 10 17.5**	**+1.3**
JMJ2	**Miyako jima3**	**1.19**	**185**	P	**Pn**	**01 10 00.1**	**+0.1**
JMJ2				S	**Sn**	**01 10 17.5**	**+0.8**
JKE	**Kume jima 2**	**1.27**	**72**	P	**Pn**	**01 09 59.0**	**-2.2**
JISG	**Ishigakijimahi**	**1.68**	**218**	*e*S	**Sg**	**01 10 30.1**	**-0.2**
JAGN	**Aguni-jima**	**1.75**	**67**	P	**Pn**	**01 10 07.0**	**-0.7**
JAGN				*e*S	**Sn**	**01 10 29.0**	**-1.6**
JIJ	**Ishigaki jima**	**1.95**	**217**	P	**Pb**	**01 10 11.7**	**-0.9**
JYNG	**Yonagunijimaku**	**2.70**	**237**	P	**Pb**	**01 10 24.7**	**-0.6**
JOW	**Kunigami**	**2.70**	**70**	Pn	**Pn**	**01 10 21.7**	**+0.9**
	1.5nm,0.3s,baz=171,slow=13,SNR=7.0						
JOW					**Sb**	**01 11 01.1**	**+2.2**
	1.9nm,0.3s,baz=66,slow=29,SNR=2.1						
JOW	**Kunigami**	**2.70**	**70**	P	**Pn**	**01 10 21.9**	**+1.1**
KSRS	**Korea Array**	**11.68**	**10**	Pn	**Pn**	**01 12 25.4**	**+1.3**
	0.4nm,0.3s,baz=195,slow=14,SNR=2.3						
KSRS				LR	LR	01 17 05.8	
	comp=Z,262nm,18.4s,baz=194,slow=38						
MJAR	**Matsushiro Arr**	**15.19**	**43**	LR	LR	01 19 15.8	
	comp=Z,155nm,20.3s,baz=220,slow=38						
ASAJ	**Asahikawa**	**22.87**	**33**	LR	LR	01 24 05.1	
	comp=Z,106nm,18.3s,baz=194,slow=38						
KLR	**Kul'dur**	**23.78**	**10**	P	**P**	**01 14 52.7**	**+2.5**
	1.7nm,0.8s,baz=212,slow=5.5,SNR=3.7						
KLR				LR	LR	01 23 58.3	
	comp=Z,72nm,18.4s,baz=41,slow=36						
CMAR	**Chiang Mai Arr**	**25.60**	**259**	LR	LR	01 25 14.2	
	comp=Z,46nm,19.7s,baz=75,slow=37						
SONM	**Songino Array**	**26.51**	**330**	P	**P**	**01 15 16.2**	**+0.8**
	1.9nm,1.1s,baz=148,slow=8.5,SNR=3.3						
SONM				LR	LR	01 27 12.4	
	comp=Z,202nm,19.4s,baz=96,slow=40						
PETK	**Petropavlovsk-**	**36.29**	**33**	LR	LR	01 31 34.4	
	comp=Z,51nm,18.8s,baz=244,slow=36						
MKAR	**Makanchi Array**	**39.88**	**313**	P	**P**	**01 17 10.9**	**-0.8**
	0.5nm,0.9s,baz=97,slow=10,SNR=3.8						
ZALV	**Zalesovo Beam**	**40.99**	**324**	P	**P**	**01 17 20.1**	**-0.5**
	0.4nm,0.3s,baz=125,slow=9.0,SNR=1.4						
ZALV				LR	LR	01 35 36.1	
	comp=Z,66nm,21.4s,baz=130,slow=38						
KURBB	**Kurchatov Arra**	**43.36**	**317**	P	**P**	**01 17 38.9**	**-1.1**
	0.8nm,0.9s,baz=106,slow=7.4,SNR=4.7						
WRA	**Warramunga Arr**	**46.41**	**168**	P	**P**	**01 18 02.9**	**-1.6**
	0.7nm,0.8s,baz=350,slow=8.6,SNR=6.0						
ASAR	**Alice Springs**	**49.98**	**170**	P	**P**	**01 18 31.7**	**-0.5**
	0.5nm,0.4s,baz=353,slow=7.2,SNR=9.6						
ASAR				LR	LR	01 40 28.5	
	comp=Z,21nm,18.4s,baz=336,slow=37						
GEYT	**Alibeck**	**57.27**	**300**	LR	LR	01 45 32.4	
	comp=Z,34nm,21.9s,baz=50,slow=38						
ARCES	**ARCESS Array B**	**69.36**	**338**	LR	LR	01 58 04.3	
	comp=Z,43nm,19.0s,baz=180,slow=42						
FINES	**FINESS Array B**	**71.88**	**330**	LR	LR	01 56 16.9	
	comp=Z,74nm,19.2s,baz=73,slow=39						
AKASG	**Malin Array Be**	**74.12**	**319**	LR	LR	01 56 30.8	
	comp=Z,38nm,18.2s,baz=65,slow=38						
BRTR	**Keskin Array B**	**75.23**	**307**	LR	LR	01 59 03.7	
	comp=Z,19nm,21.8s,baz=44,slow=40						
NOA	**NORSAR Array B**	**78.46**	**333**	LR	LR	02 00 05.6	
	comp=Z,68nm,18.8s,baz=45,slow=39						
YKA	**Yellowknife Ar**	**79.84**	**24**	P	**P**	**01 21 45.4**	**-0.8**
	0.3nm,0.8s,baz=298,slow=6.5,SNR=4.2						
YKA				LR	LR	02 00 45.3	
	comp=Z,25nm,18.2s,baz=0.0,slow=38						

IDC 26 01:16:26.6±2.4, 32°69N×141°78E, h0km, mb3.6/2, mb1 3.8/4, mb1mx3.4/31, mbtmp3.7/4, ML3.0/2, Error ellipse: s-maj=55.4km s-min=21.4km az=54.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**1.73**	**285**	Pn	Pn	01 16 58.2	+0.2
	16nm,0.3s,baz=108,slow=20,SNR=8.7						
JHJ					Sn	01 17 21.5	-0.1
	13nm,0.3s,baz=260,slow=21,SNR=2.0						

MJAR	**Matsushiro Arr**	**4.84**	**324**	Pn	Pn	01 17 41.1	+0.3
	0.1nm,0.3s,baz=149,slow=11,SNR=4.2						
JCJ	**Chichijima**	**5.58**	**176**	Pn	Pn	01 17 51.3	+0.4
	2.0nm,0.3s,baz=345,slow=20,SNR=2.3						
JCJ					Sn	01 18 49.9	-5.9
	3.3nm,0.3s,baz=269,slow=21,SNR=1.9						
MKAR	**Makanchi Array**	**46.79**	**306**	P	P	01 24 56.9	-0.9
	0.3nm,0.5s,baz=99,slow=6.6,SNR=4.1						
WRA	**Warramunga Arr**	**52.81**	**189**	P	P	01 25 43.7	-0.1
	0.7nm,0.5s,baz=5.0,slow=7.6,SNR=18						

MAN 26 01:49:55.0, 5°54N×126°56E, h8km, mb4.5, ML3.4, MS3.2, Mindanao

*INET **26** 02:29:03.6, 12°77N×88°99W, h8km, ML3.9*
*SNET **26** 02:29:05.9±0.9, 12°91N×88°93W, h49km±14km, MD3.5, ML4.0, MW3.8*
*UCR **26** 02:29:06.1±1.0, 12°90N×88°93W, h46km±17km, MD3.9, ML4.0, MW3.8(SSS)*
*IDC **26** 02:29:08.3±2.3, 12°94N×88°68W, h75km±22km, mb3.2/4, mb1 3.6/7, mb1mx3.3/32, mbtmp3.6/7, MS2.9/4, Ms1 2.9/4, ms1mx2.7/15, Error ellipse: s-maj=53.2km s-min=13.9km az=46.0*
*GCG **26** 02:29:12.1±0.3, 12°84N×89°37W, h43km±999km, MD4.2*
ISC 26 02:29:06.2±1.3, 12°89N±0°09×88°90W±0°04, h50km±11km, n46, σ0°96/70, mb3.4/4, 2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALJI	**Alcalda de J**	**0.54**	**36**	*i* P	**Pn**	**02 29 17.7**	**-0.2**
ALJI				IAML		02 29 27.0	
	comp=Z,4μm,0.1s						
ALJI				*e*S	**Sn**	**02 29 27.4**	**+1.1**
ALJI	**Alcalda de J**	**0.54**	**36**	*i* P	**Pn**	**02 29 17.7**	**-0.2**
ALJI				IAML		02 29 27.0	
	comp=Z,4μm,0.1s						
ALJI				*e*S	**Sn**	**02 29 27.4**	**+1.1**
COEB	**Comit de Eme**	**0.70**	**31**	*e*P	**Pn**	**02 29 20.0**	**-0.1**
COEB				*e*S	**Sn**	**02 29 31.1**	**+0.9**
COEB				IAML		02 29 33.7	
	comp=Z,6μm,0.3s						
COEB	**Comit de Eme**	**0.70**	**31**	*e*P	**Pn**	**02 29 20.0**	**-0.1**
COEB				*e*S	**Sn**	**02 29 31.1**	**+0.9**
COEB				IAML		02 29 33.7	
	comp=Z,6μm,0.3s						
TECA	**Tecapa**	**0.71**	**33**	*e*P	**Pn**	**02 29 20.2**	**-0.1**
TECA	**Tecapa**	**0.71**	**33**	*e*P	**Pn**	**02 29 20.2**	**-0.1**
LALI	**Alcalda de L**	**0.72**	**325**	*e*P	**Pn**	**02 29 19.6**	**-0.7**
LALI				*e*S	**Sn**	**02 29 29.5**	**-0.8**
LALI				IAML		02 29 32.4	
	comp=Z,2μm,0.2s						
LALI	**Alcalda de L**	**0.72**	**325**	*e*P	**Pn**	**02 29 19.6**	**-0.7**
LALI				*e*S	**Sn**	**02 29 29.5**	**-0.8**
LALI				IAML		02 29 32.4	
	comp=Z,2μm,0.2s						
COEG	**Centro de Oper**	**0.72**	**1**	*e*P	**Pn**	**02 29 19.8**	**-0.5**
COEG				*e*S	**Sn**	**02 29 30.8**	**+0.2**
COEG	**Centro de Oper**	**0.72**	**1**	*e*P	**Pn**	**02 29 19.8**	**-0.5**
COEG				*e*S	**Sn**	**02 29 30.8**	**+0.2**
JUCU	**Jucuarįn**	**0.73**	**60**	*e*P	**Pn**	**02 29 19.8**	**-0.6**
JUCU				*e*S	**Sn**	**02 29 31.1**	**+0.4**
JUCU				IAML		02 29 34.3	
	comp=Z,4μm,0.3s						
JUCU	**Jucuarįn**	**0.73**	**60**	*e*P	**Pn**	**02 29 19.8**	**-0.6**
JUCU				*e*S	**Sn**	**02 29 31.1**	**+0.4**
JUCU				IAML		02 29 34.3	
	comp=Z,4μm,0.3s						
LFRS	**El Faro**	**0.74**	**348**	*e*P	**Pn**	**02 29 20.1**	**-0.6**
LFRS	**El Faro**	**0.74**	**348**	*e*P	**Pn**	**02 29 20.1**	**-0.6**
PACA	**Pacayal**	**0.80**	**44**	*e*P	**Pn**	**02 29 21.5**	**+0.1**
PACA				*e*S	**Sn**	**02 29 33.6**	**+1.1**
PACA				IAML		02 29 35.5	
	comp=Z,19μm,0.4s						
PACA	**Pacayal**	**0.80**	**44**	*e*P	**Pn**	**02 29 21.5**	**+0.1**
PACA				*e*S	**Sn**	**02 29 33.6**	**+1.1**
PACA				IAML		02 29 35.5	
	comp=Z,19μm,0.4s						
LBRS	**Las Brisas**	**0.85**	**351**	*e*P	**Pn**	**02 29 22.1**	**0.0**
LBRS	**Las Brisas**	**0.85**	**351**	*e*P	**Pn**	**02 29 22.1**	**0.0**
SNET	**Serv Nac Est T**	**0.85**	**338**	*e*P	**Pn**	**02 29 21.6**	**-0.4**
SNET				*e*S	**Sn**	**02 29 33.5**	**-0.1**
SNET				IAML		02 29 34.9	
	comp=Z,4μm,0.2s						
SNET	**Serv Nac Est T**	**0.85**	**338**	*e*P	**Pn**	**02 29 21.6**	**-0.4**
SNET				*e*S	**Sn**	**02 29 33.5**	**-0.1**
SNET				IAML		02 29 34.9	
	comp=Z,4μm,0.2s						
OPAM	**Oficina de Pla**	**0.87**	**340**	*e*P	**Pn**	**02 29 21.9**	**-0.3**
OPAM				*e*S	**Sn**	**02 29 34.4**	**+0.5**
OPAM				IAML		02 29 35.1	
	comp=Z,6μm,0.1s						
OPAM	**Oficina de Pla**	**0.87**	**340**	*e*P	**Pn**	**02 29 21.9**	**-0.3**
OPAM				*e*S	**Sn**	**02 29 34.4**	**+0.5**
OPAM				IAML		02 29 35.1	
	comp=Z,6μm,0.1s						
BOQS	**Boqueron**	**0.92**	**336**	ǁ *i* P	**Pn**	**02 29 22.8**	**-0.2**
BOQS	**Boqueron**	**0.92**	**336**	ǁ *i* P	**Pn**	**02 29 22.8**	**-0.2**
LCND	**La Caada**	**1.07**	**67**	*e*P	**Pn**	**02 29 24.9**	**+0.1**
LCND				*e*S	**Sn**	**02 29 39.6**	**+1.0**
LCND				IAML		02 29 41.9	
	comp=Z,4μm,0.2s						
LCND	**La Caada**	**1.07**	**67**	*e*P	**Pn**	**02 29 24.9**	**+0.1**
LCND				*e*S	**Sn**	**02 29 39.6**	**+1.0**
LCND				IAML		02 29 41.9	
	comp=Z,4μm,0.2s						
CEVE	**Cerro Verde**	**1.17**	**323**	*e*P	**Pn**	**02 29 26.2**	**-0.3**
CEVE				*e*S	**Sn**	**02 29 42.0**	**+0.5**
CEVE				IAML		02 29 46.4	
	comp=Z,7μm,0.5s						
CEVE	**Cerro Verde**	**1.17**	**323**	*e*P	**Pn**	**02 29 26.2**	**-0.3**
CEVE				*e*S	**Sn**	**02 29 42.0**	**+0.5**
CEVE				IAML		02 29 46.4	
	comp=Z,7μm,0.5s						
SBLS	**San Blas**	**1.18**	**323**	*e*P	**Pn**	**02 29 26.8**	**+0.3**
SBLS	**San Blas**	**1.18**	**323**	*e*P	**Pn**	**02 29 26.8**	**+0.3**
SNJE	**San Jose**	**1.19**	**325**	*e*P	**Pn**	**02 29 26.6**	**0.0**
SNJE	**San Jose**	**1.19**	**325**	*e*P	**Pn**	**02 29 26.6**	**0.0**
RTR	**El Retiro**	**1.24**	**324**	*e*P	**Pn**	**02 29 27.6**	**+0.3**
RTR	**El Retiro**	**1.24**	**324**	*e*P	**Pn**	**02 29 27.6**	**+0.3**
IXG	**Ixpaco**	**1.97**	**311**	*e*P	**Pn**	**02 29 37.5**	**+0.3**
FUG	**Fuego 3**	**2.44**	**310**	*e*P	**Pn**	**02 29 46.2**	**+2.4**
FUG				*e*S	**Sn**	**02 30 12.7**	**+0.2**
STG3	**Santiaguito 3,**	**3.16**	**305**	*e*P	**Pn**	**02 29 55.8**	**+2.1**
STG3				*e*S	**Sn**	**02 30 29.9**	**-0.4**
JTS	**Las Juntas de**	**4.65**	**123**	P	**Pn**	**02 30 14.8**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=8.0,slow=22,SNR=2.5						
JTS				S	**Sn**	**02 31 05.3**	**-1.4**
	baz=315,slow=23,SNR=0.9						
JTS				LR	LR	02 32 04.9	
	comp=Z,46nm,20.7s,baz=0.0,slow=39						
CMIG	**Matias Romero**	**7.13**	**307**	P	**Pn**	**02 30 50.8**	**+2.8**
	comp=Z,0.6nm,0.3s,baz=117,slow=14,SNR=8.0						
CMIG				S	**Sn**	**02 32 04.9**	**-2.8**
	comp=Z,0.6nm,0.3s,baz=256,slow=23,SNR=1.5						
TEIG	**Tepich**	**7.32**	**5**	P	**Pn**	**02 30 52.7**	**+2.2**
	baz=139,slow=11						
TEIG				LR	LR	02 34 16.2	
	comp=Z,71nm,18.1s,baz=228,slow=42						
SDV	**Santo Domingo**	**18.37**	**101**	LR	LR	02 41 37.2	
	comp=Z,25nm,20.3s,baz=357,slow=41						
TXAR	**Lajitas Array**	**21.35**	**322**	P	**P**	**02 33 50.6**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=146,slow=12,SNR=3.5						
NVAR	**Mina Array Bea**	**36.45**	**320**	P	**P**	**02 36 08.3**	**+1.7**
	comp=Z,0.2nm,0.5s,baz=119,slow=7.4,SNR=2.6						
NVAR				PcP	**PcP**	**02 38 29.7**	**-0.3**
	comp=Z,0.2nm,0.7s,baz=142,slow=4.6,SNR=3.6						
SIV	**San Ignacio**	**39.76**	**135**	P	**P**	**02 36 33.3**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=312,slow=12,SNR=2.1						
CFA	**Coronel Fontan**	**48.48**	**156**	LR	LR	02 55 21.8	
	comp=Z,50nm,21.1s,baz=135,slow=32						
YKA	**Yellowknife Ar**	**52.82**	**345**	P	**P**	**02 38 14.9**	**-1.5**
	comp=Z,0.7nm,0.4s,baz=149,slow=6.5,SNR=27						
YKA				PcP	**PcP**	**02 39 23.4**	**-1.8**
	comp=Z,0.1nm,0.5s,baz=146,slow=4.4,SNR=2.1						

*IDC **26** 02:42:45.0±0.7, 23°25N×124°00E, h0km, mb4.1/20, mb1 4.1/22, mb1mx3.9/71, mbtmp4.1/22, ML3.2/2, MS3.2/8, Ms1 3.3/8, ms1mx2.9/36, Error ellipse: s-maj=21.2km s-min=16.2km az=66.0*

*JMA **26** 02:42:46.8±0.2, 23°16N×124°02E, h40km, M3.9*
*NEIC **26** 02:42:49.0±2.4, 23°24N±0°06×123°88E±0°06, h27km±4km, mb4.5/14, Error ellipse: s-maj=10.0km s-min=6.3km az=139.0*
ISC 26 02:42:47.8±0.7, 23°23N±0°07×123°99E±0°04, h21km±4km, n61, σ1°09/70, mb4.2/26, MS3.1/6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.84**	**349**	P	**Pb**	**02 43 03.5**	**-0.1**
HATJ				S	**Sb**	**02 43 15.1**	**+0.7**
JKRS	**Kuro-shima**	**1.00**	**1**	S	**Pn**	**02 43 06.1**	**-0.5**
JKRS				S	**Sb**	**02 43 20.4**	**+1.3**
IRIF	**Iriomote-Funau**	**1.12**	**348**	P	**Pn**	**02 43 08.1**	**-0.2**
IRIF				S	**Sn**	**02 43 23.0**	**-0.1**
JIJ	**Ishigaki jima**	**1.13**	**7**	P	**Pn**	**02 43 07.7**	**-0.8**
JIJ				S	**Sn**	**02 43 22.2**	**-1.2**
JISG	**Ishigakijimahi**	**1.38**	**12**	P	**Pn**	**02 43 11.0**	**-0.8**
JISG				*e*S	**Sn**	**02 43 28.9**	**-0.6**
YOJ	**Yonaguni jima**	**1.51**	**324**	P	**Pn**	**02 43 13.7**	**0.0**
YOJ				S	**Sn**	**02 43 32.6**	**-0.2**
YOJ	**Yonaguni jima**	**1.51**	**324**		**Pn**	**02 43 13.5**	**-0.2**
YOJ				Sn	**Sn**	**02 43 29.5**	**-3.3**
JYNG	**Yonagunijimaku**	**1.54**	**322**	P	**Pn**	**02 43 13.9**	**-0.2**
JYNG				S	**Sn**	**02 43 33.0**	**-0.5**
JTJ	**Tarama**	**1.55**	**25**	P	**Pn**	**02 43 13.5**	**-0.6**
JTJ				S	**Sn**	**02 43 34.3**	**+0.7**
JIRB	**Irabujima**	**1.92**	**34**	P	**Pn**	**02 43 18.5**	**-0.8**
JIRB				S	**Sn**	**02 43 42.7**	**-0.2**
JMJ2	**Miyako jima3**	**1.94**	**39**	P	**Pn**	**02 43 19.1**	**-0.4**
JMJ2				*e*S	**Sn**	**02 43 42.5**	**-0.8**
JOGS	**Gusukube**	**2.00**	**40**	P	**Pn**	**02 43 19.9**	**-0.5**
JOGS				*e*S	**Sn**	**02 43 44.7**	**-0.1**
JIKM	**Ikemajima**	**2.04**	**34**	P	**Pn**	**02 43 20.2**	**-0.7**
JIKM				S	**Sn**	**02 43 45.6**	**-0.2**
NACB	**Ninganchiao**	**2.38**	**294**		**Pn**	**02 43 24.0**	**-1.7**
YULB	**Yu-li**	**2.48**	**274**		**Pn**	**02 43 25.1**	**-1.9**
TWG	**Pinlang**	**2.72**	**262**		Pn	02 43 28.2	-2.0
TWG					Sn	02 43 56.4	-6.2
YHNB	**Yeheng**	**2.78**	**301**		**Pn**	**02 43 31.2**	**0.0**
SSLB	**Suanglung**	**2.84**	**282**		**Pn**	**02 43 30.6**	**-1.3**
TATO	**Taipei**	**2.87**	**308**		**Pn**	**02 43 32.5**	**+0.2**
TPUB	**Ta-pu**	**3.09**	**272**		**Pn**	**02 43 35.5**	**+0.2**
KNMB	**Chin-men Tao**	**5.27**	**285**	Pn	**Pn**	**02 44 05.0**	**-0.3**
KNMB					Sn	02 44 58.0	-7.5
JOW	**Kunigami**	**5.29**	**46**	Pn	**Pn**	**02 44 04.2**	**-1.5**
	1.3nm,0.3s,baz=345,slow=14,SNR=7.8						
JOW					**Sn**	**02 45 01.5**	**-4.4**
	0.4nm,0.3s,baz=71,slow=28,SNR=2.5						
JNU	**Nakatsue**	**11.57**	**30**	LR	LR	02 50 06.7	
	comp=Z,99nm,19.1s,baz=238,slow=38						
KSRS	**Korea Array**	**14.57**	**13**	Pn	**Pn**	**02 46 11.5**	**-1.2**
	0.1nm,0.3s,baz=198,slow=10,SNR=2.2						
KSRS				LR	LR	02 52 18.9	
	comp=Z,95nm,18.8s,baz=194,slow=40						
ASAJ	**Asahikawa**	**25.84**	**32**	P	**P**	**02 48 17.2**	**-0.5**
	9.6nm,0.8s,baz=4.1,slow=30,SNR=1.7						
JKA	**Kamikawa-asahi**	**25.84**	**32**	P	**P**	**02 48 17.2**	**-0.5**
KLR	**Kul'dur**	**26.66**	**11**	LR	LR	02 59 02.9	
	comp=Z,51nm,19.4s,baz=213,slow=37						
SONM	**Songino Array**	**28.28**	**335**	P	**P**	**02 48 39.5**	**-0.4**
	1.3nm,0.6s,baz=152,slow=10,SNR=6.8						
SONM				LR	LR	03 01 20.5	
	comp=Z,50nm,20.6s,baz=106,slow=39						
JAY	**Jayapura**	**30.34**	**145**	LR	LR	03 00 29.6	
	comp=Z,50nm,19.3s,baz=274,slow=35						
PETK	**Petropavlovsk-**	**39.26**	**32**	P	**P**	**02 50 16.3**	**+1.5**
	0.6nm,0.5s,baz=0.0,slow=15,SNR=2.2						
PETK				LR	LR	03 06 11.7	
	comp=Z,22nm,18.0s,baz=242,slow=36						
MK31	**Makanchi Array**	**40.81**	**316**	P	**P**	**02 50 27.0**	**-0.8**
MKAR	**Makanchi Array**	**40.81**	**316**	P	**P**	**02 50 28.3**	**+0.5**
	1.4nm,0.5s,baz=101,slow=11,SNR=20						
COEN	**Coen**	**41.46**	**151**	P	**P**	**02 50 34.5**	**+1.1**
ZAA0	**Zalesovo Array**	**42.44**	**326**	P	**P**	**02 50 41.0**	**0.0**
ZALV	**Zalesovo Beam**	**42.44**	**326**	P	**P**	**02 50 40.9**	**-0.1**
	3.3nm,0.5s,baz=123,slow=8.8,SNR=12						
KDJ	**Kajisay**	**43.07**	**307**	P	**P**	**02 50 48.0**	**+1.4**
KDJ					IAmb	IAmb	02 50 58.7
	comp=Z,8.0nm,0.8s						
WRA	**Warramunga Arr**	**44.09**	**166**	P	**P**	**02 50 54.5**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=348,slow=8.8,SNR=12						
WR0	**Warramunga Arr**	**44.15**	**166**	P	**P**	**02 50 54.1**	**-1.0**
WR0					IAmb	IAmb	02 50 55.6
	comp=Z,5.0nm,0.6s						
KURK	**Kurchatov**	**44.47**	**320**	P	**P**	**02 50 57.2**	**-0.2**
KURK					IAmb	IAmb	02 51 07.9
	comp=Z,6.2nm,0.9s						
KURBB	**Kurchatov

JSMT				*e*S		**Sn**	**02 45 32.5 +1.0**
TOK	**Tokyo**	**0.31**	**296**	P		**Pn**	**02 45 23.1 +0.2**
TOK				S		**Sn**	**02 45 31.6 +0.1**
BSO3	**Boso 3**	**0.82**	**155**	⇑P		**Pn**	**02 45 28.1 +0.6**
BSO3				S		**Sn**	**02 45 41.5 +1.8**
JOD2	**Odawara 2**	**0.87**	**251**	⇓P		**Pn**	**02 45 28.1 -0.3**
JOD2				S		**Sn**	**02 45 40.1 -1.1**
JIM2	**Oshima 3**	**0.99**	**213**	P		**Pn**	**02 45 29.8 -0.1**
JIM2				S		**Sn**	**02 45 43.4 -0.4**
JAG	**Ashikaga**	**1.01**	**329**	⇓P		**Pn**	**02 45 29.2 -0.9**
JRY	**Ryogami san**	**1.08**	**296**	⇓P		**Pn**	**02 45 30.8 -0.1**
JRY				*e*S		**Sn**	**02 45 44.9 -0.7**
BSO1	**Boso 1**	**1.15**	**141**	P		**Pn**	**02 45 31.6 +0.3**
BSO1				S		**Sn**	**02 45 47.8 +1.4**
JFNN	**Fujinakano**	**1.21**	**253**	⇓P		**Pn**	**02 45 32.6 +0.1**
JFNN				S		**Sn**	**02 45 48.2 -0.3**
JYN	**Shimob**	**1.27**	**268**	⇓P		**Pn**	**02 45 33.2 -0.1**
JYN				S		**Sn**	**02 45 49.5 -0.5**
JIZS	**Izushimoda**	**1.30**	**231**	P		**Pn**	**02 45 33.8 +0.1**
JIZS				S		**Sn**	**02 45 50.3 -0.3**
JKT	**Katashina**	**1.39**	**331**	P		**Pn**	**02 45 34.4 -0.6**
JKT				S		**Sn**	**02 45 51.3 -1.6**
MJAR	**Matsushiro Arr**	**1.82**	**303**	P		**Pn**	**02 45 40.5 0.0**
	4.0nm,0.3s,baz=146,slow=14,SNR=58						
MJAR				S		**Sn**	**02 46 03.1 +0.3**
	3.6nm,0.3s,baz=283,slow=14,SNR=2.6						
MJAR				LR		LR	02 46 22.0
	comp=Z,37nm,21.1s,baz=100,slow=38						
MAJO	**Matsushiro**	**1.82**	**303**			**Pn**	**02 45 40.9 +0.4**
MAT	**Matsushiro**	**1.82**	**303**	P		**Pn**	**02 45 40.7 +0.1**
MAT				*e*S		**Sn**	**02 46 00.6 -2.3**
MJB9	**Matsu-Tunnel**	**1.83**	**303**			**Pn**	**02 45 41.1 +0.5**
JHJ	**Hachijo jima 2**	**2.44**	**186**	P		**Pn**	**02 45 49.4 +0.5**
	21nm,0.3s,baz=333,slow=23,SNR=11						
JHJ				S		**Sn**	**02 46 16.3 -1.4**
	89nm,0.3s,baz=96,slow=21,SNR=9.6						
JHJ2	**Mitsune**	**2.44**	**185**			**Pn**	**02 45 50.0 +1.0**
JHJ2						**Sn**	**02 46 18.3 +0.5**
INU	**Inuyama**	**2.52**	**266**			**Pn**	**02 45 50.7 +0.8**
ERM	**Erimo**	**6.88**	**19**	Pn		**Pn**	**02 46 46.5 -2.8**
ERM						**Sn**	**02 48 02.0 -4.1**
JCJ	**Chichijima**	**8.62**	**167**	P		**Pn**	**02 47 10.8 -2.4**
	1.4nm,0.3s,baz=7.1,slow=19,SNR=7.6						
JCJ				S		**Sn**	**02 48 41.3 -7.4**
	1.9nm,0.3s,baz=284,slow=23,SNR=2.6						
H11N2	**WAKE ISLAND Hy**	**28.37**	**117**	T		T	03 20 45.4
	baz=308,slow=75,SNR=32						
H11N1	**WAKE ISLAND Hy**	**28.38**	**117**	T		T	03 20 46.7
	baz=308,slow=75,SNR=26						
H11N3	**WAKE ISLAND Hy**	**28.39**	**117**	T		T	03 20 47.6
	baz=308,slow=75,SNR=26						
H11S1	**WAKE ISLAND Hy**	**29.02**	**119**	T		T	03 21 08.5
	baz=308,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.02**	**119**	T		T	03 21 08.8
	baz=308,slow=74						
H11S2	**WAKE ISLAND Hy**	**29.03**	**119**	T		T	03 21 03.3
	baz=308						
ZALV	**Zalesovo Beam**	**42.14**	**314**	P		**P**	**02 52 56.4 +0.5**
	0.8nm,0.4s,baz=103,slow=10,SNR=2.2						
MKAR	**Makanchi Array**	**44.02**	**303**	P		**P**	**02 53 12.3 +1.1**
	0.7nm,0.6s,baz=91,slow=8.9,SNR=4.3						
KURK	**Kurchatov**	**46.02**	**309**	P		**P**	**02 53 27.8 +0.8**
KURK				IAmb		IAmb	02 53 29.5
	comp=Z,1.8nm,0.8s						
KURBB	**Kurchatov Arra**	**46.09**	**309**	P		**P**	**02 53 28.2 +0.7**
	comp=Z,1.2nm,0.7s,baz=84,slow=7.6,SNR=7.6						
WR0	**Warramunga Arr**	**55.46**	**186**	P		**P**	**02 54 38.3 +0.1**
WR0				IAmb		IAmb	02 54 38.8
	comp=Z,3.2nm,1.1s						
WRA	**Warramunga Arr**	**55.46**	**187**	P		**P**	**02 54 38.7 +0.6**
	comp=Z,0.3nm,0.3s,baz=12,slow=7.5,SNR=10						
ASAR	**Alice Springs**	**59.19**	**187**	P		**P**	**02 55 04.2 -0.2**
	comp=Z,0.1nm,0.4s,baz=358,slow=6.5,SNR=1.7						
FINES	**FINESS Array B**	**69.62**	**332**	P		**P**	**02 56 12.8 +0.8**
	comp=Z,1.0nm,0.5s,baz=75,slow=6.6,SNR=6.9						

*TEH **26** 02:49:53.2,36′.00N×45′.69E,h10km, ML2.9*
*ISN **26** 02:49:54.2±1.4,36′.05N×45′.66E,h25km±9km, ML2.6*
ISC 26 02:49:54.0±0.9,**36°02N**±0′.04×**45°66E**±0′.06,**h10**km,**n15,**
σ2s60/19,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAHB	**Mahabad**	**0.75**	**3**	*e*Sg	**Sb**	**02 50 19.0**	**-0.6**
MAHB				*e*Pg	**Pg**	**02 50 07.6**	**-0.9**
IKRK	**Kirkuk**	**1.24**	**241**	*e*Pg	**Pn**	**02 50 16.0**	**-1.3**
IKRK				*e*Sg	**Sn**	**02 50 34.0**	**-0.1**
IKRK				AML	AML	02 50 41.8	
	comp=E,145nm,0.4s						
IKRK				AML	AML	02 50 42.6	
	comp=N,94nm,0.5s						
IDHR	**Dehrash**	**1.44**	**155**	*e*Pn	**Pn**	**02 50 17.4**	**-2.9**
IDHR				*e*		02 50 22.0	
ILIN	**Lien**	**1.53**	**135**	*e*	**Sg**	**02 50 49.0**	**+5.9**
IAZR	**Azarshahr**	**1.68**	**9**	*e*Pn	**Pb**	**02 50 24.6**	**-0.5**
IAZR				*e*		02 50 55.1	
IVIS	**Veis**	**1.78**	**146**	*e*Pn	**Pb**	**02 50 25.0**	**-1.7**
IVIS				*e*		02 50 53.7	
IGHG	**Ghaleghazi**	**1.84**	**156**	*e*Pn	**Pb**	**02 50 26.5**	**-1.3**
IGHG				*e*		02 51 04.3	
KCHF	**Cheshme Sefid,**	**2.07**	**147**	*e*Pn	**Pb**	**02 50 29.6**	**-2.2**
KCHF				*e*		02 51 01.2	
MSL	**Mosul**	**2.10**	**281**	*e*Pn	**Pn**	**02 50 30.0**	**+0.8**
MSL				*e*Sn	**Sn**	**02 50 55.5**	**+0.2**
ISHB	**Shabestar**	**2.26**	**359**	*e*Pn	**Pb**	**02 50 34.2**	**-0.9**
ISHB				*e*		02 51 09.5	
IALM	**Almabolaq**	**2.35**	**119**	*e*Pn	**Pb**	**02 50 34.3**	**-2.3**
IALM				*e*		02 51 17.5	
IBZA	**Bozab**	**2.37**	**130**	*e*Pn	**Pb**	**02 50 34.2**	**-2.7**
IBZA				*e*		02 51 12.6	
IKOM	**Komasi**	**2.38**	**140**	*e*Pn	**Pb**	**02 50 34.0**	**-3.1**
IKOM				*e*		02 51 16.7	
IBDR	**Badra**	**2.91**	**176**	*e*Pn	**Pn**	**02 50 42.0**	**+1.7**
IBDR				*e*Sn	**Sn**	**02 51 15.5**	**+0.2**
IDOB	**Doab**	**3.04**	**136**	*e*	**Sg**	**02 51 36.7**	**+5.1**

*IDC **26** 02:50:52.0±5.8,6′.46S×154°.96E,h80km±43km,mb3.6/6,*
mb1 3.8/8,mb1mx3.5/40,mbtmp3.9/8,ML3.0/2,Error
ellipse: s-maj=48.6km s-min=21.2km az=97.0
ISC 26 02:50:48.8±1.2,**6°5S**±0′.1×**155°2E**±0′.1,**h56**km,**n12,**
σ0s70/10,mb3.7/6,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.79**	**305**	P	**Pn**	**02 51 45.5**	**+0.7**
	4.6nm,0.3s,baz=40,slow=21,SNR=1.5						
KRVT				S	**Sn**	**02 52 28.0**	**-0.2**
	19nm,0.3s,baz=116,slow=22,SNR=3.1						
PMG	**Port Moresby**	**8.42**	**249**	P	**Pn**	**02 52 48.9**	**+0.6**
	3.7nm,0.3s,baz=75,slow=6.9,SNR=6.0						
WRA	**Warramunga Arr**	**24.22**	**235**	P	**P**	**02 56 00.8**	**+0.2**
	1.2nm,0.6s,baz=58,slow=9.3,SNR=10						
ASAR	**Alice Springs**	**26.61**	**228**	P	**P**	**02 56 21.9**	**-0.4**
	0.5nm,0.5s,baz=56,slow=9.3,SNR=7.7						
H11S3	**WAKE ISLAND Hy**	**27.32**	**24**	T	T	03 24 56.6	
	baz=202						
H11S2	**WAKE ISLAND Hy**	**27.32**	**24**	T	T	03 24 55.7	
	baz=202						
H11S1	**WAKE ISLAND Hy**	**27.34**	**24**	T	T	03 24 58.0	
	baz=202						
KLR	**Kul'dur**	**59.14**	**342**	P	**P**	**03 00 43.3**	**-0.3**
	0.8nm,0.6s,baz=163,slow=11,SNR=2.1						
CMAR	**Chiang Mai Arr**	**60.71**	**295**	P	**P**	**03 00 54.6**	**-0.4**
	2.0nm,0.4s,baz=86,slow=7.7,SNR=3.0						
MKAR	**Makanchi Array**	**83.13**	**319**	P	**P**	**03 03 08.3**	**-0.5**
	0.6nm,0.8s,baz=101,slow=6.0,SNR=3.0						
YKA	**Yellowknife Ar**	**95.83**	**28**	P	**P**	**03 04 09.9**	**+1.1**
	0.2nm,0.9s,baz=268,slow=4.5,SNR=4.7						
TORD	**Torodi Ar. Bea**	**153.03**	**286**	PKPbc	**PKPbc**	**03 10 40.4**	**-0.8**
	0.3nm,0.6s,baz=89,slow=2.1,SNR=5.1						

*NEIC **26** 02:52:33.8±2.8,34°.73N×0°.06×23°.74E±0°.04,h32km±2km,*
Error ellipse: s-maj=10.0km s-min=4.3km az=158.0
*ISK **26** 02:52:33.7,34°.85N×23°.67E,h76km, ML4.1/20*
*HLW **26** 02:52:34.1,34°.98N×23°.85E,h25km±30km,Md3.9,Ml4.4*
*MOS **26** 02:52:35.5±1.4,34°.93N×23°.83E,h51km,mb4.4/12,Error*
ellipse: s-maj=7.9km s-min=4.7km az=80.7
*DDA **26** 02:52:35.5,35°.18N×23°.88E,h16km±3km,MW3.9*
*ATH **26** 02:52:35.6,34°.88N×23°.80E,h38km±1km,ML3.8/13,Error*
ellipse: s-maj=2.1km s-min=0.9km az=214.0
*IDC **26** 02:52:36.6±1.4,35°.00N×23°.84E,h48km±12km,mb4.0/26,*
mb1 4.1/33,mb1mx4.0/54,mbtmp4.2/33,ML3.7/7,MS3.1/7,
Ms1 3.0/7,ms1mx2.8/34,Error ellipse: s-maj=14.8km
s-min=11.0km az=165.0
*THE **26** 02:52:38.2,34°.98N×23°.87E,h14km±1km,ML3.7/9,Error*
ellipse: s-maj=1.4km s-min=0.7km az=226.0
*GII **26** 02:52:41.5±0.0,34°.52N×24°.72E,h8km,mb4.2/3,MD4.0/3,*
Mm3.8/10
ISC 26 02:52:34.0±0.9,**34°93N**±0′.03×**23°73E**±0′.03,**h30**km±6km,
n347,σ2s37/366,mb4.2/39,MS2.9/5,15C-5D,Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDR	**Palaiochora Ch**	**0.31**	**354**	PG	**Pn**	**02 52 45.1**	**+2.6**
GVD	**Gavdhos**	**0.31**	**106**	P	**Pn**	**02 52 42.8**	**+0.3**
GVD				S	**Sb**	**02 52 47.5**	**+0.7**
	66μm,0.3s						
GVD	**Gavdhos**	**0.31**	**106**	P	**Pn**	**02 52 42.8**	**+0.3**
GVD				S	**Sb**	**02 52 47.8**	**+1.1**
GVD				AML	AML	02 52 49.0	
GVD				AML	AML	02 52 50.1	
IMMV	**Iera Moni Meta**	**0.57**	**21**	P	**Pn**	**02 52 48.1**	**+1.9**
IMMV				S	**Sn**	**02 52 55.1**	**+0.5**
	21μm,0.5s						
IMMV	**Iera Moni Meta**	**0.57**	**21**	P	**Pn**	**02 52 48.3**	**+2.2**
IMMV				S	**Sn**	**02 52 57.8**	**+3.2**
IMMV				AML	AML	02 53 00.6	
	comp=N,47822μm,0.6s						
IMMV				AML	AML	02 53 01.0	
	comp=E,36763μm,0.4s						
IMMV	**Iera Moni Meta**	**0.57**	**21**	PG	**Pn**	**02 52 49.0**	**+2.8**
IMMV				SG	**Sn**	**02 53 00.5**	**+5.9**
VAM	**Vamos**	**0.62**	**39**	P	**Pn**	**02 52 48.4**	**+1.6**
VAM				S	**Sn**	**02 52 55.1**	**-0.6**
	comp=E,12μm,0.5s						
VAM	**Vamos**	**0.62**	**39**	P	**Pn**	**02 52 48.4**	**+1.6**
VAM				S	**Sn**	**02 52 59.0**	**+3.3**
VAM				AML	AML	02 53 05.2	
	comp=N,22461μm,0.6s						
VAM				AML	AML	02 53 05.5	
	comp=E,25637μm,0.5s						
RODP	**Rodopos**	**0.63**	**2**	PG	**Pn**	**02 52 49.8**	**+2.8**
RODP				SG	**Sn**	**02 53 01.5**	**+5.4**
SIVA	**Sivas**	**0.90**	**84**	P	**Pn**	**02 52 52.6**	**+2.0**
SIVA				S	**Sn**	**02 53 04.9**	**+2.4**
	comp=E,20μm,0.6s						
SIVA	**Sivas**	**0.90**	**84**	P	**Pn**	**02 52 52.5**	**+2.0**
SIVA				S	**Sn**	**02 53 04.0**	**+1.5**
SIVA				AML	AML	02 53 09.8	
	comp=N,37037μm,0.6s						
SIVA				AML	AML	02 53 09.9	
	comp=E,43559μm,0.5s						
ANKY	**Antikythira Is**	**1.00**	**340**	P	Pn	02 52 56.6	+4.6
ANKY				S	**Sn**	**02 53 11.4**	**+6.3**
	comp=E,2μm,0.7s						
ANKY	**Antikythira Is**	**1.00**	**340**	P	Pn	02 52 56.6	+4.6
ANKY				S	**Sn**	**02 53 10.8**	**+5.7**
ANKY				AML	AML	02 53 16.9	
	comp=E,4840μm,0.6s						
ANKY				AML	AML	02 53 21.9	
	comp=N,4416μm,0.8s						
IDI	**Anoyia**	**1.02**	**69**	P	**Pn**	**02 52 54.2**	**+1.8**
IDI				S	**Sn**	**02 53 07.8**	**+2.1**
	comp=N,4μm,0.9s						
IDI	**Anoyia**	**1.02**	**69**	P	**Pn**	**02 52 53.9**	**+1.5**
	comp=N,162nm,0.3s,baz=242,slow=15,SNR=651						
IDI				S	**Sn**	**02 53 10.0**	**+4.3**
	comp=N,372nm,0.3s,baz=310,slow=18,SNR=17						
IDI				LR	LR	02 53 35.4	
	comp=N,437nm,19.2s,baz=220,slow=65						
IDI	**Anoyia**	**1.02**	**69**	P	**Pn**	**02 52 54.4**	**+2.0**
IDI				AML	AML	02 53 12.4	
	comp=N,9021μm,1.4s						
IDI				AML	AML	02 53 14.4	
	comp=E,8506μm,0.6s						
IDI	**Anoyia**	**1.02**	**69**	PN	**Pn**	**02 52 54.4**	**+2.0**
IDI				SN	**Sn**	**02 53 09.7**	**+4.0**
IDI	**Anoyia**	**1.02**	**69**		**Pn**	**02 52 54.2**	**+1.8**
IDI					**Sn**	**02 53 08.6**	**+2.9**
IACM	**Heraklion**	**1.17**	**71**	P	**Pb**	**02 52 57.3**	**+1.7**
IACM				AML	AML	02 53 21.3	
	comp=N,50057μm,0.6s						
IACM				AML	AML	02 53 30.8	
	comp=E,52209μm,1.1s						
HRKL	**Herakleio**	**1.19**	**71**	PN	**Pb**	**02 52 56.8**	**+0.8**
LAST	**Lasithi**	**1.46**	**80**	P	**Pb**	**02 53 01.4**	**+0.8**
LAST				S	**Sb**	**02 53 19.1**	**+0.3**
	comp=E,2μm,0.8s						
LAST	**Lasithi**	**1.46**	**80**	P	**Pb**	**02 53 01.3**	**+0.7**
LAST				S	**Sb**	**02 53 18.8**	**0.0**
LAST				AML	AML	02 53 26.8	
	comp=N,3665μm,1.0s						
LAST				AML	AML	02 53 30.3	
	comp=E,3457μm,1.4s						
NPS	**Neapolis**	**1.58**	**77**	P	**Pb**	**02 53 03.4**	**+0.7**
NPS				S	**Sb**	**02 53 23.0**	**+0.7**
	comp=E,2μm,0.7s						
NPS	**Neapolis**	**1.58**	**77**	P	**Pb**	**02 53 03.6**	**+0.9**
MHLO	**Agia Marina, M**	**1.84**	**17**	P	**Pb**	**02 53 06.6**	**-0.5**
MHLO	**Agia Marina, M**	**1.84**	**17**	P	**Pb**	**02 53 06.1**	**-1.0**
MNVA	**Monemvasia**	**1.84**	**343**	P	**Pb**	**02 53 07.0**	**-0.1**
VLI	**Veliai**	**1.90**	**340**	P	**Pb**	**02 53 09.2**	**+1.2**
VLI				S	**Sb**	**02 53 32.4**	**+1.0**
	comp=E,675nm,0.7s						
VLI	**Veliai**	**1.90**	**340**	P	**Pb**	**02 53 09.2**	**+1.2**
VLI				AML	AML	02 53 46.4	
	comp=N,2242μm,0.7s						
VLI				AML	AML	02 53 51.5	
	comp=E,1830μm,0.7s						
MHLA	**Plaka, Milos I**	**1.90**	**17**	P	**Pb**	**02 53 07.5**	**-0.6**
SAP1	**Santorini-Akro**	**1.97**	**43**	P	**Pb**	**02 53 08.3**	**-1.0**
THR6	**Thira Island,**	**1.97**	**43**	P	**Pb**	**02 53 08.3**	**-1.0**
THR5	**Thira Island,**	**1.99**	**41**	P	**Pb**	**02 53 08.1**	**-1.5**
SAP3	**Santorini-Thir**	**2.00**	**41**	P	**Pb**	**02 53 08.5**	**-1.3**
THR3	**Thira Island,**	**2.01**	**42**	P	**Pb**	**02 53 08.6**	**-1.4**
SANT	**Santorini**	**2.02**	**44**	P	**Pb**	**02 53 08.5**	**-1.6**
SANT	**Santorini**	**2.02**	**44**	PN	**Pb**	**02 53 08.2**	**-1.9**
SANT	**Santorini**	**2.02**	**44**	*i* P	**Pb**	**02 53 08.1**	**-2.0**
SANT	**Santorini**	**2.02**	**44**		**Pb**	**02 53 08.2**	**-1.9**
THR7	**Fira-Santorini**	**2.04**	**42**	P	**Pb**	**02 53 09.5**	**-0.9**
SAP2K	**Karterados**	**2.04**	**43**	P	**Pb**	**02 53 09.3**	**-1.1**
THT2	**Imerovigli**	**2.04**	**42**	PN	**Pb**	**02 53 08.8**	**-1.7**
SAP4	**Santorini-Oia**	**2.04**	**40**	P	**Pb**	**02 53 09.6**	**-0.9**
ZKR	**Zakros**	**2.05**	**84**	P	**Pb**	**02 53 09.3**	**-1.4**
ZKR	**Zakros**	**2.05**	**84**	P	**Pb**	**02 53 09.5**	**-1.1**
ZKR	**Zakros**	**2.05**	**84**	PN	**Pb**	**02 53 08.4**	**-2.3**
CMBO	**Columbo, Santo**	**2.06**	**41**	P	**Pb**	**02 53 09.7**	**-1.1**
ANAF	**Anafi Island**	**2.19**	**49**	P	**Pb**	**02 53 10.8**	**-2.3**
ANAF	**Anafi Island**	**2.19**	**49**	P	**Pb**	**02 53 10.7**	**-2.3**
IOSP	**Ios island**	**2.20**	**35**	P	**Pb**	**02 53 10.9**	**-2.2**
IOSP				AML	AML	02 53 49.7	
	comp=N,2464μm,0.5s						
IOSP				AML	AML	02 53 52.4	
	comp=E,2633μm,0.6s						
SERI	**Serifos**	**2.31**	**15**	P	**Pb**	**02 53 12.7**	**-2.4**
KRND	**KRANIDI**	**2.50**	**349**	P	**Pb**	**02 53 16.3**	**-1.9**
KRND				AML	AML	02 54 01.2	
	comp=E,748μm,1.1s						
KRND				AML	AML	02 54 08.2	
	comp=N,662μm,0.5s						
PYL	**PYLOS**	**2.54**	**321**	P	**Pn**	**02 53 15.8**	**+2.5**
PYL				AML	AML	02 54 19.1	
	comp=N,402μm,0.8s						
PYL				AML	AML	02 54 25.8	
	comp=E,633μm,1.2s						
APE	**Apeiranthos**	**2.59**	**34**	P	**Pb**	**02 53 16.3**	**-3.5**
APE				AML	AML	02 54 02.5	
	comp=E,762μm,0.8s						
APE				AML	AML	02 54 07.0	
	comp=N,705μm,0.8s						
APE	**Apeiranthos**	**2.59**	**34**	⇑P	Pb	02 53 27.1	+7.3
APE	**Apeiranthos**	**2.59**	**34**	PN	**Pb**	**02 53 16.1**	**-3.7**
APE	**Apeiranthos**	**2.59**	**34**	*i* P	**Pb**	**02 53 16.0**	**-3.9**
APE	**Apeiranthos**	**2.59**	**34**	*c i*P	**Pn**	**02 53 15.7**	**+1.7**
AMGA	**Amorgos Island**	**2.59**	**42**	P	**Pb**	**02 53 16.1**	**-3.7**
DID	**Didima**	**2.60**	**351**	P	**Pb**	**02 53 16.9**	**-3.2**
VLX	**Vlachokerasia**	**2.67**	**336**	P	**Pb**	**02 53 20.4**	**-0.9**
ITM	**Ithomi**	**2.68**	**328**	P	**Pb**	**02 53 19.3**	**-2.0**
ITM	**Ithomi**	**2.68**	**328**	PN	**Pn**	**02 53 16.8**	**+1.6**
ITM	**Ithomi**	**2.68**	**328**		**Pb**	**02 53 19.1**	**-2.2**
TRIP	**Tripoli**	**2.85**	**336**	P	**Pb**	**02 53 23.0**	**-1.3**
TNSA	**Tinos**	**2.85**	**24**	P	**Pb**	**02 53 20.1**	**-4.2**
KARP	**Karpathos**	**2.88**	**77**	P	**Pn**	**02 53 20.2**	**+2.3**
KARP	**Karpathos**	**2.88**	**77**		**Pn**	**02 53 20.1**	**+2.2**
KARP	**Karpathos**	**2.88**	**77**	PN	**Pn**	**02 53 20.1**	**+2.2**
KARP	**Karpathos**	**2.88**	**77**		**Pn**	**02 53 20.3**	**+2.3**
VLY	**Voula,Athens**	**2.92**	**1**	P	**Pb**	**02 53 21.1**	**-4.4**
ATHU	**Athens Univers**	**3.03**	**1**	P	**Pb**	**02 53 22.9**	**-4.4**
ATH	**Athens Observa**	**3.04**	**360**	P	**Pb**	**02 53 23.3**	**-4.1**
AMT	**Artemida-Makis**	**3.07**	**328**	P	**Pb**	**02 53 24.7**	**-3.2**
LOUT	**Loutraki**	**3.11**	**349**	P	**Pb**	**02 53 25.0**	**-3.7**
PTL	**Penteli**	**3.12**	**2**	P	**Pb**	**02 53 24.3**	**-4.5**
DION	**Dionisos Attik**	**3.15**	**3**	P	**Pb**	**02 53 24.8**	**-4.5**
LTK	**Loutraki**	**3.15**	**349**	P	**Pb**	**02 53 25.2**	**-4.1**
KARY	**Karystos**	**3.15**	**10**	P	**Pn**	**02 53 24.4**	**+2.8**
KOSK	**Kos Island**	**3.21**	**54**	PN	**Pn**	**02 53 24.7**	**+2.3**
NISR	**Nisiros**	**3.24**	**58**	P	**Pn**	**02 53 24.9**	**+2.2**
VIL2	**Platees**	**3.30**	**354**	P	**Pn**	**02 53 26.1**	**+2.5**
KLV	**Kalavryta, Ach**	**3.36**	**338**	P	**Pb**	**02 53 28.4**	**-4.5**
PROD	**Prodromos**	**3.39**	**349**	P	**Pb**	**02 53 28.1**	**+3.2**
LAKA	**Lakka**	**3.59**	**337**	P	**Pb**	**02 53 32.7**	**-4.2**
BODT	**Bodrum**	**3.60**	**53**	PN	**Pn**	**02 53 30.4**	**+2.5**
DAT	**Datca**	**3.61**	**59**	PN	**Pn**	**02 53 30.3**	**+2.3**
RLS	**Riolos of Patr**	**3.62**	**330**	P	Pn	02 53 32.2	+4.2
SLUM	**Salum**	**3.65**	**160**	P	**Pn**	**02 53 28.5**	**+0.1**
	baz=161						
SLUM				AMP		02 54 00.0	
	baz=161						
SLUM				S	**Sn**	**02 54 07.8**	**-2.6**
	baz=161						
KALE	**Kalithea**	**3.69**	**340**	P	**Pn**	**02 53 32.3**	**+3.3**
BDRM	**Kayabasi**	**3.69**	**54**	*i* P	**Pn**	**02 53 31.0**	**+1.9**
KYMI	**Kymi, Euboea I**	**3.71**	**5**	P	**Pn**	**02 53 31.9**	**+2.6**
SERG	**Sergoula**	**3.73**	**339**	P	**Pn**	**02 53 33.1**	**+3.5**
SMG	**Samos**	**3.74**	**41**	P	**Pn**	**02 53 31.8**	**+2.1**
LKR	**Lokris**	**3.76**	**351**	P	**Pn**	**02 53 33.2**	**+3.2**
MRKA	**Markates**	**3.77**	**358**	P	**Pn**	**02 53 33.2**	**+3.1**
ARG	**Arkhangelos**	**3.81**	**69**	P	**Pn**	**02 53 33.1**	**+2.4**
ARG	**Arkhangelos**	**3.81**	**69**	PN	**Pn**	**02 53 33.0**	**+2.4**
VLMS	**Volimes, Zakyn**	**3.84**	**321**	P	**Pn**	**02 53 34.0**	**+2.8**
AXAR	**Agios Charalam**	**3.93**	**348**	P	Pn	02 53 36.1	+3.8
CHOS	**Chios island**	**3.93**	**28**	PN	**Pn**	**02 53 34.7**	**+2.3**
ANX	**Ano Chora**	**3.94**	**339**	P	**Pn**	**02 53 36.2**	**+3.7**
GCAM	**G?zelcaml?**	**3.96**	**45**	PN	**Pn**	**02 53 35.4**	**+2.7**
GCAM	**G?zelcaml?**	**3.96**	**45**	*i* P	**Pn**	**02 53 35.1**	**+2.4**
PVO	**Paravola**	**4.08**	**335**	P	**Pn**	**02 53 38.4**	**+3.9**
VLS	**Valsamata**	**4.11**	**323**	P	**Pn**	**02 53 37.3**	**+2.4**
URLA	**Izmir**	**4.13**	**33**	PN	**Pn**	**02 53 37.2**	**+2.1**
URLA	**Izmir**	**4.13**	**33**	*i* P	**Pn**	**02 53 35.7**	**+0.6**
AGG	**Agios Georgios**	**4.24**	**345**	P	**Pn**	**02 53 40.1**	**+3.5**
AGG	**Agios Georgios**	**4.24**	**345**	PN	**Pn**	**02 53 38.5**	**+1.9**
AGG	**Agios Georgios**	**4.24**	**345**	*i* P	**Pn**	**02 53 39.3**	**+2.8**
AGG	**Agios Georgios**	**4.24**	**345**	P	Pn	02 53 40.3	+3.7
AGG	**Agios Georgios**	**4.24**	**345**		Pn	02 53 40.3	+3.7
AOS	**Alonnisos**	**4.24**	**2**	P	**Pn**	**02 53 39.0**	**+2.4**
AOS	**Alonnisos**	**4.24**	**2**	PN	**Pn**	**02 53 38.7**	**+2.2**
SKIA	**Skiathos**	**4.24**	**357**	P	**Pn**	**02 53 39.7**	**+3.1**
MAKR	**Makrakomi, Fth**	**4.27**	**343**	P	Pn	02 53 41.5	+4.5
YER	**Yerkesik**	**4.30**	**58**	PN	**Pn**	**02 53 39.7**	**+2.2**
BLCB	**Balcova**	**4.36**	**37**	PN	**Pn**	**02 53 40.6**	**+2.4**
NEO	**Neokhori**	**4.39**	**355**	P	**Pn**	**02 53 41.7**	**+3.0**
TURN	**Turunc**	**4.41**	**62**	PN	**Pn**	**02 53 37.1**	**-1.8**
TURN	**Turunc**	**4.41**	**62**	*i* P	**Pn**	**02 53 37.1**	**-1.8**
DALY	**Dalyan (Mula)**	**4.42**	**63**	PN	**Pn**	**02 53 41.3**	**+2.2**
AYDB	**Zeytinkoy-Aydi**	**4.51**	**47**	PN	**Pn**	**02 53 42.6**	**+2.2**
SIGR	**SIGRI**	**4.60**	**21**	PN	**Pn**	**02 53 43.9**	**+2.3**
MATC	**Matruh**	**4.62**	**140**	P	**Pn**	**02

	comp=N,75nm,21.0s,baz=202,slow=44								
RUDO	**Rudo**	9.31	340	*e*Pn		**Pn**	02 54 45.2	-1.0	
TAMRE	**El Minia**	9.48	138	P		**Pn**	02 54 47.7	-0.9	
	baz=138								
BBLS	**Lazići**	9.53	341	*e*Pn		**Pn**	02 54 48.5	-0.8	
DIVS	**Divibare**	9.60	344	*e*Pn		**Pn**	02 54 49.7	-0.5	
OFRI	**`Ofer**	9.65	101	Sn		Sn	02 56 28.9	-9.4	
SLTI	**Sal'it**	9.81	103	Pn		**Pn**	02 54 51.2	-1.9	
SLTI				Sn		Sn	02 56 32.1	-10	
KZIT	**Kziot**	9.82	111	Pn		**Pn**	02 54 50.6	-2.7	
KZIT				Sn		Sn	02 56 31.4	-11	
MAKA	**Makarska**	9.84	330	*e*Pn		**Pn**	02 54 53.0	-0.4	
HAPS	**Han Pijesak,BI**	9.86	339	*e*Pn		**Pn**	02 54 52.1	-1.7	
MMA0B	**Mount Meron ar**	9.88	98	Pn		**Pn**	02 54 52.5	-1.6	
MMAI	**Mount Meron Ar**	9.88	98	P		**Pn**	02 54 51.0	-3.2	
	comp=N,4.7nm,0.3s,baz=301,slow=12,SNR=22								
MMAI				S		**Sn**	02 56 35.7	-8.4	
	comp=N,5.5nm,0.3s,baz=265,slow=21,SNR=8.1								
AMAZ	**Amatzia**	9.96	107	Pn		**Pn**	02 54 51.7	-3.5	
AMAZ				Sn		Sn	02 56 35.4	-11	
RICI	**Ricice**	9.96	331	*i* Pn		**Pn**	02 54 54.6	-0.6	
RICI				Sn		**Sn**	02 56 39.4	-6.5	
GEM	**Giv'at Ha'Em**	10.05	96	Pn		**Pn**	02 54 54.3	-2.0	
GEM				Sn		Sn	02 56 38.6	-9.5	
MMLI	**Mount Malkishu**	10.06	101	Pn		**Pn**	02 54 54.7	-1.8	
NATI	**Neve Ativ**	10.10	96	Pn		**Pn**	02 54 55.2	-1.8	
GRB	**Gharib**	10.18	128	P		**Pn**	02 54 56.6	-1.6	
	baz=128								
YTIR	**Yattir**	10.19	107	Pn		**Pn**	02 54 56.3	-2.0	
YTIR				Sn		Sn	02 56 41.2	-10	
HMDT	**Nahal Hemdat**	10.20	102	Pn		**Pn**	02 54 56.5	-1.9	
SHMJ	**Saham**	10.25	99	Pn		**Pn**	02 54 56.5	-2.6	
DSI	**Dead Sea**	10.32	106	Pn		**Pn**	02 54 57.5	-2.5	
DSI				Sn		Sn	02 56 44.3	-10	
KRMI	**Paran Flat**	10.45	114	Pn		**Pn**	02 54 59.4	-2.4	
KRMI				Sn		Sn	02 56 46.6	-11	
PRNI	**Paran**	10.54	112	Pn		**Pn**	02 55 01.0	-2.1	
PRNI				Sn		Sn	02 56 49.6	-11	
HDK1	**Dakhla**	10.56	151	P		**Pn**	02 55 02.7	-0.7	
	baz=151								
GHAJ	**Ghor Haditha**	10.56	107	Pn		**Pn**	02 55 01.5	-1.9	
KIJV	**Kijevo**	10.68	330	*e*Pn		**Pn**	02 55 04.4	-0.6	
KIJV				Sn		**Sn**	02 56 56.6	-6.9	
MLR	**Muntele Rosu**	10.69	8	P		**Pn**	02 55 01.2	-4.0	
	comp=N,0.1nm,0.3s,baz=155,slow=7.3,SNR=5.4								
MLR	**Muntele Rosu**	10.69	8	⇓P		Pn	02 54 56.8	-8.3	
MLR	**Muntele Rosu**	10.69	8	⇓P		Pn	02 54 56.8	-8.3	
HRFI	**Mount Harif**	10.72	114	Pn		**Pn**	02 55 03.7	-1.9	
HRFI				Sn		Sn	02 56 53.4	-11	
ZIRJ	**Zirje**	10.73	327	*e*Pn		**Pn**	02 55 05.7	+0.2	
ZIRJ				Sn		**Sn**	02 56 57.2	-7.3	
MBRI	**Mt Berech**	10.75	115	Pn		**Pn**	02 55 04.1	-2.0	
MBRI				Sn		Sn	02 56 54.1	-11	
MGRS	**Mrkonjic Grad**	10.77	334	*e*Pn		Pn	02 55 00.2	-5.9	
EIL	**Elat**	10.85	116	P		Pn	02 55 03.1	-4.1	
	comp=N,0.7nm,0.3s,baz=293,slow=2.6,SNR=13								
EIL				S		Sn	02 56 54.8	-13	
	comp=N,1.9nm,0.3s,baz=192,slow=5.9,SNR=3.8								
EIL	**Elat**	10.85	116	Pn		**Pn**	02 55 05.0	-2.3	
MORI	**Morici**	10.87	328	*i* Pn		**Pn**	02 55 07.4	0.0	
AQU	**L'Aquila**	10.96	316	P		**Pn**	02 55 08.7	-0.1	
AQU	**L'Aquila**	10.96	316			**Pn**	02 55 08.7	-0.1	
BLY	**Banja Luka**	11.02	335	*e*Pn		Pn	02 55 03.2	-6.3	
VRI	**Vrincioaia**	11.16	11	⇓P		Pn	02 54 58.6	-13	
VRI	**Vrincioaia**	11.16	11	⇓P		Pn	02 54 58.6	-13	
ASF	**Jabal al Asfar**	11.33	100	P		**Pn**	02 55 10.2	-3.8	
	comp=N,0.3nm,0.3s,baz=310,slow=1.7,SNR=2.6								
ASF				S		Sn	02 57 09.5	-10	
	comp=N,0.2nm,0.3s,baz=288,slow=18,SNR=1.4								
MORH	**Mrgy, Hungar**	11.92	343	*e*Pn		**Pn**	02 55 20.8	-1.0	
CRES	**Cresnjev**	12.57	332	*e*Pn		**Pn**	02 55 29.8	-1.0	
CEY	**Cerknica**	12.91	330	*e*Pn		**Pn**	02 55 34.4	-1.0	
SOKA	**Soboth**	13.45	333	*i* Pn		**Pn**	02 55 45.2	+2.4	
	comp=N,1.7nm,0.2s								
OBKA	**Obir**	13.49	332	*i* Pn		**Pn**	02 55 46.1	+2.7	
	comp=N,0.9nm,0.3s								
ARSA	**Arzberg**	13.77	336	*i* Pn		**Pn**	02 55 48.4	+1.3	
	comp=N,0.7nm,0.2s								
VYHS	**Vyhne**	14.03	346	*e*P		**P**	02 56 00.1	+1.9	
VYHS	**Vyhne**	14.03	346	*e*PN		**P**	02 56 00.1	+1.9	
CONA	**Conrad Observa**	14.26	338	*i* P		**P**	02 56 03.7	+2.9	
	comp=N,0.3nm,0.3s								
CTI	**Castel Tesino**	14.40	324	P		**Pn**	02 55 57.1	+1.3	
CTI	**Castel Tesino**	14.40	324			**Pn**	02 55 57.1	+1.3	
KBA	**Koelnbreinsper**	14.43	330	*i* Pn		**P**	02 55 60.0	-2.9	
	comp=N,0.4nm,0.3s								
ABTA	**Abfaltersbach**	14.52	328	*i* Pn		**P**	02 56 07.2	+3.5	
	comp=N,14nm,0.8s,SNR=9.3								
MOA	**Molln**	14.72	334	*i* P		**P**	02 56 08.7	+2.8	
	comp=N,3.1nm,0.4s								
VRAC	**Vranov**	15.30	342	P		**Pn**	02 56 09.5	+1.7	
	comp=N,0.6nm,0.3s,baz=145,slow=10,SNR=7.4								
VRAC	**Vranov**	15.30	342	*e*P		**P**	02 56 14.2	+1.9	
WTTA	**Wattenberg**	15.30	327	*i* Pn		**P**	02 56 17.0	+4.4	
	comp=N,2.5nm,0.5s,SNR=7.0								
WATA	**Walderalm**	15.38	327	*i* Pn		**P**	02 56 17.9	+4.5	
	comp=N,5.8nm,0.4s								
SQTA	**Sankt Quirin**	15.46	326	*i* P		**P**	02 56 17.8	+3.6	
	comp=N,6.7nm,0.6s,SNR=6.0								
FUORN	**Ofenpass-Fuorn**	15.48	323			**Pn**	02 56 12.9	+2.5	
FUORN				IAmb		IAmb	02 56 19.6		
	comp=Z,8.7nm,0.8s								
MORC	**Moravsky Berou**	15.52	345	*e*P		**P**	02 56 17.1	+2.4	
FETA	**Feichten**	15.54	325	*i* P		**P**	02 56 19.1	+4.0	
	comp=Z,5.4nm,0.6s,SNR=12								
TREC	**Trest**	15.59	340	*e*P		**P**	02 56 17.2	+1.7	
TREC	**Trest**	15.59	340	*e*P		**P**	02 56 17.2	+1.7	
MOTA	**Moosalm**	15.60	326	*i* P		**P**	02 56 19.1	+3.3	
	comp=Z,6.6nm,0.8s,SNR=6.1								
GEC2	**GERESS Array S**	15.76	335	P		**Pn**	02 56 15.9	+2.1	
GEC2				IAmb		IAmb	02 56 21.0		
	comp=Z,6.3nm,0.7s								
GERES	**GERESS Array B**	15.76	335	P		**Pn**	02 56 14.8	+1.0	
	comp=Z,0.1nm,0.3s,baz=146,slow=14,SNR=3.3								
GERES				LR		LR	03 03 45.1		
	comp=Z,32nm,18.6s,baz=138,slow=42								
RETA	**Reutte**	15.87	326	*i* P		**P**	02 56 22.7	+4.1	
	comp=Z,2.2nm,0.3s								
KRLC	**Kraliky**	15.97	344	*e*P		**P**	02 56 21.3	+1.6	
KRLC	**Kraliky**	15.97	344	*e*P		**P**	02 56 21.3	+1.6	
KHC	**Kasperske Hory**	16.05	335	*e*P		**P**	02 56 23.2	+2.6	
KHC	**Kasperske Hory**	16.05	335	*e*P		**P**	02 56 23.2	+2.6	
DAVA	**Damuels**	16.14	324	*i* P		**P**	02 56 25.1	+3.3	
	comp=Z,4.9nm,0.6s								
AKASG	**Malin Array Be**	16.27	13	P		**Pn**	02 56 20.9	+0.7	
	comp=Z,1.0nm,0.3s,baz=208,slow=9.8,SNR=4.3								
AKASG	**Malin Array Be**	16.27	13	*i* P		**P**	02 56 23.5	+0.6	
AKASG				pmax		pmax			
	comp=Z,7.0nm,0.5s								
DPC	**Dobruska-Polom**	16.33	343	*e*P		**P**	02 56 25.5	+1.7	
DPC	**Dobruska-Polom**	16.33	343	*e*P		**P**	02 56 25.5	+1.7	
PRU	**Pruhonice**	16.49	339	*e*P		**P**	02 56 26.8	+1.4	
PRU	**Pruhonice**	16.49	339	*e*P		**P**	02 56 26.8	+1.4	
SENIN	**Lac Senin/Sane**	16.87	318	Pn		**P**	02 56 31.2	+1.2	
NEY	**Neytrino**	16.90	55	*i* P		**P**	02 56 31.1	+0.8	
KIV	**Kislovodsk**	17.17	53	⇑*i*P		**P**	02 56 34.7	+1.6	
KIV				*e*S		**S**	02 59 48.3	-2.1	
KIV				pmax		pmax			
	comp=Z,10.0nm,0.7s								
KIV				MLR		MLR			
	comp=Z,29nm,16.0s								
KIV	**Kislovodsk**	17.17	53	P		**P**	02 56 32.2	-0.9	
KIV				IAmb		IAmb	02 56 35.4		
	comp=Z,9.6nm,0.7s								
KVAR	**Kislovodsk Arr**	17.17	53	P		**Pn**	02 56 31.4	-0.4	
	baz=270,slow=20,SNR=1.5								
KBZ	**Khabaz**	17.21	54	P		**Pn**	02 56 31.1	-1.1	
	comp=Z,0.1nm,0.3s,baz=231,slow=1.5,SNR=3.7								
KBZ				LR		LR	03 04 38.5		
	comp=Z,46nm,21.1s,baz=266,slow=42								
KBZ	**Khabaz**	17.21	54	*ce*P		**P**	02 56 35.4	+2.0	
KBZ				pmax		pmax			
	comp=Z,6.0nm,0.8s								
BRG	**Berggiesshubel**	17.45	339	*e*(P)		**P**	02 56 37.8	+1.8	
	comp=Z,1.8nm,0.8s								
BRG	**Berggiesshubel**	17.45	339	*e*P		**P**	02 56 37.8	+1.8	
BRG				pmax		pmax			
	comp=Z,2.0nm,0.8s								
BFO	**Black Forest**	17.61	324	P		**P**	02 56 39.0	+1.1	
BFO				pmax		pmax			
	comp=Z,4.0nm,0.6s								
BFO	**Black Forest**	17.61	324	P		**P**	02 56 39.0	+1.1	
CLL	**Collm**	18.11	338	*i* P		**P**	02 56 46.0	+2.6	
	comp=Z,11nm,1.1s								
CLL	**Collm**	18.11	338	*i* P		**P**	02 56 46.0	+2.6	
CLL				pmax		pmax			
	comp=Z,11nm,1.1s								
CLL	**Collm**	18.11	338			**P**	02 56 44.9	+1.5	
CLL				IAmb		IAmb	02 56 48.0		
	comp=Z,9.7nm,1.1s								
WLF	**Walferdange**	19.57	324	P		**Pn**	02 57 02.6	+1.8	
WLF				pmax		pmax			
	comp=Z,11nm,0.9s								
WLF	**Walferdange**	19.57	324	P		**Pn**	02 57 02.6	+1.8	
WLF				IAmb		IAmb	02 57 06.1		
	comp=Z,11nm,0.9s								
VSR	**Storozhevoye**	19.74	30	*i* P		**Pn**	02 57 04.9	+2.1	
VSR				pmax		pmax			
	comp=Z,11nm,0.9s								
BSD	**Bornholm Skovb**	21.09	346	*i* P		**P**	02 57 14.7	-1.1	
BSD	**Bornholm Skovb**	21.09	346	*i* P		**P**	02 57 14.7	-1.1	
OBN	**Obninsk**	22.06	20	*ce*P		**P**	02 57 27.5	+1.3	
OBN				pmax		pmax			
	comp=Z,9.0nm,0.5s								
OBN				MLR		MLR			
	comp=Z,37nm,16.0s								
ESDC	**Sonseca Array**	22.49	290	P		**P**	02 57 32.6	+1.6	
	comp=Z,1.9nm,0.7s,baz=82,slow=9.5,SNR=17								
PAB	**San Pablo**	22.78	290	P		**P**	02 57 37.2	+3.1	
PAB				pmax		pmax			
	comp=Z,4.0nm,1.1s								
PAB	**San Pablo**	22.78	290	P		**P**	02 57 37.2	+3.1	
HFS	**Hagfors**	26.05	349	P		**P**	02 58 04.7	+0.2	
	comp=Z,6.9nm,0.5s,baz=148,slow=12,SNR=59								
FINES	**FINESS Array B**	26.58	3	P		**P**	02 58 08.5	-0.7	
	comp=Z,0.9nm,0.4s,baz=170,slow=11,SNR=12								
FINES				PcP		**PcP**	03 01 33.2	+0.4	
	comp=Z,0.8nm,0.4s,baz=172,slow=1.0,SNR=11								
FINES				LR		LR	03 10 01.3		
	comp=Z,36nm,18.9s,baz=182,slow=39								
NB2	**NORSAR Subarra**	27.34	347	P		**P**	02 58 16.2	+0.1	
	comp=Z,1.4nm,0.5s,baz=156,slow=9.3								
NOA	**NORSAR Array B**	27.34	347	P		**P**	02 58 16.4	+0.3	
	comp=Z,1.6nm,0.5s,baz=151,slow=9.4,SNR=10								
NOA				LR		LR	03 11 28.4		
	comp=Z,29nm,18.1s,baz=165,slow=42								
NBO00	**NORSAR Array S**	27.41	346	P		**P**	02 58 17.8	+1.0	
NBO00				IAmb		IAmb	02 58 17.9		
	comp=Z,4.7nm,0.6s								
EKA	**Eskdalemuir Ar**	27.56	326	P		**P**	02 58 18.9	+0.8	
	comp=Z,0.8nm,0.4s,baz=123,slow=8.5,SNR=22								
GEYT	**Alibeck**	27.74	74	P		**P**	02 58 19.3	-0.7	
	comp=Z,1.1nm,0.4s,baz=278,slow=11,SNR=3.2								
KLMR	**Klimovskoe**	27.87	17	*e*P		**P**	02 58 18.6	-2.2	
KLMR				pmax		pmax			
	comp=Z,5.0nm,0.7s								
KLMR	**Klimovskoe**	27.87	17	*e*P		**P**	02 58 18.7	-2.1	
KLMR				AMP			02 58 20.1		
	comp=Z,5.0nm,0.7s								
KIRV	**Kirov**	29.15	28	P		**P**	02 58 29.9	-2.3	
	comp=Z,8.7nm,0.5s,baz=186,slow=6.9,SNR=3.6								
AKTO	**Aktyubinsk**	29.27	47	P		**P**	02 58 31.9	-1.5	
	comp=Z,1.5nm,0.5s,baz=258,slow=9.0,SNR=5.0								
TOA0	**Torodi Ar. Sit**	29.45	228	P		**P**	02 58 36.4	+1.2	
TOA0				IAmb		IAmb	02 58 38.3		
	comp=Z,1.8nm,0.8s								
TORD	**Torodi Ar. Bea**	29.45	228	P		**P**	02 58 35.9	+0.6	
	comp=Z,1.2nm,0.5s,baz=32,slow=8.7,SNR=32								
TORD				ScP		**ScP**	03 05 17.7	-2.5	
	comp=Z,0.8nm,1.1s,baz=11,slow=1.5,SNR=2.6								
ARU	**Arti**	31.94	37	P		**P**	02 58 56.3	-0.6	
	comp=Z,1.6nm,0.2s,baz=234,slow=16,SNR=3.7								
ARU	**Arti**	31.94	37	*i* P		**P**	02 58 57.2	+0.3	
ARU				pmax		pmax			
	comp=Z,2.0nm,0.8s								
ARU	**Arti**	31.94	37	IAmb		IAmb	02 58 57.1		
	comp=Z,3.6nm,0.6s								
ARCES	**ARCESS Array B**	34.68	1	P		**P**	02 59 19.6	-1.0	
	comp=Z,1.7nm,0.7s,baz=186,slow=8.5,SNR=8.3								
ARCES				PcP		**PcP**	03 01 53.9	-0.1	
	comp=Z,1.2nm,0.6s,baz=176,slow=1.9,SNR=5.4								
ARCES				LR		LR	03 14 34.6		
	comp=Z,36nm,21.5s,baz=306,slow=38								
KK31	**Karatay Array**	36.86	63	P		**P**	02 59 40.4	+0.8	
KK31				pmax		pmax			
	comp=Z,5.0nm,0.9s								
KK31	**Karatay Array**	36.86	63	P		**P**	02 59 40.4	+0.8	
BRVK	**Borovoye**	37.30	46	*ce*P		**P**	02 59 43.8	+0.6	
BRVK				pmax		pmax			
	comp=Z,2.0nm,0.6s								
BVAR	**Borovoye Array**	37.36	46	P		**P**	02 59 43.7	-0.1	
	comp=Z,1.4nm,0.3s,baz=257,slow=5.9,SNR=9.9								
DBIC	**Dimbokro**	38.51	230	P		**P**	02 59 54.5	+0.7	
	comp=Z,9.9nm,1.2s,baz=11,slow=10,SNR=4.1								
AAK	**Ala-Archa**	39.81	63	*ce*P		**P**	03 00 06.4	+1.7	
AAK				pmax		pmax			
	comp=Z,4.0nm,1.3s								
AAK	**Ala-Archa**	39.81	63	P		**P**	03 00 06.2	+1.5	
AAK				IAmb		IAmb	03 00 06.3		
	comp=Z,2.7nm,0.6s								
KURBB	**Kurchatov Arra**	42.18	51	P		**P**	03 00 23.8	0.0	
	comp=Z,7.1nm,0.4s,baz=274,slow=8.6,SNR=116								
KURK	**Kurchatov**	42.24	51	*ce*P		**P**	03 00 24.4	+0.1	
KURK				pmax		pmax			
	comp=Z,13nm,1.7s								
KURK	**Kurchatov**	42.24	51	P		**P**	03 00 24.2	-0.1	
MK31	**Makanchi Array**	44.88	56	P		**P**	03 00 46.0	+0.3	
MK31				pmax		pmax			
	comp=Z,7.0nm,0.5s								
MK31	**Makanchi Array**	44.88	56	P		**P**	03 00 46.0	+0.3	
MKAR	**Makanchi Array**	44.88	56	P		**P**	03 00 45.9	+0.2	
	comp=Z,4.9nm,0.3s,baz=267,slow=7.9,SNR=101								
MKAR				PcP		**PcP**	03 02 27.4	+0.4	
	comp=Z,0.3nm,0.5s,baz=265,slow=3.8,SNR=1.6								
MKAR	**Makanchi Array**	44.88	56	*i* P		**P**	03 00 46.0	+0.3	
MKAR				pmax		pmax			
	comp=Z,5.0nm,0.3s								
ZAA0	**Zalesovo Array**	46.01	46	P		**P**	03 00 53.7	-0.8	
ZALV	**Zalesovo Beam**	46.01	46	P		**P**	03 00 54.0	-0.5	
	comp=Z,4.2nm,0.4s,baz=267,slow=9.3,SNR=18								
SONM	**Songino Array**	60.54	50	P		**P**	03 02 41.5	-0.1	
	comp=Z,1.7nm,0.8s,baz=287,slow=8.0,SNR=4.6								
ULN	**Ulaanbaatar**	60.94	50	*ce*P		**P**	03 02 45.7	+1.4	
ULN				pmax		pmax			
	comp=Z,5.0nm,2.5s								
TIXI	**Tiksi**	61.80	20	P		**P**	03 02 49.4	-0.1	
	comp=Z,1.6nm,0.6s,baz=308,slow=3.2,SNR=4.4								
TIXI	**Tiksi**	61.80	20	*ce*P		**P**	03 02 49.7	+0.2	
TIXI				pmax		pmax			
	comp=Z,7.0nm,2.5s								
SCHQ	**Schefferville**	62.60	319	P		**P**	03 02 56.6	+1.5	
	comp=Z,1.7nm,0.4s,baz=71,slow=5.7,SNR=12								
SCHQ	**Schefferville**	62.60	319	IAmb		IAmb	03 02 56.9		
	comp=Z,2.4nm,0.9s								
BOSA	**Boshof**	63.22	178	P		**P**	03 03 01.4	+1.9	
	comp=Z,2.5nm,0.8s,baz=344,slow=7.4,SNR=2.4								
CMAR	**Chiang Mai Arr**	67.77	83	P		**P**	03 03 29.4	+0.2	
	comp=Z,0.9nm,0.3s,baz=354,slow=12,SNR=1.2								
BILL	**Bilibino**	73.58	14	⇑*e*P		**P**	03 04 02.2	-1.6	
BILL				*e*			03 04 21.8		
BILL				*e*			03 06 45.5		
BILL				*e*S		**SKiKP**	03 13 37.2	+5.7	
BILL				pmax		pmax			
	comp=Z,2.0nm,1.1s								
SEY	**Seymchan**	74.22	22	P		**P**	03 04 07.9	+0.3	
	comp=Z,0.9nm,0.4s,baz=337,slow=23,SNR=2.2								
KLR	**Kul'dur**	74.71	40	*i* P		**P**	03 04 10.7	0.0	
KLR				pmax		pmax			
	comp=Z,2.0nm,1.0s								
YKA	**Yellowknife Ar**	77.30	342	P		**P**	03 04 26.2	+0.9	
	comp=Z,0.5nm,0.4s,baz=35,slow=5.3,SNR=21								
USRK	**Ussuriysk Ar.**	77.83	44	P		**P**	03 04 28.3	-0.3	
	comp=Z,1.1nm,0.4s,baz=302,slow=4.3,SNR=7.1								
KSRS	**Korea Array**	79.35	52	P		**P**	03 04 36.1	-1.0	
	comp=Z,1.5nm,0.6s,baz=302,slow=3.4,SNR=4.1								
KSRS				LR		LR	03 45 50.5		
	comp=Z,26nm,18.0s,baz=156,slow=40								
ILAR	**Eielson Array**	80.36	356	P		**P**	03 04 42.9	+0.8	
	comp=Z,0.5nm,0.8s,baz=335,slow=4.3,SNR=11								
WRA	**Warramunga Arr**	117.73	96	PKP		**PKPdf**	03 11 17.1	-0.6	
	comp=Z,0.4nm,0.5s,baz=307,slow=1.9,SNR=1.2								
ASAR	**Alice Springs**	119.17	100	PKP		**PKPdf**	03 11 20.1	-0.3	
	comp=Z,0.5nm,0.7s,baz=322,slow=1.5,SNR=5.0								

MEX ***26*** *03:23:38.2±0.3, 31.50N×114.00W, h4km±21km, MD3.8*
ECX 26 03:23:37.8±0.4, 29.96N×116.28W, h20km±6km, MD3.0,
ML3.2, 1C-3D, Off west coast of Baja California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SQX	**San Quintin**	0.71	29	*e*P	Pb	03 23 50.4	-1.1
SQX				*e*S	Sb	03 24 00.4	-0.4
SPX	**San Pedro Mart**	1.28	33	*e*P	Pn	03 23 59.9	-1.0
SPX				*e*S	Sb	03 24 17.0	-0.7
SPX				⇓*e*		03 24 17.9	
SPX				IAML		03 24 17.9	
	comp=E,318nm,0.4s						
SPX				IAML		03 24 19.0	
	comp=N,437nm,0.3s						
SPX				⇓*e*		03 24 19.0	
SPX	**San Pedro Mart**	1.28	33	*e*P	Pn	03 23 59.9	-1.0
SPX				*i* S	Sb	03 24 17.0	-0.7
SPIG	**San Pedro Mart**	1.29	33	*e*P	Pn	03 23 59.8	-1.3
SPIG				*e*S	Sn	03 24 17.0	-0.9
SPIG	**San Pedro Mart**	1.29	33	*e*P	Pn	03 23 60.0	-1.1
SPIG				*i* S	Sn	03 24 16.9	-1.1
VTX	**Valle De La Tr**	1.49	16	*e*P	Pn	03 24 03.0	-0.5
VTX				*e*S	Sn	03 24 22.6	+0.1
SFX	**San Felipe**	1.64	48	*e*P	Pn	03 24 05.4	-0.1
SFX				*e*S	Sn	03 24 26.4	+0.5
ECBX	**El Chinero**	1.84	35	*e*P	Pb	03 24 09.6	-1.2
ECBX				*e*S	Sb	03 24 33.6	+0.2
ESJX	**Sierra Juarez**	2.06	8	*e*P	Pn	03 24 11.8	+0.3
ESJX				*e*S	Sn	03 24 38.1	+1.4
ESJX				IAML		03 24 42.1	
	comp=E,188nm,0.1s						
ESJX				⇓*e*		03 24 42.1	
ESJX				⇓*e*		03 24 42.8	
ESJX				IAML		03 24 42.8	
	comp=N,100nm,0.1s						
CBX	**Cerro Bola**	2.37	352	*e*P	Pn	03 24 15.5	-0.2
CBX	**Cerro Bola**	2.37	352	*e*P	Pn	03 24 15.2	-0.5
TJIG	**Tijuana**	2.49	352	*i* P	Pn	03 24 16.3	-0.9

NEIC ***26*** *03:43:42.9±3.9, 16.97N±0.10×101.34W±0.07,*
h33km±16km, Error ellipse: s-maj=15.3km s-min=6.9km
az=208.0
MEX ***26*** *03:43:43.8±0.7, 17.20N×101.35W, h5km, MD4.0*
ISC 26 03:43:41.3±1.2, 17.21N±0.06×101.41W±0.04, h25km, n27,
σ1.950/34, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	1.11	98	*e*P	**Pn**	**03 44 00.3**	**-0.9**
CAIG	**El Cayaco**	1.11	98		**Pn**	**03 44 00.3**	**-0.9**
ARIG	**Puente Sto Nin**	1.47	44	*i* P	**Pn**	**03 44 07.3**	**+1.0**
ARIG				*e*S	**Sb**	**03 44 25.1**	**-1.2**
ARIG	**Puente Sto Nin**	1.47	44		**Pn**	**03 44 07.3**	**+1.0**
ARIG					**Sb**	**03 44 25.1**	**-1.2**
ACP2	**Acapulco**	1.50	103	*e*P	**Pn**	**03 44 07.4**	**+0.7**
ACP2	**Acapulco**	1.50	103		**Pn**	**03 44 07.4**	**+0.7**
MEIG	**Mezcala**	1.85	67	*e*P	**Pn**	**03 44 12.5**	**+

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KRBG	**Karabiga-Canak**	**0.91**	**89**	PG	**Pg**	**04 08 37.1**	**-0.6**
THAS	**Thassos island**	**1.08**	**282**	P	**Pb**	**04 08 39.8**	**-0.8**
THAS				S	**Sn**	**04 08 55.5**	**0.0**
	comp=E,980nm,0.4s						
THAS	**Thassos island**	**1.08**	**282**	P	**Pb**	**04 08 40.1**	**-0.5**
THAS				S	**Sb**	**04 08 54.0**	**-0.6**
THAS				AML	AML	04 08 56.8	
	comp=N,2452μm,0.5s						
THAS				AML	AML	04 08 59.8	
	comp=E,1588μm,0.3s						
KNL	**Balıkesir**	**1.09**	**95**	*i* P	**Pb**	**04 08 40.2**	**-0.5**
KNL				*i* S	**Sg**	**04 08 55.8**	**+0.4**
KNL				IAML		04 08 58.0	
	comp=N,815nm,0.6s						
KNL				IAML		04 08 58.0	
	comp=E,955nm,0.4s						
PRK	**Paraskevi**	**1.14**	**174**	P	**Pg**	**04 08 42.3**	**+0.2**
PRK				S	**Sn**	**04 08 58.2**	**+1.2**
	comp=E,5μm,0.6s						
PRK	**Paraskevi**	**1.14**	**174**	P	**Pg**	**04 08 42.4**	**+0.2**
PRK				S	**Sn**	**04 08 57.8**	**+0.8**
PRK				AML	AML	04 09 01.2	
	comp=N,15971μm,0.8s						
PRK				AML	AML	04 09 03.8	
	comp=E,5207μm,0.8s						
MRMT	**Marmara Adasi**	**1.16**	**79**	PN	**Pb**	**04 08 41.3**	**-0.6**
AYVA	**Ayvalik**	**1.16**	**157**	*i* P	**Pb**	**04 08 41.9**	**0.0**
AYVA				*i* S	**Sb**	**04 08 57.5**	**+0.6**
AYVA				IAML		04 08 59.0	
	comp=E,2μm,0.4s						
SIGR	**SIGRI**	**1.19**	**190**	P	**Pn**	**04 08 41.6**	**-0.6**
SIGR				S	**Sg**	**04 08 58.3**	**-0.2**
	comp=E,2μm,0.4s						
SIGR	**SIGRI**	**1.19**	**190**	P	**Pn**	**04 08 41.9**	**-0.3**
SIGR				S	**Sn**	**04 08 58.7**	**+0.6**
SIGR				AML	AML	04 08 59.5	
	comp=N,5714μm,0.5s						
SIGR				AML	AML	04 09 00.2	
	comp=E,3588μm,0.3s						
SIGR	**SIGRI**	**1.19**	**190**	PN	**Pn**	**04 08 41.6**	**-0.6**
EFSA	**Agios Efstrati**	**1.20**	**226**	P	**Pb**	**04 08 42.7**	**+0.1**
EFSA				AML	AML	04 09 01.3	
	comp=N,4634μm,0.6s						
EFSA				AML	AML	04 09 02.1	
	comp=E,2645μm,0.3s						
TKR	**Tekirdag**	**1.24**	**60**	PN	**Pn**	**04 08 42.9**	**-0.1**
GONE	**Gonen-Balikesi**	**1.25**	**105**	PN	**Pn**	**04 08 43.2**	**0.0**
BALY	**Balya**	**1.33**	**118**	*i* P	**Pb**	**04 08 45.0**	**+0.2**
BALY				*i* S	**Sb**	**04 09 01.5**	**-0.1**
BALY				IAML		04 09 04.0	
	comp=E,393nm,0.6s						
BALY				IAML		04 09 07.0	
	comp=N,494nm,0.3s						
EDC	**Edincik**	**1.34**	**91**	PN	**Pn**	**04 08 43.9**	**-0.5**
KAVA	**Kavala**	**1.36**	**297**	P	**Pn**	**04 08 44.2**	**-0.4**
KAVA				S	**Sn**	**04 09 02.8**	**+0.4**
	comp=N,485nm,0.3s						
KAVA	**Kavala**	**1.36**	**297**	P	**Pn**	**04 08 44.4**	**-0.2**
KAVA				S	**Sb**	**04 09 02.1**	**-0.4**
KAVA				AML	AML	04 09 06.2	
	comp=E,935μm,0.3s						
KAVA				AML	AML	04 09 07.1	
	comp=N,980μm,0.2s						
KDZ	**Kurdzhali**	**1.37**	**338**	P	**Pn**	**04 08 45.2**	**+0.4**
KDZ	**Kurdzhali**	**1.37**	**338**	PN	**Pn**	**04 08 44.9**	**+0.1**
KVLA	**Kavala**	**1.42**	**293**	P	**Pn**	**04 08 45.2**	**-0.2**
CRLT	**Corlu**	**1.44**	**58**	PN	**Pn**	**04 08 45.9**	**+0.1**
DKL	**Dikili**	**1.45**	**155**	PN	**Pn**	**04 08 46.1**	**+0.3**
EDRB	**Edirne**	**1.54**	**18**	P	**Pn**	**04 08 46.5**	**-0.6**
EDRB				S	**Sb**	**04 09 07.8**	**+0.1**
	comp=N,480nm,0.4s						
EDRB	**Edirne**	**1.54**	**18**	PN	**Pn**	**04 08 46.7**	**-0.4**
BOTS	**Marmara Eregli**	**1.55**	**66**	PN	**Pn**	**04 08 47.5**	**+0.3**
BALB	**Balikesir**	**1.55**	**118**	PN	**Pn**	**04 08 46.9**	**-0.3**
KIRK	**Kırklareli**	**1.58**	**28**	*i* P	**Pb**	**04 08 49.0**	**-0.2**
KIRK				IAML		04 09 12.0	
	comp=N,131nm,0.4s						
STEP	**BALIKESIR_Sava**	**1.60**	**129**	*i* P	**Pn**	**04 08 48.6**	**+0.7**
STEP				IAML		04 09 12.0	
	comp=E,367nm,0.8s						
STEP				IAML		04 09 22.0	
	comp=N,311nm,0.8s						
ZEDA	**zmir-Bergama**	**1.60**	**152**	*i* P	**Pn**	**04 08 48.6**	**+0.7**
ZEDA				IAML		04 09 12.0	
	comp=N,867nm,0.3s						
ZEDA				IAML		04 09 12.0	
	comp=E,505nm,0.5s						
OUR	**Ouranopolis**	**1.62**	**269**	P	**Pn**	**04 08 47.5**	**-0.7**
OUR				S	**Sb**	**04 09 09.9**	**-0.3**
	comp=E,510nm,0.3s						
OUR	**Ouranopolis**	**1.62**	**269**	P	**Pn**	**04 08 47.6**	**-0.7**
OUR				AML	AML	04 09 16.2	
	comp=N,932μm,0.5s						
OUR				AML	AML	04 09 16.5	
	comp=E,1061μm,0.3s						
OUR	**Ouranopolis**	**1.62**	**269**	PN	**Pn**	**04 08 47.7**	**-0.6**
RZN	**Rozhen**	**1.68**	**322**	P	**Pn**	**04 08 49.5**	**+0.3**
PSRA	**Psara**	**1.89**	**193**	P	**Pn**	**04 08 52.7**	**+0.8**
PAIG	**Paliouri**	**1.92**	**257**	P	**Pn**	**04 08 51.4**	**-0.8**
PAIG				AML	AML	04 09 31.1	
	comp=E,178μm,0.7s						
PAIG				AML	AML	04 09 31.8	
	comp=N,264μm,0.7s						
SKY	**Skiros Island**	**1.93**	**219**	P	**Pn**	**04 08 51.9**	**-0.5**
SKY				AML	AML	04 09 23.1	
	comp=E,963μm,0.2s						
SKY				AML	AML	04 09 24.4	
	comp=N,805μm,0.2s						
DURS	**Dursunbey**	**1.98**	**113**	*i* P	**Pn**	**04 08 54.6**	**+1.4**
DURS				IAML		04 09 24.0	
	comp=N,226nm,0.5s						
DURS				IAML		04 09 24.0	
	comp=E,269nm,0.4s						
CHOS	**Chios island**	**2.00**	**181**	P	**Pn**	**04 08 53.4**	**0.0**
CHOS				S	**Sn**	**04 09 18.2**	**0.0**
	comp=E,470nm,0.5s						
CHOS	**Chios island**	**2.00**	**181**	P	**Pn**	**04 08 53.6**	**+0.2**
CHOS				AML	AML	04 09 29.1	
	comp=E,942μm,0.4s						
CHOS				AML	AML	04 09 30.1	
	comp=N,698μm,0.5s						
PLG	**Polygyros**	**2.03**	**271**	P	**Pn**	**04 08 53.5**	**-0.4**
PLG				S	**Sn**	**04 09 18.9**	**-0.2**
	comp=N,190nm,0.4s						
PLG	**Polygyros**	**2.03**	**271**	P	**Pn**	**04 08 53.6**	**-0.4**
PLG				AML	AML	04 09 28.4	
	comp=E,403μm,0.3s						
PLG				AML	AML	04 09 36.7	
	comp=N,352μm,0.5s						
SRS	**Serrai**	**2.05**	**292**	P	**Pn**	**04 08 53.7**	**-0.4**
SRS	**Serrai**	**2.05**	**292**	P	**Pn**	**04 08 53.9**	**-0.2**
SRS				AML	AML	04 09 35.9	
	comp=N,543μm,0.5s						
SRS				AML	AML	04 09 36.4	
	comp=E,758μm,0.6s						
URLA	**Izmir**	**2.06**	**169**	*i* P	**Pn**	**04 08 54.5**	**+0.3**
AOS	**Alonnisos**	**2.10**	**236**	P	**Pn**	**04 08 54.0**	**-0.8**
AOS				S	**Sn**	**04 09 21.7**	**+1.0**
	comp=E,268nm,0.6s						
AOS	**Alonnisos**	**2.10**	**236**	P	**Pn**	**04 08 54.1**	**-0.8**
AOS				AML	AML	04 09 33.7	
	comp=E,433μm,0.7s						
AOS				AML	AML	04 09 35.6	
	comp=N,589μm,0.5s						
JMB	**Yambol**	**2.11**	**10**	P	**Pb**	**04 08 58.1**	**0.0**
BLCB	**Balcova**	**2.12**	**160**	P	**Pn**	**04 08 55.0**	**-0.1**
MMB	**Musomiste**	**2.17**	**305**	P	**Pn**	**04 08 55.9**	**+0.1**
HORT	**Hortiatis**	**2.30**	**276**	P	**Pn**	**04 08 57.4**	**-0.3**
HORT				AML	AML	04 09 36.0	
	comp=E,202μm,0.4s						
HORT				AML	AML	04 09 45.4	
	comp=N,190μm,0.4s						
KYMI	**Kymi, Euboea I**	**2.34**	**222**	P	**Pn**	**04 08 57.4**	**-0.7**
SKIA	**Skiathos**	**2.37**	**240**	P	**Pn**	**04 08 57.4**	**-1.1**
SKIA				AML	AML	04 09 39.7	
	comp=E,740μm,0.5s						
SKIA				AML	AML	04 09 40.2	
	comp=N,621μm,0.7s						
DGB	**zmir**	**2.41**	**165**	*i* P	**Pn**	**04 08 59.6**	**+0.7**
DEMI	**Demirci**	**2.42**	**123**	*i* P	**Pn**	**04 09 00.7**	**+1.5**
DEMI				IAML		04 09 37.0	
	comp=N,117nm,0.3s						
DEMI				IAML		04 09 37.0	
	comp=E,99nm,0.3s						
XOR	**Xorichti**	**2.46**	**247**	P	**Pn**	**04 08 58.7**	**-1.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NEO	**Neokhori**	**2.47**	**245**	P	**Pn**	**04 08 59.0**	**-0.9**
ELND	**Elena**	**2.55**	**356**	⇓P	**Pn**	**04 09 02.5**	**+1.6**
KNT	**Kendrikon**	**2.56**	**289**	P	**Pn**	**04 09 01.6**	**+0.5**
MRKA	**Markates**	**2.57**	**230**	P	**Pn**	**04 09 00.7**	**-0.6**
PGB	**Panagyurishte**	**2.61**	**327**	P	**Pb**	**04 09 07.9**	**+1.2**
KARY	**Karystos**	**2.68**	**209**	P	**Pn**	**04 09 02.7**	**-0.1**
KKB	**Krupnik**	**2.72**	**304**	P	**Pn**	**04 09 03.6**	**+0.2**
SMG	**Samos**	**2.73**	**168**	P	**Pn**	**04 09 03.5**	**0.0**
SMG	**Samos**	**2.73**	**168**	P	**Pn**	**04 09 03.7**	**+0.2**
LIT	**Litokhoron**	**2.78**	**265**	P	**Pn**	**04 09 03.4**	**-0.8**
VAY	**Valandovo**	**2.84**	**290**	⇓*i*Pn	**Pn**	**04 09 06.0**	**+1.0**
VAY	**Valandovo**	**2.84**	**290**	⇓*i*Pn	**Pn**	**04 09 06.0**	**+1.0**
DION	**Dionisos Attik**	**2.86**	**217**	P	**Pn**	**04 09 04.5**	**-0.7**
LKR	**Lokris**	**2.96**	**235**	P	**Pn**	**04 09 06.2**	**-0.5**
VIL2	**Platees**	**3.09**	**226**	P	**Pn**	**04 09 08.0**	**-0.4**
VLY	**Voula,Athens**	**3.10**	**216**	P	**Pn**	**04 09 08.6**	**0.0**
VTS	**Vitosha**	**3.10**	**317**	P	**Pn**	**04 09 09.7**	**+0.9**
RAZG	**Razgrad**	**3.19**	**5**	⇑P	**Pn**	**04 09 11.2**	**+1.4**
PROD	**Prodromos**	**3.27**	**231**	P	**Pn**	**04 09 10.5**	**-0.4**
APE	**Apeiranthos**	**3.34**	**188**	P	**Pn**	**04 09 11.5**	**-0.4**
APE	**Apeiranthos**	**3.34**	**188**	⇑P	**Pn**	**04 09 11.6**	**-0.3**
MAKR	**Makrakomi, Fth**	**3.36**	**247**	P	**Pn**	**04 09 12.5**	**+0.4**
LTK	**Loutraki**	**3.39**	**227**	P	**Pn**	**04 09 12.4**	**-0.2**
LOUT	**Loutraki**	**3.41**	**227**	P	**Pn**	**04 09 12.9**	**0.0**
SERI	**Serifos**	**3.46**	**202**	P	**Pn**	**04 09 13.3**	**-0.2**
AMGA	**Amorgos Island**	**3.55**	**183**	P	**Pn**	**04 09 14.6**	**-0.1**
DID	**Didima**	**3.64**	**219**	P	**Pn**	**04 09 15.4**	**-0.6**
KALE	**Kalithea**	**3.66**	**238**	P	**Pn**	**04 09 16.1**	**-0.2**
IOSP	**Ios island**	**3.71**	**190**	P	**Pn**	**04 09 16.7**	**-0.3**
SGRR	**Singureni**	**3.84**	**359**	⇓P	**Pb**	**04 09 28.3**	**+0.8**
KLV	**Kalavryta, Ach**	**3.86**	**234**	P	**Pn**	**04 09 18.8**	**-0.3**
ANAF	**Anafi Island**	**4.03**	**184**	P	**Pn**	**04 09 21.2**	**-0.2**
TRIP	**Tripoli**	**4.13**	**228**	P	**Pn**	**04 09 23.2**	**+0.4**
TLBR	**Topalu**	**4.40**	**18**	⇓P	**Pn**	**04 09 22.9**	**-3.4**
ARR	**Arges**	**5.10**	**348**	⇓P	**Pn**	**04 09 37.6**	**+1.5**
MLR	**Muntele Rosu**	**5.11**	**359**	⇑P	**Pn**	**04 09 38.5**	**+2.2**
TLCR		**5.20**	**22**	⇓P	Pb	04 09 46.1	-4.6
HERR	**Herculane**	**5.25**	**330**	⇓P	**Pn**	**04 09 36.5**	**-1.7**
MDVR	**Moldovita**	**5.46**	**325**	⇑P	**Pn**	**04 09 40.8**	**-0.3**
PLOR	**Plostina**	**5.48**	**4**	⇑P	**Pn**	**04 09 43.6**	**+2.3**
VRI	**Vrincioaia**	**5.50**	**5**	⇓P	**Pn**	**04 09 42.2**	**+0.7**
GZR	**Gura Zlata**	**5.57**	**335**	⇑P	**Pn**	**04 09 42.8**	**+0.2**
TESR	**Tescani**	**6.14**	**3**	⇑P	**Pn**	**04 09 51.5**	**+1.2**
BZS	**Buzias**	**6.18**	**329**	⇑P	**Pn**	**04 09 50.9**	**+0.1**

*NEIC **26** 04:14:01.1±2.9, 7.42°S±0.06°×128.41°E±0.06°, h106km±5km, mb5.1/57, Error ellipse: s-maj=8.1km s-min=7.9km az=212.0*

*KLM **26** 04:14:02.0, 7.95°S×128.47°E, h30km, mb4.9*

*DJA **26** 04:14:05.4±0.2, 8°S±2°×12°8E±°, h116km±4km, M4.9/36, mb5.2/36, mB5.3/24, MLv5.2/15, Mw(mB)4.8/24*

*IDC **26** 04:14:05.6±1.8, 7.45°S×128.43°E, h137km±16km, mb4.4/18, mb1 4.5/21, mb1mx4.4/31, mbtmp4.9/21, MS3.4/9, Ms1 3.4/9, ms1mx3.1/29, Error ellipse: s-maj=15.4km s-min=9.4km az=94.0*

*GCMT **26** 04:14:05.1±0.4, 7.58°S±0.03°×128.32°E±0.03°, h134km±5km, MW4.8/76, Moment Tensor Solution. s9,c9; s76,c97; Duration: 0 Moment tensor: Scale 10^{16} Nm; M_{rr}1.10±.09; $M_{\theta\theta}$-1.12±.13; $M_{\phi\phi}$0.01±.12; $M_{r\theta}$-0.96±.08; $M_{\theta\phi}$-1.45±.12; $M_{\phi r}$0.62±.08; Best double couple: $M_0$2.15300×10^{16} NP1:ϕ_s21.00000°, δ52.00000°, λ32.00000°. NP2: ϕ_s270.00000°, δ66.00000°, λ137.00000°. Principal axes: T 2.1290, Plg47.0000°, Azm229.0000°; N 0.0410, Plg42.0000°, Azm66.0000°; P -2.1760, Plg9.0000°, Azm329.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 04:14:06.1±0.3, **7.59°S**±0.04°×**128.42°E**±0.04°, **h151**km, **n200**, σ**2.10°**/204, **mb4.8**/51, **6C-2D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.88**	**98**	P	**Pn**	**04 14 50.5**	**-1.4**
SAUI	**Saumlaki**	**2.88**	**98**		**Pn**	**04 14 51.1**	**-0.8**
SAUI				Sn	**Sn**	**04 15 22.0**	**-5.4**
BNDI	**Bandanaira**	**3.38**	**26**	P	**Pn**	**04 14 57.5**	**-0.9**
AAI	**Ambon**	**3.88**	**357**	P	**Pn**	**04 15 04.1**	**-0.8**
MSAI	**Masohi**	**4.24**	**7**	P	**Pn**	**04 15 09.6**	**0.0**
NLAI	**Namlea**	**4.52**	**343**	P	**Pn**	**04 15 14.1**	**+0.9**
SOEI	**Soe**	**4.64**	**242**	P	**Pn**	**04 15 14.2**	**-0.7**
SOEI	**Soe**	**4.64**	**242**	Pn	**Pn**	**04 15 13.9**	**-1.0**
BATI	**Baumata**	**5.38**	**241**	P	**Pn**	**04 15 24.0**	**-0.5**
	124nm,0.3s,baz=134,slow=2.4,SNR=78						
BATI				S	**Sn**	**04 16 22.3**	**-3.5**
	322nm,0.3s,baz=91,slow=22,SNR=37						
BATI	**Baumata**	**5.38**	**241**	P	**Pn**	**04 15 23.8**	**-0.7**
	6.3nm8μm514nm,0.8s						
MTN	**Manton Dam**	**5.86**	**153**	P	**Pn**	**04 15 28.6**	**-2.4**
	baz=5.8,SNR=907						
MTN				S	**Sn**	**04 16 33.5**	**-3.9**
	baz=5.8						
MTN	**Manton Dam**	**5.86**	**153**		**Pn**	**04 15 29.6**	**-1.4**
MTN					**Sn**	**04 16 31.6**	**-5.8**
FAKI	**Fak Fak**	**6.00**	**40**	P	**Pn**	**04 15 30.7**	**-2.2**
	0.6nm2μm116nm,0.7s						
FAKI	**Fak Fak**	**6.00**	**40**		**Pn**	**04 15 30.3**	**-2.5**
MMRI	**Maumere**	**6.21**	**260**	P	**Pn**	**04 15 35.0**	**-0.6**
	1.2nm7μm185nm,0.5s						
MMRI	**Maumere**	**6.21**	**260**		**Pn**	**04 15 33.7**	**-1.9**
KDU	**Kakadu**	**6.45**	**142**	P	**Pn**	**04 15 36.7**	**-2.1**
	baz=6.4,SNR=1000						
EDFI	**Ende, Flores**	**6.76**	**260**	P	**Pn**	**04 15 43.6**	**+0.5**
	0.5nm926nm65nm,0.8s						
LBMI	**Labuha**	**6.97**	**352**	P	**Pn**	**04 15 47.5**	**+1.8**
	0.9nm3μm274nm,1.0s						
SIJI	**Sorong**	**7.25**	**23**	P	**Pn**	**04 15 48.6**	**-0.9**
	15nm,0.3s,baz=27,slow=24,SNR=16						
SIJI				S	**Sn**	**04 17 05.4**	**-5.4**
	6.1nm,0.3s,baz=162,slow=19,SNR=8.6						
SIJI				LR	LR	04 19 10.0	
	comp=Z,234nm,19.2s,baz=127,slow=43						
KNRA	**Kununurra**	**8.05**	**178**	P	**Pn**	**04 15 57.5**	**-2.6**
	baz=8.0,SNR=446						
KNRA				S	**Sn**	**04 17 22.1**	**-7.7**
	baz=8.0						
KNRA	**Kununurra**	**8.05**	**178**		**Pn**	**04 15 57.8**	**-2.3**
KNRA					**Sn**	**04 17 23.5**	**-6.3**
BASI	**Baing, Sumba**	**8.18**	**251**	P	**Pn**	**04 15 59.2**	**-2.7**
	3μm185nm,0.7s						
RKPI	**Ransiki, Papua**	**8.33**	**44**	P	**Pn**	**04 16 03.3**	**-0.6**
TNTI	**Ternate**	**8.37**	**353**	P	**Pn**	**04 16 05.7**	**+1.2**
TNTI	**Ternate**	**8.37**	**353**	Pn	Pn	04 15 55.0	-9.5
BKSI	**Bulukumba**	**8.55**	**285**	P	**Pn**	**04 16 07.3**	**+0.4**
	48nm,0.9s						
LUWI	**Luwuk**	**8.60**	**319**	P	**Pn**	**04 16 07.8**	**+0.2**
	6μm359nm,1.1s						
LUWI	**Luwuk**	**8.60**	**319**	Pn	**Pn**	**04 16 02.9**	**-4.7**
BNSI	**Bone**	**8.86**	**290**	P	**Pn**	**04 16 13.7**	**+2.8**
	42nm,1.0s						
KAPI	**Kappang**	**8.99**	**286**	Pn	Pn	04 16 07.5	-5.3
WBSI	**Waikabubak, Su**	**9.16**	**256**	P	**Pn**	**04 16 15.2**	**+0.2**
	3μm314nm,0.6s						
KMSI	**Cibinong**	**9.24**	**331**	P	**Pn**	**04 16 18.5**	**+2.5**
	3μm296nm,0.7s						
APSI	**Ampana**	**9.47**	**314**	P	**Pn**	**04 16 22.1**	**+3.1**
	82nm,1.2s						
PLAI	**Plampang**	**10.61**	**263**	P	**Pn**	**04 16 32.7**	**-1.5**
	2μm142nm,0.6s						
FITZ	**Fitzroy Crossi**	**10.79**	**194**	P	**Pn**	**04 16 32.7**	**-3.8**
	baz=11,SNR=87						
FITZ	**Fitzroy Crossi**	**10.79**	**194**	P	**Pn**	**04 16 33.9**	**-2.7**
	14nm,0.3s,baz=30,slow=12,SNR=149						
FITZ				S	Sn	04 18 24.5	-11
	31nm,0.3s,baz=275,slow=22,SNR=14						
FITZ				LR	LR	04 21 54.1	
	comp=Z,138nm,18.1s,baz=32,slow=43						
FITZ	**Fitzroy Crossi**	**10.79**	**194**		**Pn**	**04 16 34.9**	**-1.6**
MPSI	**Mapaga**	**11.59**	**312**	P	**Pn**	**04 16 49.4**	**+2.4**
	656nm18nm,0.9s						
SMPI	**Sarmi**	**11.66**	**62**	P	**Pn**	**04 16 47.9**	**-0.1**
	14nm,0.6s						
JAY	**Jayapura**	**13.23**	**68**	P	**Pn**	**04 17 08.1**	**-0.2**
	1.5nm,0.3s,baz=220,slow=14,SNR=9.7						
JAY	**Jayapura**	**13.23**	**68**	P	**Pn**	**04 17 09.2**	**+0.9**
	8.9nm,0.6s						
WB0	**Warramunga Arr**	**13.42**	**155**		**Pn**	**04 17 08.0**	**-2.7**
WRAB	**Tennant Creek**	**13.55**	**156**		**Pn**	**04 17 09.6**	**-2.7**
WRA	**Warramunga Arr**	**13.55**	**156**	P	**Pn**	**04 17 08.3**	**-4.0**
	5.1nm,0.3s,baz=342,slow=13,SNR=347						
WRA				S	Sn	04 19 29.4	-13

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	14nm,0.3s,baz=327,slow=23,SNR=10						
WB2	**Warramunga Arr**	**13.56**	**156**	P	**Pn**	**04 17 09.6**	**-2.8**
	baz=14						
WB2	**Warramunga Arr**	**13.56**	**156**		**Pn**	**04 17 09.5**	**-2.9**
WR0	**Warramunga Arr**	**13.65**	**155**		**Pn**	**04 17 09.6**	**-4.0**
DAV	**Davao City (W)**	**14.84**	**349**	P	**Pn**	**04 17 28.9**	**+0.4**
	baz=220,slow=4.2,SNR=4.0						
DAV	**Davao City (W)**	**14.84**	**349**	⇑*e*P	**P**	**04 17 33.4**	**+3.0**
KCP	**Kidapawan**	**14.88**	**347**	⇑*i*P	**Pn**	**04 17 28.0**	**-1.1**
CTBH	**Cotabato--PC H**	**15.29**	**344**	⇓*i*P	**P**	**04 17 38.4**	**+2.9**
COEN	**Coen**	**15.81**	**115**	P	**Pn**	**04 17 39.8**	**-0.8**
	baz=16,SNR=13						
COEN	**Coen**	**15.81**	**115**	P	**Pn**	**04 17 39.8**	**-0.8**
PSAD1	**Pilbara Seismi**	**16.09**	**210**		**Pn**	**04 17 43.7**	**-0.3**
PSAD1				IAmb	IAmb	04 17 48.0	
	comp=Z,90nm,0.8s						
PSAC2	**Pilbara Seismi**	**16.15**	**210**		**Pn**	**04 17 44.4**	**-0.2**
PSAC2				IAmb	IAmb	04 17 48.3	
	comp=Z,69nm,0.8s						
PSAB2	**Pilbara Seismi**	**16.16**	**210**	Pn	**Pn**	**04 17 43.2**	**-1.5**
PSAB2				IAmb	IAmb	04 17 48.8	
	comp=Z,362nm,1.6s						
PSAA3	**Pilbara Seismi**	**16.18**	**210**	P	**P**	**04 17 45.3**	**0.0**
PSAA1	**Pilbara Seismi**	**16.19**	**210**	P	**Pn**	**04 17 44.8**	**-0.4**
PSAA1				IAmb	IAmb	04 17 48.8	
	comp=Z,110nm,0.7s						
PSAB1	**Pilbara Seismi**	**16.19**	**210**		**Pn**	**04 17 44.5**	**-0.7**
PSAB1				IAmb	IAmb	04 17 48.8	
	comp=Z,112nm,0.6s						
PSAB3	**Pilbara Seismi**	**16.20**	**210**		**Pn**	**04 17 45.2**	**-0.1**
PSAB3				IAmb	IAmb	04 17 48.9	
	comp=Z,108nm,0.7s						
PSAC3	**Pilbara Seismi**	**16.23**	**210**		**Pn**	**04 17 45.1**	**-0.6**
PSAD3	**Pilbara Seismi**	**16.27**	**210**		**Pn**	**04 17 46.0**	**-0.1**
AS31	**Alice Springs**	**16.83**	**162**	P	**P**	**04 17 52.1**	**-0.4**
ASAR	**Alice Springs**	**16.83**	**162**	P	**P**	**04 17 51.4**	**-1.2**
	comp=Z,8.8nm,0.3s,baz=334,slow=9.7,SNR=217						
ASAR				S	S	04 20 45.0	-15
	comp=Z,1.8nm,0.3s,baz=332,slow=17,SNR=4.6						
ASAR				LR	LR	04 24 36.1	
	comp=Z,48nm,20.9s,baz=348,slow=37						
QIS	**Mount Isa**	**16.83**	**141**	P	**P**	**04 17 52.3**	**-0.2**
	baz=17,SNR=59						
WRKA	**Warakurna**	**17.35**	**180**	P	**P**	**04 17 58.3**	**+0.1**
	baz=17,SNR=206						
UGM	**Wanagama**	**17.74**	**268**		**P**	**04 18 00.9**	**-1.7**
PMG	**Port Moresby**	**18.62**	**97**	P	**P**	**04 18 11.4**	**-0.8**
SBUM	**Sibu**	**19.00**	**301**	P	**P**	**04 18 13.3**	**-3.0**
SBUM	**Sibu**	**19.00**	**301**	P	**Pn**	**04 18 19.0**	**+0.4**
KSM	**Kuching**	**20.19**	**296**	P	**P**	**04 18 25.7**	**-3.5**
KSM				IAmb	IAmb	04 18 36.8	
	comp=Z,90nm,1.0s						
GIRL	**Giralia**	**20.26**	**221**	P	Pn	04 18 32.3	-1.1
	baz=20,SNR=26						
GIRL	**Giralia**	**20.26**	**221**	P	Pn	04 18 31.8	-1.7
CISI	**Cisompet, Garu**	**20.43**	**269**	P	**P**	**04 18 26.9**	**-4.8**
CISI				IAmb	IAmb	04 19 11.9	
	comp=Z,62nm,1.0s						
MEEK	**Meekatharra**	**21.12**	**205**	P	**P**	**04 18 40.0**	**+1.0**
	baz=21,SNR=36						
CTA	**Charters Tower**	**21.28**	**128**	P	**P**	**04 18 43.9**	**+3.1**
	comp=Z,10nm,0.8s,baz=307,slow=14,SNR=2.7						
CTAO	**Charters Tower**	**21.28**	**128**	P	**P**	**04 18 41.7**	**+0.9**
XMIS	**Christmas Isla**	**22.67**	**261**	P	**P**	**04 18 51.6**	**-3.3**
XMIS				IAmb	IAmb	04 19 24.4	
	comp=Z,68nm,0.9s						
FORT	**Forrest**	**23.07**	**181**	P	**P**	**04 19 00.6**	**+2.2**
	baz=23,SNR=30						
FORT	**Forrest**	**23.07**	**181**	P	**P**	**04 18 59.6**	**+1.2**
FORT				IAmb	IAmb	04 19 01.7	
	comp=Z,108nm,0.7s						
QLP	**Quilpie**	**24.14**	**143**	P	**P**	**04 19 10.3**	**+2.2**
	baz=24,SNR=20						
MORW	**Morawa**	**24.34**	**207**	P	**P**	**04 19 11.7**	**+1.7**
	baz=24,SNR=46						
MORW	**Morawa**	**24.34**	**207**	P	**P**	**04 19 11.7**	**+1.7**
KMBL	**Kambalda**	**24.43**	**194**	P	**P**	**04 19 12.8**	**+2.0**
	baz=24,SNR=28						
BLDU	**Ballidu**	**25.40**	**204**	P	**P**	**04 19 21.0**	**+1.4**
	baz=25,SNR=30						
KLBR	**Kellerberrin**	**25.87**	**201**	P	**P**	**04 19 25.5**	**+1.7**
	baz=26,SNR=57						
BBOO	**Buckleboo**	**26.08**	**165**	P	**P**	**04 19 27.7**	**+2.1**
	baz=26,SNR=94						
BBOO	**Buckleboo**	**26.08**	**165**	P	**P**	**04 19 27.8**	**+2.1**
BBOO				IAmb	IAmb	04 19 28.4	
	comp=Z,65nm,0.7s						
MUN	**Mundaring**	**26.80**	**204**	P	**P**	**04 19 33.7**	**+1.5**
	baz=27,SNR=4.7						
STKA	**Stephens Creek**	**27.11**	**155**	P	**P**	**04 19 37.0**	**+2.2**
	baz=27,SNR=35						
STKA	**Stephens Creek**	**27.11**	**155**	P	**P**	**04 19 37.0**	**+2.2**
	comp=Z,19nm,0.5s,baz=327,slow=9.2,SNR=55						
STKA				LR	LR	04 32 04.1	
	comp=Z,193nm,18.1s,baz=313,slow=40						
STKA	**Stephens Creek**	**27.11**	**155**	P	**P**	**04 19 37.1**	**+2.2**
NWAO	**Narrogin (SRO)**	**27.27**	**201**	P	**P**	**04 19 38.2**	**+1.9**
	baz=27,SNR=25						
NWAO	**Narrogin (SRO)**	**27.27**	**201**	P	**P**	**04 19 38.1**	**+1.9**
	comp=Z,53nm,0.5s,baz=33,slow=8.5,SNR=42						
NWAO	**Narrogin (SRO)**	**27.27**	**201**	P	**P**	**04 19 38.2**	**+1.9**
NWAO	**Narrogin (SRO)**	**27.27**	**201**	P	**P**	**04 19 37.3**	**+1.0**
NWAO				IAmb	IAmb	04 19 38.9	
	comp=Z,47nm,0.6s						
HTT	**Hallett**	**27.49**	**161**	P	**P**	**04 19 40.7**	**+2.3**
	baz=28,SNR=30						
CMSA	**Cobar Meteorol**	**28.76**	**148**	P	**P**	**04 19 52.1**	**+2.5**
	baz=29,SNR=63						
RKGY	**Rocky Gully**	**28.88**	**200**	P	**P**	**04 19 53.9**	**+3.3**
	baz=29,SNR=25						
KULM	**Kulim**	**30.52**	**294**	P	**P**	**04 20 03.7**	**-1.6**
PSI	**Prapat**	**31.19**	**288**	P	**P**	**04 20 11.7**	**+0.3**
	comp=Z,23nm,0.6s,baz=178,slow=3.1,SNR=18						
ARMA	**Armidale**	**31.44**	**139**	P	**P**	**04 20 17.8**	**+4.4**
	baz=31,SNR=5.7						
ARPS	**Mount Arapiles**	**31.52**	**159**	P	**P**	**04 20 16.8**	**+3.0**
	baz=32,SNR=66						
QIZ	**Qiongzhong**	**32.17**	**326**	P	**P**	**04 20 20.0**	**+0.2**
QIZ				S	**S**	**04 25 22.5**	**+0.9**
QIZ				SS	**SS**	**04 27 48.3**	**+1.9**
QIZ				pmax	pmax		
	comp=Z,16nm,1.6s						
QIZ				LR	LR		
	comp=N,230nm,14.7s						
QIZ				LR	LR		
	comp=E,230nm,14.2s						
QIZ				LR	LR		
	comp=Z,200nm,12.8s						
YOJ	**Yonaguni jima**	**32.29**	**351**	P	**P**	**04 20 17.8**	**-2.8**
YNG	**Young**	**32.33**	**148**	P	**P**	**04 20 24.1**	**+3.0**
	baz=32,SNR=14						
YHNB	**Yeheng**	**32.79**	**348**	P	**P**	**04 20 22.8**	**-2.4**
YHNB				IAmb	IAmb	04 20 31.8	
	comp=Z,28nm,1.1s						
TOO	**Toolangi**	**33.63**	**155**	P	**P**	**04 20 36.0**	**+3.7**
	baz=34,SNR=15						
TOO	**Toolangi**	**33.63**	**155**	P	**P**	**04 20 35.8**	**+3.5**
TOO				IAmb	IAmb	04 20 37.0	
	comp=Z,22nm,0.8s						
CHTO	**Chiang Mai**	**39.16**	**312**	P	**P**	**04 21 15.4**	**-4.0**
CHTO				IAmb	IAmb	04 21 21.8	
	comp=Z,29nm,1.6s						
GYA	**Guiyang**	**39.89**	**329**	⇓*i*P	**P**	**04 21 26.3**	**+0.8**
GYA				pP	pP	04 21 59.5	+2.3
GYA				sP	sP	04 22 12.3	-1.4
GYA				PP	**PnPn**	**04 23 03.5**	**-1.8**
GYA				PcP	**PcP**	**04 23 29.0**	**+0.7**
GYA				S	**S**	**04 27 18.0**	**-1.3**
GYA				sS	sS	04 28 15.5	+0.4
GYA				SS	**SS**	**04 30 16.5**	**-5.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,92nm,4.0s						
GYA				LR	LR		
	comp=N,470nm,14.7s						
GYA				LR	LR		
	comp=E,210nm,11.5s						
GYA				LR	LR		
	comp=Z,690nm,13.8s						
WHN	**Wuhan**	**40.25**	**341**	P	**P**	**04 21 29.8**	**+1.7**
WHN				pmax	pmax		
	comp=Z,52nm,1.0s						
NJ2	**Nanjing**	**40.46**	**347**	*e*P	**P**	**04 21 31.0**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,20nm,1.1s						

KMI	**Kunming**	**41.02**	**323**	P	**P**	**04 21 35.0**	**+0.1**		
KMI				pmax	pmax				
	comp=Z,10.0nm,1.0s								
KMI				LR	LR				
	comp=N,590nm,15.9s								
KMI				LR	LR				
	comp=E,390nm,12.9s								
KMI				LR	LR				
	comp=Z,670nm,15.9s								
ENH	**Enshi**	**41.80**	**335**	P	**P**	**04 21 38.0**	**-2.9**		
KSRS	**Korea Array**	**44.81**	**359**	P	**P**	**04 22 04.7**	**-0.2**		
	comp=Z,2.3nm,0.7s,baz=180,slow=10.0,SNR=6.1								
MAT	**Matsushiro**	**44.85**	**11**	P	**P**	**04 22 04.6**	**-0.6**		
MJAR	**Matsushiro Arr**	**44.85**	**11**	P	**P**	**04 22 04.1**	**-1.2**		
	comp=Z,8.3nm,0.8s,baz=190,slow=9.7,SNR=12								
MJB9	**Matsu-Tunnel**	**44.85**	**11**	P	**P**	**04 22 02.6**	**-2.7**		
CD2	**Chengdu**	**44.99**	**330**	P	**P**	**04 22 07.0**	**+0.5**		
CD2				pmax	pmax				
	comp=Z,20nm,0.7s								
XAN	**Xi'an**	**45.34**	**337**	P	**P**	**04 22 08.8**	**-0.4**		
XAN				pmax	pmax				
	comp=Z,16nm,0.7s								
XAN				pmax	pmax				
	comp=Z,150nm,4.7s								
XAN				LR	LR				
	comp=N,320nm,17.4s								
XAN				LR	LR				
	comp=E,220nm,17.3s								
XAN				LR	LR				
	comp=Z,520nm,15.2s								
XAN	**Xi'an**	**45.34**	**337**	P	**P**	**04 22 06.5**	**-2.8**		
AGT	**Agartala**	**47.91**	**312**	*i* x	**P**	**04 22 33.1**	**+3.8**		
SHL	**Shillong**	**48.46**	**314**	P	**P**	**04 22 31.9**	**-1.9**		
SHL				IAmb	IAmb	04 22 34.8			
	comp=Z,51nm,1.5s								
BJT	**Baijiatuan**	**48.70**	**347**	IAmb	IAmb	04 22 36.6			
	comp=Z,12nm,0.8s								
BJI	**Beijing**	**48.72**	**347**	P	**P**	**04 22 35.3**	**+0.1**		
BJI				pmax	pmax				
	comp=Z,16nm,0.9s								
LZH	**Lanzhou**	**49.21**	**334**	⇑P	**P**	**04 22 40.5**	**+1.2**		
LZH				pP	pP	04 23 11.3	-1.1		
LZH				sP	sP	04 23 26.5	-2.2		
LZH				PP	**PP**	**04 24 37.5**	**+2.9**		
LZH				pmax	pmax				
	comp=Z,23nm,1.3s								
LZH				pmax	pmax				
	comp=Z,98nm,6.0s								
LZH				LR	LR				
	comp=N,290nm,14.6s								
LZH				LR	LR				
	comp=E,360nm,15.2s								
LZH				LR	LR				
	comp=Z,390nm,17.9s								
HHC	**Hu-ho-hao-te**	**50.64**	**343**	*e*P	**P**	**04 22 49.8**	**-0.1**		
HHC				pP	pP	04 23 16.0	-7.2		
HHC				S	**S**	**04 29 55.8**	**+2.6**		
HHC				pmax	pmax				
	comp=Z,10.0nm,0.9s								
HHC				pmax	pmax				
	comp=Z,52nm,6.2s								
CN2	**Changchun**	**51.22**	**357**	*e*P	P	04 22 48.8	-5.2		
LBZ	**Lake Benmore**	**51.56**	**142**	P	**P**	**04 22 56.1**	**-0.6**		
USA0B	**Ussuriysk Arra**	**51.65**	**3**	P	**P**	**04 22 54.7**	**-2.5**		
USRK	**Ussuriysk Ar.**	**51.65**	**3**	P	**P**	**04 22 57.0**	**-0.2**		
	comp=Z,3.6nm,0.8s,baz=188,slow=6.1,SNR=8.4								
RPZ	**Rata Peaks**	**51.74**	**141**	P	**P**	**04 22 58.8**	**+0.7**		
ODAN	**Odare**	**52.48**	**312**	*e*P	**P**	**04 23 04.4**	**+0.4**		
	comp=Z,31nm,0.6s								
TUWZ	**Tuamarina**	**52.50**	**137**	P	**P**	**04 23 04.2**	**+0.6**		
ASAJ	**Asahikawa**	**53.04**	**13**	LR	LR	04 45 54.9			
	comp=Z,21nm,20.6s,baz=312,slow=36								
RAMN	**Ramite**	**53.11**	**312**	*e*P	**P**	**04 23 09.3**	**+0.7**		
	comp=Z,58nm,0.6s								
BKZ	**Black Stump Fm**	**53.31**	**134**	P	**P**	**04 23 11.1**	**+1.4**		
URZ	**Urewera**	**53.41**	**133**	LR	LR	04 47 09.9			
	comp=Z,74nm,18.5s,baz=280,slow=37								
URZ	**Urewera**	**53.41**	**133**	P	**P**	**04 23 10.8**	**+0.5**		
GTA	**Gaotai**	**53.75**	**333**	⇑P	**P**	**04 23 13.8**	**+0.9**		
GTA				pP	pP	04 23 47.3	+0.9		
GTA				sP	sP	04 24 04.5	+2.0		
GTA				sS	sS	04 31 33.0	-1.3		
GTA				pmax	pmax				
	comp=Z,13nm,1.2s								
GTA				pmax	pmax				
	comp=Z,100nm,7.8s								
GTA				LR	LR				
	comp=N,140nm,18.1s								
GTA				LR	LR				
	comp=E,2μm,23.8s								
GTA				LR	LR				
	comp=Z,130nm,19.7s								
JIRN	**Jiri**	**53.81**	**312**	*e*P	**P**	**04 23 14.0**	**+0.1**		
	comp=Z,42nm,0.8s								
GUN	**Gumba**	**54.18**	**312**	*e*P	**P**	**04 23 16.3**	**-0.2**		
	comp=Z,46nm,0.7s								
PKI	**Pulchoki**	**54.33**	**312**	*e*P	**P**	**04 23 17.6**	**0.0**		
	comp=Z,17nm,0.6s								
PKIN	**Phulchoki**	**54.35**	**312**	*e*P	**P**	**04 23 17.5**	**-0.1**		
	comp=Z,17nm,0.5s								
KKN	**Kakani**	**54.55**	**312**	*e*P	**P**	**04 23 19.1**	**0.0**		
DMN	**Daman**	**54.58**	**312**	*e*P	**P**	**04 23 19.5**	**+0.2**		
	comp=Z,13nm,0.5s								
GKN	**Gorkha**	**55.14**	**312**	*e*P	**P**	**04 23 23.1**	**-0.1**		
	comp=Z,34nm,0.4s								
KOLN	**Koldanda**	**55.79**	**311**	*e*P	**P**	**04 23 28.0**	**+0.1**		
	comp=Z,48nm,0.7s								
DANN	**Dangsing**	**55.98**	**312**	*e*P	**P**	**04 23 29.2**	**-0.2**		
	comp=Z,43nm,0.9s								
PYUN	**Piuthan**	**56.42**	**311**	*e*P	**P**	**04 23 32.8**	**+0.4**		
	comp=Z,65nm,0.8s								
KLR	**Kul'dur**	**56.65**	**3**	LR	LR	04 47 24.8			
	comp=Z,17nm,20.2s,baz=54,slow=35								
ULN	**Ulaanbaatar**	**58.36**	**343**	P	**P**	**04 23 46.4**	**+0.9**		
ULN				IAmb	IAmb	04 23 48.3			
	comp=Z,20nm,1.1s								
SONM	**Songino Array**	**58.52**	**343**	P	**P**	**04 23 47.4**	**+0.8**		
	comp=Z,9.6nm,0.9s,baz=163,slow=7.4,SNR=26								
CASY	**Casey**	**59.89**	**188**	P	**P**	**04 23 56.8**	**+1.2**		
CASY				IAmb	IAmb	04 23 59.1			
	comp=Z,16nm,1.1s								
SMLA	**Simla**	**62.32**	**311**	*e*P	**P**	**04 24 12.8**	**+0.2**		
SMLA				IAmb	IAmb	04 24 14.9			
	comp=Z,20nm,0.4s								
WMQ	**Urumqi**	**63.05**	**328**	*e*P	**P**	**04 24 18.0**	**+0.8**		
WMQ				pmax	pmax				
	comp=Z,20nm,0.8s								
WMQ				pmax	pmax				
	comp=Z,140nm,3.6s								
WMQ				LR	LR				
	comp=N,570nm,29.1s								
WMQ				LR	LR				
	comp=E,690nm,29.2s								
WMQ				LR	LR				
	comp=Z,37nm,29.3s								
PETK	**Petropavlovsk-**	**65.38**	**19**	P	**P**	**04 24 32.7**	**+0.6**		
	comp=Z,10nm,0.6s,baz=190,slow=6.6,SNR=13								
KSH	**Kashi**	**67.41**	**318**	P	**P**	**04 24 46.5**	**+1.0**		
KSH				PcP	**PcP**	**04 25 14.0**	**+2.1**		
KSH				pP	pP	04 25 21.5	+1.4		
KSH				S	**S**	**04 33 26.5**	**-2.9**		
KSH	**Kashi**	**67.41**	**318**	SS	SS	04 37 56.5	+3.8		
KSH				pmax	pmax				
	comp=Z,16nm,0.6s								
KSH				pmax	pmax				
	comp=Z,120nm,4.4s								
KSH				LR	LR				
	comp=N,100nm,4.2s								
KSH				LR	LR				
	comp=E,95nm,7.2s								
KSH				LR	LR				
	comp=Z,190nm,9.0s								
MKAR	**Makanchi Array**	**67.87**	**328**	P	**P**	**04 24 48.8**	**+0.7**		
	comp=Z,4.7nm,0.5s,baz=123,slow=7.8,SNR=58								
MAKZ	**Makanchi**	**68.05**	**328**	P	**P**	**04 24 48.3**	**-1.0**		
ZAA0	**Zalesovo Array**	**71.43**	**335**	IAmb	IAmb	04 25 10.6			
	comp=Z,36nm,1.4s								
ZALV	**Zalesovo Beam**	**71.43**	**335**	P	**P**	**04 25 09.6**	**-0.1**		
	comp=Z,9.3nm,0.6s,baz=130,slow=4.9,SNR=34								
VNDA	**Vanda**	**72.06**	**173**	P	**P**	**04 25 14.1**	**+0.9**		
	comp=Z,3.7nm,0.6s,baz=277,slow=8.1,SNR=9.7								
VNDA				LR	LR	04 57 37.1			
	comp=Z,71nm,18.0s,baz=284,slow=36								
KURK	**Kurchatov**	**72.21**	**329**	P	**P**	**04 25 15.2**	**+0.7**		
KURK				IAmb	IAmb	04 25 16.2			
	comp=Z,29nm,0.9s								
MAW	**Mawson**	**73.84**	**201**	P	**P**	**04 25 26.2**	**+2.4**		
	comp=Z,5.5nm,0.7s,baz=70,slow=3.8,SNR=9.8								
WSAR	**Wadi Sarin**	**74.72**	**297**	P	**P**	**04 25 31.3**	**+1.5**		
	comp=Z,4.8nm,0.9s,baz=110,slow=8.3,SNR=3.8								
BRVK	**Borovoye**	**77.81**	**328**	P	**P**	**04 25 46.4**	**-0.1**		
BRVK				IAmb	IAmb	04 25 48.1			
	comp=Z,16nm,1.0s								
TIXI	**Tiksi**	**79.07**	**0**	P	**P**	**04 25 51.7**	**-1.4**		
OPO	**Ambohidratompo**	**79.35**	**253**	P	**P**	**04 25 57.1**	**+1.2**		
	comp=Z,4.8nm,0.7s,baz=55,slow=3.1,SNR=6.1								
QSPA	**South Pole Qui**	**82.39**	**180**	P	**P**	**04 26 12.8**	**+1.7**		
	comp=Z,21nm,0.8s,baz=309,slow=1.0,SNR=115								
QSPA	**South Pole Qui**	**82.39**	**180**	P	**P**	**04 26 11.7**	**+0.6**		
QSPA				IAmb	IAmb	04 26 13.8			
	comp=Z,19nm,0.8s								
SYO	**Syowa Base**	**82.55**	**201**	⇑*e*P	**P**	**04 26 12.2**	**+0.5**		
SYO	**Syowa Base**	**82.55**	**201**	⇑*e*PcP	**PcP**	**04 26 17.4**	**+1.1**		
ARU	**Arti**	**85.38**	**328**	P	**P**	**04 26 26.3**	**+0.1**		
ARU				IAmb	IAmb	04 26 27.4			
	comp=Z,15nm,1.0s								
BWN	**Browne**	**93.34**	**26**	P	**P**	**04 27 03.7**	**+0.1**		
BWN				IAmb	IAmb	04 27 06.1			
	comp=Z,15nm,0.9s								
RND	**Reindeer**	**93.48**	**27**	IAmb	IAmb	04 27 04.4			
	comp=Z,6.3nm,0.8s								
MCK	**McKinley**	**93.50**	**26**	P	**P**	**04 27 03.1**	**-1.3**		
MCK				IAmb	IAmb	04 27 05.2			
	comp=Z,17nm,1.5s								
WRH	**Wood River Hil**	**93.98**	**26**	P	**P**	**04 27 05.3**	**-1.2**		
WRH				IAmb	IAmb	04 27 07.2			
	comp=Z,14nm,1.6s								
ILAR	**Eielson Array**	**94.54**	**25**	P	**P**	**04 27 07.2**	**-1.8**		
	comp=Z,1.3nm,1.0s,baz=258,slow=4.3,SNR=7.7								
SNAA	**Sanae**	**94.73**	**194**	P	**P**	**04 27 12.5**	**+2.5**		
SNAA	**Sanae**	**94.73**	**194**	P	**P**	**04 27 11.9**	**+1.9**		
SNAA				IAmb	IAmb	04 27 13.6			
	comp=Z,6.6nm,1.0s								
VNA2	**Neumayer--Watz**	**96.31**	**193**	P	**P**	**04 27 18.5**	**+1.4**		
	baz=128,slow=4.4								
MATP	**Matopo**	**96.59**	**248**	P	**P**	**04 27 21.1**	**+1.5**		
	comp=Z,2.4nm,0.9s,baz=62,slow=5.0,SNR=3.7								
VNA1	**Neumayer--Stat**	**96.70**	**193**	P	**P**	**04 27 21.9**	**+3.1**		
BOSA	**Boshof**	**97.82**	**240**	P	Pdif	04 27 26.3	+1.3		
	comp=Z,2.2nm,0.9s,baz=92,slow=6.1,SNR=3.5								
BOSA				LR	LR	05 03 23.5			
	comp=Z,29nm,20.6s,baz=114,slow=30								
ARCES	**ARCESS Array B**	**101.58**	**340**	P	**Pdif**	**04 27 40.4**	**-0.2**		
	comp=Z,2.6nm,1.0s,baz=54,slow=6.2,SNR=4.6								
PDAR	**Pinedale Array**	**118.41**	**45**	PKP	**PKiKP**	**04 32 36.5**	**+0.1**		
	comp=Z,0.2nm,0.3s,baz=107,slow=1.5,SNR=3.9								
MNTX	**Cornudas Mount**	**124.58**	**57**		**PKPdf**	**04 32 48.3**	**+0.1**		
TORD	**Torodi Ar. Bea**	**127.39**	**281**	PKP	**PKiKP**	**04 32 54.4**	**-0.1**		
	comp=Z,1.7nm,0.7s,baz=33,slow=2.4,SNR=15								
PLCA	**Paso Flores**	**128.84**	**162**	PKP	**PKiKP**	**04 32 58.0**	**+1.1**		
	comp=Z,3.1nm,1.0s,baz=124,slow=24,SNR=5.3								
P38A	**Dawn**	**130.75**	**43**		**PKiKP**	**04 33 00.7**	**+0.1**		
JFWS	**Jewell Farm**	**131.12**	**38**	PKPdf	**PKPdf**	**04 32 59.7**	**-0.6**		
DBIC	**Dimbokro**	**133.65**	**272**	PKP	**PKiKP**	**04 33 07.8**	**+0.7**		
	comp=Z,2.2nm,0.8s,baz=51,slow=16,SNR=3.5								
BO02	**Sierra Bellavi**	**134.10**	**158**		**PKPdf**	**04 33 06.3**	**0.0**		
PB07	**IPOC Station P**	**145.77**	**149**		**PKiKP**	**04 33 30.6**	**-1.4**		
PB11	**IPOC Station P**	**147.51**	**147**		**PKiKP**	**04 33 34.8**	**-0.8**		
GO01	**Chusmiza**	**147.84**	**148**		**PKPab**	**04 33 37.3**	**-0.2**		

IDC ***26*** *04:23:15.0±1.1, 1.°34N×97.°07E, h0km, mb4.3/11, mb1 4.4/13, mb1mx4.0/52, mbtmp4.3/13, ML4.0/2, MS3.7/8, Ms1 3.8/8, ms1mx3.3/36, Error ellipse: s-maj=31.2km s-min=17.8km az=56.0*

DJA ***26*** *04:23:17.0±0.9, 1.°N±4.°×9.°7E±.°, h17km±6km, M4.5/12, mB5.0/4, mb4.7/7, MLv4.5/12, Mw(mB)4.3/4*

NEIC ***26*** *04:23:21.1±2.0, 1.°41N±0.°08×97.°24E±0.°08, h39km±7km, mb4.4/8, Error ellipse: s-maj=13.0km s-min=8.6km az=224.0*

ISC 26 04:23:18.7±0.7, 1.°35N±0.°06×97.°02E±0.°06, h28km, n55, σ1°17/49, mb4.5/19, MS3.7/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.56**	**94**	P	**Pb**	**04 23 30.2**	**+0.1**
GSI				S	**Sn**	**04 23 39.3**	**0.0**
GSI	**Gunungsitoli**	**0.56**	**94**		**Pb**	**04 23 30.4**	**+0.3**
GSI				Sn	**Sb**	**04 23 36.1**	**-1.8**
SNSI	**Sinabang, Aceh**	**1.26**	**327**	P	**Pn**	**04 23 36.9**	**-3.6**
PBSI	**Pulau Batu**	**1.88**	**138**	P	**Pn**	**04 23 50.2**	**+1.2**
KCSI	**Kotacane, Aceh**	**2.29**	**19**	P	**Pn**	**04 23 55.0**	**+0.3**
RPSI	**Rantau Prapat**	**2.33**	**55**		**Pn**	**04 23 55.7**	**+0.5**
PSI	**Prapat**	**2.39**	**53**	Pn	**Pn**	**04 23 55.7**	**-0.5**
	7.5nm,0.3s,baz=180,slow=3.9,SNR=62						
MNSI	**Mandailing Nat**	**2.62**	**102**	P	**Pn**	**04 23 59.6**	**+0.4**
TSI	**Tuntungan**	**2.64**	**36**	P	**Pn**	**04 23 59.8**	**+0.3**
MLSI	**Meulaboh, Aceh**	**2.96**	**348**	P	**Pn**	**04 24 03.4**	**-0.5**
SISI	**Saibi**	**3.37**	**142**	P	**Pn**	**04 24 11.1**	**+1.6**
LHMI	**Lhok Sumawe**	**3.86**	**359**	Pn	**Pn**	**04 24 15.6**	**-0.6**
PDSI	**Padang**	**4.11**	**123**	P	**Pn**	**04 24 18.5**	**-1.3**
BKNI	**Bangkinang**	**4.15**	**104**	P	**Pn**	**04 24 20.3**	**0.0**
BKNI	**Bangkinang**	**4.15**	**104**	Pn	**Pn**	**04 24 20.7**	**+0.4**
IPM	**Ipoh**	**5.07**	**52**		**Pn**	**04 24 33.4**	**+0.4**
KULM	**Kulim**	**5.34**	**43**		**Pn**	**04 24 36.8**	**+0.2**
MNAI	**Manna**	**8.21**	**134**	Pn	**Pn**	**04 25 16.8**	**+0.7**
MNAI				Sn	**Sn**	**04 26 44.7**	**-3.3**
CISI	**Cisompet, Garu**	**13.94**	**130**	P	Pn	04 26 27.9	-6.7
SBUM	**Sibu**	**15.24**	**86**	Pn	**Pn**	**04 26 50.2**	**-1.9**
CMAR	**Chiang Mai Arr**	**17.11**	**6**	P	**Pn**	**04 27 14.9**	**-1.1**
	0.7nm,0.3s,baz=195,slow=12,SNR=8.4						
CMAR				LR	LR	04 34 52.5	
	comp=Z,282nm,19.5s,baz=230,slow=41						
MPSI	**Mapaga**	**22.90**	**92**	P	**P**	**04 28 20.6**	**0.0**
KMI	**Kunming**	**24.27**	**13**	P	**P**	**04 28 35.5**	**+1.5**
KMI				pmax	pmax		
	comp=Z,30nm,1.2s						
SHL	**Shillong**	**24.58**	**349**	*e*P	**P**	**04 28 37.2**	**+0.4**
H08S2	**Diego Garcia H**	**26.04**	**250**	T	T	04 55 48.0	
	baz=71,slow=75,SNR=2618						
H08S3	**Diego Garcia H**	**26.04**	**250**	T	T	04 55 48.0	
	baz=71,slow=75,SNR=1906						
H08S1	**Diego Carcia H**	**26.06**	**250**	T	T	04 55 48.0	
	baz=71,slow=75,SNR=2210						
ENH	**Enshi**	**31.11**	**21**	P	**P**	**04 29 34.2**	**-0.7**
XAN	**Xi'an**	**34.38**	**18**	P	**P**	**04 30 03.0**	**-0.5**
XAN				pmax	pmax		
	comp=Z,20nm,0.9s						
XAN				pmax	pmax		
	comp=Z,130nm,6.1s						
XAN				LR	LR		
	comp=N,320nm,16.3s						
XAN				LR	LR		
	comp=E,200nm,16.3s						
XAN				LR	LR		
	comp=Z,510nm,15.2s						
XAN	**Xi'an**	**34.38**	**18**	P	**P**	**04 30 02.0**	**-1.5**
GTA	**Gaotai**	**37.97**	**4**	*e*P	**P**	**04 30 35.5**	**+1.2**
GTA				pP	pP	04 30 42.8	+0.3
GTA				sP	sP	04 30 46.3	+0.5
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
H01W3	**Cape Leeuwin H**	**39.45**	**158**	T	T	05 12 20.2	
	baz=333,slow=76,SNR=22						
H01W2	**Cape Leeuwin H**	**39.46**	**158**	T	T	05 12 21.1	
	baz=333,slow=76,SNR=19						
H01W1	**Cape Leeuwin H**	**39.47**	**158**	T	T	05 12 25.3	
	baz=333,slow=76,SNR=17						
WB0	**Warramunga Arr**	**42.24**	**122**	P	**P**	**04 31 08.7**	**-1.2**
WB0				IAmb	IAmb	04 31 10.0	
	comp=Z,3.8nm,0.7s						
WRA	**Warramunga Arr**	**42.27**	**122**	P	**P**	**04 31 09.8**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=300,slow=9.1,SNR=7.4						
WRA				LR	LR	04 52 14.4	
	comp=Z,83nm,18.3s,baz=255,slow=41						
WB2	**Warramunga Arr**	**42.28**	**122**	P	**P**	**04 31 10.0**	**-0.2**
WR0	**Warramunga Arr**	**42.45**	**122**	P	**P**	**04 31 11.2**	**-0.4**
WR0				IAmb	IAmb	04 31 11.9	
	comp=Z,3.5nm,0.7s						
ASAR	**Alice Springs**	**43.63**	**127**	P	**P**	**04 31 20.8**	**-0.3**
	comp=Z,1.7nm,0.9s,baz=298,slow=9.0,SNR=6.0						
JNU	**Nakatsue**	**44.82**	**42**	LR	LR	04 50 37.9	
	comp=Z,77nm,20.6s,baz=236,slow=37						
KSRS	**Korea Array**	**45.83**	**35**	P	**P**	**04 31 36.9**	**-1.5**
	comp=Z,8.1nm,0.9s,baz=224,slow=9.2,SNR=16						
KSRS				LR	LR	04 53 30.9	
	comp=Z,60nm,18.2s,baz=240,slow=40						
SONM	**Songino Array**	**47.01**	**9**	P	**P**	**04 31 48.8**	**+1.1**
	comp=Z,5.5nm,0.8s,baz=192,slow=8.4,SNR=20						
SONM				LR	LR	04 54 11.4	
	comp=Z,238nm,18.1s,baz=124,slow=40						
MKAR	**Makanchi Array**	**47.05**	**346**	P	**P**	**04 31 49.0**	**+1.1**
	comp=Z,4.0nm,0.8s,baz=135,slow=6.7,SNR=18						
MAKZ	**Makanchi**	**47.14**	**346**	P	**P**	**04 31 48.6**	**+0.1**
MAKZ				IAmb	IAmb	04 31 50.9	
	comp=Z,4.6nm,1.0s						
CN2	**Changchun**	**49.26**	**27**	*e*P	**P**	**04 32 05.0**	**+0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**52.74**	**31**	P	**P**	**04 32 31.3**	**+0.2**
	comp=Z,12nm,0.9s,baz=228,slow=6.2,SNR=18						
USRK				LR	LR	04 56 48.0	
	comp=Z,111nm,18.8s,baz=202,slow=38						
ZAA0	**Zalesovo Array**	**53.38**	**351**	P	**P**	**04 32 37.1**	**+1.5**
ZALV	**Zalesovo Beam**	**53.38**	**351**	P	**P**	**04 32 36.7**	**+1.1**
	comp=Z,9.1nm,0.7s,baz=183,slow=6.6,SNR=35						
STKA	**Stephens Creek**	**53.59**	**132**	P	**P**	**04 32 39.0**	**+1.4**
	comp=Z,3.0nm,0.8s,baz=295,slow=14,SNR=2.5						
STKA				LR	LR	04 56 39.1	
	comp=Z,93nm,20.9s,baz=333,slow=37						
STKA	**Stephens Creek**	**53.59**	**132**	P	**P**	**04 32 36.5**	**-1.1**
EIDS	**Eidsvold**	**58.61**	**121**	P	**P**	**04 33 13.4**	**-0.2**
EIDS				IAmb	IAmb	04 33 15.6	
	comp=Z,4.8nm,0.8s						
BRTR	**Keskin Array B**	**68.88**	**312**	P	**P**	**04 34 21.5**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=302,slow=35,SNR=2.8						
FINES	**FINESS Array B**	**79.78**	**333**	P	**P**	**04 35 24.9**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=319,slow=29,SNR=2.4						
ARCES	**ARCESS Array B**	**82.33**	**340**	P	**P**	**04 35 39.1**	**+1.5**
	comp=Z,3.7nm,1.0s,baz=97,slow=27,SNR=2.3						
NOA	**NORSAR Array B**	**86.79**	**331**	LR	LR	05 19 35.9	
	comp=Z,20nm,18.7s,baz=0.0,slow=39						

IDC ***26*** *04:39:07.8±1.0, 25.°45N×142.°91E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/44, mbtmp3.7/7, Error ellipse: s-maj=41.8km s-min=17.8km az=85.0*

ISC 26 04:39:13.4±1.0, 25.°4N±0.°1×142.°9E±0.°3, h40km, n11, σ0°83/9, mb3.6/7, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.77**	**340**	Pn	**Pn**	**04 39 41.0**	**-0.6**
	52nm,0.3s,baz=310,slow=23,SNR=30						
JCJ				Sn	**Sn**	**04 40 04.3**	**+1.4**
	67nm,0.3s,baz=283,slow=23,SNR=13						
H11N2	**WAKE ISLAND Hy**	**22.89**	**99**	T	T	05 07 02.3	
	baz=293						
H11N1	**WAKE ISLAND Hy**	**22.89**	**99**	T	T	05 07 02.7	
	baz=293,slow=74,SNR=5.4						
H11N3	**WAKE ISLAND Hy**	**22.90**	**99**	T	T	05 06 59.0	
	baz=293,slow=74,SNR=3.7						
KLR	**Kul'dur**	**25.30**	**343**	P	**P**	**04 44 36.5**	**+0.5**
	1.4nm,0.7s,baz=95,slow=8.0,SNR=4.0						
WRA	**Warramunga Arr**	**45.85**	**191**	P	**P**	**04 47 32.6**	**+0.8**
	1.5nm,0.4s,baz=8.8,slow=8.5,SNR=8.9						
ASAR	**Alice Springs**	**49.57**	**191**	P	**P**	**04 48 00.9**	**+0.3**
	0.3nm,0.6s,baz=19,slow=13,SNR=4.6						
MKAR	**Makanchi Array**	**52.02**	**311**	P	**P**	**04 48 18.2**	**-0.7**
	0.2nm,0.3s,baz=334,slow=43,SNR=3.1						
ILAR	**Eielson Array**	**58.89**	**28**	P	**P**	**04 49 07.8**	**-0.2**
	0.2nm,0.6s,baz=270,slow=6.3,SNR=2.7						
YKA	**Yellowknife Ar**	**73.32**	**28**	P	**P**	**04 50 40.8**	**+0.3**
	0.2nm,0.5s,baz=292,slow=6.0,SNR=5.5						
FINES	**FINESS Array B**	**79.71**	**334**	P	**P**	**04 51 16.2**	**-0.5**
	1.5nm,0.7s,baz=64,slow=6.6,SNR=9.3						

TAP ***26*** *04:50:05.5, 24.°15N×122.°00E, h24km, ML3.2, B*

JMA ***26*** *04:50:05.0, 24.°09N×122.°00E, h30km±2km, M2.1*

ISC 26 04:50:05.6±1.0, 24.°13N±0.°02×122.°01E±0.°02, h27km±9km, n70, σ0°68/123, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.38**	**263**	*e*P	**Pb**	**04 50 14.3**	**+0.3**
	baz=258						
TWD				*e*S	**Sn**	**04 50 20.8**	**-1.0**
	baz=258						
NACB	**Ninganchiao**	**0.38**	**277**	*e*P	**Pb**	**04 50 13.8**	**-0.2**
	baz=273						
NACB				S	**Sb**	**04 50 20.2**	**+0.4**
	baz=273						
ENA	**Nanau**	**0.39**	**321**	*e*P	**Pb**	**04 50 13.6**	**-0.5**
	baz=320						
ENA				*e*S	**Sb**	**04 50 20.2**	**+0.3**
	baz=320						
HWA	**Hwalien**	**0.40**	**248**	*e*P	**Pn**	**04 50 15.2**	**-0.4**

	baz=349							
VWDT	**VWDT**	**0.88**	**245**	*e*P	**Pn**	**04 50 22.0**	**-0.1**
	baz=242							
VWDT				*e*S	**Sn**	**04 50 34.4**	**+0.4**
	baz=242							
TWB1	**Santiao Chiao**	**0.88**	**359**	*e*P	**Pb**	**04 50 22.2**	**-0.1**
TWB1				*e*S	**Sn**	**04 50 34.1**	**0.0**
EHY	**Hungye**	**0.88**	**226**	*e*P	**Pn**	**04 50 21.3**	**-1.0**
	baz=223							
JYNG	**Yonagunijimaku**	**0.91**	**69**	P	**Pn**	**04 50 21.9**	**-0.7**
JYNG				*e*S	**Sn**	**04 50 35.4**	**+0.6**
NHDH	**Xindian Distri**	**0.94**	**332**	*e*S	**Sn**	**04 50 35.7**	**+0.1**
	baz=331							
NWF	**Wu-fen Shan**	**0.96**	**347**	*e*P	**Pb**	**04 50 23.7**	**0.0**
	baz=347							
NWF				*e*S	**Sn**	**04 50 36.6**	**+0.3**
	baz=347							
WFSB	**Wu-fen Shan**	**0.96**	**347**	*e*P	**Pb**	**04 50 23.6**	**-0.1**
	baz=347							
WFSB				*e*S	**Sn**	**04 50 36.8**	**+0.7**
	baz=347							
YOJ	**Yonaguni jima**	**0.97**	**70**	*e*P	**Pn**	**04 50 23.5**	**+0.1**
	baz=71							
YOJ				*e*S	**Sn**	**04 50 37.1**	**+0.8**
	baz=71							
YOJ	**Yonaguni jima**	**0.97**	**70**	P	**Pn**	**04 50 23.2**	**-0.2**
YOJ				*e*S	**Sb**	**04 50 36.0**	**-0.2**
YULB	**Yu-li**	**0.98**	**222**	*e*P	**Pn**	**04 50 22.6**	**-1.0**
	baz=220							
YULB				*e*S	**Sn**	**04 50 37.6**	**+1.0**
	baz=220							
WHP	**Taichung City**	**0.98**	**279**	*e*P	**Pb**	**04 50 24.0**	**0.0**
	baz=277							
WHP				*e*S	**Sn**	**04 50 37.1**	**+0.3**
	baz=277							
DPDB	**Guoxing**	**1.00**	**265**	*e*P	**Pn**	**04 50 23.9**	**0.0**
	baz=262							
DPDB				*e*S	**Sn**	**04 50 37.7**	**+0.6**
	baz=262							
TWF1	**Yuli**	**1.01**	**221**	*e*P	**Pn**	**04 50 23.2**	**-0.8**
	baz=218							
SSLB	**Suanglung**	**1.02**	**251**	*e*P	**Pn**	**04 50 24.1**	**-0.1**
	baz=249							
SSLB				*e*S	**Sb**	**04 50 38.5**	**+0.7**
	baz=249							
SMLT	**Sun Moon Lake**	**1.04**	**257**	*e*P	**Pb**	**04 50 24.8**	**-0.3**
	baz=254							
SMLT				*e*S	**Sb**	**04 50 38.4**	**-0.1**
	baz=254							
LIOB	**Emei**	**1.05**	**300**	*e*P	**Pb**	**04 50 25.3**	**+0.2**
	baz=298							
LIOB				*e*S	**Sb**	**04 50 38.8**	**+0.4**
	baz=298							
NSTT	**Nanjuang**	**1.05**	**299**	*e*P	**Pb**	**04 50 25.2**	**0.0**
	baz=297							
NSTT				*e*S	**Sb**	**04 50 39.0**	**+0.5**
	baz=297							
YM01	**YM01**	**1.09**	**339**	*e*P	**Pb**	**04 50 26.2**	**+0.3**
	baz=338							
YM10	**YM10**	**1.10**	**338**	*e*P	**Pn**	**04 50 25.4**	**+0.1**
	baz=338							
YM10				*e*S	**Sn**	**04 50 39.4**	**-0.3**
	baz=338							
YM11	**YM11**	**1.11**	**339**	*e*P	**Pb**	**04 50 25.9**	**-0.3**
	baz=339							
YM11				*e*S	**Sb**	**04 50 42.0**	**+1.7**
	baz=339							
FULB	**Fuli**	**1.13**	**216**	*e*P	**Pb**	**04 50 25.8**	**+0.1**
	baz=214							
FULB				*e*S	**Sb**	**04 50 42.3**	**+1.4**
	baz=214							
WHYT	**Xinyi Township**	**1.14**	**248**	*e*P	**Pb**	**04 50 26.3**	**-0.4**
	baz=246							
WJS	**Zhushan**	**1.21**	**256**	*e*P	**Pb**	**04 50 28.2**	**+0.3**
	baz=254							
ELDTW	**Lidau**	**1.30**	**225**	*e*P	**Pn**	**04 50 27.5**	**-0.6**
	baz=222							
CHN5	**Tsauling**	**1.33**	**247**	*e*P	**Pb**	**04 50 29.7**	**-0.2**
	baz=245							
CHN5				*e*S	**Sb**	**04 50 47.7**	**+1.1**
	baz=245							
TWH	**Lutao**	**1.49**	**199**	*e*P	**Pn**	**04 50 29.7**	**-0.9**
	baz=197							
TWH				*e*S	**Sn**	**04 50 47.3**	**-1.8**
	baz=197							
TPUB	**Ta-pu**	**1.51**	**237**	*e*P	**Pb**	**04 50 32.2**	**-0.7**
	baz=235							
TPUB				*e*S	**Sb**	**04 50 52.0**	**+0.3**
	baz=235							
CHN4	**Tsaushan**	**1.51**	**240**	*e*P	**Pb**	**04 50 32.6**	**-0.4**
	baz=238							
CHN4				*e*S	**Sb**	**04 50 53.2**	**+1.5**
	baz=238							
RLNB	**Erlin**	**1.53**	**262**	*e*S	**Sb**	**04 50 53.7**	**+1.5**
	baz=260							
WTP	**Ta-pu**	**1.55**	**236**	*e*P	**Pb**	**04 50 32.8**	**-0.9**
	baz=234							
TWG	**Pinlang**	**1.56**	**214**	*e*P	**Pn**	**04 50 31.2**	**-0.3**
	baz=212							
TWG				*e*S	**Sn**	**04 50 51.4**	**+0.5**
	baz=212							
IRIF	**Iriomote-Funau**	**1.58**	**82**	P	**Pn**	**04 50 31.9**	**+0.1**
IRIF				*e*S	**Sn**	**04 50 52.0**	**+0.6**
TWK	**Hsinying**	**1.64**	**239**	*e*P	**Pb**	**04 50 34.0**	**-1.1**
	baz=237							
TWK				*e*S	**Sb**	**04 50 55.9**	**+0.5**
	baz=237							
HATJ	**Hateruma jima**	**1.64**	**92**	P	**Pn**	**04 50 33.1**	**+0.5**
CHN1	**Nanshi**	**1.65**	**236**	*e*P	**Pn**	**04 50 34.0**	**+1.2**
	baz=234							
SLGT	**Liugui**	**1.69**	**228**	*e*P	**Pb**	**04 50 35.2**	**-0.7**
	baz=226							
SLGT				*e*S	**Sb**	**04 50 58.0**	**+1.3**
	baz=226							
JKRS	**Kuro-shima**	**1.83**	**86**	P	**Pn**	**04 50 35.7**	**+0.5**
JKRS				*e*S	**Sn**	**04 50 57.6**	**+0.2**
JIJ	**Ishigaki jima**	**1.96**	**83**	P	**Pn**	**04 50 37.1**	**+0.1**
JIJ				S	**Sn**	**04 51 00.6**	**-0.1**
MASBT	**Mashibuluo**	**1.97**	**220**	*e*P	**Pb**	**04 50 39.0**	**-1.8**
	baz=219							
MASBT				*e*S	**Sb**	**04 51 03.8**	**-1.1**
	baz=219							
EAST	**Anshuo**	**2.04**	**212**	*e*P	**Pb**	**04 50 40.3**	**-1.7**
	baz=210							
JISG	**Ishigakijimahi**	**2.15**	**77**	P	**Pn**	**04 50 39.8**	**+0.2**
PHUB	**P'eng-hu**	**2.32**	**255**	*e*S	**Sn**	**04 51 10.4**	**+0.9**
	baz=253							
WDGT	**Dungji**	**2.32**	**249**	*e*P	**Pn**	**04 50 42.9**	**+0.9**
	baz=247							
WDGT				*e*S	**Sn**	**04 51 10.6**	**+1.0**
	baz=247							
VWUC	**VWUC**	**2.49**	**291**	*e*P	**Pn**	**04 50 44.0**	**-0.3**
	baz=289							
VWUC				*e*S	**Sn**	**04 51 12.7**	**-1.0**
	baz=289							
VCHM	**Qimei**	**2.54**	**249**	*e*S	**Sn**	**04 51 15.9**	**+0.9**
	baz=248							
PTMZ	**Houxiangcun**	**2.79**	**290**	*e*S	**Sn**	**04 51 19.6**	**-1.5**
	baz=288							

*JMA **26** 05:13:50.2,24.0°N×121.9°E,h33km±1km,M2.4*
*TAP **26** 05:13:50.2,24.1°N×121.9°E,h23km,ML3.4,B*

ISC 26 05:13:50.4±1.0,24.2°N±0.02°×122.0°E±0.03,h25km±10km, n62,σ0.9°59/103,10C-11D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.39**	**264**	⇑*i*P		**Pb**	**05 13 58.9**	**+0.2**
	baz=258							
TWD				*i* S		**Sn**	**05 14 06.0**	**-0.9**
	baz=258							
NACB	**Ninganchiao**	**0.39**	**277**	⇑*i*P		**Pb**	**05 13 58.7**	**-0.1**
	baz=273							
NACB				*i* S		**Sb**	**05 14 04.7**	**+0.2**
	baz=273							
ENA	**Nanau**	**0.39**	**321**	⇓*i*P		**Pb**	**05 13 58.5**	**-0.4**
	baz=321							
ENA				S		**Sb**	**05 14 05.3**	**+0.7**
	baz=321							
ETLH	**Xiulin Townshi**	**0.49**	**280**	*i* P		**Pb**	**05 14 00.5**	**-0.1**
	baz=276							
ETLH				S		**Sb**	**05 14 07.8**	**+0.3**
	baz=276							
TWC	**Suao**	**0.51**	**343**	⇑*i*P		**Pb**	**05 14 00.3**	**-0.5**
	baz=345							
TWC				*i* S		**Sb**	**05 14 07.2**	**-0.5**
	baz=345							
ESL	**Shilin**	**0.61**	**240**	⇑*i*P		**Pb**	**05 14 02.3**	**-0.3**
	baz=236							
ESL				S		**Sn**	**05 14 11.9**	**-0.7**
	baz=236							
NNSB	**Datong**	**0.65**	**298**	⇓*i*P		**Pb**	**05 14 02.9**	**-0.4**
	baz=296							
NNSB				S		**Sb**	**05 14 11.8**	**-0.2**
	baz=296							
NNSH	**Datong**	**0.65**	**298**	⇓*i*P		**Pb**	**05 14 02.9**	**-0.4**
	baz=296							
NNSH				*i* S		**Sb**	**05 14 11.7**	**-0.4**
	baz=296							
ENTT	**Nioudou**	**0.66**	**322**	*i* P		**Pb**	**05 14 02.8**	**-0.5**
	baz=321							
ENTT				S		**Sb**	**05 14 12.4**	**+0.3**
	baz=321							
NDT	**Datong Townshi**	**0.66**	**316**	*i* P		**Pb**	**05 14 02.9**	**-0.4**
	baz=315							
NDT				S		**Sb**	**05 14 12.0**	**-0.2**
	baz=315							
NNS	**Nan Shan**	**0.66**	**298**	⇓*i*P		**Pb**	**05 14 03.1**	**-0.4**
	baz=297							
NNS				S		**Sb**	**05 14 12.6**	**+0.2**
	baz=297							
TWE	**Neicheng**	**0.67**	**332**	⇓P		**Pb**	**05 14 03.3**	**-0.3**
	baz=333							
TWE				*i* S		**Sb**	**05 14 12.9**	**+0.4**
	baz=333							
ILA	**Ilan**	**0.68**	**339**	*e*S		**Sn**	**05 14 14.1**	**-0.3**
	baz=340							
WHF	**Hehuan Shan**	**0.69**	**272**	⇑*i*P		**Pb**	**05 14 03.6**	**-0.4**
	baz=269							
WHF				S		**Sb**	**05 14 13.6**	**+0.3**
	baz=269							
EGFH	**Guangfu**	**0.70**	**230**	P		**Pb**	**05 14 04.0**	**0.0**
	baz=227							
NTC	**Toucheng**	**0.75**	**347**	P		**Pb**	**05 14 04.6**	**-0.2**
	baz=348							
NTC				S		**Sb**	**05 14 14.8**	**+0.2**
	baz=348							
CHGB	**Renai**	**0.77**	**265**	⇑*i*P		**Pb**	**05 14 05.1**	**-0.3**
	baz=263							
CHGB				*e*S		**Sn**	**05 14 17.1**	**+0.3**
	baz=263							
TDCB	**Techi**	**0.79**	**279**	P		**Pb**	**05 14 05.3**	**-0.4**
	baz=277							
TDCB				S		**Sb**	**05 14 16.0**	**0.0**
	baz=277							
YHNB	**Yeheng**	**0.80**	**313**	⇓*i*P		**Pb**	**05 14 05.1**	**-0.6**
	baz=312							
YHNB				S		**Sb**	**05 14 15.5**	**-0.6**
	baz=312							
NWLT	**Wulai**	**0.80**	**324**	P		**Pb**	**05 14 05.4**	**-0.3**
	baz=324							
NWLT				S		**Sb**	**05 14 15.9**	**-0.3**
	baz=324							
NSK	**Sanguang**	**0.81**	**313**	⇓*i*P		**Pb**	**05 14 05.3**	**-0.6**
	baz=312							
NSK				S		**Sb**	**05 14 15.9**	**-0.7**
	baz=312							
HGSD	**Ruisui**	**0.83**	**221**	P		**Pb**	**05 14 05.9**	**-0.3**
	baz=218							
TIPB	**Shuangxi**	**0.86**	**349**	P		**Pb**	**05 14 06.6**	**-0.1**
	baz=349							
TIPB				S		**Sn**	**05 14 18.6**	**-0.2**
	baz=349							
VWDT	**VWDT**	**0.88**	**245**	⇑*i*P		**Pb**	**05 14 06.9**	**-0.1**
	baz=243							
TWB1	**Santiao Chiao**	**0.88**	**358**	*i* P		**Pn**	**05 14 06.8**	**-0.5**
TWB1				S		**Sn**	**05 14 19.2**	**0.0**
EHY	**Hungye**	**0.88**	**226**	P		**Pn**	**05 14 06.2**	**-1.1**
	baz=223							
JYNG	**Yonagunijimaku**	**0.91**	**69**	P		**Pn**	**05 14 07.4**	**-0.2**
TWA	**Mucha**	**0.94**	**335**	*e*S		**Sn**	**05 14 20.6**	**-0.1**
	baz=336							
NHDH	**Xindian Distri**	**0.95**	**332**	*e*S		**Sb**	**05 14 20.4**	**+0.1**
	baz=332							
NWF	**Wu-fen Shan**	**0.97**	**347**	⇓P		**Pb**	**05 14 08.7**	**+0.1**
	baz=348							
NWF				*e*S		**Sn**	**05 14 22.0**	**+0.5**
	baz=348							
WFSB	**Wu-fen Shan**	**0.97**	**347**	P		**Pb**	**05 14 08.7**	**+0.2**
	baz=348							
WFSB				*e*S		**Sn**	**05 14 21.6**	**+0.3**
	baz=348							
YOJ	**Yonaguni jima**	**0.97**	**70**	⇓P		**Pn**	**05 14 08.2**	**-0.2**
	baz=71							
YOJ	**Yonaguni jima**	**0.97**	**70**	P		**Pn**	**05 14 08.2**	**-0.2**
YOJ				S		**Sn**	**05 14 21.5**	**+0.1**
TATO	**Taipei**	**0.97**	**331**	*e*P		**Pb**	**05 14 08.7**	**+0.1**
	baz=331							
TATO				*e*S		**Sn**	**05 14 21.7**	**+0.2**
	baz=331							
WHP	**Taichung City**	**0.99**	**279**	⇓*i*P		**Pb**	**05 14 08.9**	**0.0**
	baz=277							
WHP				S		**Sn**	**05 14 22.1**	**+0.1**
	baz=277							
DPDB	**Guoxing**	**1.00**	**265**	P		**Pb**	**05 14 08.8**	**-0.3**
	baz=263							
DPDB				*e*S		**Sn**	**05 14 22.5**	**+0.3**
	baz=263							
TWF1	**Yuli**	**1.01**	**221**	P		**Pn**	**05 14 08.1**	**-0.9**
	baz=218							
SSLB	**Suanglung**	**1.03**	**251**	P		**Pn**	**05 14 09.0**	**-0.3**
	baz=249							
SMLT	**Sun Moon Lake**	**1.05**	**257**	⇑P		**Pn**	**05 14 09.5**	**-0.2**
	baz=254							
SMLT				*e*S		**Sb**	**05 14 23.2**	**-0.1**
	baz=254							
LIOB	**Emei**	**1.05**	**300**	*e*P		**Pb**	**05 14 10.3**	**+0.4**
	baz=299							
LIOB				*e*S		**Sb**	**05 14 24.4**	**+1.1**
	baz=299							
NSTT	**Nanjuang**	**1.05**	**299**	⇑P		**Pb**	**05 14 10.2**	**+0.2**
	baz=298							
NSTT				*e*S		**Sb**	**05 14 24.0**	**+0.7**
	baz=298							
TYC	**Yuchr**	**1.08**	**259**	⇑P		**Pn**	**05 14 09.9**	**-0.1**
	baz=256							
YM10	**YM10**	**1.11**	**338**	P		**Pn**	**05 14 10.5**	**0.0**
	baz=338							
YM05	**YM05**	**1.11**	**339**	*e*P		**Pn**	**05 14 10.4**	**-0.1**
	baz=338							
YM04	**YM04**	**1.11**	**337**	*e*P		**Pn**	**05 14 10.6**	**+0.1**
	baz=337							
FULB	**Fuli**	**1.13**	**216**	*e*P		**Pn**	**05 14 10.7**	**-0.1**
	baz=214							
FULB				*e*S		**Sb**	**05 14 27.7**	**+2.0**
	baz=214							
TWQ1	**Liyutan**	**1.16**	**281**	⇓*e*P		**Pb**	**05 14 12.5**	**+0.7**
	baz=279							
TWQ1				*e*S		**Sb**	**05 14 28.0**	**+1.7**
	baz=279							
YUS	**Yu-Shan**	**1.16**	**237**	*e*P		**Pb**	**05 14 11.8**	**-0.3**
	baz=235							
YUS				*e*S		**Sb**	**05 14 26.9**	**-0.1**
	baz=235							
CHN5	**Tsauling**	**1.33**	**247**	*e*P		**Pb**	**05 14 14.8**	**0.0**
	baz=245							
TWH	**Lutao**	**1.49**	**199**	*e*P		**Pn**	**05 14 14.8**	**-0.9**
	baz=197							
TWH				*e*S		**Sn**	**05 14 32.4**	**-1.9**
	baz=197							
TPUB	**Ta-pu**	**1.51**	**237**	*e*P		**Pb**	**05 14 17.3**	**-0.5**
	baz=235							
TPUB				*e*S		**Sb**	**05 14 37.2**	**+0.7**
	baz=235							
CHN4	**Tsaushan**	**1.51**	**240**	*e*P		**Pb**	**05 14 17.4**	**-0.4**
	baz=238							
CHN4				*e*S		**Sb**	**05 14 37.8**	**+1.2**
	baz=238							
RLNB	**Erlin**	**1.53**	**262**	*e*S		**Sb**	**05 14 38.3**	**+1.2**
	baz=260							
WTP	**Ta-pu**	**1.55**	**236**	*e*P		**Pb**	**05 14 17.9**	**-0.6**
	baz=234							
IRIF	**Iriomote-Funau**	**1.58**	**82**	P		**Pn**	**05 14 16.8**	**0.0**
HATJ	**Hateruma jima**	**1.64**	**92**	P		**Pn**	**05 14 18.0**	**+0.4**
SLGT	**Liugui**	**1.69**	**228**	*e*P		**Pb**	**05 14 20.2**	**-0.5**
	baz=226							
SLGT				*e*S		**Sb**	**05 14 43.0**	**+1.4**
	baz=226							
JKRS	**Kuro-shima**	**1.82**	**86**	P		**Pn**	**05 14 21.0**	**+0.8**
JKRS				*e*S		**Sn**	**05 14 42.7**	**+0.2**
JIJ	**Ishigaki jima**	**1.96**	**83**	P		**Pn**	**05 14 22.1**	**+0.1**
JIJ				*e*S		**Sn**	**05 14 46.1**	**+0.3**
MASBT	**Mashibuluo**	**1.97**	**220**	*e*P		**Pn**	**05 14 23.5**	**+1.3**
	baz=219							
MASBT				*e*S		**Sb**	**05 14 49.4**	**-0.3**
	baz=219							
JISG	**Ishigakijimahi**	**2.14**	**77**	P		**Pn**	**05 14 24.9**	**+0.3**
JISG				*e*S		**Sn**	**05 14 49.4**	**-1.0**
WDGT	**Dungji**	**2.32**	**249**	*e*P		**Pn**	**05 14 27.8**	**+0.8**
	baz=247							

IDC 26 05:13:57.3±3.1,54.5°N×87.1°E,h0km,mb1 3.2/2, mb1mx3.0/36,mbtmp3.2/2,ML2.9/2,Error ellipse: s-maj=25.9km s-min=19.3km az=50.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.51**	**248**	*i*			05 22 20.0	
	baz=66,slow=317,SNR=3.7							
ZALV	**Zalesovo Beam**	**1.51**	**248**		Pg	Pn	05 14 23.5	-2.1
	1.9nm,0.3s,baz=64,slow=16,SNR=17							
ZALV					Lg	Lg	05 14 46.5	
	3.7nm,0.3s,baz=69,slow=21,SNR=5.2							
KURBB	**Kurchatov Arra**	**6.57**	**237**		Pn	Pn	05 15 35.5	+0.3
	0.2nm,0.3s,baz=53,slow=14,SNR=8.8							
KURBB					Lg	Lg	05 17 25.9	
	0.0nm,0.3s,baz=56,slow=28,SNR=2.5							
MKAR	**Makanchi Array**	**8.36**	**204**		Pn	Pn	05 16 01.3	+1.7
	0.2nm,0.3s,baz=24,slow=12,SNR=9.2							
MKAR					Sn	Sn	05 17 32.4	-2.3
	0.1nm,0.3s,baz=22,slow=25,SNR=1.6							
MKAR					Lg	Lg	05 18 25.0	
	0.0nm,0.3s,baz=38,slow=28,SNR=2.2							

*IDC **26** 05:38:39.6±1.2,1.7°N×85.5°E,h0km,mb3.6/5,mb1 4.1/8, mb1mx3.8/28,mbtmp3.9/8,ML3.3/3,MS4.0/24,Ms1 4.0/24, ms1mx3.9/31,Error ellipse: s-maj=51.4km s-min=20.5km az=57.0*

*NEIC **26** 05:38:41.0±2.7,1.7°N±0.08°×85.4°W±0.2,h10km±1km, mb4.3/6,Error ellipse: s-maj=34.7km s-min=5.7km az=247.0*

*GCMT **26** 05:38:43.0±0.3,1.6°N±0.01°×85.2°W±0.02,h15km±1km, MW4.8/98,Moment Tensor Solution. s21,c23; s98,c138; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.19±.07; $M_{\theta\theta}$0.55±.06; $M_{\phi\phi}$-0.36±.07; $M_{r\theta}$-0.70±.23; $M_{r\phi}$1.90±.06; $M_{\theta\phi}$-0.05±.20; Best double couple: M_o2.07200×10^{16} NP1:ϕ_s186.00000°,δ71.00000°,λ179.00000°. NP2: ϕ_s277.00000°,δ89.00000°,λ19.00000°. Principal axes: T 2.1920, Plg14.0000°, Azm143.0000°; N -0.2400, Plg71.0000°, Azm278.0000°; P -1.9520, Plg13.0000°, Azm50.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 05:38:44.6±0.9,1.76°N±0.09°×85.3°W±0.1,h35km,n53, σ1.9°71/30,MS4.0/16,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
GCUF	**Volcan Galeras**	**7.94**	**94**	*e*P		**Pn**	**05 40 36.2**	**-1.8**
JTS	**Las Juntas de**	**8.48**	**2**	P		**Pn**	**05 40 46.0**	**+1.1**
	1.0nm,0.3s,baz=164,slow=19,SNR=16							
JTS						Sn **Sn**	**05 42 16.7**	**-2.8**
	baz=273,slow=17,SNR=1.0							
JTS						LR LR	05 43 23.8	
	comp=Z,774nm,19.7s,baz=246,slow=33							
JTS	**Las Juntas de**	**8.48**	**2**			**Pn**	**05 40 44.6**	**-0.4**
SOTA	**Rioblanco**	**8.66**	**87**	*e*P		**Pn**	**05 40 47.0**	**-1.0**
HORQ	**Saladito**	**8.80**	**79**	*e*P		**Pn**	**05 40 49.7**	**0.0**
YOTC	**Yotoco, Valle**	**9.18**	**76**	*e*P		**Pn**	**05 40 53.2**	**-1.5**
CBOC	**Ciudad Bolivar**	**10.09**	**66**	*e*P		**Pn**	**05 41 09.4**	**+2.1**
ACON	**Acoyapa**	**10.14**	**1**	Pn		**Pn**	**05 41 11.3**	**+3.5**
ORTC	**Ortega, Tolima**	**10.23**	**78**	*e*P		**Pn**	**05 41 07.6**	**-1.5**
RREF	**El Recreo**	**10.38**	**72**	*e*P		**Pn**	**05 41 13.0**	**+1.3**
ESPN	**Las Esperanzas**	**10.41**	**5**	Pn		**Pn**	**05 41 11.8**	**+0.3**
GUY2C	**Guyana, Caldas**	**10.46**	**71**	*e*P		**Pn**	**05 41 15.7**	**+3.0**
ATAH	**Atahualpa**	**11.19**	**142**	Pn		**Pn**	**05 41 23.5**	**+1.0**
	0.6nm,0.3s,baz=320,slow=15,SNR=3.9							
ATAH						LR LR	05 45 12.6	
	comp=Z,1μm,20.2s,baz=313,slow=35							
ROSC	**El Rosal**	**11.35**	**74**	LR		LR	05 45 34.1	
	comp=Z,693nm,18.2s,baz=235,slow=36							
CHIC	**Chingaza**	**11.86**	**76**	*e*P		**Pn**	**05 41 35.4**	**+3.7**
TGUH	**Tegucigalpa,Un**	**12.38**	**351**	Pn		**Pn**	**05 41 41.1**	**+2.6**
NNA	**Nana**	**16.02**	**149**	LR		LR	05 47 40.9	
	comp=Z,666nm,21.3s,baz=329,slow=34							
SDV	**Santo Domingo**	**16.19**	**64**	Pn		**P**	**05 42 31.9**	**-0.7**
	0.1nm,0.3s,baz=243,slow=11,SNR=8.4							
SDV						LR LR	05 48 16.5	
	comp=Z,602nm,20.1s,baz=247,slow=35							
SDV	**Santo Domingo**	**16.19**	**64**	P		**P**	**05 42 32.4**	**-0.2**
CMIG	**Matias Romero**	**17.93**	**329**	LR		LR	05 48 23.1	
	comp=Z,544nm,20.3s,baz=132,slow=33							
TEIG	**Tepich**	**18.59**	**351**	LR		LR	05 49 40.9	
	comp=Z,454nm,18.8s,baz=228,slow=36							
SAML	**Samuel**	**24.45**	**116**	P		**P**	**05 44 00.5**	**+0.1**
SAML						IAmb IAmb	05 44 06.0	
	comp=Z,9.8nm,1.0s							
LPAZ	**La Paz**	**24.66**	**137**	P		**P**	**05 44 04.2**	**+1.3**
	comp=Z,2.8nm,0.6s,baz=333,slow=9.0,SNR=13							
LPAZ						LR LR	05 54 37.2	
	comp=Z,448nm,19.4s,baz=302,slow=39							
LPAZ	**La Paz**	**24.66**	**137**	P		**P**	**05 44 02.7**	**-0.2**
LPAZ						IAmb IAmb	05 44 09.6	
	comp=Z,6.5nm,0.9s							
SJG	**San Juan**	**24.82**	**48**	LR		LR	05 53 49.1	
	comp=Z,96nm,20.1s,baz=266,slow=36							
LVC	**Limon Verde**	**29.01**	**148**	LR		LR	05 56 43.3	
	comp=Z,419nm,20.7s,baz=335,slow=37							
SIV	**San Ignacio**	**29.71**	**127**	LR		LR	05 57 15.9	
	comp=Z,445nm,20.2s,baz=329,slow=37							
H06E1	**SOCORRO T-PHAS**	**30.30**	**306**	T		T	06 16 36.3	
	SNR=4.0							
TXAR	**Lajitas Array**	**32.54**	**329**	LR		LR	05 57 21.3	
	comp=Z,267nm,20.1s,baz=0.0,slow=35							
Z35A	**Perchaven, San**	**33.35**	**342**	P		**P**	**05 45 17.7**	**-1.8**
HHAR	**Hobbs**	**35.27**	**348**	P		**P**	**05 45 36.4**	**+0.3**
HHAR						IAmb IAmb	05 45 40.4	
	comp=Z,2.3nm,0.6s							
MNTX	**Cornudas Mount**	**35.31**	**330**	P		**P**	**05 45 36.3**	**-0.2**
H03N2	**Juan Fernandez**	**35.52**	**171**	T		T	06 23 07.2	
	baz=349,slow=76,SNR=41							
H03N1	**Juan Fernandez**	**35.52**	**171**	T		T	06 23 08.2	
	baz=349,slow=76,SNR=58							
H03N3	**Juan Fernandez**	**35.54**	**171**	T		T	06 23 04.0	
	baz=349,slow=76,SNR=65							
RPN	**Rapa Nui**	**36.91**	**217**	LR		LR	05 57 14.3	

DZM	**Mont Dzumac**	**107.60**	**248**	*e*LR	LR	06 28 45.3	
	comp=Z,77nm,23.9s						
ASAR	**Alice Springs**	**136.28**	**237**	PKP	**PKPdf**	**05 58 02.9**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=81,slow=3.0,SNR=3.0						

*DJA **26** 05:45:09.8±1.1,1°S±6'×9°7E±1'1,h10km,M4.5/10, mb4.9/2,MLv4.3/10*
*IDC **26** 05:45:10.9±2.2,0.°85S×97.°11E,h0km,mb3.8/3,mb1 3.7/4, mb1mx3.5/35,mbtmp3.7/4,ML2.9/1,Error ellipse: s-maj=76.6km s-min=29.9km az=61.0*
*NEIC **26** 05:45:14.5±2.8,0.°82S±0.°09×97.°2E±0.°2,h28km±7km, mb4.1/2,Error ellipse: s-maj=30.5km s-min=4.4km az=67.0*

ISC 26 05:45:14.1±1.3,0.°85S±0.°08×97.°1E±0.°1,h35km,n25, σ1941/21,mb3.9/5,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
PBSI	**Pulau Batu**	**1.42**	**56**	P		**Pn**	**05 45 37.7**	**+0.3**
PBSI				S		**Sn**	**05 45 54.7**	**-0.1**
SISI	**Saibi**	**2.04**	**104**	P		**Pn**	**05 45 46.5**	**+0.5**
GSI	**Gunungsitoli**	**2.19**	**12**	P		**Pn**	**05 45 48.3**	**+0.3**
GSI	**Gunungsitoli**	**2.19**	**12**			**Pn**	**05 45 47.9**	**-0.1**
MNSI	**Mandailing Nat**	**2.96**	**57**	P		**Pn**	**05 46 00.2**	**+1.5**
PDSI	**Padang**	**3.36**	**91**	P		**Pn**	**05 46 04.9**	**+0.8**
RPSI	**Rantau Prapat**	**3.96**	**27**			**Pn**	**05 46 13.3**	**+0.9**
PSI	**Prapat**	**4.05**	**27**	Pn		**Pn**	**05 46 13.3**	**-0.5**
	0.8nm,0.3s,baz=180,slow=5.4,SNR=2.3							
TPTI		**4.08**	**1**	P		**Pn**	**05 46 12.8**	**-1.2**
KCSI	**Kotacane, Aceh**	**4.39**	**9**	P		**Pn**	**05 46 18.0**	**-0.3**
KRJI	**Kerinci**	**4.53**	**106**	P		**Pn**	**05 46 21.9**	**+1.6**
MNAI	**Manna**	**6.81**	**121**	P		**Pn**	**05 46 52.1**	**+0.5**
MNAI	**Manna**	**6.81**	**121**	Pn		**Pn**	**05 46 52.4**	**+0.8**
MNAI				Sn		**Sn**	**05 48 04.0**	**-3.9**
H08S2	**Diego Garcia H**	**25.44**	**254**	T		T	06 17 01.9	
	baz=75,slow=74,SNR=4.3							
H08S3	**Diego Garcia H**	**25.45**	**254**	T		T	06 16 46.4	
	baz=75,slow=74,SNR=4.2							
H08S1	**Diego Carcia H**	**25.46**	**254**	T		T	06 16 48.8	
	baz=75,slow=74,SNR=4.7							
H01W3	**Cape Leeuwin H**	**37.41**	**157**	T		T	06 32 47.3	
	baz=333							
H01W2	**Cape Leeuwin H**	**37.42**	**157**	T		T	06 32 44.7	
	baz=333							
H01W1	**Cape Leeuwin H**	**37.42**	**157**	T		T	06 32 49.4	
	baz=333							
WRAB	**Tennant Creek**	**41.08**	**120**	P		**P**	**05 52 53.6**	**-1.1**
WRAB				IAmb		IAmb	05 53 02.4	
	comp=Z,13nm,1.4s							
ASAR	**Alice Springs**	**42.27**	**125**	P		**P**	**05 53 06.0**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=298,slow=7.6,SNR=4.2							
MK31	**Makanchi Array**	**49.19**	**347**	P		**P**	**05 53 58.4**	**-0.4**
MK31				IAmb		IAmb	05 54 02.2	
	comp=Z,0.9nm,0.8s							
MKAR	**Makanchi Array**	**49.19**	**347**	P		**P**	**05 54 01.3**	**+2.4**
	comp=Z,0.7nm,0.6s,baz=153,slow=8.6,SNR=10.0							
ZALV	**Zalesovo Beam**	**55.55**	**351**	P		**P**	**05 54 46.5**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=167,slow=8.6,SNR=5.2							
TXAR	**Lajitas Array**	**145.44**	**33**	PKPbc		**PKiKP**	**06 04 52.2**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=316,slow=3.8,SNR=2.7							

*JMA **26** 06:23:49.9±0.1,24.°10N×121.°99E,h34km±2km,M2.2*
*TAP **26** 06:23:50.2,24.°16N×122.°00E,h25km,ML3.2,B*

ISC 26 06:23:50.5±1.0,24.°15N±0.°03×122.°02E±0.°02,h26km±9km, n105,σ0.°94/130,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.38**	**318**	*i* P		**Pb**	**06 23 58.4**	**-0.4**
	baz=319							
ENA				S		**Sb**	**06 24 04.8**	**+0.3**
	baz=319							
NACB	**Ninganchiao**	**0.39**	**274**	P		**Pb**	**06 23 58.6**	**-0.4**
	baz=271							
NACB				S		**Sb**	**06 24 04.9**	**+0.1**
	baz=271							
TWD	**Chiawan**	**0.39**	**260**	*i* P		**Pb**	**06 23 58.9**	**-0.1**
	baz=257							
TWD				S		**Sb**	**06 24 05.5**	**+0.7**
	baz=257							
HWA	**Hwalien**	**0.42**	**246**	*e*P		**Pb**	**06 23 59.7**	**+0.3**
	baz=242							
TWC	**Suao**	**0.49**	**341**	P		**Pb**	**06 24 00.2**	**-0.4**
	baz=344							
TWC				*e*S		**Sb**	**06 24 07.2**	**-0.2**
	baz=344							
ETLH	**Xiulin Townshi**	**0.50**	**277**	P		**Pb**	**06 24 00.4**	**-0.4**
	baz=275							
ETLH				S		**Sb**	**06 24 08.0**	**+0.3**
	baz=275							
ESL	**Shilin**	**0.63**	**239**	P		**Pb**	**06 24 02.3**	**-0.7**
	baz=235							
ENTT	**Nioudou**	**0.64**	**320**	P		**Pb**	**06 24 02.8**	**-0.4**
	baz=320							
ENTT				*e*S		**Sb**	**06 24 12.0**	**+0.2**
	baz=320							
NNSH	**Datong**	**0.65**	**296**	P		**Pb**	**06 24 02.9**	**-0.4**
	baz=295							
NNSH				S		**Sb**	**06 24 12.1**	**+0.1**
	baz=295							
NNSB	**Datong**	**0.65**	**296**	P		**Pb**	**06 24 02.8**	**-0.5**
	baz=295							
NNSB				*e*S		**Sb**	**06 24 11.4**	**-0.7**
	baz=295							
NDT	**Datong Townshi**	**0.65**	**315**	P		**Pb**	**06 24 03.0**	**-0.3**
	baz=314							
NDT				*e*S		**Sb**	**06 24 12.2**	**+0.3**
	baz=314							
TWE	**Neicheng**	**0.66**	**331**	P		**Pb**	**06 24 03.2**	**-0.2**
	baz=332							
TWE				*e*S		**Sb**	**06 24 12.7**	**+0.5**
	baz=332							
NNS	**Nan Shan**	**0.66**	**296**	*i* P		**Pb**	**06 24 03.0**	**-0.6**
	baz=296							
NNS				S		**Sb**	**06 24 12.2**	**-0.2**
	baz=296							
ILA	**Ilan**	**0.67**	**338**	*e*S		**Sb**	**06 24 13.4**	**+1.0**
	baz=339							
WHF	**Hehuan Shan**	**0.69**	**270**	*i* P		**Pb**	**06 24 03.6**	**-0.6**
	baz=268							
WHF				S		**Sb**	**06 24 13.7**	**+0.1**
	baz=268							
EGFH	**Guangfu**	**0.72**	**229**	P		**Pb**	**06 24 03.9**	**-0.6**
	baz=226							
NTC	**Toucheng**	**0.73**	**346**	P		**Pb**	**06 24 04.5**	**-0.1**
	baz=347							
CHGB	**Renai**	**0.78**	**264**	P		**Pb**	**06 24 05.0**	**-0.6**
	baz=262							
CHGB				*e*S		**Sb**	**06 24 16.5**	**+0.6**
	baz=262							
TWT	**Tachien**	**0.78**	**278**	P		**Pb**	**06 24 05.8**	**+0.2**
	baz=276							
TWT				*e*S		**Sb**	**06 24 16.2**	**+0.3**
	baz=276							
NWLT	**Wulai**	**0.79**	**323**	P		**Pb**	**06 24 05.1**	**-0.5**
	baz=323							
NWLT				S		**Sb**	**06 24 15.8**	**-0.1**
	baz=323							
YHNB	**Yeheng**	**0.79**	**312**	*e*P		**Pb**	**06 24 05.1**	**-0.6**
	baz=311							
TDCB	**Techi**	**0.80**	**278**	*e*P		**Pb**	**06 24 05.5**	**-0.3**
	baz=276							
TDCB				*e*S		**Sb**	**06 24 16.1**	**-0.1**
	baz=276							
OWD	**Renai**	**0.80**	**256**	*e*P		**Pb**	**06 24 04.4**	**-1.4**
	baz=254							
NSK	**Sanguang**	**0.80**	**311**	P		**Pb**	**06 24 05.2**	**-0.7**
	baz=311							
NSK				S		**Sb**	**06 24 15.7**	**-0.7**
	baz=311							
TIPB	**Shuangxi**	**0.84**	**348**	*e*P		**Pn**	**06 24 06.6**	**-0.1**
	baz=348							
HGSD	**Ruisui**	**0.85**	**220**	*e*P		**Pn**	**06 24 05.7**	**-1.0**
	baz=218							
TWB1	**Santiao Chiao**	**0.86**	**358**	*e*P		**Pn**	**06 24 06.9**	**0.0**
	baz=359							
VWDT	**VWDT**	**0.90**	**244**	*e*P		**Pn**	**06 24 06.8**	**-0.6**
	baz=242							
JYNG	**Yonagunijimaku**	**0.90**	**70**	P		**Pn**	**06 24 07.3**	**-0.1**
JYNG				*e*S		**Sb**	**06 24 19.1**	**+0.1**
EHY	**Hungye**	**0.90**	**225**	*e*P		**Pn**	**06 24 06.1**	**-1.4**
	baz=223							
TWA	**Mucha**	**0.92**	**334**	*e*P		**Pn**	**06 24 07.7**	**0.0**
	baz=335							
NHDH	**Xindian Distri**	**0.93**	**331**	*e*P		**Pn**	**06 24 07.8**	**-0.1**
	baz=331							
NWF	**Wu-fen Shan**	**0.95**	**347**	*e*P		**Pn**	**06 24 08.7**	**+0.5**
	baz=347							
WFSB	**Wu-fen Shan**	**0.95**	**347**	*e*P		**Pn**	**06 24 08.7**	**+0.6**
	baz=347							
YOJ	**Yonaguni jima**	**0.96**	**71**	*e*P		**Pn**	**06 24 07.8**	**-0.4**
	baz=71							
YOJ	**Yonaguni jima**	**0.96**	**71**	P		**Pn**	**06 24 08.1**	**-0.1**
YOJ				S		**Sn**	**06 24 20.6**	**-0.4**
TATO	**Taipei**	**0.96**	**330**	*e*P		**Pn**	**06 24 08.2**	**0.0**
	baz=330							
WHP	**Taichung City**	**0.99**	**278**	P		**Pn**	**06 24 08.8**	**+0.1**
	baz=276							
WHP				*e*S		**Sn**	**06 24 21.9**	**-0.1**
	baz=276							
YULB	**Yu-li**	**1.00**	**222**	*e*P		**Pn**	**06 24 07.5**	**-1.4**
	baz=220							
DPDB	**Guoxing**	**1.01**	**264**	*e*P		**Pn**	**06 24 08.1**	**-0.9**
	baz=262							
TWF1	**Yuli**	**1.03**	**220**	*e*P		**Pn**	**06 24 08.1**	**-1.2**
	baz=218							
SSLB	**Suanglung**	**1.04**	**250**	*e*P		**Pn**	**06 24 08.8**	**-0.6**
	baz=248							
NSTT	**Nanjuang**	**1.05**	**298**	P		**Pn**	**06 24 10.1**	**+0.6**
	baz=297							
SMLT	**Sun Moon Lake**	**1.06**	**256**	P		**Pn**	**06 24 09.6**	**-0.1**
	baz=254							
YM01	**YM01**	**1.08**	**338**	*e*P		**Pn**	**06 24 10.5**	**+0.6**
	baz=338							
YM10	**YM10**	**1.09**	**337**	*e*P		**Pn**	**06 24 10.0**	**-0.1**
	baz=338							
TYC	**Yuchr**	**1.09**	**257**	P		**Pn**	**06 24 09.9**	**-0.1**
	baz=256							
YM11	**YM11**	**1.09**	**338**	*e*P		**Pn**	**06 24 10.1**	**-0.1**
	baz=338							
YM04	**YM04**	**1.10**	**336**	*e*P		**Pn**	**06 24 10.9**	**+0.7**
	baz=336							
YM08	**YM08**	**1.11**	**339**	*e*P		**Pn**	**06 24 09.6**	**-0.7**
	baz=339							
NCUH	**Zhongli**	**1.12**	**317**	*e*P		**Pn**	**06 24 09.6**	**-0.8**
	baz=317							
YM03	**YM03**	**1.12**	**337**	*e*P		**Pn**	**06 24 11.4**	**+0.9**
	baz=337							
ANP	**Anpu**	**1.13**	**336**	*e*P		**Pn**	**06 24 10.6**	**-0.1**
	baz=337							
FULB	**Fuli**	**1.16**	**215**	*e*P		**Pn**	**06 24 10.6**	**-0.4**
	baz=214							
TWQ1	**Liyutan**	**1.16**	**280**	*e*P		**Pn**	**06 24 12.3**	**+1.3**
	baz=279							
TWQ1				*e*S		**Sb**	**06 24 27.8**	**+1.4**
	baz=279							
WHYT	**Xinyi Township**	**1.16**	**247**	P		**Pn**	**06 24 11.4**	**+0.3**
	baz=246							
NSY	**Sanyi**	**1.18**	**283**	*e*P		**Pn**	**06 24 12.8**	**+1.4**
	baz=282							
NMLH	**Miaoli**	**1.19**	**289**	*e*P		**Pn**	**06 24 12.6**	**+1.2**
	baz=288							
TWY	**Chenhua**	**1.19**	**341**	*e*P		**Pn**	**06 24 12.2**	**+0.8**
	baz=342							
CHKT	**Chengkung**	**1.20**	**210**	*e*P		**Pn**	**06 24 11.0**	**-0.6**
	baz=208							
WJS	**Zhushan**	**1.23**	**255**	*e*P		**Pn**	**06 24 13.0**	**+1.1**
	baz=253							
TCU	**Taichung**	**1.23**	**270**	*e*P		**Pn**	**06 24 12.6**	**+0.7**
	baz=269							
NHW	**Xinwu Township**	**1.23**	**314**	*e*S		**Sn**	**06 24 29.0**	**+1.2**
	baz=314							
PTSB	**Yuanli**	**1.24**	**284**	*e*P		**Pn**	**06 24 13.9**	**+1.8**
	baz=283							
WNT	**Mingjian**	**1.25**	**258**	*e*P		**Pn**	**06 24 13.3**	**+1.0**
	baz=256							
WDJ	**Dajia District**	**1.28**	**279**	*e*P		**Pn**	**06 24 13.2**	**+0.6**
	baz=278							
ELDTW	**Lidau**	**1.32**	**224**	*e*P		**Pn**	**06 24 12.1**	**-1.3**
	baz=222							
WCHH	**Zhanghua**	**1.34**	**267**	*e*P		**Pn**	**06 24 14.6**	**+1.2**
	baz=266							
CHN5	**Tsauling**	**1.34**	**246**	*e*P		**Pn**	**06 24 14.5**	**+0.9**
	baz=245							
WDLH	**Douliu**	**1.43**	**252**	*e*P		**Pn**	**06 24 15.9**	**+1.2**
	baz=250							
TWH	**Lutao**	**1.51**	**199**	*e*P		**Pn**	**06 24 14.4**	**-1.4**
	baz=197							
STYT	**Tauyuan**	**1.52**	**230**	*e*P		**Pn**	**06 24 16.5**	**+0.5**
	baz=228							
TPUB	**Ta-pu**	**1.53**	**237**	*e*P		**Pn**	**06 24 16.9**	**+0.8**
	baz=235							
CHN4	**Tsaushan**	**1.53**	**239**	*e*P		**Pn**	**06 24 17.4**	**+1.3**
	baz=237							
RLNB	**Erlin**	**1.54**	**261**	*e*S		**Sb**	**06 24 38.4**	**+1.0**
	baz=259							
WTP	**Ta-pu**	**1.57**	**235**	*e*P		**Pn**	**06 24 17.7**	**+0.9**
	baz=234							
IRIF	**Iriomote-Funau**	**1.57**	**83**	P		**Pn**	**06 24 16.7**	**0.0**
IRIF				*e*S		**Sn**	**06 24 36.9**	**+0.7**
TWGBT	**Beinan**	**1.58**	**213**	*e*P		**Pn**	**06 24 16.2**	**-0.6**
	baz=212							
TWG	**Pinlang**	**1.58**	**214**	*e*P		**Pn**	**06 24 16.3**	**-0.6**
	baz=212							
CHY	**Chiayi**	**1.60**	**247**	*e*P		**Pn**	**06 24 18.9**	**+1.9**
	baz=245							
HATJ	**Hateruma jima**	**1.63**	**93**	P		**Pn**	**06 24 18.1**	**+0.6**
TWK	**Hsinying**	**1.66**	**238**	*e*P		**Pn**	**06 24 19.0**	**+1.1**
	baz=237							
CHN1	**Nanshi**	**1.67**	**235**	*e*P		**Pn**	**06 24 19.1**	**+1.0**
	baz=234							
SNST	**Tainan City**	**1.67**	**237**	*e*P		**Pn**	**06 24 20.3**	**+2.2**
	baz=235							
SLGT	**Liugui**	**1.71**	**228**	*e*P		**Pn**	**06 24 20.0**	**+1.4**
	baz=226							
SLGT				*e*S		**Sn**	**06 24 42.7**	**+3.2**
	baz=226							
WSF	**Szhu**	**1.72**	**253**	*e*S		**Sn**	**06 24 41.7**	**+1.9**
	baz=252							
JKRS	**Kuro-shima**	**1.82**	**87**	P		**Pn**	**06 24 20.9**	**+0.8**
JKRS				*e*S		**Sn**	**06 24 42.6**	**+0.4**
ECL	**Taimali**	**1.83**	**213**	*e*P		**Pn**	**06 24 23.0**	**+2.8**
	baz=211							
SSD	**Sandimen**	**1.89**	**223**	*e*P		**Pn**	**06 24 20.6**	**-0.4**
	baz=221							
JIJ	**Ishigaki jima**	**1.95**	**83**	P		**Pn**	**06 24 22.0**	**+0.1**
JIJ				*e*S		**Sn**	**06 24 45.5**	**0.0**
MASBT	**Mashibuluo**	**1.99**	**220**	*e*P		**Pn**	**06 24 23.5**	**+1.1**
	baz=219							
EAST	**Anshuo**	**2.06**	**212**	*e*P		**Pn**	**06 24 23.4**	**-0.1**
	baz=210							
JISG	**Ishigakijimahi**	**2.13**	**78**	*e*S		**Sn**	**06 24 50.0**	**0.0**
SCZT	**Fangliau**	**2.19**	**216**	*e*P		**Pn**	**06 24 25.5**	**+0.3**
	baz=215							
PHUB	**P'eng-hu**	**2.33**	**255**	*e*S		**Sn**	**06 24 54.1**	**-0.7**
	baz=253							
PNG	**Penghu**	**2.33**	**256**	*e*S		**Sn**	**06 24 54.9**	**0.0**
	baz=255							
WDGT	**Dungji**	**2.34**	**248**	*e*P		**Pn**	**06 24 27.4**	**+0.2**
	baz=247							
PTTC	**Pingtan**	**2.45**	**304**	*e*S		**Sn**	**06 24 55.1**	**-2.8**
	baz=303							
VWUC	**VWUC**	**2.49**	**290**	*e*P		**Pn**	**06 24 28.2**	**-1.1**
	baz=289							
VCHM	**Qimei**	**2.55**	**249**	*e*P		**Pn**	**06 24 29.0**	**-1.2**
	baz=248							
MATB	**Ma-tsu**	**2.74**	**317**	*e*P		**Pn**	**06 24 34.8**	**+2.0**
	baz=316							
PTMZ	**Houxiangcun**	**2.79**	**289**	*e*P		**Pn**	**06 24 32.1**	**-1.3**
	baz=288							
KNMB	**Chin-men Tao**	**3.33**	**276**	*e*P		**Pn**	**06 24 39.2**	**-1.6**
	baz=275							
AXDP	**Jialang**	**3.77**	**282**	*e*P		**Pn**	**06 24 45.4**	**-1.4**
	baz=281							
ZPLA	**Ao Xicun**	**3.91**	**268**	*e*P		**Pn**	**06 24 47.2**	**-1.7**
	baz=266							

IDC 26 06:24:50.6±5.6,3.°46S×150.°38E,h0km,mb3.4/3, mb1 3.6/3,mb1mx3.4/32,mbtmp3.4/3,Error ellipse: s-maj=170.4km s-min=34.1km az=102.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.66**	**222**	P		P	06 29 53.4	-0.3
	0.6nm,1.0s,baz=47,slow=11,SNR=5.6							
ASAR	**Alice Springs**	**25.64**	**217**	P		P	06 30 22.4	+0.2
	0.3nm,0.4s,baz=54,slow=8.7,SNR=6.8							
SONM	**Songino Array**	**63.92**	**329**	P		P	06 35 25.5	0.0
	0.3nm,0.4s,baz=125,slow=7.4,SNR=2.0							

*JMA **26** 06:28:29.1±0.1,24.°09N×122.°00E,h32km±3km,M1.9*
*TAP **26** 06:28:29.7,24.°16N×122.°03E,h27km,ML3.1,B*

ISC 26 06:28:28.6±1.0,24.°13N±0.°03×122.°06E±0.°02,h32km±8km, n77,σ0.°73/99,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.42**	**316**	*i* P		**Pb**	**06 28 37.6**	**-0.3**
	baz=315							
ENA				S		**Sb**	**06 28 44.4**	**+0.2**
	baz=315							
TWD	**Chiawan**	**0.43**	**264**	*i* P		**Pb**	**06 28 38.1**	**+0.1**
	baz=258							
TWD				*i* S		**Sn**	**06 28 45.0**	**-0.2**
	baz=258							
NACB	**Ninganchiao**	**0.43**	**277**	P		**Pb**	**06 28 37.9**	**-0.1**
	baz=272							
NACB				*e*S		**Sb**	**06 28 43.9**	**-0.6**
	baz=272							
HWA	**Hwalien**	**0.44**	**250**	*i* P		**Pn**	**06 28 39.2**	**+0.4**
	baz=244							
HWA				*e*S		**Sn**	**06 28 47.1**	**+1.5**
	baz=244							
TWC	**Suao**	**0.52**	**338**	P		**Pb**	**06 28 39.4**	**0.0**
	baz=340							
TWC				S		**Sb**	**06 28 46.2**	**-0.6**
	baz=340							
ETLH	**Xiulin Townshi**	**0.53**	**279**	*i* P		**Pb**	**06 28 39.4**	**-0.3**
	baz=275							
ETLH				S		**Sb**	**06 28 46.9**	**-0.4**
	baz=275							
ESL	**Shilin**	**0.65**	**242**	P		**Pb**	**06 28 41.5**	**-0.1**
	baz=237							
ENTT	**Nioudou**	**0.68**	**319**	P		**Pb**	**06 28 41.9**	**-0.2**
	baz=318							
ENTT				S		**Sb**	**06 28 50.9**	**-0.4**
	baz=318							
NNSB	**Datong**	**0.69**	**296**	P		**Pb**	**06 28 42.0**	**-0.3**
	baz=294							
NNSB				*e*S		**Sb**	**06 28 50.6**	**-1.0**
	baz=294							
NNSH	**Datong**	**0.69**	**296**	P		**Pb**	**06 28 41.9**	**-0.4**
	baz=294							
NNSH				*e*S		**Sb**	**06 28 50.6**	**-0.9**
	baz=294							
NDT	**Datong Townshi**	**0.69**	**314**	P		**Pb**	**06 28 42.2**	**0.0**
	baz=312							
NDT				S		**Sb**	**06 28 51.4**	**-0.1**
	baz=312							
TWE	**Neicheng**	**0.69**	**329**	P		**Pb**	**06 28 42.3**	**0.0**
	baz=330							
ILA	**Ilan**	**0.70**	**336**	*e*S		**Sn**	**06 28 53.1**	**+1.1**
	baz=337							
NNS	**Nan Shan**	**0.70**	**297**	*i* P		**Pb**	**06 28 42.2**	**-0.3**
	baz=295							
NNS				*i* S		**Sb**	**06 28 51.3**	**-0.7**
	baz=295							
WHF	**Hehuan Shan**	**0.73**	**272**	*i* P		**Pb**	**06 28 42.8**	**-0.3**
	baz=268							
WHF				S		**Sb**	**06 28 53.0**	**0.0**
	baz=268							
EGFH	**Guangfu**	**0.74**	**232**	*e*P		**Pb**	**06 28 43.7**	**+0.7**
	baz=228							
NTC	**Toucheng**	**0.76**	**344**	*e*P		**Pb**	**06 28 43.6**	**+0.3**
	baz=345							
NTC				*e*S		**Sn**	**06 28 53.9**	**+0.5**
	baz=345							
CHGB	**Renai**	**0.81**	**266**	P		**Pn**	**06 28 44.2**	**+0.2**
	baz=262							
CHGB				*e*S		**Sn**	**06 28 55.6**	**+0.5**
	baz=262							
TWT	**Tachien**	**0.82**	**279**	P		**Pb**	**06 28 45.0**	**+0.5**
	baz=276							
TWT				*e*S		**Sn**	**06 28 55.7**	**+0.5**
	baz=276							
NWLT	**Wulai**	**0.82**	**322**	*e*S		**Sn**	**06 28 55.0**	**-0.2**
	baz=321							
OWD	**Renai**	**0.82**	**258**	*e*S		**Sn**	**06 28 55.8**	**+0.5**
	baz=255							
YHNB	**Yeheng**	**0.83**	**311**	*e*P		**Pn**	**06 28 44.2**	**+0.1**
	baz=310							
YHNB				*e*S		**Sn**	**06 28 54.5**	**-0.9**
	baz=310							
TDCB	**Techi**	**0.83**	**279**	*e*P		**Pb**	**06 28 44.7**	**0.0**
	baz=276							
NSK	**Sanguang**	**0.84**	**311**	P		**Pn**	**06 28 44.4**	**+0.1**
	baz=310							
NSK				*e*S		**Sn**	**06 28 55.0**	**-0.7**
	baz=310							
HGSD	**Ruisui**	**0.86**	**223**	*e*P		**Pb**	**06 28 44.9**	**-0.2**
	baz=220							
TIPB	**Shuangxi**	**0.87**	**346**	*e*P		**Pb**	**06 28 45.6**	**+0.4**
	baz=346							
JYNG	**Yonagunijimaku**	**0.87**	**68**	P		**Pb**	**06 28 46.1**	**+0.8**
JYNG				*e*S		**Sb**	**06 28 57.8**	**+1.2**
TWB1	**Santiao Chiao**	**0.88**	**356**	*e*P		**Pb**	**06 28 46.4**	**+0.9**
	baz=357							
EHY	**Hungye**	**0.91**	**228**	*e*P		**Pn**	**06 28 45.4**	**+0.1**
	baz=224							
VWDT	**VWDT**	**0.92**	**246**	*e*P		**Pb**	**06 28 45.9**	**-0.1**
	baz=243							
YOJ	**Yonaguni jima**	**0.93**	**69**	*e*P		**Pb**	**06 28 46.7**	**+0.4**
	baz=70							
YOJ	**Yonaguni jima**	**0.93**	**69**	P		**Pb**	**06 28 47.5**	**+1.3**
YOJ				*e*S		**Sb**	**06 29 00.0**	**+1.7**
TWA	**Mucha**	**0.95**	**333**	*e*P		**Pn**	**06 28 44.4**	**-1.5**
	baz=333							
NWF	**Wu-fen Shan**	**0.97**	**345**	*e*P		**Pb**	**06 28 47.8**	**+0.8**
	baz=345							
WFSB	**Wu-fen Shan**	**0.97**	**345**	*e*P		**Pb**	**06 28 47.5**	**+0.5**
	baz=345							
YULB	**Yu-li**	**1.01**	**224**	*e*P		**Pn**	**06 28 46.7**	**+0.1**
	baz=221							
WHP	**Taichung City**	**1.03**	**279**	P		**Pb**	**06 28 48.0**	**+0.1**
	baz=276							
WHP				*e*S		**Sb**	**06 29 01.2**	**+0.1**
	baz=276							
DPDB	**Guoxing**	**1.04**	**265**	*e*P		**Pb**	**06 28 47.8**	**-0.3**
	baz=262							
TWF1	**Yuli**	**1.04**	**222**	*e*P		**Pn**	**06 28 47.3**	**+0.2**
	baz=219							
SSLB	**Suanglung**	**1.07**	**252**	*e*P		**Pb**	**06 28 48.1**	**-0.5**
	baz=249							
SMLT	**Sun Moon Lake**	**1.09**	**257**	P		**Pb**	**06 28 48.7**	**-0.3**
	baz=254							
NSTT	**Nanjuang**	**1.09**	**298**	*e*P		**Pb**	**06 28 49.3**	**+0.4**
	baz=296							
YM01

CHN4	**Tsaushan** baz=238	**1.55**	**240**	*eP*	**Pb**	**06 28 56.7**	**0.0**
WTP	**Ta-pu** baz=234	**1.59**	**237**	*eP*	**Pb**	**06 28 57.0**	**-0.4**
TWK	**Hsinying** baz=237	**1.68**	**240**	*eP*	**Pb**	**06 28 58.2**	**-0.6**
CHN1	**Nanshi** baz=234	**1.69**	**237**	*eP*	**Pb**	**06 28 58.3**	**-0.7**
SNST	**Tainan City** baz=236	**1.69**	**238**	*eP*	**Pb**	**06 28 59.3**	**+0.2**
SLGT	**Liugui** baz=227	**1.72**	**229**	*eP*	**Pb**	**06 28 59.3**	**-0.3**
JKRS	**Kuro-shima**	**1.78**	**86**	P	**Pb**	**06 29 00.0**	**-0.7**
JIJ	**Ishigaki jima**	**1.92**	**82**	P	**Pb**	**06 29 01.3**	**-1.6**
JIJ				*eS*	**Sb**	**06 29 24.8**	**-1.6**
MASBT	**Mashibuluo** baz=219	**2.00**	**221**	*eP*	**Pb**	**06 29 02.3**	**-2.0**
EAST	**Anshuo** baz=211	**2.06**	**213**	*eP*	**Pn**	**06 29 02.9**	**+1.8**
JISG	**Ishigakijimahi**	**2.10**	**77**	P	**Pb**	**06 29 04.2**	**-1.9**
PHUB	**P'eng-hu** baz=253	**2.36**	**256**	*eS*	**Sn**	**06 29 32.0**	**-1.0**
WDGT	**Dungji** baz=247	**2.36**	**249**	*eP*	**Pn**	**06 29 06.6**	**+1.4**
VWUC	**VWUC** baz=289	**2.53**	**290**	*eP*	**Pn**	**06 29 07.3**	**-0.2**
PTMZ	**Houxiangcun** baz=288	**2.83**	**289**	*eP*	**Pn**	**06 29 11.2**	**-0.4**

IDC ***26*** *06:46:31.4±1.6, 7.°01S×129.°72E, h110km±13km, mb4.0/10, mb1 4.1/13, mb1mx3.9/28, mbtmp4.4/13, MS3.1/1, Ms1 3.1/1, ms1mx2.5/27, Error ellipse: s-maj=17.9km s-min=11.3km az=103.0*

NEIC ***26*** *06:46:32.3±2.6, 7.°04S±0.°06×129.°76E±0.°06, h122km±6km, mb4.4/22, Error ellipse: s-maj=8.9km s-min=7.8km az=218.0*

DJA ***26*** *06:46:33.2±0.2, 7.°S±2.°×13.°0E±.°, h132km±7km, M4.7/15, mb4.6/15, mB5.2/7, MLv4.8/13, Mw(mB)4.6/7, Mwp5.0/2*

ISC 26 06:46:34.0±0.4, 7.°13S±0.°05×129.°81E±0.°05, h150km, n78, σ2§46/81, mb4.3/18, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.70**	**120**	P	**Pn**	**06 47 04.6**	**-1.1**
SAUI	**Saumlaki**	**1.70**	**120**		**Pn**	**06 47 04.3**	**-1.4**
BNDI	**Bandanaira**	**2.59**	**2**	P	**Pn**	**06 47 17.2**	**+0.9**
AAI	**Ambon**	**3.78**	**335**	P	**Pn**	**06 47 29.5**	**-1.9**
MSAI	**Masohi**	**3.86**	**347**	P	**Pn**	**06 47 32.7**	**+0.2**
FAKI	**Fak Fak**	**4.84**	**30**	P	**Pn**	**06 47 41.5**	**-3.7**
FAKI	**Fak Fak**	**4.84**	**30**		**Pn**	**06 47 41.6**	**-3.7**
MTN	**Manton Dam**	**5.82**	**167**		**Pn**	**06 47 56.8**	**-1.5**
SOEI	**Soe** 2.9nm2µm142nm0.7s	**6.08**	**244**	P	**Pn**	**06 48 00.5**	**-1.3**
SOEI	**Soe**	**6.08**	**244**		**Pn**	**06 48 00.7**	**-1.2**
SIJI	**Sorong** 19nm0.3s,baz=257,slow=23,SNR=34	**6.39**	**13**	P	**Pn**	**06 48 02.9**	**-3.0**
SIJI				S	**Sn**	**06 49 10.3**	**-7.6**
	27nm,0.3s,baz=219,slow=22,SNR=14						
BATI	**Baumata** 40nm,0.3s,baz=96,slow=3.1,SNR=16	**6.81**	**243**	P	**Pn**	**06 48 10.3**	**-1.1**
BATI				S	**Sn**	**06 49 22.2**	**-5.7**
	91nm,0.3s,baz=69,slow=22,SNR=15						
BATI	**Baumata** 1.1nm3µm2µm77nm,1.0s	**6.81**	**243**	P	**Pn**	**06 48 10.4**	**-1.1**
RKPI	**Ransiki, Papua** 4.0nm8µm167nm,0.5s	**7.08**	**38**	P	**Pn**	**06 48 13.5**	**-1.6**
MMRI	**Maumere**	**7.65**	**258**	Pn	**Pn**	**06 48 22.1**	**-0.7**
EDFI	**Ende, Flores** 9.2nm,0.7s	**8.21**	**258**	P	**Pn**	**06 48 29.6**	**-0.7**
TNTI	**Ternate**	**8.22**	**343**	Pn	**Pn**	**06 48 27.4**	**-3.0**
KNRA	**Kununurra**	**8.56**	**187**		**Pn**	**06 48 32.2**	**-2.6**
KAPI	**Kappang** comp=Z,117nm,21.9s,baz=72,slow=34	**10.22**	**281**	LR	LR	06 52 18.1	
KAPI	**Kappang**	**10.22**	**281**	Pn	Pn	06 48 52.0	-5.0
WBSI	**Waikabubak, Su** 53nm,0.9s	**10.61**	**256**	P	**Pn**	**06 49 00.9**	**-1.2**
GENI	**Genyem** 63nm,0.5s	**11.26**	**67**	P	**Pn**	**06 49 09.8**	**-0.8**
FITZ	**Fitzroy Crossi** 4.6nm,0.3s,baz=25,slow=8.8,SNR=80	**11.63**	**200**	P	**Pn**	**06 49 11.8**	**-3.8**
FITZ				S	Sn	06 51 11.7	-13
	6.3nm,0.3s,baz=80,slow=16,SNR=8.6						
FITZ	**Fitzroy Crossi**	**11.63**	**200**		**Pn**	**06 49 12.0**	**-3.6**
MPSI	**Mapaga**	**12.37**	**306**	P	**P**	**06 49 32.3**	**+1.3**
WB0	**Warramunga Arr**	**13.32**	**161**		**Pn**	**06 49 35.6**	**-1.8**
WRAB	**Tennant Creek**	**13.47**	**161**	Pn	**P**	**06 49 40.0**	**-3.2**
WRA	**Warramunga Arr** 0.9nm,0.3s,baz=339,slow=9.3,SNR=46	**13.47**	**161**	P	**Pn**	**06 49 35.5**	**-3.8**
WRA				S	Sn	06 51 54.8	-14
	5.0nm,0.3s,baz=342,slow=22,SNR=16						
WRA				ScP	**ScP**	**06 58 18.8**	**+4.2**
	0.6nm,0.3s,baz=318,slow=2.4,SNR=9.3						
WB2	**Warramunga Arr**	**13.47**	**161**		**Pn**	**06 49 36.5**	**-2.8**
WR0	**Warramunga Arr**	**13.55**	**161**		**Pn**	**06 49 39.5**	**-0.7**
COEN	**Coen**	**14.78**	**118**	Pn	**Pn**	**06 49 55.7**	**-0.1**
JAGI	**Jajag, Banyuwa**	**15.57**	**264**	Pn	**Pn**	**06 50 04.4**	**-1.2**
ZCP	**Zamboanga City**	**15.96**	**331**	*jP*	**P**	**06 50 12.3**	**+1.4**
AS31	**Alice Springs**	**16.90**	**167**	P	**Pn**	**06 50 22.0**	**+0.3**
ASAR	**Alice Springs** 1.2nm,0.3s,baz=338,slow=9.4,SNR=32	**16.90**	**167**	P	**Pn**	**06 50 21.8**	**0.0**
ASAR				S	**S**	**06 53 21.0**	**-8.8**
	1.7nm,0.3s,baz=354,slow=25,SNR=7.5						
ASAR				ScP	**ScP**	**06 58 24.8**	**+4.0**
	1.1nm,0.3s,baz=3.3,slow=1.7,SNR=16						
PSA00	**Pilbara Seismi**	**17.29**	**213**	P	**Pn**	**06 50 27.4**	**+1.0**
PSA00	comp=Z,20nm,0.7s			IAmb	IAmb	06 50 31.2	
SBUM	**Sibu**	**19.97**	**298**	P	**Pn**	**06 50 56.2**	**-1.9**
SBUM	comp=Z,15nm,0.8s			IAmb	IAmb	06 50 58.1	
CTAO	**Charters Tower**	**20.50**	**131**	P	Pn	06 51 03.9	-0.3
CTAO	comp=Z,18nm,1.4s			IAmb	IAmb	06 51 12.1	
GIRL	**Giralia**	**21.52**	**223**	P	**P**	**06 51 13.7**	**+2.4**
RABL	**Rabaul**	**22.43**	**84**	P	**P**	**06 51 20.5**	**-0.1**
FORT	**Forrest**	**23.58**	**184**	P	**P**	**06 51 33.6**	**+2.5**
STKA	**Stephens Creek** comp=Z,1.5nm,0.3s,baz=337,slow=7.4,SNR=15	**26.96**	**157**	P	**P**	**06 52 03.0**	**+1.4**
STKA				ScP	**ScP**	**06 58 50.1**	**+4.1**
	comp=Z,2.1nm,0.8s,baz=343,slow=16,SNR=3.1						
STKA	**Stephens Creek**	**26.96**	**157**	P	**P**	**06 52 03.7**	**+2.1**
NWAO	**Narrogin (SRO)** comp=Z,9.9nm,0.9s,baz=76,slow=16,SNR=3.4	**28.20**	**203**	P	**P**	**06 52 14.9**	**+2.3**
NWAO	**Narrogin (SRO)**	**28.20**	**203**	P	**P**	**06 52 14.4**	**+1.8**
NWAO	comp=Z,18nm,1.3s			IAmb	IAmb	06 52 29.4	
RPSI	**Rantau Prapat**	**32.34**	**287**	P	**P**	**06 52 48.7**	**-0.6**
PSI	**Prapat** comp=Z,14nm,0.8s,baz=180,slow=1.7,SNR=9.5	**32.37**	**287**	P	**P**	**06 52 48.7**	**-1.0**
CMAR	**Chiang Mai Arr** comp=Z,2.0nm,0.5s,baz=135,slow=7.2,SNR=9.7	**39.67**	**310**	P	**P**	**06 53 52.0**	**+0.3**
CHTO	**Chiang Mai**	**39.89**	**311**	P	**P**	**06 53 54.2**	**+0.8**
CHTO	comp=Z,4.2nm,0.8s			IAmb	IAmb	06 53 54.7	
MSVF	**Nonsavu**	**48.14**	**107**	P	**P**	**06 55 00.5**	**+1.1**
MSVF	comp=Z,9.4nm,1.1s			IAmb	IAmb	06 55 15.9	
USRK	**Ussuriysk Ar.** comp=Z,0.5nm,0.5s,baz=172,slow=7.3,SNR=1.1	**51.13**	**2**	P	**P**	**06 55 21.8**	**+0.5**
ODAN	**Odare** comp=Z,12nm,0.5s	**53.20**	**311**	*eP*	**P**	**06 55 37.5**	**+0.2**
TAPN	**Taplejung** comp=Z,6.3nm,0.3s	**53.24**	**312**	*eP*	**P**	**06 55 37.8**	**+0.2**
RAMN	**Ramite** comp=Z,13nm,0.4s	**53.84**	**311**	*eP*	**P**	**06 55 42.3**	**+0.3**
JIRN	**Jiri**	**54.53**	**311**	*eP*	**P**	**06 55 47.3**	**+0.2**
GUN	**Gumba** comp=Z,11nm,0.4s	**54.90**	**311**	*eP*	**P**	**06 55 50.4**	**+0.7**
PKI	**Pulchoki**	**55.07**	**311**	*eP*	**P**	**06 55 52.1**	**+1.1**
KOLN	**Koldanda**	**56.54**	**310**	*eP*	**P**	**06 56 01.5**	**+0.2**
SONM	**Songino Array** comp=Z,0.8nm,0.6s,baz=164,slow=6.2,SNR=4.3	**58.51**	**342**	P	**P**	**06 56 16.0**	**+1.5**
PETK	**Petropavlovsk-** comp=Z,0.9nm,0.5s,baz=280,slow=33,SNR=5.2	**64.50**	**18**	P	**P**	**06 56 55.9**	**+1.4**
MK31	**Makanchi Array**	**68.23**	**327**	P	**P**	**06 57 19.7**	**+1.3**
MK31	comp=Z,3.7nm,0.5s			IAmb	IAmb	06 57 20.7	
MKAR	**Makanchi Array** comp=Z,5.4nm,0.4s,baz=114,slow=8.6,SNR=80	**68.23**	**327**	P	**P**	**06 57 19.8**	**+1.3**
MAKZ	**Makanchi**	**68.41**	**327**	P	**P**	**06 57 21.0**	**+1.5**
BOOM	**Boomskoye usch**	**69.53**	**320**	P	**P**	**06 57 28.9**	**+2.2**
ARSB	**Arslanbob**	**70.86**	**318**	P	**P**	**06 57 33.4**	**-1.5**
ARSB				IAmb	IAmb	06 57 37.4	
	comp=Z,4.9nm,0.7s						
ZAA0	**Zalesovo Array**	**71.62**	**334**	P	**P**	**06 57 39.2**	**+0.4**
ZAA0	comp=Z,6.4nm,1.3s			IAmb	IAmb	06 57 40.8	
ZALV	**Zalesovo Beam** comp=Z,1.5nm,0.3s,baz=142,slow=6.1,SNR=12	**71.62**	**334**	P	**P**	**06 57 39.3**	**+0.4**
GAR	**Garm**	**71.63**	**315**	P	**P**	**06 57 41.1**	**+1.7**
GAR	comp=Z,6.4nm,0.8s			IAmb	IAmb	06 57 42.8	
KURK	**Kurchatov**	**72.53**	**329**	P	**P**	**06 57 45.3**	**+0.9**
KURK	comp=Z,4.6nm,0.7s			IAmb	IAmb	06 57 48.0	
KK31	**Karatay Array**	**73.32**	**319**	P	**P**	**06 57 50.4**	**+1.1**
MAW	**Mawson** comp=Z,1.9nm,0.6s,baz=355,slow=12,SNR=2.7	**74.76**	**201**	P	**P**	**06 58 00.2**	**+3.1**
MAW	**Mawson**	**74.76**	**201**	P	**P**	**06 58 00.2**	**+3.1**
RAYN	**Ar Rayn** comp=Z,3.5nm,0.7s	**87.63**	**294**	P	**P**	**06 59 05.9**	**-0.1**
RAYN				IAmb	IAmb	06 59 10.3	
TORD	**Torodi Ar. Bea** comp=Z,1.2nm,0.6s,baz=68,slow=2.9,SNR=7.6	**128.65**	**281**	PKP	**PKiKP**	**07 05 26.3**	**+1.3**
DBIC	**Dimbokro** comp=Z,2.2nm,0.8s,baz=9.8,slow=5.9,SNR=4.7	**135.01**	**272**	PKP	**PKiKP**	**07 05 38.9**	**+1.0**
DBIC	**Dimbokro**	**135.01**	**272**	PKPdf	**PKiKP**	**07 05 39.1**	**+1.2**
LPAZ	**La Paz** comp=Z,1.0nm,0.4s,baz=32,slow=3.7,SNR=14	**150.73**	**143**	PKPbc	**PKPab**	**07 06 13.8**	**-3.8**
LPAZ	**La Paz**	**150.73**	**143**		**PKPab**	**07 06 13.9**	**-3.7**

ISK 26 07:01:18.5, 40.°44N×26.°29E, h5km, ML1.7/5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GELI	**Tayfur-Gelibol**	**0.14**	**107**	PG	Pg	07 01 22.1	+0.7
GELI				SG	Sg	07 01 24.5	+1.2
ERIK	**Erikli-Kesan**	**0.28**	**36**	PG	Pb	07 01 25.1	-1.0
ERIK				SG	Sg	07 01 29.1	+1.3
ENEZ	**Enez**	**0.32**	**340**	PG	Pg	07 01 25.3	+0.7
ENEZ				SG	Sg	07 01 30.1	+1.3
LPK	**Lapseki**	**0.36**	**101**	PG	Pb	07 01 26.7	-0.7
GADA	**Gvkgeada**	**0.39**	**231**	PG	Pg	07 01 26.7	+0.7
MRMT	**Marmara Adasi**	**1.01**	**80**	PG	Pg	07 01 37.9	+0.1

ATH ***26*** *07:01:56.8, 40.°17N×25.°08E, h15km±7km, ML2.2/5, Error ellipse: s-maj=7.2km s-min=1.0km az=93.0*

THE 26 07:01:56.9, 40.°17N×25.°09E, h13km±1km, ML2.3/5, Error ellipse: s-maj=1.4km s-min=0.4km az=195.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.28**	**165**	P	Pg	07 02 02.8	+0.1
LIA				S	Sg	07 02 07.0	+0.4
	1µm,0.2s						
LIA	**Limnos Island**	**0.28**	**165**	P	Pg	07 02 02.8	+0.1
LIA				AML	AML	07 02 07.0	
	comp=E,3631µm,0.3s						
LIA				S	Sg	07 02 07.0	+0.4
LIA				AML	AML	07 02 07.1	
	comp=N,1972µm,0.2s						
SMTH	**Samothraki Isl**	**0.45**	**48**	P	Pg	07 02 05.8	-0.1
THAS	**Thassos island**	**0.52**	**327**	P	Pg	07 02 06.6	-0.5
THAS				S	Sb	07 02 14.7	-0.7
	comp=N,268nm,0.3s						
THAS	**Thassos island**	**0.52**	**327**	P	Pg	07 02 06.6	-0.5
THAS				S	Sg	07 02 14.1	+0.1
THAS				AML	AML	07 02 16.7	
	comp=N,480µm,0.3s						
THAS				AML	AML	07 02 16.8	
	comp=E,478µm,0.2s						
GADA	**Gvkgeada**	**0.62**	**88**	P	Pg	07 02 09.1	+0.1
GADA				S	Sb	07 02 17.8	-0.4
	comp=E,118nm,0.2s						
OUR	**Ouranopolis**	**0.86**	**281**	P	Pg	07 02 12.9	-0.7
OUR				S	Sb	07 02 26.0	+0.8
	comp=E,205nm,0.3s						
OUR	**Ouranopolis**	**0.86**	**281**	P	Pg	07 02 13.0	-0.6
OUR				S	Sg	07 02 25.1	+0.2
OUR				AML	AML	07 02 27.5	
	comp=N,418µm,0.2s						
OUR				AML	AML	07 02 27.9	
	comp=E,410µm,0.3s						
KAVA	**Kavala**	**0.94**	**332**	P	Pg	07 02 14.7	-0.3
KAVA				S	Sb	07 02 27.9	+0.6
	comp=E,245nm,0.3s						
KAVA	**Kavala**	**0.94**	**332**	P	Pb	07 02 15.1	+0.1
KAVA				S	Sg	07 02 26.9	-0.3
KAVA				AML	AML	07 02 28.0	
	comp=N,438µm,0.3s						
KAVA				AML	AML	07 02 28.2	
	comp=E,541µm,0.3s						
ENEZ	**Enez**	**0.99**	**55**	P	Pb	07 02 15.1	-0.8
EZN	**Ezine**	**1.01**	**110**	P	Pb	07 02 15.6	-0.6
PAIG	**Paliouri**	**1.11**	**258**	P	Pb	07 02 17.0	-0.9
PLG	**Polygyros**	**1.27**	**280**	P	Pn	07 02 20.6	+0.1
PRK	**Paraskevi**	**1.30**	**135**	P	Pb	07 02 21.3	+0.2
PRK				S	Sg	07 02 38.9	+0.2
SKY	**Skiros Island**	**1.36**	**198**	P	Pb	07 02 22.2	+0.1
AOS	**Alonnisos**	**1.37**	**223**	P	Pn	07 02 21.6	-0.2
AOS				S	Sg	07 02 41.7	+0.7
AOS				AML	AML	07 02 46.1	
	comp=N,88µm,0.4s						
AOS				AML	AML	07 02 46.4	
	comp=E,85µm,0.4s						
SRS	**Serrai**	**1.48**	**310**	P	Pg	07 02 25.0	-0.3

IDC ***26*** *07:10:55.6±6.0, 12.°08S×166.°89E, h201km±59km, mb3.6/9, mb1 3.8/10, mb1mx3.6/41, mbtmp4.1/10, Error ellipse: s-maj=49.4km s-min=21.8km az=160.0*

NEIC ***26*** *07:10:56.0±2.2, 12.°2S±0.°1×167.°0E±0.°1, h216km±7km, mb4.5/15, Error ellipse: s-maj=20.9km s-min=13.8km az=71.0*

ISC 26 07:10:56.4±0.5, 12.°41S±0.°09×167.°0E±0.°1, h220km, n37, σ1§26/37, mb4.1/17, 1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.53**	**292**	Pn	**Pn**	**07 12 42.4**	**-1.3**
DZM	**Mont Dzumac** 0.8nm,0.3s,baz=190,slow=22,SNR=8.0	**9.63**	**183**	P	**P**	**07 13 15.0**	**-3.4**
DZM	**Mont Dzumac**	**9.63**	**183**		**P**	**07 13 15.2**	**-3.2**
EIDS	**Eidsvold**	**19.80**	**227**	P	**Pn**	**07 15 12.9**	**-1.9**
EIDS	comp=Z,17nm,0.8s			IAmb	IAmb	07 15 13.8	
CTA	**Charters Tower** comp=Z,3.2nm,0.5s,baz=97,slow=15,SNR=2.7	**21.32**	**246**	P	**P**	**07 15 27.3**	**+0.8**
ARMA	**Armidale**	**22.89**	**216**	P	**P**	**07 15 43.1**	**+1.9**
ARMA	comp=Z,14nm,1.4s			IAmb	IAmb	07 15 50.7	
BKZ	**Black Stump Fm**	**27.95**	**164**	P	**P**	**07 16 27.4**	**+0.8**
BKZ	comp=Z,16nm,1.1s			IAmb	IAmb	07 16 30.2	
BFZ	**Birch Farm**	**29.31**	**166**	P	**P**	**07 16 38.6**	**+0.1**
TUWZ	**Tuamarina**	**29.54**	**169**	P	**P**	**07 16 41.2**	**+0.6**
THZ	**Tophouse**	**29.70**	**171**	P	**P**	**07 16 42.3**	**+0.3**
STKA	**Stephens Creek** comp=Z,2.0nm,0.6s,baz=39,slow=5.6,SNR=4.2	**30.35**	**226**	P	**P**	**07 16 49.9**	**+2.1**
STKA	**Stephens Creek**	**30.35**	**226**	P	**P**	**07 16 49.3**	**+1.5**
KHZ	**Kahutara**	**30.43**	**170**	P	**P**	**07 16 49.2**	**+0.8**
LTZ	**Lake Taylor**	**30.61**	**172**	P	**P**	**07 16 50.6**	**+0.7**
LTZ	comp=Z,55nm,1.3s			IAmb	IAmb	07 17 03.1	
ASAR	**Alice Springs** comp=Z,0.5nm,0.5s,baz=69,slow=9.4,SNR=9.3	**33.32**	**246**	P	**P**	**07 17 14.5**	**+0.6**
BBOO	**Buckleboo**	**34.84**	**229**	P	**P**	**07 17 28.8**	**+2.0**
BBOO	comp=Z,40nm,1.5s			IAmb	IAmb	07 17 44.4	
VNDA	**Vanda**	**65.16**	**181**	P	**P**	**07 21 14.8**	**+1.3**
QSPA	**South Pole Qui** comp=Z,5.3nm,1.4s	**77.61**	**180**	P	**P**	**07 22 29.1**	**+1.0**
QSPA				IAmb	IAmb	07 22 46.7	
SONM	**Songino Array** comp=Z,0.6nm,0.5s,baz=115,slow=6.5,SNR=2.7	**80.49**	**323**	P	**P**	**07 22 43.4**	**-0.6**
WRH	**Wood River Hil**	**83.83**	**18**	P	**P**	**07 23 01.4**	**+0.6**
CCB	**Clear Creek Bu**	**84.05**	**18**	P	**P**	**07 23 02.5**	**+0.6**
CCB	comp=Z,3.0nm,0.6s			IAmb	IAmb	07 23 03.5	
HDA	**Harding Lake** comp=Z,7.3nm,0.6s	**84.14**	**18**	P	**P**	**07 23 02.9**	**+0.5**
HDA				IAmb	IAmb	07 23 04.5	
IL31		**84.41**	**18**	P	**P**	**07 23 03.7**	**0.0**
IL31				IAmb	IAmb	07 23 05.5	
	comp=Z,2.2nm,0.7s						
ILAR	**Eielson Array** comp=Z,2.5nm,0.6s,baz=248,slow=5.1,SNR=44	**84.41**	**18**	P	**P**	**07 23 04.6**	**+0.8**
NVAR	**Mina Array Bea** comp=Z,0.3nm,0.2s,baz=224,slow=7.5,SNR=5.7	**85.96**	**49**	P	**P**	**07 23 12.7**	**+0.4**
SYO	**Syowa Base**	**90.84**	**197**	*eP*	**P**	**07 23 34.0**	**-0.5**
MKAR	**Makanchi Array** comp=Z,1.4nm,0.6s,baz=116,slow=7.1,SNR=13	**95.35**	**317**	P	**P**	**07 23 54.9**	**-0.8**
TXAR	**Lajitas Array** comp=Z,0.3nm,0.7s,baz=228,slow=4.7,SNR=4.6	**95.40**	**61**	P	**P**	**07 23 55.4**	**-1.0**
YKA	**Yellowknife Ar** comp=Z,0.3nm,0.5s,baz=257,slow=4.2,SNR=12	**95.61**	**27**	P	**P**	**07 23 55.4**	**-1.0**
SNAA	**Sanae**	**95.84**	**183**	P	**P**	**07 23 57.6**	**0.0**
VNA3	**Neumayer Olymp**	**96.52**	**181**	P	**P**	**07 24 00.3**	**-0.2**
VNA2	**Neumayer--Watz** baz=186,slow=4.1	**96.78**	**182**	P	**P**	**07 24 01.8**	**+0.1**
ARCES	**ARCESS Array B** comp=Z,2.4nm,0.5s,baz=77,slow=2.1,SNR=17	**117.95**	**346**	PKP	**PKiKP**	**07 29 17.3**	**+1.0**
FINES	**FINESS Array B** comp=Z,8.8nm,1.2s,baz=354,slow=1.9,SNR=5.3	**123.48**	**339**	PKP	**PKiKP**	**07 29 27.4**	**0.0**
NOA	**NORSAR Array B** comp=Z,0.7nm,0.6s,baz=219,slow=16,SNR=2.5	**128.33**	**345**	PKP	**PKiKP**	**07 29 37.6**	**+0.5**
GERES	**GERESS Array B** comp=Z,0.2nm,0.3s,baz=93,slow=2.7,SNR=3.5	**137.46**	**334**	PKP	**PKiKP**	**07 29 56.4**	**+0.4**
ESDC	**Sonseca Array** comp=Z,0.5nm,0.6s,baz=6.4,slow=2.0,SNR=8.3	**151.69**	**345**	PKPbc	**PKiKP**	**07 30 26.8**	**+1.3**

DJA ***26*** *07:12:45.7±0.5, 3.°S±6.°×14.°0E±.°, h82km±12km, M3.9/5, mb4.2/4, MLv4.0/5, MLv3.6/1*

IDC ***26*** *07:12:45.5±2.8, 3.°06S×139.°42E, h57km±29km, mb3.7/5, mb1 3.9/5, mb1mx3.6/30, mbtmp4.0/5, MS3.6/1, Ms1 3.6/1, ms1mx2.5/32, Error ellipse: s-maj=34.2km s-min=16.8km az=124.0*

NEIC ***26*** *07:12:45.4±2.6, 3.°2S±0.°1×139.°49E±0.°07, h66km±10km, mb4.2/10, Error ellipse: s-maj=18.0km s-min=5.7km az=149.0*

ISC 26 07:12:44.6±0.6, 3.°08S±0.°07×139.°45E±0.°05, h46km, n29, σ1§86/29, mb4.1/5, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.87**	**56**	P	**Pn**	**07 13 03.4**	**+2.9**
WAMI	**Wamena**	**1.08**	**223**	P	**Pn**	**07 13 07.1**	**+3.8**
SMPI	**Sarmi**	**1.31**	**326**	P	**Pn**	**07 13 08.9**	**+2.4**
JAY	**Jayapura** 54nm,0.3s,baz=218,slow=9.6,SNR=102	**1.38**	**66**	P	**Pn**	**07 13 09.2**	**+1.7**
JAY				S	**Sn**	**07 13 25.9**	**+1.5**
	91nm,0.3s,baz=74,slow=16,SNR=9.3						
JAY				LR	LR	07 13 56.5	
	comp=Z,122nm,19.3s,baz=186,slow=51						
JAY	**Jayapura**	**1.38**	**66**	P	**Pn**	**07 13 09.1**	**+1.7**
FAKI	**Fak Fak** 0.1nm17nm,1.5s	**7.19**	**271**	P	**Pn**	**07 14 28.8**	**+1.6**
FAKI	**Fak Fak**	**7.19**	**271**	Pn	**Pn**	**07 14 28.6**	**+1.4**
COEN	**Coen**	**11.41**	**161**	Pn	**Pn**	**07 15 25.4**	**+0.3**
MTN	**Manton Dam**	**12.72**	**220**		**Pn**	**07 15 43.6**	**+0.8**
KNRA	**Kununurra**	**16.35**	**219**		**Pn**	**07 16 29.9**	**-1.1**
LUWI	**Luwuk**	**16.79**	**277**	P	**P**	**07 16 37.2**	**-1.0**
WB0	**Warramunga Arr**	**17.30**	**196**	P	**Pn**	**07 16 41.4**	**-1.5**
WB0	comp=Z,16nm,1.2s			IAmb	IAmb	07 17 07.2	
WR0	**Warramunga Arr**	**17.44**	**196**	P	**Pn**	**07 16 42.3**	**-2.4**
WR0	comp=Z,15nm,1.1s			IAmb	IAmb	07 16 52.5	
WRAB	**Tennant Creek**	**17.47**	**196**	P	**Pn**	**07 16 42.7**	**-2.3**
WRAB	comp=Z,28nm,1.2s			IAmb	IAmb	07 16 53.4	
WB2	**Warramunga Arr**	**17.48**	**196**	P	**Pn**	**07 16 42.7**	**-2.5**
WB2	comp=Z,9.9nm,0.6s			IAmb	IAmb	07 16 53.0	
WRA	**Warramunga Arr** comp=Z,0.3nm,0.3s,baz=8.7,slow=14,SNR=7.9	**17.48**	**196**	P	**Pn**	**07 16 40.7**	**-4.5**
WRA				S	Sn	07 19 44.5	-15
	comp=Z,0.3nm,0.3s,baz=13,slow=22,SNR=6.4						
FITZ	**Fitzroy Crossi** comp=Z,3.0nm,0.9s,baz=39,slow=11,SNR=9.9	**20.14**	**221**	P	**P**	**07 17 14.2**	**-0.9**
FITZ	**Fitzroy Crossi**	**20.14**	**221**	P	**P**	**07 17 14.6**	**-0.4**
FITZ	comp=Z,12nm,1.1s			IAmb	IAmb	07 17 23.7	
AS31	**Alice Springs**	**21.15**	**194**	P	**P**	**07 17 26.9**	**+1.0**
ASAR	**Alice Springs** comp=Z,4.6nm,0.7s,baz=26,slow=9.9,SNR=27	**21.15**	**194**	P	**P**	**07 17 26.4**	**+0.5**
TGY	**Tagaytay City** comp=Z,128nm,20.5s,baz=358,slow=35	**25.07**	**313**	LR	LR	07 27 28.8	
MJAR	**Matsushiro Arr** comp=Z,1.1nm,0.3s,baz=348,slow=16,SNR=4.1	**39.44**	**358**	P	**P**	**07 20 10.1**	**-0.3**
KSRS	**Korea Array** comp=Z,1.4nm,0.5s,baz=162,slow=8.6,SNR=4.2	**41.73**	**346**	P	**P**	**07 20 29.2**	**+0.1**
MK31	**Makanchi Array**	**70.53**	**322**	P	**P**	**07 23 54.5**	**-0.2**
MAKZ	**Makanchi**	**70.73**	**322**	P	**P**	**07 23 55.9**	**-0.1**
MAKZ	comp=Z,1.9nm,0.7s			IAmb	IAmb	07 23 56.4	
ILAR	**Eielson Array** comp=Z,0.7nm,0.6s,baz=263,slow=4.8,SNR=9.8	**85.87**	**24**	P	**P**	**07 25 17.8**	**-1.4**
DBIC	**Dimbokro** comp=Z,3.5nm,0.5s,baz=61,slow=3.1,SNR=11	**144.26**	**277**	PKP	**PKPab**	**07 32 14.3**	**-0.3**
DBIC	**Dimbokro**	**144.26**	**277**		**PKPab**	**07 32

JISG				S		Sn	07 17 53.5	-0.4
WHF	**Hehuan Shan**	**1.54**	**245**	*i* P		Pn	07 17 36.6	-0.2
	baz=245							
WHF				*e*S		Sn	07 17 57.6	-0.3
	baz=245							
ESL	**Shilin**	**1.59**	**232**	*e*P		Pn	07 17 36.3	-0.6
	baz=231							
CHGB	**Renai**	**1.65**	**244**	P		Pn	07 17 37.6	-0.4
	baz=244							
CHGB				*e*S		Sn	07 18 00.5	+0.5
	baz=244							
WHP	**Taichung City**	**1.77**	**253**	*e*P		Pn	07 17 40.6	+1.4
	baz=253							
WHP				*e*S		Sn	07 18 02.1	-0.1
	baz=253							
HGSD	**Ruisui**	**1.81**	**224**	*e*P		Pn	07 17 38.5	-1.1
	baz=224							
HGSD				*e*S		Sn	07 18 04.3	+1.4
	baz=224							
VWDT	**VWDT**	**1.84**	**236**	*e*P		Pn	07 17 39.7	-0.3
	baz=235							
VWDT				*e*S		Sn	07 18 02.9	-0.7
	baz=235							
YULB	**Yu-li**	**1.96**	**225**	*e*P		Pn	07 17 40.2	-1.4
	baz=224							
SSLB	**Suanglung**	**1.96**	**240**	*e*P		Pn	07 17 41.9	+0.3
	baz=239							
SSLB				*e*S		Sn	07 18 07.9	+1.4
	baz=239							
WHYT	**Xinyi Township**	**2.09**	**239**	*e*P		Pn	07 17 43.9	+0.6
	baz=238							
WHYT				*e*S		Sn	07 18 10.0	+0.6
	baz=238							
FULB	**Fuli**	**2.10**	**221**	*e*P		Pn	07 17 43.5	+0.1
	baz=221							

ISK ***26*** *07:17:49.5,40°.28N×25°.51E,h13km,ML3.6/29*
THE ***26*** *07:17:50.8,40°.30N×25°.54E,h11km±1km,ML3.0/12,Error ellipse: s-maj=1.2km s-min=0.6km az=50.0*
ATH ***26*** *07:17:50.3,40°.30N×25°.52E,h21km±3km,ML3.1/8,Error ellipse: s-maj=3.4km s-min=1.0km az=34.0*
DDA ***26*** *07:17:51.9,40°.27N×25°.67E,h20km±1km,ML3.6*
BEO ***26*** *07:17:52.7±1.1,40°.27N×25°.44E,h17km±6km,ML3.3/7*
ISC 26 07:17:50.7±0.8,40°.29N±0°.02×25°.53E±0°.02,h15km±6km, n99,σ0°73/135,13C-2D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SMTH	**Samothraki Isl**	**0.18**	**0**	P		**Pg**	**07 17 54.7**	**-0.4**
SMTH				S		**Sg**	**07 17 57.6**	**-0.4**
	5μm,0.1s							
SMTH	**Samothraki Isl**	**0.18**	**0**	P		**Pg**	**07 17 54.8**	**-0.4**
SMTH				S		**Sg**	**07 17 57.8**	**-0.2**
SMTH				AML	AML		07 17 58.1	
	comp=E,7926μm,0.2s							
SMTH				AML	AML		07 17 58.4	
	comp=N,9984μm,0.1s							
GADA	**Gvkgeada**	**0.30**	**109**	P		**Pg**	**07 17 57.1**	**+0.1**
GADA				S		**Sg**	**07 18 01.5**	**+0.2**
	comp=N,6μm,0.4s							
GADA	**Gvkgeada**	**0.30**	**109**	PG		**Pg**	**07 17 57.2**	**+0.2**
GADA				SG		**Sg**	**07 18 01.5**	**+0.2**
GOKA	**anakkale-Gk**	**0.31**	**109**	*i* P		**Pg**	**07 17 57.3**	**+0.2**
LIA	**Limnos Island**	**0.47**	**214**	P		**Pg**	**07 18 00.2**	**+0.1**
LIA				S		**Sb**	**07 18 07.4**	**-0.2**
	comp=N,1μm,0.2s							
LIA	**Limnos Island**	**0.47**	**214**	P		**Pg**	**07 18 00.3**	**+0.1**
LIA				S		**Sb**	**07 18 07.2**	**-0.4**
LIA				AML	AML		07 18 11.1	
	comp=E,2704μm,0.2s							
LIA				AML	AML		07 18 13.4	
	comp=N,2863μm,0.3s							
BOZC	**Bozcaada**	**0.60**	**138**	PG		**Pg**	**07 18 02.2**	**-0.4**
BOZC				SG		**Sg**	**07 18 10.4**	**-0.2**
BOZC	**Bozcaada**	**0.60**	**138**	*i* P		**Pg**	**07 18 02.5**	**-0.1**
BOZC				*i* S		**Sg**	**07 18 10.3**	**-0.2**
ENEZ	**Enez**	**0.65**	**47**	P		**Pg**	**07 18 03.0**	**-0.5**
ENEZ				S		**Sg**	**07 18 12.4**	**+0.2**
	comp=N,5μm,0.3s							
ENEZ	**Enez**	**0.65**	**47**	PG		**Pg**	**07 18 03.2**	**-0.3**
THAS	**Thassos island**	**0.69**	**297**	P		**Pg**	**07 18 03.8**	**-0.5**
THAS				S		**Sb**	**07 18 14.6**	**+0.6**
	comp=N,1μm,0.2s							
THAS	**Thassos island**	**0.69**	**297**	P		**Pg**	**07 18 03.9**	**-0.3**
THAS				S		**Sg**	**07 18 13.6**	**+0.1**
THAS				AML	AML		07 18 15.5	
	comp=N,2917μm,0.2s							
THAS				AML	AML		07 18 16.0	
	comp=E,2239μm,0.2s							
GELI	**Tayfur-Gelibol**	**0.73**	**81**	PG		**Pb**	**07 18 04.6**	**-0.6**
GELI				SG		**Sb**	**07 18 14.9**	**-0.1**
EZN	**Ezine**	**0.77**	**127**	P		**Pb**	**07 18 05.0**	**-0.8**
EZN				S		**Sg**	**07 18 16.4**	**+0.6**
	comp=E,1μm,0.3s							
EZN	**Ezine**	**0.77**	**127**	PG		**Pb**	**07 18 05.1**	**-0.8**
ERIK	**Erikli-Kesan**	**0.84**	**63**	PG		**Pb**	**07 18 06.1**	**-1.0**
EFSA	**Agios Efstrati**	**0.86**	**209**	P		**Pg**	**07 18 07.5**	**+0.2**
EFSA				AML	AML		07 18 21.4	
	comp=N,3259μm,0.5s							
EFSA				AML	AML		07 18 22.1	
	comp=E,4804μm,0.7s							
RDO	**Rodhopi**	**0.86**	**0**	P		**Pb**	**07 18 06.6**	**-0.7**
RDO				S		**Sg**	**07 18 18.9**	**+0.3**
	comp=E,1μm,0.4s							
RDO	**Rodhopi**	**0.86**	**0**	P		**Pb**	**07 18 07.2**	**-0.1**
RDO				S		**Sb**	**07 18 18.8**	**+0.1**
RDO				AML	AML		07 18 19.9	
	comp=N,3313μm,0.5s							
RDO				AML	AML		07 18 22.4	
	comp=E,1518μm,0.3s							
RDO	**Rodhopi**	**0.86**	**0**	PG		**Pb**	**07 18 06.6**	**-0.7**
LPK	**Lapseki**	**0.94**	**85**	PG		**Pb**	**07 18 08.3**	**-0.6**
BAYC	**CANAKKALE_Bayr**	**0.95**	**125**	*i* P		**Pb**	**07 18 08.7**	**-0.4**
BAYC				*i* S		**Sb**	**07 18 21.2**	**-0.3**
KESN	**Edirne-Kesan**	**1.03**	**58**	*i* P		**Pb**	**07 18 09.9**	**-0.6**
KESN				*i* S		**Sb**	**07 18 23.2**	**-0.8**
KESN				IAML			07 18 27.0	
	comp=N,2μm,0.2s							
KESN				IAML			07 18 27.0	
	comp=E,2μm,0.2s							
KAVA	**Kavala**	**1.05**	**313**	P		**Pb**	**07 18 10.1**	**-0.5**
KAVA				S		**Sn**	**07 18 25.4**	**+0.1**
	comp=E,440nm,0.2s							
KAVA	**Kavala**	**1.05**	**313**	P		**Pb**	**07 18 10.3**	**-0.3**
KAVA				S		**Sb**	**07 18 24.2**	**0.0**
KAVA				AML	AML		07 18 26.2	
	comp=E,895μm,0.2s							
KAVA				AML	AML		07 18 27.7	
	comp=N,937μm,0.2s							
KVLA	**Kavala**	**1.08**	**307**	P		**Pb**	**07 18 10.5**	**-0.7**
SIGR	**SIGRI**	**1.11**	**167**	P		**Pn**	**07 18 11.5**	**-0.2**
SIGR				S		**Sg**	**07 18 26.7**	**+0.2**
	comp=N,3μm,0.7s							
SIGR	**SIGRI**	**1.11**	**167**	P		**Pn**	**07 18 11.6**	**-0.1**
SIGR				S		**Sg**	**07 18 26.8**	**+0.2**
SIGR				AML	AML		07 18 27.7	
	comp=E,5178μm,0.7s							
SIGR				AML	AML		07 18 27.8	
	comp=N,5517μm,0.7s							
SIGR	**SIGRI**	**1.11**	**167**	PN		**Pb**	**07 18 10.8**	**-0.8**
OUR	**Ouranopolis**	**1.18**	**273**	P		**Pn**	**07 18 11.6**	**-1.2**
OUR				S		**Sg**	**07 18 30.0**	**+1.0**
	comp=N,665nm,0.4s							
OUR	**Ouranopolis**	**1.18**	**273**	P		**Pn**	**07 18 11.8**	**-1.0**
OUR	**Ouranopolis**	**1.18**	**273**	PN		**Pn**	**07 18 11.6**	**-1.2**
UKOP	**Uzunkopru-Edir**	**1.19**	**45**	PN		**Pn**	**07 18 12.6**	**-0.2**
PRK	**Paraskevi**	**1.19**	**151**	P		**Pg**	**07 18 13.4**	**-0.3**
PRK				S		**Sg**	**07 18 29.8**	**+0.6**
	comp=N,2μm,0.7s							
PRK	**Paraskevi**	**1.19**	**151**	P		**Pg**	**07 18 13.7**	**0.0**
PRK				S		**Sg**	**07 18 29.7**	**+0.6**
PRK				AML	AML		07 18 30.8	
	comp=N,4026μm,0.6s							
PRK				AML	AML		07 18 31.0	
	comp=E,5798μm,0.9s							
RKY	**Sarkoy-Tekirda**	**1.32**	**72**	PN		**Pn**	**07 18 13.6**	**-1.1**
SART	**Tekirdag**	**1.32**	**72**	*i* P		**Pn**	**07 18 13.5**	**-1.3**
AYVA	**Ayvalik**	**1.33**	**137**	*i* P		**Pb**	**07 18 15.7**	**+0.3**
AYVA				*i* S		**Sb**	**07 18 32.0**	**-0.2**
AYVA				IAML			07 18 33.0	
	comp=N,2μm,0.6s							
AYVA				IAML			07 18 35.0	
	comp=E,1μm,0.5s							

KRBG	**Karabiga-Canak**	**1.36**	**85**	PN		**Pn**	**07 18 14.9**	**-0.3**
KDZ	**Kurdzhali**	**1.36**	**356**	PN		**Pn**	**07 18 14.6**	**-0.7**
PAIG	**Paliouri**	**1.46**	**256**	P		**Pn**	**07 18 15.3**	**-1.3**
KNL	**Balıkesir**	**1.53**	**90**	*i* P		**Pb**	**07 18 18.4**	**-0.4**
KNL				*i* S		**Sb**	**07 18 38.7**	**+0.7**
KNL				IAML			07 18 42.0	
	comp=N,1μm,0.8s							
KNL				IAML			07 18 51.0	
	comp=E,1μm,0.9s							
MRMT	**Marmara Adasi**	**1.61**	**78**	PN		**Pn**	**07 18 17.8**	**-0.9**
DKL	**Dikili**	**1.61**	**138**	PN		**Pn**	**07 18 18.5**	**-0.2**
GONE	**Gonen-Balikesi**	**1.67**	**98**	PN		**Pn**	**07 18 19.9**	**+0.4**
TKR	**Tekirdag**	**1.68**	**65**	PN		**Pn**	**07 18 19.5**	**-0.1**
SRS	**Serrai**	**1.69**	**300**	*e*Pg		**Pg**	**07 18 22.6**	**-0.6**
SRS				*e*Sg		**Sg**	**07 18 44.6**	**-0.5**
AOS	**Alonnisos**	**1.69**	**229**	PN		**Pn**	**07 18 18.9**	**-0.9**
BALY	**Balya**	**1.70**	**108**	*i* P		**Pn**	**07 18 20.1**	**+0.2**
BALY				*i* S		**Sb**	**07 18 42.8**	**-0.1**
BALY				IAML			07 18 46.0	
	comp=N,743nm,0.5s							
ZEDA	**zmir-Bergama**	**1.78**	**137**	*i* P		**Pb**	**07 18 22.1**	**-1.1**
ZEDA				IAML			07 18 49.0	
	comp=N,458nm,0.4s							
EDC	**Edincik**	**1.79**	**87**	PN		**Pn**	**07 18 20.5**	**-0.6**
EDRB	**Edirne**	**1.81**	**30**	P		**Pn**	**07 18 22.0**	**+0.6**
EDRB				S		**Sn**	**07 18 43.9**	**-0.2**
	comp=N,295nm,0.5s							
EDRB	**Edirne**	**1.81**	**30**	PN		**Pn**	**07 18 21.2**	**-0.2**
HORT	**Hortiatis**	**1.88**	**280**	PN		**Pn**	**07 18 22.1**	**-0.4**
KIRK	**Kırklareli**	**1.91**	**38**	*i* P		**Pn**	**07 18 23.9**	**+1.2**
PLD	**Plovdiv**	**1.92**	**341**	PN		**Pn**	**07 18 23.4**	**+0.5**
STEP	**BALIKESIR_Sava**	**1.92**	**118**	*i* P		**Pn**	**07 18 23.6**	**+0.6**
STEP				IAML			07 18 54.0	
	comp=N,435nm,0.8s							
STEP				IAML			07 18 56.0	
	comp=E,358nm,0.7s							
BALB	**Balikesir**	**1.92**	**109**	PN		**Pn**	**07 18 23.1**	**+0.2**
CHOS	**Chios island**	**1.94**	**168**	P		**Pn**	**07 18 23.3**	**0.0**
CHOS	**Chios island**	**1.94**	**168**	PN		**Pn**	**07 18 22.9**	**-0.4**
PHSR	**Pinarhisar**	**2.02**	**48**	PN		**Pn**	**07 18 23.8**	**-0.5**
URLA	**Izmir**	**2.10**	**156**	PN		**Pn**	**07 18 24.9**	**-0.5**
URLA	**Izmir**	**2.10**	**156**	*i* P		**Pn**	**07 18 25.2**	**-0.2**
URLA				IAML			07 18 59.0	
	comp=N,122nm,0.6s							
KCTX	**Karacabey (Bur**	**2.16**	**90**	PN		**Pn**	**07 18 26.6**	**+0.3**
KNT	**Kendrikon**	**2.18**	**294**	PN		**Pn**	**07 18 26.2**	**-0.3**
BLCB	**Balcova**	**2.23**	**148**	PN		**Pn**	**07 18 27.1**	**-0.2**
SLVT	**Silivri**	**2.24**	**64**	PN		**Pn**	**07 18 27.5**	**+0.1**
ELBA	**Catalca**	**2.37**	**68**	*i* P		**Pn**	**07 18 29.0**	**-0.1**
DURS	**Dursunbey**	**2.37**	**106**	*i* P		**Pb**	**07 18 34.5**	**+1.3**
DURS				*i* S		**Sb**	**07 19 01.9**	**-0.3**
DGB	**zmir**	**2.47**	**154**	*i* P		**Pn**	**07 18 29.2**	**-1.3**
VAY	**Valandovo**	**2.47**	**296**	*e*Pg		**Pb**	**07 18 36.0**	**+1.1**
VAY				*e*Sg		**Sg**	**07 19 09.7**	**-0.4**
VAY	**Valandovo**	**2.47**	**296**	*i* Pn		**Pg**	**07 18 37.5**	**-0.6**
VAY	**Valandovo**	**2.47**	**296**	*i* Pn		**Pg**	**07 18 37.5**	**-0.6**
ARMT	**Armutlu**	**2.56**	**83**	PN		**Pn**	**07 18 32.2**	**+0.5**
BGKT	**Bogazkoy**	**2.62**	**69**	PN		**Pn**	**07 18 32.9**	**+0.3**
ULDT	**Uludag**	**2.77**	**92**	*i* P		**Pb**	**07 18 39.9**	**-0.1**
IGD	**Bursa**	**2.81**	**89**	*i* P		**Pb**	**07 18 40.0**	**-0.6**
KLYT	**Kilyos**	**2.84**	**69**	PN		**Pn**	**07 18 36.2**	**+0.7**
VTS	**Vitosha**	**2.90**	**324**	*e*Pg		**Pg**	**07 18 44.5**	**-1.7**
VTS				*e*Sg		**Sg**	**07 19 23.1**	**-0.7**
VTS	**Vitosha**	**2.90**	**324**	⇑P		**Pn**	**07 18 36.6**	**+0.1**
VTS				⇑S		**Sn**	**07 19 10.5**	**-0.7**
YLV	**Yalova**	**2.95**	**83**	PN		**Pn**	**07 18 37.8**	**+0.7**
PLVB	**Pleven**	**3.17**	**348**	⇑P		**Pn**	**07 18 41.3**	**+1.2**
PLVB				⇓S		**Sn**	**07 19 17.9**	**+0.2**
BOSS	**Bosilegrad**	**3.18**	**315**	*e*Pn		**Pn**	**07 18 41.9**	**+1.6**
APE	**Apeiranthos**	**3.22**	**180**	⇑P		**Pn**	**07 18 43.5**	**+2.7**
RAZG	**Razgrad**	**3.35**	**12**	⇑P		**Pn**	**07 18 43.1**	**+0.5**
RAZG				⇑S		**Sn**	**07 19 23.3**	**+1.0**
ZAPS	**Zavoj**	**3.68**	**325**	*e*Pn		**Pn**	**07 18 49.1**	**+1.9**
BARS	**Barje**	**3.76**	**313**	*e*Pn		**Pn**	**07 18 48.4**	**+0.2**
BORA	**Eskisehir**	**3.80**	**95**	*i* P		**Pn**	**07 18 48.4**	**-0.5**
ICOR	**Ion Corvin**	**4.18**	**23**	⇑P		**Pn**	**07 18 54.8**	**+0.8**
ZAGS	**Zajecar**	**4.29**	**326**	*e*Pg		**Pb**	**07 19 09.1**	**+3.2**
ZAGS				*e*Sn		**Sn**	**07 19 45.5**	**+0.2**
TIRR	**Tirgusor**	**4.68**	**26**	⇑P		**Pn**	**07 19 01.2**	**+0.3**
HARR	**Harsova**	**4.74**	**21**	⇑P		**Pn**	**07 19 02.3**	**+0.6**
GRUS	**Gruza**	**5.07**	**317**	*e*Pn		**Pn**	**07 19 06.6**	**+0.3**
MLR	**Muntele Rosu**	**5.21**	**3**	⇑P		**Pn**	**07 19 08.6**	**+0.4**
CFR	**Carcaliu**	**5.25**	**21**	⇓P		**Pn**	**07 19 08.5**	**-0.1**
GZR	**Gura Zlata**	**5.49**	**339**	⇑P		**Pn**	**07 19 12.2**	**+0.2**
BZS	**Buzias**	**6.05**	**333**	⇑P		**Pn**	**07 19 20.1**	**+0.5**
TESR	**Tescani**	**6.27**	**7**	⇑P		**Pn**	**07 19 22.2**	**-0.5**

IDC ***26*** *07:25:24.1±1.8,13°.05N×87°.66W,h0km,mb3.6/6, mb1 4.0/7,mb1mx3.7/29,mbtmp3.7/7,ML3.3/1,Error ellipse: s-maj=51.2km s-min=27.1km az=47.0*
UCR ***26*** *07:25:29.6±1.6,12°.51N×88°.07W,h32km±6km,ML3.7*
INET ***26*** *07:25:29.4,12°.45N×88°.04W,h22km,ML3.9*
SNET ***26*** *07:25:30.4±1.0,12°.55N×88°.10W,h32km±4km,ML3.7*
ISC 26 07:25:29.5±1.1,12°.52N±0°.06×88°.03W±0°.05,h57km±12km, n59,σ0°82/83,mb3.7/6,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JUCU	**Jucuarįn**	**0.76**	**344**	*e*P		**Pn**	**07 25 44.0**	**-0.5**
JUCU				*e*S		**Sn**	**07 25 54.9**	**-0.4**
JUCU				IAML			07 25 59.5	
	comp=Z,10μm,0.3s							
JUCU	**Jucuarįn**	**0.76**	**344**	*e*P		**Pn**	**07 25 44.0**	**-0.5**
JUCU				*e*S		**Sn**	**07 25 54.9**	**-0.4**
JUCU				IAML			07 25 59.5	
	comp=Z,10μm,0.3s							
LCND	**La Caada**	**0.80**	**10**	*e*P		**Pn**	**07 25 45.0**	**+0.2**
LCND				*e*S		**Sn**	**07 25 56.9**	**+0.9**
LCND				IAML			07 26 01.6	
	comp=Z,9μm,0.3s							
LCND	**La Caada**	**0.80**	**10**	*e*P		**Pn**	**07 25 45.0**	**+0.2**
LCND				*e*P		**Pn**	**07 25 45.0**	**+0.2**
LCND				*e*S		**Sn**	**07 25 56.7**	**+0.7**
LCND				*e*S			07 25 56.9	
LCND				IAML			07 26 01.6	
	comp=Z,9μm,0.3s							
LCY	**Lacayo**	**0.93**	**344**	*e*P		**Pn**	**07 25 46.8**	**+0.1**
LCY	**Lacayo**	**0.93**	**344**	*e*P		**Pn**	**07 25 46.8**	**+0.1**
BLLM	**Bellamira**	**0.94**	**347**	*e*P		**Pn**	**07 25 46.8**	**+0.1**
BLLM	**Bellamira**	**0.94**	**347**	*e*P		**Pn**	**07 25 46.8**	**+0.1**
ALJI	**Alcalda de J**	**0.96**	**327**	*e*P		**Pn**	**07 25 46.7**	**-0.2**
ALJI				*e*S		**Sn**	**07 26 00.1**	**+0.3**
ALJI				IAML			07 26 03.2	
	comp=Z,2μm,0.2s							
ALJI	**Alcalda de J**	**0.96**	**327**	*e*P		**Pn**	**07 25 46.7**	**-0.2**
ALJI				*e*S		**Sn**	**07 26 00.1**	**+0.3**
ALJI				IAML			07 26 03.2	
	comp=Z,2μm,0.2s							
PACA	**Pacayal**	**0.98**	**343**	*e*P		**Pn**	**07 25 47.3**	**-0.1**
PACA				*e*S		**Sn**	**07 26 01.1**	**+0.6**
PACA	**Pacayal**	**0.98**	**343**	*e*P		**Pn**	**07 25 47.3**	**-0.1**
PACA				*e*S		**Sn**	**07 26 01.1**	**+0.6**
TECA	**Tecapa**	**1.07**	**335**	*e*P		**Pn**	**07 25 48.6**	**0.0**
TECA	**Tecapa**	**1.07**	**335**	*e*P		**Pn**	**07 25 48.6**	**0.0**
COEB	**Comit de Eme**	**1.09**	**333**	*e*P		**Pn**	**07 25 48.5**	**-0.2**
COEB				*e*S		**Sn**	**07 26 03.0**	**+0.1**
COEB				IAML			07 26 08.0	
	comp=Z,2μm,0.3s							
COEB	**Comit de Eme**	**1.09**	**333**	*e*P		**Pn**	**07 25 48.5**	**-0.2**
COEB				*e*S		**Sn**	**07 26 03.0**	**+0.1**
COEB				IAML			07 26 08.0	
	comp=Z,2μm,0.3s							
FAGO	**Alcalda de S**	**1.17**	**356**	*e*P		**Pn**	**07 25 49.9**	**+0.2**
FAGO				*e*S		**Sn**	**07 26 05.7**	**+0.9**
FAGO				IAML			07 26 08.1	
	comp=Z,630nm,0.5s							
FAGO	**Alcalda de S**	**1.17**	**356**	*e*P		**Pn**	**07 25 49.9**	**+0.2**
FAGO				*e*S		**Sn**	**07 26 05.7**	**+0.9**
FAGO				IAML			07 26 08.1	
	comp=Z,630nm,0.5s							
COEG	**Centro de Oper**	**1.37**	**323**	*e*P		**Pn**	**07 25 52.4**	**-0.1**
COEG				*e*S		**Sn**	**07 26 10.0**	**+0.3**
COEG	**Centro de Oper**	**1.37**	**323**	*e*P		**Pn**	**07 25 52.4**	**-0.1**
COEG				*e*S		**Sn**	**07 26 10.0**	**+0.3**
LFRS	**El Faro**	**1.49**	**318**	*e*P		**Pn**	**07 25 54.2**	**+0.1**
LFRS	**El Faro**	**1.49**	**318**	*e*P		**Pn**	**07 25 54.2**	**+0.1**
LBRS	**Las Brisas**	**1.56**	**321**	*e*P		**Pn**	**07 25 55.8**	**+0.7**
LBRS	**Las Brisas**	**1.56**	**321**	*e*P		**Pn**	**07 25 55.8**	**+0.7**
AEIL	**Aeropuerto Ilo**	**1.58**	**318**	*e*P		**Pn**	**07 25 56.3**	**+1.1**
AEIL				*e*S		**Sn**	**07 26 15.4**	**+0.7**
AEIL				IAML			07 26 19.0	
	comp=Z,1μm,0.3s							
AEIL	**Aeropuerto Ilo**	**1.58**	**318**	*e*P		**Pn**	**07 25 56.3**	**+1.1**
AEIL				*e*S		**Sn**	**07 26 15.4**	**+0.7**
AEIL				IAML			07 26 19.0	
	comp=Z,1μm,0.3s							
LALI	**Alcalda de L**	**1.58**	**308**	*e*P		**Pn**	**07 25 55.8**	**+0.5**
LALI				*e*S		**Sn**	**07 26 14.1**	**-0.6**
LALI				IAML			07 26 17.6	
	comp=Z,208nm,0.3s							
LALI	**Alcalda de L**	**1.58**	**308**	*e*P		**Pn**	**07 25 55.8**	**+0.5**
LALI				*e*S		**Sn**	**07 26 14.1**	**-0.6**
LALI				IAML			07 26 17.6	
	comp=Z,208nm,0.3s							
UDBS	**Universidad Do**	**1.62**	**317**	*e*P		**Pn**	**07 25 56.5**	**+0.7**
UDBS				*e*S		**Sn**	**07 26 16.1**	**+0.5**
UDBS				IAML			07 26 22.4	
	comp=Z,1μm,0.4s							
UDBS	**Universidad Do**	**1.62**	**317**	*e*P		**Pn**	**07 25 56.5**	**+0.7**
UDBS				*e*S		**Sn**	**07 26 16.1**	**+0.5**
UDBS				IAML			07 26 22.4	
	comp=Z,1μm,0.4s							
OPAM	**Oficina de Pla**	**1.64**	**316**	*e*P		**Pn**	**07 25 56.4**	**+0.2**
OPAM				*e*S		**Sn**	**07 26 16.8**	**+0.6**
OPAM				IAML			07 26 22.7	
	comp=Z,964nm,0.3s							
OPAM	**Oficina de Pla**	**1.64**	**316**	*e*P		**Pn**	**07 25 56.4**	**+0.2**
OPAM				*e*S		**Sn**	**07 26 16.8**	**+0.6**
OPAM				IAML			07 26 22.7	
	comp=Z,964nm,0.3s							
SNET	**Serv Nac Est T**	**1.65**	**315**	*e*P		**Pn**	**07 25 56.5**	**+0.2**
SNET				*e*S		**Sn**	**07 26 16.2**	**-0.2**
SNET				IAML			07 26 17.6	
	comp=Z,607nm,0.2s							
SNET	**Serv Nac Est T**	**1.65**	**315**	*e*P		**Pn**	**07 25 56.5**	**+0.2**
SNET				*e*S		**Sn**	**07 26 16.2**	**-0.2**
SNET				IAML			07 26 17.6	
	comp=Z,607nm,0.2s							
UEES	**Universidad Ev**	**1.67**	**315**	*e*P		**Pn**	**07 25 56.9**	**+0.3**
UEES				IAML			07 26 21.3	
	comp=Z,760nm,0.2s							
UEES	**Universidad Ev**	**1.67**	**315**	*e*P		**Pn**	**07 25 56.9**	**+0.3**
UEES				IAML			07 26 21.3	
	comp=Z,760nm,0.2s							
GBS3	**Finca Las Img**	**3.06**	**124**	*e*P		**Pn**	**07 26 16.5**	**+1.1**
NY14	**Universidad de**	**3.07**	**127**	*e*P		**Pn**	**07 26 17.0**	**+1.4**
GB1A	**Borinquen Arri**	**3.08**	**123**	*e*P		**Pn**	**07 26 15.1**	**-0.8**
LAPC	**Finca la Perla**	**3.08**	**124**	*e*P		**Pn**	**07 26 16.6**	**+0.9**
BUEV	**Buena Vista**	**3.09**	**123**	*e*P		**Pn**	**07 26 16.8**	**+0.9**
LIM1	**Limonal**	**3.27**	**123**	*e*P		**Pn**	**07 26 19.1**	**+0.8**
COLC	**Colonia**	**3.33**	**123**	*e*P		**Pn**	**07 26 21.2**	**+2.0**
GUAI	**GUAI**	**3.33**	**132**	*e*P		**Pn**	**07 26 19.7**	**+0.5**
CUI	**Cuipilapa**	**3.36**	**123**	*e*P		**Pn**	**07 26 20.6**	**+1.0**
PLVR	**Palo Verde**	**3.40**	**129**	*e*P		**Pn**	**07 26 21.3**	**+1.0**
ACAL	**Aguas Claras**	**3.48**	**122**	*e*P		**Pn**	**07 26 21.2**	**-0.1**
JTS	**Las Juntas de**	**3.74**	**126**	Pn		**Pn**	**07 26 24.7**	**-0.1**
	comp=Z,2.4nm,0.3s,baz=179,slow=22,SNR=30							
JTS				Sn		**Sn**	**07 27 04.7**	**-3.0**
	comp=Z,2.7nm,0.3s,baz=345,slow=3.4,SNR=4.5							
JTS	**Las Juntas de**	**3.74**	**126**	*e*P		**Pn**	**07 26 25.4**	**+0.5**
ARE1	**Arenal 1**	**3.84**	**122**	*e*P		**Pn**	**07 26 27.1**	**+1.0**
LCR2	**La Lucha 2**	**4.82**	**125**	*e*P		**Pn**	**07 26 41.8**	**+2.0**
DRK0	**Durika**	**5.71**	**124**	*e*P		**Pn**	**07 26 52.5**	**+0.7**
TXAR	**Lajitas Array**	**22.16**	**321**	P		**P**	**07 30 21.8**	**+0.8**
	comp=Z,2.3nm,0.7s,baz=138,slow=11,SNR=38							
TKL	**Tuckaleechee C**	**23.36**	**9**	P		**P**	**07 30 30.2**	**-2.8**
	comp=Z,2.4nm,0.9s,baz=207,slow=13,SNR=4.6							
PDAR	**Pinedale Array**	**35.45**	**332**	P		**P**	**07 32 19.9**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=116,slow=12,SNR=4.5							
**

NWAO	**Narrogin (SRO)**	**33.95**	**184**	P	**P**	**08 17 43.5**	**+0.2**
SHL	**Shillong**	**36.53**	**314**	P	**P**	**08 18 06.1**	**+0.1**
SHL				IAmb	IAmb	08 18 21.3	
	comp=Z,11nm,0.9s						
KSRS	**Korea Array**	**36.89**	**10**	LR	LR	08 33 17.7	
	comp=Z,21nm,20.0s,baz=169,slow=36						
BBOO	**Buckleboo**	**36.92**	**157**	P	**P**	**08 18 08.9**	**0.0**
BBOO				IAmb	IAmb	08 18 09.4	
	comp=Z,16nm,0.8s						
STKA	**Stephens Creek**	**38.58**	**150**	P	**P**	**08 18 23.2**	**+0.3**
	comp=Z,12nm,0.8s,baz=312,slow=8.4,SNR=17						
STKA	**Stephens Creek**	**38.58**	**150**	P	**P**	**08 18 23.3**	**+0.3**
MJAR	**Matsushiro Arr**	**39.04**	**23**	P	**P**	**08 18 26.9**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=203,slow=9.4,SNR=4.3						
MJAR				LR	LR	08 35 51.8	
	comp=Z,20nm,18.5s,baz=210,slow=38						
GTA	**Gaotai**	**42.41**	**336**	*e*P	**P**	**08 18 56.5**	**+1.8**
GTA				pP	sP	08 19 12.0	+6.0
GTA				sP	pwP	08 19 20.3	+15
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARMA	**Armidale**	**43.37**	**139**	P	**P**	**08 19 02.7**	**+0.1**
ARMA				IAmb	IAmb	08 19 08.2	
	comp=Z,10nm,1.1s						
USRK	**Ussuriysk Ar.**	**44.20**	**12**	P	**P**	**08 19 09.6**	**+0.7**
	comp=Z,2.5nm,1.0s,baz=186,slow=3.8,SNR=4.0						
TOO	**Toolangi**	**45.05**	**151**	P	**P**	**08 19 16.4**	**+0.5**
TOO				IAmb	IAmb	08 19 20.0	
	comp=Z,6.7nm,1.2s						
CAN	**Canberra**	**45.15**	**146**	P	**P**	**08 19 16.9**	**+0.1**
ULN	**Ulaanbaatar**	**47.95**	**348**	P	**P**	**08 19 39.0**	**+0.4**
ULN				IAmb	IAmb	08 19 41.5	
	comp=Z,6.4nm,1.1s						
KDJ	**Kajisay**	**56.16**	**322**	P	**P**	**08 20 39.4**	**-0.5**
MK31	**Makanchi Array**	**56.21**	**330**	P	**P**	**08 20 39.9**	**0.0**
MKAR	**Makanchi Array**	**56.21**	**330**	P	**P**	**08 20 40.7**	**+0.8**
	comp=Z,1.8nm,0.6s,baz=131,slow=8.5,SNR=17						
MKAR				LR	LR	08 46 51.5	
	comp=Z,22nm,18.2s,baz=138,slow=38						
KBL	**Kabul**	**58.06**	**311**	P	**P**	**08 20 53.2**	**-0.4**
KBL				IAmb	IAmb	08 21 04.7	
	comp=Z,6.6nm,1.0s						
AAK	**Ala-Archa**	**58.09**	**322**	LR	LR	08 48 21.6	
	comp=Z,31nm,20.1s,baz=114,slow=38						
CHGR	**Chuyangaron**	**59.70**	**315**	P	**P**	**08 21 03.0**	**-1.7**
CHGR				IAmb	IAmb	08 21 15.8	
	comp=Z,13nm,1.1s						
ZAA0	**Zalesovo Array**	**60.17**	**337**	P	**P**	**08 21 07.8**	**+0.4**
ZAA0				IAmb	IAmb	08 21 08.4	
	comp=Z,6.2nm,1.4s						
ZALV	**Zalesovo Beam**	**60.17**	**337**	P	**P**	**08 21 07.7**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=137,slow=7.4,SNR=6.4						
KURBB	**Kurchatov Arra**	**60.61**	**331**	P	**P**	**08 21 11.2**	**+0.7**
	comp=Z,2.0nm,0.8s,baz=144,slow=7.0,SNR=9.6						
KURK	**Kurchatov**	**60.63**	**331**	P	**P**	**08 21 10.2**	**-0.4**
KURK				IAmb	IAmb	08 21 22.8	
	comp=Z,9.0nm,0.9s						
BVAR	**Borovoye Array**	**66.09**	**330**	P	**P**	**08 21 47.2**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=172,slow=12,SNR=5.0						
TIXI	**Tiksi**	**70.67**	**3**	LR	LR	08 59 29.2	
	comp=Z,14nm,18.4s,baz=220,slow=41						
VNDA	**Vanda**	**81.73**	**172**	P	**P**	**08 23 17.8**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=319,slow=6.0,SNR=7.6						
VNDA	**Vanda**	**81.73**	**172**	P	**P**	**08 23 18.2**	**+0.4**
BRTR	**Keskin Array B**	**86.61**	**310**	P	**P**	**08 23 43.1**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=72,slow=5.0,SNR=2.7						
NOA	**NORSAR Array B**	**98.12**	**332**	LR	LR	09 15 37.8	
	comp=Z,7.1nm,18.6s,baz=350,slow=39						

*IDC **26** 08:13:54.3±11.0, 23.81S×179.93E, h477km±149km, mb3.1/4, mb1 3.5/5, mb1mx3.1/26, mbtmp4.0/5, Error ellipse: s-maj=86.8km s-min=27.3km az=6.0*
*NEIC **26** 08:13:57.3±0.8, 24.02S±0.05×179.9E±0.2, h518km±12km, mb4.2/10, Error ellipse: s-maj=23.6km s-min=6.6km az=87.0*

ISC 26 08:13:57.5±0.8, 24.04S±0.09×180.0E±0.1, h526km, n16, σ0s70/18, mb4.0/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.53**	**160**	P	**P**	**08 15 28.9**	**-1.6**
RAO				S	**S**	**08 16 46.5**	**-0.1**
MSVF	**Nonsavu**	**6.52**	**344**	P	**P**	**08 15 39.0**	**-1.1**
URZ	**Urewera**	**14.38**	**189**	P	**P**	**08 17 01.1**	**+0.5**
	0.6nm,0.3s,baz=150,slow=15,SNR=1.6						
URZ				S	**S**	**08 19 31.8**	**+0.1**
	0.5nm,0.3s,baz=76,slow=21,SNR=8.8						
EIDS	**Eidsvold**	**26.24**	**261**	P	**P**	**08 18 50.7**	**+0.2**
EIDS				IAmb	IAmb	08 19 07.2	
	comp=Z,9.8nm,1.4s						
CTAO	**Charters Tower**	**31.43**	**271**	P	**P**	**08 19 36.0**	**+0.3**
ASAR	**Alice Springs**	**41.97**	**261**	P	**P**	**08 21 02.6**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=97,slow=7.5,SNR=12						
WR0	**Warramunga Arr**	**42.16**	**266**	P	**P**	**08 21 03.2**	**-0.8**
WR0				IAmb	IAmb	08 21 05.5	
	comp=Z,10nm,1.5s						
WB2	**Warramunga Arr**	**42.34**	**266**	P	**P**	**08 21 05.3**	**-0.2**
WB2				IAmb	IAmb	08 21 05.9	
	comp=Z,4.2nm,0.5s						
WRAB	**Tennant Creek**	**42.34**	**266**	P	**P**	**08 21 05.1**	**-0.3**
WRAB				IAmb	IAmb	08 21 21.4	
	comp=Z,5.4nm,1.1s						
WB0	**Warramunga Arr**	**42.34**	**267**	P	**P**	**08 21 05.5**	**0.0**
WB0				IAmb	IAmb	08 21 06.1	
	comp=Z,4.5nm,0.6s						
WRA	**Warramunga Arr**	**42.35**	**266**	P	**P**	**08 21 05.7**	**+0.1**
	comp=Z,1.4nm,0.3s,baz=95,slow=8.2,SNR=92						
KNRA	**Kununurra**	**48.64**	**270**	P	**P**	**08 21 54.1**	**+0.6**
KNRA				IAmb	IAmb	08 21 54.7	
	comp=Z,7.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**50.77**	**266**	P	**P**	**08 22 10.2**	**+0.9**
QSPA	**South Pole Qui**	**66.05**	**180**	P	**P**	**08 23 52.2**	**+0.4**
NVAR	**Mina Array Bea**	**84.88**	**44**	P	**P**	**08 25 37.8**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=219,slow=7.0,SNR=2.1						
TXAR	**Lajitas Array**	**90.54**	**58**	P	**P**	**08 26 04.3**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=210,slow=6.9,SNR=6.2						

WEL 26 08:16:34.6, 40.5S±2.2×17.5E±., h107km±6km, M2.6/16, ML2.5/10, MLv2.6/16, Error ellipse: s-maj=0.0km s-min=0.0km az=105.1, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIW	**Kapiti Island**	**0.51**	**143**	P	Pn	08 16 51.4	+0.2
DUWZ	**D'Urville Isla**	**0.56**	**232**	P	Pn	08 16 51.6	+0.1
OGWZ	**Otaki Gorge**	**0.62**	**126**	P	Pn	08 16 52.4	+0.4
TCW	**Tory Channel**	**0.77**	**193**	P	Pn	08 16 54.1	+0.8
CAW	**Cannon Point**	**0.78**	**147**	P	Pn	08 16 53.9	+0.6
WAZ	**Wanganui**	**0.79**	**28**	P	Pn	08 16 54.1	+0.6
MRZ	**Mangatainoka R**	**0.84**	**104**	P	Pn	08 16 54.1	+0.1
WEL	**Wellington**	**0.85**	**166**	P	Pn	08 16 54.6	+0.5
HOWZ	**Holdsworth Sta**	**0.89**	**120**	P	Pn	08 16 54.6	+0.2
MTW	**Mount Morrison**	**1.03**	**133**	P	Pn	08 16 56.3	+0.4
TUWZ	**Tuamarina**	**1.06**	**203**	P	Pn	08 16 57.1	+0.9
TIWZ	**Tintock**	**1.10**	**107**	P	Pn	08 16 56.6	0.0
MSWZ	**Moikau Station**	**1.11**	**150**	P	Pn	08 16 54.7	-2.1
NNZ	**Nelson**	**1.14**	**228**	P	Pn	08 16 55.9	-1.1
PAWZ	**Paruwai Farm**	**1.16**	**143**	P	Pn	08 16 57.8	+0.5
TMWZ	**Te Maipa**	**1.24**	**122**	P	Pn	08 16 58.6	+0.4
VRZ	**Vera Road**	**1.34**	**9**	P	Pn	08 16 59.8	+0.4
BFZ	**Birch Farm**	**1.35**	**100**	P	Pn	08 16 59.6	+0.2
ANWZ	**Angora Road**	**1.50**	**91**	P	Pn	08 17 01.4	+0.2
QRZ	**Quartz Range**	**1.55**	**256**	P	Pn	08 17 01.6	-0.1
BKZ	**Black Stump Fm**	**2.00**	**51**	P	Pn	08 17 11.5	+4.0
BKZ	**Black Stump Fm**	**2.00**	**51**	P	Pn	08 17 11.7	+4.2
KHZ	**Kahutara**	**2.09**	**200**	P	Pn	08 17 09.4	+0.9
GVZ	**Greta Valley S**	**2.74**	**203**	P	Pn	08 17 17.4	+0.4

*KRAR **26** 08:41:51.9±0.1, 53.56N×87.64E, M2.2, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC 26 08:41:52.4±3.4, 53.54N×88.10E, h0km, mb1 2.9/2, mb1mx2.8/48, mbtmp2.9/2, ML2.2/2, Error ellipse: s-maj=30.7km s-min=17.8km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.99**	**283**	*i*		08 53 40.0	
	baz=97,slow=327,SNR=3.9						
ZALV	**Zalesovo Beam**	**1.99**	**283**	Pg	Pn	08 42 27.9	+0.7
	1.0nm,0.3s,baz=99,slow=14,SNR=11						
ZALV				Lg	Lg	08 42 54.9	
	1.8nm,0.3s,baz=105,slow=23,SNR=9.4						
KURBB	**Kurchatov Arra**	**6.58**	**248**	Pn	Pn	08 43 32.4	+2.1
	0.1nm,0.3s,baz=62,slow=14,SNR=4.7						
KURBB				Lg	Lg	08 45 19.5	
	0.0nm,0.3s,baz=63,slow=32,SNR=7.0						
MKAR	**Makanchi Array**	**7.71**	**211**	Pn	Pn	08 43 46.1	+0.2
	0.0nm,0.3s,baz=19,slow=9.4,SNR=5.1						
MKAR				Lg	Lg	08 45 57.5	
	0.1nm,0.3s,baz=30,slow=32,SNR=1.7						

IDC 26 08:42:36.0±3.1, 54.19N×87.36E, h0km, mb1 3.0/2, mb1mx2.9/48, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=27.6km s-min=19.0km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.52**	**262**	*i*		08 52 00.0	
	baz=79,slow=318,SNR=10						
ZALV	**Zalesovo Beam**	**1.52**	**262**	Pg	Pn	08 43 03.4	-1.0
	4.9nm,0.3s,baz=94,slow=18,SNR=22						
ZALV				Lg	Lg	08 43 24.0	
	4.8nm,0.3s,baz=79,slow=24,SNR=7.7						
KURBB	**Kurchatov Arra**	**6.48**	**240**	Pn	Pn	08 44 13.3	+0.8
	0.2nm,0.3s,baz=54,slow=14,SNR=7.5						
KURBB				Lg	Lg	08 46 03.1	
	0.0nm,0.3s,baz=49,slow=31,SNR=1.9						
MKAR	**Makanchi Array**	**8.08**	**206**	Pn	Pn	08 44 35.6	+1.0
	0.1nm,0.3s,baz=27,slow=14,SNR=5.5						
MKAR				Lg	Lg	08 46 50.0	
	0.1nm,0.3s,baz=21,slow=28,SNR=1.2						

*NORS **26** 08:45:00.9±0.0, 42.44N×41.25E, h5km, MPVA3.8*
*ISK **26** 08:45:00.6, 42.35N×40.90E, h24km, ML3.2/4*
*TIF **26** 08:45:00.8, 42.32N×40.85E, h39km±2km*
*DDA **26** 08:45:02.8, 42.16N×40.90E, h8km±5km, ML2.6*

ISC 26 08:44:59.1±1.9, 42.36N±0.05×40.93E±0.05, h8km±13km, n16, σ0s55/28, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATM	**Batumi**	**0.95**	**143**	PG	**Pn**	**08 45 19.5**	**+0.8**
BATM				SG	**Sn**	**08 45 32.6**	**+0.1**
BATM	**Batumi**	**0.95**	**143**	*i* P	**Pn**	**08 45 19.6**	**+0.8**
BCA	**Borcka**	**1.05**	**151**	PG	**Pn**	**08 45 20.5**	**+0.3**
BCA				SG	**Sn**	**08 45 34.6**	**-0.5**
DBOC	**Borcka**	**1.16**	**151**	*i* P	**Pn**	**08 45 22.3**	**+0.6**
DBOC				*i* S	**Sn**	**08 45 37.3**	**-0.4**
DBOC				IAML		08 45 39.0	
	comp=E,257nm,0.2s						
DBOC				IAML		08 45 39.0	
	comp=Z,118nm,0.4s						
DBAD	**Bademkaya**	**1.46**	**157**	*i* P	**Pg**	**08 45 26.9**	**-0.2**
DBAD				*i* S	**Sn**	**08 45 44.7**	**-0.6**
DBAD				IAML		08 45 48.0	
	comp=N,159nm,0.6s						
DBAD				IAML		08 45 48.0	
	comp=E,90nm,0.5s						
NEY	**Neytrino**	**1.58**	**55**	*e*Pg	**Pb**	**08 45 28.5**	**-0.3**
NEY				*e*Sg	**Sb**	**08 45 49.2**	**+0.1**
EPOS	**Posof**	**1.59**	**122**	*i* P	**Pn**	**08 45 27.2**	**-0.5**
EPOS				*i* S	**Sg**	**08 45 50.1**	**-0.1**
EPOS				IAML		08 45 52.0	
	comp=N,110nm,0.6s						
EPOS				IAML		08 45 53.0	
	comp=E,85nm,0.3s						
DDEM	**Demirkent**	**1.59**	**157**	*i* P	**Pb**	**08 45 29.1**	**+0.3**
DDEM				*i* S	**Sb**	**08 45 48.9**	**-0.3**
DDEM				IAML		08 45 50.0	
	comp=E,112nm,0.2s						
DDEM				IAML		08 45 55.0	
	comp=N,178nm,0.3s						
ONI	**Oni**	**1.88**	**82**	PN	**Pn**	**08 45 32.3**	**+0.7**
ONI				SN	**Sn**	**08 45 55.8**	**+0.3**
ONI	**Oni**	**1.88**	**82**	*e*Pg	**Pb**	**08 45 33.4**	**-0.3**
ONI				*e*Sg	**Sb**	**08 45 57.8**	**+0.5**
DIGR	**Digorskoe uzhe**	**2.02**	**74**	*e*Pg	**Pb**	**08 45 36.0**	**-0.3**
DIGR				*e*Sg	**Sb**	**08 46 01.9**	**+0.2**
KRIK	**Erzurum-spir**	**2.02**	**180**	*i* P	**Pb**	**08 45 36.6**	**+0.3**
SENK	**Senkaya-Erzuru**	**2.09**	**149**	PN	**Pn**	**08 45 34.7**	**0.0**
AKH	**Akhalkalaki**	**2.13**	**116**	PN	**Pn**	**08 45 35.5**	**+0.2**
ESPY	**Espiye-Giresun**	**2.20**	**230**	PN	**Pn**	**08 45 36.8**	**+0.8**
ESPY				SN	**Sn**	**08 46 01.9**	**-1.4**
ZEI	**Tsey**	**2.23**	**78**	*e*Pg	**Pb**	**08 45 39.6**	**-0.3**
ZEI				*e*Sg	**Sb**	**08 46 08.0**	**+0.3**

*IDC **26** 08:52:19.4±0.8, 11.15S×162.51E, h0km, mb4.0/12, mb1 4.2/14, mb1mx4.1/35, mbtmp4.0/14, ML3.7/2, MS3.3/7, Ms1 3.3/7, ms1mx3.1/29, Error ellipse: s-maj=23.3km s-min=18.5km az=103.0*
*NEIC **26** 08:52:21.0±1.8, 11.25S±0.1×162.6E±0.1, h10km±1km, mb4.5/15, Error ellipse: s-maj=22.5km s-min=15.0km az=51.0*

ISC 26 08:52:25.9±0.6, 11.19S±0.08×162.47E±0.09, h46km, n46, σ1s26/40, mb4.2/22, MS3.4/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.03**	**305**	Pn	**Pn**	**08 53 09.5**	**-1.9**
	12nm,0.3s,baz=276,slow=3.9,SNR=3.3						
HNR				LR	LR	08 53 42.5	
	comp=Z,144nm,20.6s,baz=135,slow=27						
HNR				Sn	**Sn**	**08 53 47.7**	**+1.2**
	39nm,0.3s,baz=317,slow=16,SNR=3.7						
HNR	**Honiara**	**3.03**	**305**	*e*P	**Pn**	**08 53 11.0**	**-0.4**
HNR				*e*S	**Sn**	**08 53 44.0**	**-2.5**
HNR	**Honiara**	**3.03**	**305**		**Pn**	**08 53 10.2**	**-1.2**
DZM	**Mont Dzumac**	**11.47**	**161**	Pn	**Pn**	**08 55 05.2**	**-1.9**
	0.5nm,0.3s,baz=30,slow=8.8,SNR=20						
DZM	**Mont Dzumac**	**11.47**	**161**		**Pn**	**08 55 05.5**	**-1.7**
CTA	**Charters Tower**	**17.93**	**238**	P	**P**	**08 56 34.7**	**+2.6**
	0.3nm,0.3s,baz=66,slow=12,SNR=5.4						
COEN	**Coen**	**19.03**	**260**	P	**Pn**	**08 56 45.1**	**-0.2**
STKA	**Stephens Creek**	**28.20**	**220**	P	**P**	**08 58 14.5**	**+0.2**
	1.6nm,0.8s,baz=48,slow=8.0,SNR=3.3						
STKA				LR	LR	09 08 37.4	
	comp=Z,67nm,20.0s,baz=27,slow=35						
STKA	**Stephens Creek**	**28.20**	**220**	P	**P**	**08 58 14.0**	**-0.3**
WB0	**Warramunga Arr**	**28.33**	**249**	P	**P**	**08 58 15.6**	**0.0**
WB0				IAmb	IAmb	08 58 22.1	
	comp=Z,9.1nm,1.2s						
WRAB	**Tennant Creek**	**28.41**	**249**	P	**P**	**08 58 17.8**	**+1.5**
WB2	**Warramunga Arr**	**28.41**	**249**	P	**P**	**08 58 16.3**	**-0.1**
WB2				IAmb	IAmb	08 58 18.3	
	comp=Z,5.2nm,1.1s						
WRA	**Warramunga Arr**	**28.42**	**249**	P	**P**	**08 58 16.4**	**0.0**
	comp=Z,1.5nm,0.8s,baz=76,slow=8.9,SNR=8.1						
H11S2	**WAKE ISLAND Hy**	**29.79**	**8**	T	T	09 29 27.9	
	baz=188,slow=76,SNR=36						
H11S3	**WAKE ISLAND Hy**	**29.79**	**8**	T	T	09 29 22.5	
	baz=188,slow=76,SNR=27						
H11S1	**WAKE ISLAND Hy**	**29.80**	**8**	T	T	09 29 32.2	
	baz=188,slow=76,SNR=27						
ASAR	**Alice Springs**	**29.87**	**242**	P	**P**	**08 58 28.7**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=68,slow=10.0,SNR=19						
ASAR				LR	LR	09 08 53.3	
	comp=Z,52nm,18.9s,baz=52,slow=33						
H11N1	**WAKE ISLAND Hy**	**31.02**	**8**	T	T	09 31 01.8	
	baz=188,slow=76,SNR=16						
H11N3	**WAKE ISLAND Hy**	**31.02**	**8**	T	T	09 31 02.1	
	baz=188,slow=76,SNR=20						
H11N2	**WAKE ISLAND Hy**	**31.03**	**8**	T	T	09 30 53.5	
	baz=188,slow=76,SNR=15						
FAKI	**Fak Fak**	**31.07**	**283**	P	**P**	**08 58 37.9**	**-2.0**
BBOO	**Buckleboo**	**32.43**	**224**	P	**P**	**08 58 53.4**	**+1.7**
MORW	**Morawa**	**46.74**	**241**	P	**P**	**09 00 50.1**	**-0.7**
MJAR	**Matsushiro Arr**	**52.69**	**335**	LR	LR	09 24 01.5	
	comp=Z,21nm,19.4s,baz=275,slow=36						
KSRS	**Korea Array**	**58.23**	**328**	P	**P**	**09 02 16.0**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=337,slow=23,SNR=2.5						
KSRS				LR	LR	09 26 39.2	
	comp=Z,32nm,18.7s,baz=154,slow=35						
USRK	**Ussuriysk Ar.**	**61.69**	**336**	P	**P**	**09 02 39.9**	**+0.7**
	comp=Z,3.8nm,1.0s,baz=110,slow=4.5,SNR=5.2						
PETK	**Petropavlovsk-**	**64.17**	**357**	P	**P**	**09 02 56.2**	**+0.7**
	comp=Z,3.2nm,0.9s,baz=145,slow=8.3,SNR=5.2						
VNDA	**Vanda**	**66.32**	**180**	P	**P**	**09 03 11.1**	**+1.9**
	comp=Z,0.5nm,0.8s,baz=320,slow=3.8,SNR=4.3						

CMAR	**Chiang Mai Arr**	**69.23**	**295**	P	**P**	**09 03 29.1**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=115,slow=4.3,SNR=1.3						
ULN	**Ulaanbaatar**	**76.56**	**325**	P	**P**	**09 04 12.6**	**+1.0**
ULN				IAmb	IAmb	09 04 15.4	
	comp=Z,5.1nm,0.8s						
GTA	**Gaotai**	**76.86**	**315**	*e*P	**P**	**09 04 15.8**	**+2.4**
GTA				pP	pP	09 04 27.5	+0.9
GTA				sP	sP	09 04 31.0	-0.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BILL	**Bilibino**	**79.07**	**1**	P	**P**	**09 04 25.5**	**+0.7**
BILL				IAmb	IAmb	09 04 27.5	
	comp=Z,8.4nm,1.0s						
WRH	**Wood River Hil**	**84.10**	**19**	P	**P**	**09 04 51.4**	**-0.2**
WRH				IAmb	IAmb	09 04 53.5	
	comp=Z,4.1nm,1.0s						
CCB	**Clear Creek Bu**	**84.31**	**19**	P	**P**	**09 04 53.0**	**+0.4**
CCB				IAmb	IAmb	09 04 54.2	
	comp=Z,1.7nm,0.9s						
HDA	**Harding Lake**	**84.44**	**20**	P	**P**	**09 04 53.4**	**+0.2**
HDA				IAmb	IAmb	09 04 55.0	
	comp=Z,3.4nm,0.8s						
ILAR	**Eielson Array**	**84.69**	**19**	P	**P**	**09 04 54.6**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=242,slow=3.7,SNR=6.4						
EGAK	**Eagle**	**86.64**	**21**	P	**P**	**09 05 02.8**	**-1.3**
EGAK				IAmb	IAmb	09 05 06.6	
	comp=Z,4.4nm,1.1s						
NVAR	**Mina Array Bea**	**88.58**	**51**	P	**P**	**09 05 14.2**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=242,slow=6.2,SNR=4.0						
EPYK	**Eagle Plains**	**89.06**	**21**	P	**P**	**09 05 16.1**	**+0.3**
EPYK				IAmb	IAmb	09 05 18.4	
	comp=Z,3.2nm,1.0s						
MKAR	**Makanchi Array**	**91.44**	**317**	P	**P**	**09 05 26.6**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=98,slow=7.4,SNR=9.1						
ZALV	**Zalesovo Beam**	**91.80**	**325**	LR	LR	09 49 16.9	
	comp=Z,16nm,18.1s,baz=77,slow=37						
YKA	**Yellowknife Ar**	**96.58**	**28**	P	**P**	**09 05 49.4**	**-1.1**
	comp=Z,0.5nm,0.9s,baz=256,slow=4.5,SNR=5.7						
YKA				LR	LR	09 46 22.1	
	comp=Z,37nm,18.9s,baz=0.0,slow=34						
AKASG	**Malin Array Be**	**125.19**	**325**	PKP	**PKPdf**	**09 11 19.4**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=60,slow=3.1,SNR=4.9						
BRTR	**Keskin Array B**	**126.67**	**311**	PKP	**PKPdf**	**09 11 24.8**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=64,slow=3.4,SNR=1.7						
KEST	**Kesra**	**145.51**	**319**	PKPbc	**PKPab**	**09 12 00.4**	**+0.5**
	comp=Z,5.3nm,0.8s,baz=352,slow=4.2,SNR=4.7						
KEST	**Kesra**	**145.51**	**319**	PKPdf	**PKPdf**	**09 11 58.4**	**-1.2**

*NEIC **26** 08:56:04.3±2.3, 7.58S±0.10×128.17E±0.09, h176km±5km, mb4.1/3, Error ellipse: s-maj=15.1km s-min=11.7km az=146.0*
*IDC **26** 08:56:05.2±1.8, 7.50S×128.03E, h175km±18km, mb3.4/4, mb1 3.9/9, mb1mx3.6/33, mbtmp4.4/9, Error ellipse: s-maj=20.1km s-min=15.6km az=84.0*
*DJA **26** 08:56:06.3±0.3, 8.°S±4.°×12.°8E±.°, h148km±13km, M4.6/7, mb4.5/7, mB4.9/3, MLv4.6/7, Mw(mB)4.2/3*

ISC 26 08:56:03.8±0.8, 7.69S±0.07×128.28E±0.07, h150km, n25, σ2s44/30, mb3.8/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**4.47**	**242**	P	**Pn**	**08 57 12.7**	**+2.4**
SOEI				S	**Sn**	**08 58 03.9**	**+1.8**
SOEI	**Soe**	**4.47**	**242**		**Pn**	**08 57 11.3**	**+1.0**
NLAI	**Namlea**	**4.58**	**345**	P	**Pn**	**08 57 14.0**	**+2.4**
BATI	**Baumata**	**5.20**	**241**	P	**Pn**	**08 57 21.6**	**+1.7**
	40nm,0.3s,baz=135,slow=2.0,SNR=35						
BATI				S	**Sn**	**08 58 19.1**	**-0.2**
	35nm,0.3s,baz=124,slow=6.3,SNR=14						
BATI	**Baumata**	**5.20**	**241**	P	**Pn**	**08 57 22.2**	**+2.3**
	0.8nm2um223nm,0.8s						
MTN	**Manton Dam**	**5.84**	**152**		**Pn**	**08 57 32.5**	**+4.2**
FAKI	**Fak Fak**	**6.17**	**40**		**Pn**	**08 57 32.9**	**+0.1**
EDFI	**Ende, Flores**	**6.61**	**260**	P	**Pn**	**08 57 40.4**	**+1.7**
	0.1nm20nm,1.0s						
SIJI	**Sorong**	**7.40**	**24**	P	**Pn**	**08 57 49.9**	**+0.6**
	21nm,0.3s,baz=233,slow=8.4,SNR=28						
KNRA	**Kununurra**	**7.95**	**177**		**Pn**	**08 57 59.9**	**+3.3**
FITZ	**Fitzroy Crossi**	**10.66**	**194**	P	**Pn**	**08 58 33.3**	**+0.7**
	1.6nm,0.3s,baz=27,slow=11,SNR=37						
FITZ				S	**Sn**	**09 00 25.9**	**-4.7**
	2.8nm,0.3s,baz=80,slow=22,SNR=8.2						
WB0	**Warramunga Arr**	**13.39**	**154**	Pn	**Pn**	**08 59 08.7**	**+0.6**
WRAB	**Tennant Creek**	**13.52**	**155**		**Pn**	**08 59 12.6**	**+3.0**
WRA	**Warramunga Arr**	**13.52**	**155**	P	**Pn**	**08 59 12.7**	**+3.0**
	1.7nm,0.3s,baz=330,slow=11,SNR=46						
WRA			

PPT2				*e*LR	LR	09 18 23.9		
	comp=Z,192nm,22.8s,baz=230							
PPT	**Papeete**	**25.71**	**80**	LR	LR	09 20 31.3		
	comp=Z,131nm,18.9s,baz=249,slow=32							
CTA	**Charters Tower**	**34.99**	**270**	P	**P**	**09 13 50.0**	**0.0**	
	comp=Z,2.0nm,0.3s,baz=94,slow=13,SNR=7.0							
CTAO	**Charters Tower**	**34.99**	**270**	P	**P**	**09 13 49.9**	**0.0**	
CTAO				IAmb	IAmb	09 14 08.2		
	comp=Z,8.6nm,1.1s							
STKA	**Stephens Creek**	**37.78**	**249**	LR	LR	09 28 44.2		
	comp=Z,332nm,18.4s,baz=48,slow=35							
ASAR	**Alice Springs**	**45.40**	**260**	P	**P**	**09 15 15.1**	**-0.9**	
	comp=Z,3.3nm,1.0s,baz=96,slow=6.9,SNR=18							
ASAR				LR	LR	09 34 18.9		
	comp=Z,269nm,18.3s,baz=90,slow=36							
WR0	**Warramunga Arr**	**45.68**	**265**	P	**P**	**09 15 17.1**	**-1.0**	
WB2	**Warramunga Arr**	**45.86**	**265**	P	**P**	**09 15 18.6**	**-1.0**	
WB2				IAmb	IAmb	09 15 30.4		
	comp=Z,6.5nm,1.1s							
WRAB	**Tennant Creek**	**45.86**	**265**	P	**P**	**09 15 16.2**	**-3.3**	
WRAB				IAmb	IAmb	09 15 30.5		
	comp=Z,6.9nm,1.1s							
WB0	**Warramunga Arr**	**45.87**	**266**	P	**P**	**09 15 18.5**	**-1.1**	
WRA	**Warramunga Arr**	**45.87**	**265**	P	**P**	**09 15 18.3**	**-1.3**	
	comp=Z,2.6nm,0.8s,baz=99,slow=6.9,SNR=34							
WRA				LR	LR	09 33 52.7		
	comp=Z,238nm,19.4s,baz=115,slow=35							
JAY	**Jayapura**	**46.99**	**291**	LR	LR	09 34 08.5		
	comp=Z,91nm,19.6s,baz=165,slow=35							
KNRA	**Kununurra**	**52.19**	**269**	P	**P**	**09 16 07.5**	**-0.4**	
VNDA	**Vanda**	**54.11**	**186**	P	**P**	**09 16 22.8**	**+1.7**	
	comp=Z,1.0nm,0.8s,baz=11,slow=11,SNR=5.7							
FITZ	**Fitzroy Crossi**	**54.28**	**265**	LR	LR	09 39 19.9		
	comp=Z,256nm,18.2s,baz=105,slow=36							
BATI	**Baumata**	**58.77**	**273**	LR	LR	09 42 12.5		
	comp=Z,261nm,18.4s,baz=152,slow=36							
RPN	**Rapa Nui**	**59.56**	**108**	LR	LR	09 35 48.1		
	comp=Z,44nm,21.1s,baz=253,slow=29							
CASY	**Casey**	**61.12**	**206**	P	**P**	**09 17 11.2**	**+0.9**	
CASY				IAmb	IAmb	09 17 11.7		
	comp=Z,8.9nm,1.2s							
QSPA	**South Pole Qui**	**65.59**	**180**	P	**P**	**09 17 40.5**	**+0.5**	
QSPA				IAmb	IAmb	09 17 48.3		
	comp=Z,12nm,1.2s							
MJAR	**Matsushiro Arr**	**74.42**	**323**	P	**P**	**09 18 34.0**	**-0.2**	
	comp=Z,1.6nm,0.8s,baz=146,slow=5.7,SNR=4.5							
PETK	**Petropavlovsk-**	**80.56**	**344**	P	**P**	**09 19 08.2**	**+0.3**	
	comp=Z,5.0nm,0.9s,baz=124,slow=9.2,SNR=8.4							
KSRS	**Korea Array**	**81.00**	**318**	P	**P**	**09 19 11.6**	**+1.0**	
	comp=Z,2.0nm,0.9s,baz=136,slow=6.1,SNR=6.3							
NVAR	**Mina Array Bea**	**82.79**	**42**	P	**P**	**09 19 20.0**	**-0.3**	
	comp=Z,2.0nm,0.9s,baz=222,slow=9.0,SNR=12							
NVAR				LR	LR	09 56 15.2		
	comp=Z,43nm,18.5s,baz=250,slow=36							
USRK	**Ussuriysk Ar.**	**83.21**	**325**	P	**P**	**09 19 23.6**	**+1.6**	
	comp=Z,8.0nm,0.9s,baz=127,slow=2.3,SNR=14							
MOD	**Modoc Plateau**	**83.83**	**38**	P	**P**	**09 19 24.3**	**-1.2**	
SNAA	**Sanae**	**83.98**	**178**	P	**P**	**09 19 25.4**	**-0.4**	
VNA3	**Neumayer Olymp**	**84.05**	**176**	P	**P**	**09 19 25.4**	**-0.7**	
TUC	**Tucson**	**84.13**	**51**	P	**P**	**09 19 28.1**	**+1.0**	
VNA2	**Neumayer--Watz**	**84.51**	**176**	P	**P**	**09 19 28.3**	**-0.2**	
	baz=179,slow=5.0							
X16A	**Lo Mia Camp, P**	**84.85**	**49**	P	**P**	**09 19 31.3**	**+0.4**	
LCMT	**Little Creek M**	**85.12**	**46**	P	**P**	**09 19 32.4**	**+0.3**	
PLCA	**Paso Flores**	**85.31**	**133**	LR	LR	09 50 43.4		
	comp=Z,30nm,18.9s,baz=222,slow=31							
CCUT	**Cedar City**	**85.36**	**45**	P	**P**	**09 19 34.0**	**+0.6**	
KNB	**Kanab**	**85.40**	**46**	P	**P**	**09 19 32.7**	**-0.8**	
U15A	**North Rim**	**85.41**	**47**	P	**P**	**09 19 34.1**	**+0.4**	
U15A				IAmb	IAmb	09 19 35.1		
	comp=Z,4.9nm,1.1s							
WUAZ	**Wupatki**	**85.51**	**48**	IAmb	IAmb	09 19 36.6		
	comp=Z,8.9nm,1.5s							
TXAR	**Lajitas Array**	**87.80**	**56**	P	**P**	**09 19 45.3**	**0.0**	
	comp=Z,0.6nm,0.9s,baz=216,slow=7.6,SNR=6.2							
TXAR				LR	LR	09 52 05.7		
	comp=Z,38nm,21.1s,baz=0.0,slow=31							
TTA	**Tatalina**	**88.58**	**9**	P	**P**	**09 19 48.8**	**+0.6**	
TTA				IAmb	IAmb	09 19 49.0		
	comp=Z,5.6nm,1.3s							
ANMO	**Albuquerque**	**88.59**	**50**	P	**P**	**09 19 49.0**	**0.0**	
ENH	**Enshi**	**89.68**	**304**	P	**P**	**09 19 54.4**	**+0.4**	
BARN	**Barnard Glacie**	**89.72**	**16**	IAmb	IAmb	09 19 55.2		
	comp=Z,6.1nm,1.0s							
TRF	**Thorofare Moun**	**90.00**	**11**	IAmb	IAmb	09 19 59.6		
	comp=Z,5.6nm,1.0s							
RND	**Reindeer**	**90.22**	**12**	P	**P**	**09 19 55.3**	**-0.5**	
PDAR	**Pinedale Array**	**90.71**	**43**	LR	LR	10 02 43.8		
	comp=Z,24nm,18.1s,baz=228,slow=37							
DOT	**Dot Lake**	**91.41**	**14**	IAmb	IAmb	09 20 03.0		
	comp=Z,4.7nm,1.3s							
CCB	**Clear Creek Bu**	**91.54**	**12**	IAmb	IAmb	09 20 08.2		
	comp=Z,2.9nm,1.1s							
ILAR	**Eielson Array**	**91.83**	**12**	P	**P**	**09 20 02.6**	**-0.6**	
	comp=Z,1.6nm,1.2s,baz=206,slow=5.7,SNR=7.1							
CMAR	**Chiang Mai Arr**	**93.04**	**289**	P	P	09 20 12.9	+3.0	
	comp=Z,3.7nm,0.9s,baz=139,slow=3.6,SNR=17							
CHTO	**Chiang Mai**	**93.18**	**289**	P	**P**	**09 20 10.2**	**-0.3**	
AKASG	**Malin Array Be**	**147.32**	**330**	PKPbc	**PKiKP**	**09 26 39.2**	**-1.7**	
	comp=Z,1.6nm,0.5s,baz=39,slow=3.7,SNR=7.2							
BRTR	**Keskin Array B**	**150.72**	**309**	PKPbc	**PKiKP**	**09 26 48.4**	**-0.1**	
	comp=Z,0.4nm,0.4s,baz=210,slow=1.0,SNR=4.6							
CLL	**Collm**	**152.32**	**348**	*e*PKPbc	**PKiKP**	**09 26 52.0**	**+0.8**	
	comp=Z,4.0nm,0.7s							

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*IDC **26** 09:24:57.1±0.8, 10.°69S×166.°19E, h167km±6km, mb4.2/25, mb1 4.4/25, mb1mx4.3/37, mbtmp4.6/25, MS3.5/1, Ms1 3.4/1, ms1mx2.7/28, Error ellipse: s-maj=12.3km s-min=9.8km az=105.0*

*NEIC **26** 09:24:58.1±1.7, 10.°73S±0.°09×166.°17E±0.°07, h177km±5km, mb4.8/205, Error ellipse: s-maj=13.2km s-min=10.3km az=185.0*

*GCMT **26** 09:25:02.1±0.4, 10.°72S±0.°03×165.°89E±0.°03, h194km±3km, MW4.9/88, Moment Tensor Solution. s15,c16; s88,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.45±.12; $M_{\theta\theta}$-1.82±.16; $M_{\phi\phi}$-0.63±.15; $M_{r\theta}$-0.52±.12; $M_{\theta\phi}$-0.59±.18; $M_{\phi r}$-1.50±.11; Best double couple: $M_0$2.70600×10^{16} NP1:ϕ_s80.00000°, δ34.00000°, λ120.00000°. NP2: ϕ_s225.00000°, δ61.00000°, λ72.00000°. Principal axes: T 3.0730, Plg68.0000°, Azm98.0000°; N -0.7360, Plg16.0000°, Azm234.0000°; P -2.3390, Plg14.0000°, Azm329.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 09:24:55.6±0.3, 10.°77S±0.°06×166.°26E±0.°05, h155km, n308, σ1°18/258, mb4.8/125, 2C-1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.36**	**281**	P	**Pn**	**09 26 30.1**	**+2.9**
	16nm,0.3s,baz=294,slow=1.4,SNR=4.7						
HNR				S	**Sn**	**09 27 41.4**	**+2.5**
	baz=236,slow=23,SNR=0.7						
HNR	**Honiara**	**6.36**	**281**	*i* P	**Pn**	**09 26 27.5**	**+0.3**
HNR	**Honiara**	**6.36**	**281**		**Pn**	**09 26 28.9**	**+1.8**
DZM	**Mont Dzumac**	**11.24**	**179**	P	**P**	**09 27 38.9**	**-1.0**
	12nm,0.3s,baz=301,slow=18,SNR=134						
DZM	**Mont Dzumac**	**11.24**	**179**		**Pn**	**09 27 35.1**	**+3.1**
RABL	**Rabaul**	**15.42**	**294**	P	**Pn**	**09 28 23.8**	**-1.4**
KRVT	**Keravat (AS076**	**15.50**	**293**	P	**P**	**09 28 28.5**	**+1.4**
	8.5nm,0.3s,baz=62,slow=4.6,SNR=7.6						
PMG	**Port Moresby**	**18.86**	**272**		**Pn**	**09 29 06.2**	**-0.1**
EIDS	**Eidsvold**	**20.44**	**223**	P	**P**	**09 29 21.7**	**+0.7**
CTA	**Charters Tower**	**21.38**	**242**	P	**P**	**09 29 32.2**	**+1.1**
	8.2nm,0.6s,baz=77,slow=12,SNR=11						
CTA				pP	**pwP**	**09 30 01.9**	**-1.0**
	45nm,0.9s,baz=72,slow=13,SNR=14						
CTAO	**Charters Tower**	**21.38**	**242**	P	**P**	**09 29 32.0**	**+0.9**
CTAO					**pwP**	**09 30 01.9**	**-1.0**
AFI	**Afiamalu**	**21.68**	**101**	P	**P**	**09 29 32.3**	**-2.1**
COEN	**Coen**	**22.77**	**260**	P	**P**	**09 29 44.9**	**-0.1**
KNTN	**Kanton**	**23.25**	**72**	P	**P**	**09 29 50.9**	**+1.5**
ARMA	**Armidale**	**23.82**	**213**	P	**P**	**09 29 56.7**	**+2.1**
ARMA				IAmb	IAmb	09 29 57.5	
	comp=Z,19nm,0.8s						
OUZ	**Omahuta**	**25.24**	**166**	P	**P**	**09 30 06.5**	**-0.8**
JAY	**Jayapura**	**26.66**	**286**	P	**P**	**09 30 19.2**	**-1.1**
	comp=Z,10nm,0.5s,baz=132,slow=14,SNR=7.4						
SMPI	**Sarmi**	**28.71**	**286**	P	**P**	**09 30 38.8**	**+0.3**
	comp=Z,35nm,1.3s						
MXZ	**Matakaoa Point**	**28.80**	**160**	P	**P**	**09 30 40.3**	**+1.3**
URZ	**Urewera**	**29.05**	**162**	P	**P**	**09 30 42.8**	**+1.6**
	comp=Z,18nm,0.6s,baz=337,slow=3.2,SNR=14						
H11S2	**WAKE ISLAND Hy**	**29.07**	**1**	T	T	10 01 55.9	
	baz=182,slow=76,SNR=29						
H11S3	**WAKE ISLAND Hy**	**29.08**	**1**	T	T	10 01 44.0	
	baz=182,slow=76,SNR=26						
H11S1	**WAKE ISLAND Hy**	**29.09**	**1**	T	T	10 01 55.7	
	baz=182,slow=76,SNR=26						
BKZ	**Black Stump Fm**	**29.72**	**164**	P	**P**	**09 30 49.5**	**+2.3**
H11N1	**WAKE ISLAND Hy**	**30.29**	**1**	T	T	10 03 23.3	
	baz=182,slow=76,SNR=30						
H11N3	**WAKE ISLAND Hy**	**30.30**	**1**	T	T	10 03 24.1	
	baz=182,slow=76,SNR=15						
H11N2	**WAKE ISLAND Hy**	**30.31**	**1**	T	T	10 03 09.1	
	baz=182,slow=76,SNR=13						
STKA	**Stephens Creek**	**30.99**	**224**	P	**P**	**09 30 59.5**	**+1.0**
	comp=Z,12nm,0.8s,baz=52,slow=9.9,SNR=27						
STKA				PcP	**PcP**	**09 33 51.1**	**+0.3**
	comp=Z,5.1nm,0.8s,baz=342,slow=3.2,SNR=3.6						
STKA				ScP	**ScP**	**09 37 18.7**	**-0.6**
	comp=Z,4.4nm,0.9s,baz=55,slow=3.5,SNR=4.0						
STKA				LR	LR	09 42 08.7	
	comp=Z,87nm,19.7s,baz=28,slow=33						
STKA	**Stephens Creek**	**30.99**	**224**	P	**P**	**09 30 59.5**	**+1.0**
BFZ	**Birch Farm**	**31.07**	**165**	P	**P**	**09 30 59.9**	**+0.8**
SNZO	**South Karori**	**31.32**	**168**	P	**P**	**09 31 00.4**	**-0.7**
THZ	**Tophouse**	**31.42**	**170**	P	**P**	**09 31 00.5**	**-1.7**
MSWZ	**Moikau Station**	**31.54**	**167**	P	**P**	**09 31 04.0**	**+0.9**
WB0	**Warramunga Arr**	**31.97**	**250**	P	**P**	**09 31 07.3**	**+0.1**
WB0				IAmb	IAmb	09 31 07.9	
	comp=Z,17nm,0.8s						
WRAB	**Tennant Creek**	**32.04**	**250**	P	**P**	**09 31 07.3**	**-0.5**
WRA	**Warramunga Arr**	**32.05**	**250**	P	**P**	**09 31 07.6**	**-0.3**
	comp=Z,6.1nm,0.5s,baz=83,slow=9.0,SNR=59						
WRA				pP	**pP**	**09 31 41.5**	**+2.2**
	comp=Z,7.0nm,0.9s,baz=79,slow=9.1,SNR=5.9						
WRA				S	**S**	**09 36 04.6**	**-4.2**
	comp=Z,4.7nm,1.1s,baz=83,slow=14,SNR=6.5						
WRA				ScP	**ScP**	**09 37 21.9**	**-1.3**
	comp=Z,3.1nm,0.9s,baz=80,slow=9.9,SNR=9.3						
LTZ	**Lake Taylor**	**32.32**	**172**	P	**P**	**09 31 09.3**	**-0.7**
TOO	**Toolangi**	**32.57**	**212**	P	**P**	**09 31 12.4**	**+0.1**
FOZ	**Fox Glacier**	**32.79**	**175**	P	**P**	**09 31 15.0**	**+1.0**
OXZ	**Oxford**	**32.82**	**172**	P	**P**	**09 31 13.9**	**-0.4**
RPZ	**Rata Peaks**	**33.09**	**174**	P	**P**	**09 31 18.0**	**+1.3**
	comp=Z,45nm,0.7s,baz=336,slow=1.9,SNR=13						
MQZ	**McQueen's Vall**	**33.28**	**172**	P	**P**	**09 31 18.3**	**+0.1**
AS31	**Alice Springs**	**33.37**	**243**	P	**P**	**09 31 18.7**	**-0.7**
ASAR	**Alice Springs**	**33.37**	**243**	P	**P**	**09 31 18.8**	**-0.6**
	comp=Z,4.7nm,0.8s,baz=67,slow=9.8,SNR=43						
ASAR				pP	**pP**	**09 31 52.9**	**+2.3**
	comp=Z,2.4nm,0.8s,baz=73,slow=8.5,SNR=3.5						
ASAR				ScP	**ScP**	**09 37 27.1**	**-0.6**
	comp=Z,2.3nm,0.9s,baz=72,slow=3.6,SNR=8.3						
LBZ	**Lake Benmore**	**33.67**	**175**	P	**P**	**09 31 23.1**	**+1.5**
WKZ	**Wanaka**	**34.02**	**176**	P	**P**	**09 31 24.2**	**-0.5**
BBOO	**Buckleboo**	**35.39**	**227**	P	**P**	**09 31 37.2**	**+0.6**
BBOO				IAmb	IAmb	09 31 38.1	
	comp=Z,21nm,0.8s						
SIJI	**Sorong**	**36.13**	**283**	P	**P**	**09 31 42.4**	**-0.8**
	comp=Z,8.4nm,0.4s,baz=170,slow=8.9,SNR=5.5						
KNRA	**Kununurra**	**36.80**	**258**	P	**P**	**09 31 48.6**	**-0.2**
KNRA				IAmb	IAmb	09 31 48.9	
	comp=Z,12nm,0.6s						
FITZ	**Fitzroy Crossi**	**39.94**	**255**	P	**P**	**09 32 14.8**	**-0.3**
	comp=Z,11nm,0.7s,baz=78,slow=6.3,SNR=42						
FITZ	**Fitzroy Crossi**	**39.94**	**255**	P	**P**	**09 32 14.7**	**-0.3**
FITZ				IAmb	IAmb	09 32 15.6	
	comp=Z,13nm,0.8s						
FORT	**Forrest**	**40.62**	**235**	P	**P**	**09 32 20.8**	**+0.4**
FORT				IAmb	IAmb	09 32 21.1	
	comp=Z,24nm,0.8s						
EDFI	**Ende, Flores**	**43.95**	**269**	P	**P**	**09 32 46.9**	**-0.8**
	comp=Z,8.6nm,1.2s						
PSA00	**Pilbara Seismi**	**45.70**	**250**	P	**P**	**09 33 01.8**	**+0.4**
BKSI	**Bulukumba**	**45.97**	**273**	P	**P**	**09 33 00.2**	**-3.4**
	comp=Z,12nm,0.9s						
BNSI	**Bone**	**46.15**	**274**	P	**P**	**09 33 03.3**	**-1.7**
	comp=Z,625nmcomp=Z,28nm,0.9s						
SPSI	**Sidrap Palu**	**46.56**	**275**	P	**P**	**09 33 05.9**	**-2.3**
KIP	**Kipapa**	**47.48**	**48**	P	**P**	**09 33 16.7**	**+1.6**
KIP				IAmb	IAmb	09 33 17.5	
	comp=Z,22nm,0.7s						
OPA	**Opana**	**47.65**	**47**	P	**P**	**09 33 18.3**	**+1.9**
KHU	**Kahuku**	**47.97**	**52**	P	**P**	**09 33 19.3**	**+0.1**
AIN	**Ainahou**	**48.16**	**52**	P	**P**	**09 33 22.3**	**+1.6**
HMH	**Humu'ula Sheep**	**48.28**	**51**	P	**P**	**09 33 23.3**	**+1.6**
POHA	**Pohakuloa**	**48.33**	**51**	P	**P**	**09 33 23.8**	**+1.8**
NWAO	**Narrogin (SRO)**	**50.04**	**236**	P	**P**	**09 33 34.6**	**-0.1**
NWAO				IAmb	IAmb	09 33 37.6	
	comp=Z,54nm,1.5s						
NWAO	**Narrogin (SRO)**	**50.04**	**236**	P	**P**	**09 33 34.4**	**-0.2**
NWAO				IAmb	IAmb	09 33 37.6	
	comp=Z,67nm,1.5s						
MJAR	**Matsushiro Arr**	**53.96**	**332**	P	**P**	**09 34 02.1**	**-1.3**
	comp=Z,1.6nm,0.6s,baz=147,slow=9.1,SNR=5.3						
KSRS	**Korea Array**	**59.94**	**325**	P	**P**	**09 34 45.2**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=137,slow=6.4,SNR=4.6						
NJ2	**Nanjing**	**62.18**	**315**	*e*P	**P**	**09 35 01.5**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,12nm,1.2s						
QIZ	**Qiongzhong**	**63.00**	**298**	P	**P**	**09 35 05.0**	**-1.4**
QIZ				S	**S**	**09 43 21.8**	**-3.0**
QIZ				LR	LR		
	comp=N,99nm,12.8s						
QIZ				LR	LR		
	comp=E,130nm,20.1s						
QIZ				LR	LR		
	comp=Z,160nm,27.5s						
PETK	**Petropavlovsk-**	**64.04**	**354**	P	**P**	**09 35 12.4**	**-0.2**
	comp=Z,2.7nm,0.8s,baz=143,slow=10,SNR=4.1						
VNDA	**Vanda**	**66.78**	**181**	P	**P**	**09 35 30.5**	**+0.7**
	comp=Z,3.5nm,0.9s,baz=332,slow=6.4,SNR=15						
CASY	**Casey**	**66.82**	**201**	P	**P**	**09 35 30.7**	**+0.4**
CASY				IAmb	IAmb	09 35 31.6	
	comp=Z,23nm,1.0s						
BJI	**Beijing**	**68.59**	**321**	P	**P**	**09 35 42.5**	**+0.7**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GYA	**Guiyang**	**68.68**	**304**	*e*P	**P**	**09 35 44.5**	**+1.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KMI	**Kunming**	**71.41**	**301**	P	**P**	**09 36 02.0**	**+2.4**
KMI				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC	**Hu-ho-hao-te**	**71.95**	**319**	*e*P	**P**	**09 36 02.8**	**+0.4**
HHC				pP	pwP	09 36 45.5	+5.8
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,54nm,6.8s						
CMAR	**Chiang Mai Arr**	**72.47**	**293**	P	**P**	**09 36 06.2**	**+0.5**
	comp=Z,1.1nm,0.4s,baz=119,slow=4.3,SNR=7.7						
LZH	**Lanzhou**	**74.95**	**312**	⇑P	**P**	**09 36 19.3**	**-0.8**
LZH				pP	pP	09 37 02.0	+4.3
LZH				sP	sP	09 37 20.3	+6.2
LZH				PP	**PP**	**09 39 11.5**	**+1.4**
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,7.8s						
SVW2	**Sparrevohn**	**77.69**	**18**	P	**P**	**09 36 35.2**	**+0.4**
SVW2				IAmb	IAmb	09 36 36.3	
	comp=Z,23nm,1.4s						
BILL	**Bilibino**	**78.60**	**0**	P	**P**	**09 36 39.6**	**-0.1**
BILL				IAmb	IAmb	09 36 40.5	
	comp=Z,12nm,0.9s						
SONM	**Songino Array**	**78.74**	**324**	P	**P**	**09 36 42.2**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=142,slow=4.9,SNR=4.1						
SONM				pP	**pP**	**09 37 23.1**	**+4.1**
	comp=Z,1.0nm,0.8s,baz=116,slow=6.6,SNR=2.0						
SEW	**Seward**	**78.95**	**21**	IAmb	IAmb	09 36 42.5	
	comp=Z,15nm,0.9s						
TTA	**Tatalina**	**79.02**	**17**	P	**P**	**09 36 42.4**	**+0.3**
TTA				IAmb	IAmb	09 36 43.6	
	comp=Z,15nm,1.1s						
QSPA	**South Pole Qui**	**79.24**	**180**	P	**P**	**09 36 43.8**	**+0.3**
	comp=Z,15nm,0.6s,baz=1.7,slow=1.0,SNR=138						
QSPA	**South Pole Qui**	**79.24**	**180**	P	**P**	**09 36 43.8**	**+0.3**
QSPA				IAmb	IAmb	09 36 45.4	
	comp=Z,15nm,0.7s						
RC01	**Rabbit Creek A**	**79.56**	**20**	IAmb	IAmb	09 36 45.9	
	comp=Z,39nm,1.5s						
KNK	**Knik Glacier**	**80.22**	**20**	P	**P**	**09 36 47.4**	**-1.2**
GLI	**Glacier Island**	**80.32**	**21**	IAmb	IAmb	09 36 49.8	
	comp=Z,14nm,0.8s						
SML	**Sawmill**	**80.54**	**20**	IAmb	IAmb	09 36 51.4	
	comp=Z,18nm,1.1s						
SCM	**Sheep Creek Mo**	**80.90**	**20**	IAmb	IAmb	09 36 53.4	
	comp=Z,20nm,0.8s						
RND	**Reindeer**	**81.51**	**19**	IAmb	IAmb	09 36 57.4	
	comp=Z,14nm,0.9s						
WAX	**Waxell Ridge**	**81.60**	**23**	P	**P**	**09 36 55.9**	**-0.1**
MCK	**McKinley**	**81.72**	**18**	IAmb	IAmb	09 36 58.8	
	comp=Z,17nm,1.0s						
DHY	**Denali Highway**	**81.75**	**19**	P	**P**	**09 36 56.3**	**-0.5**
VRDI	**Verde Repeater**	**81.88**	**22**	IAmb	IAmb	09 36 58.4	
	comp=Z,12nm,0.6s						
GLB	**Gilahina Butte**	**81.88**	**22**	IAmb	IAmb	09 36 58.4	
	comp=Z,20nm,0.7s						
YAH	**Yahtse**	**81.97**	**23**	IAmb	IAmb	09 36 59.6	
	comp=Z,18nm,1.1s						
JCC	**Jacoby Creek,**	**82.08**	**46**	P	**P**	**09 36 59.3**	**+0.4**
JCC				IAmb	IAmb	09 37 01.1	
	comp=Z,17nm,0.9s						
BALM	**Baldy**	**82.17**	**23**	IAmb	IAmb	09 37 00.0	
	comp=Z,15nm,0.8s						
KHMM	**Horse Mountain**	**82.31**	**46**	P	**P**	**09 37 00.5**	**+0.2**
KHMM				IAmb	IAmb	09 37 02.6	
	comp=Z,17nm,0.8s						
KRMB	**Red Mountain**	**82.42**	**45**	IAmb	IAmb	09 37 03.1	
	comp=Z,32nm,1.5s						
WRH	**Wood River Hil**	**82.51**	**18**	P	**P**	**09 36 59.3**	**-1.3**
WRH				IAmb	IAmb	09 37 01.8	
	comp=Z,16nm,0.8s						
CCB	**Clear Creek Bu**	**82.72**	**18**	P	**P**	**09 37 00.6**	**-1.0**
CCB				IAmb	IAmb	09 37 02.5	
	comp=Z,10nm,0.6s						
O02D	**Mt. Diablo Mer**	**82.73**	**47**	P	**P**	**09 37 03.8**	**+1.4**
	baz=249,SNR=13						
MDM	**Murphy Dome**	**82.81**	**18**	IAmb	IAmb	09 37 02.8	
	comp=Z,14nm,0.8s						
HDA	**Harding Lake**	**82.82**	**19**	P	**P**	**09 37 01.9**	**-0.2**
	baz=226						
TCOL	**CIGO, UAF Yank**	**82.86**	**18**	P	**P**	**09 37 01.3**	**-1.0**
	baz=225						
COLA	**College**	**82.87**	**18**	P	**P**	**09 37 01.4**	**-0.9**
J01E	**Myrtle Point**	**83.01**	**44**	P	**P**	**09 37 04.6**	**+1.0**
	baz=248						
K02D	**Willamette Mer**	**83.02**	**44**	P	**P**	**09 37 04.7**	**+0.9**
	baz=248,SNR=8.7						
N02D	**Trinity Center**	**83.07**	**46**	P	**P**	**09 37 05.4**	**+1.2**
	baz=249,SNR=11						
IL31		**83.09**	**18**	P	**P**	**09 37 02.5**	**-0.9**
IL31				IAmb	IAmb	09 37 03.8	
	comp=Z,8.5nm,0.8s						
ILAR	**Eielson Array**	**83.09**	**18**	P	**P**	**09 37 02.9**	**-0.7**
	comp=Z,7.8nm,0.6s,baz=236,slow=5.0,SNR=163						
M02C	**Callahan**	**83.12**	**46**	P	**P**	**09 37 05.7**	**+1.3**
	baz=249,SNR=15						
POKR	**Poker Plat Res**	**83.16**	**18**	P	**P**	**09 37 03.0**	**-1.0**
	baz=226						
DOT	**Dot Lake**	**83.24**	**20**	IAmb	IAmb	09 37 05.6	
	comp=Z,25nm,1.0s						
YBH	**Yreka Blue Hor**	**83.34**	**45**	IAmb	IAmb	09 37 07.6	
	comp=Z,16nm,0.9s						
ORV	**Oroville**	**83.45**	**48**	IAmb	IAmb	09 37 07.5	
	comp=Z,12nm,0.9s						
O03E	**Paynes Creek**	**83.48**	**47**	P	**P**	**09 37 06.7**	**+0.5**
	baz=250,SNR=15						
I03D	**Drain, OR**	**83.60**	**43**	P	**P**	**09 37 07.2**	**+0.6**
	baz=249						
AFDM	**Forest Hills D**	**83.64**	**49**	IAmb	IAmb	09 37 08.6	
	comp=Z,23nm,1.1s						
CMB	**Columbia Colle**	**83.78**	**50**	IAmb	IAmb	09 37 09.2	
	comp=Z,13nm,0.9s						
L04D	**Klamath Falls**	**83.79**	**45**	P	**P**	**09 37 08.8**	**+1.0**
	baz=250,SNR=5.7						
WRAK	**Wrangell Islan**	**83.85**	**29**	IAmb	IAmb	09 37 08.6	
	comp=Z,19nm,

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KVN	Kaiserville	85.80	49	P	P	09 37 18.2	+0.2
KVN				IAmb	IAmb	09 37 19.6	
	comp=Z,12nm,1.0s						
A04D	Lummi Island	85.84	39	P	P	09 37 18.7	+1.0
	baz=249						
SWSC	Sam W. Stewart	85.86	56	P	P	09 37 19.3	+1.1
	baz=254						
TIXI	Tiksi	85.92	349	P	P	09 37 16.6	-0.9
HEC	Hector,Ludlow	85.94	54	P	P	09 37 19.4	+0.7
	baz=254,SNR=6.5						
BELC	Belle Mtn. Jos	85.98	54	P	P	09 37 19.9	+0.9
	baz=254,SNR=19						
FURC	Furnace Creek,	85.98	52	P	P	09 37 19.7	+1.0
	baz=254,SNR=10						
B05A	Bryant	86.06	39	P	P	09 37 19.4	+0.6
	baz=249						
SHOC	Shoshone, Teco	86.28	53	P	P	09 37 21.0	+0.8
	baz=254,SNR=5.7						
BC3	Big Chuckawall	86.33	55	P	P	09 37 21.9	+1.2
	baz=255,SNR=11						
I07A	Izee	86.34	44	IAmb	IAmb	09 37 21.7	
	comp=Z,9.3nm,0.7s						
WVOR	Wild Horse Val	86.43	46	IAmb	IAmb	09 37 22.8	
	comp=Z,15nm,1.1s						
TUQ	Turquoise Moun	86.43	53	P	P	09 37 22.0	+0.9
	baz=254,SNR=7.1						
GMRC	Granite Mounta	86.46	54	P	P	09 37 22.1	+0.8
	baz=254,SNR=15						
TPNV	Topopah Spring	86.59	52	P	P	09 37 22.6	+0.7
	baz=254,SNR=9.7						
GLA	Glamis	86.68	56	P	P	09 37 24.0	+1.7
	baz=255,SNR=5.6						
IRM	Iron Mountain	86.71	55	P	P	09 37 23.4	+1.0
	baz=255,SNR=16						
J08A	Circle Bar Ran	86.83	45	IAmb	IAmb	09 37 24.4	
	comp=Z,12nm,0.9s						
HAWA	Hanford	87.07	42	P	P	09 37 24.4	+0.6
HAWA				IAmb	IAmb	09 37 25.4	
	comp=Z,14nm,1.0s						
G08A	Pilot Rock	87.10	43	IAmb	IAmb	09 37 25.6	
	comp=Z,12nm,1.0s						
Y12C	Blythe	87.10	55	P	P	09 37 25.5	+1.3
	baz=255,SNR=6.9						
Y12C	Blythe	87.10	55	IAmb	IAmb	09 37 26.4	
	comp=Z,15nm,0.8s						
NEE2	Needles Airpor	87.29	54	P	P	09 37 26.4	+1.3
	baz=255						
SHPR	Sheep Range	87.31	52	IAmb	IAmb	09 37 27.6	
	comp=Z,17nm,1.5s						
EPYK	Eagle Plains	87.38	20	P	P	09 37 24.4	-0.4
	baz=236						
EPYK	Eagle Plains	87.38	20	IAmb	IAmb	09 37 26.4	
	comp=Z,12nm,1.1s						
113A	Mohawk Valley,	87.47	56	IAmb	IAmb	09 37 27.7	
	comp=Z,7.9nm,0.8s						
R11A	Troy Canyon, C	87.48	50	P	P	09 37 26.4	+0.2
	baz=254,SNR=12						
PDMCI	Parker Dam,Lak	87.55	55	P	P	09 37 27.7	+1.3
	baz=255,SNR=6.9						
W13A	Hualapai Mount	87.95	54	IAmb	IAmb	09 37 30.6	
	comp=Z,22nm,1.4s						
214A	Organ Pipe Nat	88.05	57	P	P	09 37 30.5	+1.6
	baz=256						
BMO	Blue Mountains	88.08	44	P	P	09 37 28.4	-0.4
Y14A	Wickenburg	88.37	55	IAmb	IAmb	09 37 32.3	
	comp=Z,14nm,1.4s						
F10A	Beach Ranch, E	88.46	43	IAmb	IAmb	09 37 31.2	
	comp=Z,8.0nm,0.8s						
SZCU	Shurtz Canyon	89.19	52	P	P	09 37 34.7	+0.4
NEW	Newport	89.20	41	P	P	09 37 34.2	+0.3
	baz=253						
WMQ	Urumqi	89.26	315	*e*P	P	09 37 35.0	+0.7
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,88nm,4.7s						
WMQ				LR	LR		
	comp=N,130nm,16.5s						
WMQ				LR	LR		
	comp=E,83nm,29.1s						
WMQ				LR	LR		
	comp=Z,120nm,29.3s						
INK	Inuvik	89.47	19	P	P	09 37 34.2	-0.3
	comp=Z,1.8nm,0.9s,baz=250,slow=3.6,SNR=6.1						
X16A	Lo Mia Camp, P	89.75	55	P	P	09 37 38.0	+1.0
X16A				IAmb	IAmb	09 37 39.3	
	comp=Z,12nm,0.9s						
TUC	Tucson	89.81	57	P	P	09 37 38.6	+1.4
	baz=257						
TUC	Tucson	89.81	57	P	P	09 37 38.7	+1.5
TUC				IAmb	IAmb	09 37 39.6	
	comp=Z,7.2nm,0.8s						
DUG	Dugway, Tooele	90.03	49	P	P	09 37 38.9	+0.8
	baz=256						
DUG	Dugway, Tooele	90.03	49	IAmb	IAmb	09 37 39.8	
	comp=Z,6.6nm,0.8s						
WUAZ	Wupatki	90.05	54	P	P	09 37 39.8	+1.5
	baz=257						
WUAZ	Wupatki	90.05	54	IAmb	IAmb	09 37 40.6	
	comp=Z,14nm,0.8s						
MSU	Marysvale	90.11	51	P	P	09 37 39.7	+1.1
319A	Douglas	90.86	58	IAmb	IAmb	09 37 44.6	
	comp=Z,14nm,1.1s						
MSO	Missoula	90.88	43	P	P	09 37 41.9	+0.1
	baz=255						
X18A	Snowflake	90.97	55	IAmb	IAmb	09 37 44.9	
	comp=Z,8.1nm,1.0s						
TMUT	Trail Mountain	91.03	50	P	P	09 37 43.5	+0.6
W18A	Petrified Fore	91.27	55	P	P	09 37 45.4	+1.4
	baz=258						
W18A	Petrified Fore	91.27	55	IAmb	IAmb	09 37 46.0	
	comp=Z,9.5nm,1.1s						
HWUT	Hardware Ranch	91.28	48	IAmb	IAmb	09 37 45.2	
	comp=Z,5.9nm,0.8s						
SRU	San Rafael Swe	91.51	51	P	P	09 37 45.7	+0.7
FXWY	Fox Creek	92.13	46	IAmb	IAmb	09 37 49.4	
	comp=Z,4.8nm,0.8s						
TPAW	Teton Pass	92.15	46	IAmb	IAmb	09 37 49.6	
	comp=Z,3.9nm,0.7s						
SYO	Syowa Base	92.20	197⇓	*e*P	P	09 37 46.8	-0.5
SYO	Syowa Base	92.20	197⇑	*e*P	P	09 38 01.7	+14
IMW	Indian Meadow	92.25	46	IAmb	IAmb	09 37 50.1	
	comp=Z,5.0nm,0.8s						
SNOW	Snow King Moun	92.28	46	IAmb	IAmb	09 37 50.2	
	comp=Z,4.8nm,0.8s						
121A	Cookes Peak, D	92.34	57	P	P	09 37 50.1	+1.1
	baz=259						
121A	Cookes Peak, D	92.34	57	P	P	09 37 50.0	+1.1
121A				IAmb	IAmb	09 37 51.5	
	comp=Z,6.5nm,1.0s						
PV17	East Wray Mesa	92.53	52	IAmb	IAmb	09 37 52.7	
	comp=Z,5.6nm,0.9s						
PV20	West Nyswonger	92.54	52	IAmb	IAmb	09 37 52.0	
	comp=Z,5.0nm,0.7s						
PV21	Cone Mtn., Par	92.57	51	IAmb	IAmb	09 37 52.2	
	comp=Z,4.4nm,0.7s						
PV04	Paradox Valley	92.59	52	P	P	09 37 50.9	+0.8
PV04				IAmb	IAmb	09 37 52.4	
	comp=Z,5.2nm,0.8s						
H17A	Grant Village	92.61	45	P	P	09 37 52.1	+2.1
	baz=258						
H17A	Grant Village	92.61	45	IAmb	IAmb	09 37 52.8	
	comp=Z,5.2nm,0.7s						
PV12	Saucer Basin,	92.66	52	IAmb	IAmb	09 37 52.6	
	comp=Z,6.0nm,0.8s						
MVCO	Mesa Verde	92.67	53	P	P	09 37 51.3	+0.8
	baz=259						
PV22	Blue Mesa, Par	92.71	51	IAmb	IAmb	09 37 53.1	
	comp=Z,4.2nm,0.8s						
PV07	Paradox Valley	92.80	52	IAmb	IAmb	09 37 53.2	
	comp=Z,4.5nm,0.8s						
BW06	Boulder Array	92.99	47	P	P	09 37 52.1	+0.2
	baz=258						
PD31	Pinedale Array	92.99	47	P	P	09 37 52.0	+0.2
PDAR	Pinedale Array	92.99	47	P	P	09 37 51.8	-0.1
	comp=Z,3.3nm,0.9s,baz=252,slow=3.0,SNR=15						
C36M	Paulatuk	93.00	19	P	P	09 37 49.9	-1.0
	baz=247						
MK31	Makanchi Array	93.67	317	P	P	09 37 54.0	-0.6
MKAR	Makanchi Array	93.67	317	P	P	09 37 53.6	-1.0
	comp=Z,2.2nm,0.7s,baz=94,slow=6.4,SNR=21						
MKAR				pP	pP	09 38 37.9	+4.6
	comp=Z,1.3nm,0.8s,baz=106,slow=4.6,SNR=4.0						
MKAR				PKKPbc	PKKPdf	09 54 57.9	-1.5
	comp=Z,1.3nm,0.7s,baz=278,slow=2.5,SNR=13						
A36M	Sachs Harbour	93.69	17	P	P	09 37 53.8	-0.2
	baz=246						
ANMO	Albuquerque	93.87	55	P	P	09 37 56.5	+0.5
	baz=260						
ANMO	Albuquerque	93.87	55	P	P	09 37 56.5	+0.5
EGMT	Eagleton	93.92	42	P	P	09 37 56.0	+0.2
	baz=258						
S22A	4UR Ranch, Cre	94.08	53	P	P	09 37 57.9	+0.8
	baz=260						
MNTX	Cornudas Mount	94.19	59	P	P	09 37 57.7	+0.4
	baz=260						
MNTX	Cornudas Mount	94.19	59	IAmb	IAmb	09 37 58.6	
	comp=Z,4.8nm,1.1s						
YKA	Yellowknife Ar	94.50	27	P	P	09 37 56.3	-1.7
	comp=Z,2.2nm,0.6s,baz=255,slow=4.3,SNR=71						
YKA				PKiKP	PKiKP	09 42 39.3	-0.8
	comp=Z,0.1nm,0.5s,baz=247,slow=0.9,SNR=5.1						
SDCO	Great Sand Dun	95.12	53	P	P	09 38 02.2	+0.4
	baz=260						
TX32	Lajitas Array	95.25	61	IAmb	IAmb	09 38 11.9	
	comp=Z,5.2nm,0.8s						
TXAR	Lajitas Array	95.25	61	P	P	09 38 02.5	+0.2
	comp=Z,0.8nm,0.6s,baz=222,slow=5.8,SNR=12						
TXAR				PP	PP	09 41 55.3	+0.6
	comp=Z,1.4nm,1.2s,baz=258,slow=6.3,SNR=5.2						
KSH	Kashi	96.98	309	P	P	09 38 10.5	+0.5
KSH				pP	pP	09 38 55.0	+6.1
KSH				pmax	pmax		
	comp=Z,73nm,2.1s						
KSH				pmax	pmax		
	comp=Z,270nm,3.9s						
SNAA	Sanae	97.42	183	P	P	09 38 10.5	-0.9
SNAA	Sanae	97.42	183	P	P	09 38 10.4	-0.9
	comp=Z,2.3nm,0.7s,baz=222,slow=4.0,SNR=15						
SNAA	Sanae	97.42	183	P	P	09 38 10.4	-0.9
SNAA				IAmb	IAmb	09 38 28.9	
	comp=Z,7.1nm,1.3s						
VNA3	Neumayer Olymp	98.13	181	P	P	09 38 13.5	-0.9
VNA2	Neumayer--Watz	98.38	182	P	P	09 38 15.4	-0.1
	baz=176,slow=3.6						
FFC	Flin Flon	99.71	36	IAmb	IAmb	09 38 21.8	
	comp=Z,5.0nm,1.1s						
T53A	Wise	113.31	54	P	PKiKP	09 43 15.0	-0.4
	baz=274						
S54A	Dingess, Beckl	114.22	53	P	PKPdf	09 43 16.3	-0.8
	baz=275						
N53A	Lisbon	114.27	50	P	PKPdf	09 43 16.2	-0.8
	baz=277						
M53A	WI Miller and	114.32	49	P	PKPdf	09 43 16.5	-0.7
	baz=277						
Q54A	Coxs Mills	114.48	52	P	PKPdf	09 43 16.6	-1.0
	baz=276						
O54A	Avella	114.69	51	P	PKPdf	09 43 17.3	-0.6
	baz=277						
N54A	Moraine State	114.89	50	P	PKiKP	09 43 17.2	-1.0
	baz=278						
M54A	Oil Creek Stat	115.06	49	P	PKiKP	09 43 17.5	-1.1
	baz=278						
O55A	Ligonier	115.51	51	P	PKPdf	09 43 18.8	-0.7
	baz=278						
M55A	Ridgway	115.73	49	P	PKPdf	09 43 18.9	-1.0
	baz=279						
L55A	Hinsdale	115.87	48	P	PKPdf	09 43 19.2	-0.9
	baz=279						
T57A	Hurt	115.93	54	P	PKPdf	09 43 19.4	-1.0
	baz=276						
E54A	Lac Daplat, Po	115.97	43	P	PKPdf	09 43 18.9	-1.2
	baz=282						
N56A	West Decatur	116.17	50	P	PKPdf	09 43 19.8	-1.0
	baz=279						
ARCES	ARCESS Array B	116.19	346	PKP	PKPdf	09 43 18.7	-1.2
	comp=Z,1.8nm,0.5s,baz=64,slow=2.8,SNR=17						
ARCES				PKKPbc	PKKPbc	09 53 49.2	-3.7
	comp=Z,1.8nm,0.8s,baz=53,slow=0.6,SNR=5.0						
SSPA	Standing Stone	116.52	50	P	PKPdf	09 43 20.5	-0.9
	baz=279						
G55A	Calabogie	116.53	45	P	PKPdf	09 43 20.1	-1.2
	baz=282						
M57A	Sunshine Farm,	116.97	49	P	PKPdf	09 43 21.7	-0.6
	baz=280						
H56A	Elgin	116.99	45	P	PKPdf	09 43 20.7	-1.4
	baz=282						
L57A	Andrews Acres	117.06	48	P	PKPdf	09 43 21.6	-0.8
	baz=280						
T59A	Double "B" Far	117.28	54	P	PKPdf	09 43 22.2	-0.8
	baz=277						
N58A	Sunbury	117.36	50	P	PKPdf	09 43 22.0	-1.0
	baz=280						
D56A	ZEC Mazanza, M	117.45	42	P	PKPdf	09 43 21.8	-1.2
	baz=284						
M58A	Price's Panora	117.46	49	P	PKPdf	09 43 22.4	-0.8
	baz=280						
L58A	Harry Jones Me	117.79	48	P	PKPdf	09 43 22.9	-0.9
	baz=281						
J58A	Remsen	117.93	47	P	PKPdf	09 43 23.1	-0.9
	baz=282						
L59A	Walton	118.35	48	P	PKPdf	09 43 24.0	-1.0
	baz=282						
M61A	Granite Spring	119.46	49	P	PKPdf	09 43 26.4	-0.6
	baz=282						
F60A	Warwick	119.61	43	P	PKPdf	09 43 26.3	-0.8
	baz=286						
LPAZ	La Paz	119.85	116	PKP	PKPdf	09 43 29.3	+0.1
	comp=Z,1.8nm,0.7s,baz=243,slow=1.5,SNR=7.3						
LPAZ	La Paz	119.85	116	PKPdf	PKPdf	09 43 28.7	-0.5
E61A	Lac Etchemin	120.44	42	P	PKPdf	09 43 28.3	-0.5
	baz=288						
FINES	FINESS Array B	121.70	339	PKP	PKPdf	09 43 29.1	-1.5
	comp=Z,3.5nm,0.9s,baz=46,slow=5.5,SNR=6.5						
SDV	Santo Domingo	123.97	86		PKPdf	09 43 36.1	-0.6
BOSA	Boshof	125.66	223	PKP	PKPdf	09 43 39.9	+0.3
	comp=Z,4.0nm,0.8s,baz=165,slow=3.6,SNR=5.6						
NB2	NORSAR Subarra	126.56	345	PKPdf	PKPdf	09 43 39.1	-1.1
	comp=Z,0.4nm,0.4s,baz=31,slow=1.9						
NOA	NORSAR Array B	126.56	345	PKP	PKPdf	09 43 39.0	-1.1
	comp=Z,1.1nm,0.7s,baz=32,slow=2.0,SNR=5.0						
BRTR	Keskin Array B	129.15	313	PKP	PKPdf	09 43 45.3	-0.5
	comp=Z,0.2nm,0.5s,baz=90,slow=7.2,SNR=3.6						
CLL	Collm	134.05	337	*e*PKPdf	PKPdf	09 43 54.0	-0.5
CLL				*e*PKiKP	PKiKP	09 43 56.0	+0.1
GERES	GERESS Array B	135.68	334	PKP	PKPdf	09 43 56.4	-1.4
	comp=Z,0.2nm,0.3s,baz=270,slow=1.1,SNR=4.9						
BDFB	Brasilia	137.10	127	PKP	PKPdf	09 44 01.5	+0.1
	comp=Z,2.9nm,0.5s,baz=182,slow=3.1,SNR=5.4						
KEST	Kesra	147.50	324	PKPbc	PKPbc	09 44 21.9	-0.1
	comp=Z,5.9nm,0.9s,baz=214,slow=2.4,SNR=7.2						
ESDC	Sonseca Array	149.93	345	PKPbc	PKPbc	09 44 27.6	-0.5
	comp=Z,2.1nm,0.8s,baz=11,slow=3.7,SNR=9.8						
ESDC				PKPab	PKPab	09 44 34.4	+0.4
	comp=Z,1.8nm,0.8s,baz=2.1,slow=4.3,SNR=7.4						
TORD	Torodi Ar. Bea	164.72	280	PKP	PKPdf	09 44 40.6	-1.4
	comp=Z,1.1nm,0.7s,baz=59,slow=0.6,SNR=5.4						
TORD				PKPab	PKPab	09 45 37.2	-1.3
	comp=Z,1.1nm,0.8s,baz=53,slow=1.3,SNR=3.9						

*NEIC **26** 09:26:19.1±1.3, 18°.2S±0°.1×178°.2W±0°.1, h481km±7km, mb4.4/32, Error ellipse: s-maj=19.1km s-min=14.6km az=147.0*

*IDC **26** 09:26:22.2±1.7, 18°.09S×178°.40W, h508km±17km, mb3.7/15, mb1 3.9/15, mb1mx3.7/32, mbtmp4.5/15, Error ellipse: s-maj=18.5km s-min=9.9km az=151.0*

*BGR **26** 09:26:22.4±0.0, 17°.64S×177°.23W, h500km*

ISC 26 09:26:21.0±0.4**, 18°.23S**±0°.09×**178°.25W**±0°.08**, h500**km**, n183, σ0s.80**/182**, mb4.3**/33**, 2C-26D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.56	277	P	P	09 27 35.6	-0.4
AFI	Afiamalu	7.56	56	P	P	09 28 06.5	-6.5
NIUE	Niue	7.94	97	P	P	09 28 13.5	-3.3
TARA	Tarawa	21.31	335	P	P	09 30 30.4	-1.2
QRZ	Quartz Range	23.88	197	P	P	09 30 54.0	-0.3
NNZ	Nelson	24.01	196	P	P	09 30 54.4	-1.1
MLZ	Mavora Lakes	29.35	200	P	P	09 31 42.2	-0.3
CTA	Charters Tower	33.54	261	P	P	09 32 18.7	-0.1
	3.4nm,0.4s,baz=96,slow=12,SNR=3.6						
CTA	Charters Tower	33.54	261	P	P	09 32 18.7	-0.1
CAN	Canberra	33.63	233	P	P	09 32 19.8	+0.4
CAN				IAmb	IAmb	09 32 20.7	
	comp=Z,13nm,1.1s						
TOO	Toolangi	37.09	231	P	P	09 32 48.4	+0.2
TOO				IAmb	IAmb	09 32 49.7	
	comp=Z,16nm,0.8s						
COEN	Coen	37.26	271	P	P	09 32 49.9	0.0
COEN				IAmb	IAmb	09 32 55.8	
	comp=Z,13nm,1.2s						
STKA	Stephens Creek	38.61	242	P	P	09 33 01.2	+0.5
	comp=Z,7.0nm,0.8s,baz=100,slow=12,SNR=8.0						
STKA	Stephens Creek	38.61	242	P	P	09 33 01.2	+0.5
STKA	Stephens Creek	38.61	242	IAmb	IAmb	09 33 02.2	
	comp=Z,1.9nm,0.9s						
BBOO	Buckleboo	43.38	241	P	P	09 33 39.0	+0.3
BBOO				IAmb	IAmb	09 33 39.7	
	comp=Z,19nm,0.8s						
WB0	Warramunga Arr	44.69	260	P	P	09 33 48.1	-1.0
WB2	Warramunga Arr	44.71	260	P	P	09 33 48.5	-0.7
WB2				IAmb	IAmb	09 33 49.0	
	comp=Z,5.5nm,0.7s						
WRAB	Tennant Creek	44.71	260	P	P	09 33 48.6	-0.7
WRA	Warramunga Arr	44.72	260	P	P	09 33 48.1	-1.3
	comp=Z,3.0nm,0.6s,baz=98,slow=6.6,SNR=14						
WRA				S	S	09 39 47.0	-2.4
	comp=Z,1.2nm,0.8s,baz=93,slow=13,SNR=4.5						
WRA	Warramunga Arr	44.72	260	P	P	09 33 48.1	-1.3
WRA					S	09 39 47.0	-2.4
AS31	Alice Springs	44.85	255	P	P	09 33 49.8	-0.5
AS31				IAmb	IAmb	09 33 50.6	
	comp=Z,8.8nm,0.6s						
ASAR	Alice Springs	44.85	255	P	P	09 33 50.0	-0.3
	comp=Z,27nm,0.6s,baz=90,slow=8.3,SNR=158						
ASAR				PcP	PcP	09 35 21.9	+0.2
	comp=Z,1.6nm,0.6s,baz=91,slow=4.6,SNR=4.3						
ASAR				S	S	09 39 50.1	-1.1
	comp=Z,3.6nm,0.9s,baz=91,slow=16,SNR=17						
ASAR	Alice Springs	44.85	255	P	P	09 33 50.0	-0.3
ASAR					S	09 39 50.1	-1.1
FORT	Forrest	50.01	245	P	P	09 34 28.9	-0.1
FORT				IAmb	IAmb	09 34 44.7	
	comp=Z,36nm,1.1s						
KNRA	Kununurra	50.61	264	P	P	09 34 33.3	-0.2
KNRA				IAmb	IAmb	09 34 34.3	
	comp=Z,19nm,0.8s						
FITZ	Fitzroy Crossi	53.12	261	P	P	09 34 51.9	+0.2
	comp=Z,3.5nm,0.6s,baz=135,slow=3.1,SNR=9.2						
FITZ	Fitzroy Crossi	53.12	261	P	P	09 34 51.9	+0.2
PSA00	Pilbara Seismi	57.98	256	P	P	09 35 25.4	-0.1
PSA00				IAmb	IAmb	09 35 26.1	
	comp=Z,16nm,0.8s						
NWAO	Narrogin (SRO)	59.20	242	P	P	09 35 33.8	+0.2
NWAO				IAmb	IAmb	09 35 35.6	
	comp=Z,30nm,1.2s						
VNDA	Vanda	60.14	185	P	P	09 35 40.1	+1.0
	comp=Z,2.3nm,0.9s,baz=349,slow=7.7,SNR=9.7						
MORW	Morawa	60.49	246	P	P	09 35 42.3	0.0
GIRL	Giralia	62.95	253	P	P	09 35 58.5	+0.1
MJAR	Matsushiro Arr	68.25	323	P	P	09 36 31.2	-0.2
	comp=Z,1.1nm,0.4s,baz=133,slow=5.7,SNR=5.0						
MJAR	Matsushiro Arr	68.25	323	P	P	09 36 31.2	-0.2
PETK	Petropavlovsk-	74.03	345	P	P	09 37 04.6	-0.3
	comp=Z,5.0nm,0.7s,baz=143,slow=8.2,SNR=10						
PETK	Petropavlovsk-	74.03	345	P	P	09 37 04.6	-0.3
NVAR	Mina Array Bea	79.55	44	P	P	09 37 36.0	+0.1
	comp=Z,2.4nm,0.7s,baz=219,slow=8.3,SNR=6.6						
NVAR	Mina Array Bea	79.55	44	P	P	09 37 36.0	+0.1
TUC	Tucson	81.78	52	P	P	09 37 48.9	+1.5
J08A	Circle Bar Ran	82.17	40	P	P	09 37 50.5	+1.3
J08A				IAmb	IAmb	09 37 51.5	
	comp=Z,6.2nm,0.9s						
GHO	Glory Hole Cre	83.08	14	P	P	09 37 53.1	-0.2
GHO				IAmb	IAmb	09 37 54.0	
	comp=Z,10nm,0.7s						
MAW	Mawson	83.61	200	P	P	09 37 56.8	+1.0
	comp=Z,1.6nm,0.5s,baz=159,slow=1.7,SNR=2.0						
MAW	Mawson	83.61	200	P	P	09 37 56.9	+1.0
MAW	Mawson	83.61	200	IAmb	IAmb	09 38 05.3	
	comp=Z,1.6nm,1.1s						
TRF	Thorofare Moun	84.29	12	P	P	09 37 57.8	-1.5
TRF				IAmb	IAmb	09 37 59.5	
	comp=Z,12nm,0.7s						
F10A	Beach Ranch, E	84.36	38	P	P	09 37 59.2	-0.8
F10A				IAmb	IAmb	09 38 02.2	
	comp=Z,6.6nm,1.0s						
RND	Reindeer	84.55	13	P	P	09 38 00.0	-0.5
RND				IAmb	IAmb	09 38 00.6	
	comp=Z,7.1nm,0.7s						
TXAR	Lajitas Array	86.04	58	P	P	09 38 09.7	+1.1
	comp=Z,4.2nm,0.7s,baz=217,slow=6.1,SNR=31						
TXAR	Lajitas Array	86.04	58	P	P	09 38 09.7	+1.1
ILAR	Eielson Array	86.16	13	P	P	09 38 06.8	-1.4
	comp=Z,1.0nm,0.5s,baz=218,slow=5.4,SNR=7.5						
ILAR				pP	pP	09 39 59.0	+1.0
	comp=Z,0.8nm,1.1s,baz=232,slow=5.6,SNR=3.2						
ILAR	Eielson Array	86.16	13	P	P	09 38 06.8	-1.4
PDAR	Pinedale Array	87.48	43	P	P	09 38 15.2	0.0
	comp=Z,2.1nm,0.7s,baz=228,slow=2.8,SNR=9.3						
PDAR	Pinedale Array	87.48	43	P	P	09 38 15.2	0.0
H17A	Grant Village	87.59	42	P	P	09 38 17.9	+2.1
H17A				IAmb	IAmb	09 38 19.7	
	comp=Z,4.0nm,0.8s						
YNE	Yellowstone No	88.23	41	P	P	09 38 20.5	+1.7
SYO	Syowa Base	88.88	193⇑	*e*P	P	09 38 19.4	-1.6
CMAR	Chiang Mai Arr	89.13	290	P	P	09 38 25.2	+2.0
	comp=Z,0.8nm,0.3s,baz=126,slow=2.6,SNR=5.4						
CMAR	Chiang Mai Arr	89.13	290	P	P	09 38 25.2	+2.0
LC01	Cunco	90.84	132	P	P	09 38 31.2	+0.4
PLCA	Paso Flores	91.00	134	P	P	09 38 33.1	+1.5
	comp=Z,4.5nm,1.0s,baz=246,slow=1.8,SNR=7.0						
INK	Inuvik	92.15	15	P	P	09 38 35.3	-0.7
	baz=230,slow=3.5						
INK	Inuvik	92.15	15	P	P	09 38 35.3	-0.7
INK	Inuvik	92.15	15	IAmb	IAmb	09 38 35.9	
	comp=Z,1.8nm,0.8s						
YKA	Yellowknife Ar	94.56	25	P	P	09 38 46.4	-0.7
	comp=Z,1.5nm,0.8s,baz=244,slow=4.2,SNR=11						
YKA				PKiKP	PKiKP	09 43 26.2	-0.3
	comp=Z,0.2nm,0.6s,baz=236,slow=1.1,SNR=4.1						
YKA	Yellowknife Ar	94.56	25	P	P	09 38 46.4	-0.7
MKAR	Makanchi Array	109.46	314	PKiKP	PKiKP	09 43 54.2	0.0
	comp=Z,0.7nm,0.5s,baz=185,slow=0.8,SNR=9.1						
FRB	Frobisher Bay	114.90	27	PKP	PKPdf	09 44 03.5	-0.4
	comp=Z,3.3nm,1.0s,baz=140,slow=1.7,SNR=6.8						
FRB	Frobisher Bay	114.90	27		PKPdf	09 44 03.5	-0.4
ARCES	ARCESS Array B	126.65	350	PKP	PKPdf	09 44 26.7	+0.3
	comp=Z,5.4nm,0.7s,baz=23,slow=0.9,SNR=15						
ARCES	ARCESS Array B	126.65	350		PKPdf	09 44 26.7	+0.3
GEYT	Alibeck	127.34	304	PKP	PKiKP	09 44 30.1	+0.7
	comp=Z,3.9nm,0.9s,baz=224,slow=4.1,SNR=4.9						
GEYT	Alibeck	127.34	304		PKiKP	09 44 30.1	+0.7
FINES	FINESS Array B	133.53	344	PKP	PKPdf	09 44 39.8	+0.1
	comp=Z,3.0nm,0.9s,baz=53,slow=7.4,SNR=5.1						
FINES				SKP	SKPdf	09 47 25.9	-1.2
	comp=Z,4.3nm,1.0s,baz=343,slow=6.0,SNR=5.2						
FINES	FINESS Array B	133.53	344		PKPdf	09 44 39.8	+0.1
NOA	NORSAR Array B	136.71	353	PKP	PKPdf	09 44 46.5	+0.8
	comp=Z,1.2nm,0.6s,baz=14,slow=3.9,SNR=4.8						
BSEG	Bad Segeberg	143.75	351	*e*PKPbc	PKPab	09 44 57.1	-0.1
	baz=15,slow=2.8						
RUE	Ruedersdorf	144.54	347	*e*PKPbc	PKPbc	09 44 59.8	0.0
	baz=15,slow=2.8						
BUR08	Bucovina Ar. S	144.95	332		PKPab	09 45 02.5	+0.3
BURAR	Bucovina Array	144.96	332	⇓P	PKiKP	09 45 08.1	+3.2
RETH	Rethem/Aller,	145.05	352	*e*PKPbc	PKPbc	09 45 01.6	+0.2
	baz=15,slow=2.8						
BIZ	Bicaz	145.06	330	⇓P	PKPab	09 45 02.4	-0.1
TESR	Tescani	145.11	329	⇓P	PKPab	09 45 02.4	-0.3
BR131	Keskin Array S	145.11	315		PKPbc	09 45 02.4	+0.1
BRTR	Keskin Array B	145.11	315	PKP	PKPdf	09 45 01.8	+0.3
	comp=Z,3.2nm,0.8s,baz=137,slow=4.1,SNR=14						
BRTR	Keskin Array B	145.11	315		PKPdf	09 45 01.8	+0.3
NRDL	Niedersach Rie	145.18	351	*e*PKPbc	PKPbc	09 45 02.0	+0.3
	baz=15,slow=2.8						
CFR	Carcaliu	145.28	327	⇓P	PKPab	09 45 04.0	+0.6
TOPG	Topolog	145.36	326	⇓P	PKPab	09 45 03.4	-0.3
ASSE	Asse, Remlinge	145.45	350	*e*PKPbc	PKPbc	09 45 03.0	+0.4
	baz=15,slow=2.8						
KSP	Ksiaz	145.46	344	*e*PKP	PKPab	09 45 04.0	+0.1
NIE	Niedzica	145.48	338	*e*PKP	PKPab	09 45 04.1	+0.1
VRI	Vrincioaia	145.53	329	⇓P	PKPab	09 45 04.4	0.0
PLOR	Plostina	145.58	329	⇓P	PKPbc	09 45 03.7	+0.4
ANTO	Ankara	145.61	315		PKPbc	09 45 04.1	+0.5
IBBN	Ibbenburen	145.66	353	*e*PKPbc	PKPbc	09 45 03.5	+0.3
	baz=15,slow=2.8						
TRPA	Tarpa	145.70	335	⇓P	PKPbc	09 45 04.2	+0.8
HARR	Harsova	145.72	326	⇓P	PKPab	09 45 04.7	-0.4
OSTC	Ostas	145.74	344	*e*PKP	PKPbc	09 45 03.9	+0.3
CHVC	Chvalec	145.75	344	*e*PKP	PKPbc	09 45 04.3	+0.7
TLBR	Topalu	145.75	326	⇓P	PKPbc	09 45 04.4	+0.7
CLZ	Clausthal	145.77	350	*e*PKPbc	PKPbc	09 45 04.0	+0.4
	baz=15,slow=2.8						
CLL	Collm	145.81	347⇑	*i*PKPbc	PKPab	09 45 05.0	-0.2
	comp=Z,42nm,0.9s						
CLL				*e*pPKPdf	pPKPab	09 46 58.0	-1.1

CLL	Collm	145.81	347	*e*PKPbc	PKPab	09 45 04.8	-0.4	
	baz=15,slow=2.8							
UPC	Upice	145.84	344	*e*PKP	PKPab	09 45 04.8	-0.6	
DPC	Dobruska-Polom	145.90	343	*e*PKP	PKPab	09 45 05.1	-0.6	
BRG	Berggiesshubel	146.01	346	*i* PKP	PKPbc	09 45 04.7	+0.4	
	comp=Z,20nm,0.9s							
BRG	Berggiesshubel	146.01	346	*e*PKPbc	PKPbc	09 45 04.7	+0.4	
	baz=15,slow=2.8							
KRLC	Kraliky	146.01	343	*e*PKP	PKPbc	09 45 04.7	+0.3	
MORC	Moravsky Berou	146.06	342	*e*PKP	PKPbc	09 45 04.9	+0.4	
MORC	Moravsky Berou	146.06	342	⇓P	PKPbc	09 45 05.3	+0.8	
FBE	Freiberg	146.10	347	*e*PKPbc	PKPbc	09 45 05.2	+0.7	
	baz=15,slow=2.8							
DOPR	Dopca	146.11	330	⇓P	PKPab	09 45 06.6	0.0	
GTTG	Gottingen	146.12	351	*e*PKPbc	PKPbc	09 45 04.9	+0.3	
	baz=15,slow=2.8							
NEUB	Neuenburg	146.14	349	*e*PKPbc	PKPbc	09 45 04.9	+0.2	
	baz=15,slow=2.8							
ISR	Istrita	146.15	328	⇓P	PKiKP	09 45 07.8	+0.3	
MLR	Muntele Rosu	146.18	329	⇓P	PKPab	09 45 06.6	-0.5	
BUG	Bochum--Univer	146.57	354	*e*PKPbc	PKPbc	09 45 05.9	+0.1	
	baz=15,slow=2.8							
VOIR		146.66	330	⇓P	PKPbc	09 45 07.5	+1.1	
DRGR		146.69	333	⇓P	PKPbc	09 45 06.8	+0.4	
PRU	Pruhonice	146.69	345	*e*PKP	PKPbc	09 45 06.9	+0.7	
MOX	Moxa	146.71	349	*e*PKPbc	PKPbc	09 45 06.6	+0.3	
	baz=15,slow=2.8							
PLN	Plauen	146.76	348	*e*PKPbc	PKPbc	09 45 06.7	+0.3	
	baz=15,slow=2.8							
VRAC	Vranov	146.76	342	*e*PKP	PKPbc	09 45 06.8	+0.4	
VRAC	Vranov	146.76	342	⇓P	PKPbc	09 45 07.4	+1.0	
UBBA	Unterbreizbach	146.82	350	*e*PKPbc	PKiKP	09 45 08.4	-0.1	
	baz=15,slow=2.8							
JAVC	Velka Javorina	146.83	341	*e*PKP	PKiKP	09 45 08.4	-0.3	
GUNZ	Gunzen	146.84	348	*e*PKPbc	PKPbc	09 45 07.1	+0.5	
	baz=15,slow=2.8							
PSZ	Piszkesteto	146.89	337	⇓P	PKPbc	09 45 07.3	+0.4	
PSZ	Piszkesteto	146.89	337		PKPbc	09 45 06.6	-0.3	
WERN	Wernitzgruen	146.90	347	*e*PKPbc	PKPbc	09 45 07.3	+0.5	
	baz=15,slow=2.8							
ARR	Arges	146.91	330	⇓P	PKiKP	09 45 08.6	-0.5	
NKC	Novy Kostel	146.94	347	*e*PKP	PKPbc	09 45 07.8	+0.9	
KRUC	Moravsky	147.04	342	*e*PKP	PKPbc	09 45 07.4	+0.2	
MANZ	Manzenberg	147.24	348	*e*PKPbc	PKPbc	09 45 08.2	+0.5	
	baz=15,slow=2.8							
ROTZ	Rotzenmuhle	147.43	347	*e*PKPbc	PKPbc	09 45 08.7	+0.5	
	baz=15,slow=2.8							
AHRW	Bad Neuenahr-A	147.48	354	*e*PKPbc	PKPbc	09 45 08.6	+0.3	
	baz=15,slow=2.8							
MEM	Membach	147.51	355	sPKiKP	PKiKP	09 45 08.5	-1.4	
SIRR	Siria	147.55	334	⇓P	PKPbc	09 45 09.3	+0.7	
BSTI	Sart Tilman	147.57	355	sPKiKP	PKiKP	09 45 09.1	-1.0	
TNS	Taunus Mts	147.63	352	*e*PKPbc	PKPbc	09 45 09.0	+0.3	
	baz=15,slow=2.8							
GRF	Grafenberg Arr	147.70	348	*e*PKPbc	PKPbc	09 45 09.5	+0.7	
	baz=15,slow=2.8							
KHC	Kasperske Hory	147.72	345	*e*PKP	PKPbc	09 45 09.0	0.0	
GZR	Gura Zlata	147.75	332	⇓P	PKPbc	09 45 09.0	-0.3	
BHOU	Houvegnez	147.77	355	sPKiKP	PKiKP	09 45 09.6	-0.9	
WET	Wettzell	147.87	346	*e*PKPbc	PKPbc	09 45 09.8	+0.4	
	baz=15,slow=2.8							
BMRD	Maredsous	147.91	356	sPKiKP	PKiKP	09 45 09.4	-1.4	
GEC2	GERESS Array S	147.96	345	*e*PKPbc	PKPbc	09 45 10.0	+0.3	
	baz=15,slow=2.8							
GERES	GERESS Array B	147.96	345	PKPbc	PKPbc	09 45 09.9	+0.2	
	comp=Z,8.3nm,0.6s,baz=64,slow=9.1,SNR=39							
GERES	GERESS Array B	147.96	345		PKPbc	09 45 09.8	+0.2	
BZS	Buzias	148.08	333	⇓P	PKPbc	09 45 09.3	-0.6	
DOU	Dourbes	148.12	357	sPKiKP	PKiKP	09 45 10.3	-0.9	
CONA	Conrad Observa	148.21	342	*i* PKiKP	PKiKP	09 45 11.3	-0.4	
	comp=Z,10nm,0.6s,SNR=12							
HERR	Herculane	148.31	331	⇓P	PKPbc	09 45 10.8	+0.3	
WLF	Walferdange	148.44	355	sPKiKP	PKiKP	09 45 12.0	+0.1	
WLF	Walferdange	148.44	355	*e*PKPbc	PKPbc	09 45 11.6	+0.8	
	baz=15,slow=2.8							
MDVR	Moldovita	148.70	332	⇓P	PKPbc	09 45 11.6	-0.1	
MOA	Molln	148.73	344	*i* PKiKP	PKPbc	09 45 12.2	+0.6	
	comp=Z,6.0nm,0.8s							
ARSA	Arzberg	148.92	342	*i* PKPbc	PKPbc	09 45 11.5	-0.6	
	comp=Z,3.3nm,0.7s							
FUR	Furstenfeldbru	149.14	348	*e*PKPbc	PKPbc	09 45 12.9	+0.4	
	baz=15,slow=2.8							
RJOB	Jochberg	149.21	345	*e*PKPbc	PKPbc	09 45 12.8	0.0	
	baz=15,slow=2.8							
BFO	Black Forest	149.50	351	*e*PKPbc	PKPbc	09 45 13.6	+0.2	
	baz=15,slow=2.8							
BFO	Black Forest	149.50	351		PKPbc	09 45 13.0	-0.4	
SOKA	Soboth	149.58	342	*i* PKiKP	PKPbc	09 45 13.8	0.0	
	comp=Z,13nm,1.1s,SNR=9.1							
VTS	Vitosha	149.60	328	⇓P	PKPbc	09 45 14.5	+0.4	
KBA	Koelnbreinsper	149.69	344	*i* PKPbc	PKPbc	09 45 13.8	-0.3	
	comp=Z,10nm,0.6s,SNR=8.1							
UBR	Ueberruh	149.84	349	*e*PKPbc	PKPbc	09 45 14.4	+0.1	
	baz=15,slow=2.8							
WATA	Walderalm	149.87	347	*i* PKiKP	PKPbc	09 45 14.7	+0.2	
	comp=Z,27nm,1.2s							
OBKA	Obir	149.88	342	*i* PKiKP	PKPbc	09 45 14.8	+0.3	
	comp=Z,6.4nm,0.8s							
RETA	Reutte	149.90	348	*i* PKiKP	PKPbc	09 45 14.9	+0.5	
	comp=Z,6.3nm,0.5s							
WTTA	Wattenberg	149.92	347	*i* PKiKP	PKPbc	09 45 15.1	+0.4	
	comp=Z,20nm,0.5s,SNR=12							
MOTA	Moosalm	149.96	347	*i* PKiKP	PKPbc	09 45 14.9	+0.2	
	comp=Z,14nm,0.7s,SNR=7.4							
DIVS	Divibare	149.99	333		PKPbc	09 45 14.5	-0.3	
MYKA	Terra Mystica	150.02	343	*i* PKPbc	PKPbc	09 45 14.4	-0.4	
	comp=Z,9.5nm,0.6s,SNR=5.5							
SQTA	Sankt Quirin	150.06	347	*i* PKiKP	PKPbc	09 45 15.3	+0.4	
	comp=Z,20nm,0.7s,SNR=7.8							
ABTA	Abfaltersbach	150.20	345	*i* PKiKP	PKPbc	09 45 15.1	-0.1	
	comp=Z,26nm,0.7s,SNR=10							
DAVA	Damuels	150.26	349	*i* PKiKP	PKiKP	09 45 16.2	+0.2	
	comp=Z,16nm,0.7s,SNR=8.1							
FETA	Feichten	150.35	348	*i* PKiKP	PKPbc	09 45 16.0	+0.4	
	comp=Z,20nm,0.9s,SNR=6.6							
FUORN	Ofenpass-Fuorn	150.82	348		PKPbc	09 45 16.7	-0.1	
SENIN	Lac Senin/Sane	151.57	352		PKiKP	09 45 19.3	+0.5	
KARP	Karpathos	151.65	313		PKiKP	09 45 19.9	+0.8	
PDG	Podgorica	151.65	332	⇓P	PKPbc	09 45 18.2	-0.3	
PDG	Podgorica	151.65	332		PKPbc	09 45 17.7	-0.8	

IDC ***26*** *09:36:22.1±1.5, 11.°39S×161.°67E, h0km, mb3.8/5, mb1 3.9/7, mb1mx3.7/30, mbtmp3.8/7, ML3.5/2, Error ellipse: s-maj=37.8km s-min=29.7km az=86.0*

ISC 26 09:36:27.0±1.0, 11.°4S±0.°1×161.°6E±0.°2, h35km, n10, σ0§93/8, mb3.8/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.57**	**320**	Pn		**Pn**	**Pn**	**09 37 05.7**	**-0.5**
	12nm,0.3s,baz=184,slow=13,SNR=1.4								
HNR				Sn			**Sn**	**09 37 35.4**	**-0.9**
	46nm,0.3s,baz=159,slow=18,SNR=3.2								
DZM	**Mont Dzumac**	**11.55**	**157**	Pn			**Pn**	**09 39 08.9**	**-0.8**
	0.2nm,0.3s,baz=3.0,slow=8.8,SNR=14								
WRA	**Warramunga Arr**	**27.57**	**249**	P			**P**	**09 42 11.9**	**+0.8**
	1.0nm,1.0s,baz=77,slow=9.7,SNR=3.4								
ASAR	**Alice Springs**	**29.04**	**241**	P			**P**	**09 42 24.2**	**+0.1**
	0.4nm,0.8s,baz=69,slow=11,SNR=2.9								
H11S2	**WAKE ISLAND Hy**	**30.14**	**10**	T			T	10 13 29.4	
	baz=189,slow=76,SNR=7.7								
H11S3	**WAKE ISLAND Hy**	**30.14**	**10**	T			T	10 13 28.8	
	baz=189,slow=76,SNR=4.2								
H11S1	**WAKE ISLAND Hy**	**30.15**	**10**	T			T	10 13 31.3	
	baz=189,slow=76,SNR=4.9								
SONM	**Songino Array**	**76.62**	**325**	P			**P**	**09 48 15.6**	**+1.3**
	0.9nm,0.6s,baz=142,slow=5.9,SNR=4.0								
MKAR	**Makanchi Array**	**91.04**	**318**	P			**P**	**09 49 28.0**	**+0.1**
	0.3nm,0.5s,baz=106,slow=6.5,SNR=5.0								
YKA	**Yellowknife Ar**	**97.17**	**28**	P			**P**	**09 49 55.5**	**-0.1**
	0.2nm,0.6s,baz=263,slow=4.3,SNR=4.8								

JMA 26 09:40:01.9±0.3, 32.°31N×142.°33E, h29km, M3.8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**2.60**	**335**	P		P	Pn	09 40 43.2	+1.8
BSO1					*e*S		Sn	09 41 13.8	+2.1
BSO3	**Boso 3**	**2.91**	**329**	P		P	Pn	09 40 48.0	+2.0
JOD2	**Odawara 2**	**4.00**	**318**	P		P	Pn	09 41 03.7	+2.5
JOD2					*e*S		Sn	09 41 49.3	+2.2
JHU	**Hanno**	**4.34**	**325**	P		P	Pn	09 41 08.3	+2.3
JHU					S		Sn	09 41 58.5	+2.8
JYN	**Shimob**	**4.47**	**316**	P		P	Pn	09 41 11.5	+3.7
JHO	**Hitachi**	**4.53**	**342**	P		P	Pn	09 41 08.9	+0.4
JAG	**Ashikaga**	**4.74**	**331**	P		P	Pn	09 41 13.8	+2.3
JAG						S	Sn	09 42 08.2	+2.7
MAT	**Matsushiro**	**5.42**	**322**	P		P	Pn	09 41 24.2	+3.4
MAT					*e*S		Sn	09 42 26.5	+4.2
JFT	**Otama**	**5.45**	**343**	P		P	Pn	09 41 21.4	+0.3
JFT					*e*S		Sn	09 42 22.2	-0.6
JMK	**Ichinoseki**	**6.69**	**353**	P		P	Pn	09 41 37.8	-0.3
JMK					*e*S		Sn	09 42 51.2	-2.2

NEIC ***26*** *09:46:26.5±1.9, 7.°04S±0.°08×155.°67E±0.°05, h35km±1km, mb4.9/66, Error ellipse: s-maj=15.3km s-min=3.3km az=208.0*

GCMT ***26*** *09:46:26.9±0.3, 7.°28S±0.°02×155.°59E±0.°02, h35km, MW5.0/63, Moment Tensor Solution. s53,c65; s63,c84; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr4.05±.17; Mθθ-2.41±.11; Mϕϕ-1.64±.11; Mrθ0.66±.13; Mrϕ1.82±.08; Mθϕ-1.12±.12; Best double couple: M0 4.17400×10^16^ NP1:ϕs303.00000°, δ37.00000°, λ81.00000°. NP2: ϕs135.00000°, δ54.00000°, λ97.00000°. Principal axes: T 4.2790, Plg80.0000°, Azm73.0000°; N -0.2090, Plg6.0000°, Azm311.0000°; P -4.0700, Plg9.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***26*** *09:46:29.0±0.6, 7.°5S±4.°×15.°6E±.°, h54km±5km, M5.0/24, mb4.9/24, mB4.9/3, MLv5.0/2, Mw(mB)4.2/3, Mwp5.4/1*

IDC ***26*** *09:46:30.5±2.2, 7.°06S×155.°58E, h68km±18km, mb4.4/19, mb1 4.5/23, mb1mx4.5/29, mbtmp4.7/23, MS4.0/23, Ms1 4.0/23, ms1mx4.0/28, Error ellipse: s-maj=15.7km s-min=11.8km az=93.0*

BJI ***26*** *09:46:31.2±0.0, 6.°73S×155.°71E, h79km, mB4.9/34, mb4.9/45, Ms4.4/11, Ms7 4.3/12*

ISC 26 09:46:28.4±0.3, 7.°08S±0.°06×155.°69E±0.°06, h50km, n229, σ1§20/201, mb4.9/68, MS4.2/27, 3C, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**4.54**	**309**				**Pn**	**09 47 31.1**	**-3.5**
KRVT	**Keravat (AS076**	**4.57**	**307**	P			**Pn**	**09 47 36.6**	**+1.5**
	6.9nm,0.3s,baz=198,slow=21,SNR=6.3								
KRVT				LR		LR	LR	09 49 36.2	
	comp=Z,2μm,21.4s,baz=137,slow=42								
HNR	**Honiara**	**4.81**	**119**	P			**Pn**	**09 47 42.8**	**+4.4**
	16nm,0.3s,baz=296,slow=2.0,SNR=9.0								
HNR				LR		LR	LR	09 49 29.0	
	comp=Z,3μm,20.6s,baz=288,slow=36								
HNR	**Honiara**	**4.81**	**119**	*e*P			**Pn**	**09 47 40.0**	**+1.6**
HNR	**Honiara**	**4.81**	**119**				**Pn**	**09 47 35.9**	**-2.5**
PMG	**Port Moresby**	**8.75**	**254**	P			**Pn**	**09 48 33.2**	**+0.8**
	7.5nm,0.3s,baz=56,slow=8.0,SNR=21								
PMG				S			**Sn**	**09 50 13.2**	**+3.4**
	1.5nm,0.3s,baz=14,slow=15,SNR=5.1								
PMG				LR		LR	LR	09 51 42.5	
	comp=Z,2μm,20.9s,baz=65,slow=36								
PMG	**Port Moresby**	**8.75**	**254**				**Pn**	**09 48 31.1**	**-1.3**
COEN	**Coen**	**14.07**	**240**				**Pn**	**09 49 45.9**	**+0.8**
CTA	**Charters Tower**	**15.84**	**214**	P			**Pn**	**09 50 08.8**	**+0.6**
	0.7nm,0.3s,baz=45,slow=12,SNR=9.3								
CTA				LR		LR	LR	09 55 46.4	
	comp=Z,868nm,18.3s,baz=56,slow=35								
CTAO	**Charters Tower**	**15.84**	**214**	P			**P**	**09 50 09.9**	**-1.3**
SMPI	**Sarmi**	**17.66**	**286**	P			**P**	**09 50 38.4**	**+7.0**
DZM	**Mont Dzumac**	**18.16**	**146**	*e*LR			LR	09 55 07.2	
	comp=Z,914nm,25.9s								
DZM	**Mont Dzumac**	**18.16**	**146**	LR			LR	09 56 48.0	
	comp=Z,372nm,19.0s,baz=288,slow=34								
EIDS	**Eidsvold**	**18.71**	**193**	P			**P**	**09 50 43.1**	**+0.3**
ARMA	**Armidale**	**23.52**	**189**	P			**P**	**09 51 35.2**	**+1.0**
FAKI	**Fak Fak**	**23.71**	**279**	P			**P**	**09 51 35.7**	**-0.3**
WR0	**Warramunga Arr**	**24.18**	**236**	P			**P**	**09 51 40.1**	**-0.2**
WB0	**Warramunga Arr**	**24.21**	**237**	P			**P**	**09 51 40.1**	**-0.5**
WB0					IAmb		IAmb	09 51 50.6	
	comp=Z,84nm,1.3s								
MSVF	**Nonsavu**	**24.23**	**118**	P			**P**	**09 51 41.8**	**+0.9**
WRAB	**Tennant Creek**	**24.32**	**236**	P			**P**	**09 51 41.3**	**-0.3**
WRAB					IAmb		IAmb	09 51 51.0	
	comp=Z,51nm,1.1s								
WB2	**Warramunga Arr**	**24.33**	**236**	P			**P**	**09 51 41.3**	**-0.4**
WB2					IAmb		IAmb	09 51 51.1	
	comp=Z,46nm,0.9s								
WRA	**Warramunga Arr**	**24.34**	**236**	P			**P**	**09 51 41.2**	**-0.5**
	comp=Z,14nm,0.9s,baz=60,slow=9.4,SNR=78								
WRA				PcP			**PcP**	**09 55 21.0**	**+0.4**
	comp=Z,2.2nm,0.6s,baz=58,slow=2.4,SNR=8.0								
WRA				LR		LR	LR	10 01 04.4	
	comp=Z,674nm,18.7s,baz=50,slow=36								
WRA				PKiKP			**PKiKP**	**10 03 01.8**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=326,slow=1.1,SNR=5.8								
MTN	**Manton Dam**	**24.84**	**255**	P			**P**	**09 51 46.0**	**-0.4**
SIJI	**Sorong**	**25.12**	**283**	P			**P**	**09 51 47.9**	**-1.1**
	comp=Z,20nm,0.6s,baz=82,slow=6.8,SNR=13								
AS31	**Alice Springs**	**26.63**	**229**	P			**P**	**09 52 01.6**	**-1.0**
ASAR	**Alice Springs**	**26.64**	**229**	P			**P**	**09 52 01.3**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=62,slow=9.3,SNR=15								
ASAR				PcP			**PcP**	**09 55 25.4**	**-0.3**
	comp=Z,4.6nm,0.9s,baz=62,slow=2.7,SNR=9.6								
ASAR				LR		LR	LR	10 02 22.6	
	comp=Z,575nm,18.2s,baz=110,slow=36								
H11S3	**WAKE ISLAND Hy**	**27.63**	**23**	T			T	10 20 33.0	
	baz=203,slow=75,SNR=165								
H11S2	**WAKE ISLAND Hy**	**27.64**	**23**	T			T	10 20 32.3	
	baz=203,slow=75,SNR=176								
H11S1	**WAKE ISLAND Hy**	**27.65**	**23**	T			T	10 20 33.5	
	baz=203,slow=75,SNR=120								
KNRA	**Kununurra**	**27.72**	**250**	P			**P**	**09 52 12.9**	**+0.6**
KNRA					IAmb		IAmb	09 52 27.4	
	comp=Z,31nm,1.4s								
STKA	**Stephens Creek**	**27.95**	**206**	P			**P**	**09 52 14.2**	**0.0**
	comp=Z,6.1nm,0.8s,baz=13,slow=9.3,SNR=9.1								
STKA				PcP			**PcP**	**09 55 28.9**	**+0.2**
	comp=Z,2.8nm,0.8s,baz=346,slow=1.1,SNR=3.2								
STKA				LR		LR	LR	10 03 19.3	
	comp=Z,715nm,18.7s,baz=25,slow=36								
STKA	**Stephens Creek**	**27.95**	**206**	P			**P**	**09 52 13.8**	**-0.5**
H11N1	**WAKE ISLAND Hy**	**28.82**	**22**	T			T	10 22 04.9	
	baz=204,slow=76,SNR=12								
H11N3	**WAKE ISLAND Hy**	**28.83**	**22**	T			T	10 21 49.6	
	baz=204,slow=76,SNR=20								
H11N2	**WAKE ISLAND Hy**	**28.84**	**22**	T			T	10 22 19.9	
	baz=204,slow=76,SNR=9.5								
FITZ	**Fitzroy Crossi**	**31.25**	**247**	P			**P**	**09 52 42.4**	**-1.2**
	comp=Z,7.8nm,0.7s,baz=69,slow=7.3,SNR=25								
FITZ	**Fitzroy Crossi**	**31.25**	**247**	P			**P**	**09 52 43.2**	**-0.4**
FITZ					IAmb		IAmb	09 52 53.0	
	comp=Z,20nm,0.8s								
AFI	**Afiamalu**	**32.67**	**105**	P			**P**	**09 52 57.1**	**+0.8**
BBSI	**Bau Bau**	**32.96**	**271**	P			**P**	09 53 18.4	+20
EDFI	**Ende, Flores**	**33.71**	**265**	P			**P**	**09 53 03.8**	**-1.6**
	comp=Z,37nm,0.8s								
APSI	**Ampana**	**34.49**	**279**	P			P	09 53 28.9	+17
BKSI	**Bulukumba**	**35.40**	**271**	P			**P**	**09 53 20.0**	**+0.2**
	comp=Z,38nm,0.9s								
BNSI	**Bone**	**35.50**	**272**	P			**P**	**09 53 21.6**	**+0.9**
	comp=Z,47nm,1.2s								
SPSI	**Sidrap Palu**	**35.88**	**273**	P			**P**	**09 53 24.3**	**+0.3**
	comp=Z,28nm,1.2s								
TTSI	**Tana Toraja**	**35.95**	**275**	P			P	09 53 40.2	+16
TAU	**Tasmania Unive**	**36.44**	**190**	P			**P**	**09 53 27.3**	**-1.0**
MPSI	**Mapaga**	**36.46**	**280**	P			**P**	**09 53 29.0**	**+0.1**
	comp=Z,391nmcomp=Z,19nm,0.8s								
PSA00	**Pilbara Seismi**	**37.48**	**244**	P			**P**	**09 53 36.9**	**-0.6**
PSA00					IAmb		IAmb	09 53 45.8	
	comp=Z,25nm,1.2s								
PLAI	**Plampang**	**37.58**	**265**	P			P	09 53 47.8	+9.3
THZ	**Tophouse**	**37.77**	**159**	P			**P**	**09 53 39.5**	**-0.2**
TUWZ	**Tuamarina**	**37.86**	**157**	P			**P**	**09 53 41.4**	**+1.0**
LTZ	**Lake Taylor**	**38.45**	**160**	P			**P**	**09 53 45.6**	**+0.2**
LTZ					IAmb		IAmb	09 54 01.7	
	comp=Z,38nm,1.3s								
KHZ	**Kahutara**	**38.56**	**159**	P			**P**	**09 53 45.3**	**-1.1**
RPZ	**Rata Peaks**	**38.90**	**162**	P			**P**	**09 53 48.5**	**-0.6**
MORW	**Morawa**	**43.27**	**235**	P			**P**	**09 54 24.8**	**-0.5**
YULB	**Yu-li**	**45.24**	**313**	IAmb		IAmb	IAmb	09 54 54.1	
	comp=Z,14nm,0.8s								
TPUB	**Ta-pu**	**45.68**	**312**	P			**P**	**09 54 44.4**	**-0.1**
TPUB					IAmb		IAmb	09 54 46.2	
	comp=Z,21nm,1.1s								
SSLB	**Suanglung**	**45.73**	**313**	P			**P**	**09 54 44.4**	**-0.6**
SSLB					IAmb		IAmb	09 54 56.3	
	comp=Z,14nm,0.9s								
MJAR	**Matsushiro Arr**	**46.39**	**340**	P			**P**	**09 54 48.7**	**-1.3**
	comp=Z,5.4nm,0.7s,baz=153,slow=7.7,SNR=11								
MJAR				LR			LR	10 12 45.8	
	comp=Z,50nm,21.3s,baz=130,slow=34								
MAJO	**Matsushiro**	**46.39**	**340**	P			**P**	**09 54 49.0**	**-1.0**
MAJO					IAmb		IAmb	09 54 50.2	
	comp=Z,11nm,0.9s								
MAT	**Matsushiro**	**46.39**	**340**	P			**P**	**09 54 48.9**	**-1.1**
MJB9	**Matsu-Tunnel**	**46.40**	**340**	P			**P**	**09 54 49.7**	**-0.3**
MJB9					IAmb		IAmb	09 54 50.5	
	comp=Z,7.6nm,0.6s								
JNU	**Nakatsue**	**46.42**	**331**	P			**P**	**09 54 48.7**	**-1.6**
JNU					IAmb		IAmb	09 55 02.8	
	comp=Z,36nm,1.5s								
KSRS	**Korea Array**	**51.34**	**332**	P			**P**	**09 55 27.6**	**-0.2**
	comp=Z,5.3nm,0.6s,baz=151,slow=8.3,SNR=20								
KSRS					PcP		**PcP**	**09 56 43.0**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=143,slow=3.2,SNR=5.3								
KSRS					LR		LR	10 18 30.3	
	comp=Z,25nm,18.0s,baz=142,slow=37								
NJ2	**Nanjing**	**52.42**	**320**	*e*P			**P**	**09 55 36.5**	**+0.4**
NJ2					pmax		pmax		
	comp=Z,12nm,0.6s								
PPT	**Papeete**	**54.31**	**106**	LR			LR	10 16 23.6	
	comp=Z,85nm,18.6s,baz=298,slow=33								
PPT2	**Papeete2**	**54.31**	**106**	*e*P			**P**	**09 55 51.8**	**+1.5**
	comp=Z,42nm,1.0s								
PPT2	**Papeete2**	**54.31**	**106**	*e*LQ			LQ	10 09 38.9	
PPT2									
	comp=Z,207nm,24.8s								
	comp=Z,89nm,21.8s			*e*LR			LR	10 11 54.5	
WHN	**Wuhan**	**54.49**	**316**	P			**P**	**09 55 51.3**	**+0.1**
TIAR	**Tiarei**	**54.53**	**106**	*e*P			**P**	**09 55 53.8**	**+2.0**
	comp=Z,25nm,0.9s								
TVO	**Taravao**	**54.63**	**107**	*e*P			**P**	**09 55 54.5**	**+1.9**
	comp=Z,17nm,0.9s								
TBI	**Tubuai**	**55.01**	**113**	*e*LQ			LQ	10 09 57.6	
	comp=Z,269nm,33.2s								
TBI				*e*LR			LR	10 12 12.3	
	comp=Z,302nm,35.2s,baz=296								
USRK	**Ussuriysk Ar.**	**55.35**	**339**	P			**P**	**09 55 57.6**	**+0.4**
	comp=Z,8.0nm,0.8s,baz=150,slow=8.0,SNR=14								
KULM	**Kulim**	**56.28**	**281**	P			**P**	**09 56 03.3**	**-1.2**
KULM					IAmb		IAmb	09 56 20.6	
	comp=Z,12nm,0.9s								
CN2	**Changchun**	**57.57**	**334**	*e*P			**P**	**09 56 13.5**	**+0.5**
CN2					pmax		pmax		
	comp=Z,10.0nm,0.7s								
GYA	**Guiyang**	**58.06**	**307**	*e*P			**P**	**09 56 19.0**	**+2.1**
GYA					pmax		pmax		
	comp=Z,10.0nm,0.6s								
PEA0B	**Petropavlovsk-**	**59.98**	**1**	P			**P**	**09 56 30.8**	**+1.2**
PETK	**Petropavlovsk-**	**59.98**	**1**	P			**P**	**09 56 30.2**	**+0.6**
	comp=Z,6.6nm,0.7s,baz=173,slow=8.8,SNR=11								
PETK					LR		LR	10 20 33.3	
	comp=Z,82nm,20.1s,baz=232,slow=34								
XAN	**Xi'an**	**60.25**	**316**	P			**P**	**09 56 30.8**	**-1.1**
XAN					pmax		pmax		
	comp=Z,12nm,0.8s								
XAN					pmax		pmax		
	comp=Z,110nm,3.9s	

comp=Z,8.4nm,0.9s
SCM Sheep Creek Mo 81.44 24 IAmb IAmb 09 58 50.6
comp=Z,14nm,1.0s
RND Reindeer 81.73 22 IAmb IAmb 09 58 41.5
comp=Z,8.6nm,0.8s
DHY Denali Highway 82.10 23 P **P**
DHY IAmb IAmb 09 58 44.3
comp=Z,8.7nm,1.2s
WRH Wood River Hil 82.60 21 IAmb IAmb 09 58 45.9
comp=Z,8.2nm,1.1s
CCB Clear Creek Bu 82.80 21 P **P** **09 58 45.4 -1.5**
QSPA South Pole Qui 82.89 180 P **P** **09 58 47.7 0.0**
COLA College 82.91 21 P **P** **09 58 46.8 -0.7**
COLA IAmb IAmb 09 58 47.8
comp=Z,11nm,0.8s
ILAR Eielson Array 83.20 21 P **P** **09 58 47.5 -1.6**
comp=Z,3.5nm,0.9s,baz=260,slow=4.9,SNR=27
ILAR LR LR 10 30 52.7
comp=Z,233nm,21.8s,baz=257,slow=32
BARN Barnard Glacie 83.41 26 IAmb IAmb 09 58 51.7
comp=Z,7.9nm,0.9s
RIDG Independent Ri 83.42 23 IAmb IAmb 09 58 51.1
comp=Z,13nm,1.3s
DOT Dot Lake 83.67 23 IAmb IAmb 09 58 52.4
comp=Z,7.0nm,1.0s
MK31 Makanchi Array 83.93 319 P **P** **09 58 53.1 -0.1**
MK31 IAmb IAmb 09 58 55.2
comp=Z,13nm,0.8s
MKAR Makanchi Array 83.93 319 P **P** **09 58 52.6 -0.6**
comp=Z,12nm,0.7s,baz=102,slow=5.4,SNR=74
MKAR LR LR 10 34 44.8
comp=Z,34nm,22.0s,baz=83,slow=34
MAKZ Makanchi 84.14 318 P **P** **09 58 53.8 -0.4**
MAW Mawson 84.58 203 P **P** **09 58 56.6 +0.6**
comp=Z,12nm,0.7s,baz=100,slow=6.0,SNR=21
MAW Mawson 84.58 203 P **P** **09 58 56.6 +0.6**
MAW IAmb IAmb 09 58 57.4
comp=Z,6.2nm,1.1s
ZALV Zalesovo Beam 84.64 326 P **P** **09 58 55.4 -1.2**
comp=Z,2.0nm,0.3s,baz=104,slow=6.3,SNR=18
ZALV LR LR 10 38 05.8
comp=Z,49nm,20.6s,baz=104,slow=37
HYT Haines Junctio 85.14 27 IAmb IAmb 09 59 00.8
comp=Z,9.2nm,1.1s
EGAK Eagle 85.33 23 IAmb IAmb 09 59 01.1
comp=Z,5.0nm,0.9s
KDJ Kajisay 86.26 313 IAmb IAmb 09 59 18.4
comp=Z,6.1nm,0.9s
KSH Kashi 86.59 310 P **P** **09 59 08.8 +2.0**
KSH sP sP 09 59 36.5 +10
KSH S **S** **10 09 37.3 -2.9**
KSH SS **SS** **10 15 24.8 +2.7**
KSH pmax pmax
comp=Z,130nm,1.9s
KSH pmax pmax
comp=Z,62nm,5.4s
KSH LR LR
comp=Z,27nm,7.0s
KSH LR LR
comp=Z,170nm,15.9s
INK Inuvik 89.56 21 IAmb IAmb 09 59 20.9
comp=Z,13nm,1.2s
NVAR Mina Array Bea 91.23 52 P **P** **09 59 29.7 +0.8**
comp=Z,1.5nm,0.8s,baz=265,slow=6.2,SNR=5.6
NVAR LR LR 10 34 43.8
comp=Z,75nm,20.4s,baz=290,slow=32
NV11 Mina Array Sit 91.35 52 P **P** **09 59 31.6 +2.3**
SYO Syowa Base 92.47 199↑P **P** **09 59 31.8 -1.9**
SYO Syowa Base 92.47 199↑*e*X P 09 59 40.5 +6.8
C36M Paulatuk 93.14 20 P **P** **09 59 36.2 -0.4**
NEW Newport 93.36 42 LR LR 10 35 30.8
comp=Z,186nm,20.1s,baz=260,slow=32
ELK Elko 93.86 50 LR LR 10 34 49.6
comp=Z,110nm,21.4s,baz=260,slow=31
YKA Yellowknife Ar 96.09 28 P **P** **09 59 49.9 -0.4**
comp=Z,2.7nm,0.8s,baz=266,slow=4.3,SNR=33
YKA PKKPbc **PKKPbc** **10 16 36.1 -4.2**
comp=Z,0.7nm,0.8s,baz=89,slow=3.0,SNR=8.9
YKA LR LR 10 39 31.0
comp=Z,72nm,19.8s,baz=0.0,slow=33
PDAR Pinedale Array 98.25 48 P **P** **09 59 59.2 -1.7**
comp=Z,0.3nm,0.4s,baz=292,slow=4.7,SNR=3.6
PDAR LR LR 10 40 55.4
comp=Z,127nm,18.8s,baz=303,slow=33
ARCES ARCESS Array B 109.87 343 PKiKP **PKiKP** **10 04 53.8 +0.2**
comp=Z,3.0nm,0.9s,baz=29,slow=3.0,SNR=5.1
H03S2 Juan Fernandez 114.23 132 T T 12 07 42.1
baz=242,slow=75,SNR=4.5
H03S1 Juan Fernandez 114.24 132 T T 12 07 42.1
baz=242,slow=75,SNR=4.4
H03S3 Juan Fernandez 114.25 132 T T 12 07 32.5
baz=242,slow=75,SNR=4.1
FINES FINESS Array B 114.30 336 PKP PKPdf 10 05 02.0 -0.2
comp=Z,4.2nm,0.9s,baz=152,slow=8.4,SNR=7.6
PLCA Paso Flores 116.23 142 PKP **PKiKP** **10 05 07.0 +0.2**
comp=Z,1.9nm,0.6s,baz=304,slow=0.8,SNR=5.2
GAZ Gaziantep 116.86 198 **PKiKP** **10 05 08.8 +0.8**
AKASG Malin Array Be 118.01 325 PKP **PKPdf** **10 05 08.9 -0.8**
comp=Z,3.0nm,0.6s,baz=60,slow=2.0,SNR=8.5
BRTR Keskin Array B 118.96 312 PKP **PKPdf** **10 05 11.2 -0.8**
comp=Z,0.7nm,0.7s,baz=160,slow=3.9,SNR=4.9
NB2 NORSAR Subarra 120.01 341 PKPdf **PKPdf** **10 05 12.6 -0.7**
comp=Z,7.0nm,1.1s,baz=38,slow=1.7
NB2 NORSAR Subarra 120.01 341 PKPdf **PKPdf** **10 05 12.6 -0.7**
baz=38,slow=1.7
NOA NORSAR Array B 120.01 341 PKP **PKPdf** **10 05 12.5 -0.7**
comp=Z,1.7nm,0.7s,baz=45,slow=2.0,SNR=5.6
BOSA Boshof 120.50 231 PKP **PKPdf** **10 05 15.4 0.0**
comp=Z,3.0nm,0.7s,baz=158,slow=1.1,SNR=5.9
MATP Matopo 121.34 241 PKP **PKPdf** **10 05 16.2 -1.0**
comp=Z,2.9nm,0.7s,baz=72,slow=3.3,SNR=7.2
MORC Moravsky Berou 124.93 328 *e*PKIKP **PKPdf** **10 05 23.1 0.0**
VYHS Vyhne 124.97 326 *e*PKP **PKiKP** **10 05 23.5 0.0**
VYHS *e* 10 29 25.9
KRLC Kraliky 125.14 329 *e*PKPDF **PKiKP** **10 05 23.8 -0.1**
VTS Vitosha 125.25 318 **PKPdf** **10 05 23.1 -1.0**
JAVC Velka Javorina 125.40 327 *e*PKIKP **PKiKP** **10 05 25.2 +0.8**
BSEG Bad Segeberg 125.57 336 *e*PKPdf **PKiKP** **10 05 24.6 +0.2**
baz=47,slow=1.9
KRUC Moravsky 125.95 328 *e*PKIKP **PKPdf** **10 05 24.8 -0.2**
BRG Berggiesshubel 126.06 331 *e*PKPdf **PKiKP** **10 05 25.5 0.0**
baz=47,slow=1.9
CLL Collm 126.22 332 *i* PKPdf **PKiKP** **10 05 26.1 +0.2**
comp=Z,12nm,1.0s
CLL Collm 126.22 332 *e*PKPdf **PKiKP** **10 05 26.0 +0.1**
baz=47,slow=1.9
CLL Collm 126.22 332 **PKiKP** **10 05 26.6 +0.7**
GOPC GO Pecny, Ondr 126.26 330 *e*PKPDF **PKiKP** **10 05 26.4 +0.4**
NRDL Niedersach Rie 126.69 334 *e*PKPdf **PKiKP** **10 05 27.0 +0.3**
baz=47,slow=1.9
ASSE Asse, Remlinge 126.71 334 *e*PKPdf **PKiKP** **10 05 26.8 +0.1**
baz=47,slow=1.9
RETH Rethem/Aller, 126.83 335 *e*PKPdf **PKiKP** **10 05 27.0 0.0**
baz=47,slow=1.9
CONA Conrad Observa 126.92 327 *i* PKiKP **PKPdf** **10 05 27.0 0.0**
comp=Z,5.0nm,1.1s
CLZ Clausthal 127.04 334 *e*PKPdf **PKiKP** **10 05 27.5 0.0**
baz=47,slow=1.9
GUNZ Gunzen 127.17 331 *e*PKPdf **PKiKP** **10 05 27.8 0.0**
baz=47,slow=1.9
PLN Plauen 127.17 332 *e*PKPdf **PKiKP** **10 05 27.6 -0.2**
baz=47,slow=1.9
WERN Wernitzgruen 127.19 331 *e*PKPdf **PKiKP** **10 05 27.8 -0.1**
baz=47,slow=1.9
MOX Moxa 127.31 332 *e*PKPdf **PKPdf** **10 05 27.8 +0.3**
baz=47,slow=1.9
KHC Kasperske Hory 127.36 330 *e*PKPDF **PKPdf** **10 05 28.0 +0.2**
KHC *ex* x 10 28 36.0
GTTG Gottingen 127.43 334 *e*PKPdf **PKiKP** **10 05 28.5 +0.2**
baz=47,slow=1.9
GEC2 GERESS Array S 127.48 329 *e*PKPdf **PKPdf** **10 05 28.4 +0.3**
baz=47,slow=1.9
GERES GERESS Array B 127.48 329 PKP **PKPdf** **10 05 27.9 -0.2**
comp=Z,3.6nm,0.8s,baz=48,slow=2.0,SNR=24
MANZ Manzenberg 127.52 331 *e*PKPdf **PKiKP** **10 05 28.4 -0.2**
baz=47,slow=1.9
ROTZ Rotzenmuhle 127.62 331 *e*PKPdf **PKiKP** **10 05 28.7 -0.1**
baz=47,slow=1.9
WET Wettzell 127.70 330 *e*PKPdf **PKiKP** **10 05 29.0 0.0**
baz=47,slow=1.9
IBBN Ibbenburen 127.81 336 *e*PKPdf **PKiKP** **10 05 29.1 +0.1**
baz=47,slow=1.9
SOKA Soboth 128.12 326 *i* PKiKP **PKPdf** **10 05 28.1 -1.2**
comp=Z,6.1nm,1.1s
GRF Grafenberg Arr 128.15 331 *e*PKPdf **PKiKP** **10 05 29.6 -0.2**
baz=47,slow=1.9
OBKA Obir 128.49 326 *i* PKiKP **PKiKP** **10 05 31.1 +0.4**
comp=Z,3.7nm,1.0s
RJOB Jochberg 128.66 329 *e*PKPdf **PKPdf** **10 05 30.4 +0.1**
baz=47,slow=1.9
KBA Koelnbreinsper 128.79 328 *i* PKiKP **PKPdf** **10 05 30.7 -0.1**
comp=Z,7.0nm,1.4s
MYKA Terra Mystica 128.91 327 *i* PKiKP **PKiKP** **10 05 33.6 +2.1**
comp=Z,3.0nm,0.7s
TNS Taunus Mts 129.05 333 *e*PKPdf **PKiKP** **10 05 31.5 -0.1**
baz=47,slow=1.9
AHRW Bad Neuenahr-A 129.41 335 *e*PKPdf **PKiKP** **10 05 32.4 +0.1**
baz=47,slow=1.9
ABTA Abfaltersbach 129.44 328 *i* PKiKP **PKPdf** **10 05 31.5 -0.4**
comp=Z,11nm,1.2s
WATA Walderalm 129.55 329 *i* PKPdf **PKPdf** **10 05 30.7 -1.4**
comp=Z,9.4nm,1.1s
WTTA Wattenberg 129.56 329 *i* PKiKP **PKPdf** **10 05 32.1 -0.1**
comp=Z,14nm,1.0s
MOTA Moosalm 129.78 329 *i* PKPdf **PKPdf** **10 05 31.5 -1.1**
comp=Z,8.7nm,1.0s
SQTA Sankt Quirin 129.81 329 *i* PKiKP **PKPdf** **10 05 32.4 -0.2**
comp=Z,8.3nm,1.0s
MEM Membach 129.81 335 PKiKP **PKPdf** **10 05 32.6 +0.3**
RETA Reutte 129.86 329 *i* PKPdf **PKPdf** **10 05 30.9 -1.7**
comp=Z,1.9nm,0.6s
UBR Ueberruh 130.06 330 *e*PKPdf **PKPdf** **10 05 33.1 +0.1**
baz=47,slow=1.9
FETA Feichten 130.19 329 *i* PKiKP **PKPdf** **10 05 33.4 0.0**
comp=Z,6.7nm,0.9s
DAVA Damuels 130.44 330 *i* PKiKP **PKPdf** **10 05 34.1 +0.3**
comp=Z,6.5nm,1.2s
BFO Black Forest 130.46 332 *e*PKPdf **PKPdf** **10 05 33.9 +0.2**
baz=47,slow=1.9
BMRD Maredsous 130.56 336 PKiKP **PKiKP** **10 05 34.9 +0.3**
LPAZ La Paz 130.81 119 PKP **PKiKP** **10 05 36.5 -0.4**
comp=Z,3.6nm,1.0s,baz=338,slow=2.4,SNR=9.0
SENIN Lac Senin/Sane 132.35 111 **PKiKP** **10 05 38.5 -0.2**
BNI Bardecchia 133.59 330 **PKPdf** **10 05 38.8 -1.0**
SDV Santo Domingo 134.11 85 **PKPdf** **10 05 41.8 0.0**
MVO Moncorvo 142.73 338 *e*PKP **PKPdf** **10 05 53.9 -2.7**
ESDC Sonseca Array 142.76 334 PKhKP **PKPdf** **10 05 53.3 -3.5**
comp=Z,0.6nm,0.4s,baz=23,slow=3.1,SNR=9.2
MTE Manteigas 143.59 338 *e*PKP **PKPdf** **10 05 57.3 -0.9**
MTE Manteigas 143.59 338 **PKPdf** **10 05 58.8 +0.6**
PCBR Castelo Branco 144.06 338 *e*PKP PKPbc 10 05 57.8 +0.9
PMRV Marv??o 144.38 337 *e*PKP PKPbc 10 05 58.1 +0.1
PMTG Montargil 145.01 338 *e*PKP **PKPab** **10 06 00.1 +0.2**
PBEJ Beja 145.78 337 *e*PKP **PKPab** **10 06 03.2 +0.4**
PNCL Nicolau / Gran 145.96 337 *e*PKP **PKPdf** **10 06 00.1 -2.1**
PCVE Castro Verde 146.19 336 *e*PKP **PKPab** **10 06 04.6 +0.2**
PVAQ Vaqueiros 146.26 336 *e*PKP **PKPbc** **10 06 04.2 +0.3**
PTEO Sao Teotonio 146.53 337 *e*PKP **PKPbc** **10 06 04.8 +0.1**
BDFB Brasilia 147.42 134 PKPbc **PKPdf** **10 06 06.4 +1.0**
comp=Z,33nm,0.8s,baz=193,slow=2.3,SNR=41
BDFB Brasilia 147.42 134 **PKPdf** **10 06 06.2 +0.8**
RSA Sarsar 147.52 331 P **PKPab** **10 06 09.0 -0.8**
SNR=7.7
CZD Col de Zad 148.59 328 P **PKiKP** **10 06 13.0 +0.6**
SNR=7.0
TZRR Tazzarine 150.60 326 P **PKiKP** **10 06 17.0 +0.6**
SNR=9.7
ZGR Zagora 151.13 325 P **PKiKP** **10 06 18.0 +0.5**
SNR=12
OUZM OUZ 151.16 328 P **PKiKP** **10 06 18.0 +0.5**
SNR=8.2
OUK Oukaimeden 151.49 329 P **PKiKP** **10 06 19.2 +0.8**
SNR=6.3
TOA0 Torodi Ar. Sit 153.72 285 PKPdf **PKPdf** **10 06 14.2 -0.9**
TORD Torodi Ar. Bea 153.72 285 PKP **PKPdf** **10 06 14.2 -0.9**
comp=Z,1.0nm,0.7s,baz=5.8,slow=1.2,SNR=5.1
TORD PKPbc **PKPbc** **10 06 22.3 -0.7**
comp=Z,3.7nm,0.8s,baz=10,slow=1.6,SNR=14
TORD PKPab **PKPab** **10 06 34.9 -1.0**
comp=Z,7.9nm,1.1s,baz=76,slow=1.6,SNR=9.6
DBIC Dimbokro 160.68 270 PKPab **PKPab** **10 07 06.0 +0.1**
comp=Z,7.0nm,0.9s,baz=60,slow=7.8,SNR=4.6

NIED ***26*** *09:48:00,36˚.80N×138˚.60E,h8km,Mw3.7 Best double couple: M₀3.75000×10¹⁴ NP1:φs6.00000°,δ73.00000°, λ-19.00000°. NP2:φs102.00000°,δ72.00000°, λ-162.00000°.*
JMA ***26*** *09:48:16.7±0.2,36˚.81N×138˚.62E,h2km±4km,M3.6 Broadband fault plane solution: P waves. NP1: φs187.00000°,δ79.00000°,λ-9.00000°. NP2:φs279.00000°, δ81.00000°,λ-169.00000°. Principal axes: T Plg1.0000°, Azm53.0000°; N Plg76.0000°, Azm319.0000°; P Plg14.0000°, Azm143.0000°;*
JMA Felt II J1.
IDC ***26*** *09:48:16.9±3.4,36˚.51N×138˚.73E,h0km,mb3.6/1, mb1 3.8/2,mb1mx3.2/36,mbtmp3.6/2,ML3.4/1,MS4.1/1, Ms1 4.1/1,ms1mx2.8/32 Error ellipse: s-maj=81.5km s-min=12.4km az=13.0*
ISC 26 09:48:17.2±1.0,36.78N±0˚.03×138˚.63E±0˚.03,h9km±10km, n13,σ1s05/19,4C-3D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JGK	**Kuni**	**0.22**	**179**	⇓P		**Pg**	**09 48 22.1**	**+0.4**
JGK						S	**Sg**	**09 48 26.0**	**+1.3**
MJAR	**Matsushiro Arr**	**0.42**	**235**	LR		LR	09 48 21.0	
MJAR	comp=Z,28nm,21.3s,baz=55,slow=10					Pg	**Pg**	**09 48 24.6**	**-0.7**
MJAR	120nm,0.3s,baz=42,slow=19,SNR=5797					Lg	Lg	09 48 29.8	
MAT	**Matsushiro**	**0.42**	**235**		P		**Pg**	**09 48 24.8**	**-0.5**
MAT	137nm,0.3s,baz=44,slow=33,SNR=32				S		**Sg**	**09 48 30.3**	**-0.6**
MAT	**Matsushiro**	**0.42**	**235**		P		**Pg**	**09 48 24.6**	**-0.7**
MAT					S		**Sg**	**09 48 30.2**	**-0.6**
JKT	**Katashina**	**0.49**	**92**	⇑P			**Pg**	**09 48 26.6**	**-0.2**
JKT					S		**Sg**	**09 48 33.4**	**+0.1**
JHK	**Hiroka**	**0.56**	**33**	⇑P			**Pg**	**09 48 26.8**	**-1.2**
JHK					S		**Sg**	**09 48 34.1**	**-1.2**
JNG	**Nsakai**	**0.57**	**229**	⇑P			**Pg**	**09 48 27.5**	**-0.7**
JNG					S		**Sg**	**09 48 35.3**	**-0.4**
JIZZ	**Izumozaki**	**0.75**	**5**	⇑P			**Pg**	**09 48 31.7**	**+0.1**
JIZZ					S		**Sg**	**09 48 42.9**	**+1.5**
JAG	**Ashikaga**	**0.75**	**118**	⇓P			**Pb**	**09 48 31.6**	**-0.8**
JRY	**Ryogami san**	**0.80**	**164**	⇓P			**Pg**	**09 48 32.2**	**-0.3**
KSRS	**Korea Array**	**8.58**	**278**	Pn			**Pn**	**09 50 23.8**	**+2.3**
	0.4nm,0.3s,baz=90,slow=13,SNR=3.1								
WRA	**Warramunga Arr**	**56.56**	**185**	P			**P**	**09 57 59.2**	**-0.9**
	0.5nm,0.6s,baz=358,slow=7.0,SNR=4.8								
TXAR	**Lajitas Array**	**92.02**	**51**	LR		LR	10 42 18.2	
	comp=Z,82nm,18.9s,baz=0.0,slow=35								

IDC 26 09:50:35.0±15.0,56˚.63S×27˚.31W,h0km,mb3.7/1, mb1 3.7/1,mb1mx3.4/21,mbtmp3.7/1,Error ellipse: s-maj=955.2km s-min=71.8km az=143.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**73.60**	**29**	P		P	10 02 09.9	0.0
	0.4nm,0.5s,baz=200,slow=5.8,SNR=5.5							
YKA	**Yellowknife Ar**	**136.55**	**318**	PKP		PKPdf	10 09 57.1	-0.3
	0.2nm,0.4s,baz=127,slow=2.4,SNR=8.4							
ILAR	**Eielson Array**	**150.45**	**311**	PKPbc		PKPbc	10 10 26.5	-0.4
	0.9nm,0.7s,baz=124,slow=2.1,SNR=9.4							

JMA ***26*** *10:08:02.2±0.1,22˚.89N×121˚.18E,h47km,M3.1*
TAP ***26*** *10:08:04.0,22˚.89N×121˚.34E,h22km,ML3.6,B*
ISC 26 10:08:03.9±0.9,22˚.87N±0˚.02×121˚.37E±0˚.02,h24km±6km, n82,σ1s21/137,4C-14D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWH	**Lutao**	**0.19**	**150**	⇓*i*P		**Pb**	**10 08 10.1**	**+0.8**
	baz=138							
TWH					S	**Sb**	**10 08 14.6**	**+1.7**
	baz=138							
CHKT	**Chengkung**	**0.22**	**358**	⇑*i*P		**Pb**	**10 08 09.8**	**0.0**
	baz=15							
CHKT					S	**Sb**	**10 08 14.0**	**+0.2**
	baz=15							
TTN	**Taitung**	**0.24**	**240**	⇑*i*P		**Pb**	**10 08 10.2**	**+0.2**
	baz=232							
TTN					S	**Sb**	**10 08 14.8**	**+0.7**
	baz=232							
TWGBT	**Beinan**	**0.28**	**258**	⇓*i*P		**Pb**	**10 08 10.4**	**-0.1**
	baz=266							
TWGBT					S	**Sb**	**10 08 14.8**	**-0.2**
	baz=266							
TWG	**Pinlang**	**0.28**	**259**	⇓*i*P		**Pb**	**10 08 10.4**	**-0.2**
	baz=266							
TWG					S	**Sb**	**10 08 15.1**	**-0.1**
	baz=266							
FULB	**Fuli**	**0.33**	**347**	P		**Pb**	**10 08 11.1**	**-0.3**
	baz=357							
FULB					S	**Sb**	**10 08 16.8**	**+0.4**
	baz=357							
ELDTW	**Lidau**	**0.46**	**314**	⇑*i*P		**Pb**	**10 08 12.5**	**-0.9**
	baz=316							
ELDTW					*e*S	**Sb**	**10 08 18.3**	**-1.5**
	baz=316							
ECL	**Taimali**	**0.48**	**235**	⇓*i*P		**Pb**	**10 08 12.8**	**-0.8**
	baz=242							
ECL					*e*S	**Sb**	**10 08 19.4**	**-0.9**
	baz=242							
TWF1	**Yuli**	**0.48**	**351**	P		**Pb**	**10 08 13.3**	**-0.5**
	baz=343							
TWF1					S	**Sb**	**10 08 19.9**	**-0.6**
	baz=343							
YULB	**Yu-li**	**0.52**	**352**	⇑*i*P		**Pb**	**10 08 13.7**	**-0.7**
	baz=343							
YULB					S	**Sb**	**10 08 20.5**	**-1.2**
	baz=343							
HGSD	**Ruisui**	**0.62**	**4**	P		**Pb**	**10 08 16.0**	**-0.1**
	baz=12							
HGSD					*e*S	**Sb**	**10 08 24.9**	**+0.6**
	baz=12							
EHY	**Hungye**	**0.63**	**356**	*e*P		**Pb**	**10 08 15.3**	**-1.0**
	baz=346							
EHY					*e*S	**Sb**	**10 08 23.8**	**-1.0**
	baz=346							
STYT	**Tauyuan**	**0.64**	**297**	⇓*i*P		**Pb**	**10 08 15.8**	**-0.6**
	baz=300							
STYT					S	**Sb**	**10 08 24.4**	**-0.5**
	baz=300							
TAW	**Tawu**	**0.68**	**221**	*e*P		**Pb**	**10 08 16.1**	**-0.9**
	baz=227							
TAW					*e*S	**Sb**	**10 08 24.6**	**-1.4**
	baz=227							
SLGT	**Liugui**	**0.68**	**280**	⇓*i*P		**Pb**	**10 08 16.7**	**-0.4**
	baz=280							
SLGT					*e*S	**Sb**	**10 08 25.1**	**-1.1**
	baz=280							
EAST	**Anshuo**	**0.69**	**225**	*e*P		**Pb**	**10 08 16.5**	**-0.8**
	baz=231							
EAST					*e*S	**Sb**	**10 08 25.2**	**-1.2**
	baz=231							
SSD	**Sandimen**	**0.70**	**260**	⇓*i*P		**Pb**	**10 08 16.4**	**-0.9**
	baz=261							
SSD					*e*S	**Sb**	**10 08 24.3**	**-2.3**
	baz=261							
YUS	**Yu-Shan**	**0.72**	**328**	*i* P		**Pb**	**10 08 17.5**	**-0.6**
	baz=326							
MASBT	**Mashibuluo**	**0.73**	**249**	⇓*i*P		**Pn**	**10 08 17.2**	**-1.5**
	baz=244							
MASBT					S	**Sb**	**10 08 25.9**	**-1.7**
	baz=244							
SGST	**Jiashian**	**0.76**	**286**	P		**Pn**	**10 08 17.5**	**-1.6**
	baz=286							
SGST					*e*S	**Sb**	**10 08 28.2**	**-0.2**
	baz=286							
WTP	**Ta-pu**	**0.79**	**298**	⇓*i*P		**Pn**	**10 08 19.0**	**-0.5**
	baz=299							
WTP					*e*S	**Sn**	**10 08 30.4**	**-0.3**
	baz=299							
EGFH	**Guangfu**	**0.79**	**4**	*e*P		**Pb**	**10 08 19.3**	**+0.3**
	baz=353							
EGFH					*e*S	**Sn**	**10 08 30.3**	**-0.3**
	baz=353							
TPUB	**Ta-pu**	**0.81**	**302**	⇓*i*P		**Pn**	**10 08 19.2**	**-0.5**
	baz=312							
TPUB					*e*S	**Sn**	**10 08 30.8**	**-0.2**
	baz=312							
CHN1	**Nanshi**	**0.84**	**292**	*e*P		**Pb**	**10 08 20.2**	**+0.4**
	baz=296							
CHN1					*e*S	**Sn**	**10 08 30.6**	**-1.2**
	baz=296							
SSPT	**Xinbi**	**0.84**	**243**	*e*P		**Pn**	**10 08 18.8**	**-1.3**
	baz=241							
SCZT	**Fangliau**	**0.86**	**235**	*e*P		**Pn**	**10 08 19.8**	**-0.7**
	baz=229							
SCZT					*e*S	**Sn**	**10 08 31.1**	**-1.1**
	baz=229							
CHN4	**Tsaushan**	**0.86**	**304**	⇓*i*P		**Pn**	**10 08 20.4**	**-0.2**
	baz=311							
CHN4					*e*S	**Sb**	**10 08 32.7**	**+1.3**
	baz=311							
SNST	**Tainan City**	**0.88**	**293**	*e*P		**Pb**	**10 08 20.8**	**+0.3**
	baz=293							
SNST					*e*S	**Sb**	**10 08 33.0**	**+1.2**
	baz=293							
TWM1	**Shoushan**	**0.88**	**267**	*e*P		**Pb**	**10 08 21.4**	**+0.9**
	baz=357							
VWDT	**VWDT**	**0.90**	**346**	⇓*i*P		**Pn**	**10 08 20.3**	**-0.7**
	baz=357							
VWDT					*e*S	**Sn**	**10 08 31.8**	**-1.5**
	baz=357							
TWK	**Hsinying**	**0.91**	**296**	⇓*i*P		**Pn**	**10 08 21.1**	**0.0**
	baz=296							
TWK					*e*S	**Sb**	**10 08 33.9**	**+1.2**
	baz=296							
ESL	**Shilin**	**0.94**	**3**	*e*P		**Pn**	**10 08 19.9**	**-1.6**
	baz=356							
ESL					*e*S	**Sn**	**10 08 31.5**	**-2.7**
	baz=356							
WHYT	**Xinyi Township**	**0.95**	**330**	*e*P		**Pb**	**10 08 21.7**	**0.0**
	baz=335							
WHYT					*e*S	**Sn**	**10 08 33.8**	**-0.8**
	baz=335							
CHN3	**Shinhua**	**0.95**	**282**	*e*P		**Pb**	**10 08 23.0**	**+1.3**
	baz=281							
CHN3					*e*S	**Sb**	**10 08 37.7**	**+3.8**
	baz=281							
CHN5	**Tsauling**	**0.96**	**318**	⇓*i*P		**Pb**	**10 08 22.2**	**+0.3**
	baz=319							
CHN5					*e*S	**Sb**	**10 08 34.9**	**+0.6**
	baz=319							
SNJT	**Kaohsiung City**	**0.97**	**263**	*e*P		**Pb**	**10 08 23.9**	**+1.9**
	baz=262							
SNJT					*e*S	**Sb**	**10 08 39.4**	**+5.1**
	baz=262							
SSLB	**Suanglung**	**0.99**	**337**	*e*P		**Pn**	**10 08 21.6**	**-0.6**
	baz=346							
SSLB					*e*S	**Sn**	**10 08 34.5**	**-1.0**
	baz=346							
KAU	**Kaohsiung**	**1.03**	**253**	*e*P		**Pb**	**10 08 26.0**	**+3.0**
	baz=253							
HEN	**Hengchun**	**1.05**	**214**	*e*P		**Pn**	**10 08 23.0**	**0.0**
	baz=202							
CHN2	**Minshiung**	**1.05**	**309**	*e*P		**Pb**	**10 08 23.9**	**+0.5**
	baz=308							
WLCH	**Liuqiu**	**1.06**	**241**	*e*P		**Pb**	**10 08 24.2**	**+0.7**
	baz=234							
TSEB	**Hengchuen, Pin**	**1.06**	**204**	*e*P		**Pb**	**10 08 24.7**	**+1.1**
	baz=196							
TWKBT	**Hengchun**	**1.06**	**209**	*e*P		**Pn**	**10 08 22.4**	**-0.8**
	baz=199							
TWK1	**Hengchun**	**1.07**	**210**	*e*P		**Pn**	**10 08 22.8**	**-0.5**
	baz=199							
CHY	**Chiayi**	**1.07**	**306**	*e*P		**Pb**	**10 08 24.2**	**+0.4**
	baz=305							
CHY					*e*S	**Sb**	**10 08 39.4**	**+2.0**
	baz=305							
SMLT	**Sun Moon Lake**	**1.09**	**337**	*e*P		**Pb**	**10 08 24.3**	**+0.1**
	baz=344							
SMLT					*e*S	**Sn**	**10 08 37.6**	**-0.7**
	baz=344							
WGK	**Gukeng**	**1.10**	**317**	*e*P		**Pb**	**10 08 25.0**	**+0.7**
	baz=317							
WGK					*e*S	**Sb**	**10 08 39.7**	**+1.6**
	baz=317							
WJS	**Zhushan**	**1.11**	**328**	*e*P		**Pb**	**10 08 25.2**	**+0.7**
	baz=327							
WJS					*e*S	**Sb**	**10 08 40.4**	**+1.8**
	baz=327							
WDLH	**Douliu**	**1.12**	**317**	P		**Pb**	**10 08 25.2**	**+0.7**
	baz=315							
WDLH					S	**Sb**	**10 08 41.0**	**+2.4**
	baz=315							
TYC	**Yuchr**	**1.13**	**335**	*e*P		**Pb**	**10 08 24.9**	**+0.1**
	baz=336							
TYC					*e*S	**Sb**	**10 08 41.4**	**+2.4**
	baz=336							
CHN8	**Yiju**	**1.17**	**294**	*

WNT	**Mingjian**	**1.18**	**328**	*e*P		**Pb**	**10 08 26.6**	**+0.9**
	baz=327									
WNT				*e*S		**Sb**	**10 08 42.8**	**+2.3**
	baz=327									
CHGB	**Renai**	**1.20**	**351**	*e*P		**Pn**	**10 08 24.7**	**-0.6**
CHGB				*e*S		**Sn**	**10 08 40.4**	**-0.5**
TWD	**Chiawan**	**1.22**	**10**	*e*P		**Pn**	**10 08 24.2**	**-1.2**
	baz=358									
DPDB	**Guoxing**	**1.23**	**340**	*e*P		**Pb**	**10 08 26.4**	**-0.1**
	baz=352									
WHF	**Hehuan Shan**	**1.27**	**355**	*e*P		**Pn**	**10 08 26.0**	**-0.5**
	baz=7.0									
WHF				*e*S		**Sn**	**10 08 41.5**	**-1.5**
	baz=7.0									
NACB	**Ninganchiao**	**1.31**	**9**	*e*P		**Pn**	**10 08 24.7**	**-2.0**
	baz=7.0									
NACB				*e*S		**Sb**	**10 08 43.3**	**-0.9**
	baz=7.0									
ETLH	**Xiulin Townshi**	**1.33**	**4**	*e*P		**Pn**	**10 08 26.6**	**-0.4**
	baz=4.0									
WHP	**Taichung City**	**1.45**	**344**	*e*P		**Pb**	**10 08 30.2**	**-0.1**
	baz=354									
NNSB	**Datong**	**1.55**	**0**	*e*P		**Pn**	**10 08 30.1**	**0.0**
	baz=10.0									
NNSB				*e*S		**Sn**	**10 08 47.6**	**-1.8**
	baz=10.0									
NNSH	**Datong**	**1.55**	**0**	*e*P		**Pn**	**10 08 29.9**	**-0.1**
	baz=9.0									
NNSH				*e*S		**Sn**	**10 08 47.5**	**-1.9**
	baz=9.0									
WDJ	**Dajia District**	**1.61**	**335**	*e*P		**Pb**	**10 08 33.8**	**+0.8**
	baz=319									
WDGT	**Dungji**	**1.62**	**284**	P		**Pn**	**10 08 31.1**	**+0.1**
	baz=283									
WDGT				*e*S		**Sn**	**10 08 50.3**	**-0.8**
	baz=283									
NSY	**Sanyi**	**1.64**	**340**	*e*P		**Pb**	**10 08 33.7**	**+0.4**
	baz=337									
NSY				*e*S		**Sb**	**10 08 56.1**	**+2.5**
	baz=337									
PTSB	**Yuanli**	**1.68**	**339**	*e*P		**Pb**	**10 08 33.0**	**-1.1**
	baz=335									
ENTT	**Nioudou**	**1.77**	**6**	*e*P		**Pn**	**10 08 33.8**	**+0.9**
	baz=4.0									
PHUB	**P'eng-hu**	**1.78**	**291**	*e*P		**Pn**	**10 08 32.9**	**-0.1**
	baz=291									
TWC	**Suao**	**1.78**	**14**	*e*P		**Pn**	**10 08 33.4**	**+0.2**
NSTT	**Nanjuang**	**1.78**	**349**	*e*P		**Pb**	**10 08 35.8**	**0.0**
	baz=358									
YHNB	**Yeheng**	**1.79**	**0**	*e*P		**Pn**	**10 08 34.4**	**+1.1**
	baz=9.0									
NSK	**Sanguang**	**1.79**	**360**	*e*P		**Pb**	**10 08 35.4**	**-0.7**
	baz=10.0									
PNG	**Penghu**	**1.81**	**293**	*e*P		**Pn**	**10 08 33.9**	**+0.4**
	baz=291									
PNG				*e*S		**Sn**	**10 08 56.0**	**+0.3**
	baz=291									
VCHM	**Qimei**	**1.82**	**281**	*e*P		**Pn**	**10 08 33.6**	**-0.1**
	baz=281									
NWLT	**Wulai**	**1.90**	**4**	*e*P		**Pn**	**10 08 35.9**	**+1.1**
	baz=12									
JYNG	**Yonagunijimaku**	**2.13**	**42**	P		**Pn**	**10 08 38.1**	**+0.2**
JYNG				*e*S		**Sn**	**10 09 04.1**	**+0.5**
YOJ	**Yonaguni jima**	**2.18**	**43**	P		**Pn**	**10 08 38.7**	**+0.1**
YOJ				*e*S		**Sn**	**10 09 04.9**	**+0.1**
HATJ	**Hateruma jima**	**2.52**	**62**	S		**Sn**	**10 09 12.8**	**-0.5**
IRIF	**Iriomote-Funau**	**2.60**	**56**	P		**Pn**	**10 08 45.4**	**+0.9**
JKRS	**Kuro-shima**	**2.77**	**60**	P		**Pn**	**10 08 47.2**	**+0.4**
JKRS				*e*S		**Sn**	**10 09 21.2**	**+1.7**
JIJ	**Ishigaki jima**	**2.94**	**59**	P		**Pn**	**10 08 49.1**	**0.0**
JIJ				S		**Sn**	**10 09 21.6**	**-2.0**
JISG	**Ishigakijimahi**	**3.19**	**57**	P		**Pn**	**10 08 52.5**	**+0.1**
JISG				S		**Sn**	**10 09 28.4**	**-1.3**
JTJ	**Tarama**	**3.52**	**59**	P		**Pn**	**10 08 58.3**	**+1.3**

*JMA **26** 10:33:35.9, 37.°70N×141.°75E, h47km±1km, M3.9*
JMA Felt I J1.
*IDC **26** 10:33:37.3±2.7, 37.°64N×141.°84E, h60km±27km, mb3.1/4, mb1 3.4/8, mb1mx3.3/33, mbtmp3.5/8, ML3.3/3, MS2.7/4, Ms1 2.7/4, ms1mx2.5/13, Error ellipse: s-maj=35.9km s-min=18.8km az=106.0*

ISC 26 10:33:33.9±1.7, 37.°65N±0.°04×141.°90E±0.°07, h28km±11km, n32, σ1$25/39, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIKH	**Ishinomakibobu**	**0.75**	**333**	P		**Pb**	**10 33 49.0**	**+0.7**
JIKH				S		**Sb**	**10 33 58.3**	**+0.1**
JMST	**Minamisoumatoc**	**0.80**	**276**	P		**Pb**	**10 33 49.4**	**+0.1**
JMST				S		**Sb**	**10 33 59.1**	**-0.7**
JFK	**Kawauchi**	**0.86**	**251**	P		**Pn**	**10 33 50.6**	**+0.4**
JFK				S		**Sb**	**10 34 00.8**	**-0.6**
JMM	**Marumori**	**0.90**	**284**	P		**Pb**	**10 33 50.7**	**-0.2**
JMM				S		**Sb**	**10 34 01.4**	**-1.2**
JIO	**Ouri**	**0.92**	**332**	P		**Pn**	**10 33 51.2**	**+0.2**
JIO				S		**Sb**	**10 34 02.0**	**-1.0**
ONAJ	**Iwakimizuishiy**	**1.03**	**238**	P		**Pn**	**10 33 53.1**	**+0.5**
ONAJ				S		**Sb**	**10 34 05.6**	**-0.7**
JKMT	**Kesennumamotoy**	**1.21**	**344**	P		**Pn**	**10 33 55.5**	**+0.5**
JKMT				*e*S		**Sn**	**10 34 09.5**	**-1.0**
JOU	**Okura**	**1.21**	**307**	P		**Pn**	**10 33 55.2**	**+0.2**
JOU				S		**Sn**	**10 34 09.5**	**-1.0**
JFT	**Otama**	**1.25**	**265**	P		**Pn**	**10 33 56.3**	**+0.8**
JFT				S		**Sb**	**10 34 11.1**	**-1.3**
JMK	**Ichinoseki**	**1.41**	**338**	P		**Pn**	**10 33 58.4**	**+0.7**
JMK				S		**Sn**	**10 34 14.5**	**-0.9**
JYS	**Shirataka**	**1.56**	**292**	P		**Pn**	**10 34 00.4**	**+0.6**
JYS				S		**Sn**	**10 34 19.0**	**-0.1**
JYK	**Kaneyama**	**1.75**	**317**	P		**Pn**	**10 34 02.9**	**+0.4**
JYK				S		**Sn**	**10 34 23.4**	**-0.5**
JFY	**Yanaizu**	**1.76**	**263**	P		**Pn**	**10 34 03.3**	**+0.7**
JFY				S		**Sn**	**10 34 23.7**	**-0.3**
JOM	**Ohasama**	**1.89**	**346**	P		**Pn**	**10 34 05.5**	**+1.2**
JOM				S		**Sn**	**10 34 27.8**	**+0.6**
MJAR	**Matsushiro Arr**	**3.15**	**251**	P		**Pn**	**10 34 23.4**	**+1.7**
	0.9nm,0.3s,baz=58,slow=12,SNR=35							
MJAR				LR		LR	10 35 52.5	
	comp=Z,84nm,20.3s,baz=155,slow=44							
MAT	**Matsushiro**	**3.15**	**251**	P		**Pn**	**10 34 23.5**	**+1.8**
MAT				*e*S		**Sn**	**10 35 01.2**	**+2.9**
JHJ	**Hachijo jima 2**	**4.83**	**202**	P		**Pn**	**10 34 47.6**	**+2.8**
	11nm,0.3s,baz=82,slow=21,SNR=1.4							
JHJ				S		**Sn**	**10 35 37.8**	**-2.1**
	20nm,0.3s,baz=86,slow=24,SNR=8.2							
ASAJ	**Asahikawa**	**6.49**	**4**	P		**Pn**	**10 35 09.2**	**+1.7**
	0.9nm,0.3s,baz=231,slow=15,SNR=8.3							
USRK	**Ussuriysk Ar.**	**9.95**	**314**	P		**Pn**	**10 35 58.1**	**+3.2**
	baz=116,slow=14,SNR=1.3							
JNU	**Nakatsue**	**10.06**	**247**	LR		LR	10 40 04.8	
	comp=Z,39nm,19.1s,baz=33,slow=39							
KSRS	**Korea Array**	**11.10**	**273**	LR		LR	10 40 18.6	
	comp=Z,24nm,18.7s,baz=130,slow=36							
H11N2	**WAKE ISLAND Hy**	**28.14**	**122**	T		T	11 09 45.1	
	baz=315,slow=75,SNR=34							
H11N1	**WAKE ISLAND Hy**	**28.15**	**122**	T		T	11 09 48.7	
	baz=315,slow=75,SNR=59							
H11N3	**WAKE ISLAND Hy**	**28.16**	**122**	T		T	11 09 46.5	
	baz=315,slow=75,SNR=37							
H11S1	**WAKE ISLAND Hy**	**28.88**	**124**	T		T	11 10 42.2	
	baz=317,slow=76,SNR=17							
H11S3	**WAKE ISLAND Hy**	**28.88**	**125**	T		T	11 10 43.8	
	baz=317,slow=76,SNR=14							
H11S2	**WAKE ISLAND Hy**	**28.89**	**125**	T		T	11 10 42.0	
	baz=317,slow=76,SNR=11							
TLY	**Talaya**	**30.23**	**310**	LR		LR	10 52 28.3	
	comp=Z,29nm,18.9s,baz=356,slow=38							
MKAR	**Makanchi Array**	**44.12**	**302**	P		**P**	**10 41 39.0**	**-0.8**
	0.4nm,0.6s,baz=81,slow=7.5,SNR=4.0							
ILAR	**Eielson Array**	**48.77**	**33**	P		**P**	**10 42 16.1**	**+0.1**
	0.3nm,0.6s,baz=264,slow=7.1,SNR=4.1							
WRA	**Warramunga Arr**	**57.72**	**188**	P		**P**	**10 43 21.6**	**-0.6**
	0.3nm,0.5s,baz=8.8,slow=4.7,SNR=10							
YKA	**Yellowknife Ar**	**63.09**	**30**	P		**P**	**10 43 58.3**	**-0.1**
	0.3nm,0.8s,baz=292,slow=6.0,SNR=4.1							

*TEH **26** 10:38:57.5, 34.°49N×47.°76E, h8km, ML3.5*
*ISN **26** 10:38:57.1±1.1, 34.°52N×47.°72E, h0km±12km, ML3.2*

ISC 26 10:38:57.1±1.3, 34.°49N±0.°05×47.°75E±0.°03, h2km±12km, n18, σ1$89/24, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IBZA	**Bozab**	**0.10**	**101**	*e*Pg		**Pg**	**10 38 59.5**	**+0.4**
IBZA				*e*Sg		**Sg**	**10 39 01.2**	**+0.8**
IBZA				*e*			10 39 02.5	
IKOM	**Komasi**	**0.37**	**212**	*e*			10 39 20.9	
IKOM				*e*Pg		**Pg**	**10 39 05.1**	**+0.9**
KER	**Kermanshah**	**0.52**	**259**	*e*Pg		**Pb**	**10 39 08.1**	**-0.9**
KCHF	**Cheshme Sefid,**	**0.62**	**250**	*e*Pg		**Pb**	**10 39 10.5**	**-0.3**
IVIS	**Veis**	**0.74**	**273**	*e*Pg		**Pb**	**10 39 11.9**	**-0.9**
IVIS				*e*			10 39 32.5	
IGHG	**Ghaleghazi**	**0.98**	**261**	*e*Pg		**Pn**	**10 39 18.9**	**+0.7**
IGHG				*e*			10 39 50.4	
IDHR	**Dehrash**	**1.14**	**281**	*e*Pg		**Pn**	**10 39 21.8**	**+1.5**
IDHR				*e*			10 39 46.1	
BMDN	**Meydan**	**1.21**	**132**	*e*Pg		**Pn**	**10 39 20.5**	**-0.7**
QABG	**Abgarm-Qazvin**	**1.94**	**51**	*e*Pn		**Pb**	**10 39 32.7**	**-0.6**
IRAZ	**Razeghan**	**2.01**	**62**	*e*Pn		**Pb**	**10 39 34.7**	**+0.1**
IRAZ				*e*			10 40 13.0	
IBDR	**Badra**	**2.04**	**228**	*e*Pn		**Pb**	**10 39 34.0**	**-0.9**
IBDR				*e*Sn		**Sg**	**10 40 01.8**	**-0.9**
IBDR					AML	AML	10 40 18.1	
	comp=N,195nm,0.7s							
IBDR					AML	AML	10 40 22.5	
	comp=E,177nm,0.8s							
IKRK	**Kirkuk**	**2.94**	**289**	*e*Pn		**Pn**	**10 39 46.0**	**+1.1**
IKRK				*e*Sn		**Sb**	**10 40 23.0**	**-3.7**
IKRK					AML	AML	10 40 45.8	
	comp=E,177nm,0.7s							
IKRK					AML	AML	10 40 56.2	
	comp=N,143nm,0.8s							
BHD	**Baghdad**	**3.05**	**247**	*e*Pn		**Pn**	**10 39 48.0**	**+1.7**
BHD				*e*Sn		**Sb**	**10 40 26.0**	**-3.8**
QALM	**Alamut, Qazvin**	**3.06**	**50**	*e*Pn		**Pn**	**10 39 48.6**	**+1.8**
IPIR	**Pirpir**	**3.18**	**124**	*e*Pn		**Pn**	**10 39 49.9**	**+1.4**
IDMV	**Damavand**	**3.68**	**72**	*e*Pn		**Pb**	**10 40 00.2**	**-2.9**
NSR	**Nassriya**	**3.72**	**202**	*e*Pn		**Pn**	**10 39 58.0**	**+2.4**
NSR				*e*Sn		**Sn**	**10 40 42.0**	**+2.0**
MSL	**Mosul**	**4.24**	**298**	*e*Pn		**Pn**	**10 40 05.0**	**+2.3**
MSL				*e*Sn		**Sn**	**10 40 54.0**	**+1.3**

SJA 26 10:51:10.6±1.5, 27.°54S×66.°48W, h9km±34km, ML3.5, MW3.6, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CYA	**Choya**	**1.08**	**147**	*i* P		**Pn**	**10 51 35.5**	**+3.6**
CYA				*e*S		Sn	10 51 52.5	+5.4
VCA	**Vinchina**	**1.94**	**232**	*i* P		**Pb**	**10 51 46.1**	**-0.1**
VCA				*i* S		Sg	10 52 12.0	-1.1
GO03	**Copiap**	**3.34**	**268**	*i* P		**Pb**	**10 52 09.2**	**-0.8**
GO03				*i* S		Sb	10 52 49.8	-1.0
ACDV	**Cuesta del Vie**	**3.50**	**221**	*i* P		**Pn**	**10 52 49.4**	**+3.0**
ACDV				*e*S		Sb	10 52 59.2	+3.5
ACDV					IAML		10 53 06.2	
	comp=Z,52nm,0.6s							
AROD	**Rodeo**	**3.71**	**224**	*i* P		Pn	10 52 12.1	+3.6
AROD				*i* S		Sb	10 53 05.9	+4.1
ACCO	**Cerro Coronel**	**3.79**	**216**	*i* P		Pn	10 52 12.8	+3.2
ACCO				*e*S		Sg	10 53 11.6	-0.9
ACCO					IAML		10 53 14.2	
	comp=Z,63nm,0.9s							
TCA	**Tanti**	**4.13**	**157**	*i* P		Pn	10 52 17.3	+3.4
TCA				*i* S		Sg	10 53 23.8	+0.6
RTLL	**Cerro Villicun**	**4.16**	**204**	*i* P		Pn	10 52 17.9	+3.6
RTLL				*i* S		Sg	10 53 23.0	-1.4
RTLL					IAML		10 53 31.1	
	comp=Z,77nm,0.8s							
CFA	**Coronel Fontan**	**4.34**	**200**	*i* P		Pn	10 52 19.8	+3.1
CFA				*i* S		Sg	10 53 30.1	+0.3
RTCV	**Cerro Valdivia**	**4.67**	**202**	*i* P		Pn	10 52 24.6	+3.3
RTCV				*i* S		Sg	10 53 38.3	-2.3
RTCV					IAML		10 53 40.7	
	comp=Z,57nm,1.1s							
RTLS	**Leoncito**	**4.91**	**209**	*i* P		Pn	10 52 28.5	+3.7
RTLS				*i* S		Sg	10 53 47.4	-0.9
RTLS					IAML		10 53 52.0	
	comp=Z,18nm,0.8s							
MRA	**San Martin**	**4.91**	**172**	*i* P		Pn	10 52 27.2	+2.6
MRA					IAML		10 53 54.1	
	comp=Z,41nm,0.4s							
AUSP	**Uspallata**	**5.31**	**208**	*i* P		Pn	10 52 34.1	+3.7
ROC1	**El Roble**	**6.70**	**215**	*i* P		Pn	10 52 50.3	+1.0
ROC1				*i* S		Sg	10 54 38.5	-7.1

*GCG **26** 10:54:14.6±0.5, 15.°20N×91.°00W, h60km, MD3.6*
*SNET **26** 10:54:27.0±2.3, 14.°15N×90.°32W, h33km±77km, ML3.0*

ISC 26 10:54:10.9±3.2, 13.°6N±0.°2×91.°5W±0.°1, h35km, n11, σ3$70/12, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FUG	**Fuego 3**	**1.01**	**37**	*e*P		**Pn**	**10 54 30.5**	**+1.8**
STG3	**Santiaguito 3,**	**1.07**	**355**	*e*P		**Pn**	**10 54 29.8**	**+0.1**
STG3				*e*S		**Sn**	**10 54 42.0**	**-1.5**
PCG	**Pacaya**	**1.12**	**48**	*e*S		**Sn**	**10 54 45.7**	**+1.0**
IXG	**Ixpaco**	**1.13**	**62**	*e*P		**Pn**	**10 54 33.9**	**+3.6**
IXG	**Ixpaco**	**1.13**	**62**	*e*P		**Pn**	**10 54 33.3**	**+2.9**
HUEH	**Huehuetenango**	**1.68**	**359**	IAML			10 54 58.4	
	comp=Z,151nm,0.3s							
RTR	**El Retiro**	**1.79**	**81**	*e*P		**Pn**	**10 54 42.5**	**+3.1**
SBLS	**San Blas**	**1.80**	**83**	*e*P		**Pn**	**10 54 42.1**	**+2.4**
SBLS				*e*S		**Sn**	**10 54 53.0**	**-8.4**
SNJE	**San Jose**	**1.82**	**82**	*e*P		**Pn**	**10 54 42.6**	**+2.7**
MRL	**Marmol**	**2.25**	**50**	*e*P		**Pn**	**10 54 46.5**	**+0.7**
LFRS	**El Faro**	**2.34**	**90**	*e*P		**Pn**	**10 54 48.0**	**+1.1**

*DRS **26** 10:57:33.8±0.0, 41.°51N×44.°57E, h2km*
*ISK **26** 10:57:43.9, 41.°07N×44.°17E, h6km, ML3.7/9*
*IDC **26** 10:57:43.2±2.4, 40.°84N×43.°70E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.6/33, mbtmp3.8/8, ML2.8/2, MS3.0/2, Ms1 3.0/2, ms1mx2.4/39, Error ellipse: s-maj=41.6km s-min=14.5km az=51.0*
*TIF **26** 10:57:44.0, 41.°05N×44.°15E, h10km*
*DDA **26** 10:57:44.8, 41.°08N×44.°13E, h13km±1km, MW3.8*
*NSSP **26** 10:57:44.7, 41.°03N×44.°13E, h13km, Ms3.6*
*NORS **26** 10:57:45.0±0.0, 41.°24N×44.°13E, h1km, MPVA4.6*
*MOS **26** 10:57:45.7±1.1, 41.°06N×44.°15E, h9km, mb4.0/4, Error ellipse: s-maj=6.0km s-min=4.1km az=85.4*

ISC 26 10:57:45.1±0.8, 41.°05N±0.°01×44.°14E±0.°01, h12km±6km, n120, σ1$43/197, mb3.5/9, 20C-14D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
STE	**Stepanavan**	**0.18**	**105**	⇑*i*P		**Pg**	**10 57 49.4**	**+0.2**
STE				⇑*i*S		**Sg**	**10 57 52.4**	**+0.4**
KZRT	**Kazreti**	**0.39**	**29**	P		**Pg**	**10 57 52.4**	**-0.5**
KZRT				S		**Sg**	**10 57 57.6**	**-0.5**
KZRT	**Kazreti**	**0.39**	**29**	*i* P		**Pg**	**10 57 52.4**	**-0.5**
KZRT				*i* S		**Sg**	**10 57 57.4**	**-0.8**
KZRT	**Kazreti**	**0.39**	**29**	*e*PG		**Pg**	**10 57 52.4**	**-0.5**
KZRT				*e*S		**Sg**	**10 57 57.6**	**-0.5**
BGD	**Bogdanovka**	**0.47**	**298**	P		**Pg**	**10 57 53.4**	**-1.0**
BGD				S		**Sg**	**10 58 00.7**	**+0.1**
BGD	**Bogdanovka**	**0.47**	**298**	*e*PG		**Pg**	**10 57 53.3**	**-1.0**
BGD				*e*S		**Sg**	**10 58 00.6**	**+0.1**
EAK	**Akyaka**	**0.54**	**229**	*i* P		**Pg**	**10 57 55.3**	**-0.5**
EAK				*i* S		**Sg**	**10 58 03.2**	**+0.2**
EAK					IAML		10 58 08.0	
	comp=N,5μm,0.3s							
EAK					IAML		10 58 10.0	
	comp=E,9μm,0.6s							
AKH	**Akhalkalaki**	**0.61**	**307**	P		**Pg**	**10 57 56.7**	**-0.4**
AKH				S		**Sg**	**10 58 05.1**	**0.0**
AKH	**Akhalkalaki**	**0.61**	**307**	PG		**Pg**	**10 57 56.7**	**-0.4**
AKH				SG		**Sg**	**10 58 04.9**	**-0.2**
AKH	**Akhalkalaki**	**0.61**	**307**	*e*PG		**Pg**	**10 57 56.6**	**-0.4**
AKH				*e*S		**Sg**	**10 58 05.1**	**0.0**
ARUZ	**Aruch**	**0.76**	**183**	⇓*i*P		**Pg**	**10 57 59.4**	**-0.5**
ARUZ				⇓*i*S		**Sg**	**10 58 10.0**	**+0.1**
BTNK	**Botanikuri**	**0.81**	**38**	P		**Pg**	**10 57 59.7**	**-0.9**
BTNK				S		**Sg**	**10 58 10.8**	**-0.5**
BTNK	**Botanikuri**	**0.81**	**38**	*i* P		**Pg**	**10 57 59.7**	**-0.9**
BTNK				*i* S		**Sg**	**10 58 10.7**	**-0.5**
BTNK					IAML		10 58 11.0	
	comp=E,4μm,0.3s							
BTNK					IAML		10 58 11.0	
	comp=N,2μm,0.3s							
BTNK	**Botanikuri**	**0.81**	**38**	*e*PG		**Pg**	**10 57 59.7**	**-0.9**
BTNK				*e*S		**Sg**	**10 58 10.7**	**-0.5**

TBLG	**Delisi**	**0.82**	**33**	P		**Pg**	**10 57 60.0**	**-1.0**
TBLG				S		**Sg**	**10 58 11.2**	**-0.4**
TBLG	**Delisi**	**0.82**	**33**	PG		**Pg**	**10 57 59.9**	**-1.0**
TBLG				SG		**Sg**	**10 58 10.8**	**-0.8**
TBLG	**Delisi**	**0.82**	**33**	*i* P		**Pg**	**10 57 59.9**	**-1.0**
TBLG					IAML		10 58 11.0	
	comp=N,2μm,0.4s							
TBLG					IAML		10 58 12.0	
	comp=E,2μm,0.4s							
TBLG	**Delisi**	**0.82**	**33**	*e*PG		**Pg**	**10 57 59.9**	**-1.0**
TBLG				*e*S		**Sg**	**10 58 11.2**	**-0.4**
KAPZ	**Kaputan**	**0.84**	**150**	⇓*i*P		**Pg**	**10 58 00.8**	**-0.6**
KAPZ				⇑*i*S		**Sg**	**10 58 12.3**	**0.0**
BKRG	**Bakuriani**	**0.85**	**327**	P		**Pg**	**10 58 01.1**	**-0.5**
BKRG				S		**Sb**	**10 58 13.0**	**-0.4**
BKRG	**Bakuriani**	**0.85**	**327**	*e*PG		**Pg**	**10 58 01.1**	**-0.5**
BKRG				*e*S		**Sb**	**10 58 13.0**	**-0.4**
DIGO	**Kars**	**0.86**	**223**	*i* P		**Pg**	**10 58 01.1**	**-0.7**
DIGO				*i* S		**Sg**	**10 58 12.1**	**-0.9**
DIGO					IAML		10 58 16.0	
	comp=N,3μm,0.5s							
DIGO					IAML		10 58 18.0	
	comp=E,4μm,0.5s							
METS	**Metsamor**	**0.90**	**183**	*e*P		**Pg**	**10 58 01.9**	**-0.5**
METS				*e*S		**Sg**	**10 58 14.3**	**+0.2**
KARS	**Kars**	**0.91**	**243**	PG		**Pg**	**10 58 01.9**	**-0.8**
VNNZ	**Vanand**	**0.97**	**195**	⇓*i*P		**Pg**	**10 58 03.0**	**-0.8**
VNNZ				⇑*i*S		**Sg**	**10 58 16.4**	**-0.2**
DGRG	**David-gareji**	**1.01**	**66**	P		**Pb**	**10 58 04.2**	**-0.4**
DGRG				S		**Sn**	**10 58 19.0**	**-0.4**
DGRG	**David-gareji**	**1.01**	**66**	*e*PG		**Pb**	**10 58 04.2**	**-0.4**
DGRG				*e*S		**Sn**	**10 58 18.9**	**-0.4**
TASB	**TASBURUN-IGDIR**	**1.06**	**176**	PN		**Pb**	**10 58 04.8**	**-0.7**
NRKZ	**NAREK**	**1.12**	**159**	⇓*i*P		**Pb**	**10 58 05.6**	**-0.8**
NRKZ				⇑*i*S		**Sb**	**10 58 20.6**	**-0.3**
EPOS	**Posof**	**1.16**	**294**	*i* P		**Pb**	**10 58 06.8**	**-0.4**
EPOS				*i* S		**Sb**	**10 58 22.3**	**0.0**
EPOS					IAML		10 58 24.0	
	comp=N,2μm,0.4s							
EPOS					IAML		10 58 24.0	
	comp=E,808nm,0.4s							
IGDI	**IGDIR**	**1.18**	**182**	*i* P		**Pb**	**10 58 06.1**	**-1.3**
IGDI				*i* S		**Sb**	**10 58 21.1**	**-1.6**
IGDI					IAML		10 58 23.0	
	comp=E,645nm,0.5s							
IGDI					IAML		10 58 29.0	
	comp=N,506nm,0.9s							
GUDG	**Gudauri**	**1.44**	**10**	P		**Pn**	**10 58 10.2**	**-1.0**
GUDG				S		**Sn**	**10 58 30.0**	**-0.2**
GUDG	**Gudauri**	**1.44**	**10**	*i* Pg		**Pn**	**10 58 10.2**	**-1.0**
GUDG				*e*Sg		**Sn**	**10 58 30.0**	**-0.2**
GUDG	**Gudauri**	**1.44**	**10**	⇓*i*PG		**Pn**	**10 58 10.2**	**-1.0**
GUDG				*e*S		**Sn**	**10 58 30.0**	**-0.2**
SENK	**Senkaya-Erzuru**	**1.45**	**251**	PN		**Pn**	**10 58 11.6**	**+0.3**
DDFL	**Dedoflistskaro**	**1.54**	**74**	P		**Pg**	**10 58 14.6**	**-0.1**
DDFL				S		**Sg**	**10 58 38.8**	**+4.1**
DDFL	**Dedoflistskaro**	**1.54**	**74**	*i* P		**Pg**	**10 58 14.7**	**-0.1**
DDFL	**Dedoflistskaro**	**1.54**	**74**	*e*PG		**Pg**	**10 58 14.6**	**-0.1**
DDFL				*e*S		**Sg**	**10 58 38.8**	**+4.1**
TKB	**Tkibuli**	**1.56**	**327**	P		**Pb**	**10 58 13.8**	**-0.2**
TKB				S		**Sg**	**10 58 34.8**	**-0.6**
TKB	**Tkibuli**	**1.56**	**327**	*e*PG		**Pb**	**10 58 13.7**	**-0.2**
TKB				*e*S		**Sg**	**10 58 34.7**	**-0.6**
ONI	**Oni**	**1.63**	**342**	P		**Pb**	**10 58 14.5**	**-0.6**
ONI				S		**Sg**	**10 58 36.5**	**-0.9**
ONI	**Oni**	**1.63**	**342**	*i* Pg		**Pb**	**10 58 14.5**	**-0.6**
ONI				*e*Sg		**Sg**	**10 58 36.6**	**-0.8**
ONI	**Oni**	**1.63**	**342**	*e*PG		**Pb**	**10 58 14.4**	**-0.6**
ONI				*e*S		**Sg**	**10 58 36.5**	**-0.9**
DAGI	**Agillar**	**1.69**	**272**	*i* P		**Pb**	**10 58 16.4**	**+0.3**
DAGI				*i* S		**Sg**	**10 58 38.8**	**-0.5**
DAGI					IAML		10 58 40.0	
	comp=E,400nm,0.5s							
DAGI					IAML		10 58 40.0	
	comp=N,669nm,0.6s							
GANJ	**Gan

KMKR	**Kumukh**	**2.47**	**63**	⇑*i*	PN		**Pb**	**10 58 28.0**	**-1.5**
KMKR					*e*S		**Sb**	**10 59 01.0**	**+1.1**
KMKR					pmax	pmax			
	comp=Z,66nm,0.3s								
NCK	**Nalchik**	**2.48**	**351**	⇑	*i*PN		**Pb**	**10 58 28.7**	**-0.9**
GNBR	**Gunib**	**2.50**	**57**	⇑	*e*PN		**Pb**	**10 58 29.2**	**-0.8**
GNBR					*e*			10 59 02.0	
GNBR					pmax	pmax			
	comp=Z,86nm,0.7s								
GNBR					smax	smax			
	comp=N,461nm,1.1s								
VANB	**Van**	**2.52**	**194**		PN		**Pn**	**10 58 28.2**	**+2.3**
UNCR	**Uncukul**	**2.59**	**49**		*e*Pg		**Pb**	**10 58 30.0**	**-1.4**
	comp=N,164nm,0.7s								
UNCR					*e*Sg		**Sb**	**10 59 01.5**	**-1.7**
	comp=N,1μm,1.0s								
UNCR	**Uncukul**	**2.59**	**49**		*e*PN		**Pb**	**10 58 30.0**	**-1.4**
UNCR					*e*S		**Sb**	**10 59 01.5**	**-1.7**
UNCR					pmax	pmax			
	comp=Z,164nm,0.7s								
AKT	**Akhty**	**2.74**	**80**		*e*Pn		**Pb**	**10 58 32.3**	**-1.7**
AKT					*e*Sn		**Sb**	**10 59 08.2**	**+0.5**
AKT	**Akhty**	**2.74**	**80**		*e*PN		**Pn**	**10 58 30.6**	**+1.6**
AKT					*e*			10 58 36.7	
AKT					*e*S		**Sb**	**10 59 05.3**	**-2.3**
AKT					*e*			10 59 11.2	
AKT					*e*			10 59 19.8	
AKT					pmax	pmax			
	comp=Z,110nm,0.7s								
AKT					smax	smax			
	comp=N,566nm,0.4s								
AKT					smax	smax			
	comp=E,137nm,0.6s								
AKT					smax	smax			
	comp=N,413nm,0.4s								
AKT					MLR	MLR			
	comp=Z,36nm,1.0s								
DLMR	**Dylym**	**2.74**	**42**		*i* Pg		**Pb**	**10 58 34.0**	**-0.1**
	comp=Z,102nm,0.5s								
DLMR					*i* Sg		**Sb**	**10 59 10.0**	**+2.4**
	comp=Z,810nm,0.6s								
DLMR	**Dylym**	**2.74**	**42**		*i* PN		**Pb**	**10 58 34.0**	**-0.1**
DLMR					*i* S		**Sb**	**10 59 10.0**	**+2.4**
DLMR					pmax	pmax			
	comp=Z,102nm,0.5s								
DBC	**Dubki**	**2.81**	**45**	⇑	*e*PN		**Pb**	**10 58 36.4**	**+1.1**
DBC					*e*			10 59 13.5	
DBC					pmax	pmax			
	comp=Z,69nm,0.4s								
DBC					smax	smax			
	comp=N,236nm,0.9s								
KBZ	**Khabaz**	**2.83**	**341**		Pn		**Pn**	**10 58 32.7**	**+2.5**
	comp=N,2.9nm,0.3s,baz=153,slow=13,SNR=38								
KBZ					Pg		**Pg**	**10 58 37.6**	**-1.8**
	comp=N,14nm,0.3s,baz=163,slow=13,SNR=42								
KBZ					Lg	Lg		10 59 18.9	
	comp=N,2.4nm,0.3s,baz=256,slow=15,SNR=3.7								
DOMR	**Dombai**	**2.92**	**321**	⇓	*i*PN		**Pn**	**10 58 33.8**	**+2.2**
DOMR					pmax	pmax			
	comp=Z,21nm,0.2s								
KIV	**Kislovodsk**	**3.10**	**340**	⇑	*e*PN		**Pn**	**10 58 36.6**	**+2.7**
KIV					*i* S		**Sb**	**10 59 14.7**	**-3.3**
KIV					pmax	pmax			
	comp=Z,27nm,0.6s								
MAK	**Makhachkala**	**3.15**	**52**		*e*PN		**Pn**	**10 58 34.9**	**+0.4**
MAK					*e*			10 58 41.6	
MAK					*e*			10 59 13.2	
MAK					*e*			10 59 21.4	
MAK					pmax	pmax			
	comp=Z,120nm,0.4s								
MAK					smax	smax			
	comp=N,373nm,0.4s								
MAK					smax	smax			
	comp=E,303nm,0.5s								
MAK					smax	smax			
	comp=N,330nm,0.6s								
MAK					MLR	MLR			
	comp=Z,310nm,2.0s								
DRN	**Derbent**	**3.29**	**71**	⇑	*e*PN		**Pn**	**10 58 39.5**	**+3.1**
DRN					*e*			10 59 20.9	
DRN					pmax	pmax			
	comp=Z,86nm,0.6s								
DRN					smax	smax			
	comp=N,200nm,0.8s								
GOF	**Gofitskoye**	**4.09**	**349**	⇑	*e*PN		**Pg**	**10 59 05.7**	**+2.3**
GOF					*e*S		**Sg**	**10 59 56.8**	**+0.4**
GOF					pmax	pmax			
	comp=Z,122nm,0.6s								
GOF					smax	smax			
	comp=E,57nm,0.8s								
GOF					smax	smax			
	comp=N,96nm,0.7s								
SOC	**Sochi**	**4.15**	**309**		*e*PN		**Pn**	**10 58 50.2**	**+2.0**
SOC					*e*			10 59 39.2	
SOC					pmax	pmax			
	comp=Z,12nm,0.4s								
SOC					smax	smax			
	comp=N,59nm,1.1s								
SOC					MLR	MLR			
	comp=Z,75nm,7.0s								
AKTO	**Aktyubinsk**	**13.47**	**41**		LR	LR		11 06 53.8	
	comp=Z,28nm,20.0s,baz=225,slow=40								
AKTO	**Aktyubinsk**	**13.47**	**41**	⇓	P		**Pn**	**11 00 52.9**	**-3.0**
AKTO				⇑	S		**Sn**	**11 03 20.0**	**-5.5**
	comp=Z,2.2nm,0.7s								
	comp=Z,4.2nm,1.4s								
AB31	**Akbulak array**	**13.82**	**48**	⇓	P		**Pn**	**11 00 59.3**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=240,slow=12,SNR=5.8								
AB31				⇑	S		**Sn**	**11 03 28.4**	**-5.8**
	comp=Z,2.8nm,0.8s,baz=233,slow=22,SNR=7.5								
MLR	**Muntele Rosu**	**13.98**	**295**	⇓	P		Pn	11 00 53.3	-10
APE	**Apeiranthos**	**14.99**	**261**	⇑	*i*P		**P**	**11 01 21.7**	**-0.6**
APE					pmax	pmax			
	comp=Z,21nm,1.1s								
ARU	**Arti**	**18.03**	**27**		Pn		**Pn**	**11 01 53.9**	**-1.5**
	comp=Z,0.0nm,0.3s,baz=197,slow=11,SNR=6.8								
ARU	**Arti**	**18.03**	**27**	*d*	*i*P		**Pn**	**11 01 53.8**	**-1.5**
ARU					S		**Sn**	**11 05 12.9**	**-3.3**
ARU					pmax	pmax			
	comp=Z,5.0nm,0.7s								
KLMR	**Klimovskoe**	**20.04**	**353**		*e*P		**P**	**11 02 17.4**	**-0.2**
KLMR					pmax	pmax			
	comp=Z,12nm,1.4s								
KLMR	**Klimovskoe**	**20.04**	**353**		*e*Pn		**P**	**11 02 17.5**	**-0.2**
KLMR					AMP			11 02 26.3	
	comp=Z,12nm,1.4s								
BRVK	**Borovoye**	**21.35**	**47**	⇑	*i*P		**P**	**11 02 33.1**	**+1.2**
BRVK					pmax	pmax			
	comp=Z,1.0nm,0.6s								
BVAR	**Borovoye Array**	**21.39**	**47**		P		**P**	**11 02 33.5**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=230,slow=42,SNR=2.9								
AAK	**Ala-Archa**	**22.61**	**76**		P		**P**	**11 02 49.3**	**+3.5**
	comp=Z,0.8nm,0.3s,baz=220,slow=7.9,SNR=4.3								
FINES	**FINESS Array B**	**23.19**	**338**		P		**P**	**11 02 53.0**	**+1.6**
	comp=Z,1.0nm,0.6s,baz=137,slow=13,SNR=4.5								
FINES	**FINESS Array B**	**23.19**	**338**		P		**P**	**11 02 53.0**	**+1.6**
KURBB	**Kurchatov Arra**	**25.59**	**56**		P		**P**	**11 03 18.3**	**+4.4**
	comp=Z,1.4nm,0.7s,baz=267,slow=9.2,SNR=10.0								
KURK	**Kurchatov**	**25.67**	**56**	⇓	*i*P		**P**	**11 03 16.3**	**+1.7**
KURK					pmax	pmax			
	comp=Z,2.0nm,0.5s								
MKAR	**Makanchi Array**	**27.87**	**65**		P		**P**	**11 03 37.4**	**+2.8**
	comp=Z,0.4nm,0.6s,baz=280,slow=7.3,SNR=5.6								
ZALV	**Zalesovo Beam**	**29.92**	**51**		P		**P**	**11 03 56.9**	**+4.3**
	comp=Z,0.5nm,0.3s,baz=265,slow=11,SNR=3.8								
ZALV	**Zalesovo Beam**	**29.92**	**51**		*i* P		**P**	**11 03 56.2**	**+3.6**
ZALV					pmax	pmax			
	comp=Z,1.0nm,0.3s								
KSRS	**Korea Array**	**62.53**	**63**		LR	LR		11 38 27.6	
	comp=Z,22nm,20.1s,baz=192,slow=39								
YKA	**Yellowknife Ar**	**75.40**	**350**		P		**P**	**11 09 29.2**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=11,slow=5.8,SNR=5.0								

DDA 26 11:09:41.0, 39.06N×27.56E, h8km±7km, ML1.3, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AKHS	**Akhisar**	**0.27**	**132**	*i* P		Pg	11 09 46.0	-0.3
AKHS					IAML		11 09 50.0	
	comp=N,0.3nm,0.7s							
AKHS					IAML		11 09 58.0	
	comp=E,9.6nm,0.8s							
STEP	**BALIKESIR_Sava**	**0.34**	**22**	*i* P		Pg	11 09 46.9	-0.8
STEP					IAML		11 09 54.0	
	comp=E,13nm,0.6s							
STEP					IAML		11 09 55.0	
	comp=N,20nm,0.5s							
ZEDA	**zmir-Bergama**	**0.39**	**256**	*i* S		Sb	11 09 55.3	-1.0
DURS	**Dursunbey**	**0.89**	**53**	*i* P		Pg	11 09 57.2	-0.9
DURS					IAML		11 10 09.0	
	comp=N,14nm,1.2s							
DURS				*i* S		Sn	11 10 12.2	-1.0
DURS					IAML		11 10 29.0	
	comp=E,17nm,1.2s							
DEMI	**Demirci**	**0.90**	**91**	*i* P		Pn	11 09 59.7	-0.4
DEMI				*i* S		Sn	11 10 15.8	+2.4
DEMI					IAML		11 10 43.0	
	comp=N,72nm,1.4s							
DEMI					IAML		11 10 43.0	
	comp=E,116nm,1.7s							
URLA	**Izmir**	**1.03**	**227**	*i* P		Pb	11 10 01.4	+0.3
URLA				*i* S		Sn	11 10 18.5	+2.1
URLA					IAML		11 10 20.0	
	comp=E,6.5nm,0.8s							
URLA					IAML		11 10 26.0	
	comp=N,4.0nm,0.7s							
BAYC	**CANAKKALE_Bayr**	**1.04**	**311**	*i* P		Pg	11 10 00.8	-0.2
BAYC					IAML		11 10 15.0	
	comp=N,15nm,1.4s							
BAYC				*i* S		Sn	11 10 16.4	-0.2
BAYC					IAML		11 10 18.0	
	comp=E,9.4nm,0.5s							

ISK 26 11:09:51.3, 40.41N×26.16E, h17km±1km, ML1.2/5, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GELI	**Tayfur-Gelibol**	**0.24**	**92**	PG		Pb	11 09 57.1	0.0
GADA	**Gvkgeada**	**0.29**	**223**	PG		Pb	11 09 58.1	0.0
GADA				SG		Sb	11 10 02.9	+0.3
ENEZ	**Enez**	**0.33**	**359**	PG		Pb	11 09 58.6	-0.1
ERIK	**Erikli-Kesan**	**0.38**	**45**	PG		Pb	11 09 59.4	-0.1
BOZC	**Bozcaada**	**0.57**	**188**	PG		Pb	11 10 02.9	+0.1

IDC ***26*** *11:38:36.3±1.9, 5.39S×80.76W, h0km, mb3.6/5, mb1 3.9/7, mb1mx3.7/31, mbtmp3.7/7, ML3.3/2, MS3.6/11, Ms1 3.6/11, ms1mx3.4/31, Error ellipse: s-maj=67.0km s-min=21.5km az=40.0*

ISC 26 11:38:41.2±1.6, 5.4S±0.3×80.9W±0.3, h35km, n24, σ2.936/8, mb3.6/5, MS3.4/9, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ATAH	**Atahualpa**	**2.99**	**125**	Pn		**Pn**	**11 39 26.5**	**-0.1**
	2.8nm,0.3s,baz=305,slow=10,SNR=30							
ATAH				Sn		**Sn**	**11 40 05.2**	**+3.8**
	25nm,0.3s,baz=197,slow=7.2,SNR=6.2							
ROSC	**El Rosal**	**12.09**	**33**	LR		LR	11 46 47.2	
	comp=Z,350nm,18.4s,baz=164,slow=41							
LPAZ	**La Paz**	**16.51**	**132**	Pn		**Pn**	**11 42 29.4**	**-1.5**
	0.1nm,0.3s,baz=309,slow=10.0,SNR=6.2							
SDV	**Santo Domingo**	**17.48**	**36**	LR		LR	11 49 56.2	
	comp=Z,202nm,21.7s,baz=215,slow=39							
LVC	**Limon Verde**	**20.64**	**147**	LR		LR	11 50 04.8	
	comp=Z,91nm,21.5s,baz=331,slow=33							
PTGA	**Pitinga**	**21.36**	**78**	P		**P**	**11 43 25.6**	**-0.2**
	6.2nm,0.8s,baz=262,slow=12,SNR=8.7							
PTGA					LR	LR	11 52 46.2	
	comp=Z,307nm,19.6s,baz=252,slow=40							
SIV	**San Ignacio**	**22.08**	**120**	P		**P**	**11 43 30.9**	**-2.6**
	2.5nm,1.1s,baz=316,slow=15,SNR=6.4							
SIV					LR	LR	11 52 25.9	
	comp=Z,150nm,19.3s,baz=296,slow=38							
SJG	**San Juan**	**27.51**	**32**	LR		LR	11 57 06.0	
	comp=Z,64nm,19.9s,baz=227,slow=40							
H03N2	**Juan Fernandez**	**27.95**	**177**	T		T	12 12 51.6	
	baz=359							
H03N1	**Juan Fernandez**	**27.95**	**177**	T		T	12 12 58.1	
	baz=359,slow=74,SNR=4.9							
H03N3	**Juan Fernandez**	**27.97**	**177**	T		T	12 12 52.2	
	baz=359,slow=74,SNR=5.7							
MDP	**Montagnes des**	**30.05**	**70**	LR		LR	11 57 49.3	
	comp=Z,297nm,18.1s,baz=240,slow=38							
BDFB	**Brasilia**	**33.80**	**110**	LR		LR	11 59 56.9	
	comp=Z,224nm,18.7s,baz=296,slow=38							
TXAR	**Lajitas Array**	**40.91**	**329**	LR		LR	12 03 05.0	
	comp=Z,48nm,18.0s,baz=0.0,slow=36							
NVAR	**Mina Array Bea**	**55.74**	**325**	P		**P**	**11 48 16.9**	**+2.0**
	0.2nm,0.7s,baz=130,slow=6.5,SNR=1.6							
NVAR					LR	LR	12 11 07.3	
	comp=Z,48nm,18.4s,baz=271,slow=35							
YKA	**Yellowknife Ar**	**72.45**	**344**	P		**P**	**11 50 03.5**	**-0.3**
	0.4nm,0.8s,baz=129,slow=6.0,SNR=6.7							
TORD	**Torodi Ar. Bea**	**84.00**	**76**	P		**P**	**11 51 08.2**	**-0.6**
	1.0nm,0.9s,baz=245,slow=5.7,SNR=4.3							
NOA	**NORSAR Array B**	**95.70**	**29**	LR		LR	12 37 10.1	
	comp=Z,6.0nm,18.5s,baz=340,slow=37							
H11N3	**WAKE ISLAND Hyl**	**12.72**	**289**	T		T	13 59 28.3	
	baz=88,slow=75,SNR=17							
H11N2	**WAKE ISLAND Hyl**	**12.73**	**289**	T		T	13 59 29.6	
	baz=88,slow=75,SNR=18							
H11N1	**WAKE ISLAND Hyl**	**12.74**	**289**	T		T	13 59 32.2	
	baz=88,slow=75,SNR=24							
H11S2	**WAKE ISLAND Hyl**	**12.96**	**288**	T		T	13 59 42.1	
	baz=86,slow=71,SNR=38							
H11S1	**WAKE ISLAND Hyl**	**12.97**	**288**	T		T	13 59 45.6	
	baz=86,slow=71,SNR=35							
H11S3	**WAKE ISLAND Hyl**	**12.98**	**288**	T		T	13 59 46.9	
	baz=86,slow=71,SNR=40							

JMA ***26*** *11:43:57.1±0.1, 23.16N×121.58E, h5km±3km, M2.8*
TAP ***26*** *11:43:59.2, 23.18N×121.44E, h24km, ML3.0, B*

ISC 26 11:43:59.0±0.9, 23.18N±0.02×121.44E±0.02, h26km±5km, n93, σ0.962/156, 1C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHKT	**Chengkung**	**0.11**	**219**	P		**Pb**	**11 44 04.1**	**+0.3**
	baz=215							
CHKT				S		**Sb**	**11 44 07.3**	**+0.3**
	baz=215							
FULB	**Fuli**	**0.13**	**277**	*e*P		**Pb**	**11 44 04.0**	**-0.1**
	baz=277							
FULB				*e*S		**Sb**	**11 44 07.0**	**-0.5**
	baz=277							
TWF1	**Yuli**	**0.21**	**323**	⇑	*i*P	**Pb**	**11 44 04.7**	**-0.2**
	baz=323							
TWF1				S		**Sb**	**11 44 08.7**	**-0.3**
	baz=323							
YULB	**Yu-li**	**0.25**	**328**	P		**Pb**	**11 44 05.1**	**-0.3**
	baz=328							
YULB				S		**Sb**	**11 44 09.1**	**-0.6**
	baz=328							
HGSD	**Ruisui**	**0.31**	**358**	P		**Pb**	**11 44 05.8**	**-0.4**
	baz=357							
HGSD				*e*S		**Sb**	**11 44 11.3**	**+0.1**
	baz=357							
EHY	**Hungye**	**0.34**	**342**	P		**Pb**	**11 44 06.7**	**0.0**
	baz=342							
EHY				S		**Sb**	**11 44 12.0**	**0.0**
	baz=342							
ELDTW	**Lidau**	**0.39**	**271**	P		**Pb**	**11 44 07.0**	**-0.6**
	baz=270							
ELDTW				*e*S		**Sb**	**11 44 12.0**	**-1.3**
	baz=270							
TWH	**Lutao**	**0.47**	**176**	P		**Pb**	**11 44 09.3**	**+0.6**
	baz=175							
TWH				*e*S		**Sn**	**11 44 17.7**	**+0.1**
	baz=175							
EGFH	**Guangfu**	**0.48**	**359**	*e*P		**Pb**	**11 44 09.3**	**+0.2**
	baz=358							
EGFH				*e*S		**Sb**	**11 44 16.0**	**+0.2**
	baz=358							
TWGBT	**Beinan**	**0.49**	**222**	P		**Pb**	**11 44 08.7**	**-0.4**
	baz=222							
TWGBT				S		**Sb**	**11 44 15.8**	**-0.1**
	baz=222							
TWG	**Pinlang**	**0.49**	**223**	P		**Pb**	**11 44 09.0**	**-0.2**
	baz=222							
TWG				S		**Sb**	**11 44 15.9**	**-0.1**
	baz=222							
TTN	**Taitung**	**0.50**	**212**	*e*S		**Sb**	**11 44 16.9**	**+0.6**
	baz=211							
STYT	**Tauyuan**	**0.63**	**268**	P		**Pb**	**11 44 11.0**	**-0.5**
	baz=268							
STYT				S		**Sb**	**11 44 19.0**	**-0.9**
	baz=268							
ESL	**Shilin**	**0.63**	**360**	*e*P		**Pn**	**11 44 12.3**	**-0.1**
ESL				*e*S		**Sn**	**11 44 21.3**	**-0.3**
VWDT	**VWDT**	**0.63**	**334**	*e*P		**Pb**	**11 44 10.5**	**-1.0**
	baz=334							
VWDT				*e*S		**Sb**	**11 44 19.3**	**-0.7**
	baz=334							
ECL	**Taimali**	**0.73**	**218**	*e*P		**Pb**	**11 44 12.1**	**-1.1**
	baz=216							
ECL				*e*S		**Sb**	**11 44 21.2**	**-1.6**
	baz=216							
WHYT	**Xinyi Township**	**0.74**	**314**	P		**Pb**	**11 44 13.1**	**-0.3**
	baz=313							
WHYT				*e*S		**Sb**	**11 44 22.7**	**-0.4**
	baz=313							
SSLB	**Suanglung**	**0.75**	**324**	P		**Pb**	**11 44 12.6**	**-0.9**
	baz=323							
SSLB				*e*S		**Sb**	**11 44 22.9**	**-0.5**
	baz=323							
SLGT	**Liugui**	**0.75**	**256**	P		**Pb**	**11 44 13.7**	**+0.2**
	baz=255							
SLGT				*e*S		**Sb**	**11 44 23.4**	**0.0**
	baz=255							
TPUB	**Ta-pu**	**0.75**	**279**	P		**Pb**	**11 44 13.5**	**0.0**
	baz=278							
TPUB				S		**Sb**	**11 44 24.2**	**+0.7**
	baz=278							
SGST	**Jiashian**	**0.79**	**263**	P		**Pb**	**11 44 13.7**	**-0.5**
	baz=262							
SGST				S		**Sb**	**11 44 24.7**	**+0.1**
	baz=262							
CHN4	**Tsaushan**	**0.80**	**282**	*e*P		**Pn**	**11 44 14.9**	**+0.2**
	baz=282							
CHN4				*e*S		**Sb**	**11 44 24.7**	**+0.1**
	baz=282							
HWA	**Hwalien**	**0.81**	**11**	*e*S		**Sb**	**11 44 25.5**	**+0.5**
	baz=11							
CHN5	**Tsauling**	**0.81**	**301**	*e*P		**Pb**	**11 44 14.7**	**+0.2**
	baz=300							
CHN5				*e*S		**Sb**	**11 44 25.0**	**-0.2**
	baz=300							
CHN1	**Nanshi**	**0.84**	**270**	*e*P		**Pn**	**11 44 16.0**	**+0.7**
	baz=270							
CHN1				*e*S		**Sb**	**11 44 25.9**	**0.0**
	baz=270							
SMLT	**Sun Moon Lake**	**0.86**	**325**	*e*P		**Pb**	**11 44 14.3**	**-1.0**
	baz=325							
SSD	**Sandimen**	**0.86**	**240**	*e*P		**Pb**	**11 44 14.2**	**-1.2**
	baz=239							
SSD				*e*S		**Sb**	**11 44 26.9**	**+0.4**
	baz=239							
SNST	**Tainan City**	**0.87**	**273**	*e*P		**Pb**	**11 44 15.6**	**+0.2**
	baz=272							
SNST				*e*S		**Sn**	**11 44 27.5**	**0.0**
	baz=272							
TWK	**Hsinying**	**0.88**	**276**	P		**Pn**	**11 44 16.0**	**+0.2**
	baz=275							
TWK				*e*S		**Sb**	**11 44 27.1**	**0.0**
	baz=275							
TYC	**Yuchr**	**0.90**	**324**	P		**Pn**	**11 44 16.4**	**+0.4**
	baz=324							
TYC				*e*S		**Sb**	**11 44 27.7**	**+0.2**
	baz=324							
TWD	**Chiawan**	**0.91**	**9**	P		**Pb**	**11 44 15.8**	**-0.3**
	baz=9.0							
TWD				*e*S		**Sb**	**11 44 27.9**	**+0.1**
	baz=9.0							
CHGB	**Renai**	**0.91**	**345**	P		**Pb**	**11 44 15.3**	**-1.0**
	baz=344							
WJS	**Zhushan**	**0.91**	**314**	*e*P		**Pn**	**11 44 16.6**	**+0.3**
	baz=314							
WJS				*e*S		**Sb**	**11 44 28.1**	**+0.1**
	baz=314							
MASBT	**Mashibuluo**	**0.94**	**233**	*e*P		**Pb**	**11 44 16.1**	**-0.5**
	baz=232							
MASBT				*e*S		**Sb**	**11 44 28.7**	**+0.1**
	baz=232							
WGK	**Gukeng**	**0.95**	**302**	*e*S		**Sb**	**11 44 29.2**	**+0.2**
	baz=302							
TAW	**Tawu**	**0.96**	**212**	*e*P		**Pn**	**11 44 15.6**	**-1.2**
	baz=210							
TAW				*e*S		**Sb**	**11 44 28.5**	**-0.8**
	baz=210							
EAST	**Anshuo**	**0.96**	**215**	*e*P		**Pn**	**11 44 16.4**	**-0.5**
	baz=213							
DPDB	**Guoxing**	**0.97**	**331**	P		**Pn**	**11 44 17.1**	**0.0**
	baz=331							
DPDB				*e*S		**Sb**	**11 44 29.5**	**-0.2**
	baz=331							
WDLH	**Douliu**	**0.97**	**302**	*e*P		**Pb**	**11 44 18.7**	**+1.5**
	baz=301							
WDLH				*e*S		**Sn**	**11 44 31.6**	**+1.7**
	baz=301							
WHF	**Hehuan Shan**	**0.97**	**351**	P		**Pb**	**11 44 16.8**	**-0.7**
	baz=350							
WHF				*e*S		**Sb**	**11 44 30.0**	**-0.1**
	baz=350							
WNT	**Mingjian**	**0.98**	**315**	*e*P		**Pb**	**11 44 18.1**	**+0.7**
	baz=315							
WNT				*e*S		**Sb**	**11 44 30.2**	**+0.2**
	baz=315							
CHY	**Chiayi**	**0.98**	**289**	*e*P		**Pn**	**11 44 17.2**	**0.0**
	baz=288							
CHY				*e*S		**Sn**	**11 44 31.4**	**+1.1**
	baz=288							
NACB	**Ninganchiao**	**1.00**	**8**	*e*P		**Pn**	**11 44 15.8**	**-1.6**
	baz=8.0							
NACB				*e*S		**Sn**	**11 44 31.1**	**+0.4**
	baz=8.0							
TWM1	**Shoushan**	**1.00**	**249**	*e*S		**Sb**	**11 44 30.5**	**-0.1**
	baz=248							
ETLH	**Xiulin Townshi**	**1.02**	**2**	*e*P		**Pn**	**11 44 16.6**	**-1.2**
	baz=2.0							
ETLH				*e*S		**Sb**	**11 44 31.0**	**-0.2**
	baz=2.0							
SSPT	**Xinbi**	**1.06**	**229**	*e*P		**Pn**	**11 44 18.4**	**+0.1**
	baz=229							
SCZT	**Fangliau**	**1.10**	**223**	*e*P		**Pn**	**11 44 19.0**	**+0.2**
	baz=222							
SCZT				*e*S		**Sb**	**11 44 33.7**	**+0.3**
	baz=222							
TAI1	**Yung-k'ang**	**1.12**	**263**	*e*S		**Sn**	**11 44 33.9**	**+0.2**
	baz=262							
LAY	**Lan-yu**	**1.14**	**175**	*e*P		**Pn**	**11 44 19.5**	**+0.1**
	baz=174							
LAY				*e*S		**Sn**	**11 44 34.5**	**+0.2**
	baz=174							
WHP	**Taichung City**	**1.18**	**338**	*e*P		**Pn**	**11 44 20.3**	**+0.3**
	baz=337							
WHP				*e*S		**Sb**	**11 44 36.1**	**+0.4**
	baz=337							
TCU	**Taichung**	**1.19**	**324**	*e*P		**Pn**	**11 44 20.0**	**0.0**
	baz=324							
TCU				*e*S		**Sn**	**11 44 35.8**	**+0.4**
	baz=324							
WSF	**Szhu**	**1.21**	**292**	*e*S		**Sn**	**11 44 36.0**	**+0.2**
	baz=292							
RLNB	**Erlin**	**1.22**	**306**	*e*

	baz=2.0									
ENTT	**Nioudou**	**1.46**	**5**	*e*P		**Pn**	**11 44 24.5**	**+0.8**		
	baz=4.0									
ENTT				*e*S		**Sn**	**11 44 42.2**	**+0.2**		
	baz=4.0									
NMLH	**Miaoli**	**1.47**	**336**	*e*P		**Pn**	**11 44 24.2**	**+0.2**		
	baz=336									
NMLH				*e*S		**Sn**	**11 44 43.4**	**+0.9**		
	baz=336									
YHNB	**Yeheng**	**1.48**	**358**	*e*P		**Pn**	**11 44 25.1**	**+1.0**		
	baz=357									
NSTT	**Nanjuang**	**1.50**	**345**	*e*P		**Pn**	**11 44 24.8**	**+0.5**		
	baz=344									
NSTT				*e*S		**Sn**	**11 44 43.4**	**+0.3**		
	baz=344									
TWE	**Neicheng**	**1.55**	**8**	*e*P		**Pn**	**11 44 25.8**	**+0.8**		
	baz=8.0									
NWLT	**Wulai**	**1.59**	**2**	*e*P		**Pn**	**11 44 26.4**	**+0.9**		
	baz=2.0									
NWLT				*e*S		**Sn**	**11 44 45.3**	**0.0**		
	baz=2.0									
WDGT	**Dungji**	**1.64**	**273**	*e*P		**Pn**	**11 44 26.8**	**+0.6**		
	baz=272									
WDGT				*e*S		**Sn**	**11 44 46.6**	**+0.1**		
	baz=272									
EGS		**1.72**	**15**	*e*P		**Pn**	**11 44 28.4**	**+1.1**		
	baz=15									
PHUB	**P'eng-hu**	**1.75**	**281**	*e*S		**Sn**	**11 44 49.5**	**+0.4**		
	baz=280									
PNG	**Penghu**	**1.77**	**283**	*e*S		**Sn**	**11 44 49.8**	**0.0**		
	baz=282									
TIPB	**Shuangxi**	**1.82**	**11**	*e*P		**Pn**	**11 44 29.4**	**+0.6**		
	baz=11									
TIPB				*e*S		**Sn**	**11 44 50.6**	**-0.3**		
	baz=11									
VCHM	**Qimei**	**1.85**	**271**	*e*S		**Sn**	**11 44 52.1**	**+0.4**		
	baz=270									
JYNG	**Yonagunijimaku**	**1.87**	**47**	P		**Pn**	**11 44 30.1**	**+0.7**		
JYNG				*e*S		**Sn**	**11 44 52.6**	**+0.4**		
YOJ	**Yonaguni jima**	**1.92**	**48**	P		**Pn**	**11 44 30.8**	**+0.7**		
	baz=48									
YOJ				*e*S		**Sn**	**11 44 53.7**	**+0.2**		
	baz=48									
YOJ	**Yonaguni jima**	**1.92**	**48**	P		**Pn**	**11 44 31.3**	**+1.2**		
YOJ				*e*S		**Sn**	**11 44 54.0**	**+0.5**		
YM01	**YM01**	**1.96**	**3**	*e*P		**Pn**	**11 44 31.9**	**+1.2**		
	baz=3.0									
YM01				*e*S		**Sn**	**11 44 54.8**	**+0.3**		
	baz=3.0									
YM10	**YM10**	**1.97**	**3**	*e*S		**Sn**	**11 44 54.4**	**-0.4**		
	baz=3.0									
YM03	**YM03**	**1.99**	**3**	*e*S		**Sn**	**11 44 55.5**	**+0.2**		
	baz=2.0									
HATJ	**Hateruma jima**	**2.34**	**68**	*e*S		**Sn**	**11 45 03.2**	**-0.6**		
IRIF	**Iriomote-Funau**	**2.39**	**61**	P		**Pn**	**11 44 37.0**	**+0.4**		
IRIF				*e*S		**Sn**	**11 45 05.5**	**+0.4**		
VWUC	**VWUC**	**2.56**	**315**	*e*P		**Pn**	**11 44 38.9**	**0.0**		
	baz=314									
VWUC				*e*S		**Sn**	**11 45 08.6**	**-0.7**		
	baz=314									
JKRS	**Kuro-shima**	**2.58**	**65**	*e*S		**Sn**	**11 45 10.1**	**+0.4**		
JIJ	**Ishigaki jima**	**2.74**	**64**	S		**Sn**	**11 45 12.5**	**-1.2**		
PTTC	**Pingtan**	**2.77**	**327**	*e*S		**Sn**	**11 45 13.5**	**-0.7**		
	baz=326									
PTMZ	**Houxiangcun**	**2.81**	**312**	*e*P		**Pn**	**11 44 42.2**	**-0.1**		
	baz=311									
PTMZ				*e*S		**Sn**	**11 45 14.3**	**-1.1**		
	baz=311									
JISG	**Ishigakijimahi**	**2.98**	**61**	P		**Pn**	**11 44 45.1**	**+0.5**		
JISG				*e*S		**Sn**	**11 45 18.5**	**-1.1**		
MATB	**Ma-tsu**	**3.25**	**336**	*e*P		**Pn**	**11 44 48.5**	**+0.1**		
	baz=335									
MATB				*e*S		**Sn**	**11 45 25.6**	**-0.7**		
	baz=335									
JTJ	**Tarama**	**3.32**	**63**	*e*S		**Sn**	**11 45 28.4**	**+0.4**		
MHZQ	**Yeshan**	**3.64**	**323**	*e*P		**Pn**	**11 44 55.0**	**+1.2**		
	baz=322									
LYJJ	**Jianjiangzhen**	**3.68**	**336**	*e*S		**Sn**	**11 45 37.2**	**+0.3**		
	baz=335									

*WEL **26** 11:54:12.4,44˚S±2˚×171˚9E±1˚,0,h10km±1km, M3.6/36, ML3.9/7, MLv3.6/36, Error ellipse: s-maj=0.0km s-min=0.0km az=24.0*

ISC 26 11:54:13.0±1.1,43˚55S±0˚04×171˚93E±0˚03, h14km±9km, n65, σ1§26/70, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OXZ	**Oxford**	**0.24**	**19**	P	**Pg**	**11 54 18.2**	**+0.1**
OXZ				S	**Sg**	**11 54 21.7**	**+0.1**
MQZ	**McQueen's Vall**	**0.55**	**107**	P	**Pb**	**11 54 24.8**	**+0.4**
MQZ				S	**Sb**	**11 54 33.3**	**+1.3**
AMCZ	**Amberley**	**0.64**	**55**	P	**Pn**	**11 54 27.0**	**-0.8**
RPZ	**Rata Peaks**	**0.66**	**255**	P	**Pb**	**11 54 25.7**	**-0.6**
RPZ				S	**Sb**	**11 54 34.4**	**-1.0**
AKCZ	**Akaroa Harbour**	**0.78**	**115**	P	**Pb**	**11 54 29.3**	**+0.9**
LTZ	**Lake Taylor**	**0.81**	**18**	P	**Pn**	**11 54 29.1**	**-0.9**
LTZ				S	**Sb**	**11 54 40.0**	**+0.3**
OKCZ	**Okains Bay**	**0.84**	**102**	P	**Pn**	**11 54 30.5**	**+0.1**
INZ	**Inchbonnie**	**0.90**	**336**	P	**Pn**	**11 54 30.1**	**-1.1**
GVZ	**Greta Valley S**	**0.99**	**54**	P	**Pn**	**11 54 32.1**	**-0.5**
GVZ				S	**Sn**	**11 54 47.1**	**+0.7**
WVZ	**Waitaha Valley**	**0.99**	**298**	P	**Pn**	**11 54 33.4**	**+0.9**
LBZ	**Lake Benmore**	**1.51**	**236**	P	**Pn**	**11 54 39.6**	**-0.1**
FOZ	**Fox Glacier**	**1.54**	**270**	P	**Pb**	**11 54 40.7**	**-0.6**
KHZ	**Kahutara**	**1.64**	**47**	P	**Pn**	**11 54 40.9**	**-0.4**
ODZ	**Otahua Downs**	**1.76**	**211**	P	**Pn**	**11 54 42.3**	**-0.7**
DSZ	**Denniston Nort**	**1.81**	**357**	P	**Pn**	**11 54 43.6**	**-0.2**
THZ	**Tophouse**	**1.93**	**22**	P	**Pn**	**11 54 44.9**	**-0.5**
BSWZ	**Blackbirch Sta**	**2.33**	**39**	P	**Pn**	**11 54 51.0**	**+0.1**
JCZ	**Jackson Bay**	**2.34**	**256**	P	**Pn**	**11 54 51.4**	**+0.2**
WKZ	**Wanaka**	**2.46**	**238**	P	**Pn**	**11 54 52.1**	**-0.5**
CMWZ	**Cape Campbell**	**2.46**	**44**	P	**Pn**	**11 54 53.6**	**+0.8**
EAZ	**Earnscleugh**	**2.52**	**227**	P	**Pn**	**11 54 53.3**	**-0.3**
NNZ	**Nelson**	**2.57**	**25**	P	**Pn**	**11 54 54.3**	**+0.1**
TUWZ	**Tuamarina**	**2.59**	**36**	P	**Pn**	**11 54 54.2**	**-0.2**
QRZ	**Quartz Range**	**2.76**	**9**	P	**Pn**	**11 54 56.3**	**-0.5**
TCW	**Tory Channel**	**2.91**	**37**	P	**Pn**	**11 54 58.3**	**-0.6**
MSZ	**Milford Sound**	**3.10**	**247**	P	**Pn**	**11 55 03.4**	**+1.9**
DUWZ	**D'Urville Isla**	**3.12**	**29**	P	**Pn**	**11 55 02.0**	**+0.2**
PLWZ	**Palliser**	**3.15**	**52**	P	**Pn**	**11 55 01.1**	**-1.2**
MSWZ	**Moikau Station**	**3.25**	**50**	P	**Pn**	**11 55 02.1**	**-1.5**
MLZ	**Mavora Lakes**	**3.28**	**235**	P	**Pn**	**11 55 04.8**	**+0.8**
CAW	**Cannon Point**	**3.37**	**45**	P	**Pn**	**11 55 03.8**	**-1.5**
PAWZ	**Paruwai Farm**	**3.37**	**51**	P	**Pn**	**11 55 03.5**	**-1.8**
KIW	**Kapiti Island**	**3.48**	**40**	P	**Pn**	**11 55 05.8**	**-0.9**
MTW	**Mount Morrison**	**3.56**	**49**	P	**Pn**	**11 55 06.1**	**-1.8**
SYZ	**Scrubby Hill**	**3.58**	**213**	P	**Pn**	**11 55 07.9**	**-0.3**
OGWZ	**Otaki Gorge**	**3.64**	**42**	P	**Pn**	**11 55 07.5**	**-1.5**
WHZ	**Wether Hill Ro**	**3.68**	**229**	P	**Pn**	**11 55 08.6**	**-0.9**
HOWZ	**Holdsworth Sta**	**3.76**	**46**	P	**Pn**	**11 55 09.0**	**-1.6**
TMWZ	**Te Maipa**	**3.82**	**52**	P	**Pn**	**11 55 10.7**	**-0.7**
DCZ	**Deep Cove**	**3.92**	**239**	P	**Pn**	**11 55 15.4**	**+2.7**
MRZ	**Mangatainoka R**	**3.96**	**44**	P	**Pn**	**11 55 11.4**	**-2.0**
BFZ	**Birch Farm**	**4.30**	**50**	P	**Pn**	**11 55 16.3**	**-1.7**
APZ	**The Paps**	**4.30**	**219**	P	**Pn**	**11 55 17.4**	**-0.7**
NMEZ	**Namu Road**	**4.38**	**20**	P	**Pn**	**11 55 20.5**	**+1.4**
WAZ	**Wanganui**	**4.43**	**32**	P	**Pn**	**11 55 20.5**	**+0.7**
NBEZ	**Newall Road No**	**4.52**	**19**	P	**Pn**	**11 55 22.2**	**+1.2**
PREZ	**Palmer Road**	**4.53**	**22**	P	**Pn**	**11 55 22.2**	**+1.1**
DVHZ	**Dannevirke**	**4.53**	**46**	P	**Pn**	**11 55 18.5**	**-2.7**
KHEZ	**Kahui Hut**	**4.53**	**21**	P	**Pn**	**11 55 22.3**	**+1.0**
ANWZ	**Angora Road**	**4.58**	**49**	P	**Pn**	**11 55 20.7**	**-1.1**
TSZ	**Takapari Road**	**4.61**	**42**	P	**Pn**	**11 55 20.2**	**-2.1**
PKE	**Pukeiti**	**4.62**	**20**	P	**Pn**	**11 55 23.3**	**+0.8**
PNHZ	**Pukenui**	**4.84**	**43**	P	**Pn**	**11 55 23.5**	**-2.0**
VRZ	**Vera Road**	**4.91**	**27**	P	**Pn**	**11 55 26.6**	**+0.2**
WHVZ	**Whangaehu Hut**	**5.07**	**34**	P	**Pn**	**11 55 28.7**	**-0.2**
FWVZ	**Far West T-bar**	**5.08**	**34**	P	**Pn**	**11 55 28.8**	**-0.2**
BHHZ	**Black Hill Sta**	**5.11**	**39**	P	**Pn**	**11 55 28.0**	**-1.2**
WTVZ	**West Tongariro**	**5.22**	**33**	P	**Pn**	**11 55 32.3**	**+1.6**
HIZ	**Hauiti**	**5.50**	**25**	P	**Pn**	**11 55 35.1**	**+0.7**
BKZ	**Black Stump Fm**	**5.56**	**40**	P	**Pn**	**11 55 33.1**	**-2.3**
TOZ	**Tahuroa Road**	**6.42**	**26**	P	**Pn**	**11 55 47.5**	**+0.4**
MWZ	**Matawai**	**6.71**	**41**	P	**Pn**	**11 55 48.4**	**-2.8**
CNGZ	**Carnagh Statio**	**6.94**	**45**	P	**Pn**	**11 55 53.5**	**-0.7**
TWGZ	**Tauwhareparae**	**7.06**	**43**	P	**Pn**	**11 55 53.5**	**-2.5**
HAZ	**Te Kaha**	**7.30**	**39**	P	**Pn**	**11 55 56.5**	**-2.7**

*ANF **26** 12:16:05.9±0.8, 32˚13N×115˚64W, h13km±3km, ML2.6/14, Error ellipse: s-maj=6.3km s-min=2.8km az=24.0*

*NEIC **26** 12:16:06.5±1.5, 32˚10N±0˚01×115˚71W±0˚01, h14km±4km, Error ellipse: s-maj=2.4km s-min=1.0km az=225.0*
*PAS **26** 12:16:07.5±1.7, 32˚13N±0˚01×115˚72W±0˚02, h5km±6km, Error ellipse: s-maj=2.6km s-min=0.8km az=126.0*
*ECX **26** 12:16:07.8±0.7, 32˚10N×115˚71W, h6km±3km, MD2.7, ML2.9*
*MEX **26** 12:16:08.2±0.7, 32˚12N×115˚75W, h1km, MD3.6*

ISC 26 12:16:05.8±1.0, 32˚13N±0˚02×115˚72W±0˚02, h18km±8km, n71, σ0§95/115, 4C-2D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESJX	**Sierra Juarez**	**0.23**	**238**	*i* P	**Pb**	**12 16 12.1**	**+0.9**
ESJX				*e*S	**Sb**	**12 16 15.4**	**+0.7**
ESJX	**Sierra Juarez**	**0.23**	**238**		**Pb**	**12 16 12.1**	**+0.9**
CPBX	**Cerro Prieto**	**0.46**	**50**	*e*P	**Pn**	**12 16 16.2**	**-1.2**
CPBX				*e*S	**Sb**	**12 16 22.5**	**+0.6**
CPBX				IAML		12 16 26.0	
	comp=E,4μm,0.4s						
CPBX				⇑*e*		12 16 26.0	
CPBX				⇑*e*		12 16 27.7	
CPBX				IAML		12 16 27.7	
	comp=N,3μm,0.2s						
CPBX	**Cerro Prieto**	**0.46**	**50**		**Pn**	**12 16 16.2**	**-1.2**
ERMX	**Rumorosa**	**0.50**	**329**	*e*P	**Pn**	**12 16 17.0**	**-1.1**
ERMX				*e*S	**Sb**	**12 16 24.1**	**+1.0**
ERMX				IAML		12 16 24.2	
	comp=N,506nm,0.2s						
ERMX				⇓*e*		12 16 24.2	
MBIG	**Mexicali**	**0.53**	**58**	*e*P	**Pn**	**12 16 17.5**	**-0.8**
MBIG	**Mexicali**	**0.53**	**58**	*e*P	**Pb**	**12 16 16.3**	**-0.2**
MBIG				*e*P	**Pn**	**12 16 17.5**	**-0.8**
MBIG				*i* S	**Sn**	**12 16 24.8**	**-2.0**
MBIG				*e*S	**Sb**	**12 16 26.4**	**+2.7**
MBIG				*i* S	**Sg**	**12 16 26.7**	**+3.2**
RMX	**La Rumorosa**	**0.56**	**328**		**Pb**	**12 16 17.0**	**-0.2**
RMX					**Sg**	**12 16 23.7**	**-1.0**
IKP	**In-Ko-Pah, Jac**	**0.62**	**328**	*e*P	**Pn**	**12 16 19.1**	**-0.6**
IKP	**In-Ko-Pah, Jac**	**0.62**	**328**	P	**Pn**	**12 16 19.1**	**-0.6**
	baz=148,SNR=18						
IKP				S	**Sb**	**12 16 27.3**	**+1.0**
	baz=148						
IKP	**In-Ko-Pah, Jac**	**0.62**	**328**		**Pn**	**12 16 19.0**	**-0.7**
IKP					**Sb**	**12 16 27.3**	**+1.0**
WESC	**Westside Schoo**	**0.63**	**359**	*e*P	**Pn**	**12 16 18.8**	**-1.0**
WESC	**Westside Schoo**	**0.63**	**359**		**Pn**	**12 16 18.8**	**-1.0**
WESC					**Sn**	**12 16 29.9**	**+0.5**
COK2	**Cook Ranch 2**	**0.72**	**360**		**Pn**	**12 16 21.6**	**+0.5**
COK2					**Sn**	**12 16 32.6**	**+0.9**
VTX	**Valle De La Tr**	**0.73**	**184**	*e*P	**Pb**	**12 16 20.3**	**+0.3**
VTX				*e*S	**Sb**	**12 16 29.9**	**+0.2**
SNR	**Schaffner Ranc**	**0.77**	**18**		**Pn**	**12 16 22.3**	**+0.6**
SNR					**Sn**	**12 16 34.2**	**+1.3**
CBX	**Cerro Bola**	**0.82**	**284**	⇑*i* P	**Pn**	**12 16 22.8**	**+0.3**
CBX				*e*S	**Sn**	**12 16 34.2**	**0.0**
CBX	**Cerro Bola**	**0.82**	**284**	*e*P	**Pn**	**12 16 22.4**	**-0.1**
CBX				*i* S	**Sn**	**12 16 34.2**	**0.0**
CBX	**Cerro Bola**	**0.82**	**284**		**Pn**	**12 16 22.8**	**+0.3**
CBX					**Sn**	**12 16 33.7**	**-0.4**
SWSC	**Sam W. Stewart**	**0.82**	**356**	*e*P	**Pn**	**12 16 22.7**	**+0.3**
SWSC	**Sam W. Stewart**	**0.82**	**356**	P	**Pn**	**12 16 22.9**	**+0.5**
	baz=175,SNR=22						
SWSC				S	**Sn**	**12 16 34.6**	**+0.5**
	baz=175						
SWSC	**Sam W. Stewart**	**0.82**	**356**		**Pn**	**12 16 22.9**	**+0.5**
CCX	**Cicese**	**0.84**	**252**		**Pn**	**12 16 23.3**	**+0.6**
TJIG	**Tijuana**	**0.86**	**291**	*i* P	**Pn**	**12 16 23.2**	**+0.2**
TJIG				*i* S	**Sn**	**12 16 34.6**	**-0.5**
ECBX	**El Chinero**	**0.87**	**138**	⇓*e*P	**Pg**	**12 16 22.2**	**-0.5**
ECBX				*e*S	**Sg**	**12 16 33.8**	**-0.3**
TKX	**Tecate**	**0.87**	**301**		**Pn**	**12 16 23.3**	**+0.2**
TKX					**Sn**	**12 16 34.8**	**-0.6**
CBKC	**Canebrake**	**0.89**	**330**		**Pn**	**12 16 24.4**	**+1.0**
MONP2	**Monument Peak**	**0.97**	**323**	*e*P	**Pn**	**12 16 25.4**	**+0.8**
MONP2	**Monument Peak**	**0.97**	**323**	P	**Pn**	**12 16 25.5**	**+0.8**
	baz=142,SNR=62						
MONP2				S	**Sn**	**12 16 38.3**	**+0.3**
	baz=142						
MONP2	**Monument Peak**	**0.97**	**323**		**Pn**	**12 16 25.5**	**+0.8**
MONP2					**Sn**	**12 16 38.2**	**+0.3**
BAR	**Barrett**	**0.97**	**305**	*e*P	**Pn**	**12 16 25.3**	**+0.7**
BAR	**Barrett**	**0.97**	**305**		**Pn**	**12 16 25.2**	**+0.7**
BAR				Sg	**Sn**	**12 16 38.1**	**+0.1**
SPIG	**San Pedro Mart**	**1.10**	**168**	*e*P	**Pg**	**12 16 26.9**	**-0.3**
SPIG	**San Pedro Mart**	**1.10**	**168**	*e*P	**Pg**	**12 16 26.8**	**-0.3**
SPIG				*i* S	**Sb**	**12 16 40.8**	**+0.3**
SPX	**San Pedro Mart**	**1.11**	**168**	*e*P	**Pg**	**12 16 26.7**	**-0.5**
SPX				*e*S	**Sn**	**12 16 41.7**	**+0.1**
SPX	**San Pedro Mart**	**1.11**	**168**	*e*P	**Pg**	**12 16 26.8**	**-0.5**
SPX				*i* S	**Sn**	**12 16 41.8**	**+0.1**
SPX	**San Pedro Mart**	**1.11**	**168**		**Pg**	**12 16 26.9**	**-0.5**
OLP	**Otay Lakes Par**	**1.13**	**296**	*e*P	**Pg**	**12 16 27.8**	**+0.1**
OLP	**Otay Lakes Par**	**1.13**	**296**		**Pg**	**12 16 27.7**	**+0.1**
OLP					**Sg**	**12 16 42.9**	**+0.4**
TJX	**Tijuana**	**1.19**	**289**		**Pg**	**12 16 29.2**	**+0.4**
GLA	**Glamis**	**1.20**	**39**	P	**Pb**	**12 16 27.6**	**-0.3**
	baz=220,SNR=13						
GLA				S	**Sn**	**12 16 42.9**	**-0.5**
	baz=220						
GLA	**Glamis**	**1.20**	**39**		**Pb**	**12 16 27.6**	**-0.3**
GLA					**Sb**	**12 16 42.6**	**-0.4**
SDRC	**San Diego Road**	**1.20**	**301**	*e*P	**Pg**	**12 16 28.9**	**-0.1**
SDRC	**San Diego Road**	**1.20**	**301**		**Pg**	**12 16 28.9**	**-0.1**
SDRC					**Sg**	**12 16 44.5**	**-0.2**
EML	**El Monte Cty P**	**1.22**	**309**	*e*P	**Pg**	**12 16 29.4**	**0.0**
EML	**El Monte Cty P**	**1.22**	**309**		**Pg**	**12 16 29.4**	**0.0**
EML					**Sg**	**12 16 45.1**	**-0.2**
SFX	**San Felipe**	**1.32**	**145**	*e*P	**Pb**	**12 16 29.4**	**-0.5**
SFX				*e*S	**Sb**	**12 16 46.6**	**+0.2**
SFX	**San Felipe**	**1.32**	**145**		**Pb**	**12 16 29.6**	**-0.3**
HWB	**Hans Werner Br**	**1.38**	**311**		**Pg**	**12 16 32.1**	**-0.3**
109C	**Camp Elliot, M**	**1.39**	**304**	P	**Pg**	**12 16 32.2**	**-0.5**
	baz=123,SNR=20						
109C				S	**Sg**	**12 16 50.3**	**-0.6**
	baz=123						
109C	**Camp Elliot, M**	**1.39**	**304**		**Pg**	**12 16 32.2**	**-0.5**
109C				Sn	**Sg**	**12 16 50.3**	**-0.6**
CPE	**Camp Elliot**	**1.39**	**304**		**Pg**	**12 16 32.2**	**-0.5**
BC3	**Big Chuckawall**	**1.54**	**8**	P	**Pb**	**12 16 33.2**	**-0.7**
	baz=188						
TPFO	**Pinon Flats**	**1.60**	**338**	P	**Pb**	**12 16 34.9**	**+0.1**
	baz=157,SNR=10						
TPFO				S	**Sg**	**12 16 57.8**	**+0.3**
	baz=157						
XPFO	**Pion Flat**	**1.60**	**338**		**Pb**	**12 16 34.3**	**-0.6**
XPFO				Sn	**Sg**	**12 16 57.3**	**-0.4**
PFO	**Pinyon Flats O**	**1.61**	**338**	P	**Pb**	**12 16 34.7**	**-0.3**
	baz=157,SNR=11						
PFO				S	**Sg**	**12 16 57.7**	**0.0**
	baz=157						
PFO	**Pinyon Flats O**	**1.61**	**338**		**Pb**	**12 16 34.2**	**-0.8**
PFO				Sn	**Sg**	**12 16 57.4**	**-0.3**
GORC	**Green Oak Ranc**	**1.63**	**309**		**Pg**	**12 16 36.4**	**-0.8**
113A	**Mohawk Valley,**	**1.77**	**68**		**Pn**	**12 16 36.1**	**+0.6**
Y12C	**Blythe**	**1.91**	**32**		**Pn**	**12 16 38.9**	**-1.2**
MURC	**Murrieta**	**1.92**	**320**	Sb	**Sg**	**12 17 07.2**	**-0.6**
	baz=140						
BBRC	**Big Bear Solar**	**2.36**	**335**	Sb	**Sg**	**12 17 21.7**	**0.0**
	baz=154						
214A	**Organ Pipe Nat**	**2.48**	**93**	Pn	**Pn**	**12 16 45.3**	**0.0**
	baz=275						
214A				Pb	**Pb**	**12 16 49.9**	**+0.1**
	baz=275						
214A				S	**Sn**	**12 17 14.1**	**-1.0**
	baz=275						
214A	**Organ Pipe Nat**	**2.48**	**93**	*e*P	**Pn**	**12 16 45.3**	**0.0**
214A				*i* S	**Sn**	**12 17 13.6**	**-1.5**
214A	**Organ Pipe Nat**	**2.48**	**93**		**Pn**	**12 16 46.0**	**+0.8**
CIS	**Catalina Islan**	**2.60**	**300**	P	**Pb**	**12 16 49.4**	**-2.5**
	baz=119						
CIS				S	**Sb**	**12 17 22.1**	**-1.4**
	baz=119						
BFSC	**Mount Baldy Ra**	**2.66**	**323**	Pb	**Pb**	**12 16 54.0**	**+1.0**
	baz=142						
BFSC				Sb	**Sg**	**12 17 28.5**	**-2.9**
	baz=142						
Y14A	**Wickenburg**	**2.91**	**51**		**Pn**	**12 16 53.4**	**+2.2**
EDW2	**Edwards Air Fo**	**3.34**	**326**	Sb	**Sg**	**12 17 50.7**	**-2.4**
	baz=145						
ISA	**Isabella, Lake**	**4.21**	**328**	Pn	**Pn**	**12 17 12.0**	**+3.0**
TPNV	**Topopah Spring**	**4.83**	**355**	Pn	**Pn**	**12 17 19.7**	**+2.0**

*MAN **26** 12:16:16.0,5˚65N×126˚44E, h22km, mb4.9, ML3.8, MS3.8*
*NEIC **26** 12:16:21.1±1.6,6˚01N±0˚05×126˚33E±0˚07, h58km±8km, mb4.3/21, Error ellipse: s-maj=11.0km s-min=6.9km az=66.0*
*IDC **26** 12:16:22.8±1.5,5˚96N×126˚40E, h70km±13km, mb3.7/11, mb1 3.9/12, mb1mx3.6/47, mbtmp4.0/12, MS3.2/2, Ms1 3.2/2, ms1mx2.6/32, Error ellipse: s-maj=39.9km s-min=10.9km az=65.0*
*DJA **26** 12:16:24.5±0.8,6˚N±6˚×12˚6E±˚, h47km±9km, M4.5/13, mb4.6/13, mB5.0/5, MLv4.6/7, Mw(mB)4.3/5*

ISC 26 12:16:22.5±0.9, 5˚94N±0˚04×126˚35E±0˚07, h68km±9km, n63, σ1§67/71, mb4.2/20, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.65**	**284**	*e*P	Pn	12 16 32.1	-4.7
MATI	**Mati**	**1.00**	**355**	*e*P	**Pn**	**12 16 37.9**	**-3.1**
MATI				*e*S	**Sn**	**12 16 55.9**	**+1.2**
DAV	**Davao City (W)**	**1.36**	**326**	P	**Pn**	**12 16 44.6**	**-1.0**
	71nm,0.3s,baz=155,slow=1.9,SNR=6.8						
DAV				S	**Sn**	**12 17 03.6**	**+0.7**
	164nm,0.3s,baz=238,slow=22,SNR=7.9						
DAV	**Davao City (W)**	**1.36**	**326**		**Pn**	**12 16 43.6**	**-1.9**
DAV				Sn	**Sn**	**12 16 58.4**	**-4.5**
DMPH	**Davao City--Mi**	**1.41**	**324**	⇑*e*P	**Pn**	**12 16 46.6**	**+0.4**
DMPH				*e*S	**Sn**	**12 17 09.1**	**+5.1**
KCP	**Kidapawan**	**1.64**	**310**	⇓*i* P	**Pn**	**12 16 46.5**	**-2.8**
KCP				*i* S	**Sn**	**12 17 11.7**	**+2.1**
SKMP	**Bagumbayan, Su**	**1.88**	**288**	*e*P	**Pn**	**12 16 49.9**	**-2.7**
SKMP				*e*S	**Sn**	**12 17 15.5**	**0.0**
BUKP	**Musuan**	**2.31**	**327**	*e*P	**Pn**	**12 16 57.1**	**-1.3**
BUKP				*e*S	**Sn**	**12 17 24.4**	**-1.4**
CTBH	**Cotabato--PC H**	**2.44**	**301**	⇓*i* P	**Pn**	**12 16 58.7**	**-1.5**
CGP	**Cagayan de Oro**	**2.99**	**327**	⇓*e*P	**Pn**	**12 17 10.7**	**+3.1**
CGP				*e*S	**Sn**	**12 17 47.3**	**+5.1**
PAGZ	**Pagadian**	**3.50**	**303**	*e*P	**Pn**	**12 17 13.4**	**-1.2**
MSLP	**Maasin**	**4.42**	**341**	*e*P	**Pn**	**12 17 28.5**	**+1.4**
TNTI	**Ternate**	**5.24**	**169**	P	**Pn**	**12 17 38.9**	**+0.6**
	0.2nm908nm53nm,0.5s						
TNTI	**Ternate**	**5.24**	**169**		**Pn**	**12 17 37.7**	**-0.6**
TNTI				Sn	**Sn**	**12 18 38.0**	**+0.6**
KMSI	**Cibinong**	**5.83**	**204**	P	**Pn**	**12 17 46.3**	**-0.2**
	0.4nm2μm133nm,0.7s						
LBMI	**Labuha**	**6.64**	**170**	P	**Pn**	**12 17 58.5**	**+1.0**
	0.3nm45nm,1.0s						
LUWI	**Luwuk**	**7.80**	**207**	P	**Pn**	**12 18 14.9**	**+1.5**
	0.7nm119nm,0.7s						
LUWI	**Luwuk**	**7.80**	**207**		**Pn**	**12 18 13.5**	**0.0**
LUWI				Sn	**Sn**	**12 19 42.2**	**+1.9**
APSI	**Ampana**	**8.27**	**215**	P	**Pn**	**12 18 20.5**	**+0.7**
	491nm30nm,0.5s						
SIJI	**Sorong**	**8.36**	**144**	P	**Pn**	**12 18 21.7**	**+0.6**
	1.8nm,0.3s,baz=347,slow=14,SNR=4.2						
MPSI	**Mapaga**	**8.51**	**229**	P	**Pn**	**12 18 23.0**	**-0.1**
	8.0nm,0.7s						
NLAI	**Namlea**	**9.15**	**175**	P	**Pn**	**12 18 29.8**	**-2.1**
	764nm32nm,0.6s						
TGY	**Tagaytay City**	**9.70**	**327**	LR	LR	12 23 21.0	
	comp=Z,83nm,18.4s,baz=285,slow=43						
KKM	**Kota Kinabalu**	**10.08**	**271**	Pn	**

MLSI	**Meulaboh, Aceh**	**1.79**	**18**	P		**Pn**	**12 23 28.1**	**-0.7**	
MLSI				S		**Sb**	**12 23 52.3**	**-1.3**	
GSI	**Gunungsitoli**	**2.12**	**126**	P		**Pn**	**12 23 33.8**	**+0.4**	
GSI	**Gunungsitoli**	**2.12**	**126**			**Pn**	**12 23 33.8**	**+0.4**	
GSI				Sn		**Sn**	**12 23 58.2**	**-0.8**	
KCSI	**Kotacane, Aceh**	**2.15**	**63**	P		**Pn**	**12 23 34.0**	**+0.3**	
KCSI				S		**Sb**	**12 24 02.2**	**-1.7**	
TSI	**Tuntungan**	**2.87**	**71**	P		**Pn**	**12 23 45.0**	**+1.4**	
LHMI	**Lhok Sumawe**	**2.87**	**22**	P		**Pn**	**12 23 44.9**	**+1.2**	
LHMI	**Lhok Sumawe**	**2.87**	**22**			**Pn**	**12 23 44.6**	**+0.9**	
RPSI	**Rantau Prapat**	**3.07**	**87**			**Pn**	**12 23 47.3**	**+0.9**	
PSI	**Prapat**	**3.08**	**85**	Pn		**Pn**	**12 23 47.3**	**+0.7**	
	15nm,0.3s,baz=356,slow=1.1,SNR=77								
PSI				LR		LR	12 25 19.9		
	comp=Z,2µm,18.6s,baz=270,slow=47								
PBSI	**Pulau Batu**	**3.55**	**137**	P		**Pn**	**12 23 53.8**	**+0.8**	
MNSI	**Mandailing Nat**	**4.12**	**115**	P		**Pn**	**12 24 01.9**	**+1.1**	
SISI	**Saibi**	**5.03**	**140**	P		**Pn**	**12 24 13.8**	**+0.4**	
	0.4nm50nm,1.2s								
KULM	**Kulim**	**5.50**	**60**			**Pn**	**12 24 20.1**	**+0.2**	
KULM	**Kulim**	**5.50**	**60**	P		**Pn**	**12 24 20.0**	**+0.1**	
IPM	**Ipoh**	**5.51**	**70**			**Pn**	**12 24 20.4**	**+0.4**	
IPM	**Ipoh**	**5.51**	**70**	P		**Pn**	**12 24 21.0**	**+1.0**	
IPM	**Ipoh**	**5.51**	**70**	P		**Pn**	**12 24 21.0**	**+1.0**	
BKNI	**Bangkinang**	**5.64**	**113**	P		**Pb**	**12 24 35.1**	**-2.1**	
BKNI	**Bangkinang**	**5.64**	**113**	Pn		**Pn**	**12 24 21.8**	**0.0**	
KRJI	**Kerinci**	**7.26**	**129**	P		Pn	12 24 49.4	+5.2	
MYKOM	**Kota Tinggi**	**8.03**	**95**			**Pn**	**12 24 54.6**	**-0.1**	
MYKOM	**Kota Tinggi**	**8.03**	**95**	P		**Pn**	**12 24 55.0**	**+0.4**	
MNAI	**Manna**	**9.88**	**134**	P		**Pn**	**12 25 20.1**	**+0.1**	
	236nm,1.3s								
MNAI	**Manna**	**9.88**	**134**	Pn		**Pn**	**12 25 20.4**	**+0.4**	
LHSI	**Lahat**	**9.95**	**130**	P		**Pn**	**12 25 21.5**	**+0.6**	
	61nm,0.8s								
MDSI	**Maura Dua**	**10.87**	**130**	P		**Pn**	**12 25 33.1**	**-0.5**	
	55nm,0.6s								
KSM	**Kuching**	**14.49**	**94**			**Pn**	**12 26 24.4**	**+1.4**	
LEM	**Lembang**	**14.99**	**128**	LR		LR	12 33 11.4		
	comp=Z,502nm,20.1s,baz=298,slow=41								
CM31	**Chiang Mai Arr**	**16.09**	**11**			**Pn**	**12 26 43.7**	**-0.5**	
CMAR	**Chiang Mai Arr**	**16.09**	**11**	Pn		**Pn**	**12 26 43.0**	**-1.3**	
	0.9nm,0.3s,baz=198,slow=13,SNR=28								
CMAR				LR		LR	12 32 55.0		
	comp=Z,279nm,20.6s,baz=240,slow=37								
SBUM	**Sibu**	**16.35**	**90**			**Pn**	**12 26 47.8**	**+0.3**	
SBUM	**Sibu**	**16.35**	**90**	P		**Pn**	**12 26 45.0**	**-2.6**	
CHTO	**Chiang Mai**	**16.44**	**10**			**Pn**	**12 26 47.4**	**-1.3**	
KKM	**Kota Kinabalu**	**20.60**	**80**	P		**P**	**12 27 37.4**	**+0.3**	
KKM				IAmb		IAmb	12 27 41.2		
	comp=Z,25nm,0.8s								
QIZ	**Qiongzhong**	**21.35**	**39**	P		**P**	**12 27 44.3**	**-0.7**	
QIZ				S		**S**	**12 31 42.5**	**+1.5**	
QIZ				sS		**pS**	**12 31 55.0**	**+2.5**	
QIZ				pmax		pmax			
	comp=Z,110nm,4.3s								
QIZ				LR		LR			
	comp=N,560nm,16.7s								
QIZ				LR		LR			
	comp=E,700nm,16.2s								
QIZ				LR		LR			
	comp=Z,370nm,20.6s								
KOHI	**KOHIMA**	**23.09**	**356**	*e*P		**P**	**12 28 02.1**	**-1.5**	
KOHI				IAmb		IAmb	12 28 05.5		
	comp=Z,14nm,0.4s								
SHL	**Shillong**	**23.20**	**351**	*e*P		**P**	**12 28 01.7**	**-3.1**	
SHL				IAmb		IAmb	12 28 05.9		
	comp=Z,20nm,0.5s								
SHL	**Shillong**	**23.20**	**351**	P		**P**	**12 28 01.9**	**-2.9**	
SHL				IAmb		IAmb	12 28 06.0		
	comp=Z,24nm,0.6s								
BOK	**Bokaro**	**23.21**	**336**	*e*P		**P**	**12 28 05.3**	**+0.5**	
BOK				IAmb		IAmb	12 28 09.3		
	comp=Z,85nm,1.3s								
KMI	**Kunming**	**23.40**	**16**	P		**P**	**12 28 08.5**	**+1.6**	
KMI				pP		sP	12 28 18.3	+1.1	
KMI				sP		pP	12 28 23.5	+9.5	
KMI				S		**S**	**12 32 18.0**	**-0.8**	
KMI				sS		Sn	12 32 35.3	-3.2	
KMI				pmax		pmax			
	comp=Z,19nm,1.2s								
KMI				pmax		pmax			
	comp=Z,96nm,4.8s								
KMI				LR		LR			
	comp=N,470nm,15.0s								
KMI				LR		LR			
	comp=E,220nm,12.1s								
KMI				LR		LR			
	comp=Z,510nm,14.4s								
MPSI	**Mapaga**	**24.14**	**95**	P		**P**	**12 28 15.8**	**+2.0**	
TTSI	**Tana Toraja**	**24.59**	**103**	P		P	12 28 31.4	+13	
LKP	**Lekhapani**	**24.64**	**360**	*e*P		**P**	**12 28 17.5**	**-0.7**	
ZIRO	**ZIRO**	**24.91**	**356**	*e*P		**P**	**12 28 19.5**	**-1.3**	
KAPI	**Kappang**	**25.03**	**107**	P		**P**	**12 28 23.2**	**+1.3**	
	comp=Z,30nm,0.8s,baz=277,slow=6.0,SNR=7.4								
KAPI	**Kappang**	**25.03**	**107**	P		**P**	**12 28 22.2**	**+0.3**	
H08S2	**Diego Garcia H**	**25.41**	**246**	T		T	12 54 41.3		
	baz=67,slow=76,SNR=3592								
H08S3	**Diego Garcia H**	**25.41**	**246**	T		T	12 54 41.4		
	baz=67,slow=76,SNR=4059								
H08S1	**Diego Carcia H**	**25.43**	**246**	T		T	12 54 42.6		
	baz=67,slow=76,SNR=2154								
BKSI	**Bulukumba**	**25.48**	**108**	P		**P**	**12 28 26.7**	**+0.8**	
	comp=Z,36nm,1.0s								
ODAN	**Odare**	**25.49**	**342**	*e*P		**P**	**12 28 27.1**	**+0.9**	
	comp=Z,70nm,0.7s								
GTK	**Tadong**	**25.59**	**345**	*e*P		**P**	**12 28 27.6**	**+0.7**	
GTK				IAmb		IAmb	12 28 32.0		
	comp=Z,35nm,1.2s								
RAMN	**Ramite**	**25.83**	**341**	*e*P		**P**	**12 28 30.7**	**+1.4**	
	comp=Z,126nm,0.6s								
TAPN	**Taplejung**	**25.86**	**343**	*e*P		**P**	**12 28 30.7**	**+1.1**	
GYA	**Guiyang**	**25.94**	**23**	⇑P		**P**	**12 28 30.3**	**+0.2**	
GYA				PP		**PnPn**	**12 29 18.5**	**+10**	
GYA				S		**S**	**12 33 00.0**	**+0.8**	
GYA				SS		**SnSn**	**12 34 05.0**	**+8.0**	
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s								
GYA				pmax		pmax			
	comp=Z,100nm,4.9s								
GYA				LR		LR			
	comp=N,360nm,16.4s								
GYA				LR		LR			
	comp=E,270nm,12.4s								
GYA				LR		LR			
	comp=Z,510nm,15.5s								
JIRN	**Jiri**	**26.62**	**341**	*e*P		**P**	**12 28 37.4**	**+0.8**	
	comp=Z,222nm,0.7s								
PKI	**Pulchoki**	**26.81**	**339**	*e*P		**P**	**12 28 38.5**	**+0.3**	
	comp=Z,39nm,0.7s								
PKIN	**Phulchoki**	**26.82**	**339**	*e*P		**P**	**12 28 38.9**	**+0.7**	
	comp=Z,38nm,0.6s								
DMN	**Daman**	**26.95**	**339**	*e*P		**P**	**12 28 39.9**	**+0.5**	
	comp=Z,67nm,1.0s								
GUN	**Gumba**	**26.95**	**340**	*e*P		**P**	**12 28 40.3**	**+0.7**	
	comp=Z,89nm,0.7s								
KKN	**Kakani**	**27.05**	**339**	*e*P		**P**	**12 28 40.9**	**+0.6**	
	comp=Z,114nm,1.0s								
TGY	**Tagaytay City**	**27.30**	**64**	LR		LR	12 39 52.6		
	comp=Z,120nm,18.8s,baz=186,slow=37								
LSA	**Lhasa**	**27.36**	**351**	P		**P**	**12 28 43.5**	**+0.2**	
LSA				IAmb		IAmb	12 28 45.5		
	comp=Z,28nm,1.0s								
GKN	**Gorkha**	**27.48**	**338**	*e*P		**P**	**12 28 44.7**	**+0.6**	
KOLN	**Koldanda**	**27.68**	**336**	*e*P		**P**	**12 28 46.5**	**+0.6**	
	comp=Z,54nm,0.6s								
DANN	**Dangsing**	**28.13**	**337**	*e*P		**P**	**12 28 50.5**	**+0.5**	
	comp=Z,68nm,0.5s								
PYUN	**Piuthan**	**28.22**	**335**	*e*P		**P**	**12 28 51.3**	**+0.6**	
	comp=Z,28nm,0.4s								
ENH	**Enshi**	**30.45**	**24**	P		**P**	**12 29 08.7**	**-1.6**	
ENH				IAmb		IAmb	12 29 10.4		
	comp=Z,14nm,0.8s								
YULB	**Yu-li**	**32.19**	**48**	P		**P**	**12 29 25.7**	**0.0**	
YULB				IAmb		IAmb	12 29 27.0		
	comp=Z,10nm,0.8s								
WHN	**Wuhan**	**32.89**	**30**	P		P	12 29 40.0	+8.3	
WHN				S		S	12 34 59.3	+11	
WHN				LR		LR			
	comp=N,460nm,12.7s								
WHN				LR		LR			
	comp=E,510nm,12.9s								
WHN				LR		LR			
	comp=Z,630nm,11.8s								
SMLA	**Simla**	**33.45**	**330**	*e*P		**P**	**12 29 36.6**	**0.0**	
SMLA				IAmb		IAmb	12 29 41.5		
	comp=Z,7.6nm,0.6s								
XAN	**Xi'an**	**33.62**	**20**	P		**P**	**12 29 37.0**	**-1.1**	
XAN				pP		sP	12 29 56.5	+7.9	
XAN				sP		pP	12 30 07.0	+21	
XAN				pmax		pmax			
	comp=Z,24nm,0.6s								
XAN				pmax		pmax			
	comp=Z,82nm,4.0s								
XAN				LR		LR			
	comp=N,280nm,18.4s								
XAN				LR		LR			
	comp=E,250nm,17.3s								
XAN				LR		LR			
	comp=Z,320nm,20.6s								
XAN	**Xi'an**	**33.62**	**20**	P		**P**	**12 29 36.8**	**-1.3**	
LZH	**Lanzhou**	**34.18**	**12**	*e*P		**P**	**12 29 42.5**	**-0.6**	
LZH				pP		pP	12 29 51.8	+1.2	
LZH				sP		sP	12 29 56.3	+2.6	
LZH				*e*PP		**PnPn**	**12 30 58.0**	**+0.7**	
LZH				pmax		pmax			
	comp=Z,31nm,1.2s								
LZH				pmax		pmax			
	comp=Z,78nm,4.5s								
LZH				LR		LR			
	comp=N,200nm,13.2s								
LZH				LR		LR			
	comp=E,380nm,14.0s								
LZH				LR		LR			
	comp=Z,330nm,16.3s								
FITZ	**Fitzroy Crossi**	**35.81**	**126**	P		**P**	**12 29 56.5**	**-0.7**	
NJ2	**Nanjing**	**36.46**	**34**	*e*P		**P**	**12 30 03.5**	**+0.9**	
NJ2				pmax		pmax			
	comp=Z,16nm,0.5s								
FAKI	**Fak Fak**	**36.79**	**98**	P		**P**	**12 30 04.5**	**-1.2**	
FAKI				IAmb		IAmb	12 30 06.5		
	comp=Z,9.5nm,0.9s								
GTA	**Gaotai**	**36.86**	**5**	⇑P		**P**	**12 30 05.3**	**-0.7**	
GTA				pP		pP	12 30 14.5	+0.9	
GTA				sP		sP	12 30 18.5	+1.8	
GTA				S		**S**	**12 35 48.0**	**-1.3**	
GTA				SS		**SnSn**	**12 38 15.8**	**-6.6**	
GTA				pmax		pmax			
	comp=Z,21nm,1.5s								
GTA				pmax		pmax			
	comp=Z,130nm,8.3s								
GTA				LR		LR			
	comp=N,140nm,17.1s								
GTA				LR		LR			
	comp=E,94nm,18.1s								
GTA				LR		LR			
	comp=Z,170nm,16.8s								
KNRA	**Kununurra**	**37.25**	**120**	P		**P**	**12 30 08.4**	**-1.1**	
KNRA				IAmb		IAmb	12 30 21.3		
	comp=Z,11nm,1.1s								
NIL	**Nilore**	**37.46**	**328**	P		**P**	**12 30 11.0**	**-0.1**	
MTN	**Manton Dam**	**38.22**	**114**	P		**P**	**12 30 16.5**	**-1.2**	
MTN				IAmb		IAmb	12 30 35.8		
	comp=Z,19nm,1.3s								
TIA	**Tai'an**	**38.84**	**28**	P		**P**	**12 30 22.3**	**-0.3**	
TIA				pmax		pmax			
	comp=Z,11nm,1.0s								
HHC	**Hu-ho-hao-te**	**40.68**	**18**	*e*P		**P**	**12 30 38.8**	**+0.8**	
HHC				sP		sP	12 30 51.3	+2.7	
HHC				PP		**PP**	**12 32 06.8**	**-5.2**	
HHC				*e*S		**S**	**12 36 49.5**	**+2.7**	
HHC				sS		sS	12 37 01.8	+2.6	
HHC				pmax		pmax			
	comp=Z,18nm,0.9s								
HHC				pmax		pmax			
	comp=Z,42nm,5.0s								
HHC				LR		LR			
	comp=N,290nm,14.9s								
HHC				LR		LR			
	comp=E,120nm,14.3s								
HHC				LR		LR			
	comp=Z,170nm,15.1s								
KSH	**Kashi**	**40.99**	**336**	P		**P**	**12 30 40.5**	**-0.2**	
KSH				sP		sP	12 30 54.3	+3.0	
KSH				PcP		**PcP**	**12 32 42.3**	**+1.7**	
KSH				S		**S**	**12 36 48.8**	**-2.8**	
KSH				ScS		**ScS**	**12 40 40.8**	**-3.4**	
KSH				pmax		pmax			
	comp=Z,48nm,1.5s								
KSH				pmax		pmax			
	comp=Z,160nm,5.3s								
KSH				LR		LR			
	comp=N,340nm,7.3s								
KSH				LR		LR			
	comp=E,150nm,11.2s								
KSH				LR		LR			
	comp=Z,310nm,12.9s								
H01W3	**Cape Leeuwin H**	**41.01**	**157**	T		T	13 14 14.9		
	baz=332,slow=76,SNR=119								
H01W2	**Cape Leeuwin H**	**41.02**	**157**	T		T	13 14 06.4		
	baz=332,slow=76,SNR=149								
H01W1	**Cape Leeuwin H**	**41.02**	**157**	T		T	13 14 16.4		
	baz=332,slow=76,SNR=138								
BJT	**Baijiatuau**	**41.60**	**24**	P		**P**	**12 30 45.6**	**+0.2**	
BJI	**Beijing**	**41.62**	**24**	P		**P**	**12 30 46.0**	**+0.4**	
BJI				pmax		pmax			
	comp=Z,46nm,0.7s								
BJI				LR		LR			
	comp=N,140nm,14.2s								
BJI				LR		LR			
	comp=E,110nm,17.1s								
WMQ	**Urumqi**	**41.73**	**351**	*e*P		**P**	**12 30 48.0**	**+1.5**	
WMQ				pP		sP	12 30 59.0	+1.8	
WMQ				sP		pP	12 31 05.3	+11	
WMQ				pmax		pmax			
	comp=Z,12nm,1.7s								
WMQ				pmax		pmax			
	comp=Z,70nm,5.7s								
WMQ				LR		LR			
	comp=N,55nm,7.1s								
WMQ				LR		LR			
	comp=E,130nm,16.3s								
WMQ				LR		LR			
	comp=Z,77nm,22.3s								
WMQ	**Urumqi**	**41.73**	**351**	P		**P**	**12 30 46.2**	**-0.4**	
TARG	**Taragay, Kyrgy**	**42.24**	**340**	P		**P**	**12 30 51.3**	**+0.1**	
TARG				IAmb		IAmb	12 31 00.2		
	comp=Z,9.8nm,0.8s								
KDJ	**Kajisay**	**42.81**	**339**	P		**P**	**12 30 56.1**	**+0.5**	
KDJ				IAmb		IAmb	12 31 04.7		
	comp=Z,29nm,1.2s								
GAR	**Garm**	**43.10**	**331**	P		**P**	**12 30 57.6**	**-0.3**	
CHGR	**Chuyangaron**	**43.42**	**329**	P		**P**	**12 30 59.5**	**-0.9**	
KZA	**Kyzart**	**43.47**	**338**	P		**P**	**12 31 02.8**	**+1.6**	
	SNR=7.5								
BOOM	**Boomskoye usch**	**43.57**	**339**	P		**P**	**12 31 01.8**	**+0.1**	
ARSB	**Arslanbob**	**43.75**	**335**	P		**P**	**12 31 04.0**	**+1.0**	
UCH	**Uchtor**	**43.88**	**337**	P		**P**	**12 31 06.3**	**+1.7**	
	SNR=17								
WRA	**Warramunga Arr**	**43.89**	**122**	P		**P**	**12 31 04.4**	**0.0**	
	comp=Z,3.2nm,0.9s,baz=302,slow=9.0,SNR=26								
WB2	**Warramunga Arr**	**43.90**	**122**	P		**P**	**12 31 04.2**	**-0.3**	
TKM2	**Tokmak 2**	**44.07**	**339**	P		**P**	**12 31 07.2**	**+1.4**	
	SNR=8.6								
WR0	**Warramunga Arr**	**44.07**	**122**	P		**P**	**12 31 06.0**	**+0.1**	
WR0				IAmb		IAmb	12 31 07.2		
	comp=Z,7.9nm,0.9s								
KBK	**Karagaybulak**	**44.08**	**338**	P		**P**	**12 31 07.3**	**+1.5**	
	SNR=8.0								
AML	**Almayashu**	**44.12**	**336**	P		**P**	**12 31 07.6**	**+1.2**	
	SNR=10								
AAK	**Ala-Archa**	**44.24**	**337**	P		**P**	**12 31 08.0**	**+1.0**	
EKS2	**Erkin-Say**	**44.54**	**337**	P		**P**	**12 31 11.4**	**+2.0**	
	SNR=8.3								
USP	**Ospenovka**	**44.77**	**338**	P		**P**	**12 31 12.0**	**+0.9**	
	SNR=15								
AS31	**Alice Springs**	**45.28**	**127**	P		**P**	**12 31 15.5**	**0.0**	
ASAR	**Alice Springs**	**45.28**	**127**	P		**P**	**12 31 15.5**	**0.0**	
	comp=Z,1.8nm,0.6s,baz=300,slow=7.9,SNR=57								
KS19	**Wonju Array Si**	**45.53**	**36**	P		**P**	**12 31 16.2**	**-1.0**	
KS19				IAmb		IAmb	12 31 34.7		
	comp=Z,7.9nm,1.2s								
KSRS	**Korea Array**	**45.53**	**36**	P		**P**	**12 31 16.2**	**-1.0**	
	comp=Z,3.7nm,0.7s,baz=229,slow=8.8,SNR=17								
KSRS				LR		LR	12 52 56.3		
	comp=Z,234nm,18.2s,baz=220,slow=40								
MK31	**Makanchi Array**	**45.62**	**347**	P		**P**	**12 31 17.7**	**-0.1**	
MKAR	**Makanchi Array**	**45.62**	**347**	P		**P**	**12 31 17.5**	**-0.3**	
	comp=Z,9.2nm,0.4s,baz=158,slow=8.6,SNR=122								
MAKZ	**Makanchi**	**45.70**	**347**	P		**P**	**12 31 18.2**	**-0.3**	
SONM	**Songino Array**	**46.02**	**10**	P		**P**	**12 31 20.7**	**-0.4**	
	comp=Z,8.7nm,0.7s,baz=189,slow=9.0,SNR=41								
SONM				PcP		**PcP**	**12 32 57.7**	**+0.4**	
	comp=Z,1.6nm,0.5s,baz=194,slow=3.6,SNR=4.0								
SONM				LR		LR	12 52 18.6		
	comp=Z,184nm,18.6s,baz=192,slow=38								
ULN	**Ulaanbaatar**	**46.16**	**10**	P		**P**	**12 31 22.0**	**-0.2**	
ULN				IAmb		IAmb	12 31 23.2		
	comp=Z,5.2nm,0.7s								
KK31	**Karatay Array**	**46.26**	**334**	P		**P**	**12 31 23.3**	**+0.4**	
KK31				IAmb		IAmb	12 31 24.6		
	comp=Z,17nm,1.2s								
CN2	**Changchun**	**48.74**	**28**	*e*P		**P**	**12 31 43.8**	**+1.7**	
CN2				pmax		pmax			
	comp=Z,10.0nm,0.6s								
GEYT	**Alibeck**	**49.32**	**320**	P		**P**	**12 31 47.2**	**+0.5**	
	comp=Z,5.0nm,0.5s,baz=152,slow=9.9,SNR=9.6								
GYA0B	**ALIBECK ARRAY**	**49.32**	**320**	P		**P**	**12 31 47.2**	**+0.5**	
GYA0B				IAmb		IAmb	12 31 48.8		
	comp=Z,7.5nm,0.6s								
TLY	**Talaya**	**49.39**	**6**	LR		LR	12 55 57.8		
	comp=Z,114nm,18.4s,baz=174,slow=40								
TLY	**Talaya**	**49.39**	**6**	P		**P**	**12 31 47.3**	**+0.3**	
TLY				IAmb		IAmb	12 31 49.5		
	comp=Z,3.9nm,0.7s								
KURK	**Kurchatov**	**50.15**	**346**	P		**P**	**12 31 53.2**	**+0.4**	
KURK				IAmb		IAmb	12 32 02.4		
	comp=Z,6.8nm,0.7s								
MJAR	**Matsushiro Arr**	**51.63**	**44**	LR		LR	12 56 15.6		
	comp=Z,71nm,18.4s,baz=260,slow=39								
ZAA0	**Zalesovo Array**	**52.03**	**352**	P		**P**	**12 32 06.3**	**-0.5**	
ZAA0				IAmb		IAmb	12 32 07.8		
	comp=Z,14nm,0.9s								
ZALV	**Zalesovo Beam**	**52.03**	**352**	P		**P**	**12 32 06.5**	**-0.3**	
	comp=Z,12nm,0.5s,baz=180,slow=7.1,SNR=59								
USRK	**Ussuriysk Ar.**	**52.34**	**32**	P		**P**	**12 32 09.3**	**0.0**	
	comp=Z,1.8nm,0.8s,baz=231,slow=8.9,SNR=4.5								
RAYN	**Ar Rayn**	**52.94**	**298**	P		**P**	**12 32 14.3**	**+0.2**	
RAYN				IAmb		IAmb	12 32 22.6		
	comp=Z,11nm,1.5s								
BRVK	**Borovoye**	**54.60**	**341**	P		**P**	**12 32 26.0**	**+0.2**	
BRVK				IAmb		IAmb	12 32 28.5		
	comp=Z,5.7nm,0.6s								
STKA	**Stephens Creek**	**55.26**	**132**	P		**P**	**12 32 31.9**	**+1.0**	
	comp=Z,4.2nm,0.7s,baz=312,slow=9.0,SNR=8.7								
STKA				LR		LR	13 00 26.2		
	comp=Z,84nm,18.0s,baz=280,slow=41								
STKA	**Stephens Creek**	**55.26**	**132**	P		**P**	**12 32 31.1**	**+0.2**	
ARU	**Arti**	**61.42**	**337**	P		**P**	**12 33 12.7**	**-0.8**	
ARU				IAmb		IAmb	12 33 14.1		
	comp=Z,8.4nm,0.9s								
KBZ	**Khabaz**	**62.17**	**319**	P		**P**	**12 33 20.1**	**+1.3**	
	comp=Z,1.3nm,0.8s,baz=164,slow=5.6,SNR=3.9								
YAK	**Yakutsk**	**64.52**	**17**	P		**P**	**12 33 33.1**	**-0.8**	
MBAR	**Mbarara**	**65.17**	**268**	P		**P**	**12 33 40.3**	**+1.0**	
MBAR				IAmb		IAmb	12 33 49.6		
	comp=Z,11nm,1.1s								
BR131	**Keskin Array S**	**67.21**	**312**	P		**P**	**12 33 52.1**	**+0.1**	
BR131				IAmb		IAmb	12 34 01.7		
	comp=Z,6.4nm,1.5s								
BRTR	**Keskin Array B**	**67.21**	**312**	P		**P**	**12 33 51.8**	**-0.2**	
	comp=Z,0.4nm,0.6s,baz=165,slow=10,SNR=3.7								
BRTR				LR		LR	13 04 17.9		
	comp=Z,31nm,21.5s,baz=82,slow=37								
MDUB	**Mudurnu**	**69.21**	**312**	P		**P**	**12 34 05.0**	**+0.5**	
TIXI	**Tiksi**	**72.10**	**10**	P		**P**	**12 34 20.1**	**-1.2**	
TIXI				IAmb		IAmb	12 34 21.3		
	comp=Z,8.9nm,1.0s								
AKASG	**Malin Array Be**	**73.37**	**322**	P		**P**	**12 34 28.6**	**-0.6**	
	comp=Z,1.4nm,0.7s,baz=94,slow=4.6,SNR=6.7								
AKBB	**Malin Array Si**	**73.37**	**322**	P		**P**	**12 34 28.1**	**-1.1**	
BOSA	**Boshof**	**74.29**	**239**	P		**P**	**12 34 35.9**	**+0.6**	
BOSA				IAmb		IAmb	12 34 50.7		
	comp=Z,15nm,1.5s								
FIA1	**FINESS Array S**	**78.18**	**333**	P		**P**	**12 34 56.5**	**0.0**	
FIA1				IAmb		IAmb	12 34 57.6		
	comp=Z,9.7nm,0.9s								
FINES	**FINESS Array B**	**78.18**	**333**	P		**P**	**12 34 56.2**	**-0.3**	
	comp=Z,4.6nm,0.7s,baz=92,slow=5.7,SNR=10								
ARCES	**ARCESS Array B**	**80.82**	**340**	P		**P**	**12 35 10.9**	**+0.2**	
	comp=Z,1.3nm,0.4s,baz=98,slow=4.9,SNR=12								
ARCES				LR		LR	13 15 45.1		
	comp=Z,49nm,19.6s,baz=128,slow=39								
SYO	**Syowa Base**	**80.87**	**198**	⇑esP		sP	12 35 26.7	+5.1	
GEC2	**GERESS Array S**	**82.91**	**319**	P		**P**	**12 35 22.1**	**-0.2**	
GERES	**GERESS Array B**	**82.91**	**319**	P		**P**	**12 35 23.1**	**+0.7**	
	comp=Z,0.6nm,0.4s,baz=122,slow=4.9,SNR=5.2								
HFS	**Hagfors**	**83.88**	**330**	P		**P**	**12 35 27.3**	**+0.3**	
	comp=Z,3.0nm,0.9s,baz=94,slow=5.9,SNR=4.7								
SPITS	**Spitsbergen Ar**	**85.36**	**348**	P		**P**	**12 35 33.9**	**-0.2**	
	comp=Z,3.7nm,0.9s,baz=134,slow=6.0,SNR=4.0								
KEST	**Kesra**	**85.68**	**305**	LR		LR	13 21 38.6		
	comp=Z,23nm,18.1s,baz=297,slow=41								
NVAR	**Mina Array Bea**	**128.46**	**34**	PKP		**PKiKP**	**12 42 06.3**	**+0.7**	
	comp=Z,0.6nm,0.8s,baz=323,slow=0.7,SNR=5.6				

720nm,0.4s
GRPR A A 12 31 54.0
200nm,0.4s
NEM2 Nemuro 2 1.35 258 P **Pn** **12 31 34.3 -0.2**
NEM2 *eS* **Sg** **12 31 50.7 -1.4**
NMR Nemuro--Hokkai 1.36 258 *i* P **Pn** **12 31 35.0 +0.4**
NMR *i* S **Sg** **12 31 52.1 -0.3**
GLVR Golovnino 1.48 273 *i* P **Pn** **12 31 36.9 +0.7**
GLVR *i* S **Sb** **12 31 55.1 -0.9**
GLVR A A 12 31 58.0
240nm,0.2s
GLVR A A 12 31 58.0
300nm,0.2s
KUR Kuril'sk 1.58 8 *i* P **Pb** **12 31 38.3 -0.2**
KUR AMB AMB 12 31 39.0
40nm,0.3s
KUR *i* S **Sn** **12 31 57.5 -1.0**
KUR A A 12 31 58.0
190nm,0.2s
KUR A A 12 31 58.0
120nm,0.2s
JRA Rausu 1.78 279 P **Pn** **12 31 41.1 +0.7**
JRA *eS* **Sn** **12 32 03.0 -0.5**
JKHN Kushirohamanak 1.84 252 P **Pn** **12 31 42.0 +0.8**
JKHN *eS* **Sn** **12 32 04.7 -0.3**
JNSB Nemuroshibetsu 1.85 274 P **Pn** **12 31 42.7 +1.3**
JNSB *eS* **Sn** **12 32 05.0 -0.3**
JNK Nakash 2.06 269 P **Pn** **12 31 45.1 +0.9**
JNK *eS* **Sn** **12 32 09.8 -0.7**
JAK Akkeshi 2.19 253 P **Pn** **12 31 46.6 +0.6**
JAK *eS* **Sn** **12 32 12.2 -1.4**
JAR Ashorobuto 2.78 264 P **Pn** **12 31 55.8 +1.7**
JAR *eS* **Sn** **12 32 28.6 +0.4**
JOB Onbets 2.82 255 P **Pn** **12 31 55.9 +1.2**
JOB *eS* **Sn** **12 32 28.3 -0.9**
JCH Churui 3.24 252 P **Pn** **12 32 01.9 +1.4**
JCH *eS* **Sn** **12 32 39.2 -0.4**
YSS Yuzh-Sakhalins 4.71 316 *eP* **Pn** **12 32 21.8 +1.1**
YSS AMB AMB 12 32 22.1
10.0nm,0.4s

*ISN **26** 12:40:42.6±0.9, 36°.66N×43°.28E, h0km±16km, ML2.8*
*DDA **26** 12:40:43.8, 36°.62N×43°.36E, h7km±2km, ML2.8*
ISC 26 12:40:43.8±1.2, 36°.63N±0°.03×43°.31E±0°.05, h5km±11km, n9, σ1ş05/18, Iraq

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSL	**Mosul**	**0.28**	**215**	*ePg*		**Pg**	**12 40 49.0**	**-0.3**
MSL				*eSg*		**Sg**	**12 40 53.0**	**0.0**
MSL				AML		AML	12 41 00.5	
	comp=N,2μm,0.4s							
MSL				AML		AML	12 41 02.6	
	comp=E,605nm,0.4s							
CUKT	**Cukurca**	**0.66**	**21**	*i* P		**Pg**	**12 40 56.4**	**0.0**
CUKT				*i* S		**Sb**	**12 41 06.4**	**-1.1**
CUKT				IAML			12 41 08.0	
	comp=N,1μm,0.5s							
CUKT				IAML			12 41 10.0	
	comp=E,610nm,0.4s							
HAKT	**HAKKARI**	**0.98**	**19**	*i* P		**Pb**	**12 41 02.5**	**-0.9**
HAKT				*i* S		**Sb**	**12 41 16.3**	**-0.4**
HAKT				IAML			12 41 17.0	
	comp=N,207nm,0.5s							
HAKT				IAML			12 41 17.0	
	comp=E,153nm,0.5s							
SIRN	**Sırnak**	**1.12**	**321**	*i* P		**Pn**	**12 41 06.2**	**-0.1**
SIRN				*i* S		**Sn**	**12 41 22.4**	**+0.2**
SIRN				IAML			12 41 24.0	
	comp=N,316nm,0.5s							
SIRN				IAML			12 41 25.0	
	comp=E,231nm,0.4s							
YOVA	**Hakkari_Yksek**	**1.23**	**39**	*i* P		**Pb**	**12 41 07.0**	**-0.8**
YOVA				*i* S		**Sn**	**12 41 26.2**	**+1.1**
YOVA				IAML			12 41 28.0	
	comp=E,182nm,0.4s							
YOVA				IAML			12 41 28.0	
	comp=N,233nm,0.4s							
IKRK	**Kirkuk**	**1.49**	**146**	*ePn*		**Pn**	**12 41 11.0**	**-0.2**
IKRK				*eSn*		**Sg**	**12 41 32.0**	**+0.4**
IKRK				AML		AML	12 41 37.3	
	comp=N,180nm,0.2s							
IKRK				AML		AML	12 41 38.1	
	comp=E,199nm,0.6s							
SRTM	**Siirt_Merkez**	**1.75**	**321**	*i* P		**Pg**	**12 41 16.6**	**-0.8**
SRTM				IAML			12 41 42.0	
	comp=N,202nm,0.5s							
SRTM				*i* S		**Sg**	**12 41 42.3**	**+2.3**
SRTM				IAML			12 41 43.0	
	comp=E,114nm,0.4s							
BHD	**Baghdad**	**3.47**	**165**	*ePn*		**Pn**	**12 41 40.0**	**+1.6**
BHD				*eSn*		**Sn**	**12 42 19.5**	**-0.4**
IBDR	**Badra**	**4.12**	**148**	*ePn*		**Pn**	**12 41 49.0**	**+1.6**
IBDR				*eSn*		**Sn**	**12 42 35.5**	**-0.6**

IDC 26 13:05:05.7±2.0, 1°.81N×127°.26E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.4/35, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=119.0km s-min=24.5km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FITZ	**Fitzroy Crossi**	**19.85**	**185**	P		P	13 09 38.7	+0.3
	0.1nm,0.3s,baz=335,slow=7.2,SNR=2.6							
WRA	**Warramunga Arr**	**22.71**	**163**	P		P	13 10 09.2	-0.1
	0.6nm,0.5s,baz=341,slow=11,SNR=14							
ASAR	**Alice Springs**	**26.14**	**166**	P		P	13 10 41.6	-0.1
	0.2nm,0.4s,baz=346,slow=12,SNR=8.6							
MKAR	**Makanchi Array**	**59.43**	**326**	P		P	13 15 10.2	0.0
	0.7nm,0.9s,baz=123,slow=8.8,SNR=5.8							

*IDC **26** 13:09:21.0±4.2, 23°.38S×175°.40W, h0km, mb4.1/5, mb1 4.4/5, mb1mx3.8/44, mbtmp4.1/5, Error ellipse: s-maj=247.3km s-min=33.1km az=157.0*
*NEIC **26** 13:09:31.0±1.2, 22°.8S±0°.5×175°.8W±0°.3, h66km±16km, mb4.6/10, Error ellipse: s-maj=76.3km s-min=24.8km az=156.0*
ISC 26 13:09:27.4±2.1, 22°.8S±0°.6×175°.7W±0°.3, h34km, n15, σ0ş83/15, mb4.4/8, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CTA	**Charters Tower**	**35.45**	**267**	P		**P**	**13 16 22.2**	**+1.4**
	4.6nm,0.3s,baz=92,slow=11,SNR=27							
CTAO	**Charters Tower**	**35.45**	**267**	P		**P**	**13 16 22.2**	**+1.4**
BBOO	**Buckleboo**	**43.48**	**246**	P		**P**	**13 17 27.5**	**-0.2**
AS31	**Alice Springs**	**46.11**	**259**	P		**P**	**13 17 47.9**	**-0.8**
ASAR	**Alice Springs**	**46.11**	**259**	P		**P**	**13 17 48.4**	**-0.3**
	1.7nm,0.7s,baz=95,slow=7.5,SNR=40							
WR0	**Warramunga Arr**	**46.24**	**264**	P		**P**	**13 17 49.0**	**-0.8**
WR0				IAmb		IAmb	13 19 31.9	
	comp=Z,27nm,1.9s							
WB2	**Warramunga Arr**	**46.42**	**264**	P		**P**	**13 17 50.5**	**-0.7**
WB0	**Warramunga Arr**	**46.42**	**264**	P		**P**	**13 17 50.3**	**-0.9**
WB0				IAmb		IAmb	13 17 51.2	
	comp=Z,4.7nm,0.8s							
WRAB	**Tennant Creek**	**46.42**	**264**	P		**P**	**13 17 50.4**	**-0.9**
WRAB				IAmb		IAmb	13 17 56.8	
	comp=Z,11nm,1.3s							
WRA	**Warramunga Arr**	**46.43**	**264**	P		**P**	**13 17 50.8**	**-0.5**
	comp=Z,1.9nm,0.4s,baz=102,slow=8.2,SNR=90							
MTN	**Manton Dam**	**51.34**	**272**	P		**P**	**13 18 28.7**	**-0.3**
KNRA	**Kununurra**	**52.66**	**267**	P		**P**	**13 18 38.8**	**0.0**
FAKI	**Fak Fak**	**54.12**	**284**	P		**P**	**13 18 48.9**	**-0.7**
FITZ	**Fitzroy Crossi**	**54.86**	**263**	P		**P**	**13 18 55.2**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=112,slow=5.4,SNR=2.5							
NVAR	**Mina Array Bea**	**81.29**	**42**	P		**P**	**13 21 40.7**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=242,slow=3.9,SNR=2.5							

IDC 26 13:13:51.0±3.9, 6°.51S×155°.48E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/40, mbtmp3.3/3, Error ellipse: s-maj=102.7km s-min=46.8km az=106.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**24.49**	**235**	P		P	13 19 12.5	+0.4
	0.3nm,0.4s,baz=58,slow=9.6,SNR=5.1							
ASAR	**Alice Springs**	**26.85**	**228**	P		P	13 19 33.1	-0.5
	0.5nm,1.1s,baz=56,slow=9.4,SNR=4.6							
H11S3	**WAKE ISLAND Hy 27.20**	**24**		T		T	13 48 04.9	
	baz=203,slow=76,SNR=13							
H11S2	**WAKE ISLAND Hy 27.20**	**24**		T		T	13 48 03.6	
	baz=203,slow=76,SNR=14							
H11S1	**WAKE ISLAND Hy 27.21**	**24**		T		T	13 48 06.2	
	baz=203,slow=76,SNR=7.1							
CMAR	**Chiang Mai Arr**	**61.01**	**295**	P		P	13 24 07.8	+0.9
	0.5nm,0.7s,baz=119,slow=5.3,SNR=4.3							
TORD	**Torodi Ar. Bea**	**153.36**	**286**	PKPbc		PKPbc	13 33 51.0	-1.3
	0.3nm,0.7s,baz=46,slow=4.2,SNR=2.1							

*NEIC **26** 13:14:06.9±1.7, 57°.78N±0°.04×154°.99W±0°.06, h81km±7km, Error ellipse: s-maj=6.4km s-min=4.9km az=163.0*
AEIC 26 13:14:08.2±1.1, 57°.75N±0°.04×154°.98W±0°.06, h71km±6km, ML2.7, Error ellipse: s-maj=5.7km s-min=4.5km az=178.0, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CAHL	**Cahill**	**0.34**	**330**			Pn	13 14 19.4	-0.3
KJL	**Kejulik**	**0.44**	**314**			Pn	13 14 20.2	-0.2
KJL						Sn	13 14 30.3	+0.8
ANCK	**Angle Creek**	**0.52**	**329**			Pn	13 14 21.0	-0.2
KABU	**Katmai Buttres**	**0.54**	**343**			Pn	13 14 21.1	-0.3
KABU						Sn	13 14 32.2	+0.8
KAWH	**Katmai**	**0.64**	**9**			Pn	13 14 21.8	-0.6
KAWH						Sn	13 14 32.7	-0.3
PLK3	**Peulik 3**	**0.69**	**265**			Pn	13 14 22.7	-0.2
PLK3						Sn	13 14 34.7	+0.8
PLK2	**Peulik 2**	**0.72**	**271**			Pn	13 14 23.1	-0.1
PLK2						Sn	13 14 34.0	-0.5
KAHG	**Katmai Hook Gl**	**0.78**	**17**			Pn	13 14 23.7	-0.2
PLK1	**Peulik 1**	**0.87**	**274**			Pn	13 14 24.4	-0.6
KAHC	**Katmai Hardscr**	**0.90**	**359**			Pn	13 14 24.6	-0.8
KAHC						Sn	13 14 38.0	-0.3
PLK5	**Peulik 5**	**1.04**	**284**			Pn	13 14 25.6	-0.4
OHAK	**Old Harbor**	**1.06**	**120**			Pn	13 14 26.9	-0.3
OHAK						Sn	13 14 41.8	+0.2
KDAK	**Kodiak Island**	**1.28**	**88**			Pn	13 14 29.9	-0.2
KDAK						Sn	13 14 47.2	+0.5
AUJK	**Augustine Jueg**	**1.80**	**27**			Pn	13 14 36.8	-0.2
AUW	**Augustine West**	**1.80**	**25**			Pn	13 14 37.1	+0.1
AUH	**Augustine H**	**1.80**	**26**			Pn	13 14 37.0	0.0
AUP	**Augustine Pinn**	**1.81**	**26**			Pn	13 14 37.1	-0.1
AUL	**Augustine Lava**	**1.82**	**26**			Pn	13 14 37.3	0.0
AU2	**Augustine Isla**	**1.83**	**27**			Pn	13 14 37.2	0.0
AU22	**Augustine Moun**	**1.83**	**27**			Pn	13 14 37.3	0.0
CHGN	**Chignik**	**2.38**	**234**			Pn	13 14 44.0	-0.7
IVE	**Iliamna Volcan**	**2.49**	**23**			Pn	13 14 46.0	-0.3
ILW	**Iliamna West**	**2.50**	**22**			Pn	13 14 46.2	-0.4
HOM	**Homer**	**2.58**	**41**	Pn		Pn	13 14 47.3	-0.1
CNPM	**China Poot**	**2.64**	**46**			Pn	13 14 47.7	-0.7
CNPM						Sn	13 15 17.9	-1.4
VNSG	**Veniaminof 6**	**2.78**	**236**			Pn	13 14 49.9	-0.4
VNSS	**Veniaminof 8**	**2.89**	**240**			Pn	13 14 51.6	-0.2
RED	**Redoubt Volcan**	**2.91**	**22**			Pn	13 14 51.9	-0.1
BRLK	**Bradley Lake**	**2.94**	**45**	Pn		Pn	13 14 51.1	-1.2
RSO	**Redoubt South**	**2.95**	**22**			Pn	13 14 52.1	-0.5
RDWB	**Redoubt West**	**2.96**	**21**			Pn	13 14 52.3	-0.4
BRSE	**Bradley Lake S**	**2.98**	**46**			Pn	13 14 51.6	-1.2
DFR	**Drift River**	**3.08**	**22**			Pn	13 14 54.2	-0.1
SVW2	**Sparrevohn**	**3.37**	**355**			Pn	13 14 57.1	-1.0
SLKM	**Skilak Lake**	**3.69**	**40**			Pn	13 15 01.4	-1.2
SEW	**Seward**	**3.71**	**48**			Pn	13 15 00.9	-1.9
SPCG	**Spurr Capps Gl**	**3.86**	**22**			Pn	13 15 04.4	-0.5
SDPT	**Sand Point**	**3.88**	**234**			Pn	13 15 04.2	-0.9
CNBA	**Chernabura Isl**	**3.90**	**223**	Pn		Pn	13 15 03.4	-2.0
STLK	**Strandline Lak**	**4.08**	**22**			Pn	13 15 07.8	-0.2
RC01	**Rabbit Creek A**	**4.29**	**36**			Pn	13 15 09.5	-1.1
PWL	**Port Wells**	**4.61**	**45**			Pn	13 15 13.5	-1.7
MID	**Middleton Isla**	**4.82**	**66**			Pn	13 15 16.4	-1.5
PMR	**Palmer**	**4.86**	**35**			Pn	13 15 16.9	-1.5
KNK	**Knik Glacier**	**4.94**	**39**			Pn	13 15 17.9	-1.8
GHO	**Glory Hole Cre**	**5.06**	**35**			Pn	13 15 20.0	-1.3
GLI	**Glacier Island**	**5.11**	**49**			Pn	13 15 19.4	-2.5
HIN	**Hinchinbrook I**	**5.11**	**55**			Pn	13 15 20.5	-1.4
TT01	**Tatalina**	**5.20**	**355**			Pn	13 15 22.0	-1.1
TTA	**Tatalina**	**5.22**	**355**	Pn		Pn	13 15 23.9	+0.4
SML	**Sawmill**	**5.27**	**37**			Pn	13 15 22.1	-2.0
FID	**Port Fidalgo**	**5.30**	**52**			Pn	13 15 21.9	-2.6
PPLA	**Purkeypile**	**5.34**	**14**			Pn	13 15 24.6	-0.6
EYAK	**Cordova Ski Ar**	**5.51**	**56**			Pn	13 15 25.5	-1.9
SCM	**Sheep Creek Mo**	**5.62**	**40**			Pn	13 15 26.9	-2.1
RAGM	**Ragged Mountai**	**5.93**	**59**	Pn		Pn	13 15 31.5	-1.7
GOAT	**Goat Mountain**	**5.99**	**57**			Pn	13 15 32.4	-1.5
WAT6	**Susitna Watana**	**6.04**	**34**			Pn	13 15 32.7	-2.0
WAT2	**Susitna Watana**	**6.11**	**29**			Pn	13 15 33.3	-2.4
KTH	**Kantishna Hill**	**6.15**	**17**	Pn		Pn	13 15 34.8	-1.4
TRF	**Thorofare Moun**	**6.16**	**20**			Pn	13 15 35.2	-1.2
BERG	**Berg Lake**	**6.39**	**61**			Pn	13 15 37.6	-1.7
RND	**Reindeer**	**6.42**	**25**			Pn	13 15 37.6	-2.3
DHY	**Denali Highway**	**6.53**	**32**			Pn	13 15 38.9	-2.5
KHIT	**Khitrov Hills**	**6.62**	**61**			Pn	13 15 40.8	-1.7
BPAW	**Bear Paw Mtn.**	**6.66**	**15**	Pn		Pn	13 15 41.0	-2.1
MCK	**McKinley**	**6.69**	**24**	Pn		Pn	13 15 41.0	-2.4
GLB	**Gilahina Butte**	**6.77**	**52**			Pn	13 15 42.5	-2.0
WAX	**Waxell Ridge**	**6.80**	**62**			Pn	13 15 43.7	-1.4
KULT	**Kultieth River**	**6.81**	**63**			Pn	13 15 43.8	-1.4
VRDI	**Verde Repeater**	**6.82**	**54**			Pn	13 15 43.5	-2.0
PAX	**Paxson**	**7.04**	**38**	Pn		Pn	13 15 46.9	-1.4
KIAG	**Kiagna River**	**7.19**	**58**			Pn	13 15 48.7	-1.8
BALM	**Baldy**	**7.24**	**58**			Pn	13 15 49.2	-1.8
YAH	**Yahtse**	**7.31**	**63**			Pn	13 15 50.8	-1.3
NEA	**Nenana**	**7.41**	**20**			Pn	13 15 50.4	-2.9
RKAV	**Rock Avalanche**	**7.48**	**64**			Pn	13 15 53.6	-0.9
WRH	**Wood River Hil**	**7.52**	**23**			Pn	13 15 51.5	-3.2
CHX	**Chaix Hills**	**7.54**	**66**			Pn	13 15 54.1	-1.1
BARN	**Barnard Glacie**	**7.56**	**58**			Pn	13 15 54.1	-1.4
HDA	**Harding Lake**	**7.72**	**27**	Pn		Pn	13 15 54.4	-3.1
CCB	**Clear Creek Bu**	**7.73**	**24**			Pn	13 15 54.2	-3.4
RIDG	**Independent Ri**	**7.78**	**35**	Pn		Pn	13 15 57.5	-1.0
DOT	**Dot Lake**	**7.97**	**38**	Pn		Pn	13 16 00.4	-0.5
PCA	**Pinnacle**	**7.97**	**67**			Pn	13 16 00.1	-0.9
IL31		**8.04**	**26**			Pn	13 15 59.1	-2.7
YUK2	**White River**	**8.19**	**55**			Pn	13 16 03.6	-0.4
SCRK	**Sand Creek**	**8.22**	**36**	Pn		Pn	13 16 02.2	-2.3
PNL	**Peninsula**	**8.34**	**70**			Pn	13 16 04.3	-1.6
YUK3	**Moose Creek**	**8.36**	**55**			Pn	13 16 05.9	-0.5
BC03		**8.42**	**45**			Pn	13 16 05.9	-1.0
DHAK	**Deception Hill**	**8.90**	**74**			Pn	13 16 11.8	-1.9
EGAK	**Eagle**	**9.67**	**38**	Pn		Pn	13 16 23.0	-1.1
DAWY	**Dawson**	**9.86**	**44**	Pn		Pn	13 16 25.8	-0.9
WHY	**Whitehorse**	**10.70**	**66**	Pn		Pn	13 16 37.7	-0.5

*CNRM **26** 13:16:12.4±0.4, 36°.43N×7°.21W, h25km, Error ellipse: s-maj=5.9km s-min=3.6km az=64.0*
*IGIL **26** 13:16:15.8, 36°.51N×7°.27W, h30km, ML3.4*
*LDG **26** 13:16:15.8±0.3, 36°.80N×7°.06W, h25km, Ml3.5/4, Error ellipse: s-maj=7.0km s-min=4.2km az=27.0*
*MDD **26** 13:16:15.9±0.8, 36°.58N×7°.24W, h26km±9km, mbLg3.3/60, Error ellipse: s-maj=6.9km s-min=2.7km az=29.0, PRXIMO*
*SFS **26** 13:16:15.0, 36°.58N×7°.25W, ML3.0, GOLFO DE CADIZ*
*INMG **26** 13:16:16.3±1.3, 36°.52N×7°.27W, h31km, MD3.1, ML3.1, Error ellipse: s-maj=2.9km s-min=1.7km az=42.0*
ISC 26 13:16:14.4±1.0, 36°.64N±0°.03×7°.17W±0°.02, h31km±11km, n124, σ1ş97/214, 1C-9D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PBDV	**Barranco-do-Ve**	**0.86**	**315**	P		**Pb**	**13 16 31.2**	**+0.3**
PBDV				S		**Sb**	**13 16 42.4**	**+0.3**
	308nm,0.4s							
PBDV	**Barranco-do-Ve**	**0.86**	**315**	⇓*i* P		**Pb**	**13 16 31.2**	**+0.3**
PBDV				*eS*		**Sb**	**13 16 42.4**	**+0.3**
PBDV				A		A	13 16 43.9	
	308nm,0.4s							
PVAQ	**Vaqueiros**	**0.88**	**330**	P		**Pn**	**13 16 32.0**	**+1.4**
PVAQ				S		**Sn**	**13 16 43.8**	**+1.4**
	974nm,0.3s							
PVAQ	**Vaqueiros**	**0.88**	**330**	P		**Pn**	**13 16 32.0**	**+1.4**
PVAQ				S		**Sn**	**13 16 47.2**	**+4.8**
PVAQ	**Vaqueiros**	**0.88**	**330**	⇓*i* P		**Pn**	**13 16 32.0**	**+1.4**
PVAQ				*eS*		**Sn**	**13 16 43.8**	**+1.4**
PVAQ				A		A	13 16 44.6	
	974nm,0.3s							
EGRO	**El Granado**	**0.93**	**344**	⇓P		**Pn**	**13 16 33.0**	**+1.7**
	8.4nm,0.0s,SNR=18							
EGRO				S		**Sn**	**13 16 45.6**	**+2.1**
	388nm,0.1s,SNR=39							
CNIL	**Conil**	**0.94**	**106**	P		**Pb**	**13 16 32.5**	**+0.4**
CNIL				S		**Sn**	**13 16 48.0**	**+4.3**
CNIL	**Conil**	**0.94**	**106**	*eP*		**Pb**	**13 16 32.5**	**+0.4**
CNIL				*eS*		**Sn**	**13 16 48.0**	**+4.3**
ESPR	**Espera**	**1.08**	**77**	⇓P		**Pb**	**13 16 34.8**	**+0.3**
	36nm,0.1s,SNR=18							
ESPR				S		**Sn**	**13 16 49.1**	**+1.9**
	288nm,0.2s,SNR=4.5							
EMIN	**Mina Concepcio**	**1.20**	**19**	⇓P		**Pb**	**13 16 36.8**	**+0.3**
	1.3nm,0.1s,SNR=18							
EMIN				S		**Sn**	**13 16 51.9**	**+1.8**
	39nm,0.0s,SNR=15							
PCVE	**Castro Verde**	**1.21**	**325**	P		**Pn**	**13 16 36.5**	**+1.3**
PCVE				S		**Sb**	**13 16 51.7**	**-0.4**
	381nm,0.2s							
PCVE	**Castro Verde**	**1.21**	**325**	*eP*		**Pn**	**13 16 36.5**	**+1.3**
PCVE				*eS*		**Sb**	**13 16 51.7**	**-0.4**
PCVE				A		A	13 16 52.5	
	381nm,0.2s							
ALJ	**Aljibe**	**1.23**	**95**	P		**Pn**	**13 16 36.5**	**+1.1**
ALJ				S		**Sb**	**13 16 52.0**	**-0.5**
ALJ	**Aljibe**	**1.23**	**95**	*eP*		**Pn**	**13 16 36.5**	**+1.1**
ALJ				*eS*		**Sb**	**13 16 52.0**	**-0.5**
MORF	**Marmelete**	**1.36**	**300**	*eP*		**Pn**	**13 16 37.3**	**+0.1**
MORF				*eS*		**Sn**	**13 16 53.4**	**-0.9**
MORF					AML	AML	13 16 55.1	
	comp=N,501nm,0.2s							
MORF	**Marmelete**	**1.36**	**300**	P		**Pn**	**13 16 37.3**	**+0.1**
MORF				S		**Sn**	**13 16 53.4**	**-0.9**
	comp=N,501nm,0.2s							
MORF	**Marmelete**	**1.36**	**300**	⇓*eP*		**Pn**	**13 16 37.4**	**+0.1**
MORF				*eS*		**Sn**	**13 16 53.8**	**-0.5**
MORF				A		A	13 16 55.2	
	comp=N,269nm,0.2s							
PFVI	**Vila Bisbo**	**1.42**	**291**	P		**Pn**	**13 16 37.9**	**-0.1**
	comp=N,13nm,0.1s,SNR=14							
PFVI				S		**Sn**	**13 16 54.5**	**-1.1**
	comp=N,126nm,0.1s,SNR=7.1							
PFVI	**Vila Bisbo**	**1.42**	**291**	P		Pn	13 16 35.3	-2.7
PFVI				S		**Sn**	**13 16 57.7**	**+2.1**
PFVI	**Vila Bisbo**	**1.42**	**291**	*eP*		**Pn**	**13 16 37.9**	**-0.1**
PFVI				*eS*		**Sn**	**13 16 54.5**	**-1.1**
PFVI				A		A	13 17 09.4	
	comp=N,140nm,0.5s							
PBEJ	**Beja**	**1.49**	**338**	P		**Pb**	**13 16 40.6**	**-0.9**
PBEJ				S		**Sb**	**13 16 59.2**	**-0.9**
	comp=N,33nm,0.1s							
PBEJ	**Beja**	**1.49**	**338**	*eP*		**Pb**	**13 16 40.6**	**-0.9**
PBEJ				*eS*		**Sb**	**13 16 59.2**	**-0.9**
PBEJ				A		A	13 17 04.5	
	comp=N,66nm,0.1s							
PBAR	**Barrancos**	**1.54**	**4**	P		**Pb**	**13 16 41.8**	**-0.5**
PBAR				S		**Sb**	**13 17 01.1**	**-0.3**
	comp=N,96nm,0.1s							
PBAR	**Barrancos**	**1.54**	**4**	*ePn*		**Pb**	**13 16 41.8**	**-0.5**
PBAR				*eSn*		**Sb**	**13 17 01.1**	**-0.3**
PBAR				A		A	13 17 08.5	
	comp=N,96nm,0.1s							
PTEO	**Sao Teotonio**	**1.54**	**307**	P		**Pn**	**13 16 40.5**	**+0.8**
PTEO				S		**Sn**	**13 16 58.5**	**-0.1**
	comp=N,59nm,0.5s							
PTEO	**Sao Teotonio**	**1.54**	**307**	⇓*i* P		**Pn**	**13 16 40.5**	**+0.8**
PTEO				*eS*		**Sn**	**13 16 58.5**	**-0.1**
PTEO				A		A	13 16 59.1	
	comp=N,119nm,0.5s							
REAL	**Reales**	**1.59**	**95**	P		**Pn**	**13 16 42.0**	**+1.5**
REAL				S		**Sn**	**13 16 59.0**	**-1.0**
REAL	**Reales**	**1.59**	**95**	*eP*		**Pn**	**13 16 42.0**	**+1.5**
REAL				*eS*		**Sn**	**13 16 59.0**	**-1.0**
ECEU	**Ceuta**	**1.62**	**116**	P		**Pn**	**13 16 42.2**	**+1.4**
	comp=N,8.1nm,0.1s,SNR=10							
ECEU				S		**Sn**	**13 17 02.1**	**+1.4**
	comp=N,38nm,0.1s,SNR=4.8							
CEU	**Ceuta**	**1.63**	**116**	P		**Pn**	**13 16 42.7**	**+1.8**
CEU				S		**Sn**	**13 17 03.2**	**+2.5**
CEU	**Ceuta**	**1.63**	**116**	*i* P		**Pn**	**13 16 42.7**	**+1.8**
CEU				*i* S		**Sn**	**13 17 03.2**	**+2.5**
SMIR	**Smir Dam**	**1.73**	**123**	P		**Pn**	**13 16 41.3**	**-1.1**
SMIR				S		**Sn**	**13 17 01.0**	**-2.3**
PNCL	**Nicolau / Gran**	**1.83**	**324**	P		**Pn**	**13 16 44.9**	**+1.3**
PNCL				S		**Sn**	**13 17 06.3**	**+0.6**
	comp=N,131nm,0.4s							
PNCL	**Nicolau / Gran**	**1.83**	**324**	⇓*i* Pn		**Pn**	**13 16 44.9**	**+1.3**
PNCL				*eSn*		**Sn**	**13 17 06.3**	**+0.6**
PNCL				A		A	13 17 16.6	
	comp=N,131nm,0.4s							
EMIJ	**Mijas**	**1.93**	**91**	P		**Pn**	**13 16 45.8**	**+0.7**
	comp=N,0.6nm,0.1s,SNR=6.9							
EMIJ				S		**Sn**	**13 17 09.1**	**+0.8**
	comp=N,34nm,0.2s,SNR=10							
ECAB	**El Cabril**	**2.00**	**44**	P

ZHG	**ZHG**	**3.21**	**172**	P	Pn	13 17 01.0	-1.8
ZHG				S	**Sn**	**13 17 38.6**	**-1.5**
AVE	**Averroes**	**3.34**	**184**	*e*P	**Pn**	**13 17 05.0**	**+0.5**
AVE				*e*S	Sn	13 17 39.9	-3.1
GORA	**Gorafe**	**3.41**	**74**	P	**Pn**	**13 17 07.8**	**+2.4**
	comp=N,7.0nm,0.1s,SNR=7.9						
GORA				S	**Sn**	**13 17 46.3**	**+1.5**
	comp=N,46nm,0.2s,SNR=7.9						
EALB	**Alboran**	**3.41**	**101**	S	**Sn**	**13 17 43.0**	**-1.8**
	comp=N,17nm,0.1s,SNR=7.9						
AKLM	**AKL**	**3.43**	**127**	P	Pn	13 17 02.3	-3.4
AKLM				S	**Sn**	**13 17 40.5**	**-4.8**
EBER	**Berja**	**3.45**	**84**	P	**Pn**	**13 17 08.2**	**+2.1**
	comp=N,0.7nm,0.2s,SNR=7.9						
EBER				S	**Sn**	**13 17 47.2**	**+1.3**
	comp=N,9.3nm,0.3s,SNR=6.7						
EQES	**Quesada**	**3.47**	**69**	P	**Pn**	**13 17 07.7**	**+1.4**
	comp=N,1.3nm,0.1s,SNR=20						
EQES				S	**Sn**	**13 17 46.9**	**+0.5**
	comp=N,9.0nm,0.1s,SNR=9.9						
EPLA	**Plasencia**	**3.53**	**14**	P	**Pn**	**13 17 09.0**	**+2.0**
	comp=N,18nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**13 17 48.8**	**+1.1**
	comp=N,31nm,0.1s,SNR=7.9						
IFR	**Ifrane**	**3.54**	**151**	*i* P	**Pn**	**13 17 07.1**	**-0.2**
IFR				*e*S	**Sn**	**13 17 46.5**	**-1.6**
PCAS	**Casmilo, Conde**	**3.57**	**343**	P	**Pn**	**13 17 10.2**	**+2.6**
PCAS				S	**Sn**	**13 17 49.0**	**+0.4**
	comp=N,29nm,0.5s						
PCAS	**Casmilo, Conde**	**3.57**	**343**	*e*Pn	**Pn**	**13 17 10.2**	**+2.6**
PCAS				*e*Sn	**Sn**	**13 17 49.0**	**+0.4**
PCAS				A	A	13 18 21.9	
	comp=N,29nm,0.5s						
PAB	**San Pablo**	**3.66**	**37**	⇑P	**Pn**	**13 17 11.2**	**+2.3**
	comp=N,1.2nm,0.1s,SNR=18						
PAB				S	**Sn**	**13 17 49.2**	**-1.8**
	comp=N,12nm,0.2s,SNR=7.9						
COI	**Coimbra**	**3.70**	**345**	S	**Sn**	**13 17 51.9**	**+0.1**
	comp=N,22nm,0.3s						
COI	**Coimbra**	**3.70**	**345**	*e*Sn	**Sn**	**13 17 51.9**	**+0.1**
COI				A	A	13 18 29.5	
	comp=N,44nm,0.3s						
MTE	**Manteigas**	**3.77**	**356**	P	**Pn**	**13 17 12.8**	**+2.4**
MTE				S	**Sn**	**13 17 53.8**	**+0.1**
	comp=N,16nm,0.5s						
MTE	**Manteigas**	**3.77**	**356**	*e*Pn	**Pn**	**13 17 12.8**	**+2.4**
MTE				*e*Sn	**Sn**	**13 17 53.8**	**+0.1**
MTE				A	A	13 18 24.2	
	comp=N,32nm,0.5s						
ESDC	**Sonseca Array**	**3.95**	**39**	P	**Pn**	**13 17 15.1**	**+2.3**
	comp=N,0.6nm,0.2s,baz=225,slow=13,SNR=15						
ESDC				S	**Sn**	**13 17 58.2**	**+0.2**
	comp=N,3.7nm,0.3s,baz=223,slow=23,SNR=18						
SESP	**Santiago Espad**	**3.97**	**67**	P	**Pn**	**13 17 14.9**	**+1.7**
	comp=N,1.5nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**13 17 58.4**	**-0.4**
	comp=N,21nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**3.97**	**67**	P	**Pn**	**13 17 12.9**	**-0.4**
SESP				S	**Sn**	**13 17 58.3**	**-0.4**
ENIJ	**Nijar**	**4.00**	**84**	P	**Pn**	**13 17 15.9**	**+2.4**
	comp=N,2.8nm,0.3s,SNR=7.9						
ENIJ				S	**Sn**	**13 17 58.9**	**-0.3**
	comp=N,8.6nm,0.2s,SNR=7.9						
CZD	**Col de Zad**	**4.00**	**153**	P	Pn	13 17 10.2	-3.5
CZD				S	**Sn**	**13 17 56.3**	**-3.4**
PVIS	**Viseu**	**4.11**	**352**	P	**Pn**	**13 17 17.8**	**+2.7**
PVIS				S	**Sn**	**13 18 02.0**	**-0.1**
	comp=N,8.9nm,0.1s						
PVIS	**Viseu**	**4.11**	**352**	*e*Pn	**Pn**	**13 17 17.8**	**+2.7**
PVIS				*e*Sn	**Sn**	**13 18 02.0**	**-0.1**
PVIS				A	A	13 18 04.0	
	comp=N,18nm,0.1s						
MD31	**MD31**	**4.25**	**151**	P	**Pn**	**13 17 16.2**	**-0.9**
MD31				S	Sn	13 18 00.3	-5.4
MVO	**Moncorvo**	**4.52**	**1**	P	**Pn**	**13 17 22.6**	**+1.8**
	comp=N,4.2nm,0.1s,SNR=15						
MVO				S	**Sn**	**13 18 11.5**	**-0.8**
	comp=N,20nm,0.1s,SNR=14						
MVO	**Moncorvo**	**4.52**	**1**	*e*Pn	**Pn**	**13 17 22.7**	**+2.0**
MVO				*e*Sn	**Sn**	**13 18 11.6**	**-0.7**
MVO				A	A	13 18 13.8	
	comp=N,49nm,0.5s						
GUD	**Guadarrama**	**4.64**	**30**	P	**Pn**	**13 17 25.0**	**+2.5**
	comp=N,0.8nm,0.1s,SNR=14						
GUD				S	**Sn**	**13 18 13.7**	**-1.7**
	comp=N,5.2nm,0.2s,SNR=5.8						
PVRL	**Vila Real**	**4.65**	**355**	S	**Sn**	**13 18 15.3**	**-0.1**
	comp=N,14nm,0.5s						
PVRL	**Vila Real**	**4.65**	**355**	*e*Sn	**Sn**	**13 18 15.3**	**-0.1**
PVRL				A	A	13 18 17.2	
	comp=N,27nm,0.5s						
UCM	**Universidad Co**	**4.79**	**39**	*e*P	**Pn**	**13 17 27.0**	**+2.7**
UCM				*e*S	**Sn**	**13 18 19.1**	**+0.4**
EMUR	**La Murta**	**4.88**	**74**	S	**Sn**	**13 18 19.0**	**-2.1**
	comp=N,11nm,0.3s,SNR=8.0						
ETOB	**Tobarra**	**4.89**	**64**	P	**Pn**	**13 17 26.8**	**+0.9**
	comp=N,1.0nm,0.1s,SNR=24						
ETOB				S	**Sn**	**13 18 20.3**	**-1.1**
	comp=N,16nm,0.1s						
PCAB	**Cabril**	**5.11**	**353**	P	**Pn**	**13 17 31.1**	**+2.3**
PCAB				S	**Sn**	**13 18 25.1**	**-1.6**
	comp=N,4.7nm,0.1s						
PCAB	**Cabril**	**5.11**	**353**	*e*Pn	**Pn**	**13 17 31.1**	**+2.3**
PCAB				*e*Sn	**Sn**	**13 18 25.1**	**-1.6**
PCAB				A	A	13 18 32.1	
	comp=N,9.4nm,0.1s						
PBRG	**Braganca**	**5.17**	**4**	P	**Pn**	**13 17 31.7**	**+2.1**
PBRG				S	**Sn**	**13 18 27.9**	**-0.3**
	comp=N,6.8nm,0.2s						
PBRG	**Braganca**	**5.17**	**4**	*e*Pn	**Pn**	**13 17 31.7**	**+2.1**
PBRG				*e*Sn	**Sn**	**13 18 27.9**	**-0.3**
PBRG				A	A	13 18 29.6	
	comp=N,14nm,0.2s						
ELOB	**Lobios**	**5.27**	**353**	P	**Pn**	**13 17 32.8**	**+1.8**
	comp=N,1.5nm,0.1s,SNR=13						
ELOB				S	**Sn**	**13 18 28.8**	**-1.9**
	comp=N,5.0nm,0.1s						
ECAL	**Calabor**	**5.31**	**3**	P	**Pn**	**13 17 33.4**	**+1.9**
	comp=N,2.3nm,0.1s,SNR=15						
ECAL				S	**Sn**	**13 18 30.9**	**-0.8**
	comp=N,29nm,0.3s						
PGAV	**Gavieira, Arco**	**5.39**	**351**	P	**Pn**	**13 17 34.7**	**+2.0**
PGAV				S	**Sn**	**13 18 32.3**	**-1.4**
	comp=N,7.4nm,0.3s						
PGAV	**Gavieira, Arco**	**5.39**	**351**	*e*Pn	**Pn**	**13 17 34.7**	**+2.0**
PGAV				*e*Sn	**Sn**	**13 18 32.3**	**-1.4**
PGAV				A	A	13 18 34.0	
	comp=N,7.4nm,0.3s						
OUK	**Oukaimeden**	**5.45**	**186**	P	Pn	13 17 29.3	-4.4
OUK				S	Sn	13 18 28.6	-6.9
TDRA	**Tendrara**	**5.54**	**129**	P	Pn	13 17 30.0	-4.9
TDRA				S	**Sn**	**13 18 33.2**	**-4.5**
EZAM	**Zamans**	**5.63**	**348**	P	**Pn**	**13 17 37.1**	**+1.2**
	comp=N,2.2nm,0.1s,SNR=7.9						
EZAM				S	**Sn**	**13 18 36.8**	**-2.7**
	comp=N,4.6nm,0.3s,SNR=7.9						
OUZM	**OUZ**	**5.72**	**176**	P	Pn	13 17 32.6	-4.7
OUZM				S	Sn	13 18 37.8	-4.2
ETOR	**Torete**	**5.78**	**42**	P	**Pn**	**13 17 40.6**	**+2.6**
	comp=N,12nm,0.2s,SNR=25						
ETOR				S	**Sn**	**13 18 41.2**	**-2.1**
	comp=N,42nm,0.3s						
EBEN2	**Beniarda presa**	**5.90**	**68**	S	**Sn**	**13 18 44.5**	**-1.6**
	comp=N,8.3nm,0.2s,SNR=7.9						
TTIG	**Tnine Tigouga,**	**6.17**	**190**	P	Pn	13 17 38.6	-4.9
TTIG				S	Sn	13 18 48.4	-4.6
EAGO	**Agolada(Pontev**	**6.20**	**354**	P	**Pn**	**13 17 45.7**	**+1.9**
	comp=N,1.2nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**13 18 50.7**	**-2.7**
	comp=N,6.7nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**6.43**	**53**	P	**Pn**	**13 17 50.2**	**+3.1**
	comp=N,0.3nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**13 18 58.1**	**-1.5**
	comp=N,8.0nm,0.3s,SNR=7.9						
EMAZ	**Mazaricos**	**6.46**	**348**	P	**Pn**	**13 17 49.1**	**+1.9**
	comp=N,1.7nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**13 18 56.8**	**-3.0**
	comp=N,5.7nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**6.82**	**12**	P	**Pn**	**13 17 55.6**	**+3.3**
	comp=N,0.3nm,0.2s,SNR=6.5						
EARI				S	**Sn**	**13 19 07.3**	**-1.7**
	comp=N,1.5nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**7.15**	**68**	S	**Sn**	**13 19 13.0**	**-3.8**
	comp=N,4.1nm,0.4s,SNR=7.9						
ELAN	**Lanestosa**	**7.18**	**22**	P	**Pn**	**13 17 59.7**	**+2.4**
	comp=N,0.3nm,0.1s,SNR=7.9						
ELAN				S	**Sn**	**13 19 14.5**	**-3.3**
	comp=N,2.4nm,0.3s,SNR=7.9						
EORO	**Oroz-Betelu**	**7.70**	**34**	P	**Pn**	**13 18 07.3**	**+2.8**
	comp=N,1.0nm,0.1s,SNR=7.9						
EORO				S	**Sn**	**13 19 28.9**	**-1.7**
	comp=N,5.1nm,0.4s,SNR=7.9						
EALK	**Alkurruntz**	**7.88**	**32**	P	**Pn**	**13 18 09.3**	**+2.4**
	comp=N,0.9nm,0.1s,SNR=6.5						
EALK				S	**Sn**	**13 19 31.6**	**-3.4**
	comp=N,5.0nm,0.2s,SNR=7.9						
SJPF	**Ste Jean**	**7.92**	**33**	*e*P	**Pn**	**13 18 10.0**	**+2.7**
SJPF				*e*Sn	Sn	13 19 25.8	-10
	comp=N,5.3nm,0.3s						
ETSF	**Etsaut**	**8.06**	**37**	*e*P	**Pn**	**13 18 11.8**	**+2.5**
ETSF				*e*Sn	Sn	13 19 29.3	-10
	comp=N,4.2nm,0.4s						
ATE	**Arette**	**8.13**	**36**	P	**Pn**	**13 18 12.6**	**+2.3**
	comp=N,1.0nm,0.2s,SNR=7.9						
ATE				S	**Sn**	**13 19 38.4**	**-2.7**
	comp=N,3.0nm,0.4s,SNR=7.9						
EPF	**Esparros**	**8.61**	**40**	*e*P	**Pn**	**13 18 19.5**	**+2.7**
EPF				*e*Sn	Sn	13 19 42.2	-11
	comp=N,3.4nm,0.3s						
RJF	**Les Rejaudoux**	**10.86**	**34**	*e*P	**Pn**	**13 18 49.2**	**+1.6**
RJF				*e*Sn	Sn	13 20 36.0	-12
	comp=N,1.4nm,0.2s						
MFF	**Saint Martin d**	**11.25**	**26**	*e*P	**Pn**	**13 18 54.5**	**+1.6**
QUIF	**Quistinic**	**11.65**	**13**	*e*P	**Pn**	**13 19 01.3**	**+2.9**
ROSF	**Rostrenen**	**12.04**	**13**	*e*Pn	**Pn**	**13 18 59.2**	**-4.5**
ROSF	**Rostrenen**	**12.04**	**13**	*e*P	**Pn**	**13 19 06.2**	**+2.5**
SGMF	**Saint Gilles**	**12.10**	**15**	*e*P	**Pn**	**13 19 06.6**	**+2.1**
FRF	**La Foret Royal**	**12.63**	**53**	*e*Pn	**Pn**	**13 19 09.4**	**-2.4**
AVF	**Avril sur Loir**	**12.82**	**34**	*e*Pn	**Pn**	**13 19 10.2**	**-4.2**

IDC 26 13:17:13.0±11.0, **15°.97N**×**125°.20E**, **h0**km, **mb3.4**/3, **mb1 3.7**/3, **mb1mx3.2**/43, **mbtmp3.4**/3, **Error ellipse: s-maj=331.4km s-min=33.1km az=41.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**25.19**	**279**	P	P	13 22 40.5	0.0
	0.3nm,0.4s,baz=90,slow=9.9,SNR=1.6						
WRA	**Warramunga Arr**	**36.80**	**166**	P	P	13 24 23.1	+0.3
	1.0nm,0.9s,baz=347,slow=8.9,SNR=5.4						
ASAR	**Alice Springs**	**40.30**	**168**	P	P	13 24 51.8	-0.4
	0.3nm,0.6s,baz=353,slow=7.5,SNR=17						

*JMA **26** 13:30:19.2*±*0.4, 34°.52N*×*141°.66E, h25*km±*2km, M3.2*
*IDC **26** 13:30:19.3*±*1.3, 34°.64N*×*141°.53E, h0km, mb3.5/3, mb1 3.8/6, mb1mx3.5/35, mbtmp3.7/6, ML2.8/2, MS3.1/2, Ms1 3.1/2, ms1mx2.6/28, Error ellipse: s-maj=31.4km s-min=20.8km az=109.0*
*NEIC **26** 13:30:21.7*±*1.8, 34°.57N*±*0°.07*×*141°.7E*±*0°.1, h20km*±*6km, mb4.5/3, Error ellipse: s-maj=14.3km s-min=9.9km az=95.0*

ISC 26 13:30:22.0±0.8, **34°.59N**±0°.05×**141°.61E**±0°.07, **h27**km, **n26**, σ1s**66°/27**, **mb4.0/6**, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.53**	**277**	P	**Pb**	**13 30 30.5**	**-1.9**
BSO3	**Boso 3**	**0.93**	**283**	P	**Pn**	**13 30 37.7**	**-1.4**
BSO3				*e*S	**Sb**	**13 30 50.6**	**-0.7**
BSO4	**Boso 4**	**1.12**	**291**	P	**Pn**	**13 30 40.7**	**-1.2**
CHOJ	**Chosi**	**1.27**	**331**	P	**Pn**	**13 30 43.0**	**-1.0**
CHOJ				*e*S	**Sn**	**13 30 59.3**	**-0.9**
JKUC	**kamogawauchiur**	**1.29**	**297**	P	**Pn**	**13 30 43.2**	**-1.1**
JKUC				*e*S	**Sn**	**13 31 00.6**	**-0.2**
JHJ2	**Mitsune**	**2.10**	**226**	Pn	**Pn**	**13 30 55.2**	**-0.2**
JHJ	**Hachijo jima 2**	**2.11**	**227**	Pn	**Pn**	**13 30 55.4**	**-0.2**
	24nm,0.3s,baz=80,slow=16,SNR=7.1						
JHJ				Sn	**Sn**	**13 31 22.5**	**+1.5**
	78nm,0.3s,baz=101,slow=23,SNR=9.2						
JOD2	**Odawara 2**	**2.18**	**289**	P	**Pn**	**13 30 55.7**	**-0.9**
MJAR	**Matsushiro Arr**	**3.39**	**306**	Pn	**Pn**	**13 31 12.4**	**-0.8**
	0.4nm,0.3s,baz=107,slow=11,SNR=23						
MAJO	**Matsushiro**	**3.39**	**306**		**Pn**	**13 31 14.6**	**+1.3**
MAT	**Matsushiro**	**3.39**	**306**	P	**Pn**	**13 31 13.9**	**+0.7**
MAT				*e*S	**Sn**	**13 31 52.1**	**-0.5**
MJB9	**Matsu-Tunnel**	**3.40**	**306**		**Pn**	**13 31 14.2**	**+0.9**
INU	**Inuyama**	**3.85**	**283**	Pn	**Pn**	**13 31 21.2**	**+1.7**
JCJ	**Chichijima**	**7.49**	**176**	Pn	**Pn**	**13 32 09.0**	**-0.4**
	10.0nm,0.3s,baz=91,slow=21,SNR=17						
JCJ				Sn	**Sn**	**13 33 28.5**	**-4.9**
	3.7nm,0.3s,baz=284,slow=22,SNR=1.3						
ERM	**Erimo**	**7.51**	**9**	Pn	**Pn**	**13 32 06.8**	**-2.9**
KSRS	**Korea Array**	**11.45**	**288**	LR	LR	13 37 59.2	
	comp=Z,64nm,18.3s,baz=122,slow=40						
H11N2	**WAKE ISLAND Hy**	**26.83**	**117**	T	T	14 04 16.8	
	baz=309,slow=75,SNR=8.4						
H11N1	**WAKE ISLAND Hy**	**26.83**	**117**	T	T	14 04 19.7	
	baz=309,slow=75,SNR=6.3						
H11N3	**WAKE ISLAND Hy**	**26.84**	**117**	T	T	14 04 18.6	
	baz=309,slow=75,SNR=6.2						
SONM	**Songino Array**	**29.34**	**308**	LR	LR	13 49 13.6	
	comp=Z,52nm,18.0s,baz=90,slow=39						
MKAR	**Makanchi Array**	**45.59**	**304**	P	**P**	**13 38 40.1**	**+0.4**
	0.1nm,0.4s,baz=67,slow=11,SNR=2.0						
ILAR	**Eielson Array**	**51.48**	**31**	P	**P**	**13 39 25.9**	**+1.1**
	0.6nm,0.6s,baz=267,slow=6.4,SNR=10						
WRA	**Warramunga Arr**	**54.67**	**188**	P	**P**	**13 39 51.4**	**+2.8**
	0.9nm,0.7s,baz=5.0,slow=7.6,SNR=1.6						
INK	**Inuvik**	**56.49**	**26**	P	**P**	**13 40 02.7**	**+1.4**
INK				IAmb	IAmb	13 41 08.8	
	comp=Z,2.9nm,1.2s						
C36M	**Paulatuk**	**59.58**	**24**	P	**P**	**13 40 23.9**	**+1.1**
C36M				IAmb	IAmb	13 40 24.7	
	comp=Z,2.4nm,0.5s						
NEW	**Newport**	**71.78**	**44**	P	**P**	**13 41 42.3**	**+0.4**
NEW				IAmb	IAmb	13 44 16.2	
	comp=Z,10nm,1.6s						

*ISK **26** 13:32:50.8, 40°.43N*×*25°.99E, h22km, ML3.0/16*
*ATH **26** 13:32:51.5, 40°.43N*×*25°.91E, h28km±1km, ML2.7/7, Error ellipse: s-maj=2.9km s-min=1.0km az=285.0*
*SOF **26** 13:32:52.2, 40°.44N*×*25°.82E, h20km, MD2.7*
*DDA **26** 13:32:52.1, 40°.41N*×*26°.04E, h6km±3km, ML3.0*
*THE **26** 13:32:52.1, 40°.44N*×*25°.94E, h11km±1km, ML2.7/9, Error ellipse: s-maj=1.8km s-min=0.8km az=331.0*

ISC 26 13:32:50.8±1.0, **40°.47N**±0°.02×**25°.99E**±0°.02, **h18**km±4km, **n53**, σ0s**59**/81, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.28**	**194**	P	**Pb**	**13 32 57.5**	**+0.2**
GADA				S	**Sb**	**13 33 01.6**	**-0.1**
	690nm,0.3s						
GADA	**Gvkgeada**	**0.28**	**194**	PG	**Pb**	**13 32 57.5**	**+0.2**
GADA				SG	**Sg**	**13 33 01.3**	**0.0**
ENEZ	**Enez**	**0.30**	**25**	P	**Pn**	**13 32 59.0**	**-1.4**
ENEZ				S	**Sn**	**13 33 04.2**	**-2.1**
	2μm,0.2s						
ENEZ	**Enez**	**0.30**	**25**	PG	**Pn**	**13 32 58.9**	**-1.4**
ENEZ				SG	**Sb**	**13 33 03.6**	**+1.4**
SMTH	**Samothraki Isl**	**0.35**	**271**	P	**Pb**	**13 32 58.6**	**0.0**
SMTH				S	**Sb**	**13 33 03.6**	**-0.2**
	6μm,0.1s						
SMTH	**Samothraki Isl**	**0.35**	**271**	P	**Pb**	**13 32 58.6**	**0.0**
SMTH				S	**Sb**	**13 33 03.5**	**-0.2**
SMTH				AML	AML	13 33 03.9	
	comp=E,11851μm,0.2s						
SMTH				AML	AML	13 33 04.1	
	comp=N,9993μm,0.1s						
GELI	**Tayfur-Gelibol**	**0.38**	**100**	PG	**Pb**	**13 32 59.6**	**+0.6**
GELI				SG	**Sb**	**13 33 05.0**	**+0.5**
ERIK	**Erikli-Kesan**	**0.45**	**63**	PG	**Pb**	**13 33 01.2**	**+1.0**
ERIK				SG	**Sn**	**13 33 08.3**	**-1.7**
LPK	**Lapseki**	**0.60**	**99**	PG	**Pn**	**13 33 03.9**	**-0.5**
BOZC	**Bozcaada**	**0.62**	**175**	PG	**Pg**	**13 33 03.6**	**+0.4**
BOZC				SG	**Sb**	**13 33 11.7**	**+0.1**
BOZC	**Bozcaada**	**0.62**	**175**	*i* P	**Pg**	**13 33 03.4**	**+0.2**
BOZC				*i* S	**Sg**	**13 33 11.1**	**-0.4**
KESN	**Edirne-Kesan**	**0.64**	**55**	*i* P	**Pb**	**13 33 04.2**	**+0.6**
KESN				*i* S	**Sb**	**13 33 13.1**	**+0.8**
KESN				IAML		13 33 16.0	
	comp=N,710nm,0.4s						
EZN	**Ezine**	**0.69**	**158**	P	**Pg**	**13 33 04.9**	**+0.5**
EZN				S	**Sg**	**13 33 13.7**	**+0.2**
	comp=N,150nm,0.2s						
EZN	**Ezine**	**0.69**	**158**	PG	**Pg**	**13 33 04.3**	**-0.1**
RDO	**Rodhopi**	**0.76**	**333**	P	**Pn**	**13 33 06.7**	**0.0**
RDO				S	**Sn**	**13 33 17.9**	**+0.2**
	comp=N,490nm,0.2s						
RDO	**Rodhopi**	**0.76**	**333**	P	**Pn**	**13 33 06.7**	**0.0**
RDO				S	**Sn**	**13 33 17.9**	**+0.2**
RDO				AML	AML	13 33 20.3	
	comp=E,992μm,0.2s						
RDO				AML	AML	13 33 20.6	
	comp=N,943μm,0.2s						
RDO	**Rodhopi**	**0.76**	**333**	PG	**Pn**	**13 33 06.9**	**+0.2**
UKOP	**Uzunkopru-Edir**	**0.82**	**36**	PG	**Pn**	**13 33 07.6**	**+0.1**
LIA	**Limnos Island**	**0.84**	**228**	P	**Pg**	**13 33 07.3**	**+0.1**
LIA				S	**Sg**	**13 33 18.4**	**+0.2**
	comp=N,665nm,0.6s						
LIA	**Limnos Island**	**0.84**	**228**	P	**Pg**	**13 33 07.2**	**+0.1**
LIA				S	**Sg**	**13 33 18.2**	**0.0**
LIA				AML	AML	13 33 20.4	
	comp=N,867μm,0.3s						
LIA				AML	AML	13 33 20.8	
	comp=E,911μm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.84**	**149**	*i* P	**Pn**	**13 33 07.6**	**-0.2**
BAYC				*i* S	**Sg**	**13 33 18.7**	**+0.4**
THAS	**Thassos island**	**0.98**	**279**	P	**Pb**	**13 33 09.1**	**-0.1**
THAS				S	**Sn**	**13 33 23.4**	**+0.4**
	comp=E,390nm,0.2s						
THAS	**Thassos island**	**0.98**	**279**	P	**Pb**	**13 33 09.1**	**-0.1**
THAS				S	**Sn**	**13 33 23.2**	**+0.2**
THAS				AML	AML	13 33 25.2	
	comp=N,793μm,0.2s						
THAS				AML	AML	13 33 26.2	
	comp=E,761μm,0.2s						
KRBG	**Karabiga-Canak**	**1.00**	**94**	PG	**Pb**	**13 33 09.6**	**0.0**
KNL	**Balıkesir**	**1.19**	**99**	*i* P	**Pg**	**13 33 14.0**	**+0.1**
KNL				*i* S	**Sg**	**13 33 30.2**	**+0.8**
KNL				IAML		13 33 34.0	
	comp=E,357nm,0.5s						
EFSA	**Agios Efstrati**	**1.20**	**220**	P	**Pb**	**13 33 13.3**	**+0.3**
EFSA				S	**Sn**	**13 33 28.8**	**+0.3**
MRMT	**Marmara Adasi**	**1.23**	**83**	PN	**Pn**	**13 33 12.9**	**-0.3**
PRK	**Paraskevi**	**1.24**	**170**	P	**Pg**	**13 33 15.6**	**+0.9**
PRK				S	**Sg**	**13 33 31.2**	**+0.3**
	comp=E,345nm,0.5s						
PRK	**Paraskevi**	**1.24**	**170**	P	**Pg**	**13 33 14.8**	**+0.1**
PRK				AML	AML	13 33 33.2	
	comp=E,672μm,0.5s						
PRK				AML	AML	13 33 33.6	
	comp=N,688μm,0.5s						
KAVA	**Kavala**	**1.24**	**296**	P	**Pg**	**13 33 14.1**	**-0.6**
KAVA				AML	AML	13 33 34.8	
	comp=N,330μm,0.2s						
KAVA				AML	AML	13 33 35.2	
	comp=E,382μm,0.3s						
SIGR	**SIGRI**	**1.26**	**185**	P	**Pb**	**13 33 14.1**	**+0.1**
SIGR				S	**Sg**	**13 33 31.3**	**-0.2**
	comp=E,335nm,0.4s						
SIGR	**SIGRI**	**1.26**	**185**	P	**Pb**	**13 33 14.3**	**+0.3**
SIGR				S	**Sg**	**13 33 31.4**	**-0.2**
SIGR				AML	AML	13 33 32.3	
	comp=N,762μm,0.5s						
SIGR				AML	AML	13 33 33.4	
	comp=E,588μm,0.4s						
SIGR	**SIGRI**	**1.26**	**185**	PN	**Pn**	**13 33 12.4**	**-1.1**
KDZ	**Kurdzhali**	**1.26**	**340**	P	**Pg**	**13 33 15.7**	**+0.5**
KDZ	**Kurdzhali**	**1.26**	**340**	PN	**Pb**	**13 33 13.9**	**-0.2**
AYVA	**Ayvalik**	**1.27**	**155**	*i* P	**Pg**	**13 33 15.6**	**+0.1**
AYVA				*i* S	**Sg**	**13 33 31.4**	**-0.7**
GONE	**Gonen-Balikesi**	**1.36**	**107**	PN	**Pn**	**13 33 14.8**	**-0.2**
EDC	**Edincik**	**1.44**	**94**	PN	**Pn**	**13 33 15.7**	**-0.3**
BALY	**Balya**	**1.45**	**120**	*i* P	**Pg**	**13 33 18.6**	**-0.1**
BALY				*i* S	**Sg**	**13 33 37.2**	**-0.3**
EDRB	**Edirne**	**1.49**	**22**	PN	**Pn**	**13 33 17.1**	**+0.3**
OUR	**Ouranopolis**	**1.54**	**266**	P	**Pn**	**13 33 17.5**	**+0.2**
OUR	**Ouranopolis**	**1.54**	**266**	PN	**Pn**	**13 33 17.4**	**+0.1**
RZN	**Rozhen**	**1.56**	**322**	P	**Pb**	**13 33 19.4**	**+0.2**
KIRK	**Kırklareli**	**1.56**	**32**	*i* P	**Pn**	**13 33 17.4**	**-0.2**
KIRK				*i* S	**Sb**	**13 33 39.6**	**+1.1**
DIM	**Dimitrovgrad**	**1.62**	**348**	P	**Pg**	**13 33 21.1**	**-0.9**
BALB	**Balikesir**	**1.67**	**119**	PN	**Pn**	**13 33 18.8**	**-0.3**
PAIG	**Paliouri**	**1.85**	**254**	P	**Pn**	**13 33 21.0**	**-0.6**
PLD	**Plovdiv**	**1.90**	**330**	P	**Pg**	**13 33 27.3**	**-0.1**
MMB	**Musomiste**	**2.05**	**304**	P	**Pn**	**13 33 25.7**	**+1.3**
JMB	**Yambol**	**2.05**	**12**	P	**Pg**	**13 33 30.2

GLI					IAmb	IAmb	13 52 27.6	
	comp=Z,4.8nm,0.7s							
SCM	**Sheep Creek Mo**	**18.77**	**49**	P		**P**	**13 52 26.0**	**+1.0**
SCM					IAmb	IAmb	13 52 26.4	
	comp=Z,8.0nm,0.9s							
FID	**Port Fidalgo**	**18.92**	**52**	P		**P**	**13 52 26.9**	**+0.5**
NEA	**Nenana**	**18.98**	**40**	P		**P**	**13 52 28.7**	**+1.6**
NEA					IAmb	IAmb	13 52 29.1	
	comp=Z,2.7nm,0.5s							
DHY	**Denali Highway**	**19.11**	**45**	P		**P**	**13 52 29.1**	**+0.4**
DHY					IAmb	IAmb	13 52 32.5	
	comp=Z,4.2nm,0.7s							
WRH	**Wood River Hil**	**19.32**	**41**	P		**P**	**13 52 29.9**	**-0.8**
WRH					IAmb	IAmb	13 52 44.4	
	comp=Z,13nm,1.9s							
CCB	**Clear Creek Bu**	**19.51**	**40**	P		**P**	**13 52 32.0**	**-0.7**
RAGM	**Ragged Mountai**	**19.73**	**54**	P		**P**	**13 52 35.7**	**+0.4**
HDA	**Harding Lake**	**19.76**	**41**	P		**P**	**13 52 37.4**	**+2.0**
HDA					IAmb	IAmb	13 52 38.2	
	comp=Z,2.1nm,0.5s							
IL31		**19.92**	**40**	P		**P**	**13 52 36.3**	**-0.8**
ILAR	**Eielson Array**	**19.92**	**40**	P		**P**	**13 52 37.7**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=236,slow=8.5,SNR=6.1							
GLB	**Gilahina Butte**	**20.32**	**51**	P		**P**	**13 52 40.3**	**-1.2**
GLB					IAmb	IAmb	13 52 44.0	
	comp=Z,5.1nm,1.2s							
RIDG	**Independent Ri**	**20.40**	**44**	P		**P**	**13 52 42.2**	**-0.2**
RIDG					IAmb	IAmb	13 53 18.4	
	comp=Z,14nm,1.8s							
VRDI	**Verde Repeater**	**20.45**	**52**	P		**P**	**13 52 43.1**	**0.0**
VRDI					IAmb	IAmb	13 53 14.3	
	comp=Z,4.6nm,1.1s							
DOT	**Dot Lake**	**20.71**	**45**	P		**P**	**13 52 46.2**	**+0.6**
DOT					IAmb	IAmb	13 53 42.2	
	comp=Z,9.7nm,1.8s							
SCRK	**Sand Creek**	**20.84**	**44**	P		**P**	**13 52 46.4**	**-0.7**
TOLK	**Toolik Lake Re**	**20.89**	**29**	P		**P**	**13 52 48.1**	**+0.6**
TOLK					IAmb	IAmb	13 52 50.1	
	comp=Z,6.5nm,1.5s							
EGAK	**Eagle**	**22.24**	**43**	P		**P**	**13 53 01.2**	**+0.6**
EGAK					IAmb	IAmb	13 53 02.9	
	comp=Z,4.7nm,1.1s							
DAWY	**Dawson**	**22.82**	**45**	P		**P**	**13 53 06.5**	**+0.5**
DAWY					IAmb	IAmb	13 53 26.3	
	comp=Z,10.0nm,1.8s							
INK	**Inuvik**	**26.11**	**36**	P		**P**	**13 53 37.3**	**+1.8**
C36M	**Paulatuk**	**29.67**	**35**	P		**P**	**13 54 07.8**	**+0.8**
YKA	**Yellowknife Ar**	**33.97**	**48**	P		**P**	**13 54 45.0**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=281,slow=7.5,SNR=8.4							
PNTR	**Pine Nut**	**41.69**	**85**	P		**P**	**13 55 51.1**	**+1.6**
NVAR	**Mina Array Bea**	**42.89**	**85**	P		**P**	**13 56 00.6**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=292,slow=7.8,SNR=3.5							
PAGB	**Antelope Grade**	**43.45**	**89**	P		**P**	**13 56 04.7**	**+1.2**
TPNV	**Topopah Spring**	**45.09**	**85**	P		**P**	**13 56 17.5**	**+1.0**
GSC	**Goldstone, Bar**	**45.83**	**87**	P		**P**	**13 56 23.7**	**+0.4**
PV13	**Radium Mtn., P**	**48.77**	**78**	P		**P**	**13 56 44.3**	**-0.8**
TX31	**Lajitas Ar. Si**	**57.95**	**83**	P		**P**	**13 57 50.4**	**-1.2**
TX32	**Lajitas Array**	**57.95**	**83**	P		**P**	**13 57 50.5**	**-1.2**
TX32					IAmb	IAmb	13 59 47.5	
	comp=Z,8.3nm,1.9s							
TXAR	**Lajitas Array**	**57.95**	**83**	P		**P**	**13 57 51.3**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=312,slow=5.0,SNR=8.4							
OXF	**Oxford**	**62.60**	**68**	P		**P**	**13 58 22.7**	**-0.2**

*IDC **26** 13:58:00.1±10.0, 36°.30N×18°.43E, h0km, mb3.8/3, mb1 3.8/5, mb1mx3.5/31, mbtmp3.7/5, ML3.8/2, Error ellipse: s-maj=178.9km s-min=38.2km az=36.0*
*ATH **26** 13:58:21.3, 38°.18N×20°.36E, h17km±1km, ML3.3/3, Error ellipse: s-maj=2.2km s-min=1.4km az=66.0*
*THE **26** 13:58:21.6, 38°.16N×20°.37E, h16km, ML3.7/12, Error ellipse: s-maj=1.1km s-min=0.5km az=257.0*
*NEIC **26** 13:58:24.0±1.6, 38°.08N±0°.09×20°.28E±0°.09, h47km±15km, Error ellipse: s-maj=15.0km s-min=8.0km az=211.0*
ISC 26 13:58:21.1±0.8, **38°.17N**±0°.02×**20°.33E**±0°.03, **h17**km±2km, **n86**, σ**1s34**/118, **mb3.9**/4, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.04**	**19**	P	**Pg**	**13 58 24.9**	**+0.6**
KEF3				S	**Sg**	**13 58 26.4**	**+0.1**
LXRA	**Lixouri, Kepha**	**0.09**	**67**	P	**Pg**	**13 58 25.0**	**+0.4**
LXRA				S	**Sg**	**13 58 26.8**	**-0.1**
AGT1	**Agia Thekli**	**0.10**	**26**	P	**Pg**	**13 58 25.2**	**+0.5**
AGT1				S	**Sg**	**13 58 27.8**	**+0.7**
	126μm,0.3s						
ARGA	**Argostoli. Kep**	**0.12**	**84**	P	**Pb**	**13 58 24.9**	**0.0**
ARGA				S	**Sb**	**13 58 26.3**	**-1.1**
KEF4	**Livadi, Kephal**	**0.12**	**38**	P	**Pg**	**13 58 25.3**	**+0.4**
KEF4				S	**Sg**	**13 58 27.7**	**+0.2**
ARG2	**Argostoli**	**0.12**	**84**	P	**Pg**	**13 58 25.1**	**+0.1**
ARG2				S	**Sb**	**13 58 27.3**	**-0.3**
	206μm,0.2s						
VLS	**Valsamata**	**0.20**	**86**	P	**Pg**	**13 58 25.9**	**-0.2**
VLS				S	**Sg**	**13 58 28.9**	**-0.6**
	142μm,0.1s						
VLS	**Valsamata**	**0.20**	**86**	P	**Pg**	**13 58 25.9**	**-0.2**
VLS				S	**Sg**	**13 58 28.6**	**-0.8**
VSK1	**VASILIKIADES**	**0.30**	**37**	P	**Pg**	**13 58 27.8**	**+0.1**
VSK1				S	**Sg**	**13 58 32.6**	**+0.4**
	14μm,0.3s						
FSK	**Fiskardo**	**0.35**	**32**	P	**Pg**	**13 58 28.5**	**+0.1**
FSK				S	**Sg**	**13 58 33.7**	**+0.3**
	8μm,0.1s						
FSK	**Fiskardo**	**0.35**	**32**	P	**Pg**	**13 58 28.1**	**-0.3**
FSK				S	**Sg**	**13 58 33.1**	**-0.2**
FSK				AML	AML	13 58 34.7	
	comp=N,9913μm,0.2s						
FSK				AML	AML	13 58 34.8	
	comp=E,20869μm,0.1s						
KFL	**Anninata**	**0.36**	**99**	P	**Pg**	**13 58 28.4**	**-0.3**
KFL				S	**Sg**	**13 58 33.6**	**-0.3**
	comp=E,19μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.39**	**138**	P	**Pg**	**13 58 28.9**	**-0.2**
VLMS				S	**Sg**	**13 58 34.0**	**-0.6**
VLMS				AML	AML	13 58 42.2	
	comp=N,27736μm,0.2s						
VLMS				AML	AML	13 58 43.6	
	comp=E,18100μm,0.3s						
EVGI	**Lefkada island**	**0.52**	**29**	P	**Pg**	**13 58 31.5**	**-0.1**
EVGI				S	**Sg**	**13 58 39.1**	**+0.5**
EVGI	**Lefkada island**	**0.52**	**29**	P	**Pg**	**13 58 31.6**	**0.0**
EVGI				S	**Sg**	**13 58 38.0**	**-0.6**
ZAK2	**Zakynthos**	**0.59**	**130**	P	**Pg**	**13 58 31.8**	**-0.9**
ZAK2				S	**Sb**	**13 58 41.3**	**+0.5**
	comp=E,12μm,0.3s						
MGNA	**Meganis**	**0.61**	**36**	P	**Pg**	**13 58 32.8**	**-0.4**
MGNA				S	**Sg**	**13 58 40.4**	**-1.0**
MGNA				AML	AML	13 58 43.7	
	comp=E,3196μm,0.2s						
MGNA				AML	AML	13 58 44.4	
	comp=N,2668μm,0.3s						
KRI1	**kERI**	**0.63**	**142**	P	**Pg**	**13 58 32.5**	**-1.1**
KRI1				S	**Sb**	**13 58 42.5**	**+0.3**
	comp=N,6μm,0.3s						
AST1	**Astakos**	**0.70**	**57**	P	**Pb**	**13 58 34.3**	**-0.6**
AST1				S	**Sg**	**13 58 45.0**	**+0.7**
	comp=N,5μm,0.2s						
TSLK	**Tsoukalades, L**	**0.71**	**21**	P	**Pb**	**13 58 34.9**	**-0.1**
TSLK				S	**Sn**	**13 58 46.0**	**-0.8**
	comp=N,3μm,0.4s						
TSLK	**Tsoukalades, L**	**0.71**	**21**	P	**Pb**	**13 58 34.8**	**-0.1**
VTN	**Vitineika**	**0.72**	**110**	P	**Pb**	**13 58 34.9**	**-0.2**
VTN				S	**Sg**	**13 58 45.2**	**+0.5**
VTN	**Vitineika**	**0.72**	**110**	P	**Pb**	**13 58 34.7**	**-0.5**
PDO	**Prodromos**	**0.80**	**57**	P	**Pb**	**13 58 36.0**	**-0.5**
PDO				S	**Sb**	**13 58 47.2**	**+0.2**
	comp=N,6μm,0.3s						
PDO	**Prodromos**	**0.80**	**57**	P	**Pb**	**13 58 36.1**	**-0.5**
PDO				S	**Sn**	**13 58 50.5**	**+1.5**
RLS	**Riolos of Patr**	**0.90**	**96**	P	**Pb**	**13 58 37.9**	**-0.4**
PVO	**Paravola**	**1.04**	**64**	P	**Pb**	**13 58 40.8**	**+0.1**
PVO				S	**Sg**	**13 58 55.4**	**+0.4**
	comp=N,3μm,0.6s						
PVO	**Paravola**	**1.04**	**64**	P	**Pb**	**13 58 40.6**	**0.0**
PVO				S	**Sg**	**13 58 56.0**	**+1.0**
DRO	**Drossia**	**1.11**	**101**	P	**Pn**	**13 58 41.9**	**+0.1**
DRO	**Drossia**	**1.11**	**101**	P	**Pn**	**13 58 42.1**	**+0.2**
AMT	**Artemida-Makis**	**1.26**	**120**	P	**Pg**	**13 58 45.8**	**+0.4**
AMT				S	**Sg**	**13 59 05.6**	**+3.7**
LAKA	**Lakka**	**1.30**	**86**	P	**Pn**	**13 58 44.3**	**-0.2**
ANX	**Ano Chora**	**1.32**	**71**	P	**Pb**	**13 58 46.2**	**+0.7**
ANX				S	**Sg**	**13 59 05.9**	**+2.0**

EVR	**Evrytania**	**1.38**	**57**	P		**Pg**	**13 58 47.8**	**0.0**
SERG	**Sergoula**	**1.38**	**79**	P		**Pn**	**13 58 45.6**	**0.0**
TRIZ	**Trizonia**	**1.39**	**81**	P		**Pn**	**13 58 45.6**	**0.0**
KLV	**Kalavryta, Ach**	**1.44**	**94**	P		**Pb**	**13 58 47.6**	**+0.1**
KALE	**Kalithea**	**1.44**	**80**	P		**Pn**	**13 58 46.6**	**+0.1**
ITM	**Ithomi**	**1.60**	**127**	P		**Pb**	**13 58 49.9**	**-0.3**
ITM	**Ithomi**	**1.60**	**127**			**Pb**	**13 58 50.2**	**-0.1**
KASA	**Kassiopi**	**1.61**	**349**	P		**Pb**	**13 58 50.3**	**0.0**
MAKR	**Makrakomi, Fth**	**1.65**	**58**	P		**Pg**	**13 58 52.6**	**-0.2**
TRIP	**Tripoli**	**1.66**	**112**	P		**Pg**	**13 58 53.0**	**-0.1**
AGG	**Agios Georgios**	**1.79**	**61**	Pn		**Pb**	**13 58 54.3**	**+0.9**
VLX	**Vlachokerasia**	**1.81**	**115**	P		**Pg**	**13 58 54.9**	**-0.9**
PROD	**Prodromos**	**2.03**	**87**	P		**Pb**	**13 58 56.5**	**-1.0**
DID	**Didima**	**2.39**	**105**	P		**Pn**	**13 59 01.5**	**+2.0**
SCTE	**Santa Cesarea**	**2.39**	**323**	P		**Pn**	**13 59 00.9**	**+1.4**
SCTE	**Santa Cesarea**	**2.39**	**323**			**Pn**	**13 59 01.0**	**+1.4**
LIT	**Litokhoron**	**2.56**	**40**	Pn		**Pb**	**13 59 04.7**	**-1.9**
FNA	**Florina**	**2.74**	**17**	Pn		**Pn**	**13 59 07.2**	**+2.9**
OHR	**Ohrid**	**2.96**	**7**	*i* Pn		**Pn**	**13 59 10.4**	**+2.9**
OHR	**Ohrid**	**2.96**	**7**	*i* Pn		**Pn**	**13 59 10.4**	**+2.9**
TIP	**Timpagrande**	**2.97**	**291**	P		**Pn**	**13 59 09.6**	**+2.1**
TIP	**Timpagrande**	**2.97**	**291**	Pn		**Pn**	**13 59 09.7**	**+2.1**
TIR	**Tirane**	**3.20**	**354**	Pn		**Pn**	**13 59 12.9**	**+2.4**
VAY	**Valandovo**	**3.59**	**28**	*i* Pn		**Pb**	**13 59 20.5**	**-3.7**
VAY	**Valandovo**	**3.59**	**28**	*i* Pn		**Pb**	**13 59 20.5**	**-3.7**
STIP	**Stip**	**3.80**	**21**	*i* Pn		**Pn**	**13 59 23.3**	**+4.4**
STIP	**Stip**	**3.80**	**21**	*i* Pn		**Pn**	**13 59 23.3**	**+4.4**
MMB	**Musomiste**	**4.30**	**36**	P		**Pn**	**13 59 23.9**	**-1.9**
MMB				Sg		**Sn**	**14 00 15.9**	**+0.3**
PDG	**Podgorica**	**4.34**	**349**	Pn		**Pn**	**13 59 26.3**	**+0.1**
SANT	**Santorini**	**4.46**	**112**	Pn		**Pn**	**13 59 27.5**	**-0.5**
DBRK	**Dubrovnik**	**4.80**	**340**	*e*Pn		**Pn**	**13 59 32.6**	**0.0**
DBRK				Sn		**Sn**	**14 00 27.2**	**-0.5**
VTS	**Vitosha**	**4.97**	**26**	P		Pn	13 59 30.4	-4.6
VTS				S		**Sn**	**14 00 31.5**	**-0.6**
SGRT	**San Giovanni R**	**5.03**	**317**	Pn		**Pn**	**13 59 37.1**	**+1.3**
STON	**Ston**	**5.11**	**338**	*e*Pn		**Pn**	**13 59 37.1**	**+0.3**
STON				Sn		**Sn**	**14 00 34.0**	**-1.4**
MAKA	**Makarska**	**5.70**	**335**	*e*Pn		**Pn**	**13 59 45.3**	**+0.4**
MAKA				Sn		**Sn**	**14 00 47.9**	**-2.0**
RICI	**Ricice**	**5.85**	**337**	*e*Pn		**Pn**	**13 59 47.5**	**+0.4**
KARP	**Karpathos**	**6.07**	**113**	Pn		**Pn**	**13 59 51.9**	**+1.9**
ZIRJ	**Zirje**	**6.53**	**329**	*i* Pn		**Pn**	**13 59 57.1**	**+0.8**
ZIRJ				Sn		**Sn**	**14 01 07.1**	**-3.3**
KIJV	**Kijevo**	**6.54**	**334**	*i* Pn		**Pn**	**13 59 57.6**	**+1.1**
KIJV				Sn		**Sn**	**14 01 08.8**	**-1.9**
MORI	**Morici**	**6.68**	**330**	*i* Pn		**Pn**	**14 00 00.0**	**+1.6**
DUGI	**Dugi Otok**	**7.05**	**327**	*e*Pn		**Pn**	**14 00 05.5**	**+2.0**
DUGI				Sn		**Sn**	**14 01 21.0**	**-2.2**
NVLJ	**Novalja**	**7.60**	**329**	*e*Pn		**Pn**	**14 00 11.4**	**+0.5**
BRTR	**Keskin Array B**	**10.48**	**77**	Pn		Pn	14 01 01.1	+10
	comp=N,0.1nm,0.3s,baz=262,slow=12,SNR=2.6							
BRTR	**Keskin Array B**	**10.48**	**77**			Pn	14 01 01.1	+10
GERES	**GERESS Array B**	**11.71**	**338**	Pn		**Pn**	**14 01 08.6**	**+1.3**
	comp=N,0.3nm,0.3s,baz=160,slow=18,SNR=2.6							
GERES	**GERESS Array B**	**11.71**	**338**			**Pn**	**14 01 08.6**	**+1.3**
FINES	**FINESS Array B**	**23.58**	**7**	P		**P**	**14 03 31.6**	**+1.1**
	comp=N,2.0nm,0.8s,baz=180,slow=9.5,SNR=5.2							
FINES	**FINESS Array B**	**23.58**	**7**	P		**P**	**14 03 31.6**	**+1.1**
MKAR	**Makanchi Array**	**45.44**	**58**	P		**P**	**14 06 38.6**	**-0.3**
	comp=N,0.3nm,0.4s,baz=270,slow=6.9,SNR=5.6							
MKAR	**Makanchi Array**	**45.44**	**58**	P		**P**	**14 06 38.6**	**-0.3**
ZAA0	**Zalesovo Array**	**45.81**	**48**	P		**P**	**14 06 41.5**	**-0.2**
ZAA0				IAmb		IAmb	14 06 42.6	
	comp=Z,2.8nm,1.2s							
ZALV	**Zalesovo Beam**	**45.81**	**48**	P		**P**	**14 06 41.2**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=269,slow=10,SNR=4.0							
ZALV	**Zalesovo Beam**	**45.81**	**48**	P		**P**	**14 06 41.2**	**-0.5**

*SOF **26** 14:08:16.0, 40°.06N×25°.91E, h18km, MD3.5*
*THE **26** 14:08:20.7, 40°.34N×25°.83E, h11km±1km, ML3.5/12, Error ellipse: s-maj=1.1km s-min=0.6km az=59.0*
*ISK **26** 14:08:20.1, 40°.34N×25°.86E, h10km, ML3.8/18*
*ATH **26** 14:08:20.4, 40°.35N×25°.74E, h30km±1km, ML3.6/6, Error ellipse: s-maj=2.4km s-min=1.1km az=66.0*
*DDA **26** 14:08:20.7, 40°.34N×25°.94E, h17km±1km, ML3.5*
ISC 26 14:08:20.1±0.9, **40°.36N**±0°.01×**25°.84E**±0°.01, **h18**km±3km, **n94**, σ**0s80**/141, **11C-7D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.17**	**164**	P	**Pg**	**14 08 25.1**	**+0.4**
GADA				S	**Sg**	**14 08 27.4**	**-0.3**
	27μm,0.3s						
GADA	**Gvkgeada**	**0.17**	**164**	PG	**Pg**	**14 08 25.1**	**+0.4**
SMTH	**Samothraki Isl**	**0.26**	**296**	P	**Pb**	**14 08 26.4**	**+0.2**
SMTH				S	**Sb**	**14 08 30.4**	**+0.1**
	27μm,0.1s						
SMTH	**Samothraki Isl**	**0.26**	**296**	P	**Pb**	**14 08 26.4**	**+0.2**
SMTH				S	**Sb**	**14 08 30.3**	**0.0**
SMTH				AML	AML	14 08 30.6	
	comp=E,34756μm,0.2s						
SMTH				AML	AML	14 08 30.9	
	comp=N,70079μm,0.1s						
ENEZ	**Enez**	**0.45**	**32**	P	**Pb**	**14 08 29.5**	**-0.1**
ENEZ				S	**Sb**	**14 08 36.4**	**+0.4**
	comp=N,8μm,0.3s						
ENEZ	**Enez**	**0.45**	**32**	PG	**Pb**	**14 08 29.5**	**-0.1**
ENEZ				SG	**Sb**	**14 08 36.6**	**+0.6**
GELI	**Tayfur-Gelibol**	**0.49**	**85**	PG	**Pb**	**14 08 30.0**	**-0.2**
GELI				SG	**Sb**	**14 08 37.0**	**0.0**
BOZC	**Bozcaada**	**0.54**	**162**	PG	**Pb**	**14 08 31.2**	**+0.1**
BOZC				SG	**Sb**	**14 08 38.0**	**+0.1**
BOZC	**Bozcaada**	**0.54**	**162**	*i* P	**Pb**	**14 08 31.1**	**+0.1**
BOZC				*i* S	**Sb**	**14 08 38.5**	**+0.1**
BOZC				IAML		14 08 39.0	
	comp=E,7μm,0.3s						
ERIK	**Erikli-Kesan**	**0.60**	**58**	PG	**Pb**	**14 08 31.9**	**-0.2**
ERIK				SG	**Sg**	**14 08 40.8**	**+0.5**
EZN	**Ezine**	**0.65**	**145**	P	**Pb**	**14 08 32.6**	**-0.3**
EZN				S	**Sg**	**14 08 41.4**	**-0.2**
	comp=E,2μm,0.2s						
EZN	**Ezine**	**0.65**	**145**	PG	**Pb**	**14 08 32.6**	**-0.3**
EZN				SG	**Sg**	**14 08 41.5**	**-0.2**
LIA	**Limnos Island**	**0.68**	**228**	P	**Pg**	**14 08 33.8**	**+0.3**
LIA				S	**Sg**	**14 08 42.6**	**+0.1**
	comp=E,4μm,0.4s						
LIA	**Limnos Island**	**0.68**	**228**	P	**Pg**	**14 08 33.5**	**0.0**
LIA				S	**Sg**	**14 08 42.5**	**-0.1**
LIA				AML	AML	14 08 45.7	
	comp=E,7419μm,0.4s						
LIA				AML	AML	14 08 45.7	
	comp=N,6511μm,0.4s						
LPK	**Lapseki**	**0.71**	**88**	PG	**Pg**	**14 08 33.9**	**-0.1**
LPK				SG	**Sg**	**14 08 43.8**	**+0.4**
KESN	**Edirne-Kesan**	**0.80**	**54**	*i* P	**Pb**	**14 08 34.7**	**-0.9**
KESN				*i* S	**Sb**	**14 08 45.8**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**0.82**	**138**	*i* P	**Pb**	**14 08 35.9**	**0.0**
BAYC				*i* S	**Sg**	**14 08 46.9**	**-0.2**
RDO	**Rodhopi**	**0.82**	**344**	P	**Pg**	**14 08 36.3**	**+0.1**
RDO				S	**Sn**	**14 08 48.8**	**+0.3**
	comp=N,4μm,0.2s						
RDO	**Rodhopi**	**0.82**	**344**	P	**Pg**	**14 08 36.4**	**+0.2**
RDO				S	**Sg**	**14 08 47.1**	**0.0**
RDO				AML	AML	14 08 49.6	
	comp=N,8478μm,0.2s						
RDO				AML	AML	14 08 51.2	
	comp=E,6850μm,0.2s						
RDO	**Rodhopi**	**0.82**	**344**	PG	**Pg**	**14 08 36.3**	**+0.1**
THAS	**Thassos island**	**0.89**	**287**	P	**Pb**	**14 08 37.2**	**+0.2**
THAS				S	**Sn**	**14 08 49.9**	**-0.2**
	comp=E,3μm,0.3s						
THAS	**Thassos island**	**0.89**	**287**	P	**Pb**	**14 08 37.1**	**+0.1**
THAS				S	**Sb**	**14 08 48.2**	**-0.3**
UKOP	**Uzunkopru-Edir**	**0.98**	**38**	PG	**Pn**	**14 08 38.9**	**-0.1**
UKOP				SG	**Sn**	**14 08 53.7**	**+1.3**
EFSA	**Agios Efstrati**	**1.04**	**219**	P	**Pg**	**14 08 40.3**	**-0.1**
EFSA				S	**Sb**	**14 08 53.3**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.07**	**72**	PG	**Pb**	**14 08 39.6**	**-0.6**
RKY				SG	**Sg**	**14 08 55.5**	**+0.4**
KRBG	**Karabiga-Canak**	**1.12**	**88**	PN	**Pn**	**14 08 40.6**	**-0.3**
SIGR	**SIGRI**	**1.14**	**179**	P	**Pb**	**14 08 41.6**	**+0.2**
SIGR				S	**Sg**	**14 08 57.2**	**0.0**
	comp=E,4μm,0.4s						
SIGR	**SIGRI**	**1.14**	**179**	P	**Pg**	**14 08 41.8**	**-0.5**
SIGR				S	**Sg**	**14 08 57.0**	**-0.2**
SIGR				AML	AML	14 08 58.3	
	comp=N,7489μm,0.3s						
SIGR				AML	AML	14 08 58.8	
	comp=E,9301μm,0.3s						

SIGR	**SIGRI**	**1.14**	**179**	PN		**Pg**	**14 08 41.8**	**-0.5**
SIGR				SN		**Sg**	**14 08 58.2**	**+1.0**
PRK	**Paraskevi**	**1.16**	**163**	P		**Pg**	**14 08 43.1**	**+0.6**
PRK				S		**Sg**	**14 08 58.6**	**+0.9**
	comp=E,5μm,0.6s							
PRK	**Paraskevi**	**1.16**	**163**	P		**Pg**	**14 08 43.2**	**+0.6**
PRK				S		**Sn**	**14 08 56.6**	**-0.1**
PRK				AML		AML	14 08 59.9	
	comp=E,12515μm,0.9s							
PRK				AML		AML	14 09 00.5	
	comp=N,6962μm,0.3s							
KAVA	**Kavala**	**1.19**	**303**	P		**Pn**	**14 08 41.9**	**0.0**
KAVA				S		**Sg**	**14 08 59.6**	**+0.8**
	comp=N,852nm,0.1s							
KAVA	**Kavala**	**1.19**	**303**	P		**Pb**	**14 08 42.1**	**-0.1**
KAVA				S		**Sb**	**14 08 55.5**	**-1.7**
AYVA	**Ayvalik**	**1.24**	**148**	*i* P		**Pb**	**14 08 43.3**	**+0.4**
AYVA				*i* S		**Sg**	**14 08 59.7**	**-0.5**
AYVA				IAML			14 09 02.0	
	comp=E,2μm,0.6s							
KVLA	**Kavala**	**1.25**	**298**	P		**Pb**	**14 08 43.3**	**+0.1**
KVLA				S		**Sb**	**14 08 58.8**	**-0.1**
KDZ	**Kurdzhali**	**1.33**	**346**	P		**Pg**	**14 08 45.8**	**-0.1**
KDZ	**Kurdzhali**	**1.33**	**346**	PN		**Pb**	**14 08 44.8**	**+0.2**
MRMT	**Marmara Adasi**	**1.36**	**79**	PN		**Pn**	**14 08 44.2**	**-0.2**
MRMT				SN		**Sg**	**14 09 03.3**	**-1.0**
OUR	**Ouranopolis**	**1.42**	**270**	P		**Pn**	**14 08 44.8**	**-0.2**
OUR				S		**Sb**	**14 09 04.7**	**+1.0**
	comp=E,2μm,0.6s							
OUR	**Ouranopolis**	**1.42**	**270**	P		**Pn**	**14 08 44.7**	**-0.2**
TKR	**Tekirdag**	**1.44**	**63**	PN		**Pb**	**14 08 46.1**	**-0.3**
TKR				SN		**Sg**	**14 09 05.9**	**-0.8**
GONE	**Gonen-Balikesi**	**1.45**	**102**	PN		**Pb**	**14 08 46.0**	**-0.6**
GONE				SN		**Sg**	**14 09 05.8**	**-1.2**
BALY	**Balya**	**1.50**	**114**	*i* P		**Pb**	**14 08 47.2**	**-0.3**
BALY				*i* S		**Sg**	**14 09 07.6**	**-1.1**
BALY				IAML			14 09 11.0	
	comp=N,482nm,0.5s							
DKL	**Dikili**	**1.52**	**147**	PN		**Pb**	**14 08 48.0**	**+0.1**
DKL				SN		**Sg**	**14 09 08.1**	**-1.3**
EDC	**Edincik**	**1.55**	**90**	PN		**Pb**	**14 08 48.2**	**-0.1**
RZN	**Rozhen**	**1.58**	**328**	P		**Pn**	**14 08 47.8**	**+0.4**
EDRB	**Edirne**	**1.64**	**24**	P		**Pb**	**14 08 49.0**	**-0.8**
EDRB	**Edirne**	**1.64**	**24**	PN		**Pb**	**14 08 49.5**	**-0.3**
ZEDA	**zmir-Bergama**	**1.69**	**145**	*i* P		**Pn**	**14 08 49.5**	**+0.8**
ZEDA				*i* S		**Sb**	**14 09 12.0**	**+0.6**
DIM	**Dimitrovgrad**	**1.71**	**352**	P		**Pb**	**14 08 50.4**	**-0.6**
PAIG	**Paliouri**	**1.71**	**256**	P		**Pn**	**14 08 48.5**	**-0.5**
PAIG				S		**Sb**	**14 09 12.8**	**+0.7**
	comp=N,565nm,0.7s							
PAIG	**Paliouri**	**1.71**	**256**	P		**Pn**	**14 08 48.5**	**-0.5**
KIRK	**Kırklareli**	**1.71**	**33**	*i* P		**Pn**	**14 08 48.7**	**-0.4**
KIRK				*i* S		**Sb**	**14 09 12.6**	**+0.3**
BALB	**Balikesir**	**1.73**	**114**	PN		**Pb**	**14 08 50.4**	**-0.9**
STEP	**BALIKESIR_Sava**	**1.75**	**123**	*i* P		**Pb**	**14 08 50.8**	**+0.9**
STEP				*i* S		**Sg**	**14 09 15.6**	**-0.9**
STEP				IAML			14 09 17.0	
	comp=N,373nm,1.1s							
SKY	**Skiros Island**	**1.78**	**214**	P		**Pn**	**14 08 49.7**	**-0.3**
SKY	**Skiros Island**	**1.78**	**214**	P		**Pn**	**14 08 49.5**	**-0.5**
PSRA	**Psara**	**1.82**	**187**	P		**Pn**	**14 08 51.5**	**+0.9**

comp=E,179μm,0.5s
BAYC CANAKKALE_Bayr 0.79 144 *i* P **Pb** **14 13 29.0 +0.1**
BAYC *i* S **Sb** **14 13 39.5 +0.2**
RDO Rodhopi 0.82 338 P **Pb** **14 13 29.6 +0.1**
RDO Rodhopi 0.82 338 P **Pb** **14 13 29.5 +0.1**
RDO S **Sg** **14 13 40.7 0.0**
RDO AML AML 14 13 45.3
comp=N,589μm,0.2s
RDO AML AML 14 13 45.6
comp=E,373μm,0.2s
RDO Rodhopi 0.82 338 PG **Pb** **14 13 29.6 +0.1**
UKOP Uzunkopru-Edir 0.91 35 PG **Pn** **14 13 31.5 -0.1**
THAS Thassos island 0.96 284 P **Pb** **14 13 31.7 -0.1**
THAS S **Sn** **14 13 45.5 0.0**
comp=E,102nm,0.2s
THAS Thassos island 0.96 284 P **Pb** **14 13 31.7 -0.1**
THAS S **Sn** **14 13 45.1 -0.4**
THAS AML AML 14 13 46.6
comp=N,208μm,0.2s
THAS AML AML 14 13 46.6
comp=E,190μm,0.3s
RKY Sarkoy-Tekirda 0.99 72 PG **Pb** **14 13 32.6 +0.3**
KRBG Karabiga-Canak 1.03 89 PG **Pb** **14 13 32.7 -0.4**
EFSA Agios Efstrati 1.12 221 P **Pb** **14 13 34.6 +0.1**
PRK Paraskevi 1.16 167 P **Pg** **14 13 36.5 +0.3**
PRK S **Sg** **14 13 52.5 +1.1**
PRK AML AML 14 13 53.6
comp=N,252μm,0.3s
PRK AML AML 14 13 54.2
comp=E,274μm,0.3s
SIGR SIGRI 1.17 183 P **Pb** **14 13 35.8 +0.4**
SIGR S **Sg** **14 13 51.6 -0.1**
comp=E,162nm,0.5s
SIGR SIGRI 1.17 183 P **Pb** **14 13 35.7 +0.4**
SIGR AML AML 14 13 52.9
comp=N,418μm,0.4s
SIGR AML AML 14 13 53.4
comp=E,214μm,0.3s
SIGR SIGRI 1.17 183 PN **Pn** **14 13 34.6 -0.6**
AYVA Ayvalik 1.22 152 *i* P **Pb** **14 13 36.7 +0.5**
AYVA *i* S **Sn** **14 13 52.7 +0.9**
AYVA IAML 14 13 55.0
comp=N,180nm,0.6s
KAVA Kavala 1.25 300 P **Pb** **14 13 36.6 -0.1**
KAVA Kavala 1.25 300 P **Pb** **14 13 36.6 -0.1**
KAVA S **Sg** **14 13 54.1 0.0**
KAVA AML AML 14 13 57.6
comp=E,156μm,0.2s
KAVA AML AML 14 13 58.4
comp=N,112μm,0.4s
MRMT Marmara Adasi 1.28 80 PN **Pn** **14 13 36.3 -0.5**
KVLA Kavala 1.31 296 P **Pb** **14 13 37.8 +0.1**
KDZ Kurdzhali 1.33 343 PN **Pn** **14 13 37.0 -0.4**
GONE Gonen-Balikesi 1.38 104 PN **Pn** **14 13 37.9 -0.1**
BALY Balya 1.44 116 *i* P **Pn** **14 13 39.3 +0.3**
BALY *i* S **Sg** **14 14 00.5 +0.3**
EDC Edincik 1.47 91 PN **Pn** **14 13 38.6 -0.7**
OUR Ouranopolis 1.50 269 P **Pn** **14 13 39.7 0.0**
OUR Ouranopolis 1.50 269 PN **Pn** **14 13 39.2 -0.5**
DKL Dikili 1.50 150 PN **Pn** **14 13 39.5 -0.3**
EDRB Edirne 1.58 22 PN **Pn** **14 13 40.8 -0.1**
BALB Balikesir 1.66 116 PN **Pn** **14 13 41.5 -0.4**
ZEDA zmir-Bergama 1.66 148 *i* P **Pn** **14 13 42.3 +0.4**
ZEDA *i* S **Sg** **14 14 06.9 -0.5**
PLD Plovdiv 1.96 332 PN **Pn** **14 13 46.1 +0.1**
URLA Izmir 2.08 166 PN **Pn** **14 13 47.0 -0.8**
KNT Kendrikon 2.44 290 P **Pn** **14 13 53.6 +1.0**

*JMA **26** 14:28:17.0±0.1,23°.69N×121°.48E,h14km±4km,M2.8*
*TAP **26** 14:28:18.1,23°.75N×121°.42E,h17km,ML3.4,C*
ISC 26 14:28:17.7±0.8,23°.73N±0°.01×121°.44E±0°.02,h17km±4km, n94,σ0^{9}61/153,7C-9D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
EGFH	**Guangfu**	**0.06**	**194**	⇑*iP*		**Pg**	**14 28 21.4**	**+0.4**
	baz=171							
EGFH				S		**Sg**	**14 28 23.2**	**0.0**
	baz=171							
ESL	**Shilin**	**0.09**	**354**	⇑*iP*		**Pg**	**14 28 21.5**	**+0.2**
	baz=20							
ESL				S		**Sg**	**14 28 23.7**	**+0.1**
	baz=20							
HGSD	**Ruisui**	**0.24**	**184**	⇓*iP*		**Pg**	**14 28 23.9**	**+0.7**
	baz=183							
HGSD				*e*S		**Sb**	**14 28 28.3**	**+0.9**
	baz=183							
EHY	**Hungye**	**0.25**	**207**	P		**Pg**	**14 28 23.3**	**-0.1**
	baz=198							
EHY				*e*S		**Sg**	**14 28 26.8**	**-0.4**
	baz=198							
VWDT	**VWDT**	**0.28**	**275**	⇑*iP*		**Pb**	**14 28 24.2**	**-0.1**
	baz=266							
VWDT				*e*S		**Sb**	**14 28 28.3**	**-0.4**
	baz=266							
HWA	**Hwalien**	**0.29**	**31**	*e*P		**Pb**	**14 28 24.8**	**+0.3**
	baz=34							
HWA				*e*S		**Sb**	**14 28 29.9**	**+0.9**
	baz=34							
OWD	**Renai**	**0.33**	**313**	*i* P		**Pb**	**14 28 25.0**	**-0.3**
	baz=314							
OWD				S		**Sg**	**14 28 29.1**	**-0.7**
	baz=314							
YULB	**Yu-li**	**0.36**	**202**	⇑*iP*		**Pg**	**14 28 25.2**	**-0.1**
	baz=193							
YULB				S		**Sg**	**14 28 30.1**	**-0.3**
	baz=193							
TWD	**Chiawan**	**0.38**	**22**	P		**Pg**	**14 28 25.9**	**+0.3**
	baz=28							
TWD				*e*S		**Sg**	**14 28 31.3**	**+0.4**
	baz=28							
TWF1	**Yuli**	**0.40**	**200**	P		**Pg**	**14 28 25.9**	**0.0**
	baz=198							
TWF1				*e*S		**Sg**	**14 28 31.4**	**-0.1**
	baz=198							
CHGB	**Renai**	**0.41**	**323**	⇓*iP*		**Pb**	**14 28 26.5**	**-0.2**
	baz=332							
CHGB				S		**Sg**	**14 28 31.6**	**-0.5**
	baz=332							
WHF	**Hehuan Shan**	**0.45**	**339**	⇓*iP*		**Pg**	**14 28 26.8**	**-0.2**
	baz=342							
WHF				S		**Sg**	**14 28 32.7**	**-0.5**
	baz=342							
SSLB	**Suanglung**	**0.45**	**278**	⇓*iP*		**Pg**	**14 28 26.7**	**-0.3**
	baz=283							
SSLB				S		**Sg**	**14 28 32.0**	**-1.1**
	baz=283							
NACB	**Ninganchiao**	**0.47**	**17**	⇑*iP*		**Pg**	**14 28 26.8**	**-0.4**
	baz=21							
NACB				S		**Sg**	**14 28 33.7**	**+0.2**
	baz=21							
ETLH	**Xiulin Townshi**	**0.48**	**4**	P		**Pg**	**14 28 27.3**	**-0.1**
	baz=16							
ETLH				S		**Sg**	**14 28 33.6**	**-0.3**
	baz=16							
YUS	**Yu-Shan**	**0.51**	**242**	P		**Pg**	**14 28 28.3**	**+0.1**
	baz=245							
SMLT	**Sun Moon Lake**	**0.52**	**287**	⇓*iP*		**Pg**	**14 28 28.0**	**-0.2**
	baz=288							
SMLT				S		**Sg**	**14 28 34.7**	**-0.6**
	baz=288							
WHYT	**Xinyi Township**	**0.54**	**267**	*e*P		**Pb**	**14 28 28.8**	**0.0**
	baz=266							
WHYT				*e*S		**Sg**	**14 28 35.4**	**-0.5**
	baz=266							
FULB	**Fuli**	**0.55**	**195**	*e*P		**Pg**	**14 28 28.5**	**-0.1**
	baz=202							
FULB				S		**Sb**	**14 28 38.6**	**+2.2**
	baz=202							
DPDB	**Guoxing**	**0.56**	**303**	⇓*iP*		**Pb**	**14 28 29.0**	**-0.2**
	baz=308							
DPDB				*e*S		**Sb**	**14 28 36.6**	**-0.4**
	baz=308							
TYC	**Yuchr**	**0.56**	**288**	⇓*iP*		**Pg**	**14 28 28.7**	**-0.3**
	baz=293							
TYC				*e*S		**Sg**	**14 28 35.9**	**-0.6**
	baz=293							
TWT	**Tachien**	**0.58**	**335**	*i* P		**Pb**	**14 28 29.5**	**0.0**
	baz=335							
TWT				S		**Sg**	**14 28 36.6**	**-0.5**
	baz=335							
TDCB	**Techi**	**0.58**	**334**	⇓*iP*		**Pb**	**14 28 29.6**	**0.0**
	baz=335							
TDCB				S		**Sg**	**14 28 36.5**	**-0.8**
	baz=335							
CHKT	**Chengkung**	**0.63**	**187**	*e*P		**Pg**	**14 28 30.1**	**-0.1**
	baz=169							
WJS	**Zhushan**	**0.66**	**278**	*e*P		**Pb**	**14 28 31.5**	**+0.7**
	baz=278							
WJS				*e*S		**Sn**	**14 28 41.2**	**-1.1**
	baz=278							
ELDTW	**Lidau**	**0.66**	**216**	P		**Pg**	**14 28 29.9**	**-1.0**
	baz=206							
ELDTW				*e*S		**Sg**	**14 28 38.5**	**-1.2**
	baz=206							
NNSB	**Datong**	**0.70**	**355**	⇑*iP*		**Pg**	**14 28 31.4**	**-0.1**
	baz=4.0							
NNSB				*e*S		**Sg**	**14 28 40.6**	**-0.3**
	baz=4.0							
NNSH	**Datong**	**0.70**	**355**	⇑*iP*		**Pg**	**14 28 31.4**	**-0.2**
	baz=1.0							
NNSH				*e*S		**Sg**	**14 28 40.3**	**-0.6**
	baz=1.0							
WNT	**Mingjian**	**0.71**	**282**	P		**Pn**	**14 28 32.5**	**-0.5**
	baz=284							
WNT				S		**Sn**	**14 28 42.9**	**-0.6**
	baz=284							
NNS	**Nan Shan**	**0.71**	**355**	P		**Pg**	**14 28 31.6**	**-0.2**
	baz=4.0							
NNS				*e*S		**Sb**	**14 28 41.1**	**-0.2**
	baz=4.0							
WHP	**Taichung City**	**0.71**	**320**	P		**Pb**	**14 28 31.7**	**0.0**
	baz=321							
WHP				*e*S		**Sg**	**14 28 40.6**	**-0.7**
	baz=321							
CHN5	**Tsauling**	**0.71**	**260**	P		**Pb**	**14 28 32.2**	**+0.5**
	baz=252							
CHN5				*e*S		**Sb**	**14 28 41.5**	**+0.2**
	baz=252							
ENA	**Nanau**	**0.75**	**21**	*e*P		**Pb**	**14 28 31.3**	**-1.0**
	baz=25							
WGK	**Gukeng**	**0.81**	**267**	P		**Pn**	**14 28 34.1**	**-0.2**
	baz=267							
WGK				*e*S		**Sn**	**14 28 45.9**	**0.0**
	baz=267							
TCU	**Taichung**	**0.82**	**301**	*e*P		**Pn**	**14 28 34.4**	**0.0**
	baz=301							
WDLH	**Douliu**	**0.83**	**267**	⇓*iP*		**Pn**	**14 28 34.4**	**-0.2**
	baz=267							
WDLH				S		**Sn**	**14 28 46.0**	**-0.4**
	baz=267							
STYT	**Tauyuan**	**0.84**	**228**	*e*P		**Pb**	**14 28 34.3**	**+0.3**
	baz=226							
STYT				*e*S		**Sb**	**14 28 45.3**	**+0.3**
	baz=226							
TPUB	**Ta-pu**	**0.86**	**240**	P		**Pg**	**14 28 34.7**	**+0.2**
	baz=239							
TPUB				*e*S		**Sg**	**14 28 45.8**	**0.0**
	baz=239							
CHN4	**Tsaushan**	**0.87**	**244**	P		**Pn**	**14 28 35.2**	**+0.1**
	baz=233							
CHN4				*e*S		**Sn**	**14 28 47.5**	**+0.1**
	baz=233							
NDT	**Datong Townshi**	**0.87**	**4**	P		**Pb**	**14 28 34.5**	**+0.1**
	baz=6.0							
NDT				S		**Sb**	**14 28 45.6**	**-0.2**
	baz=6.0							
WCHH	**Zhanghua**	**0.88**	**294**	*e*P		**Pn**	**14 28 35.3**	**0.0**
	baz=292							
WCHH				*e*S		**Sn**	**14 28 49.1**	**+1.4**
	baz=292							
WTP	**Ta-pu**	**0.90**	**238**	*e*P		**Pg**	**14 28 35.5**	**+0.3**
	baz=236							
WTP				*e*S		**Sg**	**14 28 47.4**	**+0.2**
	baz=236							
ENTT	**Nioudou**	**0.92**	**7**	*e*P		**Pb**	**14 28 34.6**	**-0.6**
	baz=9.0							
ENTT				*e*S		**Sb**	**14 28 47.1**	**+0.1**
	baz=9.0							
NSY	**Sanyi**	**0.93**	**318**	*e*P		**Pn**	**14 28 36.7**	**+0.7**
	baz=319							
YHNB	**Yeheng**	**0.94**	**356**	P		**Pg**	**14 28 36.0**	**-0.1**
	baz=358							
YHNB				*e*S		**Sb**	**14 28 47.4**	**-0.4**
	baz=358							
NSK	**Sanguang**	**0.95**	**355**	*e*P		**Pb**	**14 28 35.7**	**0.0**
	baz=357							
NSK				S		**Sb**	**14 28 48.0**	**0.0**
	baz=357							
TWC	**Suao**	**0.95**	**23**	*e*P		**Pb**	**14 28 34.8**	**-0.9**
	baz=19							
TWC				*e*S		**Sg**	**14 28 49.3**	**+0.5**
	baz=19							
WDJ	**Dajia District**	**0.96**	**310**	*e*P		**Pn**	**14 28 37.4**	**+1.0**
	baz=322							
WDJ				*e*S		**Sn**	**14 28 51.5**	**+1.9**
	baz=322							
CHY	**Chiayi**	**0.96**	**256**	*e*P		**Pn**	**14 28 36.5**	**+0.1**
	baz=256							
CHY				*e*S		**Sn**	**14 28 50.3**	**+0.6**
	baz=256							
TWG	**Pinlang**	**0.97**	**201**	*e*P		**Pb**	**14 28 34.9**	**-1.1**
	baz=185							
TWG				*e*S		**Sb**	**14 28 48.8**	**+0.4**
	baz=185							
TWGBT	**Beinan**	**0.97**	**200**	*e*P		**Pb**	**14 28 33.9**	**-2.1**
	baz=185							
TWGBT				*e*S		**Sb**	**14 28 48.8**	**+0.4**
	baz=185							
PTSB	**Yuanli**	**0.98**	**317**	*e*P		**Pn**	**14 28 37.1**	**+0.4**
	baz=317							
PTSB				*e*S		**Sn**	**14 28 51.7**	**+1.5**
	baz=317							
NSTT	**Nanjuang**	**0.99**	**336**	*e*P		**Pn**	**14 28 36.9**	**+0.1**
	baz=346							
NSTT				*e*S		**Sn**	**14 28 49.9**	**-0.4**
	baz=346							
TWK	**Hsinying**	**0.99**	**243**	*e*P		**Pn**	**14 28 37.3**	**+0.5**
	baz=241							
TWK				*e*S		**Sn**	**14 28 50.7**	**+0.2**
	baz=241							
CHN1	**Nanshi**	**1.00**	**237**	*e*P		**Pg**	**14 28 37.4**	**+0.2**
	baz=237							
CHN1				*e*S		**Sn**	**14 28 51.2**	**+0.6**
	baz=237							
NMLH	**Miaoli**	**1.00**	**324**	*e*P		**Pg**	**14 28 38.1**	**+0.9**
	baz=325							
SNST	**Tainan City**	**1.00**	**240**	*e*P		**Pg**	**14 28 37.5**	**+0.2**
	baz=239							
SNST				*e*S		**Sn**	**14 28 51.3**	**+0.6**
	baz=239							
RLNB	**Erlin**	**1.01**	**280**	*e*P		**Pn**	**14 28 36.9**	**-0.1**
	baz=280							
RLNB				*e*S		**Sn**	**14 28 51.7**	**+1.0**
	baz=280							
TWE	**Neicheng**	**1.01**	**12**	*e*P		**Pb**	**14 28 36.0**	**-0.7**
	baz=14							
TWE				*e*S		**Sg**	**14 28 50.4**	**-0.2**
	baz=14							
TWH	**Lutao**	**1.01**	**178**	*e*P		**Pb**	**14 28 35.4**	**-1.4**
	baz=174							
SGST	**Jiashian**	**1.02**	**231**	*e*P		**Pb**	**14 28 36.7**	**-0.2**
	baz=218							
SLGT	**Liugui**	**1.03**	**225**	*e*P		**Pb**	**14 28 37.5**	**+0.3**
	baz=220							
NWLT	**Wulai**	**1.05**	**3**	*e*P		**Pb**	**14 28 37.1**	**-0.3**
	baz=19							
WTCT	**Ta-ch'eng**	**1.07**	**277**	*e*P		**Pn**	**14 28 37.9**	**0.0**
	baz=277							
SBCB	**Hsinchu**	**1.14**	**339**	*e*P		**Pg**	**14 28 39.6**	**-0.2**
	baz=340							
NTC	**Toucheng**	**1.18**	**17**	*e*P		**Pn**	**14 28 39.0**	**-0.3**
	baz=21							
CHN8	**Yiju**	**1.19**	**252**	*e*P		**Pn**	**14 28 39.5**	**0.0**
	baz=248							
EGS		**1.20**	**22**	*e*P		**Pn**	**14 28 39.9**	**+0.2**
	baz=26							
ECL	**Taimali**	**1.21**	**202**	*e*P		**Pn**	**14 28 38.7**	**-1.2**
	baz=183							
SSD	**Sandimen**	**1.23**	**218**	*e*P		**Pn**	**14 28 40.6**	**+0.5**
	baz=206							
TATO	**Taipei**	**1.24**	**2**	*e*P		**Pn**	**14 28 39.9**	**-0.4**
	baz=20							
TWA	**Mucha**	**1.25**	**6**	*e*P		**Pn**	**14 28 39.6**	**-0.8**
	baz=19							
TIPB	**Shuangxi**	**1.29**	**16**	*e*P		**Pn**	**14 28 40.1**	**-0.8**
	baz=19							
MASBT	**Mashibuluo**	**1.34**	**214**	*e*P		**Pn**	**14 28 41.4**	**-0.2**
	baz=205							
TWS1	**Kuangyinshan**	**1.37**	**359**	*e*P		**Pb**	**14 28 42.8**	**0.0**
	baz=25							
TWB1	**Santiao Chiao**	**1.37**	**21**	*e*P		**Pn**	**14 28 42.5**	**+0.5**
	baz=25							
NWF	**Wu-fen Shan**	**1.37**	**13**	*e*P		**Pb**	**14 28 43.4**	**+0.4**
	baz=27							
WFSB	**Wu-fen Shan**	**1.37**	**13**	*e*P		**Pb**	**14 28 43.1**	**+0.1**
	baz=27							
YM01	**YM01**	**1.42**	**5**	*e*P		**Pn**	**14 28 43.3**	**+0.6**
	baz=28							
YM04	**YM04**	**1.42**	**3**	*e*P		**Pn**	**14 28 43.0**	**+0.2**
	baz=27							
YM10	**YM10**	**1.43**	**4**	*e*P		**Pb**	**14 28 43.9**	**0.0**
	baz=28							
YM11	**YM11**	**1.44**	**5**	*e*P		**Pn**	**14 28 42.2**	**-0.8**
	baz=28							
EAST	**Anshuo**	**1.45**	**202**	*e*P		**Pn**	**14 28 44.1**	**+0.9**
	baz=185							
YM03	**YM03**	**1.45**	**3**	*e*P		**Pn**	**14 28 43.7**	**+0.6**
	baz=26							
ANP	**Anpu**	**1.45**	**3**	*e*P		**Pb**	**14 28 44.9**	**+0.5**
	baz=26							
SSPT	**Xinbi**	**1.48**	**213**	*e*P		**Pb**	**14 28 45.3**	**+0.6**
	baz=199							
JYNG	**Yonagunijimaku**	**1.55**	**62**	P		**Pn**	**14 28 44.6**	**+0.1**
JYNG				*e*S		**Sn**	**14 29 05.2**	**+1.0**
YOJ	**Yonaguni jima**	**1.61**	**63**	P		**Pn**	**14 28 45.4**	**+0.1**
YOJ				*e*S		**Sn**	**14 29 05.8**	**+0.2**
IRIF	**Iriomote-Funau**	**2.18**	**73**	P		**Pn**	**14 28 53.3**	**+0.2**
IRIF				S		**Sn**	**14 29 20.7**	**+1.0**
HATJ	**Hateruma jima**	**2.19**	**81**	*e*S		**Sn**	**14 29 19.5**	**-0.4**
JKRS	**Kuro-shima**	**2.40**	**77**	P		**Pn**	**14 28 56.6**	**+0.4**
JKRS				*e*S		**Sn**	**14 29 26.0**	**+0.8**
JIJ	**Ishigaki jima**	**2.55**	**75**	P		**Pn**	**14 28 58.1**	**-0.1**
JIJ				S		**Sn**	**14 29 27.9**	**-0.9**
JISG	**Ishigakijimahi**	**2.75**	**71**	P		**Pn**	**14 29 01.0**	**-0.1**
JISG				*e*S		**Sn**	**14 29 32.9**	**-1.0**
JTJ	**Tarama**	**3.11**	**72**	P		**Pn**	**14 29 06.7**	**+0.7**

*NEIC **26** 14:33:00.1±0.8,20°.43S±0°.10×177°.8W±0°.1,h527km±8km, mb4.5/20,Error ellipse: s-maj=19.0km s-min=7.1km az=136.0*
*IDC **26** 14:33:00.1±2.9,20°.50S×177°.65W,h537km±38km,mb3.5/9, mb1 3.6/10,mb1mx3.2/41,mbtmp4.4/10,Error ellipse: s-maj=32.1km s-min=15.6km az=161.0*
ISC 26 14:33:01.4±0.6,20°.4S±0°.1×177°.73W±0°.09,h550km,n33, σ1^{9}00/35,mb4.4/19,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.78**	**303**	P		**P**	**14 34 26.8**	**-2.8**
RAR	**Rarotonga**	**16.81**	**96**	P		**P**	**14 36 28.6**	**0.0**
URZ	**Urewera**	**18.37**	**193**	P		**P**	**14 36 41.0**	**-1.5**
	0.5nm,0.3s,baz=34,slow=17,SNR=1.6							
THZ	**Tophouse**	**22.75**	**198**	P		**P**	**14 37 21.2**	**-0.9**
LHI	**Lord Howe Isla**	**23.59**	**237**	P		**P**	**14 37 29.4**	**-0.3**
PPT	**Papeete**	**26.76**	**89**	P		**P**	**14 37 56.6**	**-1.3**
	11nm,0.4s,baz=232,slow=9.1,SNR=2.2							
EIDS	**Eidsvold**	**29.12**	**254**	P		**P**	**14 38 18.1**	**-0.3**
EIDS					IAmb	IAmb	14 39 02.2	
	comp=Z,28nm,1.9s							
ARMA	**Armidale**	**29.35**	**244**	P		**P**	**14 38 21.1**	**+0.7**
ARMA					IAmb	IAmb	14 39 01.5	
	comp=Z,19nm,1.6s							
XMAS	**Kiritimati**	**29.87**	**44**	P		**P**	**14 38 26.1**	**+1.2**
CAN	**Canberra**	**32.79**	**236**	P		**P**	**14 38 49.6**	**-0.1**
CAN					IAmb	IAmb	14 39 30.9	
	comp=Z,49nm,1.8s							
CTAO	**Charters Tower**	**33.76**	**264**	P		**P**	**14 38 58.5**	**+0.5**
CTAO					IAmb	IAmb	14 39 14.7	
	comp=Z,50nm,1.8s							
STKA	**Stephens Creek**	**38.07**	**244**	P		**P**	**14 39 32.6**	**-0.9**
	comp=Z,2.7nm,0.8s,baz=85,slow=12,SNR=3.4							
BBOO	**Buckleboo**	**42.83**	**243**	P		**P**	**14 40 11.5**	**+0.1**
WR0	**Warramunga Arr**	**44.68**	**262**	P		**P**	**14 40 25.5**	**-0.5**
WR0					IAmb	IAmb	14 40 29.4	
	comp=Z,18nm,1.6s							
AS31	**Alice Springs**	**44.79**	**257**	P		**P**	**14 40 27.0**	**+0.2**
ASAR	**Alice Springs**	**44.79**	**257**	P		**P**	**14 40 27.1**	**+0.2**
	comp=Z,4.8nm,0.6s,baz=90,slow=7.8,SNR=123							
ASAR					PcP	**PcP**	**14 41 57.9**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=104,slow=4.2,SNR=5.1							
ASAR					S	**S**	**14 46 25.4**	**+1.0**
	comp=Z,0.4nm,1.0s,baz=93,slow=16,SNR=4.4							
WB0	**Warramunga Arr**	**44.85**	**262**	P		**P**	**14 40 27.3**	**0.0**
WB2	**Warramunga Arr**	**44.86**	**262**	P		**P**	**14 40 27.1**	**-0.2**
WB2					IAmb	IAmb	14 41 06.0	
	comp=Z,20nm,1.5s							
WRAB	**Tennant Creek**	**44.86**	**262**	P		**P**	**14 40 27.1**	**-0.3**
WRA	**Warramunga Arr**	**44.87**	**262**	P		**P**	**14 40 27.1**	**-0.4**
	comp=Z,3.3nm,0.7s,baz=98,slow=7.8,SNR=62							
KNRA	**Kununurra**	**50.92**	**266**	P		**P**	**14 41 12.9**	**+0.3**
KNRA					IAmb	IAmb	14 42 18.7	
	comp=Z,38nm,1.5s							
FITZ	**Fitzroy Crossi**	**53.30**	**262**	P		**P**	**14 41 30.4**	**+0.7**
SIJI	**Sorong**	**53.45**	**285**	P		**P**	**14 41 31.4**	**+0.6**
	comp=Z,6.6nm,0.6s,baz=97,slow=7.2,SNR=5.8							
BATI	**Baunata**	**57.18**	**271**	P		**P**	**14 41 55.4**	**-1.4**
	comp=Z,13nm,0.4s,baz=153,slow=2.3,SNR=2.3							
PSA00	**Pilbara Seismi**	**57.94**	**257**	P		**P**	**14 42 01.8**	**-0.1**
PSA00					IAmb	IAmb	14 42 51.3	
	comp=Z,28nm,1.6s							
CASY	**Casey**	**64.18**	**205**	P		**P**	**14 42 42.5**	**+0.6**
QSPA	**South Pole Qui**	**69.69**	**180**	P		**P**	**14 43 17.1**	**+1.1**
QSPA					IAmb	IAmb	14 44 46.5	
	comp=Z,30nm,1.9s							
MJAR	**Matsushiro Arr**	**70.26**	**323**	P		**P**	**14 43 20.3**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=138,slow=5.9,SNR=4.2							
MAJO	**Matsushiro**	**70.27**	**323**	P		**P**	**14 43 20.6**	**+0.9**
MAJO					IAmb	IAmb	14 45 25.6	
	comp=Z,27nm,1.6s							
MJB9	**Matsu-Tunnel**	**70.27**	**323**	P		**P**	**14 43 20.4**	**+0.7**
NVAR	**Mina Array Bea**	**80.76**	**43**	P		**P**	**14 44 17.7**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=229,slow=11,SNR=1.5							
CMAR	**Chiang Mai Arr**	**90.31**	**289**	P		**P**	**14 45 06.7**	**+2.1**
	comp=Z,0.4nm,0.4s,baz=119,slow=3.3,SNR=4.1							
AKASG	**Malin Array Be**	**143.03**	**331**	PKP		**PKPdf**	**14 51 30.8**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=42,slow=4.3,SNR=4.4							

*JMA **26** 14:35:34.4,39°.34N×142°.07E,h48km±1km,M3.3*
JMA Felt I J1.
*IDC **26** 14:35:35.6±3.0,39°.36N×142°.25E,h70km±28km,mb3.1/3, mb1 3.2/5,mb1mx3.0/50,mbtmp3.3/5,Error ellipse: s-maj=50.4km s-min=19.0km az=100.0*
ISC 26 14:35:34.3±1.2,39°.33N±0°.04×142°.07E±0°.08,h47km±9km, n23,σ0^{9}76/28,mb3.5/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**0.32**	**322**	P		**Pn**	**14 35 43.4**	**+0.1**
MIYJ				S		**Sn**	**14 35 49.6**	**0.0**
OFUJ	**Ofunato**	**0.40**	**232**	P		**Pn**	**14 35 44.5**	**+0.4**
OFUJ				S		**Sn**	**14 35 51.5**	**+0.4**
JOM	**Ohasama**	**0.62**	**284**	P		**Pn**	**14 35 46.9**	**0.0**
JOM				S		**Sn**	**14 35 56.2**	**+0.3**
JTH	**Tanohata**	**0.63**	**345**	P		**Pn**	**14 35 46.9**	**-0.1**
JTH				S		**Sn**	**14 35 55.9**	**-0.3**
JKMT	**Kesennumamotoy**	**0.69**	**222**	P		**Pn**	**14 35 47.9**	**+0.1**
JKMT				*e*S		**Sn**	**14 35 57.5**	**-0.1**
JMK	**Ichinoseki**	**0.76**	**

baz=319,slow=76,SNR=17
H11S3 WAKE ISLAND Hy 29.75 127 T T 15 13 01.6
baz=319,slow=76,SNR=18
H11S2 WAKE ISLAND Hy 29.77 127 T T 15 13 02.6
baz=319,slow=76,SNR=13
ZALV Zalesovo Beam 40.79 310 P **P** **14 43 10.4 -0.3**
0.4nm,0.4s,baz=87,slow=7.9,SNR=1.7
MKAR Makanchi Array 43.38 300 P **P** **14 43 31.6 -0.4**
0.2nm,0.6s,baz=79,slow=9.1,SNR=2.0
WRA Warramunga Arr 59.40 188 P **P** **14 45 31.0 -1.0**
0.5nm,1.0s,baz=8.3,slow=6.7,SNR=1.6

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*THE **26** 14:39:23.7, 40°.34N×25°.78E, h9km±1km, ML1.8/10, Error ellipse: s-maj=1.4km s-min=0.6km az=46.0*
*ISK **26** 14:39:23.1, 40°.35N×25°.78E, h9km, ML2.1/12*
*ATH **26** 14:39:23.7, 40°.34N×25°.78E, h13km±5km, ML2.0/5, Error ellipse: s-maj=5.9km s-min=1.2km az=285.0*
*DDA **26** 14:39:25.0, 40°.29N×25°.95E, h11km±1km, ML2.5*

ISC 26 14:39:23.8±0.8, 40°.35N±0°.02×25°.79E±0°.02, h13km±6km, n36, σ0°.37/58, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
GADA	**Gvkgeada**	**0.18**	**151**	P		**Pg**		**14 39 27.7**	**-0.1**
GADA				S		**Sg**		**14 39 30.5**	**0.0**
	695nm,0.4s								
GADA	**Gvkgeada**	**0.18**	**151**	PG		**Pg**		**14 39 27.7**	**-0.1**
GADA				SG		**Sg**		**14 39 30.6**	**0.0**
GOKA	**anakkale-Gk**	**0.18**	**149**	*i* P		**Pg**		**14 39 27.8**	**0.0**
GOKA				*i* S		**Sg**		**14 39 31.0**	**+0.3**
GOKA				IAML				14 39 31.0	
	comp=Z,1μm,0.2s								
SMTH	**Samothraki Isl**	**0.23**	**303**	P		**Pg**		**14 39 28.7**	**0.0**
SMTH				S		**Sg**		**14 39 32.2**	**+0.1**
	comp=Z,615nm,0.1s								
SMTH	**Samothraki Isl**	**0.23**	**303**	P		**Pg**		**14 39 28.7**	**0.0**
SMTH				S		**Sg**		**14 39 32.2**	**+0.1**
SMTH				AML		AML		14 39 32.5	
	comp=E,1263μm,0.1s								
SMTH				AML		AML		14 39 32.8	
	comp=N,1132μm,0.1s								
ENEZ	**Enez**	**0.48**	**35**	P		**Pg**		**14 39 33.0**	**-0.3**
ENEZ				S		**Sg**		**14 39 40.2**	**+0.6**
	comp=N,220nm,0.4s								
ENEZ	**Enez**	**0.48**	**35**	PG		**Pg**		**14 39 32.9**	**-0.3**
GELI	**Tayfur-Gelibol**	**0.53**	**84**	PG		**Pg**		**14 39 33.9**	**-0.2**
GELI				SG		**Sb**		**14 39 42.2**	**-0.3**
BOZC	**Bozcaada**	**0.54**	**158**	PG		**Pg**		**14 39 34.1**	**-0.3**
BOZC				SG		**Sg**		**14 39 41.9**	**+0.3**
BOZC	**Bozcaada**	**0.54**	**158**	*i* P		**Pg**		**14 39 34.1**	**-0.3**
BOZC				*i* S		**Sg**		**14 39 41.5**	**-0.1**
ERIK	**Erikli-Kesan**	**0.64**	**59**	PG		**Pg**		**14 39 35.9**	**-0.4**
LIA	**Limnos Island**	**0.64**	**226**	P		**Pg**		**14 39 36.0**	**-0.3**
LIA				S		**Sg**		**14 39 44.9**	**+0.2**
	comp=N,65nm,0.3s								
LIA	**Limnos Island**	**0.64**	**226**	P		**Pg**		**14 39 35.9**	**-0.3**
LIA				S		**Sg**		**14 39 45.0**	**+0.2**
EZN	**Ezine**	**0.66**	**141**	P		**Pg**		**14 39 36.1**	**-0.5**
EZN				S		**Sg**		**14 39 45.7**	**+0.3**
	comp=N,55nm,0.1s								
EZN	**Ezine**	**0.66**	**141**	PG		**Pg**		**14 39 36.3**	**-0.3**
LPK	**Lapseki**	**0.74**	**88**	PG		**Pg**		**14 39 37.9**	**-0.3**
RDO	**Rodhopi**	**0.82**	**347**	P		**Pg**		**14 39 39.1**	**-0.6**
RDO				S		**Sg**		**14 39 50.7**	**+0.3**
	comp=N,45nm,0.2s								
RDO	**Rodhopi**	**0.82**	**347**	P		**Pg**		**14 39 39.1**	**-0.6**
RDO				S		**Sb**		**14 39 51.0**	**+0.1**
RDO				AML		AML		14 39 53.7	
	comp=E,77μm,0.3s								
RDO				AML		AML		14 39 54.6	
	comp=N,102μm,0.2s								
RDO	**Rodhopi**	**0.82**	**347**	PG		**Pg**		**14 39 39.3**	**-0.4**
KESN	**Edirne-Kesan**	**0.83**	**55**	*i* P		**Pg**		**14 39 39.9**	**-0.1**
KESN				*i* S		**Sg**		**14 39 50.7**	**-0.2**
KESN				IAML				14 39 53.0	
	comp=E,173nm,0.4s								
THAS	**Thassos island**	**0.85**	**288**	P		**Pg**		**14 39 40.3**	**0.0**
THAS				S		**Sg**		**14 39 51.5**	**0.0**
	comp=E,55nm,0.2s								
THAS	**Thassos island**	**0.85**	**288**	P		**Pg**		**14 39 40.2**	**-0.1**
THAS				S		**Sb**		**14 39 51.9**	**0.0**
THAS				AML		AML		14 39 53.5	
	comp=N,121μm,0.2s								
THAS				AML		AML		14 39 53.8	
	comp=E,101μm,0.2s								
SIGR	**SIGRI**	**1.13**	**177**	P		**Pb**		**14 39 44.5**	**-0.7**
SIGR				S		**Sg**		**14 40 00.2**	**-0.1**
	comp=E,122nm,0.5s								
SIGR	**SIGRI**	**1.13**	**177**	P		**Pb**		**14 39 44.7**	**-0.5**
SIGR				AML		AML		14 40 01.5	
	comp=N,320μm,0.5s								
SIGR				AML		AML		14 40 02.1	
	comp=E,167μm,0.4s								
SIGR	**SIGRI**	**1.13**	**177**	PN		**Pn**		**14 39 45.5**	**+0.1**
KRBG	**Karabiga-Canak**	**1.16**	**87**	PN		**Pb**		**14 39 45.2**	**-0.4**
PRK	**Paraskevi**	**1.16**	**161**	P		**Pg**		**14 39 46.3**	**+0.2**
PRK				S		**Sn**		**14 40 02.1**	**+0.7**
	comp=E,122nm,0.6s								
PRK	**Paraskevi**	**1.16**	**161**	P		**Pg**		**14 39 46.0**	**0.0**
PRK				AML		AML		14 40 04.1	
	comp=N,233μm,0.3s								
PRK				AML		AML		14 40 04.6	
	comp=E,220μm,0.4s								
KAVA	**Kavala**	**1.17**	**304**	P		**Pb**		**14 39 45.7**	**-0.1**
KAVA				S		**Sg**		**14 40 01.4**	**0.0**
	comp=E,30nm,0.2s								
KAVA	**Kavala**	**1.17**	**304**	P		**Pb**		**14 39 45.5**	**-0.3**
KDZ	**Kurdzhali**	**1.33**	**348**	PN		**Pn**		**14 39 48.2**	**0.0**
KNL	**Balıkesir**	**1.33**	**93**	*i* P		**Pn**		**14 39 47.7**	**-0.4**
KNL				*i* S		**Sg**		**14 40 08.1**	**+1.4**
MRMT	**Marmara Adasi**	**1.40**	**79**	PN		**Pn**		**14 39 49.3**	**+0.1**
BALY	**Balya**	**1.53**	**113**	*i* P		**Pn**		**14 39 51.5**	**+0.7**
BALY				*i* S		**Sg**		**14 40 12.8**	**-0.2**
EDRB	**Edirne**	**1.67**	**25**	PN		**Pn**		**14 39 53.3**	**+0.6**
URLA	**Izmir**	**2.08**	**162**	PN		**Pn**		**14 39 58.7**	**+0.3**

MAN 26 14:40:44.9, 4°.72N×125°.47E, h36km, mb4.8, ML3.7, MS3.7, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
DDMP	**Don Marcelino,**	**1.40**	**10**	*eP*			Pn	14 41 08.8	+1.0
DDMP				*eS*			Sn	14 41 25.8	+0.8
SKMP	**Bagumbayan, Su**	**2.01**	**333**	*eP*			Pn	14 41 16.8	+0.5
SKMP				*eS*			Sn	14 41 38.0	-2.2
KCP	**Kidapawan**	**2.30**	**351**	⇑*iP*			Pn	14 41 21.7	+1.3
KCP				*i* S			Sn	14 41 48.8	+1.2
MATI	**Mati**	**2.35**	**20**	*eP*			Pn	14 41 21.4	+0.5

IDC 26 14:41:45.8±1.3, 12°.83N×124°.35E, h0km, mb3.2/4, mb1 3.5/4, mb1mx3.3/47, mbtmp3.2/4, Error ellipse: s-maj=78.2km s-min=25.9km az=75.0, Samar

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
WRA	**Warramunga Arr**	**34.02**	**163**	P			P	14 48 32.7	+1.1
	0.6nm,0.9s,baz=343,slow=9.6,SNR=6.5								
ASAR	**Alice Springs**	**37.45**	**166**	P			P	14 49 00.1	-1.1
	0.2nm,0.7s,baz=344,slow=6.9,SNR=7.0								
MKAR	**Makanchi Array**	**48.86**	**322**	P			P	14 50 33.3	0.0
	0.1nm,0.3s,baz=127,slow=9.3,SNR=2.1								
ILAR	**Eielson Array**	**77.98**	**26**	P			P	14 53 45.6	-0.1
	0.2nm,0.5s,baz=266,slow=5.5,SNR=1.9								

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*IDC **26** 14:48:18.3±1.7, 9°.95N×126°.29E, h0km, mb3.4/3, mb1 3.5/3, mb1mx3.3/39, mbtmp3.4/3, Error ellipse: s-maj=176.8km s-min=27.5km az=66.0*
*MAN **26** 14:48:18.2, 10°.44N×127°.11E, h50km, mb4.4, ML3.3, MS3.1*

ISC 26 14:48:20.2±1.1, 10°.3N±0°.1×126°.91E±0°.10, h20km, n8, σ0°.98/12, mb3.4/3, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
MSLP	**Maasin**	**2.02**	**265**	*eP*			**Pn**	**14 48 53.9**	**+0.7**
MSLP				*eS*			**Sb**	**14 49 20.5**	**-0.6**
CNP	**Catarman**	**3.10**	**315**	*eP*			**Pn**	**14 49 06.7**	**-1.4**
CNP				*eS*			**Sn**	**14 49 43.9**	**-0.6**
PVCP	**Virac**	**4.23**	**321**	*eP*			**Pn**	**14 49 25.0**	**+1.4**
RCP	**Roxas**	**4.27**	**287**	⇑*eP*			**Pn**	**14 49 24.8**	**+0.7**
WRA	**Warramunga Arr**	**30.94**	**166**	P			**P**	**14 54 34.7**	**-1.4**
	0.3nm,0.5s,baz=347,slow=9.4,SNR=1.5								
WRA					PcP		**PcP**	**14 57 32.7**	**+0.3**
	1.1nm,0.9s,baz=342,slow=3.0,SNR=5.2								
ASAR	**Alice Springs**	**34.45**	**169**	P			**P**	**14 55 06.2**	**-0.6**
	0.1nm,0.4s,baz=350,slow=6.8,SNR=12								
ASAR					PcP		**PcP**	**14 57 42.3**	**+0.2**
	0.2nm,0.5s,baz=351,slow=2.8,SNR=7.6								
MKAR	**Makanchi Array**	**52.38**	**322**	P			**P**	**14 57 31.6**	**+0.5**
	0.5nm,0.8s,baz=120,slow=8.1,SNR=5.6								
PLCA	**Paso Flores**	**145.99**	**156**	PKPbc			**PKPab**	**15 08 00.3**	**+0.8**
	1.2nm,0.7s,baz=250,slow=2.6,SNR=3.5								

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*IDC **26** 15:01:30.3±0.5, 18°.93N×145°.61E, h191km±4km, mb4.0/33, mb1 4.1/37, mb1mx4.1/48, mbtmp4.6/37, MS3.3/2, Ms1 3.3/2, ms1mx2.6/39, Error ellipse: s-maj=10.6km s-min=6.2km az=89.0*
*NEIC **26** 15:01:31.3±1.2, 18°.95N±0°.07×145°.5E±0°.1, h199km±5km, mb4.6/178, Error ellipse: s-maj=14.0km s-min=10.1km az=87.0*

ISC 26 15:01:31.0±0.4, 18°.97N±0°.04×145°.59E±0°.05, h200km±3km, h200km:pP-P, n304, σ1s23/326, mb4.5/133, 2C-2D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
GUMO	**Guam**	**5.39**	**187**				**Pn**	**15 02 51.6**	**+1.1**
JCJ	**Chichijima**	**8.68**	**339**	P			**Pn**	**15 03 31.9**	**-1.1**
	39nm,0.3s,baz=104,slow=18,SNR=86								
JCJ				S			**S**	**15 05 05.3**	**-5.1**
	28nm,0.3s,baz=343,slow=24,SNR=6.3								
JCJ	**Chichijima**	**8.68**	**339**	Pn			**Pn**	**15 03 31.4**	**-1.6**
JHJ2	**Mitsune**	**15.01**	**341**				**Pn**	**15 04 52.8**	**-0.4**
JHJ	**Hachijo jima 2**	**15.02**	**341**	P			**P**	**15 04 54.6**	**+0.5**
	14nm,0.3s,baz=234,slow=19,SNR=1.5								
JHJ				S			**S**	**15 07 45.8**	**+5.5**
	12nm,0.3s,baz=75,slow=20,SNR=1.4								
JOW	**Kunigami**	**17.76**	**299**	P			**Pn**	**15 05 27.8**	**+1.6**
	0.4nm,0.3s,baz=93,slow=12,SNR=5.0								
JOW	**Kunigami**	**17.76**	**299**	IAmb		IAmb		15 05 31.6	
	comp=Z,160nm,1.8s								
INU	**Inuyama**	**18.00**	**337**	P		**P**		**15 05 26.8**	**0.0**
INU				IAmb		IAmb		15 05 34.0	
	comp=Z,32nm,0.9s								
MJAR	**Matsushiro Arr**	**18.67**	**341**	P		**P**		**15 05 34.4**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=162,slow=10.0,SNR=28								
MJAR				S		**S**		**15 08 51.7**	**-4.5**
	comp=Z,0.0nm,0.3s,baz=138,slow=13,SNR=5.2								
MAJO	**Matsushiro**	**18.67**	**341**	P		**P**		**15 05 34.5**	**+0.4**
MAJO				IAmb		IAmb		15 05 46.6	
	comp=Z,39nm,1.1s								
MAT	**Matsushiro**	**18.67**	**341**	P		**P**		**15 05 34.3**	**+0.2**
MAT				S		**S**		**15 08 51.2**	**-5.0**
MJB9	**Matsu-Tunnel**	**18.68**	**341**	P		**P**		**15 05 34.6**	**+0.4**
MJB9				IAmb		IAmb		15 05 42.7	
	comp=Z,20nm,0.5s								
JNU	**Nakatsue**	**19.29**	**320**	P		**P**		**15 05 42.8**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=90,slow=0.3,SNR=6.1								
JNU	**Nakatsue**	**19.29**	**320**	P		**P**		**15 05 43.2**	**-1.1**
JNU				IAmb		IAmb		15 06 02.9	
	comp=Z,36nm,1.2s								
H11S3	**WAKE ISLAND Hy**	**19.99**	**88**	T		T		15 27 13.2	
	baz=275,slow=74,SNR=6.0								
H11S1	**WAKE ISLAND Hy**	**20.00**	**88**	T		T		15 27 15.8	
	baz=275,slow=74,SNR=7.7								
H11S2	**WAKE ISLAND Hy**	**20.00**	**88**	T		T		15 27 15.5	
	baz=275,slow=74,SNR=7.1								
H11N1	**WAKE ISLAND Hy**	**20.11**	**84**	T		T		15 27 24.7	
	baz=266,slow=74,SNR=3.7								
H11N2	**WAKE ISLAND Hy**	**20.12**	**84**	T		T		15 27 34.8	
	baz=266,slow=74,SNR=7.1								
H11N3	**WAKE ISLAND Hy**	**20.13**	**84**	T		T		15 27 44.0	
	baz=266,slow=74,SNR=5.1								
PVCP	**Virac**	**21.25**	**259**	*eP*		**P**		**15 06 03.0**	**+1.2**
YOJ	**Yonaguni jima**	**21.67**	**289**	P		**P**		**15 06 07.0**	**+1.0**
OCLP	**Ormoc**	**21.72**	**252**	*eP*		**P**		**15 06 08.9**	**+2.3**
JAY	**Jayapura**	**21.88**	**193**	P		**P**		**15 06 07.9**	**-0.4**
	comp=Z,32nm,1.0s,baz=342,slow=6.2,SNR=6.1								
JAY	**Jayapura**	**21.88**	**193**	P		**P**		**15 06 07.9**	**-0.4**
	comp=Z,23nm,1.2s								
MSLP	**Maasin**	**21.88**	**249**	*eP*		**P**		**15 06 09.5**	**+1.2**
SMPI	**Sarmi**	**21.90**	**199**	P		**P**		**15 06 09.6**	**+1.2**
	comp=Z,12nm,1.0s								
GENI	**Genyem**	**22.08**	**195**	P		**P**		**15 06 10.0**	**-0.1**
	comp=Z,58nm,1.2s								
MATI	**Mati**	**22.28**	**240**	*eP*		**P**		**15 06 12.8**	**+0.7**
CAUP	**Cauayan**	**22.70**	**269**	*eP*		**P**		**15 06 17.5**	**+1.7**
DAV	**Davao City (W)**	**22.77**	**241**	P		**P**		**15 06 17.1**	**+0.6**
	comp=Z,146nm,0.3s,baz=250,slow=16,SNR=2.5								
BUKP	**Musuan**	**22.78**	**244**	*eP*		**P**		**15 06 17.3**	**+0.7**
NACB	**Ninganchiao**	**22.89**	**287**	P		**P**		**15 06 18.1**	**+0.6**
YULB	**Yu-li**	**23.07**	**285**	P		**P**		**15 06 20.0**	**+0.9**
YULB				IAmb		IAmb		15 06 24.5	
	comp=Z,18nm,0.8s								
APYP	**Conner**	**23.12**	**271**	*eP*		**P**		**15 06 19.4**	**-0.2**
BALP	**Baler**	**23.14**	**266**	*eP*		**P**		**15 06 20.6**	**+0.8**
YHNB	**Yeheng**	**23.17**	**288**	P		**P**		**15 06 21.4**	**+1.3**
DDMP	**Don Marcelino,**	**23.20**	**239**	*eP*		**P**		**15 06 19.6**	**-0.7**
KCP	**Kidapawan**	**23.21**	**242**	⇓*iP*		**P**		**15 06 21.2**	**+0.7**
RCP	**Roxas**	**23.22**	**255**	⇓*eP*		**P**		**15 06 20.9**	**+0.3**
SSLB	**Suanglung**	**23.42**	**286**	P		**P**		**15 06 23.6**	**+1.2**
BOAC	**Boac**	**23.44**	**260**	*eP*		**P**		**15 06 24.2**	**+1.7**
TPUB	**Ta-pu**	**23.67**	**285**	P		**P**		**15 06 25.2**	**+0.6**
TPUB				IAmb		IAmb		15 06 26.5	
	comp=Z,37nm,1.2s								
GUIM	**Jordan**	**23.71**	**253**	*eP*		**P**		**15 06 25.9**	**+0.9**
CTBH	**Cotabato--PC H**	**23.81**	**243**	⇑*iP*		**P**		**15 06 25.7**	**-0.2**
RABL	**Rabaul**	**23.91**	**164**	P		**P**		**15 06 25.4**	**-1.4**
SMPP	**San Manuel, Pa**	**23.91**	**267**	*eP*		**P**		**15 06 27.2**	**+0.4**
KRVT	**Keravat (AS076**	**23.98**	**164**	P		**P**		**15 06 26.7**	**-0.7**
	comp=Z,24nm,0.6s,baz=354,slow=10,SNR=5.5								
CNOP	**Candoni, Negro**	**23.99**	**251**	*eP*		**P**		**15 06 28.1**	**+0.5**
KSRS	**Korea Array**	**24.04**	**324**	P		**P**		**15 06 27.5**	**-0.2**
	comp=Z,8.3nm,0.9s,baz=139,slow=9.8,SNR=23								
KSRS				pP			**pP**	**15 07 06.2**	**+1.6**
	comp=Z,8.9nm,0.9s,baz=145,slow=10,SNR=1.4								
KS19	**Wonju Array Si**	**24.11**	**324**	P		**P**		**15 06 26.5**	**-1.9**
KS19				IAmb		IAmb		15 06 29.8	
	comp=Z,23nm,1.1s								
TGY	**Tagaytay City**	**24.11**	**262**	P		**P**		**15 06 29.4**	**+0.7**
	comp=Z,113nm,0.5s,baz=124,slow=6.9,SNR=1.6								
SIJI	**Sorong**	**24.22**	**217**	P		**P**		**15 06 29.7**	**0.0**
	comp=Z,8.9nm,0.5s,baz=15,slow=11,SNR=14								
SIJI				LR		LR		15 14 48.6	
	comp=Z,50nm,19.1s,baz=353,slow=33								
PAGZ	**Pagadian**	**24.23**	**246**	*eP*		**P**		**15 06 31.6**	**+1.8**
SJMP	**San Jose**	**24.41**	**258**	*eP*		**P**		**15 06 33.4**	**+2.0**
JKA	**Kamikawa-asahi**	**25.20**	**355**	P		**P**		**15 06 39.7**	**+1.5**
ASAJ	**Asahikawa**	**25.20**	**355**	P		**P**		**15 06 39.7**	**+1.5**
	comp=Z,14nm,1.1s,baz=252,slow=5.2,SNR=9.4								
FAKI	**Fak Fak**	**25.41**	**212**	P		**P**		**15 06 40.0**	**-0.3**
FAKI				IAmb		IAmb		15 07 37.0	
	comp=Z,12nm,0.8s								
NJ2	**Nanjing**	**27.34**	**304**	*eP*		**P**		**15 06 58.0**	**+0.5**
NJ2				pmax		pmax			
	comp=Z,16nm,0.7s								
USA0B	**Ussuriysk Arra**	**27.62**	**339**	P		**P**		**15 07 00.9**	**+1.1**
USA0B				IAmb		IAmb		15 07 06.6	
	comp=Z,14nm,1.1s								
USRK	**Ussuriysk Ar.**	**27.62**	**339**	P		**P**		**15 07 01.0**	**+1.1**
	comp=Z,4.9nm,0.8s,baz=151,slow=8.9,SNR=8.8								
YSS	**Yuzh-Sakhalins**	**28.01**	**356**	P		**P**		**15 07 04.8**	**+1.6**
PMG	**Port Moresby**	**28.24**	**177**	P		**P**		**15 07 05.6**	**0.0**
	comp=Z,4.8nm,0.3s,baz=289,slow=6.9,SNR=12								
PMG	**Port Moresby**	**28.24**	**177**	P		**P**		**15 07 06.3**	**+0.7**
MDJ	**Mudanjiang**	**28.85**	**336**	P		**P**		**15 07 12.5**	**+1.7**
MDJ				pmax		pmax			
	comp=Z,16nm,1.9s								
MDJ				pmax		pmax			
	comp=Z,270nm,2.3s								
HKPS	**Hong Kong Po S**	**29.59**	**282**	P		**P**		**15 07 17.3**	**-0.3**
LUWI	**Luwuk**	**29.97**	**231**	P		**P**		**15 07 20.2**	**-0.7**
APSI	**Ampana**	**30.71**	**233**	P		**P**		**15 07 28.5**	**+1.0**
	comp=Z,26nm,1.3s								
MPSI	**Mapaga**	**31.28**	**237**	P		**P**		**15 07 33.0**	**+0.6**
	comp=Z,19nm,0.7s								
KKM	**Kota Kinabalu**	**31.36**	**250**	P		**P**		**15 07 34.2**	**+0.9**
COEN	**Coen**	**32.80**	**184**	P		**P**		**15 07 45.4**	**-0.3**
COEN				IAmb		IAmb		15 07 47.6	
	comp=Z,12nm,1.1s								
BJI	**Beijing**	**32.87**	**316**	P		**P**		**15 07 46.3**	**+0.3**
BJI				pmax		pmax			
	comp=Z,8.0nm,1.1s								

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
TTSI	**Tana Toraja**	**33.49**	**232**	P			**P**	**15 07 52.6**	**+0.9**
	comp=Z,789nmcomp=Z,88nm,0.9s								
QIZ	**Qiongzhong**	**33.77**	**276**	P			**P**	**15 07 55.3**	**+1.2**
QIZ				sP			**sP**	**15 08 57.0**	**+0.5**
QIZ				S			**S**	**15 13 02.5**	**-0.4**
QIZ				SS			**SS**	**15 15 29.3**	**-3.9**
QIZ				pmax			pmax		
	comp=Z,12nm,1.4s								
SPSI	**Sidrap Palu**	**34.14**	**231**	P			**P**	**15 07 57.9**	**+0.6**
	comp=Z,771nmcomp=Z,57nm,0.9s								
BNSI	**Bone**	**34.19**	**230**	P			**P**	**15 07 59.0**	**+1.3**
	comp=Z,45nm,1.0s								
MTN	**Manton Dam**	**34.67**	**205**	P			**P**	**15 08 01.6**	**-0.3**
MTN				IAmb			IAmb	15 08 03.8	
	comp=Z,25nm,1.0s								
KAPI	**Kappang**	**34.87**	**229**	P			**P**	**15 08 03.9**	**+0.4**
MIDW	**Midway**	**35.05**	**68**	P			**P**	**15 08 05.5**	**+0.5**
PETK	**Petropavlovsk-**	**35.35**	**13**	P			**P**	**15 08 09.3**	**+2.0**
	comp=Z,1.2nm,0.6s,baz=145,slow=7.5,SNR=5.2								
SOEI	**Soe**	**35.45**	**218**	P			**P**	**15 08 13.2**	**+4.5**
SOEI	**Soe**	**35.45**	**218**	P			**P**	**15 08 07.1**	**-1.6**
HHC	**Hu-ho-hao-te**	**36.34**	**314**	*eP*			P	15 08 07.5	-8.5
HHC				pmax			pmax		
	comp=Z,12nm,0.8s								
HHC				pmax			pmax		
	comp=Z,42nm,6.7s								
SBUM	**Sibu**	**36.55**	**247**	P			**P**	**15 08 19.1**	**+1.3**
SBUM				IAmb			IAmb	15 08 20.6	
	comp=Z,28nm,1.2s								
SBUM	**Sibu**	**36.55**	**247**	P			**P**	**15 08 20.0**	**+2.1**
KNRA	**Kununurra**	**38.20**	**207**	P			**P**	**15 08 32.2**	**+0.5**
KNRA				IAmb			IAmb	15 08 34.0	
	comp=Z,22nm,0.8s								
KSM	**Kuching**	**38.69**	**247**	P			**P**	**15 08 36.0**	**+0.1**
KSM				IAmb			IAmb	15 08 37.3	
	comp=Z,26nm,1.2s								
KSM	**Kuching**	**38.69**	**247**	P			**P**	**15 08 37.0**	**+1.2**
CTA	**Charters Tower**	**38.82**	**179**	P			**P**	**15 08 36.5**	**-0.3**
	comp=Z,2.0nm,0.3s,baz=350,slow=7.9,SNR=9.8								
CTAO	**Charters Tower**	**38.82**	**179**	P			**P**	**15 08 36.4**	**-0.3**
CTAO				IAmb			IAmb	15 09 17.1	
	comp=Z,45nm,1.6s								
WB0	**Warramunga Arr**	**40.03**	**197**	P			**P**	**15 08 46.9**	**+0.1**
WR0	**Warramunga Arr**	**40.18**	**196**	P			**P**	**15 08 48.2**	**+0.2**
WR0				IAmb			IAmb	15 08 50.2	
	comp=Z,25nm,1.1s								
WRAB	**Tennant Creek**	**40.20**	**197**	P			**P**	**15 08 48.5**	**+0.3**
WRAB				IAmb			IAmb	15 08 49.9	
	comp=Z,23nm,0.6s								
WB2	**Warramunga Arr**	**40.21**	**196**	P			**P**	**15 08 48.5**	**+0.2**
WRA	**Warramunga Arr**	**40.21**	**197**	P			**P**	**15 08 48.6**	**+0.3**
	comp=Z,14nm,0.6s,baz=19,slow=9.1,SNR=198								
WRA				PcP			**PcP**	**15 10 48.0**	**-0.4**
	comp=Z,3.7nm,0.5s,baz=15,slow=3.1,SNR=6.9								
WRA				ScP			**ScP**	**15 14 16.5**	**-2.1**
	comp=Z,3.7nm,1.1s,baz=17,slow=4.2,SNR=5.3								
WRA				S			**S**	**15 14 37.6**	**-2.7**
	comp=Z,0.8nm,1.0s,baz=13,slow=14,SNR=4.9								
LZH	**Lanzhou**	**40.41**	**304**	⇑P			**P**	**15 08 50.0**	**0.0**
LZH				pP			pwP	15 09 34.5	-1.6
LZH				sP			sP	15 09 58.3	+4.8
LZH				PP			**PP**	**15 10 30.3**	**+2.9**
LZH				pmax			pmax		
	comp=Z,23nm,1.3s								
LZH				pmax			pmax		
	comp=Z,75nm,5.8s								
MA2	**Magadan**	**40.73**	**4**	P			**P**	**15 08 53.4**	**+1.4**
	comp=Z,5.0nm,0.8s,baz=149,slow=7.8,SNR=4.1								
MA2	**Magadan**	**40.73**	**4**	IAmb			IAmb	15 09 48.1	
	comp=Z,16nm,1.3s								
JAGI	**Jajag, Banyu

BILL IAmb IAmb 15 10 13.1
comp=Z,14nm,1.0s
FORT Forrest 52.26 199 P **P** **15 10 22.0 +0.1**
BBOO Buckleboo 52.29 190 P **P** **15 10 21.7 -0.4**
TAPN Taplejung 53.47 290 *eP* **P** **15 10 32.4 +1.0**
comp=Z,45nm,1.3s
TIXI Tiksi 53.59 353 P **P** **15 10 31.0 -0.1**
ODAN Odare 53.79 290 *eP* **P** **15 10 34.4 +0.8**
WMQ Urumqi 54.06 311 *eP* **P** **15 10 36.5 +1.5**
WMQ pmax pmax
comp=Z,27nm,0.9s
WMQ pmax pmax
comp=Z,130nm,6.5s
WMQ LR LR
comp=N,150nm,15.9s
WMQ LR LR
comp=E,190nm,28.8s
WMQ LR LR
comp=Z,170nm,23.3s
SDPT Sand Point 54.31 35 P **P** **15 10 37.3 +0.8**
JIRN Jiri 54.80 291 *eP* **P** **15 10 41.8 +0.8**
comp=Z,105nm,1.3s
GUN Gumba 55.05 291 *eP* **P** **15 10 43.8 +1.0**
PKI Pulchoki 55.49 291 *eP* **P** **15 10 46.3 +0.4**
comp=Z,8.8nm,0.6s
PKIN Phulchoki 55.50 291 *eP* **P** **15 10 46.3 +0.4**
comp=Z,8.4nm,0.5s
MORW Morawa 55.63 212 P **P** **15 10 46.7 +0.4**
CHGN Chignik 55.72 34 P **P** **15 10 47.8 +1.3**
DMN Daman 55.76 291 *eP* **P** **15 10 48.5 +0.8**
comp=Z,7.8nm,0.4s
GKN Gorkha 56.14 291 *eP* **P** **15 10 50.6 +0.3**
comp=Z,64nm,1.1s
DANN Dangsing 56.88 292 *eP* **P** **15 10 56.0 +0.3**
comp=Z,49nm,0.7s
KOLN Koldanda 57.07 291 *eP* **P** **15 10 57.3 +0.3**
PYUN Piuthan 57.58 292 *eP* **P** **15 11 00.3 -0.2**
ZALV Zalesovo Beam 57.74 322 P **P** **15 11 00.3 -0.6**
comp=Z,1.1nm,0.3s,baz=115,slow=7.5,SNR=7.8
ZALV pP **pP** **15 11 43.9 -1.2**
comp=Z,0.7nm,0.3s,baz=103,slow=6.5,SNR=2.3
ZALV LR LR 15 36 09.2
comp=Z,27nm,19.3s,baz=90,slow=36
MK31 Makanchi Array 58.20 314 P **P** **15 11 04.0 -0.3**
MKAR Makanchi Array 58.20 314 P **P** **15 11 04.1 -0.2**
comp=Z,2.5nm,0.6s,baz=93,slow=8.9,SNR=30
MKAR pP **pP** **15 11 47.1 -1.5**
comp=Z,0.5nm,0.6s,baz=95,slow=9.0,SNR=1.2
MKAR ScP **ScP** **15 15 32.6 -1.9**
comp=Z,0.4nm,0.8s,baz=116,slow=3.4,SNR=2.5
NWAO Narrogin (SRO) 58.29 208 P **P** **15 11 05.3 +0.4**
MAKZ Makanchi 58.42 314 P **P** **15 11 05.6 -0.2**
MAKZ IAmb IAmb 15 11 07.1
comp=Z,6.0nm,0.7s
RDOG Red Dog Mine 58.61 20 P **P** **15 11 06.9 +0.2**
RDOG IAmb IAmb 15 11 56.7
comp=Z,8.5nm,1.1s
SVW2 Sparrevohn 58.64 29 P **P** **15 11 08.7 +1.6**
SVW2 IAmb IAmb 15 12 06.5
comp=Z,9.6nm,1.3s
TTA Tatalina 59.06 27 P **P** **15 11 10.8 +0.8**
KDAK Kodiak Island 59.19 33 P **P** **15 11 12.2 +1.4**
comp=Z,4.2nm,0.6s,baz=288,slow=1.5,SNR=22
KDAK Kodiak Island 59.19 33 P **P** **15 11 12.0 +1.2**
RAO Raoul Island 59.48 143 P **P** **15 11 12.6 -0.6**
RSO Redoubt South 59.78 30 P **P** **15 11 14.9 -0.1**
HOM Homer 60.12 31 P **P** **15 11 18.2 +1.1**
CNPM China Poot 60.29 32 P **P** **15 11 19.0 +0.7**
BRLK Bradley Lake 60.52 31 P **P** **15 11 20.2 +0.3**
BRLK IAmb IAmb 15 12 13.7
comp=Z,30nm,1.4s
PPLA Purkeypile 60.71 28 P **P** **15 11 21.9 +0.6**
PPLA IAmb IAmb 15 12 12.2
comp=Z,32nm,1.9s
PRZ Przheval'sk 60.74 309 P **P** **15 11 22.1 +0.2**
PRZ IAmb IAmb 15 11 24.2
comp=Z,28nm,1.2s
KURK Kurchatov 61.00 318 P **P** **15 11 22.9 -0.3**
KURK IAmb IAmb 15 11 24.7
comp=Z,7.2nm,0.8s
TARG Taragay, Kyrgy 61.18 308 P **P** **15 11 24.0 -1.1**
TARG IAmb IAmb 15 11 27.6
comp=Z,8.6nm,1.2s
NRIK Noril'sk 61.32 340 P **P** **15 11 25.2 +0.2**
comp=Z,6.7nm,0.3s,baz=118,slow=6.5,SNR=14
RC01 Rabbit Creek A 61.37 30 P **P** **15 11 26.2 +0.6**
RC01 IAmb IAmb 15 11 27.0
comp=Z,13nm,1.0s
KTH Kantishna Hill 61.44 27 P **P** **15 11 27.0 +0.9**
KTH IAmb IAmb 15 11 28.5
comp=Z,14nm,1.1s
BPAW Bear Paw Mtn. 61.56 27 P **P** **15 11 27.9 +1.1**
BPAW IAmb IAmb 15 11 29.0
comp=Z,11nm,1.1s
KDJ Kajisay 61.64 308 P **P** **15 11 28.1 +0.1**
KDJ IAmb IAmb 15 11 29.6
comp=Z,13nm,1.2s
TRF Thorofare Moun 61.69 27 P **P** **15 11 28.4 +0.6**
TRF IAmb IAmb 15 11 29.8
comp=Z,17nm,1.1s
PMR Palmer 61.77 30 P **P** **15 11 28.6 +0.4**
GHO Glory Hole Cre 61.91 29 P **P** **15 11 29.8 +0.6**
GHO IAmb IAmb 15 11 44.0
comp=Z,6.1nm,0.9s
KNK Knik Glacier 62.05 30 P **P** **15 11 30.9 +0.8**
KNK IAmb IAmb 15 11 35.5
comp=Z,8.2nm,1.0s
SML Sawmill 62.19 29 P **P** **15 11 31.9 +0.8**
SML IAmb IAmb 15 11 33.3
comp=Z,16nm,1.0s
BWN Browne 62.22 27 P **P** **15 11 32.3 +1.1**
BWN IAmb IAmb 15 12 50.3
comp=Z,15nm,0.9s
RND Reindeer 62.30 28 P **P** **15 11 31.9 0.0**
RND IAmb IAmb 15 12 10.3
comp=Z,6.5nm,1.1s
ULHL Ulahol 62.34 308 P **P** **15 11 33.3 +0.6**
SNR=5.8
MCK McKinley 62.34 27 P **P** **15 11 32.4 +0.3**
NEA Nenana 62.49 26 P **P** **15 11 33.6 +0.6**
BOOM Boomskoye usch 62.56 309 P **P** **15 11 34.7 +0.7**
BOOM IAmb IAmb 15 11 35.5
comp=Z,7.4nm,1.1s
GLI Glacier Island 62.59 31 P **P** **15 11 34.3 +0.6**
GLI IAmb IAmb 15 12 04.2
comp=Z,5.1nm,0.8s
KSH Kashi 62.63 305 P **P** **15 11 38.5 +4.0**
KSH PcP **PcP** **15 12 12.5 +1.0**
KSH pP pwP 15 12 25.8 +1.7
KSH S **S** **15 19 45.5 -1.3**
KSH Kashi 62.63 305 SS SS 15 24 01.8 +7.0
KSH pmax pmax
comp=Z,21nm,1.0s
KSH pmax pmax
comp=Z,250nm,5.2s
KSH LR LR
comp=N,83nm,12.6s
KSH LR LR
comp=E,120nm,10.6s
KSH LR LR
comp=Z,190nm,10.8s
SCM Sheep Creek Mo 62.66 29 P **P** **15 11 35.0 +0.8**
SCM IAmb IAmb 15 11 36.8
comp=Z,18nm,1.0s
HIN Hinchinbrook I 62.80 31 P **P** **15 11 36.0 +1.0**
HIN IAmb IAmb 15 13 09.3
comp=Z,19nm,1.2s
TKM2 Tokmak 2 62.80 309 P **P** **15 11 36.5 +0.8**
SNR=11
FID Port Fidalgo 62.87 31 P **P** **15 11 36.4 +0.9**
FID IAmb IAmb 15 12 53.0
comp=Z,11nm,1.2s
WRH Wood River Hil 62.88 26 P **P** **15 11 35.7 +0.2**
DHY Denali Highway 62.88 28 P **P** **15 11 36.4 +0.7**
MDM Murphy Dome 62.93 26 P **P** **15 11 36.6 +0.7**
CCB Clear Creek Bu 63.04 26 P **P** **15 11 36.6 +0.1**
CCB **PcP** **15 12 12.1 -0.3**
KZA Kyzart 63.08 308 P **P** **15 11 38.9 +1.1**
SNR=9.4
EYAK Cordova Ski Ar 63.19 31 P **P** **15 11 37.8 +0.3**
EYAK IAmb IAmb 15 12 55.7
comp=Z,9.9nm,1.2s
HDA Harding Lake 63.35 27 P **P** **15 11 38.3 -0.3**
TOLK Toolik Lake Re 63.38 22 P **P** **15 11 40.4 +1.5**
TOLK IAmb IAmb 15 11 41.8
comp=Z,6.0nm,0.5s
ILAR Eielson Array 63.45 26 P **P** **15 11 39.0 -0.3**
comp=Z,2.8nm,0.7s,baz=254,slow=6.0,SNR=41
ILAR pP **pP** **15 12 22.4 -2.0**
comp=Z,1.5nm,0.8s,baz=264,slow=6.0,SNR=2.8
AAK Ala-Archa 63.62 309 P **P** **15 11 41.1 +0.1**
UCH Uchtor 63.62 308 P **P** **15 11 42.9 +1.5**
SNR=11
PAX Paxson 63.72 28 P **P** **15 11 42.0 +0.8**
RIDG Independent Ri 64.13 28 P **P** **15 11 43.9 +0.1**
RIDG IAmb IAmb 15 11 46.0
comp=Z,12nm,1.1s
URZ Urewera 64.16 153 P **P** **15 11 42.9 -1.3**
comp=Z,8.7nm,1.0s,baz=30,slow=14,SNR=1.5
URZ Urewera 64.16 153 P **P** **15 11 43.4 -0.8**
AML Almayashu 64.23 308 P **P** **15 11 46.6 +1.3**
SNR=6.2
GLB Gilahina Butte 64.25 30 P **P** **15 11 45.5 +0.8**
GLB IAmb IAmb 15 11 47.4
comp=Z,8.0nm,1.0s
VRDI Verde Repeater 64.40 30 P **P** **15 11 46.6 +0.8**
DOT Dot Lake 64.46 28 P **P** **15 11 46.5 +0.6**
MENT Mentasta 64.50 29 P **P** **15 11 46.8 +0.6**
SCRK Sand Creek 64.54 27 P **P** **15 11 46.6 +0.1**
BKZ Black Stump Fm 64.66 154 P **P** **15 11 47.4 -0.1**
BALM Baldy 64.91 31 P **P** **15 11 49.3 +0.3**
BARN Barnard Glacie 65.24 31 P **P** **15 11 52.6 +1.4**
NIL Nilore 65.31 299 P **P** **15 11 51.4 -0.6**
TUWZ Tuamarina 65.59 157 P **P** **15 11 53.3 0.0**
EGAK Eagle 65.87 27 P **P** **15 11 55.1 +0.2**
BRVK Borovoye 66.27 320 P **P** **15 11 56.2 -1.4**
BRVK IAmb IAmb 15 11 59.4
comp=Z,8.4nm,0.9s
KK31 Karatay Array 66.52 310 P **P** **15 11 59.2 -0.3**
KK31 IAmb IAmb 15 12 01.0
comp=Z,12nm,0.9s
GAR Garm 67.05 305 P **P** **15 12 03.0 0.0**
GAR IAmb IAmb 15 12 03.9
comp=Z,14nm,1.0s
HYT Haines Junctio 67.25 31 P **P** **15 12 05.7 +1.8**
HYT IAmb IAmb 15 12 06.8
comp=Z,10nm,1.1s
EPYK Eagle Plains 67.85 25 P **P** **15 12 08.4 +1.0**
EPYK IAmb IAmb 15 13 02.8
comp=Z,10nm,1.4s
CHGR Chuyangaron 67.99 305 P **P** **15 12 08.6 -0.2**
KBL Kabul 68.65 300 P **P** **15 12 12.9 -0.3**
KBL IAmb IAmb 15 12 14.4
comp=Z,11nm,1.0s
INK Inuvik 69.17 23 P **P** **15 12 15.7 +0.2**
comp=Z,4.2nm,0.8s,baz=263,slow=4.6,SNR=13
INK Inuvik 69.17 23 P **P** **15 12 15.6 +0.2**
DIB Dawson Inlet, 70.25 39 P **P** **15 12 23.0 +0.7**
C36M Paulatuk 72.54 22 P **P** **15 12 36.0 +0.3**
C36M IAmb IAmb 15 12 37.7
comp=Z,10nm,1.1s
ARU Arti 72.79 324 P **P** **15 12 36.9 -0.6**
HRA Herat 74.20 301 P **P** **15 12 46.0 -0.4**
GEYT Alibeck 76.66 306 P **P** **15 13 00.5 +0.4**
comp=Z,4.2nm,0.9s,baz=76,slow=1.8,SNR=9.1
GYA0B ALIBECK ARRAY 76.66 306 P **P** **15 12 60.0 -0.2**
GYA0B IAmb IAmb 15 13 01.7
comp=Z,7.5nm,0.9s
YKA Yellowknife Ar 77.80 28 P **P** **15 13 06.3 +0.4**
comp=Z,4.3nm,0.8s,baz=289,slow=5.3,SNR=35
YKA pP **pP** **15 13 51.0 -2.0**
comp=Z,1.8nm,0.8s,baz=291,slow=5.2,SNR=4.7
KRMB Red Mountain 78.04 50 P **P** **15 13 09.6 +1.8**
KRMB IAmb IAmb 15 14 55.8
comp=Z,17nm,1.6s
JCC Jacoby Creek, 78.13 51 P **P** **15 13 10.0 +1.8**
JCC IAmb IAmb 15 14 49.1
comp=Z,16nm,1.4s
KHMM Horse Mountain 78.34 51 P **P** **15 13 11.4 +1.9**
KHMM IAmb IAmb 15 15 01.6
comp=Z,14nm,1.4s
H04A Detroit Lake 78.45 47 P **P** **15 13 11.3 +1.4**
H04A IAmb IAmb 15 15 50.2
comp=Z,32nm,1.7s
KCPM Cahto Peak 78.76 52 P **P** **15 13 13.6 +1.8**
LTY Liberty 78.78 44 P **P** **15 13 13.2 +1.5**
LTY IAmb IAmb 15 13 48.1
comp=Z,27nm,1.8s
YBH Yreka Blue Hor 78.86 50 P **P** **15 13 14.1 +1.9**
KBS Kingsbay 79.00 352 P **P** **15 13 12.6 +0.4**
RES Resolute Bay 79.19 14 P **P** **15 13 13.9 +0.7**
RES IAmb IAmb 15 13 49.5
comp=Z,12nm,1.1s
B08A Colville Reser 79.34 43 P **P** **15 13 14.8 +0.1**
HAWA Hanford 79.78 44 P **P** **15 13 18.3 +1.3**
HAWA IAmb IAmb 15 13 19.1
comp=Z,9.2nm,1.1s
K05A Summer Lake 79.88 48 P **P** **15 13 19.5 +1.6**
K05A IAmb IAmb 15 13 20.5
comp=Z,12nm,1.2s
ORV Oroville 80.34 52 P **P** **15 13 20.4 +0.2**
NEW Newport 80.78 42 P **P** **15 13 23.2 +0.8**
NEW IAmb IAmb 15 13 24.9
comp=Z,11nm,1.2s
BEKR Beckworth 81.09 51 P **P** **15 13 25.0 +0.7**
KLMR Klimovskoe 81.17 332 *eP* **P** **15 13 20.5 -3.6**
KLMR AMP 15 13 23.9
comp=Z,10.0nm,0.9s
BMO Blue Mountains 81.73 46 P **P** **15 13 28.1 +0.6**
PNTR Pine Nut 81.89 52 P **P** **15 13 29.3 +0.7**
PNTR IAmb IAmb 15 13 32.1
comp=Z,6.0nm,0.8s
YERR Yerington 82.18 52 P **P** **15 13 30.8 +0.7**
ARCES ARCESS Array B 82.21 342 P **P** **15 13 28.8 -0.6**
comp=Z,12nm,1.0s,baz=78,slow=7.8,SNR=18
RYN Ryan 82.83 52 P **P** **15 13 34.6 +1.1**
KVN Kaiserville 83.01 51 P **P** **15 13 34.9 +0.6**
NVAR Mina Array Bea 83.05 52 P **P** **15 13 35.9 +1.3**
comp=Z,4.5nm,0.8s,baz=265,slow=6.2,SNR=40
NVAR pP **pP** **15 14 21.8 -0.5**
comp=Z,3.9nm,0.8s,baz=263,slow=5.3,SNR=5.7
NV11 Mina Array Sit 83.16 52 P **P** **15 13 35.8 +0.6**
MFID Camas Ranch 83.20 47 P **P** **15 13 35.4 +0.2**
DAG Danmarks Havn 83.99 356 *i* P **P** **15 13 38.0 -0.4**
comp=Z,1.5nm,0.3s
ELK Elko 84.52 49 P **P** **15 13 42.8 +0.7**
LRM Limekiln Ridge 84.62 43 P **P** **15 13 43.1 +0.7**
TPNV Topopah Spring 85.08 53 P **P** **15 13 45.7 +0.8**
R11A Troy Canyon, C 85.10 51 P **P** **15 13 45.9 +0.9**
YHB Horse Butte 85.84 44 P **P** **15 13 49.5 +1.0**
KBZ Khabaz 85.88 315 P **P** **15 13 47.4 -1.0**
comp=Z,1.6nm,0.8s,baz=80,slow=6.1,SNR=3.0
SPUT South Promonto 86.29 48 P **P** **15 13 50.0 -0.8**
PSUT Pine Spring 86.30 51 P **P** **15 13 51.2 +0.3**
FXWY Fox Creek 86.38 45 P **P** **15 13 52.1 +0.9**
DUG Dugway, Tooele 86.45 49 P **P** **15 13 51.7 +0.2**
FINES FINESS Array B 86.60 335 P **P** **15 13 49.7 -1.8**
comp=Z,6.3nm,0.4s,baz=73,slow=4.8,SNR=89
HWUT Hardware Ranch 86.79 47 P **P** **15 13 53.2 0.0**
FFC Flin Flon 86.92 32 P **P** **15 13 53.8 +0.5**
FFC IAmb IAmb 15 13 55.4
comp=Z,6.4nm,1.0s
PDAR Pinedale Array 87.71 45 P **P** **15 13 57.3 -0.3**
comp=Z,0.6nm,0.4s,baz=197,slow=2.1,SNR=10.0
PDAR pP **pP** **15 14 45.2 -0.6**
comp=Z,0.6nm,0.8s,baz=303,slow=4.9,SNR=1.7
Q16A Castle Valley 88.10 49 P **P** **15 14 00.3 +0.8**
SRU San Rafael Swe 88.49 49 P **P** **15 14 01.9 +0.6**
Y14A Wickenburg 88.63 55 P **P** **15 14 02.9 +1.0**
Y14A IAmb IAmb 15 14 03.5
comp=Z,3.7nm,0.6s
SUMG Summit 88.64 1 P **P** **15 14 01.7 +0.2**
SUMG IAmb IAmb 15 14 05.1
comp=Z,12nm,1.3s
WUAZ Wupatki 89.27 53 P **P** **15 14 05.8 +0.8**
WUAZ IAmb IAmb 15 15 03.3
comp=Z,4.3nm,0.9s
214A Organ Pipe Nat 89.52 56 P **P** **15 14 07.3 +1.2**
PV21 Cone Mtn., Par 89.82 49 P **P** **15 14 08.2 +0.6**
PV21 IAmb IAmb 15 14 14.7
comp=Z,3.5nm,0.6s
PV23 Carpenter Ridg 89.84 49 P **P** **15 14 08.5 +0.8**
PV23 IAmb IAmb 15 14 09.4
comp=Z,7.3nm,1.0s
PV14 Lion Creek, Pa 89.86 49 P **P** **15 14 08.3 +0.5**
PV14 IAmb IAmb 15 14 09.4
comp=Z,6.4nm,0.9s
PV17 East Wray Mesa 89.95 49 P **P** **15 14 08.6 +0.4**
PV17 IAmb IAmb 15 15 26.0
comp=Z,12nm,1.3s
PV16 Nyswonger Mesa 89.97 49 P **P** **15 14 08.5 +0.3**
PV16 IAmb IAmb 15 14 10.8
comp=Z,6.4nm,1.1s
PV11 David Mesa, Pa 90.00 49 P **P** **15 14 08.8 +0.4**
PV03 Paradox Valley 90.04 49 P **P** **15 14 08.9 +0.3**
PV03 IAmb IAmb 15 14 11.2
comp=Z,6.1nm,1.2s
PV12 Saucer Basin, 90.05 49 P **P** **15 14 08.7 +0.1**
PV12 IAmb IAmb 15 15 08.7
comp=Z,8.5nm,1.0s
PV13 Radium Mtn., P 90.10 49 P **P** **15 14 09.1 +0.2**
NOA NORSAR Array B 92.28 340 P **P** **15 14 16.8 -1.5**
comp=Z,0.3nm,0.4s,baz=56,slow=7.4,SNR=2.5
BR131 Keskin Array S 93.85 314 P **P** **15 14 24.4 -1.7**
BRTR Keskin Array B 93.85 314 P **P** **15 14 23.4 -2.6**
comp=Z,1.7nm,0.8s,baz=91,slow=4.0,SNR=10
VNDA Vanda 96.76 176 P **P** **15 14 37.4 -0.7**
comp=Z,0.2nm,0.3s,baz=9.5,slow=6.1,SNR=1.7
SNAA Sanae 124.17 192 PKPdf **PKPdf** **15 20 03.8 -1.4**
VNA3 Neumayer Olymp 125.72 190 PKPdf **PKPdf** **15 20 06.8 -1.2**
TORD Torodi Ar. Bea 132.21 309 PKP **PKPdf** **15 20 22.2 +0.2**
comp=Z,0.6nm,0.4s,baz=68,slow=2.3,SNR=11
TORD SKPbc **SKPbc** **15 23 29.1 -0.7**
comp=Z,1.8nm,0.9s,baz=64,slow=4.3,SNR=6.3
DBIC Dimbokro 141.30 308 PKhKP PKPpre 15 20 27.7
comp=Z,6.4nm,1.1s,baz=53,slow=3.6,SNR=1.7
PLCA Paso Flores 142.26 133 PKhKP PKPpre 15 20 35.8
comp=Z,1.2nm,0.6s,baz=262,slow=4.9,SNR=5.2
LPAZ La Paz 147.78 91 PKPbc **PKPbc** **15 20 54.3 +0.4**
comp=Z,4.4nm,0.5s,baz=335,slow=2.3,SNR=14
LPAZ La Paz 147.78 91 **PKPbc** **15 20 54.0 +0.1**

*IDC **26** 15:05:30.6±1.1, 18°.13S×167°.60E, h0km, mb4.0/8, mb1 4.3/9, mb1mx4.0/30, mbtmp4.1/9, ML3.9/1, MS2.8/1, Ms1 2.8/1, ms1mx2.4/29, Error ellipse: s-maj=29.7km s-min=24.0km az=125.0*
*NEIC **26** 15:05:31.4±1.9, 18°.24S±0°.10×167°.61E±0°.09, h10km±1km, mb4.6/11, Error ellipse: s-maj=17.0km s-min=13.2km az=150.0*
ISC 26 15:05:33.7±0.7, 18°21S±0°.09×167°56E±0°.10, h23km, n23, σ0s99/22, mb4.1/10, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.98**	**195**	Pn	**Pn**	**15 06 32.8**	**-0.6**
	7.4nm,0.3s,baz=49,slow=11,SNR=109						
DZM				Sn	**Sn**	**15 07 19.3**	**-0.2**
	10nm,0.3s,baz=143,slow=21,SNR=7.1						
DZM				LR	LR	15 07 45.6	
	comp=Z,116nm,19.9s,baz=41,slow=33						
DZM	**Mont Dzumac**	**3.98**	**195**		**Pn**	**15 06 32.5**	**-0.9**
MSVF	**Nonsavu**	**10.00**	**89**	Pn	**Pn**	**15 07 55.2**	**-0.9**
ARMA	**Armidale**	**18.90**	**227**	P	**P**	**15 09 51.9**	**-1.0**
ARMA				IAmb	IAmb	15 10 47.3	
	comp=Z,14nm,1.2s						
CTA	**Charters Tower**	**20.21**	**261**	P	Pn	15 10 09.7	+0.5
	comp=Z,2.9nm,0.7s,baz=83,slow=12,SNR=6.0						
CTAO	**Charters Tower**	**20.21**	**261**	Pn	Pn	15 10 10.1	+0.9
CTAO				IAmb	IAmb	15 10 25.8	
	comp=Z,20nm,1.2s						
URZ	**Urewera**	**21.65**	**159**	P	**P**	**15 10 24.6**	**+2.1**
	comp=Z,8.5nm,1.0s,baz=343,slow=11,SNR=1.8						
CAN	**Canberra**	**23.70**	**220**	P	**P**	**15 10 43.3**	**-0.6**
STKA	**Stephens Creek**	**27.09**	**235**	P	**P**	**15 11 17.0**	**+2.2**
	comp=Z,3.4nm,0.7s,baz=27,slow=9.0,SNR=2.8						
WRA	**Warramunga Arr**	**31.41**	**261**	P	**P**	**15 11 52.9**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=84,slow=6.1,SNR=2.1						
AS31	**Alice Springs**	**31.85**	**254**	P	**P**	**15 11 56.0**	**-1.2**
ASAR	**Alice Springs**	**31.85**	**254**	P	**P**	**15 11 57.2**	**0.0**
	comp=Z,1.6nm,0.6s,baz=79,slow=9.0,SNR=7.7						
KNRA	**Kununurra**	**37.15**	**268**	P	**P**	**15 12 42.5**	**-0.6**
KNRA				IAmb	IAmb	15 13 26.0	
	comp=Z,27nm,1.4s						
FITZ	**Fitzroy Crossi**	**39.77**	**263**	P	**P**	**15 13 04.5**	**-0.6**
FITZ				IAmb	IAmb	15 13 34.5	
	comp=Z,24nm,1.8s						
TNTI	**Ternate**	**43.79**	**291**	P	**P**	**15 13 37.5**	**-0.5**
NWAO	**Narrogin (SRO)**	**47.28**	**242**	P	**P**	**15 14 06.1**	**+0.6**
MORW	**Morawa**	**48.09**	**247**	P	**P**	**15 14 12.0**	**+0.1**
PETK	**Petropavlovsk-**	**71.53**	**354**	P	**P**	**15 16 53.5**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=138,slow=5.8,SNR=4.9						
QSPA	**South Pole Qui**	**71.84**	**180**	P	**P**	**15 16 55.5**	**+1.0**
CMAR	**Chiang Mai Arr**	**76.63**	**295**	P	**P**	**15 17 24.0**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=110,slow=4.5,SNR=5.2						
BILL	**Bilibino**	**86.01**	**360**	P	**P**	**15 18 11.5**	**-0.2**
BILL				IAmb	IAmb	15 18 12.5	
	comp=Z,3.5nm,0.8s						
NVAR	**Mina Array Bea**	**89.33**	**49**	P	**P**	**15 18 28.0**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=228,slow=8.0,SNR=5.1						
TORD	**Torodi Ar. Bea**	**165.49**	**252**	PKPab	**PKPab**	**15 26 35.3**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=101,slow=5.0,SNR=3.0						

*ECX **26** 15:07:48.1±0.6, 31°.24N×115°.65W, h7km±2km, MD1.9, ML2.1*
*MEX **26** 15:07:49.2±0.8, 31°.25N×115°.56W, h6km±30km, MD3.0*
ISC 26 15:07:46.9±1.0, 31°25N±0°.04×115°66W±0°.04, h17km±8km, n10, σ0s25/20, 2C-2D, Baja California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VTX	**Valle De La Tr**	**0.18**	**323**	*eP*	**Pb**	**15 07 51.8**	**0.0**
VTX				*eS*	**Sg**	**15 07 54.6**	**-0.1**
SPIG	**San Pedro Mart**	**0.26**	**141**	*eP*	**Pg**	**15 07 52.7**	**-0.2**
SPIG				*eS*	**Sg**	**15 07 57.0**	**0.0**
SPIG	**San Pedro Mart**	**0.26**	**141**	*eP*	**Pg**	**15 07 53.2**	**+0.3**
SPIG				*eS*	**Sg**	**15 07 56.8**	**-0.2**
SPX	**San Pedro Mart**	**0.27**	**142**	*eP*	**Pg**	**15 07 53.2**	**+0.2**
SPX				*eS*	**Sg**	**15 07 56.9**	**-0.3**
SPX				IAML		15 07 57.3	
	comp=N,207nm,0.1s						
SPX				*⇑e*		15 07 57.3	
SPX	**San Pedro Mart**	**0.27**	**142**	*eP*	**Pg**	**15 07 53.1**	**+0.2**
SPX				*eS*	**Sg**	**15 07 56.8**	**-0.3**
ECBX	**El Chinero**	**0.56**	**66**	*eP*	**Pb**	**15 07 58.5**	**+0.3**
ECBX				*eS*	**Sg**	**15 08 06.0**	**+0.3**
SQX	**San Quintin**	**0.69**	**196**	*eP*	**Pg**	**15 08 00.4**	**-0.1**
SQX				*eS*	**Sg**	**15 08 09.8**	**+0.1**
SFX	**San Felipe**	**0.72**	**107**	*eP*	**Pg**	**15 08 00.7**	**-0.3**
SFX				*eS*	**Sg**	**15 08 10.2**	**-0.3**
ESJX	**Sierra Juarez**	**0.80**	**342**	*eP*	**Pg**	**15 08 02.4**	**-0.1**
ESJX				*eS*	**Sg**	**15 08 12.9**	**-0.2**
ESJX				IAML		15 08 13.9	
	comp=N,65nm,0.0s						
ESJX				*⇑e*		15 08 14.0	
ESJX				IAML		15 08 14.0	
	comp=E,88nm,0.1s						
CBX	**Cerro Bola**	**1.37**	**321**	*eP*	**Pb**	**15 08 12.3**	**+0.2**
CBX				*eS*	**Sn**	**15 08 28.9**	**-0.1**

MAN 26 15:20:13.1, 6°.45N×126°.42E, h1km, mb4.4, ML3.3, MS3.1, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.52**	**342**	*eP*	Pg	15 20 23.5	+0.3
MATI				*eS*	Sg	15 20 34.4	+1.2
DDMP	**Don Marcelino,**	**0.78**	**244**	*eP*	Pg	15 20 28.7	+0.6
DDMP				*eS*	Sn	15 20 43.1	-0.6
KCP	**Kidapawan**	**1.43**	**293**	*eP*	Pn	15 20 39.7	-0.6
KCP				*i* S	Sn	15 21 00.7	+0.8
BUKP	**Musuan**	**1.96**	**317**	*eP*	Pn	15 20 47.9	+0.3
BUKP				*eS*	Sn	15 21 12.6	-0.2

*IDC **26** 15:24:55.8±0.9, 18°.88N×101°.33W, h71km±6km, mb4.1/18, mb1 4.3/20, mb1mx4.2/30, mbtmp4.4/20, MS3.4/12, Ms1 3.4/12, ms1mx3.3/28, Error ellipse: s-maj=22.2km s-min=11.9km az=49.0*
*NEIC **26** 15:24:56.1±1.6, 18°.85N±0°.07×101°.42W±0°.05, h72km±5km, mb4.5/236, Md4.5/17(MEX), Error ellipse: s-maj=11.3km s-min=4.2km az=214.0*
*MEX **26** 15:24:57.5±1.7, 18°.56N×101°.59W, h16km±24km, MD4.5*
ISC 26 15:24:54.4±0.6, 18°62N±0°.05×101°56W±0°.04, h69km±4km, h69km:pP-P, n417, σ1s32/429, mb4.5/89, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOIG	**Morelia**	**1.11**	**18**	*i* P	**Pn**	**15 25 14.9**	**+0.4**
MOIG				*i* S	**Sn**	**15 25 29.8**	**+0.4**

MOIG Morelia 1.11 18 Pn 15 25 14.8 +0.4
MOIG Morelia 1.11 18 Sn 15 25 29.8 +0.4
ARIG Puente Sto Nin 1.20 106 eP Pn 15 25 16.5 +1.2
ARIG i S Sn 15 25 30.4 -0.7
ARIG Puente Sto Nin 1.20 106 Pn 15 25 16.5 +1.2
ARIG Sn 15 25 30.4 -0.7
MMIG Aquila 1.73 259 eP Pn 15 25 21.7 -0.6
MMIG i S Sn 15 25 39.9 -3.6
MMIG Aquila 1.73 259 Pn 15 25 21.7 -0.6
MMIG Sn 15 25 39.9 -3.6
MEIG Mezcala 1.97 110 eP Pn 15 25 27.4 +1.8
MEIG Mezcala 1.97 110 Pn 15 25 27.4 +1.8
COIG Colima 2.09 286 eP Pn 15 25 28.3 +1.0
EZ5V 2.11 294 eP Pn 15 25 29.7 +2.0
EZ5V 2.11 294 Pn 15 25 29.7 +2.0
UNM Universidad Na 2.36 72 Pn 15 25 33.5 +2.4
R15V 2.36 284 eP Pn 15 25 32.2 +1.3
R15V 2.36 284 Pn 15 25 32.2 +1.3
TLIG Tlapa 3.03 110 Pn 15 25 42.7 +2.6
ZAIG Zacatecas 4.24 347 Pn 15 25 57.5 +0.8
CMIG Matias Romero 6.54 102 P Pn 15 26 30.9 +3.0
7.4nm,0.3s,baz=272,slow=9.0,SNR=66
CMIG S Sn 15 27 36.3 -4.8
1.9nm,0.3s,baz=44,slow=5.0,SNR=1.2
HPIG 9.10 336 Pn 15 27 05.7 +2.5
CCIG Comitan 9.29 103 Pn 15 27 08.3 +2.7
833A Chaparral WMA, 9.86 11 P Pn 15 27 16.7 +3.4
baz=191,SNR=6.9
TXAR Lajitas Array 10.84 350 P Pn 15 27 29.9 +3.1
0.8nm,0.3s,baz=174,slow=14,SNR=57
TXAR LR LR 15 32 18.5
comp=Z,210nm,19.1s,baz=0.0,slow=42
TX31 Lajitas Ar. Si 10.84 350 Pn 15 27 29.2 +2.5
TX32 Lajitas Array 10.84 350 Pn 15 27 29.3 +2.6
JCT Junction City 11.91 7 P Pn 15 27 44.0 +2.6
baz=187,SNR=9.5
JCT Junction City 11.91 7 Pn 15 27 40.5 -0.9
HKT Hockley 12.43 24 Pn 15 27 47.1 -1.2
TEIG Tepich 12.63 81 P Pn 15 27 51.1 0.0
2.5nm,0.3s,baz=342,slow=0.1,SNR=11
TEIG Tepich 12.63 81 Pn Pn 15 27 50.7 -0.5
MNTX Cornudas Mount 13.47 346 P Pn 15 28 05.0 +2.5
baz=163,SNR=16
MNTX Cornudas Mount 13.47 346 Pn 15 28 03.2 +0.8
WHTX Lake Whitney, 13.82 15 P Pn 15 28 08.7 +1.7
baz=196
WHTX Lake Whitney, 13.82 15 Pn 15 28 07.4 +0.3
ABTX Abilene, Hawle 14.05 7 P Pn 15 28 11.9 +1.8
baz=187,SNR=14
ABTX Abilene, Hawle 14.05 7 Pn 15 28 10.3 +0.2
NATX Nacogdoches 14.49 24 P Pn 15 28 16.0 +0.2
baz=207
NATX Nacogdoches 14.49 24 Pn 15 28 15.0 -0.8
319A Douglas 14.49 333 Pn Pn 15 28 17.3 +1.3
121A Cookes Peak, D 14.94 339 P P 15 28 24.6 -1.2
baz=156,SNR=13
121A Cookes Peak, D 14.94 339 Pn 15 28 22.1 +0.2
MSTX Muleshoe 15.33 356 P Pn 15 28 27.3 +0.6
baz=175,SNR=34
MSTX Muleshoe 15.33 356 Pn 15 28 26.1 -0.6
MSTX P P 15 28 29.9 -0.1
TUC Tucson 15.96 330 P P 15 28 40.2 +3.1
baz=146
TUC Tucson 15.96 330 Pn Pn 15 28 34.2 -0.6
TUC IAmb IAmb 15 28 56.5
comp=Z,44nm,2.0s
AMTX Amarillo 16.20 360 P P 15 28 38.6 -1.1
baz=179
AMTX Amarillo 16.20 360 P Pn 15 28 37.6 -0.1
AMTX IAmb IAmb 15 28 40.6
comp=Z,66nm,0.9s
WMOK Wichita Mounta 16.24 8 Pn 15 28 37.9 -0.3
WMOK IAmb IAmb 15 28 58.2
comp=Z,27nm,1.0s
214A Organ Pipe Nat 16.71 325 P P 15 28 46.1 +0.8
214A IAmb IAmb 15 29 04.5
comp=Z,30nm,1.5s
WLAR White Oak Lake 16.80 25 P P 15 28 45.1 -1.1
X37A Clayton 16.83 18 Pn Pn 15 28 43.7 -1.8
X37A IAmb IAmb 15 28 56.8
comp=Z,19nm,0.8s
ANMO Albuquerque 16.83 346 P P 15 28 47.2 +0.4
comp=Z,0.1nm,0.3s,baz=145,slow=12,SNR=11
ANMO Albuquerque 16.83 346 P P 15 28 48.7 +1.8
baz=163
ANMO Albuquerque 16.83 346 P P 15 28 47.2 +0.4
FNO Franklin 16.98 12 P P 15 28 47.8 -0.5
W35A Tecumseh 16.98 13 P P 15 28 47.3 -1.0
OKCFA Oklahoma City 17.12 11 P P 15 28 49.4 -0.4
OKCFA IAmb IAmb 15 28 51.9
comp=Z,30nm,0.5s
MIAR Mount Ida 17.38 23 P P 15 28 52.2 -0.4
baz=206,SNR=11
MIAR Mount Ida 17.38 23 P P 15 28 51.7 -1.0
MIAR IAmb IAmb 15 29 01.4
comp=Z,33nm,0.9s
X18A Snowflake 17.52 336 P P 15 28 55.2 +0.8
CCAR Cane Creek 17.56 28 P P 15 28 54.9 +0.2
CCAR IAmb IAmb 15 29 04.7
comp=Z,33nm,0.6s
X40A Basin Creek Fa 17.61 24 P P 15 28 54.8 -0.4
baz=208
X40A Basin Creek Fa 17.61 24 P Pn 15 28 54.1 -1.0
X40A IAmb IAmb 15 29 19.3
comp=Z,65nm,1.8s
U32A Winter Ranch, 17.84 7 P Pn 15 28 57.5 -0.3
W39A Magazine 17.89 21 P Pn 15 28 58.7 +0.2
baz=204,SNR=17
W39A Magazine 17.89 21 P Pn 15 28 57.7 -0.8
W39A IAmb IAmb 15 28 59.8
comp=Z,23nm,0.7s
TUL1 Leonard 17.96 15 P Pn 15 29 00.1 +0.8
baz=198,SNR=9.6
TUL1 Leonard 17.96 15 P P 15 28 58.0 -1.0
TUL1 IAmb IAmb 15 29 00.8
comp=Z,32nm,0.7s
W18A Petrified Fore 17.96 338 P Pn 15 29 01.4 +1.8
baz=153
W18A Petrified Fore 17.96 338 P Pn 15 29 00.8 +1.2
X16A Lo Mia Camp, P 18.03 333 P Pn 15 29 01.4 +1.0
UALR University of 18.06 25 P P 15 28 59.1 -1.0
UALR IAmb IAmb 15 29 22.4
comp=Z,23nm,1.1s
Y14A Wickenburg 18.36 328 P Pn 15 29 05.1 +0.8
W41B Gary Mavity, V 18.44 25 P Pn 15 29 04.4 -0.8
baz=209,SNR=36
WHAR Wooly Hollow 18.53 24 P Pn 15 29 04.9 -1.3
T25A Trinidad 18.62 353 P Pn 15 29 08.6 +1.0
baz=171,SNR=17
GLA Glamis 18.66 323 P Pn 15 29 14.2 +6.3
baz=136
GLA Glamis 18.66 323 P Pn 15 29 08.7 +0.8
WUAZ Wupatki 18.94 335 P Pn 15 29 12.9 +1.5
baz=149,SNR=9.7
WUAZ Wupatki 18.94 335 P 15 29 11.2 +1.2
WUAZ IAmb IAmb 15 29 30.0
comp=Z,22nm,0.9s
FCAR Ozark Folk Cen 19.12 24 P P 15 29 10.3 -1.4
OXF Oxford 19.17 32 P Pn 15 29 12.1 -1.7
baz=217
OXF Oxford 19.17 32 P P 15 29 11.4 -0.9
OXF IAmb IAmb 15 29 12.8
comp=Z,50nm,1.1s
U40A Yellville 19.26 22 P P 15 29 13.1 -0.2
baz=205,SNR=26
U40A Yellville 19.26 22 P P 15 29 12.5 -0.9
U40A IAmb IAmb 15 29 13.8
comp=Z,28nm,0.7s
SDCO Great Sand Dun 19.37 351 P Pn 15 29 16.5 0.0
baz=168,SNR=32
SDCO Great Sand Dun 19.37 351 P P 15 29 15.1 +0.3
SDCO IAmb IAmb 15 29 20.6
comp=Z,24nm,1.3s
LRAL Lakeview Retre 19.41 39 P Pn 15 29 14.8 -1.9
baz=226,SNR=24
LRAL Lakeview Retre 19.41 39 P P 15 29 13.8 -1.0
LRAL IAmb IAmb 15 29 15.5
comp=Z,25nm,0.5s
HBAR Harrisburg 19.44 28 P P 15 29 14.6 -0.6
BC3 Big Chuckawall 19.46 323 P Pn 15 29 21.3 +3.9
baz=136
MONP2 Monument Peak 19.49 320 P Pn 15 29 22.0 +4.1
baz=132
MVCO Mesa Verde 19.50 343 P Pn 15 29 17.6 -0.3
baz=159,SNR=20
MVCO Mesa Verde 19.50 343 P P 15 29 16.9 +0.8
MVCO IAmb IAmb 15 29 22.1
comp=Z,24nm,1.0s
BAR Barrett 19.50 319 Pn 15 29 19.9 +2.1
S22A 4UR Ranch, Cre 19.61 347 P Pn 15 29 19.5 +0.2
baz=164,SNR=15
IRM Iron Mountain 19.66 325 P Pn 15 29 20.3 +0.7
baz=138
LCAR Lake Charles 19.66 26 P P 15 29 16.9 -0.8
LCAR IAmb IAmb 15 29 18.2
comp=Z,27nm,1.0s
W13A Hualapai Mount 19.73 329 Pn Pn 15 29 21.5 +0.8
XPFO Pion Flat 20.01 321 P P 15 29 23.1 +1.5
PFO Pinyon Flats O 20.01 321 P P 15 29 21.3 -0.3
comp=Z,0.1nm,0.3s,baz=130,slow=7.9,SNR=4.1
PFO Pinyon Flats O 20.01 321 P P 15 29 23.1 +1.5
BELC Belle Mtn. Jos 20.02 323 P Pn 15 29 27.0 +2.9
baz=136,SNR=5.4
U15A North Rim 20.11 334 P P 15 29 23.7 +0.9
CBKS Cedar Bluff 20.18 4 P Pn 15 29 26.9 +1.1
baz=184
CBKS Cedar Bluff 20.18 4 P P 15 29 22.8 -0.5
MGMO Mountain Grove 20.19 22 P P 15 29 22.6 -0.8
MGMO IAmb IAmb 15 29 24.2
comp=Z,25nm,0.8s
PLAL Pickwick Lake 20.22 34 P P 15 29 22.5 -1.3
KSCO Kaye Shedlock' 20.34 358 P P 15 29 26.2 +1.0
baz=176,SNR=13
KSCO Kaye Shedlock' 20.34 358 P P 15 29 25.2 0.0
PV01 Paradox Valley 20.39 344 P P 15 29 26.4 +0.7
GMRC Granite Mounta 20.41 325 P P 15 29 27.6 +1.7
baz=138
PV13 Radium Mtn., P 20.48 343 P P 15 29 26.9 +0.2
PV05 Paradox Valley 20.48 343 P P 15 29 26.6 -0.2
PV02 Paradox Valley 20.50 344 P P 15 29 27.1 +0.1
PV15 Paradox Valley 20.56 344 P P 15 29 28.5 +0.9
PV15 IAmb IAmb 15 29 46.5
comp=Z,18nm,0.8s
PV03 Paradox Valley 20.57 343 P P 15 29 27.3 -0.4
PV18 Skein Mesa, Pa 20.58 343 P P 15 29 28.2 +0.3
PV12 Saucer Basin, 20.62 344 P P 15 29 27.7 -0.5
PV12 IAmb IAmb 15 29 51.4
comp=Z,19nm,1.0s
CBCY The Bluff, Cay 20.62 83 P P 15 29 27.1 -1.1
PV11 David Mesa, Pa 20.62 343 P P 15 29 28.9 +0.6
PV17 East Wray Mesa 20.63 343 P P 15 29 28.5 +0.1
PV16 Nyswonger Mesa 20.64 343 P P 15 29 28.1 -0.4
TIGA Tifton 20.65 48 P P 15 29 26.9 -1.5
TIGA IAmb IAmb 15 29 32.6
comp=Z,46nm,1.1s
PV19 Morning Glory 20.66 343 P P 15 29 28.2 -0.5
PV20 West Nyswonger 20.69 343 P P 15 29 28.1 -0.8
PV20 IAmb IAmb 15 29 59.1
comp=Z,40nm,1.8s
PV07 Paradox Valley 20.69 344 P P 15 29 29.9 +0.9
PV07 IAmb IAmb 15 29 47.6
comp=Z,14nm,0.9s
PV04 Paradox Valley 20.72 343 P P 15 29 29.7 +0.5
PV04 IAmb IAmb 15 29 33.8
comp=Z,12nm,0.7s
PV14 Lion Creek, Pa 20.73 343 P P 15 29 29.6 +0.2
PV10 Paradox Valley 20.74 343 P P 15 29 28.1 -1.5
PV10 IAmb IAmb 15 29 36.4
comp=Z,12nm,0.8s
PV23 Carpenter Ridg 20.80 343 P P 15 29 29.4 -0.9
PV22 Blue Mesa, Par 20.82 344 P P 15 29 30.9 +0.5
PV22 IAmb IAmb 15 29 34.2
comp=Z,12nm,0.7s
KNB Kanab 20.83 334 P P 15 29 30.8 +0.3
KSU1 Kansas State U 20.86 11 P P 15 29 30.1 -0.5
baz=193,SNR=5.8
KSU1 Kansas State U 20.86 11 P P 15 29 29.2 -1.4
KSU1 IAmb IAmb 15 29 51.2
comp=Z,32nm,0.8s
PV09 Paradox Valley 20.88 343 P P 15 29 31.1 0.0
PV21 Cone Mtn., Par 20.89 344 P P 15 29 31.2 0.0
HICK Hickman 20.90 29 P P 15 29 29.7 -1.3
PKCU Pink Cliffs 20.99 336 P P 15 29 32.8 +0.4
TUQ Turquoise Moun 21.04 326 P P 15 29 36.2 +3.5
baz=138,SNR=5.6
BFSC Mount Baldy Ra 21.16 320 P P 15 29 36.2 +2.1
baz=132
WVT Waverly 21.24 32 P P 15 29 33.4 -1.3
baz=218
WVT Waverly 21.24 32 P P 15 29 32.1 -2.6
WVT IAmb IAmb 15 29 39.4
comp=Z,25nm,0.7s
FPAL Fort Paine 21.28 39 P P 15 29 32.5 -2.6
FPAL IAmb IAmb 15 29 56.7
comp=Z,26nm,1.1s
CCM Cathedral Cave 21.36 23 P P 15 29 34.8 -1.1
baz=207
CCM Cathedral Cave 21.36 23 P P 15 29 34.2 -1.7
CCM IAmb IAmb 15 29 35.5
comp=Z,17nm,0.7s
ISCO Idaho Springs 21.40 351 P P 15 29 37.6 +1.0
baz=169,SNR=44
ISCO Idaho Springs 21.40 351 P P 15 29 36.7 0.0
ISCO IAmb IAmb 15 29 40.5
comp=Z,21nm,0.7s
GSC Goldstone, Bar 21.42 324 P P 15 29 39.2 +2.5
baz=136
SZCU Shurtz Canyon 21.43 334 P P 15 29 38.2 +1.2
MTPU Mount Pierson 21.46 337 P P 15 29 37.9 +0.5
SHPR Sheep Range 21.47 329 P P 15 29 38.2 +0.8
SWET Sewanee 21.57 37 P P 15 29 36.7 -1.6
SWET IAmb IAmb 15 29 43.1
comp=Z,17nm,0.8s
SHOC Shoshone, Teco 21.57 326 P P 15 29 41.6 +3.3
baz=138
SNCC San Nicolas Is 21.70 316 P P 15 29 39.0 -0.7
EDW2 Edwards Air Fo 21.81 321 P P 15 29 42.9 +2.1
baz=133
SRU San Rafael Swe 21.85 341 P P 15 29 41.1 -0.3
MSU Marysvale 21.87 337 P P 15 29 42.4 +0.7
SIUC Southern Illin 21.88 27 P P 15 29 39.1 -2.3
SIUC IAmb IAmb 15 29 47.6
comp=Z,21nm,1.0s
Q16A Castle Valley 21.88 340 P P 15 29 42.2 +0.4
GOGA Godfrey 21.89 44 P P 15 29 40.4 -1.2
baz=232
GOGA Godfrey 21.89 44 P P 15 29 38.8 -2.8
CLTN Cedars of Leba 21.99 35 P P 15 29 41.1 -1.6
CLTN IAmb IAmb 15 29 49.2
comp=Z,25nm,0.9s
LRMC Laurel Mtn Rad 22.04 323 P P 15 29 45.3 +1.9
baz=135
O20A White River Ci 22.20 346 P P 15 29 45.5 +0.3
baz=162,SNR=10
O20A White River Ci 22.20 346 P P 15 29 44.6 -0.6
O20A IAmb IAmb 15 30 21.3
comp=Z,28nm,1.4s
TMUT Trail Mountain 22.24 340 P P 15 29 45.8 +0.1
P17A Butcher Ranch, 22.25 341 P P 15 29 45.3 -0.4
OGNE Ogallala 22.25 359 P P 15 29 45.9 +0.3
baz=178,SNR=8.9
OGNE Ogallala 22.25 359 P P 15 29 44.9 -0.8
MPMC Manual Prospec 22.35 324 P P 15 29 47.9 +1.1
baz=136
TPNV Topopah Spring 22.36 328 P P 15 29 48.2 +1.3
baz=140,SNR=6.4
TPNV Topopah Spring 22.36 328 P P 15 29 47.2 +0.3
N23A Red Feather La 22.52 351 P P 15 29 49.2 +0.5
baz=168,SNR=20
PSUT Pine Spring 22.55 334 P P 15 29 48.9 -0.1
CPCT Cooper Cave 22.55 39 P P 15 29 46.9 -1.9
CPCT IAmb IAmb 15 30 04.2
comp=Z,11nm,1.0s
ISA Isabella, Lake 22.63 322 P P 15 29 51.6 +1.9
baz=134
ISA Isabella, Lake 22.63 322 P P 15 29 49.3 -0.4
ISA IAmb IAmb 15 29 52.6
comp=Z,22nm,1.6s
USIN University of 22.78 29 P P 15 29 49.4 -1.7
PHWY Pilot Hill 22.85 352 P P 15 29 51.0 -1.2
PHWY IAmb IAmb 15 29 53.3
comp=Z,20nm,0.8s
BGNE Belgrade 22.90 7 P P 15 29 52.2 -0.2
baz=188
BGNE Belgrade 22.90 7 P P 15 29 51.0 -1.4
RDMU Red Mountain 22.94 344 P P 15 29 51.3 -1.7
GRAC Grapevine Rang 22.98 326 P P 15 29 54.8 +1.6
baz=138
NLU North Lily Min 23.12 339 P P 15 29 54.8 0.0
TKL Tuckaleechee C 23.14 39 P P 15 29 52.1 -2.7
comp=Z,3.9nm,0.5s,baz=197,slow=11,SNR=11
TKL Tuckaleechee C 23.14 39 P P 15 29 51.7 -3.1
R11A Troy Canyon, C 23.15 331 P P 15 29 55.8 +0.8
baz=144,SNR=6.3
R11A Troy Canyon, C 23.15 331 P P 15 29 55.2 +0.1
HODGE Hodges 23.18 44 P P 15 29 52.2 -3.0
HODGE IAmb IAmb 15 30 18.2
comp=Z,28nm,1.5s
OLIL Olney 23.21 28 P P 15 29 52.8 -2.6
OLIL IAmb IAmb 15 29 54.8
comp=Z,24nm,0.8s
BG3 Lake Jocassee 23.22 42 P P 15 29 53.9 -1.6
Y55A Saluda 23.27 45 P P 15 29 55.6 -0.4
baz=234
X54A Belton 23.30 43 P P 15 29 55.7 -0.6
baz=232
RWWY Rawlins 23.50 349 P P 15 29 57.3 -1.1
RWWY IAmb IAmb 15 29 59.2
comp=Z,18nm,0.8s
DUG Dugway, Tooele 23.59 338 P P 15 29 59.6 +0.5
baz=152,SNR=6.4
DUG Dugway, Tooele 23.59 338 P P 15 29 58.9 -0.2
WCI Wyandotte Cave 23.64 31 P P 15 29 58.4 -0.9
baz=218
WCI Wyandotte Cave 23.64 31 P P 15 29 57.3 -2.1
WCI IAmb IAmb 15 30 01.2
comp=Z,32nm,0.8s
W54A Cherokee Point 23.75 42 P P 15 30 00.4 0.0
baz=231,SNR=5.6
PAULI Pauline 23.83 43 P P 15 29 58.7 -2.4
PAULI IAmb IAmb 15 30 19.7
comp=Z,11nm,0.8s
TZTN Tazewell 23.88 38 P P 15 30 00.6 -0.9
baz=226
TZTN Tazewell 23.88 38 P P 15 30 00.3 -1.2
TZTN IAmb IAmb 15 30 26.1
comp=Z,25nm,1.4s
TCUT Toone Canyon 23.96 341 P P 15 30 02.0 -0.5
HDIL Hopedale 24.27 23 P P 15 30 03.8 -1.2
baz=209,SNR=9.6
HDIL Hopedale 24.27 23 P P 15 30 03.5 -1.5
BLO Bloomington 24.28 29 P P 15 30 03.7 -1.4
SCIA State Center 24.28 15 P P 15 30 03.6 -1.4
SCIA IAmb IAmb 15 30 05.4
comp=Z,24nm,0.7s
OMMB Old Mammoth Mi 24.31 325 P P 15 30 06.5 +0.7
BGU Big Grassy Mou 24.31 339 P P 15 30 05.4 -0.2
K22A Casper 24.32 351 P P 15 30 07.3 +1.6
baz=168,SNR=39
K22A Casper 24.32 351 P P 15 30 05.3 -0.4
KMSC Kings Mountain 24.34 43 P P 15 30 04.3 -1.4
baz=233
KMSC Kings Mountain 24.34 43 P P 15 30 04.2 -1.6
KMSC IAmb IAmb 15 30 08.3
comp=Z,12nm,0.9s
V54A Nebo 24.34 41 P P 15 30 04.9 -0.8
baz=230,SNR=15
MDPB Devils Postpil 24.37 325 P P 15 30 06.9 +0.6
HWUT Hardware Ranch 24.46 342 P P 15 30 06.2 -0.7
HWUT IAmb IAmb 15 30 10.1
comp=Z,13nm,0.8s
SPUT South Promonto 24.46 340 P P 15 30 06.8 -0.1
NV11 Mina Array Sit 24.47 327 P P 15 30 07.6 +0.6
NVAR Mina Array Bea 24.54 327 P P 15 30 09.2 +1.4
comp=Z,4.8nm,0.8s,baz=152,slow=9.4,SNR=39
NVAR pP pP 15 30 25.0 +0.6
comp=Z,4.8nm,0.9s,baz=153,slow=10,SNR=8.9
T53A Wise 24.77 39 P P 15 30 09.2 -0.6
baz=227
RYN Ryan 24.80 327 P P 15 30 10.5 +0.4
V55A Taylorsville 24.85 42 P P 15 30 09.7 -0.7
baz=232
U54A Nelsons Funny 24.90 40 P P 15 30 10.1 -0.7
baz=229
KVN Kaiserville 24.91 328 P P 15 30 11.7 +0.6
ELK Elko 24.99 335 P P 15 30 14.9 +3.1
comp=Z,0.6nm,0.5s,baz=46,slow=15,SNR=3.6
ELK pP pP 15 30 30.2 +1.7
comp=Z,1.7nm,0.9s,baz=102,slow=6.4,SNR=4.9
SFIN Lafayette 25.00 27 P P 15 30 11.1 -0.6
baz=214,SNR=6.1
SFIN Lafayette 25.00 27 P P 15 30 10.3 -1.4
BW06 Boulder Array 25.01 346 P P 15 30 12.9 +0.8
baz=161,SNR=23
BW06 Boulder Array 25.01 346 P P 15 30 11.5 -0.5
BW06 IAmb IAmb 15 30 14.5
comp=Z,17nm,0.8s
PD31 Pinedale Array 25.01 346 P P 15 30 11.7 -0.3
PD31 IAmb IAmb 15 30 14.5
comp=Z,15nm,0.8s
PDAR Pinedale Array 25.01 346 P P 15 30 12.0 0.0
comp=Z,12nm,0.7s,baz=138,slow=12,SNR=77
PDAR pP pP 15 30 29.5 +0.8
comp=Z,5.3nm,0.8s,baz=150,slow=10,SNR=5.2
PDAR LR LR 15 41 06.4
comp=Z,104nm,18.8s,baz=186,slow=39
WAKR Walker 25.20 326 P P 15 30 13.4 -0.4
U55A TA2, Sparta 25.36 41 P P 15 30 14.2 -0.9
baz=231
ECSD EROS Data Cent 25.38 8 P P 15 30 14.5 -0.6
baz=191,SNR=27
ECSD EROS Data Cent 25.38 8 P P 15 30 12.9 -2.2
ECSD IAmb IAmb 15 30 17.2
comp=Z,17nm,0.7s
T54A Tazewell 25.40 40 P P 15 30 14.2 -1.2
baz=229
P49A Miami Univ. Ec 25.43 31 P P 15 30 15.4 -0.2
baz=220
YERR Yerington 25.44 327 P P 15 30 16.6 +0.6
S53A Williamson 25.48 38 P P 15 30 15.3 -0.8
baz=227
RSSD Black Hills 25.51 356 P P 15 30 16.9 +0.4
baz=174
RSSD Black Hills 25.51 356 P P 15 30 16.0 -0.5
RSSD IAmb IAmb 15 30 19.6
comp=Z,8.0nm,0.7s
O48A Farmland 25.78 30 P P 15 30 18.5 -0.3
baz=218,SNR=8.9
V57A Coltrane Farms 25.80 44 P P 15 30 16.8 -2.2
baz=234
REDW Red Top Meadow 25.89 344 P P 15 30 19.0 -0.9
REDW IAmb IAmb 15 30 41.3
comp=Z,14nm,1.1s
VCNR Virginia City 25.89 326 P P 15 30 20.5 +0.5
T55A Pulaski 25.91 40 P P 15 30 21.1 +1.0
baz=230
P50A Jamestown 25.95 33 P P 15 30 19.9 -0.4
baz=221,SNR=9.9
SNOW Snow King Moun 25.95 345 P P 15 30 20.3 -0.3
SNOW IAmb IAmb 15 30 24.8
comp=Z,15nm,0.8s
R53A Hurricane 26.03 37 P P 15 30 21.4 +0.4
baz=226,SNR=5.3
TPAW Teton Pass 26.03 344 P P 15 30 20.9 -0.4
TPAW IAmb IAmb 15 30 25.2
comp=Z,13nm,0.8s
V58A Windy Hill, Pi 26.19 45 P P 15 30 24.0 +1.6
baz=235
FXWY Fox Creek 26.19 344 P P 15 30 22.4 -0.3
L44A Lake County Fo 26.20 23 P P 15 30 21.1 -1.3
L44A IAmb IAmb 15 30 55.0
comp=Z,18nm,0.9s
P51A Williamsport 26.24 34 P P 15 30 22.1 -0.8
P51A IAmb IAmb 15 30 49.5
comp=Z,18nm,1.0s
Q52A Bidwell 26.29 36 P P 15 30 22.8 -0.5
baz=225,SNR=9.4
N48A Decatur 26.32 29 P P 15 30 22.9 -0.7
baz=217,SNR=7.1
IMW Indian Meadow 26.41 345 P P 15 30 24.0 -0.8
O50A Cable 26.44 32 P P 15 30 24.7 0.0
baz=221,SNR=6.6
R54A Victor 26.48 38 P P 15 30 26.7 +1.6
baz=228
S55A Lewisburg 26.51 40 P P 15 30 24.9 -0.5
baz=230
FLWY Flagg Ranch 26.52 345 P P 15 30 25.6 -0.1
FLWY IAmb IAmb 15 30 50.6
comp=Z,11nm,1.2s
Q53A Leroy 26.63 37 P P 15 30 26.9 +0.5
baz=226
BEKR Beckworth 26.68 326 P P 15 30 27.1 0.0
YPP Pitchstone Pla 26.73 345 P P 15 30 27.2 -0.4
ACSO Alum Creek Sta 26.83 33 P P 15 30 29.1 +0.8
baz=222
P52A Corning 26.84 35 P P 15 30 28.1 -0.2

baz=224
R55A Marlinton 27.07 39 P **P** 15 30 29.5 -1.0
baz=230
R55A Marlinton 27.07 39 P **P** 15 30 28.0 -2.4
R55A IAmb IAmb 15 30 49.2
comp=Z,11nm,0.8s
Q54A Coxs Mills 27.11 37 P **P** 15 30 33.3 +2.5
baz=227
P53A Whipple 27.14 36 P **P** 15 30 30.9 -0.2
baz=226
YNE Yellowstone No 27.24 347 P **P** 15 30 31.2 -0.9
YNE PcP **PcP** 15 33 49.3 -1.3
O52A Adamsville 27.34 34 P **P** 15 30 32.1 -0.8
baz=224
O53A New Philadelph 27.77 35 P **P** 15 30 35.7 -1.0
baz=225
MCMT McKenzie Canyo 27.78 343 P **P** 15 30 37.6 +0.6
MOD Modoc Plateau 28.17 329 P **P** 15 30 40.2 -0.1
J08A Circle Bar Ran 28.50 334 P **P** 15 30 43.1 -0.1
LRM Limekiln Ridge 28.59 344 P **P** 15 30 44.1 -0.1
M53A WI Miller and 28.91 34 P **P** 15 30 45.9 -0.8
baz=224
N54A Moraine State 28.94 35 P **P** 15 30 46.1 -0.9
baz=226
N54A Moraine State 28.94 35 P **P** 15 30 45.5 -1.6
N54A IAmb IAmb 15 31 06.2
comp=Z,24nm,1.6s
YBH Yreka Blue Hor 29.26 326 P **P** 15 30 49.0 -1.0
comp=Z,1.0nm,0.7s,baz=135,slow=13,SNR=4.3
COWI Conover 29.27 18 P **P** 15 30 48.2 -1.7
N55A Marion Center 29.37 36 P **P** 15 30 50.7 -0.2
baz=228
M54A Oil Creek Stat 29.49 35 P **P** 15 30 51.9 0.0
baz=226
M54A Oil Creek Stat 29.49 35 P **P** 15 30 50.8 -1.2
M54A IAmb IAmb 15 30 52.6
comp=Z,7.0nm,0.6s
ERPA Erie 29.75 33 P **P** 15 30 53.5 -0.7
baz=224
ERPA Erie 29.75 33 P **P** 15 30 52.6 -1.6
KRMB Red Mountain 29.75 325 P **P** 15 30 54.6 +0.2
KRMB IAmb IAmb 15 31 27.9
comp=Z,12nm,1.6s
DGMT Dagmar 29.85 356 P **P** 15 30 55.1 0.0
baz=175
DGMT Dagmar 29.85 356 P **P** 15 30 54.1 -0.9
N56A West Decatur 29.85 37 P **P** 15 30 54.1 -1.1
baz=229
MSO Missoula 29.92 343 P **P** 15 30 55.5 -0.4
baz=156
MSO Missoula 29.92 343 P **P** 15 30 55.1 -0.7
M55A Ridgway 29.96 36 P **P** 15 30 55.3 -0.8
baz=227
M55A Ridgway 29.96 36 P **P** 15 30 54.3 -1.8
M55A IAmb IAmb 15 30 57.5
comp=Z,39nm,1.9s
AGMN Agassiz Nation 29.96 8 P **P** 15 30 55.0 -1.1
baz=190,SNR=17
AGMN Agassiz Nation 29.96 8 P **P** 15 30 54.3 -1.7
EGMT Eagleton 30.08 349 P **P** 15 30 58.4 +1.2
baz=164
F10A Beach Ranch, E 30.21 338 P **P** 15 30 58.0 -0.3
G08A Pilot Rock 30.28 335 P **P** 15 30 57.9 -1.1
M56A Emporium 30.29 36 P **P** 15 30 58.5 -0.6
baz=228
M56A Emporium 30.29 36 P **P** 15 30 58.0 -1.1
M56A IAmb IAmb 15 31 13.2
comp=Z,33nm,1.9s
EYMN Ely 30.38 13 P **P** 15 30 57.8 -1.9
baz=199
EYMN Ely 30.38 13 P **P** 15 30 57.4 -2.3
EYMN IAmb IAmb 15 30 59.1
comp=Z,5.4nm,0.8s
I51A Listowel 30.47 30 P **P** 15 30 59.9 -0.6
baz=221
L55A Hinsdale 30.62 35 P **P** 15 31 01.2 -0.8
baz=227
J54A Appleton 31.27 33 P **P** 15 31 06.2 -1.4
K56A Middlesex 31.58 35 P **P** 15 31 09.7 -0.6
baz=228
ULM Lac du Bonnet 31.88 7 P **P** 15 31 10.7 -2.2
comp=Z,9.6nm,0.6s,baz=189,slow=9.7,SNR=7.8
ULM pP **pP** 15 31 28.2 -1.8
comp=Z,16nm,0.9s,baz=185,slow=9.5,SNR=6.4
ULM LR LR 15 44 54.3
comp=Z,76nm,21.1s,baz=208,slow=38
ULM Lac du Bonnet 31.88 7 P **P** 15 31 10.4 -2.5
ULM **pP** 15 31 28.0 -2.0
WALA Waterton Lakes 31.96 345 P **P** 15 31 14.2 +0.5
WALA IAmb IAmb 15 31 15.7
comp=Z,5.7nm,0.7s
L58A Harry Jones Me 31.98 38 P **P** 15 31 14.4 +0.5
baz=231
NEW Newport 32.16 340 P **P** 15 31 15.2 -0.3
baz=151
NEW Newport 32.16 340 P **P** 15 31 14.9 -0.6
NEW IAmb IAmb 15 31 16.0
comp=Z,3.5nm,0.7s
J56A Wolcott 32.22 35 P **P** 15 31 14.0 -1.9
H53A Bobcaygeon 32.22 32 P **P** 15 31 15.2 -0.8
baz=224
I55A Frankford 32.43 33 P **P** 15 31 16.6 -1.2
baz=226
DELO Deloro Mine 32.67 33 P **P** 15 31 18.9 -1.0
DELO IAmb IAmb 15 31 49.3
comp=Z,8.9nm,1.1s
J57A Williamstown 32.78 36 P **P** 15 31 19.5 -1.3
J57A IAmb IAmb 15 31 39.9
comp=Z,19nm,1.3s
G54A Lake Saint Pet 33.06 31 P **P** 15 31 22.4 -0.9
baz=224
SJG San Juan 33.58 85 P **P** 15 31 27.7 -0.3
comp=Z,22nm,0.6s,baz=263,slow=7.0,SNR=7.9
SJG San Juan 33.58 85 P **P** 15 31 28.2 +0.1
MTP Monte Pirata 34.14 85 P **P** 15 31 32.5 -0.5
LONY Lake Ozonia 34.34 35 P **P** 15 31 33.2 -1.3
LONY IAmb IAmb 15 31 34.7
comp=Z,7.4nm,1.0s
D53A Lac Vacive, Po 34.47 29 P **P** 15 31 35.4 -0.1
baz=222
D53A Lac Vacive, Po 34.47 29 P **P** 15 31 33.8 -1.7
D53A IAmb IAmb 15 31 35.4
comp=Z,8.7nm,1.3s
FFC Flin Flon 36.04 360 P **P** 15 31 47.0 -1.9
FFC **pP** 15 32 05.6 -0.5
FFC IAmb IAmb 15 32 07.2
comp=Z,7.6nm,0.9s
PCRV Puerto La Cruz 36.67 98 P **P** 15 31 53.2 -1.6
comp=Z,4.6nm,0.5s,baz=243,slow=6.8,SNR=2.3
PLCV Puerto La Cruz 36.72 98 P **P** 15 31 53.2 -2.0
G62A West of Eustis 36.98 37 P **P** 15 31 55.4 -1.6
D62A Allapoint, All 38.90 36 P **P** 15 32 12.7 -0.4
YKA Yellowknife Ar 44.76 351 P **P** 15 32 59.2 -1.5
comp=Z,2.1nm,0.7s,baz=156,slow=7.8,SNR=25
YKA pP **pP** 15 33 17.4 -1.0
comp=Z,1.8nm,0.9s,baz=157,slow=7.8,SNR=4.5
YKA PcP **PcP** 15 34 42.2 +0.5
comp=Z,1.0nm,0.7s,baz=154,slow=3.4,SNR=9.9
YKA LR LR 15 53 18.7
comp=Z,58nm,19.2s,baz=0.0,slow=38
SCHQ Schefferville 44.78 28 PcP **PcP** 15 34 42.1 +0.1
comp=Z,3.3nm,0.6s,baz=323,slow=6.8,SNR=2.7
SCHQ LR LR 15 52 57.7
comp=Z,41nm,18.4s,baz=274,slow=38
DLBC Dease Lake 44.90 339 P **P** 15 33 02.6 +0.7
DLBC IAmb IAmb 15 33 04.0
comp=Z,5.7nm,0.8s
SAML Samuel 46.73 123 P **P** 15 33 17.0 +0.1
SAML IAmb IAmb 15 33 17.9
comp=Z,7.6nm,1.0s
LPAZ La Paz 47.81 134 P **P** 15 33 27.6 +1.7
comp=Z,3.0nm,1.0s,baz=346,slow=8.0,SNR=6.1
LPAZ La Paz 47.81 134 P **P** 15 33 26.9 +0.9
LPAZ IAmb IAmb 15 33 28.6
comp=Z,12nm,1.7s
PB11 IPOC Station P 49.34 139 P **P** 15 33 38.7 +1.6
PB01 IPOC Station P 50.41 140 P **P** 15 33 46.8 +1.8
PB07 IPOC Station P 50.68 141 P **P** 15 33 49.5 +2.3
AIN Ainahou 50.79 280 P **P** 15 33 51.0 +2.7
PB09 IPOC Station P 51.12 140 P **P** 15 33 53.1 +2.6
VRDI Verde Repeater 51.74 336 P **P** 15 33 55.0 +0.3
VRDI IAmb IAmb 15 34 49.7
comp=Z,6.5nm,1.3s
GLB Gilahina Butte 52.00 336 P **P** 15 33 56.6 +0.1
GLB IAmb IAmb 15 33 58.4
comp=Z,3.8nm,0.8s
DAWY Dawson 52.09 340 P **P** 15 33 57.2 0.0
DAWY IAmb IAmb 15 33 59.1
comp=Z,5.2nm,1.3s
HIN Hinchinbrook I 52.50 334 P **P** 15 34 00.7 +0.5
FID Port Fidalgo 52.68 334 P **P** 15 34 02.3 +0.8
FID IAmb IAmb 15 34 22.9
comp=Z,12nm,1.2s
MENT Mentasta 52.86 337 P **P** 15 34 03.1 +0.3
MENT IAmb IAmb 15 35 09.5
comp=Z,3.9nm,0.4s
EPYK Eagle Plains 52.92 343 P **P** 15 34 03.4 +0.2
baz=136
EPYK Eagle Plains 52.92 343 P **P** 15 34 02.6 -0.6
EPYK IAmb IAmb 15 35 12.7
comp=Z,6.5nm,0.9s
GLI Glacier Island 53.01 334 P **P** 15 34 04.1 +0.2
GLI IAmb IAmb 15 34 05.2
comp=Z,7.5nm,0.8s
EGAK Eagle 53.14 340 P **P** 15 34 04.5 -0.2
EGAK IAmb IAmb 15 34 05.6
comp=Z,7.0nm,1.1s
DOT Dot Lake 53.42 338 P **P** 15 34 07.1 +0.2
DOT IAmb IAmb 15 35 22.4
comp=Z,2.9nm,0.6s
GO02 Mina Guanaco 53.50 143 P **P** 15 34 10.8 +2.5
INK Inuvik 53.58 346 P **P** 15 34 07.2 -0.7
SCRK Sand Creek 53.59 338 P **P** 15 34 08.2 0.0
SCRK IAmb IAmb 15 34 09.8
comp=Z,2.9nm,0.9s
SCM Sheep Creek Mo 53.61 335 P **P** 15 34 09.3 +0.9
RIDG Independent Ri 53.75 338 P **P** 15 34 09.8 +0.4
SML Sawmill 54.00 335 P **P** 15 34 11.4 +0.2
SML IAmb IAmb 15 34 30.0
comp=Z,7.9nm,1.1s
KDAK Kodiak Island 54.02 329 P **P** 15 34 11.7 +0.4
BRLK Bradley Lake 54.09 332 P **P** 15 34 12.2 +0.4
CNPM China Poot 54.14 331 P **P** 15 34 12.7 +0.5
PMR Palmer 54.22 334 P **P** 15 34 12.8 +0.1
PMR IAmb IAmb 15 34 13.7
comp=Z,4.9nm,0.8s
GHO Glory Hole Cre 54.23 334 P **P** 15 34 12.8 -0.1
GHO IAmb IAmb 15 34 13.9
comp=Z,6.3nm,0.8s
DHY Denali Highway 54.31 336 P **P** 15 34 13.6 0.0
DHY IAmb IAmb 15 34 43.0
comp=Z,3.9nm,1.2s
HDA Harding Lake 54.89 338 P **P** 15 34 18.0 +0.4
baz=124
HDA Harding Lake 54.89 338 P **P** 15 34 17.6 0.0
HDA IAmb IAmb 15 34 18.3
comp=Z,4.6nm,0.8s
PRP Porcupine Dome 55.05 339 P **P** 15 34 18.8 0.0
RND Reindeer 55.05 336 P **P** 15 34 18.8 0.0
RND IAmb IAmb 15 34 20.8
comp=Z,7.5nm,1.2s
AC02 Maricunga 55.06 144 P **P** 15 34 22.3 +2.4
IL31 55.08 338 P **P** 15 34 18.4 -0.4
IL31 IAmb IAmb 15 34 20.3
comp=Z,4.7nm,0.9s
ILAR Eielson Array 55.08 338 P **P** 15 34 18.6 -0.2
comp=Z,3.5nm,0.8s,baz=146,slow=6.2,SNR=42
ILAR pP **pP** 15 34 36.4 -0.7
comp=Z,1.2nm,0.8s,baz=152,slow=7.6,SNR=4.4
ILAR PcP **PcP** 15 35 19.9 +0.4
comp=Z,1.0nm,0.6s,baz=149,slow=2.3,SNR=13
ILAR pPcP 15 35 37.9
comp=Z,0.6nm,0.6s,baz=159,slow=2.5,SNR=5.3
ILAR LR LR 15 59 38.6
comp=Z,34nm,18.3s,baz=153,slow=38
RSO Redoubt South 55.24 332 P **P** 15 34 20.4 +0.1
MCK McKinley 55.25 337 P **P** 15 34 19.9 -0.3
MCK IAmb IAmb 15 34 21.1
comp=Z,5.8nm,1.0s
CCB Clear Creek Bu 55.33 338 P **P** 15 34 19.6 -1.1
WRH Wood River Hil 55.34 338 P **P** 15 34 20.0 -0.8
TRF Thorofare Moun 55.63 336 P **P** 15 34 22.8 -0.3
BWN Browne 55.68 337 P **P** 15 34 22.9 -0.4
NEA Nenana 55.76 337 P **P** 15 34 23.0 -0.8
NEA IAmb IAmb 15 34 26.0
comp=Z,4.7nm,1.2s
KTH Kantishna Hill 55.92 336 P **P** 15 34 24.5 -0.6
KTH IAmb IAmb 15 35 28.9
comp=Z,4.2nm,1.0s
PPLA Purkeypile 56.11 335 P **P** 15 34 26.0 -0.5
PPLA IAmb IAmb 15 34 28.2
comp=Z,12nm,1.3s
RES Resolute Bay 56.20 2 P **P** 15 34 25.3 -1.4
BPAW Bear Paw Mtn. 56.22 336 P **P** 15 34 26.4 -0.7
BPAW IAmb IAmb 15 34 27.7
comp=Z,12nm,1.7s
SVW2 Sparrevohn 56.77 332 P **P** 15 34 30.2 -0.8
CO03 El Pedregal 57.44 148 P **P** 15 34 37.9 +1.7
TTA Tatalina 57.70 334 P **P** 15 34 36.6 -1.0
TOLK Toolik Lake Re 58.15 341 P **P** 15 34 40.7 0.0
baz=124,SNR=5.7
TOLK Toolik Lake Re 58.15 341 P **P** 15 34 40.2 -0.5
TOLK IAmb IAmb 15 34 41.5
comp=Z,6.0nm,1.1s
PPT2 Papeete2 59.36 236 *e*LR LR 15 52 08.6
comp=Z,93nm,28.2s
GO05 Huala 60.30 152 P **P** 15 34 57.3 +1.4
CPUP Villa Florida 61.98 135 P **P** 15 35 08.4 +1.0
comp=Z,5.9nm,0.7s,baz=324,slow=8.2,SNR=15
CPUP Villa Florida 61.98 135 P **P** 15 35 08.0 +0.6
BI02 San Fabin de 61.98 153 P **P** 15 35 09.3 +2.0
RDOG Red Dog Mine 62.29 338 P **P** 15 35 08.7 -0.2
RDOG IAmb IAmb 15 35 10.3
comp=Z,6.3nm,0.8s
TBI Tubuai 62.66 230 *e*LR LR 15 54 06.4
comp=Z,96nm,29.8s
PLCA Paso Flores 65.71 155 P **P** 15 35 33.8 +2.1
comp=Z,3.0nm,0.9s,baz=355,slow=10,SNR=4.4
PLCA Paso Flores 65.71 155 P **P** 15 35 33.6 +1.9
PLCA IAmb IAmb 15 35 44.3
comp=Z,13nm,1.4s
ADK Adak 66.43 319 P **P** 15 35 35.9 -0.3
BILL Bilibino 73.71 337 P **P** 15 36 20.6 +0.2
SPA0 Spitsbergen Ar 77.35 11 P **P** 15 36 40.3 -0.9
PETK Petropavlovsk- 81.57 323 P **P** 15 37 05.7 +1.2
comp=Z,3.1nm,0.5s,baz=91,slow=9.9,SNR=25
TIXI Tiksi 83.70 346 P **P** 15 37 14.2 -1.0
TIXI IAmb IAmb 15 37 15.6
comp=Z,5.6nm,1.1s
ESDC Sonseca Array 83.97 50 P **P** 15 37 17.3 0.0
comp=Z,0.8nm,0.7s,baz=298,slow=5.5,SNR=11
ESDC LR LR 16 13 42.8
comp=Z,14nm,19.8s,baz=170,slow=35
NB2 NORSAR Subarra 84.34 27 P **P** 15 37 19.1 +0.3
comp=Z,0.8nm,0.5s,baz=299,slow=4.8
NOA NORSAR Array B 84.34 27 P **P** 15 37 19.3 +0.5
comp=Z,0.5nm,0.5s,baz=300,slow=4.8,SNR=4.5
NOA LR LR 16 16 08.9
comp=Z,13nm,18.6s,baz=290,slow=37
ARCES ARCESS Array B 84.49 16 P **P** 15 37 19.0 -0.3
comp=Z,2.5nm,0.5s,baz=316,slow=5.5,SNR=22
ARCES LR LR 16 15 13.1
comp=Z,35nm,20.5s,baz=212,slow=36
HFS Hagfors 85.86 27 LR LR 16 16 10.9
comp=Z,21nm,19.1s,baz=332,slow=36
FINES FINESS Array B 90.00 22 LR LR 16 18 17.0
comp=Z,22nm,19.3s,baz=14,slow=36
YAK Yakutsk 90.00 338 P **P** 15 37 46.3 +0.3
GERES GERESS Array B 91.67 37 P **P** 15 37 53.9 -0.3
comp=Z,0.7nm,0.7s,baz=344,slow=4.3,SNR=7.2
NRIK Noril'sk 92.04 357 P **P** 15 37 56.0 +0.6
comp=Z,0.8nm,0.3s,baz=31,slow=3.8,SNR=2.8
NRIK LR LR 16 20 59.0
comp=Z,20nm,20.4s,baz=27,slow=37
NRIK Noril'sk 92.04 357 P **P** 15 37 56.0 +0.6
VYHS Vyhne 94.71 35 *e*P **P** 15 38 08.7 +0.6
DZM Mont Dzumac 98.58 250 *e*LR LR 16 10 54.0
comp=Z,68nm,24.9s
LZH Lanzhou 120.52 336 *e*PKP **PKPdf** 15 43 36.8 -1.9
LZH pPKP pPKPdf 15 44 02.0 +3.2
LZH sPKP 15 44 14.3
LZH LR LR
comp=N,52nm,17.8s
LZH LR LR
comp=E,56nm,18.0s
LZH LR LR
comp=Z,83nm,20.1s
WRA Warramunga Arr 127.43 259 PKP **PKPdf** 15 43 52.8 +0.7
comp=Z,0.4nm,0.5s,baz=72,slow=2.5,SNR=5.1
CMAR Chiang Mai Arr 138.01 330 PKP **PKiKP** 15 44 14.9 +0.8
comp=Z,0.5nm,0.7s,baz=347,slow=3.1,SNR=6.1
CMAR pPKP **pPKPdf** 15 44 33.4 +1.2
comp=Z,0.2nm,0.3s,baz=86,slow=34,SNR=1.8

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*KRNET **26** 15:31:50.8±0.1,41°.62N×75°.23E, h19km, mb3.2*
*KNET **26** 15:31:51.1±0.8,41°.68N×75°.26E, h12km±3km, ml2.5, Error ellipse: s-maj=5.6km s-min=2.5km az=2.0*
*NNC **26** 15:31:51.2±1.0,41°.59N×75°.26E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=8.4km s-min=5.0km az=168.0*
*SOME **26** 15:31:51.0,41°.63N×75°.23E, h10km*

ISC 26 15:31:51.4±1.2,41°.65N±0°.04×75°.25E±0°.02, h11km±10km, n78, σ1.44/131, 43C-30D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KZA	**Kyzart**	**0.43**	**0**	⇑*i*P	**Pg**	**15 31 59.7**	**-0.3**
	baz=2.0						
KZA				⇑*i*S	**Sg**	**15 32 06.2**	**+0.4**
	baz=2.0						
KZA	**Kyzart**	**0.43**	**0**	P	**Pg**	**15 32 00.4**	**+0.4**
	162nm,0.2s,SNR=151						
KZA				⇓S	**Sb**	**15 32 07.2**	**-0.7**
	165nm,0.1s						
UCH	**Uchtor**	**0.80**	**317**	⇑*i*P	**Pg**	**15 32 06.2**	**-0.7**
	baz=19						
UCH				⇑*i*S	**Sg**	**15 32 17.5**	**+0.1**
	baz=19						
UCH	**Uchtor**	**0.80**	**317**	⇓P	**Pg**	**15 32 06.4**	**-0.4**
	10.0nm,0.2s,SNR=39						
UCH				⇑S	**Sg**	**15 32 17.9**	**+0.6**
	57nm,0.2s						
ULHL	**Ulahol**	**0.95**	**51**	⇓*i*P	**Pg**	**15 32 09.0**	**-0.8**
	baz=50						
ULHL				⇓*i*S	**Sb**	**15 32 22.7**	**0.0**
	baz=50						
ULHL	**Ulahol**	**0.95**	**51**	P	**Pg**	**15 32 09.2**	**-0.6**
	200nm,0.1s,SNR=1365						
ULHL				⇓S	**Sb**	**15 32 22.4**	**-0.3**
	136nm,0.1s						
BOOM	**Boomskoye usch**	**0.99**	**31**	⇑*i*P	**Pg**	**15 32 10.1**	**-0.3**
	baz=31						
BOOM				⇑*i*S	**Sb**	**15 32 23.9**	**+0.2**
	baz=31						
KBK	**Karagaybulak**	**1.03**	**348**	⇓*i*P	**Pg**	**15 32 10.6**	**-0.7**
	baz=49						
KBK				⇓*i*S	**Sb**	**15 32 25.1**	**+0.1**
	baz=49						
KBK	**Karagaybulak**	**1.03**	**348**	⇓P	**Pg**	**15 32 11.3**	**0.0**
	87nm,0.1s,SNR=42						
KBK				⇓S	**Sn**	**15 32 26.1**	**-0.4**
	415nm,0.2s						
AAK	**Ala-Archa**	**1.14**	**331**	⇑*i*P	**Pb**	**15 32 12.5**	**-0.7**
	baz=32						
AAK				⇑*i*S	**Sb**	**15 32 28.0**	**0.0**
	baz=32						
AAK	**Ala-Archa**	**1.14**	**331**	⇓P	**Pb**	**15 32 12.7**	**-0.4**
	26nm,0.1s,SNR=29						
AAK				⇓S	**Sb**	**15 32 27.9**	**0.0**
	72nm,0.2s						
FRU1	**Bishkek**	**1.25**	**339**	⇑*i*P	**Pn**	**15 32 14.4**	**-0.5**
	baz=40						
FRU1				⇑*i*S	**Sn**	**15 32 31.5**	**-0.2**
	baz=40						
AML	**Almayashu**	**1.26**	**293**	⇑*i*P	**Pn**	**15 32 14.1**	**-1.2**
	baz=95						
AML				⇑*i*S	**Sb**	**15 32 31.1**	**-0.6**
	baz=95						
AML	**Almayashu**	**1.26**	**293**	⇓P	**Pn**	**15 32 14.3**	**-1.0**
	20nm,0.2s,SNR=28						
TKM2	**Tokmak 2**	**1.30**	**11**	⇑*i*P	**Pn**	**15 32 15.4**	**-0.3**
	baz=12						
TKM2				⇑*i*S	**Sg**	**15 32 33.3**	**+0.1**
	baz=12						
TKM2	**Tokmak 2**	**1.30**	**11**	P	**Pb**	**15 32 15.9**	**0.0**
	43nm,0.2s,SNR=160						
TKM2				⇓S	**Sg**	**15 32 34.0**	**+0.7**
	213nm,0.1s						
CHMS	**Chumysh**	**1.40**	**345**	⇑*i*P	**Pn**	**15 32 17.0**	**+0.1**
	baz=46						
CHMS				⇑*i*S	**Sg**	**15 32 36.2**	**-0.2**
	baz=46						
CHMS	**Chumysh**	**1.40**	**345**	P	**Pb**	**15 32 17.6**	**0.0**
	15nm,0.1s,SNR=49						
CHMS				⇑S	**Sg**	**15 32 36.8**	**+0.4**
	64nm,0.2s						
EKS2	**Erkin-Say**	**1.49**	**313**	⇓*i*P	**Pn**	**15 32 18.4**	**+0.2**
	baz=15						
EKS2				⇓*i*S	**Sb**	**15 32 38.3**	**+0.2**
	baz=15						
KST	**Kastek**	**1.49**	**21**	⇓*i*P	**Pb**	**15 32 19.3**	**+0.1**
	31nm,0.3s						
KST				⇓*i*S	**Sg**	**15 32 40.2**	**+0.8**
	64nm,0.3s						
KST	**Kastek**	**1.49**	**21**	P	**Pb**	**15 32 19.2**	**+0.1**
	17nm,0.2s						
KST				S	**Sg**	**15 32 40.3**	**+0.8**
	52nm,0.2s						
KDJ	**Kajisay**	**1.52**	**71**	⇓*i*P	**Pb**	**15 32 19.3**	**-0.4**
	baz=70						
KDJ				⇓*i*S	**Sg**	**15 32 40.2**	**-0.2**
	baz=70						
DGS	**Degeres**	**1.64**	**14**	⇑*i*P	**Pb**	**15 32 22.1**	**+0.4**
	26nm,0.1s						
DGS				⇓*i*S	**Sg**	**15 32 44.7**	**+0.5**
	88nm,0.3s						
DGS	**Degeres**	**1.64**	**14**	P	**Pb**	**15 32 22.1**	**+0.4**
	15nm,0.2s						
DGS				S	**Sg**	**15 32 44.9**	**+0.8**
	88nm,0.3s						
USP	**Ospenovka**	**1.71**	**341**	⇓*i*P	**Pb**	**15 32 22.5**	**-0.4**
	baz=42						
USP				⇓*i*S	**Sb**	**15 32 45.5**	**+1.1**
	baz=42						
USP	**Ospenovka**	**1.71**	**341**	⇓P	**Pb**	**15 32 23.0**	**+0.1**
	17nm,0.1s,SNR=87						
IZV	**Izvestkoviy**	**1.72**	**36**	⇓*i*P	**Pb**	**15 32 23.5**	**+0.4**
	22nm,0.2s						
IZV				⇑*i*S	**Sg**	**15 32 47.5**	**+0.9**
	110nm,0.3s						
IZV	**Izvestkoviy**	**1.72**	**36**	P	**Pb**	**15 32 23.5**	**+0.4**
	22nm,0.2s						
IZV				S	**Sg**	**15 32 47.5**	**+0.9**
	88nm,0.2s						
MTBS	**Maitube**	**1.72**	**30**	⇓*i*P	**Pb**	**15 32 23.5**	**+0.5**
	50nm,0.2s						
MTBS				⇑*i*S	**Sg**	**15 32 47.3**	**+0.6**
	199nm,0.2s						
MTBS	**Maitube**	**1.72**	**30**	P	**Pb**	**15 32 23.5**	**+0.5**
	50nm,0.2s						
MTBS				S	**Sg**	**15 32 47.3**	**+0.6**
	199nm,0.2s						
ARSB	**Arslanbob**	**1.73**	**260**	⇑*i*P	**Pn**	**15 32 22.1**	**+0.5**
	baz=61						
ARSB				⇑*i*S	**Sb**	**15 32 44.8**	**-0.3**
	baz=61						
SGDS	**Sogindy**	**1.86**	**346**	Pg	**Pb**	**15 32 25.8**	**+0.4**
	29nm,0.3s						
SGDS				Lg	Lg	15 32 51.0	
	79nm,0.2s						
MRKS	**Merke**	**1.86**	**307**	⇑*i*P	**Pb**	**15 32 25.1**	**-0.4**
	14nm,0.2s						
MRKS				⇓*i*S	**Sb**	**15 32 49.9**	**+1.2**
	23nm,0.3s						
MRKS	**Merke**	**1.86**	**307**	P	**Pb**	**15 32 25.3**	**-0.1**
	6.4nm,0.3s						
MRKS				S	**Sb**	**15 32 50.0**	**+1.3**
	23nm,0.3s						
TNSS	**Tian-Shan**	**1.87**	**42**	*e*P	**Pb**	**15 32 26.2**	**+0.3**
	59nm,0.3s						
TNSS				*e*S	**Sg**	**15 32 52.1**	**+0.4**
	57nm,0.2s						
TNSS	**Tian-Shan**	**1.87**	**42**	Pg	**Pb**	**15 32 26.2**	**+0.3**
	59nm,0.3s						
TNSS				Lg	Lg	15 32 52.1	
	57nm,0.2s						
TARG	**Taragay, Kyrgy**	**1.92**	**87**	⇑*i*P	**Pb**	**15 32 25.8**	**-0.8**
	baz=86						
TARG				⇑*i*S	**Sg**	**15 32 51.4**	**-1.7**
	baz=86						
AAA	**Alma-Ata**	**1.99**	**38**	⇑*i*P	**Pb**	**15 32 28.1**	**+0.5**
	38nm,0.2s						
AAA				⇑*e*S	**Sg**	**15 32 54.9**	**-0.5**
	104nm,0.4s						
MDOK	**Medeo**	**2.02**	**41**	*e*P	**Pb**	**15 32 28.6**	**+0.4**
	22nm,0.3s						
MDOK				*e*S	**Sg**	**15 32 56.0**	**-0.2**
	48nm,0.3s						
MDOK	**Medeo**	**2.02**	**41**	⇑Pn	**Pb**	**15 32 28.6**	**+0.4**

	20nm,0.5s								
MDOK				⇑Lg	Lg	15 32 57.2			
	25nm,0.4s								
MDOK	**Medeo**	**2.02**	**41**	Pg	**Pb**	**15 32 28.6**	**+0.4**		
	22nm,0.3s								
MDOK				Lg	Lg	15 32 56.0			
	48nm,0.3s								
KNDC	**Almaty**	**2.02**	**39**	⇓Pg	**Pg**	**15 32 29.2**	**-0.9**		
	33nm,0.4s								
KNDC				⇑Lg	Lg	15 32 57.2			
	70nm,0.6s								
KRBS	**Karabastau**	**2.07**	**9**	*eP*	**Pb**	**15 32 29.5**	**+0.5**		
	32nm,0.1s								
KRBS				*eS*	**Sg**	**15 32 57.8**	**-0.2**		
	82nm,0.4s								
KRBS	**Karabastau**	**2.07**	**9**	Pg	**Pb**	**15 32 29.5**	**+0.5**		
	32nm,0.1s								
KRBS				Lg	Lg	15 32 57.8			
	18nm,0.3s								
KOTS	**Kotyrbulak**	**2.10**	**40**	*eP*	**Pb**	**15 32 30.2**	**+0.6**		
	62nm,0.3s								
KOTS				*eS*	**Sg**	**15 32 59.0**	**0.0**		
	96nm,0.5s								
KOTS	**Kotyrbulak**	**2.10**	**40**	Pg	**Pb**	**15 32 30.2**	**+0.6**		
	62nm,0.3s								
KOTS				Lg	Lg	15 32 59.0			
	96nm,0.5s								
ANVS	**Anan'yevo**	**2.12**	**57**	⇑*iP*	**Pb**	**15 32 28.8**	**-1.2**		
	baz=56								
ANVS				⇑*iS*	**Sb**	**15 32 56.5**	**0.0**		
	baz=56								
KTBS	**Karatobe**	**2.32**	**27**	*eP*	**Pb**	**15 32 34.1**	**+0.9**		
	46nm,0.3s								
KTBS				*eS*	**Sg**	**15 33 05.7**	**-0.1**		
	302nm,0.5s								
KTBS	**Karatobe**	**2.32**	**27**	Pg	**Pb**	**15 32 34.1**	**+0.9**		
	46nm,0.3s								
KTBS				Lg	Lg	15 33 05.7			
	302nm,0.5s								
KUU	**Kurty**	**2.38**	**19**	*eP*	**Pb**	**15 32 35.4**	**+1.1**		
	9.1nm,0.1s								
KUU				*eS*	**Sg**	**15 33 07.5**	**-0.4**		
	168nm,0.5s								
KUU	**Kurty**	**2.38**	**19**	Pg	**Pb**	**15 32 35.4**	**+1.1**		
	9.1nm,0.1s								
KUU				Lg	Lg	15 33 07.5			
	168nm,0.5s								
PRZ	**Przheval'sk**	**2.49**	**69**	⇑*iP*	**Pb**	**15 32 34.1**	**-2.2**		
	baz=69								
PRZ				⇑*iS*	**Sb**	**15 33 05.5**	**-1.5**		
	baz=69								
CHKK	**Chushkaly**	**2.55**	**30**	*eP*	**Pb**	**15 32 38.4**	**+1.3**		
	10nm,0.2s								
CHKK				*eS*	**Sg**	**15 33 12.5**	**-0.8**		
	113nm,0.3s								
CHKK	**Chushkaly**	**2.55**	**30**	Pg	**Pb**	**15 32 38.4**	**+1.3**		
	10nm,0.2s								
CHKK				Lg	Lg	15 33 12.5			
	113nm,0.3s								
SATY	**Saty**	**2.73**	**58**	*eP*	**Pb**	**15 32 41.3**	**+1.0**		
	12nm,0.3s								
SATY				*eS*	**Sg**	**15 33 17.5**	**-1.7**		
	51nm,0.2s								
SATY	**Saty**	**2.73**	**58**	Pg	**Pb**	**15 32 41.3**	**+1.0**		
	12nm,0.3s								
SATY				Lg	Lg	15 33 17.5			
	51nm,0.2s								
ZHN	**Zhinishke**	**2.81**	**56**	*eP*	**Pb**	**15 32 42.8**	**+1.2**		
	42nm,0.3s								
ZHN				*eS*	**Sg**	**15 33 20.2**	**-1.3**		
	34nm,0.2s								
ZHN	**Zhinishke**	**2.81**	**56**	Pg	**Pb**	**15 32 42.8**	**+1.2**		
	42nm,0.3s								
ZHN				Lg	Lg	15 33 20.2			
	34nm,0.2s								
KURS	**Kuram**	**2.83**	**49**	⇑*iP*	**Pb**	**15 32 43.4**	**+1.3**		
	21nm,0.8s								
KURS				⇑*iS*	**Sg**	**15 33 20.8**	**-1.7**		
	17nm,0.7s								
UZB	**Uzynbulak**	**3.17**	**61**	*eP*	**Pb**	**15 32 49.1**	**+1.3**		
	5.5nm,0.3s								
UZB				*eS*	**Sg**	**15 33 30.9**	**-2.3**		
	24nm,0.3s								
UZB	**Uzynbulak**	**3.17**	**61**	Pg	**Pb**	**15 32 49.1**	**+1.3**		
	5.5nm,0.3s								
UZB				Lg	Lg	15 33 30.9			
	24nm,0.3s								
ARXS	**Arharly**	**3.19**	**36**	*eP*	**Pb**	**15 32 49.1**	**+1.0**		
	19nm,0.2s								
ARXS				*eS*	**Sg**	**15 33 30.7**	**-3.0**		
	50nm,0.5s								
ARXS	**Arharly**	**3.19**	**36**	Pg	**Pb**	**15 32 49.1**	**+1.0**		
	19nm,0.2s								
ARXS				Lg	Lg	15 33 30.7			
	50nm,0.5s								
MNBS	**Baschi**	**3.36**	**43**	*eP*	**Pg**	**15 32 53.1**	**-2.6**		
	5.1nm,0.3s								
MNBS				*eS*	**Sg**	**15 33 37.8**	**-1.4**		
	51nm,0.4s								
MNBS	**Baschi**	**3.36**	**43**	Pg	**Pg**	**15 32 53.1**	**-2.6**		
	5.1nm,0.3s								
MNBS				Lg	Lg	15 33 37.8			
	51nm,0.4s								
SHLS	**Shalkode**	**3.47**	**63**	*eP*	**Pg**	**15 33 00.1**	**+2.3**		
	4.3nm,0.2s								
SHLS				*eS*	**Sg**	**15 33 49.9**	**+7.2**		
	53nm,0.7s								
SHLS	**Shalkode**	**3.47**	**63**	Pg	**Pg**	**15 33 00.1**	**+2.3**		
	4.3nm,0.2s								
SHLS				Lg	Lg	15 33 49.9			
	53nm,0.7s								
BTLS	**Baital**	**3.50**	**346**	*eP*	**Pb**	**15 32 54.6**	**+1.3**		
	3.2nm,0.3s								
BTLS				*eS*	**Sg**	**15 33 40.4**	**-3.4**		
	17nm,0.3s								
PDGK	**Podgornoye**	**3.56**	**60**	⇓Pn	**Pn**	**15 32 48.7**	**+2.0**		
	1.5nm,0.5s								
PDGK				⇑Pg	**Pb**	**15 32 55.6**	**+1.2**		
	7.6nm,0.8s								
PDGK				⇓Lg	Lg	15 33 43.3			
	25nm,0.8s								
KK31	**Karatay Array**	**3.80**	**294**	⇓Pg	**Pg**	**15 33 02.8**	**-1.3**		
	0.6nm,0.3s,baz=123,slow=16,SNR=8.9								
KK31				Lg	Lg	15 33 53.4			
	2.6nm,0.4s,baz=124,slow=27,SNR=5.9								
IUG	**Iuzhnay**	**3.92**	**279**	*eP*	**Pb**	**15 33 03.1**	**+2.4**		
	1.0nm,0.4s								
IUG				*eS*	**Sg**	**15 33 54.8**	**-2.6**		
	14nm,0.4s								
IUG	**Iuzhnay**	**3.92**	**279**	Pg	**Pb**	**15 33 03.1**	**+2.4**		
	1.0nm,0.4s								
IUG				Lg	Lg	15 33 54.8			
	14nm,0.4s								
DJR	**Jarkent**	**4.28**	**50**	*eP*	**Pb**	**15 33 08.4**	**+1.7**		
	2.3nm,0.5s								
DJR				*eS*	**Sg**	**15 34 03.8**	**-4.9**		
	10nm,0.4s								
DJR	**Jarkent**	**4.28**	**50**	Pg	**Pb**	**15 33 08.4**	**+1.7**		
	2.3nm,0.5s								
DJR				Lg	Lg	15 34 03.8			
	10nm,0.4s								
KAPS	**Kapalarasan**	**4.71**	**38**	*eP*	**Pb**	**15 33 17.1**	**+3.2**		
	2.8nm,0.5s								
KAPS				*eS*	**Sg**	**15 34 19.2**	**-3.3**		
	11nm,0.4s								
OTUK	**Ortayu**	**6.91**	**344**	⇑Lg	Lg	15 35 37.2			
	5.8nm,0.9s								
MK31	**Makanchi Array**	**7.21**	**42**	⇑Pn	**Pn**	**15 33 38.4**	**+1.6**		
	0.6nm,0.7s,baz=219,slow=14,SNR=5.7								
MK31				⇓Pg	**Pg**	**15 34 05.6**	**-3.8**		
	0.4nm,0.5s,baz=221,slow=14,SNR=5.0								
MK31				⇑Lg	Lg	15 35 42.8			
	0.6nm,0.5s,baz=232,slow=28,SNR=3.6								
KURBB	**Kurchatov Arra**	**9.26**	**13**	⇑Lg	Lg	15 36 48.7			
	5.6nm,0.7s								

ANF ***26*** *15:33:16.6±0.8, 40°.36N×123°.93W, h25km±15km, ML2.8/10, Error ellipse: s-maj=13.6km s-min=4.9km az=15.0*
NEIC ***26*** *15:33:16.2±1.2, 40°.30N±0°.02×124°.03W±0°.05, h35km±4km, Error ellipse: s-maj=5.6km s-min=2.5km az=70.0*
NCEDC ***26*** *15:33:16.7, 40°.32N×124°.01W, h29km*

ISC 26 15:33:16.0±1.1, 40°.29N±0°.03×124°.06W±0°.05, h33km±4km, n100, σ0°75/111, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPM	**Mount Pierce**	**0.13**	**341**		**Sb**	**15 33 26.3**	**0.0**
KCTM	**Capetown**	**0.28**	**311**		**Sb**	**15 33 30.5**	**+1.9**
KMRM	**Mail Ridge**	**0.28**	**104**		**Sn**	**15 33 29.2**	**+0.6**
KMRM	**Mail Ridge**	**0.28**	**104**	Pg	**Pb**	**15 33 23.6**	**0.0**
KBSM	**Bell Springs**	**0.52**	**136**		**Pb**	**15 33 27.0**	**+0.1**
JCC	**Jacoby Creek,**	**0.53**	**3**		**Pb**	**15 33 26.3**	**-0.7**
JCC					**Sb**	**15 33 33.8**	**-0.7**
JCC	**Jacoby Creek,**	**0.53**	**3**		**Pb**	**15 33 26.2**	**-0.8**
KPPM	**Pickett Peak**	**0.54**	**84**		**Pb**	**15 33 27.0**	**-0.3**
KHMM	**Horse Mountain**	**0.64**	**23**		**Pn**	**15 33 28.3**	**-0.6**
KHMM					**Sb**	**15 33 37.1**	**-0.6**
KIPM	**Iron Peak**	**0.66**	**137**		**Pn**	**15 33 28.8**	**-0.3**
KCPM	**Cahto Peak**	**0.71**	**148**		**Pn**	**15 33 29.4**	**-0.4**
KCPM					**Sb**	**15 33 39.3**	**-0.3**
KHBM	**Hayfork Bally**	**0.74**	**60**		**Pn**	**15 33 29.4**	**-1.0**
KBNM	**Bluenose Ridge**	**0.78**	**121**		**Pn**	**15 33 31.2**	**+0.4**
KFPM	**Farley Peak**	**0.81**	**143**		**Pn**	**15 33 30.8**	**-0.4**
KRPM	**Rodgers**	**0.87**	**2**		**Pn**	**15 33 31.3**	**-0.6**
LBPM	**Beegum Peak**	**0.90**	**88**		**Pn**	**15 33 31.8**	**-0.7**
GTC	**Three Chop Rid**	**0.97**	**156**		**Pn**	**15 33 32.8**	**-0.6**
O02D	**Mt. Diablo Mer**	**0.98**	**96**	P	**Pn**	**15 33 32.9**	**-0.6**
	baz=279,SNR=301						
O02D				S	**Sn**	**15 33 45.9**	**-0.5**
	baz=279						
O02D	**Mt. Diablo Mer**	**0.98**	**96**		**Pn**	**15 33 33.1**	**-0.4**
KRKM	**Rackout Spring**	**0.99**	**137**		**Pn**	**15 33 33.5**	**-0.2**
KOMM	**Orleans Mounta**	**1.09**	**25**		**Pn**	**15 33 34.4**	**-0.7**
LGPM	**Granite Peak**	**1.12**	**56**		**Pn**	**15 33 34.9**	**-0.7**
GRCM	**Round Mountain**	**1.13**	**109**		**Pn**	**15 33 35.5**	**-0.1**
GNAM	**Navarro Ridge**	**1.14**	**163**		**Pn**	**15 33 34.9**	**-0.8**
GHMM	**Hull Mountain**	**1.18**	**132**		**Pn**	**15 33 35.9**	**-0.4**
GVV	**Valley View**	**1.18**	**115**		**Pn**	**15 33 36.6**	**+0.3**
WDC	**Whiskeytown Da**	**1.20**	**76**	Pn	**Pn**	**15 33 35.5**	**-1.0**
GASB	**Alder Springs**	**1.21**	**121**		**Pn**	**15 33 36.9**	**+0.1**
GWRM	**Wonder Ranch**	**1.23**	**151**		**Pn**	**15 33 36.4**	**-0.6**
KRMB	**Red Mountain**	**1.24**	**5**		**Pn**	**15 33 36.5**	**-0.6**
N02D	**Trinity Center**	**1.24**	**56**	P	**Pn**	**15 33 36.5**	**-0.6**
	baz=237,SNR=168						
N02D				S	**Sn**	**15 33 51.9**	**-0.8**
	baz=237						
N02D	**Trinity Center**	**1.24**	**56**		**Pn**	**15 33 36.5**	**-0.6**
GHOM	**Hamilton Openi**	**1.31**	**162**		**Pn**	**15 33 37.3**	**-0.7**
LBKM	**Bonanza King**	**1.32**	**53**		**Pn**	**15 33 37.8**	**-0.5**
M02C	**Callahan**	**1.43**	**39**	P	**Pn**	**15 33 39.3**	**-0.4**
	baz=220,SNR=177						
M02C				S	**Sn**	**15 33 56.3**	**-1.2**
	baz=220						
M02C	**Callahan**	**1.43**	**39**		**Pn**	**15 33 39.3**	**-0.4**
GCK	**Clark Valley**	**1.46**	**120**		**Pn**	**15 33 41.0**	**+1.1**
LTCM	**Tuscan Springs**	**1.48**	**93**		**Pn**	**15 33 39.5**	**-0.9**
GHLM	**Highland Sprin**	**1.49**	**147**		**Pn**	**15 33 40.0**	**-0.5**
GTSM	**Trough Springs**	**1.49**	**131**		**Pn**	**15 33 40.5**	**0.0**
GGUM	**Gualala**	**1.50**	**163**		**Pn**	**15 33 39.8**	**-0.8**
HOPS	**Hopland Field**	**1.50**	**149**	Pn	**Pn**	**15 33 40.3**	**-0.4**
KSXB	**Camp Six Broad**	**1.54**	**5**		**Pn**	**15 33 40.8**	**-0.6**
LSHM	**Sage Hen Hill**	**1.62**	**71**		**Pn**	**15 33 42.0**	**-0.4**
GACM	**Adobe Creek**	**1.69**	**146**		**Pn**	**15 33 43.4**	**+0.1**
KTRM	**Thompson Ridge**	**1.70**	**18**		**Pn**	**15 33 43.0**	**-0.5**
LAMM	**Antelope Mount**	**1.71**	**39**		**Pn**	**15 33 43.8**	**+0.1**
O03E	**Paynes Creek**	**1.73**	**89**	P	**Pn**	**15 33 43.0**	**-0.8**
	baz=272,SNR=83						
O03E	**Paynes Creek**	**1.73**	**89**		**Pn**	**15 33 43.0**	**-0.8**
LDBM	**Digger Butte**	**1.75**	**85**		**Pn**	**15 33 43.4**	**-0.7**
LGBM	**Gray Butte**	**1.77**	**53**		**Pn**	**15 33 45.0**	**+0.5**
YBH	**Yreka Blue Hor**	**1.77**	**35**	Pn	**Pn**	**15 33 43.8**	**-0.6**
M03C	**McCloud**	**1.77**	**56**		**Pn**	**15 33 44.7**	**+0.3**
GHCM	**House Creek**	**1.81**	**158**		**Pn**	**15 33 44.1**	**-0.8**
LMPM	**Military Pass**	**1.87**	**50**		**Pn**	**15 33 47.1**	**+1.2**
NMCNC	**Mill Creek, So**	**1.92**	**152**		**Pn**	**15 33 45.9**	**-0.4**
LMEM	**Manzanita Entr**	**1.92**	**82**		**Pn**	**15 33 46.6**	**0.0**
LHEM	**Herd Peak**	**1.93**	**46**		**Pn**	**15 33 48.1**	**+1.3**
NMTM	**Middletown**	**1.94**	**139**		**Pn**	**15 33 47.1**	**+0.5**
LCMM	**Colby Mountain**	**1.95**	**93**		**Pn**	**15 33 46.8**	**-0.2**
LBFM	**Black Fox Moun**	**1.96**	**57**		**Pn**	**15 33 47.6**	**+0.5**
B040	**Montague**	**1.98**	**38**		**Pn**	**15 33 47.6**	**+0.4**
OSUM	**Sutter Buttes**	**1.98**	**120**		**Pn**	**15 33 46.6**	**-0.6**
HATC	**Hat Creek Radi**	**2.05**	**74**		**Pn**	**15 33 48.7**	**+0.5**
SUTB	**Sutter Butte**	**2.05**	**120**		**Pn**	**15 33 47.2**	**-1.0**
ORV	**Oroville**	**2.10**	**110**		**Pn**	**15 33 48.7**	**-0.2**
ORV	**Oroville**	**2.10**	**110**	Pn	**Pn**	**15 33 48.4**	**-0.5**
PAM	**Palermo**	**2.13**	**112**		**Pn**	**15 33 49.9**	**+0.7**
LGMM	**Garner Mountai**	**2.13**	**52**		**Pn**	**15 33 50.1**	**+0.6**
LBCM	**Butte Creek Ri**	**2.14**	**74**		**Pn**	**15 33 49.5**	**0.0**
LTIM	**Timbered Crate**	**2.15**	**65**		**Pn**	**15 33 49.6**	**+0.1**
OHCM	**Honcut**	**2.20**	**115**		**Pn**	**15 33 50.0**	**-0.3**
M04C	**Macdoel**	**2.25**	**48**	P	**Pn**	**15 33 51.6**	**+0.6**
	baz=229						
M04C				S	**Sn**	**15 34 18.0**	**+0.4**
	baz=229						
LASM	**Arnica Sink**	**2.29**	**54**		**Pn**	**15 33 51.8**	**+0.1**
L04D	**Klamath Falls**	**2.34**	**34**	P	**Pn**	**15 33 53.9**	**+1.7**
	baz=215,SNR=48						
L04D				S	**Sn**	**15 34 20.5**	**+0.6**
	baz=215						
L04D	**Klamath Falls**	**2.34**	**34**		**Pn**	**15 33 54.0**	**+1.7**
K02D	**Willamette Mer**	**2.42**	**7**	P	**Pn**	**15 33 53.4**	**+0.1**
	baz=186,SNR=635						
K02D				S	**Sn**	**15 34 21.1**	**-0.8**
	baz=186						
AFDM	**Forest Hills D**	**2.74**	**118**		**Pn**	**15 33 58.1**	**+0.4**
J01E	**Myrtle Point**	**2.87**	**2**	P	**Pn**	**15 33 59.3**	**-0.1**
	baz=181,SNR=21						
J01E				S	**Sn**	**15 34 32.9**	**+0.1**
	baz=181						
BEKR	**Beckworth**	**2.87**	**97**		**Pn**	**15 33 59.8**	**+0.1**
K04D	**Chiloquin, OR**	**2.91**	**36**	S	**Sn**	**15 34 33.8**	**-0.1**
	baz=217						
IND	**Independence**	**3.02**	**105**		**Pn**	**15 34 03.6**	**+1.8**
K05A	**Summer Lake**	**3.40**	**43**	Pn	**Pn**	**15 34 07.9**	**+1.0**
I03D	**Drain, OR**	**3.44**	**9**	P	**Pn**	**15 34 08.2**	**+0.9**
	baz=188,SNR=30						
VCNR	**Virginia City**	**3.54**	**105**	Pn	**Pn**	**15 34 08.1**	**-0.8**
PAHR	**Pah Rah Range**	**3.64**	**98**		**Pn**	**15 34 10.0**	**-0.2**
PNTR	**Pine Nut**	**3.65**	**108**	Pn	**Pn**	**15 34 11.7**	**+1.4**
I02D	**Swisshome**	**3.81**	**2**	P	**Pn**	**15 34 13.3**	**+0.9**
	baz=182,SNR=25						
YERR	**Yerington**	**3.94**	**108**		**Pn**	**15 34 15.5**	**+1.1**
WAKR	**Walker**	**4.00**	**115**	Pn	**Pn**	**15 34 16.1**	**+0.9**
SAO	**San Andreas Ge**	**4.08**	**149**	Pn	**Pn**	**15 34 15.6**	**-0.4**
PINE	**Pine Mountain**	**4.20**	**33**	Pn	**Pn**	**15 34 19.4**	**+1.5**
H04D	**Lebanon**	**4.34**	**13**	P	**Pn**	**15 34 20.9**	**+1.3**
	baz=193						
H04D				S	**Sn**	**15 35 09.6**	**+0.5**
	baz=193						
BBGB	**Big Mountain B**	**4.40**	**146**		**Pn**	**15 34 19.9**	**-0.7**
RYN	**Ryan**	**4.60**	**109**	Pn	**Pn**	**15 34 24.6**	**+1.3**
H04A	**Detroit Lake**	**4.60**	**17**	Pn	**Pn**	**15 34 24.3**	**+1.0**
KVN	**Kaiserville**	**4.76**	**103**		**Pn**	**15 34 25.6**	**0.0**
PMPB	**Monarch Peak**	**4.81**	**147**	Pn	**Pn**	**15 34 27.3**	**+1.1**
J08A	**Circle Bar Ran**	**5.18**	**52**	Pn	**Pn**	**15 34 30.5**	**-0.8**
F04A	**Amboy**	**5.76**	**11**	Pn	**Pn**	**15 34 40.8**	**+1.6**

IDC 26 15:47:35.7±1.3, 27°.75N×104°.52E, h0km, mb3.4/6, mb1 3.6/6, mb1mx3.4/37, mbtmp3.5/6, Error ellipse: s-maj=46.0km s-min=21.3km az=65.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**20.10**	**4**	P	P	15 52 11.0	-0.1
	0.4nm,0.5s,baz=200,slow=12,SNR=2.4						
KSRS	**Korea Array**	**21.91**	**58**	P	P	15 52 30.0	-0.6
	0.9nm,0.8s,baz=242,slow=9.4,SNR=3.2						
MKAR	**Makanchi Array**	**25.81**	**323**	P	P	15 53 07.3	-1.3
	0.9nm,1.1s,baz=126,slow=11,SNR=2.5						
ZALV	**Zalesovo Beam**	**29.91**	**336**	P	P	15 53 46.5	+1.4
	0.3nm,0.3s,baz=160,slow=8.9,SNR=2.5						
WRA	**Warramunga Arr**	**55.51**	**145**	P	P	15 57 12.3	-0.5
	0.7nm,0.9s,baz=332,slow=7.7,SNR=5.2						
ASAR	**Alice Springs**	**58.46**	**148**	P	P	15 57 33.9	+0.3
	0.4nm,0.5s,baz=322,slow=6.8,SNR=12						

IDC ***26*** *15:55:18.3±0.9, 12°.01N×87°.64W, h0km, mb3.9/11, mb1 4.1/16, mb1mx3.9/51, mbtmp3.9/16, ML3.0/4, Error ellipse: s-maj=34.8km s-min=14.4km az=49.0*
SNET ***26*** *15:55:22.8±3.0, 12°.03N×87°.88W, h15km±19km, ML3.9*
UCR ***26*** *15:55:22.9±2.8, 12°.03N×87°.88W, h14km±19km, ML3.8, mb4.4(NEIC)*
INET ***26*** *15:55:22.5, 11°.86N×87°.84W, h15km, ML3.4*
NEIC ***26*** *15:55:23.5±1.9, 11°.94N±0°.06×87°.71W±0°.07, h50km±7km, mb4.4/45, Error ellipse: s-maj=12.3km s-min=3.4km*

az=49.0

ISC 26 15:55:22.2±0.6, 11°.91N±0°.06×87°.79W±0°.06, h35km, n91, σ18°34/99, mb4.3/32, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**1.07**	**43**		**Pn**	**15 55 42.5**	**+1.7**
CSGN	**Cosiguina Volc**	**1.08**	**12**		**Pn**	**15 55 42.4**	**+1.4**
LCND	**La Caada**	**1.39**	**356**	*eP*	**Pn**	**15 55 45.4**	**+0.2**
LCND				*eS*	**Sn**	**15 56 01.8**	**-0.6**
LCND				IAML		15 56 09.3	
	comp=Z,2μm,0.3s						
LCND	**La Caada**	**1.39**	**356**	*eP*	**Pn**	**15 55 45.4**	**+0.2**
LCND				*eS*	**Sn**	**15 56 01.8**	**-0.6**
LCND				IAML		15 56 09.3	
	comp=Z,2μm,0.3s						
JUCU	**Jucuarn**	**1.41**	**342**	*eP*	**Pn**	**15 55 45.1**	**-0.3**
JUCU				*eS*	**Sn**	**15 56 04.0**	**+1.2**
JUCU				IAML		15 56 11.3	
	comp=Z,1μm,0.4s						
JUCU	**Jucuarn**	**1.41**	**342**	*eP*	**Pn**	**15 55 45.1**	**-0.3**
JUCU				*eS*	**Sn**	**15 56 04.0**	**+1.2**
JUCU				IAML		15 56 11.3	
	comp=Z,1μm,0.4s						
ALJI	**Alcalda de J**	**1.60**	**332**	*eP*	**Pn**	**15 55 49.2**	**+1.2**
ALJI				*eS*	**Sn**	**15 56 07.6**	**+0.1**
ALJI				IAML		15 56 13.0	
	comp=Z,1μm,0.6s						
ALJI	**Alcalda de J**	**1.60**	**332**	*eP*	**Pn**	**15 55 49.2**	**+1.2**
ALJI				*eS*	**Sn**	**15 56 07.6**	**+0.1**
ALJI				IAML		15 56 13.0	
	comp=Z,1μm,0.6s						
PACA	**Pacayal**	**1.63**	**342**	*eP*	**Pn**	**15 55 49.6**	**+1.0**
PACA				IAML		15 56 19.1	
	comp=Z,8μm,0.8s						
PACA	**Pacayal**	**1.63**	**342**	*eP*	**Pn**	**15 55 49.6**	**+1.0**
PACA				IAML		15 56 19.1	
	comp=Z,8μm,0.8s						
TECA	**Tecapa**	**1.72**	**336**	*eP*	**Pn**	**15 55 49.1**	**-0.7**
TECA	**Tecapa**	**1.72**	**336**	*eP*	**Pn**	**15 55 49.1**	**-0.7**
FAGO	**Alcalda de S**	**1.80**	**350**	*eP*	**Pn**	**15 55 52.0**	**+1.2**
FAGO				*eS*	**Sn**	**15 56 13.7**	**+1.2**
FAGO	**Alcalda de S**	**1.80**	**350**	*eP*	**Pn**	**15 55 52.0**	**+1.2**
FAGO				*eS*	**Sn**	**15 56 13.7**	**+1.2**
COEG	**Centro de Oper**	**2.00**	**328**	*eP*	**Pn**	**15 55 56.2**	**+2.5**
COEG				IAML		15 56 32.8	
	comp=Z,656nm,0.4s						
COEG	**Centro de Oper**	**2.00**	**328**	*eP*	**Pn**	**15 55 56.2**	**+2.5**
COEG				IAML		15 56 32.8	
	comp=Z,656nm,0.4s						
MATN	**Matagalpa**	**2.09**	**61**		**Pn**	**15 55 55.2**	**+0.4**
LFRS	**El Faro**	**2.10**	**324**	*eP*	**Pn**	**15 55 53.5**	**-1.6**
LFRS	**El Faro**	**2.10**	**324**	*eP*	**Pn**	**15 55 53.5**	**-1.6**
LBRS	**Las Brisas**	**2.19**	**326**	*eP*	**Pn**	**15 55 58.0**	**+1.8**
LBRS	**Las Brisas**	**2.19**	**326**	*eP*	**Pn**	**15 55 58.0**	**+1.8**
SNET	**Serv Nac Est T**	**2.25**	**322**	Pn	**Pn**	**15 55 59.3**	**+2.2**
ACON	**Acoyapa**	**2.56**	**88**		**Pn**	**15 56 01.9**	**+0.6**
MTO3	**Montecristo**	**2.91**	**328**	*eP*	**Pn**	**15 56 05.9**	**-0.3**
MTO3	**Montecristo**	**2.91**	**328**	*eP*	**Pn**	**15 56 05.9**	**-0.3**
JTS	**Las Juntas de**	**3.22**	**120**	Pn	**Pn**	**15 56 08.1**	**-2.3**
	comp=Z,1.0nm,0.3s,baz=336,slow=23,SNR=1.6						
JTS				Sn	**Sn**	**15 56 47.8**	**+0.2**
	comp=Z,20nm,0.3s,baz=345,slow=18,SNR=7.7						
JTS				Lg	Lg	15 57 07.5	
	comp=Z,4.7nm,0.3s,baz=48,slow=20,SNR=1.4						
JTS	**Las Juntas de**	**3.22**	**120**		**Pn**	**15 56 11.2**	**+0.9**
ESPN	**Las Esperanzas**	**3.43**	**85**		**Pn**	**15 56 13.3**	**+0.6**
CCIG	**Comitan**	**6.05**	**316**	Pn	**Pn**	**15 56 51.5**	**+2.1**
TEIG	**Tepich**	**8.28**	**357**	Pn	**Pn**	**15 57 20.4**	**+0.6**
	baz=139,slow=17						
CMIG	**Matias Romero**	**8.58**	**308**	Pn	**Pn**	**15 57 24.1**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=164,slow=8.9,SNR=6.4						
TLIG	**Tlapa**	**11.84**	**300**	Pn	**Pn**	**15 58 10.6**	**+1.8**
ROSC	**El Rosal**	**15.06**	**117**	Pn	**Pn**	**15 58 51.2**	**-1.8**
	comp=Z,1.1nm,0.3s,baz=293,slow=24,SNR=1.2						
SDV	**Santo Domingo**	**17.14**	**98**	Pn	**Pn**	**15 59 18.1**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=328,slow=20,SNR=1.4						
LRAL	**Lakeview Retre**

	comp=Z,0.3nm,0.4s,baz=136,slow=3.1,SNR=2.4						
AGMN	**Agassiz Nation**	**36.89**	**351**	P	**P**	**16 02 25.3**	**-2.1**
REDW	**Red Top Meadow**	**37.15**	**332**	P	**P**	**16 02 28.1**	**-1.9**
TPAW	**Teton Pass**	**37.29**	**332**	P	**P**	**16 02 29.8**	**-1.5**
TPAW				IAmb	IAmb	16 02 45.7	
	comp=Z,5.9nm,0.8s						
NVAR	**Mina Array Bea**	**37.89**	**320**	P	**P**	**16 02 38.3**	**+2.0**
	comp=Z,0.1nm,0.4s,baz=310,slow=37,SNR=2.5						
NVAR				PcP	**PcP**	**16 04 54.1**	**+2.0**
	comp=Z,0.5nm,0.9s,baz=121,slow=3.5,SNR=2.4						
ULM	**Lac du Bonnet**	**38.80**	**352**	P	**P**	**16 02 42.0**	**-1.5**
	comp=Z,2.2nm,0.4s,baz=158,slow=10,SNR=3.1						
ULM	**Lac du Bonnet**	**38.80**	**352**	IAmb	IAmb	16 02 49.0	
	comp=Z,6.7nm,0.8s						
MSO	**Missoula**	**41.20**	**333**	P	**P**	**16 03 03.4**	**-0.3**
MSO				IAmb	IAmb	16 03 16.5	
	comp=Z,5.4nm,1.1s						
SCHQ	**Schefferville**	**45.89**	**17**	P	**P**	**16 03 42.0**	**+0.9**
	comp=Z,4.4nm,0.7s,baz=213,slow=8.5,SNR=3.1						
SCHQ	**Schefferville**	**45.89**	**17**	IAmb	IAmb	16 03 47.4	
	comp=Z,9.1nm,1.0s						
BDFB	**Brasilia**	**47.95**	**124**	P	**P**	**16 03 59.5**	**+1.6**
	comp=Z,1.3nm,0.4s,baz=237,slow=20,SNR=2.0						
YKA	**Yellowknife Ar**	**54.04**	**345**	P	**P**	**16 04 42.1**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=137,slow=8.3,SNR=3.8						
ILAR	**Eielson Array**	**66.38**	**336**	P	**P**	**16 06 07.3**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=128,slow=6.4,SNR=4.2						
LZH	**Lanzhou**	**131.01**	**347**	*e*PKP	**PKPdf**	**16 14 26.3**	**-4.7**
LZH				pPKP	pPKPdf	16 14 43.5	+1.3
LZH				sPKP		16 14 50.8	
ASAR	**Alice Springs**	**138.76**	**248**	PKP	**PKiKP**	**16 14 47.7**	**0.0**
	comp=Z,0.7nm,1.1s,baz=106,slow=3.1,SNR=1.5						
WRA	**Warramunga Arr**	**138.80**	**253**	PKP	**PKPdf**	**16 14 46.3**	**+0.7**
	comp=Z,0.6nm,1.0s,baz=87,slow=2.0,SNR=2.7						
CMAR	**Chiang Mai Arr**	**149.10**	**347**	PKPbc	**PKiKP**	**16 15 08.8**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=319,slow=2.9,SNR=8.8						

*IDC **26** 16:03:01.3±1.8,3˚.58N×71˚.23W,h0km,mb3.1/1,mb1 3.7/3, mb1mx3.3/40,mbtmp3.6/3,ML2.6/2,Error ellipse: s-maj=35.0km s-min=30.8km az=82.0*

*RSNC **26** 16:03:08.7±1.2,3˚.93N×71˚.66W,h12km±4km,ML3.3, Mw3.6*

ISC 26 16:03:04.7±1.7,3˚91N±0˚.04×71˚49W±0˚.06,h7km±10km, n19,σ1°32/37,Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PTGC	**Puerto Gaitan,**	**0.70**	**294**	*e*Pg		**Pg**	**16 03 17.6**	**-0.6**
	comp=Z,788nm,0.6s							
PTGC				*e*Sg		**Sg**	**16 03 26.8**	**-0.6**
PTGC				*i*			16 03 43.3	
	comp=Z,788nm,0.6s							
GUVC	**San Jose del G**	**1.77**	**220**	*e*Pg		**Pb**	**16 03 37.0**	**-0.5**
GUVC				*e*S		**Sn**	**16 03 58.5**	**0.0**
GUVC				*i*			16 04 02.4	
	comp=Z,595nm,0.3s							
VILC	**Villavicencio,**	**2.21**	**275**	*e*P		**Pn**	**16 03 42.8**	**+0.9**
VILC				*e*S		**Sn**	**16 04 07.4**	**-2.1**
VILC				*i*			16 04 15.1	
	comp=Z,480nm,0.5s							
CHIC	**Chingaza**	**2.34**	**288**	*e*P		**Pn**	**16 03 44.5**	**+0.5**
CHIC				*e*S		**Sn**	**16 04 11.1**	**-2.2**
CHIC				*i*			16 04 22.0	
	comp=Z,189nm,0.5s							
TAMC	**Tame, Arauca**	**2.52**	**353**	*e*P		**Pn**	**16 03 48.3**	**+2.1**
TAMC				*e*S		**Sn**	**16 04 18.7**	**+1.5**
RUSC	**La Rusia**	**2.53**	**321**	*e*P		**Pn**	**16 03 48.1**	**+1.5**
RUSC				*e*S		**Sn**	**16 04 18.0**	**+0.1**
RUSC				*i*			16 04 36.7	
	comp=Z,102nm,0.5s							
MACC	**Macarena, Meta**	**2.94**	**233**	*e*P		**Pn**	**16 03 54.1**	**+2.3**
MACC				*e*S		**Sn**	**16 04 27.0**	**-0.3**
MACC				*i*			16 04 39.2	
	comp=Z,216nm,0.4s							
ROSC	**El Rosal**	**2.97**	**288**	Pn		**Pn**	**16 03 54.4**	**+1.8**
	comp=Z,7.4nm,0.3s,baz=127,slow=20,SNR=5.6							
ROSC				Pg		**Pg**	**16 04 03.3**	**+1.7**
	comp=Z,24nm,0.3s,baz=115,slow=15,SNR=18							
ROSC				Sn		**Sn**	**16 04 29.8**	**+1.2**
	comp=Z,10nm,0.3s,baz=99,slow=19,SNR=2.1							
ROSC				Lg		Lg	16 04 40.1	
	comp=Z,14nm,0.3s,baz=99,slow=20,SNR=2.1							
BARC	**Barichara**	**3.15**	**328**	*e*P		**Pn**	**16 03 55.8**	**+0.8**
BARC				*e*S		**Sn**	**16 04 32.3**	**-0.6**
BARC				*i*			16 04 54.9	
	comp=Z,190nm,0.5s							
PRAC	**Prado**	**3.39**	**267**	*e*P		**Pn**	**16 03 59.7**	**+1.5**
PRAC				*e*S		**Sn**	**16 04 38.1**	**-0.5**
PRAC				*i*			16 04 58.4	
	comp=Z,51nm,0.3s							
PAMC	**Pamplona, Colo**	**3.61**	**341**	*e*P		**Pn**	**16 04 03.0**	**+1.5**
PAMC				*e*S		**Sn**	**16 04 44.1**	**-0.6**
PAMC				*i*			16 05 03.6	
	comp=Z,78nm,0.2s							
ORTC	**Ortega, Tolima**	**3.75**	**270**	*e*P		**Pn**	**16 04 03.7**	**+0.7**
ORTC				*e*S		**Sn**	**16 04 45.7**	**-1.6**
ORTC				*i*			16 05 16.7	
	comp=Z,68nm,0.4s							
BRRC	**Barranca, Sant**	**3.87**	**325**	*e*P		**Pn**	**16 04 05.8**	**+1.1**
BRRC				*e*S		**Sn**	**16 04 49.2**	**-1.1**
BRRC				*i*			16 05 08.4	
	comp=Z,30nm,0.4s							
GARC	**Garzon, Huila**	**4.35**	**247**	*e*P		**Pn**	**16 04 11.7**	**+0.2**
GARC				*e*S		**Sn**	**16 05 01.4**	**-1.2**
SDV	**Santo Domingo**	**5.01**	**10**	Pn		**Pn**	**16 04 21.0**	**+0.4**
	comp=Z,4.2nm,0.3s,baz=188,slow=6.3,SNR=14							
SDV				Pg		**Pg**	**16 04 40.0**	**-0.8**
	comp=Z,9.1nm,0.3s,baz=173,slow=23,SNR=9.1							
SDV				Sn		**Sn**	**16 05 17.3**	**-1.6**
	comp=Z,13nm,0.3s,baz=64,slow=20,SNR=10							
SDV				Lg		Lg	16 05 42.3	
	comp=Z,8.7nm,0.3s,baz=61,slow=15,SNR=5.1							
SDV	**Santo Domingo**	**5.01**	**10**	*e*P		**Pn**	**16 04 20.2**	**-0.4**
SDV				*e*S		**Sn**	**16 05 20.1**	**+1.2**
TXAR	**Lajitas Array**	**39.61**	**313**	P		**P**	**16 10 37.6**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=123,slow=6.7,SNR=3.5							
ASAR	**Alice Springs**	**148.59**	**229**	PKPbc		**PKPdf**	**16 22 50.8**	**+1.1**
	comp=Z,0.6nm,0.9s,baz=114,slow=3.5,SNR=2.0							
WRA	**Warramunga Arr**	**150.20**	**236**	PKPbc		**PKPbc**	**16 22 55.2**	**-2.3**
	comp=Z,0.4nm,0.8s,baz=110,slow=2.7,SNR=4.9							

*IDC **26** 16:50:38.9±1.0,29˚.68S×176˚.11W,h0km,mb4.2/8, mb1 4.4/10,mb1mx4.1/33,mbtmp4.2/10,ML4.0/2,MS3.6/9, Ms1 3.6/9,ms1mx3.3/33,Error ellipse: s-maj=32.0km s-min=19.4km az=157.0*

*NEIC **26** 16:50:42.4±1.4,29˚.7S±0˚.1×176˚.09W±0˚.09,h26km±4km, mb4.7/13, Error ellipse: s-maj=17.4km s-min=11.2km az=186.0*

ISC 26 16:50:42.7±0.7,29˚60S±0˚.07×176˚07W±0˚.08,h28km,n67, σ2°12/65,mb4.4/12,MS3.7/9,1D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GLKZ	**Green Lake**	**1.65**	**281**	P		**Pn**	**16 51 09.5**	**-0.2**
GLKZ				S		**Sb**	**16 51 32.4**	**-0.3**
RAO	**Raoul Island**	**1.65**	**282**	Pn		**Pn**	**16 51 10.4**	**+0.7**
	497nm,0.3s,baz=87,slow=2.5,SNR=20							
RAO				Sn		**Sn**	**16 51 30.9**	**+0.9**
	756nm,0.3s,baz=75,slow=22,SNR=10							
RAO	**Raoul Island**	**1.65**	**282**			**Pn**	**16 51 10.1**	**+0.3**
RIZ	**Raoul Island**	**1.66**	**282**	P		**Pn**	**16 51 09.7**	**-0.1**
RIZ				S		**Sb**	**16 51 32.6**	**-0.4**
MXZ	**Matakaoa Point**	**9.22**	**209**	P		**Pn**	**16 52 54.2**	**+0.4**
MXZ				S		**Sn**	**16 54 39.7**	**+3.2**
WMGZ	**Waiomatatini S**	**9.39**	**208**	P		**Pn**	**16 52 56.6**	**+0.5**
WMGZ				S		**Sn**	**16 54 45.7**	**+4.9**
PKGZ	**Pakihiroa**	**9.59**	**209**	P		**Pn**	**16 52 58.3**	**-0.6**
PKGZ				S		**Sn**	**16 54 45.6**	**-0.1**
HAZ	**Te Kaha**	**9.61**	**211**	S		**Sn**	**16 54 50.3**	**+4.3**
PUZ	**Puketiti**	**9.67**	**208**	P		**Pn**	**16 52 59.8**	**-0.2**
PUZ				S		**Sn**	**16 54 50.7**	**+3.0**
RUGZ	**Raukumara Rang**	**9.83**	**210**	P		**Pn**	**16 53 02.6**	**+0.4**
RUGZ				S		**Sn**	**16 54 55.2**	**+3.5**
TWGZ	**Tauwhareparae**	**9.88**	**208**	P		**Pn**	**16 53 02.1**	**-0.7**
TWGZ				S		**Sn**	**16 54 54.7**	**+1.9**
CNGZ	**Carnagh Statio**	**10.05**	**207**	P		**Pn**	**16 53 04.2**	**-0.9**
CNGZ				S		**Sn**	**16 55 00.3**	**+3.4**
MWZ	**Matawai**	**10.20**	**210**	P		**Pn**	**16 53 06.2**	**-1.0**
MWZ				S		**Sn**	**16 55 02.3**	**+1.6**
URZ	**Urewera**	**10.32**	**211**	Pn		**Pn**	**16 53 07.0**	**-1.8**
	0.7nm,0.3s,baz=59,slow=5.9,SNR=2.5							
URZ				Sn		**Sn**	**16 55 05.0**	**+1.4**
	4.4nm,0.3s,baz=40,slow=22,SNR=12							
URZ	**Urewera**	**10.32**	**211**	P		**Pn**	**16 53 08.2**	**-0.6**
URZ				S		**Sn**	**16 55 04.3**	**+0.7**
OUZ	**Omahuta**	**10.37**	**235**	P		Pn	16 53 17.9	+8.4
TOZ	**Tahuroa Road**	**10.72**	**219**	P		**Pn**	**16 53 17.0**	**+2.7**
RAHZ	**Arahi**	**10.87**	**210**	P		**Pn**	**16 53 17.4**	**+0.9**
BKZ	**Black Stump Fm**	**11.34**	**211**	P		**Pn**	**16 53 21.0**	**-1.9**
BHHZ	**Black Hill Sta**	**11.80**	**211**	P		Pn	16 53 33.0	+3.9
FWVZ	**Far West T-bar**	**11.85**	**213**	P		Pn	16 53 33.0	+3.0
PREZ	**Palmer Road**	**12.61**	**217**	P		**P**	**16 53 49.0**	**-2.4**
BFZ	**Birch Farm**	**12.71**	**208**	P		**Pn**	**16 53 41.5**	**0.0**
MRZ	**Mangatainoka R**	**12.97**	**209**	P		**Pn**	**16 53 44.0**	**-1.1**
TUWZ	**Tuamarina**	**14.32**	**212**	P		**Pn**	**16 54 02.7**	**-0.8**
TUWZ	**Tuamarina**	**14.32**	**212**	Pn		**Pn**	**16 54 00.0**	**-3.4**
NNZ	**Nelson**	**14.42**	**214**	Pn		**Pn**	**16 54 04.2**	**-0.6**
BSWZ	**Blackbirch Sta**	**14.57**	**211**	Pn		**Pn**	**16 54 05.7**	**-1.3**
THZ	**Tophouse**	**15.06**	**213**	Pn		**Pn**	**16 54 11.9**	**-1.7**
KHZ	**Kahutara**	**15.29**	**210**	Pn		**Pn**	**16 54 14.7**	**-1.8**
KHZ				IAmb		IAmb	16 55 08.8	
	comp=Z,90nm,1.3s							
OXZ	**Oxford**	**16.68**	**212**	Pn		**Pn**	**16 54 31.9**	**-2.5**
RAR	**Rarotonga**	**16.92**	**64**	LR		LR	16 59 19.5	
	comp=Z,204nm,19.8s,baz=261,slow=31							
DZM	**Mont Dzumac**	**17.42**	**291**	*e*LR		LR	16 58 38.5	
	comp=Z,432nm,26.8s							
DZM	**Mont Dzumac**	**17.42**	**291**	LR		LR	16 59 51.5	
	comp=Z,250nm,21.4s,baz=146,slow=32							
RPZ	**Rata Peaks**	**17.43**	**213**	P		**P**	**16 54 43.0**	**-1.9**
	comp=Z,1.1nm,0.3s,baz=37,slow=5.1,SNR=1.3							
RPZ				S		**Sn**	**16 57 46.3**	**-11**
	comp=Z,0.6nm,0.3s,baz=169,slow=22,SNR=1.6							
RPZ	**Rata Peaks**	**17.43**	**213**	IAmb		IAmb	16 55 28.8	
	comp=Z,161nm,1.5s							
TBI	**Tubuai**	**24.59**	**82**	*e*LR		LR	17 01 53.3	
	comp=Z,318nm,28.2s,baz=249							
PPT2	**Papeete2**	**27.00**	**70**	*e*LR		LR	17 02 53.8	
	comp=Z,327nm,27.5s,baz=236							
PPT	**Papeete**	**27.01**	**70**	LR		LR	17 06 13.4	
	comp=Z,44nm,18.4s,baz=252,slow=34							
STKA	**Stephens Creek**	**36.29**	**255**	P		**P**	**16 57 45.4**	**+1.5**
	comp=Z,4.3nm,1.0s,baz=46,slow=7.0,SNR=4.7							
STKA				LR		LR	17 11 51.0	
	comp=Z,156nm,18.2s,baz=27,slow=35							
STKA	**Stephens Creek**	**36.29**	**255**	IAmb		IAmb	16 57 47.7	
	comp=Z,1.7nm,1.1s							
PMG	**Port Moresby**	**39.81**	**293**	LR		LR	17 13 00.3	
	comp=Z,67nm,19.6s,baz=128,slow=34							
BBOO	**Buckleboo**	**40.80**	**253**	P		**P**	**16 58 21.9**	**+0.2**
AS31	**Alice Springs**	**44.83**	**265**	P		**P**	**16 58 53.8**	**-0.8**
ASAR	**Alice Springs**	**44.83**	**265**	P		**P**	**16 58 53.6**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=100,slow=6.6,SNR=24							
ASAR				LR		LR	17 17 46.2	
	comp=Z,200nm,18.0s,baz=132,slow=36							
WR0	**Warramunga Arr**	**45.57**	**270**	P		**P**	**16 59 00.2**	**-0.2**
WR0				IAmb		IAmb	16 59 02.6	
	comp=Z,8.3nm,1.1s							
WB2	**Warramunga Arr**	**45.74**	**270**	P		**P**	**16 59 01.4**	**-0.4**
WB2				IAmb		IAmb	16 59 15.9	
	comp=Z,17nm,1.5s							
WRAB	**Tennant Creek**	**45.74**	**270**	P		**P**	**16 59 01.5**	**-0.3**
WRAB				IAmb		IAmb	16 59 03.6	
	comp=Z,7.4nm,1.1s							
WRA	**Warramunga Arr**	**45.75**	**270**	P		**P**	**16 59 00.6**	**-1.3**
	comp=Z,4.2nm,0.9s,baz=110,slow=8.1,SNR=23							
WB0	**Warramunga Arr**	**45.77**	**271**	P		**P**	**16 59 01.2**	**-0.9**
WB0				IAmb		IAmb	16 59 03.3	
	comp=Z,6.0nm,0.9s							
KNRA	**Kununurra**	**52.32**	**273**	P		**P**	**16 59 51.5**	**-0.8**
FITZ	**Fitzroy Crossi**	**54.04**	**268**	P		**P**	**17 00 04.8**	**-0.1**
	comp=Z,4.4nm,1.0s,baz=114,slow=11,SNR=3.9							
FITZ				LR		LR	17 23 14.6	
	comp=Z,47nm,19.1s,baz=65,slow=36							
FITZ	**Fitzroy Crossi**	**54.04**	**268**	IAmb		IAmb	17 01 21.8	
	comp=Z,37nm,2.0s							
SIJI	**Sorong**	**57.62**	**290**	P		**P**	**17 00 31.2**	**+0.6**
	comp=Z,3.0nm,0.5s,baz=119,slow=6.9,SNR=3.5							
MORW	**Morawa**	**58.36**	**252**	P		**P**	**17 00 36.0**	**+0.3**
SYO	**Syowa Base**	**78.26**	**192**	*e*sP		sP	17 02 49.0	+1.0
KSRS	**Korea Array**	**84.84**	**319**	LR		LR	17 38 39.5	
	comp=Z,18nm,18.6s,baz=140,slow=34							
NVAR	**Mina Array Bea**	**86.53**	**42**	P		**P**	**17 03 23.8**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=220,slow=9.0,SNR=4.9							
PDAR	**Pinedale Array**	**94.42**	**43**	LR		LR	17 42 49.4	
	comp=Z,22nm,18.1s,baz=273,slow=33							
CMAR	**Chiang Mai Arr**	**94.72**	**288**	P		**P**	**17 04 02.5**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=136,slow=2.9,SNR=4.9							
ILAR	**Eielson Array**	**96.79**	**12**	P		**P**	**17 04 10.5**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=215,slow=5.8,SNR=5.2							
FINES	**FINESS Array B**	**144.94**	**342**	PKPbc		**PKPdf**	**17 10 16.5**	**0.0**
	comp=Z,1.5nm,0.8s,baz=66,slow=1.7,SNR=4.7							
KBZ	**Khabaz**	**146.03**	**305**	PKPbc		**PKiKP**	**17 10 21.5**	**-1.5**
	comp=Z,1.4nm,0.7s,baz=27,slow=4.5,SNR=2.7							
NB2	**NORSAR Subarra1**	**148.19**	**353**	PKP		**PKPbc**	**17 10 25.7**	**+0.4**
	comp=Z,6.5nm,1.1s,baz=7.2,slow=2.5							
NOA	**NORSAR Array B**	**148.19**	**353**	PKPbc		**PKiKP**	**17 10 27.5**	**+0.4**
	comp=Z,2.0nm,0.9s,baz=11,slow=2.6,SNR=4.7							
AKASG	**Malin Array Be**	**151.64**	**325**	PKPbc		**PKiKP**	**17 10 34.7**	**+0.3**
	comp=Z,3.3nm,0.8s,baz=44,slow=2.5,SNR=6.9							
BRTR	**Keskin Array B**	**153.66**	**301**	PKPbc		**PKiKP**	**17 10 39.0**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=112,slow=1.6,SNR=4.1							

*IDC **26** 17:09:45.5±1.8,1˚.71N×124˚.61E,h0km,mb3.5/3, mb1 3.8/4,mb1mx3.4/40,mbtmp3.6/4,ML3.2/1,Error ellipse: s-maj=129.6km s-min=24.2km az=66.0*

*NEIC **26** 17:10:10.8±0.3,1˚.26N±0˚.08×124˚.2E±0˚.2,h236km±9km, mb4.1/7,Error ellipse: s-maj=26.7km s-min=10.6km az=77.0*

ISC 26 17:10:12.3±1.4,1˚1N±0˚.1×124˚1E±0˚.2,h250km,n12, σ0°62/12,mb3.9/5,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LUWI	**Luwuk**	**2.51**	**212**	Pn		**Pn**	**17 10 59.4**	**-0.4**
LUWI				S		**S**	**17 11 37.1**	**-0.1**
KNRA	**Kununurra**	**17.30**	**165**			**Pn**	**17 13 59.0**	**-0.7**
KNRA				IAmb		IAmb	17 14 10.3	
	comp=Z,8.6nm,1.1s							
FITZ	**Fitzroy Crossi**	**19.14**	**176**	P		**P**	**17 14 17.5**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=7.4,slow=10,SNR=2.0							
FITZ	**Fitzroy Crossi**	**19.14**	**176**	IAmb		IAmb	17 14 37.3	
	comp=Z,4.2nm,1.1s							
WB0	**Warramunga Arr**	**23.07**	**155**	P		**P**	**17 14 56.7**	**+0.4**
WB0				IAmb		IAmb	17 15 03.5	
	comp=Z,7.9nm,1.3s							
WRAB	**Tennant Creek**	**23.20**	**155**			**P**	**17 14 58.0**	**+0.6**
WRAB				IAmb		IAmb	17 15 12.4	
	comp=Z,11nm,1.4s							
WRA	**Warramunga Arr**	**23.20**	**155**	P		**P**	**17 14 57.9**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=334,slow=10,SNR=51							
WB2	**Warramunga Arr**	**23.21**	**155**	P		**P**	**17 14 58.0**	**+0.5**
WR0	**Warramunga Arr**	**23.30**	**154**	P		**P**	**17 14 58.7**	**+0.4**
ASAR	**Alice Springs**	**26.40**	**159**	P		**P**	**17 15 27.1**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=339,slow=7.7,SNR=7.4							
PALK	**Pallekele**	**43.69**	**279**	P		**P**	**17 17 54.0**	**+0.7**
MKAR	**Makanchi Array**	**58.27**	**327**	P		**P**	**17 19 40.4**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=124,slow=8.0,SNR=5.8							

*NEIC **26** 17:13:46.2±1.2,20˚.1S±0˚.1×178˚.2W±0˚.1, h572km±8km, mb4.4/44, Error ellipse: s-maj=19.5km s-min=15.1km az=94.0*

*IDC **26** 17:13:47.5±3.6,20˚.10S×178˚.25W,h582km±42km, mb3.4/16,mb1 3.6/17,mb1mx3.3/45,mbtmp4.3/17,Error ellipse: s-maj=21.5km s-min=16.7km az=149.0*

ISC 26 17:13:45.8±0.5,20˚18S±0˚.1×178˚12W±0˚.09,h569km, n74,σ0°86/74,mb4.3/38,1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**4.37**	**303**	P		**P**	**17 15 11.2**	**-0.7**
NIUE	**Niue**	**7.79**	**83**	P		**P**	**17 15 40.5**	**-1.6**
DZM	**Mont Dzumac**	**14.53**	**260**	P		**P**	**17 16 51.7**	**+1.3**
	0.8nm,0.3s,baz=111,slow=19,SNR=7.5							
DZM	**Mont Dzumac**	**14.53**	**260**	P		**P**	**17 16 51.9**	**+1.5**
URZ	**Urewera**	**18.49**	**192**	P		**P**	**17 17 24.5**	**-2.4**
	1.3nm,0.3s,baz=302,slow=1.4,SNR=8.9							
BKZ	**Black Stump Fm**	**19.48**	**193**	P		**P**	**17 17 33.1**	**-3.0**
QRZ	**Quartz Range**	**22.07**	**199**	P		**P**	**17 17 59.1**	**-0.3**
LTZ	**Lake Taylor**	**23.95**	**198**	P		**P**	**17 18 16.8**	**+0.7**
EIDS	**Eidsvold**	**28.83**	**254**	P		**P**	**17 18 58.7**	**-0.4**
EIDS				IAmb		IAmb	17 20 03.6	

	comp=Z,28nm,1.8s						
ARMA	**Armidale**	**29.11**	**243**	P	**P**	**17 19 02.3**	**+0.6**
CTAO	**Charters Tower**	**33.41**	**264**	P	**P**	**17 19 37.8**	**-0.6**
COEN	**Coen**	**37.45**	**273**	P	**P**	**17 20 11.5**	**-0.4**
STKA	**Stephens Creek**	**37.83**	**244**	P	**P**	**17 20 14.8**	**+0.1**
	comp=Z,3.1nm,0.9s,baz=104,slow=13,SNR=3.8						
STKA	**Stephens Creek**	**37.83**	**244**	P	**P**	**17 20 14.9**	**+0.1**
BBOO	**Buckleboo**	**42.59**	**243**	P	**P**	**17 20 52.5**	**-0.2**
JAY	**Jayapura**	**43.84**	**288**	P	**P**	**17 21 02.7**	**0.0**
	comp=Z,1.1nm,0.5s,baz=54,slow=6.7,SNR=7.3						
WR0	**Warramunga Arr**	**44.35**	**262**	P	**P**	**17 21 05.7**	**-0.8**
WR0				IAmb	IAmb	17 21 21.4	
	comp=Z,28nm,1.8s						
AS31	**Alice Springs**	**44.49**	**256**	P	**P**	**17 21 06.8**	**-0.8**
ASAR	**Alice Springs**	**44.49**	**256**	P	**P**	**17 21 07.2**	**-0.4**
	comp=Z,4.8nm,0.6s,baz=89,slow=7.9,SNR=140						
ASAR				PcP	**PcP**	**17 22 38.1**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=108,slow=3.8,SNR=7.7						
WB0	**Warramunga Arr**	**44.51**	**262**	P	**P**	**17 21 07.0**	**-0.8**
WB0				IAmb	IAmb	17 21 07.5	
	comp=Z,6.6nm,0.5s						
WB2	**Warramunga Arr**	**44.53**	**262**	P	**P**	**17 21 07.1**	**-0.8**
WB2				IAmb	IAmb	17 22 57.8	
	comp=Z,20nm,1.6s						
WRAB	**Tennant Creek**	**44.53**	**262**	P	**P**	**17 21 07.0**	**-0.9**
WRAB				IAmb	IAmb	17 21 14.7	
	comp=Z,18nm,1.6s						
WRA	**Warramunga Arr**	**44.54**	**262**	P	**P**	**17 21 07.0**	**-0.9**
	comp=Z,3.1nm,0.3s,baz=97,slow=7.6,SNR=220						
WRA				PcP	**PcP**	**17 22 38.6**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=105,slow=3.3,SNR=1.9						
KNRA	**Kununurra**	**50.57**	**266**	P	**P**	**17 21 52.5**	**-0.6**
FITZ	**Fitzroy Crossi**	**52.96**	**262**	P	**P**	**17 22 10.1**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=108,slow=11,SNR=6.8						
FITZ	**Fitzroy Crossi**	**52.96**	**262**	P	**P**	**17 22 10.0**	**-0.2**
SIJI	**Sorong**	**53.05**	**285**	P	**P**	**17 22 10.7**	**-0.2**
	comp=Z,9.6nm,0.8s,baz=116,slow=3.9,SNR=9.4						
VNDA	**Vanda**	**58.22**	**185**	P	**P**	**17 22 46.8**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=19,slow=7.4,SNR=5.6						
QSPA	**South Pole Qui**	**69.89**	**180**	P	**P**	**17 24 01.0**	**+1.1**
QSPA				IAmb	IAmb	17 24 08.7	
	comp=Z,23nm,2.0s						
MJAR	**Matsushiro Ar**	**69.89**	**324**	P	**P**	**17 23 59.9**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=145,slow=5.3,SNR=2.6						
ADK	**Adak**	**71.76**	**1**	P	**P**	**17 24 10.2**	**-0.6**
PEA0B	**Petropavlovsk-**	**75.94**	**345**	P	**P**	**17 24 34.6**	**+0.1**
PEA0B				IAmb	IAmb	17 26 52.4	
	comp=Z,16nm,1.2s						
PETK	**Petropavlovsk-**	**75.94**	**345**	P	**P**	**17 24 34.0**	**-0.4**
	comp=Z,2.4nm,0.7s,baz=142,slow=8.4,SNR=6.8						
USRK	**Ussuriysk Ar.**	**78.64**	**326**	P	**P**	**17 24 49.5**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=157,slow=2.5,SNR=3.1						
YBH	**Yreka Blue Hor**	**80.11**	**39**	P	**P**	**17 24 58.1**	**+0.9**
	comp=Z,2.5nm,0.7s,baz=151,slow=1.9,SNR=10.0						
YBH	**

	SNR=9.3								
TKM2	**Tokmak 2**	**7.13**	**27**	P		**Pn**	17 17 26.4	**-1.4**
	SNR=8.1								
KDJ	**Kajisay**	**7.19**	**39**			**Pn**	17 17 26.6	**-1.9**
MKAR	**Makanchi Array**	**13.10**	**36**	P		**Pn**	17 18 42.0	**-0.2**
	0.1nm,0.3s,baz=214,slow=13,SNR=1.9								
ZALV	**Zalesovo Beam**	**19.73**	**24**	P		**P**	17 19 56.6	**+0.4**
	1.9nm,0.3s,baz=218,slow=9.1,SNR=8.1								
ARCES	**ARCESS Array B**	**41.06**	**337**	P		**P**	17 23 05.6	**+1.4**
	3.9nm,1.0s,baz=122,slow=9.6,SNR=3.9								
TORD	**Torodi Ar. Bea**	**65.85**	**269**	P		**P**	17 26 03.7	**-0.8**
	0.4nm,0.7s,baz=39,slow=7.3,SNR=2.7								
TOLK	**Toolik Lake Re**	**70.75**	**15**	P		**P**	17 26 35.0	**+1.0**
TOLK				IAmb	IAmb		17 26 57.9		
	comp=Z,1.3nm,0.5s								
C36M	**Paulatuk**	**73.72**	**6**	P		**P**	17 26 52.1	**+0.7**
C36M				IAmb	IAmb		17 27 27.4		
	comp=Z,7.8nm,1.4s								
YKA	**Yellowknife Ar**	**81.09**	**3**	P		**P**	17 27 32.9	**+0.7**
	comp=Z,0.2nm,0.4s,baz=352,slow=5.9,SNR=4.0								

*IDC **26** 17:17:54.7±1.6,32.°62S×179.°68W,h376km±19km,mb3.0/3, mb1 3.2/4,mb1mx2.9/29,mbtmp3.8/4,Error ellipse: s-maj=42.5km s-min=19.9km az=126.0*

ISC 26 17:17:55.7±1.2,**32.5S**±0.1°×**179.9E**±0.2,**h350**km,**n6,** σ1§**42**/**7**,**mb3.1**/3,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.73**	**31**	P		**Pn**	**17 19 02.9**	**+0.9**
	51nm,0.3s,baz=253,slow=19,SNR=1.7							
URZ	**Urewera**	**6.20**	**201**	P		**Pn**	**17 19 27.8**	**-0.8**
	0.7nm,0.3s,baz=18,slow=6.4,SNR=8.0							
URZ				S		**S**	**17 20 45.4**	**+1.3**
	3.3nm,0.3s,baz=259,slow=22,SNR=16							
STKA	**Stephens Creek**	**32.30**	**261**	P		**P**	**17 23 54.0**	**+0.9**
	2.9nm,0.8s,baz=99,slow=13,SNR=3.0							
ASAR	**Alice Springs**	**41.24**	**270**	P		**P**	**17 25 08.1**	**+0.1**
	0.3nm,0.4s,baz=105,slow=7.4,SNR=11							
WRA	**Warramunga Arr**	**42.42**	**276**	P		**P**	**17 25 16.7**	**-0.8**
	0.4nm,0.3s,baz=112,slow=8.0,SNR=8.8							
FINES	**FINESS Array B**	**146.41**	**337**	PKPbc		**PKPdf**	**17 36 51.2**	**-1.9**
	1.5nm,0.4s,baz=46,slow=4.0,SNR=20							

*IDC **26** 17:18:08.9±0.8,13.°69N×146.°43E,h0km,mb3.9/12, mb1 4.0/12,mb1mx3.8/49,mbtmp3.9/12,MS3.1/2, Ms1 3.2/2,ms1mx2.6/38,Error ellipse: s-maj=29.3km s-min=17.5km az=98.0*

*NEIC **26** 17:18:15.9±1.0,13.°6N±0.°1×146.°3E±0.°1,h48km±7km, mb4.6/13,Error ellipse: s-maj=18.1km s-min=14.7km az=178.0*

ISC 26 17:18:13.2±0.7,**13.°7N**±0.°1×**146.°3E**±0.°1,**h26**km,**n28,** σ0§**67**/**27**,**mb4.2**/18,**South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.41**	**267**			**Pb**	**17 18 38.5**	**-0.4**
KSRS	**Korea Array**	**28.82**	**329**	P		**P**	**17 24 09.7**	**+0.4**
	1.7nm,0.7s,baz=146,slow=10,SNR=6.2							
WB0	**Warramunga Arr**	**35.23**	**200**	P		**P**	**17 25 05.2**	**-0.4**
WB0				IAmb	IAmb		17 26 21.1	
	comp=Z,9.9nm,1.3s							
WRAB	**Tennant Creek**	**35.40**	**200**	P		**P**	**17 25 06.9**	**-0.2**
WRAB				IAmb	IAmb		17 25 11.0	
	comp=Z,1.8nm,1.8s							
WB2	**Warramunga Arr**	**35.41**	**200**	P		**P**	**17 25 07.2**	**0.0**
WB2				IAmb	IAmb		17 25 21.0	
	comp=Z,6.1nm,1.0s							
WRA	**Warramunga Arr**	**35.41**	**200**	P		**P**	**17 25 06.9**	**-0.3**
	comp=Z,2.9nm,1.0s,baz=22,slow=9.5,SNR=13							
FITZ	**Fitzroy Crossi**	**37.58**	**213**	P		**P**	**17 25 26.1**	**+0.5**
	comp=Z,1.7nm,0.9s,baz=4.8,slow=12,SNR=1.5							
FITZ	**Fitzroy Crossi**	**37.58**	**213**	IAmb	IAmb		17 26 28.2	
	comp=Z,25nm,1.7s							
AS31	**Alice Springs**	**39.03**	**198**	P		**P**	**17 25 36.9**	**-1.0**
ASAR	**Alice Springs**	**39.03**	**198**	P		**P**	**17 25 38.2**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=13,slow=11,SNR=16							
CMAR	**Chiang Mai Arr**	**45.68**	**283**	P		**P**	**17 26 32.9**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=82,slow=6.7,SNR=7.2							
CMAR				LR	LR		17 46 10.0	
	comp=Z,13nm,19.7s,baz=80,slow=37							
MNAI	**Manna**	**46.61**	**250**	P		**P**	**17 26 39.4**	**-0.1**
SONM	**Songino Array**	**47.49**	**324**	P		**P**	**17 26 46.5**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=134,slow=6.7,SNR=2.7							
GSI	**Gunungsitoli**	**49.75**	**260**	P		**P**	**17 27 03.8**	**0.0**
BKZ	**Black Stump Fm**	**59.62**	**153**	P		**P**	**17 28 15.7**	**+0.7**
ZALV	**Zalesovo Beam**	**62.39**	**324**	P		**P**	**17 28 33.3**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=98,slow=2.9,SNR=2.0							
ZALV				LR	LR		17 56 07.7	
	comp=Z,24nm,18.1s,baz=130,slow=36							
MK31	**Makanchi Array**	**62.42**	**316**	P		**P**	**17 28 35.0**	**+0.9**
MKAR	**Makanchi Array**	**62.42**	**316**	P		**P**	**17 28 34.6**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=92,slow=8.8,SNR=28							
MAKZ	**Makanchi**	**62.63**	**316**	P		**P**	**17 28 36.2**	**+0.8**
KURK	**Kurchatov**	**65.44**	**320**	P		**P**	**17 28 53.6**	**-0.1**
KURK				IAmb	IAmb		17 29 07.8	
	comp=Z,7.1nm,0.9s							
ILAR	**Eielson Array**	**67.90**	**25**	P		**P**	**17 29 08.1**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=261,slow=6.2,SNR=7.1							
BRVK	**Borovoye**	**70.81**	**322**	P		**P**	**17 29 27.8**	**+0.3**
BRVK				IAmb	IAmb		17 29 41.3	
	comp=Z,3.2nm,0.7s							
ARU	**Arti**	**77.51**	**325**	P		**P**	**17 30 06.9**	**+0.4**
ARU				IAmb	IAmb		17 30 20.3	
	comp=Z,3.4nm,0.6s							
YKA	**Yellowknife Ar**	**82.15**	**28**	P		**P**	**17 30 31.9**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=289,slow=5.0,SNR=3.0							
NVAR	**Mina Array Bea**	**85.77**	**52**	P		**P**	**17 30 51.2**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=263,slow=5.7,SNR=5.2							
FINES	**FINESS Array B**	**91.69**	**335**	P		**P**	**17 31 16.5**	**-1.6**
	comp=Z,1.4nm,0.8s,baz=74,slow=5.9,SNR=6.1							
DBIC	**Dimbokro**	**144.97**	**303**	PKPbc		**PKPab**	**17 37 47.8**	**-0.6**
	comp=Z,2.7nm,0.8s,baz=80,slow=1.6,SNR=4.6							
DBIC	**Dimbokro**	**144.97**	**303**			**PKPab**	**17 37 47.5**	**-0.9**

*WEL **26** 17:30:04.9,37.°S±6.°×17.°7E±.°,h238km±8km,M2.7/18, MLv2.7/18,Error ellipse: s-maj=0.0km s-min=0.0km az=167.4*

*IDC **26** 17:30:05.4±3.8,37.°52S×175.°99E,h212km±42km,mb2.9/3, mb1 3.1/3,mb1mx3.0/33,mbtmp3.4/3,Error ellipse: s-maj=193.5km s-min=24.5km az=53.0*

ISC 26 17:30:04.9±1.0,**37.°49S**±0.°06×**176.°43E**±0.°07,**h238**km±7km, **n72**,σ1§**02**/**80**,**mb3.0**/3,**North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TGRZ	**Tauranga**	**0.27**	**209**	P		**Pn**	**17 30 36.1**	**+0.3**
OPRZ	**Ohinepanea**	**0.37**	**164**	P		**Pn**	**17 30 36.0**	**0.0**
MARZ	**Manawahe**	**0.53**	**158**	P		**Pn**	**17 30 37.1**	**+0.6**
OMRZ	**Omania**	**0.62**	**184**	P		**Pn**	**17 30 37.6**	**+0.8**
TOZ	**Tahuroa Road**	**0.77**	**252**	P		**Pn**	**17 30 38.1**	**+0.7**
RRRZ	**Republican Roa**	**0.85**	**175**	P		**Pn**	**17 30 38.4**	**+0.6**
KUZ	**Kuaotunu**	**0.93**	**323**	P		**Pn**	**17 30 38.1**	**-0.2**
URZ	**Urewera**	**0.94**	**145**	P		**Pn**	**17 30 37.9**	**-0.4**
	12nm,0.3s,baz=285,slow=3.4,SNR=142							
URZ				S		**S**	**17 31 02.5**	**-2.0**
	7.7nm,0.3s,baz=255,slow=4.8,SNR=21							
URZ	**Urewera**	**0.94**	**145**	P		**Pn**	**17 30 37.9**	**-0.4**
URZ				S		**S**	**17 31 02.4**	**-2.0**
MUGZ	**Murupara**	**1.02**	**165**	P		**Pn**	**17 30 39.0**	**+0.3**
MUGZ				S		**S**	**17 31 04.9**	**-0.5**
TLZ	**Tolley Road**	**1.09**	**220**	P		**Pn**	**17 30 40.2**	**+1.0**
RUGZ	**Raukumara Rang**	**1.10**	**116**	P		**Pn**	**17 30 38.2**	**-1.1**
RUGZ				S		**S**	**17 31 04.1**	**-2.3**
HAZ	**Te Kaha**	**1.11**	**104**	P		**Pn**	**17 30 38.6**	**-0.6**
HAZ				S		**S**	**17 31 03.6**	**-2.5**
RTZ	**Ruatahuna**	**1.21**	**159**	P		**Pn**	**17 30 40.1**	**+0.2**
RTZ				S		**S**	**17 31 07.3**	**-0.2**
MWZ	**Matawai**	**1.21**	**134**	P		**Pn**	**17 30 39.7**	**-0.2**
MWZ				S		**S**	**17 31 07.0**	**-0.6**
RAGZ	**Rawiri**	**1.27**	**142**	P		**Pn**	**17 30 41.0**	**+0.5**
RAGZ				S		**S**	**17 31 08.2**	**-0.2**
MRHZ	**Matea Rd**	**1.34**	**180**	P		**Pn**	**17 30 41.3**	**+0.4**
PKGZ	**Pakihiroa**	**1.37**	**107**	P		**Pn**	**17 30 41.2**	**+0.1**
MTHZ	**Maungataniwha**	**1.40**	**167**	P		**Pn**	**17 30 41.9**	**+0.6**
TWGZ	**Tauwhareparae**	**1.41**	**120**	P		**Pn**	**17 30 42.4**	**+1.0**
MBAZ	**Motutapu North**	**1.42**	**300**	P		**Pn**	**17 30 42.0**	**+0.6**
RATZ	**Rangitukua**	**1.47**	**200**	P		**Pn**	**17 30 43.0**	**+1.2**
SNGZ	**Shannon Statio**	**1.48**	**151**	P		**Pn**	**17 30 42.6**	**+0.7**
MXZ	**Matakaoa Point**	**1.50**	**93**	P		**Pn**	**17 30 41.8**	**-0.2**
RAHZ	**Arahi**	**1.52**	**160**	P		**Pn**	**17 30 43.1**	**+1.0**
PUZ	**Puketiti**	**1.56**	**112**	P		**Pn**	**17 30 42.6**	**0.0**
RIGZ	**Rimuhau**	**1.61**	**139**	P		**Pn**	**17 30 43.7**	**+0.8**
WMGZ	**Waiomatatini S**	**1.61**	**102**	P		**Pn**	**17 30 43.1**	**+0.2**
NMHZ	**Naumai**	**1.63**	**170**	P		**Pn**	**17 30 44.7**	**+1.5**
BKZ	**Black Stump Fm**	**1.67**	**178**	P		**Pn**	**17 30 43.6**	**+0.1**
CNGZ	**Carnagh Statio**	**1.72**	**126**	P		**Pn**	**17 30 45.0**	**+1.1**
WTVZ	**West Tongariro**	**1.75**	**202**	P		**Pn**	**17 30 45.8**	**+1.6**
TWVZ	**Taurewa**	**1.76**	**206**	P		**Pn**	**17 30 45.2**	**+1.0**
KNZ	**Kokohu**	**1.82**	**148**	P		**Pn**	**17 30 45.3**	**+0.7**
PRGZ	**Paritu Road**	**1.83**	**142**	P		**Pn**	**17 30 45.8**	**+1.0**
FWVZ	**Far West T-bar**	**1.89**	**201**	P		**Pn**	**17 30 46.4**	**+0.8**
KWHZ	**Kaweka Forest**	**1.93**	**180**	P		**Pn**	**17 30 46.5**	**+0.7**
MCHZ	**McNeill Hill**	**1.96**	**174**	P		**Pn**	**17 30 47.0**	**+1.0**
MOVZ	**Moawhango**	**1.98**	**195**	P		**Pn**	**17 30 46.6**	**+0.3**
BHHZ	**Black Hill Sta**	**2.02**	**188**	P		**Pn**	**17 30 46.7**	**+0.2**
MHGZ	**Mahia Peninsul**	**2.03**	**145**	P		**Pn**	**17 30 48.0**	**+1.4**
VRZ	**Vera Road**	**2.09**	**218**	P		**Pn**	**17 30 48.8**	**+1.6**
KRHZ	**Kereru**	**2.15**	**181**	P		**Pn**	**17 30 48.4**	**+0.6**
CKHZ	**Cape Kidnapper**	**2.22**	**167**	P		**Pn**	**17 30 49.4**	**+1.0**
WCZ	**Waipu Caves**	**2.28**	**312**	P		**Pn**	**17 30 49.3**	**+0.2**
KAHZ	**Kahuranaki**	**2.33**	**171**	P		**Pn**	**17 30 50.5**	**+1.0**
PNHZ	**Pukenui**	**2.42**	**184**	P		**Pn**	**17 30 50.9**	**+0.4**
PXZ	**Pawanui**	**2.56**	**172**	P		**Pn**	**17 30 52.4**	**+0.6**
PKE	**Pukeiti**	**2.56**	**228**	P		**Pn**	**17 30 54.2**	**+2.3**
TSZ	**Takapari Road**	**2.59**	**188**	P		**Pn**	**17 30 52.4**	**+0.2**
DVHZ	**Dannevirke**	**2.81**	**184**	P		**Pn**	**17 30 54.6**	**+0.1**
POWZ	**Post Office Ro**	**2.94**	**190**	P		**Pn**	**17 30 55.8**	**-0.1**
ANWZ	**Angora Road**	**2.96**	**179**	P		**Pn**	**17 30 56.5**	**+0.4**
OUZ	**Omahuta**	**3.22**	**314**	P		**Pn**	**17 30 59.0**	**-0.1**
MRZ	**Mangatainoka R**	**3.23**	**191**	P		**Pn**	**17 30 58.5**	**-0.6**
OGWZ	**Otaki Gorge**	**3.46**	**196**	P		**Pn**	**17 31 01.2**	**-0.6**
HOWZ	**Holdsworth Sta**	**3.47**	**191**	P		**Pn**	**17 31 01.2**	**-0.7**
KIW	**Kapiti Island**	**3.56**	**199**	P		**Pn**	**17 31 02.0**	**-1.0**
MTW	**Mount Morrison**	**3.73**	**191**	P		**Pn**	**17 31 03.7**	**-1.2**
CAW	**Cannon Point**	**3.76**	**196**	P		**Pn**	**17 31 04.3**	**-1.0**
DUWZ	**D'Urville Isla**	**3.84**	**210**	P		**Pn**	**17 31 05.3**	**-0.9**
TCW	**Tory Channel**	**4.07**	**203**	P		**Pn**	**17 31 07.9**	**-1.0**
TUWZ	**Tuamarina**	**4.38**	**205**	P		**Pn**	**17 31 11.6**	**-1.0**
QRZ	**Quartz Range**	**4.50**	**221**	P		**Pn**	**17 31 12.4**	**-1.7**
BSWZ	**Blackbirch Sta**	**4.66**	**204**	P		**Pn**	**17 31 15.0**	**-0.9**
THZ	**Tophouse**	**5.06**	**211**	P		**Pn**	**17 31 20.4**	**-0.6**
KHZ	**Kahutara**	**5.39**	**203**	P		**Pn**	**17 31 24.0**	**-1.1**
GVZ	**Greta Valley S**	**6.05**	**204**	P		**Pn**	**17 31 31.8**	**-1.6**
LTZ	**Lake Taylor**	**6.17**	**210**	P		**Pn**	**17 31 32.9**	**-1.9**
ASAR	**Alice Springs**	**38.79**	**278**	P		**P**	**17 37 07.0**	**+0.1**
	0.4nm,0.8s,baz=121,slow=7.6,SNR=8.7							
WRA	**Warramunga Arr**	**40.46**	**284**	P		**P**	**17 37 20.4**	**-0.2**
	0.2nm,0.4s,baz=123,slow=7.7,SNR=7.4							
VNDA	**Vanda**	**40.62**	**185**	P		**P**	**17 37 23.4**	**+2.2**
	0.3nm,0.3s,baz=24,slow=7.1,SNR=7.3							

*IDC **26** 17:40:14.5±1.4,1.°11S×120.°82E,h0km,mb3.3/3, mb1 3.6/4,mb1mx3.2/53,mbtmp3.4/4,ML3.6/1,MS2.5/2, Ms1 2.5/2,ms1mx2.3/18,Error ellipse: s-maj=53.5km s-min=25.0km az=72.0*

*DJA **26** 17:40:15.0±0.4,1.°S±3.°×122.°0E±.°,h10km,M3.7/7,MLv3.7/7*

ISC 26 17:40:15.3±1.0,**0.°95S**±0.°06×**120.°43E**±0.°06,**h10**km,**n16,** σ1§**67**/**18**,**mb3.2**/3,**1C**,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.22**	**88**	P		**Pn**	**17 40 38.3**	**-0.2**
APSI				S		**Sn**	**17 40 56.1**	**+1.1**
MPSI	**Mapaga**	**1.38**	**337**	P		**Pn**	**17 40 38.9**	**-1.8**
TTSI	**Tana Toraja**	**2.17**	**196**	P		**Pn**	**17 40 51.4**	**-0.2**
TTSI				S		**Sn**	**17 41 19.8**	**+1.2**
LUWI	**Luwuk**	**2.34**	**92**	P		**Pn**	**17 40 53.3**	**-0.6**
SPSI	**Sidrap Palu**	**3.07**	**192**	P		**Pn**	**17 41 03.0**	**-0.9**
SPSI				S		**Sn**	**17 41 41.4**	**+0.7**
BNSI	**Bone**	**3.45**	**185**	P		**Pn**	**17 41 08.2**	**-0.9**
KAPI	**Kappang**	**4.10**	**189**	Pn		**Pn**	**17 41 17.8**	**-0.2**
	4.0nm,0.3s,baz=274,slow=18,SNR=4.9							
KAPI				Sn		**Sn**	**17 42 04.7**	**-1.4**
	3.4nm,0.3s,baz=168,slow=19,SNR=1.6							
KAPI				LR		LR	17 42 58.3	
	comp=Z,51nm,21.2s,baz=325,slow=41							
BKSI	**Bulukumba**	**4.36**	**184**	P		**Pn**	**17 41 21.2**	**-0.4**
KBKI	**Kotabaru**	**4.86**	**241**	P		**Pn**	**17 41 28.4**	**-0.1**
ZCP	**Zamboanga City**	**8.00**	**12**	*eP*		Pn	17 42 04.5	-7.2
DAV	**Davao City (W)**	**9.48**	**33**	LR		LR	17 46 32.5	
	comp=Z,30nm,19.9s,baz=163,slow=40							
BATI	**Baumata**	**9.75**	**161**	P		**Pn**	**17 42 37.2**	**+1.5**
TBP	**Tagbilaran**	**11.11**	**18**	*eP*		Pn	17 42 48.0	-6.4
WRA	**Warramunga Arr**	**23.28**	**145**	P		**P**	**17 45 20.4**	**-3.0**
	0.4nm,0.6s,baz=321,slow=9.4,SNR=8.1							
ASAR	**Alice Springs**	**26.09**	**151**	P		**P**	**17 45 48.1**	**-1.4**
	0.2nm,0.5s,baz=343,slow=14,SNR=7.0							
ASAR				PcP		**PcP**	**17 49 15.2**	**-2.0**
	0.3nm,0.9s,baz=325,slow=1.7,SNR=4.7							
MKAR	**Makanchi Array**	**58.10**	**330**	P		**P**	**17 50 12.8**	**+3.8**
	0.3nm,0.8s,baz=141,slow=5.2,SNR=3.5							

*MOS **26** 17:43:39.7±0.9,43.°81N×146.°65E,h82km,mb3.7/7,Error ellipse: s-maj=11.2km s-min=9.1km az=96.6*

*SKHL **26** 17:43:41.5±0.2,43.°84N×146.°40E,h83km±2km,mb4.8/8, msh5.3/7*

*JMA **26** 17:43:41.1±0.1,43.°68N×146.°64E,h66km±2km,M3.7*

*IDC **26** 17:43:42.9±3.0,43.°90N×146.°54E,h92km±26km,mb3.4/20, mb1 3.7/21,mb1mx3.5/47,mbtmp3.8/21,MS2.6/2, Ms1 2.6/2,ms1mx2.1/37,Error ellipse: s-maj=20.0km s-min=15.2km az=156.0*

*NEIC **26** 17:43:42.9±1.4,43.°85N±0.°09×146.°6E±.°1,h93km±7km, mb4.6/4,Error ellipse: s-maj=16.1km s-min=12.7km az=114.0*

ISC 26 17:43:40.4±0.7,**43.°77N**±0.°05×**146.°59E**±0.°05,**h74**km±6km, **n85**,σ1§**47**/104,**mb3.7**/28,**9C-6D**,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.58**	**297**	*i* P		**Pn**	**17 43 54.6**	**+0.1**
YUK				AMB	AMB		17 43 55.0	
	110nm,0.3s							
YUK				AMB	AMB		17 43 55.0	
	100nm,0.3s							
YUK				AMB	AMB		17 43 55.0	
	420nm,0.3s							
YUK				*i* S		**Sn**	**17 44 04.4**	**-0.4**
YUK				A	A		17 44 05.5	
	1μm,0.4s							
YUK				A	A		17 44 05.5	
	2μm,0.4s							
YUK	**Yuzh-Kuril'sk**	**0.58**	**297**	*c* iPN		**Pn**	**17 43 54.5**	**+0.1**
YUK				*i* S		**Sn**	**17 44 04.4**	**-0.4**
YUK				pmax	pmax			
	comp=N,1μm,0.1s							
YUK				pmax	pmax			
	comp=E,992nm,0.1s							
YUK				pmax	pmax			
	comp=Z,4μm,0.1s							
YUK				smax	smax			
	comp=E,17μm,0.1s							
YUK				smax	smax			
	comp=N,13μm,0.2s							
GRPR	**Tuman**	**0.63**	**291**	*i* P		**Pn**	**17 43 55.0**	**+0.1**
GRPR				AMB	AMB		17 43 55.0	
	comp=N,120nm,0.2s							
GRPR				*i* S		**Sn**	**17 44 04.9**	**-0.6**
GRPR				A	A		17 44 06.0	
	comp=N,810nm,0.3s							
GRPR				A	A		17 44 06.0	
	comp=N,500nm,0.3s							
GRPR	**Tuman**	**0.63**	**291**	*i* PN		**Pn**	**17 43 55.0**	**+0.1**
GRPR				*i* S		**Sn**	**17 44 04.9**	**-0.6**
GRPR				pmax	pmax			
	comp=Z,1μm,0.2s							
GRPR				pmax	pmax			
	comp=N,499nm,0.1s							
GRPR				pmax	pmax			
	comp=E,322nm,0.1s							
GRPR				smax	smax			
	comp=E,5μm,0.1s							
GRPR				smax	smax			
	comp=N,8μm,0.2s							
NEM2	**Nemuro 2**	**0.73**	**237**	P		**Pn**	**17 43 56.2**	**+0.2**
NEM2				*e*S		**Sn**	**17 44 07.1**	**-0.4**
NMR	**Nemuro--Hokkai**	**0.74**	**237**	*i* P		**Pn**	**17 43 56.2**	**+0.1**
NMR				*i* S		**Sn**	**17 44 07.2**	**-0.5**
NMR	**Nemuro--Hokkai**	**0.74**	**237**	*i* PN		**Pn**	**17 43 56.2**	**+0.1**
NMR				*i* S		**Sn**	**17 44 07.2**	**-0.5**
GLVR	**Golovnino**	**0.77**	**268**	*i* P		**Pn**	**17 43 57.1**	**+0.7**
GLVR				AMB	AMB		17 43 57.7	
	comp=N,410nm,0.3s							
GLVR				*i* S		**Sn**	**17 44 09.0**	**+0.7**
GLVR				A	A		17 44 09.8	
	comp=N,930nm,0.3s							
GLVR				A	A		17 44 09.8	
	comp=N,730nm,0.3s							
GLVR	**Golovnino**	**0.77**	**268**	*i* PN		**Pn**	**17 43 57.1**	**+0.7**
GLVR				*i* S		**Sn**	**17 44 09.3**	**+1.0**
GLVR				pmax	pmax			
	comp=E,114nm,0.1s							
GLVR				pmax	pmax			
	comp=Z,829nm,0.1s							
GLVR				pmax	pmax			
	comp=N,250nm,0.2s							
GLVR				smax	smax			
	comp=E,7μm,0.2s							
GLVR				smax	smax			
	comp=N,9μm,0.3s							
RUSJ	**Misakicho**	**1.02**	**289**	*i* PN		**Pn**	**17 44 00.8**	**+1.4**
RUSJ				*i* S		**Sn**	**17 44 16.0**	**+2.5**
JRA	**Rausu**	**1.07**	**279**	P		**Pn**	**17 44 01.2**	**+1.2**
JRA				*e*S		**Sn**	**17 44 16.5**	**+1.9**
JNSB	**Nemuroshibetsu**	**1.15**	**271**	P		**Pn**	**17 44 02.2**	**+1.3**
JNSB				*e*S		**Sn**	**17 44 18.2**	**+1.9**
JKHN	**Kushirohamanak**	**1.25**	**237**	P		**Pn**	**17 44 02.8**	**+0.6**
JKHN				*e*S		**Sn**	**17 44 18.6**	**+0.1**
JNK	**Nakash**	**1.37**	**263**	P		**Pn**	**17 44 04.5**	**+0.8**
JNK				*e*S		**Sn**	**17 44 21.9**	**+0.6**
JAK	**Akkeshi**	**1.58**	**241**	P		**Pn**	**17 44 07.0**	**+0.5**
JAK				*e*S		**Sn**	**17 44 26.5**	**+0.2**
KUR	**Kuril'sk**	**1.73**	**32**	*i* P		**Pn**	**17 44 09.6**	**+1.2**
KUR				AMB	AMB		17 44 10.0	
	comp=N,40nm,0.3s							
KUR				AMB	AMB		17 44 10.0	
	comp=N,20nm,0.3s							
KUR				AMB	AMB		17 44 10.0	
	comp=N,150nm,0.3s							
KUR				*i* S		**Sn**	**17 44 30.6**	**+0.9**
KUR				A	A		17 44 35.0	
	comp=N,230nm,0.3s							
KUR				A	A		17 44 35.0	
	comp=N,700nm,0.3s							
KUR	**Kuril'sk**	**1.73**	**32**	*c* iPN		**Pn**	**17 44 09.4**	**+1.0**
KUR				*i* S		**Sn**	**17 44 30.6**	**+0.9**
KUR				pmax	pmax			
	comp=Z,149nm,0.3s							
KUR				pmax	pmax			
	comp=N,63nm,0.2s							
KUR				pmax	pmax			
	comp=E,42nm,0.2s							
KUR				smax	smax			
	comp=N,715nm,1.2s							
KUR				smax	smax			
	comp=N,230nm,0.2s							
KUR				smax	smax			
	comp=E,702nm,0.3s							
JTKR	**Abashiri--Toko**	**1.95**	**277**	P		**Pn**	**17 44 13.0**	**+1.6**
JAR	**Ashorobuto**	**2.10**	**258**	P		**Pn**	**17 44 15.0**	**+1.5**
JAR				*e*S		**Sn**	**17 44 40.2**	**+1.5**
JOB	**Onbets**	**2.19**	**248**	P		**Pn**	**17 44 16.0**	**+1.4**
JOB				*e*S		**Sn**	**17 44 41.7**	**+0.9**
JMP	**Maruseppu**	**2.34**	**277**	P		**Pn**	**17 44 18.9**	**+2.1**
JCH	**Churui**	**2.63**	**245**	P		**Pn**	**17 44 21.4**	**+0.9**
JCH				*e*S		**Sn**	**17 44 51.2**	**-0.2**
JKM2	**Kamakawa 2**	**2.78**	**273**	P		**Pn**	**17 45 25.2**	**+2.6**
JKA	**Kamikawa-asahi**	**2.90**	**278**			**Pn**	**17 44 27.1**	**+2.9**
JKA						Sn	17 45 08.2	+10
ASAJ	**Asahikawa**	**2.90**	**278**	P		**Pn**	**17 44 27.1**	**+2.8**
	comp=E,2.9nm,0.3s,baz=104,slow=12,SNR=27							
ASAJ				S		Sn	17 45 08.2	+10
	comp=E,4.6nm,0.3s,baz=230,slow=11,SNR=4.5							
ASAJ				LR		LR	17 45 52.7	
	comp=E,54nm,21.2s,baz=156,sl

RES	**Resolute Bay**	**55.06**	**17**	P	**P**	**17 53 03.4**	**-0.5**
RES				pmax	pmax			
	comp=Z,22nm,1.5s							
RES	**Resolute Bay**	**55.06**	**17**	P	**P**	**17 53 03.4**	**-0.5**
YKA	**Yellowknife Ar**	**56.01**	**34**	P	**P**	**17 53 11.2**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=297,slow=6.1,SNR=5.4							
WRA	**Warramunga Arr**	**64.39**	**193**	P	**P**	**17 54 09.4**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=7.6,slow=5.9,SNR=1.8							
FINES	**FINESS Array B**	**64.67**	**333**	P	**P**	**17 54 10.2**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=40,slow=11,SNR=5.7							
FINES	**FINESS Array B**	**64.67**	**333**	*i* P	**P**	**17 54 10.6**	**+0.8**
FINES				pmax	pmax			
	comp=Z,2.0nm,1.0s							
OBN	**Obninsk**	**65.05**	**323**	*e*P	**P**	**17 54 13.3**	**+0.9**
OBN	**Obninsk**	**65.05**	**323**	||*e*P	**P**	**17 54 13.3**	**+0.9**
OBN				*e*		17 56 35.0		
OBN				*e*S	**S**	**18 02 41.8**	**-6.8**
OBN				pmax	pmax			
	comp=Z,6.0nm,0.5s							
OBN				MLR	MLR			
	comp=Z,23nm,18.0s							
NVAR	**Mina Array Bea**	**67.91**	**58**	P	**P**	**17 54 31.7**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=297,slow=6.0,SNR=6.1							
ASAR	**Alice Springs**	**68.11**	**193**	P	**P**	**17 54 33.6**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=12,slow=6.7,SNR=6.3							
KBZ	**Khabaz**	**69.48**	**311**	P	**P**	**17 54 41.7**	**+1.1**
	comp=Z,1.8nm,0.6s,baz=72,slow=3.2,SNR=5.5							
HFS	**Hagfors**	**69.51**	**337**	P	**P**	**17 54 40.0**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=36,slow=5.7,SNR=1.2							
PDAR	**Pinedale Array**	**70.21**	**49**	P	**P**	**17 54 45.6**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=280,slow=7.2,SNR=2.6							
AKASG	**Malin Array Be**	**71.32**	**323**	P	**P**	**17 54 50.8**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=39,slow=7.5,SNR=4.6							
MLR	**Muntele Rosu**	**76.69**	**322**	P	**P**	**17 55 23.2**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=165,slow=22,SNR=3.8							
BRTR	**Keskin Array B**	**77.23**	**313**	P	**P**	**17 55 26.1**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=101,slow=6.4,SNR=4.1							
BRTR	**Keskin Array B**	**77.23**	**313**	*i* P	**P**	**17 55 26.8**	**+0.3**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
GERES	**GERESS Array B**	**78.94**	**330**	P	**P**	**17 55 34.8**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=9.7,slow=7.6,SNR=2.9							
MMAI	**Mount Meron Ar**	**81.15**	**308**	P	**P**	**17 55 48.1**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=12,slow=7.8,SNR=2.8							
TXAR	**Lajitas Array**	**82.98**	**56**	P	**P**	**17 55 57.9**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=310,slow=3.3,SNR=6.6							

SKHL ***26*** *17:50:21.1±0.3, 48.°13N×153.°51E, h140km±5km, mb4.5/6, msh5.4/4*
MOS ***26*** *17:50:21.9±1.1, 48.°26N×153.°21E, h149km, mb4.2/5, Error ellipse: s-maj=15.9km s-min=7.0km az=65.0*
IDC ***26*** *17:50:23.9±2.3, 48.°27N×153.°14E, h151km±21km, mb3.3/14, mb1 3.5/18, mb1mx3.3/43, mbtmp3.8/18, MS3.4/1, Ms1 3.4/1, ms1mx2.3/29, Error ellipse: s-maj=18.1km s-min=12.3km az=127.0*
NEIC ***26*** *17:50:23.1±1.2, 48.°3N±0.°1×153.°2E±0.°2, h142km±8km, mb4.2/11, Error ellipse: s-maj=21.1km s-min=11.4km az=127.0*

ISC 26 17:50:23.0±0.6, 48°21N±0°08×153°37E±0°09, h150km, n68, σ1♦42/70, mb3.9/21, 3C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.06**	**35**	*e*P	**Pn**	**17 51 10.3**	**-0.7**
SKR				AMB	AMB	17 51 11.0	
	50nm,0.6s						
SKR				*e*S	**Sn**	**17 51 47.4**	**-0.8**
SKR				A	A	17 51 49.0	
	90nm,0.2s						
SKR				A	A	17 51 49.0	
	120nm,0.2s						
SKR	**Severo-Kuril's**	**3.06**	**35**	*e*PN	**Pn**	**17 51 10.7**	**-0.3**
SKR				*e*S	**Sn**	**17 51 45.8**	**-2.4**
SKR				pmax	pmax		
	comp=Z,94nm,0.6s						
SKR				smax	smax		
	comp=N,94nm,0.5s						
SKR				smax	smax		
	comp=E,117nm,0.5s						
PAU	**Pauzhetka**	**3.95**	**33**	*e*P	**Pn**	**17 51 21.8**	**-0.7**
PAU				AMB	AMB	17 51 23.8	
	comp=E,60nm,0.6s						
PAU				*i* S	**Sn**	**17 52 07.4**	**-1.4**
PAU				A	A	17 52 08.9	
	comp=E,130nm,0.4s						
PAU				A	A	17 52 08.9	
	comp=E,230nm,0.4s						
KUR	**Kuril'sk**	**4.81**	**234**	*i* P	**Pn**	**17 51 34.2**	**+0.3**
KUR				AMB	AMB	17 51 35.9	
	comp=E,30nm,0.4s						
KUR				*i* S	**Sn**	**17 52 29.4**	**+0.3**
KUR				A	A	17 52 39.0	
	comp=E,40nm,0.3s						
KUR				A	A	17 52 39.0	
	comp=E,30nm,0.3s						
KUR	**Kuril'sk**	**4.81**	**234**	⇑*i* PN	**Pn**	**17 51 34.4**	**+0.5**
KUR				*i* S	**Sn**	**17 52 29.4**	**+0.3**
KUR				pmax	pmax		
	comp=N,16nm,0.4s						
KUR				pmax	pmax		
	comp=Z,68nm,0.4s						
KUR				pmax	pmax		
	comp=E,8.0nm,0.3s						
KUR				smax	smax		
	comp=E,31nm,0.7s						
KUR				smax	smax		
	comp=N,36nm,0.4s						
PEA0B	**Petropavlovsk-**	**5.63**	**28**	PN	**Pn**	**17 51 44.6**	**0.0**
PEA0B	**Petropavlovsk-**	**5.63**	**28**		**Pn**	**17 51 44.6**	**0.0**
PETK	**Petropavlovsk-**	**5.63**	**28**	P	**Pn**	**17 51 44.9**	**+0.2**
	comp=N,2.7nm,0.3s,baz=204,slow=13,SNR=65						
PETK				S	**Sn**	**17 52 46.9**	**-1.5**
	baz=34,slow=21,SNR=1.0						
PET	**Petropavlovsk**	**5.88**	**33**	*i* P	**Pn**	**17 51 47.6**	**-0.4**
PET				AMB	AMB	17 51 49.2	
	comp=N,80nm,0.2s						
PET				AMB	AMB	17 51 49.2	
	comp=N,10.0nm,0.2s						
PET				*e*S	**Sn**	**17 52 52.3**	**-2.1**
PET				A	A	17 52 53.6	
	comp=N,20nm,0.2s						
PET				A	A	17 52 53.6	
	comp=N,20nm,0.2s						
PET	**Petropavlovsk**	**5.88**	**33**	*e*PN	**Pn**	**17 51 47.2**	**-0.8**
PET				*e*S	**Sn**	**17 52 50.8**	**-3.6**
PET				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PET				smax	smax		
	comp=N,18nm,0.5s						
PET	**Petropavlovsk**	**5.88**	**33**	Pn	**Pn**	**17 51 45.5**	**-2.4**
YUK	**Yuzh-Kuril'sk**	**6.68**	**234**	*i* P	**Pn**	**17 51 57.8**	**-0.9**
YUK				AMB	AMB	17 51 59.0	
	comp=N,10.0nm,0.6s						
YUK				AMB	AMB	17 51 59.0	
	comp=N,40nm,0.2s						
YUK				AMB	AMB	17 51 59.0	
	comp=N,50nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**6.68**	**234**	*d* iPN	**Pn**	**17 51 57.9**	**-0.8**
YUK				*e*S	**Sn**	**17 53 09.5**	**-4.2**
YUK				pmax	pmax		
	comp=E,46nm,0.6s						
YUK				pmax	pmax		
	comp=Z,141nm,0.6s						
YUK				pmax	pmax		
	comp=N,38nm,0.2s						
GRPR	**Tuman**	**6.75**	**234**	*i* P	**Pn**	**17 51 58.0**	**-1.7**
GRPR				AMB	AMB	17 52 00.0	
	comp=N,20nm,0.4s						
GRPR	**Tuman**	**6.75**	**234**	⇑*i* PN	**Pn**	**17 51 58.7**	**-1.0**
GRPR				pmax	pmax		
	comp=Z,96nm,0.2s						
RUSJ	**Misakicho**	**6.97**	**237**	*e*PN	**Pn**	**17 52 04.0**	**+1.4**
NMR	**Nemuro--Hokkai**	**7.20**	**231**	*i* P	**Pn**	**17 52 02.3**	**-3.4**
NMR	**Nemuro--Hokkai**	**7.20**	**231**	⇑*i* PN	**Pn**	**17 52 02.3**	**-3.4**
YSS	**Yuzh-Sakhalins**	**7.29**	**264**	*e*P	**Pn**	**17 52 08.7**	**+1.9**
JKA	**Kamikawa-asahi**	**8.52**	**245**	*i* P	**Pn**	**17 52 23.7**	**+0.4**
JKA	**Kamikawa-asahi**	**8.52**	**245**		**Pn**	**17 52 23.7**	**+0.4**
ASAJ	**Asahikawa**	**8.52**	**245**	P	**Pn**	**17 52 23.7**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=62,slow=16,SNR=10						
ERM	**Erimo**	**9.51**	**233**	PN	**Pn**	**17 52 33.6**	**-2.8**
ERM	**Erimo**	**9.51**	**233**	Pn	**Pn**	**17 52 33.6**	**-2.8**
SEY	**Seymchan**	**14.77**	**358**	P	**P**	**17 53 45.5**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=183,slow=9.6,SNR=13						

MJAR	**Matsushiro Arr**	**16.13**	**229**	P	**Pn**	**17 54 01.2**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=34,slow=13,SNR=1.9							
BMKR	**Bomnak**	**16.56**	**302**	*e*P	**P**	**17 54 06.0**	**-0.2**
TIXI	**Tiksi**	**26.12**	**343**	P	**P**	**17 55 41.1**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=136,slow=8.4,SNR=5.9							
TIXI	**Tiksi**	**26.12**	**343**	P	**P**	**17 55 41.2**	**-1.4**
TIXI				IAmb	IAmb	17 56 31.0		
	comp=Z,12nm,2.0s							
H11N2	**WAKE ISLAND Hy**	**30.44**	**154**	T	T	18 28 37.1		
	baz=342,slow=76							
H11N1	**WAKE ISLAND Hy**	**30.46**	**154**	T	T	18 28 42.9		
	baz=342,slow=76							
H11N3	**WAKE ISLAND Hy**	**30.46**	**154**	T	T	18 28 38.4		
	baz=342,slow=76							
H11S1	**WAKE ISLAND Hy**	**31.55**	**155**	T	T	18 30 03.3		
	baz=343,slow=76							
H11S3	**WAKE ISLAND Hy**	**31.56**	**155**	T	T	18 30 01.5		
	baz=343,slow=76							
H11S2	**WAKE ISLAND Hy**	**31.57**	**155**	T	T	18 30 04.6		
	baz=343,slow=76							
SEW	**Seward**	**34.42**	**48**	P	**P**	**17 56 55.7**	**+0.2**
SML	**Sawmill**	**34.81**	**45**	P	**P**	**17 57 00.2**	**+1.2**
SML				IAmb	IAmb	17 58 04.9		
	comp=Z,13nm,1.6s							
CCB	**Clear Creek Bu**	**34.92**	**40**	P	**P**	**17 57 01.5**	**+1.7**
HDA	**Harding Lake**	**35.29**	**40**	P	**P**	**17 57 04.2**	**+1.1**
HDA				IAmb	IAmb	17 57 05.2		
	comp=Z,4.1nm,1.2s							
ILAR	**Eielson Array**	**35.31**	**40**	P	**P**	**17 57 03.9**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=273,slow=8.0,SNR=9.2							
INK	**Inuvik**	**40.33**	**33**	P	**P**	**17 57 46.5**	**+1.3**
	comp=Z,1.7nm,0.5s,baz=290,slow=8.2,SNR=15							
INK	**Inuvik**	**40.33**	**33**	P	**P**	**17 57 46.6**	**+1.3**
INK				IAmb	IAmb	17 57 47.9		
	comp=Z,1.9nm,0.7s							
ZALV	**Zalesovo Beam**	**41.91**	**305**	P	**P**	**17 57 57.6**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=65,slow=5.8,SNR=3.9							
C36M	**Paulatuk**	**43.47**	**31**	P	**P**	**17 58 12.3**	**+1.6**
C36M				IAmb	IAmb	17 58 12.7		
	comp=Z,3.1nm,0.6s							
MK31	**Makanchi Array**	**46.44**	**296**	P	**P**	**17 58 34.4**	**-0.1**
MK31				pmax	pmax			
	comp=Z,6.0nm,2.0s							
MK31	**Makanchi Array**	**46.44**	**296**	P	**P**	**17 58 34.4**	**-0.1**
MKAR	**Makanchi Array**	**46.44**	**296**	P	**P**	**17 58 34.4**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=73,slow=6.3,SNR=5.5							
KURK	**Kurchatov**	**46.71**	**303**	*e*P	**P**	**17 58 36.8**	**+0.3**
KURK	**Kurchatov**	**46.71**	**303**	P	**P**	**17 58 36.8**	**+0.3**
KURK				pmax	pmax			
	comp=Z,9.0nm,1.9s							
KURK	**Kurchatov**	**46.71**	**303**	P	**P**	**17 58 36.8**	**+0.3**
KURK				IAmb	IAmb	17 59 25.8		
	comp=Z,8.5nm,1.9s							
YKA	**Yellowknife Ar**	**49.66**	**38**	P	**P**	**17 59 00.6**	**+1.7**
	comp=Z,0.9nm,0.8s,baz=299,slow=7.0,SNR=9.2							
BRVK	**Borovoye**	**50.12**	**309**	*e*P	**P**	**17 59 02.0**	**-0.5**
BRVK	**Borovoye**	**50.12**	**309**	P	**P**	**17 59 02.0**	**-0.5**
BRVK				pmax	pmax			
	comp=Z,3.0nm,0.6s							
BRVK	**Borovoye**	**50.12**	**309**	P	**P**	**17 59 02.0**	**-0.5**
BRVK				IAmb	IAmb	17 59 03.3		
	comp=Z,2.8nm,0.6s							
NEW	**Newport**	**56.16**	**54**	LR	LR	18 25 09.6		
	comp=Z,36nm,20.6s,baz=221,slow=37							
ARCES	**ARCESS Array B**	**56.54**	**341**	P	**P**	**17 59 49.0**	**0.0**
	comp=Z,4.3nm,1.0s,baz=28,slow=8.3,SNR=1.4							
KAPI	**Kappang**	**60.63**	**219**	P	**P**	**18 00 18.4**	**+0.3**
KAPI				pmax	pmax			
	comp=Z,20nm,1.2s							
KAPI	**Kappang**	**60.63**	**219**	P	**P**	**18 00 18.4**	**+0.3**
NVAR	**Mina Array Bea**	**61.61**	**63**	P	**P**	**18 00 26.1**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=301,slow=7.3,SNR=2.3							
FINES	**FINESS Array B**	**62.80**	**335**	P	**P**	**18 00 31.6**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=24,slow=7.0,SNR=20							
NOA	**NORSAR Array B**	**66.91**	**341**	P	**P**	**18 00 59.0**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=24,slow=7.9,SNR=1.9							
NOA	**NORSAR Array B**	**66.91**	**341**	P	**P**	**18 00 59.0**	**+0.4**
WRA	**Warramunga Arr**	**69.95**	**199**	P	**P**	**18 01 18.1**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=16,slow=6.4,SNR=7.6							
ASAR	**Alice Springs**	**73.64**	**199**	P	**P**	**18 01 41.0**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=14,slow=5.6,SNR=14							
ASAR	**Alice Springs**	**73.64**	**199**	P	**P**	**18 01 41.0**	**+1.1**
CLL	**Collm**	**75.21**	**336**	*i* P	**P**	**18 01 50.1**	**+1.4**
TXAR	**Lajitas Array**	**76.63**	**61**	P	**P**	**18 01 58.8**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=299,slow=3.9,SNR=7.6							
GERES	**GERESS Array B**	**77.22**	**334**	P	**P**	**18 02 00.5**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=46,slow=5.6,SNR=2.7							

IDC 26 17:59:01.9±9.6, 13°58N×145°62E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/46, mbtmp3.5/3, MS3.0/1, Ms1 3.0/1, ms1mx2.3/23, Error ellipse: s-maj=357.1km s-min=29.9km az=81.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.11**	**199**	P	P	18 05 57.1	-0.2
	0.9nm,1.0s,baz=23,slow=9.5,SNR=3.5						
ASAR	**Alice Springs**	**38.75**	**197**	P	P	18 06 28.2	0.0
	0.3nm,0.8s,baz=12,slow=11,SNR=5.2						
PETK	**Petropavlovsk-**	**40.59**	**11**	LR	LR	18 23 20.1	
	comp=Z,1.9nm,19.3s,baz=241,slow=36						
MKAR	**Makanchi Array**	**62.01**	**316**	P	P	18 09 24.1	0.0
	0.3nm,0.3s,baz=94,slow=8.5,SNR=11						

SSNC 26 18:01:09.9±2.4, 21°35N×76°13W, h5km±30km, MD2.4, ML1.3, MW2.5, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCC	**Rio Carpintero**	**1.41**	**163**	*e*P	Pn	18 01 35.0	-1.3
RCC				*e*S	Sb	18 01 51.2	-3.8
RCC				IAML		18 01 54.4	
	comp=N,3.0nm,0.2s						
RCC				IAML		18 01 56.0	
	comp=E,3.1nm,0.3s						
RCC	**Rio Carpintero**	**1.41**	**163**	*e*P	Pn	18 01 33.0	-3.3
RCC				*e*S	Sb	18 01 51.9	-3.1
RCC				IAML		18 01 54.4	
	comp=N,3.0nm,0.2s						
RCC				IAML		18 01 56.0	
	comp=E,3.2nm,0.3s						
LMGC	**Las Mercedes**	**1.52**	**213**	*e*P	Pn	18 01 37.0	-0.7
LMGC				*e*S	Sn	18 01 54.7	-3.2
LMGC				IAML		18 01 57.3	
	comp=E,5.3nm,0.1s						
LMGC				IAML		18 01 58.4	
	comp=N,5.4nm,0.1s						
LMGC	**Las Mercedes**	**1.52**	**213**	*e*P	Pn	18 01 34.5	-3.2
LMGC				*e*S	Sn	18 01 53.7	-4.1
LMGC				IAML		18 01 57.3	
	comp=E,5.2nm,0.1s						
LMGC				IAML		18 01 58.4	
	comp=N,5.3nm,0.1s						
CCCC	**Cccc**	**1.53**	**265**	*e*P	Pn	18 01 31.2	-6.7
CCCC				*e*S	Sn	18 01 47.8	-10
CCCC				IAML		18 01 49.7	
	comp=N,4.8nm,0.2s						
CCCC				IAML		18 01 51.6	
	comp=E,3.9nm,0.2s						

DDA ***26*** *18:05:11.8, 40.°35N×25.°94E, h7km±1km, ML2.3*
ISK ***26*** *18:05:11.2, 40.°37N×25.°92E, h10km, ML2.8/7*

ISC 26 18:05:11.8±1.0, 40°37N±0°03×25°94E±0°05, h13km±8km, n23, σ0♦42/29, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOKA	**anakkale-Gk**	**0.18**	**188**	*i* P	**Pg**	**18 05 15.8**	**-0.1**
GADA	**Gvkgeada**	**0.18**	**190**	PG	**Pg**	**18 05 15.5**	**-0.4**
GADA				SG	**Sg**	**18 05 18.8**	**+0.1**
ENEZ	**Enez**	**0.40**	**24**	PG	**Pg**	**18 05 19.6**	**-0.2**
ENEZ				SG	**Sg**	**18 05 25.9**	**+0.7**
GELI	**Tayfur-Gelibol**	**0.41**	**86**	PG	**Pg**	**18 05 20.1**	**+0.2**
GELI				SG	**Sb**	**18 05 26.5**	**-0.5**
BOZC	**Bozcaada**	**0.53**	**171**	PG	**Pg**	**18 05 22.1**	**-0.1**
BOZC				SG	**Sb**	**18 05 29.9**	**-0.6**
BOZC	**Bozcaada**	**0.53**	**171**	*i* P	**Pg**	**18 05 22.2**	**-0.1**
BOZC				IAML		18 05 30.0	
	comp=N,220nm,0.3s						
BOZC				IAML		18 05 30.0	
	comp=E,445nm,0.3s						
BOZC				*i* S	**Sb**	**18 05 30.1**	**-0.4**
EZN	**Ezine**	**0.62**	**151**	PG	**Pg**	**18 05 23.7**	**-0.1**

LPK	**Lapseki**	**0.63**	**89**	PG	**Pb**	**18 05 24.4**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**0.78**	**143**	*i* P	**Pg**	**18 05 26.9**	**-0.1**
BAYC				*i* S	**Sb**	**18 05 37.9**	**+0.2**
BAYC				IAML		18 05 39.0	
	comp=N,76nm,0.2s						
BAYC				IAML		18 05 42.0	
	comp=E,102nm,0.2s						
RDO	**Rodhopi**	**0.83**	**339**	PG	**Pb**	**18 05 28.3**	**+0.2**
UKOP	**Uzunkopru-Edir**	**0.92**	**34**	PG	**Pg**	**18 05 28.9**	**-0.7**
RKY	**Sarkoy-Tekirda**	**1.00**	**71**	PG	**Pg**	**18 05 30.9**	**-0.1**
KRBG	**Karabiga-Canak**	**1.04**	**88**	PG	**Pg**	**18 05 31.1**	**-0.7**
KNL	**Balıkesir**	**1.22**	**94**	*i* P	**Pn**	**18 05 34.6**	**+0.2**
MRMT	**Marmara Adasi**	**1.28**	**79**	PN	**Pn**	**18 05 35.3**	**-0.2**
KDZ	**Kurdzhali**	**1.34**	**343**	PN	**Pn**	**18 05 36.1**	**-0.1**
TKR	**Tekirdag**	**1.36**	**62**	PN	**Pn**	**18 05 36.3**	**-0.2**
GONE	**Gonen-Balikesi**	**1.38**	**103**	PN	**Pn**	**18 05 36.9**	**+0.3**
EDC	**Edincik**	**1.47**	**90**	PN	**Pn**	**18 05 38.5**	**+0.5**
DKL	**Dikili**	**1.49**	**150**	PN	**Pn**	**18 05 38.6**	**+0.3**
CRLT	**Corlu**	**1.56**	**60**	PN	**Pn**	**18 05 39.9**	**+0.7**
EDRB	**Edirne**	**1.60**	**22**	PN	**Pn**	**18 05 40.5**	**+0.8**
BALB	**Balikesir**	**1.66**	**115**	PN	**Pn**	**18 05 40.9**	**+0.4**

NIED ***26*** *18:12:00, 43.°00N×145.°40E, h50km, Mw3.9 Best double couple: M0 7.88000×10^14 NP1:φs36.00000°, δ65.00000°, λ88.00000°. NP2:φs220.00000°, δ25.00000°, λ94.00000°.*
MOS ***26*** *18:12:55.3±0.8, 42.°98N×145.°45E, h59km, mb4.2/9, Error ellipse: s-maj=10.2km s-min=6.1km az=88.9*
IDC ***26*** *18:12:55.0±2.6, 42.°66N×145.°53E, h52km±21km, mb3.6/16, mb1 3.8/20, mb1mx3.6/43, mbtmp3.8/20, ML2.2/3, MS2.9/6, Ms1 2.9/6, ms1mx2.6/53, Error ellipse: s-maj=20.6km s-min=17.0km az=177.0*
JMA ***26*** *18:12:56.3±0.1, 42.°99N×145.°42E, h49km±1km, M3.8*
JMA Felt I/ J1.
SKHL ***26*** *18:12:56.9±0.3, 43.°04N×145.°44E, h66km±2km, mb4.2/4*
NEIC ***26*** *18:12:56.6±1.0, 42.°9N±0.°1×145.°5E±0.°1, h55km±8km, mb4.4/11, Error ellipse: s-maj=15.8km s-min=14.2km az=125.0*

ISC 26 18:12:56.2±0.8, 42°97N±0°06×145°45E±0°04, h48km±6km, n98, σ0♦83/107, mb3.9/31, MS3.1/3, 9C-9D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKHN	**Kushirohamanak**	**0.24**	**299**	P	**Pn**	**18 13 04.6**	**0.0**
JKHN				S	**Sn**	**18 13 10.6**	**+0.1**
NMR	**Nemuro--Hokkai**	**0.45**	**27**	*i* P	**Pn**	**18 13 06.6**	**-0.2**
NMR				*i* S	**Sn**	**18 13 13.7**	**-0.6**
NMR	**Nemuro--Hokkai**	**0.45**	**27**	⇑*i* PN	**Pn**	**18 13 06.6**	**-0.2**
NMR				*i* S	**Sn**	**18 13 13.7**	**-0.6**
NEM2	**Nemuro 2**	**0.45**	**29**	P	**Pn**	**18 13 06.5**	**-0.3**
NEM2				*e*S	**Sn**	**18 13 13.6**	**-0.7**
JAK	**Akkeshi**	**0.55**	**273**	P	**Pn**	**18 13 07.7**	**-0.2**
JAK				S	**Sn**	**18 13 16.0**	**-0.3**
GLVR	**Golovnino**	**0.77**	**4**	*i* P	**Pn**	**18 13 10.5**	**-0.3**
GLVR				AMB	AMB	18 13 11.0	
	10.0nm,0.3s						
GLVR				AMB	AMB	18 13 11.0	
	30nm,0.3s						
GLVR				AMB	AMB	18 13 11.0	
	150nm,0.3s						
GLVR				*i* S	**Sn**	**18 13 21.1**	**-0.4**
GLVR				A	A	18 13 21.9	
	700nm,0.3s						
GLVR				A	A	18 13 21.9	
	900nm,0.3s						
GLVR	**Golovnino**	**0.77**	**4**	⇑*i* PN	**Pn**	**18 13 10.5**	**-0.3**
GLVR				*i* S	**Sn**	**18 13 21.1**	**-0.4**
GLVR				pmax	pmax		
	comp=Z,2μm,0.3s						
GLVR				pmax	pmax		
	comp=N,135nm,0.2s						
GLVR				pmax	pmax		
	comp=E,288nm,0.4s						
GLVR				smax	smax		
	comp=N,7μm,0.3s						
GLVR				smax	smax		
	comp=E,9μm,0.3s						
JNK	**Nakash**	**0.81**	**320**	P	**Pn**	**18 13 10.9**	**-0.5**
JNK				S	**Sn**	**18 13 21.2**	**-1.3**
JRA	**Rausu**	**1.00**	**346**	P	**Pn**	**18 13 13.7**	**-0.2**
JRA				*e*S	**Sn**	**18 13 26.5**	**-0.3**
GRPR	**Tuman**	**1.05**	**13**	*i* P	**Pn**	**18 13 14.3**	**-0.3**
GRPR				AMB	AMB	18 13 17.0	
	comp=E,50nm,0.2s						
GRPR				*i* S	**Sn**	**18 13 26.9**	**-1.3**
GRPR				A	A	18 13 27.5	
	comp=E,360nm,0.5s						
GRPR				A	A	18 13 27.5	
	comp=E,910nm,0.5s						
GRPR	**Tuman**	**1.05**	**13**	||*i* PN	**Pn**	**18 13 14.3**	**-0.3**
GRPR				*i* S	**Sn**	**18 13 26.9**	**-1.3**
GRPR				pmax	pmax		
	comp=E,354nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,520nm,0.2s						
GRPR				pmax	pmax		
	comp=N,124nm,0.1s						
GRPR				smax	smax		
	comp=N,4μm,0.5s						
GRPR				smax	smax		
	comp=E,9μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.11**	**16**	*i* P	**Pn**	**18 13 15.2**	**-0.2**
YUK				AMB	AMB	18 13 15.9	
	comp=E,40nm,0.2s						
YUK				AMB	AMB	18 13 15.9	
	comp=E,30nm,0.2s						
YUK				AMB	AMB	18 13 15.9	
	comp=E,50nm,0.2s						
YUK				*i* S	**Sn**	**18 13 28.8**	**-0.7**
YUK				A	A	18 13 30.0	
	comp=E,260nm,0.3s						
YUK				A	A	18 13 30.0

KUR pmax pmax
comp=Z,52nm,0.3s
KUR smax smax
comp=E,110nm,0.3s
KUR smax smax
comp=N,267nm,0.7s
YSS Yuzh-Sakhalins 4.42 335 *e*P **Pn 18 14 01.6 +0.9**
YSS Yuzh-Sakhalins 4.42 335 *e*PN **Pn 18 14 00.5 -0.2**
MJB9 Matsu-Tunnel 8.49 223 Pn **Pn 18 14 56.3 -0.3**
MAJO Matsushiro 8.50 223 PN **Pn 18 14 56.5 -0.2**
MAJO Matsushiro 8.50 223 Pn **Pn 18 14 56.5 -0.2**
MJAR Matsushiro Arr 8.50 223 P **Pn** 18 14 52.6 -4.1
comp=N,0.0nm,0.3s,baz=30,slow=15,SNR=1.8
USRK Ussuriysk Ar. 9.85 282 P **Pn 18 15 16.4 +1.3**
baz=77,slow=13,SNR=2.9
MSHR Mys Shultsa 10.52 273⇓ *i*PN **Pn 18 15 22.6 -1.6**
SKR Severo-Kuril's 10.62 40 *e*P **Pn 18 15 26.1 +0.5**
SKR Severo-Kuril's 10.62 40⇑ *i*PN **Pn 18 15 26.1 +0.5**
KLR Kul'dur 11.38 308 P **Pn 18 15 36.9 +0.9**
comp=N,0.1nm,0.3s,baz=118,slow=18,SNR=3.1
KLR LR LR 18 20 32.2
comp=N,444nm,18.8s,baz=73,slow=39
PET Petropavlovsk 13.37 37 *e*P **Pn 18 16 04.2 +1.0**
PET Petropavlovsk 13.37 37⇓ *i*PN **Pn 18 16 04.2 +1.0**
PET pmax pmax
comp=Z,7.0nm,1.2s
KSRS Korea Array 14.47 254 LR LR 18 21 01.9
comp=Z,31nm,21.0s,baz=57,slow=34
JNU Nakatsue 15.09 234 LR LR 18 21 51.5
comp=Z,44nm,21.0s,baz=20,slow=36
BMKR Bomnak 16.00 323 *e*P **Pn 18 16 36.0 -1.8**
SEY Seymchan 20.41 9 P **P 18 17 29.8 +0.8**
comp=Z,0.9nm,0.7s,baz=222,slow=14,SNR=1.8
YAK Yakutsk 21.26 339 *i* P **P 18 17 39.8 +1.7**
YAK Yakutsk 21.26 339⇓ *i*P **P 18 17 39.8 +1.7**
YAK pmax pmax
comp=Z,2.0nm,0.9s
ULN Ulaanbaatar 27.19 294 *i* P **P 18 18 35.7 +0.3**
ULN Ulaanbaatar 27.19 294⇓ *i*P **P 18 18 35.7 +0.3**
ULN pmax pmax
comp=Z,9.0nm,3.5s
BILL Bilibino 27.46 17 *i* P **P 18 18 37.3 -0.1**
BILL Bilibino 27.46 17⇓ *i*P **P 18 18 37.3 -0.1**
BILL pmax pmax
comp=Z,2.0nm,1.2s
SONM Songino Array 27.64 294 P **P 18 18 39.7 +0.4**
comp=Z,1.6nm,0.7s,baz=84,slow=9.0,SNR=9.6
SONM LR LR 18 30 47.9
comp=Z,28nm,19.6s,baz=102,slow=39
TLY Talaya 29.30 302 LR LR 18 31 50.4
comp=Z,42nm,18.2s,baz=97,slow=38
H11N2 WAKE ISLAND Hy 29.37 135 T T 18 49 59.1
baz=327,slow=75,SNR=461
H11N1 WAKE ISLAND Hy 29.38 135 T T 18 50 02.8
baz=327,slow=75,SNR=499
H11N3 WAKE ISLAND Hy 29.39 135 T T 18 50 00.4
baz=327,slow=75,SNR=567
TIXI Tiksi 29.89 350 *i* P **P 18 18 58.6 -0.3**
TIXI Tiksi 29.89 350⇓ *i*P **P 18 18 58.6 -0.3**
TIXI pmax pmax
comp=Z,3.0nm,2.1s
H11S1 WAKE ISLAND Hy 30.30 137 T T 18 50 51.0
baz=329,slow=76,SNR=697
H11S3 WAKE ISLAND Hy 30.30 137 T T 18 50 50.3
baz=329,slow=76,SNR=626
H11S2 WAKE ISLAND Hy 30.31 137 T T 18 51 09.3
baz=329,slow=76,SNR=301
RSO Redoubt South 40.38 42 P **P 18 20 30.2 +0.9**
ZALV Zalesovo Beam 40.48 307 P **P 18 20 30.4 +0.3**
comp=Z,0.4nm,0.3s,baz=104,slow=6.1,SNR=2.3
ZALV PcP **PcP 18 22 32.5 +0.7**
comp=Z,1.2nm,0.4s,baz=96,slow=3.8,SNR=5.2
KDAK Kodiak Island 40.69 46 P **P 18 20 31.9 +0.2**
comp=Z,4.5nm,0.9s,baz=264,slow=9.2,SNR=1.6
ILAR Eielson Array 42.85 36 P **P 18 20 49.9 +0.6**
comp=Z,0.3nm,0.4s,baz=253,slow=5.1,SNR=9.7
MK31 Makanchi Array 43.85 298 P **P 18 20 57.9 +0.3**
MK31 pmax pmax
comp=Z,2.0nm,0.9s
MK31 Makanchi Array 43.85 298 P **P 18 20 57.9 +0.3**
MKAR Makanchi Array 43.85 298 P **P 18 20 57.5 0.0**
comp=Z,1.6nm,0.7s,baz=77,slow=9.0,SNR=18
MKAR PcP **PcP 18 22 43.7 +0.5**
comp=Z,0.2nm,0.3s,baz=68,slow=5.5,SNR=4.0
MAKZ Makanchi 44.05 298 P **P 18 20 59.4 +0.2**
MAKZ pmax pmax
comp=Z,2.0nm,0.9s
MAKZ Makanchi 44.05 298 P **P 18 20 59.4 +0.2**
SCRK Sand Creek 44.18 37 P **P 18 21 00.1 0.0**
SCRK IAmb IAmb 18 21 53.1
comp=Z,5.8nm,1.6s
KURK Kurchatov 44.94 304 *i* P **P 18 21 05.5 -0.7**
KURK Kurchatov 44.94 304⇑ *i*P **P 18 21 05.5 -0.7**
KURK pmax pmax
comp=Z,1.0nm,0.6s
KURK Kurchatov 44.94 304 P **P 18 21 06.2 +0.1**
KURK IAmb IAmb 18 21 47.9
comp=Z,10nm,2.0s
EPYK Eagle Plains 46.85 33 P **P 18 21 22.6 +1.5**
EPYK IAmb IAmb 18 21 48.8
comp=Z,20nm,1.9s
INK Inuvik 47.70 30 P **P 18 21 27.9 +0.3**
INK pmax pmax
comp=Z,4.0nm,1.4s
INK Inuvik 47.70 30 P **P 18 21 27.9 +0.3**
INK IAmb IAmb 18 22 38.8
comp=Z,4.3nm,1.4s
HYT Haines Junctio 47.73 40 P **P 18 21 30.0 +1.9**
HYT IAmb IAmb 18 21 31.9
comp=Z,3.9nm,0.9s
BRVK Borovoye 49.09 309⇑ *i*P **P 18 21 37.0 -1.5**
BRVK pmax pmax
comp=Z,2.0nm,1.5s
RES Resolute Bay 56.07 16 P **P 18 22 29.6 -0.2**
comp=Z,4.3nm,0.6s,baz=299,slow=4.0,SNR=6.2
RES Resolute Bay 56.07 16 P **P 18 22 29.9 +0.2**
WRAB Tennant Creek 63.41 192⇑ *i*P **P 18 23 21.6 +0.8**
WRAB pmax pmax
comp=Z,8.0nm,1.7s
FIA1 FINESS Array S 65.00 332 P **P 18 23 30.9 +0.1**
FINES FINESS Array B 65.00 332 P **P 18 23 30.4 -0.4**
comp=Z,1.4nm,0.4s,baz=46,slow=8.6,SNR=14
FINES FINESS Array B 65.00 332 *i* P **P 18 23 30.8 0.0**
FINES pmax pmax
comp=Z,1.0nm,0.4s
OBN Obninsk 65.20 323 *e*P **P 18 23 31.1 -1.1**
OBN Obninsk 65.20 323⇑ *e*P **P 18 23 31.1 -1.1**
OBN eS S 18 32 43.2 +32
OBN pmax pmax
comp=Z,13nm,0.4s
OBN MLR MLR
comp=Z,17nm,14.0s
FFC Flin Flon 67.06 36 P **P 18 23 43.6 -0.6**
FFC pmax pmax
comp=Z,16nm,2.0s
FFC Flin Flon 67.06 36 P **P 18 23 43.6 -0.6**
FFC IAmb IAmb 18 25 06.6
comp=Z,16nm,1.9s
ASAR Alice Springs 67.15 191 P P 18 23 40.5 -4.5
comp=Z,0.4nm,0.9s,baz=1.7,slow=6.4,SNR=2.4
NVAR Mina Array Bea 69.05 57 P **P 18 23 56.0 -1.2**
comp=Z,0.2nm,0.5s,baz=278,slow=6.3,SNR=3.9
KBZ Khabaz 69.38 311 P **P 18 23 58.7 -0.1**
comp=Z,2.1nm,0.8s,baz=204,slow=7.5,SNR=4.5
NB2 NORSAR Subarra 69.88 338 P **P 18 24 01.4 -0.3**
comp=Z,0.5nm,0.4s,baz=32,slow=6.5
NOA NORSAR Array B 69.88 339 P **P 18 24 01.1 -0.6**
comp=Z,1.3nm,0.7s,baz=36,slow=6.1,SNR=5.8
AKASG Malin Array Be 71.47 323 P **P 18 24 11.1 -0.3**
comp=Z,1.3nm,0.4s,baz=41,slow=5.9,SNR=11
AKBB Malin Array Si 71.47 323 P **P 18 24 11.2 -0.3**
AKBB pmax pmax
comp=Z,3.0nm,0.8s
AKBB Malin Array Si 71.47 323 P **P 18 24 11.2 -0.3**
AKBB IAmb IAmb 18 24 11.9
comp=Z,2.7nm,0.8s
BRTR Keskin Array B 77.17 313 P **P 18 24 44.3 -0.8**
comp=Z,0.5nm,0.7s,baz=99,slow=8.9,SNR=3.3
CLL Collm 77.42 332 *e*P **P 18 24 47.0 +1.0**
GERES GERESS Array B 79.22 330 P **P 18 24 54.8 -1.3**
comp=Z,0.2nm,0.3s,baz=38,slow=5.0,SNR=2.2
TXAR Lajitas Array 84.12 55 P **P 18 25 21.5 -0.8**
comp=Z,0.2nm,0.5s,baz=302,slow=2.0,SNR=3.6
CMIG Matias Romero 98.58 57 P **P 18 26 30.2 0.0**
comp=Z,1.8nm,0.5s,baz=223,slow=2.1,SNR=6.2

*JMA **26** 18:17:16.1±0.1, 42.06N×142.47E, h68km±2km, M3.4*
Broadband fault plane solution: P waves. NP1: ϕs77.0000°, δ7.0000°, λ-23.00000°. NP2:ϕs189.00000°, δ87.00000°, λ-96.00000°. Principal axes: T Plg42.0000°, Azm285.0000°; N Plg6.0000°, Azm190.0000°; P Plg47.0000°, Azm93.0000°;
*IDC **26** 18:17:18.4±2.1, 42.14N×142.45E, h91km±16km, mb3.3/5, mb1 3.3/8, mb1mx3.1/37, mbtmp3.5/8, MS3.3/1, Ms1 3.4/1, ms1mx2.3/25 Error ellipse: s-maj=34.5km s-min=15.7km az=105.0*

ISC 26 18:17:16.6±0.8, 42.05N±0.04×142.45E±0.03, h66km±7km, n34, σ1s04/46, mb3.5/5, 4C-7D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
JNBK	**Urakawa-nobuka**	**0.32**	**44**	⇑P		**Pn**	**18 17 26.8**	**-0.7**
JNBK				*e*S		**Sn**	**18 17 35.1**	**-0.3**
JSHD	**Hidakashinhida**	**0.36**	**2**	P		**Pn**	**18 17 27.4**	**-0.4**
JSHD				*e*S		**Sn**	**18 17 36.2**	**+0.3**
JEM	**Erimo**	**0.53**	**94**	⇑P		**Pn**	**18 17 29.4**	**+0.1**
JEM				*e*S		**Sn**	**18 17 38.9**	**+0.3**
JTHR	**Tokachihiroo**	**0.67**	**69**	⇑P		**Pn**	**18 17 30.8**	**-0.1**
JTHR				*e*S		**Sn**	**18 17 41.3**	**-0.1**
JIAM	**Iburiatsuma**	**0.69**	**326**	⇓P		**Pn**	**18 17 31.4**	**+0.3**
JIAM				*e*S		**Sn**	**18 17 43.2**	**+1.4**
JBT2	**Biratori 2**	**0.73**	**355**	⇓P		**Pn**	**18 17 30.9**	**-0.7**
JBT2				*e*S		**Sn**	**18 17 42.0**	**-0.6**
JCH	**Churui**	**0.88**	**50**	⇑P		**Pn**	**18 17 32.9**	**-0.4**
JCH				*e*S		**Sn**	**18 17 45.6**	**-0.1**
JKB	**Kayabe**	**1.07**	**262**	⇓P		**Pn**	**18 17 35.5**	**-0.2**
JKB				*e*S		**Sn**	**18 17 49.7**	**-0.3**
JEW	**Eniwo**	**1.08**	**317**	⇓P		**Pn**	**18 17 35.8**	**-0.1**
JEW				*e*S		**Sn**	**18 17 50.6**	**+0.3**
JNB	**Noboribetsu**	**1.13**	**292**	⇓P		**Pn**	**18 17 35.6**	**-0.9**
JNB				*e*S		**Sn**	**18 17 50.4**	**-1.0**
JOT	**Ohata**	**1.25**	**238**	⇓P		**Pn**	**18 17 37.9**	**-0.1**
JOT				*e*S		**Sn**	**18 17 54.0**	**-0.1**
JOB	**Onbets**	**1.33**	**50**	P		**Pn**	**18 17 39.6**	**+0.5**
JOB				*e*S		**Sn**	**18 17 57.0**	**+0.9**
JISS	**Ishikarishitsu**	**1.44**	**328**	P		**Pn**	**18 17 40.4**	**-0.2**
JISS				*e*S		**Sn**	**18 17 58.9**	**+0.2**
JAB	**Ashibetsu**	**1.46**	**353**	P		**Pn**	**18 17 41.0**	**+0.1**
JAB				*e*S		**Sn**	**18 18 00.7**	**+1.5**
JYM2	**Yakumo 2**	**1.55**	**273**	⇓P		**Pn**	**18 17 41.8**	**-0.3**
JYM2				*e*S		**Sn**	**18 18 01.3**	**0.0**
JAR	**Ashorobuto**	**1.58**	**38**	P		**Pn**	**18 17 42.3**	**-0.2**
JAR				*e*S		**Sn**	**18 18 02.6**	**+0.6**
JSR	**Shiriuchi**	**1.61**	**252**	P		**Pn**	**18 17 43.1**	**+0.3**
JSR				*e*S		**Sn**	**18 18 03.4**	**+0.7**
JHR	**Hokuryu**	**1.77**	**343**	P		**Pn**	**18 17 45.9**	**+0.8**
JHR				*e*S		**Sn**	**18 18 08.4**	**+1.7**
ASAJ	**Asahikawa**	**2.07**	**3**	P		**Pn**	**18 17 49.3**	**+0.2**
	21nm,0.3s,baz=189,slow=11,SNR=42							
ASAJ				S		**Sn**	**18 18 15.4**	**+1.7**
	9.4nm,0.3s,baz=340,slow=32,SNR=9.6							
MJAR	**Matsushiro Arr**	**6.41**	**212**	P		**Pn**	**18 18 51.8**	**+3.4**
	0.1nm,0.3s,baz=30,slow=17,SNR=1.9							
USRK	**Ussuriysk Ar.**	**7.95**	**289**	P		**Pn**	**18 19 10.8**	**+1.4**
	baz=88,slow=14,SNR=3.3							
KSRS	**Korea Array**	**12.09**	**252**	P		**Pn**	**18 20 08.4**	**+2.6**
	0.2nm,0.3s,baz=63,slow=14,SNR=1.7							
SONM	**Songino Array**	**26.00**	**295**	P		**P**	**18 22 43.2**	**0.0**
	0.4nm,0.5s,baz=64,slow=7.7,SNR=3.7							
H11N2	**WAKE ISLAND Hy**	**30.39**	**130**	T		T	18 54 54.4	
	baz=323							
H11N1	**WAKE ISLAND Hy**	**30.39**	**130**	T		T	18 54 44.4	
	baz=323							
H11N3	**WAKE ISLAND Hy**	**30.40**	**130**	T		T	18 54 49.0	
	baz=323							
H11S1	**WAKE ISLAND Hy**	**31.25**	**131**	T		T	18 56 00.6	
	baz=325,slow=76							
H11S3	**WAKE ISLAND Hy**	**31.25**	**131**	T		T	18 55 57.3	
	baz=325,slow=76							
H11S2	**WAKE ISLAND Hy**	**31.26**	**131**	T		T	18 55 59.5	
	baz=325,slow=76							
ZALV	**Zalesovo Beam**	**39.29**	**308**	P		**P**	**18 24 37.1**	**-1.6**
	0.5nm,0.3s,baz=92,slow=8.8,SNR=1.7							
MKAR	**Makanchi Array**	**42.31**	**298**	P		**P**	**18 25 01.6**	**-2.2**
	0.4nm,0.5s,baz=90,slow=8.3,SNR=6.1							
ILAR	**Eielson Array**	**44.88**	**35**	LR		LR	18 45 41.7	
	comp=Z,31nm,18.2s,baz=128,slow=38							
WRA	**Warramunga Arr**	**62.13**	**189**	P		**P**	**18 27 30.4**	**-0.3**
	0.4nm,0.9s,baz=7.6,slow=6.9,SNR=1.3							
FINES	**FINESS Array B**	**64.77**	**332**	P		**P**	**18 27 47.0**	**-0.6**
	0.9nm,0.5s,baz=32,slow=8.2,SNR=4.3							

TAP 26 18:25:51.4, 23.73N×121.44E, h18km, ML1.8, 2C-1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
EGFH	**Guangfu**	**0.06**	**188**⇑	*i*P		Pg	18 25 54.9	+0.1
	baz=188							
EGFH				*i* S		Sg	18 25 56.8	-0.1
	baz=188							
ESL	**Shilin**	**0.08**	**357**	*i* P		Pg	18 25 54.9	0.0
	baz=3.0							
ESL				S		Sg	18 25 57.2	0.0
	baz=3.0							
HGSD	**Ruisui**	**0.24**	**183**	P		Pb	18 25 57.5	+0.3
	baz=187							
HGSD				*e*S		Sb	18 26 02.0	+0.9
	baz=187							
EHY	**Hungye**	**0.25**	**205**	*i* P		Pg	18 25 56.8	-0.3
	baz=204							
EHY				*e*S		Sg	18 26 01.1	+0.1
	baz=204							
VWDT	**VWDT**	**0.27**	**275**⇑	*i*P		Pg	18 25 57.6	+0.1
	baz=275							
VWDT				S		Sg	18 26 01.6	0.0
	baz=275							
HWA	**Hwalien**	**0.29**	**32**	*e*S		Sb	18 26 03.7	+1.1
	baz=25							
OWD	**Renai**	**0.33**	**313**	*e*P		Pg	18 25 58.2	-0.3
	baz=313							
OWD				*e*S		Sg	18 26 03.0	-0.2
	baz=313							
YULB	**Yu-li**	**0.36**	**201**	P		Pg	18 25 58.7	-0.3
	baz=197							
YULB				*e*S		Sg	18 26 03.7	-0.5
	baz=197							
TWD	**Chiawan**	**0.38**	**23**	*e*P		Pg	18 25 59.4	+0.2
	baz=17							
TWD				*e*S		Sb	18 26 05.0	-0.1
	baz=17							
TWF1	**Yuli**	**0.40**	**199**	P		Pg	18 25 59.4	-0.2
	baz=201							
TWF1				*e*S		Sg	18 26 05.2	0.0
	baz=201							
CHGB	**Renai**	**0.41**	**324**⇓	*i*P		Pg	18 25 59.9	0.0
	baz=330							
CHGB				*e*S		Sg	18 26 05.4	-0.2
	baz=330							
WHF	**Hehuan Shan**	**0.44**	**339**	*e*P		Pg	18 26 00.4	-0.2
	baz=340							
SSLB	**Suanglung**	**0.45**	**277**	*e*P		Pg	18 26 00.2	-0.3
	baz=284							
SSLB				*e*S		Sg	18 26 05.6	-1.1
	baz=284							
NACB	**Ninganchiao**	**0.46**	**18**	*e*P		Pg	18 26 00.5	-0.3
	baz=18							
NACB				*e*S		Sg	18 26 07.0	-0.1
	baz=18							
ETLH	**Xiulin Townshi**	**0.47**	**5**	*e*P		Pg	18 26 00.6	-0.4
	baz=5.0							
ETLH				*e*S		Sg	18 26 07.0	-0.5
	baz=5.0							
SMLT	**Sun Moon Lake**	**0.51**	**287**	*e*P		Pg	18 26 01.2	-0.6
	baz=293							
SMLT				*e*S		Sg	18 26 08.5	-0.3
	baz=293							
WHYT	**Xinyi Township**	**0.54**	**266**	*e*P		Pg	18 26 02.2	+0.1
	baz=267							
DPDB	**Guoxing**	**0.56**	**303**	*e*P		Pg	18 26 02.4	-0.1
	baz=303							
DPDB				*e*S		Sg	18 26 09.7	-0.3
	baz=303							
TYC	**Yuchr**	**0.56**	**288**	*e*P		Pg	18 26 01.8	-0.8
	baz=288							
NNSB	**Datong**	**0.69**	**356**	*e*P		Pb	18 26 04.9	-0.2
	baz=4.0							
NNSB				*e*S		Sg	18 26 14.0	-0.5
	baz=4.0							
NNSH	**Datong**	**0.69**	**356**	*e*P		Pb	18 26 05.0	-0.2
	baz=4.0							
NNSH				*e*S		Sg	18 26 14.0	-0.4
	baz=4.0							
NNS	**Nan Shan**	**0.71**	**355**	*e*P		Pb	18 26 05.1	-0.3
	baz=6.0							
NNS				*e*S		Sg	18 26 14.6	-0.2
	baz=6.0							
CHN5	**Tsauling**	**0.71**	**259**	*e*P		Pg	18 26 06.0	+0.6
	baz=252							
NDT	**Datong Townshi**	**0.87**	**5**	*e*P		Pg	18 26 08.4	0.0
	baz=4.0							
NDT				*e*S		Sb	18 26 19.2	-0.2
	baz=4.0							
YHNB	**Yeheng**	**0.94**	**357**	*e*P		Pb	18 26 09.3	+0.1
	baz=356							
YHNB				*e*S		Sb	18 26 21.5	+0.1
	baz=356							
NSK	**Sanguang**	**0.94**	**356**	*e*P		Pn	18 26 10.2	+0.3
	baz=356							
NSK				*e*S		Sb	18 26 21.4	-0.1
	baz=356							

TAP 26 18:25:55.7, 23.05N×121.15E, h10km, ML1.9, 3D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
ELDTW	**Lidau**	**0.18**	**318**⇓	*i*P		Pg	18 25 59.7	+0.1
	baz=319							
ELDTW				*i* S		Sg	18 26 02.5	+0.1
	baz=319							
FULB	**Fuli**	**0.20**	**43**⇓	*i*P		Pg	18 26 00.4	+0.5
	baz=33							
FULB				*i* S		Sg	18 26 04.4	+1.6
	baz=33							
CHKT	**Chengkung**	**0.20**	**77**	*e*P		Pg	18 26 00.9	+0.9
	baz=76							
CHKT				*e*S		Sg	18 26 05.1	+2.2
	baz=76							
TWG	**Pinlang**	**0.24**	**197**	P		Pg	18 26 01.0	+0.3
	baz=199							
TWG				*e*S		Sg	18 26 05.2	+1.2
	baz=199							
TWGBT	**Beinan**	**0.24**	**195**	P		Pg	18 26 01.1	+0.4
	baz=199							
TWGBT				*e*S		Sg	18 26 05.2	+1.1
	baz=199							
STYT	**Tauyuan**	**0.38**	**287**⇓	*i*P		Pg	18 26 03.6	+0.4
	baz=288							
STYT				*i* S		Sg	18 26 09.0	+0.8
	baz=288							
TWH	**Lutao**	**0.46**	**138**	*i* P		Pg	18 26 05.1	+0.5
	baz=126							
TWH				S		Sb	18 26 13.4	+0.7
	baz=126							
SLGT	**Liugui**	**0.47**	**263**	P		Pg	18 26 05.4	+0.6
	baz=261							
SLGT				*e*S		Sg	18 26 11.6	+0.6
	baz=261							
EHY	**Hungye**	**0.48**	**20**	*e*S		Sg	18 26 10.8	-0.6
	baz=7.0							
ECL	**Taimali**	**0.49**	**202**	*e*P		Pg	18 26 05.2	-0.1
	baz=191							
SGST	**Jiashian**	**0.52**	**273**	*e*P		Pg	18 26 06.3	+0.4
	baz=277							
SGST				*e*S		Sb	18 26 14.0	-0.6
	baz=277							
WTP	**Ta-pu**	**0.53**	**291**	*e*P		Pb	18 26 06.9	-0.2
	baz=295							
WTP				*e*S		Sb	18 26 14.8	0.0
	baz=295							
TPUB	**Ta-pu**	**0.54**	**297**	P		Pb	18 26 07.0	-0.3
	baz=307							
TPUB				*e*S		Sb	18 26 14.9	-0.1
	baz=307							
SSD	**Sandimen**	**0.57**	**237**	*e*P		Pg	18 26 07.1	+0.4
	baz=235							
SSD				*e*S		Sg	18 26 13.8	-0.3
	baz=235							
CHN1	**Nanshi**	**0.58**	**283**	P		Pb	18 26 09.0	+0.9
	baz=284							
CHN1				*e*S		Sb	18 26 16.3	-0.1
	baz=284							
CHN4	**Tsaushan**	**0.59**	**300**	*i* P		Pb	18 26 08.2	0.0
	baz=230							
CHN4	**Tsaushan**	**0.59**	**300**	*i* P		Pb	18 26 08.2	0.0
	baz=310							
CHN4				S		Sb	18 26 17.0	+0.4
	baz=310							
SNST	**Tainan City**	**0.62**	**286**	*e*P		Pb	18 26 09.3	+0.6
	baz=286							
SNST				*e*S		Sb	18 26 17.7	+0.2
	baz=286							
TWK	**Hsinying**	**0.64**	**289**	*e*P		Pb	18 26 09.3	+0.2
	baz=290							
TWK				*e*S		Sb	18 26 19.0	+0.8
	baz=290							
MASBT	**Mashibuluo**	**0.65**	**227**	*e*P		Pg	18 26 08.2	-0.1
	baz=234							
MASBT				*e*S		Sg	18 26 16.7	-0.1
	baz=234							
CHN5	**Tsauling**	**0.69**	**321**	*e*P		Pb	18 26 09.7	-0.2
	baz=320							
CHN5				*e*S		Sb	18 26 19.8	+0.2
	baz=320							
WHYT	**Xinyi Township**	**0.69**	**337**	*e*P		Pg	18 26 09.3	+0.1
	baz=340							
WHYT				*e*S		Sg	18 26 18.6	+0.4
	baz=340							
WHYT	**Xinyi Township**	**0.69**	**337**	*e*S		Pb	18 26 09.4	-0.5
	baz=267							
VWDT	**VWDT**	**0.70**	**359**	*e*P		Pg	18 26 08.7	-0.5
	baz=353							
VWDT				*e*S		Sg	18 26 18.9	+0.5
	baz=353							
EAST	**Anshuo**	**0.72**	**203**	*e*P		Pg	18 26 09.2	-0.4
	baz=190							
WNT	**Mingjian**	**0.92**	**333**	*e*P		Pn	18 26 14.8	0.0
	baz=330							
WNT				*e*S		Sn	18 26 28.8	+0.7
	baz=330							
CHGB	**Renai**	**1.00**	**1**	*e*P		Pg	18 26 13.7	-1.4
	baz=359							

*ISK **26** 18:39:37.1, 40.39N×25.89E, h12km, ML1.9/7*
*ATH **26** 18:39:41.9, 40.19N×25.10E, h26km±3km, ML2.5/4, Error ellipse: s-maj=4.0km s-min=1.1km az=75.0*
*THE **26** 18:39:42.8, 40.18N×25.03E, h8km±1km, ML2.4/5, Error ellipse: s-maj=1.7km s-min=0.6km az=69.0*

ISC 26 18:39:35.3±0.9, 40.31N±0.03×25.77E±0.03, h31km±9km, n32, σ2s14/42, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
GADA	**Gvkgeada**	**0.15**	**140**		PG	**Pn**	**18 39 41.9**	**+0.4**
GADA					SG	**Sb**	**18 39 45.6**	**+0.4**
BOZC	**Bozcaada**	**0.52**	**155**		PG	**Pn**	**18 39 48.5**	**+2.0**
BOZC					SG	**Sn**	**18 39 56.8**	**+2.6**
ENEZ	**Enez**	**0.52**	**34**		PG	**Pb**	**18 39 45.2**	**-0.8**
ENEZ					SG	**Sb**	**18 39 51.6**	**-1.8**
GELI	**Tayfur-Gelibol**	**0.55**	**81**		PG	**Pb**	**18 39 46.3**	**-0.2**
LIA	**Limnos Island**	**0.61**	**228**		P	**Pn**	**18 39 48.8**	**+1.1**
LIA					S	**Sb**	**18 39 53.2**	**-2.7**
	2μm,0.4s							
LIA	**Limnos Island**	**0.61**	**228**		P	**Pn**	**18 39 48.8**	**+1.1**
LIA					AML	AML	18 39 53.2	
	comp=E,4149μm,0.4s							
LIA					S	**Sb**	**18 39 53.4**	**-2.5**
LIA					AML	AML	18 39 53.5	
	comp=N,1815μm,0.4s							
LPK	**Lapseki**	**0.76**	**85**		PG	**Pn**	**18 39 50.3**	**+0.5**
THAS	**Thassos island**	**0.85**	**291**		P	**Pn**	**18 39 52.2**	**+1.1**
THAS					S	**Sb**	**18 39 59.5**	**-3.2**
	comp=N,420nm,0.2s							
THAS	**Thassos island**	**0.85**	**291**		P	**Pn**	**18 39 52.0**	**+0.9**
THAS					S	**Sb**	**18 39 59.7**	**-3.0**
THAS					AML	AML	18 40 01.9	
	comp=E,853μm,0.2s							
THAS					AML	AML	18 40 03.5	
	comp=N,787μm,0.2s							
RDO	**Rodhopi**	**0.85**	**348**		PG	**Pn**	**18 39 52.9**	**+1.8**
EFSA	**Agios Efstrati**	**0.97**	**218**		P	**Pb**	**18 39 55.4**	**+1.8**
KAVA	**Kavala**	**1.18**	**306**		P	**Pb**	**18 40 00.2**	**+3.2**
KAVA					S	**Sn**	**18 40 12.4**	**+1.9**

comp=N,340nm,0.3s
KAVA Kavala 1.18 306 P **Pb** **18 40 00.1 +3.2**
KAVA S **Sn** **18 40 12.2 +1.8**
KAVA AML AML 18 40 13.4
comp=N,496μm,0.2s
KAVA AML AML 18 40 14.2
comp=E,863μm,0.2s
KVLA Kavala 1.22 301 P **Pb** **18 40 00.3 +2.5**
KVLA S **Sb** **18 40 12.5 -0.8**
KDZ Kurdzhali 1.36 349 *eP* **Pb** **18 40 02.0 +1.8**
KDZ Kurdzhali 1.36 349 PN **Pb** **18 40 01.3 +1.1**
OUR Ouranopolis 1.37 272 P **Pn** **18 39 58.8 +0.6**
OUR S **Sn** **18 40 10.0 -5.1**
comp=E,335nm,0.3s
OUR Ouranopolis 1.37 272 P **Pn** **18 39 58.7 +0.6**
OUR S **Sn** **18 40 11.2 -3.9**
OUR AML AML 18 40 13.0
comp=E,709μm,0.3s
OUR AML AML 18 40 14.5
comp=N,599μm,0.2s
MRMT Marmara Adasi 1.43 78 PN **Pb** **18 40 01.8 +0.5**
RZN Rozhen 1.59 330 *eP* Pb 18 40 09.3 +5.2
PAIG Paliouri 1.65 257 P **Pn** **18 40 02.4 +0.4**
PAIG Paliouri 1.65 257 P **Pn** **18 40 02.9 +0.9**
EDRB Edirne 1.70 25 PN **Pb** **18 40 04.9 -1.0**
PLG Polygyros 1.78 273 P **Pn** **18 40 05.2 +1.4**
PLG S **Sn** **18 40 22.9 -2.5**
comp=N,85nm,0.3s
PLG Polygyros 1.78 273 P **Pn** **18 40 05.2 +1.4**
HORT Hortiatis 2.06 279 P **Pn** **18 40 09.6 +1.9**
HORT Hortiatis 2.06 279 P **Pn** **18 40 09.6 +1.9**
KNT Kendrikon 2.34 292 P **Pb** **18 40 14.9 -1.9**
VAY Valandovo 2.63 294 *i* Pn Pb 18 40 26.4 +4.8
VAY Valandovo 2.63 294 *i* Pn Pb 18 40 26.4 +4.8
STIP Stip 3.04 298 *i* Pn **Pn** **18 40 23.7 +2.5**
STIP Stip 3.04 298 *i* Pn **Pn** **18 40 23.7 +2.5**

*SNET **26** 18:40:40.9±0.8, 13.˚45N×90.˚81W, h6km±8km, ML3.5*
*SSS **26** 18:40:40.9±0.8, 13.˚45N×90.˚81W, h6km±8km, ML3.5*
*GCG **26** 18:40:48.1±0.7, 13.˚97N×90.˚80W, h35km±96km, MD3.9*
ISC 26 18:40:40.8±2.2, 13.˚5N±0.˚1×90.˚87W±0.˚08, h29km, n19, σ1♀18/25, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IXG	**Ixpaco**	**0.78**	**32**	*eP*	**Pn**	**18 40 56.9**	**+0.8**
IXG	**Ixpaco**	**0.78**	**32**	*eP*	**Pn**	**18 40 57.7**	**+1.6**
IXG	**Ixpaco**	**0.78**	**32**	*eP*	**Pn**	**18 40 56.9**	**+0.8**
FUG	**Fuego 3**	**0.93**	**1**	*eP*	**Pb**	**18 40 59.5**	**+1.0**
FUG				*eS*	**Sn**	**18 41 07.3**	**-3.4**
RTR	**El Retiro**	**1.25**	**72**	*eP*	**Pb**	**18 41 03.7**	**-0.2**
RTR	**El Retiro**	**1.25**	**72**	*eP*	**Pb**	**18 41 03.7**	**-0.2**
CEVE	**Cerro Verde**	**1.25**	**75**	*eP*	**Pb**	**18 41 03.5**	**-0.4**
CEVE				*eS*	**Sb**	**18 41 21.5**	**+1.8**
CEVE				IAML		18 41 22.5	
comp=Z,863nm,0.3s							
CEVE	**Cerro Verde**	**1.25**	**75**	*eP*	**Pb**	**18 41 03.5**	**-0.4**
CEVE				*eS*	**Sb**	**18 41 21.5**	**+1.8**
CEVE				IAML		18 41 22.5	
comp=Z,863nm,0.3s							
SBLS	**San Blas**	**1.25**	**75**	*eP*	**Pn**	**18 41 03.3**	**+0.7**
SBLS	**San Blas**	**1.25**	**75**	*eP*	**Pn**	**18 41 03.3**	**+0.7**
SNJE	**San Jose**	**1.27**	**74**	*eP*	**Pb**	**18 41 03.8**	**-0.5**
SNJE	**San Jose**	**1.27**	**74**	*eP*	**Pb**	**18 41 03.8**	**-0.5**
STG3	**Santiaguito 3,**	**1.37**	**330**	*eP*	**Pn**	**18 41 04.4**	**+0.1**
STG3				*eS*	**Sn**	**18 41 21.6**	**0.0**
MTO3	**Montecristo**	**1.71**	**59**	*eP*	**Pb**	**18 41 10.9**	**-0.8**
MTO3	**Montecristo**	**1.71**	**59**	*eP*	**Pb**	**18 41 10.9**	**-0.8**
LFRS	**El Faro**	**1.76**	**86**	*eP*	**Pb**	**18 41 11.6**	**-0.9**
LFRS				*eS*	**Sb**	**18 41 34.5**	**+0.3**
LFRS	**El Faro**	**1.76**	**86**	*eP*	**Pb**	**18 41 11.6**	**-0.9**
LFRS				*eS*	**Sb**	**18 41 34.5**	**+0.3**
MRL	**Marmol**	**1.94**	**36**	*eP*	**Pb**	**18 41 14.5**	**-1.1**
MRL	**Marmol**	**1.94**	**36**	*eP*	**Pb**	**18 41 14.5**	**-1.1**

*DJA **26** 18:41:04.8±1.2, 0.˚N±2.˚×12.˚5E±.˚, h26km±11km, M4.2/13, mB4.5/1, mb4.5/7, MLv4.1/13, Mw(mB)3.7/1*
*NEIC **26** 18:41:05.4±3.0, 0.˚08N±0.˚05×125.˚34E±0.˚07, h58km±9km, mb4.1/6, Error ellipse: s-maj=10.6km s-min=6.8km az=119.0*
*IDC **26** 18:41:05.5±2.3, 0.˚06N×125.˚25E, h61km±23km, mb3.6/11, mb1 3.8/15, mb1mx3.6/48, mbtmp4.0/15, ML3.6/4, MS3.2/1, Ms1 3.2/1, ms1mx2.4/38, Error ellipse: s-maj=16.0km s-min=14.2km az=99.0*
ISC 26 18:41:04.8±0.5, 0.˚13N±0.˚05×125.˚30E±0.˚04, h49km, n46, σ1♀68/52, mb3.9/13, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.39**	**288**	P	**Pn**	**18 41 27.7**	**-0.2**
KMSI				S	**Sn**	**18 41 47.8**	**+2.6**
TNTI	**Ternate**	**2.16**	**73**	P	**Pn**	**18 41 39.4**	**+1.0**
TNTI	**Ternate**	**2.16**	**73**		**Pn**	**18 41 38.8**	**+0.4**
SANI	**Sanana**	**2.27**	**162**	P	**Pn**	**18 41 43.6**	**+3.6**
SANI				S	**Sn**	**18 42 09.6**	**+2.8**
LBMI	**Labuha**	**2.33**	**109**	P	**Pn**	**18 41 40.5**	**-0.2**
LBMI				S	**Sn**	**18 42 10.2**	**+2.1**
LUWI	**Luwuk**	**2.79**	**245**	P	**Pn**	**18 41 48.6**	**+1.6**
LUWI	**Luwuk**	**2.79**	**245**		**Pn**	**18 41 48.2**	**+1.2**
APSI	**Ampana**	**3.80**	**254**	P	**Pn**	**18 42 03.4**	**+2.5**
MPSI	**Mapaga**	**5.41**	**272**	P	**Pn**	**18 42 23.9**	**+0.9**
0.1nm483nm12nm,0.4s							
DDMP	**Don Marcelino,**	**5.95**	**4**	*eP*	**Pn**	**18 42 32.9**	**+2.5**
DDMP				*eS*	**Sn**	**18 43 35.8**	**-1.5**
SIJI	**Sorong**	**6.04**	**99**	P	**Pn**	**18 42 32.6**	**+0.8**
0.9nm,0.3s,baz=296,slow=7.5,SNR=11							
SIJI				S	**Sn**	**18 43 42.4**	**+2.7**
baz=229,slow=20,SNR=1.3							
TTSI	**Tana Toraja**	**6.33**	**240**	P	**Pn**	**18 42 37.7**	**+2.1**
0.2nm40nm,0.5s							
SKMP	**Bagumbayan, Su**	**6.39**	**353**	*eP*	**Pn**	**18 42 35.7**	**-0.8**
SKMP				*eS*	Sn	18 43 32.5	-16
KCP	**Kidapawan**	**6.83**	**358**	*eP*	**Pn**	**18 42 46.4**	**+3.8**
SPSI	**Sidrap Palu**	**6.87**	**234**	P	**Pn**	**18 42 44.0**	**+1.0**
0.1nm32nm,0.6s							
BNSI	**Bone**	**6.87**	**229**	P	**Pn**	**18 42 45.0**	**+1.9**
0.1nm32nm,0.7s							
DAV	**Davao City (W)**	**6.90**	**2**	LR	LR	18 45 51.3	
comp=Z,186nm,18.1s,baz=194,slow=41							
KAPI	**Kappang**	**7.54**	**227**	P	**Pn**	**18 42 52.7**	**+0.4**
2.1nm,0.3s,baz=223,slow=19,SNR=1.9							
KAPI				S	**Sn**	**18 44 15.6**	**-0.9**
3.3nm,0.3s,baz=153,slow=18,SNR=1.8							
BATI	**Baumata**	**10.40**	**189**	P	**Pn**	**18 43 32.7**	**+1.2**
1.1nm,0.3s,baz=28,slow=11,SNR=2.3							
MTN	**Manton Dam**	**14.13**	**156**	Pn	**Pn**	**18 44 21.8**	**-0.5**
KNRA	**Kununurra**	**16.08**	**168**	P	**Pn**	**18 44 46.1**	**-1.6**
KNRA				IAmb	IAmb	18 44 46.8	
comp=Z,21nm,0.9s							
FITZ	**Fitzroy Crossi**	**18.12**	**179**	P	**P**	**18 45 11.3**	**-1.6**
comp=Z,0.1nm,0.3s,baz=0.0,slow=13,SNR=1.7							
FITZ	**Fitzroy Crossi**	**18.12**	**179**	P	**P**	**18 45 11.6**	**-1.3**
WB0	**Warramunga Arr**	**21.69**	**156**	P	**P**	**18 45 49.4**	**-2.4**
WRAB	**Tennant Creek**	**21.82**	**157**	P	**P**	**18 45 51.2**	**-2.0**
WRA	**Warramunga Arr**	**21.83**	**157**	P	**P**	**18 45 50.8**	**-2.5**
comp=Z,3.4nm,0.8s,baz=335,slow=11,SNR=33							
WB2	**Warramunga Arr**	**21.83**	**157**	P	**P**	**18 45 51.0**	**-2.3**
WR0	**Warramunga Arr**	**21.92**	**156**	P	**P**	**18 45 52.0**	**-2.3**
PSA00	**Pilbara Seismi**	**22.22**	**194**	P	**P**	**18 45 57.1**	**-0.4**
COEN	**Coen**	**22.56**	**129**	P	**P**	**18 46 01.5**	**+0.3**
ASAR	**Alice Springs**	**25.09**	**161**	P	**P**	**18 46 23.6**	**-1.5**
comp=Z,2.0nm,0.7s,baz=335,slow=8.0,SNR=16							
ASAR				PcP	**PcP**	**18 49 59.1**	**+0.4**
comp=Z,0.5nm,0.6s,baz=341,slow=2.2,SNR=8.0							
FORT	**Forrest**	**30.85**	**175**	P	**P**	**18 47 16.0**	**-0.5**
STKA	**Stephens Creek**	**35.37**	**156**	P	**P**	**18 47 55.4**	**-0.5**
comp=Z,2.8nm,0.8s,baz=336,slow=4.9,SNR=4.3							
STKA	**Stephens Creek**	**35.37**	**156**	P	**P**	**18 47 55.5**	**-0.5**
STKA				IAmb	IAmb	18 48 34.0	
comp=Z,3.1nm,1.3s							
KSRS	**Korea Array**	**37.22**	**3**	P	**P**	**18 48 12.4**	**+0.9**
comp=Z,1.4nm,0.9s,baz=190,slow=5.8,SNR=3.3							
MJAR	**Matsushiro Arr**	**38.16**	**17**	P	**P**	**18 48 19.3**	**-0.3**
comp=Z,2.2nm,0.8s,baz=177,slow=8.5,SNR=3.1							
USRK	**Ussuriysk Ar.**	**44.28**	**7**	P	**P**	**18 49 08.9**	**-0.7**
comp=Z,0.4nm,0.4s,baz=191,slow=8.0,SNR=1.8							
ULN	**Ulaanbaatar**	**50.12**	**344**	P	**P**	**18 49 56.4**	**+1.1**
SONM	**Songino Array**	**50.28**	**344**	P	**P**	**18 49 57.8**	**+1.3**
comp=Z,0.6nm,0.7s,baz=124,slow=4.2,SNR=2.7							
PETK	**Petropavlovsk-**	**59.28**	**22**	P	**P**	**18 51 02.4**	**+1.0**
comp=Z,4.2nm,1.0s,baz=214,slow=9.4,SNR=3.8							
MK31	**Makanchi Array**	**59.73**	**327**	P	**P**	**18 51 04.0**	**-0.7**
MK31				IAmb	IAmb	18 51 09.2	
comp=Z,0.8nm,0.8s							
MKAR	**Makanchi Array**	**59.73**	**327**	P	**P**	**18 51 03.6**	**-1.1**
comp=Z,0.4nm,0.3s,baz=127,slow=6.9,SNR=15							
ZALV	**Zalesovo Beam**	**63.16**	**335**	P	**P**	**18 51 25.4**	**-2.2**
comp=Z,0.3nm,0.3s,baz=134,slow=4.2,SNR=2.1							
KURK	**Kurchatov**	**64.03**	**329**	P	**P**	**18 51 32.5**	**-1.0**
KURK				IAmb	IAmb	18 51 35.0	
comp=Z,2.9nm,0.9s							
AKTO	**Aktyubinsk**	**75.60**	**322**	P	**P**	**18 52 43.3**	**-1.3**
comp=Z,1.9nm,0.8s,baz=87,slow=7.6,SNR=4.7							
TORD	**Torodi Ar. Bea**	**122.59**	**286**	PKP	**PKiKP**	**18 59 56.2**	**-0.1**
comp=Z,0.3nm,0.7s,baz=118,slow=4.0,SNR=2.1							

*LDG **26** 18:42:52.9±0.1, 50.˚17N×18.˚91E, h1km, Ml3.6/15, Error ellipse: s-maj=3.1km s-min=1.5km az=8.0, Suspected Mining induced.*
*IPEC **26** 18:42:53.4±0.1, 50.˚22N×18.˚87E, h0km, ML2.9/4, Error ellipse: s-maj=2.2km s-min=0.7km az=160.0*
*VIE **26** 18:42:53.4±0.3, 50.˚23N×18.˚85E, h0km, mb2.5/6, ml3.2/6, ms3.5/1, Error ellipse: s-maj=4.6km s-min=2.4km az=168.0 10 km WSW of Katowice Suspected Mining induced.*
*PRU **26** 18:42:53.8±0.0, 50.˚23N×18.˚81E, h0km*
*IDC **26** 18:42:53.8±0.8, 50.˚06N×18.˚90E, h0km, mb1 3.5/6, mb1mx3.2/39, mbtmp3.4/6, ML2.7/6, Error ellipse: s-maj=13.2km s-min=7.4km az=156.0*
*BGR **26** 18:42:57.5±0.8, 50.˚00N×18.˚57E, h1km, ML3.8/15, Error ellipse: s-maj=13.3km s-min=6.7km az=22.0*
ISC 26 18:42:51.6±0.7, 50.˚30N±0.˚03×18.˚79E±0.˚03, h0km, n98, σ2♀47/136, 7C-5D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.62**	**223**	*e*PG	**Pb**	**18 43 05.7**	**+0.4**
OKC				*e*SG	**Sg**	**18 43 13.9**	**+2.5**
MORC	**Moravsky Berou**	**0.96**	**238**	*e*PG	**Pb**	**18 43 11.6**	**+0.5**
MORC				*e*SG	**Sg**	**18 43 23.6**	**+1.2**
MORC	**Moravsky Berou**	**0.96**	**238**	⇓P	**Pb**	**18 43 12.0**	**+0.9**
MORC				⇓S	**Sb**	**18 43 25.2**	**+0.8**
MORC	**Moravsky Berou**	**0.96**	**238**	*e*Pg	**Pb**	**18 43 11.6**	**+0.5**
baz=62							
MORC				*e*Sg	**Sg**	**18 43 23.5**	**+1.2**
208nm,0.2s,baz=62							
LANS	**Liptovska Anna**	**1.23**	**159**	*e*PG	**Pg**	**18 43 15.6**	**+0.6**
LANS				*e*SG	**Sn**	**18 43 33.0**	**-0.3**
LANS				*e*LG	Lg	18 43 35.7	
KRLC	**Kraliky**	**1.31**	**261**	*e*PG	**Pn**	**18 43 18.1**	**+0.9**
KRLC				*e*SG	**Sb**	**18 43 35.6**	**+1.1**
comp=Z,462nm,0.6s							
DPC	**Dobruska-Polom**	**1.58**	**273**	*e*PG	**Pg**	**18 43 23.0**	**+1.1**
DPC				*e*SG	**Sg**	**18 43 45.4**	**+2.9**
comp=Z,226nm,0.3s							
JAVC	**Velka Javorina**	**1.61**	**207**	*e*PG	**Pn**	**18 43 21.8**	**+0.4**
JAVC				*e*SG	**Sn**	**18 43 42.4**	**-0.5**
JAVC	**Velka Javorina**	**1.61**	**207**	*e*Pg	**Pn**	**18 43 21.7**	**+0.4**
baz=29							
JAVC				*e*Sg	**Sn**	**18 43 42.3**	**-0.6**
97nm,0.7s,baz=29							
OSTC	**Ostas**	**1.67**	**280**	*e*PG	**Pg**	**18 43 24.6**	**+1.1**
OSTC				*e*SG	**Sg**	**18 43 48.4**	**+3.2**
comp=Z,160nm,0.8s							
VRAC	**Vranov**	**1.73**	**236**	Pg	**Pb**	**18 43 25.2**	**+0.9**
5.8nm,0.3s,baz=60,slow=15,SNR=35							
VRAC				Lg	Lg	18 43 47.9	
9.4nm,0.3s,baz=68,slow=14,SNR=8.1							
VRAC	**Vranov**	**1.73**	**236**	*e*PG	**Pb**	**18 43 25.0**	**+0.7**
VRAC				*e*SG	**Sb**	**18 43 47.7**	**+1.1**
VRAC	**Vranov**	**1.73**	**236**	⇑P	**Pg**	**18 43 25.4**	**+0.6**
VRAC				⇑S	**Sg**	**18 43 49.0**	**+1.7**
VRAC	**Vranov**	**1.73**	**236**	*e*Pg	**Pb**	**18 43 24.9**	**+0.7**
baz=57							
VRAC				*e*Sg	**Sb**	**18 43 47.7**	**+1.1**
88nm,0.3s,baz=57							
CHVC	**Chvalec**	**1.78**	**281**	*e*SG	**Sg**	**18 43 51.0**	**+2.4**
comp=Z,156nm,0.6s							
UPC	**Upice**	**1.79**	**278**	*e*PG	**Pg**	**18 43 26.4**	**+0.5**
UPC				*e*SG	**Sg**	**18 43 51.9**	**+2.8**
comp=Z,117nm,0.3s							
VYHS	**Vyhne**	**1.80**	**179**	*e*PN	**Pn**	**18 43 23.9**	**0.0**
VYHS				*e*SN	**Sn**	**18 43 47.5**	**0.0**
STHS	**Stebnicka Huta**	**1.81**	**118**	*e*PN	**Pb**	**18 43 25.7**	**+0.1**
KRUC	**Moravsky**	**1.99**	**233**	*e*PN	**Pn**	**18 43 27.8**	**+1.4**
KRUC				*e*SG	**Sb**	**18 43 55.5**	**+1.6**
KRUC	**Moravsky**	**1.99**	**233**	*e*Pn	**Pn**	**18 43 27.8**	**+1.4**
baz=53							
KRUC				*e*Sg	**Sb**	**18 43 55.5**	**+1.6**
72nm,0.4s,baz=53							
KECS	**Kecovo**	**2.12**	**148**	*e*PN	**Pn**	**18 43 28.2**	**-0.1**
KECS				*e*PG	**Pg**	**18 43 32.7**	**+0.5**
KECS				*e*LG	Lg	18 44 09.8	
MODS	**Modra-Piesok**	**2.17**	**208**	*e*PN	**Pn**	**18 43 28.6**	**-0.3**
CRVS	**Cervenica-Dubn**	**2.23**	**128**	*e*PN	**Pn**	**18 43 30.0**	**+0.3**
CRVS				*e*PG	**Pg**	**18 43 34.1**	**+0.3**
CRVS				*e*LG	Lg	18 44 15.5	
TREC	**Trest**	**2.37**	**246**	*e*SG	**Sg**	**18 44 07.8**	**+0.3**
comp=Z,111nm,0.6s							
ZST	**Bratislava**	**2.38**	**208**	*e*PN	**Pn**	**18 43 31.9**	**+0.2**
ZST				*e*PG	**Pg**	**18 43 36.9**	**-0.2**
ZST				*e*LG	Lg	18 44 17.6	
PSZ	**Piszkesteto**	**2.49**	**163**	⇑P	**Pn**	**18 43 34.8**	**+1.4**
GOPC	**GO Pecny, Ondr**	**2.61**	**263**	*e*PN	**Pn**	**18 43 36.1**	**+1.1**
GOPC				*e*SG	**Sg**	**18 44 15.0**	**-0.3**
comp=Z,125nm,0.6s							
KOLS	**Kolonicke sedl**	**2.64**	**120**	*e*PN	**Pn**	**18 43 35.5**	**+0.1**
KOLS				*e*LG	Lg	18 44 21.8	
PVCC	**Panska Ves**	**2.71**	**277**	*e*SG	**Sg**	**18 44 21.3**	**+2.6**
comp=Z,178nm,0.7s							
PRU	**Pruhonice**	**2.75**	**265**	*e*PN	**Pn**	**18 43 38.1**	**+1.2**
PRU				*e*PG	**Pb**	**18 43 43.3**	**+1.7**
PRU				*e*SG	**Sg**	**18 44 19.3**	**-0.7**
comp=Z,71nm,0.6s							
CONA	**Conrad Observa**	**3.05**	**220**	*e*Pn	**Pn**	**18 43 41.6**	**+0.4**
2.0nm,0.2s							
CONA				*e*Sn	**Sn**	**18 44 19.0**	**+0.6**
20nm,0.5s							
BRG	**Berggiesshubel**	**3.15**	**282**	PG	**Pg**	**18 43 53.0**	**+1.2**
BRG				SG	**Sg**	**18 44 35.7**	**+3.1**
54nm,0.4s							
BRG	**Berggiesshubel**	**3.15**	**282**	*e*Pn	**Pn**	**18 43 45.6**	**+3.3**
BRG				*e*Sg	**Sg**	**18 44 35.5**	**+2.9**
TRPA	**Tarpa**	**3.27**	**130**	⇑P	**Pn**	**18 43 44.7**	**+0.6**
FBE	**Freiberg**	**3.52**	**282**	*e*Sg	**Sg**	**18 44 47.4**	**+2.8**
KHC	**Kasperske Hory**	**3.58**	**253**	*e*PN	**Pn**	**18 43 49.8**	**+1.4**
KHC				*e*PG	**Pb**	**18 43 58.0**	**+2.3**
KHC				*e*SG	**Sg**	**18 44 46.4**	**-0.1**
comp=Z,110nm,0.5s							
GEC2	**GERESS Array S**	**3.62**	**248**	*e*Pn	**Pn**	**18 43 52.1**	**+3.2**
GEC2				*e*Sg	**Sb**	**18 44 44.5**	**+3.6**
GERES	**GERESS Array B**	**3.62**	**248**	Pn	**Pn**	**18 43 51.6**	**+2.6**
0.8nm,0.3s,baz=65,slow=14,SNR=11							
GERES				Lg	Lg	18 44 45.4	
7.7nm,0.3s,baz=66,slow=26,SNR=9.6							
ARSA	**Arzberg**	**3.74**	**217**	Sg	**Sg**	**18 44 57.2**	**+5.7**
11nm,0.5s							
CLL	**Collm**	**3.81**	**288**	*e*Pn	**Pn**	**18 43 54.9**	**+3.4**
CLL				*e*Sg	**Sg**	**18 44 57.5**	**+3.6**
CLL	**Collm**	**3.81**	**288**	*e*Pg	**Pg**	**18 44 07.0**	**+2.4**
CLL				*e*		18 44 13.0	
CLL				*e*Sg	**Sg**	**18 44 58.0**	**+4.1**
comp=Z,75nm,0.7s							
MOA	**Molln**	**3.85**	**232**	*i* Pn	**Pn**	**18 43 53.1**	**+1.0**
comp=Z,0.5nm,0.2s							
MOA				*e*Sn	**Sn**	**18 44 39.5**	**+1.4**
comp=Z,3.5nm,0.3s							
WET	**Wettzell**	**4.01**	**256**	*e*Pn	**Pn**	**18 43 56.8**	**+2.6**
BMR	**Baia Mare**	**4.06**	**128**	⇑P	**Pn**	**18 43 56.6**	**+1.7**
NKC	**Novy Kostel**	**4.07**	**272**	*e*SG	**Sg**	**18 45 02.5**	**+0.2**
comp=Z,56nm,0.4s							
MULD	**Muldenberg**	**4.09**	**274**	*e*Pn	**Pn**	**18 43 57.4**	**+2.0**
MULD				*e*Sg	**Sg**	**18 45 02.2**	**-0.8**
SCHF	**Schoenfels**	**4.10**	**278**	*e*Sg	**Sg**	**18 45 02.9**	**-0.3**
WERN	**Wernitzgruen**	**4.12**	**272**	*e*Pn	**Pn**	**18 43 58.4**	**+2.7**
WERN				*e*Sg	**Sg**	**18 45 04.3**	**+0.6**
ROHR	**Rohrbach**	**4.16**	**272**	*e*Sg	**Sg**	**18 45 06.1**	**+1.1**
HKWD	**Heukewalde**	**4.20**	**280**	*e*Sg	**Sg**	**18 45 08.0**	**+1.8**
DRGR		**4.37**	**142**	⇓P	**Pn**	**18 44 00.1**	**+1.0**
SIRR	**Siria**	**4.46**	**154**	⇓P	**Pn**	**18 44 00.9**	**+0.4**
NEUB	**Neuenburg**	**4.55**	**284**	*e*Sg	**Sg**	**18 45 21.6**	**+4.0**
MOX	**Moxa**	**4.60**	**277**	*e*Sg	**Sg**	**18 45 21.2**	**+2.0**
WIMM	**Wimmelburg**	**4.77**	**288**	*e*Sg	**Sg**	**18 45 28.2**	**+3.4**
KBA	**Koelnbreinsper**	**4.84**	**230**	*e*Sn	**Sn**	**18 45 03.8**	**+1.3**
comp=Z,8.7nm,0.5s							
BURAR	**Bucovina Array**	**5.01**	**120**	⇑P	**Pn**	**18 44 09.0**	**+1.0**
BZS	**Buzias**	**5.05**	**157**	⇑P	**Pn**	**18 44 08.7**	**+0.2**
CRUX	**Bergwerk Schwa**	**5.12**	**277**	*e*Sg	**Sg**	**18 45 37.3**	**+1.3**
BSD	**Bornholm Skovb**	**5.37**	**335**	*i* P	**Pn**	**18 44 14.5**	**+1.6**
comp=Z,2.5nm,0.4s							
GZR	**Gura Zlata**	**5.59**	**150**	⇓P	**Pn**	**18 44 17.2**	**+1.2**
WATA	**Walderalm**	**5.61**	**241**	Sn	**Sn**	**18 45 22.7**	**+1.2**
comp=Z,4.9nm,0.6s							
WATA				Sg	**Sg**	**18 45 54.9**	**+3.1**
comp=Z,16nm,0.3s							
WTTA	**Wattenberg**	**5.62**	**240**	*e*Sn	**Sn**	**18 45 23.6**	**+1.7**
comp=Z,12nm,0.7s							
MOTA	**Moosalm**	**5.87**	**243**	*e*Sn	**Sn**	**18 45 29.0**	**+1.0**
comp=Z,2.5nm,0.3s							
RETA	**Reutte**	**6.00**	**245**	Sg	**Sg**	**18 46 08.1**	**+4.0**
comp=Z,35nm,0.8s							
PABE	**Paberze**	**6.08**	**29**	*e*P	**Pn**	**18 44 25.0**	**+2.3**
PABE				IAML		18 46 22.9	
comp=Z,21nm,0.5s							
FETA	**Feichten**	**6.27**	**242**	Sn	**Sn**	**18 45 42.8**	**+5.1**
comp=Z,1.6nm,0.5s							
DAVA	**Damuels**	**6.61**	**246**	Sg	**Sg**	**18 46 25.3**	**+1.5**
comp=Z,27nm,0.7s							
AKASG	**Malin Array Be**	**6.67**	**83**	Pn	**Pn**	**18 44 29.4**	**-1.3**
comp=Z,0.8nm,0.3s,baz=272,slow=14,SNR=2.4							
AKASG				Sn	**Sn**	**18 45 42.8**	**-4.6**
comp=Z,2.8nm,0.3s,baz=263,slow=23,SNR=5.4							
AKASG				Lg	Lg	18 46 18.5	
comp=Z,3.6nm,0.3s,baz=267,slow=25,SNR=4.3							
NACGM	**Naroch**	**6.70**	**43**	*e*	Pg	18 45 11.0	+11
IIGN	**Ignalina**	**6.77**	**39**	*e*P	**Pn**	**18 44 35.9**	**+3.8**
IIGN				IAML		18 46 53.8	
comp=Z,7.7nm,0.4s							
MLR	**Muntele Rosu**	**6.80**	**132**	Pn	**Pn**	**18 44 32.6**	**0.0**
comp=Z,0.1nm,0.3s,baz=278,slow=20,SNR=3.3							
ISAL	**Salakas**	**6.89**	**37**	*e*P	Pn	18 44 40.4	+6.7
ISAL				IAML		18 47 04.4	
comp=Z,9.4nm,0.8s							
CDF	**Champ du Feu**	**7.75**	**260**	*e*Pn	**Pn**	**18 44 45.9**	**+0.2**
CDF	**Champ du Feu**	**7.75**	**260**	*e*Pg	**Pg**	**18 45 17.4**	**-2.7**
CDF				*e*Sn	**Sn**	**18 46 09.2**	**-5.0**
CDF				*e*Sg	**Sg**	**18 46 57.5**	**-3.0**
comp=Z,53nm,1.1s							
HINF	**Hinteralfeld**	**8.23**	**257**	*e*Pn	**Pn**	**18 44 51.7**	**-0.4**
HINF				*e*Sn	**Sn**	**18 46 20.2**	**-5.6**
HINF				*e*Sg	**Sg**	**18 47 11.3**	**-4.3**
comp=Z,23nm,0.9s							
HAU	**Haudompre**	**8.48**	**259**	*e*Pg	**Pg**	**18 45 30.4**	**-3.4**
HAU				*e*Sn	**Sn**	**18 46 27.1**	**-4.8**
HAU				*e*Sg	**Sg**	**18 47 19.0**	**-4.5**
comp=Z,31nm,0.9s							
PAGF	**Fort de Pagny**	**8.70**	**263**	*e*Pn	**Pn**	**18 44 58.1**	**-0.4**
baz=84							
PAGF	**Fort de Pagny**	**8.70**	**263**	*e*Pg	**Pg**	**18 45 34.8**	**-3.2**
PAGF				*e*Sn	**Sn**	**18 46 33.2**	**-4.1**
baz=84							
PAGF				*e*Sg	**Sg**	**18 47 25.7**	**-4.9**
comp=Z,10nm,0.7s							
GIVF	**Givet**	**8.97**	**274**	*e*Pg	**Pg**	**18 45 40.6**	**-2.6**
GIVF				*e*Sg	**Sg**	**18 47 35.8**	**-3.5**
comp=Z,1.5nm,0.2s							
MEZF	**Maizieres J'vi**	**9.14**	**264**	*e*Sn	**Sn**	**18 46 42.4**	**-5.7**
MEZF				*e*Sg		18 47 41.0	
comp=Z,6.2nm,0.5s							
CABF	**La Chapelle**	**9.21**	**251**	*e*Pn	**Pn**	**18 45 04.1**	**-1.6**
CABF	**La Chapelle**	**9.21**	**251**	*e*Pg	Pn	18 45 43.9	+38
CABF

LIA					AML	AML	18 54 50.2	
	comp=N,2346µm,0.6s							
RDO	**Rodhopi**	**0.80**	**340**		P	**Pg**	**18 54 32.0**	**-0.5**
RDO					S	**Sn**	**18 54 45.2**	**-0.3**
	comp=N,2µm,0.2s							
RDO	**Rodhopi**	**0.80**	**340**		P	**Pg**	**18 54 32.0**	**-0.5**
RDO					S	**Sb**	**18 54 43.6**	**+0.3**
RDO					AML	AML	18 54 47.4	
	comp=N,3296µm,0.2s							
RDO					AML	AML	18 54 47.5	
	comp=E,4011µm,0.2s							
RDO	**Rodhopi**	**0.80**	**340**		PG	**Pg**	**18 54 31.8**	**-0.7**
BAYC	**CANAKKALE_Bayr**	**0.82**	**143**	*i*	P	**Pg**	**18 54 32.5**	**-0.4**
BAYC				*i*	S	**Sb**	**18 54 44.0**	**+0.1**
BAYC					IAML		18 54 45.0	
	comp=N,537nm,0.2s							
BAYC					IAML		18 54 48.0	
	comp=E,652nm,0.2s							
UKOP	**Uzunkopru-Edir**	**0.92**	**37**		PG	**Pg**	**18 54 34.0**	**-0.7**
THAS	**Thassos island**	**0.93**	**283**		P	**Pg**	**18 54 34.4**	**-0.5**
THAS					S	**Sb**	**18 54 47.5**	**+0.5**
	comp=E,728nm,0.4s							
THAS	**Thassos island**	**0.93**	**283**		P	**Pg**	**18 54 34.4**	**-0.5**
THAS					S	**Sb**	**18 54 47.5**	**+0.5**
THAS					AML	AML	18 54 48.5	
	comp=N,1614µm,0.5s							
THAS					AML	AML	18 54 51.6	
	comp=E,1243µm,0.2s							
RKY	**Sarkoy-Tekirda**	**1.01**	**73**		PG	**Pg**	**18 54 35.0**	**-1.5**
SART	**Tekirdag**	**1.01**	**73**	*i*	P	**Pn**	**18 54 36.7**	**-0.1**
SART				*i*	S	**Sn**	**18 54 51.1**	**+0.2**
SART					IAML		18 54 52.0	
	comp=E,444nm,0.4s							
EFSA	**Agios Efstrati**	**1.11**	**220**		P	**Pg**	**18 54 37.9**	**-0.4**
PRK	**Paraskevi**	**1.18**	**166**		P	**Pg**	**18 54 40.1**	**+0.3**
PRK					S	**Sn**	**18 54 55.6**	**+0.6**
	comp=E,3µm,0.5s							
PRK	**Paraskevi**	**1.18**	**166**		P	**Pg**	**18 54 39.9**	**+0.1**
PRK					S	**Sn**	**18 54 55.6**	**+0.6**
PRK					AML	AML	18 54 56.9	
	comp=N,6018µm,0.6s							
PRK					AML	AML	18 54 59.5	
	comp=E,4898µm,0.5s							
KAVA	**Kavala**	**1.22**	**300**		P	**Pn**	**18 54 39.3**	**-0.2**
KAVA					S	**Sn**	**18 54 56.6**	**+0.8**
	comp=E,932nm,0.4s							
KAVA	**Kavala**	**1.22**	**300**		P	**Pn**	**18 54 39.3**	**-0.2**
KAVA					S	**Sb**	**18 54 55.3**	**0.0**
KAVA					AML	AML	18 54 57.2	
	comp=N,1950µm,0.4s							
KAVA					AML	AML	18 55 00.1	
	comp=E,1714µm,0.4s							
AYVA	**Ayvalik**	**1.25**	**151**	*i*	P	**Pb**	**18 54 40.1**	**-0.1**
AYVA				*i*	S	**Sn**	**18 54 57.4**	**+0.9**
AYVA					IAML		18 54 59.0	
	comp=E,2µm,0.7s							
KNL	**Balıkesir**	**1.25**	**95**	*i*	P	**Pn**	**18 54 39.8**	**-0.2**
KNL				*i*	S	**Sn**	**18 54 57.5**	**+1.0**
KNL					IAML		18 54 59.0	
	comp=N,1µm,0.8s							
KNL					IAML		18 54 59.0	
	comp=E,1µm,0.5s							
KVLA	**Kavala**	**1.27**	**295**		P	**Pn**	**18 54 40.3**	**0.0**
KDZ	**Kurdzhali**	**1.30**	**344**	*i*	P	**Pn**	**18 54 40.9**	**+0.1**
KDZ	**Kurdzhali**	**1.30**	**344**		PN	**Pn**	**18 54 40.6**	**-0.2**
MRMT	**Marmara Adasi**	**1.30**	**80**		PN	**Pn**	**18 54 40.6**	**-0.2**
TKR	**Tekirdag**	**1.37**	**64**		PN	**Pn**	**18 54 41.7**	**0.0**
GONE	**Gonen-Balikesi**	**1.41**	**104**		PN	**Pn**	**18 54 42.3**	**+0.1**
BALY	**Balya**	**1.47**	**116**	*i*	P	**Pb**	**18 54 43.8**	**-0.3**
BALY				*i*	S	**Sg**	**18 55 03.9**	**-0.5**
BALY					IAML		18 55 07.0	
	comp=E,398nm,0.8s							
BALY					IAML		18 55 15.0	
	comp=N,620nm,0.5s							
OUR	**Ouranopolis**	**1.47**	**268**		P	**Pn**	**18 54 42.5**	**-0.5**
OUR	**Ouranopolis**	**1.47**	**268**		P	**Pn**	**18 54 42.6**	**-0.5**
OUR					AML	AML	18 55 06.5	
	comp=E,748µm,0.4s							
OUR					AML	AML	18 55 07.7	
	comp=N,746µm,0.4s							
OUR	**Ouranopolis**	**1.47**	**268**		PN	**Pn**	**18 54 42.5**	**-0.5**
EDC	**Edincik**	**1.50**	**91**		PN	**Pn**	**18 54 43.5**	**+0.1**
DKL	**Dikili**	**1.53**	**149**		PN	**Pn**	**18 54 44.1**	**+0.2**
CRLT	**Corlu**	**1.57**	**62**		PN	**Pn**	**18 54 44.5**	**+0.1**
RZN	**Rozhen**	**1.57**	**325**	*i*	P	**Pn**	**18 54 45.0**	**+0.4**
EDRB	**Edirne**	**1.58**	**23**		P	**Pn**	**18 54 44.2**	**-0.4**
EDRB					S	**Sn**	**18 55 04.7**	**-0.1**
	comp=N,792nm,0.7s							
EDRB	**Edirne**	**1.58**	**23**		PN	**Pn**	**18 54 43.9**	**-0.7**
DIM	**Dimitrovgrad**	**1.67**	**350**	*i*	P	**Pn**	**18 54 46.1**	**+0.3**
BOTS	**Marmara Eregli**	**1.69**	**69**		PN	**Pn**	**18 54 46.4**	**+0.4**
ZEDA	**zmir-Bergama**	**1.69**	**147**	*i*	P	**Pn**	**18 54 46.7**	**+0.6**
ZEDA				*i*	S	**Sg**	**18 55 11.6**	**+0.1**
ZEDA					IAML		18 55 12.0	
	comp=N,578nm,0.4s							
ZEDA					IAML		18 55 12.0	
	comp=E,372nm,0.3s							
BALB	**Balikesir**	**1.69**	**116**		PN	**Pn**	**18 54 46.3**	**+0.2**
STEP	**BALIKESIR_Sava**	**1.73**	**126**	*i*	P	**Pb**	**18 54 47.5**	**-1.0**
STEP				*i*	S	**Sg**	**18 55 13.3**	**+0.7**
STEP					IAML		18 55 15.0	
	comp=E,570nm,0.6s							
STEP					IAML		18 55 22.0	
	comp=N,775nm,1.0s							
PAIG	**Paliouri**	**1.77**	**255**		P	**Pn**	**18 54 46.8**	**-0.3**
PAIG					AML	AML	18 55 16.4	
	comp=N,258µm,0.6s							
PAIG					AML	AML	18 55 22.7	
	comp=E,215µm,0.4s							
SKY	**Skiros Island**	**1.84**	**215**		P	**Pn**	**18 54 47.6**	**-0.6**
SKY					AML	AML	18 55 18.6	
	comp=N,636µm,0.3s							
SKY					AML	AML	18 55 19.2	
	comp=E,675µm,0.3s							
PSRA	**Psara**	**1.87**	**188**		P	**Pn**	**18 54 49.2**	**+0.7**
PLG	**Polygyros**	**1.88**	**270**		P	**Pn**	**18 54 48.5**	**-0.2**
PLG	**Polygyros**	**1.88**	**270**		P	**Pn**	**18 54 48.4**	**-0.2**
PLG					AML	AML	18 55 18.6	
	comp=N,500µm,0.5s							
PLG					AML	AML	18 55 19.5	
	comp=E,492µm,0.6s							
PLD	**Plovdiv**	**1.93**	**332**	*i*	P	**Pn**	**18 54 50.1**	**+0.7**
MMB	**Musomiste**	**2.03**	**307**	*i*	P	**Pn**	**18 54 50.9**	**+0.1**
URLA	**Izmir**	**2.10**	**165**	*i*	P	**Pn**	**18 54 52.1**	**+0.3**
URLA					IAML		18 55 26.0	
	comp=N,190nm,0.7s							
URLA					IAML		18 55 30.0	
	comp=E,187nm,0.9s							
JMB	**Yambol**	**2.13**	**14**	*i*	P	**Pn**	**18 54 53.3**	**+1.2**
HORT	**Hortiatis**	**2.15**	**276**		P	**Pn**	**18 54 52.5**	**0.0**
HORT					AML	AML	18 55 27.6	
	comp=N,271µm,0.5s							
HORT					AML	AML	18 55 38.0	
	comp=E,206µm,0.7s							
KNT	**Kendrikon**	**2.41**	**289**		P	**Pn**	**18 54 56.4**	**+0.4**
KNT					AML	AML	18 55 35.2	
	comp=N,507µm,0.4s							
KNT					AML	AML	18 55 41.0	
	comp=E,302µm,0.6s							
VAY	**Valandovo**	**2.69**	**291**	*i*	Pn	**Pg**	**18 55 07.5**	**-1.1**
VAY	**Valandovo**	**2.69**	**291**	*i*	Pn	**Pg**	**18 55 07.5**	**-1.1**
SMG	**Samos**	**2.78**	**165**		P	**Pn**	**18 55 01.1**	**0.0**
SMG	**Samos**	**2.78**	**165**		P	**Pn**	**18 55 01.4**	**+0.3**
SMG					AML	AML	18 55 49.4	
	comp=E,527µm,0.7s							
SMG					AML	AML	18 55 49.9	
	comp=N,656µm,0.5s							
VTS	**Vitosha**	**2.99**	**319**	⇑	P	**Pn**	**18 55 03.9**	**-0.2**
PRD	**Provadia**	**3.02**	**21**	*i*	P	**Pn**	**18 55 04.0**	**-0.2**
STIP	**Stip**	**3.10**	**296**	*i*	Pn	**Pn**	**18 55 04.2**	**-1.2**
STIP	**Stip**	**3.10**	**296**	*i*	Pn	**Pn**	**18 55 04.2**	**-1.2**
PLVB	**Pleven**	**3.14**	**343**	⇓	P	**Pn**	**18 55 07.5**	**+1.6**
RAZG	**Razgrad**	**3.20**	**8**		P	**Pn**	**18 55 08.3**	**+1.5**
ZIMR		**3.28**	**353**		P	**Pn**	**18 55 09.3**	**+1.4**
VLAD	**Vladila**	**3.77**	**343**	⇑	P	**Pn**	**18 55 15.3**	**+0.7**
COPA	**Copaceanca**	**3.77**	**352**	⇑	P	**Pn**	**18 55 15.5**	**+0.8**
ICOR	**Ion Corvin**	**3.97**	**20**		P	**Pn**	**18 55 19.1**	**+1.7**
HUMR	**Humele**	**4.18**	**351**		P	**Pn**	**18 55 21.6**	**+1.3**
CVD1	**Cernavoda-Powe**	**4.23**	**21**		P	**Pn**	**18 55 22.1**	**+1.1**
TLBR	**Topalu**	**4.44**	**20**	⇓	P	**Pn**	**18 55 24.3**	**+0.5**
TIRR	**Tirgusor**	**4.46**	**24**	⇑	P	**Pn**	**18 55 24.5**	**+0.4**
HARR	**Harsova**	**4.54**	**19**	⇓	P	**Pn**	**18 55 26.2**	**+1.0**
VOIR		**5.08**	**353**	⇓	P	**Pn**	**18 55 33.6**	**+1.0**
MLR	**Muntele Rosu**	**5.09**	**0**	⇑	P	**Pn**	**18 55 35.3**	**+2.4**
HERR	**Herculane**	**5.17**	**331**	⇓	P	**Pn**	**18 55 34.2**	**+0.3**
BISRR	**Bisoca**	**5.18**	**6**	⇑	P	**Pn**	**18 55 36.8**	**+2.7**
MDVR	**Moldovita**	**5.36**	**326**	⇑	P	**Pn**	**18 55 36.9**	**+0.3**
PLOR	**Plostina**	**5.48**	**5**	⇑	P	**Pn**	**18 55 40.7**	**+2.6**
GZR	**Gura Zlata**	**5.50**	**336**	⇑	P	**Pn**	**18 55 38.5**	**+0.1**
VRI	**Vrincioaia**	**5.50**	**6**	⇓	P	**Pn**	**18 55 40.6**	**+2.2**
DOPR	**Dopca**	**5.58**	**356**	⇑	P	**Pn**	**18 55 41.0**	**+1.5**
BZS	**Buzias**	**6.09**	**330**	⇑	P	**Pn**	**18 55 47.1**	**+0.6**
TESR	**Tescani**	**6.13**	**5**	⇑	P	**Pn**	**18 55 49.3**	**+2.1**
SIRR	**Siria**	**6.63**	**334**	⇓	P	**Pn**	**18 55 54.3**	**+0.3**
BURAR	**Bucovina Array**	**7.23**	**356**	⇑	P	**Pn**	**18 56 05.2**	**+3.0**
SORM	**Soroca**	**7.93**	**12**	⇑	P	**Pn**	**18 56 11.4**	**-0.4**

NEIC ***26*** *19:02:40.4±1.3, 30.3°S±0.1°×177.7°W±0.1, h75km±9km, mb4.4/8, Error ellipse: s-maj=18.7km s-min=8.8km az=139.0*

IDC ***26*** *19:02:40.8±1.7, 30.21°S×177.83°W, h70km±10km, mb3.2/3, mb1 3.9/5, mb1mx3.5/22, mbtmp4.0/5, Error ellipse: s-maj=35.8km s-min=14.4km az=111.0*

ISC 26 19:02:38.7±0.8, 30.29°S±0.05°×177.6°W±0.1, h50km, n92, σ2s30/94, mb3.7/5, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.06**	**345**	P		**Pn**		**19 03 00.2**	**+3.0**
GLKZ				S		**Sn**		**19 03 11.2**	**+0.3**
RAO	**Raoul Island**	**1.06**	**345**	P		**Pn**		**19 03 00.1**	**+2.7**
	2µm,0.3s,baz=95,slow=3.5,SNR=96								
RAO				S		**Sn**		**19 03 12.6**	**+1.5**
	6µm,0.3s,baz=90,slow=20,SNR=20								
RAO	**Raoul Island**	**1.06**	**345**			**Pn**		**19 03 00.3**	**+3.0**
RIZ	**Raoul Island**	**1.07**	**345**	P		**Pn**		**19 03 00.9**	**+3.4**
RIZ				S		**Sn**		**19 03 12.1**	**+0.8**
MXZ	**Matakaoa Point**	**8.01**	**204**	Pn		**Pn**		**19 04 32.6**	**+0.1**
WMGZ	**Waiomatatini S**	**8.21**	**203**	P		**Pn**		**19 04 37.2**	**+2.1**
WMGZ				S		**Sn**		**19 06 08.6**	**+2.1**
HAZ	**Te Kaha**	**8.38**	**206**	P		**Pn**		**19 04 39.9**	**+2.5**
HAZ				S		**Sn**		**19 06 16.5**	**+5.9**
PKGZ	**Pakihiroa**	**8.38**	**204**	P		**Pn**		**19 04 39.1**	**+1.4**
PKGZ				S		**Sn**		**19 06 10.4**	**-0.5**
PUZ	**Puketiti**	**8.49**	**203**	P		**Pn**		**19 04 40.2**	**+1.2**
PUZ				S		**Sn**		**19 06 15.9**	**+2.5**
KUZ	**Kuaotunu**	**8.51**	**219**	P		Pn		19 04 52.1	+13
RUGZ	**Raukumara Rang**	**8.60**	**206**	P		**Pn**		**19 04 41.8**	**+1.2**
RUGZ				S		**Sn**		**19 06 20.8**	**+4.6**
TWGZ	**Tauwhareparae**	**8.68**	**204**	P		**Pn**		**19 04 42.9**	**+1.2**
TWGZ				S		**Sn**		**19 06 21.9**	**+3.8**
WCZ	**Waipu Caves**	**8.79**	**228**	P		Pn		19 04 57.0	+14
CNGZ	**Carnagh Statio**	**8.88**	**202**	P		**Pn**		**19 04 45.9**	**+1.5**
OUZ	**Omahuta**	**8.89**	**234**	P		Pn		19 04 57.7	+13
OUZ	**Omahuta**	**8.89**	**234**	Pn		**Pn**		**19 04 42.8**	**-1.7**
MWZ	**Matawai**	**8.98**	**205**	P		**Pn**		**19 04 46.4**	**+0.7**
URZ	**Urewera**	**9.07**	**207**	P		**Pn**		**19 04 47.7**	**+0.8**
	3.5nm,0.3s,baz=273,slow=3.2,SNR=42								
URZ				S		**Sn**		**19 06 29.5**	**+1.8**
	6.8nm,0.3s,baz=258,slow=6.5,SNR=17								
URZ	**Urewera**	**9.07**	**207**	P		**Pn**		**19 04 47.8**	**+0.8**
URZ	**Urewera**	**9.07**	**207**			**Sn**		**19 06 32.6**	**+4.9**
RAGZ	**Rawiri**	**9.16**	**205**	P		**Pn**		**19 04 49.5**	**+1.1**
PRGZ	**Paritu Road**	**9.38**	**202**	P		**Pn**		**19 04 51.7**	**+0.5**
MUGZ	**Murupara**	**9.40**	**208**	P		**Pn**		**19 04 51.9**	**+0.4**
RTZ	**Ruatahuna**	**9.43**	**207**	P		**Pn**		**19 04 52.7**	**+0.7**
SNGZ	**Shannon Statio**	**9.44**	**205**	P		**Pn**		**19 04 53.5**	**+1.4**
MHGZ	**Mahia Peninsul**	**9.58**	**201**	P		**Pn**		**19 04 54.4**	**+0.4**
RAHZ	**Arahi**	**9.65**	**205**	P		**Pn**		**19 04 52.5**	**-2.5**
MTHZ	**Maungataniwha**	**9.69**	**207**	P		**Pn**		**19 04 56.6**	**+1.0**
BKZ	**Black Stump Fm**	**10.10**	**207**	P		**Pn**		**19 04 59.6**	**-1.4**
BKZ	**Black Stump Fm**	**10.10**	**207**	Pn		**Pn**		**19 04 59.7**	**-1.4**
MCHZ	**McNeill Hill**	**10.26**	**206**	P		**Pn**		**19 05 02.9**	**-0.4**
KWHZ	**Kaweka Forest**	**10.35**	**207**	P		**Pn**		**19 05 03.2**	**-1.3**
KAHZ	**Kahuranaki**	**10.51**	**204**	P		**Pn**		**19 05 07.3**	**+0.7**
BHHZ	**Black Hill Sta**	**10.55**	**208**	P		Pn		19 04 59.1	-8.1
FWVZ	**Far West T-bar**	**10.56**	**210**	P		**Pn**		**19 05 08.0**	**+0.4**
PNHZ	**Pukenui**	**10.86**	**206**	P		Pn		19 05 04.5	-7.0
TSZ	**Takapari Road**	**11.07**	**207**	P		**Pn**		**19 05 13.1**	**-1.3**
DVHZ	**Dannevirke**	**11.21**	**205**	P		**Pn**		**19 05 14.8**	**-1.4**
PRWZ	**Pori Road**	**11.50**	**205**	P		**Pn**		**19 05 22.0**	**+1.8**
BFZ	**Birch Farm**	**11.52**	**204**	P		**Pn**		**19 05 18.3**	**-2.1**
TIWZ	**Tintock**	**11.73**	**205**	P		**Pn**		**19 05 21.4**	**-2.0**
MRZ	**Mangatainoka R**	**11.74**	**206**	P		**Pn**		**19 05 20.2**	**-3.3**
HOWZ	**Holdsworth Sta**	**11.97**	**206**	P		**Pn**		**19 05 22.9**	**-3.8**
TMWZ	**Te Maipa**	**12.02**	**204**	P		**Pn**		**19 05 25.2**	**-2.0**
OGWZ	**Otaki Gorge**	**12.04**	**207**	P		**Pn**		**19 05 24.3**	**-3.2**
KIW	**Kapiti Island**	**12.18**	**208**	P		**Pn**		**19 05 25.8**	**-3.6**
MTW	**Mount Morrison**	**12.20**	**205**	P		**Pn**		**19 05 25.8**	**-3.9**
PAWZ	**Paruwai Farm**	**12.43**	**205**	P		Pn		19 05 28.8	-4.1
TCW	**Tory Channel**	**12.73**	**209**	P		**Pn**		**19 05 33.2**	**-3.8**
TUWZ	**Tuamarina**	**13.05**	**209**	P		**Pn**		**19 05 37.4**	**-3.9**
TUWZ	**Tuamarina**	**13.05**	**209**	Pn		Pn		19 05 36.5	-4.9
MSVF	**Nonsavu**	**13.11**	**341**	Pn		**Pn**		**19 05 42.6**	**+0.3**
NNZ	**Nelson**	**13.13**	**211**	P		**Pn**		**19 05 40.1**	**-2.3**
NNZ	**Nelson**	**13.13**	**211**	Pn		**Pn**		**19 05 42.4**	**+0.1**
QRZ	**Quartz Range**	**13.22**	**215**	P		Pn		**19 05 41.9**	**-1.8**
QRZ	**Quartz Range**	**13.22**	**215**	Pn		**Pn**		**19 05 42.5**	**-1.2**
BSWZ	**Blackbirch Sta**	**13.32**	**209**	P		**Pn**		**19 05 42.3**	**-2.7**
CTZ	**Chatham Island**	**13.48**	**177**	P		**P**		**19 05 52.3**	**-2.4**
THZ	**Tophouse**	**13.78**	**211**	P		**Pn**		**19 05 47.9**	**-3.4**
THZ	**Tophouse**	**13.78**	**211**	Pn		**Pn**		**19 05 49.2**	**-2.1**
KHZ	**Kahutara**	**14.04**	**208**	P		**Pn**		**19 05 52.0**	**-2.8**
KHZ	**Kahutara**	**14.04**	**208**	Pn		**Pn**		**19 05 52.0**	**-2.8**
GVZ	**Greta Valley S**	**14.70**	**208**	P		**Pn**		**19 06 00.1**	**-3.5**
LTZ	**Lake Taylor**	**14.87**	**210**	P		Pn		19 06 00.7	-5.2
LTZ	**Lake Taylor**	**14.87**	**210**	Pn		**Pn**		**19 06 02.1**	**-3.7**
INZ	**Inchbonnie**	**15.20**	**212**	P		**Pn**		**19 06 07.6**	**-2.4**
OXZ	**Oxford**	**15.41**	**210**	P		**Pn**		**19 06 12.1**	**-0.8**
OXZ	**Oxford**	**15.41**	**210**			**Pn**		**19 06 09.4**	**-3.5**
RPZ	**Rata Peaks**	**16.15**	**211**	P		**Pn**		**19 06 22.6**	**+0.3**
	6.3nm,0.3s,baz=356,slow=0.5,SNR=26								
RPZ				S		Sn		19 09 08.3	-12
	1.5nm,0.3s,baz=64,slow=16,SNR=6.2								
RPZ	**Rata Peaks**	**16.15**	**211**	P		**Pn**		**19 06 19.6**	**-2.7**
RPZ				IAmb		IAmb		19 06 19.7	
	comp=Z,29nm,1.2s								
FOZ	**Fox Glacier**	**16.59**	**214**	P		**Pn**		**19 06 28.3**	**+0.6**
FOZ	**Fox Glacier**	**16.59**	**214**	Pn		**Pn**		**19 06 24.1**	**-3.5**
LBZ	**Lake Benmore**	**17.07**	**211**	P		**P**		**19 06 35.3**	**+0.4**
ODZ	**Otahua Downs**	**17.39**	**209**	P		**Pn**		**19 06 38.4**	**+0.7**
ODZ	**Otahua Downs**	**17.39**	**209**	Pn		**Pn**		**19 06 34.4**	**-3.3**
JCZ	**Jackson Bay**	**17.49**	**214**	P		**Pn**		**19 06 37.3**	**-1.7**
WKZ	**Wanaka**	**17.94**	**212**	P		**Pn**		**19 06 43.2**	**-1.3**
WKZ	**Wanaka**	**17.94**	**212**	P		**Pn**		**19 06 41.6**	**-2.9**
WKZ				IAmb		IAmb		19 06 45.8	
	comp=Z,48nm,1.2s								
ASAR	**Alice Springs**	**43.45**	**267**	P		**P**		**19 10 36.3**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=106,slow=7.5,SNR=8.9								
WB2	**Warramunga Arr**	**44.42**	**272**	P		**P**		**19 10 43.3**	**-1.6**
WB2				IAmb		IAmb		19 10 48.0	
	comp=Z,10nm,1.4s								
WRAB	**Tennant Creek**	**44.43**	**272**	P		**P**		**19 10 43.4**	**-1.5**
WRA	**Warramunga Arr**	**44.43**	**272**	P		**P**		**19 10 43.5**	**-1.5**
	comp=Z,0.5nm,0.4s,baz=110,slow=8.1,SNR=25								
WB0	**Warramunga Arr**	**44.45**	**272**	P		**P**		**19 10 42.6**	**-2.5**
WB0				IAmb		IAmb		19 11 01.0	
	comp=Z,6.9nm,1.2s								
NVAR	**Mina Array Bea**	**87.92**	**43**	P		**P**		**19 15 24.6**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=228,slow=9.4,SNR=3.1								
MKAR	**Makanchi Array**	**117.96**	**310**	PKP		**PKPdf**		**19 21 18.2**	**-1.4**
	comp=Z,0.2nm,0.6s,baz=134,slow=2.5,SNR=2.8								
KURK	**Kurchatov**	**121.22**	**314**			**PKPdf**		**19 21 23.7**	**-1.9**
KURBB	**Kurchatov Arra**	**121.25**	**314**	PKP		**PKPdf**		**19 21 24.4**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=108,slow=2.0,SNR=6.8								
BVAR	**Borovoye Array**	**126.56**	**316**	PKP		**PKPdf**		**19 21 35.3**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=154,slow=1.6,SNR=9.0								
FINES	**FINESS Array B**	**145.15**	**340**	PKPbc		**PKPbc**		**19 22 08.3**	**-1.3**
	comp=Z,2.9nm,0.3s,baz=54,slow=4.1,SNR=41								
HFS	**Hagfors**	**149.20**	**349**	PKPbc		**PKPdf**		**19 22 18.8**	**+2.1**
	comp=Z,2.8nm,0.8s,baz=47,slow=2.6,SNR=3.9								
AKASG	**Malin Array Be**	**151.41**	**323**	PKPbc		**PKPbc**		**19 22 25.6**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=49,slow=2.1,SNR=4.9								
BRTR	**Keskin Array B**	**152.84**	**299**	PKPbc		**PKPbc**		**19 22 28.4**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=137,slow=3.0,SNR=2.5								

ATH 26 19:18:08.8, 39.97N×23.64E, h13km±4km, ML1.8/3, Error ellipse: s-maj=5.3km s-min=1.5km az=186.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.05**	**144**	P		Pg		19 18 11.3	0.0
PAIG				S		Sg		19 18 12.7	-0.4
PAIG						AML	AML	19 18 12.8	
	comp=E,6272µm,0.1s								
PAIG						AML	AML	19 18 12.8	
	comp=N,9178µm,0.1s								
PLG	**Polygyros**	**0.43**	**340**	P		Pg		19 18 17.1	-0.2
PLG				S		Sg		19 18 23.0	-0.1
PLG						AML	AML	19 18 23.8	
	comp=N,85µm,0.1s								
PLG						AML	AML	19 18 25.1	
	comp=E,169µm,0.5s								
OUR	**Ouranopolis**	**0.45**	**36**	P		Pg		19 18 17.8	+0.2
OUR				S		Sg		19 18 24.3	+0.6
OUR						AML	AML	19 18 24.7	
	comp=N,180µm,0.2s								
OUR						AML	AML	19 18 25.0	
	comp=E,219µm,0.2s								
HORT	**Hortiatis**	**0.75**	**327**	P		Pg		19 18 23.1	-0.2
THAS	**Thassos island**	**1.04**	**52**	P		Pb		19 18 27.8	-0.8
KAVA	**Kavala**	**1.22**	**33**	P		Pn		19 18 31.0	-0.5
KNT	**Kendrikon**	**1.32**	**335**	P		Pg		19 18 34.0	-0.1

DDA ***26*** *19:18:14.9, 40.37N×26.08E, h7km±2km, ML2.2*

ISK 26 19:18:13.3, 40.39N×26.09E, h25km, ML2.2/15, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GOKA	**anakkale-Gk**	**0.24**	**215**	*i*	P	Pb		19 18 20.3	+0.8
GADA	**Gvkgeada**	**0.25**	**216**		PG	Pb		19 18 20.2	+0.7
GADA					SG	Sb		19 18 24.3	+0.5
GELI	**Tayfur-Gelibol**	**0.29**	**88**		PG	Pn		19 18 21.2	-0.8
GELI					SG	Sb		19 18 25.9	+1.0
ENEZ	**Enez**	**0.35**	**8**		PG	Pb		19 18 21.9	+0.8
ENEZ					SG	Sb		19 18 27.2	+0.8
ERIK	**Erikli-Kesan**	**0.43**	**49**		PG	Pn		19 18 23.1	-0.8
ERIK					SG	Sb		19 18 29.5	+1.1
LPK	**Lapseki**	**0.51**	**92**		PG	Pn		19 18 24.7	-0.3
LPK					SG	Sn		19 18 32.4	-0.6
BOZC	**Bozcaada**	**0.55**	**183**		PG	Pn		19 18 25.3	-0.2
BOZC					SG	Sn		19 18 33.2	-0.7
BOZC	**Bozcaada**	**0.55**	**183**	*i*	P	Pn		19 18 25.3	-0.2
BOZC				*i*	S	Sn		19 18 33.3	-0.5
BOZC					IAML			19 18 34.0	
	comp=E,119nm,0.2s								
EZN	**Ezine**	**0.59**	**162**		PG	Pn		19 18 25.8	-0.3
KESN	**Edirne-Kesan**	**0.63**	**46**	*i*	P	Pb		19 18 26.2	+0.4
KESN				*i*	S	Sn		19 18 36.6	+0.3
KESN					IAML			19 18 38.0	
	comp=E,146nm,0.4s								
KESN		

KESN				IAML		19 29 05.0		
	comp=N,3μm,0.4s							
LIA	**Limnos Island**	**0.75**	**229**	P	**Pg**	**19 28 50.1**	**-0.1**
LIA				S	**Sb**	**19 29 01.1**	**+0.9**
	comp=N,1μm,0.4s							
LIA	**Limnos Island**	**0.75**	**229**	P	**Pg**	**19 28 50.1**	**-0.1**
LIA				S	**Sb**	**19 29 00.4**	**+0.2**
LIA				AML	AML	19 29 05.2		
	comp=N,2729μm,0.3s							
LIA				AML	AML	19 29 06.0		
	comp=E,2279μm,0.6s							
RDO	**Rodhopi**	**0.81**	**339**	P	**Pg**	**19 28 50.5**	**-0.8**
RDO				S	**Sn**	**19 29 03.7**	**-0.3**
	comp=E,2μm,0.2s							
RDO	**Rodhopi**	**0.81**	**339**	P	**Pg**	**19 28 50.6**	**-0.8**
RDO				S	**Sn**	**19 29 03.6**	**-0.3**
RDO				AML	AML	19 29 06.1		
	comp=E,4000μm,0.2s							
RDO				AML	AML	19 29 06.7		
	comp=N,2917μm,0.2s							
RDO	**Rodhopi**	**0.81**	**339**	PG	**Pb**	**19 28 51.2**	**0.0**
BAYC	**CANAKKALE_Bayr**	**0.81**	**143**	*i* P	**Pg**	**19 28 51.0**	**-0.4**
BAYC				*i* S	**Sb**	**19 29 02.3**	**+0.3**
BAYC				IAML		19 29 06.0		
	comp=E,452nm,0.2s							
BAYC				IAML		19 29 08.0		
	comp=N,527nm,0.4s							
UKOP	**Uzunkopru-Edir**	**0.91**	**36**	PG	**Pb**	**19 28 53.1**	**0.0**
THAS	**Thassos island**	**0.94**	**284**	P	**Pb**	**19 28 53.0**	**-0.5**
THAS				S	**Sg**	**19 29 06.2**	**0.0**
	comp=N,700nm,0.2s							
THAS	**Thassos island**	**0.94**	**284**	P	**Pb**	**19 28 53.0**	**-0.5**
THAS				S	**Sg**	**19 29 06.1**	**0.0**
THAS				AML	AML	19 29 06.6		
	comp=N,1556μm,0.3s							
THAS				AML	AML	19 29 07.9		
	comp=E,1218μm,0.2s							
RKY	**Sarkoy-Tekirda**	**1.00**	**73**	PG	**Pb**	**19 28 53.9**	**-0.8**
SART	**Tekirdag**	**1.01**	**73**	*i* P	**Pn**	**19 28 55.3**	**+0.1**
SART				*i* S	**Sn**	**19 29 09.1**	**+0.1**
SART				IAML		19 29 10.0		
	comp=E,401nm,0.3s							
KRBG	**Karabiga-Canak**	**1.05**	**90**	PG	**Pb**	**19 28 55.3**	**-0.2**
EFSA	**Agios Efstrati**	**1.11**	**220**	P	**Pn**	**19 28 56.7**	**+0.2**
EFSA				S	**Sg**	**19 29 11.4**	**-0.2**
EFSA				AML	AML	19 29 12.9		
	comp=N,2580μm,0.5s							
EFSA				AML	AML	19 29 16.4		
	comp=E,1992μm,0.6s							
PRK	**Paraskevi**	**1.18**	**166**	P	**Pg**	**19 28 58.6**	**+0.3**
PRK				S	**Sg**	**19 29 14.8**	**+1.1**
	comp=E,2μm,0.6s							
PRK	**Paraskevi**	**1.18**	**166**	P	**Pg**	**19 28 58.7**	**+0.4**
PRK				S	**Sg**	**19 29 14.9**	**+1.1**
PRK				AML	AML	19 29 15.5		
	comp=N,3764μm,0.6s							
PRK				AML	AML	19 29 15.7		
	comp=E,3653μm,0.6s							
KAVA	**Kavala**	**1.23**	**300**	P	**Pn**	**19 28 57.9**	**-0.2**
KAVA				S	**Sg**	**19 29 15.3**	**0.0**
	comp=E,960nm,0.3s							
KAVA	**Kavala**	**1.23**	**300**	P	**Pn**	**19 28 57.9**	**-0.2**
KAVA				S	**Sb**	**19 29 14.1**	**+0.1**
KAVA				AML	AML	19 29 15.8		
	comp=N,2146μm,0.4s							
KAVA				AML	AML	19 29 18.6		
	comp=E,1674μm,0.3s							
AYVA	**Ayvalik**	**1.24**	**151**	*i* P	**Pb**	**19 28 58.7**	**+0.2**
AYVA				*i* S	**Sg**	**19 29 15.7**	**+0.2**
AYVA				IAML		19 29 17.0		
	comp=N,4μm,0.6s							
AYVA				IAML		19 29 17.0		
	comp=E,1μm,0.7s							
KNL	**Balıkesir**	**1.24**	**95**	*i* P	**Pb**	**19 28 58.5**	**-0.1**
KNL				*i* S	**Sg**	**19 29 15.7**	**+0.1**
KNL				IAML		19 29 17.0		
	comp=E,883nm,0.6s							
KNL				IAML		19 29 19.0		
	comp=N,630nm,0.4s							
KVLA	**Kavala**	**1.28**	**296**	P	**Pb**	**19 28 59.3**	**-0.1**
KVLA				S	**Sb**	**19 29 15.3**	**-0.3**
KVLA				AML	AML	19 29 18.4		
	comp=E,1102μm,0.3s							
KVLA				AML	AML	19 29 18.6		
	comp=N,1552μm,0.5s							
MRMT	**Marmara Adasi**	**1.30**	**80**	PN	**Pn**	**19 28 58.7**	**-0.4**
KDZ	**Kurdzhali**	**1.31**	**343**	*i* P	**Pn**	**19 28 59.4**	**+0.1**
KDZ	**Kurdzhali**	**1.31**	**343**	PN	**Pn**	**19 28 59.4**	**+0.1**
TKR	**Tekirdag**	**1.37**	**64**	PN	**Pn**	**19 29 00.2**	**+0.2**
GONE	**Gonen-Balikesi**	**1.40**	**104**	PN	**Pn**	**19 29 00.4**	**0.0**
BALY	**Balya**	**1.46**	**116**	*i* P	**Pb**	**19 29 02.3**	**-0.2**
BALY				*i* S	**Sg**	**19 29 22.9**	**+0.2**
BALY				IAML		19 29 23.0		
	comp=N,428nm,0.5s							
BALY				IAML		19 29 25.0		
	comp=E,278nm,0.4s							
OUR	**Ouranopolis**	**1.48**	**268**	P	**Pn**	**19 29 01.2**	**-0.4**
OUR				S	**Sg**	**19 29 22.9**	**-0.4**
	comp=E,395nm,0.3s							
OUR	**Ouranopolis**	**1.48**	**268**	P	**Pn**	**19 29 01.2**	**-0.4**
OUR				AML	AML	19 29 25.8		
	comp=N,864μm,0.3s							
OUR				AML	AML	19 29 27.4		
	comp=E,719μm,0.3s							
OUR	**Ouranopolis**	**1.48**	**268**	PN	**Pn**	**19 29 01.1**	**-0.4**
EDC	**Edincik**	**1.49**	**91**	PN	**Pn**	**19 29 01.7**	**0.0**
DKL	**Dikili**	**1.52**	**150**	PN	**Pn**	**19 29 02.3**	**+0.1**
CRLT	**Corlu**	**1.56**	**61**	PN	**Pn**	**19 29 02.8**	**0.0**
RZN	**Rozhen**	**1.58**	**325**	*i* P	**Pn**	**19 29 03.5**	**+0.3**
EDRB	**Edirne**	**1.58**	**23**	P	**Pn**	**19 29 02.8**	**-0.2**
EDRB				S	**Sn**	**19 29 23.7**	**+0.6**
	comp=E,542nm,0.5s							
EDRB	**Edirne**	**1.58**	**23**	PN	**Pn**	**19 29 03.3**	**+0.3**
KIRK	**Kırklareli**	**1.65**	**32**	*i* P	**Pn**	**19 29 04.2**	**+0.3**
KIRK				IAML		19 29 30.0		
	comp=N,133nm,0.2s							
DIM	**Dimitrovgrad**	**1.68**	**350**	*i* P	**Pn**	**19 29 04.7**	**+0.4**
ZEDA	**zmir-Bergama**	**1.68**	**147**	*i* P	**Pn**	**19 29 05.3**	**+0.9**
ZEDA				*i* S	**Sg**	**19 29 30.0**	**+0.1**
ZEDA				IAML		19 29 30.0		
	comp=N,443nm,0.3s							
ZEDA				IAML		19 29 30.0		
	comp=E,253nm,0.5s							
BALB	**Balikesir**	**1.69**	**116**	PN	**Pn**	**19 29 04.1**	**-0.3**
STEP	**BALIKESIR_Sava**	**1.72**	**126**	*i* P	**Pb**	**19 29 06.0**	**-0.8**
STEP				*i* S	**Sg**	**19 29 31.2**	**+0.2**
STEP				IAML		19 29 38.0		
	comp=E,289nm,0.5s							
STEP				IAML		19 29 41.0		
	comp=N,510nm,0.7s							
SKY	**Skiros Island**	**1.84**	**215**	P	**Pn**	**19 29 06.0**	**-0.6**
PLG	**Polygyros**	**1.89**	**270**	P	**Pn**	**19 29 07.1**	**-0.2**
PLG				AML	AML	19 29 37.1		
	comp=N,457μm,0.7s							
PLG				AML	AML	19 29 39.2		
	comp=E,465μm,0.4s							
PLD	**Plovdiv**	**1.94**	**332**	*i* P	**Pn**	**19 29 08.6**	**+0.7**
MMB	**Musomiste**	**2.04**	**307**	*i* P	**Pn**	**19 29 09.4**	**0.0**
ELBA	**Catalca**	**2.05**	**68**	*i* P	**Pn**	**19 29 09.4**	**-0.1**
ELBA				IAML		19 29 45.0		
	comp=N,101nm,0.4s							
ELBA				IAML		19 29 48.0		
	comp=E,73nm,0.2s							
URLA	**Izmir**	**2.10**	**165**	*i* P	**Pn**	**19 29 10.6**	**+0.5**
URLA				*i* S	**Sb**	**19 29 37.7**	**-1.4**
URLA				IAML		19 29 44.0		
	comp=N,115nm,0.7s							
URLA				IAML		19 29 49.0		
	comp=E,122nm,0.9s							
DURS	**Dursunbey**	**2.12**	**111**	*i* P	**Pn**	**19 29 11.6**	**+1.1**
DURS				IAML		19 29 43.0		
	comp=N,227nm,0.8s							
DURS				*i* S	**Sg**	**19 29 43.2**	**-0.6**
DURS				IAML		19 29 44.0		
	comp=E,221nm,0.6s							
JMB	**Yambol**	**2.13**	**13**	*i* P	**Pn**	**19 29 11.4**	**+0.8**
HORT	**Hortiatis**	**2.16**	**276**	P	**Pn**	**19 29 10.9**	**-0.1**
HORT				AML	AML	19 29 54.0		
	comp=N,182μm,0.5s							
HORT				AML	AML	19 29 56.6		
	comp=E,146μm,0.6s							
KYMI	**Kymi, Euboea I**	**2.25**	**219**	P	**Pn**	**19 29 11.2**	**-1.0**
KYMI				AML	AML	19 29 50.6		
	comp=E,305μm,0.5s							
KYMI				AML	AML	19 29 52.5		
	comp=N,252μm,0.6s							
KNT	**Kendrikon**	**2.42**	**290**	P	**Pn**	**19 29 15.1**	**+0.6**
KNT				AML	AML	19 29 53.8		
	comp=N,336μm,0.3s							
KNT				AML	AML	19 29 59.6		
	comp=E,199μm,0.7s							
MRKA	**Markates**	**2.47**	**228**	P	**Pn**	**19 29 14.3**	**-0.8**
MRKA				AML	AML	19 29 58.2		
	comp=N,286μm,0.5s							
MRKA				AML	AML	19 29 58.6		
	comp=E,270μm,0.5s							
ELND	**Elena**	**2.53**	**359**	⇑P	**Pn**	**19 29 17.7**	**+1.6**
KARY	**Karystos**	**2.62**	**206**	P	**Pn**	**19 29 16.7**	**-0.6**
KARY				AML	AML	19 30 03.0		
	comp=E,84μm,0.5s							
KARY				AML	AML	19 30 04.5		
	comp=N,67μm,0.7s							
LIT	**Litokhoron**	**2.64**	**265**	P	**Pn**	**19 29 17.1**	**-0.5**
VAY	**Valandovo**	**2.70**	**291**	*i* Pn	**Pg**	**19 29 27.9**	**+0.5**
VAY	**Valandovo**	**2.70**	**291**	*i* Pn	**Pg**	**19 29 27.9**	**+0.5**
SMG	**Samos**	**2.77**	**165**	P	**Pn**	**19 29 19.8**	**+0.4**
SMG	**Samos**	**2.77**	**165**	P	**Pn**	**19 29 19.9**	**+0.4**
SMG				AML	AML	19 30 08.0		
	comp=E,310μm,0.6s							
SMG				AML	AML	19 30 08.9		
	comp=N,456μm,0.5s							
DION	**Dionisos Attik**	**2.78**	**214**	P	**Pn**	**19 29 18.7**	**-0.7**
PTL	**Penteli**	**2.83**	**215**	P	**Pn**	**19 29 19.6**	**-0.6**
VIL2	**Platees**	**2.99**	**224**	P	**Pn**	**19 29 22.0**	**-0.5**
VTS	**Vitosha**	**3.00**	**319**	⇑P	**Pn**	**19 29 23.5**	**+0.9**
VTS				⇓S	**Sn**	**19 29 59.0**	**+0.7**
VTS	**Vitosha**	**3.00**	**319**	*i* P	**Pn**	**19 29 23.6**	**+0.9**
PRD	**Provadia**	**3.02**	**21**	*i* P	**Pn**	**19 29 22.9**	**+0.2**
VLY	**Voula,Attikes**	**3.03**	**214**	P	**Pn**	**19 29 22.4**	**-0.5**
AGG	**Agios Georgios**	**3.09**	**245**	P	**Pn**	**19 29 23.0**	**-0.7**
PLVB	**Pleven**	**3.14**	**343**	⇓P	**Pn**	**19 29 25.9**	**+1.4**
RAZG	**Razgrad**	**3.20**	**8**	⇓P	**Pn**	**19 29 26.5**	**+1.3**
LTK	**Loutraki**	**3.29**	**225**	P	**Pn**	**19 29 26.2**	**-0.4**
KAND	**Kocaeli-Kandir**	**3.32**	**76**	*i* P	**Pn**	**19 29 27.7**	**+0.8**
APE	**Apeiranthos**	**3.33**	**185**	⇓P	**Pn**	**19 29 26.6**	**-0.6**
SERI	**Serifos**	**3.42**	**200**	P	**Pn**	**19 29 28.5**	**+0.3**
BDRM	**Kayabasi**	**3.53**	**160**	*i* P	**Pn**	**19 29 30.5**	**+0.7**
KALE	**Kalithea**	**3.54**	**237**	P	**Pn**	**19 29 29.7**	**-0.3**
DID	**Didima**	**3.56**	**217**	P	**Pn**	**19 29 30.0**	**-0.2**
ANX	**Ano Chora**	**3.58**	**241**	P	**Pn**	**19 29 30.4**	**-0.1**
KLV	**Kalavryta, Ach**	**3.75**	**232**	P	**Pn**	**19 29 32.7**	**-0.2**
COPA	**Copaceanca**	**3.77**	**352**	⇑P	**Pn**	**19 29 33.7**	**+0.6**
ICOR	**Ion Corvin**	**3.98**	**20**	⇓P	**Pn**	**19 29 37.1**	**+1.3**
TRIP	**Tripoli**	**4.03**	**226**	P	**Pn**	**19 29 37.0**	**+0.3**
TOPG	**Topolog**	**4.83**	**21**	⇑P	**Pn**	**19 29 48.7**	**+1.0**
ARR	**Arges**	**5.06**	**350**	⇑P	**Pn**	**19 29 51.6**	**+0.7**
VOIR		**5.08**	**353**	⇓P	**Pn**	**19 29 52.1**	**+0.9**
MLR	**Muntele Rosu**	**5.10**	**0**	⇑P	**Pn**	**19 29 53.3**	**+1.9**
HERR	**Herculane**	**5.17**	**331**	⇓P	**Pn**	**19 29 52.5**	**+0.1**
MDVR	**Moldovita**	**5.37**	**326**	⇓P	**Pn**	**19 29 55.7**	**+0.6**
VRI	**Vrincioaia**	**5.50**	**6**	⇓P	**Pn**	**19 29 59.2**	**+2.3**
GZR	**Gura Zlata**	**5.50**	**336**	⇓P	**Pn**	**19 29 57.0**	**+0.1**
GZR				⇓S	**Sn**	**19 30 58.6**	**-1.4**
DOPR	**Dopca**	**5.58**	**356**	⇑P	**Pn**	**19 29 59.8**	**+1.7**
BZS	**Buzias**	**6.10**	**330**	⇑P	**Pn**	**19 30 05.6**	**+0.6**
TESR	**Tescani**	**6.14**	**5**	⇑P	**Pn**	**19 30 07.8**	**+2.1**
BIZ	**Bicaz**	**6.55**	**1**	⇑P	**Pn**	**19 30 13.2**	**+2.0**
SIRR	**Siria**	**6.64**	**334**	⇓P	**Pn**	**19 30 12.9**	**+0.4**

*IDC **26** 19:29:07.3±1.2, 0.°53N×122.°16E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.5/31, mbtmp3.6/5, ML3.5/1, MS3.4/1, Ms1 3.4/1, ms1mx2.4/33, Error ellipse: s-maj=120.5km s-min=19.5km az=66.0*

*NEIC **26** 19:29:29.3±0.3, 0.°3N×0.°2×122.°0E×0.°2, h208km±13km, mb4.2/8, Error ellipse: s-maj=24.6km s-min=21.4km az=64.0*

ISC 26 19:29:28.7±0.8, 0.°3N±0.°1×122.°0E±0.°1, h200km, n24, σ0§49/23, mb3.9/8, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.54**	**148**			**Pn**	**19 30 03.7**	**+0.9**
TNTI	**Ternate**	**5.43**	**85**			**Pn**	**19 30 49.0**	**+0.4**
LEM	**Lembang**	**15.96**	**243**	LR		LR	19 40 52.2	
	comp=Z,131nm,18.6s,baz=180,slow=43							
FITZ	**Fitzroy Crossi**	**18.62**	**169**	P		**P**	**19 33 30.6**	**-0.7**
	0.1nm,0.3s,baz=354,slow=9.2,SNR=2.1							
FITZ	**Fitzroy Crossi**	**18.62**	**169**	P		**P**	**19 33 31.1**	**-0.2**
WB0	**Warramunga Arr**	**23.35**	**149**	P		**P**	**19 34 18.7**	**-0.7**
WRAB	**Tennant Creek**	**23.47**	**150**	P		**P**	**19 34 19.9**	**-0.6**
WRA	**Warramunga Arr**	**23.47**	**150**	P		**P**	**19 34 19.6**	**-0.9**
	1.0nm,0.4s,baz=325,slow=11,SNR=23							
WB2	**Warramunga Arr**	**23.48**	**150**	P		**P**	**19 34 20.1**	**-0.4**
WB2				IAmb		IAmb	19 34 21.3	
	comp=Z,12nm,1.3s							
WR0	**Warramunga Arr**	**23.59**	**149**	P		**P**	**19 34 21.0**	**-0.5**
WR0				IAmb		IAmb	19 34 24.7	
	comp=Z,9.1nm,1.3s							
ASAR	**Alice Springs**	**26.48**	**155**	P		**P**	**19 34 47.3**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=344,slow=14,SNR=6.9							
JIRN	**Jiri**	**43.79**	**311**	*eP*		**P**	**19 37 15.6**	**+0.2**
	comp=Z,16nm,0.6s							
GUN	**Gumba**	**44.16**	**312**	*eP*		**P**	**19 37 18.5**	**+0.2**
	comp=Z,10nm,0.4s							
PKI	**Pulchoki**	**44.33**	**311**	*eP*		**P**	**19 37 19.3**	**-0.3**
PKIN	**Phulchoki**	**44.34**	**311**	*eP*		**P**	**19 37 19.4**	**-0.3**
GKN	**Gorkha**	**45.14**	**311**	*eP*		**P**	**19 37 25.8**	**0.0**
	comp=Z,5.9nm,0.2s							
KOLN	**Koldanda**	**45.81**	**310**	*eP*		**P**	**19 37 31.4**	**+0.3**
	comp=Z,7.7nm,0.5s							
DANN	**Dangsing**	**45.98**	**311**	*eP*		**P**	**19 37 32.5**	**-0.1**
	comp=Z,10.0nm,0.4s							
PYUN	**Piuthan**	**46.44**	**310**	*eP*		**P**	**19 37 36.6**	**+0.5**
	comp=Z,24nm,0.8s							
SONM	**Songino Array**	**49.26**	**346**	P		**P**	**19 37 57.3**	**0.0**
	comp=Z,0.5nm,0.6s,baz=168,slow=8.8,SNR=1.4							
MK31	**Makanchi Array**	**57.84**	**329**	P		**P**	**19 38 59.5**	**+0.1**
MKAR	**Makanchi Array**	**57.84**	**329**	P		**P**	**19 38 59.5**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=129,slow=8.4,SNR=23							
MAKZ	**Makanchi**	**58.01**	**329**	P		**P**	**19 39 00.4**	**-0.2**
MAKZ				IAmb		IAmb	19 41 00.2	
	comp=Z,7.0nm,1.9s							
KURK	**Kurchatov**	**62.22**	**330**	P		**P**	**19 39 28.6**	**-0.4**
KURK				IAmb		IAmb	19 41 25.2	
	comp=Z,4.5nm,1.4s							

*IDC **26** 19:37:33.6±1.4, 6.°02S×125.°07E, h540km±19km, mb2.4/1, mb1 2.6/6, mb1mx2.4/34, mbtmp3.4/6, Error ellipse: s-maj=36.0km s-min=23.0km az=80.0*

ISC 26 19:37:33.8±1.1, 6.°1S±0.°1×125.°1E±0.°2, h550km, n6, σ1§08/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.36**	**199**	P		**P**	**19 38 59.1**	**+0.6**
	2.8nm,0.3s,baz=265,slow=1.7,SNR=6.6							
BATI				S		**S**	**19 40 06.2**	**-1.3**
	1.6nm,0.3s,baz=300,slow=20,SNR=1.5							
SIJI	**Sorong**	**8.02**	**50**	P		**P**	**19 39 31.5**	**-0.3**
	0.5nm,0.3s,baz=99,slow=22,SNR=4.2							
FITZ	**Fitzroy Crossi**	**11.97**	**178**	P		**P**	**19 40 11.8**	**-0.2**
	0.1nm,0.3s,baz=30,slow=17,SNR=1.5							
WRA	**Warramunga Arr**	**16.45**	**148**	P		**P**	**19 40 57.0**	**-0.6**
	0.2nm,0.3s,baz=322,slow=11,SNR=20							
ASAR	**Alice Springs**	**19.44**	**155**	P		**P**	**19 41 26.3**	**+1.4**
	0.0nm,0.3s,baz=349,slow=14,SNR=4.6							
MKAR	**Makanchi Array**	**64.85**	**329**	P		**P**	**19 47 19.0**	**0.0**
	0.2nm,0.5s,baz=126,slow=5.3,SNR=3.0							

*IDC **26** 19:42:59.2±0.9, 42.°09N×29.°50W, h0km, mb3.6/13, mb1 3.8/14, mb1mx3.6/52, mbtmp3.6/14, ML3.9/1, Error ellipse: s-maj=25.8km s-min=18.2km az=171.0*

*NEIC **26** 19:43:00.8±1.9, 42.°0N±0.°1×29.°4W±0.°1, h10km±1km, mb4.3/9, Error ellipse: s-maj=17.3km s-min=15.6km az=346.0*

ISC 26 19:43:00.7±0.5, 41.°92N±0.°09×29.°38W±0.°07, h10km, n48, σ1§24/46, mb3.8/19, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
H07S1	**FLORES T-PHASE**	**2.90**	**209**	*eP*		**Pn**	**19 43 46.9**	**0.0**
SRBC	**Serra Branca**	**3.06**	**160**	*eP*		**Pn**	**19 43 48.3**	**-0.8**
PGRA	**Graciosa**	**3.08**	**159**	*eP*		**Pn**	**19 43 48.5**	**-0.9**
ROSA	**Rosais**	**3.32**	**164**	Pn		**Pn**	**19 43 52.1**	**-0.5**
BART	**Pico Bartolome**	**5.26**	**141**	*eP*		**Pn**	**19 44 18.8**	**-0.6**
PSMA	**Santa Maria**	**5.92**	**145**	*eP*		**Pn**	**19 44 28.5**	**+0.1**
PSMN	**Pico do Norte,**	**5.94**	**144**	*eP*		**Pn**	**19 44 28.4**	**-0.3**
PMOZ	**Porto Moniz, M**	**13.27**	**129**	Pn		**Pn**	**19 46 06.1**	**-3.1**
ESDC	**Sonseca Array**	**19.36**	**88**	P		**Pn**	**19 47 28.0**	**+0.5**
	0.1nm,0.3s,baz=284,slow=12,SNR=12							
ESDC	**Sonseca Array**	**19.36**	**88**	P		**Pn**	**19 47 28.0**	**+0.5**
DRLN	**Deer Lake**	**20.92**	**300**	P		**P**	**19 47 43.3**	**+0.1**
EKA	**Eskdalemuir Ar**	**21.75**	**43**	P		**P**	**19 47 50.4**	**-1.7**
	0.1nm,0.3s,baz=242,slow=8.8,SNR=1.5							
EKA	**Eskdalemuir Ar**	**21.75**	**43**	P		**P**	**19 47 50.4**	**-1.7**
HAL	**Halifax**	**24.95**	**288**	P		**P**	**19 48 23.6**	**-0.4**
HAL				IAmb		IAmb	19 48 31.9	
	comp=Z,7.1nm,0.9s							
BATG	**Bathurst New B**	**26.49**	**294**	P		**P**	**19 48 36.7**	**-1.3**
BATG				IAmb		IAmb	19 48 37.9	
	comp=Z,5.9nm,0.9s							
GERES	**GERESS Array B**	**30.71**	**62**	P		**P**	**19 49 15.6**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=281,slow=6.9,SNR=1.5							
GERES	**GERESS Array B**	**30.71**	**62**	P		**P**	**19 49 15.6**	**-0.1**
NOA	**NORSAR Array B**	**30.99**	**38**	P		**P**	**19 49 18.2**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=252,slow=9.6,SNR=1.7							
TORD	**Torodi Ar. Bea**	**39.37**	**128**	P		**P**	**19 50 31.8**	**+1.3**
	comp=Z,2.9nm,0.9s,baz=321,slow=7.8,SNR=11							
TORD	**Torodi Ar. Bea**	**39.37**	**128**	P		**P**	**19 50 31.8**	**+1.3**
AKASG	**Malin Array Be**	**40.45**	**57**	P		**P**	**19 50 38.1**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=274,slow=8.8,SNR=1.2							
AKASG	**Malin Array Be**	**40.45**	**57**	P		**P**	**19 50 38.1**	**-1.1**
ELL	**Elmali**	**45.36**	**76**	P		**P**	**19 51 19.4**	**+0.1**
U40A	**Yellville**	**48.55**	**286**	P		**P**	**19 51 44.5**	**+0.5**
U40A				IAmb		IAmb	19 51 45.5	
	comp=Z,3.7nm,0.8s							
MAK	**Makhachkala**	**54.81**	**61**	*eP*		P	19 52 38.6	+7.9
MAK				*e*			19 54 44.7	
MAK				*eS*		**S**	**20 00 14.2**	**+2.7**
MAK				pmax		pmax		
	comp=Z,32nm,0.7s							
MAK				MLR		MLR		
	comp=Z,140nm,15.0s							
PDAR	**Pinedale Array**	**57.03**	**300**	P		**P**	**19 52 44.8**	**-2.2**
	comp=Z,0.3nm,0.4s,baz=67,slow=6.9,SNR=3.9							
PDAR	**Pinedale Array**	**57.03**	**300**	P		**P**	**19 52 44.8**	**-2.2**
TX31	**Lajitas Ar. Si**	**59.94**	**284**	P		**P**	**19 53 08.2**	**+1.0**
TX31				IAmb		IAmb	19 53 17.8	
	comp=Z,2.8nm,0.9s							
TX32	**Lajitas Array**	**59.94**	**284**	P		**P**	**19 53 08.3**	**+1.1**
TXAR	**Lajitas Array**	**59.94**	**284**	P		**P**	**19 53 07.0**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=66,slow=7.2,SNR=6.7							
TXAR	**Lajitas Array**	**59.94**	**284**	P		**P**	**19 53 07.0**	**-0.2**
BVAR	**Borovoye Array**	**63.00**	**42**	P		**P**	**19 53 27.4**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=298,slow=3.1,SNR=4.2							
BVAR	**Borovoye Array**	**63.00**	**42**	P		**P**	**19 53 27.4**	**-0.1**
ILAR	**Eielson Array**	**63.02**	**335**	P		**P**	**19 53 26.6**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=32,slow=6.9,SNR=5.5							
ILAR	**Eielson Array**	**63.02**	**335**	P		**P**	**19 53 26.6**	**-0.8**
LPAZ	**La Paz**	**68.07**	**220**	P		**P**	**19 54 01.8**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=0.0,slow=2.0,SNR=1.9							
LPAZ	**La Paz**	**68.07**	**220**	P		**P**	**19 54 01.8**	**+0.5**
LPAZ	**La Paz**	**68.07**	**220**	IAmb		IAmb	19 54 05.7	
	comp=Z,1.2nm,0.9s							
KURK	**Kurchatov**	**68.46**	**41**	P		**P**	**19 54 02.4**	**-0.2**
KURK	**Kurchatov**	**68.46**	**41**	IAmb		IAmb	19 54 11.0	
	comp=Z,1.1nm,0.8s							
KURBB	**Kurchatov Arra**	**68.47**	**41**	P		**P**	**19 54 02.4**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=312,slow=6.8,SNR=5.9							
ZALV	**Zalesovo Beam**	**69.14**	**35**	P		**P**	**19 54 07.1**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=297,slow=6.3,SNR=1.9							
ZALV	**Zalesovo Beam**	**69.14**	**35**	P		**P**	**19 54 07.1**	**+0.2**
MKAR	**Makanchi Array**	**72.89**	**42**	P		**P**	**19 54 29.2**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=329,slow=5.9,SNR=4.7							
MKAR	**Makanchi Array**	**72.89**	**42**	P		**P**	**19 54 29.2**	**-0.6**
IRK	**Irkutsk**	**77.98**	**27**	*eP*		**P**	**19 55 03.2**	**+4.3**
IRK				pmax		pmax		
	comp=Z,24nm,1.8s							
ASAR	**Alice Springs**	**157.08**	**43**	PKPab		**PKPab**	**20 03 26.8**	**-0.4**
	comp=Z,1.5nm,0.8s

CMLA Cha da Macela 5.18 145 Pn 19 44 31.5 -1.4
BART Pico Bartolome 5.33 143 *e*P **Pn 19 44 32.9 -2.0**
BART A A 19 44 34.9
1µm,0.9s
PSMA Santa Maria 6.00 147 *e*P **Pn 19 44 42.4 -1.7**
PSMA A A 19 44 44.1
518nm,1.2s
PSMA *e*S **Sn 19 45 46.9 -6.1**
PSMA A A 19 45 47.4
14nm,0.2s
PSMN Pico do Norte, 6.02 146 *e*P **Pn 19 44 42.1 -2.2**
PSMN A A 19 44 44.4
417nm,1.1s
PMOZ Porto Moniz, M 13.30 130 *e*P **Pn 19 46 25.3 +1.1**
169nm,2.3s
PMOZ Porto Moniz, M 13.30 130 *e*T T 19 59 16.8
PMOZ Porto Moniz, M 13.30 130 Pn 19 46 24.2 0.0
PMAR Madeira 13.54 130 *e*P **Pn 19 46 28.4 +0.9**
240nm,1.0s
PMAR Madeira 13.54 130 *e*T T 19 59 12.3
PMPST Porto Santo, M 13.62 127 *e*P **Pn 19 46 29.4 +1.0**
332nm,1.1s
PMPST *e*S **Sn 19 49 03.2 +3.2**
PMPST Porto Santo, M 13.62 127 *e*T T 19 59 15.0
PMPS Porto Santo 13.63 127 *e*P **Pn 19 46 29.4 +0.8**
217nm,0.9s
PMAFR Mafra 15.51 95 *e*P **Pn 19 46 52.9 -1.1**
185nm,1.8s
PMAFR *e*S **Sn 19 49 48.3 +2.4**
PGAV Gavieira, Arco 15.60 83 *e*P **Pn 19 46 56.5 +1.3**
180nm,1.8s
PGAV *e*S **Sn 19 49 50.4 +2.1**
LIS Lisbon 15.68 96 *e*P **Pn 19 46 55.8 -0.5**
LIS AMb AMB 19 47 06.0
comp=Z,342nm,1.6s
LIS *e*S **Sn 19 49 50.6 +0.5**
LIS Lisbon 15.68 96 *e*P **Pn 19 46 55.7 -0.5**
LIS *e*S **Sn 19 49 50.6 +0.5**
LIS pmax pmax
comp=Z,343nm,1.6s
LIS Lisbon 15.68 96 *e*P **Pn 19 46 56.5 +0.3**
comp=Z,340nm,1.5s
PCAS Casmilo, Conde 15.79 90 *e*P **P 19 46 59.9 -1.6**
comp=Z,216nm,1.6s
PCAS *e*S **Sn 19 49 46.6 -6.2**
COI Coimbra 15.81 90 P **Pn 19 46 56.4 -1.5**
COI pmax pmax
comp=Z,263nm,0.9s
COI Coimbra 15.81 90 *e*P **P 19 47 03.0 +1.2**
comp=Z,332nm,0.9s
COI Coimbra 15.81 90 Pn 19 46 56.4 -1.5
COI P **pP 19 47 03.2 0.0**
PCAB Cabril 15.81 84 *e*P **P 19 47 02.5 +0.6**
comp=Z,107nm,1.8s
PCAB Cabril 15.81 84 *e*T T 20 01 29.5
PVIS Viseu 16.09 88 *e*P **P 19 47 05.6 +0.7**
comp=Z,101nm,1.7s
PVRL Vila Real 16.11 86 *e*P **Pn 19 47 02.1 +0.2**
comp=Z,93nm,1.5s
PMTG Montargil 16.26 94 *e*P **Pn 19 47 02.2 -1.4**
comp=Z,181nm,1.7s
PMTG *e*S **Sn 19 50 06.7 +2.5**
PNCL Nicolau / Gran 16.34 97 *e*P **Pn 19 47 05.5 +0.8**
comp=Z,92nm,1.8s
PNCL *e*S **Sn 19 50 00.0 -6.2**
PNCL Nicolau / Gran 16.34 97 *e*T T 20 02 37.8
PTEO Sao Teotonio 16.41 99 *e*P **Pn 19 47 04.8 -0.8**
comp=Z,93nm,1.9s
MTE Manteigas 16.42 89 *e*P **Pn 19 47 03.9 -1.9**
comp=Z,175nm,1.6s
MTE *e*S **Sn 19 50 09.1 +1.0**
MTE Manteigas 16.42 89 Pn 19 47 03.3 -2.4
MTE P **pP 19 47 09.4 -0.6**
PFVI Vila Bisbo 16.49 101 *e*P **Pn 19 47 07.8 +1.1**
comp=Z,109nm,1.7s
PFVI *e*S **Sn 19 50 05.9 -4.0**
PFVI Vila Bisbo 16.49 101 Pn **Pn 19 47 06.0 -0.6**
MORF Marmelete 16.55 100 *e*P **Pn 19 47 07.0 -0.5**
MORF AMb AMB 19 47 20.7
comp=Z,97nm,1.6s
MORF *e*S **Sn 19 50 11.9 +0.5**
MORF Marmelete 16.55 100 *e*P **Pn 19 47 07.0 -0.5**
MORF *e*S **Sn 19 50 11.9 +0.5**
MORF pmax pmax
comp=Z,97nm,1.6s
MORF Marmelete 16.55 100 *e*P **Pn 19 47 06.8 -0.7**
comp=Z,98nm,1.6s
MORF *e*S **Sn 19 50 13.0 +1.6**
PCBR Castelo Branco 16.60 90 *e*P **Pn 19 47 07.4 -0.6**
comp=Z,152nm,1.5s
MVO Moncorvo 16.64 86 *e*P **Pn 19 47 09.2 +0.6**
comp=Z,111nm,1.7s
MVO *e*S **Sn 19 50 15.8 +2.2**
PBRG Braganca 16.75 83 *e*P **P 19 47 11.2 -1.1**
comp=Z,64nm,1.5s
PBRG *e*S **S 19 50 23.4 -3.9**
PMRV Marv??o 16.77 92 *e*P **Pn 19 47 08.9 -1.3**
comp=Z,125nm,2.0s
PMRV *e*S **Sn 19 50 09.5 -7.2**
PESTR Estremoz 16.79 94 *e*S **Sn 19 50 08.3 -8.8**
PESTR Estremoz 16.79 94 P **Pn 19 47 10.8 +0.3**
PBEJ Beja 16.86 97 *e*P **Pn 19 47 11.4 0.0**
comp=Z,72nm,1.8s
PCVE Castro Verde 16.88 98 *e*P **Pn 19 47 12.1 +0.5**
comp=Z,81nm,1.2s
PCVE *e*S **S 19 50 35.5 +5.6**
PCVE Castro Verde 16.88 98 *e*T T 20 02 05.0
PBDV Barranco-do-Ve 17.11 99 *e*P **Pn 19 47 14.8 +0.4**
comp=Z,108nm,1.9s
PBDV *e*S **Sn 19 50 21.6 -3.2**
PVAQ Vaqueiros 17.20 99 *e*P **Pn 19 47 15.1 -0.5**
comp=Z,71nm,1.6s
PVAQ *e*S **Sn 19 50 28.6 +1.5**
PVAQ Vaqueiros 17.20 99 P **P 19 47 17.2 0.0**
CCA1 Carnmenellis 18.46 56 *e*P **Pn 19 47 31.6 +0.6**
CCA1 IAmb IAmb 19 47 32.5
comp=Z,124nm,1.6s
HORN Hornachuelos 18.86 95 P **Pn 19 47 38.6 +2.6**
SNR=7.6
PAB San Pablo 19.01 89 P **Pn 19 47 37.6 -0.3**
PAB pmax pmax
comp=Z,53nm,1.0s
PAB San Pablo 19.01 89 P **Pn 19 47 37.6 -0.3**
ESDC Sonseca Array 19.26 89 P **P 19 47 40.3 +0.4**
comp=Z,0.6nm,0.3s,baz=288,slow=12,SNR=54
RSBS Rosebush, Pemb 19.32 51 *e*P **P 19 47 40.9 +0.4**
RSBS IAmb IAmb 19 47 44.3
comp=Z,80nm,1.2s
SRHM Skhour des Reh 19.47 113 P **Pn 19 47 49.0 +5.4**
SNR=5.3
RSA Sarsar 19.67 104 P **Pn 19 47 50.0 +4.1**
SNR=8.1
WPS Cemaes, Angles 20.02 47 *e*P **P 19 47 48.1 +0.1**
WPS IAmb IAmb 19 47 49.1
comp=Z,38nm,1.2s
JVM Valle D.L. Mar 20.14 60 *e*P **P 19 47 50.0 +0.6**
OUK Oukaimeden 20.25 115 P Pn 19 47 56.3 +3.2
SNR=7.3
MCH1 Michaelchurch 20.35 52 *e*P **P 19 47 52.1 +0.4**
MCH1 IAmb IAmb 19 47 53.5
comp=Z,99nm,1.2s
MONM Monmouth 20.42 52 *e*P **P 19 47 53.0 +0.6**
MONM IAmb IAmb 19 47 54.3
comp=Z,97nm,1.0s
OLDB Oldbury-Upon-S 20.51 53 *e*P **P 19 47 53.0 -0.4**
FOEL Foel Wylfa 20.54 49 *e*P **P 19 47 53.9 +0.1**
FOEL IAmb IAmb 19 47 55.3
comp=Z,50nm,1.1s
GAL1 Galloway 20.56 43 *e*P **P 19 47 53.8 -0.1**
HLM1 Long Mynd 20.59 51 *e*P **P 19 47 54.9 +0.6**
HLM1 IAmb IAmb 19 47 56.1
comp=Z,117nm,1.1s
STRD Stroud 20.78 53 *e*P **P 19 47 57.2 +0.9**
SESP Santiago Espad 20.78 92 P Pn 19 47 58.9 -0.1
SNR=14
DRLN Deer Lake 20.92 300 P **P 19 47 57.6 -0.3**
SWN1 Swindon 20.92 54 *e*P **P 19 47 58.9 +1.1**
LAWE Loch Awe, Argy 20.93 39 *e*P **P 19 47 58.0 +0.1**
LAWE IAmb IAmb 19 48 03.2
comp=Z,32nm,1.0s
CZD Col de Zad 21.16 107 P **P 19 48 05.1 +4.1**
SNR=16
STNC Stoke 21.18 49 *e*P **P 19 48 00.5 -0.1**
ESK Eskdalemuir 21.54 43 P **P 19 48 04.1 -0.4**
ESK pmax pmax
comp=Z,46nm,1.1s
ESK Eskdalemuir 21.54 43 P **P 19 48 04.1 -0.4**
EKA Eskdalemuir Ar 21.57 43 P **P 19 48 04.4 -0.4**
comp=Z,7.7nm,0.9s,baz=238,slow=8.7,SNR=14
CWF Charnwood Fore 21.57 51 *e*P **P 19 48 05.0 +0.1**
CWF IAmb IAmb 19 48 09.7
comp=Z,45nm,1.1s
MDT Midelt 21.59 107 P **P 19 48 05.8 +0.5**
comp=Z,8.2nm,1.1s,baz=305,slow=11,SNR=10
INVG Invergeldie, C 21.66 40 *e*P **P 19 48 05.9 +0.1**
INVG IAmb IAmb 19 48 07.0
comp=Z,87nm,1.3s
KAC Achnashellach 21.67 36 *e*P **P 19 48 05.8 -0.1**
EBL Broad Law 21.83 42 *e*P **P 19 48 07.3 -0.3**
ESY Stoneypath 22.11 42 *e*P **P 19 48 10.3 -0.3**
IVI Ivigtut 22.30 336 P **P 19 48 13.0 +0.5**
IVI IAmb IAmb 19 48 15.7
comp=Z,90nm,1.5s
MCD Coleburn Disti 22.64 38 *e*P **P 19 48 15.5 -0.7**
CLF Chambon-Foret 22.94 64 P **P 19 48 19.5 +0.1**
CLF IAmb IAmb 19 48 27.0
comp=Z,122nm,1.1s
EANR 'Ain N'Sour 24.29 95 P **P 19 48 33.2 +0.3**
ECHA Ech Chlef 24.41 94 P **P 19 48 35.1 +1.2**
EBNR Beni Rached 24.47 93 P **P 19 48 36.7 +2.1**
DOU Dourbes 24.64 59 P **P 19 48 35.4 -0.4**
ETRT Tiaret 24.67 96 P **P 19 48 38.1 +1.7**
BMRD Maredsous 24.77 59 P **P 19 48 36.4 -0.6**
comp=Z,30nm,1.1s
BMRD pP **sP 19 48 39.6 +0.5**
BGES Gesves 24.98 59 P **P 19 48 38.6 -0.3**
comp=Z,45nm,1.0s
BGES pP **pwP 19 48 42.2 -1.1**
BGES PnPn **PnPn 19 49 09.7 -2.1**
HAL Halifax 24.99 288 P **P 19 48 38.2 -0.8**
HAL pmax pmax
comp=Z,142nm,1.0s
HAL Halifax 24.99 288 P **P 19 48 38.2 -0.8**
BCLA Clavier 25.12 59 P **P 19 48 39.8 -0.4**
comp=Z,59nm,1.1s
BCLA PnPn **PnPn 19 49 12.4 -1.3**
BSTI Sart Tilman 25.31 58 P **P 19 48 41.8 -0.1**
BSTI PnPn **PnPn 19 49 16.4 +0.2**
BEBN Eben Emael 25.40 58 P **P 19 48 42.4 -0.3**
comp=Z,51nm,0.9s
BHOU Houyet 25.56 59 P **P 19 48 44.1 -0.1**
comp=Z,33nm,1.9s
MEM Membach 25.59 58 P **P 19 48 44.5 +0.1**
comp=Z,35nm,0.9s
MEM PnPn **PnPn 19 49 16.9 -3.2**
WLF Walferdange 25.61 61 P **P 19 48 44.2 -0.4**
comp=Z,39nm,1.1s
WLF Walferdange 25.61 61 *e*P **P 19 48 43.6 -1.0**
comp=Z,48nm,1.1s,baz=270,slow=8.5
WLF Walferdange 25.61 61 P **P 19 48 44.6 0.0**
WLF pmax pmax
comp=Z,42nm,0.9s
WLF Walferdange 25.61 61 P **P 19 48 44.6 0.0**
WLF IAmb IAmb 19 48 51.6
comp=Z,42nm,0.9s
LMN Caledonia Moun 25.73 291 P **P 19 48 44.9 -0.9**
BNI Bardonecchia 26.07 71 P **P 19 48 49.6 +0.5**
BNI pmax pmax
comp=Z,70nm,1.3s
BNI Bardonecchia 26.07 71 P **P 19 48 49.6 +0.5**
BNI IAmb IAmb 19 49 08.1
comp=Z,70nm,1.3s
ECH Echery 26.23 64 P **P 19 48 50.3 0.0**
ECH pmax pmax
comp=Z,41nm,1.0s
ECH Echery 26.23 64 P **P 19 48 50.3 0.0**
ECH IAmb IAmb 19 49 06.1
comp=Z,41nm,1.0s
AHRW Bad Neuenahr-A 26.26 59 *e*P **P 19 48 47.8 -2.7**
comp=Z,37nm,1.2s,baz=270,slow=8.5
SENIN Lac Senin/Sane 26.39 68 P **P 19 48 52.1 +0.1**
SENIN IAmb IAmb 19 49 01.6
comp=Z,80nm,1.2s
BUG Bochum--Univer 26.47 57 *e*P **P 19 48 51.5 -0.8**
comp=Z,27nm,1.1s,baz=270,slow=8.5
BATG Bathurst New B 26.51 294 P **P 19 48 51.9 -0.9**
BATG IAmb IAmb 19 48 55.6
comp=Z,74nm,1.0s
IBBN Ibbenburen 26.87 55 *e*P **P 19 48 55.7 -0.3**
comp=Z,33nm,1.1s,baz=270,slow=8.5
BFO Black Forest 27.01 64 *e*P **P 19 48 57.0 -0.3**
comp=Z,36nm,1.3s,baz=270,slow=8.5
BFO Black Forest 27.01 64 P **P 19 48 57.3 -0.1**
BFO pmax pmax
comp=Z,36nm,1.3s
BFO Black Forest 27.01 64 P **P 19 48 57.3 -0.1**
TNS Taunus Mts 27.12 60 *e*P **P 19 48 57.8 -0.5**
comp=Z,13nm,1.0s,baz=270,slow=8.5
GGN Saint George 27.23 289 P **P 19 48 58.1 -1.1**
GGN IAmb IAmb 19 49 02.4
comp=Z,91nm,1.1s
SFJD Kangerlussuaq 27.57 342 P **P 19 49 01.3 -0.8**
comp=Z,9.3nm,1.0s,baz=147,slow=11,SNR=6.6
SFJD Kangerlussuaq 27.57 342 P **P 19 49 01.5 -0.6**
H66A Whiting 27.60 289 P **P 19 49 02.1 -0.5**
baz=82,SNR=19
SCHQ Schefferville 27.63 310 P **P 19 49 01.3 -1.5**
comp=Z,50nm,1.0s,baz=103,slow=9.5,SNR=15
SCHQ Schefferville 27.63 310 P **P 19 49 01.9 -0.9**
SCHQ IAmb IAmb 19 49 06.8
comp=Z,46nm,0.9s
EMMW East Machias 27.71 289 P **P 19 49 02.4 -1.2**
G65A Princeton 27.72 290 P **P 19 49 02.8 -0.9**
baz=83
G65A Princeton 27.72 290 P **P 19 49 02.6 -1.1**
G65A IAmb IAmb 19 49 14.3
comp=Z,110nm,1.9s
E64A Bridgewater 27.77 292 P **P 19 49 03.1 -1.1**
baz=85,SNR=12
TUE Stuetta 27.79 68 P **P 19 49 04.0 -0.6**
TUE IAmb IAmb 19 49 11.2
comp=Z,31nm,1.0s
PQI Presque Isle 27.88 293 P **P 19 49 03.9 -1.3**
RETH Rethem/Aller, 27.90 54 *e*P **P 19 49 05.0 -0.3**
comp=Z,30nm,1.4s,baz=270,slow=8.5
D63A Stockholm 27.91 294 P **P 19 49 04.6 -0.8**
baz=86
DAVA Damuels 28.09 66 *i* P **P 19 49 07.8 +0.5**
comp=Z,13nm,0.9s
DAVOX Davos/Dischmat 28.13 67 P **P 19 49 07.6 0.0**
comp=Z,3.0nm,0.7s,baz=321,slow=12,SNR=7.2
UBBA Unterbreizbach 28.14 58 *e*P **P 19 49 07.3 0.0**
comp=Z,22nm,1.5s,baz=270,slow=8.5
GTTG Gottingen 28.16 57 *e*P **P 19 49 07.4 -0.2**
comp=Z,19nm,1.2s,baz=270,slow=8.5
MSSA Maissana 28.18 72 P **P 19 49 08.2 +0.2**
E63A Oxbow 28.18 292 P **P 19 49 07.3 -0.6**
baz=84,SNR=13
E63A Oxbow 28.18 292 P **P 19 49 06.9 -0.9**
F64A Sherman 28.19 291 P **P 19 49 07.2 -0.7**
baz=84,SNR=5.8
F64A Sherman 28.19 291 P **P 19 49 06.8 -1.1**
F64A IAmb IAmb 19 49 13.2
comp=Z,83nm,1.5s
UBR Ueberruh 28.22 65 *e*P **P 19 49 08.3 0.0**
comp=Z,32nm,1.6s,baz=270,slow=8.5
H65A Eastbrook 28.27 289 P **P 19 49 08.9 +0.2**
baz=81,SNR=6.7
NRDL Niedersach Rie 28.33 55 *e*P **P 19 49 08.5 -0.4**
comp=Z,14nm,1.0s,baz=270,slow=8.5
FUORN Ofenpass-Fuorn 28.41 67 P **P 19 49 09.9 -0.3**
CLZ Clausthal 28.43 56 *e*P **P 19 49 10.2 +0.1**
comp=Z,21nm,1.2s,baz=270,slow=8.5
G64A Mayfield 28.55 290 P **P 19 49 11.1 0.0**
baz=82,SNR=7.8
D62A Allapoint, All 28.55 294 P **P 19 49 10.7 -0.5**
baz=85,SNR=13
D62A Allapoint, All 28.55 294 P **P 19 49 10.1 -1.1**
D62A IAmb IAmb 19 49 16.5
comp=Z,51nm,0.9s
BSEG Bad Segeberg 28.62 52 *e*P **P 19 49 11.5 -0.2**
comp=Z,24nm,1.0s,baz=270,slow=8.5
ASSE Asse, Remlinge 28.64 56 *e*P **P 19 49 12.2 +0.4**
comp=Z,32nm,0.2s,baz=270,slow=8.5
RETA Reutte 28.68 65 *i* P **P 19 49 12.6 +0.2**
comp=Z,14nm,1.2s
FETA Feichten 28.69 66 *i* P **P 19 49 13.3 +0.7**
comp=Z,20nm,1.0s,SNR=12
SALO Salr 28.70 69 P **P 19 49 12.0 -0.5**
F63A Nahmakanta, Br 28.73 291 P **P 19 49 12.7 -0.1**
baz=83,SNR=5.4
F63A Nahmakanta, Br 28.73 291 P **P 19 49 12.6 -0.1**
F63A IAmb IAmb 19 49 18.5
comp=Z,56nm,0.9s
VLC Villacollemand 28.82 72 P **P 19 49 12.9 -0.7**
VLC IAmb IAmb 19 49 25.3
comp=Z,40nm,1.2s
GRA1 Grafenberg Arr 28.90 61 P **P 19 49 14.2 0.0**
GRF Grafenberg Arr 28.90 61 *e*P **P 19 49 14.2 0.0**
comp=Z,28nm,1.5s,baz=270,slow=8.5
GRF *e*L L 19 59 34.7
comp=Z,781nm,19.3s
GRF Grafenberg Arr 28.90 61 P **P 19 49 14.2 0.0**
GRF pmax pmax
comp=Z,27nm,1.3s
E62A Clayton Lake 28.92 293 P **P 19 49 13.6 -0.8**
baz=84
E62A Clayton Lake 28.92 293 P **P 19 49 13.8 -0.6**
E62A IAmb IAmb 19 49 19.7
comp=Z,35nm,1.1s
MOTA Moosalm 28.92 66 *i* P **P 19 49 14.9 +0.3**
comp=Z,23nm,1.0s,SNR=12
PKME Peaks-Kenny Pk 28.92 290 P **P 19 49 14.4 0.0**
baz=82,SNR=8.2
PKME Peaks-Kenny Pk 28.92 290 P **P 19 49 13.7 -0.7**
H64A Troy 28.97 289 P **P 19 49 14.4 -0.5**
baz=81,SNR=7.5
FUR Furstenfeldbru 28.98 64 *e*P **P 19 49 15.2 +0.2**
comp=Z,39nm,1.3s,baz=270,slow=8.5
SQTA Sankt Quirin 29.00 66 *i* P **P 19 49 15.9 +0.6**
comp=Z,29nm,1.1s,SNR=14
MOX Moxa 29.16 59 *e*P **P 19 49 16.5 0.0**
comp=Z,14nm,1.1s,baz=270,slow=8.5
MOX *e*L L 19 59 15.3
comp=Z,551nm,20.5s
G63A Kingsbury 29.17 290 P **P 19 49 16.2 -0.5**
baz=81,SNR=5.3
ZCCA Zocca 29.21 72 P **P 19 49 16.7 -0.4**
ZCCA IAmb IAmb 19 49 30.9
comp=Z,41nm,1.0s
WATA Walderalm 29.24 66 *i* P **P 19 49 17.7 +0.3**
comp=Z,23nm,1.0s
NEUB Neuenburg 29.27 58 *e*P **P 19 49 17.3 -0.2**
comp=Z,14nm,0.8s,baz=270,slow=8.5
WTTA Wattenberg 29.29 66 *e*P **P 19 49 18.4 +0.5**
comp=Z,20nm,0.9s,SNR=10.0
WVL Waterville 29.29 289 P **P 19 49 17.2 -0.4**
WVL IAmb IAmb 19 49 24.3
comp=Z,66nm,1.3s
CTI Castel Tesino 29.43 68 P **P 19 49 18.5 -0.6**
CTI pmax pmax
comp=Z,27nm,1.2s
CTI Castel Tesino 29.43 68 P **P 19 49 18.5 -0.6**
MANZ Manzenberg 29.47 60 *e*P **P 19 49 19.4 +0.1**
comp=Z,32nm,1.5s,baz=270,slow=8.5
ILULI Ilulissat 29.50 344 P **P 19 49 16.8 -2.4**
ILULI pmax pmax
comp=Z,49nm,1.3s
ILULI Ilulissat 29.50 344 P **P 19 49 16.8 -2.4**
ILULI IAmb IAmb 19 49 38.1
comp=Z,48nm,1.3s
PLN Plauen 29.50 59 *e*P **P 19 49 19.3 -0.3**
comp=Z,20nm,1.0s,baz=270,slow=8.5
ROTZ Rotzenmuhle 29.54 61 *e*P **P 19 49 19.7 -0.2**
comp=Z,9.0nm,1.3s,baz=270,slow=8.5
OSSC Osservatorio P 29.55 73 P **P 19 49 18.5 -1.6**
KONO Kongsberg 29.59 40 P **P 19 49 20.4 +0.2**
KONO pmax pmax
comp=Z,17nm,1.1s
KONO Kongsberg 29.59 40 P **P 19 49 20.4 +0.2**
E61A Lac Etchemin 29.60 293 P **P 19 49 20.1 -0.4**
baz=83
GUNZ Gunzen 29.61 59 *e*P **P 19 49 20.4 -0.2**
comp=Z,12nm,1.0s,baz=270,slow=8.5
WERN Wernitzgruen 29.64 60 *e*P **P 19 49 20.9 0.0**
comp=Z,16nm,1.1s,baz=270,slow=8.5
NKC Novy Kostel 29.69 60 *e*P **P 19 49 21.9 +0.7**
NKC MLR MLR
comp=Z,900nm,15.9s
NKC Novy Kostel 29.69 60 *e*P **P 19 49 21.9 +0.7**
NKC epP **pwP 19 49 26.5 +0.9**
NKC AMS AMS 19 59 50.0
comp=Z,900nm,15.9s
G62A West of Eustis 29.80 290 P **P 19 49 21.6 -0.7**
baz=81
G62A West of Eustis 29.80 290 P **P 19 49 21.9 -0.3**
G62A IAmb IAmb 19 49 22.8
comp=Z,37nm,1.1s
D60A Saint Jean D'O 29.85 294 P **P 19 49 22.2 -0.4**
baz=84,SNR=6.1
ABTA Abfaltersbach 29.94 67 *i* P **P 19 49 23.9 +0.4**
comp=Z,23nm,1.0s,SNR=14
WET Wettzell 29.99 62 *e*P **P 19 49 23.6 -0.3**
comp=Z,24nm,1.5s,baz=270,slow=8.5
F61A St Evariste 30.01 292 P **P 19 49 23.9 -0.2**
baz=82
RJOB Jochberg 30.03 65 *e*P **P 19 49 24.1 -0.2**
comp=Z,12nm,1.0s,baz=270,slow=8.5
I63A Otisfield 30.03 288 P **P 19 49 23.6 -0.7**
baz=79,SNR=5.2
I63A Otisfield 30.03 288 P **P 19 49 23.5 -0.8**
I63A IAmb IAmb 19 49 25.4
comp=Z,54nm,1.2s
CLL Collm 30.05 57 ǁ *i* P **P 19 49 25.1 +0.8**
comp=Z,8.0nm,1.0s
CLL *i* sP **pwP 19 49 29.7 +1.0**
comp=Z,13nm,1.0s
CLL *i* 19 49 38.3
CLL *e*S **S 19 54 24.0 +1.3**
CLL *e*SS **SnSn 19 55 42.0 -12**
CLL *e*SSS SSS 19 56 18.0
CLL Lm MLR 19 59 00.0
comp=Z,400nm,20.0s
CLL Lmax 20 00 00.0
CLL Collm 30.05 57 *e*P **P 19 49 25.1 +0.8**
comp=Z,13nm,1.0s,baz=270,slow=8.5
CLL Collm 30.05 57 ǁ *i* P **P 19 49 25.1 +0.8**
CLL *e*S **S 19 54 24.0 +1.3**
CLL pmax pmax
comp=Z,8.0nm,1.0s
CLL MLR MLR
comp=Z,400nm,20.0s
CLL Collm 30.05 57 P **P 19 49 25.1 +0.8**
FBE Freiberg 30.26 58 *e*P **P 19 49 26.2 -0.1**
comp=Z,20nm,0.9s,baz=270,slow=8.5
E60A Ste Agathe de 30.27 293 P **P 19 49 25.8 -0.6**
baz=83,SNR=5.6
H62A Milan 30.34 289 P **P 19 49 27.1 +0.1**
baz=80
KHC Kasperske Hory 30.45 62 *d i* P **P 19 49 28.0 0.0**
KHC pmax pmax
comp=Z,35nm,1.2s
KHC Kasperske Hory 30.45 62 *e*P **P 19 49 28.1 0.0**
KHC epP **pwP 19 49 32.6 +0.2**
KHC AMS AMS 19 59 50.0
comp=Z,500nm,14.0s
KHC Kasperske Hory 30.45 62 P **P 19 49 27.9 0.0**
KBA Koelnbreinsper 30.47 66 *i* P **P 19 49 28.9 +0.6**
comp=Z,95nm,1.9s,SNR=26
G61A St-Isidore-de- 30.48 291 P **P 19 49 28.6 +0.4**
baz=81,SNR=9.4
KEST Kesra 30.51 89 P **P 19 49 28.9 +0.2**
comp=Z,15nm,0.8s,baz=274,slow=8.9,SNR=10
KEST Kesra 30.51 89 P **P 19 49 28.6 -0.1**
KEST IAmb IAmb 19 49 36.5
comp=Z,21nm,0.8s
J63A Strafford 30.54 287 P **P 19 49 28.8 0.0**
baz=78
GEC2 GERESS Array S 30.55 62 *e*P **P 19 49 28.7 -0.3**
comp=Z,16nm,1.1s,baz=270,slow=8.5
GEC2 GERESS Array S 30.55 62 P **P 19 49 28.9 -0.1**
GERES GERESS Array B 30.55 62 P **P 19 49 29.0 0.0**
comp=Z,4.1nm,0.8s,baz=282,slow=7.8,SNR=14
I62A Tamworth 30.60 288 P **P 19 49 28.8 -0.5**
baz=78,SNR=6.7
I62A Tamworth 30.60 288 P **P 19 49 28.6 -0.7**
I62A IAmb IAmb 19 49 30.7
comp=Z,47nm,1.1s
NBO00 NORSAR Array S 30.60 38 P **P 19 49 29.2 +0.1**
NBO00 IAmb IAmb 19 50 35.0
comp=Z,90nm,1.8s
BRG Berggiesshubel 30.64 58 *e*P **P 19 49 29.6 0.0**
comp=Z,14nm,1.5s
BRG S **S 19 54 35.0 +3.1**
comp=N,422nm,11.5s
comp=E,397nm,17.6s
comp=Z,581nm,13.2s

BRG **Berggiesshubel** 30.64 58 *e*P P 19 49 29.3 -0.2
comp=Z,11nm,1.2s,baz=270,slow=8.5
BRG **Berggiesshubel** 30.64 58 *e*P P 19 49 29.6 0.0
BRG S S 19 54 35.0 +3.1
BRG pmax pmax
comp=Z,14nm,1.5s
BRG MLR MLR
comp=N,422nm,11.5s
BRG MLR MLR
comp=E,397nm,17.6s
BRG MLR MLR
comp=Z,581nm,13.2s
F60A Warwick 30.67 292 P P 19 49 29.8 -0.1
baz=82
L64A Middleborough 30.68 284 P P 19 49 30.1 +0.1
baz=75
ROBS Robic 30.68 67 *i* P P 19 49 29.5 -0.5
MYKA Terra Mystica 30.72 67 *i* P P 19 49 30.3 -0.2
comp=Z,8.4nm,0.9s
NB2 NORSAR Subarra 30.80 38 P P 19 49 31.2 +0.2
comp=Z,47nm,2.0s,baz=250,slow=9.3
NB2 NORSAR Subarra 30.80 38 P P 19 49 31.2 +0.2
baz=250,slow=9.3
NOA NORSAR Array B 30.80 38 P P 19 49 30.9 -0.1
comp=Z,3.2nm,0.9s,baz=251,slow=9.7,SNR=9.4
BCX Boston College 30.82 285 P P 19 49 29.6 -1.6
BCX IAmb IAmb 19 49 32.4
comp=Z,39nm,1.1s
NB201 NORSAR Array S 30.84 38 P P 19 49 28.8 -2.5
NC602 NORSAR Array S 30.86 39 P P 19 49 30.8 -0.6
NC602 IAmb IAmb 19 49 37.5
comp=Z,41nm,1.0s
H61A Lyndonville 30.89 289 P P 19 49 32.2 +0.2
baz=79,SNR=11
SUMG Summit 30.90 355 P P 19 49 30.5 -1.6
SUMG pmax pmax
comp=Z,22nm,1.3s
SUMG Summit 30.90 355 P P 19 49 30.5 -1.6
SUMG Summit 30.90 355 *i* P P 19 49 31.7 -0.4
comp=Z,35nm,1.1s
WES Weston 30.92 285 P P 19 49 30.5 -1.6
WES pmax pmax
comp=Z,67nm,1.2s
WES Weston 30.92 285 P P 19 49 30.5 -1.6
NC303 NORSAR Array S 30.94 38 P P 19 49 32.3 +0.2
NC303 IAmb IAmb 19 49 38.3
comp=Z,53nm,1.3s
LBNH Lisbon 30.95 289 P P 19 49 32.1 -0.3
LBNH pmax pmax
comp=Z,63nm,1.1s
LBNH Lisbon 30.95 289 P P 19 49 32.8 +0.4
baz=79,SNR=7.7
LBNH Lisbon 30.95 289 P P 19 49 32.1 -0.3
PRA Prague 30.97 60 AMS AMS 20 00 56.1
comp=Z,400nm,16.5s
MOA Molin 31.01 64 *i* P P 19 49 33.0 +0.1
comp=Z,28nm,1.9s,SNR=10
NRCA Norcia 31.03 74 P P 19 49 34.6 +1.4
PRU Pruhonice 31.04 60 *e*P P 19 49 33.7 +0.6
PRU *e*S S 19 54 43.1 +4.8
PRU MLR MLR
comp=Z,800nm,17.5s
PRU Pruhonice 31.04 60 *e*P P 19 49 33.7 +0.6
PRU *ep*P **pwP** 19 49 38.3 +0.8
PRU *e*S S 19 54 43.1 +4.8
PRU AMS AMS 20 00 50.0
comp=Z,800nm,17.5s
PVCC Panska Ves 31.04 59 AMS AMS 20 00 42.0
comp=Z,800nm,16.5s
M64A Tiverton 31.05 283 P P 19 49 33.8 +0.6
baz=75
HRV Adam Dziewonsk 31.06 285 P P 19 49 32.8 -0.6
HRV pmax pmax
comp=Z,36nm,1.1s
HRV Adam Dziewonsk 31.06 285 P P 19 49 33.5 +0.2
baz=76
HRV Adam Dziewonsk 31.06 285 P P 19 49 32.8 -0.6
HRV IAmb IAmb 19 49 34.6
comp=Z,36nm,1.1s
NC405 NORSAR Array S 31.06 38 P P 19 49 33.3 +0.1
NC405 IAmb IAmb 19 49 39.4
comp=Z,39nm,1.1s
G60A Masonville 31.07 290 P P 19 49 33.7 +0.2
baz=80,SNR=6.3
J62A Henniker 31.07 287 P P 19 49 32.9 -0.6
baz=77,SNR=6.5
D58A Chemin du LacG 31.16 294 P P 19 49 33.9 -0.3
baz=83,SNR=7.6
BRYW Bryant College 31.19 284 P P 19 49 34.4 -0.2
BRYW IAmb IAmb 19 49 53.8
comp=Z,42nm,1.3s
GOPC GO Pecny, Ondr 31.20 60 *e*P P 19 49 35.4 +0.8
GOPC *e*S S 19 54 42.7 +1.8
GOPC GO Pecny, Ondr 31.20 60 *e*P P 19 49 35.4 +0.8
GOPC *ep*P **pwP** 19 49 40.1 +1.1
GOPC *e*S S 19 54 42.7 +1.8
GOPC AMS AMS 20 00 57.7
comp=Z,700nm,16.3s
I61A Oroboro, Fairl 31.21 288 P P 19 49 35.5 +0.8
baz=78,SNR=14
F59A Saint Guilaume 31.26 292 P P 19 49 34.8 -0.3
baz=81
HNH Hanover 31.31 288 P P 19 49 35.7 +0.2
HNH IAmb IAmb 19 49 36.8
comp=Z,39nm,1.1s
FRB Frobisher Bay 31.32 327 P P 19 49 34.8 -0.6
comp=Z,34nm,1.0s,baz=114,slow=7.6,SNR=29
AQU L'Aquila 31.35 75 P P 19 49 35.8 -0.2
AQU pmax pmax
comp=Z,32nm,0.8s
AQU L'Aquila 31.35 75 P P 19 49 35.8 -0.2
AQU IAmb IAmb 19 49 45.6
comp=Z,32nm,0.8s
OBKA Obir 31.36 67 *i* P P 19 49 35.8 -0.2
comp=Z,46nm,0.9s,SNR=18
LJU Ljubljana 31.41 68 *e*P P 19 49 36.5 0.0
H60A Morristown 31.43 289 P P 19 49 37.0 +0.4
baz=79,SNR=9.7
K62A Royalston 31.50 286 P P 19 49 37.9 +0.6
baz=76
VT1 Waterbury 31.51 289 P P 19 49 37.6 +0.3
VT1 IAmb IAmb 19 49 39.3
comp=Z,47nm,1.1s
J61A Chester 31.58 287 P P 19 49 38.9 +1.0
baz=77,SNR=9.9
SOKA Soboth 31.66 66 *i* P P 19 49 37.8 -1.0
comp=Z,10nm,1.2s,SNR=11
PERS Pernice 31.73 66 *e*P P 19 49 38.1 -1.2
INTR Introdacqua 31.80 75 P P 19 49 39.9 -0.1
D57A Chemin Vers le 31.85 294 P P 19 49 39.3 -1.0
baz=82
L61B Northampton 31.88 286 P P 19 49 41.3 +0.7
baz=76,SNR=7.9
ARSA Arzberg 31.92 65 *i* P P 19 49 40.1 -0.9
comp=Z,16nm,1.0s
UPC Upice 31.96 59 *e*P P 19 49 41.6 +0.3
UPC Upice 31.96 59 *e*P P 19 49 41.6 +0.3
UPC AMS AMS 20 01 14.3
comp=Z,900nm,16.5s
CHVC Chvalec 31.98 59 *e*P P 19 49 41.4 -0.1
I60A Shoreham 31.99 288 P P 19 49 42.1 +0.6
baz=78,SNR=6.4
FRNY Flat Rock 32.00 290 P P 19 49 41.4 -0.3
FRNY IAmb IAmb 19 50 52.8
comp=Z,35nm,1.1s
BOJS Bojanci 32.00 68 *i* P P 19 49 41.7 +0.1
CONA Conrad Observa 32.07 64 *i* P P 19 49 42.0 -0.3
comp=Z,15nm,1.2s,SNR=7.5
OSTC Ostas 32.09 59 *e*P P 19 49 43.0 +0.6
OSTC AMS AMS 20 01 20.6
comp=Z,800nm,15.1s
H59A Cadyville 32.11 290 P P 19 49 42.8 +0.2
baz=79,SNR=6.6
E57A Chemin Saint G 32.11 293 P P 19 49 41.9 -0.7
baz=81,SNR=5.7
DPC Dobruska-Polom 32.17 59 *e*P P 19 49 43.6 +0.5
DPC Dobruska-Polom 32.17 59 *e*P P 19 49 43.6 +0.5
DPC *ep*P **pwP** 19 49 48.0 +0.5
DPC AMS AMS 20 01 43.1
comp=Z,800nm,18.3s
J60A Lant Hill Farm 32.22 287 P P 19 49 44.4 +0.9
baz=76,SNR=6.2
K61A Williamstown 32.24 286 P P 19 49 44.6 +0.8
baz=76,SNR=13
M62A Hamden 32.29 284 P P 19 49 44.9 +0.7
baz=74,SNR=9.5

KRUC Moravsky 32.30 62 *e*P P 19 49 44.0 -0.3
ACCN Adirondack Com 32.36 288 P P 19 49 44.8 0.0
YLE Yale 32.36 284 P P 19 49 44.6 -0.2
I59A Olmsteadville 32.41 288 P P 19 49 46.0 +0.7
baz=77
VRAC Vranov 32.41 61 *e*P P 19 49 45.0 -0.2
TRQ Mont Tremblant 32.42 293 P P 19 49 44.9 -0.5
D56A ZEC Mazanza, M 32.44 295 P P 19 49 45.1 -0.3
baz=82,SNR=12
KRLC Kraliky 32.48 60 *e*P P 19 49 46.6 +0.8
KRLC Kraliky 32.48 60 *e*P P 19 49 46.6 +0.8
KRLC AMS AMS 20 01 49.2
comp=Z,800nm,17.1s
H58A Gabriels 32.49 290 P P 19 49 45.9 -0.1
baz=78,SNR=9.9
TRY Troy 32.51 286 P P 19 49 46.2 +0.1
L61A Hillsdale 1, H 32.57 285 P P 19 49 47.6 +0.9
baz=75
NCB Newcomb 32.62 289 P P 19 49 46.8 -0.4
NCB IAmb IAmb 19 49 48.8
comp=Z,25nm,1.1s
CORL Corleone 32.63 83 P P 19 49 47.5 +0.2
CORL IAmb IAmb 19 49 52.8
comp=Z,38nm,1.0s
KSCT Kent School, K 32.64 285 P P 19 49 47.4 +0.1
CLTB Caltabellotta 32.68 84 P P 19 49 48.1 +0.3
WSPT Westport, CT 32.69 283 P P 19 49 47.7 +0.1
WSPT IAmb IAmb 19 49 48.8
comp=Z,58nm,1.2s
E56A St. Veronique 32.70 294 P P 19 49 47.7 0.0
baz=81,SNR=16
K60A Five Rivers En 32.70 286 P P 19 49 49.0 +1.2
baz=75
LONY Lake Ozonia 32.73 290 P P 19 49 48.4 +0.3
baz=78,SNR=8.7
LONY Lake Ozonia 32.73 290 P P 19 49 47.7 -0.4
LONY IAmb IAmb 19 49 49.3
comp=Z,32nm,1.1s
G57A Newington 32.92 291 P P 19 49 49.5 -0.2
baz=79
D55A Sainte-Anne-du 32.92 295 P P 19 49 49.7 0.0
baz=81,SNR=11
J59A Piesco 32.93 288 P P 19 49 50.2 +0.3
baz=76,SNR=5.3
J59A Piesco 32.93 288 P P 19 49 49.6 -0.2
J59A IAmb IAmb 19 49 50.9
comp=Z,26nm,1.2s
MODS Modra-Piesok 32.96 63 *e*P P 19 49 49.6 -0.4
MODS pmax pmax
comp=Z,42nm,1.5s
MODS Modra-Piesok 32.96 63 *e*P P 19 49 49.6 -0.4
MORC Moravsky Berou 32.99 60 *e*P P 19 49 50.1 -0.2
MORC Moravsky Berou 32.99 60 ⇑P P 19 49 50.7 +0.4
MORC Moravsky Berou 32.99 60 ⇑P P 19 49 50.7 +0.4
MORC Moravsky Berou 32.99 60 P P 19 49 49.7 -0.6
SMOL Smolenice 33.04 63 *e*P P 19 49 50.7 0.0
SMOL pmax pmax
comp=Z,7.0nm,1.0s
SMOL Smolenice 33.04 63 *e*P P 19 49 50.7 0.0
L60A Shokan 33.10 285 P P 19 49 52.6 +1.2
baz=74
PAL Palisades 33.15 283 P P 19 49 50.9 -0.8
PAL pmax pmax
comp=Z,43nm,1.3s
PAL Palisades 33.15 283 P P 19 49 50.9 -0.8
baz=73
PAL Palisades 33.15 283 P P 19 49 50.9 -0.8
PAL IAmb IAmb 19 49 52.7
comp=Z,43nm,1.2s
JAVC Velka Javorina 33.16 62 *e*P P 19 49 52.2 +0.4
I58A Old Forge 33.21 289 P P 19 49 52.9 +0.6
baz=76,SNR=7.6
CPNY Central Park 33.25 283 P P 19 49 52.1 -0.5
CPNY IAmb IAmb 19 49 57.6
comp=Z,37nm,1.1s
K59A Coopertown 33.35 287 P P 19 49 54.5 +1.0
baz=75,SNR=6.9
OKC Ostrava-Krasne 33.38 60 AMS AMS 20 02 18.8
comp=Z,600nm,13.4s
N61A South Mountain 33.51 283 P P 19 49 55.1 +0.3
baz=72
ODNJ Ogdensburg 33.63 284 P P 19 49 55.7 -0.2
ODNJ IAmb IAmb 19 50 01.2
comp=Z,45nm,1.2s
L59A Walton 33.64 286 P P 19 49 56.6 +0.6
baz=74,SNR=6.2
L59A Walton 33.64 286 P P 19 49 56.3 +0.3
L59A IAmb IAmb 19 49 57.9
comp=Z,30nm,1.1s
I57A Carthage 33.64 289 P P 19 49 56.9 +0.9
baz=77,SNR=11
D54A Lac Fusel, La 33.70 295 P P 19 49 55.5 -1.0
baz=81,SNR=5.6
BRNJ Basking Ridge 33.72 283 P P 19 49 56.2 -0.5
H56A Elgin 33.91 291 P P 19 49 58.8 +0.5
baz=77,SNR=11
K58A Earlville 33.92 287 P P 19 49 59.0 +0.6
baz=75,SNR=16
K58A Earlville 33.92 287 P P 19 49 58.5 0.0
VYHS Vyhne 33.97 62 *e*P P 19 49 58.6 -0.3
VYHS pmax pmax
comp=Z,11nm,1.2s
VYHS Vyhne 33.97 62 *e*P P 19 49 58.6 -0.3
J57A Williamstown 34.00 288 P P 19 49 59.6 +0.5
baz=76,SNR=7.4
J57A Williamstown 34.00 288 P P 19 49 59.0 -0.2
N60A Cedar Hill Far 34.05 284 P P 19 50 00.0 +0.4
baz=72,SNR=6.2
G55A Calabogie 34.09 292 P P 19 49 60.0 +0.1
baz=78,SNR=7.9
VLDQ Val d'Or 34.09 297 P P 19 50 00.9 +1.1
VLDQ IAmb IAmb 19 50 02.2
comp=Z,56nm,1.9s
M59A Waymart 34.10 285 P P 19 50 00.5 +0.5
baz=73
E54A Lac Daplat, Po 34.18 294 P P 19 50 00.6 -0.1
baz=80,SNR=11
L58A Harry Jones Me 34.25 286 P P 19 50 03.1 +1.7
baz=74
BINY Binghamton 34.31 286 P P 19 50 02.4 +0.5
baz=74,SNR=5.9
BINY Binghamton 34.31 286 P P 19 50 01.9 +0.1
BINY IAmb IAmb 19 50 03.5
comp=Z,39nm,1.2s
KSPA Keystone Colle 34.33 285 P P 19 50 01.6 -0.5
KSPA IAmb IAmb 19 50 03.6
comp=Z,45nm,1.1s
LUPA Lehigh Univers 34.33 283 P P 19 50 01.6 -0.4
PLVO Plevna 34.38 292 P P 19 50 02.5 +0.1
OJC Ojcow 34.40 59 P P 19 50 02.6 0.0
OJC pmax pmax
comp=Z,17nm,0.8s
OJC Ojcow 34.40 59 P P 19 50 02.6 0.0
OJC IAmb IAmb 19 50 08.3
comp=Z,17nm,0.8s
D53A Lac Vacive, Po 34.42 295 P P 19 50 02.5 -0.2
baz=80,SNR=8.8
D53A Lac Vacive, Po 34.42 295 P P 19 50 02.3 -0.4
D53A IAmb IAmb 19 50 04.0
comp=Z,34nm,1.1s
O60A Telford 34.44 283 P P 19 50 03.5 +0.5
baz=72,SNR=9.7
E53A Dumoine, Ponti 34.52 294 P P 19 50 03.5 -0.1
baz=79,SNR=9.9
N59A State Game Lan 34.52 284 P P 19 50 04.4 +0.6
baz=72,SNR=15
N59A State Game Lan 34.52 284 P P 19 50 03.9 +0.1
K57A Scipio Center 34.54 287 P P 19 50 04.3 +0.5
baz=74,SNR=12
H55A Tweed 34.56 291 P P 19 50 04.2 +0.2
baz=77,SNR=12
PECO Prince Edward 34.58 290 P P 19 50 04.1 0.0
PSUB Penn St. - Bra 34.60 282 P P 19 50 04.0 -0.4
PSUB IAmb IAmb 19 50 05.6
comp=Z,58nm,1.4s
J56A Wolcott 34.64 288 P P 19 50 05.4 +0.7
baz=75,SNR=7.0
J56A Wolcott 34.64 288 P P 19 50 04.8 +0.2
TIP Timpagrande 34.72 79 ⇑P P 19 50 07.0 +1.5
TIP Timpagrande 34.72 79 P P 19 50 05.6 +0.1
PSZ Piszkesteto 34.76 63 ⇓P P 19 50 07.1 +1.4
PSZ Piszkesteto 34.76 63 ⇓P P 19 50 07.1 +1.4
PSZ Piszkesteto 34.76 63 P P 19 50 05.5 -0.2
PSZ IAmb IAmb 19 50 14.7
comp=Z,59nm,1.8s

TAM Tamanrasset 34.77 113 P P 19 50 06.8 +0.6
TAM pmax pmax
comp=Z,6.0nm,0.9s
TAM Tamanrasset 34.77 113 P P 19 50 06.8 +0.6
P60A Greenville 34.77 282 P P 19 50 06.0 +0.1
baz=71,SNR=6.4
P60A Greenville 34.77 282 P P 19 50 04.9 -1.0
DELO Deloro Mine 34.88 291 P P 19 50 06.2 -0.5
DELO IAmb IAmb 19 50 08.0
comp=Z,54nm,1.2s
M58A Price's Panora 34.88 285 P P 19 50 07.4 +0.6
baz=73,SNR=13
D52A ZEK Kipawa Sen 34.91 295 P P 19 50 06.8 -0.2
baz=80,SNR=12
L57A Andrews Acres 34.98 286 P P 19 50 08.5 +0.8
baz=73,SNR=15
I55A Frankford 34.99 290 P P 19 50 08.0 +0.3
baz=76,SNR=7.8
G54A Lake Saint Pet 35.01 292 P P 19 50 07.8 -0.1
baz=78,SNR=10
DAG Danmarks Havn 35.09 4 *i* P P 19 50 08.5 +0.4
DAG pmax pmax
comp=Z,13nm,1.1s
DAG Danmarks Havn 35.09 4 *i* P P 19 50 08.5 +0.4
comp=Z,13nm,1.1s
K56A Middlesex 35.13 288 P P 19 50 09.8 +0.9
baz=74,SNR=9.3
E52A Mattawa 35.21 294 P P 19 50 09.3 -0.2
baz=78,SNR=9.0
N58A Sunbury 35.23 284 P P 19 50 10.3 +0.5
baz=72,SNR=6.9
N58A Sunbury 35.23 284 P P 19 50 10.0 +0.2
N58A IAmb IAmb 19 50 11.2
comp=Z,53nm,1.4s
MVL Millersville 35.23 283 P P 19 50 09.8 0.0
J55A Hilton 35.32 289 P P 19 50 11.2 +0.6
baz=75,SNR=5.8
J55A Hilton 35.32 289 P P 19 50 11.1 +0.6
M57A Sunshine Farm, 35.38 285 P P 19 50 11.8 +0.8
baz=72,SNR=16
M57A Sunshine Farm, 35.38 285 P P 19 50 11.6 +0.5
PAGS Pennsylvania G 35.43 283 P P 19 50 11.5 0.0
PAGS IAmb IAmb 19 50 12.8
comp=Z,72nm,1.8s
G53A Haliburton 35.43 292 P P 19 50 11.1 -0.4
baz=77
L56A Greenwood 35.45 287 P P 19 50 12.5 +0.8
baz=73,SNR=7.4
L56A Greenwood 35.45 287 P P 19 50 11.7 -0.1
L56A IAmb IAmb 19 50 13.5
comp=Z,44nm,1.1s
PBUR Paburge 35.46 49 *e*P P 19 50 11.2 -0.4
PDG Podgorica 35.52 73 ⇑P P 19 50 12.0 -0.2
PDG Podgorica 35.52 73 P P 19 50 11.5 -0.7
MMNY Mt. Morris Dam 35.53 288 P P 19 50 12.8 +0.4
H53A Bobcaygeon 35.53 291 P P 19 50 12.4 0.0
baz=76,SNR=6.6
DIVS Divibare 35.59 70 P P 19 50 12.6 -0.4
O58A Lewisberry 35.61 283 P P 19 50 13.3 +0.3
baz=71,SNR=5.4
K55A Perry 35.65 288 P P 19 50 14.0 +0.6
baz=74
E51A G1948 Merrick 35.73 295 P P 19 50 13.3 -0.7
baz=78
F52A Sundridge 35.77 293 P P 19 50 14.3 0.0
baz=78
MEDO Medina 35.80 289 P P 19 50 14.3 -0.3
MEDO IAmb IAmb 19 50 16.3
comp=Z,38nm,1.2s
D50A G1974 Best Tow 35.84 296 P P 19 50 14.4 -0.5
baz=79,SNR=6.4
N57A Milroy 35.86 284 P P 19 50 15.7 +0.5
baz=72,SNR=18
SADO Sadowa 35.87 292 P P 19 50 14.9 -0.4
SADO IAmb IAmb 19 50 19.7
comp=Z,38nm,1.2s
J54A Appleton 35.90 289 P P 19 50 16.2 +0.7
baz=74
J54A Appleton 35.90 289 P P 19 50 15.8 +0.3
J54A IAmb IAmb 19 50 17.3
comp=Z,55nm,1.2s
L55A Hinsdale 36.06 287 P P 19 50 17.5 +0.5
baz=73,SNR=7.1
M56A Emporium 36.09 286 P P 19 50 17.6 +0.4
baz=72,SNR=10.0
M56A Emporium 36.09 286 P P 19 50 17.1 -0.1
M56A IAmb IAmb 19 50 22.9
comp=Z,27nm,1.0s
O57A Amberson 36.09 284 P P 19 50 17.5 +0.3
baz=71
WVNY West Valley, N 36.12 288 P P 19 50 17.0 -0.4
WVNY IAmb IAmb 19 50 19.1
comp=Z,66nm,1.4s
K54A Basiliko Farm, 36.12 288 P P 19 50 18.2 +0.7
baz=74,SNR=7.1
SSPA Standing Stone 36.14 284 P P 19 50 18.0 +0.4
baz=71
SSPA Standing Stone 36.14 284 P P 19 50 17.8 +0.2
SSPA IAmb IAmb 19 50 19.2
comp=Z,64nm,1.2s
F51A Arnstein 36.14 294 P P 19 50 17.7 +0.1
baz=77
KOLS Kolonicke sedl 36.16 61 *e*P P 19 50 18.9 +1.2
KOLS Kolonicke sedl 36.16 61 *e*P P 19 50 18.9 +1.2
UZH Uzhgorod 36.22 62 *e*P P 19 50 18.0 -0.2
UZH *i* 19 50 31.3
SIRR Siria 36.24 66 ⇑P P 19 50 18.8 +0.4
N56A West Decatur 36.34 285 P P 19 50 20.1 +0.7
baz=71,SNR=11
BZS Buzias 36.36 67 ⇑P P 19 50 20.3 +0.9
BZS Buzias 36.36 67 ⇑P P 19 50 20.3 +0.9
TRPA Tarpa 36.47 62 ⇓P P 19 50 21.3 +1.0
M55A Ridgway 36.51 286 P P 19 50 21.3 +0.5
baz=72,SNR=13
M55A Ridgway 36.51 286 P P 19 50 20.8 0.0
Q58A Fox Den Farm, 36.56 282 P P 19 50 21.6 +0.4
baz=69
E50A Wahnapitae 36.59 295 P P 19 50 21.8 +0.4
baz=78
CBN Corbin Frederi 36.60 280 P P 19 50 21.6 0.0
CBN IAmb IAmb 19 51 34.3
comp=Z,25nm,0.4s
P57A Homestead Farm 36.61 283 P P 19 50 22.2 +0.6
baz=70
P57A Homestead Farm 36.61 283 P P 19 50 21.9 +0.3
P57A IAmb IAmb 19 50 23.5
comp=Z,46nm,1.6s
PABE Paberze 36.61 50 *e*P P 19 50 22.0 +0.5
MDVR Moldovita 36.62 68 ⇓P P 19 50 21.6 -0.1
L54A Sinclairville 36.67 288 P P 19 50 22.8 +0.6
baz=73
O56A Blue Knob Stat 36.75 284 P P 19 50 23.4 +0.5
baz=70,SNR=9.8
O56A Blue Knob Stat 36.75 284 P P 19 50 22.9 0.0
O56A IAmb IAmb 19 50 24.6
comp=Z,34nm,1.1s
D49A Beulah Townshi 36.83 296 P P 19 50 23.4 0.0
baz=78
N55A Marion Center 36.88 285 P P 19 50 24.4 +0.4
baz=71,SNR=13
OHR Ohrid 37.01 74 *i* P P 19 50 26.4 +1.2
OHR Ohrid 37.01 74 *i* P P 19 50 26.4 +1.2
R58A Rapidan 37.03 281 P P 19 50 25.6 +0.4
baz=68
Q57A Strasburg 37.06 282 P P 19 50 26.1 +0.6
baz=69,SNR=10
R58B Mineral 37.06 280 P P 19 50 25.2 -0.3
baz=68
R58B Mineral 37.06 280 P P 19 50 25.5 +0.1
HERR Herculane 37.08 68 ⇓P P 19 50 26.5 +0.9
M54A Oil Creek Stat 37.14 287 P P 19 50 26.7 +0.5
baz=72,SNR=9.9
M54A Oil Creek Stat 37.14 287 P P 19 50 26.6 +0.5
M54A IAmb IAmb 19 50 28.0
comp=Z,99nm,1.6s
D48A Paudash Townsh 37.15 296 P P 19 50 26.0 -0.2
baz=78
LVV L'vov 37.16 59 *e*P P 19 50 26.3 +0.1
LVV MLR MLR
comp=E,300nm,18.0s
LVV MLR MLR
comp=N,200nm,17.0s
LVV MLR MLR
comp=Z,300nm,18.0s
DEV Deva 37.17 66 ⇓P P 19 50 30.4 +4.0
DEV Deva 37.17 66 ⇓P P 19 50 30.4 +4.0

ERPA **Erie** 37.18 288 P P 19 50 27.4 +0.9
baz=72
ERPA **Erie** 37.18 288 P P 19 50 26.8 +0.4
ERPA IAmb IAmb 19 50 31.2
comp=Z,44nm,1.2s
J52A **Paris** 37.20 290 P P 19 50 27.4 +0.8
baz=74
IGT **Igoumenitsa** 37.20 77 P P 19 50 27.3 +0.6
SKO **Skopje** 37.20 73 *i* P P 19 50 26.8 +0.2
SKO **Skopje** 37.20 73 *i* P P 19 50 26.8 +0.2
GZR **Gura Zlata** 37.20 67 ⇓P P 19 50 28.2 +1.5
GZR **Gura Zlata** 37.20 67 ⇓P P 19 50 28.2 +1.5
P56A **Dayton Farm, R** 37.20 283 P P 19 50 27.6 +0.9
baz=70,SNR=12
T59A **Double "B" Far** 37.20 279 P P 19 50 27.3 +0.5
baz=67
T59A **Double "B" Far** 37.20 279 P P 19 50 26.2 -0.5
O55A **Ligonier** 37.30 284 P P 19 50 28.0 +0.5
baz=70,SNR=8.0
S58A **Poland Farm, P** 37.32 280 P P 19 50 28.5 +0.8
baz=67
S58A **Poland Farm, P** 37.32 280 P P 19 50 28.0 +0.3
S58A IAmb IAmb 19 50 29.7
comp=Z,56nm,1.5s
R57A **Stanardsville** 37.41 281 P P 19 50 29.1 +0.7
baz=68,SNR=7.1
L53A **Girard** 37.42 287 P P 19 50 29.2 +0.7
baz=72
I51A **Listowel** 37.43 291 P P 19 50 29.0 +0.4
baz=74,SNR=6.6
H05N1 **Guadeloupe/Mar** 37.45 236 T T 20 29 40.0
SNR=4.1
FNA **Florina** 37.53 75 P P 19 50 30.0 +0.5
FNA pmax pmax
comp=Z,13nm,0.9s
FNA **Florina** 37.53 75 P P 19 50 30.0 +0.5
E48A **Lockeyer** 37.54 295 P P 19 50 30.6 +1.1
baz=77
N54A **Moraine State** 37.54 286 P P 19 50 30.3 +0.7
baz=71,SNR=14
N54A **Moraine State** 37.54 286 P P 19 50 29.4 -0.1
Q56A **Snyder Ridge,** 37.62 283 P P 19 50 31.4 +1.1
baz=69,SNR=13
Q56A **Snyder Ridge,** 37.62 283 P P 19 50 30.9 +0.6
Q56A IAmb IAmb 19 50 32.4
comp=Z,72nm,1.2s
F49A **Sandfield** 37.63 294 P P 19 50 30.6 +0.4
baz=76
U59A **Littleton** 37.63 278 P P 19 50 30.2 -0.1
U59A IAmb IAmb 19 50 33.4
comp=Z,63nm,1.9s
ISAL **Salakas** 37.84 50 *e*P P 19 50 31.5 -0.3
M53A **WI Miller and** 37.88 287 P P 19 50 33.1 +0.7
baz=71,SNR=8.4
MCWV **Mont Chateau** 37.88 284 P P 19 50 33.7 +1.2
baz=69,SNR=8.3
MCWV **Mont Chateau** 37.88 284 P P 19 50 32.8 +0.4
FINES **FINESS Array B** 37.90 40 P P 19 50 32.1 -0.2
comp=Z,19nm,1.0s,baz=116,slow=4.4,SNR=12
FINES **FINESS Array B** 37.90 40 *i* P P 19 50 32.5 +0.2
FINES pmax pmax
comp=Z,19nm,1.0s
IIGN **Ignalina** 37.90 50 *e*P P 19 50 32.3 -0.1
FIA1 **FINESS Array S** 37.91 40 P P 19 50 32.6 +0.3
FIA1 IAmb IAmb 19 50 37.9
comp=Z,49nm,1.1s
P55A **Reedsville** 37.92 284 P P 19 50 33.7 +0.9
baz=69,SNR=13
S57A **Dark Hollow, R** 37.93 280 P P 19 50 33.5 +0.7
baz=67,SNR=10
S57A **Dark Hollow, R** 37.93 280 P P 19 50 33.3 +0.5
S57A IAmb IAmb 19 50 34.9
comp=Z,57nm,1.4s
T58A **Grand View Acr** 37.94 279 P P 19 50 33.2 +0.3
baz=66
F48A **Evansville** 38.00 294 P P 19 50 34.1 +0.7
baz=76,SNR=6.3
D47A **Chapleau** 38.04 296 P P 19 50 33.1 -0.6
baz=77,SNR=5.3
O54A **Avella** 38.08 285 P P 19 50 34.9 +0.7
baz=70,SNR=5.3
O54A **Avella** 38.08 285 P P 19 50 34.4 +0.3
O54A IAmb IAmb 19 50 36.0
comp=Z,53nm,1.2s
VSU **Vasula** 38.10 45 *e*P P 19 50 34.4 +0.4
VSU **Vasula** 38.10 45 ⇑*i*P P 19 50 33.8 -0.2
VSU pmax pmax
comp=Z,54nm,1.1s
U58A **Oxford** 38.17 278 P P 19 50 35.8 +0.9
baz=66,SNR=5.8
V59A **Middlesex** 38.20 277 P P 19 50 35.9 +0.8
baz=65
N53A **Lisbon** 38.20 286 P P 19 50 35.9 +0.8
baz=70,SNR=5.7
N53A **Lisbon** 38.20 286 P P 19 50 35.6 +0.5
N53A IAmb IAmb 19 50 37.1
comp=Z,74nm,1.6s
VAY **Valandovo** 38.21 73 *i* P P 19 50 35.4 +0.2
VAY **Valandovo** 38.21 73 *i* P P 19 50 35.4 +0.2
VTS **Vitosha** 38.28 71 *e*P P 19 50 35.1 -0.8
VTS **Vitosha** 38.28 71 P P 19 50 35.3 -0.6
VTS pmax pmax
comp=Z,6.0nm,1.0s
VTS **Vitosha** 38.28 71 P P 19 50 35.3 -0.6
Q55A **Buckhannon** 38.29 283 P P 19 50 37.1 +1.1
baz=68,SNR=15
E47A **Iron Bridge** 38.30 295 P P 19 50 36.0 +0.1
baz=76
BUR08 **Bucovina Ar. S** 38.32 63 P P 19 50 36.3 +0.1
M52A **Chesterland** 38.33 287 P P 19 50 36.5 +0.3
baz=71,SNR=6.9
M52A **Chesterland** 38.33 287 P P 19 50 36.5 +0.3
M52A IAmb IAmb 19 50 37.8
comp=Z,68nm,1.1s
BURAR **Bucovina Array** 38.34 63 ⇓P P 19 50 36.9 +0.6
BURAR **Bucovina Array** 38.34 63 ⇓P P 19 50 36.9 +0.6
P54A **Burton** 38.36 284 P P 19 50 37.5 +1.0
baz=69,SNR=19
S56A **Natural Bridge** 38.41 281 P P 19 50 37.9 +1.0
baz=67,SNR=5.2
T57A **Hurt** 38.44 279 P P 19 50 35.9 -1.3
ARR **Arges** 38.48 66 ⇑P P 19 50 38.2 +0.7
EVR **Evrytania** 38.49 77 P P 19 50 38.8 +1.1
R55A **Marlinton** 38.58 282 P P 19 50 39.5 +1.1
baz=68,SNR=7.7
R55A **Marlinton** 38.58 282 P P 19 50 39.2 +0.8
R55A IAmb IAmb 19 50 40.7
comp=Z,80nm,1.6s
O53A **New Philadelph** 38.66 285 P P 19 50 39.9 +0.9
baz=70,SNR=18
D46A **Sault St. Mari** 38.70 296 P P 19 50 39.3 0.0
baz=76
U57A **Blanch** 38.73 279 P P 19 50 40.3 +0.6
baz=66,SNR=8.6
VOIR 38.74 66 ⇑P P 19 50 40.0 +0.3
VOIR 38.74 66 ⇑P P 19 50 40.0 +0.3
AGG **Agios Georgios** 38.83 77 P P 19 50 41.6 +1.1
AGG **Agios Georgios** 38.83 77 P P 19 50 40.6 +0.1
AGG pmax pmax
comp=Z,23nm,1.0s
AGG **Agios Georgios** 38.83 77 P P 19 50 40.6 +0.1
V58A **Windy Hill, Pi** 38.83 278 P P 19 50 40.8 +0.3
baz=65
V58A **Windy Hill, Pi** 38.83 278 P P 19 50 40.4 -0.1
DOPR **Dopca** 38.84 65 ⇑P P 19 50 40.5 +0.1
Q54A **Coxs Mills** 38.84 283 P P 19 50 41.1 +0.6
baz=68,SNR=14
Q54A **Coxs Mills** 38.84 283 P P 19 50 40.6 +0.1
Q54A IAmb IAmb 19 50 42.3
comp=Z,108nm,1.6s
K50A **Casco** 38.84 290 P P 19 50 39.5 -1.0
MICGM **Minsk** 38.92 51 *e* P 19 50 44.0 +3.0
MNK **Minsk** 38.92 51 *e*P P 19 50 44.0 +3.0
MMB **Musomiste** 38.95 72 *e*P P 19 50 42.1 +0.7
T56A **Rocky Mt** 39.00 280 P P 19 50 43.2 +1.3
baz=66
E46A **Sault Ste Mari** 39.01 296 P P 19 50 41.7 -0.2
E46A IAmb IAmb 19 50 47.7
comp=Z,101nm,1.9s
G47A **Hillman** 39.01 294 P P 19 50 42.4 +0.6
baz=74
J49A **Marlette** 39.03 291 P P 19 50 42.4 +0.4
baz=73
S55A **Lewisburg** 39.05 281 P P 19 50 43.7 +1.3
baz=67,SNR=8.7
P53A **Whipple** 39.06 284 P P 19 50 43.1 +0.8
baz=69,SNR=12
P53A **Whipple** 39.06 284 P P 19 50 43.0 +0.8
P53A IAmb IAmb 19 50 44.1
comp=Z,45nm,0.9s
PRAR **RASCA** 39.06 63 ⇓P P 19 50 41.2 -1.1
BIZ **Bicaz** 39.08 63 ⇓P P 19 50 44.0 +1.6
ARCES **ARCESS Array B** 39.09 27 P P 19 50 42.6 +0.3
comp=Z,13nm,1.0s,baz=253,slow=7.5,SNR=9.9
O52A **Adamsville** 39.15 285 P P 19 50 44.1 +0.9
baz=69,SNR=8.9
O52A **Adamsville** 39.15 285 P P 19 50 44.0 +0.8
I48A **Sherman Twp** 39.18 292 P P 19 50 43.5 +0.2
baz=73,SNR=5.6
BLA **Blacksburg** 39.22 280 P P 19 50 44.6 +0.9
BLA pmax pmax
comp=Z,56nm,1.3s
BLA **Blacksburg** 39.22 280 P P 19 50 44.8 +1.0
baz=66,SNR=9.0
BLA **Blacksburg** 39.22 280 P P 19 50 44.6 +0.9
BLA IAmb IAmb 19 50 45.9
comp=Z,56nm,1.2s
ITM **Ithomi** 39.24 80 P P 19 50 44.5 +0.5
R54A **Victor** 39.25 282 P P 19 50 44.8 +0.8
baz=67,SNR=16
N51A **Ashland** 39.26 287 P P 19 50 44.9 +0.8
baz=70
N51A **Ashland** 39.26 287 P P 19 50 44.4 +0.4
N51A IAmb IAmb 19 50 45.9
comp=Z,70nm,1.1s
V57A **Coltrane Farms** 39.28 278 P P 19 50 44.7 +0.5
baz=65,SNR=5.4
MLR **Muntele Rosu** 39.34 66 ⇑P P 19 50 45.3 +0.5
MLR **Muntele Rosu** 39.34 66 ⇑P P 19 50 45.3 +0.5
MLR **Muntele Rosu** 39.34 66 P P 19 50 44.8 +0.1
Q53A **Leroy** 39.38 283 P P 19 50 45.1 0.0
baz=68,SNR=8.2
TOA0 **Torodi Ar. Sit** 39.39 128 P P 19 50 46.4 +1.1
SNR=22
TOA0 P P 19 50 46.4 +1.1
SNR=22
TOA0 **Torodi Ar. Sit** 39.39 128 P P 19 50 45.2 -0.1
TORD **Torodi Ar. Bea** 39.39 128 P P 19 50 46.0 +0.6
comp=Z,70nm,1.0s,baz=321,slow=7.0,SNR=99
K49A **Clarkson** 39.42 290 P P 19 50 45.9 +0.6
baz=72
LKR **Lokris** 39.45 77 P P 19 50 46.2 +0.6
J48A **Bridge Port** 39.49 291 P P 19 50 46.3 +0.3
baz=72
J48A **Bridge Port** 39.49 291 P P 19 50 45.9 0.0
J48A IAmb IAmb 19 50 47.5
comp=Z,161nm,1.9s
T55A **Pulaski** 39.52 280 P P 19 50 47.2 +1.0
baz=66,SNR=6.7
U56A **King** 39.54 279 P P 19 50 47.4 +1.1
baz=65
U56A **King** 39.54 279 P P 19 50 46.5 +0.1
P52A **Corning** 39.54 285 P P 19 50 47.1 +0.7
baz=69,SNR=19
M50A **Fremont** 39.58 288 P P 19 50 45.2 -1.4
M50A IAmb IAmb 19 50 47.7
comp=Z,37nm,1.0s
S54A **Dingess, Beckl** 39.63 282 P P 19 50 47.9 +0.7
baz=67,SNR=7.3
S54A **Dingess, Beckl** 39.63 282 P P 19 50 46.1 -1.1
S54A IAmb IAmb 19 50 49.1
comp=Z,56nm,1.4s
O51A **Pataskala** 39.70 286 P P 19 50 48.3 +0.6
baz=69,SNR=5.2
AAM **Ann Arbor** 39.72 289 P P 19 50 48.3 +0.5
AAM pmax pmax
comp=Z,141nm,2.0s
AAM **Ann Arbor** 39.72 289 P P 19 50 48.3 +0.5
AAM IAmb IAmb 19 50 49.6
comp=Z,141nm,1.9s
PLOR **Plostina** 39.72 65 ⇓P P 19 50 49.9 +2.1
PLOR **Plostina** 39.72 65 ⇓P P 19 50 49.9 +2.1
W57A **Gilead** 39.76 277 P P 19 50 48.3 +0.1
baz=64
W57A **Gilead** 39.76 277 P P 19 50 48.2 +0.1
VRI **Vrincioaia** 39.77 65 ⇓P P 19 50 46.3 -1.9
VRI **Vrincioaia** 39.77 65 ⇓P P 19 50 46.3 -1.9
I47A **Gladwin** 39.78 292 P P 19 50 48.9 +0.6
BISRR **Bisoca** 39.84 65 ⇓P P 19 50 50.5 +1.7
ISR **Istrita** 39.84 66 ⇑P P 19 50 49.9 +1.0
ISR **Istrita** 39.84 66 ⇑P P 19 50 49.9 +1.0
V56A **Mocksville** 39.84 278 P P 19 50 49.7 +0.8
baz=65
N50A **Nevada** 39.87 287 P P 19 50 49.9 +0.9
baz=70,SNR=5.2
K48A **Perry** 39.88 290 P P 19 50 49.7 +0.5
baz=72
Q52A **Bidwell** 39.88 284 P P 19 50 49.8 +0.5
baz=68,SNR=12
NOR **Nord** 39.89 3 *i* P P 19 50 47.7 -1.0
NOR pmax pmax
comp=Z,15nm,1.2s
NOR **Nord** 39.89 3 *i* P P 19 50 47.7 -1.0
comp=Z,15nm,1.2s
R53A **Hurricane** 39.89 283 P P 19 50 50.0 +0.7
baz=67,SNR=8.5
R53A **Hurricane** 39.89 283 P P 19 50 49.8 +0.4
ACSO **Alum Creek Sta** 39.94 286 P P 19 50 50.4 +0.8
baz=69,SNR=8.2
ACSO **Alum Creek Sta** 39.94 286 P P 19 50 50.1 +0.4
ACSO IAmb IAmb 19 50 51.4
comp=Z,88nm,1.4s
U55A **TA2, Sparta** 39.96 280 P P 19 50 50.9 +0.9
baz=66,SNR=10
Y58A **Scranton** 40.06 275 P P 19 50 50.6 -0.2
Y58A IAmb IAmb 19 50 52.5
comp=Z,72nm,0.8s
T54A **Tazewell** 40.12 281 P P 19 50 51.7 +0.4
baz=66,SNR=14
VLI **Veliai** 40.17 80 P P 19 50 52.8 +1.2
W56A **Indian Trail** 40.20 278 P P 19 50 52.0 +0.2
baz=64
P51A **Williamsport** 40.26 285 P P 19 50 52.9 +0.6
baz=68,SNR=9.0
P51A **Williamsport** 40.26 285 P P 19 50 52.7 +0.3
RAZG **Razgrad** 40.27 68 ⇓P P 19 50 52.5 +0.1
S53A **Williamson** 40.27 282 P P 19 50 53.0 +0.5
baz=66,SNR=8.1
SORM **Soroca** 40.28 61 ⇓P P 19 50 50.8 -1.6
SORM **Soroca** 40.28 61 ⇓P P 19 50 50.8 -1.6
AKASG **Malin Array Be** 40.29 57 P P 19 50 51.6 -0.8
comp=Z,14nm,0.8s,baz=280,slow=8.2,SNR=18
AKASG PcP PcP 19 52 55.8 -0.1
comp=Z,2.1nm,0.7s,baz=279,slow=3.9,SNR=5.7
AKBB **Malin Array Si** 40.29 57 P P 19 50 51.8 -0.6
AKBB pmax pmax
comp=Z,21nm,1.0s
AKBB **Malin Array Si** 40.29 57 P P 19 50 51.8 -0.6
PTL **Penteli** 40.31 77 P P 19 50 53.0 +0.2
BIRD **Birdtown, Kers** 40.32 277 P P 19 50 53.1 +0.3
VLY **Voula,Athens** 40.34 78 P P 19 50 53.0 0.0
V55A **Taylorsville** 40.36 279 P P 19 50 54.0 +0.8
baz=65,SNR=7.7
V55A **Taylorsville** 40.36 279 P P 19 50 53.8 +0.6
L48A **N Adams** 40.38 289 P P 19 50 53.5 +0.2
RDO **Rodhopi** 40.38 72 P P 19 50 53.8 +0.5
O50A **Cable** 40.42 286 P P 19 50 54.5 +0.8
baz=69,SNR=12
Z58A **St. Stephen** 40.43 275 P P 19 50 54.6 +0.7
baz=62
I46A **Reed City** 40.45 292 P P 19 50 54.7 +0.8
baz=72
U54A **Nelsons Funny** 40.52 280 P P 19 50 55.4 +0.7
baz=65,SNR=14
U54A **Nelsons Funny** 40.52 280 P P 19 50 54.8 +0.2
U54A IAmb IAmb 19 50 56.3
comp=Z,47nm,0.9s
N49A **Columbus Grove** 40.55 287 P P 19 50 55.0 +0.3
N49A IAmb IAmb 19 50 56.2
comp=Z,72nm,1.5s
Y57A **Sumter** 40.55 276 P P 19 50 54.2 -0.6
LIA **Limnos Island** 40.57 74 P P 19 50 55.5 +0.7
Q51A **Peebles** 40.64 284 P P 19 50 55.8 +0.3
Q51A IAmb IAmb 19 51 00.6
comp=Z,72nm,1.1s
P50A **Jamestown** 40.75 285 P P 19 50 56.9 +0.6
baz=68,SNR=9.7
KMSC **Kings Mountain** 40.75 278 P P 19 50 57.3 +0.8
baz=64,SNR=6.5
KMSC **Kings Mountain** 40.75 278 P P 19 50 56.4 0.0
E43A **Lone Tree Farm** 40.81 296 P P 19 50 56.6 -0.2
NHSC **New Hope** 40.81 275 P P 19 50 58.2 +1.3
baz=62
NHSC **New Hope** 40.81 275 P P 19 50 56.7 -0.2
NHSC IAmb IAmb 19 50 59.0
comp=Z,62nm,1.0s
T53A **Wise** 40.85 281 P P 19 50 57.7 +0.3
baz=66,SNR=11
KIS **Kishinev** 40.87 63 *e*P P 19 50 56.0 -1.2
KIS **Kishinev** 40.87 63 *e*PcS PcS 19 56 37.0 -12
KIS *e*S S 19 57 14.0 +5.3
KIS *e*SS SnSn 20 00 16.0 -0.3
KIS *e*LQ LQ 20 05 04.0
KIS LRM MLR 20 10 24.0
comp=Z,400nm,17.0s
KIS **Kishinev** 40.87 63 *e*P P 19 50 56.0 -1.2
KIS *e*S S 19 57 14.0 +5.3
KIS pmax pmax
comp=Z,500nm,16.0s
KIS pmax pmax
comp=N,400nm,17.0s
MILM **Milestii Mici** 40.88 63 ⇑P P 19 50 56.0 -1.3
CFR **Carcaliu** 40.91 65 ⇓P P 19 50 56.4 -1.2
CFR **Carcaliu** 40.91 65 ⇓P P 19 50 56.4 -1.2
HARR **Harsova** 40.91 66 ⇑P P 19 50 56.3 -1.3
HARR **Harsova** 40.91 66 ⇑P P 19 50 56.3 -1.3
O49A **Covington** 40.92 286 P P 19 50 57.5 -0.3
O49A IAmb IAmb 19 50 59.1
comp=Z,46nm,0.8s
V54A **Nebo** 40.93 279 P P 19 50 58.9 +1.0
baz=64
TLBR **Topalu** 41.03 66 ⇓P P 19 50 58.0 -0.6
Z57A **Bowman** 41.11 275 P P 19 51 00.4 +1.0
baz=62
N48A **Decatur** 41.17 288 P P 19 51 00.1 +0.2
baz=69,SNR=5.4
PAULI **Pauline** 41.24 278 P P 19 51 00.8 +0.3
X55A **Gracelyn & Ava** 41.27 277 P P 19 51 01.5 +0.8
baz=63,SNR=12
TIRR **Tirgusor** 41.31 66 ⇑P P 19 50 59.9 -1.0
TIRR **Tirgusor** 41.31 66 ⇑P P 19 50 59.9 -1.0
TIRR **Tirgusor** 41.31 66 P P 19 50 58.9 -2.0
TIRR IAmb IAmb 19 51 05.0
comp=Z,59nm,0.9s
S51A **Beattyville** 41.36 283 P P 19 51 01.9 +0.4
DBIC **Dimbokro** 41.37 142 P P 19 51 02.6 +0.9
comp=Z,32nm,1.0s,baz=318,slow=7.8,SNR=20
DBIC **Dimbokro** 41.37 142 P P 19 51 02.6 +0.9
DBIC IAmb IAmb 19 51 08.1
comp=Z,34nm,0.8s
W54A **Cherokee Point** 41.40 278 P P 19 51 02.6 +0.8
baz=64,SNR=11
O48A **Farmland** 41.48 287 P P 19 51 02.2 -0.1
baz=68,SNR=6.9
PRK **Paraskevi** 41.59 75 P P 19 51 04.8 +1.5
APA **Apatity** 41.60 31 ⇑*i*P P 19 51 03.9 +0.9
APA pmax pmax
comp=Z,9.0nm,0.9s
APA MLR MLR
comp=Z,800nm,17.0s
V53A **Saluda** 41.61 279 P P 19 51 03.8 +0.3
R50A **Paris** 41.63 284 P P 19 51 03.4 -0.3
R50A IAmb IAmb 19 51 05.2
comp=Z,29nm,0.8s
N47A **Urbana** 41.63 288 P P 19 51 03.1 -0.6
VAM **Vamos** 41.65 81 P P 19 51 04.7 +0.9
Y55A **Saluda** 41.67 277 P P 19 51 04.9 +0.8
baz=63
TZTN **Tazewell** 41.78 281 P P 19 51 05.4 +0.6
baz=65,SNR=8.2
TZTN **Tazewell** 41.78 281 P P 19 51 04.1 -0.8
X54A **Belton** 41.78 278 P P 19 51 05.8 +0.9
baz=63,SNR=11
HODGE **Hodges** 41.84 277 P P 19 51 05.8 +0.4
APE **Apeiranthos** 41.92 78 ⇑P P 19 51 06.6 +0.5
APE **Apeiranthos** 41.92 78 ⇑P P 19 51 06.6 +0.5
P48A **Milroy** 41.97 286 P P 19 51 06.1 -0.3
P48A IAmb IAmb 19 51 07.1
comp=Z,29nm,0.8s
BG3 **Lake Jocassee** 41.99 279 P P 19 51 06.4 -0.3
V52A **Sevierville** 42.11 280 P P 19 51 07.3 -0.3
V52A IAmb IAmb 19 51 09.3
comp=Z,118nm,2.0s
IDI **Anoyia** 42.21 81 P P 19 51 09.4 +0.9
comp=Z,20nm,0.8s,baz=295,slow=4.2,SNR=8.8
R49A **Shelbyville** 42.24 284 P P 19 51 08.7 +0.1
COWI **Conover** 42.31 297 P P 19 51 08.4 -0.7
TKL **Tuckaleechee C** 42.32 280 P P 19 51 09.0 -0.3
comp=Z,12nm,1.1s,baz=62,slow=8.9,SNR=11
TKL PP PP 19 52 52.2 +5.1
comp=Z,9.4nm,1.1s,baz=83,slow=9.8,SNR=6.6
TKL **Tuckaleechee C** 42.32 280 P P 19 51 09.0 -0.3
TKL **Tuckaleechee C** 42.32 280 P P 19 51 09.3 0.0
SDDR **Presa de Saban** 42.34 250 P P 19 51 09.8 +0.1
SDDR IAmb IAmb 19 51 15.6
comp=Z,48nm,1.3s
T50A **Nancy** 42.52 282 P P 19 51 11.3 +0.4
V51A **Loudon** 42.68 280 P P 19 51 12.3 +0.1
V51A IAmb IAmb 19 51 13.8
comp=Z,43nm,1.0s
W52A **Murphy** 42.68 279 P P 19 51 12.2 -0.1
FCC **Fort Churchill** 42.70 316 P P 19 51 12.7 +0.6
FCC pmax pmax
comp=Z,36nm,1.3s
FCC **Fort Churchill** 42.70 316 P P 19 51 12.7 +0.6
L44A **Lake County Fo** 42.73 291 P P 19 51 12.7 +0.1
baz=69
L44A **Lake County Fo** 42.73 291 P P 19 51 12.6 +0.1
L44A IAmb IAmb 19 51 13.2
comp=Z,33nm,0.8s
SFIN **Lafayette** 42.81 288 P P 19 51 13.4 +0.1
K43A **Burlington** 42.84 292 P P 19 51 13.2 -0.2
I42A **Draeger Farm,** 42.84 293 P P 19 51 13.8 +0.3
BLO **Bloomington** 42.86 286 P P 19 51 14.2 +0.5
BLO pmax pmax
comp=Z,47nm,0.8s
BLO **Bloomington** 42.86 286 P P 19 51 14.2 +0.5
BLO IAmb IAmb 19 51 15.2
comp=Z,47nm,0.8s
CPCT **Cooper Cave** 42.96 280 P P 19 51 14.9 +0.4
WCI **Wyandotte Cave** 43.07 285 P P 19 51 15.5 +0.1
WCI pmax pmax
comp=Z,31nm,0.8s
WCI **Wyandotte Cave** 43.07 285 P P 19 51 16.0 +0.6
baz=66
WCI **Wyandotte Cave** 43.07 285 P P 19 51 15.5 +0.1
WCI IAmb IAmb 19 51 17.0
comp=Z,31nm,0.8s
GOGA **Godfrey** 43.10 277 P P 19 51 16.0 +0.3
GOGA pmax pmax
comp=Z,17nm,1.0s
GOGA **Godfrey** 43.10 277 P P 19 51 16.4 +0.7
baz=62,SNR=8.6
GOGA **Godfrey** 43.10 277 P P 19 51 16.0 +0.3
M44A **Midewin, Midew** 43.11 290 P P 19 51 15.7 +0.1
P46A **Rosedale** 43.18 287 P P 19 51 16.4 +0.2
P46A IAmb IAmb 19 51 17.0
comp=Z,27nm,0.8s
154A **Montrose** 43.22 276 P P 19 51 17.0 +0.4
ZKR **Zakros** 43.26 80 P P 19 51 17.5 +0.5
G40A **Rib Lake** 43.27 296 P P 19 51 17.0 0.0
EYMN **Ely** 43.33 300 P P 19 51 17.0 -0.3
baz=74,SNR=7.5
EYMN **Ely** 43.33 300 P P 19 51 16.4 -1.0
U49A **Red Boiling Sp** 43.42 282 P P 19 51 17.7 -0.5
TMCR **Tamitsa** 43.44 36 *e*P P 19 51 15.9 -2.0
TMCR pmax pmax
comp=Z,63nm,1.0s
RES **Resolute Bay** 43.51 339 P P 19 51 17.8 -0.6
comp=Z,15nm,1.0s,baz=99,slow=7.6,SNR=6.8
RES **Resolute Bay** 43.51 339 P P 19 51 18.8 +0.4
MANT **Manisa** 43.53 75 P P 19 51 20.1 +0.7
X51A **Calhoun** 43.60 279 P P 19 51 19.6 -0.1
X51A IAmb IAmb 19 51 22.5
comp=Z,42nm,1.4s
W50A **Signal Mountai** 43.65 280 P P 19 51 20.6 +0.5
W50A IAmb IAmb 19 51 21.8
comp=Z,43nm,1.0s
E38A **The Farm, Brul** 43.76 298 P P 19 51 20.3 -0.6
KARP **Karpathos** 43.76 79 P P 19 51 20.6 -0.5
KARP IAmb IAmb 19 51 35.4
comp=Z,36nm,0.9s
OBN **Obninsk** 43.81 49 ⇑*e*P P 19 51 20.1 -1.0
OBN *e* 19 53 05.4
OBN *e*PPP PPP 19 53 37.5

OBN eS S 19 57 39.6 -12
OBN eSS **SS** **20 01 08.6 +1.4**
OBN pmax pmax
comp=Z,28nm,1.2s
OBN MLR MLR
comp=Z,484nm,17.0s
OBN Obninsk 43.81 49 P **P** **19 51 20.3 -0.8**
OBN IAmb IAmb 19 51 24.1
comp=Z,32nm,1.2s
O44A Mansfield 43.87 288 P **P** **19 51 21.0 -0.8**
O44A IAmb IAmb 19 51 23.2
comp=Z,35nm,0.9s
CLTN Cedars of Leba 44.00 282 P **P** **19 51 22.6 -0.2**
I40A Norwalk 44.01 294 P **P** **19 51 23.1 +0.2**
L42A Oliver, Polo 44.02 291 P **P** **19 51 23.0 0.0**
L42A IAmb IAmb 19 51 24.2
comp=Z,32nm,0.9s
JFWS Jewell Farm 44.09 293 P **P** **19 51 23.5 0.0**
JFWS pmax pmax
comp=Z,16nm,0.9s
JFWS Jewell Farm 44.09 293 P **P** **19 51 23.7 +0.2**
baz=69
JFWS Jewell Farm 44.09 293 P **P** **19 51 23.5 0.0**
SWET Sewanee 44.09 281 P **P** **19 51 23.3 -0.4**
SWET IAmb IAmb 19 51 32.9
comp=Z,22nm,0.8s
FPAL Fort Paine 44.16 279 P **P** **19 51 24.2 -0.1**
FPAL IAmb IAmb 19 51 25.8
comp=Z,37nm,1.3s
OLIL Olney 44.17 286 P **P** **19 51 24.5 +0.3**
OLIL IAmb IAmb 19 51 25.5
comp=Z,54nm,0.9s
USIN University of 44.17 285 P **P** **19 51 23.9 -0.3**
USIN IAmb IAmb 19 51 25.4
comp=Z,45nm,1.2s
T47A Sharon Grove 44.17 283 P **P** **19 51 24.0 -0.3**
T47A IAmb IAmb 19 51 25.8
comp=Z,42nm,0.8s
MOS Moscow 44.28 48 *eP* **P** **19 51 23.2 -1.6**
MOS MLR MLR
comp=N,900nm,20.0s
MOS MLR MLR
comp=Z,800nm,20.0s
HDIL Hopedale 44.30 289 P **P** **19 51 25.7 +0.5**
baz=67
HDIL Hopedale 44.30 289 P **P** **19 51 25.7 +0.5**
152A Waverly Hall 44.38 277 P **P** **19 51 26.4 +0.4**
KLMR Klimovskoe 44.42 41 *eP* **P** **19 51 25.6 -0.3**
KLMR *e* 19 53 08.9
KLMR pmax pmax
comp=Z,33nm,1.1s
KLMR Klimovskoe 44.42 41 *eP* **P** **19 51 25.7 -0.2**
KLMR AMP 19 51 31.2
comp=Z,33nm,1.1s
KLMR *e*PP **PP** **19 53 08.9 -0.3**
KLMR LQ LQ 20 05 49.5
KLMR LQ LQ 20 05 49.5
KLMR LR LR 20 06 54.4
V48A Smith Brothers 44.51 282 P **P** **19 51 26.5 -0.5**
V48A IAmb IAmb 19 51 28.6
comp=Z,36nm,1.4s
B35A Bob, Littlefor 44.64 301 P **P** **19 51 27.1 -0.8**
Q44A Meyer Farm, Va 44.75 287 P **P** **19 51 28.0 -0.8**
Q44A IAmb IAmb 19 51 30.2
comp=Z,48nm,1.0s
P43A Skaggs, Pawnee 44.81 288 P **P** **19 51 29.2 -0.1**
P43A IAmb IAmb 19 51 30.6
comp=Z,37nm,0.9s
SIM Simferopol' 45.00 64 P **P** **19 51 34.1 +3.3**
SIM *eS* **S** **19 58 15.3 +5.8**
SIM pmax pmax
comp=Z,8.0nm,0.9s
SIM MLR MLR
comp=Z,170nm,16.9s
SPMN Marine on St. 45.03 297 P **P** **19 51 31.4 +0.4**
baz=70
SPMN Marine on St. 45.03 297 P **P** **19 51 30.6 -0.4**
SPMN IAmb IAmb 19 51 32.0
comp=Z,31nm,1.1s
Y49A Blount Mountai 45.07 279 P **P** **19 51 31.5 0.0**
L40A Anamosa 45.07 292 P **P** **19 51 31.3 -0.1**
WVT Waverly 45.07 283 P **P** **19 51 31.4 -0.1**
WVT Waverly 45.07 283 P **P** **19 51 31.6 +0.1**
baz=64
WVT Waverly 45.07 283 P **P** **19 51 31.4 -0.1**
WVT IAmb IAmb 19 51 32.8
comp=Z,27nm,0.9s
352A Blakely 45.12 275 P **P** **19 51 31.3 -0.6**
X48A Hartselle 45.26 280 P **P** **19 51 33.1 +0.2**
F36A Milaca 45.29 298 P **P** **19 51 32.8 -0.3**
N41A Harden Midland 45.33 290 P **P** **19 51 33.5 0.0**
SIUC Southern Illin 45.39 285 P **P** **19 51 34.2 +0.3**
SIUC IAmb IAmb 19 51 35.4
comp=Z,38nm,1.0s
S44A Carbondale 45.42 285 P **P** **19 51 34.4 +0.2**
S44A IAmb IAmb 19 51 35.5
comp=Z,38nm,0.9s
ULM Lac du Bonnet 45.44 304 P **P** **19 51 32.8 -1.4**
comp=Z,3.5nm,0.6s,baz=66,slow=6.6,SNR=3.7
ULM LR LR 20 09 06.1
comp=Z,638nm,19.7s,baz=76,slow=34
ULM Lac du Bonnet 45.44 304 P **P** **19 51 33.1 -1.1**
ULM IAmb IAmb 19 53 14.2
comp=Z,34nm,1.8s
SLM Saint Louis 45.73 287 P **P** **19 51 36.7 0.0**
SLM pmax pmax
comp=Z,49nm,1.1s
SLM Saint Louis 45.73 287 P **P** **19 51 36.7 0.0**
LPSR Galich'ya Gora 45.74 52 *eP* **P** **19 51 36.5 0.0**
LPSR pmax pmax
comp=Z,30nm,0.9s
LPSR MLR MLR
comp=Z,440nm,16.0s
PLAL Pickwick Lake 45.77 281 P **P** **19 51 36.5 -0.5**
PLAL IAmb IAmb 19 51 37.8
comp=Z,23nm,0.9s
I37A Lemond, Waseca 45.85 295 P **P** **19 51 37.6 +0.1**
250A Grady 45.86 277 P **P** **19 51 37.8 0.0**
LRAL Lakeview Retre 45.89 278 P **P** **19 51 38.5 +0.6**
baz=61,SNR=8.0
LRAL Lakeview Retre 45.89 278 P **P** **19 51 37.8 -0.1**
K38A Parkersburg 45.92 293 P **P** **19 51 38.0 -0.1**
ANTO Ankara 45.98 71 P **P** **19 51 35.6 -3.1**
ANTO P **P** **19 51 35.6 -3.1**
AGMN Agassiz Nation 46.02 302 P **P** **19 51 38.8 0.0**
baz=72,SNR=5.8
AGMN Agassiz Nation 46.02 302 P **P** **19 51 38.7 -0.1**
GLAT Glass 46.07 284 P **P** **19 51 39.4 +0.1**
ILGA Ilgaz 46.16 69 P **P** **19 51 40.9 +0.6**
PENMO Penman 46.23 284 P **P** **19 51 40.6 0.0**
HALT Halls 46.27 283 P **P** **19 51 40.9 0.0**
VSR Storozhevoye 46.27 54 *eP* **P** **19 51 40.4 -0.3**
VSR pmax pmax
comp=Z,10.0nm,0.9s
LNXT Lenox 46.29 283 P **P** **19 51 41.1 0.0**
PVMO Portageville 46.30 284 P **P** **19 51 41.0 -0.2**
VORD Divnogorie 46.42 54 *eP* **P** **19 51 41.1 -0.8**
VORD pmax pmax
comp=Z,20nm,1.0s
W45A Hickory Valley 46.50 282 P **P** **19 51 41.8 -0.9**
SCIA State Center 46.51 292 P **P** **19 51 42.1 -0.6**
PEBM Pemiscott Bayo 46.55 284 P **P** **19 51 43.3 +0.1**
Z47A Carrollton 46.60 279 P **P** **19 51 44.0 +0.4**
BR131 Keskin Array S 46.64 71 P **P** **19 51 44.2 +0.3**
SNR=11
BR131 Keskin Array S 46.64 71 P **P** **19 51 43.4 -0.6**
BR131 pmax pmax
comp=Z,9.0nm,0.9s
BR131 Keskin Array S 46.64 71 P **P** **19 51 43.4 -0.6**
BRTR Keskin Array B 46.64 71 P **P** **19 51 44.3 +0.3**
comp=Z,7.6nm,0.9s,baz=284,slow=5.5,SNR=16
BRTR PcP **PcP** **19 53 18.9 +1.1**
comp=Z,4.5nm,0.9s,baz=216,slow=2.4,SNR=8.6
P40A Paris 46.64 289 P **P** **19 51 43.7 -0.2**
CCM Cathedral Cave 46.69 287 P **P** **19 51 43.6 -0.7**
CCM pmax pmax
comp=Z,33nm,0.9s
CCM Cathedral Cave 46.69 287 P **P** **19 51 43.9 -0.3**
baz=64
CCM Cathedral Cave 46.69 287 P **P** **19 51 43.6 -0.7**
OXF Oxford 46.96 281 P **P** **19 51 45.9 -0.4**
OXF pmax pmax
comp=Z,156nm,1.1s
OXF Oxford 46.96 281 P **P** **19 51 46.3 -0.1**
baz=62,SNR=10
OXF Oxford 46.96 281 P **P** **19 51 45.9 -0.4**
N38A Joes South For 46.96 291 P **P** **19 51 46.1 -0.2**
T42A Van Buren 47.03 285 P **P** **19 51 46.3 -0.6**
ANN Anapa 47.26 63 *eP* **P** **19 51 51.5 +2.9**
ANN pmax pmax
comp=Z,72nm,1.0s
ANN MLR MLR
comp=Z,457nm,13.0s
R40A Maddies Statio 47.32 287 P **P** **19 51 48.7 -0.4**
Y45A Yeager Farm, C 47.36 281 P **P** **19 51 49.2 -0.3**
LCAR Lake Charles 47.51 284 P **P** **19 51 49.7 -0.9**
LCAR IAmb IAmb 19 51 54.4
comp=Z,31nm,1.3s
P38A Dawn 47.65 290 P **P** **19 51 51.3 -0.4**
FFC Flin Flon 47.77 312 P **P** **19 51 51.9 -0.5**
FFC pmax pmax
comp=Z,12nm,0.8s
FFC Flin Flon 47.77 312 P **P** **19 51 51.9 -0.5**
FFC IAmb IAmb 19 51 55.1
comp=Z,12nm,0.8s
VRH Novokhopyorsk 47.80 53 *eP* **P** **19 51 53.1 +0.4**
VRH pmax pmax
comp=Z,10.0nm,0.8s
VRH MLR MLR
comp=Z,1μm,19.0s
MGMO Mountain Grove 47.82 286 P **P** **19 51 52.7 -0.4**
ECSD EROS Data Cent 48.11 296 P **P** **19 51 55.0 -0.2**
baz=67,SNR=22
ECSD EROS Data Cent 48.11 296 P **P** **19 51 55.0 -0.2**
ECSD IAmb IAmb 19 51 56.2
comp=Z,35nm,1.2s
FCAR Ozark Folk Cen 48.29 285 P **P** **19 51 55.7 -1.0**
FCAR IAmb IAmb 19 51 56.4
comp=Z,20nm,1.0s
N35A Tabor 48.60 292 P **P** **19 51 58.4 -0.6**
N35A IAmb IAmb 19 51 59.3
comp=Z,24nm,0.8s
U40A Yellville 48.60 285 P **P** **19 51 58.8 -0.3**
baz=63,SNR=25
U40A Yellville 48.60 285 P **P** **19 51 58.5 -0.5**
L34A Svendsen Farm, 48.65 294 P **P** **19 51 58.7 -0.7**
WHAR Wooly Hollow 48.69 284 P **P** **19 51 58.9 -0.9**
WHAR IAmb IAmb 19 52 00.0
comp=Z,30nm,1.0s
W41B Gary Mavity, V 48.71 284 P **P** **19 51 59.0 -0.9**
baz=62,SNR=17
VBMS Vicksburg 48.88 279 P **P** **19 52 01.8 +0.6**
baz=60
VBMS Vicksburg 48.88 279 P **P** **19 52 01.1 -0.1**
CCAR Cane Creek 48.96 282 P **P** **19 52 01.5 -0.3**
UALR University of 48.97 283 P **P** **19 52 01.1 -0.8**
UALR IAmb IAmb 19 52 03.6
comp=Z,19nm,1.0s
SDV Santo Domingo 49.12 240 *eP* **P** **19 52 04.6 +1.1**
SOC Sochi 49.25 64 *eP* **P** **19 52 04.5 +0.6**
SOC *e* 19 53 59.5
SOC *e*PPP PPP 19 54 55.6
SOC *eS* **S** **19 59 11.0 +1.0**
SOC *e*SS **SS** **20 02 40.4 -0.6**
SOC *e*SSS SSS 20 04 06.9
SOC pmax pmax
comp=Z,20nm,0.8s
SOC MLR MLR
comp=Z,156nm,15.0s
143A Socs Landing, 49.29 280 P **P** **19 52 04.1 -0.3**
HHAR Hobbs 49.41 286 P **P** **19 52 04.4 -1.0**
HHAR IAmb IAmb 19 52 09.9
comp=Z,18nm,1.1s
344A Westbrook Farm 49.42 279 P **P** **19 52 04.7 -0.7**
X40A Basin Creek Fa 49.46 283 P **P** **19 52 04.7 -0.9**
baz=61,SNR=15
X40A Basin Creek Fa 49.46 283 P **P** **19 52 04.8 -0.9**
X40A IAmb IAmb 19 52 05.9
comp=Z,27nm,1.0s
U38A Gravette 49.66 286 P **P** **19 52 06.3 -0.9**
E28A Huff 49.69 301 P **P** **19 52 07.2 -0.2**
SOCV Socops 49.72 239 *eP* **P** **19 52 08.0 +0.1**
W39A Magazine 49.81 285 P **P** **19 52 08.0 -0.4**
baz=62,SNR=28
W39A Magazine 49.81 285 P **P** **19 52 07.8 -0.6**
MIAR Mount Ida 49.97 284 P **P** **19 52 09.0 -0.6**
MIAR pmax pmax
comp=Z,56nm,1.0s
MIAR Mount Ida 49.97 284 P **P** **19 52 09.3 -0.3**
baz=61,SNR=23
MIAR Mount Ida 49.97 284 P **P** **19 52 09.0 -0.6**
K31A O'Neill 49.99 295 P **P** **19 52 08.9 -0.7**
K31A IAmb IAmb 19 52 09.9
comp=Z,38nm,0.9s
KSU1 Kansas State U 50.02 290 P **P** **19 52 09.6 -0.4**
baz=64,SNR=14
KSU1 Kansas State U 50.02 290 P **P** **19 52 09.2 -0.7**
Z41A Richland Creek 50.03 282 P **P** **19 52 10.2 +0.1**
baz=60
WLAR White Oak Lake 50.05 282 P **P** **19 52 09.4 -0.7**
BGNE Belgrade 50.09 294 P **P** **19 52 09.7 -0.7**
GAZ Gaziantep 50.27 72 P **P** **19 52 11.5 -0.4**
PTGA Pitinga 50.84 221 P **P** **19 52 16.2 -0.1**
GOF Gofitskoye 50.84 61⇑ *eP* **P** **19 52 17.5 +1.5**
GOF pmax pmax
comp=Z,11nm,0.5s
TUL1 Leonard 50.91 286 P **P** **19 52 15.8 -0.8**
baz=62,SNR=8.9
TUL1 Leonard 50.91 286 P **P** **19 52 15.5 -1.1**
TUL1 IAmb IAmb 19 52 16.6
comp=Z,28nm,0.9s
T35A Sooner Cattle 50.95 288 P **P** **19 52 16.1 -0.9**
T35A IAmb IAmb 19 52 17.0
comp=Z,37nm,0.8s
KIV Kislovodsk 51.06 62 P **P** **19 52 19.5 +1.6**
KIV P **P** **19 52 19.5 +1.6**
KIV S **S** **19 59 30.4 -5.1**
KIV S **S** **19 59 30.4 -5.1**
KIV Kislovodsk 51.06 62⇑ *i*P **P** **19 52 18.7 +0.9**
KIV *e* 19 54 18.9
KIV *e*PPP PPP 19 55 15.0
KIV *eS* **S** **19 59 35.3 -0.2**
KIV pmax pmax
comp=Z,6.0nm,1.1s
KIV MLR MLR
comp=Z,181nm,16.0s
X37A Clayton 51.24 285 P **P** **19 52 18.7 -0.5**
X37A IAmb IAmb 19 52 25.4
comp=Z,28nm,1.2s
KBZ Khabaz 51.30 62 P **P** **19 52 20.1 +0.7**
comp=Z,17nm,1.1s,baz=307,slow=9.2,SNR=11
KBZ PcP **PcP** **19 53 34.8 +0.5**
comp=Z,6.4nm,0.9s,baz=161,slow=3.9,SNR=2.6
SJCC San Jacinto, C 51.37 245 *eP* **P** **19 52 22.1 +1.7**
NEY Neytrino 51.38 63⇑ *i*P **P** **19 52 21.6 +1.3**
NEY pmax pmax
comp=Z,1.0nm,1.0s
SMLC San Martn de 51.43 243 *eP* **P** **19 52 19.4 -1.3**
Z38A Mt. Pleasant 51.62 283 P **P** **19 52 21.4 -0.6**
PAMC Pamplona, Colo 51.62 240 *eP* **P** **19 52 22.8 +0.1**
YKA Yellowknife Ar 51.73 324 P **P** **19 52 21.3 -1.1**
comp=Z,3.9nm,1.0s,baz=72,slow=7.4,SNR=24
YKA PcP **PcP** **19 53 35.0 -0.6**
comp=Z,2.6nm,0.8s,baz=75,slow=4.1,SNR=10
R32A Long Quarter, 51.80 291 P **P** **19 52 22.3 -1.0**
R32A IAmb IAmb 19 52 23.3
comp=Z,37nm,1.1s
W35A Tecumseh 52.05 286 P **P** **19 52 24.2 -1.0**
NATX Nacogdoches 52.14 281 P **P** **19 52 26.2 +0.3**
baz=59
NATX Nacogdoches 52.14 281 P **P** **19 52 25.6 -0.4**
CBKS Cedar Bluff 52.33 292 P **P** **19 52 27.6 +0.3**
baz=62
OKCFA Oklahoma City 52.33 287 P **P** **19 52 26.5 -0.9**
OKCFA IAmb IAmb 19 52 31.0
comp=Z,39nm,1.0s
ZEI Tsey 52.36 63 *eP* **P** **19 52 28.0 +0.3**
ZEI pmax pmax
comp=Z,31nm,0.7s
FNO Franklin 52.37 286 P **P** **19 52 27.1 -0.5**
A36M Sachs Harbour 52.38 337 P **P** **19 52 27.1 0.0**
baz=69,SNR=10
AKH Akhalkalaki 52.70 65 P **P** **19 52 30.1 -0.1**
AKH pmax pmax
comp=Z,22nm,1.1s
AKH Akhalkalaki 52.70 65 P **P** **19 52 30.1 -0.1**
RSSD Black Hills 52.84 299 P **P** **19 52 30.2 -1.0**
baz=64
OGNE Ogallala 52.92 295 P **P** **19 52 30.9 -0.8**
baz=63
OGNE Ogallala 52.92 295 P **P** **19 52 30.8 -0.9**
RUSC La Rusia 52.96 240 *eP* **P** **19 52 32.2 -0.5**
RUSC La Rusia 52.96 240 P **P** **19 52 31.8 -1.0**
U32A Winter Ranch, 52.96 288 P **P** **19 52 31.3 -0.7**
C36M Paulatuk 52.98 334 P **P** **19 52 31.0 -0.5**
baz=68
C36M Paulatuk 52.98 334 P **P** **19 52 30.7 -0.8**
X34A Smith Ranch, M 53.00 286 P **P** **19 52 31.8 -0.5**
X34A IAmb IAmb 19 52 33.3
comp=Z,47nm,1.1s
LAO LASA Array 53.14 303 P **P** **19 52 33.9 +0.7**
baz=65,SNR=8.6
LAO LASA Array 53.14 303 P **P** **19 52 33.6 +0.4**
LAO IAmb IAmb 19 52 34.9
comp=Z,30nm,1.0s
Z35A Perchaven, San 53.22 284 P **P** **19 52 33.5 -0.4**
Z35A IAmb IAmb 19 52 34.5
comp=Z,44nm,1.1s
PTBC PUERTO BERRIO, 53.37 241 *eP* **P** **19 52 34.2 -0.9**
WMOK Wichita Mounta 53.61 287 P **P** **19 52 36.1 -0.7**
WMOK pmax pmax
comp=Z,26nm,1.1s
WMOK Wichita Mounta 53.61 287 P **P** **19 52 36.2 -0.7**
baz=60,SNR=24
WMOK Wichita Mounta 53.61 287 P **P** **19 52 36.1 -0.7**
WMOK IAmb IAmb 19 52 37.2
comp=Z,26nm,1.1s
WHTX Lake Whitney, 54.06 283 P **P** **19 52 39.8 -0.2**
baz=58,SNR=9.7
WHTX Lake Whitney, 54.06 283 P **P** **19 52 39.6 -0.5**
DBBC Dabeiba 54.17 243 *eP* **P** **19 52 42.3 +1.2**
HELC Santa Helena 54.33 242 *eP* **P** **19 52 43.0 +0.4**
CHIC Chingaza 54.34 239 *eP* **P** **19 52 41.4 -1.4**
NORC Norcasia 54.37 241 *eP* **P** **19 52 43.7 +1.2**
ROSC El Rosal 54.56 240 P **P** **19 52 44.3 0.0**
comp=Z,6.0nm,0.4s,baz=340,slow=22,SNR=6.1
ROSC El Rosal 54.56 240 P **P** **19 52 43.1 -1.2**
ROSC IAmb IAmb 19 52 46.0
comp=Z,16nm,0.8s
VILC Villavicencio, 54.71 239 *eP* **P** **19 52 43.7 -1.4**
EGMT Eagleton 54.73 306 P **P** **19 52 44.9 0.0**
baz=64,SNR=12
EGMT Eagleton 54.73 306 P **P** **19 52 44.4 -0.4**
EGMT IAmb IAmb 19 52 45.8
comp=Z,23nm,0.9s
CBOC Ciudad Bolivar 54.89 242 *eP* **P** **19 52 47.0 +0.6**
GUY2C Guyana, Caldas 54.94 241 *eP* **P** **19 52 47.0 -0.2**
PHWY Pilot Hill 55.05 297 P **P** **19 52 46.6 -0.9**
K22A Casper 55.12 299 P **P** **19 52 47.6 -0.3**
baz=62,SNR=13
K22A Casper 55.12 299 P **P** **19 52 47.1 -0.8**
K22A IAmb IAmb 19 52 48.6
comp=Z,40nm,1.1s
RREF El Recreo 55.17 241 *eP* **P** **19 52 49.7 +0.7**
ARU Arti 55.18 43 *d i*P **P** **19 52 50.0 +2.1**
ARU 19 53 49.4
ARU 19 54 56.3
ARU PPP PPP 19 56 01.5
ARU S **S** **20 00 34.3 +3.2**
ARU SS **SS** **20 04 14.3 -0.2**
ARU pmax pmax
comp=Z,28nm,1.1s
ARU MLR MLR
comp=Z,398nm,17.0s
ARU Arti 55.18 43 P **P** **19 52 47.7 -0.2**
ARU IAmb IAmb 19 52 53.5
comp=Z,24nm,1.0s
ABTX Abilene, Hawle 55.31 285 P **P** **19 52 48.5 -0.8**
baz=58,SNR=12
ABTX Abilene, Hawle 55.31 285 P **P** **19 52 48.4 -0.8**
ABTX IAmb IAmb 19 52 49.3
comp=Z,35nm,1.1s
AKT Akhty 55.49 63 *eP* P 19 52 56.5 +6.0
AKT *e* 19 53 55.5
AKT pmax pmax
comp=Z,4.0nm,0.9s
ANIL Santa Ana 55.52 241 *eP* **P** **19 52 52.4 +1.3**
N23A Red Feather La 55.57 297 P **P** **19 52 51.8 +0.6**
baz=61,SNR=17
AMTX Amarillo 55.60 288 P **P** **19 52 51.8 +0.4**
baz=59
AMTX Amarillo 55.60 288 P **P** **19 52 50.7 -0.6**
GCMT Greycliff 55.68 303 P **P** **19 52 51.5 -0.3**
RLMT Red Lodge 55.74 302 P **P** **19 52 52.4 +0.1**
baz=62,SNR=6.8
RLMT Red Lodge 55.74 302 P **P** **19 52 52.0 -0.3**
PLMC San Jos del P 55.78 242 *eP* **P** **19 52 53.8 +1.0**
ISCO Idaho Springs 55.88 295 P **P** **19 52 53.1 -0.4**
ISCO pmax pmax
comp=Z,20nm,1.4s
ISCO Idaho Springs 55.88 295 P **P** **19 52 53.8 +0.3**
baz=61,SNR=10
ISCO Idaho Springs 55.88 295 P **P** **19 52 53.0 -0.4**
RWWY Rawlins 56.03 298 P **P** **19 52 53.6 -0.9**
RWWY IAmb IAmb 19 52 54.9
comp=Z,62nm,1.9s
SVE Sverdlovsk 56.05 42 *eP* **P** **19 52 56.8 +2.7**
SVE pmax pmax
comp=Z,22nm,1.5s
YNE Yellowstone No 56.25 303 P **P** **19 52 55.7 -0.4**
T25A Trinidad 56.37 292 P **P** **19 52 57.2 +0.2**
baz=60,SNR=14
YMP Mirror Lake Pl 56.47 302 P **P** **19 52 56.6 -1.1**
YOTC Yotoco, Valle 56.52 241 *eP* **P** **19 52 57.4 -0.7**
INK Inuvik 56.52 334 P **P** **19 52 56.2 -1.0**
comp=Z,11nm,0.9s,baz=37,slow=9.3,SNR=18
INK Inuvik 56.52 334 P **P** **19 52 56.5 -0.8**
INK IAmb IAmb 19 52 57.2
comp=Z,14nm,0.9s
JCT Junction City 56.56 283 P **P** **19 52 57.0 -1.2**
baz=57,SNR=8.0
JCT Junction City 56.56 283 P **P** **19 52 56.8 -1.4**
JCT IAmb IAmb 19 52 58.6
comp=Z,44nm,1.4s
WALA Waterton Lakes 56.73 308 P **P** **19 52 58.4 -0.9**
WALA IAmb IAmb 19 53 00.1
comp=Z,34nm,0.9s
SDCO Great Sand Dun 56.81 293 P **P** **19 53 00.4 +0.2**
baz=60,SNR=9.7
SDCO Great Sand Dun 56.81 293 P **P** **19 52 59.6 -0.6**
MSTX Muleshoe 56.84 288 P **P** **19 52 59.7 -0.6**
baz=58,SNR=16
MSTX Muleshoe 56.84 288 P **P** **19 52 59.4 -0.8**
YHH Holmes Hill 56.89 303 P **P** **19 53 00.5 -0.2**
H17A Grant Village 56.90 302 P **P** **19 53 01.9 +1.2**
baz=61
H17A Grant Village 56.90 302 P **P** **19 53 01.1 +0.4**
BETC Betania 56.92 239 *eP* **P** **19 53 00.5 -0.3**
YMR Madison River 57.01 303 P **P** **19 53 00.6 -0.9**
BW06 Boulder Array 57.04 300 P **P** **19 53 00.8 -0.8**
baz=61,SNR=14
BW06 Boulder Array 57.04 300 P **P** **19 53 00.7 -1.0**
PD31 Pinedale Array 57.04 300 P **P** **19 53 00.7 -1.0**
PDAR Pinedale Array 57.04 300 P **P** **19 53 00.5 -1.2**
comp=Z,7.5nm,0.9s,baz=67,slow=8.2,SNR=36
YPP Pitchstone Pla 57.10 302 P **P** **19 53 01.6 -0.6**
YHB Horse Butte 57.12 303 P **P** **19 53 02.4 +0.2**
FLWY Flagg Ranch 57.13 302 P **P** **19 53 02.3 0.0**
FLWY IAmb IAmb 19 53 03.4
comp=Z,17nm,0.9s
IMW Indian Meadow 57.37 302 P **P** **19 53 03.9 -0.1**
IMW IAmb IAmb 19 53 05.0
comp=Z,19nm,0.8s
833A Chaparral WMA, 57.44 280 P **P** **19 53 04.5 +0.1**
baz=56,SNR=5.6
SNOW Snow King Moun 57.46 301 P **P** **19 53 04.6 -0.1**
SNOW IAmb IAmb 19 53 05.8
comp=Z,26nm,1.0s
O20A White River Ci 57.47 297 P **P** **19 53 05.6 +0.9**
baz=60
O20A White River Ci 57.47 297 P **P** **19 53 04.5 -0.2**
O20A IAmb IAmb 19 53 06.2
comp=Z,29nm,1.4s
FXWY Fox Creek 57.55 302 P **P** **19 53 04.7 -0.6**
FXWY IAmb IAmb 19 53 06.1
comp=Z,52nm,1.9s
REDW Red Top Meadow 57.58 301 P **P** **19 53 04.9 -0.5**
REDW IAmb IAmb 19 53 06.3
comp=Z,25nm,1.1s
TPAW Teton Pass 57.58 301 P **P** **19 53 04.9 -0.5**
S22A 4UR Ranch, Cre 57.72 294 P **P** **19 53 07.3 +0.7**
baz=59,SNR=12
PCON Cinco Dias 57.80 240 *eP* **P** **19 53 08.6 +0.9**

MSO **Missoula** 57.80 306 P P 19 53 06.7 -0.1
baz=61,SNR=10
MSO **Missoula** 57.80 306 P P 19 53 06.3 -0.6
JTS **Las Juntas de** 57.90 254 i P P 19 53 07.8 0.0
JTS pmax pmax
comp=Z,11nm,1.1s
AHID **Auburn Hatcher** 58.03 301 P P 19 53 07.9 -0.7
SOTA **Rioblanco** 58.08 240 eP P 19 53 10.6 +1.0
MCMT **McKenzie Canyo** 58.11 304 P P 19 53 09.2 0.0
RDMU **Red Mountain** 58.13 298 P P 19 53 09.2 -0.2
BBAC **Balboa, Cauca** 58.58 240 eP P 19 53 12.0 -0.8
EPYK **Eagle Plains** 58.60 333 P P 19 53 12.0 0.0
baz=56,SNR=16
EPYK **Eagle Plains** 58.60 333 P P 19 53 11.8 -0.2
PV07 **Paradox Valley** 58.60 295 P P 19 53 12.7 0.0
PV07 IAmb IAmb 19 53 15.3
comp=Z,34nm,1.6s
PV22 **Blue Mesa, Par** 58.64 295 P P 19 53 12.6 -0.4
CRUC **La Cruz** 58.73 240 eP P 19 53 16.0 +2.0
PV21 **Cone Mtn., Par** 58.76 296 P P 19 53 13.6 -0.2
PV21 IAmb IAmb 19 53 15.2
comp=Z,42nm,1.3s
PV04 **Paradox Valley** 58.80 295 P P 19 53 13.6 -0.4
PV04 IAmb IAmb 19 53 34.7
comp=Z,38nm,1.5s
PV23 **Carpenter Ridg** 58.84 295 P P 19 53 14.2 -0.2
PV16 **Nyswonger Mesa** 58.84 295 P P 19 53 14.3 -0.1
PV16 IAmb IAmb 19 53 16.0
comp=Z,47nm,1.9s
PV13 **Radium Mtn., P** 58.86 295 P P 19 53 13.8 -0.7
PV20 **West Nyswonger** 58.86 295 P P 19 53 14.1 -0.4
PV14 **Lion Creek, Pa** 58.88 295 P P 19 53 14.8 +0.1
PV17 **East Wray Mesa** 58.89 295 P P 19 53 14.9 +0.2
PV19 **Morning Glory** 58.89 295 P P 19 53 13.9 -0.8
PV09 **Paradox Valley** 58.89 296 P P 19 53 14.9 0.0
HWUT **Hardware Ranch** 58.91 300 P P 19 53 14.3 -0.4
HWUT IAmb IAmb 19 53 15.5
comp=Z,28nm,0.9s
ANMO **Albuquerque** 58.92 291 i P P 19 53 15.6 +0.7
ANMO pmax pmax
comp=Z,13nm,1.5s
ANMO **Albuquerque** 58.92 291 P P 19 53 15.6 +0.7
baz=58
ANMO **Albuquerque** 58.92 291 P P 19 53 14.9 0.0
NEW **Newport** 58.98 309 P P 19 53 14.5 -0.5
NEW pmax pmax
comp=Z,22nm,0.9s
NEW **Newport** 58.98 309 P P 19 53 14.8 -0.2
baz=60,SNR=11
NEW **Newport** 58.98 309 P P 19 53 14.5 -0.5
NEW IAmb IAmb 19 53 15.7
comp=Z,22nm,0.9s
TCUT **Toone Canyon** 59.05 299 P P 19 53 14.9 -0.9
PV05 **Paradox Valley** 59.09 295 P P 19 53 14.7 -1.4
MVCO **Mesa Verde** 59.13 294 P P 19 53 17.5 +1.1
baz=58,SNR=9.0
MVCO **Mesa Verde** 59.13 294 P P 19 53 17.0 +0.5
CCIG **Comitan** 59.21 264 P P 19 53 16.8 -0.3
JLU **Jordanelle** 59.34 299 P P 19 53 17.3 -0.5
P17A **Butcher Ranch,** 59.46 297 P P 19 53 18.1 -0.5
SRU **San Rafael Swe** 59.51 297 P P 19 53 17.7 -1.2
SRU pmax pmax
comp=Z,9.0nm,0.9s
SRU **San Rafael Swe** 59.51 297 P P 19 53 17.7 -1.2
SAML **Samuel** 59.53 220 P P 19 53 17.7 -1.3
SAML pmax pmax
comp=Z,17nm,1.2s
SAML **Samuel** 59.53 220 P P 19 53 17.7 -1.3
SAML IAmb IAmb 19 53 23.8
comp=Z,17nm,1.2s
HVU **Hansel Valley** 59.60 300 P P 19 53 18.5 -1.0
HVU pmax pmax
comp=Z,16nm,0.9s
HVU **Hansel Valley** 59.60 300 P P 19 53 18.5 -1.0
SPUT **South Promonto** 59.63 300 P P 19 53 18.9 -0.8
NRIK **Noril'sk** 59.66 22 P P 19 53 20.4 +1.1
comp=Z,18nm,1.0s,baz=308,slow=1.8,SNR=8.1
TMUT **Trail Mountain** 59.86 297 P P 19 53 21.4 -0.2
C09A **Chrisman Ranch** 59.88 309 P P 19 53 20.2 -0.9
MNTX **Cornudas Mount** 59.91 287 P P 19 53 21.3 -0.3
baz=56,SNR=8.1
MNTX **Cornudas Mount** 59.91 287 P P 19 53 21.0 -0.6
BDFB **Brasilia** 59.99 201 P P 19 53 22.5 +0.3
comp=Z,7.1nm,0.7s,baz=20,slow=6.2,SNR=9.6
BDFB **Brasilia** 59.99 201 P P 19 53 21.9 -0.3
BDFB pmax pmax
comp=Z,12nm,0.9s
BDFB **Brasilia** 59.99 201 P P 19 53 21.9 -0.3
BDFB IAmb IAmb 19 53 29.4
comp=Z,12nm,0.9s
TXAR **Lajitas Array** 59.99 284 P P 19 53 22.1 -0.1
comp=Z,10.0nm,0.8s,baz=67,slow=6.9,SNR=44
TXAR PP PP 19 55 31.4 -3.0
comp=Z,1.6nm,0.9s,baz=77,slow=12,SNR=4.2
TX31 **Lajitas Ar. Si** 59.99 284 P P 19 53 21.9 -0.4
TX32 **Lajitas Array** 59.99 284 P P 19 53 21.7 -0.6
Q16A **Castle Valley** 60.04 297 P P 19 53 22.0 -0.5
NLU **North Lily Min** 60.09 298 P P 19 53 22.7 -0.3
F10A **Beach Ranch, E** 60.20 307 P P 19 53 22.7 -0.8
BGU **Big Grassy Mou** 60.20 300 P P 19 53 23.1 -0.6
B08A **Colville Reser** 60.21 310 P P 19 53 22.5 -0.9
DLBC **Dease Lake** 60.35 324 P P 19 53 24.8 +0.6
DLBC IAmb IAmb 19 53 26.3
comp=Z,38nm,1.6s
DUG **Dugway, Tooele** 60.45 299 P P 19 53 25.3 0.0
DUG pmax pmax
comp=Z,25nm,1.0s
DUG **Dugway, Tooele** 60.45 299 P P 19 53 25.4 0.0
baz=58,SNR=14
DUG **Dugway, Tooele** 60.45 299 P P 19 53 25.3 0.0
DUG IAmb IAmb 19 53 26.5
comp=Z,25nm,1.0s
MFID **Camas Ranch** 60.68 303 P P 19 53 26.6 -0.1
BMO **Blue Mountains** 60.83 306 P P 19 53 26.7 -1.1
BMO pmax pmax
comp=Z,7.0nm,1.0s
BMO **Blue Mountains** 60.83 306 P P 19 53 26.7 -1.1
DAWY **Dawson** 60.85 332 P P 19 53 27.5 -0.1
DAWY IAmb IAmb 19 53 29.1
comp=Z,29nm,1.1s
MSU **Marysvale** 60.92 297 P P 19 53 28.7 +0.1
MSU **Marysvale** 60.92 297 P P 19 53 28.7 +0.1
EGAK **Eagle** 61.03 333 P P 19 53 28.2 -0.4
EGAK IAmb IAmb 19 53 29.7
comp=Z,22nm,1.4s
TCRU **Three Creeks R** 61.05 297 P P 19 53 29.7 +0.2
TOLK **Toolik Lake Re** 61.08 339 P P 19 53 29.2 +0.2
baz=47,SNR=20
TOLK **Toolik Lake Re** 61.08 339 P P 19 53 29.0 0.0
TOLK IAmb IAmb 19 53 30.3
comp=Z,24nm,1.0s
121A **Cookes Peak, D** 61.16 289 P P 19 53 31.3 +1.1
baz=56,SNR=10
121A **Cookes Peak, D** 61.16 289 P P 19 53 31.1 +0.9
WHY **Whitehorse** 61.16 327 P P 19 53 30.3 +0.5
MTPU **Mount Pierson** 61.17 297 P P 19 53 30.4 -0.2
FYU **Fort Yukon** 61.21 336 P P 19 53 30.6 +0.8
LTY **Liberty** 61.55 309 P P 19 53 31.2 -1.4
X18A **Snowflake** 61.56 292 P P 19 53 32.4 -0.6
X18A IAmb IAmb 19 53 34.5
comp=Z,25nm,1.4s
PKCU **Pink Cliffs** 61.58 296 P P 19 53 32.8 -0.5
ELK **Elko** 61.72 301 P P 19 53 34.1 0.0
ELK pmax pmax
comp=Z,16nm,1.0s
ELK **Elko** 61.72 301 P P 19 53 34.1 0.0
ELK IAmb IAmb 19 53 35.6
comp=Z,16nm,0.9s
PRP **Porcupine Dome** 61.98 335 P P 19 53 35.7 +0.4
PRP IAmb IAmb 19 53 37.1
comp=Z,20nm,0.9s
WUAZ **Wupatki** 62.00 294 P P 19 53 36.9 +1.0
baz=56,SNR=9.9
WUAZ **Wupatki** 62.00 294 P P 19 53 36.5 +0.6
PSUT **Pine Spring** 62.02 298 P P 19 53 36.0 0.0
SZCU **Shurtz Canyon** 62.02 297 P P 19 53 35.9 -0.2
SKAG **Skagway** 62.04 326 P P 19 53 35.7 +0.2
SKAG IAmb IAmb 19 53 37.4
comp=Z,28nm,1.7s
HYT **Haines Junctio** 62.10 328 P P 19 53 36.3 +0.1
HYT IAmb IAmb 19 53 38.1
comp=Z,16nm,1.1s
U15A **North Rim** 62.12 295 P P 19 53 36.5 -0.3
U15A IAmb IAmb 19 53 38.1
comp=Z,29nm,1.8s
KNB **Kanab** 62.16 296 P P 19 53 36.0 -1.0
KNB pmax pmax
comp=Z,20nm,1.3s
KNB **Kanab** 62.16 296 P P 19 53 36.0 -1.0
COLD **Coldfoot** 62.22 338 P P 19 53 37.0 +0.4
COLD IAmb IAmb 19 53 38.3
comp=Z,22nm,1.0s
CCUT **Cedar City** 62.23 297 P P 19 53 37.6 +0.1
J08A **Circle Bar Ran** 62.34 305 P P 19 53 38.2 +0.2
SCRK **Sand Creek** 62.49 333 P P 19 53 39.0 +0.3
SCRK IAmb IAmb 19 53 39.7
comp=Z,13nm,0.9s
X16A **Lo Mia Camp, P** 62.65 293 P P 19 53 41.1 +0.8
X16A IAmb IAmb 19 53 43.1
comp=Z,36nm,1.7s
DOT **Dot Lake** 62.73 333 P P 19 53 40.3 +0.1
DOT IAmb IAmb 19 53 41.7
comp=Z,18nm,1.1s
BRVK **Borovoye** 62.75 42 P P 19 53 41.4 +1.0
BRVK P P 19 53 41.4 +1.0
BRVK **Borovoye** 62.75 42 i P P 19 53 41.4 +1.0
BRVK pmax pmax
comp=Z,17nm,1.1s
BRVK **Borovoye** 62.75 42 P P 19 53 40.5 +0.1
BRVK IAmb IAmb 19 53 46.5
comp=Z,17nm,0.9s
HPIG **62.80 283** P P 19 53 40.9 -0.6
HPIG IAmb IAmb 19 53 42.7
comp=Z,23nm,1.3s
BVAR **Borovoye Array** 62.82 42 P P 19 53 41.5 +0.6
comp=Z,13nm,0.9s,baz=305,slow=5.2,SNR=22
POKR **Poker Flat Res** 62.85 335 P P 19 53 41.9 +0.9
baz=48,SNR=5.2
319A **Douglas** 62.85 289 P P 19 53 41.5 -0.1
IL31 **62.91 335** P P 19 53 41.0 -0.3
IL31 IAmb IAmb 19 53 42.5
comp=Z,49nm,1.9s
ILAR **Eielson Array** 62.91 335 P P 19 53 41.2 -0.2
comp=Z,4.7nm,0.8s,baz=44,slow=6.2,SNR=46
ILAR PKPPKP P'P'df 20 22 40.9 -10
comp=Z,0.6nm,0.9s,baz=277,slow=1.5,SNR=5.3
RIDG **Independent Ri** 62.94 333 P P 19 53 41.8 +0.2
RIDG IAmb IAmb 19 53 43.3
comp=Z,17nm,1.0s
WVOR **Wild Horse Val** 62.94 304 P P 19 53 40.8 -1.3
WVOR pmax pmax
comp=Z,20nm,1.1s
WVOR **Wild Horse Val** 62.94 304 P P 19 53 40.8 -1.3
WVOR IAmb IAmb 19 53 44.0
comp=Z,20nm,1.1s
ZAIG **Zacatecas** 62.98 277 P P 19 53 40.2 -2.6
ZAIG IAmb IAmb 19 53 45.4
comp=Z,25nm,1.4s
MENT **Mentasta** 63.08 332 P P 19 53 42.5 0.0
MENT IAmb IAmb 19 53 44.0
comp=Z,14nm,0.8s
COLA **College** 63.15 335 i P P 19 53 43.0 +0.1
COLA pmax pmax
comp=Z,10.0nm,1.1s
HDA **Harding Lake** 63.18 334 P P 19 53 43.3 +0.2
baz=48,SNR=19
HDA **Harding Lake** 63.18 334 P P 19 53 43.1 -0.1
TLG **Tlapa** 63.18 270 P P 19 53 43.3 -0.7
MDM **Murphy Dome** 63.21 335 P P 19 53 42.8 -0.5
MDM IAmb IAmb 19 53 50.4
comp=Z,14nm,0.9s
R11A **Troy Canyon, C** 63.25 299 P P 19 53 44.2 -0.1
baz=56,SNR=9.1
R11A **Troy Canyon, C** 63.25 299 P P 19 53 43.1 -1.1
R11A IAmb IAmb 19 53 45.2
comp=Z,18nm,1.6s
CCB **Clear Creek Bu** 63.29 335 P P 19 53 43.5 -0.3
CCB IAmb IAmb 19 53 44.9
comp=Z,24nm,1.3s
NLWA **Neilton Lookou** 63.30 311 P P 19 53 44.4 +0.1
NLWA IAmb IAmb 19 53 47.1
comp=Z,18nm,0.9s
TUC **Tucson** 63.38 290 P P 19 53 45.1 0.0
TUC pmax pmax
comp=Z,39nm,1.6s
TUC **Tucson** 63.38 290 P P 19 53 46.2 +1.1
baz=55
TUC **Tucson** 63.38 290 P P 19 53 45.1 0.0
TUC IAmb IAmb 19 53 47.4
comp=Z,39nm,1.6s
WRH **Wood River Hil** 63.50 335 P P 19 53 45.1 -0.1
WRH IAmb IAmb 19 53 46.3
comp=Z,23nm,0.9s
BARN **Barnard Glacie** 63.55 330 P P 19 53 45.8 0.0
BARN IAmb IAmb 19 53 47.5
comp=Z,36nm,1.5s
RAYN **Ar Rayn** 63.60 81 P P 19 53 46.1 -0.5
RAYN pmax pmax
comp=Z,7.0nm,1.1s
RAYN **Ar Rayn** 63.60 81 P P 19 53 46.1 -0.5
NEA **Nenana** 63.73 335 P P 19 53 46.0 -0.8
BALM **Baldy** 63.82 330 P P 19 53 47.7 +0.1
BALM IAmb IAmb 19 53 48.5
comp=Z,11nm,1.0s
W13A **Hualapai Mount** 63.94 295 P P 19 53 48.6 -0.3
W13A IAmb IAmb 19 53 51.0
comp=Z,36nm,1.6s
SHPR **Sheep Range** 64.00 297 P P 19 53 49.4 +0.1
SHPR IAmb IAmb 19 53 50.8
comp=Z,20nm,1.4s
YAH **Yahtse** 64.03 329 P P 19 53 49.0 -0.1
J05D **Fort Rock, OR** 64.06 306 P P 19 53 50.5 +1.0
baz=56,SNR=6.7
K05A **Summer Lake** 64.17 305 P P 19 53 50.1 -0.1
K05A IAmb IAmb 19 53 52.0
comp=Z,32nm,1.2s
GEYT **Alibeck** 64.17 61 P P 19 53 50.5 +0.3
comp=Z,8.1nm,1.0s,baz=270,slow=4.4,SNR=9.4
GYA0B **ALIBECK ARRAY** 64.17 61 P P 19 53 50.2 0.0
GYA0B IAmb IAmb 19 53 56.3
comp=Z,12nm,1.1s
DHY **Denali Highway** 64.23 334 P P 19 53 50.2 -0.1
DHY IAmb IAmb 19 53 51.6
comp=Z,12nm,0.9s
MOD **Modoc Plateau** 64.27 304 P P 19 53 50.9 0.0
MOD IAmb IAmb 19 53 52.0
comp=Z,15nm,1.0s
MCK **McKinley** 64.28 335 P P 19 53 49.7 -0.7
MCK pmax pmax
comp=Z,20nm,1.0s
MCK **McKinley** 64.28 335 P P 19 53 49.7 -0.7
MCK IAmb IAmb 19 53 51.5
comp=Z,20nm,1.0s
WAX **Waxell Ridge** 64.39 330 P P 19 53 51.0 -0.2
WAX IAmb IAmb 19 53 57.4
comp=Z,23nm,1.2s
TPNV **Topopah Spring** 64.47 298 P P 19 53 51.6 -0.7
TPNV pmax pmax
comp=Z,10.0nm,1.2s
TPNV **Topopah Spring** 64.47 298 P P 19 53 51.7 -0.7
baz=55
TPNV **Topopah Spring** 64.47 298 P P 19 53 51.6 -0.7
KVN **Kaiserville** 64.49 300 P P 19 53 51.8 -0.6
KVN pmax pmax
comp=Z,26nm,1.0s
KVN **Kaiserville** 64.49 300 P P 19 53 51.8 -0.6
KVN IAmb IAmb 19 53 53.2
comp=Z,26nm,1.0s
J04D **Umpqua Nationa** 64.61 306 P P 19 53 53.4 +0.2
baz=55
BPAW **Bear Paw Mtn.** 64.66 336 P P 19 53 52.5 -0.4
BPAW IAmb IAmb 19 53 53.2
comp=Z,12nm,1.0s
RDOG **Red Dog Mine** 64.81 343 P P 19 53 53.9 +0.1
RDOG IAmb IAmb 19 54 37.4
comp=Z,12nm,0.7s
NV11 **Mina Array Sit** 64.88 300 P P 19 53 54.5 -0.4
TRF **Thorofare Moun** 64.91 335 P P 19 53 54.5 -0.2
TRF IAmb IAmb 19 53 56.7
comp=Z,22nm,1.1s
PAHR **Pah Rah Range** 64.94 302 P P 19 53 55.1 -0.2
PAHR IAmb IAmb 19 53 56.7
comp=Z,19nm,1.2s
NVAR **Mina Array Bea** 64.97 300 P P 19 53 54.6 -1.0
comp=Z,2.4nm,0.9s,baz=52,slow=4.7,SNR=19
NVAR PP PP 19 56 14.9 -3.2
comp=Z,0.7nm,0.9s,baz=49,slow=7.3,SNR=3.4
NVAR PKP2ab 20 22 48.5
comp=Z,0.4nm,0.7s,baz=197,slow=1.5,SNR=3.6
214A **Organ Pipe Nat** 64.99 291 P P 19 53 56.0 +0.4
baz=54
214A **Organ Pipe Nat** 64.99 291 P P 19 53 54.9 -0.7
214A IAmb IAmb 19 53 57.8
comp=Z,41nm,1.6s
RYN **Ryan** 65.00 300 P P 19 53 55.2 -0.5
KTH **Kantishna Hill** 65.03 335 P P 19 53 54.9 -0.5
KTH IAmb IAmb 19 53 56.2
comp=Z,29nm,1.1s
SCM **Sheep Creek Mo** 65.07 333 P P 19 53 55.7 0.0
SCM pmax pmax
comp=Z,41nm,1.6s
SCM **Sheep Creek Mo** 65.07 333 P P 19 53 55.6 0.0
SCM IAmb IAmb 19 54 13.3
comp=Z,41nm,1.6s
SHOC **Shoshone, Teco** 65.09 297 P P 19 53 57.0 +0.9
baz=55,SNR=5.2
RAGM **Ragged Mountai** 65.11 330 P P 19 53 55.8 -0.1
RAGM IAmb IAmb 19 53 57.3
comp=Z,23nm,1.0s
Y12C **Blythe** 65.14 294 P P 19 53 57.8 +1.3
baz=55
Y12C **Blythe** 65.14 294 P P 19 53 56.7 +0.2
Y12C IAmb IAmb 19 53 58.6
comp=Z,33nm,1.5s
FURC **Furnace Creek,** 65.15 297 P P 19 53 57.3 +0.8
baz=55,SNR=6.6
GRAC **Grapevine Rang** 65.18 298 P P 19 53 57.2 +0.5
baz=55
113A **Mohawk Valley,** 65.18 292 P P 19 53 57.0 +0.2
113A IAmb IAmb 19 53 58.9
comp=Z,26nm,1.6s
M04C **Macdoel** 65.28 305 P P 19 53 57.8 +0.3
baz=55,SNR=7.5
GMRC **Granite Mounta** 65.31 295 P P 19 53 58.2 +0.4
baz=55
L04D **Klamath Falls** 65.31 305 P P 19 53 57.2 -0.5
baz=55
IRM **Iron Mountain** 65.33 294 P P 19 53 58.6 +0.8
baz=55,SNR=7.9
VCNR **Virginia City** 65.34 301 P P 19 53 56.9 -1.1
SML **Sawmill** 65.43 333 P P 19 53 58.2 +0.3
SML IAmb IAmb 19 54 00.4
comp=Z,16nm,0.8s
TIXI **Tiksi** 65.51 7 i P P 19 53 59.5 +1.3
TIXI pmax pmax
comp=Z,11nm,1.0s
TIXI **Tiksi** 65.51 7 P P 19 53 58.9 +0.6
TIXI IAmb IAmb 19 54 08.6
comp=Z,18nm,1.1s
GHO **Glory Hole Cre** 65.65 333 P P 19 53 59.8 +0.3
GHO IAmb IAmb 19 54 02.1
comp=Z,20nm,1.0s
TIN **Tinemaha, Big** 65.71 299 P P 19 54 01.2 +0.9
baz=55
HEC **Hector,Ludlow** 65.74 296 P P 19 54 01.4 +0.9
baz=54,SNR=7.7
GLA **Glamis** 65.75 293 P P 19 54 00.8 +0.3
GLA pmax pmax
comp=Z,38nm,1.4s
GLA **Glamis** 65.75 293 P P 19 54 01.6 +1.1
baz=54
GLA **Glamis** 65.75 293 P P 19 54 00.8 +0.3
J01E **Myrtle Point** 65.75 307 P P 19 53 58.7 -1.6
baz=54
KNK **Knik Glacier** 65.75 333 P P 19 54 00.7 +0.7
GSC **Goldstone, Bar** 65.78 296 P P 19 54 01.4 +0.7
GSC pmax pmax
comp=Z,44nm,1.5s
GSC **Goldstone, Bar** 65.78 296 P P 19 54 01.9 +1.2
baz=54,SNR=5.8
GSC **Goldstone, Bar** 65.78 296 P P 19 54 01.4 +0.7
MPMC **Manual Prospec** 65.80 297 P P 19 54 01.4 +0.4
baz=54,SNR=24
BC3 **Big Chuckawall** 65.83 294 P P 19 54 01.7 +0.7
baz=54,SNR=7.8
PMR **Palmer** 65.85 333 P P 19 54 00.9 +0.3
PMR pmax pmax
comp=Z,31nm,0.9s
PMR **Palmer** 65.85 333 P P 19 54 00.9 +0.3
K02D **Willamette Mer** 65.86 306 P P 19 54 00.6 -0.5
baz=54
OMMB **Old Mammoth Mi** 65.89 300 P P 19 54 01.7 0.0
OMMB IAmb IAmb 19 54 03.4
comp=Z,16nm,1.3s
CWC **Cottonwood Cre** 65.97 298 P P 19 54 02.5 +0.5
baz=54
BELC **Belle Mtn. Jos** 65.99 295 P P 19 54 03.2 +1.0
baz=54,SNR=11
O03E **Paynes Creek** 66.12 303 P P 19 54 02.6 -0.2
baz=54
LRMC **Laurel Mtn Rad** 66.26 297 P P 19 54 04.8 +0.9
baz=54
N02D **Trinity Center** 66.28 304 P P 19 54 02.6 -1.2
baz=54
ORV **Oroville** 66.36 303 P P 19 54 03.8 -0.5
ORV pmax pmax
comp=Z,14nm,1.5s
ORV **Oroville** 66.36 303 P P 19 54 03.8 -0.5
AFDM **Forest Hills D** 66.38 302 P P 19 54 04.1 -0.4
AFDM IAmb IAmb 19 54 05.3
comp=Z,16nm,1.3s
RC01 **Rabbit Creek A** 66.42 333 P P 19 54 04.7 +0.4
RC01 IAmb IAmb 19 54 05.7
comp=Z,19nm,1.0s
SWSC **Sam W. Stewart** 66.47 294 P P 19 54 06.0 +0.9
baz=54
XPFO **Pion Flat** 66.53 295 P P 19 54 05.0 -0.6
XPFO IAmb IAmb 19 54 07.7
comp=Z,34nm,1.4s
PFO **Pinyon Flats O** 66.53 295 P P 19 54 06.0 +0.3
PFO pmax pmax
comp=Z,31nm,1.4s
PFO **Pinyon Flats O** 66.53 295 P P 19 54 06.4 +0.7
baz=54,SNR=10
PFO **Pinyon Flats O** 66.53 295 P P 19 54 06.0 +0.3
PFO IAmb IAmb 19 54 07.7
comp=Z,31nm,1.4s
TPFO **Pinon Flats** 66.53 295 P P 19 54 06.7 +1.0
baz=54,SNR=11
CMB **Columbia Colle** 66.54 301 P P 19 54 05.4 -0.1
CMB pmax pmax
comp=Z,13nm,1.1s
CMB **Columbia Colle** 66.54 301 P P 19 54 05.4 -0.1
CMB IAmb IAmb 19 54 06.8
comp=Z,13nm,1.1s
ISA **Isabella, Lake** 66.68 298 P P 19 54 05.8 -0.7
ISA **Isabella, Lake** 66.68 298 P P 19 54 07.5 +1.0
baz=54
ISA **Isabella, Lake** 66.68 298 P P 19 54 05.8 -0.7
ISA IAmb IAmb 19 54 08.6
comp=Z,22nm,1.4s
EDW2 **Edwards Air Fo** 66.82 297 P P 19 54 07.8 +0.4
baz=54
IKP **In-Ko-Pah, Jac** 66.86 294 P P 19 54 08.8 +1.1
baz=54,SNR=7.1
MONP2 **Monument Peak** 66.93 294 P P 19 54 09.1 +0.8
baz=54,SNR=9.3
KHMM **Horse Mountain** 66.97 305 P P 19 54 07.8 -0.5
KHMM IAmb IAmb 19 54 09.6
comp=Z,22nm,1.0s
BFSC **Mount Baldy Ra** 66.97 296 P P 19 54 08.7 +0.3
baz=54
BAR **Barrett** 67.22 294 P P 19 54 09.9 0.0
LPAZ **La Paz** 68.26 220 P P 19 54 17.6 +0.4
comp=Z,4.3nm,0.8s,baz=24,slow=7.3,SNR=13
LPAZ PKP2ab 20 22 37.7
comp=Z,0.8nm,0.7s,baz=164,slow=7.9,SNR=3.8
LPAZ **La Paz** 68.26 220 P P 19 54 16.4 -0.7
LPAZ pmax pmax
comp=Z,25nm,1.3s
LPAZ **La Paz** 68.26 220 P P 19 54 16.4 -0.7
LPAZ IAmb IAmb 19 54 24.0
comp=Z,25nm,1.2s
KURK **Kurchatov** 68.27 41 P P 19 54 16.6 +0.4
KURK **Kurchatov** 68.27 41 d i P P 19 54 16.2 0.0
KURK pmax pmax
comp=Z,9.0nm,1.0s
KURK **Kurchatov** 68.27 41 P P 19 54 17.0 +0.8
KURK IAmb IAmb 19 54 21.8
comp=Z,15nm,0.8s
KURBB **Kurchatov Arra** 68.29 41 P P 19 54 16.6 +0.3
comp=Z,11nm,0.9s,baz=313,slow=6.3,SNR=31
KURBB PP PP 19 56 41.6 -4.8
comp=Z,1.6nm,0.9s,baz=310,slow=8.6,SNR=2.4
SVW2 **Sparrevohn** 68.32 335 P P 19 54 16.2 -0.1

MBAR	**Mbarara**	**68.58**	**112**	⇓*i*P		**P**		**19 54 21.4**	**+2.6**
MBAR					pmax	pmax			
	comp=Z,16nm,1.6s								
ZALV	**Zalesovo Beam**	**68.96**	**35**	P		**P**		**19 54 20.7**	**+0.3**
	comp=Z,4.6nm,0.9s,baz=306,slow=5.3,SNR=12								
ZALV				PP		**PP**		**19 56 45.4**	**-6.6**
	comp=Z,1.2nm,0.8s,baz=335,slow=6.4,SNR=2.7								
LODK	**Lodwar**	**69.02**	**105**	P		**P**		**19 54 23.6**	**+2.2**
	SNR=9.2								
BILL	**Bilibino**	**69.58**	**354**	⇑*e*P		**P**		**19 54 23.3**	**-0.7**
BILL				*e*				19 54 46.7	
BILL				*e*				19 57 02.6	
BILL				*e*PPP		PPP		19 58 36.0	
BILL				*e*S		SKiKP		20 03 53.1	-19
BILL					pmax	pmax			
	comp=Z,10.0nm,2.2s								
BILL					MLR	MLR			
	comp=Z,313nm,20.0s								
CHGR	**Chuyangaron**	**70.72**	**55**	P		**P**		**19 54 31.4**	**-0.3**
BTK	**Batken**	**70.85**	**53**	P		**P**		**19 54 32.4**	**0.0**
BTK					pmax	pmax			
	comp=Z,20nm,1.1s								
BTK	**Batken**	**70.85**	**53**	P		**P**		**19 54 32.4**	**0.0**
BTK					IAmb	IAmb		19 54 48.4	
	comp=Z,20nm,1.1s								
EKS2	**Erkin-Say**	**70.91**	**50**	P		**P**		**19 54 34.2**	**+1.4**
	SNR=19								
AML	**Almayashu**	**71.21**	**50**	P		**P**		**19 54 35.9**	**+0.9**
	SNR=13								
GAR	**Garm**	**71.21**	**54**	P		**P**		**19 54 35.3**	**+0.6**
CHMS	**Chumysh**	**71.24**	**49**	P		**P**		**19 54 35.8**	**+1.1**
	SNR=11								
SOHO	**SOHO**	**71.25**	**74**	P		**P**		**19 54 34.8**	**-0.1**
	SNR=8.3								
SOHO				P		**P**		**19 54 34.8**	**-0.1**
	SNR=8.3								
FRU1	**Bishkek**	**71.30**	**49**	P		**P**		**19 54 34.9**	**-0.2**
FRU1					pmax	pmax			
	comp=Z,21nm,1.1s								
FRU1	**Bishkek**	**71.30**	**49**	P		**P**		**19 54 34.9**	**-0.2**
FRU1					IAmb	IAmb		19 54 41.9	
	comp=Z,21nm,1.1s								
ARSB	**Arslanbob**	**71.31**	**51**	P		**P**		**19 54 35.1**	**-0.2**
ARSB					pmax	pmax			
	comp=Z,21nm,1.0s								
ARSB	**Arslanbob**	**71.31**	**51**	P		**P**		**19 54 35.0**	**-0.2**
ARSB					IAmb	IAmb		19 54 41.7	
	comp=Z,21nm,1.0s								
AAK	**Ala-Archa**	**71.33**	**49**	P		**P**		**19 54 36.4**	**+1.0**
	comp=Z,2.8nm,0.8s,baz=145,slow=0.5,SNR=9.2								
AAK	**Ala-Archa**	**71.33**	**49**	⇑*i*P		**P**		**19 54 37.0**	**+1.6**
AAK					pmax	pmax			
	comp=Z,9.0nm,1.2s								
AAK	**Ala-Archa**	**71.33**	**49**	P		**P**		**19 54 35.1**	**-0.3**
UCH	**Uchtor**	**71.61**	**49**	P		**P**		**19 54 39.3**	**+1.8**
	SNR=17								
GO01	**Chusmiza**	**71.67**	**220**	P		**P**		**19 54 37.7**	**-0.2**
GO01					IAmb	IAmb		19 54 44.0	
	comp=Z,44nm,1.6s								
ARQ	**Araqi**	**71.74**	**75**	P		**P**		**19 54 38.6**	**+0.7**
	SNR=6.0								
TKM2	**Tokmak 2**	**71.77**	**48**	P		**P**		**19 54 39.5**	**+1.4**
	SNR=9.7								
PB11	**IPOC Station P**	**71.97**	**220**	P		**P**		**19 54 38.6**	**-0.7**
PB11					IAmb	IAmb		19 54 44.9	
	comp=Z,34nm,1.1s								
MAKZ	**Makanchi**	**72.54**	**42**	P		**P**		**19 54 42.4**	**0.0**
MAKZ					pmax	pmax			
	comp=Z,9.0nm,1.0s								
MAKZ	**Makanchi**	**72.54**	**42**	P		**P**		**19 54 42.4**	**0.0**
MK31	**Makanchi Array**	**72.70**	**42**	P		**P**		**19 54 43.3**	**-0.1**
MK31					pmax	pmax			
	comp=Z,8.0nm,0.9s								
MK31	**Makanchi Array**	**72.70**	**42**	P		**P**		**19 54 43.3**	**-0.1**
MKAR	**Makanchi Array**	**72.70**	**42**	P		**P**		**19 54 43.8**	**+0.4**
	comp=Z,13nm,0.9s,baz=317,slow=5.4,SNR=32								
CPUP	**Villa Florida**	**72.85**	**206**	P		**P**		**19 54 45.5**	**+1.2**
	comp=Z,2.5nm,1.0s,baz=60,slow=6.1,SNR=3.5								
KDJ	**Kajisay**	**73.17**	**48**	P		**P**		**19 54 46.6**	**+0.2**
KDJ	**Kajisay**	**73.17**	**48**	P		**P**		**19 54 46.6**	**+0.2**
KBL	**Kabul**	**73.25**	**59**	P		**P**		**19 54 46.7**	**-0.4**
KBL					pmax	pmax			
	comp=Z,10.0nm,0.9s								
KBL	**Kabul**	**73.25**	**59**	P		**P**		**19 54 46.7**	**-0.4**
KMBO	**Kilima Mbogo**	**73.52**	**107**	P		**P**		**19 54 50.8**	**+1.9**
	comp=Z,1.9nm,0.6s,baz=327,slow=7.3,SNR=3.4								
KSH	**Kashi**	**74.22**	**51**	P		**P**		**19 54 54.8**	**+2.2**
KSH				sP		pwP		19 55 00.0	+2.9
KSH				PP		**PP**		**19 57 38.3**	**+0.5**
KSH				S		**S**		**20 04 27.5**	**+1.0**
KSH					pmax	pmax			
	comp=Z,33nm,1.0s								
KSH					pmax	pmax			
	comp=Z,270nm,4.8s								
KSH					LR	LR			
	comp=Z,190nm,5.8s								
KSH					LR	LR			
	comp=Z,220nm,7.2s								
KSH					LR	LR			
	comp=Z,330nm,7.5s								
MHTO	**MHTO**	**74.25**	**76**	P		**P**		**19 54 53.5**	**+0.7**
	SNR=7.9								
MHTO				P		**P**		**19 54 53.5**	**+0.7**
	SNR=7.9								
YAK	**Yakutsk**	**74.85**	**10**	*e*P		**P**		**19 54 56.1**	**+0.5**
YAK					pmax	pmax			
	comp=Z,16nm,1.1s								
YAK					pmax	pmax			
	comp=N,15nm,1.4s								
YAK					pmax	pmax			
	comp=E,4.0nm,1.3s								
BOD	**Bodaibo**	**75.83**	**19**	*e*P		**P**		**19 55 02.3**	**+1.0**
BOD					pmax	pmax			
	comp=Z,32nm,1.5s								
NIL	**Nilore**	**76.48**	**57**	P		**P**		**19 55 05.3**	**-0.2**
NIL					pmax	pmax			
	comp=Z,19nm,0.9s								
NIL	**Nilore**	**76.48**	**57**	P		**P**		**19 55 05.3**	**-0.2**
NIL					IAmb	IAmb		19 55 11.1	
	comp=Z,19nm,0.9s								
MOY	**Mondy**	**77.12**	**29**	*e*P		**P**		**19 55 10.7**	**+1.8**
MOY					pmax	pmax			
	comp=Z,38nm,2.1s								
WMQ	**Urumqi**	**77.50**	**41**	*e*P		**P**		**19 55 13.0**	**+1.9**
WMQ				pP		pwP		19 55 17.5	+1.9
WMQ					pmax	pmax			
	comp=Z,10.0nm,0.9s								
WMQ					pmax	pmax			
	comp=Z,210nm,3.9s								
WMQ					LR	LR			
	comp=Z,190nm,18.1s								
WMQ					LR	LR			
	comp=Z,210nm,15.5s								
WMQ					LR	LR			
	comp=Z,190nm,22.5s								
AC02	**Maricunga**	**77.84**	**216**	P		**P**		**19 55 12.9**	**-0.7**
AC02					IAmb	IAmb		19 55 21.8	
	comp=Z,18nm,1.1s								
TLY	**Talaya**	**78.05**	**28**	*e*P		**P**		**19 55 15.7**	**+1.7**
TLY				*e*S		**S**		**20 05 08.1**	**+0.1**
TLY					pmax	pmax			
	comp=Z,38nm,1.6s								
TLY					MLR	MLR			
	comp=Z,290nm,13.0s								
ZAK	**Zakamensk**	**79.00**	**29**	*e*P		**P**		**19 55 20.6**	**+1.2**
ZAK					pmax	pmax			
	comp=Z,6.0nm,1.6s								
SONM	**Songino Array**	**82.25**	**28**	P		**P**		**19 55 37.6**	**+0.7**
	comp=Z,5.6nm,1.0s,baz=304,slow=3.6,SNR=13								
SONM					PP	**PP**		**19 58 46.2**	**+1.7**
	comp=Z,2.0nm,1.2s,baz=285,slow=5.5,SNR=3.2								
ZEA	**Zeya**	**82.44**	**14**	*e*P		**P**		**19 55 35.2**	**-2.4**
ZEA					pmax	pmax			
	comp=Z,37nm,1.4s								
ULN	**Ulaanbaatar**	**82.46**	**28**	⇑*i*P		**P**		**19 55 40.1**	**+2.1**
ULN					pmax	pmax			
	comp=Z,18nm,1.3s								
PETK	**Petropavlovsk-**	**85.00**	**356**	P		**P**		**19 55 50.3**	**-0.4**
	comp=Z,3.5nm,1.1s,baz=200,slow=11,SNR=2.7								
BO02	**Sierra Bellavi**	**85.45**	**213**	P		**P**		**19 55 53.5**	**+0.5**
PYUN	**Piuthan**	**86.34**	**55**	*e*P		**P**		**19 55 57.2**	**-0.9**
	comp=Z,60nm,1.0s								
BOSA	**Boshof**	**86.46**	**134**	LR		LR		20 31 01.0	
	comp=Z,472nm,21.9s,baz=332,slow=33								
DANN	**Dangsing**	**86.62**	**54**	*e*P		**P**		**19 56 00.1**	**+0.5**
	comp=Z,106nm,0.9s								
GTA	**Gaotai**	**86.63**	**37**	*e*P		**P**		**19 56 01.0**	**+1.7**
GTA				pP		pwP		19 56 06.0	+2.2
GTA				sP		PcP		19 56 08.0	+6.4
GTA				S		**S**		**20 06 35.5**	**-1.1**
GTA				sS		ScS		20 06 42.5	-2.4
GTA					pmax	pmax			
	comp=Z,6.0nm,1.5s								
GTA					pmax	pmax			
	comp=Z,89nm,8.1s								
GTA					LR	LR			
	comp=Z,140nm,20.6s								
GTA					LR	LR			
	comp=Z,160nm,18.4s								
GTA					LR	LR			
	comp=Z,250nm,17.8s								
KOLN	**Koldanda**	**86.95**	**55**	*e*P		**P**		**19 56 01.8**	**+0.7**
	comp=Z,27nm,1.0s								
GKN	**Gorkha**	**87.41**	**54**	*e*P		**P**		**19 56 03.2**	**0.0**
	comp=Z,43nm,1.1s								
KKN	**Kakani**	**87.95**	**54**	*e*P		**P**		**19 56 06.9**	**+1.0**
	comp=Z,33nm,1.1s								
DMN	**Daman**	**87.98**	**54**	*e*P		**P**		**19 56 06.4**	**+0.3**
	comp=Z,39nm,1.0s								
PKIN	**Phulchoki**	**88.17**	**54**	*e*P		**P**		**19 56 06.8**	**-0.3**
PKI	**Pulchoki**	**88.19**	**54**	*e*P		**P**		**19 56 06.7**	**-0.5**
	comp=Z,17nm,1.1s								
GUN	**Gumba**	**88.22**	**53**	*e*P		**P**		**19 56 07.7**	**+0.3**
	comp=Z,75nm,1.0s								
JIRN	**Jiri**	**88.59**	**53**	*e*P		**P**		**19 56 10.3**	**+1.1**
	comp=Z,38nm,1.0s								
HHC	**Hu-ho-hao-te**	**90.15**	**29**	*e*P		**P**		**19 56 15.0**	**-0.9**
HHC				sP		pwP		19 56 27.0	+6.5
HHC				*e*S		**S**		**20 07 04.5**	**-5.4**
HHC				SS		**SS**		**20 13 09.3**	**+2.2**
HHC					pmax	pmax			
	comp=Z,19nm,0.9s								
HHC					pmax	pmax			
	comp=Z,65nm,5.5s								
HHC					LR	LR			
	comp=Z,180nm,18.4s								
HHC					LR	LR			
	comp=Z,220nm,16.3s								
HHC					LR	LR			
	comp=Z,84nm,15.9s								
PLCA	**Paso Flores**	**90.52**	**210**	LR		LR		20 35 42.1	
	comp=Z,123nm,19.9s,baz=22,slow=35								
LZH	**Lanzhou**	**91.17**	**36**	*e*P		**P**		**19 56 20.0**	**-0.8**
LZH				pP		pwP		19 56 24.5	-0.9
LZH				sP		sP		19 56 26.8	+3.5
LZH				*e*PP		**PP**		**19 59 58.3**	**+1.6**
LZH					pmax	pmax			
	comp=Z,20nm,1.4s								
LZH					pmax	pmax			
	comp=Z,110nm,9.2s								
LZH					LR	LR			
	comp=Z,260nm,16.7s								
LZH					LR	LR			
	comp=Z,270nm,17.0s								
LZH					LR	LR			
	comp=Z,390nm,19.6s								
USRK	**Ussuriysk Ar.**	**92.47**	**13**	LR		LR		20 38 18.7	
	comp=Z,44nm,18.1s,baz=353,slow=36								
KUR	**Kuril'sk**	**93.03**	**2**	⇓*i*P		**P**		**19 56 29.1**	**+0.1**
KUR					pmax	pmax			
	comp=Z,85nm,1.2s								
XAN	**Xi'an**	**95.08**	**34**	P		P		19 56 44.0	+5.3
XAN					pmax	pmax			
	comp=Z,7.0nm,1.4s								
XAN					LR	LR			
	comp=Z,230nm,21.7s								
XAN					LR	LR			
	comp=Z,170nm,18.4s								
XAN					LR	LR			
	comp=Z,230nm,19.5s								
CD2	**Chengdu**	**95.46**	**39**	P		**P**		**19 56 37.8**	**-2.7**
CD2					pmax	pmax			
	comp=Z,6.0nm,0.6s								
GYA	**Guiyang**	**100.57**	**39**	*e*P		**Pdif**		**19 57 03.5**	**-0.2**
NJ2	**Nanjing**	**100.61**	**27**	*e*P		**Pdif**		**19 57 01.5**	**-2.0**
NJ2					pmax	pmax			
	comp=Z,11nm,0.5s								
CMAR	**Chiang Mai Arr**	**103.11**	**50**	PP		**PP**		**20 01 30.1**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=339,slow=4.8,SNR=5.2								
QIZ	**Qiongzhong**	**108.41**	**41**	Pdif		**Pdif**		**19 57 38.0**	**-0.5**
QIZ				S		**Sdif**		**20 09 41.3**	**-5.3**
QIZ				SS		**SS**		**20 17 20.0**	**-3.1**
QIZ				LR		LR			
	comp=Z,130nm,12.8s								
QIZ				LR		LR			
	comp=Z,140nm,14.7s								
QIZ				LR		LR			
	comp=Z,170nm,21.6s								
SNAA	**Sanae**	**114.99**	**171**	⇑*i*PKIKP		**PKiKP**		**20 01 59.6**	**+4.3**
SYO	**Syowa Base**	**121.74**	**157**	⇓*e*P		PKiKP		20 02 20.4	+12
VNDA	**Vanda**	**144.16**	**184**	PKP		**PKPdf**		**20 02 50.0**	**0.0**
	comp=Z,5.3nm,1.0s,baz=205,slow=1.7,SNR=7.4								
VNDA	**Vanda**	**144.16**	**184**	PKIKP		**PKPdf**		**20 02 50.0**	**0.0**
VNDA	**Vanda**	**144.16**	**184**			**PKPdf**		**20 02 50.8**	**+0.8**
PSA00	**Pilbara Seismi**	**147.00**	**61**			**PKPbc**		**20 02 58.0**	**-0.4**
KNRA	**Kununurra**	**147.59**	**42**			**PKPbc**		**20 02 59.8**	**-0.4**
WRA	**Warramunga Arr**	**153.92**	**37**	PKPbc		**PKPbc**		**20 03 15.3**	**0.0**
	comp=Z,1.1nm,0.8s,baz=355,slow=2.2,SNR=5.4								
ASAR	**Alice Springs**	**156.90**	**43**	PKP		**PKPdf**		**20 03 11.2**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=336,slow=2.0,SNR=2.5								
ASAR				PKPab		**PKPab**		**20 03 41.0**	**-0.1**
	comp=Z,6.5nm,0.9s,baz=333,slow=4.2,SNR=8.4								

ROM 26 19:48:11.9±0.1, 43°40.0'N±0.0'03×12°46.8'E±0.0'05, h8km, ML1.1/12, Error ellipse: s-maj=0.3km s-min=0.2km az=78.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ATPI	**Pietralunga -**	**0.05**	**283**		P		Pg	19 48 13.8	+0.1
ATPI					S		Sg	19 48 15.0	-0.1
ATVO	**AVT- Monte Val**	**0.07**	**218**		P		Pg	19 48 14.1	+0.2
ATVO					S		Sg	19 48 15.6	+0.1
ATVO					AML		AML		
	comp=E,206μm,0.2s								
ATVO					AML		AML		
	comp=N,193μm,0.4s								
ATFO	**Monte Foce - G**	**0.10**	**134**		P		Pg	19 48 14.8	+0.3
ATFO					S		Sg	19 48 16.6	+0.4
ATFO					AML		AML		
	comp=E,230μm,1.4s								
ATFO					AML		AML		
	comp=N,228μm,0.2s								
PIEI	**Pieia**	**0.11**	**27**		P		Pg	19 48 15.1	+0.6
PIEI					S		Sg	19 48 17.4	+1.1
PIEI					AML		AML		
	comp=E,274μm,0.3s								
PIEI					AML		AML		
	comp=N,166μm,0.1s								
APEC	**Apecchio**	**0.12**	**344**		P		Pg	19 48 14.5	-0.2
APEC					S		Sg	19 48 17.6	+0.9
APEC					AML		AML		
	comp=N,254μm,0.2s								
APEC					AML		AML		
	comp=E,158μm,0.6s								
BADI	**Badiali**	**0.18**	**293**		P		Pg	19 48 16.3	+0.7
BADI					S		Sg	19 48 19.5	+1.4
BADI					AML		AML		
	comp=N,191μm,0.6s								
BADI					AML		AML		
	comp=E,248μm,0.9s								
ATMI	**Monte Miggiano**	**0.18**	**234**		P		Pg	19 48 16.2	+0.6
ATMI					S		Sg	19 48 19.6	+1.5
ATMI					AML		AML		
	comp=E,58μm,0.5s								
ATMI					AML		AML		
	comp=N,70μm,0.5s								
MURB	**Monte Urbino**	**0.18**	**167**		P		Pg	19 48 16.4	+0.7
MURB					S		Sg	19 48 19.9	+1.7
MURB					AML		AML		
	comp=E,144μm,0.3s								
MURB					AML		AML		
	comp=N,162μm,0.2s								
NARO	**Abbazia di Nar**	**0.19**	**26**		P		Pg	19 48 16.4	+0.6
NARO					S		Sg	19 48 19.7	+1.2
NARO					AML		AML		
	comp=N,67μm,0.1s								
NARO					AML		AML		
	comp=E,62μm,0.4s								
NARO					AML		AML		
	comp=N,67μm,0.1s								
PE3	**Peglio**	**0.26**	**5**	P			Pb	19 48 18.2	-0.6
FOSV	**Fossato di Vic**	**0.26**	**124**	P			Pg	19 48 17.9	+0.8
FOSV				S			Sb	19 48 22.4	-1.0
PARC	**Parchiule**	**0.27**	**321**	P			Pg	19 48 18.0	+0.7
PARC				S			Sb	19 48 23.0	-0.7
PARC				AML			AML		
	comp=N,55μm,0.2s								
PARC				AML			AML		
	comp=E,60μm,1.6s								
ATCC	**AVT- Casa Cast**	**0.28**	**154**	P			Pg	19 48 18.3	+0.8
ATCC				S			Sb	19 48 23.4	-0.7
ATCC				AML			AML		
	comp=E,55μm,1.0s								
ATCC				AML			AML		
	comp=N,54μm,0.3s								
MPAG	**Monte Paganucc**	**0.28**	**48**	P			Pg	19 48 18.2	+0.7
MPAG				S			Sb	19 48 23.1	-1.1
MPAG				AML			AML		
	comp=E,32μm,1.2s								
MPAG				AML			AML		
	comp=N,28μm,0.3s								
FSSB	**Fossombrone**	**0.34**	**42**	P			Pg	19 48 19.2	+0.6
FSSB				AML			AML		
	comp=N,46μm,0.3s								
FSSB				AML			AML		
	comp=E,66μm,0.3s								

TAP ***26*** *19:49:41.8, 24°.73N×122°.39E, h14km, ML3.8, D*
NEIC ***26*** *19:49:41.2±1.5, 24°.74N±0°.05×122°.36E±0°.04, h10km±1km, mb4.6/7, Error ellipse: s-maj=10.4km s-min=2.9km az=143.0*
JMA ***26*** *19:49:42.5, 24°.64N×122°.42E, h35km±2km, M3.6*
IDC ***26*** *19:49:53.2±5.3, 24°.72N×122°.23E, h115km±53km, mb3.6/10, mb1 3.8/11, mb1mx3.4/43, mbtmp4.0/11, MS2.9/5, Ms1 2.9/5, ms1mx2.7/26, Error ellipse: s-maj=23.9km s-min=15.1km az=75.0*

ISC 26 19:49:41.7±0.9, 24.73N±0°.03×122.44E±0°.02, h14km±6km, n115,σ1°26/153, mb4.3/14, 21C-9D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.49**	**304**	⇑*i*P			**Pg**	**19 49 51.5**	**0.0**
	baz=307								
TWB1					S		**Sg**	**19 49 57.5**	**-0.6**
	baz=307								
JYNG	**Yonagunijimaku**	**0.54**	**121**	P			**Pg**	**19 49 53.1**	**+0.8**
JYNG					S		**Sg**	**19 50 00.6**	**+1.1**
TWC	**Suao**	**0.55**	**257**	⇑*i*P			**Pg**	**19 49 51.8**	**-0.8**
	baz=263								
TWC					*e*S		**Sg**	**19 49 58.4**	**-1.5**
	baz=263								
YOJ	**Yonaguni jima**	**0.59**	**117**	⇑*i*P			**Pg**	**19 49 54.1**	**+0.9**
	baz=115								
YOJ					S		**Sg**	**19 50 01.9**	**+0.8**
	baz=115								
YOJ	**Yonaguni jima**	**0.59**	**117**	P			**Pg**	**19 49 53.9**	**+0.7**
YOJ					S		**Sg**	**19 50 01.7**	**+0.7**
YOJ	**Yonaguni jima**	**0.59**	**117**				**Pg**	**19 49 53.9**	**+0.7**
TIPB	**Shuangxi**	**0.61**	**294**	⇑*i*P			**Pg**	**19 49 53.5**	**-0.2**
	baz=295								
TIPB					*e*S		**Sg**	**19 50 00.7**	**-1.0**
	baz=295								
ILA	**Ilan**	**0.63**	**273**	P			**Pg**	**19 49 53.6**	**-0.4**
	baz=272								
NWF	**Wu-fen Shan**	**0.69**	**300**	⇑*i*P			**Pg**	**19 49 55.9**	**+0.7**
	baz=301								
NWF					S		**Sb**	**19 50 05.6**	**+0.7**
	baz=301								
WFSB	**Wu-fen Shan**	**0.69**	**300**	⇑P			**Pg**	**19 49 55.9**	**+0.7**
	baz=301								
WFSB					*e*S		**Sg**	**19 50 02.6**	**-1.6**
	baz=301								
TWE	**Neicheng**	**0.70**	**269**	⇑*i*P			**Pg**	**19 49 54.4**	**-1.0**
	baz=268								
ENA	**Nanau**	**0.70**	**245**	*i* P			**Pg**	**19 49 54.6**	**-0.8**
	baz=252								
ENA					*e*S		**Sg**	**19 50 03.2**	**-1.5**
	baz=252								
ENTT	**Nioudou**	**0.80**	**264**	⇑*i*P			**Pg**	**19 49 56.9**	**-0.4**
	baz=262								
TWA	**Mucha**	**0.81**	**288**	⇓*i*P			**Pg**	**19 49 58.0**	**+0.4**
	baz=288								
TWA					*e*S		**Sg**	**19 50 07.0**	**-1.3**
	baz=288								
NDT	**Datong Townshi**	**0.85**	**262**	⇑*i*P			**Pg**	**19 49 58.1**	**-0.1**
	baz=255								
NDT					*e*S		**Sg**	**19 50 08.9**	**-0.6**
	baz=255								
NHDH	**Xindian Distri**	**0.86**	**286**	⇑P			**Pg**	**19 49 59.2**	**+0.7**
	baz=286								
NHDH					*e*S		**Sg**	**19 50 10.1**	**+0.3**
	baz=286								
YM01	**YM01**	**0.89**	**298**	⇓P			**Pg**	**19 49 59.0**	**0.0**
	baz=299								
YM01					*e*S		**Sg**	**19 50 10.6**	**-0.1**
	baz=299								
YM08	**YM08**	**0.90**	**301**	*e*P			**Pg**	**19 49 58.9**	**-0.2**
	baz=302								
YM08					*e*S		**Sg**	**19 50 10.5**	**-0.4**
	baz=302								
YM11	**YM11**	**0.90**	**299**	⇓P			**Pg**	**19 49 59.0**	**-0.1**
	baz=300								
YM11					*e*S		**Sg**	**19 50 08.5**	**-2.4**
	baz=300								
TATO	**Taipei**	**0.90**	**286**	⇓P			**Pg**	**19 49 59.0**	**-0.1**
	baz=276								
TATO					*e*S		**Sg**	**19 50 10.8**	**-0.1**
	baz=276								
TATO	**Taipei**	**0.90**	**286**	Pn			**Pg**	**19 49 59.0**	**-0.1**
TAP	**Taipei**	**0.90**	**290**	P			**Pg**	**19 49 58.2**	**-1.0**
	baz=291								
TAP					*e*S		**Sg**	**19 50 10.5**	**-0.5**
	baz=291								
YM10	**YM10**	**0.90**	**298**	P			**Pg**	**19 49 59.2**	**0.0**
	baz=299								
YM10					*e*S		**Sg**	**19 50 10.6**	**-0.5**
	baz=299								
YM04	**YM04**	**0.92**	**297**	⇓*e*P			**Pg**	**19 49 59.4**	**-0.2**
	baz=298								
YM04					*e*S		**Sg**	**19 50 09.3**	**-2.4**
	baz=298								
YM03	**YM03**	**0.93**	**299**	*e*P			**Pb**	**19 50 00.5**	**+0.8**
	baz=299								
TWY	**Chenhua**	**0.94**	**306**	*e*P			**Pg**	**19 50 00.1**	**+0.3**
	baz=307								
TWY					*e*S		**Sg**	**19 50 12.4**	**+0.3**
	baz=307								
NACB	**Ninganchiao**	**0.95**	**234**	⇑P			**Pg**	**19 49 58.6**	**-1.4**
	baz=232								
NACB					*e*S		**Sg**	**19 50 10.4**	**-2.1**
	baz=232								
NACB	**Ninganchiao**	**0.95**	**234**				**Pg**	**19 49 58.2**	**-1.8**
YHNB	**Yeheng**	**0.97**	**267**	⇑P			**Pg**	**19 49 60.0**	**-0.5**
	baz=266								
YHNB					*e*S		**Sg**	**19 50 12.0**	**-1.1**
	baz=266								
YHNB	**Ye

VWDT	VWDT	1.53 231⇑	*e*P		Pn	19 50 09.5	+0.9		
	baz=214								
HGSD	Ruisui	1.54 217	*e*P		Pn	19 50 09.0	+0.3		
	baz=202								
DPDB	Guoxing	1.54 244	*e*P		Pn	19 50 10.9	+2.1		
	baz=236								
DPDB			*e*S		Sn	19 50 29.3	+0.7		
	baz=236								
TWQ1	Liyutan	1.56 256⇑	*e*P		Pb	19 50 11.6	+1.2		
	baz=274								
EHY	Hungye	1.59 220	*e*P		Pn	19 50 09.0	-0.4		
	baz=218								
JIJ	Ishigaki jima	1.59 103	P		Pn	19 50 08.7	-0.8		
JIJ			*e*S		Sn	19 50 28.8	-1.0		
SMLT	Sun Moon Lake	1.64 239⇑	*e*P		Pn	19 50 12.0	+1.8		
	baz=224								
SSLB	Suanglung	1.65 236⇑	*e*P		Pn	19 50 11.7	+1.5		
	baz=238								
SSLB			*e*S		Sn	19 50 30.9	-0.3		
	baz=238								
SSLB	Suanglung	1.65 236			Pn	19 50 10.7	+0.5		
YULB	Yu-li	1.69 218⇓	*e*P		Pn	19 50 10.6	-0.3		
	baz=216								
YULB			*e*S		Sn	19 50 32.9	+0.6		
	baz=216								
YULB	Yu-li	1.69 218			Pn	19 50 10.0	-0.8		
JISG	Ishigakijimahi	1.71 94	P		Pn	19 50 10.5	-0.5		
JISG			*e*S		Sn	19 50 31.1	-1.6		
TWF1	Yuli	1.72 217	*e*P		Pn	19 50 11.6	+0.3		
	baz=203								
WHYT	Xinyi Township	1.78 235	*e*P		Pn	19 50 14.6	+2.6		
	baz=219								
FULB	Fuli	1.85 215⇓	*e*P		Pn	19 50 13.1	+0.1		
	baz=197								
WGK	Gukeng	2.00 239	*e*P		Pn	19 50 18.4	+3.3		
	baz=220								
ELDTW	Lidau	2.01 221⇓	*e*P		Pn	19 50 15.6	+0.3		
	baz=205								
JTJ	Tarama	2.06 92	P		Pn	19 50 16.5	+0.6		
JTJ			*e*S		Sn	19 50 40.9	-0.5		
CHN4	Tsaushan	2.17 231⇑	*e*P		Pn	19 50 20.6	+3.1		
	baz=213								
TPUB	Ta-pu	2.18 230	*e*P		Pn	19 50 20.5	+2.9		
	baz=214								
TPUB			*e*S		Sn	19 50 47.4	+3.0		
	baz=214								
TPUB	Ta-pu	2.18 230			Pn	19 50 19.8	+2.2		
STYT	Tauyuan	2.19 225⇑	*e*P		Pn	19 50 19.6	+1.8		
	baz=208								
TWH	Lutao	2.19 204	*e*P		Pn	19 50 17.1	-0.6		
	baz=200								
TWH			*e*S		Sn	19 50 43.3	-1.3		
	baz=200								
WTP	Ta-pu	2.23 229	*e*P		Pn	19 50 21.0	+2.7		
	baz=211								
TWGBT	Beinan	2.27 213	*e*P		Pn	19 50 19.0	+0.1		
	baz=211								
TWGBT			*e*S		Sn	19 50 45.9	-0.8		
	baz=211								
TWG	Pinlang	2.28 214	*e*P		Pn	19 50 19.2	+0.3		
	baz=212								
TWG	Pinlang	2.28 214			Pn	19 50 18.2	-0.7		
TWK	Hsinying	2.30 231	*e*P		Pn	19 50 22.1	+2.8		
	baz=229								
WLGB	Puzi	2.32 238	*e*P		Pn	19 50 21.8	+2.4		
	baz=236								
CHN1	Nanshi	2.33 229	*e*P		Pn	19 50 22.7	+3.1		
	baz=227								
SGST	Jiashian	2.36 226	*e*P		Pn	19 50 22.0	+1.9		
	baz=209								
SLGT	Liugui	2.38 224	*e*P		Pn	19 50 23.1	+2.8		
	baz=222								
ECL	Taimali	2.52 213	*e*P		Pn	19 50 23.2	+0.9		
	baz=211								
PTTC	Pingtan	2.54 288	*e*P		Pn	19 50 23.5	+1.0		
	baz=287								
SSD	Sandimen	2.58 220	*e*P		Pn	19 50 25.5	+2.6		
	baz=208								
MATB	Ma-tsu	2.66 303	*e*P		Pn	19 50 23.5	-0.6		
	baz=302								
MASBT	Mashibuluo	2.68 218	*e*P		Pn	19 50 26.0	+1.6		
	baz=204								
MASBT			*e*S		Sn	19 50 57.9	+1.3		
	baz=204								
VWUC	VWUC	2.73 276	*e*P		Pn	19 50 24.4	-0.6		
	baz=274								
LAY	Lan-yu	2.80 197	*e*P		Pn	19 50 25.9	-0.2		
	baz=196								
SCZT	Fangliau	2.88 216	*e*P		Pn	19 50 30.5	+3.3		
	baz=202								
PHUB	P'eng-hu	2.88 246	*e*P		Pn	19 50 28.0	+0.8		
	baz=244								
WDGT	Dungji	2.93 241	*e*P		Pn	19 50 28.0	+0.1		
	baz=239								
XPSS	Dashiqiu	2.98 318	*e*P		Pn	19 50 28.8	+0.2		
	baz=316								
LYJJ	Jianjiangzhen	3.02 307	*e*P		Pn	19 50 28.3	-0.8		
	baz=307								
PTMZ	Houxiangcun	3.03 277	*e*P		Pn	19 50 28.8	-0.4		
	baz=275								
HEN	Hengchun	3.13 210	*e*S		Sn	19 51 08.4	+0.7		
	baz=198								
VCHM	Qimei	3.14 242	*e*P		Pn	19 50 31.9	+1.1		
	baz=241								
VCHM			*e*S		Sn	19 51 09.1	+1.0		
	baz=241								
TSEB	Hengchuen, Pin	3.15 207	*e*S		Sn	19 51 08.5	+0.2		
	baz=205								
TWKBT	Hengchun	3.15 209	*e*P		Pn	19 50 31.9	+1.0		
	baz=205								
TWKBT			*e*S		Sn	19 51 08.0	-0.3		
	baz=205								
TWK1	Hengchun	3.15 209	*e*P		Pn	19 50 31.8	+0.9		
	baz=205								
TWK1			*e*S		Sn	19 51 08.0	-0.4		
	baz=205								
KNMB	Chin-men Tao	3.70 267	*e*P		Pn	19 50 38.5	+0.1		
	baz=265								
AXDP	Jialang	4.06 273	*e*P		Pn	19 50 43.6	+0.2		
	baz=271								
TGY	Tagaytay City	10.67 188	LR		LR	19 56 19.0			
	comp=Z,29nm,21.1s,baz=243,slow=36								
KSRS	Korea Array	13.52 19	P		P	19 53 02.6	+0.4		
	0.9nm,0.3s,baz=201,slow=12,SNR=41								
KSRS			LR		LR	19 58 44.9			
	comp=Z,74nm,18.6s,baz=185,slow=39								
KS19	Wonju Array Si	13.55 19			P	19 53 06.2	+3.7		
MJAR	Matsushiro Arr	17.94 45	LR		LR	20 01 42.3			
	comp=Z,28nm,21.7s,baz=90,slow=39								
USRK	Ussuriysk Ar.	20.93 20	P		Pn	19 54 26.5	+0.1		
	4.3nm,0.8s,baz=198,slow=7.3,SNR=9.1								
CMAR	Chiang Mai Arr	22.70 259	P		P	19 54 43.0	-0.2		
	0.4nm,0.7s,baz=65,slow=8.6,SNR=4.7								
CMAR			LR		LR	20 04 59.8			
	comp=Z,41nm,20.8s,baz=174,slow=40								
KLR	Kul'dur	25.52 14	P		P	19 55 11.2	+1.6		
	2.5nm,0.8s,baz=237,slow=8.4,SNR=7.2								
ULN	Ulaanbaatar	26.11 336	P		P	19 55 15.7	+0.5		
ULN			IAmb		IAmb	19 55 44.4			
	comp=Z,19nm,1.2s								
SONM	Songino Array	26.33 335	P		P	19 55 18.3	+1.1		
	comp=Z,5.6nm,0.9s,baz=148,slow=9.3,SNR=28								
SONM			LR		LR	20 06 03.3			
	comp=Z,34nm,20.4s,baz=166,slow=37								
MKAR	Makanchi Array	38.75 315	P		P	19 57 06.1	+0.5		
	comp=Z,0.6nm,0.8s,baz=106,slow=11,SNR=3.3								
MKAR			PcP		PcP	19 59 16.0	-1.0		
	comp=Z,0.2nm,0.6s,baz=112,slow=1.6,SNR=1.7								
ZALV	Zalesovo Beam	40.42 326	P		P	19 57 17.2	-2.1		
	comp=Z,0.9nm,0.7s,baz=132,slow=6.2,SNR=2.0								
WRAB	Tennant Creek	45.88 164	P		P	19 58 03.8	0.0		
WRAB			IAmb		IAmb	19 58 05.6			
	comp=Z,5.8nm,0.8s								
WRA	Warramunga Arr	45.89 164	P		P	19 58 04.2	+0.3		
	comp=Z,5.8nm,0.7s,baz=346,slow=8.7,SNR=57								
WB2	Warramunga Arr	45.89 164	P		P	19 58 04.3	+0.4		
WB2			IAmb		IAmb	19 58 05.3			
	comp=Z,7.4nm,0.9s								
WR0	Warramunga Arr	45.96 164	P		P	19 58 04.7	+0.3		
KK31	Karatay Array	46.05 307	P		P	19 58 04.8	-0.3		
KK31			IAmb		IAmb	19 58 37.0			
	comp=Z,16nm,2.0s								
TIXI	Tiksi	47.09 3	P		P	19 58 12.2	-0.5		
TIXI			IAmb		IAmb	19 58 18.9			
	comp=Z,6.5nm,1.4s								
AS31	Alice Springs	49.38 166	P		P	19 58 31.8	+0.8		
ASAR	Alice Springs	49.38 166	P		P	19 58 31.8	+0.8		
	comp=Z,2.6nm,0.7s,baz=343,slow=9.3,SNR=38								
GEYT	Alibeck	55.51 300	P		P	19 59 14.9	-1.5		
	comp=Z,1.4nm,0.6s,baz=84,slow=8.8,SNR=2.5								
NVAR	Mina Array Bea	95.25 43	P		P	20 03 04.3	-1.2		
	comp=Z,0.3nm,0.6s,baz=264,slow=4.4,SNR=3.1								

IDC 26 20:24:31.9±3.0, 6°.50S×128°.60E, h0km, mb3.4/1, mb1 3.4/3, mb1mx3.2/30, mbtmp3.2/3, ML3.3/2, Error ellipse: s-maj=318.2km s-min=31.4km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.48	158	Pn	Pn	20 27 56.8	-1.5
	0.2nm,0.3s,baz=333,slow=13,SNR=12						
WRA				Sn	Sn	20 30 26.3	-13
	0.2nm,0.3s,baz=350,slow=20,SNR=5.4						
ASAR	Alice Springs	17.81	164	P	P	20 28 42.4	+0.1
	0.1nm,0.3s,baz=348,slow=9.7,SNR=7.2						
MKAR	Makanchi Array	67.06	327	P	P	20 35 27.1	0.0
	0.2nm,0.4s,baz=111,slow=7.7,SNR=5.9						

*IDC **26** 20:28:58.7±1.2, 29°.69N×139°.14E, h412km±22km, mb3.0/5, mb1 3.1/9, mb1mx2.8/36, mbtmp3.8/9, Error ellipse: s-maj=63.6km s-min=12.8km az=76.0*
*NEIC **26** 20:28:58.1±0.6, 29°.7N±0°.1×139°.0E±0°.4, h400km±11km, mb4.1/8, Error ellipse: s-maj=48.8km s-min=11.5km az=70.0*

ISC 26 20:28:58.0±0.7, 29°.65N±0°.08×139°.1E±0°.2, h400km, n22, σ0879/23, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	3.51	10	Pn	Pn	20 30 05.7	+0.2
JHJ	Hachijo jima 2	3.51	10	P	Pn	20 30 08.0	+2.5
	27nm,0.3s,baz=127,slow=20,SNR=5.3						
JHJ				S	S	20 31 00.4	+0.1
	12nm,0.3s,baz=72,slow=20,SNR=1.1						
JCJ	Chichijima	3.75	132	P	Pn	20 30 07.8	-0.1
	10nm,0.3s,baz=276,slow=19,SNR=25						
JCJ				S	S	20 31 03.2	-1.2
	9.6nm,0.3s,baz=282,slow=22,SNR=13						
INU	Inuyama	5.93	344	Pn	Pn	20 30 29.8	-0.1
MJAR	Matsushiro Arr	6.91	354	P	Pn	20 30 40.6	0.0
	0.2nm,0.3s,baz=169,slow=9.9,SNR=14						
MAJO	Matsushiro	6.91	354	Pn	P	20 30 40.9	-0.3
MJB9	Matsu-Tunnel	6.91	354	Pn	Pn	20 30 39.6	-1.0
USRK	Ussuriysk Ar.	15.57	341	P	P	20 32 17.5	+1.0
	baz=147,slow=12,SNR=1.9						
MKAR	Makanchi Array	46.73	308	P	P	20 36 48.4	-0.5
	0.3nm,0.3s,baz=88,slow=8.5,SNR=9.0						
MAKZ	Makanchi	46.95	308	P	P	20 36 50.4	-0.1
WB0	Warramunga Arr	49.34	186	P	P	20 37 08.9	+0.1
WB0				IAmb	IAmb	20 37 31.4	
	comp=Z,24nm,1.9s						
WRAB	Tennant Creek	49.51	186	P	P	20 37 10.1	0.0
WB2	Warramunga Arr	49.52	186	P	P	20 37 10.3	+0.2
WB2				IAmb	IAmb	20 37 13.0	
	comp=Z,24nm,1.9s						
WR0	Warramunga Arr	49.52	186	P	P	20 37 10.3	+0.1
WR0				IAmb	IAmb	20 39 03.6	
	comp=Z,20nm,1.8s						
WRA	Warramunga Arr	49.52	186	P	P	20 37 10.1	0.0
	comp=Z,0.3nm,0.3s,baz=1.1,slow=7.7,SNR=21						
ASAR	Alice Springs	53.24	186	P	P	20 37 37.4	0.0
	comp=Z,0.3nm,0.4s,baz=8.1,slow=8.4,SNR=9.4						
ARU	Arti	60.72	321	P	P	20 38 28.1	-0.6
ARU				IAmb	IAmb	20 38 58.3	
	comp=Z,6.2nm,1.5s						
STKA	Stephens Creek	61.24	178	P	P	20 38 33.2	+0.8
ARCES	ARCESS Array B	70.22	340	P	P	20 39 28.6	0.0
	comp=Z,2.2nm,0.8s,baz=70,slow=7.9,SNR=5.6						
FINES	FINESS Array B	74.43	333	P	P	20 39 52.1	-1.1
	comp=Z,1.1nm,0.5s,baz=57,slow=5.1,SNR=6.3						
RAYN	Ar Rayn	81.61	292	P	P	20 40 33.1	+0.1
PV04	Paradox Valley	87.26	47		pP	20 42 33.2	+1.1

*DDA **26** 20:39:10.2, 41°.45N×24°.83E, h7km±3km, MW3.7*
*ISK **26** 20:39:12.3, 41°.49N×24°.94E, h14km, ML3.6/18*
*BEO **26** 20:39:12.8±0.8, 41°.58N×25°.21E, h25km±8km, ML3.6/9*
*SOF **26** 20:39:12.5, 41°.51N×24°.93E, h16km, MD3.5*
*ATH **26** 20:39:13.4, 41°.39N×24°.93E, h30km, ML3.3/13, Error ellipse: s-maj=1.9km s-min=0.9km az=186.0*
*THE **26** 20:39:13.0, 41°.48N×24°.95E, h7km±1km, ML3.4/11, Error ellipse: s-maj=2.4km s-min=0.9km az=162.0*

ISC 26 20:39:12.5±0.9, 41°.49N±0°.01×24°.94E±0°.01, h13km±7km, n157, σ1§14/198, 16C-20D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RZN	Rozhen	0.26	320	*i* P	Pg	20 39 18.1	0.0
RZN	Rozhen	0.26	320	P	Pg	20 39 18.3	+0.2
RZN	Rozhen	0.26	320	P	Pg	20 39 18.3	+0.2
KDZ	Kurdzhali	0.39	66	*i* P	Pg	20 39 19.8	-0.5
KDZ	Kurdzhali	0.39	66	P	Pg	20 39 19.8	-0.5
KDZ	Kurdzhali	0.39	66	P	Pg	20 39 19.8	-0.5
KDZ	Kurdzhali	0.39	66	PG	Pg	20 39 19.8	-0.5
KDZ				SG	Sg	20 39 24.3	-1.3
RDO	Rodhopi	0.57	127	P	Pg	20 39 24.1	+0.6
RDO				S	Sb	20 39 32.0	-0.2
	7μm,0.1s						
RDO	Rodhopi	0.57	127	P	Pg	20 39 24.2	+0.6
RDO				S	Sg	20 39 31.9	+0.8
RDO				AML	AML	20 39 32.7	
	comp=N,13267μm,0.1s						
RDO				AML	AML	20 39 33.2	
	comp=E,14294μm,0.2s						
RDO	Rodhopi	0.57	127	PG	Pg	20 39 24.2	+0.6
RDO				SG	Sb	20 39 32.0	-0.2
KAVA	Kavala	0.59	213	P	Pg	20 39 24.2	+0.3
KAVA				S	Sg	20 39 32.4	+0.6
	comp=E,7μm,0.2s						
KAVA	Kavala	0.59	213	P	Pg	20 39 24.2	+0.3
KAVA				S	Sg	20 39 32.4	+0.6
KAVA				AML	AML	20 39 32.7	
	comp=E,11130μm,0.3s						
KAVA				AML	AML	20 39 37.1	
	comp=N,16484μm,0.3s						
PLD	Plovdiv	0.64	344	*i* P	Pb	20 39 25.6	+0.1
PLD	Plovdiv	0.64	344	P	Pb	20 39 25.7	+0.2
PLD	Plovdiv	0.64	344	P	Pb	20 39 25.7	+0.2
PLD	Plovdiv	0.64	344	P	Pb	20 39 25.7	+0.2
PLD				PG	Pb	20 39 25.7	+0.2
PLD				SG	Sb	20 39 34.2	-0.2
KVLA	Kavala	0.69	217	P	Pg	20 39 26.1	+0.2
KVLA				S	Sg	20 39 35.0	-0.1
DIM	Dimitrovgrad	0.71	38	*i* P	Pb	20 39 27.0	+0.3
DIM	Dimitrovgrad	0.71	38	P	Pb	20 39 27.1	+0.3
DIM	Dimitrovgrad	0.71	38	P	Pb	20 39 27.1	+0.3
THAS	Thassos island	0.90	191	P	Pb	20 39 29.9	0.0
THAS				S	Sg	20 39 42.0	+0.5
	comp=N,3μm,0.3s						
THAS	Thassos island	0.90	191	P	Pb	20 39 29.9	0.0
THAS				S	Sb	20 39 40.3	-1.4
THAS				AML	AML	20 39 45.0	
	comp=N,4058μm,0.3s						
THAS				AML	AML	20 39 45.2	
	comp=E,5964μm,0.3s						
MMB	Musomiste	0.92	277	*i* P	Pb	20 39 29.6	-0.6
MMB	Musomiste	0.92	277	P	Pb	20 39 29.6	-0.6
MMB	Musomiste	0.92	277	P	Pb	20 39 29.6	-0.6
SMTH	Samothraki Isl	1.11	156	P	Pn	20 39 33.8	+0.1
SMTH				S	Sb	20 39 48.3	+0.4
	comp=E,1μm,0.4s						
SMTH	Samothraki Isl	1.11	156	P	Pn	20 39 34.0	+0.3
SMTH				S	Sb	20 39 47.8	-0.2
SMTH				AML	AML	20 39 52.5	
	comp=E,1966μm,0.2s						
SMTH				AML	AML	20 39 54.6	
	comp=N,2180μm,0.4s						
ENEZ	Enez	1.19	129	P	Pg	20 39 35.6	+0.3
ENEZ				S	Sg	20 39 51.8	+1.1
	comp=N,3μm,0.3s						
ENEZ	Enez	1.19	129	PN	Pg	20 39 35.5	+0.3
PGB	Panagyurishte	1.21	332	*i* P	Pn	20 39 34.6	-0.5
PGB	Panagyurishte	1.21	332	P	Pn	20 39 34.6	-0.5
PGB	Panagyurishte	1.21	332	P	Pn	20 39 34.6	-0.5
UKOP	Uzunkopru-Edir	1.32	105	PN	Pb	20 39 37.1	-0.1
OUR	Ouranopolis	1.36	213	P	Pn	20 39 36.7	-0.5
OUR				S	Sg	20 39 56.9	+0.5
	comp=N,2μm,0.4s						
OUR	Ouranopolis	1.36	213	P	Pn	20 39 36.7	-0.5
OUR				S	Sn	20 39 53.0	-2.1
OUR				AML	AML	20 39 57.9	
	comp=E,3014μm,0.3s						
OUR				AML	AML	20 39 57.9	
	comp=N,2699μm,0.3s						
OUR	Ouranopolis	1.36	213	PN	Pn	20 39 36.9	-0.3
EDRB	Edirne	1.40	75	P	Pn	20 39 38.0	+0.3
EDRB				S	Sb	20 39 56.0	-0.2
	comp=N,742nm,0.4s						
EDRB	Edirne	1.40	75	PN	Pn	20 39 38.0	+0.3
KKB	Krupnik	1.44	286	*i* P	Pb	20 39 38.7	-0.4
KKB	Krupnik	1.44	286	P	Pb	20 39 38.8	-0.4
KKB	Krupnik	1.44	286	P	Pb	20 39 38.8	-0.4
ERIK	Erikli-Kesan	1.44	124	PN	Pn	20 39 38.8	+0.5
KESN	Edirne-Kesan	1.47	116	*i* P	Pb	20 39 39.9	0.0
KESN				*i* S	Sg	20 40 00.6	+0.7
KESN				IAML		20 40 02.0	
	comp=N,2μm,0.5s						
KESN				IAML		20 40 04.0	
	comp=E,1μm,0.5s						
GADA	Gvkgeada	1.49	150	P	Pn	20 39 39.5	+0.6
GADA				S	Sg	20 40 00.3	0.0
	comp=E,938nm,0.8s						
GADA	Gvkgeada	1.49	150	PN	Pn	20 39 39.0	+0.1
GOKA	anakkale-Gk	1.49	150	*i* P	Pb	20 39 39.8	-0.2
JMB	Yambol	1.57	51	*i* P	Pn	20 39 40.5	+0.5
JMB	Yambol	1.57	51	PN	Pn	20 39 40.0	0.0
KNT	Kendrikon	1.57	259	P	Pb	20 39 41.0	-0.4
KNT				S	Sb	20 40 01.8	+0.6
	comp=E,1μm,0.3s						
KNT	Kendrikon	1.57	259	P	Pb	20 39 41.0	-0.4
KNT				S	Sb	20 40 01.9	+0.6
KNT				AML	AML	20 40 04.8	
	comp=N,2816μm,0.3s						
KNT				AML	AML	20 40 07.2	
	comp=E,2555μm,0.3s						
KNT	Kendrikon	1.57	259	PN	Pn	20 39 39.8	-0.3
PLG	Polygyros	1.59	226	P	Pn	20 39 40.3	0.0
PLG				S	Sb	20 40 02.7	+1.0
	comp=E,1μm,0.3s						
PLG	Polygyros	1.59	226	P	Pn	20 39 40.4	0.0
PLG				S	Sn	20 39 59.8	-1.0
PLG				AML	AML	20 40 06.4	
	comp=N,2853μm,0.3s						
PLG				AML	AML	20 40 06.4	
	comp=E,2803μm,0.3s						
GELI	Tayfur-Gelibol	1.59	133	PN	Pn	20 39 40.9	+0.6
ELND	Elena	1.60	25	⇓P	Pb	20 39 41.2	-0.7
ELND				⇓S	Sg	20 40 03.7	-0.2
LIA	Limnos Island	1.60	173	P	Pn	20 39 40.5	+0.1
LIA	Limnos Island	1.60	173	P	Pn	20 39 40.5	+0.1
LIA				S	Sn	20 40 00.2	-0.7
LIA				AML	AML	20 40 06.9	
	comp=E,1288μm,0.4s						
LIA				AML	AML	20 40 07.1	
	comp=N,1090μm,0.6s						
KIRK	Kırklareli	1.64	79	*i* P	Pn	20 39 41.5	+0.5
KIRK				*i* S	Sb	20 40 03.3	+0.1
KIRK				IAML		20 40 08.0	
	comp=N,279nm,0.5s						
HORT	Hortiatis	1.65	238	P	Pn	20 39 41.5	+0.2
HORT				S	Sg	20 40 05.2	-0.5
	comp=N,665nm,0.5s						
HORT	Hortiatis	1.65	238	P	Pn	20 39 41.5	+0.2
HORT				S	Sb	20 40 03.0	-0.6
HORT				AML	AML	20 40 07.7	
	comp=E,1618μm,0.5s						
HORT				AML	AML	20 40 09.6	
	comp=N,926μm,0.4s						
HORT	Hortiatis	1.65	238	PN	Pn	20 39 41.1	-0.2
VTS	Vitosha	1.70	312	*e*Pn	Pb	20 39 43.0	-0.7
VTS				*e*Sn	Sb	20 40 05.6	+0.6
VTS	Vitosha	1.70	312	⇓P	Pb	20 39 43.3	-0.3
VTS				⇓S	Sb	20 40 05.3	+0.3
VTS	Vitosha	1.70	312	*i* P	Pb	20 39 42.8	-0.9
VTS	Vitosha	1.70	312	P	Pb	20 39 43.8	+0.1
VTS	Vitosha	1.70	312	P	Pb	20 39 43.8	+0.1
THE	Thessaloniki	1.72	241	P	Pn	20 39 42.6	+0.5
THE				AML	AML	20 40 08.7	
	comp=E,1279μm,0.8s						
THE				AML	AML	20 40 10.2	
	comp=N,1172μm,0.5s						
LPK	Lapseki	1.77	128	PN	Pn	20 39 43.1	+0.3
VAY	Valandovo	1.79	265	*e*Pn	Pb	20 39 44.6	-0.5
VAY				*e*Sn	Sg	20 40 09.8	-0.3
VAY	Valandovo	1.79	265	*i* Pn	Pb	20 39 44.3	-0.8
VAY	Valandovo	1.79	265	*i* Pn	Pb	20 39 44.3	-0.8
PAIG	Paliouri	1.83	212	P	Pn	20 39 43.3	-0.3
PAIG	Paliouri	1.83	212	P	Pn	20 39 43.4	-0.2
PAIG				AML	AML	20 40 17.9	
	comp=E,508μm,0.4s						
PAIG				AML	AML	20 40 22.6	
	comp=N,454μm,0.7s						
BOZC	Bozcaada	1.85	152	PN	Pn	20 39 44.4	+0.5
BOZC	Bozcaada	1.85	152	*i* P	Pn	20 39 44.8	+0.9
BOZC				IAML		20 40 13.0	
	comp=E,464nm,0.7s						
BOZC				IAML		20 40 13.0	
	comp=N,337nm,0.5s						
RKY	Sarkoy-Tekirda	1.87	115	PN	Pn	20 39 44.3	+0.1
PLVB	Pleven	1.91	353	⇑P	Pb	20 39 45.9	-1.3
PHSR	Pinarhisar	1.94	85	PN	Pn	20 39 45.1	-0.1
EFSA	Agios Efstrati	1.95	179	P	Pn	20 39 46.0	+0.8
EZN	Ezine	1.97	147	PN	Pn	20 39 45.8	+0.3
TKR	Tekirdag	2.02	103	PN	Pn	20 39 46.7	+0.5
BOSS	Bosilegrad	2.09	300	*e*Pn	Pn	20 39 48.4	+1.2
BOSS				*e*Sn	Sb	20 40 11.5	-1.1
KRBG	Karabiga-Canak	2.10	121	PN	Pn	20 39 47.9	+0.7
BAYC	CANAKKALE_Bayr	2.13	144	*i* P	Pn	20 39 49.1	+1.3
BAYC				*i* S	Sn	20 40 14.7	+0.6
BAYC				IAML		20 40 22.0	
	comp=E,198nm,0.5s						
BAYC				IAML		20 40 24.0	
	comp=N,224nm,0.6s						
CRLT	Corlu	2.14	99	PN	Pn	20 39 48.7	+0.9

OHR	Ohrid	3.14	264	*i*	Pn	Pb	20 40 05.7	-2.6
AGG	Agios Georgios	3.17	220		P	Pn	20 40 02.0	-0.1
BOVS	Bovan	3.21	313	*e*	Pn	Pn	20 40 03.2	+0.6
LEHL	Lehliu	3.29	24	⇑	P	Pb	20 40 08.4	-2.2
SELS	Selova	3.32	303	*e*	Pn	Pn	20 40 04.7	+0.6
SELS				*e*	Sn	Sn	20 40 44.5	+1.1
SULR		3.33	16	⇑	P	Pg	20 40 15.6	-0.6
ICOR	Ion Corvin	3.37	38	⇑	P	Pb	20 40 11.3	-0.7
DION	Dionisos Attik	3.50	193		P	Pn	20 40 06.4	-0.1
VIL2	Platees	3.52	202		P	Pn	20 40 07.1	+0.3
PROD	Prodromos	3.59	207		P	Pn	20 40 07.5	-0.3
ANX	Ano Chora	3.71	220		P	Pn	20 40 10.0	+0.5
VLY	Voula,Athens	3.74	194		P	Pn	20 40 09.5	-0.4
KALE	Kalithea	3.77	216		P	Pn	20 40 10.5	+0.2
LTK	Loutraki	3.78	204		P	Pn	20 40 10.5	+0.1
SERG	Sergoula	3.79	217		P	Pn	20 40 10.8	+0.3
TLBR	Topalu	3.81	36	⇑	P	Pg	20 40 23.3	-2.1
ISR	Istrita	3.81	17	⇑	P	Pn	20 40 14.2	+3.3
HERR	Herculane	3.86	332	⇓	P	Pn	20 40 15.7	+4.2
ARR	Arges	3.88	357	⇑	P	Pn	20 40 12.4	+0.5
PVO	Paravola	3.89	224		P	Pn	20 40 13.6	+1.7
TIRR	Tirgusor	3.91	39	⇑	P	Pb	20 40 19.6	-1.6
GRUS	Gruza	3.93	309	*e*	Pn	Pn	20 40 12.4	-0.1
VOIR		3.95	1	⇓	P	Pn	20 40 14.9	+2.1
SMG	Samos	4.05	158		P	Pn	20 40 14.7	+0.5
KLV	Kalavryta, Ach	4.06	213		P	Pn	20 40 14.2	-0.1
MLR	Muntele Rosu	4.07	10	⇓	P	Pn	20 40 16.5	+2.0
SJES	Sjenica	4.08	297	*e*	Pn	Pn	20 40 15.1	+0.4
GZR	Gura Zlata	4.21	339	⇑	P	Pn	20 40 17.0	+0.7
TOPG	Topolog	4.22	35	⇑	P	Pg	20 40 31.7	-1.5
BISRR	Bisoca	4.26	17	⇓	P	Pn	20 40 20.2	+3.2
TRUS	Trudelj	4.31	311	*e*	Pn	Pn	20 40 18.7	+1.0
TRUS				*e*	Sn	Sn	20 41 06.8	-1.0
CFR	Carcaliu	4.36	31	⇓	P	Pb	20 40 23.9	-5.0
TRIP	Tripoli	4.46	208		P	Pn	20 40 20.5	+0.6
DIVS	Divibare	4.48	307	*e*	Pn	Pn	20 40 20.2	+0.1
DIVS				*e*	Sn	Sn	20 41 11.0	-1.1
DOPR	Dopca	4.49	4	⇓	P	Pn	20 40 22.0	+1.9
PLOR	Plostina	4.53	15	⇑	P	Pn	20 40 23.9	+3.1
VRI	Vrincioaia	4.56	16	⇓	P	Pn	20 40 24.6	+3.3
AMT	Artemida-Makis	4.68	213		P	Pn	20 40 23.3	+0.5
BBLS	Lazići	4.72	302	*e*	Pn	Pn	20 40 23.9	+0.5
BZS	Buzias	4.78	331	⇓	P	Pn	20 40 24.4	+0.2
BZS				⇓	S	Sg	20 41 42.2	-3.7
VLI	Veliai	5.01	199		P	Pn	20 40 27.5	+0.1
TESR	Tescani	5.17	13	⇓	P	Pn	20 40 32.8	+3.3
BIZ	Bicaz	5.51	8	⇓	P	Pn	20 40 36.5	+2.3
BURAR	Bucovina Array	6.13	2	⇓	P	Pn	20 40 44.6	+1.8

ATH ***26*** *21:06:06.3, 40˚.30N×25˚.57E, h26km±1km, ML3.0/15, Error ellipse: s-maj=2.1km s-min=1.0km az=86.0*
ISK ***26*** *21:06:07.2, 40˚.29N×25˚.54E, h16km, ML3.5/23*
THE ***26*** *21:06:07.8, 40˚.30N×25˚.52E, h9km±1km, ML3.0/11, Error ellipse: s-maj=1.5km s-min=0.6km az=43.0*
DDA ***26*** *21:06:09.1, 40˚.26N×25˚.66E, h19km±1km, ML3.3*
ISC 26 21:06:06.9±0.8, 40˚.31N±0˚.02×25˚.59E±0˚.02, h15km±6km, n97, σ1§13/126, 9C-2D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SMTH	Samothraki Isl	0.17	345	P		Pb	Pb	21 06 12.0	+0.4
SMTH				S		Sg	Sg	21 06 14.6	+0.8
	11μm,0.3s								
SMTH	Samothraki Isl	0.17	345	P		Pb	Pb	21 06 12.1	+0.4
SMTH				S		Sg	Sg	21 06 14.7	+0.9
SMTH				AML		AML	AML	21 06 14.8	
	comp=N,22581μm,0.2s								
SMTH				AML		AML	AML	21 06 14.9	
	comp=E,14183μm,0.2s								
GADA	Gvkgeada	0.27	117	P		Pb	Pb	21 06 14.3	+0.9
GADA				S		Sg	Sg	21 06 17.8	+1.3
	comp=E,1μm,0.3s								
GADA	Gvkgeada	0.27	117	PG		Pb	Pb	21 06 14.4	+1.0
GADA				SG		Sg	Sg	21 06 18.2	+1.7
GOKA	anakkale-Gk	0.28	116	*i* P		Pn	Pn	21 06 14.5	-1.8
LIA	Limnos Island	0.52	217	P		Pb	Pb	21 06 17.5	-0.1
LIA				S		Sg	Sg	21 06 23.9	-0.1
	comp=E,2μm,0.3s								
LIA	Limnos Island	0.52	217	P		Pb	Pb	21 06 17.6	0.0
LIA				S		Sg	Sg	21 06 23.8	-0.1
LIA				AML		AML	AML	21 06 25.6	
	comp=N,3486μm,0.3s								
LIA				AML		AML	AML	21 06 26.1	
	comp=E,2726μm,0.2s								
BOZC	Bozcaada	0.59	142	PG		Pn	Pn	21 06 19.7	-0.9
BOZC				SG		Sb	Sb	21 06 27.2	+0.1
BOZC	Bozcaada	0.59	142	*i* P		Pn	Pn	21 06 19.8	-0.9
BOZC				*i* S		Sb	Sb	21 06 27.1	+0.1
BOZC				IAML				21 06 28.0	
	comp=N,1μm,0.2s								
BOZC				IAML				21 06 29.0	
	comp=E,838nm,0.1s								
ENEZ	Enez	0.61	45	P		Pn	Pn	21 06 20.2	-0.7
ENEZ				S		Sn	Sn	21 06 29.9	-0.5
	comp=E,5μm,0.3s								
ENEZ	Enez	0.61	45	PG		Pn	Pn	21 06 20.3	-0.7
ENEZ				SG		Sn	Sn	21 06 29.8	-0.6
GELI	Tayfur-Gelibol	0.69	82	PG		Pn	Pn	21 06 21.5	-0.5
THAS	Thassos island	0.72	294	P		Pb	Pb	21 06 21.0	-0.1
THAS				S		Sb	Sb	21 06 30.8	-0.1
	comp=E,2μm,0.3s								
THAS	Thassos island	0.72	294	P		Pb	Pb	21 06 21.0	-0.1
THAS				S		Sg	Sg	21 06 30.1	-0.4
THAS				AML		AML	AML	21 06 33.1	
	comp=N,3161μm,0.2s								
THAS				AML		AML	AML	21 06 33.5	
	comp=E,4942μm,0.4s								
EZN	Ezine	0.75	130	P		Pn	Pn	21 06 22.2	-0.6
EZN				S		Sn	Sn	21 06 33.0	-0.9
	comp=E,830nm,0.3s								
EZN	Ezine	0.75	130	PG		Pn	Pn	21 06 22.3	-0.6
ERIK	Erikli-Kesan	0.79	63	PG		Pn	Pn	21 06 23.5	0.0
RDO	Rodhopi	0.83	358	P		Pn	Pn	21 06 24.0	0.0
RDO				S		Sn	Sn	21 06 35.6	-0.5
	comp=E,908nm,0.4s								
RDO	Rodhopi	0.83	358	P		Pn	Pn	21 06 23.9	-0.2
RDO				S		Sn	Sn	21 06 35.1	-1.0
RDO				AML		AML	AML	21 06 37.9	
	comp=N,1800μm,0.3s								
RDO				AML		AML	AML	21 06 39.6	
	comp=E,1690μm,0.3s								
RDO	Rodhopi	0.83	358	PG		Pn	Pn	21 06 24.1	0.0
EFSA	Agios Efstrati	0.90	211	P		Pn	Pn	21 06 24.3	-0.6
EFSA				S		Sb	Sb	21 06 36.2	+0.4
EFSA				AML		AML	AML	21 06 38.7	
	comp=N,2232μm,0.8s								
EFSA				AML		AML	AML	21 06 38.8	
	comp=E,2887μm,0.7s								
LPK	Lapseki	0.90	86	PG		Pn	Pn	21 06 25.7	+0.7
BAYC	CANAKKALE_Bayr	0.93	127	*i* P		Pn	Pn	21 06 25.8	+0.4
BAYC				IAML				21 06 39.0	
	comp=N,603nm,0.3s								
BAYC				*i* S		Sn	Sn	21 06 39.2	+0.7
BAYC				IAML				21 06 40.0	
	comp=E,544nm,0.2s								
KESN	Edirne-Kesan	0.98	58	*i* P		Pn	Pn	21 06 27.4	+1.0
KESN				*i* S		Sn	Sn	21 06 41.0	+0.8
KESN				IAML				21 06 42.0	
	comp=E,2μm,0.3s								
KESN				IAML				21 06 43.0	
	comp=N,2μm,0.2s								
KAVA	Kavala	1.06	310	P		Pn	Pn	21 06 27.4	+0.2
KAVA				S		Sn	Sn	21 06 42.2	+0.5
	comp=N,785nm,0.4s								
KAVA	Kavala	1.06	310	P		Pn	Pn	21 06 27.4	+0.2
KAVA				S		Sn	Sn	21 06 42.2	+0.5
KAVA				AML		AML	AML	21 06 43.1	
	comp=N,1480μm,0.5s								
KAVA				AML		AML	AML	21 06 44.5	
	comp=E,1707μm,0.3s								
KVLA	Kavala	1.11	305	P		Pn	Pn	21 06 27.8	0.0
KVLA				S		Sb	Sb	21 06 41.9	0.0
KVLA				AML		AML	AML	21 06 44.3	
	comp=N,1126μm,0.3s								
KVLA				AML		AML	AML	21 06 45.6	
	comp=E,816μm,0.4s								
UKOP	Uzunkopru-Edir	1.14	44	PN		Pn	Pn	21 06 29.5	+1.2
PRK	Paraskevi	1.19	153	P		Pg	Pn	21 06 30.9	+1.1
PRK				S		Sn	Sn	21 06 47.5	+2.7
	comp=E,2μm,0.9s								
OUR	Ouranopolis	1.23	272	P		Pn	Pn	21 06 29.1	-0.3
OUR				S		Sb	Sb	21 06 45.6	+0.3
	comp=E,900nm,0.3s								
OUR	Ouranopolis	1.23	272	P		Pn	Pn	21 06 29.1	-0.3
OUR				S		Sn	Sn	21 06 46.9	+1.2
OUR				AML		AML	AML	21 06 49.3	
	comp=E,1948μm,0.3s								
OUR				AML		AML	AML	21 06 50.1	
	comp=N,1619μm,0.2s								
KRBG	Karabiga-Canak	1.31	86	PN		Pg	Pg	21 06 31.6	-0.5
AYVA	Ayvalik	1.31	139	*i* P		Pg	Pg	21 06 32.1	0.0
AYVA				*i* S		Sg	Sg	21 06 50.5	+1.2
AYVA				IAML				21 06 51.0	
	comp=N,820nm,0.8s								
AYVA				IAML				21 06 52.0	
	comp=E,477nm,0.5s								
KDZ	Kurdzhali	1.34	355	*i* P		Pg	Pg	21 06 32.2	-0.5
KDZ	Kurdzhali	1.34	355	PN		Pg	Pg	21 06 31.8	-0.9
KNL	Balıkesir	1.48	91	*i* P		Pg	Pg	21 06 35.3	-0.1
KNL				*i* S		Sg	Sg	21 06 56.4	+1.7
KNL				IAML				21 06 58.0	
	comp=E,785nm,0.6s								
KNL				IAML				21 06 59.0	
	comp=N,944nm,0.4s								
PAIG	Paliouri	1.51	256	P		Pn	Pn	21 06 32.9	-0.5
PAIG				S		Sb	Sb	21 06 54.0	+0.5
	comp=N,288nm,0.4s								
PAIG	Paliouri	1.51	256	P		Pn	Pn	21 06 32.8	-0.5
PAIG				AML		AML	AML	21 06 58.9	
	comp=E,517μm,0.3s								
PAIG				AML		AML	AML	21 07 01.3	
	comp=N,615μm,0.5s								
RZN	Rozhen	1.52	335	*i* P		Pg	Pg	21 06 35.4	-0.8
MRMT	Marmara Adasi	1.56	79	PN		Pg	Pg	21 06 35.1	-1.8
DKL	Dikili	1.60	140	PN		Pg	Pg	21 06 35.9	-1.8
GONE	Gonen-Balikesi	1.63	99	PN		Pg	Pg	21 06 36.3	-1.9
TKR	Tekirdag	1.63	65	PN		Pg	Pg	21 06 36.4	-1.8
PLG	Polygyros	1.64	273	P		Pn	Pn	21 06 35.0	-0.1
PLG	Polygyros	1.64	273	P		Pn	Pn	21 06 35.0	-0.1
PLG				AML		AML	AML	21 07 01.3	
	comp=N,1049μm,0.5s								
PLG				AML		AML	AML	21 07 02.7	
	comp=E,820μm,0.4s								
SKY	Skiros Island	1.64	210	P		Pn	Pn	21 06 34.9	-0.2
SKY	Skiros Island	1.64	210	P		Pn	Pn	21 06 34.7	-0.4
BALY	Balya	1.66	109	*i* P		Pg	Pn	21 06 37.5	-1.4
EDRB	Edirne	1.77	29	P		Pb	Pn	21 06 37.5	-1.4
EDRB	Edirne	1.77	29	PN		Pb	Pn	21 06 38.1	-0.8
PSRA	Psara	1.77	181	P		Pb	Pn	21 06 37.8	-1.2
ZEDA	zmir-Bergama	1.77	139	*i* P		Pb	Pn	21 06 38.7	-0.3
ZEDA				*i* S		Sg	Sg	21 07 04.8	+1.0
ZEDA				IAML				21 07 05.0	
	comp=E,444nm,0.4s								
ZEDA				IAML				21 07 07.0	
	comp=N,350nm,0.2s								
CRLT	Corlu	1.83	63	PN		Pb	Pn	21 06 39.4	-0.6
KIRK	Kırklareli	1.86	37	*i* P		Pg	Pn	21 06 40.7	-1.9
BALB	Balikesir	1.89	110	PN		Pb	Pn	21 06 39.6	-1.4
STEP	BALIKESIR_Sava	1.89	119	*i* P		Pb	Pn	21 06 40.7	-0.3
MMB	Musomiste	1.90	313	*i* P		Pn	Pn	21 06 39.1	+0.3
PLD	Plovdiv	1.91	340	PN		Pn	Pn	21 06 39.8	+0.9
HORT	Hortiatis	1.92	279	P		Pn	Pn	21 06 38.8	-0.2
HORT				AML		AML	AML	21 07 09.3	
	comp=N,561μm,0.4s								
HORT				AML		AML	AML	21 07 10.7	
	comp=E,347μm,0.4s								
HORT	Hortiatis	1.92	279	PN		Pn	Pn	21 06 39.4	+0.4
SKIA	Skiathos	1.99	236	P		Pn	Pn	21 06 39.4	-0.6
SKIA				AML		AML	AML	21 07 16.2	
	comp=E,552μm,0.4s								
SKIA				AML		AML	AML	21 07 16.9	
	comp=N,614μm,0.4s								
KYMI	Kymi, Euboea I	2.03	215	P		Pn	Pn	21 06 40.0	-0.5
KYMI	Kymi, Euboea I	2.03	215	P		Pn	Pn	21 06 40.0	-0.5
URLA	Izmir	2.10	158	PN		Pn	Pn	21 06 42.3	+0.8
URLA	Izmir	2.10	158	*i* P		Pb	Pn	21 06 42.6	-2.1
URLA				*i* S		Sg	Sg	21 07 15.1	+0.7
KCTX	Karacabey (Bur	2.12	90	PN		Pb	Pn	21 06 43.2	-1.8
SLVT	Silivri	2.19	64	PN		Pb	Pn	21 06 44.2	-2.0
KNT	Kendrikon	2.21	293	P		Pn	Pn	21 06 43.8	+0.8
KNT	Kendrikon	2.21	293	P		Pn	Pn	21 06 43.8	+0.8
KNT				AML		AML	AML	21 07 19.1	
	comp=N,390μm,0.6s								
KNT				AML		AML	AML	21 07 19.6	
	comp=E,420μm,0.7s								
MRKA	Markates	2.23	225	P		Pn	Pn	21 06 42.9	-0.4
MRKA				AML		AML	AML	21 07 25.0	
	comp=E,275μm,0.5s								
MRKA				AML		AML	AML	21 07 28.8	
	comp=N,296μm,0.7s								
BLCB	Balcova	2.23	149	PN		Pn	Pn	21 06 43.9	+0.7
CTYL	Yalikoy Yolu	2.36	60	PN		Pb	Pn	21 06 46.9	-2.1
CTKS	Kestanelik-??a	2.40	66	PN		Pb	Pn	21 06 47.3	-2.5
VAY	Valandovo	2.50	295	*i* Pn		Pg	Pn	21 06 53.7	-1.1
VAY	Valandovo	2.50	295	*i* Pn		Pg	Pn	21 06 53.7	-1.1
DION	Dionisos Attik	2.57	210	P		Pn	Pn	21 06 47.4	-0.6
ELND	Elena	2.62	5	⇑	P	Pb	Pn	21 06 50.7	-2.8
PTL	Penteli	2.62	211	P		Pn	Pn	21 06 48.5	-0.2
PTL				AML		AML	AML	21 07 41.5	
	comp=N,101μm,0.6s								
PTL				AML		AML	AML	21 07 44.3	
	comp=E,105μm,0.6s								
SMG	Samos	2.78	159	P		Pn	Pn	21 06 51.7	+0.9
AGG	Agios Georgios	2.82	244	P		Pn	Pn	21 06 51.1	-0.3
VLY	Voula,Athens	2.82	210	P		Pn	Pn	21 06 50.9	-0.5
VTS	Vitosha	2.90	323	⇑	P	Pn	Pn	21 06 54.5	+1.9
LTK	Loutraki	3.06	223	P		Pn	Pn	21 06 54.7	0.0
APE	Apeiranthos	3.24	181	P		Pn	Pn	21 06 57.0	-0.1
KALE	Kalithea	3.29	235	P		Pn	Pn	21 06 57.5	-0.3
DID	Didima	3.35	214	P		Pn	Pn	21 06 58.3	-0.4
AMGA	Amorgos Island	3.48	176	P		Pn	Pn	21 07 00.8	+0.3
KLV	Kalavryta, Ach	3.50	231	P		Pn	Pn	21 07 00.4	-0.4
ICOR	Ion Corvin	4.14	23	⇑	P	Pn	Pn	21 07 12.0	+2.5
HARR	Harsova	4.71	21	⇑	P	Pn	Pn	21 07 19.1	+1.8
MLR	Muntele Rosu	5.18	3	⇑	P	Pn	Pn	21 07 26.1	+2.2
CFR	Carcaliu	5.21	20	⇑	P	Pn	Pn	21 07 26.0	+1.8
MDVR	Moldovita	5.30	329	⇑	P	Pn	Pn	21 07 28.3	+2.7
GZR	Gura Zlata	5.48	339	⇓	P	Pn	Pn	21 07 29.0	+1.0
VRI	Vrincioaia	5.62	8	⇑	P	Pn	Pn	21 07 33.0	+3.2
BZS	Buzias	6.05	333	⇓	P	Pn	Pn	21 07 36.9	+1.2
TESR	Tescani	6.25	7	⇑	P	Pn	Pn	21 07 41.3	+2.9

IDC 26 21:19:55.3±3.2, 31˚.69S×178˚.04W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.5/35, mbtmp3.6/3, ML3.2/1, Error ellipse: s-maj=74.8km s-min=48.0km az=119.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.67	210	Pn		Pn	Pn	21 21 47.1	-1.1
	0.3nm,0.3s,baz=133,slow=21,SNR=1.3								
URZ				Sn		Sn	Sn	21 23 12.8	-3.0
	0.5nm,0.3s,baz=359,slow=12,SNR=2.3								
ASAR	Alice Springs	43.02	268	P		P	P	21 27 56.9	+0.1
	0.4nm,0.6s,baz=108,slow=7.3,SNR=1.9								
WRA	Warramunga Arr	44.12	273	P		P	P	21 28 05.6	-0.1
	0.5nm,0.6s,baz=113,slow=8.1,SNR=17								
FINES	FINESS Array B	146.34	339	PKPbc		PKPdf		21 39 36.5	+0.5
	2.6nm,0.8s,baz=64,slow=4.8,SNR=4.3								

NNC ***26*** *21:27:22.1±5.3, 37˚.78N×69˚.47E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=42.7km s-min=26.8km az=10.0*
IDC ***26*** *21:27:36.5±1.8, 38˚.74N×71˚.13E, h0km, mb3.7/6, mb1 3.8/12, mb1mx3.5/70, mbtmp3.7/12, ML3.4/6, MS3.4/2, Ms1 3.4/2, ms1mx2.3/59, Error ellipse: s-maj=33.3km s-min=16.9km az=155.0*
ISU ***26*** *21:27:39.0, 39˚.20N×70˚.90E, h5km*
KRNET ***26*** *21:27:39.0±0.1, 39˚.05N×70˚.99E, h11km, mb4.1*
ISC 26 21:27:43.2±1.1, 39˚.00N±0˚.06×70˚.85E±0˚.04, h34km±3km, n51, σ2§26/74, mb3.6/6, 29C-13D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GAR	Garm	0.42	270	⇓ *e*	P		Pb	21 27 49.4	-3.4
	baz=65								
GAR				⇓ *e*	S		Sb	21 27 57.0	-2.4
	baz=65								
BTK	Batken	1.06	359	⇑ *i*	P		Pn	21 27 58.4	-3.3
	baz=52								
BTK				⇑ *i*	S		Sn	21 28 12.8	-2.5
	baz=52								
BTK	Batken	1.06	359	*i* P			Pn	21 27 58.4	-3.3
				i S			Sn	21 28 12.7	-2.5
CHGR	Chuyangaron	1.37	256	⇓ *i* P			Pn	21 28 06.9	+1.0
	baz=55								
CHGR				⇓ *i* S			Sb	21 28 27.5	+2.0
	baz=55								
CHMI	Chimion	1.37	22	*i* P			Pn	21 28 03.1	-2.8
CHMI				*i* S			Sn	21 28 21.6	-1.3
FRG	Fergana	1.87	22	*i* P			Pn	21 28 06.5	-6.4
FRG				*i* S			Sn	21 28 23.3	-12
TAS	Tashkent	2.61	333	⇓ *i* P			Pn	21 28 24.6	+1.7
	baz=31								
TAS				⇓ *i* S			Sb	21 28 58.0	-3.0
	baz=31								
TAS	Tashkent	2.61	333	*e* P			Pb	21 28 28.9	-0.4
TAS				*e* S			Sb	21 29 04.5	+3.5
ARSB	Arslanbob	2.84	34	⇑ *i* P			Pn	21 28 26.3	+0.1
	baz=33								
ARSB				⇑ *i* S			Sn	21 29 00.7	+1.5
	baz=33								
ARSB	Arslanbob	2.84	34	*e* P			Pn	21 28 26.2	+0.1
ARSB				*e* S			Sn	21 29 02.3	+3.1
ARK	Arkit	2.92	17	⇑ *i* P			Pn	21 28 27.6	+0.3
	baz=15								
ARK				⇑ *i* S			Sn	21 29 03.0	+1.8
	baz=15								
SAM	Samarkand	3.07	284	*e* P			Pb	21 28 38.5	+1.4
SAM				*e* S			Sb	21 29 22.7	+8.5
AML	Almayashu	3.80	34	⇑ *i* P			Pn	21 28 40.1	+0.4
	baz=33								
AML				⇑ *i* S			Sn	21 29 24.4	+1.0
	baz=33								
AML	Almayashu	3.80	34	P			Pn	21 28 40.7	+1.0
	SNR=44								
KK31	Karatay Array	4.11	357	⇑ P			Pn	21 28 45.7	+2.2
	3.6nm,0.3s,baz=189,slow=15,SNR=68								
KK31				⇓ S			Sb	21 29 47.7	+3.8
	40nm,0.5s,baz=194,slow=27,SNR=7.4								
UCH	Uchtor	4.26	40	⇑ *i* P			Pn	21 28 46.1	+0.1
	baz=39								
UCH				⇑ *e* S			Sn	21 29 35.2	+0.4
	baz=39								
UCH	Uchtor	4.26	40	P			Pn	21 28 47.4	+1.4
	SNR=38								
EKS2	Erkin-Say	4.28	30	⇑ *i* P			Pn	21 28 46.4	+0.4
	baz=29								
EKS2				⇑ *e* S			Sn	21 29 35.5	+0.8
	baz=29								
EKS2	Erkin-Say	4.28	30	P			Pn	21 28 47.5	+1.6
	SNR=32								
KZA	Kyzart	4.55	46	⇑ *i* P			Pn	21 28 50.0	+0.1
	baz=46								
KZA				⇑ *e* S			Sn	21 29 42.0	+0.2
	baz=46								
KZA	Kyzart	4.55	46	P			Pn	21 28 51.8	+1.9
	SNR=42								
AAK	Ala-Archa	4.56	36	Pn			Pn	21 28 51.4	+1.5
	12nm,0.3s,baz=200,slow=6.4,SNR=106								
AAK				Sn			Sn	21 29 40.0	-1.9
	2.9nm,0.3s,baz=344,slow=19,SNR=1.5								
AAK	Ala-Archa	4.56	36	⇓ *i* P			Pn	21 28 50.4	+0.5
	baz=35								
AAK				⇓ *i* S			Sn	21 29 42.4	+0.6
	baz=35								
AAK	Ala-Archa	4.56	36	P			Pn	21 28 51.6	+1.7
	SNR=52								
KBK	Karagaybulak	4.79	39	P			Pn	21 28 56.0	+2.9
	SNR=10								
CHMS	Chumysh	4.96	35	⇑ *i* P			Pn	21 28 55.6	+0.3
	baz=35								
CHMS				⇑ *i* S			Sn	21 29 51.5	0.0
	baz=35								
CHMS	Chumysh	4.96	35	P			Pn	21 28 56.9	+1.6
	SNR=34								
USP	Ospenovka	5.07	32	⇑ *i* P			Pn	21 28 57.2	+0.4
	baz=31								
USP				⇑ *i* S			Sn	21 29 54.3	+0.1
	baz=31								
USP	Ospenovka	5.07	32	P			Pn	21 28 57.8	+1.0
	SNR=44								
ULHL	Ulahol	5.23	50	⇑ *e* P			Pn	21 28 59.0	-0.1
	baz=50								
ULHL				⇑ *i* S			Sn	21 29 57.8	-0.4
	baz=50								
ULHL	Ulahol	5.23	50	P			Pn	21 29 01.3	+2.2
	SNR=7.3								
TKM2	Tokmak 2	5.31	41	⇓ *i* P			Pn	21 29 00.6	+0.3
	baz=41								
TKM2				⇓ *i* S			Sn	21 30 00.0	-0.4
	baz=41								
TKM2

3.7nm,0.2s
MOA Molln 0.98 83 *e*Pg Pg 21 28 47.9 +0.3
MOA Molln 0.98 83 *e*Pg Pg 21 28 47.8 +0.3
2.2nm,0.1s,SNR=24
MOA *e*Sg Sb 21 29 01.9 -0.1
1.8nm,0.1s
ABTA Abfaltersbach 1.02 192 Pg Pb 21 28 49.0 -0.1
0.8nm,0.1s
ABTA Sg Sb 21 29 03.2 +0.2
3.1nm,0.3s
FUR Furstenfeldbru 1.12 293 *e*Pg Pn 21 28 51.6 +0.1
SQTA Sankt Quirin 1.21 245 Pg Pn 21 28 53.4 +0.5
6.2nm,0.2s,SNR=15
SQTA Sg Sn 21 29 11.1 +1.1
31nm,0.4s
MOTA Moosalm 1.23 252 *e*Pg Pb 21 28 52.6 -0.2
6.3nm,0.1s,SNR=37
MOTA Sg Sn 21 29 11.2 +0.8
28nm,0.5s
MYKA Terra Mystica 1.25 153 *e*Pg Pg 21 28 52.6 0.0
0.9nm,0.1s
MYKA *e*Sn Sn 21 29 11.2 +0.4
2.9nm,0.3s
GEC2 GERESS Array S 1.25 28 *e*Pn Pg 21 28 52.8 0.0
GEC2 *e*Sg Sn 21 29 11.2 +0.2
WET Wettzell 1.40 2 *e*Pn Pn 21 28 55.0 -0.5
RETA Reutte 1.41 260 *e*Pg Pn 21 28 55.3 -0.4
2.2nm,0.2s
KHC Kasperske Hory 1.48 20 *e*PG Pn 21 28 56.3 -0.2
KHC *e*SG Sn 21 29 18.2 +1.6
comp=Z,28nm,0.5s
FETA Feichten 1.59 244 *e*Pg Pg 21 28 59.5 +0.3
1.6nm,0.2s,SNR=7.9
FETA *e*Sg Sg 21 29 23.2 +3.4
5.3nm,0.3s
OBKA Obir 1.71 136 Pg Pg 21 29 01.7 +0.3
1.8nm,0.2s,SNR=4.6
OBKA Sg Sg 21 29 25.3 +1.8
13nm,0.8s
UBR Ueberruh 1.83 269 *e*Sg Sg 21 29 30.3 +2.7
SOKA Soboth 1.85 124 *e*Pg Pb 21 29 03.6 +0.3
1.3nm,0.2s,SNR=6.3
SOKA *e*Sg Sg 21 29 29.5 +1.5
1.6nm,0.2s
ARSA Arzberg 1.90 104 *e*Pg Pb 21 29 04.0 -0.2
2.1nm,0.3s,SNR=4.9
ARSA Sg Sg 21 29 31.2 +1.5
4.5nm,0.4s
DAVA Damuels 2.04 258 Pn Pb 21 29 06.4 -0.3
2.1nm,0.2s,SNR=6.0
DAVA Sg Sg 21 29 36.4 +2.1
4.8nm,0.3s
CONA Conrad Observa 2.06 84 *e*Pn Pn 21 29 04.8 +0.3
1.2nm,0.2s,SNR=4.9
CONA *e*Sn Sb 21 29 32.2 -0.8
3.2nm,0.4s
NKC Novy Kostel 2.51 355 *e*PG Pg 21 29 15.9 -0.8
NKC *e*SG Sg 21 29 50.6 +1.4
comp=Z,4.7nm,0.5s
PRU Pruhonice 2.52 26 *e*PG Pg 21 29 15.9 -1.1
PRU *e*SG Sg 21 29 49.7 0.0
comp=Z,4.8nm,0.6s
GOPC GO Pecny, Ondr 2.53 30 *e*PG Pb 21 29 16.0 +1.0
KRUC Moravsky 2.73 60 *e*PN Pn 21 29 13.6 0.0
KRUC *e*PG Pb 21 29 18.9 +0.7
KRUC *e*SG Sg 21 29 55.9 -0.3
VRAC Vranov 2.96 57 *e*PN Pn 21 29 17.0 +0.2
VRAC *e*SG Sg 21 30 03.3 -0.4
BFO Black Forest 3.07 283 *e*Pn Pn 21 29 19.1 +0.8
BRG Berggiesshubel 3.22 13 PG Pb 21 29 28.0 +1.3
BRG SG Sg 21 30 11.5 -0.6
2.5nm,0.6s
UPC Upice 3.47 36 *e*SG Sg 21 30 20.4 +0.2
8.7nm,0.5s
DPC Dobruska-Polom 3.48 40 *e*SG Sg 21 30 21.8 +1.2
4.1nm,0.5s
CHVC Chvalec 3.55 36 *e*SG Sg 21 30 23.3 +0.5
8.8nm,0.6s
CLL Collm 3.57 2 *e*Sg Sg 21 30 27.0 +3.6
comp=Z,4.0nm,0.9s
MORC Moravsky Berou 3.73 55 *e*SG Sg 21 30 27.2 -1.3

BEO **26** *21:28:36.0±0.8, 40.09N×25.26E, h0km, ML4.1/8*
IDC **26** *21:28:37.1±0.8, 40.20N×25.12E, h0km, mb3.6/11, mb1 3.8/16, mb1mx3.6/60, mbtmp3.7/16, ML3.8/6, MS3.1/17, Ms1 3.1/17, ms1mx2.9/52, Error ellipse: s-maj=15.3km s-min=13.9km az=75.0*
DDA **26** *21:28:37.6, 40.25N×25.02E, h15km±1km, MW4.1*
ATH **26** *21:28:37.3, 40.23N×25.23E, h29km, ML3.7/19, Error ellipse: s-maj=1.3km s-min=0.6km az=86.0*
ISK **26** *21:28:38.2, 40.26N×25.19E, h15km, ML4.2/23*
NEIC **26** *21:28:38.9±1.9, 40.23N±0.03×25.19E±0.05, h12km±4km, Error ellipse: s-maj=6.2km s-min=4.5km az=66.0*
THE **26** *21:28:38.7, 40.24N×25.19E, h14km, ML3.8/12, Error ellipse: s-maj=0.8km s-min=0.4km az=72.0*
SOF **26** *21:28:38.6, 40.29N×25.20E, h19km, MD4.1*
PDG **26** *21:28:38.4±0.4, 40.23N×25.17E, h21km, ML3.6/14, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*
ISC 26 21:28:38.1±1.0, **40.21N**±0.02×**25.17E**±0.01, **h9**km±7km, **n443**, σ1s**09**/509, **mb3.8**/17, **MS3.1**/15, **41C-39D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIA	**Limnos Island**	**0.31**	**179**	P	**Pb**	**21 28 45.9**	**+0.1**
LIA				S	**Sb**	**21 28 50.5**	**-0.5**
20μm,0.7s							
LIA	**Limnos Island**	**0.31**	**179**	P	**Pb**	**21 28 46.0**	**+0.1**
LIA				S	**Sb**	**21 28 50.9**	**-0.1**
LIA				AML	AML	21 28 51.5	
comp=N,51257μm,0.6s							
LIA				AML	AML	21 28 55.1	
comp=E,30621μm,0.7s							
LIA	**Limnos Island**	**0.31**	**179**		**Pb**	**21 28 45.9**	**+0.1**
LIA					**Sb**	**21 28 50.5**	**-0.5**
SMTH	**Samothraki Isl**	**0.38**	**46**	P	**Pg**	**21 28 45.8**	**+0.3**
SMTH				S	**Sg**	**21 28 49.9**	**-0.7**
comp=E,10μm,0.3s							
SMTH	**Samothraki Isl**	**0.38**	**46**	P	**Pg**	**21 28 45.9**	**+0.3**
SMTH				S	**Sg**	**21 28 50.2**	**-0.3**
SMTH				AML	AML	21 28 51.0	
comp=N,18943μm,0.4s							
SMTH				AML	AML	21 28 55.1	
comp=E,19994μm,0.2s							
SMTH	**Samothraki Isl**	**0.38**	**46**		**Pg**	**21 28 45.8**	**+0.3**
SMTH					**Sg**	**21 28 49.9**	**-0.7**
THAS	**Thassos island**	**0.53**	**319**	P	**Pg**	**21 28 48.5**	**+0.1**
THAS				S	**Sg**	**21 28 56.0**	**+0.7**
comp=E,10μm,0.4s							
THAS	**Thassos island**	**0.53**	**319**	P	**Pg**	**21 28 48.6**	**+0.1**
THAS				S	**Sb**	**21 28 56.2**	**-1.1**
THAS				AML	AML	21 28 59.4	
comp=N,20655μm,0.3s							
THAS				AML	AML	21 29 00.0	
comp=E,17532μm,0.5s							
THAS	**Thassos island**	**0.53**	**319**		**Pg**	**21 28 48.5**	**+0.1**
THAS					**Sg**	**21 28 56.0**	**+0.7**
GADA	**Gvkgeada**	**0.56**	**92**	P	**Pb**	**21 28 49.9**	**-0.1**
GADA				S	**Sb**	**21 28 57.4**	**-0.6**
comp=E,9μm,0.4s							
GADA	**Gvkgeada**	**0.56**	**92**	PG	**Pb**	**21 28 49.9**	**-0.1**
GADA				SG	**Sb**	**21 28 57.5**	**-0.6**
GADA	**Gvkgeada**	**0.56**	**92**		**Pb**	**21 28 49.9**	**-0.1**
GADA					**Sb**	**21 28 57.4**	**-0.6**
GOKA	**anakkale-Gk**	**0.56**	**92**	⇑*i* P	**Pb**	**21 28 50.1**	**0.0**
GOKA				*i* S	**Sn**	**21 29 01.5**	**-0.2**
EFSA	**Agios Efstrati**	**0.68**	**192**	P	**Pb**	**21 28 52.4**	**+0.3**
EFSA				S	**Sb**	**21 29 02.0**	**+0.3**
EFSA				AML	AML	21 29 06.5	
comp=E,31759μm,0.8s							
EFSA				AML	AML	21 29 10.1	
comp=N,20420μm,0.9s							
BOZC	**Bozcaada**	**0.77**	**118**	PG	**Pb**	**21 28 53.8**	**+0.2**
BOZC				SG	**Sb**	**21 29 05.3**	**+1.1**
BOZC	**Bozcaada**	**0.77**	**118**	⇑*i* P	**Pb**	**21 28 53.9**	**+0.3**
BOZC				*i* S	**Sb**	**21 29 04.0**	**-0.1**
BOZC				IAML		21 29 06.0	
comp=E,9μm,0.6s							
BOZC				IAML		21 29 06.0	
comp=N,11μm,0.8s							
ENEZ	**Enez**	**0.91**	**54**	P	**Pg**	**21 28 54.9**	**-0.8**
ENEZ				S	**Sb**	**21 29 08.3**	**-0.1**
comp=N,23μm,0.3s							
ENEZ	**Enez**	**0.91**	**54**	PG	**Pg**	**21 28 55.6**	**-0.1**
ENEZ				SG	**Sb**	**21 29 08.5**	**+0.1**
ENEZ	**Enez**	**0.91**	**54**		**Pg**	**21 28 54.9**	**-0.8**
OUR	**Ouranopolis**	**0.92**	**278**	P	**Pg**	**21 28 55.4**	**-0.4**
OUR				S	**Sb**	**21 29 09.0**	**+0.4**
comp=N,5μm,0.7s							
OUR	**Ouranopolis**	**0.92**	**278**	P	**Pb**	**21 28 56.1**	**-0.1**
OUR				AML	AML	21 29 11.5	
comp=N,13379μm,0.8s							
OUR				AML	AML	21 29 12.8	
comp=E,6655μm,0.4s							
OUR	**Ouranopolis**	**0.92**	**278**	PG	**Pb**	**21 28 56.3**	**0.0**
OUR				SG	**Sn**	**21 29 10.3**	**-0.3**
KAVA	**Kavala**	**0.94**	**328**	P	**Pb**	**21 28 56.7**	**+0.2**
KAVA				S	**Sb**	**21 29 08.7**	**-0.3**
comp=E,7μm,0.5s							
KAVA	**Kavala**	**0.94**	**328**	P	**Pb**	**21 28 56.2**	**-0.3**
KAVA				S	**Sg**	**21 29 08.2**	**-0.1**
KAVA				AML	AML	21 29 09.9	
comp=N,16464μm,0.5s							
KAVA				AML	AML	21 29 10.0	
comp=E,12638μm,0.6s							
KAVA	**Kavala**	**0.94**	**328**		**Pb**	**21 28 56.7**	**+0.2**
KVLA	**Kavala**	**0.94**	**321**	P	**Pb**	**21 28 56.4**	**-0.3**
KVLA				S	**Sb**	**21 29 09.2**	**-0.1**
KVLA				AML	AML	21 29 10.3	
comp=N,27478μm,0.7s							
KVLA				AML	AML	21 29 10.6	
comp=E,11492μm,0.6s							
EZN	**Ezine**	**0.96**	**113**	P	**Pb**	**21 28 57.1**	**+0.1**
EZN				S	**Sb**	**21 29 10.5**	**+0.7**
comp=E,13μm,0.6s							
EZN	**Ezine**	**0.96**	**113**	PG	**Pb**	**21 28 57.2**	**+0.2**
EZN				SG	**Sn**	**21 29 10.8**	**-0.8**
RDO	**Rodhopi**	**0.98**	**16**	P	**Pg**	**21 28 56.5**	**-0.4**
RDO				S	**Sb**	**21 29 09.9**	**-0.3**
comp=E,4μm,0.5s							
RDO	**Rodhopi**	**0.98**	**16**	P	**Pg**	**21 28 56.4**	**-0.5**
RDO				AML	AML	21 29 11.4	
comp=E,4566μm,0.2s							
RDO				AML	AML	21 29 11.8	
comp=N,11524μm,0.8s							
RDO	**Rodhopi**	**0.98**	**16**	PG	**Pg**	**21 28 56.2**	**-0.7**
GELI	**Tayfur-Gelibol**	**1.01**	**79**	PG	**Pg**	**21 28 57.3**	**-0.3**
ERIK	**Erikli-Kesan**	**1.12**	**65**	PN	**Pg**	**21 28 58.9**	**-0.8**
ERIK				SN	**Sb**	**21 29 14.5**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**1.15**	**113**	⇑*i* P	**Pn**	**21 29 00.6**	**+0.1**
BAYC				*i* S	**Sb**	**21 29 15.8**	**+0.5**
BAYC				IAML		21 29 18.0	
comp=E,2μm,0.3s							
BAYC				IAML		21 29 18.0	
comp=N,4μm,0.4s							
PAIG	**Paliouri**	**1.18**	**257**	P	**Pb**	**21 29 00.0**	**-0.7**
PAIG	**Paliouri**	**1.18**	**257**	P	**Pb**	**21 28 59.7**	**-0.9**
PAIG				AML	AML	21 29 22.8	
comp=E,2446μm,0.8s							
PAIG				AML	AML	21 29 24.5	
comp=N,1791μm,0.8s							
LPK	**Lapseki**	**1.22**	**82**	PN	**Pn**	**21 29 00.9**	**-0.5**
PRK	**Paraskevi**	**1.28**	**138**	P	**Pg**	**21 29 03.4**	**+0.7**
PRK				S	**Sb**	**21 29 18.2**	**-0.8**
comp=N,9μm,0.5s							
PRK	**Paraskevi**	**1.28**	**138**	P	**Pg**	**21 29 03.2**	**+0.5**
PRK				S	**Sb**	**21 29 18.2**	**-0.8**
PRK				AML	AML	21 29 25.4	
comp=N,17344μm,0.5s							
PRK				AML	AML	21 29 27.2	
comp=E,18828μm,0.4s							
KESN	**Edirne-Kesan**	**1.30**	**61**	⇑*i* P	**Pn**	**21 29 01.2**	**-1.7**
KESN				*i* S	**Sg**	**21 29 19.8**	**-0.3**
KESN				IAML		21 29 23.0	
comp=E,3μm,0.2s							
KESN				IAML		21 29 27.0	
comp=N,3μm,0.6s							
PLG	**Polygyros**	**1.33**	**278**	P	**Pn**	**21 29 02.5**	**-0.4**
PLG	**Polygyros**	**1.33**	**278**	P	**Pn**	**21 29 02.6**	**-0.4**
PLG				AML	AML	21 29 25.7	
comp=E,3658μm,0.9s							
PLG				AML	AML	21 29 29.3	
comp=N,3351μm,0.7s							
SKY	**Skiros Island**	**1.41**	**200**	P	**Pn**	**21 29 03.4**	**-0.6**
SKY	**Skiros Island**	**1.41**	**200**	P	**Pn**	**21 29 03.4**	**-0.6**
SKY				AML	AML	21 29 31.3	
comp=E,4930μm,0.8s							
SKY				AML	AML	21 29 32.8	
comp=N,4177μm,0.6s							
UKOP	**Uzunkopru-Edir**	**1.44**	**50**	PN	**Pn**	**21 29 04.1**	**-0.3**
KDZ	**Kurdzhali**	**1.45**	**7**	*i* P	**Pn**	**21 29 03.5**	**-1.1**
KDZ	**Kurdzhali**	**1.45**	**7**	PN	**Pn**	**21 29 03.3**	**-1.3**
ALNA	**Alonissos**	**1.46**	**224**	P	**Pn**	**21 29 03.8**	**-0.9**
AYVA	**Ayvalik**	**1.47**	**127**	⇑*i* P	**Pb**	**21 29 05.5**	**-0.2**
AYVA				*i* S	**Sb**	**21 29 24.4**	**-0.1**
AYVA				IAML		21 29 30.0	
comp=N,4μm,0.5s							
AYVA				IAML		21 29 30.0	
comp=E,2μm,0.7s							
RZN	**Rozhen**	**1.52**	**347**	*i* P	**Pn**	**21 29 05.5**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.60**	**72**	PN	**Pn**	**21 29 05.3**	**-1.4**
SART	**Tekirdag**	**1.60**	**72**	⇑*i* P	**Pn**	**21 29 05.9**	**-0.8**
SART				*i* S	**Sg**	**21 29 30.0**	**+0.3**
SART				IAML		21 29 38.0	
comp=E,576nm,0.4s							
HORT	**Hortiatis**	**1.63**	**284**	P	**Pn**	**21 29 06.6**	**-0.5**
HORT	**Hortiatis**	**1.63**	**284**	P	**Pn**	**21 29 06.7**	**-0.5**
HORT				AML	AML	21 29 35.6	
comp=E,1394μm,0.9s							
HORT				AML	AML	21 29 45.9	
comp=N,1742μm,0.8s							
HORT	**Hortiatis**	**1.63**	**284**	PN	**Pn**	**21 29 06.8**	**-0.3**
KRBG	**Karabiga-Canak**	**1.63**	**83**	PN	**Pn**	**21 29 06.8**	**-0.2**
SKIA	**Skiathos**	**1.68**	**232**	P	**Pn**	**21 29 06.6**	**-1.1**
SKIA				S	**Sn**	**21 29 29.6**	**+0.3**
comp=N,2μm,1.0s							
SKIA	**Skiathos**	**1.68**	**232**	P	**Pn**	**21 29 06.5**	**-1.1**
SKIA				AML	AML	21 29 43.2	
comp=E,4621μm,0.8s							
SKIA				AML	AML	21 29 46.5	
comp=N,2725μm,1.2s							
THE	**Thessaloniki**	**1.74**	**285**	P	**Pn**	**21 29 08.2**	**-0.3**
THE	**Thessaloniki**	**1.74**	**285**	P	**Pn**	**21 29 07.8**	**-0.7**
THE				AML	AML	21 29 43.8	
comp=N,1049μm,1.0s							
THE				AML	AML	21 29 47.6	
comp=E,702μm,0.8s							
NEO	**Neokhori**	**1.75**	**240**	P	**Pn**	**21 29 07.7**	**-1.0**
NEO	**Neokhori**	**1.75**	**240**	P	**Pn**	**21 29 07.6**	**-1.0**
DKL	**Dikili**	**1.75**	**130**	PN	**Pb**	**21 29 09.6**	**-0.8**
MMB	**Musomiste**	**1.76**	**322**	*i* P	**Pn**	**21 29 08.2**	**-0.7**
KYMI	**Kymi, Euboea I**	**1.78**	**208**	P	**Pn**	**21 29 08.4**	**-0.7**
KYMI	**Kymi, Euboea I**	**1.78**	**208**	P	**Pn**	**21 29 08.4**	**-0.7**
KYMI				AML	AML	21 29 44.1	
comp=E,1860μm,1.0s							
KYMI				AML	AML	21 29 45.1	
comp=N,1672μm,1.2s							
KNL	**Balıkesir**	**1.80**	**87**	⇑*i* P	**Pn**	**21 29 09.5**	**+0.1**
KNL				*i* S	**Sb**	**21 29 34.4**	**+0.4**
KNL				IAML		21 29 36.0	
comp=N,2μm,0.6s							
KNL				IAML		21 29 37.0	
comp=E,2μm,0.8s							
DIM	**Dimitrovgrad**	**1.86**	**8**	*i* P	**Pn**	**21 29 09.9**	**-0.3**
MRMT	**Marmara Adasi**	**1.89**	**77**	PN	**Pn**	**21 29 09.5**	**-1.2**
ZEDA	**zmir-Bergama**	**1.92**	**130**	⇑*i* P	**Pn**	**21 29 11.8**	**+0.8**
ZEDA				*i* S	**Sg**	**21 29 40.5**	**+0.6**
ZEDA				IAML		21 29 43.0	
comp=E,1μm,0.4s							
ZEDA				IAML		21 29 44.0	
comp=N,1μm,0.4s							
PLD	**Plovdiv**	**1.93**	**350**	*i* P	**Pn**	**21 29 11.7**	**+0.7**
PLD	**Plovdiv**	**1.93**	**350**	PN	**Pn**	**21 29 11.8**	**+0.7**
GONE	**Gonen-Balikesi**	**1.93**	**94**	PN	**Pn**	**21 29 11.6**	**+0.5**
KRBN	**Karaburun**	**1.94**	**146**	PN	**Pn**	**21 29 11.6**	**+0.4**
BALY	**Balya**	**1.94**	**103**	⇑*i* P	**Pn**	**21 29 11.7**	**+0.4**
BALY				*i* S	**Sg**	**21 29 39.1**	**-1.2**
BALY				IAML		21 29 48.0	
comp=E,2μm,0.6s							
BALY				IAML		21 29 48.0	
comp=N,2μm,0.6s							
MRKA	**Markates**	**1.94**	**220**	P	**Pn**	**21 29 10.6**	**-0.6**
MRKA	**Markates**	**1.94**	**220**	P	**Pn**	**21 29 10.7**	**-0.6**
MRKA				AML	AML	21 29 48.0	
comp=N,2065μm,0.8s							
MRKA				AML	AML	21 29 51.6	
comp=E,1836μm,0.7s							
TKR	**Tekirdag**	**1.96**	**66**	PN	**Pn**	**21 29 10.7**	**-0.8**
KNT	**Kendrikon**	**1.98**	**300**	P	**Pn**	**21 29 11.8**	**0.0**
KNT	**Kendrikon**	**1.98**	**300**	P	**Pn**	**21 29 11.9**	**+0.1**
KNT				AML	AML	21 29 46.7	
comp=E,1591μm,0.6s							
KNT				AML	AML	21 29 46.8	
comp=N,1492μm,0.7s							
EDRB	**Edirne**	**2.02**	**35**	P	**Pn**	**21 29 11.4**	**-1.0**
EDRB				S	**Sn**	**21 29 36.1**	**-1.7**
comp=N,2μm,0.5s							
EDRB	**Edirne**	**2.02**	**35**	PN	**Pn**	**21 29 11.5**	**-1.0**
LIT	**Litokhoron**	**2.06**	**268**	P	**Pn**	**21 29 12.3**	**-0.6**
LIT	**Litokhoron**	**2.06**	**268**	P	**Pn**	**21 29 12.3**	**-0.6**
LIT	**Litokhoron**	**2.06**	**268**	Pn	**Pn**	**21 29 12.5**	**-0.5**
EDC	**Edincik**	**2.06**	**85**	PN	**Pn**	**21 29 13.1**	**+0.2**
CESE	**eme**	**2.07**	**155**	PN	**Pn**	**21 29 12.7**	**-0.3**
STEP	**BALIKESIR_Sava**	**2.13**	**112**	⇑*i* P	**Pn**	**21 29 14.7**	**+0.8**
STEP				*i* S	**Sb**	**21 29 43.9**	**+0.4**
STEP				IAML		21 29 54.0	
comp=E,2μm,0.7s							
STEP				IAML		21 29 54.0	
comp=N,2μm,0.7s							
KIRK	**Kırklareli**	**2.14**	**42**	⇑*i* P	**Pn**	**21 29 12.7**	**-1.4**
KIRK				*i* S	**Sg**	**21 29 47.5**	**+0.6**
KIRK				IAML		21 29 52.0	
comp=N,356nm,0.4s							
URLA	**Izmir**	**2.15**	**149**	PN	**Pn**	**21 29 14.9**	**+0.7**
URLA	**Izmir**	**2.15**	**149**	⇓*i* P	**Pn**	**21 29 14.8**	**+0.7**
URLA				*i* S	**Sn**	**21 29 40.1**	**-0.9**
URLA				IAML		21 29 53.0	
comp=E,314nm,0.7s							
URLA				IAML		21 29 55.0	
comp=N,311nm,0.6s							
CRLT	**Corlu**	**2.15**	**64**	PN	**Pn**	**21 29 13.9**	**-0.3**
BALB	**Balikesir**	**2.16**	**104**	PN	**Pn**	**21 29 14.7**	**+0.5**
KARY	**Karystos**	**2.25**	**195**	P	**Pn**	**21 29 15.0**	**-0.5**
KARY	**Karystos**	**2.25**	**195**	P	**Pn**	**21 29 15.0**	**-0.5**
VAY	**Valandovo**	**2.27**	**300**	*e*Pn	**Pn**	**21 29 16.0**	**+0.2**
VAY				*e*Sn	**Sb**	**21 29 46.4**	**-1.0**
VAY	**Valandovo**	**2.27**	**300**	*i* Pn	**Pn**	**21 29 16.0**	**+0.2**
VAY	**Valandovo**	**2.27**	**300**	*i* Pn	**Pn**	**21 29 16.0**	**+0.2**
BOTS	**Marmara Eregli**	**2.27**	**69**	PN	**Pn**	**21 29 15.3**	**-0.6**
PHSR	**Pinarhisar**	**2.28**	**51**	PN	**Pn**	**21 29 15.9**	**0.0**
KKB	**Krupnik**	**2.29**	**317**	*i* P	**Pn**	**21 29 15.8**	**-0.3**
LKR	**Lokris**	**2.29**	**228**	P	**Pn**	**21 29 15.6**	**-0.5**
LKR	**Lokris**	**2.29**	**228**	P	**Pn**	**21 29 15.6**	**-0.5**
BLCB	**Balcova**	**2.33**	**141**	P	**Pn**	**21 29 17.6**	**+1.0**
BLCB	**Balcova**	**2.33**	**141**	PN	**Pn**	**21 29 16.9**	**+0.3**
DION	**Dionisos Attik**	**2.34**	**205**	P	**Pn**	**21 29 16.0**	**-0.7**
DION	**Dionisos Attik**	**2.34**	**205**	P	**Pn**	**21 29 15.9**	**-0.9**
PTL	**Penteli**	**2.38**	**206**	P	**Pn**	**21 29 16.7**	**-0.7**
PTL	**Penteli**	**2.38**	**206**	P	**Pn**	**21 29 16.7**	**-0.7**
AXAR	**Agios Charalam**	**2.42**	**234**	P	**Pn**	**21 29 17.8**	**-0.1**
AXAR	**Agios Charalam**	**2.42**	**234**	P	**Pn**	**21 29 17.9**	**-0.1**
AKS	**Akhisar**	**2.43**	**122**	PN	**Pn**	**21 29 19.7**	**+1.6**
AKHS	**Akhisar**	**2.44**	**122**	*i* P	**Pn**	**21 29 18.9**	**+0.9**
AKHS				*i* S	**Sg**	**21 29 54.3**	**-2.0**
AKHS				IAML		21 29 58.0	
comp=E,480nm,0.6s							
KCTX	**Karacabey (Bur**	**2.44**	**88**	PN	**Pn**	**21 29 18.1**	**0.0**
PGB	**Panagyurishte**	**2.46**	**342**	*i* P	**Pn**	**21 29 18.2**	**-0.3**
VIL2	**Platees**	**2.48**	**217**	P	**Pn**	**21 29 18.7**	**-0.1**
ATHU	**Athens Univers**	**2.49**	**206**	P	**Pn**	**21 29 18.1**	**-0.7**
ATHU	**Athens Univers**	**2.49**	**206**	P	**Pn**	**21 29 17.9**	**-0.9**
JMM	**Yambol**	**2.49**	**25**	*i* P	**Pn**	**21 29 18.2**	**-0.7**
AGG	**Agios Georgios**	**2.50**	**243**	P	**Pn**	**21 29 18.5**	**-0.4**
AGG	**Agios Georgios**	**2.50**	**243**	P	**Pn**	**21 29 18.5**	**-0.4**
AGG	**Agios Georgios**	**2.50**	**243**		**Pn**	**21 29 18.9**	**0.0**
VILL	**Villia**	**2.50**	**216**	P	**Pn**	**21 29 18.5**	**-0.5**
ATH	**Athens Observa**	**2.50**	**207**	P	**Pn**	**21 29 18.8**	**-0.2**
ATH	**Athens Observa**	**2.50**	**207**	P	**Pn**	**21 29 18.9**	**-0.1**
ATH				AML	AML	21 30 13.8	
comp=N,1276μm,1.0s							
ATH				AML	AML	21 30 18.8	
comp=E,838μm,1.0s							
THL	**Klokotos Trika**	**2.52**	**256**	P	**Pn**	**21 29 18.8**	**-0.3**
THL	**Klokotos Trika**	**2.52**	**256**	P	**Pn**	**21 29 18.9**	**-0.2**
SLVT	**Silivri**	**2.52**	**65**	PN	**Pn**	**21 29 18.5**	**-0.8**
DGB	**zmir**	**2.53**	**148**	*i* P	**Pn**	**21 29 20.0**	**+0.7**
DGB				*i* S	**Sg**	**21 30 02.0**	**+2.6**
VLY	**Voula,Athens**	**2.59**	**205**	P	**Pn**	**21 29 19.3**	**-0.8**
VLY	**Voula,Athens**	**2.59**	**205**	P	**Pn**	**21 29 19.4**	**-0.8**
KZN	**Kozani**	**2.61**	**273**	P	**Pn**	**21 29 20.9**	**+0.4**
KZN	**Kozani**	**2.61**	**273**	P	**Pn**	**21 29 20.5**	**0.0**
DURS	**Dursunbey**	**2.61**	**102**	*i* P	**Pn**	**21 29 21.1**	**+0.6**
DURS				IAML		21 29 56.0	
comp=N,291nm,0.5s							
DURS				IAML		21 29 59.0	
comp=E,254nm,0.5s							
DURS				*i* S	**Sg**	**21 29 59.8**	**-2.2**
PROD	**Prodromos**	**2.63**	**223**	P	**Pn**	**21 29 20.2**	**-0.5**
PROD	**Prodromos**	**2.63**	**223**	P	**Pn**	**21 29 20.0**	**-0.7**
MAKR	**Makrakomi, Fth**	**2.64**	**244**	P	**Pn**	**21 29 20.9**	**+0.4**
MAKR	**Makrakomi, Fth**	**2.64**	**244**	P	**Pn**	**21 29 21.0**	**+0.2**
ELBA	**Catalca**	**2.65**	**68**	*i* P	**Pn**	**21 29 19.8**	**-1.2**
ELBA				*i* S	**Sg**	**21 30 01.2**	**-1.9**
CTYL	**Yalikoy Yolu**	**2.68**	**61**	PN	**Pn**	**21 29 21.2**	**-0.2**
DST	**Dursunbey**	**2.72**	**102**	PN	**Pn**	**21 29 22.3**	**+0.3**
CTKS	**Kestanelik-??a**	**2.73**	**67**	PN	**Pn**	**21 29 21.0**	**-1.1**
ELND	**Elena**	**2.77**	**11**	⇑P	**Pn**	**21 29 22.8**	**+0.2**
ELND	**Elena**	**2.77**	**11**		**Pn**	**21 29 22.8**	**+0.2**
LTK	**Loutraki**	**2.78**	**219**	P	**Pn**	**21 29 22.6**	**-0.2**
LTK	**Loutraki**	**2.78**	**219**	P	**Pn**	**21 29 22.6**	**-0.2**
LOUT	**Loutraki**	**2.80**	**218**	P	**Pn**	**21 29 22.8**	**-0.3**
LOUT	**Loutraki**	**2.80**	**218**	P	**Pn**	**21 29 22.7**	**-0.3**
SMG	**Samos**	**2.81**	**152**	P	**Pn**	**21 29 23.9**	**+0.6**
SMG	**Samos**	**2.81**	**152**	P	**Pn**	**21 29 23.8**	**+0.6**
VTS	**Vitosha**	**2.81**	**329**	*e*Pn	**Pn**	**21 29 24.1**	**+0.7**
VTS				*e*Sn	**Sb**	**21 30 00.8**	**-2.5**
VTS	**Vitosha**	**2.81**	**329**	⇑P	**Pn**	**21 29

ROIA	ROIAK	3.32	29	*i*	P	Pn	21 29 30.6	+0.3
SKO	Skopje	3.33	303	*i*	Pn	Pn	21 29 31.2	+0.9
SKO	Skopje	3.33	303	*i*	Pn	Pn	21 29 31.2	+0.9
AMGA	Amorgos Island	3.42	170		P	Pn	21 29 31.6	0.0
AMGA	Amorgos Island	3.42	170		P	Pn	21 29 31.3	-0.3
PRD	Provadia	3.42	28	*i*	P	Pn	21 29 31.0	-0.6
OHR	Ohrid	3.45	287	*i*	Pn	Pn	21 29 33.0	+1.0
OHR	Ohrid	3.45	287	*i*	Pn	Pn	21 29 33.0	+1.0
IOSP	Ios island	3.48	178		P	Pn	21 29 32.1	-0.3
PDO	Prodromos	3.48	244		P	Pn	21 29 34.3	+1.8
PDO	Prodromos	3.48	244		P	Pn	21 29 33.4	+0.9
RAZG	Razgrad	3.50	16	⇑	P	Pn	21 29 32.8	+0.1
RAZG	Razgrad	3.50	16		Pn	Pn	21 29 32.8	+0.1
TRIP	Tripoli	3.51	221		P	Pn	21 29 33.2	+0.3
TRIP	Tripoli	3.51	221		P	Pn	21 29 33.1	+0.3
GDZ	Gediz	3.51	107	*i*	P	Pn	21 29 33.1	+0.1
DRO	Drossia	3.51	231		P	Pn	21 29 33.6	+0.7
DRO	Drossia	3.51	231		P	Pn	21 29 32.8	-0.2
BODT	Bodrum	3.56	151		P	Pn	21 29 34.6	+1.1
VLX	Vlachokerasia	3.58	219		P	Pn	21 29 34.3	+0.4
VLX	Vlachokerasia	3.58	219		P	Pn	21 29 34.1	+0.2
RLS	Riolos of Patr	3.59	235		P	Pn	21 29 37.9	+3.9
ZAPS	Zavoj	3.60	329	*e*	Pn	Pn	21 29 36.1	+1.9
ZAPS				*e*	Sn	Sn	21 30 17.0	+0.1
BDRM	Kayabasi	3.61	150	*i*	P	Pn	21 29 35.5	+1.3
BARS	Barje	3.63	317	*e*	Pn	Pn	21 29 35.0	+0.5
BARS	Barje	3.63	317	*e*	Pn	Pg	21 29 46.1	-1.5
BARS				*e*	Sn	Sn	21 30 20.2	+2.8
IGT	Igoumenitsa	3.79	261		P	Pn	21 29 40.0	+3.3
AMT	Artemida-Makis	3.80	226		P	Pn	21 29 40.7	+3.8
KHAL	Karahalli	3.82	117	*i*	P	Pn	21 29 38.7	+1.5
VLAD	Vladila	3.83	352	⇑	P	Pn	21 29 37.8	+0.6
VLAD	Vladila	3.83	352		Pn	Pn	21 29 37.8	+0.6
EVGI	Lefkada island	3.84	247		P	Pn	21 29 40.2	+2.8
ANAF	Anafi Island	3.87	173		P	Pn	21 29 37.5	-0.4
VLI	Veliai	3.90	207		P	Pn	21 29 38.0	-0.2
VLI	Veliai	3.90	207		P	Pn	21 29 37.8	-0.5
YER	Yerkesik	3.92	141		P	Pn	21 29 39.8	+1.3
KAND	Kocaeli-Kandir	3.92	75	*i*	P	Pn	21 29 37.8	-0.6
GEYV	SAKARYA_Geyve	3.92	84	*i*	P	Pn	21 29 38.8	+0.2
COPA	Copaceanca	3.92	0	⇓	P	Pn	21 29 38.7	+0.2
COPA	Copaceanca	3.92	0			Pn	21 29 38.7	+0.2
ITM	Ithomi	3.95	221			Pn	21 29 39.7	+0.8
SGRR	Singureni	4.06	8	⇓	P	Pn	21 29 40.5	+0.2
SGRR	Singureni	4.06	8		P	Pn	21 29 40.5	+0.2
BORA	Eskisehir	4.07	93	*i*	P	Pn	21 29 41.2	+0.6
KEK	Kerkira	4.16	265		P	Pn	21 29 44.8	+3.0
KEK	Kerkira	4.16	265		P	Pn	21 29 43.4	+1.6
SRCK	Saricakaya, Es	4.18	91	*i*	P	Pn	21 29 42.7	+0.6
TIR	Tirane	4.19	287	⇑	P	Pn	21 29 44.5	+2.3
TIR	Tirane	4.19	287			Pn	21 29 44.8	-0.4
ZAGS	Zajecar	4.22	330	*e*	Pn	Pn	21 29 42.3	-0.2
ZAGS				*e*	Sn	Sn	21 30 34.5	+2.6
PYL	PYLOS	4.26	220		P	Pn	21 29 44.7	+1.5
PYL	PYLOS	4.26	220		P	Pn	21 29 44.1	+0.9
SELS	Selova	4.27	316	*e*	Pn	Pn	21 29 43.1	-0.3
TURN	Turunc	4.28	140	*i*	P	Pn	21 29 43.4	0.0
BOVS	Bovan	4.29	324	*e*	Pn	Pn	21 29 45.3	+1.7
HUMR	Humele	4.32	358	⇓	P	Pn	21 29 44.0	0.0
HUMR	Humele	4.32	358			Pn	21 29 44.0	0.0
ICOR	Ion Corvin	4.37	26	⇑	P	Pn	21 29 44.8	+0.2
ICOR	Ion Corvin	4.37	26			Pn	21 29 44.8	+0.2
PUNG	Punghina	4.39	338	⇑	P	Pn	21 29 45.1	+0.1
PUNG	Punghina	4.39	338			Pn	21 29 45.1	+0.1
MANR	Mangalia	4.41	34	⇓	P	Pn	21 29 44.8	-0.4
MANR	Mangalia	4.41	34			Pn	21 29 44.8	-0.4
SUR		4.54	10	⇑	P	Pn	21 29 47.9	+0.9
SULR		4.54	10			Pn	21 29 47.9	+0.9
ANKY	Antikythira Is	4.58	199		P	Pn	21 29 47.2	-0.3
PVY	Plav	4.59	303	⇓	*i*	Pn	21 29 48.2	+0.4
PVY					*i*	Sn	21 30 40.3	-1.0
MDUB	Mudurnu	4.61	85		Pn	Pn	21 29 48.4	+0.3
CVDA	Cernavoda	4.64	26	⇑	P	Pn	21 29 49.0	+0.7
CVDA	Cernavoda	4.64	26			Pn	21 29 49.0	+0.7
MFTR	Murfatlar	4.64	30	⇓	P	Pn	21 29 48.5	+0.1
MFTR	Murfatlar	4.64	30			Pn	21 29 48.5	+0.1
EFOR	EFORIE	4.64	32	⇑	P	Pn	21 29 48.3	-0.1
EFOR	EFORIE	4.64	32			Pn	21 29 48.3	-0.1
FETY	Fethiye	4.71	138		P	Pn	21 29 51.7	+2.4
IVA	Berane	4.77	306	⇑	*i*	Pn	21 29 50.7	+0.4
IVA					*i*	Sn	21 30 43.9	-1.9
ISP	Isparta	4.80	118		Pn	Pn	21 29 51.8	+1.1
ULC	Ulcinj	4.81	293	⇓	*i*	Pn	21 29 51.5	+0.7
ULC					*i*	Sn	21 30 44.9	-1.7
TLBR	Topalu	4.83	25	⇑	P	Pn	21 29 51.5	+0.2
TIRR	Tirgusor	4.88	28	⇓	P	Pn	21 29 51.5	-0.2
TIRR	Tirgusor	4.88	28	⇓	P	Pn	21 29 51.5	-0.2
TIRR	Tirgusor	4.88	28			Pn	21 29 51.5	-0.2
TIRR	Tirgusor	4.88	28		Pn	Pn	21 29 51.8	+0.2
TIRR						Sn	21 30 45.5	-2.6
KARP	Karpathos	4.91	161		P	Pn	21 29 52.8	+0.6
KARP	Karpathos	4.91	161			Pn	21 29 50.4	-1.8
IDI	Anoyia	4.92	183		Pn	Pn	21 29 52.3	+0.1
	comp=E,0.8nm,0.3s,baz=280,slow=2.8,SNR=9.2							
IDI					Sn	Sn	21 30 47.4	-1.9
	comp=E,0.5nm,0.3s,baz=45,slow=20,SNR=1.9							
IDI	Anoyia	4.92	183	⇑	P	Pn	21 29 52.6	+0.4
IDI	Anoyia	4.92	183			Pn	21 29 50.5	-1.8
HARR	Harsova	4.92	24	⇑	P	Pn	21 29 52.3	+0.1
HARR	Harsova	4.92	24			Pn	21 29 52.3	+0.1
DRME	Dracevica, Mon	4.93	296	*e*	Pn	Pn	21 29 54.4	+2.0
DRME	Dracevica, Mon	4.93	296	⇑	*i*	Pn	21 29 52.9	+0.5
DRME					*i*	Sn	21 30 48.7	-0.9
SJES	Sjenica	4.94	310	*e*	Pn	Pn	21 29 53.5	+0.8
GRUS	Gruza	4.95	319	*e*	Pn	Pn	21 29 52.9	+0.2
GRUS				*e*	Sn	Sn	21 30 49.6	-0.5
PDG	Podgorica	4.98	298	⇑	P	Pn	21 29 55.2	+2.2
PDG	Podgorica	4.98	298	*e*	Pn	Pn	21 29 54.9	+1.9
PDG	Podgorica	4.98	298		Pn	Pn	21 29 53.7	+0.7
TTG	Podgorica	4.98	298	⇓	*i*	Pn	21 29 53.7	+0.7
TTG					*i*	Sn	21 30 49.7	-1.0
KOME	Kolasin	5.00	304	⇓	*i*	Pn	21 29 54.1	+0.7
KOME					*i*	Sn	21 30 50.0	-1.4
ISR	Istrita	5.01	11	⇓	P	Pn	21 29 54.9	+1.4
ISR	Istrita	5.01	11			Pn	21 29 54.9	+1.4
MTUR	Matau	5.02	359	⇓	P	Pn	21 29 54.2	+0.6
MTUR	Matau	5.02	359			Pn	21 29 54.2	+0.6
ELL	Elmali	5.07	131			Pn	21 29 52.9	-1.6
HERR	Herculane	5.09	337	⇓	P	Pn	21 29 54.3	-0.3
HERR	Herculane	5.09	337			Pn	21 29 54.3	-0.3
SCTE	Santa Cesarea	5.14	271		Pn	Pn	21 29 55.1	-0.2
ARR	Arges	5.17	356	⇓	P	Pn	21 29 55.8	0.0
ARR	Arges	5.17	356			Pn	21 29 55.8	0.0
BUM	Brajici-Budva	5.17	296	⇓	*i*	Pn	21 29 56.2	+0.4
BUM					*i*	Sn	21 30 53.5	-2.1
VOIR		5.23	359	⇓	P	Pn	21 29 56.8	+0.3
VOIR		5.23	359			Pn	21 29 56.8	+0.3
TOPG	Topolog	5.23	26	⇓	P	Pn	21 29 56.3	-0.2
CEME	Cevo	5.25	298	⇑	*i*	Pn	21 29 57.3	+0.4
CEME					*i*	Sn	21 30 55.5	-2.1
MLR	Muntele Rosu	5.31	6		Pn	Pn	21 29 58.6	+0.9
	comp=E,4.9nm,0.3s,baz=222,slow=4.4,SNR=125							
MLR					Lg	Lg	21 31 27.7	
	baz=102,slow=20,SNR=2.1							
MLR	Muntele Rosu	5.31	6	⇑	P	Pn	21 29 58.8	+1.1
MLR	Muntele Rosu	5.31	6		Pn	Pn	21 29 58.8	+1.1
JURR	Jurilovca	5.31	30	⇓	P	Pn	21 29 56.7	-0.9
NKY	Niksic	5.32	301	⇓	*i*	Pn	21 29 58.4	+0.6
NKY					*i*	Sn	21 30 57.0	-2.3
NKME	Niksic	5.33	301	⇑	*i*	Pn	21 29 58.3	+0.5
NKME					*i*	Sn	21 30 57.1	-2.2
PLE	Pljevlja	5.33	308	⇑	*i*	Pn	21 29 58.4	+0.4
PLE					*i*	Sn	21 30 58.0	-1.6
TRUS	Trudelj	5.35	320	*e*	Pn	Pn	21 29 57.7	-0.4
CFR	Carcaliu	5.42	23	⇓	P	Pn	21 29 58.9	-0.2
CFR	Carcaliu	5.42	23			Pn	21 29 58.9	-0.2
BISRR	Bisoca	5.46	11	⇓	P	Pn	21 30 01.4	+1.8
DIVS	Divibare	5.47	317	*e*	Pn	Pn	21 29 59.9	0.0
DIVS				*e*	Sn	Sn	21 31 03.5	+0.5
DIVS	Divibare	5.47	317	*e*	Pn	Pn	21 29 59.3	-0.6
DIVS	Divibare	5.47	317		Pn	Pn	21 30 00.1	+0.2
HCY	Herceg Novi	5.50	296	*e*	Pn	Pn	21 30 04.2	+3.9
HCY	Herceg Novi	5.50	296	⇓	*i*	Pn	21 30 01.1	+0.8
HCY					*i*	Sn	21 31 01.5	-2.2
RUDO	Rudo	5.51	310	*e*	Pn	Pn	21 29 59.3	-1.0
UPM	Unac-Piva	5.56	305	*e*	Pn	Pn	21 30 03.0	+1.7
UPM	Unac-Piva	5.56	305	⇑	*i*	Pn	21 30 01.7	+0.4
UPM					*i*	Sn	21 31 02.6	-2.8
BBLS	Lazi?i	5.64	312	*e*	Pn	Pn	21 30 02.3	+0.1
BBLS	Lazi?i	5.64	312	*e*	Pn	Pn	21 30 06.0	+3.8
TLCR		5.65	27	⇓	P	Pn	21 30 02.5	+0.3
TLCR		5.65	27			Pn	21 30 02.5	+0.3
BRY	Bratogost	5.66	301	*e*	Pn	Pn	21 30 05.2	+2.7
BRY	Bratogost	5.66	301	⇓	*i*	Pn	21 30 02.9	+0.4
BRY					*i*	Sn	21 31 05.0	-2.7
TUDR		5.69	18	⇑	P	Pn	21 30 02.9	+0.2
TUDR		5.69	18			Pn	21 30 02.9	+0.2
TREB	Trebinje	5.71	298	*e*	Pn	Pn	21 30 06.8	+3.8
ODBI	Odobesti	5.72	13	⇓	P	Pn	21 30 05.2	+2.0
PLOR	Plostina	5.74	10	⇑	P	Pn	21 30 04.6	+1.1
PLOR	Plostina	5.74	10			Pn	21 30 04.6	+1.1
DOPR	Dopca	5.76	1	⇓	P	Pn	21 30 05.0	+1.2
DOPR	Dopca	5.76	1			Pn	21 30 05.0	+1.2
VRI	Vrincioaia	5.77	11	⇓	P	Pn	21 30 05.2	+1.3
VRI	Vrincioaia	5.77	11			Pn	21 30 05.2	+1.3
DBRK	Dubrovnik	5.83	297	*i*	P	Pn	21 30 06.2	+1.6
BR231	Keskin MP Arra	5.85	91			Pn	21 30 05.6	+0.5
ANTO	Ankara	5.86	91		Pn	Pn	21 30 04.5	-0.7
DEV	Deva	5.91	344	⇓	P	Pn	21 30 06.7	+0.9
DEV	Deva	5.91	344			Pn	21 30 06.7	+0.9
MDB	Medias	5.96	355	⇑	P	Pn	21 30 08.3	+1.8
MDB	Medias	5.96	355			Pn	21 30 08.3	+1.8
VARL	Varlezi	6.02	18	⇑	P	Pn	21 30 08.6	+1.4
TEKS	Tekeris	6.02	318	*e*	Pn	Pn	21 30 06.7	-0.7
STON	Ston	6.21	298	*e*	Pn	Pn	21 30 15.3	+5.4
STON	Ston	6.21	298	*i*	P	Pn	21 30 14.6	+4.8
BIR	Birlad	6.31	16	⇓	P	Pn	21 30 12.4	+1.0
BIR	Birlad	6.31	16			Pn	21 30 12.4	+1.0
FRGS	Fruska Gora	6.33	323	*e*	Pn	Pn	21 30 16.4	+4.8
TESR	Tescani	6.39	9	⇑	P	Pn	21 30 13.1	+0.6
TESR	Tescani	6.39	9			Pn	21 30 13.1	+0.6
BR131	Keskin Array S	6.52	92		Pn	Pn	21 30 15.1	+0.7
BRTR	Keskin Array B	6.52	92		Pn	Pn	21 30 14.7	+0.3
	comp=E,1.8nm,0.3s,baz=267,slow=12,SNR=73							
BRTR					Lg	Lg	21 32 04.1	
	baz=265,slow=32,SNR=1.7							
BRTR					LR	LR	21 32 42.3	
	comp=E,40nm,21.9s,baz=265,slow=37							
ILGA	Ilgaz	6.55	80		Pn	Pn	21 30 14.0	-0.9
TIP	Timpagrande	6.57	264	⇓	P	Pn	21 30 16.2	+1.2
TIP	Timpagrande	6.57	264		Pn	Pn	21 30 14.6	-0.4
SIRR	Siria	6.58	338	⇓	P	Pn	21 30 14.9	-0.1
SIRR	Siria	6.58	338			Pn	21 30 14.9	-0.1
LEOM	Leova	6.65	19	⇓	P	Pn	21 30 16.7	+0.7
LEOM	Leova	6.65	19			Pn	21 30 16.7	+0.7
VASR	Vaslui	6.71	16	⇑	P	Pn	21 30 17.3	+0.5
BIZ	Bicaz	6.76	5	⇓	P	Pn	21 30 19.1	+1.5
BIZ	Bicaz	6.76	5			Pn	21 30 19.1	+1.5
MAKA	Makarska	6.83	299	*i*	P	Pn	21 30 18.9	+0.5
RICI	Ricice	6.84	301		P	Pn	21 30 20.1	+1.5
PRAR	RASCA	7.19	6	⇑	P	Pn	21 30 25.1	+1.7
PRAR	RASCA	7.19	6			Pn	21 30 25.1	+1.7
MILM	Milestii Mici	7.21	20	⇓	P	Pn	21 30 23.8	+0.2
MILM	Milestii Mici	7.21	20			Pn	21 30 23.8	+0.2
KIS	Kishinev	7.28	20	⇓	*i*	P	21 30 26.0	+1.4
	comp=E,110nm,1.4s							
KIS					*e*	S	21 31 50.0	+2.6
KIS					LRM	MLR	21 33 54.0	
	comp=E,400nm,6.0s							
BURAR	Bucovina Array	7.41	0	⇑	P	Pn	21 30 28.0	+1.6
BURAR	Bucovina Array	7.41	0			Pn	21 30 28.0	+1.6
BUR08	Bucovina Ar. S	7.43	0		Pn	Pn	21 30 27.6	+0.7
BLY	Banja Luka	7.45	310	*e*	Pn	Pn	21 30 27.1	+0.2
KIJV	Kijevo	7.54	303	*i*	P	Pn	21 30 28.5	+0.3
MORH	Mrgy, Hungar	7.67	324	*e*	Pn	Pn	21 30 29.3	-0.6
ZIRJ	Zirje	7.89	299	*i*	P	Pn	21 30 34.0	+1.0
MORI	Morici	7.94	301	*i*	P	Pn	21 30 34.2	+0.6
PAOL	Paolisi	8.11	279		Pn	Pn	21 30 37.1	+1.0
SORM	Soroca	8.25	15	⇑	P	Pn	21 30 37.0	-0.8
DUGI	Dugi Otok	8.42	300	*i*	P	Pn	21 30 40.8	+0.5
INTR	Introdacqua	8.70	286		Pn	Pn	21 30 42.9	-1.3
NVLJ	Novalja	8.78	303	*i*	P	Pn	21 30 45.6	+0.5
OZLJ	Ozalj	8.94	310	*i*	P	Pn	21 30 49.9	+2.6
CRES	Cresnjev	9.06	311	*e*	Pn	Pn	21 30 50.0	+0.9
NRCA	Norcia	9.42	290		Pn	Pn	21 30 54.1	0.0
VYHS	Vyhne	9.44	333	*e*	PN	Pn	21 30 53.8	-0.5
WDD	Wied Dalam	9.47	246		Pn	Pn	21 30 54.2	-0.4
CEY	Cerknica	9.62	309	*e*	Pn	Pn	21 30 58.5	+1.8
MURB	Monte Urbino	9.94	292		Pn	Pn	21 31 00.5	-0.6
OBKA	Obir	9.97	313	*e*	Pn	Pn	21 31 01.8	+0.2
	comp=E,2.6nm,0.4s							
CONA	Conrad Observa	10.21	322	*e*	Pn	Pn	21 31 05.5	+0.5
	comp=E,1.5nm,0.6s							
AKASG	Malin Array Be	10.87	14		Pn	Pn	21 31 12.6	-1.1
	comp=E,1.8nm,0.3s,baz=196,slow=13,SNR=7.9							
AKBB	Malin Array Si	10.87	14			Pn	21 31 11.5	-2.3
MMAI	Mount Meron Ar	10.91	128		Pn	Pn	21 31 15.4	+1.0
	comp=E,0.7nm,0.3s,baz=322,slow=12,SNR=7.0							
MMAI					Sn	Sn	21 33 11.5	-5.1
	comp=E,0.3nm,0.3s,baz=306,slow=26,SNR=1.7							
MMAI					LR	LR	21 37 12.2	
	comp=E,48nm,18.8s,baz=245,slow=47							
MOA	Molln	10.95	318	*i*	Pn	Pn	21 31 15.3	+0.4
	comp=E,1.0nm,0.5s							
KBA	Koelnbreinsper	10.98	313	*e*	Pn	Pn	21 31 17.4	+1.9
	comp=E,2.5nm,0.8s							
ABTA	Absbach	11.28	310	*e*	Pn	Pn	21 31 20.9	+1.4
	comp=E,4.6nm,0.6s,SNR=6.3							
CTI	Castel Tesino	11.47	305		Pn	Pn	21 31 22.3	+0.2
GERES	GERESS Array B	11.89	320		LR	LR	21 36 15.7	
	comp=E,34nm,19.1s,baz=238,slow=39							
WTTA	Wattenberg	12.06	310	*i*	Pn	Pn	21 31 33.4	+3.1
	comp=E,2.2nm,0.4s							
WATA	Walderalm	12.13	310	*e*	Pn	Pn	21 31 34.1	+2.9
	comp=E,1.0nm,0.3s							
SQTA	Sankt Quirin	12.29	309	*i*	Pn	Pn	21 31 34.7	+1.4
	comp=E,4.2nm,0.6s							
MOTA	Moosalm	12.41	310	*e*	Pn	Pn	21 31 36.5	+1.5
	comp=E,2.4nm,0.6s							
FETA	Feichten	12.48	308	*e*	Pn	Pn	21 31 38.0	+2.1
	comp=E,1.9nm,0.5s							
FUORN	Ofenpass-Fuorn	12.59	306		Pn	Pn	21 31 38.7	+1.2
DAVOX	Davos/Dischmat	12.89	306		Pn	Pn	21 31 43.0	+1.3
	comp=E,0.4nm,0.3s,baz=140,slow=15,SNR=15							
DAVOX					LR	LR	21 37 36.2	
	comp=E,78nm,21.3s,baz=110,slow=42							
BNI	Bardonecchia	14.44	296		Pn	Pn	21 32 01.8	-1.0
HFS	Hagfors	21.20	344		LR	LR	21 42 33.0	
	comp=E,64nm,19.4s,baz=182,slow=39							
FINES	FINESS Array B	21.27	1		P	P	21 33 25.1	+0.6
	comp=E,1.6nm,0.5s,baz=170,slow=12,SNR=9.1							
FINES					LR	LR	21 42 21.2	
	comp=E,76nm,19.9s,baz=210,slow=39							
ESDC	Sonseca Array	22.31	278		P	P	21 33 35.2	-0.7
	comp=E,1.6nm,0.8s,baz=71,slow=10,SNR=9.2							
NOA	NORAR Array B	22.56	342		P	P	21 33 37.4	-1.0
	comp=E,0.6nm,0.6s,baz=145,slow=9.2,SNR=3.9							
NOA					LR	LR	21 43 04.3	
	comp=E,15nm,18.6s,baz=145,slow=38							
KIRV	Kirov	24.00	32		LR	LR	21 44 40.0	
	comp=E,34nm,18.7s,baz=336,slow=40							
EKA	Eskdalemuir Ar	24.09	318		P	P	21 33 53.5	-0.2
	comp=E,0.7nm,0.6s,baz=125,slow=9.6,SNR=4.0							
AKTO	Aktyubinsk	25.06	55		LR	LR	21 46 39.6	
	comp=E,38nm,18.6s,baz=260,slow=43							
ARU	Arti	27.14	42		P	P	21 34 23.8	+2.5
	comp=E,0.9nm,0.7s,baz=213,slow=10,SNR=4.7							
ARU					LR	LR	21 45 21.8	
	comp=E,38nm,21.6s,baz=233,slow=37							
TORD	Torodi Ar. Bea	33.94	224		P	P	21 35 22.2	+0.4
	comp=E,0.8nm,0.7s,baz=37,slow=9.3,SNR=5.5							
KURBB	Kurchatov Arra	38.11	56		P	P	21 35 58.1	+0.9
	comp=E,1.0nm,0.9s,baz=284,slow=7.5,SNR=3.0							
SPITS	Spitsbergen Ar	38.25	357		LR	LR	21 51 46.5	
	comp=E,40nm,19.9s,baz=215,slow=36							
MAKZ	Makanchi	40.94	61		P	P	21 36 22.3	+1.4
MAKZ					IAmb	IAmb	21 36 30.8	
	comp=Z,1.0nm,0.9s							
MK31	Makanchi Array	41.16	61		P	P	21 36 23.8	+1.2
MK31					IAmb	IAmb	21 36 29.7	
	comp=Z,2.2nm,0.6s							
MKAR	Makanchi Array	41.16	61		P	P	21 36 23.6	+0.9
	comp=Z,1.2nm,0.6s,baz=270,slow=7.9,SNR=15							
MKAR					LR	LR	21 56 22.0	
	comp=Z,22nm,18.9s,baz=283,slow=40							
ZAA0	Zalesovo Array	41.63	50		P	P	21 36 27.3	+0.9
ZAA0					IAmb	IAmb	21 36 33.1	
	comp=Z,3.0nm,0.7s							
ZALV	Zalesovo Beam	41.63	50		P	P	21 36 26.9	+0.6
	comp=Z,1.0nm,0.5s,baz=258,slow=8.5,SNR=6.8							
ZALV					LR	LR	21 55 17.8	
	comp=Z,23nm,18.7s,baz=66,slow=38							
NRIK	Noril'sk	43.35	27		LR	LR	21 55 20.1	
	comp=Z,28nm,21.0s,baz=311,slow=37							
WMQ	Urumqi	45.62	64	*e*	P	P	21 36 59.0	+0.3
WMQ					sP	sP	21 37 08.3	+6.1
WMQ					pmax	pmax		
	comp=Z,46nm,0.9s							
WMQ					pmax	pmax		
	comp=Z,190nm,3.7s							
WMQ					LR	LR		
	comp=N,120nm,8.5s							
WMQ					LR	LR		
	comp=E,130nm,9.7s							
WMQ					LR	LR		
	comp=Z,110nm,24.3s							
SONM	Songino Array	56.36	53		P	P	21 38 20.6	+1.0
	comp=Z,0.1nm,0.3s,baz=307,slow=5.2,SNR=2.0							
SONM					LR	LR	22 03 33.7	
	comp=Z,31nm,19.8s,baz=263,slow=37							
LZH	Lanzhou	60.07	66	*e*	P	P	21 38 45.0	-0.7
LZH					pP	pP	21 38 48.5	+0.2
LZH					sP	sP	21 38 49.8	+0.5
LZH				*e*	PP	PP	21 40 59.3	+1.4
LZH					pmax	pmax		
	comp=Z,17nm,1.3s							
LZH					pmax	pmax		
	comp=Z,48nm,7.8s							
HHC	Hu-ho-hao-te	62.90	58	*e*	P	P	21 39 07.0	+2.3
HHC					pmax	pmax		
	comp=Z,6.0nm,0.8s							
HHC					pmax	pmax		
	comp=Z,59nm,8.2s							
CMAR	Chiang Mai Arr	66.08	86		P	P	21 39 25.9	+0.2
	comp=Z,0.3nm,0.2s,baz=295,slow=7.2,SNR=4.8							
CMAR					LR	LR	22 13 32.2	
	comp=Z,108nm,18.6s,baz=197,slow=41							
BOSA	Boshof	68.47	180		LR	LR	22 10 34.5	
	comp=Z,116nm,18.3s,baz=90,slow=37							
TXAR	Lajitas Array	96.08	317		LR	LR	22 27 31.3	
	comp=Z,38nm,18.3s,baz=0.0,slow=37							
ASAR	Alice Springs	118.83	98		PKP	PKPdf	21 47 26.9	-0.2
	comp=Z,0.4nm,0.8s,baz=339,slow=1.6,SNR=2.1							

*IDC **26** 21:30:13.7±2.5, 6°.77S×154°.65E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.6/40, mbtmp3.7/6, ML4.1/1, MS3.1/2, Ms1 3.1/2, ms1mx2.5/35, Error ellipse: s-maj=69.5km s-min=30.3km az=104.0*

**ISC 26 21:30:21.0±1.7, 6.7S±0°.2×154°.3E±0°.3, h39km, n9, σ0s

A21	**Saint Andre**	**1.68 221**	PN	**Pn**	**21 34 17.2 +1.4**
A21			SN	**Sb**	**21 34 38.2 -1.1**
A21			Trac		21 34 40.5
	comp=Z,546nm,0.2s				
A64	**Saint Simeon**	**1.68 228**	PN	**Pn**	**21 34 17.1 +1.2**
A64			SN	**Sb**	**21 34 40.5 +1.1**
A64			Trac		21 34 44.6
	comp=Z,171nm,0.1s				
D63A	**Stockholm**	**1.94 181**	P	**Pn**	**21 34 20.9 +1.5**
	baz=1.8				
D63A			S	**Sn**	**21 34 44.4 +1.7**
	baz=1.8				
D62A	**Allapoint, All**	**2.01 200**	P	**Pn**	**21 34 21.8 +1.5**
	baz=20,SNR=98				
D62A			S	**Sb**	**21 34 47.3 -1.5**
	baz=20				
D62A	**Allapoint, All**	**2.01 200**	Pn	**Pn**	**21 34 22.1 +1.8**
D62A				**Sb**	**21 34 47.3 -1.5**
LMQ	**La Malbaie**	**2.09 228**	PN	**Pn**	**21 34 22.6 +1.1**
LMQ			SN	**Sb**	**21 34 49.3 -1.8**
LMQ			Trac		21 34 56.0
	comp=Z,162nm,0.1s				
BATG	**Bathurst New B**	**2.16 141**	PN	**Pn**	**21 34 23.3 +0.9**
BATG			SN	**Sn**	**21 34 49.3 +1.2**
BATG			Trac		21 34 54.9
	comp=Z,46nm,0.1s				
BATG	**Bathurst New B**	**2.16 141**	Pn	**Pn**	**21 34 23.5 +1.1**
BATG				**Pb**	**21 34 26.5 -0.3**
BATG				**Sn**	**21 34 49.4 +1.2**
D61A	**St Aubert, Com**	**2.28 220** ⇓	PN	**Pn**	**21 34 25.5 +1.4**
D61A	**St Aubert, Com**	**2.28 220**	P	**Pn**	**21 34 25.5 +1.4**
	baz=39				
D61A			Sb	**Sb**	**21 34 58.1 +1.6**
	baz=39				
PQI	**Presque Isle**	**2.31 179**	Pn	**Pn**	**21 34 25.7 +1.3**
PQI			SN	**Sn**	**21 34 52.8 +1.1**
DAQ	**Lac Daran**	**2.35 246**	PN	**Pn**	**21 34 26.1 +1.0**
DAQ			SN	**Sn**	**21 34 53.8 +0.7**
DAQ			Trac		21 35 05.2
	comp=Z,203nm,0.2s				
E62A	**Clayton Lake**	**2.56 203**	P	**Pn**	**21 34 30.0 +2.1**
	baz=23,SNR=57				
E62A			Sb	**Sb**	**21 35 05.7 +1.2**
	baz=23				
E62A	**Clayton Lake**	**2.56 203**	Pn	**Pn**	**21 34 29.8 +2.0**
E62A				**Sn**	**21 34 57.9 -0.1**
E64A	**Bridgewater**	**2.56 177**	P	**Pn**	**21 34 28.9 +1.0**
	baz=357				
E64A			S	**Sn**	**21 34 58.4 +0.3**
	baz=357				
E63A	**Oxbow**	**2.57 186**	P	**Pn**	**21 34 29.2 +1.2**
	baz=6.0,SNR=18				
E63A			Sb	**Sb**	**21 35 06.8 +1.9**
	baz=6.0				
E63A	**Oxbow**	**2.57 186**	Pn	**Pn**	**21 34 29.2 +1.2**
DMCQ	**Dolbeau-Mistas**	**2.65 271**	PN	**Pn**	**21 34 30.0 +0.9**
DMCQ			Trac		21 35 11.6
	comp=Z,127nm,0.2s				
D60A	**Saint Jean D'O**	**2.83 224**	PN	**Pn**	**21 34 32.9 +1.3**
D60A	**Saint Jean D'O**	**2.83 224**	P	**Pn**	**21 34 32.9 +1.3**
	baz=42				
D60A			Sb	**Sb**	**21 35 14.3 +2.1**
	baz=42				
BCLQ	**Boischatel**	**2.93 227**	PN	**Pn**	**21 34 34.5 +1.5**
E61A	**Lac Etchemin**	**3.03 214**	P	**Pn**	**21 34 36.0 +1.6**
	baz=32,SNR=15				
E61A			Sb	**Sb**	**21 35 20.4 +2.2**
	baz=32				
QCQ	**Quebec**	**3.09 226**	PN	**Pn**	**21 34 36.8 +1.7**
QCQ			Trac		21 35 29.8
	comp=Z,109nm,0.3s				
F64A	**Sherman**	**3.12 184**	P	**Pn**	**21 34 37.4 +1.9**
	baz=4.0				
F64A	**Sherman**	**3.12 184**	Pn	**Pn**	**21 34 37.5 +1.9**
F63A	**Nahmakanta, Br**	**3.35 193**	P	**Pn**	**21 34 40.0 +1.2**
	baz=12,SNR=61				
F63A			S	**Sn**	**21 35 18.2 +0.7**
	baz=12				
F63A	**Nahmakanta, Br**	**3.35 193**	Pn	**Pn**	**21 34 40.6 +1.9**
F63A				**Sn**	**21 35 20.2 +2.7**
E60A	**Ste Agathe de**	**3.47 223**	PN	**Pn**	**21 34 42.2 +1.7**
E60A			SN	**Sn**	**21 35 22.8 +2.2**
E60A	**Ste Agathe de**	**3.47 223**	S	**Sn**	**21 35 22.6 +2.1**
	baz=40				
HKNB	**Havelock Quarr**	**3.50 148**	PN	**Pn**	**21 34 41.8 +1.0**
SVNB	**Stilesville Qu**	**3.54 141**	SN	**Sn**	**21 35 22.7 +0.5**
SRNB	**Snider Mountai**	**3.54 152**	PN	**Pn**	**21 34 42.2 +0.7**
SRNB			SN	**Sn**	**21 35 22.4 +0.1**
F61A	**St Evariste**	**3.60 215**	P	**Pn**	**21 34 44.4 +2.2**
	baz=33,SNR=23				
NATG	**Natashquan Que**	**3.65 67**	PN	**Pn**	**21 34 44.5 +1.6**
NATG			SN	**Sn**	**21 35 25.8 +0.9**
NATG			Trac		21 35 46.1
	comp=Z,53nm,0.1s				
ELNB	**Elgin, New Bru**	**3.69 147**	PN	**Pn**	**21 34 43.8 +0.3**
ELNB			SN	**Sn**	**21 35 26.1 +0.2**
D58A	**Chemin du LacG**	**3.75 242**	P	**Pn**	**21 34 44.7 +0.4**
	baz=58				
G64A	**Maxfield**	**3.75 188**	P	**Pn**	**21 34 45.3 +1.0**
	baz=7.5				
G65A	**Princeton**	**3.79 175**	P	**Pn**	**21 34 45.6 +0.8**
	baz=356				
G65A	**Princeton**	**3.79 175**	Pn	**Pn**	**21 34 45.9 +1.1**
G65A				**Sn**	**21 35 27.4 -0.9**
PKME	**Peaks-Kenny Pk**	**3.81 193**	PN	**Pn**	**21 34 46.4 +1.4**
PKME			SN	**Sn**	**21 35 28.1 -0.7**
PKME			Trac		21 35 53.5
	comp=Z,45nm,0.3s				
PKME	**Peaks-Kenny Pk**	**3.81 193**	P	**Pn**	**21 34 46.3 +1.4**
	baz=13,SNR=26				
PKME	**Peaks-Kenny Pk**	**3.81 193**	Pn	**Pn**	**21 34 46.5 +1.4**
LMN	**Caledonia Moun**	**3.82 144**	PN	**Pn**	**21 34 45.4 +0.1**
LMN			SN	**Sn**	**21 35 28.2 -0.9**
LMN			Trac		21 35 36.6
	comp=Z,12nm,0.1s				
LMN	**Caledonia Moun**	**3.82 144**	Pn	**Pn**	**21 34 45.6 +0.3**
DPQ	**Saint Jean**	**3.92 236**	PN	**Pn**	**21 34 47.4 +0.8**
DPQ			SN	**Sn**	**21 35 32.0 +0.3**
DPQ			Trac		21 35 55.1
	comp=Z,51nm,0.2s				
GGN	**Saint George**	**3.94 167**	PN	**Pn**	**21 34 47.8 +0.9**
GGN			SN	**Sn**	**21 35 31.2 -1.0**
GGN			Trac		21 35 48.1
	comp=Z,10nm,0.1s				
GGN	**Saint George**	**3.94 167**	Pn	**Pn**	**21 34 47.5 +0.6**
F60A	**Warwick**	**4.00 223**	P	**Pn**	**21 34 48.8 +1.0**
	baz=40				
F60A			S	**Sn**	**21 35 34.3 +0.6**
	baz=40				
G63A	**Kingsbury**	**4.01 196**	P	**Pn**	**21 34 49.0 +1.1**
	baz=15,SNR=64				
G63A			S	**Sn**	**21 35 32.3 -1.5**
	baz=15				
G62A	**West of Eustis**	**4.12 205**	P	**Pn**	**21 34 50.5 +1.1**
	baz=24,SNR=36				
G62A			S	**Sn**	**21 35 36.4 -0.2**
	baz=24				
G62A	**West of Eustis**	**4.12 205**	Pn	**Pn**	**21 34 50.4 +1.1**
H66A	**Whiting**	**4.22 173**	P	**Pn**	**21 34 51.4 +0.7**
	baz=354				
H66A			S	**Sn**	**21 35 36.3 -2.6**
	baz=354				
CHGQ	**Chibougamau**	**4.23 285**	PN	**Pn**	**21 34 51.4 +0.5**
CHGQ			SN	**Sn**	**21 35 37.7 -1.6**
H65A	**Eastbrook**	**4.28 182**	P	**Pn**	**21 34 52.3 +0.8**
	baz=2.0				
H65A			S	**Sn**	**21 35 39.0 -1.5**
	baz=2.0				
EMMW	**East Machias**	**4.29 174**	Pn	**Pn**	**21 34 52.3 +0.7**
D57A	**Chemin Vers le**	**4.38 246**	P	**Pn**	**21 34 52.7 -0.2**
	baz=62				
D57A			S	**Sn**	**21 35 42.2 -0.8**
	baz=62				
E58A	**La Victoria**	**4.39 236**	P	**Pn**	**21 34 53.6 +0.5**
	baz=52				
E58A			S	**Sn**	**21 35 43.0 -0.1**
	baz=52				
G61A	**St-Isidore-de-**	**4.39 214**	P	**Pn**	**21 34 54.7 +1.6**
	baz=32,SNR=28				
G61A			S	**Sn**	**21 35 43.1 0.0**
	baz=32				
H64A	**Troy**	**4.41 191**	P	**Pn**	**21 34 54.3 +1.0**
	baz=10				
H64A			S	**Sn**	**21 35 42.3 -1.3**
	baz=10				
F59A	**Saint Guilaume**	**4.48 228**	P	**Pn**	**21 34 55.1 +0.8**
	baz=44				
F59A			S	**Sn**	**21 35 44.6 -0.7**
	baz=44				
H63A	**New Sharon**	**4.52 198**	P	**Pn**	**21 34 56.1 +1.3**
	baz=17,SNR=7.1				
H63A			S	**Sn**	**21 35 42.9 -3.5**
	baz=17				
WVL	**Waterville**	**4.55 195**	Pn	**Pn**	**21 34 56.5 +1.2**
WVL				**Sn**	**21 35 44.0 -3.1**
E57A	**Chemin Saint G**	**4.85 240**	P	**Pn**	**21 35 00.1 +0.7**
	baz=56				
G60A	**Masonville**	**4.86 219**	P	**Pn**	**21 35 00.9 +1.4**
	baz=36				
G60A			S	**Sn**	**21 35 56.1 +1.4**
	baz=36				
H62A	**Milan**	**4.89 207**	P	**Pn**	**21 35 01.7 +1.7**
	baz=25				
H62A			S	**Sn**	**21 35 55.6 +0.1**
	baz=25				
H62A	**Milan**	**4.89 207**	Pn	**Pn**	**21 35 00.8 +0.8**
D56A	**ZEC Mazanza, M**	**4.90 249**	P	**Pn**	**21 34 59.2 -0.8**
	baz=64				
D56A			S	**Sn**	**21 35 53.8 -1.8**
	baz=64				
MNTQ	**Montreal, Queb**	**5.15 230**	Trac		21 36 32.0
	comp=Z,41nm,0.2s				
I64A	**Boothbay**	**5.17 193**	P	**Pn**	**21 35 04.6 +0.8**
	baz=12,SNR=18				
I64A			S	**Sn**	**21 36 00.7 -1.7**
	baz=12				
H61A	**Lyndonville**	**5.18 212**	P	**Pn**	**21 35 05.4 +1.5**
	baz=30,SNR=6.7				
H61A			S	**Sn**	**21 36 02.4 -0.2**
	baz=30				
TRQ	**Mont Tremblant**	**5.19 240**	PN	**Pn**	**21 35 04.2 +0.1**
TRQ			SN	**Sn**	**21 36 01.9 -1.1**
TRQ			Trac		21 36 34.4
	comp=Z,42nm,0.3s				
TRQ	**Mont Tremblant**	**5.19 240**	Pn	**Pn**	**21 35 05.3 +1.2**
I63A	**Otisfield**	**5.23 200**	P	**Pn**	**21 35 05.7 +1.1**
	baz=19,SNR=7.0				
I63A			S	**Sn**	**21 36 03.9 +0.1**
	baz=19				
I63A	**Otisfield**	**5.23 200**	Pn	**Pn**	**21 35 05.6 +1.1**
E56A	**St. Veronique**	**5.30 245**	P	**Pn**	**21 35 04.9 -0.7**
	baz=60				
HAL	**Halifax**	**5.31 143**	PN	**Pn**	**21 35 06.9 +1.3**
HAL			SN	**Sn**	**21 36 02.8 -2.9**
D55A	**Sainte-Anne-du**	**5.35 251**	P	**Pn**	**21 35 05.9 -0.4**
	baz=66				
D55A			S	**Sn**	**21 36 04.9 -2.1**
	baz=66				
CHEG	**Cheticamp, Nov**	**5.41 111**	PN	**Pn**	**21 35 07.7 +0.6**
CHEG			SN	**Sn**	**21 36 06.6 -1.8**
LBNH	**Lisbon**	**5.44 211**	PN	**Pn**	**21 35 08.5 +1.0**
LBNH			Trac		21 36 44.0
	comp=Z,38nm,0.5s				
LBNH	**Lisbon**	**5.44 211**	Pn	**Pn**	**21 35 08.6 +1.1**
H60A	**Morristown**	**5.45 218**	P	**Pn**	**21 35 09.0 +1.4**
	baz=34,SNR=7.3				
H60A			S	**Sn**	**21 36 09.2 -0.1**
	baz=34				
I62A	**Tamworth**	**5.58 205**	P	**Pn**	**21 35 10.9 +1.4**
	baz=23,SNR=11				
I62A			S	**Sn**	**21 36 13.0 +0.4**
	baz=23				
I62A	**Tamworth**	**5.58 205**	Pn	**Pn**	**21 35 10.2 +0.8**
I62A				**Sn**	**21 36 13.0 +0.4**
G58A	**Ormstown**	**5.61 229**	P	**Pn**	**21 35 10.9 +1.1**
	baz=45				
G58A			S	**Sn**	**21 36 11.5 -1.7**
	baz=45				
FRNY	**Flat Rock**	**5.62 225**	PN	**Pn**	**21 35 10.4 +0.5**
FRNY			SN	**Sn**	**21 36 11.3 -2.0**
FRNY			Trac		21 36 45.0
	comp=Z,16nm,0.2s				
FRNY	**Flat Rock**	**5.62 225**	Pn	**Pn**	**21 35 10.6 +0.7**
FRNY				**Sn**	**21 36 11.4 -2.0**
VT1	**Waterbury**	**5.66 217**	Pn	**Pn**	**21 35 12.8 +2.3**
GBN	**Guysborough**	**5.71 126**	PN	**Pn**	**21 35 11.3 +0.2**
GBN			SN	**Sn**	**21 36 14.2 -1.4**
GBN	**Guysborough**	**5.71 126**	Pn	**Pn**	**21 35 11.2 +0.2**
GRQ	**Grand Remous**	**5.77 249**	Trac		21 36 51.5
	comp=Z,46nm,0.4s				
I61A	**Oroboro, Fairl**	**5.80 211**	P	**Pn**	**21 35 13.7 +1.3**
	baz=28,SNR=13				
I61A			S	**Sn**	**21 36 17.8 -0.3**
	baz=28				
H59A	**Cadyville**	**5.81 224**	P	**Pn**	**21 35 13.5 +1.0**
	baz=40				
H59A			S	**Sn**	**21 36 16.8 -1.3**
	baz=40				
SCHQ	**Schefferville**	**5.92 7**	PN	**Pn**	**21 35 14.6 +0.6**
SCHQ			SN	**Sn**	**21 36 20.1 -0.6**
SCHQ			Trac		21 36 54.3
	comp=Z,34nm,0.3s				
SCHQ	**Schefferville**	**5.92 7**	Pn	**Pn**	**21 35 14.4 +0.5**
LG4Q	**La Grande 4**	**6.01 323**	PN	**Pn**	**21 35 15.7 +0.5**
LG4Q			SN	**Sn**	**21 36 22.1 -0.8**
LG4Q			Trac		21 36 56.1
	comp=Z,27nm,0.3s				
GAC	**Glen Almond**	**6.02 240**	PN	**Pn**	**21 35 15.4 +0.1**
GAC			SN	**Sn**	**21 36 21.2 -2.0**
GAC			Trac		21 37 02.4
	comp=Z,44nm,0.3s				
HNH	**Hanover**	**6.03 211**	Pn	**Pn**	**21 35 15.5 -0.1**
HNH				**Sn**	**21 36 23.3 -0.2**
D54A	**Lac Fusel, La**	**6.05 256**	SN	**Sn**	**21 36 21.2 -2.9**
J63A	**Strafford**	**6.07 201**	P	**Pn**	**21 35 17.1 +0.9**
	baz=19,SNR=13				
G57A	**Newington**	**6.12 233**	P	**Pn**	**21 35 18.0 +1.2**
	baz=48				
H58A	**Gabriels**	**6.21 225**	P	**Pn**	**21 35 18.6 +0.5**
	baz=41				
H58A			S	**Sn**	**21 36 24.8 -3.2**
	baz=41				
LONY	**Lake Ozonia**	**6.25 228**	P	**Pn**	**21 35 19.2 +0.5**
	baz=44				
LONY			S	**Sn**	**21 36 26.8 -2.3**
	baz=44				
LONY	**Lake Ozonia**	**6.25 228**	Pn	**Pn**	**21 35 19.4 +0.7**
VLDQ	**Val d'Or**	**6.30 266**	Trac		21 37 11.9
	comp=Z,44nm,0.3s				
VLDQ	**Val d'Or**	**6.30 266**	Pn	**Pn**	**21 35 21.3 +1.9**
J62A	**Henniker**	**6.32 206**	P	**Pn**	**21 35 21.0 +1.5**
	baz=23				
J62A			S	**Sn**	**21 36 30.3 -0.3**
	baz=23				
WBO	**Williamsburg**	**6.34 234**	PN	**Pn**	**21 35 21.1 +1.2**
WBO			SN	**Sn**	**21 36 29.7 -1.5**
WBO			Trac		21 37 10.8
	comp=Z,30nm,0.3s				
J61A	**Chester**	**6.44 211**	P	**Pn**	**21 35 22.0 +0.8**
	baz=28				
J61A			S	**Sn**	**21 36 34.0 +0.4**
	baz=28				
F55A	**Otter Lake**	**6.45 244**	P	**Pn**	**21 35 21.4 +0.1**
	baz=58				
I59A	**Olmsteadville**	**6.56 220**	P	**Pn**	**21 35 24.4 +1.5**
	baz=36				
NCB	**Newcomb**	**6.57 223**	Pn	**Pn**	**21 35 23.7 +0.7**
NCB				**Sn**	**21 36 35.5 -1.5**
E54A	**Lac Daplat, Po**	**6.67 251**	P	**Pn**	**21 35 23.0 -1.3**
	baz=64				
E54A			S	**Sn**	**21 36 35.3 -4.0**
	baz=64				
D53A	**Lac Vacive, Po**	**6.75 257**	P	**Pn**	**21 35 24.3 -1.1**
	baz=70				
D53A			S	**Sn**	**21 36 37.7 -3.5**
	baz=70				
D53A	**Lac Vacive, Po**	**6.75 257**	Pn	**Pn**	**21 35 24.7 -0.7**
D53A				**Sn**	**21 36 36.4 -4.8**
HRV	**Adam Dziewonsk**	**6.92 202**	Pn	**Pn**	**21 35 27.6 -0.1**
DRLN	**Deer Lake**	**6.93 84**	PN	**Pn**	**21 35 28.9 +1.1**
DRLN			SN	**Sn**	**21 36 41.8 -3.9**
DRLN	**Deer Lake**	**6.93 84**	Pn	**Pn**	**21 35 27.1 -0.8**
K62A	**Royalston**	**6.95 206**	Pn	**Pn**	**21 35 28.4 +0.2**
CRLQ	**Chalk River**	**6.97 249**	PN	**Pn**	**21 35 26.1 -2.3**
CRLQ			SN	**Sn**	**21 36 42.8 -3.9**
CRLQ			Trac		21 37 29.9
	comp=Z,19nm,0.3s				
E53A	**Dumoine, Ponti**	**6.99 252**	S	**Sn**	**21 36 43.9 -3.3**
	baz=65				
J59A	**Piesco**	**7.10 221**	Pn	**Pn**	**21 35 29.9 -0.3**
D52A	**ZEK Kipawa Sen**	**7.24 258**	P	**Pn**	**21 35 31.0 -1.2**
	baz=70				
D52A			S	**Sn**	**21 36 49.3 -4.0**
	baz=70				
I57A	**Carthage**	**7.28 229**	P	**Pn**	**21 35 33.8 +1.1**
	baz=44				
PLVO	**Plevna**	**7.32 241**	Pn	**Pn**	**21 35 34.1 +0.9**
BRYW	**Bryant College**	**7.47 200**	Pn	**Pn**	**21 35 35.7 +0.3**
J58A	**Remsen**	**7.53 225**	P	**Pn**	**21 35 36.9 +0.7**
	baz=39				
J58A	**Remsen**	**7.53 225**	Pn	**Pn**	**21 35 36.6 +0.4**
H55A	**Tweed**	**7.67 238**	P	**Pn**	**21 35 39.6 +1.5**
	baz=52				
EEO	**Eldee**	**7.78 257**	PN	**Pn**	**21 35 37.9 -1.7**
EEO			SN	**Sn**	**21 37 05.3 -1.3**
EEO			Trac		21 37 54.5
	comp=Z,19nm,0.3s				
K59A	**Cooperstown**	**7.81 220**	P	**Pn**	**21 35 41.2 +1.2**
	baz=35,SNR=7.2				
J57A	**Williamstown**	**7.83 228**	Pn	**Pn**	**21 35 41.0 +0.7**
D50A	**G1974 Best Tow**	**8.10 262**	S	Sn	21 37 08.0 -6.6
	baz=73				
K58A	**Earlville**	**8.16 223**	Pn	**Pn**	**21 35 46.0 +1.1**
J56A	**Wolcott**	**8.36 230**	Pn	**Pn**	**21 35 47.5 +0.1**
L59A	**Walton**	**8.37 218**	Pn	**Pn**	**21 35 49.0 +1.2**
H53A	**Bobcaygeon**	**8.46 243**	P	**Pn**	**21 35 48.1 -0.8**
	baz=55				
F51A	**Arnstein**	**8.60 254**	P	**Pn**	**21 35 49.6 -1.2**
	baz=65				
F51A			S	**Sn**	**21 37 22.4 -4.4**
	baz=65				
SADO	**Sadowa**	**8.68 245**	Trac		21 38 23.8
	comp=Z,36nm,0.6s				
SADO	**Sadowa**	**8.68 245**	Pn	**Pn**	**21 35 52.8 +0.9**
M54A	**Oil Creek Stat**	**11.07 232**	Pn	**Pn**	**21 36 25.4 +0.7**

NIED ***26*** *21:46:00.33˝.90N×140˚.40E,h5km,Mw3.7 Best double couple: M₀4.16000×10¹⁴ NP1:φ₈168.00000°,δ77.00000°, λ30.00000°. NP2:φ₈71.00000°,δ60.00000°,λ165.00000°.*
IDC ***26*** *21:46:01.4±1.5,33˚.79N×140˚.43E,h0km,mb3.5/4, mb1 3.7/6,mb1mx3.4/54,mbtmp3.6/6,ML3.1/2,MS3.2/7, Ms1 3.2/7,ms1mx2.8/38,Error ellipse: s-maj=33.2km s-min=18.1km az=88.0*
JMA ***26*** *21:46:03.6±0.1,33˚.95N×140˚.40E,h28km±4km,M3.5*
ISC 26 21:46:02.6±1.5,33˚.88N±0˚.04×140˚.44E±0˚.06,h17km±10km, n27,σ1°70/28,MS3.7/4,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMKN	**Mikurajimanish**	**0.71**	**272**	P	**Pb**	**21 46 16.6**	**+0.1**
JMKN				S	**Sg**	**21 46 25.8**	**-0.1**
BSO1	**Boso 1**	**0.89**	**30**	P	**Pb**	**21 46 19.3**	**0.0**
JHJ2	**Mitsune**	**0.92**	**215**	P	**Pn**	**21 46 21.0**	**+0.2**
JHJ2				S	**Sn**	**21 46 33.5**	**-0.2**
BSO3	**Boso 3**	**0.93**	**3**	P	**Pb**	**21 46 19.8**	**-0.2**
JHJ	**Hachijo jima 2**	**0.93**	**216**	Pn	**Pg**	**21 46 20.7**	**0.0**
	150nm,0.3s,baz=333,slow=18,SNR=25						
JHJ				Sn	**Sg**	**21 46 32.9**	**-0.1**
	200nm,0.3s,baz=66,slow=23,SNR=6.1						
BSO4	**Boso 4**	**1.11**	**356**	P	**Pb**	**21 46 23.6**	**+0.2**
JKO	**Kozu shima**	**1.13**	**286**	eS	**Sb**	**21 46 36.9**	**-1.1**
JTHY	**Toshimahigashi**	**1.15**	**304**	P	**Pn**	**21 46 23.3**	**-0.7**
JTHY				eS	**Sb**	**21 46 37.8**	**-1.0**
JIM2	**Oshima 3**	**1.19**	**315**	P	**Pn**	**21 46 22.2**	**-1.2**
JIM2				S	**Sb**	**21 46 37.3**	**-2.4**
JIZS	**Izushimoda**	**1.54**	**303**	P	**Pn**	**21 46 28.9**	**-0.4**
JIZS				S	**Sn**	**21 46 47.9**	**-1.1**
KTJ3	**Kamata3**	**1.55**	**313**	P	**Pn**	**21 46 28.3**	**-1.1**
KTJ3				S	**Sn**	**21 46 46.2**	**-2.9**
MJAR	**Matsushiro Arr**	**3.23**	**326**	Pn	**Pn**	**21 46 54.6**	**+2.1**
	0.7nm,0.3s,baz=149,slow=12,SNR=28						
MJAR				Sn	**Sn**	**21 47 30.2**	**-0.4**
	0.7nm,0.3s,baz=155,slow=21,SNR=5.8						
MJAR				LR	LR	21 48 31.0	
	comp=Z,57nm,19.5s,baz=230,slow=46						
MAT	**Matsushiro**	**3.23**	**326**	P	**Pn**	**21 46 55.2**	**+2.7**
MAT				eS	**Sn**	**21 47 33.6**	**+3.0**
JCJ	**Chichijima**	**6.92**	**167**	Pn	**Pn**	**21 47 44.2**	**+0.9**
	1.3nm,0.3s,baz=282,slow=18,SNR=1.3						
JCJ				Sn	**Sn**	**21 48 57.1**	**-4.5**
	3.3nm,0.3s,baz=352,slow=19,SNR=2.0						
ASAJ	**Asahikawa**	**10.36**	**9**	LR	LR	21 52 36.1	
	comp=Z,49nm,21.7s,baz=196,slow=38						
KSRS	**Korea Array**	**10.79**	**293**	LR	LR	21 52 48.3	
	comp=Z,34nm,19.0s,baz=111,slow=38						
H11N2	**WAKE ISLAND Hy 27.39**	**114**		T	T	22 20 37.3	
	baz=306,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hy 27.40**	**114**		T	T	22 20 36.8	
	baz=306,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy 27.41**	**114**		T	T	22 20 40.7	
	baz=306,slow=75,SNR=14						
MKAR	**Makanchi Array**	**45.19**	**305**	P	**P**	**21 54 19.1**	**+0.6**
	0.1nm,0.6s,baz=87,slow=7.7,SNR=2.1						
KURBB	**Kurchatov Array**	**47.37**	**310**	P	**P**	**21 54 37.6**	**+2.0**
	0.2nm,0.7s,baz=88,slow=7.7,SNR=2.4						
FITZ	**Fitzroy Crossi**	**53.58**	**198**	LR	LR	22 18 19.9	
	comp=Z,128nm,20.6s,baz=264,slow=36						
WRA	**Warramunga Arr**	**53.83**	**187**	P	**P**	**21 55 25.3**	**+0.7**
	0.9nm,0.6s,baz=22,slow=7.3,SNR=15						
ASAR	**Alice Springs**	**57.56**	**187**	P	**P**	**21 55 52.5**	**+1.2**
	0.9nm,0.9s,baz=10,slow=6.8,SNR=8.3						
STKA	**Stephens Creek**	**65.41**	**179**	LR	LR	22 25 04.7	
	comp=Z,57nm,20.0s,baz=207,slow=36						
AKASG	**Malin Array Be**	**76.31**	**322**	LR	LR	22 33 13.0	
	comp=Z,19nm,19.2s,baz=185,slow=37						
FRB	**Frobisher Bay**	**80.02**	**13**	LR	LR	22 36 27.7	
	comp=Z,28nm,18.4s,baz=182,slow=38						

IDC ***26*** *21:59:02.4±7.9,51˚.56N×177˚.68E,h0km,mb3.4/5, mb1 3.9/6,mb1mx3.5/41,mbtmp3.5/6,ML4.2/1,MS3.4/1, Ms1 3.4/1,ms1mx2.4/34,Error ellipse: s-maj=154.7km s-min=62.4km az=89.0*
NEIC ***26*** *21:59:23.1±1.3,52˚.2N±0˚.3×178˚.33E±0˚.08,h148km±14km, mb3.6/10,ML2.9(AEIC),Error ellipse: s-maj=42.0km s-min=1.8km az=189.0*
AEIC ***26*** *21:59:23.6±5.9,53˚.0N±0˚.1×178˚.71E±0˚.08,h10km±6km, Error ellipse: s-maj=18.9km s-min=6.1km az=192.0*
ISC 26 21:59:23.1±1.3,52˚.2N±0˚.2×178˚.32E±0˚.06,h150km,n31, σ0°79/30,mb3.4/7,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALAA	**Gareloi Lava P**	**1.84**	**101**		**Pn**	**21 59 56.6**	**+0.2**
GAEA	**Gareloi East**	**1.85**	**100**		**Sn**	**22 00 22.3**	**+0.3**
TASE	**Tanaga Southea**	**2.27**	**97**		**Pn**	**22 00 01.4**	**-0.1**
TAFP	**Tanaga Falls P**	**2.29**	**95**		**Pn**	**22 00 01.6**	**-0.1**
TAFP					**Sn**	**22 00 30.5**	**-0.9**
SMY	**Shemya**	**2.65**	**284**	Pn	**Pn**	**22 00 05.3**	**-0.7**
SMY					**Sn**	**22 00 38.8**	**-0.3**
KICM	**Kanaga Island**	**2.78**	**93**		**Pn**	**22 00 07.4**	**-0.2**
ADK	**Adak**	**3.10**	**93**		**Pn**	**22 00 11.0**	**-0.7**
ADK	**Adak**	**3.10**	**93**		**Sn**	**22 00 47.9**	**-1.2**
GSTD	**Great Sitkin T**	**3.41**	**89**		**Pn**	**22 00 15.6**	**-0.1**
GSTD					**Sn**	**22 00 56.9**	**+0.4**
GSTR	**Great Sitkin T**	**3.46**	**89**		**Pn**	**22 00 14.2**

H11N2	**WAKE ISLAND Hy**	**33.56**	**200**	T	T		22 41 10.4		
	baz=14								
H11N3	**WAKE ISLAND Hy**	**33.58**	**200**	T	T		22 41 09.9		
	baz=14								
H11N1	**WAKE ISLAND Hy**	**33.58**	**200**	T	T		22 41 17.3		
	baz=14								
YKA	**Yellowknife Ar**	**36.00**	**47**	P	**P**		**22 06 10.2**	**+1.1**	
	comp=Z,0.5nm,0.6s,baz=281,slow=7,9,SNR=7.7								
NVAR	**Mina Array Bea**	**45.22**	**82**	P	**P**		**22 07 25.8**	**+0.5**	
	comp=Z,0.2nm,0.5s,baz=313,slow=8.0,SNR=2.7								
PDAR	**Pinedale Array**	**47.76**	**71**	P	**P**		**22 07 44.9**	**-0.2**	
	comp=Z,0.3nm,0.3s,baz=309,slow=5.7,SNR=2.7								
ZALV	**Zalesovo Beam**	**52.19**	**312**	LR	LR		22 31 00.7		
	comp=Z,36nm,18.9s,baz=84,slow=37								
TXAR	**Lajitas Array**	**60.29**	**80**	P	**P**		**22 09 16.1**	**+0.3**	
	comp=Z,0.2nm,0.5s,baz=302,slow=3.9,SNR=5.7								

DJA 26 22:13:49.9±0.4,**4°S**±4″×**12°7E**±°,**h10**km,**M3.9/9,mB4.5**/1,
mb4.4/3,**MLv3.6**/9,**Mw(mB)3.7**/1,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.39**	**322**	P	Pg	22 13 55.9	-1.7
NLAI				S	Sg	22 14 00.1	-2.7
AAI	**Ambon**	**0.86**	**99**	P	Pg	22 14 06.5	-0.1
MSAI	**Masohi**	**1.60**	**83**	P	Pb	22 14 19.0	-0.6
LBMI	**Labuha**	**2.90**	**3**	P	Pn	22 14 37.5	+1.4
LBMI				S	Sn	22 15 12.1	+1.0
FAKI	**Fak Fak**	**4.94**	**83**	P	Pn	22 15 04.4	+0.1
LUWI	**Luwuk**	**5.20**	**299**	P	Pn	22 15 08.6	+0.8
	0.3nm53nm,0.7s						
APSI	**Ampana**	**6.26**	**295**	P	Pn	22 15 23.2	+0.8

*IDC **26** 22:18:12.9±2.0,7.83S×128.29E,h153km±27km,mb2.8/1,*
mb1 3.3/6,mb1mx3.1/32,mbtmp3.8/6,Error ellipse:
s-maj=24.6km s-min=19.8km az=126.0

ISC 26 22:18:11.3±0.9,**7.86S**±0.07×**128.5E**±0.1,**h150**km,**n6,**
σ3$32/10,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.29**	**244**	P	**Pn**	**22 19 28.9**	**+0.4**
	9.7nm,0.3s,baz=77,slow=5.0,SNR=7.2						
BATI				S	**Sn**	**22 20 27.8**	**-1.2**
	10.0nm,0.3s,baz=352,slow=22,SNR=10						
SIJI	**Sorong**	**7.48**	**22**	P	**Pn**	**22 19 60.0**	**+2.1**
	0.9nm,0.3s,baz=217,slow=20,SNR=9.2						
SIJI				S	**Sn**	**22 21 16.4**	**-5.2**
	0.6nm,0.3s,baz=270,slow=20,SNR=1.9						
FITZ	**Fitzroy Crossi**	**10.54**	**195**	P	**Pn**	**22 20 39.2**	**+0.8**
	0.9nm,0.3s,baz=22,slow=10,SNR=15						
FITZ				S	**Sn**	**22 22 30.9**	**-4.3**
	1.7nm,0.3s,baz=112,slow=19,SNR=7.1						
WRA	**Warramunga Arr**	**13.29**	**155**	P	**Pn**	**22 21 15.8**	**+1.5**
	0.4nm,0.3s,baz=325,slow=13,SNR=11						
WRA				S	Sn	22 23 35.6	-5.7
	1.3nm,0.3s,baz=331,slow=23,SNR=10						
ASAR	**Alice Springs**	**16.56**	**162**	P	**Pn**	**22 21 59.0**	**+4.1**
	0.2nm,0.3s,baz=336,slow=9.9,SNR=11						
ASAR				S	**S**	**22 24 56.5**	**-2.4**
	0.3nm,0.3s,baz=346,slow=26,SNR=5.9						
MKAR	**Makanchi Array**	**68.13**	**328**	P	**P**	**22 28 55.5**	**+0.5**
	0.1nm,0.3s,baz=120,slow=6.9,SNR=2.2						

MEX 26 22:37:47.0±0.7,**17°22N**×**94°40W**,**h180**km±11km,**MD3.8,**
Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.48**	**254**	*i* P	Pn	22 38 10.6	-1.0
CMIG				*i* S	Sn	22 38 28.5	-2.1
PCIG		**1.89**	**143**	*i* P	Pn	22 38 20.1	-2.7
PCIG				*i* S	Sn	22 38 47.5	-3.1
HUIG	**Huatulco**	**2.19**	**229**	*i* P	Pn	22 38 24.8	-1.4
HUIG				*eS*	Sn	22 38 54.1	-2.4
VHO	**Vista Hermosa**	**2.24**	**267**	*i* P	Pn	22 38 25.9	-1.0
VHO				*eS*	Sn	22 38 56.5	-1.2
TOIG	**Toxpalan**	**2.69**	**289**	*i* P	Pn	22 38 30.2	-1.8
TOIG				*i* S	Sn	22 39 04.4	-2.6
TXIG	**Tlaxiaco**	**3.22**	**271**	*i* P	Pn	22 38 37.2	-1.4
TXIG				*i* S	Sn	22 39 16.7	-2.2
HLIG	**Huajuapan de L**	**3.31**	**281**	*e*P	Pn	22 38 39.0	-0.6
TLIG	**Tlapa**	**4.00**	**275**	*i* P	Pn	22 38 49.1	+1.0
PLIG	**Platanillo**	**5.00**	**284**	*i* P	Pn	22 39 00.3	-0.7
ARIG	**Puente Sto Nin**	**5.77**	**281**	*i* P	Pn	22 39 10.7	-0.3
ARIG				*i* S	Sn	22 40 15.3	-1.8

*MAN **26** 22:38:12.9,2.79N×127.10E,h32km,mb4.7,ML3.5,MS3.4*
*DJA **26** 22:38:15.2±0.5,3°N±4′×12°8E±°,h63km±15km,M4.1/10,*
mB4.6/2,mb4.1/5,MLv4.1/10,Mw(mB)3.8/2
*IDC **26** 22:38:19.1±4.8,3.14N×128.21E,h151km±59km,mb3.2/3,*
mb1 3.4/4,mb1mx3.0/46,mbtmp3.7/4,Error ellipse:
s-maj=154.7km s-min=22.4km az=67.0

ISC 26 22:38:14.6±0.9,**3.11N**±0.05×**127.62E**±0.08,**h100**km,**n13,**
σ1$67/19,**mb3.8/3,1D,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.34**	**186**	P	**Pn**	**22 38 52.7**	**+1.0**
TNTI				S	**Sn**	**22 39 20.5**	**+0.5**
DDMP	**Don Marcelino,**	**3.53**	**328**	*e*P	**Pn**	**22 39 06.8**	**-0.6**
DDMP				*e*S	**Sn**	**22 39 48.9**	**+0.5**
LBMI	**Labuha**	**3.73**	**182**	P	**Pn**	**22 39 14.6**	**+4.4**
KMSI	**Cibinong**	**4.42**	**235**	P	**Pn**	**22 39 19.9**	**+0.3**
KMSI				S	**Sn**	**22 40 09.9**	**-0.1**
SKMP	**Bagumbayan, Su**	**4.56**	**318**	*e*P	**Pn**	**22 39 20.4**	**-1.1**
SKMP				*e*S	**Sn**	**22 40 12.5**	**-0.9**
KCP	**Kidapawan**	**4.62**	**327**	⇓*i*P	**Pn**	**22 39 24.4**	**+2.1**
KCP				*i* S	**Sn**	**22 40 16.6**	**+1.8**
SIJI	**Sorong**	**5.38**	**137**	P	**Pn**	**22 39 32.8**	**+0.2**
	3.1nm,0.3s,baz=338,slow=19,SNR=10						
SIJI				S	**Sn**	**22 40 31.1**	**-2.2**
	1.1nm,0.3s,baz=143,slow=20,SNR=1.7						
LUWI	**Luwuk**	**6.36**	**230**	P	**Pn**	**22 39 46.6**	**+0.7**
	0.5nm1μm37nm,0.6s						
APSI	**Ampana**	**7.18**	**236**	P	**Pn**	**22 39 56.7**	**-0.3**
	0.1nm15nm,0.9s						
FAKI	**Fak Fak**	**7.57**	**142**	P	**Pn**	**22 40 03.3**	**+0.9**
WRA	**Warramunga Arr**	**23.84**	**164**	P	**P**	**22 43 16.7**	**-2.1**
	0.5nm,0.4s,baz=346,slow=10,SNR=16						
STKA	**Stephens Creek**	**37.25**	**160**	P	**P**	**22 45 15.5**	**-1.2**
	0.9nm,0.4s,baz=333,slow=11,SNR=4.5						
MKAR	**Makanchi Array**	**58.56**	**325**	P	**P**	**22 48 02.1**	**+1.2**
	0.3nm,0.4s,baz=117,slow=8.5,SNR=8.1						

*NIED **26** 22:43:00,38.70N×142.30E,h41km,Mw4.1 Best double*
couple: M₀1.44000×10¹⁵ NP1:φ₀356.00000°,δ67.00000°,
λ85.00000°. NP2:φ₀188.00000°,δ23.00000°,λ101.00000°.
*JMA **26** 22:43:22.2±0.1,38.72N×142.26E,h39km±1km,M4.2*
JMA Felt I J1.
*NEIC **26** 22:43:23.4±1.7,38.70N±0.07×142.3E±0.1,h51km±9km,*
mb4.2/10,Error ellipse: s-maj=15.7km s-min=7.6km
az=116.0
*IDC **26** 22:43:24.5±2.6,38.71N×142.24E,h56km±22km,mb3.7/14,*
mb1 3.9/18,mb1mx3.7/49,mbtmp4.0/18,ML3.7/4,MS3.1/9,
Ms1 3.1/9,ms1mx2.9/39,Error ellipse: s-maj=25.7km
s-min=15.2km az=89.0

ISC 26 22:43:22.8±1.2,**38.73N**±0.05×**142.30E**±0.08,**h43**km±9km,
n59,σ1$48/66,**mb4.1**/19,**MS3.1**/3,**Near east coast of**
eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.60**	**306**	P	**Pn**	**22 43 34.2**	**-0.8**
OFUJ				S	**Sn**	**22 43 42.4**	**-1.4**
JKMT	**Kesennumamotoy**	**0.65**	**278**	P	**Pn**	**22 43 34.6**	**-1.0**
JKMT				S	**Sn**	**22 43 43.2**	**-1.6**
JIKH	**Ishinomakikobu**	**0.78**	**238**	P	**Pn**	**22 43 36.3**	**-1.0**
JIKH				S	**Sn**	**22 43 46.1**	**-1.7**
JIO	**Ouri**	**0.79**	**250**	P	**Pn**	**22 43 36.4**	**-1.1**
JIO				S	**Sn**	**22 43 46.3**	**-2.0**
JMK	**Ichinoseki**	**0.87**	**285**	P	**Pn**	**22 43 37.9**	**-0.7**
JMK				S	**Sn**	**22 43 49.0**	**-1.2**
JOM	**Ohasama**	**1.08**	**314**	P	**Pn**	**22 43 41.2**	**-0.3**
JOM				S	**Sn**	**22 43 54.7**	**-0.6**
JTH	**Tanohata**	**1.25**	**345**	P	**Pn**	**22 43 43.8**	**-0.1**
JTH				S	**Sn**	**22 43 59.6**	**0.0**
JOU	**Okura**	**1.33**	**255**	P	**Pn**	**22 43 44.4**	**-0.5**
JOU				S	**Sn**	**22 44 01.4**	**-0.1**
JRG	**Rokugo**	**1.46**	**298**	P	**Pn**	**22 43 46.6**	**0.0**
JMM	**Marumori**	**1.47**	**234**	P	**Pn**	**22 43 45.9**	**-0.8**
JMM				*e*S	**Sn**	**22 44 03.5**	**-1.2**
JYK	**Kaneyama**	**1.53**	**278**	P	**Pn**	**22 43 47.4**	**-0.2**
ERM	**Erimo**	**3.35**	**11**	Pn	**Pn**	**22 44 12.8**	**+0.2**
ERM					**Sn**	**22 44 49.6**	**-1.4**
MJAR	**Matsushiro Arr**	**3.91**	**237**	P	**Pn**	**22 44 21.9**	**+1.6**
	2.7nm,0.3s,baz=37,slow=15,SNR=65						
MJAR				LR	LR	22 46 02.3	
	comp=Z,287nm,19.6s,baz=55,slow=41						
MAJO	**Matsushiro**	**3.91**	**237**		**Pn**	**22 44 22.1**	**+1.8**
MAJO				Sn	**Sn**	**22 45 02.9**	**-2.1**
MAT	**Matsushiro**	**3.91**	**237**	P	**Pn**	**22 44 21.9**	**+1.5**
MAT				*e*S	**Sn**	**22 45 11.3**	**+6.2**
MJB9	**Matsu-Tunnel**	**3.91**	**237**		**Pn**	**22 44 22.4**	**+2.0**
ASAJ	**Asahikawa**	**5.39**	**2**	P	**Pn**	**22 44 41.8**	**+1.2**
	1.4nm,0.3s,baz=209,slow=13,SNR=1.7						
ASAJ				S	**Sn**	**22 45 41.0**	**-0.3**
	1.9nm,0.3s,baz=252,slow=20,SNR=3.5						
JKA	**Kamikawa-asahi**	**5.39**	**2**		**Pn**	**22 44 41.8**	**+1.2**
JKA					**Sn**	**22 45 41.0**	**-0.3**
INU	**Inuyama**	**5.41**	**233**	Pn	**Pn**	**22 44 40.4**	**-0.4**
JHJ2	**Mitsune**	**5.96**	**201**	Pn	**Pn**	**22 44 48.4**	**0.0**
JHJ	**Hachijo jima 2**	**5.96**	**201**	P	**Pn**	**22 44 48.8**	**+0.4**
	20nm,0.3s,baz=184,slow=9.5,SNR=1.7						
USA0B	**Ussuriysk Arra**	**9.47**	**309**	Pn	**Pn**	**22 45 37.0**	**+0.5**
USRK	**Ussuriysk Ar.**	**9.47**	**309**	P	**Pn**	**22 45 40.5**	**+3.9**
	baz=117,slow=15,SNR=16						
USRK				LR	LR	22 49 05.9	
	comp=Z,96nm,18.6s,baz=109,slow=36						
JNU	**Nakatsue**	**10.81**	**242**	P	**Pn**	**22 45 56.3**	**+1.3**
	0.6nm,0.3s,baz=53,slow=5.1,SNR=6.3						
JNU				LR	LR	22 50 22.6	
	comp=Z,147nm,19.9s,baz=48,slow=39						
JNU	**Nakatsue**	**10.81**	**242**		**Pn**	**22 45 54.1**	**-1.0**
KSRS	**Korea Array**	**11.40**	**268**	P	**Pn**	**22 46 07.2**	**+4.3**
	0.4nm,0.3s,baz=80,slow=14,SNR=7.6						
KSRS				LR	LR	22 50 12.4	
	comp=Z,70nm,18.3s,baz=75,slow=36						
KLR	**Kul'dur**	**12.94**	**328**	LR	LR	22 51 18.4	
	comp=Z,85nm,19.0s,baz=136,slow=37						
PETK	**Petropavlovsk-**	**17.88**	**31**	LR	LR	22 53 58.8	
	comp=Z,38nm,19.1s,baz=241,slow=35						
SONM	**Songino Array**	**27.47**	**301**	P	**P**	**22 49 04.8**	**0.0**
	0.8nm,0.4s,baz=97,slow=7.4,SNR=5.6						
SONM				LR	LR	22 59 28.4	
	comp=Z,38nm,21.2s,baz=85,slow=35						
ENH	**Enshi**	**28.21**	**263**	P	**P**	**22 49 10.2**	**-1.3**
H11N2	**WAKE ISLAND Hy**	**28.47**	**125**	T	T	23 19 40.4	
	baz=317,slow=75,SNR=970						
H11N1	**WAKE ISLAND Hy**	**28.48**	**125**	T	T	23 19 41.1	
	baz=317,slow=75,SNR=1136						
H11N3	**WAKE ISLAND Hy**	**28.49**	**125**	T	T	23 19 41.9	
	baz=317,slow=75,SNR=1137						
H11S1	**WAKE ISLAND Hy**	**29.25**	**127**	T	T	23 20 31.9	
	baz=318,slow=76,SNR=75						
H11S3	**WAKE ISLAND Hy**	**29.25**	**127**	T	T	23 20 39.0	
	baz=318,slow=76,SNR=90						
H11S2	**WAKE ISLAND Hy**	**29.27**	**127**	T	T	23 20 39.2	
	baz=318,slow=76,SNR=67						
ZAA0	**Zalesovo Array**	**41.31**	**311**	P	**P**	**22 51 02.2**	**-1.7**
ZAA0				IAmb	IAmb	22 51 04.7	
	comp=Z,2.6nm,0.6s						
ZALV	**Zalesovo Beam**	**41.31**	**311**	P	**P**	**22 51 04.1**	**+0.2**
	comp=Z,3.3nm,0.7s,baz=89,slow=7.6,SNR=15						
ZALV				LR	LR	23 08 47.2	
	comp=Z,24nm,18.7s,baz=243,slow=37						
CMAR	**Chiang Mai Arr**	**42.62**	**254**	P	**P**	**22 51 15.3**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=44,slow=10.0,SNR=4.0						
LSA	**Lhasa**	**42.77**	**274**	P	**P**	**22 51 14.6**	**-2.1**
LSA				IAmb	IAmb	22 51 21.8	
	comp=Z,3.4nm,0.9s						
MK31	**Makanchi Array**	**43.84**	**301**	P	**P**	**22 51 23.5**	**-1.0**
MKAR	**Makanchi Array**	**43.84**	**301**	P	**P**	**22 51 24.7**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=84,slow=9.6,SNR=22						
MKAR				LR	LR	23 10 23.9	
	comp=Z,40nm,19.6s,baz=79,slow=37						
MAKZ	**Makanchi**	**44.04**	**301**	P	**P**	**22 51 25.8**	**-0.3**
KURK	**Kurchatov**	**45.46**	**307**	P	**P**	**22 51 36.9**	**-0.5**
ILAR	**Eielson Array**	**47.69**	**33**	P	**P**	**22 51 56.1**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=262,slow=7.0,SNR=4.6						
BRVK	**Borovoye**	**50.02**	**311**	P	**P**	**22 52 12.5**	**-0.1**
BRVK				IAmb	IAmb	22 52 13.8	
	comp=Z,2.8nm,1.1s						
IPM	**Ipoh**	**50.62**	**238**	P	**P**	**22 52 16.4**	**-1.3**
WR0	**Warramunga Arr**	**58.83**	**189**	P	**P**	**22 53 15.9**	**-1.0**
WR0				IAmb	IAmb	22 53 18.4	
	comp=Z,2.8nm,1.2s						
WB2	**Warramunga Arr**	**58.84**	**189**	P	**P**	**22 53 16.4**	**-0.5**
WB2				IAmb	IAmb	22 53 19.4	
	comp=Z,3.8nm,0.9s						
WRA	**Warramunga Arr**	**58.84**	**189**	P	**P**	**22 53 16.6**	**-0.3**
	comp=Z,1.7nm,0.7s,baz=6.8,slow=7.0,SNR=17						
ASAR	**Alice Springs**	**62.56**	**189**	P	**P**	**22 53 42.8**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=11,slow=5.3,SNR=6.8						
ARCES	**ARCESS Array B**	**62.66**	**339**	P	**P**	**22 53 42.9**	**+0.5**
	comp=Z,3.1nm,0.9s,baz=58,slow=8.8,SNR=3.8						
GEYT	**Alibeck**	**63.63**	**299**	P	**P**	**22 53 49.5**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=90,slow=14,SNR=4.0						
FINES	**FINESS Array B**	**67.64**	**332**	P	**P**	**22 54 14.6**	**-0.2**
	comp=Z,2.7nm,0.9s,baz=46,slow=8.1,SNR=4.0						
NOA	**NORSAR Array B**	**72.89**	**337**	P	**P**	**22 54 47.1**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=39,slow=5.9,SNR=3.3						
AKASG	**Malin Array Be**	**73.39**	**322**	P	**P**	**22 54 49.9**	**-0.1**
	comp=Z,1.0nm,0.4s,baz=40,slow=7.3,SNR=6.8						
BRTR	**Keskin Array B**	**78.25**	**312**	P	**P**	**22 55 18.6**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=54,slow=3.7,SNR=7.9						
CLL	**Collm**	**79.97**	**330**	*e*P	**P**	**22 55 28.0**	**+0.8**
CLL				*e*pP	**pP**	**22 55 41.0**	**+1.1**
GERES	**GERESS Array B**	**81.64**	**329**	P	**P**	**22 55 36.2**	**0.0**
	comp=Z,0.5nm,0.7s,baz=36,slow=3.7,SNR=4.9						

*IDC **26** 22:54:23.3±1.4,15.12S×66.81E,h0km,mb3.8/9,*
mb1 4.0/9,mb1mx3.8/35,mbtmp3.8/9,MS4.0/26,
Ms1 4.0/26,ms1mx3.8/44,Error ellipse: s-maj=46.3km
s-min=25.1km az=37.0
*NEIC **26** 22:54:24.2±1.5,15.2S±0.2×66.6E±0.1,h12km±5km,*
mb4.3/7,Error ellipse: s-maj=28.2km s-min=8.9km
az=217.0
*GCMT **26** 22:54:30.2±0.2,14.95S±0.02×66.85E±0.02,h12km,*
MW4.9/117,Moment Tensor Solution. s40,c43;
s117,c166; Duration: 0 Moment tensor: Scale 10¹⁶Nm;
Mrr=3.00±.07; Mθθ1.12±.07; Mφφ1.88±.07; Mrθ0.08±.26;
Mθφ-1.19±.06; Mφr0.79±.27; Best double couple:
M₀2.97700×10¹⁶ NP1:φ₀315.00000°,δ40.00000°,
λ-104.00000°. NP2:φ₀153.00000°,δ52.00000°,
λ-79.00000°. Principal axes: T 2.8100, Plg6.0000°,
Azm235.0000°; N 0.3330, Plg9.0000°, Azm326.0000°; P
-3.1430, Plg79.0000°, Azm111.0000°; nsta1 refers to
body waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=50s. Triangular moment-rate function

ISC 26 22:54:25.6±1.0,**15.2S**±0.2×**66.6E**±0.1,**h19**km,**n53,**
σ1$52/27,mb4.3/22,MS4.0/26,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.46**	**38**	T	T	23 05 44.9	
	baz=217,slow=76,SNR=885						
H08S2	**Diego Garcia H**	**9.47**	**38**	T	T	23 05 45.7	
	baz=217,slow=76,SNR=1383						
H08S3	**Diego Garcia H**	**9.48**	**38**	T	T	23 06 05.2	
	baz=217,slow=76,SNR=1174						
ABPO	**Ambohimpanom**	**18.93**	**256**	P	**P**	**22 58 44.7**	**-1.1**
KMBO	**Kilima Mbogo**	**32.22**	**293**	LR	LR	23 12 17.1	
	comp=Z,90nm,18.9s,baz=90,slow=33						
ATD	**Arta Tunnel**	**35.53**	**317**	LR	LR	23 14 19.5	
	comp=Z,171nm,20.0s,baz=150,slow=34						
PSI	**Prapat**	**36.63**	**63**	LR	LR	23 13 05.5	
	comp=Z,610nm,21.9s,baz=262,slow=31						
BOSA	**Boshof**	**40.43**	**244**	LR	LR	23 16 13.7	
	comp=Z,339nm,19.9s,baz=84,slow=32						
SUR	**Sutherland**	**44.90**	**239**	LR	LR	23 17 33.7	
	comp=Z,307nm,18.1s,baz=94,slow=31						
CMAR	**Chiang Mai Arr**	**46.19**	**45**	P	**P**	**23 02 49.9**	**+0.3**
	0.7nm,0.3s,baz=236,slow=9.7,SNR=6.2						
CMAR				LR	LR	23 19 56.4	
	comp=Z,317nm,19.7s,baz=236,slow=33						
H01W3	**Cape Leeuwin H**	**46.77**	**124**	T	T	23 52 50.9	
	baz=283,slow=75,SNR=18						
H01W2	**Cape Leeuwin H**	**46.77**	**124**	T	T	23 52 55.5	
	baz=283,slow=75,SNR=18						
H01W1	**Cape Leeuwin H**	**46.79**	**124**	T	T	23 52 56.3	
	baz=283,slow=75,SNR=25						
NWAO	**Narrogin (SRO)**	**48.95**	**121**	LR	LR	23 19 01.0	
	comp=Z,132nm,21.3s,baz=304,slow=30						
MAW	**Mawson**	**52.39**	**182**	LR	LR	23 20 16.5	
	comp=Z,142nm,21.4s,baz=358,slow=30						
AAK	**Ala-Archa**	**58.04**	**7**	LR	LR	23 28 41.3	
	comp=Z,149nm,18.6s,baz=180,slow=36						
CSS	**Mathiatis**	**59.10**	**328**	P	**P**	**23 04 22.4**	**-2.5**
KBZ	**Khabaz**	**62.57**	**341**	LR	LR	23 31 24.6	
	comp=Z,49nm,18.6s,baz=143,slow=36						
BRTR	**Keskin Array B**	**62.74**	**332**	P	**P**	**23 04 50.5**	**+0.7**
	0.7nm,0.9s,baz=177,slow=4.5,SNR=5.3						
MK31	**Makanchi Array**	**63.33**	**12**	P	**P**	**23 04 52.4**	**-1.0**
MK31				IAmb	IAmb	23 04 56.9	
	comp=Z,2.3nm,1.1s						
MKAR	**Makanchi Array**	**63.33**	**12**	P	**P**	**23 04 52.9**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=203,slow=7.9,SNR=7.6						
MKAR				LR	LR	23 31 23.4	
	comp=Z,106nm,20.8s,baz=192,slow=35						
ASAR	**Alice Springs**	**63.49**	**109**	P	**P**	**23 04 55.0**	**-0.1**
	comp=Z,1.1nm,0.9s,baz=277,slow=5.3,SNR=5.8						
ASAR				LR	LR	23 30 07.5	
	comp=Z,254nm,18.2s,baz=264,slow=34						
WRA	**Warramunga Arr**	**64.33**	**105**	P	**P**	**23 05 00.2**	**-0.4**
	comp=Z,1.5nm,1.1s,baz=264,slow=6.0,SNR=3.9						
WRA				LR	LR	23 29 10.4	
	comp=Z,117nm,22.0s,baz=245,slow=32						
BRVK	**Borovoye**	**68.08**	**2**	P	**P**	**23 05 23.4**	**-0.4**
STKA	**Stephens Creek**	**69.48**	**119**	LR	LR	23 31 28.1	
	comp=Z,136nm,19.7s,baz=210,slow=32						
TORD	**Torodi Ar. Bea**	**70.18**	**290**	LR	LR	23 35 38.3	
	comp=Z,75nm,18.5s,baz=130,slow=35						
ZALV	**Zalesovo Beam**	**70.64**	**11**	P	**P**	**23 05 38.6**	**-1.1**
	comp=Z,1.9nm,1.0s,baz=205,slow=6.4,SNR=4.2						
ZALV				LR	LR	23 35 35.0	
	comp=Z,46nm,20.1s,baz=322,slow=35						
SONM	**Songino Array**	**72.12**	**27**	P	**P**	**23 05 48.7**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=212,slow=5.9,SNR=4.0						
SONM				LR	LR	23 36 12.7	
	comp=Z,181nm,20.4s,baz=242,slow=35						
DIVS	**Divibare**	**72.77**	**327**	P	**P**	**23 05 51.2**	**-1.6**
DIVS				IAmb	IAmb	23 05 59.7	
	comp=Z,3.5nm,1.1s						
AKASG	**Malin Array Be**	**73.38**	**336**	P	**P**	**23 05 56.2**	**0.0**
	comp=Z,0.2nm,0.2s,baz=138,slow=4.8,SNR=4.1						
DBIC	**Dimbokro**	**74.09**	**282**	LR	LR	23 37 29.4	
	comp=Z,108nm,20.1s,baz=104,slow=35						
KEST	**Kesra**	**74.19**	**315**	LR	LR	23 38 01.1	
	comp=Z,99nm,20.5s,baz=254,slow=35						
NRCA	**Norcia**	**75.81**	**322**	P	**P**	**23 06 09.9**	**-0.7**
NRCA				IAmb	IAmb	23 06 18.0	
	comp=Z,3.5nm,1.1s						
SOKA	**Soboth**	**77.09**	**326**	*e*P	**P**	**23 06 19.4**	**+1.6**
	comp=Z,7.1nm,1.7s						
ARSA	**Arzberg**	**77.20**	**327**	*e*P	**P**	**23 06 20.3**	**+2.0**
	comp=Z,5.1nm,1.2s						
OBKA	**Obir**	**77.25**	**326**	*e*P	**P**	**23 06 20.6**	**+1.9**
	comp=Z,8.0nm,1.4s						
CONA	**Conrad Observa**	**77.45**	**328**	*e*P	**P**	**23 06 21.6**	**+1.8**
	comp=Z,9.8nm,1.6s						
KSRS	**Korea Array**	**77.82**	**46**	LR	LR	23 42 13.6	
	comp=Z,109nm,18.1s,baz=226,slow=37						
JNU	**Nakatsue**	**77.87**	**51**	LR	LR	23 41 29.6	
	comp=Z,139nm,19.0s,baz=246,slow=36						
MOA	**Molln**	**78.24**	**327**	*e*P	**P**	**23 06 26.0**	**+1.9**
	comp=Z,11nm,1.5s						
ABTA	**Abfaltersbach**	**78.50**	**325**	*e*P	**P**	**23 06 27.7**	**+2.1**
	comp=Z,6.4nm,1.4s						
WTTA	**Wattenberg**	**79.29**	**325**	pP	**P**	**23 06 32.5**	**+2.4**
	comp=Z,9.6nm,1.4s						
WATA	**Walderalm**	**79.37**	**325**	*e*P	**P**	**23 06 31.7**	**+1.3**
	comp=Z,11nm,1.6s						
MOTA	**Moosalm**	**79.63**	**325**	*e*pP	**P**	**23 06 34.3**	**+2.4**
	comp=Z,6.5nm,1.6s						
FETA	**Feichten**	**79.65**	**325**	*e*P	**P**	**23 06 33.8**	**+1.8**
	comp=Z,6.7nm,1.5s						
FINES	**FINESS Array B**	**82.92**	**342**	LR	LR	23 43 32.1	
	comp=Z,47nm,21.5s,baz=151,slow=36						
USRK	**Ussuriysk Ar.**	**83.79**	**41**	LR	LR	23 42 42.1	

	2.3nm,0.3s								
KOTS	**Kotyrbulak**	**1.89**	**287**	P		**Pb**	**22 55 28.1**	**+1.1**
	2.0nm,0.1s								
KOTS				S		**Sg**	**22 55 53.1**	**-0.2**
	2.3nm,0.3s								
MDOK	**Medeo**	**1.92**	**284**	*e*P		**Pb**	**22 55 27.8**	**+0.2**
	1.6nm,0.2s								
MDOK				*e*S		**Sb**	**22 55 52.0**	**+0.5**
	1.0nm,0.3s								
MDOK	**Medeo**	**1.92**	**284**	⇓Pg		**Pn**	**22 55 26.7**	**+1.5**
	1.3nm,0.5s								
MDOK				⇑Lg		Lg	22 55 52.0		
	2.4nm,0.7s								
MDOK	**Medeo**	**1.92**	**284**	Pg		**Pb**	**22 55 27.8**	**+0.2**
MDOK				Lg		Lg	22 55 51.9		
TNSS	**Tian-Shan**	**1.97**	**280**	*e*P		**Pg**	**22 55 30.7**	**+0.4**
	0.5nm,0.1s								
TNSS				*e*S		**Sg**	**22 55 57.2**	**+1.4**
	2.2nm,0.2s								
TNSS	**Tian-Shan**	**1.97**	**280**	Pg		**Pg**	**22 55 30.7**	**+0.4**
	0.5nm,0.1s								
TNSS				Lg		Lg	22 55 57.2		
	2.2nm,0.2s								
ARXS	**Arharly**	**1.97**	**320**	*e*P		**Pb**	**22 55 28.5**	**+0.1**
	0.9nm,0.3s								
ARXS				⇓*i*S		**Sb**	**22 55 53.2**	**+0.2**
	2.5nm,0.3s								
KNDC	**Almaty**	**1.99**	**286**	⇓Pg		**Pn**	**22 55 27.6**	**+1.5**
	4.0nm,0.3s								
KNDC				⇓Lg		Lg	22 55 53.6		
	8.1nm,0.5s								
CHKK	**Chushkaly**	**2.21**	**302**	*e*P		**Pb**	**22 55 33.2**	**+0.7**
	0.5nm,0.1s								
CHKK				*e*S		**Sb**	**22 56 01.3**	**+1.4**
	3.9nm,0.2s								
CHKK	**Chushkaly**	**2.21**	**302**	Pg		**Pb**	**22 55 33.2**	**+0.7**
	0.5nm,0.1s								
CHKK				Lg		Lg	22 56 01.3		
	3.9nm,0.2s								
KTBS	**Karatobe**	**2.35**	**296**	*e*P		**Pb**	**22 55 35.5**	**+0.7**
	0.3nm,0.3s								
KTBS				*e*S		**Sb**	**22 56 04.7**	**+1.0**
	2.4nm,0.2s								
KTBS	**Karatobe**	**2.35**	**296**	Pg		**Pb**	**22 55 35.5**	**+0.7**
	0.3nm,0.3s								
KTBS				Lg		Lg	22 56 04.7		
	2.4nm,0.2s								
ULHL	**Ulahol**	**2.52**	**260**	⇓*i*P		**Pn**	**22 55 30.3**	**-3.2**
	baz=44								
ULHL				⇓*e*S		**Sn**	**22 55 58.0**	**-6.2**
	baz=44								
KAPS	**Kapalarasan**	**2.58**	**356**	*e*P		**Pb**	**22 55 38.6**	**-0.1**
	0.7nm,0.2s								
KAPS				*e*S		**Sb**	**22 56 11.5**	**+1.1**
	0.8nm,0.2s								
KAPS	**Kapalarasan**	**2.58**	**356**	Pg		**Pb**	**22 55 38.6**	**-0.1**
	0.7nm,0.2s								
KAPS				Lg		Lg	22 56 11.5		
	0.8nm,0.2s								
KUU	**Kurty**	**2.65**	**298**	*e*P		**Pb**	**22 55 40.5**	**+0.6**
	0.8nm,0.4s								
KUU				*e*S		**Sb**	**22 56 13.8**	**+1.4**
	2.0nm,0.6s								
KUU	**Kurty**	**2.65**	**298**	Pg		**Pb**	**22 55 40.5**	**+0.6**
	0.8nm,0.4s								
KUU				Lg		Lg	22 56 13.8		
	2.0nm,0.6s								
BOOM	**Boomskoye usch**	**2.70**	**267**	⇑*i*P		**Pn**	**22 55 35.2**	**-0.7**
	baz=41								
BOOM				⇑*i*S		**Sn**	**22 56 04.6**	**-4.0**
	baz=41								
DGS	**Degeres**	**2.85**	**282**	*e*P		**Pb**	**22 55 44.4**	**+1.0**
	1.6nm,0.4s								
DGS				*e*S		**Sb**	**22 56 20.1**	**+1.8**
	1.8nm,0.4s								

GCG ***26*** *23:08:47.3±0.5, 13°.05N×91°.03W, h36km±999km, MD3.9*
SNET ***26*** *23:08:52.7±0.7, 13°.38N×90°.65W, h13km±7km, ML2.9*

ISC 26 23:08:50.5±2.8, 13°.3N±0°.2×90°.9W±0°.1, h33km, n12, σ0°.93/14, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	**Ixpaco**	**1.01**	**25**	*e*P	**Pn**	**23 09 08.7**	**+0.2**
IXG	**Ixpaco**	**1.01**	**25**	*e*P	**Pn**	**23 09 07.7**	**-0.8**
FUG	**Fuego 3**	**1.19**	**2**	*e*P	**Pn**	**23 09 11.1**	**+0.1**
CEVE	**Cerro Verde**	**1.35**	**65**	*e*P	**Pn**	**23 09 12.9**	**-0.3**
CEVE				*e*S	**Sn**	**23 09 28.6**	**-1.6**
CEVE				IAML		23 09 36.8	
	comp=Z,571nm,0.3s						
SBLS	**San Blas**	**1.35**	**64**	*e*P	**Pn**	**23 09 13.1**	**-0.3**
RTR	**El Retiro**	**1.36**	**62**	*e*P	**Pn**	**23 09 13.2**	**-0.1**
SNJE	**San Jose**	**1.38**	**63**	*e*P	**Pn**	**23 09 13.3**	**-0.4**
STG3	**Santiaguito 3,**	**1.60**	**335**	*e*P	**Pn**	**23 09 15.6**	**-1.2**
STG3				*e*S	**Sn**	**23 09 37.7**	**+1.4**
LFRS	**El Faro**	**1.81**	**78**	*e*P	**Pn**	**23 09 19.9**	**+0.5**
MTO3	**Montecristo**	**1.86**	**52**	*e*P	**Pn**	**23 09 20.9**	**+0.5**
MTO3				IAML		23 09 53.2	
	comp=Z,300nm,0.5s						
MRL	**Marmol**	**2.16**	**32**	*e*P	**Pn**	**23 09 25.7**	**+1.3**
LCND	**La Caada**	**2.91**	**89**	*e*P	**Pn**	**23 09 35.1**	**+0.6**
LCND				IAML		23 10 23.5	
	comp=Z,81nm,0.1s						

IDC 26 23:30:44.0±19.0, 18°.09S×177°.99W, h521km±170km, mb3.2/4, mb1 3.5/4, mb1mx2.9/42, mbtmp4.2/4, Error ellipse: s-maj=249.6km s-min=64.9km az=137.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.81**	**261**	P	P	23 36 43.1	+0.3
	2.3nm,0.4s,baz=87,slow=7.7,SNR=5.6						
WRA	**Warramunga Arr**	**44.99**	**260**	P	P	23 38 12.5	-0.4
	1.6nm,0.5s,baz=94,slow=8.1,SNR=18						
ASAR	**Alice Springs**	**45.13**	**254**	P	P	23 38 13.8	-0.2
	6.1nm,0.6s,baz=86,slow=8.8,SNR=73						
ILAR	**Eielson Array**	**85.97**	**13**	P	P	23 42 28.3	-0.1
	0.1nm,0.5s,baz=212,slow=5.3,SNR=1.8						
BRTR	**Keskin Array B**	**145.19**	**315**	PKPbc	PKPdf	23 49 22.3	-0.1
	0.2nm,0.4s,baz=139,slow=2.9,SNR=2.6						
GERES	**GERESS Array B**	**147.89**	**345**	PKPbc	PKPbc	23 49 30.0	-0.3
	0.3nm,0.5s,baz=38,slow=1.7,SNR=2.3						

IDC ***26*** *23:49:00.5±1.4, 15°.13S×66°.73E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.7/33, mbtmp3.8/9, MS4.0/29, Ms1 4.0/29, ms1mx3.8/56, Error ellipse: s-maj=47.7km s-min=24.3km az=38.0*
NEIC ***26*** *23:49:02.0±1.5, 15°.08S±0°.09×66°.8E±0°.1, h10km±1km, mb4.2/2, Error ellipse: s-maj=21.1km s-min=15.1km az=259.0*
GCMT ***26*** *23:49:06.0±0.2, 14°.88S±0°.02×66°.82E±0°.02, h12km, MW4.9/110, Moment Tensor Solution. s39,c44; s110,c163; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.78±.07; Mθθ 1.02±.08; Mϕϕ 1.77±.07; Mrθ 0.74±.29; Mθϕ -1.02±.06; Mϕr 0.81±.28; Best double couple: Mo2.81000×10¹⁶ NP1:ϕs309.00000°, δ45.00000°, λ-115.00000°. NP2:ϕs162.00000°, δ50.00000°, λ-67.00000°. Principal axes: T 2.4940, Plg3.0000°, Azm237.0000°; N 0.6420, Plg17.0000°, Azm327.0000°; P -3.1250, Plg72.0000°, Azm137.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 23:49:03.2±0.7, 15°.1S±0°.1×66°.8E±0°.1, h16km, n55, σ1°.9/41/27, mb4.2/20, MS4.1/28, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**9.28**	**37**	T	T	00 00 28.2	
	baz=217,slow=76,SNR=549						
H08S2	**Diego Garcia H**	**9.29**	**37**	T	T	00 00 37.5	
	baz=217,slow=76,SNR=665						
H08S3	**Diego Garcia H**	**9.30**	**37**	T	T	00 00 38.1	
	baz=217,slow=76,SNR=1238						
RER	**Riviere de l'E**	**12.11**	**239**	Pn	**Pn**	**23 51 55.8**	**+0.5**
OPO	**Ambohidratompo**	**19.10**	**257**	LR	LR	23 59 02.8	
	comp=Z,387nm,18.5s,baz=247,slow=32						
KMBO	**Kilima Mbogo**	**32.35**	**293**	LR	LR	00 06 09.3	
	comp=Z,251nm,21.9s,baz=75,slow=32						
LBTB	**Lobatse**	**39.82**	**249**	P	**P**	**23 56 35.6**	**-0.6**
BOSA	**Boshof**	**40.63**	**244**	LR	LR	00 11 01.3	
	comp=Z,395nm,18.4s,baz=62,slow=33						
CMAR	**Chiang Mai Arr**	**45.99**	**45**	P	**P**	**23 57 27.8**	**+1.6**
	0.9nm,0.3s,baz=237,slow=12,SNR=4.1						
CMAR				LR	LR	00 14 14.3	
	comp=Z,390nm,20.6s,baz=242,slow=33						
H01W3	**Cape Leeuwin H**	**46.68**	**124**	T	T	00 47 28.9	
	baz=283,slow=75,SNR=37						
H01W2	**Cape Leeuwin H**	**46.68**	**124**	T	T	00 47 36.2	
	baz=283,slow=75,SNR=37						
H01W1	**Cape Leeuwin H**	**46.70**	**124**	T	T	00 47 31.5	
	baz=283,slow=75,SNR=42						
MAW	**Mawson**	**52.49**	**182**	LR	LR	00 15 26.3	
	comp=Z,112nm,19.0s,baz=354,slow=30						
KAPI	**Kappang**	**52.95**	**85**	LR	LR	00 17 37.0	
	comp=Z,302nm,21.0s,baz=241,slow=32						
GEYT	**Alibeck**	**53.42**	**351**	LR	LR	00 18 36.5	
	comp=Z,82nm,21.3s,baz=185,slow=33						
MMAI	**Mount Meron Ar**	**56.52**	**328**	LR	LR	00 22 14.9	
	comp=Z,293nm,18.3s,baz=60,slow=35						
AAK	**Ala-Archa**	**57.92**	**7**	LR	LR	00 23 18.9	
	comp=Z,165nm,18.6s,baz=188,slow=36						
BRTR	**Keskin Array B**	**62.73**	**332**	P	**P**	**23 59 27.3**	**-0.5**
	0.3nm,0.8s,baz=150,slow=6.0,SNR=2.9						
MKAR	**Makanchi Array**	**63.20**	**12**	P	**P**	**23 59 29.9**	**-0.6**
	0.4nm,0.6s,baz=211,slow=8.6,SNR=6.6						
MKAR				LR	LR	00 26 12.7	
	comp=Z,122nm,21.6s,baz=204,slow=35						
ASAR	**Alice Springs**	**63.35**	**109**	P	**P**	**23 59 32.3**	**0.0**
	1.0nm,0.9s,baz=270,slow=6.7,SNR=6.7						
ASAR				LR	LR	00 24 54.2	
	comp=Z,288nm,18.1s,baz=261,slow=34						
WRA	**Warramunga Arr**	**64.18**	**105**	P	**P**	**23 59 38.1**	**+0.4**
	0.8nm,0.7s,baz=270,slow=6.2,SNR=5.8						
WRA				LR	LR	00 23 48.4	
	comp=Z,128nm,21.6s,baz=265,slow=32						
WB2	**Warramunga Arr**	**64.19**	**105**	P	**P**	**23 59 35.9**	**-1.9**
SIJI	**Sorong**	**65.13**	**84**	LR	LR	00 25 25.5	
	comp=Z,82nm,21.8s,baz=204,slow=34						
AKTO	**Aktyubinsk**	**65.75**	**354**	LR	LR	00 27 33.4	
	comp=Z,127nm,18.3s,baz=217,slow=35						
STKA	**Stephens Creek**	**69.38**	**119**	LR	LR	00 25 11.2	
	comp=Z,175nm,22.0s,baz=213,slow=31						
TORD	**Torodi Ar. Bea**	**70.31**	**290**	LR	LR	00 27 37.4	
	comp=Z,92nm,21.1s,baz=135,slow=33						
ZALV	**Zalesovo Beam**	**70.51**	**11**	P	**P**	**00 00 16.1**	**-0.9**
	0.3nm,0.4s,baz=201,slow=7.8,SNR=4.0						
ZALV				LR	LR	00 30 03.2	
	comp=Z,59nm,21.4s,baz=248,slow=35						
SONM	**Songino Array**	**71.95**	**27**	P	**P**	**00 00 26.5**	**+0.4**
	0.4nm,0.7s,baz=201,slow=5.9,SNR=3.8						
SONM				LR	LR	00 30 50.5	
	comp=Z,218nm,20.2s,baz=250,slow=35						
AKASG	**Malin Array Be**	**73.37**	**336**	P	**P**	**00 00 33.3**	**-0.9**
	0.4nm,0.3s,baz=144,slow=4.6,SNR=4.6						
JAY	**Jayapura**	**73.78**	**88**	LR	LR	00 35 31.6	
	comp=Z,37nm,18.1s,baz=172,slow=38						
DBIC	**Dimbokro**	**74.25**	**282**	LR	LR	00 32 26.6	
	comp=Z,98nm,18.8s,baz=108,slow=35						
KEST	**Kesra**	**74.25**	**315**	LR	LR	00 31 56.1	
	comp=Z,93nm,21.8s,baz=324,slow=35						
QSPA	**South Pole Qui**	**74.94**	**180**	P	**P**	**00 00 43.5**	**0.0**
CTA	**Charters Tower**	**75.22**	**107**	LR	LR	00 29 31.3	
	comp=Z,284nm,21.9s,baz=250,slow=32						
SOKA	**Soboth**	**77.11**	**326**	P	**P**	**00 00 57.0**	**+1.0**
	5.1nm,1.5s						
ARSA	**Arzberg**	**77.21**	**327**	P	**P**	**00 00 57.9**	**+1.4**
	5.3nm,1.1s						
CONA	**Conrad Observa**	**77.47**	**328**	*e*pP	**P**	**00 01 00.4**	**+2.5**
	8.8nm,1.6s						
KSRS	**Korea Array**	**77.62**	**46**	LR	LR	00 36 51.4	
	comp=Z,126nm,18.0s,baz=232,slow=37						
MOA	**Molln**	**78.25**	**327**	*e*P	**P**	**00 01 03.2**	**+1.0**
	4.8nm,1.0s						
KBA	**Koelnbreinsper**	**78.27**	**326**	*e*P	**P**	**00 01 01.7**	**-0.9**
	2.2nm,0.9s						
ABTA	**Abfaltersbach**	**78.52**	**325**	*e*P	**P**	**00 01 04.9**	**+1.1**
	8.2nm,1.9s						
KLMR	**Klimovskoe**	**78.83**	**347**	*e*	**P**	**00 01 03.6**	**-1.5**
KLMR				AMP		00 01 07.2	
	comp=Z,15nm,1.3s						
WTTA	**Wattenberg**	**79.31**	**325**	*e*P	**P**	**00 01 10.1**	**+1.8**
	comp=Z,4.0nm,1.2s						
WATA	**Walderalm**	**79.39**	**325**	*e*P	**P**	**00 01 10.7**	**+2.0**
	comp=Z,3.4nm,1.2s						
SQTA	**Sankt Quirin**	**79.52**	**325**	*e*pP	**P**	**00 01 11.8**	**+2.4**
	comp=Z,2.7nm,0.7s						
MOTA	**Moosalm**	**79.65**	**325**	*e*P	**P**	**00 01 11.9**	**+1.8**
	comp=Z,4.3nm,1.1s						
FETA	**Feichten**	**79.67**	**325**	*e*pP	**P**	**00 01 12.8**	**+2.5**
	comp=Z,2.3nm,0.8s						
FINES	**FINESS Array B**	**82.88**	**342**	LR	LR	00 39 42.9	
	comp=Z,36nm,19.1s,baz=174,slow=37						
USRK	**Ussuriysk Ar.**	**83.60**	**41**	LR	LR	00 37 30.7	
	comp=Z,72nm,21.4s,baz=230,slow=35						
MJAR	**Matsushiro Arr**	**84.58**	**50**	LR	LR	00 39 50.8	
	comp=Z,61nm,19.3s,baz=225,slow=36						
ESDC	**Sonseca Array**	**85.40**	**313**	P	**P**	**00 01 40.9**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=106,slow=3.3,SNR=5.7						
ESDC				LR	LR	00 39 57.0	
	comp=Z,54nm,18.1s,baz=110,slow=36						
ARCES	**ARCESS Array B**	**89.30**	**347**	LR	LR	00 44 15.5	
	comp=Z,42nm,18.0s,baz=156,slow=37						
DZM	**Mont Dzumac**	**93.02**	**114**	LR	LR	00 43 16.2	
	comp=Z,145nm,18.2s,baz=232,slow=35						
PDAR	**Pinedale Array**	**152.29**	**354**	PKPbc	**PKiKP**	**00 08 59.0**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=81,slow=3.0,SNR=4.3						
TXAR	**Lajitas Array**	**163.37**	**330**	PKPab	**PKPab**	**00 09 55.6**	**-1.0**
	comp=Z,0.3nm,1.0s,baz=50,slow=1.4,SNR=2.2						

SKO ***26*** *23:54:45.2, 41°.41N×19°.04E, h0km*
TIR ***26*** *23:54:47.1, 41°.56N×19°.41E, h9km, Md2.7/5*
BEO ***26*** *23:54:50.0±0.4, 41°.65N×19°.45E, h0km, ML2.0/5*

ISC 26 23:54:47.6±1.2, 41°.60N±0°.04×19°.43E±0°.03, h9km±10km, n21, σ0°.97/36, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.42**	**128**	*e*Pg	**Pb**	**23 54 56.7**	**-0.4**
TIR				*e*Sg	**Sb**	**23 55 02.7**	**-0.8**
TIR	**Tirane**	**0.42**	**128**	*i* PG	**Pb**	**23 54 55.9**	**-1.2**
TIR				*i* SG	**Sb**	**23 55 02.6**	**-1.0**
PUK	**Puka**	**0.56**	**38**	*i* PG	**Pg**	**23 54 58.7**	**+0.2**
PUK				*i* SG	**Sb**	**23 55 08.0**	**+0.2**
PHP	**Peshkopia**	**0.76**	**84**	*i* PG	**Pg**	**23 55 02.1**	**-0.2**
PHP				*i* SG	**Sb**	**23 55 14.2**	**+0.5**
PDG	**Podgorica**	**0.84**	**351**	*e*Pg	**Pn**	**23 55 05.5**	**-0.1**
PDG				*e*Sg	**Sg**	**23 55 14.0**	**-0.6**
BCI	**Bajram Curri**	**0.90**	**32**	*i* PG	**Pg**	**23 55 04.4**	**-0.5**
BCI				*i* SG	**Sn**	**23 55 19.4**	**-0.3**
OHR	**Ohrid**	**1.14**	**115**	*i* Pg	**Pn**	**23 55 09.5**	**-0.3**
OHR				*i* Sg	**Sn**	**23 55 27.4**	**+1.7**
OHR				*e*Lg	Lg	23 55 32.0	
	comp=E,17nm,0.5s						
OHR	**Ohrid**	**1.14**	**115**	*i* Pg	**Pn**	**23 55 09.5**	**-0.3**
OHR				*i* Sg	**Sn**	**23 55 27.4**	**+1.7**
OHR				*e*Lg	Lg	23 55 32.0	
	comp=E,17nm,0.5s						
TREB	**Trebinje**	**1.37**	**325**	*e*Pg	**Pg**	**23 55 13.8**	**-0.1**
TREB				*e*Sg	**Sg**	**23 55 33.3**	**+1.6**
DBRK	**Dubrovnik**	**1.43**	**319**	*e*Pn	**Pb**	**23 55 14.3**	**-0.1**
DBRK				Sn	**Sg**	**23 55 34.9**	**+1.4**
FNA	**Florina**	**1.68**	**118**	*i* PN	**Pg**	**23 55 19.9**	**0.0**
FNA				*i* SN	**Sg**	**23 55 43.3**	**+1.6**
SJES	**Sjenica**	**1.71**	**14**	*e*Pg	**Pb**	**23 55 19.6**	**+0.4**
SJES				*e*Sg	**Sg**	**23 55 42.9**	**+0.5**
STON	**Ston**	**1.80**	**315**	Sn	**Sg**	**23 55 45.7**	**+0.2**
SELS	**Selova**	**2.04**	**37**	*e*Pn	**Pb**	**23 55 24.2**	**-0.7**
SELS				*e*Sg	**Sg**	**23 55 53.1**	**-0.2**
BBLS	**Lazići**	**2.26**	**360**	*e*Pn	**Pb**	**23 55 27.7**	**-0.9**
MAKA	**Makarska**	**2.45**	**314**	*e*Pn	**Pn**	**23 55 28.8**	**+1.1**
MAKA				Sn	**Sn**	**23 55 58.5**	**+0.6**
DIVS	**Divibare**	**2.53**	**9**	*e*Pn	**Pb**	**23 55 32.7**	**-0.5**
RICI	**Ricice**	**2.54**	**319**	*i* Pn	**Pn**	**23 55 30.4**	**+1.4**
KIJV	**Kijevo**	**3.27**	**318**	*e*Pn	**Pn**	**23 55 38.3**	**-0.8**
ZIRJ	**Zirje**	**3.46**	**308**	*e*Pn	**Pn**	**23 55 41.6**	**-0.1**
ZIRJ				Sn	**Sn**	**23 56 22.3**	**-0.5**
MORI	**Morici**	**3.55**	**311**	*e*Pn	**Pn**	**23 55 40.5**	**-2.4**

ATH 26 23:55:14.1, 38°.28N×20°.45E, h14km±1km, ML2.0/3, Error ellipse: s-maj=2.0km s-min=0.7km az=250.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.03**	**218**	P	Pg	23 55 16.4	-0.2
KEF4				S	Sg	23 55 18.2	-0.1
LXRA	**Lixouri, Kepha**	**0.08**	**185**	P	Pg	23 55 17.1	+0.1
LXRA				S	Sg	23 55 19.5	+0.5
ARGA	**Argostoli. Kep**	**0.11**	**166**	P	Pg	23 55 17.3	0.0
ARGA				S	Sg	23 55 19.7	+0.3
KEF3	**Kipouria, Keph**	**0.11**	**225**	P	Pg	23 55 17.2	-0.1
KEF3				S	Sg	23 55 19.7	+0.2
VLS	**Valsamata**	**0.15**	**132**	P	Pg	23 55 17.9	-0.1
VLS				S	Sg	23 55 20.8	+0.3
VLS				AML	AML	23 55 21.0	
	comp=E,3174μm,0.1s						
VLS				AML	AML	23 55 21.2	
	comp=N,1341μm,0.1s						
FSK	**Fiskardo**	**0.20**	**27**	P	Pg	23 55 18.4	-0.3
FSK				S	Sg	23 55 21.6	-0.2
FSK				AML	AML	23 55 21.8	
	comp=N,988μm,0.2s						
FSK				AML	AML	23 55 22.0	
	comp=E,1810μm,0.1s						
KFL	**Anninata**	**0.32**	**122**	P	Pg	23 55 20.8	+0.1
KFL				S	Sg	23 55 25.0	-0.1
KFL				AML	AML	23 55 26.4	
	comp=N,358μm,0.3s						
KFL				AML	AML	23 55 26.7	
	comp=E,429μm,0.3s						
EVGI	**Lefkada island**	**0.38**	**26**	P	Pg	23 55 21.4	-0.4
EVGI				S	Sg	23 55 27.5	+0.5
VLMS	**Volimes, Zakyn**	**0.44**	**157**	P	Pg	23 55 22.7	-0.1
VLMS				S	Sg	23 55 28.8	+0.1
MGNA	**Meganis**	**0.46**	**36**	P	Pb	23 55 23.7	-0.3
MGNA				S	Sg	23 55 30.0	+0.5
LKD2	**Lefkada island**	**0.54**	**18**	P	Pg	23 55 24.7	+0.1
LKD2				S	Sg	23 55 32.2	+0.4
TSLK	**Tsoukalades, L**	**0.57**	**17**	P	Pg	23 55 24.8	-0.5
TSLK				S	Sb	23 55 33.5	-0.4
PDO	**Prodromos**	**0.66**	**61**	P	Pg	23 55 26.7	-0.3
PDO				S	Sb	23 55 36.1	-0.3
PVO	**Paravola**	**0.91**	**68**	P	Pg	23 55 31.4	+0.1
PVO				S	Sb	23 55 43.5	-0.2
AMT	**Artemida-Makis**	**1.25**	**126**	P	Pg	23 55 38.6	+0.5
KLV	**Kalavryta, Ach**	**1.36**	**99**	P	Pn	23 55 38.9	+0.1
MAKR	**Makrakomi, Fth**	**1.51**	**60**	P	Pg	23 55 42.9	-0.2

IDC ***26*** *23:57:20.2±2.1, 3°.80N×71°.07W, h0km, mb3.5/2, mb1 3.9/4, mb1mx3.5/30, mbtmp3.7/4, ML2.6/2, Error ellipse: s-maj=36.4km s-min=26.5km az=112.0*
NEIC ***26*** *23:57:22.2±2.7, 3°.79N±0°.09×71°.24W±0°.08, h13km±5km, mb4.1/3, Mw3.7(RSNC), Error ellipse: s-maj=12.9km s-min=10.9km az=154.0*
RSNC ***26*** *23:57:26.8±0.9, 3°.91N×71°.56W, h4km±4km, ML3.7*

ISC 26 23:57:21.5±1.6, 3°.89N±0°.04×71°.35W±0°.05, h8km±10km, n41, σ2°.27/66, mb3.9/4, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTGC	**Puerto Gaitan,**	**0.84**	**292**	*e*Pg	**Pg**	**23 57 37.5**	**-0.2**
PTGC				*e*Sg	**Sg**	**23 57 46.7**	**-2.1**
PTGC				*i*		23 58 05.5	
	comp=Z,1μm,0.4s						
GUVC	**San Jose del G**	**1.85**	**224**	*e*P	**Pn**	**23 57 55.6**	**+2.1**
GUVC				*e*S	**Sn**	**23 58 18.7**	**+1.6**
GUVC				*i*		23 58 24.0	
	comp=Z,1μm,0.2s						
VILC	**Villavicencio,**	**2.35**	**276**	*e*P	**Pn**	**23 58 02.5**	**+2.0**
VILC				*e*S	**Sn**	**23 58 30.1**	**+0.4**
VILC				*i*		23 58 35.9	
	comp=Z,1μm,0.3s						
CHIC	**Chingaza**	**2.49**	**287**	*e*P	**Pn**	**23 58 04.3**	**+1.6**
CHIC				*e*S	**Sn**	**23 58 34.3**	**+0.8**
CHIC				*i*		23 58 40.5	
	comp=Z,462nm,0.3s						
TAMC	**Tame, Arauca**	**2.57**	**350**	*e*P	**Pb**	**23 58 07.1**	**-0.7**
TAMC				*e*S	**Sb**	**23 58 39.1**	**-0.6**
TAMC				*i*		23 58 58.6	
	comp=Z,174nm,0.6s						
RUSC	**La Rusia**	**2.64**	**319**	*e*P	**Pn**	**23 58 07.1**	**+2.4**
RUSC				*e*S	**Sn**	**23 58 38.3**	**+1.1**
RUSC				*i*		23 58 59.7	
	comp=Z,161nm,0.6s						
RUSC	**La Rusia**	**2.64**	**319**		**Pn**	**23 58 07.2**	**+2.4**
RUSC				Sn	**Sn**	**23 58 35.8**	**-1.4**
MACC	**Macarena, Meta**	**3.04**	**235**	*e*P	**Pn**	**23 58 14.0**	**+4.1**
MACC				*e*S	**Sn**	**23 58 50.2**	**+3.7**
MACC				*i*		23 59 00.8	
	comp=Z,484nm,0.3s						
ROSC	**El Rosal**	**3.11**	**288**	Pn	**Pn**	**23 58 14.3**	**+3.1**
	comp=Z,9.3nm,0.3s,baz=108,slow=18,SNR=14						
ROSC				Pg	**Pg**	**23 58 23.9**	**+2.7**
	comp=Z,48nm,0.3s,baz=108,slow=17,SNR=26						
ROSC				Sn	**Sn**	**23 58 49.5**	**+0.6**
	comp=Z,28nm,0.3s,baz=68,slow=18,SNR=5.1						
ROSC				Lg	Lg	23 59 02.1	
	comp=Z,45nm,0.3s,baz=72,slow=20,SNR=5.4						
ROSC	**El Rosal**	**3.11**	**288**	*e*P	**Pn**	**23 58 14.4**	**+3.1**
ROSC				*i*		23 59 03.1	

SDV					Lg		Lg	00 00 01.7	
	comp=Z,9.6nm,0.3s,baz=119,slow=15,SNR=6.5								
SDV	**Santo Domingo**	**5.02**	**8**			**Pn**		**23 58 38.6**	**+1.3**
PCON	**Cinco Dias**	**5.28**	**253**		*e*P		Pb	23 58 50.2	-4.2
PCON					*e*S		**Sb**	**23 59 52.8**	**-5.3**
PCON					*i*			00 00 10.9	
	comp=Z,135nm,0.4s								
SMLC	**San Martn de**	**5.58**	**331**		*e*S		Sn	23 59 40.1	-9.2
SMLC					*i*			00 00 21.2	
	comp=Z,19nm,0.5s								
DBBC	**Dabeiba**	**5.75**	**303**		*e*P		**Pn**	**23 58 50.0**	**+2.7**
DBBC					*e*S		**Sn**	**23 59 49.0**	**-4.6**
DBBC					*i*			23 59 59.9	
	comp=Z,124nm,0.7s								
PUAC	**Puerto Asis, P**	**6.18**	**238**		*e*P		**Pb**	**23 59 08.9**	**-0.6**
PUAC					*e*S		Sn	00 00 15.1	+11
URIC	**Uribia, Colomb**	**7.79**	**355**		Pn		**Pn**	**23 59 15.7**	**+0.5**
SAML	**Samuel**	**15.13**	**147**		Pn		**Pn**	**00 00 53.8**	**-1.9**
PB12	**IPOC Station P**	**22.38**	**177**		P		**P**	**00 02 18.1**	**-2.4**
PB12					IAmb		IAmb	00 02 27.2	
	comp=Z,8.0nm,0.9s								
MT01	**Popeta**	**37.55**	**180**		P		**P**	**00 04 35.2**	**-1.1**
TXAR	**Lajitas Array**	**39.73**	**313**		P		**P**	**00 04 56.5**	**+1.6**
	comp=Z,0.6nm,0.7s,baz=126,slow=8.2,SNR=5.9								
MNTX	**Cornudas Mount**	**42.27**	**315**		P		**P**	**00 05 15.1**	**-0.6**
MNTX					IAmb		IAmb	00 05 18.0	
	comp=Z,3.2nm,0.8s								
YKA	**Yellowknife Ar**	**66.61**	**340**		P		**P**	**00 08 12.6**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=136,slow=6.5,SNR=2.4								
ASAR	**Alice Springs**	**148.68**	**229**		PKPbc		**PKPbc**	**00 17 10.8**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=117,slow=3.7,SNR=4.4								

IDC ***27*** *00:16:14.0±0.7,38.°77N×43.°50E, h0km, mb4.1/21, mb1 4.1/27,mb1mx4.0/54,mbtmp4.1/27,ML3.1/7,MS3.4/6, Ms1 3.4/6,ms1mx2.9/51,Error ellipse: s-maj=13.6km s-min=10.1km az=178.0*

THR ***27*** *00:16:14.8±0.3,38.°93N×43.°44E, h18km±6km, ML3.9*

ISK ***27*** *00:16:14.4,38.°85N×43.°56E, h5km, ML4.3/21*

MOS ***27*** *00:16:14.3±1.5,38.°71N×43.°59E, h12km, mb4.5/15, Error ellipse: s-maj=6.6km s-min=4.9km az=88.3*

TEH ***27*** *00:16:15.5,38.°87N×43.°55E, h12km, ML4.2*

NSSP ***27*** *00:16:15.9,38.°83N×43.°50E, h10km, Ms4.2*

DDA ***27*** *00:16:16.4,38.°86N×43.°56E, h12km±1km, MW4.3*

NEIC ***27*** *00:16:17.3±2.2,38.°80N±0.°07×43.°58E±0.°09, h25km±6km, Error ellipse: s-maj=10.8km s-min=9.0km az=143.0*

ISC 27 00:16:15.9±0.8,**38.°86N**±0.°01×**43.°55E**±0.°02,**h13**km±5km, **n273**,σ1**95**/327,**mb4.2**/48,**MS3.3**/4,**13C-27D,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VMUR	**Van-Muradiye**	**0.13**	**8**	⇓*i*P	**Pg**	**00 16 18.9**	**-0.6**
VMUR				*i* S	**Sg**	**00 16 22.2**	**+0.1**
ERCV	**ERCIS-VAN**	**0.23**	**314**	PG	**Pg**	**00 16 20.4**	**-0.6**
ERCV				SG	**Sg**	**00 16 24.9**	**+0.4**
ERCV	**ERCIS-VAN**	**0.23**	**314**	*e*Pg	**Pg**	**00 16 20.3**	**-0.7**
VANB	**Van**	**0.29**	**205**	PG	**Pb**	**00 16 22.8**	**-0.3**
VANB	**Van**	**0.29**	**205**	*e*Pg	**Pb**	**00 16 23.0**	**-0.1**
TVAN	**Van**	**0.35**	**199**	⇓*i*P	**Pg**	**00 16 23.0**	**-0.1**
TVAN				*i* S	**Sb**	**00 16 29.8**	**+0.2**
CLDR	**Caldiran**	**0.40**	**45**	PG	**Pg**	**00 16 23.5**	**-0.6**
CLDR				SG	**Sg**	**00 16 30.1**	**+0.6**
CLDR	**Caldiran**	**0.40**	**45**	⇓*i*P	**Pg**	**00 16 23.4**	**-0.6**
CLDR				*i* S	**Sg**	**00 16 30.1**	**+0.6**
CLDR				IAML		00 16 31.0	
	comp=N,30μm,0.6s						
CLDR				IAML		00 16 36.0	
	comp=E,23μm,0.6s						
CLDR	**Caldiran**	**0.40**	**45**	*e*Pg	**Pg**	**00 16 23.4**	**-0.6**
ADCV	**BITLIS_Adilcev**	**0.65**	**266**	*i* P	**Pg**	**00 16 27.9**	**-0.7**
ADCV				*i* S	**Sb**	**00 16 38.8**	**+0.6**
ADCV				IAML		00 16 40.0	
	comp=N,7μm,0.5s						
ADCV				IAML		00 16 40.0	
	comp=E,9μm,0.3s						
DYDN	**Diyadin**	**0.69**	**9**	⇓*i*P	**Pg**	**00 16 28.3**	**-1.1**
DYDN				*i* S	**Sg**	**00 16 39.0**	**+0.5**
DYDN				IAML		00 16 40.0	
	comp=E,6μm,0.2s						
DYDN				IAML		00 16 43.0	
	comp=N,7μm,0.6s						
AKDM	**Akdamar-Van**	**0.69**	**220**	PG	**Pg**	**00 16 28.6**	**-0.9**
AKDM				SG	**Sb**	**00 16 39.3**	**-0.2**
AKDM	**Akdamar-Van**	**0.69**	**220**	*e*Pg	**Pg**	**00 16 28.4**	**-1.1**
TUTA	**Tutak**	**0.79**	**314**	⇓*i*P	**Pg**	**00 16 30.0**	**-1.3**
TUTA				*i* S	**Sb**	**00 16 42.2**	**0.0**
MLAZ	**Malazgirt-MUS**	**0.83**	**290**	PG	**Pg**	**00 16 31.9**	**-0.1**
MLAZ				SG	**Sb**	**00 16 44.4**	**+1.1**
MLAZ	**Malazgirt-MUS**	**0.83**	**290**	*e*Pg	**Pg**	**00 16 31.2**	**-0.8**
AGRB	**Hanur-Agry**	**0.83**	**329**	PG	**Pg**	**00 16 31.2**	**-0.9**
AGRB				SG	**Sb**	**00 16 44.1**	**+0.5**
AGRB	**Hanur-Agry**	**0.83**	**329**	*e*Pg	**Pg**	**00 16 31.1**	**-1.0**
BASK	**Baskale_VAN**	**0.88**	**156**	*i* P	**Pg**	**00 16 31.9**	**-1.1**
BASK				*i* S	**Sn**	**00 16 47.1**	**+0.1**
BASK				IAML		00 16 48.0	
	comp=N,3μm,1.1s						
BASK				IAML		00 16 51.0	
	comp=E,4μm,0.7s						
MAKU	**Maku**	**1.01**	**60**	*e*Pg	**Pg**	**00 16 34.7**	**-0.8**
MAKU				*e*Sg	**Sb**	**00 16 49.0**	**+0.4**
MAKU				IAML		00 16 50.9	
	comp=N,6μm,0.3s						
MAKU				IAML		00 16 51.6	
	comp=E,2μm,0.4s						
MAKU	**Maku**	**1.01**	**60**	*e*Pn	**Pg**	**00 16 34.7**	**-0.8**
IGDI	**IGDIR**	**1.09**	**22**	⇓*i*P	**Pb**	**00 16 35.8**	**-0.8**
IGDI				*i* S	**Sn**	**00 16 53.7**	**+1.9**
IGDI				IAML		00 16 55.0	
	comp=E,2μm,0.5s						
IGDI				IAML		00 16 56.0	
	comp=N,3μm,0.7s						
BLIS	**Bitlis-Merkez**	**1.21**	**249**	⇑*i*P	**Pn**	**00 16 37.4**	**-1.2**
BLIS				*i* S	**Sb**	**00 16 54.2**	**-0.1**
BLIS				IAML		00 17 00.0	
	comp=E,2μm,0.6s						
BLIS				IAML		00 17 00.0	
	comp=N,3μm,0.5s						
GURO	**Guroymak-BITLI**	**1.23**	**256**	PN	**Pn**	**00 16 38.3**	**-0.6**
GURO	**Guroymak-BITLI**	**1.23**	**256**	*e*Pg	**Pn**	**00 16 37.7**	**-1.2**
TASB	**TASBURUN-IGDIR**	**1.24**	**25**	PN	**Pn**	**00 16 38.8**	**-0.3**
TASB	**TASBURUN-IGDIR**	**1.24**	**25**	*e*Pg	**Pn**	**00 16 38.7**	**-0.3**
VNNZ	**Vanand**	**1.26**	**10**	⇓*i*P	**Pn**	**00 16 39.4**	**+0.1**
VNNZ				⇓*i*S	**Sb**	**00 16 56.1**	**+0.4**
EATA	**Eleskirt**	**1.29**	**321**	⇓*i*P	**Pn**	**00 16 39.2**	**-0.8**
EATA				*i* S	**Sg**	**00 16 59.5**	**+1.8**
EATA				IAML		00 17 07.0	
	comp=E,2μm,0.8s						
EATA				IAML		00 17 09.0	
	comp=N,2μm,0.7s						
HAKT	**HAKKARI**	**1.31**	**175**	⇓*i*P	**Pn**	**00 16 39.0**	**-1.1**
HAKT				*i* S	**Sg**	**00 17 02.3**	**+4.2**
HAKT				IAML		00 17 03.0	
	comp=N,1μm,0.5s						
HAKT				IAML		00 17 08.0	
	comp=E,1μm,0.5s						
HYR	**Heyderabad**	**1.32**	**49**	*e*Pg	**Pn**	**00 16 40.3**	**+0.2**
METS	**Metsamor**	**1.35**	**18**	⇓*i*P	**Pn**	**00 16 40.9**	**+0.4**
METS				⇓*i*S	**Sn**	**00 16 58.9**	**+0.9**
YOVA	**Hakkari_Yksek**	**1.40**	**155**	⇓*i*P	**Pn**	**00 16 41.0**	**-0.3**
YOVA				*i* S	**Sg**	**00 17 03.0**	**+1.9**
NRKZ	**NAREK**	**1.43**	**37**	⇓*i*P	**Pn**	**00 16 42.1**	**+0.6**
NRKZ				⇓*i*S	**Sb**	**00 17 01.1**	**+0.6**
ARUZ	**Aruch**	**1.48**	**16**	⇓*i*P	**Pn**	**00 16 43.0**	**+0.7**
ARUZ				⇑*i*S	**Sb**	**00 17 02.8**	**+0.7**
SRTM	**Siirt_Merkez**	**1.54**	**236**	⇑*i*P	**Pb**	**00 16 44.3**	**-0.1**
SRTM				*i* S	**Sg**	**00 17 06.7**	**+1.0**
NAX	**Nakhchivan**	**1.55**	**78**	P	**Pb**	**00 16 44.7**	**+0.3**
NAX	**Nakhchivan**	**1.55**	**78**	*e*Pn	**Pb**	**00 16 44.7**	**+0.3**
DIGO	**Kars**	**1.56**	**355**	⇓*i*P	**Pb**	**00 16 44.9**	**+0.1**
DIGO				IAML		00 17 09.0	
	comp=N,1μm,0.6s						
DIGO				*i* S	**Sg**	**00 17 10.0**	**+3.8**
DIGO				IAML		00 17 23.0	
	comp=E,2μm,0.7s						
DIGO	**Kars**	**1.56**	**355**	*e*Pn	**Pb**	**00 16 44.8**	**+0.1**
MUSM	**Mu-Merkez**	**1.60**	**266**	⇑*i*P	**Pn**	**00 16 43.5**	**-0.4**
MUSM				*i* S	**Sg**	**00 17 07.3**	**-0.1**
MUSM				IAML		00 17 11.0	
	comp=N,443nm,0.5s						
MUSM				IAML		00 17 19.0	
	comp=E,404nm,0.9s						
CUKT	**Cukurca**	**1.61**	**178**	PN	**Pn**	**00 16 44.9**	**+0.8**
CUKT	**Cukurca**	**1.61**	**178**	⇓*i*P	**Pn**	**00 16 44.7**	**+0.6**
CUKT				*i* S	**Sg**	**00 17 10.6**	**+2.8**
CUKT				IAML		00 17 14.0	
	comp=N,3μm,1.1s						
CUKT				IAML		00 17 27.0	
	comp=E,3μm,0.8s						
CUKT	**Cukurca**	**1.61**	**178**	*e*Pn	**Pn**	**00 16 44.7**	**+0.6**
SIRN	**Sirnak**	**1.63**	**214**	⇑*i*P	**Pb**	**00 16 45.3**	**-0.6**
SIRN				*i* S	**Sg**	**00 17 09.0**	**+0.6**
VRTB	**Varto-Mus**	**1.66**	**281**	PN	**Pb**	**00 16 46.1**	**-0.3**
VRTB	**Varto-Mus**	**1.66**	**281**	⇓*i*P	**Pb**	**00 16 45.9**	**-0.5**
VRTB				*i* S	**Sg**	**00 17 11.8**	**+2.4**
VRTB	**Varto-Mus**	**1.66**	**281**	*e*Pn	**Pb**	**00 16 46.1**	**-0.3**
IMRD	**Marand**	**1.69**	**94**	*e*Pn	**Pb**	**00 16 45.8**	**+0.6**
IMRD				*e*		00 17 17.2	
KAPZ	**Kaputan**	**1.71**	**31**	⇓*i*P	**Pb**	**00 16 47.0**	**-0.3**
KAPZ				⇓*i*S	**Sg**	**00 17 10.3**	**-0.6**
ISHB	**Shabestar**	**1.72**	**109**	*e*Pn	**Pb**	**00 16 46.8**	**-0.7**
KOPR	**Koprukoy-ERZUR**	**1.73**	**311**	PN	**Pb**	**00 16 47.5**	**-0.2**
HOMI	**Horasan**	**1.74**	**313**	⇓*i*P	**Pb**	**00 16 47.2**	**-0.6**
HOMI				*i* S	**Sg**	**00 17 15.4**	**+3.5**
HOMI				IAML		00 17 20.0	
	comp=E,3μm,1.3s						
HOMI				IAML		00 17 20.0	
	comp=N,3μm,0.5s						
KARS	**Kars**	**1.80**	**349**	PN	**Pb**	**00 16 48.2**	**-0.6**
EAK	**Akyaka**	**1.82**	**1**	⇓*i*P	**Pb**	**00 16 49.2**	**0.0**
EAK				*i* S	**Sg**	**00 17 20.9**	**+6.3**
EAK				IAML		00 17 23.0	
	comp=E,2μm,1.4s						
EAK				IAML		00 17 32.0	
	comp=N,2μm,0.8s						
SVAN	**Silvan-Diyarba**	**1.98**	**250**	PN	**Pn**	**00 16 50.6**	**+1.5**
SVAN	**Silvan-Diyarba**	**1.98**	**250**	*i* P	**Pb**	**00 16 50.8**	**-0.9**
SVAN				*i* S	**Sg**	**00 17 18.5**	**-0.9**
KARO	**Karliova-Bingo**	**2.00**	**284**	PN	**Pn**	**00 16 50.9**	**+1.4**
BTMN	**Batman**	**2.04**	**242**	*i* P	**Pb**	**00 16 51.8**	**-1.0**
BTMN				*i* S	**Sg**	**00 17 20.6**	**-0.8**
BTMN				IAML		00 17 24.0	
	comp=E,2μm,0.6s						
BTMN				IAML		00 17 25.0	
	comp=N,2μm,0.9s						
AKDA	**Akdag**	**2.10**	**307**	*i* P	**Pb**	**00 16 53.9**	**0.0**
ITBZ	**Tabriz**	**2.13**	**106**	*e*Pn	**Pn**	**00 16 52.6**	**+1.3**
ECAT	**Cat-ERZURUM**	**2.13**	**291**	*i* P	**Pb**	**00 16 54.4**	**-0.1**
ECAT				*i* S	**Sg**	**00 17 26.4**	**+1.8**
ECAT				IAML		00 17 27.0	
	comp=E,401nm,0.6s						
ECAT				IAML		00 17 34.0	
	comp=N,408nm,0.5s						
STE	**Stepanavan**	**2.23**	**16**	⇓*i*P	**Pb**	**00 16 56.7**	**+0.6**
STE				⇓*i*S	**Sg**	**00 17 30.2**	**+2.7**
BNGB	**Bingl**	**2.24**	**274**	PN	**Pn**	**00 16 54.3**	**+1.5**
IAZR	**Azarshahr**	**2.25**	**121**	*e*Pn	**Pn**	**00 16 54.4**	**+1.4**
IAZR				*e*		00 17 06.0	
EMRE	**Erzurum,Aziziy**	**2.31**	**301**	*i* P	**Pb**	**00 16 57.9**	**+0.3**
EMRE				*i* S	**Sg**	**00 17 30.1**	**-0.1**
EMRE				IAML		00 17 43.0	
	comp=E,1μm,0.8s						
EMRE				IAML		00 17 44.0	
	comp=N,2μm,0.8s						
YEDI	**Yedisu-Bingol**	**2.41**	**285**	PN	**Pn**	**00 16 56.7**	**+1.6**
DDEM	**Demirkent**	**2.46**	**326**	*i* P	**Pn**	**00 16 57.1**	**+1.3**
DDEM				IAML		00 17 32.0	
	comp=N,601nm,0.8s						
DDEM				*i* S	**Sg**	**00 17 37.7**	**+2.8**
DDEM				IAML		00 17 42.0	
	comp=E,488nm,0.5s						
TVRZ	**Varzaqan**	**2.47**	**97**	*e*Pn	**Pn**	**00 16 57.6**	**+1.7**
TVRZ				*e*		00 17 37.6	
KRIK	**Erzurum-spir**	**2.51**	**307**	*i* P	**Pb**	**00 17 00.4**	**-0.5**
KRIK				*i* S	**Sg**	**00 17 37.6**	**+1.1**
AKH	**Akhalkalaki**	**2.55**	**359**	PN	**Pn**	**00 16 58.5**	**+1.5**
AKH	**Akhalkalaki**	**2.55**	**359**	P	**Pn**	**00 16 58.2**	**+1.2**
AKH						00 17 21.7	
AKH	**Akhalkalaki**	**2.55**	**359**		**Pn**	**00 16 58.2**	**+1.2**
AKH				Pg	**Pg**	**00 17 03.7**	**-1.0**
AKH				Sn	**Sn**	**00 17 21.7**	**-6.3**
DAGI	**Agillar**	**2.55**	**331**	*i* P	**Pb**	**00 16 59.8**	**-1.7**
DAGI				*i* S	**Sg**	**00 17 36.3**	**-1.4**
DAGI				IAML		00 17 47.0	
	comp=E,156nm,1.0s						
DBAD	**Bademkaya**	**2.58**	**327**	*i* P	**Pb**	**00 17 01.3**	**-0.8**
DBAD				*i* S	**Sg**	**00 17 42.5**	**+3.5**
DBAD				IAML		00 17 48.0	
	comp=E,236nm,0.8s						
DBAD				IAML		00 17 51.0	
	comp=N,255nm,0.7s						
KZRT	**Kazreti**	**2.60**	**14**	*i* P	**Pb**	**00 17 02.9**	**+0.5**
KZRT				*i* S	**Sg**	**00 17 39.6**	**0.0**
KOPT	**Kop Dagi**	**2.63**	**297**	*i* P	**Pb**	**00 17 03.8**	**+0.7**
KOPT				*i* S	**Sg**	**00 17 43.6**	**+3.1**
MARD	**Mardin**	**2.68**	**236**	*i* P	**Pb**	**00 17 01.6**	**-2.1**
MARD				*i* S	**Sg**	**00 17 41.4**	**-0.5**
MARD				IAML		00 17 49.0	
	comp=E,960nm,0.6s						
MARD				IAML		00 17 49.0	
	comp=N,1μm,0.7s						
MAHB	**Mahabad**	**2.70**	**140**	*e*Pn	**Pn**	**00 17 01.2**	**+2.1**
AHAR	**Ahar**	**2.77**	**97**	*e*Pn	**Pn**	**00 17 01.2**	**+1.2**
GANJ	**Ganja**	**2.78**	**49**	P	**Pn**	**00 17 00.2**	**0.0**
IHRS	**Heris**	**2.79**	**100**	*e*Pn	**Pn**	**00 17 02.0**	**+1.6**
MAZI	**Mazidag**	**2.82**	**241**	PN	**Pn**	**00 17 02.2**	**+1.5**
DYBB	**Diyarbakir**	**2.83**	**252**	PN	**Pn**	**00 17 02.5**	**+1.7**
DIYA	**Diyarbakir**	**2.85**	**252**	*i* P	**Pn**	**00 17 03.0**	**+1.9**
DIYA				*i* S	**Sg**	**00 17 45.4**	**-2.2**
DIYA				IAML		00 18 03.0	
	comp=N,373nm,1.5s						
DIYA				IAML		00 18 06.0	
	comp=E,468nm,2.0s						
DBOC	**Borcka**	**2.87**	**330**	*i* P	**Pb**	**00 17 07.7**	**+0.7**
DBOC				*i* S	**Sg**	**00 17 49.5**	**+1.3**
BAYB	**BAYBURT**	**2.90**	**300**	*i* P	**Pb**	**00 17 08.2**	**+0.6**
BAYB				*i* S	**Sg**	**00 17 50.9**	**+1.7**
DGRG	**David-gareji**	**2.94**	**28**	*i* P	**Pb**	**00 17 08.2**	**0.0**
DGRG				*i* S	**Sg**	**00 17 51.1**	**+0.7**
DGRG				IAML		00 17 59.0	
	comp=N,163nm,2.1s						
DGRG				IAML		00 18 04.0	
	comp=E,194nm,1.4s						
IHSH	**Hashtrud**	**2.96**	**100**	*e*Pn	**Pb**	**00 17 10.6**	**+1.9**
TBLG	**Delisi**	**3.01**	**17**	*i* P	**Pn**	**00 17 05.2**	**+2.0**
TBLG				*i* S	**Sg**	**00 17 52.1**	**-0.4**
TBLG	**Delisi**	**3.01**	**17**	P	**Pn**	**00 17 03.2**	**0.0**
TBLG	**Delisi**	**3.01**	**17**	Pn	**Pn**	**00 17 03.2**	**0.0**
BAYT	**Aydıntepe-Bayb**	**3.04**	**301**	PN	**Pn**	**00 17 05.9**	**+2.0**
ERZN	**Erzincan**	**3.06**	**285**	PN	**Pn**	**00 17 06.1**	**+2.0**
TNCL	**Tunceli-Merkez**	**3.13**	**276**	*i* P	**Pb**	**00 17 12.9**	**+1.4**
TNCL				*i* S	**Sg**	**00 18 00.0**	**+3.4**
GRMI	**Germi**	**3.39**	**90**	*e*Pn	**Pn**	**00 17 10.3**	**+1.7**
GRMI				*e*Sg	**Sg**	**00 18 03.0**	**-1.9**
GRMI	**Germi**	**3.39**	**90**	*e*Pn	**Pn**	**00 17 10.3**	**+1.7**
ISRB	**Sarab**	**3.40**	**106**	*e*Pn	**Pn**	**00 17 10.7**	**+1.9**
ISRB				*e*		00 17 24.3	
KELT	**Kelkit**	**3.56**	**293**	*i* P	**Pb**	**00 17 20.6**	**+1.7**
LKRN	**Lenkeran, Azer**	**4.09**	**90**	P	**Pn**	**00 17 19.9**	**+1.8**
AKT	**Akhty**	**4.13**	**49**	*e*P	**Pn**	**00 17 22.1**	**+3.3**
AKT				*e*S	**Sb**	**00 18 13.9**	**-4.5**
AKT				pmax	pmax		
	comp=Z,42nm,0.5s						
AKT				smax	smax		
	comp=N,144nm,1.0s						
AKT				smax	smax		
	comp=N,78nm,0.7s						
AKT				smax	smax		
	comp=E,73nm,1.0s						
AKT				MLR	MLR		
	comp=Z,152nm,2.0s						
ZNJK	**Zanjan**	**4.62**	**117**	*e*Pn	**Pn**	**00 17 27.5**	**+1.9**
ZNJK	**Zanjan**	**4.62**	**117**	*e*Pn	**Pn**	**00 17 27.5**	**+1.9**
DOMR	**Dombai**	**4.66**	**342**	⇑*i*P	Pb	00 17 32.2	-5.3
DOMR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
IDHR	**Dehrash**	**4.74**	**150**	*e*Pn	**Pn**	**00 17 29.2**	**+2.0**
ILIN	**Lien**	**4.79**	**144**	*e*Pn	**Pn**	**00 17 31.1**	**+3.1**
KBZ	**Khabaz**	**4.89**	**354**	Pn	**Pn**	**00 17 32.2**	**+3.2**
	comp=Z,0.1nm,0.3s,baz=95,slow=5.2,SNR=1.7						
KBZ				Pg	**Pg**	**00 17 47.1**	**-2.3**
	comp=Z,0.5nm,0.3s,baz=184,slow=8.4,SNR=23						
KBZ				Lg	Lg	00 18 59.0	
	baz=164,slow=19,SNR=0.7						
KBZ				LR	LR	00 19 56.1	
	comp=Z,238nm,20.8s,baz=184,slow=45						
QSDN	**Sirdan**	**5.04**	**116**	*e*Pn	**Pn**	**00 17 33.4**	**+2.0**
IVIS	**Veis**	**5.07**	**147**	*e*Pn	**Pn**	**00 17 33.9**	**+2.2**
MAK	**Makhachkala**	**5.07**	**35**	*e*P	**Pn**	**00 17 35.9**	**+4.3**
MAK				*e*S	**Sb**	**00 18 42.0**	**-3.3**
MAK				pmax	pmax		
	comp=Z,112nm,1.2s						
MAK				MLR	MLR		
	comp=Z,562nm,14.0s						
KVAR	**Kislovodsk Arr**	**5.13**	**353**	Pn	**Pn**	**00 17 34.9**	**+2.4**
	baz=292,slow=21,SNR=2.4						
KVAR				Pg	**Pg**	**00 17 53.5**	**-0.7**
	baz=270,slow=20,SNR=5.5						
KVAR				Lg	Lg	00 19 00.8	
	baz=49,slow=19,SNR=0.9						
KIV	**Kislovodsk**	**5.13**	**353**	*i* P	**Pb**	**00 17 41.8**	**-3.7**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV	**Kislovodsk**	**5.13**	**353**		**Pn**	**00 17 32.8**	**+0.3**
IGHG	**Ghaleghazi**	**5.13**	**151**	*e*Pn	**Pn**	**00 17 35.3**	**+2.6**
GAZ	**Gaziantep**	**5.28**	**253**	Pn	**Pn**	**00 17 32.6**	**-1.9**
GAZ				Pb	**Pb**	**00 17 50.4**	**+2.3**
KER	**Kermanshah**	**5.32**	**146**	*e*Pn	**Pn**	**00 17 37.0**	**+1.9**
KCHF	**Cheshme Sefid,**	**5.37**	**147**	*e*Pn	**Pn**	**00 17 38.2**	**+2.3**
SOC	**Sochi**	**5.53**	**330**	*e*P	**Pn**	**00 17 42.2**	**+4.3**
SOC				*e*		00 18 53.2	
SOC				pmax	pmax		
	comp=Z,29nm,0.7s						
SOC				MLR	MLR		
	comp=Z,135nm,6.0s						
IBZA	**Bozab**	**5.59**	**140**	*e*Pn	**Pn**	**00 17 41.6**	**+2.7**
IKOM	**Komasi**	**5.66**	**145**	*e*Pn	**Pn**	**00 17 42.7**	**+2.9**
QABG	**Abgarm-Qazvin**	**5.75**	**121**	*e*Pn	**Pn**	**00 17 42.7**	**+1.6**
IGZV	**Ghazvin**	**5.84**	**113**	*e*Pn	**Pn**	**00 17 45.3**	**+2.9**
QALM	**Alamut, Qazvin**	**6.13**	**111**	*e*Pn	**Pn**	**00 17 48.4**	**+2.0**
IRAZ	**Razeghan**	**6.15**	**122**	*e*Pn	**Pn**	**00 17 48.6**	**+1.9**
HSAM	**Carmen**	**6.17**	**137**	*e*Pn	**Pn**	**00 17 50.6**	**+3.7**
IDOB	**Doab**	**6.29**	**142**	*e*Pn	**Pn**	**00 17 50.7**	**+2.2**
IKMR	**Kamar-syah**	**6.61**	**142**	*e*Pn	**Pn**	**00 17 55.5**	**+2.8**
IPRN	**Peran**	**7.45**	**108**	*e*Pn	**Pn**	**00 18 06.8**	**+2.4**
BR131	**Keskin Array S**	**7.74**	**280**	P	**Pn**	**00 18 10.3**	**+2.0**
BR131	**Keskin Array S**	**7.74**	**280**		**Pn**	**00 18 10.3**	**+2.0**
BRTR	**Keskin Array B**	**7.74**	**280**	Pn	**Pn**	**00 18 10.5**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=105,slow=15,SNR=2.7						
BRTR				Lg	Lg	00 20 20.9	
	baz=62,slow=34,SNR=0.8						
BRTR				LR	LR	00 21 45.5	
	comp=Z,188nm,19.5s,baz=75,slow=43						
IALA	**Alasht**	**7.87**	**108**	*e*Pn	**Pn**	**00 18 13.8**	**+3.5**
IGLO	**Ghaloghah**	**8.48**	**103**	*e*Pn	**Pn**	**00 18 21.0**	**+2.4**
ASF	**Jabal al Asfar**	**8.60**	**221**	Pn	**Pn**	**00 18 23.4**	**+3.3**
	comp=Z,0.3nm,0.3s,baz=346,slow=20,SNR=8.3						
ASF				Lg	Lg	00 20 47.6	
	comp=Z,0.2nm,0.3s,baz=337,slow=22,SNR=2.2						
JHBN	**Jahan bin**	**8.79**	**137**	*e*Pn	**Pn**	**00 18 26.1**	**+3.1**
MMAI	**Mount Meron Ar**	**8.81**	**231**	Pn	Pn	00 18 28.3	+5.3
	comp=Z,1.1nm,0.3s,baz=64,slow=15,SNR=7.4						
MMAI				Lg	Lg	00 20 54.6	
	comp=Z,0.8nm,0.3s,baz=47,slow=28,SNR=4.2						
IANJ	**Anjilo**	**8.94**	**109**	*e*Pn	**Pn**	**00 18 29.2**	**+4.3**
ANAR	**Anarak**	**10.00**	**121**	*e*Pn	**Pn**	**00 18 42.7**	**+3.4**
GEYT	**Alibeck**	**11.47**	**90**	Pn	**Pn**	**00 18 59.6**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=251,slow=14,SNR=3.0						
VORD	**Divnogorie**	**12.47**	**347**	*e*P	**P**	**00 19 20.6**	**-4.1**
VORD				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VSR	**Storozhevoye**	**12.73**	**347**	*e*P	**P**	**00 19 23.3**	**-4.4**
VSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LPSR	**Galich'ya

KRLC					smax	smax			
	comp=N,2.0nm,0.4s								
KRLC	**Kraliky**	**22.03**	**309**	*e*P	**P**	**P**	**00 21 12.6**	**+2.6**
ARSA	**Arzberg**	**22.04**	**301**	*e*pP	**P**	**P**	**00 21 14.2**	**+4.1**
	comp=N,2.5nm,0.8s								
KLMR	**Klimovskoe**	**22.16**	**355**	*e*P	**P**	**P**	**00 21 11.4**	**+0.3**
KLMR					pmax	pmax			
	comp=Z,26nm,0.9s								
KLMR	**Klimovskoe**	**22.16**	**355**	*e*P	**P**	**P**	**00 21 11.5**	**+0.3**
KLMR					AMP		00 21 16.9		
	comp=Z,26nm,0.9s								
DPC	**Dobruska-Polom**	**22.40**	**310**	*e*P	**P**	**P**	**00 21 16.9**	**+3.0**
DPC	**Dobruska-Polom**	**22.40**	**310**	*e*P	**P**	**P**	**00 21 16.9**	**+3.0**
OSTC	**Ostas**	**22.54**	**310**	*e*P	**P**	**P**	**00 21 18.1**	**+2.7**
ARSB	**Arslanbob**	**22.60**	**74**	P	**P**	**P**	**00 21 16.5**	**+0.2**
ARSB					pmax	pmax			
	comp=Z,32nm,1.4s								
ARSB	**Arslanbob**	**22.60**	**74**	P	**P**	**P**	**00 21 16.5**	**+0.2**
UPC	**Upice**	**22.64**	**310**	*e*P	**P**	**P**	**00 21 19.3**	**+2.8**
UPC	**Upice**	**22.64**	**310**	*e*P	**P**	**P**	**00 21 19.3**	**+2.8**
CHVC	**Chvalec**	**22.64**	**310**	*e*P	**P**	**P**	**00 21 18.7**	**+2.2**
WHFO	**Wadi Hawf**	**22.69**	**154**	P	**P**	**P**	**00 21 15.9**	**-1.3**
	SNR=8.5								
MOA	**Molln**	**23.00**	**303**	*e*pP	**P**	**P**	**00 21 22.1**	**+1.8**
	comp=Z,6.8nm,1.2s								
ABTO	**Aybut**	**23.06**	**156**	P	**P**	**P**	**00 21 19.9**	**-1.2**
	SNR=12								
AML	**Almayashu**	**23.10**	**72**	P	**P**	**P**	**00 21 24.6**	**+2.8**
	SNR=7.7								
EKS2	**Erkin-Say**	**23.15**	**71**	P	**P**	**P**	**00 21 24.1**	**+2.2**
	SNR=14								
BRVK	**Borovoye**	**23.21**	**44**	P	**P**	**P**	**00 21 21.3**	**-1.0**
BRVK					pmax	pmax			
	comp=Z,3.0nm,0.9s								
BRVK	**Borovoye**	**23.21**	**44**	P	**P**	**P**	**00 21 21.3**	**-1.0**
BVAR	**Borovoye Array**	**23.25**	**44**	P	**P**	**P**	**00 21 22.9**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=243,slow=9.8,SNR=7.2								
KBA	**Koelnbreinsper**	**23.47**	**300**	*e*pP	**P**	**P**	**00 21 26.1**	**+0.9**
	comp=Z,4.1nm,1.0s								
GEC2	**GERESS Array S**	**23.59**	**305**	P	**P**	**P**	**00 21 25.9**	**-0.4**
GEC2					IAmb	IAmb	00 21 28.7		
	comp=Z,3.4nm,0.7s								
GERES	**GERESS Array B**	**23.59**	**305**	P	**P**	**P**	**00 21 27.6**	**+1.3**
	comp=Z,1.2nm,0.5s,baz=102,slow=9.3,SNR=14								
AAK	**Ala-Archa**	**23.68**	**71**	P	**P**	**P**	**00 21 29.0**	**+1.8**
	comp=Z,2.2nm,0.6s,baz=241,slow=11,SNR=13								
KHC	**Kasperske Hory**	**23.74**	**305**	*e*P	**P**	**P**	**00 21 27.6**	**0.0**
KHC	**Kasperske Hory**	**23.74**	**305**	*e*P	**P**	**P**	**00 21 27.6**	**0.0**
KHC				*ex*	x	x	00 21 40.5		
KHC	**Kasperske Hory**	**23.74**	**305**	P	**P**	**P**	**00 21 24.5**	**-3.2**
CHMS	**Chumysh**	**23.86**	**70**	P	**P**	**P**	**00 21 31.1**	**+2.2**
	SNR=10								
BRG	**Berggiesshubel**	**24.00**	**310**	PG	**P**	**P**	**00 21 29.2**	**-0.9**
BRG	**Berggiesshubel**	**24.00**	**310**	P	**P**	**P**	**00 21 29.2**	**-0.9**
KBK	**Karagaybulak**	**24.01**	**71**	P	**P**	**P**	**00 21 33.4**	**+2.9**
	SNR=8.0								
KZA	**Kyzart**	**24.26**	**72**	P	**P**	**P**	**00 21 35.4**	**+2.4**
	SNR=10								
TKM2	**Tokmak 2**	**24.48**	**70**	P	**P**	**P**	**00 21 38.4**	**+3.6**
	SNR=8.8								
WTTA	**Wattenberg**	**24.65**	**300**	*e*pP	**P**	**P**	**00 21 37.4**	**+1.2**
	comp=Z,4.3nm,0.6s								
WATA	**Walderalm**	**24.70**	**300**	*e*pP	**P**	**P**	**00 21 37.5**	**+0.9**
	comp=Z,4.7nm,1.1s								
NKC	**Novy Kostel**	**24.73**	**308**	*e*P	**P**	**P**	**00 21 38.1**	**+1.3**
NKC	**Novy Kostel**	**24.73**	**308**	*e*P	**P**	**P**	**00 21 38.1**	**+1.3**
BOOM	**Boomskoye usch**	**24.75**	**71**	P	**P**	**P**	**00 21 37.6**	**+0.4**
BOOM					pmax	pmax			
	comp=Z,5.0nm,1.0s								
BOOM	**Boomskoye usch**	**24.75**	**71**	P	**P**	**P**	**00 21 37.6**	**+0.4**
BOOM					IAmb	IAmb	00 21 40.4		
	comp=Z,5.4nm,1.0s								
SQTA	**Sankt Quirin**	**24.93**	**300**	*e*pP	**P**	**P**	**00 21 39.1**	**+0.3**
	comp=Z,4.7nm,0.9s								
ULHL	**Ulahol**	**24.98**	**72**	P	**P**	**P**	**00 21 42.2**	**+2.9**
	SNR=10								
MOTA	**Moosalm**	**25.02**	**300**	*e*P	**P**	**P**	**00 21 40.4**	**+0.8**
	comp=Z,6.5nm,1.0s								
FINES	**FINESS Array B**	**25.06**	**340**	P	**P**	**P**	**00 21 39.8**	**+0.1**
	comp=Z,3.8nm,0.9s,baz=150,slow=13,SNR=5.3								
FETA	**Feichten**	**25.23**	**300**	*e*pP	**P**	**P**	**00 21 42.1**	**+0.6**
	comp=Z,4.9nm,1.0s								
RETA	**Reutte**	**25.27**	**301**	pP	**P**	**P**	**00 21 42.0**	**+0.3**
	comp=Z,2.9nm,0.8s								
GRA1	**Grafenberg Arr**	**25.36**	**306**	P	**P**	**P**	**00 21 42.2**	**-0.3**
GRF	**Grafenberg Arr**	**25.36**	**306**	P	**P**	**P**	**00 21 42.2**	**-0.3**
GRF					pmax	pmax			
	comp=Z,20nm,1.3s								
DAVOX	**Davos/Dischmat**	**25.78**	**299**	P	**P**	**P**	**00 21 46.6**	**0.0**
	comp=Z,3.2nm,0.6s,baz=115,slow=7.4,SNR=8.0								
DAVA	**Damuels**	**25.83**	**300**	*e*pP	**P**	**P**	**00 21 47.7**	**+0.7**
	comp=Z,4.5nm,0.8s								
KURBB	**Kurchatov Arra**	**27.23**	**53**	P	**P**	**P**	**00 22 01.2**	**+1.8**
	comp=Z,7.0nm,0.7s,baz=263,slow=9.0,SNR=44								
KURK	**Kurchatov**	**27.31**	**53**	*c iP*	**P**	**P**	**00 22 01.7**	**+1.7**
KURK					pmax	pmax			
	comp=Z,11nm,1.0s								
KURK	**Kurchatov**	**27.31**	**53**	P	**P**	**P**	**00 22 00.6**	**+0.6**
HFS	**Hagfors**	**28.37**	**328**	P	**P**	**P**	**00 22 10.0**	**+0.5**
	comp=Z,3.7nm,0.7s,baz=146,slow=11,SNR=5.9								
HFS	**Hagfors**	**28.37**	**328**	P	**P**	**P**	**00 22 10.0**	**+0.5**
MAKZ	**Makanchi**	**29.04**	**62**	P	**P**	**P**	**00 22 14.5**	**-1.1**
MAKZ					pmax	pmax			
	comp=Z,2.0nm,0.8s								
MAKZ	**Makanchi**	**29.04**	**62**	P	**P**	**P**	**00 22 14.5**	**-1.1**
MAKZ					IAmb	IAmb	00 22 19.9		
	comp=Z,2.3nm,0.8s								
MK31	**Makanchi Array**	**29.26**	**62**	*e*P	**P**	**P**	**00 22 19.3**	**+1.8**
MKAR	**Makanchi Array**	**29.26**	**62**	P	**P**	**P**	**00 22 19.1**	**+1.6**
	comp=Z,1.9nm,0.7s,baz=271,slow=6.8,SNR=22								
ZAA0	**Zalesovo Array**	**31.69**	**48**	P	**P**	**P**	**00 22 39.5**	**+0.6**
ZAA0					IAmb	IAmb	00 22 40.9		
	comp=Z,4.5nm,1.2s								
ZALV	**Zalesovo Beam**	**31.69**	**48**	P	**P**	**P**	**00 22 40.0**	**+1.1**
	comp=Z,2.2nm,0.5s,baz=255,slow=9.9,SNR=13								
ZALV	**Zalesovo Beam**	**31.69**	**48**	*i* P	**P**	**P**	**00 22 40.0**	**+1.1**
ZALV					pmax	pmax			
	comp=Z,2.0nm,0.5s								
ARCES	**ARCESS Array B**	**32.22**	**348**	P	**P**	**P**	**00 22 43.2**	**-0.2**
	comp=Z,3.6nm,1.0s,baz=158,slow=10,SNR=5.9								
DANN	**Dangsing**	**34.85**	**95**	*e*P	**P**	**P**	**00 23 08.5**	**+1.5**
	comp=Z,31nm,0.7s								
KOLN	**Koldanda**	**35.00**	**96**	*e*P	**P**	**P**	**00 23 09.3**	**+1.1**
	comp=Z,11nm,0.8s								
TAM	**Tamanrasset**	**36.08**	**255**	P	**P**	**P**	**00 23 17.5**	**0.0**
TAM					pmax	pmax			
	comp=Z,5.0nm,0.9s								
TAM	**Tamanrasset**	**36.08**	**255**	P	**P**	**P**	**00 23 17.5**	**0.0**
TAM					IAmb	IAmb	00 23 24.0		
	comp=Z,4.6nm,0.9s								
DMN	**Daman**	**36.24**	**95**	*e*P	**P**	**P**	**00 23 20.4**	**+1.4**
ESDC	**Sonseca Array**	**36.45**	**287**	P	**P**	**P**	**00 23 20.0**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=67,slow=8.8,SNR=34								
PKI	**Pulchoki**	**36.50**	**95**	*e*P	**P**	**P**	**00 23 22.2**	**+0.9**
	comp=Z,36nm,1.1s								
GUN	**Gumba**	**36.70**	**94**	*e*P	**P**	**P**	**00 23 24.2**	**+1.2**
	comp=Z,34nm,0.9s								
JIRN	**Jiri**	**37.06**	**94**	*e*P	**P**	**P**	**00 23 27.4**	**+1.3**
	comp=Z,17nm,0.5s								
ODAN	**Odare**	**38.38**	**95**	*e*P	**P**	**P**	**00 23 38.3**	**+1.1**
	comp=Z,50nm,1.1s								
TAPN	**Taplejung**	**38.40**	**94**	*e*P	**P**	**P**	**00 23 38.1**	**+0.8**
	comp=Z,10nm,0.6s								
TOA0	**Torodi Ar. Sit**	**44.95**	**247**	P	**P**	**P**	**00 24 29.1**	**-1.6**
TORD	**Torodi Ar. Bea**	**44.95**	**247**	P	**P**	**P**	**00 24 30.0**	**-0.7**
	comp=Z,4.4nm,0.9s,baz=53,slow=7.4,SNR=14								
ULN	**Ulaanbaatar**	**45.85**	**57**	*i* P	**P**	**P**	**00 24 39.4**	**+1.7**
ULN					pmax	pmax			
	comp=Z,4.0nm,0.9s								
XAN	**Xi'an**	**51.80**	**74**	P	**P**	**P**	**00 25 24.0**	**+0.5**
XAN					pP	sP	00 25 35.3	+5.0	
XAN					pmax	pmax			
	comp=Z,13nm,1.0s								
CMAR	**Chiang Mai Arr**	**51.87**	**97**	P	**P**	**P**	**00 25 23.8**	**-0.3**
	comp=Z,1.4nm,0.3s,baz=300,slow=7.9,SNR=8.1								
TIXI	**Tiksi**	**52.20**	**24**	*i* P	**P**	**P**	**00 25 26.9**	**+1.1**
TIXI					pmax	pmax			
	comp=Z,4.0nm,1.2s								
DBIC	**Dimbokro**	**54.06**	**247**	P	**P**	**P**	**00 25 40.2**	**-0.1**
	comp=Z,4.2nm,0.8s,baz=31,slow=6.7,SNR=2.5								
RES	**Resolute Bay**	**63.44**	**349**	LR	LR	LR	00 54 39.7		
	comp=Z,24nm,18.3s,baz=176,slow=36								
KSRS	**Korea Array**	**63.94**	**62**	P	**P**	**P**	**00 26 49.3**	**+0.7**
	comp=Z,3.2nm,1.0s,baz=292,slow=6.6,SNR=5.5								
BILL	**Bilibino**	**65.15**	**20**	*i* P	**P**	**P**	**00 26 56.6**	**+0.6**
BILL				*i*			00 27 29.7		
BILL					pmax	pmax			
	comp=Z,2.0nm,0.9s								
BOSA	**Boshof**	**69.27**	**197**	P	**P**	**P**	**00 27 22.2**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=59,slow=7.1,SNR=3.7								
C36M	**Paulatuk**	**71.72**	**355**	P	**P**	**P**	**00 27 37.3**	**+0.3**
COLA	**College**	**76.21**	**5**	*i* P	**P**	**P**	**00 28 04.5**	**+1.1**
COLA					pmax	pmax			
	comp=Z,6.0nm,1.2s								
ILAR	**Eielson Array**	**76.38**	**5**	P	**P**	**P**	**00 28 04.7**	**+0.3**
	comp=Z,0.4nm,1.0s,baz=324,slow=4.5,SNR=4.2								
ILAR					LR	LR	01 04 33.2		
	comp=Z,78nm,21.8s,baz=311,slow=38								
DAWY	**Dawson**	**77.39**	**1**	P	**P**	**P**	**00 28 10.0**	**-0.2**
DAWY					IAmb	IAmb	00 28 12.4		
	comp=Z,2.1nm,0.9s								
YKA	**Yellowknife Ar**	**77.47**	**350**	P	**P**	**P**	**00 28 10.8**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=19,slow=6.2,SNR=11								
HYT	**Haines Junctio**	**80.66**	**1**	P	**P**	**P**	**00 28 29.7**	**+1.5**
HYT					IAmb	IAmb	00 28 30.9		
	comp=Z,4.9nm,1.1s								

*ISK **27** 00:18:32.4,38.84N×43.55E,h12km,ML3.0/8*
*DDA **27** 00:18:33.4,38.84N×43.55E,h7km±4km,ML2.7*

ISC 27 00:18:33.2±1.0,38.86N±0.04×43.55E±0.04,h13km±8km, n12,σ0.63/19,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMUR	**Van-Muradiye**	**0.13**	**8**	*i* P	**Pg**	**00 18 36.3**	**-0.4**
VMUR				*i* S	**Sg**	**00 18 39.7**	**+0.5**
VMUR				IAML		00 18 40.0	
	comp=E,3μm,0.3s						
VMUR				IAML		00 18 41.0	
	comp=N,2μm,0.3s						
ERCV	**ERCIS-VAN**	**0.23**	**314**	PG	**Pg**	**00 18 37.7**	**-0.5**
ERCV				SG	**Sg**	**00 18 42.0**	**+0.4**
VANB	**Van**	**0.29**	**205**	PG	**Pb**	**00 18 39.9**	**-0.5**
TVAN	**Van**	**0.35**	**198**	*i* P	**Pg**	**00 18 40.2**	**-0.1**
TVAN				*i* S	**Sb**	**00 18 47.7**	**+0.8**
TVAN				IAML		00 18 49.0	
	comp=N,986nm,0.5s						
TVAN				IAML		00 18 49.0	
	comp=E,810nm,0.6s						
CLDR	**Caldiran**	**0.40**	**46**	PG	**Pg**	**00 18 41.0**	**-0.3**
CLDR				SG	**Sg**	**00 18 47.7**	**+0.9**
CLDR	**Caldiran**	**0.40**	**46**	*i* P	**Pg**	**00 18 41.0**	**-0.3**
CLDR				IAML		00 18 48.0	
	comp=E,350nm,0.4s						
CLDR				IAML		00 18 48.0	
	comp=N,532nm,0.6s						
CLDR				*i* S	**Sb**	**00 18 48.1**	**-0.4**
ADCV	**BITLIS_Adilcev**	**0.65**	**266**	*i* P	**Pg**	**00 18 45.6**	**-0.1**
ADCV				*i* S	**Sb**	**00 18 56.0**	**+0.6**
ADCV				IAML		00 18 57.0	
	comp=N,199nm,0.3s						
ADCV				IAML		00 18 57.0	
	comp=E,160nm,0.3s						
AKDM	**Akdamar-Van**	**0.69**	**220**	PG	**Pg**	**00 18 45.8**	**-0.9**
MLAZ	**Malazgirt-MUS**	**0.83**	**290**	PG	**Pg**	**00 18 48.9**	**-0.3**
MLAZ				SG	**Sb**	**00 19 01.5**	**+0.9**
AGRB	**Hanur-Agry**	**0.83**	**329**	PG	**Pg**	**00 18 48.8**	**-0.5**
GURO	**Guroymak-BITLI**	**1.23**	**256**	PN	**Pb**	**00 18 55.4**	**-0.9**
KARS	**Kars**	**1.80**	**349**	PN	**Pn**	**00 19 04.5**	**+0.4**

IDC 27 00:28:20.7±8.7,5.22S×145.50E,h97km±88km,mb3.5/3, mb1 3.7/5,mb1mx3.3/38,mbtmp3.9/5,ML4.0/1,MS3.1/2, Ms1 3.1/2,ms1mx2.6/24,Error ellipse: s-maj=69.4km s-min=27.2km az=146.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.47**	**159**	P	Pn	00 29 27.1	+0.8
	9.0nm,0.3s,baz=0.6,slow=4.8,SNR=6.1						
PMG				S	Sn	00 30 17.5	+0.3
	15nm,0.3s,baz=316,slow=22,SNR=12						
WRA	**Warramunga Arr**	**18.23**	**216**	P	P	00 32 26.4	-0.1
	0.5nm,0.3s,baz=29,slow=11,SNR=7.0						
ASAR	**Alice Springs**	**21.48**	**210**	P	P	00 33 01.6	0.0
	0.7nm,0.7s,baz=38,slow=8.2,SNR=8.8						
FITZ	**Fitzroy Crossi**	**23.25**	**235**	P	P	00 33 20.0	+0.1
	6.6nm,0.6s,baz=53,slow=11,SNR=23						
KAPI	**Kappang**	**25.65**	**269**	LR	LR	00 44 39.9	
	comp=Z,23nm,19.7s,baz=217,slow=38						
USRK	**Ussuriysk Ar.**	**50.68**	**347**	LR	LR	00 57 08.4	
	comp=Z,27nm,18.7s,baz=21,slow=34						
ILAR	**Eielson Array**	**85.36**	**23**	P	P	00 40 46.8	-0.1
	0.6nm,0.7s,baz=251,slow=5.6,SNR=7.8						

ISC 27 00:30:05.2±1.0,44.49N±0.03×17.08E±0.06,h5km±9km,n9, σ1.01/17,1D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGRS	**Mrkonjic Grad**	**0.07**	**175**	*i* Pg	**Pg**	**00 30 06.7**	**-0.2**
MGRS				*e*Sg	**Sg**	**00 30 07.9**	**-0.2**
BLY	**Banja Luka**	**0.27**	**17**	*e*Pg	**Pg**	**00 30 10.5**	**+0.1**
BLY				*e*Sg	**Sg**	**00 30 14.9**	**+0.9**
KIJV	**Kijevo**	**0.69**	**225**	*i* Pg	**Pg**	**00 30 17.4**	**-1.0**
KIJV				Sg	**Sg**	**00 30 26.3**	**-0.9**
RICI	**Ricice**	**1.00**	**178**	*i* Pg	**Pg**	**00 30 24.4**	**+0.1**
RICI				Sg	**Sb**	**00 30 38.6**	**+0.2**
MOSL	**Moslavina**	**1.14**	**349**	*e*Pg	**Pb**	**00 30 27.4**	**-0.1**
MOSL				Sg	**Sn**	**00 30 43.5**	**-0.5**
MAKA	**Makarska**	**1.21**	**182**	*e*Pg	**Pn**	**00 30 28.0**	**-0.6**
ZIRJ	**Zirje**	**1.33**	**231**	*e*Pn	**Pn**	**00 30 29.0**	**-1.3**
ZIRJ				Sn	**Sg**	**00 30 48.9**	**+1.0**
HVAR	**Hvar**	**1.39**	**199**	*i* Pn	**Sg**	**00 30 32.9**	**+1.1**
HVAR				Sg	**Sg**	**00 30 51.8**	**+2.0**
DUGI	**Dugi Otok**	**1.53**	**252**	*e*Pn	**Pn**	**00 30 33.6**	**+0.4**
DUGI				Sn	**Sg**	**00 30 55.8**	**+1.4**

*IDC **27** 00:37:25.0±7.4,12.82S×166.95E,h323km±84km,mb3.5/6, mb1 3.7/7,mb1mx3.3/43,mbtmp4.2/7,Error ellipse: s-maj=83.5km s-min=24.6km az=163.0*

ISC 27 00:37:23.1±1.1,12.65±0.1×166.9E±0.2,h300km,n9, σ0.85/9,mb3.9/6,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.39**	**183**	P	**Pn**	**00 39 34.3**	**+0.4**
	1.4nm,0.3s,baz=320,slow=16,SNR=13						
WRA	**Warramunga Arr**	**32.05**	**253**	P	**P**	**00 43 21.8**	**-0.9**
	1.4nm,0.4s,baz=83,slow=8.9,SNR=25						
ASAR	**Alice Springs**	**33.14**	**246**	P	**P**	**00 43 31.3**	**-0.8**
	1.3nm,0.6s,baz=71,slow=9.3,SNR=17						
FITZ	**Fitzroy Crossi**	**40.10**	**257**	P	**P**	**00 44 30.8**	**+0.4**
	2.5nm,0.3s,baz=68,slow=7.7,SNR=28						
CMAR	**Chiang Mai Arr**	**73.78**	**294**	P	**P**	**00 48 26.6**	**+1.1**
	1.3nm,0.3s,baz=123,slow=5.8,SNR=4.7						
ILAR	**Eielson Array**	**84.66**	**18**	P	**P**	**00 49 22.1**	**-0.9**
	0.5nm,0.6s,baz=249,slow=5.3,SNR=7.3						
MKAR	**Makanchi Array**	**95.45**	**317**	P	**P**	**00 50 14.8**	**+0.8**
	0.6nm,0.5s,baz=91,slow=5.4,SNR=6.6						
ARCES	**ARCESS Array B**	**118.15**	**346**	PKP	**PKPdf**	**00 55 34.0**	**0.0**
	2.0nm,0.8s,baz=77,slow=2.0,SNR=7.3						
ESDC	**Sonseca Array**	**151.88**	**345**	PKPbc	**PKPbc**	**00 56 42.7**	**-0.3**
	0.3nm,0.6s,baz=29,slow=2.9,SNR=4.7						

ISC 27 00:44:37.8±1.3,50.05N±0.06×18.45E±0.05,h0km,n14, σ0.90/24,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.29**	**222**	*e*PG	**Pg**	**00 44 43.5**	**+0.2**
OKC				*e*SG	**Sg**	**00 44 48.1**	**+1.1**
	comp=Z,23nm,0.4s						
MORC	**Moravsky Berou**	**0.65**	**245**	*e*PG	**Pg**	**00 44 50.1**	**0.0**
MORC				*e*SG	**Sb**	**00 44 59.6**	**-1.9**
KRLC	**Kraliky**	**1.07**	**272**	*e*PG	**Pg**	**00 44 57.5**	**-0.8**
KRLC				*e*SG	**Sb**	**00 45 12.5**	**-1.4**
	comp=Z,9.1nm,0.6s						
LANS	**Liptovska Anna**	**1.12**	**143**	*e*PG	**Pg**	**00 44 58.4**	**-0.8**
LANS				*e*SG	**Sg**	**00 45 14.2**	**+0.5**
JAVC	**Velka Javorina**	**1.30**	**203**	*e*PG	**Pg**	**00 45 02.6**	**0.0**
DPC	**Dobruska-Polom**	**1.40**	**283**	*e*PG	**Pg**	**00 45 03.9**	**-0.7**
DPC				*e*SG	**Sb**	**00 45 22.8**	**-0.4**
	comp=Z,7.7nm,0.6s						
VRAC	**Vranov**	**1.42**	**239**	*e*PN	**Pg**	**00 45 03.8**	**-1.1**
OSTC	**Ostas**	**1.52**	**290**	*e*PG	**Pn**	**00 45 05.8**	**-0.4**
OSTC				*e*SG	**Sn**	**00 45 27.3**	**+0.6**
	comp=Z,4.6nm,0.8s						
CHVC	**Chvalec**	**1.62**	**290**	*e*PG	**Pn**	**00 45 07.5**	**-0.2**
CHVC				*e*SG	**Sg**	**00 45 30.9**	**+0.9**
	comp=Z,3.1nm,0.5s						
UPC	**Upice**	**1.63**	**287**	*e*PG	**Pn**	**00 45 08.0**	**+0.3**
UPC				*e*SG	**Sg**	**00 45 31.5**	**+1.4**
	comp=Z,4.7nm,0.7s						
KRUC	**Moravsky**	**1.66**	**234**	*e*PN	**Pn**	**00 45 07.7**	**-0.5**
GOPC	**GO Pecny, Ondr**	**2.37**	**268**	*e*PG	**Pb**	**00 45 22.1**	**+0.8**
GOPC				*e*SG	**Sg**	**00 45 53.4**	**-0.4**
	comp=Z,2.9nm,0.7s						
PRU	**Pruhonice**	**2.52**	**270**	*e*SG	**Sg**	**00 45 58.3**	**-0.4**
	comp=Z,1.3nm,0.4s						
KHC	**Kasperske Hory**	**3.30**	**256**	*e*PG	**Pb**	**00 45 38.6**	**+1.4**
KHC				*e*SG	**Sg**	**00 46 23.6**	**-0.1**
	comp=Z,1.6nm,0.3s						

*IDC **27** 01:00:14.0±1.4,40.28N×77.59E,h0km,mb3.4/6, mb1 3.5/10,mb1mx3.4/48,mbtmp3.4/10,ML3.3/3,Error ellipse: s-maj=19.7km s-min=16.6km az=170.0*
*SOME **27** 01:00:15.0,40.45N×77.58E,h10km*
*KRNET **27** 01:00:16.0±0.1,40.52N×77.89E,mb4.0*
*BJI **27** 01:00:16.0±0.0,40.43N×77.59E,h13km,ML3.6/9*
*NNC **27** 01:00:17.6±0.8,40.52N×77.61E,h0km,mb4.3,mpv4.0, Error ellipse: s-maj=5.9km s-min=4.8km az=164.0*

ISC 27 01:00:17.9±1.3,40.61N±0.03×77.82E±0.03,h12km±8km, n95,σ2.30/137,mb3.5/5,23C-23D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.59**	**343**	⇑*e*P	**Pb**	**01 00 47.3**	**0.0**
	baz=42						
KDJ				⇑*i* S	**Sg**	**01 01 10.6**	**+1.6**
	baz=42						
KSH	**Kashi**	**1.79**	**233**	Pn	**Pg**	**01 00 52.0**	**-0.3**
KSH				Sn	**Sg**	**01 01 21.3**	**+5.8**
KSH				smax	smax		
	comp=N,990nm,0.4s						
KSH				smax	smax		
	comp=E,3μm,0.7s						
PRZ	**Przheval'sk**	**1.92**	**13**	⇑*i* P	**Pb**	**01 00 53.0**	**+0.1**
	baz=11						
PRZ				⇑*i* S	**Sg**	**01 01 19.8**	**+0.3**
	baz=11						
ULHL	**Ulahol**	**2.02**	**324**	⇓*i* P	**Pb**	**01 00 54.6**	**0.0**
	baz=25						
ULHL				⇓*i* S	**Sg**	**01 01 22.7**	**0.0**
	baz=25						
ULHL	**Ulahol**	**2.02**	**324**	P	**Pb**	**01 00 53.4**	**-1.2**
	SNR=36						
ANVS	**Anan'yevo**	**2.17**	**357**	⇑*i* P	**Pb**	**01 00 56.8**	**-0.4**
	baz=56						
ANVS				⇑*i* S	**Sb**	**01 01 26.4**	**+2.2**
	baz=56						
BOOM	**Boomskoye usch**	**2.35**	**324**	⇓*i* P	**Pb**	**01 00 59.2**	**-1.0**
	baz=24						
BOOM				⇓*i* S	**Sb**	**01 01 30.6**	**+1.3**
	baz=24						
KZA	**Kyzart**	**2.43**	**308**	⇓*i* P	**Pb**	**01 01 00.3**	**-1.4**
	baz=9.0						
KZA				⇓*i* S	**Sb**	**01 01 32.8**	**+1.0**
	baz=9.0						
KZA	**Kyzart**	**2.43**	**308**	P	**Pb**	**01 01 00.1**	**-1.7**
	SNR=204						
SATY	**Saty**	**2.48**	**10**	*e*P	**Pg**	**01 01 05.2**	**-0.2**
	68nm,0.4s						
SATY				*e*S	**Sg**	**01 01 41.5**	**+3.9**
	390nm,0.6s						
SATY	**Saty**	**2.48**	**10**	Pg	**Pg**	**01 01 05.2**	**-0.2**
	68nm,0.4s						
SATY				Lg	Lg	01 01 41.5	
	390nm,0.6s						
TNSS	**Tian-Shan**	**2.51**	**345**	*e*P	**Pg**	**01 01 05.2**	**-0.7**
	190nm,0.5s						
TNSS				*e*S	**Sg**	**01 01 41.4**	**+3.0**

	baz=15							
KBK				⇓*i*S		**Sb**	**01 01 45.7**	**-1.4**
	baz=15							
KBK	**Karagaybulak**	**2.97**	**314**	P		**Pn**	**01 01 07.7**	**+2.7**
	SNR=59							
PDGK	**Podgornoye**	**2.98**	**24**	⇓Pn		**Pb**	**01 01 09.7**	**-1.3**
	35nm,0.6s							
PDGK				⇑Lg		Lg	01 01 58.1	
	331nm,0.9s							
DGS	**Degeres**	**3.04**	**330**	*e*P		**Pb**	**01 01 12.4**	**+0.4**
	58nm,0.6s							
DGS				*e*S		**Sg**	**01 01 53.7**	**-1.8**
	276nm,0.5s							
DGS	**Degeres**	**3.04**	**330**	Pg		**Pb**	**01 01 12.4**	**+0.4**
	66nm,0.7s							
DGS				Lg		Lg	01 01 53.7	
	276nm,0.5s							
KTBS	**Karatobe**	**3.21**	**345**	*e*P		**Pb**	**01 01 16.1**	**+1.3**
	35nm,0.4s							
KTBS				*e*S		**Sg**	**01 02 00.3**	**-0.6**
	465nm,0.6s							
KTBS	**Karatobe**	**3.21**	**345**	Pg		**Pb**	**01 01 16.1**	**+1.3**
	35nm,0.4s							
KTBS				Lg		Lg	01 02 00.3	
	465nm,0.6s							
AAK	**Ala-Archa**	**3.21**	**310**	Pn		**Pn**	**01 01 10.4**	**+2.0**
	14nm,0.3s,baz=137,slow=12,SNR=35							
AAK				Pg		**Pb**	**01 01 14.5**	**-0.4**
	14nm,0.3s,baz=135,slow=11,SNR=18							
AAK				Lg		Lg	01 01 56.8	
	18nm,0.3s,baz=256,slow=16,SNR=22							
AAK	**Ala-Archa**	**3.21**	**310**	⇓*i*P		**Pn**	**01 01 11.0**	**+2.7**
	baz=11							
AAK				⇓*e*S		**Sn**	**01 01 51.2**	**+4.6**
	baz=11							
AAK	**Ala-Archa**	**3.21**	**310**	P		**Pn**	**01 01 10.4**	**+2.0**
	SNR=6.3							
FRU1	**Bishkek**	**3.24**	**314**	⇑*e*P		**Pn**	**01 01 11.5**	**+2.8**
	baz=14							
FRU1				⇑*e*S		**Sn**	**01 01 51.9**	**+4.6**
	baz=14							
CHKK	**Chushkaly**	**3.30**	**349**	*e*P		**Pg**	**01 01 18.9**	**-2.1**
	47nm,0.4s							
CHKK				*e*S		**Sg**	**01 02 05.0**	**+1.2**
	288nm,0.4s							
CHKK	**Chushkaly**	**3.30**	**349**	Pg		**Pg**	**01 01 18.9**	**-2.1**
	47nm,0.4s							
CHKK				Lg		Lg	01 02 05.0	
	288nm,0.4s							
CHMS	**Chumysh**	**3.31**	**317**	⇑*i*P		**Pn**	**01 01 12.4**	**+2.8**
	baz=18							
CHMS				⇑*i*S		**Sn**	**01 01 53.4**	**+4.5**
	baz=18							
CHMS	**Chumysh**	**3.31**	**317**	P		**Pn**	**01 01 11.8**	**+2.3**
	SNR=6.7							
KTMS	**Ketmen**	**3.40**	**33**	*e*P		**Pg**	**01 01 21.6**	**-1.4**
	0.4nm,0.1s							
KTMS				*e*S		**Sg**	**01 02 09.1**	**+2.1**
	81nm,0.9s							
KTMS	**Ketmen**	**3.40**	**33**	Pg		**Pg**	**01 01 21.6**	**-1.4**
	0.4nm,0.1s							
KTMS				Lg		Lg	01 02 09.1	
	81nm,0.9s							
AML	**Almayashu**	**3.46**	**297**	⇑*i*P		**Pn**	**01 01 14.5**	**+2.6**
	baz=98							
AML				⇑*i*S		**Sn**	**01 01 57.5**	**+4.5**
	baz=98							
AML	**Almayashu**	**3.46**	**297**	P		**Pn**	**01 01 13.3**	**+1.4**
	SNR=26							
KUU	**Kurty**	**3.46**	**342**	*e*P		**Pb**	**01 01 20.2**	**+1.2**
	11nm,0.4s							
KUU				*e*S		**Sg**	**01 02 07.3**	**-1.5**
	135nm,0.5s							
KUU	**Kurty**	**3.46**	**342**	Pg		**Pb**	**01 01 20.2**	**+1.2**
	11nm,0.4s							
KUU				Lg		Lg	01 02 07.4	
	135nm,0.5s							
KRBS	**Karabastau**	**3.47**	**333**	⇑*e*P		**Pb**	**01 01 20.5**	**+1.2**
	24nm,0.4s							
KRBS				*e*S		**Sg**	**01 02 07.6**	**-1.6**
	103nm,0.6s							
KRBS	**Karabastau**	**3.47**	**333**	Pg		**Pb**	**01 01 20.5**	**+1.2**
	24nm,0.4s							
KRBS				Lg		Lg	01 02 07.6	
	103nm,0.6s							
MNBS	**Baschi**	**3.49**	**7**	*e*P		**Pg**	**01 01 23.3**	**-1.4**
	0.4nm,0.7s							
MNBS				*e*S		**Sg**	**01 02 12.4**	**+2.5**
	4.0nm,0.6s							
MNBS	**Baschi**	**3.49**	**7**	Pg		**Pg**	**01 01 23.3**	**-1.4**
	0.4nm,0.7s							
MNBS				Lg		Lg	01 02 12.4	
	4.0nm,0.6s							
ARXS	**Arharly**	**3.60**	**0**	*e*P		**Pg**	**01 01 24.4**	**-2.3**
	52nm,0.7s							
ARXS				*e*S		**Sg**	**01 02 14.3**	**+1.0**
	234nm,0.5s							
ARXS	**Arharly**	**3.60**	**0**	Pg		**Pg**	**01 01 24.4**	**-2.3**
	52nm,0.7s							
ARXS				Lg		Lg	01 02 14.3	
	234nm,0.5s							
USP	**Ospenovka**	**3.63**	**318**	⇑*i*P		**Pn**	**01 01 16.9**	**+2.9**
	baz=18							
USP				⇑*e*S		**Sn**	**01 02 01.1**	**+4.3**
	baz=18							
USP	**Ospenovka**	**3.63**	**318**	P		**Pb**	**01 01 22.3**	**+0.3**
	SNR=48							
EKS2	**Erkin-Say**	**3.66**	**305**	⇓*i*P		**Pn**	**01 01 17.1**	**+2.7**
	baz=6.0							
EKS2				⇓*i*S		**Sn**	**01 02 01.7**	**+4.1**
	baz=6.0							
EKS2	**Erkin-Say**	**3.66**	**305**	P		**Pn**	**01 01 17.1**	**+2.7**
	SNR=23							
SGDS	**Sogindy**	**3.70**	**321**	Pg		**Pb**	**01 01 23.7**	**+0.4**
	124nm,0.6s							
SGDS				Lg		Lg	01 02 12.9	
	82nm,0.5s							
DJR	**Jarkent**	**3.99**	**21**	*e*P		**Pg**	**01 01 32.0**	**-2.3**
	18nm,0.4s							
DJR				*e*S		**Sg**	**01 02 27.3**	**+1.3**
	35nm,0.4s							
DJR	**Jarkent**	**3.99**	**21**	Pg		**Pg**	**01 01 32.0**	**-2.3**
	19nm,0.6s							
DJR				Lg		Lg	01 02 27.3	
	35nm,0.4s							
MRKS	**Merke**	**4.05**	**303**	*e*P		**Pb**	**01 01 28.6**	**-0.6**
	18nm,0.3s							
MRKS				*e*S		**Sb**	**01 02 21.5**	**+3.4**
	38nm,0.5s							
MRKS	**Merke**	**4.05**	**303**	Pg		**Pb**	**01 01 28.6**	**-0.6**
	18nm,0.3s							
MRKS				Lg		Lg	01 02 21.5	
	38nm,0.5s							
TDK	**Taldyqorghan**	**4.41**	**5**	*e*P		**Pg**	**01 01 39.3**	**-2.9**
	70nm,0.5s							
TDK				*e*S		**Sg**	**01 02 39.4**	**+0.1**
	243nm,0.6s							
TDK	**Taldyqorghan**	**4.41**	**5**	Pg		**Pg**	**01 01 39.3**	**-2.9**
	70nm,0.5s							
TDK				Lg		Lg	01 02 39.4	
	243nm,0.6s							
BTLS	**Baital**	**5.22**	**329**	*e*P		**Pb**	**01 01 51.1**	**+2.0**
	18nm,1.0s							
BTLS				*e*S		**Sg**	**01 03 00.4**	**-5.1**
	16nm,0.7s							
BTLS	**Baital**	**5.22**	**329**	Pg		**Pb**	**01 01 51.1**	**+2.0**
	18nm,1.0s							
BTLS				Lg		Lg	01 03 00.4	
	16nm,0.7s							
BTK	**Batken**	**5.38**	**266**	⇑*i*P		**Pn**	**01 01 40.2**	**+2.1**
	baz=67							
BTK				⇑*i*S		**Sn**	**01 02 41.9**	**+1.9**
	baz=67							
KK31	**Karatay Array**	**6.00**	**297**	Pn		**Pn**	**01 01 47.2**	**+0.7**
	0.3nm,0.3s,baz=118,slow=11,SNR=8.2							
KK31				Pg		**Pb**	**01 02 05.3**	**+3.0**
	4.4nm,0.8s,baz=138,slow=17,SNR=14							
KK31				⇓Lg		Lg	01 03 24.8	
	6.1nm,0.5s,baz=116,slow=27,SNR=7.2							
IUG	**Iuzhnay**	**6.06**	**287**	Pg		**Pb**	**01 02 06.3**	**+2.9**
	3.8nm,0.6s							
IUG				Lg		Lg	01 03 25.7	
	31nm,0.9s							
BRLS	**Borolday**	**6.43**	**295**	Pg		**Pb**	**01 02 13.4**	**+3.6**
	2.0nm,0.3s							
BRLS				Lg		Lg	01 03 38.2	
	18nm,0.9s							
MK31	**Makanchi Array**	**6.97**	**26**	Pn		**Pn**	**01 02 03.3**	**+3.4**
	0.6nm,0.4s,baz=202,slow=15,SNR=16							
MK31				⇑Pg		**Pg**	**01 02 27.8**	**-3.6**
	1.3nm,0.5s,baz=208,slow=12,SNR=4.6							
MK31				⇓Lg		Lg	01 04 05.1	
	4.2nm,0.7s,baz=204,slow=27,SNR=3.9							
MKAR	**Makanchi Array**	**6.97**	**26**	Pn		**Pn**	**01 02 03.1**	**+3.2**
	0.5nm,0.3s,baz=201,slow=15,SNR=19							
MKAR				Sn		**Sn**	**01 03 24.8**	**+5.7**
	0.2nm,0.3s,baz=208,slow=26,SNR=1.7							
MKAR				Lg		Lg	01 04 05.6	
	0.6nm,0.3s,baz=213,slow=24,SNR=4.7							
CHCP	**Chirah Chowk**	**7.84**	**209**	P		**Pn**	**01 02 09.1**	**-2.7**
WMQ	**Urumqi**	**8.00**	**63**	*e*P		Pn	01 02 18.0	+4.0
WMQ				S		**Sn**	**01 03 44.5**	**+0.1**
WMQ				smax		smax		
	comp=N,17nm,0.7s							
WMQ				smax		smax		
	comp=E,16nm,0.7s							
OTUK	**Ortayu**	**8.58**	**335**	⇑Pg		Pg	01 02 55.6	-6.3
	2.7nm,0.9s							
OTUK				⇓Lg		Lg	01 04 51.2	
	32nm,0.9s							
THW	**Thamme Wali**	**9.20**	**214**	P		**Pn**	**01 02 25.8**	**-4.7**
KURBB	**Kurchatov Arra**	**10.02**	**3**	Pn		**Pn**	**01 02 43.9**	**+2.3**
	0.1nm,0.3s,baz=193,slow=12,SNR=8.7							
KURBB				Lg		Lg	01 05 38.5	
	0.1nm,0.3s,baz=180,slow=28,SNR=6.3							
KURBB	**Kurchatov Arra**	**10.02**	**3**	⇓Pn		**Pn**	**01 02 45.3**	**+3.7**
	2.2nm,0.6s							
KURBB				⇑Lg		Lg	01 05 42.0	
	34nm,0.8s							
BVAR	**Borovoye Array**	**13.41**	**340**	Pn		**Pn**	**01 03 27.9**	**0.0**
	baz=150,slow=12,SNR=5.9							
BVAR				Lg		Lg	01 07 19.8	
	0.2nm,0.3s,baz=148,slow=23,SNR=3.7							
ZALV	**Zalesovo Beam**	**14.15**	**17**	Pn		**P**	**01 03 43.4**	**-2.2**
	0.6nm,0.3s,baz=197,slow=8.5,SNR=7.3							
ARU	**Arti**	**20.21**	**328**	P		**P**	**01 04 52.5**	**0.0**
	0.4nm,0.3s,baz=102,slow=19,SNR=1.7							
SONM	**Songino Array**	**21.63**	**61**	P		**P**	**01 05 10.5**	**+2.5**
	0.3nm,0.4s,baz=267,slow=12,SNR=1.7							
ARCES	**ARCESS Array B**	**39.59**	**334**	P		**P**	**01 07 48.0**	**-0.7**
	1.8nm,0.9s,baz=99,slow=11,SNR=1.4							
ILAR	**Eielson Array**	**69.27**	**19**	P		**P**	**01 11 24.0**	**-0.4**
	0.2nm,0.7s,baz=286,slow=3.4,SNR=2.3							
TORD	**Torodi Ar. Bea**	**71.07**	**271**	P		**P**	**01 11 33.0**	**-3.2**
	0.9nm,0.8s,baz=43,slow=5.1,SNR=12							
YKA	**Yellowknife Ar**	**76.75**	**6**	P		**P**	**01 12 07.7**	**-1.1**
	0.4nm,0.9s,baz=350,slow=5.6,SNR=3.0							

*IDC **27** 01:14:46.3±8.8, 38°.34N×76°.47E, h81km±65km, mb3.1/1, mb1 3.1/6, mb1mx2.9/48, mbtmp3.4/6, ML3.0/5, Error ellipse: s-maj=97.9km s-min=44.5km az=40.0*

ISC 27 01:14:38.8±0.9, 37°.91N±0°.06×76°.0E±0°.1, h35km, n21, σ2s 26/24, 1C-1D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KZA	**Kyzart**	**4.20**	**353**	P		**Pn**	**Pn**	**01 15 43.0**	**+2.3**
	SNR=6.7								
ULHL	**Ulahol**	**4.34**	**3**	P		**Pn**	**Pn**	**01 15 45.4**	**+3.0**
	SNR=6.2								
UCH	**Uchtor**	**4.46**	**346**	P		**Pn**	**Pn**	**01 15 46.3**	**+2.0**
	SNR=20								
AML	**Almayashu**	**4.57**	**338**	P		**Pn**	**Pn**	**01 15 47.2**	**+1.5**
	SNR=20								
KBK	**Karagaybulak**	**4.81**	**351**	P		**Pn**	**Pn**	**01 15 52.2**	**+3.4**
	SNR=13								
AAK	**Ala-Archa**	**4.86**	**347**	P		**Pn**	**Pn**	**01 15 52.4**	**+2.9**
	2.1nm,0.3s,baz=133,slow=5.7,SNR=12								
AAK				S		**Sn**	**Sn**	**01 16 45.3**	**+0.7**
	0.9nm,0.3s,baz=321,slow=19,SNR=3.9								
THN	**Thein Dam**	**5.47**	**182**	*e*P		**Sn**	**Sn**	**01 16 57.5**	**-1.9**
THN				*e*S		**Sn**	**Sn**	**01 17 02.5**	**+3.1**
KK31	**Karatay Array**	**6.66**	**323**	⇓P		**Pn**	**Pn**	**01 16 13.9**	**-0.1**
	0.7nm,0.4s,baz=139,slow=11,SNR=14								
KK31				⇑S		**Sn**	**Sn**	**01 17 23.3**	**-5.4**
	0.9nm,0.4s,baz=152,slow=25,SNR=4.7								
MKAR	**Makanchi Array**	**10.03**	**26**	P		**Pn**	**Pn**	**01 17 01.4**	**+1.1**
	0.3nm,0.3s,baz=195,slow=14,SNR=7.3								
PYUN	**Piuthan**	**11.41**	**147**	*e*P		**Pn**	**Pn**	**01 17 19.5**	**+0.1**
	18nm,0.3s								
DANN	**Dangsing**	**11.54**	**143**	*e*P		**Pn**	**Pn**	**01 17 20.7**	**-0.6**
	16nm,0.4s								
KOLN	**Koldanda**	**11.96**	**145**	*e*P		**Pn**	**Pn**	**01 17 27.1**	**+0.1**
	5.4nm,0.3s								
KURBB	**Kurchatov Arra**	**12.84**	**7**	P		**Pn**	**Pn**	**01 17 37.4**	**-1.2**
	0.0nm,0.3s,baz=190,slow=12,SNR=2.0								
GUN	**Gumba**	**12.97**	**137**	*e*P		**Pn**	**Pn**	**01 17 40.4**	**-0.5**
	12nm,0.4s								
PKI	**Pulchoki**	**13.00**	**140**	*e*P		**Pn**	**Pn**	**01 17 40.8**	**-0.5**
	4.1nm,0.3s								
JIRN	**Jiri**	**13.34**	**137**	*e*P		**Pn**	**Pn**	**01 17 45.5**	**-0.4**
	14nm,0.4s								
TAPN	**Taplejung**	**14.42**	**133**	*e*P		**Pn**	**Pn**	**01 17 59.1**	**-1.6**
	8.1nm,0.5s								
BVAR	**Borovoye Array**	**15.61**	**347**	P		**Pn**	**Pn**	**01 18 18.0**	**+2.0**
	0.1nm,0.3s,baz=160,slow=11,SNR=2.5								
AB31	**Akbulak array**	**16.20**	**320**	P		**Pn**	**Pn**	**01 18 25.9**	**+2.3**
	0.2nm,0.4s,baz=121,slow=14,SNR=4.0								
ZALV	**Zalesovo Beam**	**17.16**	**18**	P		**Pn**	**Pn**	**01 18 33.1**	**-2.5**
	0.2nm,0.3s,baz=208,slow=12,SNR=6.9								
SONM	**Songino Array**	**24.26**	**56**	P		**P**	**P**	**01 19 51.0**	**-1.6**
	0.5nm,0.5s,baz=255,slow=8.6,SNR=3.8								

*IDC **27** 01:14:54.5±2.2, 44°.02N×128°.55W, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/54, mbtmp3.3/3, MS3.3/4, Ms1 3.3/4, ms1mx3.0/11, Error ellipse: s-maj=68.3km s-min=35.2km az=49.0*

*NEIC **27** 01:14:54.6±1.6, 43°.81N±0°.08×128°.34W±0°.05, h10km±1km, mb3.7/16, Error ellipse: s-maj=13.8km s-min=7.1km az=178.0*

ISC 27 01:14:55.4±1.1, 43°.9N±0°.1×128°.3W±0°.1, h13km, n52, σ1s 11/42, mb3.6/3, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
COR	**Corvallis**	**3.68**	**77**	Pn		**Pn**	**Pn**	**01 15 52.9**	**+1.0**
F03A	**Seaside**	**3.97**	**57**	Pn		**Pn**	**Pn**	**01 15 55.6**	**-0.4**
E03A	**Lebam**	**4.31**	**50**	Pn		**Pn**	**Pn**	**01 16 00.8**	**+0.3**
H04A	**Detroit Lake**	**4.49**	**77**			**Pn**	**Pn**	**01 16 04.4**	**+1.3**
YBH	**Yreka Blue Hor**	**4.65**	**115**	Pn		**Pn**	**Pn**	**01 16 04.3**	**-1.0**
F04A	**Amboy**	**4.68**	**62**			**Pn**	**Pn**	**01 16 05.4**	**-0.3**
NLWA	**Neilton Lookou**	**4.72**	**40**	Pn		**Pn**	**Pn**	**01 16 07.2**	**+0.9**
PINE	**Pine Mountain**	**5.34**	**88**			**Pn**	**Pn**	**01 16 17.1**	**+2.1**
K05A	**Summer Lake**	**5.54**	**99**			**Pn**	**Pn**	**01 16 19.2**	**+1.5**
D05A	**Enumclaw**	**5.56**	**51**	Pn		**Pn**	**Pn**	**01 16 18.3**	**+0.6**
B06A	**Marblemount**	**6.65**	**43**	Pn		**Pn**	**Pn**	**01 16 33.6**	**+0.9**
G08A	**Pilot Rock**	**6.84**	**75**	Pn		**Pn**	**Pn**	**01 16 37.1**	**+1.7**
CMB	**Columbia Colle**	**8.36**	**131**			**Pn**	**Pn**	**01 16 56.4**	**+0.1**
KVN	**Kaiserville**	**9.05**	**119**	Pn		**Pn**	**Pn**	**01 17 05.8**	**-0.1**
NVAR	**Mina Array Bea**	**9.30**	**122**	LR		LR	LR	01 21 00.5	
	comp=Z,173nm,18.8s,baz=284,slow=38								
DIB	**Dawson Inlet,**	**9.75**	**345**	Pn		**Pn**	**Pn**	**01 17 16.0**	**+0.9**
ELK	**Elko**	**10.18**	**103**			**Pn**	**Pn**	**01 17 20.1**	**-1.3**
PSUT	**Pine Spring**	**12.12**	**111**	Pn		**Pn**	**Pn**	**01 17 46.7**	**-1.2**
PASC	**Pasadena Art C**	**12.47**	**137**	Pn		**Pn**	**Pn**	**01 17 53.6**	**+1.1**
PDAR	**Pinedale Array**	**13.71**	**88**	LR		LR	LR	01 23 45.0	
	comp=Z,131nm,19.6s,baz=305,slow=38								
Q16A	**Castle Valley**	**13.79**	**105**	Pn		**Pn**	**Pn**	**01 18 09.2**	**-1.5**
SRU	**San Rafael Swe**	**14.16**	**103**	Pn		**Pn**	**Pn**	**01 18 14.7**	**-1.0**
RDMU	**Red Mountain**	**14.28**	**97**	Pn		**Pn**	**Pn**	**01 18 17.4**	**0.0**
U15A	**North Rim**	**14.32**	**116**			**Pn**	**Pn**	**01 18 17.6**	**-0.5**
GLA	**Glamis**	**15.09**	**131**	Pn		**Pn**	**Pn**	**01 18 28.1**	**-0.1**
GLA				IAmb		IAmb	IAmb	01 18 45.5	
	comp=Z,5.0nm,1.2s								
PV09	**Paradox Valley**	**15.40**	**104**	Pn		**Pn**	**Pn**	**01 18 31.8**	**-0.8**
WUAZ	**Wupatki**	**15.46**	**117**	Pn		**Pn**	**Pn**	**01 18 31.9**	**-1.3**
WUAZ				IAmb		IAmb	IAmb	01 18 44.4	
	comp=Z,4.8nm,1.1s								
PV04	**Paradox Valley**	**15.61**	**104**	Pn		**Pn**	**Pn**	**01 18 34.6**	**-0.6**
PV04				IAmb		IAmb	IAmb	01 18 45.1	
	comp=Z,6.1nm,1.2s								
PV22	**Blue Mesa, Par**	**15.63**	**103**	Pn		**Pn**	**Pn**	**01 18 34.7**	**-0.7**
PV22				IAmb		IAmb	IAmb	01 18 41.3	
	comp=Z,6.2nm,1.4s								
LAO	**LASA Array**	**15.81**	**72**	Pn		**Pn**	**Pn**	**01 18 36.9**	**-0.7**
PV01	**Paradox Valley**	**15.96**	**104**	Pn		**Pn**	**Pn**	**01 18 39.8**	**0.0**
MVCO	**Mesa Verde**	**16.45**	**107**	P		**P**	**P**	**01 18 50.3**	**+1.5**
MVCO				IAmb		IAmb	IAmb	01 18 57.0	
	comp=Z,7.8nm,1.2s								
SMCO	**Snowmass**	**16.65**	**99**	Pn		**Pn**	**Pn**	**01 18 48.2**	**-0.5**
ISCO	**Idaho Springs**	**17.39**	**96**	Pn		**Pn**	**Pn**	**01 18 57.3**	**-0.7**
SDCO	**Great Sand Dun**	**18.30**	**102**	P		**Pn**	**Pn**	**01 19 08.9**	**-0.3**
SDCO				IAmb		IAmb	IAmb	01 19 15.2	
	comp=Z,12nm,1.4s								
ANMO	**Albuquerque**	**19.06**	**110**	P		**Pn**	**Pn**	**01 19 17.7**	**-0.6**
FFC	**Flin Flon**	**20.21**	**48**	P		**P**	**P**	**01 19 28.2**	**-1.5**
FFC				IAmb		IAmb	IAmb	01 19 37.2	
	comp=Z,8.1nm,1.3s								
YKA	**Yellowknife Ar**	**20.32**	**18**	P		**P**	**P**	**01 19 30.7**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=205,slow=10.0,SNR=5.3								
DHY	**Denali Highway**	**22.18**	**337**	P		**P**	**P**	**01 19 49.3**	**-1.8**
AMTX	**Amarillo**	**22.39**	**105**	P		**P**	**P**	**01 19 52.8**	**-0.6**
AGMN	**Agassiz Nation**	**22.85**	**67**	P		**P**	**P**	**01 19 57.8**	**-0.4**
AGMN				IAmb		IAmb	IAmb	01 20 12.1	
	comp=Z,1.5nm,0.7s								
ULM	**Lac du Bonnet**	**22.89**	**62**	LR		LR	LR	01 29 23.5	
	comp=Z,87nm,18.3s,baz=240,slow=38								
CNBA	**Chernabura Isl**	**22.94**	**310**	P		**P**	**P**	**01 19 59.8**	**+0.8**
TXAR	**Lajitas Array**	**24.42**	**118**	P		**P**	**P**	**01 20 16.9**	**+3.2**
	comp=Z,0.1nm,0.5s,baz=278,slow=6.1,SNR=3.9								
PETK	**Petropavlovsk-**	**47.84**	**309**	LR		LR	LR	01 40 29.2	
	comp=Z,25nm,21.4s,baz=63,slow=32								
H11N3	**WAKE ISLAND Hy**	**58.52**	**268**	T		T	T	02 27 54.0	
	baz=49,slow=75,SNR=133								
H11N2	**WAKE ISLAND Hy**	**58.53**	**268**	T		T	T	02 27 55.1	
	baz=49,slow=75,SNR=107								
H11N1	**WAKE ISLAND Hy**	**58.54**	**268**	T		T	T	02 28 02.1	
	baz=49,slow=75,SNR=112								
H11S1	**WAKE ISLAND Hy**	**59.45**	**267**	T		T	T	02 29 06.4	
	baz=49,slow=75,SNR=35								
H11S2	**WAKE ISLAND Hy**	**59.46**	**267**	T		T	T	02 29 07.6	
	baz=49,slow=75,SNR=21								
H11S3	**WAKE ISLAND Hy**	**59.47**	**267**	T		T	T	02 29 10.6	
	baz=49,slow=75,SNR=19								
SONM	**Songino Array**	**76.78**	**326**	P		**P**	**P**	**01 26 46.6**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=64,slow=3.4,SNR=4.8								

IDC 27 01:27:39.2±2.2, 5°.15S×139°.88E, h0km, mb3.5/1, mb1 3.5/5, mb1mx3.4/22, mbtmp3.4/5, ML3.2/4, Error ellipse: s-maj=77.9km s-min=21.7km az=109.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.75**	**17**	Pn		Pn	Pn	01 28 24.6	0.0
	3.2nm,0.3s,baz=207,slow=14,SNR=13								
JAY				Sn		Sn	Sn	01 28 57.5	-1.0
	5.5nm,0.3s,baz=316,slow=16,SNR=5.9								
WRA	**Warramunga Arr**	**15.66**	**200**	Pn		Pn	Pn	01 31 19.3	-2.1
	0.1nm,0.3s,baz=19,slow=12,SNR=1.4								
WRA				Sn		Sn	Sn	01 34 06.8	-8.9
	0.1nm,0.3s,baz=45,slow=13,SNR=1.6								
FITZ	**Fitzroy Crossi**	**18.95**	**226**	P		Pn	Pn	01 32 03.2	+0.5
	0.1nm,0.3s,baz=42,slow=14,SNR=2.6								
ASAR	**Alice Springs**	**19.29**	**197**	P		P	P	01 32 05.1	-0.7
	0.1nm,0.3s,baz=31,slow=11,SNR=2.0								
MKAR	**Makanchi Array**	**72.42**	**323**	P		P	P	01 39 07.9	+0.4
	0.4nm,0.7s,baz=108,slow=7.8,SNR=3.7								

*TEH **27** 01:40:00.0, 27°.60N×56°.40E, h10km, ML2.9*

*OMAN **27** 01:40:01.5±0.2, 27°.57N×56°.65E, h18km±2km, ml3.0/6, Error ellipse: s-maj=7.7km s-min=4.1km az=315.0*

ISC 27 01:40:00.3±1.2, 27°.61N±0°.04×56°.48E±0°.05, h12km±11km, n17, σ0s 91/22, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**0.17**	**161**	*e*				01 40 13.5	
IBND				*e*Pg		**Pb**	**Pb**	**01 40 05.6**	**+0.2**
GENO	**Geno**	**0.34**	**233**	*e*Sg		**Sg**	**Sg**	**01 40 11.5**	**-0.5**
GENO				*e*Pg		**Pg**	**Pg**	**01 40 07.3**	**0.0**
GENO				*e*				01 40 16.3	
KHNJ	**Kahnooj**	**1.14**	**72**	*e*Pg		**Pg**	**Pg**	**01 40 23.2**	**+0.9**
KHNJ				*e*				01 40 49.3	
BANOM	**Banah**	**1.68**	**186**	P		**Pn**	**Pn**	**01 40 30.0**	**+0.3**
	SNR=76								
BANOM				S		**Sb**	**Sb**	**01 40 51.9**	**-0.6**
LAR1	**LAR**	**1.87**	**272**	*e*Pn		**Pb**	**Pb**	**01 40 34.8**	**+0.3**
LAR1				*e*				01 41 22.

BCO2	**Palmira**	**0.56**	**5**	⇓*i*P	**Pb**	**01 53 53.8**	**+0.4**
BCO2				*e*S	**Sb**	**01 54 01.6**	**+0.3**
PSOM3	**Paja de Sombre**	**0.58**	**26**	*i* P	**Pb**	**01 53 53.5**	**-0.1**
PSOM3				*e*S	**Sb**	**01 54 00.8**	**-1.0**
BRU2	**Volcan**	**0.65**	**350**	⇓*i*P	**Pb**	**01 53 54.9**	**+0.2**
BRU2				*e*S	**Sb**	**01 54 04.2**	**+0.6**
BRU2	**Volcan**	**0.65**	**350**	*e*P	**Pb**	**01 53 54.8**	**+0.2**
BRU2				*e*S	**Sb**	**01 54 04.3**	**+0.7**
BC3P	**Paso Ancho**	**0.66**	**357**	*e*P	**Pb**	**01 53 54.9**	**0.0**
MLIR3	**Monte Lirio, C**	**0.68**	**339**⇑	*i*P	**Pn**	**01 53 55.8**	**+0.7**
REME3	**Remedios, Chir**	**0.74**	**84**⇑	*i*P	**Pn**	**01 53 57.1**	**+1.2**
REME3				*e*S	**Sn**	**01 54 07.3**	**+1.2**
EDSV	**San Vito**	**0.77**	**330**	*e*P	**Pn**	**01 53 57.5**	**+1.2**
EDSV				*e*S	**Sn**	**01 54 08.6**	**+1.8**
PTJ1	**Puerto Jimnez**	**0.81**	**298**⇑	*i*P	**Pn**	**01 53 57.8**	**+1.0**
PTJ1				*e*S	**Sn**	**01 54 10.8**	**+3.2**
PTJ1	**Puerto Jimnez**	**0.81**	**298**	*e*P	**Pn**	**01 53 57.9**	**+1.1**
PTJ1				*e*S	**Sn**	**01 54 11.1**	**+3.5**
NANC3	**Nancito, Chiri**	**0.84**	**84**⇑	*i*P	**Pn**	**01 53 58.1**	**+0.9**
NANC3				*e*S	**Sb**	**01 54 08.2**	**-0.7**
CHGR2	**Aguacate**	**0.89**	**29**⇑	*i*P	**Pb**	**01 53 57.1**	**-1.6**
CHGR2				*e*S	**Sb**	**01 54 09.3**	**-0.9**
PVID3	**Puerto Vidal,**	**0.97**	**96**⇑	*i*P	**Pb**	**01 53 59.9**	**0.0**
PVID3				*e*S	**Sb**	**01 54 12.2**	**-0.2**
EDPN	**Palmar Norte**	**1.18**	**313**⇑	*e*P	**Pn**	**01 54 02.8**	**+0.9**
EDPN				*e*S	**Sb**	**01 54 19.3**	**+0.8**
EDBA	**Buenos Aires**	**1.22**	**326**	*e*P	**Pn**	**01 54 03.3**	**+0.9**
DRK0	**Durika**	**1.28**	**329**⇑	*i*P	**Pn**	**01 54 03.5**	**+0.1**
DRK0				*e*S	**Sn**	**01 54 21.2**	**+1.6**
DRK0	**Durika**	**1.28**	**329**	*e*P	**Pn**	**01 54 03.8**	**+0.3**
CNAZ3	**Canazas, Verag**	**1.37**	**82**⇑	*i*P	**Pn**	**01 54 05.6**	**+1.1**
CNAZ3				*e*S	**Sn**	**01 54 23.1**	**+1.6**
MESA3	**La Mesa, Verag**	**1.38**	**90**⇑	*i*P	**Pn**	**01 54 05.6**	**+1.0**
MESA3				*e*S	**Sn**	**01 54 23.0**	**+1.3**
GMAL	**Guarumal, Vera**	**1.39**	**106**⇑	*i*P	**Pn**	**01 54 05.7**	**+0.9**
GMAL				*e*S	**Sb**	**01 54 24.4**	**-0.1**
GMAL	**Guarumal, Vera**	**1.39**	**106**	*e*P	**Pn**	**01 54 06.0**	**+1.2**
RSUS3	**Rio de Jesus,**	**1.42**	**97**⇑	*i*P	**Pb**	**01 54 07.0**	**-0.5**
RSUS3				*e*S	**Sb**	**01 54 25.6**	**+0.4**
RGM0	**Gandoca**	**1.43**	**359**	*e*S	**Sb**	**01 54 26.4**	**+0.9**
RGM0	**Gandoca**	**1.43**	**359**	*e*P	**Pb**	**01 54 07.7**	**0.0**
RGM0				*e*S	**Sb**	**01 54 27.2**	**+1.7**
EDLM	**Las Mercedes**	**1.50**	**318**	*e*P	**Pn**	**01 54 07.1**	**+0.8**
EDLM				*e*S	**Sn**	**01 54 27.0**	**+2.2**
STIA3	**Santiago, Vera**	**1.59**	**92**⇑	*i*P	**Pn**	**01 54 08.9**	**+1.4**
STIA3				*e*S	**Sb**	**01 54 29.7**	**-0.5**
SFRA3	**San Francisco,**	**1.59**	**87**⇑	*i*P	**Pn**	**01 54 08.9**	**+1.3**
PONU3	**Ponuga, Veragu**	**1.61**	**100**⇑	*i*P	**Pn**	**01 54 09.4**	**+1.6**
MARI3	**Mariato, Verag**	**1.65**	**108**⇑	*i*P	**Pn**	**01 54 11.1**	**-0.3**
MARI3				*e*S	**Sb**	**01 54 32.7**	**+0.8**
EDDO	**Dominical**	**1.68**	**311**⇑	*e*P	**Pn**	**01 54 10.2**	**+1.5**
EDDO				*e*S	**Sb**	**01 54 32.1**	**-0.4**
CALO3	**Calobre, Verag**	**1.73**	**84**⇑	*e*P	**Pn**	**01 54 11.0**	**+1.6**
CALO3				*e*S	**Sn**	**01 54 33.1**	**+2.7**
OCU3	**Ocu, Herrera**	**1.80**	**97**⇑	*e*P	**Pn**	**01 54 12.6**	**+2.2**
OCU3				*e*S	**Sn**	**01 54 33.1**	**+1.0**
CACAO	**El Cacao, Vera**	**1.88**	**115**⇑	*e*P	**Pn**	**01 54 13.2**	**+1.7**
CACAO				*e*S	**Sn**	**01 54 35.6**	**+1.4**
CRIS3	**El Cristo, Coc**	**1.94**	**87**⇑	*i*P	**Pn**	**01 54 14.1**	**+1.7**
CRIS3				*e*S	**Sn**	**01 54 36.6**	**+0.9**
PESE3	**Pese, Herrera**	**1.96**	**97**	*e*S	**Sn**	**01 54 38.6**	**+2.5**
LCR2	**La Lucha 2**	**2.11**	**318**	*e*P	**Pn**	**01 54 16.1**	**+1.2**
LCR2				*e*S	**Sn**	**01 54 41.9**	**+1.7**
CVTR	**Volcan Turrial**	**2.19**	**328**	*e*P	**Pn**	**01 54 17.8**	**+1.6**
CVTR				*e*S	**Sn**	**01 54 45.8**	**+3.4**
TOSI3	**Tonosi**	**2.25**	**109**⇑	*i*P	**Pb**	**01 54 19.9**	**-1.7**
TOSI3				*e*S	**Sb**	**01 54 47.6**	**-1.2**
PNME	**Penonome**	**2.25**	**81**	*e*P	**Pn**	**01 54 18.0**	**+1.4**
PNME				*e*S	**Sn**	**01 54 45.3**	**+2.0**
PNME	**Penonome**	**2.25**	**81**⇑	*i*P	**Pn**	**01 54 18.2**	**+1.6**
PNME				*e*S	**Sn**	**01 54 43.9**	**+0.6**
SJS	**Escuela Geolog**	**2.29**	**321**	*e*P	**Pn**	**01 54 19.5**	**+2.2**
AZU	**Azuero**	**2.31**	**99**	*e*P	**Pn**	**01 54 20.1**	**+2.7**
AZU				*e*S	**Sn**	**01 54 47.5**	**+2.8**
AZU	**Azuero**	**2.31**	**99**⇑	*i*P	**Pn**	**01 54 19.4**	**+2.0**
AZU				*e*S	**Sn**	**01 54 48.4**	**+3.6**
AZU	**Azuero**	**2.31**	**99**	*e*P	**Pn**	**01 54 19.7**	**+2.2**
VTON	**El Valle, Cocl**	**2.48**	**79**⇑	*i*P	**Pn**	**01 54 22.7**	**+2.9**
VTON				*e*S	**Sn**	**01 54 53.2**	**+4.1**
PCRI3	**Pocri, Los San**	**2.49**	**101**	*e*P	**Pn**	**01 54 23.2**	**+3.3**
PCRI3				*e*S	**Sb**	**01 54 56.2**	**+0.3**
ACHO3	**Achotines, Los**	**2.50**	**107**	*e*P	**Pn**	**01 54 22.1**	**+2.2**
ACHO3				*e*S	**Sb**	**01 54 55.9**	**-0.2**
SRA1	**San Ramn**	**2.68**	**316**	*e*P	**Pn**	**01 54 25.6**	**+3.0**
ZANG	**Zanguenga, Cho**	**2.80**	**73**⇑	*e*P	**Pn**	**01 54 28.8**	**+2.6**
ZANG				*e*S	**Sb**	**01 55 05.3**	**+0.5**
ZANG	**Zanguenga, Cho**	**2.80**	**73**	*e*P	**Pn**	**01 54 26.6**	**+2.5**
CHOR3	**La Chorrera**	**2.88**	**75**	*e*S	**Sb**	**01 55 07.8**	**+0.7**
BCIP	**Isla Barro Col**	**2.89**	**69**	*e*P	**Pn**	**01 54 26.9**	**+1.5**
BCIP	**Isla Barro Col**	**2.89**	**69**	*e*P	**Pn**	**01 54 27.8**	**+2.4**
BCIP				*e*S	**Sb**	**01 55 07.8**	**+0.3**
BCIP	**Isla Barro Col**	**2.89**	**69**	*e*P	**Pn**	**01 54 27.6**	**+2.1**
MLIR	**Monte Lirio**	**2.90**	**68**	*e*P	**Pn**	**01 54 27.5**	**+2.0**
FRIJ	**El Hiral**	**3.01**	**69**⇑	*e*P	**Pn**	**01 54 29.2**	**+2.1**
TABO3	**Taboga, Panama**	**3.06**	**78**	*e*P	**Pb**	**01 54 34.9**	**-0.5**
FORC	**Fortuna**	**3.09**	**318**	*e*P	**Pn**	**01 54 29.8**	**+1.7**
FORC				*e*S	**Sb**	**01 55 11.0**	**-2.1**
FLAM	**Flamenco Islan**	**3.10**	**76**	*e*S	**Sb**	**01 55 16.8**	**+3.2**
CASO	**Castillo**	**3.11**	**317**	*e*P	**Pn**	**01 54 30.0**	**+1.6**
ARE1	**Arenal 1**	**3.12**	**318**	*e*P	**Pn**	**01 54 30.7**	**+2.2**
UPA	**Univ. de Panam**	**3.12**	**75**	*e*P	**Pn**	**01 54 31.5**	**+2.9**
UPA	**Univ. de Panam**	**3.12**	**75**	*e*P	**Pb**	**01 54 35.0**	**-1.5**
UPA				*e*S	**Sb**	**01 55 15.5**	**+1.4**
UPA	**Univ. de Panam**	**3.12**	**75**	*e*P	**Pb**	**01 54 35.8**	**-0.7**
CEDE	**Laguna Cedeo**	**3.12**	**318**	*e*P	**Pn**	**01 54 30.0**	**+1.3**
CEDE				*e*P	**Pn**	**01 54 30.5**	**+1.8**
JTS	**Las Juntas de**	**3.16**	**312**	Pn	**Pn**	**01 54 30.6**	**+1.5**
	18nm,0.3s,baz=343,slow=5.3,SNR=58						
JTS				Sn	**Sn**	**01 55 08.9**	**+3.1**
	5.6nm,0.3s,baz=20,slow=22,SNR=1.7						
JTS				LR	LR	01 55 53.6	
	comp=Z,167nm,20.6s,baz=191,slow=44						
JTS	**Las Juntas de**	**3.16**	**312**	*e*P	**Pn**	**01 54 30.8**	**+1.6**
ACAL	**Aguas Claras**	**3.46**	**316**	*e*P	**Pn**	**01 54 36.4**	**+3.2**
PTEN	**Parque Tenorio**	**3.48**	**317**	*e*P	**Pn**	**01 54 36.0**	**+2.7**
PLVR	**Palo Verde**	**3.50**	**309**	*e*P	**Pn**	**01 54 35.5**	**+1.6**
CUI	**Cuipilapa**	**3.56**	**314**	*e*P	**Pn**	**01 54 37.0**	**+2.3**
CHPO	**Chepo, Panama**	**3.57**	**73**	*e*S	**Sb**	**01 55 22.5**	**-4.5**
GUAI	**GUAI**	**3.58**	**306**⇑	*i*P	**Pn**	**01 54 36.1**	**+1.3**
COLC	**Colonia**	**3.60**	**314**	*e*P	**Pn**	**01 54 37.1**	**+1.9**
CNTA3	**Canitas, Panam**	**3.80**	**74**	*e*S	**Sb**	**01 55 29.2**	**-4.4**
NY14	**Universidad de**	**3.83**	**311**⇓	*e*P	**Pn**	**01 54 40.9**	**+2.6**
LAPC	**Finca la Perla**	**3.83**	**313**⇓	*e*P	**Pn**	**01 54 40.2**	**+1.9**
BUEV	**Buena Vista**	**3.83**	**313**⇓	*e*P	**Pb**	**01 54 44.7**	**-3.9**
BUAI	**Buenos Aires**	**3.83**	**315**	*e*P	**Pn**	**01 54 40.6**	**+2.2**
GBS3	**Finca Las Img**	**3.85**	**313**	*e*P	**Pn**	**01 54 40.2**	**+1.4**
DBBC	**Dabeiba**	**6.41**	**100**	*e*P	**Pn**	**01 55 17.3**	**+3.3**
MALC	**Bahia Malaga**	**6.64**	**128**	*e*P	**Pn**	**01 55 20.2**	**+3.2**
CBOC	**Ciudad Bolivar**	**6.90**	**109**	*e*P	**Pn**	**01 55 21.6**	**+0.8**
PLMC	**San Jos del P**	**7.04**	**117**	*e*P	**Pn**	**01 55 24.3**	**+1.7**
HELC	**Santa Helena**	**7.26**	**105**	*e*P	**Pn**	**01 55 28.8**	**+2.9**
SJCC	**San Jacinto, C**	**7.51**	**76**	*e*P	**Pn**	**01 55 30.8**	**+1.8**
ZARC	**Zaragoza, Cauc**	**7.68**	**94**	*e*P	**Pn**	**01 55 33.4**	**+2.2**
GUY2C	**Guyana, Caldas**	**7.73**	**112**	*e*P	**Pn**	**01 55 36.0**	**+3.6**
RREF	**El Recreo**	**7.88**	**114**	*e*P	**Pn**	**01 55 36.2**	**+1.6**
ANIL	**Santa Ana**	**8.01**	**117**	*e*P	**Pn**	**01 55 38.9**	**+2.8**
NORC	**Norcasia**	**8.08**	**108**	*e*P	**Pn**	**01 55 40.5**	**+3.8**
BBAC	**Balboa, Cauca**	**8.08**	**139**	*e*P	Pn	01 55 42.5	+5.5
ORTC	**Ortega, Tolima**	**8.42**	**120**	*e*P	**Pn**	**01 55 45.9**	**+4.4**
SOTA	**Rioblanco**	**8.43**	**135**	*e*P	Pn	01 55 47.8	+5.8
PRAC	**Prado**	**8.83**	**120**	*e*P	**Pn**	**01 55 51.4**	**+4.3**
GARC	**Garzon, Huila**	**9.21**	**130**	*e*P	Pn	01 55 57.7	+5.1
MACC	**Macarena, Meta**	**10.54**	**124**	*e*P	**Pn**	**01 56 12.1**	**+1.5**
CMIG	**Matias Romero**	**14.93**	**308**	Pn	**Pn**	**01 57 11.8**	**+1.4**
	0.2nm,0.3s,baz=92,slow=4.7,SNR=5.1						
TKL	**Tuckaleechee C**	**27.40**	**358**	LR	LR	02 10 40.0	
	comp=Z,65nm,18.9s,baz=158,slow=38						
TXAR	**Lajitas Array**	**28.93**	**319**	P	**P**	**01 59 37.4**	**-0.7**
	0.2nm,0.6s,baz=116,slow=8.1,SNR=2.3						
MDP	**Montagnes des**	**29.89**	**94**	LR	LR	02 12 41.4	
	comp=Z,83nm,21.3s,baz=324,slow=39						
YKA	**Yellowknife Ar**	**59.03**	**343**	P	**P**	**02 03 36.1**	**-2.0**
	0.4nm,0.8s,baz=131,slow=7.9,SNR=9.1						
ILAR	**Eielson Array**	**71.86**	**336**	P	**P**	**02 05 00.5**	**-0.7**
	0.5nm,0.6s,baz=99,slow=4.8,SNR=7.5						
ESDC	**Sonseca Array**	**76.09**	**51**	P	**P**	**02 05 26.2**	**-0.2**
	0.7nm,0.9s,baz=286,slow=6.0,SNR=6.1						
TORD	**Torodi Ar. Bea**	**82.64**	**78**	P	**P**	**02 06 02.0**	**-0.5**
	0.5nm,0.8s,baz=282,slow=6.5,SNR=11						

IDC ***27*** *01:56:05.4±1.2,6˚68S×154˚62E,h0km,mb3.9/7, mb1 4.1/8,mb1mx3.9/28,mbtmp3.9/8,ML4.2/1,MS3.3/5, Ms1 3.3/5,ms1mx2.9/24,Error ellipse: s-maj=40.0km s-min=25.3km az=126.0*

NEIC ***27*** *01:56:09.6±1.7,6˚75S±0˚.08×154˚.67E±0˚.10,h35km±2km, mb4.1/9,Error ellipse: s-maj=16.9km s-min=13.3km az=115.0*

ISC 27 01:56:11.1±0.7,6˚.61S±0˚.08×154˚.59E±0˚.08,h48km,n25, σ1§61/25,mb4.0/11,MS3.3/3,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.41**	**315**	Pn		**Pn**		**01 57 01.8**	**0.0**
KRVT	**Keravat (AS076**	**3.43**	**312**	Pn		**Pn**		**01 57 01.3**	**-0.8**
	24nm,0.3s,baz=229,slow=3.1,SNR=34								
KRVT				Sn		**Sn**		**01 57 38.1**	**-3.4**
	19nm,0.3s,baz=283,slow=23,SNR=2.2								
PMG	**Port Moresby**	**7.87**	**249**	Sn		**Sn**		**01 59 32.0**	**+1.2**
	1.9nm,0.3s,baz=222,slow=18,SNR=3.7								
PMG				LR		LR		02 00 33.5	
	comp=Z,91nm,20.7s,baz=12,slow=34								
PMG	**Port Moresby**	**7.87**	**249**	Pn		**Pn**		**01 58 02.0**	**-1.1**
PMG						**Sn**		**01 59 30.1**	**-0.7**
COEN	**Coen**	**13.39**	**236**	Pn		**Pn**		**01 59 21.4**	**+2.7**
JAY	**Jayapura**	**14.43**	**286**	LR		LR		02 06 06.8	
	comp=Z,106nm,18.7s,baz=189,slow=42								
CTAO	**Charters Tower**	**15.66**	**210**	P		**P**		**01 59 52.1**	**0.0**
DZM	**Mont Dzumac**	**19.16**	**145**	P		**P**		**02 00 27.7**	**-3.2**
DZM				IAmb		IAmb		02 00 46.5	
	comp=Z,10nm,1.1s								
WR0	**Warramunga Arr**	**23.56**	**234**	P		**P**		**02 01 16.9**	**-0.7**
WR0				IAmb		IAmb		02 01 20.7	
	comp=Z,6.4nm,1.0s								
WB0	**Warramunga Arr**	**23.58**	**234**	P		**P**		**02 01 17.2**	**-0.5**
WB2	**Warramunga Arr**	**23.70**	**234**	P		**P**		**02 01 18.0**	**-0.8**
WB2				IAmb		IAmb		02 01 20.3	
	comp=Z,5.9nm,1.0s								
WRA	**Warramunga Arr**	**23.71**	**234**	P		**P**		**02 01 18.4**	**-0.5**
	comp=Z,3.0nm,0.9s,baz=56,slow=10,SNR=8.2								
WRA				LR		LR		02 11 06.5	
	comp=Z,100nm,19.1s,baz=65,slow=38								
ASAR	**Alice Springs**	**26.14**	**227**	P		**P**		**02 01 41.5**	**+0.5**
	comp=Z,1.3nm,1.0s,baz=59,slow=10,SNR=5.5								
ASAR				LR		LR		02 10 30.5	
	comp=Z,58nm,18.0s,baz=65,slow=33								
STKA	**Stephens Creek**	**27.92**	**204**	LR		LR		02 12 30.1	
	comp=Z,83nm,18.1s,baz=36,slow=35								
TNTI	**Ternate**	**28.14**	**284**	P		**P**		**02 01 58.2**	**-0.9**
FITZ	**Fitzroy Crossi**	**30.45**	**245**	P		**P**		**02 02 19.3**	**-0.2**
FITZ				IAmb		IAmb		02 02 37.3	
	comp=Z,4.0nm,1.1s								
HIZ	**Hauiti**	**36.68**	**153**	P		**P**		**02 03 11.7**	**-1.7**
SONM	**Songino Array**	**68.80**	**327**	P		**P**		**02 07 12.0**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=154,slow=38,SNR=3.6								
VNDA	**Vanda**	**70.98**	**178**	P		**P**		**02 07 22.3**	**-1.0**
MKAR	**Makanchi Array**	**82.85**	**319**	P		**P**		**02 08 33.4**	**+2.7**
	comp=Z,0.8nm,0.5s,baz=100,slow=6.8,SNR=11								
MAKZ	**Makanchi**	**83.06**	**319**	P		**P**		**02 08 32.6**	**+0.9**
MAKZ				IAmb		IAmb		02 08 34.9	
	comp=Z,3.1nm,1.1s								
ILAR	**Eielson Array**	**83.16**	**22**	P		**P**		**02 08 32.9**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=284,slow=4.5,SNR=4.7								
ZALV	**Zalesovo Beam**	**83.64**	**326**	P		**P**		**02 08 34.2**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=116,slow=9.8,SNR=1.6								
NVAR	**Mina Array Bea**	**91.80**	**52**	P		**P**		**02 09 16.1**	**+1.6**
	comp=Z,1.3nm,0.8s,baz=249,slow=5.7,SNR=6.4								
TORD	**Torodi Ar. Bea**	**152.54**	**286**	PKPbc		**PKiKP**		**02 16 05.3**	**+1.8**
	comp=Z,1.1nm,0.9s,baz=79,slow=2.0,SNR=8.0								

IDC ***27*** *02:34:07.2±1.6,40˚.23N×77˚.52E,h0km,mb3.5/3, mb1 3.6/7,mb1mx3.4/47,mbtmp3.5/7,ML3.3/3,MS2.6/1, Ms1 2.6/1,ms1mx2.1/32,Error ellipse: s-maj=21.1km s-min=18.8km az=162.0*

SOME ***27*** *02:34:08.2,40˚.47N×77˚.55E,h5km*

BJI ***27*** *02:34:09.5±0.0,40˚.47N×77˚.59E,h6km,ML3.6/8*

KRNET ***27*** *02:34:10.2±0.1,40˚.51N×77˚.69E,mb4.1*

NNC ***27*** *02:34:10.7±0.7,40˚.50N×77˚.55E,h0km,mb4.3,mpv4.0, Error ellipse: s-maj=4.6km s-min=3.7km az=168.0*

ISC 27 02:34:14.3±1.3,40˚.64N±0˚.04×77˚.70E±0˚.03,h11km±9km, n92,σ1§75/129,mb3.5/4,27C-20D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.09**	**4**	⇓*i*P		**Pg**		**02 34 33.3**	**-2.0**
	baz=4.0								
TARG				⇓*i*S		**Sb**		**02 34 50.2**	**+0.3**
	baz=4.0								
KDJ	**Kajisay**	**1.54**	**345**⇑	*i*P		**Pn**		**02 34 41.0**	**-0.9**
	baz=47								
KDJ				⇑*i*S		**Sn**		**02 35 03.2**	**+1.2**
	baz=47								
KSH	**Kashi**	**1.73**	**230**	Pn		**Pb**		**02 34 45.5**	**-0.7**
KSH				Sn		**Sg**		**02 35 15.5**	**+5.5**
KSH				smax		smax			
	comp=N,1μm,0.3s								
KSH				smax		smax			
	comp=E,3μm,0.7s								
PRZ	**Przheval'sk**	**1.92**	**16**	⇓*i*P		**Pn**		**02 34 47.4**	**+0.3**
	baz=15								
PRZ				⇓*i*S		**Sb**		**02 35 14.5**	**+1.1**
	baz=15								
ULHL	**Ulahol**	**1.94**	**326**	⇓*i*P		**Pn**		**02 34 47.5**	**0.0**
	baz=28								
ULHL				⇓*i*S		**Sb**		**02 35 14.9**	**+0.7**
	baz=28								
ULHL	**Ulahol**	**1.94**	**326**	P		**Pn**		**02 34 47.6**	**+0.2**
	SNR=135								
ANVS	**Anan'yevo**	**2.14**	**359**⇑	*i*P		**Pn**		**02 34 50.8**	**+0.6**
	baz=60								
ANVS				⇑*i*S		**Sb**		**02 35 20.2**	**+0.3**
	baz=60								
BOOM	**Boomskoye usch**	**2.27**	**325**⇑	*i*P		**Pn**		**02 34 52.1**	**+0.1**
	baz=27								
BOOM				⇑*i*S		**Sn**		**02 35 22.7**	**+2.6**
	baz=27								
KZA	**Kyzart**	**2.34**	**309**⇑	*i*P		**Pn**		**02 34 52.7**	**-0.4**
	baz=11								
KZA				⇑*i*S		**Sn**		**02 35 24.1**	**+2.1**
	baz=11								
KZA	**Kyzart**	**2.34**	**309**	P		**Pn**		**02 34 52.7**	**-0.4**
	SNR=137								
TNSS	**Tian-Shan**	**2.46**	**347**	*e*P		**Pb**		**02 34 58.2**	**-0.6**
	193nm,0.4s								
TNSS				*e*S		**Sg**		**02 35 34.5**	**+1.1**
	426nm,0.6s								
TNSS	**Tian-Shan**	**2.46**	**347**	Pg		**Pb**		**02 34 58.2**	**-0.6**
	193nm,0.4s								
TNSS				Lg		Lg		02 35 34.5	
	426nm,0.6s								
SATY	**Saty**	**2.48**	**12**	*e*P		**Pb**		**02 34 58.6**	**-0.2**
	60nm,0.5s								
SATY				*e*S		**Sg**		**02 35 35.0**	**+1.2**
	367nm,0.6s								
SATY	**Saty**	**2.48**	**12**	Pg		**Pb**		**02 34 58.7**	**-0.2**
	60nm,0.5s								
SATY				Lg		Lg		02 35 35.0	
	367nm,0.6s								
IZV	**Izvestkoviy**	**2.53**	**342**	*e*P		**Pb**		**02 34 58.6**	**-1.2**
	107nm,0.7s								
IZV				*e*S		**Sg**		**02 35 35.0**	**-0.6**
	379nm,0.6s								
IZV	**Izvestkoviy**	**2.53**	**342**	Pg		**Pb**		**02 34 58.6**	**-1.2**
	107nm,0.7s								
IZV				Lg		Lg		02 35 35.0	
	379nm,0.6s								
MDOK	**Medeo**	**2.57**	**349**	*e*P		**Pb**		**02 34 60.0**	**-0.5**
	129nm,0.6s								
MDOK				*e*S		**Sg**		**02 35 37.1**	**+0.3**
	467nm,0.6s								
MDOK	**Medeo**	**2.57**	**349**	⇑Pn		**Pn**		**02 34 55.6**	**-0.4**
	127nm,0.7s								
MDOK				⇑Lg		Lg		02 35 36.9	
	914nm,0.6s								
MDOK	**Medeo**	**2.57**	**349**	Pg		**Pb**		**02 34 60.0**	**-0.5**
	129nm,0.6s								
MDOK				Lg		Lg		02 35 37.1	
	467nm,0.6s								
AAA	**Alma-Ata**	**2.63**	**347**	*e*P		**Pb**		**02 35 01.4**	**-0.1**
	60nm,0.2s								
AAA				*e*S		**Sg**		**02 35 40.0**	**+1.1**
	407nm,0.6s								
AAA	**Alma-Ata**	**2.63**	**347**	Pg		**Pb**		**02 35 01.4**	**-0.1**
	60nm,0.2s								
AAA				Lg		Lg		02 35 40.0	
	407nm,0.6s								
KNDC	**Almaty**	**2.63**	**348**	⇑Pn		**Pn**		**02 34 57.1**	**+0.2**
	112nm,0.6s								
KNDC				⇓Lg		Lg		02 35 38.4	
	894nm,0.5s								
MTBS	**Maitube**	**2.67**	**340**⇑	*e*P		**Pb**		**02 35 01.2**	**-0.9**
	32nm,0.3s								
MTBS				*e*S		**Sg**		**02 35 39.1**	**-0.8**
	247nm,0.5s								
MTBS	**Maitube**	**2.67**	**340**	Pg		**Pb**		**02 35 01.1**	**-0.9**
	32nm,0.3s								
MTBS				Lg		Lg		02 35 39.1	
	247nm,0.5s								
UZB	**Uzynbulak**	**2.69**	**21**	*e*P		**Pb**		**02 35 02.5**	**-0.1**
	34nm,0.8s								
UZB				*e*S		**Sg**		**02 35 41.4**	**+0.6**
	189nm,0.6s								
UZB	**Uzynbulak**	**2.69**	**21**	Pg		**Pb**		**02 35 02.5**	**-0.1**
	34nm,0.8s								
UZB				Lg		Lg		02 35 41.4	
	189nm,0.6s								
KST	**Kastek**	**2.73**	**332**	*e*P		**Pb**		**02 35 01.4**	**-1.8**
	69nm,0.3s								
KST				*e*S		**Sb**		**02 35 40.0**	**+3.2**
	260nm,0.8s								
KST	**Kastek**	**2.73**	**332**	Pg		**Pb**		**02 35 01.4**	**-1.8**
	69nm,0.3s								
KST				Lg		Lg		02 35 39.0	
	260nm,0.8s								
TKM2	**Tokmak 2**	**2.77**	**326**⇑	*i*P		**Pn**		**02 34 59.0**	**+0.2**
	baz=28								
TKM2				⇑*i*S		**Sn**		**02 35 34.7**	**+2.3**
	baz=28								
TKM2	**Tokmak 2**	**2.77**	**326**	P		**Pn**		**02 35 00.9**	**+2.1**
	SNR=9.8								
SHLS	**Shalkode**	**2.84**	**27**	*e*P		**Pg**		**02 35 08.6**	**-0.1**
	110nm,0.7s								
SHLS				*e*S		**Sg**		**02 35 51.9**	**+6.4**
	224nm,0.7s								
SHLS	**Shalkode**	**2.84**	**27**	Pg		**Pg**		**02 35 08.6**	**-0.1**
	110nm,0.7s								
SHLS				Lg		Lg		02 35 51.9	
	224nm,0.7s								
KURS	**Kuram**	**2.87**	**7**	*e*P		**Pb**		**02 35 05.0**	**-0.6**
	52nm,0.6s								
KURS				*e*S		**Sg**		**02 35 46.0**	**-0.4**
	177nm,0.6s								
KURS	**Kuram**	**2.87**	**7**	Pg

SGDS	**Sogindy**	**3.62**	**322**	Pg	**Pb**	**02 35 17.2**	**-1.2**
	134nm,0.5s							
SGDS				Lg	Lg	02 36 06.6		
	90nm,0.5s							
ARSB	**Arslanbob**	**3.64**	**282**	⇓*iP*	**Pn**	**02 35 09.9**	**-0.8**
	baz=84							
ARSB				⇓*iS*	**Sn**	**02 35 53.7**	**0.0**
	baz=84							
MRKS	**Merke**	**3.96**	**304**	*e*P	**Pb**	**02 35 22.4**	**-1.7**
	19nm,0.5s							
MRKS				*e*S	**Sb**	**02 36 15.5**	**+3.5**
	44nm,0.5s							
MRKS	**Merke**	**3.96**	**304**	Pg	**Pb**	**02 35 22.4**	**-1.7**
	19nm,0.5s							
MRKS				Lg	Lg	02 36 15.5		
	44nm,0.5s							
DJR	**Jarkent**	**4.00**	**22**	*e*P	**Pb**	**02 35 25.9**	**+1.0**
	18nm,0.6s							
DJR				*e*S	**Sg**	**02 36 21.8**	**-0.9**
	30nm,0.5s							
DJR	**Jarkent**	**4.00**	**22**	Pg	**Pb**	**02 35 25.9**	**+1.0**
	18nm,0.6s							
DJR				Lg	Lg	02 36 21.8		
	30nm,0.5s							
TDK	**Taldyqorghan**	**4.39**	**7**	*e*P	**Pb**	**02 35 32.7**	**+1.2**
	53nm,0.1s							
TDK				*e*S	**Sg**	**02 36 33.3**	**-2.0**
	240nm,0.3s							
TDK	**Taldyqorghan**	**4.39**	**7**	Pg	**Pb**	**02 35 32.7**	**+1.2**
	53nm,0.1s							
TDK				Lg	Lg	02 36 33.3		
	240nm,0.3s							
BTLS	**Baital**	**5.16**	**330**	*e*P	**Pb**	**02 35 44.5**	**0.0**
	20nm,0.9s							
BTLS				*e*S	**Sb**	**02 36 53.9**	**+7.5**
	16nm,1.0s							
BTLS	**Baital**	**5.16**	**330**	Pg	**Pb**	**02 35 44.5**	**0.0**
	20nm,0.9s							
BTLS				Lg	Lg	02 36 53.9		
	16nm,1.0s							
KK31	**Karatay Array**	**5.90**	**297**	⇓Pn	**Pn**	**02 35 40.9**	**-0.8**
	0.3nm,0.3s,baz=132,slow=12,SNR=7.4							
KK31				⇑Pg	**Pb**	**02 35 57.8**	**+0.6**
	5.1nm,0.7s,baz=131,slow=15,SNR=10.0							
KK31				⇓Lg	Lg	02 37 18.1		
	7.2nm,0.5s,baz=113,slow=27,SNR=5.8							
IUG	**Iuzhnay**	**5.96**	**287**	Pg	**Pb**	**02 35 57.6**	**-0.7**
	2.2nm,0.7s							
IUG				Lg	Lg	02 37 16.6		
	37nm,1.1s							
BRLS	**Boroldday**	**6.34**	**295**	Pg	**Pb**	**02 36 05.3**	**+0.7**
	16nm,0.3s							
BRLS				Lg	Lg	02 37 29.9		
	24nm,0.9s							
MK31	**Makanchi Array**	**6.99**	**27**	⇑Pn	**Pn**	**02 35 57.3**	**+0.7**
	0.6nm,0.4s,baz=198,slow=14,SNR=13							
MK31				⇓Pg	Pg	02 36 21.4	-6.7	
	1.1nm,0.5s,baz=206,slow=13,SNR=5.2							
MK31				⇑Lg	Lg	02 37 57.9		
	4.7nm,0.7s,baz=205,slow=26,SNR=4.2							
MKAR	**Makanchi Array**	**6.99**	**27**	Pn	**Pn**	**02 35 57.3**	**+0.7**
	0.4nm,0.3s,baz=198,slow=15,SNR=15							
MKAR				Sn	**Sn**	**02 37 20.9**	**+4.7**
	0.3nm,0.3s,baz=202,slow=25,SNR=3.7							
MKAR				Lg	Lg	02 37 55.0		
	0.4nm,0.3s,baz=212,slow=24,SNR=3.6							
CHCP	**Chirah Chowk**	**7.81**	**208**	P	Pn	02 36 02.7	-5.3	
WMQ	**Urumqi**	**8.07**	**64**	*e*P	**Pn**	**02 36 10.5**	**-1.0**
CEP	**Cherat**	**8.22**	**216**	P	**Pn**	**02 36 11.3**	**-2.3**
OTUK	**Ortayu**	**8.52**	**335**	⇑Pg	Pg	02 36 48.0	-9.2	
	2.7nm,0.7s							
OTUK				⇓Lg	Lg	02 38 42.8		
	34nm,0.9s							
KURBB	**Kurchatov Arra**	**10.00**	**3**	Pn	**Pn**	**02 36 38.1**	**+0.3**
	0.1nm,0.3s,baz=193,slow=12,SNR=9.7							
KURBB				Lg	Lg	02 39 31.8		
	0.1nm,0.3s,baz=189,slow=28,SNR=7.4							
KURBB	**Kurchatov Arra**	**10.00**	**3**	⇑Lg	Lg	02 39 32.4		
	35nm,0.8s							
BVAR	**Borovoye Array**	**13.35**	**341**	Pn	**Pn**	**02 37 24.7**	**+1.0**
	0.3nm,0.3s,baz=144,slow=12,SNR=2.2							
BVAR				Lg	Lg	02 41 16.3		
	0.5nm,0.3s,baz=146,slow=30,SNR=5.5							
ZALV	**Zalesovo Beam**	**14.15**	**17**	Pn	**Pn**	**02 37 33.7**	**-0.8**
	baz=190,slow=15,SNR=1.5							
SONM	**Songino Array**	**21.70**	**61**	P	**P**	**02 39 06.2**	**+1.0**
	0.8nm,0.8s,baz=265,slow=9.4,SNR=5.1							
ILAR	**Eielson Array**	**69.28**	**19**	P	**P**	**02 45 18.1**	**-2.9**
	0.2nm,0.5s,baz=321,slow=5.7,SNR=2.5							
TORD	**Torodi Ar. Bea**	**70.98**	**271**	P	P	02 45 26.3	-5.9	
	0.7nm,0.5s,baz=45,slow=5.5,SNR=16							
YKA	**Yellowknife Ar**	**76.74**	**6**	P	**P**	**02 46 01.4**	**-3.8**
	0.2nm,0.6s,baz=349,slow=5.3,SNR=4.3							

*IDC **27** 02:35:22.4±0.7, 6.73S×154.43E, h0km, mb4.3/15, mb1 4.5/17, mb1mx4.3/39, mbtmp4.4/17, ML3.5/2, MS3.8/14, Ms1 3.8/14, ms1mx3.6/28, Error ellipse: s-maj=20.1km s-min=16.8km az=110.0*

*NEIC **27** 02:35:26.4±1.4, 6.72S±0.07×154.34E±0.09, h36km±6km, mb4.6/28, Error ellipse: s-maj=13.1km s-min=10.4km az=77.0*

*DJA **27** 02:35:27.2±0.8, 7°S±5'×15°5E±', h38km±8km, M4.7/13, mb4.7/13, mB5.0/4, MLv4.8/3, Mw(mB)4.4/4*

ISC 27 02:35:28.4±0.4, 6.72S±0.05×154.39E±0.06, h48km, n77, σ1°57/74, mb4.5/34, MS3.8/16, 1C-1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.35**	**319**		**Pn**	**02 36 15.9**	**-2.5**
RABL				Sn	**Sn**	**02 36 53.5**	**-3.4**
KRVT	**Keravat (AS076**	**3.36**	**315**	Pn	**Pn**	**02 36 17.5**	**-0.9**
	48nm,0.3s,baz=226,slow=2.0,SNR=26						
KRVT				Sn	**Sn**	**02 36 56.1**	**-1.0**
	58nm,0.3s,baz=35,slow=19,SNR=5.6						
HNR	**Honiara**	**6.13**	**116**	LR	LR	02 39 21.2	
	comp=Z,830nm,18.3s,baz=299,slow=39						
PMG	**Port Moresby**	**7.64**	**249**	Pn	**Pn**	**02 37 17.8**	**+0.6**
	8.8nm,0.3s,baz=66,slow=10,SNR=11						
PMG				Sn	**Sn**	**02 38 45.7**	**+3.3**
	1.7nm,0.3s,baz=42,slow=16,SNR=3.4						
PMG				LR	LR	02 40 01.2	
	comp=Z,632nm,21.6s,baz=32,slow=36						
PMG	**Port Moresby**	**7.64**	**249**	Pn	**Pn**	**02 37 15.0**	**-2.2**
PMG				Sn	**Sn**	**02 38 39.0**	**-3.4**
JAY	**Jayapura**	**14.26**	**286**	LR	LR	02 44 53.5	
	comp=Z,428nm,19.7s,baz=154,slow=40						
CTA	**Charters Tower**	**15.45**	**210**	Pn	**P**	**02 39 08.8**	**+1.7**
	0.3nm,0.3s,baz=39,slow=15,SNR=5.3						
SMPI	**Sarmi**	**16.32**	**286**	P	**Pn**	**02 39 15.1**	**+0.7**
	1μm19nm,1.3s						
DZM	**Mont Dzumac**	**19.19**	**144**	*e*Pn	**Pn**	**02 39 50.0**	**+0.2**
	17nm,0.8s						
DZM				*e*S	**S**	**02 43 20.6**	**-3.1**
	162nm,23.9s						
DZM				*e*LR	LR	02 44 25.9	
	comp=Z,322nm,21.3s						
DZM	**Mont Dzumac**	**19.19**	**144**	P	**Pn**	**02 39 50.5**	**+0.7**
	0.5nm,0.3s,baz=109,slow=19,SNR=3.8						
DZM	**Mont Dzumac**	**19.19**	**144**	P	**P**	**02 39 47.5**	**-1.0**
FAKI	**Fak Fak**	**22.38**	**279**	P	**P**	**02 40 19.8**	**-3.1**
WR0	**Warramunga Arr**	**23.33**	**234**	P	**P**	**02 40 30.4**	**-2.2**
WR0				IAmb	IAmb	02 40 46.7	
	comp=Z,21nm,0.8s						
WB0	**Warramunga Arr**	**23.35**	**234**	P	**P**	**02 40 30.2**	**-2.6**
WB0				IAmb	IAmb	02 40 34.6	
	comp=Z,22nm,1.1s						
WRAB	**Tennant Creek**	**23.47**	**234**	P	**P**	**02 40 33.1**	**-0.9**
WRAB				IAmb	IAmb	02 40 48.7	
	comp=Z,16nm,0.7s						
WB2	**Warramunga Arr**	**23.47**	**234**	P	**P**	**02 40 32.5**	**-1.5**
WB2				IAmb	IAmb	02 40 48.8	
	comp=Z,13nm,0.7s						
WRA	**Warramunga Arr**	**23.48**	**234**	P	**P**	**02 40 34.1**	**0.0**
	comp=Z,5.6nm,0.5s,baz=51,slow=9.1,SNR=16						
WRA				LR	LR	02 49 13.8	
	comp=Z,266nm,20.0s,baz=45,slow=35						
SIJI	**Sorong**	**23.78**	**283**	P	**P**	**02 40 36.2**	**-0.7**
	comp=Z,9.2nm,0.5s,baz=104,slow=7.5,SNR=14						
SIJI				LR	LR	02 50 58.5	
	comp=Z,271nm,19.1s,baz=221,slow=39						
MSVF	**Nonsavu**	**25.55**	**118**	P	**P**	**02 40 52.1**	**-1.0**
MSVF				IAmb	IAmb	02 41 05.4	
	comp=Z,15nm,1.1s						
AS31	**Alice Springs**	**25.90**	**227**	P	**P**	**02 40 55.9**	**-0.3**
ASAR	**Alice Springs**	**25.91**	**227**	P	**P**	**02 40 56.5**	**+0.3**
	comp=Z,4.4nm,0.8s,baz=60,slow=8.6,SNR=29						
ASAR				LR	LR	02 50 37.8	
	comp=Z,237nm,19.8s,baz=48,slow=35						
KNRA	**Kununurra**	**26.64**	**248**	P	**P**	**02 41 01.8**	**-1.1**
LBMI	**Labuha**	**27.49**	**282**	P	**P**	**02 41 12.7**	**+2.1**
	comp=Z,2μmcomp=Z,91nm,1.1s						
STKA	**Stephens Creek**	**27.73**	**204**	P	**P**	**02 41 11.8**	**-0.7**
	comp=Z,3.2nm,0.5s,baz=40,slow=14,SNR=3.3						
STKA				LR	LR	02 51 46.0	
	comp=Z,181nm,19.6s,baz=22,slow=36						
STKA	**Stephens Creek**	**27.73**	**204**	P	**P**	**02 41 11.3**	**-1.2**
H11S3	**WAKE ISLAND Hy**	**27.84**	**26**	T	T	03 09 52.7	
	baz=203,slow=75,SNR=7.7						
H11S2	**WAKE ISLAND Hy**	**27.84**	**26**	T	T	03 09 50.2	
	baz=203,slow=75,SNR=8.4						
H11S1	**WAKE ISLAND Hy**	**27.86**	**26**	T	T	03 09 54.2	
	baz=203,slow=75,SNR=6.9						
FITZ	**Fitzroy Crossi**	**30.21**	**245**	P	**P**	**02 41 34.9**	**+0.1**
	comp=Z,8.1nm,0.7s,baz=70,slow=8.7,SNR=26						
FITZ	**Fitzroy Crossi**	**30.21**	**245**	P	**P**	**02 41 33.5**	**-1.2**
FITZ				IAmb	IAmb	02 41 35.5	
	comp=Z,10nm,0.8s						
KAPI	**Kappang**	**34.49**	**271**	P	**P**	**02 42 12.8**	**+0.6**
	comp=Z,8.1nm,0.9s,baz=45,slow=8.7,SNR=1.8						
RPZ	**Rata Peaks**	**39.65**	**161**	LR	LR	02 57 22.3	
	comp=Z,197nm,19.8s,baz=126,slow=33						
MORW	**Morawa**	**42.43**	**234**	P	**P**	**02 43 18.3**	**-0.5**
MORW				IAmb	IAmb	02 43 32.5	
	comp=Z,11nm,1.1s						
KSRS	**Korea Array**	**50.42**	**333**	P	**P**	**02 44 22.4**	**+1.2**
	comp=Z,0.7nm,0.4s,baz=146,slow=8.8,SNR=2.5						
WHN	**Wuhan**	**53.33**	**316**	⇑P	**P**	**02 44 45.3**	**+2.3**
PPT	**Papeete**	**55.66**	**107**	LR	LR	03 05 52.1	
	comp=Z,87nm,18.6s,baz=304,slow=33						
PPT2	**Papeete2**	**55.66**	**107**	*e*S	**S**	**02 52 43.6**	**+0.1**
	comp=Z,49nm,25.2s						
PPT2				*e*LR	LR	03 01 09.8	
	comp=Z,60nm,20.5s						
TBI	**Tubuai**	**56.34**	**114**	*e*LR	LR	03 01 40.3	
	comp=Z,146nm,37.2s						
XAN	**Xi'an**	**59.09**	**316**	P	**P**	**02 45 27.0**	**+2.8**
XAN				pP	pP	02 45 36.5	+1.2	
XAN				pmax	pmax			
	comp=Z,13nm,0.9s							
XAN				pmax	pmax			
	comp=Z,130nm,6.3s							
XAN				LR	LR			
	comp=E,170nm,20.6s							
XAN				LR	LR			
	comp=Z,150nm,23.9s							
PETK	**Petropavlovsk-**	**59.67**	**2**	P	**P**	**02 45 31.5**	**+3.8**
	comp=Z,2.8nm,0.9s,baz=178,slow=8.9,SNR=4.5						
PETK				LR	LR	03 11 06.9	
	comp=Z,41nm,19.1s,baz=261,slow=36						
CMAR	**Chiang Mai Arr**	**60.12**	**296**	P	**P**	**02 45 33.6**	**+2.1**
	comp=Z,1.4nm,0.5s,baz=112,slow=5.5,SNR=9.7						
CMAR				LR	LR	03 11 44.2	
	comp=Z,29nm,19.2s,baz=160,slow=36						
CHTO	**Chiang Mai**	**60.24**	**296**	P	**P**	**02 45 30.9**	**-1.4**
HIA	**Hailar**	**63.42**	**335**	P	**P**	**02 45 52.5**	**-0.7**
GTA	**Gaotai**	**68.13**	**317**	*e*P	**P**	**02 46 26.0**	**+2.2**
GTA				pP	sP	02 46 37.5	-2.3	
GTA				sP	pwP	02 46 42.8	-1.8	
GTA				pmax	pmax			
	comp=Z,5.0nm,1.1s							
GTA				pmax	pmax			
	comp=Z,80nm,7.0s							
GTA				LR	LR			
	comp=N,74nm,18.4s							
GTA				LR	LR			
	comp=E,110nm,18.1s							
GTA				LR	LR			
	comp=Z,120nm,19.7s							
SHL	**Shillong**	**68.64**	**301**	P	**P**	**02 46 25.7**	**-1.6**
SONM	**Songino Array**	**68.78**	**328**	P	**P**	**02 46 29.2**	**+1.4**
	comp=Z,2.4nm,0.9s,baz=135,slow=6.8,SNR=10						
VNDA	**Vanda**	**70.87**	**178**	P	**P**	**02 46 41.6**	**+1.7**
	comp=Z,0.7nm,0.9s,baz=328,slow=5.7,SNR=3.4						
VNDA	**Vanda**	**70.87**	**178**	P	**P**	**02 46 39.0**	**-0.9**
VNDA				IAmb	IAmb	02 46 56.5	
	comp=Z,4.4nm,0.9s						
MK31	**Makanchi Array**	**82.80**	**319**	P	**P**	**02 47 46.2**	**-1.5**
MK31				IAmb	IAmb	02 47 51.9	
	comp=Z,4.2nm,0.9s						
MKAR	**Makanchi Array**	**82.80**	**319**	P	**P**	**02 47 49.0**	**+1.4**
	comp=Z,2.8nm,0.7s,baz=97,slow=7.2,SNR=26						
MAKZ	**Makanchi**	**83.01**	**319**	P	**P**	**02 47 47.5**	**-1.3**
MAKZ				IAmb	IAmb	02 48 03.2	
	comp=Z,6.7nm,0.9s						
QSPA	**South Pole Qui**	**83.25**	**180**	P	**P**	**02 47 51.3**	**+1.5**
	comp=Z,2.2nm,0.7s,baz=6.4,slow=0.4,SNR=11						
QSPA	**South Pole Qui**	**83.25**	**180**	P	**P**	**02 47 50.1**	**+0.3**
ILAR	**Eielson Array**	**83.34**	**22**	P	**P**	**02 47 48.5**	**-1.6**
	comp=Z,0.8nm,0.8s,baz=233,slow=4.7,SNR=4.9						
ILAR				LR	LR	03 22 04.2	
	comp=Z,97nm,19.2s,baz=248,slow=34						
ZALV	**Zalesovo Beam**	**83.62**	**326**	P	**P**	**02 47 51.2**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=112,slow=6.6,SNR=7.5						
TOLK	**Tolik Lake Re**	**84.55**	**18**	P	**P**	**02 47 55.7**	**-0.5**
KDJ	**Kajisay**	**85.07**	**313**	P	**P**	**02 47 59.1**	**-0.4**
KSH	**Kashi**	**85.38**	**311**	P	**P**	**02 48 02.0**	**+0.9**
KSH				sP	pwP	02 48 22.0	0.0	
KSH				PP	**PP**	**02 51 20.8**	**+1.1**
KSH	**Kashi**	**85.38**	**311**	S	**S**	**02 58 27.3**	**-1.4**
KSH				pmax	pmax			
	comp=Z,6.0nm,0.6s							
KSH				pmax	pmax			
	comp=Z,150nm,5.7s							
KSH				LR	LR			
	comp=N,99nm,11.4s							
KSH				LR	LR			
	comp=E,87nm,12.6s							
KSH				LR	LR			
	comp=Z,33nm,11.1s							
KURK	**Kurchatov**	**86.24**	**322**	P	**P**	**02 48 04.9**	**0.0**
KURK				IAmb	IAmb	02 48 21.2	
	comp=Z,3.6nm,0.8s						
EPYK	**Eagle Plains**	**87.84**	**22**	P	**P**	**02 48 12.3**	**-0.1**
EPYK				IAmb	IAmb	02 48 30.7	
	comp=Z,3.4nm,0.9s						
NVAR	**Mina Array Bea**	**92.03**	**52**	P	**P**	**02 48 34.5**	**+1.6**
	comp=Z,1.5nm,0.8s,baz=252,slow=7.1,SNR=8.4						
NVAR				LR	LR	03 21 47.9	
	comp=Z,73nm,21.4s,baz=331,slow=30						
NV11	**Mina Array Sit**	**92.14**	**52**	P	**P**	**02 48 32.7**	**-0.6**
NV11				IAmb	IAmb	02 48 43.0	
	comp=Z,3.8nm,1.1s						
KVN	**Kaiserville**	**92.26**	**51**	P	**P**	**02 48 32.6**	**-1.2**
KVN				IAmb	IAmb	02 48 39.9	
	comp=Z,3.8nm,1.1s						
SYO	**Syowa Base**	**92.39**	**199**	⇓*eX*	P	02 48 40.0	+6.4	
TPNV	**Topopah Spring**	**93.48**	**53**	P	**P**	**02 48 38.8**	**-0.7**
TPNV				IAmb	IAmb	02 48 42.8	
	comp=Z,2.8nm,1.1s						
R11A	**Troy Canyon, C**	**94.14**	**52**	P	**P**	**02 48 42.5**	**-0.1**
YKA	**Yellowknife Ar**	**96.38**	**28**	P	**P**	**02 48 51.6**	**-0.4**
	comp=Z,0.2nm,0.7s,baz=263,slow=4.4,SNR=6.4						
YHB	**Horse Butte**	**97.82**	**46**	P	**P**	**02 48 57.4**	**-1.8**
PDAR	**Pinedale Array**	**98.97**	**48**	LR	LR	03 32 37.6	
	comp=Z,45nm,18.2s,baz=280,slow=35						
P46A	**Rosedale**	**116.03**	**49**		**PKiKP**	**02 54 05.8**	**-0.7**
CLTN	**Cedars of Leba**	**117.50**	**53**		**PKiKP**	**02 54 09.1**	**-0.4**
GERES	**GERESS Array B**	**126.51**	**329**	PKP	**PKiKP**	**02 54 27.9**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=336,slow=2.9,SNR=3.6						
TAM	**Tamanrasset**	**146.03**	**301**		**PKPdf**	**02 55 02.2**	**-1.1**
BDFB	**Brasilia**	**148.60**	**135**	PKPbc	**PKiKP**	**02 55 12.1**	**-0.8**
	comp=Z,2.8nm,0.6s,baz=321,slow=6.5,SNR=2.7						
TOA0	**Torodi Ar. Sit**	**152.37**	**285**	PKPdf	**PKPdf**	**02 55 12.1**	**-1.4**
TOA0					**PKiKP**	**02 55 21.0**	**+0.4**
TORD	**Torodi Ar. Bea**	**152.37**	**285**	PKPbc	**PKiKP**	**02 55 21.1**	**+0.5**
	comp=Z,3.2nm,0.7s,baz=37,slow=1.7,SNR=25						

IDC 27 02:42:13.5±3.9, 4.99S×151.69E, h0km, mb3.5/2, mb1 3.9/2, mb1mx3.4/25, mbtmp3.6/2, Error ellipse: s-maj=147.4km s-min=53.3km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.49**	**227**	P	P	02 47 13.5	-1.3
	0.9nm,0.6s,baz=53,slow=10,SNR=2.8						
ASAR	**Alice Springs**	**25.27**	**221**	P	P	02 47 42.4	+0.6
	1.3nm,0.6s,baz=56,slow=8.9,SNR=10						
TORD	**Torodi Ar. Bea**	**149.31**	**287**	PKPbc	PKPbc	03 02 05.0	-0.4
	0.2nm,0.8s,baz=88,slow=2.2,SNR=1.2						

IDC 27 02:55:01.6±15.0, 13.47S×167.55E, h150km±133km, mb3.4/7, mb1 3.6/7, mb1mx3.4/25, mbtmp3.8/7, MS3.2/1, Ms1 3.2/1, ms1mx2.6/12, Error ellipse: s-maj=88.4km s-min=36.9km az=128.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**28.69**	**290**	LR	LR	03 12 59.8	
	comp=Z,48nm,19.7s,baz=191,slow=38						
WRA	**Warramunga Arr**	**32.41**	**254**	P	P	03 01 17.3	-0.3
	0.6nm,0.8s,baz=85,slow=9.2,SNR=4.6						
ASAR	**Alice Springs**	**33.39**	**247**	P	P	03 01 26.2	+0.1
	0.7nm,0.6s,baz=75,slow=9.2,SNR=11						
PETK	**Petropavlovsk-**	**66.85**	**354**	P	P	03 05 37.6	+0.5
	1.9nm,0.8s,baz=182,slow=12,SNR=3.7						
SONM	**Songino Array**	**81.66**	**323**	P	P	03 07 03.2	0.0
	0.3nm,0.3s,baz=132,slow=8.4,SNR=2.3						
ILAR	**Eielson Array**	**85.25**	**18**	P	P	03 07 20.8	-0.2
	0.7nm,0.5s,baz=236,slow=5.0,SNR=26						
YKA	**Yellowknife Ar**	**96.31**	**27**	P	P	03 08 12.4	-0.4
	0.1nm,0.7s,baz=251,slow=4.7,SNR=2.0						
MKAR	**Makanchi Array**	**96.49**	**316**	P	P	03 08 13.2	-0.8
	0.2nm,0.6s,baz=87,slow=5.1,SNR=2.9						
ARCES	**ARCESS Array B**	**119.11**	**346**	PKP	PKPdf	03 13 32.1	0.0
	2.9nm,0.8s,baz=66,slow=1.3,SNR=12						
ESDC	**Sonseca Array**	**152.85**	**346**	PKPbc	PKiKP	03 14 41.5	0.0
	0.7nm,0.8s,baz=17,slow=2.0,SNR=4.8						

*IDC **27** 03:16:24.6±0.9, 22.07S×68.20W, h107km±13km, mb3.3/2, mb1 3.3/4, mb1mx3.2/21, mbtmp3.5/4, Error ellipse: s-maj=44.9km s-min=24.3km az=127.0*

*GUC **27** 03:16:25.9±0.6, 21.95S×68.49W, h112km±3km, ML3.4*

ISC 27 03:16:25.2±0.9, 21.93S±0.04×68.51W±0.08, h116km±8km, n21, σ0°85/35, 5C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.69**	**281**	*e*S	**Sn**	**03 16 59.0**	**+0.4**
PB09				IAML		03 17 01.5	
	comp=E,871nm,0.6s						
LVC	**Limon Verde**	**0.77**	**208**	P	**Pn**	**03 16 45.2**	**0.0**
	comp=E,28nm,0.3s,baz=4.4,slow=6.5,SNR=436						
LVC				S	**Sn**	**03 16 60.0**	**-0.2**
	comp=E,77nm,0.3s,baz=146,slow=17,SNR=19						
LVC	**Limon Verde**	**0.77**	**208**	*e*P	**Pn**	**03 16 45.2**	**0.0**
LVC				*i* S	**Sn**	**03 17 00.2**	**0.0**
PB03	**IPOC Station P**	**1.16**	**264**	*i* P	**Pn**	**03 16 48.5**	**-0.2**
PB03				*e*S	**Sn**	**03 17 06.6**	**+0.1**
PB03				IAML		03 17 07.2	
	comp=N,725nm,0.2s						
PB06	**IPOC Station P**	**1.25**	**232**	⇑*i*P	**Pn**	**03 16 49.6**	**0.0**
PB06				*e*S	**Sn**	**03 17 08.5**	**+0.3**
PB06				IAML		03 17 09.0	
	comp=N,817nm,0.4s						
PB01	**IPOC Station P**	**1.27**	**314**	⇑*i*P	**Pn**	**03 16 49.8**	**0.0**
PB01				*i* S	**Sn**	**03 17 08.8**	**+0.4**
PB01				IAML		03 17 11.5	
	comp=N,465nm,0.2s						
PB07	**IPOC Station P**	**1.29**	**279**	⇑*i*P	**Pn**	**03 16 50.2**	**0.0**
PB07				*e*S	**Sn**	**03 17 09.0**	**-0.1**
PB07				IAML		03 17 10.3	
	comp=E,740nm,0.5s						
PB02	**IPOC Station P**	**1.42**	**295**	*e*P	**Pn**	**03 16 51.5**	**-0.1**
PB02				*i* S	**Sn**	**03 17 11.8**	**+0.1**
PB02				IAML		03 17 16.8	
	comp=E,620nm,0.1s						
PB15	**IPOC Station P**	**1.55**	**215**	⇓*e*P	**Pn**	**03 16 53.8**	**+0.6**
PB15				*e*S	**Sn**	**03 17 15.1**	**+0.6**
PB04	**IPOC Station P**	**1.57**	**255**	*e*P	**Pn**	**03 16 53.2**	**-0.2**
PB04				*i* S	**Sn**	**03 17 14.5**	**-0.3**
PB04				IAML		03 17 17.7	
	comp=N,747nm,0.3s						
PB05	**IPOC Station P**	**1.81**	**239**	*e*P	**Pn**	**03 16 56.0**	**-0.3**
PB05				*e*S	**Sn**	**03 17 19.7**	**-0.3**
PB05				IAML		03 17 26.0	
	comp=N,374nm,0.3s						
PB08	**IPOC Station P**	**1.88**	**341**	*e*P	**Pn**	**03 16 58.7**	**+1.3**
PB08				*e*S	**Sn**	**03 17 23.0**	**+1.2**
PATCX	**Punta Patache**	**1.89**	**306**	⇑*i*P	**Pn**	**03 16 57.0**	**-0.1**
PATCX				*e*S	**Sn**	**03 17 21.4**	**-0.1**
PATCX				IAML		03 17 27.7	
	comp=E,448nm,0.2s						
TA01	**Diego Aracena**	**2.06**	**311**	⇑*i*P	**Pn**	**03 16 59.2**	**-0.1**
TA01				*e*S	**Sn**	**03 17 24.5**	**-0.9**
TA01				IAML		03 17 27.6	
	comp=N,333nm,0.5s						
PB11	**IPOC Station P**	**2.41**	**333**	*e*P	**Pn**	**03 17 03.9**	**0.0**
PB11				*i* S	**Sn**	**03 17 33.7**	**+0.2**
PB11				IAML		03 17 34.9	
	comp=E,154nm,0.2s						
PB10	**IPOC Station P**	**2.46**	**230**	*e*P	**Pn**	**03 17 04.3**	**0.0**
PB10				IAML		03 17 45.9	
	comp=E,115nm,0.2s						
LPAZ	**La Paz**	**5.62**	**4**	P	**

PSGC	**Pisagua**	**1.32**	**17**	⇓*eP*	**Pb**	**03 35 03.1**	**-0.4**
PSGC				*eS*	**Sb**	**03 35 20.0**	**-0.1**
PSGC				IAML		03 35 22.2	
	comp=E,15μm,0.5s						
PSGCX	**Pisagua**	**1.32**	**17**		**Pb**	**03 35 02.9**	**-0.6**
PB11	**IPOC Station P**	**1.38**	**37**	⇓*eP*	**Pb**	**03 35 03.9**	**-0.6**
PB11				*eS*	**Sb**	**03 35 21.5**	**-0.2**
PB11	**IPOC Station P**	**1.38**	**37**		**Pb**	**03 35 04.1**	**-0.4**
PB11				Sn	**Sb**	**03 35 20.8**	**-0.9**
PB03	**IPOC Station P**	**1.39**	**148**	⇑*iP*	**Pb**	**03 35 04.4**	**-0.4**
PB03				*eS*	**Sb**	**03 35 22.7**	**+0.5**
PB08	**IPOC Station P**	**1.49**	**61**	⇓*eP*	**Pb**	**03 35 05.6**	**-0.9**
PB08				*eS*	**Sb**	**03 35 24.6**	**+0.5**
PB08	**IPOC Station P**	**1.49**	**61**		**Pn**	**03 35 04.8**	**+0.4**
PB04	**IPOC Station P**	**1.51**	**166**	⇓*eP*	**Pb**	**03 35 06.0**	**-0.8**
PB04				*eS*	**Sb**	**03 35 26.1**	**+0.5**
PB04				IAML		03 35 29.0	
	comp=N,33μm,0.4s						
PB04	**IPOC Station P**	**1.51**	**166**		**Pb**	**03 35 05.4**	**-1.3**
PB09	**IPOC Station P**	**1.53**	**128**	⇑*iP*	**Pb**	**03 35 06.7**	**-0.3**
PB09				*eS*	**Sb**	**03 35 25.9**	**-0.1**
PB09				IAML		03 35 34.8	
	comp=N,12μm,0.5s						
PB09	**IPOC Station P**	**1.53**	**128**		**Pn**	**03 35 04.8**	**+0.1**
GO01	**Chusmiza**	**1.74**	**47**	⇓*eP*	**Pb**	**03 35 09.8**	**-1.0**
GO01				*eS*	**Sb**	**03 35 31.8**	**-0.6**
GO01	**Chusmiza**	**1.74**	**47**		**Pn**	**03 35 08.3**	**+0.5**
MNMC	**Minye Minye**	**1.94**	**28**	⇑*iP*	**Pb**	**03 35 12.3**	**-1.8**
MNMC				*eS*	**Sb**	**03 35 37.2**	**-0.8**
MNMC				IAML		03 35 46.7	
	comp=E,14μm,0.7s						
MNMC	**Minye Minye**	**1.94**	**28**		**Pn**	**03 35 11.6**	**+1.1**
PB05	**IPOC Station P**	**2.00**	**171**	⇓*eP*	**Pn**	**03 35 12.4**	**+1.1**
PB05				*eS*	**Sb**	**03 35 38.7**	**-1.1**
PB05				IAML		03 35 46.2	
	comp=E,11μm,0.6s						
PB06	**IPOC Station P**	**2.04**	**154**	⇑*iP*	**Pb**	**03 35 13.3**	**-2.5**
PB06				*iS*	**Sb**	**03 35 40.2**	**-0.7**
PB06				IAML		03 35 45.4	
	comp=E,13μm,0.3s						
PB06	**IPOC Station P**	**2.04**	**154**		**Pn**	**03 35 12.4**	**+0.6**
PB12	**IPOC Station P**	**2.25**	**5**	⇑*iP*	**Pb**	**03 35 17.1**	**-2.2**
PB12				*eS*	**Sb**	**03 35 44.6**	**-2.1**
PB12				IAML		03 35 54.8	
	comp=E,4μm,0.3s						
PB12	**IPOC Station P**	**2.25**	**5**		**Pn**	**03 35 14.6**	**0.0**
LVC	**Limon Verde**	**2.31**	**139**	Pn	**Pb**	**03 35 18.6**	**-1.8**
	comp=E,444nm,0.3s,baz=318,slow=10,SNR=1748						
LVC				Sn	**Sb**	**03 35 48.5**	**-0.1**
	comp=E,1μm,0.3s,baz=85,slow=16,SNR=16						
LVC				LR	LR	03 36 27.8	
	comp=E,2μm,21.4s,baz=357,slow=48						
LVC	**Limon Verde**	**2.31**	**139**	*eP*	**Pb**	**03 35 19.1**	**-1.4**
LVC				*iS*	**Sb**	**03 35 47.1**	**-1.5**
LVC	**Limon Verde**	**2.31**	**139**	Pn	**Pn**	**03 35 15.8**	**+0.1**
LVC				Sn	**Sn**	**03 35 42.6**	**-0.6**
AP01	**Chacalluta**	**2.49**	**4**	*eP*	**Pb**	**03 35 21.1**	**-2.2**
AP01				*iS*	**Sb**	**03 35 54.5**	**+1.0**
AP01				IAML		03 36 06.3	
	comp=N,9μm,0.5s						
PB15	**IPOC Station P**	**2.54**	**157**	⇑*iP*	**Pn**	**03 35 20.1**	**+1.5**
PB15				*iS*	**Sb**	**03 35 54.2**	**-0.9**
PB15	**IPOC Station P**	**2.54**	**157**		**Pn**	**03 35 18.4**	**-0.3**
PB10	**IPOC Station P**	**2.64**	**180**	*eP*	**Pn**	**03 35 20.4**	**+0.6**
PB10	**IPOC Station P**	**2.64**	**180**		**Pn**	**03 35 19.8**	**0.0**
LPAZ	**La Paz**	**5.09**	**27**	Pn	Pb	03 36 02.6	-5.5
	comp=N,13nm,0.3s,baz=205,slow=7.7,SNR=112						
LPAZ	**La Paz**	**5.09**	**27**		**Pn**	**03 35 56.6**	**+2.4**
AC01	**Pan de Azucar**	**5.26**	**181**		**Pn**	**03 35 56.4**	**+0.5**
AC05	**El Transito**	**7.94**	**178**		**Pn**	**03 36 32.0**	**-0.8**
CO01	**Juntas del Tor**	**9.08**	**178**	Pn	**Pn**	**03 36 48.3**	**-0.3**
GO04	**Tololo Observa**	**9.27**	**181**	Pn	**Pn**	**03 36 49.9**	**-1.3**
SIV	**San Ignacio**	**10.21**	**63**	Pn	**Pn**	**03 37 04.8**	**+0.8**
	comp=N,7.6nm,0.3s,baz=261,slow=9.8,SNR=106						
SIV				Sn	**Sn**	**03 38 59.2**	**+1.6**
	comp=N,0.2nm,0.3s,baz=316,slow=21,SNR=1.0						
SIV				LR	LR	03 41 36.5	
	comp=N,612nm,18.9s,baz=276,slow=42						
NNA	**Nana**	**10.69**	**325**	LR	LR	03 40 53.8	
	comp=N,290nm,21.2s,baz=160,slow=35						
CFA	**Coronel Fontan**	**10.89**	**170**	Pn	**Pn**	**03 37 14.5**	**+1.3**
	comp=N,1.6nm,0.3s,baz=338,slow=14,SNR=9.3						
CFA				Sn	**Sn**	**03 39 11.4**	**-2.8**
	comp=N,1.0nm,0.3s,baz=328,slow=16,SNR=1.2						
CFA				LR	LR	03 41 36.3	
	comp=N,446nm,21.1s,baz=331,slow=38						
VA03	**San Esteban**	**11.85**	**180**	Pn	**Pn**	**03 37 25.8**	**-0.6**
ROC1	**El Roble**	**12.07**	**182**	Pn	**Pn**	**03 37 28.4**	**-1.2**
PTLB	**Pontes e Lacer**	**12.10**	**65**	*eP*	**Pn**	**03 37 30.6**	**+0.8**
PTLB				*eS*	**Sn**	**03 39 45.2**	**+1.3**
VILB	**Vilhena**	**12.64**	**53**	*eP*	**Pn**	**03 37 38.3**	**+1.1**
VILB				*eS*	**Sn**	**03 39 58.3**	**+1.3**
CPUP	**Villa Florida**	**13.28**	**117**	Pn	**Pn**	**03 37 44.8**	**-1.1**
	comp=N,0.1nm,0.3s,baz=252,slow=9.6,SNR=3.1						
CPUP				LR	LR	03 44 07.0	
	comp=N,270nm,20.2s,baz=295,slow=43						
CPUP	**Villa Florida**	**13.28**	**117**		**Pn**	**03 37 44.0**	**-1.8**
CPUP	**Villa Florida**	**13.28**	**117**	*eP*	**Pn**	**03 37 47.2**	**+1.4**
SAML	**Samuel**	**13.81**	**32**		**Pn**	**03 37 51.2**	**-1.4**
SAML	**Samuel**	**13.81**	**32**	*eP*	**Pn**	**03 37 53.2**	**0.0**
AQDB	**Aquidauana**	**13.90**	**91**	*eP*	**Pn**	**03 37 55.5**	**+1.1**
H03N1	**Juan Fernandez**	**14.57**	**209**	Pn	**Pn**	**03 38 03.6**	**+0.5**
	baz=110,slow=14,SNR=29						
H03N1				Sn	Sn	03 40 27.2	-16
	baz=226,slow=72,SNR=10						
H03N1				T	T	03 53 06.4	
	baz=34,slow=72,SNR=4875						
H03N2	**Juan Fernandez**	**14.57**	**209**	Pn	**Pn**	**03 38 02.3**	**-0.9**
	baz=110,slow=14,SNR=18						
H03N2				Sn	Sn	03 40 26.9	-17
	baz=226,slow=72,SNR=11						
H03N2				T	T	03 53 06.2	
	baz=34,slow=72,SNR=1272						
H03N3	**Juan Fernandez**	**14.58**	**209**	Pn	**Pn**	**03 38 03.0**	**-0.4**
	baz=110,slow=14,SNR=23						
H03N3				Sn	Sn	03 40 26.1	-18
	baz=226,slow=72,SNR=11						
H03N3				T	T	03 52 58.6	
	baz=34,slow=72,SNR=1584						
H03S3	**Juan Fernandez**	**14.89**	**208**	Pn	**Pn**	**03 38 06.7**	**-0.7**
	baz=16,slow=20,SNR=8.8						
H03S1	**Juan Fernandez**	**14.90**	**208**	Pn	**Pn**	**03 38 06.2**	**-1.4**
	baz=16,slow=20,SNR=6.7						
H03S2	**Juan Fernandez**	**14.90**	**208**	Pn	**Pn**	**03 38 06.5**	**-1.1**
	baz=16,slow=20,SNR=8.4						
SALV	**Santo Antonio**	**14.93**	**73**	*eP*	**Pn**	**03 38 07.6**	**-0.8**
ITQB	**Itaqui**	**15.33**	**128**	*eP*	**Pn**	**03 38 15.2**	**+1.6**
ATAH	**Atahualpa**	**15.62**	**330**	LR	LR	03 44 23.9	
	comp=N,95nm,21.9s,baz=173,slow=38						
BI02	**San Fabin de**	**15.76**	**182**	P	**Pn**	**03 38 18.4**	**-0.8**
TRCB	**Terra Rica**	**16.74**	**100**	*eP*	**Pn**	**03 38 32.4**	**+0.7**
C2SB	**Chapadao do Su**	**16.79**	**86**	*eP*	**P**	**03 38 33.9**	**-0.5**
CLDB	**Colider**	**17.30**	**57**	*eP*	**Pn**	**03 38 38.6**	**-0.2**
ITAB	**Concordia**	**17.96**	**114**	*eP*	**P**	**03 38 47.9**	**+0.6**
LC01	**Cunco**	**18.01**	**183**	P	**Pn**	**03 38 45.9**	**-1.5**
ARAG	**Araguaiana, MT**	**18.51**	**77**	*eP*	**Pn**	**03 38 53.8**	**+0.2**
PLTB	**Pedras Altas**	**18.64**	**129**	*eP*	**Pn**	**03 38 56.7**	**+1.6**
ITRB	**Iturama**	**18.97**	**90**	*eP*	**Pn**	**03 38 59.5**	**+0.2**
FRTB	**Fartura**	**19.59**	**101**	*eP*	**P**	**03 39 05.3**	**+0.1**
CNLB	**Canela**	**19.70**	**119**	*eP*	**P**	**03 39 06.5**	**+0.1**
PLCA	**Paso Flores**	**19.81**	**180**	P	**Pn**	**03 39 10.8**	**+1.6**
	comp=N,0.4nm,0.3s,baz=342,slow=12,SNR=9.6						
PLCA				LR	LR	03 46 19.8	
	comp=N,265nm,18.2s,baz=359,slow=35						
PLCA	**Paso Flores**	**19.81**	**180**	P	**P**	**03 39 06.9**	**-0.6**
PLCA	**Paso Flores**	**19.81**	**180**	*eP*	**Pn**	**03 39 10.7**	**+1.6**
MACA	**Manacapuru-AM**	**20.05**	**30**	*eP*	**P**	**03 39 10.7**	**+0.6**
NPGB	**Novo Progresso**	**20.12**	**49**	*eP*	**P**	**03 39 11.7**	**+0.7**
TIJ01	**Guaruva-PR**	**20.30**	**107**	*eP*	**P**	**03 39 14.0**	**+1.0**
BB19B	**Bebedouro**	**20.56**	**95**	*eP*	**P**	**03 39 15.2**	**-0.5**
IPMB	**Ipameri, GO**	**21.25**	**86**	*eP*	**P**	**03 39 23.3**	**0.0**
RCLB	**Rio Claro- Sao**	**21.45**	**98**	*eP*	**P**	**03 39 25.4**	**0.0**
SPB	**Sao Paulo**	**21.56**	**102**	*eP*	**P**	**03 39 27.6**	**+1.1**
PET01	**Itanhaem-SP**	**21.75**	**103**	*eP*	**P**	**03 39 29.5**	**+1.0**
ITTB	**Itaituba**	**21.82**	**43**	*eP*	**P**	**03 39 30.2**	**+0.9**
VAO	**Valinhos**	**21.97**	**100**	*eP*	**P**	**03 39 31.8**	**+0.8**
BDFB	**Brasilia**	**22.01**	**80**	P	**P**	**03 39 33.4**	**+1.9**
	comp=N,4.2nm,0.4s,baz=270,slow=17,SNR=8.1						
BDFB				LR	LR	03 49 23.2	
	comp=N,772nm,19.3s,baz=282,slow=40						
BDFB	**Brasilia**	**22.01**	**80**	P	**P**	**03 39 28.1**	**-3.3**
BDFB				IAmb	IAmb	03 39 36.9	
	comp=Z,14nm,1.0s						
PUAC	**Puerto Asis, P**	**22.08**	**344**	*eP*	**P**	**03 39 36.1**	**+4.0**
PTGA	**Pitinga**	**22.52**	**29**	P	**P**	**03 39 38.4**	**+1.6**
	comp=Z,7.3nm,0.5s,baz=208,slow=10,SNR=13						
PTGA	**Pitinga**	**22.52**	**29**	P	**P**	**03 39 35.2**	**-1.6**
PTGA				IAmb	IAmb	03 39 50.8	
	comp=Z,24nm,0.8s						
PTGA	**Pitinga**	**22.52**	**29**	*eP*	**P**	**03 39 37.1**	**+0.3**
CRUC	**La Cruz**	**23.16**	**344**	*eP*	P	03 39 52.0	+8.2
PARB	**Paraibuna**	**23.21**	**101**	*eP*	**P**	**03 39 46.8**	**+2.8**
GARC	**Garzon, Huila**	**23.42**	**347**	*eP*	**P**	**03 39 49.1**	**+2.8**
SOTA	**Rioblanco**	**23.62**	**345**	*eP*	**P**	**03 39 51.3**	**+2.8**
BBAC	**Balboa, Cauca**	**23.67**	**343**	*eP*	**P**	**03 39 52.9**	**+4.2**
PCON	**Cinco Dias**	**23.75**	**345**	*eP*	**P**	**03 39 54.7**	**+4.8**
BETC	**Betania**	**23.89**	**348**	*eP*	**P**	**03 39 54.6**	**+4.0**
BSCB	**Bom Sucesso**	**24.06**	**95**	*eP*	**P**	**03 39 52.3**	**0.0**
MALB	**Monte Alegre**	**24.68**	**42**	*eP*	**P**	**03 39 58.5**	**+0.6**
PRAC	**Prado**	**24.79**	**350**	*eP*	**P**	**03 40 01.1**	**+2.2**
PRAC				*eP*	**P**	**03 40 01.3**	**+2.5**
PRPB	**Paraupebas**	**24.84**	**57**	*eP*	**P**	**03 40 00.9**	**+1.6**
ORTC	**Ortega, Tolima**	**25.05**	**349**	*eP*	**P**	**03 40 03.9**	**+2.7**
VAS01	**Vassouras-RJ**	**25.23**	**98**	*eP*	**P**	**03 40 03.9**	**+1.1**
YOTC	**Yotoco, Valle**	**25.34**	**346**	*eP*	**P**	**03 40 05.6**	**+1.7**
MC01	**Montes Claros**	**25.51**	**85**	*eP*	**P**	**03 40 05.7**	**+0.3**
CHIC	**Chingaza**	**25.53**	**353**	*eP*	**P**	**03 40 07.2**	**+1.3**
JANB	**Januaria**	**25.59**	**81**	*eP*	**P**	**03 40 06.5**	**+0.3**
ROSC	**El Rosal**	**25.81**	**351**	LR	LR	03 51 57.4	
	comp=Z,257nm,20.4s,baz=67,slow=40						
RREF	**El Recreo**	**26.04**	**349**	*eP*	**P**	**03 40 14.5**	**+3.7**
GUY2C	**Guyana, Caldas**	**26.35**	**349**	*eP*	**P**	**03 40 14.8**	**+1.3**
RUSC	**La Rusia**	**26.71**	**354**	*eP*	**P**	**03 40 18.1**	**+1.4**
RUSC	**La Rusia**	**26.71**	**354**	P	**P**	**03 40 15.5**	**-1.2**
CAM01	**Campos-RJ**	**26.91**	**97**	*eP*	**P**	**03 40 18.8**	**+0.8**
TAMC	**Tame, Arauca**	**27.16**	**357**	*eP*	**P**	**03 40 22.5**	**+2.3**
HELC	**Santa Helena**	**27.33**	**349**	*eP*	**P**	**03 40 25.9**	**+3.8**
BARC	**Barichara**	**27.41**	**354**	*eP*	**P**	**03 40 25.8**	**+3.1**
PTBC	**PUERTO BERRIO,**	**27.50**	**352**	*eP*	**P**	**03 40 22.5**	**-0.8**
SJMB	**Sao Joao De Ma**	**27.69**	**91**	*eP*	**P**	**03 40 27.9**	**+2.8**
BSFB	**Barra de Sao F**	**27.99**	**91**	*eP*	**P**	**03 40 28.6**	**+0.9**
RIB01	**Linhares ES**	**28.34**	**92**	*eP*	**P**	**03 40 33.2**	**+2.4**
ZARC	**Zaragoza, Cauc**	**28.50**	**351**	*eP*	**P**	**03 40 33.5**	**+1.3**
NAN01	**Guarapari, ES**	**28.83**	**89**	*eP*	**P**	**03 40 35.6**	**+0.4**
SDV	**Santo Domingo**	**29.56**	**360**	P	**P**	**03 40 42.1**	**+0.3**
	comp=Z,8.8nm,0.9s,baz=211,slow=3.2,SNR=8.6						
SDV	**Santo Domingo**	**29.56**	**360**	*eP*	**P**	**03 40 44.0**	**+2.1**
SDV	**Santo Domingo**	**29.56**	**360**	P	**P**	**03 40 40.1**	**-1.7**
SDV				IAmb	IAmb	03 40 43.9	
	comp=Z,10nm,0.9s						
SDV	**Santo Domingo**	**29.56**	**360**	*eP*	**P**	**03 40 42.8**	**+1.0**
SMLC	**San Martn de**	**29.68**	**353**	*eP*	**P**	**03 40 41.3**	**-1.4**
GDU01	**Guandu, BA**	**30.37**	**82**	*eP*	**P**	**03 40 48.9**	**0.0**
SJCC	**San Jacinto, C**	**30.91**	**351**	*eP*	**P**	**03 40 53.8**	**+0.2**
ROSB	**Rosario**	**31.32**	**59**	*eP*	**P**	**03 40 58.4**	**+1.1**
RCBR	**Riachuelo**	**36.75**	**71**	P	**P**	**03 41 45.6**	**+1.1**
	comp=Z,9.4nm,0.7s,baz=249,slow=10.0,SNR=7.0						
RCBR	**Riachuelo**	**36.75**	**71**	P	**P**	**03 41 42.8**	**-1.7**
RCBR	**Riachuelo**	**36.75**	**71**	*eP*	**P**	**03 41 46.0**	**+1.5**
SJG	**San Juan**	**38.97**	**7**	P	**P**	**03 42 02.7**	**-0.3**
	comp=Z,12nm,0.8s,baz=150,slow=4.6,SNR=3.7						
SJG	**San Juan**	**38.97**	**7**	P	**P**	**03 42 00.8**	**-2.2**
CBYP	**Canovanas**	**39.16**	**7**	P	**P**	**03 42 03.4**	**-1.3**
WLAR	**White Oak Lake**	**58.36**	**338**	P	**P**	**03 44 30.1**	**-1.7**
MIAR	**Mount Ida**	**59.30**	**338**	P	**P**	**03 44 37.3**	**-1.0**
MIAR				IAmb	IAmb	03 44 41.6	
	comp=Z,3.9nm,0.8s						
T47A	**Sharon Grove**	**59.62**	**345**	P	**P**	**03 44 39.6**	**-0.9**
T47A				IAmb	IAmb	03 44 53.8	
	comp=Z,6.8nm,1.1s						
W39A	**Magazine**	**59.96**	**338**	P	**P**	**03 44 41.4**	**-1.5**
W39A				IAmb	IAmb	03 44 45.6	
	comp=Z,4.7nm,1.0s						
U40A	**Yellville**	**60.70**	**339**	IAmb	IAmb	03 44 50.7	
	comp=Z,5.5nm,1.1s						
HHAR	**Hobbs**	**60.99**	**338**	IAmb	IAmb	03 44 52.5	
	comp=Z,7.6nm,1.2s						
VNA3	**Neumayer Olymp**	**61.17**	**161**	P	**P**	**03 44 53.0**	**+2.3**
VNA1	**Neumayer--Stat**	**61.39**	**160**	P	**P**	**03 44 55.4**	**+3.2**
MSTX	**Muleshoe**	**62.58**	**330**	IAmb	IAmb	03 45 04.2	
	comp=Z,3.8nm,0.8s						
SNAA	**Sanae**	**63.38**	**161**	P	**P**	**03 45 07.9**	**+2.3**
SNAA	**Sanae**	**63.38**	**161**	P	**P**	**03 45 08.1**	**+2.5**
	comp=Z,7.7nm,0.9s,baz=285,slow=5.7,SNR=14						
SNAA	**Sanae**	**63.38**	**161**	P	**P**	**03 45 04.6**	**-0.9**
ANMO	**Albuquerque**	**65.14**	**328**	P	**P**	**03 45 16.9**	**-0.9**
SDCO	**Great Sand Dun**	**66.94**	**330**	IAmb	IAmb	03 45 33.9	
	comp=Z,4.3nm,1.1s						
MVCO	**Mesa Verde**	**67.94**	**328**	IAmb	IAmb	03 45 39.7	
	comp=Z,5.3nm,1.1s						
ECSD	**EROS Data Cent**	**68.59**	**340**	IAmb	IAmb	03 45 41.7	
	comp=Z,5.5nm,1.1s						
PV01	**Paraiso Valley**	**68.70**	**329**	IAmb	IAmb	03 45 44.3	
	comp=Z,2.2nm,0.6s						
PV15	**Paradox Valley**	**68.82**	**329**	IAmb	IAmb	03 45 45.7	
	comp=Z,7.7nm,1.0s						
U15A	**North Rim**	**69.30**	**325**	IAmb	IAmb	03 46 02.5	
	comp=Z,3.7nm,1.1s						
QSPA	**South Pole Qui**	**69.32**	**180**	P	**P**	**03 45 46.8**	**+3.0**
	comp=Z,4.4nm,0.6s,baz=305,slow=1.2,SNR=29						
QSPA	**South Pole Qui**	**69.32**	**180**	P	**P**	**03 45 42.8**	**-1.0**
QSPA				IAmb	IAmb	03 45 49.2	
	comp=Z,8.0nm,0.9s						
F36A	**Milaca**	**69.61**	**343**	IAmb	IAmb	03 45 47.5	
	comp=Z,6.8nm,1.1s						
DBIC	**Dimbokro**	**70.02**	**74**	P	**P**	**03 45 49.3**	**+0.5**
	comp=Z,12nm,0.8s,baz=222,slow=5.3,SNR=9.1						
DBIC				LR	LR	04 15 58.7	
	comp=Z,131nm,19.1s,baz=244,slow=36						
DBIC	**Dimbokro**	**70.02**	**74**	P	**P**	**03 45 45.5**	**-3.3**
O20A	**White River Ci**	**70.12**	**330**	IAmb	IAmb	03 45 53.2	
	comp=Z,6.6nm,1.1s						
B35A	**Bob, Littlefor**	**71.97**	**344**	IAmb	IAmb	03 46 01.7	
	comp=Z,6.1nm,1.1s						
DUG	**Dugway, Tooele**	**72.39**	**327**	P	**P**	**03 46 01.4**	**-1.4**
PDAR	**Pinedale Array**	**72.81**	**331**	P	**P**	**03 46 07.4**	**+2.1**
	comp=Z,0.3nm,0.4s,baz=140,slow=7.4,SNR=4.2						
HWUT	**Hardware Ranch**	**72.85**	**329**	IAmb	IAmb	03 46 09.3	
	comp=Z,5.7nm,1.1s						
AHID	**Auburn Hatcher**	**73.52**	**330**	IAmb	IAmb	03 46 13.2	
	comp=Z,7.8nm,1.1s						
TPAW	**Tepas**	**74.01**	**331**	IAmb	IAmb	03 46 16.5	
	comp=Z,3.4nm,0.9s						
NVAR	**Mina Array Bea**	**74.06**	**323**	P	**P**	**03 46 16.6**	**+3.8**
	comp=Z,1.1nm,0.8s,baz=149,slow=6.4,SNR=6.6						
RLMT	**Red Lodge**	**74.54**	**333**	IAmb	IAmb	03 46 34.2	
	comp=Z,2.7nm,0.7s						
LAO	**LASA Array**	**74.56**	**335**	IAmb	IAmb	03 46 19.7	
	comp=Z,8.5nm,1.1s						
PAHR	**Pah Rah Range**	**75.55**	**323**	IAmb	IAmb	03 46 26.2	
	comp=Z,6.2nm,1.0s						
MFID	**Camas Ranch**	**76.29**	**328**	IAmb	IAmb	03 46 30.7	
	comp=Z,3.6nm,1.1s						
ORV	**Oroville**	**76.65**	**322**	IAmb	IAmb	03 46 32.1	
	comp=Z,7.4nm,1.1s						
VNDA	**Vanda**	**77.21**	**190**	P	**P**	**03 46 33.0**	**+3.0**
	comp=Z,1.0nm,0.9s,baz=127,slow=5.2,SNR=4.3						
VNDA	**Vanda**	**77.21**	**190**	P	**P**	**03 46 27.9**	**-2.1**
SYO	**Syowa Base**	**77.63**	**160**	*eX*	**P**	**03 46 33.8**	**+1.4**
BMO	**Blue Mountains**	**78.06**	**328**	IAmb	IAmb	03 46 39.2	
	comp=Z,3.6nm,1.1s						
K05A	**Summer Lake**	**78.44**	**325**	IAmb	IAmb	03 46 42.4	
	comp=Z,5.2nm,1.0s						
TOA0	**Torodi Ar. Sit**	**78.59**	**71**	P	**P**	**03 46 36.7**	**-1.9**
TORD	**Torodi Ar. Bea**	**78.59**	**71**	P	**P**	**03 46 39.0**	**+0.4**
	comp=Z,17nm,0.9s,baz=254,slow=5.2,SNR=110						
TORD				LR	LR	04 21 06.1	
	comp=Z,145nm,18.7s,baz=190,slow=36						
I07A	**Izee**	**78.63**	**326**	IAmb	IAmb	03 46 43.0	
	comp=Z,4.8nm,1.2s						
FFC	**Flin Flon**	**79.95**	**342**	P	**P**	**03 46 44.5**	**-0.7**
TSUM	**Tsumeb**	**81.68**	**107**	P	**P**	**03 46 52.6**	**-2.9**
FCC	**Fort Churchill**	**81.68**	**348**	IAmb	IAmb	03 46 57.2	
	comp=Z,9.0nm,1.1s						
BOSA	**Boshof**	**85.09**	**119**	P	**P**	**03 47 14.2**	**+1.2**
	comp=Z,4.5nm,0.9s,baz=268,slow=8.1,SNR=7.0						
BOSA	**Boshof**	**85.09**	**119**	P	**P**	**03 47 10.8**	**-2.2**
TAM	**Tamanrasset**	**85.90**	**64**	P	**P**	**03 47 14.8**	**-2.2**
TAM				IAmb	IAmb	03 47 20.8	
	comp=Z,5.1nm,1.1s						
ESDC	**Sonseca Array**	**86.46**	**45**	P	**P**	**03 47 21.6**	**+2.4**
	comp=Z,2.1nm,1.2s,baz=243,slow=4.8,SNR=5.7						
ESDC				LR	LR	04 22 40.6	
	comp=Z,86nm,20.9s,baz=235,slow=33						
YKA	**Yellowknife Ar**	**90.09**	**341**	P	**P**	**03 47 37.9**	**+2.0**
	comp=Z,2.3nm,0.9s,baz=134,slow=5.0,SNR=34						
H11S2	**WAKE ISLAND Hyl**	**26.28**	**278**	T	T	06 12 59.3	
	baz=102,slow=74,SNR=1635						
H11S1	**WAKE ISLAND Hyl**	**26.29**	**278**	T	T	06 12 52.9	
	baz=102,slow=74,SNR=1152						
H11S3	**WAKE ISLAND Hyl**	**26.30**	**278**	T	T	06 12 57.9	
	baz=102,slow=74,SNR=1162						
H11N3	**WAKE ISLAND Hyl**	**26.35**	**280**	T	T	06 12 58.3	
	baz=102,slow=74,SNR=339						
H11N2	**WAKE ISLAND Hyl**	**26.37**	**280**	T	T	06 12 59.4	
	baz=102,slow=74,SNR=354						
H11N1	**WAKE ISLAND Hyl**	**26.37**	**280**	T	T	06 12 59.6	
	baz=102,slow=74,SNR=313						
WRA	**Warramunga Arr**	**132.70**	**213**	PKP	**PKiKP**	**03 53 54.4**	**+1.2**
	comp=Z,1.6nm,0.9s,baz=145,slow=1.8,SNR=10						
ZAA0	**Zalesovo Array**	**142.00**	**24**		**PKPdf**	**03 54 06.8**	**-1.3**
ZALV	**Zalesovo Beam**	**142.00**	**24**	PKhKP	**PKPdf**	**03 54 05.5**	**-2.6**
	comp=Z,0.4nm,0.4s,baz=204,slow=3.2,SNR=1.9						
ZALV				PKP	**PKiKP**	**03 54 10.4**	**-0.7**
	comp=Z,4.2nm,0.8s,baz=288,slow=2.8,SNR=9.0						
NIL	**Nilore**	**145.56**	**61**		**PKPdf**	**03 54 12.7**	**-2.4**
KDJ	**Kajisay**	**145.57**	**45**		**PKPdf**	**03 54 12.7**	**-2.3**
KSH	**Kashi**	**145.87**	**50**	PKPbc	**PKiKP**	**03 54 18.8**	**-0.9**
KSH				pPKP	sPKPab	03 54 26.8	-2.2
KSH				PP	**PP**	**03 57 30.8**	**-6.7**
KSH	**Kashi**	**145.87**	**50**	PKP	**PKiKP**	**03 54 18.8**	**-0.9**
KSH				pPKP	sPKPab	03 54 26.8	-2.2
MK31	**Makanchi Array**	**145.99**	**34**	PKPdf	**PKPdf**	**03 54 14.2**	**-1.2**
MKAR	**Makanchi Array**	**145.99**	**34**	PKPbc	**PKPab**	**03 54 17.8**	**+1.0**
	comp=Z,5.4nm,0.6s,baz=316,slow=2.6,SNR=54						
TARG	**Taragay, Kyrgy**	**146.17**	**45**	PKPdf	**PKPdf**	**03 54 14.2**	**-2.1**
USRK	**Ussuriysk Ar.**	**150.15**	**326**	PKPbc	**PKiKP**	**03 54 30.0**	**+1.8**
	comp=Z,6.6nm,0.9s,baz=61,slow=3.8,SNR=8.6						
MJAR	**Matsushiro Arr**	**150.48**	**308**	PKPbc	**PKiKP**	**03 54 30.8**	**+1.7**
	comp=Z,4.5nm,0.8s,baz=118,slow=0.9,SNR=8.5						
MAT	**Matsushiro**	**150.48**	**308**	PKP	**PKiKP**	**03 54 30.7

s-maj=54.6km s-min=24.5km az=149.0

ISC 27 03:52:04.2±0.6, 17°4S±0.1°×179°0W±0.1, h539km, n39, σ1§33/38, mb4.1/20, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.82**	**263**	P	**P**	**03 53 19.5**	**+2.2**
AFI	**Afiamalu**	**7.80**	**64**	P	**P**	**03 53 56.6**	**-3.2**
DZM	**Mont Dzumac**	**14.45**	**249**	P	**P**	**03 55 08.3**	**+0.1**
	0.8nm,0.3s,baz=129,slow=16,SNR=12						
DZM	**Mont Dzumac**	**14.45**	**249**	P	**P**	**03 55 07.0**	**-1.2**
KNTN	**Kanton**	**16.23**	**27**	P	**P**	**03 55 25.8**	**-0.7**
SNZO	**South Karori**	**24.41**	**192**	P	**P**	**03 56 39.5**	**-0.6**
BSWZ	**Blackbirch Sta**	**24.96**	**193**	P	**P**	**03 56 49.9**	**+4.9**
THZ	**Tophouse**	**25.22**	**194**	P	**P**	**03 56 46.7**	**-0.7**
THZ				IAmb	IAmb	03 56 52.0	
	comp=Z,14nm,1.2s						
EIDS	**Eidsvold**	**28.89**	**249**	P	**P**	**03 57 19.5**	**-0.3**
EIDS				IAmb	IAmb	03 57 20.2	
	comp=Z,4.9nm,0.8s						
ARMA	**Armidale**	**29.69**	**239**	P	**P**	**03 57 26.4**	**-0.4**
ARMA				IAmb	IAmb	03 57 28.5	
	comp=Z,9.8nm,0.9s						
COEN	**Coen**	**36.53**	**270**	P	**P**	**03 58 24.6**	**0.0**
COEN				IAmb	IAmb	03 58 26.9	
	comp=Z,8.4nm,1.0s						
TOO	**Toolangi**	**37.03**	**230**	P	**P**	**03 58 28.1**	**-0.3**
TOO				IAmb	IAmb	03 58 35.7	
	comp=Z,6.1nm,0.9s						
TAU	**Tasmania Unive**	**38.21**	**221**	P	**P**	**03 58 36.6**	**-1.4**
STKA	**Stephens Creek**	**38.36**	**240**	P	**P**	**03 58 40.0**	**+0.7**
	comp=Z,4.5nm,0.4s,baz=90,slow=10.0,SNR=23						
STKA	**Stephens Creek**	**38.36**	**240**	P	**P**	**03 58 39.4**	**+0.1**
BBOO	**Buckleboo**	**43.14**	**240**	P	**P**	**03 59 16.7**	**-0.7**
WR0	**Warramunga Arr**	**43.96**	**259**	P	**P**	**03 59 22.8**	**-1.1**
WB0	**Warramunga Arr**	**44.12**	**259**	P	**P**	**03 59 23.8**	**-1.4**
WB2	**Warramunga Arr**	**44.14**	**259**	P	**P**	**03 59 24.3**	**-1.1**
WB2				IAmb	IAmb	03 59 33.6	
	comp=Z,5.5nm,1.1s						
WRAB	**Tennant Creek**	**44.14**	**259**	P	**P**	**03 59 24.6**	**-0.8**
WRAB				IAmb	IAmb	03 59 25.6	
	comp=Z,3.8nm,0.9s						
WRA	**Warramunga Arr**	**44.15**	**259**	P	**P**	**03 59 24.8**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=95,slow=7.8,SNR=20						
AS31	**Alice Springs**	**44.37**	**254**	P	**P**	**03 59 26.9**	**-0.1**
AS31				IAmb	IAmb	03 59 27.7	
	comp=Z,4.0nm,0.6s						
MTN	**Manton Dam**	**48.24**	**268**	P	**P**	**03 59 55.0**	**-1.5**
MTN				IAmb	IAmb	04 00 11.9	
	comp=Z,7.4nm,0.9s						
FORT	**Forrest**	**49.69**	**244**	P	**P**	**04 00 06.2**	**-0.8**
KNRA	**Kununurra**	**49.96**	**264**	P	**P**	**04 00 08.4**	**-0.8**
KNRA				IAmb	IAmb	04 00 10.2	
	comp=Z,7.2nm,0.7s						
FITZ	**Fitzroy Crossi**	**52.54**	**260**	P	**P**	**04 00 27.5**	**-0.3**
PETK	**Petropavlovsk-**	**73.07**	**346**	P	**P**	**04 02 40.0**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=130,slow=5.8,SNR=2.7						
NVAR	**Mina Array Bea**	**79.48**	**44**	P	**P**	**04 03 16.5**	**+1.3**
	comp=Z,1.3nm,0.8s,baz=224,slow=8.9,SNR=6.0						
TRF	**Thorofare Moun**	**83.67**	**13**	P	**P**	**04 03 35.8**	**-0.2**
TRF				IAmb	IAmb	04 03 37.6	
	comp=Z,5.2nm,1.0s						
RND	**Reindeer**	**83.94**	**13**	P	**P**	**04 03 37.3**	**+0.1**
RND				IAmb	IAmb	04 03 38.3	
	comp=Z,3.9nm,0.8s						
IL31		**85.55**	**13**	P	**P**	**04 03 45.1**	**+0.2**
ILAR	**Eielson Array**	**85.55**	**13**	P	**P**	**04 03 45.1**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=222,slow=5.7,SNR=12						
TXAR	**Lajitas Array**	**86.23**	**58**	P	**P**	**04 03 51.2**	**+2.0**
	comp=Z,0.9nm,0.7s,baz=219,slow=6.5,SNR=9.8						
PDAR	**Pinedale Array**	**87.40**	**44**	P	**P**	**04 03 55.0**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=206,slow=6.4,SNR=2.8						
YKA	**Yellowknife Ar**	**94.14**	**25**	P	**P**	**04 04 25.1**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=242,slow=4.3,SNR=7.5						
BRTR	**Keskin Array B**	**144.04**	**315**	PKP	PKPbc	04 10 38.2	-0.1
	comp=Z,0.6nm,0.6s,baz=136,slow=1.6,SNR=4.9						
CLL	**Collm**	**144.87**	**347**	i PKPbc	**PKPab**	**04 10 42.0**	**+0.9**
	comp=Z,5.0nm,0.6s						
GERES	**GERESS Array B**	**147.00**	**345**	PKPbc	**PKPbc**	**04 10 47.0**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=20,slow=2.1,SNR=9.0						
FNA	**Florina**	**150.83**	**327**		**PKPbc**	**04 10 55.7**	**-0.4**

DDA 27 03:59:39.8, 42°.90N×45°.64E, h7km±2km, ML1.9
MOS 27 03:59:39.9±0.0, 42°.95N×45°.78E, h73km±3km, MPVA3.8
NORS 27 03:59:40.9±0.0, 42°.84N×45°.75E, h52km, MPVA3.8
TIF 27 03:59:40.2, 42°.95N×45°.88E, h47km±2km
DRS 27 03:59:41.9±0.0, 43°.06N×45°.22E, h30km

ISC 27 03:59:40.4±1.1, 42°.90N±0°.02×45°.69E±0°.02, h7km±9km, n98, σ1§60/168, 3C-5D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.46**	**121**	*e*Pg	**Pn**	**03 59 53.5**	**+0.1**
BTLR				*e*Sg	**Sb**	**04 00 02.7**	**+4.9**
BTLR	**Botlikh**	**0.46**	**121**	*e*Pg	**Pn**	**03 59 53.5**	**+0.1**
	103nm,0.3s						
BTLR	**Botlikh**	**0.46**	**121**	*c i*PG	**Pn**	**03 59 53.4**	**0.0**
BTLR				*i* S	**Sb**	**04 00 02.9**	**+5.1**
BTLR				pmax	pmax		
	comp=Z,95nm,0.2s						
BTLR				smax	smax		
	comp=Z,409nm,0.3s						
KMGR	**Komgaron**	**0.63**	**285**	*e*Pg	**Pn**	**03 59 57.3**	**+1.4**
KMGR				*e*Sg	**Sn**	**04 00 09.7**	**+3.5**
KMGR	**Komgaron**	**0.63**	**285**	*e*Pg	**Pn**	**03 59 57.2**	**+1.4**
KMGR				*e*Sg	**Sn**	**04 00 09.2**	**+3.1**
KMGR	**Komgaron**	**0.63**	**285**	*e*PG	**Pn**	**03 59 57.2**	**+1.4**
KMGR				*e*S	**Sn**	**04 00 09.2**	**+3.1**
VLKR	**Vladikavkaz**	**0.76**	**282**	*e*Pg	**Pn**	**03 59 58.6**	**+1.0**
VLKR				*e*Sg	**Sn**	**04 00 12.5**	**+3.1**
VLKR	**Vladikavkaz**	**0.76**	**282**	*e*PG	**Pn**	**03 59 58.6**	**+1.0**
VLKR				*e*S	**Sn**	**04 00 12.5**	**+3.1**
XNZR	**Khunzakh**	**0.83**	**115**	*e*Pg	**Pb**	**03 59 57.5**	**+0.3**
XNZR				*e*Sg	**Sb**	**04 00 09.7**	**+1.2**
XNZR	**Khunzakh**	**0.83**	**115**	*e*Pg	**Pb**	**03 59 57.6**	**+0.5**
XNZR				*e*Sg	**Sb**	**04 00 10.0**	**+1.4**
XNZR	**Khunzakh**	**0.83**	**115**	*e*PG	**Pb**	**03 59 57.8**	**+0.6**
XNZR				*e*S	**Sb**	**04 00 09.8**	**+1.2**
UNCR	**Uncukul**	**0.83**	**102**	*e*PG	**Pb**	**03 59 57.6**	**+0.4**
UNCR				*e*S	**Sb**	**04 00 09.2**	**+0.6**
UNCR				pmax	pmax		
	comp=Z,57nm,0.2s						
BTKR	**Batakoyurt**	**0.97**	**300**	*e*Pg	**Pb**	**03 59 58.0**	**-1.5**
BTKR				*e*Sg	**Sn**	**04 00 15.8**	**+1.3**
GUDG	**Gudauri**	**0.99**	**245**	P	**Pn**	**04 00 00.6**	**-0.4**
GUDG				S	**Sn**	**04 00 17.1**	**+1.7**
GUDG	**Gudauri**	**0.99**	**245**	*e*Pg	**Pn**	**04 00 00.6**	**-0.4**
GUDG				*e*Sg	**Sn**	**04 00 17.2**	**+1.7**
GUDG	**Gudauri**	**0.99**	**245**	*e*PG	**Pn**	**04 00 00.6**	**-0.4**
GUDG				*e*S	**Sn**	**04 00 17.1**	**+1.7**
ARKR	**Arakani**	**1.00**	**107**	PG	**Pg**	**04 00 00.0**	**+0.4**
ARKR				*e*S	**Sg**	**04 00 12.5**	**-0.2**
LACR	**Lac**	**1.03**	**267**	*e*Pg	**Pn**	**04 00 00.9**	**-0.5**
LACR				*e*Sg	**Sn**	**04 00 16.2**	**+0.1**
LACR	**Lac**	**1.03**	**267**	*e*Pg	**Pn**	**04 00 00.9**	**-0.5**
LACR				*e*Sg	**Sn**	**04 00 16.2**	**+0.1**
LACR	**Lac**	**1.03**	**267**	*e*PG	**Pn**	**04 00 00.9**	**-0.5**
LACR				*e*S	**Sn**	**04 00 16.2**	**+0.1**
BUJR	**Buynaksk**	**1.04**	**93**	*e*Pg	**Pg**	**04 00 00.7**	**+0.3**
BUJR				*e*Sg	**Sb**	**04 00 15.1**	**+0.4**
BUJR	**Buynaksk**	**1.04**	**93**	⇓*e*PG	**Pb**	**04 00 01.1**	**+0.3**
BUJR				*e*		04 00 14.9	
BUJR				pmax	pmax		
	comp=Z,110nm,0.3s						
BUJR				smax	smax		
	comp=N,1μm,0.5s						
TRKR	**Terskaya**	**1.08**	**320**	*e*Pg	**Pn**	**04 00 01.8**	**-0.2**
TRKR				*e*Sg	**Sn**	**04 00 18.5**	**+1.2**
TRKR	**Terskaya**	**1.08**	**320**	*e*Pg	**Pn**	**04 00 01.8**	**-0.2**
TRKR				*e*Sg	**Sn**	**04 00 18.5**	**+1.2**
TRKR	**Terskaya**	**1.08**	**320**	*e*PG	**Pn**	**04 00 01.8**	**-0.2**
TRKR				pmax	pmax		
	comp=Z,207nm,0.2s						
LGD	**Lagodekhi**	**1.14**	**159**	P	**Pg**	**04 00 01.8**	**-0.5**
LGD				S	**Sn**	**04 00 18.1**	**-0.6**
LGD	**Lagodekhi**	**1.14**	**159**	*e*Pg	**Pg**	**04 00 01.9**	**-0.3**
LGD				*e*Sg	**Sn**	**04 00 18.0**	**-0.6**
LGD	**Lagodekhi**	**1.14**	**159**	*e*PG	**Pg**	**04 00 01.7**	**-0.5**
LGD				*e*S	**Sn**	**04 00 18.0**	**-0.6**
KORR	**Kora**	**1.21**	**280**	*e*Pg	**Pn**	**04 00 04.8**	**+1.0**
KORR				*e*Sg	**Sn**	**04 00 21.3**	**+0.9**
KORR	**Kora**	**1.21**	**280**	*e*Pg	**Pn**	**04 00 04.3**	**+0.5**
KORR				*e*Sg	**Sn**	**04 00 21.5**	**+1.1**
KORR	**Kora**	**1.21**	**280**	*e*PG	**Pn**	**04 00 04.3**	**+0.5**
KORR				*e*S	**Sn**	**04 00 21.5**	**+1.1**
STDR	**Stavd-Durt**	**1.28**	**292**	*e*Pg	**Pg**	**04 00 05.5**	**+0.6**
STDR				*e*Sg	**Sn**	**04 00 23.7**	**+1.5**
STDR	**Stavd-Durt**	**1.28**	**292**	*e*Pg	**Pg**	**04 00 05.8**	**+0.8**
STDR				*e*Sg	**Sn**	**04 00 23.6**	**+1.4**
STDR	**Stavd-Durt**	**1.28**	**292**	*e*PG	**Pg**	**04 00 05.8**	**+0.8**
STDR				*e*S	**Sn**	**04 00 23.6**	**+1.4**
KMKR	**Kumukh**	**1.29**	**126**	*e*PG	**Pn**	**04 00 04.0**	**-1.1**
KMKR				*e*S	**Sb**	**04 00 20.0**	**-2.0**
ZEI	**Tsey**	**1.32**	**266**	*e*Pg	**Pg**	**04 00 05.0**	**-0.8**
ZEI				*e*Sg	**Sn**	**04 00 22.0**	**-1.5**
ZEI	**Tsey**	**1.32**	**266**	*e*Pg	**Pg**	**04 00 05.0**	**-0.8**
ZEI				*e*Sg	**Sn**	**04 00 22.4**	**-1.1**
ZEI	**Tsey**	**1.32**	**266**	*e*PG	**Pg**	**04 00 04.9**	**-0.8**
ZEI				*e*S	**Sn**	**04 00 22.4**	**-1.1**
MAK	**Makhachkala**	**1.33**	**87**	*e*Pg	**Pn**	**04 00 03.3**	**-2.1**
MAK				*e*Sg	**Sb**	**04 00 21.7**	**-1.3**
MAK	**Makhachkala**	**1.33**	**87**	*e*PG	**Pn**	**04 00 03.0**	**-2.4**
MAK				pmax	pmax		
	comp=Z,116nm,0.4s						
PRTR	**Priterechnaya**	**1.34**	**310**	*e*Pg	**Pg**	**04 00 05.3**	**-0.7**
PRTR				*e*Sg	**Sn**	**04 00 24.4**	**+0.9**
PRTR	**Priterechnaya**	**1.34**	**310**	*e*Pg	**Pg**	**04 00 05.3**	**-0.7**
PRTR				*e*Sg	**Sn**	**04 00 24.6**	**+1.0**
PRTR	**Priterechnaya**	**1.34**	**310**	*e*PG	**Pg**	**04 00 05.3**	**-0.7**
PRTR				pmax	pmax		
	comp=Z,84nm,0.2s						
TBLG	**Delisi**	**1.36**	**212**	P	**Pg**	**04 00 05.7**	**-0.9**
TBLG				S	**Sn**	**04 00 25.1**	**+0.8**
TBLG	**Delisi**	**1.36**	**212**	*e*Pg	**Pg**	**04 00 05.7**	**-0.9**
TBLG				*e*Sg	**Sn**	**04 00 25.1**	**+0.8**
TBLG	**Delisi**	**1.36**	**212**	*i* P	**Pg**	**04 00 05.8**	**-0.7**
TBLG				*i* S	**Sn**	**04 00 25.2**	**+1.0**
TBLG				IAML		04 00 26.0	
	comp=E,24nm,0.2s						
TBLG				IAML		04 00 27.0	
	comp=N,28nm,0.3s						
TBLG	**Delisi**	**1.36**	**212**	*e*PG	**Pg**	**04 00 05.6**	**-0.9**
TBLG				*e*S	**Sn**	**04 00 25.0**	**+0.8**
BTNK	**Botanikuri**	**1.38**	**209**	P	**Pb**	**04 00 05.8**	**-0.8**
BTNK				S	**Sg**	**04 00 25.3**	**+0.5**
BTNK	**Botanikuri**	**1.38**	**209**	*e*Pg	**Pb**	**04 00 05.8**	**-0.8**
BTNK				*e*Sg	**Sg**	**04 00 25.3**	**+0.5**
BTNK	**Botanikuri**	**1.38**	**209**	*i* P	**Pb**	**04 00 05.8**	**-0.8**
BTNK				*i* S	**Sg**	**04 00 25.9**	**+1.1**
BTNK				IAML		04 00 26.0	
	comp=E,47nm,0.1s						
BTNK				IAML		04 00 28.0	
	comp=N,40nm,0.1s						
BTNK	**Botanikuri**	**1.38**	**209**	*e*PG	**Pb**	**04 00 05.7**	**-0.8**
BTNK				*e*S	**Sg**	**04 00 25.3**	**+0.5**
LSNR	**Lesken**	**1.42**	**286**	*e*Pg	**Pg**	**04 00 06.8**	**-0.7**
LSNR				*e*Sg	**Sg**	**04 00 26.1**	**+0.1**
LSNR	**Lesken**	**1.42**	**286**	*e*Pg	**Pg**	**04 00 06.3**	**-1.3**
LSNR				*e*Sg	**Sg**	**04 00 26.2**	**+0.2**
LSNR	**Lesken**	**1.42**	**286**	*e*PG	**Pg**	**04 00 06.3**	**-1.3**
LSNR				*e*S	**Sg**	**04 00 26.2**	**+0.2**
DGRG	**David-gareji**	**1.46**	**189**	P	**Pb**	**04 00 07.1**	**-0.9**
DGRG				S	**Sg**	**04 00 28.0**	**+0.6**
DGRG	**David-gareji**	**1.46**	**189**	*i* Pg	**Pb**	**04 00 07.1**	**-0.9**
DGRG				*e*Sg	**Sg**	**04 00 28.3**	**+0.9**
DGRG	**David-gareji**	**1.46**	**189**	*i* P	**Pb**	**04 00 07.2**	**-0.9**
DGRG				IAML		04 00 28.0	
	comp=E,6.7nm,0.4s						
DGRG				*i* S	**Sg**	**04 00 28.2**	**+0.8**
DGRG				IAML		04 00 29.0	
	comp=N,9.0nm,0.3s						
DGRG	**David-gareji**	**1.46**	**189**	*e*PG	**Pb**	**04 00 07.1**	**-0.9**
DGRG				*e*S	**Sg**	**04 00 28.0**	**+0.6**
DDFL	**Dedoflistskaro**	**1.48**	**168**	P	**Pg**	**04 00 08.3**	**-0.6**
DDFL				S	**Sg**	**04 00 30.9**	**+2.8**
DDFL	**Dedoflistskaro**	**1.48**	**168**	*e*Pg	**Pg**	**04 00 08.2**	**-0.6**
DDFL				*e*Sg	**Sg**	**04 00 30.8**	**+2.8**
DIGR	**Digorskoe uzhe**	**1.55**	**271**	*e*Pg	**Pb**	**04 00 07.9**	**-1.7**
DIGR				*e*Sg	**Sn**	**04 00 27.4**	**-1.7**
DIGR	**Digorskoe uzhe**	**1.55**	**271**	*e*Pg	**Pn**	**04 00 07.6**	**-1.0**
DIGR				*e*Sg	**Sb**	**04 00 27.6**	**-1.9**
DIGR	**Digorskoe uzhe**	**1.55**	**271**	*e*PG	**Pn**	**04 00 07.6**	**-1.0**
URKR	**Urkarakh**	**1.61**	**116**	*e*Pg	**Pn**	**04 00 06.3**	**-3.1**
URKR				*e*Sg	**Sn**	**04 00 27.7**	**-2.8**
URKR	**Urkarakh**	**1.61**	**116**	*e*Pg	Pn	04 00 01.0	-8.4
	comp=N,27nm,0.1s						
URKR				*e*Sg	Sn	04 00 16.0	-14
	comp=N,70nm,0.2s						
URKR	**Urkarakh**	**1.61**	**116**	*e*PG	**Pn**	**04 00 08.0**	**-1.4**
URKR				pmax	pmax		
	comp=Z,35nm,0.1s						
NCK	**Nalchik**	**1.65**	**292**	⇓*i*PN	**Pg**	**04 00 10.4**	**-1.5**
NCK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ONI	**Oni**	**1.68**	**260**	P	**Pg**	**04 00 11.1**	**-1.4**
ONI	**Oni**	**1.68**	**260**	*e*Pg	**Pg**	**04 00 11.1**	**-1.4**
ONI				*e*Sg	**Sb**	**04 00 31.1**	**-1.9**
ONI	**Oni**	**1.68**	**260**	*e*PN	**Pg**	**04 00 11.1**	**-1.4**
KZRT	**Kazreti**	**1.79**	**213**	P	**Pn**	**04 00 10.6**	**-1.2**
KZRT				S	**Sn**	**04 00 34.1**	**-0.7**
KZRT	**Kazreti**	**1.79**	**213**	*i* P	**Pn**	**04 00 10.7**	**-1.0**
KZRT	**Kazreti**	**1.79**	**213**	*e*PN	**Pn**	**04 00 10.6**	**-1.2**
DMNI	**Dmanisi**	**1.92**	**216**	*e*PN	**Pn**	**04 00 12.5**	**-1.2**
BKRG	**Bakuriani**	**1.97**	**235**	P	**Pn**	**04 00 14.3**	**-0.1**
BKRG	**Bakuriani**	**1.97**	**235**	*e*Pg	**Pn**	**04 00 14.3**	**-0.1**
BKRG	**Bakuriani**	**1.97**	**235**	*e*PN	**Pn**	**04 00 14.2**	**-0.1**
AKT	**Akhty**	**2.07**	**132**	*e*Pg	**Pn**	**04 00 13.5**	**-2.2**
AKT				*e*Sg	**Sn**	**04 00 38.4**	**-3.4**
AKT	**Akhty**	**2.07**	**132**	*e*Pg	**Pn**	**04 00 13.8**	**-2.0**
AKT				*e*Sg	**Sn**	**04 00 38.5**	**-3.4**
AKT	**Akhty**	**2.07**	**132**	*e*PN	**Pn**	**04 00 14.0**	**-1.7**
AKT				pmax	pmax		
	comp=Z,19nm,0.2s						
DRN	**Derbent**	**2.13**	**113**	*e*Pg	**Pn**	**04 00 14.4**	**-2.0**
DRN				*e*Sg	**Sn**	**04 00 40.1**	**-3.1**
DRN	**Derbent**	**2.13**	**113**	*e*Pg	**Pn**	**04 00 16.0**	**-0.4**
	comp=Z,30nm,0.6s						
DRN				*e*Sg	**Sn**	**04 00 40.7**	**-2.5**
	comp=Z,90nm,0.3s						
DRN	**Derbent**	**2.13**	**113**	*e*PN	**Pn**	**04 00 16.0**	**-0.4**
DRN				pmax	pmax		
	comp=Z,30nm,0.6s						
KBZ	**Khabaz**	**2.20**	**293**	*e*Pg	**Pn**	**04 00 15.8**	**-1.6**
KBZ				*e*Sg	**Sn**	**04 00 41.4**	**-3.5**
NEY	**Neytrino**	**2.20**	**280**	*e*Pn	**Pn**	**04 00 17.2**	**-0.4**
NEY				*e*Sn	**Sn**	**04 00 43.2**	**-2.0**
NEY	**Neytrino**	**2.20**	**280**	*e*Pn	**Pn**	**04 00 17.2**	**-0.4**
NEY				*e*Sn	**Sn**	**04 00 43.2**	**-2.0**
NEY	**Neytrino**	**2.20**	**280**	*e*PN	**Pn**	**04 00 17.2**	**-0.4**
AKH	**Akhalkalaki**	**2.21**	**228**	*e*Pn	**Pn**	**04 00 16.3**	**-1.4**
AKH				*e*Sn	**Sn**	**04 00 44.7**	**-0.6**
KSMR	**Kasumkent**	**2.22**	**125**	*e*PN	**Pn**	**04 00 16.0**	**-1.7**
BEYR	**Belyy Ugol+**	**2.37**	**299**	*e*Pn	**Pn**	**04 00 18.1**	**-1.6**
BEYR				*e*Sn	**Sn**	**04 00 45.4**	**-3.8**
KIV1	**Kislovodsk Arr**	**2.43**	**297**	*e*Pn	**Pn**	**04 00 18.9**	**-1.7**
KIV1				*e*Sn	**Sn**	**04 00 47.4**	**-3.2**
KIV	**Kislovodsk**	**2.43**	**297**	*i* PG	**Sn**	**04 00 47.5**	**-3.2**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GOF	**Gofitskoye**	**2.88**	**319**	*e*Pn	**Pn**	**04 00 25.3**	**-1.5**
GOF				*e*Sn	**Sn**	**04 00 58.3**	**-3.4**
ARU	**Arti**	**15.86**	**27**	⇑*i*P	**P**	**04 03 25.6**	**-2.2**
ARU				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRVK	**Borovoye**	**19.25**	**50**	⇓*i*P	**Pn**	**04 04 07.4**	**+1.2**
BRVK				pmax	pmax		
	comp=Z,6.0nm,3.0s						
AAK	**Ala-Archa**	**21.11**	**81**	⇓*i*P	**P**	**04 04 28.2**	**+2.5**
KHC	**Kasperske Hory**	**23.04**	**297**	⇓*i*P	**P**	**04 04 48.0**	**+1.9**
KHC				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KURK	**Kurchatov**	**23.70**	**59**	⇑*i*P	**P**	**04 04 55.0**	**+2.3**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.4s						

IDC 27 04:09:12.0±17.0, 19°21S×177°32W, h567km±173km, mb3.1/3, mb1 3.4/3, mb1mx2.9/26, mbtmp4.0/3, Error ellipse: s-maj=131.6km s-min=55.8km az=120.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.42**	**261**	P	P	04 16 40.9	-0.2
	1.7nm,0.4s,baz=97,slow=7.8,SNR=49						
MJAR	**Matsushiro Arr**	**69.56**	**323**	P	P	04 19 24.3	-0.4
	0.8nm,0.4s,baz=133,slow=6.5,SNR=2.2						
ILAR	**Eielson Array**	**86.92**	**13**	P	P	04 20 57.0	+0.3
	0.3nm,0.7s,baz=219,slow=4.0,SNR=2.8						
ARCES	**ARCESS Array B**	**127.77**	**350**	PKP	PKPdf	04 27 12.2	-0.6
	0.8nm,0.7s,baz=318,slow=1.6,SNR=5.2						
BRTR	**Keskin Array B**	**146.43**	**314**	PKPbc	PKPbc	04 27 50.4	-0.1
	0.2nm,0.3s,baz=101,slow=2.5,SNR=3.7						
GERES	**GERESS Array B**	**149.13**	**346**	PKPbc	PKPbc	04 27 56.0	-0.9
	0.4nm,0.6s,baz=19,slow=5.7,SNR=3.8						

IDC 27 04:12:55.6±1.1, 14°.93S×66°.90E, h0km, mb3.9/11, mb1 4.1/11, mb1mx3.9/37, mbtmp3.9/11, MS3.9/7, Ms1 3.9/7, ms1mx3.5/44, Error ellipse: s-maj=37.6km s-min=22.6km az=176.0
NEIC 27 04:12:56.8±1.1, 15°.0S±0°.2×66°.8E±0°.1, h10km±1km, mb4.6/7, Error ellipse: s-maj=28.1km s-min=19.3km az=156.0
GCMT 27 04:12:57.8±0.4, 14°.97S±0°.04×66°.80E±0°.03, h14km±1km, MW4.8/80, Moment Tensor Solution. s25,c27; s80,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.01±.17; $M_{\theta\theta}$0.69±.11; $M_{\phi\phi}$1.31±.11; $M_{r\theta}$0.43±.28; $M_{\theta\phi}$-0.60±.08; M_{rr}0.97±.24; Best double couple: M_o2.08200×10^{16} NP1:ϕs315.00000°, δ57.00000°, λ-117.00000°. NP2: ϕs169.00000°, δ57.00000°, λ-71.00000°. Principal axes: T 1.7870, Plg10.0000°, Azm245.0000°; N 0.5820, Plg16.0000°, Azm338.0000°; P -2.3780, Plg71.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 27 04:12:57.6±1.0, 15°.0S±0°.2×66°.9E±0°.1, h16km, n34, σ0§90/21, mb4.2/15, MS3.9/7, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.13**	**37**	T	T	04 24 30.9	
	baz=216,slow=75,SNR=254						
H08S2	**Diego Garcia H**	**9.14**	**37**	T	T	04 24 31.5	
	baz=216,slow=75,SNR=229						
H08S3	**Diego Garcia H**	**9.15**	**37**	T	T	04 24 36.8	
	baz=216,slow=75,SNR=248						
ATD	**Arta Tunnel**	**35.56**	**317**	LR	LR	04 33 20.2	
	comp=Z,102nm,18.1s,baz=106,slow=34						
PSI	**Prapat**	**36.30**	**63**	LR	LR	04 32 17.7	
	comp=Z,399nm,19.4s,baz=266,slow=32						
MATP	**Matopo**	**36.93**	**256**	LR	LR	04 32 53.8	
	comp=Z,412nm,20.7s,baz=68,slow=32						
BKNI	**Bangkinang**	**37.02**	**69**	P	**P**	**04 20 05.2**	**-1.8**
LSZ	**Lusaka**	**37.35**	**264**	P	**P**	**04 20 11.7**	**+1.8**
	0.7nm,0.3s,baz=146,slow=3.6,SNR=1.8						
LSZ	**Lusaka**	**37.35**	**264**	P	**P**	**04 20 09.0**	**-1.0**
WSAR	**Wadi Sarin**	**38.88**	**348**	LR	LR	04 33 00.7	
	comp=Z,88nm,19.4s,baz=192,slow=31						
LEM	**Lembang**	**40.73**	**83**	LR	LR	04 34 03.2	
	comp=Z,158nm,18.6s,baz=162,slow=31						
SUR	**Sutherland**	**45.24**	**239**	LR	LR	04 37 23.4	
	comp=Z,210nm,18.1s,baz=93,slow=32						
CMAR	**Chiang Mai Arr**	**45.85**	**45**	P	**P**	**04 21 20.9**	**+1.5**
	0.9nm,0.3s,baz=234,slow=8.9,SNR=7.6						
H01W3	**Cape Leeuwin H**	**46.67**	**124**	T	T	05 11 29.1	
	baz=283,slow=75,SNR=18						
H01W2	**Cape Leeuwin H**	**46.67**	**124**	T	T	05 11 22.8	
	baz=283,slow=75,SNR=19						
H01W1	**Cape Leeuwin H**	**46.69**	**124**	T	T	05 11 27.7	
	baz=283,slow=75,SNR=21						
NWAO

WRA Warramunga Arr 46.87 266 P P 04 26 53.0 +5.1
comp=Z,3.4nm,0.6s,baz=104,slow=8.0,SNR=25
WB0 Warramunga Arr 46.87 266 P **P** **04 26 46.6 -1.2**
WB0 IAmb IAmb 04 26 54.3
comp=Z,7.7nm,1.1s
KNRA Kununurra 53.24 269 P **P** **04 27 36.1 -0.1**
KNRA IAmb IAmb 04 27 45.8
comp=Z,8.8nm,1.0s
FITZ Fitzroy Crossi 55.27 265 P **P** **04 27 51.1 +0.1**
FITZ IAmb IAmb 04 27 58.6
comp=Z,4.7nm,0.9s
MORW Morawa 60.68 250 P **P** **04 28 28.7 -0.1**
MORW IAmb IAmb 04 28 41.9
comp=Z,1.5nm,0.9s
CASY Casey 60.89 206 P **P** **04 28 29.8 +0.2**
NVAR Mina Array Bea 82.67 41 P P 04 30 51.9 +11
comp=Z,1.7nm,1.0s,baz=228,slow=8.7,SNR=7.7
USRK Ussuriysk Ar. 84.47 325 P P 04 30 58.5 +8.8
comp=Z,1.3nm,0.8s,baz=172,slow=4.2,SNR=4.6
TXAR Lajitas Array 87.36 56 P P 04 31 14.5 +10
comp=Z,0.6nm,1.0s,baz=256,slow=3.6,SNR=1.9
ILAR Eielson Array 92.39 12 P P 04 31 34.0 +6.9
comp=Z,0.5nm,0.9s,baz=210,slow=4.9,SNR=3.6
CMAR Chiang Mai Arr 94.30 288 P P 04 31 43.6 +6.6
comp=Z,1.6nm,0.4s,baz=135,slow=3.3,SNR=2.5
AKASG Malin Array Be 148.53 330 PKPbc **PKPab** **04 38 09.6 +2.5**
comp=Z,0.3nm,0.3s,baz=46,slow=3.1,SNR=2.3
BRTR Keskin Array B 152.04 308 PKP^ **PKiKP** **04 38 15.0 +2.0**
comp=Z,0.2nm,0.4s,baz=128,slow=9.3,SNR=2.0
BRTR PKPbc **pPKPbc** **04 38 20.6 -1.3**
comp=Z,1.0nm,0.8s,baz=153,slow=5.9,SNR=5.3

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*BJI **27** 04:23:51.1±0.0,15.°28S×66.°57E,h13km,mB5.2/43, mb5.0/55,Ms5.0/48,Ms7 4.9/46*
*IDC **27** 04:23:52.3±0.5, 15.°07S×66.°93E,h0km,mb4.4/24, mb1 4.5/25,mb1mx4.4/36,mbtmp4.4/25,ML3.6/1,Error ellipse: s-maj=16.3km s-min=14.7km az=162.0*
*MOS **27** 04:23:52.0±0.9, 15.°05S×66.°91E,h10km,mb5.2/45, MS4.4/4,Error ellipse: s-maj=11.3km s-min=6.6km az=104.9*
*NEIC **27** 04:23:53.2±1.3, 15.°1S±0.°1×66.°9E±0.°1, h10km±1km, mb5.1/65,Error ellipse: s-maj=18.7km s-min=16.2km az=150.0*
*BGR **27** 04:23:58.2±0.0, 14.°75S×66.°51E, h33km, mb5.0*
ISC 27 04:23:54.6±0.3,**15.°18S**±0.°06×**66.°81E**±0.°06,**h16**km,**n425,**
σ1s13/419,mb5.0/114,32C-10D,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Garcia H**	**9.32**	**37**	T	T	04 35 28.6	
	baz=217,slow=74,SNR=4583						
H08S2	**Diego Garcia H**	**9.33**	**37**	T	T	04 35 29.4	
	baz=217,slow=74,SNR=3492						
H08S3	**Diego Garcia H**	**9.34**	**37**	T	T	04 35 34.2	
	baz=217						
RER	**Riviere de l'E**	**12.08**	**239**	Pn	**Pn**	**04 26 46.7**	**+0.5**
OPO	**Ambohidratompo**	**19.08**	**257**	P	**Pn**	**04 28 20.1**	**+2.5**
	0.2nm,0.3s,baz=91,slow=22,SNR=2.1						
KMBO	**Kilima Mbogo**	**32.35**	**293**	P	**P**	**04 30 23.1**	**-0.8**
	1.9nm,0.8s,baz=90,slow=19,SNR=2.4						
KMBO	**Kilima Mbogo**	**32.35**	**293**	P	**P**	**04 30 22.5**	**-1.3**
KMBO				pmax	pmax		
	comp=Z,38nm,1.8s						
KMBO	**Kilima Mbogo**	**32.35**	**293**	P	**P**	**04 30 22.5**	**-1.3**
KMBO				IAmb	IAmb	04 30 35.3	
	comp=Z,38nm,1.8s						
GSI	**Gunungsitoli**	**34.55**	**64**	P	**P**	**04 30 40.4**	**-2.4**
ATD	**Arta Tunnel**	**35.61**	**317**	P	**P**	**04 30 53.6**	**+1.8**
	comp=Z,2.5nm,0.2s,baz=169,slow=2.2,SNR=3.7						
ATD	**Arta Tunnel**	**35.61**	**317**	P	**P**	**04 30 49.8**	**-2.0**
FURI	**Furi**	**36.74**	**309**	P	**P**	**04 31 01.5**	**-0.4**
FURI				IAmb	IAmb	04 31 17.8	
	comp=Z,28nm,0.6s						
MATP	**Matopo**	**36.79**	**256**	P	**P**	**04 31 03.8**	**+1.7**
	comp=Z,4.4nm,1.0s,baz=89,slow=6.4,SNR=8.0						
LSZ	**Lusaka**	**37.24**	**265**	P	**P**	**04 31 06.1**	**+0.2**
LSZ				pmax	pmax		
	comp=Z,20nm,1.0s						
LSZ	**Lusaka**	**37.24**	**265**	P	**P**	**04 31 06.1**	**+0.2**
MBAR	**Mbarara**	**38.46**	**289**	P	**P**	**04 31 16.6**	**+0.3**
MBAR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MBAR	**Mbarara**	**38.46**	**289**	P	**P**	**04 31 16.6**	**+0.3**
WSAR	**Wadi Sarin**	**39.02**	**348**	P	**P**	**04 31 19.8**	**-0.8**
	comp=Z,2.9nm,0.8s,baz=173,slow=16,SNR=1.4						
IPM	**Ipoh**	**39.12**	**63**	P	**P**	**04 31 20.8**	**-0.9**
IPM				IAmb	IAmb	04 31 29.7	
	comp=Z,51nm,1.6s						
KULM	**Kulim**	**39.21**	**61**	P	**P**	**04 31 20.5**	**-1.9**
LBTB	**Lobatse**	**39.79**	**249**	P	**P**	**04 31 28.4**	**+1.2**
LBTB				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LBTB	**Lobatse**	**39.79**	**249**	P	**P**	**04 31 28.4**	**+1.2**
BOSA	**Boshof**	**40.60**	**244**	P	**P**	**04 31 36.0**	**+2.0**
	comp=Z,1.5nm,0.6s,baz=95,slow=8.8,SNR=4.7						
BOSA	**Boshof**	**40.60**	**244**	P	**P**	**04 31 33.3**	**-0.7**
BOSA				pmax	pmax		
	comp=Z,18nm,1.4s						
BOSA	**Boshof**	**40.60**	**244**	P	**P**	**04 31 33.3**	**-0.7**
UOSS	**Minazif**	**41.21**	**345**	P	**P**	**04 31 38.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**46.03**	**45**	P	**P**	**04 32 18.3**	**+0.6**
	comp=Z,5.2nm,0.9s,baz=237,slow=8.4,SNR=19						
CHTO	**Chiang Mai**	**46.28**	**44**	P	**P**	**04 32 17.8**	**-1.9**
CHTO				pmax	pmax		
	comp=Z,17nm,1.3s						
CHTO	**Chiang Mai**	**46.28**	**44**	P	**P**	**04 32 17.8**	**-1.9**
CHTO				IAmb	IAmb	04 32 27.1	
	comp=Z,17nm,1.2s						
H01W3	**Cape Leeuwin H**	**46.66**	**124**	T	T	05 22 23.9	
	baz=282						
H01W2	**Cape Leeuwin H**	**46.67**	**124**	T	T	05 22 25.9	
	baz=282						
H01W1	**Cape Leeuwin H**	**46.68**	**124**	T	T	05 22 23.7	
	baz=282						
SHL	**Shillong**	**47.30**	**31**	P	**P**	**04 32 27.3**	**-0.4**
SHL				pmax	pmax		
	comp=Z,45nm,1.1s						
SHL	**Shillong**	**47.30**	**31**	P	**P**	**04 32 27.3**	**-0.4**
SBUM	**Sibu**	**48.22**	**73**	P	**P**	**04 32 32.8**	**-2.2**
KMI	**Kunming**	**53.21**	**42**	P	**P**	**04 33 14.0**	**+1.3**
KMI				pP	sP	04 33 17.8	-0.6
KMI				sP	pwP	04 33 19.5	-1.3
KMI				S	**S**	**04 40 45.0**	**+1.5**
KMI				sS	sS	04 40 51.3	+0.6
KMI				SS	**SKiKP**	**04 44 28.5**	**-1.8**
KMI				pmax	pmax		
	comp=Z,14nm,1.1s						
KMI				pmax	pmax		
	comp=Z,63nm,3.1s						
KMI				LR	LR		
	comp=Z,900nm,17.8s						
KMI				LR	LR		
	comp=Z,430nm,16.6s						
KMI				LR	LR		
	comp=Z,930nm,18.1s						
GAR	**Garm**	**54.00**	**3**	P	**P**	**04 33 17.3**	**-0.8**
GAR				IAmb	IAmb	04 33 24.2	
	comp=Z,17nm,0.7s						
QIZ	**Qiongzhong**	**54.31**	**53**	P	**P**	**04 33 21.5**	**+0.9**
QIZ				S	**S**	**04 40 59.0**	**+0.9**
QIZ				pmax	pmax		
	comp=Z,91nm,5.2s						
QIZ				LR	LR		
	comp=Z,430nm,23.5s						
QIZ				LR	LR		
	comp=Z,850nm,19.6s						
QIZ				LR	LR		
	comp=Z,990nm,22.6s						
BTK	**Batken**	**55.08**	**4**	P	**P**	**04 33 25.6**	**-0.3**
BTK				pmax	pmax		
	comp=Z,21nm,1.3s						
BTK	**Batken**	**55.08**	**4**	P	**P**	**04 33 25.6**	**-0.3**
BTK				IAmb	IAmb	04 33 32.6	
	comp=Z,21nm,1.3s						
KSH	**Kashi**	**55.08**	**9**	P	**P**	**04 33 22.5**	**-3.4**
KSH				pP	pP	04 33 29.0	-1.2
KSH				S	S	04 40 57.0	-11
KSH				pmax	pmax		
	comp=Z,76nm,1.3s						
KSH				pmax	pmax		
	comp=Z,180nm,5.4s						
KSH				LR	LR		
	comp=Z,320nm,7.5s						
KSH				LR	LR		
	comp=Z,200nm,6.4s						
KSH				LR	LR		
	comp=Z,360nm,12.2s						
SYO	**Syowa Base**	**56.48**	**191**	⇓*i*P	**P**	**04 33 35.8**	**+0.4**
SYO	**Syowa Base**	**56.48**	**191**	⇑*i*pP	pP	04 33 38.2	-1.6
SYO	**Syowa Base**	**56.48**	**191**	⇑*e*P	**PP**	**04 35 40.4**	**-0.7**
ARSB	**Arslanbob**	**56.51**	**6**	P	**P**	**04 33 35.5**	**-0.7**
ARSB	**Arslanbob**	**56.51**	**6**	P	**P**	**04 33 35.5**	**-0.7**
GYA	**Guiyang**	**56.69**	**43**	⇓*i*P	**P**	**04 33 38.8**	**+1.1**
GYA				PP	**PP**	**04 35 49.8**	**+5.7**
GYA				S	**S**	**04 41 29.3**	**-0.6**
GYA				SS	**SS**	**04 45 19.5**	**+1.3**
GYA				pmax	pmax		
	comp=Z,30nm,1.2s						
GYA				pmax	pmax		
	comp=Z,150nm,3.8s						
GYA				LR	LR		
	comp=Z,550nm,20.4s						
GYA				LR	LR		
	comp=Z,510nm,21.0s						
GYA				LR	LR		
	comp=Z,1μm,21.4s						
AAK	**Ala-Archa**	**57.97**	**7**	*i*P	**P**	**04 33 46.2**	**-0.2**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
AAK	**Ala-Archa**	**57.97**	**7**	P	**P**	**04 33 45.5**	**-1.0**
CD2	**Chengdu**	**57.98**	**38**	P	**P**	**04 33 47.3**	**+0.6**
CD2				S	**S**	**04 41 48.8**	**+2.2**
CD2				pmax	pmax		
	comp=Z,50nm,1.2s						
CD2				LR	LR		
	comp=Z,500nm,15.8s						
CD2				LR	LR		
	comp=Z,480nm,15.8s						
CD2				LR	LR		
	comp=Z,710nm,19.4s						
KK31	**Karatay Array**	**58.10**	**3**	P	**P**	**04 33 46.8**	**-0.4**
KK31				pmax	pmax		
	comp=Z,23nm,1.7s						
KK31	**Karatay Array**	**58.10**	**3**	P	**P**	**04 33 46.8**	**-0.4**
KK31				IAmb	IAmb	04 33 54.2	
	comp=Z,23nm,1.7s						
AKT	**Akhty**	**59.08**	**343**	*e*P	**P**	**04 33 54.9**	**+0.7**
AKT				*e*		04 34 43.0	
AKT				*e*		04 36 04.9	
AKT				pmax	pmax		
	comp=Z,17nm,0.9s						
ENH	**Enshi**	**61.08**	**42**	P	**P**	**04 34 07.4**	**-0.7**
WMQ	**Urumqi**	**61.75**	**17**	*e*P	**P**	**04 34 12.3**	**0.0**
WMQ				pmax	pmax		
	comp=Z,29nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.6s						
WMQ				LR	LR		
	comp=Z,380nm,26.3s						
WMQ				LR	LR		
	comp=Z,380nm,13.3s						
WMQ				LR	LR		
	comp=Z,490nm,28.8s						
LZH	**Lanzhou**	**61.85**	**34**	*e*P	**P**	**04 34 14.8**	**+1.5**
LZH				pP	pP	04 34 18.0	+0.5
LZH				PP	**PP**	**04 36 35.5**	**+5.7**
LZH				pmax	pmax		
	comp=Z,28nm,1.3s						
LZH				pmax	pmax		
	comp=Z,170nm,6.8s						
LZH				LR	LR		
	comp=Z,540nm,15.0s						
LZH				LR	LR		
	comp=Z,530nm,14.7s						
LZH				LR	LR		
	comp=Z,800nm,17.5s						
GTA	**Gaotai**	**62.44**	**28**	*e*P	**P**	**04 34 17.0**	**-0.1**
GTA				pP	sP	04 34 23.0	+0.1
GTA				sP	pwP	04 34 26.3	+1.0
GTA				S	**S**	**04 42 47.0**	**+3.3**
GTA				sS	sS	04 42 57.0	+6.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,79nm,8.1s						
GTA				LR	LR		
	comp=Z,420nm,21.6s						
GTA				LR	LR		
	comp=Z,430nm,20.6s						
GTA				LR	LR		
	comp=Z,730nm,22.5s						
KBZ	**Khabaz**	**62.58**	**341**	P	**P**	**04 34 18.5**	**+0.8**
	comp=Z,3.1nm,0.8s,baz=169,slow=6.1,SNR=5.8						
BR131	**Keskin Array S**	**62.77**	**332**	P	**P**	**04 34 19.0**	**-0.4**
BR131				pmax	pmax		
	comp=Z,25nm,1.6s						
BR131	**Keskin Array S**	**62.77**	**332**	P	**P**	**04 34 19.0**	**-0.4**
BR131				IAmb	IAmb	04 34 22.2	
	comp=Z,25nm,1.6s						
BRTR	**Keskin Array B**	**62.77**	**332**	P	**P**	**04 34 19.6**	**+0.2**
	comp=Z,1.9nm,1.0s,baz=139,slow=8.0,SNR=12						
KIV	**Kislovodsk**	**62.85**	**341**	⇑*i*P	**P**	**04 34 19.7**	**0.0**
KIV				*i*		04 35 00.9	
KIV				*i*		04 36 38.0	
KIV				*i* S	S	04 42 38.8	-10
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,171nm,19.0s						
MAKZ	**Makanchi**	**63.20**	**12**	P	**P**	**04 34 20.5**	**-1.4**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MAKZ	**Makanchi**	**63.20**	**12**	P	**P**	**04 34 20.5**	**-1.4**
MK31	**Makanchi Array**	**63.24**	**12**	P	**P**	**04 34 21.0**	**-1.2**
MK31				pmax	pmax		
	comp=Z,16nm,1.5s						
MK31	**Makanchi Array**	**63.24**	**12**	P	**P**	**04 34 21.0**	**-1.2**
MK31				IAmb	IAmb	04 34 28.3	
	comp=Z,16nm,1.4s						
MKAR	**Makanchi Array**	**63.24**	**12**	P	**P**	**04 34 21.4**	**-0.9**
	comp=Z,4.0nm,0.8s,baz=216,slow=8.9,SNR=25						
XAN	**Xi'an**	**63.27**	**39**	P	**P**	**04 34 22.0**	**-0.7**
XAN				pmax	pmax		
	comp=Z,35nm,1.6s						
XAN				pmax	pmax		
	comp=Z,210nm,4.0s						
XAN				LR	LR		
	comp=Z,200nm,20.6s						
XAN				LR	LR		
	comp=Z,600nm,17.3s						
XAN				LR	LR		
	comp=Z,660nm,17.3s						
XAN	**Xi'an**	**63.27**	**39**	P	**P**	**04 34 22.2**	**-0.5**
XAN				pmax	pmax		
	comp=Z,52nm,1.3s						
XAN	**Xi'an**	**63.27**	**39**	P	**P**	**04 34 22.2**	**-0.5**
SOC	**Sochi**	**63.52**	**338**	*e*P	**P**	**04 34 24.2**	**+0.1**
SOC				*e*		04 36 38.6	
SOC				*e*PPP	PPP	04 38 20.8	
SOC				*e*S	**S**	**04 43 00.9**	**+4.0**
SOC				*e*SS	**SS**	**04 46 59.5**	**-5.1**
SOC				pmax	pmax		
	comp=Z,22nm,1.1s						
SOC				MLR	MLR		
	comp=Z,271nm,18.0s						
ILGA	**Ilgaz**	**63.80**	**333**	P	**P**	**04 34 26.0**	**-0.3**
ILGA				IAmb	IAmb	04 34 35.2	
	comp=Z,12nm,1.2s						
WRA	**Warramunga Arr**	**64.18**	**105**	P	**P**	**04 34 28.9**	**-0.1**
	comp=Z,8.6nm,0.9s,baz=268,slow=6.1,SNR=26						
WB2	**Warramunga Arr**	**64.19**	**105**	P	**P**	**04 34 27.8**	**-1.4**
WRAB	**Tennant Creek**	**64.19**	**105**	⇑*i*P	**P**	**04 34 28.3**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,24nm,1.1s						
WRAB	**Tennant Creek**	**64.19**	**105**	P	**P**	**04 34 27.9**	**-1.2**
WRAB				IAmb	IAmb	04 34 36.4	
	comp=Z,19nm,1.0s						
WB0	**Warramunga Arr**	**64.26**	**105**	P	**P**	**04 34 28.3**	**-1.3**
WB0				IAmb	IAmb	04 34 31.6	
	comp=Z,27nm,1.3s						
WR0	**Warramunga Arr**	**64.37**	**105**	P	**P**	**04 34 28.1**	**-2.2**
WR0				IAmb	IAmb	04 34 38.5	
	comp=Z,14nm,1.0s						
WHN	**Wuhan**	**64.48**	**45**	⇓P	**P**	**04 34 30.8**	**+0.1**
WHN				LR	LR		
	comp=Z,2μm,21.1s						
WHN				LR	LR		
	comp=Z,2μm,19.4s						
WHN				LR	LR		
	comp=Z,3μm,22.4s						
MDUB	**Mudurnu**	**64.50**	**331**	P	**P**	**04 34 30.6**	**-0.2**
NVL	**N'lazarevskaya**	**64.58**	**197**	*e*P	P	04 34 38.0	+7.3
NVL				pmax	pmax		
	comp=Z,24nm,0.9s						
KURK	**Kurchatov**	**66.43**	**8**	⇑*i*P	**P**	**04 34 41.6**	**-1.2**
KURK				pmax	pmax		
	comp=Z,19nm,1.2s						
KURK	**Kurchatov**	**66.43**	**8**	P	**P**	**04 34 41.7**	**-1.1**
KURK				IAmb	IAmb	04 34 49.5	
	comp=Z,18nm,1.1s						
BRVK	**Borovoye**	**68.03**	**2**	⇓*i*P	**P**	**04 34 52.0**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,14nm,0.9s						
BRVK	**Borovoye**	**68.03**	**2**	P	**P**	**04 34 52.2**	**-0.7**
BRVK				IAmb	IAmb	04 34 59.5	
	comp=Z,16nm,0.9s						
AGG	**Agios Georgios**	**68.08**	**324**	P	**P**	**04 34 53.6**	**0.0**
AGG				pmax	pmax		
	comp=Z,32nm,1.4s						
AGG	**Agios Georgios**	**68.08**	**324**	P	**P**	**04 34 53.6**	**0.0**
KDZ	**Kurdzhali**	**68.25**	**328**	*e*P	**P**	**04 34 55.8**	**+1.1**
BTO	**Baotou**	**68.47**	**34**	*e*P	**P**	**04 34 52.0**	**-4.1**
NJ2	**Nanjing**	**68.48**	**46**	*e*P	**P**	**04 34 57.3**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,24nm,0.5s						
RZN	**Rozhen**	**68.64**	**327**	*e*P	**P**	**04 34 58.5**	**+1.2**
LIT	**Litokhoron**	**68.73**	**325**	P	**P**	**04 34 58.0**	**+0.3**
LIT				pmax	pmax		
	comp=Z,23nm,1.1s						
LIT	**Litokhoron**	**68.73**	**325**	P	**P**	**04 34 58.0**	**+0.3**
LIT				IAmb	IAmb	04 35 05.0	
	comp=Z,22nm,1.1s						
TIRR	**Tirgusor**	**68.89**	**332**	⇑P	**P**	**04 34 58.5**	**0.0**
TIRR	**Tirgusor**	**68.89**	**332**	P	**P**	**04 34 58.0**	**-0.5**
TIRR				pmax	pmax		
	comp=Z,42nm,1.1s						
TIRR	**Tirgusor**	**68.89**	**332**	P	**P**	**04 34 58.0**	**-0.5**
PLD	**Plovdiv**	**68.95**	**328**	*e*P	**P**	**04 35 00.1**	**+1.1**
ELND	**Elena**	**68.96**	**329**	⇑P	**P**	**04 35 00.1**	**+1.1**
HARR	**Harsova**	**69.29**	**331**	⇑P	**P**	**04 35 01.8**	**+0.8**
SNAA	**Sanae**	**69.32**	**198**	P	**P**	**04 35 02.5**	**+1.6**
SNAA	**Sanae**	**69.32**	**198**	⇑*i*P	**P**	**04 35 02.6**	**+1.6**
SNAA				pmax	pmax		
	comp=Z,653nm,1.5s						
SNAA	**Sanae**	**69.32**	**198**	P	**P**	**04 35 01.0**	**0.0**
SNAA				IAmb	IAmb	04 35 10.0	
	comp=Z,21nm,1.4s						
HHC	**Hu-ho-hao-te**	**69.48**	**35**	*e*P	**P**	**04 35 03.5**	**+1.1**
HHC				pP	sP	04 35 08.8	+0.6
HHC				S	**S**	**04 44 12.8**	**+3.3**
HHC				sS	sS	04 44 20.5	+3.8
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
HHC				LR	LR		
	comp=Z,280nm,18.6s						
HHC				LR	LR		
	comp=Z,430nm,17.5s						
HHC				LR	LR		
	comp=Z,200nm,19.1s						
VAY	**Valandovo**	**69.53**	**326**	*i*P	**P**	**04 35 04.0**	**+1.5**
VAY	**Valandovo**	**69.53**	**326**	*i*P	**P**	**04 35 04.0**	**+1.5**
CFR	**Carcaliu**	**69.57**	**332**	⇑P	**P**	**04 35 02.4**	**-0.3**
VRH	**Novokhopyorsk**	**69.65**	**343**	*e*P	**P**	**04 35 02.5**	**-0.5**
VRH				pmax	pmax		
	comp=Z,20nm,1.0s						
FNA	**Florina**	**69.81**	**325**	P	**P**	**04 35 03.6**	**-0.8**
FNA				pmax	pmax		
	comp=Z,18nm,1.2s						
FNA	**Florina**	**69.81**	**325**	P	**P**	**04 35 03.6**	**-0.8**
FNA				IAmb	IAmb	04 35 06.7	
	comp=Z,18nm,1.2s						
PLVB	**Pleven**	**69.92**	**329**	⇑P	**P**	**04 35 05.0**	**+0.1**
VTS	**Vitosha**	**70.08**	**327**	⇑P	**P**	**04 35 06.9**	**+0.8**
VTS	**Vitosha**	**70.08**	**327**	*e*P	**P**	**04 35 05.1**	**-1.0**
VTS	**Vitosha**	**70.08**	**327**	P	**P**	**04 35 06.5**	**+0.4**
VTS				pmax	pmax		
	comp=Z,20nm,1.3s						
VTS	**Vitosha**	**70.08**	**327**	P	**P**	**04 35 06.5**	**+0.4**
VTS				IAmb	IAmb	04 35 09.1	
	comp=Z,20nm,1.3s						
TOA0	**Torodi Ar. Sit**	**70.31**	**290**	P	**P**	**04 35 06.8**	**-1.1**
TOA0				IAmb	IAmb	04 35 16.5	
	comp=Z,31nm,1.5s						
TORD	**Torodi Ar. Bea**	**70.31**	**290**	P	**P**	**04 35 08.1**	**+0.1**
	comp=Z,1.4nm,1.0s,baz=111,slow=1.8,SNR=6.3						
ZAA0	**Zalesovo Array**	**70.56**	**11**	P	**P**	**04 35 08.1**	**-0.5**
ZAA0				IAmb	IAmb	04 35 14.8	
	comp=Z,21nm,1.1s						
ZALV	**Zalesovo Beam**	**70.56**	**11**	P	**P**	**04 35 07.5**	**-1.1**
	comp=Z,6.1nm,0.9s,baz=211,slow=5.6,SNR=16						
SKO	**Skopje**	**70.59**	**326**	*i*P	**P**	**04 35 08.9**	**-0.1**
SKO	**Skopje**	**70.59**	**326**	*i*P	**P**	**04 35 08.9**	**-0.1**
VNA2	**Neumayer--Watz**	**70.60**	**200**	P	**P**	**04 35 10.4**	**+1.7**
KIS	**Kishinev**	**70.67**	**333**	*e*P	**P**	**04 35 11.0**	**+1.6**
KIS				*e*L	L	05 01 40.0	
KIS	**Kishinev**	**70.67**	**333**	*e*P	**P**	**04 35 11.0**	**+1.6**
VRI	**Vrincioaia**	**70.73**	**332**	⇑P	**P**	**04 35 10.5**	**+0.6**
PLOR	**Plostina**	**70.76**	**331**	⇑P	**P**	**04 35 10.5**	**+0.5**
MLR	**Muntele Rosu**	**70.82**	**331**	⇑P	**P**	**04 35 11.3**	**+0.8**
MLR	**Muntele Rosu**	**70.82**	**331**	P	**P**	**04 35 10.6**	**0.0**
MLR				pmax	pmax		
	comp=Z,37nm,1.5s						
MLR	**Muntele Rosu**	**70.82**	**331**	P	**P**	**04 35 10.6**	**0.0**
VNA1	**Neumayer--Stat**	**70.84**	**200**	P	**P**	**04 35 12.3**	**+2.2**
TAM	**Tamanrasset**	**70.87**	**301**	P	**P**	**04 35 11.3**	**0.0**
TAM				pmax	pmax		
	comp=Z,9.0nm,1.3s						
TAM	**Tamanrasset**	**70.87**	**301**	P	**P**	**04 35 11.3**	**0.0**
TIR	**Tirane**	**71.04**	**324**	P	**P**	**04 35 12.1**	**+0.3**
TIR				pmax	pmax		
	comp=Z,46nm,1.1s						
TIR	**Tirane**	**71.04**	**324**	P	**P**	**04 35 12.1**	**+0.3**
VOIR		**71.20**	**330**	⇑P	**P**	**04 35 13.2**	**+0.4**
TESR	**Tescani**	**71.25**	**332**	⇑P	**P**	**04 35 13.9**	**+0.9**
ARR	**Arges**	**71.35**	**330**	⇑P	**P**	**04 35 13.3**	**-0.4**
VNA3	**Neumayer Olymp**	**71.38**	**199**	P	**P**	**04 35 14.6**	**+1.1**
DOPR	**Dopca**	**71.43**	**331**	⇑P	**P**	**04 35 14.6**	**+0.5**
TIP	**Timpagrande**	**71.45**	**321**	⇑P	**P**	**04 35 13.8**	**-0.7**
BJI	**Beijing**	**71.58**	**38**	P	**P**	**04 35 15.3**	**+0.2**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.6s						
BJI				LR	LR		
	comp=Z,290nm,19.6s						
BJI				LR	LR		
	comp=Z,320nm,19.0s						
BJI				LR	LR		
	comp=Z,340nm,22.4s						
ARU	**Arti**	**71.67**	**355**	*c i*P	**P**	**04 35 15.1**	**-0.2**
ARU						04 37 49.6	
ARU				S	**S**	**04 44 36.7**	**+2.5**
ARU				SS	**SS**	**04 49 03.0**	**-7.4**
ARU				pmax	pmax		
	comp=Z,25nm,1.2s						
ARU				MLR	MLR		
	comp=Z,396nm,18.0s						
ARU	**Arti**	**71.67**	**355**	P	**P**	**04 35 15.2**	**-0.1**
ARU				IAmb	IAmb	04 35 22.0	
	comp=Z,20nm,1.0s						
LPSR	**Galich'ya Gora**	**71.68**	**343**	*e*P	**P**	**04 35 14.5**	**-0.9**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SORM	**Soroca**	**71.75**	**334**	⇑P	**P**	**04 35 15.6**	**-0.3**
SVE	**Sverdlovsk**	**71.92**	**356**	*e*P	**P**	**04 35 17.1**	**+0.3**
SONM	**Songino Array**	**72.00**	**27**	P	**P**	**04 35 18.0**	**+0.4**

BZS Buzias 73.02 329 ⇑P **P 04 35 23.8 +0.3**
DRGR 73.31 330 ⇑P **P 04 35 26.3 +0.9**
AKASG Malin Array Be 73.40 336 P **P 04 35 25.2 -0.5**
comp=Z,7.2nm,0.8s,baz=137,slow=5.1,SNR=20
AKBB Malin Array Si 73.40 336 *ce*P **P 04 35 25.6 -0.1**
AKBB Malin Array Si 73.40 336 P **P 04 35 25.1 -0.7**
AKBB IAmb IAmb 04 35 27.6
comp=Z,16nm,1.0s
TLY Talaya 73.89 23 *e*P **P 04 35 29.3 +0.7**
TLY *e*S **S 04 45 02.4 +2.7**
TLY *e* 04 45 38.2
TLY pmax pmax
comp=Z,19nm,1.5s
TLY MLR MLR
comp=Z,2µm,19.0s
KEST Kesra 74.27 315 P **P 04 35 33.0 +1.7**
comp=Z,3.1nm,0.7s,baz=127,slow=2.9,SNR=5.9
KEST Kesra 74.27 315 P **P 04 35 30.5 -0.8**
KEST IAmb IAmb 04 35 35.6
comp=Z,56nm,1.9s
TRPA Tarpa 74.34 331 ⇑P **P 04 35 32.3 +1.0**
OBN Obninsk 74.56 343 *i*P **P 04 35 30.7 -1.7**
OBN *i* 04 35 38.1
OBN *i* 04 35 44.9
OBN *i*S **SKiKP 04 44 56.4 -1.6**
OBN *i*SS **SS 04 49 55.0 +0.5**
OBN pmax pmax
comp=Z,17nm,1.3s
OBN MLR MLR
comp=Z,261nm,19.0s
MOS Moscow 74.81 343 *e*P **P 04 35 34.1 +0.3**
MOS pmax pmax
comp=Z,36nm,0.6s
UZH Uzhgorod 74.81 331 *e*P **P 04 35 34.7 +0.7**
UZH *e* 04 35 40.7
UZH *e* 04 35 46.5
KIRV Kirov 74.88 351 ⇓*i*P **P 04 35 34.4 +0.3**
LVV L'vov 74.89 333 *e*P **P 04 35 35.3 +0.9**
QSPA South Pole Qui 74.90 180 P **P 04 35 35.6 +1.1**
comp=Z,6.6nm,1.0s,baz=273,slow=2.2,SNR=12
QSPA South Pole Qui 74.90 180 P **P 04 35 34.5 -0.1**
QSPA IAmb IAmb 04 35 43.2
comp=Z,38nm,1.3s
KOLS Kolonicke sedl 75.04 331 *e*P **P 04 35 36.4 +1.0**
KOLS pmax pmax
comp=Z,7.0nm,0.7s
KOLS Kolonicke sedl 75.04 331 *e*P **P 04 35 36.4 +1.0**
PSZ Piszkesteto 75.46 329 ⇑P **P 04 35 38.3 +0.4**
NRCA Norcia 75.87 322 IAmb IAmb 04 35 53.1
comp=Z,31nm,1.2s
VNDA Vanda 76.37 167 P **P 04 35 43.5 +0.9**
comp=Z,0.9nm,0.8s,baz=256,slow=9.0,SNR=5.4
VNDA Vanda 76.37 167 P **P 04 35 43.5 +0.9**
VNDA pmax pmax
comp=Z,18nm,1.6s
VNDA Vanda 76.37 167 P **P 04 35 43.5 +0.9**
VNDA IAmb IAmb 04 35 51.2
comp=Z,18nm,1.6s
VYHS Vyhne 76.37 329 *e*P **P 04 35 43.5 +0.5**
VYHS Vyhne 76.37 329 *e*P **P 04 35 43.5 +0.5**
LJU Ljubljana 77.02 326 *e*P **P 04 35 47.9 +1.2**
LJU *e* 04 37 14.0
MODS Modra-Piesok 77.07 329 *e*P **P 04 35 46.8 -0.1**
MODS pmax pmax
comp=Z,11nm,1.1s
MODS Modra-Piesok 77.07 329 *e*P **P 04 35 46.8 -0.1**
PERS Pernice 77.07 326 *e*P **P 04 35 48.4 +1.4**
SOKA Soboth 77.14 326 P **P 04 35 48.1 +0.6**
comp=Z,23nm,1.9s,SNR=8.4
JAVC Velka Javorina 77.19 329 *e*P **P 04 35 49.3 +1.6**
ARSA Arzberg 77.24 327 *e*P **P 04 35 48.2 +0.3**
comp=Z,21nm,1.2s,SNR=10.0
OBKA Obir 77.30 326 *e*P **P 04 35 49.1 +0.8**
comp=Z,20nm,1.5s
CONA Conrad Observa 77.50 328 *e*P **P 04 35 49.5 +0.1**
comp=Z,24nm,1.4s,SNR=16
KSRS Korea Array 77.67 45 P **P 04 35 49.8 -0.7**
comp=Z,6.0nm,0.9s,baz=240,slow=5.6,SNR=13
JNU Nakatsue 77.71 51 P **P 04 35 50.2 -0.8**
MORC Moravsky Berou 77.86 330 *e*P **P 04 35 51.1 -0.3**
MORC *e* 04 37 17.8
MYKA Terra Mystica 77.86 326 *e*P **P 04 35 52.3 +0.8**
comp=Z,16nm,1.7s
KRUC Moravsky 77.96 329 *e*P **P 04 35 52.1 +0.2**
VRAC Vranov 78.02 329 *e*P **P 04 35 52.8 +0.6**
VRAC *e* 04 37 20.5
MOA Molln 78.28 327 *e*P **P 04 35 54.0 +0.2**
comp=Z,25nm,1.1s,SNR=15
KBA Koelnbreinsper 78.30 326 *e*P **P 04 35 54.8 +0.8**
comp=Z,17nm,1.8s,SNR=5.8
KRLC Kraliky 78.43 330 *e*P **P 04 35 55.0 +0.5**
KRLC *e* 04 36 01.9
KRLC Kraliky 78.43 330 *e*P **P 04 35 55.0 +0.5**
KRLC *e*PCP **pwP 04 36 01.9 -0.7**
ABTA Abfaltersbach 78.55 325 *e*P **P 04 35 56.2 +0.8**
comp=Z,23nm,1.3s,SNR=11
KLMR Klimovskoe 78.87 347 *e*P **P 04 35 54.8 -1.8**
KLMR pmax pmax
comp=Z,60nm,1.2s
KLMR Klimovskoe 78.87 347 *e*P **P 04 35 54.9 -1.7**
KLMR AMP 04 36 03.8
comp=Z,60nm,1.2s
OSTC Ostas 79.02 330 *e*P **P 04 35 58.6 +0.9**
OSTC *ex* x 04 36 05.3
OSTC *ex* x 04 36 09.9
CHVC Chvalec 79.12 330 *e*P **P 04 35 59.1 +0.8**
CHVC *ex* x 04 36 05.2
GERES GERESS Array B 79.20 327 P **P 04 35 58.6 -0.2**
comp=Z,1.2nm,0.8s,baz=126,slow=6.8,SNR=9.7
GOPC GO Pecny, Ondr 79.31 329 *e*P **P 04 36 00.4 +1.1**
GOPC *e* 04 36 06.8
GOPC GO Pecny, Ondr 79.31 329 *e*P **P 04 36 00.4 +1.1**
GOPC *e*PCP **pwP 04 36 06.8 -0.6**
GOPC *ex* x 04 36 11.4
WTTA Wattenberg 79.34 325 *e*P **P 04 36 00.2 +0.4**
comp=Z,32nm,1.5s,SNR=7.7
WATA Walderalm 79.42 325 P **P 04 36 00.2 +0.1**
comp=Z,22nm,1.2s,SNR=7.7
KHC Kasperske Hory 79.44 328 *e*P **P 04 35 58.5 -1.6**
KHC *e* 04 36 06.7
KHC Kasperske Hory 79.44 328 *e*P **P 04 35 58.5 -1.6**
KHC *ex* x 04 36 06.7
PRU Pruhonice 79.48 329 *e*P **P 04 36 01.3 +1.1**
PRU *e* 04 36 07.5
PRU Pruhonice 79.48 329 *e*P **P 04 36 01.3 +1.1**
PRU *ex* x 04 36 07.5
SQTA Sankt Quirin 79.55 325 *e*P **P 04 36 00.3 -0.5**
comp=Z,6.5nm,0.9s
MOTA Moosalm 79.68 325 *e*P **P 04 36 01.9 +0.3**
comp=Z,18nm,1.2s,SNR=5.5
FETA Feichten 79.70 325 *e*P **P 04 36 00.9 -0.8**
comp=Z,24nm,1.9s
FUORN Ofenpass-Fuorn 79.73 324 P **P 04 36 01.2 -0.9**
FUORN IAmb IAmb 04 36 05.0
comp=Z,31nm,1.4s
RETA Reutte 79.95 325 *e*P **P 04 36 03.1 +0.1**
comp=Z,16nm,1.5s,SNR=6.5
DAVA Damuels 80.33 325 *e*P **P 04 36 05.8 +0.7**
comp=Z,21nm,1.4s,SNR=6.0
BRG Berggiesshubel 80.33 329 *e*P **P 04 36 06.1 +1.3**
comp=Z,38nm,1.7s
BRG *e* 04 37 32.6
comp=Z,26nm,1.7s
BRG S **S 04 46 10.0 +0.1**
BRG *e*PKPPKP P'P'df 05 02 23.6 -25
comp=Z,3.6nm,1.3s
BRG Berggiesshubel 80.33 329 *e*P **P 04 36 06.1 +1.3**
BRG S **S 04 46 10.0 +0.1**
BRG pmax pmax
comp=Z,38nm,1.7s
BRG pmax pmax
comp=Z,27nm,1.7s
BRG pmax pmax
comp=Z,4.0nm,1.3s
NKC Novy Kostel 80.69 328 *e*P **P 04 36 08.1 +1.3**
NKC *e* 04 36 15.1
NKC Novy Kostel 80.69 328 *e*P **P 04 36 08.1 +1.3**
NKC *e*PCP **pwP 04 36 15.1 +0.2**
GRF Grafenberg Arr 81.00 327 *e*P **P 04 36 08.3 -0.2**
comp=Z,28nm,1.5s,baz=125,slow=6.4
CLL Collm 81.07 329 *i*P **P 04 36 10.3 +1.5**
comp=Z,33nm,1.5s
CLL *i* 04 36 17.3
CLL *i* 04 36 22.5
CLL LmV 05 17 00.0
comp=Z,100nm,21.0s
CLL Collm 81.07 329 *i*P **P 04 36 10.3 +1.5**
CLL *i* 04 36 17.3
CLL pmax pmax
comp=Z,33nm,1.5s
CLL Collm 81.07 329 IAmb IAmb 04 36 13.2
comp=Z,26nm,1.3s
SENIN Lac Senin/Sane 81.29 323 IAmb IAmb 04 36 13.1
comp=Z,16nm,1.1s
BFO Black Forest 81.78 325 P **P 04 36 11.8 -0.9**
BFO pmax pmax
comp=Z,35nm,1.7s
BFO Black Forest 81.78 325 P **P 04 36 11.8 -0.9**
BFO IAmb IAmb 04 36 15.7
comp=Z,35nm,1.7s
TMCR Tamitsa 82.14 348 *e*P **P 04 36 12.3 -1.8**
TMCR pmax pmax
comp=Z,27nm,1.0s
FINES FINESS Array B 82.92 342 P **P 04 36 17.6 -0.7**
comp=Z,4.1nm,1.0s,baz=182,slow=5.7,SNR=4.5
USRK Ussuriysk Ar. 83.64 41 P **P 04 36 20.6 -1.8**
comp=Z,3.6nm,0.8s,baz=222,slow=2.6,SNR=6.1
MAJO Matsushiro 84.62 50 ⇓*i*P **P 04 36 26.8 -0.8**
MAJO pmax pmax
comp=Z,43nm,1.4s
MAJO Matsushiro 84.62 50 P **P 04 36 25.1 -2.5**
MAT Matsushiro 84.62 50 P **P 04 36 26.8 -0.8**
MAT *e*S **S 04 46 54.0 -0.4**
MJAR Matsushiro Arr 84.62 50 P **P 04 36 27.9 +0.3**
comp=Z,9.9nm,0.9s,baz=235,slow=5.7,SNR=18
DOU Dourbes 84.80 325 P **P 04 36 28.5 +0.4**
comp=Z,19nm,2.1s
DOU x x 04 36 30.5
BMRD Maredsous 84.81 325 P **P 04 36 28.6 +0.4**
ESDC Sonseca Array 85.42 313 P **P 04 36 31.9 +0.3**
comp=Z,4.7nm,0.9s,baz=109,slow=3.6,SNR=27
PAB San Pablo 85.64 313 P **P 04 36 32.8 +0.1**
PAB pmax pmax
comp=Z,30nm,1.2s
PAB San Pablo 85.64 313 P **P 04 36 32.8 +0.1**
PMRV Marv??o 87.77 312 *e*P **P 04 36 44.7 +1.6**
comp=Z,56nm,1.6s
PCBR Castelo Branco 87.98 312 *e*P **P 04 36 45.4 +1.4**
PNCL Nicolau / Gran 88.12 310 *e*P **P 04 36 46.6 +1.9**
comp=Z,43nm,1.4s
MVO Moncorvo 88.16 313 *e*P **P 04 36 47.1 +2.2**
comp=Z,32nm,1.3s
PBRG Braganca 88.19 314 *e*P **P 04 36 46.4 +1.3**
comp=Z,37nm,1.5s
PMTG Montargil 88.24 311 *e*P **P 04 36 46.9 +1.6**
PCAS Casmilo, Conde 88.79 312 *e*P **P 04 36 49.9 +2.0**
comp=Z,54nm,1.6s
ARCES ARCESS Array B 89.34 347 P **P 04 36 49.8 0.0**
comp=Z,5.6nm,0.9s,baz=132,slow=6.7,SNR=7.3
ERM Erimo 90.21 46 ⇑*i*P **P 04 36 53.4 -1.0**
ERM pmax pmax
comp=Z,37nm,1.1s
DZM Mont Dzumac 93.02 114 *e*LR LR 05 07 07.8
comp=Z,699nm,21.8s
TIXI Tiksi 95.94 16 ⇓*i*P **P 04 37 20.2 0.0**
TIXI pmax pmax
comp=Z,7.0nm,1.8s
TOLK Toolik Lake Re 121.80 15 P **PKiKP 04 42 48.0 +0.4**
baz=318
A36M Sachs Harbour 122.76 4 P **PKiKP 04 42 49.8 +0.6**
baz=346
POKR Poker Plat Res 125.00 17 P **PKiKP 04 42 54.6 +0.7**
baz=318
COLA College 125.06 17 ⇑*i*PKIKP **PKiKP 04 42 53.9 -0.1**
ILAR Eielson Array 125.41 17 PKP **PKPdf 04 42 53.0 -1.4**
comp=Z,13nm,1.1s,baz=325,slow=2.9,SNR=7.6
C36M Paulatuk 125.43 5 P **PKiKP 04 42 55.3 +0.7**
baz=347
HDA Harding Lake 125.67 17 P **PKiKP 04 42 55.5 +0.3**
baz=319
EPYK Eagle Plains 126.52 12 P **PKiKP 04 42 57.0 +0.1**
baz=331
TBI Tubuai 127.80 137 *e*LR LR 05 23 10.0
comp=Z,154nm,33.5s
PPT2 Papeete2 131.54 131 *e*LR LR 05 24 54.9
comp=Z,194nm,23.8s
PKME Peaks-Kenny Pk 132.50 318 P **PKPdf 04 43 08.4 0.0**
baz=65
YKA Yellowknife Ar 132.74 1 PKP **PKPdf 04 43 07.4 -0.9**
comp=Z,0.7nm,0.9s,baz=352,slow=2.2,SNR=12
L55A Hinsdale 139.80 319 P **PKPdf 04 43 22.0 -0.1**
baz=58
D46A Sault St. Mari 140.15 329 P **PKPdf 04 43 22.7 +0.1**
baz=47
I51A Listowel 140.47 323 P **PKPdf 04 43 23.2 -0.1**
baz=54
O56A Blue Knob Stat 140.86 316 P **PKPdf 04 43 24.5 +0.3**
baz=60
W60A Pink Hill 142.56 308 P **PKPdf 04 43 26.8 -0.5**
baz=67
O53A New Philadelph 142.60 318 P **PKPdf 04 43 26.8 -0.4**
baz=57
EYMN Ely 142.74 336 P **PKPdf 04 43 27.0 -0.2**
baz=36
U57A Blanch 143.19 311 P **PKPdf 04 43 27.7 -0.6**
baz=64
Y60A Bolivia 143.34 307 P **PKPdf 04 43 28.6 -0.1**
baz=68
S55A Lewisburg 143.39 314 P **PKPdf 04 43 28.2 -0.6**
baz=61
Q53A Leroy 143.54 316 P PKPbc 04 43 26.8 +0.6
baz=58
W58A Hereford 143.71 309 P PKPbc 04 43 27.8 +0.9
baz=65
ACSO Alum Creek Sta 143.73 319 P PKPbc 04 43 27.4 +0.6
baz=55
V57A Coltrane Farms 143.74 311 P PKPbc 04 43 26.7 -0.2
baz=64
Q52A Bidwell 143.98 317 P PKPbc 04 43 27.7 +0.2
baz=57
U56A King 143.98 312 P PKPbc 04 43 27.7 +0.1
baz=62
X58A Rowland 143.98 309 P PKPbc 04 43 28.0 +0.4
baz=66
R53A Hurricane 144.10 316 P PKPbc 04 43 27.8 -0.1
baz=58
O50A Cable 144.18 320 P PKPbc 04 43 28.2 0.0
baz=54,SNR=7.2
P51A Williamsport 144.21 318 P PKPbc 04 43 28.5 +0.3
baz=56
W57A Gilead 144.22 310 P PKPbc 04 43 28.4 0.0
baz=64
V56A Mocksville 144.30 311 P PKPbc 04 43 28.9 +0.2
baz=63
U55A TA2, Sparta 144.38 313 P PKPbc 04 43 29.2 +0.3
baz=62,SNR=5.5
T54A Tazewell 144.49 314 P PKPbc 04 43 29.4 +0.1
baz=60
Y58A Scranton 144.49 308 P PKPbc 04 43 29.4 +0.2
baz=66
S53A Williamson 144.55 315 P PKPbc 04 43 29.8 +0.4
baz=59,SNR=7.4
X57A Johnson Farm, 144.59 309 P **PKPab 04 43 29.3 0.0**
baz=65
P50A Jamestown 144.61 319 P **PKPab 04 43 29.2 -0.1**
baz=55
N48A Decatur 144.62 322 P **PKPab 04 43 29.2 -0.1**
baz=52,SNR=8.2
L46A Eue Claire 144.62 324 P PKPbc 04 43 29.3 -0.1
baz=49
M47A Cromwell 144.65 323 P **PKPab 04 43 29.4 0.0**
baz=50
W56A Indian Trail 144.66 310 P PKPbc 04 43 29.9 +0.1
baz=64,SNR=8.8
V55A Taylorsville 144.80 312 P **PKPdf 04 43 30.7 -0.5**
baz=62,SNR=10
Z58A St. Stephen 144.82 307 P **PKPdf 04 43 30.9 -0.4**
baz=67
U54A Nelsons Funny 144.92 313 P **PKPdf 04 43 31.1 -0.4**
baz=61,SNR=18
U54A Nelsons Funny 144.92 313 PKPdf **PKPab 04 43 30.0 -0.6**
Y57A Sumter 144.99 308 P **PKPab 04 43 31.2 +0.3**
baz=65
O48A Farmland 145.06 321 P **PKPbc 04 43 30.7 -0.3**
baz=52,SNR=7.4
T53A Wise 145.19 314 P **PKPdf 04 43 32.3 +0.4**
baz=59,SNR=12
NHSC New Hope 145.19 307 P **PKPdf 04 43 32.1 +0.1**
baz=67
KMSC Kings Mountain 145.21 311 P **PKPdf 04 43 31.9 -0.1**
baz=63,SNR=9.9
P49A Miami Univ. Ec 145.22 320 P **PKPbc 04 43 31.2 -0.3**
baz=54,SNR=11
X56A White Oak 145.28 309 P **PKPdf 04 43 32.1 0.0**
baz=64,SNR=7.0
158A Hollywood 145.35 306 P **PKPdf 04 43 33.0 +0.8**
baz=67
V54A Nebo 145.37 312 P **PKPab 04 43 32.6 +0.3**
baz=62,SNR=16
SPMN Marine on St. 145.47 334 P **PKPdf 04 43 32.1 +0.1**
baz=36
Z57A Bowman 145.52 307 P **PKPab 04 43 33.3 +0.5**
baz=66
MDND Maddock 145.54 344 P **PKPdf 04 43 32.2 0.0**
baz=23
A04D Lummi Island 145.65 11 P **PKPab 04 43 33.2 +0.4**
baz=344
X55A Gracelyn & Ava 145.73 310 P **PKPab 04 43 33.8 +0.2**
baz=64,SNR=9.2
Y56A Pelion 145.78 309 P **PKPab 04 43 33.9 +0.1**
baz=65
W54A Cherokee Point 145.86 311 P **PKPab 04 43 34.0 0.0**
baz=62
DGMT Dagmar 145.99 349 P **PKPab 04 43 34.6 +0.4**
baz=15
157A Early Branch 146.00 307 P **PKPab 04 43 34.6 0.0**
baz=67
M44A Midewin, Midew 146.01 325 **PKPdf 04 43 33.3 +0.2**
Z56A Williston 146.02 308 P **PKPab 04 43 34.5 -0.2**
baz=65
JFWS Jewell Farm 146.08 329 PKP2 **PKPdf 04 43 33.4 +0.2**
JFWS Jewell Farm 146.08 329 P **PKPbc 04 43 33.8 -0.2**
baz=42
JFWS Jewell Farm 146.08 329 **PKPdf 04 43 33.4 +0.2**
TZTN Tazewell 146.11 314 P **PKPbc 04 43 34.7 +0.3**
baz=59,SNR=7.6
TZTN Tazewell 146.11 314 **PKPdf 04 43 33.7 +0.2**
Y55A Saluda 146.13 309 P **PKPab 04 43 35.1 0.0**
baz=64
SFIN Lafayette 146.14 323 P **PKPbc 04 43 34.4 +0.1**
baz=49
B05A Bryant 146.20 11 P **PKPab 04 43 34.5 -0.3**
baz=344
X54A Belton 146.25 310 P **PKPab 04 43 35.2 -0.3**
baz=63,SNR=6.4
I37A Lemond, Waseca 146.69 334 **PKPdf 04 43 34.4 +0.2**
D03D Eldon 146.71 12 P **PKPab 04 43 36.6 -0.2**
baz=342
NEW Newport 146.85 5 P **PKPbc 04 43 36.7 +0.4**
baz=353
WCI Wyandotte Cave 146.99 319 PKIKP **PKPdf 04 43 33.6 -1.3**
WCI Wyandotte Cave 146.99 319 P **PKPbc 04 43 36.4 -0.4**
baz=53
WCI Wyandotte Cave 146.99 319 **PKPdf 04 43 33.6 -1.3**
D04E Lakebay 147.12 12 P **PKPbc 04 43 36.6 -0.2**
baz=343
EGMT Eagleton 147.13 356 P **PKPbc 04 43 37.0 0.0**
baz=5.9
HDIL Hopedale 147.27 325 P **PKPbc 04 43 37.7 +0.2**
baz=46
CPCT Cooper Cave 147.35 313 **PKPdf 04 43 35.7 +0.2**
GOGA Godfrey 147.57 309 P **PKPbc 04 43 38.6 0.0**
baz=63
E04D Cinebar 147.75 12 P **PKPbc 04 43 38.8 +0.1**
baz=343
OLIL Olney 147.79 322 PKPdf **PKPdf 04 43 35.6 -0.5**
DWPF Disney Wildern 147.91 299 P **PKPbc 04 43 39.4 -0.2**
baz=73
P43A Skaggs, Pawnee 148.02 324 PKPdf **PKPdf 04 43 36.6 +0.1**
P43A **PKPbc 04 43 39.8 +0.2**
LAO LASA Array 148.06 351 P **PKPbc 04 43 39.4 -0.2**
baz=13
ECSD EROS Data Cent 148.22 337 P **PKPbc 04 43 39.8 -0.3**
baz=31
SCIA State Center 148.28 331 P **PKPbc 04 43 40.0 -0.2**
baz=38
SUSD Miller 148.43 340 P **PKPbc 04 43 40.8 +0.2**
baz=27
MSO Missoula 148.44 1 P **PKPbc 04 43 40.6 0.0**
baz=358
MSO Missoula 148.44 1 **PKPdf 04 43 36.3 -0.8**
TIGA Tifton 148.51 306 P **PKPbc 04 43 41.2 0.0**
baz=66
WVT Waverly 149.22 317 PKIKP **PKPdf 04 43 38.2 -0.4**
WVT Waverly 149.22 317 P **PKPbc 04 43 42.7 -0.2**
baz=54
WVT Waverly 149.22 317 PKPdf **PKPdf 04 43 38.2 -0.4**
G05D Wamic, OR 149.26 11 P **PKPbc 04 43 43.0 +0.3**
baz=344
G08A Pilot Rock 149.59 8 PKPdf **PKPdf 04 43 38.5 -0.6**
H04D Lebanon 149.65 14 P **PKPbc 04 43 44.0 +0.4**
baz=342
I02D Swisshome 149.78 15 P **PKPbc 04 43 44.1 +0.2**
baz=339
RLMT Red Lodge 149.97 354 P **PKPbc 04 43 44.7 0.0**
baz=7.4
CCM Cathedral Cave 150.09 324 PKIKP **PKPdf 04 43 37.9 -2.0**
CCM Cathedral Cave 150.09 324 P **PKPbc 04 43 45.2 +0.3**
baz=46
CCM Cathedral Cave 150.09 324 PKPdf **PKPdf 04 43 37.9 -2.0**
RSSD Black Hills 150.12 347 PKIKP **PKPdf 04 43 38.6 -1.5**
RSSD Black Hills 150.12 347 P **PKPbc 04 43 45.2 +0.1**
baz=18
RSSD Black Hills 150.12 347 PKPdf **PKPdf 04 43 38.6 -1.5**
I05D Terrebonne, OR 150.12 12 P **PKPbc 04 43 44.6 -0.3**
baz=344
I03D Drain, OR 150.29 15 P **PKPbc 04 43 44.8 -0.4**
baz=340
LRAL Lakeview Retre 150.34 311 P **PKiKP 04 43 46.1 -0.4**
baz=59
I04A Tendick Farm, 150.42 14 P **PKPbc 04 43 45.7 +0.1**
baz=342
J01E Myrtle Point 150.64 16 P **PKPbc 04 43 45.8 -0.2**
baz=338
BGNE Belgrade 150.80 336 P **PKPbc 04 43 46.5 -0.1**
baz=31
H17A Grant Village 150.80 356 P **PKPbc 04 43 46.4 -0.3**
baz=5.0
J04D Umpqua Nationa 151.01 14 P **PKPbc 04 43 46.6 -0.6**
baz=342
K02D Willamette Mer 151.14 16 P **PKPbc 04 43 47.0 -0.3**
baz=339
J05D Fort Rock, OR 151.16 12 P **PKPbc 04 43 47.3 -0.2**
baz=344
OXF Oxford 151.22 316 P **PKPbc 04 43 47.2 -0.5**
baz=54
K04D Chiloquin, OR 151.68 13 P **PKPbc 04 43 48.2 -0.5**
baz=342
L04D Klamath Falls 151.94 14 P **PKPbc 04 43 48.0 -1.3**
baz=341
K22A Casper 152.03 349 P **PKPbc 04 43 48.2 -1.3**
baz=14
KSU1 Kansas State U 152.07 332 P **PKPbc 04 43 48.7 -0.8**
baz=36
X43A Marvell 152.18 318 P **PKPbc 04 43 49.7 -0.1**
baz=51
U40A Yellville 152.19 323 P **PKPbc 04 43 49.6 -0.3**
baz=46
BW06 Boulder Array 152.34 354 P **PKPbc 04 43 50.1 -0.2**
baz=7.3
BW06 Boulder Array 152.34 354 PKPdf **PKPdf 04 43 42.9 -0.7**
PDAR Pinedale Array 152.34 354 PKPbc **PKPbc 04 43 50.5 +0.1**
comp=Z,3.5nm,0.8s,baz=48,slow=2.2,SNR=16
M04C Macdoel 152.46 14 P **PKPbc 04 43 50.4 -0.1**
baz=342
OGNE Ogallala 152.56 341 P **PKiKP 04 43 51.1 +0.1**
baz=24
M02C Callahan 152.57 16 P **PKPbc 04 43 50.8 +0.1**
baz=339
W41B Gary Mavity, V 152.63 320 P **PKiKP 04 43 51.2 +0.1**
baz=48
N02D Trinity Center 153.00 16 P **PKiKP 04 43 51.8 -0.1**
baz=339
VBMS Vicksburg 153.29 313 P **PKiKP 04 43 52.8 +0.2**
baz=56
X40A Basin Creek Fa 153.44 320 P **PKiKP 04 43 52.8 0.0**
baz=48
W39A Magazine 153.54 322 P **PKiKP 04 43 53.3 +0.3**
baz=46
N23A Red Feather La 153.62 348 P **PKPbc 04 43 53.3 0.0**
baz=16
CBKS Cedar Bluff 153.65 336 P **PKPab 04 44 05.5 -0.1**
baz=30
O02D Mt. Diablo Mer 153.72 17 P **PKPab 04 44 06.2 +0.3**
baz=339
MIAR Mount Ida 153.86 321 P **PKPab 04 44 06.9 +0.4**
baz=47
O03E Paynes Creek 153.88 15 P **PKPab 04 44 06.3 -0.2**

baz=341
TUL1 Leonard 154.15 326 P **PKPab** 04 44 07.2 -0.6
baz=41
Z41A Richland Creek 154.21 318 P **PKPab** 04 44 07.7 -0.4
baz=50
KSCO Kaye Shedlock' 154.51 341 P **PKPab** 04 44 09.2 -0.1
baz=24
ISCO Idaho Springs 154.59 346 P **PKPab** 04 44 09.8 -0.1
baz=17
O20A White River Ci 154.77 351 P **PKPab** 04 44 10.2 -0.2
baz=11
DUG Dugway, Tooele 155.08 359 P **PKPab** 04 44 11.3 -0.4
baz=0.7
NATX Nacogdoches 156.38 318 P **PKPab** 04 44 15.2 -2.2
baz=50
NVAR Mina Array Bea 156.41 10 PKPbc PKPbc 04 43 59.9
comp=Z,0.8nm,0.8s,baz=38,slow=1.3,SNR=5.7
NVAR PKPab **PKPab** 04 44 18.1 +0.6
comp=Z,1.0nm,0.8s,baz=331,slow=2.4,SNR=4.9
SDCO Great Sand Dun 156.52 345 P **PKPab** 04 44 17.9 -0.3
baz=19
WMOK Wichita Mounta 156.61 329 P **PKPab** 04 44 18.5 +0.2
baz=37
T25A Trinidad 156.78 342 P **PKPab** 04 44 18.9 -0.3
baz=22
R11A Troy Canyon, C 156.83 5 P **PKPab** 04 44 19.0 -0.3
baz=354
R11A Troy Canyon, C 156.83 5 PKPdf **PKPdf** 04 43 48.5 -1.4
R11A **PKPab** 04 44 19.7 +0.4
S22A 4UR Ranch, Cre 156.83 347 P **PKPab** 04 44 19.4 -0.1
baz=15
GRAC Grapevine Rang 157.96 9 P **PKPab** 04 44 23.8 -0.3
baz=349
WHTX Lake Whitney, 157.96 322 P **PKPab** 04 44 23.7 -0.6
baz=44
TPNV Topopah Spring 158.15 7 P **PKPab** 04 44 25.1 +0.1
baz=352
HKT Hockley 158.30 316 PKP2 **PKPab** 04 44 25.3 -0.4
HKT Hockley 158.30 316 **PKPab** 04 44 25.3 -0.4
ABTX Abilene, Hawle 158.71 327 P **PKPab** 04 44 27.0 -0.5
baz=38
MPMC Manual Prospec 158.86 10 P **PKPab** 04 44 27.4 -0.8
baz=348
435B Jarrell 158.89 320 P **PKPab** 04 44 28.1 -0.2
baz=46
ANMO Albuquerque 159.41 344 PKIKP **PKPdf** 04 43 50.8 -2.3
ANMO Albuquerque 159.41 344 P **PKPab** 04 44 30.4 -0.3
baz=18
ANMO Albuquerque 159.41 344 **PKPdf** 04 43 50.8 -2.3
ANMO **PKPab** 04 44 30.3 -0.3
TXAR Lajitas Array 163.40 330 PKPab **PKPab** 04 44 47.9 -0.2
comp=Z,1.6nm,0.8s,baz=42,slow=4.2,SNR=9.0

*IDC **27** 04:25:18.9±0.7, 15°.11S×66°.92E, h0km, mb4.1/16, mb1 4.2/16, mb1mx4.1/34, mbtmp4.1/16, MS4.4/3, Ms1 4.4/3, ms1mx4.0/11, Error ellipse: s-maj=22.4km s-min=18.9km az=147.0*
*NEIC **27** 04:25:18.4±1.7, 15°.2S±0°.1×67°.00E±0°.07, h11km±3km, mb5.1/44, Error ellipse: s-maj=16.2km s-min=9.1km az=201.0*
*GCMT **27** 04:25:19.4±0.2, 14°.96S±0°.02×66°.86E±0°.01, h22km, MW5.3/141, Moment Tensor Solution. s36,c44; s141,c246; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr=1.47±.04; Mθθ0.68±.03; Mϕϕ0.78±.03; Mrθ0.05±.04; Mθϕ-0.40±.01; Mϕr0.12±.04; Best double couple: Mo1.31000×10^17 NP1:ϕs315.00000°, δ44.00000°, λ-95.00000°. NP2:ϕs143.00000°, δ46.00000°, λ-85.00000°. Principal axes: T 1.1420, Plg1.0000°, Azm229.0000°; N 0.3320, Plg4.0000°, Azm319.0000°; P -1.4780, Plg86.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 27 04:25:20.0±0.4, 15°.16S±0°.09×67°.06E±0°.08, h16km, n112, σ1s45/108, mb4.9/49, 1C-2D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**9.16**	**36**	T	T	04 36 49.3	
	baz=216,slow=75,SNR=11						
H08S2	**Diego Garcia H**	**9.17**	**36**	T	T	04 36 50.1	
	baz=216,slow=75,SNR=14						
H08S3	**Diego Garcia H**	**9.18**	**36**	T	T	04 36 54.4	
	baz=216,slow=75						
OPO	**Ambohidratompo**	**19.32**	**257**	P	**Pn**	**04 29 47.8**	**+1.9**
	0.7nm,0.3s,baz=132,slow=12,SNR=2.0						
KMBO	**Kilima Mbogo**	**32.56**	**293**	LR	LR	04 42 45.0	
	comp=Z,671nm,19.5s,baz=83,slow=32						
LHMI	**Lhok Sumawe**	**35.88**	**58**	P	**P**	**04 32 19.4**	**-0.2**
MATP	**Matopo**	**37.03**	**256**	P	**P**	**04 32 30.3**	**+0.8**
	6.0nm,1.0s,baz=102,slow=8.2,SNR=5.8						
LSZ	**Lusaka**	**37.48**	**265**	P	**P**	**04 32 51.5**	**-1.9**
LSZ				IAmb	IAmb	04 32 47.0	
	comp=Z,66nm,1.9s						
WSAR	**Wadi Sarin**	**39.05**	**348**	P	**P**	**04 32 47.6**	**+1.3**
	comp=Z,3.6nm,0.8s,baz=157,slow=2.4,SNR=3.9						
LBTB	**Lobatse**	**40.02**	**249**	P	**P**	**04 32 52.8**	**-1.8**
BOSA	**Boshof**	**40.83**	**244**	P	**P**	**04 33 02.4**	**+1.1**
	comp=Z,3.9nm,0.9s,baz=75,slow=9.0,SNR=4.2						
BOSA	**Boshof**	**40.83**	**244**	P	**P**	**04 32 58.0**	**-3.2**
UOSS	**Minazif**	**41.25**	**345**	P	**P**	**04 33 02.8**	**-1.7**
RAYN	**Ar Rayn**	**43.85**	**331**	P	**P**	**04 33 24.5**	**-1.3**
CM31	**Chiang Mai Arr**	**45.85**	**44**	P	**P**	**04 33 41.5**	**-0.3**
CM31				IAmb	IAmb	04 33 47.0	
	comp=Z,51nm,1.8s						
CMAR	**Chiang Mai Arr**	**45.85**	**44**	P	**P**	**04 33 44.5**	**+2.7**
	comp=Z,1.2nm,0.3s,baz=239,slow=9.1,SNR=4.1						
CHTO	**Chiang Mai**	**46.10**	**44**	P	**P**	**04 33 43.5**	**-0.3**
CHTO				IAmb	IAmb	04 33 53.5	
	comp=Z,39nm,2.0s						
H01W3	**Cape Leeuwin H**	**46.48**	**124**	T	T	05 23 43.4	
	baz=283,slow=75,SNR=12						
H01W2	**Cape Leeuwin H**	**46.48**	**124**	T	T	05 23 43.5	
	baz=283,slow=75,SNR=11						
H01W1	**Cape Leeuwin H**	**46.49**	**124**	T	T	05 23 44.7	
	baz=283,slow=75,SNR=11						
MORW	**Morawa**	**47.12**	**116**	P	**P**	**04 33 50.1**	**-1.6**
MORW				IAmb	IAmb	04 33 53.4	
	comp=Z,34nm,1.5s						
SHL	**Shillong**	**47.16**	**31**	P	**P**	**04 33 50.6**	**-1.5**
SBUM	**Sibu**	**47.99**	**72**	P	**P**	**04 33 58.5**	**-0.1**
SBUM				IAmb	IAmb	04 34 04.5	
	comp=Z,19nm,1.5s						
NWAO	**Narrogin (SRO)**	**48.64**	**121**	P	**P**	**04 34 02.5**	**-1.0**
NIL	**Nilore**	**48.90**	**7**	P	**P**	**04 34 04.5**	**-0.8**
NIL				IAmb	IAmb	04 34 13.6	
	comp=Z,23nm,1.4s						
KBL	**Kabul**	**49.46**	**2**	P	**P**	**04 34 08.5**	**-1.3**
SLVN	**Son La**	**51.21**	**46**	P	**P**	**04 34 22.8**	**-0.3**
MMRI	**Maumere**	**54.27**	**90**	P	**P**	**04 34 46.5**	**+0.7**
BTK	**Batken**	**55.05**	**4**	P	**P**	**04 34 50.2**	**-0.9**
SYO	**Syowa Base**	**56.55**	**191**	↓*ep*P	**P**	**04 35 02.8**	**+1.4**
SYO	**Syowa Base**	**56.55**	**191**	↑*es*P	sP	04 35 06.0	-1.1
AAK	**Ala-Archa**	**57.92**	**6**	P	**P**	**04 35 11.1**	**-0.5**
AAK				IAmb	IAmb	04 35 19.9	
	comp=Z,22nm,1.8s						
BOOM	**Boomskoye usch**	**57.95**	**8**	P	**P**	**04 35 11.0**	**-0.8**
KK31	**Karatay Array**	**58.06**	**3**	P	**P**	**04 35 11.2**	**-1.1**
GAZ	**Gaziantep**	**59.16**	**332**	P	**P**	**04 35 20.5**	**+0.3**
GAZ				IAmb	IAmb	04 35 29.3	
	comp=Z,13nm,1.0s						
AKH	**Akhalkalaki**	**60.37**	**340**	P	**P**	**04 35 27.9**	**-0.6**
AKH				IAmb	IAmb	04 35 32.2	
	comp=Z,48nm,1.8s						
ENH	**Enshi**	**60.91**	**42**	P	**P**	**04 35 31.5**	**-0.8**
BR131	**Keskin Array S**	**62.86**	**331**	P	**P**	**04 35 45.2**	**-0.2**
BR131				IAmb	IAmb	04 35 53.6	
	comp=Z,27nm,1.6s						
BRTR	**Keskin Array B**	**62.86**	**331**	P	**P**	**04 35 45.5**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=161,slow=6.1,SNR=1.9						
MK31	**Makanchi Array**	**63.17**	**12**	P	**P**	**04 35 46.8**	**-0.4**
MK31				IAmb	IAmb	04 35 54.8	
	comp=Z,15nm,1.4s						
MKAR	**Makanchi Array**	**63.17**	**12**	P	**P**	**04 35 48.6**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=190,slow=5.0,SNR=1.8						
MKAR				LR	LR	05 02 19.8	
	comp=Z,520nm,20.8s,baz=187,slow=35						
ANTO	**Ankara**	**63.37**	**331**	P	**P**	**04 35 49.0**	**+0.3**
ILGA	**Ilgaz**	**63.90**	**332**	P	**P**	**04 35 50.9**	**-1.4**
WRA	**Warramunga Arr**	**63.96**	**105**	P	**P**	**04 35 55.1**	**+2.1**
	comp=Z,4.1nm,1.1s,baz=271,slow=5.9,SNR=8.5						
WB2	**Warramunga Arr**	**63.97**	**105**	P	**P**	**04 35 52.2**	**-0.9**
KURK	**Kurchatov**	**66.37**	**8**	P	**P**	**04 36 07.6**	**-0.3**
KURK				IAmb	IAmb	04 36 11.0	
	comp=Z,39nm,1.9s						
BRVK	**Borovoye**	**68.00**	**2**	P	**P**	**04 36 18.0**	**-0.2**
BRVK				IAmb	IAmb	04 36 21.0	
	comp=Z,26nm,1.6s						
LIT	**Litokhoron**	**68.85**	**325**	P	**P**	**04 36 22.5**	**-1.3**
LIT				IAmb	IAmb	04 36 31.2	
	comp=Z,26nm,1.4s						
TIRR	**Tirgusor**	**68.98**	**331**	P	**P**	**04 36 23.4**	**-1.1**
SNAA	**Sanae**	**69.42**	**199**	P	**P**	**04 36 25.2**	**-1.8**
FNA	**Florina**	**69.93**	**325**	P	**P**	**04 36 28.6**	**-2.0**
FNA				IAmb	IAmb	04 36 39.0	
	comp=Z,31nm,1.8s						
VTS	**Vitosha**	**70.19**	**327**	P	**P**	**04 36 31.6**	**-0.7**
VTS				IAmb	IAmb	04 36 40.5	
	comp=Z,23nm,1.5s						
ZAA0	**Zalesovo Array**	**70.49**	**11**	P	**P**	**04 36 31.8**	**-1.8**
ZAA0				IAmb	IAmb	04 36 36.2	
	comp=Z,41nm,1.8s						
ZALV	**Zalesovo Beam**	**70.49**	**11**	P	**P**	**04 36 34.5**	**+0.9**
	comp=Z,3.2nm,1.0s,baz=205,slow=6.6,SNR=4.0						
TORD	**Torodi Ar. Bea**	**70.53**	**290**	P	**P**	**04 36 35.4**	**+0.7**
	comp=Z,1.7nm,0.9s,baz=116,slow=2.6,SNR=3.7						
MLR	**Muntele Rosu**	**70.92**	**331**	P	**P**	**04 36 37.4**	**+0.8**
TOO	**Toolangi**	**71.84**	**125**	P	**P**	**04 36 41.4**	**-1.0**
TOO				IAmb	IAmb	04 36 42.2	
	comp=Z,45nm,1.9s						
SONM	**Songino Array**	**71.87**	**27**	P	**P**	**04 36 45.1**	**+2.8**
	comp=Z,0.4nm,0.3s,baz=224,slow=6.0,SNR=2.4						
PDG	**Podgorica**	**72.22**	**325**	P	**P**	**04 36 43.1**	**-1.2**
BUR08	**Bucovina Ar. S**	**72.85**	**332**	P	**P**	**04 36 46.3**	**-1.8**
DIVS	**Divibare**	**72.93**	**327**	P	**P**	**04 36 48.0**	**-0.7**
DIVS				IAmb	IAmb	04 37 03.3	
	comp=Z,16nm,1.2s						
AKASG	**Malin Array Be**	**73.48**	**336**	P	**P**	**04 36 51.4**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=137,slow=4.7,SNR=4.5						
QSPA	**South Pole Qui**	**74.92**	**180**	P	**P**	**04 37 02.1**	**+2.0**
	comp=Z,1.9nm,0.6s,baz=251,slow=0.8,SNR=7.0						
QSPA	**South Pole Qui**	**74.92**	**180**	P	**P**	**04 36 59.1**	**-1.0**
QSPA				IAmb	IAmb	04 37 04.8	
	comp=Z,46nm,1.9s						
SOKA	**Soboth**	**77.26**	**326**	*ep*P	**P**	**04 37 16.2**	**+2.6**
	comp=Z,16nm,1.7s						
ARSA	**Arzberg**	**77.36**	**327**	*ep*P	**P**	**04 37 17.1**	**+3.1**
	comp=Z,19nm,1.4s						
OBKA	**Obir**	**77.41**	**326**	*ep*P	**P**	**04 37 17.4**	**+3.0**
	comp=Z,21nm,1.6s						
KSRS	**Korea Array**	**77.48**	**45**	P	**P**	**04 37 16.9**	**+2.1**
	comp=Z,0.9nm,0.4s,baz=258,slow=6.1,SNR=4.7						
CONA	**Conrad Observa**	**77.61**	**328**	*ep*P	**P**	**04 37 18.2**	**+2.7**
	comp=Z,20nm,1.3s						
MYKA	**Terra Mystica**	**77.98**	**326**	*eP*	**P**	**04 37 19.4**	**+1.8**
	comp=Z,17nm,1.6s						
MOA	**Molln**	**78.39**	**327**	*eP*	**P**	**04 37 21.6**	**+1.7**
	comp=Z,24nm,1.2s						
KBA	**Koelnbreinsper**	**78.42**	**326**	*eP*	**P**	**04 37 21.6**	**+1.5**
	comp=Z,9.9nm,1.8s						
ABTA	**Abfaltersbach**	**78.67**	**325**	*eP*	**P**	**04 37 21.7**	**+0.2**
	comp=Z,21nm,1.5s						
KLMR	**Klimevekoe**	**78.90**	**347**	*eS*	**P**	**04 37 20.7**	**-1.5**
GERES	**GERESS Array B**	**79.31**	**327**	P	**P**	**04 37 25.8**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=99,slow=3.1,SNR=1.9						
WTTA	**Wattenberg**	**79.46**	**325**	*ep*P	**P**	**04 37 28.1**	**+2.3**
	comp=Z,12nm,0.9s						
WATA	**Walderalm**	**79.54**	**325**	*ep*P	**P**	**04 37 28.4**	**+2.1**
	comp=Z,20nm,1.3s						
MOTA	**Moosalm**	**79.80**	**325**	*ep*P	**P**	**04 37 29.8**	**+2.1**
	comp=Z,21nm,1.8s						
RETA	**Reutte**	**80.07**	**325**	*ep*P	**P**	**04 37 31.2**	**+2.1**
	comp=Z,2.9nm,0.8s						
DAVA	**Damuels**	**80.45**	**325**	*ep*P	**P**	**04 37 33.5**	**+2.3**
	comp=Z,16nm,1.3s						
CLL	**Collm**	**81.17**	**329**	↓*i*P	**P**	**04 37 38.4**	**+3.7**
CLL				*i* pP	**PcP**	**04 37 41.9**	**+0.9**
	comp=Z,41nm,2.0s						
CLL				*e*		04 38 26.0	
CLL				Lm	MLR	05 45 00.0	
	comp=Z,54nm,2.1s						
FINES	**FINESS Array B**	**82.97**	**341**	LR	LR	05 15 16.7	
	comp=Z,98nm,21.7s,baz=135,slow=36						
MJAR	**Matsushiro Arr**	**84.42**	**50**	P	**P**	**04 37 54.1**	**+2.1**
	comp=Z,2.0nm,0.5s,baz=234,slow=4.3,SNR=4.1						
ESDC	**Sonseca Array**	**85.58**	**313**	P	**P**	**04 37 58.8**	**+0.9**
	comp=Z,2.9nm,1.0s,baz=108,slow=4.4,SNR=5.7						
PAB	**San Pablo**	**85.80**	**313**	P	**P**	**04 37 57.5**	**-1.4**
PAB				IAmb	IAmb	04 38 08.6	
	comp=Z,25nm,1.3s						
ILAR	**Eielson Array**	**125.32**	**17**	PKP	**PKPdf**	**04 44 19.3**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=327,slow=2.5,SNR=3.4						
EPYK	**Eagle Plains**	**126.45**	**12**		**PKiKP**	**04 44 22.6**	**+0.4**
YKA	**Yellowknife Ar**	**132.72**	**1**	PKP	**PKiKP**	**04 44 34.7**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=7.2,slow=1.9,SNR=3.0						
G40A	**Rib Lake**	**144.38**	**332**		**PKPdf**	**04 44 56.0**	**+0.4**
O49A	**Covington**	**144.74**	**321**		**PKPab**	**04 44 55.2**	**0.0**
N47A	**Urbana**	**145.13**	**323**		**PKPab**	**04 44 56.6**	**0.0**
Y57A	**Sumter**	**145.17**	**309**		**PKPdf**	**04 44 57.2**	**-0.1**
F36A	**Milaca**	**145.32**	**336**		**PKPab**	**04 44 57.1**	**-0.1**
KMSC	**Kings Mountain**	**145.38**	**311**		**PKPbc**	**04 44 56.9**	**-0.6**
SPMN	**Marine on St.**	**145.55**	**335**		**PKPbc**	**04 44 57.8**	**+0.1**
IJFWS	**Jewell Farm**	**146.19**	**329**		**PKPdf**	**04 44 57.7**	**-1.1**
R49A	**Shelbyville**	**146.38**	**319**		**PKPab**	**04 45 01.4**	**0.0**
I37A	**Lemond, Waseca**	**146.78**	**334**		**PKPab**	**04 45 02.5**	**-0.2**
LAO	**LASA Array**	**148.07**	**351**		**PKiKP**	**04 45 07.0**	**+0.1**
MSO	**Missoula**	**148.42**	**1**	PKPdf	**PKPdf**	**04 45 02.3**	**-0.3**
MSO					**PKPab**	**04 45 10.0**	**+0.8**
152A	**Waverly Hall**	**149.01**	**309**	PKPdf	**PKPdf**	**04 45 03.1**	**-0.7**
152A					**PKPbc**	**04 45 08.4**	**+0.5**
WVT	**Waverly**	**149.37**	**318**		**PKiKP**	**04 45 09.6**	**-0.2**
P40A	**Paris**	**149.60**	**327**	PKPdf	**PKPdf**	**04 45 03.5**	**-1.0**
RSSD	**Black Hills**	**150.16**	**347**		**PKiKP**	**04 45 11.7**	**+0.2**
MCMT	**McKenzie Canyo**	**150.43**	**360**	PKPdf	**PKPdf**	**04 45 06.5**	**+0.5**
I07A	**Izee**	**150.64**	**10**	PKPdf	**PKPdf**	**04 45 03.8**	**-2.4**
I07A					**PKPab**	**04 45 17.4**	**-1.0**
T42A	**Van Buren**	**150.82**	**322**	PKPdf	**PKPdf**	**04 45 03.2**	**-3.3**
T42A					**PKPbc**	**04 45 10.8**	**-1.4**
Z47A	**Carrollton**	**151.19**	**313**		**PKiKP**	**04 45 13.8**	**+0.2**
LCAR	**Lake Charles**	**151.50**	**321**	PKPdf	**PKPdf**	**04 45 08.2**	**+0.6**
PDAR	**Pinedale Array**	**152.34**	**355**	PKPbc	**PKiKP**	**04 45 16.9**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=50,slow=2.3,SNR=4.7						
NVAR	**Mina Array Bea**	**156.34**	**11**	PKPab	**PKPab**	**04 45 44.9**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=311,slow=3.5,SNR=2.4						
TXAR	**Lajitas Array**	**163.50**	**330**	PKPab	**PKPab**	**04 46 15.1**	**+1.1**
	comp=Z,0.2nm,0.7s,baz=30,slow=4.5,SNR=2.6						

*IDC **27** 05:18:23.6±1.5, 39°.27N×106°.35E, h0km, mb3.6/5, mb1 3.7/7, mb1mx3.4/41, mbtmp3.5/7, ML3.3/2, Error ellipse: s-maj=30.9km s-min=15.9km az=53.0*
ISC 27 05:18:26.0±0.7, 39°.24N±0°.04×106°.25E±0°.05, h10km, n12, σ2s50/22, mb3.6/4, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTO	**Baotou**	**3.21**	**64**	*ep*Pg	**Pn**	**05 19 17.5**	**+1.0**
BTO				Sg	**Sb**	**05 20 05.5**	**+3.3**
LZH	**Lanzhou**	**3.68**	**212**	Pn	**Pn**	**05 19 21.0**	**-2.1**
LZH				Pg	**Pb**	**05 19 29.8**	**-1.4**
LZH				Sg	**Sb**	**05 20 15.8**	**-0.1**
LZH				smax	smax		
	comp=N,290nm,1.0s						
LZH				smax	smax		
	comp=E,310nm,1.0s						
LZH				LR	LR		
	comp=N,240nm,4.8s						
LZH				LR	LR		
	comp=E,260nm,5.0s						
LZH				LR	LR		
	comp=Z,270nm,6.1s						
GTA	**Gaotai**	**4.99**	**274**	Pn	**Pn**	**05 19 40.3**	**-0.8**
GTA				Pg	**Pb**	**05 19 54.3**	**+0.8**
GTA				Sn	**Sn**	**05 20 38.8**	**-0.1**
GTA				Sg	**Sb**	**05 21 00.5**	**+6.8**
GTA				smax	smax		
	comp=N,79nm,0.9s						
GTA				smax	smax		
	comp=E,81nm,1.2s						
XAN	**Xi'an**	**5.62**	**157**	Pn	**Pn**	**05 19 48.3**	**-1.3**
XAN				Pg	Pb	05 20 10.8	+6.7
XAN				Sn	**Sn**	**05 20 54.8**	**+0.6**
XAN				Sg	**Sb**	**05 21 17.8**	**+6.3**
XAN				smax	smax		
	comp=N,47nm,1.0s						
XAN				smax	smax		
	comp=E,39nm,1.1s						
SONM	**Songino Array**	**8.59**	**1**	Pn	**Pn**	**05 20 29.4**	**-1.1**
	comp=E,0.3nm,0.3s,baz=187,slow=7.9,SNR=1.3						
SONM				Pg	**Pg**	**05 21 09.0**	**-1.4**
	comp=E,0.5nm,0.3s,baz=191,slow=15,SNR=3.8						
SONM				Lg	Lg	05 22 56.7	
	comp=E,0.2nm,0.3s,baz=191,slow=29,SNR=1.6						
WMQ	**Urumqi**	**14.63**	**294**	*eP*	**Pn**	**05 21 52.5**	**-0.5**
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,33nm,3.7s						
WMQ				smax	smax		
	comp=N,15nm,0.9s						
WMQ				smax	smax		
	comp=E,18nm,0.7s						
WMQ				LR	LR		
	comp=N,120nm,8.1s						
WMQ				LR	LR		
	comp=E,180nm,9.5s						
WMQ				LR	LR		
	comp=Z,190nm,26.9s						
MKAR	**Makanchi Array**	**19.03**	**301**	P	**P**	**05 22 47.6**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=96,slow=11,SNR=2.9						
MKAR				S	**Sn**	**05 26 23.2**	**+1.4**
	baz=61,slow=22,SNR=2.4						
ZALV	**Zalesovo Beam**	**20.70**	**322**	P	**P**	**05 23 06.3**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=116,slow=8.9,SNR=4.7						
CMAR	**Chiang Mai Arr**	**21.66**	**199**	P	**P**	**05 23 17.5**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=6.5,slow=9.7,SNR=5.6						
KURBB	**Kurchatov Arra**	**22.55**	**309**	P	**P**	**05 23 26.1**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=108,slow=9.8,SNR=5.7						
BVAR	**Borovoye Array**	**28.08**	**311**	P	**P**	**05 24 16.0**	**-1.6**
	comp=Z,0.8nm,0.4s,baz=98,slow=11,SNR=5.0						
WRA	**Warramunga Arr**	**64.47**	**151**	P	**P**	**05 29 01.2**	**-1.6**
	comp=Z,0.6nm,0.8s,baz=342,slow=6.5,SNR=2.3						

*ASRS **27** 05:22:30.0, 53°.72N×90°.99E, M2.1, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*NNC **27** 05:22:36.7±4.6, 53°.83N×90°.59E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=35.3km s-min=23.7km az=57.0, Suspected Mining explosion.*
*IDC **27** 05:22:37.4±4.0, 53°.66N×90°.76E, h0km, mb1 3.1/3, mb1mx3.0/42, mbtmp3.1/3, ML2.9/2, Error ellipse: s-maj=38.3km s-min=24.7km az=47.0*
ISC 27 05:22:36.6±4.2, 53°.8N±0°.1×90°.7E±0°.2, h0km, n8, σ1s34/11, 5C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.50**	**275**	*i*		05 44 20.0	
	baz=88,slow=309,SNR=1.2						
ZAA0	**Zalesovo Array**	**3.50**	**275**	↓Pg	**Pb**	**05 23 38.1**	**-1.3**
	1.2nm,0.7s						
ZAA0				↓Lg	Lg	05 24 27.4	
	8.7nm,0.9s						
ZALV	**Zalesovo Beam**	**3.50**	**275**	Pn	**Pn**	**05 23 33.6**	**+1.4**
	0.1nm,0.3s,baz=87,slow=7.4,SNR=1.8						
ZALV				Pg	**Pg**	**05 23 43.4**	**-0.2**
	1.6nm,0.3s,baz=104,slow=14,SNR=9.1						
ZALV				Sn	**Sn**	**05 24 15.8**	**+1.4**
	0.8nm,0.3s,baz=99,slow=18,SNR=5.3						
ZALV				Lg	Lg	05 24 29.7	
	1.3nm,0.3s,baz=95,slow=27,SNR=8.7						
KURBB	**Kurchatov Arra**	**8.14**	**252**	Pn	**Pn**	**05 24 35.6**	**-0.3**
	0.1nm,0.3s,baz=66,slow=14,SNR=6.6						
KURBB				Sn	**Sn**	**05 26 10.9**	**+2.3**
	0.0nm,0.3s,baz=68,slow=27,SNR=6.2						
KURBB				Lg	Lg	05 26 55.9	
	0.0nm,0.3s,baz=66,slow=32,SNR=7.4						
KURBB	**Kurchatov Arra**	**8.14**	**252**	↑Pn	**Pn**	**05 24 35.4**	**-0.6**
	4.8nm,1.0s,baz=66,slow=15						
KURBB				↓Sn	**Sn**	**05 26 07.1**	**-1.5**
	21nm,0.8s						
KURBB				↑Lg	Lg	05 26 54.0	
	43nm,1.2s						
MK31	**Makanchi Array**	**8.86**	**221**	↑Pn	**Pn**	**05 24 46.4**	**+0.6**
	0.1nm,0.3s						
MK31				↑Sn	**Sn**	**05 26 26.7**	**+0.5**
	1.3nm,0.7s						
MK31				↑Lg	Lg	05 27 16.6	
	11nm,1.1s,baz=60,slow=34,SNR=2.7						
MKAR	**Makanchi Array**	**8.86**	**221**	Pn	**Pn**	**05 24 46.4**	**+0.6**
	0.2nm,0.3s,baz=41,slow=14,SNR=4.9						
MKAR				Lg	Lg	05 27 14.3	
	0.1nm,0.3s,baz=38,slow=31,SNR=2.2						
SONM	**Songino Array**	**11.56**	**115**	Lg	Lg	05 28 36.5	
	0.2nm,0.3s,baz=298,slow=28,SNR=6.1						

WEL 27 05:30:30.9, 40°.S±4°×17°.4E±°, h229km±6km, M3.8/21, MLv3.8/21, Error ellipse: s-maj=0.0km s-min=0.0km az=73.0, Off west coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NMEZ	**Namu Road**	**0.38**	**349**	P	Pn	05 31 01.1	0.0
NMEZ				S	S	05 31 23.5	-1.2
LREZ	**Lake Rotokare**	**0.47**	**46**	P	Pn	05 31 01.5	+0.2
LREZ				S	S	05 31 23.9	-1.2
PKE	**Pukeiti**	**0.59**	**1**	P	Pn	05 31 01.7	-0.1
PKE				S	S	05 31 23.7	-2.3
DREZ	**Durham Road**	**0.62**	**17**	P	Pn	05 31 02.1	+0.2
DREZ				S	S	05 31 24.1	-2.0
MHEZ	**Mangahewa**	**0.76**	**21**	P	Pn	05 31 02.6	+0.1
MHEZ				S	S	05 31 25.0	-2.1
WAZ	**Wanganui**	**0.79**	**88**	P	Pn	05 31 03.4	+0.8
WAZ				S	S	05 31 25.

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BKZ	Black Stump Fm	2.05	73	P	Pn	05 31 12.1	-0.1
TRWZ	Traveller	2.08	141	P	Pn	05 31 12.7	+0.3
PRHZ	Porangahau	2.10	104	P	Pn	05 31 13.5	+0.9
WPRZ	Whakapapatarin	2.12	54	P	Pn	05 31 12.8	-0.2
MRHZ	Matea Rd	2.12	64	P	Pn	05 31 12.4	-0.6
THZ	Tophouse	2.13	202	P	Pn	05 31 13.2	+0.2
MCHZ	McNeill Hill	2.14	82	P	Pn	05 31 14.0	+1.0
GRRZ	Galatos Road	2.20	50	P	Pn	05 31 14.0	+0.2
ALRZ	Allen Road	2.21	57	P	Pn	05 31 13.4	-0.4
PXZ	Pawanui	2.24	97	P	Pn	05 31 14.7	+0.7
KAHZ	Kahuranaki	2.24	91	P	Pn	05 31 14.9	+0.8
HRRZ	Handcock Road	2.28	53	P	Pn	05 31 14.4	-0.1
PRRZ	Plateau Road	2.28	57	P	Pn	05 31 14.0	-0.5
NMHZ	Naumai	2.30	74	P	Pn	05 31 15.7	+0.9
HSRZ	Hossack Road	2.30	51	P	Pn	05 31 12.9	-1.8
UTU	Utuhina	2.36	48	P	Pn	05 31 15.6	+0.2
TOZ	Tahuroa Road	2.38	31	P	Pn	05 31 14.9	-0.5
CKHZ	Cape Kidnapper	2.40	88	P	Pn	05 31 16.6	+0.9
NGRZ	Ngongotaha	2.41	47	P	Pn	05 31 15.5	-0.5
MTHZ	Maungataniwha	2.42	68	P	Pn	05 31 15.6	-0.3
KMRZ	Kaimai	2.48	39	P	Pn	05 31 16.1	-0.4
TARZ	Mount Tarawera	2.51	53	P	Pn	05 31 16.7	-0.3
OMRZ	Omania	2.52	49	P	Pn	05 31 16.6	-0.3
MUGZ	Murupara	2.54	60	P	Pn	05 31 16.4	-0.8
MKRZ	Makatiti	2.55	51	P	Pn	05 31 17.7	+0.3
DSZ	Denniston Nort	2.56	219	P	Pn	05 31 17.5	+0.2
RAHZ	Arahi	2.57	71	P	Pn	05 31 17.7	+0.2
RTZ	Ruatahuna	2.62	64	P	Pn	05 31 17.4	-0.7
WHHZ	Waihua	2.63	75	P	Pn	05 31 18.8	+0.7
KHZ	Kahutara	2.65	187	P	Pn	05 31 18.3	+0.1
TGRZ	Tauranga	2.73	42	P	Pn	05 31 19.1	-0.1
AWAZ	Awhitu Peninsu	2.77	11	P	Pn	05 31 20.0	+0.3
MARZ	Manawahe	2.77	50	P	Pn	05 31 19.4	-0.3
SNGZ	Shannon Statio	2.80	70	P	Pn	05 31 20.1	0.0
MKAZ	Moumakai	2.83	20	P	Pn	05 31 20.6	+0.3
URZ	Urewera	2.88	59	P	Pn	05 31 19.8	-1.0
ETAZ	East Tamaki Re	2.92	15	P	Pn	05 31 21.8	+0.4
KNZ	Kokohu	2.97	76	P	Pn	05 31 22.0	+0.2
RAGZ	Rawiri	2.97	65	P	Pn	05 31 21.6	-0.3
MHGZ	Mahia Peninsul	3.11	80	P	Pn	05 31 24.0	+0.6
WIAZ	Waiheke Island	3.12	17	P	Pn	05 31 24.2	+0.6
MWZ	Matawai	3.13	64	P	Pn	05 31 22.9	-0.8
RIGZ	Rimuhau	3.14	71	P	Pn	05 31 23.6	-0.2
PRGZ	Paritu Road	3.16	75	P	Pn	05 31 24.2	+0.3
ABAZ	Army Bay	3.25	12	P	Pn	05 31 25.6	+0.5
LTZ	Lake Taylor	3.26	203	P	Pn	05 31 25.1	+0.1
GVZ	Greta Valley S	3.26	192	P	Pn	05 31 24.8	-0.2
KUZ	Kuaotunu	3.33	25	P	Pn	05 31 26.1	+0.2
RUGZ	Raukumara Rang	3.42	59	P	Pn	05 31 25.4	-1.7
INZ	Inchbonnie	3.50	212	P	Pn	05 31 27.5	-0.3
TWGZ	Tauwhareparae	3.52	64	P	Pn	05 31 27.9	-0.3
AMCZ	Amberley	3.53	196	P	Pn	05 31 28.1	-0.1
CNGZ	Carnagh Statio	3.54	70	P	Pn	05 31 28.8	+0.4
HAZ	Te Kaha	3.60	57	P	Pn	05 31 27.7	-1.4
GRZ	Great Barrier	3.72	19	P	Pn	05 31 30.9	+0.4
PKGZ	Pakihiroa	3.73	61	P	Pn	05 31 29.8	-0.8
PUZ	Puketiti	3.76	64	P	Pn	05 31 30.2	-0.8
OXZ	Oxford	3.82	202	P	Pn	05 31 31.1	-0.5
WMGZ	Waiomatatini S	3.99	62	P	Pn	05 31 32.7	-1.0
OKCZ	Okains Bay	3.99	189	P	Pn	05 31 33.2	-0.5
MQZ	McQueen's Vall	4.04	194	P	Pn	05 31 33.0	-1.2
MXZ	Matakaoa Point	4.06	58	P	Pn	05 31 33.7	-0.8
AKCZ	Akaroa Harbour	4.16	191	P	Pn	05 31 36.1	+0.4
RPZ	Rata Peaks	4.49	208	P	Pn	05 31 39.2	-0.5
OUZ	Omahuta	4.57	356	P	Pn	05 31 41.7	+1.0
FOZ	Fox Glacier	4.87	218	P	Pn	05 31 43.6	-0.8
LBZ	Lake Benmore	5.39	210	P	Pn	05 31 50.1	-0.8
JCZ	Jackson Bay	5.77	220	P	Pn	05 31 54.8	-1.0
ODZ	Otahua Downs	5.80	204	P	Pn	05 31 56.0	0.0
WKZ	Wanaka	6.23	214	P	Pn	05 31 59.7	-1.9
MSZ	Milford Sound	6.63	221	P	Pn	05 32 05.4	-1.1
MLZ	Mavora Lakes	7.05	216	P	Pn	05 32 10.9	-1.1
WHZ	Wether Hill Ro	7.54	214	P	Pn	05 32 16.3	-1.9
SYZ	Scrubby Hill	7.62	206	P	Pn	05 32 19.0	0.0
APZ	The Paps	8.28	210	P	Pn	05 32 26.7	-0.9

JMA ***27*** *05:40:23.7, 23°.80N×121°.65E, h30km±2km, M2.7*
TAP ***27*** *05:40:24.3, 23°.84N×121°.61E, h32km, ML3.1, B*
ISC 27 05:40:24.1±0.9**, 23°.82N**±0°.02×**121°.63E**±0°.02**, h31**km±8km**,**
n84, σ**0s.57**/157**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien baz=2.0	0.16	352	P	Pn	05 40 30.8	+0.4
HWA	baz=2.0			S	Sn	05 40 35.7	+1.4
ESL	Shilin baz=261	0.18	269	P	Pn	05 40 30.8	+0.2
ESL	baz=261			S	Sn	05 40 35.1	+0.3
EGFH	Guangfu baz=224	0.24	231	*i* P	Pn	05 40 31.3	-0.2
EGFH	baz=224			S	Sn	05 40 36.4	+0.3
TWD	Chiawan baz=359	0.26	353	P	Pn	05 40 31.6	-0.2
TWD	baz=359			*e*S	Sn	05 40 36.7	-0.1
NACB	Ninganchiao baz=357	0.36	355	*i* P	Pb	05 40 32.6	+0.2
NACB	baz=357			S	Sn	05 40 39.0	-0.1
HGSD	Ruisui baz=206	0.38	210	*i* P	Pn	05 40 33.7	+0.4
HGSD	baz=206			S	Sn	05 40 40.5	+1.0
ETLH	Xiulin Townshi baz=342	0.41	341	P	Pb	05 40 33.5	+0.2
ETLH	baz=342			S	Sb	05 40 39.6	0.0
EHY	Hungye baz=217	0.42	222	*e*P	Pb	05 40 33.1	-0.2
EHY	baz=217			*e*S	Sn	05 40 41.4	+0.7
OWD	Renai baz=286	0.44	288	P	Pn	05 40 34.2	-0.1
OWD	baz=286			*e*S	Sn	05 40 41.1	-0.2
VWDT	VWDT baz=259	0.45	262	*i* P	Pn	05 40 34.4	0.0
VWDT	baz=259			S	Sn	05 40 41.4	0.0
WHF	Hehuan Shan baz=314	0.47	314	P	Pb	05 40 34.5	+0.1
WHF	baz=314			*e*S	Sb	05 40 41.5	+0.1
CHGB	Renai baz=299	0.48	300	P	Pn	05 40 35.0	-0.1
CHGB	baz=299			S	Sn	05 40 42.1	-0.4
YULB	Yu-li baz=212	0.52	216	*i* P	Pb	05 40 34.5	-0.4
YULB	baz=212			S	Sb	05 40 41.6	-0.8
TWF1	Yuli baz=209	0.56	213	*e*P	Pb	05 40 35.0	-0.4
TWF1	baz=209			S	Sb	05 40 42.9	-0.4
TWT	Tachien baz=315	0.60	316	P	Pn	05 40 36.8	+0.2
TWT	baz=315			S	Sn	05 40 45.2	-0.1
TDCB	Techi baz=315	0.61	315	P	Pn	05 40 36.7	0.0
TDCB	baz=315			S	Sb	05 40 45.1	+0.1
ENA	Nanau baz=12	0.62	9	P	Pb	05 40 36.5	0.0
ENA	baz=12			S	Sb	05 40 45.0	+0.1
SSLB	Suanglung baz=265	0.62	267	*i* P	Pb	05 40 36.6	0.0
SSLB	baz=265			S	Sn	05 40 45.8	+0.2
NNSB	Datong baz=340	0.65	340	P	Pb	05 40 37.0	-0.1
NNSB	baz=340			S	Sb	05 40 45.6	-0.4
NNSH	Datong baz=340	0.65	340	P	Pb	05 40 37.1	0.0
NNSH	baz=340			S	Sb	05 40 45.5	-0.5
NNS	Nan Shan baz=340	0.66	339	*i* P	Pb	05 40 37.3	0.0
NNS	baz=340			S	Sb	05 40 46.1	-0.3
SMLT	Sun Moon Lake baz=274	0.67	276	P	Pn	05 40 37.7	+0.2
SMLT	baz=274			*e*S	Sn	05 40 47.1	0.0
DPDB	Guoxing baz=287	0.68	289	P	Pn	05 40 37.7	+0.1
DPDB	baz=287			S	Sb	05 40 46.9	+0.2
FULB	Fuli baz=204	0.69	207	P	Pb	05 40 37.8	+0.1
FULB	baz=204			*e*S	Sn	05 40 47.8	+0.5
YUS	Yu-Shan baz=239	0.70	242	P	Pn	05 40 38.4	+0.1
YUS	baz=239			*e*S	Sn	05 40 48.3	0.0
TYC	Yuchr baz=275	0.71	277	P	Pb	05 40 38.1	+0.1
TYC	baz=275			*e*S	Sn	05 40 48.0	+0.2
WHYT	Xinyi Township baz=258	0.72	261	P	Pb	05 40 38.7	+0.5
WHYT	baz=258			*e*S	Sn	05 40 48.6	+0.5
CHKT	Chengkung baz=196	0.76	199	S	Sn	05 40 50.0	+1.1
WHP	Taichung City baz=306	0.78	306	P	Pb	05 40 39.5	+0.3
WHP	baz=306			*e*S	Sn	05 40 50.0	+0.4
NDT	Datong Townshi baz=353	0.79	352	P	Pb	05 40 39.3	-0.1
NDT	baz=353			*e*S	Sb	05 40 50.5	+0.7
TWC	Suao baz=16	0.81	14	P	Pb	05 40 40.1	+0.3
TWC	baz=16			*e*S	Sb	05 40 51.2	+0.8
ENTT	Nioudou baz=357	0.82	356	P	Pn	05 40 39.5	0.0
ENTT	baz=357			*e*S	Sn	05 40 49.6	-1.0
WJS	Zhushan baz=269	0.83	270	*e*P	Pb	05 40 40.4	+0.4
WJS	baz=269			*e*S	Sb	05 40 50.9	+0.1
ELDTW	Lidau baz=219	0.84	222	P	Pn	05 40 39.9	0.0
ELDTW	baz=219			*e*S	Sn	05 40 50.0	-1.2
WNT	Mingjian baz=272	0.87	274	*e*P	Pb	05 40 41.3	+0.6
YHNB	Yeheng baz=345	0.88	345	P	Pb	05 40 40.7	-0.2
YHNB	baz=345			S	Sn	05 40 52.0	-0.2
NSK	Sanguang baz=345	0.89	344	P	Pb	05 40 40.9	-0.2
NSK	baz=345			S	Sn	05 40 52.4	0.0
CHN5	Tsauling baz=254	0.90	256	*e*P	Pb	05 40 41.9	+0.6
CHN5	baz=254			*e*S	Sb	05 40 53.3	+0.4
TWE	Neicheng baz=4.0	0.90	2	*e*P	Pn	05 40 40.5	-0.1
TWE	baz=4.0			*e*S	Sb	05 40 53.4	+0.5
TCU	Taichung baz=290	0.93	291	P	Pb	05 40 42.4	+0.6
TCU	baz=290			*e*S	Sb	05 40 53.9	+0.1
NWLT	Wulai baz=354	0.96	353	P	Pb	05 40 41.9	-0.4
NWLT	baz=354			*e*S	Sn	05 40 54.2	+0.1
WGK	Gukeng baz=260	0.99	263	*e*P	Pb	05 40 42.5	-0.2
WGK	baz=260			*e*S	Sb	05 40 56.8	+1.5
NSY	Sanyi baz=306	0.99	307	*e*P	Pn	05 40 42.0	+0.1
NSY	baz=306			*e*S	Sb	05 40 55.4	-0.1
NSTT	Nanjuang baz=325	0.99	325	*e*P	Pb	05 40 43.1	+0.3
NSTT	baz=325			*e*S	Sb	05 40 56.0	+0.5
WDLH	Douliu baz=261	1.01	263	*e*P	Pb	05 40 43.2	+0.2
WDLH	baz=261			*e*S	Sb	05 40 57.1	+1.1
WCHH	Zhanghua baz=284	1.01	285	*e*P	Pb	05 40 42.7	-0.4
WCHH	baz=284			*e*S	Sb	05 40 56.2	0.0
STYT	Tauyuan baz=229	1.03	231	*e*P	Pb	05 40 43.0	-0.5
STYT	baz=229			*e*S	Sb	05 40 56.4	-0.3
NTC	Toucheng baz=11	1.05	10	*e*P	Pb	05 40 43.1	-0.5
NTC	baz=11			*e*S	Sb	05 40 57.1	0.0
NMLH	Miaoli baz=313	1.05	313	*e*P	Pb	05 40 43.2	-0.5
PTSB	Yuanli baz=306	1.05	307	*e*P	Pb	05 40 43.8	0.0
TPUB	Ta-pu baz=239	1.05	241	*e*P	Pb	05 40 43.4	-0.4
TPUB	baz=239			*e*S	Sb	05 40 57.1	-0.1
WTP	Ta-pu baz=236	1.09	239	*e*P	Pn	05 40 43.8	+0.5
WTP	baz=236			*e*S	Sb	05 40 58.1	-0.3
TWH	Lutao baz=185	1.11	187	*e*P	Pn	05 40 42.5	-1.0
TWH	baz=185			*e*S	Sn	05 40 57.3	-0.4
TWGBT	Beinan baz=205	1.12	207	*e*P	Pn	05 40 42.3	-1.3
TWG	Pinlang baz=205	1.12	207	*e*P	Pn	05 40 42.9	-0.7
TIPB	Shuangxi baz=9.0	1.16	9	*e*P	Pn	05 40 44.9	+0.7
TIPB	baz=9.0			*e*S	Sb	05 41 00.0	-0.4
RLNB	Erlin baz=272	1.17	274	*e*P	Pn	05 40 44.8	+0.7
RLNB	baz=272			S	Sn	05 40 59.0	0.0
TWK	Hsinying baz=240	1.18	243	*e*P	Pn	05 40 45.0	+0.5
TWK	baz=240			*e*S	Sn	05 41 00.2	+0.6
CHN1	Nanshi baz=236	1.19	238	*e*P	Pn	05 40 45.3	+0.7
CHN1	baz=236			*e*S	Sb	05 41 00.7	-0.6
SGST	Jiashian baz=231	1.21	233	*e*P	Pb	05 40 45.8	-0.6
SGST	baz=231			*e*S	Sb	05 41 01.7	0.0
SLGT	Liugui baz=226	1.22	228	*e*P	Pb	05 40 46.6	0.0
SLGT	baz=226			*e*S	Sb	05 41 02.0	0.0
NWF	Wu-fen Shan baz=7.0	1.26	6	*e*P	Pn	05 40 46.3	+0.7
NWF	baz=7.0			*e*S	Sb	05 41 02.5	-0.6
WFSB	Wu-fen Shan baz=7.0	1.26	6	*e*P	Pn	05 40 45.7	+0.3
WFSB	baz=7.0			*e*S	Sb	05 41 02.6	-0.4
YM01	YM01 baz=358	1.32	358	*e*S	Sn	05 41 03.8	+0.7
JYNG	Yonagunijimaku	1.36	62	P	Pn	05 40 47.1	+0.3
JYNG				*e*S	Sn	05 41 03.9	+0.1
SSD	Sandimen baz=219	1.41	221	*e*P	Pn	05 40 48.2	+0.7
YOJ	Yonaguni jima baz=63	1.42	63	*e*P	Pn	05 40 48.4	+0.7
YOJ	baz=63			*e*S	Sn	05 41 05.5	+0.3
YOJ	Yonaguni jima	1.42	63	P	Pn	05 40 48.1	+0.5
YOJ				*e*S	Sn	05 41 05.7	+0.5
MASBT	Mashibuluo baz=216	1.51	218	*e*P	Pn	05 40 49.9	+0.9
MASBT	baz=216			*e*S	Sn	05 41 08.4	+0.8
SCZT	Fangliau baz=211	1.71	213	*e*P	Pb	05 40 53.9	-1.1
WDGT	Dungji baz=252	1.89	253	*e*P	Pn	05 40 55.1	+0.9
WDGT	baz=252			*e*S	Sn	05 41 17.3	+0.3
PHUB	P'eng-hu baz=260	1.91	261	*e*P	Pn	05 40 54.4	-0.1
PHUB	baz=260			*e*S	Sn	05 41 17.8	+0.4
PNG	Penghu baz=261	1.92	263	*e*P	Pn	05 40 55.3	+0.8
PNG	baz=261			*e*S	Sn	05 41 18.0	+0.4
IRIF	Iriomote-Funau	1.99	75	P	Pn	05 40 56.1	+0.6
IRIF				S	Sn	05 41 19.8	+0.5
HATJ	Hateruma jima	2.00	83	P	Pn	05 40 56.1	+0.3
HATJ				*e*S	Sn	05 41 19.9	+0.1
VCHM	Qimei baz=252	2.11	254	*e*P	Pn	05 40 58.1	+0.9
VCHM	baz=252			*e*S	Sn	05 41 22.6	+0.3
JKRS	Kuro-shima	2.22	79	P	Pn	05 40 59.6	+0.9
JKRS				S	Sn	05 41 25.7	+0.7
VWUC	VWUC baz=300	2.31	301	*e*P	Pn	05 40 59.8	-0.1
VWUC	baz=300			*e*S	Sn	05 41 25.7	-1.5
JIJ	Ishigaki jima	2.36	76	P	Pn	05 41 00.8	+0.1
JIJ				S	Sn	05 41 27.9	-0.7
PTTC	Pingtan baz=314	2.38	315	*e*S	Sn	05 41 26.7	-2.3
JISG	Ishigakijimahi	2.56	72	P	Pn	05 41 03.6	+0.1
JISG				S	Sn	05 41 32.5	-1.1
PTMZ	Houxiangcun baz=297	2.59	299	*e*P	Pn	05 41 03.6	-0.2
PTMZ	baz=297			*e*S	Sn	05 41 33.0	-1.3
MATB	Ma-tsu baz=326	2.78	327	*e*P	Pn	05 41 06.0	-0.4
MATB	baz=326			*e*S	Sn	05 41 37.4	-1.5
JTJ	Tarama	2.92	73	*e*S	Sn	05 41 42.4	0.0

BJI ***27*** *05:44:27.3±0.0, 26°.35N×55°.47E, h10km, mB5.1/48, mb4.8/54, Ms5.2/54, Ms7 4.9/51*
GCMT ***27*** *05:44:28.7±0.1, 26°.38N±0°.01×55°.72E±0°.01, h15km, MW5.3/136, Moment Tensor Solution. s94,c125; s136,c268; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.01±.01; Mθθ-0.61±.01; Mφφ0.60±.01; Mrθ-0.17±.04; Mθφ-0.66±.01; Mφr-0.29±.04; Best double couple: M0 0.96100×10^17 NP1:φs112.00000°, δ70.00000°, λ-178.00000°. NP2:φs21.00000°, δ88.00000°, λ-20.00000°. Principal axes: T 0.9390, Plg13.0000°, Azm68.0000°; N 0.0430, Plg69.0000°, Azm195.0000°; P -0.9830, Plg16.0000°, Azm334.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
TEH ***27*** *05:44:29.8, 26°.54N×55°.83E, h9km, ML5.2*
IDC ***27*** *05:44:29.4±0.5, 26°.57N×55°.85E, h0km, mb4.7/29, mb1 4.8/35, mb1mx4.8/38, mbtmp4.7/35, ML4.5/6, MS4.7/35, Ms1 4.7/35, ms1mx4.6/42, Error ellipse: s-maj=12.9km s-min=10.9km az=162.0*
DSN ***27*** *05:44:29.9±0.6, 26°.63N×55°.96E, h10km, mb5.2/3, ML5.8/11, Error ellipse: s-maj=10.8km s-min=4.3km az=63.0*
THR ***27*** *05:44:29.9±0.5, 26°.51N×55°.84E, h15km, ML4.8*
OMAN ***27*** *05:44:30.1±0.5, 26°.67N×56°.02E, h6km±7km, mb5.8/2, ml5.6/20, Mwp5.5/17, Error ellipse: s-maj=31.8km s-min=11.6km az=39.0*
MOS ***27*** *05:44:30.7±1.0, 26°.61N×55°.77E, h17km, mb5.2/60, MS4.7/32, Error ellipse: s-maj=5.4km s-min=3.6km az=90.6*
NEIC ***27*** *05:44:31.3±1.9, 26°.58N±0°.05×55°.76E±0°.06, h10km±1km, Error ellipse: s-maj=10.9km s-min=5.9km az=229.0*
SOME ***27*** *05:44:33.8±0.0, 26°.79N×55°.77E, h17km, mb5.0/6, Ms4.4/10*
BGR ***27*** *05:44:36.8±0.0, 26°.57N×55°.09E, h33km, mb4.9, Ms4.8*
ISC 27 05:44:31.5±0.5**, 26°.59N**±0°.02×**55°.79E**±0°.02**, h12**km±2km**,**
h12km:pP-P, n830, σ**1s.72**/900**, mb5.0**/195**, MS4.8**/77**,**
39C-12D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHME	Shamm SNR=2686	0.62	150	*e*P	Pg	05 44 40.1	-3.5
SHME				S	Sg	05 44 50.4	-1.4
SHME	Shamm	0.62	150	*e*Pg	Pg	05 44 40.6	-3.0
BANOM	Banah SNR=2312	0.81	146	*e*P	Pg	05 44 43.7	-3.4
BANOM				S	Sg	05 44 56.2	-1.4
BANOM	Banah SNR=2235	0.81	146	P	Pg	05 44 45.3	-1.7
BANOM	SNR=2235			P	Pg	05 44 45.3	-1.7
BANOM	SNR=8.8			S	Sg	05 44 56.3	-1.3
BANOM	SNR=8.8			S	Sg	05 44 56.3	-1.3
BANOM	Banah	0.81	146	*e*Pg	Pg	05 44 44.7	-2.4
BNDS	Bandar-Abbas comp=E,25μm,0.5s	0.87	23	IAML		05 45 00.1	
BNDS	comp=N,26μm,0.3s			IAML		05 45 00.8	
BNDS	Bandar-Abbas comp=N,25μm,0.3s	0.87	23	IAML		05 45 01.0	
GENO	Geno	0.87	23	*e*Pg	Pg	05 44 47.6	-0.8
UMQ	Umm Al-Quwin SNR=163	1.07	186	*e*P	Pb	05 44 51.9	0.0
UMQ	Umm Al-Quwin SNR=163	1.07	186	P	Pn	05 44 52.2	-0.1
UMQ	SNR=163			P	Pn	05 44 52.2	-0.1
UMQ				S	Sn	05 45 09.7	+2.7
UMQ				S	Sn	05 45 09.7	+2.7
UMQ	Umm Al-Quwin	1.07	186	*e*Pg	Pn	05 44 52.7	+0.4
IBND	Bandar-abas	1.08	38	*e*Pg	Pg	05 44 51.5	-0.8
IBND				*e*		05 45 50.4	
MSFE	Esma-Masafi SNR=8349	1.27	165	*e*P	Pn	05 44 53.6	-1.5
MSFE	Esma-Masafi	1.27	165	*e*Pn	Pn	05 44 54.8	-0.3
MDH	Madha SNR=732	1.36	160	*e*P	Pn	05 44 54.8	-1.6
MDH	Madha SNR=676	1.36	160	P	Pn	05 44 55.5	-0.9
MDH	SNR=676			P	Pn	05 44 55.5	-0.9
MDH	SNR=6.3			S	Sb	05 45 14.0	-0.4
MDH	SNR=6.3			S	Sb	05 45 14.0	-0.4
MDH	Madha	1.36	160	*e*Pn	Pn	05 44 54.1	-2.3
NAZ	Nazwa, Dubai SNR=3668	1.60	184	*e*P	Pn	05 44 60.0	+0.3
NAZ	Nazwa, Dubai SNR=55	1.60	184	P	Pb	05 45 00.5	-0.5
NAZ	SNR=55			P	Pb	05 45 00.5	-0.5
NAZ				S	Sg	05 45 23.2	+0.2
NAZ				S	Sg	05 45 23.2	+0.2
NAZ	Nazwa, Dubai	1.60	184	*e*Pn	Pb	05 45 00.5	-0.5
LAR1	LAR	1.66	311	*e*Pg	Pb	05 45 02.2	+0.1
LAR1				*e*		05 45 55.3	
UOSS	Minazif SNR=2527	1.68	167	*e*P	Pn	05 44 59.4	-1.3
UOSS	Minazif	1.68	167	P	Pn	05 45 00.6	-0.2
UOSS	Minazif	1.68	167	*e*Pn	Pn	05 44 59.8	-0.9
UOSS	Minazif	1.68	167		Pn	05 45 00.7	0.0
HATD	Hatta, Dubai SNR=4282	1.78	170	*e*P	Pn	05 45 01.9	-0.3
HATD	Hatta, Dubai SNR=341	1.78	170	P	Pb	05 45 03.0	-1.2

HATD P Pb 05 45 03.0 -1.2
SNR=341
HATD S Sb 05 45 26.5 0.0
HATD S Sb 05 45 26.5 0.0
HATD Hatta, Dubai 1.78 170 *e*Pn Pn 05 45 01.7 -0.5
FAQ Al Faqa, Dubai 1.85 186 *e*P Pn 05 45 03.7 +0.7
SNR=161
FAQ Al Faqa, Dubai 1.85 186 P Pn 05 45 03.8 +0.8
SNR=48
FAQ Al Faqa, Dubai 1.85 186 *e*Pn Pn 05 45 03.9 +0.9
ASHO Ashiyiah 1.91 173 *e*P Pn 05 45 04.0 0.0
SNR=6694
ASHO Ashiyiah 1.91 173 P Pn 05 45 04.1 +0.1
SNR=979
ASHO P Pn 05 45 04.1 +0.1
SNR=979
ASHO S Sg 05 45 32.4 -0.7
ASHO S Sg 05 45 32.4 -0.7
ASHO Ashiyiah 1.91 173 *e*Pn Pn 05 45 03.9 0.0
JSK1 Jask 2.02 118 *e*Pn Pn 05 45 05.5 +0.2
AJN Ajban 2.15 200 *e*P Pn 05 45 07.8 +0.6
SNR=14
AJN Ajban 2.15 200 P Pb 05 45 08.6 -1.7
SNR=16
AJN Ajban 2.15 200 *e*Pn Pn 05 45 08.2 +1.1
KHNJ Kahnooj 2.17 51 *e*Pn Pn 05 45 07.1 -0.5
LMD1 Lamerd 2.46 288 *e*Pn Pb 05 45 13.6 -2.1
ALNE Al Ain 2.52 181 *e*P Pn 05 45 12.2 -0.2
SNR=61
SOHO SOHO 2.54 165 P Pn 05 45 13.4 +0.9
SOHO P Pn 05 45 13.4 +0.9
JHRM Jahrom 2.74 315 *e*Pn Pn 05 45 17.0 +1.6
JHRM *e* 05 46 22.2
JRN Qarnain Island 3.12 239 *e*Pn Pn 05 45 20.6 +0.1
NGRK Negar Kerman 3.15 15 *e*Pn Pn 05 45 22.5 +1.2
NGRK *e* 05 46 46.9
HOQ Hoqain 3.30 155 P Pn 05 45 21.8 -1.2
SNR=210
HOQ P Pn 05 45 21.8 -1.2
SNR=210
ARQ Araqi 3.31 168 P Pn 05 45 24.6 +1.4
SNR=206
ARQ P Pn 05 45 24.6 +1.4
SNR=206
KRBR Kerman 3.48 14 *e*Pn Pn 05 45 27.2 +1.4
KRBR IAML 05 46 31.0
comp=N,2μm,0.5s
KRBR IAML 05 46 32.1
comp=E,1μm,0.3s
KRBR Kerman 3.48 14 *e*Pn Pn 05 45 26.9 +1.1
KRBR IAML 05 46 30.7
comp=N,2μm,0.5s
KRBR Kerman 3.48 14 *e*Pn Pn 05 45 26.9 +1.1
TVBK TV Kerman 3.49 14 *e*Pn Pn 05 45 27.5 +1.6
TVBK *e* 05 46 01.8
CHMN Cheshme madani 3.60 25 *e*Pn Pn 05 45 28.7 +1.2
CHMN *e* 05 46 45.5
BIDO Bidbid 3.72 145 P Pn 05 45 28.5 -0.2
SNR=29
BIDO P Pn 05 45 28.5 -0.2
SNR=29
BIDO S Sn 05 46 13.0 +0.5
BIDO S Sn 05 46 13.0 +0.5
KHGB Koh Gabri 3.82 9 *e*Pn Pn 05 45 32.4 +2.0
BSY Bisya 4.04 161 P Pn 05 45 33.9 +0.7
SNR=144
BSY P Pn 05 45 33.9 +0.7
SNR=144
SMDO Samad 4.07 149 P Pn 05 45 34.3 +0.6
SNR=290
SMDO P Pn 05 45 34.3 +0.6
SNR=290
SMDO S Sn 05 46 20.5 -0.8
SMDO S Sn 05 46 20.5 -0.8
SHI Shiraz 4.20 317 *e*Pn Pn 05 45 35.9 +0.4
WSAR Wadi Sarin 4.22 142 Pn Pn 05 45 35.0 -0.6
comp=N,42nm,0.3s,baz=321,slow=5.8,SNR=158
WSAR Sn Sn 05 46 24.2 -0.6
comp=N,126nm,0.3s,baz=78,slow=5.1,SNR=4.0
WSAR LR LR 05 47 45.5
comp=N,8μm,20.8s,baz=6.0,slow=47
WSAR Wadi Sarin 4.22 142 P Pn 05 45 35.7 0.0
SNR=219
CHBR Chabahar 4.33 102 *e*Pn Pn 05 45 36.5 -0.7
CHBR Chabahar 4.33 102 *e*Pn Pn 05 45 36.5 -0.7
CHBR Chabahar 4.33 102 *e*Pn Pn 05 45 36.5 -0.7
SLWR Sila 4.48 237 *e*Pn Pn 05 45 38.5 -0.7
JMDO Jabal Madar 4.70 153 P Pn 05 45 42.7 +0.4
SNR=19
JMDO P Pn 05 45 42.7 +0.4
SNR=19
IMEH Mehriz 4.89 348 *e*Pn Pn 05 45 46.7 +1.6
WBK Wadi Bani Khal 4.91 143 P Pn 05 45 44.4 -0.7
SNR=136
WBK P Pn 05 45 44.4 -0.7
SNR=136
WBK S Sn 05 46 42.5 +0.6
WBK S Sn 05 46 42.5 +0.6
SLWS 4.98 250 *e*Pn Pn 05 45 46.6 +0.5
IBAF Bafgh 4.99 358 *e*Pn Pn 05 45 47.7 +1.4
BTHS 5.14 242 *e*Pn Pn 05 48.5 +0.1
SZD1 Zahaedan-tmp 5.33 56 *e*Pn Pn 05 45 51.4 +0.3
ZHSF Zahedan 5.33 54 *e*Pn Pn 05 45 51.2 +0.1
ZHSF Zahedan 5.33 54 *e*Pn Pn 05 45 51.5 +0.4
ZHSF Zahedan 5.33 54 *e*Pn Pn 05 45 51.5 +0.4
JLN Jalan Bani Buh 5.51 143 P Pn 05 45 52.7 -0.8
SNR=72
JLN S Sn 05 46 57.1 +0.2
ISAD Sadrabad 5.61 341 *e*Pn Pn 05 45 57.0 +1.9
KLNJ Kolanjah 5.74 321 *e*Pn Pn 05 45 57.4 +0.5
ICHK Chekchek 5.76 348 *e*Pn Pn 05 45 59.2 +2.1
YZKH Yazd 5.87 350 *e*Pn Pn 05 45 59.9 +1.4
YZKH Yazd 5.87 350 *e*P Pn 05 46 00.0 +1.5
YZKH Yazd 5.87 350 *e*Pn Pn 05 46 00.0 +1.5
MHTO MHTO 5.92 160 P Pn 05 45 58.5 -0.5
SNR=96
MHTO P Pn 05 45 58.5 -0.5
SNR=96
IRAM Ramesheh 5.99 331 *e*Pn Pn 05 46 01.1 +0.9
NHDN Nehbandan 6.07 37 *e*Pn Pn 05 46 02.5 +1.3
IKOO Kooshah 6.45 25 *e*Pn Pn 05 46 07.0 +0.4
TPRV Parvadeh(Tabas 6.46 7 *e*Pn Pn 05 46 08.7 +2.1
IGAR Gharneh 6.65 331 *e*Pn Pn 05 46 09.9 +0.6
ITEG Tejag 6.79 22 *e*Pn Pn 05 46 12.0 +0.9
ANAR Anarak 6.82 345 *e*Pn Pn 05 46 12.2 +0.7
IZEF Zefreh 6.97 335 *e*Pn Pn 05 46 13.6 -0.1
ROKH ROKH 7.08 325 *e*Pn Pn 05 46 16.0 +0.9
IDAH Dahanechah 7.08 29 *e*Pn Pn 05 46 17.5 +2.3
TABS Tabas 7.13 9 *e*Pn Pn 05 46 17.2 +1.5
TABS Tabas 7.13 9 *e*Pn Pn 05 46 17.2 +1.5
JHBN Jahan bin 7.18 323 *e*Pn Pn 05 46 18.3 +1.7
AFRZ Afriz 7.36 22 *e*Pn Pn 05 46 20.6 +1.6
TNSJ Nastanj 7.38 5 *e*Pn Pn 05 46 20.4 +1.2
IMON Monand 7.39 26 *e*Pn Pn 05 46 21.1 +1.7
IKLH Kolahrood 7.64 332 *e*Pn Pn 05 46 23.2 +0.4
SHRT Shahrakht 8.04 28 *e*Pn Pn 05 46 30.1 +1.9
SHRT Shahrakht 8.04 28 *e*Pn Pn 05 46 30.1 +1.9
SHAO Shalim 8.53 181 *i*P Pn 05 46 32.6 -2.3
SNR=52
KHMZ Khomeyn 8.73 326 *e*Pn Pn 05 46 39.0 +1.2
KHMZ Khomeyn 8.73 326 *e*Pn Pn 05 46 39.0 +1.2
GHVR GHOM 8.77 335 *e*Pn Pn 05 46 40.1 +1.9
GHVR GHOM 8.77 335 *e*Pn Pn 05 46 40.1 +1.9
IANJ Anjilo 8.99 350 *e*Pn Pn 05 46 43.0 +1.6
IVRN Varamin 9.08 338 *e*Pn Pn 05 46 43.4 +1.0
IQOM Qom 9.17 335 *e*Pn Pn 05 46 44.5 +0.5
BMDN Meydan 9.28 321 *e*Pn Pn 05 46 45.8 +0.5
ASAO Ashtian 9.36 329 *e*Pn Pn 05 46 47.1 +0.6
ASAO Ashtian 9.36 329 *e*Pn Pn 05 46 47.1 +0.6
ISHM Shahmirzad 9.43 348 *e*Pn Pn 05 46 48.9 +1.4
IDMV Damavand 9.52 341 *e*Pn Pn 05 46 50.0 +1.3
HRA Herat 9.55 34 Pn Pn 05 46 50.2 +1.1
DAMV Damavand 9.59 341 *e*Pn Pn 05 46 51.2 +1.7
DAMV Damavand 9.59 341 *e*Pn Pn 05 46 51.3 +1.7
IHSB Hasanabad 9.63 337 *e*Pn Pn 05 46 50.4 +0.3
IDOB Doab 9.74 319 *e*Pn Pn 05 46 51.6 0.0
IALA Alasht 9.80 346 *e*Pn Pn 05 46 54.4 +1.9
HSAM Samen 9.81 322 *e*Pn Pn 05 46 52.9 +0.3
RAYN Ar Rayn 9.82 254 *i*P Pn 05 46 50.2 -2.4
SNR=59
RAYN Ar Rayn 9.82 254 P Pn 05 46 49.8 -2.8
RAYN Ar Rayn 9.82 254 Pn 05 46 49.8 -2.8
SBZV Sabzevar 9.89 9 *e*Pn Pn 05 46 55.5 +1.8

HAGD Aghdareh 10.00 327 *e*Pn Pn 05 46 55.8 +0.5
IGLO Ghaloghah 10.02 351 *e*Pn Pn 05 46 58.3 +2.8
IMHD Mahdasht 10.07 335 *e*Pn Pn 05 46 56.7 +0.6
JRKH Jarkhoshk 10.07 22 *e*Pn Pn 05 46 58.2 +2.1
CHTH Charan 10.11 338 *e*Pn Pn 05 46 58.3 +1.6
CHTH Charan 10.11 338 *e*Pn Pn 05 46 58.3 +1.6
IRAZ Razeghan 10.12 332 *e*Pn Pn 05 46 57.4 +0.5
IAKL Akhelmad 10.29 13 *e*Pn Pn 05 47 01.3 +2.0
IKOM Komasi 10.40 319 *e*Pn Pn 05 47 01.2 +0.5
IBZA Bozab 10.41 321 *e*Pn Pn 05 47 01.1 +0.2
IKRD Kardeh 10.41 12 *e*Pn Pn 05 47 07.0 +6.1
QABG Abgarm-Qazvin 10.53 331 *e*Pn Pn 05 47 01.0 -1.5
ISFR Sfrayin 10.60 10 *e*Pn Pn 05 47 05.9 +2.4
QALM Alamut, Qazvin 10.75 337 *e*Pn Pn 05 47 06.6 +1.1
KCHF Cheshme Sefid, 10.75 318 *e*Pn Pn 05 47 04.9 -0.6
KER Kermanshah 10.77 318 *e*Pn Pn 05 47 05.3 -0.4
IVIS Veis 11.04 318 *e*Pn Pn 05 47 08.4 -0.9
IEMG Emamgholi 11.06 12 *e*Pn Pn 05 47 12.3 +2.5
IGHG Ghaleghazi 11.08 316 *e*Pn Pn 05 47 08.8 -1.2
BJRD Bojnurd 11.16 7 *e*P Pn 05 47 13.6 +2.6
BJRD Bojnurd 11.16 7 *e*Pn Pn 05 47 13.6 +2.6
ILIN Lien 11.24 320 *e*Pn Pn 05 47 11.1 -1.2
QSDN Sirdan 11.38 332 *e*Pn Pn 05 47 13.8 -0.3
IDHR Dehrash 11.44 317 *e*Pn Pn 05 47 13.5 -1.4
GEYT Alibeck 11.47 9 Pn Pn 05 47 16.9 +1.6
comp=N,0.4nm,0.3s,baz=194,slow=11,SNR=14
GEYT Lg Lg 05 50 51.8
comp=N,0.7nm,0.3s,baz=180,slow=14,SNR=1.3
GEYT LR LR 05 52 10.2
comp=N,5μm,19.2s,baz=195,slow=40
GYA0 ALIBECK ARRAY 11.47 9 P Pn 05 47 17.5 +2.3
GYA0B ALIBECK ARRAY 11.47 9 Pn 05 47 17.3 +2.1
ZNJK Zanjan 11.73 331 *e*Pn Pn 05 47 20.4 +1.5
ZNJK Zanjan 11.73 331 *e*Pn Pn 05 47 20.4 +1.5
IHRS Heris 13.82 330 *e*Pn Pn 05 47 48.8 +1.3
GRMI Germi 13.87 333 *e*Pn Pn 05 47 49.8 +1.8
GRMI IAmb IAmb 05 47 50.8
comp=Z,34nm,1.4s
GRMI Germi 13.87 333 *e*Pn Pn 05 47 49.8 +1.8
KBL Kabul 13.89 52 P Pn 05 47 50.6 +2.3
KBL Kabul 13.89 52 Pn 05 47 50.6 +2.3
SOCY Socotra 14.43 187 Pn 05 47 50.3 -5.5
ISHB Shabestar 14.47 326 *e*Pn Pn 05 47 58.5 +2.1
THW Thamme Wali 15.17 62 P Pn 05 48 02.2 -3.5
SARP Sargodha 15.65 66 P Pn 05 48 08.2 -3.8
MAKU Maku 15.76 327 *e*Pn P 05 48 15.9 -1.5
MAKU Maku 15.76 327 *e*Pn P 05 48 15.9 -1.5
VANB Van 15.87 322 *e*P Pn 05 48 16.3 +1.4
AKDM Akdamar-Van 15.91 320 *e*P Pn 05 48 14.6 -0.9
CLDR Caldiran 15.99 324 *e*P Pn 05 48 15.6 -0.9
DAMY Dhamar 16.02 224 Pn 05 48 13.1 -3.9
AKT Akhty 16.27 338 *e*P Pn 05 48 21.1 +1.1
AKT *e*S Sn 05 51 22.7 +2.2
AKT pmax pmax
comp=Z,58nm,0.5s
AKT smax smax
comp=N,16nm,0.8s
AKT smax smax
comp=E,14nm,0.7s
CHGR Chuyangaron 16.45 40 P 05 48 24.3 -0.8
NIL Nilore 16.65 61 P Pn 05 48 25.1 +0.3
NIL pmax pmax
comp=Z,70nm,0.9s
NIL Nilore 16.65 61 P Pn 05 48 25.1 +0.3
CHCP Chirah Chowk 16.66 61 P Pn 05 48 21.6 -3.4
AGRB Hanur-Agry 16.79 324 *e*P P 05 48 28.8 -0.1
SVAN Silvan-Diyarba 16.85 317 *e*P P 05 48 32.1 +2.7
MAZI Mazidag 16.91 314 *e*P P 05 48 40.0 +10
GAR Garm 17.36 41 Pn 05 48 33.0 -0.7
GAR IAmb IAmb 05 48 39.5
comp=Z,153nm,1.0s
ASF Jabal al Asfar 17.38 293 P Pn 05 48 33.5 -0.5
comp=Z,1.4nm,0.3s,baz=74,slow=3.3,SNR=14
ASF S Sn 05 51 36.7 -11
comp=Z,0.7nm,0.3s,baz=45,slow=19,SNR=1.7
ASF Lg Lg 05 54 18.0
baz=324,slow=17,SNR=1.5
ASF LR LR 05 56 25.5
comp=Z,790nm,21.4s,baz=67,slow=41
DYBB Diyarbakir 17.40 314 *e*P P 05 48 38.6 +3.1
BOM Bombay 17.45 113 *i*P Pn 05 48 24.2 -11
BOM AMP 05 48 31.8
comp=Z,201nm,0.8s
BOM *e*S Sn 05 51 45.8 -3.5
BOM AMS AMS 05 57 32.5
comp=Z,227nm,19.7s
KARS Kars 17.53 326 *e*P P 05 48 37.8 +0.9
TBLG Delisi 17.63 332 P P 05 48 38.6 +0.6
TBLG pmax pmax
comp=Z,91nm,1.3s
TBLG Delisi 17.63 332 P P 05 48 38.6 +0.6
MAK Makhachkala 17.68 340 *e*P P 05 48 39.7 +1.3
MAK *e*S S 05 51 58.9 -2.8
MAK pmax pmax
comp=Z,445nm,1.1s
MAK MLR MLR
comp=Z,2μm,19.0s
BNGB Bingl 17.70 318 *e*P P 05 48 39.8 +0.9
KOPR Koprukoy-ERZUR 17.70 323 *e*P P 05 48 38.8 -0.1
SENK Senkaya-Erzuru 17.85 325 *e*P P 05 48 44.3 +3.7
AKH Akhalkalaki 17.93 329 P P 05 48 42.2 +0.8
AKH pmax pmax
comp=Z,44nm,0.9s
AKH Akhalkalaki 17.93 329 P P 05 48 42.2 +0.8
URFA Urfa 17.98 311 *e*P P 05 48 43.8 +1.9
YEDI Yedisu-Bingol 18.07 319 *e*P Pn 05 48 42.3 -0.3
SVRC Sivrice-ELAZID 18.18 314 *e*P P 05 48 43.9 -0.3
BTK Batken 18.35 39 P P 05 48 46.7 +0.7
BTK pmax pmax
comp=Z,58nm,0.9s
BTK Batken 18.35 39 P P 05 48 46.7 +0.7
PTK Pertek 18.43 316 *e*P Pn 05 48 48.6 +1.6
SHBL Chebaa 18.62 296 *e*P Pn 05 48 49.5 +0.2
EIL Elat 18.64 284 P Pn 05 48 50.6 +1.2
comp=Z,1.9nm,0.3s,baz=119,slow=5.0,SNR=19
EIL S S 05 52 21.3 -0.1
comp=Z,0.4nm,0.3s,baz=15,slow=19,SNR=0.9
EIL LR LR 05 57 06.9
comp=Z,1μm,19.6s,baz=101,slow=40
BHK Bhakra 18.66 70 *e*P Pn 05 48 52.5 +2.8
MALT Malatya 18.71 313 *e*P Pn 05 48 51.3 +0.9
HWQ Hawqa 18.73 299 *e*P Pn 05 48 50.8 +0.1
MMAI Mount Meron Ar 18.80 295 P Pn 05 48 52.8 +1.3
comp=Z,4.1nm,0.3s,baz=105,slow=16,SNR=26
MMAI S Sn 05 52 12.9 -9.1
comp=Z,1.8nm,0.3s,baz=100,slow=22,SNR=2.1
MMAI Lg Lg 05 55 23.1
comp=Z,0.6nm,0.3s,baz=111,slow=3.0,SNR=1.4
MMAI LR LR 05 58 44.1
comp=Z,2μm,18.4s,baz=90,slow=45
BHL Bhannes 18.85 298 *e*P Pn 05 48 52.6 +0.5
GAZ Gaziantep 18.95 308 *e*P Pn 05 48 53.2 0.0
GAZ Gaziantep 18.95 308 P Pn 05 48 53.4 +0.2
GAZ IAmb IAmb 05 49 17.2
comp=Z,68nm,0.8s
YAYL Yayladag 19.25 304 *e*P Pn 05 48 58.0 +1.1
ATD Arta Tunnel 19.32 222 P Pn 05 48 57.6 -0.2
comp=Z,2.8nm,0.3s,baz=27,slow=9.2,SNR=27
ATD S S 05 52 42.6 +7.2
comp=Z,0.5nm,0.3s,baz=54,slow=14,SNR=1.4
ATD Lg Lg 05 55 22.5
comp=Z,0.5nm,0.3s,baz=17,slow=19,SNR=1.8
ATD LR LR 05 58 02.7
comp=Z,4μm,18.6s,baz=44,slow=42
ATD Arta Tunnel 19.32 222 *e*P P 05 48 54.8 -1.9
ATD Arta Tunnel 19.32 222 *e*P P 05 48 54.8 -1.9
ATD Arta Tunnel 19.32 222 P Pn 05 48 57.5 -0.3
ATD IAmb IAmb 05 49 33.6
comp=Z,98nm,0.9s
TAHT Tahtakopru-Hat 19.33 305 *e*P Pn 05 48 57.4 -0.3
CHM Chimkent 19.34 32 *e*P Pn 05 48 58.1 +0.1
CHM Chimkent 19.34 32 *e*P Pn 05 48 58.0 +0.1
IUG Iuzhnay 19.42 33 *e*P P 05 48 57.7 -0.1
IUG *e*S Sn 05 52 35.2 -1.6
IUG *e*LR LR 05 56 45.0
IUG Iuzhnay 19.42 33 *e*P P 05 48 57.7 -0.1
IUG *e*S Sn 05 52 35.1 -1.7
DARE Darende-Malaty 19.47 312 *e*P Pn 05 48 59.6 +0.1
KTUT Trabzon 19.54 321 *e*P Pn 05 49 02.7 +2.5
NCK Nalchik 19.56 333 *i*P Pn 05 49 00.7 +0.2
NCK pmax pmax
comp=Z,124nm,1.1s
NEY Neytrino 19.73 331 *i*P Pn 05 49 02.7 0.0

NEY pmax pmax
comp=Z,9.0nm,0.8s
CEYT Ceyhan 19.92 306 *e*P Pn 05 49 07.5 +2.8
YURE YUREGIR 19.92 306 *e*P Pn 05 49 14.2 +9.4
BRLS Borolday 20.00 31 *e*S S 05 52 38.3 -10
KRTS Karatas 20.00 305 *e*P Pn 05 49 09.7 +3.9
KBZ Khabaz 20.05 332 P Pn 05 49 06.2 0.0
comp=Z,59nm,0.8s,baz=145,slow=9.1,SNR=59
KBZ S Sn 05 52 51.8 +0.3
comp=Z,8.0nm,0.9s,baz=99,slow=21,SNR=1.1
KBZ LR LR 05 58 49.5
comp=Z,2μm,20.4s,baz=150,slow=43
KBZ Khabaz 20.05 332 *ce*P Pn 05 49 06.0 -0.2
KBZ pmax pmax
comp=Z,72nm,1.0s
KOZT Kozan 20.07 308 *e*P P 05 49 05.3 +0.5
ESPY Espiye-Giresun 20.09 320 *e*P Pn 05 49 07.1 +0.4
SARI SarD1z-Kayseri 20.10 311 *e*P Pn 05 49 09.0 +1.9
KVAR Kislovodsk Arr 20.32 332 P Pn 05 49 09.7 +0.2
comp=Z,57nm,0.5s,baz=270,slow=20,SNR=13
KVAR LR LR 05 56 52.6
comp=Z,2μm,20.5s,baz=66,slow=36
KIV Kislovodsk 20.32 332 *i*P P 05 49 08.0 +0.5
SNR=41
KIV Kislovodsk 20.32 332 *i*P Pn 05 49 08.9 -0.6
KIV *i* 05 49 28.6
KIV *i*S S 05 52 53.7 -1.4
KIV pmax pmax
comp=Z,288nm,1.0s
KIV MLR MLR
comp=Z,992nm,20.0s
KIV Kislovodsk 20.32 332 Pn 05 49 09.3 -0.3
KK31 Karatay Array 20.38 32 *e*P P 05 49 07.8 -0.3
KK31 Karatay Array 20.38 32 P P 05 49 07.7 -0.4
EREN Erenkoy 20.52 301 *e*P Pn 05 49 13.5 +1.6
SVSK Karacayir 20.53 315 *e*P Pn 05 49 12.1 +0.2
DZA Taraz 20.62 34 *e*P Pn 05 49 12.2 -0.8
DZA *e*LR LR 05 57 18.5
comp=Z,589nm,13.5s
DZA Taraz 20.62 34 *e*P Pn 05 49 12.2 -0.8
DZA MLR MLR
comp=Z,589nm,14.0s
BNN Bunyan 20.71 311 *e*P Pn 05 49 15.6 +1.4
MERS Mersin 20.75 305 *e*P Pn 05 49 16.2 +1.6
KIZK Mersin 20.88 303 *e*P Pn 05 49 20.2 +4.1
CSS Mathiatis 21.00 299 P Pn 05 49 16.4 -1.0
CSS IAmb IAmb 05 49 54.6
comp=Z,121nm,1.0s
SILI Silifke-Mersin 21.00 303 *e*P P 05 49 21.7 +6.8
TOKT Tokat 21.04 315 *e*P P 05 49 17.6 +2.2
GOF Gofitskoye 21.08 334 *i*P P 05 49 15.9 +0.3
GOF *e*S Sn 05 53 20.8 +4.3
GOF pmax pmax
comp=Z,259nm,0.9s
IKL Isikli 21.14 302 *e*P P 05 49 19.4 +3.1
KEBE Keben-Mersin 21.19 303 *e*P P 05 49 20.2 +3.2
KSH Kashi 21.21 48 P P 05 49 13.3 -3.9
KSH pP pP 05 49 17.5 -3.0
KSH PP PnPn 05 49 34.5 -2.1
KSH S S 05 52 57.5 -15
KSH pmax pmax
comp=Z,110nm,0.8s
KSH pmax pmax
comp=Z,330nm,4.7s
KSH LR LR
comp=Z,2μm,10.8s
KSH LR LR
comp=Z,1μm,11.0s
KSH LR LR
comp=Z,2μm,15.6s
AKKU Akkuyu-Mersin 21.21 302 *e*P P 05 49 22.8 +5.7
AML Almayashu 21.35 39 P P 05 49 18.0 -1.0
SNR=18
LEF Lefka 21.39 299 *e*P P 05 49 26.3 +7.3
SOC Sochi 21.39 327 *e*P P 05 49 18.8 -0.2
SOC *e*PPP PPP 05 49 46.3
SOC *e*S S 05 53 16.7 +0.4
SOC *e*SSS SSS 05 53 52.0
SOC pmax pmax
comp=Z,40nm,1.0s
SOC MLR MLR
comp=Z,1μm,13.0s
YOZ Yozgat 21.46 312 *e*P P 05 49 22.5 +2.5
BERE Bereket-Mersin 21.52 302 *e*P P 05 49 22.3 +1.6
TEKE Tekeli-Mersin 21.54 302 *e*P P 05 49 21.5 +0.9
EKS2 Erkin-Say 21.75 38 P P 05 49 23.4 +0.4
SNR=27
KVT Kavak 21.79 317 *e*P P 05 49 25.9 +2.5
UCH Uchtor 21.88 40 P P 05 49 28.0 +3.2
SNR=13
SULT Sultanhani-AKS 22.03 307 *e*P P 05 49 27.1 +1.1
AAK Ala-Archa 22.13 39 P P 05 49 27.7 +0.6
comp=Z,5.6nm,0.5s,baz=217,slow=11,SNR=14
AAK LR LR 05 59 57.2
comp=Z,2μm,18.3s,baz=228,slow=42
AAK Ala-Archa 22.13 39 P P 05 49 27.8 +0.6
SNR=18
AAK Ala-Archa 22.13 39 *ce*P P 05 49 27.7 +0.6
AAK pmax pmax
comp=Z,57nm,2.5s
AAK Ala-Archa 22.13 39 P P 05 49 27.8 +0.6
AAK IAmb IAmb 05 50 06.2
comp=Z,51nm,1.0s
YAYX Yaylak 22.14 309 *e*P P 05 49 29.3 +2.0
GAZI Gazipasa 22.18 301 *e*P P 05 49 29.7 +2.2
CORM Corum 22.20 313 *e*P P 05 49 29.2 +1.4
KZA Kyzart 22.21 41 P P 05 49 29.1 +0.8
SNR=12
SERE Sereflikochisa 22.32 309 *e*P P 05 49 31.9 +2.7
KBK Karagaybulak 22.40 39 P P 05 49 36.0 +5.9
SNR=17
CHMS Chumysh 22.51 39 P P 05 49 36.1 +5.1
SNR=6.0
USP Ospenovka 22.54 38 P P 05 49 33.3 +1.9
SNR=19
BR131 Keskin Array S 22.63 311 IAmb IAmb 05 50 11.9
comp=Z,84nm,0.9s
BRTR Keskin Array B 22.63 311 P P 05 49 33.3 +0.8
comp=Z,28nm,0.9s,baz=130,slow=12,SNR=52
BRTR S S 05 53 45.9 +5.6
comp=Z,4.7nm,1.1s,baz=134,slow=12,SNR=1.5
BRTR ScP ScP 05 57 05.0 +2.1
comp=Z,2.7nm,0.6s,baz=152,slow=5.5,SNR=5.3
BRTR LR LR 06 00 20.0
comp=Z,3μm,18.1s,baz=105,slow=42
BRTR Keskin Array B 22.63 311 *ce*P P 05 49 32.7 +0.2
BRTR pmax pmax
comp=Z,28nm,0.9s
CHBY Cihanbeyli 22.64 308 *e*P P 05 49 35.8 +3.3
SGDS Sogindy 22.74 37 *e*P P 05 49 33.2 -0.3
comp=Z,35nm,2.0s
SGDS *e*S S 05 53 40.3 -1.8
SGDS *e*LR LR 05 58 47.2
comp=Z,612nm,11.9s
KULU Kulu 22.75 309 *e*P P 05 49 36.6 +2.8
LADK Ladik-KONYA 22.85 306 *e*P P 05 49 35.6 +0.8
AB31 Akbulak array 22.86 7 *i*P P 05 49 32.8 -1.8
BOOM Boomskoye usch 22.87 41 P P 05 49 35.2 +0.2
BOOM pmax pmax
comp=Z,56nm,1.1s
BOOM Boomskoye usch 22.87 41 P P 05 49 35.2 +0.2
BOOM IAmb IAmb 05 50 24.9
comp=Z,56nm,1.1s
AFSR Afar-Bala (An 22.89 310 *e*P P 05 49 36.8 +1.6
HYB Hyderabad 22.96 109 *i*P P 05 49 38.0 +2.0
HYB *e*S S 05 53 48.0 +1.7
ILGA Ilgaz 23.25 314 P P 05 49 40.5 +1.5
ILGA IAmb IAmb 05 50 10.4
comp=Z,106nm,1.1s
BR231 Keskin MP Arra 23.27 310 P P 05 49 39.5 +0.3
BR231 IAmb IAmb 05 50 26.2
comp=Z,86nm,0.9s
ANTO Ankara 23.27 310 ⇑P P 05 49 40.5 +1.4
ANTO Ankara 23.27 310 P P 05 49 39.2 +0.1
ANTO pmax pmax
comp=Z,85nm,1.1s
ANTO Ankara 23.27 310 P P 05 49 39.2 +0.1
ANTO IAmb IAmb 05 50 26.6
comp=Z,85nm,1.1s
KDJ Kajisay 23.40 43 P P 05 49 42.6 +2.1
KDJ pmax pmax
comp=Z,67nm,1.0s
KDJ Kajisay 23.40 43 P P 05 49 42.5 +2.1
KDJ IAmb IAmb 05 49 48.1
comp=Z,67nm,0.9s

ANN	Anapa	23.41	326	eP	P	05 49 42.2	+1.9	CHOS	Chios island	27.59	303
ANN				eS	S	05 53 54.9	+1.7	APE	Apeiranthos	27.65	300
ANN				pmax	pmax			APE	Apeiranthos	27.65	300
	comp=Z,89nm,1.1s								comp=Z,37nm,1.3s		
ANN				MLR	MLR			IOSP	Ios island	27.76	299
	comp=Z,2µm,18.0s							IDI	Anoyia	27.80	296
KIZT	Kizilcal	23.48	307	eP	P	05 49 42.7	+1.5	IDI	Anoyia	27.80	296
BTLS	Baital	23.53	34	eP	P	05 49 41.4	-0.1		comp=Z,8.4nm,0.5s,baz=78,slow=11,SNR=14		
	comp=Z,20nm,1.3s							IDI	Anoyia	27.80	296
BTLS				eS	S	05 53 53.3	-2.0	IDI	Anoyia	27.80	296
BTLS				eLR	LR	05 58 48.3			comp=Z,54nm,1.1s		
BTLS	Baital	23.53	34	eP	P	05 49 41.4	-0.1	GELI	Tayfur-Gelibol	27.91	307
BTLS				eS	S	05 53 53.2	-2.0	BOZC	Bozcaada	28.03	306
BTLS				pmax	pmax			PSN	Preselentsi	28.11	314
	comp=Z,20nm,1.3s							JURR	Jurilovca	28.21	317
TARG	Taragay, Kyrgy	23.56	45	P	P	05 49 43.7	+1.3	TIRR	Tirgusor	28.34	316
AAE	Adis Abeba	23.78	226	eP	P	05 49 44.0	-0.5	TIRR	Tirgusor	28.34	316
AAE	Adis Abeba	23.78	226	eP	P	05 49 44.0	-0.5		comp=Z,66nm,1.1s		
TNSS	Tian-Shan	23.79	41	eP	P	05 49 44.8	+0.2	TAPN	Taplejung	28.42	81
TNSS	Tian-Shan	23.79	41	eP	P	05 49 44.7	+0.2	ICOR	Ion Corvin	28.56	315
AKTO	Aktyubinsk	23.87	4	P	P	05 49 44.6	-0.2	BRVK	Borovoye	28.57	18
	comp=Z,27nm,0.6s,baz=184,slow=10,SNR=32							BRVK			
AKTO				LR	LR	06 00 06.7			comp=Z,39nm,1.3s		
	comp=Z,3µm,19.5s,baz=170,slow=39							BRVK	Borovoye	28.57	18
AAA	Alma-Ata	23.87	41	eP	P	05 49 44.2	-0.7	BRVK			
AAA				eS	S	05 54 04.3	+3.3		comp=Z,24nm,0.9s		
AAA				eLR	LR	05 58 38.8		BVAR	Borovoye Array	28.57	19
	comp=Z,942nm,12.6s								comp=Z,24nm,0.9s,baz=202,slow=7.7,SNR=25		
AAA	Alma-Ata	23.87	41	eP	P	05 49 44.2	-0.7	BVAR			
AAA				eS	S	05 54 04.2	+3.3		comp=Z,0.3nm,0.4s,baz=12,slow=7.4,SNR=1.9		
AAA				MLR	MLR			TOPG	Topolog	28.57	317
	comp=Z,941nm,13.0s							HARR	Harsova	28.75	316
KORT	Korkueli	23.92	302	eP	P	05 49 48.7	+3.2	CFR	Carcaliu	28.87	317
MDOK	Medeo	23.92	41	eP	P	05 49 44.8	-0.8	MAKZ	Makanchi	28.89	39
MDOK				eS	S	05 54 02.3	+0.4	MAKZ			
MDOK				eLR	LR	05 58 37.7			comp=Z,23nm,1.0s		
	comp=Z,1µm,14.6s							MAKZ	Makanchi	28.89	39
MDOK	Medeo	23.92	41	eP	P	05 49 44.7	-0.8	LPSR	Galich'ya Gora	28.90	339
MDOK				eS	S	05 54 02.2	+0.4	LPSR			
MDOK				MLR	MLR			LPSR			
	comp=Z,1µm,15.0s								comp=Z,20nm,0.9s		
FURI	Furi	23.93	226	eP	P	05 49 44.0	-2.0	LPSR			
FURI	Furi	23.93	226	eP	P	05 49 44.0	-2.0		comp=E,420nm,11.9s		
FURI	Furi	23.93	226	P	P	05 49 46.4	+0.4	LPSR			
SVRH	Sivrihisar-ESK	23.97	308	eP	P	05 49 48.7	+2.8		comp=Z,740nm,18.0s		
KUU	Kurty	23.97	39	eP	P	05 49 44.9	-0.9	MK31	Makanchi Array	29.06	39
	comp=Z,108nm,2.3s							MKAR	Makanchi Array	29.06	39
KUU				eS	S	05 54 04.7	+2.3		comp=Z,2.3nm,0.4s,baz=224,slow=8.5,SNR=21		
KUU				eLR	LR	06 00 07.5		MKAR			
	comp=Z,694nm,11.7s								comp=Z,2µm,19.1s,baz=243,slow=40		
KUU	Kurty	23.97	39	eP	P	05 49 44.9	-0.9	MKAR			
KUU				eS	S	05 54 04.6	+2.3		comp=Z,0.2nm,0.7s,baz=60,slow=8.7,SNR=2.3		
KUU				pmax	pmax			KYMI	Kymi, Euboea I	29.13	302
	comp=Z,108nm,2.3s							RAZG	Razgrad	29.14	313
KUU				MLR	MLR			ANKY	Antikythira Is	29.17	296
	comp=Z,693nm,12.0s							KIS	Kishinev	29.45	321
ISP	Isparta	24.06	304	P	P	05 49 47.7	+0.8	KIS			
ISP				pmax	pmax			KIS			
	comp=Z,64nm,0.9s							KIS			
ISP	Isparta	24.06	304	P	P	05 49 47.6	+0.8		comp=Z,2µm,18.0s		
ISP				IAmb	IAmb	05 49 54.5		KIS	Kishinev	29.45	321
	comp=Z,64nm,0.9s							KIS			
ELL	Elmali	24.18	301	eP	P	05 49 51.9	+4.0	KIS			
PYUN	Piuthan	24.19	80	eP	P	05 49 49.6	+1.4	DID	Didima	29.53	300
AKAS	Kas	24.27	300	eP	P	05 49 49.5	+0.7	KURBB	Kurchatov Arra	29.63	30
KURC	Kurucasile-Bar	24.28	315	eP	P	05 49 49.9	+1.2		comp=Z,11nm,0.8s,baz=228,slow=8.9,SNR=23		
SHUT	Suhut-Afyon	24.30	306	eP	P	05 49 50.5	+1.4	KURBB			
CHKK	Chushkaly	24.31	39	eP	P	05 49 48.5	-0.4		comp=Z,0.7nm,0.7s,baz=40,slow=4.1,SNR=4.9		
CHKK	Chushkaly	24.31	39	eP	P	05 49 48.5	-0.4	KURBB	Kurchatov Arra	29.63	30
MDUB	Mudurnu	24.64	310	eP	P	05 49 53.6	+1.6	KURK	Kurchatov	29.73	30
SATY	Saty	24.67	42	eP	P	05 49 52.7	+0.3	KURK			
	comp=Z,34nm,2.3s								comp=Z,17nm,1.3s		
SATY				eS	S	05 54 14.4	+0.5	KURK	Kurchatov	29.73	30
SATY	Saty	24.67	42	eP	P	05 49 52.7	+0.3	ISR	Istrita	29.82	316
SATY				eS	S	05 54 14.3	+0.5	ARU	Arti	29.88	3
SATY				pmax	pmax				comp=Z,1.4nm,0.5s,baz=177,slow=8.8,SNR=9.8		
	comp=Z,34nm,2.3s							ARU	Arti	29.88	3
KOLN	Koldanda	24.75	81	eP	P	05 49 54.4	+1.1	ARU			
	comp=Z,209nm,1.1s							ARU			
FETY	Fethiye	24.78	300	P	P	05 50 04.0	+11	ARU			
FETY	Fethiye	24.78	300	eP	P	05 49 57.4	+4.1	ARU			
SRCK	Saricakaya, Es	24.84	309	eP	P	05 49 55.2	+1.4	ARU			
DANN	Dangsing	24.86	80	eP	P	05 49 55.6	+1.2		comp=Z,16nm,1.2s		
	comp=Z,201nm,0.9s							ARU			
GULT	Gulveren	25.09	310	eP	P	05 49 57.0	+0.9		comp=Z,2µm,16.0s		
UZB	Uzynbulak	25.09	43	eP	P	05 49 55.6	-0.6	ARU	Arti	29.88	3
	comp=Z,48nm,2.5s							BISRR	Bisoca	29.93	317
UZB				eS	S	05 54 19.7	-1.0	XOR	Xorichti	30.00	303
	comp=Z,51nm,4.3s							VRI	Vrincioaia	30.07	317
UZB				eLR	LR	05 59 59.1		PLG	Polygyros	30.09	305
	comp=Z,795nm,12.8s							PLOR	Plostina	30.11	317
UZB	Uzynbulak	25.09	43	eP	P	05 49 55.6	-0.6	VLX	Vlachokerasia	30.17	299
UZB				eS	S	05 54 19.6	-1.1	LODK	Lodwar	30.23	224
UZB				pmax	pmax			SEM	Semipalatinsk	30.27	32
	comp=Z,48nm,2.5s							SEM	Semipalatinsk	30.27	32
UZB				smax	smax			MMB	Musomiste	30.27	308
	comp=E,51nm,4.3s							TRIP	Tripoli	30.28	299
UZB				MLR	MLR			PLVB	Pleven	30.31	312
	comp=Z,795nm,13.0s							SORM	Soroca	30.36	322
DALY	Dalyan (Mula)	25.16	301	eP	P	05 50 01.5	+4.8	MLR	Muntele Rosu	30.37	316
TURN	Turunc	25.22	301	eP	P	05 50 03.3	+6.1	SVE	Sverdlovsk	30.41	5
SIM	Simferopol'	25.26	322	eP	P	05 49 57.8	+0.3	SVE			
SIM				*i* S	S	05 54 28.0	+5.0	SVE			
SIM				pmax	pmax				comp=Z,21nm,0.9s		
	comp=Z,61nm,1.1s							SVE			
SHLS	Shalkode	25.37	43	eP	P	05 50 01.0	+2.3		comp=Z,2µm,15.0s		
SHLS				eS	S	05 54 27.2	+2.2	TESR	Tescani	30.45	318
SHLS				eLR	LR	06 00 14.9		KLV	Kalavryta, Ach	30.48	300
	comp=Z,929nm,13.2s							ITM	Ithomi	30.49	299
SHLS	Shalkode	25.37	43	eP	P	05 50 00.9	+2.3		comp=Z,37nm,0.9s		
SHLS				eS	S	05 54 27.2	+2.2	AGG	Agios Georgios	30.56	302
SHLS				MLR	MLR				comp=Z,30nm,1.2s		
	comp=Z,929nm,13.0s							KALE	Kalithea	30.56	301
TVSB	Tavsanli	25.43	307	eP	P	05 50 01.1	+1.9	SERG	Sergoula	30.63	301
PDGK	Podgornoye	25.48	43	P	P	05 49 58.7	-1.0	LIT	Litokhoron	30.72	304
YER	Yerkesik	25.54	301	P	P	05 50 02.0	+1.8		comp=Z,21nm,0.9s		
YER	Yerkesik	25.54	301	eP	P	05 50 02.3	+2.1	ANX	Ano Chora	30.78	301
KULA	Kula-Manisa	25.68	304	P	P	05 50 03.2	+1.7	ZSN	Zaisan	30.89	40
KULA	Kula-Manisa	25.68	304	eP	P	05 50 03.1	+1.6	ZSN			
TDK	Taldyqorghan	25.82	39	eP	P	05 50 03.1	+0.5		comp=Z,408nm,11.1s		
TDK				eLR	LR	06 00 32.9		ZSN	Zaisan	30.89	40
	comp=Z,2µm,15.4s							ZSN			
TDK	Taldyqorghan	25.82	39	eP	P	05 50 03.1	+0.5		comp=Z,408nm,11.0s		
TDK				MLR	MLR			VOIR		30.91	316
	comp=Z,2µm,15.0s							EVR	Evrytania	30.93	302
HRT	Hereke	25.84	310	eP	P	05 50 07.3	+4.5	DOPR	Dopca	30.94	317
YLV	Yalova	25.93	309	eP	P	05 50 05.9	+2.1	VTS	Vitosha	30.97	309
SILT	Sile	26.00	311	eP	P	05 50 04.5	+0.3	WMQ	Urumqi	30.97	48
KARP	Karpathos	26.03	297	P	P	05 50 05.1	+0.5	WMQ			
AYDB	Zeytinkoy-Aydi	26.07	303	eP	P	05 50 06.5	+1.4	WMQ			
DMN	Daman	26.09	81	eP	P	05 50 06.2	+0.7	WMQ			
	comp=Z,72nm,1.1s								comp=Z,100nm,3.7s		
BODT	Bodrum	26.27	300	P	P	05 50 07.4	+0.7	WMQ			
BODT	Bodrum	26.27	300	eP	P	05 50 08.5	+1.8		comp=Z,810nm,15.9s		
ARMT	Armutlu	26.29	309	eP	P	05 50 06.5	-0.4	WMQ			
PKIN	Phulchoki	26.35	81	eP	P	05 50 08.2	+0.3		comp=Z,990nm,13.7s		
	comp=Z,126nm,1.1s							WMQ			
PKI	Pulchoki	26.36	81	eP	P	05 50 08.2	+0.1		comp=Z,1µm,29.1s		
	comp=Z,174nm,1.2s							BIZ	Bicaz	30.99	319
GCAM	G?zelcaml?	26.50	302	eP	P	05 50 11.8	+3.0	ARR	Arges	31.14	315
BRZS	Berezniki	26.73	25	eP	P	05 50 11.2	+0.4	PDO	Prodromos	31.34	301
	comp=Z,26nm,1.5s							AKASG	Malin Array Be	31.47	327
BRZS				eLR	LR	06 01 29.9			comp=Z,12nm,0.7s,baz=132,slow=8.5,SNR=29		
	comp=Z,2µm,14.7s							AKASG			
GUN	Gumba	26.75	80	eP	P	05 50 12.0	+0.4		comp=Z,944nm,20.4s,baz=150,slow=41		
	comp=Z,127nm,0.9s							AKBB	Malin Array Si	31.47	327
VRH	Novokhopyorsk	26.81	340	eP	P	05 50 11.2	-0.2	AKBB	Malin Array Si	31.47	327
VRH				eS	S	05 54 47.6	+0.3	AKBB			
VRH				pmax	pmax				comp=Z,30nm,0.9s		
	comp=Z,40nm,0.6s							KFL	Anninata	31.55	300
VRH				smax	smax			LOT	Lotru	31.72	315
	comp=E,170nm,7.7s							FNA	Florina	31.72	305
VRH				MLR	MLR			OBN	Obninsk	31.77	339
	comp=Z,750nm,16.0s								comp=Z,197nm,18.7s,baz=170,slow=43		
BLCB	Balcova	26.84	303	eP	P	05 50 13.6	+1.7	OBN	Obninsk	31.77	339
EDC	Edincik	26.91	308	eP	P	05 50 12.8	+0.3	OBN			
SLVT	Silivri	27.01	310	eP	P	05 50 16.2	+2.8	OBN			
JIRN	Jiri	27.05	81	eP	P	05 50 14.4	+0.1	OBN			
	comp=Z,95nm,1.0s								comp=Z,77nm,1.3s		
DKL	Dikili	27.16	305	eP	P	05 50 16.4	+1.7	OBN			
URLA	Izmir	27.17	303	eP	P	05 50 18.6	+3.7		comp=Z,866nm,18.0s		
MRMT	Marmara Adasi	27.19	308	eP	P	05 50 15.4	+0.3				
ANAF	Anafi Island	27.30	298	P	P	05 50 19.8	+3.7				
RAMN	Ramite	27.48	82	eP	P	05 50 17.4	-0.6				

		P	P	05 50 17.4	-1.3		
		⇑P	P	05 50 21.1	+1.9		
		i P	P	05 50 20.3	+1.1		
		pmax	pmax				
		P	P				
		P	P	05 50 12.9	-7.2		
		P	P	05 50 25.0	+4.4		
		P	P	05 50 21.6	+0.9		
		⇑P	P	05 50 23.5	+2.9		
		IAmb	IAmb	05 51 07.8			
		eP	P	05 50 22.1	+0.6		
		eP	P	05 50 21.7	-0.8		
		eP	P	05 50 28.0	+4.8		
		⇑P	P	05 50 23.4	-0.6		
		⇑P	P	05 50 24.8	-0.5		
		IAmb	IAmb	05 51 15.6			
		eP	P	05 50 26.4	-0.1		
		⇑P	P	05 50 28.1	+0.9		
		*ce*P	P	05 50 27.1	-0.1		
		pmax	pmax				
		P	P	05 50 27.0	-0.2		
		IAmb	IAmb	05 50 32.3			
		P	P	05 50 26.9	-0.3		
		P3KPbc		06 22 43.6			
		⇑P	P	05 50 27.5	+0.2		
		⇑P	P	05 50 28.4	-0.5		
		⇑P	P	05 50 29.1	-0.8		
		P	P	05 50 30.6	+0.4		
		pmax	pmax				
		P	P	05 50 30.6	+0.4		
		eP	P	05 50 29.7	-0.4		
		eS	S	05 55 13.3	-6.9		
		pmax	pmax				
		smax	smax				
		MLR	MLR				
		P	P	05 50 30.9	-0.8		
		P	P	05 50 31.2	-0.5		
		LR	LR	06 03 39.1			
		P3KPbc		06 22 38.7			
		P	P	05 50 33.4	+1.1		
		⇑P	P	05 50 32.7	+0.3		
		P	P	05 50 35.4	+2.7		
		eP	P	05 50 36.0	+0.9		
		eSS	SS	05 56 59.0	-35		
		eLQ	LQ	06 00 02.0			
		LRM	MLR	06 07 26.0			
		eP	P	05 50 36.0	+0.9		
		e		05 50 48.0			
		e		05 56 59.0			
		P	P	05 50 34.4	-1.5		
		P	P	05 50 36.1	-0.5		
		P3KPbc		06 22 39.2			
		P	P	05 50 35.9	-0.7		
		*ce*P	P	05 50 36.8	-0.7		
		pmax	pmax				
		P	P	05 50 37.4	-0.1		
		⇑P	P	05 50 39.1	+0.6		
		P	P	05 50 38.4	-0.4		
		d *i* P	P	05 50 39.2	+0.4		
		S	S	05 55 38.2	+2.6		
		SS	SnSn	05 57 07.7	+1.4		
		pmax	pmax				
		MLR	MLR				
		P	P	05 50 38.1	-0.6		
		⇓P	P	05 50 40.5	+1.0		
		P	P	05 50 39.2	-0.9		
		⇑P	P	05 50 41.6	+0.9		
		P	P	05 50 42.0	+1.1		
		⇑P	P	05 50 41.2	+0.1		
		P	P	05 50 39.9	-1.8		
		i P	P	05 50 44.9	+2.6		
		eP	P	05 50 40.8	-1.7		
		eP	P	05 50 40.8	-1.7		
		eP	P	05 50 42.2	-0.3		
		P	P	05 50 46.0	+3.3		
		⇓P	P	05 50 44.1	+1.3		
		⇑P	P	05 50 41.4	-1.6		
		⇓P	P	05 50 42.8	-0.6		
		eP	P	05 50 43.5	0.0		
		eS	S	05 55 41.5	-2.4		
		pmax	pmax				
		MLR	MLR				
		⇑P	P	05 50 43.9	0.0		
		P	P	05 50 44.1	-0.3		
		IAmb	IAmb	05 51 21.6			
		IAmb	IAmb	05 50 52.6			
		P	P	05 50 45.1	0.0		
		P	P	05 50 46.1	+0.4		
		IAmb	IAmb	05 50 50.7			
		P	P	05 50 48.9	+1.9		
		eP	P	05 50 49.0	+1.1		
		eLR	LR	06 04 22.2			
		eP	P	05 50 49.0	+1.1		
		MLR	MLR				
		⇑P	P	05 50 48.7	+0.6		
		P	P	05 50 50.2	+1.8		
		⇑P	P	05 50 48.3	-0.1		
		⇑P	P	05 50 49.7	+0.9		
		eP	P	05 50 52.8	+4.1		
		pP	sP	05 50 55.0	+1.3		
		sP	pP	05 50 58.3	+6.1		
		pmax	pmax				
		LR	LR				
		LR	LR				
		LR	LR				
		⇓P	P	05 50 49.5	+0.8		
		⇓P	P	05 50 50.2	+0.1		
		P	P	05 50 51.6	-0.3		
		LR	LR	06 06 15.7			
		eP	P	05 50 51.9	-1.0		
		P	P	05 50 51.8	-1.1		
		IAmb	IAmb	05 50 56.7			
		P	P	05 50 51.2	-2.5		
		⇓P	P	05 50 55.9	+0.6		
		P	P	05 50 56.0	+0.7		
		LR	LR	06 07 27.0			
		i		05 51 04.2			
		i		05 52 00.3			
		i		05 53 46.1			
		pmax	pmax				
		MLR	MLR				

OBN	Obninsk	31.77	339	P	P	05 50 55.2	-0.2
LKD2	Lefkada island	31.78	301	P	P	05 50 55.1	-0.7
TSLK	Tsoukalades, L	31.79	301	P	P	05 50 55.8	-0.1
BURAR	Bucovina Array	31.85	319	⇑P	P	05 50 56.4	0.0
BUR08	Bucovina Ar. S	31.88	319	IAmb	IAmb	05 51 10.4	
	comp=Z,24nm,1.3s						
MOS	Moscow	31.97	341	eP	P	05 50 57.2	0.0
MOS				*e*		05 52 10.7	
MOS				eS	S	05 56 08.2	0.0
MOS				pmax	pmax		
	comp=Z,54nm,0.9s						
KIRV	Kirov	32.29	354	LR	LR	06 07 26.4	
	comp=Z,1µm,20.8s,baz=165,slow=43						
GZR	Gura Zlata	32.33	314	⇑P	P	05 51 00.9	+0.2
PHP	Peshkopia	32.65	307	P	P	05 51 03.8	+0.4
MDVR	Moldovita	32.78	313	⇑P	P	05 51 04.8	+0.2
KMBO	Kilima Mbogo	32.85	216	P	P	05 51 09.1	+3.5
	comp=Z,57nm,0.9s,baz=30,slow=11,SNR=47						
KMBO				LR	LR	06 04 32.5	
	comp=Z,2µm,18.3s,baz=33,slow=37						
KMBO	Kilima Mbogo	32.85	216	*i* P	P	05 51 06.8	+1.2
KMBO	Kilima Mbogo	32.85	216	P	P	05 51 07.3	+1.7
KMBO				pmax	pmax		
	comp=Z,59nm,0.9s						
KMBO	Kilima Mbogo	32.85	216	P	P	05 51 07.3	+1.7
DRGR		32.97	316	⇑P	P	05 51 07.1	+1.0
BZS	Buzias	33.17	314	⇓P	P	05 51 08.1	+0.3
SIRR	Siria	33.40	315	⇑P	P	05 51 10.2	+0.3
KIBK	Kibwezi	33.48	214	*i* P	P	05 51 11.7	+0.7
LVV	L'vov	33.66	322	eP	P	05 51 13.2	+1.1
LVV				eS	S	05 56 30.0	-4.7
LVV				*e*		05 58 39.3	
TRPA	Tarpa	33.68	319	⇑P	P	05 51 12.2	0.0
DRME	Dracevica, Mon	33.69	307	eP	P	05 51 11.1	-1.3
DIVS	Divibare	33.70	311	eP	P	05 51 12.1	-0.5
DIVS	Divibare	33.70	311	IAmb	IAmb	05 51 21.8	
	comp=Z,22nm,1.2s						
PDG	Podgorica	33.70	307	⇑P	P	05 51 14.6	+2.0
PDG	Podgorica	33.70	307	eP	P	05 51 11.7	-0.8
PDG	Podgorica	33.70	307	IAmb	IAmb	05 51 32.3	
	comp=Z,17nm,0.9s						
BBLS	Lazići	34.02	310	eP	P	05 51 14.6	-0.8
UZH	Uzhgorod	34.06	319	*c* *i* P	P	05 51 16.1	+0.6
UZH				eS	S	05 56 38.1	-2.7
UZH				MLR	MLR		
	comp=N,500nm,16.0s						
UZH				MLR	MLR		
	comp=E,800nm,16.0s						
UZH				MLR	MLR		
	comp=Z,140nm,16.0s						
UPM	Unac-Piva	34.17	309	eP	P	05 51 14.8	-2.0
FRGS	Fruska Gora	34.18	312	eP	P	05 51 16.5	-0.2
KOLS	Kolonicke sedl	34.21	320	eP	P	05 51 17.7	+0.8
KOLS				pmax	pmax		
	comp=Z,75nm,1.1s						
KOLS	Kolonicke sedl	34.21	320	eP	P	05 51 17.7	+0.8
HCY	Herceg Novi	34.25	307	eP	P	05 51 15.5	-1.8
BRY	Bratogost	34.34	308	eP	P	05 51 17.1	-1.2
TREB	Trebinje	34.42	308	eP	P	05 51 18.9	+0.1
DBRK	Dubrovnik	34.56	307	*i* P	P	05 51 19.1	-0.9
MICGM	Minsk	34.60	331	eP	P	05 51 18.0	-2.1
MICGM				eS	S	05 56 46.0	-3.1
MICGM				eLR	LR	06 04 20.0	
MNK	Minsk	34.60	331	eP	P	05 51 18.0	-2.1
MNK				eS	S	05 56 46.0	-3.1
ZAA0	Zalesovo Array	34.72	30	IAmb	IAmb	05 51 26.2	
	comp=Z,25nm,0.7s						
ZALV	Zalesovo Beam	34.72	30	P	P	05 51 20.4	-0.8
	comp=Z,19nm,0.5s,baz=231,slow=9.3,SNR=42						
TIP	Timpagrande	34.84	301	⇑P	P	05 51 25.2	+2.7
TIP	Timpagrande	34.84	301	IAmb	IAmb	05 51 36.6	
	comp=Z,63nm,1.2s						
STON	Ston	34.93	308	eP	P	05 51 22.1	-1.0
KECS	Kecovo	35.06	318	eP	P	05 51 25.1	+0.9
KECS				pmax	pmax		
	comp=Z,17nm,0.8s						
KECS	Kecovo	35.06	318	eP	P	05 51 25.1	+0.9
MORH	Mrgy, Hungar	35.32	314	eP	P	05 51 26.1	-0.4
CEL	Celeste	35.38	299	P	P	05 51 27.0	-0.2
CEL				IAmb	IAmb	05 51 35.8	
	comp=Z,56nm,1.2s						
RICI	Ricice	35.49	308	P	P	05 51 26.7	-1.4
MGRS	Mrkonjic Grad	35.78	310	eP	P	05 51 30.5	0.0
BLY	Banja Luka	35.81	311	eP	P	05 51 30.1	-0.6
IIGN	Ignalina	35.88	331	eP	P	05 51 31.8	+0.6
KLMR	Klimovskoe	36.00	347	eP	P	05 51 30.3	-1.8
KLMR				pmax	pmax		
	comp=Z,58nm,1.1s						
KLMR	Klimovskoe	36.00	347	eP	P	05 51 30.3	-1.8
KLMR				AMP		05 51 37.5	
	comp=Z,58nm,1.1s						
KLMR				LQ	LQ	06 05 35.1	
KLMR				LQ	LQ	06 05 35.1	
KLMR				LR	LR	06 07 37.7	
VYHS	Vyhne	36.06	317	eP	P	05 51 33.3	+0.4
VYHS				pmax	pmax		
	comp=Z,16nm,1.1s						
VYHS	Vyhne	36.06	317	eP	P	05 51 33.3	+0.4
ISAL	Salakas	36.07	331	eP	P	05 51 32.8	0.0
KIJV	Kijevo	36.14	309	*i* P	P	05 51 32.0	-1.5
OJC	Ojcow	36.24	320	IAmb	IAmb	05 51 39.5	
	comp=Z,44nm,0.8s						
MBAR	Mbarara	36.25	226	*c* *i* P	P	05 51 35.2	+0.3
MBAR				pmax	pmax		
	comp=Z,12nm,1.1s						
MBAR	Mbarara	36.25	226	P	P	05 51 34.7	-0.3
MBAR				IAmb	IAmb	05 51 57.4	
	comp=Z,30nm,1.1s						
ZIRJ	Zirje	36.58	308	*i* P	P	05 51 36.8	-0.5
MORI	Morici	36.59	309	*i* P	P	05 51 36.8	-0.6
PAOL	Paolisi	36.81	304	P	P	05 51 40.0	+0.6
PAOL				IAmb	IAmb	05 51 47.2	
	comp=Z,44nm,1.0s						
JAVC	Velka Javorina	36.91	317	eP	P	05 51 41.4	+1.2
KOGS	Kog	36.96	313	eP	P	05 51 40.5	0.0
PABE	Paberze	36.97	330	eP	P	05 51 39.7	-0.8
MODS	Modra-Piesok

KRLC AMS AMS 06 09 40.0
comp=Z,1µm,16.4s
CEY Cerknica 37.96 311 *e*P **P** **05 51 48.6 -0.5**
LJU Ljubljana 37.98 312 *i* P **P** **05 51 49.9 +0.6**
LJU Ljubljana 37.98 312 *e*P **P** **05 51 49.8 +0.6**
OBKA Obir 38.10 312 *e*pP **P** **05 51 51.3 +1.0**
comp=Z,22nm,1.2s
PBUR Paburge 38.20 330 *e*P **P** **05 51 51.2 +0.4**
DPC Dobruska-Polom 38.31 319 *e*P **P** **05 51 51.6 -0.4**
DPC *e* 05 51 55.5
DPC MLR MLR
comp=Z,1µm,17.3s
DPC Dobruska-Polom 38.31 319 *e*P **P** **05 51 51.6 -0.4**
DPC *e*pP **sP** **05 51 55.5 -1.5**
DPC AMS AMS 06 09 50.0
comp=Z,1µm,17.3s
OSTC Ostas 38.45 319 *e*P **P** **05 51 52.5 -0.7**
OSTC *ex* x 05 51 56.2
OSTC AMS AMS 06 07 50.0
comp=Z,1µm,22.3s
UPC Upice 38.55 319 *e*P **P** **05 51 57.0 +3.0**
UPC MLR MLR
comp=Z,1µm,16.9s
UPC Upice 38.55 319 *e*P **P** **05 51 57.0 +3.0**
UPC AMS AMS 06 09 40.0
comp=Z,1µm,16.9s
CHVC Chvalec 38.56 319 *e*P **P** **05 51 54.0 -0.1**
CHVC *ex* x 05 51 57.3
CHVC AMS AMS 06 09 40.0
comp=Z,1µm,16.0s
MOA Molln 38.69 314 *e*P **P** **05 51 54.7 -0.4**
comp=Z,15nm,0.8s,SNR=5.9
GTA Gaotai 38.71 59 *e*P **P** **05 51 56.5 +0.9**
GTA pP sP 05 52 01.8 +1.2
GTA sP pP 05 52 04.5 +5.3
GTA PcP **PcP** **05 54 05.8 -1.6**
GTA S **S** **05 57 54.5 +2.0**
GTA sS sS 05 58 05.0 +6.6
GTA SS **SnSn** **06 00 38.5 -2.4**
GTA pmax pmax
comp=Z,7.0nm,1.3s
GTA pmax pmax
comp=Z,92nm,6.8s
GTA LR LR
comp=Z,2µm,19.4s
GTA LR LR
comp=Z,1µm,15.9s
GTA LR LR
comp=Z,2µm,17.5s
MURB Monte Urbino 38.71 307 P **P** **05 51 55.5 +0.1**
MURB IAmb IAmb 05 52 22.2
comp=Z,47nm,0.9s
MYKA Terra Mystica 38.73 312 *e*pP **P** **05 51 56.0 +0.5**
comp=Z,11nm,0.7s
KBA Koelnbreinsper 39.05 313 *e*P **P** **05 51 58.4 0.0**
comp=Z,26nm,0.7s,SNR=20
GOPC GO Pecny, Ondr 39.06 318 *e*P **P** **05 52 01.8 +3.6**
GOPC *e* 05 52 08.2
GOPC *e*S **S** **05 57 59.3 +2.0**
GOPC MLR MLR
comp=Z,2µm,19.6s
GOPC GO Pecny, Ondr 39.06 318 *e*P **P** **05 52 01.8 +3.6**
GOPC *ex* x 05 52 08.2
GOPC *e*S **S** **05 57 59.3 +2.0**
GOPC AMS AMS 06 10 00.0
comp=Z,2µm,19.6s
LATE Laterza 39.11 306 IAmb IAmb 05 52 11.3
comp=Z,77nm,1.2s
PRU Pruhonice 39.23 318 *e*P **P** **05 52 02.5 +2.8**
PRU *e*S **S** **05 57 55.5 -4.3**
PRU MLR MLR
comp=Z,2µm,16.6s
PRU Pruhonice 39.23 318 *e*P **P** **05 52 02.5 +2.8**
PRU *e*S **S** **05 57 55.5 -4.3**
PRU AMS AMS 06 10 40.0
comp=Z,2µm,16.6s
TMCR Tamitsa 39.30 348 *e*P **P** **05 52 00.0 0.0**
TMCR pmax pmax
comp=Z,30nm,0.4s
PRA Prague 39.33 318 AMS AMS 06 10 40.0
comp=Z,800nm,16.4s
GEC2 GERESS Array S 39.36 316 *e*P **P** **05 51 60.0 -0.9**
comp=Z,13nm,1.0s,baz=109,slow=8.2
GERES GERESS Array B 39.36 316 P **P** **05 52 00.3 -0.6**
comp=Z,4.6nm,0.6s,baz=115,slow=6.9,SNR=15
GERES PcP **PcP** **05 54 10.0 +0.8**
comp=Z,1.5nm,0.6s,baz=111,slow=5.4,SNR=2.1
GERES LR LR 06 12 09.4
comp=Z,1µm,18.3s,baz=120,slow=42
PVCC Panska Ves 39.41 319 *e*P **P** **05 52 04.2 +3.0**
PVCC MLR MLR
comp=Z,1µm,15.4s
PVCC Panska Ves 39.41 319 *e*P **P** **05 52 04.2 +3.0**
PVCC AMS AMS 06 11 00.0
comp=Z,1µm,15.4s
PBCC Pribram 39.46 317 *e*P **P** **05 52 04.1 +2.5**
ABTA Abfaltersbach 39.51 312 *e*P **P** **05 52 01.6 -0.5**
comp=Z,25nm,0.7s,SNR=14
KHC Kasperske Hory 39.53 316 *e*P **P** **05 52 01.3 -0.9**
KHC *e* 05 52 05.2
KHC *e*S **S** **05 58 03.3 -1.1**
KHC MLR MLR
comp=Z,1µm,18.2s
KHC Kasperske Hory 39.53 316 *e*P **P** **05 52 01.3 -0.9**
KHC *e*pP **pP** **05 52 05.2 -0.6**
KHC *e*S **S** **05 58 03.3 -1.1**
KHC AMS AMS 06 09 50.0
comp=Z,1µm,18.2s
RJOB Jochberg 39.60 314 *e*P **P** **05 52 01.4 -1.5**
comp=Z,15nm,0.7s,baz=109,slow=8.2
BRG Berggiesshubel 39.91 319 *e*P **P** **05 52 05.1 -0.2**
comp=Z,11nm,1.2s
BRG S S 05 57 59.0 -11
BRG SS **SS** **06 01 00.0 -6.4**
comp=N,1µm,17.8s
comp=E,1µm,14.1s
comp=Z,1µm,19.3s
BRG Berggiesshubel 39.91 319 *e*P **P** **05 52 04.5 -0.8**
comp=Z,22nm,1.2s,baz=109,slow=8.2
BRG Berggiesshubel 39.91 319 *e*P **P** **05 52 05.1 -0.2**
BRG S S 05 57 59.0 -11
BRG SS **SS** **06 01 00.0 -6.4**
BRG pmax pmax
comp=Z,11nm,1.2s
BRG MLR MLR
comp=N,1µm,17.8s
BRG MLR MLR
comp=E,1µm,14.1s
BRG MLR MLR
comp=Z,1µm,19.3s
CTI Castel Tesino 39.91 311 IAmb IAmb 05 52 09.6
comp=Z,87nm,1.5s
WET Wettzell 39.97 316 *e*P **P** **05 52 04.5 -1.3**
comp=Z,30nm,1.4s,baz=109,slow=8.2
FIA1 FINESS Array S 40.17 338 P **P** **05 52 07.4 +0.1**
FIA1 IAmb IAmb 05 52 12.1
comp=Z,72nm,1.4s
FINES FINESS Array B 40.17 338 P **P** **05 52 06.4 -0.8**
comp=Z,10.0nm,0.4s,baz=143,slow=9.9,SNR=28
FINES LR LR 06 12 22.4
comp=Z,955nm,18.5s,baz=140,slow=42
WTTA Wattenberg 40.22 313 *e*P **P** **05 52 07.2 -1.0**
comp=Z,77nm,1.2s,SNR=21
WTTA *e*S **S** **05 58 12.1 -3.1**
comp=Z,32nm,1.3s
FBE Freiberg 40.28 319 *e*P **P** **05 52 07.8 -0.5**
comp=Z,9.5nm,1.0s,baz=109,slow=8.2
WATA Walderalm 40.28 313 *e*P **P** **05 52 07.4 -1.2**
comp=Z,96nm,1.0s,SNR=23
CHTO Chiang Mai 40.40 92 P **P** **05 52 10.5 +0.7**
CHTO pmax pmax
comp=Z,15nm,1.1s
CHTO Chiang Mai 40.40 92 P **P** **05 52 10.5 +0.7**
KEST Kesra 40.46 295 P **P** **05 52 12.2 +2.0**
comp=Z,10.0nm,0.8s,baz=74,slow=3.7,SNR=8.3
KEST Kesra 40.46 295 P **P** **05 52 10.6 +0.4**
SQTA Sankt Quirin 40.49 313 *e*P **P** **05 52 09.3 -1.1**
comp=Z,47nm,0.5s,SNR=24
SQTA *e*S **S** **05 58 16.7 -2.4**
comp=Z,18nm,0.8s
CMAR Chiang Mai Arr 40.52 92 P **P** **05 52 09.2 -1.5**
comp=Z,0.6nm,0.3s,baz=288,slow=9.4,SNR=1.2
CMAR LR LR 06 13 24.4
comp=Z,557nm,19.0s,baz=320,slow=43
VSL Villasalto 40.56 300 P **P** **05 52 11.6 +0.7**
VSL IAmb IAmb 05 52 54.1
comp=Z,52nm,0.9s
ROTZ Rotzenmuhle 40.58 317 *e*P **P** **05 52 10.3 -0.6**
comp=Z,34nm,1.2s,baz=109,slow=8.2
NKC Novy Kostel 40.58 317 *e*P **P** **05 52 13.7 +2.8**
NKC MLR MLR
comp=Z,2µm,20.3s
NKC Novy Kostel 40.58 317 *e*P **P** **05 52 13.7 +2.8**
NKC AMS AMS 06 10 50.0
comp=Z,2µm,20.3s
MOTA Moosalm 40.59 313 *e*P **P** **05 52 10.3 -0.9**
comp=Z,44nm,1.0s,SNR=18
MOTA *e*S **S** **05 58 18.1 -2.5**
comp=Z,18nm,0.9s
RUE Ruedersdorf 40.61 321 *e*P **P** **05 52 10.6 -0.4**
comp=Z,42nm,0.5s,baz=109,slow=8.2
CLL Collm 40.62 319 *e*P **P** **05 52 12.0 +0.8**
comp=Z,21nm,1.3s
CLL *i* sP **sP** **05 52 16.1 -0.1**
comp=Z,41nm,1.6s
CLL *e*(PP) 05 52 40.0
CLL *e*PcS **PcS** **05 58 02.0 -1.4**
CLL *e*S **S** **05 58 18.0 -2.6**
CLL *e*SS **SnSn** **06 01 24.0 -2.4**
CLL *e*SSS SSS 06 01 42.0
CLL LmV 06 11 00.0
comp=Z,1µm,20.8s
CLL Collm 40.62 319 *e*P **P** **05 52 11.4 +0.2**
comp=Z,13nm,0.9s,baz=109,slow=8.2
CLL Collm 40.62 319 *e*P **P** **05 52 12.0 +0.8**
CLL *e*S **S** **05 58 18.0 -2.6**
CLL pmax pmax
comp=Z,21nm,1.3s
CLL MLR MLR
comp=Z,1µm,20.8s
CLL Collm 40.62 319 P **P** **05 52 11.1 -0.1**
WERN Wernitzgruen 40.65 317 *e*P **P** **05 52 11.1 -0.4**
comp=Z,19nm,1.3s,baz=109,slow=8.2
GUNZ Gunzen 40.70 317 *e*P **P** **05 52 11.4 -0.5**
comp=Z,17nm,1.8s,baz=109,slow=8.2
FUR Furstenfeldbru 40.70 314 *e*P **P** **05 52 10.8 -1.1**
comp=Z,53nm,1.1s,baz=109,slow=8.2
MANZ Manzenberg 40.71 317 *e*P **P** **05 52 11.6 -0.4**
comp=Z,12nm,1.1s,baz=109,slow=8.2
FETA Feichten 40.76 312 *e*P **P** **05 52 11.8 -0.8**
comp=Z,95nm,1.1s,SNR=34
FETA *i* S **S** **05 58 19.9 -3.2**
comp=Z,15nm,0.7s
PLN Plauen 40.84 318 *e*P **P** **05 52 12.2 -0.8**
comp=Z,8.4nm,1.1s,baz=109,slow=8.2
RETA Reute 40.86 313 *e*P **P** **05 52 11.9 -1.4**
comp=Z,16nm,0.5s
RETA *e*S **S** **05 58 21.8 -2.6**
comp=Z,22nm,1.0s
FUORN Ofenpass-Fuorn 40.98 311 P **P** **05 52 14.7 +0.2**
FUORN IAmb IAmb 05 52 34.3
comp=Z,24nm,0.9s
GRA1 Grafenberg Arr 41.17 316 P **P** **05 52 14.2 -1.5**
GRA1 IAmb IAmb 05 52 19.6
comp=Z,31nm,0.8s
GRF Grafenberg Arr 41.17 316 *e*P **P** **05 52 15.1 -0.6**
comp=Z,68nm,1.4s,baz=109,slow=8.2
GRF *e*L L 06 11 01.8
comp=Z,1µm,21.6s
GRF Grafenberg Arr 41.17 316 P **P** **05 52 14.2 -1.5**
GRF pmax pmax
comp=Z,31nm,0.8s
MOX Moxa 41.22 318 *e*P **P** **05 52 15.7 -0.5**
comp=Z,20nm,1.6s,baz=109,slow=8.2
MOX *e*L L 06 11 35.7
comp=Z,2µm,19.5s
NEUB Neuenburg 41.31 319 *e*P **P** **05 52 16.3 -0.5**
comp=Z,25nm,0.7s,baz=109,slow=8.2
UBR Ueberruh 41.33 313 *e*P **P** **05 52 15.9 -1.3**
comp=Z,54nm,0.8s,baz=109,slow=8.2
DAVA Damuels 41.39 312 *e*P **P** **05 52 16.5 -1.3**
comp=Z,103nm,0.6s,SNR=62
DAVA *e*S **S** **05 58 28.6 -3.9**
comp=Z,25nm,0.8s
TUE Stuetta 41.57 311 P **P** **05 52 19.8 +0.5**
LZH Lanzhou 41.76 65 *e*P **P** **05 52 20.0 -1.0**
LZH sP sP 05 52 27.8 +1.7
LZH S **S** **05 58 35.8 -2.5**
LZH sS sS 05 58 48.5 +4.2
LZH pmax pmax
comp=Z,38nm,1.3s
LZH pmax pmax
comp=Z,250nm,6.0s
LZH LR LR
comp=Z,2µm,14.6s
LZH LR LR
comp=Z,2µm,14.6s
LZH LR LR
comp=Z,3µm,16.8s
CMAH Djebel Manchou 42.02 296 P **P** **05 52 25.8 +2.9**
CD2 Chengdu 42.02 72 P **P** **05 52 22.3 -0.7**
CD2 S **S** **05 58 42.0 0.0**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 LR LR
comp=Z,2µm,22.3s
CD2 LR LR
comp=Z,1µm,17.2s
CD2 LR LR
comp=Z,2µm,21.6s
KMI Kunming 42.09 81 P **P** **05 52 24.8 +0.9**
KMI pP sP 05 52 30.5 +1.6
KMI S **S** **05 58 43.8 +0.3**
KMI sS sS 05 58 53.5 +4.0
KMI SS **SS** **06 01 47.3 -3.6**
KMI pmax pmax
comp=Z,8.0nm,1.4s
KMI pmax pmax
comp=Z,190nm,5.5s
KMI LR LR
comp=Z,650nm,19.6s
KMI LR LR
comp=Z,490nm,17.8s
KMI LR LR
comp=Z,870nm,17.8s
MOY Mondy 42.16 41 *e*P **P** **05 52 24.9 +0.9**
MOY pmax pmax
comp=Z,65nm,1.8s
UBBA Unterbreizbach 42.25 317 *e*P **P** **05 52 24.7 +0.3**
comp=Z,23nm,1.4s,baz=109,slow=8.2
ASSE Asse, Remlinge 42.27 319 *e*P **P** **05 52 24.5 -0.1**
comp=Z,27nm,1.2s,baz=109,slow=8.2
CLZ Clausthal 42.35 319 *e*P **P** **05 52 25.4 +0.1**
comp=Z,53nm,1.3s,baz=109,slow=8.2
GTTG Gottingen 42.49 318 *e*P **P** **05 52 26.6 +0.1**
comp=Z,31nm,1.0s,baz=109,slow=8.2
CKFL Kef-Lekhel 42.58 296 P **P** **05 52 30.3 +2.7**
BFO Black Forest 42.65 313 *e*P **P** **05 52 26.5 -1.4**
comp=Z,7.9nm,0.8s,baz=109,slow=8.2
BFO Black Forest 42.65 313 P **P** **05 52 26.2 -1.7**
BFO pmax pmax
comp=Z,10.0nm,0.8s
BFO Black Forest 42.65 313 P **P** **05 52 26.2 -1.7**
NRDL Niedersach Rie 42.71 320 *e*P **P** **05 52 28.5 +0.3**
comp=Z,39nm,1.0s,baz=109,slow=8.2
TNS Taunus Mts 43.03 316 *e*P **P** **05 52 30.6 -0.4**
comp=Z,47nm,1.5s,baz=109,slow=8.2
BSEG Bad Segeberg 43.09 322 *e*P **P** **05 52 31.1 -0.1**
comp=Z,18nm,1.1s,baz=109,slow=8.2
BNI Bardonecchia 43.16 308 IAmb IAmb 05 53 01.7
comp=Z,66nm,1.5s
ZAK Zakamensk 43.16 44 *e*P **P** **05 52 32.8 +0.7**
ZAK pmax pmax
comp=Z,11nm,1.6s
APA Apatity 43.21 348 ↓ *i*P **P** **05 52 31.4 -0.7**
APA *i* S **S** **05 58 58.0 -0.4**
APA *i* SS **SS** **06 02 11.0 -0.2**
APA pmax pmax
comp=Z,18nm,0.9s
APA MLR MLR
comp=Z,2µm,16.0s
RETH Rethem/Aller, 43.22 320 *e*P **P** **05 52 31.2 -1.2**
comp=Z,66nm,2.0s,baz=109,slow=8.2
DFRA Djebel Bou Aff 43.26 296 P **P** **05 52 36.5 +3.4**
ECH Echery 43.38 313 P **P** **05 52 32.6 -1.3**
ECH pmax pmax
comp=Z,26nm,0.9s
ECH Echery 43.38 313 P **P** **05 52 32.6 -1.3**
ECH IAmb IAmb 05 52 37.4
comp=Z,26nm,0.9s
TLY Talaya 43.74 42 *e*P **P** **05 52 36.6 0.0**
TLY *e*S **S** **05 59 03.1 -3.6**
TLY *e*SS SS 06 02 10.8 -11
TLY pmax pmax
comp=Z,50nm,1.9s
TLY MLR MLR
comp=Z,2µm,11.0s
TLY Talaya 43.74 42 P **P** **05 52 36.6 0.0**
SKMB Sankelmark Bun 43.85 323 *e*P **P** **05 52 36.7 -0.6**
comp=Z,170nm,1.4s,baz=109,slow=8.2
IBBN Ibbenburen 44.02 319 *e*P **P** **05 52 39.1 +0.3**
comp=Z,32nm,1.1s,baz=109,slow=8.2
BUG Bochum--Univer 44.08 318 *e*P **P** **05 52 39.4 +0.1**
comp=Z,48nm,1.2s,baz=109,slow=8.2
WLF Walferdange 44.34 315 pP **P** **05 52 42.5 +1.1**
WLF sP **pP** **05 52 44.0 -1.1**
WLF Walferdange 44.34 315 *e*P **P** **05 52 40.5 -0.9**
comp=Z,26nm,0.7s,baz=109,slow=8.2
WLF Walferdange 44.34 315 P **P** **05 52 39.2 -2.3**
WLF pmax pmax
comp=Z,27nm,0.8s
WLF Walferdange 44.34 315 P **P** **05 52 39.1 -2.3**
WLF IAmb IAmb 05 52 58.1
comp=Z,27nm,0.8s
BHOU Houvegnez 44.59 316 P **P** **05 52 41.8 -1.6**
BHOU pP **pP** **05 52 44.6 -2.5**
BHOU x x 05 52 54.4
SONM Songino Array 44.61 48 P **P** **05 52 43.7 -0.1**
comp=Z,3.5nm,0.7s,baz=298,slow=9.3,SNR=4.9
SONM LR LR 06 13 36.4
comp=Z,3µm,19.4s,baz=267,slow=39
MUD Monsted U'grnd 44.62 325 *i* P **P** **05 52 46.3 +2.7**
MUD Monsted U'grnd 44.62 325 *i* P **P** **05 52 46.3 +2.7**
MEM MemBach 44.64 316 pP **P** **05 52 44.3 +0.5**
BCLA Clavier 45.04 316 P **P** **05 52 47.6 +0.6**
comp=Z,23nm,1.4s
ULN Ulaanbaatar 45.05 48 *ce*P **P** **05 52 47.4 +0.1**
ULN pmax pmax
comp=Z,18nm,0.8s
ULN Ulaanbaatar 45.05 48 P **P** **05 52 47.5 +0.1**
ULN IAmb IAmb 05 52 53.4
comp=Z,19nm,0.9s
BGES Gesves 45.17 316 P **P** **05 52 46.3 -1.7**
comp=Z,27nm,1.2s
BGES sP **pP** **05 52 51.0 -0.6**
GYA Guiyang 45.26 78 *e*P P 05 52 55.8 +6.5
GYA PP PP 05 54 42.8 +7.7
GYA S **S** **05 59 31.0 +1.3**
GYA SS **SS** **06 02 52.0 -0.4**
GYA pmax pmax
comp=Z,10.0nm,0.7s
GYA pmax pmax
comp=Z,110nm,5.7s
GYA LR LR
comp=N,570nm,20.2s
GYA LR LR
comp=E,420nm,15.0s
GYA LR LR
comp=Z,780nm,17.8s
OSL Oslo 45.33 330 *e*P **P** **05 52 49.2 0.0**
NC602 NORSAR Array S 45.34 331 P **P** **05 52 49.4 +0.2**
NC602 NORSAR Array S 45.34 331 *e*P **P** **05 52 48.6 -0.6**
BMRD Maredsous 45.35 316 P **P** **05 52 48.1 -1.3**
BMRD x x 05 52 54.3
DOU Dourbes 45.42 315 P **P** **05 52 49.9 -0.1**
comp=Z,28nm,1.1s
NC405 NORSAR Array S 45.45 332 P **P** **05 52 48.8 -1.4**
TAM Tamanrasset 45.60 277 P **P** **05 52 52.8 +0.8**
TAM pmax pmax
comp=Z,16nm,0.8s
TAM Tamanrasset 45.60 277 P **P** **05 52 52.8 +0.8**
TAM IAmb IAmb 05 52 59.3
comp=Z,16nm,0.8s
NB2 NORSAR Subarra 45.63 331 P **P** **05 52 50.1 -1.5**
comp=Z,26nm,1.2s,baz=119,slow=8.6
NB2 NORSAR Subarra 45.63 331 P **P** **05 52 50.1 -1.5**
baz=119,slow=8.6
NOA NORSAR Array B 45.63 331 P **P** **05 52 50.0 -1.5**
comp=Z,11nm,0.9s,baz=119,slow=7.4,SNR=18
NOA LR LR 06 14 37.7
comp=Z,843nm,21.2s,baz=125,slow=40
SNF Seneffe 45.70 316 P **P** **05 52 51.4 -0.8**
SNF pP **pP** **05 52 54.5 -1.3**
KONO Kongsberg 45.71 329 *i* P **P** **05 52 53.4 +1.2**
KONO pmax pmax
comp=Z,21nm,1.2s
NC204 NORSAR Array S 45.93 332 IAmb IAmb 05 53 18.8
comp=Z,42nm,1.1s
XAN Xi'an 46.03 67 P **P** **05 52 56.0 +0.8**
XAN pP sP 05 53 06.3 +6.0
XAN PcP **PcP** **05 54 27.0 -4.7**
XAN S **S** **05 59 47.0 +6.5**
XAN pmax pmax
comp=Z,22nm,1.1s
XAN pmax pmax
comp=Z,120nm,3.9s
XAN LR LR
comp=Z,1µm,17.7s
XAN LR LR
comp=Z,920nm,18.4s
XAN LR LR
comp=Z,2µm,22.1s
XAN Xi'an 46.03 67 P **P** **05 52 55.3 +0.1**
XAN pmax pmax
comp=Z,35nm,1.1s
XAN Xi'an 46.03 67 P **P** **05 52 55.3 +0.1**
XAN IAmb IAmb 05 53 14.7
comp=Z,35nm,1.1s
KEV Kevo 46.33 347 P **P** **05 52 55.4 -1.5**
KEV pmax pmax
comp=Z,26nm,0.8s
KEV Kevo 46.33 347 P **P** **05 52 55.4 -1.5**
KEV IAmb IAmb 05 53 18.5
comp=Z,26nm,0.8s
ARCES ARCESS Array B 46.47 346 P **P** **05 52 57.7 -0.4**
comp=Z,8.6nm,0.7s,baz=141,slow=9.0,SNR=31
ARE0 ARCESS Array S 46.47 346 *e*P **P** **05 52 58.1 +0.1**
KTK1 Kautokeino 46.59 345 *e*P **P** **05 52 58.3 -0.7**
SKAR Skarslia 46.74 330 *e*P **P** **05 53 00.9 +0.5**
ENH Enshi 47.00 72 P **P** **05 53 03.3 +0.5**
ENH IAmb IAmb 05 53 40.1
comp=Z,22nm,1.0s
DOMB Dombas 47.01 332 *e*P **P** **05 53 02.0 -0.4**
BLS5 Blasjo 47.08 328 *e*P **P** **05 53 02.7 -0.3**
NSS Namsos 47.10 336 *e*P **P** **05 53 02.6 -0.3**
MOR8 Moi Rana 47.16 339 *e*P **P** **05 53 04.0 +0.4**
ODD1 Odda 47.19 329 *e*P **P** **05 53 04.4 +0.6**
STOK Stokkvaagen 47.73 338 *e*P **P** **05 53 08.0 +0.1**
HAMF Hammerfest 47.73 346 *e*P **P** **05 53 07.5 -0.3**
HHC Hu-ho-hao-te 47.77 58 *e*P **P** **05 53 09.5 +0.8**
HHC *e*S **S** **06 00 05.3 +0.1**
HHC sS sS 06 00 18.3 +7.1
HHC SS **SS** **06 03 31.5 -1.9**
HHC pmax pmax
comp=Z,5.0nm,0.9s
HHC pmax pmax
comp=Z,110nm,5.0s
HHC LR LR
comp=Z,610nm,16.9s
HHC LR LR
comp=Z,420nm,16.7s
HHC LR LR
comp=Z,590nm,17.0s
KONS Konsvik 47.79 338 *e*P **P** **05 53 07.2 -1.2**
MOL Molde 47.88 332 *e*P **P** **05 53 07.5 -1.6**
HYA Hoyanger 47.88 330 *e*P **P** **05 53 10.1 +1.0**
BER Bergen 47.97 329 *e*P **P** **05 53 10.7 +0.8**
STEI Steigen 47.99 341 *e*P **P** **05 53 09.1 -0.8**
ASK Askoy 48.07 329 *e*P **P** **05 53 10.8 +0.2**
TRO Tromso 48.10 344 *e*P **P** **05 53 09.5 -1.2**
LOF Lofoten 48.62 340 *e*P **P** **05 53 13.9 -0.8**
LSZ Lusaka 49.52 216 P **P** **05 53 22.8 +0.4**
LSZ pmax pmax
comp=Z,13nm,1.0s
LSZ Lusaka 49.52 216 P **P** **05 53 22.8 +0.4**
LSZ IAmb IAmb 05 53 45.8
comp=Z,13nm,1.0s
QIZ Qiongzhong 50.09 87 P **P** **05 53 27.8 +1.1**
QIZ S **S** **06 00 37.0 -1.1**
QIZ sS **sS** **06 00 46.8 +2.6**
QIZ LR LR
comp=Z,700nm,22.1s
QIZ LR LR
comp=Z,340nm,19.1s
QIZ LR LR
comp=Z,490nm,24.5s
ESDC Sonseca Array 50.86 301 P **P** **05 53 31.8 -0.6**

comp=Z,5.2nm,0.4s,baz=74,slow=7.1,SNR=36
ESDC LR LR 06 17 14.2
comp=Z,739nm,19.0s,baz=140,slow=39
BOD Bodaibo 51.06 36 *e*P **P 05 53 33.4 -0.1**
BOD pmax pmax
comp=Z,84nm,1.2s
WHN Wuhan 51.09 71 ⇓P **P 05 53 34.8 +0.7**
WHN LR LR
comp=Z,2μm,16.5s
WHN LR LR
comp=Z,2μm,17.3s
WHN LR LR
comp=Z,2μm,19.1s
PAB San Pablo 51.17 301 P **P 05 53 34.0 -0.7**
PAB pmax pmax
comp=Z,16nm,0.8s
PAB San Pablo 51.17 301 P **P 05 53 34.0 -0.7**
PAB lAmb lAmb 05 53 42.9
comp=Z,16nm,0.8s
BJO1 Bjornoya 51.57 348 *e*P **P 05 53 36.3 -0.7**
TOA0 Torodi Ar. Sit 52.26 266 P **P 05 53 41.8 -1.2**
TORD Torodi Ar. Bea 52.26 266 P **P 05 53 42.0 -1.1**
comp=Z,42nm,0.5s,baz=64,slow=7.3,SNR=214
TORD S **S 06 01 05.9 -2.3**
comp=Z,1.6nm,1.0s,baz=67,slow=10,SNR=3.8
TORD LR LR 06 18 17.3
comp=Z,2μm,18.2s,baz=60,slow=39
TIA Tai'an 52.46 63 P **P 05 53 40.0 -4.3**
TIA pmax pmax
comp=Z,3.0nm,0.5s
PBRG Braganca 52.81 304 *e*P **P 05 53 46.5 -0.4**
comp=Z,21nm,1.4s
MVO Moncorvo 53.08 303 *e*P **P 05 53 49.1 +0.2**
comp=Z,43nm,1.3s
MVO *e*S **S 06 01 16.1 -2.9**
MVO Moncorvo 53.08 303 *e*LR LR 06 12 29.8
comp=Z,493nm,16.0s
PMRV Marv??o 53.52 301 *e*P **P 05 53 51.8 -0.3**
comp=Z,23nm,1.0s
PMRV *e*S **S 06 01 26.2 +1.2**
PMRV Marv??o 53.52 301 *e*LR LR 06 12 22.5
comp=Z,449nm,22.0s
MTE Manteigas 53.54 302 *e*P **P 05 53 53.6 +1.3**
comp=Z,27nm,1.5s
MTE *e*S **S 06 01 27.7 +2.4**
MTE Manteigas 53.54 302 *e*LR LR 06 13 58.5
comp=Z,596nm,18.0s
PCBR Castelo Branco 53.55 301 *e*P **P 05 53 52.4 +0.2**
comp=Z,37nm,1.4s
PVIS Viseu 53.77 302 *e*P **P 05 53 54.2 +0.2**
comp=Z,43nm,1.0s
PCAB Cabril 53.78 304 *e*P **P 05 53 53.8 -0.2**
comp=Z,35nm,1.9s
PGAV Gavieira, Arco 53.94 304 *e*P **P 05 53 55.7 +0.5**
comp=Z,50nm,1.5s
PGAV Gavieira, Arco 53.94 304 *e*LR LR 06 11 04.2
comp=Z,508nm,18.0s
HSPB Hornsund (broa 53.96 350 *e*P **P 05 53 55.7 +1.1**
PVAQ Vaqueiros 54.03 298 *e*P **P 05 53 57.9 +2.1**
PVAQ Vaqueiros 54.03 298 *e*LR LR 06 12 32.5
comp=Z,531nm,20.0s
PBEJ Beja 54.06 299 *e*P **P 05 53 55.7 -0.4**
EVO Evora 54.11 300 *e*P **P 05 53 56.3 -0.1**
comp=Z,33nm,1.4s
PMTG Montargil 54.21 300 *e*P **P 05 53 56.3 -0.8**
COI Coimbra 54.22 302 P **P 05 53 57.1 0.0**
COI pmax pmax
comp=Z,35nm,0.8s
COI Coimbra 54.22 302 *e*P **P 05 53 57.6 +0.5**
comp=Z,33nm,1.3s
COI Coimbra 54.22 302 P **P 05 53 57.1 0.0**
PCVE Castro Verde 54.25 299 *e*P **P 05 53 57.6 +0.1**
comp=Z,39nm,1.7s
PCAS Casmilo, Conde 54.30 302 *e*P **P 05 53 58.2 +0.4**
PNCL Nicolau / Gran 54.57 299 *e*P **P 05 53 59.8 +0.1**
PNCL *e*S **S 06 01 42.3 +3.2**
NJ2 Nanjing 54.58 68 *e*P **P 05 53 58.5 -1.4**
NJ2 pmax pmax
comp=Z,11nm,0.5s
SPA0 Spitsbergen Ar 54.67 351 *e*P **P 05 54 00.1 +0.2**
PFVI Vila Bisbo 54.95 298 *e*P **P 05 54 02.2 -0.3**
comp=Z,90nm,1.4s
KBS Kingsbay 55.83 351 *e*P **P 05 54 08.1 -0.1**
MDSI Maura Dua 56.06 116 P **P 05 54 10.7 -0.1**
comp=Z,6μmcomp=Z,14nm,1.1s
CN2 Changchun 57.83 53 *e*P **P 05 54 23.0 +0.1**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
ZEA Zeya 58.18 42 *e*P **P 05 54 28.0 +2.8**
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=E,24nm,1.0s
ZEA pmax pmax
comp=Z,35nm,1.0s
ZEA MLR MLR
comp=Z,1μm,15.0s
ZEA MLR MLR
comp=E,600nm,17.0s
ZEA MLR MLR
comp=N,500nm,12.0s
TSUM Tsumeb 58.71 223 P **P 05 54 29.9 +0.4**
TSUM lAmb lAmb 05 54 36.1
comp=Z,11nm,0.8s
LBTB Lobatse 59.01 212 P **P 05 54 31.5 +0.1**
LBTB pmax pmax
comp=Z,34nm,1.1s
LBTB Lobatse 59.01 212 P **P 05 54 31.5 +0.1**
YAK Yakutsk 59.35 32 *e*P **P 05 54 36.0 +2.8**
YAK *e**PP sP 05 54 45.3 +6.9
YAK *e*S **S 06 02 44.3 +2.9**
YAK *e**SS sS 06 02 55.5 +7.9
YAK pmax pmax
comp=Z,29nm,1.1s
YAK pmax pmax
comp=E,17nm,1.1s
YAK smax smax
comp=N,40nm,2.0s
YAK smax smax
comp=E,31nm,2.3s
YAK MLR MLR
comp=Z,858nm,17.0s
YAK MLR MLR
comp=E,773nm,17.0s
TIXI Tiksi 59.68 21 *i*P **P 05 54 35.7 +0.4**
TIXI pmax pmax
comp=Z,7.0nm,1.1s
TIXI Tiksi 59.68 21 P **P 05 54 35.2 -0.1**
DAG Danmarks Havn 60.76 345 *i*P **P 05 54 43.2 +0.6**
DAG Danmarks Havn 60.76 345 *i*P **P 05 54 43.2 +0.6**
KSRS Korea Array 60.77 60 P **P 05 54 41.4 -2.0**
comp=Z,4.2nm,0.8s,baz=277,slow=6.7,SNR=6.6
KSRS LR LR 06 24 56.6
comp=Z,474nm,19.9s,baz=290,slow=40
DBIC Dimbokro 60.84 263 P **P 05 54 43.2 -0.9**
comp=Z,30nm,0.8s,baz=38,slow=6.2,SNR=18
DBIC LR LR 06 21 59.7
comp=Z,1μm,18.7s,baz=43,slow=37
DBIC Dimbokro 60.84 263 P **P 05 54 44.1 -0.1**
DBIC pmax pmax
comp=Z,28nm,0.8s
DBIC Dimbokro 60.84 263 P **P 05 54 44.0 -0.1**
KIC Kosan Boka 60.87 262 *e*P **P 05 54 43.5 -0.9**
comp=Z,62nm,0.9s
TIC Toumodi 60.99 263 *e*P **P 05 54 44.6 -0.6**
SCO Scoresbysund 61.10 338 *i*P **P 05 54 45.9 +0.8**
SCO pmax pmax
comp=Z,14nm,1.4s
SCO Scoresbysund 61.10 338 *i*P **P 05 54 45.9 +0.8**
comp=Z,14nm,1.4s
LIC Lamto 61.19 262 *e*P **P 05 54 46.0 -0.5**
comp=Z,149nm,1.0s
NOR Nord 61.31 351 *i*P **P 05 54 46.4 0.0**
NOR Nord 61.31 351 *i*P **P 05 54 46.4 0.0**
KLR Kul'dur 61.40 46 *ce*P **P 05 54 47.3 -0.2**
KLR pmax pmax
comp=Z,12nm,0.9s
BOSA Boshof 62.23 210 P **P 05 54 52.9 -0.5**
comp=Z,9.0nm,0.6s,baz=18,slow=7.0,SNR=21
BOSA LR LR 06 22 29.1
comp=Z,740nm,18.2s,baz=33,slow=37
BOSA Boshof 62.23 210 P **P 05 54 53.4 +0.1**
BOSA pmax pmax
comp=Z,39nm,1.4s
BOSA Boshof 62.23 210 P **P 05 54 53.4 +0.1**
USRK Ussuriysk Ar. 62.42 52 P **P 05 54 54.2 -0.2**
comp=Z,1.5nm,0.7s,baz=278,slow=4.2,SNR=3.4
USRK LR LR 06 25 12.9
comp=Z,1μm,19.5s,baz=278,slow=39
PMOZ Porto Moniz, M 62.56 295 *e*LR LR 06 18 40.6
comp=Z,380nm,18.0s
SUMG Summit 66.14 341 *i*P **P 05 55 19.4 +0.6**
SUMG Summit 66.14 341 P **P 05 55 18.9 +0.1**
SUMG Summit 66.14 341 *i*P **P 05 55 19.4 +0.6**
MPSI Mapaga 66.82 102 P **P 05 55 24.1 +0.5**
SUR Sutherland 67.45 212 P **P 05 55 28.9 +1.5**
MJAR Matsushiro Arr 68.95 59 P **P 05 55 39.0 +2.2**
comp=Z,2.2nm,0.7s,baz=302,slow=7.9,SNR=5.3
MJAR LR LR 06 28 21.3
comp=Z,380nm,18.6s,baz=260,slow=38
YSS Yuzh-Sakhalins 69.09 47 *e*P **P 05 55 39.0 +1.6**
YSS *e* 05 55 58.1
YSS pmax pmax
comp=Z,20nm,0.5s
YSS MLR MLR
comp=Z,1μm,19.0s
YSS MLR MLR
comp=N,600nm,12.0s
YSS MLR MLR
comp=E,800nm,18.0s
MA2 Magadan 69.90 33 *i*P **P 05 55 41.8 -0.4**
MA2 pmax pmax
comp=Z,6.0nm,0.8s
SFJD Kangerlussuaq 71.94 337 *e*P **P 05 55 58.7 +4.3**
SFJD Kangerlussuaq 71.94 337 *i*P **P 05 55 58.7 +4.3**
BILL Bilibino 72.86 22 *i*P **P 05 55 59.8 -0.1**
BILL *i* 05 56 18.7
BILL *i*S **S 06 05 17.7 -8.0**
BILL pmax pmax
comp=Z,10.0nm,1.3s
BILL MLR MLR
comp=Z,1μm,19.0s
BILL Bilibino 72.86 22 P **P 05 56 01.8 +1.8**
BILL lAmb lAmb 05 56 33.3
comp=Z,12nm,1.0s
PETK Petropavlovsk- 75.89 37 P **P 05 56 18.3 +0.5**
comp=Z,2.7nm,0.9s,baz=296,slow=4.4,SNR=5.2
PETK LR LR 06 32 45.1
comp=Z,391nm,18.6s,baz=290,slow=38
PET Petropavlovsk 76.44 37 *e*P P 05 56 25.6 +4.7
PET *e*S **S 06 06 05.4 -0.7**
PET MLR MLR
comp=Z,600nm,18.0s
FITZ Fitzroy Crossi 81.03 115 P **P 05 56 47.2 +0.6**
C36M Paulatuk 84.34 360 P **P 05 57 02.5 -0.5**
INK Inuvik 85.14 3 lAmb lAmb 05 57 12.0
comp=Z,12nm,1.2s
SCHQ Schefferville 85.19 331 P **P 05 57 09.8 +2.1**
comp=Z,2.2nm,0.6s,baz=53,slow=4.4,SNR=5.9
SCHQ LR LR 06 37 53.5
comp=Z,491nm,18.5s,baz=46,slow=38
EPYK Eagle Plains 86.84 5 lAmb lAmb 05 57 20.8
comp=Z,19nm,1.0s
IL31 87.24 10 P **P 05 57 16.4 -1.2**
ILAR Eielson Array 87.24 10 P **P 05 57 17.0 -0.6**
comp=Z,2.8nm,0.8s,baz=326,slow=3.6,SNR=18
ILAR PP **PP 06 00 44.4 +3.7**
comp=Z,1.7nm,0.9s,baz=335,slow=6.0,SNR=6.3
ILAR PKKPbc **PKKPbc 06 15 07.8 -1.9**
comp=Z,0.5nm,0.7s,baz=184,slow=2.5,SNR=5.0
ILAR LR LR 06 38 35.1
comp=Z,345nm,21.8s,baz=326,slow=37
ILAR Eielson Array 87.24 10 P **P 05 57 17.0 -0.6**
HDA Harding Lake 87.57 10 lAmb lAmb 05 57 24.6
comp=Z,7.5nm,0.8s
EGAK Eagle 87.98 7 lAmb lAmb 05 57 44.6
comp=Z,20nm,1.1s
RND Reindeer 88.21 11 lAmb lAmb 05 57 30.7
comp=Z,10nm,1.1s
SCRK Sand Creek 88.40 9 P **P 05 57 23.7 +0.3**
SCRK lAmb lAmb 05 57 29.8
comp=Z,16nm,1.0s
DHY Denali Highway 88.76 10 P **P 05 57 27.0 +1.9**
DHY lAmb lAmb 05 57 50.8
comp=Z,8.3nm,1.1s
DAWY Dawson 88.86 7 P **P 05 57 25.9 +0.4**
DAWY lAmb lAmb 05 57 31.6
comp=Z,9.6nm,1.0s
WRA Warramunga Arr 89.06 113 P **P 05 57 27.2 +0.2**
comp=Z,2.0nm,0.6s,baz=312,slow=4.1,SNR=18
WRA Warramunga Arr 89.06 113 *i*P **P 05 57 26.6 -0.4**
WRA pmax pmax
comp=Z,2.0nm,0.6s
WRAB Tennant Creek 89.07 113 P **P 05 57 27.7 +0.6**
WRAB pmax pmax
comp=Z,12nm,0.9s
WRAB Tennant Creek 89.07 113 P **P 05 57 27.7 +0.6**
WRAB lAmb lAmb 05 57 39.4
comp=Z,12nm,0.9s
WB2 Warramunga Arr 89.07 113 P **P 05 57 27.8 +0.7**
WB2 lAmb lAmb 05 57 39.8
comp=Z,13nm,0.9s
YKA Yellowknife Ar 90.89 356 P **P 05 57 35.2 +0.4**
comp=Z,4.2nm,0.9s,baz=6.1,slow=4.5,SNR=27
YKA PP **PP 06 01 14.5 +4.7**
comp=Z,6.0nm,1.3s,baz=4.1,slow=7.2,SNR=4.4
YKA PKKPbc **PKKPdf 06 14 57.5 +2.0**
comp=Z,0.1nm,0.5s,baz=173,slow=2.3,SNR=6.7
YKA LR LR 06 42 42.9
comp=Z,454nm,21.9s,baz=0.0,slow=38
FCC Fort Churchill 91.36 345 P **P 05 57 36.9 -0.1**
FCC pmax pmax
comp=Z,8.0nm,1.0s
FCC Fort Churchill 91.36 345 P **P 05 57 36.9 -0.1**
FCC lAmb lAmb 05 57 46.2
comp=Z,8.4nm,0.9s
MAW Mawson 94.06 177 LR LR 06 35 06.4
comp=Z,240nm,19.2s,baz=346,slow=32
RCBR Riachuelo 94.09 266 LR LR 06 38 55.5
comp=Z,520nm,21.7s,baz=62,slow=35
SYO Syowa Base 96.06 186 ⇑ *ep*P pP 05 58 03.0 +1.0
ULM Lac du Bonnet 99.48 342 LR LR 06 45 21.7
comp=Z,368nm,20.7s,baz=20,slow=37
PDAR Pinedale Array 109.68 349 PKiKP **PKiKP 06 03 02.9 +0.1**
comp=Z,0.2nm,0.4s,baz=336,slow=1.1,SNR=1.9
PDAR PP **PP 06 03 32.2 -0.5**
comp=Z,0.8nm,0.7s,baz=66,slow=1.8,SNR=3.6
NVAR Mina Array Bea 115.08 355 PKP **PKPdf 06 03 14.2 +1.0**
comp=Z,0.8nm,0.6s,baz=48,slow=1.3,SNR=5.8
QSPA South Pole Qui 116.44 180 **PKiKP 06 03 14.6 +0.1**
MNTX Cornudas Mount 119.32 342 **PKiKP 06 03 21.9 +0.6**
TX31 Lajitas Ar. Si 121.01 339 **PKiKP 06 03 25.4 +0.6**
TX32 Lajitas Array 121.01 339 **PKiKP 06 03 25.8 +1.0**
TXAR Lajitas Array 121.01 339 PKP **PKiKP 06 03 24.6 -0.1**
comp=Z,0.9nm,0.8s,baz=48,slow=1.3,SNR=4.6
PTBC PUERTO BERRIO 121.63 297 *e*P **PKPdf 06 03 25.3 -0.8**
ROSC El Rosal 122.52 295 PKP **PKiKP 06 03 28.9 +0.4**
comp=Z,5.2nm,0.5s,baz=299,slow=21,SNR=5.2
ROSC El Rosal 122.52 295 *e*P **PKiKP 06 03 29.7 +1.2**
NORC Norcasia 122.54 296 *e*P **PKPdf 06 03 27.6 -0.2**
DBBC Dabeiba 122.73 299 *e*P **PKiKP 06 03 29.5 +1.0**
GUY2C Guyana, Caldas 123.14 296 *e*P **PKiKP 06 03 30.1 +0.3**
RREF El Recreo 123.31 296 *e*P **PKiKP 06 03 32.6 +2.3**
PRAC Prado 123.63 295 *e*P **PKPdf 06 03 27.6 -2.3**
MACC Macarena, Meta 123.66 292 *e*P **PKiKP 06 03 30.1 -0.2**
PCON Cinco Dias 125.66 294 *e*P **PKiKP 06 03 35.6 +0.7**
SOTA Rioblanco 125.94 294 *e*P **PKiKP 06 03 36.0 +0.7**
LPAZ La Paz 127.16 269 PKP **PKPdf 06 03 36.0 -1.3**
comp=Z,1.4nm,0.8s,baz=352,slow=3.9,SNR=8.5
LPAZ La Paz 127.16 269 PKIKP **PKPdf 06 03 36.0 -1.3**
LPAZ La Paz 127.16 269 **PKiKP 06 03 38.0 +0.2**
PB11 IPOC Station P 129.70 266 **PKiKP 06 03 42.5 +0.3**
AC02 Maricunga 131.14 257 **PKiKP 06 03 46.5 +1.2**
PLCA Paso Flores 133.84 238 PKP **PKiKP 06 03 49.6 -0.3**
comp=Z,3.1nm,1.0s,baz=102,slow=9.3,SNR=3.9

MAN 27 06:07:50.8, 8.60N×125.88E, h100km, mb4.3, ML3.1, MS2.8, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUKP	**Musuan**	**1.08**	**229**	*e*P	Pn	06 08 12.3	+0.2
BUKP				*e*S	Sn	06 08 29.4	+1.2
CGP	**Cagayan de Oro**	**1.18**	**263** ⇑	*e*P	Pn	06 08 13.6	+0.4
CGP				*e*S	Sn	06 08 30.9	+0.7
KCP	**Kidapawan**	**1.76**	**206** ⇑	*e*P	Pn	06 08 27.9	+7.5
KCP				*i* S	Sn	06 08 45.2	+2.3
DDMP	**Don Marcelino,**	**2.48**	**184**	*e*P	Pn	06 08 31.0	+1.3
DDMP				*e*S	Sn	06 08 59.7	+0.2

IDC 27 06:15:27.4±3.7, 54.50N×87.05E, h0km, mb1 2.5/2, mb1mx2.5/48, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=33.8km s-min=22.5km az=46.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.42**	**248**	*i*		06 24 00.0	
	baz=68,slow=323,SNR=4.2						
ZALV	**Zalesovo Beam**	**1.42**	**248**	Pg	Pn	06 15 52.6	-1.8
	0.5nm,0.3s,baz=61,slow=17,SNR=5.2						
ZALV				Lg	Lg	06 16 12.5	
	0.3nm,0.3s,baz=62,slow=21,SNR=2.6						
KURBB	**Kurchatov Arra**	**6.48**	**237**	Pn	Pn	06 17 05.2	+1.3
	0.0nm,0.3s,baz=54,slow=14,SNR=3.2						
MKAR	**Makanchi Array**	**8.28**	**203**	Pn	Pn	06 17 29.5	+0.8
	0.1nm,0.3s,baz=21,slow=13,SNR=1.9						

ATH ***27*** *06:16:58.7, 40.42N×26.05E, h29km±1km, ML2.6/8, Error ellipse: s-maj=2.1km s-min=0.9km az=255.0*
DDA ***27*** *06:16:58.6, 40.41N×26.13E, h14km±1km, ML3.1*
ISK ***27*** *06:16:58.5, 40.42N×26.14E, h8km, ML2.7/14*
THE ***27*** *06:16:59.2, 40.41N×26.10E, h12km±1km, ML2.4/7, Error ellipse: s-maj=1.0km s-min=0.5km az=270.0*

ISC 27 06:16:58.8±0.8, 40.42N±0.02×26.13E±0.02, h16km±6km, n48, σ0 51/81, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GELI	**Tayfur-Gelibol**	**0.27**	**95**	PG	**Pg**	**06 17 04.3**	**-0.3**
GELI				SG	**Sg**	**06 17 08.4**	**-0.2**
GOKA	**anakkale-Gk**	**0.28**	**216** ⇑	*i*P	**Pg**	**06 17 04.9**	**0.0**
GOKA				*i* S	**Sg**	**06 17 09.3**	**+0.3**
GOKA				IAML		06 17 10.0	
	comp=Z,2μm,0.2s						
GADA	**Gvkgeada**	**0.29**	**217**	P	**Pg**	**06 17 04.8**	**-0.2**
GADA				S	**Sg**	**06 17 09.4**	**+0.3**
	comp=Z,875nm,0.2s						
GADA	**Gvkgeada**	**0.29**	**217**	PG	**Pg**	**06 17 04.9**	**-0.1**
GADA				SG	**Sg**	**06 17 09.5**	**+0.3**
ENEZ	**Enez**	**0.32**	**4**	P	**Pb**	**06 17 05.8**	**-0.3**
ENEZ	**Enez**	**0.32**	**4**	PG	**Pg**	**06 17 05.3**	**-0.2**
ERIK	**Erikli-Kesan**	**0.39**	**50**	PG	**Pg**	**06 17 06.5**	**-0.2**
ERIK				SG	**Sg**	**06 17 12.3**	**+0.2**
SMTH	**Samothraki Isl**	**0.46**	**276**	P	**Pg**	**06 17 07.7**	**-0.3**
SMTH				S	**Sg**	**06 17 14.1**	**-0.1**
	comp=Z,620nm,0.2s						
SMTH	**Samothraki Isl**	**0.46**	**276**	P	**Pg**	**06 17 07.6**	**-0.4**
SMTH				S	**Sg**	**06 17 14.0**	**-0.1**
SMTH				AML	AML	06 17 14.9	
	comp=E,1426μm,0.2s						
SMTH				AML	AML	06 17 18.7	
	comp=N,1214μm,0.2s						
LPK	**Lapseki**	**0.49**	**95**	PG	**Pg**	**06 17 08.4**	**-0.2**
BOZC	**Bozcaada**	**0.58**	**185**	PG	**Pg**	**06 17 09.9**	**-0.4**
BOZC	**Bozcaada**	**0.58**	**185**	*i* P	**Pg**	**06 17 09.7**	**-0.6**
BOZC				*i* S	**Sg**	**06 17 17.6**	**-0.5**
KESN	**Edirne-Kesan**	**0.58**	**46**	*i* P	**Pg**	**06 17 10.2**	**-0.4**
KESN				*i* S	**Sg**	**06 17 18.5**	**+0.1**
EZN	**Ezine**	**0.61**	**165**	P	**Pg**	**06 17 10.3**	**-0.6**
EZN				S	**Sb**	**06 17 19.5**	**0.0**
EZN	**Ezine**	**0.61**	**165**	PG	**Pg**	**06 17 10.5**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**0.75**	**154**	*i* P	**Pg**	**06 17 13.1**	**-0.4**
BAYC				*i* S	**Sb**	**06 17 24.1**	**+0.5**
RKY	**Sarkoy-Tekirda**	**0.84**	**71**	PG	**Pg**	**06 17 14.2**	**-1.1**
RKY				SG	**Sb**	**06 17 26.7**	**+0.4**
SART	**Tekirdag**	**0.85**	**71**	*i* P	**Pg**	**06 17 14.8**	**-0.5**
SART				*i* S	**Sb**	**06 17 26.4**	**+0.1**
RDO	**Rodhopi**	**0.85**	**329**	P	**Pg**	**06 17 15.2**	**-0.2**
RDO				S	**Sb**	**06 17 27.5**	**+1.1**
	comp=N,212nm,0.3s						
RDO	**Rodhopi**	**0.85**	**329**	P	**Pg**	**06 17 15.2**	**-0.2**
RDO				S	**Sg**	**06 17 26.6**	**0.0**
RDO				AML	AML	06 17 29.7	
	comp=N,575μm,0.3s						
RDO				AML	AML	06 17 34.7	
	comp=E,288μm,0.2s						
LIA	**Limnos Island**	**0.89**	**234**	P	**Pg**	**06 17 15.4**	**-0.7**
LIA				S	**Sb**	**06 17 28.2**	**+0.7**
	comp=E,412nm,0.4s						
LIA	**Limnos Island**	**0.89**	**234**	P	**Pg**	**06 17 15.4**	**-0.7**
LIA				S	**Sb**	**06 17 28.0**	**+0.4**
LIA				AML	AML	06 17 28.9	
	comp=N,786μm,0.4s						
LIA				AML	AML	06 17 31.5	
	comp=E,809μm,0.5s						
KRBG	**Karabiga-Canak**	**0.90**	**91**	PG	**Pg**	**06 17 15.6**	**-0.6**
KNL	**Balıkesir**	**1.08**	**98**	*i* P	**Pb**	**06 17 18.9**	**-0.2**
KNL				*i* S	**Sn**	**06 17 35.7**	**+1.8**
KNL				IAML		06 17 37.0	
	comp=E,699nm,0.6s						
THAS	**Thassos island**	**1.09**	**280**	P	**Pb**	**06 17 19.1**	**-0.1**
THAS				S	**Sb**	**06 17 33.7**	**+0.5**
	comp=E,235nm,0.2s						
THAS	**Thassos island**	**1.09**	**280**	P	**Pb**	**06 17 18.7**	**-0.5**
THAS				S	**Sb**	**06 17 33.6**	**+0.4**
THAS				AML	AML	06 17 35.6	
	comp=E,535μm,0.3s						
THAS				AML	AML	06 17 35.9	
	comp=N,461μm,0.3s						
MRMT	**Marmara Adasi**	**1.14**	**80**	PN	**Pb**	**06 17 19.8**	**-0.3**
MRMT				SN	**Sn**	**06 17 35.9**	**+0.5**
PRK	**Paraskevi**	**1.18**	**174**	P	**Pg**	**06 17 21.3**	**-0.3**
PRK				S	**Sg**	**06 17 37.5**	**+0.6**
PRK				AML	AML	06 17 39.3	
	comp=E,2433μm,0.9s						
PRK				AML	AML	06 17 39.6	
	comp=N,3149μm,0.6s						
AYVA	**Ayvalik**	**1.19**	**158**	*i* P	**Pg**	**06 17 21.4**	**-0.5**
AYVA				*i* S	**Sn**	**06 17 36.8**	**+0.1**
AYVA				IAML		06 17 39.0	
	comp=N,886nm,0.6s						
SIGR	**SIGRI**	**1.23**	**190**	P	**Pn**	**06 17 21.3**	**+0.1**
SIGR				S	**Sg**	**06 17 38.1**	**-0.3**
	comp=N,500nm,0.4s						
SIGR	**SIGRI**	**1.23**	**190**	P	**Pn**	**06 17 21.4**	**+0.1**
SIGR				S	**Sn**	**06 17 37.8**	**+0.3**
SIGR				AML	AML	06 17 39.4	
	comp=N,923μm,0.3s						
SIGR				AML	AML	06 17 39.4	
	comp=E,1071μm,0.4s						
EFSA	**Agios Efstrati**	**1.24**	**225**	P	**Pn**	**06 17 21.5**	**+0.1**
EDC	**Edincik**	**1.33**	**93**	PN	**Pb**	**06 17 23.1**	**-0.3**
BALY	**Balya**	**1.33**	**120**	*i* P	**Pb**	**06 17 23.8**	**+0.3**
BALY				*i* S	**Sg**	**06 17 41.9**	**0.0**
KAVA	**Kavala**	**1.35**	**296**	P	**Pn**	**06 17 23.2**	**+0.2**
KAVA	**Kavala**	**1.35**	**296**	P	**Pn**	**06 17 22.8**	**-0.2**
KAVA				S	**Sn**	**06 17 40.3**	**-0.3**
KAVA				AML	AML	06 17 45.0	
	comp=N,141μm,0.5s						
KAVA				AML	AML	06 17 47.3	
	comp=E,119μm,0.4s						
DKL	**Dikili**	**1.48**	**156**	PN	**Pb**	**06 17 26.1**	**+0.2**
EDRB	**Edirne**	**1.50**	**18**	PN	**Pb**	**06 17 26.2**	**-0.1**
KIRK	**Kırklareli**	**1.54**	**28**	*i* P	**Pn**	**06 17 25.7**	**0.0**
KIRK				*i* S	**Sb**	**06 17 46.4**	**0.0**
BALB	**Balikesir**	**1.56**	**119**	PN	**Pb**	**06 17 26.8**	**-0.4**
STEP	**BALIKESIR_Sava**	**1.61**	**130**	*i* P	**Pn**	**06 17 27.1**	**+0.5**
STEP				*i* S	**Sg**	**06 17 49.5**	**-1.2**
ZEDA	**zmir-Bergama**	**1.63**	**153**	*i* P	**Pn**	**06 17 27.0**	**+0.2**
ZEDA				*i* S	**Sb**	**06 17 48.3**	**-0.5**
OUR	**Ouranopolis**	**1.64**	**268**	P	**Pn**	**06 17 26.4**	**-0.6**
OUR	**Ouranopolis**	**1.64**	**268**	P	**Pn**	**06 17 26.3**	**-0.6**
OUR				AML	AML	06 17 54.8	
	comp=N,266μm,0.3s						
OUR				AML	AML	06 17 54.8	
	comp=E,299μm,0.3s						
DURS	**Dursunbey**	**1.98**	**114**	*i* P	**Pn**	**06 17 32.7**	**+1.0**
DURS				*i* S	**Sg**	**06 18 01.2**	**-1.4**
DURS				IAML		06 18 02.0	
	comp=N,126nm,0.5s						
CHOS	**Chios island**	**2.03**	**182**	P	**Pn**	**06 17 33.0**	**+0.5**
CHOS				S	**Sn**	**06 17 57.9**	**+0.4**
	comp=N,65nm,0.6s						
CHOS	**Chios island**	**2.03**	**182**	P	**Pn**	**06 17 33.0**	**+0.5**
URLA	**Izmir**	**2.09**	**170**	*i* P	**Pn**	**06 17 33.6**	**+0.4**
URLA				*i* S	**Sn**	**06 17 59.0**	**+0.1**

IDC ***27*** *06:24:58.9±2.9, 1.40S×15.25W, h0km, mb4.0/5, mb1 4.1/6, mb1mx3.7/45, mbtmp4.1/6, ML4.1/1, Error ellipse:*

s-maj=68.0km s-min=30.8km az=83.0
NEIC 27 06:24:59.5±1.5, 1.4S±0.1×15.3W±0.1, h10km±2km, mb4.3/2, Error ellipse: s-maj=26.0km s-min=16.3km az=289.0

ISC 27 06:24:59.9±1.3, 1.4S±0.1×15.3W±0.2, h11km, n18, σ1°08/15, mb4.2/6, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**6.44**	**173**	Pn	**Pn**	**06 26 34.2**	**-0.4**
	baz=349,slow=12,SNR=5.5						
H10N2				T	T	06 33 24.7	
	baz=354,slow=73,SNR=19						
H10N3	**ASCENSION HYDR**	**6.45**	**173**	Pn	**Pn**	**06 26 34.3**	**-0.4**
	baz=349,slow=12,SNR=7.5						
H10N3				T	T	06 33 26.1	
	baz=354,slow=73,SNR=44						
H10N1	**ASCENSION HYDR**	**6.46**	**173**	Pn	**Pn**	**06 26 34.4**	**-0.4**
	baz=349,slow=12,SNR=6.4						
H10N1				T	T	06 33 24.7	
	baz=354,slow=73,SNR=51						
ASCN	**Ascension**	**6.56**	**172**	Pn	**Pn**	**06 26 36.2**	**-0.2**
H10S3	**ASCENSION HYDR**	**7.54**	**175**	T	T	06 35 09.1	
	baz=226,slow=74,SNR=14						
H10S2	**ASCENSION HYDR**	**7.54**	**175**	T	T	06 34 54.8	
	baz=354,slow=74,SNR=7.4						
LIC	**Lamto**	**12.73**	**53**	*e*PKIKP	**Pn**	**06 28 03.0**	**+2.0**
	8.8nm,0.4s						
TIC	**Toumodi**	**12.98**	**52**	*e*PKIKP	**Pn**	**06 28 03.2**	**-1.4**
KIC	**Kosan Boka**	**13.04**	**54**	*e*PKIKP	**Pn**	**06 28 03.6**	**-1.7**
	12nm,0.8s						
DBIC	**Dimbokro**	**13.13**	**52**	Pn	**Pn**	**06 28 05.2**	**-1.3**
	1.0nm,0.3s,baz=231,slow=12,SNR=24						
DBIC				Sn	Sn	06 30 21.2	-11
	0.3nm,0.3s,baz=275,slow=16,SNR=1.5						
TOA0	**Torodi Ar. Sit**	**22.19**	**49**	P	**P**	**06 29 55.8**	**-0.6**
TOA0				IAmb	IAmb	06 29 59.5	
	comp=Z,8.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**22.19**	**49**	P	**P**	**06 29 56.7**	**+0.3**
	comp=Z,5.7nm,0.8s,baz=233,slow=11,SNR=20						
PMOZ	**Porto Moniz, M**	**34.08**	**357**	P	**P**	**06 31 44.0**	**-0.6**
MATP	**Matopo**	**46.74**	**117**	P	**P**	**06 33 29.9**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=292,slow=5.1,SNR=2.1						
BOSA	**Boshof**	**47.19**	**129**	P	**P**	**06 33 33.4**	**+0.2**
	comp=Z,2.3nm,0.6s,baz=295,slow=8.4,SNR=7.3						
BOSA	**Boshof**	**47.19**	**129**	IAmb	IAmb	06 33 33.9	
	comp=Z,2.2nm,0.6s						
BRTR	**Keskin Array B**	**60.57**	**42**	P	**P**	**06 35 12.4**	**+1.5**
	comp=Z,0.7nm,0.7s,baz=255,slow=7.3,SNR=4.4						
FINES	**FINESS Array B**	**70.16**	**20**	P	**P**	**06 36 12.5**	**+0.2**
	comp=Z,3.9nm,1.0s,baz=242,slow=3.0,SNR=5.4						

ISC 27 06:32:25.4±1.0, 44.48N±0.04×17.12E±0.06, h8km±6km, n10, σ0°98/19, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGRS	**Mrkonjic Grad**	**0.06**	**202**	*e*Pg	**Pg**	**06 32 27.4**	**+0.1**
MGRS				*e*Sg	**Sg**	**06 32 28.9**	**+0.2**
BLY	**Banja Luka**	**0.28**	**10**	*e*Pg	**Pg**	**06 32 30.9**	**0.0**
BLY				*e*Sg	**Sg**	**06 32 35.2**	**+0.5**
KIJV	**Kijevo**	**0.69**	**228**	*e*Pg	**Pg**	**06 32 38.1**	**-0.7**
KIJV				Sg	**Sg**	**06 32 47.4**	**-0.5**
RICI	**Ricice**	**0.98**	**179**	*e*Pg	**Pn**	**06 32 45.1**	**-0.4**
RICI				Sg	**Sn**	**06 32 59.2**	**-0.2**
MOSL	**Moslavina**	**1.17**	**347**	*e*Pg	**Pg**	**06 32 48.5**	**+0.7**
MOSL				Sg	**Sb**	**06 33 01.7**	**-1.4**
MORI	**Morici**	**1.18**	**239**	*e*Pg	**Pn**	**06 32 46.9**	**-1.3**
MORI				Sg	**Sg**	**06 33 04.0**	**+0.6**
MAKA	**Makarska**	**1.19**	**183**	*e*Pg	**Pn**	**06 32 48.8**	**+0.6**
MAKA				Sg	**Sn**	**06 33 05.4**	**+0.8**
ZIRJ	**Zirje**	**1.34**	**233**	*e*Pn	**Pn**	**06 32 49.1**	**-1.2**
ZIRJ				Sn	**Sg**	**06 33 09.5**	**+1.0**
DUGI	**Dugi Otok**	**1.56**	**253**	*e*Pn	**Pb**	**06 32 54.0**	**-0.4**
DUGI				Sn	**Sb**	**06 33 16.0**	**+1.8**
NVLJ	**Novalja**	**1.61**	**274**	Sn	**Sn**	**06 33 16.3**	**+1.4**

DDA 27 06:47:07.4, 35.20N×26.90E, h16km±5km, MW3.4
ISK 27 06:47:07.6, 35.08N×26.91E, h10km, ML3.1/16
THE 27 06:47:08.1, 35.06N×26.88E, h2km±2km, mb2.4/4, ML2.9/4, Error ellipse: s-maj=3.7km s-min=0.6km az=151.0
ATH 27 06:47:08.0, 35.10N×26.89E, h27km±1km, ML3.0/10, Error ellipse: s-maj=4.5km s-min=1.2km az=334.0
IDC 27 06:47:15.7±8.5, 35.16N×26.70E, h92km±81km, mb3.3/4, mb1 3.3/5, mb1mx3.2/38, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=52.6km s-min=25.1km az=144.0

ISC 27 06:47:06.9±1.4, 34.99N±0.06×26.90E±0.03, h12km±8km, n63, σ1°23/82, mb3.5/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.57**	**283**	P	**Pb**	**06 47 18.9**	**+0.1**
ZKR				S	**Sb**	**06 47 27.8**	**+0.9**
	2µm,0.3s						
ZKR	**Zakros**	**0.57**	**283**	P	**Pb**	**06 47 18.8**	**+0.1**
ZKR				S	**Sb**	**06 47 27.8**	**+0.9**
ZKR				AML	AML	06 47 28.1	
	comp=N,2995µm,0.3s						
ZKR				AML	AML	06 47 28.5	
	comp=E,3506µm,0.3s						
ZKR	**Zakros**	**0.57**	**283**	PG	**Pb**	**06 47 19.0**	**+0.1**
ZKR				SG	**Sb**	**06 47 27.5**	**+0.6**
KARP	**Karpathos**	**0.60**	**21**	P	**Pg**	**06 47 18.5**	**-0.1**
KARP				S	**Sg**	**06 47 27.0**	**+0.4**
	comp=E,5µm,0.4s						
KARP	**Karpathos**	**0.60**	**21**	P	**Pg**	**06 47 18.4**	**-0.3**
KARP				S	**Sg**	**06 47 26.5**	**-0.1**
KARP				AML	AML	06 47 29.2	
	comp=N,6470µm,0.2s						
KARP				AML	AML	06 47 29.3	
	comp=E,10443µm,0.4s						
KARP	**Karpathos**	**0.60**	**21**	PG	**Pg**	**06 47 18.2**	**-0.4**
KARP				SG	**Sg**	**06 47 25.8**	**-0.8**
STIA	**Sitia Lasithi**	**0.69**	**288**	P	**Pb**	**06 47 21.4**	**+0.5**
STIA				S	**Sb**	**06 47 31.9**	**+1.5**
FRMA	**Ierapetra Chan**	**0.95**	**272**	P	**Pg**	**06 47 23.9**	**-1.4**
FRMA				S	**Sg**	**06 47 37.2**	**-0.6**
	comp=E,350nm,0.3s						
NPS	**Neapolis**	**1.09**	**285**	P	**Pn**	**06 47 28.5**	**+0.6**
NPS	**Neapolis**	**1.09**	**285**	P	**Pn**	**06 47 28.6**	**+0.6**
NPS				AML	AML	06 47 49.4	
	comp=N,1348µm,0.5s						
NPS				AML	AML	06 47 51.8	
	comp=E,1697µm,0.7s						
LAST	**Lasithi**	**1.18**	**279**	P	**Pn**	**06 47 30.0**	**+0.8**
LAST				S	**Sn**	**06 47 45.9**	**+0.7**
	comp=E,360nm,0.6s						
LAST	**Lasithi**	**1.18**	**279**	P	**Pn**	**06 47 29.9**	**+0.7**
LAST				AML	AML	06 47 53.2	
	comp=E,682µm,0.5s						
LAST				AML	AML	06 47 56.4	
	comp=N,762µm,0.6s						
ARG	**Arkhangelos**	**1.58**	**39**	P	**Pn**	**06 47 35.2**	**+0.5**
ARG	**Arkhangelos**	**1.58**	**39**	P	**Pb**	**06 47 36.0**	**-0.1**
ARG	**Arkhangelos**	**1.58**	**39**	PN	**Pn**	**06 47 35.5**	**+0.8**
NISR	**Nisiros**	**1.63**	**7**	P	**Pn**	**06 47 35.7**	**+0.3**
NISR	**Nisiros**	**1.63**	**7**	P	**Pn**	**06 47 35.6**	**+0.2**
NISR				AML	AML	06 48 04.7	
	comp=E,1730µm,0.5s						
NISR				AML	AML	06 48 06.2	
	comp=N,880µm,0.6s						
ANAF	**Anafi Island**	**1.65**	**327**	P	**Pn**	**06 47 35.6**	**0.0**
ANAF				S	**Sn**	**06 47 57.5**	**+0.8**
ANAF	**Anafi Island**	**1.65**	**327**	P	**Pn**	**06 47 35.9**	**+0.3**
ANAF				AML	AML	06 48 00.3	
	comp=N,3983µm,0.4s						
ANAF				AML	AML	06 48 04.9	
	comp=E,4249µm,0.4s						
IDI	**Anoyia**	**1.67**	**281**	P	**Pg**	**06 47 38.2**	**-0.8**
IDI				AML	AML	06 48 09.6	
	comp=E,336µm,0.8s						
IDI				AML	AML	06 48 12.8	
	comp=N,316µm,0.4s						
IDI	**Anoyia**	**1.67**	**281**	PN	**Pb**	**06 47 37.6**	**0.0**
KOSK	**Kos Island**	**1.76**	**2**	PN	**Pn**	**06 47 37.8**	**+0.6**
SANT	**Santorini**	**1.81**	**320**	PN	**Pn**	**06 47 38.9**	**+1.0**
DAT	**Datca**	**1.83**	**17**	P	**Pn**	**06 47 38.5**	**+0.3**
DAT	**Datca**	**1.83**	**17**	PN	**Pn**	**06 47 38.7**	**+0.5**
DAT	**Datca**	**1.83**	**17**	*i* P	**Pn**	**06 47 38.4**	**+0.2**
DAT				*i* S	**Sn**	**06 48 00.0**	**-1.2**
DAT				IAML		06 48 12.0	
	comp=N,44nm,0.5s						
DAT				IAML		06 48 13.0	
	comp=E,44nm,0.6s						
THT2	**Imerovigli**	**1.88**	**321**	PN	**Pn**	**06 47 39.8**	**+1.0**
CMBO	**Columbo, Santo**	**1.92**	**321**	P	**Pn**	**06 47 39.9**	**+0.6**
AMGA	**Amorgos Island**	**2.01**	**336**	P	**Pn**	**06 47 40.4**	**-0.3**
AMGA	**Amorgos Island**	**2.01**	**336**	P	**Pn**	**06 47 40.4**	**-0.3**
AMGA				AML	AML	06 48 15.3	
	comp=E,512µm,0.5s						
AMGA				AML	AML	06 48 17.7	
	comp=N,588µm,0.8s						
BODT	**Bodrum**	**2.10**	**9**	PN	**Pn**	**06 47 42.7**	**+0.9**
BDRM	**Kayabasi**	**2.12**	**12**	*i* P	**Pn**	**06 47 42.1**	**-0.1**
BDRM				*i* S	**Sn**	**06 48 06.4**	**-2.1**
BDRM				IAML		06 48 16.0	
	comp=N,49nm,0.4s						
BDRM				IAML		06 48 21.0	
	comp=E,34nm,0.8s						
IOSP	**Ios island**	**2.17**	**323**	P	**Pn**	**06 47 43.1**	**+0.3**
IOSP	**Ios island**	**2.17**	**323**	P	**Pn**	**06 47 43.2**	**+0.3**
IOSP				AML	AML	06 48 14.2	
	comp=N,473µm,0.5s						
IOSP				AML	AML	06 48 15.2	
	comp=E,462µm,0.4s						
GVD	**Gavdhos**	**2.31**	**267**	PN	**Pb**	**06 47 47.2**	**-1.3**
DALY	**Dalyan (Mula)**	**2.32**	**37**	PN	**Pn**	**06 47 45.9**	**+1.1**
DALY	**Dalyan (Mula)**	**2.32**	**37**	*i* P	**Pn**	**06 47 46.0**	**+1.2**
DALY				*i* S	**Sg**	**06 48 24.7**	**+3.3**
DALY				IAML		06 48 28.0	
	comp=N,52nm,0.8s						
DALY				IAML		06 48 32.0	
	comp=E,43nm,0.7s						
TURN	**Turunc**	**2.34**	**36**	PN	**Pn**	**06 47 42.7**	**-2.4**
TURN	**Turunc**	**2.34**	**36**	*i* P	**Pn**	**06 47 42.1**	**-3.0**
TURN				*i* S	**Sn**	**06 48 10.2**	**-3.5**
TURN				IAML		06 48 20.0	
	comp=E,51nm,0.3s						
TURN				IAML		06 48 24.0	
	comp=N,67nm,0.7s						
APE	**Apeiranthos**	**2.35**	**332**	P	**Pn**	**06 47 45.8**	**+0.4**
APE	**Apeiranthos**	**2.35**	**332**	P	**Pn**	**06 47 45.6**	**+0.2**
APE	**Apeiranthos**	**2.35**	**332**	PN	**Pn**	**06 47 45.9**	**+0.5**
YER	**Yerkesik**	**2.42**	**27**	PN	**Pn**	**06 47 47.3**	**+1.0**
FETY	**Fethiye**	**2.42**	**47**	PN	**Pn**	**06 47 46.9**	**+0.6**
FETY	**Fethiye**	**2.42**	**47**	*i* P	**Pn**	**06 47 46.3**	**0.0**
FETY				*i* S	**Sn**	**06 48 16.9**	**+1.1**
FETY				IAML		06 48 29.0	
	comp=E,11nm,0.4s						
FETY				IAML		06 48 39.0	
	comp=N,22nm,0.7s						
KSL	**Kastellorizon**	**2.48**	**61**	P	**Pn**	**06 47 47.8**	**+0.8**
RODP	**Rodopos**	**2.63**	**283**	PN	**Pn**	**06 47 51.3**	**+2.2**
SMG	**Samos**	**2.72**	**359**	P	**Pn**	**06 47 50.8**	**+0.4**
SMG				AML	AML	06 48 38.3	
	comp=N,122µm,0.5s						
SMG				AML	AML	06 48 39.3	
	comp=E,155µm,0.5s						
TAVA	**DENIZLI_Tavas**	**2.96**	**33**	*i* P	**Pn**	**06 47 54.5**	**+0.7**
TAVA				*i* S	**Sn**	**06 48 33.6**	**+4.3**
TAVA				IAML		06 48 42.0	
	comp=E,43nm,0.8s						
TAVA				IAML		06 48 42.0	
	comp=N,37nm,0.9s						
ELL	**Elmali**	**3.01**	**53**	PN	**Pn**	**06 47 56.2**	**+1.7**
DGB	**zmir**	**3.06**	**360**	*i* P	**Pn**	**06 47 55.3**	**+0.3**
DGB				*i* S	**Sn**	**06 48 30.8**	**-0.7**
DGB				IAML		06 48 52.0	
	comp=E,14nm,0.9s						
DGB				IAML		06 48 58.0	
	comp=N,9.4nm,0.6s						
AYDB	**Zeytinkoy-Aydi**	**3.06**	**15**	PN	**Pn**	**06 47 55.9**	**+0.7**
ANKY	**Antikythira Is**	**3.06**	**288**	P	**Pn**	**06 47 57.0**	**+1.9**
URLA	**Izmir**	**3.38**	**356**	PN	**Pn**	**06 48 00.9**	**+1.5**
URLA	**Izmir**	**3.38**	**356**	*e*P	**Pn**	**06 47 58.5**	**-0.9**
URLA				*i* S	**Sn**	**06 48 40.0**	**+0.6**
URLA				IAML		06 49 00.0	
	comp=E,14nm,1.4s						
URLA				IAML		06 49 20.0	
	comp=N,12nm,1.8s						
CHOS	**Chios island**	**3.46**	**349**	P	**Pn**	**06 48 00.4**	**-0.2**
CHOS	**Chios island**	**3.46**	**349**	PN	**Pn**	**06 48 01.5**	**+0.9**
KHAL	**Karahalli**	**3.97**	**31**	*i* P	**Pn**	**06 48 07.7**	**0.0**
KHAL				*i* S	**Sn**	**06 48 51.9**	**-2.2**
KHAL				IAML		06 49 13.0	
	comp=E,5.2nm,0.7s						
KHAL				IAML		06 49 21.0	
	comp=N,4.9nm,0.6s						
AKASG	**Malin Array Be**	**15.80**	**5**	P	**Pn**	**06 50 50.8**	**+1.8**
	comp=N,0.4nm,0.3s,baz=194,slow=11,SNR=2.5						
TORD	**Torodi Ar. Bea**	**31.49**	**233**	P	**P**	**06 53 28.6**	**0.0**
	comp=N,0.3nm,0.4s,baz=30,slow=9.8,SNR=2.0						
MKAR	**Makanchi Array**	**42.68**	**57**	P	**P**	**06 55 03.7**	**+0.3**
	comp=N,0.7nm,0.6s,baz=271,slow=7.4,SNR=10						
ZALV	**Zalesovo Beam**	**44.10**	**46**	P	**P**	**06 55 13.8**	**-0.8**
	comp=N,1.5nm,0.5s,baz=273,slow=8.9,SNR=7.1						
YKA	**Yellowknife Ar**	**78.04**	**343**	P	**P**	**06 59 02.8**	**-2.2**
	comp=N,0.1nm,0.5s,baz=36,slow=5.6,SNR=6.6						

IDC 27 06:49:02.5±1.9, 3.82N×95.40E, h0km, mb3.9/3, mb1 4.1/5, mb1mx3.6/48, mbtmp3.9/5, ML4.1/2, MS3.3/4, Ms1 3.4/4, ms1mx3.0/44, Error ellipse: s-maj=71.4km s-min=23.4km az=45.0
DJA 27 06:49:10.2±0.6, 4.7N±2.9×9.6E±.7, h10km, M4.4/11, MLv4.4/11
NEIC 27 06:49:10.0±1.2, 4.67N±0.05×96.31E±0.08, h23km±8km, mb4.5/4, Error ellipse: s-maj=12.8km s-min=5.8km az=62.0

ISC 27 06:49:11.1±0.9, 4.44N±0.04×96.52E±0.06, h10km, n26, σ1°55/27, mb4.4/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.21**	**215**	P	**Pg**	**06 49 14.7**	**-0.8**
LHMI	**Lhok Sumawe**	**0.89**	**28**	P	**Pg**	**06 49 27.8**	**-0.5**
LHMI				S	**Sb**	**06 49 41.0**	**+0.4**
LHMI	**Lhok Sumawe**	**0.89**	**28**		**Pg**	**06 49 28.1**	**-0.2**
TPTI		**1.34**	**151**	P	**Pn**	**06 49 33.9**	**-2.0**
TPTI				S	**Sb**	**06 49 51.9**	**-1.8**
KCSI	**Kotacane, Aceh**	**1.54**	**126**	P	**Pn**	**06 49 38.6**	**-0.1**
KCSI				S	**Sn**	**06 49 58.5**	**-0.3**
SNSI	**Sinabang, Aceh**	**2.03**	**186**	P	**Pg**	**06 49 52.6**	**+2.6**
TSI	**Tuntungan**	**2.24**	**115**	P	**Pg**	**06 49 53.4**	**-0.7**
TSI				Pg	**Pb**	**06 49 53.6**	**+1.9**
PSI	**Prapat**	**2.90**	**124**	Pn	**Pn**	**06 49 59.5**	**+2.0**
	8.0nm,0.3s,baz=360,slow=11,SNR=22						
PSI				Sn	**Sb**	**06 50 38.2**	**-0.3**
	14nm,0.3s,baz=180,slow=15,SNR=8.4						
PSI				LR	LR	06 51 33.2	
	comp=Z,260nm,21.9s,baz=264,slow=41						
RPSI	**Rantau Prapat**	**2.96**	**126**		**Pn**	**06 49 59.5**	**+1.3**
RPSI					**Sb**	**06 50 38.2**	**-1.9**
GSI	**Gunungsitoli**	**3.29**	**161**	P	**Pn**	**06 50 01.0**	**-1.7**
GSI	**Gunungsitoli**	**3.29**	**161**	Pn	**Pn**	**06 50 04.4**	**+1.7**
KULM	**Kulim**	**4.20**	**78**		**Pn**	**06 50 14.5**	**-0.7**
IPM	**Ipoh**	**4.49**	**89**		**Pn**	**06 50 19.7**	**+0.4**
MNSI	**Mandailing Nat**	**4.74**	**140**	P	**Pn**	**06 50 23.4**	**+0.8**
CMAR	**Chiang Mai Ar**	**14.13**	**9**	Pn	**Pn**	**06 52 34.5**	**+3.0**
	0.4nm,0.3s,baz=200,slow=10,SNR=1.4						
CMAR				LR	LR	06 58 29.2	
	comp=Z,86nm,18.0s,baz=175,slow=38						
H08S2	**Diego Garcia H**	**26.82**	**243**	T	T	07 22 06.4	
	baz=60						
H08S3	**Diego Garcia H**	**26.82**	**244**	T	T	07 22 03.6	
	baz=60						
H08S1	**Diego Carcia H**	**26.83**	**244**	T	T	07 22 02.7	
	baz=60						
MKAR	**Makanchi Array**	**43.95**	**346**	P	**P**	**06 57 15.7**	**-2.7**
	0.2nm,0.5s,baz=143,slow=12,SNR=3.3						
MKAR				LR	LR	07 17 34.1	
	comp=Z,57nm,20.4s,baz=36,slow=39						
WB0	**Warramunga Arr**	**44.32**	**124**	P	**P**	**06 57 21.0**	**-0.8**
WRA	**Warramunga Arr**	**44.36**	**124**	P	**P**	**06 57 20.2**	**-1.9**
	2.0nm,0.4s,baz=302,slow=9.2,SNR=19						
WRAB	**Tennant Creek**	**44.37**	**124**	P	**P**	**06 57 21.1**	**-1.0**
WB2	**Warramunga Arr**	**44.37**	**124**	P	**P**	**06 57 21.4**	**-0.8**
WB2					IAmb	IAmb	06 57 22.2
	comp=Z,4.5nm,0.8s						
WR0	**Warramunga Arr**	**44.54**	**124**	P	**P**	**06 57 22.9**	**-0.6**
WR0					IAmb	IAmb	06 57 29.2
	comp=Z,7.0nm,1.1s						
GEYT	**Alibeck**	**48.33**	**319**	P	P	06 57 42.4	-11
	comp=Z,1.3nm,0.3s,baz=138,slow=9.1,SNR=4.3						
NOA	**NORSAR Array B**	**83.86**	**331**	LR	LR	07 44 06.7	
	comp=Z,18nm,18.4s,baz=5.0,slow=39						

IDC 27 06:52:57.5±10.0, 12.07S×166.81E, h237km±113km, mb3.4/6, mb1 3.7/7, mb1mx3.4/30, mbtmp4.0/7, Error ellipse: s-maj=100.7km s-min=26.3km az=167.0

ISC 27 06:52:55.9±0.9, 12.0S±0.1×166.8E±0.2, h220km, n8, σ1°01/8, mb3.7/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.05**	**182**	P	**Pn**	**06 55 15.7**	**+0.1**
	1.4nm,0.3s,baz=176,slow=18,SNR=11						
CTA	**Charters Tower**	**21.30**	**245**	P	**P**	**06 57 26.6**	**+0.8**
	2.3nm,0.5s,baz=78,slow=14,SNR=5.1						
WRA	**Warramunga Arr**	**32.14**	**252**	P	**P**	**06 59 02.1**	**-1.1**
	1.2nm,0.7s,baz=84,slow=8.6,SNR=4.4						
ILAR	**Eielson Array**	**84.06**	**18**	P	**P**	**07 05 01.4**	**-0.1**
	1.9nm,0.6s,baz=245,slow=5.0,SNR=29						
NVAR	**Mina Array Bea**	**85.84**	**49**	P	**P**	**07 05 12.0**	**+0.7**
	0.3nm,0.6s,baz=237,slow=8.2,SNR=3.7						
MKAR	**Makanchi Array**	**94.89**	**317**	P	**P**	**07 05 54.2**	**+1.2**
	0.3nm,0.5s,baz=94,slow=5.9,SNR=4.3						
YKA	**Yellowknife Ar**	**95.33**	**27**	P	**P**	**07 05 53.5**	**-1.2**
	0.2nm,0.4s,baz=256,slow=4.8,SNR=9.0						
ARCES	**ARCESS Array B**	**117.48**	**346**	PKP	**PKPdf**	**07 11 14.6**	**-0.3**
	0.7nm,0.6s,baz=83,slow=2.8,SNR=7.1						

IDC 27 06:56:38.8±1.1, 11.14S×164.88E, h0km, mb3.9/7, mb1 4.2/9, mb1mx4.0/31, mbtmp4.1/9, ML4.5/2, MS3.4/7, Ms1 3.4/7, ms1mx3.1/33, Error ellipse: s-maj=32.6km s-min=25.7km az=125.0
NEIC 27 06:56:43.7±0.9, 11.25S±0.10×164.8E±0.1, h34km±5km, mb4.6/8, Error ellipse: s-maj=18.4km s-min=11.2km az=56.0

ISC 27 06:56:43.3±0.7, 11.28S±0.08×164.76E±0.10, h31km, n33, σ0°98/25, mb4.3/10, MS3.3/5, 1C, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.08**	**291**	Pn	**Pn**	**06 57 57.2**	**-0.2**
	26nm,0.3s,baz=186,slow=10,SNR=2.0						
HNR				Sn	**Sn**	**06 58 52.8**	**-2.1**
	24nm,0.3s,baz=165,slow=19,SNR=1.7						
HNR				LR	LR	07 00 14.6	
	comp=Z,579nm,19.9s,baz=127,slow=42						
HNR	**Honiara**	**5.08**	**291**			**06 57 57.5**	**+0.2**
DZM	**Mont Dzumac**	**10.86**	**172**	Pn	**Pn**	**06 59 17.8**	**+1.0**
	2.2nm,0.3s,baz=353,slow=9.8,SNR=20						
DZM				Sn	**Sn**	**07 01 14.6**	**-2.8**
	0.3nm,0.3s,baz=53,slow=22,SNR=1.9						
DZM				LR	LR	07 02 50.7	
	comp=Z,217nm,20.7s,baz=36,slow=34						
DZM	**Mont Dzumac**	**10.86**	**172**		**Pn**	**06 59 17.4**	**+0.6**
CTA	**Charters Tower**	**19.84**	**242**	P	**Pn**	**07 01 14.8**	**+1.2**
	5.0nm,1.0s,baz=64,slow=14,SNR=2.9						
JAY	**Jayapura**	**25.39**	**288**	LR	LR	07 11 51.1	
	comp=Z,104nm,21.3s,baz=352,slow=36						
STKA	**Stephens Creek**	**29.61**	**223**	LR	LR	07 14 32.4	
	comp=Z,89nm,19.6s,baz=26,slow=36						
H11S2	**WAKE ISLAND Hy**	**29.64**	**4**	T	T	07 33 43.9	
	baz=184,slow=76,SNR=35						
H11S3	**WAKE ISLAND Hy**	**29.64**	**4**	T	T	07 33 44.1	
	baz=184,slow=76,SNR=17						
H11S1	**WAKE ISLAND Hy**	**29.66**	**4**	T	T	07 33 45.2	
	baz=184,slow=76,SNR=33						
BKZ	**Black Stump Fm**	**29.68**	**161**	P	**P**	**07 02 46.2**	**-0.2**
WR0	**Warramunga Arr**	**30.31**	**250**	P	**P**	**07 02 52.9**	**+0.6**
WB0	**Warramunga Arr**	**30.41**	**250**	P	**P**	**07 02 54.0**	**+0.9**
WB2	**Warramunga Arr**	**30.48**	**250**	P	**P**	**07 02 54.1**	**+0.3**
WB2				IAmb	IAmb	07 03 05.8	
	comp=Z,17nm,1.4s						
WRA	**Warramunga Arr**	**30.50**	**250**	P	**P**	**07 02 54.0**	**+0.1**
	comp=Z,3.7nm,1.0s,baz=79,slow=9.0,SNR=7.7						
WRA				PcP	**PcP**	**07 05 53.7**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=79,slow=2.9,SNR=6.3						
H11N1	**WAKE ISLAND Hy**	**30.86**	**4**	T	T	07 35 15.7	
	baz=184,slow=76,SNR=20						
H11N3	**WAKE ISLAND Hy**	**30.87**	**4**	T	T	07 35 16.5	
	baz=184,slow=76,SNR=18						
H11N2	**WAKE ISLAND Hy**	**30.88**	**4**	T	T	07 35 18.4	
	baz=184,slow=76,SNR=17						
KNRA	**Kununurra**	**35.25**	**259**	P	**P**	**07 03 35.7**	**+0.3**
FITZ	**Fitzroy Crossi**	**38.38**	**255**	LR	LR	07 20 31.5	
	comp=Z,89nm,18.1s,baz=306,slow=37						
FITZ	**Fitzroy Crossi**	**38.38**	**255**	P	**P**	**07 04 02.4**	**+0.3**
FITZ				IAmb	IAmb	07 04 05.2	
	comp=Z,7.4nm,0.8s						
MJAR	**Matsushiro Arr**	**53.73**	**333**	P	**P**	**07 06 02.9**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=154,slow=8.0,SNR=2.7						
KSRS	**Korea Array**	**59.52**	**326**	LR	LR	07 30 29.8	
	comp=Z,15nm,19.7s,baz=65,slow=34						
USRK	**Ussuriysk Ar.**	**62.72**	**334**	P	**P**	**07 07 05.9**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=128,slow=9.3,SNR=3.8						
PETK	**Petropavlovsk-**	**64.41**	**355**	LR	LR	07 31 39.6	
	comp=Z,19nm,18.7s,baz=238,slow

comp=N,2.3nm,0.3s,baz=98,slow=10,SNR=14
GEYT S **Sn** **07 19 55.8 -5.0**
comp=N,4.0nm,0.3s,baz=104,slow=17,SNR=8.2
GYA0B ALIBECK ARRAY 10.43 278 ⇑Pn **Pn** **07 18 04.7 -1.2**
GYA0B ⇓Sn **Sn** **07 19 55.0 -5.8**
PYUN Piuthan 13.42 129 *eP* **Pn** **07 18 42.0 -3.9**
comp=N,53nm,0.3s
DANN Dangsing 13.73 126 *eP* **Pn** **07 18 46.2 -3.8**
comp=N,29nm,0.3s
KOLN Koldanda 14.04 128 *eP* **Pn** **07 18 50.0 -3.9**
comp=N,23nm,0.3s
KURBB Kurchatov Arra 14.41 19 P **Pn** **07 18 56.7 -1.6**
comp=N,0.1nm,0.3s,baz=215,slow=12,SNR=2.8
AB31 Akbulak array 14.57 329 P **Pn** **07 18 58.9 -1.5**
comp=N,0.8nm,0.3s,baz=135,slow=14,SNR=76
AB31 ⇑S Sn 07 21 31.3 -10
comp=N,1.7nm,0.5s
PKIN Phulchoki 15.32 125 *eP* **Pn** **07 19 06.6 -3.7**
PKI Pulchoki 15.33 125 *eP* **Pn** **07 19 06.8 -3.7**
comp=N,35nm,0.5s
GUN Gumba 15.42 123 *eP* **Pn** **07 19 08.2 -3.5**
comp=N,79nm,0.6s
JIRN Jiri 15.79 123 *eP* **Pn** **07 19 11.8 -4.5**
comp=N,53nm,0.3s
BVAR Borovoye Array 15.84 358 P **Pn** **07 19 16.7 +0.3**
comp=N,0.3nm,0.3s,baz=178,slow=14,SNR=4.7
AKTO Aktyubinsk 16.28 329 P **P** **07 19 23.8 +0.8**
comp=N,1.4nm,0.3s,baz=142,slow=15,SNR=17
AKTO S **Sn** **07 22 13.2 -8.9**
comp=N,0.3nm,0.3s,baz=24,slow=20,SNR=1.7
AKTO Aktyubinsk 16.28 329 ⇓P **Pn** **07 19 21.9 +0.1**
comp=N,5.2nm,0.7s
RAMN Ramite 16.54 124 *eP* **Pn** **07 19 22.4 -3.0**
comp=N,58nm,0.6s
TAPN Taplejung 17.03 120 *eP* **Pn** **07 19 28.3 -3.2**
comp=N,22nm,0.4s
ODAN Odare 17.12 122 *eP* **Pn** **07 19 30.1 -2.5**
comp=N,56nm,0.8s
ZALV Zalesovo Beam 19.21 25 P **P** **07 19 55.2 +0.1**
comp=N,1.2nm,0.3s,baz=221,slow=9.9,SNR=13
BRTR Keskin Array B 29.40 287 P **P** **07 21 35.5 +2.3**
comp=N,0.3nm,0.3s,baz=81,slow=7.7,SNR=1.8
AKASG Malin Array Be 32.66 308 P **P** **07 22 03.8 +2.3**
comp=N,0.3nm,0.3s,baz=76,slow=7.7,SNR=2.5
FINES FINESS Array B 37.01 326 P **P** **07 22 40.0 +1.2**
comp=N,0.7nm,0.6s,baz=120,slow=8.2,SNR=1.0
ARCES ARCESS Array B 40.58 337 P **P** **07 23 11.7 +3.2**
comp=N,3.0nm,1.1s,baz=104,slow=9.4,SNR=1.5
NB2 NORSAR Subarra 43.94 323 P **P** **07 23 38.0 +2.1**
comp=Z,0.8nm,0.6s,baz=96,slow=7.9
NOA NORSAR Array B 43.94 323 P **P** **07 23 37.7 +1.7**
comp=Z,0.6nm,0.6s,baz=95,slow=7.8,SNR=4.5
ESDC Sonseca Array 57.30 298 P **P** **07 25 18.4 +1.8**
comp=Z,0.6nm,0.7s,baz=60,slow=7.6,SNR=6.3
TORD Torodi Ar. Bea 65.92 269 P **P** **07 26 16.5 +1.7**
comp=Z,0.4nm,0.4s,baz=49,slow=6.1,SNR=8.3
INK Inuvik 73.19 9 P **P** **07 27 01.2 +2.6**
comp=Z,0.5nm,0.5s,baz=325,slow=5.6,SNR=8.0
YKA Yellowknife Ar 80.55 3 P **P** **07 27 42.0 +2.0**
comp=Z,0.4nm,0.6s,baz=354,slow=5.4,SNR=14

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*SOME **27** 07:17:49.8, 44˚.70N×82˚.28E, h10km*
*NNC **27** 07:17:50.6±1.9, 44˚.62N×82˚.22E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=21.5km s-min=8.3km az=132.0*
ISC 27 07:17:50.4±1.8, 44˚.67N±0˚.07×82˚.20E±0˚.08, h12km±16km, n14, σ1§43/21, 1C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.76**	**260**	*eP*	**Pg**	**07 18 23.8**	**-0.3**
	9.3nm,0.2s						
DJR				*eS*	**Sg**	**07 18 48.4**	**+1.4**
	16nm,0.5s						
DJR	**Jarkent**	**1.76**	**260**	P	**Pg**	**07 18 23.8**	**-0.3**
	9.3nm,0.2s						
DJR				S	**Sg**	**07 18 48.4**	**+1.4**
	16nm,0.5s						
KTMS	**Ketmen**	**1.81**	**228**	*eP*	**Pg**	**07 18 24.8**	**-0.4**
	0.7nm,0.1s						
KTMS				*eS*	**Sg**	**07 18 49.8**	**+1.2**
	33nm,0.3s						
MK31	**Makanchi Array**	**2.12**	**2**	Pg	**Pb**	**07 18 28.6**	**-0.2**
	4.2nm,0.2s,baz=186,slow=16,SNR=366						
MK31				⇓Lg	Lg	07 18 57.4	
	8.8nm,0.3s,baz=182,slow=26,SNR=35						
PDGK	**Podgornoye**	**2.37**	**236**	⇑Pg	**Pb**	**07 18 34.3**	**+1.1**
	1.3nm,0.3s						
PDGK				⇓Lg	Lg	07 19 05.3	
	32nm,0.6s						
SHLS	**Shalkode**	**2.49**	**234**	*eP*	**Pn**	**07 18 33.0**	**+2.1**
	9.7nm,0.3s						
SHLS				*eS*	**Sb**	**07 19 04.0**	**-1.9**
	50nm,0.3s						
SHLS	**Shalkode**	**2.49**	**234**	Pg	**Pn**	**07 18 29.7**	**-1.2**
	9.7nm,0.3s						
SHLS				Lg	Lg	07 18 58.7	
	50nm,0.3s						
UZB	**Uzynbulak**	**2.76**	**238**	*eP*	**Pb**	**07 18 40.5**	**+0.7**
	4.2nm,0.4s						
UZB				*eS*	**Sg**	**07 19 16.8**	**-2.2**
	14nm,0.5s						
UZB	**Uzynbulak**	**2.76**	**238**	Pg	**Pb**	**07 18 39.3**	**-0.4**
	2.9nm,0.3s						
UZB				Lg	Lg	07 19 15.1	
	14nm,0.5s						
MNBS	**Baschi**	**2.79**	**259**	*eP*	**Pb**	**07 18 41.2**	**+1.0**
	3.7nm,0.3s						
MNBS				*eS*	**Sg**	**07 19 17.9**	**-2.1**
	29nm,0.3s						
MNBS	**Baschi**	**2.79**	**259**	Pg	**Pb**	**07 18 41.1**	**+0.9**
	3.7nm,0.3s						
MNBS				Lg	Lg	07 19 17.9	
	29nm,0.3s						
SATY	**Saty**	**3.18**	**241**	Pg	**Pb**	**07 18 47.7**	**+0.7**
	5.9nm,0.2s						
SATY				Lg	Lg	07 19 29.4	
	21nm,0.3s						
ZSN	**Zaisan**	**3.34**	**33**	*eP*	**Pb**	**07 18 48.2**	**-1.3**
	6.2nm,0.2s						
ZSN				*eS*	**Sb**	**07 19 30.0**	**-0.1**
	16nm,0.7s						
ZSN	**Zaisan**	**3.34**	**33**	Pg	**Pb**	**07 18 51.6**	**+2.1**
	6.2nm,0.3s						
ZSN				Lg	Lg	07 19 35.8	
	16nm,0.7s						

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*NNC **27** 07:31:31.9±1.6, 54˚.08N×87˚.30E, h0km, mb2.9, mpv2.6, Error ellipse: s-maj=15.0km s-min=8.3km az=23.0, Suspected Mining explosion.*
*IDC **27** 07:31:34.2±2.6, 54˚.20N×87˚.15E, h0km, mb1 3.0/3, mb1mx2.9/42, mbtmp3.0/3, ML2.6/3, Error ellipse: s-maj=21.8km s-min=14.2km az=66.0*
ISC 27 07:31:33.7±3.4, 54˚.2N±0˚.1×87˚.0E±0˚.2, h0km, n8, σ1§87/13, 2C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.33**	**260**	*i*		07 40 40.0	
	baz=79,slow=322,SNR=2.7						
ZAA0	**Zalesovo Array**	**1.33**	**260**	⇑P	**Pg**	**07 31 58.9**	**-0.2**
	1.1nm,0.8s						
ZAA0				⇓S	**Sn**	**07 32 19.1**	**+1.2**
	4.9nm,0.8s						
ZALV	**Zalesovo Beam**	**1.33**	**260**	Pg	**Pb**	**07 31 59.3**	**-0.1**
	1.7nm,0.3s,baz=82,slow=16,SNR=14						
ZALV				Lg	Lg	07 32 18.6	
	2.5nm,0.3s,baz=77,slow=27,SNR=13						
KURBB	**Kurchatov Arra**	**6.32**	**239**	Pn	**Pn**	**07 33 10.2**	**+2.2**
	0.1nm,0.3s,baz=57,slow=14,SNR=6.7						
KURBB				Pg	**Pb**	**07 33 26.1**	**+1.6**
	0.0nm,0.3s,baz=55,slow=14,SNR=5.0						
KURBB				Sn	**Sn**	**07 34 21.9**	**+1.1**
	0.1nm,0.3s,baz=46,slow=16,SNR=2.1						
KURBB				Lg	Lg	07 34 56.6	
	0.0nm,0.3s,baz=64,slow=33,SNR=5.7						
KURBB	**Kurchatov Arra**	**6.32**	**239**	⇓Pn	**Pn**	**07 33 06.1**	**-1.9**
	1.1nm,0.5s,baz=55,slow=14						
KURBB				⇓Lg	Lg	07 34 55.2	
	11nm,1.1s						
MK31	**Makanchi Array**	**8.01**	**204**	⇓Pn	**Pn**	**07 33 29.9**	**-1.5**
	0.3nm,0.6s,baz=0.0,slow=0.1,SNR=4.6						
MK31				⇓Sn	**Sn**	**07 35 00.4**	**-2.2**
	0.4nm,0.6s						
MK31				⇑Lg	Lg	07 35 46.0	
	4.5nm,1.1s,baz=33,slow=28,SNR=4.1						
MKAR	**Makanchi Array**	**8.01**	**204**	Pn	**Pn**	**07 33 32.3**	**+1.0**
	0.1nm,0.3s,baz=31,slow=12,SNR=2.3						
MKAR				Sn	**Sn**	**07 35 03.5**	**+0.9**
	0.1nm,0.3s,baz=29,slow=28,SNR=2.3						
MKAR				Lg	Lg	07 35 50.0	
	0.1nm,0.3s,baz=43,slow=28,SNR=3.7						
BVAR	**Borovoye Array**	**9.96**	**270**	Pn	**Pn**	**07 33 58.8**	**+0.9**
	0.1nm,0.3s,baz=71,slow=15,SNR=3.0						
BVAR				Sn	**Sn**	**07 35 46.9**	**-3.4**
	0.3nm,0.3s,baz=74,slow=22,SNR=4.3						

IDC 27 07:40:04.1±3.4, 53˚.44N×87˚.55E, h0km, mb1 2.9/2, mb1mx2.8/46, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=30.0km s-min=16.5km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.70**	**289**	*i*		07 50 43.0	
	baz=105,slow=310,SNR=4.2						
ZALV	**Zalesovo Beam**	**1.70**	**289**	Pg	Pn	07 40 34.5	-0.6
	0.5nm,0.3s,baz=108,slow=16,SNR=9.2						
ZALV				Lg	Lg	07 40 58.4	
	1.0nm,0.3s,baz=114,slow=25,SNR=6.1						
KURBB	**Kurchatov Arra**	**6.24**	**247**	Pn	Pn	07 41 38.0	+0.7
	0.1nm,0.3s,baz=59,slow=14,SNR=1.7						
KURBB				Lg	Lg	07 43 21.9	
	baz=62,slow=37,SNR=1.7						
MKAR	**Makanchi Array**	**7.46**	**209**	Pn	Pn	07 41 55.4	+1.3
	0.1nm,0.3s,baz=29,slow=11,SNR=3.3						
MKAR				Lg	Lg	07 43 59.8	
	0.1nm,0.3s,baz=23,slow=30,SNR=3.0						

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*IDC **27** 07:52:20.6±0.8, 44˚.62N×124˚.09E, h0km, mb3.9/14, mb1 4.0/18, mb1mx3.9/59, mbtmp3.9/18, ML3.9/2, MS3.3/8, Ms1 3.3/8, ms1mx3.0/41, Error ellipse: s-maj=19.1km s-min=14.5km az=4.0*
*BJI **27** 07:52:21.8±0.0, 44˚.67N×124˚.13E, h7km, mB4.3/11, mb4.3/13, ML4.5/18, Ms4.1/10, Ms7 3.9/4*
*NEIC **27** 07:52:23.1±1.7, 44˚.66N±0˚.08×124˚.1E±0˚.1, h14km±4km, mb4.3/8, Error ellipse: s-maj=11.8km s-min=10.6km az=218.0*
ISC 27 07:52:22.5±0.5, 44˚.68N±0˚.05×124˚.23E±0˚.04, h10km, n47, σ1§80/49, mb4.0/19, MS3.4/5, 1C, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CN2	**Changchun**	**1.24**	**135**	*e*Pg	**Pg**	**07 52 46.3**	**0.0**
CN2				Sg	**Sg**	**07 53 03.5**	**+1.1**
CN2				smax	smax		
	comp=N,12μm,0.5s						
CN2				smax	smax		
	comp=E,9μm,0.7s						
SNY	**Shenyang**	**2.89**	**190**	⇑Pn	**Pn**	**07 53 07.8**	**-0.7**
SNY				Sn	**Sg**	**07 53 51.5**	**-3.7**
SNY				smax	smax		
	comp=N,210nm,0.4s						
SNY				smax	smax		
	comp=E,290nm,0.4s						
MDJ	**Mudanjiang**	**3.83**	**89**	Pg	**Pg**	**07 53 33.8**	**-2.0**
MDJ				Sg	**Sg**	**07 54 24.5**	**-0.9**
MDJ				smax	smax		
	comp=N,1μm,0.9s						
MDJ				smax	smax		
	comp=E,750nm,0.9s						
MDJ	**Mudanjiang**	**3.83**	**89**		**Pn**	**07 53 22.1**	**+0.7**
HIA	**Hailar**	**5.52**	**328**	Pn	**Pn**	**07 53 41.9**	**-2.9**
USA0B	**Ussuriysk Arra**	**5.58**	**92**		**Pn**	**07 53 47.8**	**+2.3**
USRK	**Ussuriysk Ar.**	**5.58**	**92**	Pn	**Pn**	**07 53 46.5**	**+1.0**
	baz=260,slow=12,SNR=1.8						
USRK				Pg	**Pg**	**07 54 07.0**	**-2.3**
	baz=281,slow=15,SNR=8.0						
USRK				Lg	Lg	07 55 20.7	
	baz=286,slow=26,SNR=7.5						
USRK				LR	LR	07 56 20.3	
	comp=Z,237nm,18.8s,baz=269,slow=42						
DL2	**Dalian**	**6.08**	**199**	Pg	**Pg**	**07 54 17.3**	**-1.7**
DL2				Sg	**Sg**	**07 55 38.5**	**+0.7**
DL2				smax	smax		
	comp=N,140nm,0.9s						
DL2				smax	smax		
	comp=E,210nm,0.7s						
DL2				LR	LR		
	comp=N,440nm,4.4s						
DL2				LR	LR		
	comp=E,270nm,5.3s						
DL2				LR	LR		
	comp=Z,340nm,7.3s						
KLR	**Kul'dur**	**6.87**	**46**	Pn	**Pn**	**07 54 04.0**	**+0.7**
	comp=Z,3.5nm,0.3s,baz=249,slow=17,SNR=12						
KLR				Lg	Lg	07 56 00.5	
	comp=Z,12nm,0.3s,baz=166,slow=21,SNR=6.4						
BJI	**Beijing**	**7.55**	**235**	Pg	**Pg**	**07 54 44.3**	**-2.7**
BJI				Sg	**Sg**	**07 56 29.5**	**+4.8**
BJI				smax	smax		
	comp=N,130nm,1.1s						
BJI				smax	smax		
	comp=E,140nm,1.0s						
BJI				LR	LR		
	comp=N,650nm,5.5s						
BJI				LR	LR		
	comp=E,670nm,6.4s						
KSRS	**Korea Array**	**7.74**	**158**	Pn	**Pn**	**07 54 15.0**	**-0.1**
	baz=340,slow=13,SNR=1.4						
KSRS				Lg	Lg	07 56 26.3	
	comp=E,6.0nm,0.3s,baz=337,slow=30,SNR=7.0						
HHC	**Hu-ho-hao-te**	**10.07**	**252**	*eP*	**Pn**	**07 54 48.0**	**+0.8**
HHC				pmax	pmax		
	comp=E,12nm,0.8s						
HHC				pmax	pmax		
	comp=E,56nm,6.8s						
ULN	**Ulaanbaatar**	**12.30**	**291**	Pn	**Pn**	**07 55 18.5**	**+0.7**
JNU	**Nakatsue**	**12.64**	**154**	Lg	Lg	07 59 03.9	
	comp=E,0.2nm,0.3s,baz=68,slow=19,SNR=2.3						
SONM	**Songino Array**	**12.74**	**291**	Pn	**Pn**	**07 55 21.2**	**-2.6**
	comp=E,0.3nm,0.3s,baz=89,slow=20,SNR=1.5						
SONM				Lg	Lg	07 59 03.7	
	comp=E,0.3nm,0.3s,baz=90,slow=30,SNR=2.8						
SONM				LR	LR	08 00 41.6	
	comp=E,203nm,18.1s,baz=118,slow=40						
ASAJ	**Asahikawa**	**13.15**	**86**	LR	LR	08 00 37.1	
	comp=E,107nm,20.3s,baz=344,slow=38						
MJAR	**Matsushiro Arr**	**13.36**	**123**	LR	LR	08 00 24.7	
	comp=E,71nm,19.1s,baz=325,slow=36						
TLY	**Talaya**	**15.38**	**304**	LR	LR	08 02 26.1	
	comp=E,131nm,18.2s,baz=114,slow=40						
TLY	**Talaya**	**15.38**	**304**	Pn	**Pn**	**07 55 59.4**	**-0.2**
XAN	**Xi'an**	**15.88**	**233**	Pn	**Pn**	**07 56 05.3**	**-0.8**
XAN				lAmb	lAmb	07 56 10.7	
	comp=Z,6.2nm,0.9s						
GTA	**Gaotai**	**18.85**	**262**	*eP*	**Pn**	**07 56 44.8**	**+1.6**
GTA				pP	sP	07 56 48.8	+1.9
GTA				sP	pP	07 56 51.5	+5.9
GTA				S	**S**	**08 00 18.3**	**+1.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,40nm,5.6s						
GTA				LR	LR		
	comp=Z,160nm,15.5s						
GTA				LR	LR		
	comp=Z,190nm,14.0s						
PETK	**Petropavlovsk-**	**23.39**	**57**	P	**P**	**07 57 33.2**	**+2.0**
	comp=Z,3.0nm,0.7s,baz=232,slow=7.3,SNR=11						
WMQ	**Urumqi**	**26.05**	**281**	*eP*	**P**	**07 57 57.5**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,12nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,82nm,4.3s						
WMQ				LR	LR		
	comp=Z,160nm,12.9s						
WMQ				LR	LR		
	comp=Z,160nm,18.7s						
KMI	**Kunming**	**26.15**	**229**	P	**P**	**07 58 02.8**	**+5.7**
KMI				pmax	pmax		
	comp=Z,18nm,0.6s						
KMI				LR	LR		
	comp=Z,160nm,14.5s						
KMI				LR	LR		
	comp=Z,200nm,12.2s						
ZALV	**Zalesovo Beam**	**27.00**	**304**	P	**P**	**07 58 07.3**	**+3.0**
	comp=Z,0.5nm,0.4s,baz=77,slow=9.0,SNR=2.1						
ZALV				LR	LR	08 09 18.5	
	comp=Z,60nm,20.1s,baz=82,slow=38						
TIXI	**Tiksi**	**27.14**	**3**	P	**P**	**07 58 05.0**	**-0.4**
	comp=Z,2.5nm,0.6s,baz=171,slow=4.2,SNR=3.8						
TIXI	**Tiksi**	**27.14**	**3**	P	**P**	**07 58 03.6**	**-1.8**
TIXI				lAmb	lAmb	07 58 06.3	
	comp=Z,6.5nm,0.8s						
MK31	**Makanchi Array**	**29.10**	**289**	P	**P**	**07 58 21.9**	**-1.3**
MKAR	**Makanchi Array**	**29.10**	**289**	P	**P**	**07 58 22.4**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=117,slow=8.9,SNR=5.2						
MKAR				LR	LR	08 10 39.7	
	comp=Z,85nm,19.2s,baz=72,slow=38						
CMAR	**Chiang Mai Arr**	**33.61**	**227**	LR	LR	08 14 22.5	
	comp=Z,35nm,18.5s,baz=115,slow=40						
SPITS	**Spitsbergen Ar**	**50.17**	**345**	P	**P**	**08 01 18.3**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=103,slow=16,SNR=1.7						
ILAR	**Eielson Array**	**50.28**	**34**	P	**P**	**08 01 18.4**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=284,slow=7.0,SNR=8.3						
ARCES	**ARCESS Array B**	**51.84**	**334**	P	**P**	**08 01 29.9**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=60,slow=12,SNR=3.6						
FIA1	**FINESS Array S**	**55.53**	**325**	P	**P**	**08 01 58.1**	**+0.7**
FINES	**FINESS Array B**	**55.53**	**325**	P	**P**	**08 01 57.0**	**-0.4**
	comp=Z,3.5nm,0.9s,baz=84,slow=5.9,SNR=5.1						
AKASG	**Malin Array Be**	**59.92**	**313**	P	**P**	**08 02 27.8**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=48,slow=7.3,SNR=6.7						
AKBB	**Malin Array Si**	**59.92**	**313**	P	**P**	**08 02 28.0**	**-0.4**
HFS	**Hagfors**	**61.22**	**328**	P	**P**	**08 02 37.2**	**+0.1**
	comp=Z,5.4nm,1.0s,baz=113,slow=3.7,SNR=2.6						
NOA	**NORSAR Array B**	**61.55**	**329**	P	**P**	**08 02 38.8**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=39,slow=4.3,SNR=3.3						
FITZ	**Fitzroy Crossi**	**62.48**	**178**	P	**P**	**08 02 45.9**	**-0.1**
YKA	**Yellowknife Ar**	**63.31**	**26**	P	**P**	**08 02 50.4**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=317,slow=6.2,SNR=8.4						
BUR08	**Bucovina Ar. S**	**63.86**	**312**	P	**P**	**08 02 55.0**	**-0.1**
BUR08				lAmb	lAmb	08 02 56.6	
	comp=Z,4.7nm,1.2s						
BRTR	**Keskin Array B**	**63.87**	**301**	P	**P**	**08 02 55.0**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=76,slow=6.1,SNR=3.1						
WRA	**Warramunga Arr**	**64.97**	**169**	P	**P**	**08 03 01.3**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=352,slow=6.8,SNR=8.0						
WB2	**Warramunga Arr**	**64.97**	**169**	P	**P**	**08 03 01.5**	**-0.9**
WB2				lAmb	lAmb	08 03 09.6	
	comp=Z,4.7nm,1.1s						
NVAR	**Mina Array Bea**	**79.91**	**45**	P	**P**	**08 04 33.3**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=288,slow=4.5,SNR=4.1						
LPAZ	**La Paz**	**149.84**	**24**	PKPbc	**PKPbc**	**08 12 12.6**	**-1.2**
	comp=Z,1.9nm,1.0s,baz=8.8,slow=4.1,SNR=4.7						

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*IDC **27** 07:55:18.4±1.0, 51˚.51N×15˚.90E, h0km, mb3.0/1, mb1 3.4/5, mb1mx3.2/50, mbtmp3.2/5, ML2.9/4, Error ellipse: s-maj=17.0km s-min=9.0km az=120.0*
*VIE **27** 07:55:18.2±1.0, 51˚.48N×16˚.26E, h0km, mb2.6/4, ml3.0/5, Error ellipse: s-maj=7.5km s-min=4.7km az=16.0 68 km NW of Wroclaw Suspected Mining induced.*
ISC 27 07:55:16.4±0.9, 51˚.55N±0˚.04×16˚.09E±0˚.03, h0km, n32, σ0§83/58, 1C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHVC	**Chvalec**	**0.96**	**181**	*e*PG	**Pb**	**07 55 35.7**	**-0.2**
CHVC				*e*SG	**Sb**	**07 55 48.3**	**-0.9**
	comp=Z,51nm,0.6s						
OSTC	**Ostas**	**0.99**	**175**	*e*PG	**Pb**	**07 55 36.2**	**-0.3**
OSTC				*e*SG	**Sb**	**07 55 49.6**	**-0.6**
	comp=Z,51nm,0.5s						
UPC	**Upice**	**1.04**	**183**	*e*PG	**Pb**	**07 55 37.2**	**-0.1**
UPC				*e*SG	**Sb**	**07 55 50.7**	**-0.8**
	comp=Z,110nm,0.4s						
DPC	**Dobruska-Polom**	**1.21**	**173**	*e*PG	**Pb**	**07 55 40.1**	**0.0**
DPC				*e*SG	**Sg**	**07 55 55.3**	**+0.2**
	comp=Z,39nm,0.7s						
PVCC	**Panska Ves**	**1.40**	**224**	*e*PG	**Pg**	**07 55 43.5**	**+0.3**
PVCC				*e*SG	**Sn**	**07 56 02.7**	**+0.3**
	comp=Z,187nm,0.5s						
BRG	**Berggiesshubel**	**1.51**	**244**	PN	**Pn**	**07 55 44.3**	**-0.4**
BRG				PG	**Pb**	**07 55 45.9**	**+0.6**
BRG				SG	**Sn**	**07 56 05.8**	**+0.8**
	112nm,0.4s						
KRLC	**Kraliky**	**1.54**	**163**	*e*PG	**Pn**	**07 55 45.2**	**+0.1**
KRLC				*e*SG	**Sn**	**07 56 06.2**	**+0.4**
	comp=Z,61nm,0.5s						
PRA	**Prague**	**1.81**	**216**	*e*PN	**Pn**	**07 55 49.0**	**+0.1**
PRA				*e*SG	**Sg**	**07 56 14.7**	**0.0**
	comp=Z,27nm,0.9s						
GOPC	**GO Pecny, Ondr**	**1.83**	**207**	*e*PG	**Pn**	**07 55 49.7**	**+0.5**
GOPC				*e*SG	**Sg**	**07 56 15.1**	**-0.1**
	comp=Z,30nm,0.6s						
PRU	**Pruhonice**	**1.84**	**213**	*e*PN	**Pn**	**07 55 49.6**	**+0.3**
PRU				*e*PG	**Pb**	**07 55 51.1**	**+0.1**
PRU				*e*SG	**Sg**	**07 56 15.5**	**-0.1**
	comp=Z,40nm,0.4s						
CLL	**Collm**	**1.95**	**264**	*i* Pn	**Pn**	**07 55 51.0**	**+0.3**
CLL				*e*Pg	**Pg**	**07 55 54.0**	**+0.3**
CLL				*i*		07 55 58.0	
CLL				*i*		07 56 15.4	
CLL				*e*Sg	**Sg**	**07 56 20.0**	**+1.0**
	comp=Z,32nm,0.4s						
MORC	**Moravsky Berou**	**2.00**	**152**	*e*PN	**Pn**	**07 55 51.5**	**+0.1**
MORC				*e*SG	**Sb**	**07 56 19.4**	**+0.4**
MORC	**Moravsky Berou**	**2.00**	**152**	⇓P	**Pn**	**07 55 51.3**	**-0.2**
OKC	**Ostrava-Krasne**	**2.15**	**142**	*e*PG	**Pb**	**07 55 56.7**	**+0.5**
OKC				*e*SG	**Sg**	**07 56 25.3**	**-0.2**
	comp=Z,68nm,0.6s						
VRAC	**Vranov**	**2.26**	**172**	Pn	**Pn**	**07 55 55.9**	**+0.8**
	comp=Z,2.6nm,0.3s,baz=346,slow=13,SNR=9.3						
VRAC				Lg	Lg	07 56 29.4	
	comp=Z,6.9nm,0.3s,baz=70,slow=10,SNR=10						
VRAC	**Vranov**	**2.26**	**172**	*e*PN	**Pn**	**07 55 55.1**	**0.0**
VRAC				*e*SG	**Sg**	**07 56 27.8**	**-1.3**
VRAC	**Vranov**	**2.26**	**172**	⇑P	**Pn**	**07 55 55.8**	**+0.7**
PBCC	**Pribram**	**2.29**	**216**	*e*PG	**Pb**	**07 55 59.2**	**+0.6**
PBCC				*e*SG	**Sg**	**07 56 29.5**	**-0.5**
KRUC	**Moravsky**	**2.50**	**175**	*e*PN	**Pn**	**07 55 59.3**	**+1.1**
NKC	**Novy Kostel**	**2.66**	**242**	*e*SG	**Sg**	**07 56 41.7**	**0.0**
	comp=Z,64nm,0.6s						
JAVC	**Velka Javorina**	**2.88**	**159**	*e*PN	**Pn**	**07 56 03.5**	**0.0**
KHC	**Kasperske Hory**	**2.91**	**215**	*e*PN	**Pn**	**07 56 04.5**	**+0.6**
KHC				*e*PG	**Pb**	**07 56 10.0**	**+0.9**
KHC				*e*SN	**Sn**	**07 56 38.0**	**-1.6**
KHC				*e*SG	**Sg**	**07 56 49.1**	**-0.6**
	comp=Z,16nm,0.4s						
GERES	**GERESS Array B**	**3.11**	**211**	Pn	**Pn**	**07 56 07.9**	**+1.1**
	comp=Z,1.4nm,0.3s,baz=27,slow=15,SNR=22						
GERES				Pg	**Pb**	**07 56 13.8**	**+1.2**
	comp=

baz=21
TARG ⇓*i*S **Sb** 08 08 03.3 +0.1
baz=21
ULHL Ulahol 2.17 350⇑*e*P **Pg** 08 07 49.3 +0.6
baz=44
ULHL ⇑*i*S **Sg** 08 08 14.9 -1.9
baz=44
KZA Kyzart 2.27 330⇑*i*P **Pg** 08 07 51.8 +1.1
baz=24
KZA ⇑*i*S **Sg** 08 08 19.7 -0.5
baz=24
BOOM Boomskoye usch 2.46 346⇓*i*P **Pg** 08 07 53.3 -0.9
baz=40
BOOM ⇓*i*S **Sb** 08 08 22.2 +0.4
baz=40
PRZ Przheval'sk 2.67 27⇓*i*P **Pb** 08 07 54.5 -0.6
baz=25
PRZ ⇓*i*S **Sn** 08 08 24.4 +1.5
baz=25
UCH Uchtor 2.71 322⇑*i*P **Pg** 08 07 58.3 -0.8
baz=17
UCH ⇑*i*S **Sb** 08 08 31.0 +1.6
baz=17
ANVS Anan'yevo 2.76 14⇓*i*P **Pb** 08 07 56.2 -0.3
baz=11
ANVS ⇓*i*S **Sn** 08 08 27.0 +2.1
baz=11
KBK Karagaybulak 2.89 332⇓*i*P **Pg** 08 08 00.1 -2.3
baz=28
KBK ⇓*e*S **Sb** 08 08 33.8 -0.4
baz=28
IZV Izvestkoviy 2.92 358 *e*P **Pb** 08 07 59.6 +0.2
4.1nm,0.3s
IZV *e*S **Sg** 08 08 41.8 +0.7
24nm,0.7s
IZV Izvestkoviy 2.92 358 Pg **Pb** 08 07 59.6 +0.2
4.1nm,0.3s
IZV Lg Lg 08 08 41.8
24nm,0.7s
KST Kastek 2.99 349 *e*P **Pb** 08 08 01.4 +0.9
2.7nm,0.3s
KST *e*S **Sg** 08 08 44.5 +1.4
17nm,0.5s
KST Kastek 2.99 349 Pg **Pb** 08 08 01.2 +0.7
KST Lg Lg 08 08 44.6
MTBS Maitube 3.03 355 *e*P **Pb** 08 08 01.0 -0.1
2.0nm,0.1s
MTBS *e*S **Sg** 08 08 43.9 -0.4
35nm,0.3s
AAK Ala-Archa 3.05 327⇑*i*P **Pb** 08 08 02.7 +1.2
baz=22
AAK ⇑*i*S **Sb** 08 08 38.3 -0.5
baz=22
MDOK Medeo 3.06 4 *e*P **Pb** 08 08 01.6 -0.1
3.0nm,0.5s
MDOK *e*S **Sg** 08 08 45.0 -0.3
41nm,0.5s
MDOK Medeo 3.06 4 Pg **Pb** 08 08 01.3 -0.4
6.7nm,0.7s
MDOK ⇑Lg Lg 08 08 45.1
34nm,0.6s
AML Almayashu 3.07 312⇑*i*P **Pg** 08 08 03.9 -2.1
baz=8.0
AML ⇑*i*S **Sb** 08 08 40.7 +0.9
baz=8.0
ARSB Arslanbob 3.12 294⇑*i*P **Pg** 08 08 05.5 -1.3
baz=91
ARSB ⇑*i*S **Sb** 08 08 43.1 +2.3
baz=91
KOTS Kotyrbulak 3.13 5 *e*P **Pb** 08 08 02.9 0.0
9.1nm,0.4s
KOTS *e*S **Sg** 08 08 47.2 -0.5
106nm,0.5s
KOTS Kotyrbulak 3.13 5 Pg **Pb** 08 08 02.9 0.0
9.1nm,0.4s
KOTS Lg Lg 08 08 47.2
98nm,0.6s
DGS Degeres 3.22 347 *e*P **Pb** 08 08 05.0 +0.6
3.3nm,0.7s
DGS *e*S **Sg** 08 08 50.8 +0.4
16nm,0.6s
DGS Degeres 3.22 347 Pg **Pb** 08 08 05.0 +0.6
3.3nm,0.7s
DGS Lg Lg 08 08 50.8
16nm,0.6s
UZB Uzynbulak 3.48 28 *e*P **Pb** 08 08 08.7 -0.1
0.8nm,0.1s
UZB *e*S **Sg** 08 08 57.4 -1.3
15nm,0.0s
UZB Uzynbulak 3.48 28 Pg **Pb** 08 08 08.7 -0.1
0.8nm,0.1s
UZB Lg Lg 08 08 57.4
9.5nm,0.2s
KURS Kuram 3.54 17 *e*P **Pb** 08 08 09.6 -0.1
1.5nm,0.3s
KURS *e*S **Sg** 08 08 58.8 -1.8
15nm,0.6s
KTBS Karatobe 3.60 359 *e*P **Pb** 08 08 11.1 +0.2
4.7nm,0.5s
KTBS *e*S **Sg** 08 09 01.4 -1.2
17nm,0.5s
KTBS Karatobe 3.60 359 Pg **Pb** 08 08 11.1 +0.2
4.7nm,0.5s
KTBS Lg Lg 08 09 01.4
17nm,0.5s
KRBS Karabastau 3.67 348 *e*P **Pb** 08 08 12.3 +0.2
6.4nm,0.9s
KRBS *e*S **Sg** 08 09 03.6 -1.4
11nm,0.7s
KRBS Karabastau 3.67 348 Pg **Pb** 08 08 12.3 +0.2
6.4nm,0.9s
KRBS Lg Lg 08 09 03.6
11nm,0.7s
MRKS Merke 3.74 316 *e*P **Pb** 08 08 13.5 +0.2
1.8nm,0.2s
MRKS *e*S **Sg** 08 09 05.4 -1.8
5.1nm,0.5s
KUU Kurty 3.79 355 *e*P **Pb** 08 08 14.2 +0.1
2.6nm,0.6s
KUU *e*S **Sg** 08 09 06.8 -2.0
16nm,0.7s
PDGK Podgornoye 3.81 32 ⇓Pg **Pb** 08 08 15.2 +0.8
3.9nm,0.9s
PDGK ⇓Lg Lg 08 09 06.4
9.4nm,0.6s
MNBS Baschi 4.15 17 *e*P **Pb** 08 08 20.9 +0.7
MNBS *e*S **Sg** 08 09 18.1 -2.2
0.2nm,0.3s
ARXS Arharly 4.17 11 *e*P **Pb** 08 08 20.6 0.0
6.1nm,0.6s
ARXS *e*S **Sg** 08 09 17.7 -3.4
9.5nm,0.3s

*ATH **27** 08:11:10.6,40˚.47N×25˚.85E,h24km±1km,ML2.9/10,Error ellipse: s-maj=3.2km s-min=1.3km az=252.0*
*THE **27** 08:11:11.9,40˚.47N×25˚.86E,h9km±1km,ML2.9/13,Error ellipse: s-maj=1.1km s-min=0.6km az=45.0*
*DDA **27** 08:11:11.7,40˚.46N×25˚.90E,h7km±3km,MW3.4*
*ISK **27** 08:11:11.0,40˚.48N×25˚.84E,h9km,ML3.2/19*
ISC 27 08:11:11.7±0.9,**40˚.47N**±0˚.02×**25˚.85E**±0˚.02,**h19**km±2km,
n75,σ0**89**/105,**5C-3D**,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMTH	**Samothraki Isl**	**0.25**	**270**	P	**Pb**	**08 11 16.9**	**-0.4**
SMTH				S	**Sb**	**08 11 20.5**	**-0.5**
2μm,0.1s							
SMTH	**Samothraki Isl**	**0.25**	**270**	P	**Pb**	08 11 16.9	-0.4
SMTH				S	**Sb**	08 11 20.6	-0.5
GADA	**Gvkgeada**	**0.28**	**173**	P	**Pg**	**08 11 17.8**	**-0.3**
GADA				S	**Sb**	**08 11 22.4**	**0.0**
1μm,0.2s							
GADA	**Gvkgeada**	**0.28**	**173**	PG	**Pg**	**08 11 17.5**	**-0.6**
GADA				SG	**Sb**	**08 11 22.1**	**-0.3**
GOKA	**anakkale-Gk**	**0.28**	**172**	*i* P	**Pg**	**08 11 17.9**	**-0.3**
GOKA				*i* S	**Sb**	**08 11 22.4**	**0.0**
ENEZ	**Enez**	**0.35**	**41**	P	**Pg**	**08 11 18.5**	**-0.7**
ENEZ				S	**Sg**	**08 11 23.8**	**-0.5**
3μm,0.3s							
ENEZ	**Enez**	**0.35**	**41**	PG	**Pg**	**08 11 18.5**	**-0.7**
ENEZ				SG	**Sg**	**08 11 23.7**	**-0.5**
GELI	**Tayfur-Gelibol**	**0.48**	**99**	PG	**Pb**	**08 11 21.0**	**-0.5**
ERIK	**Erikli-Kesan**	**0.54**	**68**	PG	**Pb**	**08 11 21.9**	**-0.6**
BOZC	**Bozcaada**	**0.65**	**166**	PG	**Pb**	**08 11 24.2**	**-0.1**
BOZC	**Bozcaada**	**0.65**	**166**	*i* P	**Pb**	**08 11 22.6**	**-1.7**
BOZC				*i* S	**Sg**	**08 11 33.6**	**+0.3**
LPK	**Lapseki**	**0.70**	**98**	PG	**Pg**	**08 11 25.3**	**-0.2**
RDO	**Rodhopi**	**0.71**	**340**	P	**Pb**	**08 11 25.0**	**-0.5**
RDO				S	**Sn**	**08 11 36.6**	**-0.6**
2μm,0.3s							
RDO	**Rodhopi**	**0.71**	**340**	P	**Pb**	**08 11 24.3**	**-1.2**
RDO				AML	AML	08 11 39.1	
comp=E,2760μm,0.2s							
RDO				AML	AML	08 11 39.4	
comp=N,4520μm,0.2s							
RDO	**Rodhopi**	**0.71**	**340**	PG	**Pb**	**08 11 25.2**	**-0.3**
KESN	**Edirne-Kesan**	**0.72**	**60**	*i* P	**Pb**	**08 11 24.7**	**-1.2**
KESN				*i* S	**Sb**	**08 11 35.1**	**-0.4**
EZN	**Ezine**	**0.74**	**151**	P	**Pb**	**08 11 25.3**	**-0.7**
EZN	**Ezine**	**0.74**	**151**	PG	**Pb**	**08 11 25.4**	**-0.6**
LIA	**Limnos Island**	**0.77**	**222**	P	**Pb**	**08 11 26.3**	**-0.2**
LIA				S	**Sg**	**08 11 37.2**	**+0.1**
comp=N,1μm,0.4s							
LIA	**Limnos Island**	**0.77**	**222**	P	**Pb**	**08 11 25.9**	**-0.5**
LIA				S	**Sb**	**08 11 36.9**	**+0.4**
LIA				AML	AML	08 11 39.9	
comp=N,2140μm,0.4s							
LIA				AML	AML	08 11 40.6	
comp=E,3277μm,0.5s							
THAS	**Thassos island**	**0.87**	**279**	P	**Pg**	**08 11 28.6**	**-0.2**
THAS				S	**Sn**	**08 11 41.9**	**+0.8**
comp=E,822nm,0.3s							
THAS	**Thassos island**	**0.87**	**279**	P	**Pb**	**08 11 27.0**	**-1.3**
THAS				AML	AML	08 11 43.2	
comp=E,1647μm,0.3s							
THAS				AML	AML	08 11 45.4	
comp=N,1363μm,0.3s							
UKOP	**Uzunkopru-Edir**	**0.88**	**42**	PG	**Pg**	**08 11 28.6**	**-0.4**
UKOP				SG	**Sn**	**08 11 41.3**	**0.0**
BAYC	**CANAKKALE_Bayr**	**0.90**	**144**	*i* P	**Pb**	**08 11 26.9**	**-1.8**
BAYC				*i* S	**Sb**	**08 11 40.8**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.03**	**78**	PG	**Pg**	**08 11 31.5**	**-0.3**
RKY				SG	**Sg**	**08 11 46.4**	**+1.0**
SART	**Tekirdag**	**1.03**	**78**	*i* P	**Pb**	**08 11 30.8**	**-0.2**
SART				*i* S	**Sg**	**08 11 45.9**	**+0.5**
KRBG	**Karabiga-Canak**	**1.10**	**94**	PN	**Pg**	**08 11 32.8**	**-0.4**
KAVA	**Kavala**	**1.14**	**298**	P	**Pb**	**08 11 33.0**	**+0.1**
KAVA				S	**Sg**	**08 11 49.4**	**+0.5**
comp=N,372nm,0.5s							
KAVA	**Kavala**	**1.14**	**298**	P	**Pb**	**08 11 32.9**	**+0.1**
KAVA				S	**Sg**	**08 11 48.3**	**-0.7**
KAVA				AML	AML	08 11 49.8	
comp=N,814μm,0.5s							
KAVA				AML	AML	08 11 51.5	
comp=E,440μm,0.2s							
EFSA	**Agios Efstrati**	**1.15**	**216**	P	**Pn**	**08 11 32.6**	**0.0**
KVLA	**Kavala**	**1.21**	**293**	P	**Pb**	**08 11 34.0**	**+0.1**
KDZ	**Kurdzhali**	**1.22**	**344**	*i* P	**Pg**	**08 11 34.7**	**-0.7**
KDZ	**Kurdzhali**	**1.22**	**344**	PN	**Pg**	**08 11 34.6**	**-0.8**
KDZ				SN	**Sg**	**08 11 51.4**	**0.0**
SIGR	**SIGRI**	**1.26**	**180**	P	**Pb**	**08 11 34.8**	**0.0**
SIGR				S	**Sg**	**08 11 52.2**	**-0.4**
comp=E,718nm,0.5s							
SIGR	**SIGRI**	**1.26**	**180**	P	**Pn**	**08 11 33.9**	**-0.4**
SIGR				AML	AML	08 11 53.1	
comp=N,1832μm,0.6s							
SIGR				AML	AML	08 11 54.5	
comp=E,995μm,0.4s							
SIGR	**SIGRI**	**1.26**	**180**	PN	**Pb**	**08 11 34.9**	**+0.1**
SIGR				SN	**Sg**	**08 11 52.6**	**0.0**
PRK	**Paraskevi**	**1.27**	**165**	P	**Pg**	**08 11 36.1**	**-0.1**
PRK				S	**Sg**	**08 11 52.9**	**+0.1**
comp=E,790nm,0.6s							
PRK	**Paraskevi**	**1.27**	**165**	P	**Pb**	**08 11 35.1**	**+0.1**
PRK				AML	AML	08 11 54.9	
comp=N,1465μm,0.5s							
PRK				AML	AML	08 11 55.3	
comp=E,1375μm,0.4s							
KNL	**Balıkesir**	**1.29**	**98**	*i* P	**Pb**	**08 11 35.0**	**-0.4**
KNL				*i* S	**Sg**	**08 11 53.2**	**-0.4**
AYVA	**Ayvalik**	**1.33**	**151**	*i* P	**Pb**	**08 11 35.8**	**-0.2**
AYVA				*i* S	**Sg**	**08 11 53.8**	**-1.0**
MRMT	**Marmara Adasi**	**1.33**	**84**	PN	**Pb**	**08 11 36.3**	**+0.2**
MRMT				SN	**Sg**	**08 11 54.7**	**-0.3**
TKR	**Tekirdag**	**1.38**	**67**	PN	**Pb**	**08 11 37.1**	**+0.3**
TKR				SN	**Sg**	**08 11 55.9**	**-0.5**
OUR	**Ouranopolis**	**1.44**	**265**	P	**Pn**	**08 11 36.6**	**-0.1**
OUR				S	**Sg**	**08 11 57.6**	**-0.6**
comp=E,455nm,0.3s							
OUR	**Ouranopolis**	**1.44**	**265**	P	**Pn**	**08 11 36.7**	**+0.1**
OUR				AML	AML	08 12 00.3	
comp=E,907μm,0.3s							
OUR				AML	AML	08 12 01.4	
comp=N,906μm,0.3s							
OUR	**Ouranopolis**	**1.44**	**265**	PN	**Pb**	**08 11 37.6**	**-0.2**
GONE	**Gonen-Balikesi**	**1.47**	**106**	PN	**Pb**	**08 11 38.4**	**+0.1**
RZN	**Rozhen**	**1.49**	**325**	*i* P	**Pb**	**08 11 39.3**	**+0.5**
EDRB	**Edirne**	**1.53**	**26**	PN	**Pb**	**08 11 39.1**	**-0.3**
BALY	**Balya**	**1.54**	**118**	*i* P	**Pn**	**08 11 38.6**	**+0.5**
BALY				*i* S	**Sb**	**08 11 59.7**	**+0.9**
EDC	**Edincik**	**1.54**	**94**	PN	**Pb**	**08 11 39.4**	**-0.2**
DKL	**Dikili**	**1.62**	**150**	PN	**Pb**	**08 11 40.6**	**-0.3**
BALB	**Balikesir**	**1.76**	**118**	PN	**Pb**	**08 11 42.4**	**-1.0**
ZEDA	**zmir-Bergama**	**1.78**	**148**	*i* P	**Pn**	**08 11 42.3**	**+1.0**
STEP	**BALIKESİR_Sava**	**1.80**	**127**	*i* P	**Pn**	**08 11 42.6**	**+0.9**
SRS	**Serrai**	**1.83**	**291**	P	**Pn**	**08 11 42.7**	**+0.5**
SRS				S	**Sb**	**08 12 07.0**	**-0.2**
comp=N,170nm,0.5s							
SRS	**Serrai**	**1.83**	**291**	P	**Pn**	**08 11 42.5**	**+0.4**
SRS				AML	AML	08 12 12.2	
comp=N,235μm,0.5s							
SRS				AML	AML	08 12 12.7	
comp=E,425μm,0.4s							
PLG	**Polygyros**	**1.84**	**268**	P	**Pn**	**08 11 42.6**	**+0.3**
PLG				AML	AML	08 12 13.1	
comp=N,305μm,0.5s							
PLG				AML	AML	08 12 13.9	
comp=E,389μm,0.4s							
AOS	**Alonnisos**	**2.00**	**230**	P	**Pn**	**08 11 45.0**	**+0.6**
AOS				S	**Sb**	**08 12 10.8**	**-1.2**
comp=E,110nm,0.7s							
CHOS	**Chios island**	**2.09**	**176**	P	**Pn**	**08 11 46.4**	**+0.7**
CHOS				S	**Sn**	**08 12 12.0**	**+0.8**
comp=E,88nm,0.4s							
CHOS	**Chios island**	**2.09**	**176**	P	**Pn**	**08 11 46.4**	**+0.7**
URLA	**Izmir**	**2.19**	**165**	*i* P	**Pn**	**08 11 47.7**	**+0.6**
KNT	**Kendrikon**	**2.35**	**288**	P	**Pn**	**08 11 50.3**	**+1.0**
KNT				AML	AML	08 12 28.5	
comp=N,177μm,0.3s							
KNT				AML	AML	08 12 31.6	
comp=E,163μm,0.4s							
VAY	**Valandovo**	**2.63**	**290**	*i* Pn	**Pg**	**08 12 02.4**	**+0.3**
VAY	**Valandovo**	**2.63**	**290**	*i* Pn	**Pg**	**08 12 02.4**	**+0.3**
SMG	**Samos**	**2.87**	**164**	P	**Pn**	**08 11 56.6**	**+0.3**
VTS	**Vitosha**	**2.91**	**318**	⇓P	**Pg**	**08 12 07.0**	**-0.5**
STIP	**Stip**	**3.03**	**295**	*i* Pn	**Pn**	**08 11 57.9**	**-0.7**
STIP	**Stip**	**3.03**	**295**	*i* Pn	**Pn**	**08 11 57.9**	**-0.7**
PLVB	**Pleven**	**3.05**	**343**	⇑P	**Pg**	**08 12 10.2**	**-0.1**
TIRR	**Tirgusor**	**4.41**	**25**	⇓P	**Pb**	**08 12 29.2**	**+0.7**
CFR	**Carcaliu**	**4.99**	**19**	⇓P	**Pb**	**08 12 33.9**	**-4.5**
MDVR	**Moldovita**	**5.28**	**326**	⇑P	**Pn**	**08 12 33.6**	**+4.1**
PLOR	**Plostina**	**5.41**	**6**	⇑P	**Pn**	08 12 36.8	+5.6
GZR	**Gura Zlata**	**5.41**	**336**	⇑P	**Pn**	**08 12 34.2**	**+2.9**
VRI	**Vrincioaia**	**5.43**	**6**	⇑P	**Pn**	08 12 36.2	+4.6

*IDC **27** 08:16:53.6±0.9,25˚.55S×176˚.65W,h0km,mb4.3/8, mb1 4.4/8,mb1mx4.1/25,mbtmp4.2/8,ML5.4/1,MS3.8/8, Ms1 3.8/8,ms1mx3.5/39,Error ellipse: s-maj=27.4km s-min=23.0km az=74.0*
*NEIC **27** 08:16:53.7±2.1,25˚.53S±0˚.10×176˚.5W±0˚.1,h10km±1km, mb4.6/15,Error ellipse: s-maj=25.1km s-min=12.3km az=301.0*
ISC 27 08:16:57.6±0.6,**25˚.54S**±0˚.08×**176˚.4W**±0˚.1,**h36**km,**n50**, σ1**53**/34,**mb4.4**/12,**MS3.9**/7,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.93**	**199**	Pn	**Pn**	**08 17 55.3**	**0.0**
297nm,0.3s,baz=79,slow=12,SNR=12							
RAO				Sn	**Sn**	**08 18 44.4**	**+4.2**
208nm,0.3s,baz=90,slow=20,SNR=1.8							
RAO	**Raoul Island**	**3.93**	**199**		**Pn**	**08 17 54.1**	**-1.2**
RAO				Sn	**Sn**	**08 18 39.2**	**-1.0**
NIUE	**Niue**	**8.81**	**44**		**Pn**	**08 19 01.2**	**-1.2**
MSVF	**Nonsavu**	**9.31**	**325**		Pn	08 19 14.2	+4.8
OUZ	**Omahuta**	**12.92**	**219**		**P**	**08 20 06.1**	**-2.7**
RAR	**Rarotonga**	**15.89**	**78**	Pn	**Pn**	**08 20 36.9**	**-1.6**
2.6nm,0.3s,baz=256,slow=11,SNR=8.3							
RAR				Sn	Sn	08 23 18.2	-15
1.0nm,0.3s,baz=77,slow=18,SNR=2.1							
RAR				LR	LR	08 25 26.2	
comp=Z,181nm,19.9s,baz=278,slow=32							
RAR	**Rarotonga**	**15.89**	**78**		**Pn**	**08 20 37.5**	**-0.9**
RAR				IAmb	IAmb	08 20 41.7	
comp=Z,55nm,1.1s							
DZM	**Mont Dzumac**	**16.05**	**279**	LR	LR	08 25 32.4	
comp=Z,395nm,19.0s,baz=88,slow=33							
RPZ	**Rata Peaks**	**20.81**	**206**	P	**P**	**08 21 32.4**	**-3.4**
comp=Z,8.6nm,1.0s,baz=169,slow=19,SNR=1.7							
RPZ				LR	LR	08 29 16.4	
comp=Z,358nm,20.2s,baz=36,slow=36							
TBI	**Tubuai**	**24.64**	**91**	*e*T	T	08 47 25.8	
comp=Z,58nm,0.3s							
PAE	**Paea**	**26.13**	**78**	*e*T	T	08 49 19.0	
comp=Z,7.1nm,0.2s							
PPT2	**Papeete2**	**26.16**	**78**	*e*LQ	LQ	08 27 23.9	
comp=Z,324nm,27.2s							
PPT2				*e*LR	LR	08 28 53.0	
comp=Z,472nm,26.0s,baz=249							
PPT2	**Papeete2**	**26.16**	**78**	*e*T	T	08 49 24.7	
comp=Z,7.5nm,0.3s							
PPT	**Papeete**	**26.17**	**78**	LR	LR	08 30 21.2	
comp=Z,125nm,19.6s,baz=273,slow=31							
TVO	**Taravao**	**26.38**	**78**	*e*T	T	08 49 36.9	
comp=Z,5.4nm,0.3s							
MEH	**Mehetia**	**27.39**	**80**	*e*T	T	08 50 54.7	
comp=Z,31nm,0.3s							
EIDS	**Eidsvold**	**29.30**	**263**	P	**P**	**08 22 57.3**	**+0.5**
EIDS				IAmb	IAmb	08 22 57.4	
comp=Z,17nm,1.5s							
TOO	**Toolangi**	**34.37**	**240**	P	**P**	**08 23 41.0**	**-0.2**
TOO				IAmb	IAmb	08 23 57.6	
comp=Z,18nm,1.4s							
CTA	**Charters Tower**	**34.74**	**271**	P	**P**	**08 23 45.2**	**+0.6**
comp=Z,8.3nm,1.1s,baz=97,slow=14,SNR=3.0							
CTA				LR	LR	08 37 09.1	
comp=Z,292nm,19.6s,baz=50,slow=35							
CTAO	**Charters Tower**	**34.74**	**271**	P	**P**	**08 23 45.6**	**+1.0**
CTAO				IAmb	IAmb	08 23 48.0	
comp=Z,14nm,1.2s							
STKA	**Stephens Creek**	**37.18**	**250**	P	**P**	**08 24 05.2**	**-0.2**
comp=Z,2.2nm,0.4s,baz=97,slow=12,SNR=12							
STKA				LR	LR	08 37 43.8	
comp=Z,208nm,19.6s,baz=35,slow=34							
STKA	**Stephens Creek**	**37.18**	**250**	P	**P**	**08 24 05.5**	**+0.2**
BBOO	**Buckleboo**	**41.83**	**249**	P	**P**	**08 24 43.7**	**-0.4**
AS31	**Alice Springs**	**44.99**	**261**	P	**P**	**08 25 08.9**	**-0.8**
AS31				IAmb	IAmb	08 25 14.8	
comp=Z,2.2nm,0.3s							
WB2	**Warramunga Arr**	**45.53**	**267**	P	**P**	**08 25 12.4**	**-1.6**
WB2				IAmb	IAmb	08 25 30.0	
comp=Z,4.2nm,1.0s							
WRAB	**Tennant Creek**	**45.54**	**267**	P	**P**	**08 25 12.7**	**-1.4**
WRA	**Warramunga Arr**	**45.54**	**267**	P	**P**	**08 25 12.2**	**-1.9**
comp=Z,0.8nm,0.3s,baz=99,slow=7.0,SNR=52							
KNRA	**Kununurra**	**51.93**	**270**	P	**P**	**08 26 03.1**	**0.0**
KNRA				IAmb	IAmb	08 26 12.6	
comp=Z,9.4nm,1.1s							
VNDA	**Vanda**	**53.05**	**186**	P	**P**	**08 26 12.2**	**+1.6**
comp=Z,1.7nm,0.5s,baz=4.0,slow=7.3,SNR=25							
VNDA	**Vanda**	**53.05**	**186**	P	**P**	**08 26 12.3**	**+1.7**
MORW	**Morawa**	**59.37**	**250**	P	**P**	**08 26 55.9**	**-0.6**
CASY	**Casey**	**60.08**	**207**	P	**P**	**08 26 60.0**	**-0.8**
GIRL	**Giralia**	**62.70**	**257**	P	**P**	**08 27 18.8**	**-0.4**
QSPA	**South Pole Qui**	**64.56**	**180**	P	**P**	**08 27 31.9**	**+1.0**
comp=Z,2.2nm,0.5s,baz=66,slow=0.3,SNR=22							
QSPA	**South Pole Qui**	**64.56**	**180**	P	**P**	**08 27 31.7**	**+0.8**
QSPA				IAmb	IAmb	08 27 33.2	
comp=Z,3.5nm,0.8s							
PETK	**Petropavlovsk-**	**81.49**	**345**	P	**P**	**08 29 13.2**	**+2.5**
comp=Z,0.9nm,0.6s,baz=147,slow=6.7,SNR=2.4							
H03S2	**Juan Fernandez**	**81.98**	**124**	T	T	10 00 01.9	
baz=243,slow=74,SNR=60							
H03S1	**Juan Fernandez**	**82.00**	**124**	T	T	09 59 53.0	
baz=243,slow=74,SNR=8.6							
H03S3	**Juan Fernandez**	**82.00**	**124**	T	T	09 59 52.7	
baz=243,slow=74,SNR=8.7							
H03N2	**Juan Fernandez**	**82.15**	**123**	T	T	10 00 10.9	
baz=259,slow=73							
H03N3	**Juan Fernandez**	**82.15**	**123**	T	T	09 59 59.9	
baz=259,slow=73							
H03N1	**Juan Fernandez**	**82.16**	**123**	T	T	09 59 53.2	
baz=259,slow=73							
KDAK	**Kodiak Island**	**85.38**	**13**	LR	LR	09 00 27.2	
comp=Z,49nm,20.8s,baz=130,slow=31							
KLR	**Kul'dur**	**87.58**	**329**	LR	LR	09 02 43.3	
comp=Z,34nm,21.2s,baz=154,slow=31							
ILAR	**Eielson Array**	**92.90**	**12**	P	**P**	**08 30 07.2**	**+1.1**
comp=Z,0.2nm,0.7s,baz=226,slow=6.2,SNR=2.1							
LPAZ	**La Paz**	**98.80**	**113**	P	Pdif	08 30 37.3	+2.3
comp=Z,0.4nm,0.3s,baz=252,slow=6.6,SNR=7.2							
AKTO	**Aktyubinsk**	**131.72**	**316**	PKhKP	PKPpre	08 35 58.6	
comp=Z,0.7nm,0.4s,baz=62,slow=18,SNR=1.9							
AKASG	**Malin Array Be**	**148.08**	**329**	PKPbc	**PKiKP**	**08 36 40.9**	**+0.1**
comp=Z,0.3nm,0.3s,baz=44,slow=4.1,SNR=2.3							
BRTR	**Keskin Array B**	**151.15**	**307**	PKPbc	**PKiKP**	**08 36 48.4**	**+0.6**
comp=Z,0.6nm,0.6s,baz=115,slow=3.8,SNR=3.3							
TORD	**Torodi Ar. Bea**	**167.55**	**171**	PKP	**PKPdf**	**08 37 01.2**	**+0.5**
comp=Z,0.3nm,0.6s,baz=258,slow=2.4,SNR=1.4							
TORD				PKPab	**PKPab**	**08 38 07.5**	**+1.3**
comp=Z,0.8nm,0.5s,baz=199,slow=3.3,SNR=8.6							

*GII **27** 08:23:47.9±0.1,33˚.27N×35˚.73E,h10km,MD2.7/2, Mm2.4/11*
*GRAL **27** 08:23:48.9±0.3,33˚.27N×35˚.73E,h7km±1km,MD2.9*
ISC 27 08:23:48.0±0.9,**33˚.27N**±0˚.02×**35˚.74E**±0˚.05,**h12**km±4km,
n22,σ0**49**/36,**Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NATI	**Neve Ativ**	**0.01**	**211**	Pg	**Pg**	**08 23 49.9**	**-0.1**
NATI				Sg	**Sg**	**08 23 51.7**	**+0.3**
SHBL	**Chebaa**	**0.08**	**0**	*e*P	**Pg**	**08 23 50.9**	**+0.1**
SHBL				*e*S	**Sg**	**08 23 52.2**	**-0.5**
GEM	**Giv'at Ha'Em**	**0.09**	**228**	Pg	**Pg**	**08 23 50.6**	**-0.1**
GEM				Sg	**Sg**	**08 23 52.4**	**-0.2**
KSDI	**Kefar Szold**	**0.11**	**222**	Pg	**Pg**	**08 23 50.9**	**0.0**
KSDI				Sg	**Sg**	**08 23 52.9**	**-0.1**
RCY	**Rachaya**	**0.24**	**19**	*e*P	**Pg**	**08 23 53.3**	**+0.2**
RCY				*e*S	**Sg**	**08 23 56.7**	**+0.2**
QRWL	**Qaraoun**	**0.28**	**349**	*e*P	**Pg**	**08 23 54.1**	**+0.3**
KSHT	**Keshet**	**0.29**	**169**	Pg	**Pg**	**08 23 54.8**	**+0.7**
MMA0B	**Mount Meron ar**	**0.38**	**228**	Pg	**Pg**	**08 23 55.7**	**0.0**
MMA0B				Sg	**Sg**	**08 24 01.4**	**+0.6**
DQRL	**Deir Qamar**	**0.46**	**342**	*e*P	**Pg**	**08 23 56.8**	**-0.2**
DQRL				*e*S	**Sg**	**08 24 03.1**	**0.0**
HNTI	**Hanita**	**0.51**	**249**	Pg	**Pg**	**08 23 58.1**	**0.0**
HNTI				Sg	**Sg**	**08 24 05.8**	**+0.9**
BHL	**Bhannes**	**0.64**	**353**	*e*P	**Pg**	**08 24 00.5**	**+0.1**
BHL				*e*S	**Sg**	**08 24 08.9**	**+0.1**
BLGI	**Bet Lehem HaGe**	**0.71**	**221**	Pg	**Pg**	**08 24 01.3**	**-0.5**
BLGI				Sg	**Sb**	**08 24 11.9**	**-0.2**
**MM

ZALV				Rg	Rg	08 36 17.2			
	7.4nm,0.5s,baz=82,slow=30,SNR=9.0								
KURBB	**Kurchatov Arra**	**6.42 238**		Pn	Pn	08 37 03.3	+0.6		
	0.1nm,0.3s,baz=54,slow=14,SNR=9.9								
KURBB				Sn	Sn	08 38 15.9	-0.7		
	0.0nm,0.3s,baz=341,slow=14,SNR=1.3								
KURBB				Lg	Lg	08 38 51.6			
	0.1nm,0.3s,baz=54,slow=32,SNR=2.2								
MKAR	**Makanchi Array**	**8.15 204**		Pn	Pn	08 37 27.9	+1.3		
	0.1nm,0.3s,baz=22,slow=13,SNR=4.3								
MKAR				Lg	Lg	08 39 46.8			
	0.1nm,0.3s,baz=18,slow=29,SNR=2.3								

IDC ***27*** *08:46:10.1±0.5,3.78S×151.35E,h0km,mb4.3/20, mb1 4.4/21,mb1mx4.2/44,mbtmp4.3/21,ML2.9/1,MS4.2/16, Ms1 4.2/16,ms1mx4.1/27,Error ellipse: s-maj=15.3km s-min=12.0km az=106.0*

NEIC ***27*** *08:46:11.4±1.4,3.76S±0.07×151.33E±0.06,h10km±1km, mb4.7/72,Error ellipse: s-maj=14.9km s-min=3.8km az=40.0*

DJA ***27*** *08:46:13.5±1.5,4.3S×15.1E±.,h30km±15km,M4.7/12, mb4.7/12,mB5.2/6,MLv4.8/2,Mw(mB)4.6/6,Mwp5.1/1*

GCMT ***27*** *08:46:15.4±0.2,3.66S±0.01×151.26E±0.01,h19km, MW5.1/134,Moment Tensor Solution. s56,c70; s134,c216; Duration:0 Moment tensor: Scale 10^16^Nm; Mrr-0.40±.14; Mθθ-2.63±.12; Mφφ3.03±.12; Mrθ-1.48±.28; Mθφ5.01±.11; Mφr1.52±.25; Best double couple: M=6.13800×10^16^ NP1:φs74.00000°,δ73.00000°, λ-10.00000°. NP2:φs167.00000°,δ80.00000°, λ-162.00000°. Principal axes: T 6.0070, Plg5.0000°, Azm299.0000°; N 0.2630, Plg70.0000°, Azm194.0000°; P -6.2690, Plg19.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=50s. Triangular moment-rate function*

ISC 27 08:46:13.5±0.3,3.76S±0.05×151.37E±0.05,h21km,n130, σ1§47/129,mb4.7/63,MS4.4/27,1C,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.85**	**130**	Pn	**Pb**	**08 46 29.1**	**-0.5**
	546nm,0.3s,baz=254,slow=0.4,SNR=132						
RABL	**Rabaul**	**0.90**	**119**		**Pb**	**08 46 29.4**	**-1.0**
PMG	**Port Moresby**	**7.00**	**216**	Pn	**Pn**	**08 47 55.7**	**+0.9**
	12nm,0.3s,baz=42,slow=6.1,SNR=19						
PMG				Sn	**Sn**	**08 49 16.1**	**+2.3**
	baz=342,slow=13,SNR=1.4						
PMG	**Port Moresby**	**7.00**	**216**		**Pn**	**08 47 55.9**	**+1.0**
HNR	**Honiara**	**10.21**	**124**	Pn	**Pn**	**08 48 39.5**	**+0.5**
COEN	**Coen**	**12.97**	**218**	Pn	**Pn**	**08 49 16.2**	**-0.5**
CTA	**Charters Tower**	**16.98**	**197**	Pn	**P**	**08 50 13.4**	**+1.7**
	0.5nm,0.3s,baz=26,slow=14,SNR=11						
CTA				LR	LR	08 56 01.4	
	comp=Z,1μm,19.8s,baz=13,slow=35						
CTAO	**Charters Tower**	**16.98**	**197**	P	**P**	**08 50 12.1**	**+0.4**
CTAO				IAmb	IAmb	08 50 21.1	
	comp=Z,59nm,1.2s						
RKPI	**Ransiki, Papua**	**17.32**	**277**	P	**Pn**	**08 50 14.3**	**+0.1**
	comp=Z,6μmcomp=Z,51nm,0.7s						
FAKI	**Fak Fak**	**19.11**	**272**	P	**Pn**	**08 50 39.6**	**+3.5**
FAKI	**Fak Fak**	**19.11**	**272**	P	**P**	**08 50 31.9**	**-3.3**
FAKI				IAmb	IAmb	08 50 42.2	
	comp=Z,69nm,1.4s						
SIJI	**Sorong**	**20.29**	**278**	P	**P**	**08 50 46.6**	**-1.6**
	comp=Z,12nm,0.7s,baz=76,slow=7.4,SNR=11						
EIDS	**Eidsvold**	**21.49**	**181**	P	**P**	**08 51 00.7**	**-0.2**
EIDS				IAmb	IAmb	08 51 17.4	
	comp=Z,36nm,1.4s						
MTN	**Manton Dam**	**21.95**	**245**	P	**P**	**08 51 06.0**	**+0.1**
MTN				IAmb	IAmb	08 51 09.7	
	comp=Z,60nm,1.5s						
WB0	**Warramunga Arr**	**22.97**	**225**	P	**P**	**08 51 14.4**	**-2.4**
WB0				IAmb	IAmb	08 51 17.9	
	comp=Z,43nm,1.4s						
WR0	**Warramunga Arr**	**22.99**	**224**	P	**P**	**08 51 14.8**	**-2.3**
WR0				IAmb	IAmb	08 51 17.7	
	comp=Z,21nm,1.0s						
WRAB	**Tennant Creek**	**23.11**	**225**	P	**P**	**08 51 16.8**	**-1.5**
WRAB				IAmb	IAmb	08 51 29.4	
	comp=Z,55nm,1.4s						
WB2	**Warramunga Arr**	**23.11**	**225**	P	**P**	**08 51 17.3**	**-1.0**
WB2				IAmb	IAmb	08 51 30.3	
	comp=Z,35nm,1.2s						
WRA	**Warramunga Arr**	**23.12**	**225**	P	**P**	**08 51 16.3**	**-2.1**
	comp=Z,17nm,1.0s,baz=48,slow=9.7,SNR=48						
WRA				S	**S**	**08 55 31.3**	**+2.5**
	comp=Z,0.7nm,0.9s,baz=50,slow=18,SNR=2.2						
WRA				LR	LR	09 00 36.7	
	comp=Z,863nm,19.9s,baz=50,slow=38						
DZM	**Mont Dzumac**	**23.35**	**143**	*e*P	**P**	**08 51 22.3**	**+1.5**
	comp=Z,34nm,0.7s						
DZM				*e*S	**S**	**08 55 27.3**	**-5.4**
	comp=Z,601nm,24.1s						
DZM				*e*LR	LR	08 57 02.1	
	comp=Z,2μm,25.4s						
DZM	**Mont Dzumac**	**23.35**	**143**	P	**P**	**08 51 22.9**	**+2.2**
	comp=Z,37nm,1.0s,baz=318,slow=15,SNR=4.0						
DZM				LR	LR	08 59 17.3	
	comp=Z,1μm,21.9s,baz=320,slow=34						
DZM	**Mont Dzumac**	**23.35**	**143**	P	**P**	**08 51 21.7**	**+1.0**
TNTI	**Ternate**	**24.41**	**280**	P	**P**	**08 51 28.9**	**-1.9**
KNRA	**Kununurra**	**25.20**	**240**	P	**P**	**08 51 37.6**	**-0.3**
KNRA				IAmb	IAmb	08 51 51.8	
	comp=Z,29nm,1.2s						
AS31	**Alice Springs**	**26.00**	**219**	P	**P**	**08 51 44.5**	**-0.7**
ARMA	**Armidale**	**26.52**	**179**	P	**P**	**08 51 50.5**	**+0.6**
SOEI	**Soe**	**27.55**	**256**	P	**P**	**08 51 58.6**	**-0.7**
DAV	**Davao City (W)**	**27.90**	**293**	LR	LR	09 02 16.1	
	comp=Z,161nm,19.3s,baz=163,slow=35						
FITZ	**Fitzroy Crossi**	**28.94**	**239**	P	**P**	**08 52 10.1**	**-1.5**
	comp=Z,11nm,1.1s,baz=65,slow=11,SNR=7.0						
FITZ				LR	LR	09 04 36.8	
	comp=Z,641nm,19.4s,baz=61,slow=38						
STKA	**Stephens Creek**	**29.44**	**197**	P	**P**	**08 52 15.2**	**-0.6**
	comp=Z,6.1nm,0.7s,baz=12,slow=11,SNR=16						
STKA				LR	LR	09 03 54.1	
	comp=Z,885nm,19.6s,baz=8.7,slow=36						
STKA	**Stephens Creek**	**29.44**	**197**	P	**P**	**08 52 15.0**	**-0.8**
EDFI	**Ende, Flores**	**29.91**	**259**	P	**P**	**08 52 20.9**	**+0.6**
JCJ	**Chichijima**	**31.93**	**344**	P	**P**	**08 52 36.5**	**-1.4**
	comp=Z,31nm,0.7s,baz=299,slow=19,SNR=2.2						
PSA00	**Pilbara Seismi**	**35.36**	**237**	P	**P**	**08 53 06.3**	**-1.5**
KKM	**Kota Kinabalu**	**36.43**	**285**	P	**P**	**08 53 15.6**	**-1.7**
KKM				IAmb	IAmb	08 53 20.4	
	comp=Z,9.0nm,0.8s						
SBUM	**Sibu**	**39.61**	**278**	P	**P**	**08 53 43.6**	**-0.4**
KSM	**Kuching**	**41.37**	**276**	P	**P**	**08 53 56.5**	**-2.0**
KSM				IAmb	IAmb	08 54 04.6	
	comp=Z,25nm,1.2s						
JNU	**Nakatsue**	**41.50**	**334**	P	**P**	**08 53 59.2**	**-0.1**
JNU				IAmb	IAmb	08 54 10.8	
	comp=Z,16nm,1.1s						
BKZ	**Black Stump Fm**	**41.98**	**150**	P	**P**	**08 54 03.9**	**+0.6**
BKZ				IAmb	IAmb	08 54 14.8	
	comp=Z,30nm,1.5s						
CISI	**Cisompet, Garu**	**43.49**	**263**	P	**P**	**08 54 15.5**	**-0.4**
DLV	**T Lat**	**45.40**	**291**	P	**P**	**08 54 29.8**	**-1.5**
DLV				IAmb	IAmb	08 54 36.6	
	comp=Z,11nm,1.0s						
KSRS	**Korea Array**	**46.44**	**334**	LR	LR	09 14 15.9	
	comp=Z,98nm,18.1s,baz=135,slow=36						
QIZ	**Qiongzhong**	**46.72**	**301**	P	**P**	**08 54 40.3**	**-1.1**
QIZ				S	**S**	**09 01 31.3**	**+1.0**
QIZ				sS	**sS**	**09 01 42.5**	**+2.6**
QIZ	**Qiongzhong**	**46.72**	**301**	SS	SS	09 04 55.0	-2.0
QIZ				pmax	pmax		
	comp=Z,160nm,6.4s						
QIZ				LR	LR		
	comp=N,180nm,18.1s						
QIZ				LR	LR		
	comp=E,390nm,25.0s						
QIZ				LR	LR		
	comp=Z,540nm,23.0s						
NJ2	**Nanjing**	**47.15**	**321**	*e*P	**P**	**08 54 46.5**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
MYKOM	**Kota Tinggi**	**47.81**	**276**	P	**P**	**08 54 49.6**	**-0.4**
WHN	**Wuhan**	**49.12**	**317**	⇑P	**P**	**08 54 57.0**	**-2.8**
WHN				S	S	09 01 53.8	-10
WHN				LR	LR		
	comp=N,2μm,22.6s						
WHN				LR	LR		
	comp=E,800nm,18.5s						
WHN				LR	LR		
	comp=Z,1μm,26.9s						
USRK	**Ussuriysk Ar.**	**50.82**	**342**	P	**P**	**08 55 13.6**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=134,slow=6.2,SNR=3.3						
ENH	**Enshi**	**52.41**	**313**	P	**P**	**08 55 23.9**	**-0.7**
ENH				IAmb	IAmb	08 55 39.7	
	comp=Z,18nm,1.2s						
GYA	**Guiyang**	**52.63**	**307**	*e*P	**P**	**08 55 28.0**	**+1.5**
GYA				PP	**PP**	**08 57 25.3**	**-0.5**
GYA				S	**S**	**09 02 52.0**	**-1.2**
GYA	**Guiyang**	**52.63**	**307**	SS	SS	09 06 17.0	-15
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,170nm,4.8s						
GYA				LR	LR		
	comp=N,270nm,17.8s						
GYA				LR	LR		
	comp=E,340nm,19.2s						
GYA				LR	LR		
	comp=Z,520nm,19.7s						
PBKT	**Sadao Pong**	**53.73**	**294**	P	**P**	**08 55 34.3**	**-0.3**
PBKT				IAmb	IAmb	08 55 40.8	
	comp=Z,9.9nm,1.2s						
XAN	**Xi'an**	**54.89**	**317**	P	**P**	**08 55 39.3**	**-3.5**
XAN				pP	pP	08 55 48.5	-0.2
XAN				S	**S**	**09 03 19.5**	**-3.9**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.5s						
XAN				LR	LR		
	comp=N,270nm,22.8s						
XAN				LR	LR		
	comp=E,350nm,18.4s						
XAN				LR	LR		
	comp=Z,600nm,21.7s						
KMI	**Kunming**	**55.23**	**304**	P	**P**	**08 55 47.0**	**+1.4**
KMI				pP	pwP	08 55 57.5	+2.7
KMI				S	S	09 03 09.0	-20
KMI				pmax	pmax		
	comp=Z,17nm,1.1s						
KMI				pmax	pmax		
	comp=Z,87nm,4.0s						
KMI				LR	LR		
	comp=N,190nm,19.0s						
KMI				LR	LR		
	comp=E,310nm,22.7s						
KMI				LR	LR		
	comp=Z,430nm,21.5s						
KLR	**Kul'dur**	**55.46**	**345**	P	**P**	**08 55 46.7**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=164,slow=10,SNR=3.0						
CM31	**Chiang Mai Arr**	**56.15**	**295**	P	**P**	**08 55 51.4**	**-0.7**
CMAR	**Chiang Mai Arr**	**56.15**	**295**	P	**P**	**08 55 52.8**	**+0.7**
	comp=Z,5.2nm,0.9s,baz=118,slow=5.6,SNR=12						
CMAR				LR	LR	09 19 43.2	
	comp=Z,176nm,19.6s,baz=161,slow=36						
CHTO	**Chiang Mai**	**56.26**	**295**	P	**P**	**08 55 52.4**	**-0.5**
CHTO				IAmb	IAmb	08 55 59.8	
	comp=Z,13nm,1.2s						
PEA0B	**Petropavlovsk-**	**56.91**	**5**	P	**P**	**08 55 57.1**	**+0.3**
PETK	**Petropavlovsk-**	**56.91**	**5**	P	**P**	**08 55 56.8**	**0.0**
	comp=Z,2.2nm,0.7s,baz=164,slow=7.4,SNR=11						
HHC	**Hu-ho-hao-te**	**57.38**	**325**	*e*P	**P**	**08 56 01.3**	**+0.7**
HHC				sP	pwP	08 56 11.3	+1.5
HHC				S	**S**	**09 04 01.0**	**+4.6**
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,55nm,5.7s						
HHC				LR	LR		
	comp=N,150nm,17.9s						
HHC				LR	LR		
	comp=E,140nm,16.2s						
HHC				LR	LR		
	comp=Z,170nm,18.7s						
PPT2	**Papeete2**	**59.40**	**108**	*e*S	**S**	**09 04 23.5**	**+0.1**
	comp=Z,278nm,27.8s						
PPT2				*e*LQ	LQ	09 11 00.4	
	comp=Z,231nm,26.0s						
PPT2				*e*LR	LR	09 13 51.0	
	comp=Z,593nm,31.0s						
LZH	**Lanzhou**	**59.49**	**316**	*e*P	**P**	**08 56 17.3**	**+1.8**
LZH				pP	pwP	08 56 26.0	+1.2
LZH				sP	sP	08 56 29.8	+6.0
LZH				*e*PP	**PP**	**08 58 31.0**	**+3.9**
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,78nm,7.4s						
LZH				LR	LR		
	comp=N,240nm,15.2s						
LZH				LR	LR		
	comp=E,250nm,14.8s						
LZH				LR	LR		
	comp=Z,400nm,17.4s						
TBI	**Tubuai**	**60.28**	**115**	*e*S	**S**	**09 04 35.4**	**+0.9**
	comp=Z,295nm,29.8s						
TBI				*e*LQ	LQ	09 11 38.0	
	comp=Z,421nm,25.5s						
TBI				*e*LR	LR	09 14 15.7	
	comp=Z,722nm,32.8s						
MA2	**Magadan**	**63.14**	**360**	LR	LR	09 21 33.9	
	comp=Z,52nm,19.7s,baz=184,slow=34						
GTA	**Gaotai**	**63.93**	**318**	*e*P	**P**	**08 56 45.5**	**+0.2**
GTA				pP	pwP	08 56 56.0	+1.4
GTA				sP	sP	08 57 00.0	+6.5
GTA				S	**S**	**09 05 19.0**	**-1.3**
GTA				sS	sS	09 05 35.3	+4.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,120nm,8.6s						
GTA				LR	LR		
	comp=N,140nm,21.6s						
GTA				LR	LR		
	comp=E,230nm,20.3s						
GTA				LR	LR		
	comp=Z,260nm,18.7s						
ULN	**Ulaanbaatar**	**64.37**	**329**	P	**P**	**08 56 47.4**	**-0.7**
SHL	**Shillong**	**64.55**	**300**	P	**P**	**08 56 49.1**	**-0.6**
SONM	**Songino Array**	**64.69**	**328**	P	**P**	**08 56 49.9**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=130,slow=4.5,SNR=3.1						
SONM				LR	LR	09 25 10.5	
	comp=Z,182nm,19.3s,baz=111,slow=36						
LSA	**Lhasa**	**66.48**	**305**	P	**P**	**08 57 01.2**	**-1.3**
LSA				IAmb	IAmb	08 57 05.7	
	comp=Z,5.0nm,0.7s						
YAK	**Yakutsk**	**67.68**	**349**	P	**P**	**08 57 09.6**	**+0.8**
TAOE	**Nuku Hiva Isla**	**68.18**	**98**	*e*LR	LR	09 17 55.6	
	comp=Z,351nm,26.3s						
TLY	**Talaya**	**68.47**	**330**	P	**P**	**08 57 13.7**	**-0.4**
VNDA	**Vanda**	**73.92**	**178**	P	**P**	**08 57 47.1**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=336,slow=5.9,SNR=3.9						
VNDA	**Vanda**	**73.92**	**178**	P	**P**	**08 57 46.1**	**-0.5**
WMQ	**Urumqi**	**74.02**	**318**	*e*P	**P**	**08 57 48.8**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,61nm,3.8s						
WMQ				LR	LR		
	comp=N,240nm,15.1s						
WMQ				LR	LR		
	comp=E,240nm,18.7s						
WMQ				LR	LR		
	comp=Z,170nm,22.1s						
WMQ	**Urumqi**	**74.02**	**318**	P	**P**	**08 57 47.5**	**-0.4**
TIXI	**Tiksi**	**76.69**	**353**	P	**P**	**08 58 01.7**	**-0.8**
CNPM	**China Poot**	**77.41**	**26**	P	**P**	**08 58 06.4**	**-0.4**
RDOG	**Red Dog Mine**	**78.37**	**16**	P	**P**	**08 58 13.7**	**+1.7**
RDOG				IAmb	IAmb	08 58 16.1	
	comp=Z,6.5nm,1.1s						
MK31	**Makanchi Array**	**78.61**	**319**	P	**P**	**08 58 13.0**	**-0.9**
MKAR	**Makanchi Array**	**78.61**	**319**	P	**P**	**08 58 13.6**	**-0.3**
	comp=Z,1.9nm,0.9s,baz=103,slow=7.5,SNR=8.8						
MKAR				LR	LR	09 31 16.7	
	comp=Z,191nm,22.0s,baz=94,slow=34						
MAKZ	**Makanchi**	**78.82**	**319**	P	**P**	**08 58 14.3**	**-0.7**
ZAA0	**Zalesovo Array**	**79.50**	**327**	P	**P**	**08 58 18.4**	**-0.1**
ZALV	**Zalesovo Beam**	**79.50**	**327**	P	**P**	**08 58 18.6**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=91,slow=5.8,SNR=4.2						
ZALV				LR	LR	09 33 17.6	
	comp=Z,81nm,20.9s,baz=111,slow=36						
KNK	**Knik Glacier**	**79.53**	**25**	P	**P**	**08 58 19.4**	**+0.9**
KNK				IAmb	IAmb	08 58 38.3	
	comp=Z,14nm,1.0s						
SML	**Sawmill**	**79.78**	**25**	P	**P**	**08 58 19.7**	**-0.2**
TRF	**Thorofare Moun**	**79.79**	**23**	P	**P**	**08 58 19.7**	**-0.4**
TRF				IAmb	IAmb	08 58 26.8	
	comp=Z,8.2nm,1.1s						
TARG	**Taragay, Kyrgy**	**80.32**	**313**	P	**P**	**08 58 22.5**	**-1.3**
RND	**Reindeer**	**80.33**	**23**	P	**P**	**08 58 22.9**	**-0.1**
RND				IAmb	IAmb	08 58 26.2	
	comp=Z,8.4nm,0.8s						
MCK	**McKinley**	**80.46**	**23**	P	**P**	**08 58 23.3**	**-0.2**
NEA	**Nenana**	**80.82**	**22**	P	**P**	**08 58 25.3**	**-0.1**
NEA				IAmb	IAmb	08 58 28.2	
	comp=Z,6.6nm,0.9s						
WRH	**Wood River Hil**	**81.14**	**22**	P	**P**	**08 58 26.9**	**-0.3**
WRH				IAmb	IAmb	08 58 29.8	
	comp=Z,6.7nm,1.0s						
KSH	**Kashi**	**81.18**	**311**	P	**P**	**08 58 30.8**	**+2.7**
KSH				pP	sP	08 58 36.5	0.0
KSH				sP	pwP	08 58 41.0	+3.5
KSH				pmax	pmax		
	comp=Z,20nm,1.3s						
KSH				pmax	pmax		
	comp=Z,120nm,4.3s						
CCB	**Clear Creek Bu**	**81.33**	**22**	P	**P**	**08 58 27.3**	**-0.9**
COLA	**College**	**81.42**	**22**	P	**P**	**08 58 28.1**	**-0.5**
COLA				IAmb	IAmb	08 58 34.8	
	comp=Z,6.6nm,0.8s						
HDA	**Harding Lake**	**81.55**	**23**	P	**P**	**08 58 28.7**	**-0.6**
GLB	**Gilahina Butte**	**81.55**	**26**	IAmb	IAmb	08 58 33.2	
	comp=Z,9.5nm,1.2s						
IL31		**81.74**	**22**	P	**P**	**08 58 30.4**	**+0.2**
ILAR	**Eielson Array**	**81.74**	**22**	P	**P**	**08 58 29.2**	**-1.1**
	comp=Z,3.0nm,0.7s,baz=248,slow=5.6,SNR=25						
KURK	**Kurchatov**	**82.08**	**322**	P	**P**	**08 58 31.4**	**-1.0**
RIDG	**Independent Ri**	**82.08**	**24**	IAmb	IAmb	08 58 44.3	
	comp=Z,9.7nm,1.2s						
KURBB	**Kurchatov Arra**	**82.11**	**322**	P	**P**	**08 58 32.1**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=108,slow=4.8,SNR=6.7						
NIL	**Nilore**	**82.21**	**305**	P	**P**	**08 58 32.3**	**-1.2**
AAK	**Ala-Archa**	**82.92**	**314**	P	**P**	**08 58 38.0**	**+0.8**
	comp=Z,2.3nm,0.7s,baz=133,slow=3.3,SNR=4.7						
AAK	**Ala-Archa**	**82.92**	**314**	P	**P**	**08 58 36.3**	**-0.9**
HYT	**Haines Junctio**	**84.18**	**28**	P	**P**	**08 58 42.9**	**-0.3**
HYT				IAmb	IAmb	08 58 51.4	
	comp=Z,6.1nm,1.0s						
DAWY	**Dawson**	**84.43**	**24**	P	**P**	**08 58 44.1**	**-0.2**
DAWY				IAmb	IAmb	08 59 01.4	
	comp=Z,6.7nm,1.3s						
BTK	**Batken**	**85.18**	**311**	P	**P**	**08 58 48.4**	**-0.3**
GAR	**Garm**	**85.41**	**309**	P	**P**	**08 58 49.3**	**-0.5**
KK31	**Karatay Array**	**85.88**	**314**	P	**P**	**08 58 52.0**	**-0.1**
KK31				IAmb	IAmb	08 58 58.3	
	comp=Z,9.3nm,1.1s						
QSPA	**South Pole Qui**	**86.19**	**180**	P	**P**	**08 58 53.3**	**0.0**
QSPA				IAmb	IAmb	08 58 56.6	
	comp=Z,10nm,1.3s						
CHGR	**Chuyangaron**	**86.25**	**309**	P	**P**	**08 58 53.0**	**-1.1**
EPYK	**Eagle Plains**	**86.26**	**23**	P	**P**	**08 58 54.0**	**+0.6**
EPYK				IAmb	IAmb	08 59 07.3	
	comp=Z,8.9nm,1.1s						
DLBC	**Dease Lake**	**87.23**	**31**	P	**P**	**08 59 02.0**	**+3.7**
	comp=Z,2.8nm,0.9s,baz=270,slow=8.3,SNR=2.9						
DLBC	**Dease Lake**	**87.23**	**31**	IAmb	IAmb	08 59 11.5	
	comp=Z,8.4nm,1.2s						
BVAR	**Borovoye Array**	**87.56**	**323**	P	**P**	**08 59 00.9**	**+0.9**
	comp=Z,1.6nm,0.7s,baz=116,slow=5.0,SNR=8.5						
BRVK	**Borovoye**	**87.63**	**323**	P	**P**	**08 59 00.4**	**+0.1**
BRVK				IAmb	IAmb	08 59 12.8	
	comp=Z,4.3nm,1.1s						
INK	**Inuvik**	**88.00**	**21**	P	**P**	**08 59 01.2**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=196,slow=5.3,SNR=6.1						
INK	**Inuvik**	**88.00**	**21**	P	**P**	**08 59 01.9**	**+0.2**
INK				IAmb	IAmb	08 59 13.1	
	comp=Z,3.5nm,1.1s						
YBH	**Yreka Blue Hor**	**89.43**	**48**	P	P	08 59 16.5	+7.3
	comp=Z,2.1nm,0.9s,baz=180,slow=2.0,SNR=3.7						
NVAR	**Mina Array Bea**	**92.57**	**52**	P	**P**	**08 59 25.2**	**+1.2**
	comp=Z,0.5nm,0.9s,baz=247,slow=9.4,SNR=2.7						
NVAR				LR	LR	09 33 16.4	
	comp=Z,141nm,21.9s,baz=208,slow=30						
NEW	**Newport**	**93.78**	**42**	P	**P**	**08 59 30.3**	**+1.1**
	comp=Z,1.4nm,0.9s,baz=40,slow=16,SNR=2.1						
NEW	**Newport**	**93.78**	**42**	P	**P**	**08 59 27.9**	**-1.3**
NEW				IAmb	IAmb	08 59 37.5	
	comp=Z,4.1nm,1.1s						
GEYT	**Alibeck**	**94.86**	**308**	LR	LR	09 43 10.0	
	comp=Z,120nm,20.2s,baz=165,slow=36						
YKA	**Yellowknife Ar**	**95.17**	**28**	P	**P**	**08 59 35.4**	**+0.3**
	comp=Z,0.9nm,1.0s,baz=273,slow=3.8,SNR=9.1						
YKA				LR	LR	09 38 55.7	
	comp=Z,142nm,21.1s,baz=0.0,slow=33						
PDAR	**Pinedale Array**	**99.20**	**47**	LR	LR	09 37 10.5	
	comp=Z,176nm,21.7s,baz=222,slow=31						
SIV	**San Ignacio**	**142.39**	**122**	PKP	**PKPdf**	**09 05 46.4**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=238,slow=4.1,SNR=4.1						
TORD	**Torodi Ar. Bea**	**148.62**	**289**	PKPbc	**PKPbc**	**09 06 00.1**	**0.0**
	comp=Z,5.6nm,1.0s,baz=68,slow=2.2,SNR=12						
BDFB	**Brasilia**	**152.80**	**136**	PKPbc	**PKiKP**	**09 06 11.0**	**+0.7**
	comp=Z,1.7nm,0.4s,baz=157,slow=13,SNR=1.5						

PGC ***27*** *08:51:10.9±0.5,48.93N×129.08W,h10km,MLSn3.0/41, Mw3.7/41,230km southwest of Pt. Hardy, Bc Vancouver Island, Canada Region*

IDC ***27*** *08:51:12.5±1.5,49.06N×128.80W,h0km,mb3.5/3, mb1 3.8/12,mb1mx3.6/54,mbtmp3.6/12,ML3.6/7,MS2.9/5, Ms1 2.9/5,ms1mx2.8/34,Error ellipse: s-maj=26.5km s-min=10.8km az=63.0*

ISC 27 08:51:09.5±2.2,48.92N±0.05×129.02W±0.07,h0km±17km, n96,σ1§98/116,mb3.4/3,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEMF	**NEPTUNE Canada**	**0.97**	**183**	P	**Pg**	**08 51 26.1**	**-2.0**
NC27	**ODP1027**	**1.43**	**143**	Pn	**Pn**	**08 51 34.1**	**-2.2**
NC27				Sn	**Sn**	**08 51 49.3**	**-6.2**
NC89	**ODP889**	**1.46**	**99**	Pn	**Pn**	**08 51 35.6**	**-1.2**
BPBC	**Brooks Peninsu**	**1.48**	**33**	Pn	**Pn**	**08 51 35.8**	**-1.6**
EDB	**Eliza Dome**	**1.57**	**52**	Pn	**Pn**	**08 51 37.1**	**-1.4**
EDB				Sn	**Sn**	**08 51 56.6**	**-2.9**
FHRB	**Fair Harbour**	**1.68**	**47**	Pn	**Pn**	**08 51 38.9**	**-1.2

BBB Sn **Sn** **08 52 38.4 -4.3**
NLLB Nanaimo Lost L 3.32 83 Pn **Pn** **08 52 03.0 +0.3**
NLLB Sn **Sn** **08 52 40.4 -2.4**
OBC Olympics--Boni 3.41 103 Pn **Pn** **08 52 03.8 -0.1**
SHB Sechelt 3.44 77 Pn **Pn** **08 52 04.6 +0.3**
LZB Mount Lazard 3.45 93 Pn **Pn** **08 52 04.0 -0.5**
LZB Sn **Sn** **08 52 43.6 -2.5**
SOKB Sooke 3.58 96 Pn **Pn** **08 52 05.2 -1.0**
SOKB Sn **Sn** **08 52 46.5 -2.7**
GOBB Galiano Island 3.63 87 Pn **Pn** **08 52 07.1 +0.2**
STW Striped Peak 3.64 100 Pn **Pn** **08 52 06.5 -0.4**
B009 North Saanich 3.69 92 Pn **Pn** **08 52 07.3 -0.4**
B010 North Saanich 3.69 92 Pn **Pn** **08 52 07.2 -0.6**
B010 Sn **Sn** **08 52 49.7 -2.2**
PGC Sidney 3.69 92 Pn **Pn** **08 52 07.3 -0.4**
PGC Sn **Sn** **08 52 49.7 -2.2**
PA12 PA12 Sannich 3.69 92 Pn **Pn** **08 52 07.3 -0.4**
B011 North Saanich 3.69 92 Pn **Pn** **08 52 07.3 -0.5**
B011 Sn **Sn** **08 52 50.4 -1.6**
PA04 PA04 Cage 3.70 92 Pn **Pn** **08 52 07.5 -0.3**
BCBC Bella Coola 3.75 22 Pn **Pn** **08 52 09.1 +0.6**
BCBC Sn **Sn** **08 52 50.5 -2.7**
BIB Bowen Island 3.78 80 Pn **Pn** **08 52 09.3 +0.4**
VGZ Gonzales 3.81 95 Pn **Pn** **08 52 08.5 -0.9**
VGZ Sn **Sn** **08 52 51.6 -3.2**
SNB Saturna Island 3.87 90 Pn **Pn** **08 52 10.4 +0.2**
WPB Watts Point 3.88 77 Pn **Pn** **08 52 10.7 +0.4**
WISH Wishkah 3.96 115 Pn **Pn** **08 52 12.6 +1.2**
WISH Sn **Sn** **08 52 56.5 -1.9**
HG3B Hotspring 3.97 338 Pn **Pn** **08 52 09.9 -1.6**
MCW Mount Constitu 4.10 91 Pn **Pn** **08 52 14.0 +0.6**
BLN Blyn Mountain 4.10 100 Pn **Pn** **08 52 14.5 +0.7**
HDW Hoodsport 4.18 105 Pn **Pn** **08 52 15.6 +1.0**
HNBB Haney 4.25 83 Pn **Pn** **08 52 15.3 -0.2**
GNW Green Mountain 4.36 106 Sn **Sn** **08 53 05.9 -2.3**
E03A Lebam 4.38 121 Sn **Sn** **08 53 06.7 -2.2**
VDB Vedder Mountai 4.56 86 Pn **Pn** **08 52 20.3 +0.7**
CMW Cultus Mountai 4.60 94 Pn **Pn** **08 52 21.3 +1.0**
MBW Mount Baker 4.70 89 Pn **Pn** **08 52 22.7 +0.9**
JCW Jim Creek 4.76 96 Pn **Pn** **08 52 23.5 +1.0**
H02S1 DAWSON INLET T 4.81 334 Pn **Pn** **08 52 23.3 +0.2**
H02N1 VAN INLET T-PH 4.87 334 Pn **Pn** **08 52 23.5 -0.5**
VIB Van Inlet 4.87 334 Pn **Pn** **08 52 23.5 -0.5**
LLLB Lillooet 4.93 67 Pn **Pn** **08 52 25.7 +0.9**
HOPB Hope 5.01 82 Pn **Pn** **08 52 26.9 +1.1**
UBRB Upper Baezaeko 5.06 36 Pn **Pn** **08 52 26.8 +0.1**
GPW Glacier Peak 5.30 96 Pn **Pn** **08 52 31.0 +0.9**
FMW Mount Fremont 5.32 109 Pn **Pn** **08 52 31.9 +1.6**
RUBB Prince Rupert 5.47 352 Pn **Pn** **08 52 32.7 +0.6**
LTY Liberty 5.84 103 Pn **Pn** **08 52 38.9 +1.7**
LTY Sn **Sn** **08 53 44.4 -0.5**
PNT Penticton 6.19 83 Pn **Pn** **08 52 42.5 +0.4**
SLEB Sale Mountain 7.36 68 Pn **Pn** **08 52 59.5 +1.1**
MNB Mounoet Dainar 7.53 60 Pn **Pn** **08 53 02.5 +1.9**
NEW Newport 7.92 90 Pn **Pn** **08 53 07.0 +1.2**
0.7nm,0.3s,baz=293,slow=13,SNR=8.9
NEW LR LR 08 56 15.1
comp=Z,115nm,20.5s,baz=282,slow=39
BMBC Bull Mountain 8.28 28 Pn **Pn** **08 53 12.8 +2.0**
YBH Yreka Blue Hor 8.45 146 Pn Pn 08 53 19.8 +6.7
0.2nm,0.3s,baz=339,slow=12,SNR=18
NBC4 NorthernBC 4 8.49 34 Pn **Pn** **08 53 16.1 +2.5**
NBC5 NorthernBC 5 9.42 21 Pn **Pn** **08 53 28.5 +2.1**
DLBC Dease Lake 9.56 357 Pn **Pn** **08 53 31.2 +2.9**
0.2nm,0.3s,baz=202,slow=11,SNR=6.4
DLBC LR LR 08 57 00.2
comp=Z,87nm,20.5s,baz=210,slow=37
WHY Whitehorse 12.24 346 Pn **Pn** **08 54 09.2 +4.2**
NVAR Mina Array Basa 13.03 140 Pn Pn 08 54 21.1 +5.2
baz=320,slow=9.7,SNR=3.3
PDAR Pinedale Array 14.88 107 Pn **Pn** **08 54 44.0 +2.9**
0.2nm,0.3s,baz=295,slow=15,SNR=2.3
PDAR LR LR 09 00 31.5
comp=Z,65nm,20.5s,baz=296,slow=38
YKA Yellowknife Ar 15.79 25 Pn **Pn** **08 54 51.0 -1.8**
0.2nm,0.3s,baz=214,slow=13,SNR=34
ILAR Eielson Array 18.54 336 P **Pn** **08 55 28.9 +1.6**
0.1nm,0.3s,baz=145,slow=12,SNR=6.1
ILAR LR LR 09 01 39.4
comp=Z,67nm,21.3s,baz=162,slow=34
INK Inuvik 19.58 355 P **Pn** **08 55 40.0 +0.2**
0.0nm,0.3s,baz=173,slow=8.5,SNR=5.6
ULM Lac du Bonnet 21.44 74 P **P** **08 55 59.4 +0.5**
5.6nm,0.6s,baz=273,slow=13,SNR=2.1
ANMO Albuquerque 21.72 122 P **P** **08 56 04.9 +2.6**
0.5nm,0.6s,baz=312,slow=9.4,SNR=4.0
H11N2 WAKE ISLAND Hy 58.41 264 T T 10 04 10.4
baz=43,slow=75,SNR=21
H11N3 WAKE ISLAND Hy 58.41 264 T T 10 04 24.5
baz=43,slow=75,SNR=25
H11N1 WAKE ISLAND Hy 58.43 264 T T 10 04 11.6
baz=43,slow=75,SNR=21
H11S1 WAKE ISLAND Hy 59.42 263 T T 10 05 32.6
baz=33
H11S2 WAKE ISLAND Hy 59.42 263 T T 10 05 36.5
baz=33
H11S3 WAKE ISLAND Hy 59.43 263 T T 10 05 37.6
baz=33
MKAR Makanchi Array 80.86 339 P **P** **09 03 26.8 +1.8**
0.2nm,0.5s,baz=11,slow=2.9,SNR=2.6

IDC 27 08:52:19.1±3.0, 54°.06N×87°.36E, h0^{km}, mb1 2.9/3, mb1mx2.8/50, mbtmp2.9/3, ML2.8/3, Error ellipse: s-maj=26.5km s-min=16.2km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.50**	**267**	*i*		09 02 20.0	
	baz=82,slow=317,SNR=2.5						
ZALV	**Zalesovo Beam**	**1.50**	**267**	Pg	Pn	08 52 45.5	-1.8
	2.4nm,0.3s,baz=83,slow=15,SNR=20						
ZALV				Lg	Lg	08 53 06.8	
	1.8nm,0.3s,baz=99,slow=13,SNR=4.5						
KURBB	**Kurchatov Arra**	**6.41**	**241**	Pn	Pn	08 53 54.7	0.0
	0.1nm,0.3s,baz=56,slow=13,SNR=3.5						
KURBB				Sn	Sn	08 55 11.1	+2.7
	0.1nm,0.3s,baz=44,slow=12,SNR=3.0						
KURBB				Lg	Lg	08 55 43.0	
	0.1nm,0.3s,baz=52,slow=33,SNR=8.6						
MKAR	**Makanchi Array**	**7.96**	**206**	Pn	Pn	08 54 17.4	+1.4
	0.1nm,0.3s,baz=33,slow=14,SNR=2.4						
MKAR				Sn	Sn	08 55 45.8	-0.8
	0.1nm,0.3s,baz=20,slow=26,SNR=2.9						
MKAR				Lg	Lg	08 56 29.1	
	0.1nm,0.3s,baz=26,slow=28,SNR=6.0						
BVAR	**Borovoye Array**	**10.15**	**271**	Pn	Pn	08 54 46.2	+0.1
	0.6nm,0.3s,baz=76,slow=17,SNR=2.4						

*IDC **27** 08:52:51.0±0.6, 3°.73S×151°.27E, h0^{km}, mb4.4/14, mb1 4.6/16, mb1mx4.3/41, mbtmp4.4/16, ML3.4/2, MS4.0/2, Ms1 4.0/2, ms1mx3.4/27, Error ellipse: s-maj=16.0km s-min=13.3km az=65.0*

*NEIC **27** 08:52:51.7±1.1, 3°.81S±0°.09×151°.29E±0°.06, h10^{km}±1^{km}, mb4.6/53, Error ellipse: s-maj=15.3km s-min=8.7km az=196.0*

*DJA **27** 08:52:52.9±0.3, 4°S±4°×15°1E±°, h10^{km}, M4.7/16, mb4.6/16, mB5.2/3, MLv4.7/2, Mw(mB)4.6/3, Mwp5.5/1*

*GCMT **27** 08:52:54.7±0.3, 3°.72S±0°.02×151°.20E±0°.02, h25^{km}±1^{km}, MW4.9/87, Moment Tensor Solution. s11,c11; s87,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.16±.16; $M_{\theta\theta}$-0.98±.12; $M_{\phi\phi}$ 1.14±.12; $M_{r\theta}$-0.30±.25; $M_{r\phi}$2.16±.09; $M_{\theta\phi}$0.34±.22; Best double couple: $M_0$2.45100×10^{16} NP1:ϕ_s76.00000°, δ80.00000°, λ-6.00000°. NP2: ϕ_s167.00000°, δ84.00000°, λ-170.00000°. Principal axes: T 2.4940, Plg3.0000°, Azm302.0000°; N -0.0830, Plg79.0000°, Azm197.0000°; P -2.4070, Plg11.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 08:52:53.7±0.4, 3.77S±0°.06×151°.34E±0°.07, h21^{km}, n88, σ1^{s}25/83, mb4.6/45, MS4.2/6, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.87**	**128**	Pg	**Pb**	**08 53 09.5**	**-0.7**
	132nm,0.3s,baz=139,slow=4.7,SNR=17						
RABL	**Rabaul**	**0.93**	**117**	Pg	**Pb**	**08 53 09.8**	**-1.3**
PMG	**Port Moresby**	**6.97**	**216**	Pn	**Pn**	**08 54 36.5**	**+1.8**
	12nm,0.3s,baz=62,slow=4.7,SNR=20						
PMG				Sn	**Sn**	**08 55 57.4**	**+4.0**
	baz=345,slow=16,SNR=1.4						
PMG	**Port Moresby**	**6.97**	**216**		**Pn**	**08 54 35.3**	**+0.6**
COEN	**Coen**	**12.94**	**218**	Pn	**Pn**	**08 55 55.7**	**-0.8**
CTA	**Charters Tower**	**16.96**	**197**	Pn	**P**	**08 56 51.4**	**-0.3**
	0.3nm,0.3s,baz=23,slow=10,SNR=6.7						
CTAO	**Charters Tower**	**16.96**	**197**	P	**P**	**08 56 52.7**	**+1.0**
RKPI	**Ransiki, Papua**	**17.29**	**277**	P	**Pn**	**08 56 54.6**	**+0.6**
	13um81nm,0.5s						
FAKI	**Fak Fak**	**19.07**	**272**	P	**P**	**08 57 13.7**	**-1.4**
	40nm,1.5s						
FAKI	**Fak Fak**	**19.07**	**272**	P	**P**	**08 57 11.9**	**-3.1**
FAKI				IAmb	IAmb	08 57 21.7	
	comp=Z,72nm,1.4s						
SIJI	**Sorong**	**20.26**	**278**	P	**P**	**08 57 28.2**	**+0.2**
	comp=Z,20nm,0.7s,baz=76,slow=8.3,SNR=8.3						
EIDS	**Eidsvold**	**21.48**	**181**	P	**P**	**08 57 41.2**	**+0.1**
MTN	**Manton Dam**	**21.91**	**244**	P	**P**	**08 57 44.5**	**-1.3**
MTN				IAmb	IAmb	08 57 51.5	
	comp=Z,31nm,1.5s						
WB0	**Warramunga Arr**	**22.94**	**225**	P	**P**	**08 57 55.5**	**-1.3**
WB0				IAmb	IAmb	08 58 12.8	
	comp=Z,18nm,1.1s						
WR0	**Warramunga Arr**	**22.96**	**224**	P	**P**	**08 57 55.9**	**-1.1**
WRAB	**Tennant Creek**	**23.08**	**225**	P	**P**	**08 57 56.7**	**-1.5**
WB2	**Warramunga Arr**	**23.08**	**225**	P	**P**	**08 57 56.7**	**-1.6**
WB2				IAmb	IAmb	08 58 07.5	
	comp=Z,16nm,0.9s						
WRA	**Warramunga Arr**	**23.09**	**225**	P	**P**	**08 57 57.0**	**-1.3**
	comp=Z,9.9nm,0.7s,baz=49,slow=10,SNR=37						
DZM	**Mont Dzumac**	**23.36**	**142**	P	**P**	**08 58 04.8**	**+3.7**
	comp=Z,27nm,0.9s,baz=346,slow=9.5,SNR=3.8						
DZM	**Mont Dzumac**	**23.36**	**142**	P	**P**	**08 58 00.7**	**-0.5**
KNRA	**Kununurra**	**25.16**	**240**	P	**P**	**08 58 16.8**	**-1.1**
KNRA				IAmb	IAmb	08 58 34.4	
	comp=Z,17nm,1.0s						
AS31	**Alice Springs**	**25.98**	**219**	P	**P**	**08 58 24.4**	**-0.8**
FITZ	**Fitzroy Crossi**	**28.91**	**239**	P	**P**	**08 58 51.2**	**-0.3**
	comp=Z,4.1nm,0.6s,baz=155,slow=8.5,SNR=3.0						
FITZ	**Fitzroy Crossi**	**28.91**	**239**	P	**P**	**08 58 50.4**	**-1.1**
FITZ				IAmb	IAmb	08 59 00.8	
	comp=Z,11nm,0.9s						
STKA	**Stephens Creek**	**29.42**	**197**	P	**P**	**08 58 56.1**	**+0.2**
	comp=Z,4.3nm,0.7s,baz=25,slow=13,SNR=7.2						
STKA	**Stephens Creek**	**29.42**	**197**	P	**P**	**08 58 54.8**	**-1.2**
EDFI	**Ende, Flores**	**29.87**	**259**	P	P	08 59 07.5	+7.3
MPSI	**Mapaga**	**31.68**	**277**	P	**P**	**08 59 13.8**	**-2.3**
	comp=Z,9.1nm,0.7s						
RAO	**Raoul Island**	**38.63**	**134**	LR	LR	09 15 14.7	
	comp=Z,360nm,18.1s,baz=168,slow=35						
JNU	**Nakatsue**	**41.49**	**334**	LR	LR	09 15 00.2	
	comp=Z,106nm,21.1s,baz=173,slow=32						
DLV	**T Lat**	**45.37**	**291**		**P**	**09 01 10.6**	**-0.7**
DLV				IAmb	IAmb	09 01 24.6	
	comp=Z,10.0nm,1.1s						
QIZ	**Qiongzhong**	**46.69**	**301**	P	**P**	**09 01 21.0**	**-0.4**
QIZ				S	**S**	**09 08 10.0**	**-0.2**
QIZ				pmax	pmax		
	comp=Z,110nm,4.3s						
NJ2	**Nanjing**	**47.13**	**322**	*e*P	**P**	**09 01 24.3**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,13nm,0.7s						
USRK	**Ussuriysk Ar.**	**50.81**	**342**	P	**P**	**09 01 53.4**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=147,slow=8.6,SNR=3.7						
ENH	**Enshi**	**52.39**	**313**	P	**P**	**09 02 05.0**	**+0.3**
ENH				IAmb	IAmb	09 02 06.6	
	comp=Z,7.0nm,0.9s						
SLVN	**Son La**	**52.72**	**300**	P	**P**	**09 02 05.2**	**-2.2**
PBKT	**Sadao Pong**	**53.71**	**294**	P	**P**	**09 02 13.8**	**-0.9**
XAN	**Xi'an**	**54.87**	**317**	P	**P**	**09 02 25.5**	**+2.6**
XAN				pP	pwP	09 02 36.3	+4.2
XAN				sP	sP	09 02 41.0	+10
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
XAN				LR	LR		
	comp=E,150nm,17.4s						
XAN				LR	LR		
	comp=Z,280nm,15.2s						
KLR	**Kul'dur**	**55.46**	**345**	P	**P**	**09 02 26.6**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=5.7,slow=2.1,SNR=3.9						
CM31	**Chiang Mai Arr**	**56.12**	**295**	P	**P**	**09 02 31.9**	**-0.3**
CMAR	**Chiang Mai Arr**	**56.12**	**295**	P	**P**	**09 02 32.9**	**+0.8**
	comp=Z,4.4nm,0.6s,baz=112,slow=5.3,SNR=19						
CHTO	**Chiang Mai**	**56.23**	**295**	P	**P**	**09 02 32.4**	**-0.5**
CHTO				IAmb	IAmb	09 02 43.9	
	comp=Z,10nm,1.2s						
PEA0B	**Petropavlovsk-**	**56.92**	**5**	P	**P**	**09 02 37.2**	**0.0**
PEA0B				IAmb	IAmb	09 02 56.1	
	comp=Z,9.6nm,1.1s						
PETK	**Petropavlovsk-**	**56.92**	**5**	P	**P**	**09 02 37.6**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=158,slow=6.8,SNR=6.2						
HMH	**Humu'ula Sheep**	**57.18**	**64**	P	**P**	**09 02 40.3**	**+0.3**
POHA	**Pohakuloa**	**57.18**	**64**	P	**P**	**09 02 40.6**	**+0.7**
HHC	**Hu-ho-hao-te**	**57.37**	**325**	*e*P	**P**	**09 02 41.5**	**+0.8**
HHC				sP	pwP	09 02 50.5	+0.6
HHC				S	**S**	**09 10 41.0**	**+4.6**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,43nm,6.7s						
HHC				LR	LR		
	comp=N,200nm,17.9s						
HHC				LR	LR		
	comp=E,120nm,16.2s						
HHC				LR	LR		
	comp=Z,85nm,18.7s						
GTA	**Gaotai**	**63.91**	**318**	*e*P	**P**	**09 03 25.8**	**+0.3**
GTA				pP	pP	09 03 31.0	-0.4
GTA				sP	sP	09 03 34.0	+0.3
GTA				S	**S**	**09 12 01.5**	**+1.2**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,120nm,7.9s						
GTA				LR	LR		
	comp=N,86nm,17.5s						
GTA				LR	LR		
	comp=E,170nm,16.2s						
GTA				LR	LR		
	comp=Z,180nm,19.7s						
SHL	**Shillong**	**64.53**	**301**		**P**	**09 03 28.6**	**-1.2**
LSA	**Lhasa**	**66.45**	**305**	P	**P**	**09 03 42.0**	**-0.5**
LSA				IAmb	IAmb	09 03 58.9	
	comp=Z,7.1nm,1.0s						
CASY	**Casey**	**68.58**	**196**	P	**P**	**09 03 54.5**	**-0.2**
CASY				IAmb	IAmb	09 04 00.8	
	comp=Z,6.9nm,1.0s						
WMQ	**Urumqi**	**74.00**	**318**	*e*P	**P**	**09 04 28.0**	**0.0**
WMQ				pP	pP	09 04 34.5	+0.4
WMQ				pmax	pmax		
	comp=Z,36nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,130nm,3.9s						
WMQ				LR	LR		
	comp=N,110nm,26.9s						
WMQ				LR	LR		
	comp=E,9.0nm,27.1s						
WMQ				LR	LR		
	comp=Z,80nm,28.7s						
CNPM	**China Poot**	**77.43**	**26**	P	**P**	**09 04 47.6**	**+0.4**
RDOG	**Red Dog Mine**	**78.39**	**16**	P	**P**	**09 04 52.2**	**-0.2**
RDOG				IAmb	IAmb	09 05 06.8	
	comp=Z,9.9nm,1.2s						
MK31	**Makanchi Array**	**78.59**	**319**	P	**P**	**09 04 53.5**	**-0.5**
MKAR	**Makanchi Array**	**78.59**	**319**	P	**P**	**09 04 54.1**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=103,slow=6.8,SNR=20						
MAKZ	**Makanchi**	**78.80**	**319**	P	**P**	**09 04 54.5**	**-0.7**
MAKZ				IAmb	IAmb	09 04 55.7	
	comp=Z,3.8nm,0.7s						
SML	**Sawmill**	**79.80**	**25**	P	**P**	**09 05 01.4**	**+1.1**
TRF	**Thorofare Moun**	**79.81**	**23**	P	**P**	**09 05 00.3**	**-0.2**
TRF				IAmb	IAmb	09 05 02.6	
	comp=Z,5.7nm,1.0s						
BPAW	**Bear Paw Mtn.**	**79.88**	**22**	P	**P**	**09 05 00.9**	**+0.3**
RND	**Reindeer**	**80.36**	**23**	IAmb	IAmb	09 05 09.6	
	comp=Z,9.2nm,0.8s						
DHY	**Denali Highway**	**80.79**	**24**	IAmb	IAmb	09 05 14.5	
	comp=Z,6.4nm,1.0s						
KSH	**Kashi**	**81.16**	**311**	P	**P**	**09 05 08.8**	**+0.6**
KSH				pmax	pmax		
	comp=Z,27nm,1.3s						
KSH				pmax	pmax		
	comp=Z,120nm,5.1s						
CCB	**Clear Creek Bu**	**81.36**	**22**	IAmb	IAmb	09 05 20.8	
	comp=Z,4.9nm,1.1s						
IL31		**81.76**	**22**	P	**P**	**09 05 09.6**	**-1.0**
IL31				IAmb	IAmb	09 05 15.9	
	comp=Z,4.2nm,0.8s						
ILAR	**Eielson Array**	**81.76**	**22**	P	**P**	**09 05 10.3**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=250,slow=5.5,SNR=17						
KURK	**Kurchatov**	**82.06**	**322**	P	**P**	**09 05 11.1**	**-1.4**
KURK				IAmb	IAmb	09 05 22.3	
	comp=Z,4.6nm,1.1s						
NIL	**Nilore**	**82.19**	**305**	P	**P**	**09 05 12.5**	**-1.1**
SCRK	**Sand Creek**	**82.55**	**24**	P	**P**	**09 05 15.3**	**+0.4**
AAK	**Ala-Archa**	**82.90**	**314**	P	**P**	**09 05 17.6**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=192,slow=20,SNR=1.8						
AAK	**Ala-Archa**	**82.90**	**314**	P	**P**	**09 05 16.8**	**-0.6**
AAK				IAmb	IAmb	09 05 27.3	
	comp=Z,3.1nm,0.9s						
EGAK	**Eagle**	**84.00**	**23**	P	**P**	**09 05 23.6**	**+1.4**
EGAK				IAmb	IAmb	09 05 40.1	
	comp=Z,4.9nm,1.1s						
DAWY	**Dawson**	**84.45**	**24**	IAmb	IAmb	09 05 42.2	
	comp=Z,3.8nm,1.2s						
BTK	**Batken**	**85.16**	**311**		**P**	**09 05 29.0**	**+0.2**
BTK				IAmb	IAmb	09 05 29.7	
	comp=Z,5.2nm,0.9s						
GAR	**Garm**	**85.39**	**309**	P	**P**	**09 05 29.6**	**-0.4**
KK31	**Karatay Array**	**85.86**	**314**	P	**P**	**09 05 32.1**	**-0.1**
KK31				IAmb	IAmb	09 05 42.1	
	comp=Z,9.5nm,1.1s						
MAW	**Mawson**	**85.96**	**203**	P	**P**	**09 05 32.1**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=18,slow=19,SNR=1.7						
MAW	**Mawson**	**85.96**	**203**	P	**P**	**09 05 31.9**	**-0.1**
QSPA	**South Pole Qui**	**86.19**	**180**	P	**P**	**09 05 33.2**	**-0.2**
QSPA				IAmb	IAmb	09 05 39.2	
	comp=Z,9.8nm,1.2s						
CHGR	**Chuyangaron**	**86.23**	**309**	P	**P**	**09 05 33.5**	**-0.7**
EPYK	**Eagle Plains**	**86.28**	**23**	P	**P**	**09 05 34.5**	**+0.8**
DLBC	**Dease Lake**	**87.25**	**31**	P	**P**	**09 05 39.3**	**+0.6**
BRVK	**Borovoye**	**87.61**	**323**	P	**P**	**09 05 39.5**	**-0.9**
INK	**Inuvik**	**88.02**	**21**	P	**P**	**09 05 43.1**	**+1.1**
	comp=Z,2.0nm,0.9s,baz=204,slow=13,SNR=6.0						
INK	**Inuvik**	**88.02**	**21**	IAmb	IAmb	09 05 50.9	
	comp=Z,3.1nm,0.9s						
NVAR	**Mina Array Bea**	**92.60**	**52**	P	P	09 06 09.5	+5.1
	comp=Z,0.2nm,0.5s,baz=259,slow=8.2,SNR=3.0						
YKA	**Yellowknife Ar**	**95.20**	**28**	P	**P**	**09 06 16.4**	**+0.9**
	comp=Z,1.1nm,0.8s,baz=273,slow=4.0,SNR=11						
TORD	**Torodi Ar. Bea**	**148.59**	**289**	PKPbc	**PKPbc**	**09 12 40.2**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=70,slow=2.6,SNR=7.1						

TAP 27 08:53:18.1, 24°.84N×121°.96E, h11^{km}, ML2.3, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		**0.02**	**283**	*i* P	Pg	08 53 20.5	+0.4
	baz=286						
EGS				S	Sg	08 53 22.4	+0.9
	baz=286						
NTC	**Toucheng**	**0.12**	**277**	*e*P	Pb	08 53 21.9	-0.5
	baz=277						
NTC				S	Sg	08 53 24.0	+0.8
	baz=277						
TWB1	**Santiao Chiao**	**0.17**	**10**	*i* P	Pg	08 53 22.5	+0.5
	baz=12						
TWB1				*i* S	Sg	08 53 25.0	+0.4
	baz=12						
TIPB	**Shuangxi**	**0.18**	**318**	*i* P	Pb	08 53 23.0	-0.4
	baz=318						
TIPB				*i* S	Sg	08 53 25.8	+1.0
	baz=318						
ILA	**Ilan**	**0.20**	**249**	S	Sg	08 53 27.2	+1.8
	baz=247						
TWC	**Suao**	**0.25**	**203**	*i* P	Pb	08 53 24.1	-0.6
	baz=200						
TWC				*e*S	Sg	08 53 27.7	+1.0
	baz=200						
NWF	**Wu-fen Shan**	**0.28**	**326**	*i* P	Pb	08 53 24.9	-0.3
	baz=325						
NWF				*i* S	Sb	08 53 29.3	-0.6
	baz=325						
WFSB	**Wu-fen Shan**	**0.28**	**326**	P	Pg	08 53 24.5	+0.6
	baz=325						
WFSB				S	Sb	08 53 29.6	-0.2
	baz=325						
TWE	**Neicheng**	**0.29**	**246**	*i* P	Pb	08 53 24.8	-0.5
	baz=243						
TWE				S	Sb	08 53 29.5	-0.6
	baz=243						
TWA	**Mucha**	**0.36**	**293**	P	Pb	08 53 26.5	-0.1
	baz=292						
TWA				S	Sb	08 53 32.2	-0.2
	baz=292						
ENTT	**Nioudou**	**0.41**	**241**	*i* P	Pb	08 53 27.0	-0.3
	baz=239						
ENTT				S	Sb	08 53 32.7	-0.8
	baz=239						
NHDH	**Xindian Distri**	**0.41**	**288**	*e*P	Pb	08 53 27.3	-0.1
	baz=287						
NHDH				S	Sb	08 53 33.8	+0.2
	baz=287						
NWLT	**Wulai**	**0.42**	**261**	*i* P	Pb	08 53 27.2	-0.3
	baz=261						
NWLT				S	Sg	08 53 32.6	+0.7
	baz=261						
TATO	**Taipei**	**0.45**	**288**	*e*P	Pb	08 53 28.4	+0.4
	baz=287						
TATO				S	Sb	08 53 34.8	+0.2
	baz=287						
ENA	**Nanau**	**0.45**	**205**	P	Pb	08 53 27.9	-0.2
	baz=204						
ENA				*e*S	Sb	08 53 34.0	-0.8
	baz=204						
YM01	**YM01**	**0.46**	**311**	P	Pb	08 53 29.0	+0.6
	baz=311						
YM01				S	Sb	08 53 35.1	-0.1
	baz=311						
NDT	**Datong Townshi**	**0.47**	**240**	*i* P	Pb	08 53 28.1	-0.2
	baz=239						
NDT				S	Sb	08 53 35.0	-0.2
	baz=239						
YM11	**YM11**	**0.47**	**313**	P	Pb	08 53 29.2	+0.7
	baz=313						
YM10	**YM10**	**0.48**	**311**	*e*P	Pb	08 53 29.3	+0.8
	baz=311						
YM08	**YM08**	**0.48**	**316**	*e*P	Pb	08 53 29.0	+0.4
	baz=316						
ANP	**Anpu**	**0.52**	**311**	*e*P	Pb	08 53 29.5	+0.1
	baz=311						
TWY	**Chenhua**	**0.54**	**323**	*e*P	Pb	08 53 29.7	+0.1
	baz=323						
TWS1	**Kuangyinshan**	**0.55**	**298**	*e*P	Pb	08 53 30.7	+0.9
	baz=298						
YHNB	**Yeheng**	**0.55**	**252**	P	Pb	08 53 29.6	-0.3

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.58**	**215**	S	Sb	08 53 44.9	-0.2
JYNG	**Yonagunijimaku**	**0.62**	**219**	P	Pb	08 53 37.6	-0.5
JYNG				*e*S	Sb	08 53 46.4	0.0
IRIF	**Iriomote-Funau**	**0.69**	**151**	P	Pb	08 53 38.8	-0.3
IRIF				S	Sb	08 53 47.8	-0.4
JIJ	**Ishigaki jima**	**0.91**	**129**	*e*S	Sb	08 53 54.0	-0.6
JKRS	**Kuro-shima**	**0.91**	**140**	P	Pb	08 53 42.7	-0.2
JKRS				S	Sb	08 53 54.1	-0.5
JISG	**Ishigakijimahi**	**0.93**	**112**	*e*S	Sb	08 53 53.8	-1.2

TAP 27 08:54:00.8, 24.84N×121.95E, h11km, ML1.9, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.02**	**284**	*i* P	Pg	08 54 03.2	+0.5
	baz=288						
EGS				*i* S	Sg	08 54 04.8	+0.7
	baz=288						
NTC	**Toucheng**	**0.11**	**277**	P	Pb	08 54 04.5	-0.4
	baz=277						
NTC				S	Sg	08 54 06.7	+1.0
	baz=277						
TWB1	**Santiao Chiao**	**0.17**	**12**	*i* P	Pg	08 54 05.1	+0.5
	baz=14						
TWB1				*i* S	Sg	08 54 07.6	+0.4
	baz=14						
TIPB	**Shuangxi**	**0.17**	**319**	*i* P	Pb	08 54 05.5	-0.5
	baz=319						
TIPB				*i* S	Sg	08 54 08.4	+1.1
	baz=319						
NWF	**Wu-fen Shan**	**0.28**	**326**	P	Pb	08 54 07.8	0.0
	baz=326						
NWF				S	Sb	08 54 12.5	0.0
	baz=326						
WFSB	**Wu-fen Shan**	**0.28**	**326**	*e*P	Pb	08 54 07.8	+0.1
	baz=326						
WFSB				S	Sb	08 54 12.5	0.0
	baz=326						
TWE	**Neicheng**	**0.28**	**245**	*e*P	Pb	08 54 07.4	-0.4
	baz=243						
TWE				*e*S	Sb	08 54 12.2	-0.4
	baz=243						
ENTT	**Nioudou**	**0.40**	**240**	P	Pb	08 54 09.5	-0.4
	baz=239						
ENTT				S	Sb	08 54 15.7	-0.4
	baz=239						
NWLT	**Wulai**	**0.41**	**261**	*e*P	Pb	08 54 09.9	-0.2
	baz=261						
NWLT				S	Sb	08 54 15.5	-0.8
	baz=261						
YM01	**YM01**	**0.46**	**311**	*e*P	Pb	08 54 11.0	+0.1
	baz=311						
YM01				*e*S	Sb	08 54 17.9	+0.2
	baz=311						
NDT	**Datong Townshi**	**0.46**	**239**	*e*P	Pg	08 54 10.3	+0.5
	baz=239						
YM10	**YM10**	**0.47**	**312**	*e*P	Pb	08 54 11.9	+0.8
	baz=311						
YM10				*e*S	Sb	08 54 18.3	+0.2
	baz=311						
YHNB	**Yeheng**	**0.55**	**252**	P	Pb	08 54 12.2	-0.2
	baz=251						
YHNB				S	Sg	08 54 18.8	-0.1
	baz=251						
NSK	**Sanguang**	**0.56**	**253**	*e*P	Pb	08 54 12.4	-0.3
	baz=252						
NSK				*e*S	Sb	08 54 20.4	-0.4
	baz=252						
NNSH	**Datong**	**0.66**	**232**	*e*P	Pb	08 54 14.7	+0.4
	baz=231						
NACB	**Ninganchiao**	**0.74**	**206**	*e*P	Pn	08 54 16.4	-0.7
	baz=205						
NACB				*e*S	Sb	08 54 26.7	+1.0
	baz=205						
ETLH	**Xiulin Townshi**	**0.76**	**214**	*e*S	Sn	08 54 28.7	-0.4
	baz=214						
ETLH	**Xiulin Townshi**	**0.76**	**214**	*e*S	Sn	08 54 28.9	-0.2
	baz=357						

TAP 27 08:54:12.7, 23.74N×121.47E, h12km, ML1.1, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.08**	**209**	*i* P	Pg	08 54 15.6	+0.2
	baz=214						
EGFH				S	Sg	08 54 17.3	0.0
	baz=214						
ESL	**Shilin**	**0.08**	**336**	P	Pg	08 54 15.6	+0.1
	baz=338						
ESL				*i* S	Sg	08 54 17.2	-0.2
	baz=338						
HGSD	**Ruisui**	**0.25**	**190**	*e*P	Pg	08 54 17.9	0.0
	baz=197						
HGSD				*e*S	Sg	08 54 23.2	+1.7
	baz=197						
EHY	**Hungye**	**0.27**	**210**	*i* P	Pg	08 54 18.3	0.0
	baz=215						
EHY				S	Sg	08 54 22.6	+0.5
	baz=215						
VWDT	**VWDT**	**0.30**	**273**	P	Pb	08 54 19.6	-0.5
	baz=272						
VWDT				S	Sg	08 54 23.3	+0.3
	baz=272						
YULB	**Yu-li**	**0.38**	**205**	P	Pg	08 54 20.3	0.0
	baz=213						
YULB				*e*S	Sg	08 54 25.8	+0.3
	baz=213						
TWF1	**Yuli**	**0.42**	**202**	*e*P	Pg	08 54 21.1	0.0
	baz=213						
TWF1				*e*S	Sg	08 54 26.9	+0.3
	baz=213						
CHGB	**Renai**	**0.42**	**320**	P	Pg	08 54 21.4	+0.2
	baz=325						
CHGB				S	Sg	08 54 26.9	+0.1
	baz=325						
WHF	**Hehuan Shan**	**0.45**	**335**	*e*P	Pg	08 54 22.0	+0.3
	baz=334						
WHF				*e*S	Sg	08 54 28.5	+0.8
	baz=334						

JMA 27 08:54:12.1±0.3, 24.93N×123.38E, h25km, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.57**	**216**	P	Pb	08 54 23.2	-0.4
YOJ				*e*S	Sb	08 54 31.5	+0.1
IRIF	**Iriomote-Funau**	**0.67**	**152**	P	Pb	08 54 24.7	-0.5
IRIF				S	Sb	08 54 34.7	+0.6
JIJ	**Ishigaki jima**	**0.89**	**129**	P	Pb	08 54 28.3	-0.7
JIJ				S	Sb	08 54 39.2	-1.3
JKRS	**Kuro-shima**	**0.90**	**140**	P	Pb	08 54 28.8	-0.2
JKRS				S	Sb	08 54 40.1	-0.4
JISG	**Ishigakijimahi**	**0.91**	**112**	P	Pn	08 54 29.4	+0.1

*SJA **27** 09:03:39.8±0.4, 36.43S×76.01W, h17km±134km, ML5.1, MW5.2*

*GUC **27** 09:04:04.9±0.7, 35.91S×73.90W, h37km±5km, ML5.1*

*NEIC **27** 09:04:05.4±2.2, 35.93S±0.03×73.56W±0.08, h10km±2km, mb5.1/140, Mww5.1, ML5.1(GUC), Error ellipse: s-maj=9.2km s-min=4.5km az=81.0*

*IDC **27** 09:04:06.4±0.5, 35.92S×73.18W, h0km, mb4.6/18, mb1 4.7/21, mb1mx4.7/31, mbtmp4.6/21, ML4.4/3, MS4.7/18, Ms1 4.6/18, ms1mx4.5/27, Error ellipse: s-maj=21.1km s-min=12.4km az=88.0*

*VAO **27** 09:04:09.2±0.8, 35.99S×73.69W, h33km, mb5.0*

*GCMT **27** 09:04:09.4±0.2, 36.02S±0.01×74.00W±0.01, h15km, MW5.3/119, Moment Tensor Solution. s65,c82; s119,c172; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr0.46±.01; Mθθ-0.02±.01; Mφφ-0.44±.01; Mrθ-0.16±.03; Mrφ-0.12±.01; Mθφ-0.91±.03; Best double couple: Mo1.03500×10^17 NP1:φs19.00000°, δ13.00000°, λ98.00000°. NP2:φs191.00000°, δ77.00000°, λ88.00000°. Principal axes: T 1.0290, Plg58.0000°, Azm98.0000°; N 0.0120, Plg2.0000°, Azm191.0000°; P -1.0410, Plg32.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **27** 09:04:16,36.14S×73.57W,h12km,Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr4.12; Mθθ-0.15; Mφφ-3.97; Mrθ0.16; Mrφ-0.71; Mθφ-4.33; Fault plane solution: Mo5.97000×10^16 NP1:φs18.00000°, δ22.00000°, λ106.00000°. NP2:φs181.00000°, δ68.00000°, λ83.00000°. Principal axes: T 6.0288, Plg66.0000°, Azm80.0000°; N -0.1174, Plg6.0000°, Azm184.0000°; P -5.9114, Plg23.0000°, Azm276.0000°;*

ISC 27 09:04:06.7±1.5, 35.96S±0.03×73.50W±0.05, h11km±9km, n606, σ1§96/607, mb5.1/75, MS4.7/22, 9C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**0.94**	**161**	⇑ *i*P	**Pb**	**09 04 24.4**	**-0.6**
CCSP				*i* S	**Sn**	**09 04 38.6**	**-0.6**
CCSP				IAML		09 04 44.6	
	comp=E,90μm,0.4s						
BI03	**Tigo**	**0.96**	**157**	⇑ *i*P	**Pb**	**09 04 24.9**	**-0.5**
BI03				*i* S	**Sn**	**09 04 40.2**	**+0.3**
BI03				IAML		09 04 41.7	
	comp=N,151μm,0.7s						
BI03	**Tigo**	**0.96**	**157**		**Pb**	**09 04 25.0**	**-0.5**
BI03				Sg	**Sg**	**09 04 37.6**	**-0.1**
LAJA	**Laja**	**1.46**	**155**	*e*P	**Pn**	**09 04 31.9**	**-1.1**
GO05	**Huala**	**1.59**	**54**	⇑ *i*P	**Pn**	**09 04 34.5**	**-0.3**
GO05				*i* S	**Sg**	**09 04 57.3**	**-0.6**
GO05	**Huala**	**1.59**	**54**		**Pn**	**09 04 34.7**	**-0.2**
GO05				Sn	**Sn**	**09 04 54.8**	**-0.6**
GO05	**Huala**	**1.59**	**54**	*i* P	**Pb**	**09 04 35.0**	**-1.1**
BI02	**San Fabin de**	**1.93**	**112**	⇑ *i*P	**Pb**	**09 04 41.0**	**-1.0**
BI02				*i* S	**Sg**	**09 05 08.0**	**-0.7**
BI02				IAML		09 05 17.5	
	comp=E,9μm,0.4s						
BI02	**San Fabin de**	**1.93**	**112**		**Pn**	**09 04 40.2**	**+0.7**
BI02				Sn	**Sn**	**09 05 04.2**	**+0.3**
BI04	**Isla Mocha**	**2.47**	**187**	IAML		09 05 37.9	
	comp=N,6μm,0.2s						
BO02	**Sierra Bellavi**	**2.50**	**63**	⇑ *i*P	**Pn**	**09 04 48.2**	**+0.8**
BO02				IAML		09 05 38.9	
	comp=E,9μm,0.4s						
BO02	**Sierra Bellavi**	**2.50**	**63**		**Pn**	**09 04 47.5**	**0.0**
MT01	**Popeta**	**2.79**	**42**	*e*P	**Pn**	**09 04 50.8**	**-0.5**
MT01	**Popeta**	**2.79**	**42**		**Pn**	**09 04 50.9**	**-0.4**
MT01				Sn	**Sn**	**09 05 25.2**	**+0.3**
LC01	**Cunco**	**3.20**	**157**	⇑ *i*P	**Pn**	**09 04 56.4**	**-0.6**
LC01				IAML		09 05 54.2	
	comp=E,2μm,0.8s						
MT02	**Curacav**	**3.32**	**37**	*e*P	**Pn**	**09 04 57.6**	**-1.1**
MT02	**Curacav**	**3.32**	**37**		**Pn**	**09 04 58.1**	**-0.5**
EDS3	**Malargue**	**3.33**	**88**	*i* P	**Pb**	**09 05 03.3**	**-2.6**
EDS3				*i* S	Sg	09 06 05.2	+11
MT05	**Renca**	**3.42**	**42**		**Pn**	**09 04 59.8**	**-0.3**
MT03	**Universidad Ad**	**3.48**	**46**	*e*P	**Pn**	**09 05 00.9**	**+0.1**
ROC1	**El Roble**	**3.61**	**35**		**Pn**	**09 05 02.9**	**0.0**
ROC1	**El Roble**	**3.61**	**35**	*i* P	**Pn**	**09 05 03.1**	**+0.2**
PEL	**Peldehue**	**3.64**	**40**		**Pn**	**09 05 02.5**	**-0.6**
PEL	**Peldehue**	**3.64**	**40**	*i* P	**Pn**	**09 05 04.1**	**+1.0**
VA03	**San Esteban**	**4.01**	**38**		**Pn**	**09 05 08.2**	**-0.1**
AVIZ	**Vizcacheras**	**4.79**	**60**	*i* P	**Pn**	**09 05 22.7**	**+3.7**
AAGR	**Agrelo**	**4.80**	**55**	*i* P	**Pn**	**09 05 22.0**	**+2.9**
ARCO	**CERRO ARCO**	**4.89**	**52**	*i* P	**Pn**	**09 05 23.1**	**+2.7**
ARCO				IAML		09 07 33.8	
	comp=Z,275nm,3.2s						
H03S1	**Juan Fernandez**	**4.92**	**294**	T	T	09 10 11.3	
	baz=116,slow=74,SNR=1036						
H03S3	**Juan Fernandez**	**4.93**	**294**	T	T	09 10 10.6	
	baz=116,slow=74,SNR=1203						
H03S2	**Juan Fernandez**	**4.94**	**294**	T	T	09 10 11.1	
	baz=116,slow=74,SNR=1734						
AUSP	**Uspallata**	**5.05**	**44**	*i* P	**Pn**	**09 05 24.7**	**+2.0**
ASAL	**Salagasta**	**5.12**	**50**	*i* P	**Pn**	**09 05 26.0**	**+2.6**
ASAL				IAML		09 07 33.5	
	comp=Z,349nm,2.4s						
H03N1	**Juan Fernandez**	**5.12**	**298**	T	T	09 10 35.7	
	baz=109,slow=76,SNR=82						
H03N3	**Juan Fernandez**	**5.12**	**298**	T	T	09 10 36.0	
	baz=109,slow=76,SNR=109						
H03N2	**Juan Fernandez**	**5.13**	**298**	T	T	09 10 35.8	
	baz=109,slow=76,SNR=79						
CO02	**Combarbal**	**5.18**	**24**		**Pn**	**09 05 23.3**	**-1.0**
PLCA	**Paso Flores**	**5.30**	**155**	Pn	**Pn**	**09 05 26.5**	**+0.6**
	comp=Z,1.9nm,0.3s,baz=330,slow=11,SNR=59						
PLCA				Lg	Lg	09 06 57.1	
	comp=Z,7.6nm,0.3s,baz=262,slow=17,SNR=5.0						
PLCA	**Paso Flores**	**5.30**	**155**		**Pn**	**09 05 26.6**	**+0.8**
PLCA	**Paso Flores**	**5.30**	**155**	*e*P	**Pn**	**09 05 26.6**	**+0.8**
CO03	**El Pedregal**	**5.62**	**25**		**Pn**	**09 05 30.4**	**+0.1**
RTCV	**Cerro Valdivia**	**5.80**	**47**	*i* P	**Pn**	**09 05 34.2**	**+1.4**
CFA	**Coronel Fontan**	**6.17**	**47**	Pn	**Pn**	**09 05 37.9**	**+0.1**
	comp=Z,16nm,0.3s,baz=222,slow=13,SNR=29						
CFA				Sn	**Sn**	**09 06 51.0**	**+2.6**
	comp=Z,7.8nm,0.3s,baz=130,slow=20,SNR=1.4						
CFA				Lg	Lg	09 07 27.1	
	comp=Z,4.3nm,0.3s,baz=144,slow=24,SNR=1.8						
CFA	**Coronel Fontan**	**6.17**	**47**	*i* P	**Pn**	**09 05 38.8**	**+1.0**
CFA				IAML		09 08 04.0	
	comp=Z,133nm,1.9s						
GO04	**Tololo Observa**	**6.20**	**22**		**Pn**	**09 05 37.5**	**-0.9**
LL01	**San Ignacio de**	**6.46**	**173**		**Pn**	**09 05 40.6**	**-1.2**
ACCO	**Cerro Coronel**	**6.52**	**36**	*i* P	**Pn**	**09 05 43.7**	**+0.9**
ACCO				IAML		09 08 20.8	
	comp=Z,232nm,2.7s						
CO01	**Juntas del Tor**	**6.61**	**27**		**Pn**	**09 05 42.6**	**-1.5**
ACDV	**Cuesta del Vie**	**6.84**	**34**	*i* P	**Pn**	**09 05 48.0**	**+0.9**
AC05	**El Transito**	**7.61**	**22**		**Pn**	**09 05 56.8**	**-0.8**
AC04	**Llanos de Chal**	**8.00**	**16**		**Pn**	**09 06 00.2**	**-2.7**
GO03	**Copiap**	**8.79**	**19**	Pn	**Pn**	**09 06 11.0**	**-2.8**
AC02	**Maricunga**	**9.83**	**23**		**Pn**	**09 06 26.2**	**-2.2**
CYA	**Choya**	**9.93**	**43**	*i* P	**Pn**	**09 06 25.5**	**-4.0**
AC01	**Pan de Azucar**	**10.09**	**15**	Pn	**Pn**	**09 06 28.2**	**-3.4**
GO02	**Mina Guanaco**	**11.27**	**18**		**Pn**	**09 06 45.7**	**-2.4**
LPA	**La Plata**	**12.74**	**90**	*i* P	Pn	09 07 00.6	-7.2
LPA				PPP	PPP	09 07 26.9	
LPA				S	**Sn**	**09 09 32.1**	**+2.5**
LPA				SSS	SSS	09 10 01.3	
LPA				PKIKS		09 24 15.7	
LPA				SKIKP		09 27 35.9	
LVC	**Limon Verde**	**13.89**	**18**	Pn	**P**	**09 07 31.4**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=182,slow=8.7,SNR=3.8						
LVC				Lg	Lg	09 10 57.4	
	comp=Z,0.1nm,0.3s,baz=7.7,slow=19,SNR=3.3						
LVC				LR	LR	09 12 52.8	
	comp=Z,2μm,20.3s,baz=208,slow=38						
LVC	**Limon Verde**	**13.89**	**18**	Pn	**Pn**	**09 07 20.6**	**-3.2**
LVC	**Limon Verde**	**13.89**	**18**	*e*P	**Pn**	**09 07 24.3**	**+0.4**
PB01	**IPOC Station P**	**15.27**	**14**	Pn	**Pn**	**09 07 37.9**	**-4.5**
PB01				IAmb	IAmb	09 07 58.8	
	comp=Z,260nm,1.8s						
PATCX	**Punta Patache**	**15.37**	**12**	Pn	**Pn**	**09 07 42.3**	**-1.3**
PATCX				IAmb	IAmb	09 08 16.7	
	comp=Z,69nm,1.1s						
TA01	**Diego Aracena**	**15.61**	**12**	Pn	**Pn**	**09 07 41.9**	**-4.9**
PB08	**IPOC Station P**	**16.21**	**15**	P	**Pn**	**09 07 54.1**	**-0.8**
PB11	**IPOC Station P**	**16.49**	**13**	P	**P**	**09 07 58.6**	**-2.3**
PB11				IAmb	IAmb	09 08 08.6	
	comp=Z,156nm,1.0s						
PSGCX	**Pisagua**	**16.57**	**11**	P	**Pn**	**09 07 58.7**	**-0.5**
GO01	**Chusmiza**	**16.67**	**14**	P	**Pn**	**09 08 00.5**	**-0.3**
MNMC	**Minye Minye**	**17.11**	**13**	P	**P**	**09 08 05.8**	**-2.1**
MNMC				IAmb	IAmb	09 08 31.1	
	comp=Z,102nm,1.0s						
PB12	**IPOC Station P**	**17.50**	**10**	P	**P**	**09 08 10.5**	**-1.6**
EFI	**East Falkland**	**19.19**	**150**	P	**Pn**	**09 08 30.2**	**-1.0**
EFI				IAmb	IAmb	09 08 42.3	
	comp=Z,166nm,1.4s						
USHA	**Ushuaia**	**19.20**	**171**	P	**Pn**	**09 08 32.7**	**+1.4**
	comp=Z,2.7nm,0.3s,baz=342,slow=9.5,SNR=1.5						
MG01	**Puerto William**	**19.40**	**170**	P	**P**	**09 08 30.6**	**-1.9**
ITAB	**Concordia**	**20.14**	**70**	*e*P	Pn	09 08 42.5	-0.2
CNLB	**Canela**	**20.16**	**77**	*e*P	Pn	09 08 43.0	-0.1
LPAZ	**La Paz**	**20.17**	**15**	P	Pn	09 08 43.8	+0.1
	comp=Z,7.0nm,0.7s,baz=198,slow=5.4,SNR=10.0						
LPAZ	**La Paz**	**20.17**	**15**	P	**P**	**09 08 40.4**	**-1.4**
SIV	**San Ignacio**	**22.77**	**32**	P	**P**	**09 09 09.0**	**-0.2**
	comp=Z,34nm,1.0s,baz=232,slow=12,SNR=38						
NNA	**Nana**	**24.06**	**352**	P	**P**	**09 09 25.2**	**+3.1**
	comp=Z,25nm,1.1s,baz=204,slow=11,SNR=5.9						
NNA				LR	LR	09 16 55.3	
	comp=Z,870nm,18.4s,baz=173,slow=32						
PTLB	**Pontes e Lacer**	**24.12**	**36**	*e*P	**P**	**09 09 22.8**	**+0.2**
FRTB	**Fartura**	**24.23**	**65**	*e*P	**P**	**09 09 24.6**	**+0.9**
C2SB	**Chapadao do Su**	**25.01**	**52**	*e*P	**P**	**09 09 31.6**	**+0.8**
SALV	**Santo Antonio**	**25.52**	**43**	*e*P	**P**	**09 09 35.6**	**+0.3**
SPB	**Sao Paulo**	**25.68**	**68**	*e*P	**P**	**09 09 37.9**	**+1.2**
VILB	**Vilhena**	**25.85**	**31**	*e*P	**P**	**09 09 38.8**	**+0.4**
VAO	**Valinhos**	**26.36**	**68**	*e*P	**P**	**09 09 44.2**	**+1.1**
ARAG	**Araguaiana, MT**	**27.95**	**49**	*e*P	**P**	**09 09 58.8**	**+1.5**
SAML	**Samuel**	**28.48**	**22**	P	**P**	**09 10 00.2**	**-1.8**
IPMB	**Ipameri, GO**	**28.65**	**58**	*e*P	**P**	**09 10 03.4**	**-0.2**
ATAH	**Atahualpa**	**29.04**	**350**	P	**P**	**09 10 08.6**	**+1.2**
	comp=Z,4.6nm,0.7s,baz=127,slow=20,SNR=2.4						
PMSA	**Palmer Station**	**29.40**	**172**	LR	LR	09 21 54.0	
	comp=Z,981nm,19.0s,baz=342,slow=36						
CLDB	**Colider**	**29.68**	**37**	*e*P	**P**	**09 10 12.2**	**-0.5**
BDFB	**Brasilia**	**30.43**	**55**	P	**P**	**09 10 19.4**	**0.0**
	comp=Z,6.8nm,0.8s,baz=234,slow=4.3,SNR=7.6						
BDFB				LR	LR	09 24 23.0	
	comp=Z,2μm,19.7s,baz=227,slow=40						
BDFB	**Brasilia**	**30.43**	**55**	P	**P**	**09 10 19.7**	**+0.2**
BDFB				IAmb	IAmb	09 10 27.9	
	comp=Z,58nm,1.4s						
RPN	**Rapa Nui**	**31.64**	**276**	LR	LR	09 19 40.2	
	comp=Z,1μm,18.0s,baz=128,slow=29						
MC01	**Montes Claros**	**32.50**	**62**	*e*P	**P**	**09 10 37.6**	**0.0**
NPGB	**Novo Progresso**	**33.23**	**34**	*e*P	**P**	**09 10 43.6**	**-0.3**
SJMB	**Sao Joao De Ma**	**33.25**	**68**	*e*P	**P**	**09 10 44.9**	**+0.8**
JANB	**Januaria**	**33.36**	**59**	*e*P	**P**	**09 10 45.9**	**+0.8**
MACA	**Manacapuru-AM**	**34.72**	**23**	*e*P	**P**	**09 10 56.8**	**0.0**
PRPB	**Parauapebas**	**36.76**	**42**	*e*P	**P**	**09 11 14.1**	**-0.3**
PTGA	**Pitinga**	**37.24**	**23**	P	**P**	**09 11 18.4**	**0.0**
	comp=Z,10nm,0.9s,baz=190,slow=6.9,SNR=10						
PTGA	**Pitinga**	**37.24**	**23**	P	**P**	**09 11 16.3**	**-2.1**
PTGA				IAmb	IAmb	09 11 29.6	
	comp=Z,32nm,1.2s						
PTGA	**Pitinga**	**37.24**	**23**	*e*P	**P**	**09 11 18.8**	**+0.3**
GDU01	**Guandu, BA**	**37.62**	**63**	*e*P	**P**	**09 11 21.7**	**0.0**
PCON	**Pconco Dias**	**38.19**	**355**	*e*P	**P**	09 11 32.2	+5.1
PRAC	**Prado**	**39.49**	**358**	*e*P	**P**	**09 11 39.4**	**+2.0**
ORTC	**Ortega, Tolima**	**39.69**	**357**	*e*P	**P**	**09 11 41.2**	**+2.1**
PTGC	**Puerto Gaitan,**	**39.97**	**2**	*e*P	**P**	09 11 46.7	+5.3
ROSC	**El Rosal**	**40.59**	**359**	P	P	09 11 50.9	+3.9
	comp=Z,3.9nm,0.5s,baz=108,slow=20,SNR=1.8						
ROSC	**El Rosal**	**40.59**	**359**	*e*P	P	09 11 52.1	+5.1
ROSC	**El Rosal**	**40.59**	**359**	P	**P**	**09 11 45.2**	**-1.8**
RREF	**El Recreo**	**40.68**	**357**	*e*P	P	09 11 53.9	+5.9
RUSC	**La Rusia**	**41.63**	**1**	P	**P**	**09 11 54.4**	**-1.2**
CBOC	**Ciudad Bolivar**	**41.67**	**356**	*e*P	**P**	**09 11 57.9**	**+2.3**
HELC	**Santa Helena**	**41.97**	**357**	*e*P	**P**	**09 12 00.2**	**+2.0**
DBBC	**Dabeiba**	**42.82**	**356**	*e*P	**P**	**09 12 07.4**	**+2.5**
PTAC	**Punta Ardita,**	**43.07**	**354**	*e*P	**P**	09 12 01.1	-5.6
SDV	**Santo Domingo**	**44.69**	**4**	P	**P**	**09 12 20.4**	**+0.4**
	comp=Z,7.3nm,0.9s,baz=239,slow=8.1,SNR=5.1						
SDV	**Santo Domingo**	**44.69**	**4**	P	**P**	**09 12 18.9**	**-1.1**
SDV	**Santo Domingo**	**44.69**	**4**	*e*P	**P**	**09 12 20.5**	**+0.5**
MDP	**Montagnes des**	**45.29**	**30**	P	**P**	**09 12 24.4**	**-0.1**
	comp=Z,26nm,0.9s,baz=217,slow=7.8,SNR=5.3						
MDP				LR	LR	09 33 04.8	
	comp=Z,2μm,19.6s,baz=296,slow=38						
PCRV	**Puerto La Cruz**	**46.64**	**12**	LR	LR	09 33 58.3	
	comp=Z,2μm,18.2s,slow=38						
VNA3	**Neumayer Olymp**	**48.01**	**157**	P	**P**	**09 12 46.2**	**+0.8**
VNA1	**Neumayer--Stat**	**48.36**	**156**	P	**P**	**09 12 49.1**	**+1.2**
VNA2	**Neumayer--Wetz**	**48.69**	**156**	P	**P**	**09 12 51.4**	**+0.9**
SNAA	**Sanae**	**50.24**	**157**	P	**P**	**09 13 02.9**	**+0.5**
SNAA	**Sanae**	**50.24**	**157**	P	**P**	**09 13 02.7**	**+0.3**
	comp=Z,20nm,1.0s,baz=280,slow=6.2,SNR=34						
SNAA	**Sanae**	**50.24**	**157**	P	**P**	**09 13 01.4**	**-1.0**
QSPA	**South Pole Qui**	**54.28**	**180**	P	**P**	**09 13 32.9**	**+0.3**
QSPA				IAmb	IAmb	09 13 40.2	
	comp=Z,30nm,0.9s						
CMIG	**Matias Romero**	**56.52**	**335**	LR	LR	09 32 54.1	
	comp=Z,283nm,18.4s,baz=158,slow=30						
TEIG	**Tepich**	**57.61**	**344**	LR	LR	09 34 40.9	
	comp=Z,230nm,20.9s,baz=50,slow=32						
VNDA	**Vanda**	**61.95**	**192**	P	**P**	**09 14 29.6**	**+3.6**
	comp=Z,2.0nm,0.9s,baz=143,slow=5.3,SNR=7.7						
VNDA				LR	LR	09 38 47.6	
	comp=Z,411nm,18.5s,baz=132,slow=34						
DWPF	**Disney Wildern**	**64.17**	**352**	P	**P**	**09 14 44.1**	**+3.0**
	baz=173						
SYO	**Syowa Base**	**64.49**	**158**	⇑ *e*pP	**P**	**09 14 41.4**	**-1.5**
SYO	**Syowa Base**	**64.49**	**158**	⇑ *e*sP	sP	09 14 44.4	-3.1
SYO	**Syowa Base**	**64.49**	**158**	⇑ *e*PcP	**PcP**	**09 15 14.2**	**-2.8**
TBI	**Tubuai**	**65.72**	**258**	*e*S	**S**	**09 23 33.7**	**-4.2**
	comp=Z,660nm,28.2s						
TBI	**Tubuai**	**65.72**	**258**	*e*LR	LR	09 34 22.0	
	comp=Z,885nm,28.0s,baz=123						
TAOE	**Nuku Hiva Isla**	**65.97**	**277**	*e*LR	LR	09 34 26.2	
	comp=Z,695nm,31.0s						
MEH	**Mehetia**	**67.42**	**264**	*e*T	T	10 28 07.8	
	comp=Z,22nm,0.2s						
TIGA	**Tifton**	**67.71**	**351**	P	**P**	**09 15 06.5**	**+2.5**
	baz=171						
TIAR	**Tiarei**	**68.62**	**263**	*e*T	T	10 29 37.7	
	comp=Z,5.0nm,0.3s						
157A	**Early Branch**	**68.64**	**353**	P	**P**	**09 15 11.8**	**+2.1**
	baz=174						
PPT2	**Papeete2**	**68.79**	**263**	*e*S	**S**	**09 24 11.8**	**

BG3 IAmb IAmb 09 15 33.6
comp=Z,27nm,1.6s
W54A Cherokee Point 71.14 352 P **P** **09 15 26.7 +1.6**
baz=173
X48A Hartselle 71.18 348 P **P** **09 15 24.0 -1.4**
X48A IAmb IAmb 09 15 35.2
comp=Z,22nm,0.9s
Z41A Richland Creek 71.19 343 P **P** **09 15 27.8 +2.3**
baz=164
V62A Hyde County Ai 71.19 358 P **P** **09 15 27.8 +2.4**
baz=178
WHTX Lake Whitney, 71.23 339 P **P** **09 15 27.5 +1.7**
baz=160
WHTX Lake Whitney, 71.23 339 P **P** **09 15 23.7 -2.0**
V60A Jim Taylor Roa 71.45 357 P **P** **09 15 29.2 +2.3**
baz=177
V59A Middlesex 71.50 356 P **P** **09 15 29.1 +1.9**
baz=176
V58A Windy Hill, Pi 71.58 355 P **P** **09 15 29.5 +1.8**
baz=175
V58A Windy Hill, Pi 71.58 355 P **P** **09 15 25.8 -1.9**
CCAR Cane Creek 71.58 344 P **P** **09 15 25.9 -1.9**
MAW Mawson 71.64 164 P **P** **09 15 27.9 0.0**
comp=Z,4.3nm,0.6s,baz=242,slow=7.5,SNR=3.6
MAW LR LR 09 47 42.4
comp=Z,1µm,18.3s,baz=228,slow=36
MAW Mawson 71.64 164 P **P** **09 15 27.6 -0.2**
W50A Signal Mountai 71.65 350 P **P** **09 15 26.9 -1.3**
W50A IAmb IAmb 09 15 39.9
comp=Z,20nm,0.8s
OXF Oxford 71.67 346 P **P** **09 15 29.9 +1.6**
baz=167
WLAR White Oak Lake 71.67 343 P **P** **09 15 27.1 -1.3**
WLAR IAmb IAmb 09 15 34.1
comp=Z,26nm,1.0s
V56A Mocksville 71.70 354 P **P** **09 15 30.1 +1.6**
baz=174
V57A Coltrane Farms 71.72 355 P **P** **09 15 30.3 +1.7**
baz=175
SWET Sewanee 71.75 349 P **P** **09 15 28.5 -0.4**
CPCT Cooper Cave 71.78 351 P **P** **09 15 29.6 +0.6**
CPCT IAmb IAmb 09 15 37.4
comp=Z,28nm,1.4s
V53A Saluda 71.79 352 P **P** **09 15 27.6 -1.5**
V53A IAmb IAmb 09 15 41.1
comp=Z,14nm,1.2s
V54A Nebo 71.80 353 P **P** **09 15 30.6 +1.5**
baz=173
V55A Taylorsville 71.81 353 P **P** **09 15 30.5 +1.4**
baz=174
V55A Taylorsville 71.81 353 P **P** **09 15 28.4 -0.7**
V55A IAmb IAmb 09 15 39.0
comp=Z,14nm,1.0s
PLAL Pickwick Lake 71.88 347 P **P** **09 15 28.7 -0.8**
PLAL IAmb IAmb 09 15 38.2
comp=Z,11nm,1.0s
TKL Tuckaleechee C 71.89 351 P **P** **09 15 28.9 -0.7**
TKL IAmb IAmb 09 15 36.9
comp=Z,28nm,1.5s
X43A Marvell 71.97 345 P **P** **09 15 32.0 +1.9**
baz=165
U61A Possum Corner 71.98 357 P **P** **09 15 32.0 +1.9**
baz=178
V52A Sevierville 72.05 351 P **P** **09 15 28.7 -1.9**
V52A IAmb IAmb 09 15 38.6
comp=Z,24nm,1.3s
U59A Littleton 72.06 356 P **P** **09 15 32.4 +1.8**
baz=176
U59A Littleton 72.06 356 P **P** **09 15 30.5 -0.1**
U59A IAmb IAmb 09 15 38.6
comp=Z,22nm,1.3s
V51A Loudon 72.11 351 P **P** **09 15 30.1 -0.8**
V51A IAmb IAmb 09 15 40.6
comp=Z,15nm,1.1s
U58A Oxford 72.14 356 P **P** **09 15 32.8 +1.7**
baz=176
U60A Pendleton 72.14 357 P **P** **09 15 33.0 +1.9**
baz=177
U56A King 72.22 354 P **P** **09 15 33.2 +1.6**
baz=174
U57A Blanch 72.23 355 P **P** **09 15 33.9 +2.2**
baz=175
V48A Smith Brothers 72.41 349 P **P** **09 15 32.0 -0.7**
Z35A Perchaven, San 72.43 339 P **P** **09 15 32.8 -0.1**
U55A TA2, Sparta 72.44 354 P **P** **09 15 34.4 +1.4**
baz=174
ABTX Abilene, Hawle 72.49 337 P **P** **09 15 34.6 +1.3**
baz=158
ABTX Abilene, Hawle 72.49 337 P **P** **09 15 30.8 -2.5**
U54A Nelsons Funny 72.53 353 P **P** **09 15 34.8 +1.3**
baz=173
U54A Nelsons Funny 72.53 353 P **P** **09 15 32.2 -1.3**
U54A IAmb IAmb 09 15 41.6
comp=Z,27nm,1.2s
T59A Double "B" Far 72.66 357 P **P** **09 15 36.1 +1.9**
baz=177
T59A Double "B" Far 72.66 357 P **P** **09 15 32.4 -1.7**
CLTN Cedars of Leba 72.67 349 P **P** **09 15 32.1 -2.2**
T58A Grand View Acr 72.69 356 P **P** **09 15 35.8 +1.4**
baz=176
TZTN Tazewell 72.74 352 P **P** **09 15 36.4 +1.7**
baz=172
T57A Hurt 72.79 355 P **P** **09 15 36.7 +1.8**
baz=175
T56A Rocky Mt 72.87 355 P **P** **09 15 37.7 +2.2**
baz=174
WVT Waverly 72.95 348 P **P** **09 15 36.9 +1.0**
baz=168
WVT Waverly 72.95 348 P **P** **09 15 35.5 -0.4**
WVT IAmb IAmb 09 15 40.9
comp=Z,28nm,1.1s
U49A Red Boiling Sp 73.00 350 P **P** **09 15 34.3 -1.9**
U49A IAmb IAmb 09 15 43.8
comp=Z,17nm,1.2s
T55A Pulaski 73.02 354 P **P** **09 15 37.8 +1.3**
baz=174
T54A Tazewell 73.04 353 P **P** **09 15 37.6 +1.1**
baz=173
T53A Wise 73.06 352 P **P** **09 15 38.3 +1.6**
baz=172
BLA Blacksburg 73.09 354 P **P** **09 15 38.0 +1.2**
baz=174
W39A Magazine 73.28 343 P **P** **09 15 39.2 +1.3**
baz=163
S59A Mechanicsville 73.44 357 P **P** **09 15 40.3 +1.6**
baz=177
S56A Natural Bridge 73.48 355 P **P** **09 15 40.3 +1.2**
baz=175
S57A Dark Hollow, R 73.53 355 P **P** **09 15 40.7 +1.4**
baz=176
S55A Lewisburg 73.65 354 P **P** **09 15 41.3 +1.2**
baz=174
MNTX Cornudas Mount 73.65 332 P **P** **09 15 40.8 +0.6**
baz=154,SNR=9.0
MNTX Cornudas Mount 73.65 332 P **P** **09 15 40.1 -0.1**
R58B Mineral 73.67 356 P **P** **09 15 41.6 +1.5**
baz=176
T47A Sharon Grove 73.67 349 P **P** **09 15 38.1 -2.0**
T47A IAmb IAmb 09 15 48.1
comp=Z,28nm,1.4s
S53A Williamson 73.71 353 P **P** **09 15 41.8 +1.3**
baz=173
S54A Dingess, Beckl 73.75 354 P **P** **09 15 41.9 +1.2**
baz=174
S54A Dingess, Beckl 73.75 354 P **P** **09 15 39.3 -1.4**
S54A IAmb IAmb 09 15 47.7
comp=Z,39nm,1.6s
R59A King George, V 73.87 357 P **P** **09 15 43.0 +1.7**
baz=177
R60A Leonardtown, M 73.91 357 P **P** **09 15 43.5 +1.9**
baz=178
R61A Willards 73.94 358 P **P** **09 15 43.3 +1.6**
baz=178
R58A Rapidan 74.01 356 P **P** **09 15 43.8 +1.7**
baz=176
R57A Stanardsville 74.03 356 P **P** **09 15 43.5 +1.2**
baz=176
R54A Victor 74.10 354 P **P** **09 15 43.8 +1.1**
baz=174
R55A Marlinton 74.13 355 P **P** **09 15 43.9 +1.0**
baz=174
U40A Yellville 74.17 344 P **P** **09 15 44.6 +1.4**
baz=164
WMOK Wichita Mounta 74.19 339 P **P** **09 15 44.6 +1.3**
baz=159
R53A Hurricane 74.33 353 P **P** **09 15 45.8 +1.7**
baz=173

TUL1 Leonard 74.45 341 P **P** **09 15 46.1 +1.3**
baz=162
Q58A Fox Den Farm, 74.63 357 P **P** **09 15 48.1 +2.4**
baz=177
MSTX Muleshoe 74.75 335 P **P** **09 15 48.5 +1.7**
baz=156
Q57A Strasburg 74.76 356 P **P** **09 15 49.4 +2.9**
baz=176,SNR=7.4
WCI Wyandotte Cave 74.76 350 P **P** **09 15 48.6 +2.0**
baz=169
Q56A Snyder Ridge, 74.81 355 P **P** **09 15 48.6 +1.8**
baz=175
Q53A Leroy 74.82 354 P **P** **09 15 48.7 +1.9**
baz=173
Q55A Buckhannon 74.83 355 P **P** **09 15 48.8 +1.8**
baz=175
Q54A Coxs Mills 74.88 354 P **P** **09 15 48.8 +1.7**
baz=174
Q52A Bidwell 74.99 353 P **P** **09 15 49.5 +1.6**
baz=173
P58A Pank, Wackersv 75.16 357 P **P** **09 15 51.5 +2.7**
baz=177,SNR=5.9
P57A Homestead Farm 75.19 356 P **P** **09 15 50.9 +1.9**
baz=176
AMTX Amarillo 75.22 336 P **P** **09 15 50.6 +1.2**
baz=157
P59A Jarrettsville 75.25 358 P **P** **09 15 52.0 +2.7**
baz=178
P56A Dayton Farm, R 75.25 356 P **P** **09 15 51.3 +2.0**
baz=176
121A Cookes Peak, D 75.33 331 P **P** **09 15 51.4 +1.3**
baz=152,SNR=5.4
P60A Greenville 75.42 358 P **P** **09 15 52.0 +1.7**
baz=178
P53A Whipple 75.43 354 P **P** **09 15 52.4 +2.1**
baz=174
P54A Burton 75.47 354 P **P** **09 15 52.8 +2.2**
baz=174
T35A Sooner Cattle 75.59 341 P **P** **09 15 52.9 +1.5**
P52A Corning 75.64 353 P **P** **09 15 53.9 +2.3**
baz=173
O58A Lewisberry 75.78 357 P **P** **09 15 54.5 +2.1**
baz=177
P50A Jamestown 75.80 352 P **P** **09 15 55.1 +2.6**
baz=172
P49A Miami Univ. Ec 75.83 351 P **P** **09 15 54.8 +2.2**
baz=171
P48A Milroy 75.85 351 IAmb IAmb 09 16 00.2
comp=Z,38nm,1.4s
O57A Amberson 75.89 357 P **P** **09 15 55.2 +2.2**
baz=177
O60A Telford 75.92 358 P **P** **09 15 55.5 +2.4**
baz=178
O59A Robesonia 75.94 358 P **P** **09 15 55.5 +2.3**
baz=178
O55A Ligonier 75.98 355 P **P** **09 15 55.8 +2.3**
baz=175
O56A Blue Knob Stat 76.00 356 P **P** **09 15 55.9 +2.3**
baz=176
O54A Avella 76.03 355 P **P** **09 15 55.7 +1.9**
baz=174
O52A Adamsville 76.09 353 P **P** **09 15 56.2 +2.1**
baz=173
O53A New Philadelph 76.17 354 P **P** **09 15 56.2 +1.7**
baz=174
O51A Pataskala 76.20 353 P **P** **09 15 56.1 +1.4**
baz=172,SNR=6.6
O50A Cable 76.31 352 P **P** **09 15 57.1 +1.7**
baz=172
ACSO Alum Creek Sta 76.32 353 P **P** **09 15 57.6 +2.2**
baz=172,SNR=6.4
SSPA Standing Stone 76.33 357 P **P** **09 15 57.8 +2.4**
baz=176
N61A South Mountain 76.34 359 P **P** **09 15 58.3 +2.8**
baz=179
TUC Tucson 76.37 328 P **P** **09 15 56.9 +0.9**
baz=150
TUC Tucson 76.37 328 P **P** **09 15 54.3 -1.7**
O49A Covington 76.43 351 P **P** **09 15 53.8 -2.2**
N57A Milroy 76.43 357 P **P** **09 15 58.8 +2.7**
baz=177
N60A Cedar Hill Far 76.47 359 P **P** **09 15 58.3 +2.1**
baz=179
N58A Sunbury 76.48 357 P **P** **09 15 58.8 +2.5**
baz=177
N58A Sunbury 76.48 357 P **P** **09 15 53.3 -3.0**
N58A IAmb IAmb 09 16 05.2
comp=Z,22nm,1.2s
LIC Lamto 76.52 72 *e*P **P** **09 15 57.7 +0.5**
comp=Z,89nm,1.3s
N59A State Game Lan 76.53 358 P **P** **09 15 59.3 +2.7**
baz=178
N59A State Game Lan 76.53 358 P **P** **09 15 54.4 -2.3**
N59A IAmb IAmb 09 16 05.9
comp=Z,28nm,1.4s
N55A Marion Center 76.53 356 P **P** **09 15 59.0 +2.3**
baz=176
PAL Palisades 76.59 360 P **P** **09 15 59.6 +2.7**
baz=180
O48A Farmland 76.60 351 P **P** **09 15 59.5 +2.5**
baz=170
P43A Skaggs, Pawnee 76.67 347 P **P** **09 15 55.5 -1.8**
N52A McGinn's Farm, 76.77 354 P **P** **09 16 00.3 +2.3**
baz=173
N54A Moraine State 76.78 355 P **P** **09 15 59.9 +1.9**
baz=175
TIC Toumodi 76.79 72 *e*P **P** **09 15 59.1 +0.3**
KIC Kosan Boka 76.83 72 *e*P **P** **09 15 59.4 +0.4**
comp=Z,38nm,1.0s
N50A Nevada 76.87 352 P **P** **09 16 00.2 +1.6**
baz=172,SNR=6.4
M60A Port Jervis 76.92 359 P **P** **09 16 00.9 +2.2**
baz=179
DBIC Dimbokro 76.93 72 P **P** **09 15 57.9 -1.7**
comp=Z,9.0nm,0.9s,baz=217,slow=8.8,SNR=4.0
DBIC LR LR 09 47 41.2
comp=Z,282nm,19.0s,baz=210,slow=34
DBIC Dimbokro 76.93 72 IAmb IAmb 09 16 08.9
comp=Z,28nm,1.1s
N51A Ashland 76.94 353 P **P** **09 16 01.1 +2.2**
baz=173
N51A Ashland 76.94 353 P **P** **09 15 56.7 -2.2**
N51A IAmb IAmb 09 16 08.4
comp=Z,30nm,1.1s
ANMO Albuquerque 76.95 333 P **P** **09 16 01.0 +1.7**
baz=153
ANMO Albuquerque 76.95 333 P **P** **09 15 57.2 -2.2**
ANMO IAmb IAmb 09 16 05.5
comp=Z,15nm,1.2s
214A Organ Pipe Nat 76.96 326 P **P** **09 16 00.0 +0.7**
baz=148
214A Organ Pipe Nat 76.96 326 P **P** **09 15 56.7 -2.6**
M57A Sunshine Farm, 77.00 357 P **P** **09 16 01.6 +2.4**
baz=177
M63A Gales Ferry 77.00 1 P **P** **09 16 01.7 +2.6**
baz=181
M58A Price's Panora 77.01 358 P **P** **09 16 01.8 +2.5**
baz=178
M62A Hamden 77.03 0 P **P** **09 16 01.6 +2.2**
baz=181
M59A Waymart 77.15 359 P **P** **09 16 02.3 +2.2**
baz=178
M64A Tiverton 77.17 2 P **P** **09 16 02.7 +2.6**
baz=182
N48A Decatur 77.18 351 P **P** **09 16 02.4 +2.2**
baz=170
M56A Emporium 77.19 356 P **P** **09 16 02.0 +1.7**
baz=176
M55A Ridgway 77.21 356 P **P** **09 16 02.3 +1.9**
baz=176
N47A Urbana 77.28 351 P **P** **09 16 03.5 +2.6**
M54A Oil Creek Stat 77.30 355 P **P** **09 16 02.8 +1.9**
baz=175
M53A WI Miller and 77.31 354 P **P** **09 16 03.0 +2.0**
baz=174
M52A Chesterland 77.46 354 P **P** **09 16 03.8 +2.0**
baz=174
L63A North Scituate 77.47 1 P **P** **09 16 03.9 +2.1**
baz=182
HDIL Hopedale 77.52 348 P **P** **09 16 04.4 +2.3**
baz=167
HDIL Hopedale 77.52 348 P **P** **09 16 02.4 +0.2**
L64A Middleborough 77.56 2 P **P** **09 16 04.4 +2.1**
baz=182
L60A Shokan 77.58 359 P **P** **09 16 04.0 +1.6**
baz=180
R32A Long Quarter, 77.60 340 P **P** **09 16 01.9 -0.9**
L57A Andrews Acres 77.65 357 P **P** **09 16 05.7 +2.8**
baz=177
L58A Harry Jones Me 77.66 358 P **P** **09 16 05.6 +2.7**
baz=178
KSU1 Kansas State U 77.68 342 P **P** **09 16 05.2 +2.1**
baz=161
KSU1 Kansas State U 77.68 342 P **P** **09 16 02.0 -1.1**
KSU1 IAmb IAmb 09 16 16.8
comp=Z,13nm,0.9s
M47A Cromwell 77.75 351 P **P** **09 16 05.9 +2.5**
baz=170
L61A Hillsdale 1, H 77.78 360 P **P** **09 16 05.8 +2.3**
baz=180
L53A Girard 77.79 355 P **P** **09 16 06.4 +2.8**
baz=174
L59A Walton 77.79 359 P **P** **09 16 06.2 +2.6**
baz=179
L56A Greenwood 77.81 357 P **P** **09 16 06.3 +2.5**
baz=177
BINY Binghamton 77.82 358 P **P** **09 16 06.6 +2.8**
baz=178
L55A Hinsdale 77.90 356 P **P** **09 16 07.0 +2.7**
baz=176
ERPA Erie 77.93 355 P **P** **09 16 05.6 +1.2**
baz=175
X18A Snowflake 77.94 330 P **P** **09 16 01.8 -3.1**
L54A Sinclairville 78.00 356 P **P** **09 16 07.1 +2.2**
baz=175,SNR=5.5
CASY Casey 78.04 182 P **P** **09 16 03.9 -1.0**
L61B Northampton 78.04 1 P **P** **09 16 07.5 +2.5**
baz=181
L50A Kingsville 78.09 353 P **P** **09 16 07.7 +2.3**
baz=172
HRV Adam Dziewonsk 78.11 1 P **P** **09 16 07.7 +2.3**
baz=182
WVNY West Valley, N 78.13 356 P **P** **09 16 03.5 -2.0**
T25A Trinidad 78.19 335 P **P** **09 16 08.4 +2.2**
baz=155
K60A Five Rivers En 78.20 360 P **P** **09 16 08.4 +2.5**
baz=180
CBKS Cedar Bluff 78.25 339 P **P** **09 16 08.0 +1.6**
baz=159
K54A Basiliko Farm, 78.34 356 P **P** **09 16 09.7 +3.0**
baz=176
W18A Petrified Fore 78.37 330 P **P** **09 16 08.6 +1.4**
baz=151,SNR=7.6
K58A Earlville 78.37 358 P **P** **09 16 09.0 +2.1**
baz=178
K55A Perry 78.42 357 P **P** **09 16 09.1 +1.9**
baz=176
X16A Lo Mia Camp, P 78.46 329 P **P** **09 16 06.5 -1.3**
K52A Tillsonburg 78.64 355 P **P** **09 16 10.7 +2.4**
baz=174
K50A Casco 78.80 353 P **P** **09 16 11.8 +2.6**
baz=172
J62A Henniker 78.83 1 P **P** **09 16 11.9 +2.5**
baz=181
L44A Lake County Fo 78.87 349 P **P** **09 16 12.1 +2.5**
baz=168
J56A Wolcott 78.92 357 P **P** **09 16 12.1 +2.3**
baz=177
J61A Chester 78.94 1 P **P** **09 16 12.1 +2.2**
baz=181
J55A Hilton 78.95 357 P **P** **09 16 12.2 +2.2**
baz=176
K47A Vermontville 78.96 351 P **P** **09 16 12.2 +2.1**
baz=171
K48A Perry 78.99 352 P **P** **09 16 12.3 +2.1**
baz=171
L42A Oliver, Polo 78.99 348 **P** **09 16 13.0 +2.8**
J57A Williamstown 79.03 358 P **P** **09 16 12.8 +2.4**
baz=178
J59A Piesco 79.06 359 P **P** **09 16 13.0 +2.4**
baz=179
IKP In-Ko-Pah, Jac 79.06 324 P **P** **09 16 12.5 +1.5**
baz=146
J52A Paris 79.08 355 P **P** **09 16 13.3 +2.6**
baz=174
SDCO Great Sand Dun 79.11 335 P **P** **09 16 12.9 +1.5**
baz=154
SDCO Great Sand Dun 79.11 335 **P** **09 16 13.0 +1.5**
Y12C Blythe 79.24 326 P **P** **09 16 13.4 +1.6**
baz=147
I58A Old Forge 79.29 359 P **P** **09 16 14.1 +2.2**
baz=179
KSCO Kaye Shedlock' 79.30 337 P **P** **09 16 14.0 +1.8**
baz=156
I59A Olmsteadville 79.38 360 P **P** **09 16 14.4 +2.0**
baz=180
WUAZ Wupatki 79.38 329 P **P** **09 16 14.4 +1.6**
baz=150
MONP2 Monument Peak 79.41 324 P **P** **09 16 14.3 +1.2**
baz=146
I60A Shoreham 79.43 0 P **P** **09 16 15.5 +2.9**
baz=180
J49A Marlette 79.43 353 P **P** **09 16 14.6 +2.0**
baz=172
J48A Bridge Port 79.44 352 P **P** **09 16 14.4 +1.8**
baz=172,SNR=5.6
J48A Bridge Port 79.44 352 **P** **09 16 15.4 +2.7**
J47A Sunmer 79.50 352 P **P** **09 16 15.5 +2.5**
baz=171
I61A Oroboro, Fairl 79.53 1 P **P** **09 16 15.9 +2.7**
baz=181
I57A Carthage 79.55 358 P **P** **09 16 16.0 +2.7**
baz=178
SCIA State Center 79.57 345 P **P** **09 16 16.0 +2.5**
baz=164
S22A 4UR Ranch, Cre 79.58 334 P **P** **09 16 16.0 +2.0**
baz=153
I64A Boothbay 79.58 3 P **P** **09 16 16.5 +3.1**
baz=183
BC3 Big Chuckawall 79.59 325 P **P** **09 16 15.5 +1.6**
baz=147
I63A Otisfield 79.68 2 P **P** **09 16 17.4 +3.4**
baz=182
I51A Listowel 79.68 354 P **P** **09 16 16.3 +2.3**
baz=174
MVCO Mesa Verde 79.72 332 P **P** **09 16 16.3 +1.6**
baz=152
TSUM Tsumeb 79.82 106 P **P** **09 16 14.7 -1.0**
TSUM IAmb IAmb 09 16 25.6
comp=Z,23nm,1.4s
LBNH Lisbon 79.84 1 P **P** **09 16 17.9 +3.1**
baz=181
I55A Frankford 79.89 357 P **P** **09 16 17.4 +2.3**
baz=177
JFWS Jewell Farm 79.97 348 P **P** **09 16 18.2 +2.6**
baz=166
JFWS Jewell Farm 79.97 348 P **P** **09 16 13.5 -2.2**
JFWS IAmb IAmb 09 16 23.8
comp=Z,41nm,1.4s
I49A Point Hope 79.98 353 P **P** **09 16 18.5 +2.9**
baz=172
H58A Gabriels 80.00 360 P **P** **09 16 18.7 +2.9**
baz=180
XPFO Pion Flat 80.02 325 P **P** **09 16 15.0 -1.3**
PFO Pinyon Flats O 80.02 325 P **P** **09 16 18.0 +1.7**
baz=146
PFO Pinyon Flats O 80.02 325 **P** **09 16 14.4 -1.8**
Q24A Divide 80.08 335 P **P** **09 16 18.7 +2.0**
baz=154
W13A Hualapai Mount 80.09 327 P **P** **09 16 13.3 -3.4**
H61A Lyndonville 80.13 1 P **P** **09 16 19.4 +2.9**
baz=181
H60A Morristown 80.15 1 P **P** **09 16 19.2 +2.7**
baz=181
DELO Deloro Mine 80.19 357 P **P** **09 16 14.5 -2.2**
DELO IAmb IAmb 09 16 26.6
comp=Z,20nm,1.2s
H55A Tweed 80.20 357 P **P** **09 16 19.7 +3.0**
baz=177
LONY Lake Ozonia 80.21 359 P **P** **09 16 19.6 +2.7**
baz=179
LONY Lake Ozonia 80.21 359 P **P** **09 16 16.8 0.0**
LONY IAmb IAmb 09 16 25.7
comp=Z,34nm,1.4s
BOSA Boshof 80.21 118 P **P** **09 16 18.0 +0.3**
comp=Z,6.4nm,1.0s,baz=226,slow=4.6,SNR=7.8
BOSA LR LR 09 46 27.9
comp=Z,336nm,21.8s,baz=201,slow=32
BOSA Boshof 80.21 118 P **P** **09 16 16.1 -1.6**
BOSA IAmb IAmb 09 16 30.5
comp=Z,16nm,0.9s
H56A Elgin 80.22 358 P **P** **09 16 19.6 +2.7**
baz=178
H59A Cadyville 80.23 360 P **P** **09 16 19.6 +2.6**
baz=180
I47A Gladwin 80.23 352 P **P** **09 16 19.7 +2.8**

baz=171
I47A Gladwin 80.23 352 P **P** **09 16 16.9 -0.1**
I47A IAmb IAmb 09 16 21.3
comp=Z,18nm,0.9s
H53A Bobcaygeon 80.29 356 P **P** **09 16 20.1 +2.8**
baz=176
I48A Sherman Twp 80.31 353 P **P** **09 16 20.0 +2.7**
baz=172
MURC Murrieta 80.36 324 P **P** **09 16 19.5 +1.6**
baz=146
H65A Eastbrook 80.42 4 P **P** **09 16 20.7 +2.8**
baz=184
U15A North Rim 80.54 329 P **P** **09 16 18.9 -0.3**
GMRC Granite Mounta 80.62 326 P **P** **09 16 20.2 +0.7**
baz=147,SNR=6.1
PV13 Radium Mtn., P 80.67 332 P **P** **09 16 18.0 -1.8**
PV13 IAmb IAmb 09 16 29.0
comp=Z,26nm,1.5s
G57A Newington 80.70 359 P **P** **09 16 21.7 +2.3**
baz=179
I42A Draeger Farm, 80.70 349 P **P** **09 16 14.9 -4.6**
I42A IAmb IAmb 09 16 24.9
comp=Z,20nm,1.4s
PV05 Paradox Valley 80.70 332 P **P** **09 16 17.9 -2.0**
PV03 Paradox Valley 80.77 333 P **P** **09 16 18.2 -2.1**
BBRC Big Bear Solar 80.77 325 P **P** **09 16 21.5 +1.1**
baz=146
PV18 Skein Mesa, Pa 80.78 332 P **P** **09 16 18.8 -1.5**
PV11 David Mesa, Pa 80.81 333 P **P** **09 16 19.7 -0.8**
PV11 IAmb IAmb 09 16 34.8
comp=Z,28nm,1.7s
G53A Haliburton 80.84 356 P **P** **09 16 23.0 +2.8**
baz=176
G62A West of Eustis 80.85 2 P **P** **09 16 23.1 +2.8**
baz=182
PV07 Paradox Valley 80.85 333 P **P** **09 16 18.6 -2.2**
G61A St-Isidore-de- 80.89 1 P **P** **09 16 23.5 +3.1**
baz=182
G55A Calabogie 80.89 358 P **P** **09 16 22.7 +2.3**
baz=177
G64A Maxfield 80.95 3 P **P** **09 16 23.0 +2.2**
baz=184
I40A Norwalk 80.99 348 P **P** **09 16 20.0 -1.0**
ISCO Idaho Springs 80.99 335 P **P** **09 16 18.2 -3.4**
PV21 Cone Mtn., Par 81.08 333 P **P** **09 16 20.0 -2.0**
PV09 Paradox Valley 81.09 332 P **P** **09 16 21.0 -1.1**
G54A Lake Saint Pet 81.09 357 P **P** **09 16 23.5 +2.0**
baz=176
H43A Windswept, Lux 81.10 350 P **P** **09 16 19.9 -1.7**
H43A IAmb IAmb 09 16 29.1
comp=Z,27nm,1.3s
BFSC Mount Baldy Ra 81.10 324 P **P** **09 16 22.9 +0.9**
baz=145
KNB Kanab 81.27 329 P **P** **09 16 22.1 -0.8**
G47A Hillman 81.30 353 P **P** **09 16 23.9 +1.3**
baz=172,SNR=5.5
LCMT Little Creek M 81.44 329 P **P** **09 16 20.4 -3.4**
F52A Sundridge 81.55 356 P **P** **09 16 26.4 +2.4**
baz=175
GSC Goldstone, Bar 81.57 325 P **P** **09 16 25.9 +1.4**
baz=146
F49A Sandfield 81.71 354 P **P** **09 16 27.1 +2.3**
baz=173
F51A Arnstein 81.72 355 P **P** **09 16 27.4 +2.6**
baz=175
TRQ Mont Tremblant 81.81 359 P **P** **09 16 23.0 -2.4**
F48A Evansville 81.83 354 P **P** **09 16 27.6 +2.2**
baz=173
SHPR Sheep Range 81.83 327 P **P** **09 16 24.3 -1.7**
MTPU Mount Pierson 81.88 330 P **P** **09 16 24.0 -2.4**
CCUT Cedar City 81.95 329 **P** **09 16 28.6 +2.0**
E58A La Victoria 81.96 0 P **P** **09 16 28.2 +2.2**
baz=180
E60A Ste Agathe de 81.97 1 P **P** **09 16 28.4 +2.3**
baz=182
F45A CMU Biological 81.99 352 P **P** **09 16 28.6 +2.3**
baz=170
E57A Chemin Saint G 82.00 360 P **P** **09 16 28.5 +2.1**
baz=180
E53A Dumoine, Ponti 82.05 357 P **P** **09 16 29.2 +2.6**
baz=177
ECSD EROS Data Cent 82.06 343 P **P** **09 16 28.1 +1.4**
baz=161
N23A Red Feather La 82.08 336 P **P** **09 16 28.4 +1.1**
baz=154
E54A Lac Daplat, Po 82.09 357 P **P** **09 16 28.3 +1.6**
baz=177
LRMC Laurel Mtn Rad 82.13 325 P **P** **09 16 28.7 +1.2**
baz=145
E63A Oxbow 82.13 4 P **P** **09 16 29.6 +2.6**
baz=184
E56A St. Veronique 82.14 359 P **P** **09 16 29.6 +2.6**
baz=179
SRU San Rafael Swe 82.15 332 **P** **09 16 28.9 +1.4**
O20A White River Ci 82.20 334 P **P** **09 16 29.5 +1.7**
baz=152
Q16A Castle Valley 82.23 331 **P** **09 16 29.4 +1.4**
G40A Rib Lake 82.25 348 IAmb IAmb 09 16 35.2
comp=Z,25nm,1.7s
E50A Wahnapitae 82.27 355 P **P** **09 16 30.2 +2.4**
baz=174
E62A Clayton Lake 82.28 3 P **P** **09 16 29.9 +2.1**
baz=183
E51A G1948 Merrick 82.30 356 P **P** **09 16 30.5 +2.7**
baz=175
E48A Lockeyer 82.44 354 P **P** **09 16 30.7 +2.1**
baz=173,SNR=6.2
E47A Iron Bridge 82.51 353 P **P** **09 16 31.1 +2.1**
baz=172,SNR=7.6
MPMC Manual Prospec 82.51 325 P **P** **09 16 30.9 +1.4**
baz=146
LBTB Lobatse 82.56 115 P **P** **09 16 28.2 -2.0**
D57A Chemin Vers le 82.60 360 P **P** **09 16 31.5 +2.0**
baz=180
D55A Sainte-Anne-du 82.62 359 P **P** **09 16 31.5 +1.9**
baz=178
D56A ZEC Mazanza, M 82.64 359 P **P** **09 16 31.1 +1.4**
baz=179
ISA Isabella, Lake 82.65 325 P **P** **09 16 31.0 +1.0**
baz=145
SPMN Marine on St. 82.68 346 P **P** **09 16 31.2 +1.3**
baz=164
SPMN Marine on St. 82.68 346 **P** **09 16 32.6 +2.7**
D52A ZEK Kipawa Sen 82.68 357 P **P** **09 16 31.4 +1.5**
baz=176
D58A Chemin du LacG 82.68 0 P **P** **09 16 31.8 +1.9**
baz=181
TPNV Topopah Spring 82.69 327 P **P** **09 16 31.5 +1.1**
baz=146,SNR=6.4
D53A Lac Vacive, Po 82.75 357 P **P** **09 16 32.1 +1.9**
baz=177
D53A Lac Vacive, Po 82.75 357 P **P** **09 16 29.6 -0.6**
D53A IAmb IAmb 09 16 38.0
comp=Z,26nm,1.4s
D62A Allapoint, All 82.76 3 P **P** **09 16 32.3 +2.0**
baz=184
D63A Stockholm 82.76 4 P **P** **09 16 32.9 +2.6**
baz=184
D54A Lac Fusel, La 82.78 358 P **P** **09 16 32.9 +2.4**
baz=178
D61A St Aubert, Com 82.84 2 P **P** **09 16 32.4 +1.7**
baz=183
D51A Lot 18 Range I 82.84 356 P **P** **09 16 32.8 +2.1**
baz=175
E43A Lone Tree Farm 82.86 351 P **P** **09 16 30.5 -0.3**
E43A IAmb IAmb 09 16 40.8
comp=Z,15nm,1.1s
D50A G1974 Best Tow 82.95 356 P **P** **09 16 33.5 +2.2**
baz=175
PSUT Pine Spring 82.98 329 **P** **09 16 33.7 +1.8**
D46A Sault St. Mari 83.02 353 P **P** **09 16 34.1 +2.5**
baz=172
VES Vestal, Richgr 83.08 324 P **P** **09 16 33.7 +1.5**
baz=144
D47A Chapleau 83.09 353 P **P** **09 16 33.7 +1.7**
baz=172
SMMC Simmler 83.09 323 P **P** **09 16 34.2 +1.9**
baz=144
D48A Paudash Townsh 83.09 354 P **P** **09 16 34.0 +1.9**
baz=173
CWC Cottonwood Cre 83.10 325 P **P** **09 16 33.8 +1.3**
baz=145
D49A Beulah Townshi 83.16 355 P **P** **09 16 34.0 +1.6**
baz=174
SUSD Miller 83.30 342 P **P** **09 16 34.5 +1.4**
baz=160
F36A Milaca 83.43 346 IAmb IAmb 09 16 41.8
comp=Z,30nm,1.4s
R11A Troy Canyon, C 83.56 328 P **P** **09 16 36.3 +1.4**
baz=147,SNR=11
R11A Troy Canyon, C 83.56 328 P **P** **09 16 33.7 -1.2**
R11A IAmb IAmb 09 16 44.9
comp=Z,15nm,1.4s
K22A Casper 83.85 336 P **P** **09 16 37.7 +1.4**
baz=154
K22A Casper 83.85 336 P **P** **09 16 34.8 -1.5**
DUG Dugway, Tooele 83.98 331 P **P** **09 16 38.1 +1.2**
baz=149,SNR=13
DUG Dugway, Tooele 83.98 331 P **P** **09 16 33.6 -3.3**
F33A 5 Mile Ranch, 83.98 344 P **P** **09 16 36.5 -0.2**
F33A IAmb IAmb 09 16 46.1
comp=Z,12nm,1.0s
TCUT Toone Canyon 84.22 332 P **P** **09 16 37.2 -1.1**
RSSD Black Hills 84.40 338 P **P** **09 16 40.3 +1.2**
baz=156
RSSD Black Hills 84.40 338 P **P** **09 16 38.5 -0.5**
RSSD IAmb IAmb 09 16 47.0
comp=Z,12nm,1.1s
BGU Big Grassy Mou 84.69 331 P **P** **09 16 39.0 -1.5**
HWUT Hardware Ranch 84.71 332 P **P** **09 16 40.1 -0.6**
SPUT South Promonto 84.79 332 P **P** **09 16 38.6 -2.5**
NVAR Mina Array Bea 84.83 326 P **P** **09 16 42.5 +1.1**
comp=Z,3.3nm,0.9s,baz=150,slow=4.9,SNR=13
NVAR LR LR 09 48 36.2
comp=Z,150nm,18.5s,baz=186,slow=32
BW06 Boulder Array 84.98 334 P **P** **09 16 43.1 +1.1**
baz=152
PDAR Pinedale Array 84.98 334 P **P** **09 16 44.1 +2.1**
comp=Z,5.9nm,1.1s,baz=141,slow=5.7,SNR=11
EYMN Ely 85.07 348 P **P** **09 16 43.7 +1.6**
baz=166
KVN Kaiserville 85.24 327 P **P** **09 16 42.1 -1.3**
KVN IAmb IAmb 09 16 52.7
comp=Z,14nm,1.3s
ELK Elko 85.42 330 P **P** **09 16 42.2 -2.2**
AHID Auburn Hatcher 85.54 333 P **P** **09 16 42.4 -2.5**
AHID IAmb IAmb 09 16 52.9
comp=Z,13nm,1.1s
TOA0 Torodi Ar. Sit 85.99 71 P **P** **09 16 45.0 -2.4**
TORD Torodi Ar. Bea 85.99 71 P **P** **09 16 47.3 -0.2**
comp=Z,5.4nm,1.2s,baz=224,slow=6.3,SNR=9.9
TORD PP **PP** **09 20 05.2 -2.5**
comp=Z,1.8nm,1.2s,baz=236,slow=7.8,SNR=2.8
TORD LR LR 09 53 15.6
comp=Z,426nm,19.8s,baz=250,slow=34
SNOW Snow King Moun 86.02 334 P **P** **09 16 44.6 -2.6**
SNOW IAmb IAmb 09 16 59.8
comp=Z,12nm,1.1s
TPAW Teton Pass 86.11 334 P **P** **09 16 46.4 -1.3**
TPAW IAmb IAmb 09 16 56.6
comp=Z,16nm,1.1s
AGMN Agassiz Nation 86.23 345 P **P** **09 16 48.9 +1.1**
baz=162
AGMN Agassiz Nation 86.23 345 P **P** **09 16 47.0 -0.8**
AGMN IAmb IAmb 09 16 56.2
comp=Z,23nm,1.4s
IMW Indian Meadow 86.46 334 P **P** **09 16 47.9 -1.6**
IMW IAmb IAmb 09 16 58.4
comp=Z,21nm,1.2s
MDND Maddock 86.64 343 P **P** **09 16 51.4 +1.6**
baz=159
H17A Grant Village 86.77 334 P **P** **09 16 52.4 +1.5**
baz=151
RLMT Red Lodge 86.95 336 P **P** **09 16 53.8 +2.0**
baz=152
YHH Holmes Hill 87.21 334 P **P** **09 16 51.3 -1.8**
LAO LASA Array 87.38 338 P **P** **09 16 54.7 +1.1**
baz=154
LAO LASA Array 87.38 338 P **P** **09 16 51.7 -1.9**
LAO IAmb IAmb 09 16 59.6
comp=Z,7.8nm,0.9s
O03E Paynes Creek 87.93 325 P **P** **09 16 58.3 +1.9**
baz=143
MCMT McKenzie Canyo 87.96 333 P **P** **09 16 55.7 -0.9**
ULM Lac du Bonnet 88.09 346 P **P** **09 16 59.3 +2.5**
comp=Z,9.3nm,0.9s,baz=190,slow=4.5,SNR=6.8
WVOR Wild Horse Val 88.25 328 P **P** **09 16 56.1 -1.8**
WVOR IAmb IAmb 09 17 06.8
comp=Z,20nm,1.2s
DGMT Dagmar 88.40 340 P **P** **09 17 00.1 +1.8**
baz=156
MOD Modoc Plateau 88.54 327 P **P** **09 16 57.3 -2.0**
MOD IAmb IAmb 09 17 08.9
comp=Z,24nm,1.4s
N02D Trinity Center 88.89 325 P **P** **09 17 01.9 +1.0**
baz=142
J08A Circle Bar Ran 88.93 329 P **P** **09 16 59.2 -1.9**
M04C Macdoel 89.13 326 P **P** **09 17 03.7 +1.6**
baz=143
M02C Callahan 89.28 325 P **P** **09 17 04.6 +1.8**
baz=142
L04D Klamath Falls 89.69 326 P **P** **09 17 06.3 +1.6**
baz=142
I07A Izee 89.95 329 P **P** **09 17 05.4 -0.5**
I07A IAmb IAmb 09 17 14.9
comp=Z,12nm,1.2s
J05D Fort Rock, OR 90.06 327 P **P** **09 17 08.2 +1.8**
baz=143
LSZ Lusaka 90.31 109 P **P** **09 17 05.4 -3.0**
PINE Pine Mountain 90.33 328 P **P** **09 17 06.2 -1.6**
PINE IAmb IAmb 09 17 17.0
comp=Z,17nm,1.2s
NEW Newport 92.44 333 P **P** **09 17 19.5 +2.3**
baz=146
ESDC Sonseca Array 98.79 47 LR LR 10 00 39.4
comp=Z,312nm,19.9s,baz=235,slow=34
DZM Mont Dzumac 99.12 234 eLR LR 09 49 48.8
comp=Z,302nm,23.5s
YKA Yellowknife Ar 103.53 342 Pdiff **Pdif** **09 18 10.3 +3.5**
comp=Z,0.8nm,1.0s,baz=139,slow=4.7,SNR=7.1
YKA PKKPbc **PKKPbc** **09 34 02.2 +0.9**
comp=Z,0.4nm,1.1s,baz=328,slow=2.6,SNR=4.2
ILAR Eielson Array 115.39 333 PKP **PKiKP** **09 22 50.6 +3.1**
comp=Z,0.7nm,1.0s,baz=184,slow=1.6,SNR=4.5
TOLK Toolik Lake Re 118.19 336 P **PKiKP** **09 22 53.7 +0.7**
baz=117
TOLK Toolik Lake Re 118.19 336 **PKiKP** **09 22 53.4 +0.5**
WRA Warramunga Arr 118.47 210 PKP **PKiKP** **09 22 56.8 +1.8**
comp=Z,1.0nm,1.0s,baz=150,slow=1.5,SNR=4.6
BRTR Keskin Array B 123.81 63 PKP **PKiKP** **09 23 04.2 -0.8**
comp=Z,0.7nm,0.7s,baz=241,slow=3.0,SNR=2.3
AKASG Malin Array Be 124.39 49 PKP **PKiKP** **09 23 06.0 +0.5**
comp=Z,0.4nm,0.4s,baz=274,slow=2.7,SNR=5.4
PETK Petropavlovsk- 140.62 312 PKP **PKiKP** **09 23 37.8 -0.5**
comp=Z,0.9nm,0.7s,baz=119,slow=2.5,SNR=5.2
GEYT Alibeck 141.62 72 PKhKP **PKPdf** **09 23 35.4 -2.6**
comp=Z,1.1nm,0.4s,baz=241,slow=4.8,SNR=2.0
TIXI Tiksi 142.39 349 **PKPdf** **09 23 35.9 -2.4**
KKM Kota Kinabalu 148.92 199 PKPdf **PKPdf** **09 23 46.6 -4.8**
KKM PKPbc **PKPbc** **09 23 52.9 -2.4**
KKM PKPab **PKPab** **09 23 59.2 0.0**
BRVK Borovoye 149.45 45 PKPdf **PKPdf** **09 23 47.9 -3.0**
BRVK **PKPbc** **09 23 55.8 +0.4**
BRVK PKPab **PKPab** **09 24 01.5 +1.3**
YAK Yakutsk 150.13 338 PKPbc **PKiKP** **09 23 56.1 -1.5**
GAR Garm 151.24 73 **PKiKP** **09 24 00.0 -0.8**
GAR PKPab **PKPab** **09 24 07.2 -1.0**
KK31 Karatay Array 151.50 64 **PKPbc** **09 23 59.4 -1.2**
BTK Batken 151.71 71 **PKPbc** **09 24 00.1 -1.1**
AAK Ala-Archa 154.45 65 **PKPbc** **09 24 05.8 -1.6**
AAK PKPab **PKPab** **09 24 21.1 -0.7**
KURK Kurchatov 155.12 45 **PKPdf** **09 24 03.8 +4.4**
KURK PKPab **PKPab** **09 24 23.9 -0.2**
KSH Kashi 155.65 72 PKP **PKPdf** **09 24 03.5 +2.9**
KSH PKS **PKSdf** **09 27 35.5 +0.8**
KSH PP **PP** **09 28 07.0 +2.7**
KSH SKKS 09 34 52.8
KSH SS **SS** **09 47 49.3 -2.2**
KSH AMB AMB
comp=Z,400nm,5.5s
KSH LR LR
comp=Z,100nm,10.0s
KSH LR LR
comp=Z,120nm,13.0s
KSH LR LR
comp=Z,290nm,7.6s
ZALV Zalesovo Beam 156.52 33 PKP **PKPdf** **09 24 00.6 -0.5**
comp=Z,5.1nm,0.9s,baz=352,slow=3.1,SNR=3.2
ZALV PKPab **PKPab** **09 24 31.6 +1.7**
comp=Z,1.5nm,0.5s,baz=282,slow=2.9,SNR=4.4
TARG Taragay, Kyrgy 156.98 67 **PKPab** **09 24 31.8 -1.1**
MAKZ Makanchi 158.73 52 **PKPdf** **09 24 02.7 -1.5**
MAKZ PKPab **PKPab** **09 24 38.5 -1.4**
MK31 Makanchi Array 158.93 52 **PKPdf** **09 24 01.6 -2.9**
MK31 PKPab **PKPab** **09 24 39.0 -1.7**
MKAR Makanchi Array 158.93 52 PKP **PKPdf** **09 24 04.2 -0.3**
comp=Z,2.8nm,0.9s,baz=282,slow=2.2,SNR=13
MKAR PKPab **PKPab** **09 24 41.1 +0.4**
comp=Z,1.3nm,0.9s,baz=302,slow=2.7,SNR=3.8
MKAR PP **PP** **09 28 24.3 +2.5**
comp=Z,0.6nm,1.0s,baz=275,slow=4.9,SNR=3.7
CMAR Chiang Mai Arr 161.33 157 PKP **PKPdf** **09 24 07.9 0.0**
comp=Z,0.7nm,0.3s,baz=249,slow=2.5,SNR=1.4
CMAR PKPab **PKPab** **09 24 54.3 +2.7**
comp=Z,0.6nm,0.3s,baz=234,slow=4.7,SNR=4.5
KSRS Korea Array 162.76 281 PKP **PKPdf** **09 24 12.2 +3.4**
comp=Z,1.0nm,0.7s,baz=153,slow=1.8,SNR=2.7
KSRS PKPab **PKPab** **09 25 00.5 +2.9**
comp=Z,1.2nm,0.7s,baz=97,slow=5.7,SNR=2.7
QIZ Qiongzhong 162.88 191 PKP **PKPdf** **09 24 08.5 -0.9**
QIZ PP **PP** **09 28 42.5 +0.6**
QIZ SS SS 09 49 08.5 +3.5
QIZ LR LR
comp=Z,150nm,14.7s
QIZ LR LR
comp=Z,120nm,19.1s
QIZ LR LR
comp=Z,200nm,19.1s
WMQ Urumqi 163.59 56 *e*PKP **PKPdf** **09 24 08.8 -0.7**
WMQ LR LR
comp=Z,370nm,29.0s
WMQ LR LR
comp=Z,1μm,29.0s
WMQ LR LR
comp=Z,270nm,28.3s
SONM Songino Array 168.13 0 PKP **PKPdf** **09 24 12.4 -0.7**
comp=Z,0.3nm,0.4s,baz=27,slow=1.4,SNR=1.5
SONM PKPab **PKPab** **09 25 22.8 +1.8**
comp=Z,1.7nm,0.9s,baz=75,slow=1.6,SNR=4.1
SONM PP **PP** **09 29 12.5 +3.1**
comp=Z,0.9nm,0.7s,baz=324,slow=9.2,SNR=4.1
NJ2 Nanjing 169.03 253 *e*PKP **PKPdf** **09 24 14.0 0.0**
GYA Guiyang 170.53 181 *e*PKP **PKPdf** **09 24 11.3 -3.9**
GYA PP **PP** **09 29 21.0 -0.4**
GYA AMB AMB
comp=Z,190nm,6.9s
BJI Beijing 171.35 301 PKP **PKPdf** **09 24 15.8 +0.8**
BJI LR LR
comp=Z,260nm,12.6s
BJI LR LR
comp=Z,140nm,12.8s
GTA Gaotai 173.68 55 *e*PKP **PKPdf** **09 24 21.5 +5.2**
GTA PP **PP** **09 29 44.0 +5.8**
GTA AMB AMB
comp=Z,250nm,8.9s
GTA LR LR
comp=Z,150nm,20.3s
GTA LR LR
comp=Z,180nm,20.3s
GTA LR LR
comp=Z,230nm,21.0s
HHC Hu-ho-hao-te 173.71 322 *e*P **PKPdf** **09 24 09.0 -7.2**
HHC pmax pmax
comp=Z,17nm,0.9s
HHC pmax pmax
comp=Z,62nm,5.1s
HHC LR LR
comp=N,170nm,15.3s
HHC LR LR
comp=E,140nm,16.1s
HHC LR LR
comp=Z,220nm,17.5s
CD2 Chengdu 174.47 155 PKP **PKPdf** **09 24 15.5 -1.2**
LZH Lanzhou 177.84 86 *e*PKP **PKPdf** **09 24 17.5 0.0**
LZH sPKP 09 24 22.8
LZH PP **PP** **09 30 00.0 +1.3**
LZH SKKS 09 36 45.0
LZH SS **SS** **09 51 37.0 +0.5**
LZH AMB AMB
comp=Z,490nm,9.5s
LZH LR LR
comp=Z,300nm,18.1s
LZH LR LR
comp=Z,310nm,17.9s
LZH LR LR
comp=Z,390nm,20.0s

ATH ***27*** *09:22:58.7, 40.47N×25.80E, h26km±1km, ML2.5/8, Error ellipse: s-maj=3.1km s-min=1.4km az=254.0*
THE ***27*** *09:22:59.2, 40.48N×25.85E, h7km±1km, ML2.4/7, Error ellipse: s-maj=1.0km s-min=0.5km az=359.0*
DDA ***27*** *09:22:59.9, 40.41N×25.96E, h8km±4km, ML2.5*
ISK ***27*** *09:22:59.2, 40.46N×25.91E, h9km, ML2.7/16*

ISC 27 09:22:59.1±0.8, 40.47N±0.02×25.86E±0.02, h15km±6km, n60, σ0.953/84, 1D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMTH	**Samothraki Isl**	**0.26**	**269**	P	**Pg**	**09 23 04.2**	**-0.5**
SMTH				S	**Sg**	**09 23 07.9**	**-0.5**
	822nm,0.1s						
SMTH	**Samothraki Isl**	**0.26**	**269**	P	**Pg**	**09 23 04.2**	**-0.5**
SMTH				S	**Sg**	**09 23 08.2**	**-0.2**
SMTH				AML	AML	09 23 12.5	
	comp=E,1436μm,0.1s						
SMTH				AML	AML	09 23 14.7	
	comp=N,1835μm,0.1s						
GADA	**Gvkgeada**	**0.28**	**175**	P	**Pg**	**09 23 05.2**	**+0.1**
GADA				S	**Sg**	**09 23 09.0**	**-0.2**
	comp=N,468nm,0.3s						
GADA	**Gvkgeada**	**0.28**	**175**	PG	**Pg**	**09 23 05.4**	**+0.3**
GADA				SG	**Sg**	**09 23 09.7**	**+0.5**
ENEZ	**Enez**	**0.34**	**40**	P	**Pg**	**09 23 05.9**	**-0.2**
ENEZ				S	**Sg**	**09 23 11.2**	**+0.3**
	comp=N,1μm,0.3s						
ENEZ	**Enez**	**0.34**	**40**	PG	**Pg**	**09 23 05.9**	**-0.2**
ENEZ				SG	**Sg**	**09 23 11.3**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.47**	**99**	PG	**Pg**	**09 23 08.5**	**0.0**
ERIK	**Erikli-Kesan**	**0.53**	**68**	PG	**Pb**	**09 23 09.9**	**-0.2**
ERIK				SG	**Sg**	**09 23 16.6**	**-0.1**
BOZC	**Bozcaada**	**0.65**	**167**	PG	**Pg**	**09 23 11.4**	**-0.4**
BOZC	**Bozcaada**	**0.65**	**167**	*i* P	**Pg**	**09 23 11.3**	**-0.5**
BOZC				IAML		09 23 26.0	
	comp=E,163nm,0.2s						
LPK	**Lapseki**	**0.69**	**98**	PG	**Pb**	**09 23 12.6**	**-0.3**
KESN	**Edirne-Kesan**	**0.71**	**60**	*i* P	**Pb**	**09 23 13.8**	**+0.4**
KESN				*i* S	**Sg**	**09 23 22.4**	**-0.2**
KESN				IAML		09 23 26.0	
	comp=N,288nm,0.2s						
KESN				IAML		09 23 26.0	
	comp=E,234nm,0.3s						
RDO	**Rodhopi**	**0.72**	**340**	P	**Pg**	**09 23 12.5**	**-0.6**
RDO	**Rodhopi**	**0.72**	**340**	P	**Pg**	**09 23 12.4**	**-0.6**
RDO				S	**Sg**	**09 23 22.6**	**+0.1**
RDO				AML	AML	09 23 26.4	
	comp=E,858μm,0.2s						
RDO				AML	AML	09 23 26.7	
	comp=N,1442μm,0.2s						
RDO	**Rodhopi**	**0.72**	**340**	PG	**Pb**	**09 23 14.1**	**+0.8**
RDO				SG	**Sn**	**09 23 24.8**	**-0.6**
EZN	**Ezine**	**0.74**	**151**	P	**Pg**	**09 23 12.7**	**-0.7**
EZN	**Ezine**	**0.74**	**151**	PG	**Pg**	**09 23 12.8**	**-0.7**
LIA	**Limnos Island**	**0.78**	**222**	P	**Pg**	**09 23 13.9**	**-0.3**
LIA				S	**Sb**	**09 23 25.0**	**+0.4**
	comp=N,468nm,0.4s						
LIA	**Limnos Island**	**0.78**	**222**	P	**Pg**	**09 23 13.9**	**-0.3**
LIA				AML	AML	09 23 27.2	
	comp=N,822μm,0.4s						
LIA				AML	AML	09 23 27.9	
	comp=E,1058μm,0.5s						
UKOP	**Uzunkopru-Edir**	**0.88**	**41**	PG	**Pb**	**09 23 16.4**	**+0.4**
UKOP				SG	**Sn**	**09 23 28.9**	**-0.5**
THAS	**Thassos island**	**0.88**	**279**	P	**Pg**	**09 23 16.1**	**-0.1**
THAS				S	**Sb**	**09 23 28.4**	**+0.7**
	comp=E,310nm,0.3s						
THAS	**Thassos island**	**0.88**	**279**	P	**Pg**	**09 23 15.6**	**-0.6**
THAS				AML	AML	09 23 30.4	
	comp=E,729μm,0.3s						
THAS				AML	AML	09 23 32.7	
	comp=N,503μm,0.4s						
BAYC	**CANAKKALE_Bayr**	**0.90**	**144**	*i* P	**Pg**	**09 23 15.9**	**-0.7**
BAYC				*i* S	**Sg**	**09 23 26.8**	**-1.6**
BAYC				IAML		09 23 31.0	
	comp=E,88nm,0.2s						
BAYC				IAML		09 23 33.0	
	comp=N,90nm,0.2s						
RKY	**Sarkoy-Tekirda**	**1.02**	**78**	PG	**Pn**	**09 23 18.9**	**-0.1**

RKY				SG	**Sn**	**09 23 33.1**	**0.0**		
SART	**Tekirdag**	**1.02**	**78**	*i* P	**Pg**	**09 23 18.6**	**-0.4**		
SART				*i* S	**Sn**	**09 23 33.4**	**+0.3**		
KRBG	**Karabiga-Canak**	**1.10**	**94**	PG	**Pn**	**09 23 20.2**	**+0.3**		
KRBG				SG	**Sn**	**09 23 35.1**	**+0.3**		
KAVA	**Kavala**	**1.15**	**297**	P	**Pb**	**09 23 20.6**	**-0.1**		
KAVA				S	**Sg**	**09 23 36.5**	**+0.2**		
	comp=N,138nm,0.4s								
KAVA	**Kavala**	**1.15**	**297**	P	**Pb**	**09 23 20.4**	**-0.3**		
KVLA	**Kavala**	**1.22**	**293**	P	**Pn**	**09 23 21.6**	**0.0**		
KDZ	**Kurdzhali**	**1.22**	**344**	PN	**Pg**	**09 23 22.5**	**-0.2**		
SIGR	**SIGRI**	**1.26**	**180**	P	**Pn**	**09 23 22.4**	**+0.2**		
SIGR				S	**Sg**	**09 23 40.2**	**+0.4**		
	comp=N,228nm,0.5s								
SIGR	**SIGRI**	**1.26**	**180**	P	**Pn**	**09 23 22.3**	**+0.1**		
SIGR				AML	AML	09 23 40.5			
	comp=N,569μm,0.5s								
SIGR				AML	AML	09 23 41.9			
	comp=E,326μm,0.4s								
SIGR	**SIGRI**	**1.26**	**180**	PN	**Pn**	**09 23 22.3**	**+0.1**		
SIGR				SN	**Sg**	**09 23 40.1**	**+0.3**		
PRK	**Paraskevi**	**1.27**	**166**	P	**Pg**	**09 23 23.3**	**-0.2**		
PRK				AML	AML	09 23 42.3			
	comp=N,451μm,0.6s								
PRK				AML	AML	09 23 42.7			
	comp=E,400μm,0.4s								
MRMT	**Marmara Adasi**	**1.33**	**84**	PN	**Pb**	**09 23 23.6**	**-0.1**		
MRMT				SN	**Sg**	**09 23 41.9**	**0.0**		
AYVA	**Ayvalik**	**1.33**	**151**	*i* P	**Pn**	**09 23 23.4**	**+0.3**		
AYVA				*i* S	**Sg**	**09 23 41.3**	**-0.6**		
AYVA				IAML		09 23 43.0			
	comp=E,112nm,0.4s								
AYVA				IAML		09 23 46.0			
	comp=N,195nm,0.4s								
TKR	**Tekirdag**	**1.37**	**67**	PN	**Pg**	**09 23 24.8**	**-0.7**		
OUR	**Ouranopolis**	**1.44**	**265**	P	**Pn**	**09 23 24.3**	**-0.4**		
OUR	**Ouranopolis**	**1.44**	**265**	P	**Pn**	**09 23 24.1**	**-0.6**		
OUR				AML	AML	09 23 47.3			
	comp=E,310μm,0.3s								
OUR				AML	AML	09 23 48.7			
	comp=N,340μm,0.3s								
OUR	**Ouranopolis**	**1.44**	**265**	PN	**Pg**	**09 23 26.7**	**-0.2**		
EDRB	**Edirne**	**1.52**	**26**	PN	**Pb**	**09 23 27.3**	**+0.2**		
BALY	**Balya**	**1.53**	**118**	*i* P	**Pb**	**09 23 27.2**	**0.0**		
BALY				*i* S	**Sb**	**09 23 47.2**	**+0.7**		
BALY				IAML		09 23 49.0			
	comp=N,102nm,0.4s								
BALY				IAML		09 23 51.0			
	comp=E,81nm,0.4s								
KIRK	**Kirklareli**	**1.60**	**35**	*i* P	**Pn**	**09 23 26.5**	**-0.4**		
BALB	**Balikesir**	**1.76**	**118**	PN	**Pn**	**09 23 30.0**	**+1.0**		
PAIG	**Paliouri**	**1.76**	**253**	P	**Pn**	**09 23 29.0**	**0.0**		
PAIG	**Paliouri**	**1.76**	**253**	P	**Pn**	**09 23 28.4**	**-0.6**		
ZEDA	**zmir-Bergama**	**1.77**	**148**	*i* P	**Pn**	**09 23 30.1**	**+0.9**		
ZEDA				IAML		09 23 56.0			
	comp=E,34nm,0.4s								
ZEDA				IAML		09 23 57.0			
	comp=N,70nm,0.4s								
STEP	**BALIKESIR_Sava**	**1.80**	**127**	*i* P	**Pn**	**09 23 30.5**	**+0.9**		
STEP				*i* S	**Sb**	**09 23 54.2**	**+0.1**		
STEP				IAML		09 23 58.0			
	comp=E,63nm,0.4s								
STEP				IAML		09 24 02.0			
	comp=N,44nm,1.0s								
SRS	**Serrai**	**1.84**	**291**	P	**Pn**	**09 23 30.5**	**+0.3**		
SRS	**Serrai**	**1.84**	**291**	P	**Pn**	**09 23 29.9**	**-0.3**		
PLG	**Polygyros**	**1.85**	**268**	P	**Pn**	**09 23 30.4**	**+0.1**		
PLG				AML	AML	09 24 00.4			
	comp=N,72μm,0.4s								
PLG				AML	AML	09 24 01.2			
	comp=E,122μm,0.4s								
ELBA	**Catalca**	**2.06**	**70**	*i* P	**Pn**	**09 23 33.0**	**-0.2**		
CHOS	**Chios island**	**2.09**	**176**	P	**Pn**	**09 23 34.0**	**+0.3**		
CHOS	**Chios island**	**2.09**	**176**	P	**Pn**	**09 23 33.9**	**+0.2**		
DURS	**Dursunbey**	**2.19**	**113**	*i* P	**Pb**	**09 23 37.8**	**-0.6**		
KNT	**Kendrikon**	**2.35**	**288**	P	**Pn**	**09 23 37.8**	**+0.6**		
KNT	**Kendrikon**	**2.35**	**288**	P	**Pn**	**09 23 37.5**	**+0.3**		
VTS	**Vitosha**	**2.91**	**318**	⇓P	**Pb**	**09 23 52.6**	**+1.8**		
STIP	**Stip**	**3.04**	**295**	*i* Pn	**Pn**	**09 23 45.4**	**-1.2**		
STIP	**Stip**	**3.04**	**295**	*i* Pn	**Pn**	**09 23 45.4**	**-1.2**		

*GUC **27** 09:30:13.3±0.7, 18°.47S×70°.96W, h24km±4km, ML3.2*
*IDC **27** 09:30:16.4±1.9, 18°.52S×70°.75W, h94km±20km, mb3.3/5, mb1 3.5/9, mb1mx3.4/27, mbtmp3.8/9, Error ellipse: s-maj=25.0km s-min=16.5km az=76.0*
ISC 27 09:30:10.1±2.4, 18°.42S±0°.06×71°.1W±0°.1, h25km±15km, n19, σ1°79/25, mb3.7/4, 1C-7D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AP01	**Chacalluta**	**0.70**	**86**	⇓*i*P	**Pb**	**09 30 23.8**	**+0.1**
AP01				*i* S	**Sb**	**09 30 32.5**	**-0.5**
PB12	**IPOC Station P**	**0.74**	**105**	⇓*i*P	**Pb**	**09 30 24.4**	**0.0**
PB12				*i* S	**Sb**	**09 30 32.9**	**-1.3**
PB12				IAML		09 30 34.0	
	comp=E,2μm,0.3s						
PSGC	**Pisagua**	**1.48**	**142**	⇓*i*P	**Pn**	**09 30 36.0**	**+0.7**
PSGC				*i* S	**Sn**	**09 30 53.1**	**-0.8**
PSGC				IAML		09 30 57.4	
	comp=E,619nm,0.3s						
MNMC	**Minye Minye**	**1.57**	**117**	⇓*i*P	**Pn**	**09 30 37.4**	**+0.7**
MNMC				*i* S	**Sn**	**09 30 56.8**	**+0.3**
PB11	**IPOC Station P**	**1.90**	**135**	⇓*i*P	**Pn**	**09 30 42.6**	**+1.5**
PB11				*i* S	**Sn**	**09 31 05.6**	**+1.3**
PB11				IAML		09 31 10.0	
	comp=E,287nm,0.4s						
TA02	**Huaiquique**	**2.05**	**154**	*e*P	**Pn**	**09 30 45.1**	**+2.1**
TA02				*i* S	**Sn**	**09 31 08.8**	**+1.0**
GO01	**Chusmiza**	**2.17**	**125**	*e*P	**Pn**	**09 30 47.4**	**+2.2**
GO01				*i* S	**Sb**	**09 31 15.6**	**-0.3**
TA01	**Diego Aracena**	**2.30**	**158**	⇓*i*P	**Pn**	**09 30 47.9**	**+1.5**
TA01				IAML		09 31 29.9	
	comp=E,234nm,0.8s						
PB08	**IPOC Station P**	**2.50**	**134**	⇑*i*P	**Pn**	**09 30 51.6**	**+2.0**
PB08				*i* S	**Sn**	**09 31 21.8**	**+2.4**
PB08				IAML		09 31 29.4	
	comp=N,414nm,0.5s						
PATCX	**Punta Patache**	**2.54**	**160**	⇓*i*P	**Pn**	**09 30 51.2**	**+1.3**
LPAZ	**La Paz**	**3.53**	**53**	P	**Pn**	**09 31 08.0**	**+4.1**
	comp=N,4.4nm,0.3s,baz=242,slow=11,SNR=84						
LVC	**Limon Verde**	**4.64**	**154**	P	**Pn**	**09 31 21.3**	**+2.3**
	comp=N,2.4nm,0.3s,baz=349,slow=9.4,SNR=40						
LVC				S	**Sn**	**09 32 12.1**	**-0.1**
	comp=N,4.7nm,0.3s,baz=20,slow=13,SNR=2.1						
NNA	**Nana**	**8.47**	**318**	P	Pn	09 32 21.9	+10
	comp=N,1.3nm,0.3s,baz=231,slow=14,SNR=1.7						
SIV	**San Ignacio**	**9.87**	**77**	P	**Pn**	**09 32 31.2**	**+0.7**
	comp=N,1.5nm,0.3s,baz=267,slow=8.5,SNR=25						
PTGA	**Pitinga**	**20.69**	**33**	P	**P**	**09 34 46.3**	**-2.3**
	comp=N,3.0nm,0.3s,baz=258,slow=20,SNR=7.5						
BDFB	**Brasilia**	**22.23**	**86**	P	**P**	**09 35 02.6**	**-2.6**
	comp=N,1.7nm,0.4s,baz=225,slow=14,SNR=3.5						
TXAR	**Lajitas Array**	**56.95**	**326**	P	**P**	**09 39 53.1**	**-0.5**
	comp=N,0.1nm,0.7s,baz=108,slow=4.2,SNR=1.9						
TORD	**Torodi Ar. Bea**	**78.30**	**72**	P	P	09 42 06.6	-2.0
	comp=N,0.7nm,0.8s,baz=242,slow=5.7,SNR=3.2						
YKA	**Yellowknife Ar**	**87.62**	**341**	P	P	09 42 54.7	-1.2
	comp=N,0.2nm,0.6s,baz=132,slow=5.2,SNR=4.8						

*NNC **27** 09:46:39.8±4.3, 53°.73N×86°.98E, h0km, mb2.7, mpv2.6, Error ellipse: s-maj=36.9km s-min=19.3km az=47.0, Suspected Mining explosion.*
*IDC **27** 09:46:42.0±2.5, 53°.74N×86°.88E, h0km, mb1 3.1/2, mb1mx2.9/43, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=21.1km s-min=12.9km az=70.0*
ISC 27 09:46:40.6±3.8, 53°.8N±0°.1×86°.9E±0°.2, h0km, n7, σ1°06/11, 6C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.24**	**277**	*i*		09 54 50.0	
	baz=98,slow=317,SNR=3.6						
ZAA0	**Zalesovo Array**	**1.24**	**277**	⇓P	**Pg**	**09 47 04.2**	**-0.1**
	0.3nm,0.6s						
ZAA0				⇑S	**Sn**	**09 47 21.4**	**-1.2**
	3.1nm,0.8s						
ZALV	**Zalesovo Beam**	**1.24**	**277**	Pg	**Pb**	**09 47 04.7**	**-0.2**
	1.4nm,0.3s,baz=104,slow=14,SNR=12						
ZALV				Lg	Lg	09 47 21.7	
	1.3nm,0.3s,baz=102,slow=28,SNR=13						
ZALV				Rg	Rg	09 47 30.3	
	2.2nm,0.3s,baz=83,slow=28,SNR=8.1						
KURBB	**Kurchatov Arra**	**6.06**	**242**	Pn	**Pn**	**09 48 13.1**	**+1.7**
	0.1nm,0.3s,baz=58,slow=14,SNR=8.0						
KURBB				Sn	**Sn**	**09 49 21.9**	**+0.5**
	0.0nm,0.3s,baz=62,slow=26,SNR=2.2						
KURBB				Lg	Lg	09 49 51.0	
	0.0nm,0.3s,baz=63,slow=37,SNR=2.8						
KURBB	**Kurchatov Arra**	**6.06**	**242**	⇓Pn	**Pn**	**09 48 11.2**	**-0.1**
	2.4nm,0.8s						
KURBB				⇑Sn	**Sn**	**09 49 21.6**	**+0.2**
	2.4nm,0.8s						
KURBB				⇑Lg	Lg	09 49 52.1	
	5.7nm,0.8s						
MK31	**Makanchi Array**	**7.63**	**205**	⇑Pn	**Pn**	**09 48 32.5**	**-0.4**
	0.3nm,0.5s,baz=26,slow=30,SNR=9.7						
MK31				⇑Sn	**Sn**	**09 49 58.4**	**-1.5**
	0.2nm,0.3s						
MK31				⇑Lg	Lg	09 50 40.5	
	1.3nm,0.8s,baz=26,slow=30						
MKAR	**Makanchi Array**	**7.63**	**205**	Pn	**Pn**	**09 48 34.2**	**+1.3**
	0.2nm,0.3s,baz=25,slow=13,SNR=9.3						
MKAR				Sn	**Sn**	**09 49 59.6**	**-0.4**
	0.1nm,0.3s,baz=26,slow=27,SNR=3.3						
MKAR				Lg	Lg	09 50 41.1	
	0.1nm,0.3s,baz=21,slow=28,SNR=5.1						

*ATH **27** 09:50:16.2, 40°.03N×24°.29E, h28km±1km, ML2.6/17, Error ellipse: s-maj=1.3km s-min=0.7km az=16.0*
THE 27 09:50:17.1, 40°.04N×24°.30E, h17km±1km, ML2.6/14, Error ellipse: s-maj=1.6km s-min=0.7km az=310.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUR	**Ouranopolis**	**0.38**	**321**	P	Pg	09 50 24.8	-0.2
OUR				S	Sg	09 50 30.3	-0.1
	2μm,0.2s						
OUR	**Ouranopolis**	**0.38**	**321**	P	Pg	09 50 24.7	-0.3
OUR				S	Sg	09 50 30.6	+0.2
OUR				AML	AML	09 50 31.1	
	comp=E,3987μm,0.2s						
OUR				AML	AML	09 50 31.1	
	comp=N,2290μm,0.2s						
PAIG	**Paliouri**	**0.49**	**257**	P	Pg	09 50 26.7	-0.2
PAIG				S	Sb	09 50 33.9	-0.2
	comp=N,530nm,0.3s						
PAIG	**Paliouri**	**0.49**	**257**	P	Pg	09 50 26.5	-0.4
PAIG				S	Sg	09 50 33.6	+0.2
PAIG				AML	AML	09 50 34.8	
	comp=N,873μm,0.4s						
PAIG				AML	AML	09 50 38.5	
	comp=E,1237μm,0.3s						
THAS	**Thassos island**	**0.65**	**29**	P	Pg	09 50 28.7	-1.3
THAS				S	Sb	09 50 39.7	+0.8
	comp=E,1μm,0.5s						
THAS	**Thassos island**	**0.65**	**29**	P	Pg	09 50 28.8	-1.1
THAS				S	Sb	09 50 39.2	+0.3
THAS				AML	AML	09 50 40.0	
	comp=E,2070μm,0.3s						
THAS				AML	AML	09 50 40.2	
	comp=N,2931μm,0.3s						
LIA	**Limnos Island**	**0.69**	**101**	P	Pg	09 50 30.7	0.0
LIA				S	Sb	09 50 40.5	+0.5
	comp=N,895nm,0.5s						
LIA	**Limnos Island**	**0.69**	**101**	P	Pg	09 50 30.6	-0.1
LIA				S	Sb	09 50 40.7	+0.6
LIA				AML	AML	09 50 41.7	
	comp=E,1338μm,0.3s						
LIA				AML	AML	09 50 41.8	
	comp=N,2235μm,0.6s						
PLG	**Polygyros**	**0.73**	**298**	P	Pg	09 50 31.4	-0.1
PLG				S	Sb	09 50 41.3	0.0
	comp=N,370nm,0.4s						
PLG	**Polygyros**	**0.73**	**298**	P	Pg	09 50 31.0	-0.5
PLG				S	Sg	09 50 41.2	0.0
PLG				AML	AML	09 50 44.4	
	comp=E,808μm,0.4s						
PLG				AML	AML	09 50 44.5	
	comp=N,674μm,0.3s						
KVLA	**Kavala**	**0.90**	**4**	P	Pb	09 50 34.2	-0.1
AOS	**Alonnisos**	**0.92**	**201**	P	Pb	09 50 33.9	-0.8
AOS				S	Sg	09 50 47.5	+0.3
	comp=N,418nm,0.3s						
AOS	**Alonnisos**	**0.92**	**201**	P	Pb	09 50 33.7	-0.9
AOS				S	Sg	09 50 47.2	+0.1
AOS				AML	AML	09 50 50.3	
	comp=E,823μm,0.3s						
AOS				AML	AML	09 50 50.9	
	comp=N,826μm,0.3s						
ALNA	**Alonissos**	**0.95**	**201**	P	Pb	09 50 34.1	-1.0
ALNA				S	Sg	09 50 47.9	-0.1
KAVA	**Kavala**	**0.97**	**10**	P	Pb	09 50 35.3	-0.2
KAVA				S	Sb	09 50 47.9	-0.2
	comp=N,330nm,0.6s						
KAVA	**Kavala**	**0.97**	**10**	P	Pb	09 50 34.9	-0.6
KAVA				AML	AML	09 50 50.9	
	comp=N,558μm,0.3s						
KAVA				AML	AML	09 50 52.0	
	comp=E,454μm,0.2s						
SMTH	**Samothraki Isl**	**1.04**	**65**	P	Pb	09 50 35.6	-1.1
SMTH	**Samothraki Isl**	**1.04**	**65**	P	Pb	09 50 35.7	-0.9
HORT	**Hortiatis**	**1.07**	**302**	P	Pb	09 50 37.4	+0.1
HORT				S	Sg	09 50 51.8	-0.2
	comp=E,128nm,0.8s						
HORT	**Hortiatis**	**1.07**	**302**	P	Pb	09 50 37.1	-0.2
SKIA	**Skiathos**	**1.08**	**217**	P	Pb	09 50 37.1	-0.3
SKIA				S	Sb	09 50 51.3	+0.1
	comp=E,295nm,0.3s						
SKIA	**Skiathos**	**1.08**	**217**	P	Pb	09 50 37.0	-0.4
SKIA				S	Sb	09 50 51.5	+0.3
SKIA				AML	AML	09 50 56.3	
	comp=N,485μm,0.4s						
SKIA				AML	AML	09 50 58.4	
	comp=E,700μm,0.4s						
XOR	**Xorichti**	**1.08**	**232**	P	Pb	09 50 37.1	-0.4
XOR				S	Sb	09 50 51.7	+0.3
	comp=E,232nm,0.4s						
XOR	**Xorichti**	**1.08**	**232**	P	Pb	09 50 37.2	-0.3
XOR				S	Sb	09 50 51.7	+0.3
XOR				AML	AML	09 50 55.5	
	comp=E,387μm,0.6s						
XOR				AML	AML	09 50 58.0	
	comp=N,540μm,0.3s						
NEO	**Neokhori**	**1.10**	**229**	P	Pb	09 50 37.4	-0.4
NEO				S	Sb	09 50 52.2	+0.3
NEO				AML	AML	09 50 55.9	
	comp=N,618μm,0.5s						
NEO				AML	AML	09 50 56.5	
	comp=E,610μm,0.4s						
SKY	**Skiros Island**	**1.17**	**170**	P	Pn	09 50 38.0	-0.8
SKY				AML	AML	09 50 57.0	
	comp=N,1087μm,0.2s						
SKY				AML	AML	09 50 57.9	
	comp=E,1083μm,0.2s						
SRS	**Serrai**	**1.21**	**334**	P	Pn	09 50 39.1	-0.2
SRS	**Serrai**	**1.21**	**334**	P	Pn	09 50 39.0	-0.3
SRS				AML	AML	09 50 58.7	
	comp=N,211μm,0.2s						
SRS				AML	AML	09 50 59.6	
	comp=E,212μm,0.5s						
GADA	**Gvkgeada**	**1.24**	**82**	P	Pn	09 50 38.7	-0.9
GADA				S	Sg	09 50 57.1	0.0
	comp=E,328nm,0.7s						
LIT	**Litokhoron**	**1.39**	**273**	P	Pn	09 50 41.6	-0.2
KYMI	**Kymi, Euboea I**	**1.41**	**186**	P	Pn	09 50 41.4	-0.6
KYMI				S	Sn	09 50 59.1	-1.1
	comp=E,155nm,0.5s						
KYMI	**Kymi, Euboea I**	**1.41**	**186**	P	Pn	09 50 41.5	-0.5
KYMI				AML	AML	09 51 07.0	
	comp=E,251μm,0.4s						
KYMI				AML	AML	09 51 07.1	
	comp=N,372μm,0.4s						
MRKA	**Markates**	**1.44**	**203**	P	Pn	09 50 42.2	-0.2
MRKA	**Markates**	**1.44**	**203**	P	Pn	09 50 42.0	-0.4
MRKA				AML	AML	09 51 06.3	
	comp=E,250μm,0.5s						
MRKA				AML	AML	09 51 09.9	
	comp=N,419μm,0.4s						
RDO	**Rodhopi**	**1.46**	**40**	P	Pn	09 50 41.9	-0.8
SIGR	**SIGRI**	**1.46**	**124**	P	Pn	09 50 42.4	-0.3
KNT	**Kendrikon**	**1.55**	**317**	P	Pn	09 50 44.6	+0.6
KNT	**Kendrikon**	**1.55**	**317**	P	Pn	09 50 44.7	+0.7
KNT				AML	AML	09 51 08.8	
	comp=N,239μm,0.3s						
KNT				AML	AML	09 51 10.2	
	comp=E,170μm,0.3s						
EZN	**Ezine**	**1.57**	**97**	P	Pn	09 50 43.1	-1.1
EZN				S	Sn	09 51 03.5	-0.7
	comp=E,245nm,0.7s						
ENEZ	**Enez**	**1.58**	**63**	P	Pn	09 50 43.3	-1.1
ENEZ				S	Sn	09 51 03.4	-1.0
	comp=E,302nm,0.4s						
MMB	**Musomiste**	**1.61**	**345**	*i* P	Pn	09 50 44.5	-0.4
RZN	**Rozhen**	**1.68**	**11**	*i* P	Pn	09 50 46.0	+0.1
THL	**Klokotos Trika**	**1.82**	**256**	P	Pn	09 50 48.0	+0.3
AGG	**Agios Georgios**	**1.83**	**237**	P	Pn	09 50 47.7	-0.1
VAY	**Valandovo**	**1.84**	**315**	*i* Pn	Pg	09 50 52.4	0.0
VAY	**Valandovo**	**1.84**	**315**	*i* Pn	Pg	09 50 52.4	0.0
MAKR	**Makrakomi, Fth**	**1.96**	**239**	P	Pn	09 50 50.1	+0.4
DION	**Dionisos Attik**	**1.98**	**188**	P	Pn	09 50 49.4	-0.4
DION				AML	AML	09 51 24.4	
	comp=E,445μm,0.4s						
DION				AML	AML	09 51 25.4	
	comp=N,515μm,0.4s						
VIL2	**Platees**	**1.99**	**204**	P	Pn	09 50 50.8	+0.8
VIL2				AML	AML	09 51 29.2	
	comp=N,112μm,0.4s						
VIL2				AML	AML	09 51 29.2	
	comp=E,209μm,0.7s						
CHOS	**Chios island**	**2.14**	**140**	P	Pn	09 50 52.0	-0.1
STIP	**Stip**	**2.30**	**317**	*i* Pn	Pn	09 50 55.3	+0.9
STIP	**Stip**	**2.30**	**317**	*i* Pn	Pn	09 50 55.3	+0.9

*DDA **27** 09:51:12.1, 40°.39N×26°.02E, h7km±3km, ML2.2*
ISK 27 09:51:10.6, 40°.46N×25°.81E, h8km, ML2.4/10, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.27**	**166**	PG	Pg	09 51 16.6	+0.6
GADA				SG	Sg	09 51 20.9	+1.3
GOKA	**anakkale-Gk**	**0.27**	**164**	*i* P	Pb	09 51 16.9	-0.9
ENEZ	**Enez**	**0.38**	**43**	PG	Pg	09 51 18.7	+0.6
ERIK	**Erikli-Kesan**	**0.58**	**68**	PG	Pg	09 51 22.2	+0.5
BOZC	**Bozcaada**	**0.64**	**163**	PG	Pg	09 51 23.2	+0.3
BOZC	**Bozcaada**	**0.64**	**163**	*i* P	Pg	09 51 23.1	+0.2
BOZC				IAML		09 51 38.0	
	comp=E,98nm,0.2s						
BOZC				IAML		09 51 38.0	
	comp=N,65nm,0.3s						
RDO	**Rodhopi**	**0.72**	**343**	PG	Pg	09 51 24.9	+0.4
EZN	**Ezine**	**0.74**	**148**	PG	Pb	09 51 25.4	-0.4
BAYC	**CANAKKALE_Bayr**	**0.91**	**141**	*i* P	Pg	09 51 27.7	-0.4
BAYC				IAML		09 51 43.0	
	comp=N,57nm,0.2s						
BAYC				IAML		09 51 43.0	
	comp=E,77nm,0.3s						
UKOP	**Uzunkopru-Edir**	**0.92**	**43**	PG	Pb	09 51 28.7	-0.1
RKY	**Sarkoy-Tekirda**	**1.07**	**77**	PG	Pb	09 51 31.5	+0.1
KRBG	**Karabiga-Canak**	**1.14**	**93**	PN	Pg	09 51 32.2	-0.2
KDZ	**Kurdzhali**	**1.23**	**346**	PN	Pg	09 51 34.4	+0.2
SIGR	**SIGRI**	**1.24**	**178**	PN	Pg	09 51 34.7	+0.3
AYVA	**Ayvalik**	**1.33**	**149**	*i* P	Pn	09 51 33.4	-2.1
AYVA				*i* S	Sb	09 51 51.6	-1.4
AYVA				IAML		09 51 54.0	
	comp=N,124nm,0.5s						
AYVA				IAML		09 51 54.0	
	comp=E,67nm,0.6s						
MRMT	**Marmara Adasi**	**1.37**	**83**	PN	Pn	09 51 36.1	0.0
TKR	**Tekirdag**	**1.42**	**67**	PN	Pb	09 51 37.1	-0.2
GONE	**Goren-Balikesi**	**1.49**	**105**	PN	Pb	09 51 38.2	-0.4
EDRB	**Edirne**	**1.56**	**27**	PN	Pb	09 51 39.2	-0.5
BALY	**Balya**	**1.56**	**117**	*i* P	Pn	09 51 38.7	0.0
BALY				*i* S	Sn	09 51 58.2	-1.0
EDC	**Edincik**	**1.57**	**93**	PN	Pn	09 51 39.3	+0.5
BALB	**Balikesir**	**1.79**	**116**	PN	Pn	09 51 42.1	+0.3

*IDC **27** 09:55:25.4±1.0, 3°.05S×152°.23E, h316km±8km, mb3.2/5, mb1 3.3/6, mb1mx3.0/29, mbtmp3.9/6, Error ellipse: s-maj=60.6km s-min=17.4km az=105.0*
ISC 27 09:55:25.9±1.0, 2°.9S±0°.1×151°.8E±0°.3, h300km, n8, σ1°66/10, mb3.6/5, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.43**	**169**	P	**Pn**	**09 56 09.8**	**+1.2**
	24nm,0.3s,baz=1.1,slow=6.5,SNR=8.7						
KRVT				S	**S**	**09 56 43.5**	**+0.8**
	8.2nm,0.3s,baz=302,slow=21,SNR=7.4						
CTA	**Charters Tower**	**17.91**	**197**	P	**P**	**09 59 15.2**	**+0.5**
	0.3nm,0.3s,baz=63,slow=6.8,SNR=2.3						
WRA	**Warramunga Arr**	**24.00**	**224**	P	**P**	**10 00 14.1**	**-0.2**
	1.9nm,0.4s,baz=48,slow=9.3,SNR=52						
WRA				PcP	**PcP**	**10 03 44.5**	**-2.9**
	0.4nm,0.5s,baz=49,slow=2.2,SNR=2.7						
STKA	**Stephens Creek**	**30.37**	**197**	P	**P**	**10 01 09.3**	**-1.4**
	1.6nm,0.8s,baz=40,slow=17,SNR=1.6						
PETK	**Petropavlovsk-**	**56.03**	**4**	P	**P**	**10 04 32.5**	**-1.4**
	0.6nm,0.4s,baz=170,slow=7.7,SNR=5.9						
SONM	**Songino Array**	**64.17**	**328**	P	**P**	**10 05 30.6**	**+1.5**
	0.8nm,0.5s,baz=116,slow=6.6,SNR=2.6						
MKAR	**Makanchi Array**	**78.22**	**319**	P	**P**	**10 06 53.1**	**+0.3**
	0.2nm,0.5s,baz=147,slow=7.3,SNR=3.9						
TORD	**Torodi Ar. Bea**	**148.69**	**291**	PKPbc	**PKPdf**	**10 14 36.2**	**+1.4**
	0.7nm,0.6s,baz=103,slow=2.2,SNR=7.2						

*IDC **27** 10:27:20.7±1.9, 3°.99S×150°.93E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.7/42, mbtmp3.8/5, MS3.6/6, Ms1 3.6/6, ms1mx3.3/34, Error ellipse: s-maj=66.2km s-min=33.6km az=133.0*

CHGR	**Chuyangaron**	**86.44**	**309**	P	**P**	**10 40 05.9**	**+1.6**
YKA	**Yellowknife Ar**	**95.77**	**28**	P	**P**	**10 40 48.9**	**+1.7**
	comp=Z,0.3nm,0.9s,baz=268,slow=3.6,SNR=3.9						
TORD	**Torodi Ar. Bea**	**148.61**	**288**	PKPbc	**PKiKP**	**10 47 11.4**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=56,slow=1.9,SNR=2.1						

IDC ***27*** *10:29:03.2±1.8, 0.˝68S×133.˚64E, h0km, mb3.8/3, mb1 4.0/6, mb1mx3.7/39, mbtmp3.8/6, ML4.0/4, MS3.6/2, Ms1 3.6/2, ms1mx2.8/40, Error ellipse: s-maj=38.0km s-min=29.4km az=111.0*

ISC 27 10:29:08.1±1.2, 1.˚13S±0.˚09×133.˚4E±0.˚1, h35km, n8, σ3°47/10, mb3.9/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**2.11**	**277**	Pn	**Pn**	**10 29 42.8**	**+1.8**
	56nm,0.3s,baz=56,slow=15,SNR=149						
SIJI				Sn	**Sn**	**10 30 06.0**	**0.0**
	23nm,0.3s,baz=298,slow=17,SNR=4.6						
BATI	**Baumata**	**13.20**	**227**	Pn	**P**	**10 32 20.7**	**-2.0**
	2.5nm,0.3s,baz=112,slow=5.4,SNR=4.0						
FITZ	**Fitzroy Crossi**	**18.49**	**204**	Pn	**Pn**	**10 33 26.1**	**+4.4**
	0.4nm,0.3s,baz=16,slow=8.0,SNR=7.3						
FITZ				Sn	**Sn**	**10 36 42.1**	**-5.3**
	0.1nm,0.3s,baz=25,slow=16,SNR=1.4						
WRA	**Warramunga Arr**	**18.72**	**177**	Pn	**Pn**	**10 33 29.4**	**+4.9**
	0.3nm,0.3s,baz=357,slow=12,SNR=14						
WRA				Sn	**S**	**10 36 55.1**	**-0.2**
	0.2nm,0.3s,baz=354,slow=23,SNR=3.5						
WRA				LR	LR	10 42 20.6	
	comp=Z,140nm,18.7s,baz=40,slow=42						
STKA	**Stephens Creek**	**31.56**	**167**	LR	LR	10 50 06.8	
	comp=Z,120nm,19.2s,baz=26,slow=40						
CMAR	**Chiang Mai Arr**	**39.04**	**302**	P	**P**	**10 36 32.8**	**+0.9**
	0.7nm,0.3s,baz=108,slow=5.8,SNR=4.0						
MKAR	**Makanchi Array**	**65.33**	**324**	P	**P**	**10 39 45.5**	**-1.3**
	0.6nm,0.6s,baz=109,slow=7.8,SNR=4.4						
ILAR	**Eielson Array**	**86.64**	**25**	P	**P**	**10 41 46.0**	**-1.9**
	0.1nm,0.4s,baz=247,slow=5.0,SNR=2.9						

ISK ***27*** *10:29:27.1, 40.˚38N×26.˚18E, h8km, ML2.7/17*
THE ***27*** *10:29:27.8, 40.˚39N×26.˚13E, h12km±1km, ML2.3/10, Error ellipse: s-maj=1.4km s-min=0.7km az=29.0*
ATH ***27*** *10:29:27.7, 40.˚40N×26.˚05E, h33km±3km, ML2.5/8, Error ellipse: s-maj=3.7km s-min=1.3km az=241.0*

ISC 27 10:29:27.3±0.8, 40.˚39N±0.˚02×26.˚15E±0.˚02, h16km±7km, n42, σ0°41/68, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GELI	**Tayfur-Gelibol**	**0.25**	**89**	PG	**Pg**	**10 29 32.3**	**-0.5**
GELI				SG	**Sg**	**10 29 35.9**	**-0.7**
GADA	**Gvkgeada**	**0.28**	**223**	P	**Pg**	**10 29 33.5**	**+0.2**
GADA				S	**Sb**	**10 29 38.0**	**-0.3**
	572nm,0.3s						
GADA	**Gvkgeada**	**0.28**	**223**	PG	**Pg**	**10 29 33.3**	**0.0**
GADA				SG	**Sb**	**10 29 37.7**	**-0.6**
ENEZ	**Enez**	**0.34**	**1**	P	**Pg**	**10 29 34.7**	**+0.3**
ENEZ				S	**Sg**	**10 29 39.8**	**+0.5**
	720nm,0.5s						
ENEZ	**Enez**	**0.34**	**1**	PG	**Pg**	**10 29 34.8**	**+0.3**
ENEZ				SG	**Sb**	**10 29 40.2**	**0.0**
ERIK	**Erikli-Kesan**	**0.39**	**45**	PG	**Pg**	**10 29 35.3**	**0.0**
ERIK				SG	**Sg**	**10 29 41.1**	**+0.3**
LPK	**Lapseki**	**0.47**	**92**	PG	**Pg**	**10 29 36.4**	**-0.3**
SMTH	**Samothraki Isl**	**0.48**	**280**	P	**Pg**	**10 29 36.6**	**-0.2**
SMTH				S	**Sb**	**10 29 43.8**	**-0.3**
	795nm,0.1s						
SMTH	**Samothraki Isl**	**0.48**	**280**	P	**Pg**	**10 29 36.8**	**-0.1**
SMTH				S	**Sb**	**10 29 43.7**	**-0.3**
SMTH				AML	AML	10 29 47.1	
	comp=E,1501μm,0.2s						
SMTH				AML	AML	10 29 47.4	
	comp=N,1597μm,0.1s						
BOZC	**Bozcaada**	**0.56**	**187**	PG	**Pg**	**10 29 37.9**	**-0.4**
BOZC				SG	**Sb**	**10 29 46.2**	**-0.1**
EZN	**Ezine**	**0.58**	**166**	P	**Pg**	**10 29 38.6**	**-0.2**
EZN				S	**Sg**	**10 29 46.4**	**-0.2**
	comp=N,162nm,0.2s						
EZN	**Ezine**	**0.58**	**166**	PG	**Pg**	**10 29 38.5**	**-0.2**
EZN				SG	**Sg**	**10 29 46.8**	**+0.2**
UKOP	**Uzunkopru-Edir**	**0.82**	**26**	PG	**Pb**	**10 29 43.6**	**+0.4**
UKOP				SG	**Sn**	**10 29 55.6**	**-0.4**
RKY	**Sarkoy-Tekirda**	**0.84**	**69**	PG	**Pg**	**10 29 42.9**	**-0.7**
KRBG	**Karabiga-Canak**	**0.88**	**90**	PG	**Pb**	**10 29 43.4**	**-0.7**
KRBG				SG	**Sg**	**10 29 56.4**	**+0.5**
RDO	**Rodhopi**	**0.88**	**329**	P	**Pb**	**10 29 44.3**	**+0.1**
RDO				S	**Sn**	**10 29 57.6**	**+0.1**
	comp=N,120nm,0.2s						
RDO	**Rodhopi**	**0.88**	**329**	P	**Pb**	**10 29 43.9**	**-0.3**
RDO				AML	AML	10 30 02.3	
	comp=E,216μm,0.3s						
RDO				AML	AML	10 30 02.4	
	comp=N,259μm,0.2s						
RDO	**Rodhopi**	**0.88**	**329**	PG	**Pb**	**10 29 44.4**	**+0.2**
RDO				SG	**Sn**	**10 29 58.3**	**+0.8**
LIA	**Limnos Island**	**0.89**	**236**	P	**Pb**	**10 29 44.2**	**-0.1**
LIA				S	**Sb**	**10 29 56.6**	**+0.7**
	comp=N,385nm,0.3s						
LIA	**Limnos Island**	**0.89**	**236**	P	**Pb**	**10 29 44.4**	**+0.1**
LIA				S	**Sb**	**10 29 56.1**	**+0.2**
LIA				AML	AML	10 29 59.7	
	comp=N,803μm,0.3s						
LIA				AML	AML	10 30 00.9	
	comp=E,722μm,0.3s						
THAS	**Thassos island**	**1.11**	**282**	P	**Pn**	**10 29 48.3**	**+0.2**
THAS				S	**Sg**	**10 30 03.1**	**-0.1**
	comp=E,202nm,0.5s						
THAS	**Thassos island**	**1.11**	**282**	P	**Pb**	**10 29 47.6**	**-0.5**
THAS				S	**Sb**	**10 30 01.6**	**-0.6**
THAS				AML	AML	10 30 04.3	
	comp=N,354μm,0.3s						
THAS				AML	AML	10 30 05.2	
	comp=E,366μm,0.3s						
MRMT	**Marmara Adasi**	**1.12**	**79**	PN	**Pb**	**10 29 47.6**	**-0.8**
PRK	**Paraskevi**	**1.15**	**175**	P	**Pg**	**10 29 49.7**	**+0.2**
PRK				S	**Sg**	**10 30 05.2**	**+0.7**
	comp=E,465nm,0.7s						
PRK	**Paraskevi**	**1.15**	**175**	P	**Pg**	**10 29 50.0**	**+0.5**
PRK				AML	AML	10 30 07.1	
	comp=E,648μm,0.5s						
PRK				AML	AML	10 30 07.5	
	comp=N,966μm,0.4s						
SIGR	**SIGRI**	**1.20**	**191**	P	**Pn**	**10 29 49.5**	**+0.2**
SIGR				S	**Sg**	**10 30 06.1**	**0.0**
	comp=N,398nm,0.5s						
SIGR	**SIGRI**	**1.20**	**191**	P	**Pn**	**10 29 49.6**	**+0.2**
SIGR				S	**Sn**	**10 30 05.4**	**+0.1**
SIGR				AML	AML	10 30 07.4	
	comp=E,462μm,0.4s						
SIGR				AML	AML	10 30 07.4	
	comp=N,1085μm,0.6s						
SIGR	**SIGRI**	**1.20**	**191**	PN	**Pb**	**10 29 49.8**	**+0.2**
TKR	**Tekirdag**	**1.21**	**60**	PN	**Pn**	**10 29 49.9**	**+0.4**
GONE	**Gonen-Balikesi**	**1.23**	**106**	PN	**Pb**	**10 29 50.5**	**+0.4**
GONE				SN	**Sg**	**10 30 07.4**	**+0.4**
EDC	**Edincik**	**1.31**	**91**	PN	**Pn**	**10 29 51.0**	**+0.1**
EDC				SN	**Sg**	**10 30 09.7**	**0.0**
KDZ	**Kurdzhali**	**1.37**	**336**	*i* P	**Pb**	**10 29 52.9**	**+0.3**
KDZ	**Kurdzhali**	**1.37**	**336**	PN	**Pg**	**10 29 53.7**	**0.0**
KAVA	**Kavala**	**1.38**	**296**	P	**Pn**	**10 29 51.9**	**0.0**
KAVA				S	**Sn**	**10 30 09.4**	**-0.3**
	comp=N,65nm,0.3s						
KAVA	**Kavala**	**1.38**	**296**	P	**Pn**	**10 29 51.8**	**0.0**
KAVA				S	**Sn**	**10 30 08.7**	**-1.0**
KAVA				AML	AML	10 30 12.1	
	comp=N,138μm,0.3s						
KAVA				AML	AML	10 30 14.1	
	comp=E,121μm,0.3s						
EDRB	**Edirne**	**1.52**	**17**	PN	**Pb**	**10 29 55.2**	**+0.1**
BALB	**Balikesir**	**1.53**	**119**	PN	**Pn**	**10 29 54.7**	**+0.8**
OUR	**Ouranopolis**	**1.66**	**269**	P	**Pn**	**10 29 55.1**	**-0.5**
OUR				AML	AML	10 30 22.9	
	comp=E,288μm,0.4s						
OUR				AML	AML	10 30 24.4	
	comp=N,174μm,0.2s						
RZN	**Rozhen**	**1.69**	**321**	*i* P	**Pn**	**10 29 56.4**	**+0.2**
CHOS	**Chios island**	**2.00**	**182**	P	**Pn**	**10 30 00.8**	**+0.3**
SRS	**Serrai**	**2.07**	**291**	P	**Pn**	**10 30 01.0**	**-0.4**
KNT	**Kendrikon**	**2.58**	**288**	P	**Pn**	**10 30 08.4**	**0.0**

MAN 27 10:29:34.5, 13.˚97N×120.˚59E, h147km, mb3.9, ML2.7, MS2.3, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.41**	**235**	*e*P	Pn	10 29 56.6	+1.5
LUBP				*e*S	Sn	10 30 13.1	+2.3
PGP	**Puerto Galera**	**0.59**	**143**	*i*P	Pn	10 29 57.1	+1.0
PGP				*e*S	Sn	10 30 14.9	+2.4
ENPP	**El Nido**	**2.98**	**203**	*e*P	Pn	10 30 22.3	+0.8
CUYO	**Cuyo Island**	**3.13**	**172**	*e*P	Pn	10 30 24.3	+0.7

ATH ***27*** *10:56:43.7, 38.˚40N×20.˚50E, h14km±2km, ML2.6/15, Error ellipse: s-maj=2.4km s-min=0.7km az=273.0*
THE ***27*** *10:56:44.0, 38.˚40N×20.˚46E, h8km±1km, ML2.7/7, Error ellipse: s-maj=1.1km s-min=0.3km az=102.0*

ISC 27 10:56:43.4±0.8, 38.˚41N±0.˚02×20.˚46E±0.˚03, h13km±5km, n52, σ0°67/80, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VSK1	**VASILIKIADES**	**0.08**	**89**	P	**Pg**	**10 56 46.0**	**-0.2**
VSK1				S	**Sg**	**10 56 47.6**	**-0.6**
FSK	**Fiskardo**	**0.10**	**58**	P	**Pg**	**10 56 46.2**	**-0.1**
FSK				S	**Sg**	**10 56 48.0**	**-0.5**
	9μm,0.3s						
FSK	**Fiskardo**	**0.10**	**58**	P	**Pg**	**10 56 46.3**	**-0.1**
FSK				S	**Sg**	**10 56 48.2**	**-0.3**
FSK				AML	AML	10 56 48.5	
	comp=N,13522μm,0.2s						
FSK				AML	AML	10 56 48.6	
	comp=E,19264μm,0.2s						
KEF4	**Livadi, Kephal**	**0.15**	**190**	P	**Pg**	**10 56 47.3**	**+0.2**
KEF4				S	**Sg**	**10 56 50.1**	**+0.5**
AGT1	**Agia Thekli**	**0.17**	**200**	P	**Pg**	**10 56 47.5**	**+0.2**
AGT1				S	**Sg**	**10 56 49.7**	**-0.3**
LXRA	**Lixouri, Kepha**	**0.21**	**184**	P	**Pg**	**10 56 48.4**	**+0.5**
LXRA				S	**Sg**	**10 56 52.3**	**+1.3**
KEF3	**Kipouria, Keph**	**0.22**	**203**	P	**Pg**	**10 56 48.5**	**+0.3**
KEF3				S	**Sg**	**10 56 52.4**	**+0.9**
ARG2	**Argostoli**	**0.23**	**174**	P	**Pg**	**10 56 48.5**	**+0.2**
ARG2				S	**Sg**	**10 56 52.2**	**+0.5**
ARGA	**Argostoli. Kep**	**0.23**	**176**	P	**Pg**	**10 56 48.6**	**+0.2**
ARGA				S	**Sg**	**10 56 52.0**	**+0.3**
VLS	**Valsamata**	**0.25**	**156**	P	**Pg**	**10 56 48.7**	**-0.1**
VLS				S	**Sg**	**10 56 52.8**	**+0.5**
	comp=E,3μm,0.2s						
VLS	**Valsamata**	**0.25**	**156**	P	**Pg**	**10 56 48.6**	**-0.1**
VLS				S	**Sg**	**10 56 52.4**	**+0.1**
VLS				AML	AML	10 56 52.9	
	comp=E,5715μm,0.4s						
VLS				AML	AML	10 56 52.9	
	comp=N,5283μm,0.2s						
EVGI	**Lefkada island**	**0.26**	**36**	P	**Pg**	**10 56 49.4**	**+0.5**
EVGI				S	**Sg**	**10 56 53.1**	**+0.4**
EVGI	**Lefkada island**	**0.26**	**36**	P	**Pg**	**10 56 49.4**	**+0.5**
EVGI				S	**Sg**	**10 56 53.7**	**+1.0**
MGNA	**Meganis**	**0.36**	**46**	P	**Pg**	**10 56 50.8**	**+0.1**
MGNA				S	**Sg**	**10 56 55.9**	**+0.3**
KFL	**Anninata**	**0.40**	**139**	P	**Pg**	**10 56 51.2**	**-0.1**
KFL				S	**Sg**	**10 56 57.1**	**+0.5**
	comp=N,2μm,0.3s						
KFL	**Anninata**	**0.40**	**139**	P	**Pg**	**10 56 51.3**	**-0.1**
KFL				S	**Sg**	**10 56 56.6**	**0.0**
KFL				AML	AML	10 56 59.4	
	comp=N,3095μm,0.3s						
KFL				AML	AML	10 57 04.3	
	comp=E,3463μm,0.4s						
LKD2	**Lefkada island**	**0.41**	**22**	P	**Pg**	**10 56 51.8**	**+0.2**
LKD2				S	**Sb**	**10 56 58.7**	**0.0**
LKD2	**Lefkada island**	**0.41**	**22**	P	**Pg**	**10 56 51.9**	**+0.3**
LKD2				S	**Sg**	**10 56 58.3**	**+1.1**
LKD2				AML	AML	10 56 59.9	
	comp=E,1071μm,0.5s						
LKD2				AML	AML	10 57 03.8	
	comp=N,1059μm,0.2s						
TSLK	**Tsoukalades, L**	**0.45**	**20**	P	**Pg**	**10 56 52.6**	**+0.4**
TSLK				S	**Sb**	**10 56 59.9**	**+0.2**
	comp=N,738nm,0.4s						
TSLK	**Tsoukalades, L**	**0.45**	**20**	P	**Pg**	**10 56 52.7**	**+0.5**
TSLK				S	**Sg**	**10 56 59.4**	**+1.2**
TSLK				AML	AML	10 57 01.9	
	comp=N,1823μm,0.3s						
TSLK				AML	AML	10 57 06.7	
	comp=E,1186μm,0.8s						
AST1	**Astakos**	**0.51**	**75**	P	**Pg**	**10 56 53.8**	**+0.3**
AST1				S	**Sb**	**10 57 01.9**	**+0.3**
	comp=E,1μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.55**	**163**	P	**Pg**	**10 56 54.2**	**-0.1**
VLMS				S	**Sb**	**10 57 02.6**	**-0.1**
VLMS				AML	AML	10 57 04.0	
	comp=E,4467μm,0.2s						
VLMS				AML	AML	10 57 07.0	
	comp=N,5276μm,0.2s						
PDO	**Prodromos**	**0.60**	**71**	P	**Pg**	**10 56 55.1**	**0.0**
PDO	**Prodromos**	**0.60**	**71**	P	**Pg**	**10 56 55.2**	**+0.1**
PDO				AML	AML	10 57 10.2	
	comp=N,1535μm,0.3s						
PDO				AML	AML	10 57 16.3	
	comp=E,1016μm,0.6s						
KRI1	**kERI**	**0.80**	**159**	P	**Pg**	**10 56 58.4**	**-0.4**
KRI1				S	**Sb**	**10 57 10.5**	**+0.8**
PVO	**Paravola**	**0.86**	**76**	P	**Pg**	**10 57 00.3**	**+0.2**
PVO	**Paravola**	**0.86**	**76**	P	**Pg**	**10 57 00.3**	**+0.2**
PVO				AML	AML	10 57 19.4	
	comp=N,1077μm,0.6s						
PVO				AML	AML	10 57 21.9	
	comp=E,824μm,0.5s						
RLS	**Riolos of Patr**	**0.87**	**113**	P	**Pg**	**10 56 59.7**	**-0.5**
RLS	**Riolos of Patr**	**0.87**	**113**	P	**Pg**	**10 56 59.7**	**-0.5**
DRO	**Drossia**	**1.09**	**114**	P	**Pb**	**10 57 04.0**	**0.0**
DRO	**Drossia**	**1.09**	**114**	P	**Pb**	**10 57 03.3**	**-0.8**
DRO				AML	AML	10 57 26.8	
	comp=E,922μm,0.5s						
DRO				AML	AML	10 57 27.2	
	comp=N,631μm,0.3s						
EFP	**Efpalio**	**1.14**	**89**	P	**Pb**	**10 57 04.2**	**-0.7**
EFP				AML	AML	10 57 27.3	
	comp=E,1058μm,0.5s						
EFP				AML	AML	10 57 27.6	
	comp=N,850μm,0.5s						
LAKA	**Lakka**	**1.21**	**97**	P	**Pb**	**10 57 05.7**	**-0.4**
LAKA				S	**Sn**	**10 57 23.2**	**+1.0**
	comp=N,75nm,0.7s						
LAKA	**Lakka**	**1.21**	**97**	P	**Pb**	**10 57 05.7**	**-0.4**
LAKA				AML	AML	10 57 29.0	
	comp=N,170μm,0.8s						
LAKA				AML	AML	10 57 35.5	
	comp=E,181μm,0.8s						
SERG	**Sergoula**	**1.26**	**89**	P	**Pn**	**10 57 06.3**	**-0.3**
SERG				S	**Sn**	**10 57 24.5**	**+1.1**
	comp=E,322nm,0.7s						
SERG	**Sergoula**	**1.26**	**89**	P	**Pn**	**10 57 06.3**	**-0.3**
SERG				AML	AML	10 57 29.9	
	comp=N,734μm,0.6s						
SERG				AML	AML	10 57 30.1	
	comp=E,569μm,0.8s						
TRIZ	**Trizonia**	**1.27**	**91**	P	**Pn**	**10 57 06.7**	**-0.1**
TRIZ	**Trizonia**	**1.27**	**91**	P	**Pn**	**10 57 06.6**	**-0.2**
AMT	**Artemida-Makis**	**1.32**	**131**	P	**Pb**	**10 57 08.4**	**+0.4**
KALE	**Kalithea**	**1.32**	**90**	P	**Pn**	**10 57 07.3**	**-0.3**
KALE				AML	AML	10 57 32.8	
	comp=E,252μm,0.7s						
KALE				AML	AML	10 57 33.4	
	comp=N,496μm,0.7s						
KLV	**Kalavryta, Ach**	**1.38**	**105**	P	**Pn**	**10 57 08.5**	**+0.1**
KLV	**Kalavryta, Ach**	**1.38**	**105**	P	**Pn**	**10 57 08.5**	**+0.1**
KLV				AML	AML	10 57 31.9	
	comp=N,134μm,0.3s						
KLV				AML	AML	10 57 44.5	
	comp=E,155μm,0.6s						
KEK	**Kerkira**	**1.40**	**339**	P	**Pn**	**10 57 09.9**	**+1.3**
KEK				AML	AML	10 57 35.7	
	comp=N,183μm,0.6s						
KEK				AML	AML	10 57 40.9	
	comp=E,188μm,0.5s						
MAKR	**Makrakomi, Fth**	**1.44**	**65**	P	**Pb**	**10 57 10.3**	**+0.1**
AGG	**Agios Georgios**	**1.59**	**67**	P	**Pb**	**10 57 12.8**	**+0.2**
ITM	**Ithomi**	**1.69**	**136**	P	**Pb**	**10 57 15.0**	**+0.7**
MAKA	**Makarska**	**5.53**	**333**	*e*Pn	**Pn**	**10 58 04.6**	**-0.7**
MAKA				Sn	**Sn**	**10 59 06.6**	**-2.1**
RICI	**Ricice**	**5.67**	**335**	*e*Pn	**Pn**	**10 58 07.1**	**-0.2**
RICI				Sn	**Sn**	**10 59 10.9**	**-1.4**
KIJV	**Kijevo**	**6.37**	**333**	*e*Pn	**Pn**	**10 58 17.2**	**+0.3**
ZIRJ	**Zirje**	**6.38**	**327**	*e*Pn	**Pn**	**10 58 16.6**	**-0.4**
ZIRJ				Sn	**Sn**	**10 59 26.7**	**-2.9**
MORI	**Morici**	**6.53**	**328**	*e*Pn	**Pn**	**10 58 19.6**	**+0.6**
DUGI	**Dugi Otok**	**6.91**	**326**	*e*Pn	**Pn**	**10 58 24.7**	**+0.5**

NEIC ***27*** *10:59:11.0±1.8, 22.˚9S±0.˚1×13.˚6W±0.˚1, h10km±1km, mb5.1/136, Error ellipse: s-maj=17.2km s-min=16.3km az=163.0*
IDC ***27*** *10:59:10.4±0.4, 22.˚95S×13.˚53W, h0km, mb4.6/29, mb1 4.7/29, mb1mx4.6/40, mbtmp4.6/29, MS4.2/25, Ms1 4.2/25, ms1mx4.1/40, Error ellipse: s-maj=15.3km s-min=11.3km az=160.0*
MOS ***27*** *10:59:10.0±1.6, 22.˚90S×13.˚57W, h10km, mb5.1/33, MS4.3/4, Error ellipse: s-maj=11.6km s-min=8.0km az=56.4*
BJI ***27*** *10:59:11.0±0.0, 23.˚00S×13.˚60W, h10km, mB5.3/1, Ms5.1/2, Ms7 4.9/2*
BGR ***27*** *10:59:13.6±0.0, 22.˚97S×13.˚06W, h33km, mb4.9*
GCMT ***27*** *10:59:15.0±0.2, 22.˚92S±0.˚01×13.˚53W±0.˚01, h13km±1km, MW5.1/135, Moment Tensor Solution. s60,c68; s135,c211; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.35±.12; Mθθ-1.74±.13; Mϕϕ2.09±.13; Mrθ0.18±.27; Mθϕ4.75±.12; Mϕr0.10±.26; Best double couple: M₀5.12500×10¹⁶ NP1:φs349.00000°, δ88.00000°, λ179.00000°. NP2:φs79.00000°, δ89.00000°, λ2.00000°. Principal axes: T 5.3030, Plg2.0000°, Azm304.0000°; N -0.3550, Plg88.0000°, Azm93.0000°; P -4.9480, Plg1.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 10:59:11.4±0.5, 22.˚93S±0.˚07×13.˚50W±0.˚05, h10km±2km, h10km:pP-P, n401, σ1°38/369, mb5.0/136, MS4.4/40, 19C-9D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10S2	**ASCENSION HYDR**	**13.93**	**355**	T	T	11 16 45.3	
	baz=174,slow=74,SNR=274						
H10S3	**ASCENSION HYDR**	**13.94**	**355**	T	T	11 16 46.3	
	baz=46,slow=74,SNR=322						
H10N1	**ASCENSION HYDR**	**15.03**	**356**	T	T	11 18 06.7	
	baz=186,slow=73,SNR=8.2						
H10N3	**ASCENSION HYDR**	**15.03**	**356**	T	T	11 18 06.1	
	baz=186,slow=73,SNR=60						
H10N2	**ASCENSION HYDR**	**15.04**	**356**	T	T	11 18 07.4	
	baz=186,slow=73,SNR=14						
BSFB	**Barra de Sao F**	**25.86**	**274**	*e*P	**P**	**11 04 43.7**	**+0.3**
BSFB				*e*pP	**sP**	**11 04 46.2**	**-0.3**
BSFB				*e*S	**S**	**11 09 14.8**	**+1.5**
SJMB	**Sao Joao De Ma**	**26.20**	**274**	*e*P	**P**	**11 04 46.5**	**0.0**
SJMB				*e*pP	**sP**	**11 04 50.1**	**+0.5**
GDU01	**Guandu, BA**	**26.36**	**286**	*e*P	**P**	**11 04 48.3**	**+0.4**
RCBR	**Riachuelo**	**27.49**	**305**	P	**P**	**11 04 57.9**	**-0.3**
	19nm,0.8s,baz=122,slow=10.0,SNR=6.5						
RCBR				LR	LR	11 12 53.5	
	comp=Z,1μm,21.7s,baz=122,slow=30						
RCBR	**Riachuelo**	**27.49**	**305**	P	**P**	**11 04 58.2**	**0.0**
RCBR				pmax	pmax		
	comp=Z,33nm,1.0s						
RCBR	**Riachuelo**	**27.49**	**305**	P	**P**	**11 04 58.2**	**0.0**
RCBR				IAmb	IAmb	11 05 11.1	
	comp=Z,33nm,0.9s						
TSUM	**Tsumeb**	**29.21**	**89**	P	**P**	**11 05 13.0**	**-0.7**
	comp=Z,2.4nm,0.6s,baz=240,slow=20,SNR=5.0						
TSUM				LR	LR	11 14 42.1	
	comp=Z,477nm,19.7s,baz=298,slow=32						
TSUM	**Tsumeb**	**29.21**	**89**	P	**P**	**11 05 13.0**	**-0.7**
JANB	**Januaria**	**30.12**	**280**	*e*P	**P**	**11 05 20.9**	**-0.8**
JANB				*e*pP	**sP**	**11 05 24.3**	**-0.5**
LIC	**Lamto**	**30.14**	**17**	*e*PKP1	**P**	**11 05 22.6**	**+1.0**
	comp=Z,7.0nm,0.4s						
KIC	**Kosan Boka**	**30.34**	**17**	*e*PKP1	**P**	**11 05 23.0**	**-0.5**
	comp=Z,24nm,1.0s						
TIC	**Toumodi**	**30.54**	**17**	*e*PKP1	**P**	**11 05 21.8**	**-3.4**
DBIC	**Dimbokro**	**30.61**	**17**	P	**P**	**11 05 24.9**	**-0.9**
	comp=Z,5.2nm,0.8s,baz=166,slow=14,SNR=1.9						
DBIC				LR	LR	11 14 39.2	
	comp=Z,800nm,20.4s,baz=177,slow=30						
DBIC	**Dimbokro**	**30.61**	**17**	P	**P**	**11 05 24.9**	**-0.9**
DBIC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DBIC	**Dimbokro**	**30.61**	**17**	P	**P**	**11 05 24.9**	**-0.9**
SUR	**Sutherland**	**31.70**	**115**	P	**P**	**11 05 35.4**	**-0.2**
	comp=Z,8.2nm,1.1s,baz=274,slow=14,SNR=2.1						
SUR	**Sutherland**	**31.70**	**115**	P	**P**	**11 05 34.9**	**-0.7**
SUR				IAmb	IAmb	11 05 49.4	
	comp=Z,22nm,1.1s						
BDFB	**Brasilia**	**33.32**	**276**	P	**P**	**11 05 49.2**	**-0.6**
	comp=Z,8.2nm,0.8s,baz=94,slow=7.8,SNR=8.2						
BDFB				LR	LR	11 17 07.1	
	comp=Z,951nm,20.0s,baz=110,slow=32						
BDFB	**Brasilia**	**33.32**	**276**	P	**P**	**11 05 48.9**	**-0.9**
BDFB				IAmb	IAmb	11 06 01.9	
	comp=Z,26nm,1.2s						
PCMB	**Pacaembu**	**34.91**	**265**	*e*P	**P**	**11 06 04.1**	**+0.6**
PCMB				*e*pP	**sP**	**11 06 06.6**	**0.0**
BOSA	**Boshof**	**35.25**	**108**	P	**P**	**11 06 06.5**	**0.0**
	comp=Z,12nm,0.9s,baz=278,slow=8.4,SNR=13						
BOSA				LR	LR	11 17 57.2	
	comp=Z,682nm,19.9s,baz=267,slow=32						
BOSA	**Boshof**	**35.25**	**108**	P	**P**	**11 06 05.7**	**-0.8**
LBTB	**Lobatse**	**35.70**	**101**	P	**P**	**11 06 09.8**	**-0.6**
LBTB				pmax	pmax		
	comp=Z,19nm,1.1s						
LBTB	**Lobatse**

SAML	**Samuel**	**49.52**	**278**	P	**P**	**11 08 01.0**	**-1.7**
SAML				pmax	pmax		
	comp=Z,34nm,1.2s						
SAML	**Samuel**	**49.52**	**278**	P	**P**	**11 08 01.0**	**-1.7**
SAML				IAmb	IAmb	11 08 05.0	
	comp=Z,34nm,1.2s						
PTGA	**Pitinga**	**50.22**	**289**	P	**P**	**11 08 06.2**	**-1.8**
PTGA				IAmb	IAmb	11 08 10.2	
	comp=Z,24nm,1.2s						
PTGA	**Pitinga**	**50.22**	**289**	*eP*	**P**	**11 08 08.6**	**+0.6**
AC02	**Maricunga**	**50.28**	**253**	P	**P**	**11 08 06.3**	**-2.6**
AC02				IAmb	IAmb	11 08 11.4	
	comp=Z,30nm,0.8s						
CO01	**Juntas del Tor**	**50.73**	**249**	P	**P**	**11 08 10.4**	**-1.6**
CO01				IAmb	IAmb	11 08 14.7	
	comp=Z,30nm,0.8s						
PLCA	**Paso Flores**	**50.74**	**235**	P	**P**	**11 08 12.8**	**+1.0**
	comp=Z,6.6nm,0.9s,baz=93,slow=6.3,SNR=11						
PLCA				LR	LR	11 27 44.2	
	comp=Z,158nm,19.2s,baz=92,slow=34						
PLCA	**Paso Flores**	**50.74**	**235**	P	**P**	**11 08 11.1**	**-0.6**
LVC	**Limon Verde**	**50.83**	**259**	P	**P**	**11 08 11.0**	**-1.9**
LVC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LVC	**Limon Verde**	**50.83**	**259**	P	**P**	**11 08 11.0**	**-1.9**
LVC	**Limon Verde**	**50.83**	**259**	*eP*	**P**	**11 08 10.5**	**-2.4**
BO02	**Sierra Bellavi**	**50.94**	**243**	P	**P**	**11 08 12.5**	**-0.8**
BO02				IAmb	IAmb	11 08 16.0	
	comp=Z,20nm,1.1s						
GO02	**Mina Guanaco**	**50.96**	**256**	P	**P**	**11 08 13.8**	**0.0**
MT05	**Renca**	**50.98**	**245**	P	**P**	**11 08 12.8**	**-0.8**
MT05				IAmb	IAmb	11 08 26.9	
	comp=Z,28nm,1.0s						
AC05	**El Transito**	**51.02**	**251**	P	**P**	**11 08 14.5**	**+0.4**
AC05				IAmb	IAmb	11 08 18.1	
	comp=Z,32nm,1.1s						
GO03	**Copiap**	**51.15**	**252**	P	**P**	**11 08 13.8**	**-1.1**
GO03				IAmb	IAmb	11 08 16.3	
	comp=Z,21nm,0.9s						
CO03	**El Pedregal**	**51.15**	**248**	P	**P**	**11 08 14.9**	**0.0**
CO03				IAmb	IAmb	11 08 31.6	
	comp=Z,19nm,0.9s						
PB15	**IPOC Station P**	**51.21**	**258**	P	**P**	**11 08 15.1**	**-0.6**
ROC1	**El Roble**	**51.24**	**245**	P	**P**	**11 08 14.5**	**-1.3**
BI02	**San Fabin de**	**51.27**	**241**	P	**P**	**11 08 16.2**	**+0.4**
GO04	**Tololo Observa**	**51.32**	**249**	P	**P**	**11 08 15.7**	**-0.7**
CO02	**Combarbal**	**51.38**	**248**	P	**P**	**11 08 16.2**	**-0.5**
CO02				IAmb	IAmb	11 08 26.6	
	comp=Z,35nm,1.1s						
PB06	**IPOC Station P**	**51.41**	**259**	P	**P**	**11 08 16.2**	**-0.9**
PB06				IAmb	IAmb	11 08 17.9	
	comp=Z,26nm,0.8s						
PB08	**IPOC Station P**	**51.59**	**262**	P	**P**	**11 08 17.8**	**-1.0**
PB08				IAmb	IAmb	11 08 19.3	
	comp=Z,20nm,0.7s						
LPAZ	**La Paz**	**51.65**	**267**	P	**P**	**11 08 18.7**	**-0.7**
	comp=Z,6.1nm,0.8s,baz=106,slow=4.8,SNR=27						
LPAZ				LR	LR	11 30 07.3	
	comp=Z,244nm,18.2s,baz=110,slow=36						
LPAZ	**La Paz**	**51.65**	**267**	P	**P**	**11 08 17.8**	**-1.7**
LPAZ	**La Paz**	**51.65**	**267**	*eP*	**P**	**11 08 18.9**	**-0.6**
PB01	**IPOC Station P**	**51.69**	**261**	P	**P**	**11 08 18.2**	**-0.9**
PB01				IAmb	IAmb	11 08 19.4	
	comp=Z,15nm,0.5s						
AC01	**Pan de Azucar**	**51.69**	**254**	P	**P**	**11 08 18.6**	**-0.4**
LC01	**Cunco**	**51.72**	**238**	P	P	11 08 13.6	-5.4
GO01	**Chusmiza**	**51.74**	**262**	P	**P**	**11 08 18.7**	**-1.2**
GO01				IAmb	IAmb	11 08 20.3	
	comp=Z,19nm,0.9s						
AC04	**Llanos de Chal**	**51.80**	**251**	P	**P**	**11 08 20.1**	**+0.3**
AC04				IAmb	IAmb	11 08 25.3	
	comp=Z,21nm,0.9s						
GO05	**Huala**	**51.87**	**243**	P	**P**	**11 08 20.5**	**+0.3**
PB07	**IPOC Station P**	**51.90**	**260**	P	**P**	**11 08 20.5**	**-0.2**
PB04	**IPOC Station P**	**52.00**	**259**	P	**P**	**11 08 21.4**	**-0.1**
PB10	**IPOC Station P**	**52.13**	**257**	P	**P**	**11 08 22.5**	**+0.2**
PB11	**IPOC Station P**	**52.14**	**262**	P	**P**	**11 08 21.8**	**-0.8**
PB11				IAmb	IAmb	11 08 22.7	
	comp=Z,29nm,1.1s						
LL01	**San Ignacio de**	**52.20**	**233**	P	**P**	**11 08 21.1**	**-1.4**
MNMC	**Minye Minye**	**52.24**	**263**	P	**P**	**11 08 22.8**	**-0.6**
MNMC				IAmb	IAmb	11 08 23.8	
	comp=Z,25nm,0.8s						
PATCX	**Punta Patache**	**52.34**	**261**	P	**P**	**11 08 23.3**	**-0.7**
PATCX				IAmb	IAmb	11 08 30.4	
	comp=Z,45nm,1.2s						
TA01	**Diego Aracena**	**52.43**	**261**	P	**P**	**11 08 24.9**	**+0.4**
TA01				IAmb	IAmb	11 08 39.5	
	comp=Z,36nm,1.3s						
PSGCX	**Pisagua**	**52.60**	**262**	P	**P**	**11 08 25.0**	**-0.9**
PB12	**IPOC Station P**	**53.04**	**263**	P	**P**	**11 08 28.4**	**-0.8**
SYO	**Syowa Base**	**55.88**	**160**	*l*eP	**P**	**11 08 48.8**	**-0.1**
SYO	**Syowa Base**	**55.88**	**160**	*l*epP	pP	11 08 50.2	-1.1
SYO	**Syowa Base**	**55.88**	**160**	*l*esP	sP	11 08 52.8	+0.6
MDT	**Midelt**	**56.08**	**9**	LR	LR	11 30 54.8	
	comp=Z,343nm,19.6s,baz=193,slow=34						
PBDV	**Barranco-do-Ve**	**60.08**	**5**	*e*P	**P**	**11 09 22.7**	**+4.0**
MORF	**Marmelete**	**60.09**	**4**	*e*P	**P**	**11 09 23.1**	**+4.3**
PVAQ	**Vaqueiros**	**60.26**	**5**	*e*P	**P**	**11 09 21.2**	**+1.3**
PVAQ	**Vaqueiros**	**60.26**	**5**	*e*LR	LR	11 30 30.6	
	comp=Z,212nm,24.0s						
PSMN	**Pico do Norte,**	**60.60**	**349**	*e*T	T	12 14 17.6	
PSMA	**Santa Maria**	**60.60**	**349**	*e*T	T	12 14 17.5	
PBEJ	**Beja**	**60.86**	**5**	*e*P	**P**	**11 09 28.0**	**+4.0**
	comp=Z,25nm,1.5s						
PNCL	**Nicolau / Gran**	**60.90**	**4**	*e*P	**P**	**11 09 25.9**	**+1.7**
NNA	**Nana**	**61.01**	**269**	*ce*P	**P**	**11 09 26.6**	**+0.9**
NNA				pmax	pmax		
	comp=Z,62nm,1.7s						
EVO	**Evora**	**61.35**	**5**	*e*P	**P**	**11 09 31.2**	**+3.9**
	comp=Z,24nm,1.7s						
BART	**Pico Bartolome**	**61.37**	**349**	*e*T	T	12 15 35.6	
KEST	**Kesra**	**62.22**	**21**	P	**P**	**11 09 35.0**	**+1.6**
	comp=Z,16nm,1.0s,baz=178,slow=5.0,SNR=12						
KEST				LR	LR	11 34 37.9	
	comp=Z,318nm,21.0s,baz=250,slow=34						
KEST	**Kesra**	**62.22**	**21**	P	**P**	**11 09 33.2**	**-0.2**
KEST				IAmb	IAmb	11 09 39.6	
	comp=Z,18nm,1.0s						
PMRV	**Marv??o**	**62.29**	**5**	*e*P	**P**	**11 09 37.5**	**+3.8**
	comp=Z,24nm,1.7s						
PMRV	**Marv??o**	**62.29**	**5**	*e*LR	LR	11 30 05.5	
	comp=Z,143nm,20.0s						
PCBR	**Castelo Branco**	**62.70**	**5**	*e*P	**P**	**11 09 37.9**	**+1.6**
	comp=Z,30nm,1.5s						
PAB	**San Pablo**	**62.73**	**8**	P	**P**	**11 09 36.5**	**-0.2**
PAB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PAB	**San Pablo**	**62.73**	**8**	P	**P**	**11 09 36.5**	**-0.2**
ESDC	**Sonseca Array**	**62.91**	**8**	P	**P**	**11 09 38.7**	**+0.8**
	comp=Z,3.3nm,0.8s,baz=184,slow=6.1,SNR=16						
ESDC				LR	LR	11 34 04.0	
	comp=Z,178nm,21.6s,baz=155,slow=33						
MTE	**Manteigas**	**63.24**	**5**	*e*P	**P**	**11 09 43.8**	**+3.7**
MTE	**Manteigas**	**63.24**	**5**	*e*LR	LR	11 30 21.9	
	comp=Z,130nm,20.0s						
MTE	**Manteigas**	**63.24**	**5**	P	**P**	**11 09 40.0**	**0.0**
MTE				IAmb	IAmb	11 09 49.4	
	comp=Z,9.6nm,0.8s						
SMRT	**St. Maarten**	**63.29**	**306**	P	**P**	**11 09 40.4**	**-0.3**
PVIS	**Viseu**	**63.53**	**5**	*e*P	**P**	**11 09 44.8**	**+2.9**
MAW	**Mawson**	**63.83**	**155**	P	**P**	**11 09 46.8**	**+3.2**
	comp=Z,4.6nm,0.8s,baz=294,slow=10.0,SNR=2.8						
MAW	**Mawson**	**63.83**	**155**	P	**P**	**11 09 43.7**	**+0.1**
MAW				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MAW	**Mawson**	**63.83**	**155**	P	**P**	**11 09 43.7**	**+0.1**
MVO	**Moncorvo**	**64.05**	**5**	*e*P	**P**	**11 09 47.0**	**+1.6**
	comp=Z,30nm,2.3s						
MVO	**Moncorvo**	**64.05**	**5**	*e*LR	LR	11 30 47.8	
	comp=Z,113nm,20.0s						
SDV	**Santo Domingo**	**64.22**	**293**	P	**P**	**11 09 46.8**	**-0.4**
CDVI	**St. Croix**	**64.39**	**304**	P	**P**	**11 09 46.6**	**-1.4**
PBRG	**Braganca**	**64.71**	**6**	*e*P	**P**	**11 09 51.3**	**+1.6**
	comp=Z,29nm,1.3s						
PGAV	**Gavieira, Arco**	**64.75**	**4**	*e*P	**P**	**11 09 52.5**	**+2.5**
PGAV	**Gavieira, Arco**	**64.75**	**4**	*e*LR	LR	11 30 07.0	
	comp=Z,188nm,18.0s						
RUSC	**La Rusia**	**64.86**	**289**	P	**P**	**11 09 50.7**	**-1.1**
CUPR	**Culebra, Puert**	**65.11**	**305**	P	**P**	**11 09 52.1**	**-0.5**
HUMP	**Col San Antoni**	**65.44**	**304**	P	**P**	**11 09 54.2**	**-0.6**
ROSC	**El Rosal**	**65.45**	**287**	P	**P**	**11 09 56.2**	**+0.6**
	comp=Z,24nm,0.6s,baz=164,slow=4.7,SNR=9.4						
ROSC				LR	LR	11 37 43.2	
	comp=Z,739nm,18.7s,baz=144,slow=35						
ROSC	**El Rosal**	**65.45**	**287**	P	**P**	**11 09 54.5**	**-1.0**
CBYP	**Canovanas**	**65.53**	**304**	P	**P**	**11 09 55.1**	**-0.4**
AOPR	**Arecibo Observ**	**66.26**	**304**	P	**P**	**11 09 59.2**	**-0.9**
CRPR	**Cabo Rojo, PR**	**66.33**	**303**	P	**P**	**11 10 00.2**	**-0.3**
URIC	**Uribia, Colomb**	**66.81**	**295**	P	**P**	**11 10 02.7**	**-1.0**
QSPA	**South Pole Qui**	**67.28**	**180**	P	**P**	**11 10 07.2**	**+1.1**
QSPA				IAmb	IAmb	11 10 19.9	
	comp=Z,16nm,1.0s						
TIP	**Timpagrande**	**67.96**	**25**	P	**P**	**11 10 11.3**	**+0.7**
TIP				IAmb	IAmb	11 10 14.0	
	comp=Z,15nm,1.0s						
IDI	**Anoyia**	**68.38**	**33**	P	**P**	**11 10 14.5**	**+1.2**
	comp=Z,20nm,1.0s,baz=214,slow=10.0						
IDI	**Anoyia**	**68.38**	**33**	⇓P	**P**	**11 10 14.6**	**+1.3**
IDI	**Anoyia**	**68.38**	**33**	P	**P**	**11 10 14.7**	**+1.3**
MSEY	**Mahe Island**	**68.84**	**86**	P	**P**	**11 10 16.1**	**-0.6**
MSEY				pmax	pmax		
	comp=Z,49nm,1.2s						
MSEY	**Mahe Island**	**68.84**	**86**	P	**P**	**11 10 16.1**	**-0.6**
KARP	**Karpathos**	**69.75**	**34**	P	**P**	**11 10 22.3**	**+0.5**
OSSC	**Osservatorio P**	**69.93**	**19**	P	**P**	**11 10 22.2**	**-0.5**
OSSC				IAmb	IAmb	11 10 33.3	
	comp=Z,17nm,0.9s						
AGG	**Agios Georgios**	**70.16**	**29**	P	**P**	**11 10 24.6**	**+0.4**
AGG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AGG	**Agios Georgios**	**70.16**	**29**	P	**P**	**11 10 24.6**	**+0.4**
TIR	**Tirane**	**71.05**	**26**	P	**P**	**11 10 28.3**	**-1.2**
TIR				pmax	pmax		
	comp=Z,32nm,0.5s						
TIR	**Tirane**	**71.05**	**26**	P	**P**	**11 10 28.3**	**-1.2**
LIT	**Litokhoron**	**71.12**	**28**	P	**P**	**11 10 29.5**	**-0.5**
LIT				pmax	pmax		
	comp=Z,24nm,1.3s						
LIT	**Litokhoron**	**71.12**	**28**	P	**P**	**11 10 29.5**	**-0.5**
LIT				IAmb	IAmb	11 10 33.6	
	comp=Z,24nm,1.3s						
FNA	**Florina**	**71.20**	**27**	P	**P**	**11 10 29.1**	**-1.4**
FNA				pmax	pmax		
	comp=Z,11nm,1.0s						
FNA	**Florina**	**71.20**	**27**	P	**P**	**11 10 29.1**	**-1.4**
PDG	**Podgorica**	**71.72**	**25**	⇑P	**P**	**11 10 34.8**	**+1.3**
PDG	**Podgorica**	**71.72**	**25**	P	**P**	**11 10 33.5**	**0.0**
CLF	**Chambon-Foret**	**72.03**	**11**	P	**P**	**11 10 34.7**	**-0.6**
CLF				IAmb	IAmb	11 10 43.8	
	comp=Z,18nm,1.0s						
TUE	**Stuetta**	**72.11**	**16**	P	**P**	**11 10 36.2**	**+0.1**
TUE				IAmb	IAmb	11 10 53.4	
	comp=Z,11nm,0.9s						
ELL	**Elmali**	**72.11**	**35**	P	**P**	**11 10 35.2**	**-1.0**
ELL				pmax	pmax		
	comp=Z,49nm,1.2s						
ELL	**Elmali**	**72.11**	**35**	P	**P**	**11 10 35.2**	**-1.0**
CTI	**Castel Tesino**	**72.35**	**18**	P	**P**	**11 10 35.6**	**-1.8**
CTI				pmax	pmax		
	comp=Z,11nm,1.1s						
CTI	**Castel Tesino**	**72.35**	**18**	P	**P**	**11 10 35.6**	**-1.8**
FUORN	**Ofenpass-Fuorn**	**72.49**	**17**	P	**P**	**11 10 37.5**	**-0.9**
FUORN				IAmb	IAmb	11 10 51.3	
	comp=Z,12nm,0.9s						
MMAI	**Mount Meron Ar**	**72.59**	**42**	P	**P**	**11 10 41.2**	**+2.1**
	comp=Z,8.7nm,0.8s,baz=214,slow=5.8,SNR=11						
ASF	**Jabal al Asfar**	**72.95**	**43**	P	**P**	**11 10 44.0**	**+2.7**
	comp=Z,2.5nm,0.7s,baz=243,slow=3.9,SNR=2.7						
FETA	**Feichten**	**72.98**	**17**	*i* P	**P**	**11 10 41.6**	**+0.4**
	comp=Z,7.8nm,0.6s						
DAVA	**Damuels**	**73.00**	**16**	*i* P	**P**	**11 10 41.7**	**+0.4**
	comp=Z,12nm,0.7s						
ABTA	**Abtersbach**	**73.23**	**18**	*i* P	**P**	**11 10 43.7**	**+1.1**
	comp=Z,3.6nm,0.6s						
SQTA	**Sankt Quirin**	**73.30**	**17**	*i* P	**P**	**11 10 44.6**	**+1.6**
	comp=Z,3.4nm,0.5s						
MOTA	**Moosalm**	**73.38**	**17**	*i* P	**P**	**11 10 44.4**	**+0.8**
	comp=Z,7.1nm,1.1s						
RETA	**Reutte**	**73.42**	**17**	*i* P	**P**	**11 10 43.7**	**0.0**
	comp=Z,4.2nm,0.6s						
DIVS	**Divibare**	**73.42**	**25**	P	**P**	**11 10 42.6**	**-1.2**
WTTA	**Wattenberg**	**73.45**	**18**	*i* P	**P**	**11 10 44.5**	**+0.4**
	comp=Z,14nm,1.2s						
VTS	**Vitosha**	**73.50**	**27**	⇑P	**P**	**11 10 44.8**	**+0.4**
VTS	**Vitosha**	**73.50**	**27**	P	**P**	**11 10 43.0**	**-1.4**
VTS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
VTS	**Vitosha**	**73.50**	**27**	P	**P**	**11 10 43.0**	**-1.4**
WATA	**Walderalm**	**73.50**	**17**	*i* P	**P**	**11 10 44.5**	**+0.2**
	comp=Z,2.4nm,0.4s						
BFO	**Black Forest**	**73.58**	**15**	P	**P**	**11 10 44.3**	**-0.3**
BFO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BFO	**Black Forest**	**73.58**	**15**	P	**P**	**11 10 44.3**	**-0.3**
RAYN	**Ar Rayn**	**73.61**	**55**	P	**P**	**11 10 45.1**	**-0.3**
RAYN				pmax	pmax		
	comp=Z,12nm,1.4s						
RAYN	**Ar Rayn**	**73.61**	**55**	P	**P**	**11 10 45.1**	**-0.3**
KBA	**Koelnbreinsper**	**73.78**	**19**	*i* P	**P**	**11 10 46.7**	**+0.8**
	comp=Z,6.6nm,1.0s						
SOKA	**Soboth**	**73.93**	**20**	*i* P	**P**	**11 10 48.2**	**+1.5**
	comp=Z,7.8nm,1.0s						
ARSA	**Arzberg**	**74.60**	**20**	*i* P	**P**	**11 10 51.9**	**+1.3**
	comp=Z,11nm,0.9s						
MDVR	**Moldovita**	**74.66**	**25**	⇑P	**P**	**11 10 52.3**	**+1.3**
MOA	**Molln**	**74.74**	**19**	*i* P	**P**	**11 10 51.7**	**+0.3**
	comp=Z,4.9nm,0.7s						
HERR	**Herculane**	**75.02**	**26**	⇓P	**P**	**11 10 49.3**	**-3.7**
CONA	**Conrad Observa**	**75.30**	**20**	P	**P**	**11 10 56.0**	**+1.3**
	comp=Z,4.7nm,0.7s						
BZS	**Buzias**	**75.32**	**25**	⇓P	**P**	**11 10 56.2**	**+1.4**
GEC2	**GERESS Array S**	**75.47**	**18**	P	**P**	**11 10 54.7**	**-0.9**
GERES	**GERESS Array B**	**75.47**	**18**	P	**P**	**11 10 56.0**	**+0.3**
	comp=Z,1.1nm,0.4s,baz=204,slow=2.9,SNR=9.3						
GERES	**GERESS Array B**	**75.47**	**18**	P	**P**	**11 10 56.0**	**+0.3**
GRF	**Grafenberg Arr**	**75.56**	**16**	*e*P	**P**	**11 10 56.8**	**+0.8**
	comp=Z,13nm,1.0s,baz=203,slow=6.2						
KHC	**Kasperske Hory**	**75.69**	**18**	*e*P	P	11 11 03.3	+6.5
KHC				*e*		11 11 07.8	
KHC				MLR	MLR		
	comp=Z,300nm,22.5s						
KHC	**Kasperske Hory**	**75.69**	**18**	*e*P	P	11 11 03.3	+6.5
KHC				*e*PCP	**PcP**	**11 11 07.8**	**-1.7**
KHC				*ex*	x	11 11 20.8	
KHC				AMS	AMS	11 41 30.0	
	comp=Z,300nm,22.5s						
KHC	**Kasperske Hory**	**75.69**	**18**	P	**P**	**11 10 55.9**	**-1.0**
BR131	**Keskin Array S**	**76.29**	**36**	P	**P**	**11 11 00.3**	**-0.3**
BR131				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BR131	**Keskin Array S**	**76.29**	**36**	P	**P**	**11 11 00.3**	**-0.3**
BRTR	**Keskin Array B**	**76.29**	**36**	P	**P**	**11 11 02.0**	**+1.5**
	comp=Z,6.0nm,0.8s,baz=190,slow=6.3,SNR=33						
BRTR				LR	LR	11 43 50.6	
	comp=Z,45nm,21.8s,baz=186,slow=35						
ARR	**Arges**	**76.32**	**27**	⇑P	**P**	**11 11 01.3**	**+0.8**
NKC	**Novy Kostel**	**76.38**	**17**	AMS	AMS	11 43 00.0	
	comp=Z,300nm,26.8s						
GAZ	**Gaziantep**	**76.51**	**39**	P	**P**	**11 11 00.5**	**-1.3**
VOIR		**76.55**	**27**	⇓P	**P**	**11 11 02.4**	**+0.5**
PSZ	**Piszkesteto**	**76.64**	**22**	⇑P	**P**	**11 11 03.0**	**+0.8**
PSZ	**Piszkesteto**	**76.64**	**22**	P	**P**	**11 11 00.0**	**-2.3**
PSZ				pmax	pmax		
	comp=Z,14nm,1.0s						
PSZ	**Piszkesteto**	**76.64**	**22**	P	**P**	**11 11 00.0**	**-2.3**
PSZ				IAmb	IAmb	11 11 16.2	
	comp=Z,14nm,1.0s						
DRGR		**76.72**	**25**	⇓P	**P**	**11 11 03.4**	**+0.6**
PRU	**Pruhonice**	**76.74**	**18**	AMS	AMS	11 42 50.0	
	comp=Z,300nm,18.1s						
GOPC	**GO Pecny, Ondr**	**76.75**	**18**	*e*P	**PcP**	**11 11 10.8**	**-3.2**
GOPC				MLR	MLR		
	comp=Z,300nm,19.3s						
GOPC	**GO Pecny, Ondr**	**76.75**	**18**	*e*P	**PcP**	**11 11 10.8**	**-3.2**
GOPC				AMS	AMS	11 43 40.0	
	comp=Z,300nm,19.3s						
VRAC	**Vranov**	**76.75**	**20**	LR	LR	11 43 26.6	
	comp=Z,354nm,21.2s,baz=210,slow=35						
VYHS	**Vyhne**	**76.77**	**21**	*e*P	**P**	**11 11 06.0**	**+3.1**
VYHS	**Vyhne**	**76.77**	**21**	*e*P	**P**	**11 11 06.0**	**+3.1**
PRA	**Prague**	**76.78**	**18**	AMS	AMS	11 43 00.0	
	comp=Z,200nm,23.2s						
MLR	**Muntele Rosu**	**76.97**	**27**	P	**P**	**11 11 04.8**	**+0.6**
	comp=Z,18nm,0.9s,baz=193,slow=4.6,SNR=20						
MLR	**Muntele Rosu**	**76.97**	**27**	⇑P	**P**	**11 11 05.2**	**+0.9**
MLR	**Muntele Rosu**	**76.97**	**27**	P	**P**	**11 11 04.0**	**-0.3**
MLR				IAmb	IAmb	11 11 18.5	
	comp=Z,21nm,0.9s						
DOPR	**Dopca**	**77.12**	**27**	⇑P	**P**	**11 11 05.7**	**+0.7**
PVCC	**Panska Ves**	**77.23**	**18**	AMS	AMS	11 42 50.0	
	comp=Z,200nm,22.1s						
TIRR	**Tirgusor**	**77.24**	**29**	⇑P	**P**	**11 11 06.4**	**+0.8**
TIRR	**Tirgusor**	**77.24**	**29**	P	**P**	**11 11 04.4**	**-1.2**
TIRR				pmax	pmax		
	comp=Z,19nm,1.1s						
TIRR	**Tirgusor**	**77.24**	**29**	P	**P**	**11 11 04.4**	**-1.2**
TIRR				IAmb	IAmb	11 11 23.3	
	comp=Z,19nm,1.1s						
ILGA	**Ilgaz**	**77.28**	**35**	P	**P**	**11 11 06.7**	**+0.4**
ILGA				IAmb	IAmb	11 11 25.1	
	comp=Z,24nm,1.0s						
CBCY	**The Bluff, Cay**	**77.32**	**298**	P	**P**	**11 11 04.1**	**-2.5**
BRG	**Berggiesshubel**	**77.37**	**17**	*e*P	**P**	**11 11 09.3**	**+3.1**
	comp=Z,4.7nm,1.0s						
BRG	**Berggiesshubel**	**77.37**	**17**	*e*P	**P**	**11 11 09.3**	**+3.1**
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MORC	**Moravsky Berou**	**77.46**	**20**	⇑P	**P**	**11 11 08.3**	**+1.5**
MORC	**Moravsky Berou**	**77.46**	**20**	P	**P**	**11 11 05.5**	**-1.3**
MORC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MORC	**Moravsky Berou**	**77.46**	**20**	P	**P**	**11 11 05.5**	**-1.3**
KRLC	**Kraliky**	**77.48**	**19**	AMS	AMS	11 43 40.0	
	comp=Z,200nm,24.6s						
PLOR	**Plostina**	**77.56**	**27**	⇑P	**P**	**11 11 08.5**	**+1.0**
DPC	**Dobruska-Polom**	**77.59**	**19**	AMS	AMS	11 44 50.0	
	comp=Z,300nm,20.0s						
VRI	**Vrincioaia**	**77.60**	**28**	⇑P	**P**	**11 11 07.7**	**+0.1**
UPC	**Upice**	**77.63**	**19**	AMS	AMS	11 46 10.0	
	comp=Z,200nm,20.4s						
CFR	**Carcaliu**	**77.67**	**29**	⇓P	**P**	**11 11 08.2**	**+0.2**
OKC	**Ostrava-Krasne**	**77.70**	**20**	AMS	AMS	11 43 20.0	
	comp=Z,300nm,18.0s						
CHVC	**Chvalec**	**77.72**	**19**	AMS	AMS	11 45 50.0	
	comp=Z,200nm,18.8s						
OSTC	**Ostas**	**77.74**	**19**	*e*P	**PcP**	**11 11 15.8**	**-2.5**
OSTC				AMS	AMS	11 46 00.0	
	comp=Z,200nm,18.8s						
UZH	**Uzhgorod**	**78.10**	**23**	*e*P	**P**	**11 11 14.3**	**+4.0**
UZH				*e*		11 11 22.3	
BIZ	**Bicaz**	**78.19**	**27**	⇑P	**P**	**11 11 11.9**	**+1.0**
BUR08	**Bucovina Ar. S**	**78.39**	**26**	P	**P**	**11 11 10.3**	**-1.9**
DIKM	**Dikmen**	**78.52**	**35**	⇓P	**P**	**11 11 14.6**	**+1.8**
OJC	**Ojcow**	**78.57**	**21**	P	**P**	**11 11 11.8**	**-1.1**
OJC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
OJC	**Ojcow**	**78.57**	**21**	P	**P**	**11 11 11.8**	**-1.1**
LVV	**L'vov**	**79.72**	**24**	*e*P	**P**	**11 11 21.4**	**+2.2**
VNDA	**Vanda**	**79.73**	**179**	P	**P**	**11 11 19.8**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=212,slow=6.1,SNR=4.9						
VNDA				LR	LR	11 41 43.9	
	comp=Z,155nm,21.5s,baz=176,slow=32						
VNDA	**Vanda**	**79.73**	**179**	P	**P**	**11 11 19.4**	**+0.4**
SORM	**Soroca**	**80.07**	**27**	⇑P	**P**	**11 11 21.1**	**-0.1**
AKASG	**Malin Array Be**	**82.43**	**26**	P	**P**	**11 11 33.8**	**+0.1**
	comp=Z,4.0nm,0.7s,baz=224,slow=5.4,SNR=11						
AKASG				LR	LR	11 48 51.8	
	comp=Z,101nm,18.6s,baz=265,slow=36						
AKBB	**Malin Array Si**	**82.43**	**26**	*ce*P	**P**	**11 11 34.9**	**+1.3**
AKBB	**Malin Array Si**	**82.43**	**26**	P	**P**	**11 11 32.5**	**-1.1**
AKBB				IAmb	IAmb	11 11 44.3	
	comp=Z,18nm,1.2s						
NEY	**Neytrino**	**83.68**	**38**	*i* P	**P**	**11 11 42.3**	**+1.8**
NEY				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KBZ	**Khabaz**	**84.08**	**37**	P	**P**	**11 11 43.7**	**+1.4**
	comp=Z,6.2nm,0.8s,baz=243,slow=4.5,SNR=14						
KBZ				LR	LR	11 48 54.7	
	comp=Z,48nm,20.7s,baz=230,slow=36						
KBZ	**Khabaz**	**84.08**	**37**	*ce*P	**P**	**11 11 43.5**	**+1.2**
KBZ				pmax	pmax		
	comp=Z,6.0nm,

LPSR	**Galich'ya Gora**	**87.94**	**29**	*e*P		**P**		**11 12 02.1**	**+0.9**
LPSR				pmax		pmax			
	comp=Z,7.0nm,0.6s								
E57A	**Chemin Saint G**	**88.11**	**323**	P		**P**		**11 12 03.2**	**+1.0**
	baz=127								
H56A	**Elgin**	**88.25**	**321**	P		**P**		**11 12 03.8**	**+1.0**
	baz=125								
K55A	**Perry**	**88.29**	**318**	P		**P**		**11 12 04.0**	**+0.9**
	baz=124								
VRH	**Novokhopyorsk**	**88.30**	**31**	*e*P		**P**		**11 12 06.0**	**+3.1**
VRH				pmax		pmax			
	comp=Z,10.0nm,0.4s								
V52A	**Sevierville**	**88.33**	**310**	IAmb		IAmb		11 12 14.1	
	comp=Z,6.8nm,0.9s								
TKL	**Tuckaleechee C**	**88.36**	**310**	P		**P**		**11 12 03.2**	**-0.4**
TKL				pmax		pmax			
	comp=Z,19nm,1.4s								
TKL	**Tuckaleechee C**	**88.36**	**310**	P		**P**		**11 12 03.2**	**-0.4**
TKL				IAmb		IAmb		11 12 14.9	
	comp=Z,19nm,1.4s								
Q53A	**Leroy**	**88.44**	**314**	P		**P**		**11 12 05.0**	**+1.1**
	baz=121								
R53A	**Hurricane**	**88.45**	**313**	IAmb		IAmb		11 12 05.5	
	comp=Z,11nm,0.8s								
N54A	**Moraine State**	**88.54**	**316**	P		**P**		**11 12 05.1**	**+0.8**
	baz=122								
N54A	**Moraine State**	**88.54**	**316**	IAmb		IAmb		11 12 13.5	
	comp=Z,10nm,0.7s								
M54A	**Oil Creek Stat**	**88.62**	**317**	P		**P**		**11 12 05.8**	**+1.1**
	baz=123								
M54A	**Oil Creek Stat**	**88.62**	**317**	IAmb		IAmb		11 12 15.3	
	comp=Z,9.2nm,0.8s								
TZTN	**Tazewell**	**88.64**	**311**	P		**P**		**11 12 03.8**	**-1.2**
TZTN				IAmb		IAmb		11 12 16.5	
	comp=Z,13nm,1.1s								
E56A	**St. Veronique**	**88.68**	**323**	P		**P**		**11 12 05.5**	**+0.6**
	baz=126								
OBN	**Obninsk**	**88.69**	**26**	LR		LR		11 52 50.7	
	comp=Z,28nm,19.6s,baz=49,slow=36								
OBN	**Obninsk**	**88.69**	**26**	*e*P		**P**		**11 12 05.4**	**+0.8**
OBN				*i* PCP		**pwP**		**11 12 12.1**	**0.0**
OBN				pmax		pmax			
	comp=Z,7.0nm,0.9s								
OBN				MLR		MLR			
	comp=Z,106nm,18.0s								
H55A	**Tweed**	**88.77**	**320**	P		**P**		**11 12 06.0**	**+0.7**
	baz=124								
L54A	**Sinclairville**	**88.79**	**317**	P		**P**		**11 12 06.7**	**+1.2**
	baz=123								
D56A	**ZEC Mazanza, M**	**88.83**	**323**	P		**P**		**11 12 06.1**	**+0.5**
	baz=126								
V51A	**Loudon**	**88.84**	**310**	P		**P**		**11 12 06.0**	**+0.1**
V51A				IAmb		IAmb		11 12 16.8	
	comp=Z,8.1nm,0.9s								
I55A	**Frankford**	**88.88**	**320**	P		**P**		**11 12 06.8**	**+0.9**
	baz=124								
G55A	**Calabogie**	**88.90**	**321**	P		**P**		**11 12 06.4**	**+0.5**
	baz=125								
O53A	**New Philadelph**	**88.95**	**315**	P		**P**		**11 12 07.7**	**+1.4**
	baz=122								
Q52A	**Bidwell**	**88.99**	**313**	P		**P**		**11 12 07.5**	**+1.1**
	baz=121								
PLVO	**Plevna**	**88.99**	**321**	P		**P**		**11 12 06.9**	**+0.5**
PLVO				IAmb		IAmb		11 12 14.7	
	comp=Z,9.5nm,0.9s								
N53A	**Lisbon**	**89.00**	**316**	IAmb		IAmb		11 12 17.5	
	comp=Z,15nm,0.9s								
DELO	**Deloro Mine**	**89.01**	**320**	P		**P**		**11 12 05.5**	**-0.9**
DELO				IAmb		IAmb		11 12 16.4	
	comp=Z,8.9nm,0.8s								
FPAL	**Fort Paine**	**89.13**	**308**	IAmb		IAmb		11 12 09.3	
	comp=Z,9.8nm,0.7s								
D55A	**Sainte-Anne-du**	**89.20**	**323**	P		**P**		**11 12 08.1**	**+0.8**
	baz=126								
S51A	**Beattyville**	**89.22**	**312**	IAmb		IAmb		11 12 18.1	
	comp=Z,12nm,0.9s								
M53A	**Wt Miller and**	**89.23**	**316**	P		**P**		**11 12 08.8**	**+1.2**
	baz=122								
W50A	**Signal Mountai**	**89.23**	**309**	P		**P**		**11 12 07.2**	**-0.6**
W50A				IAmb		IAmb		11 12 18.6	
	comp=Z,17nm,1.1s								
L53A	**Girard**	**89.24**	**317**	P		**P**		**11 12 08.9**	**+1.3**
	baz=122								
Y49A	**Blount Mountai**	**89.39**	**307**	IAmb		IAmb		11 12 10.5	
	comp=Z,6.9nm,0.8s								
MOS	**Moscow**	**89.55**	**26**	*e*P		P		11 12 13.4	+4.7
H53A	**Bobcaygeon**	**89.62**	**320**	P		**P**		**11 12 10.2**	**+0.9**
	baz=123								
SWET	**Sewanee**	**89.69**	**309**	IAmb		IAmb		11 12 20.8	
	comp=Z,16nm,1.0s								
T50A	**Nancy**	**89.78**	**311**	P		**P**		**11 12 09.0**	**-1.2**
T50A				IAmb		IAmb		11 12 21.1	
	comp=Z,17nm,1.4s								
G54A	**Lake Saint Pet**	**89.78**	**320**	P		**P**		**11 12 10.4**	**+0.3**
	baz=124								
SCHQ	**Schefferville**	**89.85**	**332**	P		**P**		**11 12 10.9**	**+0.7**
	comp=Z,3.3nm,0.7s,baz=80,slow=3.7,SNR=3.7								
SCHQ				LR		LR		11 46 46.2	
	comp=Z,306nm,19.2s,baz=122,slow=32								
SCHQ	**Schefferville**	**89.85**	**332**	IAmb		IAmb		11 12 21.0	
	comp=Z,14nm,1.1s								
FINES	**FINESS Array B**	**89.90**	**18**	P		**P**		**11 12 11.8**	**+1.6**
	comp=Z,3.4nm,0.8s,baz=184,slow=5.3,SNR=9.8								
FINES				LR		LR		11 53 37.6	
	comp=Z,151nm,18.2s,baz=206,slow=36								
ACSO	**Alum Creek Sta**	**90.11**	**314**	P		**P**		**11 12 10.4**	**-1.3**
ACSO				IAmb		IAmb		11 12 22.1	
	comp=Z,13nm,1.1s								
X48A	**Hartselle**	**90.14**	**308**	IAmb		IAmb		11 12 22.7	
	comp=Z,15nm,1.1s								
GEYT	**Alibeck**	**90.41**	**49**	P		**P**		**11 12 17.1**	**+3.8**
	comp=Z,1.5nm,0.6s,baz=246,slow=7.1,SNR=2.5								
GEYT				LR		LR		11 52 43.2	
	comp=Z,94nm,18.4s,baz=70,slow=36								
D53A	**Lac Vacive, Po**	**90.49**	**322**	P		**P**		**11 12 13.6**	**+0.3**
	baz=124								
D53A	**Lac Vacive, Po**	**90.49**	**322**	P		**P**		**11 12 13.7**	**+0.3**
D53A				IAmb		IAmb		11 12 23.1	
	comp=Z,7.9nm,0.8s								
I51A	**Listowel**	**90.69**	**318**	P		**P**		**11 12 15.1**	**+0.8**
	baz=122								
D52A	**ZEK Kipawa Sen**	**90.84**	**322**	P		**P**		**11 12 15.4**	**+0.5**
	baz=123								
PLAL	**Pickwick Lake**	**91.13**	**308**	P		**P**		**11 12 16.2**	**-0.4**
PLAL				IAmb		IAmb		11 12 26.8	
	comp=Z,9.0nm,1.1s								
T47A	**Sharon Grove**	**91.36**	**310**	P		**P**		**11 12 17.5**	**-0.2**
T47A				IAmb		IAmb		11 12 28.3	
	comp=Z,14nm,1.1s								
WVT	**Waverly**	**91.48**	**309**	P		**P**		**11 12 18.0**	**-0.2**
WVT				pmax		pmax			
	comp=Z,4.0nm,1.0s								
WVT	**Waverly**	**91.48**	**309**	P		**P**		**11 12 18.8**	**+0.6**
	baz=118								
WVT	**Waverly**	**91.48**	**309**	P		**P**		**11 12 18.0**	**-0.2**
W45A	**Hickory Valley**	**92.02**	**307**	P		**P**		**11 12 19.3**	**-1.4**
SIUC	**Southern Illin**	**93.19**	**310**	P		**P**		**11 12 23.5**	**-2.5**
S44A	**Carbondale**	**93.21**	**310**	P		**P**		**11 12 24.9**	**-1.2**
T42A	**Van Buren**	**94.23**	**308**	P		**P**		**11 12 29.6**	**-1.2**
FCAR	**Ozark Folk Cen**	**94.50**	**307**	P		**P**		**11 12 31.4**	**-0.7**
FCAR				IAmb		IAmb		11 12 41.8	
	comp=Z,5.8nm,0.9s								
CCM	**Cathedral Cave**	**94.78**	**309**	P		**P**		**11 12 31.9**	**-1.5**
CCM				pmax		pmax			
	comp=Z,11nm,1.2s								
CCM	**Cathedral Cave**	**94.78**	**309**	P		**P**		**11 12 34.0**	**+0.7**
	baz=115								
CCM	**Cathedral Cave**	**94.78**	**309**	P		**P**		**11 12 31.9**	**-1.5**
CCM				IAmb		IAmb		11 12 44.1	
	comp=Z,11nm,1.1s								
R40A	**Maddies Statio**	**95.61**	**309**	P		**P**		**11 12 34.8**	**-2.3**
R40A				IAmb		IAmb		11 12 47.6	
	comp=Z,11nm,1.4s								
KIRV	**Kirov**	**96.32**	**28⇑**	*e*P		**P**		**11 12 38.5**	**-1.3**
ARCES	**ARCESS Array B**	**96.35**	**13**	LR		LR		11 58 02.9	
	comp=Z,71nm,18.8s,baz=262,slow=37								
AKTO	**Aktyubinsk**	**96.37**	**38**	LR		LR		11 58 56.0	
	comp=Z,45nm,18.9s,baz=233,slow=37								
TXAR	**Lajitas Array**	**101.02**	**297**	PP		**PP**		**11 17 09.1**	**-1.5**
	comp=Z,0.1nm,0.6s,baz=105,slow=7.9,SNR=4.4								
BVAR	**Borovoye Array**	**104.44**	**38**	PP		**PP**		**11 17 33.3**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=275,slow=7.1,SNR=1.9								
ZALV	**Zalesovo Beam**	**113.03**	**39**	PP		**PP**		**11 18 38.4**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=307,slow=15,SNR=3.5								
WMQ	**Urumqi**	**113.38**	**51**	*e*PKP		**PKiKP**		**11 17 49.3**	**-0.4**
WMQ				LR		LR			
	comp=Z,130nm,8.5s								
WMQ				LR		LR			
	comp=Z,41nm,12.7s								
WMQ				LR		LR			
	comp=Z,310nm,23.9s								
NVAR	**Mina Array Bea**	**115.14**	**303**	PKP		**PKiKP**		**11 17 54.5**	**+1.1**
	comp=Z,0.5nm,0.9s,baz=123,slow=3.3,SNR=2.5								
NVAR				PP		**PP**		**11 18 54.7**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=86,slow=6.5,SNR=2.8								
YKA	**Yellowknife Ar**	**115.19**	**330**	PKP		**PKiKP**		**11 17 51.8**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=94,slow=2.1,SNR=5.4								
YKA				PKKPbc		**PKKPab**		**11 28 31.2**	**-0.4**
	comp=Z,0.2nm,0.9s,baz=274,slow=3.0,SNR=2.1								
INK	**Inuvik**	**122.08**	**338**	PKP		**PKiKP**		**11 18 05.6**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=115,slow=1.3,SNR=6.6								
CD2	**Chengdu**	**124.12**	**67**	PKP		**PKPdf**		**11 18 09.5**	**-1.2**
LZH	**Lanzhou**	**124.76**	**61**	*e*PKP		**PKiKP**		**11 18 12.5**	**+0.3**
LZH				sPKP				11 18 17.3	
LZH				LR		LR			
	comp=Z,150nm,18.1s								
LZH				LR		LR			
	comp=Z,170nm,18.3s								
LZH				LR		LR			
	comp=Z,250nm,20.0s								
GYA	**Guiyang**	**125.94**	**73**	*e*PKP		**PKPdf**		**11 18 08.3**	**-6.1**
GYA				AMB		AMB			
	comp=Z,60nm,6.6s								
SONM	**Songino Array**	**126.57**	**47**	PKP		**PKPdf**		**11 18 13.6**	**-1.4**
	comp=Z,0.7nm,0.4s,baz=298,slow=3.1,SNR=2.3								
WRA	**Warramunga Arr**	**127.08**	**141**	PKP		**PKiKP**		**11 18 18.6**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=239,slow=2.4,SNR=7.3								
TOLK	**Toolik Lake Re**	**127.14**	**341**			**PKPdf**		**11 18 14.4**	**-1.0**
ILAR	**Eielson Array**	**128.42**	**337**	PKP		**PKiKP**		**11 18 18.1**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=337,slow=1.2,SNR=17								
HDA	**Harding Lake**	**128.63**	**336**			**PKPdf**		**11 18 17.1**	**-1.2**
RND	**Reindeer**	**129.88**	**336**	PKIKP		**PKiKP**		**11 18 21.1**	**-0.4**
RND	**Reindeer**	**129.88**	**336**			**PKiKP**		**11 18 21.1**	**-0.4**
HHC	**Hu-ho-hao-te**	**130.86**	**55**	*e*PKP		**PKPdf**		**11 18 19.5**	**-3.8**
BILL	**Bilibino**	**134.89**	**0**	*i* PKIKP		**PKiKP**		**11 18 32.2**	**+0.8**
BILL				pmax		pmax			
	comp=Z,3.0nm,0.9s								
NJ2	**Nanjing**	**137.05**	**67**	*e*PKP		**PKPdf**		**11 18 33.8**	**-1.2**
KLR	**Kul'dur**	**142.10**	**37**	PKhKP		**PKPdf**		**11 18 41.4**	**-2.3**
	comp=Z,1.0nm,0.5s,baz=323,slow=6.8,SNR=6.0								
KSRS	**Korea Array**	**143.91**	**57**	PKP		**PKPdf**		**11 18 46.2**	**-1.1**
	comp=Z,1.3nm,0.8s,baz=302,slow=2.6,SNR=3.6								
USRK	**Ussuriysk Ar.**	**144.64**	**45**	PKP		**PKPdf**		**11 18 47.5**	**-0.8**
	comp=Z,3.0nm,0.7s,baz=278,slow=4.0,SNR=5.1								
PETK	**Petropavlovsk-**	**149.13**	**10**	PKPbc		**PKPbc**		**11 18 59.3**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=355,slow=6.4,SNR=4.2								
MAT	**Matsushiro**	**152.05**	**55**	*e*PKP		**PKPbc**		**11 19 05.3**	**-2.0**
MJAR	**Matsushiro Arr**	**152.06**	**55**	PKPbc		**PKiKP**		**11 19 08.2**	**+0.5**
	comp=Z,2.9nm,0.7s,baz=276,slow=1.8,SNR=8.5								

IDC ***27*** *11:10:32.5±4.2,37.83N×72.75E,h128km±36km, mb3.3/5, mb1 3.3/10, mb1mx3.1/54, mbtmp3.7/10, Error ellipse: s-maj=34.1km s-min=24.5km az=165.0*
NNC ***27*** *11:10:37.2±2.2, 38.17N×70.71E, h0km, mb4.4, mpv4.2, Error ellipse: s-maj=25.8km s-min=15.1km az=104.0*

ISC 27 11:10:35.3±1.1, 38.05N±0.1×72.6E±0.1, h150km, n22, σ1§19/24, mb3.4/5, 2C, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.16**	**11**	P		**Pn**	**11 11 37.9**	**-0.1**
	SNR=67							
UCH	**Uchtor**	**4.42**	**19**	P		**Pn**	**11 11 41.6**	**+0.2**
	SNR=44							
KZA	**Kyzart**	**4.50**	**26**	P		**Pn**	**11 11 42.1**	**-0.4**
	SNR=8.1							
EKS2	**Erkin-Say**	**4.70**	**10**	P		**Pn**	**11 11 45.0**	**+0.3**
	SNR=13							
AAK	**Ala-Archa**	**4.80**	**17**	P		**Pn**	**11 11 46.5**	**+0.3**
	6.2nm,0.3s,baz=168,slow=6.4,SNR=35							
AAK				S		**Sn**	**11 12 42.0**	**+0.5**
	2.3nm,0.3s,baz=314,slow=21,SNR=23							
AAK	**Ala-Archa**	**4.80**	**17**	P		**Pn**	**11 11 46.8**	**+0.6**
	SNR=19							
KBK	**Karagaybulak**	**4.94**	**20**	P		**Pn**	**11 11 49.5**	**+1.5**
	SNR=5.3							
CHMS	**Chumysh**	**5.21**	**17**	P		**Pn**	**11 11 52.2**	**+0.8**
	SNR=5.6							
KK31	**Karatay Array**	**5.30**	**343**	P		**Pn**	**11 11 52.3**	**-0.3**
	15nm,0.3s,baz=154,slow=11,SNR=212							
KK31				S		**Sn**	**11 12 51.4**	**-1.6**
	14nm,0.3s,baz=185,slow=27,SNR=18							
USP	**Ospenovka**	**5.41**	**15**	P		**Pn**	**11 11 54.1**	**0.0**
	SNR=6.2							
MKAR	**Makanchi Array**	**11.28**	**36**	P		**Pn**	**11 13 11.5**	**-0.5**
	0.0nm,0.3s,baz=217,slow=12,SNR=2.1							
KURBB	**Kurchatov Arra**	**13.26**	**17**	P		**Pn**	**11 13 35.4**	**-2.2**
	0.0nm,0.3s,baz=209,slow=12,SNR=4.5							
AB31	**Akbulak array**	**14.46**	**325**	P		**Pn**	**11 13 50.6**	**-2.1**
	1.2nm,0.3s,baz=142,slow=12,SNR=32							
AB31				⇑S		Sn	11 16 22.1	-11
	0.5nm,0.4s							
BVAR	**Borovoye Array**	**15.06**	**355**	P		**Pn**	**11 14 00.2**	**0.0**
	0.6nm,0.3s,baz=159,slow=14,SNR=6.4							
AKTO	**Aktyubinsk**	**16.18**	**325**	P		**P**	**11 14 15.0**	**+0.7**
	1.0nm,0.3s,baz=137,slow=11,SNR=9.4							
AKTO	**Aktyubinsk**	**16.18**	**325**	⇑P		**Pn**	**11 14 13.7**	**-0.3**
	3.5nm,0.6s							
ZALV	**Zalesovo Beam**	**17.98**	**24**	P		**Pn**	**11 14 34.4**	**-1.1**
	0.3nm,0.3s,baz=216,slow=13,SNR=5.9							
MMAI	**Mount Meron Ar**	**30.56**	**272**	P		**P**	**11 16 36.3**	**+1.5**
	1.0nm,0.2s,baz=112,slow=10,SNR=6.6							
ARCES	**ARCESS Array B**	**40.23**	**336**	P		**P**	**11 17 58.6**	**+1.9**
	1.9nm,0.9s,baz=105,slow=5.7,SNR=4.7							
TORD	**Torodi Ar. Bea**	**67.04**	**269**	P		**P**	**11 21 11.2**	**-1.3**
	0.3nm,0.5s,baz=55,slow=5.7,SNR=5.9							
YKA	**Yellowknife Ar**	**79.64**	**3**	P		**P**	**11 22 26.9**	**+1.5**
	0.1nm,0.5s,baz=352,slow=5.6,SNR=1.5							
WRA	**Warramunga Arr**	**81.73**	**123**	P		**P**	**11 22 35.9**	**-1.3**
	0.3nm,0.6s,baz=318,slow=5.0,SNR=1.6							

IDC ***27*** *11:18:44.5±5.2,35.20N×71.03E,h0km, mb3.7/3, mb1 3.9/4, mb1mx3.4/47, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=117.7km s-min=58.6km az=140.0*

ISC 27 11:19:03.7±2.3, 36.2N±0.2×70.8E±0.2, h100km, n5, σ1§04/6, 1C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.90**	**358**	P		**Pn**	**11 20 43.2**	**+1.1**
	0.7nm,0.2s,baz=184,slow=15,SNR=23							
KK31				⇑S		**Sn**	**11 21 58.0**	**-1.1**
	1.1nm,0.3s,baz=188,slow=24,SNR=9.2							
AAK	**Ala-Archa**	**7.05**	**23**	Pn		**Pn**	**11 20 44.8**	**+0.4**
	0.5nm,0.3s,baz=186,slow=10,SNR=2.7							
AAK				Sn		**Sn**	**11 22 03.0**	**0.0**
	0.1nm,0.3s,baz=270,slow=15,SNR=1.5							
ZALV	**Zalesovo Beam**	**20.27**	**24**	P		Pn	11 23 29.5	-4.4
	1.2nm,0.4s,baz=217,slow=13,SNR=5.8							
ARCES	**ARCESS Array B**	**41.35**	**338**	P		**P**	**11 26 39.6**	**+0.3**
	3.4nm,1.1s,baz=118,slow=7.2,SNR=4.5							
YKA	**Yellowknife Ar**	**81.55**	**3**	P		**P**	**11 31 09.1**	**-0.8**
	0.1nm,0.5s,baz=350,slow=5.2,SNR=5.9							

GII ***27*** *11:21:29.00.3, 37.54N×22.82E, h80km*
ATH ***27*** *11:21:30.9, 37.54N×22.86E, h78km±1km, ML3.8/27, Error ellipse: s-maj=1.7km s-min=0.8km az=230.0*
ISK ***27*** *11:21:30.7, 37.56N×22.97E, h20km, ML3.5/18*
NEIC ***27*** *11:21:31.7±1.9, 37.54N±0.04×22.76E±0.06, h94km±4km, Error ellipse: s-maj=7.7km s-min=6.0km az=64.0*
PDG ***27*** *11:21:31.1±0.5, 37.55N×22.80E, h85km±1km, ML3.9/13, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
THE ***27*** *11:21:32.4, 37.55N×22.87E, h74km, ML3.9/24, Error ellipse: s-maj=0.8km s-min=0.4km az=271.0*
IDC ***27*** *11:21:32.1±1.7, 37.54N×22.82E, h94km±19km, mb3.5/12, mb1 3.6/17, mb1mx3.4/44, mbtmp3.8/17, Error ellipse: s-maj=17.0km s-min=14.4km az=149.0*
BEO ***27*** *11:21:34.00.8, 37.92N×22.60E, h0km, ML3.7/8*
HLW ***27*** *11:21:42.8, 36.65N×24.24E, h10km±33km, Md4.5, Ml3.9*

ISC 27 11:21:30.8±0.6, 37.56N±0.03×22.80E±0.03, h85km±5km, n266, σ1§60/356, mb4.0/15, 14C-11D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KRND	**KRANIDI**	**0.33**	**123**	P		**Pn**	**11 21 43.9**	**+0.1**
KRND				S		**Sn**	**11 21 52.9**	**-0.6**
	12μm,0.2s							
KRND	**KRANIDI**	**0.33**	**123**	P		**Pn**	**11 21 43.8**	**-0.1**
KRND				S		**Sn**	**11 21 52.7**	**-0.9**
KRND				AML		AML	11 21 54.0	
	comp=N,25540μm,0.3s							
KRND				AML		AML	11 21 55.2	
	comp=E,23402μm,0.2s							
DID	**Didima**	**0.35**	**99**	P		**Pn**	**11 21 43.8**	**-0.2**
DID				S		**Sn**	**11 21 52.7**	**-1.2**
	comp=E,10μm,0.3s							
DID	**Didima**	**0.35**	**99**	P		**Pn**	**11 21 43.8**	**-0.2**
DID				S		**Sn**	**11 21 52.7**	**-1.2**
DID				AML		AML	11 21 53.7	
	comp=E,16281μm,0.3s							
DID				AML		AML	11 21 55.5	
	comp=N,20988μm,0.2s							
VLX	**Vlachokerasia**	**0.39**	**241**	P		**Pn**	**11 21 44.9**	**+0.5**
VLX				S		**Sn**	**11 21 54.0**	**-0.4**
	comp=N,13μm,0.6s							
VLX	**Vlachokerasia**	**0.39**	**241**	P		**Pn**	**11 21 44.8**	**+0.5**
VLX				S		**Sn**	**11 21 53.5**	**-0.9**
VLX				AML		AML	11 21 54.7	
	comp=N,25888μm,0.4s							
VLX				AML		AML	11 21 55.0	
	comp=E,19011μm,0.3s							
TRIP	**Tripoli**	**0.42**	**266**	P		**Pn**	**11 21 45.4**	**+0.8**
TRIP				S		**Sn**	**11 21 54.9**	**+0.1**
	comp=E,8μm,0.4s							
TRIP	**Tripoli**	**0.42**	**266**	P		**Pn**	**11 21 45.3**	**+0.8**
TRIP				S		**Sn**	**11 21 54.7**	**-0.1**
TRIP				AML		AML	11 21 55.5	
	comp=N,15896μm,0.4s							
TRIP				AML		AML	11 21 55.5	
	comp=E,16767μm,0.5s							
LOUT	**Loutraki**	**0.45**	**18**	P		**Pn**	**11 21 45.0**	**+0.3**
LOUT				S		**Sn**	**11 21 54.7**	**-0.3**
	comp=E,5μm,0.2s							
LOUT	**Loutraki**	**0.45**	**18**	P		**Pn**	**11 21 44.9**	**+0.3**
LOUT				S		**Sn**	**11 21 55.2**	**+0.2**
LOUT				AML		AML	11 21 57.9	
	comp=E,2280μm,0.3s							
LOUT				AML		AML	11 21 58.7	
	comp=N,1680μm,0.2s							
LTK	**Loutraki**	**0.48**	**16**	P		**Pn**	**11 21 45.4**	**+0.5**
LTK				S		**Sn**	**11 21 55.5**	**+0.1**
	comp=N,5μm,0.2s							
LTK	**Loutraki**	**0.48**	**16**	P		**Pn**	**11 21 45.3**	**+0.3**
LTK				S		**Sn**	**11 21 54.7**	**-0.8**
LTK				AML		AML	11 21 55.5	
	comp=E,12509μm,0.3s							
LTK				AML		AML	11 21 58.0	
	comp=N,11369μm,0.2s							
YDRA	**Hydra**	**0.57**	**112**	P		**Pn**	**11 21 45.7**	**+0.1**
YDRA				S		**Sn**	**11 21 56.2**	**-0.5**
YDRA				AML		AML	11 21 57.9	
	comp=E,23290μm,0.2s							
YDRA				AML		AML	11 21 59.1	
	comp=N,21401μm,0.2s							
PROD	**Prodromos**	**0.70**	**6**	P		**Pn**	**11 21 47.4**	**+0.5**
PROD				S		**Sn**	**11 21 59.4**	**+0.5**
	comp=N,8μm,0.2s							
PROD	**Prodromos**	**0.70**	**6**	P		**Pn**	**11 21 47.3**	**+0.3**
PROD				S		**Sn**	**11 21 59.5**	**+0.6**
PROD				AML		AML	11 22 00.0	
	comp=N,14494μm,0.2s							
PROD				AML		AML	11 22 01.1	
	comp=E,17905μm,0.2s							
KLV	**Kalavryta, Ach**	**0.71**	**313**	P		**Pn**	**11 21 48.0**	**+0.9**
KLV	**Kalavryta, Ach**	**0.71**	**313**	P		**Pn**	**11 21 47.9**	**+0.9**
KLV				AML		AML	11 21 59.8	
	comp=N,10744μm,0.4s							
KLV				S		**Sn**	**11 22 00.2**	**+1.1**
KLV				AML		AML	11 22 01.7	
	comp=E,7415μm,0.4s							
VILL	**Villia**	**0.72**	**34**	P		**Pn**	**11 21 47.7**	**+0.5**
VILL				S		**Sn**	**11 21 58.9**	**-0.5**
VIL2	**Platees**	**0.74**	**29**	P		**Pn**	**11 21 47.6**	**+0.2**
VIL2				S		**Sn**	**11 21 59.1**	**-0.6**
VIL2				AML		AML	11 21 60.0	
	comp=N,14834μm,0.2s							
VIL2				AML		AML	11 22 01.4	
	comp=E,16287μm,0.3s							
ITM	**Ithomi**	**0.80**	**242**	P		**Pn**	**11 21 49.6**	**+1.7**
ITM				S		**Sn**	**11 22 01.9**	**+1.2**
	comp=E,4μm,0.3s							
ITM	**Ithomi**	**0.80**	**242**	P		**Pn**	**11 21 49.2**	**+1.3**
ITM				S		**Sn**	**11 22 01.7**	**+1.0**
ITM				AML		AML	11 22 03.4	
	comp=E,9308μm,0.3s							
ITM				AML		AML	11 22 04.6	
	comp=N,8324μm,0.3s					

KALE AML AML 11 22 06.5
comp=N,8786µm,0.3s
KALE AML AML 11 22 06.9
comp=E,9047µm,0.2s
TRIZ Trizonia 0.99 324 P **Pn** **11 21 51.1 +1.0**
TRIZ S **Sn** **11 22 05.9 +1.5**
comp=E,7µm,0.3s
TRIZ Trizonia 0.99 324 P **Pn** **11 21 51.0 +1.0**
TRIZ S **Sn** **11 22 05.4 +1.0**
DION Dionisos Attik 1.03 60 P **Pn** **11 21 51.4 +0.8**
DION S **Sn** **11 22 05.0 -0.4**
comp=E,7µm,0.3s
DION Dionisos Attik 1.03 60 P **Pn** **11 21 51.2 +0.6**
DION S **Sn** **11 22 04.4 -1.1**
DION AML AML 11 22 05.3
comp=E,16907µm,0.4s
DION AML AML 11 22 06.2
comp=N,10354µm,0.2s
SERG Sergoula 1.03 325 P **Pn** **11 21 51.8 +1.2**
SERG S **Sn** **11 22 07.0 +1.5**
comp=N,7µm,0.2s
SERG Sergoula 1.03 325 P **Pn** **11 21 51.7 +1.2**
SERG S **Sn** **11 22 06.2 +0.7**
SERG AML AML 11 22 08.8
comp=E,14773µm,0.3s
SERG AML AML 11 22 09.1
comp=N,12289µm,0.3s
PYL PYLOS 1.08 232 P **Pn** **11 21 51.8 +0.7**
PYL PYLOS 1.08 232 P **Pn** **11 21 51.7 +0.7**
LKR Lokris 1.10 8 P **Pn** **11 21 52.4 +1.1**
LKR S **Sn** **11 22 07.8 +1.1**
comp=N,13µm,0.2s
LKR Lokris 1.10 8 P **Pn** **11 21 52.2 +0.9**
LKR S **Sn** **11 22 07.3 +0.6**
LKR AML AML 11 22 08.3
comp=E,30903µm,0.2s
LKR AML AML 11 22 08.8
comp=N,22289µm,0.2s
EFP Efpalio 1.12 321 P **Pn** **11 21 53.0 +1.4**
EFP S **Sn** **11 22 08.9 +1.8**
comp=N,6µm,0.4s
RLS Riolos of Patr 1.17 295 P **Pn** **11 21 54.2 +2.0**
AXAR Agios Charalam 1.21 355 P **Pn** **11 21 53.9 +1.2**
AXAR S **Sn** **11 22 10.6 +1.4**
comp=N,11µm,0.4s
AXAR Agios Charalam 1.21 355 P **Pn** **11 21 53.8 +1.2**
AXAR S **Sn** **11 22 10.5 +1.4**
AXAR AML AML 11 22 11.1
comp=E,27142µm,0.4s
AXAR AML AML 11 22 14.8
comp=N,18640µm,0.3s
ANX Ano Chora 1.24 326 P **Pn** **11 21 54.7 +1.5**
ANX S **Sn** **11 22 11.7 +1.7**
comp=N,4µm,0.5s
ANX Ano Chora 1.24 326 P **Pn** **11 21 54.6 +1.5**
MRKA Markates 1.30 28 P **Pn** **11 21 54.9 +1.0**
MRKA S **Sn** **11 22 11.7 +0.6**
comp=N,3µm,0.7s
MRKA Markates 1.30 28 P **Pn** **11 21 54.8 +1.0**
MRKA S **Sn** **11 22 11.6 +0.5**
MRKA AML AML 11 22 12.0
comp=N,5201µm,0.8s
MRKA AML AML 11 22 12.1
comp=E,8647µm,0.5s
KARY Karystos 1.38 70 P **Pn** **11 21 55.5 +0.8**
KARY Karystos 1.38 70 P **Pn** **11 21 55.5 +0.8**
SERI Serifos 1.40 106 P **Pn** **11 21 55.3 +0.2**
SERI Serifos 1.40 106 P **Pn** **11 21 55.2 +0.2**
KYMI Kymi, Euboea I 1.48 43 P **Pn** **11 21 56.9 +0.8**
KYMI S **Sn** **11 22 15.8 +0.6**
comp=E,942nm,0.5s
KYMI Kymi, Euboea I 1.48 43 P **Pn** **11 21 56.8 +0.8**
KYMI S **Sn** **11 22 14.9 -0.2**
KYMI AML AML 11 22 15.7
comp=E,1786µm,0.5s
KYMI AML AML 11 22 16.5
comp=N,1968µm,0.6s
AGG Agios Georgios 1.50 346 P **Pn** **11 21 57.8 +1.4**
AGG Agios Georgios 1.50 346 P **Pn** **11 21 57.8 +1.4**
AGG Agios Georgios 1.50 346 PN **Pn** **11 21 57.7 +1.4**
AGG SN **Sn** **11 22 17.5 +1.7**
AGG Agios Georgios 1.50 346 **Pn** **11 21 57.5 +1.1**
AGG Sn **Sn** **11 22 17.6 +1.8**
MHLA Plaka, Milos I 1.53 122 P **Pn** **11 21 57.3 +0.6**
MAKR Makrakomi, Fth 1.54 340 P **Pn** **11 21 58.5 +1.6**
MAKR Makrakomi, Fth 1.54 340 P **Pn** **11 21 58.4 +1.6**
MHLO Agia Marina, M 1.55 124 P **Pn** **11 21 57.2 +0.3**
MHLO S **Sn** **11 22 17.0 +0.3**
comp=N,5µm,0.2s
MHLO Agia Marina, M 1.55 124 P **Pn** **11 21 57.2 +0.3**
EVR Evrytania 1.56 330 P **Pn** **11 21 58.8 +1.5**
EVR Evrytania 1.56 330 P **Pn** **11 21 58.7 +1.5**
SKIA Skiathos 1.68 18 P **Pn** **11 22 00.1 +1.4**
SKIA Skiathos 1.68 18 P **Pn** **11 22 00.1 +1.4**
SKIA S **Sn** **11 22 20.4 +0.5**
SKIA AML AML 11 22 21.4
comp=E,4716µm,0.5s
SKIA AML AML 11 22 22.0
comp=N,3523µm,0.4s
KFL Anninata 1.69 290 P **Pn** **11 22 00.1 +1.3**
VLMS Volimes, Zakyn 1.73 281 P **Pn** **11 21 59.9 +0.6**
ANKY Antikythira Is 1.74 167 P **Pn** **11 21 59.5 +0.1**
ANKY Antikythira Is 1.74 167 P **Pn** **11 21 59.4 -0.1**
NEO Neokhori 1.77 11 P **Pn** **11 22 01.0 +1.1**
NEO Neokhori 1.77 11 P **Pn** **11 22 01.2 +1.3**
AOS Alonnisos 1.81 27 P **Pn** **11 22 01.3 +0.9**
AOS Alonnisos 1.81 27 P **Pn** **11 22 01.2 +0.9**
AOS Alonnisos 1.81 27 PN **Pn** **11 22 00.9 +0.5**
XOR Xorichti 1.83 9 P **Pn** **11 22 01.7 +1.1**
VLS Valsamata 1.86 290 P **Pn** **11 22 01.8 +0.9**
TNSA Tinos 1.88 90 P **Pn** **11 22 01.8 +0.6**
SKY Skiros Island 1.90 46 P **Pn** **11 22 02.2 +0.6**
SKY Skiros Island 1.90 46 P **Pn** **11 22 02.1 +0.6**
THL Klokotos Trika 2.09 343 P **Pn** **11 22 05.3 +1.3**
RODP Rodopos 2.14 159 P **Pn** **11 22 05.0 +0.3**
RODP Rodopos 2.14 159 PN **Pn** **11 22 05.2 +0.5**
IOSP Ios island 2.15 112 P **Pn** **11 22 05.7 +0.8**
IOSP S **Sn** **11 22 31.4 +0.5**
comp=N,1µm,0.2s
IOSP Ios island 2.15 112 P **Pn** **11 22 05.5 +0.6**
APE Apeiranthos 2.23 102 P **Pn** **11 22 06.5 +0.6**
APE Apeiranthos 2.23 102 P **Pn** **11 22 06.3 +0.4**
APE Apeiranthos 2.23 102 ⇑P **Pn** **11 22 06.5 +0.6**
APE Apeiranthos 2.23 102 PN **Pn** **11 22 05.8 -0.1**
APE SN **Sn** **11 22 31.5 -1.3**
IMMV Iera Moni Meta 2.30 155 P **Pn** **11 22 06.8 0.0**
IMMV Iera Moni Meta 2.30 155 P **Pn** **11 22 06.9 0.0**
IMMV Iera Moni Meta 2.30 155 PN **Pn** **11 22 07.4 +0.5**
VAM Vamos 2.43 152 P **Pn** **11 22 08.7 +0.2**
KNDR Palaiochora Ch 2.43 163 PN **Pn** **11 22 10.3 +1.7**
SANT Santorini 2.44 118 ⇑P **Pn** **11 22 09.9 +1.2**
SANT Santorini 2.44 118 PN **Pn** **11 22 09.0 +0.3**
SANT Santorini 2.44 118 **Pn** **11 22 09.6 +0.9**
PAIG Paliouri 2.46 16 P **Pn** **11 22 10.0 +1.1**
LIT Litokhoron 2.55 355 P **Pn** **11 22 11.4 +1.3**
LIT Litokhoron 2.55 355 **Pn** **11 22 11.4 +1.3**
AMGA Amorgos Island 2.57 106 P **Pn** **11 22 11.7 +1.2**
AMGA Amorgos Island 2.57 106 P **Pn** **11 22 11.5 +1.1**
ANAF Anafi Island 2.67 116 P **Pn** **11 22 13.0 +1.3**
ANAF Anafi Island 2.67 116 P **Pn** **11 22 12.8 +1.1**
CHOS Chios Island 2.70 71 P **Pn** **11 22 13.4 +1.2**
CHOS Chios Island 2.70 71 PN **Pn** **11 22 12.6 +0.4**
IGT Igoumenitsa 2.76 316 *e*Pn **Pn** **11 22 14.6 +1.6**
IGT *e*Sn **Sn** **11 22 45.7 +0.3**
IDI Anoyia 2.83 143 P **Pn** **11 22 13.8 -0.2**
comp=N,15nm,0.3s,baz=278,slow=12,SNR=84
IDI S **Sn** **11 22 46.5 -0.6**
comp=N,32nm,0.3s,baz=280,slow=22,SNR=4.2
IDI Anoyia 2.83 143 ⇓P **Pn** **11 22 13.2 -0.7**
IDI Anoyia 2.83 143 PN **Pn** **11 22 14.3 +0.4**
IDI Anoyia 2.83 143 **Pn** **11 22 13.2 -0.7**
PLG Polygyros 2.85 10 P **Pn** **11 22 15.4 +1.1**
GVD Gavdhos 2.91 159 PN **Pn** **11 22 16.3 +1.3**
SIGR SIGRI 2.91 55 PN **Pn** **11 22 15.7 +0.7**
HRKL Herakleio 2.91 140 PN **Pn** **11 22 16.4 +1.4**
OUR Ouranopolis 2.92 18 P **Pn** **11 22 16.4 +1.4**
OUR Ouranopolis 2.92 18 PN **Pn** **11 22 16.5 +1.4**
HORT Hortiatis 3.04 4 P **Pn** **11 22 18.2 +1.4**
URLA Izmir 3.10 74 PN **Pn** **11 22 18.4 +0.8**
SMG Samos 3.21 86 P **Pn** **11 22 20.3 +1.3**
LAST Lasithi 3.23 137 P **Pn** **11 22 19.8 +0.4**
FNA Florina 3.40 341 *e*Pn **Pn** **11 22 23.5 +1.8**
FNA *e*Sn **Sn** **11 23 00.4 -0.6**
FNA Florina 3.40 341 **Pn** **11 22 23.6 +1.9**
FNA Sn **Sn** **11 23 03.5 +2.5**
BOZC Bozcaada 3.41 47 PN **Pn** **11 22 22.6 +0.8**
BLCB Balcova 3.45 75 PN **Pn** **11 22 23.2 +0.9**
GCAM G?zelcaml? 3.52 86 PN **Pn** **11 22 24.3 +1.1**
DKL Dikili 3.56 64 PN **Pn** **11 22 24.9 +1.1**
EZN Ezine 3.56 50 PN **Pn** **11 22 25.3 +1.5**
GADA Gvkgeada 3.57 42 PN **Pn** **11 22 24.6 +0.7**
SRS Serrai 3.60 10 *e*Pn **Pn** **11 22 25.9 +1.6**
SRS *e*Sn **Sn** **11 23 06.0 +0.2**
SRS Serrai 3.60 10 P **Pn** **11 22 26.0 +1.6**
BODT Bodrum 3.63 97 PN **Pn** **11 22 25.8 +1.1**
ZKR Zakros 3.68 131 PN **Pn** **11 22 26.9 +1.4**
VAY Valandovo 3.76 357 *e*Pn **Pn** **11 22 28.8 +2.3**
VAY Valandovo 3.76 357 *i* Pn **Pn** **11 22 28.7 +2.3**
VAY Valandovo 3.76 357 *i* Pn **Pn** **11 22 28.7 +2.3**
OHR Ohrid 3.87 337 *i* Pn Pn 11 22 35.6 +7.5
OHR Ohrid 3.87 337 *i* Pn Pn 11 22 35.6 +7.5
KARP Karpathos 4.04 119 PN **Pn** **11 22 31.9 +1.5**
KARP Karpathos 4.04 119 **Pn** **11 22 31.7 +1.3**
KARP Sn **Sn** **11 23 16.6 0.0**
AYDB Zeytinkoy-Aydi 4.05 83 PN **Pn** **11 22 31.8 +1.3**
MMB Musomiste 4.08 10 *i* P **Pn** **11 22 32.2 +1.3**
STIP Stip 4.15 354 *i* Pn **Pn** **11 22 34.8 +2.9**
STIP Stip 4.15 354 *i* Pn **Pn** **11 22 34.8 +2.9**
SCTE Santa Cesarea 4.21 308 **Pn** **11 22 33.1 +0.5**
TIR Tirane 4.41 330 Pn **Pn** **11 22 35.1 -0.2**
KDZ Kurdzhali 4.55 25 *i* P **Pn** **11 22 38.0 +0.7**
MANT Manisa 4.64 77 Pn **Pn** **11 22 39.7 +1.1**
BOSS Bosilegrad 4.93 357 *e*Pn **Pn** **11 22 44.8 +2.3**
TIP Timpagrande 5.02 291 ⇑P **Pn** **11 22 44.3 +0.6**
TIP Timpagrande 5.02 291 **Pn** **11 22 44.2 +0.6**
VTS Vitosha 5.06 4 *e*Pn **Pn** **11 22 46.8 +2.5**
VTS Vitosha 5.06 4 ⇑P **Pn** **11 22 46.8 +2.5**
VTS Vitosha 5.06 4 **Pn** **11 22 46.5 +2.1**
ULC Ulcinj 5.18 329 ⇑*i*Pn **Pn** **11 22 45.8 0.0**
ULC *i* Sn **Sn** **11 23 43.3 -0.9**
BARS Barje 5.30 352 *e*Pn **Pn** **11 22 48.5 +1.0**
DRME Dracevica, Mon 5.39 330 *e*Pn **Pn** **11 22 48.9 +0.2**
DRME Dracevica, Mon 5.39 330 ⇓*i*Pn **Pn** **11 22 49.1 +0.4**
DRME *i* Sn **Sn** **11 23 48.3 -1.1**
PVY Plav 5.48 337 ⇑*i*Pn **Pn** **11 22 51.7 +1.7**
PVY *i* Sn **Sn** **11 23 50.5 -1.2**
CEL Celeste 5.51 279 **Pn** **11 22 50.6 +0.3**
PDG Podgorica 5.57 332 *e*Pn **Pn** **11 22 51.7 +0.6**
PDG *e*Sn **Sn** **11 23 51.7 -2.0**
PDG Podgorica 5.57 332 ⇑P **Pn** **11 22 51.8 +0.7**
PDG Podgorica 5.57 332 *e*Pn **Pn** **11 22 51.5 +0.4**
PDG Podgorica 5.57 332 **Pn** **11 22 51.5 +0.4**
TTG Podgorica 5.57 332 ⇓*i*Pn **Pn** **11 22 51.7 +0.6**
TTG *i* Sn **Sn** **11 23 52.7 -1.0**
BUM Brajici-Budva 5.61 329 ⇑*i*Pn **Pn** **11 22 52.6 +1.0**
BUM *i* Sn **Sn** **11 23 53.5 -1.2**
MATE Matera 5.66 305 ⇓P **Sn** **11 23 50.0 -5.7**
ZAPS Zavoj 5.71 359 *e*Pn **Pn** **11 22 54.3 +1.3**
IVA Berane 5.75 338 ⇑*i*Pn **Pn** **11 22 54.7 +1.0**
IVA *i* Sn **Sn** **11 23 57.0 -1.3**
SELS Selova 5.79 348 *e*Pn **Pn** **11 22 54.6 +0.4**
CEME Cevo 5.80 330 ⇓*i*Pn **Pn** **11 22 53.9 -0.4**
CEME *i* Sn **Sn** **11 23 58.2 -1.3**
KOME Kolasin 5.85 336 ⇓*i*Pn **Pn** **11 22 56.4 +1.4**
KOME *i* Sn **Sn** **11 23 59.3 -1.4**
HCY Herceg Novi 5.89 327 *e*Pn **Pn** **11 22 53.8 -1.7**
HCY Herceg Novi 5.89 327 ⇓*i*Pn **Pn** **11 22 54.5 -1.0**
HCY *i* Sn **Sn** **11 24 00.4 -1.2**
NKME Niksic 5.98 332 ⇓*i*Pn **Pn** **11 22 55.6 +1.8**
NKME *i* Sn **Sn** **11 24 02.3 -1.4**
NKY Niksic 6.00 332 ⇓*i*Pn **Pn** **11 22 59.0 +1.9**
NKY *i* Sn **Sn** **11 24 03.0 -1.4**
SJES Sjenica 6.09 340 *e*Pn **Pn** **11 22 58.0 -0.3**
TREB Trebinje 6.18 328 *e*Pn **Pn** **11 23 00.8 +1.5**
TREB *e*Sn **Sn** **11 24 03.9 -4.6**
TREB Trebinje 6.18 328 *e*Pn **Pn** **11 22 58.0 -1.3**
DBRK Dubrovnik 6.22 326 *e*Pn **Pn** **11 22 58.6 -1.4**
DBRK Sn **Sn** **11 24 04.9 -4.8**
BRY Bratogost 6.25 330 *e*Pn **Pn** **11 23 01.8 +1.3**
BRY Bratogost 6.25 330 ⇑*i*Pn **Pn** **11 23 02.3 +1.8**
BRY *i* Sn **Sn** **11 24 08.9 -1.6**
ZAGS Zajecar 6.26 356 *e*Pn **Pn** **11 23 01.3 +0.8**
PLE Pljevlja 6.32 337 ⇑*i*Pn **Pn** **11 23 01.7 +0.3**
PLE *i* Sn **Sn** **11 24 10.6 -1.6**
UPM Unac-Piva 6.37 333 *e*Pn **Pn** **11 23 03.4 +1.3**
UPM Unac-Piva 6.37 333 ⇓*i*Pn **Pn** **11 23 03.5 +1.3**
UPM *i* Sn **Sn** **11 24 11.5 -2.0**
SLUM Salum 6.37 161 AMP 11 24 00.0
baz=170
GRUS Gruza 6.52 347 *e*Pn **Pn** **11 23 04.7 +0.7**
STON Ston 6.58 325 *e*Pn **Pn** **11 23 05.2 +0.3**
STON *e*Sn **Sn** **11 24 14.8 -3.6**
STON Ston 6.58 325 *e*Pn **Pn** **11 23 03.0 -1.9**
STON Ston 6.58 325 *i* Pn **Pn** **11 23 03.9 -1.0**
STON *i* Sn **Sn** **11 24 13.4 -5.0**
VAE Valguarnera 6.67 272 P **Pn** **11 23 07.0 +0.8**
comp=N,19nm,0.3s,baz=200,slow=8.3,SNR=2.6
VAE S **Sn** **11 24 20.6 -0.2**
baz=123,slow=18,SNR=1.5
BBLS Lazići 6.80 339 *e*Pn **Pn** **11 23 09.5 +1.5**
BBLS *e*Sn **Sn** **11 24 20.2 -3.7**
BBLS Lazići 6.80 339 *e*Pn **Pn** **11 23 07.2 -0.8**
DIVS Divibare 6.87 343 *e*Pn **Pn** **11 23 09.9 +1.0**
DIVS *e*Sn **Sn** **11 24 20.5 -5.0**
DIVS Divibare 6.87 343 *e*Pn **Pn** **11 23 08.6 -0.3**
DIVS Divibare 6.87 343 **Pn** **11 23 08.3 -0.5**
SGRT San Giovanni R 6.87 310 Pn **Pn** **11 23 08.3 -0.6**
WDD Wied Dalam 6.87 258 Pn **Pn** **11 23 08.2 -0.7**
MAKA Makarska 7.22 324 *i* Pn **Pn** **11 23 12.0 -1.5**
MAKA Sn **Sn** **11 24 28.4 -5.6**
PAOL Paolisi 7.26 301 Pn **Pn** **11 23 14.6 +0.3**
RICI Ricice 7.33 326 *e*Pn **Pn** **11 23 13.8 -1.3**
RICI Sn **Sn** **11 24 31.9 -4.8**
TEKS Tekeris 7.41 342 *e*Pn **Pn** **11 23 15.6 -0.5**
CORL Corleone 7.54 275 **Pn** **11 23 20.0 +2.0**
CLTB Caltabellotta 7.62 273 Pn **Pn** **11 23 20.6 +1.5**
VOIR 8.05 11 ⇑P **Pn** **11 23 28.2 +3.3**
KIJV Kijevo 8.06 325 *e*Pn **Pn** **11 23 23.9 -1.1**
MGRS Mrkonjic Grad 8.10 330 *e*Pn **Pn** **11 23 26.6 +1.0**
ZIRJ Zirje 8.16 320 *e*Pn **Pn** **11 23 25.0 -1.5**
ZIRJ Sn **Sn** **11 24 50.7 -6.3**
INTR Introdacqua 8.16 306 Pn **Pn** **11 23 27.5 +1.0**
MLR Muntele Rosu 8.26 16 P **Pn** **11 23 31.4 +3.4**
comp=N,0.8nm,0.3s,baz=141,slow=9.8,SNR=4.6
MLR Muntele Rosu 8.26 16 ⇑P **Pn** **11 23 31.9 +4.0**
MLR Muntele Rosu 8.26 16 **Pn** **11 23 30.7 +2.8**
MORI Morici 8.29 322 *e*Pn **Pn** **11 23 26.9 -1.2**
BLY Banja Luka 8.34 331 *e*Pn **Pn** **11 23 29.6 +0.8**
DUGI Dugi Otok 8.70 320 *e*Pn **Pn** **11 23 33.2 -0.6**
DUGI Sn **Sn** **11 25 03.4 -6.8**
BR131 Keskin Array S 8.75 72 Pn **Pn** **11 23 36.2 +1.6**
BRTR Keskin Array B 8.75 72 P **Pn** **11 23 37.6 +3.0**
comp=N,0.6nm,0.3s,baz=256,slow=14,SNR=13
PLOR Plostina 8.77 18 ⇓P **Pn** **11 23 38.3 +3.6**
VRI Vrincioaia 8.80 18 ⇑P **Pn** **11 23 39.8 +4.7**
NRCA Norcia 9.09 308 **Pn** **11 23 43.0 +3.8**
MORH Mrgy, Hungar 9.18 342 *e*Pn **Pn** **11 23 39.3 -1.0**
NVLJ Novalja 9.21 322 *e*Pn **Pn** **11 23 38.9 -1.7**
NVLJ Sn **Sn** **11 25 14.5 -7.9**
CRES Cresnjev 9.91 329 *e*Pn **Pn** **11 23 47.8 -2.5**
CEY Cerknica 10.29 325 *e*Pn **Pn** **11 23 53.7 -1.8**
KZIT Kziot 11.66 121 Pn **Pn** **11 24 12.3 -1.8**
YTIR Yattir 11.89 118 Pn **Pn** **11 24 15.6 -1.7**
DSI Dead Sea 11.96 116 Pn **Pn** **11 24 16.8 -1.4**
GHAJ Ghor Haditha 12.24 117 Pn **Pn** **11 24 20.7 -1.2**
PRNI Paran 12.41 122 Pn **Pn** **11 24 22.3 -2.0**
HRFI Mount Harif 12.63 123 Pn **Pn** **11 24 25.1 -2.2**
GERES GERESS Array B 13.07 332 P **Pn** **11 24 36.2 +3.1**
comp=N,0.2nm,0.3s,baz=162,slow=13,SNR=1.6
ESDC Sonseca Array 21.00 284 P **P** **11 26 07.7 +0.4**
comp=N,0.5nm,0.6s,baz=83,slow=11,SNR=4.1
HFS Hagfors 23.33 348 P **P** **11 26 30.6 -0.6**
comp=N,2.3nm,0.4s,baz=158,slow=9.6,SNR=14
FINES FINESS Array B 23.99 4 P **P** **11 26 37.9 +0.8**
comp=N,0.8nm,0.5s,baz=161,slow=12,SNR=4.9
NC602 NORSAR Array S 24.27 346 P **P** **11 26 40.5 +0.9**
NAO01 NORSAR Array S 24.49 346 P **P** **11 26 41.6 -0.1**
NAO01 IAmb IAmb 11 26 50.5
comp=Z,28nm,1.2s
NB201 NORSAR Array S 24.60 347 P **P** **11 26 43.2 +0.5**
NB201 IAmb IAmb 11 26 52.0
comp=Z,29nm,1.3s
NOA NORSAR Array B 24.61 346 P **P** **11 26 43.4 +0.6**
comp=Z,0.4nm,0.4s,baz=152,slow=10.0,SNR=5.6
NBO00 NORSAR Array S 24.68 346 P **P** **11 26 45.4 +2.0**
NBO00 IAmb IAmb 11 26 51.3
comp=Z,19nm,1.2s
EKA Eskdalemuir Ar 24.98 324 P **P** **11 26 47.3 +1.1**
comp=Z,1.8nm,0.3s,baz=122,slow=9.3,SNR=20
ESK Eskdalemuir 25.00 324 P **P** **11 26 47.5 +1.2**
TOA0 Torodi Ar. Sit 30.75 223 P **P** **11 27 36.6 -1.5**
TOA0 IAmb IAmb 11 27 40.2
comp=Z,9.0nm,1.4s
TORD Torodi Ar. Bea 30.75 223 P **P** **11 27 39.0 +0.9**
comp=Z,0.8nm,0.8s,baz=29,slow=8.9,SNR=5.7
ARCES ARCESS Array B 32.07 2 P **P** **11 27 48.7 -0.4**
comp=Z,1.6nm,0.9s,baz=190,slow=9.2,SNR=3.7
DBIC Dimbokro 39.72 226 P **P** **11 28 56.2 +1.2**
comp=Z,1.4nm,0.5s,baz=77,slow=14,SNR=1.4
DBIC Dimbokro 39.72 226 P **P** **11 28 55.3 +0.3**
KURBB Kurchatov Arra 41.15 53 P **P** **11 29 06.9 +0.5**
comp=Z,1.1nm,0.4s,baz=275,slow=8.7,SNR=6.9
KURK Kurchatov 41.20 53 P **P** **11 29 07.2 +0.4**
MKAR Makanchi Array 44.09 58 P **P** **11 29 30.3 0.0**
comp=Z,0.4nm,0.4s,baz=266,slow=9.6,SNR=7.3
ZALV Zalesovo Beam 44.76 48 P **P** **11 29 35.9 +0.4**
comp=Z,1.9nm,0.4s,baz=266,slow=8.1,SNR=8.1
YKA Yellowknife Ar 74.57 341 P **P** **11 33 01.1 +1.1**
comp=Z,0.2nm,0.8s,baz=39,slow=4.9,SNR=3.2

*OSPL **27** 11:41:19.8±0.3, 19°.03N×68°.25W, h90km±13km, ML2.7*
*RSPR **27** 11:41:21.9, 19°.23N×68°.19W, h16km±6km, MD3.0/11*
*NEIC **27** 11:41:22.1±1.9, 19°.20N±0°.08×68°.14W±0°.05, h36km±85km,*
Error ellipse: s-maj=11.7km s-min=6.3km az=177.0
ISC 27 11:41:21.9±1.8, **19°.09N**±0°.08×**68°.16W**±0°.04, **h25**km±18km,
n42, σ0**86**/54, **10C-1D**, **North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.61**	**201**	⇓*e*P		**Pn**		**11 41 34.2**	**-0.7**
PCDR	**Punta Cana, DR**	**0.61**	**201**			**Pn**		**11 41 34.3**	**-0.7**
PCDR						**Sn**		**11 41 44.2**	**+0.2**
PCDR	**Punta Cana, DR**	**0.61**	**201**	*i* P		**Pn**		**11 41 34.1**	**-0.9**
PCDR				*e*S		**Sn**		**11 41 44.5**	**+0.4**
PCDR				IAML				11 41 45.5	
	comp=Z,206nm,0.2s								
AGPR	**Aguadilla, PR**	**1.17**	**122**	⇑*e*P		**Pn**		**11 41 42.4**	**-0.3**
AGPR	**Aguadilla, PR**	**1.17**	**122**	*e*S		**Sn**		**11 41 58.2**	**+0.3**
AGPR	**Aguadilla, PR**	**1.17**	**122**			**Pn**		**11 41 42.4**	**-0.3**
AGPR						**Sn**		**11 41 58.1**	**+0.3**
AGPR	**Aguadilla, PR**	**1.17**	**122**	*i* P		**Pn**		**11 41 41.0**	**-1.8**
AGPR				*e*S		**Sn**		**11 41 56.8**	**-1.1**
AGPR				IAML				11 42 01.1	
	comp=Z,112nm,0.2s								
DR12	**Loma Pena Alta**	**1.20**	**256**				**Pb**	**11 41 44.5**	**+0.5**
MPR	**Mayaguez**	**1.30**	**132**	*i* P			**Pn**	**11 41 42.4**	**-2.1**
LSP	**Las Mesas**	**1.36**	**132**	⇑*e*P			**Pn**	**11 41 45.1**	**-0.3**
LSP	**Las Mesas**	**1.36**	**132**	*e*S			**Sn**	**11 42 03.5**	**+0.8**
LSP	**Las Mesas**	**1.36**	**132**				**Pn**	**11 41 45.1**	**-0.3**
LSP							**Sn**	**11 42 03.5**	**+0.8**
CRPR	**Cabo Rojo, PR**	**1.46**	**137**	⇑*e*P			**Pn**	**11 41 46.7**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.46**	**137**	*e*S			**Sn**	**11 42 05.8**	**+0.7**
CRPR	**Cabo Rojo, PR**	**1.46**	**137**				**Pn**	**11 41 46.9**	**+0.1**
CRPR							**Sn**	**11 42 06.0**	**+0.9**
AOPR	**Arecibo Observ**	**1.52**	**119**	⇑*e*P			**Pn**	**11 41 47.2**	**-0.4**
AOPR	**Arecibo Observ**	**1.52**	**119**	*e*S			**Sn**	**11 42 06.2**	**-0.4**
AOPR	**Arecibo Observ**	**1.52**	**119**				**Pn**	**11 41 46.6**	**-1.0**
AOPR							**Sn**	**11 42 06.2**	**-0.4**
MLPR	**Magueyes Islan**	**1.53**	**136**	⇑*e*P			**Pn**	**11 41 47.4**	**-0.4**
MLPR	**Magueyes Islan**	**1.53**	**136**	*e*S			**Sn**	**11 42 07.3**	**+0.5**
MLPR	**Magueyes Islan**	**1.53**	**136**				**Pn**	**11 41 48.0**	**+0.3**
MLPR							**Sn**	**11 42 08.0**	**+1.1**
EMPR	**Esperanza - Ma**	**1.66**	**111**	⇑*e*P			**Pn**	**11 41 49.0**	**-0.5**
EMPR	**Esperanza - Ma**	**1.66**	**111**	*e*S			**Sn**	**11 42 09.8**	**-0.1**
EMPR	**Esperanza - Ma**	**1.66**	**111**				**Pn**	**11 41 48.9**	**-0.5**
OBIP	**Obispado Ponce**	**1.80**	**125**	⇑*e*P			**Pn**	**11 41 50.7**	**-0.7**
OBIP	**Obispado Ponce**	**1.80**	**125**	*e*S			**Sn**	**11 42 13.5**	**0.0**
OBIP	**Obispado Ponce**	**1.80**	**125**				**Pn**	**11 41 51.6**	**+0.2**
OBIP						Sn	**Sn**	**11 42 14.4**	**+0.9**
ICMP	**Isla Caja de M**	**1.95**	**127**			Pn	**Pn**	**11 41 54.9**	**+1.3**
ICMP						Sn	**Sb**	**11 42 20.2**	**-0.5**
GCPR	**Guaynabo City**	**2.11**	**111**			Pn	**Pn**	**11 41 55.3**	**-0.5**
GCPR						Sn	**Sn**	**11 42 22.7**	**+1.5**
BANI	**BANI**	**2.20**	**252**			Pn	**Pn**	**11 41 55.0**	**-2.0**
CBYP	**Canovanas**	**2.33**	**110**			Pn	**Pn**	**11 41 57.2**	**-1.5**
HUMP	**Col San Antoni**	**2.38**	**113**	⇑*e*P			**Pn**	**11 41 58.6**	**-0.8**
HUMP	**Col San Antoni**	**2.38**	**113**	*e*S			**Sn**	**11 42 27.8**	**-0.1**
HUMP	**Col San Antoni**	**2.38**	**113**				**Pn**	**11 41 58.8**	**-0.6**
MTP	**Monte Pirata**	**2.66**	**111**	⇑*e*P			**Pn**	**11 42 03.2**	**-0.1**
MTP	**Monte Pirata**	**2.66**	**111**	*e*S			**Sn**	**11 42 34.5**	**-0.2**
MTP	**Monte Pirata**	**2.66**	**111**				**Pn**	**11 42 02.3**	**-0.9**
MTP						Sn	**Sn**	**11 42 36.4**	**+1.7**
CUPR	**Culebra, Puert**	**2.83**	**105**	*e*S			**Sn**	**11 42 39.3**	**+0.3**
CUPR	**Culebra, Puert**	**2.83**	**105**	⇑*e*P			**Pn**	**11 42 04.7**	**-0.9**
CUPR	**Culebra, Puert**	**2.83**	**105**				**Pn**	**11 42 05.1**	**-0.5**
SDDR	**Presa de Saban**	**2.96**	**269**			Pn	**Pn**	**11 42 08.4**	**+0.9**
STVI	**Saint Thomas**	**3.12**	**103**			Pn	**Pn**	**11 42 09.8**	**+0.2**

*BEO **27** 11:42:23.0±0.7, 40°.18N×26°.22E, h0km, ML3.6/12*
*ISK **27** 11:42:27.9, 40°.36N×25°.88E, h8km, ML3.9/21*
*SOF **27** 11:42:27.7, 40°.41N×25°.70E, h4km, MD3.6*
*DDA **27** 11:42:28.9, 40°.33N×25°.96E, h17km±1km, MW3.8*
*ATH **27** 11:42:28.6, 40°.35N×25°.78E, h35km±2km, ML3.5/13, Error ellipse: s-maj=2.8km s-min=1.2km az=66.0*
*THE **27** 11:42:28.6, 40°.37N×25°.87E, h11km±1km, ML3.5/14, Error ellipse: s-maj=1.1km s-min=0.6km az=58.0*
ISC 27 11:42:28.7±0.8, **40°.35N**±0°.01×**25°.88E**±0°.01, **h13**km±6km,
n154, σ1§**00**/205, **17C-8D**, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.16**	**175**			P	**Pg**	**11 42 33.0**	**+0.5**
GADA						S	**Sg**	**11 42 35.7**	**+0.5**
	43µm,0.3s								
GADA	**Gvkgeada**	**0.16**	**175**			PG	**Pg**	**11 42 32.3**	**-0.2**
GOKA	**anakkale-Gk**	**0.16**	**172**	*i* P			**Pg**	**11 42 33.1**	**-0.5**
SMTH	**Samoth

BAYC	**CANAKKALE_Bayr**	**0.80**	**140**	*i* P		**Pg**	**11 42 43.5**	**-0.6**
BAYC				*i* S		**Sg**	**11 42 54.0**	**-0.6**
BAYC				IAML			11 42 55.0	
	comp=N,2μm,0.3s							
BAYC				IAML			11 42 57.0	
	comp=E,2μm,0.2s							
RDO	**Rodhopi**	**0.84**	**342**	P		**Pg**	**11 42 44.2**	**-0.8**
RDO				S		**Sg**	**11 42 55.7**	**-0.2**
	comp=E,5μm,0.2s							
RDO	**Rodhopi**	**0.84**	**342**	P		**Pg**	**11 42 44.2**	**-0.8**
RDO				S		**Sg**	**11 42 55.7**	**-0.2**
RDO				AML	AML		11 42 57.7	
	comp=E,9601μm,0.2s							
RDO				AML	AML		11 42 58.3	
	comp=N,9836μm,0.2s							
RDO	**Rodhopi**	**0.84**	**342**	PG		**Pg**	**11 42 44.2**	**-0.8**
THAS	**Thassos island**	**0.92**	**287**	P		**Pg**	**11 42 45.6**	**-0.9**
THAS				S		**Sg**	**11 42 58.2**	**-0.4**
	comp=N,2μm,0.4s							
THAS	**Thassos island**	**0.92**	**287**	P		**Pg**	**11 42 45.6**	**-0.9**
THAS				S		**Sg**	**11 42 57.9**	**-0.7**
THAS				AML	AML		11 42 59.5	
	comp=N,4086μm,0.5s							
THAS				AML	AML		11 43 01.0	
	comp=E,4289μm,0.3s							
UKOP	**Uzunkopru-Edir**	**0.97**	**36**	PG		**Pg**	**11 42 46.7**	**-0.7**
UKOP				SG		**Sb**	**11 43 00.3**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.05**	**71**	PG		**Pg**	**11 42 47.9**	**-1.0**
RKY				SG		**Sn**	**11 43 03.1**	**-0.5**
SART	**Tekirdag**	**1.05**	**71**	*i* P		**Pg**	**11 42 47.7**	**-1.3**
SART				*i* S		**Sg**	**11 43 02.1**	**-0.5**
SART				IAML			11 43 03.0	
	comp=E,611nm,0.3s							
EFSA	**Agios Efstrati**	**1.06**	**221**	P		**Pb**	**11 42 48.6**	**-0.3**
KRBG	**Karabiga-Canak**	**1.08**	**87**	PN		**Pb**	**11 42 48.4**	**-0.9**
KRBG				SN		**Sn**	**11 43 04.5**	**0.0**
SIGR	**SIGRI**	**1.14**	**181**	P		**Pb**	**11 42 49.9**	**-0.3**
SIGR				S		**Sn**	**11 43 06.1**	**+0.3**
	comp=E,10μm,0.5s							
SIGR	**SIGRI**	**1.14**	**181**	P		**Pb**	**11 42 50.1**	**-0.1**
SIGR				S		**Sb**	**11 43 05.4**	**+0.5**
SIGR				AML	AML		11 43 07.4	
	comp=N,29811μm,0.6s							
SIGR				AML	AML		11 43 07.8	
	comp=E,10956μm,0.6s							
SIGR	**SIGRI**	**1.14**	**181**	PN		**Pb**	**11 42 50.4**	**+0.2**
SIGR				SN		**Sn**	**11 43 06.3**	**+0.5**
PRK	**Paraskevi**	**1.14**	**165**	P		**Pg**	**11 42 51.1**	**+0.4**
PRK				S		**Sn**	**11 43 07.0**	**+1.1**
	comp=E,6μm,0.6s							
PRK	**Paraskevi**	**1.14**	**165**	P		**Pg**	**11 42 51.4**	**+0.6**
PRK				AML	AML		11 43 08.0	
	comp=E,13223μm,0.5s							
PRK				AML	AML		11 43 08.7	
	comp=N,9434μm,0.3s							
AYVA	**Ayvalik**	**1.21**	**149**	*i* P		**Pn**	**11 42 51.3**	**0.0**
AYVA				*i* S		**Sb**	**11 43 07.4**	**+0.3**
AYVA				IAML			11 43 09.0	
	comp=N,4μm,0.4s							
AYVA				IAML			11 43 10.0	
	comp=E,2μm,0.4s							
KAVA	**Kavala**	**1.22**	**302**	P		**Pn**	**11 42 50.5**	**-1.0**
KAVA				S		**Sb**	**11 43 06.8**	**-0.6**
	comp=E,1μm,0.3s							
KAVA	**Kavala**	**1.22**	**302**	P		**Pn**	**11 42 50.7**	**-0.8**
KAVA				AML	AML		11 43 08.8	
	comp=N,1842μm,0.3s							
KAVA				AML	AML		11 43 09.8	
	comp=E,2600μm,0.3s							
KNL	**Balıkesir**	**1.26**	**93**	*i* P		**Pn**	**11 42 51.4**	**-0.6**
KNL				*i* S		**Sb**	**11 43 08.3**	**-0.2**
KNL				IAML			11 43 11.0	
	comp=N,3μm,0.8s							
KNL				IAML			11 43 11.0	
	comp=E,6μm,0.5s							
KVLA	**Kavala**	**1.28**	**298**	P		**Pn**	**11 42 51.5**	**-0.8**
MRMT	**Marmara Adasi**	**1.33**	**78**	PN		**Pn**	**11 42 52.4**	**-0.7**
MRMT				SN		**Sg**	**11 43 11.3**	**-0.4**
KDZ	**Kurdzhali**	**1.35**	**345**	*i* P		**Pn**	**11 42 52.4**	**-0.9**
KDZ	**Kurdzhali**	**1.35**	**345**	PN		**Pn**	**11 42 53.1**	**-0.2**
TKR	**Tekirdag**	**1.41**	**63**	PN		**Pn**	**11 42 54.2**	**+0.1**
TKR				SN		**Sg**	**11 43 13.3**	**-1.0**
GONE	**Gonen-Balikesi**	**1.42**	**102**	PN		**Pn**	**11 42 54.4**	**+0.2**
OUR	**Ouranopolis**	**1.45**	**270**	P		**Pn**	**11 42 53.4**	**-1.2**
OUR				S		**Sn**	**11 43 13.7**	**+0.2**
	comp=E,2μm,0.6s							
OUR	**Ouranopolis**	**1.45**	**270**	P		**Pn**	**11 42 53.6**	**-1.1**
OUR				AML	AML		11 43 17.8	
	comp=E,4641μm,0.4s							
OUR				AML	AML		11 43 17.8	
	comp=N,4494μm,0.4s							
OUR	**Ouranopolis**	**1.45**	**270**	PN		**Pn**	**11 42 54.8**	**+0.2**
BALY	**Balya**	**1.47**	**114**	*i* P		**Pn**	**11 42 55.2**	**+0.2**
BALY				*i* S		**Sb**	**11 43 14.8**	**+0.3**
BALY				IAML			11 43 18.0	
	comp=N,794nm,0.6s							
BALY				IAML			11 43 27.0	
	comp=E,428nm,0.5s							
DKL	**Dikili**	**1.50**	**148**	PN		**Pn**	**11 42 55.6**	**+0.3**
DKL				SN		**Sb**	**11 43 16.0**	**+0.6**
EDC	**Edincik**	**1.52**	**89**	PN		**Pn**	**11 42 55.7**	**+0.1**
EDC				SN		**Sb**	**11 43 16.0**	**+0.1**
RZN	**Rozhen**	**1.60**	**327**	*i* P		**Pn**	**11 42 56.4**	**-0.5**
CRLT	**Corlu**	**1.61**	**61**	PN		**Pn**	**11 42 56.9**	**0.0**
EDRB	**Edirne**	**1.63**	**23**	P		**Pn**	**11 42 56.5**	**-0.7**
EDRB	**Edirne**	**1.63**	**23**	PN		**Pn**	**11 42 57.4**	**+0.2**
ZEDA	**zmir-Bergama**	**1.66**	**146**	*i* P		**Pn**	**11 42 57.8**	**+0.3**
ZEDA				*i* S		**Sb**	**11 43 21.3**	**+1.3**
ZEDA				IAML			11 43 23.0	
	comp=E,710nm,0.4s							
ZEDA				IAML			11 43 24.0	
	comp=N,802nm,0.5s							
BALB	**Balikesir**	**1.69**	**114**	PN		**Pn**	**11 42 58.1**	**+0.1**
KIRK	**Kırklareli**	**1.70**	**32**	*i* P		**Pn**	**11 42 56.7**	**-1.4**
KIRK				*i* S		**Sb**	**11 43 21.8**	**+0.6**
KIRK				IAML			11 43 26.0	
	comp=N,188nm,0.4s							
STEP	**BALIKESIR_Sava**	**1.72**	**124**	*i* P		**Pn**	**11 42 58.6**	**+0.3**
STEP				*i* S		**Sb**	**11 43 22.4**	**+0.8**
STEP				IAML			11 43 26.0	
	comp=N,676nm,0.6s							
STEP				IAML			11 43 26.0	
	comp=E,584nm,0.6s							
DIM	**Dimitrovgrad**	**1.72**	**351**	*i* P		**Pn**	**11 42 59.1**	**+0.7**
BOTS	**Marmara Eregli**	**1.72**	**68**	PN		**Pn**	**11 42 58.5**	**+0.1**
PAIG	**Paliouri**	**1.74**	**257**	P		**Pn**	**11 42 57.1**	**-1.5**
PAIG				S		**Sb**	**11 43 21.8**	**-0.4**
	comp=E,455nm,0.9s							
PAIG	**Paliouri**	**1.74**	**257**	P		**Pn**	**11 42 57.2**	**-1.4**
PAIG				AML	AML		11 43 27.4	
	comp=N,846μm,0.7s							
PAIG				AML	AML		11 43 28.8	
	comp=E,858μm,0.4s							
SKY	**Skiros Island**	**1.79**	**215**	P		**Pn**	**11 42 58.3**	**-1.1**
SKY	**Skiros Island**	**1.79**	**215**	P		**Pn**	**11 42 58.2**	**-1.1**
PSRA	**Psara**	**1.82**	**188**	P		**Pn**	**11 43 00.2**	**+0.5**
KRBN	**Karaburun**	**1.83**	**163**	PN		**Pn**	**11 43 00.4**	**+0.5**
PLG	**Polygyros**	**1.86**	**272**	P		**Pn**	**11 42 59.3**	**-1.0**
PLG	**Polygyros**	**1.86**	**272**	P		**Pn**	**11 42 59.7**	**-0.7**
PLG				AML	AML		11 43 30.6	
	comp=E,2177nm,0.4s							
PLG				AML	AML		11 43 30.8	
	comp=N,1594nm,0.7s							
SRS	**Serrai**	**1.90**	**295**	*e*Pn		**Pn**	**11 43 00.1**	**-0.8**
SRS	**Serrai**	**1.90**	**295**	P		**Pn**	**11 42 59.9**	**-1.0**
SRS	**Serrai**	**1.90**	**295**	P		**Pn**	**11 42 59.8**	**-1.0**
AOS	**Alonnisos**	**1.94**	**233**	P		**Pn**	**11 43 00.1**	**-1.3**
AOS				S		**Sn**	**11 43 25.2**	**-0.4**
	comp=N,658nm,0.5s							
AOS	**Alonnisos**	**1.94**	**233**	P		**Pn**	**11 43 00.1**	**-1.3**
AOS				AML	AML		11 43 38.8	
	comp=N,1346μm,0.5s							
AOS				AML	AML		11 43 41.5	
	comp=E,1329μm,0.5s							
CHOS	**Chios island**	**1.96**	**176**	P		**Pn**	**11 43 01.8**	**0.0**
CHOS				S		**Sn**	**11 43 25.5**	**-0.8**
	comp=E,2μm,0.7s							
CHOS	**Chios island**	**1.96**	**176**	P		**Pn**	**11 43 01.9**	**+0.1**
CHOS				AML	AML		11 43 37.6	
	comp=N,2582μm,0.6s							
CHOS				AML	AML		11 43 38.2	
	comp=E,3392μm,0.6s							
PLD	**Plovdiv**	**1.96**	**334**	*e*Sg		**Sg**	**11 43 32.6**	**+0.7**
PLD	**Plovdiv**	**1.96**	**334**	*i* P		**Pb**	**11 43 04.8**	**+0.4**
MMB	**Musomiste**	**2.05**	**308**	*i* P		**Pn**	**11 43 02.0**	**-0.9**
URLA	**Izmir**	**2.06**	**164**	*i* P		**Pn**	**11 43 03.2**	**+0.1**
URLA				*i* S		**Sb**	**11 43 32.2**	**+0.6**
URLA				IAML			11 43 38.0	
	comp=N,309nm,0.5s							
URLA				IAML			11 43 40.0	
	comp=E,303nm,0.6s							
ELBA	**Catalca**	**2.10**	**67**	*i* P		**Pn**	**11 43 02.4**	**-1.2**
ELBA				*i* S		**Sb**	**11 43 33.6**	**+1.0**
ELBA				IAML			11 43 40.0	
	comp=E,189nm,0.3s							
ELBA				IAML			11 43 42.0	
	comp=N,224nm,0.7s							
DURS	**Dursunbey**	**2.13**	**110**	*i* P		**Pn**	**11 43 04.4**	**+0.3**
DURS				*i* S		**Sn**	**11 43 31.8**	**+1.3**
DURS				IAML			11 43 39.0	
	comp=N,534nm,0.3s							
DURS				IAML			11 43 39.0	
	comp=E,495nm,0.3s							
HORT	**Hortiatis**	**2.13**	**278**	P		**Pn**	**11 43 03.2**	**-1.0**
HORT	**Hortiatis**	**2.13**	**278**	P		**Pn**	**11 43 03.3**	**-0.8**
JMB	**Yambol**	**2.18**	**14**	*e*Sg		**Sg**	**11 43 36.7**	**-2.1**
KYMI	**Kymi, Euboea I**	**2.20**	**219**	P		**Pn**	**11 43 03.8**	**-1.1**
KYMI	**Kymi, Euboea I**	**2.20**	**219**	P		**Pn**	**11 43 03.8**	**-1.1**
SKIA	**Skiathos**	**2.20**	**238**	P		**Pn**	**11 43 03.4**	**-1.6**
SKIA	**Skiathos**	**2.20**	**238**	P		**Pn**	**11 43 03.4**	**-1.6**
SKIA				AML	AML		11 43 42.1	
	comp=E,1191μm,0.7s							
SKIA				AML	AML		11 43 42.5	
	comp=N,1741μm,0.8s							
THE	**Thessaloniki**	**2.24**	**278**	P		**Pn**	**11 43 04.3**	**-1.2**
XOR	**Xorichti**	**2.29**	**245**	P		**Pn**	**11 43 04.6**	**-1.6**
XOR	**Xorichti**	**2.29**	**245**	P		**Pn**	**11 43 04.5**	**-1.8**
NEO	**Neokhori**	**2.29**	**244**	P		**Pn**	**11 43 04.8**	**-1.5**
KNT	**Kentrikon**	**2.41**	**291**	P		**Pn**	**11 43 07.7**	**-0.2**
MRKA	**Markates**	**2.42**	**228**	P		**Pn**	**11 43 06.6**	**-1.4**
MRKA	**Markates**	**2.42**	**228**	P		**Pn**	**11 43 06.9**	**-1.1**
DGB	**zmir**	**2.42**	**161**	*i* S		**Sb**	**11 43 40.4**	**-1.5**
ULDT	**Uludag**	**2.50**	**94**	*i* P		**Pn**	**11 43 09.6**	**+0.3**
ULDT				IAML			11 43 51.0	
	comp=E,449nm,0.5s							
ULDT				IAML			11 43 51.0	
	comp=N,323nm,0.6s							
IGD	**Bursa**	**2.54**	**91**	*i* P		**Pn**	**11 43 09.4**	**-0.3**
IGD				IAML			11 43 53.0	
	comp=E,138nm,0.6s							
IGD				IAML			11 43 53.0	
	comp=N,120nm,0.3s							
DEMI	**Demirci**	**2.55**	**120**	*i* P		**Pn**	**11 43 10.7**	**+0.9**
DEMI				*i* S		**Sg**	**11 43 48.4**	**-2.3**
DEMI				IAML			11 43 52.0	
	comp=E,244nm,0.3s							
DEMI				IAML			11 43 53.0	
	comp=N,139nm,0.3s							
KARY	**Karystos**	**2.57**	**206**	P		**Pn**	**11 43 08.9**	**-1.2**
KKB	**Krupnik**	**2.60**	**307**	*i* P		**Pn**	**11 43 10.0**	**-0.5**
LIT	**Litokhoron**	**2.61**	**266**	P		**Pn**	**11 43 09.6**	**-1.0**
LIT	**Litokhoron**	**2.61**	**266**	P		**Pn**	**11 43 09.6**	**-1.0**
VAY	**Valandovo**	**2.69**	**292**	*e*Pn		**Pn**	**11 43 11.0**	**-0.7**
VAY				*e*Sn		**Sb**	**11 43 48.5**	**-1.2**
VAY	**Valandovo**	**2.69**	**292**	*i* Pn		**Pn**	**11 43 11.8**	**+0.1**
VAY	**Valandovo**	**2.69**	**292**	*i* Pn		**Pn**	**11 43 11.8**	**+0.1**
DION	**Dionisos Attik**	**2.73**	**214**	P		**Pn**	**11 43 11.2**	**-1.1**
SMG	**Samos**	**2.74**	**164**	P		**Pn**	**11 43 12.5**	**+0.1**
LKR	**Lokris**	**2.80**	**234**	P		**Pn**	**11 43 12.0**	**-1.2**
VIL2	**Platees**	**2.94**	**224**	P		**Pn**	**11 43 14.4**	**-0.8**
VTS	**Vitosha**	**3.01**	**320**	*e*Pn		**Pn**	**11 43 16.5**	**+0.2**
VTS				*e*Sn		**Sn**	**11 43 55.5**	**+3.2**
VTS	**Vitosha**	**3.01**	**320**	⇓P		**Pn**	**11 43 16.4**	**+0.2**
AGG	**Agios Georgios**	**3.04**	**245**	P		**Pn**	**11 43 15.7**	**-0.9**
STIP	**Stip**	**3.10**	**297**	*i* Pn		**Pn**	**11 43 15.3**	**-2.0**
STIP	**Stip**	**3.10**	**297**	*i* Pn		**Pn**	**11 43 15.3**	**-2.0**
PROD	**Prodromos**	**3.11**	**229**	P		**Pn**	**11 43 16.3**	**-1.2**
PLVB	**Pleven**	**3.18**	**343**	⇑P		**Pn**	**11 43 18.8**	**+0.4**
RAZG	**Razgrad**	**3.25**	**8**	⇑P		**Pn**	**11 43 19.3**	**-0.1**
APE	**Apeiranthos**	**3.29**	**185**	⇑P		**Pn**	**11 43 18.8**	**-1.2**
BOSS	**Bosilegrad**	**3.34**	**311**	*e*Pn		**Pn**	**11 43 20.5**	**-0.1**
BOSS				*e*Sn		**Sn**	**11 44 04.1**	**+4.0**
FNA	**Florina**	**3.46**	**279**	*e*Pn		**Pn**	**11 43 22.5**	**+0.2**
BDRM	**Kayabasi**	**3.50**	**159**	*i* P		**Pn**	**11 43 23.0**	**+0.1**
BDRM				IAML			11 44 23.0	
	comp=E,68nm,1.0s							
BDRM				IAML			11 44 27.0	
	comp=N,86nm,0.6s							
BORA	**Eskisehir**	**3.54**	**96**	*i* P		**Pn**	**11 43 20.9**	**-2.5**
BORA				IAML			11 44 26.0	
	comp=E,33nm,0.5s							
BORA				IAML			11 44 26.0	
	comp=N,44nm,0.5s							
ZAPS	**Zavoj**	**3.80**	**321**	*e*Pn		**Pn**	**11 43 26.8**	**-0.2**
ZAPS				*e*Sn		**Sn**	**11 44 15.1**	**+3.6**
VLAD	**Vladila**	**3.81**	**344**	⇓P		**Pn**	**11 43 27.2**	**+0.2**
BARS	**Barje**	**3.92**	**310**	*e*Pn		**Pn**	**11 43 28.9**	**+0.3**
BARS	**Barje**	**3.92**	**310**	*e*Pn		**Pb**	**11 43 37.6**	**-0.1**
BARS				*e*Sn		**Sn**	**11 44 16.7**	**+2.2**
TURN	**Turunc**	**4.07**	**148**	*i* P		**Pn**	**11 43 30.2**	**-0.5**
TURN				IAML			11 44 44.0	
	comp=N,25nm,0.5s							
TURN				IAML			11 44 49.0	
	comp=E,21nm,1.1s							
HUMR	**Humele**	**4.23**	**351**	⇓P		**Pn**	**11 43 32.7**	**-0.2**
ZAGS	**Zajecar**	**4.40**	**323**	*e*Pn		**Pn**	**11 43 34.6**	**-0.6**
ZAGS				*e*Sn		**Sn**	**11 44 29.6**	**+3.4**
FETY	**Fethiye**	**4.48**	**145**	*i* P		**Pn**	**11 43 37.7**	**+1.4**
FETY				IAML			11 44 28.0	
	comp=N,23nm,0.9s							
FETY				IAML			11 44 28.0	
	comp=E,14nm,0.8s							
TIRR	**Tirgusor**	**4.51**	**24**	⇑P		**Pn**	**11 43 36.2**	**-0.6**
SELS	**Selova**	**4.57**	**310**	*e*Pn		**Pn**	**11 43 37.1**	**-0.5**
HARR	**Harsova**	**4.59**	**19**	⇓P		**Pn**	**11 43 37.7**	**-0.2**
TOPG	**Topolog**	**4.88**	**21**	⇓P		**Pn**	**11 43 42.6**	**+0.7**
JURR	**Jurilovca**	**4.94**	**26**	⇓P		**Pn**	**11 43 43.0**	**+0.4**
IDI	**Anoyia**	**5.11**	**189**	⇓P		**Pn**	**11 43 43.2**	**-1.9**
KUBS	**Kucevo**	**5.12**	**324**	*e*Pn		**Pn**	**11 44 44.0**	**-1.1**
VOIR		**5.12**	**353**	⇑P		**Pn**	**11 43 44.8**	**-0.4**
MLR	**Muntele Rosu**	**5.14**	**1**	⇑P		**Pn**	**11 43 46.7**	**+1.2**
HERR	**Herculane**	**5.20**	**332**	⇑P		**Pn**	**11 43 45.2**	**-1.0**
GRUS	**Gruza**	**5.22**	**314**	*e*Pn		**Pn**	**11 43 46.0**	**-0.5**
TLCR		**5.29**	**23**	⇓P		**Pn**	**11 43 47.7**	**+0.3**
MDVR	**Moldovita**	**5.39**	**327**	⇑P		**Pn**	**11 43 48.6**	**-0.2**
PLOR	**Plostina**	**5.53**	**6**	⇑P		**Pn**	**11 43 53.1**	**+2.4**
GZR	**Gura Zlata**	**5.53**	**337**	⇑P		**Pn**	**11 43 50.1**	**-0.7**
VRI	**Vrincioaia**	**5.55**	**6**	⇑P		**Pn**	**11 43 53.0**	**+2.0**
TRUS	**Trudelj**	**5.61**	**315**	*e*Pn		**Pn**	**11 43 50.1**	**-1.7**
DOPR	**Dopca**	**5.63**	**357**	⇑P		**Pn**	**11 43 52.7**	**+0.6**
BBLS	**Lazići**	**5.96**	**308**	*e*Pn		**Pn**	**11 43 55.7**	**-1.0**
BZS	**Buzias**	**6.12**	**331**	⇑P		**Pn**	**11 43 58.5**	**-0.4**
TESR	**Tescani**	**6.18**	**5**	⇑P		**Pn**	**11 44 00.5**	**+0.8**
BIZ	**Bicaz**	**6.59**	**1**	⇑P		**Pn**	**11 44 06.5**	**+1.2**
DRGR		**6.84**	**341**	⇑P		**Pn**	**11 44 07.5**	**-1.3**
TIP	**Timpagrande**	**7.12**	**263**	⇑P		**Pn**	**11 44 13.3**	**+0.6**

MAN 27 11:50:24.6, 13°.23N×120°.42E, *h*1km, mb4.2, ML3.0, MS2.7, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.53**	**341**	*e*P	Pg	11 50 35.0	+0.4
LUBP				*e*S	Sn	11 50 48.5	-0.3
PGP	**Puerto Galera**	**0.58**	**63⇑**	*e*P	Pg	11 50 36.2	+0.3
PGP				*e*S	Sn	11 50 50.0	-0.4
BUSP	**Coron**	**1.24**	**190**	*e*P	Pn	11 50 49.0	-0.1
BUSP				*e*S	Sn	11 51 12.0	+5.6
ENPP	**El Nido**	**2.24**	**206**	*e*P	Pn	11 51 02.2	-0.6
ENPP				*e*S	Sb	11 51 33.9	-0.1

IDC ***27*** *11:59:14.6±0.6, 7°.96S×122°.30E, h218km±5km, mb4.4/32, mb1 4.5/38, mb1mx4.3/51, mbtmp5.0/38, Error ellipse: s-maj=9.4km s-min=5.6km az=65.0*

NEIC ***27*** *11:59:14.4±2.0, 8°.02S×0°.06×122°.23E±0°.07, h226km±4km, mb4.8/87, Error ellipse: s-maj=10.0km s-min=7.9km az=55.0*

KLM ***27*** *11:59:14.0, 8°.10S×122°.41E, h216km, mb5.2*

DJA ***27*** *11:59:15.0±0.1, 8°.8S×1°×12°.2E±°, h212km±2km, M4.7/48, mb5.1/48, mB5.2/31, MLv5.2/18, Mw(mB)4.6/31, Mwp5.0/1*

ISC 27 11:59:14.6±0.4, 8°.05S±0°.03×122°.29E±0°.04, h223km±3km, n563, σ1°35/562, mb4.8/82, 5C-3D, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.58**	**185**	P	Pn	**11 59 44.6**	**-0.1**
MMRI				S	**S**	**12 00 08.2**	**-0.2**
MMRI	**Maumere**	**0.58**	**185**		**Pn**	**11 59 44.6**	**-0.1**
MMRI				S	**S**	**12 00 08.1**	**-0.4**
EDFI	**Ende, Flores**	**0.92**	**221**	P	**Pn**	**11 59 46.0**	**-0.4**
EDFI				S	**S**	**12 00 10.3**	**-1.0**
BATI	**Baumata**	**2.53**	**148**	P	**Pn**	**12 00 01.2**	**+0.8**
	1μm,0.3s,baz=343,slow=1.9,SNR=968						
BATI				S	**S**	**12 00 35.8**	**-0.4**
	665nm,0.3s,baz=252,slow=23,SNR=8.1						
BATI	**Baumata**	**2.53**	**148**	P	**Pn**	**12 00 01.2**	**+0.8**
BATI				S	**S**	**12 00 36.6**	**+0.4**
BBSI	**Bau Bau**	**2.56**	**6**	P	**Pn**	**12 00 01.7**	**+1.0**
SOEI	**Soe**	**2.58**	**131**	P	**Pn**	**12 00 01.7**	**+0.6**
SOEI				S	**S**	**12 00 37.3**	**0.0**
SOEI	**Soe**	**2.58**	**131**		**Pn**	**12 00 01.7**	**+0.6**
SOEI				S	**S**	**12 00 36.9**	**-0.3**
BASI	**Baing, Sumba**	**2.74**	**218**	P	**Pn**	**12 00 01.2**	**-1.4**
BASI				S	**S**	**12 00 37.6**	**-2.5**
WBSI	**Waikabubak, Su**	**3.27**	**241**	P	**Pn**	**12 00 07.0**	**-1.7**
BKSI	**Bulukumba**	**3.46**	**321**	P	**Pn**	**12 00 10.0**	**-0.9**
KAPI	**Kappang**	**3.93**	**320**	P	**Pn**	**12 00 16.7**	**+0.1**
	22nm,0.3s,baz=143,slow=11,SNR=174						
KAPI				S	**S**	**12 01 05.3**	**+0.2**
	2.3nm,0.3s,baz=160,slow=17,SNR=1.3						
KAPI	**Kappang**	**3.93**	**320**		**Pn**	**12 00 16.6**	**+0.1**
KAPI				S	**S**	**12 01 04.4**	**-0.7**
BNSI	**Bone**	**4.23**	**329**	P	**Pn**	**12 00 19.8**	**-0.3**
PLAI	**Plampang**	**4.53**	**260**	P	**Pn**	**12 00 23.0**	**-0.8**
SPSI	**Sidrap Palu**	**4.77**	**328**	P	**Pn**	**12 00 26.4**	**-0.4**
TTSI	**Tana Toraja**	**5.55**	**334**	P	**Pn**	**12 00 37.1**	**+0.5**
	1.3nm4μm377nm,0.8s						
NLAI	**Namlea**	**6.76**	**45**	P	**Pn**	**12 00 56.6**	**+4.6**
LUWI	**Luwuk**	**6.98**	**4**	P	**Pn**	**12 00 55.0**	**+0.2**
	2.0nm6μm528nm,0.9s						
LUWI	**Luwuk**	**6.98**	**4**		**Pn**	**12 00 55.2**	**+0.4**
LUWI				S	**S**	**12 02 14.2**	**-0.5**
SANI	**Sanana**	**7.00**	**32**	P	**Pn**	**12 00 55.9**	**+0.8**
	0.4nm1μm87nm,1.2s						
APSI	**Ampana**	**7.12**	**355**	P	**Pn**	**12 00 57.4**	**+0.8**
	1.4nm4μm457nm,0.9s						
AAI	**Ambon**	**7.30**	**54**	P	**Pn**	**12 01 00.6**	**+1.7**
	0.4nm106nm,0.9s						
KBKI	**Kotabaru**	**7.71**	**307**	P	Pn	12 01 14.9	+11
JAGI	**Jajag, Banyuwa**	**8.07**	**266**	P	**Pn**	**12 01 05.7**	**-3.1**
JAGI	**Jajag, Banyuwa**	**8.07**	**266**		**Pn**	**12 01 05.3**	**-3.5**
JAGI				S	S	12 02 30.7	-10
MSAI	**Masohi**	**8.09**	**55**	P	**Pn**	**12 01 11.1**	**+2.0**
	31nm,0.9s						
KMMI	**Kalianget**	**8.31**	**276**	P	**Pn**	**12 01 13.7**	**+1.8**
	346nm,1.0s						
BNDI	**Bandanaira**	**8.34**	**66**	P	Pn	12 01 25.0	+13
BKB	**Balikpapan**	**8.62**	**321**	Pn	**Pn**	**12 01 15.3**	**-0.6**
MPSI	**Mapaga**	**8.67**	**344**	P	**Pn**	**12 01 16.9**	**+0.4**
	680nm66nm,1.0s						
KMSI	**Cibinong**	**8.73**	**11**	P	Pn	12 01 24.4	+7.1
SAUI	**Saumlaki**	**8.92**	**90**	P	**Pn**	**12 01 20.8**	**+1.0**
	793nm,0.7s						
SAUI	**Saumlaki**	**8.92**	**90**		**Pn**	**12 01 19.6**	**-0.2**
SAUI				S	**S**	**12 02 58.3**	**-2.1**
LBMI	**Labuha**	**9.01**	**35**	P	**Pn**	**12 01 23.3**	**+2.4**
	1μm81nm,0.7s						
GRJI	**Gresik**	**9.80**	**276**	P	**Pn**	**12 01 30.9**	**-0.1**
	2μm206nm,1.0s						
KNRA	**Kununurra**	**9.87**	**141**	P	**Pn**	**12 01 31.0**	**-0.9**
	baz=10.0,SNR=595						
KNRA				S	**S**	**12 03 17.0**	**-5.8**
	baz=10.0						
KNRA	**Kununurra**	**9.87**	**141**		**Pn**	**12 01 31.1**	**-0.9**
MTN	**Manton Dam**	**9.91**	**119**	P	**Pn**	**12 01 31.9**	**-0.6**
	baz=10.0,SNR=405				

AS31	Alice Springs	19.11	146	P	P	12 03 22.4	+1.5	
OCLP	Ormoc	19.11	7	eP	Pn	12 03 24.8	+0.1	
JAY	Jayapura	19.13	74	P	P	12 03 21.4	+0.1	
	comp=Z,4.5nm,0.3s,baz=208,slow=6.1,SNR=15							
JAY	Jayapura	19.13	74	P	Pn	12 03 23.6	-1.4	
	comp=Z,48nm,0.8s							
ENPP	El Nido	19.34	351	eP	P	12 03 23.9	+0.5	
TPRI	Tanjung Pinang	19.83	296	P	Pn	12 03 35.9	+2.6	
BUSP	Coron	20.03	354	eP	Pn	12 03 33.6	-2.0	
OTRP	Odiongan	20.28	359	eP	P	12 03 35.1	+1.6	
MYKOM	Kota Tinggi	20.83	297	P	P	12 03 38.7	-0.7	
MYKOM				IAmb	IAmb	12 03 41.8		
	comp=Z,22nm,0.8s							
MYKOM	Kota Tinggi	20.83	297	P	P	12 03 41.0	+1.6	
QIS	Mount Isa	20.85	128	P	P	12 03 40.8	+1.1	
	baz=21,SNR=91							
COEN	Coen	21.31	108	P	P	12 03 44.4	0.0	
	baz=21,SNR=84							
COEN	Coen	21.31	108	P	P	12 03 44.0	-0.3	
BOAC	Boac	21.37	359	eP	P	12 03 46.7	+1.8	
PGP	Puerto Galera	21.45	356⇓	eP	P	12 03 46.4	+0.7	
PVCP	Virac	21.58	5	eP	P	12 03 45.5	-1.5	
MORW	Morawa	21.72	195	P	P	12 03 48.9	+0.7	
	baz=22,SNR=43							
MORW	Morawa	21.72	195	P	P	12 03 48.7	+0.5	
LUBP	Lubang	21.74	355	eP	P	12 03 48.2	-0.2	
TGY	Tagaytay City	22.05	356	P	P	12 03 52.6	+1.1	
	comp=Z,259nm,0.4s,baz=190,slow=0.9,SNR=9.2							
POLP	Polilio Island	22.63	359	eP	P	12 03 56.6	-0.1	
BLDU	Ballidu	23.05	192	P	P	12 04 01.2	+0.8	
	baz=23,SNR=130							
KMBL	Kambalda	23.20	181	P	P	12 04 02.7	+0.9	
	baz=23,SNR=41							
FORT	Forrest	23.25	167	P	P	12 04 03.5	+1.3	
	baz=23,SNR=128							
FORT	Forrest	23.25	167	P	P	12 04 03.0	+0.9	
BALP	Baler	23.65	358	eP	P	12 04 06.5	+0.5	
MTSU	Mount Surprise	23.65	117	P	P	12 04 07.1	+1.0	
	baz=24,SNR=49							
SCZP	Santa Cruz	23.79	354	eP	P	12 04 06.0	-1.2	
KLBR	Kellerberrin	23.80	190	P	P	12 04 08.0	+0.8	
	baz=24,SNR=46							
SMPP	San Manuel, Pa	24.10	356	eP	P	12 04 08.6	-1.4	
DLV	T Lat	24.14	325	P	P	12 04 10.4	-0.3	
DLV				IAmb	IAmb	12 04 14.7		
	comp=Z,36nm,0.8s							
MNSI	Mandailing Nat	24.29	290	P	P	12 04 11.0	-0.9	
BOLP	Bolinao	24.39	354	eP	P	12 04 03.9	-8.8	
MUN	Mundaring	24.47	193	P	P	12 04 14.7	+1.4	
	baz=25,SNR=14							
IPM	Ipoh	24.60	300	P	P	12 04 14.1	-0.6	
IPM				IAmb	IAmb	12 04 20.1		
	comp=Z,15nm,0.7s							
IPM	Ipoh	24.60	300	P	P	12 04 17.0	+2.3	
PMG	Port Moresby	24.61	95	P	P	12 04 15.2	+0.4	
	comp=Z,29nm,0.8s,baz=326,slow=2.7,SNR=7.8							
PMG	Port Moresby	24.61	95	P	P	12 04 15.5	+0.7	
PMG				IAmb	IAmb	12 04 17.7		
	comp=Z,28nm,0.8s							
CAUP	Cauayan	24.84	359	eP	P	12 04 18.1	+1.3	
PALP	Palanan	24.95	0	eP	P	12 04 17.7	0.0	
NWAO	Narrogin (SRO)	25.20	190	P	P	12 04 20.8	+0.9	
	baz=25,SNR=34							
NWAO	Narrogin (SRO)	25.20	190	P	P	12 04 20.8	+0.9	
	comp=Z,31nm,0.6s,baz=26,slow=7.7,SNR=42							
NWAO	Narrogin (SRO)	25.20	190	P	P	12 04 21.1	+1.3	
NWAO	Narrogin (SRO)	25.20	190	P	P	12 04 20.7	+0.9	
NWAO				IAmb	IAmb	12 04 23.9		
	comp=Z,84nm,1.4s							
KULM	Kulim	25.33	301	P	P	12 04 21.2	0.0	
KULM	Kulim	25.33	301	P	P	12 04 23.0	+1.7	
PSI	Prapat	25.68	294	P	P	12 04 24.0	-0.6	
	comp=Z,9.0nm,0.7s,baz=180,slow=4.0,SNR=5.8							
APYP	Conner	25.77	358	eP	P	12 04 24.8	-0.3	
CTA	Charters Tower	26.10	120	P	P	12 04 30.6	+2.5	
	comp=Z,7.6nm,1.0s,baz=302,slow=13,SNR=5.3							
KCSI	Kotacane, Aceh	27.03	294	P	P	12 04 35.0	-1.5	
BBOO	Buckleboo	27.75	155	P	P	12 04 44.1	+1.4	
	baz=28,SNR=103							
BBOO	Buckleboo	27.75	155	P	P	12 04 43.0	+0.3	
QLP	Quilpie	27.81	134	P	P	12 04 45.7	+2.4	
	baz=28,SNR=8.0							
HTT	Hallett	29.57	151	P	P	12 05 01.0	+2.2	
	baz=30,SNR=84							
QIZ	Qiongzhong	29.58	336	P	P	12 04 59.0	+0.1	
QIZ				IAmb	IAmb	12 04 59.9		
	comp=Z,14nm,0.8s							
STKA	Stephens Creek	29.74	145	P	P	12 05 02.3	+1.9	
	baz=30,SNR=88							
STKA	Stephens Creek	29.74	145	P	P	12 05 02.2	+1.8	
	comp=Z,43nm,0.5s,baz=322,slow=9.0,SNR=115							
STKA				S	S	12 09 40.8	+0.9	
	comp=Z,11nm,0.9s,baz=294,slow=20,SNR=3.4							
STKA				ScP	ScP	12 11 17.9	-1.3	
	comp=Z,6.8nm,0.8s,baz=231,slow=6.5,SNR=3.6							
STKA	Stephens Creek	29.74	145	P	P	12 05 01.9	+1.5	
TWG	Pinlang	30.70	358	P	P	12 05 07.5	-1.3	
RMQ	Roma	31.11	129	P	P	12 05 15.2	+2.8	
	baz=31,SNR=6.2							
TPUB	Ta-pu	31.20	357	P	P	12 05 12.9	-0.3	
TPUB				IAmb	IAmb	12 05 13.7		
	comp=Z,33nm,0.9s							
YULB	Yu-li	31.27	358	P	P	12 05 12.3	-1.4	
YULB				IAmb	IAmb	12 05 18.3		
	comp=Z,17nm,0.6s							
SSLB	Suanglung	31.67	358	P	P	12 05 16.4	-0.9	
SSLB				IAmb	IAmb	12 05 17.2		
	comp=Z,21nm,0.9s							
CMSA	Cobar Meteorol	31.96	140	P	P	12 05 22.1	+2.3	
	baz=32,SNR=65							
YOJ	Yonaguni jima	32.32	1	P	P	12 05 19.3	-3.6	
YHNB	Yeheng	32.53	358	P	P	12 05 23.5	-1.3	
YHNB				IAmb	IAmb	12 05 24.7		
	comp=Z,24nm,0.8s							
ARPS	Mount Arapiles	33.67	151	P	P	12 05 36.9	+2.4	
	baz=34,SNR=29							
CMAR	Chiang Mai Arr	34.99	319	PcP	PcP	12 08 14.7	+1.5	
	comp=Z,3.5nm,0.6s,baz=177,slow=2.5,SNR=5.7							
CMAR				ScP	ScP	12 11 38.0	+0.5	
	comp=Z,1.4nm,0.8s,baz=162,slow=2.9,SNR=8.2							
YNG	Young	35.49	141	P	P	12 05 53.1	+2.9	
	baz=36,SNR=4.7							
TOO	Toolangi	36.13	148	P	P	12 05 58.8	+3.3	
	baz=36,SNR=43							
TOO	Toolangi	36.13	148	P	P	12 05 58.8	+3.3	
TOO				IAmb	IAmb	12 05 59.7		
	comp=Z,52nm,1.2s							
MGCD	Mangrove Creek	36.56	137	P	P	12 06 01.1	+1.9	
	baz=37,SNR=14							
GYA	Guiyang	37.51	337⇓	iP	P	12 06 08.3	+0.9	
GYA				pP	pwP	12 06 55.3	-0.5	
GYA				sP	sP	12 07 19.3	+1.2	
GYA				PP	PP	12 07 39.3	+1.2	
GYA				PcP	PcP	12 08 22.8	+2.0	
GYA				S	S	12 11 41.0	+1.4	
GYA				ScP	ScP	12 11 47.5	+0.7	
GYA				pmax	pmax			
	comp=Z,20nm,0.8s							
GYA				pmax	pmax			
	comp=Z,80nm,5.0s							
GYA				LR	LR			
	comp=Z,50nm,7.8s							
GYA				LR	LR			
	comp=Z,70nm,6.6s							
GYA				LR	LR			
	comp=Z,60nm,5.3s							
KMI	Kunming	38.08	331	P	P	12 06 13.8	+1.5	
KMI				pmax	pmax			
	comp=Z,12μm,3.1s							
WHN	Wuhan	39.12	349	⇑P	P	12 06 21.5	+0.9	
WHN				S	S	12 12 02.3	-1.1	
WHN				LR	LR			
	comp=Z,310nm,24.6s							
JCJ	Chichijima	39.91	28	P	P	12 06 26.8	-0.3	
	comp=Z,163nm,0.7s,baz=257,slow=5.0,SNR=14							
NJ2	Nanjing	40.01	355	eP	P	12 06 29.0	+1.1	
NJ2				pmax	pmax			
	comp=Z,53nm,0.8s							
ENH	Enshi	40.04	343	P	P	12 06 27.9	-0.3	
ENH				IAmb	IAmb	12 06 29.1		
	comp=Z,18nm,0.6s							
JNU	Nakatsue	41.75	11	P	P	12 06 41.2	-0.9	
	comp=Z,6.0nm,0.7s,baz=133,slow=2.4,SNR=7.4							
JNU	Nakatsue	41.75	11	P	P	12 06 41.3	-0.8	
CD2	Chengdu	42.62	336	P	P	12 06 49.0	-0.2	
CD2				pmax	pmax			
	comp=Z,40nm,0.5s							
XAN	Xi'an	43.74	344	P	P	12 06 57.3	-0.7	
XAN				PcP	PcP	12 08 42.3	+1.5	
XAN				pmax	pmax			
	comp=Z,37nm,0.8s							
XAN				pmax	pmax			
	comp=Z,140nm,5.7s							
XAN				LR	LR			
	comp=Z,130nm,14.1s							
XAN				LR	LR			
	comp=Z,170nm,14.1s							
XAN	Xi'an	43.74	344	P	P	12 06 57.4	-0.7	
XAN				IAmb	IAmb	12 06 58.2		
	comp=Z,30nm,1.0s							
SHL	Shillong	44.63	319	P	P	12 07 04.4	-1.0	
INU	Inuyama	45.35	17	P	P	12 07 08.8	-1.9	
KSRS	Korea Array	45.57	6	P	P	12 07 12.1	-0.3	
	comp=Z,5.2nm,0.8s,baz=180,slow=10,SNR=18							
KSRS				PcP	PcP	12 08 48.0	+1.1	
	comp=Z,3.0nm,0.6s,baz=171,slow=3.2,SNR=8.6							
MJAR	Matsushiro Arr	46.81	18	P	P	12 07 21.0	-1.1	
	comp=Z,30nm,0.7s,baz=192,slow=8.8,SNR=97							
MJAR				PcP	PcP	12 08 52.1	+0.7	
	comp=Z,6.4nm,0.8s,baz=194,slow=4.5,SNR=6.7							
MAJO	Matsushiro	46.81	18	P	P	12 07 21.1	-1.0	
MAJO				IAmb	IAmb	12 07 22.1		
	comp=Z,27nm,0.8s							
MAT	Matsushiro	46.81	18	P	P	12 07 21.0	-1.1	
MJB9	Matsu-Tunnel	46.81	18	P	P	12 07 21.6	-0.5	
LZH	Lanzhou	47.21	340	⇓P	P	12 07 26.0	+0.6	
LZH				pP	pP	12 08 13.5	+0.7	
LZH				sP	sP	12 08 36.5	-1.0	
LZH				PP	PP	12 09 20.3	+1.7	
LZH				pmax	pmax			
	comp=Z,25nm,1.3s							
LZH				pmax	pmax			
	comp=Z,100nm,6.2s							
LZH				LR	LR			
	comp=Z,170nm,13.5s							
LZH				LR	LR			
	comp=Z,300nm,13.2s							
LZH				LR	LR			
	comp=Z,260nm,16.7s							
LSA	Lhasa	48.02	323	P	P	12 07 31.4	-0.6	
BJT	Baijiatuau	48.16	354	P	P	12 07 32.3	-0.1	
BJT				IAmb	IAmb	12 07 32.7		
	comp=Z,26nm,0.8s							
BJI	Beijing	48.18	354	P	P	12 07 32.0	-0.5	
BJI				pmax	pmax			
	comp=Z,36nm,0.7s							
ODAN	Odare	48.47	317	eP	P	12 07 34.7	-0.6	
	comp=Z,22nm,0.4s							
TAPN	Taplejung	48.58	318	eP	P	12 07 35.3	-0.9	
	comp=Z,49nm,0.6s							
RAMN	Ramite	49.07	316	eP	P	12 07 39.9	+0.1	
	comp=Z,57nm,0.6s							
HHC	Hu-ho-hao-te	49.65	349	eP	P	12 07 44.5	+0.7	
HHC				pmax	pmax			
	comp=Z,12nm,0.7s							
HHC				pmax	pmax			
	comp=Z,28nm,7.1s							
JIRN	Jiri	49.80	317	eP	P	12 07 45.0	-0.5	
	comp=Z,57nm,0.4s							
GUN	Gumba	50.17	317	eP	P	12 07 47.7	-0.6	
	comp=Z,64nm,0.6s							
PKI	Pulchoki	50.28	316	eP	P	12 07 48.1	-0.9	
	comp=Z,36nm,0.5s							
PKIN	Phulchoki	50.29	316	eP	P	12 07 48.1	-0.9	
	comp=Z,45nm,0.4s							
KKN	Kakani	50.50	316	eP	P	12 07 49.9	-0.7	
	comp=Z,28nm,0.5s							
DMN	Daman	50.51	316	eP	P	12 07 50.0	-0.7	
	comp=Z,45nm,0.9s							
GKN	Gorkha	51.08	316	eP	P	12 07 54.0	-0.8	
	comp=Z,21nm,0.3s							
GTA	Gaotai	51.62	338	⇑P	P	12 07 59.0	+0.5	
GTA				pP	pwP	12 08 49.0	-1.6	
GTA				PcP	sP	12 09 10.5	-0.6	
GTA				sP	PcP	12 09 14.0	+5.0	
GTA				S	S	12 15 00.8	-1.3	
GTA				sS	sS	12 16 26.8	-0.1	
GTA				pmax	pmax			
	comp=Z,8.0nm,1.1s							
GTA				pmax	pmax			
	comp=Z,80nm,6.7s							
GTA				LR	LR			
	comp=Z,81nm,15.2s							
GTA				LR	LR			
	comp=Z,63nm,16.5s							
GTA				LR	LR			
	comp=Z,120nm,14.6s							
KOLN	Koldanda	51.65	315	eP	P	12 07 58.3	-0.8	
	comp=Z,41nm,0.8s							
DANN	Dangsing	51.90	316	eP	P	12 08 00.2	-0.8	
	comp=Z,88nm,0.6s							
PYUN	Piuthan	52.28	315	eP	P	12 08 02.9	-0.8	
	comp=Z,41nm,0.6s							
USRK	Ussuriysk Ar.	52.74	9	P	P	12 08 06.0	-0.5	
	comp=Z,28nm,0.6s,baz=189,slow=6.6,SNR=112							
USA0B	Ussuriysk Arra	52.74	9	P	P	12 08 06.4	-0.1	
USA0B				IAmb	IAmb	12 08 07.3		
	comp=Z,27nm,0.7s							
MDJ	Mudanjiang	52.83	7	P	P	12 08 06.9	-0.3	
MDJ				IAmb	IAmb	12 08 07.9		
	comp=Z,34nm,0.8s							
ASAJ	Asahikawa	55.08	18	P	P	12 08 23.6	+0.2	
	comp=Z,36nm,0.7s,baz=229,slow=9.5,SNR=31							
JKA	Kamikawa-asahi	55.08	18	P	P	12 08 23.6	+0.2	
RPZ	Rata Peaks	55.31	138	P	P	12 08 27.2	+2.0	
	comp=Z,28nm,0.8s,baz=260,slow=3.2,SNR=14							
RPZ	Rata Peaks	55.31	138	P	P	12 08 27.4	+2.2	
ULN	Ulaanbaatar	57.28	348	P	P	12 08 38.3	-0.8	
SONM	Songino Array	57.39	347	P	P	12 08 39.8	-0.1	
	comp=Z,5.9nm,0.6s,baz=166,slow=8.4,SNR=16							
SONM				PcP	pwP	12 09 31.9	-0.8	
	comp=Z,5.6nm,0.7s,baz=163,slow=4.7,SNR=7.7							
KLR	Kul'dur	57.64	7	P	P	12 08 40.8	-0.6	
	comp=Z,3.4nm,0.6s,baz=186,slow=6.5,SNR=8.3							
CASY	Casey	58.70	186	P	P	12 08 50.0	+1.5	
CASY				IAmb	IAmb	12 08 50.9		
	comp=Z,27nm,1.1s							
WMQ	Urumqi	60.39	332	eP	P	12 09 02.0	+1.5	
WMQ				PcP	PcP	12 09 41.5	-1.6	
WMQ				pmax	pmax			
	comp=Z,30nm,0.9s							
WMQ				pmax	pmax			
	comp=Z,120nm,3.7s							
WMQ				LR	LR			
	comp=Z,61nm,10.3s							
WMQ				LR	LR			
	comp=Z,84nm,28.8s							
WMQ				LR	LR			
	comp=Z,83nm,29.0s							
WMQ	Urumqi	60.39	332	P	P	12 08 59.5	-1.0	
NIL	Nilore	62.31	315	P	P	12 09 11.9	-1.6	
NIL				IAmb	IAmb	12 09 13.6		
	comp=Z,17nm,0.6s							
KSH	Kashi	63.84	321	P	P	12 09 23.5	0.0	
KSH				pP	pP	12 10 15.5	+0.8	
KSH				S	S	12 17 34.3	-6.6	
KSH				pmax	pmax			
	comp=Z,65nm,1.1s							
KSH				pmax	pmax			
	comp=Z,180nm,4.2s							
KSH				LR	LR			
	comp=Z,250nm,10.8s							
TARG	Taragay, Kyrgy	64.12	324	P	P	12 09 24.9	-0.7	
MK31	Makanchi Array	65.16	331	P	P	12 09 31.8	0.0	
MK31				IAmb	IAmb	12 09 33.2		
	comp=Z,12nm,0.7s							
MKAR	Makanchi Array	65.16	331	P	P	12 09 32.1	+0.3	
	comp=Z,20nm,0.6s,baz=137,slow=7.4,SNR=164							
MKAR				PcP	PcP	12 10 03.5	+1.1	
	comp=Z,6.9nm,0.9s,baz=124,slow=6.0,SNR=4.6							
MAKZ	Makanchi	65.32	331	P	P	12 09 32.7	-0.2	
MAKZ				IAmb	IAmb	12 09 34.0		
	comp=Z,10.0nm,0.6s							
BOOM	Boomskoye usch	65.67	324	P	P	12 09 35.1	-0.3	
BOOM				IAmb	IAmb	12 09 39.7		
	comp=Z,12nm,0.8s							
KBL	Kabul	65.76	313	P	P	12 09 35.2	-1.0	
KBL				IAmb	IAmb	12 09 36.6		
	comp=Z,20nm,0.8s							
KZA	Kyzart	65.83	323	P	P	12 09 37.6	+1.0	
	SNR=6.3							
TKM2	Tokmak 2	66.14	324	P	P	12 09 38.9	+0.5	
	SNR=6.1							
UCH	Uchtor	66.35	323	P	P	12 09 40.7	+0.7	
	SNR=6.0							
KBK	Karagaybulak	66.36	324	P	P	12 09 40.6	+0.9	
	SNR=5.9							
AAK	Ala-Archa	66.61	323	P	P	12 09 41.4	+0.1	
	comp=Z,7.9nm,0.5s,baz=129,slow=5.4,SNR=24							
AAK	Ala-Archa	66.61	323	P	P	12 09 41.7	+0.4	
	SNR=11							
AAK	Ala-Archa	66.61	323	P	P	12 09 40.5	-0.8	
AML	Almayashu	66.79	323	P	P	12 09 42.8	+0.1	
	SNR=18							
EKS2	Erkin-Say	67.05	323	P	P	12 09 44.8	+0.8	
	SNR=7.3							
GAR	Garm	67.16	318	P	P	12 09 43.7	-1.1	
GAR				IAmb	IAmb	12 09 50.6		
	comp=Z,16nm,0.7s							
BTK	Batken	67.40	319	P	P	12 09 45.4	-0.8	
CHGR	Chuyangaron	67.75	317	P	P	12 09 46.5	-2.0	
PETK	Petropavlovsk-	67.94	22	P	P	12 09 50.1	+0.9	
	comp=Z,12nm,0.7s,baz=195,slow=6.5,SNR=51							
PETK				PcP	PcP	12 10 14.1	+0.2	
	comp=Z,4.7nm,0.7s,baz=177,slow=6.2,SNR=5.8							
KK31	Karatay Array	69.27	322	P	P	12 09 56.5	-1.2	
ZAA0	Zalesovo Array	69.37	337	P	P	12 09 56.5	-1.4	
ZAA0				IAmb	IAmb	12 09 58.2		
	comp=Z,18nm,0.8s							
ZALV	Zalesovo Beam	69.37	337	P	P	12 09 56.9	-1.1	
	comp=Z,15nm,0.4s,baz=141,slow=5.0,SNR=62							
KURBB	Kurchatov Arra	69.62	332	P	P	12 09 59.5	-0.1	
	comp=Z,13nm,0.6s,baz=142,slow=5.7,SNR=119							
KURBB				PcP	PcP	12 10 21.3	+0.3	
	comp=Z,4.4nm,0.7s,baz=136,slow=3.6,SNR=11							
KURK	Kurchatov	69.64	332	P	P	12 09 58.9	-0.8	
KURK				IAmb	IAmb	12 10 00.7		
	comp=Z,21nm,0.7s							
YAK	Yakutsk	70.11	4	P	P	12 10 02.5	+0.2	
	comp=Z,9.1nm,0.3s,baz=162,slow=2.0,SNR=6.7							
YAK	Yakutsk	70.11	4	P	P	12 10 02.1	-0.2	
MA2	Magadan	71.14	15	P	P	12 10 09.1	+0.5	
MA2				IAmb	IAmb	12 10 11.1		
	comp=Z,15nm,0.8s							
MAW	Mawson	71.24	200	P	P	12 10 10.9	+1.8	
	comp=Z,2.7nm,0.3s,baz=20,slow=3.1,SNR=4.4							
MAW	Mawson	71.24	200	P	P	12 10 09.2	+0.1	
VNDA	Vanda	72.43	172	P	P	12 10 17.9	+1.9	
	comp=Z,5.5nm,0.6s,baz=317,slow=7.1,SNR=41							
VNDA	Vanda	72.43	172	P	P	12 10 17.6	+1.5	
ABPO	Ambohimpanom	73.35	253	P	P	12 10 22.6	-0.1	
BVAR	Borovoye Array	75.04	331	P	P	12 10 31.5	-0.1	
	comp=Z,6.3nm,0.7s,baz=120,slow=6.0,SNR=30							
BRVK	Borovoye	75.11	331	P	P	12 10 29.6	-2.3	
GEYT	Alibeck	75.17	313	P	P	12 10 32.4	-0.3	
	comp=Z,3.4nm,0.6s,baz=158,slow=4.3,SNR=6.4							
GYA0B	ALIBECK ARRAY	75.17	313	P	P	12 10 31.1	-1.6	
TIXI	Tiksi	79.65	2	P	P	12 10 56.5	-0.2	
TIXI				IAmb	IAmb	12 10 59.3		
	comp=Z,16nm,0.8s							
SYO	Syowa Base	79.92	201⇑	eP	P	12 10 58.3	0.0	
SYO	Syowa Base	79.92	201⇓	ePcP	PcP	12 11 05.0	0.0	
AKTO	Aktyubinsk	80.33	324	P	P	12 11 00.3	-0.6	
	comp=Z,4nm,0.7s,baz=106,slow=6.7,SNR=24							
RAYN	Ar Rayn	81.23	295	P	P	12 11 05.9	-0.3	
RAYN				IAmb	IAmb	12 11 06.8		
	comp=Z,14nm,0.8s							
QSPA	South Pole Qui	81.94	180	P	P	12 11 10.1	+0.9	
QSPA				IAmb	IAmb	12 11 13.0		
	comp=Z,13nm,0.8s							
BILL	Bilibino	82.00	15	P	P	12 11 08.4	-0.8	
KMBO	Kilima Mbogo	84.93	270	P	P	12 11 27.0	+1.4	
	comp=Z,1.4nm,0.3s,baz=82,slow=15,SNR=4.9							
KMBO	Kilima Mbogo	84.93	270	P	P	12 11 24.8	-0.9	
KBZ	Khabaz	87.92	315	P	P	12 11 39.4	+0.3	
	comp=Z,2.8nm,0.7s,baz=96,slow=2.2,SNR=7.3							
ASF	Jabal al Asfar	90.36	302	P	P	12 11 51.4	+0.4	
	comp=Z,1.4nm,0.3s,baz=50,slow=0.6,SNR=4.7							
LSZ	Lusaka	91.83	254	P	P	12 11 56.5	-1.7	
LSZ				IAmb	IAmb	12 12 01.6		
	comp=Z,4.6nm,0.6s							
BOSA	Boshof	92.31	241	P	P	12 12 00.5	+0.3	
	comp=Z,1.5nm,0.5s,baz=116,slow=2.9,SNR=5.7							
BOSA	Boshof	92.31	241	P	P	12 12 00.1	-0.1	
SNAA	Sanae	92.77	195	P	P	12 12 02.7	+1.4	
SNAA	Sanae	92.77	195	P	P	12 12 02.7	+1.4	
SNAA				IAmb	IAmb	12 12 04.7		
	comp=Z,10nm,1.5s							
TTA	Tatalina	93.34	27	P	P	12 12 03.8	-0.2	
KLMR	Klimovskoe	93.46	331	eP	P	12 12 02.0	-2.5	
KLMR				AMP		12 12 04.3		
	comp=Z,4.0nm,0.5s							
BRTR	Keskin Array B	94.05	309	P	P	12 12 06.8	-1.1	
	comp=Z,2.6nm,0.8s,baz=131,slow=5.4,SNR=9.0							
KTH	Kantishna Hill	95.71	27	P	P	12 12 12.6	-2.2	
KTH				IAmb	IAmb	12 12 14.9		
	comp=Z,4.1nm,0.8s							
BPAW	Bear Paw Mtn.	95.75	26	P	P	12 12 14.9	0.0	
BPAW				IAmb	IAmb	12 12 16.0		
	comp=Z,4.3nm,0.8s							
TRF	Thorofare Moun	95.98	27	P	P	12 12 14.9	-1.3	
TRF				IAmb	IAmb	12 12 16.0		
	comp=Z,5.8nm,0.9s							
COLD	Coldfoot	96.39	23	P	P	12 12 18.7	+0.9	
COLD				IAmb	IAmb	12 12 19.5		
	comp=Z,4.1nm,1.0s							
MCK	McKinley	96.61	27	P	P	12 12 18.1	-0.8	
MCK				IAmb	IAmb	12 12 18.7		
	comp=Z,8.6nm,1.0s							
RND	Reindeer	96.62	27	P	P	12 12 17.2	-1.7	
TOLK	Toolik Lake Re	96.76	22	P	P	12 12 19.5	+0.1	
	baz=265							
TOLK	Toolik Lake Re	96.76	22	P	P	12 12 19.2	-0.2	
TOLK				IAmb	IAmb	12 12 20.7		
	comp=Z,6.2nm

J04D	Umpqua Nationa	114.06	46	P		PKPdf	12 17 27.6	0.0	
	baz=282								
N02D	Trinity Center	114.07	49	P		PKPdf	12 17 27.5	-0.1	
	baz=281								
L04D	Klamath Falls	114.12	47	P		PKiKP	12 17 28.0	+0.3	
	baz=282								
M04C	Macdoel	114.55	48	P		PKPdf	12 17 28.3	-0.3	
	baz=282								
J05D	Fort Rock, OR	114.67	46	P		PKPdf	12 17 28.5	-0.3	
	baz=283								
O03E	Paynes Creek	114.87	49	P		PKiKP	12 17 28.9	-0.3	
	baz=281								
ESK	Eskdalemuir	116.29	329			PKiKP	12 17 31.9	+0.7	
SMMC	Simmler	117.17	54	P		PKPdf	12 17 33.5	-0.2	
	baz=280								
VES	Vestal, Richgr	117.81	54	P		PKPdf	12 17 34.6	-0.2	
	baz=281								
NVAR	Mina Array Bea	117.90	51	PKP		PKiKP	12 17 36.8	+1.5	
	comp=Z,1.1nm,0.7s,baz=254,slow=2.4,SNR=11								
CWC	Cottonwood Cre	118.49	53	P		PKPdf	12 17 35.4	-1.0	
	baz=282								
MSO	Missoula	118.62	41	P		PKPdf	12 17 35.6	-0.6	
	baz=290								
CIS	Catalina Islan	118.78	56	P		PKPdf	12 17 36.3	-0.5	
	baz=280								
EDW2	Edwards Air Fo	118.86	55	P		PKPdf	12 17 36.5	-0.4	
	baz=281								
LRMC	Laurel Mtn Rad	119.00	54	P		PKPdf	12 17 37.0	-0.3	
	baz=282								
MPMC	Manual Prospec	119.04	53	P		PKPdf	12 17 37.1	-0.4	
	baz=282								
FURC	Furnace Creek,	119.45	53	P		PKPdf	12 17 38.0	+0.1	
	baz=283								
ELK	Elko	119.63	48			PKPdf	12 17 36.5	-2.0	
GSC	Goldstone, Bar	119.74	54	P		PKPdf	12 17 38.8	+0.1	
	baz=282								
TPNV	Topopah Spring	119.82	52	P		PKPdf	12 17 38.5	-0.4	
	baz=283								
R11A	Troy Canyon, C	120.00	50	P		PKPdf	12 17 39.2	0.0	
	baz=285								
HEC	Hector,Ludlow	120.21	54	P		PKPdf	12 17 39.4	-0.2	
	baz=282								
PFO	Pinyon Flats O	120.35	56	P		PKPdf	12 17 39.7	-0.2	
	baz=281								
PFO	Pinyon Flats O	120.35	56			PKiKP	12 17 40.4	+0.3	
XPFO	Pion Flat	120.36	56			PKPdf	12 17 39.7	-0.2	
MONP2	Monument Peak	120.52	57	P		PKPdf	12 17 40.5	+0.1	
	baz=281								
BELC	Belle Mtn. Jos	120.65	55	P		PKPdf	12 17 40.3	-0.3	
	baz=282								
GMRC	Granite Mounta	120.76	54	P		PKPdf	12 17 40.5	-0.2	
	baz=282								
EGMT	Eagleton	120.79	38	P		PKiKP	12 17 40.7	+0.2	
	baz=295								
IKP	In-Ko-Pah, Jac	120.83	57	P		PKPdf	12 17 40.7	-0.1	
	baz=281								
BC3	Big Chuckawall	121.17	56	P		PKPdf	12 17 41.3	-0.2	
	baz=282								
IRM	Iron Mountain	121.31	55	P		PKPdf	12 17 41.4	-0.2	
	baz=282								
TORD	Torodi Ar. Bea	121.50	280	PKP		PKPdf	12 17 41.9	-0.6	
	comp=Z,5.6nm,0.6s,baz=65,slow=1.7,SNR=26								
DUG	Dugway, Tooele	121.56	48	P		PKPdf	12 17 42.0	-0.2	
	baz=288								
DUG	Dugway, Tooele	121.56	48			PKPdf	12 17 41.3	-0.8	
FXWY	Fox Creek	121.68	43			PKPdf	12 17 41.6	-0.8	
GLA	Glamis	121.81	56	P		PKPdf	12 17 42.8	+0.2	
	baz=282								
REDW	Red Top Meadow	121.89	43			PKPdf	12 17 42.2	-0.6	
SNOW	Snow King Moun	121.92	43			PKPdf	12 17 43.0	+0.1	
HWUT	Hardware Ranch	122.01	46			PKPdf	12 17 42.1	-0.9	
MSU	Marysvale	122.53	49			PKPdf	12 17 42.2	-1.9	
ESDC	Sonseca Array	122.72	312	PKP		PKPdf	12 17 44.3	+0.1	
	comp=Z,1.1nm,0.7s,baz=6.3,slow=3.0,SNR=8.5								
PDAR	Pinedale Array	123.00	44	PKP		PKPdf	12 17 44.7	-0.2	
	comp=Z,0.5nm,0.5s,baz=288,slow=7.2,SNR=4.6								
U15A	North Rim	123.03	52			PKiKP	12 17 45.5	+0.1	
SRU	San Rafael Swe	123.58	48			PKiKP	12 17 46.4	+0.1	
RDMU	Red Mountain	123.78	46			PKPdf	12 17 45.6	-0.9	
WUAZ	Wupatki	123.99	52	P		PKiKP	12 17 47.3	+0.1	
	baz=286								
WUAZ	Wupatki	123.99	52			PKPdf	12 17 46.2	-0.8	
O20A	White River Ci	124.88	46	P		PKPdf	12 17 48.8	+0.3	
	baz=291								
O20A	White River Ci	124.88	46			PKPdf	12 17 46.8	-1.8	
PV14	Lion Creek, Pa	124.92	48			PKPdf	12 17 47.5	-1.2	
RWWY	Rawlins	125.02	44			PKPdf	12 17 48.1	-0.8	
K22A	Casper	125.10	43	P		PKPdf	12 17 49.0	+0.1	
	baz=295								
TUC	Tucson	125.29	56	P		PKPdf	12 17 49.6	+0.1	
	baz=284								
W18A	Petrified Fore	125.39	52	P		PKPdf	12 17 49.9	+0.2	
	baz=287								
MVCO	Mesa Verde	125.70	50	P		PKPdf	12 17 50.4	+0.1	
	baz=289								
MVCO	Mesa Verde	125.70	50	PKPdf		PKiKP	12 17 51.8	+1.1	
RSSD	Black Hills	126.09	40	P		PKPdf	12 17 50.7	0.0	
	baz=298								
N23A	Red Feather La	126.21	44	P		PKPdf	12 17 50.9	-0.3	
	baz=294								
S22A	4UR Ranch, Cre	126.77	48	P		PKPdf	12 17 52.4	+0.1	
	baz=291								
ISCO	Idaho Springs	126.88	46	P		PKPdf	12 17 52.7	+0.2	
	baz=294								
KIC	Kosan Boka	127.45	272	*e*PKIKP		PKiKP	12 17 56.6	+2.1	
	comp=Z,16nm,0.9s								
DBIC	Dimbokro	127.59	272	PKP		PKiKP	12 17 56.5	+1.7	
	comp=Z,5.6nm,0.6s,baz=45,slow=1.6,SNR=7.1								
DBIC	Dimbokro	127.59	272			PKPdf	12 17 54.3	+0.1	
121A	Cookes Peak, D	127.68	55	P		PKPdf	12 17 54.0	-0.1	
	baz=286								
LIC	Lamto	127.72	272	*e*PKIKP		PKiKP	12 17 56.9	+1.8	
	comp=Z,19nm,0.7s								
SDCO	Great Sand Dun	127.75	48	P		PKPdf	12 17 54.2	-0.1	
	baz=292								
SDCO	Great Sand Dun	127.75	48			PKiKP	12 17 55.6	+0.8	
TIC	Toumodi	127.75	272	*e*PKIKP		PKiKP	12 17 56.7	+1.6	
ANMO	Albuquerque	128.00	52	P		PKiKP	12 17 55.1	-0.2	
	baz=289								
ANMO	Albuquerque	128.00	52			PKiKP	12 17 55.7	+0.4	
T25A	Trinidad	128.78	48	P		PKPdf	12 17 56.4	+0.2	
	baz=293								
MNTX	Cornudas Mount	129.88	55	P		PKiKP	12 17 59.1	+0.2	
	baz=288								
MNTX	Cornudas Mount	129.88	55			PKiKP	12 17 59.9	+0.9	
PLCA	Paso Flores	130.04	167	SKPbc		SKPbc	12 21 00.1	+0.2	
	comp=Z,4.7nm,0.8s,baz=242,slow=3.6,SNR=9.1								
ECSD	EROS Data Cent	130.88	37	P		PKPdf	12 17 59.9	+0.2	
	baz=305								
TX31	Lajitas Ar. Si	131.98	58			PKPdf	12 17 59.2	-3.1	
TX32	Lajitas Array	131.98	58			PKPdf	12 18 01.7	-0.6	
TXAR	Lajitas Array	131.98	58	PKP		PKiKP	12 18 03.6	+0.2	
	comp=Z,1.1nm,0.6s,baz=239,slow=1.7,SNR=14								
TXAR				SKPbc		SKPbc	12 21 06.5	-0.9	
	comp=Z,0.6nm,0.6s,baz=296,slow=1.9,SNR=7.2								
WMOK	Wichita Mounta	133.93	49	P		PKiKP	12 18 06.6	-0.5	
	baz=296								
JCT	Junction City	134.79	55	P		PKiKP	12 18 08.7	-0.3	
	baz=291								
JCT	Junction City	134.79	55			PKPdf	12 18 05.7	-1.7	
JFWS	Jewell Farm	135.05	34	P		PKiKP	12 18 08.9	-0.2	
	baz=311								
D46A	Sault St. Mari	135.23	26	P		PKiKP	12 18 09.3	0.0	
	baz=322								
D47A	Chapleau	135.49	25	P		PKiKP	12 18 09.7	-0.1	
	baz=323								
E46A	Sault Ste Mari	135.52	26			PKPdf	12 18 08.4	+0.1	
D48A	Paudash Townsh	135.92	24	P		PKPdf	12 18 09.9	+0.9	
	baz=325								
E48A	Lockeyer	136.34	24	P		PKiKP	12 18 10.8	-0.7	
	baz=324								
G47A	Hillman	136.65	27	P		PKiKP	12 18 12.0	-0.2	
	baz=321								
F48A	Evansville	136.67	25	P		PKPdf	12 18 11.1	+0.7	
	baz=323								
D50A	G1974 Best Tow	136.69	22	P		PKiKP	12 18 11.6	-0.6	
	baz=327								
I46A	Reed City	136.83	29	P		PKiKP	12 18 12.2	-0.4	
	baz=318								
E50A	Wahnapitae	136.96	23	P		PKiKP	12 18 12.5	-0.3	
	baz=326								
F49A	Sandfield	136.97	25	P		PKiKP	12 18 12.3	-0.5	
	baz=324								
U40A	Yellville	137.37	43	P		PKiKP	12 18 13.9	-0.1	
	baz=303								
U40A	Yellville	137.37	43			PKPdf	12 18 11.7	-0.3	
F51A	Arnstein	137.69	23	P		PKiKP	12 18 14.1	-0.2	
	baz=326								
MIAR	Mount Ida	137.81	46	P		PKiKP	12 18 14.7	-0.2	
	baz=300								
E53A	Dumoine, Ponti	138.14	21	P		PKiKP	12 18 14.6	-0.7	
	baz=330								
E54A	Lac Daplat, Po	138.26	20	P		PKiKP	12 18 14.9	-0.6	
	baz=330								
K48A	Perry	138.32	29	P		PKiKP	12 18 15.2	-0.5	
	baz=319								
X40A	Basin Creek Fa	138.37	46	P		PKPdf	12 18 15.0	+1.1	
	baz=301								
D56A	ZEC Mazanza, M	138.50	18	P		PKPdf	12 18 14.8	+1.1	
	baz=334								
D57A	Chemin Vers le	138.78	17	P		PKPdf	12 18 14.9	+0.6	
	baz=335								
G54A	Lake Saint Pet	138.83	22	P		PKPdf	12 18 15.5	+1.0	
	baz=329								
E56A	St. Veronique	138.87	18	P		PKiKP	12 18 16.3	-0.4	
	baz=334								
I51A	Listowel	138.97	26	P		PKiKP	12 18 16.2	-0.8	
	baz=324								
H53A	Bobcaygeon	139.34	23	P		PKiKP	12 18 16.9	-0.9	
	baz=327								
H55A	Tweed	139.89	22	P		PKiKP	12 18 18.4	-0.4	
	baz=329								
D62A	Allapoint, All	139.92	12	P		PKiKP	12 18 18.9	+0.1	
	baz=342								
I55A	Frankford	139.99	22	P		PKiKP	12 18 18.8	-0.2	
	baz=328								
E60A	Ste Agathe de	140.04	15	P		PKiKP	12 18 19.1	0.0	
	baz=339								
E61A	Lac Etchemin	140.21	14	P		PKiKP	12 18 19.1	-0.4	
	baz=340								
E62A	Clayton Lake	140.25	13	P		PKiKP	12 18 19.1	-0.4	
	baz=342								
N50A	Nevada	140.32	31	P		PKiKP	12 18 19.2	-0.6	
	baz=318								
WCI	Wyandotte Cave	140.40	36	P		PKiKP	12 18 19.8	-0.3	
	baz=312								
J54A	Appleton	140.41	24	P		PKiKP	12 18 19.5	-0.5	
	baz=326								
G58A	Ormstown	140.42	18	P		PKiKP	12 18 19.8	-0.1	
	baz=334								
M52A	Chesterland	140.61	28	P		PKiKP	12 18 19.8	-0.6	
	baz=322								
I57A	Carthage	140.97	21	P		PKiKP	12 18 20.4	-0.6	
	baz=331								
H59A	Cadyville	140.99	18	P		PKiKP	12 18 20.1	-1.0	
	baz=334								
M53A	WI Miller and	141.01	28	P		PKiKP	12 18 20.8	-0.5	
	baz=322								
H58A	Gabriels	141.04	19	P		PKiKP	12 18 20.8	-0.5	
	baz=334								
O51A	Pataskala	141.06	31	P		PKiKP	12 18 20.9	-0.5	
	baz=319								
AC05	El Transito	141.38	162			PKPdf	12 18 20.6	+0.8	
K56A	Middlesex	141.41	23	P		PKiKP	12 18 21.4	-0.7	
	baz=328								
M54A	Oil Creek Stat	141.41	27	P		PKiKP	12 18 21.8	-0.3	
	baz=324								
I58A	Old Forge	141.42	20	P		PKiKP	12 18 21.2	-0.8	
	baz=332								
N53A	Lisbon	141.43	29	P		PKiKP	12 18 21.8	-0.4	
	baz=322								
PKME	Peaks-Kenny Pk	141.59	13	P		PKiKP	12 18 22.0	-0.3	
	baz=342								
J58A	Remsen	141.60	21	P		PKiKP	12 18 22.0	-0.4	
	baz=331								
N54A	Moraine State	141.70	28	P		PKiKP	12 18 22.3	-0.3	
	baz=323								
J59A	Piesco	141.78	20	P		PKiKP	12 18 22.7	-0.1	
	baz=333								
M57A	Sunshine Farm,	142.64	24	PKPdf		PKPdf	12 18 17.8	-3.6	
Q54A	Coxs Mills	142.84	30	P		PKPdf	12 18 18.8	-3.0	
	baz=320								
K61A	Williamstown	142.90	19	P		PKPdf	12 18 19.0	-2.8	
	baz=334								
SSPA	Standing Stone	142.90	26	P		PKPdf	12 18 19.2	-2.7	
	baz=326								
O56A	Blue Knob Stat	142.90	27	P		PKPdf	12 18 19.3	-2.6	
	baz=324								
J63A	Strafford	143.00	16	P		PKPbc	12 18 19.4	+0.1	
	baz=338								
M59A	Waymart	143.13	22	P		PKPbc	12 18 20.0	+0.2	
	baz=330								
TZTN	Tazewell	143.15	36	P		PKPbc	12 18 20.6	+0.6	
	baz=314								
Q55A	Buckhannon	143.20	30	P		PKPbc	12 18 20.7	+0.5	
	baz=321								
FPAL	Fort Paine	143.22	40			PKPbc	12 18 20.6	+0.3	
LRAL	Lakeview Retre	143.22	43	P		PKPbc	12 18 21.3	+0.9	
	baz=306								
LRAL	Lakeview Retre	143.22	43			PKPbc	12 18 21.2	+0.9	
N58A	Sunbury	143.22	24	P		PKPbc	12 18 20.9	+0.8	
	baz=328								
N58A	Sunbury	143.22	24			PKPbc	12 18 20.7	+0.7	
O57A	Amberson	143.36	26	P		PKPbc	12 18 20.9	+0.4	
	baz=326								
R54A	Victor	143.37	31	P		PKPbc	12 18 20.5	-0.1	
	baz=319								
P56A	Dayton Farm, R	143.40	28	P		PKPbc	12 18 21.1	+0.5	
	baz=324								
T53A	Wise	143.42	34	P		PKPab	12 18 20.3	+0.6	
	baz=316								
S54A	Dingess, Beckl	143.49	32	P		PKPab	12 18 20.2	+0.3	
	baz=318								
N59A	State Game Lan	143.54	23	P		PKPbc	12 18 20.7	-0.3	
	baz=329,SNR=6.8								
HRV	Adam Dziewonsk	143.57	17	P		PKPbc	12 18 21.7	+0.7	
	baz=337								
AC02	Maruzuga	143.59	163			PKPdf	12 18 23.5	-0.7	
Q56A	Snyder Ridge,	143.60	29	P		PKPbc	12 18 21.2	0.0	
	baz=323								
V52A	Sevierville	143.61	37			PKPbc	12 18 22.1	+0.8	
M60A	Port Jervis	143.62	22	P		PKPbc	12 18 21.5	+0.3	
	baz=331								
TKL	Tuckaleechee C	143.62	37			PKPdf	12 18 22.6	-0.8	
R55A	Marlinton	143.74	30	P		PKPab	12 18 21.3	+0.4	
	baz=321								
R55A	Marlinton	143.74	30			PKPab	12 18 21.4	+0.5	
O58A	Lewisberry	143.74	25	P		PKPbc	12 18 21.7	+0.1	
	baz=327								
AC01	Pan de Azucar	143.77	160			PKPdf	12 18 23.3	-0.6	
P57A	Homestead Farm	143.79	27	P		PKPab	12 18 21.2	+0.3	
	baz=325,SNR=5.9								
N60A	Cedar Hill Far	143.84	23	P		PKPab	12 18 21.2	+0.1	
	baz=330,SNR=5.2								
O59A	Robesonia	143.89	24	P		PKPab	12 18 21.4	+0.1	
	baz=328								
T54A	Tazewell	143.89	33	P		PKPab	12 18 21.3	-0.2	
	baz=317,SNR=6.2								
S55A	Lewisburg	143.93	31	P		PKPbc	12 18 22.2	-0.1	
	baz=320								
M61A	Granite Spring	143.94	21	P		PKPbc	12 18 21.9	-0.2	
	baz=332								
Q57A	Strasburg	143.97	28	P		PKPab	12 18 21.8	+0.1	
	baz=324,SNR=6.3								
MVL	Millersville	144.08	25			PKPbc	12 18 22.6	+0.1	
P58A	Pank, Wackersv	144.10	26	P		PKPab	12 18 22.3	+0.2	
	baz=326,SNR=8.3								
M62A	Hamden	144.12	20	P		PKPbc	12 18 23.0	+0.4	
	baz=334								
L63A	North Scituate	144.15	18	P		PKPbc	12 18 22.7	0.0	
	baz=336								
U54A	Nelsons Funny	144.15	34	P		PKPab	12 18 22.8	+0.3	
	baz=317								
PAL	Palisades	144.16	21	P		PKPbc	12 18 23.1	+0.3	
	baz=332								
V53A	Saluda	144.19	36			PKPab	12 18 22.0	-0.7	
O60A	Telford	144.19	23	P		PKPbc	12 18 22.8	-0.1	
	baz=329								
BRNJ	Basking Ridge	144.20	22			PKPab	12 18 22.4	0.0	
WSPT	Westport, CT	144.22	20			PKPbc	12 18 23.0	+0.1	
N61A	South Mountain	144.24	22	P		PKPbc	12 18 23.6	+0.6	
	baz=331								
T55A	Pulaski	144.28	32	P		PKPab	12 18 22.6	-0.4	
	baz=319								
L64A	Middleborough	144.31	17	P		PKPab	12 18 22.5	-0.3	
	baz=338								
250A	Grady	144.34	44			PKPab	12 18 23.5	+0.2	
SDMD	Soldier's Deli	144.37	26			PKPab	12 18 23.3	+0.1	
P59A	Jarrettsville	144.37	25	P		PKPab	12 18 23.2	0.0	
	baz=327,SNR=8.3								
N62A	Caumsett State	144.38	21	P		PKPab	12 18 22.8	-0.3	
	baz=333								
Q58A	Fox Den Farm,	144.38	27	P		PKPab	12 18 23.1	-0.1	
	baz=325,SNR=18								
BLA	Blacksburg	144.40	32	P		PKPab	12 18 23.2	-0.2	
	baz=319								
BLA	Blacksburg	144.40	32			PKPab	12 18 23.3	-0.1	
M63A	Gales Ferry	144.43	19	P		PKPab	12 18 23.0	-0.3	
	baz=335								
R57A	Stanardsville	144.51	29	P		PKPab	12 18 23.6	-0.2	
	baz=323,SNR=20								
PSUB	Penn St. - Bra	144.51	24			PKPab	12 18 23.4	-0.3	
P60A	Greenville	144.53	24	P		PKPab	12 18 23.7	0.0	
	baz=328,SNR=14								
P60A	Greenville	144.53	24			PKPab	12 18 23.4	-0.3	
M64A	Tiverton	144.55	18	P		PKPab	12 18 23.1	-0.6	
	baz=337								
BG3	Lake Jocassee	144.58	37			PKPab	12 18 23.9	-0.2	
U55A	TA2, Sparta	144.59	33	P		PKPab	12 18 23.7	-0.5	
	baz=318,SNR=8.9								
V54A	Nebo	144.61	35	P		PKPab	12 18 23.9	-0.4	
	baz=316,SNR=8.9								
S57A	Dark Hollow, R	144.72	30	P		PKPab	12 18 24.2	-0.3	
	baz=322,SNR=7.6								
S57A	Dark Hollow, R	144.72	30			PKPab	12 18 23.2	-1.3	
T56A	Rocky Mt	144.74	32	P		PKPab	12 18 24.1	-0.5	
	baz=320,SNR=10								
R58A	Rapidan	144.75	28	P		PKPab	12 18 24.7	0.0	
	baz=324,SNR=25								
Q59A	Harwood	144.90	26	P		PKPdf	12 18 25.5	+0.1	
	baz=326								
W54A	Cherokee Point	144.96	36	P		PKPbc	12 18 25.4	0.0	
	baz=315,SNR=16								
V55A	Taylorsville	144.97	34	P		PKPbc	12 18 25.3	-0.2	
	baz=317,SNR=15								
V55A	Taylorsville	144.97	34			PKPbc	12 18 24.9	-0.5	
152A	Waverly Hall	144.97	42			PKPbc	12 18 24.2	-1.3	
GO02	Mina Guanaco	145.02	161			PKPdf	12 18 27.6	+1.2	
U56A	King	145.06	33	P		PKPbc	12 18 25.3	-0.4	
	baz=318								
U56A	King	145.06	33			PKPbc	12 18 25.2	-0.5	
R58B	Mineral	145.08	28	P		PKPbc	12 18 25.3	-0.3	
	baz=324,SNR=13								
R58B	Mineral	145.08	28			PKPbc	12 18 25.8	+0.1	
CBN	Corbin Frederi	145.12	28	P		PKPbc	12 18 25.8	0.0	
	baz=325								
Q60A	Greensboro	145.13	25	P		PKPbc	12 18 26.0	+0.2	
	baz=328								
T57A	Hurt	145.16	31	P		PKPdf	12 18 25.7	-0.3	
	baz=321,SNR=13								
T57A	Hurt	145.16	31			PKPbc	12 18 26.2	+0.2	
X54A	Belton	145.22	37	P		PKPbc	12 18 26.4	+0.2	
	baz=314,SNR=17								
R59A	King George, V	145.24	27	P		PKPbc	12 18 26.4	+0.2	
	baz=325								
S58A	Poland Farm, P	145.28	29	P		PKPdf	12 18 26.1	0.0	
	baz=323,SNR=6.2								
S58A	Poland Farm, P	145.28	29			PKPdf	12 18 26.2	+0.1	
GOGA	Godfrey	145.31	40	P		PKPbc	12 18 26.6	+0.1	
	baz=311,SNR=17								
PAULI	Pauline	145.36	36			PKPab	12 18 27.1	0.0	
V56A	Mocksville	145.40	34	P		PKPbc	12 18 26.7	0.0	
	baz=318,SNR=6.5								
KMSC	Kings Mountain	145.41	35	P		PKPbc	12 18 26.8	0.0	
	baz=316,SNR=16								
R60A	Leonardtown, M	145.42	27	P		PKPab	12 18 27.1	-0.1	
	baz=326								
Q61A	Milford	145.45	25	P		PKPbc	12 18 27.0	+0.2	
	baz=328								
S59A	Mechanicsville	145.51	28	P		PKPbc	12 18 27.2	+0.2	
	baz=324,SNR=5.5								
U57A	Blanch	145.55	32	P		PKPbc	12 18 27.1	-0.1	
	baz=320,SNR=8.5								
T58A	Grand View Acr	145.57	30	P		PKPdf	12 18 27.0	+0.4	
	baz=322,SNR=7.3								
X55A	Gracelyn & Ava	145.71	36	P		PKPbc	12 18 28.0	+0.3	
	baz=315,SNR=11								
V57A	Coltrane Farms	145.73	33	P		PKPbc	12 18 27.8	+0.1	
	baz=319,SNR=9.6								
CPUP	Villa Florida	145.82	181	PKP		PKPab	12 18 29.7	+0.7	
	comp=Z,1.9nm,0.4s,baz=167,slow=3.3,SNR=7.1								
CPUP				PKPbc		PKiKP	12 18 35.2	+3.6	
	comp=Z,11nm,0.7s,baz=174,slow=2.8,SNR=20								
W56A	Indian Trail	145.84	35	P		PKPbc	12 18 28.3	+0.2	
	baz=317,SNR=12								
S60A	Water View	145.85	27	P		PKPbc	12 18 28.4	+0.3	
	baz=325								
Y55A	Saluda	145.95	37	P		PKPbc	12 18 29.0	+0.5	
	baz=314,SNR=11								
U58A	Oxford	145.99	31	P		PKPbc	12 18 28.5	0.0	
	baz=321,SNR=7.5								
T59A	Double "B" Far	146.03	29	P		PKPbc	12 18 28.8	+0.3	
	baz=323,SNR=10								
X56A	White Oak	146.05	36	P		PKPab	12 18 29.4	-0.2	
	baz=316								
V58A	Windy Hill, Pi	146.15	32	P		PKPbc	12 18 28.9	-0.1	
	baz=320,SNR=5.3								
W57A	Gilead	146.16	34	P		PKPbc	12 18 29.4	+0.4	
	baz=318								
W57A	Gilead	146.16	34			PKPdf	12 18 28.4	+0.7	
T60A	Surry	146.28	28	P		PKPab	12 18 30.1	-0.3	
	baz=325								
U59A	Littleton	146.40	30	P		PKPbc	12 18 30.9	-0.1	
	baz=322								
TIGA	T

USP	**Ospenovka**	**7.51**	**20**	P		**Pn**	**12 11 56.7**	**+1.1**	
	SNR=6.5								
TKM2	**Tokmak 2**	**7.56**	**27**	P		Pn	12 12 02.4	+6.0	
	SNR=8.1								
GEYT	**Alibeck**	**10.36**	**283**	P		**Pn**	**12 12 35.8**	**+1.4**	
	0.7nm,0.3s,baz=86,slow=7.4,SNR=3.2								
GEYT				S		**Sn**	**12 14 23.4**	**-5.2**	
	0.5nm,0.3s,baz=8.6,slow=29,SNR=1.4								
PYUN	**Piuthan**	**13.06**	**125**	*eP*		**Pn**	**12 13 10.2**	**-0.5**	
	32nm,0.4s								
DANN	**Dangsing**	**13.42**	**122**	*eP*		**Pn**	**12 13 15.3**	**-0.1**	
	17nm,0.3s								
MKAR	**Makanchi Array**	**13.52**	**35**	P		**Pn**	**12 13 15.4**	**-0.9**	
	0.0nm,0.3s,baz=231,slow=16,SNR=1.9								
KOLN	**Koldanda**	**13.68**	**125**	*eP*		**Pn**	**12 13 18.6**	**-0.2**	
	7.0nm,0.3s								
GKN	**Gorkha**	**14.24**	**122**	*eP*		**Pn**	**12 13 25.6**	**-0.3**	
	23nm,0.2s								
DMN	**Daman**	**14.81**	**122**	*eP*		**Pn**	**12 13 33.1**	**-0.2**	
	8.7nm,0.3s								
PKI	**Pulchoki**	**15.04**	**121**	*eP*		**P**	**12 13 36.1**	**-3.2**	
	7.3nm,0.3s								
GUN	**Gumba**	**15.16**	**119**	*eP*		**P**	**12 13 37.8**	**-2.9**	
	13nm,0.4s								
AB31	**Akbulak array**	**15.26**	**332**	⇓P		**Pn**	**12 13 38.7**	**+0.2**	
	1.7nm,0.3s,baz=167,slow=11,SNR=87								
AB31				S		Sn	12 16 16.4	-11	
	0.9nm,0.5s,baz=152,slow=23,SNR=6.5								
KURBB	**Kurchatov Arra**	**15.36**	**19**	P		**P**	**12 13 42.4**	**+0.1**	
	0.2nm,0.3s,baz=206,slow=11,SNR=11								
JIRN	**Jiri**	**15.53**	**119**	*eP*		**P**	**12 13 42.3**	**-2.5**	
	37nm,0.4s								
BVAR	**Borovoye Array**	**16.76**	**359**	P		**Pn**	**12 13 57.8**	**+0.6**	
	0.7nm,0.3s,baz=166,slow=14,SNR=6.7								
TAPN	**Taplejung**	**16.80**	**117**	*eP*		**P**	**12 13 59.5**	**+0.8**	
	16nm,0.3s								
ODAN	**Odare**	**16.86**	**119**	*eP*		**P**	**12 13 59.8**	**+0.4**	
	14nm,0.5s								
AKTO	**Aktyubinsk**	**16.95**	**331**	P		**Pn**	**12 14 01.1**	**+1.6**	
	0.6nm,0.3s,baz=157,slow=10.0,SNR=14								
AKTO	**Aktyubinsk**	**16.95**	**331**	⇑P		**Pn**	**12 14 01.0**	**+1.4**	
	10nm,0.8s								
AKTO				⇑S		Sn	12 16 57.3	-10	
	4.2nm,0.9s								
ZALV	**Zalesovo Beam**	**20.15**	**24**	P		**P**	**12 14 35.2**	**+0.4**	
	5.2nm,0.4s,baz=224,slow=12,SNR=20								
FINES	**FINESS Array B**	**37.64**	**326**	P		**P**	**12 17 15.4**	**+1.7**	
	1.8nm,0.7s,baz=120,slow=12,SNR=4.3								
ARCES	**ARCESS Array B**	**41.33**	**338**	P		**P**	**12 17 46.0**	**+1.7**	
	1.2nm,0.5s,baz=106,slow=8.9,SNR=9.6								
NB2	**NORSAR Subarra**	**44.52**	**323**	P		**P**	**12 18 11.6**	**+1.5**	
	comp=Z,1.4nm,0.8s,baz=90,slow=7.9								
NOA	**NORSAR Array B**	**44.52**	**323**	P		**P**	**12 18 11.1**	**+1.0**	
	comp=Z,1.7nm,0.7s,baz=95,slow=7.8,SNR=7.3								
DAV	**Davao City (W)**	**57.59**	**106**	LR		LR	12 46 14.6		
	comp=Z,157nm,18.2s,baz=176,slow=38								
TORD	**Torodi Ar. Bea**	**65.65**	**269**	P		**P**	**12 20 41.3**	**-1.3**	
	comp=Z,0.4nm,0.6s,baz=62,slow=5.4,SNR=2.6								
INK	**Inuvik**	**74.14**	**9**	P		**P**	**12 21 34.7**	**+0.9**	
	comp=Z,0.5nm,0.5s,baz=326,slow=7.0,SNR=7.0								
BOSA	**Boshof**	**77.53**	**220**	P		**P**	**12 21 55.2**	**+1.5**	
	comp=Z,1.7nm,0.7s,baz=342,slow=20,SNR=3.3								
YKA	**Yellowknife Ar**	**81.48**	**3**	P		**P**	**12 22 15.1**	**+0.5**	
	comp=Z,0.4nm,0.5s,baz=355,slow=5.3,SNR=16								
YKA				LR		LR	13 03 33.8		
	comp=Z,33nm,18.1s,baz=0.0,slow=39								
WRA	**Warramunga Arr**	**81.92**	**122**	P		**P**	**12 22 16.7**	**-0.8**	
	comp=Z,0.5nm,0.7s,baz=324,slow=4.8,SNR=6.1								

HLW ***27*** *12:20:45.7,34.˚87N×24.˚10E,h10km±33km,Md4.7*
IDC ***27*** *12:20:49.6±0.9,34.˚57N×24.˚37E,h0km,mb3.9/10,*
mb1 4.0/16,mb1mx3.8/54,mbtmp3.9/16,ML3.8/6,MS2.6/2,
Ms1 2.6/2,ms1mx2.3/57,Error ellipse: s-maj=20.2km
s-min=10.4km az=130.0
MOS ***27*** *12:20:50.6±1.8,34.˚55N×24.˚31E,h21km,mb4.3/9,Error*
ellipse: s-maj=10.1km s-min=6.0km az=73.1
ISK ***27*** *12:20:51.3,34.˚57N×24.˚35E,h7km,ML3.7/13*
ATH ***27*** *12:20:51.5,34.˚55N×24.˚33E,h21km±1km,ML3.7/8,Error*
ellipse: s-maj=3.2km s-min=1.2km az=8.0
NEIC ***27*** *12:20:51.8±2.0,34.˚62N±0.˚05×24.˚42E±0.˚07,h15km±2km,*
Error ellipse: s-maj=9.3km s-min=5.5km az=120.0
THE ***27*** *12:20:53.0,34.˚67N×24.˚37E,h0km±2km,ML3.8/5,Error*
ellipse: s-maj=3.7km s-min=0.9km az=185.0
GII ***27*** *12:20:57.9±0.0,33.˚65N×24.˚61E,h13km*
ISC 27 12:20:51.7±1.4,**34.˚58N**±0.˚05×**24.˚35E**±0.˚03,**h14**km±8km,
n126,σ1°§44/147,**mb4.0**/21,**7C,Crete**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GVD	**Gavdhos**	**0.34**	**321**	P		**Pb**	**12 20 59.4**	**-0.1**
GVD				S		**Sb**	**12 21 04.4**	**-0.4**
	78µm,0.5s							
GVD	**Gavdhos**	**0.34**	**321**	P		**Pb**	**12 20 59.5**	**0.0**
GVD				S		**Sb**	**12 21 04.9**	**+0.1**
GVD				AML		AML	12 21 05.5	
GVD				AML		AML	12 21 06.5	
SIVA	**Sivas**	**0.58**	**41**	P		**Pb**	**12 21 03.4**	**-0.2**
SIVA				S		**Sg**	**12 21 10.5**	**-0.3**
	40µm,0.5s							
SIVA	**Sivas**	**0.58**	**41**	P		**Pb**	**12 21 03.6**	**-0.1**
SIVA				S		**Sb**	**12 21 12.5**	**+0.8**
SIVA				AML		AML	12 21 16.8	
	comp=N,47686µm,0.5s							
SIVA				AML		AML	12 21 20.5	
	comp=E,71661µm,0.5s							
TMBK	**Timbaki Herakl**	**0.60**	**35**	P		**Pb**	**12 21 04.0**	**0.0**
TMBK				S		**Sg**	**12 21 11.1**	**-0.4**
	comp=E,7µm,0.5s							
PRNS	**Prines Rethymn**	**0.80**	**9**	P		**Pg**	**12 21 06.6**	**-0.6**
PRNS				S		**Sg**	**12 21 17.2**	**-0.4**
IDI	**Anoyia**	**0.84**	**32**	P		**Pg**	**12 21 07.2**	**-0.8**
IDI	**Anoyia**	**0.84**	**32**	Pg		**Pg**	**12 21 07.3**	**-0.6**
	comp=E,86nm,0.3s,baz=214,slow=16,SNR=346							
IDI				Lg		Lg	12 21 16.7	
	comp=E,139nm,0.3s,baz=211,slow=16,SNR=28							
IDI	**Anoyia**	**0.84**	**32**	P		**Pg**	**12 21 07.4**	**-0.6**
IDI				S		**Sb**	**12 21 19.7**	**+0.5**
IDI				AML		AML	12 21 25.4	
	comp=N,5532µm,0.7s							
IDI				AML		AML	12 21 29.5	
	comp=E,7704µm,0.7s							
IDI	**Anoyia**	**0.84**	**32**	PG		**Pg**	**12 21 07.8**	**-0.2**
IDI				SG		**Sb**	**12 21 20.0**	**+0.8**
VAM	**Vamos**	**0.84**	**352**	P		**Pg**	**12 21 07.1**	**-0.8**
VAM	**Vamos**	**0.84**	**352**	P		**Pg**	**12 21 07.2**	**-0.7**
VAM				S		**Sn**	**12 21 20.9**	**-0.3**
VAM				AML		AML	12 21 28.4	
	comp=N,8310µm,0.6s							
VAM				AML		AML	12 21 30.1	
	comp=E,9649µm,0.8s							
KNDR	**Palaiochora Ch**	**0.85**	**320**	P		**Pb**	**12 21 08.4**	**+0.1**
KNDR				S		**Sn**	**12 21 22.2**	**+0.7**
	comp=E,2µm,0.4s							
IMMV	**Iera Moni Meta**	**0.93**	**341**	P		**Pb**	**12 21 08.5**	**-1.1**
IMMV				S		**Sb**	**12 21 21.8**	**-0.1**
	comp=E,7µm,0.5s							
IMMV	**Iera Moni Meta**	**0.93**	**341**	P		**Pb**	**12 21 08.8**	**-0.9**
IMMV				S		**Sg**	**12 21 22.6**	**+0.7**
IMMV				AML		AML	12 21 27.9	
	comp=N,9481µm,0.4s							
IMMV				AML		AML	12 21 34.6	
	comp=E,15326µm,0.7s							
KSTL	**Kastelli Herak**	**0.94**	**39**	P		**Pn**	**12 21 12.3**	**+1.9**
KSTL				S		**Sn**	**12 21 26.0**	**+2.4**
IACM	**Heraklion**	**0.94**	**39**	P		**Pn**	**12 21 10.1**	**-0.3**
IACM				S		**Sn**	**12 21 24.2**	**+0.6**
HRKL	**Herakleio**	**0.96**	**40**	PG		**Pg**	**12 21 10.2**	**0.0**
CHAN	**Chania**	**0.97**	**345**	P		**Pg**	**12 21 10.5**	**0.0**
RODP	**Rodopos**	**1.09**	**334**	P		**Pb**	**12 21 11.7**	**-0.7**
RODP				S		**Sn**	**12 21 28.7**	**+1.1**
LAST	**Lasithi**	**1.10**	**58**	P		**Pb**	**12 21 12.5**	**0.0**
LAST	**Lasithi**	**1.10**	**58**	P		**Pn**	**12 21 12.8**	**0.0**
LAST				S		**Sn**	**12 21 28.2**	**+0.4**
LAST				AML		AML	12 21 38.8	
	comp=N,4120µm,0.8s							
LAST				AML		AML	12 21 40.9	
	comp=E,3170µm,0.7s							
FRMA	**Ierapetra Chan**	**1.22**	**69**	P		**Pg**	**12 21 16.6**	**+1.4**
NPS	**Neapolis**	**1.24**	**56**	P		**Pn**	**12 21 14.6**	**-0.1**
NPS	**Neapolis**	**1.24**	**56**	P		**Pg**	**12 21 15.5**	**-0.2**
NPS				S		**Sg**	**12 21 33.2**	**+1.3**
NPS				AML		AML	12 21 42.4	
	comp=E,3895µm,0.6s							

NPS					AML	AML	12 21 53.8		
	comp=N,2860µm,0.5s								
ANKY	**Antikythira Is**	**1.55**	**327**	P		**Pb**	**12 21 20.6**	**+0.5**	
ANKY	**Antikythira Is**	**1.55**	**327**	P		**Pg**	**12 21 20.8**	**-0.6**	
ZKR	**Zakros**	**1.63**	**70**	P		**Pb**	**12 21 21.8**	**+0.3**	
ZKR	**Zakros**	**1.63**	**70**	P		**Pb**	**12 21 22.0**	**+0.5**	
ZKR					AML	AML	12 21 58.6		
	comp=N,1327µm,0.6s								
ZKR					AML	AML	12 22 11.9		
	comp=E,2539µm,0.7s								
ZKR	**Zakros**	**1.63**	**70**	PN		**Pb**	**12 21 21.1**	**-0.4**	
SANT	**Santorini**	**2.01**	**27**	PN		**Pn**	**12 21 26.4**	**+1.2**	
SANT				SN		**Sb**	**12 21 52.2**	**-0.6**	
SANT	**Santorini**	**2.01**	**27**			**Pn**	**12 21 24.1**	**-1.1**	
SNT1	**Gialos, Santor**	**2.04**	**25**	P		**Pb**	**12 21 27.2**	**-1.2**	
THT2	**Imerovigli**	**2.05**	**25**	PN		**Pb**	**12 21 27.3**	**-1.4**	
MHLO	**Agia Marina, M**	**2.11**	**1**	P		**Pb**	**12 21 28.4**	**-1.3**	
ANAF	**Anafi Island**	**2.12**	**33**	P		**Pn**	**12 21 28.3**	**+1.6**	
IOSP	**Ios island**	**2.27**	**19**	P		**Pn**	**12 21 30.2**	**+1.4**	
VLI	**Veliai**	**2.43**	**332**	P		**Pb**	**12 21 33.2**	**-1.9**	
KARP	**Karpathos**	**2.50**	**66**	P		**Pb**	**12 21 34.5**	**-2.0**	
KARP	**Karpathos**	**2.50**	**66**	PN		**Pn**	**12 21 33.5**	**+1.5**	
KARP	**Karpathos**	**2.50**	**66**	Pn		**Pn**	**12 21 30.8**	**-1.2**	
AMGA	**Amorgos Island**	**2.58**	**29**	P		**Pb**	**12 21 35.4**	**-2.3**	
APE	**Apeiranthos**	**2.67**	**21**	P		**Pn**	**12 21 35.3**	**+1.0**	
APE	**Apeiranthos**	**2.67**	**21**	PN		**Pn**	**12 21 35.9**	**+1.6**	
APE	**Apeiranthos**	**2.67**	**21**⇑	*eP*		**Pn**	**12 21 34.9**	**+0.6**	
KOSK	**Kos Island**	**3.05**	**44**	PN		**Pn**	**12 21 41.4**	**+2.0**	
DID	**Didima**	**3.06**	**343**	P		**Pn**	**12 21 40.9**	**+1.3**	
ITM	**Ithomi**	**3.26**	**324**			**Pn**	**12 21 41.9**	**-0.5**	
DAT	**Datca**	**3.40**	**50**	PN		**Pn**	**12 21 46.4**	**+2.1**	
ARG	**Arkhangelos**	**3.49**	**61**	PN		**Pn**	**12 21 47.6**	**+2.0**	
DION	**Dionisos Attik**	**3.51**	**355**	P		**Pn**	**12 21 47.5**	**+1.6**	
LTK	**Loutraki**	**3.62**	**342**	P		**Pn**	**12 21 49.3**	**+2.0**	
KLV	**Kalavryta, Ach**	**3.89**	**333**	P		**Pn**	**12 21 53.2**	**+2.1**	
CHOS	**Chios island**	**4.04**	**19**	P		**Pn**	**12 21 55.3**	**+2.1**	
CHOS	**Chios island**	**4.04**	**19**	PN		**Pn**	**12 21 55.5**	**+2.3**	
YER	**Yerkesik**	**4.09**	**50**	PN		**Pn**	**12 21 56.3**	**+2.5**	
TURN	**Turunc**	**4.15**	**55**	PN		**Pn**	**12 21 52.9**	**-1.7**	
DALY	**Dalyan (Mula)**	**4.16**	**56**	PN		**Pn**	**12 21 57.2**	**+2.5**	
URLA	**Izmir**	**4.19**	**25**	PN		**Pn**	**12 21 57.5**	**+2.3**	
FETY	**Fethiye**	**4.37**	**61**	PN		**Pn**	**12 21 59.6**	**+1.9**	
AYDB	**Zeytinkoy-Aydi**	**4.42**	**39**	PN		**Pn**	**12 22 00.8**	**+2.4**	
KSL	**Kastellorizon**	**4.56**	**68**	P		**Pn**	**12 22 01.8**	**+1.6**	
AKAS	**Kas**	**4.60**	**67**	PN		**Pn**	**12 22 02.9**	**+2.0**	
AGG	**Agios Georgios**	**4.72**	**341**	P		**Pn**	**12 22 02.7**	**+0.2**	
AGG	**Agios Georgios**	**4.72**	**341**			**Pn**	**12 22 02.7**	**+0.2**	
ELL	**Elmali**	**5.02**	**63**	PN		**Pn**	**12 22 09.4**	**+2.7**	
ELL	**Elmali**	**5.02**	**63**	P		**Pn**	**12 22 05.3**	**-1.4**	
ELL	**Elmali**	**5.02**	**63**			**Pn**	**12 22 05.3**	**-1.4**	
KORT	**Korkueli**	**5.44**	**62**	PN		**Pn**	**12 22 15.6**	**+3.1**	
LIT	**Litokhoron**	**5.71**	**346**	P		**Pn**	**12 22 13.5**	**-2.6**	
LIT	**Litokhoron**	**5.71**	**346**	Pn		**Pn**	**12 22 13.5**	**-2.6**	
FNA	**Florina**	**6.63**	**340**	P		**Pn**	**12 22 27.4**	**-1.3**	
FNA	**Florina**	**6.63**	**340**	Pn		**Pn**	**12 22 27.4**	**-1.3**	
CSS	**Mathiatis**	**7.40**	**84**			**Pn**	**12 22 35.9**	**-3.4**	
MDUB	**Mudurnu**	**8.01**	**41**	Pn		**Pn**	**12 22 46.5**	**-1.3**	
VTS	**Vitosha**	**8.08**	**354**	P		**Pn**	**12 22 45.9**	**-2.8**	
VTS	**Vitosha**	**8.08**	**354**	Pn		**Pn**	**12 22 45.9**	**-2.8**	
BR131	**Keskin Array S**	**9.02**	**53**	P		**Pn**	**12 23 01.1**	**-0.5**	
BR131	**Keskin Array S**	**9.02**	**53**	Pn		**Pn**	**12 23 01.1**	**-0.5**	
BRTR	**Keskin Array B**	**9.02**	**53**	Pn		**Pn**	**12 23 02.9**	**+1.3**	
	comp=E,0.1nm,0.3s,baz=230,slow=12,SNR=7.7								
BRTR					LR	LR	12 27 39.9		
	comp=E,37nm,20.5s,baz=224,slow=46								
MMAI	**Mount Meron Ar**	**9.33**	**97**	Pn		**Pn**	**12 23 05.0**	**-0.9**	
	comp=E,2.7nm,0.3s,baz=277,slow=14,SNR=6.0								
MMAI					Sn	**Sn**	**12 24 45.5**	**-5.2**	
	comp=E,0.5nm,0.3s,baz=314,slow=20,SNR=1.8								
GEM	**Giv'at Ha'Em**	**9.50**	**95**	Pn		**Pn**	**12 23 11.4**	**+3.3**	
YTIR	**Yattir**	**9.60**	**107**	Pn		**Pn**	**12 23 10.6**	**+1.1**	
HMDT	**Nahal Hemdat**	**9.63**	**101**	Pn		**Pn**	**12 23 11.6**	**+1.8**	
HMDT					Sn	**Sn**	**12 24 56.7**	**-1.0**	
DSI	**Dead Sea**	**9.73**	**105**	Pn		**Pn**	**12 23 11.3**	**+0.1**	
DSI					Sn	**Sn**	**12 24 55.5**	**-4.8**	
PRNI	**Paran**	**9.94**	**112**	Pn		**Pn**	**12 23 13.8**	**-0.3**	
GHAJ	**Ghor Haditha**	**9.97**	**106**	Pn		**Pn**	**12 23 15.3**	**+0.7**	
HRFI	**Mount Harif**	**10.11**	**114**	Pn		**Pn**	**12 23 16.1**	**-0.4**	
ASF	**Jabal al Asfar**	**10.76**	**99**	Pn		**Pn**	**12 23 25.0**	**-0.5**	
	comp=E,0.4nm,0.3s,baz=221,slow=8.6,SNR=4.0								
GERES	**GERESS Array B**	**16.30**	**334**	Pn		**Pn**	**12 24 41.3**	**+1.2**	
	comp=E,0.2nm,0.3s,baz=144,slow=12,SNR=1.5								
AKASG	**Malin Array Be**	**16.50**	**11**	Pn		**Pn**	**12 24 42.6**	**0.0**	
	comp=E,2.1nm,0.3s,baz=201,slow=11,SNR=6.7								
AKBB	**Malin Array Si**	**16.50**	**11**	P		**Pn**	**12 24 43.5**	**+0.9**	
AKBB					pmax	pmax			
	comp=Z,5.0nm,0.9s								
AKBB	**Malin Array Si**	**16.50**	**11**	P		**Pn**	**12 24 43.5**	**+0.9**	
KHC	**Kasperske Hory**	**16.58**	**335**	*ceP*		**P**	**12 24 46.4**	**+0.2**	
KHC					pmax	pmax			
	comp=Z,5.0nm,1.0s								
NEY	**Neytrino**	**16.69**	**53**	*i* P		**P**	**12 24 47.4**	**-0.2**	
NEY					pmax	pmax			
	comp=Z,2.0nm,1.0s								
KIV	**Kislovodsk**	**16.98**	**51**	*i* P		**P**	**12 24 51.1**	**+0.4**	
KIV					pmax	pmax			
	comp=Z,10.0nm,1.1s								
KBZ	**Khabaz**	**17.01**	**52**	P		**Pn**	**12 24 48.6**	**-0.5**	
	comp=Z,0.1nm,0.3s,baz=226,slow=8.7,SNR=14								
KBZ	**Khabaz**	**17.01**	**52**	*ceP*		**P**	**12 24 51.1**	**+0.2**	
NCK	**Nalchik**	**17.37**	**53**	*i* P		**P**	**12 24 55.9**	**+0.9**	
NCK					pmax	pmax			
	comp=Z,10.0nm,0.6s								
RAYN	**Ar Rayn**	**21.48**	**115**	P		**P**	**12 25 38.0**	**-2.0**	
RAYN					pmax	pmax			
	comp=Z,5.0nm,0.8s								
RAYN	**Ar Rayn**	**21.48**	**115**	P		**P**	**12 25 38.0**	**-2.0**	
OBN	**Obninsk**	**22.22**	**19**	*i* P		**P**	**12 25 50.9**	**+3.3**	
OBN					pmax	pmax			
	comp=Z,5.0nm,0.7s								
ESDC	**Sonseca Array**	**23.09**	**291**	P		**P**	**12 25 57.4**	**+0.3**	
	comp=Z,0.9nm,0.6s,baz=84,slow=10.0,SNR=9.5								
ESDC					LR	LR	12 34 27.9		
	comp=Z,14nm,21.2s,baz=160,slow=35								
HFS	**Hagfors**	**26.50**	**348**	P		**P**	**12 26 28.7**	**+0.3**	
	comp=Z,0.8nm,0.4s,baz=158,slow=9.3,SNR=1.5								
FINES	**FINESS Array B**	**26.91**	**2**	P		**P**	**12 26 32.4**	**+0.4**	
	comp=Z,3.8nm,1.1s,baz=159,slow=12,SNR=1.5								
TOA0	**Torodi Ar. Sit**	**29.60**	**229**	P		**P**	**12 26 57.3**	**+0.8**	
TOA0					IAmb	IAmb	12 27 01.0		
	comp=Z,2.7nm,0.8s								
TORD	**Torodi Ar. Bea**	**29.60**	**229**	P		**P**	**12 26 57.8**	**+1.3**	
	comp=Z,1.5nm,0.6s,baz=33,slow=8.5,SNR=9.6								
ARCES	**ARCESS Array B**	**35.02**	**1**	P		**P**	**12 27 42.5**	**-0.9**	
	comp=Z,0.8nm,0.7s,baz=186,slow=7.3,SNR=1.6								
BRVK	**Borovoye**	**37.17**	**46**	*ceP*		**P**	**12 28 01.2**	**-0.9**	
BRVK					pmax	pmax			
	comp=Z,3.0nm,1.3s								
AAK	**Ala-Archa**	**39.51**	**63**	*ceP*		**P**	**12 28 22.2**	**+0.1**	
AAK					pmax	pmax			
	comp=Z,3.0nm,1.7s								
KURK	**Kurchatov**	**42.06**	**50**	*ceP*		**P**	**12 28 42.6**	**-0.2**	
KURK					pmax	pmax			
	comp=Z,3.0nm,1.3s								
MAKZ	**Makanchi**	**44.44**	**56**	P		**P**	**12 29 02.2**	**+0.1**	
MAKZ					pmax	pmax			
	comp=Z,3.0nm,0.7s								
MAKZ	**Makanchi**	**44.44**	**56**	P		**P**	**12 29 02.2**	**+0.1**	
MK31	**Makanchi Array**	**44.65**	**56**	P		**P**	**12 29 03.7**	**-0.1**	
MK31					pmax	pmax			
	comp=Z,7.0nm,0.7s								
MK31	**Makanchi Array**	**44.65**	**56**	P		**P**	**12 29 03.7**	**-0.1**	
MKAR	**Makanchi Array**	**44.65**	**56**	P		**P**	**12 29 04.0**	**+0.2**	
	comp=Z,8.8nm,0.6s,baz=279,slow=6.8,SNR=59								
ZAA0	**Zalesovo Array**	**45.89**	**46**	P		**P**	**12 29 13.0**	**-0.4**	
ZAA0					IAmb	IAmb	12 29 13.3		
	comp=Z,3.6nm,0.8s								
ZALV	**Zalesovo Beam**	**45.89**	**46**	P		**P**	**12 29 12.8**	**-0.7**	
	comp=Z,5.5nm,0.4s,baz=265,slow=9.5,SNR=9.1								
SONM	**Songino Array**	**60.37**	**50**	P		**P**	**12 31 00.5**	**+0.1**	
	comp=Z,1.1nm,0.8s,baz=274,slow=8.4,SNR=6.0								
ULN	**Ulaanbaatar**	**60.78**	**50**	*ceP*		**P**	**12 31 04.3**	**+1.1**	
ULN					pmax	pmax			
	comp=Z,4.0nm,1.7s								
C36M	**Paulatuk**	**73.81**	**349**	P		**P**	**12 32 25.8**	**+0.6**	
C36M					IAmb	IAmb	12 32 31.0		
	comp=Z,1.3nm,0.7s								
INK	**Inuvik**	**76.10**	**352**	P		**P**	**12 32 37.7**	**-0.7**	
	comp=Z,0.2nm,0.3s,baz=173,slow=13,SNR=4.3								
INK	**Inuvik**	**76.10**	**352**	P		**P**	**12 32 38.9**	**+0.5**	
INK					pmax	pmax			
	comp=Z,3.0nm,1.4s								
INK	**Inuvik**	**76.10**	**352**	P		**P**	**12 32 38.9**	**+0.5**	
INK					IAmb	IAmb	12 32 57.5		
	comp=Z,2.7nm,1.4s								
YKA	**Yellowknife Ar**	**77.80**	**342**	P		**P**	**12 32 47.9**	**-0.2**	
	comp=Z,0.3nm,1.1s,baz=44,slow=3.1,SNR=3.9								
WRA	**Warramunga Arr**	**117.19**	**96**	PKP		**PKPdf**	**12 39 35.9**	**-1.0**	
	comp=Z,0.3nm,0.7s,baz=305,slow=1.7,SNR=2.4								

IDC ***27*** *12:23:08.3±0.7,6.˚97S×154.˚72E,h0km,mb4.4/13,*
mb1 4.5/16,mb1mx4.3/35,mbtmp4.4/16,ML4.2/2,MS3.6/12,
Ms1 3.6/12,ms1mx3.3/45,Error ellipse: s-maj=21.5km
s-min=17.1km az=147.0
NEIC ***27*** *12:23:13.4±2.5,6.˚90S±0.˚06×154.˚73E±0.˚07,h35km±1km,*
mb4.5/24,Error ellipse: s-maj=13.4km s-min=8.0km
az=61.0
DJA ***27*** *12:23:14.2±2.5,7.˚5S±7.˚1×15.˚5E±.˚,h27km±23km,M4.5/7,*
mB4.3/2,mb4.4/7,MLv4.6/3,Mw(mB)3.4/2
ISC 27 12:23:14.0±0.5,**6.˚94S**±0.˚06×**154.˚72E**±0.˚07,**h39**km,**n64,**
σ0°§95/60,mb4.5/23,**MS3.7**/9,**Bougainville-Solomon**
Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RABL	**Rabaul**	**3.73**	**317**	Pn		**Pn**	**12 24 07.1**	**-2.0**
KRVT	**Keravat (AS076**	**3.75**	**314**	Pn		**Pn**	**12 24 08.6**	**-0.8**
	14nm,0.3s,baz=191,slow=26							
KRVT				Sn		**Sn**	**12 24 52.5**	**+0.3**
	27nm,0.3s,baz=183,slow=18,SNR=3.0							
HNR	**Honiara**	**5.74**	**116**	LR		LR	12 26 54.3	
	comp=Z,470nm,18.9s,baz=266,slow=40							
HNR	**Honiara**	**5.74**	**116**	Pn		**Pn**	**12 24 34.5**	**-2.1**
PMG	**Port Moresby**	**7.87**	**251**	Pn		**Pn**	**12 25 04.8**	**-1.2**
	1.4nm,0.3s,baz=31,slow=5.9,SNR=3.2							
PMG				Sn		**Sn**	**12 26 34.7**	**+0.8**
	4.9nm,0.3s,baz=70,slow=22,SNR=8.2							
PMG				LR		LR	12 27 50.8	
	comp=Z,177nm,20.3s,baz=24,slow=36							
PMG	**Port Moresby**	**7.87**	**251**			**Pn**	**12 25 04.7**	**-1.3**
PMG						**Sn**	**12 26 34.5**	**+0.6**
CTA	**Charters Tower**	**15.43**	**211**	Pn		**P**	**12 26 54.1**	**+1.1**
	0.2nm,0.3s,baz=33,slow=11,SNR=7.7							
CTAO	**Charters Tower**	**15.43**	**211**	Pn		**Pn**	**12 26 47.6**	**-1.4**
DZM	**Mont Dzumac**	**18.82**	**144**	P		**P**	**12 27 31.4**	**+0.8**
	0.8nm,0.3s,baz=253,slow=11,SNR=2.8							
DZM				LR		LR	12 33 54.3	
	comp=Z,320nm,20.0s,baz=12,slow=34							
DZM	**Mont Dzumac**	**18.82**	**144**	P		**P**	**12 27 31.8**

mb4.7/43,Ms4.4/9,Ms7 4.1/9
KLM ***27*** *12:40:38.0,2˚.81N×127˚.06E,h90km,mb4.9*
NEIC ***27*** *12:40:40.1±2.0,2˚.67N±0˚.06×126˚.72E±0˚.07,h87km±6km, mb4.9/75,Error ellipse: s-maj=11.3km s-min=8.0km az=67.0*
IDC ***27*** *12:40:40.0±1.3,2˚.59N×126˚.62E,h84km±12km,mb4.3/29, mb1 4.3/34,mb1mx4.3/49,mbtmp4.6/34,MS3.4/5, Ms1 3.4/5,ms1mx2.9/40,Error ellipse: s-maj=12.6km s-min=6.6km az=78.0*
DJA ***27*** *12:40:40.4±0.3,3˚N±2˚×12˚7E±˚,h80km±2km,M4.9/53, mb5.2/53,mB5.4/31,MLv5.3/16,Mw(mB)4.9/31,Mwp5.7/1*
ISC 27 12:40:41.4±0.3,2.64N±0.03×126.66E±0.05,h100km,n241, σ1ᵍ**79**/250**,mb4.8**/72**,4C-2D,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
TNTI	**Ternate**	**1.99**	**159**	P		**Pn**	**12 41 12.6**	**-1.3**
TNTI	**Ternate**	**1.99**	**159**			**Pn**	**12 41 12.7**	**-1.2**
LBMI	**Labuha**	**3.37**	**165**	P		**Pn**	**12 41 32.3**	**+0.1**
LBMI				S		**Sn**	**12 42 12.5**	**+1.2**
KMSI	**Cibinong**	**3.37**	**233**	P		**Pn**	**12 41 34.1**	**+1.9**
DDMP	**Don Marcelino,**	**3.57**	**345**	*e*P		**Pn**	**12 41 31.4**	**-3.4**
DDMP				*e*S		**Sn**	**12 42 10.6**	**-5.5**
MATI	**Mati**	**4.29**	**355**	*e*P		**Pn**	**12 41 42.4**	**-2.2**
MATI				*e*S		**Sn**	**12 42 35.7**	**+2.0**
SKMP	**Bagumbayan, Su**	**4.39**	**331**	*e*P		**Pn**	**12 41 42.8**	**-3.2**
SKMP				*e*S		**Sn**	**12 42 32.0**	**-4.0**
DAV	**Davao City (W)**	**4.53**	**346**	P		**Pn**	**12 41 44.8**	**-3.0**
	273nm,0.3s,baz=255,slow=4.5,SNR=7.2							
DAV				S		**Sn**	**12 42 38.1**	**-1.3**
	baz=83,slow=23,SNR=1.2							
DAV	**Davao City (W)**	**4.53**	**346**	⇑ *i*P		**Pn**	**12 41 44.8**	**-3.0**
DAV	**Davao City (W)**	**4.53**	**346**			**Pn**	**12 41 46.8**	**-1.0**
KCP	**Kidapawan**	**4.61**	**340**	⇑ *i*P		**Pn**	**12 41 47.4**	**-1.6**
KCP				*i*S		**Sn**	**12 42 37.3**	**-4.2**
SANI	**Sanana**	**4.71**	**188**	P		**Pn**	**12 41 48.2**	**-2.1**
CTBH	**Cotabato--PC H**	**5.14**	**332**	⇑ *e*P		**Pn**	**12 41 53.9**	**-2.2**
LUWI	**Luwuk**	**5.33**	**227**	P		**Pn**	**12 42 01.7**	**+3.0**
	6.2nm7μm540nm,0.5s							
LUWI	**Luwuk**	**5.33**	**227**			**Pn**	**12 41 59.1**	**+0.4**
BUKP	**Musuan**	**5.44**	**343**	*e*P		**Pn**	**12 41 57.9**	**-2.3**
BUKP				*e*S		**Sn**	**12 43 00.5**	**-1.1**
SIJI	**Sorong**	**5.78**	**127**	P		**Pn**	**12 42 03.8**	**-1.0**
	17nm,0.3s,baz=223,slow=23,SNR=29							
SIJI				S		**Sn**	**12 43 07.6**	**-2.3**
	8.0nm,0.3s,baz=182,slow=19,SNR=6.7							
SIJI				LR		LR	12 44 36.4	
	comp=Z,636nm,18.2s,baz=264,slow=41							
NLAI	**Namlea**	**5.86**	**176**	P		**Pn**	**12 42 04.4**	**-1.5**
	2.2nm11μm376nm,0.5s							
CGP	**Cagayan de Oro**	**6.09**	**341**	||*e*P		**Pn**	**12 42 07.3**	**-1.8**
PAGZ	**Pagadian**	**6.11**	**328**	*e*P		**Pn**	**12 42 05.7**	**-3.7**
PAGZ				*e*S		**Sn**	**12 43 13.4**	**-4.4**
APSI	**Ampana**	**6.12**	**235**	P		**Pn**	**12 42 13.1**	**+3.6**
	2.7nm9μm888nm,0.6s							
ZCP	**Zamboanga City**	**6.24**	**313**	⇑ *i*P		**Pn**	**12 42 09.8**	**-1.3**
ZCP	**Zamboanga City**	**6.24**	**313**	*i*S		**Sn**	**12 43 16.1**	**-5.0**
MSAI	**Masohi**	**6.37**	**159**	P		**Pn**	**12 42 14.0**	**+1.2**
	0.5nm1μm147nm,0.7s							
AAI	**Ambon**	**6.47**	**166**	P		**Pn**	**12 42 12.6**	**-1.6**
	1.3nm4μm308nm,0.5s							
MPSI	**Mapaga**	**7.13**	**251**	P		**Pn**	**12 42 24.6**	**+1.4**
	2.4nm8μm794nm,0.8s							
TBP	**Tagbilaran**	**7.53**	**339**	*e*P		**Pn**	**12 42 28.8**	**+0.2**
MSLP	**Maasin**	**7.65**	**347**	*e*P		**Pn**	**12 42 27.1**	**-3.2**
FAKI	**Fak Fak**	**7.86**	**135**	P		**Pn**	**12 42 34.4**	**+1.3**
	0.3nm922nm64nm,0.8s							
FAKI	**Fak Fak**	**7.86**	**135**			**Pn**	**12 42 31.9**	**-1.2**
RKPI	**Ransiki, Papua**	**8.58**	**119**	P		**Pn**	**12 42 42.1**	**-0.8**
	9μm132nm,0.6s							
OCLP	**Ormoc**	**8.60**	**346**	*e*P		**Pn**	**12 42 41.4**	**-1.7**
TTSI	**Tana Toraja**	**8.87**	**230**	P		**Pn**	**12 42 46.8**	**0.0**
	2μm235nm,0.9s							
GUIM	**Jordan**	**8.90**	**333**	*e*P		**Pn**	**12 42 44.1**	**-3.1**
BBSI	**Bau Bau**	**9.05**	**207**	P		**Pn**	**12 42 50.2**	**+0.9**
	207nm15nm,0.7s							
SPSI	**Sidrap Palu**	**9.51**	**226**	P		**Pn**	**12 42 56.4**	**+0.9**
	129nm,0.8s							
BNSI	**Bone**	**9.58**	**223**	P		**Pn**	**12 42 57.0**	**+0.5**
	824nm53nm,0.5s							
RCP	**Roxas**	**9.67**	**337**	||*e*P		**Pn**	**12 43 00.2**	**+2.4**
SMKI	**Samarinda**	**9.93**	**252**	P		**Pn**	**12 43 03.8**	**+2.5**
	5μm208nm,0.5s							
BKSI	**Bulukumba**	**10.26**	**220**	P		**Pn**	**12 43 07.8**	**+2.1**
	582nm47nm,0.7s							
KAPI	**Kappang**	**10.27**	**222**	P		**Pn**	**12 43 05.1**	**-0.7**
	3.3nm,0.3s,baz=53,slow=4.3,SNR=9.9							
KAPI				S		**Sn**	**12 44 56.0**	**-3.1**
	1.8nm,0.3s,baz=114,slow=20,SNR=1.5							
KAPI				LR		LR	12 47 53.1	
	comp=Z,95nm,19.1s,baz=50,slow=42							
SPMM	**Sapulut**	**10.37**	**282**	P		**Pn**	**12 43 10.0**	**+2.6**
KKM	**Kota Kinabalu**	**10.94**	**288**			**Pn**	**12 43 17.8**	**+2.6**
KBKI	**Kotabaru**	**12.03**	**241**	P		**Pn**	**12 43 30.6**	**+1.0**
	399nm46nm,1.0s							
EDFI	**Ende, Flores**	**12.35**	**204**	P		**Pn**	**12 43 34.3**	**+0.3**
	23nm,0.8s							
LQP	**Lukban**	**12.47**	**336**	*e*P		**Pn**	**12 43 33.2**	**-2.3**
SOEI	**Soe**	**12.54**	**191**	P		**P**	**12 43 39.5**	**-4.6**
	2μm149nm,0.7s							
SOEI	**Soe**	**12.54**	**191**			**Pn**	**12 43 38.4**	**+1.9**
TGY	**Tagaytay City**	**12.71**	**334**	LR		LR	12 49 34.7	
	comp=Z,190nm,20.0s,baz=166,slow=42							
BATI	**Baumata**	**13.11**	**193**	P		**Pn**	**12 43 43.4**	**-0.5**
	3.9nm,0.3s,baz=325,slow=19,SNR=2.4							
BATI	**Baumata**	**13.11**	**193**	P		**P**	**12 43 47.0**	**-3.3**
	81nm,0.7s							
SBUM	**Sibu**	**14.42**	**270**	P		**P**	**12 44 04.2**	**-0.7**
PLAI	**Plampang**	**14.43**	**218**	P		**P**	**12 44 03.8**	**-1.1**
	2μm203nm,0.8s							
JAY	**Jayapura**	**14.95**	**110**	P		**P**	**12 44 08.0**	**-2.8**
	0.8nm,0.3s,baz=281,slow=19,SNR=1.3							
MTN	**Manton Dam**	**16.02**	**164**			**Pn**	**12 44 17.9**	**-3.1**
SZP	**Santa**	**16.02**	**338**	P		**P**	**12 44 22.7**	**+0.2**
KSM	**Kuching**	**16.38**	**266**	P		**P**	**12 44 27.9**	**+1.4**
KSM				IAmb		IAmb	12 44 31.4	
	comp=Z,41nm,0.8s							
KSM	**Kuching**	**16.38**	**266**	P		**P**	**12 44 28.0**	**+1.4**
JAGI	**Jajag, Banyuwa**	**16.65**	**228**	P		**P**	**12 44 31.5**	**+1.9**
	comp=Z,2μmcomp=Z,191nm,1.6s							
JAGI	**Jajag, Banyuwa**	**16.65**	**228**	P		**P**	**12 44 29.6**	**0.0**
KNRA	**Kununurra**	**18.32**	**174**	P		**Pn**	**12 44 48.0**	**-1.1**
	baz=18,SNR=218							
KNRA	**Kununurra**	**18.32**	**174**	P		**Pn**	**12 44 47.5**	**-1.6**
SMRI	**Semarang**	**18.83**	**239**			**Pn**	**12 44 54.3**	**-0.9**
SMRI				IAmb		IAmb	12 45 10.0	
	comp=Z,128nm,1.1s							
UGM	**Wanagama**	**19.21**	**237**	P		**P**	**12 44 57.9**	**+0.1**
DLV	**T Lat**	**20.23**	**298**	P		**P**	**12 45 08.2**	**-0.9**
FITZ	**Fitzroy Crossi**	**20.63**	**183**	P		**P**	**12 45 12.9**	**-0.2**
	baz=21,SNR=181							
FITZ	**Fitzroy Crossi**	**20.63**	**183**	P		**P**	**12 45 12.8**	**-0.2**
	comp=Z,32nm,0.4s,baz=14,slow=8.7,SNR=263							
FITZ				S		**S**	**12 48 54.9**	**-3.4**
	comp=Z,11nm,1.0s,baz=355,slow=11,SNR=3.5							
FITZ	**Fitzroy Crossi**	**20.63**	**183**	P		**P**	**12 45 12.9**	**-0.2**
FITZ				IAmb		IAmb	12 45 14.5	
	comp=Z,76nm,1.2s							
TWG	**Pinlang**	**20.78**	**345**	P		**P**	**12 45 10.8**	**-3.8**
LEM	**Lembang**	**21.20**	**244**	P		**P**	**12 45 18.9**	**-0.6**
	comp=Z,19nm,0.6s,baz=66,slow=20,SNR=2.2							
YULB	**Yu-li**	**21.27**	**346**	P		**P**	**12 45 15.9**	**-4.0**
YULB				IAmb		IAmb	12 45 17.2	
	comp=Z,33nm,0.6s							
TPUB	**Ta-pu**	**21.35**	**345**	P		**P**	**12 45 18.0**	**-2.8**
TPUB				IAmb		IAmb	12 45 19.4	
	comp=Z,73nm,0.7s							
CISI	**Cisompet, Garu**	**21.35**	**242**	P		**P**	**12 45 25.0**	**+4.1**
	comp=Z,107nm,1.0s							
CISI	**Cisompet, Garu**	**21.35**	**242**	P		**P**	**12 45 17.7**	**-3.2**
CISI				IAmb		IAmb	12 45 25.3	
	comp=Z,79nm,0.8s							
CBJI	**Citeko**	**21.73**	**245**	P		**P**	**12 45 27.8**	**+3.0**
	comp=Z,8μmcomp=Z,318nm,0.5s							
SSLB	**Suanglung**	**21.73**	**346**	P		**P**	**12 45 21.3**	**-3.5**
SSLB				IAmb		IAmb	12 45 24.5	
	comp=Z,47nm,0.8s							
YOJ	**Yonaguni jima**	**21.98**	**351**	P		**P**	**12 45 24.2**	**-3.1**
YOJ				IAmb		IAmb	12 45 30.9	
	comp=Z,51nm,0.6s							
YHNB	**Yeheng**	**22.48**	**347**	P		**P**	**12 45 31.2**	**-1.5**
YHNB				IAmb		IAmb	12 45 38.7	
	comp=Z,28nm,0.7s							
MYKOM	**Kota Tinggi**	**22.80**	**268**	P		**P**	**12 45 36.8**	**+0.8**
MYKOM	**Kota Tinggi**	**22.80**	**268**	P		**P**	**12 45 38.0**	**+1.9**
BLSI	**Bandar Lampung**	**22.82**	**250**	P		**P**	**12 45 39.7**	**+3.5**
	comp=Z,133nm,0.7s							
COEN	**Coen**	**23.25**	**136**	P		**P**	**12 45 39.5**	**-0.7**
	baz=23,SNR=12							
COEN	**Coen**	**23.25**	**136**	P		**P**	**12 45 39.6**	**-0.7**
WB0	**Warramunga Arr**	**23.53**	**161**	P		**P**	**12 45 42.6**	**-0.3**
MDSI	**Maura Dua**	**23.55**	**253**	P		**P**	**12 45 45.6**	**+2.5**
	comp=Z,796nmcomp=Z,32nm,0.8s							
KASI	**Kota Agung**	**23.57**	**250**	P		**P**	**12 45 45.9**	**+2.6**
	comp=Z,132nm,1.1s							
WRAB	**Tennant Creek**	**23.67**	**162**	P		**P**	**12 45 43.9**	**-0.3**
WRA	**Warramunga Arr**	**23.68**	**162**	P		**P**	**12 45 43.9**	**-0.3**
	comp=Z,40nm,0.4s,baz=340,slow=10,SNR=219							
WRA				S		**S**	**12 49 52.8**	**+1.0**
	comp=Z,3.5nm,0.8s,baz=335,slow=18,SNR=6.0							
WB2	**Warramunga Arr**	**23.68**	**162**	P		**P**	**12 45 44.0**	**-0.2**
WR0	**Warramunga Arr**	**23.76**	**161**	P		**P**	**12 45 44.6**	**-0.3**
WR0				IAmb		IAmb	12 45 53.6	
	comp=Z,89nm,1.1s							
LWLI	**Liwa**	**23.82**	**251**	P		**P**	**12 45 49.4**	**+3.7**
	comp=Z,6μmcomp=Z,176nm,0.7s							
LHSI	**Lahat**	**23.99**	**255**	P		**P**	**12 45 51.8**	**+4.7**
	comp=Z,2μmcomp=Z,41nm,0.8s							
JOW	**Kunigami**	**24.10**	**4**	P		**P**	**12 45 48.5**	**+0.6**
	comp=Z,5.0nm,0.6s,baz=142,slow=17,SNR=19							
JOW	**Kunigami**	**24.10**	**4**	P		**P**	**12 45 48.8**	**+0.9**
JOW				IAmb		IAmb	12 45 51.3	
	comp=Z,102nm,1.3s							
XMIS	**Christmas Isla**	**24.64**	**238**	P		**P**	**12 45 50.5**	**-2.4**
MNAI	**Manna**	**24.68**	**254**	P		**P**	**12 45 54.5**	**+1.1**
PSA00	**Pilbara Seismi**	**24.97**	**195**	P		**P**	**12 45 57.2**	**+1.3**
PSA00				IAmb		IAmb	12 45 58.1	
	comp=Z,47nm,0.7s							
IPM	**Ipoh**	**25.64**	**275**	P		**P**	**12 46 01.9**	**-0.2**
KULM	**Kulim**	**26.07**	**277**	P		**P**	**12 46 06.0**	**+0.1**
KULM	**Kulim**	**26.07**	**277**	P		**P**	**12 46 07.0**	**+1.1**
QIS	**Mount Isa**	**26.32**	**152**	P		**P**	**12 46 08.6**	**+0.5**
	baz=26,SNR=101							
MTSU	**Mount Surprise**	**27.00**	**141**	P		**P**	**12 46 15.3**	**+1.1**
	baz=27,SNR=33							
AS31	**Alice Springs**	**27.09**	**165**	P		**P**	**12 46 14.3**	**-0.6**
AS31				IAmb		IAmb	12 46 26.0	
	comp=Z,15nm,0.5s							
MNSI	**Mandailing Nat**	**27.12**	**267**	P		**P**	**12 46 16.2**	**+0.8**
	comp=Z,7μmcomp=Z,25nm,0.6s							
WRKA	**Warakurna**	**27.56**	**177**	P		**P**	**12 46 19.8**	**+0.6**
	baz=28,SNR=144							
PSI	**Prapat**	**27.70**	**271**	P		**P**	**12 46 19.9**	**-0.8**
	comp=Z,5.5nm,0.8s,baz=360,slow=3.1,SNR=4.8							
RPSI	**Rantau Prapat**	**27.70**	**271**	P		**P**	**12 46 19.9**	**-0.6**
GIRL	**Giralia**	**27.90**	**205**	P		**P**	**12 46 24.2**	**+2.0**
PBKT	**Sadao Pong**	**28.80**	**300**	P		**P**	**12 46 30.8**	**+0.5**
KCSI	**Kotacane, Aceh**	**28.85**	**272**	P		**P**	**12 46 31.7**	**+0.9**
	comp=Z,10nm,1.1s							
GSI	**Gunungsitoli**	**29.09**	**268**	P		**P**	**12 46 34.7**	**+1.8**
	comp=Z,157nm,0.7s							
GSI	**Gunungsitoli**	**29.09**	**268**	P		**P**	**12 46 32.2**	**-0.7**
GSI				IAmb		IAmb	12 46 34.1	
	comp=Z,27nm,0.6s							
CTA	**Charters Tower**	**29.67**	**140**	P		**P**	**12 46 37.6**	**-0.3**
	comp=Z,7.8nm,1.0s,baz=330,slow=15,SNR=2.6							
CTAO	**Charters Tower**	**29.67**	**140**	P		**P**	**12 46 37.6**	**-0.3**
CTAO				IAmb		IAmb	12 46 39.5	
	comp=Z,28nm,1.4s							
MEEK	**Meekatharra**	**30.13**	**194**	P		**P**	**12 46 42.7**	**+0.8**
	baz=30,SNR=111							
NJ2	**Nanjing**	**30.16**	**347**	*e*P		**P**	**12 46 43.5**	**+1.4**
NJ2				pmax		pmax		
	comp=Z,7.0nm,0.5s							
GYA	**Guiyang**	**30.48**	**323**	*e*P		**P**	**12 46 47.3**	**+2.2**
GYA				sP		pwP	12 47 10.5	+0.7
GYA				PP		**PnPn**	**12 47 49.8**	**+1.5**
GYA				S		**S**	**12 51 44.5**	**+5.2**
GYA				SS		**SnSn**	**12 53 26.8**	**+0.5**
GYA				pmax		pmax		
	comp=Z,10.0nm,0.6s							
GYA				pmax		pmax		
	comp=Z,80nm,5.0s							
GYA				LR		LR		
	comp=Z,150nm,8.1s							
GYA				LR		LR		
	comp=Z,100nm,7.2s							
GYA				LR		LR		
	comp=Z,110nm,6.9s							
JNU	**Nakatsue**	**30.58**	**7**	P		**P**	**12 46 44.7**	**-1.2**
	comp=Z,13nm,0.8s,baz=166,slow=0.7,SNR=10							
JNU	**Nakatsue**	**30.58**	**7**	P		**P**	**12 46 44.6**	**-1.3**
JNU				IAmb		IAmb	12 46 48.3	
	comp=Z,20nm,0.9s							
CM31	**Chiang Mai Arr**	**31.37**	**302**	P		**P**	**12 46 53.4**	**+0.4**
CMAR	**Chiang Mai Arr**	**31.37**	**302**	P		**P**	**12 46 52.8**	**-0.2**
	comp=Z,3.6nm,0.8s,baz=125,slow=7.1,SNR=20							
CHTO	**Chiang Mai**	**31.53**	**303**	P		**P**	**12 46 52.6**	**-1.8**
KMI	**Kunming**	**32.10**	**316**	P		**P**	**12 47 01.3**	**+1.7**
KMI				S		**S**	**12 52 11.3**	**+6.4**
KMI				pmax		pmax		
	comp=Z,6.0nm,0.7s							
KMI				LR		LR		
	comp=Z,250nm,18.5s							
KMI				LR		LR		
	comp=Z,160nm,22.2s							
KMI				LR		LR		
	comp=Z,110nm,21.6s							
MORW	**Morawa**	**33.13**	**197**	P		**P**	**12 47 09.6**	**+1.3**
	baz=33,SNR=14							
MORW	**Morawa**	**33.13**	**197**	P		**P**	**12 47 07.6**	**-0.6**
MORW				IAmb		IAmb	12 47 19.4	
	comp=Z,21nm,1.1s							
FORT	**Forrest**	**33.26**	**178**	P		**P**	**12 47 10.1**	**+0.8**
	baz=33,SNR=35							
FORT	**Forrest**	**33.26**	**178**	P		**P**	**12 47 09.9**	**+0.6**
QLP	**Quilpie**	**33.66**	**151**	P		**P**	**12 47 12.8**	**0.0**
	baz=34,SNR=12							
INU	**Inuyama**	**33.94**	**15**	P		**P**	**12 47 15.8**	**+0.7**
INU				IAmb		IAmb	12 47 16.5	
	comp=Z,15nm,0.8s							
KMBL	**Kambalda**	**34.12**	**187**	P		**P**	**12 47 17.8**	**+1.0**
	baz=34,SNR=46							
BLDU	**Ballidu**	**34.41**	**195**	P		**P**	**12 47 21.6**	**+2.3**
	baz=35,SNR=10							
KSRS	**Korea Array**	**34.66**	**2**	P		**P**	**12 47 22.8**	**+1.4**
	comp=Z,6.9nm,0.5s,baz=178,slow=9.9,SNR=41							
KS19	**Wonju Array Si**	**34.71**	**2**	P		**P**	**12 47 21.9**	**+0.1**
KS19				IAmb		IAmb	12 47 34.0	
	comp=Z,17nm,1.1s							
KLBR	**Kellerberrin**	**35.08**	**193**	P		**P**	**12 47 26.3**	**+1.2**
	baz=35,SNR=12							
HNR	**Honiara**	**35.27**	**110**	LR		LR	13 02 35.4	
	comp=Z,62nm,19.0s,baz=314,slow=37							
XAN	**Xi'an**	**35.35**	**334**	P		**P**	**12 47 26.5**	**-0.9**
XAN				pP		pP	12 47 48.3	-1.3
XAN				sP		sP	12 47 57.5	-3.4
XAN				pmax		pmax		
	comp=Z,13nm,0.9s							
XAN				pmax		pmax		
	comp=Z,100nm,4.1s							
MJAR	**Matsushiro Arr**	**35.38**	**16**	P		**P**	**12 47 27.0**	**-0.6**
	comp=Z,3.9nm,0.7s,baz=196,slow=9.4,SNR=14							
MAJO	**Matsushiro**	**35.38**	**16**	P		**P**	**12 47 25.0**	**-2.6**
MAJO				IAmb		IAmb	12 47 27.9	
	comp=Z,16nm,1.2s							
MAT	**Matsushiro**	**35.38**	**16**	P		**P**	**12 47 26.7**	**-0.9**
MJB9	**Matsu-Tunnel**	**35.38**	**16**	P		**P**	**12 47 25.1**	**-2.5**
MJB9				IAmb		IAmb	12 47 28.9	
	comp=Z,5.2nm,0.6s							
CD2	**Chengdu**	**35.48**	**325**	*e*P		**P**	**12 47 29.0**	**+0.4**
MUN	**Mundaring**	**35.83**	**195**	P		**P**	**12 47 33.0**	**+1.6**
	baz=36,SNR=11							
RMQ	**Roma**	**35.98**	**145**	P		**P**	**12 47 33.4**	**+0.5**
	baz=36,SNR=10							
BBOO	**Buckleboo**	**36.37**	**167**	P		**P**	**12 47 36.4**	**+0.4**
	baz=36,SNR=60							
BBOO	**Buckleboo**	**36.37**	**167**	P		**P**	**12 47 36.4**	**+0.4**
NWAO	**Narrogin (SRO)**	**36.48**	**193**	P		**P**	**12 47 38.6**	**+1.6**
	baz=37,SNR=13							
NWAO	**Narrogin (SRO)**	**36.48**	**193**	P		**P**	**12 47 38.3**	**+1.3**
	comp=Z,14nm,0.5s,baz=18,slow=8.8,SNR=13							
NWAO	**Narrogin (SRO)**	**36.48**	**193**	P		**P**	**12 47 38.0**	**+1.0**
NWAO				IAmb		IAmb	12 47 49.3	
	comp=Z,33nm,1.2s							
NWAO	**Narrogin (SRO)**	**36.48**	**193**	P		**P**	**12 47 38.1**	**+1.0**
NWAO				IAmb		IAmb	12 47 49.3	
	comp=Z,24nm,1.2s							
EIDS	**Eidsvold**	**36.55**	**141**	P		**P**	**12 47 37.9**	**+0.1**
	baz=37,SNR=12							
EIDS	**Eidsvold**	**36.55**	**141**	P		**P**	**12 47 37.5**	**-0.2**
EIDS				IAmb		IAmb	12 47 38.6	
	comp=Z,23nm,0.8s							
STKA	**Stephens Creek**	**37.15**	**159**	P		**P**	**12 47 43.3**	**+0.6**
	baz=37,SNR=32							
STKA	**Stephens Creek**	**37.15**	**159**	P		**P**	**12 47 43.2**	**+0.6**
	comp=Z,32nm,0.6s,baz=332,slow=8.9,SNR=60							
STKA	**Stephens Creek**	**37.15**	**159**	P		**P**	**12 47 43.3**	**+0.6**
STKA				IAmb		IAmb	12 47 44.1	
	comp=Z,8.0nm,0.8s							
HTT	**Hallett**	**37.70**	**163**	P		**P**	**12 47 48.2**	**+0.8**
	baz=38,SNR=13							
BJI	**Beijing**	**38.42**	**347**	P		**P**	**12 47 55.0**	**+1.7**
BJI				pmax		pmax		
	comp=Z,14nm,0.6s							
CMSA	**Cobar Meteorol**	**38.51**	**153**	P		**P**	**12 47 54.9**	**+0.7**
	baz=39,SNR=54							
LZH	**Lanzhou**	**39.40**	**330**	*e*P		**P**	**12 48 03.0**	**+1.2**
LZH				pP		pP	12 48 20.0	-4.2
LZH				sP		pwP	12 48 28.0	+1.2
LZH				*e*PP		**PnPn**	**12 49 39.3**	**+1.3**
LZH				pmax		pmax		
	comp=Z,27nm,1.3s							
LZH				pmax		pmax		
	comp=Z,100nm,5.2s							
LZH				LR		LR		
	comp=Z,280nm,13.2s							
LZH				LR		LR		
	comp=Z,280nm,13.6s							
LZH				LR		LR		
	comp=Z,380nm,16.4s							
HHC	**Hu-ho-hao-te**	**40.40**	**342**	*e*P		**P**	**12 48 09.5**	**-0.4**
HHC				pmax		pmax		
	comp=Z,9.0nm,0.8s							
HHC				pmax		pmax		
	comp=Z,60nm,5.7s							
SHL	**Shillong**	**40.47**	**307**	P		**P**	**12 48 10.3**	**-0.4**
SHL				IAmb		IAmb	12 48 25.5	
	comp=Z,21nm,1.1s							
ARMA	**Armidale**	**40.61**	**146**	P		**P**	**12 48 13.2**	**+1.4**
	baz=41,SNR=20							
ARMA	**Armidale**	**40.61**	**146**	P		**P**	**12 48 12.7**	**+0.9**
USA0B	**Ussuriysk Arra**	**41.65**	**6**	P		**P**	**12 48 21.2**	**+1.3**
USA0B				IAmb		IAmb	12 48 22.6	
	comp=Z,33nm,1.4s							
USRK	**Ussuriysk Ar.**	**41.65**	**6**	P		**P**	**12 48 21.2**	**+1.3**
	comp=Z,8.9nm,0.7s,baz=193,slow=6.5,SNR=21							
ARPS	**Mount Arapiles**	**41.68**	**162**	P		**P**	**12 48 21.4**	**+1.1**
	baz=42,SNR=25							
YNG	**Young**	**42.06**	**153**	P		**P**	**12 48 25.0**	**+1.6**
	baz=42,SNR=7.9							
H11S3	**WAKE ISLAND Hy**	**42.24**	**65**	T		T	13 32 05.8	
	baz=252,slow=75,SNR=35							
H11S1	**WAKE ISLAND Hy**	**42.26**	**65**	T		T	13 32 06.6	
	baz=252,slow=75,SNR=12							
H11S2	**WAKE ISLAND Hy**	**42.26**	**65**	T		T	13 32 05.5	
	baz=252,slow=75,SNR=19							
MGCD	**Mangrove Creek**	**42.49**	**149**	P		**P**	**12 48 29.1**	**+2.2**
	baz=43,SNR=7.2							
H11N1	**WAKE ISLAND Hy**	**42.80**	**64**	T		T	13 32 53.7	
	baz=249,SNR=6.6							
H11N2	**WAKE ISLAND Hy**	**42.81**	**64**	T		T	13 32 57.7	
	baz=249							
H11N3	**WAKE ISLAND Hy**	**42.81**	**64**	T		T	13 32 52.6	
	baz=249,SNR=8.6							
CAN	**Canberra**	**43.18**	**153**	P		**P**	**12 48 33.5**	**+0.9**
CNB	**Canberra Magne**	**43.34**	**153**	P		**P**	**12 48 35.6**	**+1.7**
	baz=44,SNR=9.5							
TOO	**Toolangi**	**43.66**	**158**	P		**P**	**12 48 38.6**	**+2.2**
	baz=44,SNR=7.6							
TOO	**Toolangi**	**43.66**	**158**	P		**P**	**12 48 36.7**	**+0.4**
TOO				IAmb		IAmb	12 48 38.7	
	comp=Z,11nm,0.8s							
ODAN	**Odare**	**44.64**	**306**	*e*P		**P**	**12 48 45.1**	**+0.5**
	comp=Z,15nm,0.5s							

RAYN	**Ar Rayn**	**80.84**	**293**	P	**P**	**12 52 45.5**	**+0.6**
ABPO	**Ambohimpanom**	**80.88**	**250**	P	**P**	**12 52 45.9**	**+0.5**
ABPO				IAmb	IAmb	12 52 49.3	
	comp=Z,14nm,0.7s						
VNDA	**Vanda**	**82.36**	**173**	P	**P**	**12 52 52.8**	**+1.0**
	comp=Z,2.2nm,0.8s,baz=301,slow=6.0,SNR=12						
VNDA	**Vanda**	**82.36**	**173**	P	**P**	**12 52 51.7**	**-0.1**
KDAK	**Kodiak Island**	**82.84**	**32**	P	**P**	**12 52 54.9**	**+0.3**
	comp=Z,5.4nm,0.8s,baz=256,slow=12,SNR=2.0						
KDAK	**Kodiak Island**	**82.84**	**32**	P	**P**	**12 52 54.4**	**-0.3**
KDAK				IAmb	IAmb	12 53 03.5	
	comp=Z,32nm,1.4s						
KBZ	**Khabaz**	**83.67**	**314**	P	**P**	**12 52 59.2**	**0.0**
	comp=Z,2.5nm,0.7s,baz=123,slow=3.4,SNR=4.6						
TOLK	**Toolik Lake Re**	**85.28**	**21**	P	**P**	**12 53 06.7**	**-0.2**
ILAR	**Eielson Array**	**86.11**	**25**	P	**P**	**12 53 11.7**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=249,slow=4.9,SNR=1.6						
KLMR	**Klimovskoe**	**86.31**	**331**	*e*P	P	12 53 18.3	+6.3
KLMR				AMP		12 53 27.9	
	comp=Z,8.0nm,0.8s						
KMBO	**Kilima Mbogo**	**89.45**	**269**	P	**P**	**12 53 29.8**	**+1.5**
	comp=Z,1.3nm,0.3s,baz=112,slow=23,SNR=1.6						
BRTR	**Keskin Array B**	**90.65**	**310**	P	**P**	**12 53 33.9**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=107,slow=5.0,SNR=4.1						
INK	**Inuvik**	**91.19**	**21**	P	**P**	**12 53 36.0**	**+1.0**
	comp=Z,0.6nm,0.9s,baz=313,slow=2.6,SNR=1.7						
INK	**Inuvik**	**91.19**	**21**	P	**P**	**12 53 35.5**	**+0.5**
ARCES	**ARCESS Array B**	**91.44**	**340**	P	**P**	**12 53 37.2**	**+1.1**
	comp=Z,1.8nm,1.0s,baz=34,slow=9.8,SNR=1.5						
AKASG	**Malin Array Be**	**92.68**	**321**	P	**P**	**12 53 41.6**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=69,slow=4.7,SNR=2.0						
FINES	**FINESS Array B**	**92.75**	**332**	P	**P**	**12 53 42.4**	**+0.1**
	comp=Z,6.0nm,1.1s,baz=81,slow=5.4,SNR=2.2						
YKA	**Yellowknife Ar**	**100.51**	**24**	P	**Pdif**	**12 54 16.7**	**-0.7**
	comp=Z,0.1nm,0.5s,baz=302,slow=3.5,SNR=1.6						
CLL	**Collm**	**102.47**	**324**	*e*Pdif	**Pdif**	**12 54 25.0**	**-1.4**
TXAR	**Lajitas Array**	**122.32**	**53**	PKP	**PKiKP**	**12 59 26.9**	**+1.0**
	comp=Z,0.1nm,0.7s,baz=90,slow=1.9,SNR=1.6						
TORD	**Torodi Ar. Bea**	**123.18**	**287**	PKP	**PKPdf**	**12 59 25.7**	**-1.8**
	comp=Z,0.7nm,0.8s,baz=36,slow=1.9,SNR=2.1						

*TAP **27** 12:49:03.8,24°.70N×122°.41E,h22km,ML2.5,C*
*JMA **27** 12:49:04.0±0.1,24°.67N×122°.41E,h27km±2km,M1.8*
ISC 27 12:49:03.7±1.0,24.71N±0.03×122.43E±0.02,h24km±11km,
n45,σ0s53/77,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.47**	**287**	P	**Pb**	**12 49 13.3**	**-0.1**
	baz=288						
EGS				*e*S	**Sb**	**12 49 19.4**	**-0.6**
	baz=288						
TWB1	**Santiao Chiao**	**0.50**	**307**	*e*P	**Pb**	**12 49 12.7**	**-1.2**
	baz=309						
TWB1				*e*S	**Sb**	**12 49 20.8**	**0.0**
	baz=309						
TWC	**Suao**	**0.54**	**260**	*e*P	**Pb**	**12 49 14.4**	**0.0**
	baz=260						
TWC				*e*S	**Sb**	**12 49 22.4**	**+0.6**
	baz=260						
JYNG	**Yonagunijimaku**	**0.54**	**118**	P	**Pb**	**12 49 14.5**	**0.0**
JYNG				S	**Sb**	**12 49 22.2**	**+0.4**
NTC	**Toucheng**	**0.56**	**285**	*e*P	**Pb**	**12 49 15.2**	**+0.3**
	baz=286						
NTC				*e*S	**Sn**	**12 49 23.8**	**-0.9**
	baz=286						
YOJ	**Yonaguni jima**	**0.58**	**115**	*i* P	**Pb**	**12 49 15.6**	**+0.3**
	baz=113						
YOJ				S	**Sb**	**12 49 23.7**	**+0.5**
	baz=113						
YOJ	**Yonaguni jima**	**0.58**	**115**	P	**Pb**	**12 49 15.4**	**+0.1**
YOJ				S	**Sb**	**12 49 23.1**	**-0.1**
TIPB	**Shuangxi**	**0.61**	**296**	P	**Pb**	**12 49 15.5**	**-0.2**
	baz=302						
TIPB				*e*S	**Sb**	**12 49 24.3**	**+0.4**
	baz=302						
ENA	**Nanau**	**0.68**	**246**	P	**Pb**	**12 49 16.8**	**-0.2**
	baz=252						
ENA				*e*S	**Sb**	**12 49 25.2**	**-0.9**
	baz=252						
NWF	**Wu-fen Shan**	**0.69**	**302**	*e*P	**Pb**	**12 49 17.3**	**+0.2**
	baz=303						
NWF				*e*S	**Sb**	**12 49 27.1**	**+0.8**
	baz=303						
WFSB	**Wu-fen Shan**	**0.69**	**302**	*e*P	**Pb**	**12 49 17.1**	**+0.1**
	baz=315						
WFSB				*e*S	**Sb**	**12 49 26.6**	**+0.3**
	baz=315						
TWE	**Neicheng**	**0.69**	**271**	*i* P	**Pb**	**12 49 16.4**	**-0.7**
	baz=272						
TWE				*e*S	**Sb**	**12 49 26.8**	**+0.6**
	baz=272						
ENTT	**Nioudou**	**0.79**	**265**	*e*P	**Pb**	**12 49 18.8**	**+0.1**
	baz=265						
ENTT				*e*S	**Sb**	**12 49 29.3**	**+0.3**
	baz=265						
NDT	**Datong Townshi**	**0.84**	**263**	*e*P	**Pb**	**12 49 19.8**	**+0.2**
	baz=263						
NDT				*e*S	**Sb**	**12 49 30.1**	**-0.4**
	baz=263						
NWLT	**Wulai**	**0.84**	**275**	P	**Pn**	**12 49 20.6**	**+0.6**
	baz=286						
NWLT				*e*S	**Sn**	**12 49 31.7**	**0.0**
	baz=286						
YM01	**YM01**	**0.89**	**300**	P	**Pn**	**12 49 21.1**	**+0.4**
	baz=300						
YM01				*e*S	**Sn**	**12 49 32.6**	**-0.3**
	baz=300						
TATO	**Taipei**	**0.89**	**288**	*e*S	**Sb**	**12 49 32.3**	**+0.3**
	baz=288						
YM08	**YM08**	**0.90**	**302**	*e*P	**Pb**	**12 49 20.6**	**0.0**
	baz=303						
YM08				*e*S	**Sb**	**12 49 31.8**	**-0.4**
	baz=303						
YM11	**YM11**	**0.90**	**301**	*e*P	**Pb**	**12 49 20.2**	**-0.5**
	baz=301						
YM11				*e*S	**Sb**	**12 49 32.5**	**+0.3**
	baz=301						
YM10	**YM10**	**0.90**	**300**	*e*P	**Pn**	**12 49 21.5**	**+0.6**
	baz=300						
YM10				*e*S	**Sb**	**12 49 32.4**	**-0.1**
	baz=300						
YM04	**YM04**	**0.92**	**299**	*e*P	**Pb**	**12 49 20.1**	**-0.9**
	baz=300						
YM04				*e*S	**Sb**	**12 49 32.7**	**-0.2**
	baz=300						
NACB	**Ninganchiao**	**0.93**	**235**	*e*P	**Pb**	**12 49 20.4**	**-0.7**
	baz=235						
NACB				*e*S	**Sn**	**12 49 34.2**	**+0.5**
	baz=235						
TWY	**Chenhua**	**0.94**	**307**	*e*P	**Pn**	**12 49 21.9**	**+0.6**
	baz=308						
TWY				*e*S	**Sn**	**12 49 33.8**	**-0.2**
	baz=308						
ANP	**Anpu**	**0.95**	**300**	*e*P	**Pn**	**12 49 22.1**	**+0.4**
	baz=301						
YHNB	**Yeheng**	**0.96**	**268**	*e*P	**Pb**	**12 49 21.2**	**-0.4**
	baz=268						
YHNB				*e*S	**Sb**	**12 49 34.2**	**+0.3**
	baz=268						
PCYT	**Pengchaiyu**	**0.97**	**341**	*e*P	**Pn**	**12 49 22.6**	**+0.8**
	baz=342						
NNSB	**Datong**	**0.99**	**254**	*e*P	**Pn**	**12 49 22.3**	**+0.1**
	baz=254						
NNSB				*e*S	**Sn**	**12 49 35.2**	**-0.3**
	baz=254						
NNSH	**Datong**	**0.99**	**254**	*e*P	**Pb**	**12 49 21.9**	**-0.4**
	baz=254						
NNSH				*e*S	**Sb**	**12 49 34.6**	**-0.3**
	baz=254						
ETLH	**Xiulin Townshi**	**0.99**	**240**	*e*P	**Pn**	**12 49 22.6**	**+0.4**
	baz=248						
ETLH				*e*S	**Sn**	**12 49 36.0**	**+0.5**
	baz=248						
NNS	**Nan Shan**	**1.00**	**255**	*e*P	**Pn**	**12 49 22.4**	**+0.1**
	baz=255						
NNS				*e*S	**Sb**	**12 49 34.5**	**-0.6**
	baz=255						
WHF	**Hehuan Shan**	**1.20**	**242**	*e*P	**Pb**	**12 49 26.1**	**+0.2**
	baz=251						
IRIF	**Iriomote-Funau**	**1.24**	**107**	P	**Pn**	**12 49 25.8**	**+0.3**
IRIF				S	**Sn**	**12 49 41.3**	**-0.2**
NSTT	**Nanjuang**	**1.30**	**267**	*e*P	**Pn**	**12 49 26.4**	**+0.1**
	baz=284						
CHGB	**Renai**	**1.31**	**241**	*e*P	**Pb**	**12 49 28.1**	**+0.3**
	baz=227						
HATJ	**Hateruma jima**	**1.41**	**117**	P	**Pb**	**12 49 29.0**	**-0.4**
HATJ				*e*S	**Sb**	**12 49 46.6**	**-0.4**
WHP	**Taichung City**	**1.42**	**253**	*e*P	**Pb**	**12 49 31.0**	**+1.5**
	baz=253						
VWDT	**VWDT**	**1.51**	**231**	*e*P	**Pb**	**12 49 31.7**	**+0.7**
	baz=218						
JKRS	**Kuro-shima**	**1.52**	**108**	P	**Pn**	**12 49 29.8**	**+0.5**
JKRS				S	**Sb**	**12 49 49.5**	**-0.4**
JIJ	**Ishigaki jima**	**1.60**	**102**	P	**Pn**	**12 49 31.0**	**+0.6**
JIJ				S	**Sn**	**12 49 50.2**	**-0.1**
SSLB	**Suanglung**	**1.63**	**236**	*e*P	**Pb**	**12 49 32.0**	**-1.0**
	baz=220						
TYC	**Yuchr**	**1.64**	**241**	*e*P	**Pb**	**12 49 32.8**	**-0.4**
	baz=231						
YULB	**Yu-li**	**1.67**	**219**	*e*P	**Pn**	**12 49 31.9**	**+0.5**
	baz=217						
YULB				*e*S	**Sn**	**12 49 51.1**	**-1.0**
	baz=217						
JISG	**Ishigakijimahi**	**1.72**	**94**	P	**Pb**	**12 49 33.8**	**-0.8**
WHYT	**Xinyi Township**	**1.75**	**235**	*e*P	**Pb**	**12 49 34.4**	**-0.9**
	baz=222						
JTJ	**Tarama**	**2.07**	**91**	P	**Pb**	**12 49 40.0**	**-0.6**

*NEIC **27** 12:50:12.8±0.7,20°.4S±0°.2×176°.88W±0°.05,h10km±1km,*
mb4.4/10,Error ellipse: s-maj=33.8km s-min=6.3km
az=5.0
*IDC **27** 12:50:13.1±2.1,20°.15S×177°.08W,h0km,mb3.8/4,*
mb1 4.0/4,mb1mx3.7/39,mbtmp3.8/4,Error ellipse:
s-maj=159.9km s-min=34.4km az=159.0
ISC 27 12:50:13.1±0.8,20.4S±0.2×176.90W±0.09,h10km,n16,
σ0s98/17,mb4.5/9,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.44**	**298**	Pn	**Pn**	**12 51 34.3**	**-0.2**
MSVF				Sn	**Sn**	**12 52 37.4**	**+0.2**
NIUE	**Niue**	**6.70**	**80**	Pn	**Pn**	**12 51 50.8**	**-0.8**
CTA	**Charters Tower**	**34.53**	**264**	P	**P**	**12 57 03.2**	**+1.3**
	0.8nm,0.3s,baz=76,slow=8.3,SNR=1.1						
PMG	**Port Moresby**	**36.32**	**282**	P	**P**	**12 57 15.7**	**-1.7**
STKA	**Stephens Creek**	**38.77**	**244**	P	**P**	**12 57 38.4**	**+0.4**
	2.4nm,0.9s,baz=66,slow=10.0,SNR=2.4						
STKA	**Stephens Creek**	**38.77**	**244**	P	**P**	**12 57 38.2**	**+0.2**
STKA				IAmb	IAmb	12 57 46.0	
	comp=Z,3.0nm,1.4s						
WR0	**Warramunga Arr**	**45.45**	**262**	P	**P**	**12 58 33.6**	**+0.9**
AS31	**Alice Springs**	**45.55**	**256**	P	**P**	**12 58 33.3**	**-0.2**
WB0	**Warramunga Arr**	**45.62**	**262**	P	**P**	**12 58 34.0**	**0.0**
WB0				IAmb	IAmb	12 58 36.9	
	comp=Z,6.9nm,1.3s						
WB2	**Warramunga Arr**	**45.63**	**262**	P	**P**	**12 58 34.0**	**0.0**
WB2				IAmb	IAmb	12 58 45.4	
	comp=Z,9.1nm,1.4s						
WRAB	**Tennant Creek**	**45.63**	**262**	P	**P**	**12 58 33.4**	**-0.7**
WRAB				IAmb	IAmb	12 58 40.5	
	comp=Z,11nm,1.5s						
WRA	**Warramunga Arr**	**45.64**	**262**	P	**P**	**12 58 34.2**	**0.0**
	comp=Z,0.4nm,0.4s,baz=97,slow=7.8,SNR=14						
KNRA	**Kununurra**	**51.69**	**266**	P	**P**	**12 59 19.3**	**-1.5**
FITZ	**Fitzroy Crossi**	**54.06**	**262**	P	**P**	**12 59 37.2**	**-1.1**
FITZ				IAmb	IAmb	12 59 54.7	
	comp=Z,6.5nm,1.4s						
QSPA	**South Pole Qui**	**69.70**	**180**	P	**P**	**13 01 22.5**	**-0.5**
QSPA				IAmb	IAmb	13 01 34.8	
	comp=Z,5.8nm,1.5s						
TXAR	**Lajitas Array**	**86.12**	**57**	P	**P**	**13 02 56.6**	**+1.8**
	comp=Z,0.3nm,0.9s,baz=205,slow=4.0,SNR=2.4						

*IDC **27** 13:02:47.2±1.2,19°.63S×70°.73W,h0km,mb3.9/5,*
mb1 4.1/7,mb1mx3.8/31,mbtmp3.9/7,ML3.6/2,MS3.4/6,
Ms1 3.4/6,ms1mx3.1/24,Error ellipse: s-maj=35.7km
s-min=18.0km az=59.0
*NEIC **27** 13:02:49.8±1.6,19°.78S±0°.04×70°.84W±0°.07,h21km±5km,*
mb4.5/2,Error ellipse: s-maj=8.8km s-min=5.6km az=88.0
*GUC **27** 13:02:52.0±0.9,19°.74S×70°.80W,h25km±6km,ML3.6*
ISC 27 13:02:48.5±3.2,19°.76S±0°.03×70°.88W±0°.06,h13km±20km,
n61,σ1s08/65,mb4.1/6,MS3.4/3,8D,Near coast of
northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.73**	**78**	*i*P	**Pb**	**13 03 03.2**	**-0.1**
PSGC				*i* S	**Sb**	**13 03 11.6**	**-1.7**
PSGC				IAML		13 03 13.8	
	comp=E,3μm,0.6s						
PSGCX	**Pisagua**	**0.73**	**78**		**Pb**	**13 03 03.1**	**-0.2**
PSGCX				Sg	**Sb**	**13 03 12.3**	**-1.0**
TA02	**Huaiquique**	**0.88**	**126**	*e*P	**Pb**	**13 03 06.1**	**+0.5**
TA02				*e*S	**Sb**	**13 03 17.8**	**+0.6**
TA02				IAML		13 03 20.3	
	comp=N,7μm,0.1s						
TA01	**Diego Aracena**	**1.04**	**141**	*e*P	**Pb**	**13 03 08.9**	**+0.4**
TA01				*i* S	**Sb**	**13 03 22.7**	**+0.7**
TA01	**Diego Aracena**	**1.04**	**141**		**Pb**	**13 03 09.0**	**+0.6**
TA01				Sn	**Sb**	**13 03 22.4**	**+0.4**
PB11	**IPOC Station P**	**1.16**	**91**	*i*P	**Pn**	**13 03 10.2**	**-0.4**
PB11				*i* S	**Sb**	**13 03 24.6**	**-0.9**
PB11				IAML		13 03 28.0	
	comp=N,5μm,0.5s						
PB11	**IPOC Station P**	**1.16**	**91**		**Pn**	**13 03 10.1**	**-0.5**
PB12	**IPOC Station P**	**1.25**	**25**	*i*P	**Pn**	**13 03 11.9**	**+0.1**
PB12				*i* S	**Sb**	**13 03 28.2**	**+0.1**
PB12				IAML		13 03 33.3	
	comp=N,4μm,0.5s						
PB12	**IPOC Station P**	**1.25**	**25**		**Pn**	**13 03 11.8**	**0.0**
PATCX	**Punta Patache**	**1.26**	**147**	*i*P	**Pn**	**13 03 12.4**	**+0.5**
PATCX				*i* S	**Sb**	**13 03 28.6**	**+0.1**
PATCX				IAML		13 03 34.6	
	comp=E,1μm,0.6s						
PATCX	**Punta Patache**	**1.26**	**147**		**Pn**	**13 03 12.3**	**+0.3**
MNMC	**Minye Minye**	**1.36**	**63**	*i*P	**Pn**	**13 03 13.8**	**+0.3**
MNMC				*i* S	**Sn**	**13 03 31.1**	**-0.5**
MNMC	**Minye Minye**	**1.36**	**63**		**Pn**	**13 03 13.7**	**+0.1**
AP01	**Chacalluta**	**1.47**	**21**	*e*P	**Pn**	**13 03 15.3**	**+0.6**
AP01				*i* S	**Sn**	**13 03 34.4**	**+0.6**
AP01	**Chacalluta**	**1.47**	**21**		**Pn**	**13 03 15.3**	**+0.6**
GO01	**Chusmiza**	**1.59**	**87**	*e*P	**Pn**	**13 03 17.7**	**+0.8**
GO01				*i* S	**Sn**	**13 03 37.9**	**+0.3**
GO01	**Chusmiza**	**1.59**	**87**		**Pn**	**13 03 17.5**	**+0.7**
PB08	**IPOC Station P**	**1.67**	**104**	*i*P	**Pn**	**13 03 18.8**	**+0.9**
PB08				*i* S	**Sn**	**13 03 39.7**	**+0.3**
PB08	**IPOC Station P**	**1.67**	**104**		**Pn**	**13 03 18.6**	**+0.7**
PB02	**IPOC Station P**	**1.81**	**149**	*i*P	**Pn**	**13 03 20.4**	**+0.8**
PB02				*i* S	**Sn**	**13 03 42.4**	**-0.1**
PB01	**IPOC Station P**	**1.83**	**135**	*i*P	**Pn**	**13 03 21.0**	**+1.2**
PB01				*i* S	**Sn**	**13 03 42.9**	**0.0**
PB01	**IPOC Station P**	**1.83**	**135**		**Pn**	**13 03 20.4**	**+0.6**
PB07	**IPOC Station P**	**2.17**	**155**	*i*P	**Pn**	**13 03 25.1**	**+0.5**
PB07				*i* S	**Sn**	**13 03 50.4**	**-1.1**
PB07	**IPOC Station P**	**2.17**	**155**		**Pn**	**13 03 24.9**	**+0.4**
PB03	**IPOC Station P**	**2.52**	**155**	*e*P	**Pn**	**13 03 29.8**	**+0.5**
PB03				IAML		13 04 13.6	
	comp=E,242nm,0.8s						
PB09	**IPOC Station P**	**2.55**	**143**	*e*P	**Pn**	**13 03 31.7**	**+2.0**
PB09				*e*S	**Sn**	**13 04 03.0**	**+2.3**
PB09				IAML		13 04 19.2	
	comp=N,548nm,0.3s						
PB09	**IPOC Station P**	**2.55**	**143**		**Pn**	**13 03 31.2**	**+1.5**
PB04	**IPOC Station P**	**2.66**	**165**	*e*P	**Pn**	**13 03 31.2**	**0.0**
PB04	**IPOC Station P**	**2.66**	**165**		**Pn**	**13 03 31.0**	**-0.2**
PB06	**IPOC Station P**	**3.18**	**158**		**Pn**	**13 03 38.4**	**0.0**
LVC	**Limon Verde**	**3.39**	**147**	Pn	**Pn**	**13 03 43.5**	**+2.1**
	comp=N,5.6nm,0.3s,baz=332,slow=18,SNR=17						
LVC				Sn	**Sn**	**13 04 21.2**	**-0.5**
	comp=N,22nm,0.3s,baz=356,slow=13,SNR=3.8						
LVC				Lg	Lg	13 04 34.8	
	comp=N,17nm,0.3s,baz=122,slow=15,SNR=8.4						
LVC				LR	LR	13 05 08.9	
	comp=N,172nm,18.8s,baz=349,slow=42						
LVC	**Limon Verde**	**3.39**	**147**		**Pn**	**13 03 40.2**	**-1.3**
PB15	**IPOC Station P**	**3.68**	**159**		**Pn**	**13 03 45.0**	**-0.3**
PB10	**IPOC Station P**	**3.75**	**175**		**Pn**	**13 03 45.4**	**-0.8**
LPAZ	**La Paz**	**4.33**	**38**	Pn	**Pn**	**13 03 58.5**	**+3.8**
	comp=N,1.6nm,0.3s,baz=229,slow=5.7,SNR=23						
LPAZ				Lg	Lg	13 05 04.8	
	comp=N,0.7nm,0.3s,baz=103,slow=8.9,SNR=1.2						
GO02	**Mina Guanaco**	**5.51**	**168**		**Pn**	**13 04 10.4**	**-0.3**
AC01	**Pan de Azucar**	**6.37**	**178**	Pn	**Pn**	**13 04 20.3**	**-1.9**
AC02	**Maricunga**	**7.23**	**167**		**Pn**	**13 04 34.2**	**-0.2**
AC04	**Llanos de Chal**	**8.41**	**181**	Pn	**Pn**	**13 04 46.9**	**-3.3**

SIV	**San Ignacio**	**10.06**	**70**	Pn	**Pn**	**13 05 12.8**	**-0.1**
	comp=N,0.5nm,0.3s,baz=266,slow=11,SNR=12							
SIV				LR	LR	13 09 41.2		
	comp=N,215nm,20.5s,baz=192,slow=42							
CFA	**Coronel Fontan**	**12.04**	**169**	LR	LR	13 09 30.5		
	comp=N,49nm,21.8s,baz=340,slow=33							
H03N1	**Juan Fernandez**	**15.40**	**206**	T	T	13 22 29.1		
	baz=31,slow=72,SNR=22							
H03N2	**Juan Fernandez**	**15.40**	**206**	T	T	13 22 27.3		
	baz=31,slow=72,SNR=18							
H03N3	**Juan Fernandez**	**15.41**	**206**	T	T	13 22 22.7		
	baz=31,slow=72,SNR=18							
PTGA	**Pitinga**	**21.72**	**31**	P	**P**	**13 07 37.8**	**-1.8**	
	comp=N,8.6nm,0.3s,baz=210,slow=19,SNR=7.0							
BDFB	**Brasilia**	**22.16**	**83**	LR	LR	13 17 49.0		
	comp=N,118nm,19.2s,baz=136,slow=41							
SDV	**Santo Domingo**	**28.46**	**1**	LR	LR	13 21 25.6		
	comp=N,87nm,19.0s,baz=232,slow=40							
PCRV	**Puerto La Cruz**	**30.37**	**12**	LR	LR	13 20 10.8		
	comp=N,482nm,21.4s,slow=34							
V55A	**Taylorsville**	**56.16**	**350**	P	**P**	**13 12 28.6**	**+0.7**	
V55A				IAmb	IAmb	13 13 31.8		
	comp=Z,5.2nm,0.9s							
TXAR	**Lajitas Array**	**58.15**	**326**	P	**P**	**13 12 43.4**	**+1.1**	
	comp=Z,0.2nm,0.5s,baz=146,slow=8.3,SNR=2.4							
NVAR	**Mina Array Bea**	**72.99**	**323**	P	**P**	**13 14 19.2**	**+0.9**	
	comp=Z,0.3nm,0.6s,baz=136,slow=6.7,SNR=2.2							
TOA0	**Torodi Ar. Sit**	**78.54**	**72**	P	**P**	**13 14 48.8**	**-1.4**	
TORD	**Torodi Ar. Bea**	**78.54**	**72**	P	**P**	**13 14 49.0**	**-1.2**	
	comp=Z,1.3nm,0.6s,baz=253,slow=5.9,SNR=6.4							
YKA	**Yellowknife Ar**	**88.94**	**341**	P	**P**	**13 15 42.1**	**-0.3**	
	comp=Z,0.5nm,0.6s,baz=131,slow=4.9,SNR=14							
H11S2	**WAKE ISLAND Hyl**	**25.80**	**279**	T	T	15 40 26.3		
	baz=101,slow=74,SNR=33							
H11S1	**WAKE ISLAND Hyl**	**25.81**	**279**	T	T	15 40 26.3		
	baz=101,slow=74,SNR=25							
H11S3	**WAKE ISLAND Hyl**	**25.82**	**279**	T	T	15 40 26.5		
	baz=101,slow=74,SNR=30							
H11N3	**WAKE ISLAND Hyl**	**25.84**	**280**	T	T	15 40 30.5		
	baz=100,slow=74,SNR=13							
H11N2	**WAKE ISLAND Hyl**	**25.86**	**280**	T	T	15 40 30.5		
	baz=100,slow=74,SNR=12							
H11N1	**WAKE ISLAND Hyl**	**25.86**	**280**	T	T	15 40 29.9		
	baz=100,slow=74,SNR=9.4							
MKAR	**Makanchi Array**	**145.25**	**33**	PKPbc	**PKPdf**	**13 22 26.3**	**+0.2**	
	comp=Z,0.8nm,0.5s,baz=330,slow=3.7,SNR=11							

*NIED **27** 13:15:00,44°.80N×149°.70E,h53km,Mw4.5 Best double*
couple: M0 7.01000×10^15 NP1:φs177.00000°,δ62.00000°,
λ34.00000°. NP2:φs70.00000°,δ61.00000°,λ147.00000°.
*SKHL **27** 13:15:29.5±0.2,44°.71N×149°.91E,h59km±4km,mb5.0/19*
*IDC **27** 13:15:29.8±2.3,44°.86N×149°.72E,h36km±17km,mb4.2/27,*
mb1 4.3/37,mb1mx4.2/49,mbtmp4.4/37,ML3.8/9,MS3.5/25,
Ms1 3.5/25,ms1mx3.4/37,Error ellipse: s-maj=14.9km
s-min=10.4km az=155.0
*MOS **27** 13:15:29.8±0.9,44°.78N×149°.72E,h53km,mb4.9/46,*
MS3.1/5,Error ellipse: s-maj=6.4km s-min=5.6km az=54.1
*JMA **27** 13:15:30.0±0.5,44°.81N×149°.74E,h30km,M5.0*
*NEIC **27** 13:15:32.3±1.2,44°.83N±0°.08×149°.73E±0°.10,h58km±5km,*
mb4.9/264,Error ellipse: s-maj=12.2km s-min=9.1km
az=145.0
ISC 27 13:15:29.2±0.8,44°.70N±0°.05×149°.79E±0°.04,h35km±3km,
n728,σ1s23/761,mb4.8/179,MS3.6/24,30C-2D,Kuril
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.47**	**292**	*i* P	**Pb**	**13 15 53.9**	**-1.9**
KUR				AMB	AMB	13 15 56.3	
	110nm,0.3s						
KUR				AMB	AMB	13 15 56.3	
	500nm,0.3s						
KUR				AMB	AMB	13 15 56.3	
	240nm,0.3s						
KUR				*i* S	**Sb**	**13 16 12.1**	**-2.0**
KUR				A	A	13 16 16.5	
	4μm,0.3s						
KUR				A	A	13 16 16.5	
	1μm,0.3s						
KUR	**Kuril'sk**	**1.47**	**292**	*d i* PN	**Pb**	**13 15 53.8**	**-2.0**
KUR				*i* S	**Sb**	**13 16 12.1**	**-2.0**
KUR				pmax	pmax		
	comp=Z,2μm,0.5s						
KUR				pmax	pmax		
	comp=N,1μm,0.3s						
KUR				pmax	pmax		
	comp=E,465nm,0.3s						
KUR				smax	smax		
	comp=N,4μm,0.3s						
KUR				smax	smax		
	comp=E,1μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.90**	**258**	*i* P	**Pn**	**13 16 14.1**	**+1.3**
YUK				AMB	AMB	13 16 14.2	
	comp=E,60nm,0.3s						
YUK				AMB	AMB	13 16 14.2	
	comp=E,90nm,0.3s						
YUK				AMB	AMB	13 16 14.2	
	comp=E,480nm,0.3s						
YUK				*i* S	**Sn**	**13 16 47.7**	**+1.3**
YUK				A	A	13 16 52.0	
	comp=E,1μm,0.4s						
YUK				A	A	13 16 52.0	
	comp=E,1μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.90**	**258**	*c*

JRA Rausu 3.44 259 P **Pn** **13 16 22.4 +2.2**
JNK Nakash 3.82 255 P **Pn** **13 16 27.1 +1.6**
JNK *eS* **Sn** **13 17 09.4 +0.3**
JAK Akkeshi 4.06 247 P **Pn** **13 16 29.6 +0.8**
JAK *eS* **Sn** **13 17 12.8 -2.3**
JTKR Abashiri--Toko 4.28 262 P **Pn** **13 16 34.3 +2.5**
JAR Ashorobuto 4.57 254 P **Pn** **13 16 38.0 +2.3**
JAR *eS* **Sn** **13 17 28.4 +0.8**
JMP Maruseppu 4.67 264 P **Pn** **13 16 40.1 +3.0**
JOB Onbets 4.67 249 P **Pn** **13 16 39.1 +1.9**
JOB *eS* **Sn** **13 17 29.7 -0.4**
JCH Churui 5.11 248 P **Pn** **13 16 44.5 +1.3**
JCH *eS* **Sn** **13 17 40.8 -0.2**
JKK2 Kamakawa 2 5.12 263 P **Pn** **13 16 46.7 +3.3**
JKA Kamikawa-asahi 5.19 266 *eP* **Pn** **13 16 46.3 +2.0**
JKA *eS* **Sn** **13 17 45.8 +3.0**
JKA Kamikawa-asahi 5.19 266 **Pn** **13 16 46.2 +2.0**
JKA **Sn** **13 17 45.8 +3.0**
ASAJ Asahikawa 5.19 266 Pn **Pn** **13 16 46.2 +2.0**
comp=E,16nm,0.3s,baz=63,slow=17,SNR=84
ASAJ Sn **Sn** **13 17 45.8 +2.9**
baz=67,slow=10.0,SNR=1.2
ASAJ LR LR 13 18 52.9
comp=E,688nm,21.5s,baz=156,slow=39
ASAJ Asahikawa 5.19 266 P **Pn** **13 16 47.7 +3.4**
YSS Yuzh-Sakhalins 5.41 297 *i* P **Pn** **13 16 49.7 +2.4**
YSS *i* P **Pn** **13 16 49.7 +2.4**
YSS AMB AMB 13 16 50.3
comp=E,120nm,0.8s
YSS *eS* **Sn** **13 17 48.7 +0.5**
YSS A A 13 17 49.6
comp=E,50nm,0.6s
YSS A A 13 17 49.6
comp=E,30nm,0.6s
YSS Yuzh-Sakhalins 5.41 297 ⇓ *i* PN **Pn** **13 16 49.7 +2.4**
YSS *eS* **Sn** **13 17 48.4 +0.2**
YSS pmax pmax
comp=Z,120nm,0.8s
YSS pmax pmax
comp=E,60nm,0.7s
YSS smax smax
comp=N,50nm,0.6s
YSS MLR MLR
comp=Z,600nm,15.0s
YSS MLR MLR
comp=E,400nm,16.0s
YSS Yuzh-Sakhalins 5.41 297 **Pn** **13 16 49.6 +2.3**
JFR Furan 5.42 256 P **Pn** **13 16 50.4 +2.9**
JEM Erimo 5.53 243 P **Pn** **13 16 51.0 +2.0**
JEM *eS* **Sn** **13 17 50.4 -0.9**
ERM Erimo 5.53 243 *ce* PN **Pn** **13 16 50.7 +1.7**
ERM pmax pmax
comp=Z,146nm,0.7s
ERM Erimo 5.53 243 **Pn** **13 16 51.4 +2.4**
JAB Ashibetsu 5.58 260 P **Pn** **13 16 53.8 +4.1**
JWK2 Keihoku 5.63 279 P Pn 13 16 55.0 +4.7
JNBK Urakawa-nobuka 5.66 247 P **Pn** **13 16 51.5 +0.7**
JNBK *eS* **Sn** **13 17 51.9 -2.7**
JBT2 Biratori 2 5.71 253 P **Pn** **13 16 53.4 +1.9**
JRBN Rebuntou 6.22 280 P **Pn** **13 17 01.9 +3.4**
JEW Eniwo 6.32 256 P **Pn** **13 17 02.6 +2.8**
JNB Noboribetsu 6.74 254 P **Pn** **13 17 07.2 +1.7**
JNB *eS* **Sn** **13 18 19.7 -1.3**
JKB Kayabe 6.98 249 P **Pn** **13 17 09.8 +0.9**
JKB *eS* **Sn** **13 18 23.0 -4.0**
JYM2 Yakumo 2 7.33 253 P **Pn** **13 17 15.1 +1.4**
SKR Severo-Kuril's 7.35 33 *eP* **Pn** **13 17 14.7 +0.9**
SKR AMB AMB 13 17 16.0
comp=Z,300nm,2.0s
SKR AMB AMB 13 17 17.0
comp=Z,200nm,0.6s
SKR *eS* **Sn** **13 18 33.4 -2.5**
SKR A A 13 18 44.0
comp=Z,50nm,0.8s
SKR A A 13 18 44.0
comp=Z,90nm,0.8s
SKR Severo-Kuril's 7.35 33 *ce* PN **Pn** **13 17 14.7 +0.9**
SKR pmax pmax
comp=Z,300nm,1.9s
SKR pmax pmax
comp=Z,196nm,0.6s
SKR MLR MLR
comp=Z,200nm,18.0s
JANG Nango 7.49 238 P **Pn** **13 17 14.5 -1.4**
JANG *eS* **Sn** **13 18 31.7 +7.8**
JTM Tenmabayashi 7.52 242 P **Pn** **13 17 16.7 +0.4**
JTM *eS* **Sn** **13 18 34.1 -6.1**
JSR Shiriuchi 7.55 248 P **Pn** **13 17 17.5 +0.7**
TYV Tymovskoe 7.81 325 *eP* **Pn** **13 17 22.9 +2.7**
TYV AMB AMB 13 17 23.2
comp=Z,20nm,0.5s
TYV *eS* **Sn** **13 18 46.7 -0.7**
TYV A A 13 18 54.1
comp=Z,10.0nm,0.6s
TYV A A 13 18 54.1
comp=Z,10.0nm,0.6s
TYV Tymovskoe 7.81 325 *ce* PN **Pn** **13 17 22.9 +2.7**
TYV *eS* **Sn** **13 18 53.4 +6.0**
TYV pmax pmax
comp=Z,19nm,0.5s
TYV smax smax
comp=N,12nm,0.6s
JOSM Okushiri--Mats 7.96 254 P **Pn** **13 17 23.6 +1.3**
PAU Pauzhetka 8.23 32 *eP* **Pn** **13 17 26.2 +0.2**
PAU AMB AMB 13 17 26.8
comp=N,160nm,0.6s
JRG Rokugo 8.63 235 P **Pn** **13 17 31.6 +0.1**
JIO Ouri 8.88 228 P **Pn** **13 17 34.8 -0.2**
JIO *eS* Sn 13 19 05.2 -8.6
TEY Ternei 9.37 277 *eP* **Pn** **13 17 45.8 +4.1**
TEY AMB AMB 13 17 46.9
comp=N,20nm,1.0s
TEY AMB AMB 13 17 46.9
comp=N,20nm,1.0s
TEY Ternei 9.37 277 ⇑ *e* PN **Pn** **13 17 45.8 +4.1**
TEY pmax pmax
comp=E,20nm,1.1s
TEY pmax pmax
comp=Z,10.0nm,2.0s
PEA0B Petropavlovsk- 9.88 29 *ce* PN **Pn** **13 17 50.4 +1.7**
PEA0B Petropavlovsk- 9.88 29 **Pn** **13 17 49.3 +0.7**
PETK Petropavlovsk- 9.88 29 Pn **Pn** **13 17 47.6 -1.0**
comp=Z,1.3nm,0.3s,baz=198,slow=13,SNR=31
PETK LR LR 13 21 40.9
comp=Z,268nm,18.6s,baz=220,slow=38
OKH Okha 9.92 336 *eP* Pn 13 17 53.2 +4.1
OKH AMB AMB 13 17 54.2
comp=Z,50nm,1.0s
PET Petropavlovsk 10.16 32 *eP* **Pn** **13 17 52.8 +0.4**
PET AMB AMB 13 17 53.2
comp=Z,20nm,0.7s
PET *eS* **Sn** **13 19 41.2 -3.8**
PET A A 13 19 46.9
comp=Z,20nm,0.5s
PET A A 13 19 46.9
comp=Z,20nm,0.5s
PET Petropavlovsk 10.16 32 *e* PN **Pn** **13 17 50.7 -1.7**
PET pmax pmax
comp=Z,21nm,0.7s
PET MLR MLR
comp=Z,300nm,11.0s
PET MLR MLR
comp=Z,300nm,14.0s
PET Petropavlovsk 10.16 32 **Pn** **13 17 51.9 -0.5**
NKL Nikolayevsk 10.35 328 *eP* **Pn** **13 17 57.0 +2.0**
GRNR Gornyy 10.85 309 *i* P Pn 13 18 05.4 +3.5
GRNR AMB AMB 13 18 06.3
comp=Z,20nm,0.5s
GRNR AMB AMB 13 18 06.3
comp=Z,20nm,0.5s
GRNR Gornyy 10.85 309 ⇑ *i* PN Pn 13 18 05.4 +3.5
GRNR *eS* Sn 13 20 09.9 +7.9
GRNR pmax pmax
comp=Z,20nm,0.5s
GRNR smax smax
comp=E,1.0nm,0.5s
GRNR MLR MLR
comp=Z,120nm,16.0s
MJAR Matsushiro Arr 11.99 231 Pn **Pn** **13 18 17.1 -0.4**
comp=Z,0.1nm,0.3s,baz=28,slow=15,SNR=12
MJAR Sn **Sn** **13 20 33.3 +3.3**
comp=Z,0.1nm,0.3s,baz=30,slow=27,SNR=1.4
MJB9 Matsu-Tunnel 11.99 231 **Pn** **13 18 15.9 -1.6**
MAJO Matsushiro 11.99 231 PN **Pn** **13 18 15.9 -1.6**
MAJO Matsushiro 11.99 231 **Pn** **13 18 15.9 -1.6**
USA0B Ussuriysk Arra 12.73 274 PN **Pn** **13 18 29.1 +1.4**
USA0B Ussuriysk Arra 12.73 274 **Pn** **13 18 29.1 +1.4**
USRK Ussuriysk Ar. 12.73 274 Pn **Pn** **13 18 28.8 +1.2**
baz=86,slow=13,SNR=38
USRK LR LR 13 23 15.9
comp=Z,184nm,21.2s,baz=73,slow=37
KLR Kul'dur 13.12 297 Pn **Pn** **13 18 32.6 -0.3**
comp=Z,0.1nm,0.3s,baz=75,slow=20,SNR=1.6
KLR LR LR 13 23 51.9
comp=Z,181nm,19.6s,baz=108,slow=39
KLR Kul'dur 13.12 297 *eP* **Pn** **13 18 36.1 +3.2**
KLR AMB AMB 13 18 42.3
comp=Z,10.0nm,1.0s
KLR Kul'dur 13.12 297 ⇑ *e* PN P 13 18 36.9 -5.7
KLR pmax pmax
comp=Z,11nm,1.0s
EKMR Ekimchan 13.86 313 *eP* **Pn** **13 18 42.3 -0.7**
EKMR AMB AMB 13 18 46.9
comp=Z,30nm,1.0s
JHJ Hachijo jima 2 13.93 217 Pn **Pn** **13 18 44.2 +0.1**
comp=Z,4.8nm,0.3s,baz=56,slow=22,SNR=2.0
JHJ Sn Sn 13 21 03.6 -14
comp=Z,6.2nm,0.3s,baz=50,slow=12,SNR=1.6
JHJ LR LR 13 23 44.1
comp=Z,39nm,21.4s,baz=33,slow=35
MA2 Magadan 14.91 2 Pn **Pn** **13 18 57.7 +0.6**
comp=Z,0.6nm,0.3s,baz=186,slow=10.0,SNR=6.7
MA2 LR LR 13 24 06.7
comp=Z,97nm,21.2s,baz=192,slow=35
MA2 Magadan 14.91 2 P **Pn** **13 18 58.2 +1.1**
MA2 Magadan 14.91 2 Pn **Pn** **13 18 58.2 +1.1**
BMKR Bomnak 16.78 314 *eP* **Pn** **13 19 18.9 -2.4**
BMKR AMB AMB 13 19 26.0
comp=Z,10.0nm,0.6s
ZEA Zeya 17.21 310 *eP* **Pn** **13 19 24.4 -2.3**
ZEA AMB AMB 13 19 30.2
comp=Z,30nm,1.0s
ZEA Zeya 17.21 310 *eP* **P** **13 19 28.4 +0.5**
ZEA pmax pmax
comp=Z,28nm,1.2s
KROS Kirovskiy 17.64 312 *eP* **Pn** **13 19 30.0 -2.0**
KROS AMB AMB 13 19 34.8
comp=Z,10.0nm,0.4s
KSRS Korea Array 17.98 254 P **Pn** **13 19 35.1 -1.1**
comp=Z,0.5nm,0.3s,baz=58,slow=11,SNR=13
KSRS LR LR 13 26 42.8
comp=Z,144nm,19.6s,baz=72,slow=37
KS19 Wonju Array Si 17.99 254 P **P** **13 19 38.2 +1.5**
KS19 IAmb IAmb 13 20 13.7
comp=Z,109nm,1.9s
SEY Seymchan 18.33 4 P **Pn** **13 19 38.6 -1.6**
comp=Z,0.6nm,0.3s,baz=182,slow=9.9,SNR=11
JCJ Chichijima 18.60 202 LR LR 13 26 24.7
comp=Z,191nm,19.7s,baz=108,slow=35
JNU Nakatsue 18.67 238 P **P** **13 19 44.6 +0.4**
comp=Z,0.2nm,0.3s,baz=27,slow=4.5,SNR=2.7
JNU LR LR 13 27 15.8
comp=Z,95nm,21.5s,baz=39,slow=38
JNU Nakatsue 18.67 238 Pn **Pn** **13 19 47.2 +2.5**
YAK Yakutsk 20.94 333 P **P** **13 20 06.4 -2.2**
comp=Z,4.6nm,0.3s,baz=107,slow=0.7,SNR=6.0
YAK Yakutsk 20.94 333 P **P** **13 20 06.3 -2.2**
ADK Adak 23.27 60 P **P** **13 20 33.5 0.0**
ADK pmax pmax
comp=Z,40nm,1.2s
ADK Adak 23.27 60 P **P** **13 20 33.5 0.0**
ADK IAmb IAmb 13 21 08.6
comp=Z,40nm,1.2s
GSTR Great Sitkin T 23.68 60 P **P** **13 20 37.6 +0.2**
BILL Bilibino 24.94 15 *i* P **P** **13 20 47.3 -1.4**
BILL pmax pmax
comp=Z,5.0nm,0.9s
BILL MLR MLR
comp=Z,132nm,21.0s
BILL Bilibino 24.94 15 P **P** **13 20 47.3 -1.4**
BJI Beijing 25.16 271 P **P** **13 20 51.5 +0.5**
BJI pmax pmax
comp=Z,9.0nm,1.0s
BJI LR LR
comp=N,67nm,10.9s
BJI LR LR
comp=E,130nm,15.6s
BJI LR LR
comp=Z,260nm,26.5s
NJ2 Nanjing 27.17 253 *eP* **P** **13 21 10.3 +1.0**
NJ2 pmax pmax
comp=Z,11nm,0.5s
HHC Hu-ho-hao-te 28.15 276 *eP* **P** **13 21 19.3 +1.2**
HHC sP sP 13 21 38.3 +7.8
HHC S **S** **13 26 01.8 +0.7**
HHC pmax pmax
comp=Z,12nm,0.9s
HHC pmax pmax
comp=Z,79nm,5.5s
HHC LR LR
comp=N,160nm,12.2s
HHC LR LR
comp=E,120nm,11.8s
HHC LR LR
comp=Z,87nm,14.5s
H11N2 WAKE ISLAND Hy 28.68 145 T T 13 52 05.1
baz=335,slow=75,SNR=1275
H11N1 WAKE ISLAND Hy 28.69 145 T T 13 52 04.5
baz=335,slow=75,SNR=918
H11N3 WAKE ISLAND Hy 28.70 145 T T 13 52 05.1
baz=335,slow=75,SNR=830
TIXI Tiksi 28.84 346 P **P** **13 21 20.9 -2.9**
comp=Z,1.2nm,0.5s,baz=131,slow=6.9,SNR=4.1
TIXI LR LR 13 32 56.1
comp=Z,48nm,21.6s,baz=226,slow=36
TIXI Tiksi 28.84 346 P **P** **13 21 20.9 -2.9**
TIXI pmax pmax
comp=Z,3.0nm,1.1s
BTO Baotou 29.33 276 *eP* **P** **13 21 28.3 -0.3**
ULN Ulaanbaatar 29.43 292 *eP* **P** **13 21 28.9 -0.5**
ULN Ulaanbaatar 29.43 292 *ce* P **P** **13 21 28.9 -0.5**
ULN pmax pmax
comp=Z,5.0nm,1.3s
ULN Ulaanbaatar 29.43 292 P **P** **13 21 29.2 -0.3**
YOJ Yonaguni jima 29.68 236 P **P** **13 21 31.5 -0.1**
YOJ pmax pmax
comp=Z,201nm,1.9s
YOJ Yonaguni jima 29.68 236 P **P** **13 21 31.5 -0.1**
H11S1 WAKE ISLAND Hy 29.70 146 T T 13 53 21.8
baz=336,slow=76,SNR=1063
H11S3 WAKE ISLAND Hy 29.71 146 T T 13 53 23.5
baz=336,slow=76,SNR=424
H11S2 WAKE ISLAND Hy 29.72 146 T T 13 53 23.0
baz=336,slow=76,SNR=930
SONM Songino Array 29.87 292 P **P** **13 21 33.0 -0.3**
comp=Z,1.5nm,0.3s,baz=85,slow=8.8,SNR=8.0
SONM LR LR 13 34 25.6
comp=Z,125nm,19.2s,baz=82,slow=38
TLY Talaya 31.11 300 LR LR 13 35 14.8
comp=Z,101nm,19.4s,baz=82,slow=38
TPUB Ta-pu 31.98 238 P **P** **13 21 53.6 +1.7**
XAN Xi'an 33.03 265 P **P** **13 22 01.3 +0.2**
XAN pP sP 13 22 12.5 -1.1
XAN sP pwP 13 22 17.5 +3.4
XAN pmax pmax
comp=Z,9.0nm,0.6s
XAN LR LR
comp=E,150nm,16.3s
LZH Lanzhou 35.63 272 *eP* **P** **13 22 24.3 +0.5**
LZH pP sP 13 22 41.5 +5.2
LZH sP pwP 13 22 50.0 +13
LZH *e*PP **PP** **13 23 45.8 +0.8**
LZH pmax pmax
comp=Z,23nm,1.1s
LZH pmax pmax
comp=Z,92nm,4.9s
LZH LR LR
comp=N,240nm,13.2s
LZH LR LR
comp=E,260nm,14.0s
LZH LR LR
comp=Z,340nm,16.3s
RSO Redoubt South 36.96 44 P **P** **13 22 35.2 +0.2**
GTA Gaotai 37.01 280 ⇑ P **P** **13 22 35.8 +0.3**
GTA pP sP 13 22 49.5 +1.5
GTA sP pP 13 22 53.8 +9.3
GTA S **S** **13 28 16.0 -2.7**
GTA pmax pmax
comp=Z,8.0nm,0.8s
GTA pmax pmax
comp=Z,60nm,7.9s
GTA LR LR
comp=N,69nm,19.7s
GTA LR LR
comp=E,62nm,19.4s
GTA LR LR
comp=Z,83nm,19.7s
KDAK Kodiak Island 37.20 48 P **P** **13 22 34.9 -1.8**
comp=Z,19nm,0.8s,baz=251,slow=7.9,SNR=17
KDAK Kodiak Island 37.20 48 P **P** **13 22 36.1 -0.6**
PPLA Purkeypile 37.23 40 P **P** **13 22 38.7 +1.6**
SPU Mount Spurr 37.29 43 P **P** **13 22 38.7 +1.2**
CNPM China Poot 37.77 45 P **P** **13 22 42.1 +0.6**
CNPM IAmb IAmb 13 22 42.9
comp=Z,20nm,1.0s
BPAW Bear Paw Mtn. 37.81 38 P **P** **13 22 42.7 +0.9**
BPAW IAmb IAmb 13 22 43.9
comp=Z,24nm,1.4s
KTH Kantishna Hill 37.82 39 P **P** **13 22 43.0 +1.0**
BRLK Bradley Lake 37.93 45 P **P** **13 22 43.8 +0.9**
MLY Manley 37.95 36 P **P** **13 22 43.0 -0.1**
MLY IAmb IAmb 13 23 04.9
comp=Z,10nm,0.6s
TRF Thorofare Moun 38.10 39 P **P** **13 22 44.7 +0.2**
TRF IAmb IAmb 13 22 48.5
comp=Z,7.1nm,0.6s
CD2 Chengdu 38.38 265 P **P** **13 22 47.0 -0.1**
CD2 pmax pmax
comp=Z,50nm,0.5s
RC01 Rabbit Creek A 38.42 43 P **P** **13 22 47.1 +0.1**
RC01 IAmb IAmb 13 22 48.4
comp=Z,17nm,0.8s
BWN Browne 38.48 38 P **P** **13 22 49.3 +1.9**
NEA Nenana 38.65 37 P **P** **13 22 49.7 +0.9**
TOLK Toolik Lake Re 38.70 31 P **P** **13 22 50.0 +0.7**
baz=264,SNR=14
TOLK Toolik Lake Re 38.70 31 P **P** **13 22 49.9 +0.6**
TOLK IAmb IAmb 13 22 51.2
comp=Z,14nm,0.9s
MCK McKinley 38.71 39 P **P** **13 22 49.9 +0.5**
MCK pmax pmax
comp=Z,13nm,0.8s
MCK McKinley 38.71 39 P **P** **13 22 49.9 +0.5**
MCK IAmb IAmb 13 22 50.9
comp=Z,13nm,0.8s
RND Reindeer 38.75 39 P **P** **13 22 49.7 -0.1**
RND pmax pmax
comp=Z,13nm,0.9s
RND Reindeer 38.75 39 P **P** **13 22 49.7 -0.1**
RND IAmb IAmb 13 22 51.0
comp=Z,13nm,0.9s
GHO Glory Hole Cre 38.77 42 P **P** **13 22 50.3 +0.3**
GHO IAmb IAmb 13 22 51.6
comp=Z,15nm,0.8s
GYA Guiyang 38.99 257 *eP* **P** **13 22 54.8 +2.5**
GYA sP sP 13 23 12.3 +7.5
GYA PP **PnPn** **13 24 28.3 +3.8**
GYA PcP **PcP** **13 25 03.0 +0.8**
GYA S **S** **13 28 49.0 +0.1**
GYA SS **SnSn** **13 31 31.8 -10**
GYA pmax pmax
comp=Z,10.0nm,0.4s
GYA pmax pmax
comp=Z,80nm,5.0s
GYA LR LR
comp=N,70nm,4.7s
GYA LR LR
comp=E,40nm,4.7s
GYA LR LR
comp=Z,80nm,6.8s
KNK Knik Glacier 39.02 42 P **P** **13 22 51.9 -0.1**
MDM Murphy Dome 39.02 37 P **P** **13 22 52.3 +0.3**
MDM IAmb IAmb 13 22 53.9
comp=Z,14nm,0.8s
SML Sawmill 39.05 42 P **P** **13 22 52.8 +0.4**
WRH Wood River Hil 39.08 37 P **P** **13 22 52.8 +0.4**
TCOL CIGO, UAF Yank 39.17 37 P **P** **13 22 54.1 +0.9**
baz=270,SNR=9.1
COLA College 39.18 37 P **P** **13 22 53.9 +0.7**
COLA pmax pmax
comp=Z,33nm,0.7s
COLA College 39.18 37 P **P** **13 22 53.9 +0.7**
CCB Clear Creek Bu 39.20 37 P **P** **13 22 53.7 +0.2**
CCB IAmb IAmb 13 22 55.7
comp=Z,8.6nm,0.6s
POKR Poker Plat Res 39.35 36 P **P** **13 22 56.1 +1.3**
baz=270,SNR=30
DHY Denali Highway 39.43 40 P **P** **13 22 55.7 +0.1**
DHY IAmb IAmb 13 22 56.8
comp=Z,15nm,0.6s
SCM Sheep Creek Mo 39.52 42 P **P** **13 22 56.8 +0.5**
SCM pmax pmax
comp=Z,15nm,0.8s
SCM Sheep Creek Mo 39.52 42 P **P** **13 22 56.8 +0.5**
SCM IAmb IAmb 13 23 00.9
comp=Z,15nm,0.8s
HDA Harding Lake 39.57 38 P **P** **13 22 56.3 -0.3**
baz=272,SNR=38
HDA Harding Lake 39.57 38 P **P** **13 22 56.3 -0.3**
IL31 39.59 37 P **P** **13 22 56.7 0.0**
IL31 IAmb IAmb 13 22 59.4
comp=Z,11nm,0.7s
ILAR Eielson Array 39.59 37 P **P** **13 22 57.2 +0.5**
comp=Z,9.3nm,0.7s,baz=265,slow=8.0,SNR=126
ILAR PcP **PcP** **13 25 02.2 -1.1**
comp=Z,0.3nm,0.6s,baz=275,slow=4.2,SNR=1.8
ILAR LR LR 13 40 12.0
comp=Z,43nm,18.9s,baz=230,slow=38
GLI Glacier Island 39.72 43 P **P** **13 22 58.3 +0.4**
GLI IAmb IAmb 13 23 03.2
comp=Z,26nm,1.2s
FID Port Fidalgo 40.03 43 P **P** **13 23 01.1 +0.7**
FID IAmb IAmb 13 23 01.8
comp=Z,24nm,1.2s
HIN Hinchinbrook I 40.06 44 P **P** **13 23 02.1 +1.4**
HIN IAmb IAmb 13 23 03.7
comp=Z,21nm,1.0s
PRP Porcupine Dome 40.15 36 P **P** **13 23 01.8 +0.3**
PRP IAmb IAmb 13 23 03.5
comp=Z,16nm,0.7s
FYU Fort Yukon 40.26 34 P **P** **13 23 03.7 +1.5**
RIDG Independent Ri 40.53 38 P **P** **13 23 04.3 -0.3**
RIDG IAmb IAmb 13 23 06.1
comp=Z,24nm,1.1s
DOT Dot Lake 40.88 39 P **P** **13 23 07.0 -0.4**
SCRK Sand Creek 40.89 38 P **P** **13 23 07.5 -0.1**
SCRK IAmb IAmb 13 23 08.6
comp=Z,12nm,0.6s
RAGM Ragged Mountai 40.96 44 P **P** **13 23 08.9 +0.7**
RAGM IAmb IAmb 13 23 12.3
comp=Z,18nm,1.0s
GLB Gilahina Butte 41.24 42 P **P** **13 23 11.3 +0.9**
VRDI Verde Repeater 41.44 42 P **P** **13 23 13.1 +0.9**
VRDI IAmb IAmb 13 23 14.4
comp=Z,11nm,0.8s
WAX Waxell Ridge 41.84 43 P **P** **13 23 16.7 +1.3**
ZALV Zalesovo Beam 41.94 307 P **P** **13 23 14.2 -2.1**
comp=Z,0.8nm,0.4s,baz=105,slow=5.9,SNR=4.5
ZALV PcP **PcP** **13 25 10.1 -1.0**
comp=Z,1.4nm,0.7s,baz=82,slow=2.0,SNR=4.0
ZALV LR LR 13 41 48.0
comp=Z,60nm,19.1s,baz=86,slow=38
BALM Baldy 42.00 42 P **P** **13 23 17.3 +0.6**
BALM IAmb IAmb 13 23 19.0
comp=Z,16nm,1.0s
EGAK Eagle 42.04 37 P **P** **13 23 17.1 +0.2**
BARN Barnard Glacie 42.32 42 P **P** **13 23 20.7 +1.2**
BARN IAmb IAmb 13 23 21.9
comp=Z,22nm,1.2s
YAH Yahtse 42.40 43 P **P** **13 23 21.0 +0.9**
YAH IAmb IAmb 13 23 22.7
comp=Z,19nm,0.8s
DAWY Dawson 42.89 38 P **P** **13 23 24.4 +0.6**
WMQ Urumqi 43.51 292 *eP* **P** **13 23 31.0 +1.8**
WMQ pP sP 13 23 45.5 +3.9
WMQ LR LR
comp=N,25nm,5.1s
WMQ LR LR
comp=E,77nm,4.1s
WMQ LR LR
comp=Z,36nm,19.9s
EPYK Eagle Plains 43.67 34 P **P** **13 23 31.3 +1.1**
baz=278,SNR=37
EPYK Eagle Plains 43.67 34 P **P** **13 23 31.2 +1.1**
HYT Haines Junctio 44.36 42 P **P** **13 23 37.4 +1.6**

HYT IAmb IAmb 13 23 38.9
comp=Z,20nm,0.9s
INK Inuvik 44.61 31 P **P** **13 23 38.4 +0.8**
INK pmax pmax
comp=Z,8.0nm,0.6s
INK Inuvik 44.61 31 P **P** **13 23 38.4 +0.8**
INK IAmb IAmb 13 23 39.1
comp=Z,7.8nm,0.6s
WHY Whitehorse 45.65 42 P **P** **13 23 47.4 +1.3**
MK31 Makanchi Array 45.82 298 P **P** **13 23 46.7 -0.8**
MK31 pmax pmax
comp=Z,7.0nm,0.7s
MK31 Makanchi Array 45.82 298 P **P** **13 23 46.7 -0.8**
MK31 IAmb IAmb 13 23 47.8
comp=Z,6.8nm,0.7s
MKAR Makanchi Array 45.82 298 P **P** **13 23 47.2 -0.3**
comp=Z,6.7nm,0.6s,baz=75,slow=8.0,SNR=57
MKAR PcP **PcP** **13 25 23.3 -1.2**
comp=Z,0.6nm,0.6s,baz=71,slow=4.9,SNR=1.9
MKAR ScP **ScP** **13 29 12.7 -1.9**
comp=Z,0.2nm,0.5s,baz=52,slow=5.9,SNR=2.4
MKAR LR LR 13 44 19.1
comp=Z,138nm,18.0s,baz=56,slow=38
MAKZ Makanchi 46.02 298 P **P** **13 23 48.5 -0.5**
MAKZ pmax pmax
comp=Z,7.0nm,0.7s
MAKZ Makanchi 46.02 298 P **P** **13 23 48.5 -0.5**
MAKZ IAmb IAmb 13 23 49.4
comp=Z,6.6nm,0.7s
JIS Juneau Island 46.57 45 P **P** **13 23 54.9 +1.8**
JIS IAmb IAmb 13 23 56.2
comp=Z,12nm,0.9s
KURK Kurchatov 46.57 304 *e*P **P** **13 23 52.3 -1.0**
KURK Kurchatov 46.57 304*ce*P **P** **13 23 52.3 -1.0**
KURK pmax pmax
comp=Z,2.0nm,0.3s
KURK Kurchatov 46.57 304 P **P** **13 23 51.2 -2.1**
KURK IAmb IAmb 13 23 53.4
comp=Z,4.2nm,0.5s
KURK Kurchatov 46.57 304 **PcP** **13 25 26.5 -0.5**
KURBB Kurchatov Arra 46.66 304 P **P** **13 23 53.5 -0.4**
comp=Z,2.0nm,0.3s,baz=72,slow=8.2,SNR=8.2
KURBB PcP **PcP** **13 25 26.5 -0.8**
comp=Z,0.5nm,0.4s,baz=82,slow=3.4,SNR=2.8
C36M Paulatuk 47.74 29 P **P** **13 24 02.7 +0.5**
baz=286,SNR=34
C36M Paulatuk 47.74 29 P **P** **13 24 02.5 +0.4**
DLBC Dease Lake 48.69 44 P **P** **13 24 11.4 +1.7**
CHTO Chiang Mai 49.37 255 P **P** **13 24 15.9 +0.6**
CHTO pmax pmax
comp=Z,6.0nm,1.2s
CHTO Chiang Mai 49.37 255 P **P** **13 24 15.9 +0.6**
DIB Dawson Inlet, 49.37 51 P **P** **13 24 16.1 +1.2**
PBKT Sadao Pong 49.54 252 P **P** **13 24 17.2 +0.6**
PBKT IAmb IAmb 13 24 56.9
comp=Z,19nm,1.8s
CMAR Chiang Mai Arr 49.61 255 P **P** **13 24 18.4 +1.2**
comp=Z,0.9nm,0.4s,baz=38,slow=7.3,SNR=5.5
CMAR LR LR 13 47 39.4
comp=Z,61nm,18.3s,baz=39,slow=39
SHL Shillong 49.98 268 P **P** **13 24 19.5 -0.6**
SHL pmax pmax
comp=Z,15nm,0.7s
SHL Shillong 49.98 268 P **P** **13 24 19.5 -0.6**
BRVK Borovoye 50.41 310 *i* P **P** **13 24 22.0 -0.8**
BRVK Borovoye 50.41 310 *i* P **P** **13 24 22.0 -0.8**
BRVK pmax pmax
comp=Z,2.0nm,0.7s
KDJ Kajisay 51.17 294 P **P** **13 24 28.9 0.0**
KDJ pmax pmax
comp=Z,12nm,1.1s
KDJ Kajisay 51.17 294 P **P** **13 24 28.9 0.0**
KDJ IAmb IAmb 13 24 30.1
comp=Z,12nm,1.1s
BOOM Boomskoye usch 51.79 295 P **P** **13 24 33.9 +0.3**
BOOM pmax pmax
comp=Z,21nm,1.4s
BOOM Boomskoye usch 51.79 295 P **P** **13 24 33.9 +0.3**
BOOM IAmb IAmb 13 24 35.0
comp=Z,21nm,1.4s
TAPN Taplejung 51.88 272 *e*P **P** **13 24 35.1 +0.6**
comp=Z,28nm,0.8s
BBB Bella Bella 52.21 51 P **P** **13 24 37.2 +1.0**
BBB IAmb IAmb 13 24 44.2
comp=Z,17nm,1.4s
AAK Ala-Archa 52.65 296 P **P** **13 24 39.2 -0.7**
comp=Z,2.1nm,0.6s,baz=54,slow=3.0,SNR=7.0
AAK Ala-Archa 52.65 296 *e*P **P** **13 24 40.2 +0.3**
AAK Ala-Archa 52.65 296*ce*P **P** **13 24 40.2 +0.3**
AAK pmax pmax
comp=Z,6.0nm,1.2s
AAK Ala-Archa 52.65 296 P **P** **13 24 38.8 -1.1**
JIRN Jiri 52.77 274 *e*P **P** **13 24 41.7 +0.4**
comp=Z,42nm,0.5s
GUN Gumba 52.85 274 *e*P **P** **13 24 42.0 +0.2**
comp=Z,36nm,0.4s
RAMN Ramite 52.91 273 *e*P **P** **13 24 42.0 -0.1**
comp=Z,56nm,0.5s
KSH Kashi 53.27 292 P **P** **13 24 48.5 +4.0**
KSH pP sP 13 25 07.0 +10
KSH PP **PP** **13 26 51.0 +6.4**
KSH S **S** **13 32 13.0 -0.5**
KSH Kashi 53.27 292 SS **SKiKP** **13 35 54.5 -4.0**
KSH pmax pmax
comp=Z,86nm,1.7s
KSH pmax pmax
comp=Z,37nm,4.0s
KSH LR LR
comp=N,170nm,6.4s
KSH LR LR
comp=E,130nm,4.1s
KSH LR LR
comp=Z,170nm,7.1s
KKN Kakani 53.34 275 *e*P **P** **13 24 45.7 +0.4**
comp=Z,34nm,0.8s
PKI Pulchoki 53.38 274 *e*P **P** **13 24 45.7 0.0**
comp=Z,14nm,0.6s
PKIN Phulchoki 53.39 274 *e*P **P** **13 24 45.6 -0.1**
comp=Z,13nm,0.5s
RES Resolute Bay 53.50 17 P **P** **13 24 45.7 +0.2**
RES pmax pmax
comp=Z,17nm,0.8s
RES Resolute Bay 53.50 17 P **P** **13 24 45.7 +0.2**
DMN Daman 53.58 274 *e*P **P** **13 24 47.4 +0.4**
comp=Z,24nm,0.5s
GKN Gorkha 53.67 275 *e*P **P** **13 24 47.8 +0.2**
YKA Yellowknife Ar 53.94 35 P **P** **13 24 49.3 +0.4**
comp=Z,6.7nm,0.7s,baz=299,slow=6.6,SNR=98
YKA PcP **PcP** **13 25 54.2 +0.3**
comp=Z,0.7nm,0.7s,baz=306,slow=3.5,SNR=2.4
YKA LR LR 13 48 29.3
comp=Z,38nm,20.4s,baz=0.0,slow=37
DANN Dangsing 54.09 276 *e*P **P** **13 24 51.6 +0.8**
comp=Z,30nm,0.5s
KOLN Koldanda 54.55 276 *e*P **P** **13 24 54.5 +0.4**
comp=Z,17nm,0.7s
PYUN Piuthan 54.78 276 *e*P **P** **13 24 56.3 +0.5**
comp=Z,31nm,0.4s
KK31 Karatay Array 54.94 298 P **P** **13 24 56.1 -0.4**
KK31 pmax pmax
comp=Z,5.0nm,1.0s
KK31 Karatay Array 54.94 298 P **P** **13 24 56.1 -0.4**
ARU Arti 54.94 317 *e*P **P** **13 24 56.1 -0.1**
ARU Arti 54.94 317*c i*P **P** **13 24 56.1 -0.1**
ARU *PP **sP** **13 25 08.6 -0.3**
ARU 13 26 56.2
ARU S **S** **13 32 37.3 +2.0**
ARU pmax pmax
comp=Z,4.0nm,0.5s
ARU Arti 54.94 317 P **P** **13 24 55.9 -0.3**
ARU IAmb IAmb 13 24 56.8
comp=Z,5.8nm,0.6s
BTK Batken 56.35 295 P **P** **13 25 06.7 -0.1**
BTK pmax pmax
comp=Z,10.0nm,0.4s
BTK Batken 56.35 295 P **P** **13 25 06.7 -0.1**
LLLB Lillooet 56.39 50 P **P** **13 25 07.2 +0.4**
LLLB IAmb IAmb 13 25 08.7
comp=Z,7.4nm,0.8s
PGC Sidney 56.53 53 P **P** **13 25 08.2 +0.5**
PGC IAmb IAmb 13 26 04.2
comp=Z,17nm,1.4s
TULEG Thule 56.56 10 P **P** **13 25 06.5 -1.1**
A04D Lummi Island 56.92 52 P **P** **13 25 11.5 +1.0**
baz=302

NLWA Neilton Lookou 56.95 54 P **P** **13 25 12.0 +1.2**
NLWA IAmb IAmb 13 25 13.2
comp=Z,14nm,0.8s
D03D Eldon 57.33 54 P **P** **13 25 14.8 +1.3**
baz=302,SNR=7.8
B05A Bryant 57.50 52 P **P** **13 25 15.6 +0.9**
baz=303
E03A Lebam 57.58 55 P **P** **13 25 15.6 +0.4**
B06A Marblemount 57.71 52 P **P** **13 25 16.6 +0.6**
D05A Enumclaw 58.14 53 P **P** **13 25 19.9 +0.7**
E04D Cinebar 58.15 54 P **P** **13 25 20.8 +1.6**
baz=303
NIL Nilore 58.32 288 P **P** **13 25 20.9 +0.2**
NIL pmax pmax
comp=Z,19nm,0.8s
NIL Nilore 58.32 288 P **P** **13 25 20.9 +0.2**
KNTN Kanton 58.41 133 P **P** **13 25 22.2 +0.9**
F04A Amboy 58.58 55 P **P** **13 25 23.2 +0.9**
LTY Liberty 58.86 53 P **P** **13 25 24.3 0.0**
LTY IAmb IAmb 13 25 25.7
comp=Z,15nm,1.4s
B08A Colville Reser 59.00 51 P **P** **13 25 25.5 +0.3**
B08A IAmb IAmb 13 25 26.7
comp=Z,8.1nm,0.8s
ARCES ARCESS Array B 59.00 340 P **P** **13 25 24.3 -0.5**
comp=Z,1.3nm,0.9s,baz=45,slow=7.8,SNR=1.5
H04A Detroit Lake 59.41 56 P **P** **13 25 29.0 +0.9**
H04A IAmb IAmb 13 25 30.4
comp=Z,14nm,1.0s
G05D Wamic, OR 59.61 55 P **P** **13 25 31.1 +1.7**
baz=304
K02D Willamette Mer 59.65 59 P **P** **13 25 31.4 +1.7**
baz=305
I04A Tendick Farm, 59.78 57 P **P** **13 25 32.2 +1.6**
baz=305
C09A Chrisman Ranch 59.90 51 P **P** **13 25 31.8 +0.5**
D08A Wollman Farm, 59.96 52 P **P** **13 25 31.7 0.0**
D08A IAmb IAmb 13 25 33.3
comp=Z,16nm,1.4s
HAWA Hanford 59.99 53 P **P** **13 25 32.1 +0.1**
HAWA IAmb IAmb 13 25 34.1
comp=Z,8.8nm,0.9s
F07A Phinny Hill Vi 60.05 54 P **P** **13 25 34.0 +1.7**
I05D Terrebonne, OR 60.11 56 P **P** **13 25 34.3 +1.4**
baz=305
NEW Newport 60.27 50 P **P** **13 25 34.4 +0.5**
NEW pmax pmax
comp=Z,12nm,1.1s
NEW Newport 60.27 50 P **P** **13 25 34.3 +0.5**
baz=305,SNR=5.2
NEW Newport 60.27 50 P **P** **13 25 34.4 +0.5**
NEW IAmb IAmb 13 25 35.6
comp=Z,12nm,1.1s
KBL Kabul 60.64 291 P **P** **13 25 35.3 -1.5**
KBL pmax pmax
comp=Z,10.0nm,0.7s
KBL Kabul 60.64 291 P **P** **13 25 35.3 -1.5**
PINE Pine Mountain 60.66 56 P **P** **13 25 38.0 +1.1**
PINE IAmb IAmb 13 25 39.6
comp=Z,12nm,0.9s
E09A Wood Farm, Sta 60.71 52 P **P** **13 25 37.8 +0.9**
L04D Klamath Falls 60.74 58 P **P** **13 25 38.6 +1.2**
baz=306
J05D Fort Rock, OR 60.77 57 P **P** **13 25 39.3 +1.7**
baz=306
YBH Yreka Blue Hor 60.78 59 P **P** **13 25 39.0 +1.4**
YBH pmax pmax
comp=Z,11nm,1.6s
YBH Yreka Blue Hor 60.78 59 P **P** **13 25 39.0 +1.4**
YBH IAmb IAmb 13 27 34.0
comp=Z,11nm,1.6s
N02D Trinity Center 61.22 60 P **P** **13 25 42.4 +1.8**
baz=306
M04C Macdoel 61.28 58 P **P** **13 25 42.6 +1.6**
baz=306
WALA Waterton Lakes 61.54 48 P **P** **13 25 43.0 +0.3**
F10A Beach Ranch, E 61.54 52 P **P** **13 25 42.9 +0.3**
O02D Mt. Diablo Mer 61.63 60 P **P** **13 25 44.8 +1.5**
baz=306
JTMT Jette 62.12 49 P **P** **13 25 46.5 0.0**
JTMT IAmb IAmb 13 25 48.1
comp=Z,8.4nm,0.6s
MOD Modoc Plateau 62.14 58 P **P** **13 25 47.4 +0.6**
MOD IAmb IAmb 13 25 49.1
comp=Z,4.3nm,0.8s
BMO Blue Mountains 62.16 53 P **P** **13 25 47.7 +0.9**
BMO pmax pmax
comp=Z,5.0nm,1.2s
BMO Blue Mountains 62.16 53 P **P** **13 25 47.6 +0.9**
J08A Circle Bar Ran 62.36 55 P **P** **13 25 49.4 +1.2**
J08A IAmb IAmb 13 25 50.6
comp=Z,9.6nm,1.2s
WVOR Wild Horse Val 62.82 56 P **P** **13 25 52.3 +1.0**
WVOR pmax pmax
comp=Z,9.0nm,1.1s
WVOR Wild Horse Val 62.82 56 P **P** **13 25 52.3 +1.0**
WVOR IAmb IAmb 13 25 53.5
comp=Z,8.9nm,1.1s
MSO Missoula 62.86 50 P **P** **13 25 52.1 +0.6**
baz=307,SNR=9.5
MSO Missoula 62.86 50 P **P** **13 25 52.1 +0.6**
MSO IAmb IAmb 13 25 53.2
comp=Z,12nm,0.8s
SUMG Summit 62.88 3 P **P** **13 25 51.2 -0.4**
SUMG pmax pmax
comp=Z,8.0nm,0.9s
SUMG Summit 62.88 3 P **P** **13 25 51.2 -0.4**
SUMG IAmb IAmb 13 25 52.4
comp=Z,8.3nm,0.9s
BEKR Beckworth 63.32 59 P **P** **13 25 55.3 +0.5**
FFC Flin Flon 63.79 38 P **P** **13 25 57.6 +0.2**
FFC pmax pmax
comp=Z,9.0nm,0.8s
FFC Flin Flon 63.79 38 P **P** **13 25 57.6 +0.2**
FFC IAmb IAmb 13 25 58.9
comp=Z,9.5nm,0.8s
FCC Fort Churchill 64.23 31 P **P** **13 25 59.9 -0.3**
FCC pmax pmax
comp=Z,10.0nm,1.0s
FCC Fort Churchill 64.23 31 P **P** **13 25 59.9 -0.3**
FCC IAmb IAmb 13 26 01.0
comp=Z,10nm,0.9s
LRM Limekiln Ridge 64.29 50 P **P** **13 26 01.6 +0.4**
EGMT Eagleton 64.36 47 P **P** **13 26 01.9 +0.5**
baz=309,SNR=11
EGMT Eagleton 64.36 47 P **P** **13 26 01.7 +0.4**
MCMT McKenzie Canyo 64.69 51 P **P** **13 26 03.3 -0.4**
FINES FINESS Array B 64.87 334 P **P** **13 26 02.2 -2.1**
comp=Z,2.3nm,0.6s,baz=28,slow=7.4,SNR=13
FINES LR LR 13 57 35.4
comp=Z,36nm,18.6s,baz=72,slow=39
KVN Kaiserville 65.20 59 P **P** **13 26 07.9 +0.8**
KVN pmax pmax
comp=Z,6.0nm,1.0s
KVN Kaiserville 65.20 59 P **P** **13 26 07.9 +0.8**
RYN Ryan 65.20 60 P **P** **13 26 07.5 +0.4**
HRA Herat 65.21 294 P **P** **13 26 07.5 +0.3**
NVAR Mina Array Bea 65.46 60 P **P** **13 26 09.8 +1.0**
comp=Z,2.0nm,0.7s,baz=298,slow=7.3,SNR=18
QLMT Earthquake Lak 65.47 51 P **P** **13 26 09.6 +0.8**
GEYT Alibeck 65.63 300 P **P** **13 26 09.7 0.0**
comp=Z,5.6nm,0.7s,baz=202,slow=0.8,SNR=10
GEYT LR LR 13 55 57.2
comp=Z,45nm,19.3s,baz=205,slow=37
GYA0B ALIBECK ARRAY 65.63 300 P **P** **13 26 09.6 -0.1**
GYA0B IAmb IAmb 13 26 10.6
comp=Z,6.4nm,0.7s
YHB Horse Butte 65.65 51 P **P** **13 26 10.8 +0.8**
WB0 Warramunga Arr 65.68 196 P **P** **13 26 11.6 +1.6**
WB0 IAmb IAmb 13 26 45.2
comp=Z,30nm,1.9s
YHH Holmes Hill 65.82 50 P **P** **13 26 11.8 +0.7**
GCMT Greycliff 65.82 49 P **P** **13 26 11.9 +1.0**
WRA Warramunga Arr 65.86 196 P **P** **13 26 12.2 +1.0**
comp=Z,1.4nm,1.0s,baz=13,slow=6.7,SNR=6.2
YNE Yellowstone No 66.14 50 P **P** **13 26 13.3 +0.1**
H17A Grant Village 66.22 51 P **P** **13 26 15.8 +2.2**
baz=310,SNR=8.0
H17A Grant Village 66.22 51 P **P** **13 26 15.7 +2.0**
H17A IAmb IAmb 13 26 17.8
comp=Z,10nm,1.1s
YMP Mirror Lake Pl 66.23 50 P **P** **13 26 14.8 +1.0**
IMW Indian Meadow 66.34 51 P **P** **13 26 15.7 +1.3**
FLWY Flagg Ranch 66.35 51 P **P** **13 26 16.3 +1.8**
FLWY IAmb IAmb 13 26 17.2
comp=Z,11nm,1.2s
FXWY Fox Creek 66.45 51 P **P** **13 26 16.5 +1.4**
FXWY IAmb IAmb 13 26 17.7
comp=Z,10nm,1.4s
RLMT Red Lodge 66.47 49 P **P** **13 26 16.4 +1.2**
baz=310
RLMT Red Lodge 66.47 49 P **P** **13 26 16.2 +1.0**
RLMT IAmb IAmb 13 26 17.4
comp=Z,31nm,1.8s
TPAW Teton Pass 66.59 52 P **P** **13 26 17.5 +1.5**
TPAW IAmb IAmb 13 26 18.7
comp=Z,11nm,0.9s
REDW Red Top Meadow 66.73 52 P **P** **13 26 17.6 +0.6**
REDW IAmb IAmb 13 26 19.4
comp=Z,14nm,1.3s
DGMT Dagmar 66.90 44 P **P** **13 26 18.2 +0.6**
baz=312,SNR=5.1
DGMT Dagmar 66.90 44 P **P** **13 26 18.0 +0.3**
GRAC Grapevine Rang 66.94 60 P **P** **13 26 19.3 +1.2**
baz=310
AHID Auburn Hatcher 66.97 52 P **P** **13 26 19.1 +0.6**
LAO LASA Array 67.06 47 P **P** **13 26 19.7 +1.0**
baz=312
LAO LASA Array 67.06 47 P **P** **13 26 19.9 +1.2**
LAO IAmb IAmb 13 26 20.7
comp=Z,14nm,0.9s
R11A Troy Canyon, C 67.17 58 P **P** **13 26 20.3 +0.6**
baz=310,SNR=8.3
R11A Troy Canyon, C 67.17 58 P **P** **13 26 20.3 +0.6**
MPMC Manual Prospec 67.45 61 P **P** **13 26 22.2 +0.6**
baz=310
HWUT Hardware Ranch 67.46 53 P **P** **13 26 21.9 +0.5**
HWUT IAmb IAmb 13 26 23.6
comp=Z,11nm,1.5s
FURC Furnace Creek, 67.58 61 P **P** **13 26 23.2 +1.2**
baz=310
DUG Dugway, Tooele 67.64 55 P **P** **13 26 22.7 0.0**
DUG pmax pmax
comp=Z,7.0nm,1.3s
DUG Dugway, Tooele 67.64 55 P **P** **13 26 23.5 +0.8**
baz=310
DUG Dugway, Tooele 67.64 55 P **P** **13 26 22.7 0.0**
TPNV Topopah Spring 67.66 60 P **P** **13 26 23.2 +0.4**
TPNV pmax pmax
comp=Z,7.0nm,1.1s
TPNV Topopah Spring 67.66 60 P **P** **13 26 23.6 +0.8**
baz=310,SNR=7.8
TPNV Topopah Spring 67.66 60 P **P** **13 26 23.2 +0.4**
BW06 Boulder Array 67.84 51 P **P** **13 26 24.5 +0.6**
baz=311
BW06 Boulder Array 67.84 51 P **P** **13 26 23.8 -0.1**
PD31 Pinedale Array 67.84 51 P **P** **13 26 23.7 -0.3**
PDAR Pinedale Array 67.84 51 P **P** **13 26 24.4 +0.5**
comp=Z,2.3nm,0.5s,baz=278,slow=2.2,SNR=21
PDAR LR LR 13 52 05.0
comp=Z,17nm,21.6s,baz=314,slow=32
EDW2 Edwards Air Fo 67.89 62 P **P** **13 26 25.4 +1.2**
baz=310
PSUT Pine Spring 68.10 57 P **P** **13 26 25.9 +0.3**
NLU North Lily Min 68.23 55 P **P** **13 26 26.9 +0.4**
GSC Goldstone, Bar 68.36 61 P **P** **13 26 28.1 +0.9**
baz=310
SHPR Sheep Range 68.61 60 P **P** **13 26 29.4 +0.6**
CCUT Cedar City 69.03 58 P **P** **13 26 32.2 +0.8**
MSU Marysvale 69.11 56 P **P** **13 26 33.1 +1.2**
MSU Marysvale 69.11 56 P **P** **13 26 33.1 +1.2**
SZCU Shurtz Canyon 69.17 57 P **P** **13 26 32.8 +0.5**
RDMU Red Mountain 69.27 53 P **P** **13 26 33.7 +0.8**
P17A Butcher Ranch, 69.32 55 P **P** **13 26 33.9 +0.7**
NB2 NORSAR Subarra 69.38 340 P **P** **13 26 31.7 -1.3**
comp=Z,0.7nm,0.5s,baz=28,slow=6.9
NOA NORSAR Array B 69.38 340 P **P** **13 26 31.7 -1.3**
comp=Z,1.2nm,0.7s,baz=31,slow=6.6,SNR=6.2
NOA LR LR 14 02 38.1
comp=Z,17nm,18.0s,baz=40,slow=41
MTPU Mount Pierson 69.41 57 P **P** **13 26 34.9 +0.9**
Q16A Castle Valley 69.44 55 P **P** **13 26 34.9 +0.9**
LCMT Little Creek M 69.45 58 P **P** **13 26 34.9 +0.9**
MDND Maddock 69.57 42 P **P** **13 26 34.7 +0.3**
baz=315
MDND Maddock 69.57 42 P **P** **13 26 34.6 +0.3**
ULM Lac du Bonnet 69.58 39 P **P** **13 26 33.9 -0.5**
comp=Z,3.0nm,0.7s,baz=319,slow=8.5,SNR=3.2
ULM Lac du Bonnet 69.58 39 P **P** **13 26 34.0 -0.4**
ULM IAmb IAmb 13 26 37.4
comp=Z,20nm,1.8s
K22A Casper 69.59 50 P **P** **13 26 34.9 +0.1**
baz=313,SNR=5.4
K22A Casper 69.59 50 P **P** **13 26 34.8 +0.1**
NAO01 NORSAR Array S 69.63 340 P **P** **13 26 34.8 +0.3**
PFO Pinyon Flats O 69.67 63 P **P** **13 26 36.3 +0.9**
baz=311
SRU San Rafael Swe 69.69 55 P **P** **13 26 35.9 +0.4**
SRU pmax pmax
comp=Z,8.0nm,1.0s
SRU San Rafael Swe 69.69 55 P **P** **13 26 35.9 +0.4**
KNB Kanab 69.70 58 P **P** **13 26 36.3 +0.7**
KNB pmax pmax
comp=Z,5.0nm,0.9s
KNB Kanab 69.70 58 P **P** **13 26 36.3 +0.7**
BELC Belle Mtn. Jos 69.71 62 P **P** **13 26 36.6 +1.0**
baz=311
RWWY Rawlins 69.86 51 P **P** **13 26 35.5 -1.0**
RWWY IAmb IAmb 13 26 36.8
comp=Z,9.7nm,1.1s
RSSD Black Hills 69.92 47 P **P** **13 26 36.7 -0.1**
RSSD pmax pmax
comp=Z,10.0nm,0.9s
RSSD Black Hills 69.92 47 P **P** **13 26 37.1 +0.2**
baz=313
RSSD Black Hills 69.92 47 P **P** **13 26 36.7 -0.1**
RSSD IAmb IAmb 13 26 38.0
comp=Z,9.6nm,0.9s
E28A Huff 69.93 44 P **P** **13 26 36.6 0.0**
IRM Iron Mountain 70.15 61 P **P** **13 26 39.0 +0.8**
baz=311
MONP2 Monument Peak 70.17 63 P **P** **13 26 39.0 +0.5**
baz=311
BC3 Big Chuckawall 70.28 62 P **P** **13 26 39.8 +0.7**
baz=311
W13A Hualapai Mount 70.31 60 P **P** **13 26 40.3 +0.9**
O20A White River Ci 70.32 53 P **P** **13 26 39.5 +0.2**
baz=312
O20A White River Ci 70.32 53 P **P** **13 26 39.7 +0.3**
U15A North Rim 70.41 58 P **P** **13 26 40.8 +0.8**
KIV Kislovodsk 70.52 313 ⇑P **P** **13 26 41.4 +1.0**
KIV Kislovodsk 70.52 313 *e*P **P** **13 26 41.0 +0.6**
KIV Kislovodsk 70.52 313 *i* P **P** **13 26 41.0 +0.6**
KIV pmax pmax
comp=Z,13nm,0.8s
KIV MLR MLR
comp=Z,65nm,20.0s
KIV Kislovodsk 70.52 313 P **P** **13 26 41.2 +0.8**
IKP In-Ko-Pah, Jac 70.52 63 P **P** **13 26 41.5 +0.9**
baz=311
KBZ Khabaz 70.57 313 P **P** **13 26 41.5 +1.1**
comp=Z,9.5nm,0.7s,baz=64,slow=4.1,SNR=24
KBZ LR LR 14 01 57.4
comp=Z,88nm,19.0s,baz=39,slow=40
KBZ Khabaz 70.57 313 *e*P **P** **13 26 41.3 +0.8**
KBZ Khabaz 70.57 313 *i* P **P** **13 26 41.3 +0.8**
KBZ pmax pmax
comp=Z,12nm,0.8s
PDMCI Parker Dam,Lak 70.68 61 P **P** **13 26 42.3 +0.9**
baz=312
Y12C Blythe 70.80 61 P **P** **13 26 42.8 +0.6**
baz=312
PV09 Paradox Valley 70.91 55 P **P** **13 26 43.3 +0.3**
PV21 Cone Mtn., Par 70.96 54 P **P** **13 26 43.2 -0.1**
AGMN Agassiz Nation 71.00 40 P **P** **13 26 42.5 -0.6**
AGMN IAmb IAmb 13 26 43.3
comp=Z,6.6nm,0.8s
PV23 Carpenter Ridg 71.01 55 P **P** **13 26 43.7 +0.1**
PV23 IAmb IAmb 13 26 45.3
comp=Z,12nm,1.3s
PV10 Paradox Valley 71.04 55 P **P** **13 26 44.7 +0.9**
PV10 IAmb IAmb 13 26 45.8
comp=Z,10nm,0.7s
PV14 Lion Creek, Pa 71.06 55 P **P** **13 26 44.1 +0.3**
PV14 IAmb IAmb 13 26 45.4
comp=Z,32nm,1.8s
GLA Glamis 71.07 62 P **P** **13 26 43.7 -0.1**
GLA pmax pmax
comp=Z,6.0nm,0.8s
GLA Glamis 71.07 62 P **P** **13 26 44.4 +0.6**

baz=312
GLA Glamis 71.07 62 P P 13 26 43.7 -0.1
PV22 Blue Mesa, Par 71.08 54 P P 13 26 44.2 +0.2
N23A Red Feather La 71.10 51 P P 13 26 44.6 +0.4
baz=313
PV20 West Nyswonger 71.11 55 P P 13 26 44.6 +0.4
PV20 lAmb lAmb 13 26 45.7
comp=Z,19nm,1.5s
PV04 Paradox Valley 71.11 55 P P 13 26 44.5 +0.3
PV04 lAmb lAmb 13 26 45.8
comp=Z,39nm,1.9s
PV19 Morning Glory 71.12 55 P P 13 26 44.8 +0.5
PV19 lAmb lAmb 13 26 45.8
comp=Z,11nm,1.0s
PV17 East Wray Mesa 71.15 55 P P 13 26 44.9 +0.5
PV17 lAmb lAmb 13 26 46.0
comp=Z,13nm,0.6s
PV11 David Mesa, Pa 71.19 55 P P 13 26 45.1 +0.5
PV11 lAmb lAmb 13 26 46.2
comp=Z,24nm,1.4s
PV18 Skein Mesa, Pa 71.21 55 P P 13 26 45.1 +0.3
PV18 lAmb lAmb 13 26 46.3
comp=Z,15nm,1.2s
PV05 Paradox Valley 71.21 55 P P 13 26 45.4 +0.6
PV05 lAmb lAmb 13 26 46.6
comp=Z,11nm,1.0s
PV12 Saucer Basin, 71.22 55 P P 13 26 45.3 +0.5
PV07 Paradox Valley 71.23 54 P P 13 26 45.3 +0.4
PV03 Paradox Valley 71.24 55 P P 13 26 45.3 +0.3
PV13 Radium Mtn., P 71.32 55 P P 13 26 45.8 +0.4
PV13 lAmb lAmb 13 26 47.0
comp=Z,8.4nm,0.7s
PV15 Paradox Valley 71.39 54 P P 13 26 46.2 +0.3
PV01 Paradox Valley 71.48 55 P P 13 26 46.8 +0.4
WUAZ Wupatki 71.57 58 P P 13 26 47.9 +0.9
baz=312
WUAZ Wupatki 71.57 58 P P 13 26 47.7 +0.7
Y14A Wickenburg 71.62 60 P P 13 26 47.7 +0.5
SMCO Snowmass 71.69 53 P P 13 26 47.5 -0.4
AKASG Malin Array Be 71.92 325 P P 13 26 47.8 -0.7
comp=Z,1.6nm,0.4s,baz=38,slow=6.0,SNR=3.3
AKASG LR LR 14 01 22.4
comp=Z,41nm,18.4s,baz=55,slow=38
B35A Bob, Littlefor 71.92 39 P P 13 26 48.2 -0.5
B35A lAmb lAmb 13 26 48.8
comp=Z,7.0nm,0.6s
ISCO Idaho Springs 72.03 52 P P 13 26 50.5 +0.7
ISCO pmax pmax
comp=Z,4.0nm,0.8s
ISCO Idaho Springs 72.03 52 P P 13 26 50.6 +0.7
baz=314,SNR=5.7
ISCO Idaho Springs 72.03 52 P P 13 26 50.5 +0.7
MVCO Mesa Verde 72.15 55 P P 13 26 50.9 +0.4
baz=313,SNR=5.3
MVCO Mesa Verde 72.15 55 P P 13 26 50.9 +0.4
X16A Lo Mia Camp, P 72.27 59 P P 13 26 51.7 +0.5
F33A 5 Mile Ranch, 72.59 42 P P 13 26 52.6 -0.1
F33A lAmb lAmb 13 26 53.5
comp=Z,21nm,1.1s
BATM Batumi 72.69 312 ⇑P P 13 26 54.1 +0.8
S22A 4UR Ranch, Cre 72.75 54 P P 13 26 55.0 +0.8
baz=314,SNR=5.7
W18A Petrified Fore 72.83 58 P P 13 26 55.6 +1.0
baz=313
BCA Borcka 72.84 312 ⇑P P 13 26 55.0 +0.8
Q24A Divide 72.87 52 P P 13 26 55.5 +0.6
baz=314
214A Organ Pipe Nat 73.07 62 P P 13 26 56.5 +0.7
baz=313
X18A Snowflake 73.10 58 P P 13 26 56.1 0.0
EYMN Ely 73.22 38 P P 13 26 56.1 -0.3
baz=319,SNR=6.8
EYMN Ely 73.22 38 P P 13 26 56.0 -0.4
EYMN lAmb lAmb 13 26 57.1
comp=Z,10nm,1.0s
SDCO Great Sand Dun 73.51 53 P P 13 26 59.1 +0.5
baz=314
SDCO Great Sand Dun 73.51 53 P P 13 26 58.9 +0.3
K31A O'Neill 73.71 46 P P 13 26 59.2 -0.2
F36A Milaca 73.88 41 P P 13 26 59.5 -0.8
ECSD EROS Data Cent 73.98 44 P P 13 27 00.7 -0.2
baz=317,SNR=11
ECSD EROS Data Cent 73.98 44 P P 13 27 00.5 -0.4
ECSD lAmb lAmb 13 27 01.7
comp=Z,16nm,1.1s
TUC Tucson 74.09 60 P P 13 27 01.9 0.0
TUC pmax pmax
comp=Z,6.0nm,1.4s
TUC Tucson 74.09 60 P P 13 27 02.5 +0.6
baz=313
TUC Tucson 74.09 60 P P 13 27 01.9 0.0
E38A The Farm, Brul 74.21 39 P P 13 27 01.6 -0.6
T25A Trinidad 74.56 53 P P 13 27 04.9 +0.2
baz=315,SNR=5.6
SPMN Marine on St. 74.69 41 P P 13 27 04.8 -0.2
baz=319
SPMN Marine on St. 74.69 41 P P 13 27 04.5 -0.5
SPMN lAmb lAmb 13 27 05.7
comp=Z,13nm,1.1s
ANMO Albuquerque 74.90 56 P P 13 27 07.1 +0.4
ANMO pmax pmax
comp=Z,3.0nm,0.8s
ANMO Albuquerque 74.90 56 P P 13 27 07.6 +0.9
baz=314
ANMO Albuquerque 74.90 56 P P 13 27 07.0 +0.4
LENM Lemitar 75.14 57 P P 13 27 09.4 +1.4
D41A Chassel 75.18 37 P P 13 27 07.8 0.0
D41A lAmb lAmb 13 29 41.2
comp=Z,11nm,0.8s
UOSS Minazif 75.31 291 P P 13 27 09.1 +0.2
I37A Lemond, Waseca 75.32 42 P P 13 27 08.9 +0.2
BNM Barren Site 75.35 56 P P 13 27 09.8 +0.5
L34A Svendsen Farm, 75.39 45 P P 13 27 08.6 -0.6
319A Douglas 75.67 60 P P 13 27 11.6 +0.6
319A lAmb lAmb 13 27 12.9
comp=Z,10nm,0.8s
COWI Conover 75.67 38 P P 13 27 09.8 -0.9
COWI lAmb lAmb 13 27 10.8
comp=Z,5.6nm,0.6s
121A Cookes Peak, D 75.78 58 P P 13 27 12.9 +1.1
baz=314
121A Cookes Peak, D 75.78 58 P P 13 27 12.9 +1.1
G40A Rib Lake 75.85 39 P P 13 27 11.1 -0.6
G40A lAmb lAmb 13 27 12.2
comp=Z,8.4nm,0.7s
BUR08 Bucovina Ar. S 75.95 325 P P 13 27 11.9 -0.5
BURAR Bucovina Array 75.97 325 ⇑P P 13 27 12.8 +0.4
DIKM Dikmen 75.98 315 ⇑P P 13 27 14.1 +1.6
SCHQ Schefferville 76.07 21 P P 13 27 12.8 0.0
comp=Z,3.5nm,0.8s,baz=339,slow=12,SNR=3.8
SCHQ LR LR 14 03 23.6
comp=Z,44nm,19.8s,baz=302,slow=38
SCHQ Schefferville 76.07 21 P P 13 27 12.6 -0.2
SCHQ lAmb lAmb 13 29 36.5
comp=Z,28nm,1.7s
TESR Tescani 76.25 323 ⇑P P 13 27 14.2 +0.3
E43A Lone Tree Farm 76.38 37 P P 13 27 13.9 -0.8
STKA Stephens Creek 76.58 187 P P 13 27 17.1 +1.4
comp=Z,2.4nm,0.9s,baz=353,slow=4.3,SNR=3.2
STKA Stephens Creek 76.58 187 P P 13 27 17.5 +1.8
N35A Tabor 76.58 45 P P 13 27 15.8 -0.1
TRPA Tarpa 76.63 327 ⇑P P 13 27 16.3 +0.3
I40A Norwalk 76.72 40 P P 13 27 16.2 -0.4
TOPG Topolog 76.78 321 ⇑P P 13 27 17.1 +0.2
SCIA State Center 77.00 43 P P 13 27 18.0 -0.2
baz=320
SCIA State Center 77.00 43 P P 13 27 18.6 +0.3
MORC Moravsky Berou 77.12 331 ⇑P P 13 27 19.9 +1.1
MORC Moravsky Berou 77.12 331 P P 13 27 19.3 +0.5
MORC pmax pmax
comp=Z,4.0nm,1.0s
MORC Moravsky Berou 77.12 331 P P 13 27 19.3 +0.5
HARR Harsova 77.12 322 ⇑P P 13 27 19.2 +0.4
D46A Sault St. Mari 77.20 35 P P 13 27 18.7 -0.6
baz=324
CLL Collm 77.32 334 eP P 13 27 20.0 +0.1
comp=Z,7.0nm,0.6s
CLL e 13 27 23.0
CLL Collm 77.32 334 eP P 13 27 20.0 +0.1
CLL pmax pmax
comp=Z,7.0nm,0.6s
CLL Collm 77.32 334 P P 13 27 20.0 +0.1
CLL lAmb lAmb 13 27 21.6
comp=Z,11nm,1.2s
MLR Muntele Rosu 77.36 323 ⇑P P 13 27 22.1 +1.8
KSU1 Kansas State U 77.40 47 P P 13 27 19.8 -0.7
baz=318
D47A Chapleau 77.44 34 P P 13 27 19.9 -0.7
baz=325
E46A Sault Ste Mari 77.51 35 P P 13 27 20.9 -0.1
E46A lAmb lAmb 13 27 50.6
comp=Z,24nm,1.5s
H43A Windswept, Lux 77.55 38 P P 13 27 21.1 -0.2
F45A CMU Biological 77.56 36 P P 13 27 21.1 -0.2
baz=323
ICOR Ion Corvin 77.63 321 ⇑P P 13 27 22.8 +1.1
DRGR 77.65 326 ⇑P P 13 27 22.5 +0.6
AMTX Amarillo 77.71 53 P P 13 27 22.8 +0.3
baz=316
AMTX Amarillo 77.71 53 P P 13 27 23.0 +0.5
AMTX lAmb lAmb 13 27 24.0
comp=Z,9.9nm,0.8s
VYHS Vyhne 77.73 329 eP P 13 27 22.3 +0.1
VYHS Vyhne 77.73 329 eP P 13 27 22.3 +0.1
MSTX Muleshoe 77.74 54 P P 13 27 22.9 +0.2
baz=316
VOIR 77.78 324 ⇑P P 13 27 23.8 +1.2
MNTX Cornudas Mount 77.82 57 P P 13 27 23.5 +0.5
baz=315,SNR=7.7
MNTX Cornudas Mount 77.82 57 P P 13 27 23.4 +0.4
N38A Joes South For 77.84 44 P P 13 27 22.5 -0.5
L40A Anamosa 77.84 42 P P 13 27 22.5 -0.5
L40A lAmb lAmb 13 27 23.3
comp=Z,11nm,0.9s
D48A Paudash Townsh 77.86 33 P P 13 27 22.1 -0.8
baz=325
E47A Iron Bridge 77.86 34 P P 13 27 22.5 -0.5
baz=324
D49A Beulah Townshi 77.95 33 P P 13 27 22.8 -0.7
baz=326
G45A Suttons Bay 78.02 37 P P 13 27 23.8 0.0
baz=323
G45A Suttons Bay 78.02 37 P P 13 27 23.6 -0.2
G46A Petoskey 78.13 36 P P 13 27 24.4 -0.1
baz=324
BRTR Keskin Array B 78.24 315 P P 13 27 26.3 +0.9
comp=Z,1.7nm,0.6s,baz=52,slow=8.1,SNR=8.9
E48A Lockeyer 78.28 34 P P 13 27 24.5 -0.9
baz=325
P38A Dawn 78.58 45 P P 13 27 26.6 -0.5
P38A lAmb lAmb 13 27 27.8
comp=Z,14nm,0.9s
L42A Oliver, Polo 78.62 41 P P 13 27 26.1 -1.1
L42A lAmb lAmb 13 27 27.3
comp=Z,8.5nm,0.7s
F48A Evansville 78.64 34 P P 13 27 26.6 -0.6
baz=325
G47A Hillman 78.67 36 P P 13 27 26.7 -0.8
baz=324
K43A Burlington 78.69 40 P P 13 27 26.0 -1.6
K43A lAmb lAmb 13 27 28.5
comp=Z,11nm,0.8s
GZR Gura Zlata 78.76 325 ⇑P P 13 27 28.3 +0.3
KHC Kasperske Hory 79.02 332 P P 13 27 29.0 -0.4
KHC pmax pmax
comp=Z,2.0nm,0.7s
KHC Kasperske Hory 79.02 332 eP P 13 27 29.8 +0.4
KHC ex x 13 27 32.6
KHC Kasperske Hory 79.02 332 P P 13 27 29.0 -0.4
N41A Harden Midland 79.06 42 P P 13 27 29.5 -0.2
T35A Sooner Cattle 79.07 48 P P 13 27 29.7 -0.1
T35A lAmb lAmb 13 27 30.9
comp=Z,22nm,1.1s
GEC2 GERESS Array S 79.23 332 P P 13 27 30.6 0.0
GERES GERESS Array B 79.23 332 P P 13 27 30.5 0.0
comp=Z,1.7nm,0.5s,baz=40,slow=6.7,SNR=16
H48A Harrisville 79.27 35 P P 13 27 30.5 -0.3
baz=325
H48A Harrisville 79.27 35 P P 13 27 30.9 +0.1
E51A G1948 Merrick 79.28 32 P P 13 27 30.4 -0.4
baz=327
HERR Herculane 79.32 325 ⇑P P 13 27 30.8 -0.2
P40A Paris 79.39 44 P P 13 27 31.4 -0.1
P40A lAmb lAmb 13 27 32.5
comp=Z,20nm,1.1s
WMOK Wichita Mounta 79.45 51 P P 13 27 31.8 -0.2
WMOK pmax pmax
comp=Z,4.0nm,0.8s
WMOK Wichita Mounta 79.45 51 P P 13 27 32.1 +0.1
baz=318,SNR=7.0
WMOK Wichita Mounta 79.45 51 P P 13 27 31.8 -0.2
D53A Lac Vacive, Po 79.49 31 P P 13 27 31.2 -0.7
baz=328
I48A Sherman Twp 79.53 36 P P 13 27 32.0 -0.2
baz=325
MDVR Moldovita 79.69 325 ⇑P P 13 27 32.0 -1.1
D54A Lac Fusel, La 79.80 30 P P 13 27 32.6 -1.0
baz=328
FNO Franklin 79.83 50 P P 13 27 33.7 -0.2
M44A Midewin, Midew 79.86 40 P P 13 27 33.6 -0.5
M44A lAmb lAmb 13 27 35.2
comp=Z,18nm,0.9s
HDIL Hopedale 79.93 42 P P 13 27 34.4 -0.1
baz=322
HDIL Hopedale 79.93 42 P P 13 27 34.3 -0.1
F52A Sundridge 79.96 32 P P 13 27 34.0 -0.5
baz=327
I49A Point Hope 80.10 36 P P 13 27 35.5 +0.3
baz=325
K47A Vermontville 80.20 38 P P 13 27 35.7 -0.2
baz=324
R40A Maddies Statio 80.23 45 P P 13 27 35.4 -0.7
R40A lAmb lAmb 13 27 36.2
comp=Z,8.8nm,0.5s
D55A Sainte-Anne-du 80.34 30 P P 13 27 36.0 -0.5
baz=329
TX31 Lajitas Ar. Si 80.54 58 P P 13 27 38.2 +0.2
TX32 Lajitas Array 80.54 58 P P 13 27 38.1 +0.1
TX32 lAmb lAmb 13 27 39.4
comp=Z,8.7nm,0.7s
TXAR Lajitas Array 80.54 58 P P 13 27 38.8 +0.8
comp=Z,8.2nm,0.6s,baz=301,slow=4.1,SNR=132
D56A ZEC Mazanza, M 80.56 29 P P 13 27 37.4 -0.3
baz=330
G53A Haliburton 80.79 32 P P 13 27 38.5 -0.5
baz=328
VTS Vitosha 80.83 323 ⇑P P 13 27 40.8 +1.4
VTS Vitosha 80.83 323 P P 13 27 39.8 +0.4
VTS pmax pmax
comp=Z,4.0nm,0.7s
VTS Vitosha 80.83 323 P P 13 27 39.8 +0.4
D57A Chemin Vers le 80.89 29 P P 13 27 39.3 -0.1
baz=330
E56A St. Veronique 80.90 30 P P 13 27 39.1 -0.4
baz=330
HHAR Hobbs 80.91 47 P P 13 27 39.1 -0.7
HHAR lAmb lAmb 13 27 40.3
comp=Z,10nm,1.2s
CCM Cathedral Cave 80.92 44 P P 13 27 39.4 -0.4
CCM pmax pmax
comp=Z,8.0nm,0.8s
CCM Cathedral Cave 80.92 44 P P 13 27 39.6 -0.2
baz=321
CCM Cathedral Cave 80.92 44 P P 13 27 39.4 -0.4
CCM lAmb lAmb 13 27 40.1
comp=Z,8.3nm,0.8s
I51A Listowel 80.95 35 P P 13 27 39.6 -0.2
baz=326
DIVS Divibare 80.95 326 P P 13 27 39.4 -0.5
M47A Cromwell 80.98 39 P P 13 27 39.8 -0.2
baz=324
SFIN Lafayette 81.09 40 P P 13 27 40.5 -0.2
baz=323
D58A Chemin du LacG 81.16 28 P P 13 27 40.8 -0.1
baz=331
E57A Chemin Saint G 81.32 29 P P 13 27 41.3 -0.5
baz=330
N47A Urbana 81.33 39 P P 13 27 41.5 -0.5
N47A lAmb lAmb 13 27 42.3
comp=Z,11nm,0.6s
G55A Calabogie 81.40 31 P P 13 27 41.4 -0.8
baz=329
U40A Yellville 81.42 46 P P 13 27 42.0 -0.5
baz=320,SNR=12
U40A Yellville 81.42 46 P P 13 27 41.8 -0.6
N48A Decatur 81.65 39 P P 13 27 43.1 -0.5
baz=324,SNR=5.4
L50A Kingsville 81.66 37 P P 13 27 43.2 -0.4
baz=325
E58A La Victoria 81.66 29 P P 13 27 43.2 -0.3
baz=331
W39A Magazine 81.82 48 P P 13 27 44.3 -0.3
baz=320
W39A Magazine 81.82 48 P P 13 27 43.7 -0.9
H55A Tweed 81.82 32 P P 13 27 43.7 -0.7
baz=328
I55A Frankford 81.92 32 P P 13 27 44.2 -0.7
baz=328
JCT Junction City 82.00 55 P P 13 27 45.7 0.0
baz=318
O48A Farmland 82.08 39 P P 13 27 45.6 -0.2
baz=324
FCAR Ozark Folk Cen 82.15 46 P P 13 27 45.6 -0.7
FCAR lAmb lAmb 13 27 46.3
comp=Z,7.4nm,0.5s
G57A Newington 82.16 30 P P 13 27 45.5 -0.7
baz=330
S44A Carbondale 82.19 43 P P 13 27 46.2 -0.3
SIUC Southern Illin 82.19 43 P P 13 27 46.2 -0.3
WHTX Lake Whitney, 82.23 52 P P 13 27 47.1 +0.3
baz=319
F59A Saint Guilaume 82.28 29 P P 13 27 46.5 -0.3
baz=331
J54A Appleton 82.34 33 P P 13 27 47.3 +0.1
baz=328
MMAI Mount Meron Ar 82.37 309 P P 13 27 48.6 +1.0
comp=Z,2.5nm,0.5s,baz=15,slow=8.0,SNR=5.6
D62A Allapoint, All 82.40 26 P P 13 27 47.4 0.0
baz=333
MIAR Mount Ida 82.42 48 P P 13 27 47.4 -0.4
MIAR pmax pmax
comp=Z,13nm,1.1s
MIAR Mount Ida 82.42 48 P P 13 27 47.8 0.0
baz=320,SNR=7.5
MIAR Mount Ida 82.42 48 P P 13 27 47.4 -0.4
MIAR lAmb lAmb 13 27 48.9
comp=Z,13nm,1.1s
WHAR Wooly Hollow 82.53 47 P P 13 27 47.9 -0.4
WHAR lAmb lAmb 13 27 49.1
comp=Z,16nm,1.3s
W41B Gary Mavity, V 82.64 47 P P 13 27 49.0 +0.1
baz=321
E62A Clayton Lake 82.67 26 P P 13 27 48.7 -0.2
baz=333
M52A Chesterland 82.68 36 P P 13 27 49.0 0.0
baz=326
N51A Ashland 82.77 37 P P 13 27 49.1 -0.3
baz=326
L53A Girard 82.80 35 P P 13 27 49.9 +0.3
baz=327
O50A Cable 82.85 38 P P 13 27 49.8 -0.2
baz=325
X40A Basin Creek Fa 82.86 48 P P 13 27 50.2 +0.2
baz=321
P49A Miami Univ. Ec 82.86 39 P P 13 27 50.1 +0.1
baz=324
PPT Papeete 82.92 123 LR LR 14 00 59.2
comp=Z,43nm,18.8s,baz=322,slow=33
L54A Sinclairville 82.95 34 P P 13 27 49.2 -1.2
baz=327
H59A Cadyville 83.02 30 P P 13 27 49.7 -1.0
baz=331
K55A Perry 83.03 33 P P 13 27 50.5 -0.3
baz=328
H58A Gabriels 83.04 30 P P 13 27 50.5 -0.4
baz=330
ACSO Alum Creek Sta 83.06 38 P P 13 27 51.3 +0.3
baz=325
WCI Wyandotte Cave 83.19 41 P P 13 27 51.5 -0.1
baz=324
G61A St-Isidore-de- 83.20 28 P P 13 27 51.6 -0.1
baz=332
P50A Jamestown 83.21 39 P P 13 27 51.6 -0.2
baz=325
O51A Pataskala 83.30 38 P P 13 27 51.9 -0.3
baz=326
K56A Middlesex 83.34 33 P P 13 27 52.3 -0.1
baz=328
I58A Old Forge 83.38 31 P P 13 27 52.5 -0.2
baz=330
M54A Oil Creek Stat 83.41 35 P P 13 27 52.7 -0.2
baz=327
N53A Lisbon 83.51 36 P P 13 27 53.0 -0.3
baz=326
J58A Remsen 83.55 31 P P 13 27 53.3 -0.1
baz=330
G62A West of Eustis 83.59 27 P P 13 27 53.7 +0.1
baz=332
F63A Nahmakanta, Br 83.62 26 P P 13 27 54.2 +0.4
baz=333
O52A Adamsville 83.66 37 P P 13 27 54.1 0.0
baz=326
F64A Sherman 83.71 26 P P 13 27 54.2 0.0
baz=334
H61A Lyndonville 83.72 29 P P 13 27 54.5 +0.1
baz=332
L56A Greenwood 83.73 33 P P 13 27 54.2 -0.2
baz=328
N54A Moraine State 83.74 36 P P 13 27 54.1 -0.4
baz=327
J59A Piesco 83.75 31 P P 13 27 54.4 -0.2
baz=330
T47A Sharon Grove 83.79 42 P P 13 27 54.8 0.0
T47A lAmb lAmb 13 27 56.2
comp=Z,12nm,0.8s
M55A Ridgway 83.81 35 P P 13 27 54.3 -0.6
baz=328
O53A New Philadelph 83.81 37 P P 13 27 54.7 -0.2
baz=326
K58A Earlville 83.93 32 P P 13 27 54.4 -1.0
baz=330
PKME Peaks-Kenny Pk 83.95 27 P P 13 27 54.6 -0.8
baz=333
H62A Milan 83.95 28 P P 13 27 54.6 -0.9
baz=332
M56A Emporium 84.03 34 P P 13 27 56.2 +0.2
baz=328
WVT Waverly 84.12 43 P P 13 27 56.1 -0.4
WVT pmax pmax
comp=Z,7.0nm,1.0s
WVT Waverly 84.12 43 P P 13 27 56.5 -0.1
baz=323
WVT Waverly 84.12 43 P P 13 27 56.1 -0.4
WVT lAmb lAmb 13 27 57.7
comp=Z,7.1nm,1.0s
I61A Oroboro, Fairl 84.16 29 P P 13 27 56.7 +0.2
baz=332
K59A Cooperstown 84.22 31 P P 13 27 56.5 -0.5
baz=330
O54A Avella 84.22 36 P P 13 27 57.2 +0.2
baz=327
N55A Marion Center 84.30 35 P P 13 27 57.4 0.0
baz=328
J60A Lant Hill Farm 84.33 30 P P 13 27 57.2 -0.2
baz=331
P53A Whipple 84.37 37 P P 13 27 57.6 -0.1
baz=326
Q52A Bidwell 84.42 38 P P 13 27 57.8 -0.1
baz=326
L58A Harry Jones Me 84.47 32 P P 13 27 57.0 -1.2
baz=329
M57A Sunshine Farm, 84.58 34 P P 13 27 58.9 +0.2
baz=329
I63A Otisfield 84.61 28 P P 13 27 58.8 0.0
baz=333
L59A Walton 84.65 32 P P 13 27 58.5 -0.7
baz=330
O55A Ligonier 84.65 36 P P 13 27 59.0 -0.2
baz=327
P54A Burton 84.67 37 P P 13 27 59.6 +0.4
baz=327
U49A Red Boiling Sp 84.81 42 P P 13 27 59.9 0.0
U49A lAmb lAmb 13 28 01.1
comp=Z,12nm,0.9s
M58A Price's Panora 84.81 33 P P 13 27 59.3 -0.6
baz=329
Q53A Leroy 84.83 38 P P 13 27 59.9 -0.2
baz=326
T50A Nancy 84.84 41 P P 13 27 59.8 -0.3
SSPA Standing Stone 84.87 34 P P 13 28 00.6 +0.4
baz=328
CLTN Cedars of Leba 84.88 42 P P 13 28 00.2 -0.1
CLTN lAmb lAmb 13 28 01.6
comp=Z,10nm,1.0s
K61A Williamstown 84.89 30 P P 13 28 00.0 -0.2
baz=331
N57A Milroy 84.90 34 P P 13 28 00.4 0.0
baz=328
O56A Blue Knob Stat 84.91 35 P P 13 28 00.4 0.0

	baz=328							
P55A	**Reedsville**	**85.02**	**36**	P	**P**	**13 28 01.4**	**+0.3**	
	baz=327,SNR=5.4							
Q54A	**Coxs Mills**	**85.03**	**37**	P	**P**	**13 28 01.3**	**+0.2**	
	baz=327							
N58A	**Sunbury**	**85.16**	**34**	P	**P**	**13 28 02.1**	**+0.4**	
	baz=329							
O57A	**Amberson**	**85.33**	**34**	P	**P**	**13 28 03.1**	**+0.6**	
	baz=328							
Q55A	**Buckhannon**	**85.34**	**37**	P	**P**	**13 28 03.2**	**+0.6**	
	baz=327							
P56A	**Dayton Farm, R**	**85.44**	**36**	P	**P**	**13 28 03.7**	**+0.6**	
	baz=328							
N59A	**State Game Lan**	**85.47**	**33**	P	**P**	**13 28 03.4**	**+0.2**	
	baz=330							
R54A	**Victor**	**85.63**	**38**	P	**P**	**13 28 04.5**	**+0.4**	
	baz=327							
Q56A	**Snyder Ridge,**	**85.68**	**36**	P	**P**	**13 28 04.5**	**+0.2**	
	baz=328							
O58A	**Lewisberry**	**85.69**	**34**	P	**P**	**13 28 04.5**	**+0.2**	
	baz=329							
SWET	**Sewanee**	**85.78**	**43**	P	**P**	**13 28 04.6**	**-0.3**	
SWET				IAmb	IAmb	13 28 05.5		
	comp=Z,11nm,0.9s							
S54A	**Dingess, Becki**	**85.80**	**38**	P	**P**	**13 28 05.2**	**+0.2**	
	baz=326							
TZTN	**Tazewell**	**85.83**	**40**	P	**P**	**13 28 05.6**	**+0.5**	
	baz=325							
R55A	**Marlinton**	**85.92**	**37**	P	**P**	**13 28 05.7**	**+0.1**	
	baz=327							
R55A	**Marlinton**	**85.92**	**37**	P	**P**	**13 28 05.5**	**-0.1**	
T53A	**Wise**	**85.93**	**39**	P	**P**	**13 28 05.5**	**-0.2**	
	baz=326							
Q57A	**Strasburg**	**86.01**	**36**	P	**P**	**13 28 05.4**	**-0.6**	
	baz=328							
V51A	**Loudon**	**86.06**	**41**	P	**P**	**13 28 06.2**	**0.0**	
V51A				IAmb	IAmb	13 28 07.3		
	comp=Z,9.2nm,0.8s							
P58A	**Pank, Wackersv**	**86.08**	**35**	P	**P**	**13 28 05.7**	**-0.6**	
	baz=329							
O60A	**Telford**	**86.12**	**33**	P	**P**	**13 28 06.3**	**-0.2**	
	baz=330							
S55A	**Lewisburg**	**86.18**	**38**	P	**P**	**13 28 07.2**	**+0.4**	
	baz=327							
CPCT	**Cooper Cave**	**86.27**	**42**	P	**P**	**13 28 07.0**	**-0.3**	
CPCT				IAmb	IAmb	13 28 08.3		
	comp=Z,9.8nm,1.0s							
T54A	**Tazewell**	**86.30**	**39**	P	**P**	**13 28 07.8**	**+0.4**	
	baz=326							
P59A	**Jarrettsville**	**86.33**	**34**	P	**P**	**13 28 07.7**	**+0.2**	
	baz=329							
V52A	**Sevierville**	**86.38**	**41**	P	**P**	**13 28 07.5**	**-0.3**	
V52A				IAmb	IAmb	13 28 09.1		
	comp=Z,12nm,1.1s							
Q58A	**Fox Den Farm,**	**86.39**	**35**	P	**P**	**13 28 07.8**	**0.0**	
	baz=326							
TKL	**Tuckaleechee C**	**86.45**	**41**	P	**P**	**13 28 07.6**	**-0.5**	
TKL				pmax	pmax			
	comp=Z,6.0nm,0.8s							
TKL	**Tuckaleechee C**	**86.45**	**41**	P	**P**	**13 28 07.6**	**-0.5**	
TKL				IAmb	IAmb	13 28 09.2		
	comp=Z,6.1nm,0.8s							
L65A	**Cape Cod Natio**	**86.58**	**29**	P	**P**	**13 28 10.4**	**+1.8**	
	baz=333							
R57A	**Stanardsville**	**86.59**	**36**	P	**P**	**13 28 09.2**	**+0.4**	
	baz=328							
T55A	**Pulaski**	**86.60**	**38**	P	**P**	**13 28 09.1**	**+0.2**	
	baz=327							
BLA	**Blacksburg**	**86.69**	**38**	P	**P**	**13 28 10.1**	**+0.8**	
	baz=327							
R58A	**Rapidan**	**86.80**	**36**	P	**P**	**13 28 10.3**	**+0.4**	
	baz=328							
U55A	**TA2, Sparta**	**87.00**	**39**	P	**P**	**13 28 12.1**	**+1.1**	
	baz=327							
LRAL	**Lakeview Retre**	**87.00**	**45**	P	**P**	**13 28 11.5**	**+0.6**	
	baz=324							
T56A	**Rocky Mt**	**87.01**	**38**	P	**P**	**13 28 12.3**	**+1.4**	
	baz=327							
V54A	**Nebo**	**87.19**	**40**	P	**P**	**13 28 12.4**	**+0.6**	
	baz=326							
T57A	**Hurt**	**87.37**	**37**	P	**P**	**13 28 13.3**	**+0.6**	
	baz=328							
BG3	**Lake Jocassee**	**87.39**	**41**	P	**P**	**13 28 12.8**	**+0.1**	
BG3				IAmb	IAmb	13 28 14.7		
	comp=Z,7.8nm,1.0s							
W54A	**Cherokee Point**	**87.66**	**40**	P	**P**	**13 28 14.1**	**+0.1**	
	baz=326							
T58A	**Grand View Acr**	**87.72**	**37**	P	**P**	**13 28 14.4**	**+0.1**	
	baz=328							
U57A	**Blanch**	**87.81**	**38**	P	**P**	**13 28 15.4**	**+0.7**	
	baz=328							
KMSC	**Kings Mountain**	**88.00**	**40**	P	**P**	**13 28 16.1**	**+0.5**	
	baz=326							
X54A	**Belton**	**88.01**	**41**	P	**P**	**13 28 16.6**	**+0.9**	
	baz=326							
T59A	**Double "B" Far**	**88.12**	**36**	P	**P**	**13 28 16.4**	**+0.3**	
	baz=329							
U58A	**Oxford**	**88.18**	**37**	P	**P**	**13 28 16.9**	**+0.5**	
	baz=328							
HODGE	**Hodges**	**88.33**	**41**	P	**P**	**13 28 17.1**	**-0.1**	
HODGE				IAmb	IAmb	13 28 18.6		
	comp=Z,6.7nm,1.0s							
X55A	**Gracelyn & Ava**	**88.42**	**40**	P	**P**	**13 28 18.5**	**+0.9**	
	baz=326							
GOGA	**Godfrey**	**88.43**	**42**	P	**P**	**13 28 18.2**	**+0.5**	
	baz=325							
W57A	**Gilead**	**88.59**	**39**	P	**P**	**13 28 18.7**	**+0.3**	
	baz=327							
X56A	**White Oak**	**88.68**	**40**	P	**P**	**13 28 18.9**	**+0.1**	
	baz=327							
Y55A	**Saluda**	**88.75**	**41**	P	**P**	**13 28 19.5**	**+0.3**	
	baz=326							
V59A	**Middlesex**	**88.85**	**37**	P	**P**	**13 28 20.1**	**+0.5**	
	baz=328							
LPAZ	**La Paz**	**137.36**	**61**	PKP	**PKPdf**	**13 34 49.8**	**-0.2**	
	comp=Z,0.7nm,0.5s,baz=251,slow=16,SNR=4.7							
H03N2	**Juan Fernandez**	**141.07**	**90**	T	T	16 12 05.8		
	baz=306,slow=77,SNR=6.7							
H03N3	**Juan Fernandez**	**141.08**	**90**	T	T	16 12 02.2		
	baz=306,slow=77,SNR=10							
H03N1	**Juan Fernandez**	**141.08**	**90**	T	T	16 12 01.4		
	baz=306,slow=77,SNR=11							
AC05	**El Transito**	**144.61**	**77**		PKPbc	13 35 01.8	+0.9	
GO04	**Tololo Observa**	**145.04**	**80**		**PKPbc**	**13 35 02.4**	**0.0**	
BDFB	**Brasilia**	**147.35**	**33**	PKPbc	**PKPbc**	**13 35 09.3**	**-0.2**	
	comp=Z,2.7nm,0.5s,baz=266,slow=7.7,SNR=4.3							
CFA	**Coronel Fontan**	**147.66**	**79**	PKPbc	**PKPbc**	**13 35 09.8**	**0.0**	
	comp=Z,9.6nm,0.6s,baz=235,slow=1.6,SNR=13							
BI02	**San Fabin de**	**148.12**	**90**		**PKPbc**	**13 35 11.0**	**0.0**	
PLCA	**Paso Flores**	**150.31**	**97**	PKPbc	**PKPbc**	**13 35 16.0**	**-0.3**	
	comp=Z,4.9nm,0.8s,baz=312,slow=2.8,SNR=11							
CPUP	**Villa Florida**	**151.51**	**59**	PKPbc	**PKPbc**	**13 35 18.8**	**-0.7**	
	comp=Z,1.3nm,0.6s,baz=333,slow=1.1,SNR=5.1							

*IDC **27** 13:57:09.6±0.8,31°.96N×110°.33E,h0km,mb3.7/13, mb1 3.8/16,mb1mx3.7/52,mbtmp3.7/16,ML3.4/2,MS3.2/15, Ms1 3.2/15,ms1mx3.1/36,Error ellipse: s-maj=22.9km s-min=18.2km az=61.0*

*BJI **27** 13:57:10.7±0.0,31°.91N×110°.42E,h8km,mB4.3/13, mb4.3/18,ML4.4/26,Ms4.0/20,Ms7 3.7/20*

*NEIC **27** 13:57:12.8±2.0,31°.96N±0°.06×110°.2E±0°.1,h22km±1km, mb4.5/11,Error ellipse: s-maj=14.1km s-min=7.9km az=82.0*

ISC 27 13:57:11.1±0.4,31°.91N±0°.04×110°.35E±0°.03,h10km,n64, σ2°37/65,mb4.0/18,MS3.1/13,1D,Southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENH	**Enshi**	**1.80**	**205**		**Pb**	**13 57 44.1**	**-0.1**
XAN	**Xi'an**	**2.44**	**331**	Pn	**Pn**	**13 57 51.3**	**+0.2**
XAN				Pg	**Pb**	**13 57 55.5**	**+0.4**
XAN				Sg	**Sb**	**13 58 26.0**	**+0.8**
XAN				smax	smax		
	comp=N,3μm,0.8s						
XAN				smax	smax		
	comp=E,2μm,0.9s						
XAN	**Xi'an**	**2.44**	**331**		**Pn**	**13 57 51.5**	**+0.4**
WHN	**Wuhan**	**3.69**	**111**	Pn	**Pn**	**13 58 07.8**	**-0.4**
WHN				Pg	**Pb**	**13 58 17.3**	**+1.0**
WHN				Sn	**Sn**	**13 58 51.0**	**-0.7**
WHN				Sg	**Sg**	**13 59 04.0**	**-5.5**
WHN				smax	smax		
	comp=N,5μm,1.0s						
WHN				smax	smax		
	comp=E,4μm,1.0s						
CD2	**Chengdu**	**5.73**	**262**	Pn	**Pn**	**13 58 38.0**	**+1.7**
CD2				Pg	**Pg**	**13 58 58.3**	**-2.5**
CD2				Sn	**Sn**	**13 59 48.3**	**+6.2**
CD2				smax	smax		
	comp=N,410nm,1.2s						
CD2				smax	smax		
	comp=E,330nm,1.7s						
CD2				LR	LR		
	comp=E,2μm,5.1s						
CD2				LR	LR		
	comp=Z,1μm,6.5s						
GYA	**Guiyang**	**6.32**	**212**	*i*Pn	**Pn**	**13 58 48.8**	**+4.3**
GYA				Sn	**Sn**	**13 59 58.5**	**+1.6**
GYA				smax	smax		
	comp=N,140nm,0.9s						
GYA				smax	smax		
	comp=E,180nm,1.0s						
GYA				LR	LR		
	comp=N,560nm,3.5s						
GYA				LR	LR		
	comp=E,520nm,3.5s						
GYA				LR	LR		
	comp=Z,370nm,6.5s						
LZH	**Lanzhou**	**6.82**	**309**	Pn	**Pn**	**13 58 54.8**	**+3.4**
LZH				Pg	**Pb**	**13 59 14.3**	**+4.4**
LZH				Sn	**Sn**	**14 00 11.5**	**+2.3**
LZH				Sg	**Sg**	**14 00 44.0**	**-6.1**
LZH				smax	smax		
	comp=N,490nm,1.3s						
LZH				smax	smax		
	comp=E,630nm,1.2s						
LZH				LR	LR		
	comp=E,1μm,6.2s						
LZH				LR	LR		
	comp=Z,870nm,7.6s						
TIA	**Tai'an**	**7.07**	**51**	Pg	Pb	13 59 18.5	+4.6
TIA				Sg	**Sb**	**14 00 45.3**	**+7.0**
TIA				smax	smax		
	comp=N,150nm,0.7s						
TIA				smax	smax		
	comp=E,130nm,1.0s						
BTO	**Baotou**	**8.68**	**358**	*e*P	**Pn**	**13 59 19.0**	**+2.2**
BTO				S	**Sn**	**14 00 49.8**	**-5.0**
HHC	**Hu-ho-hao-te**	**8.97**	**6**	*e*P	**Pn**	**13 59 24.0**	**+3.2**
HHC				pmax	pmax		
	comp=E,11nm,0.9s						
HHC				pmax	pmax		
	comp=E,28nm,5.3s						
GZH	**Guangzhou**	**9.18**	**162**	P	Pn	13 59 17.8	-5.9
GZH				S	Sn	14 00 56.0	-11
GZH				smax	smax		
	comp=E,44nm,1.2s						
GZH				smax	smax		
	comp=E,70nm,1.0s						
BJI	**Beijing**	**9.38**	**29**	P	**Pn**	**13 59 22.3**	**-4.0**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.4s						
BJI				LR	LR		
	comp=N,380nm,10.4s						
BJI				LR	LR		
	comp=E,430nm,8.8s						
KMI	**Kunming**	**9.52**	**227**	P	**Pn**	**13 59 32.8**	**+4.3**
KMI				S	**Sn**	**14 01 12.3**	**-3.4**
KMI				smax	smax		
	comp=E,42nm,0.8s						
KMI				smax	smax		
	comp=E,40nm,0.9s						
KMI				LR	LR		
	comp=E,470nm,12.4s						
KMI				LR	LR		
	comp=E,210nm,14.2s						
HKPS	**Hong Kong Po S**	**10.17**	**160**	Pn	**Pn**	**13 59 37.2**	**0.0**
GTA	**Gaotai**	**11.37**	**314**	*e*P	**Pn**	**13 59 53.8**	**+0.1**
GTA				pP		13 59 58.0	
GTA				sP		14 00 01.0	
GTA				S	**Sn**	**14 02 03.3**	**+2.4**
GTA				pmax	pmax		
	comp=E,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=E,31nm,6.2s						
GTA				LR	LR		
	comp=E,270nm,14.3s						
GTA				LR	LR		
	comp=E,230nm,16.8s						
GTA				LR	LR		
	comp=E,230nm,14.0s						
KSRS	**Korea Array**	**15.47**	**64**	Pn	**P**	**14 00 50.8**	**-3.1**
	comp=E,0.1nm,0.3s,baz=245,slow=11,SNR=2.3						
KSRS				LR	LR	14 07 05.8	
	comp=E,73nm,19.0s,baz=244,slow=39						
SONM	**Songino Array**	**16.18**	**350**	Pn	**Pn**	**14 00 58.2**	**-0.6**
	baz=162,slow=14,SNR=4.2						
SONM				LR	LR	14 08 12.0	
	comp=E,118nm,18.2s,baz=118,slow=41						
LSA	**Lhasa**	**16.65**	**267**		**Pn**	**14 01 03.7**	**-1.4**
LSA				IAmb	IAmb	14 01 10.6	
	comp=Z,16nm,0.9s						
CMAR	**Chiang Mai Arr**	**16.90**	**220**	Pn	**P**	**14 01 09.3**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=24,slow=11,SNR=9.9						
JNU	**Nakatsue**	**17.35**	**81**	LR	LR	14 08 27.5	
	comp=Z,78nm,18.2s,baz=230,slow=39						
SHL	**Shillong**	**17.38**	**253**	P	**Pn**	**14 01 12.6**	**-1.5**
SHL				IAmb	IAmb	14 01 14.9	
	comp=Z,18nm,0.9s						
TAPN	**Taplejung**	**20.19**	**263**	*e*P	**P**	**14 01 45.9**	**-0.5**
	comp=Z,27nm,0.7s						
TGY	**Tagaytay City**	**20.20**	**149**	LR	LR	14 09 56.4	
	comp=Z,97nm,18.7s,baz=192,slow=38						
TLY	**Talaya**	**20.36**	**348**	LR	LR	14 11 20.9	
	comp=Z,9.8nm,20.2s,baz=178,slow=42						
ODAN	**Odare**	**20.62**	**262**	*e*P	**P**	**14 01 51.9**	**+0.9**
	comp=Z,33nm,0.7s						
USRK	**Ussuriysk Ar.**	**20.92**	**48**	P	Pn	14 01 54.3	-2.0
	comp=Z,1.0nm,0.6s,baz=246,slow=7.9,SNR=2.2						
JIRN	**Jiri**	**21.38**	**265**	*e*P	**P**	**14 02 00.2**	**+0.9**
	comp=Z,31nm,0.5s						
WMQ	**Urumqi**	**21.40**	**310**	*e*P	**P**	**14 01 58.8**	**-0.3**
WMQ				sP	sP	14 02 06.0	+2.4
WMQ				pmax	pmax		
	comp=Z,25nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,5.0nm,4.3s						
WMQ				LR	LR		
	comp=Z,95nm,3.9s						
WMQ				LR	LR		
	comp=Z,88nm,10.1s						
WMQ				LR	LR		
	comp=Z,440nm,29.1s						
GUN	**Gumba**	**21.57**	**266**	*e*P	**P**	**14 02 02.4**	**+1.0**
	comp=Z,58nm,0.7s						
PKI	**Pulchoki**	**22.07**	**265**	*e*P	**P**	**14 02 07.0**	**+0.3**
	comp=Z,21nm,0.5s						
PKIN	**Phulchoki**	**22.08**	**265**	*e*P	**P**	**14 02 07.2**	**+0.5**
	comp=Z,18nm,0.5s						
KKN	**Kakani**	**22.12**	**266**	*e*P	**P**	**14 02 07.8**	**+0.8**
	comp=Z,39nm,0.7s						
DMN	**Daman**	**22.32**	**265**	*e*P	**P**	**14 02 10.0**	**+0.8**
GKN	**Gorkha**	**22.60**	**267**	*e*P	**P**	**14 02 12.6**	**+0.4**
	comp=Z,40nm,0.6s						
DANN	**Dangsing**	**23.25**	**268**	*e*P	**P**	**14 02 19.4**	**+0.3**
MJAR	**Matsushiro Arr**	**23.45**	**71**	LR	LR	14 12 25.1	
	comp=Z,39nm,18.9s,baz=90,slow=39						
KOLN	**Koldanda**	**23.55**	**267**	*e*P	**P**	**14 02 22.4**	**+0.4**
	comp=Z,36nm,0.9s						
KLR	**Kul'dur**	**23.60**	**37**	P	**P**	**14 02 22.4**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=249,slow=9.0,SNR=4.5						
PYUN	**Piuthan**	**23.97**	**268**	*e*P	**P**	**14 02 27.1**	**+1.0**
	comp=Z,31nm,0.6s						
JHJ	**Hachijo jima 2**	**24.81**	**79**	LR	LR	14 13 23.3	
	comp=Z,48nm,19.4s,baz=333,slow=39						
MKAR	**Makanchi Array**	**26.12**	**313**	P	**P**	**14 02 46.1**	**+0.8**
	comp=Z,1.3nm,0.6s,baz=109,slow=11,SNR=9.2						
MKAR				LR	LR	14 12 12.3	
	comp=Z,34nm,20.4s,baz=114,slow=35						
ASAJ	**Asahikawa**	**27.99**	**55**	LR	LR	14 13 39.4	
	comp=Z,26nm,18.9s,baz=217,slow=35						
DAV	**Davao City (W)**	**28.51**	**147**	LR	LR	14 15 32.5	
	comp=Z,42nm,18.2s,baz=306,slow=39						
ZALV	**Zalesovo Beam**	**28.61**	**328**	P	**P**	**14 03 07.6**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=116,slow=9.8,SNR=1.6						
ZALV				LR	LR	14 15 05.2	
	comp=Z,50nm,19.4s,baz=111,slow=38						
KURK	**Kurchatov**	**30.01**	**318**	P	**P**	**14 03 20.5**	**+0.6**
KURBB	**Kurchatov Arra**	**30.02**	**318**	P	**P**	**14 03 20.5**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=119,slow=9.2,SNR=1.7						
BVAR	**Borovoye Array**	**35.61**	**318**	P	**P**	**14 04 07.1**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=99,slow=8.9,SNR=2.9						
TIXI	**Tiksi**	**41.02**	**9**	P	**P**	**14 04 52.7**	**-1.4**
	comp=Z,0.7nm,0.4s,baz=255,slow=5.0,SNR=6.1						
GEYT	**Alibeck**	**42.79**	**293**	LR	LR	14 24 16.3	
	comp=Z,39nm,18.6s,baz=60,slow=38						
WRAB	**Tennant Creek**	**56.45**	**153**	P	**P**	**14 06 53.4**	**+0.1**
WRA	**Warramunga Arr**	**56.45**	**153**	P	**P**	**14 06 53.0**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=344,slow=7.8,SNR=7.8						
WB2	**Warramunga Arr**	**56.46**	**153**	P	**P**	**14 06 52.8**	**-0.5**
WB2				IAmb	IAmb	14 07 02.1	
	comp=Z,3.9nm,0.8s						
WR0	**Warramunga Arr**	**56.55**	**152**	P	**P**	**14 06 54.8**	**+0.8**
WR0				IAmb	IAmb	14 07 09.0	
	comp=Z,22nm,1.7s						
ARCES	**ARCESS Array B**	**58.71**	**336**	LR	LR	14 33 32.7	
	comp=Z,33nm,21.9s,baz=106,slow=37						
FINES	**FINESS Array B**	**59.86**	**326**	LR	LR	14 33 23.6	
	comp=Z,26nm,18.9s,baz=0.5,slow=36						
AKASG	**Malin Array Be**	**60.70**	**314**	P	**P**	**14 07 22.2**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=64,slow=6.9,SNR=1.7						
ILAR	**Eielson Array**	**66.74**	**27**	P	**P**	**14 08 02.7**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=281,slow=5.5,SNR=3.7						
NOA	**NORSAR Array B**	**66.81**	**328**	P	**P**	**14 08 01.4**	**-1.3**
	comp=Z,0.6nm,0.6s,baz=66,slow=6.3,SNR=2.4						
NOA				LR	LR	14 37 37.4	
	comp=Z,18nm,20.8s,baz=160,slow=36						
INK	**Inuvik**	**69.56**	**21**	P	**P**	**14 08 20.0**	**+0.2**
INK				IAmb	IAmb	14 08 44.2	
	comp=Z,5.8nm,1.5s						
STKA	**Stephens Creek**	**69.99**	**152**	P	**P**	**14 08 23.9**	**+1.0**
	comp=Z,1.2nm,0.6s,baz=7.4,slow=15,SNR=3.6						
STKA	**Stephens Creek**	**69.99**	**152**	IAmb	IAmb	14 10 27.7	
	comp=Z,9.1nm,1.9s						
SUMG	**Summit**	**73.59**	**351**	P	**P**	**14 08 44.9**	**+0.3**
SUMG				IAmb	IAmb	14 11 17.7	
	comp=Z,14nm,1.7s						
YKA	**Yellowknife Ar**	**79.25**	**20**	P	**P**	**14 09 16.2**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=327,slow=5.0,SNR=3.0						
ULM	**Lac du Bonnet**	**94.95**	**17**	P	**P**	**14 10 32.2**	**-1.5**
	comp=Z,2.3nm,0.5s,baz=333,slow=2.3,SNR=1.9						

*IDC **27** 13:58:28.3±2.0,1°.43N×96°.85E,h0km,mb4.0/5,mb1 3.9/7, mb1mx3.6/52,mbtmp3.9/7,ML3.4/2,MS3.1/3,Ms1 3.1/3, ms1mx2.7/33,Error ellipse: s-maj=47.6km s-min=26.7km az=50.0*

*DJA **27** 13:58:34.7±1.0,2°.N±7°×97°.7E±°,h17km±17km,M4.0/8, MLv4.0/8*

*NEIC **27** 13:58:35.2±0.5,1°.80N±0°.07×96°.9E±0°.1,h29km±7km, mb4.6/3,Error ellipse: s-maj=18.8km s-min=8.2km az=65.0*

ISC 27 13:58:34.5±1.0,1°.76N±0°.07×96°.87E±0°.08,h28km,n32, σ1°27/26,mb4.4/8,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**0.84**	**320**	P	**Pb**	**13 58 51.4**	**+0.9**
GSI	**Gunungsitoli**	**0.84**	**123**	P	**Pb**	**13 58 51.2**	**+0.6**
GSI	**Gunungsitoli**	**0.84**	**123**		**Pb**	**13 58 51.4**	**+0.8**
TPTI		**1.52**	**12**	P	**Pn**	**13 58 58.8**	**-1.1**
TPTI				S	**Sb**	**13 59 20.4**	**-0.5**
KCSI	**Kotacane, Aceh**	**1.97**	**27**	P	**Pn**	**13 59 06.5**	**+0.5**
KCSI				S	**Sn**	**13 59 31.3**	**+1.5**
RPSI	**Rantau Prapat**	**2.25**	**66**		**Pn**	**13 59 10.3**	**+0.4**
PSI	**Prapat**	**2.30**	**63**	Pn	**Pn**	**13 59 10.3**	**-0.3**
	1.8nm,0.3s,baz=180,slow=15,SNR=8.8						
PSI				Lg	Lg	13 59 39.0	
	9.8nm,0.3s,baz=180,slow=12,SNR=7.2						
PSI				LR	LR	13 59 48.2	
	comp=Z,160nm,18.3s,baz=271,slow=33						
TSI	**Tuntungan**	**2.42**	**44**	P	**Pn**	**13 59 12.7**	**+0.5**
MLSI	**Meulaboh, Aceh**	**2.53**	**349**	P	**Pn**	**13 59 13.9**	**+0.1**
MNSI	**Mandailing Nat**	**2.88**	**109**	P	**Pn**	**13 59 20.0**	**+1.5**
LHMI	**Lhok Sumawe**	**3.44**	**1**	Pn	**Pn**	**13 59 26.4**	**+0.1**
IPM	**Ipoh**	**4.95**	**57**		**Pn**	**13 59 47.4**	**+0.3**
KULM	**Kulim**	**5.15**	**47**		**Pn**	**13 59 49.7**	**-0.2**
MYKOM	**Kota Tinggi**	**6.98**	**90**	Pn	**Pn**	**14 00 16.0**	**+1.1**
MNAI	**Manna**	**8.60**	**135**	Pn	**Pn**	**14 00 38.3**	**+1.1**
LEM	**Lembang**	**13.71**	**129**	LR	LR	14 07 56.9	
	comp=Z,103nm,18.4s,baz=274,slow=42						
CMAR	**Chiang Mai Arr**	**16.72**	**7**	Pn	**Pn**	**14 02 27.1**	**+0.3**
	0.1nm,0.3s,baz=196,slow=12,SNR=4.6						
H08S2	**Diego Garcia H**	**26.05**	**249**	T	T	14 31 17.7	
	baz=69,slow=75,SNR=351						
H08S3	**Diego Garcia H**	**26.05**	**249**	T	T	14 31 18.8	
	baz=69,slow=75,SNR=355						
H08S1	**Diego Garcia H**	**26.07**	**249**	T	T	14 31 17.1	
	baz=69,slow=75,SNR=436						
H01W3	**Cape Leeuwin H**	**39.89**	**158**	T	T	14 48 40.1	
	baz=336						
H01W2	**Cape Leeuwin H**	**39.90**	**158**	T	T	14 48 37.8	
	baz=336						
H01W1	**Cape Leeuwin H**	**39.90**	**158**	T	T	14 48 42.4	
	baz=336						
WRA	**Warramunga Arr**	**42.61**	**122**	P	**P**	**14 06 25.2**	**-3.5**
	0.7nm,0.7s,baz=298,slow=9.6,SNR=6.9						
WRAB	**Tennant Creek**	**42.62**	**122**	P	**P**	**14 06 26.5**	**-2.2**
WRAB				IAmb	IAmb	14 07 02.1	
	comp=Z,32nm,2.0s						
WB2	**Warramunga Arr**	**42.62**	**122**	P	**P**	**14 06 26.3**	**-2.5**
WB2				IAmb	IAmb	14 06 44.0	
	comp=Z,24nm,1.8s						
KSRS	**Korea Array**	**45.58**	**35**	LR	LR	14 27 03.6	
	comp=Z,23nm,18.3s,baz=10.0,slow=37						
SONM	**Songino Array**	**46.63**	**9**	P	**P**	**14 07 01.4**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=188,slow=7.2,SNR=2.0						
ZAA0	**Zalesovo Array**	**52.95**	**351**	P	**P**	**14 07 49.0**	**+0.7**
ZAA0				IAmb	IAmb	14 07 50.0	
	comp=Z,5.9nm,0.8s						
ZALV	**Zalesovo Beam**	**52.95**	**351**	P	**P**	**14 07 49.0**	**+0.7**
	comp=Z,4.4nm,0.4s,baz=182,slow=6.9,SNR=20						
BVAR	**Borovoye Array**	**55.61**	**341**	P	**P**	**14 08 08.1**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=130,slow=6.5,SNR=7.9						
KLR	**Kul'dur**	**55.90**	**27**	P	**P**	**14 08 08.9**	**-0.9**
	comp=Z,1.8nm,0.8s,baz=233,slow=9.2,SNR=5.7						

ATH 27 14:34:10.1,38°.42N×20°.48E,h9km±3km,ML1.0/1,Error ellipse: s-maj=3.4km s-min=0.9km az=106.0,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res

	20nm,0.5s							
DJR	**Jarkent**	**1.73**	**258**	P	**Pg**	**15 14 23.9**	**+0.1**
	22nm,0.3s							
DJR				S	**Sg**	**15 14 48.7**	**+2.4**
	20nm,0.5s							
KTMS	**Ketmen**	**1.81**	**226**	*e*P	**Pg**	**15 14 24.9**	**-0.4**
	3.8nm,0.1s							
KTMS				*e*S	**Sg**	**15 14 50.2**	**+1.4**
	86nm,0.4s							
KTMS	**Ketmen**	**1.81**	**226**	P	**Pg**	**15 14 24.9**	**-0.4**
	2.1nm,0.1s							
KTMS				Pg	**Pg**	**15 14 24.9**	**-0.4**
	3.8nm,0.1s							
KTMS				S	**Sg**	**15 14 49.1**	**+0.4**
	86nm,0.5s							
KTMS				Lg	Lg	15 14 50.2		
	66nm,0.4s							
MK31	**Makanchi Array**	**2.09**	**3**	⇑Pn	**Pg**	**15 14 29.2**	**-1.6**
	11nm,0.2s,baz=183,slow=13,SNR=756							
MK31				⇑Lg	Lg	15 14 57.3		
	11nm,0.3s,baz=184,slow=20,SNR=25							
PDGK	**Podgornoye**	**2.36**	**235**	⇑Pg	**Pb**	**15 14 33.2**	**-0.1**
	3.3nm,0.3s							
PDGK				⇓Lg	Lg	15 15 05.1		
	46nm,0.5s							
SHLS	**Shalkode**	**2.48**	**232**	*e*P	**Pn**	**15 14 32.1**	**+0.8**
	23nm,0.4s							
SHLS				*e*S	**Sn**	**15 15 02.5**	**+0.8**
	89nm,0.5s							
SHLS	**Shalkode**	**2.48**	**232**	Pg	**Pn**	**15 14 32.1**	**+0.8**
	17nm,0.2s							
SHLS				Pg	**Pn**	**15 14 32.1**	**+0.8**
	23nm,0.4s							
SHLS				Lg	Lg	15 15 00.6		
	78nm,0.4s							
SHLS				Lg	Lg	15 15 02.5		
	89nm,0.5s							
UZB	**Uzynbulak**	**2.75**	**237**	*e*P	**Pb**	**15 14 40.2**	**+0.3**
	11nm,0.2s							
UZB				*e*S	**Sg**	**15 15 16.2**	**-2.6**
	11nm,0.4s							
UZB	**Uzynbulak**	**2.75**	**237**	Pg	**Pb**	**15 14 39.9**	**0.0**
	11nm,0.2s							
UZB				Pg	**Pb**	**15 14 40.2**	**+0.3**
	11nm,0.2s							
UZB				Lg	Lg	15 15 16.2		
	11nm,0.4s							
UZB				Lg	Lg	15 15 16.3		
	15nm,0.4s							
MNBS	**Baschi**	**2.76**	**258**	*e*P	**Pg**	**15 14 41.1**	**-2.4**
	0.3nm,0.2s							
MNBS				*e*S	**Sg**	**15 15 17.6**	**-1.7**
	0.9nm,0.4s							
KURS	**Kuram**	**3.12**	**248**	*e*P	**Pb**	**15 14 46.5**	**+0.3**
	3.2nm,0.4s							
KURS				*e*S	**Sg**	**15 15 27.4**	**-3.3**
	5.2nm,0.4s							
KURS	**Kuram**	**3.12**	**248**	Pg	**Pb**	**15 14 46.5**	**+0.3**
	3.2nm,0.4s							
KURS				Lg	Lg	15 15 27.4		
	5.2nm,0.4s							
ARXS	**Arharly**	**3.14**	**262**	*e*P	**Pg**	**15 14 48.0**	**-2.7**
	15nm,0.3s							
ARXS				*e*S	**Sg**	**15 15 29.6**	**-1.8**
ARXS	**Arharly**	**3.14**	**262**	Pg	**Pg**	**15 14 47.9**	**-2.7**
	12nm,0.3s							
ARXS				Lg	Lg	15 15 28.3		
	21nm,0.4s							
SATY	**Saty**	**3.17**	**240**	*e*P	**Pb**	**15 14 47.6**	**+0.5**
	6.0nm,0.3s							
SATY				*e*S	**Sg**	**15 15 29.2**	**-3.2**
	46nm,0.3s							
SATY	**Saty**	**3.17**	**240**	Pg	**Pb**	**15 14 47.6**	**+0.5**
	6.0nm,0.3s							
SATY				Lg	Lg	15 15 29.2		
	46nm,0.3s							
ZSN	**Zaisan**	**3.33**	**34**	*e*P	**Pb**	**15 14 50.5**	**+0.7**
	5.5nm,0.2s							
ZSN				*e*S	**Sg**	**15 15 34.0**	**-3.6**
	8.1nm,0.5s							
ZSN	**Zaisan**	**3.33**	**34**	Pg	**Pb**	**15 14 50.5**	**+0.7**
	5.5nm,0.2s							
ZSN				Pg	**Pg**	**15 14 52.3**	**-2.1**
	4.0nm,0.3s							
ZSN				Lg	Lg	15 15 34.0		
	8.1nm,0.5s							
ZSN				Lg	Lg	15 15 35.3		
	7.9nm,0.4s							
CHKK	**Chushkaly**	**3.81**	**259**	*e*P	**Pb**	**15 14 58.5**	**+0.6**
	1.8nm,0.3s							
CHKK				*e*S	**Sg**	**15 15 47.9**	**-4.9**
	11nm,0.3s							
KOTS	**Kotyrbulak**	**3.92**	**250**	Pg	**Pg**	**15 15 02.4**	**-3.4**
KOTS				Lg	Lg	15 15 52.7		
MDOK	**Medeo**	**4.00**	**249**	*e*P	**Pg**	**15 15 05.2**	**-2.0**
	5.4nm,0.4s							
MDOK				*e*S	**Sg**	**15 15 59.0**	**0.0**
	6.3nm,0.3s							
MDOK	**Medeo**	**4.00**	**249**	⇑Pn	**Pn**	**15 14 55.0**	**+3.0**
	1.0nm,0.3s							
MDOK				⇑Pg	**Pg**	**15 15 04.0**	**-3.2**
	4.3nm,0.5s							
MDOK				⇑Lg	Lg	15 15 54.9		
	5.9nm,0.7s							
KTBS	**Karatobe**	**4.06**	**258**	Pg	**Pb**	**15 15 03.5**	**+1.3**
	1.5nm,0.3s							
KTBS				Lg	Lg	15 15 55.0		
	9.3nm,0.5s							
TNSS	**Tian-Shan**	**4.12**	**248**	*e*P	**Pb**	**15 15 04.8**	**+1.3**
	1.8nm,0.3s							
TNSS				*e*S	**Sg**	**15 15 58.5**	**-4.3**
	5.9nm,0.3s							
TNSS	**Tian-Shan**	**4.12**	**248**	Pg	**Pb**	**15 15 04.8**	**+1.3**
	1.8nm,0.3s							
TNSS				Lg	Lg	15 15 58.5		
	5.9nm,0.3s							
KUU	**Kurty**	**4.25**	**261**	*e*P	**Pb**	**15 15 06.8**	**+1.3**
	3.3nm,0.3s							
KUU				*e*S	**Sg**	**15 16 02.5**	**-4.6**
	12nm,0.3s							
KUU	**Kurty**	**4.25**	**261**	Pg	**Pb**	**15 15 06.8**	**+1.3**
	3.3nm,0.3s							
KUU				Lg	Lg	15 16 02.5		
	12nm,0.3s							
DGS	**Degeres**	**4.83**	**255**	Pg	**Pg**	**15 15 18.8**	**-4.3**
	2.2nm,0.3s							
DGS				Lg	Lg	15 16 21.0		
	12nm,0.6s							
KURBB	**Kurchatov Arra**	**6.41**	**339**	⇑Sn	**Sn**	**15 16 44.0**	**+5.9**
	1.6nm,0.5s							
KURBB				⇓Lg	Lg	15 17 17.8		

IDC ***27*** *15:23:29.2±1.5,37˚.78N×20˚.96E,h0km,mb3.7/8, mb1 3.7/8,mb1mx3.5/41,mbtmp3.7/8,MS2.3/1,Ms1 2.3/1, ms1mx2.1/40,Error ellipse: s-maj=46.5km s-min=26.4km az=132.0*

ATH ***27*** *15:23:31.6,37˚.61N×20˚.89E,h17km±1km,ML3.2/26,Error ellipse: s-maj=1.6km s-min=0.7km az=29.0*

THE ***27*** *15:23:32.5,37˚.66N×20˚.92E,h18km,ML3.2/10,Error ellipse: s-maj=1.0km s-min=0.5km az=214.0*

ISC 27 15:23:31.9±0.8,37˚.63N±0˚.03×20.88E±0˚.02,h23km±5km, n90,σ1§26/133,mb3.6/8,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRI1	**kERI**	**0.06**	**299**	P	**Pb**	**15 23 36.2**	**+0.1**
KRI1				S	**Sb**	**15 23 38.9**	**+0.1**
ZAK2	**Zakynthos**	**0.16**	**5**	P	**Pb**	**15 23 36.3**	**-0.6**
ZAK2				S	**Sb**	**15 23 39.6**	**-0.6**
VLMS	**Volimes, Zakyn**	**0.30**	**324**	P	**Pb**	**15 23 38.9**	**0.0**
VLMS				S	**Sb**	**15 23 44.0**	**+0.4**
VLMS				AML	AML	15 23 47.3	
	comp=N,34582μm,0.2s						
VLMS				AML	AML	15 23 48.5	
	comp=E,39139μm,0.2s						
VTN	**Vitineika**	**0.37**	**40**	P	**Pb**	**15 23 39.5**	**-0.4**
VTN				S	**Sb**	**15 23 45.7**	**+0.3**
VTN	**Vitineika**	**0.37**	**40**	P	**Pb**	**15 23 39.5**	**-0.4**
VTN				S	**Sb**	**15 23 45.9**	**+0.5**
KFL	**Anninata**	**0.48**	**351**	P	**Pb**	**15 23 41.5**	**-0.3**
KFL				S	**Sb**	**15 23 48.9**	**+0.4**
	comp=E,14μm,0.2s						
KFL	**Anninata**	**0.48**	**351**	P	**Pb**	**15 23 41.7**	**-0.1**
KFL				S	**Sb**	**15 23 48.9**	**+0.4**
KFL				AML	AML	15 23 49.9	
	comp=N,28001μm,0.2s						
KFL				AML	AML	15 23 50.5	
	comp=E,27489μm,0.2s						
VLS	**Valsamata**	**0.59**	**337**	P	**Pb**	**15 23 43.4**	**-0.3**
VLS				S	**Sb**	**15 23 52.7**	**+1.1**
	comp=E,5μm,0.1s						
VLS	**Valsamata**	**0.59**	**337**	P	**Pb**	**15 23 43.4**	**-0.3**
VLS				S	**Sb**	**15 23 52.6**	**+0.9**
VLS				AML	AML	15 23 53.8	
	comp=N,13896μm,0.1s						
VLS				AML	AML	15 23 53.9	
	comp=E,9204μm,0.2s						
RLS	**Riolos of Patr**	**0.63**	**47**	P	**Pb**	**15 23 43.1**	**-1.1**
RLS				S	**Sb**	**15 23 52.3**	**-0.3**
	comp=E,4μm,0.2s						
RLS	**Riolos of Patr**	**0.63**	**47**	P	**Pb**	**15 23 43.4**	**-0.8**
RLS				S	**Sb**	**15 23 52.6**	**0.0**
RLS				AML	AML	15 23 53.6	
	comp=E,5420μm,0.2s						
RLS				AML	AML	15 23 53.8	
	comp=N,9691μm,0.3s						
ARGA	**Argostoli. Kep**	**0.63**	**330**	P	**Pb**	**15 23 44.4**	**+0.1**
ARGA				S	**Sn**	**15 23 54.7**	**-0.1**
AMT	**Artemida-Makis**	**0.66**	**98**	P	**Pb**	**15 23 44.3**	**-0.6**
AMT				S	**Sb**	**15 23 54.3**	**+0.6**
	comp=N,4μm,0.5s						
AMT	**Artemida-Makis**	**0.66**	**98**	P	**Pb**	**15 23 44.7**	**-0.2**
AMT				S	**Sb**	**15 23 54.3**	**+0.6**
AMT				AML	AML	15 23 57.2	
	comp=N,9110μm,0.6s						
AMT				AML	AML	15 23 58.9	
	comp=E,5635μm,0.4s						
LXRA	**Lixouri, Kepha**	**0.67**	**328**	P	**Pb**	**15 23 45.1**	**+0.2**
LXRA				S	**Sn**	**15 23 55.7**	**0.0**
KEF3	**Kipouria, Keph**	**0.71**	**324**	P	**Pb**	**15 23 46.1**	**+0.4**
KEF3				S	**Sn**	**15 23 57.0**	**+0.2**
KEF4	**Livadi, Kephal**	**0.72**	**330**	P	**Pn**	**15 23 46.6**	**-0.1**
KEF4				S	**Sn**	**15 23 57.8**	**+0.8**
DRO	**Drossia**	**0.73**	**64**	P	**Pb**	**15 23 45.2**	**-0.8**
DRO	**Drossia**	**0.73**	**64**	P	**Pb**	**15 23 45.6**	**-0.4**
DRO				S	**Sn**	**15 23 56.6**	**-0.6**
DRO				AML	AML	15 23 59.9	
	comp=N,7902μm,0.6s						
DRO				AML	AML	15 24 00.0	
	comp=E,10820μm,0.6s						
AGT1	**Agia Thekli**	**0.73**	**327**	P	**Pb**	**15 23 46.0**	**0.0**
AGT1				S	**Sn**	**15 23 57.3**	**0.0**
VSK1	**VASILIKIADES**	**0.81**	**342**	P	**Pb**	**15 23 47.2**	**-0.2**
FSK	**Fiskardo**	**0.86**	**343**	P	**Pb**	**15 23 47.8**	**-0.5**
FSK	**Fiskardo**	**0.86**	**343**	P	**Pb**	**15 23 47.7**	**-0.6**
FSK				S	**Sn**	**15 24 00.3**	**-0.2**
FSK				AML	AML	15 24 02.7	
	comp=N,2425μm,0.2s						
FSK				AML	AML	15 24 06.4	
	comp=E,4921μm,0.2s						
ITM	**Ithomi**	**0.94**	**118**	P	**Pn**	**15 23 50.0**	**+0.2**
ITM	**Ithomi**	**0.94**	**118**	P	**Pn**	**15 23 49.9**	**+0.1**
ITM				AML	AML	15 24 10.9	
	comp=E,1456μm,0.4s						
ITM				AML	AML	15 24 11.9	
	comp=N,1617μm,0.8s						
PDO	**Prodromos**	**0.99**	**14**	P	**Pb**	**15 23 50.1**	**-0.4**
PDO	**Prodromos**	**0.99**	**14**	P	**Pb**	**15 23 50.2**	**-0.2**
PDO				S	**Sn**	**15 24 05.1**	**+1.3**
PDO				AML	AML	15 24 07.6	
	comp=E,7877μm,0.3s						
PDO				AML	AML	15 24 07.7	
	comp=N,9906μm,0.3s						
EVGI	**Lefkada island**	**1.00**	**350**	P	**Pb**	**15 23 50.2**	**-0.4**
EVGI	**Lefkada island**	**1.00**	**350**	P	**Pb**	**15 23 50.3**	**-0.4**
EVGI				S	**Sn**	**15 24 05.3**	**+1.3**
PYL	**PYLOS**	**1.00**	**137**	P	**Pn**	**15 23 50.7**	**+0.1**
PYL				AML	AML	15 24 17.0	
	comp=E,929μm,0.4s						
PYL				AML	AML	15 24 18.5	
	comp=N,680μm,0.6s						
MGNA	**Meganis**	**1.02**	**356**	P	**Pn**	**15 23 50.5**	**-0.3**
MGNA				S	**Sn**	**15 24 05.5**	**+1.0**
MGNA				AML	AML	15 24 06.7	
	comp=N,1512μm,0.1s						
MGNA				AML	AML	15 24 09.9	
	comp=E,2040μm,0.3s						
LAKA	**Lakka**	**1.06**	**55**	P	**Pn**	**15 23 51.1**	**-0.3**
KLV	**Kalavryta, Ach**	**1.08**	**67**	P	**Pn**	**15 23 51.5**	**-0.2**
KLV				S	**Sn**	**15 24 05.8**	**-0.3**
KLV	**Kalavryta, Ach**	**1.08**	**67**	P	**Pn**	**15 23 51.5**	**-0.2**
KLV				S	**Sn**	**15 24 08.4**	**+2.3**
KLV				AML	AML	15 24 14.8	
	comp=N,964μm,0.4s						
KLV				AML	AML	15 24 16.6	
	comp=E,769μm,0.7s						
PVO	**Paravola**	**1.10**	**27**	P	**Pb**	**15 23 52.0**	**-0.4**
PVO				S	**Sn**	**15 24 06.9**	**+0.4**
	comp=E,1μm,0.3s						
PVO	**Paravola**	**1.10**	**27**	P	**Pb**	**15 23 52.3**	**-0.1**
PVO				S	**Sn**	**15 24 09.6**	**+3.1**
PVO				AML	AML	15 24 15.2	
	comp=E,2769μm,0.3s						
PVO				AML	AML	15 24 15.5	
	comp=N,2513μm,0.4s						
TRIP	**Tripoli**	**1.11**	**95**	P	**Pb**	**15 23 52.3**	**-0.1**
TRIP				S	**Sn**	**15 24 07.7**	**+1.0**
TRIP				AML	AML	15 24 14.1	
	comp=E,1134μm,0.5s						
TRIP				AML	AML	15 24 15.8	
	comp=N,1078μm,0.5s						
EFP	**Efpalio**	**1.13**	**45**	P	**Pn**	**15 23 52.1**	**-0.2**
ALIK	**Aliki, Aigiali**	**1.16**	**57**	P	**Pb**	**15 23 52.7**	**-0.5**
LKD2	**Lefkada island**	**1.17**	**351**	P	**Pb**	**15 23 53.2**	**-0.3**
LKD2	**Lefkada island**	**1.17**	**351**	P	**Pb**	**15 23 53.2**	**-0.3**
LKD2				S	**Sn**	**15 24 10.6**	**+2.5**
LKD2				AML	AML	15 24 15.0	
	comp=E,2512μm,0.4s						
LKD2				AML	AML	15 24 17.7	
	comp=N,1916μm,0.3s						
TRIZ	**Trizonia**	**1.19**	**52**	P	**Pn**	**15 23 53.0**	**-0.2**
TRIZ				S	**Sb**	**15 24 09.4**	**+0.6**
	comp=N,868nm,0.5s						
TSLK	**Tsoukalades, L**	**1.20**	**351**	P	**Pn**	**15 23 53.5**	**+0.1**
TSLK				S	**Sb**	**15 24 10.4**	**+1.2**
	comp=N,1μm,0.5s						
TSLK	**Tsoukalades, L**	**1.20**	**351**	P	**Pb**	**15 23 54.1**	**+0.1**
SERG	**Sergoula**	**1.21**	**50**	P	**Pn**	**15 23 53.0**	**-0.5**
SERG				S	**Sb**	**15 24 09.4**	**0.0**
	comp=N,960nm,0.4s						
SERG	**Sergoula**	**1.21**	**50**	P	**Pn**	**15 23 53.4**	**-0.1**
SERG				AML	AML	15 24 20.9	
	comp=N,2006μm,0.5s						
SERG				AML	AML	15 24 21.6	
	comp=E,1774μm,0.3s						
VLX	**Vlachokerasia**	**1.22**	**102**	P	**Pb**	**15 23 53.9**	**-0.4**
VLX	**Vlachokerasia**	**1.22**	**102**	P	**Pb**	**15 23 54.4**	**+0.1**
VLX				S	**Sb**	**15 24 10.6**	**+0.9**
VLX				AML	AML	15 24 17.5	
	comp=N,1430μm,0.5s						
VLX				AML	AML	15 24 22.5	
	comp=E,1262μm,0.5s						
KALE	**Kalithea**	**1.25**	**52**	P	**Pn**	**15 23 53.8**	**-0.2**
KALE				S	**Sb**	**15 24 10.0**	**-0.5**
	comp=E,852nm,0.5s						
ANX	**Ano Chora**	**1.26**	**40**	P	**Pn**	**15 23 54.2**	**0.0**
ANX	**Ano Chora**	**1.26**	**40**	P	**Pb**	**15 23 54.5**	**-0.6**
ANX				AML	AML	15 24 20.8	
	comp=N,3577μm,0.6s						
ANX				AML	AML	15 24 22.1	
	comp=E,1966μm,0.5s						
EVR	**Evrytania**	**1.47**	**29**	P	**Pn**	**15 23 56.4**	**-0.8**
EVR				S	**Sn**	**15 24 15.3**	**-0.5**
	comp=E,435nm,0.6s						
EVR	**Evrytania**	**1.47**	**29**	P	**Pb**	**15 23 58.9**	**+0.1**
EVR				S	**Sb**	**15 24 21.1**	**+4.0**
EVR				AML	AML	15 24 26.9	
	comp=N,716μm,0.5s						
EVR				AML	AML	15 24 28.4	
	comp=E,1055μm,0.7s						
DLFA	**Delphi**	**1.53**	**56**	P	**Pb**	**15 24 01.0**	**+1.5**
LTK	**Loutraki**	**1.69**	**76**	P	**Pb**	**15 24 03.2**	**+0.8**
LTK				AML	AML	15 24 32.8	
	comp=N,564μm,0.5s						
LTK				AML	AML	15 24 38.5	
	comp=E,928μm,0.7s						
AGG	**Agios Georgios**	**1.79**	**39**	P	**Pb**	**15 24 04.0**	**-0.2**
AGG				AML	AML	15 24 39.8	
	comp=E,412μm,1.0s						
AGG				AML	AML	15 24 41.0	
	comp=N,491μm,0.8s						
KRND	**KRANIDI**	**1.82**	**97**	P	**Pb**	**15 24 03.1**	**-1.5**
DID	**Didima**	**1.87**	**93**	P	**Pb**	**15 24 05.1**	**-0.4**
DID				AML	AML	15 24 38.2	
	comp=N,494μm,0.6s						
DID				AML	AML	15 24 46.5	
	comp=E,725μm,0.8s						
VLI	**Velíai**	**1.88**	**118**	P	**Pb**	**15 24 05.7**	**+0.2**
IGT	**Igoumenitsa**	**1.95**	**347**	P	**Pb**	**15 24 06.6**	**-0.1**
IGT				S	**Sb**	**15 24 32.6**	**+2.1**
LKR	**Lokris**	**1.95**	**58**	P	**Pb**	**15 24 07.0**	**+0.2**
THL	**Klokotos Trika**	**2.12**	**24**	P	**Pb**	**15 24 09.5**	**-0.2**
VLY	**Voula,Athens**	**2.32**	**84**	P	**Pb**	**15 24 11.3**	**-1.7**
KPRO	**Kipourio**	**2.35**	**9**	P	**Pb**	**15 24 13.0**	**-0.6**
KPRO				AML	AML	15 24 59.2	
	comp=E,309μm,0.7s						
KPRO				AML	AML	15 25 01.3	
	comp=N,368μm,0.6s						
DION	**Dionisos Attik**	**2.45**	**79**	P	**Pb**	**15 24 13.1**	**-2.2**
DION				S	**Sb**	**15 24 44.3**	**-0.9**
DION				AML	AML	15 24 48.0	
	comp=E,830μm,0.4s						
DION				AML	AML	15 24 58.3	
	comp=N,629μm,1.2s						
XOR	**Xorichti**	**2.50**	**46**	P	**Pb**	**15 24 14.0**	**-2.2**
XOR				S	**Sb**	**15 24 46.4**	**-0.2**
KYMI	**Kymi, Euboea I**	**2.73**	**68**	P	**Pn**	**15 24 16.8**	**+2.5**
LIT	**Litokhoron**	**2.77**	**26**	P	**Pn**	**15 24 17.0**	**+2.2**
AOS	**Alonnisos**	**2.81**	**56**	P	**Pn**	**15 24 17.8**	**+2.3**
AOS				S	**Sb**	**15 24 51.6**	**-3.8**
AOS				AML	AML	15 24 55.5	
	comp=N,190μm,0.6s						
AOS				AML	AML	15 24 56.5	
	comp=E,142μm,0.5s						
PLG	**Polygyros**	**3.39**	**35**	P	**Pn**	**15 24 25.5**	**+2.1**
CHOS	**Chios island**	**4.15**	**78**	P	**Pn**	**15 24 36.4**	**+2.5**
STIP	**Stip**	**4.18**	**14**	*i* Pn	**Pn**	**15 24 36.4**	**+2.1**
STIP	**Stip**	**4.18**	**14**	*i* Pn	**Pn**	**15 24 36.4**	**+2.1**
DBRK	**Dubrovnik**	**5.45**	**338**	*e*Pn	**Pn**	**15 24 52.2**	**+0.5**
DBRK				Sn	**Sn**	**15 25 51.1**	**-2.6**
STON	**Ston**	**5.77**	**336**	*e*Pn	**Pn**	**15 24 55.8**	**-0.3**
STON				Sn	**Sn**	**15 25 58.7**	**-2.9**
MAKA	**Makarska**	**6.37**	**334**	Sn	**Sn**	**15 26 14.0**	**-2.3**
RICI	**Ricice**	**6.51**	**335**	*i* Pn	**Pn**	**15 25 05.4**	**-1.0**
RICI				Sn	**Sn**	**15 26 17.1**	**-2.8**
KIJV	**Kijevo**	**7.21**	**333**	*e*Pn	**Pn**	**15 25 16.7**	**+0.7**
ZIRJ	**Zirje**	**7.21**	**328**	*e*Pn	**Pn**	**15 25 15.3**	**-0.6**
ZIRJ				Sn	**Sn**	**15 26 33.2**	**-3.8**
DUGI	**Dugi Otok**	**7.74**	**327**	*e*Pn	**Pn**	**15 25 26.1**	**+3.0**
DUGI				Sn	**Sn**	**15 26 47.1**	**-2.9**
BRTR	**Keskin Array B**	**10.19**	**74**	LR	LR	15 29 55.3	
	comp=E,14nm,18.3s,baz=104,slow=38						
FINES	**FINESS Array B**	**24.06**	**6**	P	**P**	**15 28 43.9**	**-1.2**
	comp=E,1.0nm,0.7s,baz=187,slow=11,SNR=3.6						
AKTO	**Aktyubinsk**	**29.28**	**52**	P	**P**	**15 29 31.0**	**-1.3**
	comp=E,0.7nm,0.4s,baz=257,slow=18,SNR=2.1						
TORD	**Torodi Ar. Bea**	**29.79**	**220**	P	**P**	**15 29 39.1**	**+2.0**
	comp=E,0.3nm,0.6s,baz=32,slow=8.5,SNR=1.8						
ARCES	**ARCESS Array B**	**32.06**	**3**	P	**P**	**15 29 56.4**	**-0.1**
	comp=E,1.2nm,1.0s,baz=196,slow=8.6,SNR=4.6						
BVAR	**Borovoye Array**	**37.25**	**49**	P	**P**	**15 30 41.9**	**+0.3**
	comp=E,0.4nm,0.5s,baz=269,slow=8.7,SNR=4.6						
KURBB	**Kurchatov Arra**	**42.33**	**53**	P	**P**	**15 31 23.9**	**+0.1**
	comp=E,0.5nm,0.5s,baz=280,slow=8.9,SNR=4.9						
MKAR	**Makanchi Array**	**45.34**	**58**	P	**P**	**15 31 47.6**	**-0.6**
	comp=E,0.4nm,0.4s,baz=280,slow=6.5,SNR=9.6						
ZALV	**Zalesovo Beam**	**45.84**	**48**	P	**P**	**15 31 51.6**	**-0.3**
	comp=E,1.3nm,0.4s,baz=270,slow=8.3,SNR=6.1						
MJAR	**Matsushiro Arr**	**86.16**	**46**	LR	LR	16 17 01.6	
	comp=E,291nm,20.0s,baz=100,slow=37						

KRNET ***27*** *16:03:04.9±0.1,39˚.30N×74˚.65E,mb2.8*

SOME ***27*** *16:03:05.8,39˚.52N×73˚.32E,h5km*

ISC 27 16:03:14.2±2.5,39˚.6N±0˚.1×73˚.7E±0˚.07,h10km,n8, σ1§63/16,6C-1D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARSB	**Arslanbob**	**1.86**	**341**	⇑*i*P	**Pn**	**16 03 44.1**	**-2.2**
	baz=28						
ARSB				⇑*i*S	**Sb**	**16 04 12.8**	**+1.1**
	baz=28						
BTK	**Batken**	**2.33**	**283**	⇑*i*P	**Pn**	**16 03 53.4**	**+0.7**
	baz=86						
BTK				⇑*i*S	**Sg**	**16 04 28.7**	**-0.4**
	baz=86						
ARK	**Arkit**	**2.62**	**329**	⇑*i*P	**Pn**	**16 03 55.7**	**-1.0**
	baz=21						
ARK				⇑*i*S	**Sb**	**16 04 32.5**	**-1.2**
	baz=21						
MRKS	**Merke**	**3.20**	**353**	*e*P	**Pn**	**16 04 06.9**	**+2.2**
	4.2nm,0.3s						
MRKS				*e*S	**Sb**	**16 04 49.6**	**-0.8**
	12nm,0.4s						
IUG	**Iuzhnay**	**3.83**	**313**	*e*P	**Pn**	**16 04 13.2**	**-0.2**
	1.0nm,0.1s						
IUG				*e*S	**Sn**	**16 05 00.2**	**+1.6**
	12nm,0.4s						
KST	**Kastek**	**3.85**	**25**	*e*P	**Pb**	**16 04 18.9**	**-3.4**
	2.6nm,0.4s						
KST				*e*S	**Sb**	**16 05 10.2**	**+1.3**
	4.7nm,0.3s						
DGS	**Degeres**	**3.97**	**22**	*e*P	**Pb**	**16 04 25.9**	**+1.6**
	3.2nm,0.5s						
DGS				*e*S	**Sg**	**16 05 21.8**	**+0.1**
	4.3nm,0.6s						
KK31	**Karatay Array**	**4.30**	**326**	Pn	**Pn**	**16 04 19.6**	**-0.2**
	0.3nm,0.2s,baz=139,slow=15,SNR=6.7						
KK31				⇓Sn	**Sn**	**16 05 11.4**	**+1.3**
	0.8nm,0.3s,baz=136,slow=23,SNR=3.7						

NIED ***27*** *16:12:00,32˚.60N×140˚.80E,h59km,Mw4.9 Best double couple: M0 2.24000×10^16 NP1:ϕs40.00000°,δ48.00000°, λ112.00000°. NP2:ϕs188.00000°,δ46.00000°,λ67.00000°.*

IDC ***27*** *16:12:09.0±1.0,32˚.48N×140˚.60E,h62km±7km,mb4.8/29, mb1 4.9/32,mb1mx4.9/35,mbtmp5.1/32,MS3.8/32, Ms1 3.8/32,ms1mx3.7/39,Error ellipse: s-maj=12.0km s-min=9.2km az=98.0*

MOS ***27*** *16:12:08.1±0.9,32˚.48N×140˚.64E,h70km,mb5.5/58, MS4.0/6,Error ellipse: s-maj=6.2km s-min=3.7km az=107.0*

BGR ***27*** *16:12:08.8±0.0,32˚.60N×141˚.65E,h77km±6km,mb5.4*

BJI ***27*** *16:12:09.2±0.0,32˚.50N×

29µm,0.3s,baz=74,slow=7.7,SNR=46
JMKN Mikurajimanish 1.65 327 ⇓P Pn 16 12 36.3 -0.5
JMKN S **Sn 16 12 56.5 -0.8**
JKO Kozu shima 2.11 323 ⇓P Pn 16 12 43.2 +0.3
JKO S **Sn 16 13 08.6 +0.4**
BSO1 Boso 1 2.16 7 P Pn 16 12 41.4 -1.7
BSO1 S **Sn 16 13 06.6 -2.1**
JSKK Shikinejimakit 2.19 327 ⇓P Pn 16 12 44.1 0.0
BSO3 Boso 3 2.29 357 P Pn 16 12 44.0 -1.2
BSO3 S **Sn 16 13 10.7 -1.6**
JTHY Toshimahigashi 2.32 331 P Pn 16 12 45.9 +0.1
JIM2 Oshima 3 2.43 335 P Pn 16 12 46.9 -0.5
JIM2 S **Sn 16 13 14.2 -2.0**
BSO4 Boso 4 2.49 354 ⇑P Pn 16 12 47.1 -0.9
JIZS Izushimoda 2.66 326 ⇓P Pn 16 12 51.1 +0.7
JIZS S **Sn 16 13 21.7 +0.1**
JKUC kamogawauchiur 2.67 352 ⇑P Pn 16 12 49.4 -1.2
JKUC S **Sn 16 13 19.8 -2.2**
TK02 Tokai 2 2.83 301 ⇓P Pn 16 12 54.0 +1.5
AJI Ajiro2 2.85 333 ⇓P Pn 16 12 53.0 0.0
TK04 Tokai 4 2.99 310 P Pn 16 12 56.4 +1.6
JSG Sagara 2.99 317 ⇓P Pn 16 12 56.8 +1.9
JOD2 Odawara 2 3.05 335 P Pn 16 12 55.6 -0.1
JOD2 S **Sn 16 13 28.6 -2.4**
JFNN Fujinakano 3.15 329 ⇓P Pn 16 12 58.4 +1.4
JFNN S **Sn 16 13 34.4 +1.0**
JKKS Kakegawashinom 3.16 316 ⇓P Pn 16 12 58.8 +1.6
SHZ3 Shizuoka 3 3.27 322 P Pn 16 13 00.3 +1.6
JSGW Sagamiharawaka 3.32 339 ⇑P Pn 16 12 58.9 -0.4
HMMJ Hamamatsu 2 3.39 315 ⇓P Pn 16 13 01.6 +1.3
TTO1 TONANKAI O.B.S 3.44 290 ⇓P Pn 16 13 02.2 +1.5
JYN Shimob 3.46 330 ⇓P Pn 16 13 02.8 +1.4
JYZW Yoshizawa 3.48 316 P Pn 16 13 02.9 +1.3
JSSY Shinshiroyabe 3.56 313 P Pn 16 13 04.0 +1.4
JAA Atsumi 3.62 307 ⇓P Pn 16 13 04.7 +1.2
JNY Yasuok 3.68 321 ⇓P Pn 16 13 06.2 +1.9
JRY Ryogami san 3.79 338 P Pn 16 13 06.4 +0.5
JIE Ise 3.80 301 ⇓P Pn 16 13 07.3 +1.3
JAO Obara 3.95 315 ⇓P Pn 16 13 09.7 +1.7
JNT Takato 3.96 329 P Pn 16 13 10.1 +1.9
JNT S **Sn 16 13 57.6 +4.2**
JKN2 Miekihoku 4.06 296 ⇓P Pn 16 13 11.0 +1.6
JHO Hitachi 4.10 359 P Pn 16 13 08.3 -1.6
JMMH Miemihama 4.10 290 ⇓P Pn 16 13 11.4 +1.4
JGF Kuroka 4.13 319 ⇓P Pn 16 13 12.7 +2.2
INU Inuyama 4.15 314 Pn 16 13 12.3 +1.6
TSUJ Tsu 2 4.17 303 ⇓P Pn 16 13 12.6 +1.7
JEG Eigenji 4.42 308 ⇓P Pn 16 13 16.5 +2.1
JYTA Yamagatataniai 4.49 314 ⇓P Pn 16 13 17.3 +2.1
MJAR Matsushiro Arr 4.51 334 P Pn 16 13 16.1 +0.5
16nm,0.3s,baz=147,slow=13,SNR=570
MJAR S **Sn 16 14 07.8 +1.1**
12nm,0.3s,baz=307,slow=12,SNR=10
MAJO Matsushiro 4.51 334 P Pn 16 13 16.1 +0.5
MAJO Matsushiro 4.51 334 Pn 16 13 16.1 +0.5
MAT Matsushiro 4.51 334 P Pn 16 13 16.2 +0.6
MAT S **Sn 16 14 05.9 -0.8**
MJB9 Matsu-Tunnel 4.51 334 Pn 16 13 16.3 +0.7
JHE Heguri 4.67 299 ⇓P Pn 16 13 19.7 +1.9
JFM Mihama 4.92 309 ⇓P Pn 16 13 23.1 +1.9
JWT Wachi 5.18 304 ⇓P Pn 16 13 26.9 +2.2
JKG Kaga 5.19 318 P Pn 16 13 27.7 +2.8
JMIK Miki 5.21 298 ⇓P Pn 16 13 27.6 +2.5
JKS Kasai 5.44 299 P Pn 16 13 30.4 +2.1
JCJ Chichijima 5.55 166 P Pn 16 13 26.7 -3.2
65nm,0.3s,baz=83,slow=12,SNR=40
JCJ S **Sn 16 14 27.3 -5.0**
88nm,0.3s,baz=81,slow=22,SNR=6.4
JKY Yasaka 5.57 306 P Pn 16 13 32.0 +2.0
JKSM Kasumi 5.85 303 ⇓P Pn 16 13 35.8 +1.9
JJS Sakaide 5.93 290 ⇓P Pn 16 13 37.2 +2.2
JAD Aida 5.93 296 P Pn 16 13 37.2 +2.2
JIO Ouri 5.96 5 ⇑P Pn 16 13 32.4 -3.0
JMK Ichinoseki 6.45 4 P Pn 16 13 39.3 -2.7
JNA Nagahama 6.95 281 P Pn 16 13 51.4 +2.4
JOM Ohasama 6.97 4 ⇑P Pn 16 13 46.3 -2.9
JTSN Tsuno 7.75 271 P Pn 16 14 02.0 +2.1
JKIT Kitakata 7.78 273 P Pn 16 14 03.0 +2.8
JNU Nakatsue 8.26 277 P Pn 16 14 09.9 +3.1
22nm,0.3s,baz=83,slow=7.5,SNR=178
JNU LR LR 16 17 16.9
comp=Z,1µm,20.8s,baz=98,slow=38
JNU Nakatsue 8.26 277 P Pn 16 14 09.9 +3.1
JNU Nakatsue 8.26 277 Pn 16 14 09.6 +2.7
JMTN Minamitane 8.60 258 P Pn 16 14 15.8 +4.3
JKC Kuchinoerabu 9.17 260 P Pn 16 14 23.0 +3.8
JTU Tsushima 9.62 285 P Pn 16 14 27.6 +2.3
ERM Erimo 9.70 11 *ceP* Pn 16 14 22.0 -4.4
ERM pmax pmax
comp=Z,113nm,1.0s
ERM Erimo 9.70 11 Pn 16 14 22.3 -4.1
KSRS Korea Array 11.55 299 P Pn 16 14 55.2 +3.5
comp=Z,2.5nm,0.3s,baz=116,slow=14,SNR=65
KSRS LR LR 16 19 30.5
comp=Z,666nm,19.5s,baz=112,slow=38
KSRS PcP **PcP 16 20 38.1 +0.8**
comp=Z,0.1nm,0.3s,baz=146,slow=0.6,SNR=4.3
NMR Nemuro--Hokkai 11.56 19 *eP* Pn 16 14 45.8 -5.9
TJN Taejon 11.64 293 *iP* Pn 16 14 55.4 +2.5
ASAJ Asahikawa 11.69 7 P Pn 16 14 48.7 -4.9
comp=Z,9.4nm,0.3s,baz=223,slow=9.8,SNR=110
ASAJ S Sn 16 16 51.5 -11
comp=Z,3.4nm,0.3s,baz=29,slow=27,SNR=2.5
ASAJ Asahikawa 11.69 7 P Pn 16 14 49.2 -4.4
JKA Kamikawa-asahi 11.69 7 Pn 16 14 48.7 -4.9
JKA Sn 16 16 51.5 -11
JKA Kamikawa-asahi 11.69 7 Pn Pn 16 14 49.2 -4.4
GLVR Golovnino 11.85 17 *eP* Pn 16 14 49.6 -6.0
GLVR pmax pmax
comp=Z,47nm,0.6s
RUSJ Misakicho 12.12 16 *eP* Pn 16 14 54.6 -4.8
GRPR Tuman 12.15 18 *eP* Pn 16 14 55.1 -4.7
GRPR pmax pmax
comp=Z,94nm,0.2s
JOW Kunigami 12.16 245 P Pn 16 15 03.6 +3.5
comp=Z,1.5nm,0.3s,baz=87,slow=16,SNR=36
JOW Kunigami 12.16 245 P Pn 16 15 03.8 +3.7
JOW Kunigami 12.16 245 Pn 16 15 02.6 +2.5
YUK Yuzh-Kuril'sk 12.21 18 *eP* Pn 16 14 55.4 -5.2
YUK pmax pmax
comp=N,43nm,0.4s
YUK pmax pmax
comp=E,25nm,0.4s
YUK pmax pmax
comp=Z,111nm,0.4s
TEY Ternei 12.90 347 *eP* Pn 16 15 07.5 -2.5
USA0B Ussuriysk Arra 13.50 332 P Pn 16 15 18.9 +0.8
USA0B Ussuriysk Arra 13.50 332 Pn 16 15 18.9 +0.8
USRK Ussuriysk Ar. 13.50 332 P Pn 16 15 18.9 +0.9
baz=134,slow=12,SNR=11
USRK LR LR 16 20 26.7
comp=Z,344nm,18.9s,baz=137,slow=37
KUR Kuril'sk 13.88 22 *eP* Pn 16 15 19.0 -4.0
KUR pmax pmax
comp=Z,31nm,0.3s
KUR pmax pmax
comp=N,10.0nm,0.2s
KUR pmax pmax
comp=E,17nm,0.2s
YSS Yuzh-Sakhalins 14.52 6 *eP* Pn 16 15 26.2 -5.1
YSS pmax pmax
comp=Z,70nm,0.9s
YSS MLR MLR
comp=Z,400nm,18.0s
YSS Yuzh-Sakhalins 14.52 6 Pn 16 15 26.6 -4.7
MDJ Mudanjiang 14.85 328 P Pn 16 15 36.8 +1.1
MDJ pmax pmax
comp=Z,8.0nm,1.2s
MDJ pmax pmax
comp=Z,130nm,5.1s
MDJ Mudanjiang 14.85 328 Pn Pn 16 15 35.5 -0.2
JISG Ishigakijimahi 16.38 245 P P 16 15 59.3 +2.6
UGL Uglegorsk 16.59 3 ⇑*iP* P 16 15 59.0 +0.2
UGL pmax pmax
comp=Z,160nm,0.9s
UGL MLR MLR
comp=Z,1µm,17.0s
UGL MLR MLR
comp=N,700nm,15.0s
UGL MLR MLR
comp=E,600nm,12.0s
SSE Sheshan 16.62 270 P P 16 15 59.5 +0.2
SSE S **S 16 19 07.3 -2.0**
SSE pmax pmax
comp=E,13nm,0.7s
SSE pmax pmax
comp=E,79nm,3.8s
SSE LR LR
comp=E,170nm,15.4s
SSE LR LR
comp=E,180nm,21.2s
DL2 Dalian 16.71 298 P P 16 16 04.3 +4.0
DL2 pmax pmax
comp=E,51nm,0.8s
DL2 pmax pmax
comp=E,310nm,11.8s
DL2 LR LR
comp=E,240nm,14.8s
DL2 LR LR
comp=E,500nm,13.8s
DL2 LR LR
comp=E,510nm,17.2s
JKRS Kuro-shima 16.80 245 P P 16 16 03.9 +2.6
IRIF Iriomote-Funau 16.96 246 P P 16 16 04.6 +1.5
YOJ Yonaguni jima 17.45 247 P P 16 16 09.8 +1.3
YOJ pmax pmax
comp=Z,112nm,0.8s
YOJ Yonaguni jima 17.45 247 P P 16 16 09.8 +1.3
YOJ IAmb IAmb 16 16 12.2
comp=Z,112nm,0.8s
JYNG Yonagunijimaku 17.51 247 P P 16 16 10.7 +1.5
KLR Kul'dur 17.99 341 P P 16 16 14.4 +0.1
comp=Z,1.8nm,0.3s,baz=164,slow=12,SNR=18
KLR LR LR 16 23 08.4
comp=Z,127nm,21.6s,baz=153,slow=37
KLR Kul'dur 17.99 341 *ceP* P 16 16 12.0 -2.4
TATO Taipei 18.40 251 P P 16 16 18.0 -1.0
NJ2 Nanjing 18.45 274 *eP* Pn 16 16 21.5 +1.1
NJ2 pP **pP 16 16 32.3 -1.9**
NJ2 sP **sP 16 16 42.3 -1.1**
NJ2 S **S 16 19 44.8 -0.8**
NJ2 sS **sS 16 20 03.5 -6.1**
NJ2 pmax pmax
comp=Z,42nm,0.8s
NJ2 pmax pmax
comp=Z,140nm,4.4s
NJ2 LR LR
comp=Z,290nm,17.2s
NJ2 LR LR
comp=Z,400nm,23.0s
NJ2 LR LR
comp=Z,350nm,25.0s
GRNR Gornyy 18.52 351 ⇓*iP* P 16 16 19.9 -0.2
GRNR *eS* **S 16 19 44.6 -2.2**
GRNR pmax pmax
comp=Z,40nm,0.6s
GRNR MLR MLR
comp=Z,110nm,17.0s
YHNB Yeheng 18.63 250 P P 16 16 21.5 -0.1
NACB Ninganchiao 18.70 248 P P 16 16 22.5 +0.1
GUMO Guam 19.22 167 P P 16 16 28.7 +0.7
GUMO pmax pmax
comp=Z,550nm,0.9s
GUMO Guam 19.22 167 P P 16 16 28.7 +0.7
YULB Yu-li 19.34 247 P P 16 16 29.4 +0.1
SSLB Suanglung 19.41 248 P P 16 16 30.9 +0.8
TIA Tai'an 19.77 287 P Pn 16 16 36.5 +0.4
TIA pmax pmax
comp=Z,11nm,0.6s
TIA pmax pmax
comp=Z,46nm,2.7s
TIA LR LR
comp=Z,220nm,14.9s
TIA LR LR
comp=Z,830nm,15.9s
TIA LR LR
comp=Z,880nm,17.6s
TWG Pinlang 19.83 246 P P 16 16 34.8 +0.2
TWG IAmb IAmb 16 16 41.6
comp=Z,197nm,0.8s
TPUB Ta-pu 19.91 248 P P 16 16 36.4 +0.8
BJI Beijing 21.08 298 P P 16 16 51.3 +3.3
BJI sP **sP 16 17 11.5 -0.6**
BJI S **S 16 20 38.3 -0.2**
BJI pmax pmax
comp=Z,14nm,0.8s
BJI pmax pmax
comp=Z,53nm,3.7s
BJI LR LR
comp=Z,190nm,16.1s
BJI LR LR
comp=Z,310nm,18.9s
BJI LR LR
comp=Z,540nm,26.5s
SKR Severo-Kuril's 21.45 28 *eP* P 16 16 54.1 +2.3
SKR *eS* **S 16 20 47.7 +2.1**
SKR pmax pmax
comp=Z,100nm,4.0s
SKR pmax pmax
comp=Z,57nm,1.0s
SKR pmax pmax
comp=Z,300nm,2.9s
SKR MLR MLR
comp=Z,100nm,20.0s
WHN Wuhan 22.50 272 ⇓P P 16 17 02.8 -0.5
WHN S **S 16 20 57.0 -8.1**
WHN LR LR
comp=Z,1µm,19.0s
WHN LR LR
comp=Z,770nm,15.9s
WHN LR LR
comp=Z,1µm,24.5s
HIA Hailar 22.91 323 P P 16 17 06.1 -1.3
HIA pmax pmax
comp=Z,34nm,0.7s
HIA Hailar 22.91 323 P P 16 17 06.1 -1.3
ZEA Zeya 23.29 340 *eP* P 16 17 11.4 +0.4
ZEA *eS* **S 16 21 20.0 +2.5**
ZEA *e* 16 21 50.0
ZEA pmax pmax
comp=Z,200nm,2.0s
ZEA pmax pmax
comp=N,120nm,1.0s
ZEA pmax pmax
comp=E,47nm,1.0s
ZEA pmax pmax
comp=Z,160nm,0.8s
ZEA smax smax
comp=N,400nm,12.0s
ZEA MLR MLR
comp=N,200nm,14.0s
ZEA MLR MLR
comp=Z,300nm,14.0s
SZP Santa 23.54 236 P P 16 17 12.1 -1.5
PEA0B Petropavlovsk- 23.97 26 *ceP* P 16 17 15.2 -2.0
PEA0B Petropavlovsk- 23.97 26 P P 16 17 16.7 -0.4
PETK Petropavlovsk- 23.97 26 P P 16 17 17.8 +0.7
comp=Z,17nm,0.8s,baz=210,slow=10,SNR=43
PETK PcP **PcP 16 20 57.9 +0.5**
comp=Z,3.0nm,0.7s,baz=168,slow=4.2,SNR=6.8
PET Petropavlovsk 24.26 27 *eP* P 16 17 15.3 -4.4
PET *e**SP **sP 16 17 42.6 -2.1**
PET *eS* **S 16 21 27.9 -5.3**
PET pmax pmax
comp=Z,82nm,1.0s
PET MLR MLR
comp=Z,100nm,18.0s
PET Petropavlovsk 24.26 27 P P 16 17 18.9 -0.8
HHC Hu-ho-hao-te 24.69 298 *eP* P 16 17 23.3 -0.7
HHC pP pP 16 17 41.0 +0.1
HHC sP sP 16 17 48.0 -1.4
HHC PP **PnPn 16 18 00.8 +1.1**
HHC S **S 16 21 34.8 -5.8**
HHC SS **SnSn 16 22 38.5 +4.7**
HHC pmax pmax
comp=Z,13nm,0.8s
HHC pmax pmax
comp=Z,24nm,5.2s
HHC LR LR
comp=Z,240nm,13.7s
HHC LR LR
comp=Z,230nm,16.3s
HHC LR LR
comp=Z,280nm,18.7s
TGY Tagaytay City 25.68 229 P P 16 17 34.0 +0.9
comp=Z,120nm,0.6s,baz=94,slow=5.5,SNR=3.8
TGY LR LR 16 26 23.5
comp=Z,131nm,19.4s,baz=4.5,slow=33
BTO Baotou 25.81 297 *eP* P 16 17 34.8 +0.7
XAN Xi'an 26.53 282 P P 16 17 40.3 -0.4
XAN S **S 16 22 12.3 +2.6**
XAN pmax pmax
comp=Z,25nm,0.9s
XAN pmax pmax
comp=Z,130nm,4.7s
XAN LR LR
comp=Z,130nm,16.3s
XAN LR LR
comp=Z,180nm,18.4s
XAN LR LR
comp=Z,280nm,15.2s
XAN Xi'an 26.53 282 P P 16 17 40.2 -0.4
XAN pmax pmax
comp=Z,36nm,1.3s
XAN Xi'an 26.53 282 P P 16 17 40.2 -0.4
ENH Enshi 26.66 274 P P 16 17 41.0 -0.8
H11N2 WAKE ISLAND Hy 26.69 112 T T 16 46 38.6
baz=304,slow=75,SNR=328
H11N1 WAKE ISLAND Hy 26.69 112 T T 16 46 40.3
baz=304,slow=75,SNR=314
H11N3 WAKE ISLAND Hy 26.71 112 T T 16 46 39.8
baz=304,slow=75,SNR=349
H11S3 WAKE ISLAND Hy 27.23 114 T T 16 47 09.9
baz=305,slow=75,SNR=319
H11S1 WAKE ISLAND Hy 27.23 114 T T 16 47 08.0
baz=305,slow=75,SNR=299
H11S2 WAKE ISLAND Hy 27.25 114 T T 16 47 11.2
baz=305,slow=75,SNR=262
CIT Chita 27.72 323 *eP* P 16 17 50.4 -0.7
CIT *e* 16 18 08.2
CIT pmax pmax
comp=Z,59nm,1.4s
MA2 Magadan 27.90 11 P P 16 17 53.0 +0.4
comp=Z,34nm,0.8s,baz=191,slow=8.6,SNR=18
MA2 LR LR 16 30 38.9
comp=Z,96nm,18.3s,baz=210,slow=40
MA2 Magadan 27.90 11 *ceP* P 16 17 52.1 -0.5
MA2 pmax pmax
comp=Z,108nm,1.7s
MA2 Magadan 27.90 11 P P 16 17 52.2 -0.4
MA2 IAmb IAmb 16 17 54.1
comp=Z,78nm,1.1s
DAV Davao City (W) 28.94 212 LR LR 16 27 37.7
comp=Z,161nm,22.0s,baz=27,slow=32
ULN Ulaanbaatar 29.63 311 P P 16 18 09.5 +1.3
ULN Ulaanbaatar 29.63 311 *ceP* P 16 18 08.9 +0.7
ULN pmax pmax
comp=Z,15nm,0.8s
ULN Ulaanbaatar 29.63 311 P P 16 18 08.9 +0.7
ULN **PcP 16 21 11.8 +0.7**
SONM Songino Array 30.04 311 P P 16 18 13.3 +1.5
comp=Z,6.3nm,0.8s,baz=112,slow=8.5,SNR=35
SONM PcP **PcP 16 21 13.1 +0.9**
comp=Z,4.8nm,0.8s,baz=102,slow=3.5,SNR=4.7
SONM ScP **ScP 16 24 48.0 +0.2**
comp=Z,1.0nm,0.7s,baz=128,slow=4.4,SNR=4.1
SONM LR LR 16 30 52.7
comp=Z,472nm,18.5s,baz=110,slow=37
GYA Guiyang 30.12 267 ⇑*iP* P 16 18 12.0 -0.7
GYA pP pP 16 18 32.8 +3.1
GYA sP sP 16 18 41.0 +2.9
GYA PcP **PcP 16 21 14.0 +1.3**
GYA S **S 16 23 07.5 +1.1**
GYA sS sS 16 23 38.8 +3.5
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,60nm,5.6s
GYA LR LR
comp=Z,80nm,10.5s
GYA LR LR
comp=Z,210nm,15.3s
GYA LR LR
comp=Z,280nm,17.4s
YAK Yakutsk 30.38 350 *c iP* P 16 18 14.2 -0.3
YAK *e**PP **pP 16 18 35.4 +4.0**
YAK *e* 16 21 12.0
YAK *eS* **S 16 23 10.0 +0.6**
YAK *eSS* **ScP 16 24 49.2 +0.8**
YAK pmax pmax
comp=Z,57nm,0.9s
YAK pmax pmax
comp=N,27nm,0.9s
YAK pmax pmax
comp=E,7.0nm,0.8s
YAK pmax pmax
comp=Z,46nm,1.7s
YAK pmax pmax
comp=N,47nm,1.7s
YAK pmax pmax
comp=E,33nm,1.8s
YAK smax smax
comp=N,61nm,1.7s
YAK smax smax
comp=E,57nm,1.9s
YAK Yakutsk 30.38 350 P P 16 18 14.1 -0.3
YAK IAmb IAmb 16 18 17.8
comp=Z,63nm,0.7s
YAK **PcP 16 21 12.5 0.0**
LZH Lanzhou 30.51 287 *eP* P 16 18 17.5 +1.3
LZH pP pP 16 18 36.3 +3.2
LZH sP sP 16 18 46.5 +4.9
LZH sS sS 16 23 43.0 +1.7
LZH SS **SnSn 16 24 54.0 -1.5**
LZH pmax pmax
comp=Z,26nm,1.0s
LZH pmax pmax
comp=Z,170nm,4.9s
LZH LR LR
comp=Z,260nm,11.0s
LZH LR LR
comp=Z,400nm,10.8s
LZH LR LR
comp=Z,560nm,14.2s
QIZ Qiongzhong 30.70 252 P P 16 18 15.0 -2.8
QIZ S **S 16 23 16.0 +0.6**
QIZ LR LR
comp=Z,180nm,18.6s
QIZ LR LR
comp=Z,140nm,28.4s
QIZ LR LR
comp=Z,310nm,31.4s
BOD Bodaibo 31.14 332 *eP* P 16 18 20.8 -0.4
BOD pmax pmax
comp=Z,22nm,1.0s
CD2 Chengdu 31.34 277 P P 16 18 21.8 -1.6
CD2 pP pP 16 18 40.0 -0.4
CD2 PP **PP 16 19 30.0 -5.3**
CD2 S **S 16 23 17.0 -8.3**
CD2 sS sS 16 23 53.5 -0.7
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 LR LR
comp=Z,350nm,14.4s
CD2 LR LR
comp=Z,510nm,17.3s
CD2 LR LR
comp=Z,690nm,18.0s
SEY Seymchan 31.34 10 P P 16 18 23.8 +0.9
comp=Z,20nm,0.8s,baz=197,slow=6.5,SNR=39
ZAK Zakamensk 32.79 314 *eP* P 16 18 36.6 +0.7
ZAK pmax pmax
comp=Z,10.0nm,1.0s
IRK Irkutsk 32.86 318 *eP* P 16 18 36.0 -0.4
IRK pmax pmax
comp=Z,41nm,1.1s
TLY Talaya 33.01 317 P P 16 18 39.0 +1.2
TLY Talaya 33.01 317 *eP* P 16 18 39.5 +1.7
TLY *e* 16 20 12.8
TLY *eS* **S 16 23 56.7 +5.8**
TLY pmax pmax
comp=Z,70nm,0.9s
TLY MLR MLR
comp=Z,824nm,19.0s
TLY Talaya 33.01 317 P P 16 18 37.7 0.0
TLY IAmb IAmb 16 18 42.5
comp=Z,25nm,0.8s
GTA Gaotai 33.56 294 *eP* P 16 18 43.0 +0.2
GTA pP pP 16 19 01.3 +1.3
GTA sP sP 16 19 11.0 +2.6
GTA PcP **PcP 16 21 23.0 +1.2**
GTA S **S 16 23 56.0 -3.8**
GTA ScP **ScP 16 25 00.3 +0.4**
GTA SS **SnSn 16 26 05.3 -3.9**

GTA pmax pmax
comp=Z,4.0nm,1.4s
GTA pmax pmax
comp=Z,37nm,6.5s
GTA LR LR
comp=Z,130nm,17.1s
GTA LR LR
comp=Z,290nm,17.1s
GTA LR LR
comp=Z,240nm,15.5s
KMI Kunming 33.90 267 P **P** **16 18 47.5 +1.5**
KMI pmax pmax
comp=Z,5.0nm,0.7s
KMI LR LR
comp=Z,100nm,21.2s
KMI LR LR
comp=Z,250nm,17.8s
KMI LR LR
comp=Z,310nm,34.4s
TNTI Ternate 33.96 204 P **P** **16 18 44.5 -1.7**
KWAJ Kwajalein Atol 34.34 127 P **P** **16 18 48.3 -1.2**
KWAJ pmax pmax
comp=Z,225nm,1.1s
KWAJ Kwajalein Atol 34.34 127 P **P** **16 18 48.3 -1.2**
SIJI Sorong 34.36 197 P **P** **16 18 48.8 -1.0**
comp=Z,20nm,0.6s
SIJI LR LR 16 30 21.0
comp=Z,132nm,18.1s,baz=276,slow=32
SLVN Son La 34.45 260 P **P** **16 18 50.7 +0.1**
MOY Mondy 34.56 316 *eP* **P** **16 18 52.4 +1.1**
MOY pmax pmax
comp=Z,22nm,1.6s
JAY Jayapura 34.83 180 LR LR 16 31 26.6
comp=Z,132nm,21.2s,baz=36,slow=33
KMSI Cibinong 35.44 210 P **P** **16 18 57.7 -1.4**
comp=Z,792nmcomp=Z,64nm,0.7s
DLV T Lat 35.92 243 P **P** **16 19 02.9 -0.4**
FAKI Fak Fak 36.12 194 P **P** **16 19 03.6 -1.3**
FAKI IAmb IAmb 16 20 17.0
comp=Z,59nm,1.4s
ADK Adak 36.40 45 P **P** **16 19 07.0 +0.1**
ADK pmax pmax
comp=Z,41nm,0.9s
ADK Adak 36.40 45 P **P** **16 19 07.0 +0.1**
ADK IAmb IAmb 16 19 08.4
comp=Z,41nm,0.8s
LUWI Luwuk 37.41 210 P **P** **16 19 14.8 -1.0**
LUWI IAmb IAmb 16 19 48.2
comp=Z,28nm,0.8s
ATKA Atka Island 37.97 45 P **P** **16 19 20.1 -0.1**
BILL Bilibino 38.54 15 *c i* P **P** **16 19 24.6 -0.2**
BILL *i* 16 21 35.8
BILL *e* S **S** **16 25 14.2 -0.8**
BILL pmax pmax
comp=Z,25nm,0.9s
BILL Bilibino 38.54 15 P **P** **16 19 24.6 -0.2**
BILL IAmb IAmb 16 19 26.0
comp=Z,30nm,0.9s
PBKT Sadao Pong 39.19 256 P **P** **16 19 30.1 -0.7**
PBKT **PcP** **16 21 40.0 +1.1**
TIXI Tiksi 39.71 354 *ce* P **P** **16 19 32.9 -1.6**
TIXI pmax pmax
comp=Z,42nm,1.0s
TIXI Tiksi 39.71 354 P **P** **16 19 33.8 -0.7**
TIXI IAmb IAmb 16 19 35.0
comp=Z,43nm,1.0s
CHTO Chiang Mai 39.75 260 P **P** **16 19 34.6 -0.9**
CHTO pmax pmax
comp=Z,9.0nm,0.8s
CHTO Chiang Mai 39.75 260 P **P** **16 19 34.6 -0.9**
CM31 Chiang Mai Arr 39.92 260 P **P** **16 19 36.6 -0.3**
CMAR Chiang Mai Arr 39.92 260 P **P** **16 19 36.5 -0.4**
comp=Z,3.0nm,0.7s,baz=47,slow=7.9,SNR=26
CMAR PcP **PcP** **16 21 42.8 +1.6**
comp=Z,4.3nm,1.0s,baz=45,slow=1.6,SNR=8.7
CMAR PKiKP **PKiKP** **16 28 51.7 -0.4**
comp=Z,0.5nm,0.7s,baz=347,slow=1.0,SNR=4.3
CMAR LR LR 16 38 11.9
comp=Z,98nm,18.2s,baz=60,slow=39
SBUM Sibu 40.09 228 P **P** **16 19 37.8 -0.5**
SBUM Sibu 40.09 228 P **P** **16 19 38.0 -0.3**
NIKH Nikolski High 41.31 45 P **P** **16 19 48.3 +0.3**
SPSI Sidrap Palu 41.34 213 P **P** **16 19 45.2 -3.3**
SPIA Saint Paul Isl 41.42 38 P **P** **16 19 49.5 +0.8**
KSM Kuching 42.05 229 P **P** **16 19 53.8 -0.6**
KSM Kuching 42.05 229 P **P** **16 19 54.0 -0.4**
PMG Port Moresby 42.13 170 LR LR 16 36 41.1
comp=Z,77nm,21.2s,baz=8.5,slow=35
PMG Port Moresby 42.13 170 *i* P **P** **16 19 54.8 -0.2**
PMG pmax pmax
comp=Z,67nm,0.9s
PMG Port Moresby 42.13 170 P **P** **16 19 54.9 -0.1**
PMG IAmb IAmb 16 20 29.6
comp=Z,27nm,0.9s
LSA Lhasa 42.19 280 P **P** **16 19 56.3 +0.4**
LSA pmax pmax
comp=Z,6.0nm,0.6s
LSA Lhasa 42.19 280 P **P** **16 19 56.3 +0.4**
KAPI Kappang 42.28 212 P **P** **16 19 54.8 -1.4**
comp=Z,8.7nm,0.6s,baz=99,slow=17,SNR=2.3
KAPI Kappang 42.28 212 P **P** **16 19 54.8 -1.4**
KAPI pmax pmax
comp=Z,29nm,1.2s
BKSI Bulukumba 42.39 211 P **P** **16 19 55.5 -1.6**
comp=Z,14nm,1.0s
WMQ Urumqi 42.49 301 *eP* **P** **16 19 58.3 +0.5**
WMQ pP pP 16 20 16.0 +0.6
WMQ sP sP 16 20 25.8 +2.1
WMQ pmax pmax
comp=Z,20nm,0.9s
WMQ pmax pmax
comp=Z,68nm,3.7s
WMQ LR LR
comp=Z,170nm,14.5s
WMQ LR LR
comp=Z,230nm,24.9s
WMQ LR LR
comp=Z,390nm,28.9s
SHL Shillong 42.91 274 P **P** **16 20 00.6 -0.9**
SHL **PcP** **16 21 51.4 +0.3**
AKUT Akutan 43.30 44 P **P** **16 20 05.1 +1.1**
MMRI Maumere 44.53 206 P **P** **16 20 11.9 -2.4**
comp=Z,52nm,0.9s
MMRI Maumere 44.53 206 P **P** **16 20 12.4 -1.9**
MMRI IAmb IAmb 16 20 35.5
comp=Z,40nm,0.8s
ZAA0 Zalesovo Array 44.62 316 P **P** **16 20 14.4 -0.2**
ZAA0 **PcP** **16 21 55.9 -0.3**
ZALV Zalesovo Beam 44.62 316 P **P** **16 20 14.7 0.0**
comp=Z,5.1nm,0.5s,baz=109,slow=7.5,SNR=21
ZALV PcP **PcP** **16 21 56.3 +0.1**
comp=Z,19nm,0.6s,baz=110,slow=3.6,SNR=17
ZALV ScP **ScP** **16 25 41.5 -0.3**
comp=Z,1.6nm,0.7s,baz=88,slow=3.7,SNR=3.6
ZALV LR LR 16 39 39.7
comp=Z,163nm,19.3s,baz=80,slow=37
EDFI Ende, Flores 44.84 207 P **P** **16 20 15.4 -1.5**
comp=Z,20nm,0.9s
SOEI Soe 44.85 203 P **P** **16 20 16.0 -0.9**
comp=Z,86nm,1.0s
SOEI Soe 44.85 203 P **P** **16 20 15.5 -1.5**
SOEI IAmb IAmb 16 20 33.7
comp=Z,100nm,1.1s
BATI Baumata 45.47 204 P **P** **16 20 21.2 -0.5**
comp=Z,58nm,0.7s,baz=152,slow=10.0,SNR=3.3
BATI LR LR 16 39 11.2
comp=Z,259nm,19.2s,baz=39,slow=36
TAPN Taplejung 45.80 278 *eP* **P** **16 20 24.1 -0.6**
comp=Z,38nm,0.4s
ANM Nome 45.81 29 P **P** **16 20 25.6 +1.7**
ANM pmax pmax
comp=Z,44nm,0.8s
ANM Nome 45.81 29 P **P** **16 20 25.6 +1.7**
ANM IAmb IAmb 16 20 26.8
comp=Z,44nm,0.8s
MTN Manton Dam 46.01 193 P **P** **16 20 24.7 -1.3**
MTN pP **pP** **16 20 43.1 -0.3**
MTN IAmb IAmb 16 20 44.2
comp=Z,21nm,0.8s
KULM Kulim 46.10 243 P **P** **16 20 25.9 -0.8**
KULM Kulim 46.10 243 P **P** **16 20 26.0 -0.8**
MK31 Makanchi Array 46.13 306 *i* P **P** **16 20 27.1 +0.4**
MK31 Makanchi Array 46.13 306 P **P** **16 20 26.8 +0.1**
MK31 IAmb IAmb 16 20 30.9
comp=Z,25nm,0.9s

MK31 pP **pP** **16 20 45.2 +0.7**
MKAR Makanchi Array 46.13 306 P **P** **16 20 27.1 +0.3**
comp=Z,21nm,0.8s,baz=90,slow=9.9,SNR=136
MKAR PcP **PcP** **16 22 01.9 +0.3**
comp=Z,9.8nm,0.8s,baz=79,slow=6.7,SNR=5.3
MKAR ScP **ScP** **16 25 48.1 -0.3**
comp=Z,2.5nm,0.7s,baz=90,slow=4.9,SNR=6.8
MKAR S **S** **16 27 07.4 +0.2**
comp=Z,1.9nm,1.0s,baz=89,slow=16,SNR=4.2
MKAR LR LR 16 40 35.1
comp=Z,209nm,20.0s,baz=82,slow=37
MYKOM Kota Tinggi 46.15 236 P **P** **16 20 26.9 -0.3**
MYKOM Kota Tinggi 46.15 236 P **P** **16 20 27.0 -0.2**
ODAN Odare 46.23 277 *eP* **P** **16 20 27.3 -0.7**
comp=Z,36nm,0.5s
COEN Coen 46.26 177 P **P** **16 20 28.4 +0.5**
COEN IAmb IAmb 16 20 29.6
comp=Z,41nm,0.7s
MAKZ Makanchi 46.34 306 P **P** **16 20 28.6 +0.2**
MAKZ pP **pP** **16 20 47.0 +0.8**
IPM Ipoh 46.35 242 P **P** **16 20 26.9 -1.9**
IPM Ipoh 46.35 242 P **P** **16 20 28.0 -0.8**
SDPT Sand Point 46.48 42 P **P** **16 20 28.6 -0.7**
RAMN Ramite 46.86 278 *eP* **P** **16 20 32.6 -0.4**
CNBA Chernabura Isl 46.96 43 P **P** **16 20 32.6 -0.4**
JIRN Jiri 46.96 279 *eP* **P** **16 20 33.7 -0.2**
comp=Z,192nm,0.7s
GUN Gumba 47.14 279 *eP* **P** **16 20 35.3 +0.1**
comp=Z,127nm,1.0s
PKI Pulchoki 47.64 279 *eP* **P** **16 20 38.1 -1.1**
comp=Z,34nm,0.9s
PKIN Phulchoki 47.65 279 *eP* **P** **16 20 38.3 -0.8**
comp=Z,21nm,0.6s
KKN Kakani 47.68 280 *eP* **P** **16 20 38.8 -0.5**
comp=Z,51nm,0.8s
CHGN Chignik 47.71 41 P **P** **16 20 38.4 -0.3**
RDOG Red Dog Mine 47.84 25 P **P** **16 20 40.8 +1.1**
RDOG IAmb IAmb 16 20 42.4
comp=Z,66nm,1.0s
DMN Daman 47.88 279 *eP* **P** **16 20 40.4 -0.5**
GKN Gorkha 48.14 280 *eP* **P** **16 20 42.5 -0.3**
comp=Z,64nm,0.8s
KURK Kurchatov 48.34 311 P **P** **16 20 43.9 +0.1**
KURK Kurchatov 48.34 311 *ce* P **P** **16 20 43.3 -0.5**
KURK pmax pmax
comp=Z,65nm,1.3s
KURK Kurchatov 48.34 311 P **P** **16 20 43.5 -0.3**
KURK IAmb IAmb 16 20 47.1
comp=Z,39nm,0.8s
KURBB Kurchatov Arra 48.40 311 P **P** **16 20 44.1 -0.2**
PDGK Podgornoye 48.47 301 P **P** **16 20 44.8 -0.3**
DANN Dangsing 48.75 281 *eP* **P** **16 20 47.3 -0.3**
comp=Z,35nm,0.3s
PSI Prapat 49.02 242 LR LR 16 40 55.5
comp=Z,45nm,18.7s,baz=90,slow=35
PSI Prapat 49.02 242 P **P** **16 20 49.4 -0.2**
PSI pmax pmax
comp=Z,13nm,0.5s
KOLN Koldanda 49.08 280 *eP* **P** **16 20 49.6 -0.5**
comp=Z,17nm,0.4s
RPSI Rantau Prapat 49.10 242 P **P** **16 20 49.4 -0.6**
RPSI IAmb IAmb 16 22 14.6
comp=Z,13nm,0.5s
BKNI Bangkinang 49.17 237 P **P** **16 20 50.0 -0.5**
KNRA Kununurra 49.24 195 P **P** **16 20 50.2 -0.8**
KNRA IAmb IAmb 16 20 52.7
comp=Z,18nm,0.7s
PYUN Piuthan 49.48 281 *eP* **P** **16 20 52.9 -0.2**
comp=Z,99nm,0.4s
TTA Tatalina 49.53 33 P **P** **16 20 53.7 +0.9**
TTA Tatalina 49.53 33 P **P** **16 20 53.7 +0.9**
SVW2 Sparrevohn 49.53 35 P **P** **16 20 54.1 +1.3**
MNSI Mandailing Nat 49.89 239 P **P** **16 20 55.5 -0.6**
comp=Z,13nm,0.5s
LEM Lembang 50.20 225 LR LR 16 41 52.8
comp=Z,65nm,21.1s,baz=6.0,slow=36
KDJ Kajisay 50.35 300 P **P** **16 20 59.9 +0.4**
KDJ pmax pmax
comp=Z,6.0nm,1.0s
KDJ Kajisay 50.35 300 P **P** **16 20 59.9 +0.4**
LHSI Lahat 50.46 231 P **P** **16 20 59.6 -0.7**
comp=Z,68nm,1.0s
MDSI Maura Dua 50.52 230 P **P** **16 20 59.7 -1.1**
comp=Z,1µmcomp=Z,45nm,0.8s
OHAK Old Harbor 50.55 40 P **P** **16 21 00.7 +0.2**
RSO Redoubt South 50.88 36 P **P** **16 21 03.6 +0.4**
KDAK Kodiak Island 50.93 39 P **P** **16 21 03.7 +0.3**
KDAK pmax pmax
comp=Z,119nm,0.7s
KDAK Kodiak Island 50.93 39 P **P** **16 21 03.7 +0.3**
GSI Gunungsitoli 51.02 241 P **P** **16 21 03.3 -1.3**
SPU Mount Spurr 51.25 35 P **P** **16 21 06.0 +0.2**
PPLA Purkeypile 51.27 33 P **P** **16 21 07.5 +1.6**
TKM2 Tokmak 2 51.35 301 P **P** **16 21 07.8 +0.8**
SNR=13
CNPM China Poot 51.63 37 P **P** **16 21 08.6 0.0**
CNPM IAmb IAmb 16 21 09.8
comp=Z,38nm,0.8s
KZA Kyzart 51.77 300 P **P** **16 21 11.7 +1.3**
SNR=7.0
KSH Kashi 51.80 297 P **P** **16 21 13.0 +2.7**
KSH sP sP 16 21 43.5 +6.9
KSH PP PP 16 23 17.8 +9.3
KSH S **S** **16 28 27.0 -0.1**
KSH SS **SS** **16 32 03.5 -0.8**
KSH pmax pmax
comp=Z,23nm,1.0s
KSH pmax pmax
comp=Z,240nm,5.1s
KSH LR LR
comp=Z,270nm,6.2s
KSH LR LR
comp=Z,250nm,11.0s
KSH LR LR
comp=Z,260nm,7.8s
BRLK Bradley Lake 51.80 37 P **P** **16 21 09.1 -0.8**
BRLK IAmb IAmb 16 21 12.8
comp=Z,36nm,0.9s
KBK Karagaybulak 51.87 301 P **P** **16 21 11.5 +0.6**
SNR=8.7
BPAW Bear Paw Mtn. 51.87 31 P **P** **16 21 11.4 +1.1**
BPAW IAmb IAmb 16 21 12.9
comp=Z,46nm,1.4s
KTH Kantishna Hill 51.87 32 P **P** **16 21 11.3 +0.9**
KTH IAmb IAmb 16 21 12.9
comp=Z,57nm,1.4s
MLY Manley 52.04 30 P **P** **16 21 12.8 +1.2**
MLY IAmb IAmb 16 21 14.1
comp=Z,28nm,0.8s
TRF Thorofare Moun 52.15 32 P **P** **16 21 13.0 +0.4**
TRF IAmb IAmb 16 21 15.9
comp=Z,25nm,0.8s
AAK Ala-Archa 52.20 301 P **P** **16 21 14.4 +1.1**
SNR=6.1
AAK Ala-Archa 52.20 301 *i* P **P** **16 21 13.8 +0.5**
SNR=7.7
AAK Ala-Archa 52.20 301 *ce* P **P** **16 21 12.7 -0.6**
AAK pmax pmax
comp=Z,6.0nm,0.8s
AAK Ala-Archa 52.20 301 P **P** **16 21 12.8 -0.6**
UCH Uchtor 52.27 301 P **P** **16 21 15.3 +1.1**
SNR=7.1
WB0 Warramunga Arr 52.32 187 P **P** **16 21 13.1 -1.0**
WB0 IAmb IAmb 16 21 14.5
comp=Z,35nm,0.7s
WB0 pP **pP** **16 21 30.9 -1.0**
FITZ Fitzroy Crossi 52.33 198 P **P** **16 21 13.0 -1.2**
FITZ pP **pP** **16 21 32.2 +0.2**
RC01 Rabbit Creek A 52.37 35 P **P** **16 21 14.2 +0.2**
WRAB Tennant Creek 52.49 187 *ce* P **P** **16 21 13.9 -1.4**
WRAB pmax pmax
comp=Z,37nm,1.0s
WRAB Tennant Creek 52.49 187 P **P** **16 21 14.5 -0.8**
WRAB IAmb IAmb 16 21 15.8
comp=Z,29nm,0.8s
WR0 Warramunga Arr 52.50 187 P **P** **16 21 14.4 -1.0**
WR0 IAmb IAmb 16 21 15.9
comp=Z,32nm,0.8s
WB2 Warramunga Arr 52.50 187 P **P** **16 21 14.5 -0.9**
WB2 IAmb IAmb 16 21 15.9
comp=Z,33nm,0.8s
WRA Warramunga Arr 52.50 188 P **P** **16 21 14.9 -0.5**
comp=Z,27nm,0.6s,baz=5.3,slow=7.7,SNR=301
WRA PcP **PcP** **16 22 26.4 +1.3**
comp=Z,27nm,0.8s,baz=359,slow=4.0,SNR=11

WRA S **S** **16 28 34.8 -1.8**
comp=Z,0.8nm,0.7s,baz=8.1,slow=14,SNR=5.1
SEW Seward 52.52 36 P **P** **16 21 15.2 +0.1**
BWN Browne 52.55 31 P **P** **16 21 16.8 +1.5**
CTAO Charters Tower 52.57 173 P **P** **16 21 15.8 -0.1**
CTAO pmax pmax
comp=Z,19nm,0.9s
CTAO Charters Tower 52.57 173 P **P** **16 21 15.8 -0.1**
CTAO IAmb IAmb 16 21 35.4
comp=Z,19nm,0.9s
PMR Palmer 52.66 34 P **P** **16 21 16.2 +0.1**
PMR Palmer 52.66 34 P **P** **16 21 16.2 +0.1**
NEA Nenana 52.73 31 P **P** **16 21 17.6 +1.0**
GHO Glory Hole Cre 52.76 34 P **P** **16 21 17.2 +0.2**
MCK McKinley 52.77 32 P **P** **16 21 17.3 +0.3**
MCK pmax pmax
comp=Z,41nm,0.8s
MCK McKinley 52.77 32 P **P** **16 21 17.3 +0.3**
MCK IAmb IAmb 16 21 20.0
comp=Z,41nm,0.8s
TOLK Toolik Lake Re 52.79 26 P **P** **16 21 18.4 +1.3**
baz=265
TOLK Toolik Lake Re 52.79 26 P **P** **16 21 18.1 +1.0**
RND Reindeer 52.80 32 P **P** **16 21 17.3 0.0**
RND pmax pmax
comp=Z,55nm,0.8s
RND Reindeer 52.80 32 P **P** **16 21 17.3 0.0**
AML Almayashu 52.89 301 P **P** **16 21 20.2 +1.5**
SNR=6.4
KNK Knik Glacier 52.98 35 P **P** **16 21 19.2 +0.5**
SML Sawmill 53.04 34 P **P** **16 21 19.5 +0.4**
MDM Murphy Dome 53.10 30 P **P** **16 21 20.4 +1.0**
WRH Wood River Hil 53.15 31 P **P** **16 21 19.9 +0.2**
WRH IAmb IAmb 16 21 22.6
comp=Z,31nm,0.7s
WRH **PcP** **16 22 27.2 +0.2**
TCOL CIGO, UAF Yank 53.26 30 P **P** **16 21 21.8 +1.3**
baz=269,SNR=7.8
COLA College 53.26 30 *c i* P **P** **16 21 19.7 -0.8**
COLA pmax pmax
comp=Z,27nm,0.9s
COLA College 53.26 30 P **P** **16 21 21.4 +0.9**
CCB Clear Creek Bu 53.28 31 P **P** **16 21 20.8 +0.2**
CCB IAmb IAmb 16 21 23.9
comp=Z,29nm,0.7s
BRVK Borovoye 53.30 315 P **P** **16 21 21.7 +0.7**
BRVK Borovoye 53.30 315 *ce* P **P** **16 21 20.3 -0.7**
BRVK pmax pmax
comp=Z,59nm,1.7s
BRVK Borovoye 53.30 315 P **P** **16 21 21.0 0.0**
BRVK IAmb IAmb 16 21 25.7
comp=Z,77nm,1.5s
POKR Poker Plat Res 53.44 30 P **P** **16 21 23.0 +1.2**
baz=269,SNR=23
DHY Denali Highway 53.47 33 P **P** **16 21 22.5 +0.2**
DHY IAmb IAmb 16 21 26.1
comp=Z,19nm,0.7s
SCM Sheep Creek Mo 53.52 34 P **P** **16 21 23.2 +0.6**
SCM pmax pmax
comp=Z,110nm,0.9s
SCM Sheep Creek Mo 53.52 34 P **P** **16 21 23.2 +0.6**
ARSB Arslanbob 53.59 300 P **P** **16 21 23.8 +0.2**
ARSB pmax pmax
comp=Z,15nm,1.0s
ARSB Arslanbob 53.59 300 P **P** **16 21 23.8 +0.2**
HDA Harding Lake 53.65 31 P **P** **16 21 23.5 +0.1**
baz=270
HDA Harding Lake 53.65 31 P **P** **16 21 23.4 0.0**
GLI Glacier Island 53.66 35 P **P** **16 21 23.8 +0.3**
IL31 53.67 30 P **P** **16 21 23.4 -0.1**
ILAR Eielson Array 53.67 30 P **P** **16 21 23.6 +0.1**
comp=Z,44nm,0.9s,baz=268,slow=6.2,SNR=310
ILAR PcP **PcP** **16 22 28.4 -0.5**
comp=Z,4.0nm,0.6s,baz=275,slow=3.7,SNR=4.8
ILAR LR LR 16 44 54.4
comp=Z,31nm,21.7s,baz=320,slow=37
FID Port Fidalgo 53.97 35 P **P** **16 21 26.1 +0.3**
HIN Hinchinbrook I 53.98 36 P **P** **16 21 26.9 +0.9**
PRP Porcupine Dome 54.24 30 P **P** **16 21 28.2 +0.3**
PRP IAmb IAmb 16 21 29.8
comp=Z,16nm,0.7s
PAX Paxson 54.34 33 P **P** **16 21 28.9 +0.3**
PAX Paxson 54.34 33 P **P** **16 21 28.9 +0.3**
EYAK Cordova Ski Ar 54.34 36 P **P** **16 21 29.2 +0.7**
FYU Fort Yukon 54.36 28 P **P** **16 21 30.1 +1.6**
HARP HAARP 54.51 33 pP pP 16 21 50.5 +2.9
RIDG Independent Ri 54.59 32 P **P** **16 21 30.3 0.0**
RIDG IAmb IAmb 16 21 32.7
comp=Z,22nm,0.7s
RAGM Ragged Mountai 54.89 36 P **P** **16 21 33.7 +1.2**
DOT Dot Lake 54.94 32 P **P** **16 21 33.1 +0.3**
KK31 Karatay Array 54.95 303 *i* P **P** **16 21 33.4 +0.2**
KK31 Karatay Array 54.95 303 P **P** **16 21 33.4 +0.2**
SCRK Sand Creek 54.95 31 P **P** **16 21 33.4 +0.3**
MENT Mentasta 55.14 33 P **P** **16 21 35.5 +1.2**
GLB Gilahina Butte 55.22 35 P **P** **16 21 35.7 +0.8**
GLB IAmb IAmb 16 21 38.0
comp=Z,62nm,1.3s
VRDI Verde Repeater 55.41 35 P **P** **16 21 37.4 +1.0**
NIL Nilore 55.55 291 P **P** **16 21 38.1 +0.4**
NIL Nilore 55.55 291 P **P** **16 21 37.7 0.0**
NIL pmax pmax
comp=Z,27nm,0.8s
NIL Nilore 55.55 291 P **P** **16 21 37.7 0.0**
NIL IAmb IAmb 16 21 41.9
comp=Z,27nm,0.8s
WAX Waxell Ridge 55.78 36 P **P** **16 21 40.0 +1.0**
BALM Baldy 55.96 35 P **P** **16 21 41.0 +0.8**
BALM IAmb IAmb 16 21 42.3
comp=Z,46nm,1.0s
EGAK Eagle 56.12 30 P **P** **16 21 41.5 +0.3**
GAR Garm 56.17 298 P **P** **16 21 42.0 -0.2**
GAR IAmb IAmb 16 21 44.2
comp=Z,38nm,1.0s
AS31 Alice Springs 56.23 187 P **P** **16 21 41.8 -0.7**
MESA MESA 56.26 36 P **P** **16 21 43.4 +0.9**
MESA IAmb IAmb 16 21 44.7
comp=Z,31nm,0.8s
BARN Barnard Glacie 56.29 35 P **P** **16 21 43.5 +0.7**
BARN IAmb IAmb 16 21 44.9
comp=Z,30nm,0.7s
YAH Yahtse 56.34 36 P **P** **16 21 44.2 +1.1**
DAWY Dawson 56.96 31 P **P** **16 21 48.1 +0.8**
DAWY IAmb IAmb 16 21 50.2
comp=Z,15nm,0.6s
CHGR Chuyangaron 57.14 298 P **P** **16 21 48.8 -0.2**
PSA00 Pilbara Seismi 57.34 203 P **P** **16 21 49.6 -0.8**
PSA00 IAmb IAmb 16 21 51.7
comp=Z,21nm,0.9s
PSAA1 Pilbara Seismi 57.35 203 pP pP 16 22 08.6 +0.1
HYB Hyderabad 57.56 271 *i* P **P** **16 21 51.0 -1.1**
HYB *es* P **sP** **16 22 22.0 +3.5**
EPYK Eagle Plains 57.78 28 P **P** **16 21 54.6 +1.6**
baz=278
EPYK Eagle Plains 57.78 28 P **P** **16 21 54.3 +1.3**
HMH Humu'ula Sheep 58.04 86 P **P** **16 21 55.2 -0.6**
AIN Ainahou 58.16 86 P **P** **16 21 58.0 +1.5**
MLH Mauna Loa 58.17 86 P **P** **16 21 57.1 +0.5**
SVE Sverdlovsk 58.18 320 ‖ *eP* **P** **16 21 56.6 +0.7**
SVE pmax pmax
comp=Z,21nm,0.9s
DHAK Deception Hill 58.31 37 P **P** **16 21 58.4 +1.6**
HYT Haines Junctio 58.33 35 P **P** **16 21 58.7 +1.7**
EIDS Eidsvold 58.40 169 P **P** **16 21 58.1 +0.4**
EIDS pP **pP** **16 22 17.0 +1.2**
KBL Kabul 58.55 293 P **P** **16 21 58.8 -0.3**
KBL pmax pmax
comp=Z,9.0nm,0.7s
KBL Kabul 58.55 293 P **P** **16 21 58.8 -0.3**
INK Inuvik 58.71 26 P **P** **16 22 00.1 +0.8**
comp=Z,28nm,0.7s,baz=286,slow=6.3,SNR=75
INK Inuvik 58.71 26 P **P** **16 21 59.5 +0.2**
INK IAmb IAmb 16 22 01.0
comp=Z,30nm,0.9s
ARU Arti 59.39 320 *c i* P **P** **16 22 04.1 -0.1**
ARU *PP **pP** **16 22 22.2 -0.6**
ARU 16 22 47.9
ARU 16 24 12.6
ARU S **S** **16 30 07.8 +0.5**
ARU 16 31 45.3
ARU SS **SS** **16 34 04.9 +2.2**
ARU pmax pmax
comp=Z,26nm,0.9s

ARU MLR MLR
comp=Z,135nm,17.0s
ARU Arti 59.39 320 P **P** **16 22 03.9 -0.4**
ARU IAmb IAmb 16 22 05.6
comp=Z,19nm,0.7s
DZM Mont Dzumac 59.60 152 *e*LR LR 16 39 56.4
comp=Z,262nm,23.9s
WHY Whitehorse 59.62 35 P **P** **16 22 07.6 +1.6**
SKAG Skagway 59.68 36 P **P** **16 22 07.9 +1.7**
BESE Bessie Mountai 60.12 37 P **P** **16 22 10.4 +1.1**
JIS Juneau Island 60.44 37 P **P** **16 22 12.5 +1.1**
JIS IAmb IAmb 16 22 14.2
comp=Z,53nm,1.2s
AB31 Akbulak array 60.44 312 *e*P **P** **16 22 11.5 -0.1**
A36M Sachs Harbour 60.69 21 P **P** **16 22 13.9 +1.0**
baz=285
C36M Paulatuk 61.80 24 P **P** **16 22 20.9 +0.4**
baz=287,SNR=25
C36M Paulatuk 61.80 24 P **P** **16 22 20.9 +0.4**
C36M IAmb IAmb 16 22 21.9
comp=Z,33nm,0.8s
WRAK Wrangell Islan 62.01 39 P **P** **16 22 23.3 +1.3**
WRAK IAmb IAmb 16 22 24.6
comp=Z,14nm,0.8s
DLBC Dease Lake 62.60 36 P **P** **16 22 27.4 +1.3**
DLBC IAmb IAmb 16 22 29.1
comp=Z,39nm,1.4s
DIB Dawson Inlet, 62.93 42 P **P** **16 22 28.9 +0.7**
DIB IAmb IAmb 16 22 30.1
comp=Z,26nm,0.7s
MOBC Moresby Island 63.24 42 P **P** **16 22 31.1 +0.7**
ARMA Armidale 63.44 169 P **P** **16 22 32.5 +0.7**
ARMA pP **pP** **16 22 50.8 +0.6**
ARMA IAmb IAmb 16 22 52.8
comp=Z,27nm,0.8s
HRA Herat 63.84 295 P **P** **16 22 35.2 +0.4**
HRA IAmb IAmb 16 22 36.5
comp=Z,18nm,0.7s
STKA Stephens Creek 64.04 179 P **P** **16 22 36.1 +0.5**
comp=Z,18nm,0.8s,baz=340,slow=8.0,SNR=21
STKA LR LR 16 50 57.8
comp=Z,63nm,19.9s,baz=21,slow=36
STKA Stephens Creek 64.04 179 P **P** **16 22 35.8 +0.2**
FORT Forrest 64.06 192 P **P** **16 22 35.7 -0.1**
SPA0 Spitsbergen Ar 64.84 349 P **P** **16 22 41.2 +0.7**
SPA0 IAmb IAmb 16 23 25.3
comp=Z,28nm,1.0s
SPA0 Spitsbergen Ar 64.84 349 *e*P **P** **16 22 41.1 +0.7**
KBS Kingsbay 65.00 350 *ce*P **P** **16 22 42.0 +0.6**
KBS pmax pmax
comp=Z,23nm,1.0s
KBS Kingsbay 65.00 350 P **P** **16 22 42.6 +1.1**
KBS IAmb IAmb 16 22 42.9
comp=Z,54nm,1.1s
KBS Kingsbay 65.00 350⇑ *i*P **P** **16 22 42.2 +0.7**
BBOO Buckleboo 65.11 184 P **P** **16 22 42.4 -0.2**
BBOO IAmb IAmb 16 23 37.2
comp=Z,49nm,1.3s
NOR Nord 65.52 356 *i* P **P** **16 22 44.9 +0.1**
NOR pmax pmax
comp=Z,7.0nm,0.8s
NOR Nord 65.52 356 *i* P **P** **16 22 44.9 +0.1**
comp=Z,7.3nm,0.8s
GEYT Alibeck 65.54 301 P **P** **16 22 45.8 +0.1**
comp=Z,14nm,0.9s,baz=46,slow=4.3,SNR=25
GEYT LR LR 16 53 38.6
comp=Z,85nm,18.3s,baz=65,slow=38
GYA0 ALIBECK ARRAY 65.54 301 P **P** **16 22 45.9 +0.3**
GYA0B ALIBECK ARRAY 65.54 301 P **P** **16 22 45.9 +0.3**
MORW Morawa 65.55 204 P **P** **16 22 45.4 -0.1**
MORW IAmb IAmb 16 23 07.6
comp=Z,60nm,1.8s
HSPB Hornsund (broa 65.74 348⇑ *i*P **P** **16 22 47.0 +0.8**
BBB Bella Bella 65.78 42 P **P** **16 22 47.3 +0.5**
LVZ Lovozero 65.99 337 P **P** **16 22 48.3 +0.2**
LVZ pmax pmax
comp=Z,24nm,1.0s
LVZ Lovozero 65.99 337 P **P** **16 22 48.2 +0.2**
LVZ IAmb IAmb 16 23 22.9
comp=Z,24nm,1.0s
TMCR Tamitsa 66.43 332 *e*P **P** **16 22 50.6 -0.2**
TMCR pmax pmax
comp=Z,39nm,1.1s
APA Apatity 66.57 336⇓ *i*P **P** **16 22 51.4 -0.2**
APA *i* 16 23 10.0
APA pmax pmax
comp=Z,20nm,0.9s
RES Resolute Bay 67.13 14 P **P** **16 22 55.4 +0.3**
RES pmax pmax
comp=Z,24nm,0.8s
RES Resolute Bay 67.13 14 P **P** **16 22 55.4 +0.3**
RES IAmb IAmb 16 22 56.1
comp=Z,24nm,0.8s
KLMR Klimovskoe 67.27 329 *e*P **P** **16 22 55.0 -1.2**
KLMR pmax pmax
comp=Z,16nm,0.6s
KLMR Klimovskoe 67.27 329 *e*P **P** **16 22 55.0 -1.2**
KLMR AMP 16 22 56.7
comp=Z,16nm,0.6s
KEV Kevo 67.46 340 P **P** **16 22 57.4 +0.2**
KEV pmax pmax
comp=Z,28nm,1.1s
KEV Kevo 67.46 340 P **P** **16 22 57.4 +0.2**
KEV IAmb IAmb 16 23 01.4
comp=Z,28nm,1.1s
HAMF Hammerfest 67.89 341⇑ *i*P **P** **16 22 59.9 -0.1**
CAN Canberra 67.92 173 pP pP 16 23 20.8 +1.7
ARCES ARCESS Array B 68.02 340 P **P** **16 23 01.2 +0.4**
comp=Z,11nm,0.6s,baz=61,slow=8.0,SNR=52
ARCES LR LR 16 57 18.6
comp=Z,118nm,19.5s,baz=67,slow=40
ARE0 ARCESS Array S 68.02 340 P **P** **16 23 01.2 +0.4**
ARE0 ARCESS Array S 68.02 340⇑ *i*P **P** **16 23 01.2 +0.4**
YKA Yellowknife Ar 68.04 29 P **P** **16 23 01.0 0.0**
comp=Z,7.4nm,0.8s,baz=295,slow=5.6,SNR=79
YKA LR LR 16 53 44.7
comp=Z,17nm,21.7s,baz=0.0,slow=37
NWAO Narrogin (SRO) 68.73 201 P **P** **16 23 06.1 +0.5**
NWAO pP **pP** **16 23 23.9 -0.4**
KTK1 Kautokeino 68.98 340⇑ *i*P **P** **16 23 07.0 +0.2**
TULEG Thule 69.66 7 P **P** **16 23 10.8 0.0**
TULEG IAmb IAmb 16 23 11.9
comp=Z,92nm,1.5s
TRO Tromso 69.80 342 *e*P **P** **16 23 12.1 +0.4**
TOO Toolangi 69.86 176 P **P** **16 23 13.6 +1.1**
TOO pmax pmax
comp=Z,38nm,1.3s
TOO Toolangi 69.86 176 P **P** **16 23 13.6 +1.1**
TOO IAmb IAmb 16 23 33.6
comp=Z,38nm,1.2s
LLLB Lillooet 69.98 42 P **P** **16 23 14.4 +1.0**
LLLB IAmb IAmb 16 23 15.6
comp=Z,30nm,0.8s
DAG Danmarks Havn 70.22 355⇑ *i*P **P** **16 23 14.7 +0.4**
DAG pmax pmax
comp=Z,47nm,0.8s
DAG Danmarks Havn 70.22 355⇑ *i*P **P** **16 23 14.7 +0.4**
comp=Z,47nm,0.8s
NLWA Neilton Lookou 70.26 46 P **P** **16 23 16.8 +1.7**
NLWA IAmb IAmb 16 23 18.3
comp=Z,37nm,0.9s
A04D Lummi Island 70.36 44 P **P** **16 23 17.3 +1.7**
baz=297,SNR=9.4
MOS Moscow 70.53 324 *e*P **P** **16 23 15.9 -0.6**
MOS *e* 16 23 36.5
MOS *e* 16 25 54.5
VRH Novokhopyorsk 70.54 319 *e*P **P** **16 23 16.0 -0.7**
VRH pmax pmax
comp=Z,20nm,0.6s
D03D Eldon 70.67 46 P **P** **16 23 19.7 +2.2**
baz=297,SNR=25
E03A Lebam 70.83 47 P **P** **16 23 19.9 +1.4**
E03A IAmb IAmb 16 23 21.4
comp=Z,28nm,0.9s
B05A Bryant 70.93 45 P **P** **16 23 20.8 +1.7**
baz=298,SNR=18
D04E Lakebay 71.03 46 P **P** **16 23 21.6 +2.0**
baz=298
B06A Marblemount 71.17 44 P **P** **16 23 21.4 +0.9**
B06A IAmb IAmb 16 23 22.8
comp=Z,51nm,0.8s
AKT Akhty 71.31 308 *e*P **P** **16 23 22.2 +0.5**
AKT *e**PP **pP** **16 23 38.0 -2.7**
AKT *e* 16 23 40.5
AKT *e**SP **sP** **16 23 46.9 -1.7**

AKT pmax pmax
comp=Z,84nm,0.6s
OBN Obninsk 71.37 324 *e*P **P** **16 23 20.5 -1.0**
OBN *i* 16 23 37.0
OBN pmax pmax
comp=Z,11nm,0.9s
OBN MLR MLR
comp=Z,125nm,19.0s
LPSR Galich'ya Gora 71.40 321 *e*P **P** **16 23 21.7 -0.1**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
E04D Cinebar 71.44 46 P **P** **16 23 24.0 +1.8**
baz=298,SNR=9.2
D05A Enumclaw 71.49 46 P **P** **16 23 23.9 +1.4**
D05A IAmb IAmb 16 23 25.2
comp=Z,24nm,0.8s
WBK Wadi Bani Khal 71.50 285 P **P** **16 23 23.9 +0.9**
G03D McMinnville, O 71.63 48 P **P** **16 23 25.2 +1.8**
baz=298
BIDO Bidbid 71.76 287 P **P** **16 23 25.8 +1.3**
SNR=5.5
I02D Swisshome 71.78 49 P **P** **16 23 25.9 +1.6**
baz=298
C06D Leavenworth 71.80 44 P **P** **16 23 25.8 +1.4**
baz=298
F04A Amboy 71.82 47 P **P** **16 23 25.7 +1.2**
F04A IAmb IAmb 16 23 45.9
comp=Z,34nm,0.9s
STEI Steigen 71.94 341⇑ *i*P **P** **16 23 25.1 +0.3**
BANOM Banah 72.11 290 *i* P **P** **16 23 27.7 +1.1**
SNR=6.2
BANOM Banah 72.11 290 P **P** **16 23 27.6 +1.0**
J01E Myrtle Point 72.16 50 P **P** **16 23 28.5 +1.9**
baz=298,SNR=5.1
SHME Shamm 72.17 290 *i* P **P** **16 23 28.1 +1.1**
SNR=24
LOF Lofoten 72.25 342 *e*P **P** **16 23 26.7 0.0**
LTY Liberty 72.25 45 P **P** **16 23 28.0 +0.8**
LTY pP **pP** **16 23 47.3 +1.4**
H04D Lebanon 72.29 48 P **P** **16 23 29.1 +1.8**
baz=298
I03D Drain, OR 72.29 49 P **P** **16 23 29.0 +1.7**
baz=298,SNR=18
HOQ Hoqain 72.39 287 P **P** **16 23 29.4 +1.1**
SNR=8.6
MDH Madha 72.40 289 P **P** **16 23 28.2 -0.1**
MDH Madha 72.40 289 P **P** **16 23 28.3 0.0**
F05D White Salmon 72.43 47 P **P** **16 23 29.4 +1.2**
baz=299
MSFE Esma-Masafi 72.48 289 *i* P **P** **16 23 29.7 +0.9**
SNR=7.8
B08A Colville Reser 72.51 44 P **P** **16 23 29.6 +1.0**
B08A IAmb IAmb 16 23 30.9
comp=Z,37nm,0.9s
KULLO Kullorsuaq 72.53 5⇑ *i*P **P** **16 23 28.6 +0.4**
KULLO pmax pmax
comp=Z,29nm,0.7s
KULLO Kullorsuaq 72.53 5⇑ *i*P **P** **16 23 28.6 +0.4**
comp=Z,29nm,0.7s
FIA1 FINESS Array S 72.53 333 P **P** **16 23 28.4 0.0**
FIA1 IAmb IAmb 16 23 29.5
comp=Z,40nm,0.8s
FINES FINESS Array B 72.54 333 P **P** **16 23 28.6 +0.1**
comp=Z,41nm,0.7s,baz=75,slow=5.1,SNR=196
FINES LR LR 16 57 23.9
comp=Z,64nm,20.4s,baz=40,slow=37
K02D Willamette Mer 72.56 50 P **P** **16 23 30.6 +1.6**
baz=298,SNR=11
H04A Detroit Lake 72.56 48 P **P** **16 23 29.4 +0.4**
H04A IAmb IAmb 16 23 31.4
comp=Z,36nm,0.9s
UOSS Minazif 72.64 289 *i* P **P** **16 23 30.4 +0.6**
SNR=8.6
UOSS Minazif 72.64 289 P **P** **16 23 30.4 +0.6**
UOSS Minazif 72.64 289 P **P** **16 23 30.0 +0.3**
UOSS IAmb IAmb 16 23 31.5
comp=Z,32nm,1.1s
GOF Gofitskoye 72.67 313⇑ *i*P **P** **16 23 30.4 +0.8**
GOF pmax pmax
comp=Z,49nm,0.6s
HATD Hatta, Dubai 72.75 289 *i* P **P** **16 23 31.4 +0.9**
SNR=13
HATD Hatta, Dubai 72.75 289 P **P** **16 23 31.6 +1.2**
SNR=8.0
SOHO SOHO 72.76 288 P **P** **16 23 31.5 +1.0**
SNR=6.2
G05D Wamic, OR 72.83 47 P **P** **16 23 32.2 +1.7**
baz=299
I04A Tendick Farm, 72.84 49 P **P** **16 23 32.0 +1.3**
baz=299,SNR=23
BSY Bisya 72.88 286 P **P** **16 23 32.1 +0.8**
SNR=5.2
ASHO Ashiyiah 72.88 289 *i* P **P** **16 23 31.9 +0.6**
SNR=11
ASHO Ashiyiah 72.88 289 P **P** **16 23 32.0 +0.8**
SNR=6.4
KRMB Red Mountain 72.95 51 P **P** **16 23 33.1 +1.6**
NCK Nalchik 73.07 311 *i* P **P** **16 23 31.4 -0.6**
NCK pmax pmax
comp=Z,23nm,0.9s
E07A Sunnyside 73.08 45 P **P** **16 23 33.3 +1.3**
E07A IAmb IAmb 16 23 34.6
comp=Z,59nm,1.4s
MHTO MHTO 73.09 284 P **P** **16 23 32.8 +0.3**
ARQ Araqi 73.14 287 P **P** **16 23 33.7 +0.9**
SNR=7.8
TBLG Delisi 73.18 309 P **P** **16 23 33.4 +0.7**
TBLG pmax pmax
comp=Z,25nm,0.9s
TBLG Delisi 73.18 309 P **P** **16 23 33.4 +0.7**
TBLG IAmb IAmb 16 23 37.1
comp=Z,25nm,0.9s
JCC Jacoby Creek, 73.21 52 P **P** **16 23 34.8 +1.9**
G06A Carlson Farm, 73.25 47 P **P** **16 23 34.3 +1.2**
G06A IAmb IAmb 16 23 35.8
comp=Z,49nm,1.5s
I05D Terrebonne, OR 73.25 48 P **P** **16 23 34.7 +1.6**
baz=299,SNR=7.8
J04D Umpqua Nationa 73.30 49 P **P** **16 23 35.3 +1.7**
baz=299,SNR=27
HAWA Hanford 73.36 45 P **P** **16 23 34.8 +1.2**
KHMM Horse Mountain 73.38 52 P **P** **16 23 35.9 +1.8**
KHMM IAmb IAmb 16 23 37.0
comp=Z,26nm,0.8s
D08A Wollman Farm, 73.39 45 P **P** **16 23 34.8 +1.0**
D08A IAmb IAmb 16 23 36.1
comp=Z,32nm,1.0s
C09A Chrisman Ranch 73.40 44 P **P** **16 23 34.5 +0.6**
C09A IAmb IAmb 16 23 36.1
comp=Z,33nm,1.1s
KBZ Khabaz 73.40 311 P **P** **16 23 34.8 +0.9**
comp=Z,49nm,0.8s,baz=76,slow=4.4,SNR=97
KBZ LR LR 16 58 39.3
comp=Z,106nm,18.6s,baz=50,slow=38
KBZ Khabaz 73.40 311 *ce*P **P** **16 23 34.2 +0.3**
KBZ pmax pmax
comp=Z,59nm,0.9s
ALNE Al Ain 73.42 288 *i* P **P** **16 23 34.9 +0.5**
SNR=6.6
KIV Kislovodsk 73.43 312⇑ P **P** **16 23 35.1 +0.8**
KIV Kislovodsk 73.43 312 *i* P **P** **16 23 35.0 +0.8**
SNR=16
KIV Kislovodsk 73.43 312 P **P** **16 23 35.2 +1.0**
KIV Kislovodsk 73.43 312 *c* P **P** **16 23 35.0 +0.8**
KIV *i* 16 23 48.3
KIV *i* 16 26 16.6
KIV pmax pmax
comp=Z,68nm,1.0s
KIV MLR MLR
comp=Z,73nm,22.0s
KIV Kislovodsk 73.43 312 P **P** **16 23 34.6 +0.4**
KIV IAmb IAmb 16 23 36.9
comp=Z,48nm,0.8s
KONS Konsvik 73.53 341 *e*P **P** **16 23 34.9 +0.7**
E08A Dider Farm, El 73.59 45 P **P** **16 23 35.8 +0.8**
E08A IAmb IAmb 16 23 37.4
comp=Z,31nm,1.2s
YBH Yreka Blue Hor 73.64 51 P **P** **16 23 36.9 +1.4**
YBH pmax pmax
comp=Z,23nm,0.8s
YBH Yreka Blue Hor 73.64 51 P **P** **16 23 36.9 +1.4**
YBH IAmb IAmb 16 23 38.2
comp=Z,23nm,0.8s
L04D Klamath Falls 73.67 50 P **P** **16 23 37.2 +1.4**
baz=299,SNR=20
STOK Stokkvaagen 73.68 341 *e*P **P** **16 23 35.9 +0.8**

KMRM Mail Ridge 73.71 53 P **P** **16 23 37.7 +1.8**
KMRM IAmb IAmb 16 23 54.4
comp=Z,35nm,1.2s
M02C Callahan 73.71 51 P **P** **16 23 37.7 +1.8**
baz=299,SNR=12
NEY Neytrino 73.75 311 *i* P **P** **16 23 37.6 +1.4**
NEY pmax pmax
comp=Z,3.0nm,0.8s
PINE Pine Mountain 73.77 48 P **P** **16 23 38.0 +1.7**
K04D Chiloquin, OR 73.83 50 P **P** **16 23 38.1 +1.5**
baz=299,SNR=5.4
NEW Newport 73.83 43 P **P** **16 23 37.4 +1.0**
NEW pmax pmax
comp=Z,32nm,1.0s
NEW Newport 73.83 43 P **P** **16 23 37.6 +1.1**
baz=301
NEW Newport 73.83 43 P **P** **16 23 37.4 +1.0**
NEW IAmb IAmb 16 23 38.7
comp=Z,32nm,1.0s
J05D Fort Rock, OR 73.83 49 P **P** **16 23 38.7 +2.0**
baz=300,SNR=18
N02D Trinity Center 74.01 51 P **P** **16 23 39.3 +1.7**
baz=299,SNR=19
VSU Vasula 74.05 330 *e*P **P** **16 23 38.0 +0.6**
VSU Vasula 74.05 330 *i* P **P** **16 23 36.8 -0.6**
VSU pmax pmax
comp=Z,80nm,0.9s
KCPM Cahto Peak 74.05 53 P **P** **16 23 39.3 +1.4**
KCPM IAmb IAmb 16 23 40.6
comp=Z,43nm,0.9s
E09A Wood Farm, Sta 74.12 45 P **P** **16 23 39.4 +1.3**
E09A IAmb IAmb 16 23 40.6
comp=Z,43nm,1.1s
AKH Akhalkalaki 74.15 309⇑ P **P** **16 23 39.9 +1.3**
AKH Akhalkalaki 74.15 309 P **P** **16 23 39.8 +1.2**
AKH pmax pmax
comp=Z,24nm,0.8s
AKH Akhalkalaki 74.15 309 P **P** **16 23 39.8 +1.2**
AKH IAmb IAmb 16 23 40.9
comp=Z,24nm,0.8s
M04C Macdoel 74.18 50 P **P** **16 23 40.4 +1.7**
baz=300,SNR=15
G08A Pilot Rock 74.25 46 P **P** **16 23 39.6 +0.6**
WDC Whiskeytown Da 74.31 52 P **P** **16 23 40.4 +1.1**
WDC *PP **pP** **16 23 59.6 +1.5**
WDC pmax pmax
comp=Z,17nm,1.0s
WDC Whiskeytown Da 74.31 52 P **P** **16 23 40.4 +1.1**
WDC pP **pP** **16 23 59.6 +1.5**
K05A Summer Lake 74.33 49 P **P** **16 23 41.3 +1.7**
O02D Mt. Diablo Mer 74.34 52 P **P** **16 23 41.5 +1.8**
baz=300,SNR=12
JMIC Jan Mayen 74.49 350 *e*P **P** **16 23 40.0 +0.3**
I07A Izee 74.53 47 P **P** **16 23 41.8 +1.1**
HOPS Hopland Field 74.73 53 P **P** **16 23 42.6 +0.9**
HOPS IAmb IAmb 16 23 43.5
comp=Z,57nm,1.2s
O03E Paynes Creek 74.94 52 P **P** **16 23 43.8 +0.7**
baz=300,SNR=11
F10A Beach Ranch, E 74.95 45 P **P** **16 23 43.8 +0.8**
F10A pP **pP** **16 24 03.4 +1.5**
MOD Modoc Plateau 75.12 50 P **P** **16 23 44.9 +0.7**
SUMG Summit 75.20 360⇑ *i*P **P** **16 23 45.8 +1.4**
SUMG pmax pmax
comp=Z,94nm,0.8s
SUMG Summit 75.20 360 P **P** **16 23 45.5 +1.1**
SUMG IAmb IAmb 16 23 46.9
comp=Z,84nm,1.2s
SUMG Summit 75.20 360⇑ *i*P **P** **16 23 45.8 +1.4**
comp=Z,94nm,0.8s
BATM Batumi 75.23 310⇑ P **P** **16 23 44.9 +0.3**
BATM Batumi 75.23 310⇑ P **P** **16 23 44.9 +0.3**
WALA Waterton Lakes 75.23 41 P **P** **16 23 45.5 +0.8**
WALA IAmb IAmb 16 23 47.5
comp=Z,22nm,0.8s
NSS Namsos 75.30 340⇑ *i*P **P** **16 23 44.4 -0.1**
BCA Borcka 75.35 310⇑ P **P** **16 23 46.2 +0.9**
BCA Borcka 75.35 310 *e*P **P** **16 23 45.7 +0.3**
SOC Sochi 75.47 313 *e*P **P** **16 23 45.8 -0.1**
SOC *e* 16 26 35.2
SOC *e*PPP PPP 16 28 19.1
SOC *e*S **S** **16 33 20.0 -0.5**
SOC *e*SS **SS** **16 38 19.8 +8.2**
SOC *e*SSS SSS 16 41 34.1
SOC pmax pmax
comp=Z,31nm,0.6s
BMO Blue Mountains 75.48 46 P **P** **16 23 47.0 +0.9**
BMO *PP **pwP** **16 24 06.6 -1.6**
BMO pmax pmax
comp=Z,23nm,0.7s
BMO Blue Mountains 75.48 46 P **P** **16 23 47.0 +0.9**
BMO IAmb IAmb 16 23 48.4
comp=Z,23nm,0.7s
BMO pP **pwP** **16 24 06.6 -1.6**
ORV Oroville 75.51 52 P **P** **16 23 46.6 +0.3**
ORV pmax pmax
comp=Z,37nm,1.3s
ORV Oroville 75.51 52 P **P** **16 23 46.6 +0.3**
ORV IAmb IAmb 16 23 48.0
comp=Z,37nm,1.3s
J08A Circle Bar Ran 75.54 48 P **P** **16 23 47.9 +1.4**
J08A IAmb IAmb 16 23 49.0
comp=Z,81nm,1.3s
JTMT Jette 75.73 42 P **P** **16 23 48.5 +1.0**
JTMT IAmb IAmb 16 23 50.7
comp=Z,25nm,1.0s
WVOR Wild Horse Val 75.91 49 P **P** **16 23 49.7 +1.1**
WVOR pP **pP** **16 24 09.0 +1.5**
ISAL Salakas 76.06 328 *e*P **P** **16 23 49.4 +0.4**
BEKR Beckworth 76.11 52 P **P** **16 23 50.4 +0.4**
BEKR IAmb IAmb 16 23 51.9
comp=Z,25nm,0.7s
IIGN Ignalina 76.15 328 *e*P **P** **16 23 50.1 +0.5**
AFDM Forest Hills D 76.17 53 P **P** **16 23 50.9 +0.8**
ANN Anapa 76.24 314 *e*P **P** **16 23 50.2 0.0**
ANN pmax pmax
comp=Z,116nm,1.3s
SLIT Slitere, Latvi 76.42 331 *e*P **P** **16 23 51.1 +0.1**
MSO Missoula 76.42 43 P **P** **16 23 51.9 +0.5**
SCO Scoresbysund 76.54 354⇑ *i*P **P** **16 23 53.0 +1.5**
SCO pmax pmax
comp=Z,50nm,0.9s
SCO Scoresbysund 76.54 354⇑ *i*P **P** **16 23 53.0 +1.5**
comp=Z,50nm,0.9s
TBLU Trondheim 76.75 339 *e*P **P** **16 23 52.3 -0.5**
KTUT Trabzon 76.79 310⇓ *e*P **P** **16 23 53.8 +0.4**
PAHR Pah Rah Range 76.84 51 P **P** **16 23 54.4 +0.4**
PAHR IAmb IAmb 16 23 56.1
comp=Z,39nm,1.4s
SAO San Andreas Ge 76.96 55 P **P** **16 23 55.4 +0.9**
SAO pmax pmax
comp=Z,20nm,0.9s
SAO San Andreas Ge 76.96 55 P **P** **16 23 55.4 +0.9**
PNTR Pine Nut 77.02 52 P **P** **16 23 56.2 +1.1**
PNTR IAmb IAmb 16 23 57.5
comp=Z,100nm,1.8s
CMB Columbia Colle 77.04 53 P **P** **16 23 55.9 +0.9**
CMB *PP **pP** **16 24 15.2 +1.4**
CMB pmax pmax
comp=Z,65nm,1.4s
CMB Columbia Colle 77.04 53 P **P** **16 23 55.9 +0.9**
CMB IAmb IAmb 16 23 57.3
comp=Z,65nm,1.4s
CMB pP **pP** **16 24 15.2 +1.4**
PABE Paberze 77.06 329 *e*P **P** **16 23 55.2 +0.6**
MFID Camas Ranch 77.15 47 P **P** **16 23 56.8 +1.2**
MFID IAmb IAmb 16 23 58.0
comp=Z,23nm,0.8s
YERR Yerington 77.31 52 P **P** **16 23 57.6 +0.9**
YERR IAmb IAmb 16 26 28.3
comp=Z,32nm,0.8s
WAKR Walker 77.43 52 P **P** **16 23 58.5 +1.1**
AKASG Malin Array Be 77.50 323 P **P** **16 23 57.2 0.0**
comp=Z,9.0nm,0.5s,baz=49,slow=5.9,SNR=40
AKASG LR LR 17 01 25.1
comp=Z,142nm,18.1s,baz=80,slow=38
AKBB Malin Array Si 77.50 323 P **P** **16 23 57.2 -0.1**
AKBB pmax pmax
comp=Z,47nm,1.4s
AKBB Malin Array Si 77.50 323 P **P** **16 23 57.2 -0.1**
AKBB IAmb IAmb 16 23 58.2
comp=Z,47nm,1.4s
PBUR Paburge 77.61 330 *e*P **P** **16 23 57.2 -0.5**
PMPB Monarch Peak 77.69 55 P **P** **16 23 59.2 +0.5**

LRM	Limekiln Ridge	77.84	43	P		P	16 24 00.4	+0.8
FFC	Flin Flon	77.86	32	P		P	16 23 59.2	+0.1
FFC	comp=Z,24nm,0.9s			pmax		pmax		
FFC	Flin Flon	77.86	32	P		P	16 23 59.2	+0.1
FFC	comp=Z,24nm,0.8s			IAmb		IAmb	16 24 00.4	
NC405	NORSAR Array S	77.90	337	P		P	16 23 59.4	+0.1
NC303	NORSAR Array S	77.93	337	P		P	16 23 59.3	-0.1
NC303	NORSAR Array S	77.93	337	i P		P	16 23 59.7	+0.2
RYN	Ryan	77.98	52	P		P	16 24 01.1	+0.8
RYN	comp=Z,38nm,1.3s			IAmb		IAmb	16 24 02.8	
DLMT	Dillon	78.01	44	P		P	16 24 00.9	+0.5
DLMT	comp=Z,20nm,0.8s			IAmb		IAmb	16 24 02.6	
KVN	Kaiserville	78.03	51	P		P	16 24 01.8	+1.1
KVN	comp=Z,66nm,1.4s			pmax		pmax		
KVN	Kaiserville	78.03	51	P		P	16 24 01.8	+1.1
KVN	comp=Z,66nm,1.4s			IAmb		IAmb	16 24 03.1	
DOMB	Dombas	78.03	339	eP		P	16 24 00.4	+0.3
MOL	Molde	78.08	340	eP		P	16 24 01.2	+0.9
NB201	NORSAR Array S	78.08	337	P		P	16 24 00.3	0.0
NC204	NORSAR Array S	78.09	338	P		P	16 24 00.5	+0.1
EGMT	Eagleton baz=306	78.09	40	P		P	16 24 01.5	+0.8
EGMT	Eagleton	78.09	40	P		P	16 24 01.3	+0.5
EGMT	comp=Z,38nm,1.4s			IAmb		IAmb	16 24 02.7	
NB2	NORSAR Subarra comp=Z,42nm,0.9s,baz=42,slow=5.9	78.12	337	P		P	16 24 00.4	-0.2
NB2	NORSAR Subarra baz=42,slow=5.9	78.12	337	P		P	16 24 00.4	-0.2
NOA	NORSAR Array B comp=Z,26nm,0.8s,baz=42,slow=5.4,SNR=64	78.12	337	P		P	16 24 00.7	+0.1
NOA	comp=Z,48nm,19.7s,baz=45,slow=38			LR		LR	17 01 26.1	
MDPB	Devils Postpil	78.13	53	P		P	16 24 02.2	+0.9
MDPB				pP		pP	16 24 21.6	+1.3
SIM	Simferopol'	78.13	316	c i P		P	16 24 01.3	+0.4
SIM				e			16 26 56.0	
SIM	comp=Z,37nm,0.8s			pmax		pmax		
PTK	Pertek	78.14	309	eP		P	16 24 02.9	+1.6
MCMT	McKenzie Canyo	78.16	44	P		P	16 24 01.7	+0.3
OMMB	Old Mammoth Mi	78.19	53	P		P	16 24 02.0	+0.3
ILULI	Ilulissat	78.21	4	P		P	16 24 01.3	+0.5
ILULI	comp=Z,30nm,1.0s			pmax		pmax		
ILULI	Ilulissat	78.21	4	P		P	16 24 01.3	+0.5
ILULI	comp=Z,30nm,1.0s			IAmb		IAmb	16 24 02.7	
NVAR	Mina Array Bea comp=Z,11nm,0.6s,baz=294,slow=5.5,SNR=57	78.23	52	P		P	16 24 03.1	+1.3
NVAR	comp=Z,55nm,19.4s,baz=252,slow=35			LR		LR	16 57 33.3	
NC602	NORSAR Array S	78.24	337	P		P	16 24 00.7	-0.5
NC602	comp=Z,98nm,1.7s			IAmb		IAmb	16 24 38.4	
NC602	NORSAR Array S	78.24	337	⇑i P		P	16 24 00.9	-0.3
NBO00	NORSAR Array S	78.27	338	P		P	16 24 01.4	0.0
NBO00	comp=Z,50nm,0.9s			IAmb		IAmb	16 24 02.6	
MLAC	Mammoth, Mammo baz=302	78.29	53	P		P	16 24 03.8	+1.6
NV11	Mina Array Sit	78.32	52	P		P	16 24 03.1	+0.8
PAGB	Antelope Grade	78.33	55	P		P	16 24 03.3	+1.1
PAGB	comp=Z,48nm,0.8s			IAmb		IAmb	16 24 04.7	
FCC	Fort Churchill	78.33	26	P		P	16 24 01.2	-0.5
FCC	comp=Z,25nm,1.0s			pmax		pmax		
FCC	Fort Churchill	78.33	26	P		P	16 24 01.2	-0.5
FCC	comp=Z,25nm,1.0s			IAmb		IAmb	16 24 02.5	
SUW	Suwalki	78.37	328	P		P	16 24 01.8	-0.2
SUW	comp=Z,35nm,1.0s			pmax		pmax		
SUW	Suwalki	78.37	328	P		P	16 24 01.8	-0.2
SUW	comp=Z,35nm,1.0s			IAmb		IAmb	16 24 11.0	
NAO01	NORSAR Array S	78.37	337	P		P	16 24 01.5	-0.4
NAO01	comp=Z,42nm,0.9s			IAmb		IAmb	16 24 02.9	
VOG	Valley Oaks Go baz=302	78.61	54	P		P	16 24 04.5	+0.8
QRZ	Quartz Range	78.68	156	P		P	16 24 04.8	+1.1
QRZ				pP		pwP	16 24 24.5	-1.8
BKZ	Black Stump Fm	78.69	152	P		P	16 24 04.2	+0.4
BKZ				pP		pwP	16 24 24.9	-1.6
BKZ	comp=Z,94nm,1.9s			IAmb		IAmb	16 24 44.2	
SMMC	Simmler baz=302	78.72	55	P		P	16 24 04.0	-0.3
ELK	Elko	78.97	49	P		P	16 24 07.2	+1.3
ELK	comp=Z,15nm,0.8s			pmax		pmax		
ELK	Elko	78.97	49	P		P	16 24 07.2	+1.3
QLMT	Earthquake Lak	78.99	44	P		P	16 24 07.2	+1.3
TIN	Tinemaha, Big baz=302,SNR=6.1	79.01	53	P		P	16 24 07.4	+1.4
PKM	Mcpherson Peak baz=302,SNR=5.8	79.07	56	P		P	16 24 07.8	+1.3
VES	Vestal, Richgr baz=302	79.07	55	P		P	16 24 06.8	+0.6
MALT	Malatya	79.09	308	eP		P	16 24 08.1	+1.7
KVT	Kavak	79.11	312	eP		P	16 24 08.1	+1.7
YHB	Horse Butte	79.18	44	P		P	16 24 08.2	+1.3
TOKT	Tokat	79.22	311	eP		P	16 24 08.8	+1.8
DIKM	Dikmen	79.29	313	⇑P		P	16 24 08.4	+1.2
DIKM	Dikmen	79.29	313	eP		P	16 24 09.2	+1.9
NNZ	Nelson	79.32	155	P		P	16 24 07.9	+0.8
YHH	Holmes Hill	79.36	43	P		P	16 24 09.0	+1.0
YHH				pP		pP	16 24 28.3	+1.3
YMR	Madison River	79.36	44	P		P	16 24 09.4	+1.5
SBC	Santa Barbara baz=302	79.38	56	P		P	16 24 09.0	+1.1
CWC	Cottonwood Cre baz=303	79.44	54	P		P	16 24 09.2	+0.8
GCMT	Greycliff	79.45	42	P		P	16 24 09.3	+1.0
YNM	Yellowstone No	79.48	43	P		P	16 24 09.2	+0.6
YNR	Norris Junctio	79.50	43	P		P	16 24 08.6	-0.1
SORM	Soroca	79.50	321	⇑P		P	16 24 08.4	+0.1
SORM	Soroca	79.50	321	⇑P		P	16 24 08.4	+0.1
DARE	Darende-Malaty	79.57	309	eP		P	16 24 11.2	+2.2
ISA	Isabella, Lake	79.59	54	P		P	16 24 09.1	0.0
ISA	comp=Z,10.0nm,1.0s			pmax		pmax		
ISA	Isabella, Lake baz=303,SNR=6.5	79.59	54	P		P	16 24 09.2	0.0
ISA	Isabella, Lake	79.59	54	P		P	16 24 09.1	0.0
GRAC	Grapevine Rang baz=303,SNR=10.0	79.62	53	P		P	16 24 10.4	+1.1
ARVC	Arvin baz=302	79.63	55	P		P	16 24 10.0	+0.7
THZ	Tophouse	79.64	156	P		P	16 24 09.2	+0.2
THZ				pP		pP	16 24 29.1	+1.2
SCZ2	Santa Cruz Isl baz=302	79.67	56	P		P	16 24 10.4	+0.9
YPP	Pitchstone Pla	79.68	44	P		P	16 24 11.8	+2.0
KONO	Kongsberg	79.70	337	P		P	16 24 09.4	+0.3
KONO	comp=Z,25nm,1.1s			pmax		pmax		
KONO	Kongsberg	79.70	337	P		P	16 24 09.4	+0.3
TUWZ	Tuamarina	79.71	155	P		P	16 24 09.1	-0.1
YNE	Yellowstone No	79.72	43	P		P	16 24 10.7	+0.8
H17A	Grant Village baz=306,SNR=21	79.74	44	P		P	16 24 12.9	+2.9
H17A	Grant Village	79.74	44	P		P	16 24 12.7	+2.6
H17A	comp=Z,24nm,0.8s			IAmb		IAmb	16 24 14.1	
LKWY	Lake	79.75	43	P		P	16 24 12.5	+2.4
LKWY	comp=Z,20nm,0.9s			pmax		pmax		
LKWY	Lake	79.75	43	P		P	16 24 12.5	+2.4
YMP	Mirror Lake Pl	79.79	43	P		P	16 24 11.9	+1.5
IMW	Indian Meadow	79.82	44	P		P	16 24 12.1	+1.5
FLWY	Flagg Ranch	79.85	44	P		P	16 24 11.4	+0.8
FLWY	comp=Z,32nm,1.2s			IAmb		IAmb	16 24 13.9	
BFZ	Birch Farm	79.90	153	P		P	16 24 10.5	+0.2
BFZ				IAmb		IAmb	16 24 37.0	
	comp=Z,108nm,1.5s							
FXWY	Fox Creek	79.92	44	P		P	16 24 12.1	+1.1
HVU	Hansel Valley	79.93	47	P		P	16 24 12.5	+1.5
HVU	comp=Z,28nm,0.8s			pmax		pmax		
HVU	Hansel Valley	79.93	47	P		P	16 24 12.5	+1.5
BSWZ	Blackbirch Sta	79.94	155	P		P	16 24 10.5	0.0
BSWZ				pP		pP	16 24 30.4	+1.0
OSI	Osito Audit: C baz=303	79.98	55	P		P	16 24 12.3	+1.1
MILM	Milestii Mici	79.99	320	⇑P		P	16 24 10.7	-0.2
MPMC	Manual Prospec baz=303,SNR=20	80.05	54	P		P	16 24 12.6	+0.8
TPAW	Teton Pass	80.05	45	P		P	16 24 13.4	+1.7
R11A	Troy Canyon, C baz=304,SNR=40	80.07	51	P		P	16 24 12.9	+1.0
R11A	Troy Canyon, C	80.07	51	P		P	16 24 12.8	+1.0
RLMT	Red Lodge baz=306,SNR=11	80.07	42	P		P	16 24 13.0	+1.2
RLMT	Red Lodge	80.07	42	P		P	16 24 13.0	+1.2
SNCC	San Nicolas Is baz=302	80.14	57	P		P	16 24 13.0	+0.9
REDW	Red Top Meadow	80.18	45	P		P	16 24 13.3	+0.9
SNOW	Snow King Moun	80.18	44	P		P	16 24 13.6	+1.1
SNOW	comp=Z,33nm,1.4s			IAmb		IAmb	16 24 15.1	
LRMC	Laurel Mtn Rad baz=303,SNR=12	80.23	54	P		P	16 24 13.4	+0.7
FURC	Furnace Creek, baz=303,SNR=5.2	80.25	53	P		P	16 24 13.5	+1.0
BGU	Big Grassy Mou	80.26	48	P		P	16 24 13.8	+1.0
EDW2	Edwards Air Fo baz=303,SNR=19	80.34	55	P		P	16 24 14.3	+1.1
SARI	SarD1z-Kayseri	80.36	309	eP		P	16 24 14.9	+1.5
AHID	Auburn Hatcher	80.38	45	P		P	16 24 13.7	+0.2
TPNV	Topopah Spring	80.40	52	P		P	16 24 14.5	+0.9
TPNV	comp=Z,37nm,1.1s			pmax		pmax		
TPNV	Topopah Spring baz=304,SNR=32	80.40	52	P		P	16 24 14.6	+0.9
TPNV	Topopah Spring	80.40	52	P		P	16 24 14.4	+0.9
TPNV	comp=Z,37nm,1.1s			IAmb		IAmb	16 24 15.7	
SPUT	South Promonto	80.40	47	P		P	16 24 14.3	+0.8
SPUT				pP		pP	16 24 33.9	+1.3
SFJD	Kangerlussuaq	80.44	4	⇑i P		P	16 24 13.4	+0.4
SFJD	comp=Z,2.0nm,0.7s			pmax		pmax		
SFJD	Kangerlussuaq	80.44	4	P		P	16 24 13.3	+0.3
SFJD	comp=Z,59nm,1.4s			IAmb		IAmb	16 24 14.5	
SFJD	Kangerlussuaq comp=Z,1.5nm,0.7s	80.44	4	⇑i P		P	16 24 13.4	+0.4
DECC	Green Verdugo baz=303	80.44	56	P		P	16 24 14.3	+0.6
BNN	Bunyan	80.48	310	eP		P	16 24 15.7	+1.7
IAS	Iasi	80.50	321	⇑P		P	16 24 14.6	+0.9
IAS	Iasi	80.50	321	⇑P		P	16 24 14.6	+0.9
CORM	Corum	80.51	312	eP		P	16 24 15.2	+1.1
GAZ	Gaziantep	80.52	308	P		P	16 24 15.1	+0.9
KMRS	Kahramanmaras	80.54	308	eP		P	16 24 15.4	+1.2
ILGA	Ilgaz	80.58	313	P		P	16 24 15.5	+0.9
ILGA	comp=Z,44nm,0.8s			IAmb		IAmb	16 24 17.0	
MWC	Mount Wilson	80.65	55	P		P	16 24 15.3	+0.3
MWC	comp=Z,31nm,1.3s			pmax		pmax		
MWC	Mount Wilson	80.65	55	P		P	16 24 15.3	+0.3
MWC	comp=Z,31nm,1.2s			IAmb		IAmb	16 24 16.9	
LVV	L'vov	80.67	324	eP		P	16 24 15.6	+1.0
FMP	Fort Macarthur baz=303	80.76	56	P		P	16 24 16.3	+0.9
HWUT	Hardware Ranch	80.77	46	P		P	16 24 16.4	+0.9
HWUT	comp=Z,40nm,0.9s			IAmb		IAmb	16 24 18.1	
DGMT	Dagmar	80.78	38	P		P	16 24 15.5	+0.2
DGMT	Dagmar	80.78	38	P		P	16 24 15.2	0.0
SOCY	Socotra	80.79	279	P		P	16 24 14.5	-1.4
SOCY	comp=Z,27nm,0.9s			IAmb		IAmb	16 24 18.8	
DUG	Dugway, Tooele	80.81	48	P		P	16 24 16.7	+0.9
DUG	comp=Z,36nm,0.7s			pmax		pmax		
DUG	Dugway, Tooele baz=305,SNR=43	80.81	48	P		P	16 24 17.2	+1.4
DUG	Dugway, Tooele baz=304,SNR=7.5	80.81	48	P		P	16 24 16.6	+0.9
DUG	comp=Z,36nm,0.7s			IAmb		IAmb	16 24 18.1	
LAO	LASA Array baz=308,SNR=9.5	80.82	40	P		P	16 24 16.5	+0.9
LAO	LASA Array	80.82	40	P		P	16 24 16.3	+0.8
LAO	comp=Z,30nm,0.9s			IAmb		IAmb	16 24 17.6	
CIS	Catalina Islan baz=303,SNR=7.5	80.84	56	P		P	16 24 16.3	+0.4
BFSC	Mount Baldy Ra baz=303,SNR=7.5	80.92	55	P		P	16 24 16.7	+0.3
GSC	Goldstone, Bar	80.93	54	P		P	16 24 17.0	+0.6
GSC	Goldstone, Bar baz=304,SNR=7.5	80.93	54	P		P	16 24 17.2	+0.8
GSC	Goldstone, Bar	80.93	54	P		P	16 24 17.0	+0.6
SHOC	Shoshone, Teco baz=304	80.96	53	P		P	16 24 17.1	+0.6
RRX	Edison Barstow baz=304	81.03	54	P		P	16 24 18.0	+1.2
TLCR		81.04	318	⇑P		P	16 24 17.1	+0.5
TLCR		81.04	318	⇑P		P	16 24 17.1	+0.5
PSUT	Pine Spring	81.09	50	P		P	16 24 18.0	+0.7
BSD	Bornholm Skovb	81.13	332	i P		P	16 24 16.5	-0.4
BSD	Bornholm Skovb	81.13	332	i P		P	16 24 16.5	-0.4
TCUT	Toone Canyon	81.15	47	P		P	16 24 18.5	+0.9
CTU	Camp Tracy	81.19	47	P		P	16 24 18.7	+0.9
KOZT	Kozan	81.26	309	eP		P	16 24 19.1	+1.1
BW06	Boulder Array baz=307	81.30	45	P		P	16 24 18.9	+0.4
BW06	Boulder Array	81.30	45	P		P	16 24 18.8	+0.4
PD31	Pinedale Array	81.30	45	P		P	16 24 18.7	+0.3
PDAR	Pinedale Array comp=Z,7.1nm,0.6s,baz=272,slow=2.5,SNR=53	81.30	45	P		P	16 24 18.9	+0.5
SHPR	Sheep Range	81.37	52	P		P	16 24 19.7	+0.9
SHPR	comp=Z,40nm,1.4s			IAmb		IAmb	16 24 21.2	
BR131	Keskin Array S	81.39	312	P		P	16 24 19.1	+0.3
BR131	comp=Z,29nm,0.9s			pmax		pmax		
BR131	Keskin Array S	81.39	312	P		P	16 24 19.1	+0.3
BR131	comp=Z,29nm,0.9s			IAmb		IAmb	16 24 20.9	
BRTR	Keskin Array B comp=Z,25nm,0.9s,baz=106,slow=4.0,SNR=88	81.39	312	P		P	16 24 19.4	+0.6
BRTR	comp=Z,31nm,18.8s,baz=47,slow=38			LR		LR	17 04 10.9	
NLU	North Lily Min	81.41	48	P		P	16 24 19.9	+0.9
TESR	Tescani	81.41	320	⇑P		P	16 24 19.1	+0.5
BBRC	Big Bear Solar baz=304	81.42	55	P		P	16 24 19.8	+0.6
CFR	Carcaliu	81.42	319	⇑P		P	16 24 18.9	+0.3
CFR	Carcaliu	81.42	319	⇑P		P	16 24 18.9	+0.2
JLU	Jordanelle	81.42	47	P		P	16 24 19.7	+0.6
BIZ	Bicaz	81.44	321	⇑P		P	16 24 19.4	+0.7
TUQ	Turquoise Moun baz=304	81.45	53	P		P	16 24 20.1	+0.9
BUR08	Bucovina Ar. S	81.47	322	P		P	16 24 19.5	+0.5
BUR08	comp=Z,30nm,1.2s			IAmb		IAmb	16 24 20.8	
TOPG	Topolog	81.47	318	⇓P		P	16 24 19.6	+0.6
BURAR	Bucovina Array	81.48	322	⇑P		P	16 24 19.7	+0.7
BURAR	Bucovina Array	81.48	322	⇑P		P	16 24 19.7	+0.7
HEC	Hector,Ludlow baz=304,SNR=15	81.51	54	P		P	16 24 20.2	+0.7
CEYT	Ceyhan	81.58	309	eP		P	16 24 21.2	+1.6
PETR	Petresti	81.59	319	⇑P		P	16 24 20.0	+0.5
MURC	Murrieta baz=304,SNR=5.3	81.59	56	P		P	16 24 20.3	+0.5
TIRR	Tirgusor	81.71	318	⇑P		P	16 24 20.6	+0.4
TIRR	Tirgusor	81.71	318	⇑P		P	16 24 20.6	+0.4
VRI	Vrincioaia	81.78	320	⇑P		P	16 24 21.5	+1.0
VRI	Vrincioaia	81.78	320	⇑P		P	16 24 21.5	+1.0
RAYN	Ar Rayn SNR=90	81.81	293	i P		P	16 24 21.9	+0.7
RAYN	Ar Rayn	81.81	293	P		P	16 24 21.5	+0.3
RAYN	comp=Z,69nm,0.7s			pmax		pmax		
RAYN	Ar Rayn	81.81	293	P		P	16 24 21.5	+0.3
PLOR	Plostina	81.83	320	⇑P		P	16 24 21.4	+0.6
PLOR	Plostina	81.83	320	⇑P		P	16 24 21.4	+0.6
HARR	Harsova	81.84	318	⇑P		P	16 24 21.5	+0.6
HARR	Harsova	81.84	318	⇑P		P	16 24 21.5	+0.6
ANTO	Ankara	81.84	312	⇓P		P	16 24 21.8	+0.7
ANTO	Ankara	81.84	312	⇓P		P	16 24 21.8	+0.7
ANTO	Ankara	81.84	312	P		P	16 24 21.6	+0.5
ANTO	comp=Z,35nm,0.7s			IAmb		IAmb	16 24 22.9	
BR231	Keskin MP Arra	81.87	312	P		P	16 24 22.0	+0.7
BR231	comp=Z,23nm,0.7s			IAmb		IAmb	16 24 23.1	
TCRU	Three Creeks R	81.95	49	P		P	16 24 22.9	+0.9
CCUT	Cedar City	81.97	51	P		P	16 24 22.7	+0.7
BISRR	Bisoca	81.98	320	⇑P		P	16 24 23.4	+1.6
GMRC	Granite Mounta baz=304,SNR=16	81.99	54	P		P	16 24 22.9	+0.8
109C	Camp Elliot, M baz=304	82.04	56	P		P	16 24 22.7	+0.5
PFO	Pinyon Flats O	82.10	55	P		P	16 24 23.2	+0.6
PFO	comp=Z,29nm,1.0s			pmax		pmax		
PFO	Pinyon Flats O baz=304,SNR=15	82.10	55	P		P	16 24 23.1	+0.5
PFO	Pinyon Flats O	82.10	55	P		P	16 24 23.2	+0.6
PFO	comp=Z,29nm,1.0s			IAmb		IAmb	16 24 24.5	
XPFO	Pion Flat	82.10	55	P		P	16 24 23.1	+0.5
XPFO	comp=Z,31nm,1.1s			IAmb		IAmb	16 24 24.5	
KOLS	Kolonicke sedl	82.12	324	eP		P	16 24 23.1	+0.8
KOLS	comp=Z,14nm,0.9s			pmax		pmax		
KOLS	Kolonicke sedl	82.12	324	eP		P	16 24 23.1	+0.8
SZCU	Shurtz Canyon	82.12	50	P		P	16 24 23.5	+0.7
MSU	Marysvale	82.18	49	P		P	16 24 24.3	+1.2
MSU	Marysvale	82.18	49	P		P	16 24 24.3	+1.2
BELC	Belle Mtn. Jos baz=304,SNR=19	82.20	55	P		P	16 24 23.5	+0.3
ICOR	Ion Corvin	82.27	318	⇓P		P	16 24 24.7	+1.6
ARCR	ARCALIA	82.27	322	⇑P		P	16 24 24.8	+1.7
UZH	Uzhgorod	82.31	324	eP		P	16 24 23.7	+0.5
UZH				e			16 24 38.3	
UZH				e			16 24 49.5	
BMR	Baia Mare	82.33	323	⇑P		P	16 24 24.7	+1.3
BMR	Baia Mare	82.33	323	⇑P		P	16 24 24.7	+1.3
TMUT	Trail Mountain	82.34	48	P		P	16 24 24.8	+0.8
LCMT	Little Creek M	82.35	51	P		P	16 24 25.0	+1.0
DOPR	Dopca	82.44	320	⇑P		P	16 24 25.3	+1.3
MLR	Muntele Rosu	82.44	320	⇑P		P	16 24 24.2	0.0
MLR	Muntele Rosu	82.44	320	⇑P		P	16 24 24.2	0.0
MLR	Muntele Rosu	82.44	320	P		P	16 24 24.7	+0.5
MLR	comp=Z,36nm,1.3s			IAmb		IAmb	16 24 26.6	
MTPU	Mount Pierson	82.45	50	P		P	16 24 25.9	+1.2
OJC	Ojcow	82.45	326	eP		P	16 24 24.8	+0.8
OJC	Ojcow	82.45	326	P		P	16 24 24.5	+0.5
OJC	comp=Z,72nm,1.2s			pmax		pmax		
OJC	Ojcow	82.45	326	P		P	16 24 24.5	+0.5
OJC	comp=Z,72nm,1.2s			IAmb		IAmb	16 24 25.9	
BAR	Barrett	82.46	56	P		P	16 24 24.8	+0.4
MERS	Mersin	82.47	309	eP		P	16 24 25.2	+0.8
MDUB	Mudurnu	82.47	313	eP		P	16 24 25.3	+0.9
MDUB	Mudurnu	82.47	313	P		P	16 24 24.9	+0.5
WAL1	Walls	82.51	342	⇑eP		P	16 24 25.0	+1.0
WAL1	comp=Z,50nm,0.9s			IAmb		IAmb	16 24 25.3	
TRPA	Tarpa	82.52	323	⇑P		P	16 24 25.4	+1.1
MONP2	Monument Peak baz=304,SNR=14	82.52	56	P		P	16 24 25.7	+0.7
P17A	Butcher Ranch,	82.53	48	P		P	16 24 25.6	+0.8
Q16A	Castle Valley	82.58	48	P		P	16 24 25.8	+0.6
RDMU	Red Mountain	82.60	46	P		P	16 24 26.3	+1.0
KNB	Kanab	82.63	51	P		P	16 24 26.6	+1.2
KNB	comp=Z,110nm,1.7s			pmax		pmax		
KNB	Kanab	82.63	51	P		P	16 24 26.6	+1.2
SECR		82.66	319	⇑P		P	16 24 26.0	+0.8
IRM	Iron Mountain baz=304,SNR=12	82.70	54	P		P	16 24 26.4	+0.7
NEE2	Needles Airpor baz=305	82.71	53	P		P	16 24 26.1	+0.4
BC3	Big Chuckawall baz=304,SNR=18	82.77	55	P		P	16 24 26.8	+0.7
SULR		82.78	319	⇑P		P	16 24 26.7	+0.9
IKP	In-Ko-Pah, Jac baz=304,SNR=8.9	82.87	56	P		P	16 24 27.5	+0.8
SRU	San Rafael Swe	82.88	48	P		P	16 24 27.5	+0.8
SRU	comp=Z,83nm,0.7s			pmax		pmax		
SRU	San Rafael Swe	82.88	48	P		P	16 24 27.5	+0.8
CJR	Cluj-Napoca	82.90	322	⇑P		P	16 24 27.7	+1.2
CJR	Cluj-Napoca	82.90	322	⇑P		P	16 24 27.7	+1.2
GULT	Gulveren	82.91	314	eP		P	16 24 27.1	+0.4
SWSC	Sam W. Stewart baz=304	82.92	55	P		P	16 24 27.4	+0.6
KIZK	Mersin	82.94	309	eP		P	16 24 27.1	+0.3
VOIR		82.96	320	⇓P		P	16 24 27.5	+0.7
VOIR		82.96	320	⇓P		P	16 24 27.5	+0.7
KIZT	Kizilcal	82.99	312	eP		P	16 24 27.7	+0.5
W13A	Hualapai Mount	83.02	53	P		P	16 24 28.0	+0.4
LADK	Ladik-KONYA	83.09	311	eP		P	16 24 28.1	+0.4
K22A	Casper baz=308	83.15	43	P		P	16 24 28.4	+0.5
K22A	Casper	83.15	43	P		P	16 24 28.2	+0.2
K22A	comp=Z,25nm,0.7s			IAmb		IAmb	16 24 29.5	
HRT	Hereke	83.19	314	eP		P	16 24 27.9	-0.2
PPT	Papeete comp=Z,60nm,19.8s,baz=308,slow=30	83.20	116	LR		LR	16 54 25.6	
PPT2	Papeete2 comp=Z,251nm,26.5s	83.21	116	eLR		LR	16 50 29.4	
ARR	Arges	83.23	320	⇑P		P	16 24 29.5	+1.3
KEBE	Keben-Mersin	83.24	309	eP		P	16 24 29.6	+1.2
KECS	Kecovo	83.30	325	eP		P	16 24 29.2	+0.8
KECS	comp=Z,12nm,1.2s			pmax		pmax		
KECS	Kecovo	83.30	325	eP		P	16 24 29.2	+0.8
PDMCI	Parker Dam,Lak baz=305	83.30	54	P		P	16 24 29.7	+1.0
KLYT	Kilyos	83.31	315	eP		P	16 24 29.6	+1.1
DRGR		83.31	322	⇑P		P	16 24 29.3	+0.7
DRGR		83.31	322	⇑P		P	16 24 29.3	+0.7
U15A	North Rim	83.31	51	P		P	16 24 29.8	+0.7
LANS	Liptovska Anna	83.34	326	eP		P	16 24 30.3	+1.7
LANS	comp=Z,22nm,1.1s			pmax		pmax		
LANS	Liptovska Anna	83.34	326	eP		P	16 24 30.3	+1.7
RWWY	Rawlins	83.

ULM **Lac du Bonnet** 83.63 33 P **P** 16 24 29.8 -0.3
comp=Z,3.7nm,0.5s,baz=314,slow=5.2,SNR=5.9
ULM LR LR 17 06 39.2
comp=Z,17nm,19.4s,baz=22,slow=39
ULM Lac du Bonnet 83.63 33 P **P** **16 24 29.4 -0.6**
O20A White River Ci 83.67 46 P **P** **16 24 31.6 +0.8**
baz=308
O20A White River Ci 83.67 46 P **P** **16 24 31.0 +0.3**
COPA Copaceanca 83.70 319 ⇓P **P** **16 24 30.5 0.0**
MORC Moravsky Berou 83.81 327 *e*P **P** **16 24 31.7 +0.7**
MORC Moravsky Berou 83.81 327 ⇑P **P** **16 24 32.0 +0.9**
MORC Moravsky Berou 83.81 327 ⇑P **P** **16 24 32.0 +0.9**
MORC Moravsky Berou 83.81 327 P **P** **16 24 31.5 +0.4**
MORC lAmb lAmb 16 24 32.9
comp=Z,43nm,1.1s
BSEG Bad Segeberg 83.81 333 *e*P **P** **16 24 31.2 +0.3**
comp=Z,37nm,1.3s,baz=40,slow=4.9
TEKE Tekeli-Mersin 83.81 309 *e*P **P** **16 24 31.5 +0.3**
E28A Huff 83.81 38 P **P** **16 24 31.2 +0.1**
E28A lAmb lAmb 16 24 32.0
comp=Z,25nm,0.6s
SLVT Silivri 83.81 315 *e*P **P** **16 24 32.2 +1.0**
OSTC Ostas 83.86 328 *e*P **P** **16 24 31.9 +0.7**
CHVC Chvalec 83.91 328 *e*P **P** **16 24 32.3 +0.8**
KRLC Kraliky 83.94 327 *e*P **P** **16 24 32.4 +0.7**
KRLC Kraliky 83.94 327 *e*P **P** **16 24 32.4 +0.7**
KRLC *e*PCP **PcP** **16 24 35.3 -0.3**
DPC Dobruska-Polom 83.96 328 *e*P **P** **16 24 32.5 +0.7**
DPC Dobruska-Polom 83.96 328 *e*P **P** **16 24 32.5 +0.7**
PSZ Piszkesteto 83.97 324 ⇑P **P** **16 24 33.1 +1.1**
PSZ Piszkesteto 83.97 324 ⇑P **P** **16 24 33.1 +1.1**
PSZ Piszkesteto 83.97 324 P **P** **16 24 32.6 +0.6**
PSZ lAmb lAmb 16 24 33.9
comp=Z,42nm,1.0s
UPC Upice 83.98 328 *e*P **P** **16 24 32.7 +0.8**
UPC Upice 83.98 328 *e*P **P** **16 24 32.7 +0.8**
UPC *e*PCP **PcP** **16 24 35.3 -0.4**
LFK Lefkose 84.04 308 *e*P **P** **16 24 33.0 +0.5**
VYHS Vyhne 84.09 325 *e*P **P** **16 24 33.6 +1.1**
VYHS pmax pmax
comp=Z,58nm,1.1s
VYHS Vyhne 84.09 325 *e*P **P** **16 24 33.6 +1.1**
PV09 Paradox Valley 84.11 48 P **P** **16 24 34.0 +0.8**
TVSB Tavsanli 84.15 313 *e*P **P** **16 24 33.7 +0.6**
PV21 Cone Mtn., Par 84.17 48 P **P** **16 24 34.2 +0.8**
GZR Gura Zlata 84.20 321 ⇓P **P** **16 24 33.4 +0.2**
GZR Gura Zlata 84.20 321 ⇓P **P** **16 24 33.4 +0.2**
SIRR Siria 84.20 322 ⇑P **P** **16 24 33.6 +0.5**
PV23 Carpenter Ridg 84.22 48 P **P** **16 24 34.4 +0.8**
VLAD Vladila 84.24 319 ⇑P **P** **16 24 33.6 +0.4**
PV10 Paradox Valley 84.25 48 P **P** **16 24 35.0 +1.2**
PV14 Lion Creek, Pa 84.26 48 P **P** **16 24 34.8 +1.0**
GAZI Gazipasa 84.28 310 *e*P **P** **16 24 33.2 -0.5**
Y14A Wickenburg 84.28 53 P **P** **16 24 34.4 +0.6**
Y14A lAmb lAmb 16 24 35.7
comp=Z,21nm,0.9s
PV22 Blue Mesa, Par 84.31 48 P **P** **16 24 34.8 +0.8**
PV22 lAmb lAmb 16 24 36.2
comp=Z,40nm,0.8s
PV20 West Nyswonger 84.31 48 P **P** **16 24 34.9 +0.9**
PV04 Paradox Valley 84.32 48 P **P** **16 24 34.9 +0.8**
PV19 Morning Glory 84.32 48 P **P** **16 24 35.0 +0.9**
KCTX Karacabey (Bur 84.32 315 *e*P **P** **16 24 34.7 +0.9**
PV17 East Wray Mesa 84.35 48 P **P** **16 24 35.1 +0.9**
CSS Mathiatis 84.36 308 P **P** **16 24 34.2 +0.1**
CSS lAmb lAmb 16 24 39.1
comp=Z,45nm,0.8s
PV05 Paradox Valley 84.39 48 P **P** **16 24 35.4 +0.9**
JAVC Velka Javorina 84.39 326 *e*P **P** **16 24 35.7 +1.7**
PV11 David Mesa, Pa 84.40 48 P **P** **16 24 35.2 +0.8**
PV18 Skein Mesa, Pa 84.41 48 P **P** **16 24 35.3 +0.7**
PV12 Saucer Basin, 84.43 48 P **P** **16 24 35.5 +0.9**
113A Mohawk Valley, 84.43 55 P **P** **16 24 35.1 +0.6**
113A lAmb lAmb 16 24 36.3
comp=Z,24nm,1.1s
PV03 Paradox Valley 84.44 48 P **P** **16 24 35.5 +0.8**
WUAZ Wupatki 84.45 51 P **P** **16 24 35.8 +1.1**
baz=306,SNR=28
WUAZ Wupatki 84.45 51 P **P** **16 24 35.6 +0.9**
WUAZ lAmb lAmb 16 24 37.0
comp=Z,34nm,0.9s
PV07 Paradox Valley 84.45 48 P **P** **16 24 35.6 +0.8**
PV07 lAmb lAmb 16 24 40.9
comp=Z,17nm,0.7s
SRE Strehaia 84.45 320 ⇑P **P** **16 24 35.6 +1.2**
SRE Strehaia 84.45 320 ⇑P **P** **16 24 35.6 +1.2**
PLVB Pleven 84.51 319 ⇑P **P** **16 24 35.7 +1.0**
PV13 Radium Mtn., P 84.51 48 P **P** **16 24 36.0 +0.8**
PV02 Paradox Valley 84.54 48 P **P** **16 24 36.0 +0.8**
LEF Lefka 84.56 308 *e*P **P** **16 24 35.9 +0.8**
MRMT Marmara Adasi 84.57 315 *e*P **P** **16 24 35.6 +0.5**
VRAC Vranov 84.58 327 *e*P **P** **16 24 35.6 +0.7**
VRAC Vranov 84.58 327 ⇑P **P** **16 24 35.8 +0.9**
VRAC Vranov 84.58 327 ⇑P **P** **16 24 35.8 +0.9**
N23A Red Feather La 84.58 44 P **P** **16 24 36.8 +1.4**
baz=309
PVCC Panska Ves 84.61 329 *e*P **P** **16 24 35.7 +0.7**
PVCC Panska Ves 84.61 329 *e*P **P** **16 24 35.7 +0.7**
PHWY Pilot Hill 84.61 44 P **P** **16 24 36.0 +0.4**
PHWY lAmb lAmb 16 24 37.5
comp=Z,21nm,0.9s
PV15 Paradox Valley 84.61 48 P **P** **16 24 36.2 +0.5**
PV15 lAmb lAmb 16 24 40.9
comp=Z,27nm,0.7s
BRG Berggiesshubel 84.62 329 *i* P **P** **16 24 35.5 +0.4**
comp=Z,27nm,0.8s
BRG *i* PCP **PcP** **16 24 38.3 -0.2**
comp=Z,26nm,1.0s
BRG pP **pP** **16 24 55.0 +0.5**
BRG PP **PP** **16 27 51.2 +0.3**
comp=Z,6.2nm,0.9s
BRG S **S** **16 34 56.0 -0.3**
BRG SS **SS** **16 40 24.0 -3.6**
BRG *e*PKKP **PKKPdf** **16 42 37.2 +2.0**
comp=Z,3.1nm,0.9s
comp=N,56nm,20.1s
comp=E,78nm,19.5s
comp=Z,117nm,16.0s
BRG Berggiesshubel 84.62 329 *e*P **P** **16 24 35.3 +0.2**
comp=Z,31nm,0.9s,baz=40,slow=4.9
BRG Berggiesshubel 84.62 329 *i* P **P** **16 24 35.5 +0.4**
BRG *PP **pP** **16 24 55.0 +0.5**
BRG 16 27 51.2
BRG S **S** **16 34 56.0 -0.3**
BRG SS **SS** **16 40 24.0 -3.6**
BRG pmax pmax
comp=Z,27nm,0.8s
BRG pmax pmax
comp=Z,26nm,1.0s
BRG pmax pmax
comp=Z,6.0nm,1.0s
BRG pmax pmax
comp=Z,3.0nm,0.9s
BRG MLR MLR
comp=N,56nm,20.1s
BRG MLR MLR
comp=E,78nm,19.5s
BRG MLR MLR
comp=Z,117nm,16.0s
BZS Buzias 84.66 322 ⇑P **P** **16 24 35.3 -0.1**
BZS Buzias 84.66 322 ⇑P **P** **16 24 35.3 -0.1**
PV01 Paradox Valley 84.69 48 P **P** **16 24 36.8 +0.8**
CLL Collm 84.70 330 *i* P **P** **16 24 36.4 +0.9**
comp=Z,68nm,0.9s
CLL *i* PcP **PcP** **16 24 39.3 +0.5**
comp=Z,51nm,1.0s
CLL *e*pP **pP** **16 24 56.0 +1.1**
CLL *e*sP **sP** **16 25 07.0 +4.3**
CLL *e*S **S** **16 34 51.0 -6.0**
CLL *e*SS **SS** **16 40 30.0 +1.2**
CLL *e*SSS SSS 16 44 18.0
CLL *e*SSSS 16 46 48.0
CLL Lm MLR 17 05 00.0
comp=Z,100nm,18.1s
CLL Collm 84.70 330 *e*P **P** **16 24 36.5 +0.9**
comp=Z,68nm,0.9s,baz=40,slow=4.9
CLL Collm 84.70 330 *i* P **P** **16 24 36.4 +0.9**
CLL *e*PP **pP** **16 24 56.0 +1.1**
CLL *e*S **S** **16 34 51.0 -6.0**
CLL pmax pmax
comp=Z,68nm,0.9s
CLL Collm 84.70 330 P **P** **16 24 36.4 +0.9**
HERR Herculane 84.73 321 ⇑P **P** **16 24 35.6 -0.2**

SMOL Smolenice 84.75 326 *e*P **P** **16 24 37.1 +1.3**
SMOL pmax pmax
comp=Z,32nm,1.0s
SMOL Smolenice 84.75 326 *e*P **P** **16 24 37.1 +1.3**
FBE Freiberg 84.84 330 *e*P **P** **16 24 36.8 +0.6**
comp=Z,78nm,1.1s,baz=40,slow=4.9
FBE *es*P **sP** **16 25 07.2 +3.9**
KRUC Moravsky 84.84 327 *e*P **P** **16 24 36.6 +0.4**
MODS Modra-Piesok 84.92 326 *e*P **P** **16 24 36.9 +0.2**
MODS pmax pmax
comp=Z,46nm,1.1s
MODS Modra-Piesok 84.92 326 *e*P **P** **16 24 36.9 +0.2**
GOPC GO Pecny, Ondr 84.96 328 *e*P **P** **16 24 37.5 +0.7**
GOPC *e* 16 24 56.6
GOPC GO Pecny, Ondr 84.96 328 *e*P **P** **16 24 37.5 +0.7**
GOPC *ep*P **pP** **16 24 56.6 +0.4**
NRDL Niedersach Rie 84.99 332 *e*P **P** **16 24 37.1 +0.3**
comp=Z,21nm,1.3s,baz=40,slow=4.9
BALB Balikesir 85.00 314 *e*P **P** **16 24 38.2 +1.0**
PRA Prague 85.00 329 *e*P **P** **16 24 38.1 +1.1**
PRA Prague 85.00 329 *e*P **P** **16 24 38.1 +1.1**
PRU Pruhonice 85.01 328 *e*P **P** **16 24 37.7 +0.7**
PRU Pruhonice 85.01 328 *e*P **P** **16 24 37.7 +0.7**
PRU *ex* x 16 24 48.9
AGMN Agassiz Nation 85.02 34 P **P** **16 24 36.5 -0.6**
ASSE Asse, Remlinge 85.04 332 *e*P **P** **16 24 37.4 +0.3**
comp=Z,37nm,1.1s,baz=40,slow=4.9
X16A Lo Mia Camp, P 85.05 52 P **P** **16 24 38.5 +0.7**
X16A lAmb lAmb 16 24 40.1
comp=Z,21nm,1.1s
KORT Korkueli 85.09 311 *e*P **P** **16 24 39.1 +1.2**
RETH Rethem/Aller, 85.09 333 *e*P **P** **16 24 37.6 +0.2**
comp=Z,40nm,1.2s,baz=40,slow=4.9
ZST Bratislava 85.13 326 *e*P **P** **16 24 38.1 +0.4**
ZST pmax pmax
comp=Z,35nm,1.3s
ZST Bratislava 85.13 326 *e*P **P** **16 24 38.1 +0.4**
MDVR Moldovita 85.17 321 ⇑P **P** **16 24 38.2 +0.2**
MCD Coleburn Disti 85.25 341 *e*P **P** **16 24 39.0 +0.9**
MVCO Mesa Verde 85.29 48 P **P** **16 24 39.9 +0.8**
baz=308,SNR=5.6
MVCO Mesa Verde 85.29 48 P **P** **16 24 39.6 +0.6**
MVCO lAmb lAmb 16 24 40.8
comp=Z,48nm,1.4s
NEUB Neuenburg 85.29 331 *e*P **P** **16 24 38.7 +0.2**
comp=Z,72nm,1.0s,baz=40,slow=4.9
NEUB *ep*P **pP** **16 24 57.9 +0.1**
CLZ Clausthal 85.39 332 *e*P **P** **16 24 39.4 +0.5**
comp=Z,66nm,1.2s,baz=40,slow=4.9
ISCO Idaho Springs 85.46 45 P **P** **16 24 41.0 +1.1**
ISCO pmax pmax
comp=Z,21nm,0.8s
ISCO Idaho Springs 85.46 45 P **P** **16 24 41.1 +1.1**
baz=309
ISCO Idaho Springs 85.46 45 P **P** **16 24 41.0 +1.1**
ISCO lAmb lAmb 16 24 42.1
comp=Z,21nm,0.8s
PBCC Pribram 85.47 328 *e*P **P** **16 24 39.7 +0.3**
PBCC *ex* x 16 24 42.3
ELL Elmali 85.52 311 P **P** **16 24 40.1 +0.1**
ELL pmax pmax
comp=Z,86nm,1.1s
ELL Elmali 85.52 311 P **P** **16 24 40.1 +0.1**
214A Organ Pipe Nat 85.56 55 P **P** **16 24 41.2 +1.0**
baz=306,SNR=9.7
214A Organ Pipe Nat 85.56 55 P **P** **16 24 40.9 +0.7**
TANN Tannenbergstha 85.60 330 *e*P **P** **16 24 40.3 +0.2**
comp=Z,17nm,1.2s,baz=40,slow=4.9
PLN Plauen 85.67 330 *e*P **P** **16 24 40.6 +0.2**
comp=Z,20nm,1.1s,baz=40,slow=4.9
LEWI Lewis, Hebride 85.68 343 *e*P **P** **16 24 39.9 -0.3**
LEWI lAmb lAmb 16 24 41.6
comp=Z,40nm,0.9s
GUNZ Gunzen 85.69 330 *e*P **P** **16 24 40.8 +0.3**
comp=Z,30nm,1.1s,baz=40,slow=4.9
GUNZ *ep*P **pP** **16 25 00.5 +0.6**
GUNZ *es*P **sP** **16 25 11.6 +3.9**
WERN Wernitzgruen 85.73 330 *e*P **P** **16 24 41.1 +0.4**
comp=Z,36nm,1.1s,baz=40,slow=4.9
NKC Novy Kostel 85.74 330 *e*P **P** **16 24 41.1 +0.4**
NKC Novy Kostel 85.74 330 *e*P **P** **16 24 41.1 +0.4**
W18A Petrified Fore 85.76 51 P **P** **16 24 42.2 +0.8**
baz=307,SNR=5.6
W18A Petrified Fore 85.76 51 P **P** **16 24 41.8 +0.5**
GTTG Gottingen 85.78 332 *e*P **P** **16 24 41.1 +0.3**
comp=Z,40nm,1.1s,baz=40,slow=4.9
MOX Moxa 85.78 330 *e*P **P** **16 24 41.2 +0.2**
comp=Z,32nm,1.3s,baz=40,slow=4.9
KAC Achnashellach 85.86 342 ⇑*e*P **P** **16 24 41.8 +0.7**
CONA Conrad Observa 85.90 326 *i* PcP **P** **16 24 42.7 +1.1**
comp=Z,22nm,1.0s,SNR=14
B35A Bob, Littlefor 85.97 33 P **P** **16 24 41.1 -0.7**
X18A Snowflake 85.97 51 P **P** **16 24 42.6 +0.2**
S22A 4UR Ranch, Cre 86.01 47 P **P** **16 24 43.9 +1.2**
baz=309,SNR=28
AYDB Zeytinkoy-Aydi 86.05 313 *e*P **P** **16 24 43.1 +0.5**
IBBN Ibbenburen 86.05 333 *e*P **P** **16 24 42.2 0.0**
comp=Z,89nm,1.3s,baz=40,slow=4.9
KHC Kasperske Hory 86.07 328 *e*P **P** **16 24 42.3 -0.1**
KHC *e* 16 25 02.1
KHC *e* 16 28 02.0
KHC Kasperske Hory 86.07 328 *e*P **P** **16 24 42.3 -0.1**
KHC *ep*P **pP** **16 25 02.1 +0.3**
KHC *e*PP **PP** **16 28 02.0 -0.7**
KHC Kasperske Hory 86.07 328 P **P** **16 24 42.4 -0.1**
MANZ Manzenberg 86.07 330 *e*P **P** **16 24 42.6 +0.2**
comp=Z,17nm,1.0s,baz=40,slow=4.9
EDU Dundee 86.08 341 *e*P **P** **16 24 42.8 +0.5**
KPL Plockton 86.09 342 ⇑*e*P **P** **16 24 42.8 +0.6**
KPL lAmb lAmb 16 24 43.8
comp=Z,63nm,0.8s
SUSD Miller 86.15 38 P **P** **16 24 42.8 -0.1**
baz=313
SUSD Miller 86.15 38 P **P** **16 24 42.9 0.0**
ROTZ Rotzenmuhle 86.19 329 *e*P **P** **16 24 43.6 +0.7**
comp=Z,48nm,1.5s,baz=40,slow=4.9
GEC2 GERESS Array S 86.22 328 *e*P **P** **16 24 43.1 -0.1**
comp=Z,14nm,1.0s,baz=40,slow=4.9
GEC2 GERESS Array S 86.22 328 P **P** **16 24 42.8 -0.4**
GERES GERESS Array B 86.22 328 P **P** **16 24 43.1 -0.1**
comp=Z,6.7nm,0.8s,baz=36,slow=5.0,SNR=44
GERES PKKPbc **PKKPbc** **16 42 41.8 +0.8**
comp=Z,0.2nm,0.3s,baz=219,slow=6.2,SNR=4.0
GERES LR LR 17 07 31.5
comp=Z,65nm,18.3s,baz=82,slow=38
Q24A Divide 86.27 45 P **P** **16 24 44.6 +0.6**
baz=310,SNR=12
UBBA Unterbreizbach 86.32 331 *e*P **P** **16 24 43.6 +0.2**
comp=Z,27nm,1.5s,baz=40,slow=4.9
ELO Logie Almond 86.34 341 *e*P **P** **16 24 43.6 0.0**
WET Wettzell 86.37 329 *e*P **P** **16 24 44.2 +0.4**
comp=Z,11nm,1.2s,baz=40,slow=4.9
INVG Invergeldie, C 86.47 341 ⇑*e*P **P** **16 24 44.4 +0.2**
INVG lAmb lAmb 16 24 45.1
comp=Z,38nm,0.7s
ESY Stoneypath 86.52 340 ⇑*e*P **P** **16 24 44.7 +0.3**
DIVS Divibare 86.54 322 P **P** **16 24 43.9 -1.0**
F33A 5 Mile Ranch, 86.54 36 P **P** **16 24 44.5 -0.2**
F33A lAmb lAmb 16 24 46.0
comp=Z,38nm,1.1s
ARSA Arzberg 86.55 326 *i* PcP **P** **16 24 45.8 +1.1**
comp=Z,12nm,1.3s
GRA1 Grafenberg Arr 86.67 330 P **P** **16 24 45.2 -0.1**
GRA1 lAmb lAmb 16 24 50.5
comp=Z,29nm,1.0s
GRF Grafenberg Arr 86.67 330 *e*P **P** **16 24 46.0 +0.7**
comp=Z,45nm,1.3s,baz=40,slow=4.9
GRF Grafenberg Arr 86.67 330 P **P** **16 24 45.2 -0.1**
GRF pmax pmax
comp=Z,29nm,1.0s
MOA Molln 86.70 327 *i* PcP **P** **16 24 45.8 +0.4**
comp=Z,6.6nm,0.7s,SNR=5.8
TUC Tucson 86.74 54 P **P** **16 24 46.6 +0.5**
TUC pmax pmax
comp=Z,9.0nm,1.1s
TUC Tucson 86.74 54 P **P** **16 24 46.8 +0.8**
baz=307
TUC Tucson 86.74 54 P **P** **16 24 46.6 +0.5**
EAB Aberfoyle 86.76 341 ⇑*e*P **P** **16 24 46.0 +0.4**
EBL Broad Law 86.77 340 ⇑*e*P **P** **16 24 46.0 +0.4**
TBI Tubuai 86.77 120 *e*LR LR 16 51 57.3
comp=Z,135nm,31.2s
OGNE Ogallala 86.82 42 P **P** **16 24 46.7 +0.4**
baz=311
OGNE Ogallala 86.82 42 P **P** **16 24 46.4 +0.1**

OGNE lAmb lAmb 16 24 47.7
comp=Z,45nm,0.9s
SDCO Great Sand Dun 86.83 47 P **P** **16 24 47.5 +0.8**
baz=309,SNR=26
SDCO Great Sand Dun 86.83 47 P **P** **16 24 46.8 +0.1**
BUG Bochum--Univer 86.92 333 *e*P **P** **16 24 46.2 -0.2**
comp=Z,36nm,1.1s,baz=40,slow=4.9
LAWE Loch Awe, Argy 86.98 342 ⇑*e*P **P** **16 24 46.9 +0.3**
LAWE lAmb lAmb 16 24 47.8
comp=Z,23nm,0.8s
PERS Pernice 87.19 326 *i* P **P** **16 24 47.8 -0.1**
SOKA Soboth 87.19 326 *i* PcP **P** **16 24 48.0 0.0**
comp=Z,17nm,1.0s,SNR=9.6
ESK Eskdalemuir 87.21 340 ⇑*e*P **P** **16 24 47.9 +0.2**
ESK lAmb lAmb 16 24 48.8
comp=Z,21nm,0.8s
ESK Eskdalemuir 87.21 340 P **P** **16 24 47.8 +0.1**
ESK pmax pmax
comp=Z,22nm,0.8s
ESK Eskdalemuir 87.21 340 P **P** **16 24 47.8 +0.1**
ESK lAmb lAmb 16 24 49.1
comp=Z,22nm,0.8s
EYMN Ely 87.28 32 P **P** **16 24 48.1 -0.2**
baz=318,SNR=7.3
EYMN Ely 87.28 32 P **P** **16 24 47.9 -0.4**
EYMN lAmb lAmb 16 24 49.3
comp=Z,17nm,1.1s
TNS Taunus Mts 87.41 332 *e*P **P** **16 24 49.1 +0.1**
comp=Z,18nm,1.2s,baz=40,slow=4.9
RJOB Jocberg 87.45 328 *e*P **P** **16 24 49.3 +0.1**
comp=Z,11nm,0.7s,baz=40,slow=4.9
K31A O'Neill 87.50 39 P **P** **16 24 49.5 0.0**
OBKA Obir 87.55 326 *e*PcP **P** **16 24 49.3 -0.4**
comp=Z,4.8nm,0.7s
KBA Koelnbreinsper 87.69 327 *i* P **P** **16 24 49.7 -0.8**
comp=Z,8.7nm,0.8s
AHRW Bad Neuenahr-A 87.70 332 *e*P **P** **16 24 50.4 +0.2**
comp=Z,30nm,1.3s,baz=40,slow=4.9
KSCO Kaye Shedlock' 87.74 44 P **P** **16 24 51.1 +0.3**
baz=311
FUR Furstenfeldbru 87.80 329 *e*P **P** **16 24 51.3 +0.5**
comp=Z,27nm,1.1s,baz=40,slow=4.9
ECSD EROS Data Cent 87.86 38 P **P** **16 24 51.3 +0.1**
baz=315,SNR=20
ECSD EROS Data Cent 87.86 38 P **P** **16 24 50.9 -0.2**
ECSD lAmb lAmb 16 24 52.2
comp=Z,28nm,0.8s
F36A Milaca 87.88 35 P **P** **16 24 50.4 -0.7**
MYKA Terra Mystica 87.88 327 *i* P **P** **16 24 50.7 -0.6**
comp=Z,11nm,0.9s
T25A Trinidad 87.88 46 P **P** **16 24 52.3 +0.6**
baz=310,SNR=12
ANMO Albuquerque 87.99 49 *ce*P **P** **16 24 50.2 -2.0**
ANMO pmax pmax
comp=Z,13nm,1.3s
ANMO Albuquerque 87.99 49 P **P** **16 24 52.8 +0.6**
baz=309
ANMO Albuquerque 87.99 49 P **P** **16 24 52.4 +0.2**
CRNS Crni Vrh 88.00 326 *i* P **P** **16 24 50.7 -1.1**
GAL1 Galloway 88.03 341 ⇑*e*P **P** **16 24 51.7 0.0**
GAL1 lAmb lAmb 16 24 53.2
comp=Z,30nm,0.9s
BEBN Eben Emael 88.04 333 PcP **P** **16 24 52.3 +0.6**
APE Apeiranthos 88.05 314 ⇑P **P** **16 24 50.3 -1.9**
APE Apeiranthos 88.05 314 ⇑P **P** **16 24 50.3 -1.9**
MEM Membach 88.06 333 PcP **P** **16 24 51.6 -0.3**
MEM pP **pP** **16 25 11.0 -0.5**
PDG Podgorica 88.08 321 ⇑P **P** **16 24 51.6 -0.5**
PDG Podgorica 88.08 321 P **P** **16 24 51.7 -0.5**
PDG lAmb lAmb 16 24 52.7
comp=Z,18nm,0.6s
CLGH Cloghs, Cushen 88.21 342 ⇑*e*P **P** **16 24 53.2 +0.7**
CLGH lAmb lAmb 16 24 53.9
comp=Z,21nm,0.8s
JAVS Javornik 88.23 326 *i* P **P** **16 24 52.0 -1.0**
BSTI Sart Tilman 88.25 333 PcP **P** **16 24 53.5 +0.6**
E38A The Farm, Brul 88.25 33 P **P** **16 24 52.5 -0.5**
E38A lAmb lAmb 16 24 53.8
comp=Z,34nm,0.9s
WATA Walderalm 88.30 328 *i* PcP **P** **16 24 53.7 +0.3**
comp=Z,11nm,1.1s
ABTA Abfaltersbach 88.32 327 *i* P **P** **16 24 51.9 -1.4**
comp=Z,17nm,1.0s
319A Douglas 88.33 53 P **P** **16 24 53.6 -0.1**
319A lAmb lAmb 16 24 57.5
comp=Z,22nm,1.5s
WTTA Wattenberg 88.33 328 *i* PcP **P** **16 24 53.4 -0.1**
comp=Z,5.7nm,0.7s
LBWR Ladybower, Pea 88.42 339 *e*P **P** **16 24 53.4 -0.1**
LBWR lAmb lAmb 16 24 58.2
comp=Z,47nm,1.0s
BCLA Clavier 88.48 333 P **P** **16 24 51.8 -2.1**
BCLA PcP **PcP** **16 24 54.1 -1.4**
BCLA pP **pP** **16 25 13.3 -0.2**
MOTA Moosalm 88.50 328 *i* PcP **P** **16 24 54.1 -0.2**
comp=Z,10nm,1.2s
RETA Reutte 88.54 329 *i* PcP **P** **16 24 54.5 +0.1**
comp=Z,12nm,1.0s,SNR=6.3
SQTA Sankt Quirin 88.55 328 *i* PcP **P** **16 24 54.3 -0.2**
comp=Z,6.7nm,0.8s
STAL STALIGIAL 88.59 327 P **P** **16 24 53.1 -1.5**
BGES Gesves 88.59 333 PcP **P** **16 24 54.5 +0.1**
BGES pP **pP** **16 25 12.9 -1.1**
BGNE Belgrade 88.67 40 P **P** **16 24 54.8 -0.2**
baz=314
SPMN Marine on St. 88.69 35 P **P** **16 24 55.2 +0.1**
baz=317,SNR=5.2
SPMN Marine on St. 88.69 35 P **P** **16 24 54.8 -0.2**
SPMN lAmb lAmb 16 24 56.2
comp=Z,29nm,1.1s
WLF Walferdange 88.76 332 PcP **P** **16 24 56.2 +1.0**
WLF Walferdange 88.76 332 *e*P **P** **16 24 55.8 +0.5**
comp=Z,25nm,1.4s,baz=40,slow=4.9
BMRD Maredsous 88.78 333 PcP **P** **16 24 55.3 0.0**
BMRD x x 16 24 59.2
BMRD pP **pP** **16 25 15.5 +0.6**
SNF Seneffe 88.79 334 PcP **P** **16 24 55.6 +0.3**
CWF Charnwood Fore 88.86 338 *e*P **P** **16 24 55.9 +0.3**
FETA Feichten 88.91 328 *i* PcP **P** **16 24 56.2 0.0**
comp=Z,14nm,0.8s,SNR=6.8
BFO Black Forest 88.94 330 *e*P **P** **16 24 56.0 -0.2**
comp=Z,14nm,1.1s,baz=40,slow=4.9
BFO Black Forest 88.94 330 P **P** **16 24 55.7 -0.4**
BFO pmax pmax
comp=Z,17nm,1.2s
BFO Black Forest 88.94 330 P **P** **16 24 55.7 -0.4**
BFO lAmb lAmb 16 24 57.2
comp=Z,17nm,1.2s
DOU Dourbes 89.01 333 PcP **P** **16 24 57.0 +0.6**
DOU pP **pP** **16 25 15.8 -0.1**
DOU sP **sP** **16 25 23.6 -0.1**
DAVA Damuels 89.08 329 *i* PcP **P** **16 24 57.1 0.0**
comp=Z,20nm,0.9s,SNR=6.4
L34A Svendsen Farm, 89.23 39 P **P** **16 24 57.5 -0.1**
CTI Castel Tesino 89.24 327 P **P** **16 24 56.4 -1.3**
CTI pmax pmax
comp=Z,14nm,0.8s
CTI Castel Tesino 89.24 327 P **P** **16 24 56.4 -1.3**
CTI lAmb lAmb 16 25 03.3
comp=Z,14nm,0.8s
D41A Chassel 89.25 31 P **P** **16 24 57.6 0.0**
I37A Lemond, Waseca 89.28 36 P **P** **16 24 58.1 +0.3**
FOEL Foel Wyifa 89.31 339 ⇑*e*P **P** **16 24 58.3 +0.5**
FOEL lAmb lAmb 16 24 59.0
comp=Z,44nm,0.8s
FUORN Ofenpass-Fuorn 89.43 328 P **P** **16 24 58.6 -0.1**
LLW Llanuwychllyn 89.49 339 *e*P **P** **16 24 58.2 -0.4**
LLW lAmb lAmb 16 24 59.6
comp=Z,9.0nm,0.8s
ECH Echery 89.51 331 P **P** **16 24 57.9 -0.9**
ECH pmax pmax
comp=Z,4.0nm,0.8s
ECH Echery 89.51 331 P **P** **16 24 57.9 -0.9**
HLM1 Long Mynd 89.54 339 *e*P **P** **16 24 58.4 -0.4**
CBKS Cedar Bluff 89.55 43 P **P** **16 24 58.2 -1.0**
CBKS pmax pmax
comp=Z,41nm,0.5s
CBKS Cedar Bluff 89.55 43 P **P** **16 24 59.1 -0.2**
baz=313
CBKS Cedar Bluff 89.55 43 P **P** **16 24 58.2 -1.0**
IDI Anoyia 89.60 313 ⇑P **P** **16 24 58.3 -1.3**
IDI Anoyia 89.60 313 P **P** **16 24 57.9 -1.6**
IDI lAmb lAmb 16 25 04.4
comp=Z,17nm,1.1s
COWI Conover 89.73 32 P **P** **16 24 59.5 -0.4**

COWI IAmb IAmb 16 25 01.1
comp=Z,17nm,0.9s
SCHQ Schefferville 89.85 15 P P 16 25 01.2 +0.9
comp=Z,9.5nm,0.8s,baz=346,slow=5.5,SNR=7.2
SCHQ Schefferville 89.85 15 P P 16 25 00.9 +0.6
SCHQ IAmb IAmb 16 25 02.0
comp=Z,16nm,0.9s
G40A Rib Lake 89.88 33 P P 16 25 00.6 0.0
G40A IAmb IAmb 16 25 01.9
comp=Z,23nm,0.9s
TUE Stuetta 89.94 329 P P 16 25 00.8 -0.4
TUE IAmb IAmb 16 25 06.5
comp=Z,17nm,0.9s
SALO Salr 90.08 328 P P 16 25 00.9 -0.6
MONM Monmouth 90.10 338 eP P 16 25 01.6 +0.2
MONM IAmb IAmb 16 25 02.4
comp=Z,31nm,0.7s
ITM Ithomi 90.15 316 P P 16 25 00.8 -1.2
ITM IAmb IAmb 16 25 27.6
comp=Z,32nm,0.9s
N35A Tabor 90.40 39 P P 16 25 03.0 -0.1
E43A Lone Tree Farm 90.47 31 P P 16 25 03.4 +0.1
RSBS Rosebush, Pemb 90.59 339 eP P 16 25 03.5 -0.3
RSBS IAmb IAmb 16 25 07.8
comp=Z,15nm,0.9s
MNTX Cornudas Mount 90.73 51 P P 16 25 05.6 +0.7
baz=310,SNR=14
MNTX Cornudas Mount 90.73 51 P P 16 25 04.7 -0.1
SCIA State Center 90.91 37 P P 16 25 06.0 +0.6
baz=317
MURB Monte Urbino 90.91 325 P P 16 25 05.7 +0.1
SENIN Lac Senin/Sane 90.91 330 P P 16 25 05.3 -0.4
SENIN IAmb IAmb 16 25 10.2
comp=Z,13nm,1.2s
NRCA Norcia 90.95 324 P P 16 25 05.5 -0.2
NRCA IAmb IAmb 16 25 06.9
comp=Z,14nm,0.9s
MSTX Muleshoe 90.95 48 P P 16 25 06.0 +0.1
baz=311
AMTX Amarillo 91.03 47 P P 16 25 07.2 +0.9
baz=312
AMTX Amarillo 91.03 47 P P 16 25 06.3 0.0
KSU1 Kansas State U 91.12 41 P P 16 25 06.4 -0.1
baz=315
D46A Sault St. Mari 91.30 29 P P 16 25 07.2 0.0
baz=324
D47A Chapleau 91.54 28 P P 16 25 08.4 +0.1
baz=324
CLF Chambon-Foret 91.59 334 P P 16 25 08.9 +0.5
CLF IAmb IAmb 16 25 10.2
comp=Z,25nm,1.0s
JFWS Jewell Farm 91.64 35 P P 16 25 08.6 -0.2
baz=319
F45A CMU Biological 91.65 30 P P 16 25 09.2 +0.4
baz=323
N38A Joes South For 91.72 38 P P 16 25 09.3 +0.1
L40A Anamosa 91.80 36 P P 16 25 09.3 -0.2
L40A IAmb IAmb 16 25 10.6
comp=Z,22nm,1.2s
D48A Paudash Townsh 91.96 27 P P 16 25 09.9 -0.3
baz=325
E47A Iron Bridge 91.96 29 P P 16 25 10.3 +0.1
baz=324
D49A Beulah Townshi 92.05 27 P P 16 25 10.5 -0.2
baz=326
G45A Suttons Bay 92.10 31 P P 16 25 10.9 0.0
baz=322
BNI Bardonecchia 92.22 329 P P 16 25 11.4 -0.2
BNI pmax pmax
comp=Z,19nm,0.9s
BNI Bardonecchia 92.22 329 P P 16 25 11.4 -0.2
BNI IAmb IAmb 16 25 19.1
comp=Z,18nm,0.9s
G46A Petoskey 92.22 30 P P 16 25 11.5 +0.1
baz=323
E48A Lockeyer 92.39 28 P P 16 25 11.9 -0.3
baz=325
P38A Dawn 92.41 39 P P 16 25 12.4 -0.1
L42A Oliver, Polo 92.61 35 P P 16 25 12.6 -0.7
L42A IAmb IAmb 16 25 13.9
comp=Z,12nm,0.8s
GLMI Grayling 92.72 30 P P 16 25 14.3 +0.5
baz=323
D50A G1974 Best Tow 92.72 26 P P 16 25 13.2 -0.5
baz=327
F48A Evansville 92.74 29 P P 16 25 14.0 +0.2
baz=325
G47A Hillman 92.76 30 P P 16 25 14.3 +0.4
baz=324
WMOK Wichita Mounta 92.89 45 P P 16 25 15.0 +0.2
baz=313
E50A Wahnapitae 92.99 27 P P 16 25 15.0 0.0
baz=326
F49A Sandfield 93.02 28 P P 16 25 15.0 -0.1
baz=325
P40A Paris 93.26 38 P P 16 25 16.1 -0.2
H48A Harrisville 93.36 30 P P 16 25 17.0 +0.3
baz=324
E51A G1948 Merrick 93.38 26 P P 16 25 16.4 -0.4
baz=327
TX31 Lajitas Ar. Si 93.38 52 P P 16 25 18.1 +0.9
TX32 Lajitas Array 93.38 52 P P 16 25 18.1 +0.8
TXAR Lajitas Array 93.38 52 P P 16 25 18.3 +1.1
comp=Z,32nm,0.7s,baz=300,slow=3.2,SNR=336
TXAR LR LR 17 05 38.5
comp=Z,35nm,18.8s,baz=0.0,slow=34
D52A ZEK Kipawa Sen 93.41 26 P P 16 25 16.4 -0.5
baz=328
HPIG 93.55 55 P P 16 25 18.8 +0.6
D53A Lac Vacive, Po 93.58 25 P P 16 25 17.4 -0.3
baz=328
D53A Lac Vacive, Po 93.58 25 P P 16 25 16.9 -0.7
D53A IAmb IAmb 16 25 36.0
comp=Z,34nm,1.8s
I48A Sherman Twp 93.62 30 P P 16 25 17.8 0.0
baz=324
F51A Arnstein 93.72 27 P P 16 25 18.2 -0.1
baz=327
ABTX Abilene, Hawle 93.80 47 P P 16 25 19.4 +0.4
baz=313
ABTX Abilene, Hawle 93.80 47 P P 16 25 19.0 0.0
ABTX IAmb IAmb 16 25 20.7
comp=Z,22nm,0.9s
D54A Lac Fusel, La 93.88 25 P P 16 25 18.6 -0.5
baz=329
E52A Mattawa 93.90 26 P P 16 25 18.6 -0.5
baz=328
R40A Maddies Statio 94.06 39 P P 16 25 19.7 -0.3
F52A Sundridge 94.06 27 P P 16 25 19.4 -0.5
baz=327
E53A Dumoine, Ponti 94.19 25 P P 16 25 19.9 -0.5
baz=328
K47A Vermontville 94.27 32 P P 16 25 20.6 -0.3
baz=323
E54A Lac Daplat, Po 94.31 25 P P 16 25 20.4 -0.7
baz=329
D55A Sainte-Anne-du 94.41 24 P P 16 25 21.4 -0.1
baz=330
J49A Marlette 94.53 30 P P 16 25 21.8 -0.3
baz=324
K48A Perry 94.55 31 P P 16 25 21.8 -0.4
baz=324
D56A ZEC Mazanza, M 94.63 23 P P 16 25 22.5 0.0
baz=331
CCM Cathedral Cave 94.77 39 P P 16 25 23.1 -0.2
CCM pmax pmax
comp=Z,16nm,0.9s
CCM Cathedral Cave 94.77 39 P P 16 25 23.3 0.0
baz=318
CCM Cathedral Cave 94.77 39 P P 16 25 23.1 -0.2
CCM IAmb IAmb 16 25 24.2
comp=Z,16nm,0.9s
Z35A Perchaven, San 94.78 45 P P 16 25 23.6 +0.2
G54A Lake Saint Pet 94.86 26 P P 16 25 23.1 -0.5
baz=328
MGMO Mountain Grove 94.89 40 P P 16 25 23.3 -0.6
MGMO IAmb IAmb 16 25 24.5
comp=Z,13nm,0.8s
G53A Haliburton 94.89 27 P P 16 25 23.1 -0.7
baz=328
D57A Chemin Vers le 94.94 23 P P 16 25 23.8 -0.1
baz=331
E56A St. Veronique 94.97 24 P P 16 25 23.9 -0.1
baz=330
I51A Listowel 95.05 29 P P 16 25 24.7 +0.3
baz=326
SFIN Lafayette 95.09 35 P P 16 25 24.5 -0.2
baz=321
SFIN Lafayette 95.09 35 P P 16 25 24.6 -0.2
SFIN IAmb IAmb 16 29 07.6
comp=Z,6.4nm,0.8s
JCT Junction City 95.14 49 P P 16 25 24.8 -0.4
JCT pmax pmax
comp=Z,17nm,0.9s
JCT Junction City 95.14 49 P P 16 25 24.9 -0.4
baz=313
JCT Junction City 95.14 49 P P 16 25 24.8 -0.4
JCT IAmb IAmb 16 25 26.5
comp=Z,16nm,0.9s
U40A Yellville 95.16 41 P P 16 25 25.1 0.0
baz=317
U40A Yellville 95.16 41 P P 16 25 24.5 -0.6
H53A Bobcaygeon 95.37 27 P P 16 25 25.6 -0.3
baz=328
E57A Chemin Saint G 95.39 23 P P 16 25 25.8 -0.2
baz=331
G55A Calabogie 95.49 26 P P 16 25 25.9 -0.5
baz=329
PLVO Plevna 95.54 26 P P 16 25 26.3 -0.4
PLVO IAmb IAmb 16 25 26.9
comp=Z,7.3nm,0.8s
WHTX Lake Whitney, 95.58 46 P P 16 25 27.3 +0.1
baz=314,SNR=5.5
WHTX Lake Whitney, 95.58 46 P P 16 25 27.0 -0.2
N48A Decatur 95.69 33 P P 16 25 27.5 0.0
baz=323
E58A La Victoria 95.71 23 P P 16 25 27.5 +0.1
baz=332
J52A Paris 95.74 29 P P 16 25 27.6 -0.1
baz=326
DELO Deloro Mine 95.79 26 P P 16 25 27.4 -0.4
DELO IAmb IAmb 16 28 01.6
comp=Z,22nm,1.5s
FCAR Ozark Folk Cen 95.90 41 P P 16 25 27.8 -0.7
H55A Tweed 95.92 26 P P 16 25 28.1 -0.3
baz=329
D60A Saint Jean D'O 95.97 21 P P 16 25 28.4 -0.2
baz=334
I55A Frankford 96.02 27 P P 16 25 28.6 -0.3
baz=328
MIAR Mount Ida 96.07 42 P P 16 25 29.2 -0.1
MIAR pmax pmax
comp=Z,15nm,1.0s
MIAR Mount Ida 96.07 42 P P 16 25 29.1 -0.2
baz=317
MIAR Mount Ida 96.07 42 P P 16 25 29.2 -0.1
MIAR IAmb IAmb 16 25 30.5
comp=Z,15nm,0.9s
O48A Farmland 96.11 34 P P 16 25 29.1 -0.3
baz=323
H56A Elgin 96.22 26 P P 16 25 29.6 -0.2
baz=329
G57A Newington 96.24 25 P P 16 25 29.5 -0.3
baz=330
E60A Ste Agathe de 96.30 22 P P 16 25 29.8 -0.3
baz=333
F59A Saint Guilaume 96.33 23 P P 16 25 29.8 -0.4
baz=332
W41B Gary Mavity, V 96.36 41 P P 16 25 30.1 -0.5
baz=318
D62A Allapoint, All 96.38 20 P P 16 25 30.2 -0.3
baz=335
F60A Warwick 96.50 22 P P 16 25 30.8 -0.2
baz=333
G58A Ormstown 96.52 24 P P 16 25 30.6 -0.5
baz=331
E61A Lac Etchemin 96.54 21 P P 16 25 30.8 -0.4
baz=334
N50A Nevada 96.61 32 P P 16 25 31.5 -0.1
baz=324
E62A Clayton Lake 96.66 20 P P 16 25 31.7 0.0
baz=335
J55A Hilton 96.77 27 P P 16 25 32.4 +0.1
baz=328
F61A St Evariste 96.79 22 P P 16 25 32.7 +0.4
baz=334
LONY Lake Ozonia 96.80 25 P P 16 25 31.5 -0.9
baz=331
833A Chaparral WMA, 96.86 50 P P 16 25 32.6 -0.4
baz=313
P49A Miami Univ. Ec 96.89 34 P P 16 25 32.5 -0.4
baz=323
L53A Girard 96.89 29 P P 16 25 32.8 -0.1
baz=326
O50A Cable 96.91 33 P P 16 25 32.6 -0.4
baz=324
K54A Basiliko Farm, 96.98 28 P P 16 25 33.1 -0.3
baz=328
I57A Carthage 97.01 26 P P 16 25 33.0 -0.4
baz=330
L54A Sinclairville 97.05 29 P P 16 25 33.5 -0.1
baz=327
H59A Cadyville 97.09 24 P P 16 25 33.3 -0.4
baz=331
H58A Gabriels 97.12 24 P P 16 25 33.7 -0.2
baz=331
ACSO Alum Creek Sta 97.12 32 P P 16 25 33.8 -0.1
baz=324
K55A Perry 97.13 28 P P 16 25 33.7 -0.3
baz=328
J56A Wolcott 97.13 27 P P 16 25 33.6 -0.3
baz=329
G60A Masonville 97.15 23 P P 16 25 33.8 -0.2
baz=332
G61A St-Isidore-de- 97.24 22 P P 16 25 34.1 -0.3
baz=333
E64A Bridgewater 97.33 19 P P 16 25 34.5 -0.3
baz=336
J57A Williamstown 97.34 26 P P 16 25 34.5 -0.4
baz=330
H60A Morristown 97.50 23 P P 16 25 35.3 -0.3
baz=332
M54A Oil Creek Stat 97.51 29 P P 16 25 35.4 -0.3
baz=327
J58A Remsen 97.64 26 P P 16 25 36.0 -0.3
baz=330
F64A Sherman 97.69 20 P Pdif 16 25 36.4 0.0
baz=336
K57A Scipio Center 97.73 27 P Pdif 16 25 36.7 0.0
baz=329
O52A Adamsville 97.73 32 P P 16 25 36.4 -0.3
baz=325
I59A Olmsteadville 97.77 24 P P 16 25 36.5 -0.3
baz=331
H61A Lyndonville 97.78 23 P P 16 25 36.7 -0.1
baz=333
L56A Greenwood 97.83 28 P Pdif 16 25 37.6 +0.4
baz=328
J59A Piseco 97.84 25 P P 16 25 37.1 0.0
baz=331
M55A Ridgway 97.91 29 P P 16 25 37.1 -0.5
baz=327
I60A Shoreham 97.93 24 P P 16 25 36.9 -0.6
baz=332
PKME Peaks-Kenny Pk 97.95 21 P P 16 25 37.2 -0.3
baz=335
H62A Milan 97.99 22 P P 16 25 37.2 -0.7
baz=333
K58A Earlville 98.03 26 P Pdif 16 25 38.5 +0.4
baz=330
LBNH Lisbon 98.04 23 P Pdif 16 25 38.8 +0.7
baz=333
M56A Emporium 98.14 28 P Pdif 16 25 39.2 +0.6
baz=328
KEST Kesra 98.22 322 P P 16 25 38.9 -0.2
comp=Z,6.0nm,1.0s,baz=164,slow=2.0,SNR=4.4
KEST Kesra 98.22 322 IAmb IAmb 16 25 45.9
comp=Z,9.1nm,1.2s
N55A Marion Center 98.40 29 P P 16 25 39.1 -0.6
baz=327
OXF Oxford 98.41 40 P Pdif 16 25 40.2 +0.4
baz=319
P53A Whipple 98.44 32 P P 16 25 39.1 -0.8
baz=325
G65A Princeton 98.52 20 P Pdif 16 25 40.8 +0.7
baz=336
H64A Troy 98.54 21 P P 16 25 40.1 -0.1
baz=335
L58A Harry Jones Me 98.57 27 P Pdif 16 25 40.8 +0.3
baz=330
M57A Sunshine Farm, 98.68 28 P P 16 25 40.7 -0.2
baz=329
P54A Burton 98.75 31 P P 16 25 40.7 -0.6
baz=326
SSPA Standing Stone 98.97 29 P Pdif 16 25 42.4 +0.1
baz=328
M66A Nantucket 101.30 23 P Pdif 16 25 51.6 -1.0
baz=334
V59A Middlesex 102.92 32 P Pdif 16 25 58.8 -1.1
baz=327
158A Hollywood 104.53 35 P Pdif 16 26 05.1 -1.9
baz=325
Z59A Georgetown, SC 104.55 34 P Pdif 16 26 05.2 -1.9
baz=326
TOA0 Torodi Ar. Sit 120.00 312 PKPdf 16 30 52.0 -0.6
TORD Torodi Ar. Bea 120.00 312 PKP PKPdf 16 30 52.1 -0.5
comp=Z,5.1nm,0.6s,baz=16,slow=1.5,SNR=42
QSPA South Pole Qui 122.26 180 PKPdf 16 30 55.2 -0.1
SYO Syowa Base 123.87 205 eP PKiKP PKiKP 16 31 02.6 +4.1
SYO Syowa Base 123.87 205 eP pPKiKP pPKiKP 16 31 23.4 +4.7
BOSA Boshof 125.00 256 PKP PKiKP 16 31 02.6 +0.3
comp=Z,4.4nm,0.8s,baz=118,slow=2.0,SNR=8.1
DBIC Dimbokro 129.06 314 PKP PKPdf 16 31 09.8 -0.2
comp=Z,3.4nm,0.5s,baz=32,slow=1.9,SNR=8.7
SDV Santo Domingo 129.15 41 PKPdf 16 31 09.9 -0.5
SDV Santo Domingo 129.15 41 eP PKPdf 16 31 09.9 -0.5
TIC Toumodi 129.18 314 ePKIKP PKPdf 16 31 10.4 +0.2
KIC Kosan Boka 129.23 313 ePKIKP PKPdf 16 31 10.6 +0.3
comp=Z,21nm,0.8s
LIC Lamto 129.51 313 ePKIKP PKPdf 16 31 11.0 +0.2
comp=Z,7.9nm,0.4s
RUSC La Rusia 130.12 46 PKPdf 16 31 11.4 -1.2
NVL N'lazarevskaya 132.86 201 ePKIKP PKPdf 16 31 15.6 +0.2
NVL pmax pmax
comp=Z,10.0nm,0.7s
SNAA Sanae 136.24 196 PKPdf PKiKP 16 31 23.8 +0.3
VNA2 Neumayer--Watz 137.80 195 PKPdf PKiKP 16 31 27.4 +0.8
VNA3 Neumayer Olymp 138.04 194 PKPdf PKiKP 16 31 25.5 +0.4
VNA1 Neumayer--Stat 138.20 195 PKPdf PKiKP 16 31 28.2 +0.8
PTGA Pitinga 142.89 36 eP PKPdf 16 31 35.7 +0.1
PMSA Palmer Station 144.31 162 eP PKPbc 16 31 35.3 +0.4
MACA Manacapuru-AM 144.60 39 eP PKPab 16 31 35.8 -1.4
MALB Monte Alegre 146.43 28 eP PKPbc 16 31 42.8 -0.3
H03N2 Juan Fernandez 146.91 103 T T 19 17 10.3
baz=281,slow=74,SNR=3.3
H03N3 Juan Fernandez 146.91 103 T T 19 16 57.2
baz=281,slow=74,SNR=5.1
H03N1 Juan Fernandez 146.92 103 T T 19 17 11.4
baz=281,slow=74,SNR=7.0
SAML Samuel 147.80 49 PKIKP PKPdf 16 31 43.7 -0.3
SAML 16 31 46.9
SAML Samuel 147.80 49 PKPdf 16 31 43.7 -0.3
SAML PKPbc **PKPbc 16 31 46.9 0.0**
SAML Samuel 147.80 49 eP PKPdf 16 31 43.8 -0.1
ITTB Itaituba 148.07 32 eP PKPdf 16 31 44.4 0.0
PB12 IPOC Station P 148.94 71 PKPdf 16 31 46.5 +0.7
LPAZ La Paz 149.34 65 PKPbc PKiKP 16 31 52.7 0.0
comp=Z,31nm,0.7s,baz=321,slow=2.2,SNR=72
LPAZ La Paz 149.34 65 PKPbc PKiKP 16 31 52.5 -0.2
LPAZ La Paz 149.34 65 eP PKPdf 16 31 45.7 -1.4
PSGCX Pisagua 149.62 73 PKPbc 16 31 52.0 +0.5
MNMC Minye Minye 149.80 71 PKPbc PKiKP 16 31 53.3 +0.1
TA01 Diego Aracena 150.06 74 PKiKP 16 31 53.0 -0.3
PB11 IPOC Station P 150.08 72 PKPbc PKiKP 16 31 53.4 -0.2
ROSB Rosrio 150.21 10 eP PKPdf 16 31 48.2 +0.3
PATCX Punta Patache 150.21 75 PKiKP 16 31 53.7 0.0
GO01 Chusmiza 150.40 72 PKPbc PKPbc 16 31 54.2 +0.3
NPGB Novo Progresso 150.61 34 eP PKPdf 16 31 49.7 +1.2
PB08 IPOC Station P 150.68 73 PKiKP 16 31 55.3 +0.3
PB01 IPOC Station P 150.86 74 PKiKP 16 31 54.8 -0.2
PB07 IPOC Station P 150.86 76 PKiKP 16 31 55.0 -0.2
PB04 IPOC Station P 150.93 77 PKPbc 16 31 54.7 0.0
PB09 IPOC Station P 151.42 76 PKiKP 16 31 56.1 -0.2
PB06 IPOC Station P 151.57 78 PKiKP 16 31 56.7 +0.2
PB15 IPOC Station P 151.87 78 PKiKP 16 31 57.3 +0.1
PRPB Parauapebas 152.04 23 eP PKPdf 16 31 51.1 +0.4
LVC Limon Verde 152.07 77 PKIKP PKiKP 16 31 58.3 +0.4
LVC Limon Verde 152.07 77 PKiKP 16 31 58.3 +0.4
LVC Limon Verde 152.07 77 eP PKPdf 16 31 50.3 -0.6
LL01 San Ignacio de 152.10 120 PKiKP 16 31 57.1 +0.3
GO02 Mina Guanaco 152.57 82 PKiKP 16 31 58.7 -0.1
VILB Vilhena 152.73 49 eP PKPdf 16 31 51.8 +0.2
GO03 Copiap 152.86 88 PKiKP 16 31 59.2 +0.2
LC01 Cunco 152.91 113 PKiKP 16 31 58.9 +0.2
GO04 Tololo Observa 153.08 93 PKiKP 16 31 59.5 -0.1
CO02 Combarbal 153.12 96 PKiKP 16 31 59.5 0.0
AC05 El Transito 153.19 90 PKPbc PKiKP 16 32 00.4 +0.7
RCBR Riachuelo 153.26 352 eP PKPdf 16 31 51.6 -0.9
ROC1 El Roble 153.40 100 PKiKP 16 32 00.4 +0.2
BI02 San Fabin de 153.45 108 PKiKP 16 32 00.3 +0.3
AC02 Maricunga 153.56 85 PKPbc PKiKP 16 32 01.8 +0.8
CO01 Juntas del Tor 153.63 93 PKiKP 16 32 01.1 +0.4
CLDB Colider 153.66 39 eP PKPdf 16 31 54.2 +1.2
PLCA Paso Flores 153.74 117 PKP PKPdf 16 31 52.4 -0.1
comp=Z,1.9nm,1.0s,baz=313,slow=17,SNR=3.6
PLCA PKPbc **PKiKP 16 32 01.5 +1.1**
comp=Z,7.9nm,0.8s,baz=230,slow=2.4,SNR=19
PLCA PKPab **PKPab 16 32 14.7 +1.2**
comp=Z,7.4nm,0.8s,baz=250,slow=3.3,SNR=12
PLCA Paso Flores 153.74 117 PKiKP 16 32 01.0 +0.6
PLCA Paso Flores 153.74 117 eP PKPdf 16 31 51.6 -0.9
VA03 San Esteban 153.76 99 PKiKP 16 32 01.0 +0.3
BO02 Sierra Bellavi 153.78 104 PKiKP 16 32 01.2 +0.5
PTLB Pontes e Lacer 155.26 51 eP PKPdf 16 31 56.1 +0.9
BDFB Brasilia 161.45 27 PKPab PKPab 16 32 47.3 0.0
comp=Z,4.6nm,0.6s,baz=301,slow=2.5,SNR=6.4
CPUP Vila Florida 163.17 73 PKPab PKPab 16 32 54.6 0.0
comp=Z,5.6nm,0.8s,baz=312,slow=5.7,SNR=8.0
ITRB Iturama 163.88 40 eP PKPdf 16 32 05.6 +0.7
TRCB Terra Rica 164.77 54 eP PKPdf 16 32 06.2 +0.5
SJMB Sao Joao De Ma 166.16 7 eP PKPdf 16 32 07.6 +0.7
OGAUY Aigu 167.03 102 eP PKPdf 16 32 07.5 +0.4

ATH ***27*** *16:22:46.7,40°00'N×23°31'E,h27km±1km,ML2.5/12,Error ellipse: s-maj=1.5km s-min=0.9km az=133.0*
SKO ***27*** *16:22:47.2,39°98'N×23°31'E,h12km*
THE 27 16:22:46.6,39°98'N×23°32'E,h29km±1km,ML2.3/8,Error ellipse: s-maj=1.4km s-min=0.6km az=93.0,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	**0.28**	**101**	P	Pb	16 22 54.0	+0.3
PAIG				S	Sb	16 22 58.4	0.0
	732nm,0.4s						
PAIG	**Paliouri**	**0.28**	**101**	P	Pb	16 22 54.0	+0.4
PAIG				S	Sb	16 22 58.0	-0.4
PAIG				AML	AML	16 22 59.4	
	comp=N,2051μm,0.5s						
PAIG				AML	AML	16 22 59.8	
	comp=E,887μm,0.2s						
PLG	**Polygyros**	**0.40**	**14**	P	Pb	16 22 55.3	-0.2
PLG				S	Sb	16 23 01.8	+0.3
	comp=E,465nm,0.3s						
PLG	**Polygyros**	**0.40**	**14**	P	Pb	16 22 55.3	-0.2
PLG				S	Sb	16 23 01.0	-0.5
PLG				AML	AML	16 23 02.2	
	comp=E,1041μm,0.3s						
PLG				AML	AML	16 23 05.4	
	comp=N,854μm,0.4s						
OUR	**Ouranopolis**	**0.62**	**55**	P	Pb	16 22 58.1	-0.8
OUR				S	Sn	16 23 08.4	0.0
OUR	**Ouranopolis**	**0.62**	**55**	P	Pn	16 23 00.0	+0.6
OUR				S	Sn	16 23 08.6	+0.3
OUR				AML	AML	16 23 12.9	
	comp=N,2378μm,0.6s						
OUR				AML	AML	16 23 13.4	
	comp=E,2093μm,0.3s						
XOR	**Xorichti**	**0.62**	**189**	P	Pb	16 22 58.6	-0.4
XOR				S	Sn	16 23 08.4	-0.2
XOR	**Xorichti**	**0.62**	**189**	P	Pn	16 23 00.3	+0.7
XOR				S	Sn	16 23 09.0	+0.4
XOR				AML	AML	16 23 10.4	
	comp=E,1839μm,0.5s						
XOR				AML	AML	16 23 10.8	
	comp=N,6724μm,0.4s						
HORT	**Hortiatis**	**0.64**	**345**	P	Pb	16 22 59.2	-0.1
HORT				S	Sb	16 23 07.8	-0.2
	comp=N,320nm,0.3s						
HORT	**Hortiatis**	**0.64**	**345**	P	Pb	16 22 59.2	-0.1
HORT				S	Sb	16 23 07.9	-0.1
HORT				AML	AML	16 23 09.3	
	comp=E,784μm,0.3s						
HORT				AML	AML	16 23 09.7	
	comp=N,466μm,0.3s						
LIT	**Litokhoron**	**0.65**	**281**	P	Pb	16 22 59.1	-0.4
LIT	**Litokhoron**	**0.65**	**281**	P	Pb	16 22 59.1	-0.3
NEO	**Neokhori**	**0.68**	**186**	P	Pb	16 22 59.0	-0.9

NEO	**Neokhori**	**0.68**	**186**	P	Pb	16 23 00.1	+0.2	
NEO				S	Sn	16 23 10.6	+0.6	
NEO				AML	AML	16 23 11.9		
	comp=E,2588μm,0.6s							
NEO				AML	AML	16 23 12.1		
	comp=N,2787μm,0.5s							
THE	**Thessaloniki**	**0.70**	**337**	P	Pb	16 23 00.3	-0.1	
THE				S	Sb	16 23 09.7	0.0	
THE				AML	AML	16 23 10.5		
	comp=N,583μm,0.6s							
THE				AML	AML	16 23 10.6		
	comp=E,488μm,0.5s							
SKIA	**Skiathos**	**0.82**	**172**	P	Pb	16 23 02.5	+0.2	
SKIA				S	Sb	16 23 12.6	-0.4	
	comp=E,525nm,0.4s							
SKIA	**Skiathos**	**0.82**	**172**	P	Pb	16 23 03.0	+0.7	
SKIA				S	Sn	16 23 14.4	+0.9	
SKIA				AML	AML	16 23 15.7		
	comp=N,1340μm,0.5s							
SKIA				AML	AML	16 23 15.9		
	comp=E,752μm,0.4s							
AOS	**Alonnisos**	**0.92**	**152**	P	Pb	16 23 04.4	+0.5	
AOS				S	Sn	16 23 17.8	+2.0	
THL	**Klokotos Trika**	**1.09**	**248**	P	Pn	16 23 05.2	-0.7	
SRS	**Serrai**	**1.15**	**10**	P	Pn	16 23 06.5	-0.3	
SRS				S	Sn	16 23 21.3	-0.4	
	comp=E,105nm,0.4s							
SRS	**Serrai**	**1.15**	**10**	P	Pb	16 23 08.9	+1.0	
SRS				S	Sb	16 23 23.5	+1.0	
SRS				AML	AML	16 23 28.7		
	comp=E,186μm,0.5s							
SRS				AML	AML	16 23 29.6		
	comp=N,239μm,0.3s							
KNT	**Kendrikon**	**1.22**	**345**	P	Pn	16 23 07.7	-0.1	
KNT				S	Sn	16 23 23.1	-0.3	
	comp=N,170nm,0.4s							
KNT	**Kendrikon**	**1.22**	**345**	P	Pb	16 23 09.9	+0.8	
KNT				S	Sb	16 23 25.9	+1.4	
KNT				AML	AML	16 23 30.0		
	comp=E,352nm,0.4s							
KNT				AML	AML	16 23 32.1		
	comp=N,326nm,0.4s							
THAS	**Thassos island**	**1.24**	**59**	P	Pn	16 23 07.0	-1.0	
THAS				S	Sn	16 23 23.5	-0.2	
	comp=N,108nm,0.4s							
THAS	**Thassos island**	**1.24**	**59**	P	Pb	16 23 09.6	+0.3	
THAS				S	Sb	16 23 25.8	+0.9	
THAS				AML	AML	16 23 29.9		
	comp=E,204μm,0.5s							
THAS				AML	AML	16 23 32.4		
	comp=N,243μm,0.3s							
MRKA	**Markates**	**1.29**	**171**	P	Pb	16 23 10.1	-0.2	
MAKR	**Makrakomi, Fth**	**1.33**	**224**	P	Pn	16 23 08.6	-0.8	
MAKR				S	Sn	16 23 25.9	-0.3	
	comp=N,155nm,0.6s							
MAKR	**Makrakomi, Fth**	**1.33**	**224**	P	Pb	16 23 12.1	+1.1	
KAVA	**Kavala**	**1.36**	**41**	P	Pn	16 23 08.6	-1.1	
KAVA	**Kavala**	**1.36**	**41**	P	Pb	16 23 11.7	+0.3	
KAVA				S	Sb	16 23 31.3	+2.8	
KAVA				AML	AML	16 23 33.7		
	comp=E,247μm,0.4s							
KAVA				AML	AML	16 23 33.8		
	comp=N,250μm,0.4s							
VAY	**Valandovo**	**1.46**	**337**	*i* Pg	Pb	16 23 14.4	+1.4	
VAY				*i* Sg	Sb	16 23 33.1	+1.9	
VAY				*e*Lg	Lg	16 23 36.4		
	comp=E,50nm,0.7s							
VAY	**Valandovo**	**1.46**	**337**	*i* Pg	Pb	16 23 14.4	+1.4	
VAY				*i* Sg	Sb	16 23 33.1	+1.9	
VAY				*e*Lg	Lg	16 23 36.4		
	comp=E,50nm,0.7s							

WEL 27 16:33:35.9±0.6, 34°S±14″×17°9E±1°6, *h*272km±20km, M3.7/15, mL3.7/7, MLv3.7/15, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.24**	**194**	P	Pn	16 34 30.5	-1.6
WMGZ	**Waiomatatini S**	**3.47**	**191**	P	Pn	16 34 34.8	+0.2
WMGZ				S	S	16 35 22.9	+1.4
HAZ	**Te Kaha**	**3.55**	**199**	P	Pn	16 34 35.3	-0.1
PKGZ	**Pakihiroa**	**3.60**	**195**	P	Pn	16 34 36.1	0.0
PKGZ				S	S	16 35 24.0	-0.2
PUZ	**Puketiti**	**3.74**	**192**	P	Pn	16 34 35.7	-1.9
PUZ				S	S	16 35 27.7	+0.7
RUGZ	**Raukumara Rang**	**3.77**	**199**	P	Pn	16 34 37.6	-0.5
TWGZ	**Tauwhareparae**	**3.90**	**195**	P	Pn	16 34 40.1	+0.6
TWGZ				S	S	16 35 32.0	+1.8
CNGZ	**Carnagh Statio**	**4.15**	**191**	P	Pn	16 34 42.8	+0.5
MWZ	**Matawai**	**4.16**	**199**	P	Pn	16 34 41.0	-1.4
MWZ				S	S	16 35 35.0	-0.5
URZ	**Urewera**	**4.21**	**204**	P	Pn	16 34 42.6	-0.4
URZ				S	S	16 35 36.7	0.0
RIGZ	**Rimuhau**	**4.45**	**195**	P	Pn	16 34 46.2	+0.4
RIGZ				S	S	16 35 42.2	+0.4
MUGZ	**Murupara**	**4.53**	**206**	P	Pn	16 34 46.8	+0.2
RTZ	**Ruatahuna**	**4.58**	**203**	P	Pn	16 34 45.3	-2.1
RTZ				S	S	16 35 43.4	-1.1
SNGZ	**Shannon Statio**	**4.63**	**199**	P	Pn	16 34 47.9	0.0
SNGZ				S	S	16 35 45.4	-0.1
RAHZ	**Arahi**	**4.82**	**201**	P	Pn	16 34 50.3	+0.1
RAHZ				S	S	16 35 50.4	+0.7
MTHZ	**Maungataniwha**	**4.84**	**203**	P	Pn	16 34 50.7	+0.3
MTHZ				S	S	16 35 51.8	+1.7
MHGZ	**Mahia Peninsul**	**4.86**	**193**	P	Pn	16 34 51.5	+1.0
BKZ	**Black Stump Fm**	**5.24**	**204**	P	Pn	16 34 55.1	0.0
BKZ				S	S	16 35 57.8	-1.0
HIZ	**Hauiti**	**5.42**	**220**	P	Pn	16 35 00.1	+2.9
BHHZ	**Black Hill Sta**	**5.68**	**206**	P	Pn	16 35 00.0	-0.5

*THE **27** 16:46:08.6, 40°.33N×25°.73E, *h*13km, ML2.5/9, Error ellipse: s-maj=0.8km s-min=0.4km az=53.0*
*ISK **27** 16:46:08.1, 40°.32N×25°.69E, *h*13km, ML2.6/17*
*ATH **27** 16:46:08.4, 40°.34N×25°.69E, *h*26km±1km, ML2.5/7, Error ellipse: s-maj=2.0km s-min=1.0km az=67.0*
*DDA **27** 16:46:10.2, 40°.29N×25°.85E, *h*11km±2km, ML2.5*

ISC 27 16:46:08.8±0.8, 40°33N±0°.02×25°71E±0°.02, *h*15km±5km, n68, σ1§48/103, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.20**	**134**	P	**Pg**	**16 46 13.2**	**-0.2**
GADA				S	**Sg**	**16 46 16.1**	**-0.4**
	1μm,0.2s						
GADA	**Gvkgeada**	**0.20**	**134**	PG	**Pg**	**16 46 13.1**	**-0.3**
GADA				SG	**Sg**	**16 46 16.4**	**-0.1**
SMTH	**Samothraki Isl**	**0.20**	**315**	P	**Pg**	**16 46 13.5**	**+0.1**
SMTH				S	**Sg**	**16 46 16.3**	**-0.3**
	3μm,0.1s						
SMTH	**Samothraki Isl**	**0.20**	**315**	P	**Pg**	**16 46 13.6**	**+0.1**
SMTH				S	**Sg**	**16 46 16.8**	**+0.2**
SMTH				AML	AML	16 46 16.8	
	comp=E,6014μm,0.1s						
SMTH				AML	AML	16 46 17.1	
	comp=N,5259μm,0.1s						
GOKA	**anakkale-Gk**	**0.20**	**133**	*i* P	**Pg**	**16 46 13.4**	**-0.1**
ENEZ	**Enez**	**0.53**	**39**	P	**Pg**	**16 46 18.6**	**-0.6**
ENEZ				S	**Sg**	**16 46 26.5**	**+0.3**
	comp=N,652nm,0.2s						
ENEZ	**Enez**	**0.53**	**39**	PG	**Pg**	**16 46 19.2**	**0.0**
ENEZ				SG	**Sb**	**16 46 27.3**	**+0.2**
BOZC	**Bozcaada**	**0.55**	**152**	PG	**Pg**	**16 46 19.4**	**-0.2**
BOZC				SG	**Sb**	**16 46 27.6**	**-0.2**
BOZC	**Bozcaada**	**0.55**	**152**	*i* P	**Pg**	**16 46 19.5**	**-0.1**
BOZC				*i* S	**Sg**	**16 46 26.8**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.58**	**83**	PG	**Pg**	**16 46 20.3**	**0.0**
GELI				SG	**Sb**	**16 46 29.1**	**+0.3**
LIA	**Limnos Island**	**0.59**	**224**	P	**Pg**	**16 46 20.4**	**0.0**
LIA				S	**Sb**	**16 46 28.8**	**-0.1**
	comp=N,232nm,0.3s						
LIA	**Limnos Island**	**0.59**	**224**	P	**Pg**	**16 46 20.5**	**0.0**
LIA				S	**Sb**	**16 46 28.9**	**-0.1**
LIA				AML	AML	16 46 33.0	
	comp=N,506μm,0.3s						
LIA				AML	AML	16 46 34.0	
	comp=E,449μm,0.3s						
EZN	**Ezine**	**0.69**	**137**	P	**Pg**	**16 46 21.5**	**-0.7**
EZN				S	**Sg**	**16 46 31.4**	**+0.1**
EZN	**Ezine**	**0.69**	**137**	PG	**Pg**	**16 46 21.9**	**-0.3**
EZN				SG	**Sg**	**16 46 31.4**	**+0.1**
ERIK	**Erikli-Kesan**	**0.70**	**61**	PG	**Pg**	**16 46 22.4**	**0.0**
LPK	**Lapseki**	**0.80**	**87**	PG	**Pb**	**16 46 24.3**	**-0.1**
LPK				SG	**Sn**	**16 46 36.2**	**-0.9**
THAS	**Thassos island**	**0.81**	**290**	P	**Pb**	**16 46 24.5**	**0.0**
THAS				S	**Sb**	**16 46 36.0**	**+0.8**
	comp=E,245nm,0.2s						
THAS	**Thassos island**	**0.81**	**290**	P	**Pg**	**16 46 24.2**	**-0.3**
THAS				S	**Sb**	**16 46 35.2**	**+0.1**
THAS				AML	AML	16 46 38.1	
	comp=N,564μm,0.3s						
THAS				AML	AML	16 46 38.9	
	comp=E,401μm,0.2s						
RDO	**Rodhopi**	**0.83**	**351**	P	**Pb**	**16 46 24.6**	**-0.2**
RDO				S	**Sb**	**16 46 35.9**	**+0.2**
RDO	**Rodhopi**	**0.83**	**351**	P	**Pb**	**16 46 24.7**	**-0.1**
RDO				S	**Sg**	**16 46 35.5**	**-0.2**
RDO				AML	AML	16 46 39.1	
	comp=N,291μm,0.3s						
RDO				AML	AML	16 46 41.1	
	comp=E,307μm,0.2s						
RDO	**Rodhopi**	**0.83**	**351**	PG	**Pb**	**16 46 24.6**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**0.87**	**132**	*i* P	**Pb**	**16 46 25.3**	**-0.2**
BAYC				*i* S	**Sb**	**16 46 36.5**	**-0.4**
KESN	**Edirne-Kesan**	**0.89**	**56**	*i* P	**Pn**	**16 46 26.7**	**-0.3**
KESN				*i* S	**Sg**	**16 46 37.5**	**-0.3**
KESN				IAML		16 46 41.0	
	comp=N,217nm,0.2s						
KESN				IAML		16 46 41.0	
	comp=E,184nm,0.3s						
EFSA	**Agios Efstrati**	**0.97**	**216**	P	**Pg**	**16 46 27.4**	**0.0**
EFSA				S	**Sn**	**16 46 41.0**	**-0.2**
EFSA				AML	AML	16 46 43.2	
	comp=N,520μm,0.4s						
EFSA				AML	AML	16 46 44.2	
	comp=E,398μm,0.3s						
SIGR	**SIGRI**	**1.12**	**174**	P	**Pb**	**16 46 29.3**	**-0.5**
SIGR				S	**Sb**	**16 46 44.5**	**+0.3**
	comp=E,478nm,0.5s						
SIGR	**SIGRI**	**1.12**	**174**	P	**Pb**	**16 46 29.6**	**-0.2**
SIGR				S	**Sg**	**16 46 45.6**	**+0.6**
SIGR				AML	AML	16 46 46.5	
	comp=N,1214μm,0.6s						
SIGR				AML	AML	16 46 46.9	
	comp=E,700μm,0.4s						
SIGR	**SIGRI**	**1.12**	**174**	PN	**Pb**	**16 46 29.6**	**-0.2**
SIGR				SN	**Sg**	**16 46 45.3**	**+0.3**
KAVA	**Kavala**	**1.13**	**307**	P	**Pb**	**16 46 29.5**	**-0.5**
KAVA				S	**Sn**	**16 46 45.1**	**-0.2**
	comp=E,180nm,0.2s						
KAVA	**Kavala**	**1.13**	**307**	P	**Pn**	**16 46 30.2**	**+0.2**
PRK	**Paraskevi**	**1.16**	**158**	P	**Pn**	**16 46 30.3**	**-0.2**
PRK				S	**Sn**	**16 46 45.8**	**-0.3**
	comp=E,288nm,0.5s						
PRK	**Paraskevi**	**1.16**	**158**	P	**Pg**	**16 46 31.4**	**+0.2**
PRK				S	**Sg**	**16 46 47.7**	**+1.3**
PRK				AML	AML	16 46 49.1	
	comp=E,623μm,0.7s						
PRK				AML	AML	16 46 49.5	
	comp=N,514μm,0.2s						
RKY	**Sarkoy-Tekirda**	**1.17**	**72**	PN	**Pb**	**16 46 30.7**	**0.0**
SART	**Tekirdag**	**1.17**	**72**	*i* P	**Pn**	**16 46 30.4**	**-0.3**
KVLA	**Kavala**	**1.18**	**301**	P	**Pg**	**16 46 31.5**	**0.0**
KRBG	**Karabiga-Canak**	**1.21**	**86**	PN	**Pb**	**16 46 31.5**	**+0.1**
AYVA	**Ayvalik**	**1.27**	**143**	*i* P	**Pb**	**16 46 32.6**	**+0.4**
AYVA				*i* S	**Sg**	**16 46 49.2**	**-0.4**
AYVA				IAML		16 46 51.0	
	comp=N,259nm,0.3s						
AYVA				IAML		16 46 51.0	
	comp=E,77nm,0.3s						
OUR	**Ouranopolis**	**1.32**	**271**	P	**Pn**	**16 46 32.3**	**-0.4**
OUR				S	**Sn**	**16 46 49.6**	**-0.4**
	comp=E,140nm,0.3s						
OUR	**Ouranopolis**	**1.32**	**271**	P	**Pn**	**16 46 32.5**	**-0.1**
OUR	**Ouranopolis**	**1.32**	**271**	PN	**Pn**	**16 46 32.4**	**-0.3**
KDZ	**Kurdzhali**	**1.34**	**350**	P	**Pb**	**16 46 33.6**	**+0.1**
KDZ				S	**Sb**	**16 46 50.8**	**+0.3**
KDZ	**Kurdzhali**	**1.34**	**350**	PN	**Pn**	**16 46 33.0**	**+0.1**
KNL	**Balıkesir**	**1.39**	**92**	*i* P	**Pb**	**16 46 34.1**	**-0.3**
KNL				*i* S	**Sg**	**16 46 53.8**	**+0.3**
KNL				IAML		16 46 55.0	
	comp=E,111nm,0.4s						
KNL				IAML		16 46 57.0	
	comp=N,92nm,0.3s						
MRMT	**Marmara Adasi**	**1.46**	**79**	PN	**Pn**	**16 46 34.9**	**+0.3**
TKR	**Tekirdag**	**1.54**	**64**	PN	**Pn**	**16 46 35.8**	**+0.2**
GONE	**Gonen-Balikesi**	**1.54**	**100**	PN	**Pn**	**16 46 35.9**	**+0.3**
DKL	**Dikili**	**1.56**	**143**	PN	**Pn**	**16 46 36.1**	**+0.2**
BALY	**Balya**	**1.58**	**111**	*i* P	**Pb**	**16 46 37.1**	**-0.5**
BALY				*i* S	**Sb**	**16 46 57.2**	**-0.2**
BALY				IAML		16 47 01.0	
	comp=N,65nm,0.4s						
PAIG	**Paliouri**	**1.61**	**256**	P	**Pn**	**16 46 36.0**	**-0.6**
PAIG				S	**Sn**	**16 46 57.4**	**+0.3**
PAIG	**Paliouri**	**1.61**	**256**	P	**Pn**	**16 46 36.0**	**-0.6**
EDC	**Edincik**	**1.64**	**89**	PN	**Pn**	**16 46 37.7**	**+0.6**
EDRB	**Edirne**	**1.70**	**27**	PN	**Pn**	**16 46 38.1**	**+0.2**
PLG	**Polygyros**	**1.73**	**272**	P	**Pn**	**16 46 38.2**	**-0.2**
KIRK	**Kirklareli**	**1.79**	**35**	*i* P	**Pn**	**16 46 39.9**	**+0.8**
SRS	**Serrai**	**1.79**	**297**	P	**Pn**	**16 46 38.4**	**-0.8**
SRS	**Serrai**	**1.79**	**297**	P	**Pn**	**16 46 40.2**	**+1.0**
BALB	**Balikesir**	**1.80**	**112**	PN	**Pn**	**16 46 39.6**	**+0.4**
STEP	**BALIKESIR_Sava**	**1.81**	**121**	*i* P	**Pn**	**16 46 39.9**	**+0.4**
AOS	**Alonnisos**	**1.83**	**231**	P	**Pn**	**16 46 39.5**	**-0.1**
AOS	**Alonnisos**	**1.83**	**231**	P	**Pn**	**16 46 40.2**	**+0.6**
CHOS	**Chios island**	**1.96**	**172**	P	**Pn**	**16 46 42.0**	**+0.5**
CHOS	**Chios island**	**1.96**	**172**	PN	**Pn**	**16 46 41.7**	**+0.2**
URLA	**Izmir**	**2.08**	**161**	*i* P	**Pn**	**16 46 43.5**	**+0.4**
URLA				*i* S	**Sn**	**16 47 09.1**	**+0.3**
XOR	**Xorichti**	**2.17**	**244**	P	**Pn**	**16 46 43.8**	**-0.5**
ELBA	**Catalca**	**2.22**	**68**	*i* P	**Pn**	**16 46 45.9**	**+0.9**
DURS	**Dursunbey**	**2.24**	**108**	*i* P	**Pn**	**16 46 46.2**	**+0.8**
DURS				*i* S	**Sn**	**16 47 14.6**	**+1.8**
DURS				IAML		16 47 21.0	
	comp=N,28nm,0.3s						
DURS				IAML		16 47 21.0	
	comp=E,33nm,0.3s						
ULDT	**Uludag**	**2.63**	**93**	*i* P	**Pg**	**16 46 57.6**	**-1.5**
DEMI	**Demirci**	**2.65**	**118**	*i* P	**Pg**	**16 46 58.5**	**-1.1**
MANT	**Manisa**	**2.87**	**129**	*i* P	**Pn**	**16 46 55.3**	**+1.2**

*KRNET **27** 16:49:11.1±0.1, 39°.91N×77°.61E, mb2.8*
*SOME **27** 16:49:11.1, 40°.32N×77°.45E, h15km*
*NNC **27** 16:49:12.6±0.7, 40°.40N×77°.49E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=4.6km s-min=3.5km az=177.0*

ISC 27 16:49:11.4±2.5, 40°3N±0°.1×77°52E±0°06, *h*2km±17km, n41, σ1§19/61, 8C-3D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**2.32**	**16**	⇓*i* P	**Pb**	**16 49 52.7**	**-1.4**
	baz=13						
PRZ				⇓*i* S	**Sb**	**16 50 22.8**	**-0.6**
	baz=13						
ANVS	**Anan'yevo**	**2.53**	**2**	⇑*e* P	**Pb**	**16 49 56.0**	**-1.7**
	baz=1.0						
ANVS				⇑*i* S	**Sb**	**16 50 28.8**	**-0.5**
	baz=1.0						
BOOM	**Boomskoye usch**	**2.53**	**332**	⇑*i* P	**Pb**	**16 49 55.9**	**-1.8**
	baz=34						
BOOM				⇑*i* S	**Sb**	**16 50 28.4**	**-1.0**
	baz=34						
TNSS	**Tian-Shan**	**2.81**	**351**	*e* P	**Pb**	**16 50 01.5**	**-1.1**
	24nm,0.5s						
TNSS				*e* S	**Sb**	**16 50 37.9**	**+0.2**
	21nm,0.5s						
TNSS	**Tian-Shan**	**2.81**	**351**	Pg	**Pb**	**16 50 01.5**	**-1.1**
	26nm,0.6s						
TNSS				Lg	Lg	16 50 38.4	
	21nm,0.4s						
IZV	**Izvestkoviy**	**2.86**	**346**	*e* P	**Pb**	**16 50 02.4**	**-0.9**
	7.7nm,0.5s						
IZV				*e* S	**Sb**	**16 50 39.5**	**+0.7**
	23nm,0.5s						
IZV	**Izvestkoviy**	**2.86**	**346**	Pg	**Pb**	**16 50 02.4**	**-0.9**
	7.8nm,0.5s						
IZV				Lg	Lg	16 50 39.8	
	21nm,0.4s						
SATY	**Saty**	**2.88**	**13**	*e* P	**Pb**	**16 50 03.4**	**-0.3**
	3.7nm,0.8s						
SATY				*e* S	**Sb**	**16 50 40.9**	**+1.6**
	18nm,0.5s						
SATY	**Saty**	**2.88**	**13**	Pg	**Pb**	**16 50 03.3**	**-0.3**
	3.6nm,0.2s						
SATY				Lg	Lg	16 50 40.8	
	19nm,0.6s						
MDOK	**Medeo**	**2.92**	**353**	*e* P	**Pb**	**16 50 03.3**	**-1.1**
	8.5nm,0.5s						
MDOK				*e* S	**Sb**	**16 50 40.7**	**0.0**
	28nm,0.5s						
MDOK	**Medeo**	**2.92**	**353**	⇓Pg	**Pb**	**16 50 03.0**	**-1.4**
	8.7nm,0.7s						
MDOK				Lg	Lg	16 50 41.4	
	37nm,0.9s						
MDOK	**Medeo**	**2.92**	**353**	Pg	**Pb**	**16 50 03.4**	**-1.1**
	8.1nm,0.5s						
MDOK				Lg	Lg	16 50 40.9	
	28nm,0.4s						
MTBS	**Maitube**	**2.98**	**344**	*e* P	**Pb**	**16 50 04.6**	**-0.8**
	5.6nm,0.3s						
MTBS				*e* S	**Sb**	**16 50 43.2**	**+0.9**
	13nm,0.2s						
MTBS	**Maitube**	**2.98**	**344**	Pg	**Pb**	**16 50 04.4**	**-1.0**
	5.4nm,0.1s						
MTBS				Lg	Lg	16 50 43.1	
	14nm,0.3s						
KOTS	**Kotyrbulak**	**2.99**	**354**	*e* P	**Pb**	**16 50 04.4**	**-1.1**
	9.0nm,0.3s						
KOTS				*e* S	**Sb**	**16 50 42.9**	**+0.3**
	63nm,0.5s						
KOTS	**Kotyrbulak**	**2.99**	**354**	Pg	**Pb**	**16 50 04.4**	**-1.1**
	22nm,0.3s						
KOTS				Lg	Lg	16 50 43.2	
	62nm,0.4s						
KST	**Kastek**	**3.02**	**338**	*e* P	**Pb**	**16 50 04.9**	**-1.1**
	3.1nm,0.3s						
KST				*e* S	**Sb**	**16 50 43.8**	**+0.3**
	18nm,0.3s						
KST	**Kastek**	**3.02**	**338**	Pg	**Pb**	**16 50 05.1**	**-1.0**
	3.6nm,0.3s						
KST				Lg	Lg	16 50 43.7	
	18nm,0.3s						
UZB	**Uzynbulak**	**3.10**	**21**	*e* P	**Pb**	**16 50 06.9**	**-0.5**
	4.0nm,0.5s						
UZB				*e* S	**Sb**	**16 50 46.8**	**+1.1**
	6.6nm,0.4s						
UZB	**Uzynbulak**	**3.10**	**21**	Pg	**Pb**	**16 50 07.1**	**-0.3**
	3.7nm,0.3s						
UZB				Lg	Lg	16 50 47.2	
	6.7nm,0.7s						
SHLS	**Shalkode**	**3.24**	**26**	*e* P	**Pg**	**16 50 12.8**	**-0.8**
	6.2nm,0.3s						
SHLS				*e* S	**Sg**	**16 50 57.1**	**+1.5**
	22nm,0.3s						
SHLS	**Shalkode**	**3.24**	**26**	Pg	**Pg**	**16 50 12.6**	**-1.0**
	6.0nm,0.2s						
SHLS				Lg	Lg	16 50 56.7	
	21nm,0.6s						
DGS	**Degeres**	**3.26**	**337**	*e* P	**Pb**	**16 50 09.1**	**-1.0**
	3.1nm,0.3s						
DGS				*e* S	**Sb**	**16 50 51.0**	**+0.7**
	17nm,0.4s						
DGS	**Degeres**	**3.26**	**337**	Pg	**Pb**	**16 50 09.9**	**-0.2**
	3.3nm,0.4s						
DGS				Lg	Lg	16 50 51.8	
	15nm,0.4s						
KURS	**Kuram**	**3.26**	**8**	*e* P	**Pb**	**16 50 09.5**	**-0.7**
	3.5nm,0.7s						
KURS				*e* S	**Sb**	**16 50 51.8**	**+1.4**
	8.6nm,0.6s						
KURS	**Kuram**	**3.26**	**8**	Pg	**Pb**	**16 50 09.8**	**-0.4**
	3.5nm,0.3s						
KURS				Lg	Lg	16 50 51.7	
	8.6nm,0.5s						
PDGK	**Podgornoye**	**3.40**	**25**	⇑Pg	**Pb**	**16 50 11.7**	**-0.9**
	2.5nm,0.6s						
PDGK				⇑Lg	Lg	16 50 55.5	
	30nm,0.7s						
KTBS	**Karatobe**	**3.51**	**350**	*e* P	**Pb**	**16 50 13.9**	**-0.4**
	4.1nm,0.3s						
KTBS				*e* S	**Sb**	**16 50 59.0**	**+1.6**
	17nm,0.3s						
KTBS	**Karatobe**	**3.51**	**350**	Pg	**Pb**	**16 50 13.6**	**-0.7**
	3.9nm,0.3s						
KTBS				Lg	Lg	16 50 58.5	
	20nm,0.6s						
ARSB	**Arslanbob**	**3.61**	**289**	⇑*i* P	**Pn**	**16 50 08.3**	**-0.3**
	baz=93						
ARSB				⇑*i* S	**Sn**	**16 50 50.1**	**-1.7**
	baz=93						
KRBS	**Karabastau**	**3.70**	**339**	*e* P	**Pb**	**16 50 17.2**	**-0.4**
	2.0nm,0.4s						
KRBS				*e* S	**Sb**	**16 51 04.7**	**+1.7**
	6.1nm,0.5s						
KTMS	**Ketmen**	**3.82**	**33**	Pg	**Pb**	**16 50 20.2**	**+0.4**
	0.2nm,0.1s						
KTMS				Lg	Lg	16 51 09.5	
	7.9nm,0.5s						
SGDS	**Sogindy**	**3.85**	**327**	Pg	**Pb**	**16 50 19.8**	**-0.4**
	5.3nm,0.5s						
SGDS				Lg	Lg	16 51 09.4	
	5.3nm,0.4s						
MNBS	**Baschi**	**3.87**	**9**	*e* P	**Pb**	**16 50 20.7**	**+0.1**
MNBS				*e* S	**Sb**	**16 51 10.9**	**+2.9**
	0.2nm,0.3s						
MNBS	**Baschi**	**3.87**	**9**	Pg	**Pb**	**16 50 20.7**	**+0.1**
	1.8nm,0.4s						
MNBS				Lg	Lg	16 51 10.2	
	12nm,0.3s						
ARXS	**Arharly**	**3.96**	**3**	*e* P	**Pb**	**16 50 22.2**	**+0.2**
	3.3nm,0.3s						
ARXS				*e* S	**Sb**	**16 51 13.0**	**+2.6**
	5.7nm,0.3s						
ARXS	**Arharly**	**3.96**	**3**	Pg	**Pb**	**16 50 22.1**	**+0.1**
	3.0nm,0.3s						
ARXS				Lg	Lg	16 51 13.2	
	8.1nm,0.3s						
MRKS	**Merke**	**4.07**	**309**	*e* P	**Pb**	**16 50 24.7**	**+0.7**
	2.6nm,0.4s						
MRKS				*e* S	**Sb**	**16 51 17.4**	**+3.7**
	4.8nm,0.3s						
MRKS	**Merke**	**4.07**	**309**	Pg	**Pb**	**16 50 24.9**	**+0.9**
	0.9nm,0.2s						
MRKS				Lg	Lg	16 51 17.5	
	4.0nm,0.3s						
DJR	**Jarkent**	**4.41**	**22**	Pg	**Pb**	**16 50 30.6**	**+1.0**
	1.9nm,0.4s						
DJR				Lg	Lg	16 51 27.3	
	3.8nm,

PMG	**Port Moresby**	**6.37 196**			**Pn**	**17 23 52.8**	**+2.0**
PMG					**Sn**	**17 25 04.3**	**+2.0**
JAY	**Jayapura**	**8.20 275**	Pn		**Pn**	**17 24 14.8**	**-1.1**
	0.3nm,0.3s,baz=62,slow=4.2,SNR=5.4						
JAY			LR	LR		17 27 05.2	
	comp=Z,908nm,20.4s,baz=77,slow=36						
JAY	**Jayapura**	**8.20 275**	P		**Pn**	**17 24 17.0**	**+1.0**
	297nm20nm,1.4s						
GENI	**Genyem**	**8.73 274**	P		**Pn**	**17 24 20.3**	**-2.9**
	1µm80nm,1.4s						
SMPI	**Sarmi**	**10.24 277**	P		**Pn**	**17 24 43.6**	**-0.3**
	994nm29nm,1.3s						
COEN	**Coen**	**12.06 208**	Pn		**Pn**	**17 25 09.7**	**+0.9**
HNR	**Honiara**	**12.60 120**	LR	LR		17 30 12.2	
	comp=Z,498nm,18.1s,baz=290,slow=38						
FAKI	**Fak Fak**	**16.61 271**	Pn		**Pn**	**17 26 08.3**	**-1.5**
FAKI			IAmb	IAmb		17 26 28.0	
	comp=Z,112nm,1.6s						
CTA	**Charters Tower**	**16.95 189**	Pn		**Pn**	**17 26 13.7**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=9.4,slow=12,SNR=2.8						
WB0	**Warramunga Arr**	**21.68 220**	P		**P**	**17 27 05.2**	**-2.1**
WB0			IAmb	IAmb		17 27 10.8	
	comp=Z,61nm,1.4s						
WR0	**Warramunga Arr**	**21.73 219**	P		**P**	**17 27 05.5**	**-2.3**
WRAB	**Tennant Creek**	**21.83 219**	P		**P**	**17 27 06.6**	**-2.3**
WRAB			IAmb	IAmb		17 27 26.6	
	comp=Z,21nm,0.9s						
WB2	**Warramunga Arr**	**21.84 219**	P		**P**	**17 27 06.6**	**-2.4**
WB2			IAmb	IAmb		17 27 46.1	
	comp=Z,22nm,1.0s						
WRA	**Warramunga Arr**	**21.85 219**	P		**P**	**17 27 06.7**	**-2.4**
	comp=Z,7.2nm,0.9s,baz=42,slow=11,SNR=37						
EIDS	**Eidsvold**	**22.11 175**	P		**P**	**17 27 10.2**	**-1.6**
EIDS			IAmb	IAmb		17 27 20.5	
	comp=Z,35nm,1.1s						
AS31	**Alice Springs**	**24.95 214**	P		**P**	**17 27 38.6**	**-1.1**
DZM	**Mont Dzumac**	**25.32 139**	LR	LR		17 36 33.4	
	comp=Z,951nm,19.5s,baz=314,slow=34						
DAV	**Davao City (W)**	**25.41 294**	LR			17 35 00.5	
	comp=Z,268nm,22.0s,baz=288,slow=30						
BATI	**Baumata**	**25.97 253**	LR	LR		17 40 16.9	
	comp=Z,453nm,19.1s,baz=96,slow=42						
FITZ	**Fitzroy Crossi**	**27.14 235**	P		**P**	**17 27 59.6**	**0.0**
	comp=Z,8.1nm,0.8s,baz=61,slow=9.5,SNR=8.0						
FITZ			LR	LR		17 39 06.9	
	comp=Z,473nm,18.3s,baz=62,slow=37						
FITZ	**Fitzroy Crossi**	**27.14 235**	P		**P**	**17 27 58.8**	**-0.7**
FITZ			IAmb	IAmb		17 28 18.6	
	comp=Z,23nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**27.81 38**	T		T	17 57 18.0	
	baz=220,slow=76,SNR=3518						
H11S2	**WAKE ISLAND Hy**	**27.82 38**	T		T	17 57 21.5	
	baz=220,slow=76,SNR=1672						
H11S1	**WAKE ISLAND Hy**	**27.83 38**	T		T	17 57 19.8	
	baz=220,slow=76,SNR=700						
H11N1	**WAKE ISLAND Hy**	**28.86 37**	T		T	17 58 40.6	
	baz=219,slow=76,SNR=208						
H11N3	**WAKE ISLAND Hy**	**28.88 37**	T		T	17 58 38.5	
	baz=219,slow=76,SNR=228						
H11N2	**WAKE ISLAND Hy**	**28.88 37**	T		T	17 58 41.9	
	baz=219,slow=76,SNR=265						
KAPI	**Kappang**	**29.11 266**	LR	LR		17 40 26.7	
	comp=Z,124nm,19.9s,baz=71,slow=38						
STKA	**Stephens Creek**	**29.31 193**	LR	LR		17 40 41.3	
	comp=Z,541nm,19.8s,baz=13,slow=38						
BBOO	**Buckleboo**	**31.79 201**	P		**P**	**17 28 40.6**	**0.0**
PSA00	**Pilbara Seismi**	**33.59 235**	P		**P**	**17 28 54.4**	**-2.1**
FORT	**Forrest**	**33.73 213**	P		**P**	**17 28 56.1**	**-1.5**
JNU	**Nakatsue**	**39.97 336**	P		**P**	**17 29 51.0**	**+0.3**
JNU			IAmb	IAmb		17 30 01.1	
	comp=Z,29nm,1.4s						
MJAR	**Matsushiro Arr**	**40.80 347**	LR	LR		17 45 00.9	
	comp=Z,151nm,19.1s,baz=185,slow=34						
KSRS	**Korea Array**	**44.92 336**	LR	LR		17 48 21.9	
	comp=Z,144nm,19.9s,baz=155,slow=35						
WHN	**Wuhan**	**47.06 318**	P		P	17 30 53.3	+5.5
WHN			S		**S**	**17 37 38.0**	**+0.5**
WHN			LR	LR			
	comp=Z,710nm,20.2s						
USRK	**Ussuriysk Ar.**	**49.59 344**	P		**P**	**17 31 07.3**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=167,slow=6.7,SNR=4.8						
USRK			LR	LR		17 49 52.5	
	comp=Z,188nm,20.6s,baz=144,slow=33						
PBKT	**Sadao Pong**	**51.25 294**	P		**P**	**17 31 20.6**	**+0.5**
XAN	**Xi'an**	**52.82 318**	P		P	17 31 37.3	+5.7
XAN			pP		sP	17 31 51.3	+6.0
XAN			pmax	pmax			
	comp=Z,7.0nm,0.7s						
XAN			pmax	pmax			
	comp=Z,94nm,4.3s						
XAN			LR	LR			
	comp=N,130nm,19.5s						
XAN			LR	LR			
	comp=E,150nm,16.3s						
XAN			LR	LR			
	comp=Z,250nm,23.9s						
CMAR	**Chiang Mai Arr**	**53.68 296**	P		**P**	**17 31 39.2**	**+1.1**
	comp=Z,2.6nm,1.0s,baz=116,slow=6.0,SNR=9.8						
CMAR			LR	LR		17 54 43.3	
	comp=Z,44nm,19.1s,baz=157,slow=36						
PEA0B	**Petropavlovsk-**	**56.62 6**	P		**P**	**17 31 58.7**	**0.0**
PETK	**Petropavlovsk-**	**56.62 6**	P		**P**	**17 31 59.1**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=145,slow=5.4,SNR=4.3						
PETK			LR	LR		17 52 48.9	
	comp=Z,113nm,21.6s,baz=238,slow=32						
PPT	**Papeete**	**61.92 108**	LR	LR		17 56 56.0	
	comp=Z,32nm,19.1s,baz=298,slow=34						
ULN	**Ulaanbaatar**	**62.64 330**	P		**P**	**17 32 40.1**	**-0.4**
ULN			IAmb	IAmb		17 32 43.0	
	comp=Z,5.8nm,1.2s						
SONM	**Songino Array**	**62.96 329**	P		**P**	**17 32 42.7**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=148,slow=6.5,SNR=8.6						
SONM			LR	LR		18 00 39.3	
	comp=Z,96nm,19.4s,baz=96,slow=37						
TLY	**Talaya**	**66.80 331**	LR	LR		17 59 59.9	
	comp=Z,137nm,21.8s,baz=131,slow=34						
TLY	**Talaya**	**66.80 331**	P		**P**	**17 33 07.3**	**-0.1**
TLY			IAmb	IAmb		17 33 37.5	
	comp=Z,10.0nm,1.6s						
VNDA	**Vanda**	**74.56 177**	LR	LR		18 05 21.7	
	comp=Z,56nm,18.7s,baz=3.5,slow=35						
VNDA	**Vanda**	**74.56 177**	P		**P**	**17 33 55.1**	**+0.9**
MKAR	**Makanchi Array**	**76.59 320**	P		**P**	**17 34 06.4**	**-0.1**
	comp=Z,1.4nm,1.0s,baz=106,slow=6.8,SNR=10						
MKAR			LR	LR		18 08 35.5	
	comp=Z,86nm,18.5s,baz=107,slow=36						
MAKZ	**Makanchi**	**76.80 320**	P		**P**	**17 34 07.0**	**-0.6**
MAKZ			IAmb	IAmb		17 34 14.1	
	comp=Z,7.5nm,1.2s						
ZALV	**Zalesovo Beam**	**77.70 327**	P		**P**	**17 34 11.2**	**-1.3**
	comp=Z,1.1nm,0.6s,baz=113,slow=6.7,SNR=7.2						
ZALV			LR	LR		18 08 47.6	
	comp=Z,72nm,19.7s,baz=118,slow=36						
KURK	**Kurchatov**	**80.15 323**	P		**P**	**17 34 26.0**	**+0.1**
KURK			IAmb	IAmb		17 34 32.0	
	comp=Z,7.8nm,0.9s						
ILAR	**Eielson Array**	**82.22 23**	P		**P**	**17 34 38.0**	**+1.4**
	comp=Z,1.0nm,0.9s,baz=264,slow=4.6,SNR=5.4						
ILAR			LR	LR		18 07 03.3	
	comp=Z,50nm,21.9s,baz=256,slow=33						
GEYT	**Alibeck**	**92.57 308**	LR	LR		18 17 43.3	
	comp=Z,43nm,21.8s,baz=210,slow=36						
NVAR	**Mina Array Bea**	**94.19 52**	LR	LR		18 09 15.5	
	comp=Z,69nm,21.9s,baz=294,slow=30						
YKA	**Yellowknife Ar**	**95.86 28**	P		**P**	**17 35 43.5**	**+1.4**
	comp=Z,0.6nm,0.9s,baz=268,slow=4.4,SNR=5.9						
YKA			LR	LR		18 17 27.7	
	comp=Z,45nm,19.8s,baz=0.0,slow=34						
TORD	**Torodi Ar. Bea**	**146.11 289**	PKPbc		**PKPbc**	**17 41 56.6**	**-0.2**
	comp=Z,3.8nm,1.1s,baz=24,slow=3.9,SNR=6.6						

RSNC 27 17:36:28.6±1.1, 3°89N×71°57W, h1km±7km, ML3.3, Mw3.5, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PTGC	**Puerto Gaitan,**	**0.64**	**299**	*e*P		Pg	17 36 40.1	-0.7
PTGC				*e*S		Sg	17 36 48.9	-0.3
GUVC	**San Jose del G**	**1.70**	**218**	*e*P		Pn	17 36 58.5	-1.0
GUVC				*e*S		Sn	17 37 20.4	-1.5
GUVC				*i*			17 37 24.3	
	comp=Z,438nm,0.2s							
VILC	**Villavicencio,**	**2.13**	**276**	*e*P		Pn	17 37 04.8	-0.7
VILC				*e*S		Sn	17 37 32.4	-0.2
VILC				*i*			17 37 37.9	
	comp=Z,473nm,0.4s							

CHIC	**Chingaza**	**2.27**	**289**	*e*P	Pn	17 37 06.5	-1.2
CHIC				*e*S	Sn	17 37 37.1	+0.5
CHIC				*i*		17 37 41.6	
	comp=Z,228nm,0.3s						
RUSC	**La Rusia**	**2.49**	**323**	*e*P	Pn	17 37 10.2	-0.6
RUSC				*i*		17 37 55.7	
	comp=Z,64nm,0.2s						
TAMC	**Tame, Arauca**	**2.54**	**355**	*e*P	Pn	17 37 09.6	-1.4
TAMC				*e*S	Sn	17 37 42.0	-0.6
TAMC				*i*		17 37 58.4	
	comp=Z,144nm,0.3s						
MACC	**Macarena, Meta**	**2.86**	**233**	*e*P	Pn	17 37 17.1	+1.7
MACC				*e*S	Sn	17 37 53.1	+2.7
MACC				*i*		17 38 06.2	
	comp=Z,157nm,0.5s						
BARC	**Barichara**	**3.13**	**329**	*e*P	Pn	17 37 17.3	-2.0
PRAC	**Prado**	**3.31**	**267**	*e*P	Pn	17 37 19.5	-2.1
ORTC	**Ortega, Tolima**	**3.67**	**270**	*e*P	Pn	17 37 26.0	-0.5
ORTC				*i*		17 38 35.6	
	comp=Z,47nm,0.3s						
NORC	**Norcasia**	**3.68**	**297**	*e*P	Pn	17 37 25.9	-0.9
NORC				*i*		17 38 26.5	
	comp=Z,20nm,0.4s						
PTBC	**PUERTO BERRIO,**	**3.90**	**313**	*e*P	Pn	17 37 27.3	-2.4
GUY2C	**Guyana, Caldas**	**4.01**	**289**	*e*P	Pn	17 37 29.0	-2.6
SMLC	**San Martn de**	**5.47**	**333**	*e*P	Pn	17 37 50.1	-1.3

*SJA **27** 17:38:31.9±0.7, 31°09S×72°75W, h28km±20km, ML3.9, MW4.2*
*GUC **27** 17:38:36.7±0.7, 31°11S×72°08W, h34km±5km, ML3.9*
ISC 27 17:38:35.4±2.3, 31°07S±0°04×72°3W±0°1, h10km, n29, σ2s16/37, 1C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CO02	**Combarbal**	**1.15**	**97**	↓*i* P		**Pn**	**17 38 54.5**	**-3.1**
CO02				*i* S		Sn	17 39 08.7	-4.7
CO03	**El Pedregal**	**1.43**	**81**	↓*i* P		**Pn**	**17 38 59.3**	**-2.1**
CO03				*i* S		**Sn**	**17 39 16.9**	**-3.4**
CO03				IAML			17 39 18.4	
	comp=E,4µm,0.4s							
GO04	**Tololo Observa**	**1.59**	**56**	↓*i* P		**Pn**	**17 39 02.9**	**-0.9**
GO04				*i* S		**Sn**	**17 39 22.9**	**-1.6**
GO04				IAML			17 39 30.2	
	comp=E,6µm,0.5s							
GO04	**Tololo Observa**	**1.59**	**56**	*i* P		**Pn**	**17 39 03.0**	**-0.9**
ROCH	**El Roble**	**2.21**	**150**	*e*P		**Pn**	**17 39 11.7**	**-0.6**
ROCH				*i* S		**Sb**	**17 39 43.0**	**0.0**
ROC1	**El Roble**	**2.21**	**150**	*i* P		**Pn**	**17 39 11.7**	**-0.6**
ROC1				*e*S		**Sn**	**17 39 41.8**	**+2.0**
CO01	**Juntas del Tor**	**2.21**	**61**	*e*P		**Pn**	**17 39 12.8**	**+0.5**
CO01				*i* S		**Sn**	**17 39 38.0**	**-1.9**
PEL	**Peldehue**	**2.50**	**146**	*e*P		**Pn**	**17 39 16.0**	**-0.2**
PEL				*i* S		**Sb**	**17 39 51.0**	**-0.3**
PEL				IAML			17 39 56.6	
	comp=E,501nm,0.3s							
PEL	**Peldehue**	**2.50**	**146**	*i* P		**Pn**	**17 39 16.2**	**+0.1**
PEL				*e*S		**Sn**	**17 39 48.6**	**+1.9**
AROD	**Rodeo**	**2.62**	**71**	*i* P		**Pn**	**17 39 20.4**	**+2.3**
RTLS	**Leoncito**	**2.69**	**107**	*i* P		**Pn**	**17 39 21.2**	**+2.2**
AUSP	**Uspallata**	**2.76**	**115**	*i* P		**Pn**	**17 39 22.7**	**+2.7**
ACCO	**Cerro Coronel**	**2.85**	**81**	*i* P		**Pn**	**17 39 24.4**	**+3.2**
ACCO				IAML			17 40 17.4	
	comp=Z,222nm,0.8s							
AC05	**El Transito**	**2.85**	**39**	*e*P		**Pn**	**17 39 22.1**	**+1.1**
AC05				*i* S		**Sn**	**17 39 56.8**	**+1.3**
AC05				IAML			17 40 06.0	
	comp=E,374nm,0.4s							
MT03	**Universidad Ad**	**2.87**	**148**	*e*P		**Pn**	**17 39 21.3**	**0.0**
ACDV	**Cuesta del Vie**	**2.91**	**73**	*i* P		**Pn**	**17 39 24.4**	**+2.6**
ACDV				IAML			17 40 18.6	
	comp=Z,236nm,0.7s							
ZON	**Zonda**	**3.16**	**100**	*i* P		**Pn**	**17 39 27.9**	**+2.6**
AMOG	**MOGNA**	**3.30**	**89**	*i* P		**Pn**	**17 39 29.6**	**+2.5**
AMOG				IAML			17 40 38.5	
	comp=Z,184nm,0.5s							
LMEL	**Las Melosas**	**3.31**	**148**	↑*i* P		**Pn**	**17 39 27.9**	**+0.5**
LMEL				*i* S		**Sn**	**17 40 05.9**	**-0.9**
LMEL				IAML			17 40 23.5	
	comp=N,222nm,0.3s							
RTLL	**Cerro Villicun**	**3.31**	**96**	*i* P		**Pn**	**17 39 29.9**	**+2.5**
RTLL				IAML			17 40 31.2	
	comp=Z,175nm,0.8s							
RTCV	**Cerro Valdivia**	**3.33**	**105**	*i* P		**Pn**	**17 39 29.8**	**+2.2**
RTCV				IAML			17 40 30.8	
	comp=Z,176nm,0.7s							
ASAL	**Salagasta**	**3.34**	**118**	*i* P		**Pb**	**17 39 32.6**	**-2.2**
ASAL				IAML			17 40 30.2	
	comp=Z,188nm,0.8s							
ARCO	**CERRO ARCO**	**3.39**	**122**	*i* P		**Pb**	**17 39 34.6**	**-1.0**
ARCO				IAML			17 40 32.1	
	comp=Z,152nm,0.7s							
AAGR	**Agrelo**	**3.59**	**125**	*i* P		**Pn**	**17 39 34.3**	**+3.1**
AAGR				IAML			17 40 35.9	
	comp=Z,154nm,0.7s							
AGUA	**GUANDACOL**	**3.67**	**66**	*i* P		**Pn**	**17 39 36.6**	**+4.3**
VCA	**Vinchina**	**4.27**	**58**	*i* P		Pn	17 39 46.8	+6.2
VCA				IAML			17 40 58.6	
	comp=Z,158nm,1.4s							
MRA	**San Martin**	**5.79**	**105**	*i* P		**Pn**	**17 40 03.1**	**+1.6**
CYA	**Choya**	**6.25**	**67**	*i* P		**Pn**	**17 40 10.3**	**+2.6**
CYA				IAML			17 42 05.5	
	comp=Z,22nm,1.0s							
TCA	**Tanti**	**6.63**	**94**	*i* P		**Pn**	**17 40 16.3**	**+3.3**
TCA				IAML			17 42 16.7	
	comp=Z,36nm,1.0s							

ROM 27 17:41:21.6±0.0, 42°704N±0°002×13°265E±0°004, h10km, ML1.6/4, Error ellipse: s-maj=0.3km s-min=0.1km az=243.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NRCA	**Norcia**	**0.17**	**320**	P		Pg	17 41 25.8	+0.4
NRCA				AML		AML		
	comp=E,634µm,0.3s							
NRCA				AML		AML		
	comp=N,477µm,0.1s							
CAMP	**Campotosto**	**0.20**	**148**	P		Pg	17 41 26.6	+0.8
CAMP				S		Sg	17 41 30.0	+1.2
TERO	**Teramo**	**0.26**	**108**	P		Pg	17 41 27.6	+0.7
TERO				S		Sb	17 41 31.9	-1.1
TERO				AML		AML		
	comp=N,148µm,0.1s							
TERO				AML		AML		
	comp=E,105µm,0.1s							
FDMO	**Fiordimonte**	**0.36**	**339**	P		Pg	17 41 29.2	+0.5
FDMO				S		Sb	17 41 34.8	-0.9
FDMO				AML		AML		
	comp=N,52µm,0.9s							
FDMO				AML		AML		
	comp=N,52µm,0.9s							
FDMO				AML		AML		
	comp=E,41µm,0.7s							
CSP1	**Cessapalombo**	**0.39**	**354**	P		Pg	17 41 29.6	+0.3
CSP1				S		Sb	17 41 35.9	-0.9
FIAM	**Fiamignano**	**0.45**	**194**	P		Pg	17 41 30.9	+0.5
FIAM				S		Sb	17 41 37.5	-0.9
CESX	**Cesi**	**0.51**	**260**	P		Pg	17 41 31.7	+0.1
GUMA	**Gualdo di Mace**	**0.61**	**54**	P		Pg	17 41 29.5	-3.9
GUMA				AML		AML		
	comp=E,300µm,0.6s							
GUMA				AML		AML		
	comp=N,220µm,0.5s							
GUMA				AML		AML		
	comp=N,220µm,0.5s							
LPEL	**Lama dei Pelig**	**0.95**	**134**	S		Sg	17 41 50.0	-2.1

*IDC **27** 17:41:52.4±2.0, 43°67N×105°20W, h0km, mb1 3.6/4, mb1mx3.3/42, mbtmp3.3/4, ML2.7/3, Error ellipse: s-maj=45.7km s-min=10.0km az=149.0*
*NEIC **27** 17:41:55.3±2.0, 43°99N±0°05×105°34W±0°03, h0km±2km, ML3.2/50, Error ellipse: s-maj=9.4km s-min=3.1km az=159.0*
ISC 27 17:41:54.4±1.0, 44°04N±0°06×105°32W±0°07, h0km, n55, σ1s06/54, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RSSD	**Black Hills**	**0.93**	**85**			**Pb**	**17 42 12.7**	**-0.8**

K22A	**Casper**	**1.65**	**213**			**Pn**	**17 42 23.8**	**-1.0**
K22A				IAML			17 42 49.6	
	comp=N,352nm,0.3s							
K22A				IAML			17 42 50.0	
	comp=E,220nm,0.7s							
LAO	**LASA Array**	**2.72**	**347**			**Pn**	**17 42 40.1**	**+0.6**
RWWY	**Rawlins**	**2.73**	**211**			**Pn**	**17 42 40.2**	**+0.4**
RWWY				IAML			17 43 18.8	
	comp=E,82nm,0.9s							
PHWY	**Pilot Hill**	**2.74**	**182**			**Pn**	**17 42 40.0**	**+0.1**
RLMT	**Red Lodge**	**3.02**	**292**			**Pn**	**17 42 44.1**	**+0.4**
RLMT				IAML			17 43 40.5	
	comp=E,44nm,0.7s							
BW06	**Boulder Array**	**3.34**	**249**			**Pn**	**17 42 49.2**	**+1.1**
BW06				IAML			17 43 39.9	
	comp=N,34nm,0.6s							
PD31	**Pinedale Array**	**3.34**	**249**			**Pn**	**17 42 48.8**	**+0.6**
PDAR	**Pinedale Array**	**3.34**	**249**	Pn		**Pn**	**17 42 49.5**	**+1.4**
	comp=N,2.7nm,0.3s,baz=66,slow=16,SNR=33							
PDAR				Lg		Lg	17 43 35.5	
	comp=N,11nm,0.3s,baz=76,slow=31,SNR=19							
YNE	**Yellowstone No**	**3.49**	**288**			**Pn**	**17 42 49.9**	**-0.3**
YMP	**Mirror Lake PI**	**3.54**	**283**			**Pn**	**17 42 51.4**	**+0.5**
GCMT	**Greycliff**	**3.55**	**301**			**Pn**	**17 42 51.5**	**+0.5**
FLWY	**Flagg Ranch**	**3.88**	**272**			**Pn**	**17 42 55.0**	**-0.5**
FLWY				IAML			17 44 04.4	
	comp=N,48nm,1.6s							
FLWY				IAML			17 44 05.8	
	comp=N,33nm,1.5s							
YPP	**Pitchstone Pla**	**3.96**	**275**			**Pn**	**17 42 57.5**	**+0.8**
SNOW	**Snow King Moun**	**3.98**	**264**			**Pn**	**17 42 57.2**	**+0.2**
SNOW				IAML			17 44 12.1	
	comp=N,31nm,1.0s							
SNOW				IAML			17 44 12.7	
	comp=N,28nm,0.8s							
YHH	**Holmes Hill**	**4.04**	**283**			**Pn**	**17 42 58.8**	**+1.0**
IMW	**Indian Meadow**	**4.06**	**270**			**Pn**	**17 42 58.7**	**+0.6**
IMW				IAML			17 44 07.8	
	comp=N,33nm,0.7s							
IMW				IAML			17 44 11.1	
	comp=N,33nm,0.8s							
REDW	**Red Top Meadow**	**4.07**	**262**			**Pn**	**17 42 59.5**	**+1.3**
REDW				IAML			17 44 08.1	
	comp=N,38nm,0.7s							
REDW				IAML			17 44 10.2	
	comp=N,45nm,0.7s							
YMR	**Madison River**	**4.10**	**281**			**Pn**	**17 43 01.3**	**+2.7**
TPAW	**Teton Pass**	**4.12**	**264**			**Pn**	**17 42 59.0**	**+0.2**
TPAW				IAML			17 44 24.3	
	comp=N,22nm,0.9s							
E28A	**Huff**	**4.13**	**51**			**Pn**	**17 43 01.1**	**+2.3**
FXWY	**Fox Creek**	**4.15**	**266**			**Pn**	**17 43 00.7**	**+1.5**
ISCO	**Idaho Springs**	**4.24**	**183**			**Pn**	**17 43 00.8**	**+0.2**
ISCO				IAML			17 44 16.9	
	comp=N,20nm,0.9s							
YHB	**Horse Butte**	**4.27**	**282**			**Pn**	**17 43 02.3**	**+1.4**
O20A	**White River Ci**	**4.47**	**210**			**Pn**	**17 43 05.2**	**+1.6**
O20A				IAML			17 44 29.2	
	comp=N,24nm,0.9s							
O20A				IAML			17 44 33.7	
	comp=E,22nm,0.8s							
DGMT	**Dagmar**	**4.50**	**10**			**Pn**	**17 43 05.7**	**+1.8**
RDMU	**Red Mountain**	**4.69**	**224**			**Pn**	**17 43 06.3**	**-0.3**
EGMT	**Eagleton**	**5.04**	**324**			**Pn**	**17 43 12.0**	**+0.6**
HWUT	**Hardware Ranch**	**5.20**	**244**			**Pn**	**17 43 12.8**	**-0.8**
HWUT				IAML			17 44 41.4	
	comp=E,17nm,0.8s							
LRM	**Limekiln Ridge**	**5.37**	**292**			**Pn**	**17 43 15.9**	**-0.1**
MCMT	**McKenzie Canyo**	**5.45**	**281**			**Pn**	**17 43 17.4**	**+0.2**
SPUT	**South Promonto**	**5.92**	**245**			**Pn**	**17 43 22.8**	**-0.8**
PV22	**Blue Mesa, Par**	**6.09**	**207**			**Pn**	**17 43 25.0**	**-0.9**
PV07	**Paradox Valley**	**6.13**	**205**			**Pn**	**17 43 27.2**	**+0.7**
PV23	**Carpenter Ridg**	**6.24**	**208**			**Pn**	**17 43 29.0**	**+1.0**
PV04	**Paradox Valley**	**6.26**	**207**			**Pn**	**17 43 30.3**	**+2.2**
SRU	**San Rafael Swe**	**6.29**	**220**			**Pn**	**17 43 28.8**	**+0.3**
SDCO	**Great Sand Dun**	**6.29**	**181**			**Pn**	**17 43 29.7**	**+1.0**
PV12	**Saucer Basin,**	**6.29**	**206**			**Pn**	**17 43 28.8**	**+0.1**
ECSD	**EROS Data Cent**	**6.30**	**90**			**Pn**	**17 43 29.4**	**+0.9**
PV14	**Lion Creek, Pa**	**6.32**	**208**			**Pn**	**17 43 28.1**	**-0.9**
PV20	**West Nyswonger**	**6.33**	**207**			**Pn**	**17 43 29.6**	**+0.5**
PV11	**David Mesa, Pa**	**6.33**	**206**			**Pn**	**17 43 31.3**	**+2.1**
PV03	**Paradox Valley**	**6.37**	**206**			**Pn**	**17 43 30.4**	**+0.7**
PV02	**Paradox Valley**	**6.38**	**205**			**Pn**	**17 43 29.9**	**0.0**
PV17	**East Wray Mesa**	**6.38**	**207**			**Pn**	**17 43 29.8**	**-0.1**
PV18	**Skein Mesa, Pa**	**6.39**	**206**			**Pn**	**17 43 29.6**	**-0.5**
PV13	**Radium Mtn., P**	**6.45**	**205**			**Pn**	**17 43 30.1**	**-0.6**
PV05	**Paradox Valley**	**6.61**	**207**			**Pn**	**17 43 32.6**	**-0.4**
DUG	**Dugway, Tooele**	**6.77**	**238**			**Pn**	**17 43 36.0**	**+0.8**
AGMN	**Agassiz Nation**	**7.82**	**54**			**Pn**	**17 43 48.8**	**-0.6**
ULM	**Lac du Bonnet**	**8.94**	**43**	Pn		**Pn**	**17 44 03.1**	**-1.5**
	comp=E,0.6nm,0.3s,baz=237,slow=7.9,SNR=2.1							
ULM				Lg		Lg	17 46 35.8	
	comp=E,0.5nm,0.3s,baz=296,slow=4.5,SNR=1.6							
I56US	**NEWPORT INFRAS**	**9.22**	**301**	*i*			18 36 20.0	
	baz=113,slow=321,SNR=2.3							
NVAR	**Mina Array Bea**	**11.27**	**245**	Pn		**Pn**	**

JIU3				S	Sn	17 54 59.7	+0.7		
JNU	**Nakatsue**	**1.33**	**333**	Pg	Pn	17 54 53.7	+1.0		
	143nm,0.3s,baz=137,slow=5.5,SNR=1858								
JNU				LR	LR	17 54 59.2			
	comp=Z,28nm,21.4s,baz=204,slow=23								
JNU				Lg	Lg	17 55 12.1			
	150nm,0.3s,baz=0.6,slow=9.4,SNR=20								
JNU	**Nakatsue**	**1.33**	**333**		Pn	17 54 53.6	+1.0		
JNU				Sn	Sn	17 55 11.3	+2.1		
JTO	**Tosashimizu**	**1.37**	**48**	||P	Pn	17 54 52.7	-0.5		
JTO				S	Sn	17 55 08.9	-1.3		
JTN	**Tanegashima 3**	**1.39**	**203**	||P	Pn	17 54 54.3	+0.9		
JTN				S	Sn	17 55 11.8	+1.1		
INU	**Inuyama**	**5.65**	**52**		Pn	17 55 53.2	+1.3		
KSRS	**Korea Array**	**6.28**	**332**	Pn	Pn	17 56 01.4	+1.0		
	0.3nm,0.3s,baz=144,slow=15,SNR=4.4								
KSRS				Lg	Lg	17 57 50.6			
	0.2nm,0.3s,baz=161,slow=27,SNR=2.9								
KSRS				LR	LR	17 58 38.9			
	comp=Z,79nm,20.2s,baz=145,slow=39								
JHJ	**Hachijo jima 2**	**7.01**	**78**	Pn	Pn	17 56 11.0	+0.5		
	9.0nm,0.3s,baz=132,slow=23,SNR=6.3								
MAJO	**Matsushiro**	**7.14**	**48**		Pn	17 56 14.2	+1.9		
MAT	**Matsushiro**	**7.14**	**48**	P	Pn	17 56 13.7	+1.4		
MJB9	**Matsu-Tunnel**	**7.14**	**48**		Pn	17 56 14.1	+1.8		
MJAR	**Matsushiro Arr**	**7.14**	**48**	Pn	Pn	17 56 14.3	+2.1		
	0.8nm,0.3s,baz=214,slow=15,SNR=73								
MJAR				LR	LR	17 59 19.9			
	comp=Z,49nm,18.0s,baz=160,slow=39								
KLR	**Kul'dur**	**17.27**	**0**	P	P	17 58 31.3	+2.6		
	0.8nm,0.3s,baz=186,slow=6.1,SNR=26								
HIA	**Hailar**	**19.47**	**336**	P	P	17 58 53.8	+1.0		
ULN	**Ulaanbaatar**	**24.50**	**318**	P	P	17 59 44.4	-0.5		
ULN				IAmb	IAmb	17 59 46.7			
	comp=Z,6.2nm,0.6s								
SONM	**Songino Array**	**24.86**	**317**	P	P	17 59 48.3	+0.1		
	comp=Z,5.4nm,0.7s,baz=131,slow=9.5,SNR=27								
CMAR	**Chiang Mai Arr**	**32.32**	**253**	LR	LR	18 13 55.1			
	comp=Z,18nm,19.5s,baz=220,slow=37								
MKAR	**Makanchi Array**	**40.24**	**306**	P	P	18 02 01.4	-0.7		
	comp=Z,2.8nm,0.5s,baz=90,slow=11,SNR=50								
MAKZ	**Makanchi**	**40.45**	**306**	P	P	18 02 03.5	-0.3		
MAKZ				IAmb	IAmb	18 02 04.3			
	comp=Z,2.6nm,0.7s								
KURK	**Kurchatov**	**42.96**	**312**	P	P	18 02 23.7	-0.5		
GAR	**Garm**	**49.59**	**296**	P	P	18 03 16.4	-0.3		
INK	**Inuvik**	**62.49**	**25**	P	P	18 04 49.5	+1.4		
KBZ	**Khabaz**	**67.88**	**309**	P	P	18 05 22.4	-0.9		
	comp=Z,2.1nm,0.8s,baz=13,slow=3.9,SNR=5.2								
FINES	**FINESS Array B**	**69.37**	**330**	P	P	18 05 31.3	-1.0		
	comp=Z,1.8nm,0.5s,baz=74,slow=6.2,SNR=20								
AKASG	**Malin Array Be**	**73.11**	**320**	P	P	18 05 54.2	-1.0		
	comp=Z,0.9nm,0.3s,baz=55,slow=6.6,SNR=4.6								
AKBB	**Malin Array Si**	**73.11**	**320**	P	P	18 05 53.8	-1.4		
AKBB				IAmb	IAmb	18 05 54.3			
	comp=Z,1.6nm,0.6s								
RAYN	**Ar Rayn**	**74.81**	**288**	P	P	18 06 04.2	-1.4		
RAYN				IAmb	IAmb	18 06 06.1			
	comp=Z,2.7nm,0.8s								
NOA	**NORSAR Array B**	**75.48**	**334**	P	P	18 06 08.1	-0.8		
	comp=Z,0.2nm,0.4s,baz=47,slow=5.9,SNR=1.9								
CLL	**Collm**	**81.12**	**326**	*i* P	P	18 06 40.8	+0.7		

IDC 27 17:58:30.5±2.6, 6°80S×154°99E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.4/24, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=65.6km s-min=44.8km az=98.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.85**	**310**	Pn	Pn	17 59 31.6	+0.6
	3.0nm,0.3s,baz=134,slow=2.0,SNR=9.8						
KRVT				Sn	Sn	18 00 13.6	-3.3
	6.9nm,0.3s,baz=261,slow=8.4,SNR=3.9						
WRA	**Warramunga Arr**	**23.92**	**235**	P	P	18 03 46.1	-0.3
	0.9nm,1.0s,baz=58,slow=9.2,SNR=5.0						
MKAR	**Makanchi Array**	**83.25**	**319**	P	P	18 10 59.3	+0.2
	0.1nm,0.4s,baz=94,slow=6.1,SNR=2.7						
TORD	**Torodi Ar. Bea**	**152.97**	**286**	PKPbc	PKiKP	18 18 31.4	+0.2
	0.4nm,0.7s,baz=63,slow=2.7,SNR=1.7						
TORD				PKPab	PKPab	18 18 41.0	-1.1
	0.4nm,0.7s,baz=68,slow=5.0,SNR=1.6						

KRSC 27 18:09:13.3±2.4, 50°03N×158°63E, h59km±41km, ML4.2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.74**	**293**	*e*P	Pn	18 09 42.4	+1.3
SKR				*e*S	Sn	18 10 03.0	+0.9
PAU	**Pauzhetka**	**1.84**	**322**	*e*S	Sn	18 10 08.4	+3.6
ALID	**Alaid**	**2.14**	**294**	*i* P	Pn	18 09 48.9	+2.2
ALID				*e*S	Sn	18 10 13.9	+1.7
ASAK	**Asacha**	**2.40**	**349**	*e*P	Pn	18 09 53.0	+2.8
ASAK				*e*S	Sn	18 10 21.3	+2.8
RUS	**Russkaya**	**2.41**	**358**	*i* P	Pn	18 09 52.7	+2.5
RUS				*e*S	Sn	18 10 20.5	+2.0
MTVR	**Mutnovka**	**2.47**	**354**	*e*P	Pn	18 09 54.2	+3.0
MTVR				*e*S	Sn	18 10 22.8	+2.5
MIPR	**Malaya Ipel'ka**	**2.54**	**333**	*e*P	Pn	18 09 55.3	+3.3
GRL	**Gorelyy**	**2.55**	**352**	*i* P	Pn	18 09 55.6	+3.3
GRL				*e*S	Sn	18 10 25.4	+3.2
KRMR	**Karymshinskiy**	**2.82**	**354**	*e*P	Pn	18 09 59.9	+4.1
KRMR				*e*S	Sn	18 10 33.4	+4.8
PET	**Petropavlovsk**	**3.00**	**0**	*i* P	Pn	18 10 01.4	+3.1
PET				*e*S	Sn	18 10 35.6	+2.7
DALK	**Dalny**	**3.00**	**1**	*e*P	Pn	18 10 01.3	+2.9
DALK				*e*S	Sn	18 10 35.8	+2.7
APC	**Apacha**	**3.04**	**343**	*e*P	Pn	18 10 02.5	+3.6
NLC	**Nalytchevo**	**3.18**	**8**	*e*P	Pn	18 10 02.8	+2.1
NLC				*e*S	Sn	18 10 38.3	+1.0
UGLR	**Uglovaya**	**3.19**	**2**	*e*P	Pn	18 10 04.0	+3.1
SPN	**Mys Shipunski**	**3.19**	**15**	*e*P	Pn	18 10 03.9	+3.0
SPN				*e*S	Sn	18 10 39.8	+2.1
SMAR	**Somma**	**3.24**	**2**	*e*P	Pn	18 10 04.6	+2.8
AVH	**Avacha**	**3.24**	**1**	*i* P	Pn	18 10 05.2	+3.5
SDLR	**Sedlovina**	**3.26**	**3**	*e*P	Pn	18 10 04.5	+2.6
KOK	**Koryaka**	**3.27**	**0**	*i* P	Pn	18 10 05.8	+3.8
KRER	**Koryakskii**	**3.28**	**1**	*e*P	Pn	18 10 05.7	+3.4
KRX	**Arik**	**3.33**	**0**	*i* P	Pn	18 10 06.4	+3.4
KII	**Karymskiy**	**4.04**	**7**	*e*P	Pn	18 10 16.9	+4.3
KII				*e*S	Sn	18 11 04.3	+5.6
KZV	**Kizimen**	**5.19**	**11**	*e*P	Pn	18 10 32.4	+4.0
KZV				*e*S	Sn	18 11 30.8	+3.8
TUMD	**Tumrok D**	**5.29**	**11**	*e*P	Pn	18 10 33.5	+3.8
TUMD				*e*S	Sn	18 11 32.3	+3.0
TUMR	**Tumrok**	**5.34**	**9**	*i* P	Pn	18 10 35.0	+4.6
KMNR	**Kamenistaya**	**5.82**	**9**	*i* P	Pn	18 10 42.3	+5.4
KPT	**Kopyto**	**6.02**	**9**	*e*P	Pn	18 10 44.4	+4.7
BZGR	**Bezymyannyi-Gr**	**6.05**	**11**	*e*P	Pn	18 10 44.9	+4.8
BZWR	**Bezymyannyi-We**	**6.05**	**10**	*e*P	Pn	18 10 45.1	+4.9
KOZ	**Kozyrevsk**	**6.08**	**7**	*e*P	Pn	18 10 45.9	+5.4
KBTR	**Krutoberegovo**	**6.68**	**21**	*i* P	Pn	18 10 51.8	+3.2
SRKR	**Sorokina**	**6.81**	**12**	*e*P	Pn	18 10 54.9	+4.5
BKI	**Bering**	**6.84**	**38**	*e*S	Sn	18 12 03.4	-3.8

ATH 27 18:16:39.2, 40°03N×24°28E, h18km±9km, ML1.8/4, Error ellipse: s-maj=9.8km s-min=1.2km az=330.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.38**	**323**	P	Pb	18 16 47.4	0.0
OUR				S	Sb	18 16 52.9	0.0
OUR				AML	AML	18 16 54.0	
	comp=E,379μm,0.2s						
OUR				AML	AML	18 16 55.7	
	comp=N,453μm,0.2s						
PAIG	**Paliouri**	**0.47**	**257**	P	Pb	18 16 49.2	+0.2
PAIG				S	Sg	18 16 55.2	0.0
PAIG				AML	AML	18 16 57.8	
	comp=E,102μm,0.2s						
PAIG				AML	AML	18 16 58.9	
	comp=N,142μm,0.2s						
THAS	**Thassos island**	**0.66**	**30**	P	Pg	18 16 52.7	+0.4
THAS				S	Sb	18 17 00.7	-0.3
THAS				AML	AML	18 17 03.6	
	comp=E,187μm,0.4s						
THAS				AML	AML	18 17 04.6	
	comp=N,152μm,0.3s						
LIA	**Limnos Island**	**0.71**	**101**	P	Pg	18 16 53.1	0.0
LIA				S	Sb	18 17 02.2	0.0
LIA				AML	AML	18 17 04.3	
	comp=N,350μm,0.3s						
LIA				AML	AML	18 17 04.4	
	comp=E,333μm,0.3s						
PLG	**Polygyros**	**0.72**	**298**	P	Pg	18 16 53.5	+0.1
PLG				S	Sb	18 17 02.6	-0.3
AOS	**Alonnisos**	**0.92**	**200**	P	Pb	18 16 56.7	+0.2
AOS				S	Sb	18 17 08.1	-0.2
XOR	**Xorichti**	**1.07**	**232**	P	Pb	18 16 58.3	-0.9
SRS	**Serrai**	**1.20**	**334**	P	Pb	18 17 01.4	0.0
SRS				S	Sn	18 17 17.4	+0.4

DDA 27 18:17:52.8, 40°29N×26°30E, h20km±3km, ML2.3

ISK 27 18:17:52.8, 40°31N×26°28E, h12km, ML2.6/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GELI	**Tayfur-Gelibol**	**0.17**	**60**	PG	Pg	18 17 57.2	+0.5
GELI				SG	Sg	18 18 00.3	+0.8
GOKA	**anakkale-Gk**	**0.31**	**247**	*i* P	Pb	18 17 59.7	-0.5
GADA	**Gvkgeada**	**0.32**	**247**	PG	Pg	18 17 59.5	+0.3
GADA				SG	Sb	18 18 04.6	-0.8
LPK	**Lapseki**	**0.37**	**81**	PG	Pg	18 18 00.8	+0.5
LPK				SG	Sb	18 18 06.7	-0.4
ERIK	**Erikli-Kesan**	**0.40**	**27**	PG	Pg	18 18 01.1	+0.3
ERIK				SG	Sg	18 18 06.8	+0.6
ENEZ	**Enez**	**0.43**	**347**	PG	Pb	18 18 01.9	-0.5
ENEZ				SG	Sb	18 18 08.2	-0.6
EZN	**Ezine**	**0.49**	**176**	PG	Pb	18 18 02.9	-0.4
EZN				SG	Sb	18 18 09.9	-0.4
BOZC	**Bozcaada**	**0.50**	**200**	PG	Pb	18 18 03.2	-0.3
BOZC				SG	Sb	18 18 10.3	-0.4
BOZC	**Bozcaada**	**0.50**	**200**	*i* P	Pg	18 18 02.7	+0.1
KESN	**Edirne-Kesan**	**0.60**	**31**	*i* P	Pg	18 18 04.3	-0.3
KESN				IAML		18 18 19.0	
	comp=N,130nm,0.1s						
BAYC	**CANAKKALE_Bayr**	**0.61**	**160**	*i* P	Pb	18 18 05.2	-0.1
BAYC				*i* S	Sg	18 18 12.8	+0.1
KRBG	**Karabiga-Canak**	**0.78**	**84**	PG	Pg	18 18 08.1	+0.1
KRBG				SG	Sb	18 18 18.9	0.0
SART	**Tekirdag**	**0.78**	**61**	*i* P	Pg	18 18 04.1	-3.9
SART				*i* S	Sb	18 18 18.8	-0.2
UKOP	**Uzunkopru-Edir**	**0.86**	**18**	PG	Pb	18 18 09.9	+0.3
KNL	**Balıkesir**	**0.96**	**92**	*i* P	Pg	18 18 11.0	-0.2
KNL				*i* S	Sb	18 18 23.9	+0.1
RDO	**Rodhopi**	**1.00**	**326**	PG	Pn	18 18 12.7	0.0
MRMT	**Marmara Adasi**	**1.05**	**73**	PG	Pn	18 18 13.3	0.0
AYVA	**Ayvalik**	**1.05**	**162**	*i* P	Pg	18 18 13.1	0.0
AYVA				*i* S	Sg	18 18 27.0	+0.3
AYVA				IAML		18 18 29.0	
	comp=N,87nm,0.6s						
GONE	**Gonen-Balikesi**	**1.11**	**103**	PN	Pg	18 18 14.6	+0.4
SIGR	**SIGRI**	**1.15**	**197**	PN	Pg	18 18 15.2	+0.3
BALY	**Balya**	**1.18**	**119**	*i* P	Pg	18 18 16.0	+0.5
BALY				*i* S	Sn	18 18 31.0	-0.1
EDC	**Edincik**	**1.21**	**88**	PN	Pg	18 18 16.2	+0.1
DKL	**Dikili**	**1.33**	**158**	PN	Pb	18 18 17.8	+0.2
BALB	**Balikesir**	**1.40**	**118**	PN	Pb	18 18 18.6	-0.3
STEP	**BALIKESIR_Sava**	**1.45**	**130**	*i* P	Pb	18 18 20.2	+0.4
STEP				*i* S	Sg	18 18 39.8	+0.3
STEP				IAML		18 18 41.0	
	comp=E,39nm,0.3s						
DURS	**Dursunbey**	**1.83**	**112**	*i* P	Pb	18 18 26.0	-0.3
DURS				*i* S	Sb	18 18 49.7	+0.5
DURS				IAML		18 18 52.0	
	comp=N,75nm,0.5s						
DURS				IAML		18 18 53.0	
	comp=E,65nm,0.5s						
ULDT	**Uludag**	**2.19**	**94**	*i* P	Pn	18 18 29.9	+0.7
ULDT				*i* S	Sg	18 19 02.8	-0.6
BUY	**Buyukada**	**2.23**	**75**	*i* P	Pn	18 18 25.7	-3.8
BUY				IAML		18 19 06.0	
	comp=N,17nm,0.4s						
IGD	**Bursa**	**2.24**	**90**	*i* P	Pb	18 18 32.4	-0.7
IGD				IAML		18 19 07.0	
	comp=N,15nm,0.6s						
DEMI	**Demirci**	**2.27**	**123**	*i* P	Pn	18 18 31.5	+1.4

ISC 27 18:55:02.3±1.7, 44°60N±0°03×17°3E±0°1, h7km±11km, n7, σ0s57/14, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**0.17**	**332**	*e*Pg	**Pg**	**18 55 05.6**	**-0.1**
BLY				*e*Sg	**Sg**	**18 55 08.2**	**+0.1**
MGRS	**Mrkonjic Grad**	**0.24**	**220**	*e*Pg	**Pg**	**18 55 06.9**	**-0.1**
MGRS				*e*Sg	**Sg**	**18 55 10.0**	**-0.1**
MOSL	**Moslavina**	**1.08**	**339**	*e*Pg	**Pb**	**18 55 23.5**	**0.0**
MOSL				Sg	**Sb**	**18 55 38.3**	**+0.4**
RICI	**Ricice**	**1.11**	**186**	*e*Pg	**Pb**	**18 55 24.2**	**+0.3**
RICI				Sg	**Sb**	**18 55 38.4**	**-0.2**
MORI	**Morici**	**1.36**	**238**	*e*Pn	**Pn**	**18 55 26.7**	**-1.0**
MORI				Sn	**Sg**	**18 55 46.4**	**+0.5**
ZIRJ	**Zirje**	**1.52**	**232**	*e*Pn	**Pg**	**18 55 31.4**	**+0.1**
ZIRJ				Sn	**Sg**	**18 55 51.9**	**+0.8**
DUGI	**Dugi Otok**	**1.72**	**250**	*e*Pn	**Pn**	**18 55 33.1**	**+0.4**
DUGI				Sn	**Sg**	**18 55 56.6**	**-0.9**

ANF 27 19:30:50.6±0.1, 34°99N×116°87W, h14km±1km, ML2.9/32, Error ellipse: s-maj=1.0km s-min=0.8km az=105.0
SCEDC 27 19:30:51.6, 34°99N×116°86W, h2km
PAS 27 19:30:51.7±1.5, 34°99N±0°01×116°87W±0°01, h4km±3km, ML3.0/207, Error ellipse: s-maj=1.6km s-min=1.3km az=221.0

NEIC 27 19:30:51.3±1.3, 35°00N±0°01×116°868W±0°009, h11km±1km, Error ellipse: s-maj=1.6km s-min=1.1km az=176.0, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RRX	**Edison Barstow**	**0.16**	**222**	P	Pg	19 30 54.9	0.0
	baz=43,SNR=164						
RRX				S	Sg	19 30 57.6	+0.1
	baz=43						
RRX	**Edison Barstow**	**0.16**	**222**		Pg	19 30 55.0	0.0
RRX					Sg	19 30 57.6	+0.1
ALV	**Alvord Mountai**	**0.21**	**71**		Pg	19 30 55.8	0.0
GSC	**Goldstone, Bar**	**0.31**	**10**	P	Pg	19 30 57.8	+0.2
	baz=189,SNR=418						
GSC				S	Sg	19 31 02.3	+0.4
	baz=189						
GSC	**Goldstone, Bar**	**0.31**	**10**		Pg	19 30 57.8	+0.1
HEC	**Hector,Ludlow**	**0.47**	**110**	P	Pg	19 31 00.4	-0.1
	baz=291,SNR=64						
HEC				S	Sg	19 31 06.7	-0.1
	baz=291						
HEC	**Hector,Ludlow**	**0.47**	**110**		Pg	19 31 00.4	-0.1
VTV	**Victorville**	**0.58**	**221**		Pg	19 31 02.4	-0.2
HYS	**Haystack Butte**	**0.59**	**257**		Pg	19 31 02.5	-0.3
HYS					Sg	19 31 10.9	+0.2
ADO	**Adelanto Recei**	**0.64**	**227**		Pg	19 31 03.8	0.0
DSCC	**Desert Studies**	**0.64**	**77**		Pg	19 31 03.6	-0.2
DSCC					Sg	19 31 12.4	+0.1
SIL	**Silver Peak**	**0.65**	**177**		Pg	19 31 03.8	-0.1
CCCA	**Chr Cany lake**	**0.67**	**323**		Pg	19 31 04.3	+0.1
BBRC	**Big Bear Solar**	**0.73**	**183**	P	Pg	19 31 05.2	-0.3
	baz=3.7						
BBRC				S	Sg	19 31 15.1	0.0
	baz=3.7						
BBRC	**Big Bear Solar**	**0.73**	**183**		Pg	19 31 05.2	-0.3
BBRC					Sg	19 31 15.2	+0.1
BTL	**Butler Peak**	**0.74**	**189**		Pg	19 31 05.6	-0.1
RMR	**Rimrock**	**0.82**	**163**		Pg	19 31 07.0	-0.1
LRMC	**Laurel Mtn Rad**	**0.82**	**306**	P	Pg	19 31 06.6	-0.6
	baz=126,SNR=41						
LRMC				Sb	Sn	19 31 20.4	-0.7
	baz=126						
LRMC	**Laurel Mtn Rad**	**0.82**	**306**		Pn	19 31 08.5	-0.4
SBB	**Saddle Back Bu**	**0.84**	**249**		Pg	19 31 07.0	-0.6
SBB					Sg	19 31 18.2	-0.4
DTP	**Desert Tortois**	**0.84**	**289**		Pg	19 31 07.3	-0.3
TUQ	**Turquoise Moun**	**0.89**	**60**	P	Pg	19 31 08.0	-0.5
	baz=240,SNR=16						
TUQ				S	Sg	19 31 20.2	+0.1
	baz=240						
TUQ	**Turquoise Moun**	**0.89**	**60**		Pg	19 31 08.0	-0.5
TUQ					Sg	19 31 20.3	+0.2
SVD	**Seven Oaks Dam**	**0.91**	**192**		Pg	19 31 08.3	-0.4
SVD					Sg	19 31 20.6	0.0
EDW2	**Edwards Air Fo**	**0.93**	**263**	P	Pg	19 31 08.8	-0.5
	baz=83,SNR=19						
EDW2				S	Sg	19 31 20.7	-0.7
	baz=83						
EDW2	**Edwards Air Fo**	**0.93**	**263**		Pg	19 31 08.8	-0.5
EDW2					Sg	19 31 20.9	-0.5
SS2	**San Sevaine**	**0.94**	**214**		Pg	19 31 09.2	-0.3
CCAC	**Calif City Air**	**0.95**	**280**		Pg	19 31 09.5	-0.2
HOLC	**Holcomb Ridge**	**0.97**	**237**		Pg	19 31 09.4	-0.5
CFT	**Crafton Hills**	**0.98**	**192**		Pg	19 31 09.8	-0.4
BFSC	**Mount Baldy Ra**	**1.00**	**221**	P	Pg	19 31 09.9	-0.6
	baz=41,SNR=31						
BFSC				S	Sg	19 31 22.9	-0.6
	baz=41						
BFSC	**Mount Baldy Ra**	**1.00**	**221**		Pg	19 31 09.9	-0.6
BFSC					Sg	19 31 23.5	0.0
BLAC	**Blackrock camp**	**1.00**	**157**		Pg	19 31 10.3	-0.3
BLAC					Sb	19 31 24.4	+0.4
CLC	**China Lake**	**1.01**	**324**		Pg	19 31 10.1	-0.7
GMRC	**Granite Mounta**	**1.01**	**102**	P	Pg	19 31 10.1	-0.7
	baz=282,SNR=175						
GMRC				S	Sg	19 31 24.0	-0.1
	baz=282						
GMRC	**Granite Mounta**	**1.01**	**102**		Pg	19 31 09.9	-1.0
GMRC					Sb	19 31 24.2	-0.1
SHOC	**Shoshone, Teco**	**1.02**	**28**	P	Pg	19 31 10.5	-0.5
	baz=208,SNR=9.7						
SHOC				S	Sb	19 31 24.8	+0.3
	baz=208						
SHOC	**Shoshone, Teco**	**1.02**	**28**		Sb	19 31 25.0	+0.5
SSK	**Sunset Peak**	**1.04**	**221**		Pg	19 31 10.8	-0.5
JNH	**Juniper Hills**	**1.05**	**239**		Pg	19 31 10.9	-0.6
JNH					Sg	19 31 24.9	-0.2
LRRC	**Littlerock Res**	**1.06**	**244**		Pb	19 31 11.2	-0.5
XTL	**Crystal Lake,**	**1.08**	**230**		Pb	19 31 11.3	+0.7
DEVC	**Devers**	**1.08**	**167**		Sn	19 31 27.1	-0.3
RVR	**Riverside**	**1.08**	**203**		Pb	19 31 11.4	-0.6
TPC	**Twentynine Pal**	**1.11**	**142**		Pn	19 31 12.9	0.0
EW2	**E Wide Canyon**	**1.12**	**160**		Pb	19 31 12.4	-0.2
TPO	**Tropico Hills**	**1.12**	**264**		Pb	19 31 12.6	-0.1
TPO					Sn	19 31 28.1	-0.3
CJV	**Casa Juvan**	**1.15**	**247**		Sg	19 31 28.6	+0.2
CHFC	**Chilao Flat St**	**1.16**	**236**		Pb	19 31 12.6	-0.8
CHFC					Sb	19 31 27.9	-0.6
PEM	**Pine Mountain**	**1.17**	**225**		Pb	19 31 13.1	-0.3
WBSM	**Bird Springs**	**1.17**	**298**		Pb	19 31 13.4	-0.3
WBSM					Sn	19 31 30.6	+0.7
MPMC	**Manual Prospec**	**1.18**	**335**	P	Pb	19 31 13.1	-0.7
	baz=154,SNR=39						
MPMC				S	Sb	19 31 28.7	-0.3
	baz=154						
MPMC	**Manual Prospec**	**1.18**	**335**		Pb	19 31 13.2	-0.5
MPMC					Sg	19 31 29.2	-0.1
MTPC	**Mountain Pass**	**1.18**	**65**		Sn	19 31 30.0	-0.1
PSRC	**Puddingstone R**	**1.19**	**221**		Pb	19 31 13.6	-0.2
PSRC					Sn	19 31 29.8	-0.1
BELC	**Belle Mtn. Jos**	**1.23**	**144**	P	Pn	19 31 13.6	-0.9
	baz=324,SNR=63						
BELC				S	Sb	19 31 30.1	-0.2
	baz=324						
LEOC	**Leona Valley**	**1.24**	**253**		Pg	19 31 15.0	-0.1
SME	**Santa Rosa Min**	**1.24**	**199**		Pn	19 31 13.9	-0.6
MWC	**Mount Wilson**	**1.25**	**232**		Pn	19 31 14.3	-0.5
DANC	**Danby, Needles**	**1.27**	**106**		Pb	19 31 15.5	+0.2
HMTC	**Hemet**	**1.29**	**185**		Pn	19 31 15.2	0.0
HMTC					Sb	19 31 32.1	+0.1
DGR	**Domenigoni Val**	**1.35**	**185**		Pn	19 31 16.2	+0.2
DGR					Sb	19 31 33.8	0.0
PASC	**Pasadena Art C**	**1.36**	**233**		Pn	19 31 16.1	-0.1
BACC	**Bachelor Mtn.**	**1.39**	**186**		Pb	19 31 17.0	-0.2
WHFM	**Hanning Flat**	**1.40**	**300**		Pn	19 31 16.9	+0.1
WHFM					Sg	19 31 36.5	+0.2
GVRC	**Garvey Reservo**	**1.40**	**228**		Sg	19 31 36.4	0.0
GVRC	**Garvey Reservo**	**1.40**	**228**		Pg	19 31 17.8	-0.3
DECC	**Green Verdugo**	**1.42**	**239**	Sb	Sb	19 31 35.9	+0.1
	baz=58						
DECC	**Green Verdugo**	**1.42**	**239**		Pb	19 31 17.5	-0.2
MURC	**Murrieta**	**1.42**	**191**	Pb	Pn	19 31 16.9	-0.1
	baz=11,SNR=18						
MURC				S	Sn	19 31 35.1	-0.5
	baz=11						
PFO	**Pinyon Flats O**	**1.42**	**166**	Pb	Pn	19 31 16.8	-0.3
	baz=346,SNR=10						
PFO				S	Sn	19 31 34.9	-0.9
	baz=346						
PFO	**Pinyon Flats O**	**1.42**	**166**		Pn	19 31 17.0	-0.1
PFO					Sn	19 31 35.1	-0.7
PFO	**Pinyon Flats O**	**1.42**	**166**		Pn	19 31 16.8	-0.5
XPFO	**Pion Flat**	**1.42**	**166**		Pg	19 31 16.3	+0.3
XPFO

baz=38
SHPR Sheep Range 2.05 42 Pn 19 31 25.8 -0.1
109C Camp Elliot, M 2.11 185 Sb Sb 19 31 56.2 +0.5
baz=5.4
109C Camp Elliot, M 2.11 185 Pn Pb 19 31 28.6 -0.9
MONP2 Monument Peak 2.13 170 Sb Sb 19 31 57.9 +1.4
baz=350
SWSC Sam W. Stewart 2.23 156 Sb Sg 19 32 01.6 -1.3
baz=337
Y12C Blythe 2.30 122 P Pn 19 31 28.1 -1.0
baz=303
Y12C Sb Sg 19 32 03.3 -2.0
baz=303
Y12C Blythe 2.30 122 Pn 19 31 28.0 -1.1
BAR Barrett 2.31 176 Pn 19 31 29.3 0.0
IKP In-Ko-Pah, Jac 2.42 165 Sb Sb 19 32 06.9 +2.1
baz=345
W13A Hualapai Mount 2.45 87 Pn 19 31 30.6 -0.8
GLA Glamis 2.58 138 Pn 19 31 32.1 -0.8
PAGB Antelope Grade 2.86 286 Pn Pn 19 31 35.4 -1.4
OMMB Old Mammoth Mi 3.13 327 Pn Pn 19 31 39.7 -1.1
Y14A Wickenburg 3.36 107 Pn 19 31 42.8 -1.0
113A Mohawk Valley, 3.40 130 Pn 19 31 42.9 -1.4
PMPB Monarch Peak 3.43 292 Pn Pn 19 31 44.5 -0.2
LCMT Little Creek M 3.56 55 Pn Pn 19 31 47.3 +0.7
CCUT Cedar City 3.81 47 Pn Pn 19 31 51.6 +1.5
KNB Kanab 3.85 57 Pn 19 31 51.3 +0.7
U15A North Rim 3.99 68 Pn 19 31 53.5 +0.9
X16A Lo Mia Camp, P 4.51 96 Pn Pn 19 31 59.6 0.0
TMUT Trail Mountain 6.23 45 Pn Pn 19 32 22.9 -0.5

*ATH **27** 19:33:40.8, 40˚.40N×25˚.86E, h27km±1km, ML2.4/7, Error ellipse: s-maj=2.6km s-min=1.1km az=254.0*
*ISK **27** 19:33:40.8, 40˚.39N×25˚.91E, h7km, ML2.7/21*
*DDA **27** 19:33:41.4, 40˚.37N×25˚.99E, h10km±1km, ML2.7*
*THE **27** 19:33:41.4, 40˚.40N×25˚.90E, h10km, ML2.4/10, Error ellipse: s-maj=0.9km s-min=0.6km az=30.0*
ISC 27 19:33:40.8±0.8, **40˚41**N±0˚.02×**25˚.94**E±0˚.02, **h15**km±6km, **n66**, σ0**59**/100, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOKA	**anakkale-Gk**	**0.22**	**187**	*i* P	**Pg**	**19 33 46.0**	**+0.2**
GOKA				*i* S	**Sg**	**19 33 49.3**	**+0.2**
GOKA				IAML		19 33 50.0	
	comp=Z,2μm,0.2s						
GADA	**Gvkgeada**	**0.23**	**188**	P	**Pg**	**19 33 45.9**	**+0.1**
GADA				S	**Sg**	**19 33 49.2**	**0.0**
	comp=Z,3μm,0.3s						
GADA	**Gvkgeada**	**0.23**	**188**	PG	**Pg**	**19 33 45.8**	**0.0**
SMTH	**Samothraki Isl**	**0.32**	**280**	P	**Pg**	**19 33 47.3**	**-0.2**
SMTH				S	**Sg**	**19 33 52.1**	**+0.1**
	comp=Z,850nm,0.1s						
SMTH	**Samothraki Isl**	**0.32**	**280**	P	**Pg**	**19 33 47.2**	**-0.3**
SMTH				S	**Sg**	**19 33 52.0**	**+0.1**
SMTH				AML	AML	19 33 56.3	
	comp=N,2172μm,0.2s						
SMTH				AML	AML	19 33 56.9	
	comp=E,1242μm,0.2s						
ENEZ	**Enez**	**0.36**	**27**	P	**Pb**	**19 33 48.8**	**-0.2**
ENEZ				S	**Sb**	**19 33 55.0**	**+0.5**
	comp=E,1μm,0.3s						
ENEZ	**Enez**	**0.36**	**27**	PG	**Pb**	**19 33 48.9**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.41**	**92**	PG	**Pb**	**19 33 49.6**	**-0.2**
ERIK	**Erikli-Kesan**	**0.51**	**59**	PG	**Pb**	**19 33 51.9**	**+0.4**
BOZC	**Bozcaada**	**0.58**	**171**	PG	**Pg**	**19 33 52.3**	**+0.1**
BOZC	**Bozcaada**	**0.58**	**171**	*i* P	**Pg**	**19 33 52.1**	**0.0**
BOZC				*i* S	**Sg**	**19 33 59.9**	**0.0**
LPK	**Lapseki**	**0.63**	**93**	PG	**Pb**	**19 33 53.9**	**+0.4**
LPK				SG	**Sb**	**19 34 03.1**	**+1.0**
EZN	**Ezine**	**0.66**	**153**	P	**Pg**	**19 33 53.5**	**-0.2**
EZN	**Ezine**	**0.66**	**153**	PG	**Pg**	**19 33 53.4**	**-0.2**
KESN	**Edirne-Kesan**	**0.70**	**54**	*i* P	**Pb**	**19 33 54.6**	**-0.4**
KESN				*i* S	**Sb**	**19 34 03.9**	**-0.6**
LIA	**Limnos Island**	**0.78**	**229**	P	**Pg**	**19 33 55.5**	**-0.4**
LIA				S	**Sg**	**19 34 06.6**	**+0.5**
	comp=E,208nm,0.5s						
LIA	**Limnos Island**	**0.78**	**229**	P	**Pg**	**19 33 55.5**	**-0.4**
LIA				S	**Sg**	**19 34 05.7**	**-0.4**
LIA				AML	AML	19 34 10.7	
	comp=N,455μm,0.3s						
LIA				AML	AML	19 34 11.5	
	comp=E,383μm,0.6s						
RDO	**Rodhopi**	**0.79**	**337**	P	**Pg**	**19 33 56.1**	**-0.1**
RDO	**Rodhopi**	**0.79**	**337**	P	**Pg**	**19 33 56.2**	**-0.1**
RDO				S	**Sb**	**19 34 08.0**	**+1.0**
RDO				AML	AML	19 34 11.4	
	comp=N,632μm,0.2s						
RDO				AML	AML	19 34 11.6	
	comp=E,906μm,0.2s						
RDO	**Rodhopi**	**0.79**	**337**	PG	**Pb**	**19 33 56.7**	**+0.3**
RDO				SG	**Sn**	**19 34 08.6**	**-0.5**
BAYC	**CANAKKALE_Bayr**	**0.82**	**145**	*i* P	**Pb**	**19 33 56.5**	**-0.2**
BAYC				*i* S	**Sb**	**19 34 07.5**	**-0.1**
UKOP	**Uzunkopru-Edir**	**0.89**	**36**	PG	**Pn**	**19 33 59.0**	**+0.2**
UKOP				SG	**Sn**	**19 34 12.2**	**+0.8**
THAS	**Thassos island**	**0.95**	**282**	P	**Pb**	**19 33 59.2**	**+0.2**
THAS				S	**Sg**	**19 34 11.8**	**+0.1**
	comp=E,122nm,0.3s						
THAS	**Thassos island**	**0.95**	**282**	P	**Pb**	**19 33 58.8**	**-0.2**
THAS				S	**Sg**	**19 34 10.0**	**-1.7**
THAS				AML	AML	19 34 12.1	
	comp=N,282μm,0.3s						
THAS				AML	AML	19 34 14.5	
	comp=E,222μm,0.4s						
RKY	**Sarkoy-Tekirda**	**0.98**	**73**	PG	**Pn**	**19 34 00.7**	**+0.5**
RKY				SG	**Sn**	**19 34 15.2**	**+1.3**
SART	**Tekirdag**	**0.98**	**73**	*i* P	**Pn**	**19 34 00.0**	**-0.2**
SART				*i* S	**Sn**	**19 34 13.4**	**-0.5**
KRBG	**Karabiga-Canak**	**1.04**	**91**	PG	**Pn**	**19 34 01.7**	**+0.8**
EFSA	**Agios Efstrati**	**1.14**	**220**	P	**Pb**	**19 34 01.9**	**-0.3**
PRK	**Paraskevi**	**1.19**	**168**	P	**Pg**	**19 34 03.8**	**0.0**
PRK				S	**Sn**	**19 34 19.9**	**+1.0**
	comp=E,308nm,0.6s						
PRK	**Paraskevi**	**1.19**	**168**	P	**Pg**	**19 34 03.9**	**0.0**
PRK				S	**Sn**	**19 34 20.0**	**+1.0**
PRK				AML	AML	19 34 21.0	
	comp=N,603μm,0.6s						
PRK				AML	AML	19 34 21.2	
	comp=E,636μm,0.6s						
SIGR	**SIGRI**	**1.20**	**183**	P	**Pn**	**19 34 02.6**	**-0.6**
SIGR				S	**Sb**	**19 34 19.1**	**+0.4**
	comp=E,330nm,0.4s						
SIGR	**SIGRI**	**1.20**	**183**	P	**Pn**	**19 34 02.5**	**-0.6**
SIGR				S	**Sn**	**19 34 19.6**	**+0.4**
SIGR				AML	AML	19 34 20.6	
	comp=N,746μm,0.4s						
SIGR				AML	AML	19 34 21.8	
	comp=E,632μm,0.4s						
SIGR	**SIGRI**	**1.20**	**183**	PN	**Pn**	**19 34 03.3**	**+0.2**
KNL	**Balıkesir**	**1.22**	**96**	*i* P	**Pg**	**19 34 03.7**	**-0.6**
KNL				*i* S	**Sg**	**19 34 20.2**	**-0.1**
KNL				IAML		19 34 23.0	
	comp=N,149nm,0.5s						
KAVA	**Kavala**	**1.23**	**299**	P	**Pn**	**19 34 03.8**	**+0.2**
KAVA				S	**Sb**	**19 34 20.0**	**+0.4**
	comp=N,162nm,0.3s						
KAVA	**Kavala**	**1.23**	**299**	P	**Pn**	**19 34 03.7**	**+0.2**
KAVA				S	**Sb**	**19 34 19.6**	**+0.1**
KAVA				AML	AML	19 34 21.3	
	comp=N,345μm,0.4s						
KAVA				AML	AML	19 34 24.1	
	comp=E,301μm,0.3s						
AYVA	**Ayvalik**	**1.25**	**152**	*i* P	**Pg**	**19 34 04.4**	**-0.4**
AYVA				*i* S	**Sg**	**19 34 21.3**	**+0.3**
AYVA				IAML		19 34 23.0	
	comp=N,398nm,0.5s						
AYVA				IAML		19 34 23.0	
	comp=E,163nm,0.5s						
MRMT	**Marmara Adasi**	**1.27**	**81**	PN	**Pg**	**19 34 05.5**	**+0.1**
KDZ	**Kurdzhali**	**1.30**	**342**	P	**Pn**	**19 34 04.6**	**+0.1**
KDZ				S	**Sb**	**19 34 20.7**	**-0.8**
KDZ	**Kurdzhali**	**1.30**	**342**	PN	**Pg**	**19 34 05.9**	**+0.1**
TKR	**Tekirdag**	**1.34**	**64**	PN	**Pg**	**19 34 06.8**	**+0.1**
GONE	**Gonen-Balikesi**	**1.39**	**105**	PN	**Pg**	**19 34 07.3**	**-0.2**
BALY	**Balya**	**1.45**	**117**	*i* P	**Pg**	**19 34 07.8**	**-1.0**
BALY				*i* S	**Sg**	**19 34 27.7**	**0.0**
EDC	**Edincik**	**1.47**	**92**	PN	**Pg**	**19 34 08.5**	**-0.6**
OUR	**Ouranopolis**	**1.50**	**268**	P	**Pn**	**19 34 06.7**	**-0.6**
OUR				S	**Sn**	**19 34 27.4**	**+0.9**
	comp=E,68nm,0.2s						
OUR	**Ouranopolis**	**1.50**	**268**	P	**Pn**	**19 34 06.6**	**-0.6**
DKL	**Dikili**	**1.53**	**151**	PN	**Pb**	**19 34 08.8**	**-0.2**
CRLT	**Corlu**	**1.54**	**62**	PN	**Pg**	**19 34 09.7**	**-0.7**
EDRB	**Edirne**	**1.56**	**23**	PN	**Pg**	**19 34 09.8**	**-0.9**
KIRK	**Kırklareli**	**1.62**	**32**	*i* P	**Pn**	**19 34 09.4**	**+0.4**
BALB	**Balikesir**	**1.68**	**117**	PN	**Pb**	**19 34 11.2**	**-0.2**
ZEDA	**zmir-Bergama**	**1.69**	**148**	*i* P	**Pn**	**19 34 10.5**	**+0.7**
ZEDA				*i* S	**Sg**	**19 34 34.5**	**-0.7**
ZEDA				IAML		19 34 36.0	
	comp=N,71nm,0.4s						
STEP	**BALIKESIR_Sava**	**1.71**	**127**	*i* P	**Pb**	**19 34 11.6**	**-0.5**
STEP				*i* S	**Sg**	**19 34 35.7**	**-0.4**
STEP				IAML		19 34 38.0	
	comp=E,58nm,0.6s						
KCTX	**Karacabey (Bur**	**1.85**	**94**	PN	**Pb**	**19 34 13.8**	**-0.6**
PLG	**Polygyros**	**1.91**	**270**	P	**Pn**	**19 34 12.4**	**-0.4**
SRS	**Serrai**	**1.92**	**292**	P	**Pn**	**19 34 13.3**	**+0.3**
SRS	**Serrai**	**1.92**	**292**	P	**Pn**	**19 34 14.4**	**+1.4**
CHOS	**Chios island**	**2.03**	**177**	P	**Pn**	**19 34 14.5**	**-0.1**
CHOS				S	**Sb**	**19 34 41.4**	**-1.1**
	comp=E,60nm,0.5s						
CHOS	**Chios island**	**2.03**	**177**	P	**Pn**	**19 34 14.6**	**+0.1**
CTYL	**Yalikoy Yolu**	**2.07**	**58**	PN	**Pb**	**19 34 17.2**	**-0.9**
AKHS	**Akhisar**	**2.11**	**136**	*i* P	**Pg**	**19 34 20.1**	**-1.2**
DURS	**Dursunbey**	**2.11**	**112**	*i* P	**Pn**	**19 34 16.6**	**+0.9**
DURS				*i* S	**Sb**	**19 34 44.9**	**0.0**
URLA	**Izmir**	**2.11**	**166**	*i* P	**Pn**	**19 34 14.6**	**-1.1**
URLA				*i* S	**Sn**	**19 34 43.1**	**+1.4**
CTKS	**Kestanelik-??a**	**2.11**	**66**	PN	**Pb**	**19 34 17.9**	**-1.0**
DGB	**zmir**	**2.47**	**162**	*i* P	**Pn**	**19 34 21.2**	**+0.7**
DEMI	**Demirci**	**2.54**	**122**	*i* P	**Pn**	**19 34 22.1**	**+0.5**

*INET **27** 19:55:59.7, 11˚.55N×85˚.80W, h217km, ML3.6*
UCR 27 19:55:59.9±1.1, **11˚.35N×85˚.73W**, **h222**km±3km, **MD4.0, MW3.7, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUAI	**Buenos Aires**	**0.61**	**141**	*i* P	Pn	19 56 30.2	+0.1
GB1A	**Borinquen Arri**	**0.62**	**149**	*e*P	Pn	19 56 30.5	+0.3
GB1A				*i* S	S	19 56 54.5	+0.7
GBS3	**Finca Las Img**	**0.62**	**155**	*i* P	Pn	19 56 29.9	-0.2
GBS3				*i* S	S	19 56 53.1	-0.6
BUEV	**Buena Vista**	**0.63**	**150**	*e*P	Pn	19 56 30.4	+0.2
BUEV				*e*S	S	19 56 54.4	+0.5
LAPC	**Finca la Perla**	**0.65**	**154**	*i* P	Pn	19 56 29.8	-0.4
LAPC				*i* S	S	19 56 53.9	+0.1
GPS1	**Guardaparques**	**0.68**	**147**	*i* P	Pn	19 56 30.6	+0.1
GPS3	**Bodega del ICE**	**0.69**	**149**	*i* S	S	19 56 54.9	+0.7
NY14	**Universidad de**	**0.72**	**165**	*i* P	Pn	19 56 30.5	0.0
LIM1	**Limonal**	**0.80**	**144**	*i* P	Pn	19 56 31.0	+0.1
GUAB	**Guayabo de Bag**	**0.80**	**143**	*i* P	Pn	19 56 31.0	0.0
ACON	**Acoyapa**	**0.82**	**41**	*e*P	Pn	19 56 29.9	-1.0
HORNC	**Hornillas**	**0.83**	**140**	*i* P	Pn	19 56 31.4	+0.3
COLC	**Colonia**	**0.85**	**143**	*i* P	Pn	19 56 31.3	+0.1
CUI	**Cuipilapa**	**0.88**	**141**	*e*P	Pn	19 56 31.8	+0.4
PTEN	**Parque Tenorio**	**0.96**	**131**	*i* P	Pn	19 56 32.3	+0.4
ACAL	**Aguas Claras**	**0.98**	**136**	*i* P	Pn	19 56 32.6	+0.6
ACAL				*i* S	S	19 56 57.7	+0.8
PLVR	**Palo Verde**	**1.06**	**160**	*e*P	Pn	19 56 32.9	+0.3
PLVR				*e*S	S	19 56 58.9	+0.8
GUAI	**GUAI**	**1.09**	**169**	*i* P	Pn	19 56 33.1	+0.5
JTS	**Las Juntas de**	**1.30**	**144**	*e*P	Pn	19 56 34.4	+0.3
JTS				*e*S	S	19 57 00.2	-0.5
CEDE	**Laguna Cedeo**	**1.32**	**130**	*i* P	Pn	19 56 35.1	+0.8
CEDE				*e*S	S	19 57 02.6	+1.6
ARE1	**Arenal 1**	**1.33**	**132**	*e*P	Pn	19 56 35.1	+0.9
ARE1				*e*S	S	19 57 02.2	+1.3
CASO	**Castillo**	**1.33**	**133**	*i* P	Pn	19 56 35.1	+0.7
FORC	**Fortuna**	**1.36**	**130**	*i* P	Pn	19 56 35.3	+0.7
CNGN	**Cerro Negro**	**1.49**	**320**	*e*P	Pn	19 56 33.9	-1.7
MATN	**Matagalpa**	**1.58**	**353**	*e*P	Pn	19 56 34.6	-1.8
SRA1	**San Ramn**	**1.75**	**136**	*e*P	Pn	19 56 35.5	-2.4
SRA1				*e*S	S	19 57 08.7	+1.1
LCR2	**La Lucha 2**	**2.33**	**133**	*e*P	Pn	19 56 44.7	+1.0
LCR2				*e*S	S	19 57 18.9	+1.2
CSGN	**Cosiguina Volc**	**2.41**	**312**	*e*P	Pn	19 56 43.1	-1.3
EDDO	**Dominical**	**2.77**	**139**	*e*S	S	19 57 26.3	+0.4
DRK0	**Durika**	**3.20**	**130**	*e*P	Pn	19 56 54.5	+1.2
DRK0				*e*S	S	19 57 35.4	+0.4
BRU2	**Volcan**	**3.92**	**130**	*e*S	S	19 57 51.3	+1.0

*IDC **27** 20:05:07.1±1.8, 2˚.43N×126˚.75E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.4/36, mbtmp3.7/4, Error ellipse: s-maj=114.0km s-min=24.8km az=68.0*
*NEIC **27** 20:05:14.0±1.0, 2˚.4N×0˚.2×126˚.6E±0˚.3, h62km±13km, mb4.2/8, Error ellipse: s-maj=47.6km s-min=9.9km az=63.0*
*DJA **27** 20:05:13.0±0.3, 3˚.N×3˚×12˚7E±˚, h10km, M3.1/6, MLv3.1/6*
ISC 27 20:05:13.4±1.3, **2˚.5N**±0˚.2×**126˚.6E**±0˚.3, **h55**km, **n15,** σ1**31**/14, **mb4.2/6, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.87**	**157**	P	**Pn**	**20 05 43.5**	**+0.5**
TNTI	**Ternate**	**1.87**	**157**		**Pn**	**20 05 42.5**	**-0.5**
LBMI	**Labuha**	**3.23**	**164**	P	**Pn**	**20 06 04.4**	**+2.7**
FITZ	**Fitzroy Crossi**	**20.49**	**183**	P	**P**	**20 09 46.5**	**-0.5**
	2.3nm,0.9s,baz=18,slow=9.6,SNR=1.4						
FITZ	**Fitzroy Crossi**	**20.49**	**183**	IAmb	IAmb	20 09 53.9	
	comp=Z,31nm,1.8s						
WB0	**Warramunga Arr**	**23.40**	**161**	P	**P**	**20 10 16.8**	**-0.9**
WRA	**Warramunga Arr**	**23.55**	**162**	P	**P**	**20 10 18.2**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=341,slow=11,SNR=20						
WB2	**Warramunga Arr**	**23.55**	**162**	P	**P**	**20 10 18.3**	**-0.7**
IPM	**Ipoh**	**25.63**	**275**	P	**P**	**20 10 37.6**	**-0.6**
CHTO	**Chiang Mai**	**31.58**	**303**	P	**P**	**20 11 30.1**	**-1.0**
CHTO				IAmb	IAmb	20 12 39.8	
	comp=Z,6.7nm,1.6s						
STKA	**Stephens Creek**	**37.02**	**159**	P	**P**	**20 12 17.9**	**0.0**
	comp=Z,2.3nm,0.8s,baz=342,slow=9.6,SNR=4.5						
STKA	**Stephens Creek**	**37.02**	**159**	P	**P**	**20 12 16.5**	**-1.5**
MKAR	**Makanchi Array**	**58.51**	**326**	P	**P**	**20 15 05.9**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=142,slow=6.6,SNR=5.4						
MAKZ	**Makanchi**	**58.69**	**326**	P	**P**	**20 15 05.7**	**+0.3**
MAKZ				IAmb	IAmb	20 15 12.0	
	comp=Z,2.6nm,1.3s						
KURK	**Kurchatov**	**62.72**	**328**	P	**P**	**20 15 34.1**	**+1.5**
KURK				IAmb	IAmb	20 15 35.5	
	comp=Z,1.1nm,0.6s						

*IDC **27** 20:08:23.1±0.8, 3˚.49S×148˚.93E, h0km, mb4.1/12, mb1 4.2/15, mb1mx4.0/33, mbtmp4.1/15, ML1.3/1, MS4.0/28, Ms1 4.0/28, ms1mx4.0/30, Error ellipse: s-maj=22.6km s-min=17.2km az=106.0*
*GCMT **27** 20:08:29.0±0.2, 3˚.28S±0˚.01×148˚.85E±0˚.01, h17km±1km, MW5.0/119, Moment Tensor Solution. s40,c53; s119,c187; Duration: 0 Moment tensor: Scale 1016Nm; Mrr=0.74±.11; Mθθ2.86±.10; Mϕϕ -2.12±.09; Mrθ0.53±.21; Mθϕ2.70±.08; Mϕr-0.41±.23; Best double couple: M☉3.74800×1016 NP1ϕs22.00000˚, δ79.00000˚, λ-174.00000˚. NP2ϕs291.00000˚, δ84.00000˚, λ-12.00000˚. Principal axes: T 4.0640, Plg4.0000˚, Azm337.0000˚; N -0.6300, Plg77.0000˚, Azm83.0000˚; P -3.4320, Plg12.0000˚, Azm246.0000˚; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
ISC 27 20:08:25.9±0.6, **3˚.48S**±0˚.08×**148˚.94E**±0˚.09, **h19**km, **n43,** σ0**92**/20, **mb3.9**/15, **MS4.0**/28, **Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.19**	**105**	Pn	**Pn**	**20 09 13.9**	**-1.2**
	13nm,0.3s,baz=73,slow=1.4,SNR=11						
PMG	**Port Moresby**	**6.14**	**197**	Pn	**Pn**	**20 09 54.7**	**-1.1**
	0.4nm,0.3s,baz=323,slow=21,SNR=1.9						
PMG				Sn	**Sn**	**20 11 07.1**	**+1.6**
	0.7nm,0.3s,baz=24,slow=8.4,SNR=2.0						
PMG				LR	LR	20 12 31.4	
	comp=Z,1μm,18.6s,baz=13,slow=40						
JAY	**Jayapura**	**8.28**	**276**	Pn	**Pn**	**20 10 24.3**	**-0.8**
	0.2nm,0.3s,baz=92,slow=9.8,SNR=3.7						
JAY				LR	LR	20 13 18.8	
	comp=Z,1μm,18.4s,baz=77,slow=36						
HNR	**Honiara**	**12.43**	**119**	LR	LR	20 16 16.1	
	comp=Z,701nm,18.7s,baz=294,slow=38						
CTA	**Charters Tower**	**16.71**	**189**	LR	LR	20 18 46.3	

comp=Z,567nm,19.1s,baz=6.0,slow=37
WRA Warramunga Arr 21.69 220 P **P** **20 13 15.3 -0.6**
3.1nm,0.7s,baz=44,slow=9.9,SNR=24
WRA PcP **PcP** **20 17 17.9 +0.9**
0.5nm,0.8s,baz=36,slow=2.5,SNR=2.3
WRA LR LR 20 21 55.9
comp=Z,315nm,21.1s,baz=30,slow=38
DZM Mont Dzumac 25.10 139 *e*LR LR 20 20 23.0
comp=Z,1μm,25.8s
DZM Mont Dzumac 25.10 139 LR LR 20 22 39.3
comp=Z,1μm,19.3s,baz=301,slow=34
DAV Davao City (W) 25.56 294 LR LR 20 20 49.9
comp=Z,283nm,21.8s,baz=21,slow=29
BATI Baumata 25.95 254 P **P** **20 13 57.9 +0.3**
20nm,1.1s,baz=282,slow=22,SNR=2.1
BATI LR LR 20 26 29.5
comp=Z,567nm,18.8s,baz=100,slow=42
FITZ Fitzroy Crossi 27.05 236 P **P** **20 14 08.1 +0.7**
11nm,0.8s,baz=63,slow=9.3,SNR=21
FITZ LR LR 20 25 18.1
comp=Z,576nm,19.6s,baz=60,slow=38
H11S3 WAKE ISLAND Hy 27.98 38 T T 20 43 25.3
baz=220,slow=76,SNR=646
H11S2 WAKE ISLAND Hy 27.99 38 T T 20 43 24.4
baz=220,slow=76,SNR=1605
H11S1 WAKE ISLAND Hy 28.00 38 T T 20 43 24.9
baz=220,slow=76,SNR=1220
H11N1 WAKE ISLAND Hy 29.03 37 T T 20 44 42.9
baz=219,slow=76,SNR=205
H11N3 WAKE ISLAND Hy 29.05 37 T T 20 44 43.9
baz=219,slow=76,SNR=193
H11N2 WAKE ISLAND Hy 29.05 37 T T 20 44 43.9
baz=219,slow=76,SNR=467
STKA Stephens Creek 29.08 193 LR LR 20 26 39.6
comp=Z,468nm,21.7s,baz=13,slow=38
KAPI Kappang 29.14 266 LR LR 20 26 40.8
comp=Z,113nm,21.8s,baz=74,slow=38
JCJ Chichijima 31.09 348 LR LR 20 26 06.9
comp=Z,179nm,20.6s,baz=136,slow=34
TGY Tagaytay City 32.80 303 LR LR 20 25 40.7
comp=Z,216nm,20.9s,baz=130,slow=32
JNU Nakatsue 40.22 336 P **P** **20 16 02.0 +0.5**
10.0nm,0.9s,baz=144,slow=2.8,SNR=4.6
MJAR Matsushiro Arr 41.06 347 LR LR 20 31 12.0
comp=Z,159nm,19.1s,baz=150,slow=33
KSRS Korea Array 45.17 336 LR LR 20 34 53.7
comp=Z,160nm,19.7s,baz=146,slow=35
USRK Ussuriysk Ar. 49.85 344 P **P** **20 17 18.2 +0.3**
0.8nm,0.6s,baz=141,slow=8.7,SNR=2.1
USRK LR LR 20 36 03.7
comp=Z,192nm,20.6s,baz=141,slow=33
XAN Xi'an 53.04 318 P P 20 17 51.0 +8.9
XAN pmax pmax
comp=Z,6.0nm,0.7s
XAN pmax pmax
comp=Z,75nm,4.7s
XAN LR LR
comp=N,200nm,19.5s
XAN LR LR
comp=Z,280nm,18.4s
CMAR Chiang Mai Arr 53.83 296 P **P** **20 17 47.9 -0.2**
comp=Z,2.0nm,1.0s,baz=110,slow=5.3,SNR=8.3
CMAR LR LR 20 40 55.8
comp=Z,40nm,19.7s,baz=159,slow=36
PETK Petropavlovsk- 56.87 6 LR LR 20 38 58.8
comp=Z,104nm,21.4s,baz=239,slow=32
PPT Papeete 61.80 108 LR LR 20 43 10.1
comp=Z,36nm,18.8s,baz=314,slow=34
PPT2 Papeete2 61.80 108 *e*LQ LQ 20 34 17.4
comp=Z,467nm,34.8s
PPT2 *e*LR LR 20 37 21.0
comp=Z,158nm,27.2s
GTA Gaotai 62.10 318 *e*P **P** **20 18 45.5 -0.4**
GTA pP pwP 20 18 52.0 -2.1
GTA sP sP 20 18 54.8 +1.3
GTA pmax pmax
comp=Z,1.0nm,1.2s
GTA pmax pmax
comp=Z,41nm,7.0s
GTA LR LR
comp=N,86nm,18.1s
GTA LR LR
comp=E,110nm,20.6s
GTA LR LR
comp=Z,130nm,19.7s
TBI Tubuai 62.61 114 *e*LR LR 20 37 45.3
comp=Z,146nm,30.0s
SONM Songino Array 63.20 329 P **P** **20 18 53.1 0.0**
comp=Z,0.4nm,0.5s,baz=142,slow=7.5,SNR=5.2
SONM LR LR 20 45 29.3
comp=Z,139nm,21.8s,baz=112,slow=35
VNDA Vanda 74.30 177 P **P** **20 20 01.6 0.0**
comp=Z,0.5nm,0.7s,baz=339,slow=3.8,SNR=2.7
VNDA LR LR 20 48 34.3
comp=Z,71nm,21.9s,baz=354,slow=32
MKAR Makanchi Array 76.82 320 P **P** **20 20 16.1 -0.6**
comp=Z,0.3nm,0.6s,baz=103,slow=5.4,SNR=2.4
MKAR LR LR 20 54 48.0
comp=Z,104nm,18.2s,baz=110,slow=36
ZALV Zalesovo Beam 77.94 327 P **P** **20 20 22.4 -0.3**
comp=Z,0.3nm,0.3s,baz=92,slow=4.3,SNR=1.9
ZALV LR LR 20 54 59.5
comp=Z,94nm,20.0s,baz=88,slow=36
KSH Kashi 79.16 311 P **P** **20 20 31.3 +1.3**
KSH pmax pmax
comp=Z,25nm,1.2s
KSH pmax pmax
comp=Z,100nm,5.4s
ILAR Eielson Array 82.43 23 P **P** **20 20 47.7 +1.0**
comp=Z,0.8nm,1.0s,baz=254,slow=6.1,SNR=4.7
ILAR LR LR 20 52 38.2
comp=Z,42nm,20.6s,baz=234,slow=32
MAW Mawson 85.30 203 LR LR 20 56 53.4
comp=Z,146nm,21.3s,baz=126,slow=34
GEYT Alibeck 92.76 308 LR LR 21 03 56.1
comp=Z,59nm,21.9s,baz=20,slow=36
NVAR Mina Array Bea 94.31 52 LR LR 20 57 57.6
comp=Z,80nm,19.5s,baz=268,slow=32
YKA Yellowknife Ar 96.06 28 P **P** **20 21 52.5 +0.5**
comp=Z,0.2nm,0.6s,baz=274,slow=4.4,SNR=3.7
YKA LR LR 21 02 46.7
comp=Z,56nm,20.0s,baz=0.0,slow=34
TORD Torodi Ar. Bea 146.24 288 PKPbc **PKPab** **20 28 05.4 -1.6**
comp=Z,1.1nm,0.7s,baz=73,slow=2.9,SNR=5.1

WEL 27 20:18:24.5, 38˚S±4˚×17˚9E±˚, h33km, M3.6/14, ML3.9/14, MLv3.6/14, Error ellipse: s-maj=0.0km s-min=0.0km az=179.6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGZ	**Carnagh Statio**	**0.28**	**246**	P	Pn	20 18 32.4	+0.2
PUZ	**Puketiti**	**0.37**	**324**	P	Pb	20 18 32.9	-0.4
PUZ				S	Sb	20 18 39.2	+0.1
TWGZ	**Tauwhareparae**	**0.48**	**294**	P	Pb	20 18 34.9	+0.1
TWGZ				S	Sn	20 18 42.9	+0.5
WMGZ	**Waiomatatini S**	**0.56**	**350**	P	Pn	20 18 36.7	+0.6
WMGZ				S	Sn	20 18 46.2	+1.9
PKGZ	**Pakihiroa**	**0

OPRZ	Ohinepanea	1.65 288	P		Pn	20 18 51.1	0.0
PRRZ	Plateau Road	1.69 265	P		Pn	20 18 52.2	+0.5
HLRZ	Highlands Stat	1.72 273	P		Pb	20 18 57.1	+1.6
MRHZ	Matea Rd	1.72 254	P		Pn	20 18 52.6	+0.4
OMRZ	Omania	1.72 278	P		Pb	20 18 56.8	+1.2
HRRZ	Handcock Road	1.77 269	P		Pb	20 18 59.5	+3.2
BKZ	Black Stump Fm	1.78 243	P		Pn	20 18 53.4	+0.3
MCHZ	McNeill Hill	1.79 233	P		Pn	20 18 53.8	+0.7
HSRZ	Hossack Road	1.80 271	P		Pn	20 18 53.4	+0.1
TGRZ	Tauranga	1.91 289	P		Pn	20 18 56.0	+1.3
PXZ	Pawanui	2.11 218	P		Pn	20 18 56.7	-0.7
KMRZ	Kaimai	2.11 284	P		Pb	20 19 03.6	+1.4
KRRZ	Kereru	2.11 232	P		Pn	20 18 57.1	-0.5
RATZ	Rangitukua	2.22 256	P		Pn	20 19 00.8	+1.7
BHHZ	Black Hill Sta	2.23 239	P		Pn	20 18 59.1	-0.1
KRVZ	Karewarewa	2.38 251	P		Pn	20 19 01.5	+0.3
PNHZ	Pukenui	2.38 229	P		Pn	20 19 00.7	-0.6
MOVZ	Moawhango	2.40 244	P		Pn	20 19 01.9	+0.3
WTVZ	West Tongariro	2.42 251	P		Pn	20 19 04.3	+2.4
TUVZ	Tukino	2.42 247	P		Pn	20 19 02.8	+0.9
NGZ	Ngauruhoe	2.43 250	P		Pn	20 19 02.6	+0.6
FWVZ	Far West T-bar	2.49 248	P		Pn	20 19 03.5	+0.5
MTVZ	Mangateitei	2.60 246	P		Pn	20 19 04.5	+0.2
TSZ	Takapari Road	2.61 229	P		Pn	20 19 03.3	-1.2
ANWZ	Angora Road	2.63 217	P		Pn	20 19 04.8	+0.2
KUZ	Kuaotunu	2.76 305	P		Pn	20 19 06.1	-0.4
HIZ	Hauiti	2.89 266	P		Pn	20 19 09.5	+1.2
BFZ	Birch Farm	2.91 217	P		Pn	20 19 06.6	-1.9
POWZ	Post Office Ro	2.94 226	P		Pn	20 19 08.3	-0.7
PRWZ	Pori Road	2.95 221	P		Pn	20 19 08.1	-1.0
MKAZ	Moumakai	2.96 294	P		Pn	20 19 10.0	+0.8
VRZ	Vera Road	3.05 255	P		Pn	20 19 11.4	+1.0
WAZ	Wanganui	3.09 242	P		Pn	20 19 12.1	+1.1
MRZ	Mangatainoka R	3.23 224	P		Pn	20 19 11.2	-1.7
GRZ	Great Barrier	3.24 310	P		Pn	20 19 13.2	+0.2
TMWZ	Te Maipa	3.41 216	P		Pn	20 19 12.9	-2.5
HOWZ	Holdsworth Sta	3.44 222	P		Pn	20 19 13.6	-2.1
OGWZ	Otaki Gorge	3.57 226	P		Pn	20 19 15.4	-2.1
KHEZ	Kahui Hut	3.65 254	P		Pn	20 19 20.3	+1.5
PKE	Pukeiti	3.65 256	P		Pn	20 19 20.0	+1.3
KIW	Kapiti Island	3.74 227	P		Pn	20 19 17.9	-2.1
CAW	Cannon Point	3.82 223	P		Pn	20 19 18.8	-2.2
WCZ	Waipu Caves	4.13 305	P		Pn	20 19 26.0	+0.6
DUWZ	D'Urville Isla	4.31 234	P		Pn	20 19 25.9	-1.9
TCW	Tory Channel	4.33 228	P		Pn	20 19 25.7	-2.4
CTZ	Chatham Island	6.49 147	P		Pn	20 19 58.6	+1.0

IDC 27 20:44:32.1±4.0, 5°55.55S×152°24.24E, h132km±18km, mb3.1/2, mb1 3.3/2, mb1mx2.8/34, mbtmp3.5/2, Error ellipse: s-maj=96.9km s-min=30.6km az=107.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	1.25 350		P	Pn	20 44 59.3	+1.6
	21nm,0.3s,baz=340,slow=1.7,SNR=6.7						
KRVT				S	Sn	20 45 17.1	-0.1
	65nm,0.3s,baz=56,slow=22,SNR=35						
WRA	Warramunga Arr	22.53 229		P	P	20 49 20.9	-0.3
	0.7nm,0.7s,baz=58,slow=9.7,SNR=8.8						
SONM	Songino Array	66.66 328		P	P	20 55 08.8	+0.1
	0.3nm,0.5s,baz=141,slow=5.5,SNR=2.7						
TORD	Torodi Ar. Bea	149.99 287		PKPbc	PKPbc	21 04 07.5	-0.6
	0.3nm,0.6s,baz=93,slow=2.1,SNR=4.8						

IDC 27 20:47:04.4±2.0, 11°54S×162°73E, h0km, mb3.8/3, mb1 4.0/5, mb1mx3.6/37, mbtmp4.0/5, ML4.0/2, Error ellipse: s-maj=55.4km s-min=30.1km az=59.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	3.44 307		Pn	Pn	20 48 00.5	+1.2
	32nm,0.3s,baz=203,slow=9.8,SNR=8.9						
HNR				Sn	Sn	20 48 40.8	0.0
	22nm,0.3s,baz=253,slow=17,SNR=1.9						
DZM	Mont Dzumac	11.06 162		Pn	Pn	20 49 44.7	+0.6
	0.4nm,0.3s,baz=11,slow=19,SNR=2.4						
WRA	Warramunga Arr	28.54 249		P	P	20 53 01.7	-0.4
	0.6nm,1.0s,baz=80,slow=8.6,SNR=1.9						
SONM	Songino Array	77.34 325		P	P	20 59 01.3	+0.2
	1.0nm,0.7s,baz=134,slow=6.2,SNR=5.7						
MKAR	Makanchi Array	91.86 317		P	P	21 00 14.1	-0.5
	0.3nm,0.5s,baz=88,slow=5.3,SNR=4.9						

IDC 27 20:47:55.2±2.3, 11°50S×162°68E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.5/38, mbtmp3.8/4, ML3.5/1, Error ellipse: s-maj=66.3km s-min=40.1km az=77.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.11 162		Pn	Pn	20 50 35.4	-0.2
	0.3nm,0.3s,baz=48,slow=18,SNR=2.2						
WRA	Warramunga Arr	28.51 249		P	P	20 53 52.7	0.0
	0.3nm,0.7s,baz=77,slow=9.1,SNR=1.3						
SONM	Songino Array	77.28 325		P	P	20 59 52.3	+0.6
	0.5nm,0.6s,baz=140,slow=4.9,SNR=2.6						
MKAR	Makanchi Array	91.81 317		P	P	21 01 04.5	-0.7
	0.2nm,0.5s,baz=119,slow=5.1,SNR=2.1						

IDC 27 20:51:12.5±1.6, 9.54N×125.99E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.6/35, mbtmp3.8/5, MS3.5/1, Ms1 3.5/1, ms1mx2.4/38, Error ellipse: s-maj=128.5km s-min=23.7km az=73.0

MAN 27 20:51:19.8, 9.63N×126.20E, h4km, mb4.7, ML3.6, MS3.5

ISC 27 20:51:11.8±1.7, 9.73N±0.03×126.46E±0.06, h2km±10km, n29, σ2s16/34, mb4.0/5, 3C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.96 273		‖iP	Pn	20 51 34.0	+1.7
SCPH				*i* S	Sn	20 51 45.1	-1.5
MSLP	Maasin	1.63 284		*e*P	Pg	20 51 44.9	+1.9
MSLP				*e*S	Sg	20 52 06.0	+1.8
CGP	Cagayan de Oro	2.16 234		‖*e*P	Pg	20 51 52.2	-0.9
CGP				*e*S	Sb	20 52 17.4	-1.5
OCLP	Ormoc	2.25 306		*e*P	Pg	20 51 55.2	+0.3
OCLP				*e*S	Sg	20 52 24.0	0.0
BUKP	Musuan	2.30 217		*e*P	Pg	20 51 56.7	+0.8
BUKP				*e*S	Sg	20 52 25.6	-0.2
LLP	Lapu-Lapu	2.53 284		‖*e*P	Pg	20 51 59.2	-1.1
LLP				*e*S	Sb	20 52 28.8	-0.7
TBP	Tagbilaran	2.56 269		*i* P	Pg	20 52 02.6	+1.6
TBP				*i* S	Sg	20 52 29.3	-0.4
KCP	Kidapawan	3.02 207		⇑*i*P	Pb	20 52 07.2	+0.7
KCP				*i* S	Sb	20 52 42.6	-1.3
DCPH	Dipolog City	3.28 250		‖*e*P	Pb	20 52 09.2	-1.5
DCPH				*e*S	Sn	20 52 45.1	+1.3
CNP	Catarman	3.28 328		*e*P	Pb	20 52 08.7	-2.0
CNP				*e*S	Sn	20 52 41.4	-2.5
CTBH	Cotabato--PC H	3.32 222		⇑*i*P	Pb	20 52 10.5	-0.9
PAGZ	Pagadian	3.57 239		*e*P	Pb	20 52 12.2	-3.5
DDMP	Don Marcelino,	3.68 192		*e*P	Pb	20 52 16.0	-1.5
DDMP				*e*S	Sg	20 53 08.1	-1.9
GUIM	Jordan	3.92 283		*e*P	Pn	20 52 16.3	+3.3
RCP	Roxas	4.08 297		⇑*e*P	Pb	20 52 21.4	-3.1
PVCP	Virac	4.46 330		*e*P	Pb	20 52 30.9	0.0
PVCP				*e*S	Sn	20 53 06.0	-6.9
LQP	Lukban	6.50 313		*e*P	Sn	20 54 07.0	+3.4
FITZ	Fitzroy Crossi	27.66 182		P	P	20 57 00.2	-1.0
	1.6nm,0.6s,baz=0.0,slow=10,SNR=1.7						
WRA	Warramunga Arr	30.49 165		P	P	20 57 27.1	+0.7
	2.3nm,1.4s,baz=345,slow=9.4,SNR=4.6						
CTA	Charters Tower	35.46 147		LR	LR	21 16 34.4	
	comp=Z,71nm,18.2s,baz=279,slow=43						
H11S3	WAKE ISLAND Hy	39.90 73		T	T	21 41 44.1	
	baz=262,slow=75,SNR=8.3						
H11S1	WAKE ISLAND Hy	39.91 73		T	T	21 41 44.8	
	baz=262,slow=75,SNR=6.5						
H11S2	WAKE ISLAND Hy	39.91 73		T	T	21 41 50.3	
	baz=262,slow=75,SNR=8.7						
H11N1	WAKE ISLAND Hy	40.25 71		T	T	21 42 16.5	
	baz=263,slow=74,SNR=24						
H11N2	WAKE ISLAND Hy	40.26 71		T	T	21 42 09.0	
	baz=263,slow=74,SNR=16						
H11N3	WAKE ISLAND Hy	40.27 71		T	T	21 42 15.2	
	baz=263,slow=74,SNR=24						
MKAR	Makanchi Array	52.57 323		P	P	21 00 27.2	+0.3
	0.3nm,0.3s,baz=120,slow=7.6,SNR=7.3						
ARCES	ARCESS Array B	84.76 340		P	P	21 03 48.6	+1.2
	0.7nm,0.8s,baz=76,slow=5.8,SNR=8.2						
FINES	FINESS Array B	86.45 332		P	P	21 03 56.3	+0.4
	0.7nm,0.4s,baz=86,slow=5.9,SNR=12						

IDC 27 21:08:52.6±0.7, 84°72N×4°10E, h0km, mb3.8/14, mb1 3.9/16, mb1mx3.7/54, mbtmp3.8/16, ML3.6/2, MS3.0/8, Ms1 3.0/8, ms1mx2.8/40, Error ellipse: s-maj=23.8km s-min=13.1km az=55.0

NEIC 27 21:08:52.8±2.9, 84°8N±0°1×±°, h10km±1km, mb4.0/10, Error ellipse: s-maj=21.3km s-min=14.6km az=41.0

IEPN 27 21:08:55.0, 84°69N×7°80E, h15km

ISC 27 21:08:53.3±0.6, 84°57N±0°06×3°80E±0°07, h10km, n64, σ2s48/69, mb3.9/17, MS3.0/6, 2C, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOR	Nord	3.84 230		Pn	Pn	21 09 55.9	+3.6
NOR	Nord	3.84 230		Pn	Pn	21 09 55.9	+3.6
KBS	Kingsbay	5.78 164		Pn	Pn	21 10 19.9	+1.0
KBS				Sn	Sn	21 11 21.8	-3.4
KBS	Kingsbay	5.78 164		*e*P	Pn	21 10 19.4	+0.4
KBS				*e*S	Sn	21 11 21.4	-3.8
KBS	Kingsbay	5.78 164		*e*P	Pn	21 10 19.4	+0.4
KBS				*e*S	Sn	21 11 21.4	-3.8
KBS	Kingsbay	5.78 164		Pn	Pn	21 10 20.1	+1.2
KBS				Sn	Sn	21 11 23.4	-1.8
KBS	Kingsbay	5.78 164		*e*P	Pn	21 10 20.1	+1.2
KBS				*e*S	Sn	21 11 22.8	-2.4
KBS				IAML		21 11 28.5	
	comp=Z,6.7nm,0.8s						
ZFI2	Zemlya Franca-	6.51 101		⇑*i*P	Pn	21 10 28.2	-0.7
ZFI2				*e*S	Sn	21 11 33.3	-10
	comp=Z,26nm,1.0s						
ZFI2	Zemlya Franca-	6.51 101		⇑*i*P	Pn	21 10 28.2	-0.7
ZFI2				*e*S	Sn	21 11 33.3	-10
	comp=Z,26nm,1.0s						
SPA0	Spitsbergen Ar	6.67 157		Pn	Pn	21 10 32.6	+1.6
	baz=4.8,slow=11						
SPA0	Spitsbergen Ar	6.67 157		*e*P	Pn	21 10 31.6	+0.5
SPA0				*e*S	Sn	21 11 42.5	-4.5
SPA0	Spitsbergen Ar	6.67 157		*e*P	Pn	21 10 31.6	+0.5
SPA0				*e*S	Sn	21 11 42.5	-4.5
SPA0	Spitsbergen Ar	6.67 157		Pn	Pn	21 10 32.6	+1.6
SPA0	Spitsbergen Ar	6.67 157		Pn	Pn	21 10 32.6	+1.6
	baz=4.8,slow=11						
SPA0				IAML		21 12 00.8	
	comp=Z,4.9nm,0.8s						
SPITS	Spitsbergen Ar	6.67 157		Pn	Pn	21 10 32.0	+0.9
	baz=5.2,slow=10.0,SNR=27						
SPITS				Sn	Sn	21 11 43.4	-3.6
	baz=9.7,slow=20,SNR=1.1						
SPITS				LR	LR	21 12 55.1	
	comp=Z,94nm,21.0s,baz=40,slow=36						
HSPB	Hornsund (broa	7.81 160		Pn	Pn	21 10 47.6	+1.0
HSPB	Hornsund (broa	7.81 160		*e*P	Pn	21 10 48.1	+1.4
HSPB				*e*S	Sn	21 12 08.3	-6.6
HSPB	Hornsund (broa	7.81 160		*e*P	Pn	21 10 48.1	+1.4
HSPB				*e*S	Sn	21 12 08.3	-6.6
HSPB	Hornsund (broa	7.81 160		*e*P	Pn	21 10 48.4	+1.7
DAG	Danmarks Havn	8.52 216		*i* P	Pn	21 11 00.0	+3.6
	comp=Z,3.5nm,0.7s						
HOPEN	Hopen	8.70 146		P	Pn	21 10 54.4	-4.5
HOPEN				S	Sn	21 12 22.4	-15
HOPEN	Hopen	8.70 146		P	Pn	21 10 54.4	-4.5
HOPEN				S	Sn	21 12 22.4	-15
BJO1	Bjornoya	10.42 157		Pn	Pn	21 11 23.1	+0.8
TULEG	Thule	12.99 276			Pn	21 11 53.9	-3.6
SUMG	Summit	13.96 237		Pn	Pn	21 12 10.4	-0.7
SUMG	Summit	13.96 237		*i* P	Pn	21 12 10.0	-1.1
	comp=Z,13nm,0.7s						
KEV	Kevo	15.49 149		Pn	Pn	21 12 33.0	+1.7
KEV				IAmb	IAmb	21 12 39.6	
	comp=Z,9.6nm,1.1s						
ARA0	ARCESS Array S	15.63 151		Pn	Pn	21 12 32.9	-0.4
	baz=354,slow=11						
ARA0	ARCESS Array S	15.63 151		Pn	Pn	21 12 32.9	-0.4
	baz=354,slow=11						
ARCES	ARCESS Array B	15.63 151		Pn	Pn	21 12 32.2	-1.1
	comp=Z,0.3nm,0.3s,baz=4.0,slow=10,SNR=7.2						
ARE0	ARCESS Array S	15.64 151		Pn	Pn	21 12 33.0	-0.3
RES	Resolute Bay	17.09 297		P	Pn	21 12 49.2	-2.6
	comp=Z,0.5nm,0.3s,baz=14,slow=12,SNR=7.1						
RES				LR	LR	21 19 32.1	
	comp=Z,70nm,19.9s,baz=322,slow=38						
RES	Resolute Bay	17.09 297		IAmb	IAmb	21 12 54.2	
	comp=Z,9.1nm,1.1s						
SFJD	Kangerlussuaq	20.42 246		P	Pn	21 13 32.0	-0.1
	comp=Z,4.7nm,0.8s,baz=8.0,slow=13,SNR=2.2						
SFJD	Kangerlussuaq	20.42 246		P	P	21 13 30.0	0.0
SFJD				IAmb	IAmb	21 13 38.1	
	comp=Z,10.0nm,1.1s						
LSH	Leshukonskoye	21.49 129		P	P	21 13 43.2	+1.7
	comp=Z,21nm,1.0s						
LSH	Leshukonskoye	21.49 129		P	P	21 13 43.2	+1.7
	comp=Z,21nm,1.0s						
NOA	NORSAR Array B	23.71 171		P	P	21 14 06.7	+1.9
	comp=Z,1.1nm,0.8s,baz=360,slow=10,SNR=5.2						
FIA0	FINESS Array S	23.74 153		P	P	21 14 07.9	+2.9
	baz=12,slow=14						
FIA0	FINESS Array S	23.74 153		P	P	21 14 07.9	+2.9
	baz=12,slow=14						
FINES	FINESS Array B	23.74 153		P	P	21 14 06.8	+1.8
	comp=Z,7.7nm,0.8s,baz=12,slow=12,SNR=5.3						
HFS	Hagfors	24.66 168		P	P	21 14 15.3	+1.7
	comp=Z,1.9nm,0.7s,baz=27,slow=7.0,SNR=5.1						
KLMR	Klimovskoe	25.06 138		*e*P	P	21 14 18.1	+1.0
	comp=Z,9.4nm,1.1s						
KLMR	Klimovskoe	25.06 138		*e*P	P	21 14 18.1	+1.0
	comp=Z,9.4nm,1.1s						
IVI	Ivigtut	25.92 241		P	P	21 14 25.9	+0.9
INK	Inuvik	26.10 325		P	P	21 14 25.8	-0.7
	comp=Z,1.5nm,0.7s,baz=6.5,slow=16,SNR=5.7						
INK				LR	LR	21 25 57.1	
	comp=Z,39nm,18.4s,baz=99,slow=39						
INK	Inuvik	26.10 325		P	P	21 14 24.5	-2.0
RDOG	Red Dog Mine	27.43 349		P	P	21 14 33.9	-4.6
KIRV	Kirov	28.01 127		LR	LR	21 27 07.2	
	comp=Z,28nm,18.7s,baz=4.4,slow=39						
ILAR	Eielson Array	30.26 335		P	P	21 15 03.3	-0.4
	comp=Z,0.8nm,0.9s,baz=3.9,slow=7.0,SNR=7.9						
YKA	Yellowknife Ar	30.62 307		P	P	21 15 07.4	+0.5
	comp=Z,0.3nm,0.6s,baz=4.7,slow=7.6,SNR=6.4						
YKA				LR	LR	21 26 42.3	
	comp=Z,22nm,18.2s,baz=0.0,slow=35						
TRF	Thorofare Moun	31.71 338		P	P	21 15 13.7	-3.0
TRF				IAmb	IAmb	21 15 16.5	
	comp=Z,2.5nm,1.0s						
CLL	Collm	33.49 170		*e*(sP)	sP	21 15 38.0	+3.0
AKASG	Malin Array Be	34.62 151		P	P	21 15 43.4	+1.5
	comp=Z,0.7nm,0.4s,baz=354,slow=8.4,SNR=4.1						
DLBC	Dease Lake	35.72 319		P	P	21 15 52.1	+0.7
	comp=Z,2.6nm,0.9s,baz=188,slow=9.9,SNR=4.4						
DLBC	Dease Lake	35.72 319		P	P	21 15 51.0	-0.4
DLBC				IAmb	IAmb	21 15 55.0	
	comp=Z,2.9nm,0.8s						
ZALV	Zalesovo Beam	35.73 91		P	P	21 15 52.5	+0.9
	comp=Z,0.4nm,0.4s,baz=4.3,slow=5.8,SNR=2.1						
ZALV				LR	LR	21 32 30.2	
	comp=Z,22nm,20.6s,baz=25,slow=40						
KBZ	Khabaz	42.33 137		P	P	21 16 49.2	+2.5
	comp=Z,1.8nm,0.9s,baz=263,slow=6.4,SNR=3.8						
MAKZ	Makanchi	42.53 96		P	P	21 16 49.5	+1.1
MAKZ				IAmb	IAmb	21 16 50.7	
	comp=Z,3.4nm,0.8s						
MK31	Makanchi Array	42.58 96		P	P	21 16 50.3	+1.5
MKAR	Makanchi Array	42.58 96		P	P	21 16 50.0	+1.1
	comp=Z,0.6nm,0.7s,baz=352,slow=7.6,SNR=6.4						
MKAR				LR	LR	21 37 25.4	
	comp=Z,19nm,18.7s,baz=345,slow=40						
SONM	Songino Array	43.81 72		LR	LR	21 35 27.2	
	comp=Z,22nm,19.2s,baz=342,slow=36						
TORD	Torodi Ar. Bea	71.47 182		P	P	21 20 15.5	+1.9
	comp=Z,0.8nm,0.8s,baz=351,slow=6.0,SNR=5.6						
CMAR	Chiang Mai Arr	72.23 83		P	P	21 20 18.1	-0.1
	comp=Z,0.7nm,0.7s,baz=350,slow=7.3,SNR=5.7						

IDC 27 21:19:01.6±0.6, 20°27S×169°62E, h124km±4km, mb4.1/13, mb1 4.3/14, mb1mx4.2/23, mbtmp4.5/14, MS3.4/6, Ms1 3.4/6, ms1mx3.1/21, Error ellipse: s-maj=17.1km s-min=10.8km az=133.0

NEIC 27 21:19:01.1±2.0, 20°16S±0°10×169°68E±0°09, h125km±5km, mb4.8/60, Error ellipse: s-maj=15.3km s-min=10.9km az=150.0

BGR 27 21:19:02.2±0.0, 19°54S×171°53E, h120km

GCMT 27 21:19:05.1±0.3, 20°42S±0°03×169°63E±0°02, h142km±4km, MW4.8/93, Moment Tensor Solution. s21,c23; s93,c118; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-1.69±.09; Mθθ 1.25±.12; Mφφ 0.44±.12; Mrθ 0.14±.08; Mθφ -1.20±.11; Mφr 1.15±.07; Best double couple: Mo2.25400×10^16 NP1:φs281.00000°, δ43.00000°, λ-132.00000°. NP2: φs152.00000°, δ59.00000°, λ-58.00000°. Principal axes: T 2.2020, Plg9.0000°, Azm219.0000°; N 0.1080, Plg27.0000°, Azm314.0000°; P -2.3060, Plg61.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 27 21:19:01.4±0.4, 20°20S±0°07×169°65E±0°06, h128km±3km, h128km:pP-P, n216, σ1961/216, mb4.8/46, 2C-8D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.52 238		*e*Pn	Pn	21 19 55.1	+0.3
	1μm,0.7s						
DZM				*e*Sn	Sn	21 20 34.3	-1.9
	12μm,1.2s						
DZM	Mont Dzumac	3.52 238		P	Pn	21 19 54.9	+0.1
	192nm,0.3s,baz=51,slow=19,SNR=904						
DZM				S	Sn	21 20 33.7	-2.4
	208nm,0.3s,baz=132,slow=22,SNR=4.7						
DZM				LR	LR	21 21 15.6	
	comp=Z,1μm,19.0s,baz=53,slow=39						
DZM	Mont Dzumac	3.52 238			Pn	21 19 55.1	+0.3
DZM					Sn	21 20 34.5	-1.6
MSVF	Nonsavu	8.32 74			Pn	21 20 59.0	-0.3
HNR	Honiara	14.23 317		LR	LR	21 26 37.3	
	comp=Z,107nm,20.1s,baz=176,slow=32						
HNR	Honiara	14.23 317		Pn	Pn	21 22 15.3	-1.9
OUZ	Umahuta	15.36 168		P	P	21 22 32.8	-0.3
EIDS	Eidsvold	17.87 250		P	P	21 23 00.8	0.0
HIZ	Hauiti	18.80 167		P	P	21 23 11.3	+0.4
AFI	Afiamalu	18.82 73		P	P	21 23 11.9	+0.5
AFI				IAmb	IAmb	21 23 13.5	
	comp=Z,50nm,1.2s						
MXZ	Matakaoa Point	18.87 158			P	21 23 11.2	-0.5
MXZ				IAmb	IAmb	21 23 29.0	
	comp=Z,66nm,1.3s						
ARMA	Armidale	19.18 234		P	P	21 23 16.2	+1.0
ARMA				IAmb	IAmb	21 23 22.6	
	comp=Z,54nm,0.9s						
BKZ	Black Stump Fm	19.80 164		P	P	21 23 21.9	+0.1
BFZ	Birch Farm	21.18 166		P	P	21 23 36.5	0.0
BFZ				IAmb	IAmb	21 23 55.7	
	comp=Z,42nm,1.0s						
SNZO	South Karori	21.48 170		P	P	21 23 41.6	+2.0
THZ	Tophouse	21.67 173		P	P	21 23 42.9	+1.1
THZ				IAmb	IAmb	21 23 51.2	
	comp=Z,62nm,1.4s						
PLWZ	Palliser	21.82 169		P	P	21 23 44.7	+1.2
CTA	Charters Tower	21.96 266		P	P	21 23 45.5	+0.5
	comp=Z,11nm,0.6s,baz=92,slow=12,SNR=12						
KHZ	Kahutara	22.39 172		P	P	21 23 49.4	+0.3
LTZ	Lake Taylor	22.62 175		P	P	21 23 52.8	+1.4
LTZ				IAmb	IAmb	21 23 53.1	
	comp=Z,29nm,0.8s						
OXZ	Oxford	23.14 176		P	P	21 23 55.1	-1.3
OXZ				IAmb	IAmb	21 23 57.4	
	comp=Z,31nm,0.8s						
FOZ	Fox Glacier	23.26 180		P	P	21 23 57.4	0.0
FOZ				IAmb	IAmb	21 24 01.3	
	comp=Z,61nm,1.3s						
RPZ	Rata Peaks	23.47 177		P	P	21 23 59.5	+0.1
	comp=Z,8.5nm,0.6s,baz=47,slow=17,SNR=2.5						
RPZ	Rata Peaks	23.47 177		P	P	21 23 59.9	+0.5
CAN	Canberra	23.61 226		P	P	21 24 02.8	+2.1
CAN				IAmb	IAmb	21 24 04.2	
	comp=Z,27nm,0.8s						
LBZ	Lake Benmore	24.12 179		P	P	21 24 05.2	0.0
PMG	Port Moresby	24.21 293		LR	LR	21 32 25.3	
	comp=Z,73nm,18.1s,baz=218,slow=33						
ODZ	Otahua Downs	24.79 178		P	P	21 24 11.3	0.0
STKA	Stephens Creek	27.67 239		P	P	21 24 38.6	+1.2
	comp=Z,8.0nm,0.7s,baz=81,slow=11,SNR=16						
STKA				LR	LR	21 34 41.7	
	comp=Z,86nm,21.7s,baz=32,slow=34						
STKA	Stephens Creek	27.67 239		P	P	21 24 38.8	+1.4
WRA	Warramunga Arr	33.13 264		P	P	21 25 25.5	-0.1
	comp=Z,2.1nm,0.8s,baz=96,slow=7.4,SNR=28						
WRA				pP	pP	21 25 50.9	-0.9
	comp=Z,1.6nm,0.5s,baz=91,slow=8.3,SNR=5.9						
WRA				PcP	PcP	21 28 06.3	+0.4
	comp=Z,2.5nm,0.9s,baz=95,slow=2.5,SNR=5.6						
WRA				S	S	21 30 33.9	-1.8
	comp=Z,1.1nm,1.0s,baz=92,slow=14,SNR=5.2						
JAY	Jayapura	33.27 298		LR	LR	21 38 10.5	
	comp=Z,45nm,19.6s,baz=320,slow=34						
AS31	Alice Springs	33.28 257		P	P	21 25 27.6	+0.7
TBI	Tubuai	38.02 102		*e*LR	LR	21 36 42.0	
	comp=Z,122nm,36.8s						
PPT2	Papeete2	38.

LZH					pP	pP	21 31 47.3	-0.8	
LZH					sP	sP	21 32 13.5	+12	
LZH					PP	**PP**	**21 34 36.8**	**+6.0**	
LZH					pmax	pmax			
	comp=Z,21nm,1.4s								
LZH					pmax	pmax			
	comp=Z,93nm,8.7s								
SYO	**Syowa Base**	**84.12**	**196**	ǁ *i*P	**P**	**21 31 18.0**	**+0.4**		
SYO	**Syowa Base**	**84.12**	**196**	ǁ *e*PcP	**PcP**	**21 31 20.4**	**-0.8**		
WDC	**Whiskeytown Da**	**87.27**	**45**	P	**P**	**21 31 33.6**	**0.0**		
WDC				IAmb	IAmb	21 31 37.9			
	comp=Z,14nm,1.3s								
ORV	**Oroville**	**87.47**	**46**	P	**P**	**21 31 32.3**	**-2.3**		
ORV				IAmb	IAmb	21 31 37.7			
	comp=Z,14nm,1.3s								
CMB	**Columbia Colle**	**87.51**	**48**	P	**P**	**21 31 33.4**	**-1.5**		
CMB				IAmb	IAmb	21 31 37.8			
	comp=Z,22nm,1.6s								
AFDM	**Forest Hills D**	**87.54**	**47**	P	**P**	**21 31 33.2**	**-1.8**		
ISA	**Isabella, Lake**	**87.79**	**51**	P	**P**	**21 31 35.5**	**-0.8**		
ISA				IAmb	IAmb	21 31 39.4			
	comp=Z,15nm,1.2s								
ULN	**Ulaanbaatar**	**87.86**	**323**	P	**P**	**21 31 36.3**	**-0.2**		
ULN				IAmb	IAmb	21 32 12.7			
	comp=Z,8.3nm,0.9s								
GTA	**Gaotai**	**88.06**	**313**	*e*P	**P**	**21 31 39.0**	**+1.4**		
GTA				pP	pP	21 32 11.0	+0.9		
GTA				sP	sP	21 32 27.0	+3.7		
GTA				pmax	pmax				
	comp=Z,6.0nm,1.0s								
GTA				pmax	pmax				
	comp=Z,96nm,6.2s								
GTA				LR	LR				
	comp=N,56nm,17.1s								
GTA				LR	LR				
	comp=E,51nm,19.0s								
GTA				LR	LR				
	comp=Z,48nm,17.1s								
SHL	**Shillong**	**88.14**	**298**	P	**P**	**21 31 37.8**	**-0.5**		
SONM	**Songino Array**	**88.22**	**323**	P	**P**	**21 31 39.4**	**+1.3**		
	comp=Z,3.8nm,0.9s,baz=141,slow=5.2,SNR=22								
SONM				pP	**pP**	**21 32 10.3**	**-0.2**		
	comp=Z,5.3nm,0.8s,baz=149,slow=4.3,SNR=12								
SNAA	**Sanae**	**88.22**	**182**	P	**P**	**21 31 37.4**	**-0.3**		
SNAA	**Sanae**	**88.22**	**182**	P	**P**	**21 31 37.0**	**-0.8**		
SNAA				IAmb	IAmb	21 31 38.4			
	comp=Z,12nm,0.9s								
OMMB	**Old Mammoth Mi**	**88.29**	**49**	IAmb	IAmb	21 31 42.1			
	comp=Z,16nm,1.5s								
WAKR	**Walker**	**88.39**	**48**	P	**P**	**21 31 39.3**	**+0.1**		
WAKR				IAmb	IAmb	21 31 42.6			
	comp=Z,14nm,1.3s								
VNA3	**Neumayer Olymp**	**88.79**	**180**	P	**P**	**21 31 39.9**	**-0.5**		
GSC	**Goldstone, Bar**	**88.85**	**52**	IAmb	IAmb	21 31 45.3			
	comp=Z,23nm,1.8s								
VNA2	**Neumayer--Watz**	**89.09**	**181**	P	**P**	**21 31 42.0**	**+0.2**		
NVAR	**Mina Array Bea**	**89.15**	**48**	P	**P**	**21 31 43.7**	**+0.9**		
	comp=Z,2.6nm,0.8s,baz=230,slow=8.9,SNR=7.9								
NVAR				pP	**pwP**	**21 32 17.2**	**-0.1**		
	comp=Z,0.5nm,0.4s,baz=226,slow=9.0,SNR=3.3								
NV11	**Mina Array Sit**	**89.26**	**48**	IAmb	IAmb	21 31 46.1			
	comp=Z,13nm,1.3s								
KVN	**Kaiserville**	**89.57**	**48**	IAmb	IAmb	21 31 47.7			
	comp=Z,13nm,1.4s								
PINE	**Pine Mountain**	**89.86**	**43**	IAmb	IAmb	21 31 49.2			
	comp=Z,10nm,0.8s								
LSA	**Lhasa**	**90.36**	**302**	P	**P**	**21 31 49.5**	**+0.5**		
PGC	**Sidney**	**90.72**	**38**	P	**P**	**21 31 47.9**	**-1.7**		
ILAR	**Eielson Array**	**91.03**	**17**	P	**P**	**21 31 50.2**	**-0.5**		
	comp=Z,0.7nm,0.6s,baz=234,slow=4.8,SNR=11								
ILAR				pP	**pP**	**21 32 23.0**	**-0.1**		
	comp=Z,0.6nm,0.7s,baz=240,slow=4.2,SNR=2.8								
U15A	**North Rim**	**92.65**	**52**	IAmb	IAmb	21 32 35.8			
	comp=Z,7.7nm,1.1s								
EGAK	**Eagle**	**92.71**	**19**	P	**P**	**21 31 58.6**	**+0.2**		
EGAK				IAmb	IAmb	21 31 59.9			
	comp=Z,6.3nm,1.1s								
DLBC	**Dease Lake**	**92.72**	**27**	P	**P**	**21 31 56.5**	**-2.2**		
DLBC				IAmb	IAmb	21 32 01.2			
	comp=Z,6.6nm,1.1s								
WUAZ	**Wupatki**	**92.99**	**53**	P	**P**	**21 31 58.7**	**-2.0**		
WUAZ				IAmb	IAmb	21 32 37.5			
	comp=Z,4.8nm,0.9s								
TXAR	**Lajitas Array**	**96.89**	**61**	P	**P**	**21 32 19.6**	**+1.1**		
	comp=Z,0.5nm,0.8s,baz=243,slow=5.5,SNR=3.7								
INK	**Inuvik**	**97.33**	**18**	P	**P**	**21 32 18.1**	**-1.4**		
INK				IAmb	IAmb	21 32 20.5			
	comp=Z,6.3nm,1.4s								
WMQ	**Urumqi**	**98.15**	**314**	*e*P	Pdif	21 32 25.0	+1.2		
WMQ				pmax	pmax				
	comp=Z,19nm,0.9s								
WMQ				pmax	pmax				
	comp=Z,78nm,4.1s								
WMQ				LR	LR				
	comp=N,68nm,15.7s								
WMQ				LR	LR				
	comp=E,230nm,7.9s								
WMQ				LR	LR				
	comp=Z,2μm,28.8s								
YKA	**Yellowknife Ar**	**101.35**	**27**	PKKP		21 48 55.0			
	comp=Z,0.2nm,0.5s,baz=48,slow=0.9,SNR=3.0								
MKAR	**Makanchi Array**	**102.69**	**315**	P	**Pdif**	**21 32 44.5**	**+0.5**		
	comp=Z,0.4nm,0.7s,baz=94,slow=6.2,SNR=5.4								
MKAR				pP	**pPdif**	**21 33 16.9**	**+0.5**		
	comp=Z,0.5nm,0.8s,baz=95,slow=6.3,SNR=2.7								
ZALV	**Zalesovo Beam**	**103.11**	**323**	Pdiff	**Pdif**	**21 32 46.1**	**+0.5**		
	comp=Z,0.3nm,0.4s,baz=92,slow=4.8,SNR=1.5								
O54A	**Avella**	**117.81**	**54**		**PKPdf**	**21 37 31.5**	**-1.3**		
BOSA	**Boshof**	**120.52**	**216**	PKP	**PKPdf**	**21 37 38.8**	**+0.1**		
	comp=Z,2.2nm,0.9s,baz=148,slow=19,SNR=2.2								
ARCES	**ARCESS Array B**	**126.09**	**345**	PKP	**PKPdf**	**21 37 47.3**	**-0.6**		
	comp=Z,1.1nm,0.4s,baz=83,slow=2.2,SNR=11								
BDFB	**Brasilia**	**128.63**	**131**	PKP	**PKPdf**	**21 37 53.8**	**-0.6**		
	comp=Z,2.5nm,0.5s,baz=93,slow=2.9,SNR=5.3								
FINES	**FINESS Array B**	**131.62**	**338**	PKP	**PKPdf**	**21 37 58.1**	**-0.4**		
	comp=Z,2.2nm,0.8s,baz=72,slow=2.8,SNR=3.3								
MORC	**Moravsky Berou**	**143.09**	**330**	*e*PKP	PKPbc	21 38 17.6	+0.3		
BODT	**Bodrum**	**143.20**	**305**	P	**PKiKP**	**21 38 24.1**	**+0.1**		
KRLC	**Kraliky**	**143.24**	**331**	*e*PKP	PKPbc	21 38 18.3	+0.6		
DPC	**Dobruska-Polom**	**143.25**	**331**	*e*PKP	PKPbc	21 38 18.3	+0.6		
UPC	**Upice**	**143.28**	**332**	*e*PKP	PKPbc	21 38 18.5	+0.7		
VYHS	**Vyhne**	**143.30**	**327**	*e*PKP	**PKPdf**	**21 38 20.1**	**-0.4**		
KOSK	**Kos Island**	**143.55**	**305**	P	**PKiKP**	**21 38 28.4**	**+3.8**		
JAVC	**Velka Javorina**	**143.64**	**328**	*e*PKP	**PKPdf**	**21 38 20.9**	**-0.2**		
KARP	**Karpathos**	**143.73**	**303**		PKPbc	21 38 20.0	+0.4		
VRAC	**Vranov**	**143.86**	**330**	*e*PKP	PKPbc	21 38 20.4	+0.9		
PVCC	**Panska Ves**	**143.89**	**333**	*e*PKP	PKPbc	21 38 20.3	+0.8		
BRG	**Berggiesshubel**	**143.90**	**334**	*i* PKP	PKPbc	21 38 20.4	+0.9		
	comp=Z,23nm,0.8s								
BRG				*e*pPKP	pPKPdf	21 38 55.6	+0.3		
	comp=Z,7.1nm,0.8s								
BRG	**Berggiesshubel**	**143.90**	**334**	*e*PKPbc	PKPbc	21 38 20.5	+1.0		
	baz=35,slow=3.1								
CLL	**Collm**	**143.95**	**335**	*i* PKPdf	**PKPdf**	**21 38 21.0**	**-0.5**		
	comp=Z,20nm,0.9s								
CLL				*e*pPKPdf	**pPKPdf**	**21 38 55.0**	**-0.4**		
CLL	**Collm**	**143.95**	**335**	*e*PKPbc	**PKPdf**	**21 38 21.4**	**0.0**		
	baz=35,slow=3.1								
VTS	**Vitosha**	**144.01**	**316**	*i* P	PKPbc	21 38 21.2	+0.9		
NRDL	**Niedersach Rie**	**144.07**	**339**	*e*PKPbc	**PKPdf**	**21 38 20.9**	**-0.6**		
	baz=35,slow=3.1								
FBE	**Freiberg**	**144.11**	**334**	*e*PKPbc	**PKPdf**	**21 38 21.3**	**-0.4**		
	baz=35,slow=3.1								
KRUC	**Moravsky**	**144.12**	**330**	*e*PKP	PKPbc	21 38 21.1	+0.9		
KRUC				*e*		21 38 53.5			
MMB	**Musomiste**	**144.15**	**314**	*i* P	PKPbc	21 38 21.2	+0.6		
ASSE	**Asse, Remlinge**	**144.17**	**338**	*e*PKPbc	**PKPdf**	**21 38 21.3**	**-0.4**		
	baz=35,slow=3.1								
GOPC	**GO Pecny, Ondr**	**144.25**	**332**	*e*PKP	PKPbc	21 38 21.3	+0.7		
PRA	**Prague**	**144.29**	**332**	*e*PKP	**PKPdf**	**21 38 21.9**	**-0.2**		
PRU	**Pruhonice**	**144.31**	**332**	*e*PKP	PKPbc	21 38 21.6	+0.8		
PRU				*e*pPKP	pPKPdf	21 38 54.0	-2.1		
SRS	**Serrai**	**144.45**	**313**	P	**PKPab**	**21 38 14.7**	**-6.6**		
KKB	**Krupnik**	**144.46**	**315**	*i* P	**PKPdf**	**21 38 22.4**	**-0.3**		
NEUB	**Neuenburg**	**144.51**	**336**	*e*PKPbc	**PKPdf**	**21 38 22.7**	**+0.3**		
	baz=35,slow=3.1								
OUR	**Ouranopolis**	**144.51**	**312**	P	**PKPab**	**21 38 16.0**	**-5.5**		
CLZ	**Clausthal**	**144.51**	**338**	*e*PKPbc	**PKPdf**	**21 38 22.7**	**+0.2**		
	baz=35,slow=3.1								
PBCC	**Pribram**	**144.77**	**332**	*e*PKP	**PKPdf**	**21 38 23.2**	**+0.2**		
PBCC				*ex*	x	21 38 55.6			
FRGS	**Fruska Gora**	**144.80**	**322**	ǁ *i*P	**PKPdf**	**21 38 23.2**	**0.0**		
MORH	**Mrgy, Hungar**	**144.83**	**324**	ǁ *i*P	PKPbc	21 38 22.8	+0.3		
IOSP	**Ios island**	**144.85**	**306**	P	**PKPab**	**21 38 18.3**	**-4.6**		
TANN	**Tannenbergstha**	**144.86**	**334**	*e*PKPbc	**PKPdf**	**21 38 23.9**	**+0.7**		
	baz=35,slow=3.1								
TANN				*e*pPKPbc	**pPKPdf**	**21 38 55.8**	**-1.3**		
KNT	**Kendrikon**	**144.90**	**314**	P	PKPbc	21 38 18.7	-4.2		
GTTG	**Gottingen**	**144.90**	**338**	*e*PKPbc	**PKPdf**	**21 38 24.1**	**+1.0**		
	baz=35,slow=3.1								
PLN	**Plauen**	**144.93**	**335**	*e*PKPbc	**PKPdf**	**21 38 24.2**	**+1.0**		
	baz=35,slow=3.1								
PLN				*e*pPKPbc	**pPKPdf**	**21 38 56.1**	**-1.1**		
GUNZ	**Gunzen**	**144.95**	**335**	*e*PKPbc	**PKPdf**	**21 38 24.5**	**+1.2**		
	baz=35,slow=3.1								
WERN	**Wernitzgruen**	**144.99**	**334**	*e*PKPbc	**PKPdf**	**21 38 24.5**	**+1.2**		
	baz=35,slow=3.1								
IBBN	**Ibbenburen**	**144.99**	**341**	*e*PKPbc	**PKPdf**	**21 38 24.0**	**+0.8**		
	baz=35,slow=3.1								
NKC	**Novy Kostel**	**145.00**	**334**	*e*PKP	**PKPdf**	**21 38 24.4**	**+1.0**		
NKC				*e*pPKP	pPKPbc	21 38 56.3	-0.3		
MOX	**Moxa**	**145.01**	**335**	*e*PKPbc	**PKPdf**	**21 38 24.1**	**+0.8**		
	baz=35,slow=3.1								
NPS	**Neapolis**	**145.02**	**303**	P	**PKPbc**	**21 38 21.0**	**-2.5**		
VAY	**Valandovo**	**145.05**	**314**	*i* P	**PKPab**	**21 38 23.7**	**+0.2**		
VAY	**Valandovo**	**145.05**	**314**	*i* P	**PKPab**	**21 38 23.7**	**+0.2**		
CONA	**Conrad Observa**	**145.16**	**329**	*i* PKPdf	**PKPdf**	**21 38 25.1**	**+1.2**		
	comp=Z,34nm,0.9s,SNR=20								
CONA				*i* pPKPdf	**pPKPdf**	**21 38 58.1**	**+0.2**		
	comp=Z,13nm,0.8s								
DIVS	**Divibare**	**145.29**	**320**	ǁ *i*P	**PKPab**	**21 38 24.8**	**+0.4**		
MANZ	**Manzenberg**	**145.34**	**334**	*e*PKPbc	**PKPab**	**21 38 25.5**	**+1.1**		
	baz=35,slow=3.1								
MANZ				*e*pPKPbc	pPKPab	21 38 57.3	-0.1		
KHC	**Kasperske Hory**	**145.36**	**332**	*e*PKP	**PKPbc**	**21 38 24.4**	**+0.2**		
KHC				*e*pPKP	pPKPab	21 38 57.0	-0.5		
KSTL	**Kastelli Herak**	**145.44**	**303**	P	**PKPdf**	**21 38 24.1**	**-0.4**		
ROTZ	**Rotzenmuhle**	**145.46**	**334**	*e*PKPbc	**PKPab**	**21 38 25.6**	**+0.8**		
	baz=35,slow=3.1								
UBBA	**Unterbreizbach**	**145.49**	**337**	*e*PKPbc	**PKPab**	**21 38 25.8**	**+1.1**		
	baz=35,slow=3.1								
SKO	**Skopje**	**145.49**	**316**	*i* P	**PKPab**	**21 38 25.9**	**+0.8**		
SKO	**Skopje**	**145.49**	**316**	*i* P	**PKPab**	**21 38 25.9**	**+0.8**		
GEC2	**GERESS Array S**	**145.52**	**332**	*e*PKPbc	**PKPab**	**21 38 25.7**	**+0.5**		
	baz=35,slow=3.1								
GERES	**GERESS Array B**	**145.52**	**332**	PKPbc	**PKPab**	**21 38 25.2**	**0.0**		
	comp=Z,12nm,0.9s,baz=33,slow=3.2,SNR=60								
GERES				pPKPbc	pPKPab	21 38 57.9	-0.3		
	comp=Z,4.6nm,0.8s,baz=46,slow=3.9,SNR=6.6								
LIT	**Litokhoron**	**145.64**	**313**	P	**PKPdf**	**21 38 17.4**	**-7.4**		
LIT	**Litokhoron**	**145.64**	**313**		**PKPbc**	**21 38 25.6**	**+0.3**		
WET	**Wettzell**	**145.66**	**333**	*e*PKPbc	**PKPab**	**21 38 26.6**	**+1.1**		
	baz=35,slow=3.1								
BBLS	**Lazići**	**145.77**	**320**	ǁ *i*P	**PKPab**	**21 38 26.6**	**+0.4**		
ARSA	**Arzberg**	**145.79**	**328**	*e*PKPab	**PKPab**	**21 38 26.0**	**-0.1**		
	comp=Z,8.4nm,1.2s								
ARSA				*i* pPKPab	pPKPab	21 38 59.4	+0.2		
	comp=Z,18nm,1.6s								
LRSO	**Larissa Observ**	**145.89**	**312**	P	**PKPdf**	**21 38 22.6**	**-2.6**		
BUG	**Bochum--Univer**	**145.90**	**340**	*e*PKPbc	**PKPab**	**21 38 26.3**	**0.0**		
	baz=35,slow=3.1								
GRF	**Grafenberg Arr**	**145.92**	**335**	*e*PKPbc	**PKPab**	**21 38 27.0**	**+0.5**		
	baz=35,slow=3.1								
GRF				*e*pPKPbc	pPKPbc	21 38 59.1	-0.2		
RUDO	**Rudo**	**145.93**	**320**	*e*P	**PKPbc**	**21 38 26.4**	**+0.3**		
MOA	**Molln**	**145.98**	**330**	*i* PKPab	**PKPab**	**21 38 27.5**	**+0.6**		
	comp=Z,12nm,0.8s,SNR=6.5								
MOA				*i* pPKPab	pPKPab	21 39 00.3	+0.4		
	comp=Z,22nm,1.3s								
FNA	**Florina**	**146.10**	**314**		**PKPab**	**21 38 27.6**	**+0.1**		
PHP	**Peshkopia**	**146.28**	**316**	P	**PKPdf**	**21 38 20.6**	**-5.3**		
OHR	**Ohrid**	**146.33**	**315**	*i* P	**PKPab**	**21 38 28.1**	**-0.3**		
OHR	**Ohrid**	**146.33**	**315**	*i* P	**PKPab**	**21 38 28.1**	**-0.3**		
SOKA	**Soboth**	**146.43**	**328**	*i* PKPab	**PKPbc**	**21 38 28.2**	**+0.7**		
	comp=Z,9.9nm,1.0s								
TNS	**Taunus Mts**	**146.54**	**338**	*e*PKPbc	**PKPab**	**21 38 29.1**	**+0.2**		
	baz=35,slow=3.1								
KNDR	**Palaiochora Ch**	**146.54**	**304**	P	**PKPdf**	**21 38 26.2**	**-0.2**		
BLY	**Banja Luka**	**146.54**	**323**	ǁ *i*P	**PKPbc**	**21 38 28.4**	**+0.6**		
KALE	**Kalithea**	**146.60**	**310**	P	**PKPdf**	**21 38 21.0**	**-5.5**		
PDG	**Podgorica**	**146.65**	**318**	*e*P	**PKPbc**	**21 38 28.5**	**+0.3**		
ANX	**Ano Chora**	**146.68**	**310**	P	**PKPdf**	**21 38 21.4**	**-5.3**		
KLV	**Kalavryta, Ach**	**146.73**	**309**	P	**PKPdf**	**21 38 22.4**	**-4.4**		
AHRW	**Bad Neuenahr-A**	**146.73**	**340**	*e*PKPbc	**PKPab**	**21 38 29.4**	**-0.2**		
	baz=35,slow=3.1								
RJOB	**Jochberg**	**146.75**	**331**	*e*PKPbc	**PKiKP**	**21 38 31.0**	**+0.1**		
	baz=35,slow=3.1								
CRES	**Cresnjev**	**146.79**	**326**	*e*P	**PKPbc**	**21 38 28.4**	**-0.1**		
OBKA	**Obir**	**146.79**	**328**	*i* PKiKP	**PKPab**	**21 38 30.7**	**+0.6**		
	comp=Z,5.1nm,0.8s								
DRME	**Dracevica, Mon**	**146.82**	**318**	*e*P	**PKPbc**	**21 38 28.9**	**+0.2**		
BRY	**Bratogost**	**146.84**	**320**	*e*P	**PKPbc**	**21 38 29.1**	**+0.2**		
TRIP	**Tripoli**	**146.84**	**308**	P	**PKPdf**	**21 38 22.4**	**-4.6**		
PVO	**Paravola**	**146.95**	**311**	P	**PKPbc**	**21 38 28.4**	**-0.8**		
KBA	**Koelnbreinsper**	**146.97**	**330**	*i* PKPab	**PKPbc**	**21 38 29.5**	**+0.3**		
	comp=Z,6.3nm,1.1s								
KBA				*i* pPKPab	pPKPbc	21 39 02.6	-0.2		
	comp=Z,4.2nm,0.8s								
MEM	**Membach**	**147.01**	**341**	PKPab	**PKPbc**	**21 38 29.6**	**+0.7**		
HCY	**Herceg Novi**	**147.12**	**319**	*e*P	**PKPbc**	**21 38 28.6**	**-0.9**		
LJU	**Ljubljana**	**147.12**	**327**	ǁ *i*P	**PKPbc**	**21 38 29.8**	**+0.4**		
MYKA	**Terra Mystica**	**147.15**	**329**	*i* PKPbc	**PKPbc**	**21 38 29.6**	**0.0**		
	comp=Z,7.3nm,0.8s								
MYKA				*i* pPKPdf	**pPKPdf**	**21 38 59.9**	**-1.3**		
	comp=Z,7.0nm,1.2s								
BSTI	**Sart Tilman**	**147.17**	**341**	PKPab	**PKPbc**	**21 38 30.4**	**+1.0**		
PDO	**Prodromos**	**147.20**	**311**	P	**PKPdf**	**21 38 28.4**	**+1.0**		
CEY	**Cerknica**	**147.38**	**327**	ǁ *i*P	**PKPbc**	**21 38 30.3**	**+0.1**		
TSLK	**Tsoukalades, L**	**147.47**	**312**	P	**PKPbc**	**21 38 29.5**	**-1.1**		
LKD2	**Lefkada island**	**147.49**	**311**	P	**PKPbc**	**21 38 30.7**	**0.0**		
EVGI	**Lefkada island**	**147.56**	**311**	P	**PKPdf**	**21 38 29.5**	**+1.4**		
WATA	**Walderalm**	**147.59**	**332**	*i* PKPab	**PKPbc**	**21 38 31.4**	**+0.5**		
	comp=Z,8.9nm,1.1s								
WATA				*i* pPKiKP	**pPKPab**	**21 39 05.8**	**-0.6**		
	comp=Z,3.8nm,0.6s								
ABTA	**Abfaltersbach**	**147.60**	**330**	*i* PKPbc	**PKPbc**	**21 38 31.0**	**+0.2**		
	comp=Z,7.4nm,1.0s								
ABTA				*i* pPKPbc	**pPKPbc**	**21 39 03.8**	**-0.6**		
	comp=Z,9.3nm,0.8s								
WTTA	**Wattenberg**	**147.62**	**332**	*i* PKPab	**PKPbc**	**21 38 31.7**	**+0.7**		
	comp=Z,11nm,0.9s								
WTTA				*i* pPKPab	**pPKPbc**	**21 39 04.6**	**0.0**		
	comp=Z,20nm,1.8s								
BMRD	**Maredsous**	**147.66**	**342**	PKPab	**PKPbc**	**21 38 31.0**	**+0.3**		
BMRD					pPKP	**pPKPbc**	**21 39 04.3**	**0.0**	
KFL	**Anninata**	**147.69**	**310**	P	**PKPdf**	**21 38 27.8**	**-0.5**		
FSL	**Fiskardo**	**147.70**	**311**	P	**PKPbc**	**21 38 31.6**	**+0.4**		
WLF	**Walferdange**	**147.79**	**340**	PKPab	**PKiKP**	**21 38 32.4**	**-0.6**		
WLF	**Walferdange**	**147.79**	**340**	*e*PKPbc	**PKiKP**	**21 38 32.9**	**-0.1**		
	baz=35,slow=3.1								
MOTA	**Moosalm**	**147.80**	**332**	*i* PKiKP	**PKPbc**	**21 38 32.1**	**+0.7**		
	comp=Z,13nm,0.9s,SNR=5.8								
MOTA				*i* pPKPab	**pPKPbc**	**21 39 04.9**	**-0.2**		
	comp=Z,8.7nm,0.9s								
VLS	**Valsamata**	**147.80**	**310**	P	**PKPdf**	**21 38 28.0**	**-0.5**		
RETA	**Reutte**	**147.84**	**333**	*i* PKiKP	**PKPbc**	**21 38 32.0**	**+0.6**		
	comp=Z,6.6nm,1.0s								
SQTA	**Sankt Quirin**	**147.84**	**332**	*i* PKiKP	**PKPbc**	**21 38 32.4**	**+0.9**		
	comp=Z,9.5nm,0.6s,SNR=6.0								
SQTA				*i* pPKPab	**pPKPbc**	**21 39 05.3**	**+0.1**		
	comp=Z,7.6nm,0.7s								
KRI1	**kERI**	**147.85**	**309**	P	**PKPbc**	**21 38 32.2**	**+0.6**		
DOU	**Dourbes**	**147.89**	**342**	PKPbc	**PKPbc**	**21 38 31.1**	**-0.3**		
DOU				PKPab	**PKiKP**	**21 38 32.4**	**-0.8**		
DOU				pPKP	**pPKPbc**	**21 39 04.3**	**-0.7**		
UBR	**Ueberruh**	**147.96**	**334**	*e*PKPbc	**PKPbc**	**21 38 32.3**	**+0.6**		
	baz=35,slow=3.1								
BFO	**Black Forest**	**148.15**	**336**		**PKPbc**	**21 38 32.5**	**+0.3**		
FETA	**Feichten**	**148.21**	**332**	*i* PKiKP	**PKiKP**	**21 38 33.5**	**-0.6**		
	comp=Z,12nm,0.8s								
FETA				*i* pPKiKP	**pPKPbc**	**21 39 06.4**	**+0.2**		
	comp=Z,7.8nm,0.9s								
DAVA	**Damuels**	**148.37**	**333**	*i* PKiKP	**PKPbc**	**21 38 33.8**	**+0.9**		
	comp=Z,17nm,0.9s								
DAVA				*i* pPKiKP	**pPKPbc**	**21 39 06.5**	**-0.1**		
	comp=Z,13nm,1.1s								
FUORN	**Ofenpass-Fuorn**	**148.72**	**332**		**PKPbc**	**21 38 34.8**	**+0.8**		
INTR	**Introdacqua**	**150.12**	**322**		**PKPbc**	**21 38 37.7**	**+0.3**		
DBIC	**Dimbokro**	**165.53**	**202**	PKPab	**PKPab**	**21 39 50.5**	**+0.1**		
	comp=Z,10nm,0.9s,baz=94,slow=3.8,SNR=4.8								
TORD	**Torodi Ar. Bea**	**166.50**	**241**	PKP	**PKPdf**	**21 38 51.8**	**-0.6**		
	comp=Z,0.8nm,0.8s,baz=90,slow=0.7,SNR=4.8								
TORD				PKPab	**PKPab**	**21 39 55.1**	**+0.2**		
	comp=Z,0.6nm,0.7s,baz=114,slow=3.2,SNR=2.4								

MAN 27 21:23:28.8, 10.81N×122.65E, h80km, mb4.5, ML3.4, MS3.2, 5D, Panay

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.20**	**198**	*e*P		Pn	21 23 40.8	+0.2
GUIM				*e*S		Sn	21 23 51.4	+2.2
JAP	**San Jose, Anti**	**0.69**	**265**	ǁ *e*P		Pn	21 23 46.5	+2.1
RCP	**Roxas**	**0.75**	**7**	ǁ *e*P		Pn	21 23 46.9	+1.9
RCP				*e*S		Sn	21 23 59.6	+2.5
CNOP	**Candoni, Negro**	**0.98**	**181**	*e*P		Pn	21 23 48.5	+0.9
CNOP				*e*S		Sn	21 24 03.4	+1.8
LLP	**Lapu-Lapu**	**1.38**	**111**	ǁ *e*P		Pn	21 23 53.1	+0.5
LLP				*e*S		Sn	21 24 10.5	-0.1
SNPH	**Sibulan**	**1.57**	**158**	ǁ *i*P		Pn	21 23 56.6	+1.5
SNPH				*i* S		Sn	21 24 16.7	+1.8
CUYO	**Cuyo Island**	**1.60**	**272**	*e*P		Pn	21 23 56.6	+1.1
CUYO				*e*S		Sn	21 24 16.5	+0.8
TBP	**Tagbilaran**	**1.63**	**133**	*i* P		Pn	21 24 00.9	+5.1
OTRP	**Odiongan**	**1.66**	**338**	*e*P		Pn	21 23 56.7	+0.5
OTRP				*e*S		Sn	21 24 17.7	+0.7
DCPH	**Dipolog City**	**2.32**	**163**	ǁ *e*P		Pn	21 24 05.6	+0.6
DCPH				*e*S		Sn	21 24 33.1	+0.4
PAGZ	**Pagadian**	**3.03**	**166**	*e*P		Pn	21 24 15.4	+0.8
PAGZ				*e*S		Sn	21 24 47.2	-2.7
ENPP	**El Nido**	**3.19**	**277**	*e*P		Pn	21 24 18.9	+2.1
ENPP				*e*S		Sn	21 24 52.8	-1.0

*IDC **27** 21:45:01.4±1.8, 25.08N×98.40E, h0km, mb3.5/2, mb1 3.5/3, mb1mx3.2/36, mbtmp3.4/3, ML3.7/1, MS3.6/1, Ms1 3.6/1, ms1mx2.5/33, Error ellipse: s-maj=61.7km s-min=18.1km az=80.0*

**ISC 27 21:45:01.8±2.7, 25.1N±0.3×9.8

baz=201
TWD eS Sb 21 51 14.9 -0.5
baz=201
PCYT Pengchaiyu 0.83 6 eP Pb 21 51 05.3 0.0
baz=10.0
LIOB Emei 0.89 260 eP Pb 21 51 06.8 +0.6
baz=258
NSTT Nanjuang 0.90 260 eP Pb 21 51 07.2 +0.7
baz=257
WHF Hehuan Shan 0.92 225 eP Pb 21 51 07.3 +0.3
baz=221
JYNG Yonagunijimaku 0.95 111 P Pb 21 51 07.7 +0.5
JYNG eS Sb 21 51 20.3 +0.5
YOJ Yonaguni jima 1.00 109 eP Pb 21 51 08.2 +0.1
baz=108
YOJ Yonaguni jima 1.00 109 P Pb 21 51 08.1 0.0
CHGB Renai 1.03 225 eP Pb 21 51 08.6 -0.3
baz=222
CHGB eS Sb 21 51 23.1 +0.5
baz=222
WHP Taichung City 1.07 241 eP Pb 21 51 09.8 +0.3
baz=238
ESL Shilin 1.10 207 eP Pb 21 51 09.7 -0.1
baz=203
VWDT VWDT 1.29 216 eP Pn 21 51 13.3 +0.6
baz=213
SMLT Sun Moon Lake 1.34 227 eP Pb 21 51 14.9 +0.9
baz=224
TYC Yuchr 1.35 229 eP Pn 21 51 14.1 +0.5
baz=226
SSLB Suanglung 1.37 223 eP Pn 21 51 13.5 -0.4
baz=220
SSLB eS Sb 21 51 32.8 +0.8
baz=220
YULB Yu-li 1.53 204 eP Pn 21 51 16.8 +0.7
baz=201
IRIF Iriomote-Funau 1.66 106 P Pn 21 51 17.4 -0.5
IRIF eS Sn 21 51 39.3 +0.1
JKRS Kuro-shima 1.93 106 P Pn 21 51 21.5 -0.1
JKRS eS Sn 21 51 45.7 -0.2
JIJ Ishigaki jima 2.02 102 P Pn 21 51 23.1 +0.3
JIJ eS Sn 21 51 47.4 -0.7

*IDC **27** 22:02:20.9±1.0,6˚.85S×154˚.68E, h0km, mb3.9/10, mb1 4.1/12, mb1mx3.9/36, mbtmp4.0/12, ML3.0/2, MS3.5/9, Ms1 3.5/9, ms1mx3.2/32, Error ellipse: s-maj=31.4km s-min=21.8km az=112.0*
*NEIC **27** 22:02:24.8±2.2, 7˚.1S±0˚.1×154˚.8E±0˚.1, h35km±2km, mb4.0/6, Error ellipse: s-maj=21.5km s-min=18.1km az=105.0*
ISC 27 22:02:26.9±0.8,**6˚.89S**±0˚.08×**154˚.61E**±0˚.10,**h41**km,**n31**, σ2s**10**/26,**mb3.9**/12,**MS3.5**/7,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RABL	**Rabaul**	**3.63**	**318**	Pn		**Pn**	**22 03 24.1**	**+3.5**
KRVT	**Keravat (AS076**	**3.64**	**315**	Pn		**Pn**	**22 03 19.9**	**-0.8**
	11nm,0.3s,baz=353,slow=0.7,SNR=7.8							
KRVT				Sn		**Sn**	**22 03 59.8**	**-2.6**
	13nm,0.3s,baz=196,slow=11,SNR=3.8							
HNR	**Honiara**	**5.85**	**116**	LR		LR	22 06 20.4	
	comp=Z,496nm,18.3s,baz=275,slow=41							
PMG	**Port Moresby**	**7.79**	**251**	Pn		**Pn**	**22 04 17.8**	**+0.1**
	2.8nm,0.3s,baz=218,slow=16,SNR=2.4							
PMG				Sn		**Sn**	**22 05 41.4**	**-3.3**
	1.1nm,0.3s,baz=3.4,slow=9.6,SNR=1.5							
PMG				LR		LR	22 07 01.3	
	comp=Z,193nm,20.4s,baz=40,slow=36							
PMG	**Port Moresby**	**7.79**	**251**			**Sn**	**22 05 50.2**	**+5.4**
PMG	**Port Moresby**	**7.79**	**251**			**Pn**	**22 04 19.0**	**+1.2**
WR0	**Warramunga Arr**	**23.41**	**234**	P		**P**	**22 07 30.1**	**-2.3**
WR0				IAmb		IAmb	22 07 36.5	
	comp=Z,6.7nm,0.9s							
WB0	**Warramunga Arr**	**23.43**	**235**	P		**P**	**22 07 29.5**	**-3.2**
WB0				IAmb		IAmb	22 07 36.1	
	comp=Z,4.3nm,0.9s							
WB2	**Warramunga Arr**	**23.55**	**235**	P		**P**	**22 07 30.4**	**-3.4**
WRA	**Warramunga Arr**	**23.56**	**235**	P		**P**	**22 07 33.4**	**-0.5**
WRA				PcP		**PcP**	**22 11 19.7**	**+1.1**
	comp=Z,2.7nm,0.9s,baz=57,slow=9.4,SNR=9.6							
STKA	**Stephens Creek**	**27.67**	**204**	P		**P**	**22 08 11.9**	**+0.8**
	comp=Z,2.5nm,0.9s,baz=13,slow=14,SNR=3.4							
STKA				LR		LR	22 19 58.2	
	comp=Z,122nm,18.2s,baz=24,slow=38							
STKA	**Stephens Creek**	**27.67**	**204**	P		**P**	**22 08 08.4**	**-2.7**
H11S3	**WAKE ISLAND Hy**	**27.90**	**25**	T		T	22 36 38.3	
	baz=201							
H11S2	**WAKE ISLAND Hy**	**27.90**	**25**	T		T	22 36 34.4	
	baz=201							
H11S1	**WAKE ISLAND Hy**	**27.92**	**25**	T		T	22 36 44.1	
	baz=201							
FITZ	**Fitzroy Crossi**	**30.35**	**246**	P		**P**	**22 08 34.5**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=86,slow=9.6,SNR=2.0							
FITZ	**Fitzroy Crossi**	**30.35**	**246**	IAmb		IAmb	22 08 39.8	
	comp=Z,1.8nm,0.8s							
INU	**Inuyama**	**45.17**	**340**	P		**P**	**22 10 39.8**	**0.0**
KSRS	**Korea Array**	**50.67**	**332**	LR		LR	22 30 31.5	
	comp=Z,18nm,20.3s,baz=156,slow=33							
PETK	**Petropavlovsk-**	**59.83**	**2**	LR		LR	22 37 04.3	
	comp=Z,17nm,19.5s,baz=79,slow=35							
CMAR	**Chiang Mai Arr**	**60.40**	**296**	P		**P**	**22 12 33.3**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=120,slow=5.3,SNR=1.6							
SONM	**Songino Array**	**69.05**	**327**	P		**P**	**22 13 28.9**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=139,slow=6.8,SNR=2.9							
SONM				LR		LR	22 44 33.4	
	comp=Z,22nm,18.1s,baz=48,slow=37							
MKAR	**Makanchi Array**	**83.08**	**319**	P		**P**	**22 14 48.3**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=103,slow=5.1,SNR=12							
QSPA	**South Pole Qui**	**83.08**	**180**	P		**P**	**22 14 48.5**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=91,slow=4.0,SNR=2.7							
ILAR	**Eielson Array**	**83.42**	**22**	P		**P**	**22 14 48.8**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=224,slow=6.4,SNR=3.2							
ILAR				LR		LR	22 50 08.0	
	comp=Z,57nm,18.5s,baz=205,slow=34							
ZALV	**Zalesovo Beam**	**83.89**	**326**	P		**P**	**22 14 51.9**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=100,slow=6.4,SNR=2.1							
BBB	**Bella Bella**	**87.67**	**37**	LR		LR	22 49 49.0	
	comp=Z,30nm,18.5s,baz=33,slow=32							
NEW	**Newport**	**93.94**	**42**	LR		LR	22 52 17.5	
	comp=Z,50nm,19.2s,baz=325,slow=32							
YKA	**Yellowknife Ar**	**96.42**	**28**	P		**P**	**22 15 51.8**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=262,slow=3.9,SNR=4.9							
GERES	**GERESS Array B**	**126.77**	**329**	PKP		**PKiKP**	**22 21 27.2**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=28,slow=4.4,SNR=4.1							
TORD	**Torodi Ar. Bea**	**152.63**	**285**	PKPbc		**PKiKP**	**22 22 20.9**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=60,slow=2.4,SNR=2.4							
TORD				PKPab		**PKPab**	**22 22 30.9**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=78,slow=2.5,SNR=4.4							

*NNC **27** 22:49:29.2±0.3, 43˚.08N×77˚.23E, h9km±2km, mb2.4, mpv2.6, Error ellipse: s-maj=3.9km s-min=2.6km az=0.0*
*KRNET **27** 22:49:29.3±0.1, 43˚.07N×77˚.23E, h25km, mb2.3*
*SOME **27** 22:49:29.7, 43˚.07N×77˚.22E, h15km*
ISC 27 22:49:29.3±0.9,**43˚.08N**±0˚.02×**77˚.22E**±0˚.02,**h16**km±7km, **n48**, σ0**29**/95,**17C-14D**,**Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MDOK	**Medeo**	**0.16**	**305**	↑*e*P		**Pb**	**22 49 33.9**	**-0.1**
	baz=4.0							
MDOK				↑*e*S		**Sb**	**22 49 37.0**	**-0.2**
	baz=4.0							
MDOK	**Medeo**	**0.16**	**305**	↑*e*P		**Pb**	**22 49 33.9**	**-0.1**
	4.3nm,0.1s							
MDOK				*e*S		**Sb**	**22 49 37.0**	**-0.2**
	28nm,0.2s							
MDOK	**Medeo**	**0.16**	**305**	↑P		**Pg**	**22 49 33.7**	**+0.1**
	2.2nm,0.4s							
MDOK				↓S		**Sb**	**22 49 36.9**	**-0.2**
	5.4nm,0.2s							
MDOK	**Medeo**	**0.16**	**305**	Pg		**Pb**	**22 49 33.9**	**-0.1**
	4.3nm,0.1s							
MDOK				Lg		Lg	22 49 37.0	
	28nm,0.2s							
KOTS	**Kotyrbulak**	**0.18**	**333**	↓*e*P		**Pb**	**22 49 34.4**	**0.0**
	baz=31							
KOTS				↓*e*S		**Sb**	**22 49 37.9**	**+0.1**
	baz=31							
KOTS	**Kotyrbulak**	**0.18**	**333**	↓*e*P		**Pb**	**22 49 34.4**	**0.0**
	36nm,0.1s							
KOTS				*e*S		**Sb**	**22 49 37.9**	**+0.1**
	65nm,0.1s							
KOTS	**Kotyrbulak**	**0.18**	**333**	P		**Pb**	**22 49 34.4**	**0.0**
	36nm,0.1s							
KOTS				S		**Sb**	**22 49 37.9**	**+0.1**
	25nm,0.2s							
TNSS	**Tian-Shan**	**0.21**	**260**	*e*P		**Pb**	**22 49 34.9**	**-0.2**
	baz=61							
TNSS				*e*S		**Sb**	**22 49 38.7**	**-0.2**
	baz=61							
TNSS	**Tian-Shan**	**0.21**	**260**	*e*P		**Pb**	**22 49 34.9**	**-0.2**
	4.1nm,0.1s							
TNSS				*e*S		**Sb**	**22 49 38.6**	**-0.2**
	12nm,0.2s							
TNSS	**Tian-Shan**	**0.21**	**260**	P		**Pb**	**22 49 34.8**	**-0.2**
	4.1nm,0.1s							
TNSS				S		**Sb**	**22 49 38.6**	**-0.2**
	12nm,0.2s							
AAA	**Alma-Ata**	**0.26**	**301**	↓*e*P		**Pb**	**22 49 35.9**	**+0.1**
	baz=1.0							
AAA				↓*e*S		**Sb**	**22 49 40.5**	**+0.4**
	baz=1.0							
AAA	**Alma-Ata**	**0.26**	**301**	↓*e*P		**Pb**	**22 49 35.9**	**+0.1**
	12nm,0.1s							
AAA				*e*S		**Sb**	**22 49 40.5**	**+0.4**
	40nm,0.1s							
AAA	**Alma-Ata**	**0.26**	**301**	P		**Pb**	**22 49 35.9**	**+0.1**
	12nm,0.1s							
AAA				S		**Sb**	**22 49 40.5**	**+0.4**
	40nm,0.1s							
ANVS	**Anan'yevo**	**0.44**	**132**	↑*i*P		**Pg**	**22 49 38.4**	**+0.2**
	baz=32							
ANVS				↑*i*S		**Sg**	**22 49 44.4**	**+0.2**
	baz=32							
IZV	**Izvestkoviy**	**0.45**	**265**	*e*P		**Pb**	**22 49 39.0**	**0.0**
	baz=66							
IZV				*e*S		**Sb**	**22 49 45.6**	**0.0**
	baz=66							
IZV	**Izvestkoviy**	**0.45**	**265**	*e*P		**Pb**	**22 49 39.0**	**0.0**
	1.0nm,0.1s							
IZV				*e*S		**Sb**	**22 49 45.6**	**0.0**
	8.5nm,0.1s							
IZV	**Izvestkoviy**	**0.45**	**265**	P		**Pb**	**22 49 39.0**	**0.0**
	1.0nm,0.1s							
IZV				S		**Sb**	**22 49 45.6**	**0.0**
	8.5nm,0.1s							
KTBS	**Karatobe**	**0.75**	**328**	↓*e*P		**Pg**	**22 49 43.7**	**-0.2**
	2.7nm,0.1s							
KTBS				*e*S		**Sg**	**22 49 53.8**	**-0.1**
	13nm,0.3s							
KTBS	**Karatobe**	**0.75**	**328**	P		**Pg**	**22 49 43.7**	**-0.2**
	2.7nm,0.1s							
KTBS				S		**Sg**	**22 49 53.8**	**-0.1**
	13nm,0.3s							
CHKK	**Chushkaly**	**0.80**	**348**	↓*e*P		**Pg**	**22 49 44.6**	**-0.3**
	baz=48							
CHKK				↓*e*S		**Sg**	**22 49 55.5**	**0.0**
	baz=48							
CHKK	**Chushkaly**	**0.80**	**348**	↓*e*P		**Pg**	**22 49 44.6**	**-0.3**
	7.5nm,0.1s							
CHKK				*e*S		**Sg**	**22 49 55.4**	**0.0**
	10.0nm,0.1s							
CHKK	**Chushkaly**	**0.80**	**348**	P		**Pg**	**22 49 44.6**	**-0.3**
	7.5nm,0.1s							
CHKK				S		**Sg**	**22 49 55.4**	**0.0**
	10.0nm,0.1s							
SATY	**Saty**	**0.87**	**91**	*e*P		**Pb**	**22 49 45.9**	**-0.3**
	1.3nm,0.1s							
SATY				*e*S		**Sg**	**22 49 57.4**	**-0.3**
	13nm,0.1s							
SATY	**Saty**	**0.87**	**91**	P		**Pb**	**22 49 45.9**	**-0.3**
	1.3nm,0.1s							
SATY				S		**Sg**	**22 49 57.4**	**-0.3**
	13nm,0.1s							
KST	**Kastek**	**0.92**	**268**	*e*P		**Pb**	**22 49 46.9**	**-0.2**
	baz=69							
KST				*e*S		**Sb**	**22 49 59.2**	**0.0**
	baz=69							
KST	**Kastek**	**0.92**	**268**	*e*P		**Pb**	**22 49 46.9**	**-0.2**
	0.6nm,0.1s							
KST				*e*S		**Sb**	**22 49 59.2**	**0.0**
	1.5nm,0.1s							
KST	**Kastek**	**0.92**	**268**	P		**Pb**	**22 49 46.9**	**-0.2**
	0.6nm,0.1s							
KST				S		**Sb**	**22 49 59.2**	**0.0**
	1.5nm,0.1s							
KDJ	**Kajisay**	**0.94**	**182**	↑*i*P		**Pb**	**22 49 47.3**	**-0.2**
	baz=82							
KDJ				↑*i*S		**Sb**	**22 49 59.1**	**-0.7**
	baz=82							
KUU	**Kurty**	**1.04**	**322**	*e*P		**Pb**	**22 49 48.6**	**-0.4**
	baz=22							
KUU				*e*S		**Sb**	**22 50 02.4**	**-0.1**
	baz=22							
KUU	**Kurty**	**1.04**	**322**	*e*P		**Pb**	**22 49 48.6**	**-0.4**
	0.5nm,0.1s							
KUU				*e*S		**Sb**	**22 50 02.4**	**-0.1**
	5.4nm,0.2s							
KUU	**Kurty**	**1.04**	**322**	P		**Pb**	**22 49 48.6**	**-0.4**
	0.5nm,0.1s							
KUU				S		**Sb**	**22 50 02.4**	**-0.1**
	5.4nm,0.2s							
DGS	**Degeres**	**1.07**	**279**	*e*P		**Pb**	**22 49 49.5**	**-0.2**
	baz=80							
DGS				*e*S		**Sb**	**22 50 03.5**	**-0.1**
	baz=80							
DGS	**Degeres**	**1.07**	**279**	*e*P		**Pb**	**22 49 49.5**	**-0.2**
	0.4nm,0.1s							
DGS				*e*S		**Sb**	**22 50 03.5**	**-0.1**
	3.0nm,0.2s							
DGS	**Degeres**	**1.07**	**279**	P		**Pb**	**22 49 49.5**	**-0.2**
	0.4nm,0.1s							
DGS				S		**Sb**	**22 50 03.5**	**-0.1**
	3.0nm,0.2s							
ULHL	**Ulahol**	**1.10**	**221**	↑*i*P		**Pb**	**22 49 49.8**	**-0.4**
	baz=22							
ULHL				↑*i*S		**Sb**	**22 50 04.5**	**+0.1**
	baz=22							
BOOM	**Boomskoye usch**	**1.11**	**239**	↓*i*P		**Pb**	**22 49 49.9**	**-0.4**
	baz=39							
BOOM				↓*i*S		**Sb**	**22 50 04.6**	**0.0**
	baz=39							
TKM2	**Tokmak 2**	**1.20**	**263**	↑*e*P		**Pb**	**22 49 52.0**	**+0.1**
	baz=63							
TKM2				↑*i*S		**Sn**	**22 50 08.1**	**+0.2**
	baz=63							
ARXS	**Arharly**	**1.22**	**21**	*e*P		**Pn**	**22 49 51.9**	**0.0**
	1.5nm,0.1s							
ARXS				*e*S		**Sn**	**22 50 08.1**	**0.0**
	3.1nm,0.1s							
ARXS	**Arharly**	**1.22**	**21**	P		**Pn**	**22 49 51.9**	**0.0**
	1.5nm,0.1s							
ARXS				S		**Sn**	**22 50 08.1**	**0.0**
	3.1nm,0.1s							
KRBS	**Karabastau**	**1.29**	**299**	*e*P		**Pb**	**22 49 53.3**	**0.0**
	0.8nm,0.1s							
KRBS				*e*S		**Sn**	**22 50 09.9**	**+0.2**
	4.2nm,0.2s							
KRBS	**Karabastau**	**1.29**	**299**	P		**Pb**	**22 49 53.3**	**0.0**
	0.8nm,0.1s							
KRBS				S		**Sn**	**22 50 10.0**	**+0.2**
	4.2nm,0.2s							
UZB	**Uzunbulak**	**1.32**	**86**	*e*P		**Pn**	**22 49 53.5**	**+0.2**
	baz=86							
UZB				*e*S		**Sb**	**22 50 10.5**	**-0.1**
	baz=86							
UZB	**Uzunbulak**	**1.32**	**86**	*e*P		**Pn**	**22 49 53.5**	**+0.2**
	0.6nm,0.1s							
UZB				*e*S		**Sb**	**22 50 10.4**	**-0.1**
	2.1nm,0.1s							
UZB	**Uzunbulak**	**1.32**	**86**	P		**Pn**	**22 49 53.5**	**+0.2**
	0.6nm,0.1s							
UZB				S		**Sb**	**22 50 10.4**	**-0.1**
	2.1nm,0.1s							
TARG	**Taragay, Kyrgy**	**1.41**	**162**	↑*e*P		**Pb**	**22 49 55.7**	**+0.1**
	baz=62							
TARG				↑*i*S		**Sb**	**22 50 13.5**	**0.0**
	baz=62							
PDGK	**Podgornoye**	**1.68**	**81**	↑P		**Pn**	**22 49 59.0**	**+0.8**
	0.8nm,0.8s							
PDGK				↓S		**Sb**	**22 50 21.6**	**+0.8**
	1.1nm,0.6s							
SGDS	**Sogindy**	**1.93**	**282**	P		**Pb**	**22 50 04.3**	**+0.1**
	1.0nm,0.1s							
SGDS				S		**Sb**	**22 50 29.7**	**+1.5**
	2.0nm,0.1s							
USP	**Ospenovka**	**2.00**	**276**	↑*i*P		**Pb**	**22 50 04.6**	**-0.8**
	baz=77							
USP				↑*i*S		**Sb**	**22 50 29.9**	**-0.2**
	baz=77							

*NEIC **27** 22:51:54.9±1.9, 20˚.58S±0˚.09×176˚.09W±0˚.09, h198km±5km, mb4.8/67, Error ellipse: s-maj=13.7km s-min=11.0km az=148.0*
*IDC **27** 22:51:58.8±2.4, 20˚.51S×176˚.42W, h225km±21km, mb4.1/16, mb1 4.3/17, mb1mx4.1/28, mbtmp4.7/17, Error ellipse: s-maj=13.5km s-min=11.4km az=137.0*
ISC 27 22:51:55.3±0.3,**20˚.68S**±0˚.05×**176˚.10W**±0˚.05,**h200**km, **n158**, σ1s**70**/151,**mb4.7**/44,**20C-3D**,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NIUE	**Niue**	**6.02**	**76**			**Pn**	**22 53 22.2**	**-0.7**
NIUE				Sn		**Sn**	**22 54 25.8**	**-6.3**
MSVF	**Nonsavu**	**6.26**	**297**	Pn		**Pn**	**22 53 28.2**	**+2.1**
MSVF	**Nonsavu**	**6.26**	**297**			**Pn**	**22 53 28.4**	**+2.3**
AFI	**Afiamalu**	**7.89**	**32**			**Pn**	**22 53 43.3**	**-4.0**
RIZ	**Raoul Island**	**8.69**	**191**	P		**Pn**	**22 53 57.6**	**+0.1**
RAO	**Raoul Island**	**8.70**	**191**	S		**Sn**	**22 55 35.2**	**-0.1**
	86nm,0.3s,baz=96,slow=21,SNR=5.9							
RAO	**Raoul Island**	**8.70**	**191**	Pn		**Pn**	**22 53 57.7**	**+0.1**
GLKZ	**Green Lake**	**8.71**	**191**	P		**Pn**	**22 53 57.6**	**-0.1**
GLKZ				S		**Sn**	**22 55 34.6**	**-0.9**
FUNA	**Funafuti**	**12.91**	**339**			**Pn**	**22 54 51.1**	**-0.7**
RAR	**Rarotonga**	**15.26**	**95**	P		**P**	**22 55 28.0**	**+6.8**
	0.4nm,0.3s,baz=213,slow=13,SNR=2.2							
RAR				S		**S**	**22 58 10.5**	**+0.2**
	1.2nm,0.3s,baz=230,slow=22,SNR=1.5							
DZM	**Mont Dzumac**	**16.32**	**262**	P		**Pn**	**22 55 36.4**	**+2.7**
	8.7nm,0.3s,baz=70,slow=18,SNR=51							
DZM	**Mont Dzumac**	**16.32**	**262**			**Pn**	**22 55 36.0**	**+2.2**
OUZ	**Omahuta**	**17.10**	**210**	P		**P**	**22 55 42.3**	**+1.0**
OUZ	**Omahuta**	**17.10**	**210**	P		**Pn**	**22 55 43.2**	**+0.6**
OUZ				IAmb		IAmb	22 55 46.6	
	comp=Z,18nm,0.9s							
GRZ	**Great Barrier**	**17.19**	**204**	P		**Pn**	**22 55 44.8**	**+1.1**
MXZ	**Matakaoa Point**	**17.52**	**195**	P		**Pn**	**22 55 47.7**	**+0.2**
MXZ				S		S	22 58 44.7	-13
MXZ	**Matakaoa Point**	**17.52**	**195**	P		**Pn**	**22 55 47.8**	**+0.2**
MXZ				IAmb		IAmb	22 55 55.1	
	comp=Z,48nm,1.2s							
KUZ	**Kuaotunu**	**17.53**	**202**	P		**Pn**	**22 55 49.9**	**+2.1**
WMGZ	**Waiomatatini S**	**17.74**	**194**	P		**P**	**22 55 49.7**	**+1.5**
WMGZ				S		S	22 58 51.7	-10
HAZ	**Te Kaha**	**17.83**	**196**	P		**P**	**22 55 50.5**	**+1.3**
HAZ				S		S	22 58 52.6	-11
PKGZ	**Pakihiroa**	**17.88**	**195**	P		**P**	**22 55 51.0**	**+1.2**
PKGZ				S		S	22 58 53.9	-11
RUGZ	**Raukumara Rang**	**18.06**	**196**	P		**P**	**22 55 52.9**	**+1.1**
RUGZ				S		**S**	**22 59 00.1**	**-8.3**
TWGZ	**Tauwhareparae**	**18.18**	**195**	P		**Pn**	**22 55 56.3**	**+0.9**
MARZ	**Manawahe**	**18.35**	**198**	P		**Pn**	**22 55 58.1**	**+0.6**
KMRZ	**Kaimai**	**18.45**	**200**	P		**Pn**	**22 55 59.5**	**+0.9**
URZ	**Urewera**	**18.48**	**197**	P		**P**	**22 55 56.3**	**0.0**
URZ				S		S	22 59 06.9	-10
MUGZ	**Murupara**	**18.78**	**198**	P		**P**	**22 56 00.1**	**+0.5**
MUGZ				S		**S**	**22 59 14.9**	**-7.7**
HIZ	**Hauiti**	**19.42**	**202**	P		**P**	**22 56 08.6**	**+2.2**
BKZ	**Black Stump Fm**	**19.50**	**197**	P		**P**	**22 56 06.5**	**-0.9**
BKZ				IAmb		IAmb	22 56 14.9	
	comp=Z,14nm,0.5s							
BFZ	**Birch Farm**	**20.98**	**196**	P		**P**	**22 56 22.5**	**-0.6**
BFZ				IAmb		IAmb	22 56 32.0	
	comp=Z,67nm,1.3s							
MSWZ	**Moikau Station**	**21.94**	**198**	P		**P**	**22 56 32.9**	**0.0**
SNZO	**South Karori**	**22.00**	**199**	P		**P**	**22 56 33.5**	**+0.1**
PLWZ	**Palliser**	**22.08**	**197**	P		**P**	**22 56 33.8**	**-0.5**
QRZ	**Quartz Range**	**22.30**	**203**	P		**P**	**22 56 37.3**	**+1.0**
NNZ	**Nelson**	**22.34**	**201**	P		**P**	**22 56 36.5**	**-0.2**
BSWZ	**Blackbirch Sta**	**22.63**	**200**	P		**P**	**22 56 39.4**	**+0.2**
THZ	**Tophouse**	**22.99**	**201**	P		**P**	**22 56 42.1**	**-0.4**
KHZ	**Kahutara**	**23.37**	**200**	P		**P**	**22 56 46.0**	**+0.1**
MQZ	**McQueen's Vall**	**24.81**	**200**	P		**P**	**22 56 59.1**	**+0.2**
RPZ	**Rata Peaks**	**25.35**	**202**	P		**P**	**22 57 04.7**	**+0.8**
	comp=Z,45nm,0.6s,baz=3.7,slow=0.6,SNR=24							
LBZ	**Lake Benmore**	**26.25**	**203**	P		**P**	**22 57 12.3**	**+0.4**
LBZ				IAmb		IAmb	22 57 30.1	
	comp=Z,27nm,0.8s							
ODZ	**Otahua Downs**	**26.66**	**201**	P		**P**	**22 57 17.5**	**+1.9**
ODZ				IAmb		IAmb	22 57 17.9	
	comp=Z,20nm,1.1s							
WKZ	**Wanaka**	**27.05**	**204**	P		**P**	**22 57 19.4**	**+0.3**
MLZ	**Mavora Lakes**	**27.85**	**204**	P		**P**	**22 57 27.5**	**+1.3**
DCZ	**Deep Cove**	**28.31**	**205**	P		**P**	**22 57 31.2**	**+0.9**
ARMA	**Armidale**	**30.60**	**245**	P		**P**	**22 57 51.7**	**+0.9**
ARMA				IAmb		IAmb	22 57 51.9	
	comp=Z,15nm,0.8s							
CAN	**Canberra**	**33.90**	**237**	IAmb		IAmb	22 58 20.2	
	comp=Z,25nm,0.6s							
CTA	**Charters Tower**	**35.25**	**264**	P		**P**	**22 58 30.5**	**-0.6**
	comp=Z,18nm,0.5s,baz=91,slow=10.0,SNR=22							
CTAO	**Charters Tower**	**35.25**	**264**	P		**P**	**22 58 31.1**	**0.0**
CTAO				IAmb		IAmb	22 58 32.0	
	comp=Z,21nm,0.6s							
PMG	**Port Moresby**	**37.12**	**282**	P		**P**	**22 58 45.3**	**-1.7**
	comp=Z,8.3nm,0.4s,baz=94,slow=4.2,SNR=2.1							
TOO	**Toolangi**	**37.24**	**235**	IAmb		IAmb	22 58 48.2	
	comp=Z,17nm,0.7s							
STKA	**Stephens Creek**	**39.32**	**245**	P		**P**	**22 59 04.9**	**-0.3**
	comp=Z,6.6nm,0.5s,baz=94,slow=11,SNR=22							
STKA				PcP		**PcP**	**23 01 10.1**	**+0.4**
	comp=Z,2.9nm,0.6s,baz=14,slow=5.1,SNR=3.1							
STKA	**Stephens Creek**	**39.32**	**245**	P		**P**	**22 59 04.8**	**-0.4**
COEN	**Coen**	**39.37**	**273**	IAmb		IAmb	22 59 06.6	
	comp=Z,19nm,0.7s							
WB0	**Warramunga Arr**	**46.32**	**262**	IAmb		IAmb	23 00 01.2	
	comp=Z,14nm,0.5s							
WB2	**Warramunga Arr**	**46.33**	**262**	P		**P**	**23 00 00.3**	**-1.3**
WRAB	**Tennant Creek**	**46.33**	**262**	P		**P**	**23 00 00.7**	**-1.0**
WRA	**Warramunga Arr**	**46.34**	**262**	P		**P**	**23 00 00.2**	**-1.

H03N2	**Juan Fernandez**	**84.56**	**124**	T	T	00 37 06.1		
	baz=248,slow=72,SNR=8.6							
H03N3	**Juan Fernandez**	**84.56**	**124**	T	T	00 37 03.4		
	baz=248,slow=72,SNR=3.5							
H03N1	**Juan Fernandez**	**84.57**	**124**	T	T	00 36 56.9		
	baz=248,slow=72,SNR=4.2							
GLI	**Glacier Island**	**84.58**	**14**	P	**P**	**23 04 05.4**	**-0.3**	
GLI				IAmb	IAmb	23 04 06.4		
	comp=Z,23nm,0.8s							
TTA	**Tatalina**	**84.82**	**9**	P	**P**	**23 04 07.8**	**+0.9**	
TMUT	**Trail Mountain**	**85.01**	**45**	P	**P**	**23 04 09.2**	**+0.4**	
SRU	**San Rafael Swe**	**85.37**	**45**	P	**P**	**23 04 10.8**	**+0.5**	
SCM	**Sheep Creek Mo**	**85.38**	**13**	P	**P**	**23 04 10.0**	**+0.3**	
SCM				IAmb	IAmb	23 04 10.8		
	comp=Z,13nm,0.7s							
YAH	**Yahtse**	**85.43**	**16**	IAmb	IAmb	23 04 11.9		
	comp=Z,17nm,0.7s							
TXAR	**Lajitas Array**	**85.66**	**57**	P	**P**	**23 04 13.7**	**+1.8**	
	comp=Z,1.8nm,1.1s,baz=221,slow=5.0,SNR=9.4							
VRDI	**Verde Repeater**	**85.74**	**15**	P	**P**	**23 04 10.8**	**-0.9**	
VRDI				IAmb	IAmb	23 04 12.9		
	comp=Z,21nm,1.5s							
GLB	**Gilahina Butte**	**85.84**	**15**	P	**P**	**23 04 10.8**	**-1.2**	
GLB				IAmb	IAmb	23 04 13.2		
	comp=Z,9.1nm,0.7s							
BALM	**Baldy**	**85.85**	**16**	IAmb	IAmb	23 04 13.4		
	comp=Z,8.7nm,0.7s							
BARN	**Barnard Glacie**	**86.05**	**16**	IAmb	IAmb	23 04 14.7		
	comp=Z,11nm,0.7s							
TRF	**Thorofare Moun**	**86.26**	**11**	IAmb	IAmb	23 04 14.6		
	comp=Z,13nm,0.7s							
DHY	**Denali Highway**	**86.48**	**13**	P	**P**	**23 04 14.8**	**-0.4**	
RND	**Reindeer**	**86.49**	**12**	IAmb	IAmb	23 04 16.1		
	comp=Z,14nm,0.6s							
SYO	**Syowa Base**	**86.94**	**192**⇓	*e*P	**P**	**23 04 16.0**	**-1.3**	
SYO	**Syowa Base**	**86.94**	**192**⇑	*i*PcP	**P**	**23 04 17.2**	**-0.1**	
SYO	**Syowa Base**	**86.94**	**192**⇑	*e*pP	pP	23 05 04.8	-0.9	
MLY	**Manley**	**87.63**	**10**	P	**P**	**23 04 19.4**	**-1.2**	
HDA	**Harding Lake**	**87.76**	**12**	IAmb	IAmb	23 04 23.1		
	comp=Z,5.0nm,0.6s							
SNAA	**Sanae**	**87.78**	**178**	P	**P**	**23 04 22.0**	**+0.6**	
SNAA	**Sanae**	**87.78**	**178**	P	**P**	**23 04 22.1**	**+0.6**	
CCB	**Clear Creek Bu**	**87.81**	**12**	P	**P**	**23 04 21.1**	**-0.2**	
CCB				IAmb	IAmb	23 04 21.9		
	comp=Z,13nm,1.3s							
VNA3	**Neumayer Olymp**	**87.84**	**176**	P	**P**	**23 04 22.5**	**+0.9**	
PLCA	**Paso Flores**	**87.85**	**133**	P	**P**	**23 04 24.0**	**+1.6**	
	comp=Z,0.9nm,0.6s,baz=222,slow=4.9,SNR=3.5							
ILAR	**Eielson Array**	**88.10**	**12**	P	**P**	**23 04 22.4**	**-0.3**	
	comp=Z,1.5nm,0.8s,baz=236,slow=5.8,SNR=9.1							
VNA2	**Neumayer--Watz**	**88.30**	**176**	P	**P**	**23 04 25.1**	**+1.3**	
VNA1	**Neumayer--Stat**	**88.52**	**176**	P	**P**	**23 04 25.4**	**+0.7**	
DAWY	**Dawson**	**89.15**	**15**	P	**P**	**23 04 27.4**	**-0.3**	
DAWY				IAmb	IAmb	23 04 29.4		
	comp=Z,7.5nm,0.8s							
EGAK	**Eagle**	**89.33**	**14**	IAmb	IAmb	23 04 29.9		
	comp=Z,5.0nm,0.8s							
EPYK	**Eagle Plains**	**91.69**	**15**	IAmb	IAmb	23 04 40.8		
	comp=Z,5.2nm,0.8s							
CMAR	**Chiang Mai Arr**	**91.86**	**289**	P	**P**	**23 04 40.9**	**-0.4**	
	comp=Z,0.8nm,0.6s,baz=116,slow=2.6,SNR=5.9							
RSSD	**Black Hills**	**92.05**	**43**	P	**P**	**23 04 41.0**	**-0.8**	
LZH	**Lanzhou**	**94.30**	**307**	⇑P	**P**	**23 04 54.0**	**+1.7**	
LZH				pP	pP	23 05 34.5	-6.5	
LZH				sP	pwP	23 05 51.5	+7.3	
LZH				PP	**PP**	**23 08 46.3**	**+3.8**	
LZH				pmax	pmax			
	comp=Z,20nm,1.4s							
LZH				pmax	pmax			
	comp=Z,87nm,9.3s							
YKA	**Yellowknife Ar**	**95.93**	**24**	P	**P**	**23 04 58.9**	**0.0**	
	comp=Z,0.9nm,0.7s,baz=237,slow=4.2,SNR=14							
YKA				PKKP	**PKKPbc**	**23 21 46.4**	**-2.8**	
	comp=Z,0.5nm,0.5s,baz=49,slow=2.5,SNR=7.9							
ZALV	**Zalesovo Beam**	**111.75**	**321**	PKiKP	**PKiKP**	**23 10 04.8**	**-1.1**	
	comp=Z,0.3nm,0.3s,baz=113,slow=1.9,SNR=3.5							
MKAR	**Makanchi Array**	**112.61**	**313**	PKiKP	**PKiKP**	**23 10 06.8**	**-1.1**	
	comp=Z,0.7nm,0.5s,baz=114,slow=1.0,SNR=15							
BOSA	**Boshof**	**126.84**	**204**	PKP	**PKiKP**	**23 10 36.6**	**+0.2**	
	comp=Z,2.1nm,0.5s,baz=166,slow=2.5,SNR=11							
ARCES	**ARCESS Array B**	**129.40**	**350**	PKP	**PKPdf**	**23 10 39.0**	**-0.3**	
	comp=Z,0.7nm,0.5s,baz=13,slow=1.7,SNR=15							
GEYT	**Alibeck**	**130.38**	**303**	PKP	**PKPdf**	**23 10 41.6**	**-0.6**	
	comp=Z,0.9nm,0.4s,baz=63,slow=6.8,SNR=3.8							
FINES	**FINESS Array B**	**136.43**	**345**	PKhKP	PKPpre	23 10 43.9		
	comp=Z,1.3nm,0.8s,baz=53,slow=1.7,SNR=1.3							
AKASG	**Malin Array Be**	**144.01**	**332**	PKP	PKPab	23 11 03.9	-0.8	
	comp=Z,1.0nm,0.3s,baz=42,slow=4.1,SNR=6.4							
SORM	**Soroca**	**146.26**	**330**	⇑P	**PKPab**	**23 11 12.2**	**-1.1**	
BURAR	**Bucovina Array**	**148.07**	**332**	⇑P	**PKiKP**	**23 11 17.9**	**-1.1**	
TLCR		**148.08**	**326**	⇓P	**PKPbc**	**23 11 16.8**	**-0.5**	
BIZ	**Bicaz**	**148.18**	**331**	⇑P	**PKiKP**	**23 11 17.9**	**-1.3**	
BRTR	**Keskin Array B**	**148.27**	**313**	PKPbc	**PKPbc**	**23 11 17.6**	**-0.6**	
	comp=Z,1.9nm,0.6s,baz=138,slow=4.6,SNR=9.1							
CFR	**Carcaliu**	**148.44**	**326**	⇑P	**PKPbc**	**23 11 17.1**	**-1.1**	
TOPG	**Topolog**	**148.51**	**326**	⇑P	**PKPbc**	**23 11 18.2**	**-0.2**	
CLL	**Collm**	**148.60**	**349**	*i* PKPbc	**PKiKP**	**23 11 19.9**	**+0.1**	
	comp=Z,5.0nm,0.8s							
CLL				*i* PKPab	**PKPab**	**23 11 23.1**	**+0.6**	
	comp=Z,6.0nm,0.6s							
VRI	**Vrincioaia**	**148.67**	**329**	⇑P	**PKPbc**	**23 11 18.5**	**-0.3**	
TRPA	**Tarpa**	**148.76**	**336**	⇑P	**PKPbc**	**23 11 18.9**	**0.0**	
BRG	**Berggiesshubel**	**148.84**	**348**	*e*PKP	**PKiKP**	**23 11 19.3**	**-1.0**	
	comp=Z,2.6nm,0.7s							
BRG				*e*		23 11 22.9		
	comp=Z,9.6nm,1.4s							
MORC	**Moravsky Berou**	**149.00**	**343**	*e*PKP	**PKPbc**	**23 11 19.2**	**-0.4**	
DOPR	**Dopca**	**149.23**	**330**	⇑P	**PKiKP**	**23 11 20.4**	**-1.0**	
MLR	**Muntele Rosu**	**149.32**	**329**	⇓P	**PKPbc**	**23 11 20.3**	**-0.3**	
PRU	**Pruhonice**	**149.55**	**346**⇑	*e*PKP	**PKiKP**	**23 11 21.5**	**-0.3**	
GOPC	**GO Pecny, Ondr**	**149.57**	**346**⇑	*e*PKP	**PKiKP**	**23 11 21.4**	**-0.5**	
VRAC	**Vranov**	**149.69**	**343**	*e*PKP	**PKiKP**	**23 11 21.1**	**-1.0**	
DRGR		**149.77**	**334**	⇑P	**PKiKP**	**23 11 21.7**	**-0.8**	
JAVC	**Velka Javorina**	**149.79**	**342**	*e*PKP	**PKiKP**	**23 11 22.7**	**+0.3**	
KRUC	**Moravsky**	**149.96**	**343**	*e*PKP	**PKiKP**	**23 11 21.8**	**-0.9**	
ARR	**Arges**	**150.03**	**330**	⇑P	**PKiKP**	**23 11 22.6**	**-0.5**	
KHC	**Kasperske Hory**	**150.57**	**347**⇑	*e*PKP	**PKiKP**	**23 11 23.5**	**-0.5**	
KHC				*e*PKPAB	**PKPab**	**23 11 30.9**	**+0.1**	
GERES	**GERESS Array B**	**150.82**	**347**	PKPbc	**PKPbc**	**23 11 23.5**	**-0.5**	
	comp=Z,1.1nm,0.6s,baz=11,slow=2.7,SNR=7.3							
GZR	**Gura Zlata**	**150.85**	**332**	⇑P	**PKPbc**	**23 11 23.8**	**-0.4**	
CONA	**Conrad Observa**	**151.15**	**343**	*i* PKiKP	**PKiKP**	**23 11 25.3**	**0.0**	
BZS	**Buzias**	**151.17**	**334**	⇑P	**PKiKP**	**23 11 24.8**	**-0.5**	
PLVB	**Pleven**	**151.49**	**327**	⇑P	**PKiKP**	**23 11 25.9**	**-0.2**	
MDVR	**Moldovita**	**151.80**	**333**	⇑P	**PKPbc**	**23 11 25.9**	**-0.5**	
WTTA	**Wattenberg**	**152.74**	**348**	*i* PKiKP	**PKiKP**	**23 11 28.5**	**-0.2**	
ABTA	**Abfaltersbach**	**153.06**	**347**	*e*PKPbc	**PKPbc**	**23 11 28.5**	**-0.7**	
	comp=Z,2.3nm,0.5s							
ESDC	**Sonseca Array**	**159.90**	**18**	PKP	**PKPdf**	**23 11 30.6**	**-0.1**	
	comp=Z,0.4nm,0.8s,baz=318,slow=1.7,SNR=2.3							
ESDC				PKPab	**PKPab**	**23 12 11.0**	**+0.1**	
	comp=Z,1.3nm,0.8s,baz=324,slow=3.8,SNR=9.2							
TORD	**Torodi Ar. Bea**	**172.22**	**164**	PKP	**PKPdf**	**23 11 40.0**	**-1.0**	
	comp=Z,1.0nm,0.8s,baz=312,slow=1.1,SNR=5.4							
TORD				PKPab	**PKPab**	**23 13 06.6**	**+0.9**	
	comp=Z,2.5nm,0.9s,baz=184,slow=4.4,SNR=7.5							
TORD				PP	**PP**	**23 16 56.1**	**+0.4**	
	comp=Z,1.0nm,1.1s,baz=175,slow=4.0,SNR=2.1							

IDC 27 23:14:06.2±5.3, 6°26S×152°56E, h182km±27km, mb3.1/2, mb1 3.3/3, mb1mx3.0/31, mbtmp3.6/3, Error ellipse: s-maj=105.4km s-min=31.4km az=109.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.01**	**345**	P	Pn	23 14 44.1	+0.5
	11nm,0.3s,baz=21,slow=3.2,SNR=2.5						
KRVT				S	Sn	23 15 12.8	+0.2
	8.4nm,0.3s,baz=193,slow=19,SNR=6.6						
WRA	**Warramunga Arr**	**22.32**	**231**	P	P	23 18 49.1	+0.1
	1.5nm,0.8s,baz=56,slow=9.6,SNR=7.6						
MKAR	**Makanchi Array**	**81.26**	**319**	P	P	23 26 02.4	+0.4
	0.3nm,0.7s,baz=118,slow=7.1,SNR=3.6						
TORD	**Torodi Ar. Bea**	**150.50**	**286**	PKPbc	PKPbc	23 33 36.5	-0.8
	0.5nm,0.6s,baz=100,slow=1.5,SNR=4.3						

*KRSC **27** 23:18:54.9±1.7, 52°92N×160°85E, h40km±15km, ML3.9*
*IDC **27** 23:19:01.9±3.3, 53°07N×160°36E, h87km±34km, mb3.0/2, mb1 3.4/2, mb1mx2.9/34, mbtmp3.4/2, MS2.4/1, Ms1 2.4/1, ms1mx2.1/14, Error ellipse: s-maj=54.1km s-min=35.3km az=8.0*

ISC 27 23:18:56.0±1.6, 52°89N±0°06×160°82E±0°05, h31km±11km, n46, σ1ᵗ65/61, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.53**	**294**	*e*P	**Pb**	**23 19 06.7**	**-0.1**
SPN				*e*S	**Sb**	**23 19 13.5**	**-0.8**
NLC	**Nalytchevo**	**0.94**	**288**	*e*P	**Pn**	**23 19 12.6**	**-0.3**
NLC				*e*S	**Sn**	**23 19 24.3**	**-1.0**
SDLR	**Sedlovina**	**1.23**	**289**	*i* P	**Pn**	**23 19 17.3**	**+0.1**
SDLR				*e*S	**Sn**	**23 19 32.4**	**-0.4**
UGLR	**Uglovaya**	**1.25**	**286**	*e*P	**Pn**	**23 19 17.8**	**+0.4**
UGLR				*e*S	**Sn**	**23 19 33.7**	**+0.5**
DALK	**Dalny**	**1.26**	**277**	*e*P	**Pn**	**23 19 17.4**	**0.0**
DALK				*e*S	**Sn**	**23 19 31.6**	**-1.6**
SMAR	**Somma**	**1.27**	**288**	*e*P	**Pn**	**23 19 18.0**	**+0.2**
SMAR				*e*S	**Sn**	**23 19 33.1**	**-0.9**
AVH	**Avacha**	**1.31**	**288**	*i* P	**Pn**	**23 19 18.8**	**+0.6**
AVH				*e*S	**Sn**	**23 19 35.1**	**+0.4**
KRER	**Koryakskii**	**1.32**	**289**	*i* P	**Pn**	**23 19 18.9**	**+0.5**
KRER				*e*S	**Sn**	**23 19 35.3**	**+0.3**
PET	**Petropavlovsk**	**1.32**	**277**	*e*P	**Pn**	**23 19 18.4**	**+0.2**
PET				*e*S	**Sn**	**23 19 34.1**	**-0.6**
KOK	**Koryaka**	**1.38**	**288**	*i* P	**Pn**	**23 19 19.6**	**+0.5**
KRX	**Arik**	**1.39**	**291**	*i* P	**Pn**	**23 19 19.5**	**+0.1**
KRX				*e*S	**Sn**	**23 19 36.0**	**-0.8**
KII	**Karymskiy**	**1.41**	**325**	*e*P	**Pn**	**23 19 19.5**	**-0.1**
RUS	**Russkaya**	**1.48**	**253**	*i* P	**Pn**	**23 19 20.9**	**+0.5**
RUS				*e*S	**Sn**	**23 19 38.9**	**+0.3**
KRMR	**Karymshinskiy**	**1.63**	**269**	*e*P	**Pn**	**23 19 23.6**	**+1.1**
KRMR				*e*S	**Sn**	**23 19 42.1**	**-0.4**
MTVR	**Mutnovka**	**1.66**	**257**	*e*P	**Pn**	**23 19 24.0**	**+1.0**
MTVR				*e*S	**Sn**	**23 19 43.6**	**+0.3**
GRL	**Gorelyy**	**1.71**	**260**	*e*P	**Pn**	**23 19 25.0**	**+1.3**
GRL				*e*S	**Sn**	**23 19 46.1**	**+1.6**
ASAK	**Asacha**	**1.85**	**255**	*i* P	**Pn**	**23 19 27.1**	**+1.5**
ASAK				*e*S	**Sn**	**23 19 49.7**	**+1.7**
PETK	**Petropavlovsk-**	**1.90**	**278**	P	**Pn**	**23 19 27.4**	**+1.1**
	58nm,0.3s,baz=93,slow=19,SNR=663						
PETK				S	**Sn**	**23 19 49.7**	**+0.6**
	11nm,0.3s,baz=86,slow=19,SNR=6.1						
APC	**Apacha**	**2.22**	**272**	*e*P	**Pn**	**23 19 32.7**	**+2.1**
APC				*e*S	**Sn**	**23 19 59.9**	**+3.0**
KZV	**Kizimen**	**2.25**	**352**	*e*P	**Pn**	**23 19 32.0**	**+0.8**
KZV				*e*S	**Sn**	**23 19 57.3**	**-0.7**
TUMD	**Tumrok D**	**2.33**	**354**	*e*P	**Pn**	**23 19 32.6**	**+0.4**
TUMD				*e*S	**Sn**	**23 19 59.0**	**-0.8**
TUMR	**Tumrok**	**2.43**	**351**	*e*P	**Pn**	**23 19 35.0**	**+1.4**
TUMR				*e*S	**Sn**	**23 20 02.6**	**+0.2**
MIPR	**Malaya Ipel'ka**	**2.55**	**258**	*e*P	**Pn**	**23 19 37.5**	**+2.3**
KMNR	**Kamenistaya**	**2.89**	**353**	*i* P	**Pn**	**23 19 42.3**	**+2.3**
BZGR	**Bezymyannyi-Gr**	**3.06**	**359**	*e*P	**Pn**	**23 19 44.1**	**+1.9**
KIRR	**Kirishey**	**3.08**	**355**	*e*P	**Pn**	**23 19 44.8**	**+2.2**
BZWR	**Bezymyannyi-We**	**3.09**	**357**	*e*P	**Pn**	**23 19 45.1**	**+2.4**
KPT	**Kopyto**	**3.10**	**354**	*e*P	**Pn**	**23 19 45.0**	**+2.2**
ZLN	**Zelenaya**	**3.13**	**360**	*e*P	**Pn**	**23 19 45.4**	**+2.1**
LGNR	**Loginova**	**3.20**	**359**	*i* P	**Pn**	**23 19 47.6**	**+3.2**
LGNR				*e*S	**Sn**	**23 20 24.8**	**+3.2**
KOZ	**Kozyrevsk**	**3.22**	**351**	*e*P	**Pn**	**23 19 46.4**	**+2.0**
CIRR	**Tsirk**	**3.23**	**359**	*e*P	**Pn**	**23 19 47.7**	**+3.0**
KRSR	**Krestovskiy**	**3.34**	**358**	*e*P	**Pn**	**23 19 48.2**	**+2.1**
KBTR	**Krutoberegovo**	**3.52**	**18**	*e*P	**Pn**	**23 19 49.2**	**+0.7**
BDR	**Baidarnaya**	**3.69**	**3**	*e*P	**Pn**	**23 19 54.0**	**+3.1**
SRKR	**Sorokina**	**3.78**	**3**	*e*P	**Pn**	**23 19 55.1**	**+3.0**
BKI	**Bering**	**3.82**	**51**	*e*P	**Pn**	**23 19 53.5**	**+0.9**
BKI				*e*S	**Sn**	**23 20 32.9**	**-3.5**
MA2	**Magadan**	**8.72**	**324**	LR	LR	23 24 29.3	
	comp=Z,23nm,19.3s,baz=105,slow=39						
H11N2	**WAKE ISLAND Hy**	**33.43**	**170**	T	T	00 01 04.0	
	baz=353,slow=76,SNR=12						
H11N3	**WAKE ISLAND Hy**	**33.44**	**170**	T	T	00 01 06.3	
	baz=353,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	**33.45**	**170**	T	T	00 01 03.7	
	baz=353,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**34.62**	**170**	T	T	00 02 45.2	
	baz=352						
H11S3	**WAKE ISLAND Hy**	**34.63**	**170**	T	T	00 02 34.5	
	baz=352						
H11S2	**WAKE ISLAND Hy**	**34.63**	**170**	T	T	00 02 36.3	
	baz=352						
MKAR	**Makanchi Array**	**48.64**	**296**	P	**P**	**23 27 33.4**	**-3.3**
	0.2nm,0.5s,baz=54,slow=5.9,SNR=1.4						
TXAR	**Lajitas Array**	**70.31**	**67**	P	**P**	**23 30 07.6**	**+1.1**
	0.3nm,0.6s,baz=298,slow=4.6,SNR=5.1						

*NEIC **27** 23:45:15.5±1.5, 5°13S±0°07×125°39E±0°09, h529km±7km, mb4.4/37, Error ellipse: s-maj=13.4km s-min=9.6km az=123.0*
*IDC **27** 23:45:15.8±0.7, 5°17S×125°41E, h528km±8km, mb3.7/19, mb1 3.8/25, mb1mx3.7/36, mbtmp4.6/25, Error ellipse: s-maj=10.1km s-min=8.0km az=79.0*
*DJA **27** 23:45:16.4±0.3, 5°S±3°×12°6E±°, h515km±5km, M4.5/24, mb4.8/18, mB4.9/14, MLv5.1/24, Mw(mB)4.2/14*

ISC 27 23:45:16.7±0.3, 5°12S±0°05×125°44E±0°06, h550km, n116, σ1ᵗ74/123, mb4.3/31, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**2.50**	**42**	P	**P**	**23 46 25.0**	**-3.9**
NLAI				S	**S**	**23 47 20.7**	**-6.8**
BBSI	**Bau Bau**	**2.88**	**263**	P	**P**	**23 46 30.1**	**-1.0**
AAI	**Ambon**	**3.09**	**63**	P	**P**	**23 46 28.2**	**-4.2**
MSAI	**Masohi**	**3.90**	**63**	P	**P**	**23 46 33.6**	**-4.3**
BNDI	**Bandanaira**	**4.49**	**83**	P	**P**	**23 46 39.2**	**-3.2**
MMRI	**Maumere**	**4.72**	**222**	P	**P**	**23 46 42.5**	**-1.8**
MMRI	**Maumere**	**4.72**	**222**	P	**P**	**23 46 42.7**	**-1.6**
SOEI	**Soe**	**4.75**	**194**	P	**P**	**23 46 42.4**	**-2.2**
SOEI	**Soe**	**4.75**	**194**	P	**P**	**23 46 42.5**	**-2.2**
LBMI	**Labuha**	**4.91**	**25**	P	**P**	**23 46 45.2**	**-0.7**
EDFI	**Ende, Flores**	**5.18**	**226**	P	**P**	**23 46 46.4**	**-1.9**
	1.6nm5μm368nm,0.6s						
BKSI	**Bulukumba**	**5.30**	**268**	P	**P**	**23 46 47.5**	**-1.7**
	1.0nm2μm279nm,0.8s						
BATI	**Baumata**	**5.35**	**199**	P	**P**	**23 46 47.5**	**-2.1**
	396nm,0.3s,baz=56,slow=1.6,SNR=226						
BATI				S	**S**	**23 48 00.6**	**-4.9**
	70nm,0.3s,baz=116,slow=20,SNR=7.6						
BATI	**Baumata**	**5.35**	**199**	P	**P**	**23 46 47.3**	**-2.3**
	2.8nm10μm651nm,0.5s						
BNSI	**Bone**	**5.37**	**277**	P	**P**	**23 46 49.1**	**-0.6**
	1.0nm3μm258nm,0.7s						
KAPI	**Kappang**	**5.67**	**271**	P	**P**	**23 46 50.9**	**-1.5**
	22nm,0.3s,baz=98,slow=4.8,SNR=76						
KAPI				S	**S**	**23 48 09.3**	**-1.2**
	baz=346,slow=22,SNR=0.9						
KAPI	**Kappang**	**5.67**	**271**	P	**P**	**23 46 50.5**	**-1.9**
SPSI	**Sidrap Palu**	**5.77**	**281**	P	**P**	**23 46 51.8**	**-1.5**
	0.7nm2μm176nm,0.7s						
KMSI	**Cibinong**	**5.84**	**345**	P	**P**	**23 46 53.9**	**-0.1**
	1.5nm350nm,0.7s						
TTSI	**Tana Toraja**	**5.98**	**290**	P	**P**	**23 46 54.3**	**-0.9**
	0.2nm34nm,0.9s						
TNTI	**Ternate**	**6.16**	**18**	P	**P**	**23 46 55.2**	**-1.7**
	0.8nm2μm86nm,0.5s						
TNTI	**Ternate**	**6.16**	**18**	P	**P**	**23 46 54.7**	**-2.2**
TNTI				S	**S**	**23 48 16.9**	**-1.8**
SAUI	**Saumlaki**	**6.48**	**116**	P	**P**	**23 46 59.0**	**-0.8**
SAUI				S	**S**	**23 48 21.1**	**-3.0**
WSI	**Waingapu**	**6.81**	**228**	P	**P**	**23 47 02.4**	**-0.5**
	103nm23μm,1.0s						
BASI	**Baing, Sumba**	**6.99**	**223**	P	**P**	**23 47 01.6**	**-3.0**
FAKI	**Fak Fak**	**7.13**	**72**	P	**P**	**23 47 04.9**	**-1.2**
	2.8nm11μm600nm,0.5s						
FAKI	**Fak Fak**	**7.13**	**72**	P	**P**	**23 47 04.6**	**-1.5**
SIJI	**Sorong**	**7.19**	**54**	P	**P**	**23 47 05.9**	**-0.7**
	33nm,0.3s,baz=257,slow=5.7,SNR=36						
SIJI				S	**S**	**23 48 33.6**	**-2.9**
	0.4nm,0.3s,baz=115,slow=18,SNR=9.0						
WBSI	**Waikabubak, Su**	**7.49**	**233**	P	**P**	**23 47 05.6**	**-4.0**
	1.0nm3μm112nm,0.5s						
WBSI				S	S	23 48 30.7	-11
	1.0nm3μm112nm,0.5s						
MPSI	**Mapaga**	**7.75**	**314**	P	**P**	**23 47 11.9**	**-0.2**
	0.1nm548nm10nm,0.9s						
PLAI	**Plampang**	**8.45**	**244**	P	**P**	**23 47 16.1**	**-2.9**
	2μm71nm,0.7s						
RKPI	**Ransiki, Papua**	**9.43**	**68**	P	**P**	**23 47 33.0**	**+4.1**
MTN	**Manton Dam**	**9.51**	**144**	P	**P**	**23 47 29.1**	**-0.6**
KNRA	**Kununurra**	**10.98**	**163**	P	**P**	**23 47 43.3**	**-1.5**
JAGI	**Jajag, Banyuwa**	**11.69**	**253**	P	**P**	**23 47 49.7**	**-2.5**
KDP	**Kidapawan**	**12.06**	**358**⇓	*e*P	**P**	**23 47 54.7**	**-1.3**
KCP				*i* S	**S**	**23 50 06.9**	**-0.2**

FITZ	**Fitzroy Crossi**	**12.90**	**179**	P	**P**	**23 48 03.0**	**-1.5**	
	1.3nm,0.3s,baz=3.7,slow=6.5,SNR=16							
FITZ				S	**S**	**23 50 26.5**	**+3.8**	
	1.3nm,0.3s,baz=344,slow=19,SNR=15							
FITZ	**Fitzroy Crossi**	**12.90**	**179**	P	**P**	**23 48 02.4**	**-2.1**	
GENI	**Genyem**	**14.90**	**81**	P	**P**	**23 48 25.4**	**+0.1**	
JAY	**Jayapura**	**15.45**	**81**	P	**P**	**23 48 29.9**	**-1.0**	
	2.0nm,0.3s,baz=244,slow=11,SNR=7.4							
KSM	**Kuching**	**16.48**	**293**	P	**P**	**23 48 39.1**	**-1.7**	
KSM				IAmb	IAmb	23 48 42.6		
	comp=Z,14nm,0.9s							
MBWA	**Marble Bar**	**16.88**	**199**	P	**P**	**23 48 44.0**	**-0.4**	
WB0	**Warramunga Arr**	**16.97**	**150**	P	**P**	**23 48 44.7**	**-0.5**	
WRAB	**Tennant Creek**	**17.09**	**150**	P	**P**	**23 48 46.5**	**+0.2**	
WRA	**Warramunga Arr**	**17.09**	**150**	P	**P**	**23 48 45.8**	**-0.5**	
	comp=Z,2.9nm,0.3s,baz=327,slow=7.6,SNR=75							
WRA				S	**S**	**23 51 36.0**	**-1.3**	
	comp=Z,0.3nm,0.3s,baz=328,slow=16,SNR=6.6							
WB2	**Warramunga Arr**	**17.09**	**150**	P	**P**	**23 48 46.5**	**+0.1**	
PSA00	**Pilbara Seismi**	**17.23**	**198**	P	**P**	**23 48 47.0**	**-0.6**	
CISI	**Cisompet, Garu**	**17.68**	**261**	P	**P**	**23 48 50.5**	**-1.5**	
LEM	**Lembang**	**17.81**	**264**	P	**P**	**23 48 52.1**	**-1.0**	
	comp=Z,5.5nm,0.3s,baz=14,slow=11,SNR=6.3							
AS31	**Alice Springs**	**20.16**	**157**	P	**P**	**23 49 14.8**	**+0.4**	
AS31				IAmb	IAmb	23 49 17.1		
	comp=Z,4.9nm,0.7s							
PMG	**Port Moresby**	**21.95**	**102**	P	**P**	**23 49 31.8**	**+1.3**	
	comp=Z,11nm,0.5s,baz=304,slow=8.2,SNR=3.6							
PMG	**Port Moresby**	**21.95**	**102**	IAmb	IAmb	23 49 32.2		
	comp=Z,19nm,0.7s							
FORT	**Forrest**	**25.64**	**175**	P	**P**	**23 50 03.1**	**0.0**	
KRVT	**Keravat (AS076**	**26.51**	**89**	P	**P**	**23 50 12.4**	**+1.4**	
	comp=Z,32nm,0.5s,baz=209,slow=10,SNR=2.7							
RPSI	**Rantau Prapat**	**27.61**	**286**	P	**P**	**23 50 20.4**	**-0.2**	
PSI	**Prapat**	**27.64**	**286**	P	**P**	**23 50 20.3**	**-0.7**	
	comp=Z,14nm,0.8s,baz=171,slow=0.1,SNR=14							
GSI	**Gunungsitoli**	**28.56**	**282**	P	**P**	**23 50 28.1**	**-0.9**	
TPUB	**Ta-pu**	**28.64**	**351**	P	**P**	**23 50 28.4**	**-1.1**	
NWAO	**Narrogin (SRO)**	**28.70**	**194**	P	**P**	**23 50

*ISK **28** 00:03:40.7, 40˚.53N×42˚.52E, h6km, ML4.2/22*
*DDA **28** 00:03:41.6, 40˚.49N×42˚.40E, h11km±2km, MW4.3*
*ATA **28** 00:03:41.0±1.5, 40˚.50N×42˚.39E, h15km±8km, ML4.2, MW4.4*
*TIF **28** 00:03:41.9, 40˚.51N×42˚.33E, h9km*
*MOS **28** 00:03:43.4±1.7, 40˚.62N×42˚.22E, h10km, mb4.4/17, Error ellipse: s-maj=4.9km s-min=4.0km az=120.1*
*IDC **28** 00:03:45.1±0.6, 40˚.71N×42˚.27E, h0km, mb3.9/16, mb1 3.9/27, mb1mx3.8/51, mbtmp3.8/27, ML3.0/8, MS3.5/28, Ms1 3.5/28, ms1mx3.4/49, Error ellipse: s-maj=10.6km s-min=8.4km az=160.0*
*NEIC **28** 00:03:45.5±3.0, 40˚.70N±0˚.05×42˚.25E±0˚.06, h10km±1km, mb4.3/30, ML4.2(ISK), Error ellipse: s-maj=8.7km s-min=7.3km az=345.0*

ISC 28 00:03:44.1±0.7, **40˚49N**±0˚.01×**42˚35E**±0˚.01, **h3**km±5km, **n309**, **s201**/363, **mb4.2**/43, **MS3.5**/20, **61C-23D, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res	ISC
SENK	**Senkaya-Erzuru**	**0.07**	**358**		Op PG	**Pg**	**00 03 44.2**	**-1.4**	
SENK					SG	**Pg**	**00 03 45.6**	**0.0**	
SENK	**Senkaya-Erzuru**	**0.07**	**358**			**Pg**	**00 03 45.6**	**0.0**	
HOMI	**Horasan**	**0.56**	**218**	*i* P		**Pg**	**00 03 52.7**	**-2.3**	
HOMI					*e*S	**Sg**	**00 04 02.5**	**+0.3**	
HOMI					IAML		00 04 11.9		
	comp=Z,12μm,1.3s								
HOMI	**Horasan**	**0.56**	**218**	⇑*i* P		**Pg**	**00 03 52.6**	**-2.3**	
HOMI					*i* S	**Sg**	**00 04 02.4**	**+0.2**	
DDEM	**Demirkent**	**0.61**	**311**	⇑*i* P		**Pg**	**00 03 54.1**	**-1.6**	
DDEM					*i* S	**Sg**	**00 04 03.4**	**-0.3**	
DDEM					IAML		00 04 06.0		
	comp=E,12μm,0.3s								
KOPR	**Koprukoy-ERZUR**	**0.63**	**217**	PG		**Pg**	**00 03 54.1**	**-2.1**	
KOPR	**Koprukoy-ERZUR**	**0.63**	**217**			**Pg**	**00 03 54.1**	**-2.1**	
KOPR						**Pn**	**00 04 04.4**	**+4.3**	
EATA	**Eleskirt**	**0.64**	**170**	⇓*i* P		**Pg**	**00 03 53.8**	**-2.6**	
EATA					*e*S	**Sg**	**00 04 03.7**	**-1.0**	
EATA	**Eleskirt**	**0.64**	**170**	⇓*i* P		**Pg**	**00 03 53.8**	**-2.6**	
EATA					*i* S	**Sg**	**00 04 03.7**	**-1.0**	
EATA					IAML		00 04 07.0		
	comp=N,6μm,0.4s								
EATA					IAML		00 04 11.0		
	comp=E,5μm,0.4s								
DAGI	**Agillar**	**0.67**	**330**	⇓*i* P		**Pg**	**00 03 55.4**	**-1.6**	
DAGI					*i* S	**Sg**	**00 04 05.7**	**0.0**	
DAGI					IAML		00 04 09.0		
	comp=E,8μm,1.6s								
DAGI					IAML		00 04 09.0		
	comp=N,13μm,0.6s								
DBAD	**Bademkaya**	**0.72**	**317**	⇑*i* P		**Pg**	**00 03 56.2**	**-1.8**	
DBAD					*i* S	**Sg**	**00 04 07.0**	**-0.4**	
DBAD					IAML		00 04 10.0		
	comp=E,6μm,0.6s								
DBAD					IAML		00 04 12.0		
	comp=N,7μm,0.6s								
AKDA	**Akdag**	**0.85**	**243**	⇑*i* P		**Pg**	**00 03 58.5**	**-1.9**	
AKDA					*i* S	**Sb**	**00 04 13.2**	**-0.3**	
EAK	**Akyaka**	**0.97**	**78**	⇑*i* P		**Pg**	**00 04 00.1**	**-2.7**	
EAK					IAML		00 05 00.2		
	comp=Z,9μm,1.2s								
EAK	**Akyaka**	**0.97**	**78**	⇑*i* P		**Pg**	**00 04 00.1**	**-2.7**	
EAK					IAML		00 04 19.0		
	comp=N,8μm,0.6s								
EAK					*i* S	**Sn**	**00 04 24.4**	**+5.2**	
EAK					IAML		00 04 32.0		
	comp=E,9μm,0.7s								
DBOC	**Borcka**	**1.00**	**329**	⇓*i* P		**Pg**	**00 04 00.8**	**-2.4**	
DBOC					*i* S	**Sg**	**00 04 14.6**	**-1.5**	
DBOC					IAML		00 04 16.0		
	comp=E,3μm,0.8s								
ATA5	**Erzurum, Merke**	**1.03**	**236**	*i* P		**Pg**	**00 04 02.4**	**-1.5**	
ATA5					*i* S	**Sg**	**00 04 18.1**	**+0.8**	
ATA5					IAML		00 04 20.0		
	comp=E,3μm,0.6s								
ATA5					IAML		00 04 22.0		
	comp=N,5μm,0.7s								
BCA	**Borcka**	**1.10**	**330**	PN		**Pg**	**00 04 02.7**	**-2.5**	
BCA				SN		**Sb**	**00 04 19.2**	**-1.3**	
BCA	**Borcka**	**1.10**	**330**			**Pg**	**00 04 02.6**	**-2.6**	
KRIK	**Erzurum-spir**	**1.10**	**262**	⇑*i* P		**Pg**	**00 04 03.4**	**-1.8**	
KRIK					*e*S	**Sb**	**00 04 20.4**	**-0.3**	
KRIK	**Erzurum-spir**	**1.10**	**262**	⇑*i* P		**Pg**	**00 04 03.4**	**-1.8**	
KRIK					*i* S	**Sn**	**00 04 20.6**	**-1.9**	
TUTA	**Tutak**	**1.15**	**162**	⇓*e* P		**Pb**	**00 04 03.3**	**-3.4**	
TUTA					*e*S	**Sb**	**00 04 19.6**	**-2.5**	
TUTA	**Tutak**	**1.15**	**162**	⇓*i* P		**Pb**	**00 04 03.3**	**-3.4**	
TUTA					*i* S	**Sb**	**00 04 20.1**	**-2.0**	
EMRE	**Erzurum,Aziziy**	**1.15**	**247**	⇑*i* P		**Pb**	**00 04 04.1**	**-2.6**	
EMRE					*e*S	**Sn**	**00 04 22.9**	**-0.9**	
EMRE	**Erzurum,Aziziy**	**1.15**	**247**	⇑*i* P		**Pb**	**00 04 04.1**	**-2.6**	
EMRE					*i* S	**Sn**	**00 04 22.1**	**-1.6**	
EMRE					IAML		00 04 29.0		
	comp=E,5μm,0.7s								
VNNZ	**Vanand**	**1.19**	**109**	⇑*i* P		**Pn**	**00 04 03.8**	**-4.0**	
VNNZ				⇑	*i* S	**Sb**	**00 04 20.8**	**-2.4**	
BATM	**Batumi**	**1.22**	**336**	⇓*i* P		**Pb**	**00 04 04.6**	**-3.2**	
BATM					*e*S	**Sb**	**00 04 21.6**	**-2.3**	
BATM	**Batumi**	**1.22**	**336**	PN		**Pb**	**00 04 04.6**	**-3.2**	
BATM				SN		**Sb**	**00 04 22.2**	**-1.7**	
BATM	**Batumi**	**1.22**	**336**	⇓*i* P		**Pb**	**00 04 04.6**	**-3.2**	
BATM					*i* S	**Sb**	**00 04 22.1**	**-1.7**	
BATM	**Batumi**	**1.22**	**336**	PG		**Pb**	**00 04 04.6**	**-3.2**	
BATM	**Batumi**	**1.22**	**336**			**Pb**	**00 04 04.6**	**-3.2**	
AKH	**Akhalkalaki**	**1.26**	**43**	PG		**Pn**	**00 04 06.3**	**-2.5**	
AKH	**Akhalkalaki**	**1.26**	**43**			**Pn**	**00 04 06.3**	**-2.5**	
ARUZ	**Aruch**	**1.34**	**98**	*i* P		**Pn**	**00 04 06.7**	**-3.2**	
ARUZ					*i* S	**Sb**	**00 04 25.5**	**-2.2**	
CHOM	**Cayeli-Rize**	**1.35**	**297**	PN		**Pn**	**00 04 07.6**	**-2.3**	
MLAZ	**Malazgirt-MUS**	**1.36**	**174**	PN		**Pn**	**00 04 07.1**	**-3.0**	
MLAZ				SN		**Sb**	**00 04 26.3**	**-1.8**	
METS	**Metsamor**	**1.36**	**104**	*i* P		**Pn**	**00 04 06.9**	**-3.2**	
METS					*i* S	**Sb**	**00 04 25.8**	**-2.4**	
CHAY	**Cayeli-Rize**	**1.37**	**296**	PN		**Pn**	**00 04 08.2**	**-1.9**	
ECAT	**Cat-ERZURUM**	**1.38**	**230**	⇑*i* P		**Pn**	**00 04 07.3**	**-3.2**	
ECAT					*e*S	**Sg**	**00 04 29.2**	**+0.7**	
ECAT	**Cat-ERZURUM**	**1.38**	**230**	⇑*i* P		**Pn**	**00 04 07.4**	**-3.1**	
ECAT					*i* S	**Sn**	**00 04 28.6**	**-0.7**	
ECAT					IAML		00 04 30.0		
	comp=N,513nm,0.5s								
ECAT					IAML		00 04 33.0		
	comp=E,670nm,0.6s								
DYDN	**Diyadin**	**1.40**	**132**	*e* P		**Pn**	**00 04 07.9**	**-2.8**	
DYDN					*e*S	**Sn**	**00 04 29.2**	**-0.5**	
DYDN					IAML		00 04 40.7		
	comp=Z,2μm,1.0s								
DYDN	**Diyadin**	**1.40**	**132**	*i* P		**Pn**	**00 04 08.0**	**-2.8**	
DYDN					*i* S	**Sn**	**00 04 28.2**	**-1.6**	
DYDN					IAML		00 04 35.0		
	comp=E,3μm,0.9s								
DYDN					IAML		00 04 36.0		
	comp=N,3μm,1.2s								
IGDI	**IGDIR**	**1.46**	**115**	*e* P		**Pn**	**00 04 09.5**	**-2.0**	
IGDI	**IGDIR**	**1.46**	**115**	*i* P		**Pn**	**00 04 08.3**	**-3.2**	
IGDI					*i* S	**Sb**	**00 04 32.0**	**+1.0**	
IGDI					IAML		00 04 34.0		
	comp=E,1μm,1.6s								
IGDI					IAML		00 04 39.0		
	comp=N,1μm,1.1s								
KOPT	**Kop Dagi**	**1.50**	**252**	⇑*i* P		**Pn**	**00 04 10.6**	**-1.5**	
KOPT					*e*S	**Sg**	**00 04 33.2**	**+1.0**	
KOPT					IAML		00 04 39.2		
	comp=Z,2μm,0.6s								
KOPT	**Kop Dagi**	**1.50**	**252**	⇑*i* P		**Pn**	**00 04 10.6**	**-1.5**	
KOPT					*i* S	**Sg**	**00 04 35.6**	**+3.4**	
KOPT					IAML		00 04 44.0		
	comp=N,2μm,0.9s								
KOPT					IAML		00 04 47.0		
	comp=E,2μm,0.7s								
VRTB	**Varto-Mus**	**1.50**	**208**	PN		**Pn**	**00 04 09.6**	**-2.5**	
VRTB	**Varto-Mus**	**1.50**	**208**	⇓*i* P		**Pn**	**00 04 09.3**	**-2.7**	
VRTB					*i* S	**Sg**	**00 04 34.1**	**+1.8**	
VRTB	**Varto-Mus**	**1.50**	**208**			**Sg**	**00 04 40.7**	**+8.4**	
KARO	**Karliova-Bingo**	**1.55**	**221**	PN		**Pn**	**00 04 10.9**	**-1.9**	
STE	**Stepanavan**	**1.61**	**71**	⇑*i* P		**Pn**	**00 04 12.3**	**-1.3**	
STE				⇑	*i* S	**Sg**	**00 04 36.7**	**+0.8**	
BAYB	**BAYBURT**	**1.62**	**262**	⇑*i* P		**Pn**	**00 04 12.2**	**-1.5**	
BAYB					*e*S	**Sg**	**00 04 36.4**	**+0.3**	
BAYB	**BAYBURT**	**1.62**	**262**	⇑*i* P		**Pn**	**00 04 12.3**	**-1.5**	
BAYB					*i* S	**Sg**	**00 04 36.6**	**+0.5**	
BAYB					IAML		00 04 42.0		
	comp=N,979nm,0.8s								
BAYB					IAML		00 04 47.0		
	comp=E,1μm,0.6s								
BAYT	**Aydıntepe-Bayb**	**1.69**	**267**	PN		**Pn**	**00 04 13.3**	**-1.4**	
BAYT	**Aydıntepe-Bayb**	**1.69**	**267**	Pn		**Pn**	**00 04 13.3**	**-1.4**	
ADCV	**BITLIS_Adilcev**	**1.71**	**170**	*i* P		**Pn**	**00 04 12.9**	**-2.1**	
ADCV					*i* S	**Sg**	**00 04 40.7**	**+1.7**	
ADCV					IAML		00 04 43.0		
	comp=N,540nm,1.4s								
ADCV					IAML		00 04 49.0		
	comp=E,539nm,1.2s								
YEDI	**Yedisu-Bingol**	**1.75**	**233**	PN		**Pn**	**00 04 13.7**	**-1.7**	
VMUR	**Van-Muradiye**	**1.77**	**148**	*i* P		**Pn**	**00 04 14.0**	**-1.8**	
VMUR					*i* S	**Sn**	**00 04 36.9**	**-2.0**	
KZRT	**Kazreti**	**1.79**	**59**	*e* P		**Pn**	**00 04 14.3**	**-1.5**	
KZRT					*e*S	**Sn**	**00 04 38.9**	**-0.3**	
KZRT	**Kazreti**	**1.79**	**59**	*i* P		**Pn**	**00 04 14.4**	**-1.5**	
KZRT					*i* S	**Sn**	**00 04 37.7**	**-1.5**	
KAPZ	**Kaputan**	**1.80**	**95**	*i* P		**Pn**	**00 04 14.2**	**-2.0**	
KAPZ					*i* S	**Sn**	**00 04 38.3**	**-1.4**	
CLDR	**Caldiran**	**1.81**	**138**	*i* P		**Pn**	**00 04 14.1**	**-2.2**	
CLDR					*i* S	**Sg**	**00 04 43.2**	**+1.0**	
CLDR					IAML		00 05 02.0		
	comp=N,508nm,1.2s								
CLDR					IAML		00 05 13.0		
	comp=E,650nm,1.2s								
NRKZ	**NAREK**	**1.83**	**105**	*i* P		**Pn**	**00 04 15.0**	**-1.6**	
NRKZ					*i* S	**Sb**	**00 04 41.6**	**-0.1**	
MUSM	**Mu-Merkez**	**1.88**	**200**	⇓*e* P		**Pn**	**00 04 15.7**	**-1.6**	
MUSM					*e*S	**Sn**	**00 04 42.0**	**+0.3**	
MUSM	**Mu-Merkez**	**1.88**	**200**	⇓*i* P		**Pn**	**00 04 15.7**	**-1.6**	
MUSM					*i* S	**Sb**	**00 04 42.5**	**-0.7**	
MUSM					IAML		00 04 45.0		
	comp=N,334nm,0.5s								
MUSM					IAML		00 04 45.0		
	comp=E,324nm,0.5s								
GURO	**Guroymak-BITLI**	**1.96**	**187**	PN		**Pn**	**00 04 16.6**	**-1.7**	
BNGB	**Bingl**	**1.98**	**221**	PN		**Pn**	**00 04 17.1**	**-1.5**	
MACK	**Trabzon**	**2.02**	**284**	⇑*i* P		**Pn**	**00 04 17.8**	**-1.2**	
MACK					*i* S	**Sb**	**00 04 46.1**	**-0.8**	
MACK					IAML		00 04 49.0		
	comp=N,2μm,0.5s								
MACK					IAML		00 04 56.0		
	comp=E,1μm,0.7s								
KTUT	**Trabzon**	**2.03**	**285**	PN		**Pn**	**00 04 17.9**	**-1.2**	
BLIS	**Bitlis-Merkez**	**2.08**	**185**	⇓*e* P		**Pn**	**00 04 18.6**	**-1.6**	
BLIS					*e*S	**Sb**	**00 04 48.6**	**-0.4**	
BLIS	**Bitlis-Merkez**	**2.08**	**185**	⇓*i* P		**Pn**	**00 04 18.5**	**-1.6**	
BLIS					*i* S	**Sb**	**00 04 49.3**	**+0.3**	
BLIS					IAML		00 04 52.0		
	comp=N,652nm,0.9s								
BLIS					IAML		00 04 54.0		
	comp=E,712nm,0.8s								
TVAN	**Van**	**2.12**	**157**	*e* P		**Pn**	**00 04 21.3**	**+0.6**	
TVAN	**Van**	**2.12**	**157**	*i* P		**Pn**	**00 04 21.4**	**+0.7**	
TVAN					*i* S	**Sb**	**00 04 51.7**	**+1.5**	
EUZM	**Uzumlu**	**2.18**	**250**	*e* P		**Pn**	**00 04 19.7**	**-1.7**	
EUZM	**Uzumlu**	**2.18**	**250**	⇑*i* P		**Pn**	**00 04 19.8**	**-1.7**	
EUZM					*i* S	**Sg**	**00 04 59.7**	**+5.5**	
EUZM					IAML		00 05 08.0		
	comp=E,165nm,0.9s								
TBLG	**Delisi**	**2.19**	**55**	*e* P		**Pn**	**00 04 20.9**	**-0.5**	
TBLG					*e*S	**Sb**	**00 04 51.2**	**-0.6**	
TBLG					IAML		00 05 06.5		
	comp=Z,481nm,1.2s								
TBLG	**Delisi**	**2.19**	**55**	*i* P		**Pn**	**00 04 21.4**	**+0.1**	
TBLG					*i* S	**Sb**	**00 04 52.2**	**+0.4**	
TBLG	**Delisi**	**2.19**	**55**	PN		**Pn**	**00 04 20.7**	**-0.7**	
TBLG	**Delisi**	**2.19**	**55**	Pn		**Pn**	**00 04 20.7**	**-0.7**	
BTNK	**Botanikuri**	**2.20**	**56**	*i* P		**Pn**	**00 04 20.0**	**-1.5**	
BTNK					*i* S	**Sb**	**00 04 53.0**	**+0.9**	
BTNK					IAML		00 05 02.0		
	comp=N,466nm,1.3s								
BTNK					IAML		00 05 08.0		
	comp=E,291nm,1.2s								
ERZN	**Erzincan**	**2.21**	**247**	PN		**Pn**	**00 04 21.5**	**-0.3**	
KELT	**Kelkit**	**2.39**	**263**	*e* P		**Pn**	**00 04 22.5**	**-1.9**	
KELT					IAML		00 05 13.1		
	comp=Z,322nm,1.0s								
KELT	**Kelkit**	**2.39**	**263**	*i* P		**Pn**	**00 04 24.3**	**-0.1**	
KELT					*i* S	**Sg**	**00 05 00.5**	**-0.5**	
KELT					IAML		00 05 12.0		
	comp=N,443nm,0.9s								
KELT					IAML		00 05 27.0		
	comp=E,277nm,0.9s								
DGRG	**David-gareji**	**2.48**	**66**	*e* P		**Pn**	**00 04 25.0**	**-0.4**	
DGRG	**David-gareji**	**2.48**	**66**	*i* P		**Pn**	**00 04 25.4**	**0.0**	
DGRG					IAML		00 05 40.0		
	comp=E,307nm,1.3s								
DGRG					IAML		00 05 41.0		
	comp=N,400nm,1.8s								
SVAN	**Silvan-Diyarba**	**2.50**	**201**	PN		**Pn**	**00 04 24.1**	**-1.7**	
SVAN	**Silvan-Diyarba**	**2.50**	**201**	*i* P		**Pn**	**00 04 24.7**	**-1.1**	
SVAN					*i* S	**Sb**	**00 05 00.4**	**-0.6**	
SRTM	**Siirt_Merkez**	**2.52**	**188**	*i* P		**Pn**	**00 04 25.5**	**-0.6**	
SRTM					*i* S	**Sb**	**00 05 03.6**	**+2.0**	
TNCL	**Tunceli-Merkez**	**2.57**	**238**	*e* P		**Pn**	**00 04 25.0**	**-1.7**	
TNCL	**Tunceli-Merkez**	**2.57**	**238**	*i* P		**Pn**	**00 04 25.1**	**-1.6**	
TNCL					*i* S	**Sb**	**00 05 04.4**	**+1.5**	
HANI	**Diyarbakir_Han**	**2.57**	**217**	*i* P		**Pn**	**00 04 25.4**	**-1.3**	
HANI					*i* S	**Sg**	**00 05 05.8**	**-0.8**	
HANI					IAML		00 05 22.0		
	comp=E,450nm,1.5s								
HANI					IAML		00 05 37.0		
	comp=N,198nm,1.5s								
ZEI	**Tsey**	**2.57**	**26**	*e* PN		**Pn**	**00 04 24.8**	**-2.0**	
ZEI					pmax	pmax			
	comp=Z,199nm,0.7s								
BTMN	**Batman**	**2.73**	**198**	*i* P		**Pn**	**00 04 28.3**	**-0.6**	
BTMN					*i* S	**Sb**	**00 05 09.9**	**+2.4**	
BTMN					IAML		00 05 29.0		
	comp=N,617nm,1.2s								
BTMN					IAML		00 05 33.0		
	comp=E,696nm,1.4s								
NAX	**Nakhchivan**	**2.75**	**118**	PN		**Pb**	**00 04 33.0**	**-1.0**	
NEY	**Neytrino**	**2.77**	**6**	*c* PN		**Pn**	**00 04 30.0**	**+0.5**	
ESPY	**Espiye-Giresun**	**2.79**	**280**	PN		**Pn**	**00 04 28.7**	**-0.9**	
PTK	**Pertek**	**2.79**	**236**	PN		**Pn**	**00 04 29.5**	**-0.3**	
DOMR	**Dombai**	**2.85**	**349**	*c* PN		**Pn**	**00 04 30.3**	**-0.3**	
SIRN	**Sırnak**	**2.99**	**179**	*i* P		**Pn**	**00 04 31.4**	**-1.2**	
DDFL	**Dedoflistskaro**	**3.00**	**70**	*e* P		**Pn**	**00 04 34.0**	**+1.3**	
DDFL					*e*S	**Sg**	**00 05 20.4**	**-0.2**	
DDFL	**Dedoflistskaro**	**3.00**	**70**	*i* P		**Pn**	**00 04 35.3**	**+2.6**	
GANJ	**Ganja**	**3.03**	**86**	PN		**Pn**	**00 04 31.8**	**-1.1**	
DYBB	**Diyarbakir**	**3.06**	**215**	PN		**Pn**	**00 04 32.8**	**-0.7**	
DIYA	**Diyarbakir**	**3.10**	**215**	*i* P		**Pn**	**00 04 33.1**	**-0.8**	
DIYA					IAML		00 05 33.0		
	comp=E,602nm,2.5s								
DIYA					IAML		00 05 38.0		
	comp=N,386nm,2.0s								
HAKT	**HAKKARI**	**3.12**	**160**	*i* P		**Pn**	**00 04 34.8**	**+0.5**	
HAKT					IAML		00 05 53.0		
	comp=E,79nm,2.8s								
NCK	**Nalchik**	**3.14**	**17**	*i* PN		**Pn**	**00 04 35.2**	**+0.7**	
SVRC	**Sivrice-ELAZID**	**3.17**	**229**	PN		**Pn**	**00 04 34.7**	**-0.3**	
SUSE	**Susehri**	**3.19**	**266**	*i* P		**Pb**	**00 04 40.2**	**-1.2**	
SUSE					*i* S	**Sg**	**00 05 27.2**	**+0.8**	
KEMA	**Kemaliye**	**3.21**	**249**	*e* P		**Pn**	**00 04 33.7**	**-1.8**	
KEMA					*e*S	**Sb**	**00 05 18.0**	**-3.4**	
KEMA					IAML		00 05 38.9		
	comp=Z,30nm,1.5s								
KEMA	**Kemaliye**	**3.21**	**249**	*i* P		**Pb**	**00 04 39.1**	**-2.8**	
KEMA					*i* S	**Sg**	**00 05 30.2**	**+2.9**	
KEMA					IAML		00 05 38.0		
	comp=E,87nm,1.1s								
KEMA					IAML		00 05 40.0		
	comp=N,88nm,0.9s								
KBZ	**Khabaz**	**3.26**	**7**	Pn		**Pn**	**00 04 36.5**	**+0.5**	
	comp=N,3.8nm,0.3s,baz=180,slow=13,SNR=18								
KBZ				Pg		**Pb**	**00 04 40.9**	**-1.6**	
	comp=N,4.1nm,0.3s,baz=189,slow=16,SNR=26								
KBZ				LR		LR	00 06 06.6		
	comp=N,1μm,20.7s,baz=248,slow=46								
KBZ	**Khabaz**	**3.26**	**7**	*c* PN		**Pn**	**00 04 35.7**	**-0.3**	
YOVA	**Hakkari_Yksek**	**3.27**	**152**	*i* P		**Pn**	**00 04 39.4**	**+3.0**	
ELZG	**Elazig**	**3.28**	**234**	*i* P		**Pn**	**00 04 34.2**	**-2.3**	
ELZG					IAML		00 05 39.0		
	comp=E,157nm,2.2s								
ELZG					IAML		00 05 50.0		
	comp=N,148nm,1.9s								
MAZI	**Mazidag**	**3.38**	**207**	PN		**Pn**	**00 04 36.3**	**-1.5**	
CUKT	**Cukurca**	**3.39**	**163**	*i* P		**Pn**	**00 04 38.7**	**+0.8**	
CUKT					IAML		00 05 47.0		
	comp=N,173nm,1.2s								
CUKT					IAML		00 05 50.0		
	comp=E,114nm,1.5s								
ORDU	**Ordu-Boztepe**	**3.45**	**280**	*i* P		**Pn**	**00 04 41.0**	**+2.3**	
KIV	**Kislovodsk**	**3.47**	**4**	*ce* PN		**Pn**	**00 04 39.1**	**0.0**	
KIV					pmax	pmax			
	comp=Z,50nm,1.7s								
KIV					MLR	MLR			
	comp=Z,580nm,17.0s								
KIV	**Kislovodsk**	**3.47**	**4**	Pn		**Pn**	**00 04 37.4**	**-1.7**	
MNGR	**Mingechevir, A**	**3.61**	**84**	PN		**Pn**	**00 04 40.5**	**-0.4**	
SOC	**Sochi**	**3.66**	**328**	*e* PN		**Pn**	**00 04 38.9**	**-2.7**	
SOC					*e*		00 05 19.7		
SOC					pmax	pmax			
	comp=Z,62nm,0.5s								
SOC					MLR	MLR			
	comp=Z,422nm,9.0s								
SEKA	**Sheki**	**3.74**	**77**	PN		**Pn**	**00 04 42.2**	**-0.6**	
HEKM	**Malatya_Hekimh**	**3.75**	**246**	*i* P		**Pb**	**00 04 51.4**	**+0.3**	
CUKAN	**kangal_SIVAS**	**3.94**	**254**	*i* P		**Pn**	**00 04 48.0**	**+2.4**	
CUKAN					IAML		00 06 12.0		
	comp=N,106nm,1.7s								
CUKAN					IAML		00 06 16.0		
	comp=E,166nm,1.6s								
SCER	**sogukcermik**	**4.05**	**263**	*i* P		**Pb**	**00 04 55.1**	**-1.0**	
URFA	**Urfa**	**4.11**	**223**	PN		**Pn**	**00 04 47.5**	**-0.3**	
SVSK	**Karacayir**	**4.14**	**264**	PN		**Pn**	**00 04 48.9**	**+0.7**	
AKT	**Akhty**	**4.19**	**75**	*e* PN		**Pn**	**00 04 53.0**	**+4.0**	
AKT					*e*		00 05 02.1		
AKT					*e*		00 05 07.8		
AKT					*e*		00 06 00.6		
AKT					pmax	pmax			
	comp=Z,23nm,0.6s								
AKT					MLR	MLR			
	comp=Z,24nm,4.0s								
DARE	**Darende-Malaty**	**4.23**	**245**	PN		**Pn**	**00 04 49.9**	**+0.4**	
TOKT	**Tokat**	**4.44**	**270**	PN		**Pn**	**00 04 52.4**	**0.0**	
MAK	**Makhachkala**	**4.58**	**56**	*e* PN		**Pn**	**00 04 53.8**	**-0.4**	
MAK					*e*S	**Sn**	**00 05 48.9**	**+1.1**	
MAK					pmax	pmax			
	comp=Z,220nm,1.2s								
MAK					MLR	MLR			
	comp=Z,1μm,7.0s								
GOF	**Gofitskoye**	**4.59**	**6**	⇑*e* PN		**Pb**	**00 05 06.7**	**+1.5**	
GOF					*e*S	**Sg**	**00 06 15.8**	**+4.3**	
GOF					pmax	pmax			
	comp=Z,49nm,0.9s								
GOF					smax	smax			
	comp=E,507nm,1.5s								
GOF					smax	smax			
	comp=N,347nm,1.1s								
GAZ	**Gaziantep**	**5.21**	**232**	*e* P		**Pb**	**00 05 12.3**	**-3.5**	
GAZ	**Gaziantep**	**5.21**	**232**	Pn		**Pn**	**00 05 03.8**	**+0.9**	
LKRN	**Lenkeran, Azer**	**5.27**	**108**	P		**Pn**	**00 05 05.9**	**+2.2**	
ANN	**Anapa**	**5.63**	**321**	*e* P		**Pn**	**00 05 08.2**	**-0.4**	
ANN					*e*S	**Sn**	**00 06 12.1**	**-1.6**	
ANN					pmax	pmax			
	comp=Z,80nm,1.3s								
BR131	**Keskin Array S**	**6.72**	**266**	P		**Pn**	**00 05 24.7**	**+0.8**	
BR131	**Keskin Array S**	**6.72**	**266**	Pn		**Pn**	**00 05 24.7**	**+0.8**	
BRTR	**Keskin Array B**	**6.72**	**266**	Pn		**Pn**	**00 05 27.0**	**+3.1**	
	comp=Z,0.1nm,0.3s,baz=90,slow=14,SNR=6.1								
BRTR				Pg		**Pb**	**00 05 42.2**	**+0.5**	
	comp=Z,0.3nm,0.3s,baz=84,slow=13,SNR=3.1								
BRTR	**Keskin Array B**	**6.72**	**266**	P		**Pn**	**00 05 27.0**	**+3.1**	
SUDU	**Sudak**	**6.97**	**311**	⇓*e* P		**Pn**	**00 05 26.4**	**-0.7**	
SUDU					*e*S	**Sn**	**00 06 45.9**	**-1.0**	
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Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,20nm,1.7s						
OBN				MLR	MLR		
	comp=Z,112nm,17.0s						
DRGR		**15.53**	**300**	⇑P	**Pn**	**00 07 21.3**	**-2.8**
DRGR		**15.53**	**300**	⇑P	**Pn**	**00 07 21.3**	**-2.7**
MOS	**Moscow**	**15.57**	**350**	*e*P	**Pn**	**00 07 20.8**	**-3.6**
MOS				*e*		00 10 20.2	
TRPA	**Tarpa**	**16.08**	**305**	⇑P	**Pn**	**00 07 29.6**	**-1.4**
UZH	**Uzhgorod**	**16.41**	**306**	*e*P	**Pn**	**00 07 35.4**	**+0.1**
KOLS	**Kolonicke sedl**	**16.54**	**307**	*e*P	**P**	**00 07 39.4**	**-0.3**
KOLS	**Kolonicke sedl**	**16.54**	**307**	*e*P	**P**	**00 07 39.4**	**-0.3**
HRA	**Herat**	**16.92**	**105**	Pn	**Pn**	**00 07 42.1**	**0.0**
DIVS	**Divibare**	**16.92**	**290**		**Pn**	**00 07 40.5**	**-1.4**
RAYN	**Ar Rayn**	**17.13**	**170**	P	**Pn**	**00 07 45.0**	**+0.4**
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
RAYN	**Ar Rayn**	**17.13**	**170**	Pn	**Pn**	**00 07 45.0**	**+0.4**
PSZ	**Piszkesteto**	**17.69**	**302**	P	**P**	**00 07 51.1**	**-1.3**
PSZ				pmax	pmax		
	comp=Z,30nm,1.8s						
PSZ	**Piszkesteto**	**17.69**	**302**		**P**	**00 07 51.1**	**-1.3**
PSZ				IAmb	IAmb	00 07 59.1	
	comp=Z,30nm,1.8s						
VYHS	**Vyhne**	**18.53**	**303**	*e*P	**Pn**	**00 08 05.6**	**+3.8**
VYHS	**Vyhne**	**18.53**	**303**	*e*P	**Pn**	**00 08 05.5**	**+3.8**
KIRV	**Kirov**	**18.66**	**12**	P	**P**	**00 08 01.8**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=173,slow=19,SNR=3.6						
KIRV				LR	LR	00 15 48.8	
	comp=Z,235nm,20.0s,baz=196,slow=39						
ARU	**Arti**	**19.15**	**28**	P	**Pn**	**00 08 08.3**	**-0.8**
	comp=Z,0.0nm,0.3s,baz=214,slow=10,SNR=4.9						
ARU				LR	LR	00 17 33.4	
	comp=Z,195nm,18.4s,baz=222,slow=44						
ARU	**Arti**	**19.15**	**28***d*	*i*P	**P**	**00 08 07.7**	**-0.6**
ARU				S	**Sn**	**00 11 42.7**	**-1.2**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.7s						
ARU				MLR	MLR		
	comp=Z,244nm,16.0s						
ARU	**Arti**	**19.15**	**28**	P	**P**	**00 08 05.5**	**-2.8**
MODS	**Modra-Piesok**	**19.50**	**302**	*e*P	**Pn**	**00 08 16.4**	**+2.9**
MODS	**Modra-Piesok**	**19.50**	**302**	*e*P	**Pn**	**00 08 16.4**	**+2.9**
MORC	**Moravsky Berou**	**19.73**	**306**	P	**P**	**00 08 13.6**	**-1.2**
MORC				pmax	pmax		
	comp=Z,12nm,1.6s						
MORC	**Moravsky Berou**	**19.73**	**306**	P	**P**	**00 08 13.6**	**-1.2**
SVE	**Sverdlovsk**	**20.21**	**30**	*e*P	Pn	00 08 20.4	-1.4
SVE				pmax	pmax		
	comp=Z,31nm,1.3s						
KRLC	**Kraliky**	**20.30**	**307**	*e*P	**P**	**00 08 17.8**	**-3.1**
CONA	**Conrad Observa**	**20.32**	**300**	*e*P	Pn	00 08 23.8	+0.5
	comp=Z,7.4nm,1.1s,SNR=8.4						
TAS	**Tashkent**	**20.36**	**79**	P	**P**	**00 08 21.1**	**-0.5**
TAS				pmax	pmax		
	comp=Z,40nm,0.9s						
TAS	**Tashkent**	**20.36**	**79**	P	**P**	**00 08 21.1**	**-0.5**
ARSA	**Arzberg**	**20.43**	**298**	*e*pP	pP	00 08 27.3	+3.6
	comp=Z,3.9nm,0.7s						
KLMR	**Klimovskoe**	**20.46**	**356**	*e*P	**P**	**00 08 19.8**	**-2.8**
KLMR				pmax	pmax		
	comp=Z,39nm,1.2s						
KLMR	**Klimovskoe**	**20.46**	**356**	*e*P	**P**	**00 08 19.9**	**-2.7**
KLMR				AMP		00 08 26.5	
	comp=Z,39nm,1.2s						
CEL	**Celeste**	**20.55**	**272**	P	Pn	00 08 24.2	-1.8
DPC	**Dobruska-Polom**	**20.66**	**307**	*e*P	Pn	00 08 28.5	+1.3
DPC				MLR	MLR		
	comp=Z,100nm,10.6s						
DPC	**Dobruska-Polom**	**20.66**	**307**	*e*P	Pn	00 08 28.5	+1.3
DPC				AMS	AMS	00 19 20.0	
	comp=Z,100nm,10.6s						
SOKA	**Soboth**	**20.67**	**296**	*i* Pn	Pn	00 08 25.2	-2.1
	comp=Z,5.5nm,1.1s						
CHGR	**Chuyangaron**	**20.72**	**86**	P	**P**	**00 08 25.9**	**+0.2**
CHGR				IAmb	IAmb	00 08 30.9	
	comp=Z,22nm,1.0s						
KK31	**Karatay Array**	**21.11**	**74**	P	**P**	**00 08 29.4**	**-0.5**
KK31				pmax	pmax		
	comp=Z,13nm,1.0s						
KK31	**Karatay Array**	**21.11**	**74**	P	**P**	**00 08 29.4**	**-0.5**
KK31				IAmb	IAmb	00 08 37.4	
	comp=Z,13nm,1.0s						
GAR	**Garm**	**21.52**	**85**	P	**P**	**00 08 34.5**	**+0.1**
PRU	**Pruhonice**	**21.65**	**305**	*e*P	**P**	**00 08 35.4**	**-0.1**
PRU	**Pruhonice**	**21.65**	**305**	*e*P	**P**	**00 08 35.4**	**-0.1**
BTK	**Batken**	**21.69**	**82**	P	**P**	**00 08 36.4**	**+0.3**
BTK				pmax	pmax		
	comp=Z,12nm,1.0s						
BTK	**Batken**	**21.69**	**82**	P	**P**	**00 08 36.4**	**+0.3**
BTK				IAmb	IAmb	00 08 53.9	
	comp=Z,12nm,1.0s						
KBA	**Koelnbreinsper**	**21.87**	**297**	*e*P	**P**	**00 08 38.3**	**+0.2**
	comp=Z,10nm,0.9s						
VAE	**Valguarnera**	**21.89**	**271**	LR	LR	00 18 47.2	
	comp=Z,110nm,19.1s,baz=158,slow=41						
GEC2	**GERESS Array S**	**21.92**	**302**	P	**P**	**00 08 38.0**	**-0.6**
GEC2				IAmb	IAmb	00 08 46.2	
	comp=Z,8.2nm,1.3s						
GERES	**GERESS Array B**	**21.92**	**302**	P	**P**	**00 08 38.4**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=105,slow=8.1,SNR=9.2						
KBL	**Kabul**	**21.94**	**97**	P	**P**	**00 08 38.7**	**-0.3**
KBL				pmax	pmax		
	comp=Z,26nm,1.8s						
KBL	**Kabul**	**21.94**	**97**	P	**P**	**00 08 38.7**	**-0.3**
KBL				IAmb	IAmb	00 09 03.9	
	comp=Z,26nm,1.8s						
WSAR	**Wadi Sarin**	**22.01**	**137**	P	**P**	**00 08 44.0**	**+4.5**
	comp=Z,6.0nm,0.9s,baz=347,slow=9.8,SNR=3.6						
WSAR				LR	LR	00 19 41.7	
	comp=Z,53nm,18.3s,baz=327,slow=43						
KHC	**Kasperske Hory**	**22.06**	**303**	*ce*P	**P**	**00 08 41.4**	**+1.4**
KHC				pmax	pmax		
	comp=Z,21nm,1.7s						
KHC	**Kasperske Hory**	**22.06**	**303**	*e*P	**P**	**00 08 39.9**	**-0.1**
MURB	**Monte Urbino**	**22.33**	**287**	P	**P**	**00 08 43.4**	**+0.5**
MURB				IAmb	IAmb	00 08 50.0	
	comp=Z,22nm,1.0s						
ABTA	**Abfaltersbach**	**22.40**	**296**	*i* pP	**P**	**00 08 47.1**	**+3.4**
	comp=Z,2.0nm,0.4s						
BRVK	**Borovoye**	**22.72**	**47**	*ce*P	**P**	**00 08 49.8**	**+2.9**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BRVK	**Borovoye**	**22.72**	**47**	P	**P**	**00 08 47.4**	**+0.5**
BRVK				IAmb	IAmb	00 09 02.7	
	comp=Z,7.2nm,0.9s						
BVAR	**Borovoye Array**	**22.76**	**47**	P	**P**	**00 08 48.3**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=255,slow=5.7,SNR=5.8						
CTI	**Castel Tesino**	**22.95**	**294**	P	**P**	**00 08 47.0**	**-2.5**
CTI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CTI	**Castel Tesino**	**22.95**	**294**	P	**P**	**00 08 47.0**	**-2.5**
CTI				IAmb	IAmb	00 08 52.1	
	comp=Z,10nm,1.0s						
CLL	**Collm**	**22.96**	**308**	*e*sP	**sP**	**00 08 53.0**	**+1.4**
	comp=Z,14nm,1.3s						
CLL				*e*sPP		00 09 17.0	
CLL				*e*S	Sn	00 13 06.0	-10
CLL	**Collm**	**22.96**	**308**	P	**P**	**00 08 46.7**	**-2.7**
CLL				pmax	pmax		
	comp=Z,13nm,1.2s						
CLL	**Collm**	**22.96**	**308**	P	**P**	**00 08 46.7**	**-2.7**
CLL				IAmb	IAmb	00 08 56.6	
	comp=Z,13nm,1.2s						
WTTA	**Wattenberg**	**23.05**	**297**	*i* P	**P**	**00 08 48.9**	**-1.7**
	comp=Z,6.7nm,0.9s,SNR=5.2						
WATA	**Walderalm**	**23.10**	**297**	*i* pP	**P**	**00 08 53.2**	**+2.1**
	comp=Z,4.7nm,0.8s,SNR=7.6						
FINES	**FINESS Array B**	**23.21**	**340**	P	**P**	**00 08 51.9**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=134,slow=11,SNR=5.1						
FINES				LR	LR	00 18 27.5	
	comp=Z,131nm,20.4s,baz=176,slow=38						
SQTA	**Sankt Quirin**	**23.34**	**297**	*i* P	**P**	**00 08 52.9**	**-0.6**
	comp=Z,11nm,0.9s						
MOTA	**Moosalm**	**23.42**	**297**	*i* P	**P**	**00 08 52.8**	**-1.6**
	comp=Z,12nm,0.9s,SNR=6.5						
FETA	**Feichten**	**23.65**	**297**	*i* P	**P**	**00 08 55.3**	**-1.3**
	comp=Z,7.6nm,0.9s,SNR=5.7						
RETA	**Reutte**	**23.66**	**298**	*i* P	**P**	**00 08 55.1**	**-1.6**
	comp=Z,1.8nm,0.6s						
FUORN	**Ofenpass-Fuorn**	**23.94**	**296**	P	**P**	**00 08 58.0**	**-1.6**
AAK	**Ala-Archa**	**24.07**	**74**	P	**P**	**00 09 02.7**	**+1.9**
	comp=Z,2.0nm,0.6s,baz=220,slow=4.6,SNR=6.7						
AAK				LR	LR	00 20 04.6	
	comp=Z,145nm,18.2s,baz=266,slow=41						
AAK	**Ala-Archa**	**24.07**	**74**	*ce*P	**P**	**00 09 02.8**	**+2.0**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
AAK	**Ala-Archa**	**24.07**	**74**	P	**P**	**00 08 59.9**	**-0.9**
AAK				IAmb	IAmb	00 09 52.4	
	comp=Z,6.0nm,1.1s						
FRU1	**Bishkek**	**24.15**	**74**	P	**P**	**00 09 00.7**	**-0.8**
FRU1				pmax	pmax		
	comp=Z,13nm,0.5s						
FRU1	**Bishkek**	**24.15**	**74**	P	**P**	**00 09 00.7**	**-0.8**
DAVOX	**Davos/Dischmat**	**24.21**	**296**	P	**P**	**00 09 01.5**	**-0.6**
	comp=Z,3.5nm,0.5s						
DAVA	**Damuels**	**24.24**	**297**	*i* P	**P**	**00 09 01.5**	**-0.8**
	comp=Z,3.2nm,0.5s						
TUE	**Stuetta**	**24.56**	**295**	IAmb	IAmb	00 09 09.0	
	comp=Z,15nm,1.2s						
BOOM	**Boomskoye usch**	**25.15**	**74**	IAmb	IAmb	00 09 17.2	
	comp=Z,10nm,1.3s						
NIL	**Nilore**	**25.50**	**96**	P	**P**	**00 09 13.2**	**-0.5**
NIL				pmax	pmax		
	comp=Z,20nm,1.4s						
NIL	**Nilore**	**25.50**	**96**	P	**P**	**00 09 13.2**	**-0.5**
KDJ	**Kajisay**	**26.11**	**75**	P	**P**	**00 09 16.6**	**-2.7**
KDJ				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KDJ	**Kajisay**	**26.11**	**75**	P	**P**	**00 09 16.6**	**-2.7**
KDJ				IAmb	IAmb	00 09 37.6	
	comp=Z,6.8nm,1.1s						
KEST	**Kesra**	**26.31**	**270**	P	**P**	**00 09 22.2**	**+1.1**
	comp=Z,10nm,1.0s,baz=334,slow=13,SNR=6.5						
KEST	**Kesra**	**26.31**	**270**	IAmb	IAmb	00 09 27.2	
	comp=Z,17nm,1.1s						
HFS	**Hagfors**	**26.50**	**327**	P	**P**	**00 09 22.8**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=132,slow=10,SNR=1.2						
HFS				LR	LR	00 21 45.4	
	comp=Z,117nm,18.2s,baz=123,slow=41						
KURBB	**Kurchatov Arra**	**27.03**	**56**	P	**P**	**00 09 27.6**	**+0.3**
	comp=Z,3.2nm,1.0s,baz=270,slow=9.4,SNR=20						
KURK	**Kurchatov**	**27.10**	**56**	*ce*P	**P**	**00 09 28.8**	**+0.9**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KURK	**Kurchatov**	**27.10**	**56**	P	**P**	**00 09 27.6**	**-0.3**
KURK				IAmb	IAmb	00 09 33.4	
	comp=Z,7.1nm,1.1s						
KURK	**Kurchatov**	**27.10**	**56**		**P**	**00 09 28.1**	**+0.2**
NOA	**NORSAR Array B**	**28.02**	**328**	LR	LR	00 22 42.6	
	comp=Z,91nm,18.9s,baz=120,slow=41						
ATD	**Arta Tunnel**	**28.85**	**179**	LR	LR	00 21 22.2	
	comp=Z,80nm,18.8s,baz=1.5,slow=36						
MKAR	**Makanchi Array**	**29.34**	**64**	P	**P**	**00 09 49.0**	**+1.0**
	comp=Z,0.6nm,0.9s,baz=284,slow=5.8,SNR=5.0						
MKAR				LR	LR	00 23 17.0	
	comp=Z,104nm,18.2s,baz=264,slow=40						
MK31	**Makanchi Array**	**29.34**	**64**	P	**P**	**00 09 47.3**	**-0.7**
MK31				pmax	pmax		
	comp=Z,4.0nm,1.6s						
MK31	**Makanchi Array**	**29.34**	**64**	P	**P**	**00 09 47.3**	**-0.7**
ARCES	**ARCESS Array B**	**30.43**	**348**	LR	LR	00 22 37.5	
	comp=Z,84nm,20.1s,baz=148,slow=38						
ZALV	**Zalesovo Beam**	**31.32**	**50**	P	**P**	**00 10 05.8**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=253,slow=8.7,SNR=4.0						
ZALV				LR	LR	00 24 25.0	
	comp=Z,55nm,19.4s,baz=254,slow=40						
ZALV	**Zalesovo Beam**	**31.32**	**50**	*i* P	**P**	**00 10 06.5**	**+1.1**
ESDC	**Sonseca Array**	**35.13**	**284**	P	**P**	**00 10 39.7**	**+0.8**
	comp=Z,1.4nm,1.0s,baz=61,slow=9.6,SNR=6.6						
ESDC				LR	LR	00 26 06.3	
	comp=Z,33nm,21.3s,baz=120,slow=38						
TORD	**Torodi Ar. Bea**	**44.78**	**244**	P	**P**	**00 11 59.2**	**0.0**
	comp=Z,2.9nm,1.0s,baz=35,slow=7.4,SNR=8.9						
TORD				LR	LR	00 32 59.8	
	comp=Z,58nm,19.2s,baz=230,slow=39						
SONM	**Songino Array**	**45.34**	**58**	LR	LR	00 33 15.9	
	comp=Z,190nm,18.5s,baz=288,slow=39						
ULN	**Ulaanbaatar**	**45.76**	**58**	*ce*P	**P**	**00 12 09.2**	**+2.4**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TIXI	**Tiksi**	**51.08**	**24**	*i* P	**P**	**00 12 49.4**	**+2.1**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**52.98**	**97**	P	**P**	**00 13 03.0**	**+0.9**
	comp=Z,0.8nm,0.4s,baz=292,slow=7.5,SNR=5.7						
CMAR				LR	LR	00 40 21.9	
	comp=Z,33nm,18.9s,baz=360,slow=41						
KLR	**Kul'dur**	**60.41**	**49**	*i* P	**P**	**00 13 57.5**	**+2.9**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KSRS	**Korea Array**	**63.99**	**62**	LR	LR	00 43 19.4	
	comp=Z,35nm,18.1s,baz=303,slow=37						
BOSA	**Boshof**	**70.57**	**196**	LR	LR	00 47 33.8	
	comp=Z,88nm,18.5s,baz=319,slow=37						
MJAR	**Matsushiro Arr**	**71.29**	**58**	P	**P**	**00 15 06.6**	**+1.7**
	comp=Z,2.4nm,0.9s,baz=312,slow=6.0,SNR=4.4						
MJAR				LR	LR	00 48 26.7	
	comp=Z,60nm,20.2s,baz=340,slow=38						
YKA	**Yellowknife Ar**	**75.70**	**349**	P	**P**	**00 15 31.5**	**+1.1**
	comp=Z,0.3nm,0.9s,baz=21,slow=5.3,SNR=3.1						
BATI	**Baumata**	**90.03**	**103**	LR	LR	01 04 33.3	
	comp=Z,46nm,19.5s,baz=113,slow=40						
PDAR	**Pinedale Array**	**93.31**	**340**	LR	LR	00 58 34.0	
	comp=Z,38nm,19.4s,baz=3.5,slow=35						

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*NSSP **28** 00:04:56.6, 40°.47N×42°.38E, h8km, Ms3.2*
*DDA **28** 00:04:57.8, 40°.49N×42°.30E, h7km±4km, ML2.6*
ISC 28 00:04:57.2±1.2**, 40°.49N**±0°.03×**42°.33E**±0°.03**, h6**km±11km**,**
n11, σ0ˢ.70/21**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.55**	**216**	*i* P	**Pb**	**00 05 08.9**	**-0.6**
HOMI				*i* S	**Sb**	**00 05 16.5**	**-1.2**
HOMI				IAML		00 05 18.0	
	comp=E,918nm,0.4s						
DDEM	**Demirkent**	**0.59**	**312**	*i* P	**Pg**	**00 05 09.4**	**+0.7**
DDEM				*i* S	**Sb**	**00 05 19.3**	**+0.6**
DDEM				IAML		00 05 21.0	
	comp=N,907nm,0.4s						
DDEM				IAML		00 05 22.0	
	comp=E,752nm,0.3s						
EATA	**Eleskirt**	**0.64**	**169**	*i* P	**Pg**	**00 05 10.0**	**+0.3**
EATA				*i* S	**Sg**	**00 05 17.9**	**-0.1**
EATA				IAML		00 05 23.0	
	comp=N,526nm,0.9s						
DAGI	**Agillar**	**0.66**	**332**	*i* P	**Pg**	**00 05 10.1**	**+0.1**
DAGI				*i* S	**Sb**	**00 05 20.4**	**-0.4**
DAGI				IAML		00 05 21.0	
	comp=E,255nm,0.3s						
DAGI				IAML		00 05 21.0	
	comp=N,258nm,0.4s						
DBAD	**Bademkaya**	**0.71**	**318**	*i* P	**Pg**	**00 05 11.1**	**+0.2**
DBAD				IAML		00 05 25.0	
	comp=E,198nm,0.3s						
DBAD				IAML		00 05 26.0	
	comp=N,240nm,0.5s						
ATA5	**Erzurum, Merke**	**1.02**	**235**	*i* P	**Pn**	**00 05 17.7**	**-0.5**
ATA5				*i* S	**Sn**	**00 05 34.0**	**+1.1**
ATA5				IAML		00 05 36.0	
	comp=E,190nm,0.7s						
ATA5				IAML		00 05 36.0	
	comp=N,306nm,0.6s						
KRIK	**Erzurum-spir**	**1.08**	**262**	*i* P	**Pn**	**00 05 18.9**	**-0.2**
KRIK				*i* S	**Sn**	**00 05 34.3**	**-0.2**
KRIK				IAML		00 05 38.0	
	comp=E,38nm,1.0s						
TUTA	**Tutak**	**1.15**	**161**	*i* P	**Pn**	**00 05 20.7**	**+0.6**
TUTA				*i* S	**Sn**	**00 05 37.7**	**+1.5**
TUTA				IAML		00 05 39.0	
	comp=N,204nm,0.8s						
BATM	**Batumi**	**1.21**	**337**	*i* P	**Pb**	**00 05 19.9**	**-0.6**
BATM				*i* S	**Sg**	**00 05 36.5**	**+0.4**
ARUZ	**Aruch**	**1.36**	**98**	*e*P	**Pn**	**00 05 22.3**	**-0.6**
ARUZ				*e*S	**Sb**	**00 05 40.4**	**-0.5**
KAPZ	**Kaputan**	**1.82**	**95**	*e*P	**Pb**	**00 05 30.4**	**-0.6**
KAPZ				*e*S	**Sb**	**00 05 54.3**	**+0.2**

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*ATH **28** 00:05:22.1, 38°.66N×20°.59E, h11km±1km, ML2.7/25, Error ellipse: s-maj=1.3km s-min=0.6km az=248.0*
*THE **28** 00:05:22.2, 38°.66N×20°.53E, h6km±2km, ML2.9/12, Error ellipse: s-maj=2.9km s-min=0.4km az=90.0*
ISC 28 00:05:21.8±0.8**, 38°.66N**±0°.02×**20°.56E**±0°.02**, h12**km±4km**,**
n78, σ1ˢ.23/108**, 1C-1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVGI	**Lefkada island**	**0.09**	**117**	P	**Pg**	**00 05 24.2**	**-0.3**
EVGI				S	**Sg**	**00 05 26.3**	**-0.2**
EVGI	**Lefkada island**	**0.09**	**117**	P	**Pg**	**00 05 24.2**	**-0.3**
EVGI				S	**Sg**	**00 05 26.2**	**-0.4**
LKD2	**Lefkada island**	**0.15**	**32**	P	**Pg**	**00 05 25.0**	**-0.4**
LKD2				S	**Sg**	**00 05 27.9**	**-0.1**
	8µm,0.3s						
LKD2	**Lefkada island**	**0.15**	**32**	P	**Pg**	**00 05 25.0**	**-0.4**
LKD2				S	**Sg**	**00 05 27.9**	**-0.1**
LKD2				AML	AML	00 05 28.0	
	comp=E,17343µm,0.3s						
LKD2				AML	AML	00 05 28.2	
	comp=N,16163µm,0.2s						
TSLK	**Tsoukalades, L**	**0.18**	**25**	P	**Pg**	**00 05 25.8**	**-0.1**
TSLK				S	**Sg**	**00 05 29.0**	**+0.3**
	comp=N,8µm,0.3s						
TSLK	**Tsoukalades, L**	**0.18**	**25**	P	**Pg**	**00 05 25.8**	**-0.1**
TSLK				S	**Sg**	**00 05 29.1**	**+0.4**
TSLK				AML	AML	00 05 30.2	
	comp=E,19570µm,0.2s						
TSLK				AML	AML	00 05 35.5	
	comp=N,11030µm,0.5s						
MGNA	**Meganis**	**0.18**	**91**	P	**Pg**	**00 05 25.8**	**-0.1**
MGNA				S	**Sg**	**00 05 28.7**	**0.0**
MGNA				AML	AML	00 05 30.1	
	comp=E,7636µm,0.2s						
MGNA				AML	AML	00 05 30.1	
	comp=N,5831µm,0.3s						
FSK	**Fiskardo**	**0.20**	**179**	P	**Pg**	**00 05 26.3**	**+0.1**
FSK				S	**Sg**	**00 05 29.1**	**-0.1**
	comp=N,7µm,0.2s						
FSK	**Fiskardo**	**0.20**	**179**	P	**Pg**	**00 05 26.2**	**+0.1**
FSK				S	**Sg**	**00 05 30.5**	**+1.3**
FSK				AML	AML	00 05 30.7	
	comp=N,7435µm,0.2s						
FSK				AML	AML	00 05 30.8	
	comp=E,18573µm,0.2s						
VSK1	**VASILIKIADES**	**0.25**	**179**	P	**Pg**	**00 05 27.1**	**+0.1**
VSK1				S	**Sg**	**00 05 31.4**	**+0.8**
	comp=E,3µm,0.2s						
KEF4	**Livadi, Kephal**	**0.41**	**194**	P	**Pg**	**00 05 30.1**	**+0.1**
KEF4				S	**Sg**	**00 05 36.5**	**+1.0**
AGT1	**Agia Thekli**	**0.43**	**198**	P	**Pg**	**00 05 30.4**	**+0.1**
AGT1				S	**Sg**	**00 05 36.6**	**+0.6**
	comp=E,3µm,0.3s						
AST1	**Astakos**	**0.43**	**106**	P	**Pg**	**00 05 30.8**	**+0.4**
AST1				S	**Sb**	**00 05 37.8**	**0.0**
	comp=E,2µm,0.3s						
LXRA	**Lixouri, Kepha**	**0.47**	**192**	P	**Pg**	**00 05 31.1**	**+0.1**
LXRA				S	**Sb**	**00 05 38.6**	**-0.2**
VLS	**Valsamata**	**0.48**	**177**	P	**Pg**	**00 05 31.2**	**-0.1**
VLS				S	**Sb**	**00 05 39.0**	**-0.2**
	comp=E,2µm,0.2s						
VLS	**Valsamata**	**0.48**	**177**	P	**Pg**	**00 05 31.2**	**-0.1**
VLS				S	**Sb**	**00 05 39.1**	**-0.2**
VLS				AML	AML	00 05 39.6	
	comp=E,5249µm,0.3s						
VLS				AML	AML	00 05 39.7	
	comp=N,4556µm,0.3s						
ARG2	**Argostoli**	**0.48**	**186**	P	**Pg**	**00 05 31.2**	**-0.1**
ARG2				S	**Sg**	**00 05 38.9**	**+1.2**
	comp=N,3µm,0.2s						
KEF3	**Kipouria, Keph**	**0.48**	**200**	P	**Pg**	**00 05 31.1**	**-0.2**
KEF3				S	**Sg**	**00 05 38.7**	**+0.9**
ARGA	**Argostoli. Kep**	**0.49**	**187**	P	**Pg**	**00 05 31.2**	**-0.2**
PDO	**Prodromos**	**0.49**	**97**	P	**Pg**	**00 05 31.6**	**+0.1**
PDO				S	**Sb**	**00 05 39.8**	**+0.3**
	comp=N,2µm,0.4s						
PDO	**Prodromos**	**0.49**	**97**	P	**Pg**	**00 05 31.6**	**+0.1**
PDO				AML	AML	00 05 42.0	
	comp=E,2780µm,0.2s						
PDO				AML	AML	00 05 45.3	
	comp=N,2278µm,0.3s						
KFL	**Anninata**	**0.58**	**162**	P	**Pg**	**00 05 33.0**	**-0.1**
KFL				S	**Sg**	**00 05 41.7**	**+1.0**
	comp=N,1µm,0.5s						
KFL	**Anninata**	**0.58**	**162**	P	**Pg**	**00 05 32.9**	**-0.1**
KFL				S	**Sg**	**00 05 41.0**	**+0.2**
KFL				AML	AML	00 05 47.7	
	comp=N,2411µm,0.3s						
KFL				AML	AML	00 05 51.4	
	comp=E,2736µm,0.4s						
PVO	**Paravola**	**0.76**	**93**	P	**Pg**	**00 05 37.0**	**+0.5**
PVO	**Paravola**	**0.76**	**93**	P	**Pg**	**00 05 37.1**	**+0.5**
PVO				AML	AML	00 05 50.8	
	comp=N,2459µm,0.3s						
PVO				AML	AML	00 05 51.0	
	comp=E,4901µm,0.4s						
VLMS	**Volimes, Zakyn**	**0.79**	**174**	P	**Pg**	**00 05 36.5**	**-0.5**
VLMS				AML	AML	00 05 52.8	
	comp=E,1457µm,0.2s						
VLMS				AML	AML	00 06 00.6	
	comp=N,1943µm,0.5s						
IGT	**Igoumenitsa**	**0.89**	**349**	P	**Pg**	**00 05 38.1**	**-0.9**
IGT				S	**Sb**	**00 05 52.2**	**+1.3**
	comp=N,415nm,0.4s						
IGT	**Igoumenitsa**	**0.89**	**349**	P	**Pg**	**00 05 38.0**	**-0.9**
IGT				S	**Sb**	**00 05 52.6**	**+1.7**
IGT				AML	AML	00 05 57.2	
	comp=E,872µm,0.6s						
IGT				AML	AML	00 05 57.5	
	comp=N,785µm,0.4s						
VTN	**Vitineika**	**0.89**	**146**	P	**Pg**	**00 05 38.9**	**-0.1**
RLS	**Riolos of Patr**	**0.94**	**130**	P	**Pg**	**00 05 39.5**	**-0.3**
RLS				AML	AML	00 06 02.6	
	comp=E,489µm,0.4s						
RLS				AML	AML	00 06 03.9	
	comp=N,914µm,0.6s						
EVR	**Evrytania**	**1.01**	**75**	P	**Pg**	**00 05 40.9**	**-0.4**
EVR				AML	AML	00 06 06.0	
	comp=N,336µm,0.4s						
EVR				AML	AML	00 06 06.9	
	comp=E,359µm,0.5s						
KRI1	**kERI**	**1.02**	**168**	P	**Pg**	**00 05 40.6**	**-0.8**
JAN	**Janina**	**1.02**	**13**	P	**Pb**	**00 05 42.0**	**+0.7**
JAN				AML	AML	00 06 00.5	
	comp=N,341µm,0.5s						
JAN				AML	AML	00 06 08.0	
	comp=E,603µm,0.6s						
ANX	**Ano Chora**	**1.07**	**93**	P	**Pg**	**00 05 41.8**	**-0.7**
ANX				AML	AML	00 06 07.6	
	comp=E,1640µm,0.6s						
ANX				AML	AML	00 06 12.3	
	comp=N,977µm,0.8s						
EFP	**Efpalio**	**1.08**	**102**	P	**Pg**	**00 05 41.9**	**-0.8**
EFP				AML	AML	00 06 07.5	
	comp=N,868µm,0.6s						
EFP				AML	AML	00 06 08.4	
	comp=E,660µm,0.5s						
DRO	**Drossia**	**1.15**	**128**	P	**Pg**	**00 05 43.4**	**-0.5**
DRO				AML	AML	00 06 08.4	
	comp=N,908µm,0.6s						
DRO				AML	AML	00 06 11.9	
	comp=E,1145µm,0.6s						
KASA	**Kassiopi**	**1.19**	**336**	P	**Pb**	**00 05 44.7**	**+0.5**
LAKA	**Lakka**	**1.19**	**110**	P	**Pb**	**00 05 43.6**	**-0.6**
LAKA				AML	AML	00 06 10.9	
	comp=E,399µm,0.8s						
LAKA				AML	AML	00 06 14.7	
	comp=N,381µm,0.7s						
SERG	**Sergoula**	**1.20**	**101**	P	**Pb**	**00 05 43.8**	**-0.6**
SERG				AML	AML	00 06 09.8	
	comp=N,571µm,0.3s						
SERG				AML	AML	00 06 11.0	
	comp=E,701µm,0.4s						
KEK	**Kerkira**	**1.21**	**331**	P	**Pb**	**00 05 45.2**	**+0.7**
KEK				S	**Sn**	**00 06 01.9**	**+1.2**
	comp=E,202nm,0.8s						
KEK	**Kerkira**	**1.21**	**331**	P	**Pb**	**00 05 45.0**	**+0.5**
KEK				S	**Sn**	**00 06 02.3**	**+1.6**
KEK				AML	AML	00 06 08.0	
	comp=N,358µm,0.7s						
KEK				AML	AML	00 06 13.3	
	comp=E,421µm,0.5s						
TRIZ	**Trizonia**	**1.23**	**103**	P	**Pb**	**00 05 44.4**	**-0.4**
MEV	**Metsovon**	**1.24**	**25**	P	**Pg**	**00 05 46.1**	**+0.5**
KALE	**Kalithea**	**1.27**	**102**	P	**Pn**	**00 05 44.9**	**-0.4**
KALE				AML	AML	00 06 14.0	
	comp=N,513µm,0.9s						
KALE				AML	AML	00 06 19.0	
	comp=E,442µm,0.7s						
MAKR	**Makrakomi, Fth**	**1.28**	**74**	P	**Pn**	**00 05 45.8**	**+0.3**
MAKR				AML	AML	00 06 12.3	
	comp=N,557µm,0.5s						
MAKR				AML	AML	00 06 15.4	
	comp=E,1045µm,0.4s						

KLV	**Kalavryta, Ach**	**1.40**	**116**	P	**Pn**	**00 05 46.8**	**-0.3**
KLV				AML	AML	00 06 18.7	
	comp=E,218µm,0.6s						
KLV				AML	AML	00 06 19.7	
	comp=N,256µm,1.1s						
AGG	**Agios Georgios**	**1.43**	**75**	P	**Pn**	**00 05 48.5**	**+0.9**
KPRO	**Kipourio**	**1.44**	**26**	P	**Pn**	**00 05 48.8**	**+1.1**
AMT	**Artemida-Makis**	**1.45**	**141**	P	**Pb**	**00 05 49.1**	**+0.4**
AMT				AML	AML	00 06 24.0	
	comp=E,343µm,0.4s						
AMT				AML	AML	00 06 26.8	
	comp=N,408µm,0.5s						
THL	**Klokotos Trika**	**1.45**	**51**	P	**Pg**	**00 05 49.6**	**0.0**
NEST	**Nestorio**	**1.79**	**12**	P	**Pg**	**00 05 56.4**	**+0.2**
ITM	**Ithomi**	**1.83**	**143**	P	**Pb**	**00 05 55.6**	**+0.4**
PROD	**Prodromos**	**1.88**	**102**	P	**Pb**	**00 05 56.6**	**+0.6**
KZN	**Kozani**	**1.89**	**29**	P	**Pb**	**00 05 57.1**	**+0.9**
KZN				AML	AML	00 06 27.9	
	comp=E,124µm,0.4s						
KZN				AML	AML	00 06 31.2	
	comp=N,67µm,0.5s						
LKR	**Lokris**	**1.91**	**90**	P	**Pn**	**00 05 55.5**	**+1.3**
PYL	**PYLOS**	**2.00**	**152**	P	**Pb**	**00 05 58.1**	**+0.1**
LIT	**Litokhoron**	**2.08**	**46**	P	**Pn**	**00 05 58.1**	**+1.6**
XOR	**Xorichti**	**2.17**	**70**	P	**Pb**	**00 06 00.1**	**-0.9**
VIL2	**Platees**	**2.18**	**101**	P	**Pb**	**00 06 00.9**	**-0.1**
FNA	**Florina**	**2.21**	**16**	P	**Pn**	**00 06 00.7**	**+2.4**
MRKA	**Markates**	**2.37**	**88**	P	**Pb**	**00 06 03.2**	**-1.2**
DID	**Didima**	**2.41**	**118**	P	**Pb**	**00 06 04.4**	**-0.6**
DID				AML	AML	00 06 51.2	
	comp=E,129µm,0.7s						
DID				AML	AML	00 06 51.5	
	comp=N,83µm,0.7s						
ATHU	**Athens Univers**	**2.63**	**104**	P	**Pn**	**00 06 06.9**	**+2.9**
AOS	**Alonnisos**	**2.64**	**78**	P	**Pn**	**00 06 06.7**	**+2.6**
VLY	**Voula,Athens**	**2.67**	**107**	P	**Pn**	**00 06 07.7**	**+3.1**
DION	**Dionisos Attik**	**2.72**	**101**	P	**Pn**	**00 06 07.8**	**+2.5**
KYMI	**Kymi, Euboea I**	**2.77**	**89**	P	**Pn**	**00 06 09.3**	**+3.3**
DBRK	**Dubrovnik**	**4.40**	**336**	*e*Pn	**Pn**	**00 06 28.6**	**+0.2**
DBRK				Sn	**Sn**	**00 07 16.1**	**-3.4**
VTS	**Vitosha**	**4.45**	**26**	⇑P	Pn	00 06 25.0	-4.1
STON	**Ston**	**4.73**	**334**	*e*Pn	**Pn**	**00 06 35.7**	**+2.8**
STON				Sn	**Sn**	**00 07 23.9**	**-3.7**
MAKA	**Makarska**	**5.34**	**331**	*e*Pn	**Pn**	**00 06 41.0**	**-0.2**
MAKA				Sn	**Sn**	**00 07 39.8**	**-2.8**
RICI	**Ricice**	**5.48**	**333**	*e*Pn	**Pn**	**00 06 43.0**	**-0.2**
RICI				Sn	**Sn**	**00 07 43.7**	**-2.3**
ELND	**Elena**	**5.87**	**42**	⇓P	Pb	00 06 58.2	-5.8
KIJV	**Kijevo**	**6.19**	**331**	*e*Pn	**Pn**	**00 06 51.5**	**-1.4**
KIJV				Sn	**Sn**	**00 08 01.3**	**-2.1**
ZIRJ	**Zirje**	**6.21**	**325**	*e*Pn	**Pn**	**00 06 52.8**	**-0.5**
MORI	**Morici**	**6.36**	**326**	*e*Pn	**Pn**	**00 06 55.8**	**+0.7**
MORI				Sn	**Sn**	**00 08 05.2**	**-2.3**
DUGI	**Dugi Otok**	**6.74**	**324**	*e*Pn	**Pn**	**00 07 00.5**	**0.0**
DUGI				Sn	**Sn**	**00 08 13.6**	**-3.6**
NVLJ	**Novalja**	**7.27**	**326**	*e*Pn	**Pn**	**00 07 07.4**	**-0.3**

IDC 28 00:07:47.0±2.0, **5°26S**×143°43E, **h0**km, **mb3.7**/2, **mb1 4.1**/4, **mb1mx3.7**/26, **mbtmp3.8**/4, **ML4.0**/2, **Error ellipse: s-maj=47.9km s-min=37.7km az=63.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**3.85**	**315**	Pn	Pn	00 08 49.8	+2.2
	2.6nm,0.3s,baz=160,slow=12,SNR=9.6						
JAY				Sn	Sn	00 09 34.1	+0.5
	2.7nm,0.3s,baz=123,slow=18,SNR=3.8						
WRA	**Warramunga Arr**	**17.06**	**210**	P	Pn	00 11 47.8	+0.6
	1.2nm,0.3s,baz=28,slow=12,SNR=44						
WRA				S	Sn	00 14 44.2	-13
	0.2nm,0.3s,baz=29,slow=25,SNR=4.0						
MKAR	**Makanchi Array**	**74.69**	**321**	P	P	00 19 27.1	-1.5
	0.2nm,0.6s,baz=108,slow=7.0,SNR=3.0						
ILAR	**Eielson Array**	**86.22**	**24**	P	P	00 20 30.8	+0.6
	0.5nm,0.5s,baz=257,slow=5.0,SNR=5.5						

*ISK **28** 00:27:12.3, 40°.51N×42°.35E, h5km, ML2.9/9*
*ATA **28** 00:27:12.6±1.6, 40°.44N×42°.35E, h2km±14km, MD3.7, ML2.6, MW3.5*
*DDA **28** 00:27:12.6, 40°.47N×42°.39E, h3km±2km, ML2.8*
*TIF **28** 00:27:13.7, 40°.59N×42°.35E, h4km±1km*

ISC 28 00:27:13.0±1.1, **40°.51N**±0°.02×**42°.36E**±0°.02, **h3**km±10km, **n55**, σ1§**10**/92, **4C-4D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.58**	**217**	⇓*i*P	**Pg**	**00 27 23.8**	**-0.3**
HOMI				*e*S	**Sb**	**00 27 32.7**	**-2.0**
HOMI				IAML		00 27 38.1	
	comp=Z,223nm,0.6s						
HOMI	**Horasan**	**0.58**	**217**	*i*P	**Pg**	**00 27 23.9**	**-0.3**
HOMI				*i*S	**Sg**	**00 27 32.0**	**+0.3**
HOMI				IAML		00 27 34.0	
	comp=N,758nm,0.5s						
HOMI				IAML		00 27 36.0	
	comp=E,820nm,0.3s						
DDEM	**Demirkent**	**0.60**	**309**	*i*P	**Pb**	**00 27 25.3**	**-0.9**
DDEM				*i*S	**Sg**	**00 27 32.5**	**+0.2**
DDEM				IAML		00 27 38.0	
	comp=E,850nm,0.3s						
DDEM				IAML		00 27 38.0	
	comp=N,2µm,0.3s						
KOPR	**Koprukoy-ERZUR**	**0.65**	**217**	PG	**Pg**	**00 27 25.3**	**-0.1**
KOPR				SG	**Sb**	**00 27 35.7**	**-0.9**
EATA	**Eleskirt**	**0.66**	**171**	⇓*i*P	**Pg**	**00 27 24.9**	**-0.6**
EATA				*e*S	**Sg**	**00 27 34.2**	**+0.1**
EATA	**Eleskirt**	**0.66**	**171**	*i*P	**Pg**	**00 27 25.1**	**-0.5**
EATA				*i*S	**Sg**	**00 27 33.7**	**-0.3**
EATA				IAML		00 27 37.0	
	comp=E,303nm,0.4s						
DAGI	**Agillar**	**0.66**	**329**	*i*P	**Pb**	**00 27 26.5**	**-0.7**
DAGI				*i*S	**Sg**	**00 27 34.5**	**+0.3**
DAGI				IAML		00 27 37.0	
	comp=E,578nm,0.4s						
DAGI				IAML		00 27 37.0	
	comp=N,362nm,0.4s						
DBAD	**Bademkaya**	**0.72**	**315**	*i*P	**Pb**	**00 27 27.4**	**-0.7**
DBAD				*i*S	**Sg**	**00 27 35.2**	**-0.8**
AKDA	**Akdag**	**0.87**	**242**	⇑*i*P	**Pb**	**00 27 29.8**	**-0.9**
AKDA	**Akdag**	**0.87**	**242**	*i*P	**Pb**	**00 27 29.9**	**-0.9**
AKDA				*i*S	**Sb**	**00 27 42.4**	**-0.5**
EAK	**Akyaka**	**0.96**	**79**	⇑*i*P	**Pg**	**00 27 31.1**	**-0.3**
EAK				IAML		00 28 04.0	
	comp=Z,194nm,0.6s						
EAK	**Akyaka**	**0.96**	**79**	*i*P	**Pg**	**00 27 31.4**	**-0.1**
EAK				*i*S	**Sb**	**00 27 45.1**	**-0.5**
EAK				IAML		00 27 49.0	
	comp=N,291nm,0.4s						
EAK				IAML		00 27 49.0	
	comp=E,179nm,0.4s						
ATA5	**Erzurum, Merke**	**1.05**	**235**	*i*P	**Pb**	**00 27 33.5**	**-0.4**
ATA5				*i*S	**Sn**	**00 27 49.3**	**-0.7**
ATA5				IAML		00 27 52.0	
	comp=E,239nm,0.8s						
ATA5				IAML		00 27 54.0	
	comp=N,196nm,0.6s						
BCA	**Borcka**	**1.09**	**329**	PN	**Pb**	**00 27 34.1**	**-0.3**
BCA				SN	**Sn**	**00 27 50.2**	**-0.5**
KRIK	**Erzurum-spir**	**1.11**	**261**	⇑*i*P	**Pb**	**00 27 34.6**	**-0.3**
KRIK				*e*S	**Sn**	**00 27 51.5**	**0.0**
KRIK	**Erzurum-spir**	**1.11**	**261**	*i*P	**Pn**	**00 27 34.9**	**-0.7**
KRIK				*i*S	**Sn**	**00 27 50.8**	**-0.8**
TUTA	**Tutak**	**1.16**	**162**	⇓*i*P	**Pg**	**00 27 34.5**	**-0.7**
TUTA				*e*S	**Sg**	**00 27 50.4**	**+0.1**
TUTA	**Tutak**	**1.16**	**162**	*i*P	**Pg**	**00 27 34.6**	**-0.7**
TUTA				*i*S	**Sb**	**00 27 51.4**	**+0.1**
EMRE	**Erzurum,Aziziy**	**1.17**	**246**	*i*P	**Pn**	**00 27 35.6**	**-0.8**
EMRE				*i*S	**Sn**	**00 27 53.0**	**+0.1**
EMRE				IAML		00 27 55.0	
	comp=E,179nm,0.3s						
EMRE				IAML		00 27 55.0	
	comp=N,678nm,0.7s						
BATM	**Batumi**	**1.20**	**335**	PN	**Pn**	**00 27 36.0**	**-0.7**
BATM				SN	**Sn**	**00 27 53.9**	**+0.4**
BATM	**Batumi**	**1.20**	**335**	*i*P	**Pg**	**00 27 35.6**	**-0.4**
BATM				*i*S	**Sb**	**00 27 52.0**	**-0.4**
CHOM	**Cayeli-Rize**	**1.35**	**296**	PN	**Pg**	**00 27 39.1**	**+0.3**
CHOM				SN	**Sn**	**00 27 58.8**	**+1.6**
MLAZ	**Malazgirt-MUS**	**1.38**	**174**	PN	**Pg**	**00 27 39.8**	**+0.5**
MLAZ				SN	**Sn**	**00 27 59.8**	**+1.8**
ECAT	**Cat-ERZURUM**	**1.40**	**230**	*e*P	**Pn**	**00 27 38.9**	**-0.7**
ECAT				*e*S	**Sn**	**00 27 58.6**	**0.0**
DYDN	**Diyadin**	**1.41**	**133**	*i*P	**Pg**	**00 27 40.7**	**+0.8**
DYDN				*e*S	**Sn**	**00 28 00.7**	**+1.9**
DYDN	**Diyadin**	**1.41**	**133**	*i*P	**Pn**	**00 27 39.3**	**-0.4**
DYDN				*i*S	**Sn**	**00 28 00.7**	**+1.9**
DYDN				IAML		00 28 01.0	
	comp=E,193nm,0.7s						
DYDN				IAML		00 28 02.0	
	comp=N,199nm,0.8s						
IGDI	**IGDIR**	**1.46**	**116**	*e*P	**Pn**	**00 27 39.7**	**-0.6**
IGDI				*e*S	**Sg**	**00 28 02.2**	**+2.3**
IGDI	**IGDIR**	**1.46**	**116**	*i*P	**Pb**	**00 27 40.2**	**-0.6**
IGDI				*i*S	**Sg**	**00 28 00.5**	**+0.5**
KOPT	**Kop Dagi**	**1.51**	**252**	*i*P	**Pg**	**00 27 42.2**	**+0.3**
KOPT				*i*S	**Sg**	**00 28 03.7**	**+2.2**
KOPT				IAML		00 28 10.0	
	comp=E,90nm,0.8s						
KOPT				IAML		00 28 11.0	
	comp=N,109nm,0.5s						
VRTB	**Varto-Mus**	**1.52**	**208**	PN	**Pg**	**00 27 41.8**	**-0.3**
VRTB	**Varto-Mus**	**1.52**	**208**	*i*P	Pn	**00 27 41.0**	**-0.2**
BAYB	**BAYBURT**	**1.63**	**262**	⇑*i*P	**Pg**	**00 27 43.5**	**-0.6**
BAYB				*e*S	**Sg**	**00 28 08.3**	**+3.0**
BAYB	**BAYBURT**	**1.63**	**262**	*i*P	**Pg**	**00 27 43.7**	**-0.5**
BAYB				*i*S	**Sg**	**00 28 08.3**	**+3.0**
BAYT	**Aydıntepe-Bayb**	**1.70**	**267**	PN	**Pb**	**00 27 44.2**	**-0.8**
YEDI	**Yedisu-Bingol**	**1.76**	**233**	PN	**Pb**	**00 27 45.2**	**-0.8**
VMUR	**Van-Muradiye**	**1.78**	**148**	*i*P	**Pb**	**00 27 46.2**	**-0.2**
VMUR				*i*S	**Sg**	**00 28 09.7**	**-0.5**
CLDR	**Caldiran**	**1.82**	**138**	*i*P	**Pg**	**00 27 47.6**	**-0.1**
CLDR				*i*S	**Sg**	**00 28 11.1**	**-0.2**
MUSM	**Mu-Merkez**	**1.90**	**200**	⇓*i*P	**Pb**	**00 27 47.0**	**-1.4**
MUSM	**Mu-Merkez**	**1.90**	**200**	*i*P	**Pb**	**00 27 46.9**	**-1.4**
MUSM				*i*S	**Sb**	**00 28 12.5**	**-0.1**
GURO	**Guroymak-BITLI**	**1.98**	**188**	PN	**Pb**	**00 27 48.3**	**-1.3**
BNGB	**Bingl**	**2.00**	**221**	PN	**Pb**	**00 27 48.6**	**-1.4**
BLIS	**Bitlis-Merkez**	**2.10**	**185**	*i*P	**Pg**	**00 27 52.3**	**-1.0**
BLIS	**Bitlis-Merkez**	**2.10**	**185**	*i*P	**Pb**	**00 27 50.2**	**-1.6**
BLIS				*i*S	**Sg**	**00 28 21.6**	**+1.1**
KELT	**Kelkit**	**2.40**	**262**	*e*P	**Pg**	**00 27 57.5**	**-1.4**
KELT	**Kelkit**	**2.40**	**262**	*i*P	**Pg**	**00 27 57.6**	**-1.4**
DGRG	**David-gareji**	**2.46**	**67**	*i*P	**Pb**	**00 27 58.4**	**-0.6**
DGRG				*i*S	**Sg**	**00 28 33.3**	**+1.2**
SRTM	**Siirt_Merkez**	**2.54**	**188**	*i*P	**Pn**	**00 27 56.1**	**+0.9**
SRTM				*i*S	**Sg**	**00 28 36.9**	**+2.3**
TNCL	**Tunceli-Merkez**	**2.58**	**238**	*e*P	**Pn**	**00 27 55.1**	**-0.7**
TNCL	**Tunceli-Merkez**	**2.58**	**238**	*i*P	**Pb**	**00 27 58.4**	**-1.6**
TNCL				*i*S	**Sg**	**00 28 39.1**	**+3.2**
HANI	**Diyarbakir_Han**	**2.59**	**217**	*i*P	**Pn**	**00 27 56.6**	**+0.8**
ESPY	**Espiye-Giresun**	**2.79**	**280**	PN	**Pn**	**00 27 59.9**	**+1.3**
PTK	**Pertek**	**2.81**	**236**	PN	**Pn**	**00 28 00.1**	**+1.2**
SUSE	**Susehri**	**3.19**	**266**	*i*P	**Pb**	**00 28 10.8**	**+0.3**
SUSE				*i*S	**Sg**	**00 28 56.5**	**+1.0**
KEMA	**Kemaliye**	**3.23**	**249**	*e*P	**Pb**	**00 28 10.9**	**0.0**
KEMA	**Kemaliye**	**3.23**	**249**	*i*P	**Pb**	**00 28 11.8**	**+0.9**

*VIE **28** 00:30:13.9±0.3, 50°.43N×18°.81E, h0km, mb1.9/2, ml2.6/3, Error ellipse: s-maj=3.6km s-min=1.5km az=175.0 24 km NNW of Katowice Suspected Mining induced.*
*IPEC **28** 00:30:14.5±0.2, 50°.36N×18°.82E, h3km±1km, ML2.2/3, Error ellipse: s-maj=2.5km s-min=0.8km az=168.0*
*PRU **28** 00:30:14.5±0.0, 50°.38N×18°.77E, h0km*
*IDC **28** 00:30:15.2±2.8, 50°.25N×18°.90E, h0km, mb1 3.6/2, mb1mx3.0/34, mbtmp3.6/2, ML2.6/3, Error ellipse: s-maj=51.1km s-min=13.7km az=136.0*

ISC 28 00:30:12.6±1.0, **50°.41N**±0°.04×**18°.86E**±0°.05, **h0**km, **n26**, σ1§**05**/44, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.74**	**219**	*e*PG	**Pb**	**00 30 28.0**	**-0.3**
OKC				*e*SG	**Sg**	**00 30 37.2**	**+0.9**
	comp=E,31nm,0.5s						
MORC	**Moravsky Berou**	**1.06**	**234**	*e*PG	**Pb**	**00 30 33.9**	**0.0**
MORC				*e*SG	**Sg**	**00 30 46.1**	**-0.6**
MORC	**Moravsky Berou**	**1.06**	**234**	*e*Pg	**Pb**	**00 30 33.8**	**-0.1**
	baz=54						
MORC				*e*Sg	**Sg**	**00 30 46.0**	**-0.6**
	47nm,0.3s,baz=54						
LANS	**Liptovska Anna**	**1.32**	**162**	*e*PG	**Pn**	**00 30 39.2**	**+0.8**
LANS				*e*SG	**Sn**	**00 30 57.1**	**+0.3**
LANS				*e*LG	Lg	00 31 00.5	
DPC	**Dobruska-Polom**	**1.63**	**269**	*e*PG	**Pg**	**00 30 43.7**	**-0.1**
DPC				*e*SG	**Sg**	**00 31 05.5**	**+0.7**
	comp=Z,15nm,0.3s						
OSTC	**Ostas**	**1.70**	**276**	*e*PG	**Pb**	**00 30 44.8**	**+0.1**
OSTC				*e*SG	**Sn**	**00 31 05.8**	**-0.1**
JAVC	**Velka Javorina**	**1.74**	**207**	*e*PG	**Pb**	**00 30 44.9**	**-0.5**
JAVC	**Velka Javorina**	**1.74**	**207**	*e*Pg	**Pn**	**00 30 44.8**	**+0.7**
	baz=26						
CHVC	**Chvalec**	**1.80**	**277**	*e*PG	**Pb**	**00 30 46.3**	**-0.2**
CHVC				*e*SG	**Sg**	**00 31 10.0**	**-0.4**
UPC	**Upice**	**1.82**	**274**	*e*PG	**Pg**	**00 30 47.4**	**-0.1**
VRAC	**Vranov**	**1.84**	**234**	*e*PN	**Pb**	**00 30 46.3**	**-0.8**
VRAC				*e*SG	**Sb**	**00 31 10.5**	**-0.1**
VRAC	**Vranov**	**1.84**	**234**	*e*Pn	**Pb**	**00 30 46.3**	**-0.8**
	baz=53						
VRAC				*e*Sg	**Sb**	**00 31 10.5**	**-0.1**
	16nm,0.3s,baz=53						
VYHS	**Vyhne**	**1.92**	**180**	*e*PN	**Pn**	**00 30 47.1**	**+0.5**
VYHS				*e*SN	**Sn**	**00 31 11.1**	**-0.4**
KRUC	**Moravsky**	**2.10**	**231**	*e*PN	**Pn**	**00 30 49.7**	**+0.7**
KRUC				*e*SG	**Sb**	**00 31 18.1**	**+0.1**
KRUC	**Moravsky**	**2.10**	**231**	*e*Pn	**Pn**	**00 30 49.6**	**+0.6**
	baz=50						
KRUC				*e*Sg	**Sb**	**00 31 18.1**	**+0.1**
	9.7nm,0.3s,baz=50						
KECS	**Kecovo**	**2.20**	**151**	*e*PN	**Pn**	**00 30 51.2**	**+0.7**
PVCC	**Panska Ves**	**2.75**	**274**	*e*SG	**Sg**	**00 31 40.7**	**-0.1**
	comp=Z,15nm,0.6s						
PRU	**Pruhonice**	**2.81**	**263**	*e*SG	**Sg**	**00 31 41.9**	**-0.9**
	comp=Z,5.9nm,0.7s						
BRG	**Berggiesshubel**	**3.16**	**280**	PG	**Pg**	**00 31 13.1**	**-0.1**
BRG				SG	**Sg**	**00 31 55.7**	**+1.5**
	4.1nm,0.7s						
CONA	**Conrad Observa**	**3.17**	**219**	*e*Pn	**Pn**	**00 31 06.1**	**+2.3**
	0.3nm,0.2s						
CONA				Sg	**Sg**	**00 31 57.9**	**+3.4**
	7.3nm,0.4s						
KHC	**Kasperske Hory**	**3.66**	**251**	*e*PN	**Pn**	**00 31 11.0**	**+0.5**
KHC				*e*PG	**Pb**	**00 31 17.8**	**-0.3**
KHC				*e*SG	**Sg**	**00 32 09.5**	**-0.5**
	comp=Z,7.6nm,0.5s						
GERES	**GERESS Array B**	**3.70**	**247**	Pn	**Pn**	**00 31 12.5**	**+1.4**
	0.1nm,0.3s,baz=64,slow=12,SNR=2.2						
GERES				Pg	**Pg**	**00 31 22.4**	**-1.2**
	0.6nm,0.3s,baz=61,slow=18,SNR=3.3						
GERES				Lg	Lg	00 32 09.5	
	1.5nm,0.3s,baz=69,slow=31,SNR=13						
CLL	**Collm**	**3.82**	**286**	*e*Sg	**Sg**	**00 32 15.0**	**-0.2**
	comp=Z,15nm,1.4s						
MOA	**Molln**	**3.96**	**231**	*e*Pn	**Pn**	**00 31 16.5**	**+1.9**
	comp=Z,0.8nm,0.3s						
MOA				*e*Sg	**Sg**	**00 32 16.8**	**-3.0**
	comp=Z,4.2nm,0.4s						
FINES	**FINESS Array B**	**11.76**	**17**	Pn	**Pn**	**00 33 00.3**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=203,slow=10,SNR=4.0						
ARCES	**ARCESS Array B**	**19.45**	**7**	Pn	**P**	**00 34 41.2**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=196,slow=13,SNR=1.6						

*IDC **28** 00:39:12.4±7.9, 15°.31S×174°.82W, h170km±70km, mb3.8/15, mb1 4.1/15, mb1mx3.9/41, mbtmp4.3/15, Error ellipse: s-maj=21.4km s-min=16.5km az=127.0*
*NEIC **28** 00:39:20.8±1.0, 15°.39S±0°.09×174°.8W±0°.1, h251km±6km, mb4.1/5, Error ellipse: s-maj=16.4km s-min=10.4km az=121.0*

ISC 28 00:39:22.0±0.5, **15°.39S**±0°.10×**174°.82W**±0°.10, **h262**km, **n63**, σ0§**69**/61, **mb4.0**/18, **14C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.29**	**64**		**Pn**	**00 40 16.6**	**-1.9**
NIUE	**Niue**	**5.94**	**129**	Pn	**Pn**	**00 40 48.1**	**-1.6**
MSVF	**Nonsavu**	**7.22**	**250**		**Pn**	**00 41 05.1**	**-0.7**
STKA	**Stephens Creek**	**42.86**	**240**	P	**P**	**00 46 55.0**	**0.0**
	0.9nm,0.3s,baz=86,slow=12,SNR=6.3						
STKA	**Stephens Creek**	**42.86**	**240**	IAmb	IAmb	00 46 57.8	
	comp=Z,4.7nm,1.7s						
WRA	**Warramunga Arr**	**48.51**	**257**	P	**P**	**00 47 38.0**	**-1.2**
	comp=Z,0.9nm,0.3s,baz=96,slow=8.1,SNR=36						
WRA				PcP	**PcP**	**00 49 00.7**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=100,slow=3.5,SNR=3.0						
AS31	**Alice Springs**	**48.81**	**252**	P	**P**	**00 47 40.8**	**-0.7**
AS31				IAmb	IAmb	00 47 42.0	
	comp=Z,3.1nm,0.8s						
SIJI	**Sorong**	**55.11**	**280**	P	**P**	**00 48 28.2**	**+0.3**
	comp=Z,12nm,0.5s,baz=82,slow=9.1,SNR=8.2						
VNDA	**Vanda**	**63.25**	**186**	P	**P**	**00 49 23.8**	**+1.4**
	comp=Z,1.3nm,1.0s,baz=11,slow=5.3,SNR=5.3						
MJAR	**Matsushiro Arr**	**68.05**	**321**	P	**P**	**00 49 52.3**	**-1.4**
	comp=Z,1.4nm,0.5s,baz=139,slow=5.8,SNR=2.6						
PETK	**Petropavlovsk-**	**72.21**	**343**	P	**P**	**00 50 18.4**	**0.0**
	comp=Z,6.3nm,0.7s,baz=142,slow=9.6,SNR=15						
QSPA	**South Pole Qui**	**74.65**	**180**	P	**P**	**00 50 32.3**	**-0.4**
QSPA				IAmb	IAmb	00 50 34.7	
	comp=Z,4.3nm,0.9s						
KSRS	**Korea Array**	**75.20**	**316**	P	**P**	**00 50 36.5**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=123,slow=4.5,SNR=2.4						
NVAR	**Mina Array Bea**	**75.24**	**43**	P	**P**	**00 50 37.7**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=223,slow=8.6,SNR=8.0						
NV11	**Mina Array Sit**	**75.34**	**43**	P	**P**	**00 50 38.0**	**+0.9**
NV11				IAmb	IAmb	00 50 39.1	
	comp=Z,7.0nm,1.3s						
TXAR	**Lajitas Array**	**81.75**	**57**	P	**P**	**00 51 13.2**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=233,slow=8.9,SNR=3.0						
SEY	**Seymchan**	**82.16**	**346**	P	**P**	**00 51 13.1**	**-0.2**
	comp=Z,3.4nm,0.5s,baz=106,slow=7.4,SNR=4.6						
ILAR	**Eielson Array**	**82.70**	**12**	P	**P**	**00 51 15.8**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=222,slow=5.3,SNR=26						
PDAR	**Pinedale Array**	**83.17**	**42**	P	**P**	**00 51 19.9**	**+0.5**
	comp=Z,2.9nm,0.6s,baz=221,slow=2.7,SNR=17						
MAW	**Mawson**	**87.36**	**199**	P	**P**	**00 51 40.1**	**+0.9**
	comp=Z,2.8nm,0.6s,baz=131,slow=4.9,SNR=2.0						
YKA	**Yellowknife Ar**	**90.64**	**24**	P	**P**	**00 51 54.8**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=227,slow=4.4,SNR=7.9						
CMAR	**Chiang Mai Arr**	**91.31**	**289**	P	**P**	**00 51 59.0**	**+0.4**
	comp=Z,1.5nm,0.5s,baz=79,slow=2.7,SNR=6.2						
BVAR	**Borovoye Array**	**117.03**	**322**	PKP	**PKPdf**	**00 57 35.1**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=67,slow=3.9,SNR=3.9						
ARU	**Arti**	**122.61**	**328**	PKP	**PKPdf**	**00 57 45.9**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=333,slow=3.9,SNR=4.2						
ARCES	**ARCESS Array B**	**124.40**	**351**	PKP	**PKPdf**	**00 57 49.1**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=358,slow=1.5,SNR=16						
AKTO	**Aktyubinsk**	**125.13**	**321**	PKP	**PKPdf**	**00 57 51.4**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=162,slow=3.2,SNR=1.7						
FINES	**FINESS Array B**	**131.63**	**347**	PKP	**PKPdf**	**00 58 03.6**	**+0.4**
	comp=Z,2.3nm,0.8s,baz=343,slow=4.0,SNR=6.7						
KOLS	**Kolonicke sedl**	**143.73**	**341**	*e*P	PKPbc	00 58 23.9	-0.3
KOLS				*e*pP	PKiKP	00 58 38.0	+8.6
KMBO	**Kilima Mbogo**	**144.30**	**245**	PKP	**PKPdf**	**00 58 29.2**	**+1.0**
	comp=Z,3.3nm,0.9s,baz=61,slow=6.5,SNR=6.6						
KMBO	**Kilima Mbogo**	**144.30**	**245**		**PKPdf**	**00 58 28.2**	**0.0**
TRPA	**Tarpa**	**144.35**	**340**	⇑P	**PKPab**	**00 58 24.9**	**-0.9**
CFR	**Carcaliu**	**144.55**	**332**	⇑P	PKPbc	00 58 26.7	0.0
ARCR	**ARCALIA**	**144.60**	**337**	⇑P	**PKPdf**	**00 58 27.4**	**0.0**
VRI	**Vrincioaia**	**144.64**	**334**	⇑P	**PKPab**	**00 58 25.3**	**-1.7**
TOPG	**Topolog**	**144.67**	**331**	⇑P	**PKPdf**	**00 58 27.7**	**+0.1**
PLOR	**Plostina**	**144.69**	**334**	⇑P	**PKPab**	**00 58 27.3**	**+0.1**
VRAC	**Vranov**	**144.91**	**347**	*e*PKP	PKPbc	00 58 27.8	+0.1
TIRR	**Tirgusor**	**144.97**	**331**	⇑P	**PKPab**	**00 58 28.4**	**+0.2**
HARR	**Harsova**	**145.02**	**331**	⇑P	**PKPab**	**00 58 28.8**	**+0.4**
DOPR	**Dopca**	**145.12**	**335**	⇑P	**PKPab**	**00 58 29

baz=89,slow=76,SNR=21
H08S3 Diego Garcia H 30.71 266 T T 01 24 19.3
baz=89,slow=76,SNR=14
H08S1 Diego Garcia H 30.72 266 T T 01 24 08.9
baz=89,slow=76,SNR=16
WRA Warramunga Arr 32.82 117 P **P** **00 52 15.2 +0.7**
comp=Z,0.6nm,0.5s,baz=288,slow=12,SNR=11
ODAN Odare 36.68 336 *eP* **P** **00 52 47.7 -0.2**
comp=Z,15nm,0.6s
TAPN Taplejung 36.98 336 *eP* **P** **00 52 50.2 -0.4**
comp=Z,26nm,0.8s
RAMN Ramite 37.09 335 *eP* **P** **00 52 52.0 +0.6**
comp=Z,29nm,0.6s
JIRN Jiri 37.88 335 *eP* **P** **00 52 58.3 0.0**
DANN Dangsing 39.56 332 *eP* **P** **00 53 12.1 -0.2**
comp=Z,21nm,0.6s
PYUN Piuthan 39.71 331 *eP* **P** **00 53 14.1 +0.7**
comp=Z,5.6nm,0.3s
STKA Stephens Creek 43.60 130 P **P** **00 53 47.0 +1.9**
comp=Z,1.1nm,0.5s,baz=257,slow=8.4,SNR=3.9
KSRS Korea Array 49.41 26 P **P** **00 54 28.8 -1.6**
comp=Z,2.2nm,0.6s,baz=212,slow=8.3,SNR=6.9
KSH Kashi 52.41 333 P **P** **00 54 56.8 +3.6**
KSH pP sP 00 55 12.0 +4.7
KSH pmax pmax
comp=Z,15nm,1.1s
KSH pmax pmax
comp=Z,170nm,6.0s
KDJ Kajisay 54.05 336 P **P** **00 55 05.8 +0.4**
SONM Songino Array 54.23 2 P **P** **00 55 05.6 -0.8**
comp=Z,3.9nm,0.7s,baz=181,slow=9.1,SNR=26
MK31 Makanchi Array 56.34 343 P **P** **00 55 20.7 -0.9**
MK31 IAmb IAmb 00 55 22.6
comp=Z,2.5nm,0.7s
MKAR Makanchi Array 56.34 343 P **P** **00 55 20.5 -1.0**
comp=Z,2.8nm,0.5s,baz=148,slow=7.8,SNR=39
USRK Ussuriysk Ar. 56.72 24 P **P** **00 55 22.6 -1.6**
comp=Z,5.8nm,0.6s,baz=206,slow=6.0,SNR=17
KLR Kul'dur 60.82 21 P **P** **00 55 50.3 -2.4**
comp=Z,2.4nm,0.7s,baz=234,slow=5.4,SNR=10
KURBB Kurchatov Arra 60.89 342 P **P** **00 55 52.2 -0.9**
comp=Z,2.1nm,0.7s,baz=158,slow=6.2,SNR=17
KURK Kurchatov 60.94 342 P **P** **00 55 52.8 -0.6**
KURK IAmb IAmb 00 55 54.9
comp=Z,3.0nm,0.8s
ZALV Zalesovo Beam 62.29 348 P **P** **00 56 01.2 -1.2**
comp=Z,3.6nm,0.4s,baz=155,slow=4.6,SNR=22
ZALV LR LR 01 24 44.5
comp=Z,24nm,19.0s,baz=214,slow=38
BVAR Borovoye Array 65.63 339 P **P** **00 56 23.6 -0.9**
comp=Z,2.2nm,0.6s,baz=142,slow=9.2,SNR=21
AKTO Aktyubinsk 68.97 331 P **P** **00 56 45.3 -0.4**
comp=Z,1.1nm,0.8s,baz=175,slow=11,SNR=1.8
AKTO LR LR 01 31 23.2
comp=Z,16nm,18.2s,baz=15,slow=40
ARU Arti 72.73 336 P **P** **00 57 08.0 -0.4**
comp=Z,0.8nm,0.4s,baz=152,slow=5.2,SNR=4.4
ARU Arti 72.73 336 IAmb IAmb 00 57 09.2
comp=Z,11nm,1.4s
KBZ Khabaz 73.97 319 P **P** **00 57 17.4 +1.4**
comp=Z,2.3nm,0.8s,baz=150,slow=8.1,SNR=5.4
BRTR Keskin Array B 78.90 312 P **P** **00 57 44.5 +0.2**
comp=Z,0.4nm,0.5s,baz=118,slow=5.4,SNR=1.9
TIRR Tirgusor 83.98 316 P P 00 58 16.5 +5.7
BUR08 Bucovina Ar. S 86.93 318 P **P** **00 58 24.7 -1.0**
FINES FINESS Array B 89.71 332 P **P** **00 58 39.5 +1.1**
comp=Z,3.5nm,1.0s,baz=169,slow=2.8,SNR=3.5
DIVS Divibare 89.82 314 IAmb IAmb 00 58 39.6
comp=Z,2.9nm,0.8s
YKA Yellowknife Ar 117.64 19 PKP **PKPdf** **01 04 26.0 -0.1**
comp=Z,0.2nm,0.7s,baz=310,slow=1.4,SNR=2.5
TX31 Lajitas Ar. Si 145.87 45 **PKPab** **01 05 21.3 +0.3**
TX32 Lajitas Array 145.87 45 **PKPab** **01 05 21.3 +0.3**
TXAR Lajitas Array 145.87 45 PKPbc **PKPab** **01 05 21.2 +0.2**
comp=Z,3.3nm,0.8s,baz=301,slow=1.4,SNR=27
U40A Yellville 146.81 24 **PKPbc** **01 05 22.7 -0.4**
T42A Van Buren 146.91 22 **PKPbc** **01 05 23.2 0.0**
WVT Waverly 148.82 18 **PKPbc** **01 05 28.4 0.0**

*JMA **28** 00:54:42.3±0.3,37.72N×134.41E,h441km,M3.1*
*IDC **28** 00:54:44.0±1.7,37.92N×134.43E,h414km±63km,mb2.5/2, mb1 2.7/4,mb1mx2.4/52,mbtmp3.4/4,Error ellipse: s-maj=174.0km s-min=34.7km az=5.0*
ISC 28 00:54:44.1±1.2,38.0N±0.2×134.37E±0.08,h407km,n10,
σ1§46/10,Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSZ	**Suzu**	**2.42**	**101**	P	**P**	**00 55 44.7**	**+1.3**
JSD	**Sado**	**3.07**	**87**	P	**P**	**00 55 49.5**	**+1.2**
JHS	**Saijyo**	**3.11**	**199**	P	**P**	**00 55 48.0**	**-0.8**
JNG	**Nsakai**	**3.35**	**116**	P	**P**	**00 55 51.6**	**+0.8**
MJAR	**Matsushiro Arr**	**3.37**	**113**	P	**P**	**00 55 51.2**	**+0.4**
	0.4nm,0.3s,baz=295,slow=9.6,SNR=34						
JRG	**Rokugo**	**5.11**	**72**	S	**S**	**00 57 16.2**	**+0.8**
KSRS	**Korea Array**	**5.14**	**266**	P	**P**	**00 56 08.8**	**+1.2**
	0.4nm,0.3s,baz=87,slow=11,SNR=16						
JCH	**Churui**	**8.30**	**53**	S	**S**	**00 58 16.8**	**-2.7**
MKAR	**Makanchi Array**	**38.85**	**300**	P	**P**	**01 01 32.4**	**+0.3**
	0.2nm,0.5s,baz=90,slow=11,SNR=2.5						
KURBB	**Kurchatov Arra**	**40.99**	**307**	P	**P**	**01 01 48.4**	**-0.9**
	0.2nm,0.2s,baz=88,slow=8.4,SNR=4.3						

*IDC **28** 01:04:49.9±3.4,35.98N×71.22E,h72km±27km,mb3.6/12, mb1 3.8/16,mb1mx3.6/50,mbtmp4.0/16,Error ellipse: s-maj=26.9km s-min=18.5km az=175.0*
*MOS **28** 01:04:52.9±1.2,36.30N×71.30E,h102km,mb4.0/6,Error ellipse: s-maj=12.4km s-min=6.1km az=84.7*
*NEIC **28** 01:04:53.4±1.7,36.34N±0.05×71.0E±0.1,h111km±6km, mb4.1/9,Error ellipse: s-maj=12.1km s-min=7.3km az=101.0*
*NNC **28** 01:05:03.5±6.2,37.03N×71.38E,h172km±72km,mb3.6, mpv4.5,Error ellipse: s-maj=58.3km s-min=26.9km az=6.0*
ISC 28 01:04:54.8±0.5,36.28N±0.05×71.27E±0.05,h114km,n91,
σ2§66/101,mb3.9/18,2C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.51**	**168**	P	**Pn**	**01 05 38.3**	**+3.6**
CEP				S	**Sn**	**01 06 09.0**	**+3.8**
KBL	**Kabul**	**2.52**	**227**	PN	**Pn**	**01 05 31.7**	**-3.1**
KBL	**Kabul**	**2.52**	**227**		**Pn**	**01 05 31.7**	**-3.1**
KBL				Sn	**Sn**	**01 06 01.0**	**-4.5**
GAR	**Garm**	**2.82**	**345**		**Pn**	**01 05 35.5**	**-3.2**
CHGR	**Chuyangaron**	**2.91**	**325**		**Pn**	**01 05 36.8**	**-3.0**
CHGR				Sn	**Sn**	**01 06 08.0**	**-6.4**
CHCP	**Chirah Chowk**	**3.09**	**147**	P	**Pn**	**01 05 43.3**	**+1.2**
NIL	**Nilore**	**3.09**	**148**	PN	**Pn**	**01 05 42.5**	**+0.4**
NIL	**Nilore**	**3.09**	**148**		**Pn**	**01 05 42.5**	**+0.4**
THW	**Thamme Wali**	**3.50**	**173**	P	**Pn**	**01 05 47.6**	**0.0**
BTK	**Batken**	**3.79**	**355**	PN	**Pn**	**01 05 49.8**	**-1.6**
BTK	**Batken**	**3.79**	**355**		**Pn**	**01 05 49.8**	**-1.6**
SARP	**Sargodha**	**4.50**	**165**	P	**Pn**	**01 05 59.9**	**-1.1**
THN	**Thein Dam**	**5.31**	**135**	*eP*	**Pn**	**01 06 13.0**	**+1.1**
THN				*eS*	**Sn**	**01 07 11.0**	**-1.0**
AML	**Almayashu**	**6.14**	**17**	P	**Pn**	**01 06 23.2**	**-0.1**
	SNR=75						
UCH	**Uchtor**	**6.45**	**22**	P	**Pn**	**01 06 27.5**	**-0.1**
	SNR=36						
KZA	**Kyzart**	**6.56**	**27**	P	**Pn**	**01 06 29.4**	**+0.3**
	SNR=23						
EKS2	**Erkin-Say**	**6.66**	**16**	P	**Pn**	**01 06 30.4**	**+0.2**
	SNR=17						
AAK	**Ala-Archa**	**6.82**	**20**	P	**Pn**	**01 06 32.6**	**+0.2**
	12nm,0.3s,baz=190,slow=5.5,SNR=81						
AAK				S	**Sn**	**01 07 47.3**	**-1.3**
	2.2nm,0.3s,baz=296,slow=23,SNR=11						
AAK	**Ala-Archa**	**6.82**	**20**	P	**Pn**	**01 06 32.8**	**+0.4**
	SNR=48						
AAK	**Ala-Archa**	**6.82**	**20**		**Pn**	**01 06 31.7**	**-0.7**
AAK					**Sn**	**01 07 46.9**	**-1.6**
KK31	**Karatay Array**	**6.84**	**355**	P	**Pn**	**01 06 31.1**	**-1.4**
	26nm,0.4s,baz=176,slow=11,SNR=457						
KK31				S	**Sn**	**01 07 42.4**	**-6.4**
	18nm,0.5s,baz=186,slow=22,SNR=10						
KK31	**Karatay Array**	**6.84**	**355**	PN	**Pn**	**01 06 31.1**	**-1.4**
KK31	**Karatay Array**	**6.84**	**355**		**Pn**	**01 06 31.1**	**-1.4**
KBK	**Karagaybulak**	**6.97**	**23**	P	**Pn**	**01 06 35.2**	**+0.8**
	SNR=12						
ULHL	**Ulahol**	**7.09**	**31**	P	**Pn**	**01 06 37.5**	**+1.3**
	SNR=7.4						
BOOM	**Boomskoye usch**	**7.17**	**29**	PN	**Pn**	**01 06 36.6**	**-0.6**
BOOM	**Boomskoye usch**	**7.17**	**29**		**Pn**	**01 06 36.6**	**-0.6**
CHMS	**Chumysh**	**7.22**	**21**	P	**Pn**	**01 06 38.0**	**+0.3**
	SNR=26						
USP	**Ospenovka**	**7.41**	**19**	P	**Pn**	**01 06 39.8**	**-0.4**
	SNR=31						
TKM2	**Tokmak 2**	**7.42**	**25**	P	**Pn**	**01 06 41.0**	**+0.4**
	SNR=9.1						
KDJ	**Kajisay**	**7.42**	**36**	PN	**Pn**	**01 06 39.9**	**-0.7**
KDJ	**Kajisay**	**7.42**	**36**		**Pn**	**01 06 39.9**	**-0.7**
TARG	**Taragay, Kyrgy**	**7.45**	**41**		**Pn**	**01 06 40.3**	**-0.8**
MDOK	**Medeo**	**8.19**	**31**	P	**Pn**	**01 06 51.3**	**+0.4**
	9.3nm,0.6s						
MDOK				S	**Sn**	**01 08 14.3**	**-7.4**
	4.9nm,0.6s						
GEYT	**Alibeck**	**10.64**	**283**	P	**Pn**	01 07 19.1	-4.8
	2.1nm,0.3s,baz=120,slow=12,SNR=16						
GEYT				S	Sn	01 09 10.1	-11
	2.9nm,0.3s,baz=110,slow=22,SNR=5.8						
GYA0B	**ALIBECK ARRAY**	**10.64**	**283**		**Pn**	01 07 19.2	-4.7
PYUN	**Piuthan**	**12.84**	**126**	*eP*	**Pn**	**01 07 49.9**	**-3.5**
	39nm,0.3s						
PYUN				*eS*	Sn	01 10 03.3	-11
DANN	**Dangsing**	**13.19**	**123**	*eP*	**Pn**	**01 07 54.8**	**-3.2**
	18nm,0.3s						
MAKZ	**Makanchi**	**13.21**	**34**	P	**Pn**	**01 07 56.6**	**-1.3**
MAKZ	**Makanchi**	**13.21**	**34**		**Pn**	**01 07 56.6**	**-1.3**
MK31	**Makanchi Array**	**13.34**	**35**	⇓P	**Pn**	**01 07 58.1**	**-1.5**
	3.7nm,0.8s,baz=204,slow=11,SNR=35						
MK31	**Makanchi Array**	**13.34**	**35**	P	**Pn**	**01 07 59.3**	**-0.3**
MK31	**Makanchi Array**	**13.34**	**35**		**Pn**	**01 07 59.3**	**-0.3**
MKAR	**Makanchi Array**	**13.34**	**35**	P	**Pn**	**01 07 58.5**	**-1.1**
	0.2nm,0.3s,baz=218,slow=12,SNR=22						
MKAR	**Makanchi Array**	**13.34**	**35**	*eP*	**Pn**	**01 07 58.5**	**-1.1**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KOLN	**Koldanda**	**13.46**	**126**	*eP*	**Pn**	**01 07 58.1**	**-3.3**
	comp=Z,12nm,0.3s						
GKN	**Gorkha**	**14.00**	**122**	*eP*	**Pn**	**01 08 05.5**	**-2.9**
	comp=Z,33nm,0.3s						
PKIN	**Phulchoki**	**14.79**	**122**	*eP*	**Pn**	**01 08 15.9**	**-2.6**
	comp=Z,25nm,0.5s						
PKI	**Pulchoki**	**14.80**	**122**	*eP*	**Pn**	**01 08 15.9**	**-2.9**
	comp=Z,17nm,0.4s						
KURBB	**Kurchatov Arra**	**15.26**	**18**	P	**Pn**	**01 08 22.0**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=207,slow=10,SNR=13						
JIRN	**Jiri**	**15.29**	**120**	*eP*	**Pn**	**01 08 21.8**	**-3.1**
	comp=Z,49nm,0.4s						
KURK	**Kurchatov**	**15.37**	**18**	*i* P	**Pn**	**01 08 23.8**	**-1.5**
KURK	**Kurchatov**	**15.37**	**18**	Pn	**Pn**	**01 08 23.4**	**-1.9**
AB31	**Akbulak array**	**15.38**	**331**	⇑P	**Pn**	**01 08 22.5**	**-3.0**
	comp=Z,3.9nm,0.4s,baz=146,slow=11,SNR=194						
TAPN	**Taplejung**	**16.55**	**118**	*eP*	**Pn**	**01 08 38.4**	**-2.1**
	comp=Z,18nm,0.5s						
ODAN	**Odare**	**16.62**	**120**	*eP*	**Pn**	**01 08 39.4**	**-1.9**
	comp=Z,10nm,0.4s						
BVAR	**Borovoye Array**	**16.75**	**358**	P	**Pn**	**01 08 41.0**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=163,slow=13,SNR=11						
BVAR	**Borovoye Array**	**16.75**	**358**	P	**Pn**	**01 08 41.0**	**-1.4**
BRVK	**Borovoye**	**16.79**	**358**	*i* P	**P**	**01 08 42.9**	**-0.2**
BRVK	**Borovoye**	**16.79**	**358**		**Pn**	**01 08 42.4**	**-0.4**
AKTO	**Aktyubinsk**	**17.08**	**330**	P	**P**	**01 08 45.7**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=136,slow=16,SNR=22						
AKTO				S	Sn	01 11 42.6	-14
	comp=Z,0.1nm,0.3s,baz=56,slow=17,SNR=2.4						
AKTO	**Aktyubinsk**	**17.08**	**330**	⇓P	**P**	**01 08 45.1**	**-1.2**
	comp=Z,9.8nm,0.8s						
ZAA0	**Zalesovo Array**	**20.02**	**24**	P	**P**	**01 09 17.9**	**-0.6**
ZAA0				IAmb	IAmb	01 09 19.5	
	comp=Z,8.8nm,0.5s						
ZALV	**Zalesovo Beam**	**20.02**	**24**	P	**P**	**01 09 18.8**	**+0.4**
	comp=Z,8.7nm,0.3s,baz=212,slow=11,SNR=38						
ARU	**Arti**	**21.91**	**341**	P	**P**	**01 09 40.0**	**+1.4**
	comp=Z,1.5nm,0.6s,baz=125,slow=5.3,SNR=8.7						
ARU	**Arti**	**21.91**	**341**	*d iP*	**P**	**01 09 40.2**	**+1.6**
ARU						01 10 08.7	
ARU				S	**S**	**01 13 36.4**	**+3.2**
ARU				SS	**SnSn**	**01 14 21.6**	**+11**
ARU				pmax	pmax		
	comp=Z,14nm,1.5s						
ARU	**Arti**	**21.91**	**341**	P	**P**	**01 09 36.3**	**-2.2**
ARU				IAmb	IAmb	01 09 42.9	
	comp=Z,6.2nm,0.7s						
NCK	**Nalchik**	**22.36**	**297**	*i* P	**P**	**01 09 45.7**	**+2.3**
NCK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KBZ	**Khabaz**	**22.90**	**298**	*i* P	**P**	**01 09 50.8**	**+2.1**
KIV	**Kislovodsk**	**23.08**	**298**	*eP*	**P**	**01 09 55.0**	**+4.4**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ANN	**Anapa**	**26.93**	**299**	*eP*	**P**	**01 10 25.0**	**-0.3**
ANN				*e**PP	**pP**	**01 10 50.2**	**-0.6**
ANN				*e*		01 11 14.6	
ANN				*eS*	**S**	**01 14 54.1**	**+0.3**
ANN				*eSS*	**SnSn**	**01 16 23.3**	**+11**
ANN				pmax	pmax		
	comp=Z,43nm,1.1s						
TLY	**Talaya**	**27.63**	**46**	*i* P	**P**	**01 10 32.3**	**+0.8**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**28.28**	**55**	P	**P**	**01 10 38.4**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=243,slow=9.3,SNR=2.1						
OBN	**Obninsk**	**30.25**	**320**	*eP*	**P**	**01 10 56.9**	**+2.4**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MDUB	**Mudurnu**	**31.50**	**290**	P	**P**	**01 11 04.1**	**-1.9**
DAMY	**Dhamar**	**32.31**	**235**	P	P	01 11 08.6	-4.9
AKASG	**Malin Array Be**	**33.25**	**309**	P	**P**	**01 11 23.0**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=83,slow=7.6,SNR=5.1						
AKASG	**Malin Array Be**	**33.25**	**309**	P	**P**	**01 11 23.0**	**+2.0**
FINES	**FINESS Array B**	**37.79**	**326**	P	**P**	**01 12 00.6**	**+1.1**
	comp=Z,2.8nm,0.8s,baz=119,slow=11,SNR=7.7						
ARCES	**ARCESS Array B**	**41.43**	**338**	P	**P**	**01 12 30.9**	**+1.2**
	comp=Z,2.0nm,1.0s,baz=111,slow=7.9,SNR=10.0						
NB2	**NORSAR Subarra**	**44.69**	**323**	P	**P**	**01 12 56.9**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**44.69**	**323**	P	**P**	**01 12 56.9**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=96,slow=7.8,SNR=8.4						
TORD	**Torodi Ar. Bea**	**65.93**	**269**	P	**P**	**01 15 27.5**	**-1.5**
	comp=Z,0.4nm,0.5s,baz=48,slow=6.4,SNR=8.3						
TOLK	**Toolik Lake Re**	**71.08**	**15**	P	**P**	**01 16 00.3**	**+0.1**
TOLK				IAmb	IAmb	01 16 03.3	
	comp=Z,2.5nm,0.8s						
INK	**Inuvik**	**74.08**	**9**	P	**P**	**01 16 20.2**	**+2.3**
	comp=Z,1.8nm,0.7s,baz=17,slow=4.8,SNR=6.8						
INK	**Inuvik**	**74.08**	**9**	P	**P**	**01 16 16.4**	**-1.5**
INK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
INK	**Inuvik**	**74.08**	**9**	P	**P**	**01 16 16.4**	**-1.5**
INK				IAmb	IAmb	01 16 20.5	
	comp=Z,2.4nm,0.9s						
ILAR	**Eielson Array**	**74.93**	**16**	P	**P**	**01 16 23.3**	**+0.4**
	comp=Z,0.7nm,0.9s,baz=301,slow=4.3,SNR=6.6						
YKA	**Yellowknife Ar**	**81.45**	**3**	P	**P**	**01 17 00.0**	**+1.2**
	comp=Z,1.5nm,0.6s,baz=351,slow=5.2,SNR=19						
WRA	**Warramunga Arr**	**81.69**	**122**	P	**P**	**01 17 00.5**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=324,slow=4.9,SNR=6.4						
WB2	**Warramunga Arr**	**81.70**	**122**	P	**P**	**01 17 00.9**	**+0.1**
WB2				IAmb	IAmb	01 17 18.1	
	comp=Z,3.3nm,1.1s						

*IDC **28** 01:19:58.8±1.8,37.39N×70.09E,h0km,mb3.6/8, mb1 3.8/15,mb1mx3.6/54,mbtmp3.7/15,ML3.4/7,MS2.9/6, Ms1 2.9/6,ms1mx2.6/44,Error ellipse: s-maj=33.2km s-min=14.2km az=153.0*
*NNC **28** 01:20:05.8±12.0,37.93N×69.49E,h0km,mb4.0,mpv3.5, Error ellipse: s-maj=150.1km s-min=84.0km az=131.0*
ISC 28 01:20:05.2±1.3,38.0N±0.1×69.66E±0.08,h12km,n29,
σ1§75/28,mb3.5/6,MS3.0/3,1C-1D,
Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.14**	**7**	Pn	**Pn**	**01 21 24.5**	**+2.5**
	1.0nm,0.3s,baz=193,slow=16,SNR=33						
KK31				⇓Pg	**Pg**	**01 21 43.6**	**0.0**
	6.9nm,0.6s,baz=190,slow=18,SNR=4.0						
KK31				Lg	Lg	01 22 51.0	
	53nm,0.7s,baz=193,slow=28,SNR=9.0						
AML	**Almayashu**	**5.16**	**36**	P	**Pn**	**01 21 24.1**	**+1.5**
	SNR=22						
UCH	**Uchtor**	**5.63**	**40**	P	**Pn**	**01 21 30.4**	**+1.3**
	SNR=25						
KZA	**Kyzart**	**5.92**	**45**	P	**Pn**	**01 21 34.4**	**+1.4**
	SNR=20						
AAK	**Ala-Archa**	**5.93**	**37**	Pn	**Pn**	**01 21 34.8**	**+1.9**
	4.8nm,0.3s,baz=182,slow=4.4,SNR=41						
AAK				Lg	Lg	01 23 13.5	
	2.0nm,0.3s,baz=333,slow=21,SNR=6.2						
AAK	**Ala-Archa**	**5.93**	**37**	P	**Pn**	**01 21 35.0**	**+2.1**
	SNR=22						
KBK	**Karagaybulak**	**6.16**	**39**	P	**Pn**	**01 21 38.3**	**+2.1**
	SNR=7.9						
CHMS	**Chumysh**	**6.32**	**36**	P	**Pn**	**01 21 40.7**	**+2.4**
	SNR=19						
USP	**Ospenovka**	**6.42**	**33**	P	**Pn**	**01 21 40.6**	**+1.0**
	SNR=9.6						
TKM2	**Tokmak 2**	**6.68**	**41**	P	**Pn**	**01 21 45.0**	**+1.7**
	SNR=14						
GEYT	**Alibeck**	**9.12**	**273**	Pn	**Pn**	**01 22 17.5**	**+0.9**
	0.6nm,0.3s,baz=113,slow=11,SNR=4.3						
GEYT				Sn	**Sn**	**01 23 59.1**	**0.0**
	0.7nm,0.3s,baz=91,slow=19,SNR=1.4						
GEYT				LR	LR	01 27 05.9	
	comp=Z,98nm,20.3s,baz=70,slow=45						
MKAR	**Makanchi Array**	**12.81**	**43**	Pn	**Pn**	**01 23 06.4**	**-0.6**
	0.1nm,0.3s,baz=232,slow=13,SNR=36						
MKAR				LR	LR	01 27 46.6	
	comp=Z,9.4nm,19.3s,baz=217,slow=36						
AB31	**Akbulak array**	**13.26**	**331**	P	**Pn**	**01 23 12.3**	**-0.8**
	0.3nm,0.3s,baz=318,slow=9.1,SNR=21						
KURBB	**Kurchatov Arra**	**14.11**	**24**	Pn	**Pn**	**01 23 22.3**	**-2.5**
	0.0nm,0.3s,baz=211,slow=12,SNR=7.6						
KURBB				Lg	Lg	01 27 34.6	
	0.0nm,0.3s,baz=206,slow=28,SNR=4.0						
AKTO	**Aktyubinsk**	**14.95**	**330**	Pn	**Pn**	**01 23 36.9**	**+0.6**
	0.1nm,0.3s,baz=144,slow=15,SNR=2.0						
AKTO				Sn	**Sn**	**01 26 18.7**	**-2.9**
	0.2nm,0.3s,baz=12,slow=20,SNR=2.8						
AKTO	**Aktyubinsk**	**14.95**	**330**	⇑P	**P**	**01 23 42.2**	**+0.4**
	6.6nm,0.8s						
BVAR	**Borovoye Array**	**15.04**	**2**	Pn	**Pn**	**01 23 37.1**	**-0.3**
	0.3nm,0.3s,baz=220,slow=41,SNR=4.0						
WSAR	**Wadi Sarin**	**17.48**	**216**	LR	LR	01 32 10.3	
	comp=Z,59nm,18.1s,baz=12,slow=42						
ZALV	**Zalesovo Beam**	**19.05**	**28**	P	**P**	**01 24 25.6**	**-1.5**
	0.4nm,0.3s,baz=226,slow=12,SNR=16						
ARU	**Arti**	**19.87**	**342**	P	**Pn**	**01 24 37.8**	**+0.1**
	0.7nm,0.4s,baz=185,slow=13,SNR=4.4						
KBZ	**Khabaz**	**20.98**	**294**	P	**P**	**01 24 49.8**	**+1.6**
	4.2nm,0.7s,baz=119,slow=9.2,SNR=11						
KVAR	**Kislovodsk Arr**	**21.16**	**295**	P	**P**	**01 24 53.2**	**+3.0**
	2.5nm,0.6s,baz=257,slow=24,SNR=3.1						
TLY	**Talaya**	**27.43**	**49**	LR	LR	01 38 09.1	
	comp=Z,19nm,19.5s,baz=328,slow=40						
SONM	**Songino Array**	**28.41**	**58**	P	P	01 25 54.5	-5.1
	0.3nm,0.3s,baz=247,slow=5.6,SNR=2.2						
SONM				LR	LR	01 38 25.6	
	comp=Z,88nm,18.1s,baz=135,slow=39						
ARCES	**ARCESS Array B**	**39.35**	**337**	P	**P**	**01 27 34.8**	**+0.8**
	0.9nm,0.8s,baz=96,slow=7.4,SNR=5.2						
NOA	**NORSAR Array B**	**42.54**	**322**	P	**P**	**01 28 00.2**	**-0.2**
	0.7nm,0.8s,baz=100,slow=15,SNR=1.6						
KLR	**Kul'dur**	**45.14**	**55**	LR	LR	01 48 43.4	
	comp=Z,15nm,18.2s,baz=6.0,slow=38						
TORD	**Torodi Ar. Bea**	**64.70**	**267**	P	**P**	**01 30 40.2**	**-3.2**
	0.3nm,0.8s,baz=42,slow=6.8,SNR=1.5						
YKA	**Yellowknife Ar**	**79.79**	**2**	P	**P**	**01 32 12.3**	**-0.5**
	0.4nm,0.6s,baz=352,slow=5.1,SNR=7.3						

AUST 28 02:04:45.4±0.8,32.26S×149.78E,h10km,Error ellipse: s-maj=9.2km s-min=6.6km az=17.0,New South Wales

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MGCD	**Mangrove Creek**	**1.47**	**131**	P	Pn	02 05 11.3	-0.7
	baz=1.5						
MGCD				S	Sn	02 05 30.8	-0.4
	baz=1.5						
YNG	**Young**	**2.34**	**209**	P	Pn	02 05 24.0	0.0
	baz=2.3						
YNG				S	Sb	02 05 55.6	-1.1
	baz=2.3						
ARMA	**Armidale**	**2.42**	**41**	P	Pn	02 05 27.1	+1.8
	baz=2.4						
CMSA	**Cobar Meteorol**	**3.55**	**281**	P	Pn	02 05 40.6	0.0
	baz=3.5						
CMSA				S	Sn	02 06 21.9	-0.8
	baz=3.5						

*NEIC **28** 02:17:16.4±2.1,18.32S±0.05×69.28W±0.07,h120km±5km, mb4.5/12,ML4.3(GUC),Error ellipse: s-maj=10.0km s-min=7.0km az=103.0*
*VAO **28** 02:17:18.4±0.7,18.17S×69.00W,h118km±6km,mb4.4*
*IDC **28** 02:17:19.0±1.4,18.33S×69.00W,h135km±10km,mb4.1/8, mb1 4.2/12,mb1mx3.8/45,mbtmp4.6/12,MS2.6/1, Ms1 2.7/1,ms1mx2.4/24,Error ellipse: s-maj=20.3km s-min=14.1km az=97.0*
*GUC **28** 02:17:18.1±0.6,18.42S×69.48W,h131km±3km,ML4.3*
ISC 28 02:17:16.4±0.6,18.28S±0.04×69.25W±0.06,h122km±6km,
n93,σ1§37/112,mb4.5/9,9C-1D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNMC	**Minye Minye**	**0.91**	**201**

PB09	**IPOC Station P**	**3.50**	**180**	*eP*		**Pn**	**02 18 10.9**	**+1.3**
PB09				IAML			02 19 10.6	
	comp=N,316nm,0.6s							
PB09	**IPOC Station P**	**3.50**	**180**			**Pn**	**02 18 10.0**	**+0.4**
PB04	**IPOC Station P**	**4.12**	**192**			**Pn**	**02 18 17.5**	**-0.4**
LVC	**Limon Verde**	**4.32**	**176**	P		**Pn**	**02 18 22.3**	**+1.6**
	comp=N,21nm,0.3s,baz=343,slow=11,SNR=173							
LVC				S		**Sn**	**02 19 09.2**	**-1.4**
	comp=N,18nm,0.3s,baz=45,slow=23,SNR=11							
LVC	**Limon Verde**	**4.32**	**176**			**Pn**	**02 18 21.4**	**+0.7**
LVC						**Sn**	**02 19 09.4**	**-1.2**
LVC	**Limon Verde**	**4.32**	**176**	*eP*		**Pn**	**02 18 22.5**	**+1.8**
LVC				*eS*		**Sn**	**02 19 15.1**	**+4.5**
PB06	**IPOC Station P**	**4.42**	**184**			**Pn**	**02 18 21.9**	**+0.1**
PB15	**IPOC Station P**	**4.91**	**182**			**Pn**	**02 18 28.6**	**+0.2**
PB10	**IPOC Station P**	**5.35**	**193**			**Pn**	**02 18 32.6**	**-1.5**
GO02	**Mina Guanaco**	**6.86**	**183**			**Pn**	**02 18 53.4**	**-1.4**
GO02				Sn		**Sn**	**02 20 09.7**	**-1.9**
AC01	**Pan de Azucar**	**7.93**	**189**			**Pn**	**02 19 05.9**	**-3.1**
SIV	**San Ignacio**	**8.14**	**75**	P		**Pn**	**02 19 11.2**	**-0.7**
	comp=N,9.4nm,0.3s,baz=277,slow=10,SNR=111							
SIV				S		**Sn**	**02 20 39.0**	**-3.3**
	baz=169,slow=22,SNR=8.2							
AC02	**Maricunga**	**8.52**	**179**			**Pn**	**02 19 16.2**	**-1.1**
PTLB	**Pontes e Lacer**	**10.08**	**75**	*eP*		**Pn**	**02 19 37.1**	**-0.9**
VILB	**Vilhena**	**10.20**	**60**	*eP*		**Pn**	**02 19 38.8**	**-0.8**
VILB				*eS*		**Sn**	**02 21 27.1**	**-5.1**
AC05	**El Transito**	**10.55**	**185**			**Pn**	**02 19 40.5**	**-3.9**
SAML	**Samuel**	**10.98**	**33**			**Pn**	**02 19 49.0**	**-1.2**
AQDB	**Aquidauana**	**12.97**	**102**	*eP*		**Pn**	**02 20 15.9**	**-0.4**
SALV	**Santo Antonio**	**13.17**	**82**	*eP*		**Pn**	**02 20 18.2**	**-0.7**
CFA	**Coronel Fontan**	**13.30**	**176**	P		**Pn**	**02 20 18.5**	**-2.0**
	comp=N,1.8nm,0.3s,baz=344,slow=12,SNR=19							
CLDB	**Colider**	**14.95**	**62**	*eP*		**Pn**	**02 20 41.5**	**-0.2**
MT02	**Curacav**	**15.02**	**186**	Pn		**Pn**	**02 20 41.7**	**-0.7**
MT01	**Popeta**	**15.63**	**186**	Pn		**Pn**	**02 20 49.3**	**-0.6**
MT01				IAmb	IAmb		02 20 54.7	
	comp=Z,16nm,0.7s							
BO02	**Sierra Bellavi**	**16.51**	**184**	P		**Pn**	**02 21 00.7**	**-0.2**
MACA	**Manacapuru-AM**	**17.21**	**30**	*eP*		**Pn**	**02 21 09.4**	**0.0**
H03N1	**Juan Fernandez**	**17.41**	**208**	T		T	02 38 40.2	
	baz=29,slow=73,SNR=8.7							
H03N2	**Juan Fernandez**	**17.42**	**208**	T		T	02 38 35.5	
	baz=29,slow=73,SNR=7.2							
H03N3	**Juan Fernandez**	**17.43**	**208**	T		T	02 39 05.5	
	baz=29,slow=73,SNR=7.2							
NPGB	**Novo Progresso**	**17.54**	**52**	*eP*		**P**	**02 21 12.6**	**-0.3**
ITAB	**Concordia**	**18.11**	**123**	*eP*		**Pn**	**02 21 19.9**	**-0.4**
BI02	**San Fabin de**	**18.40**	**185**			**P**	**02 21 21.7**	**-0.5**
FRTB	**Fartura**	**19.07**	**109**	*eP*		**P**	**02 21 30.2**	**+0.7**
PTGA	**Pitinga**	**19.68**	**29**	P		**P**	**02 21 35.5**	**-0.6**
	comp=Z,5.3nm,0.3s,baz=212,slow=15,SNR=49							
PTGA	**Pitinga**	**19.68**	**29**	P		**P**	**02 21 35.6**	**-0.6**
PTGA	**Pitinga**	**19.68**	**29**	*eP*		**P**	**02 21 35.5**	**-0.6**
IPMB	**Ipameri, GO**	**20.00**	**92**	*eP*		**P**	**02 21 39.4**	**-0.2**
CNLB	**Canela**	**20.07**	**127**	*eP*		**P**	**02 21 41.0**	**+0.6**
BDFB	**Brasilia**	**20.48**	**86**	P		**P**	**02 21 44.6**	**-0.3**
	comp=Z,9.6nm,0.5s,baz=265,slow=12,SNR=15							
BDFB	**Brasilia**	**20.48**	**86**	P		**P**	**02 21 44.5**	**-0.3**
BDFB				IAmb	IAmb		02 21 48.6	
	comp=Z,9.4nm,0.6s							
RCLB	**Rio Claro- Sao**	**20.77**	**105**	*eP*		**P**	**02 21 47.4**	**-0.5**
MALB	**Monte Alegre**	**21.96**	**44**	*eP*		**P**	**02 22 00.6**	**0.0**
PLCA	**Paso Flores**	**22.41**	**183**	P		**P**	**02 22 05.7**	**+0.7**
	comp=Z,2.4nm,0.9s,baz=345,slow=10,SNR=4.5							
PLCA	**Paso Flores**	**22.41**	**183**	P		**P**	**02 22 05.0**	**+0.1**
PLCA	**Paso Flores**	**22.41**	**183**	*eP*		**P**	**02 22 08.3**	**+3.3**
PRPB	**Parauapebas**	**22.45**	**60**	*eP*		**P**	**02 22 04.4**	**-1.2**
SMTB	**Santa Maria do**	**23.02**	**69**	*eP*		**P**	**02 22 11.0**	**0.0**
JANB	**Januaria**	**24.10**	**86**	*eP*		**P**	**02 22 21.2**	**+0.2**
MC01	**Montes Claros**	**24.18**	**90**	*eP*		**P**	**02 22 22.4**	**+0.7**
GDU01	**Guandu, BA**	**28.86**	**85**	*eP*		**P**	**02 23 02.9**	**-0.8**
V48A	**Smith Brothers**	**56.24**	**343**	P		**P**	**02 26 44.0**	**0.0**
V48A				IAmb	IAmb		02 26 44.6	
	comp=Z,5.3nm,0.7s							
WVT	**Waverly**	**56.90**	**342**	P		**P**	**02 26 48.4**	**-0.2**
WVT				IAmb	IAmb		02 26 48.7	
	comp=Z,4.5nm,0.6s							
DBIC	**Dimbokro**	**68.16**	**75**	P		**P**	**02 28 03.9**	**-0.2**
	comp=Z,16nm,0.8s,baz=222,slow=6.3,SNR=18							
DBIC	**Dimbokro**	**68.16**	**75**	P		**P**	**02 28 03.6**	**-0.4**
TOA0	**Torodi Ar. Sit**	**76.60**	**71**	P		**P**	**02 28 53.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**76.60**	**71**	P		**P**	**02 28 53.8**	**-0.3**
	comp=Z,10nm,0.8s,baz=253,slow=5.0,SNR=96							
ESDC	**Sonseca Array**	**83.78**	**45**	P		**P**	**02 29 33.1**	**+1.0**
	comp=Z,3.1nm,0.9s,baz=254,slow=4.9,SNR=16							
BOSA	**Boshof**	**85.25**	**118**	P		**P**	**02 29 40.4**	**+0.4**
	comp=Z,2.7nm,0.9s,baz=267,slow=3.9,SNR=2.2							
BOSA	**Boshof**	**85.25**	**118**	P		**P**	**02 29 40.1**	**+0.1**
BOSA				IAmb	IAmb		02 29 45.8	
	comp=Z,4.0nm,1.1s							
YKA	**Yellowknife Ar**	**88.06**	**341**	P		**P**	**02 29 53.7**	**+1.2**
	comp=Z,2.6nm,0.6s,baz=131,slow=5.1,SNR=63							
YKA				pP		**pP**	**02 30 26.9**	**+1.3**
	comp=Z,1.8nm,0.7s,baz=133,slow=5.2,SNR=8.2							
INK	**Inuvik**	**97.82**	**340**	P		Pdif	02 30 38.3	+0.9
	comp=Z,0.6nm,0.6s,baz=37,slow=5.1,SNR=3.2							
INK	**Inuvik**	**97.82**	**340**	P		Pdif	02 30 37.8	+0.3
INK				IAmb	IAmb		02 30 38.7	
	comp=Z,1.8nm,1.1s							
H11S2	**WAKE ISLAND Hyl**	**27.09**	**280**	T		T	04 55 48.1	
	baz=100,slow=75,SNR=3.6							
H11S1	**WAKE ISLAND Hyl**	**27.10**	**280**	T		T	04 55 39.8	
	baz=100,slow=75,SNR=4.8							
H11S3	**WAKE ISLAND Hyl**	**27.11**	**280**	T		T	04 55 41.5	
	baz=100,slow=75,SNR=2.7							
ZALV	**Zalesovo Beam**	**139.16**	**23**	PKP		**PKPdf**	**02 36 29.8**	**+1.1**
	comp=Z,2.0nm,0.8s,baz=294,slow=1.4,SNR=3.8							
MKAR	**Makanchi Array**	**143.17**	**33**	PKP		**PKPdf**	**02 36 35.9**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=287,slow=2.6,SNR=1.6							
KLR	**Kul'dur**	**144.78**	**336**	PKP		**PKPdf**	**02 36 38.8**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=88,slow=4.4,SNR=5.4							
SONM	**Songino Array**	**150.30**	**6**	PKPbc		**PKiKP**	**02 36 54.6**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=322,slow=1.5,SNR=17							

IDC ***28*** *02:25:58.0±0.9, 42°.51N×74°.84E, h0km, mb3.7/9, mb1 3.9/15, mb1mx3.7/55, mbtmp3.8/15, ML3.7/6, MS2.9/5, Ms1 3.0/5, ms1mx2.6/41, Error ellipse: s-maj=11.7km s-min=5.0km az=5.0*

KNET ***28*** *02:25:57.3±0.2, 42°.49N×74°.79E, h18km±2km, ml3.9, Error ellipse: s-maj=2.0km s-min=1.5km az=174.0*

KRNET ***28*** *02:25:58.5±0.1, 42°.49N×74°.80E, h17km, mb4.5*

NNC ***28*** *02:25:58.4±0.7, 42°.54N×74°.75E, h0km, mb4.8, mpv4.6, Error ellipse: s-maj=6.1km s-min=3.5km az=0.0*

SOME ***28*** *02:25:58.6, 42°.48N×74°.78E, h15km, MS3.1*

NEIC ***28*** *02:25:59.7±1.6, 42°.56N±0°.05×74°.82E±0°.03, h10km±4km, mb4.2/5, Error ellipse: s-maj=7.6km s-min=1.8km az=199.0*

ISC 28 02:25:59.4±0.8, 42°.51N±0°.02×74°.80E±0°.01, h12km±5km, n129, σ1s50/214, mb3.8/11, MS3.0/3, 28C-36D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KBK	**Karagaybulak**	**0.18**	**37**	⇓*iP*		**Pg**	**02 26 03.1**	**-0.5**
	baz=33							
KBK				⇓*iS*		**Sg**	**02 26 06.3**	**-0.2**
	baz=33							
KBK	**Karagaybulak**	**0.18**	**37**	⇑P		**Pg**	**02 26 02.9**	**-0.7**
	3μm,0.1s							
KBK				⇑S		**Sg**	**02 26 06.2**	**-0.3**
	48μm,0.3s							
AAK	**Ala-Archa**	**0.26**	**299**	Pg		**Pg**	**02 26 03.9**	**-1.0**
	792nm,0.3s,baz=108,slow=5.9,SNR=7668							
AAK				Lg		Lg	02 26 07.7	
	5μm,0.3s,baz=17,slow=19,SNR=113							
AAK	**Ala-Archa**	**0.26**	**299**	⇓*iP*		**Pg**	**02 26 04.0**	**-0.8**
	baz=4.0							
AAK				⇓*iS*		**Sg**	**02 26 07.8**	**-0.7**
	baz=4.0							
AAK	**Ala-Archa**	**0.26**	**299**	⇓P		**Pg**	**02 26 03.9**	**-1.0**
	2μm,0.1s,SNR=4065							
AAK				⇓S		**Sg**	**02 26 07.8**	**-0.7**
	26μm,0.2s							
AAK	**Ala-Archa**	**0.26**	**299**			**Pg**	**02 26 03.7**	**-1.2**
AAK				Sg		**Sg**	**02 26 07.9**	**-0.6**
FRU1	**Bishkek**	**0.32**	**337**	⇓*iP*		**Pg**	**02 26 06.1**	**+0.1**
	baz=39							
FRU1				⇓*iS*		**Sg**	**02 26 10.8**	**+0.4**
	baz=39							
FRU1	**Bishkek**	**0.32**	**337**			**Pg**	**02 26 05.5**	**-0.5**
FRU1				Sg		**Sg**	**02 26 09.8**	**-0.6**
UCH	**Uchtor**	**0.35**	**217**	⇓*iP*		**Pg**	**02 26 05.2**	**-1.5**
	baz=19							
UCH				⇓*iS*		**Sg**	**02 26 09.9**	**-1.7**
	baz=19							
UCH	**Uchtor**	**0.35**	**217**	P		**Pg**	**02 26 05.2**	**-1.5**
	2μm,0.2s,SNR=5040							
UCH				⇓S		**Sg**	**02 26 09.8**	**-1.7**
	17μm,0.2s							
CHMS	**Chumysh**	**0.49**	**356**	⇓*iP*		**Pg**	**02 26 08.5**	**-0.5**
	baz=56							
CHMS				⇓*iS*		**Sg**	**02 26 15.3**	**-0.2**
	baz=56							
CHMS	**Chumysh**	**0.49**	**356**	P		**Pg**	**02 26 08.5**	**-0.5**
	2μm,0.2s,SNR=770							
CHMS				⇓S		**Sg**	**02 26 15.4**	**-0.1**
	2μm,0.1s							
KZA	**Kyzart**	**0.55**	**142**	⇓*iP*		**Pg**	**02 26 09.0**	**-1.2**
	baz=41							
KZA				⇓*iS*		**Sg**	**02 26 16.3**	**-1.2**
	baz=41							
KZA	**Kyzart**	**0.55**	**142**	P		**Pg**	**02 26 09.0**	**-1.2**
	2μm,0.2s,SNR=3665							
KZA				⇓S		**Sg**	**02 26 16.2**	**-1.3**
	8μm,0.3s							
TKM2	**Tokmak 2**	**0.72**	**55**	⇓*iP*		**Pg**	**02 26 12.3**	**-1.1**
	baz=53							
TKM2				⇓*iS*		**Sg**	**02 26 22.0**	**-0.7**
	baz=53							
TKM2	**Tokmak 2**	**0.72**	**55**	⇓P		**Pg**	**02 26 12.2**	**-1.1**
	392nm,0.3s,SNR=1182							
TKM2				⇑S		**Sg**	**02 26 22.0**	**-0.7**
	4μm,0.2s							
EKS2	**Erkin-Say**	**0.77**	**282**	⇑*iP*		**Pg**	**02 26 13.4**	**-0.9**
	baz=83							
EKS2				⇑*iS*		**Sg**	**02 26 24.0**	**-0.4**
	baz=83							
EKS2	**Erkin-Say**	**0.77**	**282**	⇑P		**Pg**	**02 26 13.3**	**-1.0**
	414nm,0.1s,SNR=1074							
EKS2				⇑S		**Sg**	**02 26 24.7**	**+0.3**
	2μm,0.2s							
USP	**Ospenovka**	**0.79**	**344**	⇓*iP*		**Pg**	**02 26 13.8**	**-0.8**
	baz=44							
USP				⇓*iS*		**Sg**	**02 26 24.4**	**-0.5**
	baz=44							
USP	**Ospenovka**	**0.79**	**344**	P		**Pg**	**02 26 13.8**	**-0.8**
	2μm,0.2s,SNR=1259							
USP				⇑S		**Sg**	**02 26 24.6**	**-0.3**
	2μm,0.2s							
BOOM	**Boomskoye usch**	**0.84**	**91**	⇑*iP*		**Pg**	**02 26 14.5**	**-1.3**
	baz=89							
BOOM				⇑*iS*		**Sg**	**02 26 25.4**	**-1.4**
	baz=89							
BOOM	**Boomskoye usch**	**0.84**	**91**			**Pg**	**02 26 14.4**	**-1.3**
BOOM					Sg	**Sg**	**02 26 26.4**	**-0.4**
AML	**Almayashu**	**0.90**	**245**	⇑P		**Pg**	**02 26 15.4**	**-1.5**
	335nm,0.2s,SNR=637							
AML				⇑S		**Sg**	**02 26 27.5**	**-1.2**
	1μm,0.2s							
SGDS	**Sogindy**	**0.95**	**353**	P		**Pg**	**02 26 16.6**	**-1.1**
	872nm,0.3s							
SGDS				S		**Sg**	**02 26 29.3**	**-0.8**
	1μm,0.3s							
KST	**Kastek**	**1.01**	**58**	*eP*		**Pg**	**02 26 17.9**	**-0.9**
	baz=57							
KST				*eS*		**Sg**	**02 26 31.5**	**-0.5**
	baz=57							
KST	**Kastek**	**1.01**	**58**	*eP*		**Pg**	**02 26 17.9**	**-0.9**
	191nm,0.2s							
KST				*eS*		**Sg**	**02 26 31.4**	**-0.5**
	1μm,0.6s							
KST	**Kastek**	**1.01**	**58**	P		**Pg**	**02 26 17.9**	**-0.9**
	191nm,0.2s							
KST				S		**Sg**	**02 26 31.4**	**-0.5**
	1μm,0.6s							
DGS	**Degeres**	**1.02**	**44**	*eP*		**Pg**	**02 26 18.0**	**-1.1**
	baz=43							
DGS				*eS*		**Sg**	**02 26 31.6**	**-0.8**
	baz=43							
DGS	**Degeres**	**1.02**	**44**	*eP*		**Pg**	**02 26 18.0**	**-1.1**
	132nm,0.5s							
DGS				*eS*		**Sg**	**02 26 31.6**	**-0.8**
	1μm,0.5s							
DGS	**Degeres**	**1.02**	**44**	P		**Pg**	**02 26 18.0**	**-1.1**
	132nm,0.5s							
DGS				S		**Sg**	**02 26 31.6**	**-0.8**
	1μm,0.5s							
ULHL	**Ulahol**	**1.10**	**104**	⇓*iP*		**Pg**	**02 26 18.6**	**-2.0**
	baz=2.0							
ULHL				⇓*iS*		**Sg**	**02 26 33.4**	**-1.6**
	baz=2.0							
ULHL	**Ulahol**	**1.10**	**104**	⇓P		**Pg**	**02 26 18.6**	**-2.0**
	280nm,0.2s,SNR=329							
ULHL				⇑S		**Sg**	**02 26 33.9**	**-1.1**
	807nm,0.4s							
MRKS	**Merke**	**1.18**	**282**	*eP*		**Pb**	**02 26 20.8**	**-1.1**
	baz=83							
MRKS				*eS*		**Sb**	**02 26 36.5**	**-0.7**
	baz=83							
MRKS	**Merke**	**1.18**	**282**	*eP*		**Pb**	**02 26 20.8**	**-1.1**
	561nm,0.1s							
MRKS				*eS*		**Sb**	**02 26 36.5**	**-0.7**
	2μm,0.3s							
KRBS	**Karabastau**	**1.35**	**28**	*eP*		**Pn**	**02 26 23.9**	**-0.2**
	859nm,0.3s							
KRBS				*eS*		**Sn**	**02 26 41.9**	**0.0**
	1μm,0.3s							
KRBS	**Karabastau**	**1.35**	**28**	P		**Pn**	**02 26 23.9**	**-0.2**
	859nm,0.3s							
KRBS				S		**Sn**	**02 26 41.9**	**0.0**
	1μm,0.3s							
MTBS	**Maitube**	**1.35**	**62**	*eP*		**Pn**	**02 26 23.9**	**-0.2**
	baz=61							
MTBS				*eS*		**Sn**	**02 26 41.8**	**-0.2**
	baz=61							
MTBS	**Maitube**	**1.35**	**62**	*eP*		**Pn**	**02 26 23.9**	**-0.2**
	218nm,0.2s							
MTBS				*eS*		**Sn**	**02 26 41.9**	**-0.2**
	1μm,0.4s							
MTBS	**Maitube**	**1.35**	**62**	P		**Pn**	**02 26 23.9**	**-0.2**
	218nm,0.2s							
MTBS				S		**Sn**	**02 26 41.9**	**-0.2**
	1μm,0.4s							
IZV	**Izvestkoviy**	**1.43**	**68**	*eP*		**Pn**	**02 26 25.4**	**0.0**
	baz=67							
IZV				*eS*		**Sg**	**02 26 45.0**	**-0.6**
	baz=67							
IZV	**Izvestkoviy**	**1.43**	**68**	*eP*		**Pn**	**02 26 25.4**	**0.0**
	249nm,0.3s							
IZV				*eS*		**Sg**	**02 26 45.0**	**-0.6**
	701nm,0.3s							
IZV	**Izvestkoviy**	**1.43**	**68**	P		**Pn**	**02 26 25.4**	**0.0**
	249nm,0.3s							
IZV				S		**Sg**	**02 26 45.0**	**-0.6**
	701nm,0.3s							
TNSS	**Tian-Shan**	**1.67**	**71**	*eP*		**Pb**	**02 26 29.6**	**-0.7**
	baz=70							
TNSS				*eS*		**Sb**	**02 26 51.8**	**+0.4**
	baz=70							
TNSS	**Tian-Shan**	**1.67**	**71**	*eP*		**Pb**	**02 26 29.6**	**-0.7**
	295nm,0.3s							
TNSS				*eS*		**Sb**	**02 26 51.7**	**+0.4**
	940nm,0.5s							
TNSS	**Tian-Shan**	**1.67**	**71**	P		**Pb**	**02 26 29.6**	**-0.7**
	295nm,0.3s							
TNSS				S		**Sb**	**02 26 51.7**	**+0.4**
	940nm,0.5s							
AAA	**Alma-Ata**	**1.70**	**65**	*eP*		**Pb**	**02 26 30.6**	**0.0**
	401nm,0.3s							
AAA				*eS*		**Sg**	**02 26 53.7**	**-0.5**
	2μm,0.2s							
AAA	**Alma-Ata**	**1.70**	**65**	P		**Pb**	**02 26 30.7**	**0.0**
	401nm,0.3s							
AAA				S		**Sg**	**02 26 53.7**	**-0.5**
	2μm,0.2s							
KNDC	**Almaty**	**1.74**	**65**	⇓P		**Pb**	**02 26 31.3**	**-0.1**
	300nm,0.4s							
KNDC				⇓S		**Sg**	**02 26 54.9**	**-0.5**
	1μm,0.4s							
MDOK	**Medeo**	**1.78**	**68**	*eP*		**Pb**	**02 26 31.5**	**-0.5**
	baz=67							
MDOK				*eS*		**Sg**	**02 26 55.4**	**-1.2**
	baz=67							
MDOK	**Medeo**	**1.78**	**68**	*eP*		**Pb**	**02 26 31.5**	**-0.5**
	263nm,0.2s							
MDOK				*eS*		**Sg**	**02 26 55.4**	**-1.2**
	1μm,0.5s							
MDOK	**Medeo**	**1.78**	**68**	⇓Pn		**Pn**	**02 26 30.7**	**+0.6**
	145nm,0.5s							
MDOK				Sn		**Sg**	**02 26 55.7**	**-0.9**
	427nm,0.4s							
MDOK	**Medeo**	**1.78**	**68**	Pg		**Pb**	**02 26 31.5**	**-0.5**
	263nm,0.2s							
MDOK				Lg		Lg	02 26 55.4	
	1μm,0.5s							
KUU	**Kurty**	**1.78**	**39**	*eP*		**Pb**	**02 26 31.6**	**-0.4**
	baz=38							
KUU				*eS*		**Sb**	**02 26 55.0**	**+0.7**
	baz=38							
KUU	**Kurty**	**1.78**	**39**	*eP*		**Pb**	**02 26 31.6**	**-0.4**
	288nm,0.4s							
KUU				*eS*		**Sb**	**02 26 55.0**	**+0.7**
	4μm,0.5s							
KUU	**Kurty**	**1.78**	**39**	P		**Pb**	**02 26 31.6**	**-0.4**
	288nm,0.4s							
KUU				S		**Sb**	**02 26 55.0**	**+0.7**
	4μm,0.5s							
ARSB	**Arslanbob**	**1.80**	**229**	⇑*iP*		**Pn**	**02 26 30.8**	**+0.4**
	baz=30							
ARSB				⇑*iS*		**Sb**	**02 26 54.8**	**-0.2**
	baz=30							
KDJ	**Kajisay**	**1.81**	**101**			**Pb**	**02 26 31.4**	**-1.1**
KTBS	**Karatobe**	**1.83**	**48**	*eP*		**Pb**	**02 26 32.4**	**-0.4**
	193nm,0.3s							
KTBS				*eS*		**Sb**	**02 26 56.5**	**+0.9**
	3μm,0.3s							
KTBS	**Karatobe**	**1.83**	**48**	P		**Pb**	**02 26 32.4**	**-0.4**
	193nm,0.3s							
KTBS				S		**Sb**	**02 26 56.5**	**+0.9**
	3μm,0.3s							
KOTS	**Kotyrbulak**	**1.85**	**66**	*eP*		**Pb**	**02 26 32.9**	**-0.3**
	1μm,0.3s							
KOTS				*eS*		**Sg**	**02 26 58.3**	**-0.5**
	9μm,0.6s							
KOTS	**Kotyrbulak**	**1.85**	**66**	Pg		**Pb**	**02 26 32.9**	**-0.3**
	1μm,0.3s							
KOTS				Lg		Lg	02 26 58.3	
	9μm,0.6s							
CHKK	**Chushkaly**	**2.09**	**49**	*eP*		**Pb**	**02 26 36.3**	**-0.9**
	123nm,0.4s							
CHKK				*eS*		**Sb**	**02 27 04.4**	**+1.2**
	2μm,0.3s							
ANVS	**Anan'yevo**	**2.13**	**82**	⇑*iP*		**Pn**	**02 26 35.9**	**+0.9**
	baz=81							
ANVS				⇑*iS*		**Sb**	**02 27 03.0**	**-1.6**
	baz=81							
ARK	**Arkit**	**2.23**	**252**	⇑*iP*		**Pn**	**02 26 37.2**	**+1.0**
	baz=52							
ARK				⇑*iS*		**Sn**	**02 27 05.1**	**+1.4**
	baz=52							
TARG	**Taragay, Kyrgy**	**2.37**	**108**			**Pn**	**02 26 38.9**	**+0.5**
TARG					Sn	**Sn**	**02 27 07.2**	**-0.5**
DZA	**Taraz**	**2.58**	**280**	*eP*		**Pg**	**02 26 49.5**	**+0.6**
	217nm,0.2s							
DZA				*eS*		**Sg**	**02 27 25.3**	**+2.9**
	2μm,0.3s							
BTLS	**Baital**	**2.59**	**348**	*eP*		**Pb**	**02 26 45.2**	**-0.4**
	254nm,0.3s							
BTLS				*eS*		**Sb**	**02 27 18.4**	**+1.0**
	559nm,0.3s							
BTLS	**Baital**	**2.59**	**348**	Pg		**Pb**	**02 26 45.2**	**-0.4**
	254nm,0.3s							
BTLS				Lg		Lg	02 27 18.4	
	559nm,0.3s							
PRZ	**Przheval'sk**	**2.66**	**89**	⇓*eP*		**Pn**	**02 26 43.5**	**+1.2**
	baz=89							
PRZ				⇓*iS*		**Sn**	**02 27 16.3**	**+1.7**
	baz=89							
PRZ	**Przheval'sk**	**2.66**	**89**	Pn		**Pn**	**02 26 42.9**	**+0.6**
PRZ				Sn		**Sn**	**02 27 15.3**	**+0.8**
SATY	**Saty**	**2.71**	**77**	*eP*		**Pb**	**02 26 47.4**	**-0.5**
	365nm,0.3s							
SATY				*eS*		**Sb**	**02 27 22.5**	**+1.4**
	974nm,0.3s							
SATY	**Saty**	**2.71**	**77**	Pg		**Pb**	**02 26 47.4**	**-0.5**
	365nm,0.3s							
SATY				Lg		Lg	02 27 22.5	
	974nm,0.3s							
ARXS	**Arharly**	**2.79**	**51**	*eP*		**Pb**	**02 26 49.2**	**+0.1**
	132nm,0.4s							
ARXS				*eS*		**Sb**	**02 27 25.5**	**+2.2**
	1μm,0.5s							
ARXS	**Arharly**	**2.79**	**51**	Pg		**Pb**	**02 26 49.2**	**+0.1**
	132nm,0.4s							
ARXS				Lg		Lg	02 27 25.5	
	1μm,0.5s							
MNBS	**Baschi**	**3.06**	**58**	*eP*		**Pb**	**02 26 55.2**	**+1.3**
	89nm,0.4s							
MNBS				*eS*		**Sg**	**02 27 34.5**	**-3.2**
	695nm,0.4s							
MNBS	**Baschi**	**3.06**	**58**	Pg		**Pb**	**02 26 54.5**	**+0.6**
	89nm,0.4s							
MNBS				Lg		Lg	02 27 34.3	
	695nm,0.4s							
KSH	**Kashi**	**3.12**	**163**	Pn		**Pb**	**02 26 56.5**	**+1.6**
KSH				Sn		**Sg**	**02 27 37.8**	**-1.8**
KSH				smax	smax			

comp=E,4.3nm,0.4s,baz=228,slow=12,SNR=94
MK31 ⇑Sn **Sn** **02 28 58.7 +1.3**
comp=E,3.9nm,0.3s,baz=240,slow=14,SNR=5.1
MK31 ⇓Lg Lg 02 29 29.4
comp=E,39nm,0.7s,baz=232,slow=28,SNR=7.1
MKAR Makanchi Array 6.84 49 Pn **Pn** **02 27 41.3 +1.7**
comp=E,2.0nm,0.3s,baz=228,slow=14,SNR=63
MKAR Sn **Sn** **02 28 58.4 +1.0**
comp=E,4.7nm,0.3s,baz=221,slow=25,SNR=8.5
MKAR Lg Lg 02 29 34.2
comp=E,4.6nm,0.3s,baz=238,slow=27,SNR=9.3
KURBB Kurchatov Arra 8.51 16 Pn **Pn** **02 28 01.7 -0.6**
comp=E,0.4nm,0.3s,baz=206,slow=12,SNR=18
KURBB Sn **Sn** **02 29 36.7 -1.5**
comp=E,0.7nm,0.3s,baz=203,slow=16,SNR=6.2
KURBB Lg Lg 02 30 27.3
comp=E,1.4nm,0.3s,baz=208,slow=27,SNR=7.4
KURBB Kurchatov Arra 8.51 16 ⇓Pn **Pn** **02 28 01.4 -1.0**
comp=E,5.5nm,0.5s
KURBB ⇑Lg Lg 02 30 23.6
comp=E,149nm,0.6s
KURK Kurchatov 8.62 16 **Pn** **02 28 03.4 -0.4**
KURK **Sn** **02 29 38.5 -2.4**
CEP Cherat 8.97 196 P Pn 02 28 18.2 +9.4
KBL Kabul 9.14 211 Pn **Pn** **02 28 12.4 +1.1**
KBL **Sn** **02 29 55.6 +1.3**
BVAR Borovoye Array 10.93 346 Pn **Pn** **02 28 34.1 -1.4**
comp=E,1.3nm,0.3s,baz=149,slow=12,SNR=24
BVAR Sn **Sn** **02 30 33.8 -3.7**
comp=E,1.1nm,0.3s,baz=131,slow=18,SNR=3.0
BVAR Lg Lg 02 31 41.7
comp=E,1.3nm,0.3s,baz=168,slow=34,SNR=3.7
BRVK Borovoye 10.98 346 **Pn** **02 28 35.1 -1.1**
AB31 Akbulak array 12.34 308 ⇑Pn **Pn** **02 28 54.0 -0.8**
comp=E,4.6nm,0.6s,baz=113,slow=15,SNR=138
AB31 ⇑Sn **Sn** **02 31 04.4 -7.9**
comp=E,2.8nm,0.5s
ZAA0 Zalesovo Array 13.23 27 **Pn** **02 29 06.8 -0.1**
ZALV Zalesovo Beam 13.23 27 Pn **Pn** **02 29 07.6 +0.7**
comp=E,0.9nm,0.3s,baz=220,slow=14,SNR=14
ZALV Sn **Sn** **02 31 27.9 -5.9**
comp=E,0.7nm,0.3s,baz=215,slow=18,SNR=4.0
ZALV Lg Lg 02 32 59.0
comp=E,0.6nm,0.3s,baz=209,slow=26,SNR=2.1
GEYT Alibeck 13.54 256 Pn **Pn** **02 29 11.6 +0.3**
comp=E,0.3nm,0.3s,baz=47,slow=10,SNR=2.6
AKTO Aktyubinsk 14.00 310 Pn **Pn** **02 29 16.4 -1.0**
comp=E,1.1nm,0.3s,baz=97,slow=9.2,SNR=14
AKTO Sn **Sn** **02 31 46.4 -6.2**
comp=E,0.7nm,0.3s,baz=345,slow=21,SNR=3.6
AKTO LR LR 02 35 24.5
comp=E,41nm,18.2s,baz=116,slow=40
AKTO Aktyubinsk 14.00 310 ⇑Pn **Pn** **02 29 16.3 -1.1**
comp=E,2.6nm,0.5s
ARU Arti 17.41 329 P **Pn** **02 29 59.8 -2.1**
comp=E,0.0nm,0.3s,baz=145,slow=9.4,SNR=8.6
ARU Lg Lg 02 35 05.0
comp=E,0.0nm,0.3s,baz=330,slow=20,SNR=1.3
ARU LR LR 02 37 17.9
comp=E,16nm,21.1s,baz=102,slow=39
ARU Arti 17.41 329 Pn **Pn** **02 29 59.9 -2.0**
SONM Songino Array 22.80 66 P **P** **02 31 01.8 -0.2**
comp=E,0.9nm,0.7s,baz=267,slow=9.4,SNR=4.9
WSAR Wadi Sarin 23.46 220 LR LR 02 40 23.2
comp=E,27nm,19.2s,baz=108,slow=37
AKASG Malin Array Be 31.93 301 P **P** **02 32 26.0 +1.4**
comp=E,0.2nm,0.3s,baz=77,slow=8.8,SNR=2.1
ARCES ARCESS Array B 36.88 334 P **P** **02 33 07.8 +0.5**
comp=E,0.9nm,0.7s,baz=102,slow=8.9,SNR=4.0
KLR Kul'dur 39.40 60 P **P** **02 33 29.6 +0.9**
comp=E,1.2nm,0.6s,baz=272,slow=7.6,SNR=5.5
NOA NORSAR Array B 41.56 319 LR LR 02 51 33.7
comp=E,18nm,18.3s,baz=270,slow=37
TOLK Toolik Lake Re 64.35 17 P **P** **02 36 35.1 +0.6**
TOLK IAmb IAmb 02 36 41.5
comp=Z,1.5nm,0.8s
INK Inuvik 67.48 11 P **P** **02 36 55.1 +0.5**
comp=Z,0.4nm,0.4s,baz=331,slow=8.3,SNR=2.3
INK Inuvik 67.48 11 P **P** **02 36 54.9 +0.4**
INK IAmb IAmb 02 37 09.3
comp=Z,1.5nm,1.1s
C36M Paulatuk 67.59 7 P **P** **02 36 55.8 +0.6**
ILAR Eielson Array 68.18 18 P **P** **02 36 59.5 +0.4**
comp=Z,0.5nm,0.8s,baz=335,slow=4.9,SNR=4.6
TORD Torodi Ar. Bea 68.81 269 P **P** **02 37 03.9 +0.2**
comp=Z,1.7nm,0.7s,baz=49,slow=5.1,SNR=21
LSZ Lusaka 71.70 228 LR LR 03 11 31.8
comp=Z,30nm,19.2s,baz=84,slow=38
YKA Yellowknife Ar 75.07 5 P **P** **02 37 41.3 +0.8**
comp=Z,0.4nm,0.6s,baz=352,slow=6.1,SNR=2.6
WRA Warramunga Arr 82.86 125 P **P** **02 38 23.9 +0.1**
comp=Z,0.4nm,0.6s,baz=332,slow=5.2,SNR=2.1
WB2 Warramunga Arr 82.86 125 P **P** **02 38 23.7 -0.1**
WB2 IAmb IAmb 02 38 39.1
comp=Z,1.6nm,0.8s

NIED ***28*** *02:43:00, 43.˚70N×146.˚10E, h83km, Mw3.5 Best double couple: M0 2.26000×10^14 NP1:φ=257.00000°, δ90.00000°, λ-30.00000°. NP2:φ=347.00000°, δ60.00000°, λ-180.00000°.*

MOS ***28*** *02:43:34.4±1.0, 43.˚80N×146.˚02E, h130km, mb4.4/2, Error ellipse: s-maj=20.6km s-min=11.6km az=60.0*

SKHL ***28*** *02:43:36.3±0.4, 43.˚94N×145.˚89E, h126km±3km, mb4.4/2, msh5.2/3*

JMA ***28*** *02:43:36.9±0.2, 43.˚70N×146.˚07E, h114km±2km, M3.7*

NEIC ***28*** *02:43:37.1±1.0, 43.˚6N±0.˚3×146.˚1E±0.˚2, h150km±16km, mb4.4/5, Error ellipse: s-maj=43.4km s-min=15.4km az=160.0*

IDC ***28*** *02:43:41.2±10.0, 43.˚25N×146.˚10E, h210km±175km, mb3.3/9, mb1 3.4/10, mb1mx3.2/32, mbtmp3.8/10, ML2.8/1, Error ellipse: s-maj=166.5km s-min=20.5km az=171.0*

ISC 28 02:43:35.6±0.7, **43.79N**±0.˚05×**146.˚05E**±0.˚05, **h125**km±5km, **n50**, σ0=**92**/**65**, **mb3.8**/10, **2C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**0.28**	**331**	*i* P	**Pn**	**02 43 53.3**	**+0.2**
YUK				AMB	AMB	02 43 56.0	
	90nm,0.4s						
YUK				*i* S	**Sn**	**02 44 06.1**	**-0.2**
YUK				A	A	02 44 06.6	
	1μm,0.3s						
YUK				A	A	02 44 06.6	
	340nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.28**	**331**	*c* iPN	**Pn**	**02 43 53.2**	**+0.2**
YUK				*i* S	**Sn**	**02 44 06.0**	**-0.2**
YUK				pmax	pmax		
	comp=Z,909nm,0.2s						
YUK				pmax	pmax		
	comp=N,197nm,0.1s						
YUK				pmax	pmax		
	comp=E,396nm,0.1s						
YUK				smax	smax		
	comp=E,670nm,0.1s						
YUK				smax	smax		
	comp=N,1μm,0.2s						
GRPR	**Tuman**	**0.28**	**316**	*i* P	**Pn**	**02 43 53.4**	**+0.3**
GRPR				AMB	AMB	02 43 55.0	
	comp=N,30nm,0.2s						
GRPR				*i* S	**Sn**	**02 44 05.8**	**-0.5**
GRPR				A	A	02 44 07.0	
	comp=N,520nm,0.2s						
GRPR				A	A	02 44 07.0	
	comp=N,240nm,0.2s						
GRPR	**Tuman**	**0.28**	**316**	⇑*i* PN	**Pn**	**02 43 53.4**	**+0.3**
GRPR				*i* S	**Sn**	**02 44 05.8**	**-0.5**
GRPR				pmax	pmax		
	comp=Z,322nm,0.1s						
GRPR				smax	smax		
	comp=E,2μm,0.1s						
GRPR				smax	smax		
	comp=N,5μm,0.3s						
GLVR	**Golovnino**	**0.39**	**262**	*i* P	**Pn**	**02 43 54.0**	**+0.5**
GLVR				AMB	AMB	02 43 54.0	
	comp=N,220nm,0.4s						
GLVR				*i* S	**Sn**	**02 44 07.8**	**+0.8**
GLVR				A	A	02 44 08.0	
	comp=N,720nm,0.3s						
GLVR				A	A	02 44 08.0	
	comp=N,370nm,0.3s						
GLVR	**Golovnino**	**0.39**	**262**	⇓*i* PN	**Pn**	**02 43 54.0**	**+0.5**
GLVR				*i* S	**Sn**	**02 44 07.8**	**+0.8**
GLVR				pmax	pmax		
	comp=E,144nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,2μm,0.1s						
GLVR				pmax	pmax		
	comp=N,236nm,0.2s						
GLVR				smax	smax		
	comp=N,7μm,0.3s						
GLVR				smax	smax		
	comp=E,4μm,0.3s						
NEM2	**Nemuro 2**	**0.48**	**207**	P	**Pn**	**02 43 53.8**	**-0.2**
NEM2				*e*S	**Sn**	**02 44 06.3**	**-1.5**
NMR	**Nemuro--Hokkai**	**0.48**	**209**	*e*P	**Pn**	**02 43 53.6**	**-0.4**
NMR				*e*S	**Sn**	**02 44 06.6**	**-1.2**
NMR	**Nemuro--Hokkai**	**0.48**	**209**	*e*PN	**Pn**	**02 43 53.6**	**-0.4**
NMR				*e*S	**Sn**	**02 44 06.3**	**-1.5**
RUSJ	**Misakicho**	**0.66**	**299**	*e*PN	**Pn**	**02 43 55.8**	**+0.7**
RUSJ				*e*S	**Sn**	**02 44 10.4**	**+0.5**
JRA	**Rausu**	**0.68**	**283**	P	**Pn**	**02 43 55.9**	**+0.6**
JRA				*e*S	**Sn**	**02 44 10.5**	**+0.3**
JNSB	**Nemuroshibetsu**	**0.76**	**269**	P	**Pn**	**02 43 56.9**	**+1.0**
JKHN	**Kushirohamanak**	**0.96**	**223**	P	**Pn**	**02 43 57.8**	**+0.2**
JKHN				*e*S	**Sn**	**02 44 13.5**	**-0.8**
JNK	**Nakash**	**0.98**	**258**	P	**Pn**	**02 43 58.6**	**+0.7**
JAK	**Akkeshi**	**1.27**	**232**	P	**Pn**	**02 44 00.9**	**+0.2**
JAK				*e*S	**Sn**	**02 44 18.9**	**-0.9**
JTKR	**Abashiri--Toko**	**1.56**	**277**	P	**Pn**	**02 44 04.8**	**+0.9**
JTKR				*e*S	**Sn**	**02 44 26.2**	**+0.6**
JAR	**Ashorobuto**	**1.73**	**254**	P	**Pn**	**02 44 07.2**	**+1.2**
JOB	**Onbets**	**1.84**	**242**	P	**Pn**	**02 44 08.2**	**+0.9**
JOB				*e*S	**Sn**	**02 44 31.3**	**-0.3**
KUR	**Kuril'sk**	**1.94**	**41**	*i* P	**Pn**	**02 44 09.5**	**+0.9**
KUR				AMB	AMB	02 44 10.0	
	comp=E,30nm,0.2s						
KUR				AMB	AMB	02 44 10.0	
	comp=E,10.0nm,0.2s						
KUR				AMB	AMB	02 44 10.0	
	comp=E,50nm,0.2s						
KUR				*i* S	**Sn**	**02 44 34.4**	**+0.6**
KUR				A	A	02 44 36.0	
	comp=E,250nm,0.2s						
KUR				A	A	02 44 36.0	
	comp=E,130nm,0.2s						
KUR	**Kuril'sk**	**1.94**	**41**	*d* iPN	**Pn**	**02 44 09.4**	**+0.9**
KUR				*e*S	**Sn**	**02 44 34.3**	**+0.5**
KUR				pmax	pmax		
	comp=N,26nm,0.2s						
KUR				pmax	pmax		
	comp=E,13nm,0.2s						
KUR				pmax	pmax		
	comp=Z,49nm,0.2s						
KUR				smax	smax		
	comp=N,248nm,0.2s						
KUR				smax	smax		
	comp=E,134nm,0.2s						
JMP	**Maruseppu**	**1.95**	**277**	P	**Pn**	**02 44 09.8**	**+1.1**
JMP				*e*S	**Sn**	**02 44 35.0**	**+0.9**
JCH	**Churui**	**2.29**	**240**	P	**Pn**	**02 44 13.2**	**+0.3**
JCH				*e*S	**Sn**	**02 44 40.5**	**-0.9**
ERM	**Erimo**	**2.77**	**231**	PN	**Pn**	**02 44 20.1**	**+1.1**
ERM						02 44 53.4	
ERM	**Erimo**	**2.77**	**231**		**Pn**	**02 44 20.1**	**+1.1**
ERM				Sn	**Sn**	**02 44 53.4**	**+1.1**
YSS	**Yuzh-Sakhalins**	**3.92**	**325**	*e*P	**Pn**	**02 44 33.0**	**-1.1**
YSS				*e*S	**Sn**	**02 45 15.5**	**-4.0**
YSS				A	A	02 45 20.5	
	comp=E,50nm,0.4s						
YSS				A	A	02 45 20.5	
	comp=E,60nm,0.4s						
MJAR	**Matsushiro Ar**	**9.40**	**222**	P	**Pn**	**02 45 47.6**	**-0.3**
	comp=E,0.1nm,0.3s,baz=34,slow=12,SNR=4.6						
INCN	**Inchon**	**16.01**	**253**	P	**Pn**	**02 47 13.6**	**-0.1**
INCN				pmax	pmax		
	comp=Z,33nm,1.1s						
INCN	**Inchon**	**16.01**	**253**		**Pn**	**02 47 13.6**	**-0.1**
INCN				IAmb	IAmb	02 47 27.4	
	comp=Z,33nm,1.1s						
SONM	**Songino Array**	**27.72**	**292**	P	**P**	**02 49 13.1**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=81,slow=8.9,SNR=1.9						
H11N2	**WAKE ISLAND Hy**	**29.66**	**137**	T	T	03 20 36.2	
	baz=328,slow=75,SNR=52						
H11N1	**WAKE ISLAND Hy**	**29.68**	**137**	T	T	03 20 38.8	
	baz=328,slow=75,SNR=34						
H11N3	**WAKE ISLAND Hy**	**29.68**	**137**	T	T	03 20 33.6	
	baz=328,slow=75,SNR=42						
H11S1	**WAKE ISLAND Hy**	**30.61**	**139**	T	T	03 21 49.2	
	baz=329,slow=76,SNR=72						
H11S3	**WAKE ISLAND Hy**	**30.62**	**139**	T	T	03 21 48.0	
	baz=329,slow=76,SNR=63						
H11S2	**WAKE ISLAND Hy**	**30.63**	**139**	T	T	03 21 49.0	
	baz=329,slow=76,SNR=47						
KDAK	**Kodiak Island**	**39.81**	**47**	P	**P**	**02 50 56.7**	**+0.6**
	comp=Z,4.9nm,1.0s,baz=297,slow=6.8,SNR=1.6						
KDAK	**Kodiak Island**	**39.81**	**47**	P	**P**	**02 50 56.5**	**+0.5**
KDAK				IAmb	IAmb	02 50 59.5	
	comp=Z,9.3nm,1.1s						
ILAR	**Eielson Array**	**41.93**	**36**	P	**P**	**02 51 14.1**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=265,slow=7.2,SNR=0.8						
MKAR	**Makanchi Array**	**43.86**	**297**	P	**P**	**02 51 28.3**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=73,slow=11,SNR=2.4						
INK	**Inuvik**	**46.77**	**30**	P	**P**	**02 51 52.4**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=282,slow=6.0,SNR=5.3						
INK	**Inuvik**	**46.77**	**30**	P	**P**	**02 51 52.1**	**+0.4**
RES	**Resolute Bay**	**55.16**	**16**	P	**P**	**02 52 54.1**	**-0.2**
	comp=Z,8.9nm,1.0s,baz=318,slow=9.6,SNR=7.0						
RES	**Resolute Bay**	**55.16**	**16**	P	**P**	**02 52 54.5**	**+0.1**
RES				pmax	pmax		
	comp=Z,9.0nm,1.1s						
RES	**Resolute Bay**	**55.16**	**16**	P	**P**	**02 52 54.5**	**+0.1**
YKA	**Yellowknife Ar**	**56.21**	**33**	P	**P**	**02 53 02.2**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=303,slow=6.4,SNR=6.7						
ARCES	**ARCESS Array B**	**58.93**	**339**	P	**P**	**02 53 21.8**	**+0.8**
	comp=Z,1.1nm,0.9s,baz=54,slow=7.9,SNR=1.9						
WDC	**Whiskeytown Da**	**64.33**	**58**	P	**P**	**02 53 56.3**	**-1.3**
WDC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WDC	**Whiskeytown Da**	**64.33**	**58**	P	**P**	**02 53 56.3**	**-1.3**
WDC				IAmb	IAmb	02 54 14.5	
	comp=Z,3.4nm,1.0s						
FINES	**FINESS Array B**	**64.47**	**333**	P	**P**	**02 53 58.0**	**-0.2**
	comp=Z,2.7nm,0.9s,baz=44,slow=6.6,SNR=5.9						
FINES	**FINESS Array B**	**64.47**	**333**	P	**P**	**02 53 58.0**	**-0.2**

ATH ***28*** *02:51:13.5, 40.˚35N×25.˚71E, h25km±2km, ML2.4/6, Error ellipse: s-maj=2.7km s-min=1.2km az=61.0*

ISK ***28*** *02:51:13.1, 40.˚33N×25.˚78E, h18km, ML2.6/18*

THE ***28*** *02:51:14.1, 40.˚33N×25.˚75E, h9km, ML2.3/11, Error ellipse: s-maj=0.9km s-min=0.4km az=56.0*

DDA ***28*** *02:51:14.7, 40.˚30N×25.˚87E, h16km, ML2.7*

ISC 28 02:51:13.8±0.8, **40.˚34N**±0.˚02×**25.˚76E**±0.˚02, **h15**km±6km, **n65**, σ0=**70**/102, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.18**	**144**	P	**Pb**	**02 51 18.0**	**-0.9**
GADA				S	**Sb**	**02 51 20.9**	**-1.2**
	3μm,0.2s						
GADA	**Gvkgeada**	**0.18**	**144**	PG	**Pb**	**02 51 17.9**	**-0.9**
GADA				SG	**Sb**	**02 51 21.0**	**-1.2**
GOKA	**anakkale-Gk**	**0.18**	**142**	*i* P	**Pb**	**02 51 18.2**	**-0.7**
GOKA				*i* S	**Sg**	**02 51 21.4**	**+0.3**
SMTH	**Samothraki Isl**	**0.22**	**307**	P	**Pg**	**02 51 18.8**	**-0.1**
SMTH				S	**Sg**	**02 51 22.1**	**-0.2**
	940nm,0.2s						
SMTH	**Samothraki Isl**	**0.22**	**307**	P	**Pg**	**02 51 18.7**	**-0.1**
SMTH				S	**Sg**	**02 51 22.3**	**0.0**
SMTH				AML	AML	02 51 22.7	
	comp=N,2570μm,0.2s						
SMTH				AML	AML	02 51 23.3	
	comp=E,1130μm,0.2s						
ENEZ	**Enez**	**0.50**	**36**	P	**Pg**	**02 51 23.6**	**-0.1**
ENEZ				S	**Sb**	**02 51 32.0**	**+0.6**
	comp=E,630nm,0.3s						
ENEZ	**Enez**	**0.50**	**36**	PG	**Pg**	**02 51 23.7**	**0.0**
ENEZ				SG	**Sb**	**02 51 31.1**	**-0.3**
BOZC	**Bozcaada**	**0.54**	**156**	PG	**Pg**	**02 51 24.5**	**0.0**
BOZC	**Bozcaada**	**0.54**	**156**	*i* P	**Pg**	**02 51 24.4**	**0.0**
BOZC				*i* S	**Sg**	**02 51 31.6**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.55**	**83**	PG	**Pg**	**02 51 24.7**	**+0.1**
GELI				SG	**Sb**	**02 51 32.4**	**-0.4**
LIA	**Limnos Island**	**0.62**	**226**	P	**Pb**	**02 51 25.9**	**-0.5**
LIA				S	**Sg**	**02 51 34.7**	**+0.4**
	comp=E,165nm,0.3s						
LIA	**Limnos Island**	**0.62**	**226**	P	**Pb**	**02 51 25.9**	**-0.5**
LIA				S	**Sg**	**02 51 34.5**	**+0.2**
LIA				AML	AML	02 51 36.5	
	comp=N,308μm,0.3s						
LIA				AML	AML	02 51 38.6	
	comp=E,343μm,0.4s						
ERIK	**Erikli-Kesan**	**0.66**	**59**	PG	**Pb**	**02 51 26.4**	**-0.7**
ERIK				SG	**Sb**	**02 51 35.4**	**-0.7**
EZN	**Ezine**	**0.67**	**140**	P	**Pb**	**02 51 26.3**	**-0.9**
EZN				S	**Sg**	**02 51 36.4**	**+0.7**
	comp=E,172nm,0.1s						
EZN	**Ezine**	**0.67**	**140**	PG	**Pb**	**02 51 26.8**	**-0.4**
EZN				SG	**Sb**	**02 51 35.4**	**-0.8**
LPK	**Lapseki**	**0.76**	**87**	PG	**Pb**	**02 51 28.6**	**-0.2**
RDO	**Rodhopi**	**0.83**	**348**	P	**Pb**	**02 51 29.6**	**-0.3**
RDO				S	**Sg**	**02 51 41.7**	**+0.9**
	comp=E,190nm,0.3s						
RDO	**Rodhopi**	**0.83**	**348**	P	**Pb**	**02 51 29.5**	**-0.4**
RDO				S	**Sb**	**02 51 40.8**	**-0.1**
RDO				AML	AML	02 51 44.2	
	comp=N,472μm,0.4s						
RDO				AML	AML	02 51 44.9	
	comp=E,280μm,0.2s						
RDO	**Rodhopi**	**0.83**	**348**	PG	**Pb**	**02 51 29.7**	**-0.2**
THAS	**Thassos island**	**0.84**	**289**	P	**Pb**	**02 51 30.0**	**-0.1**
THAS				S	**Sb**	**02 51 41.7**	**+0.4**
	comp=E,175nm,0.2s						
THAS	**Thassos island**	**0.84**	**289**	P	**Pb**	**02 51 29.6**	**-0.5**
THAS				S	**Sb**	**02 51 40.2**	**-1.1**
THAS				AML	AML	02 51 43.9	
	comp=N,327μm,0.2s						
THAS				AML	AML	02 51 44.4	
	comp=E,357μm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.84**	**134**	*i* P	**Pb**	**02 51 30.2**	**0.0**
BAYC				*i* S	**Sb**	**02 51 40.8**	**-0.6**
KESN	**Edirne-Kesan**	**0.85**	**55**	*i* P	**Pg**	**02 51 30.6**	**+0.1**
KESN				*i* S	**Sb**	**02 51 41.4**	**-0.6**
KESN				IAML		02 51 44.0	
	comp=E,598nm,0.3s						
KESN				IAML		02 51 44.0	
	comp=N,368nm,0.2s						
EFSA	**Agios Efstrati**	**0.99**	**217**	P	**Pn**	**02 51 33.1**	**-0.2**
SIGR	**SIGRI**	**1.12**	**176**	P	**Pn**	**02 51 34.5**	**-0.5**
SIGR				S	**Sg**	**02 51 50.7**	**+0.5**
	comp=N,822nm,0.4s						
SIGR	**SIGRI**	**1.12**	**176**	P	**Pn**	**02 51 34.6**	**-0.5**
SIGR				S	**Sg**	**02 51 50.9**	**+0.7**
SIGR				AML	AML	02 51 51.5	
	comp=N,2032μm,0.5s						
SIGR				AML	AML	02 51 52.0	
	comp=E,1269μm,0.4s						
SIGR	**SIGRI**	**1.12**	**176**	PN	**Pn**	**02 51 34.7**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.13**	**71**	PN	**Pn**	**02 51 34.5**	**-0.8**
PRK	**Paraskevi**	**1.16**	**160**	P	**Pg**	**02 51 36.1**	**0.0**
PRK				S	**Sg**	**02 51 52.0**	**+0.8**
	comp=E,332nm,0.3s						
PRK	**Paraskevi**	**1.16**	**160**	P	**Pg**	**02 51 36.5**	**+0.4**
PRK				S	**Sg**	**02 51 51.8**	**+0.6**
PRK				AML	AML	02 51 54.1	
	comp=E,683μm,0.3s						
PRK				AML	AML	02 51 54.6	
	comp=N,636μm,0.4s						
KAVA	**Kavala**	**1.16**	**305**	P	**Pn**	**02 51 35.4**	**-0.1**
KAVA				S	**Sn**	**02 51 51.4**	**+0.3**
	comp=N,65nm,0.3s						
KAVA	**Kavala**	**1.16**	**305**	P	**Pn**	**02 51 35.2**	**-0.3**
KRBG	**Karabiga-Canak**	**1.17**	**87**	PN	**Pn**	**02 51 34.9**	**-0.8**
AYVA	**Ayvalik**	**1.25**	**145**	*i* P	**Pb**	**02 51 37.4**	**+0.3**
AYVA				*i* S	**Sg**	**02 51 53.6**	**-0.5**
AYVA				IAML		02 51 55.0	
	comp=E,142nm,0.6s						
AYVA				IAML		02 51 56.0	
	comp=N,379nm,0.5s						
KDZ	**Kurdzhali**	**1.34**	**349**	*i* P	**Pn**	**02 51 38.3**	**+0.3**
KDZ				S	**Sb**	**02 51 56.0**	**+0.3**
KDZ	**Kurdzhali**	**1.34**	**349**	PN	**Pn**	**02 51 37.5**	**-0.5**
KNL	**Balıkesir**	**1.35**	**92**	*i* P	**Pb**	**02 51 39.2**	**+0.3**
KNL				*i* S	**Sb**	**02 51 56.3**	**+0.4**
KNL				IAML		02 51 59.0	
	comp=E,142nm,0.4s						
KNL				IAML		02 52 00.0	
	comp=N,155nm,0.4s						
OUR	**Ouranopolis**	**1.36**	**271**	P	**Pn**	**02 51 37.6**	**-0.7**
OUR				S	**Sb**	**02 51 57.2**	**+1.0**
	comp=N,105nm,0.3s						
OUR	**Ouranopolis**	**1.36**	**271**	P	**Pn**	**02 51 37.8**	**-0.4**
OUR	**Ouranopolis**	**1.36**	**271**	PN	**Pn**	**02 51 37.1**	**-1.2**
MRMT	**Marmara Adasi**	**1.42**	**79**	PN	**Pn**	**02 51 37.9**	**-1.3**
TKR	**Tekirdag**	**1.50**	**64**	PN	**Pn**	**02 51 39.6**	**-0.6**
GONE	**Gonen-Balikesi**	**1.50**	**100**	PN	**Pn**	**02 51 39.2**	**-1.0**
DKL	**Dikili**	**1.54**	**145**	PN	**Pn**	**02 51 39.9**	**-0.8**
BALY	**Balya**	**1.54**	**112**	*i* P	**Pn**	**02 51 41.2**	**+0.3**
EDC	**Edincik**	**1.60**	**89**	PN	**Pn**	**02 51 40.6**	**-1.1**
PAIG	**Paliouri**	**1.65**	**256**	P	**Pn**	**02 51 41.6**	**-0.7**
EDRB	**Edirne**	**1.68**	**26**	PN	**Pn**	**02 51 41.8**	**-0.9**
CRLT	**Corlu**	**1.70**	**61**	PN	**Pn**	**02 51 42.3**	**-0.6**
ZEDA	**zmir-Bergama**	**1.70**	**143**	*i* P	**Pn**	**02 51 43.1**	**+0.1**
ZEDA				*i* S	**Sb**	**02 52 06.0**	**-0.1**
ZEDA				IAML		02 52 09.0	
	comp=N,67nm,0.4s						
KIRK	**Kırklareli**	**1.76**	**34**	*i* P	**Pn**	**02 51 44.2**	**+0.4**
KIRK				*i* S	**Sb**	**02 52 07.9**	**+0.1**
BALB	**Balikesir**	**1.77**	**112**	PN	**Pn**	**02 51 43.1**	**-0.8**
STEP	**BALIKESIR_Sava**	**1.78**	**122**	*i* P	**Pn**	**02 51 44.8**	**+0.6**
STEP				*i* S	**Sb**	**02 52 08.9**	**+0.5**
SRS	**Serrai**	**1.82**	**296**	P	**Pn**	**02 51 44.7**	**0.0**
URLA	**Izmir**	**2.08**	**162**	*i* P	**Pn**	**02 51 48.8**	**+0.7**
URLA				*i* S	**Sn**	**02 52 13.0**	**-0.8**
AKHS	**Akhisar**	**2.15**	**132**	*i* P	**Pn**	**02 51 49.9**	**+0.7**
DURS	**Dursunbey**	**2.21**	**109**	*i* P	**Pn**	**02 51 50.9**	**+0.9**
DURS				*i* S	**Sb**	**02 52 19.4**	**-1.3**
DGB	**zmir**	**2.44**	**159**	*i* P	**Pn**	**02 51 52.9**	**-0.2**
DGB				*i* S	**Sn**	**02 52 23.1**	**+0.4**
ULDT	**Uludag**	**2.59**	**93**	*i* P	**Pb**	**02 52 00.8**	**+0.8**
BUY	**Buyukada**	**2.61**	**77**	*i* P	**Pb**	**02 52 00.8**	**+0.6**
DEMI	**Demirci**	**2.62**	**119**	*i* P	**Pn**	**02 51 56.6**	**+0.9**
IGD	**Bursa**	**2.63**	**90**	*i* P	**Pn**	**02 51 56.7**	**+0.9**
IGD				*i* S	**Sg**	**02 52 36.2**	**-2.2**
MANT	**Manisa**	**2.84**	**130**	*i* P	**Pn**	**02 52 00.2**	**+1.3**
MANT				*i* S	**Sn**	**02 52 34.8**	**+1.8**
KHAL	**Karahalli**	**3.49**	**123**	*i* P	**Pn**	**02 52 09.2**	**+1.4**
KHAL				*i* S

BRDH S Sn 03 20 54.6 -1.9
comp=N,435nm,0.3s,baz=130,slow=23,SNR=42
LSA Lhasa 5.52 323 P Pn 03 20 33.5 +1.7
LSA S Sn 03 21 26.3 -8.0
LSA pmax pmax
comp=Z,850nm,0.4s
LSA LR LR
comp=N,340nm,6.1s
LSA LR LR
comp=E,410nm,7.8s
LSA LR LR
comp=Z,370nm,7.1s
LSA Lhasa 5.52 323 Pn 03 20 32.8 +1.0
TAPN Taplejung 6.80 289 *e*Pn Pn 03 20 48.4 -0.6
TAPN *e*Sn Sn 03 22 02.1 -3.0
comp=Z,2µm,0.9s
ODAN Odare 6.96 284 *e*Pn Pn 03 20 50.8 -0.4
ODAN *e*Sn Sn 03 22 06.8 -2.2
comp=Z,1µm,0.5s
CRAI Chiangrai 7.12 134 P Pn 03 20 52.6 -0.5
CRAI Chiangrai 7.12 134 P Pn 03 20 54.1 +1.0
CM33 Chiang Mai Arr 7.45 149 P Pn 03 20 56.3 -1.3
CHTO Chiang Mai 7.45 149 Pn Pn 03 20 54.8 -2.9
CMMT Chiang Mai 7.45 149 P Pn 03 20 57.6 -0.2
CMMT Chiang Mai 7.45 149 P Pn 03 20 57.0 -0.7
PAYA Payao 7.47 141 P Pn 03 20 57.8 -0.1
PAYA Payao 7.47 141 P Pn 03 20 57.6 -0.3
CM34 Chiang Mai Arr 7.51 148 P Pn 03 20 57.9 -0.6
CM35 Chiang Mai Arr 7.67 149 P Pn 03 21 00.2 -0.4
RAMN Ramite 7.67 284 *e*Pn Pn 03 21 00.7 -0.2
RAMN *e*Sn Sn 03 22 24.4 -1.9
comp=Z,682nm,0.5s
CM31 Chiang Mai Arr 7.76 151 Pn Pn 03 21 00.4 -1.5
CMAR Chiang Mai Arr 7.76 151 P Pn 03 21 01.3 -0.6
comp=Z,2.5nm,0.3s,baz=326,slow=13,SNR=192
CMAR LR LR 03 24 03.3
comp=Z,80nm,21.8s,baz=14,slow=38
CM13 Chiang Mai Arr 7.78 151 P Pn 03 21 02.3 +0.1
CM02 Chiang Mai Arr 7.78 151 P Pn 03 21 02.5 +0.3
CM09 Chiang Mai Arr 7.79 150 P Pn 03 21 02.5 +0.2
CM01 Chiang Mai Arr 7.80 151 P Pn 03 21 02.6 +0.1
CM05 Chiang Mai Arr 7.81 151 P Pn 03 21 02.7 +0.1
CM04 Chiang Mai Arr 7.83 151 P Pn 03 21 03.0 +0.1
LAMP Lampang 8.03 146 P Pn 03 21 05.7 +0.2
LAMP Lampang 8.03 146 P Pn 03 21 04.9 -0.7
JIRN Jiri 8.18 289 *e*Pn Pn 03 21 07.3 -0.6
JIRN *e*Sn Sn 03 22 35.6 -3.3
comp=Z,555nm,0.4s
BOK Bokaro 8.38 262 *e*P Pn 03 21 09.2 -1.1
BOK *e*S Sn 03 22 37.1 -6.1
BOK IAML 03 22 40.6
comp=N,277nm,0.5s
BOK IAML 03 22 42.8
comp=E,233nm,0.3s
GUN Gumba 8.51 290 *e*Pn Pn 03 21 11.5 -0.9
GUN *e*Sn Sn 03 22 42.9 -4.1
comp=E,713nm,0.6s
PKI Pulchoki 8.84 287 *e*Pn Pn 03 21 15.4 -1.4
PKI *e*Sn Sn 03 22 50.9 -3.9
comp=E,277nm,0.5s
PKIN Phulchoki 8.85 287 *e*Pn Pn 03 21 15.5 -1.4
PKIN *e*Sn Sn 03 22 50.7 -4.3
comp=E,284nm,0.5s
KKN Kakani 9.00 288 *e*Pn Pn 03 21 18.0 -0.9
KKN *e*Sn Sn 03 22 54.3 -4.2
DMN Daman 9.11 287 *e*Pn Pn 03 21 18.8 -1.6
DMN *e*Sn Sn 03 22 56.0 -5.3
comp=E,394nm,0.7s
SLVN Son La 9.14 114 Pn 03 21 17.2 -3.5
GKN Gorkha 9.60 289 *e*Pn Pn 03 21 25.6 -1.4
GKN *e*Sn Sn 03 23 09.1 -4.0
DANN Dangsing 10.44 289 *e*Pn Pn 03 21 35.4 -3.1
DANN *e*Sn Sn 03 23 27.2 -6.4
comp=E,245nm,0.5s
KOLN Koldanda 10.45 286 *e*Pn Pn 03 21 36.2 -2.4
KOLN *e*Sn Sn 03 23 29.1 -4.7
comp=E,228nm,0.5s
PYUN Piuthan 11.04 287 *e*Pn Pn 03 21 45.1 -1.6
PYUN *e*Sn Sn 03 23 42.5 -5.7
comp=E,287nm,0.5s
LZH Lanzhou 13.19 33 *e*P Pn 03 22 13.3 -1.8
LZH pP P 03 22 22.0 +0.6
LZH sP 03 22 26.5
LZH pmax pmax
comp=Z,21nm,1.3s
JBP Jabalpur 13.81 264 *ex* Pn 03 22 25.5 +2.4
JBP AMB AMB 03 22 25.9
comp=Z,30nm,0.6s
JBP *ex* x 03 24 40.8
GTA Gaotai 14.65 15 P P 03 22 38.8 +1.2
GTA pP Pn 03 22 48.3 +14
GTA sP 03 22 52.3
GTA pmax pmax
comp=Z,24nm,0.9s
XAN Xi'an 14.94 51 P Pn 03 22 34.8 -2.8
XAN pP P 03 22 41.5 +0.8
XAN pmax pmax
comp=Z,7.0nm,0.8s
HYB Hyderabad 17.15 246 *i*P P 03 23 06.0 +0.7
HYB *e*S S 03 26 19.0 +0.1
NIL Nilore 20.60 299 P P 03 23 44.4 +1.5
NIL IAmb IAmb 03 23 49.8
comp=Z,15nm,0.7s
KSH Kashi 21.32 316 P P 03 23 52.5 +1.9
KSH PP sP 03 24 25.8 +3.1
KSH sP pP 03 24 32.5 +23
KSH S S 03 27 35.0 -6.9
KSH SS SnSn 03 28 19.8 +6.4
KSH pmax pmax
comp=Z,25nm,1.1s
KSH pmax pmax
comp=Z,120nm,6.5s
KSH LR LR
comp=N,240nm,6.3s
KSH LR LR
comp=E,180nm,5.5s
KSH LR LR
comp=Z,270nm,5.8s
TARG Taragay, Kyrgy 21.67 323 P P 03 23 55.7 +1.2
KCSI Kotacane, Aceh 21.83 172 P P 03 23 55.0 -1.0
comp=Z,20nm,1.2s
KDJ Kajisay 22.28 323 P P 03 24 01.0 +0.2
PSI Prapat 22.70 170 P P 03 24 05.8 +0.6
comp=Z,3.8nm,0.3s,baz=0.5,slow=6.7,SNR=9.1
RPSI Rantau Prapat 22.80 170 P P 03 24 04.0 -2.1
RPSI Rantau Prapat 22.80 170 P P 03 24 05.8 -0.3
BOOM Boomskoye usch 23.20 322 P P 03 24 10.2 +0.2
MK31 Makanchi Array 23.70 338 P P 03 24 15.8 +1.6
MKAR Makanchi Array 23.70 338 P P 03 24 16.5 +2.3
comp=Z,6.0nm,0.5s,baz=149,slow=9.4,SNR=77
MKAR PcP PcP 03 27 56.6 +0.9
comp=Z,0.7nm,0.5s,baz=217,slow=3.9,SNR=5.5
MKAR ScP ScP 03 31 26.3 +1.4
comp=Z,2.7nm,0.8s,baz=104,slow=5.1,SNR=20
MKAR LR LR 03 35 13.5
comp=Z,46nm,20.9s,baz=114,slow=40
MAKZ Makanchi 23.82 338 P P 03 24 16.0 +0.6
MAKZ IAmb IAmb 03 24 19.2
comp=Z,7.2nm,0.6s
GSI Gunungsitoli 24.00 174 P P 03 24 16.3 -0.8
comp=Z,310nm,2.2s
GSI Gunungsitoli 24.00 174 P P 03 24 15.8 -1.4
AAK Ala-Archa 24.11 321 P P 03 24 22.0 +3.8
comp=Z,2.9nm,0.6s,baz=188,slow=3.2,SNR=6.6
AAK Ala-Archa 24.11 321 P P 03 24 19.5 +1.3
KBL Kabul 24.20 298 P P 03 24 19.5 +0.4
KBL IAmb IAmb 03 24 35.6
comp=Z,9.4nm,0.8s
SONM Songino Arhay 24.24 19 P P 03 24 20.4 +1.2
comp=Z,9.1nm,0.7s,baz=196,slow=9.7,SNR=38
SONM ScP ScP 03 31 26.1 -0.5
comp=Z,1.5nm,0.9s,baz=193,slow=4.6,SNR=7.4
SONM LR LR 03 33 35.9
comp=Z,17nm,18.0s,baz=124,slow=36
ULN Ulaanbaatar 24.47 20 P P 03 24 21.4 +0.1
ULN IAmb IAmb 03 24 24.2
comp=Z,8.4nm,0.8s
GAR Garm 24.82 309 P P 03 24 25.8 +1.1
BTK Batken 24.97 312 P P 03 24 27.8 +1.9
CHGR Chuyangaron 25.50 308 P P 03 24 30.9 +0.1
CHGR IAmb IAmb 03 24 49.8
comp=Z,12nm,0.6s
KK31 Karatay Array 26.75 318 P P 03 24 42.4 +0.5
TLY Talaya 27.16 12 LR LR 03 36 24.4

comp=Z,29nm,21.2s,baz=172,slow=38
KURBB Kurchatov Arra 28.27 338 P P 03 24 57.3 +2.0
comp=Z,2.0nm,0.6s,baz=146,slow=9.4,SNR=16
KURBB PcP PcP 03 28 07.0 +0.9
comp=Z,0.9nm,0.5s,baz=160,slow=2.3,SNR=8.0
KURBB ScP ScP 03 31 39.0 +0.9
comp=Z,4.4nm,0.7s,baz=155,slow=2.7,SNR=41
KURK Kurchatov 28.31 338 P P 03 24 57.0 +1.3
KURK PcP 03 28 06.6 +0.4
KURK ScP 03 31 38.8 +0.5
ZAA0 Zalesovo Array 29.59 348 P P 03 25 06.5 -0.5
ZAA0 IAmb IAmb 03 25 11.0
comp=Z,3.2nm,0.7s
ZALV Zalesovo Beam 29.59 348 P P 03 25 08.8 +1.9
comp=Z,5.4nm,0.8s,baz=149,slow=6.0,SNR=11
ZALV pP pP 03 25 31.3 +1.6
comp=Z,1.5nm,0.4s,baz=152,slow=6.4,SNR=3.6
ZALV LR LR 03 38 30.7
comp=Z,25nm,20.6s,baz=322,slow=39
KSRS Korea Array 30.50 59 LR LR 03 38 59.9
comp=Z,26nm,20.1s,baz=241,slow=39
JNU Nakatsue 32.20 68 LR LR 03 40 02.2
comp=Z,32nm,21.5s,baz=176,slow=39
GEYT Alibeck 33.57 301 pP pP 03 26 05.9 +0.7
comp=Z,2.3nm,0.7s,baz=134,slow=6.4,SNR=3.3
GEYT ScP ScP 03 31 57.7 +1.6
comp=Z,2.1nm,0.6s,baz=270,slow=4.3,SNR=4.5
MJAR Matsushiro Arr 38.48 63 LR LR 03 44 38.4
comp=Z,13nm,19.2s,baz=260,slow=40
TIXI Tiksi 50.13 13 P P 03 27 56.7 +0.4
KLMR Klimovskoe 51.53 329 *e* pP 03 28 31.7 +0.3
KLMR AMP 03 28 33.8
comp=Z,13nm,1.3s
BRTR Keskin Array B 52.71 302 P P 03 28 17.9 +1.6
comp=Z,0.8nm,0.7s,baz=125,slow=6.2,SNR=4.4
BRTR pP pP 03 28 41.2 +0.5
comp=Z,1.1nm,0.7s,baz=104,slow=6.1,SNR=3.5
AKASG Malin Array Be 55.61 315 pP pP 03 29 01.8 +0.2
comp=Z,0.8nm,0.4s,baz=77,slow=7.3,SNR=3.8
ELL Elmali 55.94 298 P P 03 28 40.7 +1.0
ELL pP pP 03 29 04.0 -0.4
MLR Muntele Rosu 57.97 309 P P 03 28 54.4 +0.5
MLR IAmb IAmb 03 28 57.0
comp=Z,3.4nm,0.7s
MLR pP 03 29 18.5 -0.1
FINES FINESS Array B 58.02 328 P P 03 28 55.2 +1.5
comp=Z,2.0nm,0.7s,baz=95,slow=10.0,SNR=7.1
FINES pP pP 03 29 18.5 -0.1
comp=Z,1.5nm,0.6s,baz=95,slow=7.2,SNR=1.9
WB0 Warramunga Arr 58.98 136 P P 03 28 59.1 -1.9
WRA Warramunga Arr 59.08 136 P P 03 29 00.6 -1.1
comp=Z,7.5nm,0.7s,baz=324,slow=7.4,SNR=59
WRAB Tennant Creek 59.08 136 P P 03 28 59.4 -2.2
WB2 Warramunga Arr 59.09 136 P P 03 29 00.7 -1.0
WR0 Warramunga Arr 59.22 136 P P 03 29 01.4 -1.2
ARCES ARCESS Array B 59.35 337 P P 03 29 04.7 +1.8
comp=Z,1.6nm,1.0s,baz=116,slow=5.4,SNR=4.3
ARCES pP pP 03 29 27.7 0.0
comp=Z,2.6nm,0.9s,baz=97,slow=7.7,SNR=3.7
SANT Santorini 59.53 299 P P 03 29 04.7 0.0
IDI Anoyia 60.19 298 P P 03 29 09.4 +0.1
IDI IAmb IAmb 03 29 19.8
comp=Z,4.9nm,0.9s
VTS Vitosha 60.23 306 P P 03 29 10.0 +0.4
VTS IAmb IAmb 03 29 12.0
comp=Z,1.6nm,0.5s
AS31 Alice Springs 61.60 139 P P 03 29 17.1 -1.7
AS31 IAmb IAmb 03 29 18.7
comp=Z,2.1nm,0.8s
NOA NORSAR Array B 65.20 328 P P 03 29 43.0 +1.0
comp=Z,0.7nm,0.8s,baz=67,slow=4.8,SNR=2.2
GERES GERESS Array B 65.78 314 P P 03 29 47.8 +1.6
comp=Z,0.5nm,0.4s,baz=52,slow=7.5,SNR=4.1
GERES pP pP 03 30 13.1 +1.7
comp=Z,1.4nm,0.6s,baz=54,slow=6.8,SNR=6.3
STKA Stephens Creek 72.23 139 P P 03 30 25.1 -0.9
comp=Z,2.0nm,0.5s,baz=336,slow=4.6,SNR=8.1
STKA Stephens Creek 72.23 139 P P 03 30 24.5 -1.6
KEST Kesra 72.32 302 P P 03 30 28.4 +1.7
comp=Z,3.1nm,0.8s,baz=273,slow=8.7,SNR=3.2
TOLK Toolik Lake Re 75.36 20 P P 03 30 43.4 -0.4
TOLK IAmb IAmb 03 30 45.6
comp=Z,5.8nm,0.8s
MLY Manley 76.90 23 P P 03 30 53.1 +0.4
MLY IAmb IAmb 03 30 54.2
comp=Z,5.0nm,0.9s
BPAW Bear Paw Mtn. 77.31 24 P P 03 30 54.6 -0.3
BPAW IAmb IAmb 03 30 56.9
comp=Z,3.2nm,0.7s
ILAR Eielson Array 78.41 23 P P 03 31 00.6 -0.4
comp=Z,1.2nm,0.8s,baz=299,slow=5.2,SNR=15
ILAR pP pP 03 31 26.1 -1.0
comp=Z,1.3nm,0.9s,baz=291,slow=5.1,SNR=5.3
KDAK Kodiak Island 80.00 30 P P 03 31 09.7 -0.1
comp=Z,4.8nm,0.7s,baz=266,slow=7.6,SNR=4.2
INK Inuvik 80.13 16 P P 03 31 10.9 +0.7
comp=Z,4.8nm,0.9s,baz=328,slow=5.0,SNR=19
INK pP pP 03 31 35.4 -1.0
comp=Z,1.3nm,0.7s,baz=281,slow=13,SNR=3.5
INK Inuvik 80.13 16 P P 03 31 10.9 +0.7
INK IAmb IAmb 03 31 11.8
comp=Z,4.5nm,0.8s
EGAK Eagle 80.34 21 P P 03 31 11.6 +0.1
EGAK IAmb IAmb 03 31 12.7
comp=Z,3.1nm,0.8s
EPYK Eagle Plains 80.64 19 P P 03 31 12.0 -1.1
EPYK IAmb IAmb 03 31 16.0
comp=Z,3.7nm,0.8s
ESDC Sonseca Array 80.67 309 pP pP 03 31 40.1 +0.1
comp=Z,0.4nm,0.6s,baz=27,slow=4.4,SNR=3.0
ESDC LR LR 04 10 52.6
comp=Z,15nm,19.1s,baz=265,slow=38
C36M Paulatuk 81.50 13 P P 03 31 18.0 +0.6
C36M IAmb IAmb 03 31 18.6
comp=Z,6.9nm,0.7s
BARN Barnard Glacie 82.58 24 P P 03 31 23.2 -0.4
BARN IAmb IAmb 03 31 25.9
comp=Z,4.1nm,0.7s
BOSA Boshof 85.77 236 P P 03 31 41.1 +0.9
comp=Z,5.8nm,0.9s,baz=62,slow=2.3,SNR=7.8
BOSA Boshof 85.77 236 P P 03 31 40.3 +0.1
BOSA IAmb IAmb 03 31 41.5
comp=Z,5.7nm,0.8s
TORD Torodi Ar. Bea 87.35 283 P P 03 31 49.5 +1.4
comp=Z,0.7nm,0.5s,baz=53,slow=4.2,SNR=23
TORD pP pP 03 32 14.2 -0.6
comp=Z,1.0nm,0.8s,baz=60,slow=4.9,SNR=3.8
YKA Yellowknife Ar 89.38 13 P P 03 31 57.0 +0.3
comp=Z,0.6nm,0.7s,baz=332,slow=3.9,SNR=11
TXAR Lajitas Array 122.81 19 PKP PKPdf 03 37 56.4 -0.2
comp=Z,1.1nm,0.8s,baz=122,slow=0.2,SNR=8.2
BDFB Brasilia 144.09 278 PKP PKPdf 03 38 36.1 -0.4
comp=Z,4.9nm,0.7s,baz=45,slow=2.9,SNR=8.8
BDFB Brasilia 144.09 278 PKPdf 03 38 35.7 -0.8
ROSC El Rosal 148.27 339 PKPbc PKiKP 03 38 49.2 +0.1
comp=Z,13nm,0.5s,baz=165,slow=1.7,SNR=8.0
ROSC El Rosal 148.27 339 PKPbc 03 38 46.5 -1.0
ROSC PKPab PKiKP 03 38 49.6 +0.5
LPAZ La Paz 161.82 296 PKP PKPdf 03 39 02.4 -0.2
comp=Z,1.2nm,0.8s,baz=39,slow=3.3,SNR=6.7

MAN 28 03:19:11.5, 7.03N×125.54E, h3km, mb3.8, ML2.5, MS2.0, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMPH	**Davao City--Mi**	**0.06**	**333**	*ie*P	Pg	03 19 13.1	+0.3
DMPH				*i* S	Sg	03 19 15.8	+2.2
DDMP	**Don Marcelino,**	**0.94**	**169**	*e*P	Pb	03 19 30.2	-0.2
DDMP				*e*S	Sn	03 19 45.2	-0.3
BUKP	**Musuan**	**0.96**	**331**	*e*P	Pg	03 19 30.0	-0.1
BUKP				*e*S	Sn	03 19 46.5	+0.2

*IDC **28** 03:29:44.7±1.2, 36.45N×135.48E, h364km±15km, mb2.6/1, mb1 2.8/4, mb1mx2.5/35, mbtmp3.3/4, Error ellipse: s-maj=28.4km s-min=19.5km az=105.0*
*JMA **28** 03:29:44.3±0.1, 36.51N×135.47E, h364km±2km, M2.8*
ISC 28 03:29:44.2±0.9, 36.52N±0.09×135.50E±0.08, h364km, n22, σ0.974/24, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKY	**Yasaka**	**0.95**	**200**	P	Pn	03 30 31.5	+0.1
JKSM	**Kasumi**	**1.15**	**216**	P	Pn	03 30 32.0	-0.1
JWT	**Wachi**	**1.24**	**184**	P	Pn	03 30 32.8	+0.2
JWT				*e*S	S	03 31 10.4	-0.9
JOI	**OKI**	**1.83**	**263**	P	Pn	03 30 35.9	+0.2
MAT	**Matsushiro**	**2.18**	**89**	P	Pn	03 30 38.9	+0.8
MJAR	**Matsushiro Arr**	**2.18**	**89**	P	Pn	03 30 39.2	+1.1
	0.2nm,0.3s,baz=269,slow=8.9,SNR=15						
JWY	**Kouya**	**2.30**	**178**	P	Pn	03 30 39.4	+0.3
JIE	**Ise**	**2.34**	**155**	P	Pn	03 30 40.1	+0.8
JHS	**Saijyo**	**2.46**	**233**	P	Pn	03 30 40.1	-0.2
JSD	**Sado**	**2.67**	**55**	P	Pn	03 30 42.3	+0.6
JTNC	**Tanabenakahech**	**2.70**	**178**	P	Pn	03 30 42.1	-0.1
JGT2	**ShimaneMisato**	**2.83**	**240**	P	Pn	03 30 43.1	-0.1
JAI	**Aioi**	**2.86**	**198**	P	Pn	03 30 43.7	+0.2
JFT	**Otama**	**4.00**	**74**	P	Pn	03 30 54.8	+0.8
JTO	**Tosashimizu**	**4.28**	**212**	P	Pn	03 30 57.3	+0.4
JFK	**Kawauchi**	**4.39**	**77**	P	Pn	03 30 57.8	-0.2
JMM	**Marumori**	**4.43**	**71**	P	Pn	03 30 58.7	+0.3
JMM				S	S	03 31 56.4	-2.0
KSRS	**Korea Array**	**6.14**	**281**	P	Pn	03 31 17.8	+0.8
	0.1nm,0.3s,baz=99,slow=12,SNR=4.3						
USRK	**Ussuriysk Ar.**	**8.12**	**342**	P	P	03 31 41.3	-0.7
	baz=156,slow=11,SNR=5.7						
ASAJ	**Asahikawa**	**9.32**	**33**	P	Pn	03 31 54.4	+0.5
	baz=77,slow=17						
ILAR	**Eielson Array**	**52.45**	**32**	P	P	03 38 21.4	+1.0
	0.3nm,0.5s,baz=262,slow=6.1,SNR=4.7						
WRA	**Warramunga Arr**	**56.17**	**181**	P	P	03 38 47.4	-0.1
	4.4nm,0.3s,baz=355,slow=7.5,SNR=15						

*JMA **28** 03:40:53.6±0.2, 34.69N×138.16E, h252km±2km, M3.0*
*IDC **28** 03:40:54.5±0.8, 34.73N×138.10E, h246km±7km, mb2.7/4, mb1 3.0/8, mb1mx2.9/32, mbtmp3.5/8, Error ellipse: s-maj=19.2km s-min=11.2km az=70.0*
ISC 28 03:40:54.5±0.8, 34.74N±0.06×138.08E±0.06, h247km±6km, n24, σ0.955/31, mb3.0/4, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TK02	**Tokai 2**	**0.83**	**199**	P	Pn	03 41 28.5	+0.4
JYN	**Shimob**	**0.85**	**27**	P	Pn	03 41 28.6	+0.1
JOD2	**Odawara 2**	**0.98**	**57**	P	Pn	03 41 29.3	+0.2
JIE	**Ise**	**1.18**	**253**	P	Pn	03 41 30.4	+0.1
JIE				*e*S	S	03 41 58.2	-0.2
JYTA	**Yamagatataniai**	**1.39**	**308**	P	Pn	03 41 32.0	+0.4
JRY	**Ryogami san**	**1.44**	**28**	P	Pn	03 41 32.7	+0.6
JRY				*e*S	S	03 42 02.2	+0.4
TTO1	**TONANKAI O.B.S**	**1.54**	**224**	P	Pn	03 41 32.9	+0.4
MJAR	**Matsushiro Arr**	**1.80**	**3**	P	Pn	03 41 35.0	+0.1
	0.5nm,0.3s,baz=183,slow=10.0,SNR=27						
MJAR				S	S	03 42 06.8	-0.2
	0.2nm,0.3s,baz=56,slow=26,SNR=3.7						
MAT	**Matsushiro**	**1.81**	**3**	P	Pn	03 41 35.1	+0.2
MAT				S	S	03 42 06.4	-0.5
MAT	**Matsushiro**	**1.81**	**3**	P	Pn	03 41 35.2	+0.3
MAT				S	S	03 42 06.6	-0.3
JAG	**Ashikaga**	**2.02**	**33**	P	Pn	03 41 36.5	-0.4
JWY	**Kouya**	**2.12**	**257**	P	Pn	03 41 37.8	-0.1
JHJ	**Hachijo jima 2**	**2.15**	**138**	P	Pn	03 41 38.0	-0.1
	15nm,0.3s,baz=49,slow=8.3,SNR=1.7						
JHJ				S	S	03 42 13.1	+0.6
	12nm,0.3s,baz=60,slow=20,SNR=2.1						
JTNC	**Tanabenakahech**	**2.24**	**247**	P	Pn	03 41 38.8	-0.2
JWT	**Wachi**	**2.26**	**285**	P	Pn	03 41 39.3	+0.2
JWT				*e*S	S	03 42 13.6	-0.7
BSO1	**Boso 1**	**2.39**	**91**	P	Pn	03 41 38.8	-1.0
JSZ	**Suzu**	**2.77**	**348**	P	Pn	03 41 44.5	+0.3
JNU	**Nakatsue**	**6.20**	**257**	P	Pn	03 42 25.1	+0.1
	0.3nm,0.3s,baz=28,slow=12,SNR=4.1						
KSRS	**Korea Array**	**8.65**	**291**	P	Pn	03 42 57.4	+1.5
	0.2nm,0.3s,baz=112,slow=13,SNR=7.3						
KLR	**Kul'dur**	**15.22**	**344**	P	P	03 44 15.5	-1.1
	0.3nm,0.3s,baz=156,slow=11,SNR=7.0						
MKAR	**Makanchi Array**	**43.09**	**304**	P	P	03 48 30.7	+0.5
	0.3nm,0.4s,baz=85,slow=10,SNR=4.5						
ILAR	**Eielson Array**	**52.87**	**31**	P	P	03 49 44.8	+0.2
	0.5nm,0.6s,baz=276,slow=6.1,SNR=6.2						
WRA	**Warramunga Arr**	**54.49**	**184**	P	P	03 49 56.3	-0.6
	0.5nm,1.0s,baz=357,slow=7.5,SNR=1.2						
YKA	**Yellowknife Ar**	**67.14**	**29**	P	P	03 51 21.7	+0.4
	0.1nm,0.5s,baz=303,slow=5.8,SNR=1.7						

*SOF **28** 03:59:47.3, 40.28N×26.29E, h8km, MD4.3*
*MOS **28** 03:59:49.4±1.0, 40.44N×26.19E, h10km, mb4.2/6, Error ellipse: s-maj=6.9km s-min=3.8km az=87.1*
*BEO **28** 03:59:50.8±0.7, 40.75N×26.53E, h0km, ML4.5/10*
*IDC **28** 03:59:50.6±0.7, 40.40N×26.06E, h0km, mb3.8/16, mb1 3.9/24, mb1mx3.8/46, mbtmp3.8/24, ML3.7/9, MS3.2/15, Ms1 3.2/15, ms1mx3.0/45, Error ellipse: s-maj=12.0km s-min=10.6km az=31.0*
*DDA **28** 03:59:51.6, 40.39N×26.18E, h12km±2km, MW4.1*
*ATH **28** 03:59:51.6, 40.44N×26.06E, h31km±1km, ML4.0/15, Error ellipse: s-maj=1.7km s-min=0.7km az=61.0*
*PDG **28** 03:59:51.3±0.5, 40.44N×26.14E, h19km, ML3.5/13, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*NEIC **28** 03:59:51.2, 40.42N×26.14E, h8km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr-1.89; Mθθ2.44; Mϕϕ-0.56; Mrθ2.24; Mrϕ-0.24; Mθϕ-0.09; Fault plane solution: M0 3.16000×10^15 NP1:φ97.36000°, δ22.10000°, λ-85.55000°. NP2:φ272.56000°, δ67.97000°, λ-91.80000°. Principal axes: T 3.4132, Plg23.0000°, Azm4.0000°; N -0.5756, Plg2.0000°, Azm273.0000°; P -2.8375, Plg67.0000°, Azm179.0000°;*
*NEIC **28** 03:59:51.3±0.9, 40.38N±0.04×26.07E±0.06, h7km±5km Error ellipse: s-maj=6.6km s-min=5.8km az=54.0*
*ISK **28** 03:59:51.2, 40.42N×26.13E, h13km, ML4.5/37*
*THE **28** 03:59:52.0, 40.43N×26.12E, h12km, ML4.0/15, Error ellipse: s-maj=0.7km s-min=0.4km az=282.0*
ISC 28 03:59:52.4±0.8, 40.44N±0.01×26.12E±0.01, h16km±5km, n503, σ1.944/591, mb3.8/22, MS3.1/11, 42C-41D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GELI	**Tayfur-Gelibol**	**0.28**	**98**	PG	Pg	03 59 57.2	-1.1
GELI				SG	Sg	04 00 01.3	-1.1
GOKA	**anakkale-Gk**	**0.29**	**213**	*i* P	Pg	03 59 58.1	-0.5
GOKA				*i* S	Sg	04 00 02.3	-0.5
GADA	**Gvkgeada**	**0.30**	**214**	P	Pg	03 59 58.0	-0.7
GADA				S	Sg	04 00 02.8	-0.1
	55µm,0.7s						
GADA	**Gvkgeada**	**0.30**	**214**	PG	Pg	03 59 58.2	-0.5
GADA				SG	Sg	04 00 02.9	0.0
ENEZ	**Enez**	**0.30**	**5**	P	Pg	03 59 58.4	-0.3
ENEZ				S	Sg	04 00 03.1	-0.1
	82µm,0.3s						
ENEZ	**Enez**	**0.30**	**5**	PG	Pg	03 59 58.5	-0.3
ENEZ				SG	Sg	04 00 03.6	+0.4
ERIK	**Erikli-Kesan**	**0.38**	**52**	PG	Pg	03 59 59.3	-0.9
ERIK				SG	Sg	04 00 04.7	-0.8
SMTH	**Samothraki Isl**	**0.45**	**275**	P	Pg	04 00 00.5	-0.9
SMTH				S	Sg	04 00 07.7	+0.2
	15µm,0.3s						
SMTH	**Samothraki Isl**	**0.45**	**275**	P	Pg	04 00 00.6	-0.8
SMTH				S	Sg	04 00 07.3	-0.2
SMTH				AML	AML	04 00 08.6	
	comp=E,32499µm,0.5s						
SMTH				AML	AML	04 00 08.8	
	comp=N,25976µm,0.2s						
LPK	**Lapseki**	**0.50**	**97**	PG	Pg	04 00 01.3	-1.0
LPK				SG	Sg	04 00 08.2	-0.7
KESN	**Edirne-Kesan**	**0.58**	**48**	*i* P	Pg	04 00 02.4	-1.6
KESN				*i* S	Sg	04 00 09.8	-2.0
KESN				IAML		04 00 17.0	
	comp=E,14µm,0.3s						
KESN				IAML		04 00 17.0	
	comp=N,19µm,0.3s						
BOZC	**Bozcaada**	**0.59**	**185**	PG	Pg	04 00 02.8	-1.3
BOZC				SG	Sg	04 00 11.5	-0.5
BOZC	**Bozcaada**	**0.59**	**185**	*i* P	Pg	04 00 02.8	-1.3
BOZC				*i* P	Pg	04 00 02.9	-1.3
BOZC				IAML		04 00 16.0	
	comp=N,14µm,0.9s						
BOZC				IAML		04 00 16.0	
	comp=N,14µm,0.8s						
BOZC				IAML		04 00 17.0	
	comp=E,8µm,0.5s						
EZN	**Ezine**	**0.63**	**165**	P	Pg	04 00 03.2	-1.6
EZN				S	Sg	04 00 13.1	0.0

comp=E,9µm,0.4s
EZN Ezine 0.63 165 PG **Pg** 04 00 03.7 -1.1
EZN SG **Sg** 04 00 11.8 -1.3
BAYC CANAKKALE_Bayr 0.77 154 *i* P **Pg** 04 00 06.0 -1.4
BAYC *i* S **Sg** 04 00 15.5 -2.0
UKOP Uzunkopru-Edir 0.80 29 PG **Pb** 04 00 06.9 -0.9
UKOP SG **Sg** 04 00 19.0 +0.6
RDO Rodhopi 0.83 328 P **Pb** 04 00 07.6 -0.9
RDO S **Sn** 04 00 20.6 -0.9
comp=E,14µm,0.8s
RDO Rodhopi 0.83 328 P **Pb** 04 00 07.6 -0.9
RDO S **Sb** 04 00 19.2 -0.4
RDO AML AML 04 00 21.8
comp=E,24954µm,0.8s
RDO AML AML 04 00 22.8
comp=N,33393µm,0.8s
RDO Rodhopi 0.83 328 PG **Pb** 04 00 07.7 -0.8
RKY Sarkoy-Tekirda 0.85 72 PG **Pb** 04 00 07.5 -1.3
RKY SG **Sb** 04 00 19.7 -0.2
SART Tekirdag 0.85 72 *i* P **Pb** 04 00 07.1 -1.7
SART *i* S **Sb** 04 00 19.2 -0.8
LIA Limnos Island 0.89 233 P **Pb** 04 00 08.7 -0.8
LIA S **Sg** 04 00 21.7 +0.2
comp=N,15µm,0.7s
LIA Limnos Island 0.89 233 P **Pb** 04 00 08.8 -0.7
LIA S **Sg** 04 00 21.5 +0.1
LIA AML AML 04 00 22.9
comp=E,24251µm,0.3s
LIA AML AML 04 00 23.5
comp=N,27033µm,0.7s
KRBG Karabiga-Canak 0.90 92 PG **Pb** 04 00 09.5 -0.2
THAS Thassos island 1.08 280 P **Pb** 04 00 11.5 -1.2
THAS S **Sn** 04 00 27.5 +0.1
comp=N,5µm,0.5s
THAS Thassos island 1.08 280 P **Pb** 04 00 11.6 -1.0
THAS S **Sb** 04 00 26.6 +0.1
THAS AML AML 04 00 28.6
comp=E,9096µm,0.5s
THAS AML AML 04 00 29.4
comp=N,10868µm,0.5s
KNL Balıkesir 1.09 98 *i* P **Pb** 04 00 11.6 -1.3
KNL *i* S **Sb** 04 00 25.2 -1.6
KNL IAML 04 00 29.0
comp=E,25µm,0.5s
KNL IAML 04 00 30.0
comp=N,24µm,0.5s
MRMT Marmara Adasi 1.14 81 PN **Pn** 04 00 12.5 -1.3
PRK Paraskevi 1.19 174 P **Pn** 04 00 14.4 0.0
PRK S **Sb** 04 00 29.9 +0.1
comp=N,114µm,0.6s
PRK Paraskevi 1.19 174 P **Pg** 04 00 15.1 -0.3
PRK S **Sg** 04 00 31.3 +0.3
AYVA Ayvalik 1.21 158 *i* P **Pn** 04 00 14.0 -0.6
AYVA *i* S **Sb** 04 00 30.1 -0.1
AYVA IAML 04 00 32.0
comp=N,62µm,0.7s
AYVA IAML 04 00 32.0
comp=E,22µm,0.7s
TKR Tekirdag 1.21 62 PN **Pn** 04 00 14.2 -0.5
SIGR SIGRI 1.24 189 P **Pn** 04 00 14.1 -0.9
SIGR S **Sb** 04 00 31.0 -0.1
comp=E,43µm,0.5s
SIGR SIGRI 1.24 189 P **Pn** 04 00 14.4 -0.6
SIGR S **Sn** 04 00 31.3 -0.1
SIGR AML AML 04 00 32.2
SIGR AML AML 04 00 33.5
comp=E,60392µm,0.4s
SIGR SIGRI 1.24 189 PN **Pn** 04 00 13.9 -1.1
EFSA Agios Efstrati 1.25 224 P **Pn** 04 00 14.4 -0.7
EFSA S **Sn** 04 00 31.8 +0.3
EFSA AML AML 04 00 33.6
comp=E,36060µm,0.9s
EFSA AML AML 04 00 34.2
comp=N,42124µm,0.5s
GONE Gonen-Balikesi 1.26 107 PN **Pn** 04 00 14.9 -0.5
KDZ Kurdzhali 1.32 337 *i* P **Pn** 04 00 16.5 +0.2
KDZ Kurdzhali 1.32 337 PN **Pn** 04 00 16.1 -0.1
EDC Edincik 1.34 93 PN **Pn** 04 00 15.6 -0.8
KAVA Kavala 1.34 295 P **Pn** 04 00 15.9 -0.5
KAVA S **Sb** 04 00 34.2 +0.1
comp=N,3µm,0.7s
KAVA Kavala 1.34 295 P **Pn** 04 00 15.9 -0.5
KAVA S **Sn** 04 00 33.0 -0.9
KAVA AML AML 04 00 35.9
comp=N,6752µm,0.7s
KAVA AML AML 04 00 37.5
comp=E,5416µm,0.3s
BALY Balya 1.35 121 *i* P **Pn** 04 00 16.3 -0.3
BALY IAML 04 00 36.0
comp=N,11µm,0.6s
BALY IAML 04 00 36.0
comp=E,9µm,0.3s
KVLA Kavala 1.41 291 P **Pn** 04 00 16.9 -0.4
KVLA S **Sn** 04 00 34.3 -1.3
KVLA AML AML 04 00 39.3
comp=N,4548µm,0.4s
KVLA AML AML 04 00 46.6
comp=E,4120µm,0.5s
EDRB Edirne 1.49 18 P **Pn** 04 00 17.4 -1.0
EDRB S **Sb** 04 00 38.2 -0.1
comp=E,4µm,0.3s
EDRB Edirne 1.49 18 PN **Pn** 04 00 17.5 -1.0
DKL Dikili 1.49 156 PN **Pn** 04 00 18.4 -0.1
KIRK Kirklareli 1.54 29 *i* P **Pn** 04 00 18.1 -1.0
BALB Balikesir 1.57 120 PN **Pn** 04 00 19.9 +0.3
PHSR Pinarhisar 1.60 41 PN **Pn** 04 00 19.3 -0.7
STEP BALIKESIR_Sava 1.62 130 *i* P **Pn** 04 00 20.5 +0.1
STEP *i* S **Sn** 04 00 40.9 -0.1
STEP IAML 04 00 44.0
comp=N,8µm,0.6s
STEP IAML 04 00 49.0
comp=E,7µm,0.5s
OUR Ouranopolis 1.63 267 P **Pn** 04 00 19.4 -1.1
OUR S **Sn** 04 00 41.6 +0.5
comp=E,3µm,0.5s
OUR Ouranopolis 1.63 267 P **Pn** 04 00 19.4 -1.1
OUR AML AML 04 00 47.3
comp=N,6888µm,0.3s
OUR AML AML 04 00 56.9
comp=E,6667µm,0.7s
OUR Ouranopolis 1.63 267 PN **Pn** 04 00 19.4 -1.1
RZN Rozhen 1.64 320 *i* P **Pn** 04 00 21.0 +0.3
ZEDA zmir-Bergama 1.64 153 *i* P **Pn** 04 00 20.5 -0.1
ZEDA *i* S **Sn** 04 00 41.1 -0.3
ZEDA IAML 04 00 45.0
comp=N,6µm,0.5s
ZEDA IAML 04 00 45.0
comp=E,3µm,0.3s
DIM Dimitrovgrad 1.67 345 *i* P **Pn** 04 00 21.1 +0.1
KCTX Karacabey (Bur 1.72 95 PN **Pn** 04 00 20.9 -0.8
SLVT Silivri 1.78 63 PN **Pn** 04 00 22.0 -0.4
KRBN Karaburun 1.87 169 PN **Pn** 04 00 23.5 -0.2
ELBA Catalca 1.90 67 *i* P **Pn** 04 00 23.1 -0.9
PAIG Paliouri 1.93 256 P **Pn** 04 00 22.9 -1.7
PAIG S **Sn** 04 00 49.1 +0.5
comp=E,730nm,0.7s
PAIG Paliouri 1.93 256 P **Pn** 04 00 23.1 -1.5
PSRA Psara 1.94 193 P **Pn** 04 00 25.0 +0.4
PSRA S **Sn** 04 00 48.6 -0.1
PSRA AML AML 04 00 56.4
comp=N,10214µm,0.6s
PSRA AML AML 04 01 00.6
comp=E,13026µm,0.6s
CTYL Yalikoy Yolu 1.95 57 PN **Pn** 04 00 24.1 -0.7
SKY Skiros Island 1.97 218 P **Pn** 04 00 23.9 -1.2
PLD Plovdiv 1.98 328 *i* P **Pn** 04 00 25.6 +0.4
PLD Plovdiv 1.98 328 PN **Pn** 04 00 25.8 +0.6
CTKS Kestanelik-??a 1.98 65 PN **Pn** 04 00 25.2 -0.1
DURS Dursunbey 1.99 114 *i* P **Pn** 04 00 25.5 0.0
DURS IAML 04 00 55.0
comp=N,7µm,0.3s
DURS IAML 04 00 56.0
comp=E,6µm,0.3s
YKBL Yakuplu-Istanb 2.02 73 PN **Pn** 04 00 25.5 -0.2
AKS Akhisar 2.03 139 PN **Pn** 04 00 26.5 +0.5
SRS Serrai 2.03 290 P **Pn** 04 00 25.5 -0.5
SRS Serrai 2.03 290 P **Pn** 04 00 25.5 -0.5
SRS AML AML 04 01 02.0
comp=E,5329µm,0.6s
SRS AML AML 04 01 03.7
comp=N,3475µm,1.1s
PLG Polygyros 2.04 269 P **Pn** 04 00 25.2 -0.9
PLG Polygyros 2.04 269 P **Pn** 04 00 25.2 -0.9
PLG AML AML 04 00 59.4
comp=N,4141µm,1.0s
PLG AML AML 04 01 00.2
comp=E,2480µm,0.6s
CHOS Chios island 2.05 181 P **Pn** 04 00 25.6 -0.6
CHOS S **Sn** 04 00 51.8 +0.3
comp=E,5µm,0.6s
CHOS Chios island 2.05 181 P **Pn** 04 00 25.6 -0.6
CHOS Chios island 2.05 181 PN **Pn** 04 00 25.7 -0.5
AVCI Avcilar-stanb 2.06 73 PN **Pn** 04 00 26.3 0.0
JMB Yambol 2.06 10 P **Pn** 04 00 25.7 -0.6
JMB Yambol 2.06 10 PN **Pn** 04 00 26.8 +0.5
DST Dursunbey 2.09 113 PN **Pn** 04 00 26.6 -0.3
ARMT Armutlu 2.10 86 PN **Pn** 04 00 26.3 -0.6
URLA Izmir 2.11 170 PN **Pn** 04 00 26.6 -0.4
URLA Izmir 2.11 170 *i* P **Pn** 04 00 26.5 -0.4
URLA IAML 04 01 01.0
comp=E,3µm,0.6s
URLA IAML 04 01 07.0
comp=N,3µm,0.7s
MDNY Mudanya-Bursa 2.12 91 PN **Pn** 04 00 26.9 -0.2
AOS Alonnisos 2.14 234 P **Pn** 04 00 25.9 -1.5
AOS Alonnisos 2.14 234 P **Pn** 04 00 25.9 -1.5
AOS Alonnisos 2.14 234 PN **Pn** 04 00 27.8 +0.4
HVHR Bakirkoy-Istan 2.14 75 PN **Pn** 04 00 26.9 -0.5
MMB Musomiste 2.14 303 *i* P **Pn** 04 00 27.2 -0.3
BGKT Bogazkoy 2.15 69 PN **Pn** 04 00 27.8 +0.2
ALNA Alonissos 2.16 234 P **Pn** 04 00 26.1 -1.6
ORLT Orhaneli 2.16 99 PN **Pn** 04 00 27.1 -0.7
BLCB Balcova 2.17 160 P **Pn** 04 00 27.3 -0.5
BLCB S **Sn** 04 00 54.0 -0.4
BLCB Balcova 2.17 160 PN **Pn** 04 00 27.5 -0.3
HORT Hortiatis 2.31 275 P **Pn** 04 00 29.0 -0.8
HORT AML AML 04 01 07.2
comp=N,2508µm,1.1s
HORT AML AML 04 01 16.3
comp=E,2124µm,0.9s
HORT Hortiatis 2.31 275 PN **Pn** 04 00 29.9 +0.1
BUY Buyukada 2.32 79 *i* P **Pn** 04 00 28.8 -1.2
BUY IAML 04 01 14.0
comp=E,1µm,0.5s
BUY IAML 04 01 20.0
comp=N,1µm,0.5s
ISK Istanbul-Kandi 2.32 73 P **Pn** 04 00 28.9 -1.0
ISK S **Sn** 04 00 58.2 0.0
comp=N,3µm,0.7s
ISK Istanbul-Kandi 2.32 73 PN **Pn** 04 00 29.4 -0.5
ISK SN **Sn** 04 00 58.0 -0.2
ULDT Uludag 2.33 96 *i* P **Pn** 04 00 30.0 -0.2
ULDT IAML 04 01 08.0
comp=N,1µm,0.4s
ULDT IAML 04 01 14.0
comp=E,2µm,1.1s
GEMT Gemlik 2.34 89 PN **Pn** 04 00 30.8 +0.5
IGD Bursa 2.36 93 *i* P **Pn** 04 00 29.9 -0.7
KLYT Kilyos 2.37 69 PN **Pn** 04 00 30.5 0.0
KYMI Kymi, Euboea I 2.38 222 P **Pn** 04 00 29.3 -1.5
SKIA Skiathos 2.40 239 P **Pn** 04 00 29.3 -1.8
SKIA AML AML 04 01 12.6
comp=N,4115µm,0.5s
SKIA AML AML 04 01 12.9
comp=E,4718µm,0.7s
THE Thessaloniki 2.41 276 P **Pn** 04 00 31.4 +0.3
TUZL Tuzla-Istanbul 2.43 80 PN **Pn** 04 00 30.9 -0.5
DEMI Demirci 2.44 124 *i* P **Pn** 04 00 32.2 +0.5
DEMI IAML 04 01 03.0
comp=N,1µm,0.3s
DEMI IAML 04 01 12.0
comp=E,2µm,0.7s
DGB zmir 2.45 166 *i* P **Pn** 04 00 31.2 -0.5
DGB IAML 04 01 11.0
comp=N,1µm,0.4s
DGB IAML 04 01 13.0
comp=E,933nm,0.9s
YLV Yalova 2.49 86 PN **Pn** 04 00 32.2 -0.1
XOR Xorichti 2.49 246 P **Pn** 04 00 30.6 -1.7
NEO Neokhori 2.50 244 P **Pn** 04 00 30.6 -1.7
ELND Elena 2.50 356 ⇑P **Pn** 04 00 33.4 +1.0
ELND ⇑S **Sb** 04 01 05.3 -2.1
ELND Elena 2.50 356 **Pn** 04 00 33.4 +1.0
ELND **Sb** 04 01 05.2 -2.1
KNT Kendrikon 2.55 288 P **Pn** 04 00 33.2 +0.1
KNT AML AML 04 01 18.5
comp=E,1702µm,0.6s
KNT AML AML 04 01 22.5
comp=N,1509µm,0.5s
KNT Kendrikon 2.55 288 PN **Pn** 04 00 33.0 -0.1
PGB Panagyurishte 2.57 326 P **Pn** 04 00 33.4 0.0
SMAA Simav-Kutahya 2.58 120 PN **Pn** 04 00 34.3 +0.8
SIMA Simav-Kutahya 2.59 121 PN **Pn** 04 00 33.6 -0.1
MRKA Markates 2.61 229 P **Pn** 04 00 32.4 -1.5
KKB Krupnik 2.70 303 *i* P **Pn** 04 00 35.6 +0.4
MANT Manisa 2.71 135 *i* P **Pn** 04 00 35.8 +0.3
MANT IAML 04 01 10.0
comp=N,718nm,0.3s
MANT Manisa 2.71 135 **Pn** 04 00 35.2 -0.3
MANT Sn **Sn** 04 01 08.0 0.0
KARY Karystos 2.73 209 P **Pn** 04 00 34.3 -1.3
SMG Samos 2.78 168 P **Pn** 04 00 35.9 -0.3
LIT Litokhoron 2.79 264 P **Pn** 04 00 35.5 -1.0
LIT Litokhoron 2.79 264 P **Pn** 04 00 35.7 -0.8
LIT Litokhoron 2.79 264 **Pn** 04 00 35.7 -0.8
VAY Valandovo 2.83 289 *i* Pn **Pn** 04 00 37.7 +0.8
VAY Valandovo 2.83 289 *i* Pn **Pn** 04 00 37.7 +0.8
SZH Strazhica 2.83 357 P **Pn** 04 00 37.0 0.0
GCAM G?zlcaml? 2.87 162 PN **Pn** 04 00 37.0 -0.4
GCAM G?zlcaml? 2.87 162 *i* P **Pn** 04 00 37.0 -0.4
GCAM IAML 04 01 29.0
comp=E,890nm,0.6s
GCAM IAML 04 01 34.0
comp=N,1µm,0.7s
PTL Penteli 2.96 217 P **Pn** 04 00 37.4 -1.3
TNSA Tinos 2.99 195 P **Pn** 04 00 37.9 -1.2
LKR Lokris 3.00 235 P **Pn** 04 00 38.1 -1.1
ATHU Athens Univers 3.06 217 P **Pn** 04 00 38.7 -1.4
VTS Vitosha 3.07 316 *e*Pn **Pn** 04 00 41.3 +0.9
VTS *e*Sn **Sn** 04 01 17.5 +0.6
VTS Vitosha 3.07 316 ⇑P **Pn** 04 00 41.1 +0.7
VTS Vitosha 3.07 316 P **Pn** 04 00 40.6 +0.2
VTS Vitosha 3.07 316 **Pn** 04 00 41.2 +0.8
VTS Sn **Sn** 04 01 17.8 +0.9
AYDN Tasoluk 3.09 153 *i* P **Pn** 04 00 40.1 -0.5
VIL2 Platees 3.13 226 P **Pn** 04 00 40.1 -1.0
RAZG Razgrad 3.14 5 ⇑P **Pn** 04 00 41.6 +0.4
RAZG ⇑S **Sn** 04 01 21.7 +3.2
RAZG Razgrad 3.14 5 **Pn** 04 00 41.6 +0.4
RAZG **Sn** 04 01 21.7 +3.2
AXAR Agios Charalam 3.15 239 P **Pn** 04 00 40.5 -0.8
VLV Voula,Athens 3.15 216 P **Pn** 04 00 40.1 -1.2
PLVB Pleven 3.15 340 ⇑P **Pn** 04 00 41.8 +0.5
PLVB Pleven 3.15 340 **Pn** 04 00 41.8 +0.5
KAND Kocaeli-Kandir 3.17 77 *i* P **Pn** 04 00 41.2 -0.3
KAND IAML 04 01 41.0
comp=E,625nm,0.7s
KAND IAML 04 01 41.0
comp=N,472nm,0.8s
GEYV SAKARYA_Geyve 3.19 88 *i* P **Pn** 04 00 41.6 -0.3
GEYV IAML 04 01 37.0
comp=N,462nm,0.5s
AGG Agios Georgios 3.24 245 P **Pn** 04 00 41.6 -1.1
AGG Agios Georgios 3.24 245 P **Pn** 04 00 41.5 -1.1
AGG Agios Georgios 3.24 245 P **Pn** 04 00 41.8 -0.8
AGG Agios Georgios 3.24 245 Pn **Pn** 04 00 41.8 -0.8
THL Klokotos Trika 3.27 256 P **Pn** 04 00 42.0 -0.9
ZIMR 3.27 350 ⇓P **Pn** 04 00 43.6 +0.7
ZIMR ⇑S **Sn** 04 01 24.2 +2.7
ZIMR 3.27 350 **Pn** 04 00 43.6 +0.7
ZIMR **Sn** 04 01 24.2 +2.7
KZN Kozani 3.32 269 P **Pn** 04 00 44.0 +0.3
KHAL Karahalli 3.33 127 *i* P **Pn** 04 00 44.8 +0.9
KHAL *i* S **Sn** 04 01 22.0 -1.2
KHAL IAML 04 01 25.0
comp=N,420nm,0.3s
KHAL IAML 04 01 27.0
comp=E,596nm,0.4s
BORA Eskisehir 3.37 98 *i* P **Pn** 04 00 44.6 +0.2
MAKR Makrakomi, Fth 3.38 246 P **Pn** 04 00 44.0 -0.6
APE Apeiranthos 3.39 188 P **Pn** 04 00 43.3 -1.4
APE Apeiranthos 3.39 188 ⇓P **Pn** 04 00 43.3 -1.4
APE Apeiranthos 3.39 188 *d* P **Pn** 04 00 43.2 -1.5
APE Apeiranthos 3.39 188 **Pn** 04 00 43.3 -1.4
MPEP Malo Peshtene 3.42 329 *i* P **Pn** 04 00 45.6 +0.6
BOSS Bosilegrad 3.42 308 *e*Pn **Pn** 04 00 45.9 +0.8
BOSS *e*Sn **Sn** 04 01 28.2 +2.9
LOUT Loutraki 3.45 226 P **Pn** 04 00 44.5 -1.1
SRCK Saricakaya, Es 3.47 95 *i* P **Pn** 04 00 46.2 +0.4
SERI Serifos 3.51 202 P **Pn** 04 00 44.8 -1.5
BDRM Kayabasi 3.52 162 *i* P **Pn** 04 00 46.2 -0.2
BDRM *i* P **Pn** 04 00 46.4 0.0
PSN Preselentsi 3.59 25 P **Pn** 04 00 45.9 -1.5
FNA Florina 3.62 277 P **Pn** 04 00 48.2 +0.3
FNA Florina 3.62 277 P **Pn** 04 00 47.8 -0.1
FNA Florina 3.62 277 **Pn** 04 00 47.8 -0.1
AFYO Afyonkarahisar 3.63 116 *i* P **Pn** 04 00 49.1 +1.2
SAHE Sakarya_HENDEK 3.63 82 *i* P **Pn** 04 00 47.5 -0.4
EVR Evrytania 3.65 247 P **Pn** 04 00 47.9 -0.5
KPRO Kipourio 3.67 264 P **Pn** 04 00 48.8 +0.2
TAVA DENIZLI_Tavas 3.68 143 *i* P **Pn** 04 00 47.1 -1.6
TAVA IAML 04 01 34.0
comp=N,337nm,0.5s
DID Didima 3.69 218 P **Pn** 04 00 47.6 -1.2
ANX Ano Chora 3.73 242 P **Pn** 04 00 48.7 -0.7
SERG Sergoula 3.74 239 P **Pn** 04 00 48.7 -0.8
TRIZ Trizonia 3.75 238 P **Pn** 04 00 48.9 -0.7
COPA Copaceanca 3.76 350 ⇑P **Pn** 04 00 49.9 +0.2
COPA Copaceanca 3.76 350 **Pn** 04 00 49.9 +0.2
IOSP Ios island 3.76 190 P **Pn** 04 00 48.4 -1.4
VLAD Vladila 3.78 341 ⇓P **Pn** 04 00 49.9 -0.1
VLAD Vladila 3.78 341 **Pn** 04 00 49.9 -0.1
SGRR Singureni 3.79 358 ⇑P **Pn** 04 00 50.7 +0.6
SGRR Singureni 3.79 358 **Pn** 04 00 50.7 +0.6
KZIL AFYON_Kizioren 3.80 124 *i* P **Pn** 04 00 48.9 -1.5
KZIL *i* S **Sn** 04 01 33.6 -1.3
MEV Metsovon 3.80 262 P **Pn** 04 00 51.2 +0.8
KRND KRANIDI 3.83 218 P **Pn** 04 00 49.3 -1.3
EFP Efpalio 3.83 240 P **Pn** 04 00 50.1 -0.6
MANR Mangalia 3.85 28 ⇑P **Pn** 04 00 50.5 -0.4
MANR Mangalia 3.85 28 **Pn** 04 00 50.5 -0.4
SKO Skopje 3.85 295 *e*Pn **Pn** 04 00 54.1 +3.2
SKO Skopje 3.85 295 *i* Pn **Pg** 04 01 03.4 -2.7
SKO Skopje 3.85 295 *i* Pn **Pg** 04 01 03.9 -2.2
SKO Skopje 3.85 295 *i* Pn **Pg** 04 01 03.4 -2.7
SKO Skopje 3.85 295 *i* Pn **Pg** 04 01 03.9 -2.2
ZAPS Zavoj 3.85 319 *e*Pn **Pn** 04 00 52.7 +1.7
ZAPS *e*Sn **Sn** 04 01 36.4 +0.5
RASA Rasa 3.85 11 ⇑P **Pn** 04 00 52.2 +1.2
RASA Rasa 3.85 11 **Pn** 04 00 52.2 +1.2
DAT Datca 3.87 162 *i* P **Pn** 04 00 50.9 -0.5
MDUB Mudurnu 3.88 88 **Pn** 04 00 52.0 +0.6
ICOR Ion Corvin 3.88 18 ⇑P **Pn** 04 00 51.3 -0.1
ICOR Ion Corvin 3.88 18 **Pn** 04 00 51.3 -0.1
LAKA Lakka 3.89 237 P **Pn** 04 00 50.1 -1.4
KLV Kalavryta, Ach 3.90 233 P **Pn** 04 00 50.6 -1.0
CIFT Cifteler, Eski 3.95 104 *i* P **Pn** 04 00 53.2 +0.7
CIFT IAML 04 01 42.0
comp=E,962nm,0.6s
CIFT IAML 04 01 42.0
comp=N,1µm,0.5s
MHLO Agia Marina, M 3.97 200 P **Pn** 04 00 51.5 -1.2
BARS Barje 4.01 308 *e*Pn **Pn** 04 00 53.9 +0.8
BARS Barje 4.01 308 *e*Pn **Pb** 04 01 01.9 -0.7
BARS *e*Sn **Sn** 04 01 42.4 +2.7
BARS *e*Sn **Sg** 04 01 57.2 -3.8
TURN Turunc 4.05 151 *i* P **Pn** 04 00 53.0 -0.7
LEHL Lehliu 4.07 7 ⇓P **Pn** 04 00 56.1 +2.1
LEHL Lehliu 4.07 7 **Pn** 04 00 56.0 +2.1
ANAF Anafi Island 4.08 184 P **Pn** 04 00 53.2 -0.9
ANAF Anafi Island 4.08 184 P **Pn** 04 00 53.2 -0.9
YIGI Dzce 4.09 81 *i* P **Pn** 04 00 54.0 -0.2
SANT Santorini 4.09 187 ⇓P **Pn** 04 00 53.0 -1.3
SANT Santorini 4.09 187 **Pn** 04 00 53.2 -1.1
OHR Ohrid 4.09 281 *i* Pn **Pb** 04 01 00.7 -3.4
OHR Ohrid 4.09 281 *i* Pn **Pb** 04 01 00.7 -3.4
BOLV Bolvadin 4.11 113 *i* P **Pn** 04 00 55.8 +1.1
BRDR BURDUR-Merkez 4.11 130 *i* P **Pn** 04 00 55.3 +0.6
MFTR Murfatlar 4.11 24 ⇓P **Pn** 04 00 53.9 -0.6
MFTR Murfatlar 4.11 24 **Pn** 04 00 53.9 -0.6
DALY Dalyan (Mula) 4.12 150 *i* P **Pn** 04 00 55.0 +0.3
TRIP Tripoli 4.17 227 P **Pn** 04 00 55.0 -0.4
HUMR Humele 4.17 349 ⇓P **Pn** 04 00 55.9 +0.5
HUMR Humele 4.17 349 **Pn** 04 00 55.9 +0.5
DRO Drossia 4.23 235 P **Pn** 04 00 56.2 0.0
VLX Vlachokerasia 4.23 225 P **Pn** 04 00 55.8 -0.4
PDO Prodromos 4.23 246 P **Pn** 04 00 56.9 +0.7
SULR 4.24 1 ⇑P **Pn** 04 00 57.3 +1.0
SULR 4.24 1 **Pn** 04 00 57.3 +1.0
AUSIV SIVRIHISAR 4.29 102 *i* P **Pn** 04 00 57.7 +0.6
ISP Isparta 4.31 126 P **Pn** 04 00 57.1 -0.2
ISP Isparta 4.31 126 **Pn** 04 00 57.1 -0.2
TIRR Tirgusor 4.36 22 ⇓P **Pn** 04 00 57.4 -0.6
TIRR Tirgusor 4.36 22 P **Pn** 04 00 57.6 -0.4
TIRR Tirgusor 4.36 22 **Pn** 04 00 57.4 -0.6
TIRR Tirgusor 4.36 22 Pn **Pn** 04 00 57.6 -0.4
BAGO Egridir - ISPA 4.37 122 *i* P **Pn** 04 00 58.9 +0.6
KIBS BOLU 4.38 88 *i* P **Pn** 04 00 58.7 +0.3
ZAGS Zajecar 4.44 321 *e*Pn **Pn** 04 00 58.9 -0.2
ZAGS *e*Sn **Sn** 04 01 49.0 -1.4
FETY Fethiye 4.45 148 *i* P **Pn** 04 01 00.4 +1.1
HARR Harsova 4.46 17 ⇓P **Pn** 04 00 59.3 0.0
HARR Harsova 4.46 17 P **Pn** 04 00 59.3 0.0
HARR Harsova 4.46 17 **Pn** 04 00 59.3 0.0
GOLR 4.48 349 ⇓P **Pn** 04 01 00.3 +0.7
GOLR 4.48 349 **Pn** 04 01 00.3 +0.7
PUNG Punghina 4.51 329 ⇑P **Pn** 04 01 00.2 +0.2
PUNG Punghina 4.51 329 **Pn** 04 01 00.2 +0.2
BCAM Yenicaga 4.54 83 *i* P **Pn** 04 01 00.8 +0.2
BOVS Bovan 4.58 316 *e*Pn **Pn** 04 01 01.7 +0.7
BOVS *e*Sn **Sn** 04 01 53.4 -0.5
SECR 4.60 360 ⇑P **Pn** 04 01 02.4 +1.2
SECR 4.60 360 **Pn** 04 01 02.4 +1.2
ITM Ithomi 4.61 227 Pn **Pn** 04 01 01.3 -0.2
SELS Selova 4.66 308 *e*Pn **Pn** 04 01 02.3 +0.2
SELS *e*Sn **Sn** 04 01 58.7 +2.9
ISR Istrita 4.69 4 ⇑P **Pn** 04 01 02.9 +0.3
ISR Istrita 4.69 4 P **Pn** 04 01 02.9 +0.3
ISR Istrita 4.69 4 **Pn** 04 01 02.9 +0.3
ELL Elmali 4.73 140 P **Pn** 04 01 03.0 -0.2
ELL Elmali 4.73 140 **Pn** 04 01 03.0 -0.2
SRE Strehaia 4.74 334 ⇑P **Pn** 04 01 03.6 +0.4
SRE Strehaia 4.74 334 P **Pn** 04 01 03.6 +0.4
SRE Strehaia 4.74 334 **Pn** 04 01 03.6 +0.4
TOPG Topolog 4.74 20 ⇑P **Pn** 04 01 03.1 -0.1
KORT Korkueli 4.77 135 *i* P **Pn** 04 01 04.9 +1.3
JURR Jurilovca 4.78 24 ⇓P **Pn** 04 01 02.1 -1.7
BTIN Bartın 4.79 74 *i* P **Pn** 04 01 02.6 -1.3
TIR Tirane 4.83 283 P **Pn** 04 01 04.1 -0.3
TIR Tirane 4.83 283 **Pn** 04 01 04.0 -0.3
MTUR Matau 4.85 351 ⇑P **Pn** 04 01 05.4 +0.6
MTUR Matau 4.85 351 P **Pn** 04 01 05.4 +0.6
MTUR Matau 4.85 351 **Pn** 04 01 05.4 +0.6
CMDR Camlidere-ANKA 4.85 87 *i* P **Pn** 04 01 04.9 0.0
CMDR *i* S **Sn** 04 02 00.3 -0.4
DOGA KONYA_Doganhis 4.90 117 *i* P **Pn** 04 01 07.1 +1.6
CFR Carcaliu 4.97 17 ⇓P **Pn** 04 01 06.3 0.0
CFR Carcaliu 4.97 17 P **Pn** 04 01 06.3 0.0
CFR Carcaliu 4.97 17 **Pn** 04 01 06.3 0.0
GRER 4.98 7 ⇓P **Pn** 04 01 09.3 +2.8
KBUK KARABUK-Merkez 5.00 79 *i* P **Pn** 04 01 06.1 -0.7
AKAS Kas 5.01 146 *i* P **Pn** 04 01 08.0 +0.9
KDHN Kadinhani 5.02 110 *i* P **Pn** 04 01 07.7 +0.6
ARR Arges 5.05 348 ⇑P **Pn** 04 01 07.7 +0.3
ARR Arges 5.05 348 **Pn** 04 01 07.8 +0.3
MLR Muntele Rosu 5.05 359 Pn **Pn** 04 01 09.2 +1.6
comp=N,8.9nm,0.3s,baz=180,slow=8.1,SNR=139
MLR Lg Lg 04 02 32.9
comp=N,3.0nm,0.3s,baz=182,slow=16,SNR=1.2
MLR Muntele Rosu 5.05 359 ⇓P **Pn** 04 01 09.3 +1.7
MLR Muntele Rosu 5.05 359 P **Pn** 04 01 08.7 +1.1
MLR Muntele Rosu 5.05 359 **Pn** 04 01 08.7 +1.1
VOIR 5.06 351 ⇓P **Pn** 04 01 08.0 +0.4
VOIR 5.06 351 P **Pn** 04 01 08.0 +0.4
VOIR 5.06 351 **Pn** 04 01 08.0 +0.4
PVY Plav 5.10 297 ⇓*i*Pn **Pn** 04 01 08.6 +0.3
PVY *i* Sn **Sn** 04 02 05.5 -1.4
BISRR Bisoca 5.13 5 ⇑P **Pn** 04 01 09.9 +1.3
BISRR Bisoca 5.13 5 **Pn** 04 01 09.9 +1.3
BR231 Keskin MP Arra 5.14 94 **Pn** 04 01 09.1 +0.3
ANTO Ankara 5.15 94 ⇓P **Pn** 04 01 09.3 +0.4
ANTO Ankara 5.15 94 P **Pn** 04 01 09.3 +0.4
ANTO Ankara 5.15 94 **Pn** 04 01 09.3 +0.4
KUBS Kucevo 5.16 322 *e*Pn **Pn** 04 01 08.1 -0.8
HERR Herculane 5.21 330 ⇓P **Pn** 04 01 09.3 -0.4
HERR Herculane 5.21 330 **Pn** 04 01 09.2 -0.4

IDI	**Anoyia**	**5.23**	**191**	Pn	**Pn**	**04 01 09.1**	**-0.8**
	comp=N,2.9nm,0.3s,baz=339,slow=9.7,SNR=21						
IDI				LR	LR	04 03 26.1	
	comp=N,110nm,20.0s,baz=45,slow=42						
IDI	**Anoyia**	**5.23**	**191**	⇑P	**Pn**	**04 01 08.6**	**-1.3**
IVA	**Berane**	**5.26**	**300**	⇑*i*Pn	**Pn**	**04 01 10.9**	**+0.5**
IVA				*i* Sn	**Sn**	**04 02 09.3**	**-1.4**
AKUM	**Antalya-Kumluc**	**5.28**	**140**	*i* P	**Pn**	**04 01 12.1**	**+1.5**
AKUM				*i* S	**Sn**	**04 02 14.0**	**+2.9**
GRUS	**Gruza**	**5.29**	**312**	*e*Pn	**Pn**	**04 01 10.9**	**+0.1**
GRUS				*e*Sn	**Sn**	**04 02 10.8**	**-0.6**
LOT	**Lotru**	**5.30**	**342**	⇑P	**Pn**	**04 01 10.9**	**0.0**
LOT	**Lotru**	**5.30**	**342**		**Pn**	**04 01 10.9**	**0.0**
ODBI	**Odobesti**	**5.37**	**7**	⇑P	**Pn**	**04 01 13.6**	**+1.8**
ODBI	**Odobesti**	**5.37**	**7**		**Pn**	**04 01 13.7**	**+1.8**
SJES	**Sjenica**	**5.39**	**304**	*e*Pn	**Pn**	**04 01 12.9**	**+0.7**
KKUL	**Konya-Kulu**	**5.39**	**101**	*i* P	**Pn**	**04 01 13.2**	**+1.0**
ULC	**Ulcinj**	**5.40**	**289**	⇑*i*Pn	**Pn**	**04 01 12.6**	**+0.3**
ULC				*i* Sn	**Sn**	**04 02 12.8**	**-1.4**
MDVR	**Moldovita**	**5.42**	**325**	⇓P	**Pn**	**04 01 12.9**	**+0.3**
MDVR	**Moldovita**	**5.42**	**325**		**Pn**	**04 01 12.9**	**+0.3**
PLOR	**Plostina**	**5.43**	**4**	⇑P	**Pn**	**04 01 14.2**	**+1.5**
PLOR	**Plostina**	**5.43**	**4**	P	**Pn**	**04 01 14.2**	**+1.5**
PLOR	**Plostina**	**5.43**	**4**		**Pn**	**04 01 14.2**	**+1.5**
IVAS	**Ivanjica**	**5.44**	**307**	*e*Pn	**Pn**	**04 01 12.5**	**-0.3**
VRI	**Vrincioaia**	**5.45**	**5**	⇑P	**Pn**	**04 01 14.4**	**+1.5**
VRI	**Vrincioaia**	**5.45**	**5**	P	**Pn**	**04 01 14.4**	**+1.5**
VRI	**Vrincioaia**	**5.45**	**5**		**Pn**	**04 01 14.4**	**+1.5**
BBAL	**Bala**	**5.46**	**97**	*i* P	**Pn**	**04 01 13.5**	**+0.4**
KOME	**Kolasin**	**5.50**	**298**	⇓*i*Pn	**Pn**	**04 01 14.0**	**+0.3**
KOME				*i* Sn	**Sn**	**04 02 15.2**	**-1.5**
DRME	**Dracevica, Mon**	**5.50**	**291**	⇓*i*Pn	**Pn**	**04 01 14.0**	**+0.3**
DRME				*i* Sn	**Sn**	**04 02 15.3**	**-1.4**
PELI	**Kastamonı-Ara**	**5.52**	**79**	*i* P	**Pn**	**04 01 14.2**	**+0.1**
GZR	**Gura Zlata**	**5.53**	**335**	⇓P	**Pn**	**04 01 13.9**	**-0.2**
GZR	**Gura Zlata**	**5.53**	**335**	P	**Pn**	**04 01 13.9**	**-0.2**
GZR	**Gura Zlata**	**5.53**	**335**		**Pn**	**04 01 13.9**	**-0.2**
PDG	**Podgorica**	**5.53**	**293**	*e*Pn	**Pn**	**04 01 15.8**	**+1.8**
PDG	**Podgorica**	**5.53**	**293**	⇓P	**Pn**	**04 01 16.4**	**+2.5**
PDG	**Podgorica**	**5.53**	**293**	Pn	**Pn**	**04 01 14.3**	**+0.3**
TTG	**Podgorica**	**5.53**	**293**	⇓*i*Pn	**Pn**	**04 01 14.4**	**+0.4**
TTG				*i* Sn	**Sn**	**04 02 15.7**	**-1.5**
KMER	**Konya-Meram**	**5.54**	**117**	*i* P	**Pn**	**04 01 16.2**	**+1.8**
KMER				*i* S	**Sn**	**04 02 15.9**	**-1.9**
DOPR	**Dopca**	**5.55**	**355**	⇓P	**Pn**	**04 01 15.1**	**+0.7**
DOPR	**Dopca**	**5.55**	**355**		**Pn**	**04 01 15.1**	**+0.7**
KEPZ	**Antalya-Kepez**	**5.56**	**128**	*i* P	**Pn**	**04 01 15.6**	**+1.1**
KEPZ				*i* S	**Sn**	**04 02 17.7**	**-0.3**
ELDT	**Eldivan**	**5.58**	**87**	*i* P	**Pn**	**04 01 13.8**	**-1.0**
VARL	**Varlezi**	**5.61**	**12**	⇑P	**Pn**	**04 01 16.4**	**+1.4**
TRUS	**Trudelj**	**5.68**	**314**	*e*Pn	**Pn**	**04 01 15.8**	**-0.3**
BUM	**Brajici-Budva**	**5.75**	**291**	⇓*i*Pn	**Pn**	**04 01 17.3**	**+0.3**
BUM				*i* Sn	**Sn**	**04 02 21.0**	**-1.7**
PLE	**Pljevlja**	**5.79**	**302**	⇓*i*Pn	**Pn**	**04 01 17.8**	**0.0**
PLE				*i* Sn	**Sn**	**04 02 22.0**	**-1.9**
CEME	**Cevo**	**5.80**	**294**	⇑*i*Pn	**Pn**	**04 01 18.2**	**+0.4**
CEME				*i* Sn	**Sn**	**04 02 22.3**	**-1.8**
BRTR	**Keskin Array B**	**5.81**	**95**	Pn	**Pn**	**04 01 18.8**	**+0.8**
	comp=N,7.4nm,0.3s,baz=264,slow=12,SNR=204						
BRTR				Sn	**Sn**	**04 02 22.3**	**-2.2**
	comp=N,3.4nm,0.3s,baz=268,slow=20,SNR=1.9						
BRTR				Lg	Lg	04 02 58.0	
	baz=269,slow=29,SNR=2.5						
BRTR	**Keskin Array B**	**5.81**	**95**	*i* P	**Pn**	**04 01 18.2**	**+0.1**
BRTR				pmax	pmax		
	comp=Z,13nm,0.3s						
DIVS	**Divibare**	**5.83**	**311**	*e*Pn	**Pn**	**04 01 18.2**	**-0.1**
DIVS				*e*Sn	**Sn**	**04 02 24.8**	**-0.1**
MDB	**Medias**	**5.84**	**348**	⇓P	**Pn**	**04 01 20.2**	**+1.9**
MDB	**Medias**	**5.84**	**348**	P	**Pn**	**04 01 20.2**	**+1.9**
MDB	**Medias**	**5.84**	**348**		**Pn**	**04 01 20.2**	**+1.9**
NKY	**Niksic**	**5.84**	**296**	⇑*i*Pn	**Pn**	**04 01 18.9**	**+0.5**
NKY				*i* Sn	**Sn**	**04 02 23.2**	**-1.9**
NKME	**Niksic**	**5.85**	**296**	⇓*i*Pn	**Pn**	**04 01 19.2**	**+0.7**
NKME				*i* Sn	**Sn**	**04 02 23.6**	**-1.7**
DEV	**Deva**	**5.93**	**338**	⇓P	**Pn**	**04 01 20.2**	**+0.7**
DEV	**Deva**	**5.93**	**338**	P	**Pn**	**04 01 20.2**	**+0.7**
DEV	**Deva**	**5.93**	**338**		**Pn**	**04 01 20.2**	**+0.7**
BIR	**Birlad**	**5.93**	**10**	⇑P	**Pn**	**04 01 19.7**	**+0.2**
BIR	**Birlad**	**5.93**	**10**	P	**Pn**	**04 01 19.7**	**+0.2**
BIR	**Birlad**	**5.93**	**10**		**Pn**	**04 01 19.7**	**+0.2**
DELI	**KIRIKKALE**	**5.99**	**92**	*i* P	**Pn**	**04 01 20.1**	**-0.4**
DELI				*i* S	**Sn**	**04 02 26.0**	**-2.8**
BBLS	**Lazići**	**6.05**	**307**	*e*Pn	**Pn**	**04 01 21.9**	**+0.6**
UPM	**Unac-Piva**	**6.05**	**300**	⇑*i*Pn	**Pn**	**04 01 21.8**	**+0.4**
UPM				*i* Sn	**Sn**	**04 02 28.3**	**-2.2**
HCY	**Herceg Novi**	**6.07**	**292**	⇑*i*Pn	**Pn**	**04 01 21.6**	**+0.1**
HCY				*i* Sn	**Sn**	**04 02 28.7**	**-1.9**
TESR	**Tescani**	**6.09**	**3**	⇓P	**Pn**	**04 01 22.5**	**+0.8**
TESR	**Tescani**	**6.09**	**3**		**Pn**	**04 01 22.5**	**+0.8**
BZS	**Buzias**	**6.14**	**329**	*e*Pn	**Pn**	**04 01 21.9**	**-0.4**
BZS	**Buzias**	**6.14**	**329**	⇑P	**Pn**	**04 01 22.0**	**-0.4**
BZS	**Buzias**	**6.14**	**329**	P	**Pn**	**04 01 22.0**	**-0.4**
BZS	**Buzias**	**6.14**	**329**		**Pn**	**04 01 22.0**	**-0.4**
KIRS	**Kırehir-Merke**	**6.15**	**100**	*i* P	**Pn**	**04 01 23.1**	**+0.5**
KIRS				*i* S	**Sn**	**04 02 29.8**	**-2.8**
AKSY	**AKSARAY - Alti**	**6.17**	**104**	*i* Pn	**Pn**	**04 01 23.9**	**+1.0**
AKSY				*i* S	**Sn**	**04 02 29.0**	**-4.2**
BRY	**Bratogost**	**6.19**	**296**	⇓*i*Pn	**Pn**	**04 01 23.5**	**+0.3**
BRY				*i* Sn	**Sn**	**04 02 31.4**	**-2.2**
TEKS	**Tekeris**	**6.37**	**312**	*e*Pn	**Pn**	**04 01 25.9**	**+0.3**
DBRK	**Dubrovnik**	**6.38**	**293**	*i* P	**Pn**	**04 01 26.6**	**+0.9**
CDAG	**Cicekdag**	**6.39**	**95**	*i* P	**Pn**	**04 01 26.2**	**+0.2**
CDAG				*i* S	**Sn**	**04 02 33.4**	**-5.2**
GAZI	**Gazipasa**	**6.43**	**129**	*i* P	**Pn**	**04 01 27.0**	**+0.6**
GAZI				*i* S	**Sn**	**04 02 38.2**	**-1.2**
BIZ	**Bicaz**	**6.50**	**360**	⇑P	**Pn**	**04 01 28.3**	**+0.9**
BIZ	**Bicaz**	**6.50**	**360**		**Pn**	**04 01 28.3**	**+0.9**
CJR	**Cluj-Napoca**	**6.54**	**345**	⇑P	**Pn**	**04 01 28.8**	**+0.9**
CJR	**Cluj-Napoca**	**6.54**	**345**	P	**Pn**	**04 01 28.8**	**+0.9**
CJR	**Cluj-Napoca**	**6.54**	**345**		**Pn**	**04 01 28.8**	**+0.9**
ERMK	**Ermenek**	**6.54**	**123**	*i* P	**Pn**	**04 01 31.0**	**+3.0**
CTAK	**Corum_Osmancik**	**6.61**	**85**	*i* P	**Pn**	**04 01 28.7**	**-0.4**
CTAK				*i* S	**Sn**	**04 02 43.8**	**-0.4**
SIRR	**Siria**	**6.67**	**332**	⇓P	**Pn**	**04 01 29.5**	**-0.2**
SIRR	**Siria**	**6.67**	**332**		**Pn**	**04 01 29.5**	**-0.2**
STON	**Ston**	**6.76**	**294**	*i* P	Pn	04 01 37.2	+6.3
ARCR	**ARCALIA**	**6.77**	**350**	⇑P	**Pn**	**04 01 30.9**	**-0.1**
ARCR	**ARCALIA**	**6.77**	**350**		**Pn**	**04 01 30.9**	**-0.1**
MILM	**Milestii Mici**	**6.77**	**16**	⇑P	**Pn**	**04 01 30.9**	**-0.1**
MILM	**Milestii Mici**	**6.77**	**16**		**Pn**	**04 01 30.9**	**-0.1**
DRGR		**6.82**	**340**	⇑P	**Pn**	**04 01 31.6**	**-0.2**
DRGR		**6.82**	**340**	P	**Pn**	**04 01 31.6**	**-0.2**
DRGR		**6.82**	**340**		**Pn**	**04 01 31.6**	**-0.2**
KIS	**Kishinev**	**6.85**	**16**	*e*P	**Pn**	**04 01 33.0**	**+0.9**
KIS				*e*S	**Sn**	**04 02 52.0**	**+2.4**
KIS				LRM	MLR	04 04 26.0	
	comp=Z,1μm,10.0s						
KIS	**Kishinev**	**6.85**	**16**	*e*P	**Pn**	**04 01 33.0**	**+0.9**
KIS				*e*S	**Sn**	**04 02 52.0**	**+2.4**
KIS				MLR	MLR		
	comp=Z,1μm,10.0s						
KIS				MLR	MLR		
	comp=N,700nm,10.0s						
SEV	**Sevastopol'**	**6.93**	**51**	⇓*i*P	**Pn**	**04 01 33.0**	**-0.2**
SEV				*e*S	**Sn**	**04 02 46.6**	**-5.0**
AVNS	**Nevsehir-Avano**	**6.93**	**101**	*i* P	**Pn**	**04 01 34.0**	**+0.6**
AVNS				*i* S	**Sn**	**04 02 49.5**	**-2.6**
KERG	**Konya-Eregli**	**6.93**	**113**	*i* P	**Pn**	**04 01 33.9**	**+0.4**
DIKM	**Dikmen**	**7.02**	**77**	⇑P	**Pn**	**04 01 35.0**	**+0.5**
DIKM	**Dikmen**	**7.02**	**77**		**Pn**	**04 01 35.0**	**+0.5**
SINO	**SINOP_Merkez**	**7.03**	**74**	*i* P	**Pn**	**04 01 35.0**	**+0.4**
SIRC	**Yozgat**	**7.03**	**96**	*i* P	**Pn**	**04 01 35.7**	**+0.9**
SIRC				*i* S	**Sn**	**04 02 51.5**	**-3.0**
YAL	**Yalta**	**7.19**	**53**	⇓*e*P	**Pn**	**04 01 34.8**	**-2.0**
YAL				*e*S	**Sn**	**04 02 51.6**	**-6.5**
BURAR	**Bucovina Array**	**7.21**	**355**	⇓P	**Pn**	**04 01 38.8**	**+1.6**
BURAR	**Bucovina Array**	**7.21**	**355**		**Pn**	**04 01 38.8**	**+1.6**
GULN	**MERSIN_Gulnar**	**7.22**	**124**	*i* P	**Pn**	**04 01 39.8**	**+2.6**
BUR08	**Bucovina Ar. S**	**7.24**	**355**	Pn	**Pn**	**04 01 38.0**	**+0.5**
TIP	**Timpagrande**	**7.31**	**263**	⇓P	**Pn**	**04 01 38.3**	**-0.3**
TIP	**Timpagrande**	**7.31**	**263**		**Pn**	**04 01 37.5**	**-1.1**
RICI	**Ricice**	**7.36**	**297**	P	**Pn**	**04 01 41.2**	**+2.0**
MAKA	**Makarska**	**7.36**	**296**	*i* P	**Pn**	**04 01 41.1**	**+1.9**
SIM	**Simferopol'**	**7.42**	**50**	*d*P	**Pn**	**04 01 39.4**	**-0.6**
SIM				*e*S	**Sn**	**04 02 58.4**	**-5.4**
SIM				*i* S	**Sn**	**04 03 00.3**	**-3.5**
SIM				pmax	pmax		
	comp=Z,285nm,0.3s						
SIM				smax	smax		
	comp=N,50nm,0.9s						
SIM				smax	smax		
	comp=E,60nm,0.9s						
KIZK	**Mersin**	**7.43**	**120**	*i* P	**Pn**	**04 01 43.3**	**+3.2**
ALU	**Alushta**	**7.44**	**53**	*i* P	**Pn**	**04 01 38.3**	**-2.0**
ALU				*i* S	**Sn**	**04 02 57.6**	**-6.7**
BMR	**Baia Mare**	**7.48**	**346**	⇓P	**Pn**	**04 01 40.3**	**-0.5**
BMR	**Baia Mare**	**7.48**	**346**	P	**Pn**	**04 01 40.3**	**-0.5**
BMR	**Baia Mare**	**7.48**	**346**		**Pn**	**04 01 40.3**	**-0.5**
SUDU	**Sudak**	**7.92**	**53**	⇓*i*P	**Pn**	**04 01 46.1**	**-0.6**
SUDU				*e*S	**Sn**	**04 03 11.6**	**-4.3**
KIJV	**Kijevo**	**8.04**	**300**	*i* P	**Pn**	**04 01 51.1**	**+2.6**
TRPA	**Tarpa**	**8.11**	**343**	⇑P	**Pn**	**04 01 48.8**	**-0.6**
TRPA	**Tarpa**	**8.11**	**343**		**Pn**	**04 01 48.8**	**-0.6**
FEO	**Feodosiya**	**8.22**	**53**	*e*P	**Pn**	**04 01 49.4**	**-1.5**
FEO				*e*S	**Sn**	**04 03 17.6**	**-5.8**
ZIRJ	**Zirje**	**8.43**	**296**	*i* P	**Pn**	**04 01 54.3**	**+0.5**
UZH	**Uzhgorod**	**8.64**	**343**	*e*P	**Pn**	**04 01 57.5**	**+0.9**
UZH				*e*S	**Sn**	**04 03 35.5**	**+1.9**
UZH				MLR	MLR		
	comp=N,800nm,11.0s						
UZH				MLR	MLR		
	comp=E,110nm,11.0s						
UZH				MLR	MLR		
	comp=Z,70nm,11.0s						
ANN	**Anapa**	**9.41**	**59**	*e*P	Pn	04 02 01.2	-6.1
ANN				*e*S	**Sn**	**04 03 44.2**	**-8.5**
ANN				pmax	pmax		
	comp=Z,30nm,1.2s						
LVV	**L'vov**	**9.50**	**352**	*e*P	**Pn**	**04 02 09.7**	**+1.3**
LVV				*e*S	**Sn**	**04 03 58.3**	**+3.5**
LVV				MLR	MLR		
	comp=E,300nm,7.0s						
LVV				MLR	MLR		
	comp=N,500nm,9.0s						
LVV				MLR	MLR		
	comp=Z,500nm,9.0s						
VYHS	**Vyhne**	**9.59**	**330**	*e*P	**Pn**	**04 02 08.9**	**-0.8**
VYHS	**Vyhne**	**9.59**	**330**	*e*PN	**Pn**	**04 02 08.9**	**-0.8**
WDD	**Wied Dalam**	**10.22**	**247**	Pn	**Pn**	**04 02 17.4**	**-0.9**
ARSA	**Arzberg**	**10.24**	**315**	*e*Pn	**Pn**	**04 02 22.2**	**+3.6**
	comp=Z,7.0nm,1.1s						
AKASG	**Malin Array Be**	**10.49**	**11**	Pn	**Pn**	**04 02 21.1**	**-0.9**
	comp=Z,1.5nm,0.3s,baz=200,slow=11,SNR=3.2						
CONA	**Conrad Observa**	**10.50**	**319**	*i* Pn	**Pn**	**04 02 23.6**	**+1.4**
MMAI	**Mount Meron Ar**	**10.50**	**132**	Pn	**Pn**	**04 02 22.5**	**+0.2**
	comp=Z,1.7nm,0.3s,baz=309,slow=16,SNR=4.3						
MMAI				Sn	**Sn**	**04 04 17.7**	**-2.0**
	comp=Z,1.5nm,0.3s,baz=317,slow=27,SNR=2.9						
OKC	**Ostrava-Krasne**	**10.95**	**332**	AMS	AMS	04 07 20.0	
	comp=Z,400nm,10.3s						
TREC	**Trest**	**11.62**	**323**	AMS	AMS	04 07 40.0	
	comp=Z,600nm,10.1s						
DPC	**Dobruska-Polom**	**12.06**	**329**	AMS	AMS	04 08 20.0	
	comp=Z,300nm,7.9s						
GERES	**GERESS Array B**	**12.19**	**318**	Pn	**Pn**	**04 02 46.5**	**+1.2**
	comp=Z,0.0nm,0.3s,baz=113,slow=15,SNR=1.7						
OSTC	**Ostas**	**12.26**	**329**	AMS	AMS	04 08 30.0	
	comp=Z,300nm,8.9s						
UPC	**Upice**	**12.30**	**328**	AMS	AMS	04 09 00.0	
	comp=Z,200nm,7.6s						
CHVC	**Chvalec**	**12.35**	**329**	AMS	AMS	04 08 30.0	
	comp=Z,300nm,7.4s						
GOPC	**GO Pecny, Ondr**	**12.38**	**324**	AMS	AMS	04 08 10.0	
	comp=Z,500nm,10.3s						
KHC	**Kasperske Hory**	**12.43**	**319**	AMS	AMS	04 08 00.0	
	comp=Z,600nm,10.6s						
PRU	**Pruhonice**	**12.55**	**323**	AMS	AMS	04 08 10.0	
	comp=Z,600nm,9.2s						
PRA	**Prague**	**12.66**	**323**	AMS	AMS	04 08 20.0	
	comp=Z,200nm,11.2s						
KIV	**Kislovodsk**	**12.78**	**69**	*e*P	**Pn**	**04 02 52.6**	**-0.9**
KIV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KBZ	**Khabaz**	**12.89**	**70**	Pn	**Pn**	**04 02 58.9**	**+4.0**
	comp=Z,0.1nm,0.3s,baz=294,slow=18,SNR=2.0						
KBZ	**Khabaz**	**12.89**	**70**	*i* P	**Pn**	**04 02 54.0**	**-0.9**
FETA	**Feichten**	**12.92**	**306**	*e*Pn	**Pn**	**04 02 59.7**	**+4.3**
	comp=Z,7.0nm,1.2s						
PVCC	**Panska Ves**	**12.93**	**325**	AMS	AMS	04 08 40.0	
	comp=Z,500nm,10.1s						
EIL	**Elat**	**12.94**	**143**	Pn	**Pn**	**04 02 55.4**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=336,slow=14,SNR=2.6						
EIL				Sn	**Sn**	**04 05 12.7**	**-6.6**
	comp=Z,0.6nm,0.3s,baz=120,slow=20,SNR=2.4						
EIL				LR	LR	04 08 47.4	
	comp=Z,38nm,18.4s,baz=291,slow=42						
DAVOX	**Davos/Dischmat**	**13.36**	**304**	LR	LR	04 09 05.4	
	comp=Z,52nm,20.4s,baz=118,slow=42						
NKC	**Novy Kostel**	**13.70**	**320**	AMS	AMS	04 09 00.0	
	comp=Z,300nm,12.6s						
VORD	**Divnogorie**	**13.96**	**37**	*e*P	**Pn**	**04 03 07.0**	**-2.5**
VORD				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KEST	**Kesra**	**14.02**	**256**	Pn	**Pn**	**04 03 11.6**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=307,slow=17,SNR=2.0						
KEST				LR	LR	04 09 39.4	
	comp=Z,72nm,19.1s,baz=251,slow=42						
KEST	**Kesra**	**14.02**	**256**		**Pn**	**04 03 10.4**	**+0.1**
LPSR	**Galich'ya Gora**	**15.00**	**32**	*e*P	**Pn**	**04 03 20.6**	**-2.9**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VRH	**Novokhopyorsk**	**15.27**	**40**	*e*P	**Pn**	**04 03 24.2**	**-3.0**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MOS	**Moscow**	**17.10**	**23**	*e*P	P	04 04 04.5	+12
VSU	**Vasula**	**18.05**	**1**	*i* P	**Pn**	**04 04 01.5**	**-0.8**
VSU				pmax	pmax		
	comp=Z,37nm,0.8s						
FINES	**FINESS Array B**	**21.04**	**360**	P	**P**	**04 04 36.3**	**+1.1**
	comp=Z,1.6nm,0.7s,baz=227,slow=14,SNR=1.0						
HFS	**Hagfors**	**21.19**	**343**	P	**P**	**04 04 36.2**	**-0.6**
	comp=Z,3.0nm,0.7s,baz=150,slow=10,SNR=5.3						
HFS				LR	LR	04 13 55.5	
	comp=Z,71nm,19.2s,baz=171,slow=40						
KLMR	**Klimovskoe**	**22.05**	**18**	*e*P	**P**	**04 04 52.7**	**+6.6**
KLMR				pmax	pmax		
	comp=Z,17nm,1.4s						
KLMR	**Klimovskoe**	**22.05**	**18**	*e*P	**P**	**04 04 52.8**	**+6.6**
KLMR				AMP		04 05 09.3	
	comp=Z,17nm,1.4s						
NAO01	**NORSAR Array S**	**22.49**	**340**	P	**P**	**04 04 50.2**	**-0.7**
NB2	**NORSAR Subarra**	**22.57**	**341**	P	**P**	**04 04 50.9**	**-0.9**
	comp=Z,6.9nm,1.0s,baz=150,slow=11						
NOA	**NORSAR Array B**	**22.57**	**341**	P	**P**	**04 04 51.2**	**-0.6**
	comp=Z,3.4nm,0.8s,baz=146,slow=11,SNR=8.2						
NOA				LR	LR	04 15 15.9	
	comp=Z,95nm,20.3s,baz=155,slow=41						
NBO00	**NORSAR Array S**	**22.68**	**340**	P	**P**	**04 04 51.7**	**-1.2**
NBO00				IAmb	IAmb	04 04 56.1	
	comp=Z,26nm,1.1s						
ESDC	**Sonseca Array**	**22.99**	**278**	P	**P**	**04 04 57.5**	**+1.1**
	comp=Z,3.2nm,1.2s,baz=72,slow=11,SNR=9.6						
KIRV	**Kirov**	**23.43**	**31**	LR	LR	04 13 11.7	
	comp=Z,45nm,21.6s,baz=240,slow=34						
RAYN	**Ar Rayn**	**23.47**	**130**	P	**P**	**04 05 01.7**	**+0.4**
RAYN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RAYN	**Ar Rayn**	**23.47**	**130**	P	**P**	**04 05 01.7**	**+0.4**
AKTO	**Aktyubinsk**	**24.34**	**55**	P	**P**	**04 05 11.7**	**+2.3**
	comp=Z,0.5nm,0.3s,baz=255,slow=12,SNR=1.4						
AKTO				LR	LR	04 16 55.0	
	comp=Z,33nm,18.6s,baz=270,slow=42						
EKA	**Eskdalemuir Ar**	**24.41**	**317**	P	**P**	**04 05 10.2**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=119,slow=9.6,SNR=4.3						
GEYT	**Alibeck**	**24.86**	**85**	P	**P**	**04 05 15.4**	**+1.2**
	comp=Z,2.4nm,0.6s,baz=243,slow=6.5,SNR=5.7						
GEYT				LR	LR	04 15 58.7	
	comp=Z,39nm,18.4s,baz=350,slow=39						
ARU	**Arti**	**26.49**	**42**	P	**P**	**04 05 31.0**	**+2.4**
	comp=Z,2.0nm,0.2s,baz=230,slow=7.7,SNR=6.4						
ARU				LR	LR	04 16 41.3	
	comp=Z,39nm,20.9s,baz=338,slow=38						
ARU	**Arti**	**26.49**	**42**	*i* P	**P**	**04 05 31.2**	**+2.5**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARU	**Arti**	**26.49**	**42**	P	**P**	**04 05 29.4**	**+0.8**
ARU				IAmb	IAmb	04 05 46.5	
	comp=Z,8.5nm,1.0s						
ARCES	**ARCESS Array B**	**29.16**	**360**	P	**P**	**04 05 54.2**	**+1.7**
	comp=Z,2.7nm,1.0s,baz=175,slow=12,SNR=3.2						
TORD	**Torodi Ar. Bea**	**34.61**	**225**	P	**P**	**04 06 40.8**	**0.0**
	comp=Z,0.9nm,0.9s,baz=34,slow=9.1,SNR=9.7						
AAK	**Ala-Archa**	**35.89**	**70**	*i* P	**P**	**04 06 54.1**	**+2.3**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KURBB	**Kurchatov Arra**	**37.38**	**56**	P	**P**	**04 07 05.2**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=284,slow=8.9,SNR=3.1						
KURK	**Kurchatov**	**37.43**	**56**	P	**P**	**04 07 05.2**	**+0.6**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	**Kurchatov**	**37.43**	**56**	P	**P**	**04 07 05.2**	**+0.6**
MKAR	**Makanchi Array**	**40.42**	**62**	P	**P**	**04 07 30.8**	**+1.1**
	comp=Z,0.8nm,0.9s,baz=275,slow=7.2,SNR=7.2						
ZALV	**Zalesovo Beam**	**40.93**	**50**	P	**P**	**04 07 34.9**	**+1.0**
	comp=Z,0.9nm,0.4s,baz=260,slow=6.9,SNR=3.3						
ZALV				LR	LR	04 26 07.9	
	comp=Z,22nm,19.7s,baz=258,slow=38						
DBIC	**Dimbokro**	**43.56**	**228**	P	**P**	**04 07 56.0**	**+0.4**
	comp=Z,2.4nm,0.7s,baz=17,slow=14,SNR=1.4						
DBIC				LR	LR	04 27 08.8	
	comp=Z,34nm,18.2s,baz=92,slow=38						
DBIC	**Dimbokro**	**43.56**	**228**	P	**P**	**04 07 55.4**	**-0.2**
DBIC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
DBIC	**Dimbokro**	**43.56**	**228**	P	**P**	**04 07 55.4**	**-0.2**
DBIC				IAmb	IAmb	04 08 00.2	
	comp=Z,4.2nm,1.1s						
YKA	**Yellowknife Ar**	**72.67**	**342**	P	**P**	**04 11 19.6**	**+0.7**
	comp=Z,0.4nm,0.9s,baz=22,slow=6.1,SNR=3.8						
KSRS	**Korea Array**	**74.52**	**54**	P	**P**	**04 11 29.8**	**-0.4**
	comp=Z,1.2nm,0.9s,baz=308,slow=5.9,SNR=2.0						
KSRS				LR	LR	04 48 07.1	
	comp=Z,24nm,18.4s,baz=154,slow=39						
PETK	**Petropavlovsk-**	**77.88**	**27**	LR	LR	04 48 17.1	
	comp=Z,27nm,19.4s,baz=252,slow=37						
ASAJ	**Asahikawa**	**78.28**	**41**	LR	LR	04 50 25.1	
	comp=Z,35nm,18.3s,baz=79,slow=39						
LRAL	**Lakeview Retre**	**84.33**	**309**	P	**P**	**04 12 23.6**	**-0.1**
MGMO	**Mountain Grove**	**84.34**	**315**	P	**P**	**04 12 24.2**	**+0.4**
MGMO				IAmb	IAmb	04 12 30.9	
	comp=Z,4.2nm,1.0s						

*UPP **28** 04:02:46.1±1.0,62°.81N×22°.76E,h0km,ML1.9, Suspected explosion*

HEL 28 04:02:37.8±0.1, 62°.71N×22°.90E, h0km, ML1.4, ML1.1 (UPP), Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAF	**Ylistaro**	**0.35**	**343**	*e*P	Pg	04 02 43.3	-1.2
VAF				*e*S	Sg	04 02 46.

	baz=337,slow=76,SNR=143							
H11N1	**WAKE ISLAND Hy**	**28.57**	**149**	T	T	05 28 12.8		
	baz=337,slow=76,SNR=138							
H11N3	**WAKE ISLAND Hy**	**28.57**	**149**	T	T	05 28 09.3		
	baz=337,slow=76,SNR=127							
H11S1	**WAKE ISLAND Hy**	**29.61**	**150**	T	T	05 29 31.8		
	baz=338,slow=76,SNR=115							
H11S3	**WAKE ISLAND Hy**	**29.62**	**150**	T	T	05 29 29.3		
	baz=338,slow=76,SNR=105							
H11S2	**WAKE ISLAND Hy**	**29.63**	**150**	T	T	05 29 28.3		
	baz=338,slow=76,SNR=126							
ILAR	**Eielson Array**	**38.22**	**37**	P	**P**	**04 57 55.2**	**0.0**	
	comp=Z,0.2nm,0.6s,baz=273,slow=7.8,SNR=4.6							
YKA	**Yellowknife Ar**	**52.60**	**36**	P	**P**	**04 59 49.0**	**+0.1**	
	comp=Z,0.4nm,0.8s,baz=300,slow=6.9,SNR=5.1							
TXAR	**Lajitas Array**	**79.04**	**59**	P	**P**	**05 02 41.3**	**+1.5**	
	comp=Z,0.1nm,0.5s,baz=312,slow=6.0,SNR=3.4							
H03N2	**Juan Fernandez**	**139.76**	**91**	T	T	07 46 41.5		
	baz=307,slow=77,SNR=7.6							
H03N3	**Juan Fernandez**	**139.77**	**91**	T	T	07 46 40.7		
	baz=307,slow=77,SNR=7.2							
H03N1	**Juan Fernandez**	**139.77**	**91**	T	T	07 46 41.1		
	baz=307,slow=77,SNR=9.4							

JMA 28 05:07:24.6±0.2, 39.15N×144.38E, h48km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**2.03**	**283**	P	Pn	05 07 57.3	+1.0
JTH	**Tanohata**	**2.10**	**293**	P	Pn	05 07 58.1	+0.8
OFUJ	**Ofunato**	**2.11**	**269**	P	Pn	05 07 58.3	+0.9
OFUJ				S	Sn	05 08 23.1	+0.7
JOM	**Ohasama**	**2.42**	**279**	P	Pn	05 08 03.0	+1.4
JMK	**Ichinoseki**	**2.47**	**266**	P	Pn	05 08 03.5	+1.2
JANG	**Nango**	**2.52**	**300**	P	Pn	05 08 03.7	+0.6
JYK	**Kaneyama**	**3.14**	**267**	P	Pn	05 08 13.2	+1.7
JNBK	**Urakawa-nobuka**	**3.36**	**339**	P	Pn	05 08 15.4	+0.8
JNBK				S	Sn	05 08 53.9	+0.7
JOT	**Ohata**	**3.39**	**312**	P	Pn	05 08 16.2	+1.3
JCH	**Churui**	**3.55**	**348**	P	Pn	05 08 16.8	-0.3
JRY	**Ryogami san**	**5.36**	**236**	P	Pn	05 08 41.9	-0.1
JRY				S	Sn	05 09 41.0	-1.4

*IDC **28** 05:11:10.2±1.2, 0.69S×122.03E, h0km, mb3.7/4, mb1 4.0/6, mb1mx3.7/29, mbtmp4.0/6, ML4.2/2, MS3.0/6, Ms1 3.0/6, ms1mx2.7/38, Error ellipse: s-maj=33.7km s-min=21.7km az=77.0*
*DJA **28** 05:11:12.5±0.2, 1°S×2°×12°2E±°, h10km, M4.4/12, mB5.0/3, mb4.5/5, MLv4.4/12, Mw(mB)4.3/3*
*NEIC **28** 05:11:12.6±1.6, 0.74S±0.06×122.14E±0.06, h18km±7km, mb4.1/3, Error ellipse: s-maj=8.9km s-min=7.5km az=132.0*

ISC 28 05:11:14.3±0.7, 0.81S±0.06×122.08E±0.04, h31km, n32, σ1§83/33, mb4.0/7, 1D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APSI	**Ampana**	**0.45**	**257**	P	**Pb**	**05 11 21.9**	**-2.0**
APSI				S	**Sb**	**05 11 27.3**	**-3.2**
LUWI	**Luwuk**	**0.73**	**109**	P	**Pn**	**05 11 26.2**	**-2.3**
LUWI				S	**Sb**	**05 11 36.9**	**-1.4**
LUWI	**Luwuk**	**0.73**	**109**		**Pn**	**05 11 26.4**	**-2.1**
KMSI	**Cibinong**	**2.34**	**54**	P	**Pn**	**05 11 51.3**	**+0.6**
MPSI	**Mapaga**	**2.46**	**298**	P	**Pn**	**05 11 53.3**	**+1.0**
MPSI				S	**Sn**	**05 12 23.6**	**+2.2**
TTSI	**Tana Toraja**	**3.17**	**225**	P	**Pn**	**05 12 03.8**	**+1.7**
SPSI	**Sidrap Palu**	**3.90**	**216**	P	**Pn**	**05 12 13.2**	**+1.1**
BNSI	**Bone**	**4.08**	**209**	P	**Pn**	**05 12 15.9**	**+1.3**
KAPI	**Kappang**	**4.78**	**209**	Pn	**Pn**	**05 12 25.5**	**+1.2**
	6.6nm,0.3s,baz=32,slow=5.7,SNR=34						
KAPI				Sn	**Sn**	**05 13 21.1**	**+2.4**
	baz=18,slow=20,SNR=1.3						
KAPI				LR	LR	05 14 40.7	
	comp=Z,242nm,20.2s,baz=80,slow=43						
KAPI	**Kappang**	**4.78**	**209**		**Pn**	**05 12 25.2**	**+0.9**
BKSI	**Bulukumba**	**4.89**	**204**	P	**Pn**	**05 12 26.5**	**+0.7**
TNTI	**Ternate**	**5.51**	**73**	Pn	**Pn**	**05 12 35.8**	**+1.4**
NLAI	**Namlea**	**5.57**	**116**	P	**Pn**	**05 12 36.2**	**+1.1**
	0.7nm37nm,0.8s						
KBKI	**Kotabaru**	**6.41**	**247**	P	Pb	05 12 56.4	-8.7
SKMP	**Bagumbayan, Su**	**7.68**	**19**	*eP*	**Pn**	**05 13 02.5**	**-1.6**
SKMP				*eS*	**Sn**	**05 14 28.0**	**-2.2**
DDMP	**Don Marcelino,**	**7.76**	**28**	*eP*	**Pn**	**05 13 04.3**	**-1.0**
DDMP				*eS*	**Sn**	**05 14 33.1**	**+0.9**
EDFI	**Ende, Flores**	**7.90**	**183**	P	**Pn**	**05 13 08.4**	**+1.2**
	0.1nm327nm18nm,0.7s						
KCP	**Kidapawan**	**8.32**	**21**	*↓iP*	**Pn**	**05 13 16.3**	**+3.3**
KCP				*i* S	**Sn**	**05 14 50.9**	**+4.8**
DAV	**Davao City (W)**	**8.57**	**24**	LR	LR	05 16 44.9	
	comp=Z,86nm,20.5s,baz=170,slow=40						
SIJI	**Sorong**	**9.18**	**90**	Pn	**Pn**	**05 13 24.7**	**-0.1**
	4.2nm,0.3s,baz=264,slow=6.0,SNR=8.5						
FAKI	**Fak Fak**	**10.38**	**102**	Pn	**Pn**	**05 13 39.4**	**-1.7**
LEM	**Lembang**	**15.62**	**247**	LR	LR	05 21 53.0	
	comp=Z,62nm,20.6s,baz=95,slow=41						
WB0	**Warramunga Arr**	**22.37**	**148**	P	**P**	**05 16 10.9**	**+0.8**
WB0				IAmb	IAmb	05 16 19.1	
	comp=Z,5.6nm,0.8s						
WRA	**Warramunga Arr**	**22.49**	**149**	P	**P**	**05 16 12.6**	**+1.2**
	comp=Z,1.2nm,0.7s,baz=325,slow=10,SNR=5.1						
WB2	**Warramunga Arr**	**22.49**	**148**	P	**P**	**05 16 11.7**	**+0.2**
WB2				IAmb	IAmb	05 16 20.4	
	comp=Z,6.3nm,0.9s						
WR0	**Warramunga Arr**	**22.61**	**148**	P	**P**	**05 16 13.4**	**+0.8**
WR0				IAmb	IAmb	05 16 19.9	
	comp=Z,4.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**29.73**	**311**	LR	LR	05 31 05.8	
	comp=Z,19nm,18.1s,baz=225,slow=40						
MJAR	**Matsushiro Arr**	**40.07**	**20**	LR	LR	05 33 39.5	
	comp=Z,12nm,21.7s,baz=255,slow=34						
SONM	**Songino Array**	**50.34**	**346**	P	**P**	**05 20 08.2**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=165,slow=9.0,SNR=11						
MKAR	**Makanchi Array**	**58.82**	**329**	P	**P**	**05 21 10.0**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=140,slow=8.4,SNR=5.2						
ZALV	**Zalesovo Beam**	**62.67**	**336**	P	**P**	**05 21 35.0**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=129,slow=5.9,SNR=2.0						
OBN	**Obninsk**	**88.08**	**325**	LR	LR	06 06 57.5	
	comp=Z,15nm,20.3s,baz=182,slow=38						

*GCG **28** 05:22:30.2±0.3, 13.11N×90.69W, h50km±59km, MD3.8*
*SNET **28** 05:22:33.7±1.1, 13.37N×90.63W, h20km±5km, ML2.9*

ISC 28 05:22:30.2±2.5, 13.3N±0.1×90.70W±0.07, h4km±12km, n17, σ0§58/23, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IXG	**Ixpaco**	**0.95**	**15**	*eP*	**Pb**	**05 22 49.8**	**+0.4**
CEVE	**Cerro Verde**	**1.19**	**61**	*eP*	**Pb**	**05 22 53.5**	**0.0**
CEVE				*eS*	**Sn**	**05 23 10.1**	**-0.6**
CEVE				IAML		05 23 11.4	
	comp=Z,520nm,0.2s						
SBLS	**San Blas**	**1.20**	**61**	*eP*	**Pg**	**05 22 53.5**	**+0.2**
FUG	**Fuego 3**	**1.20**	**353**	*eP*	**Pg**	**05 22 53.1**	**-0.2**
FUG				*eS*	**Sg**	**05 23 09.6**	**+0.7**
RTR	**El Retiro**	**1.21**	**58**	*eP*	**Pb**	**05 22 53.7**	**0.0**
SNJE	**San Jose**	**1.23**	**60**	*eP*	**Pg**	**05 22 53.9**	**+0.1**
UNIC	**Universidad Ca**	**1.33**	**57**	*eP*	**Pg**	**05 22 55.1**	**-0.7**
UNIC				IAML		05 22 56.3	
	comp=Z,134nm,0.3s						
UNIC				*eS*	**Sg**	**05 23 12.3**	**-0.7**
NBG	**Las Nubes**	**1.37**	**14**	*eP*	**Pb**	**05 22 57.2**	**+0.5**
NBG				*eS*	**Sn**	**05 23 15.9**	**+0.7**
SNET	**Serv Nac Est T**	**1.49**	**73**	*eP*	**Pb**	**05 22 58.4**	**-0.1**
UEES	**Universidad Ev**	**1.49**	**72**	IAML		05 23 21.1	
	comp=Z,159nm,0.2s						
LFRS	**El Faro**	**1.63**	**77**	*eP*	**Pb**	**05 23 01.1**	**+0.1**
LBRS	**Las Brisas**	**1.68**	**73**	*eP*	**Pn**	**05 23 01.3**	**+0.8**
STG3	**Santiaguito 3,**	**1.68**	**330**	*eP*	**Pn**	**05 22 59.8**	**-0.8**
STG3				*eS*	**Sn**	**05 23 22.8**	**0.0**
MTO3	**Montecristo**	**1.73**	**48**	*eP*	**Pn**	**05 23 01.2**	**0.0**
MTO3				*eS*	**Sn**	**05 23 23.2**	**-0.7**
COEG	**Centro de Oper**	**1.80**	**78**	*eP*	**Pn**	**05 23 03.2**	**+1.0**
ESQI	**Esquipulas**	**1.85**	**45**	*eP*	**Pn**	**05 23 02.9**	**+0.1**
COEB	**Comit de Eme**	**2.12**	**83**	*eP*	**Pn**	**05 23 07.1**	**+0.5**
COEB				*eS*	**Sn**	**05 23 32.9**	**-0.6**

*IDC **28** 05:27:02.8±1.0, 19.22S×70.96W, h0km, mb4.0/5, mb1 4.2/8, mb1mx3.9/28, mbtmp4.0/8, ML3.9/3, MS3.3/8, Ms1 3.3/8, ms1mx3.1/24, Error ellipse: s-maj=32.8km s-min=21.1km az=80.0*
*NEIC **28** 05:27:04.6±2.1, 19.43S±0.04×71.20W±0.07, h17km±2km, mb4.2/3, ML3.9(GUC), Error ellipse: s-maj=10.1km s-min=5.9km az=92.0*
*GUC **28** 05:27:06.1±0.8, 19.38S×71.11W, h50km±2km, ML3.9*
*VAO **28** 05:27:06.0±1.1, 19.28S×71.41W, h50km±8km, mb4.3*

ISC 28 05:27:05.8±3.1, 19.40S±0.04×71.18W±0.06, h26km±24km, n104, σ1§42/101, mb4.1/5, MS3.6/4, 10C-3D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**1.02**	**101**	*↑iP*	**Pn**	**05 27 23.7**	**-0.8**
PSGC				*i* S	**Sn**	**05 27 36.8**	**-1.3**
PSGC				IAML		05 27 38.6	
	comp=N,6μm,0.7s						
PSGCX	**Pisagua**	**1.02**	**101**		**Pn**	**05 27 23.7**	**-0.8**
PB12	**IPOC Station P**	**1.12**	**46**	*↓iP*	**Pn**	**05 27 25.0**	**-1.0**
PB12				*i* S	**Sn**	**05 27 38.9**	**-1.8**
PB12	**IPOC Station P**	**1.12**	**46**		**Pn**	**05 27 24.8**	**-1.2**
AP01	**Chacalluta**	**1.30**	**38**	*↓iP*	**Pn**	**05 27 27.6**	**-0.6**
AP01				*i* S	**Sn**	**05 27 43.5**	**-1.2**
AP01	**Chacalluta**	**1.30**	**38**	Pn	**Pn**	**05 27 27.7**	**-0.6**
TA02	**Huaiquique**	**1.31**	**131**	*↑iP*	**Pn**	**05 27 28.3**	**-0.2**
TA02				IAML		05 27 52.4	
	comp=N,5μm,0.1s						
PB11	**IPOC Station P**	**1.48**	**104**	*↑iP*	**Pn**	**05 27 30.9**	**0.0**
PB11				*i* S	**Sn**	**05 27 49.1**	**-0.6**
PB11				IAML		05 27 49.8	
	comp=N,1μm,0.2s						
PB11	**IPOC Station P**	**1.48**	**104**		**Pn**	**05 27 31.0**	**0.0**
TA01	**Diego Aracena**	**1.49**	**141**	*↑iP*	**Pn**	**05 27 30.7**	**-0.3**
TA01				*i* S	**Sn**	**05 27 48.0**	**-1.6**
TA01				IAML		05 27 49.8	
	comp=N,2μm,0.5s						
TA01	**Diego Aracena**	**1.49**	**141**		**Pn**	**05 27 30.7**	**-0.3**
MNMC	**Minye Minye**	**1.52**	**80**	*↓iP*	**Pn**	**05 27 31.6**	**0.0**
MNMC				*i* S	**Sn**	**05 27 50.9**	**+0.1**
MNMC				IAML		05 27 54.2	
	comp=E,7μm,0.7s						
MNMC	**Minye Minye**	**1.52**	**80**		**Pn**	**05 27 31.7**	**0.0**
PATCX	**Punta Patache**	**1.71**	**146**	*↑iP*	**Pn**	**05 27 33.8**	**-0.3**
PATCX				IAML		05 27 55.4	
	comp=E,2μm,0.4s						
PATCX	**Punta Patache**	**1.71**	**146**		**Pn**	**05 27 33.8**	**-0.3**
GO01	**Chusmiza**	**1.89**	**98**	*↑iP*	**Pn**	**05 27 37.2**	**+0.3**
GO01				*i* S	**Sn**	**05 28 00.2**	**0.0**
GO01	**Chusmiza**	**1.89**	**98**		**Pn**	**05 27 37.2**	**+0.3**
PB08	**IPOC Station P**	**2.05**	**111**	*↑iP*	**Pn**	**05 27 39.3**	**+0.3**
PB08				*i* S	**Sn**	**05 28 03.5**	**-0.5**
PB08				IAML		05 28 10.5	
	comp=N,1μm,0.5s						
PB08	**IPOC Station P**	**2.05**	**111**		**Pn**	**05 27 39.3**	**+0.3**
PB02	**IPOC Station P**	**2.26**	**148**	*↑iP*	**Pn**	**05 27 41.6**	**0.0**
PB02	**IPOC Station P**	**2.28**	**136**	*↑iP*	**Pn**	**05 27 42.0**	**+0.1**
PB01				*i* S	**Sn**	**05 28 07.9**	**-1.3**
PB01				IAML		05 28 09.2	
	comp=N,761nm,0.2s						
PB01	**IPOC Station P**	**2.28**	**136**		**Pn**	**05 27 42.2**	**+0.2**
PB07	**IPOC Station P**	**2.61**	**153**		**Pn**	**05 27 46.4**	**-0.2**
PB09	**IPOC Station P**	**3.00**	**143**	*↑iP*	**Pn**	**05 27 52.7**	**+0.9**
PB09				*i* S	**Sn**	**05 28 27.3**	**+0.3**
PB09				IAML		05 28 34.4	
	comp=N,504nm,0.6s						
PB09	**IPOC Station P**	**3.00**	**143**		**Pn**	**05 27 52.6**	**+0.7**
PB04	**IPOC Station P**	**3.07**	**162**		**Pn**	**05 27 52.0**	**-0.9**
PB06	**IPOC Station P**	**3.62**	**156**		**Pn**	**05 27 59.6**	**-0.7**
LVC	**Limon Verde**	**3.83**	**147**	Pn	**Pn**	**05 28 04.1**	**+0.6**
	comp=N,55nm,0.3s,baz=317,slow=10,SNR=320						
LVC				Sn	**Sn**	**05 28 47.9**	**-0.1**
	comp=N,40nm,0.3s,baz=87,slow=20,SNR=8.0						
LVC				LR	LR	05 29 36.1	
	comp=N,381nm,18.8s,baz=346,slow=40						
LVC	**Limon Verde**	**3.83**	**147**		**Pn**	**05 28 04.3**	**+0.8**
LVC	**Limon Verde**	**3.83**	**147**	*eP*	**Pn**	**05 28 04.6**	**+1.1**
PB15	**IPOC Station P**	**4.11**	**157**		**Pn**	**05 28 06.4**	**-0.8**
PB10	**IPOC Station P**	**4.13**	**172**		**Pn**	**05 28 05.8**	**-1.5**
LPAZ	**La Paz**	**4.25**	**44**	Pn	**Pn**	**05 28 12.7**	**+3.3**
	comp=N,0.4nm,0.3s,baz=234,slow=10,SNR=23						
LPAZ	**La Paz**	**4.25**	**44**		**Pn**	**05 28 12.8**	**+3.4**
LPAZ	**La Paz**	**4.25**	**44**	Pn	**Pn**	**05 28 12.4**	**+3.0**
AC01	**Pan de Azucar**	**6.74**	**176**		**Pn**	**05 28 40.5**	**-2.6**
AC02	**Maricunga**	**7.64**	**166**		**Pn**	**05 28 55.2**	**-0.7**
AC04	**Llanos de Chal**	**8.77**	**179**	Pn	Pn	05 29 07.2	-3.7
NNA	**Nana**	**9.16**	**323**	Pn	**Pn**	**05 29 18.2**	**+1.7**
AC05	**El Transito**	**9.43**	**175**		**Pn**	**05 29 17.6**	**-2.6**
SIV	**San Ignacio**	**10.21**	**72**	Pn	**Pn**	**05 29 27.5**	**-3.3**
	comp=N,0.2nm,0.3s,baz=264,slow=13,SNR=3.2						
SIV				LR	LR	05 33 00.4	
	comp=N,34nm,19.9s,baz=259,slow=36						
CO01	**Juntas del Tor**	**10.58**	**175**	Pn	**Pn**	**05 29 34.7**	**-1.3**
GO04	**Tololo Observa**	**10.73**	**178**	Pn	**Pn**	**05 29 35.8**	**-2.3**
CO03	**El Pedregal**	**11.40**	**178**	Pn	**Pn**	**05 29 43.7**	**-3.4**
PTLB	**Pedros e Lacer**	**12.15**	**73**	*eP*	**Pn**	**05 30 00.0**	**+2.7**
CFA	**Coronel Fontan**	**12.44**	**168**	Pn	Pn	05 30 04.8	+3.5
	comp=N,0.6nm,0.3s,baz=351,slow=12,SNR=8.4						
CFA				LR	LR	05 34 23.7	
	comp=N,123nm,21.6s,baz=304,slow=35						
SAML	**Samuel**	**12.96**	**38**	*eP*	**Pn**	**05 30 07.4**	**-1.0**
MT02	**Curacav**	**13.80**	**180**	Pn	**Pn**	**05 30 17.7**	**-2.2**
CPUP	**Villa Florida**	**14.51**	**121**	Pn	**P**	**05 30 33.5**	**-2.3**
	comp=N,0.1nm,0.3s,baz=303,slow=17,SNR=1.9						
CPUP				LR	LR	05 36 47.0	
	comp=N,77nm,19.6s,baz=304,slow=40						
CPUP	**Villa Florida**	**14.51**	**121**	*eP*	**Pn**	**05 30 30.9**	**+1.4**
SALV	**Santo Antonio**	**15.17**	**79**	*eP*	**Pn**	**05 30 39.2**	**+0.8**
H03N1	**Juan Fernandez**	**15.59**	**205**	T	T	05 47 12.8	
	baz=31,slow=72,SNR=23						
H03N2	**Juan Fernandez**	**15.60**	**205**	T	T	05 47 03.7	
	baz=31,slow=72,SNR=12						
H03N3	**Juan Fernandez**	**15.61**	**205**	T	T	05 47 08.7	
	baz=31,slow=72,SNR=17						
ITQB	**Itaqui**	**16.72**	**130**	*eP*	**Pn**	**05 30 59.8**	**+1.6**
CLDB	**Colider**	**17.09**	**62**	*eP*	**Pn**	**05 31 03.0**	**-0.1**
BI02	**San Fabin de**	**17.20**	**180**	P	Pn	**05 31 05.0**	**+0.6**
BI02				IAmb	IAmb	05 31 18.5	
	comp=Z,15nm,1.0s						
ARAG	**Araguaiana, MT**	**18.83**	**82**	*eP*	**P**	**05 31 24.0**	**+0.1**
MACA	**Manacapuru-AM**	**19.12**	**34**	*eP*	**P**	**05 31 25.9**	**-1.2**
CPSB	**Cacapava Do Su**	**19.44**	**128**	*eP*	**P**	**05 31 31.2**	**+0.7**
NPGB	**Novo Progresso**	**19.68**	**53**	*eP*	**P**	**05 31 31.5**	**-1.6**
PLTB	**Pedras Altas**	**20.04**	**131**	*eP*	**P**	**05 31 36.2**	**-0.8**
FRTB	**Fartura**	**20.51**	**105**	*eP*	**P**	**05 31 42.1**	**-0.1**
ITTB	**Itaituba**	**21.22**	**47**	*eP*	**P**	**05 31 48.0**	**-1.9**
PLCA	**Paso Flores**	**21.27**	**179**	P	**P**	**05 31 52.3**	**+2.0**
	comp=Z,3.3nm,0.8s,baz=352,slow=12,SNR=7.4						
PLCA	**Paso Flores**	**21.27**	**179**	P	**P**	**05 31 51.6**	**+1.3**
PLCA				IAmb	IAmb	05 31 59.4	
	comp=Z,11nm,1.1s						
PLCA	**Paso Flores**	**21.27**	**179**	*eP*	**P**	**05 31 51.2**	**+0.9**
BB19B	**Bebedouro**	**21.32**	**98**	*eP*	**P**	**05 31 51.6**	**+0.6**
TIJ01	**Guaruva-PR**	**21.33**	**110**	*eP*	**P**	**05 31 51.6**	**+0.5**
PTGA	**Pitinga**	**21.57**	**32**	P	**P**	**05 31 51.8**	**-1.7**
	comp=Z,7.1nm,0.5s,baz=212,slow=15,SNR=26						
PTGA	**Pitinga**	**21.57**	**32**	P	**P**		
PTGA				IAmb	IAmb	**05 31 51.9**	**-1.7**
	comp=Z,26nm,1.2s					05 32 02.4	
PTGA	**Pitinga**	**21.57**	**32**	*eP*	**P**	**05 31 52.0**	**-1.6**
CRUC	**La Cruz**	**21.59**	**344**	*eP*	P	05 32 00.1	+5.9
IPMB	**Ipameri, GO**	**21.80**	**90**	*eP*	**P**	**05 31 57.4**	**+1.2**
GARC	**Garzon, Huila**	**21.87**	**348**	*eP*	**P**	**05 31 58.9**	**+1.8**
SOTA	**Rioblanco**	**22.05**	**345**	*eP*	**P**	**05 32 02.8**	**+3.5**
BBAC	**Balboa, Cauca**	**22.11**	**344**	*eP*	**P**	**05 32 01.1**	**+1.5**
BDFB	**Brasilia**	**22.40**	**84**	LR	LR	05 40 57.5	
	comp=Z,86nm,19.1s,baz=324,slow=38						
PRAC	**Prado**	**23.26**	**351**	*eP*	**P**	**05 32 10.7**	**-0.8**
ORTC	**Ortega, Tolima**	**23.51**	**350**	*eP*	**P**	**05 32 14.6**	**+0.7**
YOTC	**Yotoco, Valle**	**23.79**	**347**	*eP*	**P**	**05 32 18.2**	**+1.5**
MALB	**Monte Alegre**	**24.05**	**46**	*eP*	**P**	**05 32 16.7**	**-2.4**
RREF	**El Recreo**	**24.49**	**350**	*eP*	**P**	**05 32 26.1**	**+2.3**
GUY2C	**Guyana, Caldas**	**24.81**	**350**	*eP*	**P**	**05 32 28.3**	**+1.7**
SPBC	**San Pablo de B**	**25.06**	**353**	*eP*	**P**	**05 32 28.6**	**+0.3**
NORC	**Norcasia**	**25.07**	**351**	*eP*	**P**	**05 32 29.2**	**+0.8**
RUSC	**La Rusia**	**25.20**	**356**	*eP*	**P**	**05 32 30.6**	**+0.5**
CBOC	**Ciudad Bolivar**	**25.55**	**349**	*eP*	**P**	**05 32 34.5**	**+1.5**
HELC	**Santa Helena**	**25.79**	**350**	*eP*	**P**	**05 32 35.3**	**0.0**
PTBC	**PUERTO BERRIO,**	**25.98**	**353**	*eP*	**P**	**05 32 35.7**	**-0.9**
ZARC	**Zaragoza, Cauc**	**26.37**	**352**	*eP*	**P**	**05 32 45.2**	**-0.4**
SMLC	**San Martn de**	**28.17**	**354**	*eP*	**P**	**05 32 54.6**	**-1.7**
TXAR	**Lajitas Array**	**57.70**	**326**	P	**P**	**05 36 55.3**	**+0.8**
	comp=Z,0.6nm,0.9s,baz=150,slow=8.7,SNR=5.7						
ULM	**Lac du Bonnet**	**72.70**	**344**	LR	LR	06 13 53.0	
	comp=Z,26nm,18.2s,baz=114,slow=39						
TORD	**Torodi Ar. Bea**	**78.69**	**72**	P	**P**	**05 39 05.5**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=244,slow=5.4,SNR=6.5						
TORD				LR	LR	06 13 14.2	
	comp=Z,32nm,18.1s,baz=200,slow=35						
YKA	**Yellowknife Ar**	**88.52**	**341**	P	**P**	**05 39 56.1**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=134,slow=5.3,SNR=17						
YKA				LR	LR	06 25 15.5	
	comp=Z,29nm,18.4s,baz=0.0,slow=40						
H11S2	**WAKE ISLAND Hy**	**25.47**	**279**	T	T	08 05 20.6	
	baz=101,slow=74,SNR=38						
H11S1	**WAKE ISLAND Hy**	**25.48**	**279**	T	T	08 05 21.7	
	baz=101,slow=74,SNR=30						
H11S3	**WAKE ISLAND Hy**	**25.49**	**279**	T	T	08 05 21.4	
	baz=101,slow=74,SNR=13						
H11N3	**WAKE ISLAND Hy**	**25.50**	**281**	T	T	08 05 23.8	
	baz=100,slow=74,SNR=12						
H11N2	**WAKE ISLAND Hy**	**25.52**	**281**	T	T	08 05 26.1	
	baz=100,slow=74,SNR=13						
H11N1	**WAKE ISLAND Hy**	**25.52**	**281**	T	T	08 05 24.6	
	baz=100,slow=74,SNR=7.7						
MKAR	**Makanchi Array**	**145.10**	**32**	PKP	**PKPdf**	**05 46 41.9**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=338,slow=2.6,SNR=6.3						
SONM	**Songino Array**	**151.57**	**3**	PKPbc	**PKiKP**	**05 46 58.4**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=354,slow=1.4,SNR=3.0						

*NNC **28** 06:22:43.4±0.9, 43.15N×69.70E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=7.0km s-min=2.4km az=128.0*
*SOME **28** 06:22:43.0, 43.15N×69.68E, h0km*

ISC 28 06:22:41.7±2.2, 43.03N±0.08×69.3E±0.1, h10km, n28, σ1§95/45, 1C, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRLS	**Borolday**	**0.41**	**90**	*eP*	**Pb**	**06 22 50.2**	**-0.8**
	90nm,0.1s						
BRLS				*eS*	**Sg**	**06 22 55.2**	**0.0**
	2μm,0.2s						
BRLS	**Borolday**	**0.41**	**90**	P	**Pb**	**06 22 50.2**	**-0.8**
	90nm,0.1s						
BRLS				S	**Sg**	**06 22 55.2**	**0.0**
	2μm,0.2s						
CHM	**Chimkent**	**0.75**	**161**	*eP*	**Pn**	**06 22 59.1**	**+0.6**
	132nm,0.2s						
CHM				*eS*	**Sn**	**06 23 10.3**	**+0.4**
	576nm,0.3s						
KK31	**Karatay Array**	**0.91**	**85**	P	**Pg**	**06 22 55.1**	**-4.0**
	3.6nm,0.1s,baz=270,slow=17,SNR=369						
KK31				*↑*S	**Sg**	**06 23 04.1**	**-6.8**
	18nm,0.2s,baz=277,slow=38,SNR=49						
IUG	**Iuzhnay**	**1.04**	**148**	*eP*	**Pn**	**06 23 03.5**	**+1.0**
	18nm,0.3s						
IUG				*eS*	**Sn**	**06 23 17.9**	**+0.7**
	269nm,0.3s						
IUG	**Iuzhnay**	**1.04**	**148**	P	**Pn**	**06 23 03.5**	**+1.0**
	18nm,0.3s						
IUG				S	**Sn**	**06 23 17.9**	**+0.7**
	269nm,0.3s						
MRKS	**Merke**	**2.92**	**94**	*eP*	**Pn**	**06 23 30.4**	**+2.2**
	6.4nm,0.3s						
MRKS				*eS*	**Sn**	**06 24 04.3**	**+0.9**
	26nm,0.3s						
MRKS	**Merke**	**2.92**	**94**	Pg	**Pn**	**

DRK0				eS	Sb	06 28 08.2	+0.1	
DRK0	**Durika**	**0.65**	**2**	⇓*e*P	**Pb**	**06 27 58.8**	**-0.6**	
DRK0				eS	Sb	06 28 08.1	+0.1	
BC3P	**Paso Ancho**	**0.68**	**73**	⇓*i*P	**Pb**	**06 27 59.8**	**-0.2**	
BC3P				eS	Sn	06 28 10.6	-0.4	
EDLM	**Las Mercedes**	**0.73**	**335**	*e*P	**Pb**	**06 28 00.0**	**-0.7**	
EDLM				eS	Sb	06 28 11.1	+0.7	
BCO2	**Palmira**	**0.74**	**82**	⇓*i*P	**Pb**	**06 28 00.8**	**-0.1**	
BCO2				eS	Sn	06 28 12.3	-0.2	
DVD	**David**	**0.83**	**102**	*e*P	**Pb**	**06 28 01.6**	**-0.7**	
DVD				eS	Sb	06 28 14.0	+0.9	
LOCO3	**Loma Colorada,**	**0.87**	**103**	eS	**Sn**	**06 28 15.5**	**+0.2**	
CHIR3	**Chiriqui UPA,**	**0.96**	**103**	eS	**Sn**	**06 28 18.4**	**+1.0**	
CHGR2	**Aguacate**	**1.16**	**74**	*e*P	**Pn**	**06 28 06.7**	**-0.7**	
CHGR2				eS	Sb	06 28 22.4	-0.2	
LCR2	**La Lucha 2**	**1.33**	**327**	*e*P	**Pn**	**06 28 09.3**	**-0.7**	
CVTR	**Volcan Turrial**	**1.48**	**341**	*e*P	**Pn**	**06 28 12.6**	**+0.4**	
JTS	**Las Juntas de**	**2.35**	**315**	*e*P	**Pn**	**06 28 25.4**	**+1.5**	

MAN 28 06:31:19.0, 13°.87N×120°.58E, h121km, mb4.2, ML3.0, MS2.7, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.35**	**247**	*e*P	Pn	06 31 38.4	+2.1
LUBP				eS	Sn	06 31 51.8	+2.5
PGP	**Puerto Galera**	**0.52**	**135**	⇑*i*P	Pn	06 31 38.9	+1.6
PGP				eS	Sn	06 31 53.2	+2.3
BUSP	**Coron**	**1.89**	**191**	*e*P	Pn	06 31 51.7	+0.5
BUSP				eS	Sn	06 32 16.3	+0.5
OTRP	**Odiongan**	**2.06**	**137**	*e*P	Pn	06 31 53.8	+0.6
OTRP				eS	Sn	06 32 20.3	+0.9
BALP	**Baler**	**2.10**	**27**	*e*P	Pn	06 31 54.6	+0.8
BALP				eS	Sn	06 32 17.6	-2.7
BOLP	**Bolinao**	**2.58**	**346**	*e*P	Pn	06 32 00.3	+0.4
BOLP				eS	Sn	06 32 26.3	-5.0

*IDC **28** 06:32:42.4±6.6, 17°.14S×177°.47W, h387km±69km, mb3.4/8, mb1 3.7/9, mb1mx3.5/25, mbtmp4.1/9, Error ellipse: s-maj=35.1km s-min=23.3km az=132.0*
*NEIC **28** 06:32:42.9±1.7, 17°.3S±0°.2×177°.4W±0°.1, h399km±8km, mb4.1/20, Error ellipse: s-maj=26.6km s-min=16.9km az=146.0*

ISC 28 06:32:43.1±0.6, 17°.3S±0°.1×177°.4W±0°.1, h400km, n36, σ0°83/33, mb4.0/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.37**	**263**		**Pn**	**06 33 59.0**	**+0.2**
MSVF	**Nonsavu**	**4.37**	**263**		**Pn**	**06 33 59.3**	**+0.4**
AFI	**Afiamalu**	**6.37**	**59**		Pn	06 34 12.7	-7.2
DZM	**Mont Dzumac**	**15.95**	**250**	P	**P**	**06 36 06.3**	**+0.3**
	0.3nm,0.3s,baz=30,slow=15,SNR=1.7						
OUZ	**Omahuta**	**19.59**	**202**	P	**P**	**06 36 44.3**	**+0.7**
OUZ				IAmb	IAmb	06 36 59.6	
	comp=Z,8.2nm,1.1s						
BKZ	**Black Stump Fm**	**22.44**	**193**	P	**P**	**06 37 06.9**	**-2.8**
BKZ				IAmb	IAmb	06 37 20.5	
	comp=Z,9.9nm,1.1s						
ARMA	**Armidale**	**31.09**	**239**	P	**P**	**06 38 27.8**	**+1.3**
ARMA				IAmb	IAmb	06 38 41.0	
	comp=Z,7.3nm,1.2s						
TOO	**Toolangi**	**38.31**	**231**	P	**P**	**06 39 27.5**	**+0.2**
STKA	**Stephens Creek**	**39.78**	**241**	P	**P**	**06 39 39.9**	**+0.4**
	comp=Z,2.6nm,0.5s,baz=78,slow=8.7,SNR=13						
STKA	**Stephens Creek**	**39.78**	**241**	IAmb	IAmb	06 39 40.5	
	comp=Z,1.2nm,1.1s						
BBOO	**Buckleboo**	**44.56**	**241**	P	**P**	**06 40 17.1**	**-0.3**
BBOO				IAmb	IAmb	06 40 19.8	
	comp=Z,25nm,1.4s						
WR0	**Warramunga Arr**	**45.51**	**259**	P	**P**	**06 40 24.2**	**-0.8**
WB0	**Warramunga Arr**	**45.67**	**259**	P	**P**	**06 40 25.3**	**-1.0**
WB2	**Warramunga Arr**	**45.69**	**259**	P	**P**	**06 40 25.9**	**-0.6**
WRA	**Warramunga Arr**	**45.70**	**259**	P	**P**	**06 40 25.6**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=97,slow=6.9,SNR=1.4						
AS31	**Alice Springs**	**45.90**	**254**	P	**P**	**06 40 27.5**	**-0.4**
FORT	**Forrest**	**51.15**	**244**	P	**P**	**06 41 06.4**	**-0.9**
VNDA	**Vanda**	**61.15**	**185**	P	**P**	**06 42 16.9**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=348,slow=5.1,SNR=1.9						
MORW	**Morawa**	**61.62**	**246**	P	**P**	**06 42 20.8**	**+0.5**
MORW				IAmb	IAmb	06 42 27.4	
	comp=Z,14nm,1.2s						
PETK	**Petropavlovsk-**	**73.33**	**345**	P	**P**	**06 43 31.7**	**-0.4**
	comp=Z,2.4nm,0.6s,baz=140,slow=7.2,SNR=4.1						
KMRM	**Mail Ridge**	**75.92**	**39**	P	**P**	**06 43 47.5**	**+0.3**
NVAR	**Mina Array Bea**	**78.31**	**43**	P	**P**	**06 44 00.8**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=229,slow=8.8,SNR=11						
TPNV	**Topopah Spring**	**78.89**	**46**	P	**P**	**06 44 04.0**	**+0.3**
TPNV				IAmb	IAmb	06 44 04.1	
	comp=Z,6.6nm,1.4s						
MNTX	**Cornudas Mount**	**84.43**	**55**	P	**P**	**06 44 32.8**	**+0.6**
MNTX				IAmb	IAmb	06 44 33.4	
	comp=Z,1.6nm,0.8s						
DOT	**Dot Lake**	**84.72**	**14**	P	**P**	**06 44 32.6**	**-0.3**
DOT				IAmb	IAmb	06 44 33.1	
	comp=Z,3.5nm,0.7s						
HDA	**Harding Lake**	**84.74**	**13**	P	**P**	**06 44 32.3**	**-0.6**
CCB	**Clear Creek Bu**	**84.77**	**12**	P	**P**	**06 44 32.0**	**-1.0**
TXAR	**Lajitas Array**	**84.84**	**57**	P	**P**	**06 44 35.8**	**+1.3**
	comp=Z,2.0nm,0.8s,baz=209,slow=7.2,SNR=16						
SCRK	**Sand Creek**	**85.02**	**14**	P	**P**	**06 44 34.3**	**-0.2**
SCRK				IAmb	IAmb	06 44 34.8	
	comp=Z,2.1nm,0.8s						
IL31		**85.07**	**13**	IAmb	IAmb	06 44 34.4	
	comp=Z,5.3nm,1.1s						
ILAR	**Eielson Array**	**85.07**	**13**	P	**P**	**06 44 33.6**	**-1.0**
	comp=Z,1.7nm,0.5s,baz=224,slow=5.3,SNR=30						
YKA	**Yellowknife Ar**	**93.36**	**24**	P	**P**	**06 45 12.8**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=242,slow=4.4,SNR=13						
ARCES	**ARCESS Array B**	**125.87**	**350**	PKP	**PKPdf**	**06 50 57.4**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=353,slow=2.9,SNR=6.0						
BRTR	**Keskin Array B**	**145.02**	**316**	PKP	**PKPbc**	**06 51 34.7**	**+0.4**
	comp=Z,2.0nm,0.9s,baz=156,slow=3.4,SNR=6.7						
CLL	**Collm**	**145.06**	**349**	*i* PKPbc	**PKPab**	**06 51 34.6**	**+0.3**
	comp=Z,7.0nm,0.6s						
CLL				Lm	MLR	16 27 00.0	
	comp=Z,100nm,19.9s						
GERES	**GERESS Array B**	**147.25**	**346**	PKPbc	**PKPbc**	**06 51 40.5**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=0.0,slow=2.9,SNR=4.1						

*IDC **28** 06:56:11.6±1.4, 20°.10S×70°.54W, h0km, mb3.6/4, mb1 3.8/7, mb1mx3.6/31, mbtmp3.7/7, ML3.6/3, MS3.1/3, Ms1 3.2/3, ms1mx2.8/23, Error ellipse: s-maj=40.7km s-min=21.0km az=87.0*
*GUC **28** 06:56:17.2±0.6, 20°.26S×70°.41W, h33km±3km, ML3.7*

ISC 28 06:56:13.4±1.4, 20°.17S±0°.03×70°.53W±0°.06, h14km±9km, n34, σ1°15/34, mb3.7/3, 6C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.39**	**105**	⇑*i*P	**Pn**	**06 56 23.6**	**-1.0**
TA02				*i* S	**Sb**	**06 56 28.9**	**+1.0**
TA01	**Diego Aracena**	**0.51**	**140**	⇑*i*P	**Pb**	**06 56 24.8**	**+0.6**
TA01				*i* S	**Sb**	**06 56 30.9**	**-0.6**
TA01				IAML		06 56 31.4	
	comp=E,14μm,0.2s						
PSGC	**Pisagua**	**0.69**	**34**	⇓*i*P	**Pn**	**06 56 29.6**	**+0.8**
PSGC				*i* S	**Sn**	**06 56 39.8**	**+0.5**
PATCX	**Punta Patache**	**0.74**	**152**	⇑*i*P	**Pg**	**06 56 28.0**	**+0.2**
PATCX				*i* S	**Sg**	**06 56 36.7**	**-0.9**
PB11	**IPOC Station P**	**0.92**	**64**	⇓*i*P	**Pn**	**06 56 32.4**	**+0.4**
PB11				*i* S	**Sg**	**06 56 43.8**	**+0.5**
PB02	**IPOC Station P**	**1.29**	**153**	⇑*i*P	**Pn**	**06 56 36.5**	**-0.6**
PB02				*i* S	**Sb**	**06 56 51.6**	**-2.4**
PB02				IAML		06 56 54.7	
	comp=E,6μm,0.4s						
PB08	**IPOC Station P**	**1.29**	**89**	⇓*i*P	**Pb**	**06 56 37.9**	**+0.2**
PB08				*i* S	**Sn**	**06 56 53.7**	**-1.0**
PB01	**IPOC Station P**	**1.31**	**132**	⇑*i*P	**Pn**	**06 56 36.7**	**-0.6**
PB01				*i* S	**Sb**	**06 56 53.2**	**-1.3**
PB01				IAML		06 56 55.1	
	comp=E,4μm,0.4s						
GO01	**Chusmiza**	**1.35**	**69**	⇓*i*P	**Pg**	**06 56 39.3**	**-0.2**
GO01				*i* S	**Sg**	**06 56 56.9**	**-0.2**
GO01				IAML		06 56 58.0	
	comp=N,3μm,0.3s						
MNMC	**Minye Minye**	**1.36**	**41**	⇓*i*P	**Pg**	**06 56 40.1**	**+0.5**
MNMC				*i* S	**Sg**	**06 56 58.1**	**+0.8**
MNMC				IAML		06 57 03.4	
	comp=N,3μm,0.3s						
PB12	**IPOC Station P**	**1.56**	**7**	*e*P	**Pg**	**06 56 44.3**	**+0.8**
PB12				IAML		06 57 11.5	
	comp=E,867nm,0.3s						
PB07	**IPOC Station P**	**1.66**	**159**	IAML		06 57 07.4	
	comp=E,1μm,0.5s						
PB03	**IPOC Station P**	**2.00**	**159**	*e*P	**Pn**	**06 56 47.4**	**+0.4**
PB03				IAML		06 57 17.0	
	comp=E,773nm,0.6s						
PB09	**IPOC Station P**	**2.02**	**144**	⇑*i*P	**Pn**	**06 56 48.6**	**+1.4**
PB09				IAML		06 57 17.3	
	comp=E,956nm,0.3s						
PB05	**IPOC Station P**	**2.69**	**174**	*e*P	**Pn**	**06 56 55.4**	**-1.0**
PB05				IAML		06 57 39.1	
	comp=E,402nm,0.5s						
LVC	**Limon Verde**	**2.86**	**148**	Pn	**Pn**	**06 57 00.5**	**+1.5**
	comp=E,12nm,0.3s,baz=333,slow=9.1,SNR=46						
LVC				Sn	**Sn**	**06 57 34.7**	**+1.4**
	comp=E,18nm,0.3s,baz=56,slow=21,SNR=10.0						
LPAZ	**La Paz**	**4.48**	**31**	Pn	**Pb**	**06 57 29.1**	**-3.2**
	comp=E,0.8nm,0.3s,baz=213,slow=8.6,SNR=39						
LPAZ				LR	LR	06 59 22.9	
	comp=E,111nm,20.9s,baz=234,slow=43						
SIV	**San Ignacio**	**9.91**	**67**	Pn	**Pn**	**06 58 36.9**	**+1.4**
	comp=E,1.0nm,0.3s,baz=270,slow=11,SNR=34						
SIV				LR	LR	07 03 15.6	
	comp=E,81nm,19.1s,baz=328,slow=43						
CFA	**Coronel Fontan**	**11.57**	**170**	Pn	**Pn**	**06 58 59.9**	**+1.6**
	comp=E,0.2nm,0.3s,baz=336,slow=19,SNR=2.4						
H03N1	**Juan Fernandez**	**15.18**	**208**	T	T	07 14 54.1	
	baz=34,slow=72,SNR=83						
H03N2	**Juan Fernandez**	**15.19**	**208**	T	T	07 14 53.9	
	baz=34,slow=72,SNR=42						
H03N3	**Juan Fernandez**	**15.20**	**208**	T	T	07 14 52.8	
	baz=34,slow=72,SNR=42						
PLCA	**Paso Flores**	**20.50**	**180**	P	**P**	**07 00 51.4**	**+0.3**
	comp=E,1.1nm,0.6s,baz=4.4,slow=13,SNR=5.6						
PTGA	**Pitinga**	**21.91**	**29**	P	**P**	**07 01 05.1**	**-1.3**
	comp=E,1.0nm,0.3s,baz=218,slow=19,SNR=1.6						
DBIC	**Dimbokro**	**69.83**	**75**	LR	LR	07 37 03.8	
	comp=E,44nm,18.5s,baz=138,slow=35						
TORD	**Torodi Ar. Bea**	**78.35**	**71**	P	**P**	**07 08 13.4**	**-0.5**
	comp=E,0.2nm,0.8s,baz=133,slow=5.8,SNR=4.7						
YKA	**Yellowknife Ar**	**89.44**	**341**	P	**P**	**07 09 09.8**	**+0.4**
	comp=E,0.2nm,0.8s,baz=133,slow=5.8,SNR=4.7						
H11S2	**WAKE ISLAND Hyd**	**26.20**	**279**	T	T	09 34 41.4	
	baz=102,slow=74,SNR=34						
H11S1	**WAKE ISLAND Hyd**	**26.20**	**279**	T	T	09 34 41.2	
	baz=102,slow=74,SNR=41						
H11S3	**WAKE ISLAND Hyd**	**26.21**	**279**	T	T	09 34 36.9	
	baz=102,slow=74,SNR=34						
H11N3	**WAKE ISLAND Hyd**	**26.25**	**280**	T	T	09 34 37.9	
	baz=101,slow=74,SNR=26						
H11N2	**WAKE ISLAND Hyd**	**26.26**	**280**	T	T	09 34 45.1	
	baz=101,slow=74,SNR=27						
H11N1	**WAKE ISLAND Hyd**	**26.26**	**280**	T	T	09 34 39.0	
	baz=101,slow=74,SNR=16						
MKAR	**Makanchi Array**	**145.41**	**34**	PKPbc	**PKPbc**	**07 15 51.2**	**+0.3**
	comp=E,0.4nm,0.6s,baz=338,slow=5.2,SNR=4.8						

*IDC **28** 07:01:33.4±1.9, 39°.79N×50°.89E, h0km, mb3.7/6, mb1 3.9/10, mb1mx3.6/37, mbtmp3.7/10, ML4.0/4, MS2.7/5, Ms1 2.7/5, ms1mx2.4/41, Error ellipse: s-maj=36.4km s-min=22.4km az=26.0*
*AZER **28** 07:01:40.9, 39°.87N×51°.03E, h59km, ML3.3*
*TEH **28** 07:01:41.0, 39°.85N×51°.12E, h29km, ML3.8*

ISC 28 07:01:42.1±0.8, 39°.89N±0°.04×51°.03E±0°.05, h76km±10km, n83, σ1°44/106, mb3.5/6, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALA	**Gala**	**0.84**	**308**	P	**Pn**	**07 02 01.3**	**+2.2**
GALA				S	**Sn**	**07 02 14.1**	**+2.4**
GALA	**Gala**	**0.84**	**308**	*e*Pg	**Pn**	**07 02 01.2**	**+2.2**
NDR	**Nardaran**	**1.05**	**311**	P	**Pn**	**07 02 02.0**	**+0.4**
NDR				S	**Sn**	**07 02 17.7**	**+1.6**
NDR	**Nardaran**	**1.05**	**311**	*e*Pg	**Pn**	**07 02 02.2**	**+0.7**
GOBA	**Gobu**	**1.11**	**298**	P	**Pn**	**07 02 02.8**	**+0.4**
	SNR=7.6						
GOBA				S	**Sn**	**07 02 16.3**	**-1.1**
GOBA	**Gobu**	**1.11**	**298**	*e*Pn	**Pn**	**07 02 03.3**	**+1.0**
ALIB	**Äli-Bayra**	**1.56**	**273**	P	**Pn**	**07 02 08.7**	**+0.7**
	SNR=4.5						
ALIB				S	**Sn**	**07 02 28.2**	**+0.6**
ALIB	**Äli-Bayra**	**1.56**	**273**	*e*Pn	**Pn**	**07 02 09.4**	**+1.4**
GBS	**Qobustan**	**1.72**	**293**	Sn	**Sn**	**07 02 33.0**	**+1.4**
ATGJ	**Altiaghaj**	**1.87**	**302**	Sn	**Sn**	**07 02 36.2**	**+1.1**
SAAT	**Saatly**	**2.00**	**270**	Pn	**Pn**	**07 02 15.0**	**+1.1**
SAAT	**Saatly**	**2.00**	**270**	*e*Pn	**Pn**	**07 02 15.0**	**+1.1**
SIZA	**Siyzn**	**2.01**	**307**	Pn	**Pn**	**07 02 16.9**	**+2.8**
	SNR=3.1						
SIZA				S	**Sn**	**07 02 39.4**	**+1.0**
SIZA	**Siyzn**	**2.01**	**307**	*e*Pn	**Pn**	**07 02 16.9**	**+2.8**
PQL	**Pirkuli**	**2.06**	**297**	Pn	**Pn**	**07 02 17.0**	**+2.1**
PQL				Sn	**Sn**	**07 02 40.0**	**+0.1**
PQL	**Pirkuli**	**2.06**	**297**	*e*Pn	**Pn**	**07 02 17.0**	**+2.1**
LKRN	**Lenkeran, Azer**	**2.11**	**237**	Pn	**Pn**	**07 02 15.2**	**-0.2**
	SNR=3.4						
LKRN				Sn	**Sn**	**07 02 41.3**	**+0.7**
LKRN	**Lenkeran, Azer**	**2.11**	**237**	*e*Pn	**Pn**	**07 02 15.1**	**-0.2**
GLBA	**Clilabad**	**2.14**	**253**	Pn	**Pn**	**07 02 16.0**	**+0.3**
	SNR=5.4						
GLBA				Sn	**Sn**	**07 02 41.7**	**+0.4**
ASTR	**Astara**	**2.19**	**233**	Pn	**Pn**	**07 02 16.0**	**-0.4**
	SNR=23						
ASTR				S	**Sn**	**07 02 42.7**	**+0.1**
KDMR	**Kurdemir**	**2.23**	**283**	Sn	**Sn**	**07 02 44.5**	**+0.8**
IML	**Ismayilli**	**2.35**	**293**	Pn	**Pn**	**07 02 18.0**	**-0.7**
IML				Sn	**Sn**	**07 02 47.2**	**+0.5**
YRD	**Yardimli**	**2.37**	**247**	Pn	**Pn**	**07 02 18.2**	**-0.9**
	SNR=6.5						
YRD				Sn	**Sn**	**07 02 46.1**	**-1.1**
YRD	**Yardimli**	**2.37**	**247**	*e*Pn	**Pn**	**07 02 18.1**	**-0.9**
QUBA	**Quba, Azerbaij**	**2.42**	**308**	Pn	**Pn**	**07 02 19.7**	**+0.1**
QUBA				Sn	**Sn**	**07 02 47.9**	**-0.3**
LRK	**Lerik**	**2.43**	**240**	Pn	**Pn**	**07 02 19.4**	**-0.5**
	SNR=9.2						
LRK				Sn	**Sn**	**07 02 47.7**	**-1.0**
LRK	**Lerik**	**2.43**	**240**	*e*Pn	**Pn**	**07 02 19.3**	**-0.5**
XNQ	**Khinaliq**	**2.54**	**301**	Pn	**Pn**	**07 02 21.5**	**+0.1**
	SNR=5.2						
XNQ				Sn	**Sn**	**07 02 51.2**	**-0.4**
ZRD	**Zardab**	**2.59**	**280**	Pn	**Pn**	**07 02 22.2**	**+0.4**
ZRD				Sn	**Sn**	**07 02 52.9**	**+0.6**
QBL	**Gabala**	**2.65**	**294**	Pn	**Pn**	**07 02 21.8**	**-0.9**
QBL				Sn	**Sn**	**07 02 52.3**	**-1.7**
QSAR	**Qusar**	**2.65**	**309**	Pn	**Pn**	**07 02 22.9**	**+0.2**
QSAR				Sn	**Sn**	**07 02 53.2**	**-0.7**
BLQ	**Beylaqan**	**2.68**	**267**	Sn	**Sn**	**07 02 54.4**	**0.0**
BRDA	**Brd**	**2.98**	**278**	Pn	**Pn**	**07 02 25.0**	**-2.0**
BRDA				Sn	**Sn**	**07 03 05.2**	**+3.5**
AGDM	**Agdam**	**3.02**	**275**	Pn	**Pn**	**07 02 27.1**	**-0.6**
AGDM				Sn	**Sn**	**07 03 03.8**	**+1.1**
SEKA	**Sheki**	**3.20**	**296**	Pn	**Pn**	**07 02 30.3**	**+0.2**
SEKA				Sn	**Sn**	**07 03 06.0**	**-1.2**
IHSH	**Hashtrud**	**3.33**	**243**	*e*Pn	Pn	07 02 41.3	+9.1
ISRB	**Sarab**	**3.34**	**233**	*e*Pn	**Pn**	**07 02 32.7**	**+0.5**
ISRB				*e*		07 02 33.4	
AHAR	**Ahar**	**3.39**	**247**	*e*Pn	**Pn**	**07 02 33.4**	**+0.6**
AHAR				*e*		07 03 15.7	
QALM	**Alamut, Qazvin**	**3.47**	**185**	*e*Pn	**Pn**	**07 02 33.0**	**-1.0**
QALM				*e*		07 03 13.6	
IHRS	**Heris**	**3.48**	**244**	*e*Pn	**Pn**	**07 02 34.6**	**+0.5**
IHRS				*e*		07 02 35.8	
GANJ	**Ganja**	**3.68**	**283**	Pn	**Pn**	**07 02 37.4**	**+0.8**
GANJ				Sn	**Sn**	**07 03 17.0**	**-1.8**
QSDN	**Sirdan**	**3.68**	**204**	*e*Pn	**Pn**	**07 02 36.1**	**-0.8**
ZKTA	**Zakatala**	**3.77**	**299**	Pn	**Pn**	**07 02 39.0**	**+1.1**
ZKTA				Sn	**Sn**	**07 03 18.4**	**-2.7**
IPRN	**Peran**	**3.79**	**164**	*e*Pn	**Pn**	**07 02 38.2**	**-0.1**
ORD	**Ordubad**	**4.01**	**258**	Pn	**Pn**	**07 02 41.3**	**+0.1**
	SNR=9.4						
ORD				Sn	**Sn**	**07 03 27.2**	**+0.1**
IGLO	**Ghaloghah**	**4.04**	**146**	*e*Pn	**Pn**	**07 02 41.1**	**-0.7**
IALA	**Alasht**	**4.05**	**159**	*e*Pn	**Pn**	**07 02 42.5**	**+0.5**
GDB	**GEDABAY**	**4.12**	**283**	Pn	**Pn**	**07 02 43.1**	**+0.3**
GDB				Sn	**Sn**	**07 03 27.0**	**-2.7**
IMHD	**Mahdasht**	**4.21**	**184**	*e*Pn	**Pn**	**07 02 45.6**	**+1.6**
SBZ	**Shahbuz**	**4.25**	**265**	Pn	**Pn**	**07 02 45.5**	**+0.9**
SBZ				Sn	**Sn**	**07 03 34.6**	**+1.6**
IMRD	**Marand**	**4.29**	**256**	*e*Pn	**Pn**	**07 02 45.9**	**+0.7**
IMRD				*e*		07 02 46.3	
QABG	**Abgarm-Qazvin**	**4.33**	**196**	*e*Pn	**Pn**	**07 02 44.4**	**-1.3**
QABG				*e*		07 03 37.8	
NAX	**Nakhchivan**	**4.34**	**262**	Pn	**Pn**	**07 02 43.2**	**-2.5**
NAX				Sn	**Sn**	**07 03 38.6**	**+3.6**
IDMV	**Damavand**	**4.38**	**169**	*e*Pn	**Pn**	**07 02 48.4**	**+1.9**
IHSB	**Hasanabad**	**4.45**	**177**	*e*Pn	**Pn**	**07 02 49.4**	**+2.1**
ISHM	**Shahmirzad**	**4.45**	**156**	*e*Pn	**Pn**	**07 02 49.0**	**+1.5**
QZX	**Qazax, Azerbai**	**4.47**	**287**	Pn	**Pn**	**07 02 47.7**	**+0.3**
QZX				Sn	**Sn**	**07 03 35.6**	**-2.5**
ISHB	**Shabestar**	**4.50**	**251**	*e*Pn	**Pn**	**07 02 49.1**	**+1.0**
IRAZ	**Razeghan**	**4.56**	**191**	*e*Pn	**Pn**	**07 02 49.4**	**+0.5**
IVRN	**Varamin**	**4.92**	**173**	*e*Pn	**Pn**	**07 02 55.0**	**+1.4**
IANJ	**Anjilo**	**4.97**	**152**	*e*Pn	**Pn**	**07 02 56.2**	**+1.7**
GEYT	**Alibeck**	**5.87**	**107**	Pn	**Pn**	**07 03 04.6**	**-1.9**
	4.0nm,0.3s,baz=273,slow=16,SNR=26						
GEYT				Sn	**Sn**	**07 04 08.1**	**-4.3**
	0.4nm,0.3s,baz=322,slow=16,SNR=1.5						
GEYT				LR	LR	07 06 08.4	
	comp=Z,26nm,21.1s,baz=355,slow=46						
ISFR	**Sfrayin**	**6.16**	**115**	*e*Pn	**Pn**	**07 03 10.6**	**-0.1**
SBZV	**Sabzevar**	**6.26**	**122**	*e*Pn	**Pn**	**07 03 11.9**	**-0.1**
IEMG	**Emamgholi**	**6.46**	**110**	*e*Pn	**Pn**	**07 03 13.1**	**-1.7**
IKRD	**Kardeh**	**6.66**	**115**	*e*Pn	Pn	07 03 25.8	+8.3
TKDS	**Koohdasht(Taba**	**7.95**	**140**	*e*Pn	**Pn**	**07 03 34.8**	**-0.2**
TPRV	**Parvadeh(Tabas**	**8.23**	**145**	*e*Pn	**Pn**	**07 03 39.1**	**+0.3**
JRKH	**Jarkhoshk**	**8.37**	**115**	*e*Pn	**Pn**	**07 03 39.9**	**-0.9**
AFRZ	**Afriz**	**9.10**	**133**	*e*Pn	**Pn**	**07 03 51.2**	**+0.5**
IMON	**Monand**	**9.64**	**131**	*e*Pn	**Pn**	**07 03 58.3**	**+0.1**
AKTO	**Aktyubinsk**	**11.63**	**23**	Pn	**Pn**	**07 04 21.1**	**-3.9**
	0.4nm,0.3s,baz=212,slow=11,SNR=2.2						
AKTO				Sn	Sn	07 06 21.1	-12
	1.1nm,0.3s,baz=287,slow=20,SNR=12						
ARU	**Arti**	**17.28**	**14**	LR	LR	07 14 54.2	
	comp=Z,16nm,18.0s,baz=220,slow=46						
BVAR	**Borovoye Array**	**18.64**	**39**	P	**P**	**07 05 54.0**	**+0.4**
	0.6nm,0.3s,baz=232,slow=7.3,SNR=16						
AKASG	**Malin Array Be**	**18.69**	**313**	P	**P**	**07 05 52.6**	**-1.5**
	0.6nm,0.3s,baz=111,slow=13,SNR=1.6						
KIRV	**Kirov**	**18.74**	**357**	LR	LR	07 15 14.9	
	comp=Z,16nm,19.6s,baz=177,slow=44						
KURBB	**Kurchatov Arra**	**22.01**	**52**	P	**P**	**07 06 30.4**	**+0.5**
	0.7nm,0.5s,baz=253,slow=11,SNR=4.9						
MKAR	**Makanchi Array**	**23.65**	**63**	P	**P**	**07 06 46.1**	**-0.4**
	1.0nm,0.7s,baz=268,slow=9.4,SNR=8.0						
FINES	**FINESS Array B**	**26.44**	**333**	P	**P**	**07 07 12.6**	**+1.1**
	2.7nm,0.8s,baz=148,slow=11,SNR=4.9						
ZALV	**Zalesovo Beam**	**26.72**	**47**	P	**P**	**07 07 15.0**	**+0.9**
	0.6nm,0.3s,baz=247,slow=7.5,SNR=1.5						
ZALV				LR	LR	07 20 18.3	
	comp=Z,16nm,18.0s,baz=168,slow=42						
CMAR	**Chiang Mai Arr**	**46.33**	**103**	P	**P**	**07 10 02.2**	**+1.6**
	0.8nm,0.3s,baz=307,slow=8.9,SNR=1.0						
RES	**Resolute Bay**	**63.48**	**350**	LR	LR	07 40 56.8	
	comp=Z,22nm,18.2s,baz=240,slow=37						
YKA	**Yellowknife Ar**	**77.31**	**353**	P	**P**	**07 13 29.6**	**+1.7**
	0.1nm,0.7s,baz=11,slow=5.5,SNR=9.7						

*TIF **28** 07:08:12.0, 42°.54N×43°.53E, h13km±1km*
*NORS **28** 07:08:11.9±0.0, 42°.54N×43°.51E, h14km, MPVA3.5*
*MOS **28** 07:08:12.5±0.0, 42°.55N×43°.49E, h

CUI	**Cuipilapa**	**0.88**	**350**	*e*P		Pg	07 26 55.1	+0.5
CUI				*e*S		Sb	07 27 07.4	-0.5
PTEN	**Parque Tenorio**	**0.92**	**1**	*i* P		Pg	07 26 55.8	+0.4
HORNC	**Hornillas**	**0.94**	**350**	*i* P		Pg	07 26 56.0	+0.2
LIM1	**Limonal**	**0.94**	**345**	*i* P		Pb	07 26 56.8	+0.1
LCR2	**La Lucha 2**	**0.99**	**92** ⇑ *i*P			Pg	07 26 56.0	-0.7
LCR2				*e*S		Sg	07 27 10.1	+0.5
NY14	**Universidad de**	**1.00**	**329**	*i* P		Pg	07 26 57.1	+0.1
BUEV	**Buena Vista**	**1.08**	**339** ⇑ *e*P			Pg	07 26 58.0	-0.5
BUEV				*e*S		Sg	07 27 12.6	0.0
GB1A	**Borinquen Arri**	**1.10**	**339**	*e*P		Pg	07 26 58.2	-0.6
GB1A				*e*S		Sg	07 27 13.2	+0.2
DRK0	**Durika**	**1.81**	**106**	*e*P		Pn	07 27 08.7	-1.3

IDC ***28*** *07:41:45.5±0.9, 23.°07S×70.°87W, h0km, mb4.3/5, mb1 4.2/9, mb1mx3.9/29, mbtmp4.1/9, ML3.8/4, MS3.6/10, Ms1 3.6/10, ms1mx3.4/23, Error ellipse: s-maj=25.0km s-min=14.2km az=163.0*

NEIC ***28*** *07:41:46.9±2.4, 23.°05S±0.°04×70.°91W±0.°04, h14km±4km, Error ellipse: s-maj=6.2km s-min=5.1km az=171.0*

VAO ***28*** *07:41:46.4±1.6, 22.°95S×71.°17W, h24km±13km, mb4.3*

GUC ***28*** *07:41:47.4±1.0, 23.°05S×70.°95W, h27km±4km, ML4.4*

ISC 28 07:41:46.4±1.5, 23.°06S±0.°03×70.°95W±0.°05, h11km±9km, **n96,σ1°§13/99, mb4.5/6, MS3.8/8, 6C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB10	**IPOC Station P**	**0.58**	**141** ⇓	*e*P	**Pg**	**07 41 58.6**	**+0.8**
PB10				*e*S	**Sg**	**07 42 06.4**	**+0.9**
PB10				IAML		07 42 09.4	
	comp=E,48μm,0.3s						
PB10	**IPOC Station P**	**0.58**	**141**		**Pg**	**07 41 57.1**	**-0.7**
PB10					**Pb**	**07 41 58.8**	**+0.1**
PB05	**IPOC Station P**	**0.72**	**74** ⇓	*e*P	**Pg**	**07 42 00.7**	**+0.4**
PB05				*e*S	**Sb**	**07 42 10.1**	**-1.0**
PB04	**IPOC Station P**	**1.03**	**46** ⇓	*e*P	**Pb**	**07 42 06.3**	**-0.2**
PB04				*e*S	**Sb**	**07 42 18.9**	**-1.2**
PB04				IAML		07 42 23.8	
	comp=N,13μm,0.4s						
PB04	**IPOC Station P**	**1.03**	**46**		**Pb**	**07 42 06.3**	**-0.2**
PB06	**IPOC Station P**	**1.32**	**75** ⇓	*e*P	**Pn**	**07 42 10.4**	**-0.6**
PB06				*e*S	**Sb**	**07 42 27.6**	**-0.8**
PB06				IAML		07 42 30.3	
	comp=N,19μm,0.3s						
PB06	**IPOC Station P**	**1.32**	**75**		**Pn**	**07 42 10.2**	**-0.8**
PB06					**Pb**	**07 42 10.9**	**-0.4**
PB15	**IPOC Station P**	**1.37**	**97** ⇓	*e*P	**Pn**	**07 42 11.5**	**-0.3**
PB15				*e*S	**Sn**	**07 42 29.4**	**-0.7**
PB15	**IPOC Station P**	**1.37**	**97**		**Pn**	**07 42 11.5**	**-0.3**
PB15					**Pb**	**07 42 11.9**	**-0.4**
PB03	**IPOC Station P**	**1.50**	**48** ⇑	*i*P	**Pb**	**07 42 13.2**	**-0.2**
PB03				*e*S	**Sn**	**07 42 32.4**	**-0.7**
PB03				IAML		07 42 36.0	
	comp=E,7μm,0.3s						
PB07	**IPOC Station P**	**1.65**	**37** ⇑	*i*P	**Pn**	**07 42 15.4**	**-0.1**
PB07				*e*S	**Sb**	**07 42 37.2**	**-0.7**
PB07				IAML		07 42 45.4	
	comp=N,4μm,0.1s						
PB07	**IPOC Station P**	**1.65**	**37**		**Pn**	**07 42 14.6**	**-1.0**
PB07					**Pn**	**07 42 15.5**	**-0.1**
LVC	**Limon Verde**	**1.94**	**77**	Pg	**Pn**	**07 42 20.6**	**+1.0**
	comp=N,252nm,0.3s,baz=240,slow=8.5,SNR=576						
LVC				Lg	Lg	07 42 45.9	
	comp=N,847nm,0.3s,baz=8.3,slow=14,SNR=16						
LVC	**Limon Verde**	**1.94**	**77**	*e*P	**Pn**	**07 42 20.6**	**+1.0**
LVC				*e*S	**Sb**	**07 42 46.4**	**+0.1**
PB02	**IPOC Station P**	**1.99**	**30** ⇑	*i*P	**Pn**	**07 42 20.1**	**0.0**
PB02				*e*S	**Sb**	**07 42 46.1**	**-1.3**
PB02				IAML		07 42 55.6	
	comp=E,5μm,0.4s						
PB09	**IPOC Station P**	**2.02**	**52** ⇑	*i*P	**Pn**	**07 42 21.6**	**+0.9**
PB09				*e*S	**Sb**	**07 42 48.0**	**-0.5**
PB09				IAML		07 42 54.7	
	comp=N,4μm,0.4s						
PB09	**IPOC Station P**	**2.02**	**52**		**Pn**	**07 42 21.5**	**+0.9**
PATCX	**Punta Patache**	**2.34**	**19**	*e*P	**Pn**	**07 42 24.7**	**-0.3**
PATCX				IAML		07 43 14.1	
	comp=E,1μm,0.7s						
PATCX	**Punta Patache**	**2.34**	**19**		**Pn**	**07 42 24.8**	**-0.3**
PB01	**IPOC Station P**	**2.42**	**34** ⇑	*i*P	**Pn**	**07 42 26.6**	**+0.5**
PB01				*e*S	**Sb**	**07 42 57.5**	**-2.5**
PB01				IAML		07 43 07.1	
	comp=E,2μm,0.3s						
PB01	**IPOC Station P**	**2.42**	**34**		**Pn**	**07 42 26.6**	**+0.5**
GO02	**Mina Guanaco**	**2.44**	**150** ⇑	*i*P	**Pn**	**07 42 27.8**	**+1.2**
GO02				*e*S	**Sn**	**07 42 57.5**	**+0.9**
GO02	**Mina Guanaco**	**2.44**	**150**		**Pn**	**07 42 27.6**	**+1.1**
TA01	**Diego Aracena**	**2.58**	**16**	IAML		07 43 14.6	
	comp=N,2μm,0.5s						
TA01	**Diego Aracena**	**2.58**	**16**		**Pn**	**07 42 27.8**	**-0.4**
AC01	**Pan de Azucar**	**3.10**	**174**		**Pn**	**07 42 34.5**	**-0.8**
PB08	**IPOC Station P**	**3.35**	**30**		**Pn**	**07 42 39.0**	**-0.1**
PB11	**IPOC Station P**	**3.49**	**20**	*e*P	**Pn**	**07 42 41.9**	**+1.0**
PB11				IAML		07 43 43.6	
	comp=N,974nm,0.4s						
PB11	**IPOC Station P**	**3.49**	**20**		**Pn**	**07 42 40.7**	**-0.2**
PSGCX	**Pisagua**	**3.53**	**13**		**Pn**	**07 42 40.8**	**-0.5**
GO01	**Chusmiza**	**3.75**	**26**	Pn	**Pn**	**07 42 45.5**	**+0.8**
MNMC	**Minoy Minye**	**4.11**	**18**		**Pn**	**07 42 49.4**	**0.0**
AC02	**Maricunga**	**4.11**	**157**		**Pn**	**07 42 51.2**	**+1.5**
GO03	**Copiap**	**4.56**	**172**		**Pn**	**07 42 55.2**	**-0.3**
AC04	**Llanos de Chal**	**5.13**	**181**		**Pn**	**07 43 01.8**	**-1.4**
CO01	**Juntas del Tor**	**6.94**	**174**	Pn	**Pn**	**07 43 28.4**	**+0.1**
LPAZ	**La Paz**	**7.24**	**22**	Pn	**Pn**	**07 43 36.0**	**+3.2**
	comp=N,3.5nm,0.3s,baz=187,slow=3.8,SNR=154						
LPAZ				LR	LR	07 46 36.8	
	comp=N,707nm,19.1s,baz=185,slow=40						
CO03	**El Pedregal**	**7.76**	**178**	Pn	**Pn**	**07 43 38.6**	**-0.8**
CO02	**Combarbal**	**8.12**	**180**	Pn	**Pn**	**07 43 42.8**	**-1.6**
CFA	**Coronel Fontan**	**8.85**	**165**	Pn	**Pn**	**07 43 54.4**	**0.0**
	comp=N,0.7nm,0.3s,baz=345,slow=14,SNR=11						
CFA				Sn	**Sn**	**07 45 29.9**	**-4.3**
	comp=N,1.8nm,0.3s,baz=183,slow=20,SNR=1.9						
CFA				LR	LR	07 47 02.8	
	comp=N,340nm,20.0s,baz=331,slow=36						
VA03	**San Esteban**	**9.68**	**178**	Pn	**Pn**	**07 44 06.5**	**+0.7**
MT02	**Curacav**	**10.17**	**181**	Pn	**Pn**	**07 44 10.6**	**-1.8**
SIV	**San Ignacio**	**11.66**	**55**	Pn	**Pn**	**07 44 31.5**	**-1.5**
	comp=N,2.2nm,0.3s,baz=249,slow=12,SNR=40						
SIV				Sn	**Sn**	**07 46 42.8**	**-0.6**
	baz=239,slow=21,SNR=1.0						
SIV				LR	LR	07 49 22.5	
	comp=N,178nm,18.8s,baz=208,slow=39						
NNA	**Nana**	**12.35**	**332**	LR	LR	07 49 03.5	
	comp=N,79nm,20.6s,baz=164,slow=35						
H03N1	**Juan Fernandez**	**12.49**	**212**	T	T	07 57 44.4	
	baz=39,slow=72,SNR=202						
H03N2	**Juan Fernandez**	**12.50**	**212**	T	T	07 57 58.4	
	baz=39,slow=72,SNR=139						
H03N3	**Juan Fernandez**	**12.51**	**212**	T	T	07 57 47.8	
	baz=39,slow=72,SNR=173						
CPUP	**Villa Florida**	**12.81**	**108**	Pn	**Pn**	**07 44 47.9**	**-0.6**
	comp=N,0.0nm,0.3s,baz=263,slow=8.1,SNR=2.0						
PTLB	**Pontes e Lacer**	**13.47**	**58**	*e*P	**Pn**	**07 44 57.1**	**-0.6**
PTLB				*e*S	**Sn**	**07 47 29.2**	**+1.6**
VILB	**Vilhena**	**14.33**	**47**	*e*P	**Pn**	**07 45 08.5**	**-0.9**
AQDB	**Aquidauana**	**14.40**	**83**	*e*P	**Pn**	**07 45 11.1**	**+0.7**
SAML	**Samuel**	**15.88**	**29**	P	**P**	**07 45 34.7**	**+0.8**
SAML	**Samuel**	**15.88**	**29**	*e*P	**Pn**	**07 45 29.2**	**-0.9**
SALV	**Santo Antonio**	**16.04**	**66**	*e*P	**Pn**	**07 45 33.2**	**+1.0**
TRCB	**Terra Rica**	**16.88**	**93**	*e*P	**P**	**07 45 44.7**	**-0.2**
PLCA	**Paso Flores**	**17.63**	**179**	P	**Pn**	**07 45 52.8**	**+0.6**
	comp=N,0.1nm,0.3s,baz=7.3,slow=5.9,SNR=4.1						
PLCA				LR	LR	07 52 21.8	
	comp=N,216nm,20.3s,baz=354,slow=36						
PCMB	**Pacaembu**	**18.28**	**89**	*e*P	**Pn**	**07 46 00.1**	**-0.1**
CLDB	**Colider**	**18.87**	**53**	*e*P	**P**	**07 46 04.9**	**-2.0**
ARAG	**Araguaiana, MT**	**19.47**	**71**	*e*P	**Pn**	**07 46 14.3**	**-0.4**
NPGB	**Novo Progresso**	**21.88**	**46**	*e*P	**P**	**07 46 38.7**	**-0.8**
IPMB	**Ipameri, GO**	**21.88**	**81**	*e*P	**P**	**07 46 38.6**	**-1.0**
BDFB	**Brasilia**	**22.85**	**75**	P	**P**	**07 46 49.0**	**-1.0**
	comp=N,3.5nm,0.6s,baz=243,slow=12,SNR=5.8						
BDFB				LR	LR	07 57 13.3	
	comp=N,344nm,18.2s,baz=276,slow=41						
BDFB	**Brasilia**	**22.85**	**75**	IAmb	IAmb	07 46 49.4	
	comp=Z,22nm,1.5s						
PTGA	**Pitinga**	**24.63**	**27**	P	**P**	**07 47 06.6**	**-0.5**
	comp=Z,3.5nm,0.4s,baz=209,slow=16,SNR=12						
PTGA				LR	LR	07 57 00.7	
	comp=Z,117nm,18.1s,baz=202,slow=37						
PTGA	**Pitinga**	**24.63**	**27**	P	**P**	**07 47 08.0**	**+0.8**
PTGA				IAmb	IAmb	07 47 16.5	
	comp=Z,12nm,1.1s						
PTGA	**Pitinga**	**24.63**	**27**	*e*P	**P**	**07 47 05.5**	**-1.7**
JANB	**Januaria**	**26.38**	**77**	*e*P	**P**	**07 47 22.5**	**-0.6**
PRPB	**Parauapebas**	**26.39**	**54**	*e*P	**P**	**07 47 21.7**	**-1.5**
SMTB	**Santa Maria do**	**26.47**	**62**	*e*P	**P**	**07 47 23.7**	**-0.2**
T47A	**Sharon Grove**	**61.63**	**345**	P	**P**	**07 52 05.2**	**+1.0**
TAOE	**Nuku Hiva Isla**	**67.49**	**270**	*e*LR	LR	08 13 10.4	
	comp=Z,152nm,25.9s						
Y14A	**Wickenburg**	**69.38**	**323**	P	**P**	**07 52 53.7**	**-0.8**
Y14A				IAmb	IAmb	07 52 54.6	
	comp=Z,2.5nm,0.6s						
DBIC	**Dimbokro**	**70.99**	**74**	LR	LR	08 23 34.9	
	comp=Z,51nm,18.1s,baz=214,slow=35						
TBI	**Tubuai**	**71.21**	**252**	*e*LR	LR	08 15 14.5	
	comp=Z,58nm,24.5s						
PPT2	**Papeete2**	**73.13**	**258**	*e*LR	LR	08 15 57.9	
	comp=Z,83nm,27.8s						
TOA0	**Torodi Ar. Sit**	**79.65**	**71**	P	**P**	**07 53 54.9**	**+0.3**
TORD	**Torodi Ar. Bea**	**79.65**	**71**	P	**P**	**07 53 54.2**	**-0.3**
	comp=Z,5.6nm,1.0s,baz=262,slow=4.6,SNR=16						
TORD				LR	LR	08 28 10.2	
	comp=Z,41nm,19.9s,baz=200,slow=35						
MAW	**Mawson**	**83.38**	**164**	LR	LR	08 30 52.4	
	comp=Z,26nm,19.7s,baz=236,slow=35						
BOSA	**Boshof**	**84.38**	**119**	P	**P**	**07 54 18.4**	**-1.0**
	comp=Z,3.7nm,1.0s,baz=270,slow=1.8,SNR=1.9						
BOSA	**Boshof**	**84.38**	**119**	IAmb	IAmb	07 54 27.8	
	comp=Z,4.8nm,1.1s						
YKA	**Yellowknife Ar**	**92.03**	**341**	P	**P**	**07 54 56.1**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=136,slow=4.9,SNR=9.8						
H11S2	**WAKE ISLAND Hyl**	**26.18**	**277**	T	T	10 20 13.8	
	baz=106,slow=74,SNR=52						
H11S1	**WAKE ISLAND Hyl**	**26.19**	**277**	T	T	10 20 11.4	
	baz=106,slow=74,SNR=35						
H11S3	**WAKE ISLAND Hyl**	**26.20**	**277**	T	T	10 20 12.8	
	baz=106,slow=74,SNR=33						
H11N3	**WAKE ISLAND Hyl**	**26.31**	**278**	T	T	10 20 21.9	
	baz=112,SNR=32						
H11N2	**WAKE ISLAND Hyl**	**26.33**	**278**	T	T	10 20 21.3	
	baz=112,SNR=24						
H11N1	**WAKE ISLAND Hyl**	**26.33**	**278**	T	T	10 20 14.6	
	baz=112,SNR=29						
WRA	**Warramunga Arr**	**130.65**	**212**	PKP	**PKPdf**	**08 00 58.9**	**+0.4**
	comp=Z,1.3nm,1.0s,baz=158,slow=2.6,SNR=4.5						
ZALV	**Zalesovo Beam**	**144.15**	**24**	PKP	**PKPdf**	**08 01 22.4**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=302,slow=2.7,SNR=2.3						
ARSB	**Arslanbob**	**144.78**	**50**		**PKPdf**	**08 01 24.6**	**+0.8**
AAK	**Ala-Archa**	**145.34**	**47**	PKPbc	**PKPdf**	**08 01 26.4**	**+1.7**
	comp=Z,5.4nm,0.9s,baz=262,slow=1.9,SNR=11						
AAK	**Ala-Archa**	**145.34**	**47**		**PKiKP**	**08 01 27.1**	**-1.6**
KSH	**Kashi**	**147.54**	**52**	PKPbc	**PKPbc**	**08 01 31.8**	**+0.6**
KSH				PP	**PP**	**08 05 01.3**	**+3.8**
KSH				PKS	**PKSdf**	**08 05 04.8**	**+1.0**
MK31	**Makanchi Array**	**148.00**	**36**		**PKPbc**	**08 01 33.0**	**+0.9**
MKAR	**Makanchi Array**	**148.00**	**36**	PKPbc	**PKPbc**	**08 01 32.9**	**+0.9**
	comp=Z,2.1nm,0.8s,baz=329,slow=1.7,SNR=14						
MJAR	**Matsushiro Arr**	**151.47**	**305**	PKPbc	**PKiKP**	**08 01 42.6**	**+1.3**
	comp=Z,1.3nm,0.5s,baz=223,slow=1.4,SNR=5.0						

TRN 28 07:45:55.5, 16.°88N×62.°19W, h17km, MD3.6, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLYT	**Lee's Yard**	**0.16**	**180**	*e*P		Pb	07 46 01.4	+1.4
MLYT				*e*S		Sb	07 46 04.3	+1.4
SKOC	**St. Kitts, UWI**	**0.66**	**309**	*e*P		Pn	07 46 11.7	+1.7
SKI	**Saint Kitts**	**0.69**	**311**	*e*P		Pn	07 46 10.1	-0.4
SKI				*e*S		Sb	07 46 19.0	+0.7
ABD	**La Joyeuse, An**	**0.79**	**121**	*e*P		Pn	07 46 13.5	+1.7
ABD				*e*S		Sn	07 46 25.5	+2.4
ANWB	**Willy Bob**	**0.88**	**26**	*e*P		Pn	07 46 14.6	+1.6
ANWB				*e*S		Sn	07 46 27.9	+2.5
CBE	**Ff, Capester**	**0.98**	**145**	*e*P		Pg	07 46 16.3	+1.8
CBE				*e*S		Sn	07 46 31.6	+3.6
TDBA	**Terre de Bas,**	**1.16**	**152**	*e*P		Pg	07 46 19.0	+1.1
TDBA				*e*S		Sg	07 46 34.2	+1.3
DEG	**La Desirade**	**1.22**	**117**	*e*P		Pg	07 46 21.9	+2.8
DEG				*e*S		Sg	07 46 37.2	+2.1
MAGL	**Barre de l'ile**	**1.27**	**137**	*e*P		Pg	07 46 21.5	+1.5
MAGL				*e*S		Sg	07 46 39.1	+2.5

SOF ***28*** *08:42:25.5, 39.°81N×24.°66E, h10km, MD4.0*

IDC ***28*** *08:42:26.2±0.9, 39.°81N×24.°39E, h0km, mb3.5/5, mb1 3.7/10, mb1mx3.5/36, mbtmp3.6/10, ML3.7/5, MS2.8/6, Ms1 2.8/6, ms1mx2.5/42, Error ellipse: s-maj=20.6km s-min=12.0km az=104.0*

ATH ***28*** *08:42:27.5, 39.°86N×24.°48E, h30km, ML3.8/21, Error ellipse: s-maj=0.9km s-min=0.5km az=99.0*

THE ***28*** *08:42:28.2, 39.°87N×24.°45E, h12km±1km, ML3.7/17, Error ellipse: s-maj=1.1km s-min=0.5km az=292.0*

BEO ***28*** *08:42:28.5±0.8, 39.°94N×24.°41E, h0km, ML3.7/9*

PDG ***28*** *08:42:28.3±0.6, 39.°86N×24.°45E, h19km±1km, ML3.4/13, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*

DDA ***28*** *08:42:29.1, 39.°72N×24.°64E, h25km±1km, MW3.9*

ISK ***28*** *08:42:29.1, 39.°83N×24.°32E, h22km, ML4.1/31*

ISC 28 08:42:28.3±0.9, 39.°86N±0.°01×24.°48E±0.°01, h16km±7km, **n213,σ1°§26/289, mb3.3/5, MS2.7/5, 18C-13D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EFSA	**Agios Efstrati**	**0.51**	**128**	P	**Pb**	**08 42 38.4**	**-0.4**
EFSA				S	**Sb**	**08 42 45.8**	**0.0**
EFSA				AML	AML	08 42 46.6	
	comp=E,26021μm,0.5s						
EFSA				AML	AML	08 42 48.4	
	comp=N,17281μm,0.6s						
LIA	**Limnos Island**	**0.54**	**85**	P	**Pb**	**08 42 38.8**	**-0.6**
LIA				S	**Sb**	**08 42 46.6**	**-0.4**
	comp=N,8μm,0.4s						
LIA	**Limnos Island**	**0.54**	**85**	P	**Pb**	**08 42 38.7**	**-0.6**
LIA				S	**Sb**	**08 42 46.6**	**-0.4**
LIA				AML	AML	08 42 46.9	
	comp=E,16745μm,0.4s						
LIA				AML	AML	08 42 51.0	
	comp=N,16727μm,0.3s						
OUR	**Ouranopolis**	**0.61**	**322**	P	**Pb**	**08 42 40.1**	**-0.4**
OUR				S	**Sg**	**08 42 48.4**	**-0.1**
	comp=N,10μm,0.4s						
OUR	**Ouranopolis**	**0.61**	**322**	P	**Pg**	**08 42 40.3**	**0.0**
OUR				S	**Sg**	**08 42 48.8**	**+0.3**
OUR				AML	AML	08 42 51.8	
	comp=E,15153μm,0.4s						
OUR				AML	AML	08 42 51.8	
	comp=N,22762μm,0.6s						
OUR	**Ouranopolis**	**0.61**	**322**	PG	**Pg**	**08 42 40.2**	**-0.1**
OUR				SG	**Sn**	**08 42 50.2**	**-1.5**
PAIG	**Paliouri**	**0.62**	**277**	P	**Pb**	**08 42 40.0**	**-0.6**
PAIG				S	**Sg**	**08 42 48.6**	**-0.1**
	comp=N,8μm,0.5s						
PAIG	**Paliouri**	**0.62**	**277**	P	**Pb**	**08 42 40.1**	**-0.6**
PAIG				S	**Sg**	**08 42 49.4**	**+0.8**
PAIG				AML	AML	08 42 52.1	
	comp=N,18058μm,0.6s						
PAIG				AML	AML	08 42 52.3	
	comp=E,13664μm,0.7s						
THAS	**Thassos island**	**0.77**	**14**	P	**Pb**	**08 42 42.4**	**-0.9**
THAS				S	**Sg**	**08 42 54.3**	**+0.8**
	comp=E,15μm,0.4s						
THAS	**Thassos island**	**0.77**	**14**	P	**Pb**	**08 42 42.4**	**-0.9**
THAS				S	**Sg**	**08 42 54.4**	**+0.8**
THAS				AML	AML	08 42 55.6	
	comp=E,40997μm,0.5s						
THAS				AML	AML	08 42 56.1	
	comp=N,17059μm,0.3s						
AOS	**Alonnisos**	**0.83**	**214**	P	**Pb**	**08 42 43.9**	**-0.3**
AOS				S	**Sn**	**08 42 56.9**	**-0.1**
	comp=N,19μm,0.4s						
AOS	**Alonnisos**	**0.83**	**214**	P	**Pb**	**08 42 43.9**	**-0.3**
AOS				S	**Sn**	**08 42 56.6**	**-0.4**
AOS				AML	AML	08 42 59.5	
	comp=E,40876μm,0.5s						
AOS				AML	AML	08 42 59.6	
	comp=N,33409μm,0.4s						
AOS	**Alonnisos**	**0.83**	**214**	PG	**Pg**	**08 42 44.4**	**+0.1**
AOS				SG	**Sn**	**08 42 55.7**	**-1.3**
ALNA	**Alonnisos**	**0.85**	**214**	P	**Pg**	**08 42 44.6**	**-0.2**
ALNA				S	**Sn**	**08 42 57.2**	**-0.4**
ALNA				AML	AML	08 42 60.0	
	comp=N,33599μm,0.6s						
ALNA				AML	AML	08 43 00.1	
	comp=E,30946μm,0.6s						
PLG	**Polygyros**	**0.95**	**304**	P	**Pb**	**08 42 45.7**	**-0.6**
PLG				S	**Sg**	**08 42 58.8**	**-0.3**
	comp=E,3μm,0.5s						
PLG	**Polygyros**	**0.95**	**304**	P	**Pb**	**08 42 45.9**	**-0.4**
PLG				S	**Sg**	**08 42 58.6**	**-0.4**
PLG				AML	AML	08 43 02.1	
	comp=E,6012μm,0.6s						
PLG				AML	AML	08 43 02.4	
	comp=N,6082μm,0.4s						
SKY	**Skiros Island**	**0.98**	**177**	P	**Pb**	**08 42 46.3**	**-0.5**
SKY				S	**Sn**	**08 43 01.8**	**+1.0**
	comp=N,9μm,0.3s						
SKY	**Skiros Island**	**0.98**	**177**	P	**Pb**	**08 42 46.5**	**-0.3**
SKY				S	**Sn**	**08 43 00.5**	**-0.3**
SKY				AML	AML	08 43 03.9	
	comp=E,16081μm,0.3s						
SKY				AML	AML	08 43 04.0	
	comp=N,18563μm,0.4s						
SMTH	**Samothraki Isl**	**1.01**	**52**	P	**Pb**	**08 42 46.7**	**-0.7**
SMTH				S	**Sg**	**08 43 02.1**	**+0.9**
	comp=N,6μm,0.5s						
SMTH	**Samothraki Isl**	**1.01**	**52**	P	**Pb**	**08 42 46.8**	**-0.6**
SMTH				S	**Sn**	**08 43 01.1**	**-0.6**
SMTH				AML	AML	08 43 02.6	
	comp=E,10674μm,0.5s						
SMTH				AML	AML	08 43 02.9	
	comp=N,13521μm,0.5s						
SKIA	**Skiathos**	**1.04**	**229**	P	**Pb**	**08 42 47.3**	**-0.6**
SKIA				S	**Sg**	**08 43 02.0**	**-0.1**
	comp=N,6μm,0.5s						
SKIA	**Skiathos**	**1.04**	**229**	P	**Pb**	**08 42 47.4**	**-0.6**
SKIA				S	**Sg**	**08 43 02.3**	**+0.2**
SKIA				AML	AML	08 43 04.7	
	comp=N,13228μm,0.5s						
SKIA				AML	AML	08 43 06.8	
	comp=E,12394μm,0.5s						
KVLA	**Kavala**	**1.08**	**356**	P	**Pb**	**08 42 48.2**	**-0.3**
KVLA				S	**Sb**	**08 43 02.0**	**-0.5**
KVLA				AML	AML	08 43 04.5	
	comp=E,18066μm,0.4s						
KVLA				AML	AML	08 43 05.0	
	comp=N,8726μm,0.6s						
XOR	**Xorichti**	**1.11**	**244**	P	**Pb**	**08 42 48.3**	**-0.7**
XOR				S	**Sg**	**08 43 03.5**	**-0.7**
	comp=N,3μm,0.5s						
XOR	**Xorichti**	**1.11**	**244**	P	**Pb**	**08 42 48.5**	**-0.5**
XOR				S	**Sn**	**08 43 03.3**	**-0.8**
XOR				AML	AML	08 43 03.5	
	comp=N,5451μm,0.7s						
XOR				AML	AML	08 43 03.9	
	comp=E,5540μm,0.4s						
NEO	**Neokhori**	**1.11**	**241**	P	**Pn**	**08 42 48.4**	**-0.7**
NEO	**Neokhori**	**1.11**	**241**	P	**Pn**	**08 42 48.5**	**-0.7**
NEO				S	**Sn**	**08 43 03.2**	**-1.0**
NEO				AML	AML	08 43 03.3	
	comp=N,6724μm,0.5s						
NEO				AML	AML	08 43 04.0	
	comp=E,4320μm,0.4s						
KAVA	**Kavala**	**1.14**	**1**	P	**Pn**	**08 42 48.8**	**-0.7**
KAVA				S	**Sg**	**08 43 05.3**	**+0.1**
	comp=E,4μm,0.4s						
KAVA	**Kavala**	**1.14**	**1**	P	**Pn**	**08 42 49.0**	**-0.5**
KAVA				S	**Sn**	**08 43 04.3**	**-0.5**
KAVA				AML	AML	08 43 07.1	
	comp=E,8837μm,0.3s						
KAVA				AML	AML	08 43 07.7	
	comp=N,7398μm,0.2s						
GADA	**Gvkgeada**	**1.14**	**72**	P	**Pb**	**08 42 49.1**	**-0.4**
GADA				S	**Sg**	**08 43 05.4**	**+0.2**
	comp=N,4μm,0.4s						
GADA	**Gvkgeada**	**1.14**	**72**	PN	**Pb**	**08 42 50.1**	**+0.5**
GOKA	**anakkale-Gk**	**1.15**	**73**	*i* P	**Pn**	**08 42 49.4**	**-0.2**
GOKA				*i* S	**Sn**	**08 43 05.0**	**0.0**
BOZC	**Bozcaada**	**1.21**	**90**	PN	**Pg**	**08 42 51.6**	**-0.1**
BOZC	**Bozcaada**	**1.21**	**90**	*i* P	**Pn**	**08 42 50.4**	**-0.2**
BOZC				*i* P	**Pb**	**08 42 50.5**	**-0.3**
BOZC				*i* S	**Sb**	**08 43 05.9**	**-0.3**
BOZC				IAML		08 43 08.0	
	comp=N,1μm,0.2s						
BOZC				IAML		08 43 08.0	
	comp=N,935nm,0.2s						
BOZC				IAML		08 43 09.0	
	comp=E,1μm,0.4s						
BOZC				IAML		08 43 11.0	
	comp=E,1μm,0.5s						
SIGR	**SIGRI**

AYVA				IAML		08 43 23.0		
	comp=E,466nm,0.7s							
AYVA				IAML		08 43 35.0		
	comp=N,811nm,0.5s							
KARY	**Karystos**	**1.82**	**181**	P	**Pn**	**08 42 58.8**	**-0.1**	
DION	**Dionisos Attik**	**1.82**	**194**	P	**Pn**	**08 42 58.7**	**-0.3**	
LPK	**Lapseki**	**1.82**	**73**	PN	**Pb**	**08 43 01.9**	**+0.7**	
RZN	**Rozhen**	**1.84**	**6**	*i* P	**Pn**	**08 42 59.3**	**0.0**	
AGG	**Agios Georgios**	**1.86**	**244**	P	**Pn**	**08 43 00.0**	**+0.6**	
VIL2	**Platees**	**1.89**	**210**	P	**Pn**	**08 42 59.9**	**0.0**	
CHOS	**Chios island**	**1.91**	**140**	P	**Pn**	**08 43 00.8**	**+0.6**	
CHOS	**Chios island**	**1.91**	**140**	PN	**Pb**	**08 43 02.2**	**-0.6**	
THL	**Klokotos Trika**	**1.92**	**262**	P	**Pn**	**08 43 00.5**	**+0.2**	
KDZ	**Kurdzhali**	**1.93**	**21**	*i* P	**Pn**	**08 42 59.6**	**-0.8**	
KDZ	**Kurdzhali**	**1.93**	**21**	PN	**Pb**	**08 43 01.9**	**-1.1**	
KESN	**Edirne-Kesan**	**1.94**	**59**	*i* P	**Pn**	**08 43 01.9**	**+1.0**	
KESN				*i* S	**Sn**	**08 43 23.5**	**-1.6**	
KESN				IAML		08 43 37.0		
	comp=N,834nm,0.4s							
ATHU	**Athens Univers**	**1.96**	**196**	P	**Pn**	**08 43 00.5**	**-0.3**	
ATH	**Athens Observa**	**1.97**	**198**	P	**Pn**	**08 43 01.0**	**+0.1**	
MAKR	**Makrakomi, Fth**	**2.00**	**246**	P	**Pn**	**08 43 02.2**	**+0.7**	
DKL	**Dikili**	**2.04**	**112**	PN	**Pb**	**08 43 04.6**	**-0.2**	
KRBN	**Karaburun**	**2.05**	**127**	PN	**Pb**	**08 43 04.4**	**-0.6**	
VAY	**Valandovo**	**2.06**	**316**	*e*Pn	**Pn**	**08 43 03.0**	**+0.8**	
VAY	**Valandovo**	**2.06**	**316**	*e*Pn	**Pn**	**08 43 03.0**	**+0.8**	
DLFA	**Delphi**	**2.06**	**229**	P	**Pn**	**08 43 01.9**	**-0.4**	
UKOP	**Uzunkopru-Edir**	**2.08**	**52**	PN	**Pb**	**08 43 05.2**	**-0.3**	
KZN	**Kozani**	**2.12**	**283**	P	**Pn**	**08 43 03.4**	**+0.3**	
ZEDA	**zmir-Bergama**	**2.20**	**113**	*i* P	**Pb**	**08 43 08.1**	**+0.5**	
ZEDA				*i* S	**Sg**	**08 43 38.0**	**-1.0**	
ZEDA				IAML		08 43 41.0		
	comp=N,262nm,0.7s							
ZEDA				IAML		08 43 43.0		
	comp=E,250nm,0.4s							
LOUT	**Loutraki**	**2.20**	**213**	P	**Pn**	**08 43 03.1**	**-1.1**	
URLA	**Izmir**	**2.22**	**132**	PN	**Pb**	**08 43 07.0**	**-1.1**	
URLA	**Izmir**	**2.22**	**132**	*i* P	**Pn**	**08 43 05.0**	**+0.6**	
URLA				*i* S	**Sg**	**08 43 39.9**	**+0.1**	
URLA				IAML		08 43 44.0		
	comp=E,146nm,0.5s							
URLA				IAML		08 43 56.0		
	comp=N,206nm,0.7s							
RKY	**Sarkoy-Tekirda**	**2.23**	**67**	PN	**Pb**	**08 43 07.6**	**-0.5**	
KRBG	**Karabiga-Canak**	**2.23**	**75**	PN	**Pb**	**08 43 07.5**	**-0.6**	
SART	**Tekirdag**	**2.23**	**67**	*i* P	**Pn**	**08 43 05.5**	**+0.9**	
SART				*i* S	**Sb**	**08 43 36.5**	**+1.0**	
SART				IAML		08 43 48.0		
	comp=E,205nm,0.6s							
PLD	**Plovdiv**	**2.25**	**4**	*i* P	**Pg**	**08 43 11.7**	**+0.2**	
PLD	**Plovdiv**	**2.25**	**4**	PN	**Pb**	**08 43 06.5**	**-2.1**	
KKB	**Krupnik**	**2.27**	**333**	*i* P	**Pn**	**08 43 05.8**	**+0.7**	
DIM	**Dimitrovgrad**	**2.33**	**20**	P	**Pg**	**08 43 13.2**	**+0.2**	
KALE	**Kalithea**	**2.33**	**232**	P	**Pn**	**08 43 06.1**	**+0.1**	
ANX	**Ano Chora**	**2.35**	**238**	P	**Pn**	**08 43 06.7**	**+0.4**	
SERG	**Sergoula**	**2.37**	**233**	P	**Pn**	**08 43 06.5**	**+0.1**	
TRIZ	**Trizonia**	**2.39**	**232**	P	**Pn**	**08 43 06.7**	**0.0**	
KPRO	**Kipourio**	**2.40**	**273**	P	**Pn**	**08 43 07.5**	**+0.6**	
BALY	**Balya**	**2.42**	**92**	*i* P	**Pn**	**08 43 07.3**	**+0.1**	
BALY				*i* S	**Sb**	**08 43 42.0**	**+0.9**	
BALY				IAML		08 43 47.0		
	comp=N,432nm,0.4s							
BALY				IAML		08 43 57.0		
	comp=E,272nm,0.4s							
GONE	**Gonen-Balikesi**	**2.47**	**85**	PN	**Pb**	**08 43 11.1**	**-1.2**	
BLCB	**Balcova**	**2.48**	**126**	PN	**Pb**	**08 43 10.5**	**-1.9**	
MRMT	**Marmara Adasi**	**2.50**	**72**	PN	**Pb**	**08 43 11.5**	**-1.3**	
LAKA	**Lakka**	**2.53**	**231**	P	**Pn**	**08 43 07.7**	**-0.9**	
FNA	**Florina**	**2.55**	**292**	P	**Pn**	**08 43 10.2**	**+1.3**	
STEP	**BALIKESIR_Sava**	**2.55**	**100**	*i* P	**Pn**	**08 43 10.0**	**+1.1**	
STEP				*i* S	**Sg**	**08 43 50.2**	**0.0**	
STEP				IAML		08 43 59.0		
	comp=N,506nm,1.0s							
STEP				IAML		08 44 00.0		
	comp=E,291nm,0.6s							
PENT	**Pentalofos**	**2.59**	**279**	P	**Pn**	**08 43 10.7**	**+1.1**	
TKR	**Tekirdag**	**2.59**	**63**	PN	**Pb**	**08 43 12.9**	**-1.5**	
PVO	**Paravola**	**2.60**	**243**	P	**Pn**	**08 43 10.9**	**+1.2**	
EDRB	**Edirne**	**2.63**	**40**	PN	**Pb**	**08 43 13.1**	**-1.9**	
BALB	**Balikesir**	**2.63**	**94**	PN	**Pb**	**08 43 13.3**	**-1.7**	
EDC	**Edincik**	**2.64**	**78**	PN	**Pb**	**08 43 13.2**	**-2.0**	
NEST	**Nestorio**	**2.69**	**283**	P	**Pn**	**08 43 11.3**	**+0.4**	
SERI	**Serifos**	**2.69**	**180**	P	**Pn**	**08 43 10.5**	**-0.4**	
KIRK	**Kirklareli**	**2.77**	**45**	*i* P	**Pg**	**08 43 19.7**	**-1.6**	
KIRK				*i* S	**Sg**	**08 43 54.6**	**-2.5**	
SMG	**Samos**	**2.83**	**139**	P	**Pn**	**08 43 13.3**	**+0.6**	
PDO	**Prodromos**	**2.85**	**245**	P	**Pn**	**08 43 14.5**	**+1.4**	
DRO	**Drossia**	**2.88**	**230**	P	**Pn**	**08 43 14.1**	**+0.6**	
TRIP	**Tripoli**	**2.90**	**217**	P	**Pn**	**08 43 13.8**	**+0.1**	
APE	**Apeiranthos**	**2.90**	**163**	P	**Pn**	**08 43 13.5**	**-0.3**	
APE	**Apeiranthos**	**2.90**	**163**	⇑P	**Pn**	**08 43 13.5**	**-0.3**	
APE				⇑S	**Sn**	**08 43 48.4**	**+0.1**	
BOTS	**Marmara Eregli**	**2.90**	**66**	PN	**Pb**	**08 43 17.4**	**-2.2**	
VTS	**Vitosha**	**2.91**	**342**	*e*Pn	**Pn**	**08 43 14.6**	**+0.5**	
VTS				*e*Sn	**Sn**	**08 43 48.1**	**-0.7**	
VTS	**Vitosha**	**2.91**	**342**	⇑P	**Pn**	**08 43 15.4**	**+1.3**	
VTS	**Vitosha**	**2.91**	**342**	P	**Pn**	**08 43 15.2**	**+1.1**	
PHSR	**Pinarhisar**	**2.92**	**52**	PN	**Pb**	**08 43 17.5**	**-2.3**	
RLS	**Riolos of Patr**	**2.96**	**234**	P	**Pn**	**08 43 16.2**	**+1.7**	
KCTX	**Karacabey (Bur**	**3.00**	**81**	PN	**Pb**	**08 43 18.7**	**-2.7**	
BOSS	**Bosilegrad**	**3.04**	**331**	*e*Pn	**Pn**	**08 43 16.6**	**+0.9**	
BOSS				*e*Sn	**Sn**	**08 43 52.5**	**+0.8**	
GCAM	**G?zelcaml?**	**3.04**	**134**	PN	**Pn**	**08 43 18.6**	**+2.9**	
DURS	**Dursunbey**	**3.09**	**93**	*i* P	**Pb**	**08 43 24.0**	**+1.1**	
DURS				*i* S	**Sg**	**08 44 06.3**	**-1.3**	
SLVT	**Silivri**	**3.16**	**63**	PN	**Pb**	**08 43 21.2**	**-2.8**	
DST	**Dursunbey**	**3.20**	**93**	PN	**Pb**	**08 43 22.1**	**-2.7**	
ELBA	**Catalca**	**3.28**	**66**	*i* P	**Pb**	**08 43 28.1**	**+2.0**	
ELBA				*i* S	**Sb**	**08 44 09.8**	**+4.2**	
CTYL	**Yalikoy Yolu**	**3.32**	**60**	PN	**Pb**	**08 43 23.2**	**-3.5**	
CTKS	**Kestanelik-??a**	**3.37**	**65**	PN	**Pn**	**08 43 23.7**	**+3.6**	
DEMI	**Demirci**	**3.38**	**103**	*i* P	**Pn**	**08 43 21.5**	**+1.1**	
DEMI				*i* S	**Sg**	**08 44 15.4**	**-1.4**	
DEMI				IAML		08 44 23.0		
	comp=E,120nm,0.4s							
DEMI				IAML		08 44 27.0		
	comp=N,99nm,0.5s							
ORLT	**Orhaneli**	**3.40**	**85**	PN	**Pb**	**08 43 24.8**	**-3.3**	
MDNY	**Mudanya-Bursa**	**3.42**	**80**	PN	**Pb**	**08 43 24.9**	**-3.5**	
ARMT	**Armutlu**	**3.43**	**77**	PN	**Pb**	**08 43 25.1**	**-3.5**	
MANT	**Manisa**	**3.45**	**112**	*i* P	**Pn**	**08 43 23.6**	**+2.1**	
MANT				*i* S	**Sb**	**08 44 14.5**	**+3.7**	
MANT				IAML		08 44 27.0		
	comp=E,54nm,0.7s							
MANT				IAML		08 44 28.0		
	comp=N,49nm,0.9s							
PLVB	**Pleven**	**3.53**	**2**	⇓P	**Pn**	**08 43 23.7**	**+1.3**	
BGKT	**Bogazkoy**	**3.53**	**67**	PN	**Pb**	**08 43 26.6**	**-3.7**	
MPEP	**Malo Peshtene**	**3.54**	**351**	P	**Pn**	**08 43 23.8**	**+1.3**	
SIMA	**Simav-Kutahya**	**3.57**	**101**	PN	**Pb**	**08 43 27.3**	**-3.8**	
BARS	**Barje**	**3.57**	**327**	*e*Pn	**Pn**	**08 43 23.5**	**+0.5**	
BARS	**Barje**	**3.57**	**327**	*e*Pn	**Pg**	**08 43 37.1**	**+0.4**	
BARS				*e*Sn	**Sn**	**08 44 05.3**	**+0.4**	
SZH	**Strazhica**	**3.58**	**17**	*i* P	**Pn**	**08 43 23.4**	**+0.3**	
ULDT	**Uludag**	**3.59**	**84**	*i* P	**Pb**	**08 43 33.7**	**+2.3**	
ULDT				*i* S	**Sg**	**08 44 21.5**	**-2.0**	
GEMT	**Gemlik**	**3.66**	**79**	PN	**Pb**	**08 43 28.5**	**-4.0**	
ZAPS	**Zavoj**	**3.69**	**339**	*e*Pn	**Pn**	**08 43 26.0**	**+1.4**	
ZAPS				*e*Sn	**Sn**	**08 44 08.2**	**+0.6**	
ISK	**Istanbul-Kandi**	**3.70**	**69**	PN	**Pn**	**08 43 28.7**	**+4.0**	
KLYT	**Kilyos**	**3.75**	**67**	PN	**Pn**	**08 43 29.4**	**+4.1**	
YLV	**Yalova**	**3.81**	**78**	PN	**Pn**	**08 43 30.5**	**+4.1**	
GDZ	**Gediz**	**3.95**	**100**	*i* P	**Pn**	**08 43 30.3**	**+2.0**	
GDZ				IAML		08 44 43.0		
	comp=E,24nm,0.7s							
GDZ				IAML		08 44 47.0		
	comp=N,29nm,0.6s							
RAZG	**Razgrad**	**4.01**	**22**	⇑P	**Pn**	**08 43 29.4**	**+0.5**	
KHAL	**Karahalli**	**4.17**	**109**	*i* P	**Pn**	**08 43 33.0**	**+1.7**	
KHAL				IAML		08 44 47.0		
	comp=N,20nm,0.6s							
SELS	**Selova**	**4.20**	**324**	*e*Pn	**Pn**	**08 43 31.4**	**-0.2**	
SELS				*e*Sn	**Sn**	**08 44 19.7**	**-0.7**	
ZAGS	**Zajecar**	**4.29**	**338**	*e*Pn	**Pn**	**08 43 32.8**	**-0.1**	
ZAGS				*e*Sn	**Sn**	**08 44 22.7**	**+0.1**	
BOVS	**Bovan**	**4.31**	**332**	*e*Pn	**Pn**	**08 43 33.9**	**+0.8**	
BOVS				*e*Sn	**Sn**	**08 44 23.2**	**+0.3**	
PVY	**Plav**	**4.37**	**310**	⇑*i*Pn	**Pn**	**08 43 35.1**	**+1.0**	
PVY				*i* Sn	**Sn**	**08 44 24.0**	**-0.7**	
ULC	**Ulcinj**	**4.49**	**300**	⇓*i*Pn	**Pn**	**08 43 36.8**	**+1.2**	
ULC				*i* Sn	**Sn**	**08 44 26.8**	**-0.7**	

IDI	**Anoyia**	**4.57**	**176**	Pn	**Pn**	**08 43 36.6**	**-0.1**	
	comp=N,1.6nm,0.3s,baz=320,slow=13,SNR=10							
IDI				Lg	Lg	08 44 52.4		
	baz=304,slow=15,SNR=1.2							
IDI	**Anoyia**	**4.57**	**176**	⇓P	**Pn**	**08 43 37.0**	**+0.2**	
IVA	**Berane**	**4.58**	**313**	⇓*i*Pn	**Pn**	**08 43 37.9**	**+1.0**	
IVA				*i* Sn	**Sn**	**08 44 29.2**	**-0.6**	
DRME	**Dracevica, Mon**	**4.63**	**302**	⇓*i*Pn	**Pn**	**08 43 38.7**	**+1.2**	
DRME				*i* Sn	**Sn**	**08 44 30.2**	**-0.7**	
TTG	**Podgorica**	**4.71**	**305**	⇓*i*Pn	**Pn**	**08 43 39.8**	**+1.3**	
TTG				*i* Sn	**Sn**	**08 44 32.0**	**-0.8**	
KOME	**Kolasin**	**4.79**	**310**	⇑*i*Pn	**Pn**	**08 43 41.2**	**+1.5**	
KOME				*i* Sn	**Sn**	**08 44 33.9**	**-1.0**	
SJES	**Sjenica**	**4.79**	**317**	*e*Pn	**Pn**	**08 43 41.3**	**+1.4**	
BUM	**Brajici-Budva**	**4.88**	**302**	⇓*i*Pn	**Pn**	**08 43 42.3**	**+1.4**	
BUM				*i* Sn	**Sn**	**08 44 36.0**	**-1.1**	
GRUS	**Gruza**	**4.91**	**326**	*e*Pn	**Pn**	**08 43 41.8**	**+0.4**	
GRUS				*e*Sn	**Sn**	**08 44 36.2**	**-1.6**	
IVAS	**Ivanjica**	**4.93**	**320**	*e*Pn	**Pn**	**08 43 40.7**	**-1.0**	
CEME	**Cevo**	**4.98**	**304**	⇑*i*Pn	**Pn**	**08 43 43.9**	**+1.5**	
CEME				*i* Sn	**Sn**	**08 44 38.6**	**-1.1**	
NKME	**Niksic**	**5.08**	**307**	⇓*i*Pn	**Pn**	**08 43 44.8**	**+1.1**	
NKME				*i* Sn	**Sn**	**08 44 40.8**	**-1.2**	
PLE	**Pljevlja**	**5.16**	**314**	⇑*i*Pn	**Pn**	**08 43 46.3**	**+1.4**	
PLE				*i* Sn	**Sn**	**08 44 42.9**	**-1.2**	
HCY	**Herceg Novi**	**5.21**	**302**	⇑*i*Pn	**Pn**	**08 43 46.6**	**+1.2**	
HCY				*i* Sn	**Sn**	**08 44 43.9**	**-1.2**	
HERR	**Herculane**	**5.25**	**344**	⇓P	**Pn**	**08 43 46.2**	**+0.2**	
MDVR	**Moldovita**	**5.33**	**338**	⇑P	**Pn**	**08 43 47.4**	**+0.2**	
UPM	**Unac-Piva**	**5.36**	**310**	⇑*i*Pn	**Pn**	**08 43 48.7**	**+1.1**	
UPM				*i* Sn	**Sn**	**08 44 47.6**	**-1.4**	
DIVS	**Divibare**	**5.40**	**323**	*e*Pn	**Pn**	**08 43 48.4**	**+0.3**	
DIVS				*e*Sn	**Sn**	**08 44 47.8**	**-2.1**	
BRY	**Bratogost**	**5.41**	**306**	⇓*i*Pn	**Pn**	**08 43 49.4**	**+1.1**	
BRY				*i* Sn	**Sn**	**08 44 48.7**	**-1.5**	
HARR	**Harsova**	**5.47**	**27**	⇑P	**Pn**	**08 43 49.4**	**+0.5**	
ARR	**Arges**	**5.51**	**1**	⇑P	**Pn**	**08 43 50.6**	**+1.0**	
BBLS	**Lazići**	**5.51**	**318**	*e*Pn	**Pn**	**08 43 50.9**	**+1.2**	
GZR	**Gura Zlata**	**5.67**	**348**	⇑P	**Pn**	**08 43 52.2**	**+0.2**	
MLR	**Muntele Rosu**	**5.74**	**10**	Pn	**Pn**	**08 43 54.4**	**+1.6**	
	comp=N,1.5nm,0.3s,baz=184,slow=7.2,SNR=15							
MLR				Sn	**Sn**	**08 44 57.1**	**-1.2**	
	comp=N,0.5nm,0.3s,baz=280,slow=22,SNR=1.8							
MLR				Lg	Lg	08 45 33.1		
	comp=N,1.8nm,0.3s,baz=16,slow=16,SNR=4.9							
MLR	**Muntele Rosu**	**5.74**	**10**	⇑P	**Pn**	**08 43 54.6**	**+1.8**	
CFR	**Carcaliu**	**5.97**	**26**	⇑P	**Pn**	**08 43 56.2**	**+0.4**	
TIP	**Timpagrande**	**6.01**	**266**	⇑P	**Pn**	**08 43 57.7**	**+1.2**	
VRI	**Vrincioaia**	**6.23**	**15**	⇓P	**Pn**	**08 44 02.0**	**+2.5**	
RICI	**Ricice**	**6.59**	**306**	*i* P	**Pn**	**08 44 06.1**	**+1.7**	
TESR	**Tescani**	**6.84**	**13**	⇓P	**Pn**	**08 44 09.5**	**+1.6**	
BRTR	**Keskin Array B**	**7.06**	**88**	Pn	**Pn**	**08 44 12.2**	**+1.2**	
	comp=N,0.5nm,0.3s,baz=261,slow=12,SNR=8.1							
BRTR				Lg	Lg	08 46 16.4		
	baz=273,slow=22,SNR=3.5							
BRTR				LR	LR	08 46 57.9		
	comp=N,53nm,19.6s,baz=245,slow=38							
BIZ	**Bicaz**	**7.18**	**9**	⇓P	**Pn**	**08 44 14.5**	**+2.0**	
KIJV	**Kijevo**	**7.31**	**307**	*i* P	**Pn**	**08 44 15.8**	**+1.6**	
ZIRJ	**Zirje**	**7.62**	**303**	*i* P	**Pn**	**08 44 18.5**	**0.0**	
BURAR	**Bucovina Array**	**7.78**	**4**	⇑P	**Pn**	**08 44 21.5**	**+0.7**	
MOSL	**Moslavina**	**8.09**	**318**	*i* P	**Pn**	**08 44 24.9**	**-0.1**	
MMAI	**Mount Meron Ar**	**11.13**	**124**	Pn	**Pn**	**08 45 07.6**	**+0.9**	
	comp=N,0.6nm,0.3s,baz=306,slow=17,SNR=1.2							
AKASG	**Malin Array Be**	**11.35**	**16**	Pn	**Pn**	**08 45 08.7**	**-0.8**	
	comp=N,0.8nm,0.3s,baz=203,slow=11,SNR=2.5							
HFS	**Hagfors**	**21.40**	**345**	LR	LR	08 56 11.8		
	comp=N,18nm,18.1s,baz=336,slow=38							
FINES	**FINESS Array B**	**21.64**	**2**	LR	LR	08 56 01.0		
	comp=N,42nm,19.9s,baz=170,slow=38							
ESDC	**Sonseca Array**	**21.83**	**279**	P	**P**	**08 47 20.1**	**+0.3**	
	comp=N,0.2nm,0.4s,baz=74,slow=11,SNR=2.0							
ESDC				LR	LR	08 56 03.0		
	comp=N,25nm,18.4s,baz=70,slow=38							
NOA	**NORSAR Array B**	**22.74**	**343**	LR	LR	08 58 23.8		
	comp=N,5.4nm,20.1s,baz=235,slow=42							
TORD	**Torodi Ar. Bea**	**33.32**	**223**	P	**P**	**08 49 06.0**	**+0.6**	
	comp=N,0.5nm,0.5s,baz=34,slow=8.9,SNR=5.9							
SPITS	**Spitsbergen Ar**	**38.58**	**357**	LR	LR	09 07 06.9		
	comp=N,49nm,18.6s,baz=70,slow=38							
MKAR	**Makanchi Array**	**41.80**	**61**	P	**P**	**08 50 18.3**	**+1.4**	
	comp=N,0.3nm,0.5s,baz=249,slow=6.0,SNR=4.2							
DBIC	**Dimbokro**	**42.25**	**226**	P	**P**	**08 50 18.9**	**-1.9**	
	comp=N,4.7nm,0.9s,baz=3.5,slow=7.4,SNR=4.0							
YKA	**Yellowknife Ar**	**72.83**	**341**	P	**P**	**08 53 56.2**	**+0.6**	
	comp=N,0.1nm,0.4s,baz=37,slow=5.5,SNR=1.7							

BER 28 08:56:32.9±0.9, 60°23'N×11°75'E, h0km±4km, ML1.0, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NC602	**NORSAR Array S**	**0.51**	**348**	*e*P	Pg	08 56 42.0	-0.7
NC602				*e*S	Sg	08 56 48.6	-0.8
NC602				IAML		08 56 54.5	
	comp=Z,18nm,0.6s						
NAO01	**NORSAR Array S**	**0.75**	**325**	*e*P	Pg	08 56 45.9	-1.3
NAO01				*e*S	Sg	08 56 56.1	-0.8
NAO01				IAML		08 57 03.0	
	comp=Z,3.8nm,0.5s						
NB201	**NORSAR Array S**	**0.85**	**345**	*e*P	Pg	08 56 48.1	-1.0
NB201				*e*S	Sg	08 56 59.0	-1.2
NB201				IAML		08 57 08.4	
	comp=Z,11nm,0.7s						
NBO00	**NORSAR Array S**	**0.93**	**329**	*e*P	Pg	08 56 49.3	-1.4
NBO00				*e*S	Sg	08 57 02.4	-0.5
NBO00				IAML		08 57 06.6	
	comp=Z,4.3nm,0.4s						
NC303	**NORSAR Array S**	**1.01**	**349**	*e*P	Pg	08 56 51.2	-1.1
NC303				*e*S	Sg	08 57 04.8	-0.5
NC303				IAML		08 57 16.1	
	comp=Z,5.1nm,0.6s						
NC204	**NORSAR Array S**	**1.15**	**335**	*e*P	Pg	08 56 53.6	-1.4
NC204				*e*S	Sg	08 57 08.9	-1.0
NC204				IAML		08 57 09.3	
	comp=Z,4.9nm,0.5s						
KONO	**Kongsberg**	**1.23**	**243**	*e*P	Pg	08 56 55.2	-1.3
KONO				*e*S	Sg	08 57 11.2	-1.3
KONO				IAML		08 57 13.9	
	comp=Z,3.6nm,0.3s						
STRU	**Stroemstad**	**1.24**	**194**	*e*P	Pg	08 56 55.7	-0.9
STRU				*e*S	Sg	08 57 11.0	-1.6
DOMB	**Dombas**	**2.23**	**325**	*e*P	Pn	08 57 09.0	-2.2
DOMB				*e*S	Sn	08 57 36.7	-2.8
DOMB				IAML		08 57 44.1	
	comp=Z,2.6nm,0.4s						

EST 28 08:57:04.5±0.1, 59°24'N×27°78'E, h0km, ML1.4(HEL), Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARBE	**Arbavere**	**0.94**	**283**	*e*P	Pg	08 57 21.5	-1.0
VSU	**Vasula**	**0.95**	**215**	*e*P	Pg	08 57 21.7	-1.0
VJF	**Virojoki**	**1.30**	**355**	*e*P	Pg	08 57 27.7	-1.8
VJF				MSG		08 57 41.4	
	comp=Z,3.8nm,0.2s						
VJF				*e*SB	Sg	08 57 45.0	-1.4
PVF	**Pernaja**	**1.62**	**324**	*e*PG	Pn	08 57 33.8	-0.5
PVF				MSG		08 57 52.5	
	comp=Z,3.4nm,0.2s						
PVF				*e*S	Sn	08 57 54.4	-1.5
MEF	**Metsahovi**	**1.97**	**301**	*e*PG	Pn	08 57 40.0	+0.9
MEF				*e*SG	Sn	08 58 05.0	+0.5
MEF				MSG		08 58 07.0	
	comp=Z,2.0nm,0.1s						
MTSE	**Matsula**	**2.12**	**257**	*e*PG	Pn	08 57 42.1	+1.0
MTSE				*e*SG	Sn	08 58 09.3	+1.2
FIA0	**FINESS Array S**	**2.36**	**340**	*e*P	Pn	08 57 44.4	-0.1
FIA0				*e*PB	Pb	08 57 45.7	-2.2
FIA0				*e*SG	Sb	08 58 17.4	-0.2
FIA0				MSG		08 58 18.9	
	comp=Z,0.9nm,0.1s						
FIA1	**FINESS Array S**	**2.37**	**340**	*e*P	Pn	08 57 44.4	-0.1
FIA1				*e*PB	Pb	08 57 45.7	-2.2
FIA1				*e*SG	Sb	08 58 17.3	-0.3
FIA1				MSG		08 58 18.2	
	comp=Z,0.9nm,0.1s						
KAF	**Kangasniemi**	**2.97**	**347**	*e*PB	Pb	08 57 55.7	-2.5
KAF				*e*SG	Sb	08 58 35.4	+0.4
KAF				MSG		08 58 37.3	
	comp=Z,0.6nm,0.1s						

*KRAR **28** 09:47:13.3±0.1, 53°.59N×87°.56E, M2.4, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
IDC 28 09:47:14.7±3.9, 53°.69N×88°.04E, h0km, mb1 2.8/2, mb1mx2.8/35, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=38.4km s-min=18.6km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.93**	**279**	*i*		09 59 27.4	
	baz=96,slow=324,SNR=3.8						
ZALV	**Zalesovo Beam**	**1.93**	**279**	Pg	Pn	09 47 49.1	+0.4
	0.9nm,0.3s,baz=100,slow=14,SNR=13						
ZALV				Lg	Lg	09 48 16.3	
	1.3nm,0.3s,baz=101,slow=24,SNR=7.2						
KURBB	**Kurchatov Arra**	**6.60**	**246**	Pn	Pn	09 48 53.4	+0.5
	0.0nm,0.3s,baz=61,slow=14,SNR=4.7						
MKAR	**Makanchi Array**	**7.82**	**210**	Pn	Pn	09 49 11.0	+1.3
	0.1nm,0.3s,baz=24,slow=13,SNR=6.0						

*JSN **28** 09:51:56.1±0.5, 18°.14N×73°.89W, h0km±27km, MD4.6*
ISC 28 09:51:58.6±4.9, 18°.3N±0°.3×73°.9W±0°.3, h35km, n10, σ0°35/11, 3C-5D, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJ	**Castle Mountai**	**2.40**	**267**	⇓*i*P	**Pn**	**09 52 34.9**	**-0.5**
GWJ	**Greenwich**	**2.74**	**266**	⇓*i*P	**Pn**	**09 52 39.9**	**-0.3**
HOJ	**Hope**	**2.76**	**265**	⇑*i*P	**Pn**	**09 52 40.1**	**-0.3**
STH	**Stony Hill**	**2.81**	**266**	⇓*i*P	**Pn**	**09 52 40.9**	**-0.2**
BNJ	**Bonny Gate**	**2.94**	**271**	⇓*i*P	**Pn**	**09 52 43.0**	**+0.1**
BBJ	**Bamboo Saint A**	**3.24**	**272**	⇑*i*P	**Pn**	**09 52 47.0**	**0.0**
CVJ	**Coleyville**	**3.50**	**270**	⇑*i*P	**Pn**	**09 52 50.9**	**+0.4**
MCJ	**Malvern**	**3.66**	**265**	⇓*i*P	**Pn**	**09 52 52.8**	**0.0**
MCJ				*i* S	**Sn**	**09 53 35.0**	**+0.2**
SJCC	**San Jacinto, C**	**8.44**	**189**	*e*P	**Pn**	**09 53 58.1**	**-0.4**
SMLC	**San Martn de**	**9.43**	**181**	*e*P	**Pn**	**09 54 12.3**	**+0.3**

*IDC **28** 10:04:31.6±3.3, 36°.21N×69°.97E, h0km, mb3.6/5, mb1 3.7/11, mb1mx3.5/41, mbtmp3.6/11, ML3.4/6, MS2.9/4, Ms1 3.0/4, ms1mx2.4/38, Error ellipse: s-maj=57.6km s-min=26.1km az=157.0*
*NNC **28** 10:04:36.6±5.3, 36°.59N×69°.31E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=49.0km s-min=34.5km az=145.0*
**ISC 28 10:04:39.7±0.8, 36°.51N±0°.08

WHHZ	**Waihua**	**1.37**	**18**	P		**Pn**	**10 26 59.8**	**-0.1**	
MTVZ	**Mangateitei**	**1.38**	**316**	P		**Pb**	**10 27 00.8**	**-0.5**	
TUVZ	**Tukino**	**1.38**	**324**	P		**Pn**	**10 27 00.7**	**+0.5**	
DRZ	**Dome Shelter**	**1.42**	**321**	P		**Pb**	**10 27 01.7**	**-0.4**	
CAW	**Cannon Point**	**1.44**	**239**	P		**Pn**	**10 27 00.6**	**-0.3**	
FWVZ	**Far West T-bar**	**1.44**	**322**	P		**Pn**	**10 27 01.4**	**+0.3**	
KIW	**Kapiti Island**	**1.45**	**250**	P		**Pn**	**10 27 00.9**	**0.0**	
WAZ	**Wanganui**	**1.46**	**295**	P		**Pb**	**10 27 02.2**	**-0.5**	
NGZ	**Ngauruhoe**	**1.48**	**325**	P		**Pn**	**10 27 02.0**	**+0.4**	
RAHZ	**Arahi**	**1.50**	**11**	P		**Pn**	**10 27 01.7**	**0.0**	
MSWZ	**Moikau Station**	**1.51**	**227**	P		**Pn**	**10 27 01.2**	**-0.6**	
MSWZ	**Moikau Station**	**1.51**	**227**			**Pn**	**10 27 00.8**	**-0.9**	
PKVZ	**Pokaka**	**1.52**	**316**	P		**Pb**	**10 27 02.7**	**-0.9**	
KRVZ	**Karewarewa**	**1.53**	**327**	P		**Pb**	**10 27 03.1**	**-0.8**	
WTVZ	**West Tongariro**	**1.53**	**326**	P		**Pn**	**10 27 02.8**	**+0.5**	
MTHZ	**Maungataniwha**	**1.54**	**4**	P		**Pn**	**10 27 02.1**	**-0.1**	
MHGZ	**Mahia Peninsul**	**1.54**	**37**	P		**Pn**	**10 27 01.9**	**-0.3**	
RITZ	**Rihia Road**	**1.55**	**335**	P		**Pn**	**10 27 03.2**	**+0.8**	
KNZ	**Kokohu**	**1.56**	**29**	P		**Pn**	**10 27 01.7**	**-0.7**	
HATZ	**Hinemaiaia**	**1.57**	**342**	P		**Pn**	**10 27 03.0**	**+0.4**	
MRHZ	**Matea Rd**	**1.57**	**352**	P		**Pn**	**10 27 02.9**	**+0.2**	
KATZ	**Kakaramea**	**1.61**	**331**	P		**Pb**	**10 27 05.1**	**-0.2**	
PLWZ	**Palliser**	**1.61**	**222**	P		**Pn**	**10 27 02.4**	**-0.9**	
PLWZ	**Palliser**	**1.61**	**222**			**Pn**	**10 27 02.0**	**-1.2**	
TWVZ	**Taurewa**	**1.64**	**323**	P		**Pn**	**10 27 04.0**	**+0.3**	
SNGZ	**Shannon Statio**	**1.68**	**17**	P		**Pn**	**10 27 03.8**	**-0.4**	
RATZ	**Rangitukua**	**1.68**	**334**	P		**Pn**	**10 27 04.9**	**+0.7**	
WEL	**Wellington**	**1.72**	**238**	P		**Pn**	**10 27 04.4**	**-0.3**	
BHW	**Baring Head**	**1.72**	**233**	P		**Pn**	**10 27 04.0**	**-0.7**	
BHW	**Baring Head**	**1.72**	**233**			**Pn**	**10 27 03.8**	**-1.0**	
PRGZ	**Paritu Road**	**1.72**	**32**	P		**Pn**	**10 27 04.0**	**-0.7**	
SNZO	**South Karori**	**1.77**	**236**			**Pn**	**10 27 04.5**	**-0.9**	
RTZ	**Ruatahuna**	**1.78**	**7**	P		**Pn**	**10 27 05.6**	**0.0**	
WHTZ	**Whakaora**	**1.81**	**341**	P		**Pn**	**10 27 06.5**	**+0.4**	
WATZ	**Wairara**	**1.84**	**336**	P		**Pn**	**10 27 06.5**	**+0.2**	
ALRZ	**Allen Road**	**1.84**	**351**	P		**Pn**	**10 27 06.4**	**-0.1**	
RIGZ	**Rimuhau**	**1.87**	**26**	P		**Pn**	**10 27 06.0**	**-0.7**	
PRRZ	**Plateau Road**	**1.90**	**353**	P		**Pn**	**10 27 07.1**	**-0.1**	
MUGZ	**Murupara**	**1.91**	**2**	P		**Pn**	**10 27 07.0**	**-0.3**	
WPRZ	**Whakapapataran**	**1.91**	**347**	P		**Pn**	**10 27 07.2**	**-0.2**	
VRZ	**Vera Road**	**1.96**	**309**	P		**Pn**	**10 27 08.8**	**+0.8**	
RAGZ	**Rawiri**	**1.97**	**16**	P		**Pn**	**10 27 07.7**	**-0.5**	
LREZ	**Lake Rotokare**	**2.00**	**297**	P		**Pn**	**10 27 09.7**	**+1.2**	
KUTZ	**Kaahu Road**	**2.01**	**340**	P		**Pn**	**10 27 08.6**	**-0.2**	
TCW	**Tory Channel**	**2.02**	**245**	P		**Pn**	**10 27 08.1**	**-0.7**	
HRRZ	**Handcock Road**	**2.02**	**351**	P		**Pn**	**10 27 09.0**	**+0.1**	
RRRZ	**Republican Roa**	**2.05**	**356**	P		**Pn**	**10 27 09.0**	**-0.3**	
GRRZ	**Galatos Road**	**2.09**	**347**	P		**Pn**	**10 27 10.0**	**+0.3**	
HSRZ	**Hossack Road**	**2.10**	**350**	P		**Pn**	**10 27 09.8**	**-0.2**	
MWZ	**Matawai**	**2.15**	**18**	P		**Pn**	**10 27 09.6**	**-1.0**	
URZ	**Urewera**	**2.15**	**9**	P		**Pn**	**10 27 09.7**	**-0.9**	
HLRZ	**Highlands Stat**	**2.15**	**353**	P		**Pn**	**10 27 11.5**	**+0.9**	
TARZ	**Mount Tarawera**	**2.15**	**356**	P		**Pn**	**10 27 10.6**	**-0.2**	
DUWZ	**D'Urville Isla**	**2.16**	**258**	P		**Pn**	**10 27 12.3**	**+1.5**	
PREZ	**Palmer Road**	**2.22**	**297**	P		**Pn**	**10 27 13.3**	**+1.6**	
CNGZ	**Carnagh Statio**	**2.23**	**32**	P		**Pn**	**10 27 11.0**	**-0.7**	
UTU	**Utuhina**	**2.24**	**350**	P		**Pn**	**10 27 12.0**	**+0.1**	
TLZ	**Tolley Road**	**2.25**	**336**	P		**Pn**	**10 27 11.4**	**-0.5**	
MKRZ	**Makatiti**	**2.25**	**355**	P		**Pb**	**10 27 18.3**	**+2.1**	
MHEZ	**Mangahewa**	**2.25**	**305**	P		**Pb**	**10 27 14.8**	**-1.4**	
DREZ	**Durham Road**	**2.27**	**301**	P		**Pn**	**10 27 13.6**	**+1.4**	
EDRZ	**Edgecumbe**	**2.28**	**1**	P		**Pn**	**10 27 12.0**	**-0.4**	
OMRZ	**Omania**	**2.29**	**353**	P		**Pn**	**10 27 12.5**	**-0.1**	
NGRZ	**Ngongotaha**	**2.32**	**350**	P		**Pn**	**10 27 13.1**	**+0.1**	
CMWZ	**Cape Campbell**	**2.32**	**233**			**Pn**	**10 27 11.9**	**-1.1**	
TUWZ	**Tuamarina**	**2.34**	**243**	P		**Pn**	**10 27 11.9**	**-1.2**	
TUWZ	**Tuamarina**	**2.34**	**243**			**Pn**	**10 27 11.7**	**-1.5**	
KHEZ	**Kahui Hut**	**2.34**	**297**	P		**Pn**	**10 27 15.0**	**+1.7**	
HIZ	**Hauiti**	**2.36**	**322**	P		**Pn**	**10 27 13.6**	**+0.1**	
HIZ	**Hauiti**	**2.36**	**322**			**Pn**	**10 27 14.2**	**+0.7**	
NMEZ	**Namu Road**	**2.38**	**293**	P		**Pn**	**10 27 15.4**	**+1.6**	
MARZ	**Manawahe**	**2.40**	**359**	P		**Pn**	**10 27 14.3**	**+0.2**	
PKE	**Pukeiti**	**2.41**	**299**	P		**Pn**	**10 27 15.8**	**+1.6**	
TWGZ	**Tauwhareparae**	**2.42**	**25**	P		**Pn**	**10 27 13.5**	**-0.8**	
NBEZ	**Newall Road No**	**2.45**	**296**	P		**Pn**	**10 27 16.4**	**+1.6**	
BSWZ	**Blackbirch Sta**	**2.52**	**237**	P		**Pn**	**10 27 14.5**	**-1.1**	
BSWZ	**Blackbirch Sta**	**2.52**	**237**			**Pn**	**10 27 14.1**	**-1.5**	
RUGZ	**Raukumara Rang**	**2.53**	**18**	P		**Pn**	**10 27 15.1**	**-0.9**	
WHRZ	**Whale Island**	**2.54**	**5**	P		**Pn**	**10 27 15.3**	**-0.7**	
OPRZ	**Ohinepanea**	**2.54**	**357**	P		**Pn**	**10 27 15.5**	**-0.5**	
PUZ	**Puketiti**	**2.61**	**28**	P		**Pn**	**10 27 15.2**	**-1.7**	
NNZ	**Nelson**	**2.66**	**251**	P		**Pn**	**10 27 17.1**	**-0.4**	
NNZ	**Nelson**	**2.66**	**251**			**Pn**	**10 27 16.5**	**-1.1**	
TGRZ	**Tauranga**	**2.68**	**352**	P		**Pn**	**10 27 17.2**	**-0.7**	
PKGZ	**Pakihiroa**	**2.71**	**24**	P		**Pn**	**10 27 17.4**	**-1.1**	
WMGZ	**Waiomatatini S**	**2.89**	**28**	P		**Pn**	**10 27 19.4**	**-1.3**	
MXZ	**Matakaoa Point**	**3.08**	**24**	Pn		**Pn**	**10 27 21.6**	**-1.9**	
KHZ	**Kahutara**	**3.13**	**229**	Pn		**Pn**	**10 27 21.1**	**-2.9**	
THZ	**Tophouse**	**3.18**	**243**	Pn		**Pn**	**10 27 22.5**	**-2.4**	
QRZ	**Quartz Range**	**3.21**	**261**			**Pn**	**10 27 25.3**	**+0.2**	
LTZ	**Lake Taylor**	**4.10**	**233**	Pn		**Pn**	**10 27 35.0**	**-2.5**	
RPZ	**Rata Peaks**	**5.36**	**230**	Pn		**Pn**	**10 27 52.8**	**-2.0**	
	1.1nm,0.3s,baz=224,slow=16,SNR=1.5								
RPZ				Pg		**Pb**	**10 28 11.6**	**+2.4**	
	20nm,0.3s,baz=291,slow=3.4,SNR=24								
RPZ				Sn		**Sn**	**10 28 49.8**	**-6.0**	
	4.4nm,0.3s,baz=354,slow=20,SNR=8.5								
RPZ				Lg		Lg	10 29 22.8		
	baz=302,slow=20,SNR=4.1								
RPZ	**Rata Peaks**	**5.36**	**230**			**Pn**	**10 27 55.1**	**+0.4**	
OUZ	**Omahuta**	**5.71**	**334**	Pn		**Pn**	**10 27 58.6**	**-1.0**	
DZM	**Mont Dzumac**	**20.23**	**331**	*e*LR		LR	10 36 03.4		
	comp=Z,293nm,23.4s								
DZM	**Mont Dzumac**	**20.23**	**331**	P		**P**	**10 31 07.9**	**-1.9**	
	0.3nm,0.3s,baz=306,slow=16,SNR=3.4								
DZM				LR		LR	10 38 24.2		
	comp=Z,245nm,19.2s,baz=198,slow=36								
DZM	**Mont Dzumac**	**20.23**	**331**	P		**P**	**10 31 09.5**	**-0.3**	
DZM				IAmb		IAmb	10 31 13.8		
	comp=Z,22nm,1.0s								
ARMA	**Armidale**	**22.66**	**288**	P		**P**	**10 31 36.2**	**+0.3**	
STKA	**Stephens Creek**	**29.45**	**276**	P		**P**	**10 32 37.1**	**-1.1**	
	comp=Z,2.4nm,0.9s,baz=106,slow=12,SNR=4.4								
STKA				LR		LR	10 43 28.0		
	comp=Z,112nm,19.1s,baz=165,slow=35								
STKA	**Stephens Creek**	**29.45**	**276**	P		**P**	**10 32 39.4**	**+1.3**	
TBI	**Tubuai**	**33.13**	**69**	*e*LR		LR	10 41 59.0		
	comp=Z,95nm,24.8s								
TBI	**Tubuai**	**33.13**	**69**	*e*T		T	11 07 47.4		
	comp=Z,18nm,0.3s								
BBOO	**Buckleboo**	**33.27**	**270**	P		**P**	**10 33 12.3**	**+0.6**	
HNR	**Honiara**	**34.24**	**330**	LR		LR	10 44 44.2		
	comp=Z,129nm,19.7s,baz=192,slow=32								
PAE	**Paea**	**36.83**	**62**	*e*T		T	11 12 24.0		
	comp=Z,9.2nm,0.3s								
PPT2	**Papeete2**	**36.88**	**62**	*e*LR		LR	10 43 36.8		
	comp=Z,75nm,28.8s								
PPT2	**Papeete2**	**36.88**	**62**	*e*T		T	11 12 28.6		
	comp=Z,5.2nm,0.3s								
TVO	**Taravao**	**36.97**	**62**	*e*T		T	11 12 34.3		
	comp=Z,1.2nm,0.3s								
AS31	**Alice Springs**	**39.51**	**282**	P		**P**	**10 34 05.2**	**0.0**	
PMG	**Port Moresby**	**40.49**	**311**	P		**P**	**10 34 13.0**	**-0.3**	
WR0	**Warramunga Arr**	**41.27**	**287**	P		**P**	**10 34 19.4**	**-0.4**	
WR0				IAmb		IAmb	10 34 20.1		
	comp=Z,7.5nm,1.1s								
WB2	**Warramunga Arr**	**41.42**	**287**	P		**P**	**10 34 20.8**	**-0.2**	
WRAB	**Tennant Creek**	**41.43**	**287**	P		**P**	**10 34 20.5**	**-0.5**	
WRAB				IAmb		IAmb	10 34 21.2		
	comp=Z,10nm,0.5s								
WRA	**Warramunga Arr**	**41.43**	**287**	P		**P**	**10 34 20.5**	**-0.6**	
	comp=Z,6.7nm,0.5s,baz=126,slow=8.3,SNR=150								
WB0	**Warramunga Arr**	**41.50**	**287**	P		**P**	**10 34 21.4**	**-0.3**	
WB0				IAmb		IAmb	10 34 21.8		
	comp=Z,7.9nm,0.5s								
KNRA	**Kununurra**	**48.23**	**286**	P		**P**	**10 35 15.7**	**+0.5**	
FITZ	**Fitzroy Crossi**	**49.02**	**281**	P		**P**	**10 35 21.0**	**-0.2**	
FITZ				IAmb		IAmb	10 35 23.1		
	comp=Z,5.3nm,1.1s								
QSPA	**South Pole Qui**	**49.74**	**180**	P		**P**	**10 35 29.8**	**+3.4**	
	comp=Z,0.8nm,0.6s,baz=232,slow=0.4,SNR=8.5								
QSPA	**South Pole Qui**	**49.74**	**180**	P		**P**	**10 35 28.4**	**+2.0**	
QSPA				IAmb		IAmb	10 35 47.8		
	comp=Z,3.5nm,1.1s								
KSRS	**Korea Array**	**89.44**	**323**	P		**P**	**10 39 30.8**	**-0.1**	
	comp=Z,0.9nm,0.7s,baz=157,slow=9.9,SNR=2.8								
KSRS				LR		LR	11 18 07.1		
	comp=Z,13nm,18.3s,baz=160,slow=35								
NJ2	**Nanjing**	**89.75**	**314**	*e*P		**P**	**10 39 34.0**	**+1.5**	
NJ2				pmax		pmax			
	comp=Z,8.0nm,0.7s								
CMAR	**Chiang Mai Arr**	**92.83**	**292**	LR		LR	11 24 36.2		
	comp=Z,14nm,19.5s,baz=110,slow=38								
GYA	**Guiyang**	**93.00**	**302**	*e*P		**P**	**10 39 45.3**	**-2.5**	
GYA				pmax		pmax			
	comp=Z,10.0nm,0.6s								
CN2	**Changchun**	**95.68**	**325**	*e*P		**P**	**10 40 01.8**	**+2.2**	
HHC	**Hu-ho-hao-te**	**100.19**	**316**	*e*P		**Pdif**	**10 40 19.8**	**-0.3**	
HHC				pmax		pmax			
	comp=Z,13nm,0.8s								
HHC				pmax		pmax			
	comp=Z,27nm,6.5s								
ARCES	**ARCESS Array B**	**147.10**	**342**	PKPbc		**PKPbc**	**10 46 16.7**	**+0.7**	
	comp=Z,3.9nm,0.6s,baz=50,slow=2.5,SNR=19								
FINES	**FINESS Array B**	**152.36**	**329**	PKPbc		**PKPbc**	**10 46 29.4**	**+0.3**	
	comp=Z,2.5nm,0.9s,baz=90,slow=5.7,SNR=3.8								
TORD	**Torodi Ar. Bea**	**152.51**	**191**	PKPbc		**PKiKP**	**10 46 32.0**	**+0.8**	
	comp=Z,1.0nm,0.6s,baz=144,slow=0.8,SNR=7.0								

IDC ***28*** *10:27:05.1±3.0, 32.°14S×71.°74W, h60km±23km, mb4.2/6, mb1 4.2/10, mb1mx3.9/29, mbtmp4.4/10, ML4.3/4, MS3.0/2, Ms1 3.0/2, ms1mx2.8/18, Error ellipse: s-maj=26.0km s-min=16.9km az=118.0*

NEIC ***28*** *10:27:05.7±2.1, 32.°30S±0.°04×71.°68W±0.°07, h61km±5km, Error ellipse: s-maj=8.7km s-min=5.1km az=94.0*

SJA ***28*** *10:27:05.2±1.3, 32.°05S×71.°76W, h40km±999km, ML3.7, MW4.0*

GUC ***28*** *10:27:06.2±0.8, 32.°29S×71.°56W, h57km±9km, ML4.3*

ISC 28 10:27:03.8±0.8, 32.°25S±0.°03×71.°78W±0.°06, h45km±7km, n91, σ1°978/110, mb4.5/10, 5C-10D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MT02	**Curacav**	**1.14**	**152**	↓*e*P		**Pn**	**10 27 24.9**	**+1.6**
MT02				*e*S		**Sn**	**10 27 38.7**	**+0.9**
MT02	**Curacav**	**1.14**	**152**			**Pn**	**10 27 25.0**	**+1.6**
MT02				Sn		**Sn**	**10 27 38.2**	**+0.3**
VA03	**San Esteban**	**1.16**	**117**	↓*e*P		**Pn**	**10 27 24.5**	**+0.9**
VA03				*e*S		**Sn**	**10 27 37.9**	**-0.4**
VA03				IAML			10 27 39.4	
	comp=E,13μm,0.1s							
VA03	**San Esteban**	**1.16**	**117**			**Pn**	**10 27 24.5**	**+0.9**
VA03				Sn		**Sn**	**10 27 37.9**	**-0.4**
CO02	**Combarbal**	**1.24**	**33**	↓*i*P		**Pn**	**10 27 27.1**	**+2.3**
CO02				*i* S		**Sn**	**10 27 42.5**	**+2.2**
CO02	**Combarbal**	**1.24**	**33**			**Pn**	**10 27 27.2**	**+2.4**
CO02				Sn		**Sn**	**10 27 42.8**	**+2.5**
PEL	**Peldehue**	**1.28**	**134**	↑*i*P		**Pn**	**10 27 26.0**	**+0.7**
PEL				*e*S		**Sn**	**10 27 41.5**	**+0.2**
PEL	**Peldehue**	**1.28**	**134**			**Pn**	**10 27 26.7**	**+1.4**
PEL				Sn		**Sn**	**10 27 41.5**	**+0.2**
MT05	**Renca**	**1.44**	**143**			**Pn**	**10 27 29.1**	**+1.6**
MT05				Sn		**Sn**	**10 27 46.5**	**+1.4**
CLCH	**Cerro Calan**	**1.55**	**138**	↓*e*P		**Pn**	**10 27 30.6**	**+1.6**
CLCH				*e*S		**Sn**	**10 27 47.9**	**0.0**
CLCH				IAML			10 27 49.5	
	comp=E,10μm,0.2s							
FSR	**Penalolen**	**1.61**	**140**	↑*i*P		**Pn**	**10 27 32.4**	**+2.5**
FSR				*e*S		**Sn**	**10 27 49.7**	**+0.1**
MT03	**Universidad Ad**	**1.64**	**140**	↑*i*P		**Pn**	**10 27 31.4**	**+1.2**
MT03				*e*S		**Sn**	**10 27 50.5**	**+0.4**
MT03				IAML			10 27 52.2	
	comp=N,10μm,0.3s							
MT01	**Popeta**	**1.67**	**165**	↑*i*P		**Pn**	**10 27 32.3**	**+1.7**
MT01				*i* S		**Sn**	**10 27 52.5**	**+1.7**
MT01	**Popeta**	**1.67**	**165**			**Pn**	**10 27 32.9**	**+2.3**
MT01				Sn		**Sn**	**10 27 52.1**	**+1.3**
CO03	**El Pedregal**	**1.69**	**34**	↓*i*P		**Pn**	**10 27 33.2**	**+2.3**
CO03				*i* S		**Sn**	**10 27 53.3**	**+2.0**
CO03				IAML			10 27 55.2	
	comp=E,4μm,0.4s							
CO03	**El Pedregal**	**1.69**	**34**			**Pn**	**10 27 33.2**	**+2.3**
CO03				Sn		**Sn**	**10 27 53.4**	**+2.0**
LMEL	**Las Melosas**	**2.07**	**141**	↓*e*P		**Pn**	**10 27 38.0**	**+1.8**
LMEL				*e*S		**Sn**	**10 28 01.5**	**+0.6**
LMEL				IAML			10 28 03.9	
	comp=N,4μm,0.2s							
RTLS	**Leoncito**	**2.16**	**79**	*e*P		**Pn**	**10 27 40.2**	**+2.7**
RTLS				*e*S		**Sn**	**10 28 06.3**	**+3.1**
RTLS				IAML			10 28 09.7	
	comp=Z,340nm,0.6s							
GO04	**Tololo Observa**	**2.24**	**22**			**Pn**	**10 27 41.1**	**+2.5**
BO02	**Sierra Bellavi**	**2.67**	**162**	↓*e*P		**Pn**	**10 27 46.2**	**+1.9**
BO02				*e*S		**Sn**	**10 28 16.6**	**+1.1**
BO02				IAML			10 28 24.0	
	comp=E,1μm,0.5s							
BO02	**Sierra Bellavi**	**2.67**	**162**			**Pn**	**10 27 46.4**	**+2.1**
BO02				Sn		**Sn**	**10 28 17.5**	**+2.0**
CO01	**Juntas del Tor**	**2.69**	**33**	↓*i*P		**Pn**	**10 27 47.3**	**+2.6**
CO01	**Juntas del Tor**	**2.69**	**33**			**Pn**	**10 27 47.6**	**+2.8**
CO01				Sn		**Sn**	**10 28 17.8**	**+1.6**
ZON	**Zonda**	**2.73**	**76**	*e*P		**Pn**	**10 27 48.1**	**+3.0**
ZON				*e*S		**Sn**	**10 28 19.9**	**+2.9**
ZON				IAML			10 28 25.7	
	comp=Z,448nm,0.7s							
GO05	**Huala**	**2.75**	**183**			**Pn**	**10 27 47.3**	**+1.8**
RTCV	**Cerro Valdivia**	**2.78**	**83**	*e*P		**Pn**	**10 27 48.8**	**+3.0**
SJA	**San Juan**	**2.83**	**76**	*e*P		Pn	10 27 50.3	+3.7
RTLL	**Cerro Villicun**	**2.96**	**73**	*e*P		**Pn**	**10 27 50.4**	**+2.1**
RTLL				*e*S		**Sn**	**10 28 23.3**	**+0.6**
RTLL				IAML			10 28 24.5	
	comp=Z,350nm,0.4s							
CFA	**Coronel Fontan**	**3.08**	**79**	P		**Pn**	**10 27 52.0**	**+2.1**
	comp=Z,36nm,0.3s,baz=250,slow=13,SNR=482							
CFA				S		**Sn**	**10 28 26.4**	**+0.9**
	comp=Z,25nm,0.3s,baz=265,slow=8.8,SNR=5.5							
ACDV	**Cuesta del Vie**	**3.08**	**48**	*e*P		**Pn**	**10 27 53.6**	**+3.5**
ACDV				*e*S		**Sn**	**10 28 26.6**	**+0.9**
ACDV				IAML			10 28 53.2	
	comp=Z,268nm,0.8s							
AC05	**El Transito**	**3.64**	**21**	↓*i*P		**Pn**	**10 28 00.2**	**+2.4**
AC05				*i* S		**Sn**	**10 28 41.1**	**+1.9**
AC05	**El Transito**	**3.64**	**21**			**Pn**	**10 28 00.4**	**+2.6**
AGUA	**GUANDACOL**	**3.95**	**47**	*e*P		**Pn**	**10 28 05.1**	**+3.2**
AGUA				IAML			10 29 15.3	
	comp=Z,80nm,0.7s							
AC04	**Llanos de Chal**	**4.08**	**9**			**Pn**	**10 28 05.2**	**+1.6**
BI02	**San Fabin de**	**4.42**	**175**	↓*i*P		**Pn**	**10 28 10.6**	**+2.2**
BI02				*i* S		**Sn**	**10 28 59.0**	**+0.4**
BI02	**San Fabin de**	**4.42**	**175**			**Pn**	**10 28 10.8**	**+2.4**
BI03	**Tigo**	**4.70**	**192**			**Pn**	**10 28 13.5**	**+1.4**
GO03	**Copiap**	**4.83**	**16**	↑*i*P		**Pn**	**10 28 15.5**	**+1.5**
GO03	**Copiap**	**4.83**	**16**			**Pn**	**10 28 15.4**	**+1.4**
MRA	**San Martin**	**5.13**	**93**	*e*P		**Pn**	**10 28 18.9**	**+0.6**
AC02	**Maricunga**	**5.87**	**24**			**Pn**	**10 28 30.0**	**+1.3**
AC02					Sn	**Sn**	**10 29 35.0**	**0.0**
H03N1	**Juan Fernandez**	**6.12**	**257**	T	T		10 35 19.1	
	baz=86,slow=73,SNR=167							
H03N3	**Juan Fernandez**	**6.13**	**257**	T	T		10 35 15.3	
	baz=86,slow=73,SNR=120							
H03N2	**Juan Fernandez**	**6.14**	**257**	T	T		10 35 16.5	
	baz=86,slow=73,SNR=170							
AC01	**Pan de Azucar**	**6.17**	**10**			**Pn**	**10 28 31.6**	**-0.7**
H03S3	**Juan Fernandez**	**6.19**	**253**	T	T		10 35 11.8	
	baz=84,slow=75,SNR=28							
H03S1	**Juan Fernandez**	**6.19**	**253**	T	T		10 35 10.5	
	baz=84,slow=75,SNR=20							
H03S2	**Juan Fernandez**	**6.21**	**253**	T	T		10 35 08.5	
	baz=84,slow=75,SNR=39							
LC01	**Cunco**	**6.63**	**181**			**Pn**	**10 28 39.4**	**+0.7**
LC01					Sn	**Sn**	**10 29 51.1**	**-1.8**
GO02	**Mina Guanaco**	**7.32**	**16**			**Pn**	**10 28 47.6**	**-0.8**
PLCA	**Paso Flores**	**8.52**	**174**	P		**Pn**	**10 29 07.0**	**+2.4**
	comp=Z,2.6nm,0.3s,baz=339,slow=11,SNR=103							
PLCA				LR		LR	10 32 20.8	
	comp=Z,112nm,19.8s,baz=320,slow=37							
PLCA	**Paso Flores**	**8.52**	**174**			**Pn**	**10 29 06.5**	**+1.8**
LVC	**Limon Verde**	**9.94**	**16**	P		**Pn**	**10 29 21.8**	**-2.5**
	comp=Z,1.1nm,0.3s,baz=159,slow=6.8,SNR=11							
LVC				S		**Sn**	**10 31 09.4**	**-5.3**
	comp=Z,0.5nm,0.3s,baz=232,slow=20,SNR=2.0							
LVC				LR		LR	10 33 08.3	
	comp=Z,88nm,20.1s,baz=214,slow=37							
LL01	**San Ignacio de**	**10.12**	**183**			**Pn**	**10 29 26.5**	**+0.1**
LPAZ	**La Paz**	**16.23**	**13**	P		**P**	**10 30 51.4**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=188,slow=6.7,SNR=42							
LPAZ	**La Paz**	**16.23**	**13**			**P**	**10 30 51.6**	**-0.3**
SIV	**San Ignacio**	**18.89**	**34**	P		**P**	**10 31 20.0**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=225,slow=8.7,SNR=12							
EFI	**East Falkland**	**21.86**	**157**	P		**P**	**10 31 50.4**	**-2.0**
BDFB	**Brasilia**	**27.20**	**58**	P		**P**	**10 32 41.7**	**-1.8**
	comp=Z,4.7nm,0.5s,baz=251,slow=9.9,SNR=6.6							
BDFB	**Brasilia**	**27.20**	**58**	P		**P**	**10 32 42.9**	**-0.7**
BDFB				IAmb		IAmb	10 32 45.0	
	comp=Z,18nm,1.5s							
VNA3	**Neumayer Olymp**	**50.90**	**158**	P		**P**	**10 36 00.6**	**+0.7**
SNAA	**Sanae**	**53.12**	**158**	P		**P**	**10 36 17.1**	**+0.6**
SNAA	**Sanae**	**53.12**	**158**	P		**P**	**10 36 17.0**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=270,slow=9.1,SNR=18							
SNAA	**Sanae**	**53.12**	**158**	P		**P**	**10 36 17.1**	**+0.6**
SNAA				IAmb		IAmb	10 36 17.5	
	comp=Z,2.8nm,0.7s							
TEIG	**Tepich**	**54.52**	**341**	P		**P**	**10 36 28.8**	**+1.6**
QSPA	**South Pole Qui**	**57.98**	**180**	P		**P**	**10 36 51.7**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=141,slow=2.6,SNR=4.6							
QSPA	**South Pole Qui**	**57.98**	**180**	P		**P**	**10 36 53.5**	**+1.9**
QSPA				IAmb		IAmb	10 36 55.6	
	comp=Z,4.1nm,1.1s							
WVT	**Waverly**	**69.67**	**346**	P		**P**	**10 38 09.8**	**+1.4**
GNAR	**Gosnell**	**69.98**	**344**	P		**P**	**10 38 08.4**	**-2.0**
LIC	**Lamto**	**74.02**	**72**	*e*P		**P**	**10 38 34.1**	**-1.1**
	comp=Z,10.0nm,0.6s							
TIC	**Toumodi**	**74.27**	**71**	*e*P		**P**	**10 38 36.1**	**-0.6**
KIC	**Kosan Boka**	**74.33**	**72**	*e*P		**P**	**10 38 35.9**	**-1.1**
	comp=Z,18nm,0.8s							
DBIC	**Dimbokro**	**74.42**	**72**	P		**P**	**10 38 35.7**	**-1.7**
	comp=Z,4.6nm,0.5s,baz=211,slow=5.9,SNR=9.5							
DBIC	**Dimbokro**	**74.42**	**72**	P		**P**	**10 38 35.9**	**-1.6**
DBIC				IAmb		IAmb	10 38 39.9	
	comp=Z,16nm,1.3s							
MAW	**Mawson**	**74.79**	**164**

KESN			*i* S		**Sb**	10 32 22.0	-0.4	
KESN			IAML			10 32 25.0		
	comp=N,1µm,0.2s							
KESN			IAML			10 32 33.0		
	comp=E,2µm,0.4s							
SIGR	**SIGRI**	**1.13 165**	P		**Pg**	10 32 09.6	-0.3	
SIGR			S		**Sn**	10 32 25.4	+0.3	
	comp=E,2µm,0.5s							
SIGR	**SIGRI**	**1.13 165**	P		**Pb**	10 32 09.2	-0.4	
SIGR			S		**Sb**	10 32 23.9	-0.3	
SIGR			AML		AML	10 32 26.2		
	comp=N,3848µm,0.6s							
SIGR			AML		AML	10 32 26.4		
	comp=E,3517µm,0.4s							
SIGR	**SIGRI**	**1.13 165**	PN		**Pb**	10 32 09.4	-0.2	
OUR	**Ouranopolis**	**1.15 272**	P		**Pb**	10 32 09.5	-0.5	
OUR			S		**Sn**	10 32 26.9	+1.2	
	comp=E,1µm,0.7s							
OUR	**Ouranopolis**	**1.15 272**	P		**Pb**	10 32 09.5	-0.5	
OUR			S		**Sn**	10 32 27.2	+1.5	
OUR			AML		AML	10 32 35.8		
	comp=N,2557µm,0.7s							
OUR			AML		AML	10 32 36.5		
	comp=E,1477µm,0.7s							
OUR	**Ouranopolis**	**1.15 272**	PN		**Pb**	10 32 09.1	-0.9	
PRK	**Paraskevi**	**1.22 150**	P		**Pg**	10 32 11.8	+0.2	
PRK			S		**Sg**	10 32 28.8	+1.4	
	comp=E,1µm,0.6s							
PRK	**Paraskevi**	**1.22 150**	P		**Pg**	10 32 11.5	-0.1	
PRK			S		**Sb**	10 32 26.7	-0.1	
PRK			AML		AML	10 32 29.7		
	comp=N,2398µm,0.4s							
PRK			AML		AML	10 32 30.6		
	comp=E,2350µm,0.3s							
KDZ	**Kurdzhali**	**1.35 358**	*i* P		**Pn**	10 32 12.6	-0.3	
KDZ	**Kurdzhali**	**1.35 358**	PN		**Pn**	10 32 12.5	-0.3	
RKY	**Sarkoy-Tekirda**	**1.35 73**	PN		**Pn**	10 32 11.8	-1.1	
RKY			SN		**Sg**	10 32 31.1	-0.6	
AYVA	**Ayvalik**	**1.36 136**	*i* P		**Pb**	10 32 13.4	-0.2	
AYVA			*i* S		**Sg**	10 32 31.9	-0.1	
AYVA			IAML			10 32 34.0		
	comp=E,459nm,0.3s							
AYVA			IAML			10 32 42.0		
	comp=N,873nm,0.6s							
KRBG	**Karabiga-Canak**	**1.39 86**	PN		**Pn**	10 32 12.5	-0.9	
KRBG			SN		**Sb**	10 32 32.0	+0.3	
PAIG	**Paliouri**	**1.43 255**	P		**Pn**	10 32 13.1	-0.8	
PAIG			S		**Sb**	10 32 33.2	+0.2	
	comp=N,200nm,0.5s							
PAIG	**Paliouri**	**1.43 255**	P		**Pn**	10 32 13.2	-0.8	
PAIG			AML		AML	10 32 45.7		
	comp=E,342µm,0.4s							
PAIG			AML		AML	10 32 50.5		
	comp=N,375µm,0.8s							
RZN	**Rozhen**	**1.50 337**	P		**Pb**	10 32 15.6	-0.5	
PLG	**Polygyros**	**1.56 273**	P		**Pn**	10 32 15.4	-0.4	
PLG	**Polygyros**	**1.56 273**	P		**Pn**	10 32 15.4	-0.4	
PLG			AML		AML	10 32 45.0		
	comp=E,698µm,0.4s							
PLG			AML		AML	10 32 50.3		
	comp=N,786µm,0.6s							
KNL	**Balıkesir**	**1.56 90**	*i* P		**Pn**	10 32 15.9	+0.1	
SKY	**Skiros Island**	**1.59 207**	P		**Pn**	10 32 15.2	-1.0	
MRMT	**Marmara Adasi**	**1.64 79**	PN		**Pn**	10 32 15.9	-1.0	
DKL	**Dikili**	**1.65 138**	PN		**Pn**	10 32 16.4	-0.5	
SRS	**Serrai**	**1.65 300**	P		**Pn**	10 32 16.8	-0.2	
SRS	**Serrai**	**1.65 300**	P		**Pn**	10 32 16.7	-0.4	
SRS			AML		AML	10 32 47.4		
	comp=E,3284µm,0.5s							
SRS			AML		AML	10 32 47.4		
	comp=N,1319µm,0.7s							
AOS	**Alonnisos**	**1.68 228**	P		**Pn**	10 32 16.8	-0.5	
AOS			S		**Sb**	10 32 40.5	+0.5	
	comp=N,670nm,0.6s							
AOS	**Alonnisos**	**1.68 228**	P		**Pn**	10 32 16.8	-0.5	
AOS			AML		AML	10 32 49.1		
	comp=N,1154µm,0.7s							
AOS			AML		AML	10 32 50.0		
	comp=E,1490µm,0.6s							
AOS	**Alonnisos**	**1.68 228**	PN		**Pn**	10 32 17.0	-0.3	
GONE	**Gonen-Balikesi**	**1.71 98**	PN		**Pn**	10 32 17.5	-0.2	
TKR	**Tekirdag**	**1.71 66**	PN		**Pn**	10 32 17.4	-0.3	
BALY	**Balya**	**1.73 108**	*i* P		**Pn**	10 32 18.6	+0.5	
BALY			*i* S		**Sn**	10 32 40.5	+0.3	
DIM	**Dimitrovgrad**	**1.75 1**	P		**Pb**	10 32 19.2	-1.0	
EDRB	**Edirne**	**1.81 31**	P		**Pn**	10 32 18.5	-0.7	
EDRB			S		**Sb**	10 32 43.7	-0.3	
	comp=E,285nm,0.5s							
EDRB	**Edirne**	**1.81 31**	PN		**Pn**	10 32 19.2	0.0	
EDRB			SN		**Sn**	10 32 42.3	+0.2	
ZEDA	**zmir-Bergama**	**1.81 137**	*i* P		**Pb**	10 32 20.1	-1.2	
ZEDA			IAML			10 32 48.0		
	comp=N,412nm,0.3s							
ZEDA			IAML			10 32 48.0		
	comp=E,276nm,0.4s							
EDC	**Edincik**	**1.82 88**	PN		**Pn**	10 32 18.9	-0.4	
HORT	**Hortiatis**	**1.84 280**	P		**Pn**	10 32 19.2	-0.5	
HORT	**Hortiatis**	**1.84 280**	P		**Pn**	10 32 19.3	-0.4	
HORT			AML		AML	10 33 02.2		
	comp=N,318µm,0.7s							
HORT			AML		AML	10 33 05.5		
	comp=E,371µm,0.8s							
HORT	**Hortiatis**	**1.84 280**	PN		**Pn**	10 32 19.5	-0.2	
MMB	**Musomiste**	**1.85 315**	P		**Pn**	10 32 20.0	+0.2	
PLD	**Plovdiv**	**1.90 342**	*i* P		**Pg**	10 32 23.9	-0.7	
KIRK	**Kırklareli**	**1.92 39**	*i* P		**Pn**	10 32 20.2	-0.5	
SKIA	**Skiathos**	**1.93 235**	P		**Pn**	10 32 19.9	-0.9	
STEP	**BALIKESIR_Sava**	**1.95 118**	*i* P		**Pb**	10 32 22.2	-1.5	
STEP			*i* S		**Sn**	10 32 45.8	+0.2	
STEP			IAML			10 32 51.0		
	comp=E,632nm,0.4s							
STEP			IAML			10 33 01.0		
	comp=N,623nm,0.8s							
BALB	**Balikesir**	**1.96 109**	PN		**Pn**	10 32 20.6	-0.6	
CHOS	**Chios island**	**1.96 167**	P		**Pn**	10 32 21.7	+0.4	
CHOS	**Chios island**	**1.96 167**	P		**Pn**	10 32 21.5	+0.1	
CHOS			AML		AML	10 32 56.1		
	comp=N,544µm,0.6s							
CHOS			AML		AML	10 32 56.9		
	comp=E,785µm,0.3s							
CHOS	**Chios island**	**1.96 167**	PN		**Pn**	10 32 21.3	0.0	
KYMI	**Kymi, Euboea I**	**1.98 213**	P		**Pn**	10 32 20.8	-0.7	
KYMI	**Kymi, Euboea I**	**1.98 213**	P		**Pn**	10 32 20.9	-0.6	
XOR	**Xorichti**	**2.00 243**	P		**Pn**	10 32 20.9	-0.9	
XOR	**Xorichti**	**2.00 243**	P		**Pn**	10 32 20.9	-0.9	
PHSR	**Pinarhisar**	**2.04 49**	PN		**Pn**	10 32 22.1	-0.2	
URLA	**Izmir**	**2.12 156**	PN		**Pn**	10 32 23.5	0.0	
URLA	**Izmir**	**2.12 156**	*i* P		**Pn**	10 32 24.1	+0.6	
URLA			*i* S		**Sn**	10 32 49.7	0.0	
KNT	**Kendrikon**	**2.15 294**	PN		**Pn**	10 32 23.8	0.0	
KCTX	**Karacabey (Bur**	**2.20 90**	PN		**Pn**	10 32 24.3	-0.2	
BLCB	**Balcova**	**2.26 147**	P		**Pn**	10 32 25.7	+0.3	
BLCB	**Balcova**	**2.26 147**	PN		**Pn**	10 32 24.9	-0.7	
SLVT	**Silivri**	**2.27 65**	PN		**Pn**	10 32 25.5	0.0	
AKHS	**Akhisar**	**2.29 128**	*i* P		**Pn**	10 32 26.7	+0.9	
KKB	**Krupnik**	**2.40 312**	P		**Pn**	10 32 28.2	+0.9	
DURS	**Dursunbey**	**2.40 106**	*i* P		**Pn**	10 32 27.8	+0.4	
DURS			IAML			10 33 07.0		
	comp=N,277nm,0.3s							
DURS			IAML			10 33 08.0		
	comp=E,342nm,0.3s							
CTYL	**Yalikoy Yolu**	**2.43 60**	PN		**Pn**	10 32 28.0	+0.3	
VAY	**Valandovo**	**2.44 296**	*e*Pn		**Pn**	10 32 28.1	+0.4	
VAY	**Valandovo**	**2.44 296**	*e*Pn		**Pn**	10 32 28.1	+0.4	
CTKS	**Kestanelik-??a**	**2.48 67**	PN		**Pn**	10 32 28.7	+0.3	
ARMT	**Armutlu**	**2.59 83**	PN		**Pn**	10 32 30.6	+0.7	
MDNY	**Mudanya-Bursa**	**2.60 87**	PN		**Pn**	10 32 29.7	-0.3	
BGKT	**Bogazkoy**	**2.65 70**	PN		**Pn**	10 32 30.3	-0.4	
DEMI	**Demirci**	**2.79 116**	*i* P		**Pn**	10 32 33.9	+1.1	
ULDT	**Uludag**	**2.80 92**	*i* P		**Pn**	10 32 33.8	+0.8	
ULDT			*i* S		**Sb**	10 33 15.2	+2.6	
ISK	**Istanbul-Kandi**	**2.82 73**	PN		**Pn**	10 32 33.1	0.0	
IGD	**Bursa**	**2.84 90**	*i* P		**Pn**	10 32 33.8	+0.4	
KLYT	**Kilyos**	**2.86 69**	PN		**Pn**	10 32 33.4	-0.2	
VTS	**Vitosha**	**2.87 325**	*e*Pn		**Pn**	10 32 34.5	+0.7	
VTS			*e*Sn		**Sn**	10 33 09.6	+1.3	
VTS	**Vitosha**	**2.87 325**	⇑P		**Pn**	10 32 35.1	+1.3	
VTS	**Vitosha**	**2.87 325**	P		**Pn**	10 32 34.2	+0.4	
YLV	**Yalova**	**2.98 84**	PN		**Pn**	10 32 35.1	-0.2	
SZH	**Strazhica**	**2.98 6**	P		**Pn**	10 32 35.7	+0.4	
MANT	**Manisa**	**2.99 126**	*i* P		**Pn**	10 32 36.4	+0.7	
BOSS	**Bosilegrad**	**3.15 315**	*e*Pn		**Pn**	10 32 38.5	+0.9	
BOSS			*e*Sn		**Sn**	10 33 15.7	+0.6	
PLVB	**Pleven**	**3.15 348**	⇓P		**Pn**	10 32 38.8	+1.2	
APE	**Apeiranthos**	**3.23 179**	⇑P		**Pn**	10 32 38.3	-0.5	
PRD	**Provadia**	**3.23 26**	P		**Pn**	10 32 38.1	-0.6	
MPEP	**Malo Peshtene**	**3.32 337**	P		**Pn**	10 32 41.1	+1.2	
RAZG	**Razgrad**	**3.35 13**	⇓P		**Pn**	10 32 40.8	+0.5	
ZAPS	**Zavoj**	**3.66 325**	*e*Pn		**Pn**	10 32 46.6	+2.0	
ZAPS			*e*Sn		**Sn**	10 33 27.8	+0.2	
KHAL	**Karahalli**	**3.66 121**	*i* P		**Pn**	10 32 46.2	+1.5	
GEYV	**SAKARYA_Geyve**	**3.68 86**	*i* P		**Pn**	10 32 45.4	+0.6	
BARS	**Barje**	**3.73 314**	*e*Pn		**Pn**	10 32 46.2	+0.7	
BARS	**Barje**	**3.73 314**	*e*Pn		**Pb**	10 32 56.1	+2.1	
BARS			*e*Sn		**Sn**	10 33 29.6	+0.3	
ICOR	**Ion Corvin**	**4.18 24**	⇓P		**Pn**	10 32 52.9	+1.2	
ZAGS	**Zajecar**	**4.26 326**	*e*Pn		**Pn**	10 32 52.9	0.0	
ZAGS			*e*Sn		**Sn**	10 33 42.5	0.0	
BOVS	**Bovan**	**4.36 321**	*e*Pn		**Pn**	10 32 54.9	+0.7	
SELS	**Selova**	**4.38 313**	*e*Pn		**Pn**	10 32 54.5	0.0	
SELS			*e*Sn		**Sn**	10 33 45.9	+0.5	
HARR	**Harsova**	**4.74 22**	⇑P		**Pn**	10 33 00.1	+0.6	
KUBS	**Kucevo**	**4.98 327**	*e*Pn		**Pn**	10 33 01.9	-0.9	
GRUS	**Gruza**	**5.04 317**	*e*Pn		**Pn**	10 33 03.1	-0.5	
GRUS			*e*Sn		**Sn**	10 34 00.4	-1.3	
IVAS	**Ivanjica**	**5.15 311**	*e*Pn		**Pn**	10 33 05.3	+0.2	
MLR	**Muntele Rosu**	**5.20 4**	⇓P		**Pn**	10 33 08.0	+2.1	
MDVR	**Moldovita**	**5.27 329**	⇑P		**Pn**	10 33 07.0	+0.2	
KDHN	**Kadinhani**	**5.43 107**	*i* P		**Pn**	10 33 10.6	+1.5	
TRUS	**Trudelj**	**5.44 318**	*e*Pn		**Pn**	10 33 08.9	-0.1	
GZR	**Gura Zlata**	**5.46 340**	⇑P		**Pn**	10 33 09.7	+0.2	
DIVS	**Divibare**	**5.57 315**	*e*Pn		**Pn**	10 33 10.9	0.0	
DIVS			*e*Sn		**Sn**	10 34 11.3	-3.6	
PLOR	**Plostina**	**5.61 8**	⇑P		**Pn**	10 33 13.7	+2.2	
VRI	**Vrincioaia**	**5.64 9**	⇑P		**Pn**	10 33 14.1	+2.3	
DOPR	**Dopca**	**5.66 359**	⇓P		**Pn**	10 33 13.6	+1.5	
BBLS	**Lazići**	**5.76 310**	*e*Pn		**Pn**	10 33 14.1	+0.6	
TESR	**Tescani**	**6.26 7**	⇓P		**Pn**	10 33 22.6	+2.2	
BIZ	**Bicaz**	**6.65 4**	⇓P		**Pn**	10 33 27.9	+2.2	

IDC 28 10:36:06.5±2.0, 18°32S×177°17W, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.6/31, mbtmp3.8/3, Error ellipse: s-maj=179.7km s-min=33.9km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.47**	**242**	P		10 43 39.1	+0.3
	1.3nm,0.6s,baz=84,slow=9.2,SNR=3.8						
WRA	**Warramunga Arr**	**45.72**	**260**	P		10 44 29.3	-0.5
	0.6nm,0.4s,baz=98,slow=7.0,SNR=17						
TXAR	**Lajitas Array**	**85.22**	**57**	P		10 48 45.4	0.0
	0.4nm,0.7s,baz=219,slow=4.2,SNR=4.1						

*IDC **28** 10:38:59.1±1.5, 29°.94S×179°.44W, h334km±15km, mb3.4/4, mb1 3.4/5, mb1mx3.2/26, mbtmp4.1/5, Error ellipse: s-maj=27.0km s-min=21.7km az=49.0*

ISC 28 10:39:01.9±1.1, 30°.0S±0°.2×179°.5W±0°.2, h362km, n11, σ0°.67/10, mb3.5/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.59**	**62**	P	Pn	10 39 45.4	-6.4
	68nm,0.3s,baz=92,slow=23,SNR=1.8						
RAO				S	S	10 40 17.9	-14
	180nm,0.3s,baz=80,slow=10,SNR=6.4						
DZM	**Mont Dzumac**	**14.86**	**299**	P	**P**	**10 42 14.6**	**0.0**
	0.1nm,0.3s,baz=121,slow=23,SNR=1.6						
STKA	**Stephens Creek**	**33.27**	**257**	P	**P**	**10 45 07.3**	**+0.4**
	1.7nm,0.7s,baz=106,slow=7.4,SNR=3.0						
WRA	**Warramunga Arr**	**42.75**	**273**	P	**P**	**10 46 25.0**	**-0.4**
	1.3nm,0.6s,baz=112,slow=7.5,SNR=14						
QSPA	**South Pole Qui**	**60.11**	**180**	P	**P**	**10 48 32.6**	**+0.5**
	1.1nm,0.6s,baz=5.0,slow=0.7,SNR=14						
PETK	**Petropavlovsk-**	**85.11**	**346**	P	**P**	**10 50 58.4**	**+0.9**
	1.4nm,0.6s,baz=178,slow=4.2,SNR=2.0						
FINES	**FINESS Array B**	**144.31**	**339**	PKP	**PKPab**	**10 57 53.2**	**-0.6**
	4.1nm,0.4s,baz=41,slow=4.8,SNR=29						
NB2	**NORSAR Subarra1**	**148.14**	**350**	PKP	**PKPbc**	**10 58 04.4**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=17,slow=2.5						
NOA	**NORSAR Array B**	**148.14**	**350**	PKPbc	**PKPbc**	**10 58 04.5**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=17,slow=4.1,SNR=3.8						
AKASG	**Malin Array Be**	**150.17**	**322**	PKPbc	**PKPbc**	**10 58 10.0**	**-0.1**
	comp=Z,1.0nm,0.4s,baz=52,slow=2.5,SNR=1.8						
TORD	**Torodi Ar. Bea**	**163.19**	**184**	PKPab	**PKPab**	**10 59 13.4**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=183,slow=3.3,SNR=4.4						

*IDC **28** 10:44:38.2±7.1, 68°.43N×164°.27W, h0km, mb3.0/2, mb1 3.6/4, mb1mx3.3/40, mbtmp3.3/4, ML3.4/2, Error ellipse: s-maj=101.4km s-min=80.6km az=119.0*

*AEIC **28** 10:44:46.1±3.0, 67°.69N±0°.07×162°.4W±0°.2, h19km±7km, ML2.8/23, Error ellipse: s-maj=12.4km s-min=6.4km az=137.0*

ISC 28 10:44:43.2±1.1, 67°.69N±0°.05×162°.69W±0°.07, h10km, n26, σ2°.29/30, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RDOG	**Red Dog Mine**	**0.38**	**348**		**Pn**	**10 44 54.4**	**-0.3**
RDOG					**Sb**	**10 45 01.1**	**+3.3**
ANM	**Nome**	**3.32**	**200**	Pn	**Pb**	**10 45 38.2**	**-3.9**
ANM					**Pn**	**10 45 38.6**	**+3.5**
IM03		**3.93**	**112**		**Pn**	**10 45 45.0**	**+1.7**
IM03					**Sn**	**10 46 29.0**	**-0.4**
COLD	**Coldfoot**	**4.83**	**90**		**Pn**	**10 45 56.7**	**+0.9**
TOLK	**Toolik Lake Re**	**4.99**	**73**		**Pn**	**10 45 59.2**	**+1.2**
TOLK					**Sn**	**10 46 53.0**	**-2.8**
TTA	**Tatalina**	**5.54**	**147**		**Pn**	**10 46 05.0**	**-0.6**
TT01	**Tatalina**	**5.56**	**147**		**Pn**	**10 46 08.3**	**+2.5**
BPAW	**Bear Paw Mtn.**	**5.99**	**121**		**Pn**	**10 46 12.6**	**+0.7**
KTH	**Kantishna Hill**	**6.40**	**125**		**Pn**	**10 46 18.1**	**+0.7**
PPLA	**Purkeypile**	**6.52**	**133**	Pn	**Pn**	**10 46 21.9**	**+2.8**
TCOL	**CIGO, UAF Yank**	**6.61**	**108**		**Pn**	**10 46 20.8**	**+0.6**
COLA	**College**	**6.62**	**108**		**Pn**	**10 46 21.5**	**+1.2**
WRH	**Wood River Hil**	**6.75**	**112**		**Pn**	**10 46 24.2**	**+2.0**
CCB	**Clear Creek Bu**	**6.75**	**110**		**Pn**	**10 46 24.4**	**+2.1**
FYU	**Fort Yukon**	**6.89**	**91**	Pn	**Pn**	**10 46 24.9**	**+0.8**
MCK	**McKinley**	**6.92**	**119**	Pn	**Pn**	**10 46 24.5**	**0.0**
BM03	**Burnt Mountain**	**6.93**	**84**		**Pn**	**10 46 25.8**	**+1.2**
IL31		**7.02**	**107**		**Pn**	**10 46 28.2**	**+2.4**
ILAR	**Eielson Array**	**7.02**	**107**	Pn	**Pn**	**10 46 28.1**	**+2.3**
	0.9nm,0.3s,baz=303,slow=14,SNR=37						
ILAR					Sn	**Sn**	**10 47 40.9**	**-4.8**
	baz=91,slow=13,SNR=0.5						
HDA	**Harding Lake**	**7.20**	**110**	Pn	**Pn**	**10 46 30.4**	**+2.1**
SVW2	**Sparrevohn**	**7.29**	**152**	Pn	**Pn**	**10 46 33.5**	**+3.8**
DHY	**Denali Highway**	**7.88**	**119**	Pn	**Pn**	**10 46 39.6**	**+1.8**
SCRK	**Sand Creek**	**8.51**	**107**	Pn	**Pn**	**10 46 46.8**	**+0.3**
INK	**Inuvik**	**10.90**	**73**	Pn	**Pn**	**10 47 18.7**	**-0.3**
	0.1nm,0.3s,baz=290,slow=11,SNR=11						
INK					Sn	10 49 12.2	-8.7
	0.2nm,0.3s,baz=112,slow=26,SNR=7.6						
YKA	**Yellowknife Ar**	**20.45**	**82**	P	Pn	10 49 21.5	-0.9
	0.2nm,0.4s,baz=305,slow=10,SNR=6.6						
TXAR	**Lajitas Array**	**51.53**	**107**	P	**P**	**10 53 51.5**	**+2.5**
	0.2nm,0.5s,baz=317,slow=5.2,SNR=2.8						

*IDC **28** 10:59:22.4±2.0, 23°.15N×121°.97E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.5/4, Error ellipse: s-maj=60.7km s-min=29.8km az=62.0*

*JMA **28** 10:59:24.7, 23°.03N×121°.36E, h0km, M3.2*

*TAP **28** 10:59:26.5, 23°.09N×121°.18E, h6km, ML3.8, C*

*ASIES **28** 10:59:26.0, 23°.05N×121°.15E, h18km, MW3.3*

ISC 28 10:59:26.8±0.8, 23°.06N±0°.01×121°.18E±0°.02, h16km±5km, n117, σ1°.37/196, mb3.4/4, 3C-21D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHKT	**Chengkung**	**0.18**	**77**	⇓*i*P	**Pg**	**10 59 31.4**	**+0.1**
	baz=86						
CHKT				*i* S	**Sg**	**10 59 35.8**	**+1.5**
	baz=86						
ELDTW	**Lidau**	**0.20**	**312**	⇓*i*P	**Pg**	**10 59 30.6**	**-1.0**
	baz=306						
ELDTW				S	**Sg**	**10 59 33.1**	**-1.7**
	baz=306						
TWG	**Pinlang**	**0.26**	**202**	⇑*i*P	**Pg**	**10 59 32.3**	**-0.2**
	baz=198						
TWG				*e*S	**Sg**	**10 59 36.9**	**+0.6**
	baz=198						
TWGBT	**Beinan**	**0.26**	**200**	⇑*i*P	**Pg**	**10 59 32.3**	**-0.2**
	baz=198						
TWGBT				S	**Sg**	**10 59 36.6**	**+0.3**
	baz=198						
TTN	**Taitung**	**0.30**	**185**	*e*P	**Pb**	**10 59 34.6**	**+0.8**
	baz=192						
TTN				S	**Sb**	**10 59 41.6**	**+3.0**
	baz=192						
TWF1	**Yuli**	**0.31**	**21**	⇓*i*P	**Pg**	**10 59 32.6**	**-0.9**
	baz=19						
TWF1				*e*S	**Sg**	**10 59 36.8**	**-1.2**
	baz=19						
YULB	**Yu-li**	**0.35**	**18**	⇓*i*P	**Pg**	**10 59 33.1**	**-1.0**
	baz=20						
YULB				*i* S	**Sg**	**10 59 37.6**	**-1.5**
	baz=20						
STYT	**Tauyuan**	**0.40**	**285**	⇓*i*P	**Pb**	**10 59 34.7**	**-0.9**
	baz=281						
STYT				S	**Sb**	**10 59 40.1**	**-1.4**
	baz=281						
TWH	**Lutao**	**0.44**	**141**	⇑*i*P	**Pb**	**10 59 36.4**	**+0.2**
	baz=130						
TWH				*e*S	**Sb**	**10 59 45.2**	**+2.5**
	baz=130						
EHY	**Hungye**	**0.47**	**17**	*e*P	**Pg**	**10 59 35.3**	**-0.9**
	baz=8.0						
EHY				S	**Sg**	**10 59 41.1**	**-1.4**
	baz=8.0						
HGSD	**Ruisui**	**0.49**	**28**	*e*P	**Pg**	**10 59 36.4**	**-0.2**
	baz=12						
HGSD				S	**Sb**	**10 59 44.5**	**+0.5**
	baz=12						
SLGT	**Liugui**	**0.49**	**263**	⇓*i*P	**Pb**	**10 59 36.7**	**-0.4**
	baz=254						
SLGT				*e*S	**Sb**	**10 59 43.0**	**-1.1**
	baz=254						
ECL	**Taimali**	**0.50**	**204**	P	**Pb**	**10 59 36.0**	**-1.3**
	baz=215						
ECL				*e*S	**Sb**	**10 59 43.2**	**-1.2**
	baz=215						
SGST	**Jiashian**	**0.55**	**273**	⇓*i*P	**Pb**	**10 59 37.1**	**-0.9**
	baz=272						
SGST				S	**Sb**	**10 59 45.0**	**-0.6**
	baz=272						
WTP	**Ta-pu**	**0.55**	**290**	⇓*i*P	**Pb**	**10 59 37.9**	**-0.3**
	baz=287						
WTP				*e*S	**Sb**	**10 59 46.0**	**+0.2**
	baz=287						
TPUB	**Ta-pu**	**0.56**	**296**	⇓*i*P	**Pb**	**10 59 38.0**	**-0.2**
	baz=303						
TPUB				*e*S	**Sb**	**10 59 46.0**	**0.0**
	baz=303						
ALS	**Alishan**	**0.56**	**323**	⇓*i*P	**Pb**	**10 59 37.8**	**-0.7**
	baz=321						
ALS				*e*S	**Sb**	**10 59 45.4**	**-1.1**
	baz=321						
SSD	**Sandimen**	**0.59**	**238**	*e*P	**Pb**	**10 59 38.0**	**-0.8**
	baz=228						
SSD				*e*S	**Sb**	**10 59 45.4**	**-1.5**
	baz=228						
CHN1	**Nanshi**	**0.61**	**282**	⇓P	**Pb**	**10 59 39.4**	**-1.4**
	baz=279						
CHN1				*e*S	**Sn**	**10 59 49.1**	**-1.3**
	baz=279						
SNST	**Tainan City**	**0.65**	**285**	*e*P	**Pn**	**10 59 39.9**	**-1.4**
	baz=282						
SNST				*e*S	**Sn**	**10 59 50.0**	**-1.2**
	baz=282						
EGFH	**Guangfu**	**0.65**	**21**	*e*P	**Pg**	**10 59 38.6**	**-1.0**
	baz=21						
EGFH				*e*S	**Sg**	**10 59 46.9**	**-1.4**
	baz=21						
TWK	**Hsinying**	**0.67**	**288**	⇓*i*P	**Pb**	**10 59 40.2**	**+0.1**
	baz=286						
TWK				*e*S	**Sn**	**10 59 50.3**	**-1.5**
	baz=286						
MASBT	**Mashibuluo**	**0.67**	**229**	*e*P	**Pb**	**10 59 39.5**	**-0.6**
	baz=234						
MASBT				*e*S	**Sb**	**10 59 49.0**	**-0.1**
	baz=234						
VWDT	**VWDT**	**0.69**	**357**	⇓*i*P	**Pg**	**10 59 39.4**	**-1.0**
	baz=350						
VWDT				S	**Sg**	**10 59 49.4**	**-0.2**
	baz=350						
WHYT	**Xinyi Township**	**0.70**	**335**	⇓*i*P	**Pb**	**10 59 40.2**	**-0.5**
	baz=334						
WHYT				*e*S	**Sb**	**10 59 49.4**	**-0.7**
	baz=334						
**C

DPDB	**Guoxing** baz=352	1.00	347	*e*P	**Pb**	10 59 45.4	-0.4
DPDB	baz=352			*e*S	**Sb**	11 00 00.3	+1.6
WLCH	**Liuqiu** baz=229	1.02	226	*e*P	**Pn**	10 59 50.1	+3.7
WSF	**Szhu** baz=302	1.05	304	*e*P	**Pn**	10 59 46.9	+0.1
WSF	baz=302			*e*S	**Sn**	11 00 02.6	+1.5
LAY	**Lan-yu** baz=183	1.07	161	P	**Pg**	10 59 45.2	-2.4
LAY	baz=183			*e*S	**Sb**	11 00 01.2	+0.4
WHF	**Hehuan Shan** baz=15	1.08	4	P	**Pg**	10 59 46.6	-1.3
WHF	baz=15			*e*S	**Sg**	11 00 01.3	-0.9
TWD	**Chiawan** baz=19	1.09	21	*e*P	**Pg**	10 59 47.1	-0.8
TWD	baz=19			*e*S	**Sg**	11 00 01.9	-0.2
RLNB	**Erlin** baz=316	1.12	318	*e*P	**Pn**	10 59 48.4	+0.6
RLNB	baz=316			*e*S	**Sn**	11 00 04.8	+1.9
HEN	**Hengchun** baz=190	1.12	201	*e*P	**Pn**	10 59 47.6	-0.2
TWK1	**Hengchun** baz=182	1.16	197	*e*P	**Pn**	10 59 48.8	+0.4
TWKBT	**Hengchun** baz=188	1.16	197	*e*P	**Pn**	10 59 49.0	+0.6
TWKBT	baz=188			*e*S	**Sn**	11 00 04.4	+0.4
WCHH	**Zhanghua** baz=328	1.16	331	*e*P	**Pn**	10 59 49.2	+0.7
WCHH	baz=328			*e*S	**Sn**	11 00 05.4	+1.4
NACB	**Ninganchiao** baz=17	1.18	19	*e*P	**Pg**	10 59 47.2	-2.3
NACB	baz=17			*e*S	**Sg**	11 00 04.0	-0.9
ETLH	**Xiulin Townshi** baz=26	1.18	14	*e*P	**Pg**	10 59 48.1	-1.4
ETLH	baz=26			*e*S	**Sg**	11 00 03.7	-1.3
TCU	**Taichung** baz=333	1.18	337	*e*P	**Pn**	10 59 49.6	+1.0
TCU	baz=333			*e*S	**Sn**	11 00 05.9	+1.6
TDCB	**Techi** baz=7.0	1.19	359	*e*P	**Pg**	10 59 48.5	-1.3
TDCB	baz=7.0			*e*S	**Sb**	11 00 05.0	+0.6
TWT	**Tachien** baz=356	1.19	360	*e*P	**Pg**	10 59 48.4	-1.4
TWT	baz=356			*e*S	**Sg**	11 00 04.0	-1.4
WHP	**Taichung City** baz=354	1.23	350	*e*P	**Pn**	10 59 50.6	+1.2
WHP	baz=354			*e*S	**Sn**	11 00 07.3	+1.5
TWQ1	**Liyutan** baz=326	1.34	344	*e*P	**Pb**	10 59 52.4	+0.9
TWQ1	baz=326			*e*S	**Sn**	11 00 11.4	+3.1
WDJ	**Dajia District** baz=335	1.38	339	*e*P	**Pb**	10 59 53.5	+1.3
WDJ	baz=335			*e*S	**Sn**	11 00 13.0	+3.8
NNSB	**Datong** baz=18	1.38	8	*e*P	**Pn**	10 59 51.8	+0.3
NNSB	baz=18			*e*S	**Sg**	11 00 09.5	-1.8
NNSH	**Datong** baz=17	1.38	8	*e*P	**Pn**	10 59 51.9	+0.4
NNSH	baz=17			*e*S	**Sg**	11 00 09.8	-1.6
NNS	**Nan Shan** baz=18	1.39	7	*e*P	**Pn**	10 59 52.3	+0.7
NNS	baz=18			*e*S	**Sg**	11 00 09.8	-1.9
NSY	**Sanyi** baz=328	1.40	344	*e*P	**Pb**	10 59 53.9	+1.3
NSY	baz=328			*e*S	**Sn**	11 00 14.3	+4.3
PTSB	**Yuanli** baz=338	1.45	343	*e*P	**Pg**	10 59 54.5	-0.3
PTSB	baz=338			*e*S	**Sn**	11 00 14.9	+3.8
NMLH	**Miaoli** baz=340	1.51	347	*e*P	**Pg**	10 59 55.1	-0.9
NMLH	baz=340			*e*S	**Sg**	11 00 15.0	-0.7
PHUB	**P'eng-hu** baz=288	1.54	287	*e*P	**Pn**	10 59 53.7	0.0
PHUB	baz=288			*e*S	**Sb**	11 00 13.4	-1.0
NDT	**Datong Townshi** baz=19	1.57	11	*e*P	**Pb**	10 59 55.5	0.0
NDT	baz=19			*e*S	**Sn**	11 00 14.7	+0.6
NSTT	**Nanjuang** baz=350	1.57	354	*e*P	**Pg**	10 59 56.4	-0.7
PNG	**Penghu** baz=276	1.57	289	*e*P	**Pb**	10 59 54.6	-1.0
PNG	baz=276			*e*S	**Sg**	11 00 15.4	-2.2
LIOB	**Emei** baz=349	1.59	355	*e*P	**Pg**	10 59 56.0	-1.4
LIOB	baz=349			*e*S	**Sg**	11 00 18.5	+0.5
ENTT	**Nioudou** baz=23	1.61	13	*e*P	**Pb**	10 59 56.3	+0.1
ENTT	baz=23			*e*S	**Sn**	11 00 15.6	+0.5
VCHM	**Qimei** baz=276	1.61	276	*e*P	**Pn**	10 59 54.1	-0.6
YHNB	**Yeheng** baz=15	1.61	6	*e*P	**Pn**	10 59 54.7	0.0
YHNB	baz=15			*e*S	**Sn**	11 00 16.8	+1.5
NSK	**Sanguang** baz=15	1.62	6	*e*P	**Pn**	10 59 55.5	+0.8
NSK	baz=15			*e*S	**Sn**	11 00 16.9	+1.6
TWC	**Suao** baz=20	1.66	22	*e*P	**Pb**	10 59 57.3	+0.2
TWE	**Neicheng** baz=29	1.71	15	*e*P	**Pb**	10 59 58.1	+0.2
NWLT	**Wulai** baz=21	1.74	10	*e*P	**Pn**	10 59 57.5	+1.1
WLTB	**Daxi** baz=359	1.79	2	*e*P	**Pg**	11 00 00.1	-1.1
NTC	**Toucheng** baz=16	1.89	18	*e*P	**Pn**	10 59 59.7	+1.3
EGS	baz=19	1.91	21	*e*P	**Pn**	10 59 59.7	+1.0
NHDH	**Xindian Distri** baz=21	1.92	9	*e*P	**Pg**	11 00 03.0	-0.8
TIPB	**Shuangxi** baz=15	2.00	17	*e*P	**Pn**	11 00 01.2	+1.3
TWS1	**Kuangyinshan** baz=20	2.04	6	*e*P	**Pb**	11 00 04.1	+0.5
YM01	**YM01** baz=24	2.11	10	*e*P	**Pn**	11 00 02.4	+0.9
YM10	**YM10** baz=24	2.12	9	*e*P	**Pb**	11 00 04.2	-0.6
YM05	**YM05** baz=24	2.13	10	*e*P	**Pn**	11 00 04.9	-0.2
YM11	**YM11** baz=24	2.13	10	*e*P	**Pn**	11 00 03.6	+1.8
JYNG	**Yonagunijimaku**	2.13	49	P	**Pn**	11 00 01.1	-0.7
JYNG				*e*S	**Sn**	11 00 27.4	-0.5
YM03	**YM03** baz=23	2.14	9	*e*P	**Pb**	11 00 04.1	-1.1
ANP	**Anpu** baz=22	2.14	8	*e*P	**Pb**	11 00 04.5	-0.7
YM08	**YM08** baz=24	2.15	10	*e*P	**Pb**	11 00 04.8	-0.6
YOJ	**Yonaguni jima**	2.19	50	P	**Pn**	11 00 01.9	-0.6
YOJ				*e*S	**Sn**	11 00 28.9	-0.3
VWUC	**VWUC** baz=318	2.49	321	*e*P	**Pn**	11 00 06.5	-0.2
HATJ	**Hateruma jima**	2.61	67	P	**Pn**	11 00 07.0	-1.3
HATJ				S	**Sn**	11 00 38.1	-1.6
PCYT	**Pengchaiyu** baz=13	2.69	18	*e*P	**Pn**	11 00 12.1	+2.7
PTMZ	**Houxiangcun** baz=315	2.73	317	*e*P	**Pn**	11 00 11.1	+1.2
JKRS	**Kuro-shima**	2.85	65	P	**Pn**	11 00 11.6	0.0
JKRS				*e*S	**Sn**	11 00 44.9	-0.7
KNMB	**Chin-men Tao** baz=301	2.91	299	*e*P	**Pn**	11 00 12.8	+0.3
JIJ	**Ishigaki jima**	3.01	64	P	**Pn**	11 00 12.7	-1.2
JIJ				*e*S	**Sn**	11 00 49.3	-0.3
JISG	**Ishigakijimahi**	3.25	61	P	**Pn**	11 00 15.8	-1.3
JISG				*e*S	**Sn**	11 00 52.8	-2.6
ZPLA	**Ao Xicun** baz=289	3.26	286	*e*P	**Pn**	11 00 18.4	+1.1
MATB	**Ma-tsu** baz=336	3.28	340	*e*P	**Pn**	11 00 17.9	+0.4
AXDP	**Jialang** baz=303	3.46	303	*e*P	**Pn**	11 00 20.8	+0.8
JTJ	**Tarama**	3.59	63	P	**Pn**	11 00 20.9	-0.9
JTJ				*e*S	**Sn**	11 01 02.7	-1.2
MHZQ	**Yeshan** baz=326	3.60	328	*e*P	**Pn**	11 00 22.5	+0.5
CMAR	**Chiang Mai Arr** 0.5nm,0.3s,baz=59,slow=7.5,SNR=2.0	21.28	262	P	**P**	11 04 18.3	+5.5
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=110,slow=9.5,SNR=5.9	39.15	317	P	**P**	11 06 56.0	+2.3
ZALV	**Zalesovo Beam** 1.2nm,0.7s,baz=109,slow=7.8,SNR=4.4	41.19	328	P	**P**	11 07 10.3	-0.1
WRA	**Warramunga Arr** 0.3nm,0.8s,baz=344,slow=8.8,SNR=1.6	44.63	162	P	**P**	11 07 35.7	-3.0

*DDA **28** 11:00:29.9, 40°.30N×25°.62E, h7km±2km, ML1.5*

ISK 28 11:00:29.5, 40°.25N×25°.60E, h23km, ML2.0/7, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
GADA	**Gvkgeada**	**0.24**	**105**		PG		Pb	11 00 36.3	+0.8
GADA					SG		Sb	11 00 40.5	+0.9
GOKA	**anakkale-Gk**	**0.25**	**104**	*i* P			Pb	11 00 34.9	-0.7
GOKA					IAML			11 00 40.0	
	comp=E,110nm,0.3s								
GOKA				*i* S			Sb	11 00 40.6	+0.9
GOKA					IAML			11 00 43.0	
	comp=N,128nm,0.4s								
BOZC	**Bozcaada**	**0.54**	**139**	PG			Pn	11 00 41.3	-0.4
BOZC					SG		Sn	11 00 48.9	-1.2
BOZC	**Bozcaada**	**0.54**	**139**	*i* P			Pn	11 00 41.4	-0.3
BOZC				*i* S			Sn	11 00 49.7	-0.3
BOZC					IAML			11 00 50.0	
	comp=N,30nm,0.1s								
BOZC					IAML			11 00 50.0	
	comp=E,29nm,0.3s								
BOZC	**Bozcaada**	**0.54**	**139**	*i* P			Pn	11 00 41.4	-0.3
BOZC				*i* S			Sn	11 00 49.8	-0.3
BOZC					IAML			11 00 50.0	
	comp=N,30nm,0.1s								
BOZC					IAML			11 00 50.0	
	comp=E,29nm,0.3s								
ENEZ	**Enez**	**0.64**	**41**	PG			Pn	11 00 42.9	-0.3
ENEZ					SG		Sn	11 00 52.3	-0.3
GELI	**Tayfur-Gelibol**	**0.69**	**77**	PG			Pb	11 00 43.2	+0.4
GELI					SG		Sn	11 00 53.6	-0.1
EZN	**Ezine**	**0.70**	**127**	PG			Pb	11 00 43.5	+0.4
ERIK	**Erikli-Kesan**	**0.81**	**59**	PG			Pn	11 00 46.0	+0.5
BAYC	**CANAKKALE_Bayr**	**0.89**	**125**	*i* P			Pn	11 00 47.7	+1.2
BAYC				*i* S			Sn	11 00 59.7	+1.0
BAYC					IAML			11 01 01.0	
	comp=N,14nm,0.2s								
BAYC					IAML			11 01 04.0	
	comp=E,19nm,0.2s								
BAYC	**CANAKKALE_Bayr**	**0.89**	**125**	*i* P			Pn	11 00 47.5	+0.9
BAYC				*i* S			Sn	11 01 00.4	+1.6
BAYC					IAML			11 01 01.0	
	comp=N,14nm,0.2s								
BAYC					IAML			11 01 04.0	
	comp=E,19nm,0.2s								
RDO	**Rodhopi**	**0.89**	**357**	PG			Pn	11 00 46.7	+0.1
LPK	**Lapseki**	**0.90**	**82**	PG			Pn	11 00 47.2	+0.5
KESN	**Edirne-Kesan**	**1.00**	**55**	*i* P			Pn	11 00 49.9	+1.4
KESN				*i* S			Sn	11 01 02.1	0.0
KESN					IAML			11 01 04.0	
	comp=E,54nm,0.2s								
KESN					IAML			11 01 04.0	
	comp=N,50nm,0.3s								
KESN	**Edirne-Kesan**	**1.00**	**55**	*i* P			Pn	11 00 49.9	+1.4
KESN				*i* S			Sn	11 01 02.1	0.0
SIGR	**SIGRI**	**1.06**	**169**	PG			Pn	11 00 48.6	-0.3
OUR	**Ouranopolis**	**1.24**	**274**	PN			Pn	11 00 51.5	+0.2
KRBG	**Karabiga-Canak**	**1.31**	**83**	PN			Pn	11 00 52.4	+0.1
KDZ	**Kurdzhali**	**1.40**	**354**	PN			Pn	11 00 53.4	-0.3
MRMT	**Marmara Adasi**	**1.56**	**76**	PN			Pn	11 00 56.7	+0.8

*GCG **28** 11:16:19.4±0.6, 14°.40N×89°.07W, h35km±999km, MD4.2*
*SNET **28** 11:16:27.3±1.2, 14°.96N×89°.94W, h11km±10km, ML3.6*
*UCR **28** 11:16:27.5±1.1, 14°.97N×89°.94W, h13km±10km, ML3.6*

ISC 28 11:16:29.1±1.2, 14°.86N±0°.03×89°.85W±0°.03, h3km±11km, n36, σ1°.45/43, 4C, Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
MRL	**Marmol**	**0.28**	**35**	⇑*i* P			**Pg**	**11 16 33.6**	**-0.9**
MRL	**Marmol**	**0.28**	**35**	*e*P			**Pg**	**11 16 34.3**	**-0.1**
MRL				*e*S			Sb	11 16 49.4	+7.4
MRL	**Marmol**	**0.28**	**35**	⇑*i*P			**Pg**	**11 16 33.6**	**-0.9**
NBG	**Las Nubes**	**0.55**	**241**	*e*P			**Pg**	**11 16 38.6**	**-1.0**
MTO3	**Montecristo**	**0.66**	**134**	⇑*i*P			**Pg**	**11 16 41.8**	**+0.1**
MTO3	**Montecristo**	**0.66**	**134**	⇑*i*P			**Pg**	**11 16 41.8**	**+0.1**
PCG	**Pacaya**	**0.87**	**238**	*e*P			**Pg**	**11 16 44.6**	**-1.1**
PCG				*e*S			**Sn**	**11 17 04.1**	**+2.4**
IXG	**Ixpaco**	**0.89**	**220**	*e*P			**Pg**	**11 16 44.3**	**-1.8**
IXG	**Ixpaco**	**0.89**	**220**	*e*P			**Pg**	**11 16 45.1**	**-1.0**
IXG	**Ixpaco**	**0.89**	**220**	*e*P			**Pg**	**11 16 44.3**	**-1.8**
UNIC	**Universidad Ca**	**0.92**	**161**	*e*P			**Pg**	**11 16 46.3**	**-0.3**
UNIC	**Universidad Ca**	**0.92**	**161**	*e*P			**Pg**	**11 16 46.3**	**-0.3**
RTR	**El Retiro**	**0.97**	**168**	*e*P			**Pg**	**11 16 47.4**	**-0.4**
RTR	**El Retiro**	**0.97**	**168**	*e*P			**Pg**	**11 16 47.4**	**-0.4**
SNJE	**San Jose**	**1.01**	**166**	*e*P			**Pg**	**11 16 48.2**	**-0.2**
SNJE	**San Jose**	**1.01**	**166**	*e*P			**Pg**	**11 16 48.2**	**-0.2**
SBLS	**San Blas**	**1.03**	**168**	*e*P			**Pb**	**11 16 49.5**	**-0.2**
SBLS	**San Blas**	**1.03**	**168**	*e*P			**Pb**	**11 16 49.5**	**-0.2**
FUG	**Fuego 3**	**1.04**	**247**	*e*P			**Pg**	**11 16 47.7**	**-1.4**
FUG				*e*S			**Sn**	**11 17 09.6**	**+3.7**
CEVE	**Cerro Verde**	**1.04**	**168**	*e*P			**Pg**	**11 16 49.3**	**+0.2**
CEVE				*e*S			**Sn**	**11 17 05.7**	**-0.4**
CEVE					IAML			11 17 11.0	
	comp=Z,1μm,0.2s								
CEVE	**Cerro Verde**	**1.04**	**168**	*e*P			**Pg**	**11 16 49.3**	**+0.2**
CEVE				*e*S			**Sn**	**11 17 05.7**	**-0.4**
CEVE					IAML			11 17 11.0	
	comp=Z,1μm,0.2s								
BOQS	**Boqueron**	**1.24**	**154**	*e*P			**Pn**	**11 16 52.1**	**-1.5**
BOQS				*e*S			**Sn**	**11 17 11.2**	**+0.2**
BOQS	**Boqueron**	**1.24**	**154**	*e*P			**Pn**	**11 16 52.1**	**-1.5**
BOQS				*e*S			**Sn**	**11 17 11.2**	**+0.2**
UEES	**Universidad Ev**	**1.28**	**152**		IAML			11 17 17.6	
	comp=Z,1μm,0.3s								
UEES	**Universidad Ev**	**1.28**	**152**		IAML			11 17 17.6	
	comp=Z,1μm,0.3s								
OPAM	**Oficina de Pla**	**1.30**	**151**	*e*S			**Sg**	**11 17 13.1**	**+2.2**
OPAM					IAML			11 17 16.2	
	comp=Z,1μm,0.3s								
OPAM	**Oficina de Pla**	**1.30**	**151**	*e*S			**Sg**	**11 17 13.1**	**+2.2**
OPAM					IAML			11 17 16.2	
	comp=Z,1μm,0.3s								
SNET	**Serv Nac Est T**	**1.31**	**153**	*e*S			**Sg**	**11 17 13.0**	**+1.9**
SNET					IAML			11 17 21.8	
	comp=Z,701nm,0.4s								
SNET	**Serv Nac Est T**	**1.31**	**153**	*e*S			**Sg**	**11 17 13.0**	**+1.9**
SNET					IAML			11 17 21.8	
	comp=Z,701nm,0.4s								
LFRS	**El Faro**	**1.44**	**148**	*e*P			**Pn**	**11 16 55.3**	**-0.9**
LFRS	**El Faro**	**1.44**	**148**	*e*P			**Pn**	**11 16 55.3**	**-0.9**
LALI	**Alcalda de L**	**1.45**	**159**	*e*S			**Sg**	**11 17 15.9**	**+0.1**
LALI	**Alcalda de L**	**1.45**	**159**	*e*S			**Sg**	**11 17 15.9**	**+0.1**
COEG	**Centro de Oper**	**1.55**	**142**	*e*P			**Pn**	**11 16 57.4**	**-0.2**
COEG				*e*S			**Sg**	**11 17 19.1**	**+0.3**
COEG	**Centro de Oper**	**1.55**	**142**	*e*P			**Pn**	**11 16 57.4**	**-0.2**
COEG				*e*S			**Sg**	**11 17 19.1**	**+0.3**
STG3	**Santiaguito 3,**	**1.67**	**265**	*e*P			**Pb**	**11 16 58.8**	**-1.8**
STG3				*e*S			**Sg**	**11 17 27.5**	**+4.7**

DDA 28 11:28:59.3, 39°.06N×27°.86E, h7km±4km, ML1.6, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
AKHS	**Akhisar**	**0.19**	**192**	*i* P			Pg	11 29 03.5	+0.5
AKHS				*i* S			Sg	11 29 06.5	+0.9
AKHS	**Akhisar**	**0.19**	**192**	*i* P			Pg	11 29 03.9	+0.8
AKHS				*i* S			Sg	11 29 06.7	+1.1
STEP	**BALIKESIR_Sava**	**0.34**	**340**	*i* P			Pg	11 29 05.6	-0.3
STEP					IAML			11 29 14.0	
	comp=N,62nm,0.3s								
STEP					IAML			11 29 14.0	
	comp=E,119nm,0.3s								
DEMI	**Demirci**	**0.67**	**91**	*i* P			Pb	11 29 13.6	+0.3
DEMI				*i* S			Sb	11 29 22.6	-0.2
DEMI					IAML			11 29 27.0	
	comp=N,22nm,0.2s								
DEMI					IAML			11 29 31.0	
	comp=E,24nm,0.5s								
DEMI	**Demirci**	**0.67**	**91**	*i* P			Pg	11 29 09.5	-2.6
BALY	**Balya**	**0.70**	**345**	*i* P			Pn	11 29 15.7	-0.1
BALY				*i* S			Sb	11 29 25.3	+1.4
BALY					IAML			11 29 26.0	
	comp=E,24nm,0.2s								
BALY					IAML			11 29 35.0	
	comp=N,20nm,0.4s								
USAK	**Uak-Merkez**	**0.97**	**111**	*i* P			Pb	11 29 18.7	+0.3

*IDC **28** 11:37:45.8±1.1, 5°.62S×106°.72W, h0km, mb3.9/12, mb1 4.2/12, mb1mx4.0/28, mbtmp3.9/12, MS3.7/14, Ms1 3.7/14, ms1mx3.6/22, Error ellipse: s-maj=40.4km s-min=20.6km az=49.0*
*NEIC **28** 11:37:47.0±1.3, 5°.7S±0°.1×106°.5W±0°.1, h10km±1km, mb4.6/74, Error ellipse: s-maj=20.2km s-min=19.1km az=201.0*

ISC 28 11:37:47.1±0.8, 5°.6S±0°.1×106°.6W±0°.1, h10km, n111, σ0°.83/93, mb4.5/44, MS3.7/14, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
PAYG	**Puerto Ayora**	**16.97**	**74**	P			**Pn**	**11 41 45.5**	**+0.7**
PAYG					IAmb		IAmb	11 42 20.6	
	comp=Z,56nm,1.2s								
RPN	**Rapa Nui**	**21.54**	**187**	LR			LR	11 48 49.5	
	comp=Z,162nm,19.7s,baz=5.5,slow=31								
RPN	**Rapa Nui**	**21.54**	**187**	P			**P**	**11 42 35.8**	**-0.9**
CMIG	**Matias Romero**	**25.35**	**27**	LR			LR	11 50 56.5	
	comp=Z,350nm,19.3s,baz=202,slow=31								
CCIG	**Comitan**	**26.03**	**33**	P			**P**	**11 43 18.1**	**-2.8**
CCIG					IAmb		IAmb	11 43 26.7	
	comp=Z,23nm,1.2s								
CRIN	**San Cristobal**	**26.60**	**47**	P			**P**	**11 43 26.2**	**+0.3**
JTS	**Las Juntas de**	**26.70**	**54**	LR			LR	11 51 15.7	
	comp=Z,219nm,18.2s,baz=300,slow=30								
ACON	**Acoyapa**	**27.53**	**51**	P			**P**	**11 43 35.4**	**+1.1**
ATAH	**Atahualpa**	**28.03**	**95**	LR			LR	11 52 03.4	
	comp=Z,272nm,18.6s,baz=252,slow=30								
SRIG	**Santa Rosalia**	**33.21**	**351**	P			**P**	**11 44 22.6**	**-1.8**
SRIG					IAmb		IAmb	11 44 28.4	
	comp=Z,7.9nm,1.0s								
KVTX	**Kingsville**	**34.03**	**14**	P			**P**	**11 44 31.9**	**+0.4**
HSIG		**34.71**	**353**	P			**P**	**11 44 38.1**	**+0.7**
HSIG					IAmb		IAmb	11 44 40.7	
	comp=Z,9.6nm,1.1s								
TXAR	**Lajitas Array**	**34.87**	**4**	P			**P**	**11 44 39.9**	**+1.0**
	comp=Z,0.9nm,1.1s,baz=183,slow=8.8,SNR=4.0								
TXAR					PcP		**PcP**	**11 47 12.7**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=204,slow=2.0,SNR=4.8								
TXAR					LR		LR	11 56 37.3	
	comp=Z,39nm,18.2s,baz=0.0,slow=32								
TX32	**Lajitas Array**	**34.87**	**4**	P			**P**	**11 44 38.3**	**-0.6**
HKT	**Hockley**	**36.84**	**16**	P			**P**	**11 44 54.1**	**-1.5**
HKT					IAmb		IAmb	11 46 06.6	
	comp=Z,34nm,1.9s								
MNTX	**Cornudas Mount**	**37.13**	**2**	P			**P**	**11 44 57.0**	**-1.2**
H03N2	**Juan Fernandez** baz=314,slow=77,SNR=30	**37.74**	**141**	T			T	12 25 09.9	
H03N1	**Juan Fernandez** baz=314,slow=77,SNR=74	**37.76**	**141**	T			T	12 25 13.8	
H03N3	**Juan Fernandez** baz=314,slow=77,SNR=53	**37.76**	**141**	T			T	12 25 11.0	
214A	**Organ Pipe Nat**	**37.85**	**351**	P			**P**	**11 45 05.0**	**+0.8**
ABTX	**Abilene, Hawle**	**38.60**	**9**	P			**P**	**11 45 10.3**	**-0.3**
ABTX					IAmb		IAmb	11 45 43.1	
	comp=Z,20nm,1.9s								
SDV	**Santo Domingo** comp=Z,3.4nm,0.3s,baz=321,slow=6.5,SNR=1.4	**38.61**	**68**	P			**P**	**11 45 12.8**	**+1.8**
SDV	**Santo Domingo**	**38.61**	**68**	P			**P**	**11 45 10.6**	**-0.5**
SDV					IAmb		IAmb	11 45 19.1	
	comp=Z,8.1nm,0.7s								
PB04	**IPOC Station P**	**38.88**	**119**	P			**P**	**11 45 11.6**	**-1.7**
LPAZ	**La Paz**	**39.11**	**109**	P			**P**	**11 45 17.5**	**+1.7**
	comp=Z,1.9nm,1.0s,baz=356,slow=6.1,SNR=4.2								
LPAZ					LR		LR	11 57 54.9	
	comp=Z,82nm,21.6s,baz=279,slow=31								
BNM	**Barren Site**	**39.56**	**360**	P			**P**	**11 45 17.8**	**-1.0**
LENM	**Lemitar**	**39.58**	**359**	P			**P**	**11 45 18.8**	**-0.1**
X16A	**Lo Mia Camp, P**	**40.10**	**354**	P			**P**	**11 45 23.5**	**+0.2**
XPFO	**Pion Flat**	**40.14**	**347**	P			**P**	**11 45 23.6**	**+0.1**
PFO	**Pinyon Flats O**	**40.14**	**347**	P			**P**	**11 45 22.0**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=224,slow=18,SNR=1.8								
PFO	**Pinyon Flats O**	**40.14**	**347**	P			**P**	**11 45 23.2**	**-0.3**
Z38A	**Mt. Pleasant**	**40.20**	**15**	P			**P**	**11 45 23.2**	**-0.6**
ANMO	**Albuquerque** comp=Z,0.3nm,0.3s,baz=158,slow=6.9,SNR=3.9	**40.36**	**0**	P			**P**	**11 45 24.9**	**-0.5**
W18A	**Petrified Fore**	**40.64**	**356**	P			**P**	**11 45 28.5**	**+0.8**
W13A	**Hualapai Mount**	**41.09**	**351**	P			**P**	**11 45 32.1**	**+0.6**
MWC	**Mount Wilson**	**41.10**	**345**	P			**P**	**11 45 31.3**	**-0.2**
MWC					IAmb		IAmb	11 45 35.2	
	comp=Z,13nm,1.2s								
WLAR	**White Oak Lake**	**41.12**	**17**	P			**P**	**11 45 32.0**	**+0.6**
WLAR					IAmb		IAmb	11 45 35.8	
	comp=Z,34nm,1.5s								
WUAZ	**Wupatki**	**41.18**	**354**	P			**P**	**11 45 33.6**	**+1.4**
451A	**Vernon**	**41.18**	**28**	P			**P**	**11 45 32.9**	**+1.0**
X37A	**Clayton**	**41.37**	**14**	P			**P**	**11 45 33.7**	**+0.2**
X37A					IAmb		IAmb	11 45 58.8	
	comp=Z,12nm,1.4s								
FNO	**Franklin**	**41.57**	**11**	P			**P**	**11 45 36.0**	**+0.8**
MIAR	**Mount Ida**	**41.80**	**16**	P			**P**	**11 45 37.5**	**+0.5**
GSC	**Goldstone, Bar**	**41.84**	**347**	P			**P**	**11 45 36.7**	**-0.8**
U15A	**North Rim**	**42.18**	**353**	P			**P**	**11 45 38.6**	**-1.8**
W39A	**Magazine**	**42.35**	**16**	P			**P**	**11 45 42.4**	**+0.8**
W39A					IAmb		IAmb	11 45 45.2	
	comp=Z,28nm,1.8s								
SDDR	**Presa de Saban**	**

PLAL	**Pickwick Lake**	**43.99**	**22**	P		**P**	**11 45 54.5**	**-0.3**
PLAL				IAmb		IAmb	11 45 58.1	
	comp=Z,32nm,1.7s							
FPAL	**Fort Paine**	**44.58**	**25**	P		**P**	**11 45 59.5**	**-0.1**
MGMO	**Mountain Grove**	**44.60**	**16**	P		**P**	**11 45 59.6**	**-0.1**
MGMO				IAmb		IAmb	11 46 03.2	
	comp=Z,12nm,1.3s							
T42A	**Van Buren**	**44.83**	**18**	P		**P**	**11 46 01.4**	**-0.1**
V48A	**Smith Brothers**	**45.13**	**23**	P		**P**	**11 46 04.1**	**+0.2**
V48A				IAmb		IAmb	11 46 07.1	
	comp=Z,18nm,1.6s							
NVAR	**Mina Array Bea**	**45.17**	**347**	P		**P**	**11 46 04.9**	**+0.4**
	comp=Z,1.7nm,1.0s,baz=170,slow=10.0,SNR=6.9							
NVAR				LR		LR	12 02 10.3	
	comp=Z,53nm,18.6s,baz=236,slow=32							
SIV	**San Ignacio**	**45.75**	**107**	P		**P**	**11 46 09.7**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=308,slow=9.8,SNR=4.7							
S44A	**Carbondale**	**46.02**	**19**	P		**P**	**11 46 10.2**	**-0.6**
S44A				IAmb		IAmb	11 46 21.1	
	comp=Z,8.1nm,0.9s							
SLM	**Saint Louis**	**46.57**	**18**	P		**P**	**11 46 15.3**	**+0.1**
P40A	**Paris**	**46.89**	**15**	P		**P**	**11 46 17.3**	**-0.4**
RWWY	**Rawlins**	**47.09**	**359**	P		**P**	**11 46 19.9**	**+0.3**
RWWY				IAmb		IAmb	11 46 21.5	
	comp=Z,9.4nm,1.3s							
Q44A	**Meyer Farm, Va**	**47.20**	**19**	P		**P**	**11 46 20.4**	**+0.3**
HWUT	**Hardware Ranch**	**47.23**	**355**	P		**P**	**11 46 21.1**	**+0.5**
HWUT				IAmb		IAmb	11 46 23.1	
	comp=Z,8.3nm,1.4s							
PLCA	**Paso Flores**	**47.53**	**143**	LR		LR	12 01 32.1	
	comp=Z,181nm,18.6s,baz=303,slow=30							
PDAR	**Pinedale Array**	**48.24**	**357**	P		**P**	**11 46 28.9**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=188,slow=4.5,SNR=5.2							
HDIL	**Hopedale**	**48.62**	**18**	P		**P**	**11 46 31.6**	**+0.5**
HDIL				IAmb		IAmb	11 46 32.6	
	comp=Z,8.9nm,0.8s							
MFID	**Camas Ranch**	**49.53**	**351**	P		**P**	**11 46 38.7**	**+0.5**
MFID				IAmb		IAmb	11 46 45.0	
	comp=Z,4.2nm,0.8s							
V61A	**Roper**	**49.90**	**32**	P		**P**	**11 46 39.9**	**-1.1**
MCMT	**McKenzie Canyo**	**50.54**	**354**	P		**P**	**11 46 46.8**	**+0.7**
CPUP	**Villa Florida**	**51.22**	**119**	LR		LR	12 05 06.6	
	comp=Z,85nm,19.4s,baz=289,slow=32							
C09A	**Chrisman Ranch**	**54.20**	**350**	P		**P**	**11 47 13.3**	**+0.5**
C09A				IAmb		IAmb	11 47 15.4	
	comp=Z,5.6nm,1.0s							
EYMN	**Ely**	**54.97**	**12**	P		**P**	**11 47 18.7**	**+0.3**
ULM	**Lac du Bonnet**	**56.42**	**8**	P		**P**	**11 47 27.4**	**-1.3**
	comp=Z,1.9nm,0.5s,baz=8.8,slow=3.4,SNR=1.7							
ULM				LR		LR	12 09 52.4	
	comp=Z,47nm,22.0s,baz=186,slow=34							
BDFB	**Brasilia**	**58.23**	**105**	LR		LR	12 10 21.9	
	comp=Z,144nm,19.9s,baz=240,slow=34							
YKA	**Yellowknife Ar**	**68.21**	**356**	P		**P**	**11 48 47.5**	**0.0**
	comp=Z,1.0nm,0.8s,baz=162,slow=6.4,SNR=12							
SCHQ	**Schefferville**	**68.69**	**23**	LR		LR	12 18 37.7	
	comp=Z,37nm,19.4s,baz=90,slow=36							
DOT	**Dot Lake**	**74.62**	**344**	P		**P**	**11 49 27.3**	**+1.0**
EGAK	**Eagle**	**74.75**	**345**	P		**P**	**11 49 28.1**	**+1.0**
EGAK				IAmb		IAmb	11 49 29.6	
	comp=Z,7.5nm,1.2s							
RIDG	**Independent Ri**	**74.92**	**343**	P		**P**	**11 49 28.5**	**+0.4**
RIDG				IAmb		IAmb	11 49 30.3	
	comp=Z,10nm,1.2s							
INK	**Inuvik**	**76.15**	**350**	P		**P**	**11 49 34.8**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=181,slow=5.9,SNR=3.6							
IL31		**76.28**	**343**	P		**P**	**11 49 35.9**	**+0.1**
IL31				IAmb		IAmb	11 50 33.7	
	comp=Z,19nm,1.9s							
ILAR	**Eielson Array**	**76.28**	**343**	P		**P**	**11 49 35.5**	**-0.3**
	comp=Z,1.6nm,0.9s,baz=160,slow=5.0,SNR=14							
NEA	**Nenana**	**76.78**	**343**	P		**P**	**11 49 39.6**	**+0.9**
NEA				IAmb		IAmb	11 52 29.0	
	comp=Z,3.6nm,0.8s							
MLY	**Manley**	**77.60**	**342**	P		**P**	**11 49 44.0**	**+0.7**
MLY				IAmb		IAmb	11 50 09.4	
	comp=Z,8.0nm,1.4s							
H11N3	**WAKE ISLAND Hy**	**88.62**	**290**	T		T	13 28 32.7	
	baz=96,slow=74,SNR=15							
H11N2	**WAKE ISLAND Hy**	**88.64**	**290**	T		T	13 28 32.7	
	baz=96,slow=74,SNR=15							
H11N1	**WAKE ISLAND Hy**	**88.64**	**290**	T		T	13 28 33.5	
	baz=96,slow=74,SNR=16							
H11S2	**WAKE ISLAND Hy**	**88.68**	**289**	T		T	13 28 51.5	
	baz=103,slow=74,SNR=11							
H11S1	**WAKE ISLAND Hy**	**88.69**	**289**	T		T	13 28 36.2	
	baz=103,slow=74,SNR=9.8							
H11S3	**WAKE ISLAND Hy**	**88.70**	**289**	T		T	13 28 47.3	
	baz=103,slow=74,SNR=12							
PETK	**Petropavlovsk-**	**97.92**	**323**	LR		LR	12 26 31.7	
	comp=Z,36nm,21.6s,baz=62,slow=30							
SONM	**Songino Array**	**129.40**	**332**	PKP		**PKiKP**	**11 56 56.8**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=108,slow=3.3,SNR=4.6							
BRTR	**Keskin Array B**	**130.67**	**41**	PKP		**PKPdf**	**11 56 59.2**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=216,slow=6.1,SNR=5.3							
ZALV	**Zalesovo Beam**	**130.94**	**351**	PKP		**PKPdf**	**11 56 58.8**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=327,slow=2.5,SNR=3.8							
MKAR	**Makanchi Array**	**138.28**	**351**	PKP		**PKPdf**	**11 57 13.2**	**+0.2**
	comp=Z,2.2nm,1.1s,baz=11,slow=2.5,SNR=8.6							
GEYT	**Alibeck**	**144.95**	**21**	PKPbc		**PKPdf**	**11 57 25.7**	**+0.5**
	comp=Z,1.6nm,0.4s,baz=236,slow=4.9,SNR=5.0							
CMAR	**Chiang Mai Arr**	**152.04**	**299**	PKPbc		**PKPbc**	**11 57 43.9**	**+0.1**
	comp=Z,2.8nm,0.9s,baz=44,slow=2.3,SNR=12							

*GCG **28** 11:45:52.9±0.4, 14°.83N×89°.81W, h0km±4km, MD3.7*
*SNET **28** 11:45:53.3±1.4, 14°.96N×89°.91W, h16km±57km, ML3.2*
ISC 28 11:45:54.4±1.2, 14°.86N±0°.05×89°.85W±0°.04, h9km±12km, n14, σ1§13/18, 2C, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.28**	**36**	*eP*	**Pg**	**11 46 00.2**	**+0.1**
MRL	**Marmol**	**0.28**	**36**	*i*⇑*iP*	**Pg**	**11 45 59.4**	**-0.7**
NBG	**Las Nubes**	**0.55**	**241**	*eP*	**Pg**	**11 46 04.7**	**-0.4**
MTO3	**Montecristo**	**0.66**	**134**	*i*⇑*iP*	**Pb**	**11 46 07.5**	**-0.7**
MTO3				IAML		11 46 07.9	
IXG	**Ixpaco**	**0.89**	**220**	*eP*	**Pb**	**11 46 11.2**	**-0.9**
IXG	**Ixpaco**	**0.89**	**220**	*eP*	**Pg**	**11 46 10.4**	**-1.1**
RTR	**El Retiro**	**0.97**	**168**	*eP*	**Pg**	**11 46 12.8**	**-0.4**
SBLS	**San Blas**	**1.03**	**168**	*eP*	**Pn**	**11 46 15.2**	**-0.2**
FUG	**Fuego 3**	**1.04**	**247**	*eP*	**Pb**	**11 46 13.8**	**-0.9**
FUG				*eS*	**Sn**	**11 46 30.4**	**+0.2**
CEVE	**Cerro Verde**	**1.04**	**168**	*eP*	**Pn**	**11 46 15.4**	**-0.1**
CEVE				*eS*	**Sn**	**11 46 32.1**	**+1.7**
CEVE				IAML		11 46 42.6	
	comp=Z,482nm,0.3s						
LLGN	**La Laguna**	**1.12**	**128**	*eP*	**Pn**	**11 46 15.7**	**-0.6**
LLGN				*eS*	**Sn**	**11 46 32.2**	**+0.3**
LLGN				IAML		11 46 33.0	
	comp=Z,410nm,0.1s						
BOQS	**Boqueron**	**1.24**	**153**	*eP*	**Pg**	**11 46 18.1**	**-0.2**
BOQS				*eS*	**Sn**	**11 46 36.4**	**+1.1**
STG3	**Santiaguito 3,**	**1.67**	**265**	*eP*	**Pb**	**11 46 24.4**	**-1.0**
STG3				*eS*	**Sg**	**11 46 51.0**	**+2.9**
PPT2	**Papeete2**	**67.14**	**243**	*e*LR	LR	11 57 49.7	
	comp=Z,117nm,26.0s						

IDC 28 11:59:27.0±418.0, 32°.76S×145°.51E, h0km, Error ellipse: s-maj=190.2km s-min=155.2km az=173.0, New South Wales

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I05AU	**HOBART INFRASO**	**9.86**	**171**	*i*		12 59 10.0	
	baz=352,slow=334,SNR=1.8						
I22FR	**PORTLAGUERRE I**	**21.63**	**66**	*i*		14 13 25.0	
	baz=237,slow=246,SNR=0.8						
I39PW	**PALAU INFRASON**	**41.41**	**343**	*i*		16 10 30.0	
	baz=165,slow=314,SNR=0.8						

MAN 28 12:28:40.8, 7°.01N×123°.94E, h9km, mb4.4, ML3.3, MS3.0, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.37**	**56**	*i*⇓*iP*	Pb	12 28 49.0	-0.5
CTBH				*i* S	Sg	12 28 53.8	+0.9
SKMP	**Bagumbayan, Su**	**0.77**	**129**	*e*P	Pg	12 28 55.9	+0.1
SKMP				*e*S	Sg	12 29 05.9	0.0
PAGZ	**Pagadian**	**1.00**	**326**	*e*P	Pg	12 28 59.0	-1.0
PAGZ				*e*S	Sg	12 29 11.5	-1.5
KCP	**Kidapawan**	**1.14**	**90**	*i*⇑*iP*	Pg	12 29 01.8	-1.0
KCP				*i* S	Sg	12 29 14.9	-2.7
BUKP	**Musuan**	**1.41**	**52**	*e*P	Pn	12 29 06.2	-0.5
BUKP				*e*S	Sb	12 29 24.7	-0.7
CGP	**Cagayan de Oro**	**1.62**	**27**	*i*⇓*e*P	Pn	12 29 09.3	-0.2
CGP				*e*S	Sg	12 29 32.1	-0.7
DDMP	**Don Marcelino,**	**1.98**	**117**	*e*P	Pn	12 29 14.9	+0.4
DDMP				*e*S	Sn	12 29 40.1	+0.7

*IDC **28** 12:58:06.7±1.1, 15°.16S×67°.22E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.6/32, mbtmp3.6/7, MS3.5/7, Ms1 3.5/7, ms1mx3.2/37, Error ellipse: s-maj=49.0km s-min=26.9km az=78.0*
ISC 28 12:58:09.4±1.1, 15°.2S±0°.2×67°.2E±0°.3, h16km, n17, σ0§96/7, mb3.7/7, MS3.5/7, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Garcia H**	**9.07**	**35**	T	T	13 09 52.5	
	baz=214,slow=76,SNR=146						
H08S2	**Diego Garcia H**	**9.08**	**35**	T	T	13 09 49.3	
	baz=214,slow=76,SNR=251						
H08S3	**Diego Garcia H**	**9.09**	**35**	T	T	13 09 52.4	
	baz=214,slow=76,SNR=230						
CMAR	**Chiang Mai Arr**	**45.75**	**44**	LR	LR	13 23 41.1	
	comp=Z,97nm,19.7s,baz=201,slow=34						
H01W3	**Cape Leeuwin H**	**46.35**	**124**	T	T	13 56 01.9	
	baz=283,slow=75,SNR=22						
H01W2	**Cape Leeuwin H**	**46.35**	**124**	T	T	13 56 02.4	
	baz=283,slow=75,SNR=21						
H01W1	**Cape Leeuwin H**	**46.37**	**124**	T	T	13 56 05.0	
	baz=283,slow=75,SNR=19						
MAW	**Mawson**	**52.48**	**182**	LR	LR	13 25 46.2	
	comp=Z,46nm,18.6s,baz=92,slow=32						
GEYT	**Alibeck**	**53.50**	**351**	LR	LR	13 27 51.6	
	comp=Z,32nm,21.1s,baz=15,slow=33						
BRTR	**Keskin Array B**	**62.94**	**331**	P	**P**	**13 08 36.0**	**+0.8**
	0.4nm,0.5s,baz=145,slow=8.8,SNR=1.5						
BRTR				LR	LR	13 35 19.6	
	comp=Z,14nm,18.1s,baz=148,slow=36						
MKAR	**Makanchi Array**	**63.14**	**12**	P	**P**	**13 08 36.6**	**+0.2**
	0.1nm,0.3s,baz=184,slow=5.9,SNR=2.2						
WRA	**Warramunga Arr**	**63.81**	**105**	P	**P**	**13 08 41.3**	**-0.1**
	0.5nm,0.9s,baz=265,slow=6.6,SNR=2.3						
ZALV	**Zalesovo Beam**	**70.46**	**11**	P	**P**	**13 09 21.4**	**-1.3**
	0.6nm,0.7s,baz=224,slow=4.0,SNR=1.3						
ZALV				LR	LR	13 39 25.9	
	comp=Z,25nm,19.9s,baz=127,slow=35						
SONM	**Songino Array**	**71.80**	**27**	P	**P**	**13 09 32.0**	**+0.8**
	0.3nm,0.4s,baz=212,slow=10,SNR=2.0						
SONM				LR	LR	13 40 03.8	
	comp=Z,44nm,20.6s,baz=246,slow=35						
AKASG	**Malin Array Be**	**73.54**	**336**	P	**P**	**13 09 40.5**	**-0.8**
	0.2nm,0.3s,baz=160,slow=4.3,SNR=1.4						
QSPA	**South Pole Qui**	**74.92**	**180**	P	**P**	**13 09 49.6**	**+0.1**
	1.5nm,1.0s,baz=239,slow=4.3						
KSRS	**Korea Array**	**77.37**	**45**	LR	LR	13 45 30.4	
	comp=Z,21nm,18.1s,baz=226,slow=37						

MAN 28 13:03:07.8, 9°.67N×123°.63E, h19km, mb4.5, ML3.3, MS3.1, 4C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.23**	**86**	*i* P	Pg	13 03 14.9	+1.6
TBP				*i* S	Sg	13 03 18.5	+1.4
SNPH	**Sibulan**	**0.51**	**230**	*i*⇑*iP*	Pb	13 03 18.6	+0.5
SNPH				*i* S	Sn	13 03 27.8	-0.5
SNPH	**Sibulan**	**0.51**	**230**	*i*⇑*iP*	Pb	13 03 18.6	+0.5
SNPH				*i* S	Sn	13 03 27.8	-0.5
LLP	**Lapu-Lapu**	**0.72**	**28**	*i*⇓*eP*	Pb	13 03 18.5	-3.2
LLP				*i* S	Sb	13 03 28.7	-2.5
CNOP	**Candoni, Negro**	**0.98**	**279**	*e*P	Pb	13 03 25.5	-0.7
CNOP				*e*S	Sn	13 03 42.1	+2.1
DCPH	**Dipolog City**	**1.12**	**194**	*i*⇑*eP*	Pn	13 03 27.3	-1.2
DCPH				*e*S	Sg	13 03 43.9	-0.3
MSLP	**Maasin**	**1.30**	**69**	*e*P	Pn	13 03 29.7	-1.2
MSLP				*e*S	Sb	13 03 48.4	+0.5
GUIM	**Jordan**	**1.39**	**313**	*e*P	Pn	13 03 31.4	-0.8
GUIM				*e*S	Sb	13 03 51.1	+0.5
OCLP	**Ormoc**	**1.68**	**35**	*e*P	Pn	13 03 35.7	-0.5
OCLP				*e*S	Sb	13 03 59.9	+1.1
RCP	**Roxas**	**2.06**	**335**	*i*⇑*eP*	Pn	13 03 41.9	+0.4
RCP				*e*S	Sn	13 04 04.5	-2.2
BUKP	**Musuan**	**2.28**	**141**	*e*P	Pn	13 03 42.1	-2.4

*IDC **28** 13:03:32.7±3.0, 11°.74S×161°.80E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.8/26, mbtmp3.8/6, Error ellipse: s-maj=101.6km s-min=36.0km az=148.0*
*NEIC **28** 13:03:34.5±1.8, 11°.66S±0°.06×161°.6E±0°.2, h10km±1km, mb4.3/2, Error ellipse: s-maj=26.2km s-min=9.8km az=84.0*
ISC 28 13:03:38.4±0.9, 11°.6S±0°.1×161°.7E±0°.2, h35km, n10, σ1§06/10, mb3.9/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.74**	**322**	Pn	**Pn**	**13 04 18.0**	**-1.9**
EIDS	**Eidsvold**	**16.96**	**215**	P	**Pn**	**13 07 32.6**	**-0.4**
EIDS				IAmb	IAmb	13 07 53.3	
	comp=Z,5.1nm,1.1s						
WRA	**Warramunga Arr**	**27.54**	**249**	P	**P**	**13 09 22.3**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=79,slow=8.7,SNR=3.6						
BHW	**Baring Head**	**31.87**	**161**	P	**P**	**13 09 59.2**	**-1.1**
KNRA	**Kununurra**	**32.20**	**259**	P	**P**	**13 10 04.3**	**+0.8**
KNRA				IAmb	IAmb	13 10 29.3	
	comp=Z,36nm,1.6s						
CMAR	**Chiang Mai Arr**	**68.69**	**295**	P	**P**	**13 14 39.7**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=115,slow=3.6,SNR=4.9						
SONM	**Songino Array**	**76.80**	**325**	P	**P**	**13 15 27.9**	**+1.3**
	comp=Z,0.8nm,0.5s,baz=123,slow=5.3,SNR=4.3						
ILAR	**Eielson Array**	**85.35**	**20**	P	**P**	**13 16 11.9**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=237,slow=5.0,SNR=4.7						
MKAR	**Makanchi Array**	**91.21**	**318**	P	**P**	**13 16 40.1**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=93,slow=6.4,SNR=5.7						
YKA	**Yellowknife Ar**	**97.32**	**28**	P	**P**	**13 17 07.6**	**0.0**
	comp=Z,0.3nm,0.7s,baz=260,slow=4.5,SNR=5.5						

*IDC **28** 13:11:10.7±14.0, 16°.97N×98°.99W, h0km, mb3.5/4, mb1 3.9/4, mb1mx3.7/27, mbtmp3.5/4, Error ellipse: s-maj=267.7km s-min=132.6km az=173.0*
*MEX **28** 13:11:12.6±0.5, 16°.52N×100°.39W, h1km±4km, MD4.1*
*NEIC **28** 13:11:18.2±1.9, 16°.89N±0°.02×100°.29W±0°.03, h34km±7km, mb4.3/2, Md4.1/23(MEX), Error ellipse: s-maj=4.0km s-min=3.0km az=76.0*
ISC 28 13:11:14.6±2.8, 16°.76N±0°.08×100°.30W±0°.06, h14km±14km, n22, σ1§53/38, mb3.4/4, 1C, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.29**	**6**	*i*⇓*iP*	**Pb**	**13 11 22.4**	**+0.7**
	baz=192,slow=14						
CAIG				*i* S	**Sb**	**13 11 30.5**	**+4.2**
CAIG	**El Cayaco**	**0.29**	**6**		**Pb**	**13 11 22.4**	**+0.7**
CAIG					**Sb**	**13 11 30.5**	**+4.2**
ACP2	**Acapulco**	**0.41**	**74**	*e*P	**Pb**	**13 11 25.2**	**+1.5**
ACP2				*e*S	**Sn**	**13 11 34.1**	**+0.4**
ACP2	**Acapulco**	**0.41**	**74**		**Pb**	**13 11 25.2**	**+1.5**
ACP2					**Sn**	**13 11 34.1**	**+0.4**
MEIG	**Mezcala**	**1.33**	**29**	*e*P	**Pn**	**13 11 38.7**	**-0.2**
MEIG				*i* S	**Sg**	**13 11 57.1**	**-0.4**
MEIG	**Mezcala**	**1.33**	**29**		**Pn**	**13 11 38.7**	**-0.2**
MEIG					**Sg**	**13 11 57.1**	**-0.4**
ARIG	**Puente Sto Nin**	**1.51**	**358**	*e*P	**Pn**	**13 11 39.8**	**-1.5**
ARIG				*i* S	**Sb**	**13 12 01.6**	**-0.1**
ARIG	**Puente Sto Nin**	**1.51**	**358**		**Pn**	**13 11 39.8**	**-1.5**
ARIG					**Sb**	**13 12 01.6**	**-0.1**
PLIG	**Platanillo**	**1.79**	**25**	*e*P	**Pn**	**13 11 45.4**	**+0.1**
PLIG				*i* S	**Sb**	**13 12 09.5**	**-0.2**
PLIG	**Platanillo**	**1.79**	**25**		**Pn**	**13 11 45.4**	**+0.1**
PLIG					**Sb**	**13 12 09.5**	**-0.2**
TLIG	**Tlapa**	**1.84**	**64**	*i* P	**Pn**	**13 11 44.9**	**-1.0**
TLIG				*i* S	**Sn**	**13 12 09.0**	**-0.1**
TLIG	**Tlapa**	**1.84**	**64**		**Pn**	**13 11 46.9**	**+1.0**
TLIG					**Sg**	**13 12 13.1**	**-0.7**
FTIG	**Fresnillo de T**	**2.36**	**61**	*i* P	**Pn**	**13 11 51.6**	**-1.5**
FTIG				*i* S	**Sn**	**13 12 23.8**	**+1.8**
YAIG	**Yautepec**	**2.40**	**29**	*e*P	**Pn**	**13 11 53.6**	**-0.1**
YAIG				*e*S	**Sb**	**13 12 25.4**	**-1.8**
YAIG	**Yautepec**	**2.40**	**29**		**Pn**	**13 11 53.6**	**-0.1**
YAIG					**Sb**	**13 12 25.1**	**-2.1**
PPM	**Popocatepetl**	**2.79**	**35**	*e*P	**Pn**	**13 11 59.5**	**+0.1**
PPM				*i* S	**Sb**	**13 12 36.6**	**-2.3**
ABTX	**Abilene, Hawle**	**15.81**	**2**		**P**	**13 15 00.0**	**-0.7**
ABTX				IAmb	IAmb	13 15 06.0	
	comp=Z,12nm,0.6s						
TMUT	**Trail Mountain**	**24.39**	**339**	P	**P**	**13 16 32.9**	**0.0**
NVAR	**Mina Array Bea**	**26.75**	**327**	P	**P**	**13 16 57.0**	**+2.8**
	comp=Z,0.9nm,0.8s,baz=138,slow=8.8,SNR=5.1						
PDAR	**Pinedale Array**	**27.10**	**345**	P	**P**	**13 16 56.8**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=153,slow=13,SNR=3.9						
YKA	**Yellowknife Ar**	**46.78**	**351**	P	**P**	**13 19 41.9**	**-1.6**
	comp=Z,0.6nm,0.9s,baz=156,slow=8.0,SNR=6.8						
ILAR	**Eielson Array**	**57.24**	**338**	P	**P**	**13 21 01.1**	**-0.3**
	comp=Z,0.3nm,0.9s,baz=146,slow=7.2,SNR=2.8						

*IDC **28** 13:12:02.3±2.3, 15°.26S×67°.03E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/36, mbtmp3.7/5, MS3.7/4, Ms1 3.7/4, ms1mx3.0/39, Error ellipse: s-maj=75.8km s-min=37.1km az=46.0*
*NEIC **28** 13:12:04.0±0.6, 15°.2S±0°.2×67°.09E±0°.08, h10km±1km, mb4.7/5, Error ellipse: s-maj=27.1km s-min=12.3km az=192.0*
ISC 28 13:12:05.1±1.0, 15°.2S±0°.2×67°.1E±0°.3, h16km, n20, σ0§37/10, mb4.0/6, MS3.7/4, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**9.21**	**36**	T	T	13 23 41.8	
	baz=214,slow=76,SNR=84						
H08S2	**Diego Garcia H**	**9.23**	**36**	T	T	13 23 42.3	
	baz=214,slow=76,SNR=165						
H08S3	**Diego Garcia H**	**9.23**	**36**	T	T	13 23 43.0	
	baz=214,slow=76,SNR=134						
PSI	**Prapat**	**36.27**	**63**	LR	LR	13 30 42.0	
	comp=Z,107nm,19.9s,baz=271,slow=31						
BOSA	**Bosnof**	**40.80**	**244**	LR	LR	13 33 10.8	
	comp=Z,150nm,21.0s,baz=182,slow=31						
CMAR	**Chiang Mai Arr**	**45.90**	**44**	LR	LR	13 37 46.5	
	comp=Z,56nm,18.5s,baz=198,slow=34						
H01W3	**Cape Leeuwin H**	**46.44**	**124**	T	T	14 10 03.8	
	baz=283,slow=75,SNR=6.6						
H01W2	**Cape Leeuwin H**	**46.44**	**124**	T	T	14 10 03.9	
	baz=283,slow=75,SNR=7.6						
H01W1	**Cape Leeuwin H**	**46.46**	**124**	T	T	14 10 05.2	
	baz=283,slow=75,SNR=8.6						
FITZ	**Fitzroy Crossi**	**56.00**	**102**	P	**P**	**13 21 43.1**	**-0.2**
CASY	**Casey**	**58.53**	**161**	P	**P**	**13 22 00.8**	**+0.4**
MKAR	**Makanchi Array**	**63.24**	**12**	P	**P**	**13 22 32.9**	**+0.2**
	0.4nm,0.7s,baz=210,slow=8.3,SNR=4.4						
WRA	**Warramunga Arr**	**63.94**	**105**	P	**P**	**13 22 37.9**	**-0.1**
	0.7nm,0.6s,baz=269,slow=5.9,SNR=7.8						
WB2	**Warramunga Arr**	**63.95**	**105**	P	**P**	**13 22 37.8**	**-0.2**
WR0	**Warramunga Arr**	**64.13**	**105**	P	**P**	**13 22 38.9**	**-0.3**
ZALV	**Zalesovo Beam**	**70.56**	**11**	P	**P**	**13 23 18.5**	**-0.5**
	0.5nm,0.5s,baz=190,slow=4.2,SNR=2.2						
SONM	**Songino Array**	**71.53**	**27**	P	**P**	**13 23 28.2**	**+0.4**
	0.9nm,0.6s,baz=227,slow=4.6,SNR=3.0						
QSPA	**South Pole Qui**	**74.85**	**180**	P	**P**	**13 23 44.6**	**-0.2**
QSPA				IAmb	IAmb	13 25 33.5	
	comp=Z,15nm,1.8s						
ESDC	**Sonseca Array**	**85.62**	**313**	P	**P**	**13 24 43.1**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=123,slow=4.7,SNR=3.1						
YAK	**Yakutsk**	**91.20**	**25**	LR	LR	14 05 40.5	
	comp=Z,27nm,18.9s,baz=280,slow=35						

*MAN **28** 13:23:33.7, 5°.68N×126°.39E, h147km, mb4.6, ML3.4, MS3.3*
*DJA **28** 13:23:33.9±0.6, 6°.N±5°×12°.7E±°, h136km±7km, M4.6/18, mb4.6/18, mB4.9/8, MLv5.1/9, Mw(mB)4.2/8, Mwp5.4/1*
*IDC **28** 13:23:35.9±0.8, 5°.77N×126°.34E, h156km±6km, mb3.8/18, mb1 3.9/21, mb1mx3.8/39, mbtmp4.3/21, MS3.0/1, Ms1 3.0/1, ms1mx2.3/43, Error ellipse: s-maj=21.2km s-min=8.8km az=76.0*
*NEIC **28** 13:23:35.6±1.8, 5°.78N±0°.06×126°.39E±0°.09, h154km±5km, mb4.5/34, Error ellipse: s-maj=13.9km s-min=9.1km az=76.0*
ISC 28 13:23:34.6±0.7, 5°.76N±0°.04×126°.43E±0°.06, h143km±6km, n108, σ1§46/122, mb4.3/37, 2C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.79**	**296**	*e*P	**Pn**	**13 23 57.0

comp=Z,25nm,1.4s
YHNB Yeheng 19.42 346 P P 13 27 49.5 -0.5
UGM Wanagama 20.89 230 P P 13 28 07.3 +1.5
KNRA Kununurra 21.42 174 P P **13 28 12.4 +1.0**
KNRA IAmb IAmb 13 28 13.2
comp=Z,22nm,1.0s
FITZ Fitzroy Crossi 23.72 182 P P **13 28 34.5 +0.8**
comp=Z,2.0nm,0.4s,baz=10,slow=9.2,SNR=21
WRA Warramunga Arr 26.70 163 P P **13 29 00.5 -0.1**
comp=Z,1.1nm,0.3s,baz=342,slow=10,SNR=8.8
WB2 Warramunga Arr 26.70 163 P P **13 29 00.8 +0.1**
WB2 IAmb IAmb 13 29 54.4
comp=Z,6.7nm,0.9s
WR0 Warramunga Arr 26.77 163 P P **13 29 01.5 +0.2**
WR0 IAmb IAmb 13 29 58.4
comp=Z,7.4nm,1.1s
NJ2 Nanjing 27.10 346 *eP* P **13 29 04.5 +0.4**
NJ2 pmax pmax
comp=Z,16nm,0.6s
WHN Wuhan 27.15 337 P P **13 29 05.0 +0.5**
PBKT Sadao Pong 27.15 295 P P **13 29 04.7 -0.1**
PBKT IAmb IAmb 13 29 05.5
comp=Z,4.7nm,0.7s
PSA00 Pilbara Seismi 27.92 193 P P **13 29 12.2 +0.7**
PSA00 IAmb IAmb 13 29 55.8
comp=Z,31nm,1.4s
GYA Guiyang 27.92 320 *eP* P **13 29 10.8 -0.8**
GYA pmax pmax
comp=Z,10.0nm,0.5s
GSI Gunungsitoli 29.13 262 P P **13 29 20.3 -2.1**
GSI IAmb IAmb 13 29 20.5
comp=Z,11nm,0.9s
CMAR Chiang Mai Arr 29.63 298 P P **13 29 26.4 -0.4**
comp=Z,1.8nm,0.6s,baz=111,slow=7.2,SNR=13
AS31 Alice Springs 30.14 166 P P **13 29 31.4 +0.1**
GIRL Giralia 30.65 203 P P **13 29 37.5 +1.9**
KSRS Korea Array 31.58 2 P P **13 29 44.0 +0.4**
comp=Z,0.9nm,0.7s,baz=191,slow=9.0,SNR=3.3
XAN Xi'an 32.49 332 P P **13 29 50.5 -1.2**
XAN pP sP 13 30 49.8 +12
XAN pmax pmax
comp=Z,17nm,0.9s
BJI Beijing 35.36 346 P P **13 30 17.0 +0.7**
BJI pmax pmax
comp=Z,13nm,0.8s
MORW Morawa 36.04 196 P P **13 30 22.6 +0.3**
FORT Forrest 36.37 178 P P **13 30 25.8 +0.7**
LZH Lanzhou 36.62 329 ⇑P P **13 30 26.3 -1.1**
LZH pP pP 13 30 56.3 -1.9
LZH sP sP 13 31 11.5 -2.9
LZH PP **PnPn 13 31 55.5 0.0**
LZH pmax pmax
comp=Z,21nm,1.1s
LZH pmax pmax
comp=Z,58nm,5.2s
HHC Hu-ho-hao-te 37.39 341 *eP* P **13 30 31.0 -2.8**
HHC pmax pmax
comp=Z,17nm,0.7s
HHC pmax pmax
comp=Z,33nm,5.1s
CN2 Changchun 37.90 359 *eP* P **13 30 39.5 +1.7**
USRK Ussuriysk Ar. 38.60 6 P P **13 30 44.6 +0.9**
comp=Z,1.7nm,0.4s,baz=184,slow=8.2,SNR=12
BBOO Buckleboo 39.43 167 P P **13 30 51.9 +1.1**
NWAO Narrogin (SRO) 39.45 192 P P **13 30 50.8 -0.1**
comp=Z,20nm,1.1s,baz=30,slow=8.7,SNR=7.4
NWAO Narrogin (SRO) 39.45 192 P P **13 30 52.0 +1.1**
STKA Stephens Creek 40.12 160 P P **13 30 57.5 +1.0**
comp=Z,2.0nm,0.5s,baz=340,slow=9.9,SNR=8.3
STKA Stephens Creek 40.12 160 P P **13 30 57.7 +1.2**
GTA Gaotai 41.22 328 *eP* P **13 31 09.3 +3.7**
GTA pP pwP 13 31 38.8 -0.4
GTA sP sP 13 31 54.5 +1.8
GTA S S **13 37 15.8 +7.1**
GTA pmax pmax
comp=Z,2.0nm,1.0s
GTA pmax pmax
comp=Z,58nm,7.5s
GTA LR LR
comp=N,48nm,18.1s
GTA LR LR
comp=E,34nm,19.4s
GTA LR LR
comp=Z,56nm,19.4s
TAPN Taplejung 42.60 305 *eP* P **13 31 16.0 -1.2**
comp=Z,8.5nm,0.4s
ODAN Odare 42.68 304 *eP* P **13 31 16.6 -1.2**
RAMN Ramite 43.36 304 *eP* P **13 31 22.3 -1.0**
comp=Z,23nm,0.8s
JIRN Jiri 43.97 304 *eP* P **13 31 27.3 -1.0**
comp=Z,37nm,0.7s
GUN Gumba 44.32 305 *eP* P **13 31 30.0 -1.0**
comp=Z,39nm,0.7s
PKI Pulchoki 44.58 304 *eP* P **13 31 31.4 -1.7**
PKIN Phulchoki 44.59 304 *eP* P **13 31 31.5 -1.6**
SONM Songino Array 45.29 341 P P **13 31 38.1 0.0**
comp=Z,1.2nm,0.7s,baz=155,slow=8.6,SNR=5.1
SONM PcP **PcP 13 33 15.3 -0.2**
comp=Z,0.5nm,0.5s,baz=134,slow=4.2,SNR=2.7
KOLN Koldanda 46.15 303 *eP* P **13 31 44.4 -0.9**
comp=Z,23nm,0.4s
DANN Dangsing 46.22 304 *eP* P **13 31 44.8 -1.1**
comp=Z,58nm,0.7s
WMQ Urumqi 50.91 324 *eP* P **13 32 21.5 +0.2**
WMQ LR LR
comp=N,89nm,8.1s
WMQ LR LR
comp=E,170nm,12.3s
WMQ LR LR
comp=Z,200nm,12.3s
PETK Petropavlovsk- 53.68 23 P P **13 32 41.4 0.0**
comp=Z,1.5nm,0.7s,baz=184,slow=5.8,SNR=2.4
PETK LR LR 14 00 56.8
comp=Z,14nm,18.0s,baz=69,slow=42
MK31 Makanchi Array 55.73 325 P P **13 32 55.3 -1.1**
MKAR Makanchi Array 55.73 325 P P **13 32 55.7 -0.7**
comp=Z,2.4nm,0.4s,baz=119,slow=7.2,SNR=41
MKAR PcP **PcP 13 33 53.7 -0.2**
comp=Z,1.1nm,0.6s,baz=125,slow=4.9,SNR=6.8
MKAR ScP **ScP 13 37 38.6 -1.1**
comp=Z,0.1nm,0.4s,baz=108,slow=4.7,SNR=1.6
MAKZ Makanchi 55.92 324 P P **13 32 56.7 -1.0**
MAKZ IAmb IAmb 13 32 57.6
comp=Z,3.7nm,1.0s
NIL Nilore 56.47 307 P P **13 33 01.9 0.0**
KDJ Kajisay 56.65 318 P P **13 33 02.5 -0.7**
KDJ IAmb IAmb 13 33 05.3
comp=Z,13nm,1.9s
ZAA0 Zalesovo Array 58.66 333 P P **13 33 16.1 -0.6**
ZAA0 IAmb IAmb 13 34 47.0
comp=Z,5.7nm,1.6s
ZALV Zalesovo Beam 58.66 333 P P **13 33 15.2 -1.5**
comp=Z,0.7nm,0.4s,baz=108,slow=4.8,SNR=4.3
ZALV PcP **PcP 13 34 03.8 -1.4**
comp=Z,1.2nm,0.9s,baz=141,slow=5.5,SNR=1.9
KURK Kurchatov 59.88 327 P P **13 33 24.1 -1.2**
KURK IAmb IAmb 13 33 25.0
comp=Z,3.8nm,0.6s
GAR Garm 60.35 312 P P **13 33 28.2 -0.6**
GAR IAmb IAmb 13 33 29.2
comp=Z,10nm,0.8s
BRVK Borovoye 65.54 327 P P **13 34 01.7 -1.0**
BRVK IAmb IAmb 13 34 03.0
comp=Z,3.7nm,0.8s
TIXI Tiksi 65.83 1 P P **13 34 04.3 +0.1**
AKUT Akutan 72.43 35 P P **13 34 45.1 0.0**
RAYN Ar Rayn 79.42 293 P P **13 35 23.9 -1.7**
BPAW Bear Paw Mtn. 81.61 26 P P **13 35 36.8 +0.4**
MLY Manley 81.78 25 P P **13 35 37.7 +0.4**
ILAR Eielson Array 83.41 26 P P **13 35 45.0 -0.6**
comp=Z,0.6nm,0.5s,baz=243,slow=5.0,SNR=11
KLMR Klimovskoe 83.50 331 *eP* P **13 35 45.0 -1.2**
KLMR AMP 13 35 46.6
comp=Z,8.0nm,1.0s
ARCES ARCESS Array B 88.45 340 P P **13 36 09.6 -0.8**
comp=Z,3.4nm,0.7s,baz=83,slow=6.7,SNR=13
BRTR Keskin Array B 88.51 310 P P **13 36 10.2 -1.2**
comp=Z,1.0nm,0.7s,baz=102,slow=6.1,SNR=3.0
FINES FINESS Array B 89.31 332 P P **13 36 16.0 -1.3**
comp=Z,3.2nm,0.8s,baz=98,slow=5.8,SNR=7.2
AKASG Malin Array Be 90.14 321 P P **13 36 19.1 +0.5**
comp=Z,0.4nm,0.4s,baz=67,slow=4.3,SNR=1.8
NOA NORSAR Array B 96.85 334 P P **13 36 47.6 -1.6**
comp=Z,0.7nm,0.9s,baz=66,slow=4.4,SNR=3.2
YKA Yellowknife Ar 97.78 24 P P **13 36 53.0 -0.4**
comp=Z,0.2nm,0.6s,baz=303,slow=4.0,SNR=5.3

TORD Torodi Ar. Bea 121.99 289 PKP **PKPdf 13 42 12.2 -1.0**
comp=Z,0.6nm,0.7s,baz=68,slow=1.1,SNR=3.4

*IDC **28** 13:30:11.3±4.4, 60.97S×161.70E, h0km, mb4.2/1, mb1 4.1/2, mb1mx3.8/24, mbtmp3.8/2, ML3.2/1, MS3.9/14, Ms1 3.9/14, ms1mx3.8/26, Error ellipse: s-maj=260.5km s-min=37.4km az=72.0*
*NEIC **28** 13:30:13.8±0.9, 60.7S±0.1×162.5E±0.4, h15km±5km, mb4.7/12, Error ellipse: s-maj=26.7km s-min=14.9km az=83.0*
*GCMT **28** 13:30:20.8±0.3, 60.84S±0.01×160.65E±0.04, h22km±1km, MW4.9/77, Moment Tensor Solution. s34,c41; s77,c106; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.63±.15; Mθθ=1.38±.10; Mφφ=2.00±.14; Mrθ=0.88±.18; Mθφ=2.53±.10; Mφr=0.30±.18; Best double couple: Mo=3.21700×10^16 NP1:φs=345.00000°, δ=74.00000°, λ=-167.00000°. NP2: φs=251.00000°, δ=77.00000°, λ=-16.00000°. Principal axes: T 3.3590, Plg2.0000°, Azm298.0000°; N -0.2900, Plg69.0000°, Azm35.0000°; P -3.0750, Plg21.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 28 13:30:12.8±0.8, 60.73S±0.08×162.4E±0.2, h10km, n50, σ1=11, mb4.6/7, MS3.9/16, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**6.53**	**342**	Pn	**Pn**	**13 31 47.6**	**-1.1**
PYZ	**Puysegur Point**	**14.81**	**12**	Pn	**Pn**	**13 33 43.0**	**+0.9**
VNDA	**Vanda**	**16.87**	**180**	Pn	**Pn**	**13 34 05.6**	**-3.0**
VNDA	0.1nm,0.3s,baz=350,slow=12,SNR=5.5			LR	LR	13 39 27.9	
	comp=Z,561nm,19.7s,baz=5.0,slow=34						
VNDA	**Vanda**	**16.87**	**180**	P	**P**	**13 34 11.1**	**+0.5**
FOZ	**Fox Glacier**	**17.79**	**18**	P	**Pn**	**13 34 20.3**	**0.0**
RPZ	**Rata Peaks**	**17.82**	**21**	LR	LR	13 40 49.5	
	comp=Z,712nm,18.2s,baz=175,slow=35						
MSWZ	**Moikau Station**	**20.88**	**28**	P	**P**	**13 34 54.4**	**-0.5**
QSPA	**South Pole Qui**	**29.36**	**180**	P	**P**	**13 36 17.7**	**+2.0**
QSPA	comp=Z,22nm,1.9s			IAmb	IAmb	13 36 38.9	
STKA	**Stephens Creek**	**31.96**	**325**	P	**P**	**13 36 39.5**	**+0.9**
DZM	**Mont Dzumac**	**38.73**	**6**	*e*LR	LR	13 48 12.6	
	comp=Z,192nm,22.8s						
MAW	**Mawson**	**39.36**	**217**	LR	LR	13 53 55.2	
	comp=Z,497nm,19.5s,baz=100,slow=37						
H01W1	**Cape Leeuwin H**	**40.12**	**288**	T	T	14 19 45.7	
	baz=146,slow=75,SNR=32						
H01W2	**Cape Leeuwin H**	**40.12**	**288**	T	T	14 19 44.6	
	baz=146,slow=75,SNR=38						
H01W3	**Cape Leeuwin H**	**40.13**	**288**	T	T	14 19 46.8	
	baz=146,slow=75,SNR=34						
NWAO	**Narrogin (SRO)**	**40.33**	**293**	LR	LR	13 50 10.6	
	comp=Z,227nm,21.3s,baz=132,slow=30						
AS31	**Alice Springs**	**41.98**	**319**	P	**P**	**13 38 03.9**	**+0.1**
WR0	**Warramunga Arr**	**45.25**	**322**	P	**P**	**13 38 30.3**	**0.0**
WR0	comp=Z,7.9nm,0.9s			IAmb	IAmb	13 38 31.2	
WB2	**Warramunga Arr**	**45.32**	**321**	P	**P**	**13 38 30.6**	**-0.2**
WB2	comp=Z,13nm,1.4s			IAmb	IAmb	13 38 48.8	
WRA	**Warramunga Arr**	**45.33**	**321**	P	**P**	**13 38 30.3**	**-0.5**
	comp=Z,3.9nm,0.9s,baz=163,slow=6.6,SNR=12						
WRAB	**Tennant Creek**	**45.33**	**321**	P	**P**	**13 38 30.9**	**0.0**
WRAB	comp=Z,25nm,1.8s			IAmb	IAmb	13 38 39.9	
WB0	**Warramunga Arr**	**45.47**	**322**	P	**P**	**13 38 31.8**	**-0.2**
WB0	comp=Z,7.9nm,1.1s			IAmb	IAmb	13 38 37.4	
SNAA	**Sanae**	**47.48**	**186**	P	**P**	**13 38 47.9**	**+0.6**
SNAA	comp=Z,8.2nm,1.2s			IAmb	IAmb	13 38 49.0	
TBI	**Tubuai**	**49.85**	**64**	*e*LQ	LQ	13 50 56.4	
	comp=Z,342nm,30.2s						
TBI	comp=Z,188nm,27.8s,baz=214			*e*LR	LR	13 53 15.0	
TBI	**Tubuai**	**49.85**	**64**	*e*T	T	14 33 12.9	
	comp=Z,36nm,0.3s						
FITZ	**Fitzroy Crossi**	**49.97**	**312**	P	**P**	**13 39 07.9**	**+1.0**
KNRA	**Kununurra**	**51.11**	**317**	P	**P**	**13 39 15.8**	**+0.3**
PAE	**Paea**	**54.81**	**60**	*e*T	T	14 39 21.9	
	comp=Z,4.4nm,0.4s						
TVO	**Taravao**	**54.85**	**60**	*e*T	T	14 39 24.5	
	comp=Z,1.9nm,0.2s						
PPT2	**Papeete2**	**54.88**	**60**	*e*LR	LR	13 55 36.5	
	comp=Z,254nm,25.2s,baz=211						
PPT2	**Papeete2**	**54.88**	**60**	*e*T	T	14 39 26.4	
	comp=Z,3.8nm,0.2s						
PPT	**Papeete**	**54.90**	**60**	LR	LR	13 58 42.3	
	comp=Z,108nm,19.5s,baz=190,slow=31						
TIAR	**Tiarei**	**55.01**	**60**	*e*T	T	14 39 35.8	
	comp=Z,1.6nm,0.2s						
JAY	**Jayapura**	**60.40**	**335**	LR	LR	14 05 33.7	
	comp=Z,111nm,18.5s,baz=204,slow=35						
TAOE	**Nuku Hiva Isla**	**66.75**	**65**	*e*LR	LR	14 01 13.7	
	comp=Z,118nm,23.3s						
PLCA	**Paso Flores**	**70.04**	**140**	LR	LR	14 07 44.1	
	comp=Z,72nm,19.1s,baz=166,slow=32						
H03S2	**Juan Fernandez**	**73.34**	**130**	T	T	15 03 21.1	
	baz=204,slow=74,SNR=4.1						
H03S1	**Juan Fernandez**	**73.34**	**130**	T	T	15 03 22.8	
	baz=204,slow=74,SNR=3.5						
H03S3	**Juan Fernandez**	**73.35**	**130**	T	T	15 03 21.1	
	baz=204,slow=74,SNR=3.4						
DAV	**Davao City (W)**	**73.52**	**322**	LR	LR	14 14 37.3	
	comp=Z,51nm,19.1s,baz=156,slow=36						
PSI	**Prapat**	**79.83**	**295**	LR	LR	14 10 46.1	
	comp=Z,88nm,21.0s,baz=91,slow=31						
H08S2	**Diego Garcia H**	**83.36**	**266**	T	T	15 13 50.8	
	baz=150,slow=76,SNR=19						
H08S1	**Diego Carcia H**	**83.37**	**266**	T	T	15 13 50.8	
	baz=150,slow=76,SNR=16						
H08S3	**Diego Garcia H**	**83.38**	**266**	T	T	15 13 50.8	
	baz=150,slow=76,SNR=19						
BOSA	**Boshof**	**84.37**	**217**	LR	LR	14 17 00.9	
	comp=Z,75nm,19.3s,baz=201,slow=34						
LPAZ	**La Paz**	**93.27**	**132**	LR	LR	14 16 06.2	
	comp=Z,37nm,20.4s,baz=171,slow=30						
CMAR	**Chiang Mai Arr**	**93.78**	**302**	LR	LR	14 25 40.0	
	comp=Z,22nm,18.0s,baz=188,slow=36						
JHJ	**Hachijo jima 2**	**95.34**	**341**	LR	LR	14 22 38.2	
	comp=Z,21nm,20.1s,baz=97,slow=33						
MJAR	**Matsushiro Arr**	**98.34**	**340**	LR	LR	14 29 31.0	
	comp=Z,21nm,18.1s,baz=260,slow=36						
TORD	**Torodi Ar. Bea**	**130.45**	**205**	PKP	**PKPdf**	**13 49 22.2**	**-1.2**
	comp=Z,1.1nm,1.0s,baz=103,slow=1.9,SNR=4.0						
AKASG	**Malin Array Be**	**152.39**	**270**	PKPbc	**PKPbc**	**13 50 07.4**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=94,slow=1.4,SNR=1.7						

*IDC **28** 13:29:48.7±1.9, 4.71N×124.45E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/33, mbtmp3.7/4, Error ellipse: s-maj=129.3km s-min=27.3km az=67.0*
*NEIC **28** 13:30:34.6±1.4, 4.0N±0.2×123.92E±0.10, h482km±14km, mb4.3/10, Error ellipse: s-maj=28.8km s-min=5.5km az=207.0*
ISC 28 13:30:35.7±1.0, 3.8N±0.1×123.7E±0.1, h482km, n19, σ1=60/19, mb4.2/8, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**4.74**	**129**	P	**P**	**13 31 56.9**	**-2.5**
LUWI	**Luwuk**	**4.90**	**191**	P	**P**	**13 32 02.5**	**+1.6**
LUWI				S	**S**	**13 33 06.8**	**-3.5**
KKM	**Kota Kinabalu**	**7.79**	**287**		**P**	**13 32 30.6**	**+0.9**
FAKI	**Fak Fak**	**10.84**	**128**	P	**P**	**13 33 03.8**	**+1.8**
SBUM	**Sibu**	**11.55**	**264**	P	**P**	**13 33 11.4**	**+1.7**
KNRA	**Kununurra**	**19.99**	**166**	P	**P**	**13 34 36.9**	**+1.5**
FITZ	**Fitzroy Crossi**	**21.84**	**175**	P	**P**	**13 34 52.1**	**0.0**
	0.6nm,0.3s,baz=9.5,slow=12,SNR=9.2						
FITZ	**Fitzroy Crossi**	**21.84**	**175**	IAmb	IAmb	13 35 15.9	
	comp=Z,25nm,1.9s						
WB0	**Warramunga Arr**	**25.67**	**156**	P	**P**	**13 35 25.7**	**-0.6**
WB0	comp=Z,15nm,1.6s			IAmb	IAmb	13 35 44.5	
WRA	**Warramunga Arr**	**25.80**	**157**	P	**P**	**13 35 27.1**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=337,slow=9.6,SNR=13						
WB2	**Warramunga Arr**	**25.81**	**156**	P	**P**	**13 35 27.1**	**-0.5**
WB2	comp=Z,31nm,2.0s			IAmb	IAmb	13 35 38.5	
WR0	**Warramunga Arr**	**25.90**	**156**	P	**P**	**13 35 28.0**	**-0.4**
WR0				IAmb	IAmb	13 36 14.0	
	comp=Z,23nm,1.9s						
AS31	**Alice Springs**	**29.05**	**160**	P	**P**	**13 35 56.1**	**-0.1**
FORT	**Forrest**	**34.64**	**173**	P	**P**	**13 36 44.3**	**+0.5**
FORT				IAmb	IAmb	13 36 45.1	
	comp=Z,22nm,1.0s						
BBOO	**Buckleboo**	**38.25**	**163**	P	**P**	**13 37 14.3**	**+0.6**
STKA	**Stephens Creek**	**39.35**	**156**	P	**P**	**13 37 23.9**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=331,slow=10,SNR=5.7						
STKA	**Stephens Creek**	**39.35**	**156**	P	**P**	**13 37 23.8**	**+1.2**
STKA				IAmb	IAmb	13 38 40.3	
	comp=Z,6.9nm,1.9s						
MK31	**Makanchi Array**	**55.81**	**327**	P	**P**	**13 39 24.2**	**-2.2**
MKAR	**Makanchi Array**	**55.81**	**327**	P	**P**	**13 39 25.3**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=116,slow=8.5,SNR=2.4						

*IDC **28** 13:44:44.7±1.1, 11.12S×164.78E, h0km, mb4.0/7, mb1 4.1/9, mb1mx3.8/40, mbtmp4.0/9, ML4.1/2, MS3.8/2, Ms1 3.9/2, ms1mx2.8/27, Error ellipse: s-maj=31.1km s-min=23.8km az=90.0*
*NEIC **28** 13:44:49.6±1.5, 11.2S±0.1×164.7E±0.1, h33km±6km, mb4.7/5, Error ellipse: s-maj=17.4km s-min=14.8km az=53.0*
ISC 28 13:44:49.7±0.9, 11.30S±0.10×164.7E±0.1, h35km, n21, σ1=39/16, mb4.0/9, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.03**	**291**	Pn	**Pn**	**13 46 02.9**	**+0.3**
	8.1nm,0.3s,baz=58,slow=17,SNR=1.8						
HNR				Sn	**Sn**	**13 46 58.2**	**-1.3**
	4.5nm,0.3s,baz=54,slow=17,SNR=1.6						
DZM	**Mont Dzumac**	**10.84**	**171**	Pn	**Pn**	**13 47 23.0**	**+0.5**
	1.2nm,0.3s,baz=295,slow=19,SNR=29						
DZM				Sn	**Sn**	**13 49 20.0**	**-2.8**
	0.1nm,0.3s,baz=293,slow=7.7,SNR=1.4						
DZM				LR	LR	13 50 54.7	
	comp=Z,293nm,18.4s,baz=227,slow=34						
H11S2	**WAKE ISLAND Hy**	**29.67**	**4**	T	T	14 21 54.6	
	baz=184,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**29.67**	**4**	T	T	14 21 56.3	
	baz=184,slow=76,SNR=9.9						
H11S1	**WAKE ISLAND Hy**	**29.68**	**4**	T	T	14 21 54.6	
	baz=184,slow=76,SNR=9.0						
WB0	**Warramunga Arr**	**30.34**	**250**	P	**P**	**13 50 59.7**	**+1.4**
WB0				IAmb	IAmb	13 51 19.0	
	comp=Z,21nm,1.8s						
WB2	**Warramunga Arr**	**30.42**	**250**	P	**P**	**13 50 59.9**	**+0.9**
WB2				IAmb	IAmb	13 51 57.4	
	comp=Z,22nm,1.6s						
WRA	**Warramunga Arr**	**30.43**	**250**	P	**P**	**13 51 00.3**	**+1.2**
	comp=Z,2.4nm,1.0s,baz=78,slow=9.1,SNR=6.1						
H11N1	**WAKE ISLAND Hy**	**30.89**	**4**	T	T	14 23 24.8	
	baz=184,slow=76,SNR=9.1						
H11N3	**WAKE ISLAND Hy**	**30.90**	**4**	T	T	14 23 25.3	
	baz=184,slow=76,SNR=6.8						
H11N2	**WAKE ISLAND Hy**	**30.91**	**4**	T	T	14 23 25.3	
	baz=184,slow=76,SNR=9.6						
KNRA	**Kununurra**	**35.18**	**259**	P	**P**	**13 51 41.4**	**+0.7**
FITZ	**Fitzroy Crossi**	**38.32**	**255**	P	**P**	**13 52 08.2**	**+0.8**
	comp=Z,4.9nm,0.7s,baz=99,slow=6.2,SNR=15						
MJAR	**Matsushiro Arr**	**53.73**	**334**	P	**P**	**13 54 07.2**	**-1.2**
	comp=Z,1.5nm,0.8s,baz=138,slow=8.2,SNR=4.1						
JKA	**Kamikawa-asahi**	**58.70**	**342**	P	**P**	**13 54 44.6**	**+0.9**
ASAJ	**Asahikawa**	**58.70**	**342**	P	**P**	**13 54 44.6**	**+0.8**
	comp=Z,2.1nm,0.7s,baz=162,slow=20,SNR=2.1						
QSPA	**South Pole Qui**	**78.71**	**180**	P	**P**	**13 56 50.4**	**+2.1**
	comp=Z,0.9nm,0.7s,baz=304,slow=1.1,SNR=7.7						
ILAR	**Eielson Array**	**84.08**	**19**	P	**P**	**13 57 15.8**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=243,slow=4.0,SNR=2.3						
NVAR	**Mina Array Bea**	**86.97**	**50**	LR	LR	14 31 48.4	
	comp=Z,82nm,18.3s,baz=213,slow=32						
MKAR	**Makanchi Array**	**93.00**	**317**	P	**P**	**13 57 58.0**	**-1.6**
	comp=Z,0.2nm,0.7s,baz=102,slow=6.1,SNR=2.1						
ARCES	**ARCESS Array B**	**116.32**	**345**	PKP	**PKPdf**	**14 03 28.8**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=90,slow=2.2,SNR=4.6						

*NEIC **28** 13:49:04.4±2.0, 9.06S±0.08×112.87E±0.06, h76km±8km, mb4.4/21, Error ellipse: s-maj=11.1km s-min=8.0km az=179.0*
*IDC **28** 13:49:06.0±2.3, 8.83S×113.01E, h78km±19km, mb3.8/12, mb1 3.9/15, mb1mx3.7/41, mbtmp4.2/15, MS3.2/3, Ms1 3.1/3, ms1mx2.7/30, Error ellipse: s-maj=27.7km s-min=15.7km az=41.0*
*DJA **28** 13:49:05.4±0.4, 9°S±5°×11°3E±°, h46km±26km, M4.6/14, mB5.2/3, mb4.5/6, MLv4.6/14, Mw(mB)4.5/3*
ISC 28 13:49:04.2±0.8, 9.10S±0.06×112.89E±0.04, h75km±8km, n70, σ1=65/77, mb4.3/19, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**1.40**	**64**	P	**Pn**	**13 49 28.6**	**+0.6**
JAGI				S	**Sn**	**13 49 45.8**	**-0.2**
JAGI	**Jajag, Banyuwa**	**1.40**	**64**		**Pn**	**13 49 28.6**	**+0.6**
GRJI	**Gresik**	**2.21**	**349**	P	**Pn**	**13 49 40.3**	**+1.6**
GRJI				S	**Sn**	**13 50 06.2**	**+1.1**
KMMI	**Kalianget**	**2.30**	**28**	P	**Pn**	**13 49 41.5**	**+1.5**
WOJI	**Wonogiri, Jawa**	**2.31**	**303**	P	**Pn**	**13 49 40.9**	**+0.8**
WOJI				S	**Sn**	**13 50 07.8**	**+0.2**
DNP	**Denpasar**	**2.34**	**80**	P	**Pn**	**13 49 41.6**	**+1.1**
DNP				S	**Sn**	**13 50 10.2**	**+2.0**
UGM	**Wanagama**	**2.62**	**297**	P	**Pn**	**13 49 45.1**	**+0.8**
UGM				S	**Sn**	**13 50 15.2**	**+0.1**
UGM	**Wanagama**	**2.62**	**297**		**Pn**	**13 49 45.1**	**+0.8**
YOGI	**Yogyakarta**	**2.86**	**296**	P	**Pn**	**13 49 48.7**	**+1.1**
YOGI				S	**Sn**	**13 50 21.6**	**+0.6**
SMRI	**Semarang**	**3.16**	**310**	P	**Pn**	**13 49 53.1**	**+1.4**
SMRI	**Semarang**	**3.16**	**310**		**Pn**	**13 49 53.0**	**+1.2**
UWJI	**Ujung Watu**	**3.28**	**324**	P	**Pn**	**13 49 54.5**	**+1.2**
UWJI				S	**Sn**	**13 50 31.5**	**+0.2**
PLAI	**Plampang**	**4.84**	**87**	P	**Pn**	**13 50 17.5**	**+2.9**
PLAI				S	**Sn**	**13 51 11.0**	**+1.6**
CISI	**Cisompet, Garu**	**5.25**	**287**	P	**Pn**	**13 50 20.5**	**+0.3**
	1.6nm6μm178nm,0.7s						
CISI	**Cisompet, Garu**	**5.25**	**287**		**Pn**	**13 50 20.3**	**+0.1**
LEM	**Lembang**	**5.68**	**293**	P	**Pn**	**13 50 28.7**	**+2.4**
	2.5nm,0.3s,baz=139,slow=11,SNR=3.6						
LEM				S	**Sn**	**13 51 29.6**	**-0.7**
	6.7nm,0.3s,baz=163,slow=19,SNR=1.5						
CNJI	**Cibinong**	**5.97**	**287**	P	**Pn**	**13 50 30.5**	**+0.5**
	0.7nm3μm77nm,0.8s						
WBSI	**Waikabubak, Su**	**6.44**	**95**	P	**Pn**	**13 50 37.5**	**+1.0**
	0.4nm82nm,0.9s						
KBKI	**Kotabaru**	**6.62**	**30**	P	**Pn**	**13 50 39.3**	**+0.4**
XMIS	**Christmas Isla**	**7.26**	**259**	Pn	**Pn**	**13 50 46.0**	**-1.6**
KAPI	**Kappang**	**7.93**	**60**	P	**Pn**	**13 50 55.0**	**-1.8**
	1.5nm,0.3s,baz=253,slow=13,SNR=2.2						
KAPI				S	**Sn**	**13 52 18.4**	**-6.7**
	0.6nm,0.3s,baz=240,slow=16,SNR=1.2						
KAPI				LR	LR	13 54 42.5	
	comp=Z,51nm,18.1s,baz=160,slow=44						
KAPI	**Kappang**	**7.93**	**60**		**Pn**	**13 50 54.9**	**-2.0**
BKSI	**Bulukumba**	**8.10**	**63**	P	**Pn**	**13 51 00.0**	**+0.9**
	21nm,0.8s						
BNSI	**Bone**	**8.56**	**57**	P	**Pn**	**13 51 07.8**	**+2.4**
	15nm,1.3s						
EDFI	**Ende, Flores**	**8.71**	**88**	P	**Pn**	**13 51 08.8**	**+1.3**
BATI	**Baumata**	**10.68**	**97**	P	**Pn**	**13 51 35.3**	**+0.8**
	2.0nm,0.3s,baz=306

FAKI					IAmb	IAmb	13 54 08.2	
	comp=Z,36nm,1.2s							
WB0	**Warramunga Arr**	**23.34**	**119**		P	**P**	**13 54 06.7**	**+0.5**
WB0					IAmb	IAmb	13 54 57.1	
	comp=Z,34nm,1.9s							
WRA	**Warramunga Arr**	**23.37**	**120**		P	**P**	**13 54 07.6**	**+1.1**
	comp=Z,2.4nm,0.8s,baz=296,slow=11,SNR=10							
WRA					ScP	**ScP**	**14 01 24.0**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=307,slow=2.1,SNR=2.4							
WRAB	**Tennant Creek**	**23.37**	**120**		P	**P**	**13 54 07.3**	**+0.8**
WB2	**Warramunga Arr**	**23.38**	**120**		P	**P**	**13 54 07.4**	**+0.8**
WR0	**Warramunga Arr**	**23.55**	**120**		P	**P**	**13 54 09.3**	**+1.2**
AS31	**Alice Springs**	**24.78**	**128**		P	**P**	**13 54 20.9**	**+1.7**
CMAR	**Chiang Mai Arr**	**30.64**	**333**		P	**P**	**13 55 12.0**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=165,slow=8.2,SNR=10							
BBOO	**Buckleboo**	**31.87**	**141**		P	**P**	**13 55 24.1**	**+1.8**
STKA	**Stephens Creek**	**34.97**	**135**		P	**P**	**13 55 52.2**	**+2.9**
	comp=Z,2.1nm,0.7s,baz=316,slow=12,SNR=5.9							
STKA					LR	LR	14 09 51.1	
	comp=Z,62nm,21.1s,baz=23,slow=36							
STKA	**Stephens Creek**	**34.97**	**135**		IAmb	IAmb	13 55 59.4	
	comp=Z,5.3nm,1.8s							
MAJO	**Matsushiro**	**51.26**	**26**		P	**P**	**13 57 59.0**	**-1.5**
MAT	**Matsushiro**	**51.26**	**26**		P	**P**	**13 57 59.0**	**-1.5**
MJAR	**Matsushiro Arr**	**51.26**	**26**		P	**P**	**13 57 59.2**	**-1.4**
	comp=Z,3.4nm,0.8s,baz=204,slow=8.1,SNR=8.8							
MJB9	**Matsu-Tunnel**	**51.26**	**26**		P	**P**	**13 57 59.0**	**-1.5**
MJB9					IAmb	IAmb	13 57 59.8	
	comp=Z,3.4nm,0.6s							
DZM	**Mont Dzumac**	**52.93**	**111**		LR	LR	14 20 15.1	
	comp=Z,33nm,19.9s,baz=194,slow=35							
USRK	**Ussuriysk Ar.**	**55.80**	**17**		P	**P**	**13 58 33.1**	**-0.5**
	comp=Z,2.7nm,0.8s,baz=179,slow=4.8,SNR=7.4							
SONM	**Songino Array**	**56.97**	**355**		P	**P**	**13 58 42.2**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=175,slow=8.3,SNR=9.4							
KSH	**Kashi**	**59.25**	**327**		P	P	13 59 03.5	+5.4
KSH					pP	pP	13 59 17.3	+0.4
KSH					sP	sP	13 59 22.3	-2.8
KSH					pmax	pmax		
	comp=Z,13nm,1.1s							
KSH					pmax	pmax		
	comp=Z,150nm,4.6s							
ASAJ	**Asahikawa**	**59.42**	**24**		P	**P**	**13 58 58.8**	**-0.2**
	comp=Z,4.6nm,1.0s,baz=226,slow=8.6,SNR=5.9							
JKA	**Kamikawa-asahi**	**59.42**	**25**		P	**P**	**13 58 58.8**	**-0.2**
JKA	**Kamikawa-asahi**	**59.42**	**25**		P	**P**	**13 58 58.7**	**-0.2**
JKA					IAmb	IAmb	14 00 27.1	
	comp=Z,26nm,1.5s							
KLR	**Kul'dur**	**60.40**	**14**		P	**P**	**13 59 04.9**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=203,slow=2.6,SNR=5.3							
KDJ	**Kajisay**	**60.56**	**330**		P	**P**	**13 59 06.6**	**-0.5**
MK31	**Makanchi Array**	**61.97**	**337**		P	**P**	**13 59 15.9**	**-0.4**
MKAR	**Makanchi Array**	**61.97**	**337**		P	**P**	**13 59 16.1**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=148,slow=7.4,SNR=13							
AAK	**Ala-Archa**	**62.28**	**329**		P	**P**	**13 59 18.5**	**-0.1**
AAK					IAmb	IAmb	13 59 20.1	
	comp=Z,2.8nm,1.1s							
KURK	**Kurchatov**	**66.57**	**337**		P	**P**	**13 59 45.5**	**-0.8**
KURK					IAmb	IAmb	14 00 56.8	
	comp=Z,8.4nm,1.9s							
ZAA0	**Zalesovo Array**	**67.15**	**342**		P	**P**	**13 59 48.9**	**-1.0**
ZAA0					IAmb	IAmb	13 59 49.4	
	comp=Z,2.1nm,0.7s							
ZALV	**Zalesovo Beam**	**67.15**	**342**		P	**P**	**13 59 48.9**	**-0.9**
	comp=Z,1.4nm,0.4s,baz=156,slow=4.5,SNR=10							
RAYN	**Ar Rayn**	**73.36**	**298**		P	**P**	**14 00 28.4**	**-0.2**
RAYN					IAmb	IAmb	14 00 29.7	
	comp=Z,3.7nm,0.9s							
SEY	**Seymchan**	**77.94**	**17**		P	**P**	**14 00 53.6**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=240,slow=16,SNR=2.4							
BRTR	**Keskin Array B**	**87.59**	**311**		P	**P**	**14 01 45.2**	**+0.7**
	comp=Z,3.5nm,0.8s,baz=139,slow=6.0,SNR=11							

*ATH **28** 14:05:30.7, 38°.31N×20°.44E, h14km±1km, ML2.8/13, Error ellipse: s-maj=2.2km s-min=0.7km az=254.0*
*THE **28** 14:05:31.2, 38°.31N×20°.44E, h9km, ML2.9/11, Error ellipse: s-maj=0.8km s-min=0.5km az=266.0*

ISC 28 14:05:30.2±0.8, 38°.30N±0°.02×20°.40E±0°.03, h17km±4km, n54, σ0°976/85, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.04**	**154**	P	**Pg**	**14 05 33.3**	**0.0**
KEF4				S	**Sg**	**14 05 34.9**	**-0.4**
AGT1	**Agia Thekli**	**0.05**	**194**	P	**Pg**	**14 05 33.4**	**+0.1**
AGT1				S	**Sg**	**14 05 35.0**	**-0.3**
KEF3	**Kipouria, Keph**	**0.10**	**203**	P	**Pg**	**14 05 34.2**	**+0.5**
KEF3				S	**Sg**	**14 05 36.7**	**+0.6**
LXRA	**Lixouri, Kepha**	**0.10**	**163**	P	**Pg**	**14 05 34.1**	**+0.4**
LXRA				S	**Sg**	**14 05 36.1**	**+0.1**
ARGA	**Argostoli. Kep**	**0.14**	**153**	P	**Pg**	**14 05 34.3**	**+0.2**
ARGA				S	**Sg**	**14 05 36.8**	**+0.1**
ARG2	**Argostoli**	**0.14**	**150**	P	**Pg**	**14 05 34.4**	**+0.3**
ARG2				S	**Sg**	**14 05 36.7**	**-0.1**
	22μm,0.1s						
VSK1	**VASILIKIADES**	**0.17**	**50**	P	**Pg**	**14 05 34.5**	**-0.1**
VSK1				S	**Sg**	**14 05 37.0**	**-0.6**
VLS	**Valsamata**	**0.19**	**129**	P	**Pg**	**14 05 35.0**	**+0.1**
VLS				S	**Sb**	**14 05 38.0**	**-0.7**
	14μm,0.2s						
VLS	**Valsamata**	**0.19**	**129**	P	**Pg**	**14 05 35.0**	**+0.1**
VLS				S	**Sg**	**14 05 37.9**	**-0.3**
VLS				AML	AML	14 05 38.3	
	comp=N,27981μm,0.2s						
VLS				AML	AML	14 05 38.3	
	comp=E,27771μm,0.2s						
FSK	**Fiskardo**	**0.20**	**39**	P	**Pg**	**14 05 35.0**	**-0.1**
FSK				S	**Sg**	**14 05 38.2**	**-0.2**
FSK	**Fiskardo**	**0.20**	**39**	P	**Pg**	**14 05 35.1**	**-0.1**
FSK				S	**Sg**	**14 05 37.9**	**-0.6**
FSK				AML	AML	14 05 38.5	
	comp=E,34926μm,0.2s						
FSK				AML	AML	14 05 38.7	
	comp=N,17156μm,0.3s						
KFL	**Anninata**	**0.36**	**122**	P	**Pb**	**14 05 37.8**	**-0.3**
KFL				S	**Sb**	**14 05 42.7**	**-0.8**
	comp=N,8μm,0.4s						
KFL	**Anninata**	**0.36**	**122**	P	**Pb**	**14 05 37.9**	**-0.3**
KFL				S	**Sb**	**14 05 43.0**	**-0.5**
KFL				AML	AML	14 05 44.3	
	comp=N,15484μm,0.5s						
KFL				AML	AML	14 05 45.2	
	comp=E,14432μm,0.3s						
EVGI	**Lefkada island**	**0.38**	**32**	P	**Pg**	**14 05 38.1**	**+0.1**
EVGI				S	**Sg**	**14 05 43.6**	**+0.2**
EVGI	**Lefkada island**	**0.38**	**32**	P	**Pg**	**14 05 38.1**	**+0.1**
EVGI				S	**Sg**	**14 05 43.4**	**0.0**
VLMS	**Volimes, Zakyn**	**0.47**	**154**	P	**Pb**	**14 05 39.9**	**-0.1**
VLMS				S	**Sb**	**14 05 47.2**	**+0.5**
VLMS				AML	AML	14 05 53.6	
	comp=N,4377μm,0.2s						
VLMS				AML	AML	14 05 56.6	
	comp=E,4122μm,0.3s						
MGNA	**Meganis**	**0.47**	**41**	P	**Pg**	**14 05 39.4**	**-0.3**
MGNA				S	**Sg**	**14 05 46.0**	**-0.1**
MGNA				AML	AML	14 05 47.2	
	comp=E,2294μm,0.3s						
MGNA				AML	AML	14 05 50.0	
	comp=N,2384μm,0.2s						
LKD2	**Lefkada island**	**0.53**	**22**	P	**Pg**	**14 05 40.5**	**-0.3**
LKD2				S	**Sg**	**14 05 48.5**	**+0.6**
	comp=N,660nm,0.5s						
LKD2	**Lefkada island**	**0.53**	**22**	P	**Pg**	**14 05 40.4**	**-0.3**
TSLK	**Tsoukalades, L**	**0.56**	**21**	P	**Pg**	**14 05 41.2**	**-0.2**
TSLK				S	**Sg**	**14 05 49.6**	**+0.7**
	comp=N,675nm,0.3s						
TSLK	**Tsoukalades, L**	**0.56**	**21**	P	**Pg**	**14 05 41.1**	**-0.3**
TSLK				S	**Sg**	**14 05 48.1**	**-0.8**
TSLK				AML	AML	14 05 51.7	
	comp=E,1281μm,0.7s						
TSLK				AML	AML	14 06 00.1	
	comp=N,1546μm,0.5s						
AST1	**Astakos**	**0.59**	**66**	P	**Pg**	**14 05 41.8**	**-0.1**
AST1				S	**Sb**	**14 05 50.5**	**+0.3**
PDO	**Prodromos**	**0.69**	**64**	P	**Pg**	**14 05 43.5**	**-0.2**
PDO	**Prodromos**	**0.69**	**64**	P	**Pg**	**14 05 43.4**	**-0.2**
PDO				AML	AML	14 06 02.3	
	comp=E,1977μm,0.5s						
PDO				AML	AML	14 06 02.4	
	comp=N,1992μm,0.3s						
KRI1	**kERI**	**0.72**	**152**	P	**Pb**	**14 05 44.2**	**0.0**
KRI1				S	**Sn**	**14 05 55.2**	**-0.9**
	comp=N,2μm,0.2s						

RLS	**Riolos of Patr**	**0.88**	**106**		P	**Pb**	**14 05 47.0**	**+0.1**
RLS	**Riolos of Patr**	**0.88**	**106**		P	**Pb**	**14 05 46.5**	**-0.4**
RLS					AML	AML	14 06 08.2	
	comp=E,392μm,0.5s							
RLS					AML	AML	14 06 08.8	
	comp=N,615μm,0.4s							
PVO	**Paravola**	**0.94**	**70**		P	**Pb**	**14 05 48.4**	**+0.3**
PVO					S	**Sn**	**14 06 02.7**	**+1.0**
	comp=N,670nm,0.3s							
PVO	**Paravola**	**0.94**	**70**		P	**Pb**	**14 05 48.3**	**+0.3**
PVO					AML	AML	14 06 08.5	
	comp=N,981μm,0.3s							
PVO					AML	AML	14 06 09.0	
	comp=E,1693μm,0.4s							
DRO	**Drossia**	**1.09**	**108**		P	**Pb**	**14 05 50.6**	**0.0**
DRO					S	**Sn**	**14 06 06.6**	**+1.2**
	comp=E,708nm,0.4s							
DRO	**Drossia**	**1.09**	**108**		P	**Pn**	**14 05 50.8**	**+0.1**
DRO					AML	AML	14 06 13.7	
	comp=N,1601μm,0.4s							
DRO					AML	AML	14 06 20.6	
	comp=E,1597μm,0.4s							
EFP	**Efpalio**	**1.19**	**83**		P	**Pn**	**14 05 51.9**	**-0.2**
EFP					S	**Sg**	**14 06 10.0**	**+1.2**
	comp=E,348nm,0.5s							
EFP	**Efpalio**	**1.19**	**83**		P	**Pn**	**14 05 51.6**	**-0.4**
ANX	**Ano Chora**	**1.23**	**76**		P	**Pn**	**14 05 53.1**	**+0.4**
ANX					S	**Sg**	**14 06 10.5**	**+0.5**
	comp=E,410nm,0.5s							
ANX	**Ano Chora**	**1.23**	**76**		P	**Pn**	**14 05 52.8**	**+0.1**
ANX					AML	AML	14 06 17.7	
	comp=E,781μm,0.4s							
ANX					AML	AML	14 06 21.9	
	comp=N,896μm,0.5s							
IGT	**Igoumenitsa**	**1.23**	**358**		P	**Pn**	**14 05 53.8**	**+1.1**
IGT					S	**Sg**	**14 06 11.8**	**+1.7**
	comp=N,162nm,0.2s							
IGT	**Igoumenitsa**	**1.23**	**358**		P	**Pn**	**14 05 54.0**	**+1.3**
IGT					AML	AML	14 06 14.4	
	comp=E,396μm,0.2s							
IGT					AML	AML	14 06 17.1	
	comp=N,278μm,0.3s							
LAKA	**Lakka**	**1.24**	**92**		P	**Pn**	**14 05 53.0**	**+0.2**
LAKA					S	**Sg**	**14 06 11.1**	**+0.6**
AMT	**Artemida-Makis**	**1.29**	**126**		P	**Pg**	**14 05 55.2**	**+0.2**
AMT	**Artemida-Makis**	**1.29**	**126**		P	**Pg**	**14 05 55.1**	**+0.1**
AMT					AML	AML	14 06 24.4	
	comp=N,541μm,0.6s							
AMT					AML	AML	14 06 25.4	
	comp=E,423μm,0.9s							
SERG	**Sergoula**	**1.31**	**84**		P	**Pn**	**14 05 53.7**	**0.0**
TRIZ	**Trizonia**	**1.32**	**87**		P	**Pn**	**14 05 54.2**	**+0.4**
KALE	**Kalithea**	**1.37**	**86**		P	**Pn**	**14 05 54.7**	**+0.1**
KLV	**Kalavryta, Ach**	**1.40**	**100**		P	**Pn**	**14 05 55.7**	**-0.3**
KLV	**Kalavryta, Ach**	**1.40**	**100**		P	**Pb**	**14 05 55.9**	**0.0**
KEK	**Kerkira**	**1.49**	**342**		P	**Pn**	**14 05 57.7**	**+1.5**
ITM	**Ithomi**	**1.65**	**132**		P	**Pb**	**14 06 00.4**	**+0.3**
AGG	**Agios Georgios**	**1.68**	**64**		P	**Pb**	**14 06 00.5**	**-0.1**
THL	**Kiokotos Trika**	**1.79**	**44**		P	**Pb**	**14 06 03.4**	**+1.0**
DBRK	**Dubrovnik**	**4.69**	**339**	*e*	Pn	**Pn**	**14 06 40.5**	**+0.3**
RICI	**Ricice**	**5.75**	**336**	*e*	Pn	**Pn**	**14 06 55.0**	**+0.2**
RICI					Sn	**Sn**	**14 07 58.2**	**-2.1**
ZIRJ	**Zirje**	**6.45**	**328**	*i*	Pn	**Pn**	**14 07 04.1**	**-0.1**
ZIRJ					Sn	**Sn**	**14 08 14.2**	**-3.2**
KIJV	**Kijevo**	**6.45**	**333**	*e*	Pn	**Pn**	**14 07 05.4**	**+1.1**
KIJV					Sn	**Sn**	**14 08 15.2**	**-2.3**
UDBI	**Udbina**	**7.13**	**332**	*e*	Pn	**Pn**	**14 07 15.9**	**+2.2**

*IDC **28** 15:24:37.9±2.3, 6°.93S×102°.70E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.6/33, mbtmp3.7/8, ML3.7/1, Error ellipse: s-maj=71.5km s-min=20.5km az=48.0*
*NEIC **28** 15:24:40.2±1.4, 6°.79S±0°.10×103°.0E±0°.1, h10km±2km, mb4.3/5, Error ellipse: s-maj=26.4km s-min=4.4km az=231.0*

ISC 28 15:24:38.6±1.1, 7°.0S±0°.1×102°.7E±0°.1, h10km, n17, σ2s12/17, mb3.7/8, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNAI	**Manna**	**2.60**	**6**	P	**Pn**	**15 25 16.2**	**-4.5**
XMIS	**Christmas Isla**	**4.57**	**140**	P	**Pn**	**15 25 44.8**	**-3.2**
LEM	**Lembang**	**4.91**	**89**	P	**Pn**	**15 25 53.2**	**+0.4**
	3.1nm,0.3s,baz=348,slow=23,SNR=4.0						
CISI	**Cisompet, Garu**	**5.14**	**97**			**Pn**	**15 25 52.9**	**-2.8**
UGM	**Wanagama**	**7.84**	**97**	P		**Pn**	**15 26 30.7**	**-2.3**
BATI	**Baumata**	**21.00**	**102**	P		**P**	**15 29 23.6**	**+1.0**
	19nm,0.8s,baz=273,slow=20,SNR=1.3							
SOEI	**Soe**	**21.55**	**99**	P		**P**	**15 29 27.6**	**-0.9**
PBKT	**Sadao Pong**	**23.44**	**356**	P		**P**	**15 29 49.6**	**+1.3**
CM31	**Chiang Mai Arr**	**25.52**	**352**	P		**P**	**15 30 07.9**	**+0.3**
CMAR	**Chiang Mai Arr**	**25.52**	**352**	P		**P**	**15 30 06.2**	**-1.4**
	0.3nm,0.5s,baz=182,slow=8.7,SNR=4.5							
WRA	**Warramunga Arr**	**33.31**	**116**	P		**P**	**15 31 16.9**	**0.0**
	0.4nm,0.6s,baz=286,slow=12,SNR=5.5							
WB2	**Warramunga Arr**	**33.33**	**116**	P		**P**	**15 31 16.9**	**-0.1**
STKA	**Stephens Creek**	**43.92**	**130**	P		**P**	**15 32 46.3**	**+0.4**
	0.8nm,0.8s,baz=297,slow=14,SNR=2.9							
KSH	**Kashi**	**52.43**	**334**	SS		**SS**	**15 44 58.8**	**+2.6**
KSH				pmax	pmax			
	comp=Z,48nm,1.6s							
KSH				pmax	pmax			
	comp=Z,95nm,4.9s							
KSH				LR	LR			
	comp=N,100nm,4.6s							
KSH				LR	LR			
	comp=E,110nm,4.8s							
KSH				LR	LR			
	comp=Z,400nm,9.4s							
SONM	**Songino Array**	**54.66**	**3**	P		**P**	**15 34 08.6**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=195,slow=10,SNR=1.9							
MKAR	**Makanchi Array**	**56.50**	**343**	P		**P**	**15 34 22.1**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=146,slow=6.4,SNR=2.8							
ZALV	**Zalesovo Beam**	**62.52**	**348**	P		**P**	**15 35 04.3**	**+1.9**
	comp=Z,0.4nm,0.4s,baz=134,slow=8.3,SNR=2.0							

*DJA **28** 15:24:51.1±0.3, 7°.S±3°×107°.3E±°, h10km, M4.6/39, mb4.8/39, mB5.1/18, MLv5.1/20, Mw(mB)4.5/18*
*IDC **28** 15:24:52.2±0.7, 6°.70S×102°.80E, h0km, mb4.4/19, mb1 4.5/22, mb1mx4.4/35, mbtmp4.4/22, ML4.3/3, Error ellipse: s-maj=22.5km s-min=10.7km az=35.0*
*GCMT **28** 15:24:54.9±0.3, 6°.76S±0°.02×102°.96E±0°.02, h12km, MW4.9/91, Moment Tensor Solution. s23,c25; s91,c129; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.20±.07; Mθθ=0.49±.07; Mφφ=0.69±.07; Mrθ=1.22±.20; Mrφ=2.00±.05; Mθφ=0.25±.20; Best double couple: Mo=2.43000×10^16 NP1:φs=352.00000°, δ59.00000°, λ-178.00000°. NP2: φs=261.00000°, δ88.00000°, λ-31.00000°. Principal axes: T 2.5250, Plg20.0000°, Azm311.0000°; N -0.1910, Plg59.0000°, Azm77.0000°; P -2.3350, Plg23.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **28** 15:24:55.9±1.9, 6°.59S±0°.06×102°.99E±0°.06, h27km±4km, mb4.9/54 Error ellipse: s-maj=9.0km s-min=7.7km az=148.0*
*KLM **28** 15:25:00.0, 6°.91S×103°.26E, h52km, mb4.8*

ISC 28 15:24:55.5±0.4, 6°.62S±0°.05×102°.93E±0°.05, h21km, n193, σ1s90/192, mb4.8/59, MS4.8/10, 3C-4D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LWLI	**Liwa**	**1.95**	**35**	P	**Pb**	**15 25 27.7**	**-2.7**
MNAI	**Manna**	**2.25**	**1**	P	**Pn**	**15 25 30.9**	**-0.6**
MNAI				S	**Sb**	**15 26 02.2**	**-0.6**
MNAI	**Manna**	**2.25**	**1**		**Pn**	**15 25 30.8**	**-0.7**
MDSI	**Maura Dua**	**2.46**	**30**	P	**Pn**	**15 25 34.3**	**-0.1**
BLSI	**Bandar Lampung**	**2.62**	**62**	P	**Pn**	**15 25 35.3**	**-1.3**
LHSI	**Lahat**	**2.84**	**12**	P	**Pn**	**15 25 40.0**	**+0.4**
MASI	**Maura Aman, Be**	**3.52**	**349**	P	**Pn**	**15 25 49.6**	**+0.5**
DBJI	**Dramaga**	**3.79**	**89**	P	**Pn**	**15 25 52.4**	**-0.4**
CBJI	**Citeko**	**3.90**	**87**	P	**Pn**	**15 25 56.0**	**+1.8**
PMBI	**Palembang**	**4.10**	**27**	P	**Pn**	**15 25 57.4**	**+0.4**
PMBI	**Palembang**	**4.10**	**27**	Pn	**Pn**	**15 25 55.3**	**-1.7**
CNJI	**Cibinong**	**4.22**	**100**	P	**Pn**	**15 25 57.6**	**-1.1**
LEM	**Lembang**	**4.66**	**93**	Pn	**Pn**	**15 26 06.8**	**+2.0**
	30nm,0.3s,baz=291,slow=21,SNR=22						
LEM					Sn	**Sn**	**15 27 02.6**	**+4.2**
	12nm,0.3s,baz=311,slow=19,SNR=1.6						

LEM	**Lembang**	**4.66**	**93**		P	**Pn**	**15 26 06.0**	**+1.2**
XMIS	**Christmas Isla**	**4.68**	**145**			Pn	15 25 58.9	-6.2
KRJI	**Kerinci**	**4.73**	**342**		P	**Pn**	**15 26 05.7**	**-0.1**
PPSI	**Pulau Pagai**	**4.81**	**323**		P	Pn	15 26 01.8	-5.0
CISI	**Cisompet, Garu**	**4.93**	**101**		P	**Pn**	**15 26 07.6**	**-0.9**
	1.3nm4μm290nm,0.5s							
CISI	**Cisompet, Garu**	**4.93**	**101**		Pn	**Pn**	**15 26 07.5**	**-1.1**
SDSI	**Sungai Dareh**	**5.85**	**345**		P	**Pn**	**15 26 21.0**	**0.0**
	0.7nm2μm64nm,1.1s							
TPI	**Tanjungpandan**	**6.07**	**51**		P	**Pn**	**15 26 24.6**	**+0.5**
	0.5nm607nm24nm,1.1s							
SISI	**Saibi**	**6.51**	**324**		P	**Pn**	**15 26 26.6**	**-3.5**
	0.5nm61nm,1.2s							
BKNI	**Bangkinang**	**7.16**	**345**		P	**Pb**	**15 26 56.7**	**-2.4**
SMRI	**Semarang**	**7.47**	**94**		P	**Pn**	**15 26 41.1**	**-2.2**
	0.8nm162nm,1.0s							
SMRI	**Semarang**	**7.47**	**94**			**Pn**	**15 26 44.5**	**+1.1**
UGM	**Wanagama**	**7.64**	**100**		P	**Pn**	**15 26 44.7**	**-1.0**
	1.5nm495nm,1.2s							
UGM	**Wanagama**	**7.64**	**100**		Pn	**Pn**	**15 26 44.9**	**-0.8**
TPRI	**Tanjung Pinang**	**7.66**	**12**		P	**Pn**	**15 26 44.9**	**-1.0**
	0.6nm2μm58nm,1.2s							
WOJI	**Wonogiri, Jawa**	**8.02**	**99**		P	**Pn**	**15 26 50.4**	**-0.5**
	58nm,0.8s							
MNSI	**Mandailing Nat**	**8.09**	**335**		P	**Pn**	**15 26 49.1**	**-2.8**
	768nm35nm,1.0s							
COCO	**West Island**	**8.17**	**227**			**Pn**	**15 26 54.6**	**+1.7**
MYKOM	**Kota Tinggi**	**8.41**	**6**		Pn	**Pn**	**15 26 54.4**	**-1.7**
MYKOM	**Kota Tinggi**	**8.41**	**6**		P	Pn	15 27 02.0	+5.8
GRJI	**Gresik**	**9.48**	**92**		P	**Pn**	**15 27 10.1**	**-0.9**
	1μm121nm,0.9s							
GSI	**Gunungsitoli**	**9.52**	**326**		P	**Pn**	**15 27 08.3**	**-3.1**
	98nm,0.9s							
GSI	**Gunungsitoli**	**9.52**	**326**		Pn	**Pn**	**15 27 11.6**	**+0.1**
RPSI	**Rantau Prapat**	**10.08**	**336**		Pn	**Pn**	**15 27 19.6**	**+0.5**
RPSI	**Rantau Prapat**	**10.08**	**336**			**Pn**	**15 27 19.3**	**+0.1**
PSI	**Prapat**	**10.18**	**337**		Pn	**Pn**	**15 27 19.3**	**-1.3**
	0.9nm,0.3s,baz=179,slow=20,SNR=1.9							
IPM	**Ipoh**	**11.19**	**350**		Pn	**Pn**	**15 27 33.8**	**-0.6**
IPM	**Ipoh**	**11.19**	**350**		P	**Pn**	**15 27 33.0**	**-1.4**
JAGI	**Jajag, Banyuwa**	**11.27**	**100**		P	**Pn**	**15 27 34.5**	**-1.0**
	80nm,1.4s							
JAGI	**Jajag, Banyuwa**	**11.27**	**100**		Pn	**Pn**	**15 27 32.8**	**-2.7**
KCSI	**Kotacane, Aceh**	**11.32**	**333**		P	**Pn**	**15 27 33.5**	**-2.6**
	16nm,0.9s							
KULM	**Kulim**	**12.05**	**349**		Pn	**Pn**	**15 27 45.4**	**-0.7**
KULM	**Kulim**	**12.05**	**349**		P	**Pn**	**15 27 45.0**	**-1.1**
SBUM	**Sibu**	**12.93**	**46**		Pn	**Pn**	**15 27 59.5**	**+1.3**
SBUM	**Sibu**	**12.93**	**46**		P	**Pn**	**15 28 01.0**	**+2.8**
PLAI	**Plampang**	**14.87**	**99**		P	**Pn**	**15 28 21.6**	**-3.1**
	59nm,1.2s							
KAPI	**Kappang**	**16.81**	**85**		Pn	**P**	**15 28 51.1**	**-0.8**
	1.2nm,0.3s,baz=178,slow=16,SNR=1.4							
BKSI	**Bulukumba**	**17.14**	**87**		P	**P**	**15 28 54.6**	**-1.0**
	648nm55nm,1.1s							
TTSI	**Tana Toraja**	**17.20**	**79**		P	**P**	**15 28 56.0**	**-0.1**
	522nm33nm,1.3s							
BNSI	**Bone**	**17.24**	**84**		P	**P**	**15 28 56.6**	**0.0**
	539nm32nm,1.5s							
SPMM	**Sapulut**	**17.58**	**51**		P	**P**	**15 29 06.0**	**+5.6**
KKM	**Kota Kinabalu**	**18.28**	**47**		Pn	**Pn**	**15 29 04.4**	**-3.7**
MPSI	**Mapaga**	**18.29**	**68**		P	**P**	**15 29 09.0**	**+0.8**
	67nm,1.2s							
EDFI	**Ende, Flores**	**18.71**	**98**		P	**P**	**15 29 12.1**	**-0.8**
	14nm,1.3s							
MMRI	**Maumere**	**19.24**	**97**		P	P	15 29 11.4	-7.2
MMRI	**Maumere**	**19.24**	**97**		P	**P**	**15 29 16.9**	**-1.7**
MMRI					IAmb	IAmb	15 29 26.8	
	comp=Z,122nm,1.2s							
APSI	**Ampana**	**19.51**	**74**		P	**Pn**	**15 29 23.7**	**+0.7**
	comp=Z,672nmcomp=Z,42nm,1.3s							
LUWI	**Luwuk**	**20.55**	**75**		P	Pn	15 29 33.4	-1.9
BATI	**Baumata**	**20.81**	**101**		P	Pn	15 29 36.9	-1.5
	comp=Z,40nm,0.4s,baz=226,slow=5.9,SNR=11							
BATI					S	Sn	15 33 33.8	+0.8
	comp=Z,10nm,0.6s,baz=217,slow=20,SNR=1.1							
BATI	**Baumata**	**20.81**	**101**		P	**P**	**15 29 34.1**	**-1.7**
	comp=Z,104nm,1.0s			

GYA	**Guiyang**	**33.08**	**6**	⇑*i*P	**P**	**15 31 33.3 +3.2**		
GYA				pP	pwP	15 31 44.0 +5.2		
GYA				PP	**PP**	**15 32 46.3 +1.1**		
GYA				S	**S**	**15 36 51.3 +3.1**		
GYA				SS	**SnSn**	**15 38 55.3 +7.7**		
GYA				pmax	pmax			
	comp=Z,10.0nm,1.3s							
GYA				pmax	pmax			
	comp=Z,80nm,5.7s							
GYA				LR	LR			
	comp=N,760nm,17.9s							
GYA				LR	LR			
	comp=E,1μm,14.4s							
GYA				LR	LR			
	comp=Z,1μm,15.3s							
WB0	**Warramunga Arr**	**33.22**	**116**	P	**P**	**15 31 30.5 -0.8**		
WB0				IAmb	IAmb	15 31 57.8		
	comp=Z,13nm,1.1s							
WRA	**Warramunga Arr**	**33.23**	**117**	P	**P**	**15 31 31.0 -0.4**		
	comp=Z,4.0nm,0.5s,baz=286,slow=12,SNR=31							
WRA				PcP	**PcP**	**15 34 14.2 +0.3**		
	comp=Z,0.5nm,0.8s,baz=290,slow=2.3,SNR=1.6							
WRAB	**Tennant Creek**	**33.23**	**117**	P	**P**	**15 31 31.0 -0.5**		
WRAB				IAmb	IAmb	15 31 58.1		
	comp=Z,22nm,1.3s							
WB2	**Warramunga Arr**	**33.24**	**117**	P	**P**	**15 31 30.9 -0.6**		
WB2				IAmb	IAmb	15 31 58.0		
	comp=Z,12nm,1.0s							
WR0	**Warramunga Arr**	**33.41**	**116**	P	**P**	**15 31 32.2 -0.8**		
WR0				IAmb	IAmb	15 31 37.9		
	comp=Z,21nm,1.2s							
FORT	**Forrest**	**33.65**	**139**	P	**P**	**15 31 35.8 +0.8**		
FORT				IAmb	IAmb	15 31 56.9		
	comp=Z,25nm,1.1s							
SHL	**Shillong**	**33.75**	**342**	P	**P**	**15 31 36.0 -0.1**		
SHL				IAmb	IAmb	15 31 51.7		
	comp=Z,31nm,1.3s							
HYB	**Hyderabad**	**33.92**	**315**	*i* P	**P**	**15 31 40.0 +2.5**		
AS31	**Alice Springs**	**34.24**	**123**	P	**P**	**15 31 39.1 -1.1**		
YULB	**Yu-li**	**34.81**	**30**	P	**P**	**15 31 45.5 +0.4**		
YULB				IAmb	IAmb	15 31 51.3		
	comp=Z,26nm,1.3s							
YHNB	**Yeheng**	**35.92**	**29**	P	**P**	**15 31 54.0 -0.6**		
YHNB				IAmb	IAmb	15 31 58.6		
	comp=Z,34nm,1.6s							
ODAN	**Odare**	**36.53**	**336**	*e*P	**P**	**15 32 00.8 +0.7**		
	comp=Z,64nm,1.1s							
TAPN	**Taplejung**	**36.84**	**337**	*e*P	**P**	**15 32 03.7 +0.9**		
	comp=Z,96nm,1.3s							
RAMN	**Ramite**	**36.93**	**335**	*e*P	**P**	**15 32 04.4 +0.9**		
	comp=Z,76nm,1.5s							
ENH	**Enshi**	**37.22**	**9**	P	**P**	**15 32 03.9 -1.7**		
CD2	**Chengdu**	**37.33**	**1**	P	**P**	**15 32 05.5 -1.0**		
CD2				pmax	pmax			
	comp=Z,30nm,1.3s							
JIRN	**Jiri**	**37.73**	**335**	*e*P	**P**	**15 32 11.2 +0.8**		
	comp=Z,130nm,1.2s							
LSA	**Lhasa**	**37.85**	**343**	P	**P**	**15 32 12.5 +1.0**		
LSA				pmax	pmax			
	comp=Z,31nm,1.0s							
LSA	**Lhasa**	**37.85**	**343**	P	**P**	**15 32 10.2 -1.2**		
LSA				IAmb	IAmb	15 32 32.3		
	comp=Z,22nm,1.1s							
PKI	**Pulchoki**	**37.98**	**334**	*e*P	**P**	**15 32 12.9 +0.4**		
	comp=Z,39nm,1.3s							
GUN	**Gumba**	**38.08**	**335**	*e*P	**P**	**15 32 14.5 +1.2**		
	comp=Z,77nm,1.0s							
GKN	**Gorkha**	**38.69**	**334**	*e*P	**P**	**15 32 19.5 +1.2**		
KOLN	**Koldanda**	**38.96**	**332**	*e*P	**P**	**15 32 21.4 +0.8**		
	comp=Z,53nm,1.0s							
DANN	**Dangsing**	**39.38**	**333**	*e*P	**P**	**15 32 25.8 +1.6**		
	comp=Z,88nm,1.0s							
PYUN	**Piuthan**	**39.53**	**332**	*e*P	**P**	**15 32 26.1 +0.8**		
	comp=Z,58nm,1.0s							
BBOO	**Buckleboo**	**40.33**	**135**	P	**P**	**15 32 31.0 -0.7**		
BBOO				IAmb	IAmb	15 33 51.4		
	comp=Z,50nm,1.5s							
XAN	**Xi'an**	**40.84**	**8**	P	**P**	**15 32 35.5 -0.4**		
XAN				pP	pwP	15 32 50.0 +5.3		
XAN				sP	sP	15 32 56.3 +12		
XAN				S	**S**	**15 38 38.5 -7.5**		
XAN				sS	pS	15 38 50.5 -2.5		
XAN	**Xi'an**	**40.84**	**8**	ScS	ScS	15 42 39.5 -0.7		
XAN				pmax	pmax			
	comp=Z,42nm,1.3s							
XAN				pmax	pmax			
	comp=Z,150nm,3.9s							
XAN				LR	LR			
	comp=N,280nm,14.1s							
XAN				LR	LR			
	comp=E,2μm,14.7s							
XAN				LR	LR			
	comp=Z,2μm,13.7s							
XAN	**Xi'an**	**40.84**	**8**	P	**P**	**15 32 33.4 -2.4**		
NJ2	**Nanjing**	**41.35**	**21**	*e*P	**P**	**15 32 40.0 0.0**		
NJ2				pmax	pmax			
	comp=Z,11nm,0.5s							
NJ2				LR	LR			
	comp=N,660nm,18.0s							
NJ2				LR	LR			
	comp=E,530nm,18.0s							
NJ2				LR	LR			
	comp=Z,570nm,17.1s							
LZH	**Lanzhou**	**42.49**	**1**	*e*P	**P**	**15 32 50.5 +1.0**		
LZH				sP	pwP	15 33 05.3 +6.9		
LZH				sS	sS	15 39 31.0 +10		
LZH				pmax	pmax			
	comp=Z,29nm,1.1s							
LZH				pmax	pmax			
	comp=Z,190nm,5.2s							
LZH				LR	LR			
	comp=N,1μm,13.6s							
LZH				LR	LR			
	comp=E,1μm,14.0s							
LZH				LR	LR			
	comp=Z,1μm,16.3s							
STKA	**Stephens Creek**	**43.93**	**130**	P	**P**	**15 33 01.1 -0.1**		
	comp=Z,4.4nm,0.6s,baz=298,slow=7.8,SNR=18							
STKA	**Stephens Creek**	**43.93**	**130**	P	**P**	**15 33 00.3 -0.9**		
STKA				IAmb	IAmb	15 33 03.2		
	comp=Z,4.6nm,1.4s							
GTA	**Gaotai**	**45.89**	**357**	⇑P	**P**	**15 33 20.3 +3.6**		
GTA				pP	pwP	15 33 31.5 +5.9		
GTA				sP	sP	15 33 35.5 +10		
GTA				PcP	**PcP**	**15 34 54.5 +0.8**		
GTA				S	**S**	**15 40 03.5 +3.4**		
GTA				sS	sS	15 40 20.0 +10		
GTA	**Gaotai**	**45.89**	**357**	SS	SS	15 43 29.0 +3.8		
GTA				pmax	pmax			
	comp=Z,8.0nm,1.1s							
GTA				pmax	pmax			
	comp=Z,110nm,7.8s							
GTA				LR	LR			
	comp=N,860nm,17.1s							
GTA				LR	LR			
	comp=E,1μm,19.0s							
GTA				LR	LR			
	comp=Z,1μm,17.8s							
BTO	**Baotou**	**47.44**	**7**	*e*P	**P**	**15 33 28.5 -0.3**		
BTO				S	**S**	**15 40 26.3 +4.1**		
HHC	**Hu-ho-hao-te**	**47.90**	**9**	*e*P	**P**	**15 33 30.0 -2.4**		
HHC				pP	pwP	15 33 41.0 -0.3		
HHC				S	**S**	**15 40 28.5 -0.2**		
HHC				sS	sS	15 40 41.8 +3.0		
HHC				pmax	pmax			
	comp=Z,6.0nm,0.7s							
HHC				pmax	pmax			
	comp=Z,51nm,5.8s							
HHC				LR	LR			
	comp=N,460nm,13.6s							
HHC				LR	LR			
	comp=E,270nm,14.5s							
HHC				LR	LR			
	comp=Z,410nm,13.3s							
BJI	**Beijing**	**48.01**	**14**	P	**P**	**15 33 36.8 +3.7**		
BJI				pmax	pmax			
	comp=Z,10.0nm,1.2s							
NIL	**Nilore**	**48.95**	**327**	P	**P**	**15 33 41.0 +0.5**		
KSRS	**Korea Array**	**49.67**	**26**	P	**P**	**15 33 46.1 +0.3**		
	comp=Z,8.2nm,1.1s,baz=221,slow=8.0,SNR=8.4							
WMQ	**Urumqi**	**52.07**	**346**	*e*P	**P**	**15 34 04.5 +0.6**		
WMQ				pP	pP	15 34 10.5 +0.7		
WMQ				sP	pwP	15 34 18.3 +5.2		
WMQ				pmax	pmax			
	comp=Z,43nm,1.1s							
WMQ				pmax	pmax			
	comp=Z,41nm,4.5s							
WMQ				LR	LR			
	comp=N,200nm,18.1s							
WMQ				LR	LR			
	comp=E,260nm,20.5s							
WMQ				LR	LR			
	comp=Z,320nm,20.5s							
KSH	**Kashi**	**52.24**	**334**	P	**P**	**15 34 04.0 -1.4**		
KSH				pP	pwP	15 34 19.0 +4.5		
KSH				PP	**PP**	**15 36 07.3 +3.2**		
KSH				S	**S**	**15 41 21.8 -7.6**		
KDJ	**Kajisay**	**53.91**	**336**	P	**P**	**15 34 17.8 0.0**		
CN2	**Changchun**	**54.16**	**20**	*e*P	**P**	**15 34 21.5 +2.2**		
CN2				*e*pP	sP	15 34 33.5 +6.0		
CN2				*e*S	**S**	**15 41 54.0 -1.1**		
CN2				pmax	pmax			
	comp=Z,10.0nm,1.2s							
CN2				LR	LR			
	comp=N,440nm,15.0s							
CN2				LR	LR			
	comp=E,520nm,15.0s							
CN2				LR	LR			
	comp=Z,380nm,15.0s							
MAJO	**Matsushiro**	**54.18**	**35**	P	**P**	**15 34 17.8 -1.8**		
MJAR	**Matsushiro Arr**	**54.18**	**35**	P	**P**	**15 34 21.6 +2.0**		
	comp=Z,1.4nm,0.8s,baz=208,slow=6.8,SNR=6.1							
SONM	**Songino Array**	**54.31**	**3**	P	**P**	**15 34 21.4 +1.0**		
	comp=Z,6.4nm,1.0s,baz=184,slow=7.7,SNR=17							
ULN	**Ulaanbaatar**	**54.37**	**3**	P	**P**	**15 34 20.9 -0.1**		
ULN				IAmb	IAmb	15 34 30.7		
	comp=Z,9.8nm,1.1s							
GAR	**Garm**	**54.53**	**329**	P	**P**	**15 34 22.1 -0.1**		
CHGR	**Chuyangaron**	**54.88**	**328**	P	**P**	**15 34 24.2 -0.5**		
AAK	**Ala-Archa**	**55.44**	**335**	P	**P**	**15 34 29.2 +0.4**		
AAK				IAmb	IAmb	15 35 04.7		
	comp=Z,15nm,1.4s							
HRA	**Herat**	**56.04**	**319**	P	**P**	**15 34 34.1 +0.8**		
HRA				IAmb	IAmb	15 34 38.3		
	comp=Z,16nm,1.4s							
MK31	**Makanchi Array**	**56.26**	**343**	P	**P**	**15 34 33.1 -1.2**		
MKAR	**Makanchi Array**	**56.26**	**343**	P	**P**	**15 34 34.7 +0.3**		
	comp=Z,7.4nm,1.0s,baz=146,slow=7.7,SNR=22							
MAKZ	**Makanchi**	**56.36**	**343**	P	**P**	**15 34 33.9 -1.3**		
MAKZ				IAmb	IAmb	15 34 41.6		
	comp=Z,11nm,1.3s							
MDJ	**Mudanjiang**	**56.37**	**23**	P	**P**	**15 34 38.3 +3.1**		
MDJ				pmax	pmax			
	comp=Z,7.0nm,1.0s							
MDJ				pmax	pmax			
	comp=Z,120nm,3.5s							
USA0B	**Ussuriysk Arra**	**56.98**	**25**	P	**P**	**15 34 38.5 -1.0**		
USRK	**Ussuriysk Ar.**	**56.98**	**25**	P	**P**	**15 34 38.9 -0.6**		
	comp=Z,4.1nm,0.8s,baz=214,slow=6.0,SNR=11							
TLY	**Talaya**	**58.07**	**1**	P	**P**	**15 34 45.6 -1.5**		
GEYT	**Alibeck**	**60.85**	**320**	P	**P**	**15 35 06.1 -0.5**		
	comp=Z,5.2nm,0.9s,baz=174,slow=5.7,SNR=9.3							
GYA0B	**ALIBECK ARRAY**	**60.85**	**320**	P	**P**	**15 35 07.1 +0.5**		
GYA0B				IAmb	IAmb	15 35 21.9		
	comp=Z,8.4nm,0.9s							
KURK	**Kurchatov**	**60.85**	**343**	P	**P**	**15 35 05.9 -0.4**		
ZAA0	**Zalesovo Array**	**62.24**	**348**	P	**P**	**15 35 15.0 -0.6**		
ZALV	**Zalesovo Beam**	**62.24**	**348**	P	**P**	**15 35 16.0 +0.4**		
	comp=Z,4.8nm,0.5s,baz=160,slow=5.7,SNR=25							
RAYN	**Ar Rayn**	**63.55**	**300**	P	**P**	**15 35 24.8 -0.2**		
BRVK	**Borovoye**	**65.57**	**339**	P	**P**	**15 35 37.0 -0.6**		
BRVK				IAmb	IAmb	15 35 44.5		
	comp=Z,9.7nm,0.9s							
YAK	**Yakutsk**	**71.51**	**13**	P	**P**	**15 36 13.4 -1.0**		
ARU	**Arti**	**72.59**	**336**	P	**P**	**15 36 21.0 -0.1**		
KBZ	**Khabaz**	**73.69**	**319**	P	**P**	**15 36 28.9 +1.1**		
	comp=Z,8.5nm,1.1s,baz=46,slow=1.0,SNR=12							
PETK	**Petropavlovsk-**	**75.28**	**31**	P	**P**	**15 36 36.8 -0.1**		
	comp=Z,1.9nm,0.7s,baz=138,slow=9.0,SNR=3.6							
VNDA	**Vanda**	**77.09**	**169**	P	**P**	**15 36 47.4 +0.5**		
	comp=Z,0.5nm,0.8s,baz=305,slow=8.6,SNR=2.0							
BRTR	**Keskin Array B**	**78.58**	**313**	P	**P**	**15 36 56.4 +0.3**		
	comp=Z,2.2nm,0.8s,baz=126,slow=6.3,SNR=8.9							
TIXI	**Tiksi**	**79.96**	**8**	P	**P**	**15 37 00.9 -1.7**		
TIXI				IAmb	IAmb	15 37 14.0		
	comp=Z,11nm,1.1s							
KLMR	**Klimovskoe**	**83.24**	**334**	*e*P	**P**	**15 37 21.4 +1.2**		
KLMR				AMP		15 37 39.3		
	comp=Z,29nm,1.4s							
AKASG	**Malin Array Be**	**84.91**	**322**	P	**P**	**15 37 28.1 -0.8**		
	comp=Z,0.2nm,0.3s,baz=84,slow=5.1,SNR=6.9							
VRI	**Vrincioaia**	**85.21**	**317**	⇓P	**P**	**15 37 32.7 +2.1**		
MLR	**Muntele Rosu**	**85.65**	**317**	⇓P	**P**	**15 37 37.3 +4.3**		
MLR	**Muntele Rosu**	**85.65**	**317**	P	**P**	**15 37 32.2 -0.7**		
MLR				IAmb	IAmb	15 37 43.1		
	comp=Z,16nm,1.3s							
MDVR	**Moldovita**	**88.42**	**315**	⇑P	**P**	**15 37 50.8 +4.5**		
BZS	**Buzias**	**88.64**	**316**	⇓P	**P**	**15 37 48.8 +1.5**		
KOLS	**Kolonicke sedl**	**88.84**	**319**	*e*P	P	15 37 53.0 +4.9		
FINES	**FINESS Array B**	**89.54**	**332**	P	**P**	**15 37 51.9 +0.8**		
	comp=Z,3.8nm,1.1s,baz=101,slow=7.2,SNR=1.7							
YKA	**Yellowknife Ar**	**117.85**	**19**	PKP	**PKPdf**	**15 43 39.3 -0.9**		
	comp=Z,0.5nm,0.9s,baz=297,slow=1.7,SNR=4.3							
P40A	**Paris**	**144.57**	**20**		PKPbc	15 44 29.4 -0.2		
T35A	**Sooner Cattle**	**145.01**	**28**		**PKPab**	**15 44 30.7 -0.4**		
N49A	**Columbus Grove**	**145.26**	**9**		**PKPbc**	**15 44 31.2 -0.5**		
TXAR	**Lajitas Array**	**146.25**	**45**	PKPbc	**PKPab**	**15 44 36.2 +0.1**		
	comp=Z,4.1nm,0.8s,baz=276,slow=1.5,SNR=17							
MGMO	**Mountain Grove**	**146.60**	**22**		**PKPdf**	**15 44 34.9 +0.4**		
HHAR	**Hobbs**	**146.68**	**25**		**PKPbc**	**15 44 35.4 -0.9**		
U40A	**Yellville**	**147.06**	**24**	PKPbc	**PKPbc**	**15 44 36.1 -1.2**		
FCAR	**Ozark Folk Cen**	**147.76**	**23**	PKPbc	**PKPbc**	**15 44 38.8 -0.5**		
S51A	**Beattyville**	**148.56**	**10**	PKPdf	**PKPdf**	**15 44 36.8 -1.0**		
WVT	**Waverly**	**149.02**	**17**	PKPbc	**PKPbc**	**15 44 40.6 -2.0**		
U49A	**Red Boiling Sp**	**149.20**	**14**	PKPbc	**PKPbc**	**15 44 42.1 -0.9**		
PLAL	**Pickwick Lake**	**150.01**	**18**		**PKiKP**	**15 44 47.8 +1.8**		
CPCT	**Cooper Cave**	**150.50**	**12**		**PKPab**	**15 44 49.6 -3.1**		

*TAP **28** 15:57:53.5,21.°72N×121.°71E,h9km,ML2.6,D*
*JMA **28** 15:57:54.1±0.4,21.°70N×121.°71E,h70km,M2.8*
ISC 28 15:57:51.7±1.6,21.°68N±0.°07×121.°85E±0.°03,h9km±10km,
n43,σ1s55/80,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
LAY	**Lan-yu**	**0.46**	**322**	*i* P		**Pg**		**15 58 01.2**	**+0.6**
	baz=335								
LAY				*i* S		**Sg**		**15 58 06.5**	**-0.1**
	baz=335								
TSEB	**Hengchuen, Pin**	**0.91**	**284**	*i* P		**Pg**		**15 58 10.4**	**+1.1**
	baz=282								
TSEB				*e*S		**Sg**		**15 58 22.8**	**+1.6**
	baz=282								
TWKBT	**Hengchun**	**1.00**	**285**	*e*P		**Pb**		**15 58 11.3**	**0.0**
	baz=284								
TWKBT				*e*S		**Sg**		**15 58 23.6**	**-0.4**
	baz=284								
TWK1	**Hengchun**	**1.01**	**285**	P		**Pb**		**15 58 10.9**	**-0.5**
	baz=284								
TWK1				S		**Sg**		**15 58 23.1**	**-1.1**
	baz=284								
HEN	**Hengchun**	**1.09**	**288**	*e*S		**Sb**		**15 58 25.2**	**-1.8**
	baz=287								
TWH	**Lutao**	**1.09**	**341**	*e*P		**Pg**		**15 58 10.7**	**-1.9**
	baz=348								
TAW	**Tawu**	**1.12**	**308**	*e*P		**Pb**		**15 58 12.9**	**-0.3**
	baz=310								
TAW				S		**Sb**		**15 58 25.3**	**-2.6**
	baz=310								
EAST	**Anshuo**	**1.17**	**307**	P		**Pn**		**15 58 12.8**	**-1.5**
	baz=310								
EAST				S		**Sb**		**15 58 26.3**	**-3.1**
	baz=310								
ECL	**Taimali**	**1.24**	**318**	*e*P		**Pn**		**15 58 14.0**	**-1.2**
	baz=322								
ECL				*e*S		**Sb**		**15 58 29.4**	**-2.1**
	baz=322								
SCZT	**Fangliau**	**1.34**	**301**	P		**Pn**		**15 58 16.6**	**0.0**
	baz=303								
SCZT				*e*S		**Sn**		**15 58 32.9**	**-1.6**
	baz=303								
TWGBT	**Beinan**	**1.34**	**328**	P		**Pn**		**15 58 16.6**	**-0.1**
	baz=316								
TWGBT				S		**Sb**		**15 58 35.3**	**+0.9**
	baz=316								
TWG	**Pinlang**	**1.35**	**328**	*e*P		**Pn**		**15 58 15.2**	**-1.6**
	baz=316								
TWG				*e*S		**Sb**		**15 58 35.1**	**+0.5**
	baz=316								
MASBT	**Mashibuluo**	**1.46**	**310**	*e*P		**Pn**		**15 58 17.9**	**-0.5**
	baz=325								
CHKT	**Chengkung**	**1.49**	**342**	P		**Pn**		**15 58 17.5**	**-1.2**
	baz=347								
SSD	**Sandimen**	**1.55**	**313**	*e*P		**Pn**		**15 58 20.6**	**+1.0**
	baz=326								
SSD				S		**Sn**		**15 58 37.4**	**-2.5**
	baz=326								
ELDTW	**Lidau**	**1.69**	**333**	*e*P		**Pn**		**15 58 21.3**	**-0.3**
	baz=346								
SLGT	**Liugui**	**1.72**	**320**	*e*P		**Pn**		**15 58 23.2**	**+1.3**
	baz=331								
SLGT				*e*S		**Sn**		**15 58 43.7**	**-0.4**
	baz=331								
TWF1	**Yuli**	**1.75**	**343**	*e*P		**Pn**		**15 58 23.7**	**+1.4**
	baz=331								
TWF1				*e*S		**Sb**		**15 58 46.5**	**+0.4**
	baz=331								
YULB	**Yu-li**	**1.78**	**343**	*e*P		**Pn**		**15 58 22.4**	**-0.4**
	baz=332								
YULB				*e*S		**Sn**		**15 58 46.0**	**+0.4**
	baz=332								
STYT	**Tauyuan**	**1.79**	**326**	*e*P		**Pn**		**15 58 23.5**	**+0.6**
	baz=329								
STYT				*e*S		**Sn**		**15 58 45.3**	**-0.6**
	baz=329								
SGST	**Jiashian**	**1.83**	**320**	*e*P		**Pn**		**15 58 25.0**	**+1.6**
	baz=323								
SGST				*e*S		**Sn**		**15 58 47.9**	**+1.2**
	baz=323								
HGSD	**Ruisui**	**1.85**	**348**	*e*P		**Pb**		**15 58 25.8**	**0.0**
	baz=4.0								
HGSD				*e*S		**Sb**		**15 58 48.4**	**-0.6**
	baz=4.0								
EHY	**Hungye**	**1.89**	**345**	*e*P		**Pn**		**15 58 25.5**	**+1.3**
	baz=332								
EHY				*e*S		**Sb**		**15 58 49.4**	**-0.7**
	baz=332								
WTP	**Ta-pu**	**1.94**	**324**	P		**Pn**		**15 58 27.2**	**+2.3**
	baz=327								
WTP				S		**Sb**		**15 58 51.9**	**+0.3**
	baz=327								
CHN1	**Nanshi**	**1.94**	**321**	*e*P		**Pn**		**15 58 27.1**	**+2.2**
	baz=324								
CHN1				*i* S		**Sn**		**15 58 51.3**	**+1.9**
	baz=324								
TPUB	**Ta-pu**	**1.97**	**325**	P		**Pn**		**15 58 27.4**	**+2.0**
	baz=328								
TPUB				*e*S		**Sn**		**15 58 51.9**	**+1.6**
	baz=328								
SNST	**Tainan City**	**1.98**	**321**	*e*P		**Pn**		**15 58 27.4**	**+1.9**
	baz=324								
SNST				*e*S		**Sn**		**15 58 52.9**	**+2.4**
	baz=324								
TWK	**Hsinying**	**2.02**	**322**	*e*P		**Pn**		**15 58 27.9**	**+1.8**
	baz=325								
TWK				*e*S		**Sn**		**15 58 54.0**	**+2.4**
	baz=325								
ALS	**Alishan**	**2.07**	**332**	*e*P		**Pn**		**15 58 28.5**	**+1.6**
	baz=336								
ALS				*e*S		**Sb**		**15 58 55.5**	**-0.1**
	baz=336								
ESL	**Shilin**	**2.16**	**350**	*e*P		**Pn**		**15 58 28.4**	**+0.4**
	baz=5.0								
ESL				*e*S		**Sn**		**15 58 55.8**	**+0.8**
	baz=5.0								
VWDT	**VWDT**	**2.17**	**343**	*e*P		**Pn**		**15 58 29.4**	**+1.3**
	baz=346								
VWDT				*e*S		**Sn**		**15 58 56.3**	**+1.2**
	baz=346								
CHN5	**Tsauling**	**2.20**	**331**	P		**Pb**		**15 58 31.3**	**-0.5**
	baz=334								
CHN5				*e*S		**Sn**		**15 58 58.4**	**+2.4**
	baz=334								
WHYT	**Xinyi Township**	**2.21**	**336**	*e*P		**Pn**		**15 58 30.5**	**+1.8**
	baz=339								
WHYT				*e*S		**Sb**		**15 58 59.4**	**-0.2**
	baz=339								
SSLB	**Suanglung**	**2.26**	**339**	*e*P		**Pn**		**15 58 31.1**	**+1.8**
	baz=355								
SSLB				*e*S		**Sb**		**15 59 00.2**	**-0.7**
	baz=355								
JYNG	**Yonagunijimaku**	**2.94**	**20**	P		**Pn**		**15 58 39.9**	**+1.2**
JYNG				*e*S		**Sn**		**15 59 13.3**	**-0.8**
YOJ	**Yonaguni jima**	**2.97**	**21**	P		**Pn**		**15 58 40.9**	**+1.8**
YOJ				*e*S		**Sn**		**15 59 15.4**	**+0.5**
HATJ	**Hateruma jima**	**2.98**	**37**	P		**Pn**		**15 58 40.6**	**+1.4**
HATJ				*e*S		**Sn**		**15 59 14.6**	**-0.4**
IRIF	**Iriomote-Funau**	**3.16**	**33**	P		**Pn**		**15 58 43.8**	**+2.1**
IRIF				*e*S		**Sb**		**15 59 21.8**	**-5.0**
JKRS	**Kuro-shima**	**3.23**	**38**	P		**Pn**		**15 58 45.1**	**+2.4**
JKRS				*e*S		**Sn**		**15 59 20.9**	**-0.4**
JIJ	**Ishigaki jima**	**3.41**	**38**	P		**Pn**		**15 58 47.3**	**+2.2**
JIJ				*e*S		**Sn**		**15 59 24.6**	**-1.0**
JISG	**Ishigakijimahi**	**3.68**	**38**	P		**Pn**		**15 58 50.9**	**+2.1**
JISG				*e*S		**Sn**		**15 59 31.0**	**-1.3**
JTJ	**Tarama**	**3.95**	**41**	P		**Pn**		**15 58 54.8**	**+2.3**
JTJ				*e*S		**Sn**		**15 59 38.8**	**-0.2**
JIRB	**Irabujima**	**4.38**	**44**	*e*S		**Sn**		**15 59 49.7**	**+0.1**

*IDC **28** 16:04:14.5±1.8,1.°43N×126.°85E,h0km,mb3.7/3,*
mb1 3.8/4,mb1mx3.4/33,mbtmp3.7/4,ML3.3/1,MS3.2/1,
Ms1 3.2/1,ms1mx2.5/39,Error ellipse: s-maj=114.9km
s-min=24.1km az=68.0
*NEIC **28** 16:04:22.6±1.3,1.°4N±0.°1×126.°9E±0.°2,h71km±9km,*
mb4.2/10,Error ellipse: s-maj=33.1km s-min=7.0km
az=62.0
*DJA **28** 16:04:22.1±0.8,2.°N±4.°×12.°7E±.°,h23km±10km,M3.7/6,*
mb4.0/1,MLv3.7/6,MLv3.6/5
ISC 28 16:04:18.8±1.3,1.°8N±0.°1×127.°17E±0.°10,h35km±,n20,
σ2s14/22,mb4.1/7,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
TNTI	**Ternate**	**1.01**	**169**	P		**Pn**		**16 04 38.8**	**+2.4**
TNTI				S		**Sn**		**16 04 50.9**	**+1.5**
TNTI	**Ternate**	**1.01**	**169**			**Pn**		**16 04 38.9**	**+2.4**
TNTI				Sn		**Sn**		**16 04 50.1**	**+0.6**
LBMI	**Labuha**	**2.41**	**172**	P		**P

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**0.36**	**2**	⇑Pg	**Pg**	**16 17 37.0**	**-0.5**
GTA				Sg	**Sg**	**16 17 42.3**	**0.0**
GTA				smax	smax		
	comp=N,1μm,0.4s						
GTA				smax	smax		
	comp=E,2μm,0.5s						
LZH	**Lanzhou**	**4.37**	**131**	*e*Pg	**Pg**	**16 18 53.5**	**-0.5**
LZH				Sg	**Sg**	**16 19 50.5**	**-0.1**
LZH				smax	smax		
	comp=N,100nm,1.1s						
LZH				smax	smax		
	comp=E,100nm,1.0s						
LZH				LR	LR		
	comp=N,300nm,5.0s						
LZH				LR	LR		
	comp=E,160nm,5.4s						
LZH				LR	LR		
	comp=Z,310nm,6.5s						
SONM	**Songino Array**	**10.00**	**26**	Pn	**Pn**	**16 19 55.4**	**+1.3**
	comp=Z,2.3nm,0.3s,baz=205,slow=15,SNR=29						
SONM				Lg	Lg	16 22 46.8	
	comp=Z,0.6nm,0.3s,baz=212,slow=31,SNR=9.0						
WMQ	**Urumqi**	**10.26**	**302**	*e*P	**Pn**	**16 20 01.5**	**+4.0**
MKAR	**Makanchi Array**	**14.96**	**307**	Pn	**Pn**	**16 21 00.4**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=110,slow=15,SNR=3.1						
ZALV	**Zalesovo Beam**	**18.06**	**330**	P	**Pn**	**16 21 38.4**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=19,slow=31,SNR=1.9						
KURBB	**Kurchatov Arra**	**18.93**	**315**	P	**P**	**16 21 47.6**	**-3.6**
	comp=Z,0.0nm,0.3s,baz=236,slow=26,SNR=3.2						
CMAR	**Chiang Mai Arr**	**20.53**	**182**	P	Pn	16 22 10.4	-0.6
	comp=Z,0.7nm,0.5s,baz=350,slow=9.3,SNR=8.1						
KSRS	**Korea Array**	**22.11**	**85**	P	**P**	**16 22 26.1**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=274,slow=7.5,SNR=2.9						
BVAR	**Borovoye Array**	**24.52**	**314**	P	**P**	**16 22 49.4**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=115,slow=9.2,SNR=7.2						

*IDC **28** 16:19:32.7±1.7,39.°07N×99.°74E, h0km, mb3.4/2, mb1 3.8/5, mb1mx3.4/38, mbtmp3.7/5, ML3.5/3, MS3.0/2, Ms1 3.0/2, ms1mx2.4/35, Error ellipse: s-maj=30.5km s-min=24.7km az=87.0*
*BJI **28** 16:19:33.8±0.0, 39.°02N×99.°81E, h7km, mb3.8/1, ML3.7/14*
*NEIC **28** 16:19:34.8±1.7, 39.°0N±0.°1×99.°62E±0.°08, h20km±5km, mb4.2/6, Error ellipse: s-maj=16.7km s-min=7.2km az=204.0*

ISC 28 16:19:33.9±0.7,**39.°05N**±0.°06×**99.°73E**±0.°08,**h10**km,**n20, σ1§41/21,Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**0.37**	**10**	Pg	**Pg**	**16 19 39.8**	**-1.5**
GTA				Sg	**Sg**	**16 19 46.3**	**+0.1**
GTA				smax	smax		
	comp=N,2μm,0.5s						
GTA				smax	smax		
	comp=E,8μm,0.6s						
LZH	**Lanzhou**	**4.41**	**131**	*e*Pn	**Pn**	**16 20 42.0**	**+1.0**
LZH				Sg	**Sg**	**16 21 54.5**	**-1.0**
LZH				smax	smax		
	comp=N,230nm,1.0s						
LZH				smax	smax		
	comp=E,340nm,1.0s						
BTO	**Baotou**	**8.07**	**76**	*e*P	**Pn**	**16 21 32.5**	**+1.2**
BTO				S	Sn	16 23 10.3	+7.7
XAN	**Xi'an**	**8.92**	**121**	P	**Pg**	**16 22 25.5**	**+0.7**
XAN				pP	Pn	16 22 36.8	+54
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SONM	**Songino Array**	**10.03**	**27**	Pn	**Pn**	**16 21 58.7**	**+0.6**
	comp=Z,1.9nm,0.3s,baz=205,slow=15,SNR=15						
SONM				Lg	Lg	16 24 49.2	
	comp=Z,0.8nm,0.3s,baz=215,slow=31,SNR=6.6						
WMQ	**Urumqi**	**10.21**	**302**	*e*P	**Pn**	**16 22 04.8**	**+4.2**
ULN	**Ulaanbaatar**	**10.29**	**29**	Pn	**Pn**	**16 22 01.1**	**-0.7**
MK31	**Makanchi Array**	**14.92**	**307**	Pn	**Pn**	**16 23 04.3**	**-0.5**
MKAR	**Makanchi Array**	**14.92**	**307**	Pn	**Pn**	**16 23 03.9**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=116,slow=15,SNR=2.3						
MKAR				Lg	Lg	16 27 39.2	
	comp=Z,0.1nm,0.3s,baz=24,slow=24,SNR=2.5						
PRZ	**Przheval'sk**	**16.51**	**289**	Pn	**Pn**	**16 23 23.7**	**-2.1**
PRZ				IAmb	IAmb	16 23 40.7	
	comp=Z,5.9nm,0.4s						
ZALV	**Zalesovo Beam**	**18.04**	**331**	P	**Pn**	**16 23 44.3**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=130,slow=13,SNR=5.4						
KURK	**Kurchatov**	**18.89**	**315**	P	**P**	**16 23 54.5**	**+0.1**
KURBB	**Kurchatov Arra**	**18.90**	**315**	P	**P**	**16 23 54.7**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=116,slow=12,SNR=13						
CMAR	**Chiang Mai Arr**	**20.53**	**182**	P	**P**	**16 24 12.7**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=354,slow=9.6,SNR=6.1						
KSRS	**Korea Array**	**22.16**	**85**	P	**P**	**16 24 29.8**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=280,slow=9.3,SNR=5.7						
KSRS				LR	LR	16 34 29.2	
	comp=Z,19nm,19.2s,baz=245,slow=40						
BILL	**Bilibino**	**45.74**	**29**	P	**P**	**16 27 55.8**	**+0.8**
AKBB	**Malin Array Si**	**49.50**	**308**	P	**P**	**16 28 22.5**	**-1.8**
AKBB				IAmb	IAmb	16 28 26.9	
	comp=Z,2.2nm,0.7s						
HFS	**Hagfors**	**55.24**	**323**	LR	LR	16 51 51.9	
	comp=Z,30nm,18.1s,baz=27,slow=35						
WB2	**Warramunga Arr**	**67.04**	**145**	P	**P**	**16 30 26.1**	**-1.2**
WR0	**Warramunga Arr**	**67.14**	**144**	P	**P**	**16 30 27.2**	**-0.7**

*MEX **28** 16:29:35.8±0.3, 14.°75N×93.°78W, h17km±999km, MD3.9*
*GCG **28** 16:29:37.2±0.9, 15.°37N×93.°52W, h50km±241km, MD4.0*

ISC 28 16:29:35.4±3.6,**14.°88N**±0.°09×**93.°74W**±0.°09,**h24**km±26km, **n8,σ1§38/15,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.96**	**31**	*e*P	**Pn**	**16 29 52.8**	**-0.7**
PCIG				*e*S	**Sb**	**16 30 05.8**	**+0.2**
THIG		**1.42**	**89**	*i*P	**Pn**	**16 29 57.9**	**-1.8**
THIG				*i*S	**Sn**	**16 30 15.3**	**-2.4**
TGIG		**1.98**	**17**	*e*P	**Pn**	**16 30 07.4**	**-0.1**
TGIG				*i*S	**Sn**	**16 30 32.5**	**+0.9**
CCIG	**Comitan**	**2.08**	**48**	*i*P	**Pn**	**16 30 09.1**	**+0.2**
CCIG				*i*S	**Sn**	**16 30 35.0**	**+0.8**
STG3	**Santiaguito 3,**	**2.10**	**94**	*e*P	**Pn**	**16 30 09.1**	**-0.2**
STG3				*e*S	**Sn**	**16 30 34.0**	**-0.8**
CMIG	**Matias Romero**	**2.46**	**333**	*e*P	**Pn**	**16 30 13.8**	**-0.3**
CMIG				*i*S	**Sn**	**16 30 43.1**	**-0.3**
FUG	**Fuego 3**	**2.83**	**98**	*e*S	**Sn**	**16 30 53.0**	**+0.1**
IXG	**Ixpaco**	**3.27**	**102**	*e*P	**Pn**	**16 30 26.6**	**+1.2**
IXG				*e*S	**Sn**	**16 31 06.3**	**+2.7**

JMA 28 16:37:49.3±0.2,**24.°92N×123.°26E, h18**km,**M1.3, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.51**	**206**	P	Pg	16 37 59.2	-0.4
JYNG	**Yonagunijimaku**	**0.55**	**212**	P	Pg	16 37 59.9	-0.4
IRIF	**Iriomote-Funau**	**0.72**	**144**	P	Pb	16 38 02.9	-0.4
JKRS	**Kuro-shima**	**0.96**	**135**	P	Pb	16 38 07.1	-0.3
JJ	**Ishigaki jima**	**0.98**	**124**	P	Pb	16 38 07.3	-0.4
HATJ	**Hateruma jima**	**0.99**	**150**	P	Pb	16 38 07.5	-0.5
JISG	**Ishigakijimahi**	**1.01**	**109**	P	Pb	16 38 07.8	-0.5
JISG				S	Sb	16 38 21.0	-0.2
JTJ	**Tarama**	**1.34**	**102**	P	Pb	16 38 13.9	0.0

TAP 28 16:38:12.2,24.°61N×121.°79E, h76km,**ML2.1, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.05**	**86**	P	Pn	16 38 23.4	+0.4
	baz=86						
TWC				S	Sn	16 38 33.0	+2.0
	baz=86						
TWE	**Neicheng**	**0.16**	**316**	*i*P	Pn	16 38 24.0	+0.7
	baz=312						
TWE				*i*S	Sn	16 38 32.1	+0.6
	baz=312						
ENA	**Nanau**	**0.18**	**194**	*i*P	Pn	16 38 24.0	+0.6
	baz=191						
ENA				*i*S	Sn	16 38 32.8	+1.2
	baz=191						
ENTT	**Nioudou**	**0.21**	**280**	*i*P	Pn	16 38 24.3	+0.7
	baz=280						
ENTT				*i*S	Sn	16 38 32.8	+0.9
	baz=280						
NTC	**Toucheng**	**0.25**	**8**	*e*S	Sn	16 38 33.5	+1.4
	baz=360						
NDT	**Datong Townshi**	**0.25**	**269**	P	Pn	16 38 24.1	+0.3
	baz=281						
NDT				S	Sn	16 38 31.9	-0.3
	baz=281						
NWLT	**Wulai**	**0.31**	**303**	*e*P	Pn	16 38 24.3	+0.2
	baz=303						
NWLT				S	Sn	16 38 32.7	-0.2
	baz=303						
TIPB	**Shuangxi**	**0.37**	**5**	*e*P	Pn	16 38 25.5	+1.0
	baz=356						
TIPB				*e*S	Sn	16 38 34.6	+1.1
	baz=356						
YHNB	**Yeheng**	**0.38**	**280**	P	Pn	16 38 25.1	+0.4
	baz=288						
YHNB				S	Sn	16 38 33.2	-0.7
	baz=288						
NSK	**Sanguang**	**0.40**	**280**	*e*S	Sn	16 38 33.4	-0.6
	baz=289						
NNSB	**Datong**	**0.41**	**245**	P	Pn	16 38 25.2	+0.3
	baz=241						
NNSB				S	Sn	16 38 34.2	-0.1
	baz=241						
NNSH	**Datong**	**0.41**	**245**	P	Pn	16 38 25.3	+0.3
	baz=242						
NNSH				S	Sn	16 38 33.9	-0.4
	baz=242						
NACB	**Ninganchiao**	**0.47**	**203**	*e*S	Sn	16 38 34.2	-0.6
	baz=210						
ETLH	**Xiulin Townshi**	**0.49**	**215**	P	Pn	16 38 25.5	0.0
	baz=223						
ETLH				*e*S	Sn	16 38 35.0	-0.3
	baz=223						
YM01	**YM01**	**0.57**	**340**	*e*P	Pn	16 38 26.7	+0.4
	baz=331						
YM01				*e*S	Sn	16 38 37.1	+0.4
	baz=331						
YM10	**YM10**	**0.59**	**339**	P	Pn	16 38 26.9	+0.4
	baz=331						
YM10				S	Sn	16 38 37.1	+0.1
	baz=331						
YM11	**YM11**	**0.59**	**341**	*e*P	Pn	16 38 26.8	+0.3
	baz=332						
YM11				*e*S	Sn	16 38 37.3	+0.2
	baz=332						
YM04	**YM04**	**0.59**	**337**	*e*P	Pn	16 38 27.2	+0.7
	baz=330						
YM04				*e*S	Sn	16 38 37.0	0.0
	baz=330						
TWS1	**Kuangyinshan**	**0.60**	**326**	P	Pn	16 38 26.8	+0.3
	baz=316						
TWS1				S	Sn	16 38 37.7	+0.7
	baz=316						
WHF	**Hehuan Shan**	**0.66**	**226**	P	Pn	16 38 27.8	+0.2
	baz=221						
WHF				*e*S	Sn	16 38 39.0	0.0
	baz=221						
NSTT	**Nanjuang**	**0.72**	**272**	*e*S	Sn	16 38 39.2	0.0
	baz=271						
CHGB	**Renai**	**0.78**	**226**	*e*S	Sn	16 38 41.0	+0.1
	baz=220						

*NEIC **28** 16:40:15.1±1.5, 21.°5S±0.°1×179.°4W±0.°1, h621km±8km, mb4.7/32, Error ellipse: s-maj=16.4km s-min=15.8km az=128.0*
*IDC **28** 16:40:17.0±5.1, 21.°40S×179.°48W, h640km±64km, mb3.2/10, mb1 3.4/11, mb1mx3.2/23, mbtmp4.2/11, Error ellipse: s-maj=32.2km s-min=17.7km az=82.0*

ISC 28 16:40:14.0±0.5,**21.°48S**±0.°08×**179.°30W**±0.°08,**h604**km, **n54,σ1§08/52,mb4.5/24,2C,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.48**	**326**	P	**P**	**16 41 46.0**	**+2.5**
AFI	**Afiamalu**	**10.39**	**45**	P	**P**	**16 42 35.7**	**-1.3**
DZM	**Mont Dzumac**	**13.26**	**265**	P	**P**	**16 43 05.5**	**0.0**
	0.7nm,0.3s,baz=79,slow=19,SNR=7.5						
OUZ	**Omahuta**	**15.04**	**203**	P	**P**	**16 43 24.3**	**+2.0**
MXZ	**Matakaoa Point**	**16.16**	**187**	P	**P**	**16 43 31.7**	**-0.8**
MXZ				IAmb	IAmb	16 44 08.6	
	comp=Z,34nm,1.0s						
BKZ	**Black Stump Fm**	**18.00**	**191**	P	**P**	**16 43 46.8**	**-2.5**
BKZ				IAmb	IAmb	16 44 37.4	
	comp=Z,64nm,1.7s						
QRZ	**Quartz Range**	**20.50**	**198**	P	**P**	**16 44 12.0**	**+0.1**
BSWZ	**Blackbirch Sta**	**20.98**	**194**	P	**P**	**16 44 16.7**	**+0.5**
THZ	**Tophouse**	**21.27**	**196**	P	**P**	**16 44 18.1**	**-0.7**
KHZ	**Kahutara**	**21.73**	**194**	P	**P**	**16 44 21.0**	**-1.8**
LTZ	**Lake Taylor**	**22.39**	**196**	P	**P**	**16 44 26.7**	**-2.1**
OXZ	**Oxford**	**22.95**	**196**	P	**P**	**16 44 32.2**	**-1.6**
OXZ				IAmb	IAmb	16 45 01.0	
	comp=Z,43nm,1.2s						
HNR	**Honiara**	**23.27**	**298**	P	**P**	**16 44 35.3**	**-1.7**
	comp=Z,93nm,0.8s,baz=279,slow=6.4,SNR=2.6						
WKZ	**Wanaka**	**25.20**	**200**	P	**P**	**16 44 53.2**	**-0.4**
MLZ	**Mavora Lakes**	**25.97**	**201**	P	**P**	**16 45 00.9**	**+0.5**
EIDS	**Eidsvold**	**27.42**	**256**	P	**P**	**16 45 14.1**	**+0.7**
EIDS				IAmb	IAmb	16 45 19.9	
	comp=Z,21nm,1.6s						
ARMA	**Armidale**	**27.55**	**245**	P	**P**	**16 45 15.8**	**+1.2**
ARMA				IAmb	IAmb	16 45 50.8	
	comp=Z,66nm,2.0s						
CTAO	**Charters Tower**	**32.20**	**266**	P	**P**	**16 45 54.8**	**+0.4**
CTAO				IAmb	IAmb	16 47 26.5	
	comp=Z,37nm,1.6s						
STKA	**Stephens Creek**	**36.27**	**245**	P	**P**	**16 46 28.4**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=78,slow=11,SNR=8.2						
COEN	**Coen**	**36.45**	**276**	P	**P**	**16 46 30.6**	**+0.8**
COEN				IAmb	IAmb	16 48 11.2	
	comp=Z,28nm,1.3s						
BBOO	**Buckleboo**	**41.03**	**244**	P	**P**	**16 47 06.1**	**-0.3**
BBOO				IAmb	IAmb	16 47 35.8	
	comp=Z,86nm,1.8s						
WR0	**Warramunga Arr**	**43.08**	**263**	P	**P**	**16 47 22.1**	**-0.6**
WR0				IAmb	IAmb	16 48 59.2	
	comp=Z,21nm,1.8s						
AS31	**Alice Springs**	**43.12**	**258**	P	**P**	**16 47 22.4**	**-0.5**
JAY	**Jayapura**	**43.22**	**290**	P	**P**	**16 47 23.9**	**+0.1**
	comp=Z,7.8nm,0.5s,baz=93,slow=3.0,SNR=6.2						
WB0	**Warramunga Arr**	**43.26**	**264**	P	**P**	**16 47 23.6**	**-0.3**
WB2	**Warramunga Arr**	**43.26**	**263**	P	**P**	**16 47 23.6**	**-0.5**
WRAB	**Tennant Creek**	**43.26**	**263**	P	**P**	**16 47 23.5**	**-0.6**
WRA	**Warramunga Arr**	**43.27**	**263**	P	**P**	**16 47 23.6**	**-0.5**
	comp=Z,1.7nm,0.3s,baz=96,slow=7.8,SNR=91						
PTCN	**Pitcairn Islan**	**45.15**	**104**	P	**P**	**16 47 40.4**	**+1.9**
FORT	**Forrest**	**47.80**	**247**	P	**P**	**16 47 57.6**	**-0.6**
FORT				IAmb	IAmb	16 49 08.1	
	comp=Z,25nm,1.1s						
MTN	**Manton Dam**	**47.97**	**272**	P	**P**	**16 47 59.4**	**-0.4**
MTN				IAmb	IAmb	16 49 01.1	
	comp=Z,24nm,1.4s						
KNRA	**Kununurra**	**49.39**	**267**	P	**P**	**16 48 10.1**	**-0.1**
KNRA				IAmb	IAmb	16 48 58.5	
	comp=Z,38nm,1.6s						
VNDA	**Vanda**	**56.84**	**185**	P	**P**	**16 49 03.0**	**+1.1**
	comp=Z,1.3nm,0.5s,baz=358,slow=5.8,SNR=7.6						
CASY	**Casey**	**62.56**	**205**	P	**P**	**16 49 39.9**	**-0.1**
QSPA	**South Pole Qui**	**68.60**	**180**	P	**P**	**16 50 17.8**	**+0.1**
QSPA				IAmb	IAmb	16 50 18.9	
	comp=Z,12nm,0.9s						
MJAR	**Matsushiro Arr**	**70.28**	**325**	P	**P**	**16 50 27.4**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=144,slow=6.6,SNR=3.1						
ADK	**Adak**	**73.08**	**2**	P	**P**	**16 50 43.6**	**-0.1**
ADK				IAmb	IAmb	16 52 46.9	
	comp=Z,71nm,1.3s						
PETK	**Petropavlovsk-**	**76.91**	**346**	P	**P**	**16 51 04.8**	**-0.2**
	comp=Z,1nm,0.6s,baz=130,slow=5.8,SNR=3.5						
NVAR	**Mina Array Bea**	**82.57**	**44**	P	**P**	**16 51 35.5**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=227,slow=8.9,SNR=4.5						
SYO	**Syowa Base**	**85.51**	**193**	⇑*e*P	**P**	**16 51 47.0**	**-1.8**
SYO	**Syowa Base**	**85.51**	**193**	⇑*e*PcP	**PcP**	**16 51 51.6**	**+0.9**
SNAA	**Sanae**	**87.07**	**179**	P	**P**	**16 51 54.7**	**-1.5**
VNA3	**Neumayer Olymp**	**87.25**	**177**	P	**P**	**16 51 55.8**	**-1.2**
TRF	**Thorofare Moun**	**87.66**	**13**	P	**P**	**16 51 58.2**	**-0.9**
RND	**Reindeer**	**87.92**	**13**	P	**P**	**16 51 59.8**	**-0.4**
RND				IAmb	IAmb	16 54 40.8	
	comp=Z,27nm,1.9s						
TXAR	**Lajitas Array**	**88.60**	**58**	P	**P**	**16 52 05.4**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=167,slow=8.8,SNR=3.9						
PLCA	**Paso Flores**	**89.48**	**134**	P	**P**	**16 52 08.6**	**+0.5**
	comp=Z,2.5nm,1.0s,baz=201,slow=6.8,SNR=3.7						
PLCA	**Paso Flores**	**89.48**	**134**	P	**P**	**16 52 08.8**	**+0.6**
PLCA				IAmb	IAmb	16 54 34.6	
	comp=Z,40nm,1.8s						
ILAR	**Eielson Array**	**89.53**	**13**	P	**P**	**16 52 06.5**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=216,slow=4.3,SNR=4.8						
AKASG	**Malin Array Be**	**143.25**	**329**	PKP	PKPab	16 58 37.7	-0.9
	comp=Z,0.5nm,0.4s,baz=43,slow=4.3,SNR=5.3						
MBAR	**Mbarara**	**143.37**	**237**		PKPbc	16 58 40.5	-0.1
DBIC	**Dimbokro**	**164.33**	**159**	PKPab	**PKPab**	**17 00 08.2**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=209,slow=1.8,SNR=1.3						
DBIC	**Dimbokro**	**164.33**	**159**		**PKPab**	**17 00 08.3**	**-0.2**
TORD	**Torodi Ar. Bea**	**171.66**	**187**	PKPab	**PKPab**	**17 00 39.5**	**-1.5**
	comp=Z,0.7nm,0.6s,baz=165,slow=3.3,SNR=3.9						

*ATH **28** 16:43:45.4, 40.°30N×19.°64E, h31km±2km, ML2.5/7, Error ellipse: s-maj=2.8km s-min=1.2km az=185.0*
*SKO **28** 16:43:45.7, 40.°32N×19.°62E, h29km*
*THE **28** 16:43:46.1, 40.°32N×19.°69E, h6km±1km, ML2.5/4, Error ellipse: s-maj=2.5km s-min=1.3km az=250.0*

ISC 28 16:43:44.7±1.2,**40.°34N**±0.°03×**19.°54E**±0.°03,**h16**km±10km, **n28,σ1§00/45,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.66**	**163**	P	**Pg**	**16 43 57.9**	**+0.3**
KEK	**Kerkira**	**0.66**	**163**	P	**Pg**	**16 43 58.1**	**+0.5**
KEK				S	**Sg**	**16 44 06.4**	**+0.1**
KEK				AML	AML	16 44 10.1	
	comp=N,901μm,0.2s						
KEK				AML	AML	16 44 10.3	
	comp=E,1492μm,0.2s						
KASA	**Kassiopi**	**0.67**	**153**	P	**Pg**	**16 43 58.0**	**+0.3**
KASA				S	**Sg**	**16 44 06.4**	**-0.1**
KASA				AML	AML	16 44 09.0	
	comp=N,1482μm,0.2s						
KASA				AML	AML	16 44 09.3	
	comp=E,1258μm,0.3s						
SCTE	**Santa Cesarea**	**0.87**	**252**	P	**Pn**	**16 44 03.3**	**+1.1**
SCTE				S	**Sn**	**16 44 16.7**	**+2.1**
SCTE				AML	AML	16 44 18.5	
	comp=E,537μm,0.3s						
SCTE				AML	AML	16 44 18.6	
	comp=N,491μm,0.3s						
IGT	**Igoumenitsa**	**1.01**	**143**	P	**Pg**	**16 44 03.5**	**-0.7**
IGT				S	**Sg**	**16 44 16.9**	**-0.6**
	comp=N,142nm,0.3s						
IGT	**Igoumenitsa**	**1.01**	**143**	P	**Pg**	**16 44 03.7**	**-0.5**
IGT				S	**Sg**	**16 44 16.6**	**-0.9**
IGT				AML	AML	16 44 19.1	
	comp=N,282μm,0.2s						
IGT				AML	AML	16 44 20.4	
	comp=E,290μm,0.2s						
TIR	**Tirane**	**1.03**	**14**	P	**Pg**	**16 44 05.5**	**+0.8**
NEST	**Nestorio**	**1.15**	**86**	P	**Pb**	**16 44 05.4**	**-0.9**
JAN	**Janina**	**1.22**	**124**	P	**Pn**	**16 44 07.2**	**+0.1**
JAN				S	**Sb**	**16 44 22.6**	**-0.2**
	comp=E,585nm,0.3s						
JAN	**Janina**	**1.22**	**124**	P	**Pn**	**16 44 06.7**	**-0.4**
JAN				AML	AML	16 44 24.2	
	comp=E,1556μm,0.4s						
JAN				AML	AML	16 44 25.0	
	comp=N,775μm,0.3s						
OHR	**Ohrid**	**1.23**	**51**	*i*Pg	**Pn**	**16 44 08.1**	**+0.8**
OHR				*i*Sg	**Sb**	**16 44 24.9**	**+1.8**
OHR	**Ohrid**	**1.23**	**51**	*i*Pg	**Pn**	**16 44 08.1**	**+0.8**
OHR				*i*Sg	**Sb**	**16 44 24.9**	**+1.8**
KPRO	**Kipourio**	**1.45**	**105**	P	**Pn**	**16 44 11.1**	**+0.8**
KPRO				S	**Sn**	**16 44 30.0**	**+1.0**
	comp=N,152nm,0.4s						
KPRO	**Kipourio**	**1.45**	**105**	P	**Pn**	**16 44 10.6**	**+0.3**
KPRO				AML	AML	16 44 33.3	
	comp=N,303μm,0.4s						
KPRO				AML	AML	16 44 34.7	
	comp=E,315μm,0.5s						
FNA	**Florina**	**1.46**	**72**	P	**Pn**	**16 44 10.9**	**+0.4**
FNA				S	**Sn**	**16 44 29.5**	**+0.1**
	comp=E,190nm,0.5s						
FNA	**Florina**	**1.46**	**72**	P	**Pn**	**16 44 10.7**	**+0.2**
FNA				S	**Sn**	**16 44 29.4**	**-0.1**
FNA				AML	AML	16 44 32.2	
	comp=E,435μm,0.3s						
FNA				AML	AML	16 44 32.7	
	comp=N,328μm,0.7s						
TSLK	**Tsoukalades, L**	**1.74**	**150**	P	**Pn**	**16 44 14.3**	**0.0**
LKD2	**Lefkada island**	**1.77**	**151**	P	**Pn**	**16 44 16.3**	**+1.5**
EVGI	**Lefkada island**	**1.92**	**153**	P	**Pn**	**16 44 16.0**	**-0.8**
NOCI	**Noci**	**1.94**	**284**	P	**Pn**	**16 44 18.1**	**+1.0**
AGG	**Agios Georgios**	**2.52**	**121**	P	**Pn**	**16 44 25.5**	**+0.4**
ANX	**Ano Chora**	**2.54**	**133**	P	**Pn**	**16 44 25.9**	**+0.6**
DBRK	**Dubrovnik**	**2.55**	**336**	*e*Pn	**Pn**	**16 44 24.7**	**-0.7**
DBRK				Sn	**Sn**	**16 44 54.4**	**-1.7**
RICI	**Ricice**	**3.63**	**331**	*i*Pn	**Pn**	**16 44 40.5**	**+0.2**
RICI				Sn	**Sn**	**16 45 21.4**	**-1.3**
KIJV	**Kijevo**	**4.34**	**329**	*e*Pn	**Pn**	**16 44 50.8**	**+0.8**
KIJV				Sn	**Sn**	**16 45 39.9**	**-0.4**
ZIRJ	**Zirje**	**4.40**	**320**	*e*Pn	**Pn**	**16 44 50.8**	**-0.1**
ZIRJ				Sn	**Sn**	**16 45 39.9**	**-1.9**
MORI	**Morici**	**4.53**	**322**	*e*Pn	**Pn**	**16 44 53.2**	**+0.6**
MORI				Sn	**Sn**	**16 45 44.0**	**-0.9**
DUGI	**Dugi Otok**	**4.94**	**319**	*e*Pn	**Pn**	**16 44 58.4**	**+0.2**
DUGI				Sn	**Sn**	**16 45 52.7**	**-2.4**

*IDC **28** 16:48:49.1±1.2, 34.°33N×24.°97E, h0km, mb3.7/4, mb1 3.8/9, mb1mx3.5/60, mbtmp3.6/9, ML3.8/5, Error ellipse: s-maj=23.2km s-min=18.5km az=89.0*
*ATH **28** 16:48:50.9, 34.°30N×25.°11E, h21km±4km, ML3.2/8, Error ellipse: s-maj=5.0km s-min=1.7km az=4.0*
*ISK **28** 16:48:51.5, 34.°37N×25.°10E, h5km, ML3.4/12*
*THE **28** 16:48:52.2, 34.°34N×25.°12E, h6km±3km, ML2.9/6, Error ellipse: s-maj=3.2km s-min=0.9km az=182.0*

ISC 28 16:48:53.0±1.6,**34.°36N**±0.°06×**25.°07E**±0.°04,**h23**km±12km, **n52,σ1§21/71,mb3.7/4,Crete**

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

comp=E,9051µm,0.3s
GVD **Gavdhos** **0.94** **301** PG **Pb** **16 49 10.0 -0.8**
GVD SG **Sn** **16 49 23.6 -0.1**
HRKL **Herakleio** **0.95** **1** PG **Pn** **16 49 09.9 -1.1**
HRKL SG **Sn** **16 49 23.8 -0.1**
NPS **Neapolis** **1.01** **26** P **Pn** **16 49 10.9 -0.9**
NPS **Neapolis** **1.01** **26** P **Pn** **16 49 11.2 -0.6**
NPS AML AML 16 49 32.1
comp=E,1505µm,0.6s
NPS AML AML 16 49 44.2
comp=N,901µm,0.6s
PRNS **Prines Rethymn** **1.11** **335** P **Pb** **16 49 13.1 -0.4**
PRNS S **Sb** **16 49 29.7 +2.2**
STIA **Sitia Lasithi** **1.19** **45** P **Pn** **16 49 14.3 +0.1**
ZKR **Zakros** **1.21** **51** P **Pn** **16 49 13.9 -0.6**
ZKR S **Sb** **16 49 31.1 +0.8**
comp=N,790nm,0.4s
ZKR **Zakros** **1.21** **51** P **Pn** **16 49 13.9 -0.6**
ZKR AML AML 16 49 33.8
comp=E,2060µm,0.5s
ZKR AML AML 16 49 34.3
comp=N,1064µm,0.4s
ZKR **Zakros** **1.21** **51** PN **Pn** **16 49 14.1 -0.4**
ZKR SN **Sn** **16 49 30.0 -0.2**
VAM **Vamos** **1.27** **326** P **Pb** **16 49 15.7 -0.5**
VAM **Vamos** **1.27** **326** P **Pb** **16 49 15.8 -0.5**
VAM S **Sb** **16 49 34.5 +2.4**
VAM AML AML 16 49 41.0
comp=N,2506µm,0.4s
VAM AML AML 16 49 49.0
comp=E,1470µm,0.7s
IMMV **Iera Moni Meta** **1.42** **321** P **Pn** **16 49 17.2 -0.2**
IMMV **Iera Moni Meta** **1.42** **321** P **Pb** **16 49 18.6 -0.2**
IMMV AML AML 16 49 45.1
comp=N,1201µm,0.3s
IMMV AML AML 16 49 48.8
comp=E,1272µm,0.4s
IMMV **Iera Moni Meta** **1.42** **321** PN **Pb** **16 49 18.1 -0.7**
KNDR **Palaiochora Ch** **1.44** **308** PN **Pb** **16 49 19.2 +0.1**
RODP **Rodopos** **1.61** **318** P **Pb** **16 49 21.4 -0.7**
RODP **Rodopos** **1.61** **318** PN **Pb** **16 49 21.7 -0.4**
SANT **Santorini** **2.03** **9** PN **Pb** **16 49 27.5 -1.8**
KARP **Karpathos** **2.08** **55** PN **Pn** **16 49 27.6 +1.0**
ANKY **Antikythira Is** **2.09** **317** P **Pb** **16 49 28.4 -1.9**
APE **Apeiranthos** **2.73** **8** PN **Pn** **16 49 37.6 +2.1**
DAT **Datca** **3.12** **40** PN **Pn** **16 49 42.7 +1.7**
DID **Didima** **3.48** **335** P **Pn** **16 49 46.4 +0.6**
ITM **Ithomi** **3.81** **319** PN **Pn** **16 49 52.6 +2.4**
YER **Yerkesik** **3.81** **42** PN **Pn** **16 49 52.5 +2.2**
TURN **Turunc** **3.82** **48** PN **Pn** **16 49 48.5 -1.8**
CHOS **Chios island** **4.10** **11** PN **Pn** **16 49 56.4 +2.1**
AKAS **Kas** **4.15** **62** PN **Pn** **16 49 57.1 +2.0**
KORT **Korkueli** **5.04** **57** PN **Pn** **16 50 09.8 +2.5**
AGG **Agios Georgios** **5.15** **335** PN **Pn** **16 50 11.7 +3.0**
MMAI **Mount Meron Ar** **8.71** **96** Pn **Pn** **16 50 57.5 -0.1**
comp=E,1.6nm,0.3s,baz=287,slow=10,SNR=4.0
EIL **Elat** **9.60** **116** Pn **Pn** **16 51 08.2 -1.6**
comp=E,0.9nm,0.3s,baz=32,slow=3.6,SNR=2.7
AKASG **Malin Array Be** **16.61** **9** Pn **Pn** **16 52 44.6 +0.4**
comp=E,0.6nm,0.3s,baz=201,slow=10,SNR=5.7
KBZ **Khabaz** **16.68** **51** Pn **P** **16 52 49.4 +2.0**
comp=E,0.2nm,0.3s,baz=192,slow=4,SNR=3.7
GERES **GERESS Array B** **16.76** **333** Pn **Pn** **16 52 45.2 -1.0**
comp=E,0.1nm,0.3s,baz=128,slow=13,SNR=2.4
TORD **Torodi Ar. Bea** **29.92** **231** P **P** **16 54 58.6 -0.8**
comp=E,1.6nm,0.6s,baz=34,slow=8.8,SNR=10.0
MKAR **Makanchi Array** **44.28** **56** P **P** **16 57 00.7 -0.2**
comp=E,0.2nm,0.5s,baz=292,slow=3.3,SNR=2.8
ZALV **Zalesovo Beam** **45.61** **46** P **P** **16 57 11.6 +0.3**
comp=E,0.7nm,0.5s,baz=275,slow=7.7,SNR=3.9
YKA **Yellowknife Ar** **78.19** **342** P **P** **17 00 49.6 -0.6**
comp=E,0.3nm,0.6s,baz=34,slow=5.1,SNR=6.4

*IDC **28** 16:53:47.9±2.1,11.˚44N×84.˚40W,h0km,mb3.9/5, mb1 4.3/5,mb1mx3.8/31,mbtmp3.9/5,MS3.6/5,Ms1 3.6/5, ms1mx3.2/31,Error ellipse: s-maj=61.8km s-min=17.9km az=98.0*
*INET **28** 16:53:51.4, 10.˚25N×86.˚21W,h15km,ML3.8*
*UCR **28** 16:53:53.1±1.9, 10.˚46N×86.˚21W,h10km,MD4.2, mb4.3(NEIC)*
*NEIC **28** 16:53:56.3±2.6, 10.˚5N±0.˚1×86.˚05W±0.˚07, h53km±11km, mb4.3/32, Error ellipse: s-maj=17.0km s-min=9.6km az=200.0*
ISC 28 16:53:51.9±1.3,10.˚54N±0.˚05×86.˚21W±0.˚04,h15km±8km, n82,σ1°27/89,mb4.3/22,MS3.6/4,8C-3D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res	ISC
NY14	**Universidad de**	**0.68**	**81**	*i* P			**Pn**	**16 54 06.7**	**-0.3**	
GUAI	**GUAI**	**0.74**	**111**	*i* P			**Pg**	**16 54 06.1**	**-0.4**	
GUAI				*i* S			**Sg**	**16 54 16.4**	**+0.2**	
GBS3	**Finca Las Img**	**0.78**	**72**	*i* P			**Pn**	**16 54 08.1**	**-0.4**	
GBS3				*i* S			**Sn**	**16 54 20.1**	**+0.1**	
BUEV	**Buena Vista**	**0.83**	**72**	*i* P			**Pn**	**16 54 08.8**	**-0.4**	
BUEV				eS			**Sn**	**16 54 23.1**	**+1.8**	
GB1A	**Borinquen Arri**	**0.85**	**71**	⇓eP			**Pn**	**16 54 09.2**	**-0.3**	
GB1A				*i* S			**Sn**	**16 54 21.7**	**0.0**	
GPS3	**Bodega del ICE**	**0.86**	**75**	*i* P			**Pn**	**16 54 09.3**	**-0.3**	
PLVR	**Palo Verde**	**0.87**	**102**	⇑eP			**Pg**	**16 54 08.4**	**-0.5**	
PLVR				eS			**Sb**	**16 54 21.2**	**+0.8**	
GPS2	**Hotel Rincn d**	**0.87**	**76**	*i* P			**Pn**	**16 54 09.4**	**-0.3**	
GPS2				eS			**Sn**	**16 54 22.5**	**+0.3**	
GPS1	**Guardaparques**	**0.88**	**74**	*i* P			**Pn**	**16 54 09.6**	**-0.3**	
BUAI	**Buenos Aires**	**0.93**	**69**	*i* P			**Pn**	**16 54 10.8**	**+0.3**	
LIM1	**Limonal**	**0.96**	**80**	*i* P			**Pn**	**16 54 10.6**	**-0.3**	
LIM1				*i* S			**Sn**	**16 54 24.5**	**+0.1**	
COLC	**Colonia**	**1.00**	**83**	*i* P			**Pn**	**16 54 11.4**	**-0.1**	
HORNC	**Hornillas**	**1.03**	**80**	*i* P			**Pb**	**16 54 11.5**	**-0.1**	
HORNC				*i* S			**Sn**	**16 54 26.0**	**-0.2**	
CUI	**Cuipilapa**	**1.04**	**83**	⇑eP			**Pn**	**16 54 11.8**	**-0.2**	
CUI				eS			**Sn**	**16 54 27.3**	**+1.0**	
ACL	**Aguas Claras**	**1.16**	**85**	*i* P			**Pn**	**16 54 13.6**	**-0.3**	
ACAL				*i* S			**Sn**	**16 54 29.7**	**+0.3**	
PTEN	**Parque Tenorio**	**1.22**	**82**	*i* P			**Pg**	**16 54 14.7**	**-0.8**	
JTS	**Las Juntas de**	**1.27**	**101**	Pn			**Pn**	**16 54 13.7**	**-1.4**	
	75nm,0.3s,baz=42,slow=2.8,SNR=117									
JTS				Sn			**Sb**	**16 54 30.3**	**-1.3**	
	132nm,0.3s,baz=60,slow=19,SNR=6.3									
JTS				LR			LR	16 54 49.9		
	comp=Z,985nm,21.4s,baz=110,slow=49									
JTS	**Las Juntas de**	**1.27**	**101**	⇑eP			**Pn**	**16 54 14.0**	**-1.1**	
JTS				eS			**Sg**	**16 54 32.7**	**-0.2**	
JTS	**Las Juntas de**	**1.27**	**101**				**Pn**	**16 54 14.1**	**-1.1**	
MASN	**Masaya**	**1.44**	**2**	⇓eP			**Pn**	**16 54 20.1**	**+0.4**	
ARE1	**Arenal 1**	**1.47**	**93**	⇑eP			**Pn**	**16 54 18.5**	**+0.5**	
CEDE	**Laguna Cedeo**	**1.49**	**92**	⇑eP			**Pn**	**16 54 18.6**	**+0.4**	
ACON	**Acoyapa**	**1.75**	**36**	⇑*i*P			**Pb**	**16 54 23.1**	**-0.7**	
ACON				eS			**Sg**	**16 54 49.6**	**+1.3**	
ACON	**Acoyapa**	**1.75**	**36**				**Pb**	**16 54 23.1**	**-0.7**	
SRA1	**San Ramn**	**1.77**	**105**	eP			**Pb**	**16 54 23.8**	**-0.3**	
CRIN	**San Cristobal**	**2.30**	**339**	eP			**Pb**	**16 54 33.6**	**+0.4**	
CRIN	**San Cristobal**	**2.30**	**339**				**Pb**	**16 54 32.0**	**-1.2**	
LCR2	**La Lucha 2**	**2.32**	**110**	eP			**Pn**	**16 54 31.7**	**+2.0**	
MATN	**Matagalpa**	**2.39**	**7**	eP			**Pb**	**16 54 32.7**	**-2.1**	
MATN	**Matagalpa**	**2.39**	**7**				**Pb**	**16 54 32.2**	**-2.7**	
CVTR	**Volcan Turrial**	**2.47**	**102**	⇓eP			**Pb**	**16 54 35.2**	**-1.1**	
ESPN	**Las Esperanzas**	**2.50**	**49**	⇑eP			**Pn**	**16 54 32.4**	**+0.4**	
ESPN	**Las Esperanzas**	**2.50**	**49**				**Pn**	**16 54 32.5**	**+0.4**	
CSGN	**Cosiguina Volc**	**2.76**	**332**	eP			**Pb**	**16 54 38.8**	**-2.2**	
CSGN	**Cosiguina Volc**	**2.76**	**332**				**Pb**	**16 54 38.6**	**-2.4**	
DRK0	**Durika**	**3.19**	**113**	eP			**Pn**	**16 54 42.3**	**+0.6**	
TEIG	**Tepich**	**9.84**	**349**	LR			LR	17 00 15.0		
	comp=Z,342nm,20.4s,baz=228,slow=41									
CMIG	**Matias Romero**	**10.64**	**309**	Pn			**Pn**	**16 56 26.2**	**+2.2**	
	0.5nm,0.3s,baz=112,slow=7.7,SNR=5.4									
ATAH	**Atahualpa**	**19.21**	**156**	LR			LR	17 04 29.9		
	comp=Z,232nm,21.4s,baz=345,slow=33									
152A	**Waverly Hall**	**22.07**	**3**	P			**P**	**16 58 48.2**	**+1.8**	
152A				IAmb			IAmb	16 58 50.0		
	comp=Z,20nm,1.1s									
LRAL	**Lakeview Retre**	**22.40**	**358**	P			**P**	**16 58 50.8**	**+0.9**	
Y49A	**Blount Mountai**	**23.21**	**360**	P			**P**	**16 58 59.0**	**+0.6**	
Y49A				IAmb			IAmb	16 59 01.1		
	comp=Z,8.8nm,0.8s									
Y45A	**Yeager Farm, C**	**23.42**	**353**	P			**P**	**16 59 01.5**	**+1.0**	
PLAL	**Pickwick Lake**	**24.39**	**356**	P			**P**	**16 59 09.3**	**-0.5**	
PLAL				IAmb			IAmb	16 59 11.2		
	comp=Z,8.3nm,0.9s									
W50A	**Signal Mountai**	**24.56**	**2**	P			**P**	**16 59 11.0**	**-0.3**	
W50A				IAmb			IAmb	16 59 12.8		

comp=Z,16nm,1.4s
SWET **Sewanee** **24.57** **1** P **P** **16 59 10.8 -0.6**
SWET IAmb IAmb 16 59 14.1
comp=Z,8.2nm,0.9s
UALR **University of** **24.77** **348** P **P** **16 59 12.7 -0.4**
UALR IAmb IAmb 16 59 14.2
comp=Z,12nm,0.8s
TXAR **Lajitas Array** **24.81** **321** P **P** **16 59 15.7 +2.0**
comp=Z,4.6nm,0.9s,baz=140,slow=9.5,SNR=30
TX31 **Lajitas Ar. Si** **24.81** **321** P **P** **16 59 15.3 +1.6**
TX32 **Lajitas Array** **24.81** **321** P **P** **16 59 15.5 +1.7**
MIAR **Mount Ida** **24.83** **345** P **P** **16 59 13.3 -0.3**
MIAR IAmb IAmb 16 59 14.9
comp=Z,10nm,0.8s
Z35A **Perchaven, San** **24.85** **338** P **P** **16 59 16.0 +2.1**
TKL **Tuckaleechee C** **25.11** **5** LR LR 17 09 48.4
comp=Z,125nm,18.7s,baz=242,slow=40
V51A **Loudon** **25.21** **4** P **P** **16 59 17.3 +0.2**
V51A IAmb IAmb 16 59 20.8
comp=Z,9.7nm,0.9s
ABTX **Abilene, Hawle** **25.23** **333** P **P** **16 59 18.9 +1.6**
ABTX IAmb IAmb 16 59 20.4
comp=Z,8.7nm,0.8s
WHAR **Wooly Hollow** **25.25** **348** P **P** **16 59 16.3 -1.2**
WHAR IAmb IAmb 16 59 24.6
comp=Z,10nm,0.9s
X37A **Clayton** **25.36** **342** P **P** **16 59 18.9 +0.4**
W39A **Magazine** **25.50** **345** P **P** **16 59 18.6 -1.1**
FCAR **Ozark Folk Cen** **25.80** **349** P **P** **16 59 21.4 -1.0**
LCAR **Lake Charles** **25.81** **351** P **P** **16 59 21.3 -1.3**
U40A **Yellville** **26.40** **348** P **P** **16 59 26.8 -1.1**
U40A IAmb IAmb 16 59 35.6
comp=Z,5.9nm,0.8s
WMOK **Wichita Mounta** **26.68** **336** P **P** **16 59 33.0 +2.5**
WMOK IAmb IAmb 16 59 40.8
comp=Z,11nm,0.9s
ANMO **Albuquerque** **30.51** **326** P **P** **17 00 06.6 +1.7**
comp=Z,1.0nm,0.6s,baz=109,slow=6.8,SNR=3.7
ANMO **Albuquerque** **30.51** **326** IAmb IAmb 17 00 08.1
comp=Z,1.6nm,0.8s
SDCO **Great Sand Dun** **32.16** **331** P **P** **17 00 20.4 +0.9**
PV03 **Paradox Valley** **34.25** **327** P **P** **17 00 38.8 +1.2**
PV03 IAmb IAmb 17 00 42.6
comp=Z,2.9nm,0.8s
PV12 **Saucer Basin,** **34.27** **328** P **P** **17 00 38.8 +1.0**
PV17 **East Wray Mesa** **34.33** **327** P **P** **17 00 39.4 +1.1**
PV17 IAmb IAmb 17 00 40.7
comp=Z,4.8nm,0.9s
W13A **Hualapai Mount** **35.10** **319** P **P** **17 00 48.0 +2.9**
W13A IAmb IAmb 17 00 49.3
comp=Z,3.8nm,1.1s
PDAR **Pinedale Array** **38.02** **332** LR LR 17 20 09.5
comp=Z,84nm,20.2s,baz=123,slow=42
REDW **Red Top Meadow** **39.09** **331** P **P** **17 01 19.9 +1.1**
REDW IAmb IAmb 17 01 27.9
comp=Z,6.8nm,1.1s
ELK **Elko** **39.52** **325** P **P** **17 01 23.3 +0.8**
NVAR **Mina Array Bea** **39.93** **319** P **P** **17 01 27.9 +2.0**
comp=Z,2.2nm,0.8s,baz=136,slow=7.1,SNR=15
WAKR **Walker** **40.70** **319** P **P** **17 01 35.3 +3.0**
WAKR IAmb IAmb 17 01 37.1
comp=Z,8.4nm,1.2s
SAO **San Andreas Ge** **41.12** **315** P **P** **17 01 36.3 +0.7**
MCMT **McKenzie Canyo** **41.13** **331** P **P** **17 01 37.4 +1.6**
SCHQ **Schefferville** **46.77** **15** LR LR 17 22 28.8
comp=Z,78nm,18.6s,baz=238,slow=38
YKA **Yellowknife Ar** **55.77** **345** P **P** **17 03 25.0 -2.9**
comp=Z,1.9nm,1.1s,baz=136,slow=7.6,SNR=12
ILAR **Eielson Array** **68.25** **336** P **P** **17 04 49.8 -2.0**
comp=Z,0.8nm,0.9s,baz=118,slow=5.0,SNR=5.8
KSH **Kashi** **127.52** **17** PKP **PKPdf** **17 12 55.8 -1.2**
LZH **Lanzhou** **132.67** **349** *e*PKP **PKPdf** **17 13 05.3 -1.7**
LZH pPKP sPKPdf 17 13 16.3 +2.5
LZH sPKP 17 13 25.0
LZH LR LR
comp=N,42nm,17.8s
LZH LR LR
comp=E,47nm,18.1s
LZH LR LR
comp=Z,65nm,19.9s
CMAR **Chiang Mai Arr** **150.74** **350** PKPbc **PKPdf** **17 13 39.5 +0.4**
comp=Z,0.2nm,0.4s,baz=316,slow=2.5,SNR=2.2

*NIED **28** 16:58:00,21.˚80N×121.˚80E,h11km,Mw4.8 Best double couple: M0 1.51000×10¹⁶ NP1:φs267.00000°,δ81.00000°, λ-121.00000°. NP2:φs162.00000°,δ32.00000°, λ-17.00000°.*
*IDC **28** 16:58:05.8±0.7,21.˚66N×121.˚80E,h0km,mb4.3/22, mb1 4.4/23,mb1mx4.3/40,mbtmp4.3/23,ML2.9/2,MS3.8/22, Ms1 3.8/22,ms1mx3.7/35,Error ellipse: s-maj=19.2km s-min=14.4km az=78.0*
*JMA **28** 16:58:05.4±0.3,21.˚77N×121.˚81E,h19km,M4.5*
*TAP **28** 16:58:06.2,21.˚77N×121.˚73E,h19km,ML4.7,D*
*MOS **28** 16:58:07.5±1.0,21.˚65N×121.˚70E,h22km,mb4.7/17, MS4.0/4,Error ellipse: s-maj=10.7km s-min=6.2km az=109.3*
*BJI **28** 16:58:08.3±0.0,21.˚83N×121.˚66E,h16km,mB4.6/46, mb4.5/55,ML4.3/3,Ms4.3/55,Ms7 4.1/51*
*GCMT **28** 16:58:09.5±0.4,21.˚78N±0.˚02×121.˚69E±0.˚02,h15km±1km, MW4.6/72,Moment Tensor Solution. s7,c7; s72,c101; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.35±.07; Mθθ 0.60±.06; Mφφ -0.24±.06; Mrθ 0.16±.16; Mφφ -1.00±.04; Mφr-0.23±.17; Best double couple: M0 1.1200×10¹⁶ NP1:φs78.00000°,δ76.00000°,λ-179.00000°. NP2: φs348.00000°,δ89.00000°,λ-14.00000°. Principal axes: T 1.3000, Plg9.0000°, Azm34.0000°; N -0.3740, Plg76.0000°, Azm163.0000°; P -0.9250, Plg10.0000°, Azm302.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **28** 16:58:09.5±1.9,21.˚90N±0.˚05×121.˚71E±0.˚07,h18km±4km, mb4.6/31 Error ellipse: s-maj=9.0km s-min=7.8km az=102.0*
ISC 28 16:58:07.5±1.1,21.˚78N±0.˚03×121.˚78E±0.˚03,h8km±6km, n285,σ2°20/351,mb4.6/63,MS3.8/27,9C-13D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res	ISC
LAY	**Lan-yu**	**0.34**	**320**	P			**Pg**	**16 58 13.2**	**-0.9**	
	baz=329									
LAY				S			**Sg**	**16 58 18.2**	**-0.4**	
	baz=329									
TSEB	**Hengchuen, Pin**	**0.83**	**278**	P			**Pb**	**16 58 22.5**	**-1.7**	
	baz=279									
TSEB				S			**Sb**	**16 58 33.9**	**-1.6**	
	baz=279									
TWKBT	**Hengchun**	**0.92**	**280**	⇓*i*P			**Pb**	**16 58 22.9**	**-2.8**	
	baz=294									
TWKBT				eS			**Sb**	**16 58 34.4**	**-3.6**	
	baz=294									
TWK1	**Hengchun**	**0.92**	**280**	P			**Pb**	**16 58 23.0**	**-2.8**	
	baz=294									
TWK1				eS			**Sb**	**16 58 35.0**	**-3.2**	
	baz=294									
TWH	**Lutao**	**0.97**	**343**	⇑*i*P			Pb	16 58 22.5	-4.0	
	baz=357									
TWH				S			**Sb**	**16 58 34.9**	**-4.6**	
	baz=357									
HEN	**Hengchun**	**1.00**	**283**	eP			**Pb**	**16 58 24.8**	**-2.2**	
	baz=297									
HEN				eS			**Sb**	**16 58 36.5**	**-3.8**	
	baz=297									
EAST	**Anshuo**	**1.05**	**305**	*i* P			Pb	16 58 24.7	-3.3	
	baz=307									
EAST				eS			**Sb**	**16 58 38.2**	**-3.9**	
	baz=307									
ECL	**Taimali**	**1.12**	**317**	*i* P			Pn	16 58 25.9	-3.6	
	baz=320									
TTN	**Taitung**	**1.13**	**329**	eP			**Pn**	**16 58 27.2**	**-2.5**	
	baz=341									
TTN				eS			**Sb**	**16 58 42.6**	**-1.7**	
	baz=341									
TWGBT	**Beinan**	**1.22**	**328**	eP			**Pn**	**16 58 27.7**	**-3.2**	
	baz=314									
TWGBT				eS			**Sb**	**16 58 44.0**	**-2.8**	
	baz=314									
TWG	**Pinlang**	**1.23**	**328**	eP			**Pn**	**16 58 27.9**	**-3.1**	
	baz=314									
TWG	**Pinlang**	**1.23**	**328**				Pn	16 58 27.3	-3.7	

SCZT **Fangliau** **1.23** **299** *e*P **Pn** **16 58 28.1 -2.9**
baz=310
SCZT eS **Sb** **16 58 42.4 -4.7**
baz=310
SSPT **Xinbi** **1.33** **302** *e*P **Pn** **16 58 30.4 -1.9**
baz=312
SSPT eS **Sn** **16 58 45.4 -4.8**
baz=312
MASBT **Mashibuluo** **1.35** **308** ⇓P **Pn** **16 58 29.5 -3.2**
baz=318
MASBT eS **Sn** **16 58 45.5 -5.2**
baz=318
CHKT **Chengkung** **1.37** **344** P Pn 16 58 29.2 -3.7
baz=357
CHKT eS **Sn** **16 58 45.8 -5.5**
baz=357
WLCH **Liuqiu** **1.42** **294** *e*P **Pn** **16 58 33.8 +0.2**
baz=311
SSD **Sandimen** **1.44** **312** *e*P **Pn** **16 58 31.0 -2.8**
baz=322
SSD eS **Sn** **16 58 46.9 -6.0**
baz=322
SGLT **Jiouru** **1.52** **308** *e*P **Pn** **16 58 35.1 +0.1**
baz=319
ELDTW **Lidau** **1.57** **333** *e*P **Pn** **16 58 32.9 -2.9**
baz=325
KAU **Kaohsiung** **1.58** **300** *e*P **Pn** **16 58 35.9 +0.1**
baz=302
SLGT **Liugui** **1.60** **319** *e*P **Pn** **16 58 35.6 -0.6**
baz=328
TWF1 **Yuli** **1.63** **344** ⇓*i*P **Pn** **16 58 33.5 -3.0**
baz=356
TWF1 eS **Sn** **16 58 53.4 -4.2**
baz=356
TWM1 **Shoushan** **1.63** **310** *e*P **Pn** **16 58 36.9 +0.4**
baz=311
TWM1 eS **Sn** **16 58 55.0 -2.8**
baz=311
SNJT **Kaohsiung City** **1.65** **306** *e*P **Pn** **16 58 37.4 +0.6**
baz=308
YULB **Yu-li** **1.67** **344** ⇑*i*P **Pn** **16 58 33.8 -3.2**
baz=355
YULB eS **Sn** **16 58 55.9 -2.7**
baz=355
YULB **Yu-li** **1.67** **344** **Pn** **16 58 33.8 -3.2**
STYT **Tauyuan** **1.67** **326** *e*P **Pn** **16 58 35.3 -1.8**
baz=328
STYT eS **Sn** **16 58 55.1 -3.7**
baz=328
SGST **Jiashian** **1.71** **320** *e*P **Pn** **16 58 36.2 -1.4**
baz=322
SGST eS **Sn** **16 58 58.2 -1.4**
baz=322
HGSD **Ruisui** **1.73** **349** *e*P **Pn** **16 58 34.8 -3.2**
HGSD eS **Sn** **16 58 58.7 -1.6**
EHY **Hungye** **1.77** **346** P **Pn** **16 58 35.9 -2.5**
baz=356
WTP **Ta-pu** **1.81** **324** P **Pn** **16 58 38.8 -0.3**
baz=326
CHN1 **Nanshi** **1.82** **320** P **Pn** **16 58 38.9 -0.2**
baz=322
CHN1 eS **Sn** **16 59 02.1 -0.3**
baz=322
CHN3 **Shinhua** **1.84** **315** *e*P **Pn** **16 58 40.2 +0.8**
baz=316
CHN3 eS **Sn** **16 59 03.8 +1.0**
baz=316
TPUB **Ta-pu** **1.85** **325** P **Pn** **16 58 39.0 -0.6**
baz=327
TPUB eS **Sn** **16 59 00.2 -3.0**
baz=327
TPUB **Ta-pu** **1.85** **325** **Pn** **16 58 38.4 -1.2**
SNST **Tainan City** **1.86** **321** *e*P **Pn** **16 58 39.9 +0.2**
baz=322
YUS **Yu-Shan** **1.87** **336** P **Pn** **16 58 39.0 -1.2**
baz=329
EGFH **Guangfu** **1.91** **350** *e*P **Pn** **16 58 37.8 -2.6**
baz=1.0
EGFH eS **Sn** **16 59 00.9 -3.6**
baz=1.0
ALS **Alishan** **1.94** **332** *e*P **Pn** **16 58 40.4 -0.7**
baz=324
ALS eS **Sn** **16 59 03.5 -2.4**
baz=324
SCLT **Jiali** **2.02** **314** *e*P **Pn** **16 58 41.8 -0.1**
baz=315
SCLT eS **Sn** **16 59 07.1 -0.3**
baz=315
ESL **Shilin** **2.05** **351** P **Pn** **16 58 39.7 -2.6**
baz=1.0
ESL eS **Sn** **16 59 04.2 -3.9**
baz=1.0
VWDT **VWDT** **2.05** **343** *e*P **Pn** **16 58 40.6 -1.7**
baz=354
CHN5 **Tsauling** **2.08** **331** P **Pn** **16 58 43.0 +0.3**
baz=333
CHN5 eS **Sn** **16 59 06.5 -2.4**
baz=333
WHYT **Xinyi Township** **2.09** **336** P **Pn** **16 58 42.7 -0.2**
baz=347
WHYT eS **Sn** **16 59 08.9 -0.2**
baz=347
CHN2 **Minshiung** **2.12** **325** *e*P **Pn** **16 58 44.4 +1.1**
baz=311
CHY **Chiayi** **2.12** **324** *e*P **Pn** **16 58 43.2 -0.1**
baz=326
CHN8 **Yiju** **2.13** **317** *e*P **Pn** **16 58 43.1 -0.3**
baz=319
SSLB **Suanglung** **2.14** **339** *e*P **Pn** **16 58 42.6 -1.0**
baz=351
SSLB **Suanglung** **2.14** **339** **Pn** **16 58 41.9 -1.7**
HWA **Hwalien** **2.19** **356** *e*P **Pn** **16 58 42.5 -1.7**
baz=10.0
WGK **Gukeng** **2.21** **329** *e*P **Pn** **16 58 44.7 +0.2**
baz=331
WGK eS **Sn** **16 59 10.9 -1.0**
baz=331
WDLH **Douliu** **2.22** **329** *e*P **Pn** **16 58 45.1 +0.5**
baz=331
WDLH eS **Sn** **16 59 12.3 +0.1**
baz=331
OWD **Renai** **2.23** **346** *e*P **Pn** **16 58 45.0 0.0**
baz=355
SMLT **Sun Moon Lake** **2.25** **339** *e*P **Pn** **16 58 45.1 0.0**
baz=324
SMLT eS **Sn** **16 59 15.1 +2.0**
baz=324
WJS **Zhushan** **2.25** **335** *e*P **Pn** **16 58 45.8 +0.7**
baz=320
WJS eS **Sn** **16 59 13.0 -0.1**
baz=320
TYC **Yuchr** **2.28** **338** *e*P **Pn** **16 58 45.5 +0.1**
baz=324
TYC eS **Sn** **16 59 15.4 +1.7**
baz=324
TWD **Chiawan** **2.29** **356** *e*P **Pn** **16 58 43.6 -2.0**
baz=8.0
TWD eS **Sn** **16 59 10.9 -3.2**
baz=8.0
WNT **Mingjian** **2.32** **334** P **Pn** **16 58 46.5 +0.5**
baz=319
WNT eS **Sn** **16 59 15.9 +1.2**
baz=319
CHGB **Renai** **2.34** **346** ⇑*i*P **Pn** **16 58 44.9 -1.6**
baz=348
CHGB eS **Sn** **16 59 15.2 -0.3**
baz=348
WSF **Szhu** **2.34** **322** *e*P **Pn** **16 58 45.4 -1.0**
baz=324
DPDB **Guoxing** **2.38** **341** *e*P **Pn** **16 58 46.1 -0.7**
baz=354
NACB **Ninganchiao** **2.39** **356** *e*P **Pn** **16 58 43.9 -3.0**
baz=8.0
NACB eS **Sn** **16 59 11.5 -4.9**
baz=8.0
NACB **Ninganchiao** **2.39** **356** **Pn** **16 58 43.9 -3.0**
WHF **Hehuan Shan** **2.40** **349** *e*P **Pn** **16 58 45.5 -2.0**
baz=359
WHF eS **Sn** **16 59 14.0 -3.3**
baz=359
ETLH **Xiulin Townshi** **2.43** **353** *e*P **Pn** **16 58 45.7 -1.9**
baz=4.0
WDGT **Dungji** **2.45** **307** *e*P **Pn** **16 58 46.9 -1.0**
baz=308
WDGT eS **Sn** **16 59 14.3 -3.8**
baz=308
RLNB **Erlin** **2.48** **328** *e*P **Pn** **16 58 47.3 -0.8**
baz=330

RLNB eS Sn 16 59 16.6 -2.0
baz=330
TDCB Techi 2.53 347 eP Pn 16 58 48.6 -0.4
baz=356
WCHH Zhanghua 2.55 334 eP Pn 16 58 49.7 +0.5
baz=320
WCHH eS Sn 16 59 20.7 +0.2
baz=320
TCU Taichung 2.57 337 eP Pn 16 58 49.1 -0.3
baz=322
VCHM Qimei 2.60 304 eP Pn 16 58 47.6 -2.2
baz=304
VCHM eS Sn 16 59 17.4 -4.3
baz=304
WHP Taichung City 2.60 343 eP Pn 16 58 50.6 +0.7
baz=354
WHP eS Sn 16 59 22.4 +0.6
baz=354
ENA Nanau 2.63 359 eP Pn 16 58 48.3 -2.1
baz=10.0
ENA eS Sn 16 59 20.3 -2.2
baz=10.0
NNSB Datong 2.66 352 eP Pn 16 58 50.0 -0.9
baz=1.0
NNSH Datong 2.66 352 eP Pn 16 58 49.8 -1.0
baz=1.0
NNS Nan Shan 2.67 352 eP Pn 16 58 50.0 -1.0
baz=3.0
NNS eS Sn 16 59 23.6 -0.1
baz=3.0
PHUB P'eng-hu 2.67 311 eP Pn 16 58 48.9 -2.0
baz=300
PHUB eS Sn 16 59 18.6 -4.8
baz=300
TWQ1 Liyutan 2.72 340 eP Pn 16 58 52.5 +0.9
baz=325
TWQ1 eS Sn 16 59 25.6 +1.0
baz=325
PNG Penghu 2.72 311 eP Pn 16 58 49.6 -1.9
baz=312
PNG eS Sn 16 59 21.2 -3.4
baz=312
WDJ Dajia District 2.76 338 eP Pn 16 58 53.1 +1.0
baz=324
NSY Sanyi 2.79 340 eP Pn 16 58 53.5 +1.0
baz=327
NSY eS Sn 16 59 27.4 +1.1
baz=327
TWC Suao 2.81 1 eP Pn 16 58 52.3 -0.5
baz=13
NDT Datong Townshi 2.82 355 eP Pn 16 58 53.0 +0.1
baz=356
PTSB Yuanli 2.83 340 eP Pn 16 58 53.6 +0.5
baz=326
PTSB eS Sn 16 59 28.7 +1.3
baz=326
ENTT Nioudou 2.85 356 eP Pn 16 58 51.7 -1.7
baz=357
JYNG Yonagunijimaku 2.86 22 P Pn 16 58 51.9 -1.6
JYNG S Sn 16 59 24.6 -3.6
NMLH Miaoli 2.89 342 eP Pn 16 58 55.0 +1.1
baz=326
YOJ Yonaguni jima 2.90 23 eP Pn 16 58 52.0 -2.0
baz=23
YOJ Yonaguni jima 2.90 23 P Pn 16 58 52.6 -1.3
YOJ S Sn 16 59 26.2 -2.8
YOJ Yonaguni jima 2.90 23 P Pn 16 58 52.2 -1.7
YOJ Yonaguni jima 2.90 23 Pn 16 58 52.2 -1.7
YHNB Yeheng 2.90 353 eP Pn 16 58 53.1 -0.9
baz=5.0
YHNB Yeheng 2.90 353 Pn 16 58 52.5 -1.5
NSK Sanguang 2.91 352 eP Pn 16 58 53.2 -0.9
baz=5.0
NSTT Nanjuang 2.93 346 eP Pn 16 58 55.0 +0.7
baz=331
NSTT eS Sn 16 59 30.1 +0.4
baz=331
TWE Neicheng 2.93 358 eP Pn 16 58 53.5 -0.9
baz=8.0
HATJ Hateruma jima 2.93 39 P Pn 16 58 53.2 -1.2
HATJ S Sn 16 59 26.5 -3.3
NWLT Wulai 2.99 355 eP Pn 16 58 55.9 +0.5
baz=356
NTC Toucheng 3.06 1 eP Pn 16 58 56.4 +0.2
baz=13
IRIF Iriomote-Funau 3.11 35 P Pn 16 58 55.6 -1.3
IRIF S Sn 16 59 30.8 -3.4
NHDH Xindian Distri 3.18 356 eP Pn 16 58 57.2 -0.6
baz=5.0
TIPB Shuangxi 3.18 1 eP Pn 16 58 57.0 -0.8
baz=12
TIPB eS Sn 16 59 34.6 -1.4
baz=12
TWA Mucha 3.19 357 eP Pn 16 58 59.0 +1.0
baz=358
JKRS Kuro-shima 3.19 40 P Pn 16 58 57.0 -1.0
JKRS S Sn 16 59 33.1 -3.1
TATO Taipei 3.19 355 eP Pn 16 58 57.5 -0.5
baz=4.0
TATO Taipei 3.19 355 Pn 16 58 57.1 -0.9
TWB1 Santiao Chiao 3.22 3 eP Pn 16 58 59.3 +0.9
baz=15
NCUH Zhongli 3.22 350 eP Pn 16 59 00.0 +1.6
baz=334
NWF Wu-fen Shan 3.27 360 eP Pn 16 58 57.9 -1.3
baz=12
WFSB Wu-fen Shan 3.27 360 eP Pn 16 58 57.8 -1.3
baz=12
TWS1 Kuangyinshan 3.32 354 eP Pn 16 59 01.9 +2.1
baz=7.0
YM01 YM01 3.35 357 eP Pn 16 59 00.7 +0.4
baz=358
JIJ Ishigaki jima 3.37 40 P Pn 16 58 59.0 -1.4
JIJ S Sn 16 59 36.3 -4.2
YM10 YM10 3.37 357 eP Pn 16 59 00.2 -0.2
baz=358
YM11 YM11 3.37 357 eP Pn 16 59 00.8 +0.2
baz=358
NTST Danshui 3.38 355 eP Pn 16 59 01.4 +0.7
baz=9.0
ANP Anpu 3.40 356 eP Pn 16 59 00.1 -0.8
baz=357
TWY Chenhua 3.48 357 eP Pn 16 59 03.2 +1.2
baz=358
JISG Ishigakijimahi 3.63 39 P Pn 16 59 02.4 -1.7
JISG S Sn 16 59 43.2 -4.0
PCYT Pengchaiyu 3.84 4 eP Pn 16 59 04.5 -2.4
baz=5.0
VWUC VWUC 3.85 327 eP Pn 16 59 05.7 -1.3
baz=327
JTJ Tarama 3.91 43 P Pn 16 59 06.8 -1.1
JTJ S Sn 16 59 50.9 -3.1
KNM Kinmen 4.05 311 eP Pn 16 59 09.9 +0.1
baz=310
PTMZ Houxiangcun 4.06 323 eP Pn 16 59 08.8 -1.2
baz=324
KNMB Chin-men Tao 4.11 311 eP Pn 16 59 08.8 -1.9
baz=312
KNMB Chin-men Tao 4.11 311 Pn 16 59 08.9 -1.7
PTTC Pingtan 4.14 334 eP Pn 16 59 10.2 -0.8
baz=335
ZPLA Ao Xicun 4.29 301 eP Pn 16 59 11.2 -1.9
baz=301
QZH Quanzhou 4.30 318 Pn Pn 16 59 11.3 -2.0
QZH Sn Sn 16 59 58.0 -5.6
QZH LR LR
comp=N,990nm,14.7s
QZH LR LR
comp=E,1μm,17.3s
QZH LR LR
comp=Z,1μm,15.6s
JIRB Irabujima 4.35 45 P Pn 16 59 12.1 -1.8
JIRB S Sn 17 00 00.9 -3.9
SZP Santa 4.39 197 Pn 16 59 16.0 +1.5
JMJ2 Miyako jima3 4.39 47 P Pn 16 59 12.8 -1.7
JMJ2 S Sn 17 00 02.8 -3.1
JMJ Miyako jima 2 4.42 46 eP Pn 16 59 12.9 -2.0
baz=47
JOGS Gusukube 4.46 48 P Pn 16 59 14.1 -1.3
JOGS S Sn 17 00 04.6 -2.9
JIKM Ikemajima 4.46 45 P Pn 16 59 14.0 -1.5
JIKM S Sn 17 00 05.1 -2.5
MATB Ma-tsu 4.66 339 eP Pn 16 59 16.8 -1.4
baz=329
ZZJH Jiuhuzhen 4.67 306 eP Pn 16 59 17.0 -1.3
baz=306
AXDP Jialang 4.68 312 eP Pn 16 59 17.5 -1.0

baz=312
VDOS Pratas Island 4.83 258 eP Pn 16 59 19.4 -1.2
baz=256
MHZQ Yeshan 4.98 330 eP Pn 16 59 20.9 -1.7
baz=331
LYJJ Jianjiangzhen 5.09 339 eP Pn 16 59 23.1 -1.1
baz=329
XPSS Dashiqiu 5.33 344 eP Pn 16 59 26.3 -1.0
baz=334
HKPS Hong Kong Po S 7.11 275 eP Pn 16 59 49.8 -2.0
baz=274
HKPS Hong Kong Po S 7.11 275 Pn 16 59 50.1 -1.8
TGY Tagaytay City 7.68 186 LR LR 17 03 40.0
comp=Z,1μm,18.2s,baz=360,slow=44
JOW Kunigami 7.77 48 Pn Pn 16 59 59.5 -1.4
0.2nm,0.3s,baz=348,slow=21,SNR=6.5
JOW Kunigami 7.77 48 Pn Pn 17 00 00.9 0.0
NJ2 Nanjing 10.56 346 eP Pn 17 00 40.0 +0.9
NJ2 pmax pmax
comp=Z,4.0nm,0.7s
NJ2 LR LR
comp=N,1μm,14.7s
NJ2 LR LR
comp=E,1μm,11.4s
NJ2 LR LR
comp=Z,1μm,16.1s
QIZ Qiongzhong 11.53 258 P Pn 17 00 51.8 -0.7
QIZ S Sn 17 03 04.8 +3.3
QIZ LR LR
comp=N,1μm,14.2s
QIZ LR LR
comp=E,800nm,13.2s
QIZ LR LR
comp=Z,890nm,15.7s
QIZ Qiongzhong 11.53 258 Pn Pn 17 00 52.4 0.0
JNU Nakatsue 13.88 34 LR LR 17 07 18.7
comp=Z,515nm,18.3s,baz=195,slow=40
JNU Nakatsue 13.88 34 Pn Pn 17 01 24.3 -0.3
GYA Guiyang 14.57 292⇑iP Pn 17 01 35.5 +1.4
GYA PP PnPn 17 01 47.3 +5.2
GYA S Sn 17 04 15.0 -0.9
GYA SS S 17 04 30.5 -5.0
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,60nm,3.5s
GYA LR LR
comp=N,720nm,10.6s
GYA LR LR
comp=E,440nm,14.4s
GYA LR LR
comp=Z,710nm,13.9s
TIA Tai'an 14.94 345 P Pn 17 01 41.5 +2.4
TIA S Sn 17 04 28.0 +3.2
TIA LR LR
comp=N,490nm,18.0s
TIA LR LR
comp=E,490nm,15.2s
TIA LR LR
comp=Z,540nm,15.7s
DAV Davao City (W) 15.08 165 LR LR 17 07 50.0
comp=Z,647nm,18.6s,baz=334,slow=39
DLV T Lat 16.04 235 Pn 17 01 54.6 +0.8
KSRS Korea Array 16.50 17 Pn Pn 17 01 59.0 -0.2
0.2nm,0.3s,baz=200,slow=13,SNR=13
KSRS LR LR 17 09 05.0
comp=Z,585nm,18.5s,baz=188,slow=40
KKM Kota Kinabalu 16.55 200 P P 17 02 05.4 +2.7
KKM IAmb IAmb 17 03 00.6
comp=Z,32nm,1.1s
XAN Xi'an 16.66 320 P P 17 02 05.5 +1.6
XAN S Sn 17 05 05.0 -1.8
XAN pmax pmax
comp=Z,17nm,1.1s
XAN LR LR
comp=Z,980nm,19.5s
XAN LR LR
comp=Z,790nm,18.4s
XAN LR LR
comp=Z,650nm,14.2s
XAN Xi'an 16.66 320 P Pn 17 02 01.0 -0.5
XAN pmax pmax
comp=Z,17nm,1.1s
XAN Xi'an 16.66 320 Pn Pn 17 02 01.0 -0.5
KMI Kunming 17.79 284 P Pn 17 02 14.8 -1.0
KMI pmax pmax
comp=Z,15nm,0.6s
KMI LR LR
comp=Z,430nm,13.2s
KMI LR LR
comp=Z,350nm,15.2s
KMI LR LR
comp=Z,330nm,11.3s
CD2 Chengdu 18.52 303 P Pn 17 02 26.5 +1.9
CD2 S Sn 17 05 48.8 -3.0
CD2 LR LR
comp=Z,1μm,16.5s
CD2 LR LR
comp=Z,820nm,14.4s
CD2 LR LR
comp=Z,1μm,10.8s
INU Inuyama 18.99 41 P P 17 02 29.7 +0.2
INU IAmb IAmb 17 02 39.0
comp=Z,51nm,1.2s
MAJO Matsushiro 20.50 41 deP Pn 17 02 48.2 0.0
MAJO Matsushiro 20.50 41 P P 17 02 46.7 +0.7
MAJO IAmb IAmb 17 02 56.1
comp=Z,53nm,1.2s
MAT Matsushiro 20.50 41 P Pn 17 02 48.1 -0.1
MJAR Matsushiro Arr 20.50 41 P P 17 02 47.3 +1.3
comp=Z,7.1nm,0.9s,baz=230,slow=10,SNR=25
MJAR LR LR 17 11 11.4
comp=Z,134nm,20.7s,baz=200,slow=38
HHC Hu-ho-hao-te 20.89 338 eP P 17 02 51.0 +0.7
HHC sP pwP 17 02 58.0 +2.1
HHC S S 17 06 46.3 +2.9
HHC SS SnSn 17 07 09.5 +5.6
HHC pmax pmax
comp=Z,17nm,0.9s
HHC pmax pmax
comp=Z,57nm,6.0s
HHC LR LR
comp=Z,380nm,15.7s
HHC LR LR
comp=Z,260nm,14.0s
HHC LR LR
comp=Z,450nm,14.5s
LZH Lanzhou 21.16 316 eP P 17 02 56.0 +2.7
LZH sP sP 17 03 02.0 +6.7
LZH eS S 17 06 48.5 -0.4
LZH SS SnSn 17 07 18.5 +8.0
LZH pmax pmax
comp=Z,31nm,1.0s
LZH pmax pmax
comp=Z,150nm,4.7s
LZH LR LR
comp=Z,730nm,10.5s
LZH LR LR
comp=Z,620nm,10.2s
LZH LR LR
comp=Z,900nm,12.5s
BTO Baotou 21.25 335 eP P 17 02 55.0 +0.7
BTO S S 17 06 52.0 +1.3
SBUM Sibu 21.35 207 P P 17 02 55.6 +0.3
MPSI Mapaga 21.39 185 P P 17 02 57.4 +1.6
comp=Z,320nmcomp=Z,28nm,0.8s
TNTI Ternate 21.58 165 P P 17 02 58.6 +0.8
comp=Z,15nm,1.1s
CMAR Chiang Mai Arr 21.70 265 P P 17 02 59.6 +0.5
comp=Z,5.6nm,1.0s,baz=71,slow=9.2,SNR=24
CMAR PcP PcP 17 06 59.5 -0.8
comp=Z,0.4nm,0.6s,baz=69,slow=0.5,SNR=4.2
CMAR LR LR 17 12 30.9
comp=Z,350nm,18.4s,baz=118,slow=40
CN2 Changchun 22.17 7 eP P 17 03 05.0 +1.1
CN2 esP pwP 17 03 12.0 +2.9
CN2 eS S 17 07 03.0 -5.3
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 LR LR
comp=Z,700nm,15.0s
CN2 LR LR
comp=Z,500nm,13.0s
CN2 LR LR
comp=Z,780nm,15.0s
APSI Ampana 22.55 180 P P 17 03 10.1 +1.9

comp=Z,432nmcomp=Z,31nm,0.9s
LUWI Luwuk 22.70 177 P P 17 03 11.2 +1.4
comp=Z,75nm,1.2s
LBMI Labuha 22.97 165 P P 17 03 14.0 +1.4
comp=Z,29nm,1.0s
KSM Kuching 23.07 210 P P 17 03 14.4 +0.7
BKB Balikpapan 23.39 192 P P 17 03 17.6 +0.6
MDJ Mudanjiang 23.67 14 P P 17 03 18.9 -0.5
MDJ IAmb IAmb 17 03 24.6
comp=Z,13nm,0.9s
USRK Ussuriysk Ar. 23.90 18 P P 17 03 23.1 +1.4
comp=Z,7.5nm,0.7s,baz=203,slow=9.9,SNR=14
USRK LR LR 17 13 34.8
comp=Z,350nm,18.3s,baz=172,slow=39
SANI Sanana 24.04 170 P P 17 03 24.9 +1.7
comp=Z,900nmcomp=Z,26nm,0.9s
TTSI Tana Toraja 24.75 185 P P 17 03 30.4 +0.7
comp=Z,20nm,1.0s
NLAI Namlea 25.41 168 P P 17 03 36.4 +0.8
comp=Z,31nm,0.7s
GTA Gaotai 25.70 318 eP P 17 03 40.0 +1.6
GTA pP pP 17 03 43.5 +3.7
GTA sP sP 17 03 46.8 +6.3
GTA S S 17 08 06.0 -1.4
GTA sS sS 17 08 15.3 +4.3
GTA SS SnSn 17 09 11.5 +10
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,100nm,8.6s
GTA LR LR
comp=Z,280nm,18.7s
GTA LR LR
comp=Z,350nm,15.6s
GTA LR LR
comp=Z,220nm,17.5s
MYKOM Kota Tinggi 26.45 224 P P 17 03 46.3 +1.2
MYKOM IAmb IAmb 17 03 58.8
comp=Z,33nm,1.6s
KAPI Kappang 26.70 185 P P 17 03 46.6 -0.8
comp=Z,7.3nm,0.6s,baz=351,slow=4.8,SNR=2.5
KAPI LR LR 17 15 40.0
comp=Z,203nm,19.9s,baz=357,slow=40
KAPI Kappang 26.70 185 P P 17 03 47.9 +0.5
KAPI pmax pmax
comp=Z,11nm,0.9s
KAPI Kappang 26.70 185 P P 17 03 47.9 +0.5
KAPI IAmb IAmb 17 03 54.6
comp=Z,11nm,0.9s
ERM Erimo 27.00 37 P P 17 03 50.6 +0.7
ERM pmax pmax
comp=Z,97nm,1.7s
ERM Erimo 27.00 37 P P 17 03 50.6 +0.7
ASAJ Asahikawa 28.15 33 P P 17 04 03.9 +3.7
comp=Z,10nm,0.8s,baz=225,slow=10,SNR=7.9
JKA Kamikawa-asahi 28.15 33 P P 17 04 03.9 +3.7
KLR Kul'dur 28.51 14 P P 17 04 04.2 +0.9
comp=Z,2.0nm,0.7s,baz=195,slow=8.3,SNR=6.5
KLR LR LR 17 16 22.1
comp=Z,437nm,19.9s,baz=189,slow=38
KLR Kul'dur 28.51 14⇑eP P 17 04 06.6 +3.2
ULN Ulaanbaatar 28.59 339⇓eP P 17 04 04.7 +0.4
ULN pmax pmax
comp=Z,16nm,1.7s
ULN Ulaanbaatar 28.59 339 P P 17 04 03.0 -1.3
ULN IAmb IAmb 17 04 06.3
comp=Z,7.3nm,0.9s
SONM Songino Array 28.79 338 P P 17 04 06.8 +0.8
comp=Z,5.2nm,0.8s,baz=150,slow=8.8,SNR=28
SONM LR LR 17 17 50.5
comp=Z,172nm,20.4s,baz=146,slow=41
PSI Prapat 29.15 233 LR LR 17 16 35.6
comp=Z,148nm,18.1s,baz=87,slow=38
MNSI Mandailing Nat 30.06 229 P P 17 04 17.1 -0.3
comp=Z,18nm,0.9s
YSS Yuzh-Sakhalins 30.31 29 eP P 17 04 22.8 +3.5
YSS MLR MLR
comp=Z,300nm,14.0s
YSS MLR MLR
comp=Z,200nm,17.0s
EDFI Ende, Flores 30.34 180 P P 17 04 18.7 -1.3
comp=Z,22nm,0.7s
MDSI Maura Dua 31.29 215 P P 17 04 29.1 +0.9
comp=Z,10nm,0.8s
LWLI Liwa 31.80 215 P P 17 04 42.3 +9.5
ZEA Zeya 32.18 6 eP P 17 04 38.4 +2.7
TLY Talaya 33.01 339 P P 17 04 43.9 +0.9
comp=Z,1.1nm,0.4s,baz=235,slow=5.0,SNR=4.0
TLY Talaya 33.01 339 ceP P 17 04 43.9 +0.9
TLY pmax pmax
comp=Z,4.0nm,0.8s
TLY Talaya 33.01 339 P P 17 04 42.5 -0.5
TLY IAmb IAmb 17 04 44.5
comp=Z,3.7nm,0.9s
MOY Mondy 33.92 337 eP P 17 04 52.3 +1.2
WMQ Urumqi 35.74 316 eP P 17 05 08.0 +1.2
WMQ pP pP 17 05 12.3 +4.0
WMQ pmax pmax
comp=Z,7.0nm,0.6s
WMQ pmax pmax
comp=Z,9.0nm,3.7s
WMQ LR LR
comp=Z,140nm,8.3s
WMQ LR LR
comp=Z,170nm,10.7s
WMQ LR LR
comp=Z,67nm,10.7s
RABL Rabaul 39.38 127 P P 17 05 40.0 +2.1
RABL IAmb IAmb 17 05 40.9
comp=Z,16nm,0.8s
FITZ Fitzroy Crossi 39.81 174 P P 17 05 39.0 -2.4
MK31 Makanchi Array 40.46 318 i P P 17 05 46.7 +0.1
MKAR Makanchi Array 40.46 318 P P 17 05 47.3 +0.7
comp=Z,13nm,0.9s,baz=113,slow=8.7,SNR=58
MKAR PcP PcP 17 07 51.0 +1.6
comp=Z,0.6nm,0.6s,baz=87,slow=9.2,SNR=2.7
MKAR LR LR 17 23 07.0
comp=Z,99nm,18.4s,baz=108,slow=37
MKAR Makanchi Array 40.46 318 i P P 17 05 47.2 +0.6
MKAR pmax pmax
comp=Z,17nm,1.0s
YAK Yakutsk 40.59 6 eP P 17 05 48.1 +0.7
YAK pmax pmax
comp=Z,7.0nm,1.4s
YAK pmax pmax
comp=N,5.0nm,1.5s
YAK pmax pmax
comp=E,5.0nm,1.6s
YAK Yakutsk 40.59 6 P P 17 05 45.2 -2.2
YAK IAmb IAmb 17 05 56.9
comp=Z,6.2nm,0.7s
MAKZ Makanchi 40.66 318 P P 17 05 47.7 -0.6
MAKZ pmax pmax
comp=Z,13nm,0.9s
MAKZ Makanchi 40.66 318 P P 17 05 47.7 -0.6
MAKZ IAmb IAmb 17 05 51.4
comp=Z,13nm,0.9s
HYB Hyderabad 40.86 272 i P P 17 05 45.0 -5.3
PDGK Podgornoye 41.07 312 P P 17 05 51.3 -0.5
PETK Petropavlovsk- 41.57 32 LR LR 17 22 08.8
comp=Z,154nm,21.6s,baz=242,slow=35
H11N1 WAKE ISLAND Hy 42.12 84 T T 17 51 07.2
baz=282,slow=75,SNR=145
H11N2 WAKE ISLAND Hy 42.12 84 T T 17 51 09.7
baz=282,slow=75,SNR=295
H11N3 WAKE ISLAND Hy 42.14 84 T T 17 51 10.8
baz=282,slow=75,SNR=262
KDJ Kajisay 42.37 309 P P 17 06 02.7 +0.2
KDJ pmax pmax
comp=Z,4.0nm,1.0s
KDJ Kajisay 42.37 309 P P 17 06 02.7 +0.2
ZALV Zalesovo Beam 42.56 328 P P 17 06 02.6 -1.0
comp=Z,7.7nm,0.7s,baz=121,slow=8.2,SNR=31
ZALV LR LR 17 25 44.8
comp=Z,131nm,18.4s,baz=125,slow=39
KSH Kashi 42.70 305 P P 17 06 07.3 +2.1
KSH pP sP 17 06 11.3 +4.0
KSH sP pP 17 06 14.3 +7.7
KSH pmax pmax
comp=Z,23nm,1.2s
KSH pmax pmax
comp=Z,260nm,4.6s
WRAB Tennant Creek 43.24 163⇓iP P 17 06 07.5 -2.0
WRAB pmax pmax
comp=Z,5.0nm,1.0s
WRA Warramunga Arr 43.25 163 P P 17 06 06.7 -2.9

	comp=Z,2.3nm,0.7s,baz=344,slow=9.0,SNR=23						
NIL	**Nilore**	**44.20**	**296**	P	**P**	**17 06 16.7**	**-0.6**
NIL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NIL	**Nilore**	**44.20**	**296**	P	**P**	**17 06 16.7**	**-0.6**
NIL				IAmb	IAmb	17 06 19.8	
	comp=Z,6.9nm,0.8s						
KURK	**Kurchatov**	**44.29**	**321***d*	*i*P	**P**	**17 06 17.5**	**-0.2**
KURK				pmax	pmax		
	comp=Z,18nm,1.3s						
KURK	**Kurchatov**	**44.29**	**321**	P	**P**	**17 06 17.4**	**-0.3**
KURK				IAmb	IAmb	17 06 20.0	
	comp=Z,9.6nm,0.8s						
KURBB	**Kurchatov Arra**	**44.31**	**321**	P	**P**	**17 06 17.7**	**-0.1**
	comp=Z,12nm,0.9s,baz=118,slow=7.5,SNR=56						
KURBB	**Kurchatov Arra**	**44.31**	**321**	P	**P**	**17 06 16.9**	**-0.9**
AAK	**Ala-Archa**	**44.42**	**309**	P	**P**	**17 06 19.7**	**+0.6**
	comp=Z,0.8nm,0.4s,baz=86,slow=4.7,SNR=4.2						
AAK	**Ala-Archa**	**44.42**	**309**⇓	*e*P	**P**	**17 06 19.4**	**+0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AAK	**Ala-Archa**	**44.42**	**309**	P	**P**	**17 06 17.0**	**-2.1**
OTUK	**Ortayu**	**47.29**	**316**	P	**P**	**17 06 41.1**	**-0.4**
BVAR	**Borovoye Array**	**49.89**	**322**	P	**P**	**17 07 02.0**	**+0.6**
	comp=Z,3.2nm,0.7s,baz=108,slow=9.8,SNR=17						
BVAR				PcP	**PcP**	**17 08 24.5**	**+2.7**
	comp=Z,0.8nm,0.5s,baz=104,slow=6.3,SNR=3.9						
BRVK	**Borovoye**	**49.96**	**322***d*	*i*P	**P**	**17 07 03.2**	**+1.3**
BRVK				pmax	pmax		
	comp=Z,15nm,1.3s						
BRVK	**Borovoye**	**49.96**	**322**	P	**P**	**17 07 01.1**	**-0.8**
TIXI	**Tiksi**	**50.05**	**3**⇓	*e*P	**P**	**17 07 03.5**	**+1.2**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.7s						
TIXI	**Tiksi**	**50.05**	**3**	P	**P**	**17 07 01.9**	**-0.4**
TIXI				IAmb	IAmb	17 07 14.9	
	comp=Z,16nm,2.0s						
MORW	**Morawa**	**50.86**	**186**	P	**P**	**17 07 07.4**	**-1.5**
BILL	**Bilibino**	**53.76**	**19**⇓	*e*P	P	17 07 34.9	+4.9
BILL				*e*		17 07 44.0	
BILL				*e*S	**S**	**17 15 07.3**	**+3.0**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,238nm,19.0s						
BILL	**Bilibino**	**53.76**	**19**	P	**P**	**17 07 29.4**	**-0.6**
BILL				IAmb	IAmb	17 07 35.7	
	comp=Z,6.7nm,1.3s						
GEYT	**Alibeck**	**56.51**	**302**	LR	LR	17 34 39.7	
	comp=Z,90nm,21.2s,baz=70,slow=39						
STKA	**Stephens Creek**	**56.63**	**160**	P	**P**	**17 07 50.4**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=318,slow=6.1,SNR=4.9						
STKA				LR	LR	17 36 13.5	
	comp=Z,36nm,18.1s,baz=22,slow=40						
ARU	**Arti**	**57.36**	**324**⇓	*e*P	**P**	**17 07 56.2**	**+0.1**
ARU				pmax	pmax		
	comp=Z,17nm,1.7s						
ARU	**Arti**	**57.36**	**324**	P	**P**	**17 07 56.1**	**0.0**
ARU				IAmb	IAmb	17 07 57.8	
	comp=Z,6.2nm,0.9s						
ZEI	**Tsey**	**66.84**	**308**	*e*P	**P**	**17 08 59.7**	**-0.6**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KBZ	**Khabaz**	**67.42**	**310**	P	**P**	**17 09 03.9**	**+0.2**
	comp=Z,5.8nm,0.9s,baz=157,slow=3.3,SNR=9.3						
KLMR	**Klimovskoe**	**67.48**	**328**	*e*P	**P**	**17 09 00.8**	**-2.9**
KLMR				pmax	pmax		
	comp=Z,17nm,1.4s						
KLMR	**Klimovskoe**	**67.48**	**328**	*e*P	**P**	**17 09 00.8**	**-2.9**
KLMR				AMP		17 09 05.8	
	comp=Z,17nm,1.4s						
KIV	**Kislovodsk**	**67.53**	**310**⇓	*e*P	**P**	**17 09 03.9**	**-0.6**
KIV				*e*		17 09 31.3	
KIV				*e*S	**PnS**	**17 18 34.1**	**+11**
KIV				*e*SS	SS	17 22 23.7	+2.1
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KIV				MLR	MLR		
	comp=Z,51nm,17.0s						
KIV	**Kislovodsk**	**67.53**	**310**	P	**P**	**17 09 04.1**	**-0.4**
NEY	**Neytrino**	**67.62**	**309**⇓	*e*P	**P**	**17 09 06.5**	**+1.3**
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LPSR	**Galich'ya Gora**	**68.72**	**319**	*e*P	**P**	**17 09 11.6**	**-0.1**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RAYN	**Ar Rayn**	**69.59**	**288**	P	**P**	**17 09 16.8**	**-0.9**
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
RAYN	**Ar Rayn**	**69.59**	**288**	P	**P**	**17 09 16.8**	**-0.9**
RAYN				IAmb	IAmb	17 09 22.2	
	comp=Z,4.9nm,1.1s						
OBN	**Obninsk**	**69.73**	**322**⇑	*e*P	**P**	**17 09 17.7**	**-0.1**
OBN				*e*S	**S**	**17 18 20.9**	**-5.9**
OBN				pmax	pmax		
	comp=Z,36nm,1.8s						
OBN				MLR	MLR		
	comp=Z,68nm,16.0s						
RND	**Reindeer**	**70.48**	**29**	P	**P**	**17 09 21.9**	**-0.6**
RND				pmax	pmax		
	comp=Z,9.0nm,0.9s						
RND	**Reindeer**	**70.48**	**29**	P	**P**	**17 09 21.9**	**-0.6**
ILAR	**Eielson Array**	**71.09**	**27**	LR	LR	17 42 05.8	
	comp=Z,50nm,19.1s,baz=173,slow=37						
ARCES	**ARCESS Array B**	**71.97**	**338**	P	**P**	**17 09 31.9**	**+0.7**
	comp=Z,1.6nm,0.6s,baz=79,slow=6.3,SNR=8.2						
FINES	**FINESS Array B**	**73.79**	**330**	P	**P**	**17 09 42.3**	**+0.1**
	comp=Z,3.4nm,0.7s,baz=41,slow=4.7,SNR=11						
AKASG	**Malin Array Be**	**75.03**	**319**	P	**P**	**17 09 48.9**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=61,slow=5.8,SNR=6.5						
AKBB	**Malin Array Si**	**75.03**	**319***ce*	P	**P**	**17 09 50.6**	**+1.0**
BRTR	**Keskin Array B**	**75.05**	**307**	P	**P**	**17 09 49.8**	**-0.3**
	comp=Z,1.8nm,0.8s,baz=124,slow=6.1,SNR=8.4						
BRTR				LR	LR	17 45 32.7	
	comp=Z,30nm,20.8s,baz=87,slow=38						
NB2	**NORSAR Subarra**	**80.60**	**332**	P	**P**	**17 10 20.5**	**0.0**
	comp=Z,6.6nm,1.2s,baz=56,slow=5.6						
NOA	**NORSAR Array B**	**80.60**	**332**	P	**P**	**17 10 20.2**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=57,slow=5.6,SNR=5.8						
NOA				LR	LR	17 48 12.0	
	comp=Z,63nm,19.3s,baz=70,slow=37						
VTS	**Vitosha**	**81.55**	**312**	P	**P**	**17 10 25.9**	**-0.2**
VTS				pmax	pmax		
	comp=Z,14nm,1.3s						
VTS	**Vitosha**	**81.55**	**312**	P	**P**	**17 10 25.9**	**-0.2**
MORC	**Moravsky Berou**	**82.38**	**321**	*e*P	**P**	**17 10 31.6**	**+1.4**
CLL	**Collm**	**84.30**	**323**	*e*P	**P**	**17 10 41.0**	**+1.0**
	comp=Z,9.0nm,1.2s						
CLL	**Collm**	**84.30**	**323**	*e*P	**P**	**17 10 43.0**	**+3.0**
CLL				pmax	pmax		
	comp=Z,9.0nm,1.2s						
YKA	**Yellowknife Ar**	**84.96**	**23**	P	**P**	**17 10 43.6**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=317,slow=4.4,SNR=18						
YKA				LR	LR	17 54 20.7	
	comp=Z,40nm,18.6s,baz=0.0,slow=40						
GERES	**GERESS Array B**	**85.04**	**321**	P	**P**	**17 10 43.7**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=44,slow=4.2,SNR=6.7						
GERES				LR	LR	17 50 12.5	
	comp=Z,88nm,19.9s,baz=355,slow=37						
PPT	**Papeete**	**95.14**	**107**	LR	LR	17 45 37.6	
	comp=Z,17nm,19.7s,baz=20,slow=30						

*NIED **28** 17:22:00,36˚80N×141˚40E,h11km,Mw3.9 Best double couple: M0 6.75000×10^14 NP1:φs 45.00000°,δ 49.00000°, λ -76.00000°. NP2:φs 204.00000°,δ 43.00000°, λ -106.00000°.*

*IDC **28** 17:22:19.5±0.7,36˚89N×141˚22E,h0km,mb4.0/14, mb1 4.1/18,mb1mx4.0/34,mbtmp4.1/18,ML3.9/3,MS2.8/2, Ms1 2.8/2,ms1mx2.4/33,Error ellipse: s-maj=18.0km s-min=16.0km az=123.0*

*JMA **28** 17:22:21.3±0.1,36˚83N×141˚33E,h37km±1km,M3.9 JMA Felt II J1.*

*MOS **28** 17:22:21.7±1.1,36˚91N×141˚40E,h31km,mb4.3/7,Error ellipse: s-maj=10.6km s-min=7.8km az=103.6*

*NEIC **28** 17:22:22.5±1.8,36˚83N±0˚06×141˚33E±0˚09,h21km±5km, mb4.5/19,Error ellipse: s-maj=9.9km s-min=9.3km az=82.0*

ISC 28 17:22:21.0±0.9,**36˚84N**±0˚03×**141˚36E**±0˚04,**h14**km±4km, **n86**,σ1§**34**/93,**mb4.2**/30,**3C-6D**,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.52**	**301**	P	**Pb**	**17 22 31.6**	**-0.5**
ONAJ				S	**Sb**	**17 22 39.3**	**-0.3**
JFK	**Kawauchi**	**0.66**	**324**	P	**Pb**	**17 22 33.8**	**-0.5**
JFK				S	**Sg**	**17 22 42.5**	**-0.1**
JHO	**Hitachi**	**0.68**	**251**	P	**Pg**	**17 22 33.9**	**-0.3**
JHO				S	**Sg**	**17 22 42.9**	**-0.2**
JFFD	**Fukushimafurud**	**0.69**	**292**	P	**Pg**	**17 22 34.1**	**-0.4**
JFFD				S	**Sg**	**17 22 43.4**	**-0.2**
JHYU	**Hitachinakayam**	**0.80**	**232**	P	**Pg**	**17 22 35.7**	**-0.8**
JHYU				S	**Sg**	**17 22 46.3**	**-0.6**
JFT	**Otama**	**1.07**	**310**	P	**Pb**	**17 22 40.6**	**-0.7**
JMM	**Marumori**	**1.12**	**336**	P	**Pb**	**17 22 40.7**	**-1.5**
JMM				S	**Sb**	**17 22 55.1**	**-1.6**
JFY	**Yanaizu**	**1.44**	**294**	P	**Pn**	**17 22 46.5**	**-0.3**
JFY				S	**Sn**	**17 23 05.1**	**-0.5**
JAG	**Ashikaga**	**1.59**	**256**	P	**Pn**	**17 22 47.4**	**-1.4**
MJA0	**Matsu Arr-Jizo**	**2.52**	**264**	*e*P	**Pn**	**17 23 02.1**	**+0.5**
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR	**Matsushiro Arr**	**2.55**	**264**	Pn	**Pn**	**17 23 02.1**	**+0.1**
	comp=Z,1.7nm,0.3s,baz=86,slow=15,SNR=59						
MJAR				Sn	**Sn**	**17 23 33.5**	**+0.6**
	comp=Z,2.7nm,0.3s,baz=23,slow=22,SNR=4.0						
MAJO	**Matsushiro**	**2.55**	**264***d*	*i*P	**Pn**	**17 23 02.6**	**+0.5**
MAJO	**Matsushiro**	**2.55**	**264**		**Pn**	**17 23 02.3**	**+0.2**
MAT	**Matsushiro**	**2.55**	**264**	P	**Pn**	**17 23 02.6**	**+0.5**
MAT				S	**Sb**	**17 23 36.1**	**-1.8**
MJB9	**Matsu-Tunnel**	**2.56**	**264**		**Pn**	**17 23 02.5**	**+0.4**
INU	**Inuyama**	**3.82**	**248**	Pn	**Pn**	**17 23 19.4**	**0.0**
JHJ2	**Mitsune**	**3.93**	**199**	Pn	**Pn**	**17 23 20.9**	**0.0**
JHJ	**Hachijo jima 2**	**3.93**	**200**	Pn	**Pn**	**17 23 22.1**	**+1.1**
	comp=Z,18nm,0.3s,baz=298,slow=22,SNR=11						
JHJ				Sn	**Sn**	**17 24 05.8**	**-1.0**
	comp=Z,51nm,0.3s,baz=249,slow=23,SNR=7.5						
ERM	**Erimo**	**5.36**	**14**⇓	*e*P	**Pn**	**17 23 42.2**	**+1.7**
ERM	**Erimo**	**5.36**	**14**	Pn	**Pn**	**17 23 41.0**	**+0.5**
ASAJ	**Asahikawa**	**7.33**	**7**	Pn	**Pn**	**17 24 06.3**	**-1.3**
	comp=Z,1.3nm,0.3s,baz=238,slow=12,SNR=11						
JKA	**Kamikawa-asahi**	**7.33**	**7**		**Pn**	**17 24 06.3**	**-1.3**
JNU	**Nakatsue**	**9.37**	**250**	LR	LR	17 28 03.8	
	comp=Z,37nm,18.5s,baz=94,slow=37						
KUR	**Kuril'sk**	**9.72**	**28**	P	**Pn**	**17 24 39.0**	**-1.3**
KUR				S	**Sn**	**17 26 25.1**	**-4.1**
JCJ	**Chichijima**	**9.74**	**176**	Pn	**Pn**	**17 24 41.2**	**+0.6**
	comp=Z,5.0nm,0.3s,baz=334,slow=23,SNR=1.6						
JCJ				Sn	**Sn**	**17 26 24.8**	**-5.1**
	comp=Z,4.8nm,0.3s,baz=270,slow=22,SNR=2.7						
USRK	**Ussuriysk Ar.**	**10.24**	**319**	Pn	**Pn**	**17 24 51.0**	**+3.4**
	baz=135,slow=11,SNR=4.1						
USRK	**Ussuriysk Ar.**	**10.24**	**319**	P	**Pn**	**17 24 51.0**	**+3.4**
KSRS	**Korea Array**	**10.75**	**277**	Pn	**Pn**	**17 24 58.2**	**+3.7**
	baz=209,slow=23,SNR=1.9						
KSRS				LR	LR	17 28 31.3	
	comp=Z,77nm,18.0s,baz=199,slow=35						
ZEA	**Zeya**	**19.54**	**334**	*e*P	**Pn**	**17 26 48.8**	**-0.5**
GUMO	**Guam**	**23.36**	**171**	P	**P**	**17 27 30.4**	**+1.2**
GUMO				pmax	pmax		
	comp=Z,237nm,0.4s						
GUMO	**Guam**	**23.36**	**171**	P	**P**	**17 27 30.4**	**+1.2**
YAK	**Yakutsk**	**26.25**	**348**	P	**P**	**17 27 55.3**	**-0.1**
	comp=Z,4.3nm,0.4s,baz=159,slow=4.0,SNR=6.3						
YAK	**Yakutsk**	**26.25**	**348**	*e*P	**P**	**17 27 55.0**	**-0.5**
YAK				*e**PP	**sP**	**17 28 01.4**	**+0.2**
YAK				*e*		17 28 34.0	
YAK				*e*PPP	PPP	17 28 47.4	
YAK				*e*		17 31 18.0	
YAK				*e*S	**S**	**17 32 26.4**	**-0.8**
YAK				*e**SS	sS	17 32 41.3	+7.3
YAK				*e*SS	**SnSn**	**17 33 28.3**	**+1.7**
YAK				*e*SSS	SSS	17 33 49.7	
YAK				*e*		17 38 48.2	
YAK				pmax	pmax		
	comp=N,1.0nm,0.6s						
YAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,16nm,1.5s						
YAK				pmax	pmax		
	comp=N,30nm,1.5s						
YAK				pmax	pmax		
	comp=E,24nm,1.9s						
YAK				smax	smax		
	comp=N,39nm,2.0s						
YAK				smax	smax		
	comp=E,12nm,1.8s						
YAK	**Yakutsk**	**26.25**	**348**	P	**P**	**17 27 55.1**	**-0.3**
YAK				IAmb	IAmb	17 27 57.1	
	comp=Z,10nm,0.6s						
ENH	**Enshi**	**27.28**	**265**	P	**P**	**17 28 04.7**	**-0.4**
SONM	**Songino Array**	**27.86**	**304**	P	**P**	**17 28 10.4**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=102,slow=8.6,SNR=11						
H11N2	**WAKE ISLAND Hy**	**28.08**	**120**	T	T	17 57 40.2	
	baz=313,slow=75,SNR=197						
H11N1	**WAKE ISLAND Hy**	**28.09**	**120**	T	T	17 57 39.4	
	baz=313,slow=75,SNR=185						
H11N3	**WAKE ISLAND Hy**	**28.10**	**120**	T	T	17 57 45.6	
	baz=313,slow=75,SNR=146						
H11S1	**WAKE ISLAND Hy**	**28.79**	**123**	T	T	17 58 34.4	
	baz=315,slow=75,SNR=105						
H11S3	**WAKE ISLAND Hy**	**28.79**	**123**	T	T	17 58 32.8	
	baz=315,slow=75,SNR=85						
H11S2	**WAKE ISLAND Hy**	**28.80**	**123**	T	T	17 58 32.1	
	baz=315,slow=75,SNR=64						
TIXI	**Tiksi**	**35.48**	**353**⇓	*e*P	**P**	**17 29 16.1**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,4.0nm,2.1s						
ZAA0	**Zalesovo Array**	**42.02**	**313**	P	**P**	**17 30 11.4**	**-0.3**
ZALV	**Zalesovo Beam**	**42.02**	**313**	P	**P**	**17 30 11.1**	**-0.6**
	comp=Z,3.1nm,0.6s,baz=91,slow=7.6,SNR=16						
MK31	**Makanchi Array**	**44.19**	**302**	P	**P**	**17 30 29.3**	**-0.2**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	**Makanchi Array**	**44.19**	**302**	P	**P**	**17 30 29.3**	**-0.2**
MKAR	**Makanchi Array**	**44.19**	**302**	P	**P**	**17 30 29.4**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=88,slow=9.9,SNR=25						
MAKZ	**Makanchi**	**44.40**	**302**	P	**P**	**17 30 31.1**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MAKZ	**Makanchi**	**44.40**	**302**	P	**P**	**17 30 31.1**	**-0.1**
KURK	**Kurchatov**	**46.02**	**308***c*	*i*P	**P**	**17 30 43.9**	**0.0**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURK	**Kurchatov**	**46.02**	**308**	P	**P**	**17 30 43.5**	**-0.4**
KURK				IAmb	IAmb	17 30 45.0	
	comp=Z,4.7nm,0.8s						
MLY	**Manley**	**48.04**	**32**	P	**P**	**17 31 02.0**	**+2.5**
MLY				IAmb	IAmb	17 31 02.1	
	comp=Z,12nm,1.7s						
SML	**Sawmill**	**49.18**	**36**	P	**P**	**17 31 09.8**	**+1.5**
IL31		**49.68**	**32**	P	**P**	**17 31 13.2**	**+1.2**
IL31				IAmb	IAmb	17 31 13.9	
	comp=Z,3.9nm,0.8s						
ILAR	**Eielson Array**	**49.68**	**32**	P	**P**	**17 31 13.2**	**+1.1**
	comp=Z,2.3nm,0.7s,baz=257,slow=5.4,SNR=16						
KSH	**Kashi**	**50.45**	**294**	P	**P**	**17 31 20.5**	**+2.1**
KSH				pmax	pmax		
	comp=Z,11nm,1.5s						
KSH				pmax	pmax		
	comp=Z,330nm,4.7s						
BRVK	**Borovoye**	**50.73**	**312**⇑	*e*P	**P**	**17 31 20.5**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,5.0nm,2.3s						
BRVK	**Borovoye**	**50.73**	**312**	P	**P**	**17 31 20.6**	**+0.4**
BRVK				IAmb	IAmb	17 31 23.6	
	comp=Z,3.9nm,1.3s						
DOT	**Dot Lake**	**50.99**	**34**	P	**P**	**17 31 23.2**	**+1.1**
DOT				IAmb	IAmb	17 31 29.8	
	comp=Z,8.9nm,1.6s						
SCRK	**Sand Creek**	**50.99**	**33**	P	**P**	**17 31 23.4**	**+1.2**
SCRK				IAmb	IAmb	17 31 25.0	
	comp=Z,10nm,1.6s						
EGAK	**Eagle**	**52.13**	**32**	P	**P**	**17 31 31.7**	**+1.2**
EGAK				IAmb	IAmb	17 31 41.6	
	comp=Z,18nm,2.0s						
EPYK	**Eagle Plains**	**53.72**	**30**	P	**P**	**17 31 44.4**	**+2.2**
EPYK				IAmb	IAmb	17 31 45.3	
	comp=Z,6.1nm,0.7s						
INK	**Inuvik**	**54.58**	**27**	P	**P**	**17 31 49.9**	**+1.4**
	comp=Z,0.9nm,0.5s,baz=310,slow=2.2,SNR=3.1						
INK	**Inuvik**	**54.58**	**27**	P	**P**	**17 31 49.6**	**+1.2**
INK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
INK	**Inuvik**	**54.58**	**27**	P	**P**	**17 31 49.6**	**+1.2**
INK				IAmb	IAmb	17 31 50.9	
	comp=Z,3.9nm,1.2s						
GAR	**Garm**	**54.75**	**296**	P	**P**	**17 31 50.3**	**0.0**
ARU	**Arti**	**56.48**	**319***d*	*i*P	**P**	**17 32 02.0**	**-0.3**
ARU						17 34 07.3	
ARU				S	**S**	**17 39 52.6**	**-0.3**
ARU				SS	**SS**	**17 43 40.1**	**+0.5**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARU	**Arti**	**56.48**	**319**	P	**P**	**17 32 02.2**	**-0.1**
WRAB	**Tennant Creek**	**56.85**	**188**⇑	*e*P	**P**	**17 32 05.0**	**-0.2**
WRA	**Warramunga Arr**	**56.86**	**188**	P	**P**	**17 32 05.1**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=5.5,slow=7.3,SNR=15						
C36M	**Paulatuk**	**57.62**	**25**	P	**P**	**17 32 11.5**	**+1.3**
C36M				IAmb	IAmb	17 33 14.0	
	comp=Z,17nm,1.9s						
YKA	**Yellowknife Ar**	**64.00**	**30**	P	**P**	**17 32 54.3**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=291,slow=6.0,SNR=6.3						
ARCES	**ARCESS Array B**	**64.17**	**339**	P	**P**	**17 32 53.4**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=38,slow=6.1,SNR=4.6						
FINES	**FINESS Array B**	**68.97**	**332**	P	**P**	**17 33 24.6**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=64,slow=8.7,SNR=5.3						
KBZ	**Khabaz**	**71.00**	**311**⇓	*e*P	**P**	**17 33 38.1**	**-0.1**
NB2	**NORSAR Subarra**	**74.35**	**337**	P	**P**	**17 33 57.8**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=41,slow=5.9						
NOA	**NORSAR Array B**	**74.35**	**337**	P	**P**	**17 33 57.9**	**0.0**
	comp=Z,0.8nm,0.7s,baz=40,slow=5.8,SNR=4.8						
AKASG	**Malin Array Be**	**74.43**	**322**	P	**P**	**17 33 57.6**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=49,slow=6.3,SNR=4.7						
NVAR	**Mina Array Bea**	**75.14**	**53**	P	**P**	**17 34 04.9**	**+1.8**
	comp=Z,0.8nm,0.7s,baz=283,slow=6.2,SNR=6.4						
KONO	**Kongsberg**	**75.94**	**337**⇓	*e*P	**P**	**17 34 09.3**	**+2.3**
KONO				pmax	pmax		
	comp=Z,32nm,2.5s						
TXAR	**Lajitas Array**	**90.27**	**52**	P	**P**	**17 35 23.1**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=346,slow=1.9,SNR=2.3						
LPAZ	**La Paz**	**146.83**	**60**	PKPbc	**PKPab**	**17 42 05.2**	**-0.1**
	comp=Z,2.0nm,0.6s,baz=2.5,slow=3.1,SNR=8.7						
H03N2	**Juan Fernandez**	**147.04**	**96**	T	T	20 26 30.6	
	baz=291,slow=76,SNR=15						
H03N3	**Juan Fernandez**	**147.05**	**96**	T	T	20 26 36.6	
	baz=291,slow=76,SNR=17						
H03N1	**Juan Fernandez**	**147.06**	**96**	T	T	20 26 32.6	
	baz=291,slow=76,SNR=17						

*IDC **28** 17:52:02.4±2.4,59˚58N×22˚31E,h0km,mb1 3.2/3, mb1mx2.9/33,mbtmp3.0/3,ML2.5/3,Error ellipse: s-maj=30.4km s-min=10.8km az=163.0*

*HEL **28** 17:52:04.3,59˚66N×22˚42E,h0km,ML2.2,Explosion*

*UPP **28** 17:52:05.6±1.1,59˚69N×21˚79E,h0km,ML2.2,Suspected explosion*

ISC 28 17:52:00.3±0.8,**59˚69N**±0˚04×**22˚32E**±0˚03,**h0**km,**n35**, σ1§**81**/44,**Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**1.17**	**62**	*e*P	**Pn**	**17 52 24.1**	**+0.2**
MEF				*e*S	**Sb**	**17 52 39.0**	**-0.1**
MTSE	**Matsula**	**1.24**	**141**	*e*P	**Pg**	**17 52 25.2**	**+1.1**
MTSE				*e*S	**Sg**	**17 52 41.1**	**+1.0**
AAL	**Aland**	**1.27**	**294**	P	**Pg**	**17 52 24.8**	**+0.3**
NRTU	**Norrtaelje**	**1.87**	**271**	P	**Pn**	**17 52 34.9**	**+1.4**
NRTU	**Norrtaelje**	**1.87**	**271**	*e*P	**Pn**	**17 52 34.9**	**+1.4**
ARBE	**Arbavere**	**1.88**	**96**	*e*P	**Pg**	**17 52 36.7**	**+0.4**
PVF	**Pernaja**	**1.97**	**63**	*e*P	**Pg**	**17 52 38.2**	**+0.2**
PVF				*e*S	**Sg**	**17 53 03.5**	**0.0**
PVF				MSG		17 53 08.3	
	comp=Z,16nm,0.1s						
FORU	**Forsmark**	**2.19**	**290**	P	**Pn**	**17 52 39.7**	**+1.8**
FORU	**Forsmark**	**2.19**	**290**	*e*P	**Pn**	**17 52 39.7**	**+1.8**
FLYU	**Flymyra**	**2.28**	**283**	P	**Pn**	**17 52 40.9**	**+1.8**
FLYU	**Flymyra**	**2.28**	**283**	*e*P	**Pn**	**17 52 40.9**	**+1.8**
NYNU	**Nynaeshamn**	**2.31**	**255**	P	**Pn**	**17 52 41.7**	**+2.2**
NYNU	**Nynaeshamn**	**2.31**	**255**	*e*P	**Pn**	**17 52 41.7**	**+2.2**
FIBU	**Brunna**	**2.52**	**277**	P	**Pn**	**17 52 44.9**	**+2.6**
FIA0	**FINESS Array S**	**2.56**	**45**	*e*P	**Pb**	**17 52 46.8**	**-0.2**
FIA0				*e*S	**Sb**	**17 53 17.9**	**-1.1**
FINES	**FINESS Array B**	**2.56**	**45**	Pn	**Pb**	**17 52 46.9**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=230,slow=12,SNR=54						
FINES				Sn	**Sb**	**17 53 19.7**	**+0.8**
	comp=Z,3.7nm,0.3s,baz=239,slow=23,SNR=29						
FIA1	**FINESS Array S**	**2.56**	**45**	*e*P	**Pb**	**17 52 46.8**	**-0.2**
FIA1				*e*S	**Sb**	**17 53 17.9**	**-1.1**
OSTU	**Oestervaala**	**2.67**	**284**	P	**Pn**	**17 52 46.6**	**+2.3**
OSTU	**Oestervaala**	**2.67**	**284**	*e*P	**Pn**	**17 52 46.6**	**+2.3**
IGGU	**Iggoen**	**2.76**	**298**	P	**Pn**	**17 52 47.8**	**+2.1**
IGGU	**Iggoen**	**2.76**	**298**	*e*P	**Pn**	**17 52 47.8**	**+2.1**
**K

	baz=59									
TYC	**Yuchr**	**0.25**	**202**	*i*	P		Pg	17 53 31.5	+0.5	
	baz=194									
TYC					*e*S		Sb	17 53 35.7	-0.6	
	baz=194									
SMLT	**Sun Moon Lake**	**0.26**	**192**	*i*	P		Pg	17 53 31.6	+0.5	
	baz=185									
SMLT					*e*S		Sb	17 53 35.9	-0.7	
	baz=185									
WHF	**Hehuan Shan**	**0.28**	**88**		P		Pb	17 53 32.5	-0.3	
	baz=88									
WHF					*e*S		Sb	17 53 36.9	-0.8	
	baz=88									
SSLB	**Suanglung**	**0.35**	**181**		P		Pg	17 53 32.6	-0.1	
	baz=176									
SSLB					*e*S		Sg	17 53 37.7	+0.3	
	baz=176									
VWDT	**VWDT**	**0.41**	**156**		P		Pg	17 53 34.3	+0.4	
	baz=152									
VWDT					*e*S		Sg	17 53 39.5	0.0	
	baz=152									
WHYT	**Xinyi Township**	**0.45**	**192**		*e*P		Pb	17 53 35.6	+0.1	
	baz=189									
WHYT					*e*S		Sb	17 53 42.9	+0.8	
	baz=189									
ETLH	**Xiulin Townshi**	**0.48**	**81**		P		Pg	17 53 35.6	+0.4	
	baz=82									
ETLH					*e*S		Sg	17 53 41.9	+0.2	
	baz=82									
NNS	**Nan Shan**	**0.48**	**51**		*e*S		Sg	17 53 41.3	-0.5	
	baz=46									
NNSB	**Datong**	**0.48**	**53**		P		Pg	17 53 35.4	+0.1	
	baz=59									
NNSH	**Datong**	**0.48**	**53**		P		Pg	17 53 35.1	-0.1	
	baz=46									
NNSH					*e*S		Sb	17 53 42.8	-0.4	
	baz=46									
NSTT	**Nanjuang**	**0.49**	**4**		*e*P		Pb	17 53 36.4	+0.1	
	baz=5.0									
NSTT					*e*S		Sb	17 53 43.4	0.0	
	baz=5.0									
LIOB	**Emei**	**0.51**	**6**		P		Pb	17 53 36.7	+0.2	
	baz=7.0									
NACB	**Ninganchiao**	**0.58**	**86**		*e*S		Sg	17 53 45.3	+0.5	
	baz=81									
NSK	**Sanguang**	**0.65**	**34**		*e*P		Pb	17 53 38.7	-0.2	
	baz=30									
YHNB	**Yeheng**	**0.65**	**35**		*e*P		Pg	17 53 38.5	0.0	
	baz=31									
YHNB					*e*S		Sg	17 53 46.7	-0.4	
	baz=31									
NDT	**Datong Townshi**	**0.69**	**47**		*e*P		Pg	17 53 39.0	0.0	
	baz=56									
ENTT	**Nioudou**	**0.75**	**48**		P		Pb	17 53 40.6	0.0	
	baz=48									

TAP 28 17:53:40.1, 23.09N×121.16E, h16km±1km, ML0.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDTW	**Lidau**	**0.16**	**307**	*i* P	Pg	17 53 44.4	0.0
	baz=307						
ELDTW				*e*S	Sg	17 53 47.1	-0.1
	baz=307						
CHKT	**Chengkung**	**0.19**	**87**	*e*S	Sb	17 53 49.3	+0.7
	baz=102						
TWG	**Pinlang**	**0.28**	**197**	*e*P	Pg	17 53 46.3	+0.2
	baz=206						
TWG				*e*S	Sb	17 53 50.9	-0.4
	baz=206						
TWGBT	**Beinan**	**0.28**	**195**	*e*P	Pg	17 53 46.3	+0.2
	baz=206						
TWGBT				*e*S	Sb	17 53 50.9	-0.4
	baz=206						
YULB	**Yu-li**	**0.33**	**23**	*e*S	Sg	17 53 51.7	+0.1
	baz=147						
YULB	**Yu-li**	**0.33**	**23**	*e*S	Sg	17 53 51.7	+0.1
	baz=21						

*IDC **28** 18:00:53.6±3.6, 59.35N×22.43E, h0km, mb1 2.9/3, mb1mx2.8/29, mbtmp2.8/3, ML2.4/3, Error ellipse: s-maj=48.2km s-min=11.9km az=165.0*
*HEL **28** 18:00:56.4±0.1, 59.66N×22.21E, h0km, ML2.0, ML1.9(UPP), Explosion*
*UPP **28** 18:00:58.7±1.2, 59.67N×21.81E, h0km, ML2.1, Suspected explosion*
ISC 28 18:00:54.6±0.8, 59.74N±0.04×22.33E±0.03, h0km, n39, σ0s84/49, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**1.14**	**64**	*e*P	**Pn**	**18 01 18.0**	**+0.2**
MEF				*e*S	**Sn**	**18 01 34.1**	**-0.1**
AAL	**Aland**	**1.26**	**292**	P	**Pg**	**18 01 18.2**	**-0.5**
AAL	**Aland**	**1.26**	**292**	*e*P	**Pg**	**18 01 18.3**	**-0.3**
MTSE	**Matsula**	**1.28**	**143**	*e*P	**Pg**	**18 01 18.7**	**-0.3**
MTSE				*e*S	**Sg**	**18 01 35.2**	**-0.4**
NRTU	**Norrtaelje**	**1.88**	**270**	P	**Pn**	**18 01 28.3**	**+0.4**
NRTU	**Norrtaelje**	**1.88**	**270**	*e*P	**Pn**	**18 01 28.3**	**+0.4**
ARBE	**Arbavere**	**1.88**	**98**	*e*P	**Pb**	**18 01 29.6**	**-0.2**
ARBE				*e*S	**Sg**	**18 01 55.8**	**+0.8**
PVF	**Pernaja**	**1.94**	**64**	*e*P	**Pg**	**18 01 31.8**	**0.0**
PVF				*e*S	**Sg**	**18 01 57.7**	**+0.7**
PVF				MSG		18 02 02.4	
	comp=Z,7.9nm,0.1s						
FLYU	**Flymyra**	**2.27**	**282**	P	**Pn**	**18 01 34.8**	**+1.5**
FLYU	**Flymyra**	**2.27**	**282**	*e*P	**Pn**	**18 01 34.8**	**+1.5**
NYNU	**Nynaeshamn**	**2.33**	**254**	P	**Pn**	**18 01 35.1**	**+0.9**
NYNU	**Nynaeshamn**	**2.33**	**254**	*e*P	**Pn**	**18 01 35.1**	**+0.9**
FIA0	**FINESS Array S**	**2.52**	**46**	*e*P	**Pb**	**18 01 40.4**	**-0.3**
FIA0				*e*S	**Sb**	**18 02 11.2**	**-1.0**
FINES	**FINESS Array B**	**2.52**	**46**	Pn	**Pb**	**18 01 40.4**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=225,slow=13,SNR=26						
FINES				Sn	**Sg**	**18 02 14.3**	**-1.1**
	comp=Z,2.4nm,0.3s,baz=236,slow=25,SNR=24						
FIA1	**FINESS Array S**	**2.52**	**46**	*e*P	**Pb**	**18 01 40.4**	**-0.3**
FIA1				*e*S	**Sb**	**18 02 11.2**	**-1.0**
VSU	**Vasula**	**2.61**	**117**	*e*P	**Pb**	**18 01 40.5**	**-1.6**
VSU				*e*S	**Sn**	**18 02 12.0**	**+1.8**
KEF	**Keuruu**	**2.73**	**26**	*e*P	**Pb**	**18 01 43.8**	**-0.5**
KEF				*e*S	**Sb**	**18 02 17.6**	**-0.7**
KEF				MSG		18 02 23.6	
	comp=Z,5.6nm,0.1s						
IGGU	**Iggoen**	**2.74**	**297**	P	**Pn**	**18 01 41.1**	**+1.3**
IGGU	**Iggoen**	**2.74**	**297**	*e*P	**Pn**	**18 01 41.1**	**+1.3**
GOTU	**Gotland**	**2.84**	**225**	P	**Pn**	**18 01 41.5**	**+0.4**
GOTU	**Gotland**	**2.84**	**225**	*e*P	**Pn**	**18 01 41.5**	**+0.4**
ESKU	**Eskilstuna**	**3.07**	**263**	P	**Pn**	**18 01 45.0**	**+0.8**
ESKU	**Eskilstuna**	**3.07**	**263**	*e*P	**Pn**	**18 01 45.0**	**+0.8**
VIKU	**Vikbolandet**	**3.16**	**249**	P	**Pn**	**18 01 45.9**	**+0.4**
VIKU	**Vikbolandet**	**3.16**	**249**	*e*P	**Pn**	**18 01 45.9**	**+0.4**
VSTU	**Vaestervik**	**3.67**	**238**	P	**Pn**	**18 01 53.4**	**+0.9**
VSTU	**Vaestervik**	**3.67**	**238**	*e*P	**Pn**	**18 01 53.4**	**+0.9**
BYXU	**Byxelkrok**	**3.72**	**231**	P	**Pn**	**18 01 54.1**	**+0.9**
BYXU	**Byxelkrok**	**3.72**	**231**	*e*P	**Pn**	**18 01 54.1**	**+0.9**
ASPU	**Aespoe**	**3.80**	**235**	P	**Pn**	**18 01 54.8**	**+0.5**
ASPU	**Aespoe**	**3.80**	**235**	*e*P	**Pn**	**18 01 54.8**	**+0.5**
LNKU	**Linkoeping**	**3.84**	**250**	P	**Pn**	**18 01 56.1**	**+1.2**
LNKU	**Linkoeping**	**3.84**	**250**	*e*P	**Pn**	**18 01 56.1**	**+1.2**
OSKU	**Oskarshamn**	**4.15**	**235**	P	**Pn**	**18 01 59.2**	**+0.1**
OSKU	**Oskarshamn**	**4.15**	**235**	*e*P	**Pn**	**18 01 59.2**	**+0.1**
EKSU	**Eksjoe**	**4.26**	**242**	P	**Pn**	**18 02 01.1**	**+0.4**
EKSU	**Eksjoe**	**4.26**	**242**	*e*P	**Pn**	**18 02 01.1**	**+0.4**
NOA	**NORSAR Array B**	**5.67**	**288**	Pn	**Pn**	**18 02 19.4**	**-0.6**
	comp=Z,0.0nm,0.3s,baz=40,slow=8.2,SNR=5.6						
NOA				Sn	**Sn**	**18 03 24.7**	**-1.0**
	comp=Z,0.0nm,0.3s,baz=230,slow=20,SNR=2.6						
ARCES	**ARCESS Array B**	**9.93**	**6**	Pn	**Pn**	**18 03 19.4**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=187,slow=13,SNR=8.3						

*IDC **28** 18:01:14.7±3.6, 59.63N×22.36E, h0km, mb1 2.9/3, mb1mx2.8/29, mbtmp2.7/3, ML2.3/3, Error ellipse: s-maj=50.1km s-min=12.0km az=166.0*
*UPP **28** 18:01:15.8±1.4, 59.85N×21.98E, h0km, ML2.2, Suspected explosion*
ISC 28 18:01:15.7±1.8, 59.9N±0.1×22.02E±0.08, h0km, n10, σ0s95/13, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAL	**Aland**	**1.07**	**288**	P	**Pg**	**18 01 35.2**	**-0.9**
AAL	**Aland**	**1.07**	**288**	*e*S	**Pg**	**18 01 35.6**	**-0.6**
NRTU	**Norrtaelje**	**1.73**	**265**	S	**Sn**	**18 02 10.7**	**+1.0**
FORU	**Forsmark**	**2.00**	**287**	P	**Pn**	**18 01 50.8**	**+0.2**
FLYU	**Flymyra**	**2.10**	**279**	P	**Pn**	**18 01 52.0**	**-0.1**
NYNU	**Nynaeshamn**	**2.23**	**249**	P	**Pn**	**18 01 53.5**	**-0.3**
NYNU				S	**Sn**	**18 02 22.6**	**+0.6**
FIBU	**Brunna**	**2.36**	**273**	P	**Pn**	**18 01 56.3**	**+0.7**
FINES	**FINESS Array B**	**2.55**	**50**	Pn	**Pn**	**18 01 58.9**	**+0.6**
	0.6nm,0.3s,baz=231,slow=14,SNR=7.5						
FINES				Sn	**Sn**	**18 02 31.5**	**+1.5**
	2.2nm,0.3s,baz=239,slow=26,SNR=8.1						
NOA	**NORSAR Array B**	**5.48**	**287**	Pn	**Pn**	**18 02 38.7**	**+0.1**
	0.0nm,0.3s,baz=104,slow=1.8,SNR=4.5						
NOA				Sn	**Sn**	**18 03 43.2**	**+1.0**
	0.0nm,0.3s,baz=126,slow=2.7,SNR=1.5						
ARCES	**ARCESS Array B**	**9.82**	**7**	Pn	**Pn**	**18 03 36.5**	**-1.5**
	0.2nm,0.3s,baz=186,slow=13,SNR=4.8						

TAP 28 18:01:17.9, 24.14N×121.68E, h9km, ML1.6, 1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.09**	**297**	*i* P	Pg	18 01 20.9	+0.8
	baz=297						
NACB				*i* S	Sg	18 01 22.8	+1.0
	baz=297						
TWD	**Chiawan**	**0.09**	**234**	⇓P	Pg	18 01 20.7	+0.4
	baz=231						
TWD				S	Sg	18 01 22.5	+0.6
	baz=231						
ETLH	**Xiulin Townshi**	**0.19**	**292**	P	Pg	18 01 22.9	+0.9
	baz=291						
ETLH				S	Sg	18 01 26.3	+1.6
	baz=291						
ENA	**Nanau**	**0.30**	**11**	*e*P	Pg	18 01 24.6	+0.7
	baz=12						
ENA				*e*S	Sg	18 01 28.9	+1.1
	baz=12						
WHF	**Hehuan Shan**	**0.38**	**272**	*e*P	Pb	18 01 26.3	-0.7
	baz=271						
WHF				*e*S	Sb	18 01 31.8	-1.3
	baz=271						
ESL	**Shilin**	**0.39**	**215**	*e*P	Pg	18 01 25.7	+0.2
	baz=213						
ESL				*e*S	Sb	18 01 32.9	-0.2
	baz=213						
NNSB	**Datong**	**0.40**	**317**	*e*P	Pb	18 01 27.0	-0.2
	baz=317						
NNSB				*e*S	Sb	18 01 32.9	-0.6
	baz=317						
NNSH	**Datong**	**0.40**	**317**	*e*P	Pb	18 01 26.9	-0.3
	baz=317						
NNSH				*e*S	Sb	18 01 32.8	-0.7
	baz=317						
NNS	**Nan Shan**	**0.41**	**318**	*e*P	Pb	18 01 27.2	-0.3
	baz=318						
NNS				*e*S	Sb	18 01 33.4	-0.5
	baz=318						
CHGB	**Renai**	**0.47**	**261**	*e*P	Pg	18 01 27.7	+0.6
	baz=260						
CHGB				*e*S	Sb	18 01 35.2	-0.3
	baz=260						
NDT	**Datong Townshi**	**0.49**	**342**	*e*P	Pb	18 01 28.4	-0.3
	baz=342						
NDT				*e*S	Sb	18 01 35.7	-0.3
	baz=342						
ENTT	**Nioudou**	**0.51**	**349**	*e*P	Pb	18 01 28.9	-0.2
	baz=349						
ENTT				*e*S	Sb	18 01 36.4	-0.3
	baz=349						
EGFH	**Guangfu**	**0.52**	**206**	*e*P	Pb	18 01 28.7	-0.5
	baz=206						
TWE	**Neicheng**	**0.58**	**359**	*e*P	Pb	18 01 30.1	-0.2
TWE				*e*S	Sb	18 01 38.6	-0.1
YHNB	**Yeheng**	**0.60**	**333**	*e*P	Pb	18 01 30.9	+0.2
	baz=332						
YHNB				*e*S	Sb	18 01 39.7	+0.5
	baz=332						
NSK	**Sanguang**	**0.61**	**332**	*e*P	Pb	18 01 31.0	+0.2
	baz=332						
NSK				*e*S	Sb	18 01 39.8	+0.2
	baz=332						
VWDT	**VWDT**	**0.62**	**232**	*e*P	Pb	18 01 31.1	+0.2
	baz=232						
VWDT				*e*S	Sb	18 01 40.3	+0.5
	baz=232						
NWLT	**Wulai**	**0.66**	**346**	*e*P	Pb	18 01 31.6	0.0
	baz=345						
NWLT				*e*S	Sb	18 01 41.0	+0.1
	baz=345						
HGSD	**Ruisui**	**0.68**	**200**	*e*P	Pb	18 01 31.9	0.0
	baz=199						
HGSD				*e*S	Sb	18 01 42.1	+0.7
	baz=199						
WHP	**Taichung City**	**0.68**	**282**	*e*P	Pb	18 01 32.4	+0.3
	baz=282						
WHP				*e*S	Sb	18 01 42.4	+0.7
	baz=282						
DPDB	**Guoxing**	**0.69**	**262**	*e*P	Pb	18 01 32.8	+0.6
	baz=261						
EHY	**Hungye**	**0.71**	**208**	*e*P	Pb	18 01 32.4	+0.1
	baz=206						
EHY				*e*S	Sb	18 01 42.2	0.0
	baz=206						
SSLB	**Suanglung**	**0.75**	**243**	*e*P	Pb	18 01 32.9	-0.2
	baz=242						
SSLB				*e*S	Sb	18 01 43.2	-0.2
	baz=242						
YULB	**Yu-li**	**0.82**	**205**	*e*P	Pb	18 01 34.3	0.0
	baz=205						
YULB				*e*S	Sb	18 01 46.4	+0.9
	baz=205						
TWF1	**Yuli**	**0.85**	**204**	*e*P	Pb	18 01 35.3	+0.4
	baz=203						

JMA 28 18:01:24.9±0.2, 24.85N×123.30E, h30km, M0.9, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.47**	**214**	P	Pb	18 01 34.6	-0.2
YOJ				S	Sb	18 01 40.8	-0.8
JYNG	**Yonagunijimaku**	**0.51**	**219**	P	Pb	18 01 35.2	-0.3
JYNG				*e*S	Sb	18 01 42.5	-0.3
IRIF	**Iriomote-Funau**	**0.65**	**143**	P	Pb	18 01 37.2	-0.5
IRIF				*e*S	Sn	18 01 47.0	-0.2
JKRS	**Kuro-shima**	**0.89**	**133**	P	Pn	18 01 41.4	+0.1
JKRS				S	Sn	18 01 53.2	0.0
JIJ	**Ishigaki jima**	**0.91**	**122**	P	Pn	18 01 41.1	-0.5
JIJ				S	Sn	18 01 52.9	-0.8
JISG	**Ishigakijimahi**	**0.96**	**106**	P	Pn	18 01 42.2	-0.1
JISG				S	Sn	18 01 54.3	-0.6

*IDC **28** 18:08:37.6±3.5, 59.40N×22.42E, h0km, mb1 3.0/3, mb1mx2.8/38, mbtmp2.9/3, ML2.5/3, Error ellipse: s-maj=47.0km s-min=11.5km az=164.0*
*HEL **28** 18:08:39.5±0.1, 59.68N×22.27E, h0km, ML2.4, Explosion*
*EST **28** 18:08:39.9±0.1, 59.64N×22.24E, h0km, ML2.3(HEL), Explosion*
*UPP **28** 18:08:39.3±1.8, 59.72N×22.21E, h0km, ML2.3, Suspected explosion*
ISC 28 18:08:38.2±0.8, 59.75N±0.03×22.35E±0.03, h0km, n24, σ1s36/41, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**1.13**	**65**	*e*P	**Pn**	**18 09 01.4**	**+0.1**
MEF				MSG		18 09 15.8	
	comp=Z,32nm,0.2s						
AAL	**Aland**	**1.26**	**291**	P	**Pg**	**18 09 01.7**	**-0.6**
AAL	**Aland**	**1.26**	**291**	*e*P	**Pg**	**18 09 01.7**	**-0.6**
AAL				*e*SB	**Sg**	**18 09 19.1**	**+0.6**
MTSE	**Matsula**	**1.28**	**143**	*e*PB	**Pg**	**18 09 02.1**	**-0.6**
MTSE				*e*SB	**Sg**	**18 09 18.3**	**-0.9**
ARBE	**Arbavere**	**1.88**	**98**	*e*P	**Pg**	**18 09 13.6**	**-0.5**
ARBE				*e*SG	**Sg**	**18 09 39.2**	**+0.8**
NRTU	**Norrtaelje**	**1.88**	**269**	P	**Pn**	**18 09 11.7**	**+0.1**
NRTU				S	**Sn**	**18 09 36.4**	**+0.5**
PVF	**Pernaja**	**1.93**	**64**	*e*P	**Pg**	**18 09 15.2**	**0.0**
PVF				MSG		18 09 38.9	
	comp=Z,27nm,0.2s						
PVF				*e*SG	**Sg**	**18 09 41.9**	**+1.7**
SLIT	**Slitere, Latvi**	**2.12**	**181**	*e*P	**Pn**	**18 09 15.1**	**+0.2**
SLIT				*e*SG	**Sn**	**18 09 42.4**	**+0.5**
FORU	**Forsmark**	**2.19**	**289**	P	**Pn**	**18 09 16.5**	**+0.8**
FLYU	**Flymyra**	**2.28**	**282**	P	**Pn**	**18 09 17.7**	**+0.7**
FLYU				S	**Sn**	**18 09 46.9**	**+1.2**
NYNU	**Nynaeshamn**	**2.34**	**253**	P	**Pn**	**18 09 18.6**	**+0.8**
FIA0	**FINESS Array S**	**2.51**	**46**	*e*P	**Pb**	**18 09 23.9**	**-0.1**
FIA0				*e*PB	**Pg**	**18 09 25.2**	**-0.9**
FIA0				*e*SB	**Sg**	**18 09 57.4**	**-1.2**
FIA0				MSG		18 09 59.6	
	comp=Z,7.9nm,0.1s						
FINES	**FINESS Array B**	**2.51**	**46**	Pn	**Pb**	**18 09 23.5**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=224,slow=13,SNR=32						
FINES				Sn	**Sg**	**18 09 57.5**	**-1.2**
	comp=Z,2.7nm,0.3s,baz=241,slow=26,SNR=23						
FIA1	**FINESS Array S**	**2.51**	**46**	*e*P	**Pb**	**18 09 23.9**	**-0.1**
FIA1				*e*PB	**Pg**	**18 09 25.2**	**-1.0**
FIA1				*e*SB	**Sg**	**18 09 58.4**	**-0.3**
FIA1				MSG		18 09 59.9	
	comp=Z,13nm,0.1s						
VSU	**Vasula**	**2.60**	**118**	*e*PB	**Pb**	**18 09 24.7**	**-1.0**
VSU				*e*SB	**Sb**	**18 09 58.0**	**-0.1**
KEF	**Keuruu**	**2.72**	**26**	*e*PB	**Pb**	**18 09 27.8**	**+0.2**
KEF				MSG		18 10 01.9	
	comp=Z,11nm,0.2s						
KEF				*e*SB	**Sg**	**18 10 05.1**	**-0.4**
VJF	**Virojoki**	**2.72**	**71**	*e*P	**Pn**	**18 09 25.1**	**+2.0**
VJF				*e*S	**Sb**	**18 10 00.1**	**-1.4**
VJF				MSG		18 10 01.4	
	comp=Z,13nm,0.2s						
KAF	**Kangasniemi**	**3.06**	**37**	*e*P	**Pb**	**18 09 31.7**	**-1.7**
KAF				MSG		18 10 15.2	
	comp=Z,5.3nm,0.1s						
SUF	**Sumiainen**	**3.50**	**30**	*e*P	**Pb**	**18 09 37.6**	**-3.4**
HEMU	**Hemsoen**	**3.60**	**327**	*e*P	**Pn**	**18 09 37.8**	**+2.7**
HUSU	**Husum**	**3.91**	**339**	*e*P	**Pn**	**18 09 42.5**	**+3.2**
UMU	**Umeaa**	**4.23**	**350**	*e*P	**Pn**	**18 09 47.1**	**+3.4**
UMAU				*e*SG	**Sg**	**18 10 53.6**	**-0.2**
NOA	**NORSAR Array B**	**5.67**	**288**	Pn	**Pn**	**18 10 03.3**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=249,slow=14,SNR=7.7						
NOA				Sn	**Sn**	**18 11 07.4**	**-1.9**
	comp=Z,0.0nm,0.3s,baz=138,slow=9.9,SNR=1.4						
ARCES	**ARCESS Array B**	**9.92**	**6**	Pn	**Pn**	**18 11 03.0**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=186,slow=14,SNR=11						

*IDC **28** 18:08:51.3±3.2, 59.47N×22.42E, h0km, mb1 3.1/3, mb1mx2.9/38, mbtmp3.0/3, ML2.5/3, Error ellipse: s-maj=43.0km s-min=11.5km az=165.0*
*UPP **28** 18:08:58.0±1.5, 59.68N×21.51E, h0km, ML2.4, Suspected explosion*
ISC 28 18:08:52.6±2.5, 59.8N±0.2×22.12E±0.08, h0km, n8, σ1s20/10, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAL	**Aland**	**1.14**	**291**	P	**Pg**	**18 09 15.1**	**+0.7**
NRTU	**Norrtaelje**	**1.77**	**268**	P	**Pn**	**18 09 24.8**	**+0.4**
FORU	**Forsmark**	**2.07**	**289**	P	**Pn**	**18 09 30.1**	**+1.7**
FLYU	**Flymyra**	**2.16**	**281**	P	**Pn**	**18 09 31.6**	**+1.9**
FIBU	**Brunna**	**2.41**	**275**	P	**Pb**	**18 09 35.7**	**-1.1**
FINES	**FINESS Array B**	**2.56**	**48**	Pn	**Pn**	**18 09 36.2**	**+0.9**
	1.0nm,0.3s,baz=227,slow=13,SNR=16						
FINES				Sn	**Sb**	**18 10 10.8**	**-0.5**
	1.4nm,0.3s,baz=227,slow=26,SNR=4.2						
NOA	**NORSAR Array B**	**5.55**	**288**	Pn	**Pn**	**18 10 16.9**	**+0.5**
	0.0nm,0.3s,baz=249,slow=13,SNR=9.1						
NOA				Sn	**Sn**	**18 11 20.2**	**-0.6**
	0.0nm,0.3s,baz=138,slow=9.3,SNR=1.5						
ARCES	**ARCESS Array B**	**9.89**	**7**	Pn	**Pn**	**18 11 15.4**	**-0.5**
	0.4nm,0.3s,baz=188,slow=13,SNR=11						

*SJA **28** 18:14:00.1±1.1, 20.28S×70.91W, h22km±8km, ML4.6, MW4.7*
*IDC **28** 18:14:00.2±0.8, 20.19S×70.48W, h0km, mb4.2/10, mb1 4.5/10, mb1mx4.3/25, mbtmp4.2/10, MS3.9/20, Ms1 3.9/20, ms1mx3.8/25, Error ellipse: s-maj=27.3km s-min=22.9km az=20.0*
*NEIC **28** 18:14:02.3, 20.26S×70.83W, h23km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.98; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$-0.89; $M_{r\theta}$0.12; $M_{r\phi}$0.20; $M_{\theta\phi}$-0.46; Fault plane solution: $M_0$1.07000×10^{16} NP1:ϕ_s347.74000°, δ31.89000°, λ91.34000°. NP2:ϕ_s166.17000°, δ58.12000°, λ89.17000°. Principal axes: T 1.0853, Plg77.0000°, Azm74.0000°; N -0.0347, Plg1.0000°, Azm167.0000°; P -1.0506, Plg13.0000°, Azm257.0000°;*
*NEIC **28** 18:14:02.5±2.0, 20.24S±0.03×70.78W±0.06, h18km±3km Error ellipse: s-maj=8.7km s-min=5.0km az=87.0*
*VAO **28** 18:14:04.8±1.6, 20.11S×70.74W, h32km±12km, mb4.6*
*GUC **28** 18:14:04.5±0.8, 20.25S×70.75W, h31km±3km, ML4.5*
ISC 28 18:14:03.2±0.5, 20.25S±0.02×70.76W±0.06, h21km±4km, n171, σ1s54/169, mb4.7/20, MS4.0/17, 10C-9D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.59**	**92**	⇓*i*P	**Pb**	**18 14 14.8**	**-0.1**
TA02				*i* S	**Sb**	**18 14 22.9**	**0.0**
TA02				IAML		18 14 26.4	
	comp=N,58μm,0.1s						
TA01	**Diego Aracena**	**0.63**	**120**	⇓*i*P	**Pb**	**18 14 15.4**	**-0.2**
TA01				*i* S	**Sb**	**18 14 23.7**	**-0.3**
TA01				IAML		18 14 27.5	
	comp=N,23μm,0.4s						
TA01	**Diego Aracena**	**0.63**	**120**		**Pb**	**18 14 15.4**	**-0.2**
PATCX	**Punta Patache**	**0.81**	**135**	⇓*i*P	**Pn**	**18 14 18.4**	**-1.1**
PATCX				*i* S	**Sb**	**18 14 29.1**	**0.0**
PATCX	**Punta Patache**	**0.81**	**135**		**Pn**	**18 14 18.2**	**-1.2**
PATCX	**Punta Patache**	**0.81**	**135**	*i* P	**Pn**	**18 14 18.3**	**-1.1**
PATCX				*e*S	**Sb**	**18 14 30.2**	**+1.1**
PATCX				IAML		18 14 30.9	
	comp=Z,23μm,0.5s						
PSGC	**Pisagua**	**0.88**	**43**	⇓*i*P	**Pn**	**18 14 19.5**	**-1.0**
PSGC				*i* S	**Sn**	**18 14 30.7**	**-2.0**
PSGCX	**Pisagua**	**0.88**	**43**		**Pn**	**18 14 19.5**	**-1.0**
PSGCX	**Pisagua**	**0.88**	**43**	*i* P	**Pn**	**18 14 19.5**	**-1.0**
PSGCX				*e*S	**Sb**	**18 14 33.4**	**+2.1**
PSGCX				IAML		18 14 36.3	
	comp=Z,3μm,0.4s						
PB11	**IP

PB07	**IPOC Station P**	**1.68**	**151**			**Pn**	**18 14 31.4**	**-0.1**
PB07	**IPOC Station P**	**1.68**	**151**	*i*	P	**Pn**	**18 14 31.5**	**-0.1**
PB07					IAML		18 15 00.7	
	comp=Z,9μm,0.5s							
AP01	**Chacalluta**	**1.91**	**12**	*eP*		**Pn**	**18 14 35.7**	**+1.2**
AP01				*i*	S	**Sn**	**18 14 59.0**	**+1.1**
AP01	**Chacalluta**	**1.91**	**12**			**Pn**	**18 14 34.8**	**+0.3**
PB03	**IPOC Station P**	**2.02**	**153**	⇑*i*	P	**Pn**	**18 14 36.1**	**-0.2**
PB03	**IPOC Station P**	**2.02**	**153**	*i*	P	**Pn**	**18 14 36.1**	**-0.2**
PB03					IAML		18 15 14.9	
	comp=Z,4μm,0.3s							
PB09	**IPOC Station P**	**2.09**	**138**	⇑*i*	P	**Pn**	**18 14 38.7**	**+1.4**
PB09				*i*	S	**Sn**	**18 15 04.4**	**+1.6**
PB09	**IPOC Station P**	**2.09**	**138**			**Pn**	**18 14 38.5**	**+1.3**
PB09	**IPOC Station P**	**2.09**	**138**	*i*	P	**Pn**	**18 14 38.7**	**+1.4**
PB09					IAML		18 15 13.3	
	comp=Z,8μm,0.5s							
PB04	**IPOC Station P**	**2.15**	**165**	⇑*i*	P	**Pn**	**18 14 37.5**	**-0.5**
PB04					IAML		18 15 15.8	
	comp=N,8μm,0.5s							
PB04	**IPOC Station P**	**2.15**	**165**			**Pn**	**18 14 37.7**	**-0.3**
PB04	**IPOC Station P**	**2.15**	**165**	*i*	P	**Pn**	**18 14 37.5**	**-0.5**
PB04					IAML		18 15 19.1	
	comp=Z,9μm,0.6s							
PB05	**IPOC Station P**	**2.64**	**169**	‖*i*	P	**Pn**	**18 14 43.6**	**-1.1**
PB05	**IPOC Station P**	**2.64**	**169**	*i*	P	**Pn**	**18 14 43.6**	**-1.1**
PB05					IAML		18 15 36.0	
	comp=Z,3μm,0.9s							
PB06	**IPOC Station P**	**2.69**	**156**	⇑*i*	P	**Pn**	**18 14 44.9**	**-0.5**
PB06	**IPOC Station P**	**2.69**	**156**		Pn	**Pn**	**18 14 45.0**	**-0.3**
PB06	**IPOC Station P**	**2.69**	**156**	*i*	P	**Pn**	**18 14 44.9**	**-0.5**
PB06					IAML		18 15 31.2	
	comp=Z,6μm,1.1s							
LVC	**Limon Verde**	**2.92**	**144**		Pn	**Pn**	**18 14 50.1**	**+1.4**
	comp=Z,37nm,0.3s,baz=8.2,slow=8.4,SNR=601							
LVC					LR	LR	18 15 22.9	
	comp=Z,435nm,19.4s,baz=320,slow=29							
LVC					Sn	**Sb**	**18 15 28.4**	**-1.7**
	comp=Z,377nm,0.3s,baz=117,slow=10,SNR=11							
LVC	**Limon Verde**	**2.92**	**144**		Pn	**Pn**	**18 14 50.2**	**+1.5**
LVC	**Limon Verde**	**2.92**	**144**	*i*	P	**Pn**	**18 14 50.2**	**+1.5**
LVC					IAML		18 15 38.0	
	comp=Z,1μm,0.7s							
LVC	**Limon Verde**	**2.92**	**144**	*eP*		**Pn**	**18 14 50.2**	**+1.5**
LVC				*eS*		**Sn**	**18 15 25.8**	**+2.5**
PB15	**IPOC Station P**	**3.18**	**158**			**Pn**	**18 14 51.5**	**-0.7**
PB15	**IPOC Station P**	**3.18**	**158**	*i*	P	**Pn**	**18 14 51.8**	**-0.5**
PB10	**IPOC Station P**	**3.26**	**177**		Pn	**Pn**	**18 14 51.5**	**-1.6**
PB10	**IPOC Station P**	**3.26**	**177**	*i*	P	**Pn**	**18 14 51.5**	**-1.6**
PB10					IAML		18 16 00.1	
	comp=Z,848nm,0.7s							
LPAZ	**La Paz**	**4.66**	**33**		Pn	**Pn**	**18 15 16.9**	**+3.9**
	comp=Z,4.3nm,0.3s,baz=280,slow=3.3,SNR=82							
LPAZ	**La Paz**	**4.66**	**33**			**Pn**	**18 15 16.5**	**+3.5**
GO02	**Mina Guanaco**	**5.01**	**168**			**Pn**	**18 15 16.3**	**-1.1**
YJA	**Yavi**	**5.26**	**112**	*i*	P	**Pn**	**18 15 24.0**	**+3.0**
AC01	**Pan de Azucar**	**5.88**	**179**			**Pn**	**18 15 26.2**	**-2.9**
AZAP	**Zapla**	**6.59**	**128**	*i*	P	**Pn**	**18 15 41.4**	**+2.2**
AZAP					IAML		18 17 40.9	
	comp=Z,64nm,2.5s							
AC02	**Maricunga**	**6.73**	**167**		Pn	**Pn**	**18 15 40.6**	**-0.6**
GO03	**Copiap**	**7.33**	**176**		Pn	**Pn**	**18 15 47.2**	**-1.9**
NNA	**Nana**	**10.08**	**324**		LR	LR	18 20 21.7	
	comp=Z,336nm,21.1s,baz=155,slow=37							
SIV	**San Ignacio**	**10.14**	**67**		Pn	**Pn**	**18 16 26.5**	**-1.1**
	comp=Z,3.7nm,0.3s,baz=251,slow=9.7,SNR=21							
SIV					LR	LR	18 21 07.3	
	comp=Z,2μm,18.8s,baz=266,slow=43							
CFA	**Coronel Fontan**	**11.54**	**169**		Pn	**Pn**	**18 16 51.3**	**+4.5**
	comp=Z,0.6nm,0.3s,baz=358,slow=12,SNR=5.2							
CFA					LR	LR	18 21 26.2	
	comp=Z,691nm,19.8s,baz=334,slow=39							
PTLB	**Pontes e Lacer**	**12.05**	**69**	*eP*		**Pn**	**18 16 52.9**	**-0.9**
VILB	**Vilhena**	**12.45**	**56**	*eP*		**Pn**	**18 16 58.7**	**-0.6**
VILB				*eS*		**Sn**	**18 19 16.2**	**-1.2**
SAML	**Samuel**	**13.41**	**34**		Pn	**Pn**	**18 17 08.9**	**-3.5**
CPUP	**Villa Florida**	**13.74**	**119**		Pn	**Pn**	**18 17 18.9**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=288,slow=10,SNR=6.7							
CPUP					LR	LR	18 23 15.1	
	comp=Z,544nm,21.7s,baz=296,slow=41							
CPUP	**Villa Florida**	**13.74**	**119**			**Pn**	**18 17 13.3**	**-3.5**
SALV	**Santo Antonio**	**14.36**	**76**	*eP*		**Pn**	**18 17 33.5**	**-0.1**
H03N1	**Juan Fernandez**	**15.01**	**207**	T		T	18 32 58.1	
	baz=34,slow=72,SNR=280							
H03N2	**Juan Fernandez**	**15.02**	**207**	T		T	18 32 53.9	
	baz=34,slow=72,SNR=224							
H03N3	**Juan Fernandez**	**15.03**	**207**	T		T	18 32 52.8	
	baz=34,slow=72,SNR=183							
C2SB	**Chapadao do Su**	**16.96**	**88**	*eP*		**Pn**	**18 17 59.9**	**+0.5**
TRCB	**Terra Rica**	**17.06**	**102**	*eP*		**Pn**	**18 18 01.3**	**+0.8**
CLDB	**Colider**	**17.15**	**59**	*eP*		**Pn**	**18 18 00.6**	**-1.1**
PTGB	**Pitanga**	**17.84**	**108**	*eP*		**P**	**18 18 12.7**	**+1.8**
ITAB	**Concordia**	**18.41**	**116**	*eP*		**Pn**	**18 18 11.2**	**+1.0**
ARAG	**Araguaiana, MT**	**18.58**	**79**	*eP*		**Pn**	**18 18 19.7**	**+0.4**
MACA	**Manacapuru-AM**	**19.62**	**31**	*eP*		**P**	**18 18 29.5**	**-0.9**
NPGB	**Novo Progresso**	**19.88**	**51**	*eP*		**P**	**18 18 31.9**	**-1.4**
FRTB	**Fartura**	**19.92**	**103**	*eP*		**P**	**18 18 33.7**	**0.0**
PLCA	**Paso Flores**	**20.42**	**180**	P		Pn	18 18 40.6	-0.6
PLCA					LR	LR	18 25 35.4	
	comp=Z,263nm,18.9s,baz=354,slow=34							
PLCA	**Paso Flores**	**20.42**	**180**	P		**P**	**18 18 37.9**	**-1.2**
IPMB	**Ipameri, GO**	**21.42**	**88**	*eP*		**P**	**18 18 49.6**	**-0.4**
PTGA	**Pitinga**	**22.08**	**30**	P		**P**	**18 18 55.5**	**-1.6**
	comp=Z,9.2nm,0.4s,baz=216,slow=15,SNR=19							
PTGA	**Pitinga**	**22.08**	**30**	P		**P**	**18 18 54.9**	**-2.2**
PTGA					IAmb	IAmb	18 18 58.9	
	comp=Z,22nm,1.1s							
PTGA	**Pitinga**	**22.08**	**30**	*eP*		**P**	**18 18 56.3**	**-0.7**
BDFB	**Brasilia**	**22.11**	**82**	P		**P**	**18 18 55.7**	**-1.8**
	comp=Z,3.2nm,0.3s,baz=274,slow=5.8,SNR=3.6							
BDFB					LR	LR	18 29 01.1	
	comp=Z,934nm,20.2s,baz=274,slow=41							
BDFB	**Brasilia**	**22.11**	**82**	P		**P**	**18 18 55.8**	**-1.8**
GCUF	**Volcan Galeras**	**22.30**	**342**	*eP*		P	18 19 07.4	+7.5
SOTA	**Rioblanco**	**22.97**	**345**	*eP*		**P**	**18 19 11.0**	**+4.0**
BBAC	**Balboa, Cauca**	**23.03**	**346**	*eP*		**P**	**18 19 10.9**	**+3.6**
PCON	**Cinco Dias**	**23.11**	**346**	*eP*		**P**	**18 19 15.1**	**+6.6**
PRAC	**Prado**	**24.15**	**350**	*eP*		**P**	**18 19 17.1**	**-0.9**
VILC	**Villavicencio,**	**24.38**	**353**	*eP*		**P**	**18 19 18.5**	**-1.7**
ORTC	**Ortega, Tolima**	**24.41**	**349**	*eP*		**P**	**18 19 22.0**	**+1.6**
PRPB	**Parauapebas**	**24.68**	**58**	*eP*		**P**	**18 19 22.3**	**-0.6**
SMTB	**Santa Maria do**	**25.08**	**67**	*eP*		**P**	**18 19 26.1**	**-0.5**
ROSC	**El Rosal**	**25.18**	**352**	LR		LR	18 30 48.8	
	comp=Z,524nm,18.3s,baz=206,slow=40							
RREF	**El Recreo**	**25.39**	**349**	*eP*		**P**	**18 19 33.2**	**+3.2**
MC01	**Montes Claros**	**25.67**	**87**	*eP*		**P**	**18 19 31.1**	**-0.8**
JANB	**Januaria**	**25.71**	**83**	*eP*		**P**	**18 19 32.2**	**-0.1**
GUY2C	**Guyana, Caldas**	**25.71**	**349**	*eP*		**P**	**18 19 36.8**	**+4.1**
SPBC	**San Pablo de B**	**25.94**	**352**	*eP*		**P**	**18 19 34.4**	**+0.1**
RUSC	**La Rusia**	**26.08**	**355**	*eP*		**P**	**18 19 36.0**	**-0.1**
TAMC	**Tame, Arauca**	**26.54**	**358**	*eP*		**P**	**18 19 40.1**	**+0.5**
SMLC	**San Martn de**	**29.05**	**353**	*eP*		**P**	**18 19 59.6**	**-2.5**
SJCC	**San Jacinto, C**	**30.27**	**351**	*eP*		**P**	**18 20 11.4**	**-1.5**
T57A	**Hurt**	**57.50**	**352**	P		**P**	**18 23 50.5**	**-0.3**
WVT	**Waverly**	**58.35**	**344**	P		**P**	**18 23 55.8**	**-1.0**
WVT					IAmb	IAmb	18 24 08.0	
	comp=Z,5.9nm,1.0s							
TXAR	**Lajitas Array**	**58.62**	**326**	P		**P**	**18 24 00.0**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=156,slow=6.3,SNR=5.2							
TXAR					LR	LR	18 48 07.7	
	comp=Z,58nm,18.6s,baz=0.0,slow=35							
MIAR	**Mount Ida**	**58.65**	**338**	P		**P**	**18 23 58.3**	**-0.7**
MIAR					IAmb	IAmb	18 24 00.4	
	comp=Z,12nm,1.2s							
W39A	**Magazine**	**59.31**	**338**	P		**P**	**18 24 02.2**	**-1.3**
W39A					IAmb	IAmb	18 24 24.6	
	comp=Z,6.5nm,0.9s							
X37A	**Clayton**	**59.34**	**336**	P		**P**	**18 24 03.4**	**-0.4**
U40A	**Yellville**	**60.05**	**339**	P		**P**	**18 24 08.4**	**-0.2**
U40A					IAmb	IAmb	18 24 10.3	
	comp=Z,6.5nm,1.1s							
S44A	**Carbondale**	**60.20**	**343**	P		**P**	**18 24 09.5**	**-0.1**
HHAR	**Hobbs**	**60.35**	**339**	P		**P**	**18 24 10.0**	**-0.6**
HHAR					IAmb	IAmb	18 24 11.8	
	comp=Z,14nm,1.4s							
MGMO	**Mountain Grove**	**60.59**	**340**	P		**P**	**18 24 11.0**	**-1.3**
MGMO					IAmb	IAmb	18 24 33.3	
	comp=Z,5.7nm,0.9s							
MNTX	**Cornudas Mount**	**61.40**	**327**	P		**P**	**18 24 18.3**	**+0.4**
VNA3	**Neumayer Olymp**	**61.81**	**161**	P		**P**	**18 24 21.4**	**+1.2**
N49A	**Columbus Grove**	**62.12**	**349**	P		**P**	**18 24 22.0**	**-0.6**
SNAA	**Sanae**	**64.02**	**161**	P		**P**	**18 24 35.9**	**+1.0**
SNAA	**Sanae**	**64.02**	**161**	P		**P**	**18 24 35.8**	**+0.8**
SNAA					IAmb	IAmb	18 24 37.0	
	comp=Z,13nm,1.4s							
SRU	**San Rafael Swe**	**69.80**	**328**	P		**P**	**18 25 13.0**	**+0.8**
DBIC	**Dimbokro**	**70.06**	**75**	P		**P**	**18 25 11.5**	**-2.7**
	comp=Z,6.6nm,1.0s,baz=186,slow=10,SNR=4.2							
DBIC					LR	LR	18 54 45.3	
	comp=Z,198nm,19.3s,baz=226,slow=35							
PDAR	**Pinedale Array**	**72.17**	**331**	P		**P**	**18 25 27.3**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=107,slow=3.6,SNR=3.7							
PDAR					LR	LR	18 59 42.7	
	comp=Z,42nn,18.4s,baz=122,slow=38							
TBI	**Tubuai**	**72.26**	**251**	*e*LR		LR	18 47 50.2	
	comp=Z,151nm,25.2s							
TPAW	**Teton Pass**	**73.38**	**331**	P		**P**	**18 25 32.8**	**-1.0**
NVAR	**Mina Array Bea**	**73.45**	**323**	P		**P**	**18 25 36.0**	**+1.7**
	comp=Z,1.0nm,0.8s,baz=150,slow=6.2,SNR=5.3							
NVAR					LR	LR	18 54 31.8	
	comp=Z,34nn,18.3s,baz=258,slow=33							
FXWY	**Fox Creek**	**73.53**	**331**	P		**P**	**18 25 35.7**	**+1.0**
ULM	**Lac du Bonnet**	**73.62**	**344**	LR		LR	18 59 49.8	
	comp=Z,66nm,21.4s,baz=168,slow=37							
FLWY	**Flagg Ranch**	**73.72**	**331**	P		**P**	**18 25 36.1**	**+0.3**
FLWY					IAmb	IAmb	18 25 38.9	
	comp=Z,8.0nm,0.9s							
RLMT	**Red Lodge**	**73.91**	**333**	P		**P**	**18 25 36.5**	**-0.4**
RLMT					IAmb	IAmb	18 25 39.4	
	comp=Z,7.9nm,1.1s							
PPT2	**Papeete2**	**73.92**	**257**	*e*S		S	18 35 20.3	+12
	comp=Z,86nm,25.0s							
PPT2	**Papeete2**	**73.92**	**257**	*e*LR		LR	18 48 37.0	
	comp=Z,158nm,24.0s							
YNE	**Yellowstone No**	**74.14**	**332**	P		**P**	**18 25 37.0**	**-1.3**
YHH	**Holmes Hill**	**74.34**	**332**	P		**P**	**18 25 39.3**	**-0.2**
GCMT	**Greycliff**	**74.61**	**333**	P		**P**	**18 25 40.0**	**-0.8**
SCHQ	**Schefferville**	**74.85**	**2**	LR		LR	18 58 17.1	
	comp=Z,54nm,21.6s,baz=274,slow=36							
DLMT	**Dillon**	**75.57**	**331**	P		**P**	**18 25 45.6**	**-0.8**
DLMT					IAmb	IAmb	18 25 50.5	
	comp=Z,7.3nm,1.3s							
EGMT	**Eagleton**	**76.41**	**334**	P		**P**	**18 25 49.5**	**-1.5**
EGMT					IAmb	IAmb	18 25 53.2	
	comp=Z,7.4nm,1.0s							
SYO	**Syowa Base**	**78.27**	**160**	⇑*e*X		P	18 25 51.6	-10
SYO	**Syowa Base**	**78.27**	**160**	‖*e*PcP		**P**	**18 26 05.3**	**+4.2**
TORD	**Torodi Ar. Bea**	**78.58**	**71**	P		**P**	**18 26 02.7**	**-1.1**
	comp=Z,7.9nm,0.8s,baz=256,slow=4.7,SNR=30							
TORD					LR	LR	18 59 41.0	
	comp=Z,276nm,18.8s,baz=245,slow=35							
NEW	**Newport**	**79.81**	**331**	LR		LR	19 04 01.5	
	comp=Z,39nm,18.2s,baz=80,slow=38							
MAW	**Mawson**	**86.02**	**164**	LR		LR	19 07 47.5	
	comp=Z,64nm,18.2s,baz=230,slow=38							
ESDC	**Sonseca Array**	**86.17**	**45**	P		**P**	**18 26 42.6**	**-0.4**
	comp=Z,1.6nm,1.0s,baz=256,slow=5.5,SNR=5.5							
ESDC					LR	LR	19 01 10.8	
	comp=Z,60nm,21.6s,baz=240,slow=33							
YKA	**Yellowknife Ar**	**89.44**	**341**	P		**P**	**18 26 58.6**	**+0.6**
	comp=Z,5.6nm,0.9s,baz=136,slow=5.2,SNR=57							
YKA					LR	LR	19 09 15.9	
	comp=Z,59nm,21.7s,baz=0.0,slow=37							
DLBC	**Dease Lake**	**92.30**	**333**	LR		LR	19 11 26.4	
	comp=Z,62nn,19.0s,baz=192,slow=37							
H11S2	**WAKE ISLAND Hyl**	**25.99**	**279**	T		T	20 52 24.2	
	baz=102,slow=74,SNR=140							
H11S1	**WAKE ISLAND Hyl**	**26.00**	**279**	T		T	20 52 24.8	
	baz=102,slow=74,SNR=117							
H11S3	**WAKE ISLAND Hyl**	**26.01**	**279**	T		T	20 52 22.4	
	baz=102,slow=74,SNR=164							
H11N3	**WAKE ISLAND Hyl**	**26.05**	**280**	T		T	20 52 20.7	
	baz=101,slow=75,SNR=95							
H11N2	**WAKE ISLAND Hyl**	**26.06**	**280**	T		T	20 52 27.4	
	baz=101,slow=75,SNR=93							
H11N1	**WAKE ISLAND Hyl**	**26.06**	**280**	T		T	20 52 21.8	
	baz=101,slow=75,SNR=101							
WRA	**Warramunga Arr**	**133.10**	**213**	PKP		**PKPdf**	**18 33 17.7**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=153,slow=1.9,SNR=6.6							
ZALV	**Zalesovo Beam**	**141.52**	**23**	PKhKP		PKPpre	18 33 28.1	
	comp=Z,0.4nm,0.3s,baz=335,slow=23,SNR=2.3							
MAKZ	**Makanchi**	**145.42**	**34**			**PKPab**	**18 33 39.9**	**+0.2**
NIL	**Nilore**	**145.44**	**60**			**PKPbc**	**18 33 39.6**	**-0.5**
MK31	**Makanchi Array**	**145.59**	**33**			**PKPab**	**18 33 40.5**	**+0.1**
MKAR	**Makanchi Array**	**145.59**	**33**	PKPbc		**PKPab**	**18 33 40.5**	**+0.1**
	comp=Z,10nm,0.8s,baz=323,slow=3.3,SNR=75							
KSH	**Kashi**	**145.62**	**49**	PKPbc		**PKPdf**	**18 33 38.3**	**-2.0**
KSH				pPKP		pPKPdf	18 33 48.5	+1.3
KSH				PP		**PP**	**18 37 02.0**	**+0.8**
KLR	**Kul'dur**	**145.94**	**333**	PKPbc		**PKPab**	**18 33 41.2**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=264,slow=11,SNR=4.1							
USRK	**Ussuriysk Ar.**	**149.52**	**327**	PKPbc		**PKPbc**	**18 33 51.1**	**+0.1**
	comp=Z,3.6nm,0.9s,baz=80,slow=1.6,SNR=6.6							
MJAR	**Matsushiro Arr**	**149.94**	**309**	PKPbc		**PKiKP**	**18 33 52.8**	**-0.4**
	comp=Z,2.5nm,0.8s,baz=149,slow=0.9,SNR=7.7							
MAT	**Matsushiro**	**149.94**	**309**	PKP		**PKiKP**	**18 33 52.9**	**-0.3**
SONM	**Songino Array**	**152.38**	**4**	PKPbc		**PKPbc**	**18 33 57.1**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=1.9,slow=2.2,SNR=7.4							
ULN	**Ulaanbaatar**	**152.39**	**3**			**PKPdf**	**18 33 51.5**	**+0.5**
GTA	**Gaotai**	**159.25**	**21**	*e*PKP		**PKPdf**	**18 34 04.5**	**+4.1**
LZH	**Lanzhou**	**163.52**	**16**	*e*PKP		**PKPdf**	**18 34 04.5**	**-0.5**
LZH				pPKP		pPKPdf	18 34 10.3	-1.1
LZH				sPKP			18 34 12.5	
LZH				PKP		**PKPab**	**18 34 58.8**	**+2.6**
LZH				LR		LR		
	comp=N,56nm,18.1s							
LZH				LR		LR		
	comp=E,60nm,18.2s							
LZH				LR		LR		
	comp=Z,79nm,20.0s							

*IDC **28** 18:23:46.0±1.1,36°.86N×135°.32E,h359km±15km, mb2.6/2, mb1 2.8/7, mb1mx2.6/41, mbtmp3.4/7, Error ellipse: s-maj=24.3km s-min=20.2km az=68.0*
*JMA **28** 18:23:46.4±0.2,36°.82N×135°.29E,h353km±2km, M2.5*
ISC 28 18:23:46.0±1.0, 36°.8N±0°.1×135°.28E±0°.08, h350km, n16, σ0°84/19, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JWT	**Wachi**	**1.56**	**176**	P		**Pn**	**18 24 35.1**	**+0.5**
JWT				*e*S		**S**	**18 25 13.3**	**-0.2**
JYTA	**Yamagatataniai**	**1.71**	**136**	P		**Pn**	**18 24 36.1**	**+0.6**
JYTA				S		**S**	**18 25 15.1**	**0.0**
JOI	**OKI**	**1.73**	**252**	P		**Pn**	**18 24 36.5**	**+1.0**
JSZ	**Suzu**	**1.77**	**69**	P		**Pn**	**18 24 36.6**	**+0.9**
MAT	**Matsushiro**	**2.37**	**96**	P		**Pn**	**18 24 40.9**	**+0.8**
MAT				*e*S		**S**	**18 25 24.2**	**+0.7**
MAT	**Matsushiro**	**2.37**	**96**	P		**Pn**	**18 24 40.9**	**+0.8**
MJAR	**Matsushiro Arr**	**2.37**	**96**	P		**Pn**	**18 24 41.3**	**+1.2**
	0.6nm,0.3s,baz=278,slow=9.4,SNR=60							
JSD	**Sado**	**2.65**	**62**	P		**Pn**	**18 24 43.0**	**+0.7**
JYN	**Shimob**	**2.96**	**116**	P		**Pn**	**18 24 45.5**	**+0.4**
JRY	**Ryogami san**	**3.03**	**105**	P		**Pn**	**18 24 46.7**	**+1.0**
JNU	**Nakatsue**	**5.18**	**226**	P		**Pn**	**18 25 08.1**	**+0.4**
	0.4nm,0.3s,baz=297,slow=13,SNR=2.6							
KSRS	**Korea Array**	**5.91**	**278**	P		**Pn**	**18 25 16.6**	**+0.9**
	baz=105,slow=12,SNR=4.1							
USRK	**Ussuriysk Ar.**	**7.77**	**342**	P		**Pn**	**18 25 37.8**	**+0.6**
	baz=160,slow=11,SNR=9.3							
ASAJ	**Asahikawa**	**9.15**	**35**	P		**Pn**	**18 25 52.5**	**-1.2**
	1.7nm,0.3s,baz=240,slow=12,SNR=20							
MKAR	**Makanchi Array**	**40.05**	**301**	P		**P**	**18 30 47.7**	**-0.6**
	0.1nm,0.4s,baz=99,slow=8.9,SNR=1.8							
WRA	**Warramunga Arr**	**56.48**	**181**	P		**P**	**18 32 51.9**	**-0.8**
	0.4nm,0.4s,baz=359,slow=7.6,SNR=9.0							

*IDC **28** 18:28:59.7±0.8,28°.06N×140°.19E,h406km±12km, mb2.9/7, mb1 3.0/11,mb1mx2.8/38,mbtmp3.7/11, Error ellipse: s-maj=41.0km s-min=12.2km az=76.0*
*JMA **28** 18:29:00.4±0.1,28°.33N×140°.78E,h428km, M3.5*
ISC 28 18:29:00.6±0.8, 28°.24N±0°.08×140°.5E±0°.2, h428km, n22, σ2°16/30, mb3.5/8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.90**	**126**	P		**P**	**18 29 57.9**	**-0.8**
CBIJ				*e*S		**S**	**18 30 42.8**	**-2.8**
JCJ	**Chichijima**	**1.90**	**126**	P		**P**	**18 29 57.8**	**-0.9**
	21nm,0.3s,baz=288,slow=21,SNR=14							
JCJ				S		**S**	**18 30 42.4**	**-3.2**
	29nm,0.3s,baz=276,slow=23,SNR=9.2							
JHH2	**Haha-jima-NKT2**	**2.21**	**136**	P		**P**	**18 29 59.8**	**-0.7**
JHH2				S		**S**	**18 30 46.7**	**-2.1**
JHJ2	**Mitsune**	**4.89**	**354**	P		**P**	**18 30 23.2**	**+0.6**
JHJ2				*e*S		**S**	**18 31 28.0**	**-1.7**
JHJ	**Hachijo jima 2**	**4.90**	**353**	P		**P**	**18 30 23.7**	**+1.0**
	20nm,0.3s,baz=78,slow=22,SNR=17							
JHJ				S		**S**	**18 31 26.1**	**-3.7**
	2.6nm,0.3s,baz=81,slow=17,SNR=1.6							
BSO3	**Boso 3**	**6.54**	**0**	*e*S		**S**	**18 31 58.9**	**-1.6**
BSO4	**Boso 4**	**6.73**	**359**	*e*S		**S**	**18 32 02.3**	**-2.2**
JOD2	**Odawara 2**	**7.10**	**351**	*e*S		**S**	**18 32 10.8**	**-1.3**
JRY	**Ryogami san**	**7.87**	**351**	P		**P**	**18 30 54.8**	**+0.4**
JRY				*e*S		**S**	**18 32 24.7**	**-2.8**
JAG	**Ashikaga**	**8.21**	**354**	P		**P**	**18 30 57.6**	**-0.4**
JAG				S		**S**	**18 32 29.9**	**-4.5**
JHO	**Hitachi**	**8.35**	**1**	P		**P**	**18 31 00.8**	**+1.3**
JHO				*e*S		**S**	**18 32 35.4**	**-1.8**
MJAR	**Matsushiro Arr**	**8.50**	**348**	P		**P**	**18 31 02.6**	**+1.5**
	0.1nm,0.3s,baz=241,slow=33,SNR=4.3							
JFK	**Kawauchi**	**9.11**	**2**	*e*S		**S**	**18 32 49.4**	**-3.5**
USRK	**Ussuriysk Ar.**	**17.32**	**339**	P		**P**	**18 32 38.8**	**+2.0**
	baz=154,slow=9.9,SNR=5.5							
KLR	**Kul'dur**	**22.01**	**345**	P		**P**	**18 33 23.4**	**+2.1**
	1.2nm,0.6s,baz=201,slow=5.2,SNR=6.4							
HHC	**Hu-ho-hao-te**	**26.79**	**306**	*eP*		**P**	**18 34 02.0**	**-2.3**
HHC					pmax	pmax		
	comp=Z,10.0nm,0.7s							
HHC					pmax	pmax		
	comp=Z,45nm,5.5s							
WRA	**Warramunga Arr**	**48.26**	**188**	P		**P**	**18 36 59.8**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=4.7,slow=7.7,SNR=10							
MKAR	**Makanchi Array**	**48.57**	**309**	P		**P**	**18 37 02.8**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=74,slow=11,SNR=2.4							
YKA	**Yellowknife Ar**	**71.86**	**28**	P		**P**	**18 39 40.5**	**+2.1**
	comp=Z,0.1nm,0.4s,baz=229,slow=17,SNR=2.7							
ARCES	**ARCESS Array B**	**71.96**	**340**	P		**P**	**18 39 40.9**	**+2.0**
	comp=Z,0.5nm,0.5s,baz=76,slow=9.4,SNR=7.6							
FINES	**FINESS Array B**	**76.25**	**333**	P		**P**	**18 40 05.1**	**+1.6**
	comp=Z,1.6nm,0.5s,baz=70,slow=5.4,SNR=15							
AKASG	**Malin Array Be**	**80.79**	**323**	P		**P**	**18 40 28.8**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=53,slow=5.3,SNR=3.2							

*IDC **28** 18:36:33.2±2.5,20°.97S×71°.00W,h0km, mb3.5/2, mb1 3.7/3, mb1mx3.5/16, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=77.4km s-min=63.6km az=137.0*
*GUC **28** 18:36:41.3±0.7,20°.28S×70°.74W,h31km±3km, ML3.4*
**ISC

RANC	**El Ranchito**	**1.04**	**338**	*eP*	Pn	18 45 20.7	-11
RANC				*eS*	Sn	18 45 34.8	-11
RANC				IAML		18 45 37.9	
	comp=Z,1μm,0.2s						
PACA	**Pacayal**	**1.08**	**337**	*eP*	**Pn**	**18 45 32.5**	**-0.2**
PACA	**Pacayal**	**1.08**	**337**	*eP*	**Pn**	**18 45 32.5**	**-0.2**
PACA				*eS*	**Sn**	**18 45 46.9**	**0.0**
TECA	**Tecapa**	**1.19**	**330**	*eP*	**Pn**	**18 45 34.1**	**+0.1**
TECA	**Tecapa**	**1.19**	**330**	*eP*	**Pn**	**18 45 34.1**	**+0.1**
TECA				*eS*	**Sb**	**18 45 49.6**	**-0.3**
FAGO	**Alcalda de S**	**1.24**	**350**	*eP*	**Pn**	**18 45 34.5**	**-0.1**
FAGO	**Alcalda de S**	**1.24**	**350**	*eP*	**Pn**	**18 45 34.5**	**-0.1**
FAGO				*eS*	**Sn**	**18 45 50.8**	**+0.2**
LFRS	**El Faro**	**1.62**	**315**	*eP*	**Pn**	**18 45 40.1**	**+0.1**
LFRS	**El Faro**	**1.62**	**315**	*eP*	**Pn**	**18 45 40.1**	**+0.1**
LFRS				*eS*	**Sn**	**18 46 00.2**	**0.0**

*INET **28** 18:53:52.9, 11°.43N×85°.66W, h178km, ML2.9*
*UCR **28** 18:53:53.8±1.2, 11°.36N×85°.66W, h163km±4km, MD3.9*
ISC 28 18:53:55.0±2.5,**11°.36N**±0°.08×**85°.6W**±0°.1,**h158**km±16km,
n21,σ0s72/34,4C,Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUAI	**Buenos Aires**	**0.57**	**147**	*iP*	**Pn**	**18 54 17.6**	**-0.1**
BUAI				*iS*	**Sn**	**18 54 35.6**	**+0.6**
GB1A	**Borinquen Arri**	**0.59**	**156**	*eP*	**Pn**	**18 54 17.6**	**-0.3**
GB1A				*iS*	**Sn**	**18 54 36.5**	**+1.2**
GBS3	**Finca Las Img**	**0.60**	**162**	*iP*	**Pn**	**18 54 17.1**	**-0.8**
GBS3				*iS*	**Sn**	**18 54 35.6**	**+0.2**
BUEV	**Buena Vista**	**0.60**	**157**	*eP*	**Pn**	**18 54 17.3**	**-0.6**
BUEV				*eS*	**Sn**	**18 54 36.5**	**+1.1**
LAPC	**Finca la Perla**	**0.62**	**161**	*iP*	**Pn**	**18 54 16.9**	**-1.1**
LAPC				*iS*	**Sn**	**18 54 36.0**	**+0.5**
GPS2	**Hotel Rincn d**	**0.67**	**155**	*eP*	**Pn**	**18 54 17.6**	**-0.7**
NY14	**Universidad de**	**0.72**	**171**	*iP*	**Pn**	**18 54 18.0**	**-0.5**
NY14				*iS*	**Sn**	**18 54 36.9**	**+0.5**
ACON	**Acoyapa**	**0.76**	**37**	*eP*	**Pn**	**18 54 18.3**	**-0.5**
ACON				*eS*	**Sn**	**18 54 36.1**	**-0.8**
LIM1	**Limonal**	**0.76**	**150**	*iP*	**Pn**	**18 54 18.4**	**-0.5**
HORNC	**Hornillas**	**0.79**	**145**	*iP*	**Pn**	**18 54 18.7**	**-0.3**
HORNC				*iS*	**Sn**	**18 54 37.1**	**-0.3**
COLC	**Colonia**	**0.81**	**148**	*iP*	**Pn**	**18 54 18.9**	**-0.3**
CUI	**Cuipilapa**	**0.84**	**146**	*iP*	**Pn**	**18 54 19.3**	**-0.1**
CUI				*eS*	**Sn**	**18 54 39.1**	**+1.1**
PTEN	**Parque Tenorio**	**0.91**	**135**	*iP*	**Pn**	**18 54 19.7**	**-0.2**
ACAL	**Aguas Claras**	**0.94**	**140**	*iP*	**Pn**	**18 54 20.1**	**-0.1**
ACAL				*iS*	**Sn**	**18 54 39.7**	**+0.4**
PLVR	**Palo Verde**	**1.05**	**164**	*eP*	**Pn**	**18 54 20.3**	**-0.8**
PLVR				*eS*	**Sn**	**18 54 41.4**	**+0.2**
GUAI	**GUAI**	**1.09**	**173**	*iP*	**Pn**	**18 54 20.6**	**-0.7**
GUAI				*iS*	**Sn**	**18 54 41.3**	**-0.3**
JTS	**Las Juntas de**	**1.26**	**147**	*eP*	**Pn**	**18 54 22.1**	**-0.8**
CEDE	**Laguna Cedeo**	**1.27**	**133**	*eP*	**Pn**	**18 54 22.2**	**-0.8**
ARE1	**Arenal 1**	**1.27**	**134**	*eP*	**Pn**	**18 54 23.1**	**+0.1**
ARE1				*eS*	**Sn**	**18 54 46.4**	**+1.9**
LCR2	**La Lucha 2**	**2.28**	**135**	*eP*	**Pn**	**18 54 33.7**	**-0.5**
CSGN	**Cosiguina Volc**	**2.47**	**311**	*eP*	**Pn**	**18 54 36.4**	**+0.2**

*MEX **28** 20:00:59.9±0.3, 27°.80N×112°.37W, h16km, MD3.6*
*ECX **28** 20:01:00.5±0.5, 27°.10N×111°.81W, h5km±6km, MD3.2*
ISC 28 20:00:58.1±4.4,**27°.8N**±0°.2×**112°.2W**±0°.2,**h10**km,**n4,**
σ0s27/8,1D,Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.51**	**184**	*eP*	**Pg**	**20 01 08.3**	**+0.2**
SRIG				*eS*	**Sg**	**20 01 14.7**	**-0.2**
SRIG	**Santa Rosalia**	**0.51**	**184**	*eP*	**Pg**	**20 01 08.3**	**+0.2**
SRIG				*iS*	**Sg**	**20 01 14.7**	**-0.2**
GUYB	**Guaymas**	**1.17**	**87**	*eP*	**Pb**	**20 01 20.2**	**-0.2**
GUYB				*eS*	**Sb**	**20 01 36.0**	**+0.3**
GUYB	**Guaymas**	**1.17**	**87**	*eP*	**Pb**	**20 01 20.2**	**-0.2**
GUYB				*eS*	**Sb**	**20 01 35.7**	**0.0**

*GII **28** 20:06:31.0±0.0, 33°.78N×35°.07E, h5km*
*GRAL **28** 20:06:31.0±0.4, 33°.99N×35°.11E, h32km±1km, MD2.6*
ISC 28 20:06:27.4±2.7,**33°.9N**±0°.1×**35°.2E**±0°.1,**h4**km±14km,**n15,**
σ0s64/25,Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DQRL	**Deir Qamar**	**0.41**	**121**	*eP*	**Pn**	**20 06 40.7**	**+0.6**
BHL	**Bhannes**	**0.42**	**92**	*eP*	**Pn**	**20 06 40.2**	**0.0**
QRWL	**Qaraoun**	**0.58**	**130**	*eP*	**Pn**	**20 06 43.1**	**+0.7**
QRWL				*eS*	**Sn**	**20 06 51.9**	**-0.4**
RCY	**Rachaya**	**0.71**	**126**	*eP*	**Pn**	**20 06 45.0**	**+0.8**
RCY				*eS*	**Sn**	**20 06 55.5**	**-0.2**
SHBL	**Chebaa**	**0.75**	**139**	*eP*	**Pn**	**20 06 45.6**	**+0.7**
NATI	**Neve Ativ**	**0.82**	**143**	Pg	**Pn**	**20 06 46.2**	**+0.6**
NATI				Sg	**Sn**	**20 06 57.2**	**-0.9**
GEM	**Giv'at Ha'Em**	**0.82**	**149**	Pg	**Pn**	**20 06 46.1**	**+0.4**
GEM				Sg	**Sb**	**20 06 56.9**	**+1.2**
KSDI	**Kefar Szold**	**0.84**	**149**	Pg	**Pn**	**20 06 46.2**	**+0.3**
KSDI				Sg	**Sn**	**20 06 57.7**	**-1.0**
MMA0B	**Mount Meron ar**	**0.92**	**167**	Pg	**Pn**	**20 06 47.2**	**0.0**
MMA0B				Sg	**Sb**	**20 06 59.0**	**+0.4**
KSHT	**Keshet**	**1.08**	**149**	Pg	**Pn**	**20 06 50.3**	**+0.9**
BLGI	**Bet Lehem HaGe**	**1.18**	**178**	Pg	**Pn**	**20 06 51.3**	**+0.7**
BLGI				Sg	**Sb**	**20 07 06.0**	**+0.1**
OFRI	**`Ofer**	**1.30**	**186**	Pg	**Pg**	**20 06 52.6**	**+0.3**
OFRI				Sg	**Sg**	**20 07 09.1**	**0.0**
MMLI	**Mount Malkishu**	**1.49**	**171**	Sn	**Sn**	**20 07 14.4**	**-0.5**
SLTI	**Sal'it**	**1.67**	**183**	Pn	**Pb**	**20 06 58.4**	**-0.3**
SLTI				Sn	**Sn**	**20 07 19.3**	**0.0**
HMDT	**Nahal Hemdat**	**1.69**	**169**	Pn	**Pg**	**20 06 59.1**	**-0.6**
HMDT				Sn	**Sb**	**20 07 20.2**	**-0.4**

*IDC **28** 20:09:20.4±1.9, 6°.58S×155°.51E, h0km, mb3.8/4,*
mb1 4.1/5, mb1mx3.7/31, mbtmp3.9/5, ML4.1/1, MS3.4/2,
Ms1 3.4/2, ms1mx2.6/35, Error ellipse: s-maj=50.9km
s-min=32.8km az=132.0
*NEIC **28** 20:09:27.4±1.7, 6°.7S±0°.1×155°.6E±0°.1, h54km±9km,*
mb4.4/6, Error ellipse: s-maj=20.1km s-min=17.6km
az=46.0
ISC 28 20:09:23.0±1.5,**6°.6S**±0°.1×**155°.6E**±0°.2,**h10**km,**n19,**
σ2s60/15,mb4.4/7,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**4.17**	**305**		**Pn**	**20 10 28.3**	**+1.5**
KRVT	**Keravat (AS076**	**4.22**	**303**	Pn	**Pn**	**20 10 24.3**	**-3.1**
	12nm,0.3s,baz=76,slow=20,SNR=6.2						
KRVT				Pg	**Pb**	**20 10 39.4**	**+1.9**
	24nm,0.3s,baz=69,slow=15,SNR=7.8						
KRVT				Lg	Lg	20 11 28.1	
	15nm,0.3s,baz=84,slow=16,SNR=4.5						
PMG	**Port Moresby**	**8.79**	**251**	Pn	**Pn**	**20 11 31.4**	**+1.1**
	1.8nm,0.3s,baz=93,slow=16,SNR=1.9						
WR0	**Warramunga Arr**	**24.36**	**235**	P	**P**	**20 14 40.5**	**-1.0**
WR0				IAmb	IAmb	20 14 54.7	
	comp=Z,21nm,1.7s						
WB0	**Warramunga Arr**	**24.39**	**236**	P	**P**	**20 14 41.3**	**-0.4**
WB0				IAmb	IAmb	20 14 43.6	
	comp=Z,23nm,1.8s						
WRAB	**Tennant Creek**	**24.50**	**235**	P	**P**	**20 14 39.2**	**-3.6**
WB2	**Warramunga Arr**	**24.51**	**235**	P	**P**	**20 14 40.8**	**-2.0**
WB2				IAmb	IAmb	20 14 42.6	
	comp=Z,17nm,1.4s						
WRA	**Warramunga Arr**	**24.52**	**235**	P	**P**	**20 14 41.9**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=59,slow=9.7,SNR=16						
H11S3	**WAKE ISLAND Hy**	**27.25**	**24**	T	T	20 43 32.4	
	baz=204,slow=75,SNR=67						
H11S2	**WAKE ISLAND Hy**	**27.25**	**24**	T	T	20 43 28.0	
	baz=204,slow=75,SNR=74						
H11S1	**WAKE ISLAND Hy**	**27.26**	**24**	T	T	20 43 33.7	
	baz=204,slow=75,SNR=52						
KNRA	**Kununurra**	**27.79**	**249**	P	**P**	**20 15 09.1**	**-3.3**
FITZ	**Fitzroy Crossi**	**31.34**	**246**	P	**P**	**20 15 42.1**	**-1.9**
	comp=Z,5.9nm,1.2s,baz=76,slow=9.5,SNR=2.9						
FITZ	**Fitzroy Crossi**	**31.34**	**246**	P	**P**	**20 15 42.0**	**-2.0**
NWAO	**Narrogin (SRO)**	**44.19**	**228**	LR	LR	20 34 50.4	
	comp=Z,132nm,20.4s,baz=132,slow=35						
KSRS	**Korea Array**	**50.88**	**332**	LR	LR	20 39 06.9	
	comp=Z,9.8nm,18.1s,baz=253,slow=35						
CMAR	**Chiang Mai Arr**	**61.15**	**295**	P	**P**	**20 19 37.1**	**-1.1**
	comp=Z,0.7nm,0.7s,baz=113,slow=5.0,SNR=6.4						
ILAR	**Eielson Array**	**82.81**	**21**	P	**P**	**20 21 46.6**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=248,slow=4.8,SNR=3.7						
TORD	**Torodi Ar. Bea**	**153.49**	**286**	PKPbc	**PKPdf**	**20 29 20.2**	**+5.0**
	comp=Z,0.4nm,0.7s,baz=33,slow=3.5,SNR=1.5						

*TAP **28** 20:11:19.8, 24°.75N×122°.54E, h113km±1km, ML2.9, D*
*JMA **28** 20:11:19.7±0.1, 24°.74N×122°.47E, h115km±2km, M2.1*
ISC 28 20:11:19.8±1.4,**24°.76N**±0°.04×**122°.49E**±0°.02,**h118**km±7km,
n85,σ0s94/149,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.52**	**298**	P	**Pn**	**20 11 37.9**	**+0.3**
	baz=297						
JYNG	**Yonagunijimaku**	**0.52**	**127**	P	**Pn**	**20 11 37.4**	**-0.2**
JYNG				S	**Sn**	**20 11 50.6**	**-0.4**
YOJ	**Yonaguni jima**	**0.56**	**122**	P	**Pn**	**20 11 37.7**	**-0.2**
YOJ				S	**Sn**	**20 11 51.1**	**-0.4**
TWC	**Suao**	**0.60**	**255**	*i* P	**Pn**	**20 11 38.0**	**-0.1**
	baz=257						
TWC				*eS*	**Sn**	**20 11 51.4**	**-0.6**
	baz=257						
NTC	**Toucheng**	**0.61**	**279**	S	**Sn**	**20 11 51.6**	**-0.5**
	baz=279						
TIPB	**Shuangxi**	**0.64**	**289**	*i* P	**Pn**	**20 11 38.7**	**+0.2**
	baz=288						
TIPB				*i* S	**Sn**	**20 11 52.3**	**-0.2**
	baz=288						
NWF	**Wu-fen Shan**	**0.71**	**296**	P	**Pn**	**20 11 39.4**	**+0.3**
	baz=295						
NWF				S	**Sn**	**20 11 53.8**	**+0.1**
	baz=295						
WFSB	**Wu-fen Shan**	**0.71**	**296**	P	**Pn**	**20 11 39.4**	**+0.4**
	baz=295						
WFSB				S	**Sn**	**20 11 53.6**	**+0.1**
	baz=295						
TWE	**Neicheng**	**0.75**	**267**	*i* P	**Pn**	**20 11 39.5**	**+0.2**
	baz=267						
TWE				S	**Sn**	**20 11 53.6**	**-0.4**
	baz=267						
ENA	**Nanau**	**0.76**	**244**	P	**Pn**	**20 11 39.7**	**+0.3**
	baz=245						
ENA				S	**Sn**	**20 11 54.0**	**-0.2**
	baz=245						
ENTT	**Nioudou**	**0.85**	**262**	P	**Pn**	**20 11 40.7**	**+0.5**
	baz=262						
ENTT				S	**Sn**	**20 11 55.4**	**-0.2**
	baz=262						
TWA	**Mucha**	**0.85**	**285**	P	**Pn**	**20 11 40.2**	**0.0**
	baz=284						
TWA				S	**Sn**	**20 11 55.0**	**-0.7**
	baz=284						
NWLT	**Wulai**	**0.90**	**271**	P	**Pn**	**20 11 40.7**	**+0.1**
	baz=271						
NWLT				*eS*	**Sn**	**20 11 57.3**	**+0.9**
	baz=271						
NHDH	**Xindian Distri**	**0.90**	**283**	*eP*	**Pn**	**20 11 40.8**	**+0.1**
	baz=283						
NHDH				*eS*	**Sn**	**20 11 55.8**	**-0.6**
	baz=283						
NDT	**Datong Townshi**	**0.90**	**260**	*eP*	**Pn**	**20 11 41.5**	**+0.8**
	baz=261						
NDT				S	**Sn**	**20 11 57.5**	**+1.0**
	baz=261						
YM01	**YM01**	**0.92**	**295**	P	**Pn**	**20 11 41.1**	**+0.2**
	baz=294						
YM01				S	**Sn**	**20 11 56.5**	**-0.3**
	baz=294						
YM08	**YM08**	**0.92**	**298**	*eP*	**Pn**	**20 11 41.0**	**+0.2**
	baz=296						
YM08				*eS*	**Sn**	**20 11 56.4**	**-0.5**
	baz=296						
YM11	**YM11**	**0.92**	**296**	*eP*	**Pn**	**20 11 41.3**	**+0.3**
	baz=295						
YM11				*eS*	**Sn**	**20 11 56.8**	**-0.2**
	baz=295						
YM10	**YM10**	**0.93**	**295**	*eP*	**Pn**	**20 11 41.2**	**+0.2**
	baz=294						
YM10				*eS*	**Sn**	**20 11 56.7**	**-0.4**
	baz=294						
PCYT	**Pengchaiyu**	**0.94**	**336**	*eP*	**Pn**	**20 11 41.9**	**+0.8**
	baz=334						
YM04	**YM04**	**0.95**	**294**	*eP*	**Pn**	**20 11 41.0**	**-0.1**
	baz=293						
YM04				*eS*	**Sn**	**20 11 56.3**	**-1.1**
	baz=293						
TWY	**Chenhua**	**0.96**	**302**	*eP*	**Pn**	**20 11 41.7**	**+0.5**
	baz=301						
TWY				*eS*	**Sn**	**20 11 58.2**	**+0.8**
	baz=301						
NACB	**Ninganchiao**	**1.00**	**234**	*eP*	**Pn**	**20 11 41.5**	**-0.1**
	baz=236						
NACB				*eS*	**Sn**	**20 11 57.3**	**-0.9**
	baz=236						
YHNB	**Yeheng**	**1.02**	**265**	P	**Pn**	**20 11 42.3**	**+0.4**
	baz=265						
YHNB				S	**Sn**	**20 11 58.5**	**-0.1**
	baz=265						
NTST	**Danshui**	**1.03**	**293**	*eP*	**Pn**	**20 11 42.3**	**+0.5**
	baz=292						
NTST				*eS*	**Sn**	**20 11 58.9**	**+0.3**
	baz=292						
TWS1	**Kuangyinshan**	**1.03**	**289**	*eP*	**Pn**	**20 11 42.2**	**+0.3**
	baz=289						
TWS1				*eS*	**Sn**	**20 11 58.5**	**-0.2**
	baz=289						
NSK	**Sanguang**	**1.03**	**265**	*iP*	**Pn**	**20 11 42.3**	**+0.3**
	baz=265						
NSK				S	**Sn**	**20 11 58.7**	**-0.2**
	baz=265						
NNSB	**Datong**	**1.06**	**252**	P	**Pn**	**20 11 42.7**	**+0.4**
	baz=253						
NNSB				*eS*	**Sn**	**20 11 59.6**	**+0.1**
	baz=253						
NNSH	**Datong**	**1.06**	**252**	*eP*	**Pn**	**20 11 42.8**	**+0.4**
	baz=253						
TWD	**Chiawan**	**1.06**	**230**	P	**Pn**	**20 11 41.9**	**-0.3**
	baz=231						
TWD				*eS*	**Sn**	**20 11 59.0**	**-0.3**
	baz=231						
NNS	**Nan Shan**	**1.07**	**253**	P	**Pn**	**20 11 42.8**	**+0.4**
	baz=253						
NNS				S	**Sn**	**20 11 59.5**	**-0.1**
	baz=253						
ETLH	**Xiulin Townshi**	**1.07**	**239**	P	**Pn**	**20 11 42.4**	**0.0**
	baz=240						
ETLH				S	**Sn**	**20 11 59.3**	**-0.3**
	baz=240						
HWA	**Hwalien**	**1.12**	**226**	*eP*	**Pn**	**20 11 43.0**	**+0.1**
	baz=227						
NCU	**National Centr**	**1.20**	**280**	*eS*	**Sn**	**20 12 02.8**	**+1.0**
	baz=280						
IRIF	**Iriomote-Funau**	**1.21**	**110**	P	**Pn**	**20 11 43.6**	**-0.1**
IRIF				S	**Sn**	**20 12 01.7**	**-0.2**
WHF	**Hehuan Shan**	**1.27**	**241**	P	**Pn**	**20 11 45.1**	**+0.1**
	baz=242						
WHF				*eS*	**Sn**	**20 12 02.8**	**-1.3**
	baz=242						
TDCB	**Techi**	**1.31**	**248**	*eP*	**Pn**	**20 11 45.9**	**+0.8**
	baz=248						
TDCB				*eS*	**Sn**	**20 12 04.5**	**+0.2**
	baz=248						
NHW	**Xinwu Township**	**1.33**	**281**	*eS*	**Sn**	**20 12 05.2**	**+0.8**
	baz=280						
ESL	**Shilin**	**1.35**	**226**	P	**Pn**	**20 11 44.7**	**-0.6**
	baz=227						
ESL				*eS*	**Sn**	**20 12 03.9**	**-0.9**
	baz=227						
NSTT	**Nanjuang**	**1.36**	**265**	*eP*	**Pn**	**20 11 45.7**	**+0.2**
	baz=265						
NSTT				S	**Sn**	**20 12 04.7**	**-0.2**
	baz=265						
CHGB	**Renai**	**1.39**	**240**	P	**Pn**	**20 11 46.5**	**+0.5**
	baz=241						
CHGB				*eS*	**Sn**	**20 12 05.8**	**-0.1**
	baz=241						
HATJ	**Hateruma jima**	**1.39**	**120**	P	**Pn**	**20 11 46.4**	**+0.6**
HATJ				S	**Sn**	**20 12 05.6**	**+0.1**
EGFH	**Guangfu**	**1.46**	**222**	*eP*	**Pn**	**20 11 46.1**	**-0.5**
	baz=223						
JKRS	**Kuro-shima**	**1.48**	**110**	P	**Pn**	**20 11 47.2**	**+0.4**
JKRS				S	**Sn**	**20 12 07.1**	**-0.2**
WHP	**Taichung City**	**1.49**	**251**	*eP*	**Pn**	**20 11 48.2**	**+1.2**
	baz=252						
WHP				*eS*	**Sn**	**20 12 08.0**	**+0.3**
	baz=252						
JIJ	**Ishigaki jima**	**1.56**	**104**	P	**Pn**	**20 11 47.7**	**0.0**
JIJ				S	**Sn**	**20 12 07.6**	**-1.4**
VWDT	**VWDT**	**1.59**	**231**	P	**Pn**	**20 11 48.5**	**+0.4**
	baz=232						
VWDT				*eS*	**Sn**	**20 12 09.6**	**0.0**
	baz=232						
HGSD	**Ruisui**	**1.60**	**218**	*eP*	**Pn**	**20 11 48.0**	**-0.2**
	baz=219						
NSY	**Sanyi**	**1.61**	**258**	*eS*	**Sn**	**20 12 11.0**	**+0.8**
	baz=258						
EHY	**Hungye**	**1.65**	**221**	*eP*	**Pn**	**20 11 48.1**	**-0.7**
	baz=221						
JISG	**Ishigakijimahi**	**1.67**	**96**	P	**Pn**	**20 11 49.0**	**0.0**
JISG				S	**Sn**	**20 12 10.1**	**-1.2**
SMLT	**Sun Moon Lake**	**1.69**	**239**	P	**Pn**	**20 11 50.8**	**+1.3**
	baz=239						
SMLT				*eS*	**Sn**	**20 12 14.5**	**+2.3**
	baz=239						
SSLB	**Suanglung**	**1.71**	**236**	P	**Pn**	**20 11 50.7**	**+1.2**
	baz=236						
SSLB				*eS*	**Sn**	**20 12 14.4**	**+2.2**
	baz=236						
TYC	**Yuchr**	**1.72**	**240**	*eP*	**Pn**	**20 11 50.9**	**+1.3**
	baz=241						
TYC				*eS*	**Sn**	**20 12 13.6**	**+1.2**
	baz=241						
YULB	**Yu-li**	**1.75**	**219**	P	**Pn**	**20 11 49.2**	**-0.8**
	baz=220						
TWF1	**Yuli**	**1.78**	**218**	P	**Pn**	**20 11 49.9**	**-0.5**
	baz=218						
WHYT	**Xinyi Township**	**1.83**	**235**	*eP*	**Pn**	**20 11 52.6**	**+1.5**
	baz=235						
WHYT				*eS*	**Sn**	**20 12 16.6**	**+1.6**
	baz=235						
WNT	**Mingjian**	**1.87**	**242**	*eP*	**Pn**	**20 11 53.1**	**+1.7**
	baz=242						
WNT				S	**Sn**	**20 12 17.6**	**+1.9**
	baz=242						
CHKT	**Chengkung**	**1.95**	**212**	P	**Pn**	**20 11 52.0**	**-0.6**
	baz=212						
CHKT				S	**Sn**	**20 12 15.7**	**-1.8**
	baz=212						
ALS	**Alishan**	**1.98**	**231**	*i* P	**Pn**	**20 11 54.3**	**+1.2**
	baz=231						
ALS				S	**Sn**	**20 12 20.3**	**+1.6**
	baz=231						
JTJ	**Tarama**	**2.02**	**93**	P	**Pn**	**20 11 53.7**	**+0.4**
JTJ				S	**Sn**	**20 12 18.9**	**0.0**
CHN5	**Tsauling**	**2.02**	**235**	*i* P	**Pn**	**20 11 54.4**	**+0.9**
	baz=235						
CHN5				S	**Sn**	**20 12 20.3**	**+1.1**
	baz=235						
ELDTW	**Lidau**	**2.07**	**221**	P	**Pn**	**20 11 53.6**	**-0.5**
	baz=221						
ELDTW				S	**Sn**	**20 12 20.2**	**-0.1**
	baz=221						
RLNB	**Erlin**	**2.13**	**246**	*eP*	**Pn**	**20 11 55.1**	**+0.4**
	baz=246						
RLNB				*eS*	**Sn**	**20 12 21.3**	**-0.2**
	baz=246						
TPUB	**Ta-pu**	**2.24**	**230**	*eP*	**Pn**	**20 11 57.0**	**+0.9**
	baz=230						
TPUB				*eS*	**Sn**	**20 12 26.9**	**+2.8**
	baz=230						
TWH	**Lutao**	**2.24**	**205**	*eP*	**Pn**	**20 11 55.6**	**-0.6**
	baz=205						
STYT	**Tauyuan**	**2.25**	**225**	P	**Pn**	**20 11 57.5**	**+1.2**
	baz=225						
STYT				*eS*	**Sn**	**20 12 26.3**	**+2.0**
	baz=225						
WTP	**Ta-pu**	**2.29**	**229**	*eP*	**Pn**	**20 11 58.0**	**+1.3**
	baz=229						
TWGBT	**Beinan**	**2.33**	**214**	*eP*	**Pn**	**20 11 56.7**	**-0.6**
	baz=214						
TWGBT				*eS*	**Sn**	**20 12 24.4**	**-1.6**
	baz=214						
TWG	**Pinlang**	**2.33**	**214**	*eS*	**Sn**	**20 12 24.5**	**-1.6**
	baz=214						
WSF	**Szhu**	**2.35**	**242**	*eS*	**Sn**	**20 12 26.7**	**0.0**
	baz=242						
TWK	**Hsinying**	**2.36**	**231**	*eP*	**Pn**	**20 11 58.3**	**+0.5**
	baz=231						
TWK				*eS*	**Sn**	**20 12 27.8**	**+1.0**
	baz=231						
CHN1	**Nanshi**	**2.38**	**229**	*eP*	**Pn**	**20 11 59.1**	**+1.0**
	baz=229						
CHN1				*eS*	**Sn**	**20 12 28.9**	**+1.5**
	baz=229						
JIRB	**Irabujima**	**2.44**	**88**	P	**Pn**	**20 11 59.3**	**+0.6**
JIRB				S	**Sn**	**20 12 28.3**	**-0.2**
SLGT	**Liugui**	**2.44**	**224**	*eP*	**Pn**	**20 12 00.8**	**+2.1**
	baz=224						
JIKM	**Ikemajima**	**2.51**	**86**	S	**Sn**	**20 12 30.5**	**+0.3**
JMJ2	**Miyako jima3**	**2.58**	**90**	P	**Pn**	**20 12 01.3**	**+0.8**
JMJ2				S	**Sn**	**20 12 31.6**	**-0.2**
SSD	**Sandimen**	**2.63**	**221**	*eP*	**Pn**	**20 12 02.3**	**+1.1**
	baz=221						
JOGS	**Gusukube**	**2.65**	**89**	P	**Pn**	**20 12 02.5**	**+1.1**
JOGS				*eS*	**Sn**	**20 12 34.0**	**+0.6**
MASBT	**Mashibuluo**	**2.74**	**219**	*eP*	**Pn**	**20 12 03.4**	**+0.8**
	baz=219						
VWUC	**VWUC**	**2.77**	**275**	P	**Pn**	**20 12 02.4**	**-0.5**
	baz=274						
VWUC				*eS*	**Sn**	**20 12 33.5**	**-2.7**
	baz=274						
PNG	**Penghu**	**2.93**	**247**	*iP*	**Pn**	**20 12 04.4**	**-0.7**
	baz=246						
PNG				S	**Sn**	**20 12 37.5**	**-2.5**
	baz=246						
PHUB	**P'eng-hu**	**2.94**	**246**	*eP*	**Pn**	**20 12 04.4**	**-0.8**
	baz=245						
PHUB				S	**Sn**	**20 12 37.9**	**-2.3**
	baz=245						
WDGT	**Dungji**	**2.99**	**241**	*eP*	**Pn**	**20 12 05.4**	**-0.4**
	baz=240						
WDGT				*eS*	**Sn**	**20 12 39.7**	**-1.7**
	baz=240						
PTMZ	**Houxiangcun**	**3.07**	**276**	*eP*	**Pn**	**20 12 06.6**	**-0.3**
	baz=275						
PTMZ				*eS*	**Sn**	**20 12 40.4**	**-2.9**
	baz=275						

*MAN **28** 20:11:39.9, 4°.85N×125°.91E, h17km, mb4.8, ML3.7, MS3.6*
*NEIC **28** 20:11:44.6±2.2, 5°.28N±0°.06×126°.31E±0°.08, h

MSLP				*e*S		**Sn**	**20 14 03.1 +6.2**	
LBMI	**Labuha**	**5.93**	**166**	P		**Pn**	**20 13 11.7 +0.9**	
LUWI	**Luwuk**	**6.98**	**208**	P		**Pn**	**20 13 28.1 +3.1**	
	0.3nm81nm,1.0s							
LUWI	**Luwuk**	**6.98**	**208**			**Pn**	**20 13 28.9 +3.8**	
APSI	**Ampana**	**7.47**	**216**	P		**Pn**	**20 13 35.4 +3.7**	
	0.2nm627nm66nm,0.8s							
MPSI	**Mapaga**	**7.80**	**232**	P		**Pn**	**20 13 39.4 +3.2**	
	0.0nm8.7nm,0.9s							
SIJI	**Sorong**	**7.93**	**139**	P		**Pn**	**20 13 37.8 -0.2**	
	1.6nm,0.3s,baz=145,slow=23,SNR=8.5							
NLAI	**Namlea**	**8.40**	**173**	P		**Pn**	**20 13 43.4 -1.0**	
TTSI	**Tana Toraja**	**10.26**	**218**	P		Pn	20 14 16.9 +7.2	
KAPI	**Kappang**	**11.91**	**212**	P		**Pn**	**20 14 33.4 +1.5**	
	0.4nm,0.3s,baz=27,slow=9.5,SNR=4.0							
KAPI	**Kappang**	**11.91**	**212**			**Pn**	**20 14 32.5 +0.6**	
BATI	**Baumata**	**15.45**	**189**	P		**Pn**	**20 15 19.2 +1.3**	
	3.6nm,0.3s,baz=232,slow=1.1,SNR=4.9							
KSM	**Kuching**	**16.14**	**257**	P		**P**	**20 15 30.1 +2.2**	
KSM				IAmb	IAmb	20 16 04.8		
	comp=Z,25nm,1.5s							
JAGI	**Jajag, Banyuwa**	**18.01**	**221**	P		**P**	**20 15 49.1 +0.6**	
JAGI				IAmb	IAmb	20 16 20.3		
	comp=Z,36nm,1.2s							
MTN	**Manton Dam**	**18.58**	**164**	P		**P**	**20 15 54.8 +0.1**	
MTN				IAmb	IAmb	20 15 55.8		
	comp=Z,19nm,1.1s							
KNRA	**Kununurra**	**20.87**	**173**	P		**P**	**20 16 19.7 +0.2**	
KNRA				IAmb	IAmb	20 16 20.5		
	comp=Z,30nm,0.6s							
JOW	**Kunigami**	**21.66**	**5**	P		**P**	**20 16 28.1 +0.3**	
	comp=Z,0.7nm,0.7s,baz=158,slow=8.5,SNR=4.6							
FITZ	**Fitzroy Crossi**	**23.11**	**181**	P		**P**	**20 16 42.9 +0.1**	
	comp=Z,3.4nm,0.4s,baz=17,slow=8.9,SNR=22							
FITZ	**Fitzroy Crossi**	**23.11**	**181**	P		**P**	**20 16 43.1 +0.3**	
WB0	**Warramunga Arr**	**26.09**	**162**	P		**P**	**20 17 11.7 +1.8**	
WB0				IAmb	IAmb	20 17 16.2		
	comp=Z,14nm,1.4s							
WRA	**Warramunga Arr**	**26.24**	**162**	P		**P**	**20 17 11.2 0.0**	
	comp=Z,2.7nm,0.4s,baz=340,slow=10,SNR=34							
JNU	**Nakatsue**	**28.18**	**9**	P		**P**	**20 17 28.0 -0.5**	
	comp=Z,6.9nm,0.9s,baz=153,slow=7.4,SNR=4.1							
JNU	**Nakatsue**	**28.18**	**9**	P		**P**	**20 17 28.0 -0.5**	
JNU				IAmb	IAmb	20 17 59.5		
	comp=Z,27nm,1.4s							
AS31	**Alice Springs**	**29.65**	**165**	P		**P**	**20 17 41.5 -0.1**	
MJAR	**Matsushiro Arr**	**33.17**	**18**	P		**P**	**20 18 10.8 -1.6**	
	comp=Z,0.9nm,0.7s,baz=204,slow=11,SNR=4.3							
NWAO	**Narrogin (SRO)**	**38.79**	**192**	P		**P**	**20 19 00.1 -0.2**	
	comp=Z,17nm,1.0s,baz=22,slow=8.8,SNR=8.0							
NWAO	**Narrogin (SRO)**	**38.79**	**192**	P		**P**	**20 19 00.5 +0.2**	
BBOO	**Buckleboo**	**38.93**	**167**	P		**P**	**20 19 02.2 +0.6**	
USRK	**Ussuriysk Ar.**	**39.23**	**7**	P		**P**	**20 19 04.0 +0.2**	
	comp=Z,1.5nm,0.6s,baz=191,slow=8.1,SNR=9.1							
STKA	**Stephens Creek**	**39.69**	**159**	P		**P**	**20 19 08.5 +0.7**	
	comp=Z,1.3nm,0.5s,baz=323,slow=11,SNR=5.2							
STKA	**Stephens Creek**	**39.69**	**159**	P		**P**	**20 19 08.2 +0.3**	
SONM	**Songino Array**	**45.74**	**342**	LR		LR	20 41 33.0	
	comp=Z,23nm,18.8s,baz=262,slow=39							
PETK	**Petropavlovsk-**	**54.38**	**23**	P		**P**	**20 20 59.2 -2.5**	
	comp=Z,2.1nm,0.7s,baz=188,slow=4.4,SNR=2.5							
MKAR	**Makanchi Array**	**56.01**	**325**	P		**P**	**20 21 12.4 -1.2**	
	comp=Z,0.3nm,0.3s,baz=122,slow=7.4,SNR=8.6							
MKAR				ScP		**ScP**	**20 25 59.0 -1.9**	
	comp=Z,0.4nm,0.7s,baz=117,slow=4.5,SNR=4.2							

IDC 28 20:33:30.6±12.0, **8°34N**×**91°22E**, **h0**km, **mb3.6**/2, **mb1 3.7**/3, **mb1mx3.3**/40, **mbtmp3.5**/3, **ML3.3/1**, **MS2.8**/2, **Ms1 2.9**/2, **ms1mx2.5**/32, **Error ellipse: s-maj=212.7km s-min=77.1km az=169.0**, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.55**	**36**	Pn	Pn	20 36 30.6	0.0
	0.1nm,0.3s,baz=228,slow=15,SNR=11						
CMAR				LR	LR	20 41 48.1	
	comp=Z,32nm,18.4s,baz=206,slow=40						
H08S3	**Diego Garcia H**	**24.50**	**230**	T	T	21 04 21.7	
	baz=56,slow=75,SNR=54						
H08S2	**Diego Garcia H**	**24.51**	**230**	T	T	21 04 33.9	
	baz=56,slow=75,SNR=49						
H08S1	**Diego Garcia H**	**24.52**	**230**	T	T	21 04 22.9	
	baz=56,slow=75,SNR=65						
MKAR	**Makanchi Array**	**39.08**	**350**	P	P	20 40 60.0	+0.5
	0.2nm,0.4s,baz=171,slow=8.9,SNR=4.1						
ZALV	**Zalesovo Beam**	**45.78**	**355**	P	P	20 41 53.2	-0.7
	0.7nm,0.4s,baz=160,slow=6.1,SNR=5.1						
MJAR	**Matsushiro Arr**	**51.02**	**49**	LR	LR	21 06 24.4	
	comp=Z,14nm,18.3s,baz=250,slow=39						

*IDC **28** 20:34:41.0±2.0, 6°85S×129°64E, h162km±21km, mb3.5/5, mb1 3.6/9, mb1mx3.4/31, mbtmp4.0/9, MS2.5/1, Ms1 2.5/1, ms1mx2.0/24, Error ellipse: s-maj=28.5km s-min=16.1km az=79.0*

*NEIC **28** 20:34:42.2±0.7, 6°80S±0.07°×129°62E±0.08, h174km±12km, mb4.2/6, Error ellipse: s-maj=14.3km s-min=3.1km az=130.0*

*DJA **28** 20:34:42.8±0.3, 7°S±3°×13°0E±°, h195km±11km, M4.3/9, mB5.0/4, mb4.1/6, MLv4.5/9, Mw(mB)4.3/4*

ISC 28 20:34:42.4±0.7, **6°87S**±0.06°×**129°64E**±0.07, **h200**km, **n32**, σ**2s79**/35, **mb3.8**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.98**	**124**	P	**Pn**	**20 35 21.3**	**+0.6**
SAUI	**Saumlaki**	**1.98**	**124**		**Pn**	**20 35 20.0**	**-0.7**
MSAI	**Masohi**	**3.58**	**349**	P	**Pn**	**20 35 39.2**	**+0.2**
FAKI	**Fak Fak**	**4.71**	**34**	P	**Pn**	**20 35 51.2**	**-1.9**
FAKI				S	**Sn**	**20 36 43.7**	**-5.2**
FAKI	**Fak Fak**	**4.71**	**34**		**Pn**	**20 35 51.5**	**-1.7**
SOEI	**Soe**	**6.04**	**241**	Pn	**Pn**	**20 36 10.2**	**-0.1**
MTN	**Manton Dam**	**6.11**	**166**		**Pn**	**20 36 11.1**	**-0.1**
SIJI	**Sorong**	**6.18**	**15**	P	**Pn**	**20 36 10.3**	**-1.7**
	6.9nm,0.3s,baz=230,slow=23,SNR=23						
SIJI				S	**Sn**	**20 37 16.2**	**-6.9**
	5.4nm,0.3s,baz=268,slow=23,SNR=12						
LBMI	**Labuha**	**6.55**	**341**	P	**Pn**	**20 36 18.3**	**+1.5**
	0.2nm69nm,0.8s						
BATI	**Baumata**	**6.78**	**240**	P	**Pn**	**20 36 19.0**	**-0.8**
	4.0nm,0.3s,baz=115,slow=3.3,SNR=8.5						
BATI				S	**Sn**	**20 37 31.5**	**-5.5**
	14nm,0.3s,baz=85,slow=6.6,SNR=12						
BATI	**Baumata**	**6.78**	**240**	P	**Pn**	**20 36 19.2**	**-0.6**
	0.2nm18nm,0.7s						
RKPI	**Ransiki, Papua**	**6.99**	**41**	P	**Pn**	**20 36 23.4**	**+0.9**
	1.5nm5μm307nm,0.5s						
KNRA	**Kununurra**	**8.79**	**186**		**Pn**	**20 36 45.0**	**-1.0**
FITZ	**Fitzroy Crossi**	**11.82**	**199**	P	**Pn**	**20 37 24.0**	**-1.0**
	1.0nm,0.3s,baz=30,slow=11,SNR=56						
FITZ				S	**Sn**	**20 39 29.5**	**-7.4**
	1.9nm,0.3s,baz=105,slow=8.5,SNR=5.0						
FITZ	**Fitzroy Crossi**	**11.82**	**199**		**Pn**	**20 37 23.2**	**-1.8**
WB0	**Warramunga Arr**	**13.62**	**161**	P	**Pn**	**20 37 46.3**	**-1.4**
WRAB	**Tennant Creek**	**13.76**	**161**	P	**Pn**	**20 37 48.8**	**-0.7**
WRA	**Warramunga Arr**	**13.77**	**161**	P	**Pn**	**20 37 48.0**	**-1.5**
	0.6nm,0.3s,baz=333,slow=11,SNR=26						
WRA				S	S	20 40 13.8	-9.2
	2.0nm,0.3s,baz=334,slow=23,SNR=8.0						
WB2	**Warramunga Arr**	**13.77**	**161**	P	**Pn**	**20 37 48.2**	**-1.4**
WR0	**Warramunga Arr**	**13.85**	**160**	P	**Pn**	**20 37 49.2**	**-1.4**
DAV	**Davao City (W)**	**14.43**	**344**	LR	LR	20 43 25.2	
	comp=Z,18nm,19.4s,baz=154,slow=36						
COEN	**Coen**	**15.05**	**119**	P	**P**	**20 38 08.3**	**+2.3**
COEN				IAmb	IAmb	20 38 48.8	
	comp=Z,44nm,1.6s						
AS31	**Alice Springs**	**17.19**	**167**	P	**Pn**	**20 38 32.2**	**+1.2**
AS31				IAmb	IAmb	20 38 34.3	
	comp=Z,4.9nm,0.5s						
BBOO	**Buckleboo**	**26.49**	**168**	P	**P**	**20 40 03.9**	**+2.6**
STKA	**Stephens Creek**	**27.27**	**157**	P	**P**	**20 40 11.2**	**+3.0**
	comp=Z,1.3nm,0.6s,baz=345,slow=7.7,SNR=6.0						
STKA	**Stephens Creek**	**27.27**	**157**	P	**P**	**20 40 11.3**	**+3.1**
STKA				IAmb	IAmb	20 40 35.8	
	comp=Z,6.0nm,1.8s						
CMAR	**Chiang Mai Arr**	**39.38**	**310**	P	**P**	**20 41 54.8**	**+1.9**
	comp=Z,0.9nm,0.6s,baz=137,slow=6.8,SNR=15						
SONM	**Songino Array**	**58.21**	**342**	P	**P**	**20 44 17.6**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=123,slow=5.3,SNR=2.1						
MK31	**Makanchi Array**	**67.92**	**327**	P	**P**	**20 45 22.0**	**+2.4**
MKAR	**Makanchi Array**	**67.92**	**327**	P	**P**	**20 45 22.6**	**+3.0**
	comp=Z,1.9nm,0.4s,baz=116,slow=8.5,SNR=38						
MAKZ	**Makanchi**	**68.10**	**327**	P	**P**	**20 45 22.7**	**+2.0**
MAKZ				IAmb	IAmb	20 45 24.0	
	comp=Z,1.8nm,0.5s						
ZALV	**Zalesovo Beam**	**71.31**	**334**	P	**P**	**20 45 41.9**	**+1.8**
	comp=Z,0.9nm,0.6s,baz=134,slow=4.3,SNR=5.2						

ATH 28 20:44:37.0, 38°25N×**20°45E, h11**km±2km, **ML1.3**/2, **Error ellipse: s-maj=3.1km s-min=1.1km az=234.0**, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.02**	**280**	P	Pg	20 44 38.9	0.0
KEF4				S	Sg	20 44 40.3	0.0
KEF3	**Kipouria, Keph**	**0.10**	**238**	P	Pg	20 44 39.8	+0.2
KEF3				S	Sg	20 44 41.6	0.0
VLS	**Valsamata**	**0.13**	**125**	P	Pg	20 44 40.1	-0.1
VLS				S	Sg	20 44 42.6	+0.1
VLS				AML	AML	20 44 42.8	
	comp=N,424μm,0.1s						
VLS				AML	AML	20 44 42.8	
	comp=E,392μm,0.1s						
FSK	**Fiskardo**	**0.22**	**23**	P	Pg	20 44 41.6	-0.1
FSK				S	Sg	20 44 45.0	+0.2
KFL	**Anninata**	**0.30**	**118**	P	Pg	20 44 42.7	-0.4
KFL				S	Sg	20 44 47.6	+0.4
KFL				AML	AML	20 44 48.8	
	comp=N,112μm,0.2s						
KFL				AML	AML	20 44 49.0	
	comp=E,137μm,0.3s						
EVGI	**Lefkada island**	**0.40**	**24**	P	Pg	20 44 44.9	0.0
EVGI				S	Sg	20 44 51.0	+0.8

ISC 28 20:45:57.3±1.0, **44°49N**±0°03×**17°06E**±0°05, **h7**km±7km, **n10**, σ**0s63**/20, **1C-1D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGRS	**Mrkonjic Grad**	**0.07**	**166**	⇓*i* P	**Pg**	**20 45 59.2**	**-0.1**
MGRS				*e*S	**Sg**	**20 46 00.7**	**0.0**
BLY	**Banja Luka**	**0.28**	**19**	⇑*i* P	**Pg**	**20 46 02.7**	**-0.1**
BLY				*e*S	**Sg**	**20 46 07.2**	**+0.7**
KIJV	**Kijevo**	**0.67**	**225**	*e*Pg	**Pg**	**20 46 10.1**	**-0.2**
KIJV				S	**Sg**	**20 46 19.3**	**+0.2**
UDBI	**Udbina**	**0.93**	**273**	*i* Pg	**Pg**	**20 46 14.3**	**-0.8**
UDBI				S	**Sb**	**20 46 28.4**	**+0.1**
RICI	**Ricice**	**0.99**	**177**	*i* Pg	**Pb**	**20 46 16.9**	**+0.1**
RICI				S	**Sn**	**20 46 31.1**	**-0.9**
MOSL	**Moslavina**	**1.15**	**349**	*i* Pg	**Pn**	**20 46 19.8**	**0.0**
MOSL				S	**Sg**	**20 46 33.8**	**-0.4**
MORI	**Morici**	**1.16**	**238**	*e*Pg	**Pg**	**20 46 18.8**	**-0.7**
MORI				S	**Sn**	**20 46 35.8**	**0.0**
MAKA	**Makarska**	**1.20**	**181**	*e*Pg	**Pg**	**20 46 20.4**	**0.0**
MAKA				S	**Sn**	**20 46 37.5**	**+0.6**
ZIRJ	**Zirje**	**1.32**	**231**	*e*Pg	**Pn**	**20 46 21.4**	**-0.6**
ZIRJ				S	**Sn**	**20 46 41.1**	**+1.2**
DUGI	**Dugi Otok**	**1.52**	**252**	*e*Pn	**Pg**	**20 46 27.0**	**+0.5**
DUGI				S	**Sg**	**20 46 47.3**	**+1.1**

*IDC **28** 20:46:16.8±1.0, 49°14S×106°08E, h0km, mb4.1/6, mb1 4.2/6, mb1mx4.0/31, mbtmp4.1/6, MS4.1/4, Ms1 4.2/4, ms1mx3.8/15, Error ellipse: s-maj=41.5km s-min=19.4km az=107.0*

*NEIC **28** 20:46:18.1±1.3, 49°1S±0.1×106°1E±0.3, h10km±1km, mb4.4/7, Error ellipse: s-maj=37.8km s-min=14.2km az=293.0*

*GCMT **28** 20:46:21.1±0.3, 49°30Ss±0.02×106°18E±0.03, h21km±1km, MW5.0/92, Moment Tensor Solution. s28,c32; s92,c138; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr~0.04±.19; Mθθ 3.31±.16; Mϕϕ ~3.27±.20; Mrθ ~2.14±.36; Mθϕ 2.10±.12; Mϕr~0.24±.29; Best double couple: Mo 4.38500×10^16 NP1: ϕs 301.00000°, δ 78.00000°, λ 22.00000°. Principal axes: T 4.8460, Plg24.0000°, Azm165.0000°; N -0.9240, Plg66.0000°, Azm328.0000°; P -3.9250, Plg6.0000°, Azm72.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 20:46:18.2±0.9, **49°2S**±0°1×**106°1E**±0°2, **h10**km, **n25**, σ**0s54**/19, **mb4.2**/7, **MS4.1**/4, **Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.43**	**25**	T	T	21 05 42.0	
	baz=199,slow=74,SNR=98						
H01W1	**Cape Leeuwin H**	**15.44**	**26**	T	T	21 05 44.7	
	baz=199,slow=74,SNR=114						
H01W3	**Cape Leeuwin H**	**15.44**	**25**	T	T	21 05 43.2	
	baz=199,slow=74,SNR=99						
CASY	**Casey**	**17.32**	**174**	P	**Pn**	**20 50 20.1**	**+0.3**
CASY				IAmb	IAmb	20 50 26.6	
	comp=Z,35nm,1.4s						
MAW	**Mawson**	**28.36**	**214**	LR	LR	21 01 58.5	
	comp=Z,216nm,19.1s,baz=72,slow=33						
STKA	**Stephens Creek**	**31.65**	**70**	P	**P**	**20 52 41.2**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=153,slow=14,SNR=3.2						
STKA				LR	LR	21 03 06.0	
	comp=Z,392nm,21.6s,baz=210,slow=32						
STKA	**Stephens Creek**	**31.65**	**70**	P	**P**	**20 52 41.0**	**-0.5**
VNDA	**Vanda**	**35.24**	**162**	P	**P**	**20 53 12.6**	**+0.3**
	comp=Z,4.1nm,0.8s,baz=283,slow=10,SNR=16						
VNDA				LR	LR	21 06 31.4	
	comp=Z,805nm,19.2s,baz=300,slow=34						
VNDA	**Vanda**	**35.24**	**162**	P	**P**	**20 53 11.9**	**-0.4**
VNDA				IAmb	IAmb	20 53 14.2	
	comp=Z,6.3nm,1.0s						
WRA	**Warramunga Arr**	**36.87**	**48**	P	**P**	**20 53 26.1**	**-0.7**
	comp=Z,2.0nm,0.9s,baz=214,slow=7.9,SNR=7.4						
WR0	**Warramunga Arr**	**36.96**	**48**	P	**P**	**20 53 27.5**	**0.0**
WB0	**Warramunga Arr**	**37.05**	**48**	P	**P**	**20 53 28.9**	**+0.6**
WB0				IAmb	IAmb	20 53 45.0	
	comp=Z,13nm,1.4s						
QSPA	**South Pole Qui**	**40.98**	**180**	P	**P**	**20 54 01.0**	**+0.1**
	comp=Z,4.2nm,1.0s,baz=175,slow=1.4,SNR=10						
QSPA	**South Pole Qui**	**40.98**	**180**	P	**P**	**20 54 00.9**	**+0.1**
QSPA				IAmb	IAmb	20 54 04.2	
	comp=Z,8.5nm,1.1s						
SNAA	**Sanae**	**49.60**	**203**	P	**P**	**20 55 09.0**	**-0.1**
SNAA	**Sanae**	**49.60**	**203**	P	**P**	**20 55 08.4**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=137,slow=11,SNR=9.4						
SNAA	**Sanae**	**49.60**	**203**	P	**P**	**20 55 08.7**	**-0.4**
SNAA				IAmb	IAmb	20 55 36.9	
	comp=Z,6.5nm,1.2s						
H08S2	**Diego Garcia H**	**50.10**	**314**	T	T	21 49 04.4	
	baz=151,slow=74,SNR=6.5						
H08S1	**Diego Garcia H**	**50.11**	**314**	T	T	21 49 05.2	
	baz=29,slow=74,SNR=7.8						
H08S3	**Diego Garcia H**	**50.12**	**314**	T	T	21 49 03.7	
CMAR	**Chiang Mai Arr**	**67.61**	**353**	P	**P**	**20 57 14.8**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=189,slow=5.3,SNR=5.8						
CMAR				LR	LR	21 25 51.5	
	comp=Z,102nm,18.2s,baz=226,slow=35						
NVAR	**Mina Array Bea**	**146.63**	**92**	PKPbc	**PKPbc**	**21 06 00.1**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=218,slow=5.1,SNR=2.3						
TXAR	**Lajitas Array**	**149.90**	**120**	PKPbc	**PKiKP**	**21 06 09.3**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=173,slow=40,SNR=2.5						
YKA	**Yellowknife Ar**	**154.04**	**44**	PKPbc	**PKiKP**	**21 06 18.2**	**+1.4**
	comp=Z,0.1nm,0.4s,baz=20,slow=28,SNR=2.9						
YKA				PKPab	**PKPab**	**21 06 30.9**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=292,slow=2.9,SNR=3.6						
ISCO	**Idaho Springs**	**155.65**	**101**		**PKPdf**	**21 06 11.7**	**-0.4**

*ANF **28** 20:48:01.6±0.5, 32°31N×115°24W, h21km±3km, ML2.6/9, Error ellipse: s-maj=4.9km s-min=2.3km az=176.0*

*ECX **28** 20:48:01.5±0.5, 32°24N×115°31W, h10km±2km, MD2.8, ML3.0*

*MEX **28** 20:48:01.0±0.5, 32°47N×114°95W, h34km±5km, MD3.7*

*SCEDC **28** 20:48:02.4, 32°28N×115°25W, h14km*

ISC 28 20:48:01.8±1.0, **32°26N**±0°02×**115°25W**±0°03, **h18**km±3km, **n28**, σ**0s71**/40, **4C-2D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBIG	**Mexicali**	**0.15**	**15**	*i* P	**Pg**	**20 48 06.6**	**+0.5**
MBIG	**Mexicali**	**0.15**	**15**	*e*P	**Pg**	**20 48 06.2**	**0.0**
MBIG				*i* P		20 48 06.5	
MBIG				*i* S	**Sg**	**20 48 09.9**	**+0.8**
MBIG				*i* S		20 48 10.9	
CPBX	**Cerro Prieto**	**0.17**	**343**	*e*P	**Pb**	**20 48 06.2**	**+0.4**
CPBX				*e*S	**Sg**	**20 48 10.4**	**+0.9**
CPBX				⇑*e*		20 48 11.5	
CPBX				IAML		20 48 11.5	
	comp=E,10μm,0.2s						
CPBX				⇓*e*		20 48 16.3	
CPBX				IAML		20 48 16.3	
	comp=N,9μm,0.2s						
UABX	**UABC, Campus M**	**0.41**	**336**	*e*S	**Sb**	**20 48 17.7**	**+1.2**
CEA0	**Mexicali**	**0.53**	**318**	*e*P	**Pb**	**20 48 12.4**	**-0.2**
DREC	**Desert Rsrch C**	**0.57**	**343**	*e*P	**Pg**	**20 48 13.8**	**+0.5**
ESJX	**Sierra Juarez**	**0.65**	**247**	⇑*i* P	**Pb**	**20 48 14.6**	**-0.1**
ESJX				*e*S	**Sb**	**20 48 23.0**	**-0.4**
ERMX	**Rumorosa**	**0.73**	**294**	⇑*i* P	**Pb**	**20 48 15.6**	**-0.5**
ERMX				*e*S	**Sb**	**20 48 24.9**	**-0.8**
ECBX	**El Chinero**	**0.80**	**168**	*e*P	**Pb**	**20 48 16.9**	**-0.2**
ECBX				*e*S	**Sg**	**20 48 29.0**	**+0.9**
IKP	**In-Ko-Pah, Jac**	**0.83**	**298**	⇑*i* P	**Pb**	**20 48 17.3**	**-0.5**
IKP	**In-Ko-Pah, Jac**	**0.83**	**298**	P	**Pb**	**20 48 17.3**	**-0.5**
	baz=117						
IKP				S	**Sb**	**20 48 28.0**	**-0.6**
	baz=117						
SWSC	**Sam W. Stewart**	**0.83**	**326**	P	**Pb**	**20 48 16.6**	**-1.2**
	baz=145						
GLA	**Glamis**	**0.87**	**24**	P	**Pb**	**20 48 17.6**	**-0.8**
	baz=205						
GLA				S	**Sb**	**20 48 29.0**	**-0.7**
	baz=205						
MONP2	**Monument Peak**	**1.18**	**303**	P	**Pn**	**20 48 23.7**	**0.0**
	baz=122						
CBX	**Cerro Bola**	**1.20**	**273**	*e*P	**Pn**	**20 48 23.3**	**-0.6**
CBX				*e*S	**Sb**	**20 48 39.2**	**-0.2**
CBX	**Cerro Bola**	**1.20**	**273**	*e*P	**Pn**	**20 48 23.3**	**-0.6**
CBX				*i* S	**Sb**	**20 48 39.8**	**+0.3**
SPIG	**San Pedro Mart**	**1.22**	**189**	*e*P	**Pn**	**20 48 23.8**	**-0.5**
SPX	**San Pedro Mart**	**1.23**	**189**	⇓*e*P	**Pn**	**20 48 23.9**	**-0.5**
SPX	**San Pedro Mart**	**1.23**	**189**	*e*P	**Pn**	**20 48 23.5**	**-0.9**
SPX				*i* S	**Sb**	**20 48 40.8**	**+0.4**
SFX	**San Felipe**	**1.26**	**164**	*e*P	**Pn**	**20 48 24.6**	**0.0**
SFX				*e*S	**Sn**	**20 48 41.7**	**+0.7**
BAR	**Barrett**	**1.28**	**290**	*e*P	**Pn**	**20 48 24.2**	**-0.6**
BC3	**Big Chuckawall**	**1.41**	**353**	P	**Pn**	**20 48 25.4**	**-1.2**
	baz=173						
OLP	**Otay Lakes Par**	**1.47**	**284**	*e*P	**Pb**	**20 48 28.4**	**-0.2**
EML	**El Monte Cty P**	**1.49**	**295**	*e*P	**Pn**	**20 48 28.5**	**+0.8**
109C	**Camp Elliot, M**	**1.69**	**292**	Pb	**Pb**	**20 48 31.9**	**-0.5**
	baz=111						
109C				S	**Sn**	**20 48 51.3**	**-0.3**
	baz=111						
PFO	**Pinyon Flats O**	**1.69**	**323**	P	**Pn**	**20 48 29.3**	**-1.3**
	baz=142						
IRM	**Iron Mountain**	**1.90**	**3**	Pb	**Pn**	**20 48 34.4**	**+1.1**
	baz=183						
214A	**Organ Pipe Nat**	**2.09**	**98**	P	**Pn**	**20 48 35.1**	**-0.9**
	baz=280						

*NNC **28** 20:49:11.0±8.3, 38°17N×72°30E, h0km, mb4.7, mpv4.2, Error ellipse: s-maj=68.8km s-min=41.8km az=7.0*

*IDC **28** 20:49:16.3±3.3, 38°33N×73°22E, h66km±27km, mb3.6/15, mb1 3.8/21, mb1mx3.6/43, mbtmp3.9/21, ML3.7/6, Error ellipse: s-maj=24.8km s-min=15.7km az=171.0*

*NEIC **28** 20:49:21.7±2.3, 38°62N±0°06×73°10E±0°09, h108km±8km, mb4.2/3, Error ellipse: s-maj=10.1km s-min=8.5km az=122.0*

ISC 28 20:49:19.8±0.5, **38°47N**±0°04×**73°24E**±0°06, **h103**km, **n80**, σ**2s00**/83, **mb3.8**/14, **4C-5D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.34**	**284**		**Pn**	**20 49 56.5**	**-0.5**
BTK	**Batken**	**2.46**	**311**		**Pn**	**20 49 58.9**	**+0.4**
ARSB	**Arslanbob**	**2.86**	**356**		**Pn**	**20 50 03.6**	**-0.3**
CHGR	**Chuyangaron**	**3.20**	**275**		**Pn**	**20 50 07.5**	**-0.9**
AML	**Almayashu**	**3.67**	**5**	P	**Pn**	**20 50 15.5**	**+0.5**
	SNR=100						
UCH	**Uchtor**	**3.88**	**14**	P	**Pn**	**20 50 18.9**	**+1.1**
	SNR=68						
KZA	**Kyzart**	**3.92**	**22**	P	**Pn**	**20 50 19.2**	**+0.9**
	SNR=28						
EKS2	**Erkin-Say**	**4.21**	**5**	P	**Pn**	**20 50 23.1**	**+1.1**
	SNR=42						
AAK	**Ala-Archa**	**4.27**	**13**	P	**Pn**	**20 50 23.8**	**+1.0**
	5.4nm,0.3s,baz=187,slow=8.1,SNR=53						
AAK				S	**Sn**	**20 51 10.4**	**-1.2**
	15nm,0.3s,baz=333,slow=16,SNR=30						
AAK	**Ala-Archa**	**4.27**	**13**	P	**Pn**	**20 50 24.3**	**+1.5**
	SNR=28						
AAK	**Ala-Archa**	**4.27**	**13**		**Pn**

AB31	**Akbulak array**	**14.41**	**323**	⇓P		**Pn**	**20 52 35.2**	**-3.5**
	comp=E,2.4nm,0.3s,baz=131,slow=13,SNR=121							
BVAR	**Borovoye Array**	**14.69**	**353**	P		**Pn**	**20 52 40.7**	**-1.6**
	comp=E,0.9nm,0.3s,baz=158,slow=12,SNR=11							
BVA4	**Borovoye Array**	**14.69**	**353**	⇓P		**P**	**20 52 45.7**	**0.0**
	comp=E,19nm,0.7s							
DMN	**Daman**	**14.69**	**134**	*e*P		**Pn**	**20 52 40.0**	**-2.8**
	comp=E,7.2nm,0.4s							
BRVK	**Borovoye**	**14.73**	**353**			**Pn**	**20 52 41.3**	**-1.5**
PKIN	**Phulchoki**	**14.88**	**133**	*e*P		**Pn**	**20 52 42.0**	**-3.2**
	comp=E,11nm,0.4s							
PKI	**Pulchoki**	**14.89**	**133**	*e*P		**Pn**	**20 52 42.3**	**-3.1**
	comp=E,6.3nm,0.4s							
GUN	**Gumba**	**14.91**	**131**	*e*P		**Pn**	**20 52 42.4**	**-3.2**
	comp=E,8.8nm,0.4s							
JIRN	**Jiri**	**15.28**	**131**	*e*P		**Pn**	**20 52 47.1**	**-3.2**
	comp=E,24nm,0.5s							
BHPL	**Bhopal**	**15.60**	**166**	*e*P		**Pn**	**20 52 52.2**	**-1.7**
BHPL				*e*S		Sn	20 55 30.9	-16
BHPL				*ex*		x	20 55 33.9	
RAMN	**Ramite**	**16.05**	**132**	*e*P		**Pn**	**20 52 56.7**	**-3.1**
	comp=E,13nm,0.5s							
AKTO	**Aktyubinsk**	**16.12**	**323**	P		**Pn**	**20 52 59.0**	**-1.3**
	comp=E,2.0nm,0.3s,baz=122,slow=13,SNR=26							
AKTO	**Aktyubinsk**	**16.12**	**323**	⇑P		**Pn**	**20 52 57.8**	**-2.4**
	comp=E,16nm,0.7s							
TAPN	**Taplejung**	**16.43**	**128**	*e*P		**Pn**	**20 53 02.0**	**-2.5**
	comp=E,9.6nm,0.6s							
ODAN	**Odare**	**16.59**	**130**	*e*P		**Pn**	**20 53 04.5**	**-1.9**
	comp=E,8.7nm,0.4s							
ZAA0	**Zalesovo Array**	**17.39**	**23**	P		**P**	**20 53 14.6**	**-1.0**
ZAA0				IAmb		IAmb	20 53 19.8	
	comp=Z,3.8nm,0.5s							
ZALV	**Zalesovo Beam**	**17.39**	**23**	P		**P**	**20 53 15.2**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=212,slow=12,SNR=16							
ARU	**Arti**	**20.45**	**336**	P		**P**	**20 53 49.0**	**+0.2**
	comp=Z,1.8nm,0.4s,baz=146,slow=4.9,SNR=11							
ARU	**Arti**	**20.45**	**336**	P		**P**	**20 53 48.6**	**-0.1**
ARU				IAmb		IAmb	20 53 53.4	
	comp=Z,17nm,1.2s							
KIRV	**Kirov**	**25.33**	**330**	P		**P**	**20 54 37.8**	**+1.2**
	comp=Z,4.8nm,0.4s,baz=155,slow=3.3,SNR=4.7							
SONM	**Songino Array**	**25.77**	**58**	P		**P**	**20 54 42.5**	**+1.5**
	comp=Z,1.6nm,0.8s,baz=258,slow=9.3,SNR=9.0							
BRTR	**Keskin Array B**	**30.59**	**285**	P		**P**	**20 55 25.4**	**+1.4**
	comp=Z,0.9nm,0.9s,baz=79,slow=7.7,SNR=6.3							
AKASG	**Malin Array Be**	**33.16**	**306**	P		**P**	**20 55 46.7**	**+0.5**
	comp=Z,0.2nm,0.2s,baz=118,slow=12,SNR=1.7							
FINES	**FINESS Array B**	**36.89**	**324**	P		**P**	**20 56 18.8**	**+0.8**
	comp=Z,1.3nm,0.4s,baz=107,slow=9.8,SNR=17							
ARCES	**ARCESS Array B**	**40.04**	**336**	P		**P**	**20 56 45.4**	**+1.1**
	comp=Z,2.3nm,0.6s,baz=111,slow=8.6,SNR=23							
GERES	**GERESS Array B**	**43.28**	**304**	P		**P**	**20 57 13.0**	**+1.9**
	comp=Z,0.4nm,0.5s,baz=61,slow=9.3,SNR=4.8							
CLL	**Colim**	**43.37**	**307**	*e*P		**P**	**20 57 14.0**	**+2.3**
NB2	**NORSAR Subarra**	**43.91**	**322**	P		**P**	**20 57 15.7**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=92,slow=7.9							
NOA	**NORSAR Array B**	**43.91**	**322**	P		**P**	**20 57 15.8**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=94,slow=7.8,SNR=4.8							
ESDC	**Sonseca Array**	**58.12**	**298**	P		**P**	**20 59 03.0**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=50,slow=7.1,SNR=5.9							
TORD	**Torodi Ar. Bea**	**67.54**	**269**	P		**P**	**21 00 05.8**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=46,slow=6.3,SNR=11							
INK	**Inuvik**	**71.67**	**10**	P		**P**	**21 00 31.1**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=327,slow=5.6,SNR=1.6							
INK	**Inuvik**	**71.67**	**10**	IAmb		IAmb	21 02 50.8	
	comp=Z,5.2nm,1.3s							
ILAR	**Eielson Array**	**72.39**	**17**	P		**P**	**21 00 35.1**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=210,slow=32,SNR=2.3							
YKA	**Yellowknife Ar**	**79.18**	**4**	P		**P**	**21 01 14.3**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=351,slow=5.6,SNR=12							
WRA	**Warramunga Arr**	**81.56**	**124**	P		**P**	**21 01 26.0**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=38,slow=23,SNR=5.2							

NNC ***28*** *20:55:13.3±14.0, 37.40N×69.40E, h0km, mb3.7, mpv3.2,*
Error ellipse: s-maj=136.3km s-min=87.1km az=1.0

ISC 28 20:55:16.7±5.6, 37.3N±0.4×69.0E±0.2, h37km, n11, σ0s85/12, 2C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KK31	**Karatay Array**	**5.92**	**11**	Pn		**Pn**	**20 56 42.8**	**+1.1**
	1.0nm,0.4s,baz=187,slow=14,SNR=9.3							
KK31				Lg		Lg	20 58 17.5	
	4.3nm,0.4s,baz=186,slow=23,SNR=8.7							
AML	**Almayashu**	**6.05**	**36**	P		**Pn**	**20 56 43.9**	**0.0**
	SNR=16							
EKS2	**Erkin-Say**	**6.51**	**33**	P		**Pn**	**20 56 51.6**	**+1.6**
	SNR=6.8							
UCH	**Uchtor**	**6.52**	**39**	P		**Pn**	**20 56 50.3**	**-0.2**
	SNR=8.9							
KZA	**Kyzart**	**6.81**	**44**	P		**Pn**	**20 56 54.6**	**+0.3**
	SNR=5.6							
AAK	**Ala-Archa**	**6.82**	**37**	P		**Pn**	**20 56 54.4**	**+0.1**
	SNR=13							
KBK	**Karagaybulak**	**7.06**	**39**	P		**Pn**	**20 56 58.2**	**+0.6**
	SNR=8.3							
CHMS	**Chumysh**	**7.22**	**36**	P		**Pn**	**20 56 59.5**	**-0.1**
	SNR=7.5							
TKM2	**Tokmak 2**	**7.58**	**40**	P		**Pn**	**20 57 04.3**	**-0.4**
	SNR=8.1							
AB31	**Akbulak array**	**13.62**	**334**	⇑P		**Pn**	**20 58 26.3**	**-0.8**
	0.3nm,0.3s							
AB31				S		**Sn**	**21 00 56.1**	**-0.8**
	0.3nm,0.3s,baz=158,slow=24,SNR=4.0							
AKTO	**Aktyubinsk**	**15.29**	**333**	⇑P		**Pn**	**20 58 50.5**	**+0.9**
	4.0nm,1.1s							

TAP 28 21:11:54.9, 24.81N×121.52E, h69km, ML2.2, 2C, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NWLT	**Wulai**	**0.03**	**212**	P		Pn	21 12 05.0	+0.1
	baz=211							
NWLT				S		Sn	21 12 12.3	0.0
	baz=211							
TWE	**Neicheng**	**0.16**	**123**	P		Pn	21 12 05.7	+0.5
	baz=121							
TWE				S		Sn	21 12 13.4	+0.8
	baz=121							
ENTT	**Nioudou**	**0.17**	**166**	P		Pn	21 12 05.6	+0.3
	baz=164							
ENTT				S		Sn	21 12 13.5	+0.7
	baz=164							
YHNB	**Yeheng**	**0.19**	**224**	⇑*i*P		Pn	21 12 05.5	+0.1
	baz=224							
YHNB				S		Sn	21 12 13.3	+0.2
	baz=224							
NSK	**Sanguang**	**0.20**	**229**	*e*P		Pn	21 12 05.4	0.0
	baz=226							
NSK				*e*S		Sn	21 12 13.5	+0.3
	baz=226							
NDT	**Datong Townshi**	**0.20**	**182**	⇑*i*P		Pn	21 12 05.7	+0.2
	baz=182							
NDT				S		Sn	21 12 13.4	+0.3
	baz=182							
TWS1	**Kuangyinshan**	**0.31**	**342**	*e*P		Pn	21 12 06.5	+0.5
	baz=342							
TWS1				*e*S		Sn	21 12 15.4	+1.2
	baz=342							
TIPB	**Shuangxi**	**0.32**	**59**	*e*P		Pn	21 12 06.3	+0.2
	baz=59							
TIPB				*e*S		Sn	21 12 14.7	+0.3
	baz=59							
YM01	**YM01**	**0.34**	**7**	P		Pn	21 12 06.6	+0.2
	baz=7.0							
YM01				*e*S		Sn	21 12 15.1	+0.4
	baz=7.0							
YM04	**YM04**	**0.35**	**2**	S		Sn	21 12 15.3	+0.5
	baz=2.0							
YM10	**YM10**	**0.35**	**6**	*e*S		Sn	21 12 15.2	+0.3
	baz=5.0							
NWF	**Wu-fen Shan**	**0.35**	**42**	*e*S		Sn	21 12 15.4	+0.5
	baz=41							
TWC	**Suao**	**0.36**	**123**	*e*S		Sn	21 12 15.7	+1.0
	baz=122							
YM11	**YM11**	**0.36**	**8**	*e*S		Sn	21 12 15.5	+0.5
	baz=7.0							
YM03	**YM03**	**0.37**	**2**	*e*S		Sn	21 12 15.6	+0.5
	baz=2.0							
NNS	**Nan Shan**	**0.39**	**200**	*e*P		Pn	21 12 06.8	0.0
	baz=199							
NNS				*e*S		Sn	21 12 16.8	+1.3
	baz=199							
NNSB	**Datong**	**0.40**	**199**	*e*P		Pn	21 12 07.2	+0.4
	baz=198							
NNSB				*e*S		Sn	21 12 16.1	+0.6
	baz=198							
NNSH	**Datong**	**0.40**	**199**	P		Pn	21 12 07.3	+0.4
	baz=198							
NNSH				*e*S		Sn	21 12 15.9	+0.3
	baz=198							
TWY	**Chenhua**	**0.47**	**9**	*e*S		Sn	21 12 17.0	+0.5
	baz=9.0							
NSTT	**Nanjuang**	**0.51**	**250**	*i* P		Pn	21 12 08.0	+0.4
	baz=249							
NSTT				S		Sn	21 12 17.7	+0.7
	baz=249							
ETLH	**Xiulin Townshi**	**0.60**	**184**	*e*P		Pn	21 12 08.6	-0.2
	baz=183							
ETLH				*e*S		Sn	21 12 18.9	+0.1
	baz=183							
NACB	**Ninganchiao**	**0.63**	**174**	*e*P		Pn	21 12 09.2	+0.2
	baz=174							
NACB				*e*S		Sn	21 12 18.7	-0.7
	baz=174							
WHF	**Hehuan Shan**	**0.70**	**200**	*e*P		Pn	21 12 10.6	+0.4
	baz=199							
WHF				*e*S		Sn	21 12 22.8	+1.5
	baz=199							
WHP	**Taichung City**	**0.74**	**225**	P		Pn	21 12 10.8	+0.5
	baz=224							
WHP				*e*S		Sn	21 12 22.2	+0.5
	baz=224							
CHGB	**Renai**	**0.81**	**203**	*e*P		Pn	21 12 11.8	+0.6
	baz=203							
DPDB	**Guoxing**	**0.94**	**215**	*e*P		Pn	21 12 13.2	+0.5
	baz=215							
SMLT	**Sun Moon Lake**	**1.08**	**212**	*e*P		Pn	21 12 14.9	+0.4
	baz=211							
TYC	**Yuchr**	**1.08**	**214**	*e*P		Pn	21 12 14.7	+0.4
	baz=213							
TYC				*e*S		Sn	21 12 30.1	+1.3
	baz=213							
VWDT	**VWDT**	**1.10**	**198**	*e*P		Pn	21 12 16.0	+1.4
	baz=198							
VWDT				*e*S		Sn	21 12 31.7	+2.4
	baz=198							
SSLB	**Suanglung**	**1.14**	**207**	P		Pn	21 12 15.3	+0.2
	baz=207							
SSLB				*e*S		Sn	21 12 31.1	+0.9
	baz=207							
WHYT	**Xinyi Township**	**1.26**	**209**	*e*P		Pn	21 12 17.2	+0.5
	baz=208							
WHYT				*e*S		Sn	21 12 34.0	+0.9
	baz=208							
YULB	**Yu-li**	**1.42**	**188**	*e*P		Pn	21 12 17.9	-0.9
	baz=188							
CHN5	**Tsauling**	**1.43**	**213**	*e*P		Pn	21 12 19.4	+0.5
	baz=212							
ALS	**Alishan**	**1.45**	**207**	*e*P		Pn	21 12 19.7	+0.3
	baz=206							
ELDTW	**Lidau**	**1.68**	**196**	*e*P		Pn	21 12 22.9	+0.7
	baz=195							
ELDTW				*e*S		Sn	21 12 43.8	+0.8
	baz=195							
VWUC	**VWUC**	**1.89**	**276**	*e*S		Sn	21 12 46.1	-1.9
	baz=275							

JMA 28 21:12:52.3±0.2, 24.87N×123.30E, h23km, M1.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.48**	**213**	P		Pb	21 13 01.9	-0.3
YOJ				S		Sb	21 13 08.2	-0.7
JYNG	**Yonagunijimaku**	**0.53**	**218**	P		Pb	21 13 02.8	-0.1
JYNG				S		Sb	21 13 09.4	-0.7
IRIF	**Iriomote-Funau**	**0.66**	**144**	P		Pb	21 13 04.9	-0.3
IRIF				S		Sb	21 13 14.6	+0.7
JKRS	**Kuro-shima**	**0.90**	**134**	P		Pb	21 13 09.0	-0.3
JKRS				S		Sb	21 13 20.9	0.0
JIJ	**Ishigaki jima**	**0.92**	**123**	P		Pb	21 13 09.0	-0.5
JIJ				S		Sb	21 13 21.5	+0.2
HATJ	**Hateruma jima**	**0.93**	**150**	P		Pb	21 13 09.8	0.0
HATJ				S		Sb	21 13 21.4	-0.3
JISG	**Ishigakijimahi**	**0.96**	**107**	P		Pb	21 13 09.5	-0.8
JISG				S		Sb	21 13 22.6	0.0
JTJ	**Tarama**	**1.29**	**100**	S		Sb	21 13 32.4	+0.2

BJI ***28*** *21:15:02.1±0.0, 17.86N×69.17W, h90km, mB5.4/52,*
Ms5.5/60, Ms7 5.3/53

MOS ***28*** *21:15:03.7±0.9, 18.18N×68.39W, h91km, mb5.8/35,*
MS5.1/19, Error ellipse: s-maj=6.5km s-min=5.1km
az=67.5

NEIC ***28*** *21:15:04.9, 18.13N×68.35W, h94km, Moment Tensor*
Solution. Moment tensor: Scale 10^17Nm; Mrr3.94;
Mθθ-2.96; Mϕϕ-0.98; Mrθ-3.89; Mθϕ-2.20; Mϕr-0.03; Fault
plane solution: M0 5.71000×10^17 NP1:ϕs37.64000°,
δ28.84000°, λ3.25000°. NP2:ϕs258.09000°, δ67.26000°,
λ108.24000°. Principal axes: T 5.8051, Plg63.0000°,
Azm197.0000°; N -0.2053, Plg17.0000°, Azm71.0000°; P
-5.5998, Plg20.0000°, Azm334.0000°;

NEIC ***28*** *21:15:04.5±2.1, 18.11N×0.06×68.39W×0.05, h88km±1km*
Error ellipse: s-maj=9.9km s-min=7.3km az=184.0

IDC ***28*** *21:15:05.5±0.3, 18.19N×68.39W, h97km±2km, mb5.2/32,*
mb1 5.4/38, mb1mx5.4/40, mbtmp5.6/38, MS4.8/31,
Ms1 4.8/31, ms1mx4.8/35, Error ellipse: s-maj=8.7km
s-min=6.9km az=47.0

OSPL ***28*** *21:15:07.2±4.4, 18.15N×68.35W, h101km±33km, ML5.7,*
Fault plane solution: NP1:ϕs258.00000°, δ67.00000°,
λ108.00000°.

GCMT ***28*** *21:15:07.6±0.1, 18.40N×68.36W, h89km, MW5.8/169,*
Moment Tensor Solution. s153,c326; s169,c498;
Duration: 1s9 Moment tensor: Scale 10^17Nm;
Mrr3.58±.04; Mθθ-2.58±.04; Mϕϕ-1.00±.04; Mrθ-4.14±.03;
Mθϕ-2.55±.04; Mϕr0.11±.03; Best double couple:
M0 5.82000×10^17 NP1:ϕs29.00000°, δ30.00000°,
λ44.00000°. NP2:ϕs259.00000°, δ69.00000°, λ113.00000°.
Principal axes: T 5.9020, Plg59.0000°, Azm202.0000°;
N -0.1640, Plg21.0000°, Azm71.0000°; P -5.7380,
Plg21.0000°, Azm332.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface/mantle waves,
cutoff=50s. Triangular moment-rate function

NEIC ***28*** *21:15:08, 18.33N×68.35W, h100km, Moment Tensor*
Solution. Moment tensor: Scale 10^17Nm; Mrr4.51;
Mθθ-3.78; Mϕϕ-0.73; Mrθ-4.71; Mθϕ-2.84; Mϕr0.41; Fault
plane solution: M0 6.93000×10^17 NP1:ϕs263.00000°,
δ68.00000°, λ112.00000°. NP2:ϕs36.00000°, δ31.00000°,
λ47.00000°. Principal axes: T 6.9710, Plg61.0000°,
Azm205.0000°; N -0.0825, Plg20.0000°, Azm74.0000°; P
-6.8884, Plg20.0000°, Azm337.0000°;

NEIC ***28*** *21:15:08, 18.39N×68.39W, h87km, Moment Tensor*
Solution. Moment tensor: Scale 10^17Nm; Mrr3.45;
Mθθ-2.42; Mϕϕ-1.03; Mrθ-4.16; Mθϕ-2.64; Mϕr0.12; Fault
plane solution: M0 5.81000×10^17 NP1:ϕs259.00000°,
δ70.00000°, λ114.00000°. NP2:ϕs27.00000°, δ31.00000°,
λ42.00000°. Principal axes: T 5.8790, Plg58.0000°,
Azm202.0000°; N -0.1506, Plg23.0000°, Azm71.0000°; P
-5.7284, Plg21.0000°, Azm331.0000°;

BGR ***28*** *21:15:10.5±0.0, 18.15N×67.27W, h33km, mb5.6, Ms5.1*

ISC 28 21:15:05.4±0.2, 18.11N±0.03×68.36W±0.03, h100km±1km, h100km:pP-P, n1852, σ1s61/1907, mb5.8/462, 124C-52D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.40**	**357**			**Pn**	**21 15 19.5**	**-1.0**
PCDR						**Sn**	**21 15 31.8**	**+0.1**
PCDR	**Punta Cana, DR**	**0.40**	**357**	*i* P		**Pn**	**21 15 20.0**	**-0.5**
PCDR				*e*S		**Sn**	**21 15 30.9**	**-0.8**
PCDR				IAML			21 15 34.1	
	comp=Z,572μm,0.5s							
MPR	**Mayaguez**	**1.16**	**85**			**Pn**	**21 15 27.5**	**-0.1**
MPR	**Mayaguez**	**1.16**	**85**	*i* P		**Pn**	**21 15 27.8**	**+0.2**
MPR				*e*S		**Sn**	**21 15 44.1**	**-0.3**
MPR				IAML			21 15 53.5	
	comp=Z,91μm,0.8s							
DR12	**Loma Pena Alta**	**1.18**	**305**			**Pn**	**21 15 25.9**	**-2.0**
CRPR	**Cabo Rojo, PR**	**1.19**	**95**			**Pn**	**21 15 28.0**	**0.0**
CRPR					Sn	**Sn**	**21 15 45.0**	**0.0**

AGPR	**Aguadilla, PR**	**1.24**	**73**			**Pn**	**21 15 28.9**	**+0.4**
AGPR	**Aguadilla, PR**	**1.24**	**73**	*i* P		**Pn**	**21 15 29.6**	**+1.1**
AGPR				*e*S		**Sn**	**21 15 47.1**	**+1.2**
AGPR				IAML			21 15 48.4	
	comp=Z,221μm,0.2s							
MLPR	**Magueyes Islan**	**1.26**	**96**			**Pn**	**21 15 28.7**	**0.0**
MLPR				Sn		**Sn**	**21 15 46.0**	**-0.3**
SDD	**Santo Domingo**	**1.52**	**283**			**Pn**	**21 15 32.3**	**+0.4**
SDD	**Santo Domingo**	**1.52**	**283**	*i* P		**Pn**	**21 15 32.7**	**+0.9**
SDD				*e*S		**Sn**	**21 15 52.7**	**+0.8**
SDD				IAML			21 15 55.1	
	comp=Z,20μm,0.3s							
AOPR	**Arecibo Observ**	**1.54**	**81**			**Pn**	**21 15 32.2**	**0.0**
AOPR						**Sn**	**21 15 52.9**	**+0.3**
OBIP	**Obispado Ponce**	**1.67**	**92**			**Pn**	**21 15 34.0**	**+0.2**
ICMP	**Isla Caja de M**	**1.76**	**97**			**Pn**	**21 15 34.8**	**0.0**
EMPR	**Esperanza - Ma**	**1.77**	**78**			**Pn**	**21 15 35.4**	**+0.4**
EMPR						**Sn**	**21 15 58.6**	**+0.9**
BANI	**BANI**	**1.92**	**279**			**Pn**	**21 15 37.2**	**+0.1**
BON1	**Bonao**	**2.10**	**293**	*i* P		**Pn**	**21 15 39.7**	**+0.4**
BON1				*e*S		**Sn**	**21 16 06.0**	**+0.8**
BON1				IAML			21 16 09.4	
	comp=Z,49μm,0.8s							
SJG	**San Juan**	**2.10**	**90**	P		**Pn**	**21 15 39.4**	**+0.2**
	comp=Z,985nm,0.3s,baz=267,slow=10,SNR=1686							
SJG				LR		LR	21 16 12.9	
	comp=Z,61μm,19.3s,baz=342,slow=32							
SJG	**San Juan**	**2.10**	**90**	*e*P		**Pn**	**21 15 39.4**	**+0.2**
IGPR	**InterUniversit**	**2.15**	**94**			**Pn**	**21 15 39.8**	**-0.1**
GCPR	**Guaynabo City**	**2.17**	**85**			**Pn**	**21 15 40.0**	**-0.2**
CBYP	**Canovanas**	**2.38**	**86**			**Pn**	**21 15 43.0**	**-0.1**
HUMP	**Col San Antoni**	**2.39**	**89**			**Pn**	**21 15 43.0**	**+0.1**
SC01	**Santiago de lo**	**2.60**	**301**			**Pn**	**21 15 46.4**	**+0.6**
SC01	**Santiago de lo**	**2.60**	**301**	*i* P		**Pn**	**21 15 47.0**	**+1.2**
SC01				*e*S		**Sn**	**21 16 11.4**	**-5.4**
SC01				IAML			21 16 12.8	
	comp=Z,75μm,0.9s							
MTP	**Monte Pirata**	**2.67**	**90**			**Pn**	**21 15 46.8**	**0.0**
SDDR	**Presa de Saban**	**2.91**	**288**			**Pn**	**21 15 50.6**	**+0.6**
SDDR	**Presa de Saban**	**2.91**	**288**	*i* P		**Pn**	**21 15 51.9**	**+1.9**
SDDR				IAML			21 16 36.9	
	comp=Z,26μm,1.3s							
CUPR	**Culebra, Puert**	**2.93**	**86**			**Pn**	**21 15 49.5**	**-0.7**
LONE1	**Neyba**	**2.93**	**278**	*i* P		**Pn**	**21 15 49.1**	**-1.1**
LONE1				*e*S		**Sn**	**21 16 26.3**	**+1.5**
LONE1				IAML			21 16 32.3	
	comp=Z,14μm,0.4s							
LOPE2	**Hotel El Peder**	**3.22**	**269**	*i* P		**Pn**	**21 15 51.5**	**-2.6**
LOPE2				*e*S		**Sn**	**21 16 29.1**	**-2.7**
LOPE2				IAML			21 16 31.2	
	comp=Z,17μm,0.8s							
STVI	**Saint Thomas**	**3.25**	**85**			**Pn**	**21 15 53.7**	**-0.7**
STVI				Sn		**Sn**	**21 16 31.2**	**-1.1**
CDVI	**St. Croix**	**3.44**	**95**	*e*P		**Pn**	**21 15 56.2**	**-0.9**
CDVI				*e*S		**Sn**	**21 16 35.5**	**-1.4**
CDVI	**St. Croix**	**3.44**	**95**			**Pn**	**21 15 56.2**	**-0.9**
NQUSE	**US Embassy, Po**	**3.72**	**278**			**Pn**	**21 16 01.9**	**+1.1**
NQBME	**Bureau des Min**	**3.77**	**277**			**Pn**	**21 16 02.6**	**+1.2**
GRTK	**Grand Turk**	**4.27**	**323**			**Pn**	**21 16 05.5**	**-2.8**
SABA	**Saba**	**4.90**	**95**	*e*P		**Pn**	**21 16 16.1**	**-0.6**
SABA	**Saba**	**4.90**	**95**	*e*S		**Sn**	**21 17 11.6**	**-0.7**
SABA	**Saba**	**4.90**	**95**			**Pn**	**21 16 16.8**	**+0.1**
SMRT	**St. Maarten**	**5.03**	**90**	*e*P		**Pn**	**21 16 17.5**	**-1.0**
SMRT	**St. Maarten**	**5.03**	**90**	*e*S		**Sn**	**21 17 12.2**	**-3.2**
SMRT	**St. Maarten**	**5.03**	**90**			**Pn**	**21 16 17.5**	**-1.0**
SEUS	**St. Eustatius**	**5.16**	**96**	*e*P		**Pn**	**21 16 20.5**	**+0.2**
SEUS	**St. Eustatius**	**5.16**	**96**	*e*S		**Sn**	**21 17 17.4**	**-1.2**
SEUS	**St. Eustatius**	**5.16**	**96**			**Pn**	**21 16 21.0**	**-0.3**
SKI	**Saint Kitts**	**5.41**	**97**	*e*P		**Pn**	**21 16 23.4**	**-0.3**
SKI	**Saint Kitts**	**5.41**	**97**	*e*S		**Sn**	**21 17 25.8**	**+1.0**
SKI	**Saint Kitts**	**5.41**	**97**	P		**Pn**	**21 16 23.4**	**-0.3**
SKI	**Saint Kitts**	**5.41**	**97**			**Pn**	**21 16 23.4**	**-0.3**
SKOC	**St. Kitts, UWI**	**5.42**	**98**	*e*S		**Sn**	**21 17 26.6**	**+1.5**
HATO	**Hato, Curacao**	**5.93**	**186**	Pn		**Pn**	**21 16 33.2**	**+2.4**
MLYT	**Lee's Yard**	**6.05**	**102**	*e*P		**Pn**	**21 16 32.6**	**+0.2**
MLYT	**Lee's Yard**	**6.05**	**102**	*e*S		**Sn**	**21 17 38.7**	**-1.6**
ANWB	**Willy Bob**	**6.28**	**93**	*e*P		**Pn**	**21 16 33.9**	**-1.5**
ANWB	**Willy Bob**	**6.28**	**93**	*e*S		**Sn**	**21 17 41.7**	**-4.1**
ANWB	**Willy Bob**	**6.28**	**93**			**Pn**	**21 16 34.0**	**-1.4**
GTBY	**Guantanamo Bay**	**6.64**	**287**			**Pn**	**21 16 37.7**	**-2.7**
ABD	**La Joyeuse, An**	**6.76**	**103**	*e*P		**Pn**	**21 16 42.4**	**+0.3**
ABD	**La Joyeuse, An**	**6.76**	**103**	*e*S		**Sn**	**21 17 52.8**	**-4.8**
ABD	**La Joyeuse, An**	**6.76**	**103**	*e*S		**Sn**	**21 17 53.1**	**-4.5**
CBE	**Ff, Capester**	**6.77**	**106**	*e*P		**Pn**	**21 16 42.1**	**-0.2**
CBE	**Ff, Capester**	**6.77**	**106**	*e*P		**Pn**	**21 16 42.5**	**+0.3**
CBE	**Ff, Capester**	**6.77**	**106**	*e*S		**Sn**	**21 17 59.5**	**+1.6**
TDBA	**Terre de Bas,**	**6.81**	**108**	*e*P		**Pn**	**21 16 42.6**	**-0.2**
TDBA	**Terre de Bas,**	**6.81**	**108**	*e*S		**Sn**	**21 17 53.6**	**-5.4**
MAGL	**Barre de l'ile**	**7.

comp=Z,54nm,0.3s,baz=26,slow=6.9,SNR=184
SDV S **Sn** 21 18 60.0 -3.1
comp=Z,56nm,0.3s,baz=98,slow=21,SNR=1.6
SDV LR LR 21 21 57.3
comp=Z,7µm,19.1s,baz=14,slow=43
SDV Santo Domingo 9.44 194 *eP* **Pn** 21 17 21.3 +2.6
SDV Santo Domingo 9.44 194 P **Pn** 21 17 20.7 +2.0
SDV Santo Domingo 9.44 194 *eS* **Sn** 21 19 00.5 -2.6
GUIV Guiria 9.51 140 *eP* **Pn** 21 17 21.8 +2.3
GUIV Guiria 9.51 140 *eS* **Sn** 21 19 00.4 -4.2
BCHC Barbados, Cave 9.76 119 *eP* Pn 21 17 29.2 +6.3
BCHC Barbados, Cave 9.76 119 *eS* **Sn** 21 19 10.3 -0.3
BBGH Gun Hill 9.81 119 *eP* **Pn** 21 17 27.1 +3.5
BBGH Gun Hill 9.81 119 *eS* **Sn** 21 19 10.5 -1.4
BBGH Gun Hill 9.81 119 **Pn** 21 17 26.5 +2.9
BBSP Saint Philip 9.91 119 *eP* Pn 21 17 31.6 +6.6
ARGC Ariguani, Magd 10.00 216 *eP* **Pn** 21 17 27.2 +1.0
TRN Trinidad (W) 10.02 137 *eP* **Pn** 21 17 29.1 +2.7
TRN Trinidad (W) 10.02 137 *eS* **Sn** 21 19 13.5 -3.6
TOSP Speyside 10.15 131 *eP* **Pn** 21 17 29.6 +1.3
TOSP Speyside 10.15 131 *eS* **Sn** 21 19 17.8 -2.5
TOSP Speyside 10.15 131 **Pn** 21 17 29.1 +0.8
TBH Brigand Hill 10.36 136 *eP* Pn 21 17 37.5 +6.4
TBH Brigand Hill 10.36 136 *eS* **Sn** 21 19 26.8 +1.4
SJCC San Jacinto, C 10.51 220 *eP* **Pn** 21 17 33.0 -0.2
SMLC San Martn de 10.79 212 *eP* **Pn** 21 17 35.7 -1.3
CBCV The Bluff, Cay 10.91 280 **Pn** 21 17 38.0 -0.5
PAMC Pamplona, Colo 11.51 202 *eP* **Pn** 21 17 48.7 +1.6
LCBC Los crdobas, 12.05 221 *eP* **Pn** 21 17 56.7 +2.8
TAMC Tame, Arauca 12.08 197 *eP* **Pn** 21 17 56.8 +2.5
BRRC Barranca, Sant 12.12 206 *eP* **Pn** 21 17 55.2 +0.4
FSCY Frank Sound, G 12.21 278 **Pn** 21 17 55.4 -0.6
BARC Barichara 12.38 203 *eP* **Pn** 21 18 00.2 +1.8
UREC San Jos de Ur 12.44 215 *eP* **Pn** 21 17 59.8 +0.7
PTBC PUERTO BERRIO, 12.95 208 *eP* **Pn** 21 18 07.3 +1.5
RUSC La Rusia 12.99 201 *eP* **Pn** 21 18 08.8 +2.0
RUSC La Rusia 12.99 201 **Pn** 21 18 07.2 +0.5
RUSC **Sn** 21 20 25.7 -4.3
PRVC Isla de Provid 13.37 251 *eP* **Pn** 21 18 13.5 +2.2
DBBC Dabeiba 13.42 216 *eP* **Pn** 21 18 14.5 +2.5
SPBC San Pablo de B 13.59 205 *eP* **Pn** 21 18 15.7 +1.6
HELC Santa Helena 13.76 211 *eP* **Pn** 21 18 18.7 +2.0
061Z Ochoppi 13.96 306 P **Pn** 21 18 15.6 -3.2
NORC Norcasia 14.00 208 *eP* **Pn** 21 18 21.0 +1.5
060A Indiantown 14.20 311 P **Pn** 21 18 18.7 -3.2
BCIP Isla Barro Col 14.26 233 *eP* **Pn** 21 18 22.5 -0.3
BCIP Isla Barro Col 14.26 233 P **Pn** 21 18 22.9 +0.1
BCIP Isla Barro Col 14.26 233 P **Pn** 21 18 22.9 +0.1
PTAC Punta Ardita, 14.27 221 *eP* **Pn** 21 18 24.9 +2.0
CBOC Ciudad Bolivar 14.29 212 *eP* **Pn** 21 18 25.4 +2.1
PTGC Puerto Gaitan, 14.31 195 *eP* **P** 21 18 25.8 -1.8
CHIC Chingaza 14.39 202 *eP* **Pn** 21 18 26.4 +1.4
ROSC El Rosal 14.42 205 P **P** 21 18 27.9 -1.3
comp=Z,33nm,0.3s,baz=83,slow=6.8,SNR=50
ROSC LR LR 21 24 19.5
comp=Z,5µm,21.3s,baz=19,slow=38
ROSC El Rosal 14.42 205 *eP* **Pn** 21 18 27.0 +1.7
ROSC El Rosal 14.42 311 P **P** 21 18 26.6 -1.7
GUY2C Guyana, Caldas 14.53 209 *eP* **P** 21 18 28.6 -1.8
BBSR BB Station 14.58 12 P **Pn** 21 18 24.8 -2.0
RREF El Recreo 14.80 208 *eP* **P** 21 18 33.0 -0.7
VILC Villavicencio, 14.86 201 *eP* **P** 21 18 32.4 -1.5
ANIL Santa Ana 15.19 208 *eP* **P** 21 18 37.6 -0.1
PLMC San Jos del P 15.24 211 *eP* **P** 21 18 38.2 +0.2
DWPF Disney Wildern 15.60 312 P **Pn** 21 18 36.5 -3.2
baz=127
DWPF Disney Wildern 15.60 312 P **Pn** 21 18 37.2 -2.4
ORTC Ortega, Tolima 15.64 206 *eP* **P** 21 18 41.7 -0.8
PRAC Prado 15.67 205 *eP* **P** 21 18 42.7 -0.1
PIZC Pizarro, Choco 15.76 215 *eP* **P** 21 18 45.6 +2.0
GUVC San Jose del G 16.03 196 *eP* **P** 21 18 48.7 +2.0
YOTC Yotoco, Valle 16.07 210 *eP* **Pn** 21 18 45.9 +0.1
ESPN Las Esperanzas 16.47 251 P **Pn** 21 18 50.0 -0.6
MALC Bahia Malaga 16.54 213 *eP* **P** 21 18 56.6 +4.2
MACC Macarena, Meta 16.76 199 *eP* **P** 21 18 54.5 -0.3
BETC Betania 16.84 205 *eP* **P** 21 18 56.9 +1.2
DRK0 Durika 16.92 241 *eP* **P** 21 18 58.0 +1.3
CVTR Volcan Turrial 16.96 244 *eP* **P** 21 18 59.9 +2.5
656A Willston 17.13 313 P **Pn** 21 18 57.0 -1.5
EDPN Palmar Norte 17.26 240 *eP* **Pn** 21 19 04.5 +4.2
LCR2 La Lucha 2 17.30 243 *eP* **Pn** 21 19 04.1 +3.0
GARC Garzon, Huila 17.31 205 *eP* **Pn** 21 19 02.6 +1.4
ACON Acoyapa 17.34 252 *eP* **Pn** 21 19 02.3 +1.0
ACON Acoyapa 17.34 252 P **Pn** 21 19 01.9 +0.6
EDDO Dominical 17.44 242 *eP* **Pn** 21 19 06.4 +3.9
FORC Fortuna 17.53 247‖ *eP* **Pn** 21 19 05.8 +2.2
CEDE Laguna Cedeo 17.55 247 *eP* **Pn** 21 19 06.1 +2.2
PCON Cinco Dias 17.56 208 *eP* **Pn** 21 19 08.2 +3.8
ARE1 Arenal 1 17.57 247 *eP* **Pn** 21 19 05.5 +1.4
456A Hilliard 17.65 318 P **P** 21 19 03.0 -1.5
MATN Matagalpa 17.69 256 *eP* **Pn** 21 19 07.6 +1.9
MATN Matagalpa 17.69 256 P **Pn** 21 19 06.3 +1.1
PTEN Parque Tenorio 17.70 248 *eP* **Pn** 21 19 06.6 +0.9
ACAL Aguas Claras 17.77 248 *eP* **Pn** 21 19 09.2 +2.6
SOTA Rioblanco 17.82 208 *eP* **Pn** 21 19 09.5 +1.9
GR1C Gorgona, Isla 17.83 214 *eP* Pn 21 19 19.7 +13
JTS Las Juntas de 17.86 246 P **Pn** 21 19 08.6 +1.0
comp=Z,6.0nm,0.3s,baz=112,slow=8.4,SNR=66
JTS Las Juntas de 17.86 246 *ceP* **Pn** 21 19 08.4 +0.8
JTS Las Juntas de 17.86 246 *eP* **Pn** 21 19 08.8 +1.2
JTS Las Juntas de 17.86 246 P **P** 21 19 07.0 +0.1
JTS IAmb IAmb 21 19 12.8
comp=Z,1µm,1.1s
HORNC Hornillas 17.86 248‖ *eP* **Pn** 21 19 10.7 +2.9
CUI Cuipilapa 17.88 248 *eP* **Pn** 21 19 09.3 +1.5
COLC Colonia 17.91 248 *eP* **Pn** 21 19 10.7 +2.5
GUAB Guayabo de Bag 17.91 248‖ *eP* **Pn** 21 19 11.8 +3.5
257A Skidaway Islan 17.93 323 P **P** 21 19 06.7 -0.8
BUAI Buenos Aires 17.93 249 *eP* **Pn** 21 19 11.2 +2.8
LIM1 Limonal 17.94 248‖ *eP* **Pn** 21 19 10.7 +2.1
Z59A Georgetown, SC 17.97 329 P **P** 21 19 07.4 -0.6
baz=144,SNR=13
GPS1 Guardaparques 17.99 248‖ *eP* **Pn** 21 19 12.0 +2.7
GPS2 Hotel Rincn d 18.00 248‖ *eP* **Pn** 21 19 11.8 +2.5
GB1A Borinquen Arri 18.01 249 *eP* **Pn** 21 19 12.0 +2.5
BUEV Buena Vista 18.03 249 *eP* **Pn** 21 19 11.5 +1.7
158A Hollywood 18.04 326 P **P** 21 19 08.4 -0.4
baz=141,SNR=13
LAPC Finca la Perla 18.07 248‖ *eP* **Pn** 21 19 11.2 +1.1
GBS3 Finca Las Img 18.08 249‖ *eP* **Pn** 21 19 10.9 +0.6
Y60A Bolivia 18.12 333 P **P** 21 19 09.0 -0.6
baz=149,SNR=30
Y60A Bolivia 18.12 333 P **P** 21 19 08.5 -1.1
CSU Charleston Sou 18.17 327 P **P** 21 19 09.7 -0.5
RGRS Roger Stewart 18.17 326 P **P** 21 19 09.6 -0.6
PLVR Palo Verde 18.18 247 *eP* **Pn** 21 19 12.4 +0.8
NY14 Universidad de 18.21 248‖ *eP* **Pn** 21 19 12.7 +1.0
BBAC Balboa, Cauca 18.22 210 *eP* **Pn** 21 19 13.6 +1.5
Z58A St. Stephen 18.31 328 P **P** 21 19 11.4 -0.4
baz=143,SNR=133
NHSC New Hope 18.32 327 P **P** 21 19 11.5 -0.2
baz=142
GUAI GUAI 18.35 247‖ *eP* **Pn** 21 19 12.9 -0.6
Y59A Loris 18.40 331 P **P** 21 19 12.3 -0.4
baz=147,SNR=39
Y59A Loris 18.40 331 P **P** 21 19 12.2 -0.4
157A Early Branch 18.43 324 P **P** 21 19 12.5 -0.5
baz=139,SNR=114
CRUC La Cruz 18.48 208 *eP* **Pn** 21 19 17.2 +1.8
X60A Albert Glenn T 18.50 334 P **P** 21 19 13.1 -0.7
baz=150,SNR=104
V62A Hyde County Ai 18.64 340 P **P** 21 19 14.4 -0.9
baz=157,SNR=15
V62A Hyde County Ai 18.64 340 P **P** 21 19 14.9 -0.4
W61A Ground Anchor 18.65 337 P **P** 21 19 14.5 -0.9
baz=154,SNR=21
Y58A Scranton 18.70 329 P **P** 21 19 15.4 -0.6
baz=145,SNR=6.3
Y58A Scranton 18.70 329 P **P** 21 19 15.1 -0.8
Z57A Bowman 18.74 326 P **P** 21 19 16.3 -0.2
baz=141,SNR=61
255A Hazlehurst 18.75 320 P **P** 21 19 16.0 -0.5
X59A McDuffie Farm, 18.77 333 P **P** 21 19 16.3 -0.3
baz=148,SNR=27
W60A Pink Hill 18.81 336 P **P** 21 19 16.9 -0.2
baz=152,SNR=56
PTLC Puerto Leguiza 18.92 200 *eP* **Pn** 21 19 23.9 +3.6
TEIG Tepich 18.93 280 P **Pn** 21 19 20.0 -0.3
comp=Z,13nm,0.3s,baz=319,slow=1.1,SNR=48
TEIG Tepich 18.93 280 P **P** 21 19 18.8 +0.2
553A Crawfordville 18.94 312 P **P** 21 19 19.2 +0.7
553A IAmb IAmb 21 19 23.9
comp=Z,797nm,1.2s
CNNC Cliffs of the 19.05 335 P **P** 21 19 18.8 -0.9
CNNC IAmb IAmb 21 19 27.9
comp=Z,333nm,0.8s
V61A Roper 19.05 339 P **P** 21 19 19.0 -0.7
baz=156,SNR=17
V61A Roper 19.05 339 P **P** 21 19 18.5 -1.3
X58A Rowland 19.08 331 P **P** 21 19 19.4 -0.7
baz=147,SNR=22
X58A Rowland 19.08 331 P **P** 21 19 19.4 -0.7
X58A IAmb IAmb 21 19 47.4
comp=Z,434nm,0.8s
Z56A Williston 19.12 325 P **P** 21 19 20.2 -0.4
baz=139,SNR=8.7
Z56A Williston 19.12 325 P **P** 21 19 20.0 -0.6
Z56A IAmb IAmb 21 20 16.1
comp=Z,393nm,0.8s
TIGA Tifton 19.13 317 P **P** 21 19 20.6 -0.1
baz=131,SNR=37
TIGA Tifton 19.13 317 P **P** 21 19 21.0 +0.3
Y57A Sumter 19.15 328 P **P** 21 19 20.0 -0.8
baz=143,SNR=28
Y57A Sumter 19.15 328 P **P** 21 19 19.9 -0.8
Y57A IAmb IAmb 21 20 16.1
comp=Z,389nm,0.7s
W59A Clinton 19.21 334 P **P** 21 19 20.7 -0.8
baz=150
PUAC Puerto Asis, P 19.23 206 *eP* **Pn** 21 19 24.6 +0.7
V60A Jim Taylor Roa 19.27 338 P **P** 21 19 21.9 -0.2
baz=154,SNR=15.7
V60A Jim Taylor Roa 19.27 338 P **P** 21 19 22.0 -0.2
V60A IAmb IAmb 21 20 07.0
comp=Z,437nm,0.8s
X57A Johnson Farm, 19.36 330 P **P** 21 19 22.2 -0.9
baz=144,SNR=38
W58A Raeford 19.42 332 P **P** 21 19 23.2 -0.6
baz=148,SNR=57
CMBC Cumbal 19.43 210 *eP* **Pn** 21 19 28.7 +1.9
Y56A Pelion 19.45 326 P **P** 21 19 23.4 -0.7
baz=140,SNR=10.0
U61A Possum Corner 19.50 340 P **P** 21 19 23.9 -0.7
baz=156,SNR=33
U61A Possum Corner 19.50 340 P **P** 21 19 23.8 -0.9
154A Montrose 19.61 320 P **P** 21 19 26.3 +0.4
V59A Middlesex 19.64 335 P **P** 21 19 25.4 -0.8
baz=151,SNR=75
BIRD Birdtown, Kers 19.68 329 P **P** 21 19 26.3 -0.4
BIRD IAmb IAmb 21 19 28.7
comp=Z,818nm,1.3s
X56A White Oak 19.85 328 P **P** 21 19 27.8 -0.6
baz=142,SNR=205
Y55A Saluda 19.85 325 P **P** 21 19 28.3 -0.2
baz=139,SNR=289
U60A Pendleton 19.87 339 P **P** 21 19 28.2 -0.4
baz=155,SNR=21
W57A Gilead 19.88 331 P **P** 21 19 27.9 -0.8
baz=146,SNR=96
W57A Gilead 19.88 331 P **P** 21 19 27.5 -1.2
W57A IAmb IAmb 21 19 32.8
comp=Z,421nm,1.1s
U59A Littleton 19.99 337 P **P** 21 19 29.3 -0.6
baz=153,SNR=84
U59A Littleton 19.99 337 P **P** 21 19 29.4 -0.6
U59A IAmb IAmb 21 19 34.5
comp=Z,717nm,1.2s
V58A Windy Hill, Pi 20.02 334 P **P** 21 19 29.7 -0.6
baz=149,SNR=110
V58A Windy Hill, Pi 20.02 334 P **P** 21 19 29.8 -0.6
V58A IAmb IAmb 21 19 32.7
comp=Z,872nm,1.4s
352A Blakely 20.05 315 P **P** 21 19 30.3 -0.4
MDP Montagnes des 20.08 128 P Pn 21 19 32.9 -0.9
comp=Z,386nm,0.7s,baz=319,slow=10,SNR=93
MDP S **S** 21 23 09.3 -2.2
comp=Z,90nm,0.7s,baz=289,slow=13,SNR=5.1
451A Vernon 20.11 311 P **P** 21 19 31.2 -0.1
W56A Indian Trail 20.14 330 P **P** 21 19 30.9 -0.7
baz=144,SNR=122
X55A Gracelyn & Ava 20.14 327 P **P** 21 19 30.9 -0.7
baz=141,SNR=95
CUSE Cuicocha Este 20.26 210 *eP* Pn 21 19 37.1 +0.7
HODGE Hodges 20.29 325 P **P** 21 19 32.5 -0.7
HODGE IAmb IAmb 21 19 35.4
comp=Z,682nm,1.1s
U58A Oxford 20.31 336 P **P** 21 19 33.0 -0.4
baz=151,SNR=130
T60A Surry 20.34 340 P **P** 21 19 33.8 +0.1
baz=157,SNR=25
T60A Surry 20.34 340 P **P** 21 19 33.4 -0.3
GOGA Godfrey 20.39 321 P **P** 21 19 34.3 +0.1
baz=135,SNR=208
V57A Coltrane Farms 20.39 333 P **P** 21 19 33.9 -0.3
baz=148,SNR=283
T59A Double "B" Far 20.46 339 P **P** 21 19 34.8 -0.2
baz=154,SNR=108
T59A Double "B" Far 20.46 339 P **P** 21 19 34.5 -0.5
T59A IAmb IAmb 21 19 39.9
comp=Z,681nm,1.1s
PTGA Pitinga 20.47 155 P Pn 21 19 37.4 -0.9
comp=Z,207nm,0.8s,baz=354,slow=13,SNR=124
PTGA Pitinga 20.47 155 P **P** 21 19 36.7 +1.4
PTGA IAmb IAmb 21 20 03.6
comp=Z,583nm,0.9s
PTGA Pitinga 20.47 155 *eP* **P** 21 19 34.5 -0.8
PAC1 Pacto, Paraso 20.49 211 *eP* Pn 21 19 37.6 -1.1
PAULI Pauline 20.50 327 IAmb IAmb 21 19 40.6
comp=Z,853nm,1.2s
KMSC Kings Mountain 20.51 328 P **P** 21 19 34.8 -0.8
baz=143,SNR=202
S61A Accomac 20.52 343 P **P** 21 19 35.7 0.0
baz=160
X54A Belton 20.59 325 P **P** 21 19 36.0 -0.5
baz=139,SNR=251
V56A Mocksville 20.65 331 P **P** 21 19 36.7 -0.4
baz=146,SNR=209
152A Waverly Hall 20.66 318 IAmb IAmb 21 20 04.9
comp=Z,449nm,0.8s
U57A Blanch 20.66 334 P **P** 21 19 36.9 -0.3
baz=149,SNR=200
T58A Grand View Acr 20.79 337 P **P** 21 19 38.1 -0.4
baz=152,SNR=124
S60A Water View 20.83 341 P **P** 21 19 39.1 +0.1
baz=157,SNR=35
W54A Cherokee Point 20.90 327 P **P** 21 19 39.3 -0.5
baz=141,SNR=63
V55A Taylorsville 21.02 330 P **P** 21 19 40.7 -0.4
baz=144,SNR=65
U56A King 21.04 332 P **P** 21 19 41.2 0.0
baz=147,SNR=118
U56A King 21.04 332 IAmb IAmb 21 19 46.5
comp=Z,1µm,1.4s
S59A Mechanicsville 21.08 340 P **P** 21 19 41.5 -0.2
baz=156,SNR=20
T57A Hurt 21.12 335 P **P** 21 19 41.6 -0.4
baz=150,SNR=214
T57A Hurt 21.12 335 IAmb IAmb 21 19 46.5
comp=Z,810nm,1.1s
S58A Poland Farm, P 21.21 338 P **P** 21 19 42.6 -0.4
baz=154,SNR=94
S58A Poland Farm, P 21.21 338 IAmb IAmb 21 20 36.3
comp=Z,335nm,0.8s
BG3 Lake Jocassee 21.23 325 IAmb IAmb 21 19 45.9
comp=Z,490nm,1.2s
V54A Nebo 21.32 328 P **P** 21 19 44.1 -0.2
baz=142,SNR=197
R60A Leonardtown, M 21.33 342 P **P** 21 19 44.2 -0.1
baz=158,SNR=19
R59A King George, V 21.43 341 P **P** 21 19 45.4 0.0
baz=157,SNR=60
R58B Mineral 21.46 339 P **P** 21 19 45.4 -0.3
baz=155,SNR=149
R58B Mineral 21.46 339 IAmb IAmb 21 20 30.0
comp=Z,1µm,1.4s
T56A Rocky Mt 21.46 334 P **P** 21 19 45.4 -0.4
baz=148,SNR=83
U55A TA2, Sparta 21.47 331 P **P** 21 19 46.0 +0.1
baz=145,SNR=195
CBN Corbin Frederi 21.51 340 P **P** 21 19 45.9 -0.4
baz=156,SNR=11
CBN Corbin Frederi 21.51 340 IAmb IAmb 21 20 24.4
comp=Z,694nm,1.0s
Q61A Milford 21.56 345 P **P** 21 19 46.4 -0.4
baz=162
S57A Dark Hollow, R 21.66 337 P **P** 21 19 46.9 -1.0
baz=152,SNR=80
S57A Dark Hollow, R 21.66 337 IAmb IAmb 21 19 54.4
comp=Z,365nm,1.1s
BLA Blacksburg 21.78 333 P **P** 21 19 48.8 -0.4
baz=148,SNR=110
BLA Blacksburg 21.78 333 IAmb IAmb 21 20 32.1
comp=Z,686nm,0.9s
R58A Rapidan 21.81 339 P **P** 21 19 49.0 -0.4
baz=155,SNR=262
Q60A Greensboro 21.81 344 P **P** 21 19 48.8 -0.6
baz=161,SNR=25
S56A Natural Bridge 21.83 335 P **P** 21 19 49.4 -0.3
baz=150,SNR=120
U54A Nelsons Funny 21.85 330 P **P** 21 19 49.7 -0.2
baz=144,SNR=112
U54A Nelsons Funny 21.85 330 IAmb IAmb 21 20 33.9
comp=Z,685nm,1.1s
W52A Murphy 21.85 324 IAmb IAmb 21 20 29.3
comp=Z,1µm,1.8s
T55A Pulaski 21.86 332 P **P** 21 19 50.1 0.0
baz=147,SNR=11
Q59A Harwood 21.90 342 P **P** 21 19 49.9 -0.5
baz=158,SNR=24
R57A Stanardsville 21.98 338 P **P** 21 19 51.0 -0.3
baz=154,SNR=96
T54A Tazewell 22.17 331 P **P** 21 19 53.0 -0.3
baz=145,SNR=188
TKL Tuckaleechee C 22.18 325 P **P** 21 19 52.4 -1.0
comp=Z,155nm,1.0s,baz=148,slow=11,SNR=38
TKL S **S** 21 23 51.5 +0.1
comp=Z,231nm,1.0s,baz=205,slow=13,SNR=4.2
TKL Tuckaleechee C 22.18 325 IAmb IAmb 21 20 14.7
comp=Z,372nm,1.0s
P61A Hammonton 22.20 347 P **P** 21 19 53.4 -0.1
baz=164
V52A Sevierville 22.22 326 P **P** 21 19 52.9 -1.0
Q58A Fox Den Farm, 22.28 341 P **P** 21 19 53.4 -1.0
baz=156,SNR=57
S55A Lewisburg 22.29 334 P **P** 21 19 54.3 -0.3
baz=148,SNR=100
LRAL Lakeview Retre 22.38 315 P **P** 21 19 55.4 -0.2
baz=127,SNR=186
LRAL Lakeview Retre 22.38 315 P **P** 21 19 55.5 -0.1
LRAL IAmb IAmb 21 20 18.9
comp=Z,581nm,0.9s
CPCT Cooper Cave 22.45 323 P **P** 21 19 56.0 -0.2
CPCT IAmb IAmb 21 20 17.7
comp=Z,342nm,0.9s
FPAL Fort Paine 22.45 320 IAmb IAmb 21 20 33.1
comp=Z,392nm,0.9s
Y49A Blount Mountai 22.51 318 IAmb IAmb 21 20 21.1
comp=Z,458nm,1.2s
P60A Greenville 22.52 345 P **P** 21 19 55.9 -1.0
baz=162,SNR=26
P59A Jarrettsville 22.54 344 P **P** 21 19 56.3 -0.8
baz=160,SNR=75
O61A Allentown 22.55 348 P **P** 21 19 56.3 -0.8
baz=165,SNR=7.4
T53A Wise 22.56 329 P **P** 21 19 56.9 -0.5
baz=143,SNR=49
R55A Marlinton 22.57 335 P **P** 21 19 57.5 0.0
baz=150,SNR=55
R55A Marlinton 22.57 335 IAmb IAmb 21 20 51.5
comp=Z,780nm,1.2s
PSUB Penn St. - Bra 22.59 346 IAmb IAmb 21 20 33.9
comp=Z,450nm,1.2s
Q57A Strasburg 22.61 339 P **P** 21 19 57.0 -0.8
baz=155,SNR=20
V51A Loudon 22.61 324 IAmb IAmb 21 20 19.3
comp=Z,531nm,1.0s
S54A Dingess, Beckl 22.66 333 P **P** 21 19 58.2 -0.2
baz=147,SNR=82
S54A Dingess, Beckl 22.66 333 IAmb IAmb 21 20 20.1
comp=Z,423nm,0.7s
P58A Pank, Wackersv 22.67 342 P **P** 21 19 57.3 -1.0
baz=158,SNR=26
W50A Signal Mountai 22.73 322 IAmb IAmb 21 20 39.5
comp=Z,428nm,1.1s
TZTN Tazewell 22.73 327 P **P** 21 19 58.5 -0.6
baz=140,SNR=92
TZTN Tazewell 22.73 327 IAmb IAmb 21 20 44.5
comp=Z,577nm,1.0s
CCIG Comitan 22.79 269 P **P** 21 19 59.6 -0.4
CCIG IAmb IAmb 21 20 44.2
comp=Z,318nm,0.8s
R54A Victor 22.84 334 P **P** 21 20 00.1 -0.1
baz=148,SNR=55
MVL Millersville 22.88 344 IAmb IAmb 21 20 03.1
comp=Z,781nm,1.3s
Q56A Snyder Ridge, 22.88 338 P **P** 21 20 00.3 -0.3
baz=153,SNR=56
Q56A Snyder Ridge, 22.88 338 IAmb IAmb 21 20 22.2
comp=Z,382nm,1.1s
P57A Homestead Farm 22.88 341 P **P** 21 19 59.5 -1.0
baz=156,SNR=37
S53A Williston 22.93 331 P **P** 21 20 00.7 -0.4
baz=145,SNR=42
O60A Telford 22.95 346 P **P** 21 20 00.8 -0.4
baz=163,SNR=14
N63A Mattituck 23.08 352 P **P** 21 20 01.3 -1.1
baz=170
SWET Sewanee 23.11 321 IAmb IAmb 21 20 06.8
comp=Z,1µm,1.9s
CPNY Central Park 23.11 349 IAmb IAmb 21 20 48.4
comp=Z,666nm,1.4s
N61A South Mountain 23.13 348 P **P** 21 20 02.3 -0.7
baz=166,SNR=9.6
O58A Lewisberry 23.15 343 P **P** 21 20 02.7 -0.4
baz=159,SNR=52
N62A Caumsett State 23.16 350 P **P** 21 20 01.3 -1.9
baz=168
Q55A Buckhannon 23.17 336 P **P** 21 20 03.8 +0.4
baz=151,SNR=43
P56A Dayton Farm, R 23.17 339 P **P** 21 20 03.4 0.0
baz=154,SNR=60
PAGS Pennsylvania G 23.19 344 IAmb IAmb 21 21 01.6
comp=Z,359nm,0.9s
Z47A Carrollton 23.20 314 IAmb IAmb 21 20 28.4
comp=Z,474nm,0.8s
PAL Palisades 23.31 349 P **P** 21 20 03.1 -1.4
baz=167,SNR=17
PAL Palisades 23.31 349 IAmb IAmb 21 21 00.6
comp=Z,248nm,0.8s
WSPT Westport, CT 23.37 351 IAmb IAmb 21 20 56.4
comp=Z,386nm,0.7s
R53A Hurricane 23.38 332 P **P** 21 20 05.1 -0.1
baz=146,SNR=54
R53A Hurricane 23.38 332 IAmb IAmb 21 20 28.2
comp=Z,507nm,1.1s
N60A Cedar Hill Far 23.41 347 P **P** 21 20 05.0 -0.5
baz=164,SNR=44
M63A Gales Ferry 23.43 353 P **P** 21 20 05.1 -0.6
baz=171,SNR=20
O57A Amberson 23.43 342 P **P** 21 20 06.1 +0.3
baz=157,SNR=57
M65A Busby, Falmout 23.45 356 P **P** 21 20 04.3 -1.6
baz=174,SNR=5.4
YLE Yale 23.45 351 IAmb IAmb 21 21 00.6
comp=Z,659nm,1.0s
Q54A Coxs Mills 23.46 335 P **P** 21 20 06.6 +0.7
baz=149,SNR=76
M64A Tiverton 23.49 355 P **P** 21 20 05.8 -0.3
baz=173,SNR=22
ODNJ Ogdensburg 23.51 348 IAmb IAmb 21 20 27.5
comp=Z,256nm,0.7s
P55A Reedsville 23.52 337 P **P** 21 20 06.6 0.0
baz=152,SNR=45
M62A Hamden 23.57 351 P **P** 21 20 06.2 -0.8
baz=169,SNR=23
M61A Granite Spring 23.58 350 P **P** 21 20 06.1 -0.9
baz=167,SNR=15
S51A Beattyville 23.60 329 IAmb IAmb 21 20 29.3
comp=Z,386nm,1.1s
N59A State Game Lan 23.60 346 P **P** 21 20 07.3 0.0
baz=162,SNR=58
N59A State Game Lan 23.60 346 IAmb IAmb 21 20 30.4
comp=Z,541nm,0.8s
Q53A Leroy 23.64 334 P **P** 21 20 07.5 -0.1
baz=148,SNR=53
MCWV Mont Chateau 23.66 337 P **P** 21 20 08.5 +0.7
baz=152,SNR=27
M60A Port Jervis 23.75 348 P **P** 21 20 08.3 -0.2
baz=165,SNR=20
N58A Sunbury 23.76 344 P **P** 21 20 08.2 -0.4
baz=160,SNR=28
N58A Sunbury 23.76 344 IAmb IAmb 21 20 52.3
comp=Z,480nm,1.1s
T50A Nancy 23.77 326 IAmb IAmb 21 20 31.6
comp=Z,401nm,1.2s
O56A Blue Knob Stat 23.77 340 P **P** 21 20 09.2 +0.3
baz=155,SNR=28

O56A **Blue Knob Stat** 23.77 340 IAmb IAmb 21 20 32.7
comp=Z,922nm,1.8s
L63A **North Scituate** 23.83 354 P **P** **21 20 09.3 0.0**
baz=172,SNR=8.6
L64A **Middleborough** 23.84 355 P **P** **21 20 08.1 -1.2**
baz=174
P54A **Burton** 23.85 336 P **P** **21 20 08.6 -0.9**
baz=151,SNR=64
BRYW **Bryant College** 23.88 354 IAmb IAmb 21 20 44.0
comp=Z,424nm,1.2s
SSPA **Standing Stone** 23.90 342 P **P** **21 20 10.6 +0.7**
SSPA IAmb IAmb 21 20 33.2
comp=Z,319nm,0.9s
N57A **Milroy** 23.91 343 P **P** **21 20 09.2 -0.9**
baz=158,SNR=50
KSCT **Kent School, K** 23.94 351 IAmb IAmb 21 20 58.4
comp=Z,473nm,1.4s
O55A **Ligonier** 23.96 339 P **P** **21 20 10.9 +0.4**
baz=154,SNR=25
Q52A **Bidwell** 24.04 333 P **P** **21 20 11.5 +0.3**
baz=146,SNR=130
P53A **Whipple** 24.11 335 P **P** **21 20 12.0 +0.2**
baz=148,SNR=81
P53A **Whipple** 24.11 335 IAmb IAmb 21 20 15.0
comp=Z,451nm,1.1s
L62A **Suffield** 24.12 352 P **P** **21 20 11.3 -0.6**
baz=170
M59A **Waymart** 24.12 347 P **P** **21 20 11.9 0.0**
baz=163,SNR=42
M58A **Price's Panora** 24.20 345 P **P** **21 20 13.6 +1.0**
baz=161,SNR=20
M58A S **S** **21 24 24.5 +0.7**
baz=161
344A **Westbrook Farm** 24.21 308 IAmb IAmb 21 20 38.9
comp=Z,412nm,1.1s
KSPA **Keystone Colle** 24.21 346 IAmb IAmb 21 20 56.8
comp=Z,398nm,1.2s
MALB **Monte Alegre** 24.21 144 *e*P **P** **21 20 14.4 +1.4**
MALB *e*S **S** **21 24 34.0 +10**
N56A **West Decatur** 24.28 341 P **P** **21 20 13.9 +0.5**
baz=157,SNR=51
PLAL **Pickwick Lake** 24.28 318 IAmb IAmb 21 20 37.5
comp=Z,525nm,0.9s
L60A **Shokan** 24.32 349 P **P** **21 20 13.9 +0.3**
baz=166,SNR=23
O54A **Avella** 24.32 337 P **P** **21 20 14.4 +0.6**
baz=151,SNR=84
O54A **Avella** 24.32 337 IAmb IAmb 21 20 16.6
comp=Z,581nm,1.1s
M57A **Sunshine Farm,** 24.34 344 P **P** **21 20 14.7 +0.8**
baz=160,SNR=70
M57A **Sunshine Farm,** 24.34 344 IAmb IAmb 21 20 16.9
comp=Z,281nm,0.9s
N55A **Marion Center** 24.37 340 P **P** **21 20 14.6 +0.4**
baz=155,SNR=86
L61A **Hillsdale 1, H** 24.41 351 P **P** **21 20 14.8 +0.3**
baz=168,SNR=63
VBMS **Vicksburg** 24.42 309 P **P** **21 20 16.0 +1.3**
baz=120,SNR=13
R50A **Paris** 24.46 328 IAmb IAmb 21 20 18.1
comp=Z,513nm,1.0s
HRV **Adam Dziewonsk** 24.47 354 P **P** **21 20 15.6 +0.6**
HRV pmax pmax
comp=Z,539nm,1.0s
HRV **Adam Dziewonsk** 24.47 354 P **P** **21 20 15.4 +0.4**
baz=173
HRV **Adam Dziewonsk** 24.47 354 P **P** **21 20 15.6 +0.6**
HRV IAmb IAmb 21 20 18.6
comp=Z,539nm,0.9s
L61B **Northampton** 24.54 352 P **P** **21 20 15.6 0.0**
baz=170,SNR=16
P52A **Corning** 24.54 334 P **P** **21 20 15.7 0.0**
baz=147,SNR=92
K63A **Dunstable** 24.64 354 P **P** **21 20 17.2 +0.6**
baz=173,SNR=33
L59A **Walton** 24.67 348 P **P** **21 20 16.7 -0.2**
baz=165,SNR=26
L59A **Walton** 24.67 348 IAmb IAmb 21 21 01.4
comp=Z,258nm,0.9s
K62A **Royalston** 24.69 353 P **P** **21 20 17.0 0.0**
baz=171,SNR=20
O53A **New Philadelph** 24.69 336 P **P** **21 20 17.1 0.0**
baz=150,SNR=59
L58A **Harry Jones Me** 24.70 347 P **P** **21 20 17.5 +0.3**
baz=163,SNR=35
M56A **Emporium** 24.77 342 P **P** **21 20 18.3 +0.5**
baz=157,SNR=64
M56A **Emporium** 24.77 342 IAmb IAmb 21 20 40.8
comp=Z,313nm,1.0s
P51A **Williamsport** 24.82 332 P **P** **21 20 18.5 +0.2**
baz=145,SNR=54
P51A **Williamsport** 24.82 332 IAmb IAmb 21 20 48.2
comp=Z,326nm,0.8s
O52A **Adamsville** 24.83 335 P **P** **21 20 18.9 +0.5**
baz=148,SNR=88
O52A **Adamsville** 24.83 335 IAmb IAmb 21 20 22.8
comp=Z,763nm,1.1s
K61A **Williamstown** 24.83 351 P **P** **21 20 17.8 -0.5**
baz=169,SNR=29
WVT **Waverly** 24.86 320 P **P** **21 20 18.6 -0.1**
WVT pmax pmax
comp=Z,213nm,0.8s
WVT **Waverly** 24.86 320 P **P** **21 20 18.4 -0.3**
baz=131
WVT **Waverly** 24.86 320 P **P** **21 20 18.6 -0.1**
WVT IAmb IAmb 21 20 57.5
comp=Z,213nm,0.8s
N54A **Moraine State** 24.87 339 P **P** **21 20 19.4 +0.6**
baz=153,SNR=58
BINY **Binghamton** 24.87 346 P **P** **21 20 19.2 +0.4**
baz=163,SNR=85
BINY **Binghamton** 24.87 346 IAmb IAmb 21 20 21.6
comp=Z,491nm,1.1s
K60A **Five Rivers En** 24.87 350 P **P** **21 20 19.2 +0.5**
baz=168,SNR=6.4
OXF **Oxford** 24.87 315 P **P** **21 20 19.3 +0.5**
baz=126,SNR=151
L57A **Andrews Acres** 24.89 345 P **P** **21 20 19.4 +0.5**
baz=161,SNR=73
M55A **Ridgway** 24.93 341 P **P** **21 20 19.5 +0.2**
baz=156,SNR=76
M55A **Ridgway** 24.93 341 IAmb IAmb 21 20 22.9
comp=Z,751nm,1.6s
N53A **Lisbon** 25.04 337 P **P** **21 20 20.8 +0.5**
baz=151,SNR=122
O51A **Pataskala** 25.17 334 P **P** **21 20 21.8 +0.3**
baz=147,SNR=77
J63A **Strafford** 25.19 355 P **P** **21 20 21.5 -0.1**
baz=174,SNR=15
K59A **Cooperstown** 25.20 349 P **P** **21 20 21.8 +0.1**
baz=165,SNR=54
L56A **Greenwood** 25.20 344 P **P** **21 20 21.8 +0.1**
baz=159,SNR=65
L56A **Greenwood** 25.20 344 IAmb IAmb 21 20 24.3
comp=Z,344nm,0.9s
J62A **Henniker** 25.20 354 P **P** **21 20 22.4 +0.7**
baz=172,SNR=20
M54A **Oil Creek Stat** 25.25 340 P **P** **21 20 22.6 +0.4**
baz=154,SNR=53
P50A **Jamestown** 25.25 331 P **P** **21 20 22.8 +0.6**
baz=144,SNR=93
CMIG **Matias Romero** 25.30 272 P **P** **21 20 21.0 -1.9**
comp=Z,2.1nm,0.5s,baz=99,slow=7.1,SNR=4.0
K58A **Earlville** 25.34 347 P **P** **21 20 23.6 +0.7**
baz=164,SNR=65
K58A **Earlville** 25.34 347 IAmb IAmb 21 21 16.9
comp=Z,365nm,0.9s
N52A **McGinn's Farm,** 25.36 336 P **P** **21 20 23.5 +0.3**
baz=149,SNR=18
342A **Flagon Creek P** 25.39 306 IAmb IAmb 21 20 29.6
comp=Z,642nm,1.1s
ACSO **Alum Creek Sta** 25.40 333 P **P** **21 20 24.1 +0.5**
baz=146,SNR=140
J61A **Chester** 25.40 353 P **P** **21 20 23.7 +0.2**
baz=171,SNR=36
J60A **Lant Hill Farm** 25.42 351 P **P** **21 20 24.3 +0.7**
baz=169,SNR=9.5
WCI **Wyandotte Cave** 25.44 326 P **P** **21 20 24.7 +0.8**
WCI pmax pmax
comp=Z,204nm,0.8s
WCI **Wyandotte Cave** 25.44 326 P **P** **21 20 24.0 0.0**
baz=137
WCI **Wyandotte Cave** 25.44 326 P **P** **21 20 24.7 +0.8**
WCI IAmb IAmb 21 21 06.2
comp=Z,204nm,0.8s
L55A **Hinsdale** 25.48 342 P **P** **21 20 24.8 +0.5**
baz=157,SNR=42
K57A **Scipio Center** 25.50 346 P **P** **21 20 24.7 +0.2**
baz=162,SNR=26
M53A **WI Miller and** 25.53 338 P **P** **21 20 25.3 +0.5**
baz=152,SNR=46
ALLY **Alegheny Colle** 25.54 339 IAmb IAmb 21 20 49.4
comp=Z,332nm,0.9s
ITTB **Itaituba** 25.57 150 *e*P **P** **21 20 27.0 +1.7**
ACCN **Adirondack Com** 25.59 351 IAmb IAmb 21 21 18.3
comp=Z,318nm,1.1s
O50A **Cable** 25.61 332 P **P** **21 20 26.1 +0.6**
baz=145,SNR=46
P49A **Miami Univ. Ec** 25.63 330 P **P** **21 20 25.9 +0.3**
baz=142,SNR=54
K56A **Middlesex** 25.66 345 P **P** **21 20 26.1 +0.2**
baz=160,SNR=20
N51A **Ashland** 25.72 335 P **P** **21 20 26.6 +0.1**
baz=148,SNR=21
N51A **Ashland** 25.72 335 IAmb IAmb 21 20 51.1
comp=Z,438nm,1.3s
WVNY **West Valley, N** 25.74 342 IAmb IAmb 21 20 50.8
comp=Z,317nm,0.9s
I64A **Boothbay** 25.75 358 P **P** **21 20 28.0 +1.4**
baz=177,SNR=5.5
L54A **Sinclairville** 25.79 341 P **P** **21 20 27.3 +0.2**
baz=156,SNR=58
J59A **Piesco** 25.80 350 P **P** **21 20 27.6 +0.5**
baz=166,SNR=20
I62A **Tamworth** 25.80 355 P **P** **21 20 27.9 +0.7**
baz=174
I62A **Tamworth** 25.80 355 IAmb IAmb 21 21 21.8
comp=Z,299nm,0.9s
J58A **Remsen** 25.84 348 P **P** **21 20 28.0 +0.5**
baz=165,SNR=48
J58A **Remsen** 25.84 348 IAmb IAmb 21 20 30.3
comp=Z,349nm,1.2s
L53A **Girard** 25.84 339 P **P** **21 20 27.8 +0.2**
baz=153,SNR=16
MMNY **Mt. Morris Dam** 25.85 344 IAmb IAmb 21 20 52.0
comp=Z,429nm,0.9s
M52A **Chesterland** 25.87 337 P **P** **21 20 28.0 +0.2**
baz=151,SNR=9.4
M52A **Chesterland** 25.87 337 IAmb IAmb 21 20 52.6
comp=Z,227nm,0.8s
X43A **Marvell** 25.88 314 P **P** **21 20 29.0 +1.1**
baz=124,SNR=18
K55A **Perry** 25.89 343 P **P** **21 20 27.9 0.0**
baz=158,SNR=34
ERPA **Erie** 25.90 340 P **P** **21 20 28.0 -0.1**
baz=154,SNR=21
ERPA **Erie** 25.90 340 IAmb IAmb 21 21 12.3
comp=Z,218nm,0.8s
N50A **Nevada** 25.92 334 P **P** **21 20 28.1 -0.1**
baz=146,SNR=42
I63A **Otisfield** 25.93 356 P **P** **21 20 28.6 +0.4**
baz=175,SNR=19
I63A **Otisfield** 25.93 356 IAmb IAmb 21 20 33.3
comp=Z,263nm,1.1s
I61A **Oroboro, Fairl** 25.94 354 P **P** **21 20 28.6 +0.2**
baz=172,SNR=20
K54A **Basiliko Farm,** 25.95 342 P **P** **21 20 28.6 +0.1**
baz=157,SNR=20
O49A **Covington** 25.97 331 IAmb IAmb 21 20 53.4
comp=Z,476nm,1.2s
I60A **Shoreham** 25.99 352 P **P** **21 20 29.4 +0.6**
baz=169,SNR=25
M51A **Elyria** 26.00 336 P **P** **21 20 29.3 +0.3**
baz=149,SNR=6.2
USIN **University of** 26.01 323 IAmb IAmb 21 21 11.5
comp=Z,459nm,0.9s
I59A **Olmsteadville** 26.02 351 P **P** **21 20 29.4 +0.3**
baz=168,SNR=14
J57A **Williamstown** 26.03 347 P **P** **21 20 29.3 +0.1**
baz=163,SNR=37
J57A **Williamstown** 26.03 347 IAmb IAmb 21 21 25.8
comp=Z,341nm,1.1s
J56A **Wolcott** 26.10 346 P **P** **21 20 29.6 -0.1**
baz=161,SNR=23
J56A **Wolcott** 26.10 346 IAmb IAmb 21 21 02.0
comp=Z,194nm,0.8s
I58A **Old Forge** 26.10 349 P **P** **21 20 30.2 +0.3**
baz=166,SNR=33
LPAR **Lepanto** 26.10 316 P **P** **21 20 30.9 +1.0**
LPAR IAmb IAmb 21 20 56.3
comp=Z,398nm,0.8s
GNAR **Gosnell** 26.14 317 P **P** **21 20 31.2 +1.0**
LBNH **Lisbon** 26.22 354 P **P** **21 20 31.3 +0.4**
baz=172,SNR=13
BLO **Bloomington** 26.25 327 IAmb IAmb 21 20 34.0
comp=Z,237nm,1.0s
HBAR **Harrisburg** 26.31 316 P **P** **21 20 32.7 +0.9**
HBAR IAmb IAmb 21 20 58.8
comp=Z,364nm,0.8s
J55A **Hilton** 26.32 344 P **P** **21 20 31.9 +0.1**
baz=160,SNR=42
J55A **Hilton** 26.32 344 IAmb IAmb 21 20 34.2
comp=Z,392nm,1.1s
WVL **Waterville** 26.39 358 IAmb IAmb 21 21 10.5
comp=Z,201nm,0.8s
O48A **Farmland** 26.40 330 P **P** **21 20 32.3 -0.3**
baz=142,SNR=44
M50A **Fremont** 26.40 335 IAmb IAmb 21 20 58.5
comp=Z,556nm,1.2s
H64A **Troy** 26.46 359 P **P** **21 20 32.9 -0.1**
baz=178,SNR=13
I57A **Carthage** 26.47 348 P **P** **21 20 33.1 -0.1**
baz=164,SNR=40
H62A **Milan** 26.49 356 P **P** **21 20 33.9 +0.6**
baz=174,SNR=17
H65A **Eastbrook** 26.50 0 P **P** **21 20 33.3 -0.1**
baz=180
H63A **New Sharon** 26.51 357 P **P** **21 20 34.2 +0.7**
baz=176,SNR=8.0
H61A **Lyndonville** 26.51 354 P **P** **21 20 34.1 +0.6**
baz=172,SNR=29
EMMW **East Machias** 26.53 1 P **P** **21 20 34.3 +0.7**
J54A **Appleton** 26.55 343 P **P** **21 20 34.0 +0.2**
baz=158,SNR=16
Z41A **Richland Creek** 26.60 309 P **P** **21 20 35.8 +1.4**
baz=119,SNR=13
H66A **Whiting** 26.61 2 P **P** **21 20 34.7 +0.3**
baz=182,SNR=9.5
H60A **Morristown** 26.62 353 P **P** **21 20 35.0 +0.5**
baz=171,SNR=18
H58A **Gabriels** 26.68 351 P **P** **21 20 35.3 +0.2**
baz=168,SNR=17
K52A **Tillsonburg** 26.73 340 P **P** **21 20 35.7 +0.1**
baz=153,SNR=9.1
SIUC **Southern Illin** 26.74 321 IAmb IAmb 21 21 03.1
comp=Z,357nm,0.8s
S44A **Carbondale** 26.75 321 IAmb IAmb 21 20 38.3
comp=Z,342nm,0.7s
N48A **Decatur** 26.82 331 P **P** **21 20 36.2 -0.1**
baz=143,SNR=44
H59A **Cadyville** 26.83 352 P **P** **21 20 36.2 -0.2**
baz=169,SNR=15
L50A **Kingsville** 26.85 336 P **P** **21 20 36.8 +0.2**
baz=148,SNR=16
LONY **Lake Ozonia** 26.94 350 P **P** **21 20 37.5 +0.2**
baz=167,SNR=28
G63A **Kingsbury** 26.94 358 P **P** **21 20 37.4 +0.1**
baz=177,SNR=21
K51A **Iona Station** 26.95 338 P **P** **21 20 38.0 +0.5**
baz=152,SNR=9.8
GGN **Saint George** 26.96 2 IAmb IAmb 21 21 18.6
comp=Z,302nm,0.8s
ATAH **Atahualpa** 26.97 202 P **P** **21 20 40.8 +2.4**
comp=Z,124nm,1.1s,baz=12,slow=6.2,SNR=48
G65A **Princeton** 27.02 1 P **P** **21 20 38.3 +0.3**
baz=182,SNR=7.9
WLAR **White Oak Lake** 27.04 310 IAmb IAmb 21 21 05.5
comp=Z,487nm,1.1s
G64A **Maxfield** 27.06 359 P **P** **21 20 38.3 -0.1**
baz=179,SNR=25
J52A **Paris** 27.07 340 P **P** **21 20 38.7 +0.1**
baz=154,SNR=37
PKME **Peaks-Kenny Pk** 27.08 359 P **P** **21 20 39.1 +0.5**
baz=178,SNR=19
PKME **Peaks-Kenny Pk** 27.08 359 IAmb IAmb 21 21 21.0
comp=Z,488nm,1.6s
G62A **West of Eustis** 27.09 357 P **P** **21 20 39.1 +0.4**
baz=176,SNR=32
G62A **West of Eustis** 27.09 357 IAmb IAmb 21 21 23.9
comp=Z,194nm,0.9s
G60A **Masonville** 27.11 354 P **P** **21 20 39.3 +0.4**
baz=172,SNR=24
N47A **Urbana** 27.14 330 IAmb IAmb 21 20 41.4
comp=Z,422nm,0.9s
W41B **Gary Mavity, V** 27.18 313 P **P** **21 20 40.1 +0.5**
baz=123,SNR=70
I55A **Frankford** 27.18 345 P **P** **21 20 39.4 0.0**
baz=160,SNR=51
G59A **Clarenceville** 27.19 353 P **P** **21 20 40.3 +0.8**
baz=170,SNR=15
G61A **St-Isidore-de-** 27.22 355 P **P** **21 20 40.8 +0.9**
baz=173,SNR=15
H56A **Elgin** 27.22 348 P **P** **21 20 40.4 +0.5**
baz=164,SNR=67
X40A **Basin Creek Fa** 27.23 312 P **P** **21 20 40.5 +0.4**
baz=121,SNR=69
X40A **Basin Creek Fa** 27.23 312 IAmb IAmb 21 21 20.6
comp=Z,337nm,1.1s
WHAR **Wooly Hollow** 27.27 314 IAmb IAmb 21 21 20.6
comp=Z,342nm,1.0s
I53A **Kortright Cn E** 27.33 342 P **P** **21 20 40.9 0.0**
baz=156,SNR=6.2
NATX **Nacogdoches** 27.36 305 P **P** **21 20 42.2 +0.9**
baz=114,SNR=21
SAML **Samuel** 27.37 169 P **P** **21 20 42.6 +1.2**
SAML pmax pmax
comp=Z,1µm,0.8s
SAML **Samuel** 27.37 169 P **P** **21 20 42.6 +1.2**
SAML **Samuel** 27.37 169 *e*P **P** **21 20 42.7 +1.2**
G58A **Ormstown** 27.37 351 P **P** **21 20 41.6 +0.4**
baz=168,SNR=10
H55A **Tweed** 27.38 346 P **P** **21 20 41.3 +0.1**
baz=162,SNR=67
AAM **Ann Arbor** 27.41 335 P **P** **21 20 41.8 +0.2**
baz=147,SNR=16
AAM **Ann Arbor** 27.41 335 IAmb IAmb 21 21 04.9
comp=Z,330nm,0.9s
K50A **Casco** 27.41 337 P **P** **21 20 41.0 -0.5**
baz=150,SNR=8.5
K50A **Casco** 27.41 337 IAmb IAmb 21 21 05.1
comp=Z,310nm,1.0s
Q44A **Meyer Farm, Va** 27.42 323 IAmb IAmb 21 20 44.2
comp=Z,430nm,1.0s
SFIN **Lafayette** 27.45 328 P **P** **21 20 42.2 +0.3**
baz=139,SNR=43
SFIN **Lafayette** 27.45 328 IAmb IAmb 21 21 08.4
comp=Z,241nm,1.1s
DELO **Deloro Mine** 27.45 346 IAmb IAmb 21 20 44.1
comp=Z,244nm,1.0s
G57A **Newington** 27.48 350 P **P** **21 20 42.2 +0.1**
baz=166,SNR=16
FCAR **Ozark Folk Cen** 27.48 315 IAmb IAmb 21 21 09.5
comp=Z,221nm,0.8s
M47A **Cromwell** 27.49 331 P **P** **21 20 42.5 +0.2**
baz=142,SNR=33
F63A **Nahmakanta, Br** 27.52 359 P **P** **21 20 42.6 +0.1**
baz=178,SNR=16
HKT **Hockley** 27.65 300 P **P** **21 20 44.3 +0.6**
HKT pmax pmax
comp=Z,354nm,1.2s
HKT **Hockley** 27.65 300 P **P** **21 20 44.3 +0.6**
HKT IAmb IAmb 21 21 09.4
comp=Z,354nm,1.2s
F64A **Sherman** 27.67 0 P **P** **21 20 43.9 +0.1**
baz=180,SNR=12
I52A **Shelburne** 27.72 341 P **P** **21 20 43.9 -0.5**
baz=155
K49A **Clarkson** 27.73 336 P **P** **21 20 44.8 +0.3**
baz=148,SNR=13
H53A **Bobcaygeon** 27.74 344 P **P** **21 20 44.2 -0.3**
baz=159,SNR=55
I51A **Listowel** 27.75 340 P **P** **21 20 44.2 -0.4**
baz=154,SNR=26
MIAR **Mount Ida** 27.79 311 P **P** **21 20 44.7 -0.4**
baz=120,SNR=45
MIAR **Mount Ida** 27.79 311 IAmb IAmb 21 21 41.6
comp=Z,219nm,1.1s
GBN **Guysborough** 27.81 10 P **P** **21 20 44.8 -0.3**
LMN **Caledonia Moun** 27.82 5 IAmb IAmb 21 21 31.4
comp=Z,315nm,0.9s
PLVO **Plevna** 27.82 347 IAmb IAmb 21 20 47.6
comp=Z,201nm,1.1s
F61A **St Evariste** 27.87 356 P **P** **21 20 45.6 0.0**
baz=175,SNR=5.9
F59A **Saint Guilaume** 27.90 353 P **P** **21 20 45.4 -0.5**
baz=171
ORIO **Orleans, Innes** 27.90 349 P **P** **21 20 46.2 +0.3**
baz=165,SNR=10
F60A **Warwick** 27.94 355 P **P** **21 20 45.6 -0.7**
baz=173,SNR=12
G55A **Calabogie** 27.95 347 P **P** **21 20 46.1 -0.2**
baz=163,SNR=52
SLM **Saint Louis** 27.95 321 IAmb IAmb 21 21 27.6
comp=Z,305nm,1.1s
O44A **Mansfield** 27.99 326 IAmb IAmb 21 20 49.4
comp=Z,304nm,0.9s
K48A **Perry** 28.01 335 P **P** **21 20 46.6 -0.3**
baz=147,SNR=57
F58A **St-Lin Laurent** 28.04 352 P **P** **21 20 46.6 -0.5**
baz=169
SADO **Sadowa** 28.07 344 P **P** **21 20 46.7 -0.7**
comp=Z,80nm,0.9s,baz=173,slow=7.4,SNR=51
SADO LR LR 21 32 45.6
comp=Z,3µm,18.3s,baz=192,slow=38
NPGB **Novo Progresso** 28.10 152 *e*P **P** **21 20 48.5 +0.5**
J49A **Marlette** 28.10 337 P **P** **21 20 47.6 -0.1**
baz=149,SNR=9.7
F57A **Harrington** 28.12 351 P **P** **21 20 47.7 -0.1**
baz=167
H52A **Wyevale** 28.16 342 P **P** **21 20 48.0 -0.3**
baz=156,SNR=10
CCM **Cathedral Cave** 28.19 319 P **P** **21 20 48.5 -0.1**
CCM pmax pmax
comp=Z,500nm,1.6s
CCM **Cathedral Cave** 28.19 319 P **P** **21 20 48.5 -0.1**
baz=129
CCM **Cathedral Cave** 28.19 319 P **P** **21 20 48.5 -0.1**
CCM IAmb IAmb 21 20 50.7
comp=Z,500nm,1.6s
E63A **Oxbow** 28.23 360 P **P** **21 20 48.5 -0.3**
baz=180,SNR=8.0
E64A **Bridgewater** 28.23 1 P **P** **21 20 48.7 -0.1**
baz=181,SNR=14
Z38A **Mt. Pleasant** 28.23 307 IAmb IAmb 21 21 34.1
comp=Z,288nm,1.1s
U40A **Yellville** 28.23 315 P **P** **21 20 49.1 0.0**
baz=124,SNR=49
W39A **Magazine** 28.26 312 P **P** **21 20 50.3 +1.0**
baz=121,SNR=110
W39A **Magazine** 28.26 312 IAmb IAmb 21 20 53.3
comp=Z,384nm,1.4s
G53A **Haliburton** 28.26 345 P **P** **21 20 48.9 -0.3**
baz=159,SNR=23
K47A **Vermontville** 28.27 334 P **P** **21 20 49.1 -0.1**
baz=145,SNR=19
E60A **Ste Agathe de** 28.29 355 P **P** **21 20 48.8 -0.5**
baz=174
E61A **Lac Etchemin** 28.29 357 P **P** **21 20 49.0 -0.5**
baz=176,SNR=9.8
J48A **Bridge Port** 28.30 336 P **P** **21 20 49.8 +0.3**
baz=148,SNR=21
J48A **Bridge Port** 28.30 336 IAmb IAmb 21 21 12.4
comp=Z,284nm,1.1s
MGMO **Mountain Grove** 28.30 317 IAmb IAmb 21 21 18.0
comp=Z,200nm,0.8s
G54A **Lake Saint Pet** 28.39 345 P **P** **21 20 50.1 -0.2**
baz=160,SNR=41
F55A **Otter Lake** 28.43 348 P **P** **21 20 50.6 0.0**
baz=164,SNR=6.5
E62A **Clayton Lake** 28.44 358 P **P** **21 20 50.9 +0.2**
baz=178,SNR=20
E62A **Clayton Lake** 28.44 358 IAmb IAmb 21 21 48.9
comp=Z,318nm,1.2s
E58A **La Victoria** 28.47 353 P **P** **21 20 51.3 +0.3**
baz=170,SNR=29
I49A **Point Hope** 28.49 338 IAmb IAmb 21 21 14.1
comp=Z,306nm,1.2s
E59A **St. Maurice** 28.50 354 P **P** **21 20 51.4 +0.2**
baz=172
E57A **Chemin Saint G** 28.62 352 P **P** **21 20 52.5 +0.2**
baz=168,SNR=35
J47A **Sunmer** 28.66 334 P **P** **21 20 52.7 0.0**
baz=146,SNR=5.5
J47A **Sunmer** 28.66 334 IAmb IAmb 21 21 15.8
comp=Z,367nm,1.1s
HDIL **Hopedale** 28.73 325 P **P** **21 20 53.6 +0.2**
baz=135,SNR=16
HDIL **Hopedale** 28.73 325 IAmb IAmb 21 21 37.3
comp=Z,204nm,1.1s
TLIG **Tlapa** 28.75 274 P **P** **21 20 54.1 +0.2**
D60A **Saint Jean D'O** 28.80 356 P **P** **21 20 54.0 +0.1**
baz=175,SNR=14
D63A **Stockholm** 28.85 0 P **P** **21 20 54.7 +0.4**
baz=180,SNR=10.0

E56A	**St. Veronique**	**28.88**	**350**	P		**P**	**21 20 55.3**	**+0.7**
	baz=167							
D62A	**Allapoint, All**	**28.89**	**359**	P		**P**	**21 20 54.8**	**+0.1**
	baz=179,SNR=14							
ALGO	**Algonquin Park**	**28.91**	**346**	P		**P**	**21 20 54.6**	**-0.2**
	baz=161,SNR=28							
D59A	**Saint-Raymond**	**28.96**	**355**	P		**P**	**21 20 54.8**	**-0.4**
	baz=173,SNR=12							
E55A	**Montcerf-Lytto**	**28.97**	**349**	P		**P**	**21 20 55.2**	**-0.2**
	baz=165,SNR=18							
I48A	**Sherman Twp**	**29.02**	**337**	P		**P**	**21 20 55.9**	**0.0**
	baz=149,SNR=14							
D61A	**St Aubert, Com**	**29.05**	**357**	P		**P**	**21 20 56.9**	**+0.9**
	baz=176,SNR=5.9							
F52A	**Sundridge**	**29.07**	**344**	P		**P**	**21 20 56.0**	**-0.3**
	baz=158,SNR=60							
J46A	**Howard City**	**29.09**	**334**	P		**P**	**21 20 56.4**	**-0.2**
	baz=145							
D58A	**Chemin du LacG**	**29.14**	**354**	P		**P**	**21 20 56.6**	**-0.4**
	baz=171,SNR=23							
E54A	**Lac Daplat, Po**	**29.17**	**347**	P		**P**	**21 20 57.2**	**0.0**
	baz=163,SNR=42							
D57A	**Chemin Vers le**	**29.18**	**352**	P		**P**	**21 20 57.0**	**-0.3**
	baz=169,SNR=9.3							
I47A	**Gladwin**	**29.19**	**336**	P		**P**	**21 20 56.9**	**-0.5**
	baz=147							
L44A	**Lake County Fo**	**29.21**	**329**	P		**P**	**21 20 57.6**	**+0.1**
	baz=139,SNR=22							
E53A	**Dumoine, Ponti**	**29.22**	**347**	P		**P**	**21 20 57.4**	**-0.3**
	baz=162,SNR=32							
H48A	**Harrisville**	**29.32**	**338**	P		**P**	**21 20 58.3**	**-0.3**
	baz=150,SNR=10.0							
H48A	**Harrisville**	**29.32**	**338**	IAmb		IAmb	21 21 22.0	
	comp=Z,294nm,1.1s							
D56A	**ZEC Mazanza, M**	**29.33**	**351**	P		**P**	**21 20 58.6**	**0.0**
	baz=168,SNR=17							
435B	**Jarrell**	**29.35**	**301**	P		**P**	**21 20 58.8**	**-0.1**
	baz=109,SNR=23							
F51A	**Arnstein**	**29.35**	**343**	P		**P**	**21 20 58.5**	**-0.3**
	baz=157,SNR=68							
E52A	**Mattawa**	**29.36**	**345**	P		**P**	**21 20 58.3**	**-0.6**
	baz=160,SNR=19							
D55A	**Sainte-Anne-du**	**29.42**	**350**	P		**P**	**21 20 59.4**	**+0.1**
	baz=166,SNR=37							
LATQ	**La Tuque**	**29.42**	**354**	P		**P**	**21 20 59.5**	**+0.2**
	baz=171,SNR=18							
J45A	**Montague**	**29.48**	**333**	P		**P**	**21 20 59.8**	**-0.2**
	baz=143							
I46A	**Reed City**	**29.50**	**334**	P		**P**	**21 21 00.1**	**0.0**
	baz=146,SNR=11							
H47A	**Mio**	**29.56**	**337**	P		**P**	**21 21 00.6**	**0.0**
	baz=148							
P40A	**Paris**	**29.61**	**321**	IAmb		IAmb	21 21 02.9	
	comp=Z,181nm,0.8s							
WHTX	**Lake Whitney,**	**29.65**	**303**	P		**P**	**21 21 01.8**	**+0.2**
	baz=111,SNR=38							
WHTX	**Lake Whitney,**	**29.65**	**303**	IAmb		IAmb	21 21 26.5	
	comp=Z,347nm,1.1s							
N41A	**Harden Midland**	**29.69**	**324**	IAmb		IAmb	21 21 03.5	
	comp=Z,216nm,0.8s							
D54A	**Lac Fusel, La**	**29.75**	**349**	P		**P**	**21 21 02.2**	**-0.2**
	baz=164,SNR=112							
E51A	**G1948 Merrick**	**29.80**	**344**	P		**P**	**21 21 02.7**	**-0.1**
	baz=158,SNR=93							
F49A	**Sandfield**	**29.82**	**341**	P		**P**	**21 21 02.7**	**-0.3**
	baz=153,SNR=28							
D53A	**Lac Vacive, Po**	**29.89**	**347**	P		**P**	**21 21 03.5**	**0.0**
	baz=162,SNR=86							
D53A	**Lac Vacive, Po**	**29.89**	**347**	IAmb		IAmb	21 21 05.8	
	comp=Z,252nm,1.0s							
I45A	**Fountain**	**29.90**	**334**	P		**P**	**21 21 03.6**	**-0.1**
	baz=144,SNR=6.5							
GLMI	**Grayling**	**29.91**	**336**	P		**P**	**21 21 03.8**	**+0.1**
	baz=148							
G47A	**Hillman**	**29.92**	**338**	P		**P**	**21 21 04.2**	**+0.3**
	baz=150,SNR=30							
D52A	**ZEK Kipawa Sen**	**29.95**	**346**	P		**P**	**21 21 04.3**	**+0.2**
	baz=161,SNR=40							
L42A	**Oliver, Polo**	**29.95**	**327**	IAmb		IAmb	21 21 28.1	
	comp=Z,173nm,0.8s							
Z35A	**Perchaven, San**	**29.99**	**306**	IAmb		IAmb	21 21 29.6	
	comp=Z,278nm,1.0s							
E50A	**Wahnapitae**	**30.03**	**343**	P		**P**	**21 21 04.4**	**-0.4**
	baz=156,SNR=30							
TUL1	**Leonard**	**30.04**	**312**	P		**P**	**21 21 05.0**	**0.0**
	baz=119,SNR=104							
F48A	**Evansville**	**30.07**	**340**	P		**P**	**21 21 04.9**	**-0.2**
	baz=152,SNR=24							
833A	**Chaparral WMA,**	**30.20**	**295**	P		**P**	**21 21 05.5**	**-1.0**
	baz=103,SNR=9.6							
D51A	**Lot 18 Range I**	**30.29**	**345**	P		**P**	**21 21 06.9**	**-0.2**
	baz=159,SNR=41							
PRPB	**Parauapebas**	**30.29**	**141**	*e*P		**P**	**21 21 06.7**	**-0.7**
H45A	**Beulah**	**30.30**	**335**	P		**P**	**21 21 06.9**	**-0.4**
	baz=145							
G46A	**Petoskey**	**30.42**	**337**	P		**P**	**21 21 08.4**	**+0.2**
	baz=148,SNR=8.5							
D50A	**G1974 Best Tow**	**30.48**	**344**	P		**P**	**21 21 08.8**	**0.0**
	baz=158,SNR=48							
G45A	**Suttons Bay**	**30.49**	**335**	P		**P**	**21 21 09.3**	**+0.4**
	baz=146,SNR=8.6							
G45A	**Suttons Bay**	**30.49**	**335**	IAmb		IAmb	21 22 02.9	
	comp=Z,515nm,1.6s							
E48A	**Lockeyer**	**30.50**	**341**	P		**P**	**21 21 09.1**	**+0.1**
	baz=154,SNR=54							
P38A	**Dawn**	**30.56**	**320**	IAmb		IAmb	21 21 11.7	
	comp=Z,259nm,1.4s							
L40A	**Anamosa**	**30.82**	**326**	IAmb		IAmb	21 21 13.3	
	comp=Z,168nm,0.7s							
E47A	**Iron Bridge**	**30.84**	**340**	P		**P**	**21 21 12.4**	**+0.5**
	baz=152,SNR=50							
JFWS	**Jewell Farm**	**30.91**	**328**	P		**P**	**21 21 12.5**	**-0.1**
	baz=136,SNR=92							
H43A	**Windswept, Lux**	**30.91**	**332**	IAmb		IAmb	21 21 15.0	
	comp=Z,243nm,1.1s							
F45A	**CMU Biological**	**30.97**	**336**	P		**P**	**21 21 13.7**	**+0.7**
	baz=147,SNR=44							
D49A	**Beulah Townshi**	**30.98**	**343**	P		**P**	**21 21 13.4**	**+0.2**
	baz=156,SNR=47							
I42A	**Draeger Farm,**	**30.98**	**330**	IAmb		IAmb	21 21 15.5	
	comp=Z,250nm,1.1s							
OKCFA	**Oklahoma City**	**31.01**	**310**	IAmb		IAmb	21 21 15.1	
	comp=Z,131nm,0.9s							
D48A	**Paudash Townsh**	**31.02**	**342**	P		**P**	**21 21 13.4**	**-0.1**
	baz=155,SNR=41							
NNA	**Nana**	**31.06**	**196**	P		**P**	**21 21 15.6**	**+1.4**
NNA				pmax		pmax		
	comp=Z,925nm,1.7s							
NNA	**Nana**	**31.06**	**196**	P		**P**	**21 21 15.6**	**+1.4**
JCT	**Junction City**	**31.08**	**299**	P		**P**	**21 21 14.1**	**-0.2**
	baz=106,SNR=33							
JCT	**Junction City**	**31.08**	**299**	IAmb		IAmb	21 21 38.8	
	comp=Z,195nm,1.1s							
D47A	**Chapleau**	**31.31**	**340**	P		**P**	**21 21 16.1**	**0.0**
	baz=152,SNR=30							
CLDB	**Colider**	**31.36**	**156**	*e*P		**P**	**21 21 16.8**	**0.0**
D46A	**Sault St. Mari**	**31.47**	**339**	P		**P**	**21 21 17.4**	**-0.1**
	baz=151,SNR=17							
ABTX	**Abilene, Hawle**	**31.61**	**303**	P		**P**	**21 21 19.0**	**+0.1**
	baz=110,SNR=99							
LSQQ	**Lebel-sur-Quev**	**31.65**	**349**	P		**P**	**21 21 18.7**	**-0.3**
	baz=164							
WMOK	**Wichita Mounta**	**31.71**	**308**	P		**P**	**21 21 19.1**	**-0.7**
	baz=114,SNR=129							
WMOK	**Wichita Mounta**	**31.71**	**308**	IAmb		IAmb	21 21 45.3	
	comp=Z,92nm,0.7s							
ROSB	**Rosrio**	**31.72**	**129**	*e*P		**P**	**21 21 19.6**	**-0.4**
I40A	**Norwalk**	**31.80**	**329**	IAmb		IAmb	21 21 44.2	
	comp=Z,239nm,0.8s							
SCIA	**State Center**	**31.81**	**323**	P		**P**	**21 21 20.3**	**-0.3**
	baz=131,SNR=23							
SCIA	**State Center**	**31.81**	**323**	IAmb		IAmb	21 21 22.5	
	comp=Z,173nm,0.7s							
VILB	**Vilhena**	**31.90**	**165**	*e*P		**P**	**21 21 23.1**	**+1.5**
CHGQ	**Chibougamau**	**32.09**	**353**	P		**P**	**21 21 23.0**	**+0.2**
	baz=169,SNR=48							
E43A	**Lone Tree Farm**	**32.12**	**335**	IAmb		IAmb	21 21 46.5	
	comp=Z,164nm,1.2s							
KSU1	**Kansas State U**	**32.22**	**316**	P		**P**	**21 21 24.4**	**+0.2**
	baz=123,SNR=15							
KSU1	**Kansas State U**	**32.22**	**316**	IAmb		IAmb	21 21 27.4	
	comp=Z,149nm,0.9s							
DRLN	**Deer Lake**	**32.28**	**13**	P		**P**	**21 21 24.6**	**+0.1**
DRLN				IAmb		IAmb	21 21 49.1	
	comp=Z,215nm,1.3s							
MATQ	**Matagami**	**32.44**	**349**	P		**P**	**21 21 26.0**	**0.0**
	baz=163,SNR=49							
U32A	**Winter Ranch,**	**32.56**	**310**	IAmb		IAmb	21 22 15.6	
	comp=Z,159nm,1.1s							
N35A	**Tabor**	**32.60**	**320**	IAmb		IAmb	21 21 29.2	
	comp=Z,193nm,0.8s							
G40A	**Rib Lake**	**32.63**	**331**	IAmb		IAmb	21 21 53.5	
	comp=Z,140nm,0.8s							
COWI	**Conover**	**32.79**	**333**	IAmb		IAmb	21 21 52.6	
	comp=Z,213nm,1.1s							
SMTB	**Santa Maria do**	**33.75**	**141**	*e*P		**P**	**21 21 38.1**	**+0.4**
SPMN	**Marine on St.**	**33.85**	**328**	P		**P**	**21 21 37.8**	**-0.5**
	baz=135,SNR=14							
SPMN	**Marine on St.**	**33.85**	**328**	IAmb		IAmb	21 22 02.0	
	comp=Z,111nm,0.8s							
AMTX	**Amarillo**	**33.98**	**306**	P		**P**	**21 21 38.7**	**-1.0**
	baz=111							
AMTX	**Amarillo**	**33.98**	**306**	IAmb		IAmb	21 21 40.7	
	comp=Z,109nm,0.7s							
TXAR	**Lajitas Array**	**34.08**	**296**	P		**P**	**21 21 40.4**	**-0.2**
	comp=Z,26nm,0.7s,baz=118,slow=9.2,SNR=66							
TXAR				pP		**pP**	**21 22 03.9**	**+0.9**
	comp=Z,29nm,0.7s,baz=108,slow=8.1,SNR=5.4							
TXAR				PcP		**PcP**	**21 24 14.9**	**-1.2**
	comp=Z,14nm,0.6s,baz=123,slow=4.9,SNR=3.5							
TXAR				pPcP			21 24 43.5	
	comp=Z,21nm,0.6s,baz=130,slow=4.3,SNR=6.9							
TXAR				ScP		**ScP**	**21 27 51.7**	**-0.4**
	comp=Z,3.4nm,0.6s,baz=102,slow=5.8,SNR=3.7							
TXAR				LR		LR	21 37 54.5	
	comp=Z,1μm,21.6s,baz=0.0,slow=40							
TXAR				P3KPbc			21 52 45.9	
	comp=Z,1.4nm,0.9s,baz=225,slow=5.1,SNR=3.8							
TX32	**Lajitas Array**	**34.08**	**296**	IAmb		IAmb	21 22 06.4	
	comp=Z,393nm,1.8s							
CBKS	**Cedar Bluff**	**34.19**	**314**	P		**P**	**21 21 41.5**	**+0.2**
	baz=118,SNR=89							
LPAZ	**La Paz**	**34.19**	**180**	P		**P**	**21 21 42.8**	**+0.7**
	comp=Z,122nm,0.9s,baz=11,slow=10.0,SNR=136							
LPAZ				LR		LR	21 37 30.6	
	comp=Z,2μm,18.5s,baz=348,slow=39							
LPAZ	**La Paz**	**34.19**	**180**	P		**P**	**21 21 43.0**	**+0.9**
LPAZ				pmax		pmax		
	comp=Z,296nm,1.1s							
LPAZ	**La Paz**	**34.19**	**180**	P		**P**	**21 21 43.0**	**+0.9**
LPAZ	**La Paz**	**34.19**	**180**	*e*P		**P**	**21 21 42.6**	**+0.5**
E38A	**The Farm, Brul**	**34.26**	**331**	IAmb		IAmb	21 22 05.6	
	comp=Z,143nm,0.9s							
BGNE	**Belgrade**	**34.47**	**319**	P		**P**	**21 21 43.3**	**-0.4**
	baz=124,SNR=6.9							
MSTX	**Muleshoe**	**34.52**	**304**	P		**P**	**21 21 44.1**	**-0.3**
	baz=109,SNR=41							
PTLB	**Pontes e Lacer**	**34.57**	**164**	*e*P		**P**	**21 21 45.2**	**+0.5**
ECSD	**EROS Data Cent**	**34.90**	**323**	P		**P**	**21 21 46.8**	**-0.6**
	baz=128,SNR=180							
ECSD	**EROS Data Cent**	**34.90**	**323**	IAmb		IAmb	21 22 21.2	
	comp=Z,166nm,0.9s							
EYMN	**Ely**	**35.24**	**333**	P		**P**	**21 21 49.8**	**-0.5**
	baz=140,SNR=83							
PEXB	**Peixe**	**35.97**	**145**	*e*P		**P**	**21 21 57.3**	**+0.5**
MNTX	**Cornudas Mount**	**36.02**	**299**	P		**P**	**21 21 57.3**	**+0.2**
	baz=103,SNR=250							
MNTX	**Cornudas Mount**	**36.02**	**299**	P		**P**	**21 21 57.4**	**+0.2**
MNTX				PP		**PnPn**	**21 23 24.1**	**+2.9**
SALV	**Santo Antonio**	**36.03**	**159**	*e*P		**P**	**21 21 57.9**	**+0.6**
F33A	**5 Mile Ranch,**	**36.06**	**326**	IAmb		IAmb	21 21 59.3	
	comp=Z,310nm,1.6s							
KSCO	**Kaye Shedlock'**	**36.29**	**312**	P		**P**	**21 21 59.6**	**+0.1**
	baz=115,SNR=20							
KSCO	**Kaye Shedlock'**	**36.29**	**312**	IAmb		IAmb	21 22 25.5	
	comp=Z,148nm,0.7s							
SCHQ	**Schefferville**	**36.67**	**1**	P		**P**	**21 22 02.3**	**0.0**
	comp=Z,65nm,0.5s,baz=189,slow=6.8,SNR=180							
SCHQ				LR		LR	21 37 14.3	
	comp=Z,1μm,18.3s,baz=188,slow=36							
SUSD	**Miller**	**36.68**	**322**	P		**P**	**21 22 02.7**	**+0.1**
	baz=126,SNR=11							
OGNE	**Ogallala**	**36.75**	**315**	P		**P**	**21 22 03.5**	**+0.2**
	baz=118,SNR=8.3							
OGNE	**Ogallala**	**36.75**	**315**	IAmb		IAmb	21 22 05.5	
	comp=Z,217nm,1.0s							
T25A	**Trinidad**	**36.85**	**308**	P		**P**	**21 22 05.0**	**+0.6**
	baz=111,SNR=36							
ARAG	**Araguaiana, MT**	**37.35**	**153**	*e*P		**P**	**21 22 08.9**	**+0.4**
AGMN	**Agassiz Nation**	**37.50**	**330**	P		**P**	**21 22 08.9**	**-0.5**
	baz=134,SNR=8.6							
ANMO	**Albuquerque**	**37.72**	**304**	*c iP*		**P**	**21 22 12.2**	**+0.5**
ANMO				pmax		pmax		
	comp=Z,109nm,1.0s							
ANMO	**Albuquerque**	**37.72**	**304**	P		**P**	**21 22 12.4**	**+0.7**
	baz=107							
ANMO	**Albuquerque**	**37.72**	**304**	P		**P**	**21 22 12.0**	**+0.3**
ANMO				IAmb		IAmb	21 22 38.4	
	comp=Z,136nm,1.1s							
Y22D	**IRIS PASSCAL I**	**37.85**	**303**	P		**P**	**21 22 13.8**	**+1.0**
	baz=105,SNR=5.8							
SDCO	**Great Sand Dun**	**37.88**	**309**	P		**P**	**21 22 13.6**	**+0.5**
	baz=111,SNR=216							
SDCO	**Great Sand Dun**	**37.88**	**309**	IAmb		IAmb	21 22 15.2	
	comp=Z,103nm,0.8s							
Q24A	**Divide**	**38.07**	**311**	P		**P**	**21 22 15.0**	**+0.3**
	baz=113,SNR=17							
121A	**Cookes Peak, D**	**38.19**	**300**	P		**P**	**21 22 16.6**	**+0.9**
	baz=102,SNR=44							
121A	**Cookes Peak, D**	**38.19**	**300**	IAmb		IAmb	21 22 42.4	
	comp=Z,128nm,0.9s							
TA01	**Diego Aracena**	**38.48**	**183**	P		**P**	**21 22 17.2**	**-0.6**
H07S1	**FLORES T-PHASE**	**38.48**	**49**	*e*P		**P**	**21 22 21.2**	**+3.3**
H07S1				epP		**pP**	**21 22 41.5**	**+0.8**
H07S1	**FLORES T-PHASE**	**38.48**	**49**	T		T	22 02 40.9	
	SNR=141							
ISCO	**Idaho Springs**	**38.72**	**312**	P		**P**	**21 22 20.8**	**+0.6**
	baz=113							
S22A	**4UR Ranch, Cre**	**38.86**	**308**	P		**P**	**21 22 22.0**	**+0.6**
	baz=110,SNR=94							
ULM	**Lac du Bonnet**	**38.88**	**332**	P		**P**	**21 22 20.1**	**-0.9**
	comp=Z,48nm,0.6s,baz=137,slow=7.7,SNR=44							
ULM				pP		**pP**	**21 22 42.8**	**-1.3**
	comp=Z,153nm,1.0s,baz=135,slow=7.1,SNR=14							
ULM				PcP		**PcP**	**21 24 29.2**	**-0.8**
	comp=Z,48nm,0.6s,baz=150,slow=2.9,SNR=5.5							
ULM				LR		LR	21 38 28.2	
	comp=Z,2μm,19.4s,baz=134,slow=36							
ULM	**Lac du Bonnet**	**38.88**	**332**	IAmb		IAmb	21 22 44.4	
	comp=Z,187nm,1.0s							
BDFB	**Brasilia**	**39.08**	**148**	P		**P**	**21 22 23.5**	**+0.5**
	comp=Z,90nm,0.9s,baz=314,slow=8.5,SNR=83							
BDFB				pP		**pP**	**21 22 46.2**	**+1.3**
	comp=Z,84nm,0.8s,baz=311,slow=12,SNR=4.3							
BDFB				LR		LR	21 39 54.0	
	comp=Z,3μm,18.2s,baz=313,slow=38							
BDFB	**Brasilia**	**39.08**	**148**	P		**P**	**21 22 23.6**	**+0.5**
BDFB				IAmb		IAmb	21 22 54.4	
	comp=Z,108nm,0.7s							
MDND	**Maddock**	**39.09**	**326**	P		**P**	**21 22 23.4**	**+0.6**
	baz=129							
319A	**Douglas**	**39.22**	**298**	IAmb		IAmb	21 22 51.0	
	comp=Z,218nm,0.9s							
PHWY	**Pilot Hill**	**39.22**	**314**	IAmb		IAmb	21 22 26.9	
	comp=Z,242nm,1.4s							
N23A	**Red Feather La**	**39.39**	**313**	P		**P**	**21 22 25.5**	**-0.2**
	baz=114,SNR=20							
LPIG	**La Paz**	**39.48**	**286**	LR		LR	21 40 29.1	
	comp=Z,589nm,19.8s,baz=100,slow=39							
RSSD	**Black Hills**	**39.58**	**319**	P		**P**	**21 22 27.5**	**+0.3**
RSSD				pmax		pmax		
	comp=Z,32nm,0.9s							
RSSD	**Black Hills**	**39.58**	**319**	P		**P**	**21 22 26.9**	**-0.2**
	baz=120							
RSSD	**Black Hills**	**39.58**	**319**	P		**P**	**21 22 27.5**	**+0.3**
C2SB	**Chapadao do Su**	**39.70**	**157**	*e*P		**P**	**21 22 29.0**	**+0.9**
RCBR	**Riachuelo**	**39.89**	**124**	P		**P**	**21 22 31.5**	**+1.6**
RCBR				pmax		pmax		
	comp=Z,91nm,1.0s							
RCBR	**Riachuelo**	**39.89**	**124**	P		**P**	**21 22 31.5**	**+1.6**
RCBR	**Riachuelo**	**39.89**	**124**	*e*P		**P**	**21 22 31.0**	**+1.1**
MVCO	**Mesa Verde**	**39.96**	**307**	P		**P**	**21 22 30.2**	**-0.2**
	baz=108,SNR=11							
MVCO	**Mesa Verde**	**39.96**	**307**	IAmb		IAmb	21 23 53.2	
	comp=Z,204nm,1.8s							
PCED	**Cedros**	**40.04**	**51**	*e*P		**P**	**21 22 33.7**	**+2.9**
	comp=Z,130nm,0.7s							
PCED				*e*pP		**pP**	**21 22 55.8**	**+2.1**
PCAN	**Candelaria**	**40.15**	**51**	*e*P		**P**	**21 22 34.2**	**+2.5**
	comp=Z,193nm,0.9s							
PCAN				*e*pP		**pP**	**21 22 56.1**	**+1.5**
PICO	**Pico**	**40.20**	**51**	*e*P		**P**	**21 22 34.6**	**+2.4**
	comp=Z,195nm,1.1s							
PICO				*e*pP		**pP**	**21 22 56.1**	**+1.0**
PV01	**Paradox Valley**	**40.29**	**308**	IAmb		IAmb	21 23 01.7	
	comp=Z,174nm,1.3s							
W18A	**Petrified Fore**	**40.36**	**303**	P		**P**	**21 22 34.4**	**+0.7**
	baz=104,SNR=6.9							
X18A	**Snowflake**	**40.39**	**302**	IAmb		IAmb	21 23 00.8	
	comp=Z,116nm,0.9s							
ROSA	**Rosais**	**40.41**	**51**	*e*P		**P**	**21 22 36.5**	**+2.6**
	comp=Z,140nm,0.7s							
ROSA				epP		**pP**	**21 22 58.7**	**+1.9**
PV02	**Paradox Valley**	**40.44**	**308**	IAmb		IAmb	21 22 37.6	
	comp=Z,155nm,0.9s							
PV07	**Paradox Valley**	**40.45**	**308**	IAmb		IAmb	21 22 36.8	
	comp=Z,153nm,0.8s							
LVC	**Limon Verde**	**40.48**	**181**	P		**P**	**21 22 34.6**	**-0.3**
LVC				pmax		pmax		
	comp=Z,463nm,1.0s							
LVC	**Limon Verde**	**40.48**	**181**	P		**P**	**21 22 34.6**	**-0.3**
LVC	**Limon Verde**	**40.48**	**181**	*e*P		**P**	**21 22 34.9**	**-0.1**
PV13	**Radium Mtn., P**	**40.49**	**308**	IAmb		IAmb	21 22 37.9	
	comp=Z,243nm,1.1s							
PMAN	**Manadas**	**40.49**	**51**	*e*P		**P**	**21 22 35.9**	**+1.4**
	comp=Z,148nm,0.9s							
PMAN				epP		**pP**	**21 22 56.7**	**-0.8**
K22A	**Casper**	**40.51**	**315**	P		**P**	**21 22 34.9**	**0.0**
	baz=115,SNR=41							
K22A	**Casper**	**40.51**	**315**	IAmb		IAmb	21 22 37.3	
	comp=Z,126nm,1.1s							
PV03	**Paradox Valley**	**40.54**	**308**	IAmb		IAmb	21 23 17.8	
	comp=Z,230nm,1.1s							
PV11	**David Mesa, Pa**	**40.57**	**308**	IAmb		IAmb	21 23 18.0	
	comp=Z,234nm,1.0s							
PV18	**Skein Mesa, Pa**	**40.58**	**308**	IAmb		IAmb	21 22 37.9	
	comp=Z,169nm,0.9s							
PV22	**Blue Mesa, Par**	**40.58**	**309**	IAmb		IAmb	21 22 37.7	
	comp=Z,141nm,0.8s							
RWWY	**Rawlins**	**40.58**	**314**	IAmb		IAmb	21 22 37.4	
	comp=Z,176nm,1.2s							
JANB	**Januaria**	**40.60**	**143**	*e*P		**P**	**21 22 35.1**	**-0.6**
TUC	**Tucson**	**40.64**	**299**	P		**P**	**21 22 36.7**	**+0.8**
TUC				pmax		pmax		
	comp=Z,275nm,1.8s							
TUC	**Tucson**	**40.64**	**299**	P		**P**	**21 22 36.8**	**+0.9**
	baz=100							
TUC	**Tucson**	**40.64**	**299**	P		**P**	**21 22 36.7**	**+0.8**
TUC				IAmb		IAmb	21 23 02.8	
	comp=Z,274nm,1.8s							
PV20	**West Nyswonger**	**40.65**	**308**	IAmb		IAmb	21 23 20.3	
	comp=Z,242nm,1.1s							
PV05	**Paradox Valley**	**40.67**	**308**	IAmb		IAmb	21 23 03.9	
	comp=Z,256nm,1.2s							
PGRA	**Graciosa**	**40.70**	**51**	*e*P		**P**	**21 22 37.0**	**+0.7**
	comp=Z,82nm,0.8s							
PGRA				epP		**pP**	**21 23 01.9**	**+2.7**
PV10	**Paradox Valley**	**40.72**	**308**	IAmb		IAmb	21 22 39.9	
	comp=Z,208nm,1.1s							
O20A	**White River Ci**	**40.72**	**311**	P		**P**	**21 22 37.6**	**+1.0**
	baz=111,SNR=17							
PV21	**Cone Mtn., Par**	**40.73**	**309**	IAmb		IAmb	21 23 24.2	
	comp=Z,186nm,1.0s							
IPMB	**Ipameri, GO**	**40.98**	**150**	*e*P		**P**	**21 22 38.5**	**-0.2**
ADH	**Ângra Heroismo**	**41.13**	**52**	epP		pP	21 23 04.2	+1.4
SRIG	**Santa Rosalia**	**41.33**	**291**	IAmb		IAmb	21 22 45.3	
	comp=Z,142nm,1.1s							
PB10	**IPOC Station P**	**41.43**	**183**	P		**P**	**21 22 42.1**	**-0.1**
WUAZ	**Wupatki**	**41.75**	**303**	P		**P**	**21 22 46.2**	**+1.1**
	baz=103,SNR=69							
WUAZ	**Wupatki**	**41.75**	**303**	IAmb		IAmb	21 22 49.1	
	comp=Z,230nm,1.1s							
DGMT	**Dagmar**	**41.95**	**324**	P		**P**	**21 22 46.9**	**+0.6**
	baz=124,SNR=17							
DGMT	**Dagmar**	**41.95**	**324**	P		**P**	**21 22 47.1**	**+0.7**
PSET	**Sete Cidades**	**42.03**	**53**	*e*P		**P**	**21 22 49.0**	**+1.8**
	comp=Z,127nm,0.8s							
PSET				*e*pP		**pP**	**21 23 10.5**	**+0.2**
PDA	**Ponta Delgada**	**42.06**	**53**	*e*pP		pP	21 23 10.0	-0.4
MC01	**Montes Claros**	**42.13**	**144**	*e*P		**P**	**21 22 47.9**	**-0.3**
MC01				epP		**P**	**21 22 50.7**	**+2.5**
GRON	**Grota Negra**	**42.16**	**53**	*e*pP		pP	21 23 12.3	+0.9
CMLA	**Cha da Macela**	**42.17**	**53**	*e*P		**P**	**21 22 50.2**	**+1.9**
	comp=Z,238nm,0.9s							
CMLA				*e*pP		**pP**	**21 23 11.1**	**-0.3**
CMLA	**Cha da Macela**	**42.17**	**53**	P		**P**	**21 22 49.6**	**+1.3**
C

baz=99,SNR=124
FRTB Fartura 45.11 155 *e*P P 21 23 11.7 -0.2
IKP In-Ko-Pah, Jac 45.14 298 P P 21 23 13.4 +1.1
baz=97,SNR=9.3
BELC Belle Mtn. Jos 45.22 300 P P 21 23 13.9 +0.9
baz=98,SNR=27
BSCB Bom Sucesso 45.22 148 *e*P P 21 23 12.4 -0.5
SJMB Sao Joao De Ma 45.30 142 *e*P P 21 23 14.0 +0.5
IVI Ivigtut 45.37 14 P P 21 23 14.7 +1.2
TUQ Turquoise Moun 45.38 302 P P 21 23 15.5 +1.3
baz=100,SNR=47
MONP2 Monument Peak 45.43 299 P P 21 23 16.0 +1.3
baz=97,SNR=179
PTGB Pitanga 45.44 159 *e*P P 21 23 14.3 -0.3
PTGB *e*pP P 21 23 17.9 +3.3
CPUP Villa Florida 45.46 166 LR LR 21 44 24.3
comp=Z,1µm,18.2s,baz=325,slow=39
GO03 Copiap 45.47 182 lAmb lAmb 21 23 44.5
comp=Z,187nm,1.0s
XPFO Pion Flat 45.55 300 P P 21 23 16.0 +0.5
XPFO lAmb lAmb 21 23 43.2
comp=Z,286nm,2.0s
XPFO ScP ScP 21 28 36.8 +0.3
PFO Pinyon Flats O 45.55 300 P P 21 23 16.2 +0.6
PFO pmax pmax
comp=Z,286nm,2.0s
PFO Pinyon Flats O 45.55 300 P P 21 23 16.4 +0.9
baz=98,SNR=29
PFO Pinyon Flats O 45.55 300 P P 21 23 16.1 +0.6
PFO lAmb lAmb 21 23 43.2
comp=Z,286nm,2.0s
PFO ScP ScP 21 28 37.7 +1.2
BSFB Barra de Sao F 45.59 142 *e*P P 21 23 15.7 -0.1
DLMT Dillon 45.61 317 lAmb lAmb 21 23 19.1
comp=Z,203nm,1.2s
HEC Hector,Ludlow 45.62 301 P P 21 23 17.6 +1.6
baz=99,SNR=46
R11A Troy Canyon, C 45.67 306 P P 21 23 17.9 +1.3
baz=103,SNR=171
R11A Troy Canyon, C 45.67 306 lAmb lAmb 21 23 54.8
comp=Z,164nm,1.3s
SHOC Shoshone, Teco 45.74 303 P P 21 23 18.1 +1.2
baz=100,SNR=16
VAO Valinhos 45.90 152 *e*P P 21 23 18.1 -0.1
TPNV Topopah Spring 45.91 304 P P 21 23 20.1 +1.8
baz=101,SNR=152
NRS Narsarsuaq 45.98 15 *i* P P 21 23 19.2 +0.9
NRS *i* 21 23 41.3
NRS pmax pmax
comp=Z,130nm,0.6s
NRS MLR MLR
comp=Z,3µm,19.0s
NRS Narsarsuaq 45.98 15 *i* P P 21 23 19.2 +0.9
comp=Z,125nm,0.6s
NRS *i* 21 23 41.3
comp=Z,3µm,19.0s
ELK Elko 45.99 310 P P 21 23 19.4 +0.4
ELK Elko 45.99 310 P P 21 23 19.4 +0.4
ELK pmax pmax
comp=Z,86nm,1.4s
109C Camp Elliot, M 46.00 298 P P 21 23 19.7 +0.8
baz=96,SNR=12
109C Camp Elliot, M 46.00 298 lAmb lAmb 21 23 21.5
comp=Z,148nm,0.9s
BBRC Big Bear Solar 46.02 300 P P 21 23 21.0 +1.7
baz=98,SNR=5.9
GSC Goldstone, Bar 46.07 302 P P 21 23 21.1 +1.5
baz=99,SNR=94
GSC Goldstone, Bar 46.07 302 lAmb lAmb 21 23 47.2
comp=Z,215nm,1.1s
MURC Murrieta 46.16 299 P P 21 23 21.4 +1.2
baz=97,SNR=38
RRX Edison Barstow 46.16 301 P P 21 23 22.1 +1.8
baz=98,SNR=8.6
FURC Furnace Creek, 46.30 303 P P 21 23 22.9 +1.7
baz=100,SNR=47
BFSC Mount Baldy Ra 46.62 300 P P 21 23 24.8 +0.8
baz=97,SNR=30
MPMC Manual Prospec 46.74 303 P P 21 23 26.1 +1.2
baz=99,SNR=120
GRAC Grapevine Rang 46.79 304 P P 21 23 26.9 +1.7
baz=100,SNR=25
PARB Paraibuna 46.80 151 *e*P P 21 23 25.2 -0.1
LRMC Laurel Mtn Rad 46.80 302 P P 21 23 25.9 +0.5
baz=98,SNR=9.6
PET01 Itanhaem-SP 46.90 153 *e*P P 21 23 25.9 -0.1
PET01 *e*pP P 21 23 29.9 +4.0
MWC Mount Wilson 46.94 300 lAmb lAmb 21 23 53.9
comp=Z,200nm,1.5s
EDW2 Edwards Air Fo 46.98 301 P P 21 23 28.1 +1.5
baz=98,SNR=127
MSO Missoula 47.02 318 P P 21 23 27.1 +0.2
baz=112,SNR=33
PASC Pasadena Art C 47.04 300 lAmb lAmb 21 23 29.7
comp=Z,119nm,1.0s
FMP Fort Macarthur 47.08 299 P P 21 23 28.5 +1.1
baz=96,SNR=6.7
CIS Catalina Islan 47.15 299 P P 21 23 29.2 +1.3
baz=96,SNR=38
DECC Green Verdugo 47.17 300 P P 21 23 29.3 +1.2
baz=97,SNR=12
MAN01 Angra dos Reis 47.20 149 *e*P P 21 23 28.4 +0.1
MAN01 *e*pP P 21 23 31.7 +3.3
SCI2 San Clemente I 47.22 298 P P 21 23 29.8 +1.3
baz=96
CWC Cottonwood Cre 47.27 303 P P 21 23 30.4 +1.4
baz=99
ISA Isabella, Lake 47.47 302 P P 21 23 31.8 +1.3
baz=98,SNR=20
ISA Isabella, Lake 47.47 302 lAmb lAmb 21 23 58.3
comp=Z,372nm,1.8s
TIN Tinemaha, Big 47.48 304 P P 21 23 32.4 +1.8
baz=100,SNR=54
CAM01 Campos-RJ 47.53 146 *e*P P 21 23 30.7 -0.1
OSI Osito Audit: C 47.54 301 P P 21 23 31.9 +0.9
baz=97,SNR=10
OSI Osito Audit: C 47.54 301 lAmb lAmb 21 23 33.3
comp=Z,132nm,0.9s
JTMT Jette 47.58 319 lAmb lAmb 21 23 34.0
comp=Z,122nm,1.1s
NV11 Mina Array Sit 47.67 306 lAmb lAmb 21 23 34.9
comp=Z,194nm,0.8s
ARVC Arvin 47.69 301 P P 21 23 33.8 +1.7
baz=97,SNR=28
ITAB Concordia 47.75 160 *e*P P 21 23 32.3 -0.2
NVAR Mina Array Bea 47.78 306 P P 21 23 34.0 +1.0
comp=Z,112nm,1.0s,baz=105,slow=4.8,SNR=250
NVAR pP pP 21 23 56.8 +0.1
comp=Z,72nm,0.9s,baz=84,slow=6.2,SNR=4.1
NVAR PP PP 21 25 28.4 +2.8
comp=Z,20nm,0.6s,baz=130,slow=2.7,SNR=5.4
NVAR LR LR 21 45 00.2
comp=Z,1µm,21.0s,baz=106,slow=38
VES Vestal, Richgr 47.99 302 P P 21 23 36.1 +1.8
baz=98,SNR=38
RYN Ryan 47.99 306 lAmb lAmb 21 23 36.5
comp=Z,94nm,0.8s
PMOZ Porto Moniz, M 48.02 62 P P 21 23 36.4 +1.7
SNR=7.9
PMOZ Porto Moniz, M 48.02 62 *e*P P 21 23 36.0 +1.2
comp=Z,497nm,1.2s
PMOZ *e*pP pP 21 23 59.5 +1.2
PMOZ *e*S S 21 30 27.2 +1.5
PMOZ *e*LR LR 21 37 04.7
comp=Z,391nm,22.0s
MLAC Mammoth, Mammo 48.06 305 P P 21 23 36.7 +1.5
baz=100
SNCC San Nicolas Is 48.06 299 P P 21 23 35.6 +0.7
baz=95,SNR=6.6
SNCC San Nicolas Is 48.06 299 lAmb lAmb 21 23 37.2
comp=Z,204nm,0.9s
OMMB Old Mammoth Mi 48.18 305 lAmb lAmb 21 23 39.3
comp=Z,149nm,0.9s
SCZ2 Santa Cruz Isl 48.22 300 P P 21 23 36.5 +0.3
baz=96,SNR=15
MDPB Devils Postpil 48.25 305 lAmb lAmb 21 23 39.7
comp=Z,151nm,0.9s
PMAR Madeira 48.25 62 *e*P P 21 23 39.7 +3.1
comp=Z,267nm,1.3s
PMAR *e*pP pP 21 24 01.8 +1.6
FUL Funchal 48.26 62 *e*P P 21 23 37.8 +1.3
comp=Z,159nm,1.8s
VOG Valley Oaks Go 48.29 303 P P 21 23 37.1 +0.4
baz=98
SBC Santa Barbara 48.33 300 P P 21 23 37.8 +0.8
baz=96,SNR=9.5
MACI Morro de la Ar 48.41 68 P P 21 23 38.7 +0.7

PKM Mcpherson Peak 48.46 301 P P 21 23 39.3 +1.1
baz=96,SNR=38
SMMC Simmler 48.66 301 P P 21 23 41.3 +1.7
baz=97,SNR=26
WAKR Walker 48.67 306 lAmb lAmb 21 24 22.6
comp=Z,241nm,1.3s
PMPST Porto Santo, M 48.76 62 *e*P P 21 23 42.4 +2.0
comp=Z,282nm,1.9s
PMPST *e*pP pP 21 24 04.9 +0.9
PMPST *e*S S 21 30 44.2 +8.3
F10A Beach Ranch, E 48.87 316 lAmb lAmb 21 23 43.3
comp=Z,102nm,1.2s
WVOR Wild Horse Val 48.88 311 lAmb lAmb 21 24 20.0
comp=Z,145nm,1.2s
PAGB Antelope Grade 48.91 302 lAmb lAmb 21 23 43.7
comp=Z,140nm,0.9s
J08A Circle Bar Ran 48.99 312 lAmb lAmb 21 24 26.6
comp=Z,98nm,1.0s
NEW Newport 49.55 319 P P 21 23 45.8 -0.4
baz=110,SNR=69
NEW Newport 49.55 319 lAmb lAmb 21 24 12.1
comp=Z,115nm,0.8s
E09A Wood Farm, Sta 49.64 316 lAmb lAmb 21 24 13.1
comp=Z,97nm,1.1s
AFDM Forest Hills D 49.93 306 lAmb lAmb 21 24 26.1
comp=Z,106nm,1.2s
SAO San Andreas Ge 50.00 303 lAmb lAmb 21 23 52.2
comp=Z,129nm,1.0s
CNLB Canela 50.09 160 *e*P P 21 23 49.9 -0.6
C09A Chrisman Ranch 50.13 318 lAmb lAmb 21 24 17.5
comp=Z,264nm,1.8s
SFJD Kangerlussuaq 50.20 9 *i* P P 21 23 50.5 -0.2
SFJD *i* 21 24 12.9
SFJD MLR MLR
comp=Z,120nm,18.0s
SFJD Kangerlussuaq 50.20 9 P P 21 23 50.9 +0.2
SFJD lAmb lAmb 21 24 15.4
comp=Z,100nm,0.7s
SFJD Kangerlussuaq 50.20 9 *i* P P 21 23 50.5 -0.2
SFJD *i* 21 24 12.9
comp=Z,110nm,18.0s
ORV Oroville 50.43 307 lAmb lAmb 21 23 55.2
comp=Z,63nm,0.9s
K05A Summer Lake 50.56 311 lAmb lAmb 21 23 58.5
comp=Z,87nm,0.9s
O03E Paynes Creek 50.78 308 P P 21 23 55.2 -0.4
baz=100,SNR=20
E07A Sunnyside 50.78 316 lAmb lAmb 21 23 58.2
comp=Z,108nm,1.3s
J05D Fort Rock, OR 50.93 311 P P 21 23 56.9 0.0
baz=102,SNR=21
G06A Carlson Farm, 50.96 314 lAmb lAmb 21 24 24.4
comp=Z,194nm,1.5s
B08A Colville Reser 50.98 318 lAmb lAmb 21 24 22.8
comp=Z,83nm,0.8s
M04C Macdoel 51.07 309 P P 21 23 57.6 -0.3
baz=101,SNR=19
K04D Chiloquin, OR 51.17 310 P P 21 23 58.8 +0.3
baz=102,SNR=19
I05D Terrebonne, OR 51.24 313 P P 21 23 59.5 +0.5
baz=103,SNR=8.6
G05D Wamic, OR 51.43 314 P P 21 24 01.4 +1.1
baz=104,SNR=6.7
L04D Klamath Falls 51.49 310 P P 21 24 01.0 0.0
baz=101,SNR=59
O02D Mt. Diablo Mer 51.50 307 P P 21 23 59.5 -1.5
baz=99,SNR=12
J04D Umpqua Nationa 51.55 311 P P 21 24 01.8 +0.3
baz=102,SNR=25
HOPS Hopland Field 51.55 306 lAmb lAmb 21 24 05.0
comp=Z,196nm,1.1s
N02D Trinity Center 51.57 308 P P 21 24 00.0 -1.5
baz=100,SNR=12
PLTB Pedras Altas 51.57 164 *e*P P 21 24 00.0 -1.5
F05D White Salmon 51.68 315 P P 21 24 02.7 +0.5
baz=104,SNR=18
YBH Yreka Blue Hor 51.70 309 P P 21 24 01.7 -0.8
comp=Z,46nm,0.7s
YBH Yreka Blue Hor 51.70 309 P P 21 24 01.7 -0.8
YBH pmax pmax
comp=Z,47nm,0.8s
YBH Yreka Blue Hor 51.70 309 lAmb lAmb 21 24 02.9
comp=Z,47nm,0.8s
M02C Callahan 51.75 309 P P 21 24 02.1 -0.8
baz=100,SNR=25
MT01 Popeta 51.76 183 lAmb lAmb 21 24 46.0
comp=Z,80nm,1.0s
I04A Tendick Farm, 51.87 312 P P 21 24 03.6 -0.2
baz=102,SNR=24
KCPM Cahto Peak 52.04 306 lAmb lAmb 21 24 07.4
comp=Z,71nm,0.8s
ILULI Ilulissat 52.20 8 *i* P P 21 24 05.8 +0.2
ILULI *i* 21 24 27.8
ILULI pmax pmax
comp=Z,62nm,0.6s
ILULI MLR MLR
comp=Z,2µm,19.0s
ILULI Ilulissat 52.20 8 *i* P P 21 24 05.8 +0.2
comp=Z,62nm,0.6s
ILULI *i* 21 24 27.8
comp=Z,2µm,19.0s
KMRM Mail Ridge 52.21 307 lAmb lAmb 21 24 49.2
comp=Z,165nm,1.2s
H04D Lebanon 52.25 313 P P 21 24 05.9 -0.5
baz=102,SNR=15
I03D Drain, OR 52.52 312 P P 21 24 07.9 -0.5
baz=101,SNR=22
JCC Jacoby Creek, 52.53 308 lAmb lAmb 21 24 11.6
comp=Z,134nm,0.9s
K02D Willamette Mer 52.56 310 P P 21 24 08.5 -0.4
baz=100,SNR=15
E04D Cinebar 52.59 315 P P 21 24 08.0 -0.9
baz=104
COR Corvallis 52.66 313 P P 21 24 10.3 +0.8
COR pmax pmax
comp=Z,133nm,1.2s
COR Corvallis 52.66 313 P P 21 24 10.3 +0.8
COR lAmb lAmb 21 25 04.3
comp=Z,133nm,1.1s
B05A Bryant 52.71 317 P P 21 24 07.8 -2.0
baz=106,SNR=15
G03D McMinnville, O 52.76 313 P P 21 24 09.6 -0.6
baz=102,SNR=5.6
F04D Rainier, OR 52.78 315 P P 21 24 09.1 -1.3
baz=103
J01E Myrtle Point 52.84 311 P P 21 24 11.0 +0.2
baz=100,SNR=13
GO05 Huala 52.94 184 lAmb lAmb 21 24 43.0
comp=Z,122nm,0.8s
I02D Swisshome 52.95 312 P P 21 24 12.1 +0.6
baz=101,SNR=9.1
F03A Seaside 53.12 314 lAmb lAmb 21 25 06.9
comp=Z,182nm,1.1s
D03D Elton 53.17 316 P P 21 24 11.7 -1.5
baz=104,SNR=8.3
A04D Lummi Island 53.23 318 P P 21 24 12.0 -1.5
baz=105
E03A Lebam 53.26 315 lAmb lAmb 21 24 15.4
comp=Z,113nm,0.9s
PGC Sidney 53.69 318 lAmb lAmb 21 24 43.3
comp=Z,106nm,1.1s
BI02 San Fabin de 54.55 183 lAmb lAmb 21 25 12.2
comp=Z,76nm,0.9s
YKA Yellowknife Ar 54.62 336 P P 21 24 22.4 -1.0
comp=Z,46nm,0.9s,baz=114,slow=7.6,SNR=158
YKA pP pP 21 24 46.8 -0.8
comp=Z,156nm,0.8s,baz=110,slow=7.6,SNR=27
YKA LR LR 21 47 59.0
comp=Z,3µm,19.4s,baz=0.0,slow=36
YKA PKPPKP P'P'df 21 54 38.4 +3.3
comp=Z,0.7nm,1.0s,baz=280,slow=1.5,SNR=4.1
PMAFR Mafra 54.93 55 *e*P P 21 24 27.4 +1.3
comp=Z,169nm,1.1s
PMAFR *e*pP pP 21 24 51.8 +1.6
PMAFR *e*S S 21 32 02.2 +1.9
LIS Lisbon 55.02 55 *e*P P 21 24 27.4 +0.6
LIS AMb AMB 21 24 29.6
comp=Z,130nm,1.2s
LIS *e*pP pP 21 24 52.6 +1.9
LIS Lisbon 55.02 55 *e*P P 21 24 27.3 +0.6
LIS *e*PP pP 21 24 52.6 +1.9
LIS pmax pmax
comp=Z,130nm,1.2s
LIS Lisbon 55.02 55 *e*P P 21 24 28.2 +1.5
LIS *e*pP pP 21 24 52.7 +1.9
PFVI Vila Bisbo 55.17 57 P P 21 24 30.0 +2.2
SNR=6.5

PFVI Vila Bisbo 55.17 57 *e*P P 21 24 29.7 +1.8
comp=Z,158nm,1.4s
PFVI *e*pP pP 21 24 53.4 +1.5
PFVI *e*S S 21 32 06.3 +2.8
PFVI Vila Bisbo 55.17 57 lAmb lAmb 21 24 30.9
comp=Z,78nm,0.8s
PTEO Sao Teotonio 55.27 57 *e*P P 21 24 29.9 +1.3
comp=Z,206nm,1.5s
PTEO *e*pP pP 21 24 54.8 +2.1
MORF Marmelete 55.32 57 *e*P P 21 24 29.5 +0.5
MORF AMb AMB 21 24 31.8
comp=Z,77nm,1.2s
MORF *e*pP pP 21 24 54.8 +1.7
MORF *e*S S 21 32 07.0 +1.4
MORF Marmelete 55.32 57 *e*P P 21 24 29.5 +0.5
MORF *e**PP pP 21 24 54.8 +1.7
MORF *e*S S 21 32 07.0 +1.4
MORF pmax pmax
comp=Z,77nm,1.2s
MORF Marmelete 55.32 57 *e*P P 21 24 30.0 +1.0
comp=Z,144nm,1.4s
MORF *e*pP pP 21 24 54.8 +1.7
MORF *e*S S 21 32 08.4 +2.8
PNCL Nicolau / Gran 55.46 56 *e*P P 21 24 31.1 +1.2
comp=Z,142nm,1.4s
PNCL *e*pP pP 21 24 55.7 +1.7
PNCL *e*S S 21 32 09.6 +2.2
PCAS Casmilo, Conde 55.62 54 *e*P P 21 24 32.3 +1.2
comp=Z,230nm,1.4s
PCAS *e*pP pP 21 24 56.2 +1.0
PCAS *e*S S 21 32 11.7 +2.2
MESJ Messejana 55.69 56 *e*P P 21 24 32.3 +0.8
MESJ AMb AMB 21 24 34.9
comp=Z,116nm,1.2s
MESJ *e*pP pP 21 24 57.3 +1.7
MESJ *e*S S 21 32 12.0 +1.6
MESJ Messejana 55.69 56 *e*P P 21 24 32.3 +0.8
MESJ *e**PP pP 21 24 57.3 +1.7
MESJ *e*S S 21 32 12.0 +1.6
MESJ pmax pmax
comp=Z,116nm,1.2s
MESJ Messejana 55.69 56 *e*P P 21 24 32.7 +1.1
comp=Z,196nm,1.4s
MESJ *e*pP pP 21 24 57.4 +1.7
COI Coimbra 55.70 53 *e*P P 21 24 33.3 +1.7
comp=Z,203nm,1.4s
COI *e*pP pP 21 24 57.1 +1.4
COI *e*S S 21 32 14.0 +3.5
PMTG Montargil 55.76 55 *e*P P 21 24 33.0 +0.9
comp=Z,183nm,1.5s
PMTG *e*pP pP 21 24 57.1 +0.9
PMTG *e*S S 21 32 10.2 -1.1
PCVE Castro Verde 55.82 56 *e*P P 21 24 33.6 +1.1
comp=Z,150nm,1.6s
PCVE *e*pP pP 21 24 58.6 +1.9
PCVE *e*S S 21 32 16.5 +4.3
SRHM Skhour des Reh 55.84 63 P P 21 24 35.0 +2.1
SNR=8.1
PBDV Barranco-do-Ve 55.89 57 *e*P P 21 24 34.9 +1.8
comp=Z,193nm,1.4s
PBDV *e*pP pP 21 24 59.3 +2.1
PBDV *e*S S 21 32 18.3 +5.1
EVO Evora 55.89 55 PcP pP 21 24 55.6 -1.6
EVO *i* S S 21 32 14.9 +1.8
EVO Evora 55.89 55 *e*P P 21 24 33.9 +0.9
comp=Z,172nm,1.5s
EVO *e*pP pP 21 24 57.9 +0.8
OUK Oukaimeden 55.90 64 P P 21 24 36.0 +2.4
SNR=11
PGAV Gavieira, Arco 55.98 51 *e*P P 21 24 34.6 +0.9
comp=Z,217nm,1.5s
PGAV *e*pP pP 21 24 58.5 +0.6
PGAV *e*S S 21 32 11.9 -2.4
PGAV *e*LR LR 21 40 39.1
comp=Z,892nm,20.0s
PBEJ Beja 55.98 56 *e*P P 21 24 34.7 +1.1
comp=Z,139nm,1.3s
PBEJ *e*pP pP 21 24 58.9 +1.1
PVAQ Vaqueiros 56.07 57 P P 21 24 36.1 +1.8
SNR=15
PVAQ Vaqueiros 56.07 57 *e*P P 21 24 35.9 +1.6
comp=Z,139nm,1.4s
PVAQ *e*pP pP 21 25 00.3 +1.9
PVAQ *e*S S 21 32 19.0 +3.5
PVAQ *e*LR LR 21 40 50.1
comp=Z,938nm,20.0s
PVAQ Vaqueiros 56.07 57 lAmb lAmb 21 25 10.2
comp=Z,92nm,1.0s
PCAB Cabril 56.13 52 *e*P P 21 24 35.5 +0.8
comp=Z,125nm,1.9s
PCAB *e*pP pP 21 25 00.1 +1.1
PVIS Viseu 56.14 53 *e*P P 21 24 35.5 +0.7
comp=Z,124nm,1.9s
PVIS *e*pP pP 21 24 59.1 +0.1
PESTR Estremoz 56.24 55 P P 21 24 36.9 +1.4
SNR=33
PESTR Estremoz 56.24 55 *e*S S 21 32 18.7 +0.9
PESTR Estremoz 56.24 55 lAmb lAmb 21 25 12.4
comp=Z,68nm,1.0s
AVE Averroes 56.24 62 P P 21 24 37.6 +2.0
SNR=15
AVE Averroes 56.24 62 PcP pP 21 24 57.5 -2.2
AVE *i* S S 21 32 19.7 +1.8
PVRL Vila Real 56.32 52 *e*P P 21 24 37.1 +1.0
comp=Z,219nm,1.2s
PVRL *e*pP pP 21 25 01.8 +1.4
MTE Manteigas 56.38 53 *e*P P 21 24 37.2 +0.7
comp=Z,136nm,1.6s
MTE *e*pP pP 21 25 01.9 +1.2
MTE *e*S S 21 32 22.1 +2.4
MTE *e*LR LR 21 40 58.8
comp=Z,1µm,22.0s
MTE Manteigas 56.38 53 lAmb lAmb 21 24 39.0
comp=Z,108nm,0.7s
PCBR Castelo Branco 56.39 54 *e*P P 21 24 37.4 +0.9
comp=Z,158nm,1.4s
PCBR *e*pP pP 21 25 01.9 +1.2
PMRV Marv??o 56.43 54 *e*P P 21 24 37.7 +0.8
comp=Z,149nm,1.5s
PMRV *e*pP pP 21 25 01.6 +0.6
PMRV *e*S S 21 32 22.9 +2.6
PMRV *e*LR LR 21 40 54.9
comp=Z,630nm,22.0s
RTC Rabat Centre 56.70 61 P P 21 24 41.6 +2.7
SNR=6.4
KULLO Kullorsuaq 56.81 4 *i* P P 21 24 38.4 -0.5
KULLO *i* 21 25 01.2
KULLO pmax pmax
comp=Z,27nm,0.7s
KULLO MLR MLR
comp=Z,890nm,17.0s
KULLO Kullorsuaq 56.81 4 *i* P P 21 24 38.4 -0.5
comp=Z,27nm,0.7s
KULLO *i* 21 25 01.2
comp=Z,870nm,17.0s
MVO Moncorvo 56.83 52 *e*P P 21 24 40.6 +0.9
comp=Z,203nm,1.1s
MVO *e*pP pP 21 25 04.9 +0.9
MVO *e*S S 21 32 27.8 +2.2
MVO *e*LR LR 21 41 15.8
comp=Z,655nm,20.0s
OUZM OUZ 56.85 65 P P 21 24 42.0 +1.8
SNR=16
ZHG ZHG 56.89 62 P P 21 24 42.0 +1.7
SNR=29
PBRG Braganca 57.10 52 *e*P P 21 24 42.8 +1.2
comp=Z,96nm,1.6s
PBRG *e*pP pP 21 25 05.8 -0.1
SUMG Summit 57.11 10 *i* P P 21 24 42.2 +0.7
SUMG pmax pmax
comp=Z,190nm,0.6s
SUMG Summit 57.11 10 P P 21 24 41.9 +0.4
SUMG Summit 57.11 10 *i* P P 21 24 42.2 +0.7
comp=Z,185nm,0.6s
SFS San Fernando 57.25 58 PcP pP 21 25 05.2 -1.7
SFS *i* S S 21 32 35.7 +4.7
CNIL Conil 57.37 58 PcP pP 21 25 12.0 +4.2
RSA Sarsar 57.55 60 P P 21 24 47.4 +2.5
SNR=30
ZGR Zagora 57.88 65 P P 21 24 50.0 +2.7
SNR=21
TZRR Tazzarine 57.88 65 P P 21 24 49.2 +1.8
SNR=20
CEU Ceuta 57.92 59 PcP pP 21 25 11.7 +0.1
CEU *i* S S 21 32 45.7 +5.9

CHEFC Chefchaouen 57.95 60 P P 21 24 51.0 +3.3
SNR=7.9
SICH Sidi Chahed 57.98 61 P P 21 24 50.0 +2.1
SNR=15
HORN Hornachuelos 58.03 56 P P 21 24 49.4 +1.2
SNR=62
REAL Reales 58.05 58 PcP pP 21 25 17.0 +4.2
IFR Ifrane 58.15 61 PcP pP 21 25 12.1 -1.4
IFR *i* S S 21 32 47.1 +3.7
CZD Col de Zad 58.24 62 P P 21 24 52.5 +2.5
SNR=46
GOLM Goulmima 58.37 64 P P 21 24 54.0 +3.2
SNR=7.1
RES Resolute Bay 58.40 352 IAmb IAmb 21 25 18.0
comp=Z,44nm,0.7s
TULEG Thule 58.45 360 IAmb IAmb 21 25 16.6
comp=Z,104nm,0.8s
PLCA Paso Flores 58.58 182 P P 21 24 51.7 -0.1
comp=Z,88nm,1.0s,baz=0.2,slow=7.9,SNR=130
PLCA LR LR 21 52 57.3
comp=Z,482nm,20.8s,baz=6.0,slow=39
PLCA Paso Flores 58.58 182 *e*P P 21 24 51.7 -0.1
EMAL Malaga-Limoner 58.68 58 PcP pP 21 25 15.6 -1.4
EMAL *i* S S 21 32 53.2 +3.5
PAB San Pablo 58.79 54 P P 21 24 54.3 +0.9
PAB pmax pmax
comp=Z,82nm,0.9s
PAB San Pablo 58.79 54 P P 21 24 54.3 +0.9
PAB IAmb IAmb 21 24 56.1
comp=Z,82nm,0.8s
PVLZ Peæn de 58.80 59 PcP pP 21 25 16.8 -1.1
PVLZ *i* S S 21 32 50.1 -1.2
ARF Arif 59.01 64 P P 21 24 59.0 +3.8
SNR=6.7
ESDC Sonseca Array 59.09 54 P P 21 24 56.6 +1.1
comp=Z,122nm,0.7s,baz=271,slow=7.3,SNR=717
ESDC pP pP 21 25 19.0 -0.9
comp=Z,96nm,0.8s,baz=272,slow=7.2,SNR=9.3
ESDC LR LR 21 45 48.2
comp=Z,790nm,21.8s,baz=285,slow=31
ESDC PKPPKP P'P'df 21 54 35.3 +5.6
comp=Z,3.2nm,1.0s,baz=48,slow=2.1,SNR=10
PALE Palemas 59.09 59 P P 21 24 57.3 +1.7
SNR=16
AKLM AKL 59.17 60 P P 21 24 58.0 +1.8
SNR=22
SCO Scoresbysund 59.24 16 *i* P P 21 24 55.5 -0.4
SCO MLR MLR
comp=Z,940nm,18.0s
SCO Scoresbysund 59.24 16 *i* P P 21 24 55.5 -0.4
comp=Z,930nm,18.0s
ASCN Ascension 59.24 111 P P 21 24 57.3 +0.4
UCM Universidad Co 59.66 53 PcP pP 21 25 21.7 -2.1
UCM *i* S S 21 33 06.3 +4.0
RSBS Rosebush, Pemb 59.72 40 *e*P P 21 25 00.0 +0.5
RSBS IAmb IAmb 21 25 01.2
comp=Z,40nm,1.0s
RSBS IAMs_20 IAMs_20 21 44 52.7
comp=Z,2µm,21.4s
HTL Hartland 59.73 41 *e*P P 21 24 59.9 +0.3
HTL IAmb IAmb 21 25 02.5
comp=Z,87nm,0.9s
HTL IAMs_20 IAMs_20 21 44 52.6
comp=Z,2µm,19.7s
LEWI Lewis, Hebride 59.82 33 *e*P P 21 24 59.2 -0.9
LEWI IAmb IAmb 21 25 02.0
comp=Z,32nm,1.0s
LEWI IAMs_20 IAMs_20 21 45 56.6
comp=Z,2µm,19.8s
MELI Melilla 59.91 59 PcP pP 21 25 22.1 -3.6
MELI *i* S S 21 33 09.7 +4.1
DLBC Dease Lake 59.98 328 IAmb IAmb 21 25 51.4
comp=Z,93nm,1.1s
SESP Santiago Espad 60.18 56 P P 21 25 04.6 +1.4
SNR=13
IOMK Kirk Michael 60.22 37 *e*P P 21 25 03.2 +0.3
IOMK IAmb IAmb 21 25 04.9
comp=Z,103nm,1.0s
IOMK IAMs_20 IAMs_20 21 51 09.3
comp=Z,2µm,16.2s
DIB Dawson Inlet, 60.23 321 IAmb IAmb 21 25 34.0
comp=Z,91nm,1.4s
GAL1 Galloway 60.25 37 *e*P P 21 25 02.9 -0.2
GAL1 IAmb IAmb 21 25 04.9
comp=Z,81nm,1.0s
GAL1 IAMs_20 IAMs_20 21 42 57.8
comp=Z,1µm,23.8s
KPL Plockton 60.26 34 *e*P P 21 25 02.5 -0.6
KPL IAMs_20 IAMs_20 21 46 37.6
comp=Z,2µm,22.0s
KAC Achnashellach 60.48 34 *e*P P 21 25 03.6 -1.0
EAB Aberfoyle 60.72 35 *e*P P 21 25 06.0 -0.3
TDRA Tendrara 60.76 62 P P 21 25 10.0 +2.7
SNR=18
MCH1 Michaelchurch 60.79 40 *e*P P 21 25 06.8 -0.1
MCH1 IAmb IAmb 21 25 08.6
comp=Z,50nm,0.9s
MCH1 IAMs_20 IAMs_20 21 45 58.6
comp=Z,2µm,21.8s
FOEL Foel Wylfa 60.80 39 *e*P P 21 25 06.5 -0.4
FOEL IAmb IAmb 21 25 08.6
comp=Z,86nm,1.0s
FOEL IAMs_20 IAMs_20 21 43 23.6
comp=Z,715nm,19.5s
MONM Monmouth 60.89 40 *e*P P 21 25 07.8 +0.3
MONM IAmb IAmb 21 25 09.4
comp=Z,110nm,1.0s
MONM IAMs_20 IAMs_20 21 45 26.7
comp=Z,2µm,22.5s
INVG Invergeldie, C 60.92 35 *e*P P 21 25 07.1 -0.5
INVG IAmb IAmb 21 25 08.9
comp=Z,37nm,1.0s
INVG IAMs_20 IAMs_20 21 45 19.3
comp=Z,956nm,22.6s
HLM1 Long Mynd 60.93 39 *e*P P 21 25 08.0 +0.2
HLM1 IAmb IAmb 21 25 10.2
comp=Z,153nm,1.0s
JVM Valle D.L. Mar 60.96 43 *e*P P 21 25 08.8 +0.8
MDO Dochfour 60.96 34 *e*P P 21 25 07.0 -0.9
ESK Eskdalemuir 61.19 36 P P 21 25 09.9 +0.5
ESK pmax pmax
comp=Z,144nm,1.0s
ESK Eskdalemuir 61.19 36 P P 21 25 09.9 +0.5
ESK IAmb IAmb 21 25 37.0
comp=Z,144nm,0.9s
STRD Stroud 61.27 40 *e*P P 21 25 10.8 +0.7
STRD IAmb IAmb 21 25 12.0
comp=Z,79nm,1.0s
STRD IAMs_20 IAMs_20 21 46 13.7
comp=Z,2µm,21.5s
EBL Broad Law 61.35 36 *e*P P 21 25 10.1 -0.5
C36M Paulatuk 61.38 340 P P 21 25 08.8 -1.7
baz=116,SNR=6.1
CART Cartagena 61.41 57 PcP pP 21 25 33.3 -2.5
CART *i* S S 21 33 26.9 +2.3
SWN1 Swindon 61.47 41 *e*P P 21 25 11.8 +0.4
SWN1 IAmb IAmb 21 25 17.1
comp=Z,51nm,0.8s
SWN1 IAMs_20 IAMs_20 21 46 30.1
comp=Z,2µm,21.4s
MCD Coleburn Disti 61.58 34 *e*P P 21 25 12.4 +0.4
LBWR Ladybower, Pea 61.75 39 *e*P P 21 25 13.5 +0.2
LBWR IAmb IAmb 21 25 15.9
comp=Z,121nm,0.9s
LBWR IAMs_20 IAMs_20 21 49 49.0
comp=Z,1µm,21.2s
WOL Wolverton 61.80 41 *e*P P 21 25 14.2 +0.6
WOL IAmb IAmb 21 25 17.1
comp=Z,107nm,1.1s
WOL IAMs_20 IAMs_20 21 44 06.1
comp=Z,3µm,35.9s
HPK Haverah Park 61.88 38 *e*P P 21 25 14.1 0.0
HPK IAmb IAmb 21 25 15.6
comp=Z,47nm,0.9s
HPK IAMs_20 IAMs_20 21 47 08.6
comp=Z,1µm,20.9s
TIC Toumodi 62.65 92 *e*P P 21 25 20.1 +0.1
LIC Lamto 62.76 92 *e*P P 21 25 20.9 +0.2
comp=Z,740nm,0.9s
DBIC Dimbokro 62.80 92 P P 21 25 21.1 +0.2
comp=Z,167nm,0.7s,baz=273,slow=7.2,SNR=157
DBIC LR LR 21 48 28.4
comp=Z,469nm,21.9s,baz=270,slow=32
DBIC PKP2bc 21 54 28.4
comp=Z,8.1nm,1.0s,baz=90,slow=3.2,SNR=3.9
DBIC Dimbokro 62.80 92 P P 21 25 21.4 +0.5
DBIC pmax pmax
comp=Z,181nm,0.8s
DBIC Dimbokro 62.80 92 P P 21 25 21.4 +0.5
A36M Sachs Harbour 62.91 343 P P 21 25 20.4 -0.3
baz=116,SNR=24
WAL1 Walls 62.93 31 *e*P P 21 25 20.3 -0.7
KIC Kosan Boka 63.00 92 *e*P P 21 25 22.6 +0.3
comp=Z,464nm,0.8s
LRW Lerwick 63.12 31 *e*P P 21 25 21.3 -0.9
LRW IAmb IAmb 21 25 23.6
comp=Z,67nm,1.2s
JMIC Jan Mayen 63.35 18 *e*P P 21 25 25.6 +1.9
DAG Danmarks Havn 63.74 11 *i* P P 21 25 25.6 -0.5
DAG pmax pmax
comp=Z,57nm,0.7s
DAG MLR MLR
comp=Z,4µm,18.0s
DAG Danmarks Havn 63.74 11 *i* P P 21 25 25.6 -0.5
comp=Z,57nm,0.7s
comp=Z,3µm,18.0s
INK Inuvik 64.19 338 LR LR 21 53 20.8
comp=Z,1µm,20.0s,baz=104,slow=36
INK Inuvik 64.19 338 IAmb IAmb 21 26 10.5
comp=Z,138nm,1.1s
EPYK Eagle Plains 64.90 336 P P 21 25 33.6 -0.3
baz=103,SNR=14
SNF Seneffe 65.23 42 ⇑P P 21 25 36.4 +0.2
SNF pP pP 21 25 59.3 -1.8
UCC Uccle 65.28 42 ⇑P P 21 25 36.6 0.0
UCC pP pP 21 25 59.7 -1.7
DOU Dourbes 65.42 43 ⇑P P 21 25 37.6 +0.1
DOU pP pP 21 26 00.8 -1.6
MAHO Mahon 65.42 54 PcP pP 21 26 05.3 +2.8
MAHO *i* S S 21 34 22.7 +8.3
PCA Pinnacle 65.45 328 IAmb IAmb 21 26 25.3
comp=Z,97nm,0.8s
BMRD Maredsous 65.53 42 ⇑P P 21 25 38.3 +0.1
BMRD pP pP 21 26 01.4 -1.7
BGES Gesves 65.74 42 ⇑P P 21 25 39.6 0.0
BGES pP pP 21 26 02.3 -2.2
BCLA Clavier 65.88 42 ⇓P P 21 25 40.9 +0.4
BCLA pP pP 21 26 06.3 +1.0
comp=Z,97nm,2.0s
BSTI Sart Tilman 66.05 42 ⇑P P 21 25 41.8 +0.3
BSTI pP pP 21 26 05.0 -1.4
BEBN Eben Emael 66.12 42 ⇓P P 21 25 42.8 +0.8
BEBN pP pP 21 26 05.2 -1.6
SUE Sulen 66.15 31 *e*P P 21 25 42.3 +0.4
BARN Barnard Glacie 66.24 329 IAmb IAmb 21 26 21.3
comp=Z,110nm,1.1s
ASK Askoy 66.31 31 *e*P P 21 25 43.7 +0.7
BHOU Houvegnez 66.33 42 ⇑P P 21 25 43.9 +0.6
BHOU pP pP 21 26 06.2 -2.1
MEM Membach 66.33 42 P P 21 25 43.5 +0.2
MEM pP pP 21 26 06.1 -2.2
MEM x x 21 26 10.3
FOO Floro 66.34 30 *e*P P 21 25 42.9 -0.3
BER Bergen 66.37 31 *e*P P 21 25 43.6 +0.3
WLF Walferdange 66.43 43 P P 21 25 44.0 +0.1
WLF pP pP 21 26 05.7 -3.2
WLF Walferdange 66.43 43 *e*P P 21 25 44.6 +0.6
comp=Z,72nm,1.0s,baz=274,slow=6.2
WLF Walferdange 66.43 43 IAmb IAmb 21 26 12.5
comp=Z,155nm,0.9s
WAX Waxell Ridge 66.77 329 IAmb IAmb 21 26 18.7
comp=Z,112nm,1.0s
HYA Hoyanger 66.85 31 *e*P P 21 25 47.0 +0.7
BLS5 Blasjo 66.86 32 *e*P P 21 25 48.1 +1.5
NOR Nord 66.90 7 *i* P P 21 25 45.4 -1.0
NOR *i* 21 26 09.9
NOR pmax pmax
comp=Z,19nm,0.7s
NOR MLR MLR
comp=Z,2µm,18.0s
NOR Nord 66.90 7 *i* P P 21 25 45.4 -1.0
comp=Z,19nm,0.7s
NOR *i* 21 26 09.9
comp=Z,2µm,18.0s
BNI Bardonecchia 66.92 48 IAmb IAmb 21 26 16.2
comp=Z,149nm,1.1s
ODD1 Odda 66.98 32 *e*P P 21 25 49.5 +2.2
AHRW Bad Neuenahr-A 67.01 42 *e*P P 21 25 48.5 +0.9
comp=Z,73nm,1.1s,baz=274,slow=6.2
SNART Snartemo 67.20 34 *e*P P 21 25 49.5 +0.9
SENIN Lac Senin/Sane 67.29 47 IAmb IAmb 21 26 18.1
comp=Z,203nm,1.1s
TOA0 Torodi Ar. Sit 67.30 83 IAmb IAmb 21 25 51.4
comp=Z,167nm,0.8s
TORD Torodi Ar. Bea 67.30 83 P P 21 25 50.0 0.0
comp=Z,158nm,0.8s,baz=293,slow=6.6,SNR=526
TORD pP pP 21 26 14.0 -1.1
comp=Z,62nm,0.6s,baz=294,slow=4.5,SNR=6.2
TORD LR LR 21 51 59.5
comp=Z,479nm,21.8s,baz=285,slow=33
TORD PKPPKP P'P'df 21 54 07.2 -10
comp=Z,2.8nm,1.1s,baz=95,slow=2.3,SNR=6.5
GLB Gilahina Butte 67.31 330 IAmb IAmb 21 26 17.7
comp=Z,117nm,1.1s
AKN Aaknes 67.31 29 *e*P P 21 25 49.8 +0.4
IBBN Ibbenbueren 67.42 40 *e*P P 21 25 50.6 +0.5
comp=Z,97nm,1.0s,baz=274,slow=6.2
SCRK Sand Creek 67.58 332 IAmb IAmb 21 26 19.1
comp=Z,176nm,0.9s
MOL Molde 67.60 29 *e*P P 21 25 52.8 +1.7
SKAR Skarslia 67.85 31 *e*P P 21 25 54.8 +1.9
HOMB Homborsund 67.88 34 *e*P P 21 25 53.9 +0.9
BFO Black Forest 67.90 44 *e*P P 21 25 53.1 -0.2
comp=Z,26nm,1.1s,baz=274,slow=6.2
BFO Black Forest 67.90 44 P P 21 25 53.3 0.0
BFO pmax pmax
comp=Z,81nm,1.2s
BFO Black Forest 67.90 44 P P 21 25 53.3 0.0
TNS Taunus Mts 67.90 42 *e*P P 21 25 53.9 +0.5
comp=Z,58nm,1.3s,baz=274,slow=6.2
RIDG Independent Ri 67.94 332 IAmb IAmb 21 26 21.4
comp=Z,204nm,1.0s
EYAK Cordova Ski Ar 68.21 329 IAmb IAmb 21 26 24.7
comp=Z,137nm,1.2s
MUD Monsted U'grnd 68.22 36 *i* P P 21 25 55.0 -0.1
MUD *i* 21 26 19.7
MUD pmax pmax
comp=Z,79nm,1.0s
MUD Monsted U'grnd 68.22 36 *i* P P 21 25 55.0 -0.1
comp=Z,79nm,1.0s
MUD *i* 21 26 19.7
GOET G??ttrup 68.25 35 *i* P P 21 25 56.6 +1.3
comp=Z,212nm,1.1s
DOMB Dombas 68.28 30 *e*P P 21 25 56.1 +0.6
FYU Fort Yukon 68.31 335 IAmb IAmb 21 26 37.7
comp=Z,199nm,1.2s
PRP Porcupine Dome 68.35 334 IAmb IAmb 21 26 23.4
comp=Z,116nm,0.8s
RETH Rethem/Aller, 68.39 40 *e*P P 21 25 56.8 +0.6
comp=Z,60nm,1.1s,baz=274,slow=6.2
KONO Kongsberg 68.47 32 *ce*P P 21 25 58.1 +1.5
KONO pmax pmax
comp=Z,27nm,0.8s
KONO Kongsberg 68.47 32 P P 21 25 57.9 +1.3
KONO IAmb IAmb 21 26 24.4
comp=Z,441nm,1.9s
KONO Kongsberg 68.47 32 *e*P P 21 25 57.3 +0.7
FID Port Fidalgo 68.57 329 IAmb IAmb 21 26 25.4
comp=Z,114nm,1.0s
TAM Tamanrasset 68.73 72 IAmb IAmb 21 26 27.3
comp=Z,118nm,1.0s
NRDL Niedersach Rie 68.85 40 *e*P P 21 25 60.0 +1.0
comp=Z,52nm,1.0s,baz=274,slow=6.2
TBLU Trondheim 68.87 28 *e*P P 21 26 00.3 +1.3
ILAR Eielson Array 68.88 333 P P 21 25 58.1 -1.0
comp=Z,12nm,0.6s,baz=102,slow=4.5,SNR=86
ILAR pP pP 21 26 22.9 -1.4
comp=Z,56nm,0.8s,baz=105,slow=3.4,SNR=19
ILAR PKPPKP P'P'df 21 54 07.3 -5.0
comp=Z,0.6nm,0.9s,baz=281,slow=3.0,SNR=4.8
ILAR LR LR 21 57 05.1
comp=Z,3µm,19.0s,baz=102,slow=37
HDA Harding Lake 68.89 333 P P 21 25 58.3 -0.9
baz=92,SNR=19
BSEG Bad Segeberg 68.92 38 *e*P P 21 25 59.8 +0.3
comp=Z,41nm,1.0s,baz=274,slow=6.2
SCM Sheep Creek Mo 69.00 330 IAmb IAmb 21 26 28.2
comp=Z,151nm,1.2s
DAVA Damuels 69.00 46 *i* P P 21 26 01.2 +0.8
comp=Z,90nm,0.9s,SNR=30
DAVA *i* PcP pP 21 26 26.7 +1.4
comp=Z,205nm,1.1s
CLZ Clausthal 69.04 41 *e*P P 21 26 01.0 +0.6
comp=Z,54nm,1.0s,baz=274,slow=6.2
NC204 NORSAR Array S 69.07 31 IAmb IAmb 21 26 28.3
comp=Z,370nm,1.6s
NBO00 NORSAR Array S 69.07 31 IAmb IAmb 21 26 28.5
comp=Z,221nm,1.1s
UBR Ueberruh 69.13 45 *e*P P 21 26 01.2 +0.1
comp=Z,34nm,0.8s,baz=274,slow=6.2
POKR Poker Flat Res 69.13 334 P P 21 26 00.1 -0.6
baz=92,SNR=9.1
ASSE Asse, Remlinge 69.22 40 *e*P P 21 26 02.2 +0.9
comp=Z,80nm,1.1s,baz=274,slow=6.2
NB2 NORSAR Subarra 69.28 31 P P 21 26 02.3 +0.6
comp=Z,500nm,2.0s,baz=269,slow=6.5
NB2 NORSAR Subarra 69.28 31 P P 21 26 02.3 +0.6
baz=269,slow=6.5
NOA NORSAR Array B 69.28 31 P P 21 26 02.5 +0.7
comp=Z,21nm,0.9s,baz=270,slow=6.3,SNR=40
NOA pP pP 21 26 27.5 +0.7
comp=Z,38nm,0.7s,baz=271,slow=6.3,SNR=18
NOA LR LR 21 51 30.6
comp=Z,641nm,21.9s,baz=265,slow=32
NOA PKPPKP P'P'df 21 54 07.2 -4.8
comp=Z,11nm,1.1s,baz=248,slow=3.0,SNR=7.9
COLA College 69.30 333 *ce*P P 21 26 00.5 -1.1
COLA pmax pmax
comp=Z,29nm,1.4s
TCOL CIGO, UAF Yank 69.30 333 P P 21 26 01.2 -0.5
baz=92
NC303 NORSAR Array S 69.36 31 IAmb IAmb 21 26 30.2
comp=Z,168nm,0.9s
VSL Villasalto 69.39 54 IAmb IAmb 21 26 05.3
comp=Z,158nm,1.0s
NC602 NORSAR Array S 69.45 31 IAmb IAmb 21 26 31.0
comp=Z,257nm,1.1s
NC602 NORSAR Array S 69.45 31 *e*P P 21 26 03.6 +0.9
PRMA PARMA 69.52 48 IAmb IAmb 21 26 31.2
comp=Z,86nm,0.8s
RETA Reutte 69.58 45 *i* P P 21 26 04.6 +0.7
comp=Z,94nm,0.8s,SNR=47
RETA *i* pP pP 21 26 31.1 +2.2
comp=Z,283nm,1.1s
SALO Salr 69.58 47 IAmb IAmb 21 26 05.7
comp=Z,134nm,0.7s
FETA Feichten 69.60 46 *i* P P 21 26 05.1 +1.0
comp=Z,140nm,0.7s,SNR=101
FETA *i* PcP pP 21 26 28.2 -0.9
comp=Z,383nm,1.2s
NSS Namsos 69.65 27 *e*P P 21 26 04.3 +0.5
GRA1 Grafenberg Arr 69.72 43 IAmb IAmb 21 26 33.3
comp=Z,176nm,1.4s
GRF Grafenberg Arr 69.72 43 *e*L L 21 52 04.2
comp=Z,1µm,21.8s
RND Reindeer 69.72 332 IAmb IAmb 21 26 32.3
comp=Z,189nm,1.0s
GHO Glory Hole Cre 69.76 330 IAmb IAmb 21 26 32.3
comp=Z,143nm,0.9s
NEA Nenana 69.82 333 IAmb IAmb 21 26 32.0
comp=Z,117nm,1.0s
MOTA Moosalm 69.83 45 *i* P P 21 26 06.0 +0.5
comp=Z,92nm,0.9s,SNR=41
MOTA *i* pP pP 21 26 30.0 -0.5
comp=Z,164nm,1.0s
KEST Kesra 69.85 58 P P 21 26 06.7 +0.9
comp=Z,95nm,0.8s,baz=192,slow=1.6,SNR=79
KEST PKPPKP P'P'df 21 54 08.7 -3.4
comp=Z,13nm,1.1s,baz=164,slow=3.4,SNR=8.0
KEST LR LR 21 57 16.8
comp=Z,194nm,18.0s,baz=235,slow=36
KEST Kesra 69.85 58 IAmb IAmb 21 26 44.8
comp=Z,204nm,1.1s
FUR Furstenfeldbru 69.87 45 *e*P P 21 26 06.0 +0.4
comp=Z,76nm,0.9s,baz=274,slow=6.2
MOX Moxa 69.90 42 *e*P P 21 26 05.8 +0.2
baz=274,slow=6.2
MOX *e*L L 21 52 11.1
comp=Z,1µm,21.3s
SQTA Sankt Quirin 69.91 46 *i* P P 21 26 06.6 +0.7
comp=Z,72nm,0.6s,SNR=62
SQTA *i* pP pP 21 26 30.2 -0.7
comp=Z,140nm,0.8s
NEUB Neuenburg 69.96 41 *e*P P 21 26 06.6 +0.6
comp=Z,81nm,0.9s,baz=274,slow=6.2
SEW Seward 70.05 328 IAmb IAmb 21 26 34.4
comp=Z,154nm,1.0s
EFI East Falkland 70.07 173 *ce*P P 21 26 06.8 +0.4
EFI pmax pmax
comp=Z,339nm,1.4s
EFI East Falkland 70.07 173 P P 21 26 06.4 0.0
TOLK Toolik Lake Re 70.08 337 P P 21 26 05.3 -1.1
baz=91,SNR=26
STOK Stokkvagen 70.11 25 *e*P P 21 26 07.4 +0.8
KONS Konsvik 70.15 25 *e*P P 21 26 07.3 +0.5
WATA Walderalm 70.15 45 *i* P P 21 26 07.6 +0.2
comp=Z,46nm,1.1s,SNR=24
WATA *i* pP pP 21 26 32.7 +0.2
comp=Z,101nm,1.1s
WTTA Wattenberg 70.20 45 *i* P P 21 26 08.1 +0.4
comp=Z,62nm,1.0s,SNR=29
WTTA *i* pP pP 21 26 34.2 +1.4
comp=Z,128nm,1.2s
PLN Plauen 70.25 42 *e*P P 21 26 08.1 +0.2
comp=Z,40nm,1.3s,baz=274,slow=6.2
MANZ Manzenberg 70.26 43 *e*P P 21 26 08.6 +0.6
comp=Z,89nm,1.0s,baz=274,slow=6.2
LOF Lofoten 70.32 23 *e*P P 21 26 08.5 +0.6
ROTZ Rotzenmuhle 70.35 43 *e*P P 21 26 09.1 +0.6
comp=Z,50nm,1.0s,baz=274,slow=6.2
GUNZ Gunzen 70.38 42 *e*P P 21 26 09.0 +0.4
comp=Z,19nm,1.0s,baz=274,slow=6.2
WERN Wernitzgruen 70.41 42 *e*P P 21 26 09.2 +0.4
comp=Z,23nm,1.0s,baz=274,slow=6.2
TANN Tannenbergstha 70.45 42 *e*P P 21 26 09.5 +0.4
comp=Z,104nm,1.0s,baz=274,slow=6.2
NKC Novy Kostel 70.46 42 *e*P P 21 26 09.6 +0.5
NKC *e**PP pP 21 26 32.6 -1.7
NKC *eS* S 21 35 14.1 -0.1
NKC MLR MLR
comp=Z,2µm,21.4s
NKC Novy Kostel 70.46 42 *e*P P 21 26 09.6 +0.5
NKC *e*pP pP 21 26 32.6 -1.7
NKC *eS* S 21 35 14.1 -0.1
NKC AMS AMS 21 52 00.0
comp=Z,2µm,21.4s
KBS Kingsbay 70.48 12 *de*P P 21 26 10.9 +2.2
KBS pmax pmax
comp=Z,28nm,0.9s
KBS Kingsbay 70.48 12 P P 21 26 09.8 +1.1
KBS IAmb IAmb 21 26 35.6
comp=Z,202nm,1.3s
KBS Kingsbay 70.48 12 *e*P P 21 26 09.6 +1.0
BPAW Bear Paw Mtn. 70.66 333 IAmb IAmb 21 26 37.2
comp=Z,138nm,0.8s
CLL Collm 70.72 41 *e*P P 21 26 12.0 +1.4
comp=Z,34nm,1.3s
CLL *e*PcP PcP 21 26 33.0 +2.1
CLL *i* pP pP 21 26 37.6 +1.8
comp=Z,214nm,1.7s
CLL *es*P sP 21 26 47.0 +0.3
CLL *e* 21 29 06.0
CLL *eS* S 21 35 18.0 +0.9
CLL *epS* sS 21 35 56.0 -2.0
CLL *eSS* SS 21 39 48.0 -2.5
CLL *e*SSS SSS 21 43 12.0
CLL *e*SSSS 21 44 48.0
CLL Lm MLR 23 19 00.0
comp=Z,100nm,21.5s
CLL Lm MLR 00 10 00.0
comp=Z,100nm,20.2s
CLL Collm 70.72 41 *e*P P 21 26 12.0 +1.4
comp=Z,34nm,1.3s,baz=274,slow=6.2
CLL Collm 70.72 41 *e*P P 21 26 12.0 +1.4
CLL *e**PP PcP 21 26 33.0 +2.1
CLL *i* 21 26 37.6
CLL *eS* S 21 35 18.0 +0.9
CLL pmax pmax
comp=Z,34nm,1.3s
WET Wettzell 70.84 43 *e*P P 21 26 12.0 +0.5
comp=Z,48nm,0.8s,baz=274,slow=6.2
ABTA Abfaltersbach 70.84 46 *i* P P 21 26 11.9 +0.3
comp=Z,81nm,0.9s,SNR=46
ABTA *i* pP pP 21 26 38.3 +1.6
comp=Z,168nm,1.1s
RJOB Jochberg 70.93 45 *e*P P 21 26 12.2 +0.2
comp=Z,35nm,0.9s,baz=274,slow=6.2
STEI Steigen 70.96 23 *e*P P 21 26 12.4 +0.6

FBE	**Freiberg**	**70.97**	**41**	*eP*		**P**	**21 26 12.9**	**+0.7**
	comp=Z,54nm,1.0s,baz=274,slow=6.2							
CNPM	**China Poot**	**70.97**	**328**	IAmb	IAmb		21 26 40.0	
	comp=Z,181nm,0.9s							
HSPB	**Hornsund (broa**	**71.10**	**14**	*epP*		**pP**	**21 26 37.9**	**+0.1**
HSPB				*eS*		**S**	**21 35 23.1**	**+2.4**
HSPB				*e*SKSac		**ScS**	**21 36 07.9**	**+0.7**
HSPB				LMZ	LR		21 54 14.7	
	comp=Z,0.6nm,21.8s							
HSPB	**Hornsund (broa**	**71.10**	**14**	*eP*		**P**	**21 26 12.8**	**+0.4**
PPLA	**Purkeypile**	**71.25**	**331**	IAmb	IAmb		21 26 41.4	
	comp=Z,102nm,1.0s							
KHC	**Kasperske Hory**	**71.30**	**43**	*eP*		**P**	**21 26 15.0**	**+0.8**
KHC				*e**PP		**pP**	**21 26 38.3**	**-1.1**
KHC				*eS*		**S**	**21 35 23.0**	**-1.0**
KHC				MLR	MLR			
	comp=Z,1μm,23.1s							
KHC	**Kasperske Hory**	**71.30**	**43**	*eP*		**P**	**21 26 15.0**	**+0.8**
KHC				*epP*		**pP**	**21 26 38.3**	**-1.1**
KHC				*ex*		x	21 26 57.7	
KHC				*eS*		**S**	**21 35 23.0**	**-1.0**
KHC				AMS	AMS		21 51 30.0	
	comp=Z,1μm,23.1s							
SPA0	**Spitsbergen Ar**	**71.31**	**13**	IAmb	IAmb		21 26 40.9	
	comp=Z,245nm,1.2s							
SPA0	**Spitsbergen Ar**	**71.31**	**13**	*eP*		**P**	**21 26 14.0**	**+0.2**
BRG	**Berggiesshubel**	**71.35**	**42**	*i* P		**P**	**21 26 15.0**	**+0.6**
	comp=Z,48nm,0.9s							
BRG				pP		**pP**	**21 26 38.0**	**-1.7**
BRG				S		**S**	**21 35 25.0**	**+0.6**
	comp=N,2μm,23.0s							
	comp=E,948nm,22.8s							
	comp=Z,1μm,22.2s							
BRG	**Berggiesshubel**	**71.35**	**42**	*eP*		**P**	**21 26 15.0**	**+0.6**
	comp=Z,56nm,1.0s,baz=274,slow=6.2							
BRG	**Berggiesshubel**	**71.35**	**42**	*i* P		**P**	**21 26 15.0**	**+0.6**
BRG				*PP		**pP**	**21 26 38.0**	**-1.7**
BRG				S		**S**	**21 35 25.0**	**+0.6**
BRG				pmax	pmax			
	comp=Z,48nm,0.9s							
BRG				MLR	MLR			
	comp=N,2μm,23.0s							
BRG				MLR	MLR			
	comp=E,948nm,22.8s							
BRG				MLR	MLR			
	comp=Z,1μm,22.2s							
KBA	**Koelnbreinsper**	**71.38**	**46**	*i* P		**P**	**21 26 15.8**	**+0.9**
	comp=Z,63nm,0.8s,SNR=36							
KBA				*i* pP		**pP**	**21 26 42.8**	**+2.8**
	comp=Z,153nm,1.1s							
GEC2	**GERESS Array S**	**71.41**	**44**	*eP*		**P**	**21 26 15.1**	**+0.2**
	comp=Z,54nm,1.1s,baz=274,slow=6.2							
GERES	**GERESS Array B**	**71.41**	**44**	P		**P**	**21 26 15.2**	**+0.2**
	comp=Z,21nm,0.8s,baz=280,slow=3.9,SNR=96							
GERES				pP		**pP**	**21 26 39.8**	**-0.3**
	comp=Z,42nm,1.0s,baz=289,slow=4.1,SNR=8.1							
GERES				PKPPKP		P'P'df	21 53 54.3	-15
	comp=Z,0.1nm,0.3s,baz=14,slow=2.2,SNR=3.7							
PBCC	**Pribram**	**71.51**	**43**	*eP*		**P**	**21 26 16.2**	**+0.7**
PBCC				*epP*		**pP**	**21 26 39.5**	**-1.1**
BSD	**Bornholm Skovb**	**71.52**	**37**	*eP*		**P**	**21 26 15.6**	**+0.2**
BSD	**Bornholm Skovb**	**71.52**	**37**	*i* P		**P**	**21 26 15.6**	**+0.2**
ROBS	**Robic**	**71.59**	**46**	*i* P		**P**	**21 26 16.1**	**+0.1**
ROBS				*eS*		**S**	**21 35 27.4**	**+0.1**
MYKA	**Terra Mystica**	**71.63**	**46**	*i* P		**P**	**21 26 16.5**	**+0.2**
	comp=Z,39nm,0.7s,SNR=23							
MYKA				*epP*		**pP**	**21 26 43.6**	**+2.1**
	comp=Z,102nm,1.1s							
PRA	**Prague**	**71.75**	**42**	*eS*		**S**	**21 35 30.2**	**+1.2**
PRA				AMS	AMS		21 52 00.0	
	comp=Z,800nm,22.3s							
PVCC	**Panska Ves**	**71.78**	**42**	*eP*		**P**	**21 26 17.9**	**+0.8**
PVCC				*e**PP		**pP**	**21 26 41.3**	**-0.9**
PVCC				*e**PP		**PcP**	**21 26 41.4**	**+5.9**
PVCC				MLR	MLR			
	comp=Z,2μm,22.4s							
PVCC	**Panska Ves**	**71.78**	**42**	*eP*		**P**	**21 26 17.9**	**+0.8**
PVCC				*epP*		**pP**	**21 26 41.3**	**-0.9**
PVCC				AMS	AMS		21 52 10.0	
	comp=Z,2μm,22.4s							
KDAK	**Kodiak Island**	**71.81**	**326**	LR	LR		21 55 43.6	
	comp=Z,147nm,21.7s,baz=84,slow=34							
KDAK	**Kodiak Island**	**71.81**	**326**	P		**P**	**21 26 17.6**	**+0.6**
KDAK				pmax	pmax			
	comp=Z,103nm,0.9s							
KDAK	**Kodiak Island**	**71.81**	**326**	P		**P**	**21 26 17.6**	**+0.6**
KDAK				IAmb	IAmb		21 26 45.1	
	comp=Z,103nm,0.9s							
PRU	**Pruhonice**	**71.83**	**42**	*eP*		**P**	**21 26 18.0**	**+0.7**
PRU				*e**PP		**pP**	**21 26 40.8**	**-1.7**
PRU				*eS*		**S**	**21 35 31.1**	**+1.2**
PRU				MLR	MLR			
	comp=Z,2μm,22.2s							
PRU	**Pruhonice**	**71.83**	**42**	*eP*		**P**	**21 26 18.0**	**+0.7**
PRU				*epP*		**pP**	**21 26 40.8**	**-1.7**
PRU				*eS*		**S**	**21 35 31.1**	**+1.2**
PRU				AMS	AMS		21 51 10.0	
	comp=Z,2μm,22.2s							
MOA	**Molln**	**71.90**	**45**	*i* P		**P**	**21 26 18.1**	**+0.2**
	comp=Z,40nm,1.2s,SNR=16							
MOA				*i* pP		**pP**	**21 26 45.0**	**+2.0**
	comp=Z,103nm,1.6s							
GOPC	**GO Pecny, Ondr**	**71.99**	**42**	*eP*		**P**	**21 26 19.1**	**+0.7**
GOPC				*e**PP		**pP**	**21 26 42.8**	**-0.7**
GOPC				*eS*		**S**	**21 35 32.2**	**+0.3**
GOPC				MLR	MLR			
	comp=Z,2μm,23.5s							
GOPC	**GO Pecny, Ondr**	**71.99**	**42**	*eP*		**P**	**21 26 19.1**	**+0.7**
GOPC				*epP*		**pP**	**21 26 42.8**	**-0.7**
GOPC				*eS*		**S**	**21 35 32.2**	**+0.3**
GOPC				AMS	AMS		21 51 20.0	
	comp=Z,2μm,23.5s							
SKDS	**Skadanscina**	**72.03**	**47**	*eS*		**S**	**21 35 33.5**	**+1.0**
AQU	**L'Aquila**	**72.03**	**50⇑**	*iP*		**P**	**21 26 19.1**	**+0.3**
TRO	**Tromso**	**72.23**	**22**	*eP*		**P**	**21 26 20.0**	**+0.7**
OBKA	**Obir**	**72.27**	**46**	*i* P		**P**	**21 26 20.4**	**+0.3**
	comp=Z,69nm,0.8s,SNR=31							
OBKA				*i* pP		**pP**	**21 26 48.2**	**+2.9**
	comp=Z,116nm,1.0s							
CEY	**Cerknica**	**72.29**	**47⇑**	*iP*		**P**	**21 26 20.9**	**+0.7**
LJU	**Ljubljana**	**72.32**	**47**	*i* P		**P**	**21 26 21.0**	**+0.6**
LJU				*i* pP		**pP**	**21 26 44.7**	**-0.8**
LJU				*i* sS		**sS**	**21 36 17.6**	**+0.6**
LJU	**Ljubljana**	**72.32**	**47⇑**	*iP*		**P**	**21 26 20.9**	**+0.6**
RIY	**Rijeka**	**72.39**	**47**	*eP*		**P**	**21 26 21.3**	**+0.6**
TREC	**Trest**	**72.52**	**43**	*eP*		**P**	**21 26 22.3**	**+0.8**
TREC				*e**PP		**pP**	**21 26 45.1**	**-1.6**
TREC				MLR	MLR			
	comp=Z,1μm,21.6s							
TREC	**Trest**	**72.52**	**43**	*eP*		**P**	**21 26 22.3**	**+0.8**
TREC				*epP*		**pP**	**21 26 45.1**	**-1.6**
TREC				AMS	AMS		21 52 20.0	
	comp=Z,1μm,21.6s							
SOKA	**Soboth**	**72.58**	**46**	*i* P		**P**	**21 26 21.8**	**-0.1**
	comp=Z,37nm,1.1s,SNR=23							
SOKA				*i* pP		**pP**	**21 26 46.8**	**-0.4**
	comp=Z,66nm,1.3s							
GBRS	**Gornja Briga**	**72.58**	**47**	*i* P		**P**	**21 26 22.8**	**+0.8**
CLTB	**Caltabellotta**	**72.64**	**55**	IAmb	IAmb		21 26 52.7	
	comp=Z,116nm,1.0s							
CORL	**Corleone**	**72.66**	**55**	IAmb	IAmb		21 26 52.1	
	comp=Z,232nm,1.1s							
UPC	**Upice**	**72.70**	**42**	*eP*		**P**	**21 26 23.3**	**+0.8**
UPC				*e**PP		**pP**	**21 26 45.5**	**-2.2**
UPC				*eS*		**S**	**21 35 38.8**	**-1.1**
UPC				MLR	MLR			
	comp=Z,2μm,22.0s							
UPC	**Upice**	**72.70**	**42**	*eP*		**P**	**21 26 23.3**	**+0.8**
UPC				*epP*		**pP**	**21 26 45.5**	**-2.2**
UPC				*eS*		**S**	**21 35 38.8**	**-1.1**
UPC				AMS	AMS		21 53 20.0	
	comp=Z,2μm,22.0s							
CHVC	**Chvalec**	**72.72**	**42**	*eP*		**P**	**21 26 23.0**	**+0.3**
CHVC				*epP*		**pP**	**21 26 45.8**	**-2.1**
CHVC				AMS	AMS		21 52 50.0	
	comp=Z,2μm,23.8s							
MG01	**Puerto William**	**72.75**	**180**	IAmb	IAmb		21 26 53.7	
	comp=Z,159nm,0.9s							
OSTC	**Ostas**	**72.82**	**42**	*eP*		**P**	**21 26 23.9**	**+0.6**
OSTC				*epP*		**pP**	**21 26 47.1**	**-1.4**
OSTC				*eS*		**S**	**21 35 41.3**	**0.0**
OSTC				AMS	AMS		21 53 20.0	
	comp=Z,2μm,20.9s							
ARSA	**Arzberg**	**72.83**	**45**	*i* P		**P**	**21 26 23.6**	**+0.2**
	comp=Z,42nm,0.8s,SNR=24							
KSP	**Ksiaz**	**72.83**	**41**	*eP*		**P**	**21 26 24.0**	**+0.7**
KSP				*epP*		**pP**	**21 26 49.8**	**+1.3**
KSP				*eS*		**S**	**21 35 42.0**	**+0.6**
KSP				*e*SKSac		**ScS**	**21 36 21.9**	**0.0**
KSP				LMZ	LR		21 53 35.3	
	comp=Z,1.4nm,22.7s							
BOJS	**Bojanci**	**72.89**	**47**	*i* P		**P**	**21 26 24.3**	**+0.5**
BOJS				*i* pP		**pP**	**21 26 48.1**	**-0.8**
BOJS				*eS*		**S**	**21 35 43.4**	**+1.1**
BOJS				*es*S		**sS**	**21 36 29.1**	**+5.8**
DPC	**Dobruska-Polom**	**72.92**	**42**	*eP*		**P**	**21 26 24.6**	**+0.7**
DPC				*e**PP		**pP**	**21 26 47.8**	**-1.3**
DPC				MLR	MLR			
	comp=Z,2μm,21.5s							
DPC	**Dobruska-Polom**	**72.92**	**42**	*eP*		**P**	**21 26 24.6**	**+0.7**
DPC				*epP*		**pP**	**21 26 47.8**	**-1.3**
DPC				AMS	AMS		21 53 30.0	
	comp=Z,2μm,21.5s							
CONA	**Conrad Observa**	**72.96**	**44**	*i* P		**P**	**21 26 24.7**	**+0.4**
	comp=Z,26nm,0.9s,SNR=21							
CONA				*i* pP		**pP**	**21 26 51.4**	**+1.9**
	comp=Z,57nm,1.3s							
CRES	**Cresnjev**	**72.99**	**47⇑**	*iP*		**P**	**21 26 24.8**	**+0.5**
GKP	**Gorka Klasztor**	**73.09**	**39**	*eP*		**P**	**21 26 25.8**	**+1.1**
GKP				*epP*		**pP**	**21 26 51.2**	**+1.2**
GKP				LMZ	LR		21 54 08.4	
	comp=Z,1.1nm,21.6s							
KRUC	**Moravsky**	**73.14**	**43⇑**	*iP*		**P**	**21 26 25.4**	**+0.2**
KRUC				*eS*		**S**	**21 35 43.1**	**-1.9**
VRAC	**Vranov**	**73.24**	**43⇑**	*iP*		**P**	**21 26 26.1**	**+0.4**
VRAC				*e*			21 26 48.8	
VRAC				*eS*		**S**	**21 35 44.2**	**-1.9**
VRAC	**Vranov**	**73.24**	**43**	⇑P		**P**	**21 26 26.5**	**+0.7**
ZAG	**Zagreb**	**73.36**	**47⇑**	*iP*		**P**	**21 26 27.8**	**+1.3**
HAMF	**Hammerfest**	**73.74**	**20**	*eP*		**P**	**21 26 28.6**	**+0.4**
ZST	**Bratislava**	**73.74**	**44**	*eP*		**P**	**21 26 28.8**	**+0.1**
ZST				pmax	pmax			
	comp=Z,103nm,1.2s							
ZST	**Bratislava**	**73.74**	**44**	*eP*		**P**	**21 26 28.8**	**+0.1**
MORC	**Moravsky Berou**	**73.78**	**42⇑**	*iP*		**P**	**21 26 29.5**	**+0.6**
MORC				*e*			21 26 52.3	
MORC				*eS*		**SKiKP**	**21 35 48.3**	**-0.3**
MORC	**Moravsky Berou**	**73.78**	**42**	⇑P		**P**	**21 26 30.0**	**+1.0**
BEHE	**Becsehely**	**73.80**	**46⇑**	*iP*		**P**	**21 26 32.5**	**+3.5**
KTK1	**Kautokeino**	**73.82**	**22**	*eP*		**P**	**21 26 29.4**	**+0.6**
MODS	**Modra-Piesok**	**73.83**	**44**	*eP*		**P**	**21 26 29.5**	**+0.3**
MODS				pmax	pmax			
	comp=Z,115nm,1.0s							
MODS	**Modra-Piesok**	**73.83**	**44**	*eP*		**P**	**21 26 29.5**	**+0.3**
SMOL	**Smolenice**	**73.90**	**44**	*eP*		**P**	**21 26 31.2**	**+1.6**
SMOL				pmax	pmax			
	comp=Z,21nm,0.9s							
SMOL	**Smolenice**	**73.90**	**44**	*eP*		**P**	**21 26 31.2**	**+1.6**
JAVC	**Velka Javorina**	**74.01**	**43⇑**	*iP*		**P**	**21 26 31.9**	**+1.6**
JAVC				*e*			21 26 57.0	
JAVC				*eS*		**S**	**21 35 55.4**	**+0.6**
OKC	**Ostrava-Krasne**	**74.16**	**42**	*eP*		**P**	**21 26 31.9**	**+0.8**
OKC				*e**PP		**pP**	**21 26 54.9**	**-1.4**
OKC				*eS*		**S**	**21 35 55.2**	**-1.1**
OKC				MLR	MLR			
	comp=Z,1μm,21.8s							
OKC	**Ostrava-Krasne**	**74.16**	**42**	*eP*		**P**	**21 26 31.9**	**+0.8**
OKC				*epP*		**pP**	**21 26 54.9**	**-1.4**
OKC				*eS*		**S**	**21 35 55.2**	**-1.1**
OKC				AMS	AMS		21 54 20.0	
	comp=Z,1μm,21.8s							
MGRS	**Mrkonjic Grad**	**74.36**	**48⇓**	*iP*		**P**	**21 26 33.8**	**+1.4**
BLY	**Banja Luka**	**74.37**	**48⇑**	*iP*		**P**	**21 26 33.1**	**+0.7**
ARCES	**ARCESS Array B**	**74.53**	**21**	P		**P**	**21 26 32.8**	**-0.1**
	comp=Z,18nm,0.6s,baz=288,slow=4.1,SNR=178							
ARCES				*pP*		**pP**	**21 26 58.1**	**-0.1**
	comp=Z,73nm,0.6s,baz=284,slow=4.0,SNR=15							
ARCES				LR	LR		21 56 26.5	
	comp=Z,363nm,18.8s,baz=280,slow=33							
ARE0	**ARCESS Array S**	**74.53**	**21**	*eP*		**P**	**21 26 33.0**	**+0.1**
KLNR	**Kaliningrad**	**74.62**	**37⇓**	*eP*		**P**	**21 26 34.9**	**+1.3**
KLNR				pmax	pmax			
	comp=Z,134nm,0.9s							
SRO2	**Moca**	**74.67**	**44**	*eP*		**P**	**21 26 33.8**	**-0.2**
SRO2				pmax	pmax			
	comp=Z,56nm,0.7s							
SRO2	**Moca**	**74.67**	**44**	*eP*		**P**	**21 26 33.8**	**-0.2**
SG1	**Sgolgore (BA)**	**74.71**	**52⇑**	*iP*		**P**	**21 26 34.2**	**-0.3**
MATE	**Matera**	**74.76**	**52**	⇑P		**P**	**21 26 34.3**	**-0.4**
BAI	**Bari**	**74.81**	**51⇓**	*iP*		**P**	**21 26 35.3**	**+0.3**
VYHS	**Vyhne**	**74.83**	**44**	*eP*		**P**	**21 26 36.0**	**+1.0**
VYHS				pmax	pmax			
	comp=Z,79nm,1.1s							
VYHS	**Vyhne**	**74.83**	**44**	*eP*		**P**	**21 26 36.0**	**+1.0**
KEV	**Kevo**	**75.00**	**21**	P		**P**	**21 26 35.0**	**-0.6**
KEV				pmax	pmax			
	comp=Z,143nm,1.0s							
KEV	**Kevo**	**75.00**	**21**	P		**P**	**21 26 35.0**	**-0.6**
KEV				IAmb	IAmb		21 27 03.2	
	comp=Z,143nm,1.0s							
RDOG	**Red Dog Mine**	**75.05**	**337**	IAmb	IAmb		21 27 02.9	
	comp=Z,138nm,0.8s							
STON	**Ston**	**75.08**	**49⇑**	*iP*		**P**	**21 26 36.7**	**+0.2**
TIP	**Timpagrande**	**75.09**	**53**	⇑P		**P**	**21 26 35.8**	**-1.0**
MORH	**Mrgy, Hungar**	**75.11**	**46⇑**	*iP*		**P**	**21 26 37.4**	**+0.7**
LANS	**Liptovska Anna**	**75.12**	**43**	*eP*		**P**	**21 26 38.7**	**+2.0**
LANS				*e*			21 27 03.8	
LANS				pmax	pmax			
	comp=Z,16nm,1.0s							
LANS	**Liptovska Anna**	**75.12**	**43**	*eP*		**P**	**21 26 38.7**	**+2.0**
LANS				*epP*		**pP**	**21 27 03.8**	**+1.8**
OJC	**Ojcow**	**75.14**	**42**	*eP*		**P**	**21 26 37.7**	**+1.0**
OJC				*epP*		**pP**	**21 27 03.2**	**+1.2**
OJC				*eS*		**S**	**21 36 07.2**	**-0.1**
OJC				*e*SKSac		**SKSac**	**21 36 36.3**	**-0.7**
OJC				LMZ	LR		21 53 34.7	
	comp=Z,1.7nm,24.1s							
TAR1	**Taranto**	**75.22**	**52⇑**	*iP*		**P**	**21 26 37.2**	**-0.2**
SLIT	**Slitere, Latvi**	**75.25**	**34**	*eP*		**P**	**21 26 39.5**	**+2.3**
CGL1	**Ceglie Messapi**	**75.34**	**52⇑**	*iP*		**P**	**21 26 38.1**	**0.0**
PBUR	**Paburge**	**75.34**	**35**	*eP*		**P**	**21 26 39.8**	**+2.0**
BEL	**Belsk**	**75.46**	**40**	*eP*		**P**	**21 26 40.0**	**+1.5**
BEL				*epP*		**pP**	**21 27 05.5**	**+1.7**
BEL				LMZ	LR		21 53 20.5	
	comp=Z,1.1nm,25.6s							
TREB	**Trebinje**	**75.58**	**49**	*eP*		**P**	**21 26 39.7**	**+0.3**
PSZ	**Piszkesteto**	**75.63**	**44**	⇓P		**P**	**21 26 41.2**	**+1.4**
PSZ	**Piszkesteto**	**75.63**	**44**	IAmb	IAmb		21 27 24.8	
	comp=Z,199nm,1.6s							
BRY	**Bratogost**	**75.67**	**49⇑**	*iP*		**P**	**21 26 40.6**	**+0.5**
BRY	**Bratogost**	**75.67**	**49⇑**	*iP*		**P**	**21 26 40.9**	**+0.8**
TAOE	**Nuku Hiva Isla**	**75.73**	**256**	*e*LR	LR		21 50 11.2	
	comp=Z,1μm,33.8s							
HCY	**Herceg Novi**	**75.73**	**50**	*eP*		**P**	**21 26 40.9**	**+0.6**
HCY	**Herceg Novi**	**75.73**	**50⇓**	*iP*		**P**	**21 26 41.1**	**+0.8**
UPM	**Unac-Piva**	**75.88**	**49⇑**	*iP*		**P**	**21 26 42.3**	**+0.9**
UPM	**Unac-Piva**	**75.88**	**49⇑**	*iP*		**P**	**21 26 42.4**	**+1.0**
KECS	**Kecovo**	**75.91**	**43**	*eP*		**P**	**21 26 42.5**	**+1.3**
KECS				*e*			21 27 05.6	
KECS				pmax	pmax			
	comp=Z,16nm,0.8s							
KECS	**Kecovo**	**75.91**	**43**	*eP*		**P**	**21 26 42.5**	**+1.3**
KECS				*epP*		**pP**	**21 27 05.6**	**-0.9**
NKME	**Niksic**	**76.00**	**49⇑**	*iP*		**P**	**21 26 42.9**	**+1.0**
CEME	**Cevo**	**76.02**	**50⇓**	*iP*		**P**	**21 26 42.3**	**+0.3**
NKY	**Niksic**	**76.02**	**49⇓**	*iP*		**P**	**21 26 43.0**	**+0.9**
TEKS	**Tekeris**	**76.05**	**47⇑**	*iP*		**P**	**21 26 42.8**	**+0.7**
BUM	**Brajici-Budva**	**76.05**	**50⇓**	*iP*		**P**	**21 26 43.3**	**+1.1**
BBLS	**Lazići**	**76.10**	**48⇑**	*iP*		**P**	**21 26 43.6**	**+1.1**
FRGS	**Fruska Gora**	**76.12**	**47⇑**	*iP*		**P**	**21 26 43.3**	**+0.8**
RUDO	**Rudo**	**76.13**	**48**	*eP*		**P**	**21 26 42.5**	**0.0**
PLE	**Pljevlja**	**76.20**	**49⇑**	*iP*		**P**	**21 26 44.1**	**+1.0**
SCTE	**Santa Cesarea**	**76.20**	**52**	IAmb	IAmb		21 27 12.4	
	comp=Z,173nm,1.0s							
DRME	**Dracevica, Mon**	**76.29**	**50⇑**	*iP*		**P**	**21 26 44.7**	**+1.3**
DRME	**Dracevica, Mon**	**76.29**	**50⇓**	*iP*		**P**	**21 26 44.8**	**+1.3**
PDG	**Podgorica**	**76.29**	**50⇑**	⇑P		**P**	**21 26 44.8**	**+1.4**
PDG	**Podgorica**	**76.29**	**50⇑**	*iP*		**P**	**21 26 44.3**	**+0.9**
PDG	**Podgorica**	**76.29**	**50**	IAmb	IAmb		21 27 13.3	
	comp=Z,104nm,0.8s							
TTG	**Podgorica**	**76.29**	**50⇓**	*iP*		**P**	**21 26 44.3**	**+0.9**
FINES	**FINESS Array B**	**76.37**	**30**	P		**P**	**21 26 44.0**	**+0.5**
	comp=Z,42nm,0.8s,baz=264,slow=3.4,SNR=96							
FINES				*pP*		**pP**	**21 27 09.3**	**+0.3**
	comp=Z,146nm,0.7s,baz=300,slow=3.8,SNR=26							
FINES				LR	LR		21 59 22.2	
	comp=Z,352nm,18.6s,baz=283,slow=35							
FINES	**FINESS Array B**	**76.37**	**30**	P		**P**	**21 26 44.0**	**+0.5**
ULC	**Ulcinj**	**76.38**	**50⇑**	*iP*		**P**	**21 26 45.1**	**+1.1**
KOME	**Kolasin**	**76.39**	**49⇓**	*iP*		**P**	**21 26 45.4**	**+1.3**
SUW	**Suwalki**	**76.44**	**37**	*eP*		**P**	**21 26 44.4**	**+0.4**
SUW				*epP*		**pP**	**21 27 08.8**	**-0.7**
SUW				*eS*		**S**	**21 36 22.4**	**+0.9**
SUW				LMZ	LR		21 54 53.8	
	comp=Z,0.9nm,25.0s							
DIVS	**Divibare**	**76.47**	**48⇑**	*iP*		**P**	**21 26 45.7**	**+1.2**
PABE	**Paberze**	**76.58**	**36**	*eP*		**P**	**21 26 46.5**	**+1.7**
IVA	**Berane**	**76.66**	**49⇑**	*iP*		**P**	**21 26 46.6**	**+1.0**
PVY	**Plav**	**76.76**	**49⇑**	*iP*		**P**	**21 26 47.5**	**+1.2**
TIR	**Tirane**	**76.96**	**51**	⇑P		**P**	**21 26 48.9**	**+1.6**
TIR	**Tirane**	**76.96**	**51**	IAmb	IAmb		21 27 17.6	
	comp=Z,144nm,1.1s							
KOLS	**Kolonicke sedl**	**76.97**	**43**	*eP*		**P**	**21 26 48.9**	**+1.7**
KOLS				*e*			21 27 13.3	
KOLS				pmax	pmax			
	comp=Z,41nm,1.0s							
KOLS	**Kolonicke sedl**	**76.97**	**43**	*eP*		**P**	**21 26 48.9**	**+1.7**
KOLS				*epP*		**pP**	**21 27 13.3**	**+0.7**
BANR	**Banloc**	**76.99**	**46**	⇑P		**P**	**21 26 49.2**	**+1.9**
UZH	**Uzhgorod**	**77.05**	**43**	*eP*		**P**	**21 26 48.8**	**+1.2**
UZH				*e*			21 26 55.9	
UZH				*e**PP		**pP**	**21 27 14.5**	**+1.5**
UZH				*eS*		**S**	**21 36 29.0**	**+0.7**
UZH				*ePS*		**pS**	**21 36 55.2**	**-3.5**
UZH				MLR	MLR			
	comp=N,80nm,18.0s							
UZH				MLR	MLR			
	comp=E,170nm,18.0s							
UZH				MLR	MLR			
	comp=Z,70nm,18.0s							
KWP	**Kalwaria Pacla**	**77.10**	**42**	*eP*		**P**	**21 26 49.8**	**+1.9**
KWP				*epP*		**pP**	**21 27 15.3**	**+2.1**
KWP				*eS*		**S**	**21 36 30.3**	**+1.4**
KWP				LMZ	LR		21 54 10.5	
	comp=Z,1.1nm,25.7s							
SIRR	**Siria**	**77.15**	**45**	⇑P		**P**	**21 26 49.3**	**+1.0**
BZS	**Buzias**	**77.27**	**46**	⇑P		**P**	**21 26 50.0**	**+1.1**
KEK	**Kerkira**	**77.28**	**52**	P		**P**	**21 26 50.2**	**+1.1**
PHP	**Peshkopia**	**77.31**	**50**	P		**P**	**21 26 50.9**	**+1.6**
TRPA	**Tarpa**	**77.32**	**43**	⇓P		**P**	**21 26 50.5**	**+1.4**
VSU	**Vasula**	**77.38**	**32**	*eP*		**P**	**21 26 50.5**	**+1.3**
VSU	**Vasula**	**77.38**	**32**	*ceP*		**P**	**21 26 49.0**	**-0.2**
VSU				pmax	pmax			
	comp=Z,199nm,0.8s							
SRN	**Sarande**	**77.39**	**52**	P		**P**	**21 26 50.6**	**+0.9**
MDVR	**Moldovita**	**77.52**	**47**	⇑P		**P**	**21 26 51.3**	**+0.9**
OHR	**Ohrid**	**77.70**	**51**	*i* Pn		**P**	**21 26 53.2**	**+1.7**
OHR	**Ohrid**	**77.70**	**51**	*i* Pn		**P**	**21 26 53.2**	**+1.7**
IGT	**Igoumenitsa**	**77.72**	**52**	P		**P**	**21 26 52.8**	**+1.2**
DRGR		**77.74**	**45**	⇓P		**P**	**21 26 52.4**	**+0.8**
DRGR		**77.74**	**45**	*i* P		**P**	**21 26 52.2**	**+0.6**
ISAL	**Salakas**	**77.75**	**35**	*eP*		**P**	**21 26 53.2**	**+1.9**
APA	**Apatity**	**77.82**	**23⇓**	*iP*		**P**	**21 26 51.6**	**+0.1**
APA				*i*			21 27 03.0	
APA				*i* *PP		**pP**	**21 27 16.0**	**-1.1**
APA				*i* S		**S**	**21 36 37.0**	**+1.1**
APA				*i*			21 36 52.0	
APA				pmax	pmax			
	comp=Z,44nm,1.0s							
IIGN	**Ignalina**	**77.86**	**36**	*eP*		**P**	**21 26 53.1**	**+1.1**
LVV	**L'vov**	**77.89**	**41**	*i* P		**P**	**21 26 53.5**	**+1.2**
LVV				*e*			21 27 15.4	
LVV				*eS*		**S**	**21 36 40.2**	**+2.8**
LVV				*e*			21 37 07.

VOIR		79.65	46	⇑	P		P	21 27 02.9	+0.8	
AXAR	Agios Charalam	79.66	53		P		P	21 27 02.8	+0.6	
TRIP	Tripoli	79.68	54		P		P	21 27 03.9	+1.5	
MMB	Musomiste	79.72	50	*i*	P		P	21 27 03.8	+1.3	
DOPR	Dopca	79.74	45	⇑	P		P	21 27 03.6	+1.0	
GOLR		79.75	46	⇑	P		P	21 27 04.1	+1.5	
AKUT	Akutan	79.77	324		IAmb		IAmb	21 27 35.6		
	comp=Z,92nm,0.8s									
PGB	Panagyurishte	79.79	49	*i*	P		P	21 27 03.8	+0.9	
VLX	Vlachokerasia	79.81	54		P		P	21 27 04.9	+1.8	
PLG	Polygyros	79.83	51		P		P	21 27 04.2	+1.0	
HUMR	Humele	79.84	47	⇑	P		P	21 27 04.1	+1.0	
PLVE	Pleven	79.89	48	⇑	P		P	21 27 04.3	+0.9	
XOR	Xorichti	79.91	52		P		P	21 27 03.8	+0.2	
PRAR	RASCA	79.93	43	⇓	P		P	21 27 04.2	+0.7	
NEO	Neokhori	79.94	52		P		P	21 27 04.3	+0.5	
LKR	Lokris	79.95	53		P		P	21 27 04.4	+0.7	
BIZ	Bicaz	79.96	44	⇓	P		P	21 27 05.8	+2.1	
OZUR		79.97	45	⇑	P		P	21 27 04.5	+0.7	
COPA	Copaceanca	80.11	47	⇑	P		P	21 27 05.2	+0.7	
PAIG	Paliouri	80.12	51		P		P	21 27 05.7	+1.0	
SKIA	Skiathos	80.16	52		P		P	21 27 05.6	+0.7	
OUR	Ouranopolis	80.24	51		P		P	21 27 06.4	+1.1	
MLR	Muntele Rosu	80.25	45	⇓	P		P	21 27 07.3	+1.9	
PLD	Plovdiv	80.29	49	*i*	P		P	21 27 06.3	+0.8	
VILL	Villia	80.31	53		P		P	21 27 06.4	+0.6	
ZIMR		80.34	47	⇑	P		P	21 27 07.1	+1.4	
MRKA	Markates	80.38	52		P		P	21 27 07.1	+1.0	
KRND	KRANIDI	80.39	54		P		P	21 27 06.6	+0.4	
VLI	Veliai	80.41	55		P		P	21 27 07.2	+0.9	
RZN	Rozhen	80.41	49	*i*	P		P	21 27 07.7	+1.3	
DID	Didima	80.43	54		P		P	21 27 06.8	+0.4	
TESR	Tescani	80.44	44	⇑	P		P	21 27 07.1	+0.8	
SECR		80.45	46	⇑	P		P	21 27 07.1	+0.7	
AOS	Alonnisos	80.47	52		P		P	21 27 07.0	+0.4	
SGRR	Singureni	80.61	47	⇓	P		P	21 27 08.0	+0.8	
PLOR	Plostina	80.62	45	⇓	P		P	21 27 08.9	+1.6	
VRI	Vrincioaia	80.67	45	⇑	P		P	21 27 08.3	+0.8	
SULR		80.68	46	⇓	P		P	21 27 07.3	-0.2	
ATHU	Athens Univers	80.72	53		P		P	21 27 08.8	+0.9	
BISRR	Bisoca	80.75	45	⇑	P		P	21 27 08.9	+0.9	
ISR	Istrita	80.75	46	⇑	P		P	21 27 08.8	+0.8	
PTL	Penteli	80.76	53		P		P	21 27 09.1	+0.9	
VLY	Voula,Athens	80.76	53		P		P	21 27 08.9	+0.8	
KYMI	Kymi, Euboea I	80.78	52		P		P	21 27 09.2	+1.0	
TMCR	Tamitsa	80.78	25	*eP*			P	21 27 07.8	+0.1	
TMCR				*eS*			S	21 37 09.7	+2.4	
TMCR					pmax		pmax			
	comp=Z,58nm,0.9s									
DION	Dionisos Attik	80.81	53		P		P	21 27 09.3	+0.9	
SZH	Strazhica	80.85	48	*i*	P		P	21 27 09.7	+1.2	
AKASG	Malin Array Be	80.87	40		P		P	21 27 08.6	+0.2	
	comp=Z,40nm,0.9s,baz=285,slow=4.3,SNR=31									
AKASG					pP		pP	21 27 33.5	-0.5	
	comp=Z,76nm,1.0s,baz=278,slow=4.3,SNR=11									
AKASG					PKKPbc		PKKPbc	21 45 44.7	-2.4	
	comp=Z,0.4nm,0.3s,baz=78,slow=3.0,SNR=5.1									
AKASG					PKPPKP		P'P'df	21 53 49.7	-1.9	
	comp=Z,0.2nm,0.3s,baz=79,slow=1.7,SNR=4.6									
AKASG					LR		LR	21 59 17.2		
	comp=Z,1μm,21.8s,baz=290,slow=33									
AKASG	Malin Array Be	80.87	40	*i*	P		P	21 27 08.6	+0.2	
AKASG					pmax		pmax			
	comp=Z,46nm,0.9s									
DIM	Dimitrovgrad	80.90	49	*i*	P		P	21 27 10.0	+1.2	
ANKY	Antikythira Is	80.92	55		P		P	21 27 10.8	+1.8	
KDZ	Kurdzhali	80.93	49	*i*	P		P	21 27 09.4	+0.4	
SORM	Soroca	81.08	42	⇑	P		P	21 27 10.1	+0.5	
LEHL	Lehliu	81.12	46	⇑	P		P	21 27 09.9	0.0	
RDO	Rodhopi	81.16	52		P		P	21 27 11.0	+0.9	
RAZG	Razgrad	81.17	47	⇑	P		P	21 27 10.8	+0.6	
KNDR	Palaiochora Ch	81.39	56		P		P	21 27 12.2	+0.7	
AMRR	Amara	81.44	46	⇑	P		P	21 27 11.7	+0.1	
SERI	Serifos	81.48	54		P		P	21 27 12.0	0.0	
POHA	Pohakuloa	81.49	288		P		P	21 27 13.1	+0.5	
POHA					IAmb		IAmb	21 27 13.9		
	comp=Z,186nm,1.1s									
LEOM	Leova	81.50	44	⇓	P		P	21 27 12.2	+0.3	
JMB	Yambol	81.53	48	*i*	P		P	21 27 12.9	+0.8	
IMMV	Iera Moni Meta	81.56	56		P		P	21 27 13.4	+1.0	
HPAH	Hawaii Prepara	81.56	288		IAmb		IAmb	21 27 41.4		
	comp=Z,179nm,1.0s									
CHAN	Chania	81.59	55		P		P	21 27 14.0	+1.5	
GADA	Gvkgeada	81.69	51		P		P	21 27 13.8	+0.8	
KIS	Kishinev	81.72	43	⇑	*iP*		P	21 27 15.0	+2.0	
	comp=Z,280nm,3.0s									
KIS				*i*	pP		pP	21 27 40.0	+1.3	
KIS				⇓	*iS*		S	21 37 17.0	-0.7	
	comp=Z,400nm,4.0s									
KIS				*e*	L		L	21 53 36.0		
KIS					LRM		MLR	22 02 00.0		
	comp=Z,800nm,16.0s									
KIS	Kishinev	81.72	43	⇑	*iP*		P	21 27 15.0	+2.0	
KIS				*i*	*PP		pP	21 27 40.0	+1.3	
KIS				*e*				21 30 20.0		
KIS				*i*	S		S	21 37 17.0	-0.7	
KIS				*i*				21 38 00.0		
KIS				*i*				21 38 20.0		
	comp=Z,280nm,3.0s									
KIS					pmax		pmax			
	comp=N,400nm,4.0s									
KIS					smax		smax			
	comp=Z,800nm,16.0s									
KIS					MLR		MLR			
	comp=N,300nm,17.0s									
KIS					MLR		MLR			
	comp=N,1300nm,17.0s									
MILM	Milestii Mici	81.74	43	⇑	P		P	21 27 13.3	+0.2	
VAM	Vamos	81.75	56		P		P	21 27 14.6	+1.2	
NEF	NEVSHA	81.79	47	*i*	P		P	21 27 14.3	+0.8	
CFR	Carcaliu	81.81	45	⇑	P		P	21 27 12.9	-0.6	
GVD	Gavdhos	81.82	56		P		P	21 27 14.6	+0.8	
HARR	Harsova	81.82	46	⇑	P		P	21 27 13.6	+0.1	
EDRB	Edirne	81.83	49		P		P	21 27 14.4	+0.7	
PRD	Provadia	81.89	47	*i*	P		P	21 27 15.1	+1.1	
ICOR	Ion Corvin	81.90	46	⇑	P		P	21 27 14.6	+0.6	
SIGR	SIGRI	81.94	51		P		P	21 27 15.1	+0.8	
TLBR	Topalu	81.94	46	⇑	P		P	21 27 14.5	+0.3	
KHLH	Kahului Airpor	81.98	289		IAmb		IAmb	21 27 16.8		
	comp=Z,156nm,0.9s									
EZN	Ezine	82.11	51		P		P	21 27 16.1	+0.9	
TIRR	Tirgusor	82.22	46	⇑	P		P	21 27 16.4	+0.7	
TIRR	Tirgusor	82.22	46	⇑	P		P	21 27 16.4	+0.7	
TIRR	Tirgusor	82.22	46	⇑	P		P	21 27 16.0	+0.3	
TIRR	Tirgusor	82.22	46		IAmb		IAmb	21 27 45.3		
	comp=Z,190nm,1.1s									
IOSP	Ios island	82.22	54		P		P	21 27 15.9	+0.1	
PRK	Paraskevi	82.24	51		P		P	21 27 15.6	-0.3	
TLCR		82.27	45	⇓	P		P	21 27 16.1	+0.2	
APE	Apeiranthos	82.31	54		P		P	21 27 16.4	0.0	
APE	Apeiranthos	82.31	54	⇑	P		P	21 27 16.7	+0.3	
IDI	Anoyia	82.32	56		P		P	21 27 17.3	+0.8	
IDI	Anoyia	82.32	56	⇑	P		P	21 27 17.3	+0.8	
IDI	Anoyia	82.32	56		IAmb		IAmb	21 27 19.5		
	comp=Z,187nm,0.8s									
CHOS	Chios island	82.32	52		P		P	21 27 17.2	+0.7	
JURR	Jurilovca	82.44	45	⇓	P		P	21 27 17.1	+0.3	
SANT	Santorini	82.45	54	⇓	P		P	21 27 17.6	+0.4	
MANR	Mangalia	82.53	46	⇑	P		P	21 27 18.8	+1.5	
AMGA	Amorgos Island	82.65	54		P		P	21 27 18.1	0.0	
PMSA	Palmer Station	82.69	178		P		P	21 27 18.3	+0.9	
PMSA	Palmer Station	82.69	178		*eP*		P	21 27 18.7	+1.3	
KLMR	Klimovskoe	82.73	28		*eP*		P	21 27 17.4	-0.5	
KLMR					*e*PP		pP	21 27 43.2	-0.4	
KLMR					*eS*		S	21 37 26.4	-1.1	
KLMR					pmax		pmax			
	comp=Z,85nm,1.4s									
KLMR	Klimovskoe	82.73	28		*eP*		P	21 27 17.5	-0.5	
KLMR					AMP			21 27 21.9		
	comp=Z,85nm,1.4s									
KLMR					*eP*		pP	21 27 43.3	-0.4	
KLMR					*eS*		S	21 37 26.4	-1.1	
KLMR					*eS*		S	21 37 26.4	-1.1	
KLMR					LQ		LQ	21 55 15.3		
KLMR					LQ		LQ	21 55 15.3		
KLMR					LR		LR	21 56 13.0		
LAST	Lasithi	82.82	55		P		P	21 27 19.8	+0.7	
NPS	Neapolis	82.89	55		P		P	21 27 20.3	+0.9	
SMG	Samos	83.11	53		P		P	21 27 21.0	+0.5	
STIA	Sitia Lasithi	83.29	55		P		P	21 27 22.3	+0.9	
ZKR	Zakros	83.41	55		P		P	21 27 22.3	+0.2	
OBN	Obninsk	83.56	34		P		P	21 27 22.9	+0.5	
	comp=Z,26nm,0.9s,baz=129,slow=0.9,SNR=36									
OBN					pP		pP	21 27 47.0	-1.1	
	comp=Z,61nm,0.6s,baz=105,slow=5.7,SNR=14									
OBN	Obninsk	83.56	34	⇑	P		P	21 27 22.8	+0.5	
OBN	Obninsk	83.56	34	*c*	*iP		P	21 27 22.7	+0.4	
OBN				*i*	S		S	21 37 35.2	-0.8	
OBN				*e*	SS		SS	21 43 13.0	+9.5	
OBN					pmax		pmax			
	comp=Z,114nm,0.8s									
OBN					MLR		MLR			
	comp=Z,661nm,18.0s									
OBN	Obninsk	83.56	34		P		P	21 27 22.9	+0.5	
BODT	Bodrum	83.67	53		P		P	21 27 23.1	-0.2	
MOS	Moscow	83.87	33	*e*	P		P	21 27 23.8	-0.1	
MOS				*e*				21 27 48.1		
MOS				*e*	S		SKSac	21 37 32.1	-5.7	
MOS					pmax		pmax			
	comp=Z,122nm,1.2s									
DAT	Datca	83.97	53		P		P	21 27 24.1	-0.9	
KARP	Karpathos	84.02	55		P		P	21 27 25.2	0.0	
KULA	Kula-Manisa	84.23	51		P		P	21 27 26.2	-0.1	
ARG	Arkhangelos	84.55	54		P		P	21 27 27.4	-0.4	
BILL	Bilibino	85.45	342	*c*	*iP*		P	21 27 32.0	+0.3	
BILL				*i*	S		SKSac	21 37 40.6	-6.9	
BILL					pmax		pmax			
	comp=Z,56μm,0.8s									
BILL					MLR		MLR			
	comp=Z,591nm,18.0s									
BILL	Bilibino	85.45	342		P		P	21 27 32.2	+0.5	
LPSR	Galich'ya Gora	85.84	36	*e*	P		P	21 27 34.2	+0.3	
LPSR				*e*	*PP		pP	21 27 58.8	-0.9	
LPSR				*e*				21 37 48.4		
LPSR				*e*	S		S	21 37 58.9	+0.1	
LPSR					pmax		pmax			
	comp=Z,280nm,0.9s									
LPSR					pmax		pmax			
	comp=Z,300nm,0.9s									
LPSR					smax		smax			
	comp=N,1μm,3.8s									
LPSR					MLR		MLR			
	comp=Z,930nm,20.0s									
SIM	Simferopol'	85.89	44	*i*	P		P	21 27 35.2	+0.9	
SIM				*i*	*PP		pP	21 28 01.0	+0.8	
SIM				*e*				21 37 50.0		
SIM				*i*	S		S	21 38 01.5	+1.9	
SIM					pmax		pmax			
	comp=Z,87nm,1.2s									
VORD	Divnogorie	86.73	37	*e*	P		P	21 27 38.1	-0.2	
VORD				*e*	*PP		pP	21 28 02.4	-1.8	
VORD				*e*				21 37 53.6		
VORD				*e*	S		S	21 38 07.7	+0.2	
VORD					pmax		pmax			
	comp=Z,90nm,1.0s									
VORD					pmax		pmax			
	comp=Z,100nm,1.0s									
VORD					smax		smax			
	comp=N,460nm,3.0s									
ANTO	Ankara	86.81	49	⇑	P		P	21 27 40.0	+1.0	
ANTO	Ankara	86.81	49		P		P	21 27 40.1	+1.1	
ANTO					pmax		pmax			
	comp=Z,157nm,0.9s									
ANTO	Ankara	86.81	49		P		P	21 27 40.1	+1.1	
PPT	Papeete	87.37	251		LR		LR	21 57 13.6		
	comp=Z,123nm,20.4s,baz=20,slow=29									
PPT2	Papeete2	87.38	251	*e*	S		S	21 38 21.2	+6.2	
	comp=Z,697nm,28.5s									
PPT2	Papeete2	87.38	251	*e*	LR		LR	21 55 39.9		
	comp=Z,1μm,28.8s,baz=67									
BR131	Keskin Array S	87.46	49		IAmb		IAmb	21 27 44.6		
	comp=Z,96nm,0.9s									
BRTR	Keskin Array B	87.47	49		P		P	21 27 42.8	+0.5	
	comp=Z,74nm,0.8s,baz=268,slow=3.3,SNR=360									
BRTR					pP		pP	21 28 07.4	-0.7	
	comp=Z,78nm,1.0s,baz=269,slow=5.0,SNR=9.2									
BRTR					PKKPbc		PKKPbc	21 45 29.6	-2.0	
	comp=Z,1.1nm,0.7s,baz=146,slow=5.2,SNR=5.8									
BRTR					PKPPKP			21 53 34.2		
	comp=Z,0.5nm,0.8s,baz=144,slow=2.3,SNR=4.1									
BRTR					LR		LR	22 04 04.1		
	comp=Z,186nm,21.9s,baz=280,slow=34									
DIKM	Dikmen	87.89	47	⇑	P		P	21 27 45.4	+1.3	
VRH	Novokhopyorsk	88.01	36	*e*	P		P	21 27 44.2	-0.2	
VRH				*e*	*PP		pP	21 28 08.1	-2.2	
VRH				*e*				21 38 00.8		
VRH				*e*	S		S	21 38 18.8	-0.9	
VRH					pmax		pmax			
	comp=Z,160nm,1.0s									
VRH					pmax		pmax			
	comp=Z,240nm,1.1s									
VRH					smax		smax			
	comp=N,810nm,3.5s									
VRH					MLR		MLR			
	comp=Z,2μm,20.0s									
ANN	Anapa	88.12	43	*e*	P		P	21 27 41.1	-4.0	
ANN				*e*	*PP		pP	21 28 08.2	-2.9	
ANN				*e*	S		SKSac	21 37 59.9	-4.8	
ANN					pmax		pmax			
	comp=Z,140nm,1.0s									
KIRV	Kirov	88.22	28		P		P	21 27 45.1	-0.1	
	comp=Z,22nm,0.5s,baz=254,slow=1.8,SNR=24									
KIRV					pP		pP	21 28 09.8	-1.4	
	comp=Z,100nm,0.8s,baz=310,slow=5.5,SNR=13									
XMAS	Kiritimati	88.50	272		P		P	21 27 47.2	-0.3	
LEF	Lefka	88.57	54	⇓	P		P	21 27 48.1	+0.7	
CSS	Mathiatis	88.97	54		IAmb		IAmb	21 28 17.8		
	comp=Z,57nm,0.8s									
TBI	Tubuai	89.23	245	*e*	S		S	21 38 40.8	+8.7	
	comp=Z,190nm,35.0s									
TBI	Tubuai	89.23	245	*e*	LR		LR	21 56 30.5		
	comp=Z,544nm,35.2s									
TIXI	Tiksi	89.69	355		PKKPbc		PKKPbc	21 45 23.9	-3.2	
	comp=Z,1.0nm,0.3s,baz=44,slow=2.6,SNR=3.7									
TIXI	Tiksi	89.69	355	*c*	*iP*		P	21 27 51.6	-0.3	
TIXI					pmax		pmax			
	comp=Z,53nm,1.3s									
TIXI	Tiksi	89.69	355		P		P	21 27 51.5	-0.3	
SOC	Sochi	90.12	44	*e*	P		P	21 27 53.3	-1.2	
SOC				*e*	*PP		pP	21 28 20.9	+0.5	
SOC				*e*	*SP		sP	21 28 27.8	-3.1	
SOC				*e*				21 31 30.9		
SOC				*e*	PPP		PPP	21 33 27.5		
SOC				*e*				21 38 14.9		
SOC				*e*	SS		SS	21 44 37.7	-2.3	
SOC				*e*	SSS		SSS	21 48 15.7		
SOC					pmax		pmax			
	comp=Z,89nm,0.9s									
GAZ	Gaziantep	91.03	50		IAmb		IAmb	21 28 45.8		
	comp=Z,73nm,1.3s									
KTUT	Trabzon	91.27	46	⇑	P		P	21 27 59.9	0.0	
GOF	Gofitskoye	91.60	41	⇑	*eP		P	21 28 02.2	+0.8	
GOF					pmax		pmax			
	comp=Z,74nm,1.5s									
KIV	Kislovodsk	91.89	42	⇑	*eP		P	21 28 03.7	+0.9	
KIV				*i*				21 28 30.4		
KIV				*e*				21 31 48.6		
KIV				*i*	S		SKSac	21 38 30.3	+3.4	
KIV				*i*	PS		PS	21 40 27.3	+8.8	
KIV				*e*	SS		SS	21 45 20.1	+15	
KIV					pmax		pmax			
	comp=Z,68nm,1.1s									
KIV	Kislovodsk	91.89	42		P		P	21 28 03.7	+0.9	
KIV					IAmb		IAmb	21 28 31.6		
	comp=Z,80nm,1.0s									
KBZ	Khabaz	92.13	43		P		P	21 28 05.7	+1.9	
	comp=Z,70nm,0.9s,baz=311,slow=1.9,SNR=76									
KBZ					pP		pP	21 28 30.7	+1.0	
	comp=Z,88nm,0.9s,baz=256,slow=2.4,SNR=12									
KBZ					LR		LR	22 06 22.5		
	comp=Z,449nm,21.6s,baz=310,slow=33									
KBZ	Khabaz	92.13	43	*c*	*iP*		P	21 28 04.9	+1.1	
TSUM	Tsumeb	92.14	109		P		P	21 28 05.8	+1.4	
TSUM					IAmb		IAmb	21 28 07.5		
	comp=Z,65nm,1.0s									
NEY	Neytrino	92.23	43	*d*	*iP		P	21 28 06.7	+2.2	
NEY					pmax		pmax			
	comp=Z,29nm,0.9s									
BATM	Batumi	92.30	45	⇑	P		P	21 28 05.2	+0.5	
BCA	Borcka	92.32	45	⇑	P		P	21 28 05.4	+0.6	
NCK	Nalchik	92.68	43	*ce*	P		P	21 28 07.8	+1.4	
NCK					pmax		pmax			
	comp=Z,84nm,0.9s									
ZEI	Tsey	93.21	43	*eP*			P	21 28 08.6	-0.5	
ZEI				*e*				21 28 35.3		
ZEI					pmax		pmax			
	comp=Z,36nm,0.9s									
ARU	Arti	93.47	26		P		P	21 28 10.1	+0.4	
	comp=Z,16nm,1.1s,baz=304,slow=2.3,SNR=33									
ARU					pP		pP	21 28 35.3	-0.4	
	comp=Z,14nm,0.8s,baz=295,slow=2.7,SNR=12									
ARU	Arti	93.47	26	*c*	*iP*		P	21 28 09.9	+0.2	
ARU					pmax		pmax			
	comp=Z,46nm,1.2s									
ARU	Arti	93.47	26		P		P	21 28 10.1	+0.4	
AKH	Akhalkalaki	93.59	44	⇓	P		P	21 28 12.2	+1.4	
AKH	Akhalkalaki	93.59	44		IAmb		IAmb	21 28 38.9		
	comp=Z,63nm,1.3s									
SVE	Sverdlovsk	94.06	25	*eP*			P	21 28 12.8	+0.4	
SVE				*eS*			SKSac	21 38 36.6	-1.6	
SVE					pmax		pmax			
	comp=Z,61nm,1.1s									
MAK	Makhachkala	95.44	42	*eP*			P	21 28 17.6	-1.4	
MAK				*e*	*PP		pP	21 28 42.3	-2.7	
MAK				*e*	*SP		sP	21 28 52.2	-3.2	
MAK				*e*				21 32 10.0		
MAK				*e*				21 38 44.9		
MAK				*e*				21 39 29.0		
MAK				*e*	SSS		SSS	21 49 41.5		
MAK					pmax		pmax			
	comp=Z,311nm,1.3s									
AKT	Akhty	96.34	43	*eP*			P	21 28 24.1	+0.8	
AKT				*e*	*PP		pP	21 28 48.1	-1.2	
AKT				*e*				21 32 20.7		
AKT					pmax		pmax			
	comp=Z,19nm,1.0s									
AKTO	Aktyubinsk	97.07	31		P		P	21 28 25.9	-0.4	
	comp=Z,7.3nm,0.9s,baz=309,slow=6.2,SNR=16									
AKTO					pP		pP	21 28 52.2	-0.2	
	comp=Z,11nm,0.9s,baz=337,slow=4.6,SNR=9.7									
AKTO					PKKPbc		PKKPbc	21 45 04.6	-2.7	
	comp=Z,1.7nm,0.6s,baz=113,slow=12,SNR=4.7									
VNA3	Neumayer Olymp	97.61	164		P		Pdif	21 28 28.6	+0.4	
VNA1	Neumayer--Stat	97.66	163		P		Pdif	21 28 29.0	+0.7	
PET	Petropavlovsk	98.36	333	*eP*			P	21 28 27.5	-4.5	
PET				*e*	*SP		pP	21 28 57.9	-0.3	
PET				*e*				21 32 33.3		
PET				*e*				21 38 58.4		
PET				*eS*			S	21 39 44.3	-7.4	
PET				*ePS*			PS	21 41 21.0	-7.5	
PET				*ePPS*			PPS	21 42 00.0		
PET					MLR		MLR			
	comp=Z,700nm,21.0s									
PET					MLR		MLR			
	comp=Z,600nm,20.0s									
PETK	Petropavlovsk-	98.70	334		P		P	21 28 33.5	0.0	
	comp=Z,2.7nm,0.7s,baz=81,slow=9.3,SNR=4.7									
PETK					PP		PP	21 32 35.4	+0.4	
	comp=Z,4.2nm,1.0s,baz=90,slow=3.4,SNR=3.6									
PETK					LR		LR	22 14 06.3		
	comp=Z,388nm,20.9s,baz=59,slow=36									
YAK	Yakutsk	98.85	352	*eP*			P	21 28 33.9	0.0	
YAK				*e*	*PP		pP	21 28 58.5	-1.6	
YAK				*e*				21 32 36.3		
YAK				*eS*			SKSac	21 39 03.5	+0.7	
YAK				*e*	*SS		S	21 39 47.1	-8.3	
YAK				*eSS*			SS	21 46 46.7	+4.2	
YAK				*eSSS*			SSS	21 50 30.0		
YAK					pmax		pmax			
	comp=Z,12nm,1.0s									
YAK					pmax		pmax			
	comp=N,2.0nm,0.9s									
YAK					pmax		pmax			
	comp=E,4.0nm,1.1s									
YAK					pmax		pmax			
	comp=Z,39nm,1.8s									
YAK					pmax		pmax			
	comp=N,40nm,1.8s									
YAK					pmax		pmax			
	comp=E,16nm,1.9s									
YAK					smax		smax			
	comp=N,62nm,2.6s									
YAK					smax		smax			
	comp=E,54nm,2.8s									
SNAA	Sanae	99.70	163		Pdiff		Pdif	21 28 37.4	-0.1	
SNAA	Sanae	99.70	163	*de*	P		Pdif	21 28 37.9	+0.4	
BRVK	Borovoye	100.63	24	*d*	*iP		Pdif	21 28 44.1	+2.0	
BRVK					pmax		pmax			
	comp=Z,6.0nm,1.0s									
BVAR	Borovoye Array	100.70	24		P		Pdif	21 28 42.7	+0.3	
	comp=Z,1.9nm,0.8s,baz=281,slow=3.8,SNR=7.7									
BOD	Bodaibo	104.33	359	*eP*			Pdif	21 28 58.1	-0.4	
BOD					pmax		pmax			
	comp=Z,18nm,1.7s									
ZALV	Zalesovo Beam	104.62	16		Pdiff		Pdif	21 29 00.0	+0.2	
	comp=Z,2.4nm,0.8s,baz

DHRM					IAmb	IAmb	21 33 51.2	
	comp=Z,18nm,0.8s							
MAJO	**Matsushiro**	**120.12**	**335**		PKIKP	**PKPdf**	**21 33 44.2**	**-0.8**
MAJO	**Matsushiro**	**120.12**	**335**			**PKPdf**	**21 33 44.2**	**-0.8**
MAT	**Matsushiro**	**120.12**	**335**		PKP	**PKPdf**	**21 33 44.0**	**-1.1**
MJAR	**Matsushiro Arr**	**120.12**	**335**		PKP	**PKPdf**	**21 33 44.1**	**-1.0**
	comp=Z,15nm,0.6s,baz=152,slow=0.8,SNR=60							
MJAR					pPKP	**pPKPdf**	**21 34 11.1**	**-0.8**
	comp=Z,18nm,0.8s,baz=47,slow=0.8,SNR=10							
MJAR					PKKPbc	**PKKPbc**	**21 43 52.2**	**-1.9**
	comp=Z,2.2nm,0.7s,baz=209,slow=5.5,SNR=7.0							
HHC	**Hu-ho-hao-te**	**121.34**		**0**	*e*PKP	**PKPdf**	**21 33 45.5**	**-1.9**
HHC					SKKS		21 42 08.5	
HHC					SS	**SS**	**21 51 45.8**	**+2.2**
HHC					AMB	AMB		
	comp=Z,66nm,9.3s							
HHC					LR	LR		
	comp=Z,250nm,18.4s							
HHC					LR	LR		
	comp=Z,130nm,19.6s							
HHC					LR	LR		
	comp=Z,320nm,20.4s							
BTO	**Baotou**	**121.56**		**1**	*e*PKP	**PKPdf**	**21 33 46.0**	**-1.8**
INU	**Inuyama**	**121.63**	**336**			**PKPdf**	**21 33 47.5**	**-0.4**
MAW	**Mawson**	**121.71**	**160**		PKP	**PKPdf**	**21 33 46.7**	**-0.3**
	comp=Z,18nm,0.9s,baz=285,slow=6.0,SNR=16							
MAW					PKKP	PKKPdf	21 44 12.9	-11
	comp=Z,11nm,1.1s,baz=27,slow=2.4,SNR=4.7							
GTA	**Gaotai**	**121.72**		**11**	⇑PKP	**PKPdf**	**21 33 47.8**	**-0.4**
GTA					PP	**PP**	**21 35 25.3**	**+4.6**
GTA					SKS	**SKSdf**	**21 40 48.8**	**-2.7**
GTA					SKKS	**SKKSac**	**21 42 07.8**	**-4.4**
GTA					SS	**SS**	**21 51 53.0**	**+4.4**
GTA					AMB	AMB		
	comp=Z,150nm,10.5s							
GTA					LR	LR		
	comp=Z,460nm,23.8s							
GTA					LR	LR		
	comp=Z,370nm,22.8s							
GTA					LR	LR		
	comp=Z,1μm,21.9s							
BJI	**Beijing**	**122.00**	**356**		PKP	**PKPdf**	**21 33 48.0**	**-0.5**
BJI					SKS	**SKSdf**	**21 40 52.5**	**+0.9**
BJI					SS	**SS**	**21 51 51.3**	**-0.4**
BJI					AMB	AMB		
	comp=Z,190nm,6.1s							
BJI					LR	LR		
	comp=Z,390nm,17.7s							
BJI					LR	LR		
	comp=Z,170nm,19.4s							
BJI					LR	LR		
	comp=Z,680nm,30.3s							
DL2	**Dalian**	**122.52**	**351**		PKP	**PKPdf**	**21 33 48.8**	**-0.7**
DL2					*es*PKP		21 34 24.8	
DL2					AMB	AMB		
	comp=Z,190nm,7.9s							
DL2					LR	LR		
	comp=Z,380nm,15.9s							
DL2					LR	LR		
	comp=Z,340nm,21.2s							
DL2					LR	LR		
	comp=Z,550nm,19.8s							
KSRS	**Korea Array**	**122.64**	**345**		PKP	**PKPdf**	**21 33 49.2**	**-0.6**
	comp=Z,21nm,0.8s,baz=24,slow=1.6,SNR=69							
KSRS					pPKP	**pPKPdf**	**21 34 16.3**	**-0.3**
	comp=Z,18nm,0.7s,baz=27,slow=1.9,SNR=12							
KSRS					SKP		21 37 15.9	
	comp=Z,9.1nm,1.1s,baz=27,slow=1.1,SNR=7.1							
KSRS					PKKP	**PKKPdf**	**21 44 16.7**	**-3.7**
	comp=Z,1.3nm,0.7s,baz=195,slow=4.7,SNR=4.1							
LZH	**Lanzhou**	**125.59**		**8**	⇑PKP	**PKiKP**	**21 33 56.3**	**+0.1**
LZH					PP	**PP**	**21 35 51.0**	**+4.2**
LZH					SKS	**SKSdf**	**21 40 54.0**	**-5.0**
LZH					SKKS	**SKKSac**	**21 42 34.8**	**-2.4**
LZH					AMB	AMB		
	comp=Z,310nm,9.2s							
LZH					LR	LR		
	comp=Z,630nm,17.9s							
LZH					LR	LR		
	comp=Z,460nm,18.4s							
LZH					LR	LR		
	comp=Z,600nm,20.1s							
TIA	**Tai'an**	**125.72**	**355**		PKP	**PKPdf**	**21 33 55.8**	**0.0**
TIA					AMB	AMB		
	comp=Z,190nm,9.8s							
TIA					LR	LR		
	comp=Z,420nm,16.7s							
TIA					LR	LR		
	comp=Z,280nm,19.4s							
TIA					LR	LR		
	comp=Z,710nm,19.6s							
PYUN	**Piuthan**	**126.34**		**32**	*e*P	**PKPdf**	**21 33 57.2**	**-0.3**
	comp=Z,319nm,0.9s							
DANN	**Dangsing**	**126.51**		**31**	*e*P	**PKPdf**	**21 33 57.8**	**-0.1**
	comp=Z,340nm,0.8s							
KOLN	**Koldanda**	**126.91**		**31**	*e*P	**PKPdf**	**21 33 57.9**	**-0.7**
	comp=Z,124nm,1.0s							
BHPL	**Bhopal**	**127.02**		**40**	*ex*	**PKPdf**	**21 33 58.5**	**-0.1**
GKN	**Gorkha**	**127.22**		**30**	*e*P	**PKPdf**	**21 33 58.8**	**-0.3**
	comp=Z,218nm,0.7s							
DMN	**Daman**	**127.78**		**30**	*e*P	**PKPdf**	**21 33 59.9**	**-0.4**
	comp=Z,116nm,0.8s							
GUN	**Gumba**	**127.89**		**29**	*e*P	**PKPdf**	**21 34 00.3**	**-0.3**
	comp=Z,128nm,0.9s							
PKIN	**Phulchoki**	**127.94**		**30**	*e*P	**PKPdf**	**21 33 59.8**	**-0.8**
	comp=Z,91nm,0.8s							
PKI	**Pulchoki**	**127.95**		**30**	*e*P	**PKPdf**	**21 33 59.8**	**-0.9**
	comp=Z,143nm,1.0s							
XAN	**Xi'an**	**128.07**		**3**	PKP	**PKPdf**	**21 34 00.0**	**-0.4**
XAN					AMB	AMB		
	comp=Z,300nm,5.9s							
XAN					LR	LR		
	comp=Z,550nm,21.7s							
XAN					LR	LR		
	comp=Z,560nm,21.7s							
XAN	**Xi'an**	**128.07**		**3**	PKIKP	**PKPdf**	**21 34 00.4**	**0.0**
XAN	**Xi'an**	**128.07**		**3**		**PKPdf**	**21 34 00.4**	**0.0**
JIRN	**Jiri**	**128.24**		**29**	*e*P	**PKPdf**	**21 34 00.5**	**-0.8**
	comp=Z,99nm,0.7s							
LSA	**Lhasa**	**128.52**		**23**	PKP	**PKPdf**	**21 34 02.0**	**+0.1**
DZM	**Mont Dzumac**	**128.60**	**256**		*e*LR	LR	22 14 42.6	
	comp=Z,402nm,27.4s							
RAMN	**Ramite**	**129.04**		**29**	*e*P	**PKPdf**	**21 34 02.1**	**-0.6**
	comp=Z,200nm,0.7s							
TAPN	**Taplejung**	**129.20**		**28**	*e*P	**PKPdf**	**21 34 02.5**	**-0.6**
	comp=Z,61nm,0.6s							
ODAN	**Odare**	**129.48**		**28**	*e*P	**PKPdf**	**21 34 02.9**	**-0.6**
	comp=Z,133nm,1.0s							
NGP	**Nagpur**	**129.58**		**41**	*ex*	**PKPdf**	**21 34 02.9**	**-0.6**
NGP					*i* x	**pPKPdf**	**21 34 30.9**	**+0.6**
GTK	**Tadong**	**129.61**		**27**	*i* x	**PKPdf**	**21 34 03.9**	**+0.3**
NJ2	**Nanjing**	**129.64**	**352**		*e*PKP	**PKPdf**	**21 34 02.3**	**-1.1**
NJ2					PP	**PP**	**21 36 19.0**	**+5.8**
NJ2					SKS	**SKSdf**	**21 41 04.0**	**-2.2**
NJ2					SKKS	**SKKSac**	**21 43 00.5**	**-1.8**
NJ2					SS	**SS**	**21 53 27.8**	**+0.3**
NJ2					AMB	AMB		
	comp=Z,400nm,8.5s							
NJ2					LR	LR		
	comp=Z,320nm,24.4s							
NJ2					LR	LR		
	comp=Z,280nm,16.1s							
NJ2					LR	LR		
	comp=Z,710nm,24.6s							
KLRI	**Killari**	**130.20**		**46**	*e*PKPdf	**PKPdf**	**21 34 03.7**	**-1.1**
CD2	**Chengdu**	**130.67**		**9**	PKP	**PKPdf**	**21 34 05.5**	**+0.1**
CD2					PP	PP	21 36 30.0	+10
CD2					SKS	**SKSdf**	**21 40 58.8**	**-9.5**
CD2					AMB	AMB		
	comp=Z,260nm,7.2s							
CD2					LR	LR		
	comp=Z,490nm,18.7s							
CD2					LR	LR		
	comp=Z,430nm,21.6s							
CD2					LR	LR		
	comp=Z,810nm,20.1s							
SRSP	**Sriramsagar**	**130.75**		**43**	*e*PKPdf	**PKPdf**	**21 34 04.6**	**-1.2**
RPR	**Rampur**	**131.42**		**43**	*e*PKiKP	**PKPdf**	**21 34 06.8**	**-0.3**
ZIRO	**ZIRO**	**131.46**		**21**	*ex*	**PKPdf**	**21 34 06.8**	**-0.3**
CASY	**Casey**	**131.86**	**179**			**PKiKP**	**21 34 07.3**	**-0.2**
HYBB	**Hyderabad (bro**	**131.97**		**45**	*e*PKPdf	**PKPdf**	**21 34 07.5**	**-0.7**
HYB	**Hyderabad**	**131.98**		**45**	*i* PKP	**PKPdf**	**21 34 08.0**	**-0.2**
HYB					*ep*PKP	**pPKPdf**	**21 34 33.0**	**-2.1**
HYB					*e*		21 37 24.0	
SHL	**Shillong**	**132.52**		**24**	*ex*	**PKPdf**	**21 34 07.6**	**-1.7**
SHL					*i* x	x	21 37 26.8	
URV	**Uravakonda**	**132.80**		**48**	*e*PKPdf	**PKPdf**	**21 34 09.1**	**-0.6**
NJS	**Nagarjunasagar**	**133.09**		**45**	*e*PKPdf	**PKPdf**	**21 34 09.4**	**-0.9**
SRLM	**Srisailam**	**133.14**		**45**	*e*PKPdf	**PKPdf**	**21 34 09.4**	**-1.0**
KOHI	**KOHIMA**	**133.21**		**22**	*i* x	**PKPdf**	**21 34 11.2**	**+0.7**
ADKI	**Addanki**	**134.04**		**45**	*e*PKiKP	**PKPdf**	**21 34 12.1**	**+0.1**
PVM	**Polavaram**	**134.09**		**42**	*e*PKPdf	**PKPdf**	**21 34 11.5**	**-0.6**
SKHT	**Srikalahasti**	**135.35**		**47**	*e*PKPdf	**PKPdf**	**21 34 14.2**	**-0.3**
GYA	**Guiyang**	**135.43**		**6**	⇑*i*PKP	**PKPdf**	**21 34 14.0**	**-0.6**
GYA					sPKP		21 34 50.8	
GYA					PP	**PP**	**21 36 56.5**	**+6.1**
GYA					PKS	PKSdf	21 37 43.3	-7.9
GYA					SKKS		21 43 35.3	
GYA					SS	**SS**	**21 54 39.8**	**+1.8**
GYA					AMB	AMB		
	comp=Z,140nm,6.0s							
GYA					LR	LR		
	comp=Z,310nm,19.3s							
GYA					LR	LR		
	comp=Z,180nm,17.5s							
GYA					LR	LR		
	comp=Z,270nm,20.8s							
KMI	**Kunming**	**136.16**		**12**	PKP	**PKPdf**	**21 34 16.0**	**-0.1**
KMI					sPKP		21 34 48.0	
KMI					PP	**PP**	**21 37 01.8**	**+6.6**
KMI					SKKS		21 43 39.3	
KMI					AMB	AMB		
	comp=Z,100nm,5.5s							
KMI					LR	LR		
	comp=Z,430nm,19.9s							
KMI					LR	LR		
	comp=Z,250nm,19.7s							
KMI					LR	LR		
	comp=Z,530nm,21.7s							
QZH	**Quanzhou**	**136.67**	**351**		PKP	**PKPdf**	**21 34 16.0**	**-0.8**
QZH					AMB	AMB		
	comp=Z,440nm,9.0s							
QZH					LR	LR		
	comp=Z,310nm,16.6s							
QZH					LR	LR		
	comp=Z,170nm,18.9s							
RABL	**Rabaul**	**138.03**	**284**		PKPpre	PKPpre	21 34 08.9	
RABL						**PKPdf**	**21 34 20.1**	**+0.5**
CHTO	**Chiang Mai**	**141.24**		**19**	PKHKP	PKPpre	21 34 17.5	
CHTO	**Chiang Mai**	**141.24**		**19**		PKPpre	21 34 17.5	
CMAR	**Chiang Mai Arr**	**141.57**		**20**	PKhKP	PKPpre	21 34 18.6	
	comp=Z,6.3nm,0.6s,baz=318,slow=4.2,SNR=46							
CMAR					SKPbc	**SKPbc**	**21 37 53.2**	**-1.0**
	comp=Z,29nm,1.0s,baz=323,slow=3.8,SNR=11							
QIZ	**Qiongzhong**	**143.05**		**3**	PKP	PKPbc	21 34 25.3	-0.2
QIZ					PP	**PP**	**21 37 38.8**	**+1.6**
QIZ					SS	SS	21 56 10.0	+2.7
QIZ					LR	LR		
	comp=Z,230nm,20.6s							
QIZ					LR	LR		
	comp=Z,260nm,17.2s							
QIZ					LR	LR		
	comp=Z,420nm,20.6s							
BOLP	**Bolinao**	**144.77**	**346**		*e*P	**PKPab**	**21 34 28.7**	**-1.8**
SMPP	**San Manuel, Pa**	**144.81**	**345**		*e*P	**PKPab**	**21 34 29.2**	**-1.5**
BALP	**Baler**	**144.96**	**343**		*e*P	**PKPab**	**21 34 30.4**	**-0.8**
PBA	**Port Blair**	**145.03**		**34**	*ex*	PKPbc	21 34 31.0	-0.5
SCZP	**Santa Cruz**	**145.35**	**346**		*e*P	**PKPbc**	**21 34 31.0**	**-1.5**
PVCP	**Virac**	**146.16**	**338**		*e*P	**PKPdf**	**21 34 33.5**	**-0.4**
CNP	**Catarman**	**146.97**	**336**		*e*P	**PKPdf**	**21 34 35.6**	**+0.3**
CTAO	**Charters Tower**	**147.27**	**261**		PKIKP	**PKPdf**	**21 34 36.2**	**+0.5**
CTAO	**Charters Tower**	**147.27**	**261**			**PKPdf**	**21 34 36.2**	**+0.5**
PGP	**Puerto Galera**	**147.27**	**343**	‖	*e*P	**PKPdf**	**21 34 32.6**	**-3.2**
JAY	**Jayapura**	**147.56**	**295**		PKP	**PKPbc**	**21 34 39.1**	**-0.1**
GENI	**Genyem**	**148.06**	**296**		PKP	**PKPbc**	**21 34 40.5**	**+0.1**
RCP	**Roxas**	**148.54**	**339**	‖	*e*P	**PKPdf**	**21 34 37.0**	**-0.9**
RCP					*es*	**pPKPdf**	**21 35 03.5**	**-1.3**
SMPI	**Sarmi**	**148.99**	**298**		PKP	**PKPdf**	**21 34 40.0**	**+1.3**
MSLP	**Maasin**	**149.05**	**334**		*e*P	**PKPbc**	**21 34 41.6**	**-1.3**
GUIM	**Jordan**	**149.47**	**338**		*e*P	**PKPbc**	**21 34 42.4**	**-1.6**
STKA	**Stephens Creek**	**149.71**	**237**		PKP	**PKPdf**	**21 34 39.2**	**-0.1**
	comp=Z,91nm,0.8s,baz=74,slow=1.8,SNR=41							
STKA					PKPbc	**PKPbc**	**21 34 43.7**	**-0.4**
	comp=Z,91nm,0.8s,baz=85,slow=2.7,SNR=43							
STKA					pPKPbc	**pPKPbc**	**21 35 10.6**	**-0.4**
	comp=Z,78nm,0.8s,baz=49,slow=3.0,SNR=6.9							
ENPP	**El Nido**	**149.87**	**345**		*e*P	**PKPdf**	**21 34 40.1**	**+0.1**
CNOP	**Candoni, Negro**	**150.19**	**338**		*e*P	**PKPdf**	**21 34 38.6**	**-2.0**
SNPH	**Sibulan**	**150.41**	**336**	⇑	*i*P	**PKPbc**	**21 34 46.2**	**-0.1**
SNPH					*i* S	**pPKPdf**	**21 35 13.6**	**+5.7**
SNPH	**Sibulan**	**150.41**	**336**	⇑	*i*P	**PKPbc**	**21 34 46.2**	**-0.1**
SNPH					*i* S	**pPKPdf**	**21 35 13.6**	**+5.7**
CGP	**Cagayan de Oro**	**150.62**	**333**	‖	*e*P	**PKPbc**	**21 34 46.4**	**-0.4**
BUKP	**Musuan**	**150.97**	**332**		*e*P	**PKPbc**	**21 34 47.2**	**-0.5**
DAV	**Davao City (W)**	**151.44**	**330**		PKPdf	**PKPdf**	**21 34 44.4**	**+1.8**
DAV						**PKiKP**	**21 34 49.7**	**+0.5**
DAV					PKPab	**PKPab**	**21 34 56.6**	**-0.6**
KCP	**Kidapawan**	**151.73**	**331**	‖	*e*P	**PKPdf**	**21 34 43.1**	**0.0**
CTBH	**Cotabato--PC H**	**151.92**	**333**	‖	*i*P	**PKPbc**	**21 34 49.5**	**-0.3**
DDMP	**Don Marcelino,**	**152.22**	**329**		*e*P	**PKPbc**	**21 34 47.9**	**-2.5**
SKMP	**Bagumbayan, Su**	**152.41**	**331**		*e*P	**PKPdf**	**21 34 42.1**	**-1.9**
BATP	**Bataraza**	**152.58**	**347**		*e*P	**PKPdf**	**21 34 43.9**	**-0.3**
FAKI	**Fak Fak**	**154.78**	**304**		PKP	**PKPdf**	**21 34 49.1**	**+1.7**
FAKI	**Fak Fak**	**154.78**	**304**			**PKPdf**	**21 34 47.0**	**-0.4**
FAKI						**PKPbc**	**21 34 55.5**	**-0.5**
TSI	**Tuntungan**	**154.95**		**32**	PKP	**PKPbc**	**21 34 56.1**	**-0.3**
LBMI	**Labuha**	**156.67**	**316**		PKP	**PKPdf**	**21 34 54.6**	**+4.7**
MNSI	**Mandailing Nat**	**157.78**		**34**	PKP	**PKPdf**	**21 34 50.4**	**-0.9**
AAI	**Ambon**	**158.36**	**310**		PKP	**PKPdf**	**21 34 54.4**	**+2.4**
WRAB	**Tennant Creek**	**158.46**	**262**		PKIKP	**PKPdf**	**21 34 51.5**	**-0.4**
WRAB	**Tennant Creek**	**158.46**	**262**			**PKPdf**	**21 34 51.5**	**-0.4**
WRA	**Warramunga Arr**	**158.47**	**261**		PKP	**PKPdf**	**21 34 51.0**	**-0.9**
	comp=Z,50nm,1.1s,baz=76,slow=1.0,SNR=102							
WRA					pPKP	**pPKPdf**	**21 35 18.7**	**-0.6**
	comp=Z,38nm,0.9s,baz=93,slow=0.9,SNR=10.0							
WRA					SKKPbc		21 45 10.6	
	comp=Z,2.6nm,0.9s,baz=271,slow=2.5,SNR=6.0							
SISI	**Saibi**	**159.26**		**38**	PKP	**PKPdf**	**21 34 54.7**	**+1.7**
SISI					PKP	**PKPdf**	**21 34 55.0**	**+2.0**
TPRI	**Tanjung Pinang**	**159.83**		**21**	PKP	**PKPdf**	**21 34 54.1**	**+0.4**
MPSI	**Mapaga**	**159.95**		**335**	PKP	**PKPdf**	**21 34 53.4**	**-0.4**
MPSI					PKP	**PKPdf**	**21 34 53.8**	**0.0**
SDSI	**Sungai Dareh**	**160.20**		**32**	PKP	**PKPdf**	**21 34 53.1**	**-1.0**
SDSI					PKP	**PKPdf**	**21 34 53.3**	**-0.8**
FORT	**Forrest**	**160.48**	**227**			**PKPdf**	**21 34 53.8**	**-0.2**
KRJI	**Kerinci**	**161.20**		**33**	PKP	**PKPdf**	**21 34 55.0**	**-0.3**
KRJI					PKP	**PKPdf**	**21 34 55.0**	**-0.3**
KRJI					PKP	**PKPdf**	**21 34 55.4**	**+0.1**
SMKI	**Samarinda**	**161.61**	**342**		PKP	**PKPdf**	**21 34 57.1**	**+1.5**
SMKI					PKP	**PKPdf**	**21 34 57.9**	**+2.3**
BKB	**Balikpapan**	**162.47**	**342**		PKP	**PKPdf**	**21 34 57.4**	**+0.9**
BKB					PKP	**PKPdf**	**21 34 58.4**	**+1.9**
MASI	**Maura Aman, Be**	**162.50**		**33**	PKP	**PKPdf**	**21 34 56.7**	**+0.1**
MASI					PKP	**PKPdf**	**21 34 57.3**	**+0.7**
MASI					PKP	**PKPdf**	**21 34 57.6**	**+1.0**
TTSI	**Tana Toraja**	**163.01**	**331**		PKP	**PKPdf**	**21 34 58.2**	**+1.2**
TTSI					PKP	**PKPdf**	**21 34 58.3**	**+1.2**
TTSI					PKP	**PKPdf**	**21 34 58.7**	**+1.7**
BBSI	**Bau Bau**	**163.52**	**318**		PKP	**PKPdf**	**21 34 57.9**	**+0.4**
BBSI					PKP	**PKPdf**	**21 35 00.4**	**+2.9**
LHSI	**Lahat**	**163.73**		**30**	PKP	**PKPdf**	**21 34 56.6**	**-1.1**
SPSI	**Sidrap Palu**	**163.84**	**330**		PKP	**PKPdf**	**21 34 58.0**	**+0.2**
BNSI	**Bone**	**164.05**	**328**		PKP	**PKPdf**	**21 34 59.0**	**+1.0**
TPI	**Tanjungpandan**	**164.25**		**15**	PKP	**PKPdf**	**21 34 58.6**	**+0.4**
NWAO	**Narrogin (SRO)**	**164.41**	**198**		PKIKP	**PKPdf**	**21 34 57.7**	**-0.1**
NWAO	**Narrogin (SRO)**	**164.41**	**198**			**PKPdf**	**21 34 57.7**	**-0.1**
KBKI	**Kotabaru**	**164.62**	**343**		PKP	**PKPdf**	**21 34 58.7**	**+0.2**
KAPI	**Kappang**	**164.76**	**328**		PKIKP	**PKPdf**	**21 34 58.1**	**-0.5**
KAPI							21 35 54.9	
KAPI	**Kappang**	**164.76**	**328**		PKPdf	**PKPdf**	**21 34 58.1**	**-0.5**
KAPI						**PKPab**	**21 35 54.9**	**+0.4**
LWLI	**Liwa**	**165.02**		**31**	PKP	**PKPdf**	**21 34 59.1**	**+0.1**
SOEI	**Soe**	**165.20**	**302**		PKP	**PKPdf**	**21 35 01.2**	**+2.1**
BLSI	**Bandar Lampung**	**165.87**		**27**	PKP	**PKPdf**	**21 35 00.7**	**+1.1**
BATI	**Baumata**	**165.95**	**302**		PKP	**PKPdf**	**21 35 02.6**	**+3.0**
DBJI	**Dramaga**	**167.56**		**23**	PKP	**PKPdf**	**21 35 00.3**	**-0.5**
CNJI	**Cibinong**	**168.40**		**23**	PKP	**PKPdf**	**21 35 01.4**	**0.0**
CISI	**Cisompet, Garu**	**168.86**		**20**	PKP	**PKPdf**	**21 35 01.3**	**-0.5**
SMRI	**Semarang**	**168.94**		**6**	PKP	**PKPdf**	**21 35 03.0**	**+1.2**
SMRI	**Semarang**	**168.94**		**6**	PKPdf	**PKPdf**	**21 35 01.4**	**-0.4**
PLAI	**Plampang**	**169.01**	**326**		PKP	**PKPdf**	**21 35 00.8**	**-1.0**
WOJI	**Wonogiri, Jawa**	**169.76**		**4**	PKP	**PKPdf**	**21 35 02.4**	**+0.2**
UGM	**Wanagama**	**169.80**		**6**	PKP	**PKPdf**	**21 35 03.7**	**+1.4**
JAGI	**Jajag, Banyuwa**	**170.11**	**345**		PKP	**PKPdf**	**21 35 01.9**	**-0.6**

ISC 28 21:22:31.7±3.3, 35°.8N±0°.2×70°.2E±0°.3, h100km, n17,
σ1§84/18, **2C, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.86**	**22**	P		**Pn**	**Pn**	**21 24 12.0**	**+2.1**
	SNR=136								
UCH	**Uchtor**	**7.22**	**26**	P		**Pn**	**Pn**	**21 24 16.1**	**+1.2**
	SNR=9.6								
KK31	**Karatay Array**	**7.28**	**2**	⇑Pn		**Pn**	**Pn**	**21 24 16.9**	**+1.6**
	1.9nm,0.4s,baz=184,slow=13,SNR=32								
KK31				⇑Sn			**Sn**	**21 25 32.6**	**-3.7**
	1.8nm,0.5s,baz=187,slow=24,SNR=4.7								
EKS2	**Erkin-Say**	**7.37**	**21**	P		**Pn**	**Pn**	**21 24 19.2**	**+2.6**
	SNR=18								
KZA	**Kyzart**	**7.38**	**31**	P		**Pn**	**Pn**	**21 24 18.4**	**+1.4**
	SNR=6.3								
AAK	**Ala-Archa**	**7.57**	**25**	P		**Pn**	**Pn**	**21 24 21.0**	**+1.6**
	SNR=7.8								
CHMS	**Chumysh**	**7.98**	**25**	P		**Pn**	**Pn**	**21 24 27.0**	**+2.2**
	SNR=7.5								
USP	**Ospennovka**	**8.14**	**23**	P		**Pn**	**Pn**	**21 24 29.2**	**+2.2**
	SNR=5.1								
TKM2	**Tokmak 2**	**8.22**	**29**	P		**Pn**	**Pn**	**21 24 30.2**	**+1.9**
	SNR=5.9								
PYUN	**Piuthan**	**13.29**	**122**	*e*P		**Pn**	**Pn**	**21 25 35.9**	**-0.7**
	8.1nm,0.3s								
DANN	**Dangsing**	**13.68**	**119**	*e*P		**Pn**	**Pn**	**21 25 40.8**	**-0.9**
	7.1nm,0.4s								
KOLN	**Koldanda**	**13.92**	**121**	*e*P		**Pn**	**Pn**	**21 25 44.2**	**-0.5**
	2.2nm,0.2s								
GKN	**Gorkha**	**14.51**	**118**	*e*P		**Pn**	**Pn**	**21 25 51.4**	**-0.9**
	5.4nm,0.2s								
PKIN	**Phulchoki**	**15.30**	**118**	*e*P		**Pn**	**Pn**	**21 26 01.6**	**-0.9**
PKI	**Pulchoki**	**15.31**	**118**	*e*P		**Pn**	**Pn**	**21 26 01.7**	**-1.0**
	2.9nm,0.4s								
JIRN	**Jiri**	**15.82**	**116**	*e*P		**Pn**	**Pn**	**21 26 08.8**	**-0.3**
	13nm,0.3s								
RAMN	**Ramite**	**16.53**	**118**	*e*P		**Pn**	**Pn**	**21 26 17.4**	**-0.4**
	3.8nm,0.3s								

*IDC **28** 21:53:19.2±1.2, 32°.46N×140°.67E, h0km, mb3.7/5, mb1 4.0/7, mb1mx3.7/35, mbtmp3.8/7, ML3.7/2, Error ellipse: s-maj=32.4km s-min=20.4km az=65.0*
*JMA **28** 21:53:25.8±0.1, 32°.63N×140°.42E, h49km, M3.9*
ISC 28 21:53:26.0±1.0, 32°.59N±0°.06×140°.51E±0°.08, h50km, n27,
σ1§57/32, **mb3.7/5, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**0.64**	**259**	P		**Pn**	**Pn**	**21 53 38.0**	**-1.0**
JAOM					*eS*		**Sn**	**21 53 47.0**	**-1.4**
JHCJ	**Hachijojimakas**	**0.77**	**309**	P		**Pn**	**Pn**	**21 53 39.2**	**-1.4**
JHCJ					*eS*		**Sn**	**21 53 48.9**	**-2.4**
JHJ2	**Mitsune**	**0.78**	**312**	P		**Pn**	**Pn**	**21 53 39.7**	**-1.1**
JHJ	**Hachijo jima 2**	**0.81**	**311**	Pn		**Pn**	**Pn**	**21 53 39.6**	**-1.6**
	428nm,0.3s,baz=63,slow=22,SNR=259								
JHJ					Sn		**Sn**	**21 53 49.5**	**-2.7**
	2μm,0.3s,baz=92,slow=23,SNR=36								
JMKN	**Mikurajimanish**	**1.51**	**330**	P		**Pn**	**Pn**	**21 53 49.8**	**-0.8**
JMKN					*eS*		**Sn**	**21 54 07.2**	**-2.0**
JKO	**Kozu shima**	**1.96**	**325**	P		**Pn**	**Pn**	**21 53 57.0**	**+0.2**
JKO					*eS*		**Sn**	**21 54 19.6**	**-0.7**
BSO1	**Boso 1**	**2.10**	**11**	P		**Pn**	**Pn**	**21 53 56.4**	**-1.7**
BSO3	**Boso 3**	**2.21**	**0**	P		**Pn**	**Pn**	**21 53 58.8**	**-1.1**
BSO3					S		**Sn**	**21 54 24.1**	**-1.8**
JIM2	**

GERES	**GERESS Array B**	**147.31**	**346**	PKPbc		**PKPab**	**22 21 11.2**	**-0.5**
	0.4nm,0.5s,baz=10,slow=3.0,SNR=4.8							

GUC ***28*** *22:07:04.0±0.5, 19.89S×71.10W, h39km±2km, ML3.3*
IDC ***28*** *22:07:11.3±5.2, 20.55S×68.17W, h0km, mb3.7/1, mb1 3.6/2, mb1mx3.4/17, mbtmp3.5/2, ML3.3/1, Error ellipse: s-maj=149.2km s-min=53.6km az=69.0*

ISC 28 22:07:01.9±2.1, 19.89S±0.04×71.07W±0.08, h10km±10km, n18, σ1♀12/28, 8C-3D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.94**	**72**	⇓*iP*		**Pg**	**22 07 19.8**	**-0.3**
PSGC				*e*S		**Sg**	**22 07 32.8**	**+0.6**
TA02	**Huaiquique**	**0.96**	**114**	*e*P		**Pg**	**22 07 20.6**	**+0.1**
TA02				*e*S		**Sg**	**22 07 34.0**	**+0.9**
TA02				IAML			22 07 35.5	
	comp=N,2μm,0.1s							
TA01	**Diego Aracena**	**1.08**	**129**	⇑*iP*		**Pb**	**22 07 22.4**	**-0.2**
TA01				*i* S		**Sg**	**22 07 36.3**	**-0.4**
TA01				IAML			22 07 37.1	
	comp=E,757nm,0.2s							
PATCX	**Punta Patache**	**1.27**	**137**	⇑*iP*		**Pn**	**22 07 25.2**	**-0.6**
PATCX				IAML			22 07 53.8	
	comp=E,579nm,0.5s							
PB11	**IPOC Station P**	**1.34**	**85**	⇑*iP*		**Pn**	**22 07 26.5**	**-0.3**
PB11				*e*S		**Sb**	**22 07 44.1**	**-0.4**
PB12	**IPOC Station P**	**1.45**	**29**	⇑*iP*		**Pn**	**22 07 28.0**	**-0.3**
PB12				*e*S		**Sn**	**22 07 46.2**	**-1.2**
MNMC	**Minye Minye**	**1.58**	**62**	⇑*iP*		**Pn**	**22 07 30.3**	**0.0**
MNMC				*e*S		**Sn**	**22 07 50.9**	**-0.1**
GO01	**Chusmiza**	**1.78**	**83**	⇑*iP*		**Pn**	**22 07 33.3**	**+0.1**
GO01				*e*S		**Sn**	**22 07 56.5**	**+0.3**
PB02	**IPOC Station P**	**1.80**	**143**	*e*P		**Pn**	**22 07 32.8**	**-0.4**
PB08	**IPOC Station P**	**1.82**	**98**	⇑*iP*		**Pn**	**22 07 33.7**	**0.0**
PB08				*e*S		**Sn**	**22 07 57.4**	**+0.3**
PB08				IAML			22 08 00.6	
	comp=N,583nm,0.4s							
PB01	**IPOC Station P**	**1.88**	**128**	*e*P		**Pn**	**22 07 34.1**	**-0.1**
PB01				*e*S		**Sn**	**22 07 57.5**	**-0.6**
PB01				IAML			22 08 06.5	
	comp=E,671nm,0.3s							
PB07	**IPOC Station P**	**2.14**	**149**	⇓*iP*		**Pn**	**22 07 37.6**	**-0.3**
PB07				*i* S		**Sn**	**22 08 04.4**	**-0.2**
PB07				IAML			22 08 15.9	
	comp=E,273nm,0.3s							
PB03	**IPOC Station P**	**2.48**	**150**	⇑*iP*		**Pn**	**22 07 42.3**	**-0.2**
PB03				IAML			22 08 31.2	
	comp=E,155nm,0.5s							
PB09	**IPOC Station P**	**2.56**	**138**	*e*P		**Pn**	**22 07 43.9**	**+0.3**
PB09				*i* S		**Sn**	**22 08 14.8**	**-0.2**
PB15	**IPOC Station P**	**3.63**	**156**	⇓*iP*		**Pn**	**22 07 58.1**	**-0.3**
LPAZ	**La Paz**	**4.54**	**38**	Pn		Pn	22 08 17.6	+6.3
	comp=E,1.2nm,0.3s,baz=233,slow=8.9,SNR=13							
TORD	**Torodi Ar. Bea**	**78.75**	**72**	P		**P**	**22 19 03.2**	**-2.1**
	comp=E,0.4nm,0.5s,baz=246,slow=5.9,SNR=6.1							
MKAR	**Makanchi Array**	**145.45**	**33**	PKP		**PKiKP**	**22 26 48.9**	**+4.6**
	comp=E,0.4nm,0.7s,baz=281,slow=0.6,SNR=4.0							

IDC ***28*** *22:23:26.8±1.0, 9.05S×113.89E, h0km, mb4.2/9, mb1 4.3/11, mb1mx4.1/28, mbtmp4.2/11, ML3.9/2, Error ellipse: s-maj=45.5km s-min=17.1km az=47.0*
NEIC ***28*** *22:23:36.3±2.2, 9.05S±0.06×114.22E±0.08, h82km±3km, mb4.1/15, Error ellipse: s-maj=12.1km s-min=7.7km az=66.0*
DJA ***28*** *22:23:37.2±0.6, 9°S±3'×11°4E±°, h29km±5km, M4.6/12, mB5.0/3, mb4.8/3, MLv4.5/12, Mw(mB)4.4/3*

ISC 28 22:23:36.2±0.8, 9.10S±0.07×114.12E±0.05, h80km±7km, n60, σ1♀62/59, mb4.1/12, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**0.62**	**3**	P		**Pn**	**22 23 50.9**	**-0.2**
JAGI				S		**Sn**	**22 24 01.5**	**-0.7**
JAGI	**Jajag, Banyuwa**	**0.62**	**3**			**Pn**	**22 23 51.1**	**0.0**
JAGI						**Sn**	**22 24 02.1**	**-0.1**
DNP	**Denpasar**	**1.16**	**69**	P		**Pn**	**22 23 58.5**	**+1.3**
DNP				S		**Sn**	**22 24 15.8**	**+2.9**
KMMI	**Kalianget**	**2.04**	**356**	P		**Pn**	**22 24 11.1**	**+2.5**
KMMI				S		**Sn**	**22 24 37.3**	**+4.0**
GRJI	**Gresik**	**2.71**	**323**	P		**Pn**	**22 24 19.7**	**+2.1**
GRJI				S		**Sn**	**22 24 51.1**	**+1.7**
WOJI	**Wonogiri, Jawa**	**3.40**	**291**	P		**Pn**	**22 24 29.2**	**+2.3**
PLAI	**Plampang**	**3.63**	**86**	P		**Pn**	**22 24 32.2**	**+2.1**
PLAI				S		**Sn**	**22 25 13.6**	**+1.8**
UGM	**Wanagama**	**3.74**	**288**	P		**Pn**	**22 24 33.7**	**+2.0**
UGM	**Wanagama**	**3.74**	**288**			**Pn**	**22 24 33.7**	**+2.0**
UGM						**Sn**	**22 25 18.6**	**+4.0**
YOGI	**Yogyakarta**	**3.99**	**288**	P		**Pn**	**22 24 37.7**	**+2.7**
SMRI	**Semarang**	**4.17**	**299**	Pn		**Pn**	**22 24 39.2**	**+1.7**
WBSI	**Waikabubak, Su**	**5.23**	**96**	P		**Pn**	**22 24 52.6**	**+0.6**
	0.5nm1μm57nm,1.0s							
CISI	**Cisompet, Garu**	**6.42**	**283**	P		**Pn**	**22 25 08.9**	**+0.7**
	0.8nm4μm106nm,0.6s							
CISI	**Cisompet, Garu**	**6.42**	**283**			**Pn**	**22 25 09.5**	**+1.3**
CISI				Sn		**Sn**	**22 26 18.8**	**-1.4**
KAPI	**Kappang**	**6.91**	**54**	Pn		**Pn**	**22 25 12.4**	**-2.5**
	1.0nm,0.3s,baz=36,slow=23,SNR=1.7							
KAPI				Sn		**Sn**	**22 26 30.5**	**-1.5**
	1.8nm,0.3s,baz=117,slow=16,SNR=1.7							
BKSI	**Bulukumba**	**7.04**	**58**	P		**Pn**	**22 25 18.7**	**+2.0**
BNSI	**Bone**	**7.56**	**52**	P		Pn	22 25 29.0	+5.3
TTSI	**Tana Toraja**	**8.26**	**44**	P		Pn	22 25 38.7	+5.3
XMIS	**Christmas Isla**	**8.46**	**260**	Pn		**Pn**	**22 25 34.5**	**-1.6**
MNAI	**Manna**	**12.04**	**292**	Pn		**Pn**	**22 26 22.6**	**-2.3**
GIRL	**Giralia**	**13.47**	**180**	Pn		Pn	22 26 41.5	-2.5
PSAC1	**Pilbara Seismi**	**13.53**	**157**	Pn		Pn	22 26 40.5	-4.3
PSA00	**Pilbara Seismi**	**13.58**	**157**	Pn		Pn	22 26 41.1	-4.3
FITZ	**Fitzroy Crossi**	**14.33**	**130**	Pn		**Pn**	**22 26 53.8**	**-1.5**
	0.6nm,0.3s,baz=329,slow=6.9,SNR=12							
FITZ				Sn		Sn	22 29 22.6	-10
	1.0nm,0.3s,baz=196,slow=22,SNR=7.8							
KKM	**Kota Kinabalu**	**15.19**	**8**			**P**	**22 27 08.4**	**-1.2**
KKM				IAmb		IAmb	22 27 16.5	
	comp=Z,15nm,1.0s							
KNRA	**Kununurra**	**15.72**	**116**			**Pn**	**22 27 14.3**	**+1.2**
KNRA				IAmb		IAmb	22 27 33.2	
	comp=Z,23nm,1.4s							
LBMI	**Labuha**	**15.75**	**58**	P		P	22 27 31.7	+16
FAKI	**Fak Fak**	**19.04**	**72**	P		**P**	**22 27 51.5**	**-0.7**
FAKI				IAmb		IAmb	22 27 55.1	
	comp=Z,11nm,0.7s							
MORW	**Morawa**	**19.95**	**175**	P		**P**	**22 28 02.3**	**+0.4**
MORW				IAmb		IAmb	22 28 18.3	
	comp=Z,15nm,1.2s							
WB0	**Warramunga Arr**	**22.29**	**121**	P		**P**	**22 28 27.7**	**+0.6**
WB0				IAmb		IAmb	22 28 30.8	
	comp=Z,9.7nm,1.4s							
WRA	**Warramunga Arr**	**22.32**	**121**	P		**P**	**22 28 28.2**	**+0.8**
	comp=Z,1.9nm,0.4s,baz=294,slow=12,SNR=14							
WB2	**Warramunga Arr**	**22.33**	**121**	P		**P**	**22 28 28.2**	**+0.6**
WB2				IAmb		IAmb	22 28 33.6	
	comp=Z,7.5nm,1.1s							
WR0	**Warramunga Arr**	**22.50**	**121**	P		**P**	**22 28 27.9**	**-1.5**
AS31	**Alice Springs**	**23.83**	**130**	P		**P**	**22 28 44.8**	**+2.6**
NWAO	**Narrogin (SRO)**	**23.89**	**174**	P		**P**	**22 28 42.1**	**-0.4**
FORT	**Forrest**	**25.19**	**151**	P		**P**	**22 28 56.5**	**+2.1**
BBOO	**Buckleboo**	**31.12**	**142**	P		**P**	**22 29 48.9**	**+1.7**
CMAR	**Chiang Mai Arr**	**31.21**	**331**	P		**P**	**22 29 48.6**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=163,slow=9.2,SNR=12							
STKA	**Stephens Creek**	**34.11**	**136**	P		**P**	**22 30 15.6**	**+2.2**
	comp=Z,1.8nm,0.3s,baz=315,slow=7.3,SNR=13							
STKA	**Stephens Creek**	**34.11**	**136**	IAmb		IAmb	22 30 21.3	
	comp=Z,1.1nm,1.1s							
H08S2	**Diego Garcia H**	**41.19**	**269**	T		T	23 15 13.0	
	baz=94,slow=76,SNR=8.1							
H08S3	**Diego Garcia H**	**41.20**	**269**	T		T	23 15 14.5	
	baz=94,slow=76,SNR=6.7							
H08S1	**Diego Carcia H**	**41.21**	**269**	T		T	23 15 14.5	
	baz=94,slow=76,SNR=8.0							
JIRN	**Jiri**	**45.46**	**324**	*e*P		**P**	**22 31 47.9**	**0.0**
	comp=Z,11nm,0.3s							
GUN	**Gumba**	**45.83**	**324**	*e*P		**P**	**22 31 50.6**	**-0.2**
	comp=Z,9.4nm,0.3s							
PKI	**Pulchoki**	**45.84**	**324**	*e*P		**P**	**22 31 50.5**	**-0.4**
	comp=Z,1.9nm,0.3s							
DMN	**Daman**	**46.05**	**323**	*e*P		**P**	**22 31 52.0**	**-0.5**
	comp=Z,6.8nm,0.3s							
GKN	**Gorkha**	**46.62**	**323**	*e*P		**P**	**22 31 56.4**	**-0.4**
	comp=Z,13nm,0.2s							
KOLN	**Koldanda**	**47.07**	**322**	*e*P		**P**	**22 31 59.9**	**-0.5**
	comp=Z,6.6nm,0.4s							
DANN	**Dangsing**	**47.40**	**323**	*e*P		**P**	**22 32 02.3**	**-0.7**
	comp=Z,12nm,0.5s							
PYUN	**Piuthan**	**47.68**	**322**	*e*P		**P**	**22 32 04.6**	**-0.5**
	comp=Z,6.4nm,0.4s							
SONM	**Songino Array**	**57.09**	**354**	P		**P**	**22 33 13.9**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=175,slow=8.3,SNR=7.7							
MKAR	**Makanchi Array**	**62.46**	**336**	P		**P**	**22 33 51.0**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=148,slow=7.3,SNR=17							
AAK	**Ala-Archa**	**62.91**	**328**	P		**P**	**22 33 53.8**	**-0.6**
AAK				IAmb		IAmb	22 33 55.1	
	comp=Z,1.6nm,0.7s							
ZALV	**Zalesovo Beam**	**67.52**	**342**	P		**P**	**22 34 22.7**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=165,slow=2.4,SNR=6.1							
GEYT	**Alibeck**	**70.09**	**316**	P		**P**	**22 34 40.5**	**+0.4**
	comp=Z,2.1nm,0.8s,baz=179,slow=8.9,SNR=4.5							
RAYN	**Ar Rayn**	**74.44**	**297**	P		**P**	**22 35 05.2**	**-1.1**
TIXI	**Tiksi**	**81.17**	**5**	P		**P**	**22 35 42.3**	**-0.2**
BRTR	**Keskin Array B**	**88.51**	**310**	P		**P**	**22 36 20.3**	**0.0**
	comp=Z,1.2nm,0.8s,baz=126,slow=6.4,SNR=10							
FINES	**FINESS Array B**	**96.98**	**331**	P		**P**	**22 36 58.2**	**-0.4**
	comp=Z,4.2nm,0.9s,baz=152,slow=8.6,SNR=3.8							

SJA ***28*** *22:23:36.6±1.0, 19.95S×71.08W, h25km±5km, ML4.8, MW5.0*
NEIC ***28*** *22:23:37.4±2.4, 19.92S±0.03×71.09W±0.03, h11km±3km, mb5.1/71, Mwr4.8/45, Mww4.9, ML4.5(GUC), Error ellipse: s-maj=4.4km s-min=2.7km az=218.0*
IDC ***28*** *22:23:37.1±0.7, 19.74S×70.64W, h0km, mb4.3/13, mb1 4.5/14, mb1mx4.4/27, mbtmp4.3/14, ML4.1/1, MS4.2/20, Ms1 4.1/20, ms1mx4.1/26, Error ellipse: s-maj=24.3km s-min=16.7km az=63.0*
NEIC ***28*** *22:23:38.8, 19.90S×71.01W, h16km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.80; $M_{\theta\theta}$0.30; $M_{\phi\phi}$-1.10; $M_{r\theta}$0.68; $M_{r\phi}$0.48; $M_{\theta\phi}$-1.99; Fault plane solution: $M_0$2.37000×10^{16} NP1:ϕ_s161.17000°, δ77.00000°, λ88.79000°. NP2:ϕ_s346.52000°, δ13.05000°, λ95.21000°. Principal axes: T 2.1118, Plg58.0000°, Azm70.0000°; N 0.4493, Plg1.0000°, Azm161.0000°; P -2.5610, Plg32.0000°, Azm252.0000°;*
GUC ***28*** *22:23:39.5±0.8, 19.89S×71.11W, h40km±3km, ML4.4*
VAO ***28*** *22:23:40.0±1.8, 19.69S×70.93W, h23km±16km, mb4.6*
NEIC ***28*** *22:23:42, 19.61S×71.03W, h16km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.61; $M_{\theta\theta}$0.26; $M_{\phi\phi}$-1.87; $M_{r\theta}$-0.51; $M_{\theta\phi}$0.39; $M_{r\phi}$-1.51; Fault plane solution: $M_0$2.40000×10^{16} NP1:ϕ_s189.00000°, δ67.00000°, λ108.00000°. NP2:ϕ_s329.00000°, δ29.00000°, λ54.00000°. Principal axes: T 2.3568, Plg64.0000°, Azm129.0000°; N 0.0926, Plg17.0000°, Azm2.0000°; P -2.4494, Plg20.0000°, Azm266.0000°;*

ISC 28 22:23:37.8±1.3, 19.91S±0.03×71.08W±0.04, h16km±7km, n221, σ1♀67/200, mb5.1/46, MS4.2/20, 13C-2D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.95**	**71**	⇓*iP*		**Pg**	**22 23 55.5**	**-0.8**
PSGC				*e*S		**Sg**	**22 24 08.7**	**-0.1**
PSGCX	**Pisagua**	**0.95**	**71**			**Pg**	**22 23 55.7**	**-0.6**
PSGCX				Sg		**Sg**	**22 24 08.9**	**+0.1**
PSGCX	**Pisagua**	**0.95**	**71**	*i* P		**Pg**	**22 23 55.5**	**-0.8**
PSGCX				*e*S		**Sg**	**22 24 09.3**	**+0.5**
TA02	**Huaiquique**	**0.96**	**112**	*e*P		**Pb**	**22 23 56.1**	**+0.1**
TA02				*e*S		**Sg**	**22 24 09.2**	**+0.3**
TA02				IAML			22 24 11.3	
	comp=N,14μm,0.1s							
TA01	**Diego Aracena**	**1.06**	**128**	⇑*iP*		**Pn**	**22 23 58.2**	**+0.1**
TA01				*i* S		**Sg**	**22 24 12.0**	**-0.3**
TA01	**Diego Aracena**	**1.06**	**128**			**Pn**	**22 23 58.2**	**+0.1**
TA01				Sg		**Sg**	**22 24 12.1**	**-0.2**
PATCX	**Punta Patache**	**1.25**	**136**	⇑*iP*		**Pb**	**22 24 00.9**	**-0.2**
PATCX				*i* S		**Sb**	**22 24 17.1**	**0.0**
PATCX	**Punta Patache**	**1.25**	**136**			**Pb**	**22 24 01.0**	**-0.2**
PATCX	**Punta Patache**	**1.25**	**136**	*i* P		**Pb**	**22 24 01.0**	**-0.2**
PATCX				*e*S		**Sb**	**22 24 17.2**	**+0.2**
PB11	**IPOC Station P**	**1.35**	**84**	⇑*iP*		**Pn**	**22 24 02.2**	**+0.1**
PB11				*i* S		**Sb**	**22 24 20.1**	**+0.3**
PB11				IAML			22 24 21.7	
	comp=E,23μm,0.7s							
PB11	**IPOC Station P**	**1.35**	**84**			**Pn**	**22 24 02.2**	**+0.1**
PB11						**Sb**	**22 24 20.2**	**+0.3**
PB11	**IPOC Station P**	**1.35**	**84**	*i* P		**Pn**	**22 24 02.3**	**+0.1**
PB11				*e*S		**Sb**	**22 24 20.4**	**+0.6**
PB11				IAML			22 24 30.2	
	comp=Z,17μm,1.5s							
PB12	**IPOC Station P**	**1.47**	**29**	⇑*iP*		**Pn**	**22 24 03.6**	**-0.2**
PB12				*i* S		**Sn**	**22 24 22.1**	**-0.8**
PB12				IAML			22 24 32.2	
	comp=N,6μm,0.4s							
PB12	**IPOC Station P**	**1.47**	**29**			**Pn**	**22 24 03.5**	**-0.3**
PB12	**IPOC Station P**	**1.47**	**29**	*i* P		**Pn**	**22 24 03.7**	**-0.2**
PB12				IAML			22 24 31.6	
	comp=Z,10μm,1.5s							
MNMC	**Minye Minye**	**1.60**	**61**	⇑*iP*		**Pn**	**22 24 06.0**	**+0.3**
MNMC				*e*S		**Sn**	**22 24 26.7**	**+0.5**
MNMC	**Minye Minye**	**1.60**	**61**			**Pn**	**22 24 05.9**	**+0.3**
MNMCX	**Minye Minye**	**1.60**	**61**	*i* P		**Pn**	**22 24 06.2**	**+0.4**
MNMCX				IAML			22 24 40.3	
	comp=Z,14μm,1.2s							
AP01	**Chacalluta**	**1.68**	**24**	*e*P		**Pn**	**22 24 06.3**	**-0.3**
AP01				*e*S		**Sn**	**22 24 27.1**	**-0.8**
AP01	**Chacalluta**	**1.68**	**24**			**Pn**	**22 24 06.6**	**0.0**
PB02	**IPOC Station P**	**1.78**	**142**	⇑*iP*		**Pn**	**22 24 08.6**	**+0.4**
PB02				*i* S		**Sn**	**22 24 29.8**	**-0.7**
PB02				IAML			22 24 38.7	
	comp=E,10μm,0.3s							
PB02	**IPOC Station P**	**1.78**	**142**	*i* P		**Pn**	**22 24 08.6**	**+0.4**
PB02				IAML			22 24 42.4	
	comp=Z,10μm,0.6s							
GO01	**Chusmiza**	**1.79**	**82**	⇑*iP*		**Pn**	**22 24 09.1**	**+0.6**
GO01				*i* S		**Sn**	**22 24 32.3**	**+1.1**
GO01				IAML			22 24 35.6	
	comp=N,13μm,0.2s							
GO01	**Chusmiza**	**1.79**	**82**			**Pn**	**22 24 09.1**	**+0.6**
PB08	**IPOC Station P**	**1.82**	**97**	⇑*iP*		**Pn**	**22 24 09.3**	**+0.4**
PB08				*i* S		**Sn**	**22 24 32.8**	**+0.9**
PB08				IAML			22 24 36.9	
	comp=N,4μm,0.4s							
PB08	**IPOC Station P**	**1.82**	**97**			**Pn**	**22 24 09.3**	**+0.4**
PB08	**IPOC Station P**	**1.82**	**97**	*i* P		**Pn**	**22 24 09.3**	**+0.4**
PB01	**IPOC Station P**	**1.87**	**127**	⇑*iP*		**Pn**	**22 24 09.9**	**+0.7**
PB01				*e*S		**Sn**	**22 24 33.2**	**+0.7**
PB01				IAML			22 24 41.7	
	comp=N,6μm,0.5s							
PB01	**IPOC Station P**	**1.87**	**127**			**Pn**	**22 24 10.0**	**+0.7**
PB07	**IPOC Station P**	**2.12**	**149**	⇑*iP*		**Pn**	**22 24 13.1**	**+0.3**
PB07				IAML			22 24 52.6	
	comp=E,3μm,0.5s							
PB07	**IPOC Station P**	**2.12**	**149**			**Pn**	**22 24 13.0**	**+0.2**
PB07	**IPOC Station P**	**2.12**	**149**	*i* P		**Pn**	**22 24 13.1**	**+0.3**
PB03	**IPOC Station P**	**2.46**	**150**	*e*P		**Pn**	**22 24 17.8**	**+0.3**
PB03				IAML			22 25 09.8	
	comp=E,1μm,0.4s							
PB03	**IPOC Station P**	**2.46**	**150**	*i* P		**Pn**	**22 24 18.0**	**+0.5**
PB09	**IPOC Station P**	**2.54**	**138**	⇑*iP*		**Pn**	**22 24 20.2**	**+1.6**
PB09				*e*S		**Sn**	**22 24 50.4**	**+1.1**
PB09				IAML			22 25 08.5	
	comp=N,3μm,0.6s							
PB09	**IPOC Station P**	**2.54**	**138**			**Pn**	**22 24 20.2**	**+1.6**
PB09	**IPOC Station P**	**2.54**	**138**	*i* P		**Pn**	**22 24 20.2**	**+1.6**
PB04	**IPOC Station P**	**2.56**	**160**	⇑*iP*		**Pn**	**22 24 19.0**	**+0.1**
PB04				IAML			22 25 11.2	
	comp=E,2μm,0.3s							
PB04	**IPOC Station P**	**2.56**	**160**			**Pn**	**22 24 18.9**	**0.0**
PB04	**IPOC Station P**	**2.56**	**160**	*i* P		**Pn**	**22 24 18.9**	**0.0**
PB05	**IPOC Station P**	**3.04**	**165**	⇓*iP*		**Pn**	**22 24 24.8**	**-0.5**
PB05				IAML			22 25 31.3	
	comp=E,668nm,0.7s							
PB05	**IPOC Station P**	**3.04**	**165**	*i* P		**Pn**	**22 24 24.9**	**-0.4**
PB06	**IPOC Station P**	**3.11**	**153**	⇑*iP*		**Pn**	**22 24 26.5**	**+0.1**
PB06				IAML			22 25 23.9	
	comp=N,752nm,0.6s							
PB06	**IPOC Station P**	**3.11**	**153**			**Pn**	**22 24 26.4**	**0.0**
PB06	**IPOC Station P**	**3.11**	**153**	*i* P		**Pn**	**22 24 26.4**	**0.0**
LVC	**Limon Verde**	**3.36**	**143**	Pn		**Pn**	**22 24 31.8**	**+1.8**
	comp=N,20nm,0.3s,baz=359,slow=8.7,SNR=195							
LVC				Sn		**Sn**	**22 25 10.6**	**+0.8**
	comp=N,79nm,0.3s,baz=60,slow=18,SNR=8.9							
LVC	**Limon Verde**	**3.36**	**143**	*e*P		**Pn**	**22 24 31.6**	**+1.6**
LVC				*i* S		**Sn**	**22 25 10.9**	**+1.1**
LVC	**Limon Verde**	**3.36**	**143**	*i* P		**Pn**	**22 24 31.9**	**+1.8**
PB15	**IPOC Station P**	**3.60**	**156**	*e*P		**Pn**	**22 24 33.4**	**+0.1**
PB15	**IPOC Station P**	**3.60**	**156**			**Pn**	**22 24 33.3**	**+0.1**
PB15	**IPOC Station P**	**3.60**	**156**	*i* P		**Pn**	**22 24 33.5**	**+0.1**
PB15				IAML			22 25 42.1	
	comp=Z,1μm,1.0s							
PB10	**IPOC Station P**	**3.62**	**172**			**Pn**	**22 24 32.7**	**-0.5**
PB10	**IPOC Station P**	**3.62**	**172**	*i* P		**Pn**	**22 24 33.1**	**-0.1**
LPAZ	**La Paz**	**4.57**	**38**	Pn		**Pn**	**22 24 50.3**	**+3.5**
	comp=Z,1.5nm,0.3s,baz=208,slow=10.0,SNR=35							
LPAZ				LR		LR	22 26 42.6	
	comp=Z,4μm,18.1s,baz=233,slow=44							
LPAZ	**La Paz**	**4.57**	**38**	Pn		**Pn**	**22 24 50.2**	**+3.3**
LPAZ						**Pn**	**22 24 50.3**	**+3.5**
GO02	**Mina Guanaco**	**5.40**	**166**			**Pn**	**22 24 58.6**	**+0.5**
GO02						**Sn**	**22 25 58.2**	**-1.9**
YJA	**Yavi**	**5.66**	**114**	*i* P		Pn	22 25 07.7	+5.9
AC01	**Pan de Azucar**	**6.22**	**176**			**Pn**	**22 25 08.0**	**-1.1**
AC02	**Maricunga**	**7.12**	**166**			**Pn**	**22 25 22.6**	**+0.8**
AC02						**Sn**	**22 26 43.6**	**+0.9**
GO03	**Copiap**	**7.69**	**174**	Pn		**Pn**	**22 25 28.8**	**-0.4**
AC04	**Llanos de Chal**	**8.25**	**180**	Pn		**Pn**	**22 25 34.4**	**-2.6**
AC05	**El Transito**	**8.91**	**175**	Pn		**Pn**	**22 25 45.8**	**-0.4**
NNA	**Nana**	**9.63**	**324**	Sn		**Sn**	**22 27 39.5**	**-4.5**
	comp=Z,6.4nm,0.3s,baz=207,slow=8.9,SNR=7.3							
NNA				LR		LR	22 29 53.0	
	comp=Z,692nm,19.9s,baz=154,slow=39							
NNA	**Nana**	**9.63**	**324**	Pn		**Pn**	**22 25 54.8**	**-1.1**
CO01	**Juntas del Tor**	**10.06**	**175**	Pn		**Pn**	**22 26 00.9**	**-1.0**
GO04	**Tololo Observa**	**10.22**	**179**	Pn		**Pn**	**22 26 01.5**	**-2.6**
SIV	**San Ignacio**	**10.29**	**69**	Pn		**Pn**	**22 26 02.8**	**-2.1**
	comp=Z,5.0nm,0.3s,baz=284,slow=8.6,SNR=60							
CO03	**El Pedregal**	**10.88**	**178**	Pn		**Pn**	**22 26 11.1**	**-2.0**
CO02	**Combarbal**	**11.24**	**180**	Pn		**Pn**	**22 26 16.5**	**-1.6**
CFA	**Coronel Fontan**	**11.92**	**168**	Pn		Pn	22 26 38.7	+12
	comp=Z,0.7nm,0.3s,baz=293,slow=7.6,SNR=3.8							
CFA				Sn		Sn	22 28 51.8	+12
	comp=Z,0.5nm,0.3s,baz=20,slow=11,SNR=1.3							
CFA				LR		LR	22 31 13.3	
	comp=Z,1μm,19.1s,baz=338,slow=38							
PTLB	**Pontes e Lacer**	**12.21**	**71**	*e*P		**Pn**	**22 26 29.5**	**-1.8**
PTLB				*e*S		**Sn**	**22 28 44.6**	**-2.5**
VILB	**Vilhena**	**12.52**	**58**	*e*P		**Pn**	**22 26 34.6**	**-0.8**
VILB				*e*S		**Sn**	**22 28 50.5**	**-4.1**
MT02	**Curacav**	**13.29**	**180**	Pn		**Pn**	**22 26 44.6**	**-1.3**
SAML	**Samuel**	**13.31**	**36**			**Pn**	**22 26 46.8**	**+0.6**
AQDB	**Aquidauana**	**14.45**	**95**	*e*P		**Pn**	**22 27 02.3**	**+0.5**
ATAH	**Atahualpa**	**14.55**	**330**	LR		LR	22 32 21.5	
	comp=Z,417nm,20.4s,baz=111,slow=36							
BO02	**Sierra Bellavi**	**14.82**	**179**			**Pn**	**22 27 06.1**	**-0.8**
SALV	**Santo Antonio**	**15.17**	**77**	*e*P		**Pn**	**22 27 09.9**	**-1.7**
H03N1	**Juan Fernandez**	**15.18**	**206**	T		T	22 43 03.9	
	baz=229,slow=74,SNR=114							
H03N2	**Juan Fernandez**	**15.18**	**206**	T		T	22 42 57.8	

Q56A	**Snyder Ridge,** comp=Z,30nm,1.1s	**59.13**	**353**		IAmb	IAmb	22 33 50.2		
P53A	**Whipple** comp=Z,19nm,1.1s	**59.87**	**351**		IAmb	IAmb	22 33 53.7		
HHAR	**Hobbs** comp=Z,20nm,1.3s	**59.93**	**339**		IAmb	IAmb	22 33 55.0		
MGMO	**Mountain Grove**	**60.18**	**341**		P	**P**	**22 33 45.7**	**+0.8**	
MGMO	comp=Z,23nm,1.4s				IAmb	IAmb	22 33 56.5		
O56A	**Blue Knob Stat** comp=Z,38nm,1.4s	**60.27**	**353**		IAmb	IAmb	22 33 58.1		
CCM	**Cathedral Cave**	**60.70**	**342**		P	**P**	**22 33 49.4**	**+0.9**	
MNTX	**Cornudas Mount**	**60.95**	**327**		P	**P**	**22 33 50.9**	**+0.5**	
R40A	**Maddies Statio** comp=Z,19nm,1.3s	**61.22**	**341**		IAmb	IAmb	22 34 03.3		
T35A	**Sooner Cattle** comp=Z,23nm,1.2s	**61.41**	**337**		IAmb	IAmb	22 34 06.1		
M55A	**Ridgway** comp=Z,28nm,1.0s	**61.48**	**353**		IAmb	IAmb	22 34 05.2		
L40A	**Anamosa** comp=Z,19nm,1.2s	**64.42**	**343**		IAmb	IAmb	22 34 24.3		
SNAA	**Sanae**	**64.43**	**161**		P	**P**	**22 34 15.0**	**+1.9**	
SNAA	**Sanae** comp=Z,1.7nm,0.8s,baz=244,slow=6.0,SNR=3.9	**64.43**	**161**		P	**P**	**22 34 15.0**	**+1.9**	
SNAA	**Sanae**	**64.43**	**161**		P	**P**	**22 34 13.7**	**+0.6**	
SNAA	comp=Z,30nm,1.9s				IAmb	IAmb	22 34 25.0		
SNAA					PcP	**PcP**	**22 34 46.7**	**-0.7**	
G62A	**West of Eustis**	**64.82**	**0**		P	**P**	**22 34 16.3**	**+0.5**	
ECSD	**EROS Data Cent**	**67.53**	**340**		P	**P**	**22 34 32.6**	**-0.7**	
ECSD	comp=Z,24nm,1.4s				IAmb	IAmb	22 34 45.1		
F36A	**Milaca** comp=Z,29nm,1.8s	**68.56**	**343**		IAmb	IAmb	22 34 56.8		
DBIC	**Dimbokro** comp=Z,4.4nm,0.8s,baz=176,slow=3.8,SNR=3.5	**70.26**	**75**		P	**P**	**22 34 50.0**	**-0.8**	
DBIC	comp=Z,198nm,19.9s,baz=226,slow=35				LR	LR	23 04 14.7		
DBIC	**Dimbokro** comp=Z,43nm,1.7s	**70.26**	**75**		IAmb	IAmb	22 36 16.3		
QSPA	**South Pole Qui**	**70.27**	**180**		P	**P**	**22 34 51.1**	**+0.9**	
QSPA	comp=Z,21nm,1.6s				IAmb	IAmb	22 34 58.5		
PDAR	**Pinedale Array** comp=Z,0.3nm,0.4s,baz=138,slow=47,SNR=1.5	**71.74**	**331**		P	**P**	**22 35 02.0**	**+2.5**	
PDAR	comp=Z,57nm,18.3s,baz=118,slow=37				LR	LR	23 08 22.3		
TBI	**Tubuai** comp=Z,207nm,27.2s	**72.09**	**251**	*e*S		**S**	**22 44 20.1**	**-3.5**	
TBI	**Tubuai** comp=Z,370nm,28.8s	**72.09**	**251**	*e*LR	LR	LR	22 57 05.2		
NVAR	**Mina Array Bea** comp=Z,1.6nm,0.8s,baz=151,slow=6.2,SNR=7.0	**73.00**	**323**		P	**P**	**22 35 11.3**	**+4.2**	
NVAR	comp=Z,81nm,18.6s,baz=193,slow=34				LR	LR	23 04 41.9		
ULM	**Lac du Bonnet** comp=Z,2.0nm,0.4s,baz=198,slow=6.8,SNR=1.8	**73.22**	**344**		P	**P**	**22 35 09.1**	**+1.3**	
ULM	comp=Z,138nm,19.9s,baz=156,slow=38				LR	LR	23 09 35.6		
ULM	**Lac du Bonnet**	**73.22**	**344**		P	**P**	**22 35 08.0**	**+0.2**	
ULM	comp=Z,31nm,1.5s				IAmb	IAmb	22 35 18.6		
PPT2	**Papeete2** comp=Z,253nm,25.0s	**73.70**	**257**	*e*LR	LR	LR	22 57 51.5		
PPT	**Papeete** comp=Z,43nm,21.6s,baz=318,slow=30	**73.71**	**257**		LR	LR	23 00 46.6		
SCHQ	**Schefferville** comp=Z,6.2nm,1.2s,baz=175,slow=8.1,SNR=3.2	**74.53**	**3**		P	**P**	**22 35 15.3**	**-0.2**	
SCHQ	comp=Z,84nm,18.1s,baz=205,slow=39				LR	LR	23 11 31.8		
SCHQ	**Schefferville** comp=Z,39nm,1.6s	**74.53**	**3**		IAmb	IAmb	22 35 30.0		
ORV	**Oroville** comp=Z,25nm,1.4s	**75.60**	**322**		P	**P**	**22 35 23.5**	**+1.5**	
ORV					IAmb	IAmb	22 35 49.2		
EGMT	**Eagleton** comp=Z,13nm,0.8s	**75.99**	**334**		IAmb	IAmb	22 37 16.3		
MSO	**Missoula**	**76.86**	**331**		P	**P**	**22 35 30.2**	**+1.1**	
TOA0	**Torodi Ar. Sit**	**78.76**	**72**		P	**P**	**22 35 40.0**	**-0.3**	
TOA0	comp=Z,29nm,1.0s				IAmb	IAmb	22 35 49.5		
TORD	**Torodi Ar. Bea** comp=Z,9.3nm,0.8s,baz=252,slow=4.2,SNR=33	**78.76**	**72**		P	**P**	**22 35 39.5**	**-0.7**	
TORD	comp=Z,283nm,21.2s,baz=235,slow=34				LR	LR	23 08 39.4		
PVAQ	**Vaqueiros** comp=Z,110nm,18.0s	**82.46**	**46**	*e*LR	LR	LR	23 07 27.2		
PMRV	**Marv??o** comp=Z,222nm,18.0s	**83.75**	**44**	*e*LR	LR	LR	23 10 39.1		
MTE	**Manteigas** comp=Z,296nm,18.0s	**84.16**	**43**	*e*LR	LR	LR	23 08 32.9		
PGAV	**Gavieira, Arco** comp=Z,282nm,20.0s	**84.54**	**42**	*e*LR	LR	LR	23 08 33.9		
MVO	**Moncorvo** comp=Z,33nm,1.6s	**84.90**	**43**	*e*P		**P**	**22 36 13.3**	**+1.1**	
MVO	**Moncorvo** comp=Z,246nm,18.0s	**84.90**	**43**	*e*LR	LR	LR	23 09 21.6		
PBRG	**Bragança** comp=Z,28nm,1.6s	**85.42**	**43**	*e*P		**P**	**22 36 15.8**	**+1.1**	
TAM	**Tamanrasset** comp=Z,22nm,1.3s	**85.94**	**64**		P	**P**	**22 36 19.1**	**+1.3**	
TAM					IAmb	IAmb	22 36 29.0		
ESDC	**Sonseca Array** comp=Z,3.0nm,1.1s,baz=252,slow=6.0,SNR=9.7	**86.15**	**45**		P	**P**	**22 36 16.9**	**-1.5**	
ESDC	comp=Z,130nm,18.1s,baz=240,slow=36				LR	LR	23 14 39.9		
YKA	**Yellowknife Ar** comp=Z,1.7nm,0.8s,baz=137,slow=5.3,SNR=24	**89.03**	**341**		P	**P**	**22 36 32.9**	**+1.3**	
YKA	comp=Z,71nm,18.4s,baz=0.0,slow=38				LR	LR	23 20 27.5		
KEST	**Kesra** comp=Z,152nm,21.1s,baz=236,slow=35	**93.98**	**54**		LR	LR	23 18 31.1		
H11S2	**WAKE ISLAND Hyl** baz=101,slow=74,SNR=64	**25.65**	**279**		T	T	01 02 01.3		
H11S1	**WAKE ISLAND Hyl** baz=101,slow=74,SNR=52	**25.66**	**279**		T	T	01 02 03.6		
H11S3	**WAKE ISLAND Hyl** baz=101,slow=74,SNR=49	**25.67**	**279**		T	T	01 02 02.5		
H11N3	**WAKE ISLAND Hyl** baz=102,slow=74,SNR=3.3	**25.69**	**280**		T	T	01 02 08.4		
H11N2	**WAKE ISLAND Hyl** baz=102,slow=74,SNR=4.0	**25.71**	**280**		T	T	01 02 12.5		
H11N1	**WAKE ISLAND Hyl** baz=102,slow=74,SNR=3.4	**25.71**	**280**		T	T	01 02 03.2		
WRA	**Warramunga Arr** comp=Z,0.6nm,0.9s,baz=137,slow=1.9,SNR=1.4	**133.22**	**214**		PKP	**PKiKP**	**22 42 55.8**	**+0.8**	
ZAA0	**Zalesovo Array**	**141.33**	**23**			**PKiKP**	**22 43 09.6**	**-0.8**	
ZALV	**Zalesovo Beam** comp=Z,2.0nm,0.7s,baz=263,slow=2.5,SNR=11	**141.33**	**23**		PKP	**PKPdf**	**22 43 08.1**	**+0.5**	
MKAR	**Makanchi Array** comp=Z,7.2nm,1.1s,baz=325,slow=1.9,SNR=32	**145.48**	**33**		PKPbc	**PKPab**	**22 43 16.4**	**+0.9**	
KSH	**Kashi**	**145.62**	**48**		PKPbc	**PKPab**	**22 43 17.8**	**+1.4**	
KSH					PP	**PP**	**22 46 40.5**	**+3.9**	
KSH					PKS	**PKSdf**	**22 46 52.8**	**+1.4**	
KSH					SKKS		22 53 28.3		
KSH					SS	SS	23 05 31.5	+2.1	
KSH	comp=Z,170nm,4.6s				AMB	AMB			
USRK	**Ussuriysk Ar.** comp=Z,1.7nm,0.7s,baz=64,slow=4.4,SNR=4.4	**149.08**	**327**		PKPbc	**PKiKP**	**22 43 26.4**	**-0.3**	
MJAR	**Matsushiro Arr** comp=Z,0.5nm,0.3s,baz=73,slow=22,SNR=4.7	**149.50**	**309**		PKPbc	**PKiKP**	**22 43 27.9**	**+0.1**	
MAT	**Matsushiro**	**149.50**	**309**	*e*PKP		**PKPab**	**22 43 29.6**	**-2.1**	
WMQ	**Urumqi**	**150.28**	**32**	*e*PKPbc		**PKPdf**	**22 43 24.0**	**+0.7**	
WMQ	comp=Z,220nm,11.9s				LR	LR			
WMQ	comp=Z,270nm,9.1s				LR	LR			
WMQ	comp=Z,170nm,12.1s				LR	LR			
SONM	**Songino Array** comp=Z,1.7nm,0.7s,baz=267,slow=0.7,SNR=9.4	**152.07**	**4**		PKPbc	**PKiKP**	**22 43 34.2**	**+1.3**	
HHC	**Hu-ho-hao-te**	**159.01**	**354**	*e*PKP		**PKPdf**	**22 43 32.3**	**-3.2**	
HHC	comp=Z,110nm,6.9s				AMB	AMB			
HHC	comp=Z,120nm,18.7s				LR	LR			
HHC	comp=Z,120nm,16.2s				LR	LR			
HHC	comp=Z,150nm,17.0s				LR	LR			
LZH	**Lanzhou**	**163.28**	**14**	*e*PKP		**PKPdf**	**22 43 38.0**	**-2.3**	
LZH					pPKP	sPKPdf	22 43 41.8	-4.3	
LZH					sPKP		22 43 43.0		
LZH	comp=Z,140nm,18.1s				LR	LR			
LZH	comp=Z,130nm,18.0s				LR	LR			
NJ2	**Nanjing** comp=Z,180nm,20.3s	**164.98**	**326**	*e*PKP		**PKPdf**	**22 43 41.5**	**-0.2**	
CD2	**Chengdu**	**168.10**	**22**	PKP		**PKPdf**	**22 43 44.0**	**-0.2**	
CMAR	**Chiang Mai Arr** comp=Z,0.5nm,0.3s,baz=38,slow=27,SNR=1.9	**170.46**	**97**	PKPab		**PKPab**	**22 45 03.2**	**+0.3**	
KMI	**Kunming**	**172.28**	**47**	PKP		**PKPdf**	**22 43 49.8**	**+2.8**	
GYA	**Guiyang**	**173.16**	**17**	*e*PKP		**PKPdf**	**22 43 41.0**	**-6.2**	

TIR **28** *22:34:36.8,41.78N×20.31E,***h6**km**,Md2.0/3,Albania**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.14**	**134**	*i* PG		Pg	22 34 40.2	+0.5
PHP				*i* SG		Sg	22 34 41.8	+0.2
PUK	**Puka**	**0.41**	**310**	*i* PG		Pb	22 34 45.8	-0.7
PUK				*i* SG		Sg	22 34 50.7	+0.6
FNA	**Florina**	**1.28**	**141**	*i* PN		Pn	22 34 59.4	-1.9
FNA				*i* SN		Sg	22 35 01.3	-17

DDA **28** *22:35:38.9,40.42N×26.14E,***h7**km**±2**km**,ML1.7*

ISK 28 22:35:39.2,40.42N×26.12E,h12km,ML1.6/11,Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GELI	**Tayfur-Gelibol**	**0.27**	**93**	PG		Pg	22 35 45.3	+0.5
GELI				SG		Sg	22 35 49.5	+1.0
GOKA	**anakkale-Gk**	**0.28**	**216**	*i* P		Pg	22 35 45.4	+0.5
GOKA				*i* S		Sb	22 35 49.8	-0.9
GOKA	comp=N,278nm,0.5s			IAML			22 35 50.0	
GOKA	comp=E,343nm,0.6s			IAML			22 35 50.0	
GADA	**Gvkgeada**	**0.28**	**218**	PG		Pg	22 35 45.4	+0.4
GADA				SG		Sb	22 35 49.9	-0.9
ENEZ	**Enez**	**0.32**	**4**	PG		Pg	22 35 46.2	+0.4
ERIK	**Erikli-Kesan**	**0.39**	**49**	PG		Pg	22 35 47.4	+0.4
ERIK				SG		Sg	22 35 53.1	+0.8
LPK	**Lapseki**	**0.49**	**95**	PG		Pb	22 35 49.6	-0.1
BOZC	**Bozcaada**	**0.57**	**185**	PG		Pb	22 35 50.9	-0.3
BOZC	**Bozcaada**	**0.57**	**185**	*i* P		Pg	22 35 50.3	-0.1
BOZC				*i* S		Sg	22 35 58.5	+0.4
KESN	**Edirne-Kesan**	**0.59**	**46**	*i* P		Pg	22 35 49.3	-1.6
KESN				*i* S		Sg	22 35 58.6	-0.2
EZN	**Ezine**	**0.61**	**165**	PG		Pb	22 35 51.8	+0.1
BAYC	**CANAKKALE_Bayr**	**0.75**	**154**	*i* P		Pg	22 35 53.3	-0.4
BAYC				*i* S		Sb	22 36 04.5	+0.3
UKOP	**Uzunkopru-Edir**	**0.81**	**28**	PG		Pb	22 35 55.4	+0.2
RDO	**Rodhopi**	**0.85**	**329**	PG		Pb	22 35 56.2	+0.2
KRBG	**Karabiga-Canak**	**0.90**	**91**	PG		Pb	22 35 57.1	+0.4
KNL	**Balıkesir**	**1.08**	**97**	*i* P		Pb	22 35 59.5	-0.3
MRMT	**Marmara Adasi**	**1.14**	**80**	PN		Pn	22 36 01.0	0.0
SIGR	**SIGRI**	**1.22**	**190**	PN		Pb	22 36 02.2	+0.1

ISN **28** *22:44:35.7±1.5,36.71N×43.98E,***h8**km**±1**km**,ML2.5*
DDA **28** *22:44:38.3,36.71N×43.98E,***h8**km**±1**km**,ML2.2*

ISC 28 22:44:37.8±1.6,36.70N±0.05×44.01E±0.07,h14km±13km,
n7,σ1§20/14,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CUKT	**Cukurca**	**0.64**	**330**	*i* P		**Pb**	**22 44 50.4**	**-0.4**
CUKT				*i* S		**Sg**	**22 44 59.1**	**+0.4**
CUKT	comp=N,136nm,0.4s			IAML			22 45 04.0	
CUKT	comp=E,230nm,0.5s			IAML			22 45 05.0	
MSL	**Mosul** baz=60	**0.78**	**248**	*e*Pg		**Pb**	**22 44 51.6**	**-1.5**
MSL				*e*Sg		**Sb**	**22 45 04.5**	**+1.0**
MSL	comp=E,148nm,0.6s			AML	AML		22 45 06.8	
MSL	comp=N,152nm,0.6s			AML	AML		22 45 07.1	
HAKT	**HAKKARI**	**0.89**	**345**	*i* P		**Pb**	**22 44 55.1**	**-0.2**
HAKT				*i* S		**Sn**	**22 45 07.7**	**-1.3**
HAKT	comp=N,37nm,0.5s			IAML			22 45 11.0	
YOVA	**Hakkari_Yksek**	**0.92**	**14**	*i* P		**Pg**	**22 44 55.7**	**0.0**
YOVA				*i* S		**Sn**	**22 45 10.2**	**+0.5**
IKRK	**Kirkuk**	**1.32**	**168**	*e*Pn		**Pn**	**22 45 00.8**	**-1.0**
IKRK				*e*Sn		**Sn**	**22 45 21.4**	**+2.2**
SIRN	**Sırnak**	**1.50**	**303**	*i* P		**Pb**	**22 45 06.4**	**+0.9**
SIRN				*i* S		**Sg**	**22 45 27.3**	**+1.0**
SIRN	comp=N,38nm,0.4s			IAML			22 45 29.0	
SIRN	comp=E,38nm,0.4s			IAML			22 45 31.0	
SRTM	**Siirt_Merkez**	**2.10**	**309**	*i* P		**Pb**	**22 45 16.6**	**+0.7**
SRTM				*i* S		**Sg**	**22 45 44.7**	**-0.8**
SRTM	comp=N,37nm,0.8s			IAML			22 45 54.0	
SRTM	comp=E,17nm,0.6s			IAML			22 45 59.0	

IDC **28** *22:58:50.4±0.6,3.35S×146.03E,h0km,mb4.4/18, mb1 4.5/24,mb1mx4.4/35,mbtmp4.4/24,ML3.5/5,MS4.0/25, Ms1 4.0/25,ms1mx4.0/31,Error ellipse: s-maj=16.7km s-min=11.8km az=84.0*
NEIC **28** *22:58:51.8±1.6,3.37S±0.06×145.98E±0.06,h10km±1km, mb4.9/35,Error ellipse: s-maj=11.9km s-min=7.5km az=137.0*
GCMT **28** *22:58:55.8±0.2,3.31S±0.01×146.06E±0.01,h16km±1km, MW5.0/116,Moment Tensor Solution. s32,c34; s116,c178; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.13±.14; Mθθ0.55±.12; Mϕϕ-0.68±.13; Mrθ0.13±.36; Mrϕ4.21±.10; Mθϕ0.21±.33; Best double couple: M=4.26300×10¹⁶ NP1:ϕ=94.00000°, δ87.00000°, λ2.00000°. NP2:ϕ=4.00000°, δ88.00000°, λ177.00000°. Principal axes: T 4.2030, Plg3.0000°, Azm319.0000°; N 0.1200, Plg87.0000°, Azm156.0000°; P -4.3230, Plg1.0000°, Azm49.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA **28** *22:59:00.9±1.0,4.1S±8.1×14.6E±1.1,h43km±6km,M4.6/25, mb4.8/25,mB5.2/15,MLv4.6/4,Mw(mB)4.6/15*

ISC 28 22:58:54.5±0.4,3.43S±0.05×146.06E±0.06,h25km,n134,
σ1§66/132,mb4.7/53,MS4.2/29,1C,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JAY	**Jayapura** 0.6nm,0.3s,baz=60,slow=21,SNR=2.2	**5.42**	**280**	Pn		**Pn**	**23 00 12.1**	**-1.8**
JAY	comp=Z,567nm,21.1s,baz=3.5,slow=37			LR		LR	23 02 07.4	
JAY	**Jayapura** 0.1nm367nm17nm,1.1s	**5.42**	**280**	P		**Pn**	**23 00 14.8**	**+0.9**
GENI	**Genyem** 0.5nm2µm87nm,1.4s	**5.94**	**278**	P		**Pn**	**23 00 23.6**	**+2.6**
KRVT	**Keravat (AS076** 5.3nm,0.3s,baz=130,slow=13,SNR=7.5	**6.02**	**98**	Pn		**Pn**	**23 00 22.8**	**+0.7**
KRVT	comp=Z,1µm,20.9s,baz=273,slow=37			LR		LR	23 02 34.5	
PMG	**Port Moresby** 12nm,0.3s,baz=42,slow=3.2,SNR=15	**6.03**	**170**	Pn		**Pn**	**23 00 22.8**	**+0.5**
PMG	2.3nm,0.3s,baz=104,slow=13,SNR=3.4			Sn		**Sn**	**23 01 33.2**	**+2.6**
PMG	comp=Z,729nm,21.2s,baz=348,slow=36			LR		LR	23 02 32.0	
PMG	**Port Moresby**	**6.03**	**170**			**Pn**	**23 00 22.9**	**+0.7**
RABL	**Rabaul**	**6.14**	**97**	Pn		**Pn**	**23 00 25.9**	**+2.2**
SMPI	**Sarmi** 0.2nm781nm59nm,1.2s	**7.48**	**281**	P		**Pn**	**23 00 44.2**	**+2.1**
COEN	**Coen** baz=11,SNR=17	**10.84**	**195**	P		**Pn**	**23 01 30.6**	**+2.4**
COEN	**Coen**	**10.84**	**195**			**Pn**	**23 01 29.6**	**+1.4**
MTSU	**Mount Surprise** baz=15,SNR=11	**14.71**	**187**	P		**Pn**	**23 02 23.3**	**+2.1**
SIJI	**Sorong** 0.3nm,0.3s,baz=105,slow=7.3,SNR=8.3	**15.00**	**279**	Pn		**Pn**	**23 02 22.9**	**-2.1**
SIJI	comp=Z,609nm,19.5s,baz=85,slow=40			LR		LR	23 08 46.0	
HNR	**Honiara** 12nm,0.3s,baz=194,slow=15,SNR=1.7	**15.03**	**114**	Pn		**Pn**	**23 02 26.3**	**+0.8**
HNR	comp=Z,644nm,18.3s,baz=282,slow=38			LR		LR	23 08 17.8	
HNR	**Honiara**	**15.03**	**114**			**Pn**	**23 02 25.0**	**-0.5**
KDU	**Kakadu** baz=17,SNR=14	**16.28**	**235**	P		**Pn**	**23 02 39.2**	**-2.5**
CTA	**Charters Tower** 0.4nm,0.3s,baz=344,slow=12,SNR=7.2	**16.55**	**179**	Pn		**Pn**	**23 02 46.7**	**+1.5**
CTA	comp=Z,721nm,19.0s,baz=4.5,slow=38			LR		LR	23 09 25.1	
CTAO	**Charters Tower**	**16.55**	**179**	P		**Pn**	**23 02 47.1**	**+1.9**
MTN	**Manton Dam** baz=18,SNR=9.9	**17.47**	**237**	P		**Pn**	**23 02 55.6**	**-1.1**
MTN	**Manton Dam**	**17.47**	**237**			**Pn**	**23 02 54.6**	**-2.0**
QIS	**Mount Isa** baz=19,SNR=8.0	**18.14**	**200**	P		**Pn**	**23 03 05.3**	**+0.3**
LBMI	**Labuha** 1µm66nm,1.9s	**18.75**	**278**	P		**Pn**	**23 03 14.4**	**+2.0**
NLAI	**Namlea** 33nm,0.6s	**18.93**	**270**	P		**Pn**	**23 03 15.5**	**+1.0**
TNTI	**Ternate** 32nm,1.4s	**19.14**	**282**	P		**Pn**	**23 03 18.5**	**+1.4**
TNTI	**Ternate**	**19.14**	**282**	P		**P**	**23 03 16.0**	**-0.2**
WB0	**Warramunga Arr**	**19.83**	**214**	P		**P**	**23 03 23.0**	**-0.6**
WR0	**Warramunga Arr**	**19.90**	**213**	P		**P**	**23 03 24.0**	**-0.4**
WRAB	**Tennant Creek**	**19.98**	**214**	P		**P**	**23 03 24.2**	**-1.1**
WB2	**Warramunga Arr**	**19.99**	**214**	P		**P**	**23 03 24.6**	**-0.8**
WRA	**Warramunga Arr** 98nm,1.0s,baz=31,slow=12,SNR=92	**20.00**	**214**	P		**P**	**23 03 24.2**	**-1.2**
WRA	comp=Z,748nm,19.5s,baz=45,slow=37			LR		LR	23 11 18.3	
KNRA	**Kununurra** baz=21,SNR=32	**20.92**	**233**	P		**P**	**23 03 34.2**	**-1.3**
KNRA	**Kununurra**	**20.92**	**233**	P		**P**	**23 03 34.2**	**-1.3**
EIDS	**Eidsvold** baz=23,SNR=4.4	**22.34**	**168**	P		**P**	**23 03 49.7**	**-1.0**
EIDS	**Eidsvold**	**22.34**	**168**	P		**P**	**23 03 51.0**	**+0.4**
EIDS	comp=Z,76nm,1.8s			IAmb		IAmb	23 04 01.6	
SOEI	**Soe** comp=Z,2µmcomp=Z,198nm,1.0s	**22.53**	**253**	P		**P**	**23 03 53.2**	**+0.3**
SOEI	**Soe**	**22.53**	**253**	P		**P**	**23 03 51.1**	**-1.9**
DAV	**Davao City (W)** comp=Z,125nm,18.3s,baz=106,slow=38	**22.95**	**297**	LR		LR	23 13 11.7	
RMQ	**Roma** baz=24,SNR=7.9	**23.07**	**174**	P		**P**	**23 03 57.9**	**-0.5**
QLP	**Quilpie** baz=24,SNR=7.9	**23.08**	**184**	P		**P**	**23 03 58.5**	**0.0**
BATI	**Baumata** comp=Z,100nm,0.8s,baz=160,slow=2.3,SNR=14	**23.22**	**252**	P		**P**	**23 03 58.8**	**-1.2**
BATI	comp=Z,452nm,18.5s,baz=92,slow=42			LR		LR	23 15 16.5	
BATI	**Baumata** comp=Z,1µmcomp=Z,89nm,0.7s	**23.22**	**252**	P		**P**	**23 03 59.2**	**-0.8**
AS31	**Alice Springs**	**23.29**	**209**	P		**P**	**23 04 00.0**	**-0.6**
KCP	**Kidapawan**	**23.36**	**296**	*e*P		**P**	**23 04 02.8**	**+1.4**
LUWI	**Luwuk**	**23.39**	**275**	P		**P**	23 04 09.9	+8.2
LUWI	**Luwuk**	**23.39**	**275**	P		**P**	**23 04 01.2**	**-0.5**
BBSI	**Bau Bau** comp=Z,108nmcomp=Z,8.2nm,1.0s	**23.50**	**264**	P		**P**	**23 04 04.6**	**+1.8**
APSI	**Ampana** comp=Z,607nmcomp=Z,48nm,1.5s	**24.52**	**275**	P		**P**	**23 04 12.9**	**+0.6**
FITZ	**Fitzroy Crossi** baz=25,SNR=74	**24.74**	**232**	P		**P**	**23 04 12.9**	**-1.4**
FITZ	**Fitzroy Crossi** comp=Z,60nm,0.6s,baz=48,slow=8.7,SNR=177	**24.74**	**232**	P		**P**	**23 04 13.3**	**-1.0**
FITZ	comp=Z,987nm,19.5s,baz=56,slow=38			LR		LR	23 14 38.0	
FITZ	**Fitzroy Crossi**	**24.74**	**232**	P		**P**	**23 04 13.3**	**-1.0**
BNSI	**Bone** comp=Z,956nmcomp=Z,74nm,1.3s	**25.91**	**267**	P		**P**	**23 04 27.6**	**+2.7**
BKSI	**Bulukumba** comp=Z,29nm,0.9s	**25.92**	**265**	P		**P**	**23 04 27.2**	**+2.1**
TTSI	**Tana Toraja** comp=Z,901nmcomp=Z,54nm,1.4s	**26.20**	**270**	P		**P**	**23 04 30.9**	**+3.3**
SPSI	**Sidrap Palu** comp=Z,554nmcomp=Z,17nm,1.4s	**26.24**	**268**	P		**P**	**23 04 30.2**	**+2.3**
KAPI	**Kappang** comp=Z,8.0nm,0.8s,baz=287,slow=23,SNR=4.5	**26.28**	**266**	P		**P**	**23 04 27.2**	**-1.0**
KAPI	comp=Z,210nm,21.7s,baz=91,slow=37			LR		LR	23 15 10.7	
KAPI	**Kappang** comp=Z,45nm,1.5s	**26.28**	**266**	IAmb		IAmb	23 04 34.1	
MPSI	**Mapaga**	**26.41**	**278**	P		**P**	**23 04 35.2**	**+5.7**
DZM	**Mont Dzumac** comp=Z,13nm,0.8s	**27.11**	**135**	*e*P		**P**	**23 04 35.0**	**-0.8**
DZM	comp=Z,301nm,24.4s			*e*S		**S**	**23 09 11.5**	**-1.3**
DZM	comp=Z,1µm,25.7s			*e*LR		LR	23 11 28.6	
DZM	**Mont Dzumac** comp=Z,14nm,0.9s,baz=170,slow=20,SNR=5.3	**27.11**	**135**	P		**P**	**23 04 36.4**	**+0.6**
DZM	comp=Z,797nm,18.5s,baz=322,slow=34			LR		LR	23 14 13.4	
DZM	**Mont Dzumac**	**27.11**	**135**	P		**P**	**23 04 35.5**	**-0.3**
DZM	comp=Z,58nm,2.0s			IAmb		IAmb	23 04 49.8	
WRKA	**Warakurna** baz=28,SNR=37	**27.45**	**217**	P		**P**	**23 04 37.9**	**-0.9**
STKA	**Stephens Creek** baz=29,SNR=11	**28.60**	**188**	P		**P**	**23 04 48.9**	**0.0**
STKA	**Stephens Creek** comp=Z,12nm,0.8s,baz=346,slow=9.3,SNR=19	**28.60**	**188**	P		**P**	**23 04 51.0**	**+2.1**
STKA	**Stephens Creek**	**28.60**	**188**	P		**P**	**23 04 47.7**	**-1.3**
TGY	**Tagaytay City** comp=Z,264nm,21.9s,baz=202,slow=32	**30.40**	**306**	LR		LR	23 15 02.7	
BBOO	**Buckleboo** baz=31,SNR=6.5	**30.69**	**197**	P		**P**	**23 05 06.7**	**-0.7**
FORT	**Forrest** baz=33,SNR=16	**32.07**	**210**	P		**P**	**23 05 18.9**	**-0.7**
FORT	**Forrest**	**32.07**	**210**	P		**P**	**23 05 17.5**	**-2.1**
SZP	**Santa**	**32.75**	**310**	P		**P**	**23 05 24.5**	**-1.2**
MEEK	**Meekatharra** baz=36,SNR=7.1	**34.97**	**226**	P		**P**	**23 05 43.5**	**-1.4**
YULB	**Yu-li**	**35.97**	**319**	P		**P**	**23 05 51.4**	**-2.1**
YULB	comp=Z,31nm,1.5s			IAmb		IAmb	23 06 00.8	
YHNB	**Yeheng**	**36.82**	**321**	P		**P**	**23 06 00.6**	**-0.3**
JNU	**Nakatsue** comp=Z,11nm,1.0s,baz=114,slow=7.8,SNR=4.7	**39.09**	**340**	P		**P**	**23 06 18.8**	**-1.2**
JNU	**Nakatsue** comp=Z,48nm,1.5s	**39.09**	**340**	IAmb		IAmb	23 06 28.4	
MJAR	**Matsushiro Arr** comp=Z,3.7nm,0.7s,baz=165,slow=8.2,SNR=8.1	**40.44**	**350**	P		**P**	**23 06 29.5**	**-1.5**
MJAR	comp=Z,79nm,18.2s,baz=205,slow=35			LR		LR	23 22 20.4	
MAT	**Matsushiro**	**40.44**	**350**	P		**P**	**23 06 29.5**	**-1.5**
MAT				S		**S**	**23 12 38.0**	**-0.2**
**QI

GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,100nm,5.2s
GYA LR LR
comp=N,100nm,16.3s
GYA LR LR
comp=E,120nm,17.7s
GYA LR LR
comp=Z,200nm,18.2s
KCSI Kotacane, Aceh 48.75 278 P P 23 07 47.8 +10
USA0B Ussuriysk Arra 49.07 347 P **P** **23 07 38.6 -1.0**
USA0B IAmb IAmb 23 07 53.1
comp=Z,13nm,1.5s
USRK Ussuriysk Ar. 49.07 347 P **P** **23 07 39.4 -0.3**
comp=Z,3.6nm,0.7s,baz=170,slow=8.7,SNR=11
USRK LR LR 23 26 38.3
comp=Z,83nm,19.3s,baz=153,slow=34
MDJ Mudanjiang 50.06 345 P **P** **23 07 48.0 +0.8**
MDJ S **S** **23 15 02.5 +5.6**
MDJ pmax pmax
comp=Z,5.0nm,0.3s
MDJ pmax pmax
comp=Z,140nm,4.2s
MDJ LR LR
comp=N,120nm,10.3s
MDJ LR LR
comp=E,110nm,7.9s
MDJ LR LR
comp=Z,200nm,18.6s
KMI Kunming 50.71 307 P **P** **23 07 54.5 +1.7**
KMI pmax pmax
comp=Z,13nm,1.3s
XAN Xi'an 51.12 320 P **P** **23 07 56.8 +1.3**
XAN pP pwP 23 08 15.8 +10
XAN pmax pmax
comp=Z,13nm,1.9s
XAN LR LR
comp=N,230nm,17.3s
XAN LR LR
comp=E,150nm,19.5s
XAN LR LR
comp=Z,340nm,20.6s
BJI Beijing 51.22 331 P **P** **23 07 57.0 +1.0**
BJI pmax pmax
comp=Z,6.0nm,0.6s
CMAR Chiang Mai Arr 51.24 297 P **P** **23 07 57.6 +1.1**
comp=Z,3.6nm,0.9s,baz=118,slow=5.7,SNR=16
CMAR LR LR 23 30 27.0
comp=Z,49nm,18.2s,baz=150,slow=37
CHTO Chiang Mai 51.36 297 P **P** **23 07 55.9 -1.6**
CHTO IAmb IAmb 23 08 09.3
comp=Z,22nm,1.7s
CD2 Chengdu 52.83 313 *e*P **P** **23 08 08.0 -0.3**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
KLR Kul'dur 53.90 348 P **P** **23 08 15.3 -0.5**
comp=Z,3.0nm,0.8s,baz=198,slow=2.6,SNR=7.5
HHC Hu-ho-hao-te 54.17 328 *e*P **P** **23 08 20.3 +2.2**
HHC S **S** **23 15 53.3 -0.4**
HHC pmax pmax
comp=Z,8.0nm,1.0s
HHC pmax pmax
comp=Z,68nm,4.6s
HHC LR LR
comp=N,140nm,18.7s
HHC LR LR
comp=E,120nm,17.0s
HHC LR LR
comp=Z,160nm,17.0s
LZH Lanzhou 55.67 319 *e*P **P** **23 08 29.5 +0.4**
LZH pP pP 23 08 32.5 -3.6
LZH sP sP 23 08 34.3 -4.6
LZH *e*PP **PP** **23 10 35.5 +1.9**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,93nm,7.8s
LZH LR LR
comp=N,370nm,15.0s
LZH LR LR
comp=E,370nm,15.3s
LZH LR LR
comp=Z,560nm,17.6s
PETK Petropavlovsk- 57.18 8 P **P** **23 08 37.6 -1.7**
comp=Z,1.5nm,0.8s,baz=166,slow=8.3,SNR=2.0
GTA Gaotai 60.18 320 *e*P **P** **23 09 00.8 +0.2**
GTA pP pP 23 09 06.5 -1.3
GTA sP sP 23 09 09.5 -1.0
GTA S **S** **23 17 15.0 +1.9**
GTA sS sS 23 17 24.5 -0.5
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA pmax pmax
comp=Z,130nm,5.9s
GTA LR LR
comp=N,110nm,17.5s
GTA LR LR
comp=E,160nm,17.8s
GTA LR LR
comp=Z,220nm,21.3s
ULN Ulaanbaatar 61.42 331 P **P** **23 09 08.1 -0.9**
ULN IAmb IAmb 23 09 13.1
comp=Z,22nm,1.6s
SONM Songino Array 61.72 331 P **P** **23 09 10.9 0.0**
comp=Z,2.2nm,0.9s,baz=150,slow=5.2,SNR=12
SONM LR LR 23 35 31.2
comp=Z,289nm,19.3s,baz=132,slow=36
TAPN Taplejung 63.98 303 *e*P **P** **23 09 28.5 +1.9**
comp=Z,30nm,1.2s
ODAN Odare 64.09 302 *e*P **P** **23 09 28.5 +1.3**
comp=Z,16nm,0.8s
PPT2 Papeete2 64.55 108 *e*LR LR 23 28 58.6
comp=Z,98nm,24.0s
TBI Tubuai 65.25 114 *e*LQ LQ 23 26 22.4
comp=Z,393nm,35.0s
TBI *e*LR LR 23 29 04.3
comp=Z,292nm,36.2s
JIRN Jiri 65.35 302 *e*P **P** **23 09 37.5 +1.9**
PKI Pulchoki 65.98 302 *e*P **P** **23 09 41.3 +1.6**
comp=Z,26nm,1.1s
DMN Daman 66.25 302 *e*P **P** **23 09 42.8 +1.5**
comp=Z,36nm,0.9s
GKN Gorkha 66.77 302 *e*P **P** **23 09 46.0 +1.5**
KOLN Koldanda 67.58 302 *e*P **P** **23 09 50.0 +0.3**
comp=Z,27nm,0.9s
DANN Dangsing 67.61 302 *e*P **P** **23 09 51.4 +1.4**
comp=Z,18nm,0.7s
PYUN Piuthan 68.19 302 *e*P **P** **23 09 53.9 +0.4**
comp=Z,26nm,0.9s
WMQ Urumqi 70.25 319 *e*P **P** **23 10 06.5 +0.7**
WMQ pP pP 23 10 10.5 -2.6
WMQ S **S** **23 19 17.8 +1.5**
WMQ pmax pmax
comp=Z,21nm,0.6s
WMQ pmax pmax
comp=Z,45nm,3.7s
WMQ LR LR
comp=N,190nm,7.1s
WMQ LR LR
comp=E,200nm,12.3s
WMQ LR LR
comp=Z,59nm,9.1s
VNDA Vanda 74.51 176 P **P** **23 10 29.4 -1.2**
comp=Z,1.2nm,0.6s,baz=318,slow=6.3,SNR=5.7
VNDA LR LR 23 41 17.4
comp=Z,98nm,18.3s,baz=346,slow=34
MK31 Makanchi Array 74.93 320 P **P** **23 10 32.4 -1.2**
MKAR Makanchi Array 74.93 320 P **P** **23 10 31.9 -1.7**
comp=Z,2.3nm,0.9s,baz=108,slow=7.8,SNR=13
MKAR LR LR 23 41 52.9
comp=Z,98nm,21.8s,baz=32,slow=34
MAKZ Makanchi 75.14 320 P **P** **23 10 34.1 -0.6**
MAKZ IAmb IAmb 23 10 38.2
comp=Z,25nm,1.8s
ZAA0 Zalesovo Array 76.35 328 P **P** **23 10 40.5 -0.9**
ZALV Zalesovo Beam 76.35 328 P **P** **23 10 39.7 -1.8**
comp=Z,0.6nm,0.5s,baz=23,slow=31,SNR=2.9
ZALV LR LR 23 42 57.0
comp=Z,207nm,21.2s,baz=126,slow=35
KSH Kashi 76.98 312 P **P** **23 10 49.0 +3.5**
KSH pP pP 23 10 53.3 +0.4
KSH pmax pmax
comp=Z,9.0nm,1.1s
KSH pmax pmax
comp=Z,150nm,3.6s
NIL Nilore 77.68 305 P **P** **23 10 47.7 -1.7**
NIL IAmb IAmb 23 10 55.9
comp=Z,33nm,1.9s
KURK Kurchatov 78.61 323 P **P** **23 10 52.9 -1.3**
KURK IAmb IAmb 23 10 59.4
comp=Z,17nm,1.5s
MLY Manley 82.12 22 P **P** **23 11 12.9 +0.1**
MLY IAmb IAmb 23 11 31.6
comp=Z,14nm,1.9s
RND Reindeer 82.18 24 P **P** **23 11 11.9 -1.4**
RND IAmb IAmb 23 11 28.2
comp=Z,12nm,1.6s
IL31 83.51 23 P **P** **23 11 19.9 0.0**
ILAR Eielson Array 83.51 23 P **P** **23 11 18.6 -1.5**
comp=Z,1.2nm,0.9s,baz=251,slow=4.9,SNR=8.8
MAW Mawson 84.24 202 LR LR 23 47 15.5
comp=Z,46nm,18.3s,baz=58,slow=34
DAWY Dawson 86.36 25 P **P** **23 11 34.4 -0.1**
DAWY IAmb IAmb 23 11 42.5
comp=Z,18nm,2.0s
GEYT Alibeck 90.46 308 LR LR 23 54 14.1
comp=Z,110nm,21.2s,baz=50,slow=37
NVAR Mina Array Bea 96.54 52 LR LR 23 47 27.8
comp=Z,168nm,21.9s,baz=276,slow=30
YKA Yellowknife Ar 97.35 28 P **P** **23 12 23.3 -2.2**
comp=Z,0.6nm,0.9s,baz=280,slow=3.9,SNR=4.9
YKA LR LR 23 51 27.4
comp=Z,81nm,21.8s,baz=0.0,slow=32
TORD Torodi Ar. Bea 143.49 287 PKhKP PKPpre 23 18 24.4
comp=Z,1.1nm,0.7s,baz=126,slow=2.2,SNR=9.0
DBIC Dimbokro 150.85 277 PKPbc **PKPbc** **23 18 47.2 +1.2**
comp=Z,6.0nm,0.7s,baz=121,slow=5.7,SNR=4.6

BEO ***28*** *23:49:11.8±0.4, 41.˚88N×20.˚10E, h0km, ML1.4/4*
TIR ***28*** *23:49:13.0, 41.˚92N×20.˚07E, h7km, Md2.6/3*
ISC 28 23:49:11.1±1.1, 41.˚85N±0.˚03×20.˚13E±0.˚04, h8km±12km, n9, σ1°35/17, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUK	**Puka**	**0.26**	**317**	*i* PG	**Pn**	**23 49 20.2**	**-1.2**
PUK				*i* SG	**Sb**	**23 49 27.0**	**+4.1**
PHP	**Peshkopia**	**0.28**	**126**	*i* PG	**Pg**	**23 49 16.7**	**-0.1**
PHP				*i* SG	**Sg**	**23 49 20.6**	**0.0**
BCI	**Bajram Curri**	**0.52**	**355**	*i* PG	**Pg**	**23 49 21.6**	**+0.5**
BCI				*i* SG	**Sg**	**23 49 29.0**	**+1.1**
TIR	**Tirane**	**0.54**	**202**	*e*Pg	**Pb**	**23 49 23.0**	**+0.2**
TIR				*e*Sg	**Sg**	**23 49 29.0**	**+0.4**
PDG	**Podgorica**	**0.87**	**312**	*e*Pg	**Pg**	**23 49 26.2**	**-1.7**
PDG				*e*Sg	**Sg**	**23 49 38.6**	**-0.6**
SKO	**Skopje**	**0.98**	**82**	*e*Sg	**Sb**	**23 49 43.6**	**+0.1**
SJES	**Sjenica**	**1.42**	**355**	*e*Pg	**Pn**	**23 49 36.7**	**-0.5**
SJES				*e*Sg	**Sb**	**23 49 56.0**	**0.0**
TREB	**Trebinje**	**1.58**	**304**	*e*Pg	**Pn**	**23 49 39.3**	**-0.1**
TREB				*e*Sg	**Sb**	**23 50 01.0**	**+0.3**
IVAS	**Ivanjica**	**1.73**	**0**	*e*Pn	**Pb**	**23 49 43.0**	**0.0**
IVAS				*e*Sn	**Sb**	**23 50 04.6**	**-0.3**

ATH 28 23:50:10.3, 37.˚64N×20.˚73E, h16km±7km, ML1.4/1, Error ellipse: s-maj=9.7km s-min=3.8km az=283.0, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLMS	**Volimes, Zakyn**	**0.24**	**347**	P	Pg	23 50 15.6	-0.2
VLMS				S	Sg	23 50 19.4	-0.1
VLMS				AML	AML	23 50 20.3	
	comp=E,202μm,0.1s						
VLMS				AML	AML	23 50 20.4	
	comp=N,232μm,0.1s						
KFL	**Anninata**	**0.47**	**5**	P	Pg	23 50 20.0	+0.2
KFL				S	Sg	23 50 26.2	0.0
VLS	**Valsamata**	**0.55**	**348**	P	Pg	23 50 20.8	-0.4
VLS				S	Sb	23 50 29.0	-0.3

SNET ***29*** *00:05:47.7±0.7, 12.˚35N×89.˚42W, h15km±6km, ML3.5*
SSS ***29*** *00:05:47.7±0.7, 12.˚35N×89.˚42W, h15km±6km, ML3.5*
ISC 29 00:05:47.0±3.1, 12.˚4N±0.˚2×89.˚4W±0.˚1, h10km, n24, σ0°36/28, 2C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**1.13**	**4**	*e*P	**Pb**	**00 06 08.3**	**-0.4**
LALI				*e*S	**Sb**	**00 06 23.7**	**+0.1**
LALI	**Alcalda de L**	**1.13**	**4**	*e*P	**Pb**	**00 06 08.3**	**-0.4**
LALI				*e*S	**Sb**	**00 06 23.7**	**+0.1**
LFRS	**El Faro**	**1.31**	**15**	*e*P	**Pn**	**00 06 10.8**	**-0.7**
LFRS				*e*S	**Sb**	**00 06 29.3**	**+0.6**
LFRS	**El Faro**	**1.31**	**15**	*e*P	**Pn**	**00 06 10.8**	**-0.7**
LFRS				*e*S	**Sb**	**00 06 29.3**	**+0.6**
COEG	**Centro de Oper**	**1.36**	**22**	*e*P	**Pn**	**00 06 12.1**	**-0.1**
COEG	**Centro de Oper**	**1.36**	**22**	*e*P	**Pn**	**00 06 12.1**	**-0.1**
BOQS	**Boqueron**	**1.38**	**5**	⇑*e*P	**Pn**	**00 06 12.4**	**-0.2**
BOQS	**Boqueron**	**1.38**	**5**	⇑*e*P	**Pn**	**00 06 12.4**	**-0.2**
LBRS	**Las Brisas**	**1.42**	**14**	*e*P	**Pn**	**00 06 13.1**	**+0.1**
LBRS	**Las Brisas**	**1.42**	**14**	*e*P	**Pn**	**00 06 13.1**	**+0.1**
TECA	**Tecapa**	**1.44**	**38**	*e*P	**Pn**	**00 06 13.4**	**+0.1**
TECA	**Tecapa**	**1.44**	**38**	*e*P	**Pn**	**00 06 13.4**	**+0.1**
CEVE	**Cerro Verde**	**1.48**	**352**	*e*P	**Pn**	**00 06 14.2**	**+0.2**
CEVE				IAML		00 06 42.2	
	comp=Z,831nm,0.4s						
CEVE	**Cerro Verde**	**1.48**	**352**	*e*P	**Pn**	**00 06 14.2**	**+0.2**
CEVE				IAML		00 06 42.2	
	comp=Z,831nm,0.4s						
SBLS	**San Blas**	**1.50**	**352**	*e*P	**Pn**	**00 06 14.4**	**+0.2**
SBLS	**San Blas**	**1.50**	**352**	*e*P	**Pn**	**00 06 14.4**	**+0.2**
PACA	**Pacayal**	**1.53**	**43**	*e*P	**Pn**	**00 06 14.9**	**+0.3**
PACA	**Pacayal**	**1.53**	**43**	*e*P	**Pn**	**00 06 14.9**	**+0.3**
RTR	**El Retiro**	**1.56**	**351**	*e*P	**Pn**	**00 06 15.5**	**+0.5**
RTR	**El Retiro**	**1.56**	**351**	*e*P	**Pn**	**00 06 15.5**	**+0.5**
LCND	**La Caada**	**1.76**	**57**	*e*P	**Pn**	**00 06 17.7**	**+0.1**
LCND				IAML		00 06 44.4	
	comp=Z,302nm,0.3s						
LCND	**La Caada**	**1.76**	**57**	*e*P	**Pn**	**00 06 17.7**	**+0.1**
LCND				IAML		00 06 44.4	
	comp=Z,302nm,0.3s						
MTO3	**Montecristo**	**2.04**	**1**	*e*P	**Pn**	**00 06 21.7**	**+0.1**
MTO3	**Montecristo**	**2.04**	**1**	*e*P	**Pn**	**00 06 21.7**	**+0.1**

NIED ***29*** *00:17:00, 33.˚40N×139.˚50E, h8km, Mw4.4 Best double couple: M0=4.70000×10^15 NP1:φs=308.00000°, δ60.00000°, λ=-95.00000°. NP2:φs=139.00000°, δ30.00000°, λ=-81.00000°.*
IDC ***29*** *00:17:54.8±0.5, 33.˚16N×139.˚37E, h0km, mb4.3/23, mb1 4.4/27, mb1mx4.3/36, mbtmp4.2/27, ML3.9/3, MS3.3/16, Ms1 3.4/16, ms1mx3.2/42, Error ellipse: s-maj=15.0km s-min=8.1km az=16.0*
MOS ***29*** *00:17:57.6±1.1, 33.˚18N×139.˚33E, h30km, mb4.8/33, Error ellipse: s-maj=12.0km s-min=5.7km az=112.3*
JMA ***29*** *00:17:58.7, 33.˚40N×139.˚47E, h30km±2km, M4.5*
JMA Felt I J1.
NEIC ***29*** *00:17:59.5±2.7, 33.˚28N±0.˚07×139.˚40E±0.˚05, h31km±4km, mb4.7/47, Error ellipse: s-maj=9.8km s-min=6.1km az=179.0*
ISC 29 00:17:59.4±0.4, 33.˚37N±0.˚03×139.˚43E±0.˚03, h26km±3km, h26km:pP-P, n170, σ1°63/207, mb4.5/70, MS3.6/22, 16C-15D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**0.39**	**130**	Pn	**Pb**	**00 18 07.6**	**-0.3**
	1μm,0.3s,baz=342,slow=10,SNR=408						
JHJ				Sn	**Sn**	**00 18 15.6**	**-0.3**
	3μm,0.3s,baz=99,slow=18,SNR=25						
JHJ2	**Mitsune**	**0.42**	**128**	⇑P	**Pb**	**00 18 07.5**	**-0.8**
JHJ2	**Mitsune**	**0.42**	**128**		**Pb**	**00 18 07.7**	**-0.6**
JHJ2					**Sb**	**00 18 12.9**	**-1.4**
JHCJ	**Hachijojimakas**	**0.43**	**134**	⇑P	**Pb**	**00 18 07.6**	**-0.9**
JHCJ				*e*S	**Sb**	**00 18 13.7**	**-1.0**
JMKN	**Mikurajimanish**	**0.54**	**15**	⇑P	**Pb**	**00 18 08.9**	**-1.4**
JMKN				*e*S	**Sb**	**00 18 15.8**	**-1.9**
JKO	**Kozu shima**	**0.85**	**344**	⇑P	**Pb**	**00 18 13.9**	**-1.6**
JKO				*e*S	**Sb**	**00 18 24.6**	**-1.9**
JAOM	**Aogashimamukai**	**0.95**	**162**	⇓P	**Pb**	**00 18 16.2**	**-1.0**
JAOM				*e*S	**Sb**	**00 18 28.8**	**-0.6**
JSKK	**Shikinejimakit**	**0.98**	**350**	⇑P	**Pb**	**00 18 15.7**	**-2.0**
JSKK				*e*S	**Sb**	**00 18 28.6**	**-1.6**
JTHY	**Toshimahigashi**	**1.16**	**354**	P	**Pn**	**00 18 18.8**	**-1.1**
JIM2	**Oshima 3**	**1.34**	**0**	⇑P	**Pn**	**00 18 21.8**	**-0.7**
JIM2 *e*S **Sn** **00 18 38.7 -0.8**
JIZS Izushimoda 1.42 341 ⇓P **Pn** **00 18 22.6 -0.9**
JIZS *e*S **Sn** **00 18 40.5 -0.8**
TK03 Tokai 3 1.45 303 ⇓P **Pn** **00 18 23.1 -0.7**
TK02 Tokai 2 1.51 293 ⇓P **Pn** **00 18 23.5 -1.0**
TK02 *e*S **Sn** **00 18 43.0 -0.1**
TK01 Tokai 1 1.58 285 P **Pn** **00 18 24.0 -1.4**
TK01 *e*S **Sn** **00 18 43.8 -1.1**
KTJ3 Kamata3 1.59 349 P **Pn** **00 18 25.3 -0.5**
TK04 Tokai 4 1.64 309 ⇓P **Pn** **00 18 25.6 -0.8**
TK04 *e*S **Sn** **00 18 45.8 -0.8**
TTO5 TONANKAI O.B.S 1.67 302 ⇓P **Pn** **00 18 25.7 -1.1**
TTO5 S **Sn** **00 18 46.6 -0.7**
BSO3 Boso 3 1.69 32 ⇓P **Pn** **00 18 26.3 -0.6**
BSO3 S **Sn** **00 18 46.4 -1.2**
TTO4 TONANKAI O.B.S 1.70 293 ⇓P **Pn** **00 18 25.8 -1.3**
TTO4 S **Sn** **00 18 46.3 -1.5**
INU Inuyama 2.80 315 **Pn** **00 18 41.9 -0.6**
INU **Sn** **00 19 12.6 -2.9**
MJAR Matsushiro Arr 3.32 343 Pn **Pn** **00 18 52.2 +2.6**
3.7nm,0.3s,baz=153,slow=14,SNR=130
MJAR Sn **Sb** **00 19 34.3 -3.2**
2.3nm,0.3s,baz=168,slow=25,SNR=5.9
MJAR LR LR 00 19 41.5
comp=Z,103nm,20.9s,baz=155,slow=31
MAJO Matsushiro 3.32 343 *c*eP **Pn** **00 18 52.3 +2.7**
MAJO Matsushiro 3.32 343 **Pn** **00 18 50.1 +0.4**
MAT Matsushiro 3.32 343 P **Pn** **00 18 51.7 +2.1**
MAT S **Sn** **00 19 29.1 +0.9**
MJB9 Matsu-Tunnel 3.32 343 **Pn** **00 18 49.6 0.0**
JNU Nakatsue 7.17 270 Pn **Pn** **00 19 41.7 -0.8**
4.2nm,0.3s,baz=95,slow=4.4,SNR=25
JNU Sn **Sn** **00 21 01.6 -1.4**
0.4nm,0.3s,baz=188,slow=17,SNR=1.8
JNU LR LR 00 22 29.2
comp=Z,237nm,18.5s,baz=108,slow=38
JNU Nakatsue 7.17 270 **Pn** **00 19 42.3 -0.2**
ERM Erimo 9.12 18 ⇑*e*P **Pn** **00 20 08.8 -0.4**
ERM Erimo 9.12 18 Pn **Pn** **00 20 08.9 -0.4**
ERM Sn **Sn** **00 21 46.7 -4.3**
KSRS Korea Array 10.23 297 Pn **Pn** **00 20 24.8 +0.3**
0.4nm,0.3s,baz=105,slow=15,SNR=2.4
KSRS LR LR 00 24 14.4
comp=Z,162nm,18.5s,baz=84,slow=37
JOW Kunigami 11.64 239 **Pn** **00 20 44.2 +0.3**
USA0B Ussuriysk Arra 12.26 334 P **Pn** **00 20 52.3 +0.1**
USA0B Ussuriysk Arra 12.26 334 Pn **Pn** **00 20 52.3 +0.1**
USRK Ussuriysk Ar. 12.26 334 Pn **Pn** **00 20 54.5 +2.3**
baz=148,slow=11,SNR=4.3
DL2 Dalian 15.40 296 P **P** **00 21 42.3 +3.1**
DL2 *e*S **S** **00 24 41.0 +0.9**
DL2 pmax pmax
comp=Z,40nm,0.9s
DL2 pmax pmax
comp=Z,110nm,5.5s
DL2 LR LR
comp=N,300nm,10.0s
DL2 LR LR
comp=E,260nm,10.4s
DL2 LR LR
comp=Z,380nm,12.2s
KLR Kul'dur 16.85 342 LR LR 00 27 54.8
comp=Z,80nm,20.2s,baz=158,slow=35
KLR Kul'dur 16.85 342 ⇑*e*P **P** **00 21 54.4 -0.8**
GRNR Gornyy 17.53 354 *e*P **Pn** **00 21 55.3 -6.4**
GRNR MLR MLR
comp=Z,110nm,15.0s
SSLB Suanglung 18.80 244 P **P** **00 22 13.3 -3.6**
TWG Pinlang 19.27 242 P **P** **00 22 18.5 -3.6**
TWG IAmb IAmb 00 22 32.0
comp=Z,48nm,0.8s
TPUB Ta-pu 19.32 244 P **P** **00 22 19.3 -3.4**
ZEA Zeya 22.13 341 *e*P **P** **00 22 51.8 -0.9**
ZEA pmax pmax
comp=Z,29nm,1.0s
SZP Santa 23.21 232 P **P** **00 23 02.4 -2.0**
HHC Hu-ho-hao-te 23.37 297 *e*P **P** **00 23 06.3 +0.3**
HHC sP sP 00 23 16.3 +0.3
HHC PP **PnPn** **00 23 34.3 +1.8**
HHC S **S** **00 27 18.5 +1.1**
HHC sS sS 00 27 27.5 -1.8
HHC pmax pmax
comp=Z,13nm,0.8s
HHC pmax pmax
comp=Z,50nm,5.2s
HHC LR LR
comp=N,190nm,10.4s
HHC LR LR
comp=E,150nm,10.8s
HHC LR LR
comp=Z,130nm,11.1s
PETK Petropavlovsk- 23.67 28 P **P** **00 23 10.8 +2.2**
comp=Z,2.0nm,0.7s,baz=224,slow=8.3,SNR=2.5
PETK LR LR 00 33 18.3
comp=Z,76nm,19.0s,baz=239,slow=39
BTO Baotou 24.50 296 *e*P **P** **00 23 17.8 +1.2**
BTO S **PcP** **00 26 56.8 +2.2**
XAN Xi'an 25.34 280 P **P** **00 23 24.5 +0.3**
XAN pP sP 00 23 42.0 +7.4
XAN sP pP 00 23 49.5 +18
XAN S S 00 28 04.5 +15
XAN pmax pmax
comp=Z,12nm,1.2s
XAN pmax pmax
comp=Z,65nm,3.3s
XAN LR LR
comp=N,190nm,13.0s
XAN LR LR
comp=E,160nm,15.2s
XAN LR LR
comp=Z,210nm,17.3s
XAN Xi'an 25.34 280 P **P** **00 23 21.3 -2.9**
XAN pmax pmax
comp=Z,7.0nm,0.7s
XAN Xi'an 25.34 280 P **P** **00 23 21.3 -2.9**
ENH Enshi 25.59 271 P **P** **00 23 25.4 -1.0**
ENH IAmb IAmb 00 23 28.1
comp=Z,18nm,1.1s
MA2 Magadan 27.27 13 P **P** **00 23 43.4 +2.1**
comp=Z,9.2nm,0.6s,baz=199,slow=16,SNR=4.7
MA2 LR LR 00 34 04.1
comp=Z,87nm,20.9s,baz=174,slow=35
MA2 Magadan 27.27 13 P **P** **00 23 42.2 +0.9**
H11N2 WAKE ISLAND Hy 27.98 112 T T 00 52 52.9
baz=305,slow=74,SNR=237
H11N1 WAKE ISLAND Hy 27.98 112 T T 00 52 53.3
baz=305,slow=74,SNR=215
H11N3 WAKE ISLAND Hy 27.99 112 T T 00 52 54.1
baz=305,slow=74,SNR=181
ULN Ulaanbaatar 28.28 310 *d* P **P** **00 23 52.3 +1.7**
ULN pmax pmax
comp=Z,16nm,1.0s
ULN Ulaanbaatar 28.28 310 P **P** **00 23 50.1 -0.5**
ULN IAmb IAmb 00 23 53.4
comp=Z,11nm,0.8s
H11S3 WAKE ISLAND Hy 28.53 114 T T 00 53 34.8
baz=307,slow=75,SNR=72
H11S1 WAKE ISLAND Hy 28.53 114 T T 00 53 35.0
baz=307,slow=75,SNR=63
H11S2 WAKE ISLAND Hy 28.55 114 T T 00 53 39.7
baz=307,slow=75,SNR=31
SONM Songino Array 28.69 310 P **P** **00 23 56.0 +1.8**
comp=Z,7.6nm,0.8s,baz=116,slow=8.9,SNR=43
SONM LR LR 00 34 29.9
comp=Z,70nm,20.4s,baz=96,slow=35
GYA Guiyang 29.14 265 *e*P **P** **00 23 59.5 +1.1**
GYA PP **PnPn** **00 24 54.8 +3.4**
GYA S **S** **00 28 49.3 +0.2**
GYA SS **SnSn** **00 30 15.0 +0.7**
GYA pmax pmax
comp=Z,10.0nm,0.7s
GYA pmax pmax
comp=Z,70nm,4.2s
GYA LR LR
comp=N,190nm,15.8s
GYA LR LR
comp=E,100nm,14.2s
GYA LR LR
comp=Z,180nm,14.0s
LZH Lanzhou 29.27 285 ⇑P **P** **00 24 01.5 +1.9**
LZH pP pP 00 24 05.5 -1.5
LZH sP sP 00 24 07.5 -2.6
LZH PP **PnPn** **00 24 52.0 -1.1**
LZH pmax pmax
comp=Z,11nm,1.1s

LZH				pmax	pmax		
	comp=Z,71nm,4.8s						
LZH				LR	LR		
	comp=N,310nm,17.9s						
LZH				LR	LR		
	comp=E,290nm,14.1s						
LZH				LR	LR		
	comp=Z,160nm,13.0s						
YAK	**Yakutsk**	**29.35**	**351**	P	**P**	**00 24 00.2**	**+0.5**
YAK				pmax	pmax		
	comp=Z,11nm,0.7s						
YAK	**Yakutsk**	**29.35**	**351**	P	**P**	**00 24 00.2**	**+0.5**
YAK				IAmb	IAmb	00 24 14.2	
	comp=Z,11nm,0.7s						
CD2	**Chengdu**	**30.21**	**275**	*eP*	**P**	**00 24 08.0**	**+0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZAK	**Zakamensk**	**31.44**	**314**	*eP*	**P**	**00 24 17.1**	**-1.4**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TLY	**Talaya**	**31.67**	**316**	*d iP*	**P**	**00 24 22.2**	**+1.8**
TLY				pmax	pmax		
	comp=Z,11nm,1.0s						
GTA	**Gaotai**	**32.26**	**292**	⇑P	**P**	**00 24 26.3**	**+0.4**
GTA				pP	sP	00 24 37.0	+0.5
GTA				sP	pP	00 24 40.5	+7.3
GTA				S	**S**	**00 29 38.3**	**+0.5**
GTA				sS	sS	00 29 49.5	-0.3
GTA				SS	**SnSn**	**00 31 34.3**	**+4.2**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,30nm,6.5s						
GTA				LR	LR		
	comp=N,150nm,17.1s						
GTA				LR	LR		
	comp=E,99nm,19.0s						
GTA				LR	LR		
	comp=Z,93nm,17.8s						
BILL	**Bilibino**	**37.99**	**16**	⇑*eP*	**P**	**00 25 16.3**	**+1.6**
BILL				*e**PP	**pP**	**00 25 21.2**	**-0.9**
BILL				*e**SP	**sP**	**00 25 28.8**	**+3.6**
BILL						00 27 32.0	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.5s						
BILL				MLR	MLR		
	comp=Z,125nm,21.0s						
PBKT	**Sadao Pong**	**38.41**	**254**	P	**P**	**00 25 18.2**	**-0.6**
PBKT				IAmb	IAmb	00 25 20.7	
	comp=Z,9.3nm,1.1s						
TIXI	**Tiksi**	**38.75**	**355**	P	**P**	**00 25 21.4**	**+0.3**
	comp=Z,2.2nm,0.5s,baz=153,slow=7.6,SNR=8.3						
TIXI	**Tiksi**	**38.75**	**355**	P	**P**	**00 25 21.6**	**+0.5**
TIXI				PcP	**PcP**	**00 27 32.6**	**+0.5**
CMAR	**Chiang Mai Arr**	**39.06**	**258**	P	**P**	**00 25 23.1**	**-1.2**
	comp=Z,1.4nm,0.5s,baz=48,slow=9.0,SNR=9.0						
CMAR				LR	LR	00 42 25.3	
	comp=Z,59nm,18.4s,baz=110,slow=38						
WMQ	**Urumqi**	**41.16**	**300**	*eP*	**P**	**00 25 43.5**	**+2.0**
WMQ				sP	pwP	00 25 49.5	-1.8
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				LR	LR		
	comp=N,96nm,12.9s						
WMQ				LR	LR		
	comp=E,62nm,14.3s						
WMQ				LR	LR		
	comp=Z,130nm,16.9s						
DGZ	**Jazzator, Alta**	**41.33**	**309**	⇓*eP*	**P**	**00 25 44.4**	**+1.5**
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KAPI	**Kappang**	**42.48**	**210**	LR	LR	00 46 24.8	
	comp=Z,31nm,18.5s,baz=68,slow=40						
ZAA0	**Zalesovo Array**	**43.27**	**315**	P	**P**	**00 25 57.1**	**-1.4**
ZAA0				PcP	**PcP**	**00 27 47.4**	**+0.3**
ZALV	**Zalesovo Beam**	**43.27**	**315**	P	**P**	**00 25 59.0**	**+0.5**
	comp=Z,3.4nm,0.7s,baz=101,slow=7.7,SNR=14						
ZALV				PcP	**PcP**	**00 27 47.1**	**-0.1**
	comp=Z,5.5nm,0.6s,baz=103,slow=3.1,SNR=17						
ZALV				LR	LR	00 44 47.4	
	comp=Z,42nm,19.7s,baz=106,slow=37						
MK31	**Makanchi Array**	**44.78**	**305**	P	**P**	**00 26 10.2**	**-0.6**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK31	**Makanchi Array**	**44.78**	**305**	P	**P**	**00 26 10.2**	**-0.6**
MKAR	**Makanchi Array**	**44.78**	**305**	P	**P**	**00 26 11.5**	**+0.7**
	comp=Z,3.8nm,0.8s,baz=91,slow=10.0,SNR=32						
MKAR				PcP	**PcP**	**00 27 52.6**	**+0.1**
	comp=Z,1.3nm,0.9s,baz=88,slow=4.1,SNR=4.0						
MAKZ	**Makanchi**	**45.00**	**305**	P	**P**	**00 26 11.3**	**-1.2**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAKZ	**Makanchi**	**45.00**	**305**	P	**P**	**00 26 11.2**	**-1.2**
KURK	**Kurchatov**	**46.99**	**311**	*d iP*	**P**	**00 26 27.8**	**-0.3**
KURK				pmax	pmax		
	comp=Z,15nm,1.3s						
KURK	**Kurchatov**	**46.99**	**311**	P	**P**	**00 26 27.9**	**-0.1**
KURK				IAmb	IAmb	00 26 29.2	
	comp=Z,10nm,0.9s						
TARG	**Taragay, Kyrgy**	**48.64**	**299**	P	**P**	**00 26 40.0**	**-1.5**
TARG				IAmb	IAmb	00 26 43.5	
	comp=Z,5.4nm,0.8s						
TTA	**Tatalina**	**49.36**	**33**	P	**P**	**00 26 47.0**	**+0.7**
TTA						00 28 10.7	
TTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TTA	**Tatalina**	**49.36**	**33**	P	**P**	**00 26 47.0**	**+0.7**
TTA				IAmb	IAmb	00 26 55.1	
	comp=Z,6.2nm,1.2s						
TTA				PcP	**PcP**	**00 28 10.7**	**+2.2**
KSH	**Kashi**	**50.49**	**296**	P	**P**	**00 26 59.0**	**+3.7**
KSH				sP	sP	00 27 05.0	-0.9
KSH				PP	**PP**	**00 28 51.5**	**+0.6**
KSH				S	**S**	**00 34 11.5**	**+3.9**
KSH	**Kashi**	**50.49**	**296**	SS	**SS**	**00 37 42.8**	**+1.3**
KSH				pmax	pmax		
	comp=Z,14nm,1.1s						
KSH				pmax	pmax		
	comp=Z,51nm,4.5s						
KSH				LR	LR		
	comp=N,200nm,5.6s						
KSH				LR	LR		
	comp=E,69nm,9.9s						
KSH				LR	LR		
	comp=Z,160nm,13.1s						
AAK	**Ala-Archa**	**50.87**	**300**	LR	LR	00 48 16.4	
	comp=Z,21nm,18.8s,baz=108,slow=36						
AAK	**Ala-Archa**	**50.87**	**300**	⇑*iP*	**P**	**00 26 58.7**	**+0.6**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KDAK	**Kodiak Island**	**50.93**	**40**	P	**P**	**00 26 59.2**	**+1.0**
	comp=Z,5.3nm,0.6s,baz=331,slow=3.8,SNR=4.1						
KDAK	**Kodiak Island**	**50.93**	**40**	P	**P**	**00 26 57.8**	**-0.3**
KDAK				pmax	pmax		
	comp=Z,17nm,1.2s						
KDAK	**Kodiak Island**	**50.93**	**40**	P	**P**	**00 26 57.8**	**-0.3**
KDAK				IAmb	IAmb	00 27 01.5	
	comp=Z,16nm,1.1s						
BPAW	**Bear Paw Mtn.**	**51.68**	**32**	P	**P**	**00 27 05.0**	**+1.2**
BPAW				IAmb	IAmb	00 27 13.4	
	comp=Z,5.5nm,1.1s						
MLY	**Manley**	**51.82**	**30**	P	**P**	**00 27 05.7**	**+1.0**
MLY				IAmb	IAmb	00 27 14.6	
	comp=Z,11nm,1.2s						
BRVK	**Borovoye**	**51.95**	**314**	⇑*eP*	**P**	**00 27 08.0**	**+2.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TOLK	**Toolik Lake Re**	**52.47**	**26**	P	**P**	**00 27 10.8**	**+1.2**
TOLK				IAmb	IAmb	00 27 19.1	
	comp=Z,8.5nm,1.2s						
RND	**Reindeer**	**52.63**	**33**	P	**P**	**00 27 11.5**	**+0.7**
RND				pmax	pmax		
	comp=Z,9.0nm,1.0s						
RND	**Reindeer**	**52.63**	**33**	P	**P**	**00 27 11.5**	**+0.7**
RND				IAmb	IAmb	00 27 19.3	
	comp=Z,8.8nm,1.0s						
WRA	**Warramunga Arr**	**53.23**	**186**	P	**P**	**00 27 14.0**	**-1.6**
	comp=Z,2.9nm,0.6s,baz=4.2,slow=7.6,SNR=36						
HDA	**Harding Lake**	**53.45**	**31**	IAmb	IAmb	00 27 24.9	
	comp=Z,6.9nm,1.0s						
IL31		**53.46**	**31**	P	**P**	**00 27 18.6**	**+1.8**
IL31				IAmb	IAmb	00 27 25.1	
	comp=Z,9.3nm,1.3s						
ILAR	**Eielson Array**	**53.46**	**31**	P	**P**	**00 27 18.0**	**+1.1**
	comp=Z,1.1nm,0.8s,baz=265,slow=6.2,SNR=11						
ILAR				LR	LR	00 50 41.3	
	comp=Z,33nm,20.5s,baz=272,slow=37						
KK31	**Karatay Array**	**53.61**	**302**	IAmb	IAmb	00 27 19.8	
	comp=Z,14nm,1.1s						
SCRK	**Sand Creek**	**54.76**	**32**	IAmb	IAmb	00 27 35.2	
	comp=Z,11nm,1.2s						
SVE	**Sverdlovsk**	**56.85**	**320**	⇓*eP*	**P**	**00 27 42.4**	**+0.9**
SVE				pmax	pmax		
	comp=Z,14nm,1.1s						
ARU	**Arti**	**58.06**	**320**	*d iP*	**P**	**00 27 50.1**	**+0.1**
ARU						00 29 54.3	
ARU				S	**S**	**00 35 52.1**	**+3.1**
ARU				SS	**SS**	**00 39 44.4**	**+4.5**
ARU				pmax	pmax		
	comp=Z,14nm,1.1s						
ARU	**Arti**	**58.06**	**320**	P	**P**	**00 27 48.3**	**-1.6**
EIDS	**Eidsvold**	**59.46**	**168**	P	**P**	**00 27 57.6**	**-2.3**
C36M	**Paulatuk**	**61.43**	**24**	P	**P**	**00 28 13.0**	**+0.1**
C36M				IAmb	IAmb	00 28 21.5	
	comp=Z,7.8nm,1.0s						
DLBC	**Dease Lake**	**62.52**	**36**	P	**P**	**00 28 19.9**	**-0.6**
DLBC				IAmb	IAmb	00 28 30.6	
	comp=Z,12nm,1.2s						
GEYT	**Alibeck**	**64.21**	**300**	P	**P**	**00 28 30.6**	**-1.4**
	comp=Z,1.7nm,0.8s,baz=83,slow=4.6,SNR=4.9						
STKA	**Stephens Creek**	**64.93**	**178**	P	**P**	**00 28 35.2**	**-1.3**
	comp=Z,1.8nm,0.6s,baz=338,slow=9.1,SNR=4.7						
STKA	**Stephens Creek**	**64.93**	**178**	P	**P**	**00 28 34.4**	**-2.1**
STKA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
STKA	**Stephens Creek**	**64.93**	**178**	P	**P**	**00 28 34.4**	**-2.1**
ARCES	**ARCESS Array B**	**66.85**	**340**	P	**P**	**00 28 48.7**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=72,slow=12,SNR=10						
ARCES				LR	LR	01 02 37.3	
	comp=Z,40nm,19.6s,baz=315,slow=40						
YKA	**Yellowknife Ar**	**67.79**	**29**	P	**P**	**00 28 55.7**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=299,slow=5.5,SNR=7.1						
VRH	**Novokhopyorsk**	**69.21**	**318**	*eP*	**P**	**00 29 04.2**	**+0.6**
VRH				pmax	pmax		
	comp=Z,5.0nm,0.4s						
OBN	**Obninsk**	**70.06**	**323**	⇓*eP*	**P**	**00 29 08.8**	**+0.1**
OBN				*e**PP	**sP**	**00 29 19.6**	**+0.2**
OBN				*e**SP	**pwP**	**00 29 23.3**	**+4.5**
OBN				*e*		00 29 26.5	
OBN				S	**SPn**	**00 38 42.0**	**-0.1**
OBN				pmax	pmax		
	comp=Z,13nm,1.7s						
OBN				MLR	MLR		
	comp=Z,48nm,16.0s						
LPSR	**Galich'ya Gora**	**70.07**	**320**	*eP*	**P**	**00 29 08.2**	**-0.7**
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FINES	**FINESS Array B**	**71.29**	**332**	P	**P**	**00 29 16.4**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=75,slow=5.3,SNR=21						
FINES	**FINESS Array B**	**71.29**	**332**	*i* P	**P**	**00 29 16.3**	**+0.1**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZEI	**Tsey**	**71.87**	**310**	*eP*	**P**	**00 29 19.3**	**-1.0**
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
KBZ	**Khabaz**	**72.05**	**311**	P	**P**	**00 29 20.4**	**-0.7**
	comp=Z,5.8nm,0.9s,baz=168,slow=1.6,SNR=10						
KBZ	**Khabaz**	**72.05**	**311**	*eP*	**P**	**00 29 22.1**	**+1.0**
KIV	**Kislovodsk**	**72.08**	**311**	⇓*eP*	**P**	**00 29 21.9**	**+0.5**
KIV				*e**PP	**pP**	**00 29 28.9**	**-0.3**
KIV				*SP	**PcP**	**00 29 36.0**	**-3.7**
KIV						00 29 40.0	
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,17nm,15.0s						
SUMG	**Summit**	**74.33**	**359**	P	**P**	**00 29 34.4**	**-0.1**
SUMG				pmax	pmax		
	comp=Z,14nm,1.4s						
SUMG	**Summit**	**74.33**	**359**	P	**P**	**00 29 34.4**	**-0.1**
SUMG				IAmb	IAmb	00 29 46.7	
	comp=Z,14nm,1.4s						
AKASG	**Malin Array Be**	**76.19**	**322**	P	**P**	**00 29 44.0**	**-1.1**
	comp=Z,3.1nm,0.6s,baz=50,slow=6.0,SNR=8.9						
AKASG				LR	LR	01 05 45.8	
	comp=Z,45nm,19.3s,baz=215,slow=38						
AKASG	**Malin Array Be**	**76.19**	**322**	P	**P**	**00 29 44.0**	**-1.1**
NC204	**NORSAR Array S**	**76.89**	**337**	P	**P**	**00 29 48.9**	**0.0**
NB2	**NORSAR Subarra**	**76.92**	**337**	P	**P**	**00 29 49.0**	**-0.1**
	comp=Z,2.7nm,1.0s,baz=43,slow=5.6						
NOA	**NORSAR Array B**	**76.92**	**337**	P	**P**	**00 29 49.4**	**+0.3**
	comp=Z,4.7nm,0.9s,baz=42,slow=5.6,SNR=11						
NOA				LR	LR	01 08 37.0	
	comp=Z,24nm,19.0s,baz=345,slow=40						
FFC	**Flin Flon**	**77.67**	**31**	P	**P**	**00 29 53.1**	**-0.2**
FFC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
FFC	**Flin Flon**	**77.67**	**31**	P	**P**	**00 29 53.1**	**-0.2**
FFC				IAmb	IAmb	00 30 01.4	
	comp=Z,7.6nm,1.2s						
NVAR	**Mina Array Bea**	**78.51**	**52**	P	**P**	**00 29 58.9**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=270,slow=4.4,SNR=5.1						
BRTR	**Keskin Array B**	**80.04**	**311**	P	**P**	**00 30 06.9**	**0.0**
	comp=Z,2.4nm,0.8s,baz=77,slow=5.3,SNR=15						
BUR08	**Bucovina Ar. S**	**80.15**	**321**	P	**P**	**00 30 05.1**	**-2.1**
RAYN	**Ar Rayn**	**80.52**	**292**	P	**P**	**00 30 07.1**	**-2.5**
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
RAYN	**Ar Rayn**	**80.52**	**292**	P	**P**	**00 30 07.1**	**-2.5**
RAYN				IAmb	IAmb	00 30 10.9	
	comp=Z,9.4nm,1.3s						
DUG	**Dugway, Tooele**	**81.00**	**48**	P	**P**	**00 30 11.3**	**-0.7**
DUG				pmax	pmax		
	comp=Z,9.0nm,1.4s						
DUG	**Dugway, Tooele**	**81.00**	**48**	P	**P**	**00 30 11.3**	**-0.7**
DUG				IAmb	IAmb	00 30 21.4	
	comp=Z,9.4nm,1.4s						
PDAR	**Pinedale Array**	**81.41**	**44**	P	**P**	**00 30 15.6**	**+1.4**
	comp=Z,0.3nm,0.4s,baz=279,slow=5.8,SNR=2.4						
MORC	**Moravsky Berou**	**82.51**	**326**	*eP*	**P**	**00 30 20.6**	**+0.9**
VYHS	**Vyhne**	**82.79**	**325**	*eP*	**P**	**00 30 22.3**	**+1.2**
VYHS	**Vyhne**	**82.79**	**325**	*eP*	**P**	**00 30 22.3**	**+1.2**
JAVC	**Velka Javorina**	**83.09**	**326**	*eP*	**P**	**00 30 24.7**	**+2.0**
VRAC	**Vranov**	**83.28**	**326**	*eP*	**P**	**00 30 24.6**	**+1.0**
CLL	**Collm**	**83.44**	**329**	*i* P	**P**	**00 30 25.5**	**+1.2**
	comp=Z,8.0nm,1.3s						
CLL				*ep*P	**pwP**	**00 30 33.0**	**-1.6**
CLL				*e*PP	**PP**	**00 33 39.0**	**+3.2**
CLL	**Collm**	**83.44**	**329**	*i* P	**P**	**00 30 25.5**	**+1.2**
CLL				*e*		00 30 33.0	
CLL				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KRUC	**Moravsky**	**83.55**	**326**	*eP*	**P**	**00 30 26.0**	**+1.0**
MODS	**Modra-Piesok**	**83.62**	**325**	*eP*	**P**	**00 30 26.1**	**+0.7**
MODS	**Modra-Piesok**	**83.62**	**325**	*eP*	**P**	**00 30 26.1**	**+0.7**
GOPC	**GO Pecny, Ondr**	**83.67**	**328**	*eP*	**P**	**00 30 26.1**	**+0.5**
GOPC				*e*		00 30 33.3	
GOPC	**GO Pecny, Ondr**	**83.67**	**328**	*eP*	**P**	**00 30 26.1**	**+0.5**
GOPC				*ep*P	**pP**	**00 30 33.3**	**-0.3**
PRU	**Pruhonice**	**83.73**	**328**	*eP*	pP	00 30 31.8	-2.0
PRU	**Pruhonice**	**83.73**	**328**	*ep*P	pP	00 30 31.8	-2.0
PV18	**Skein Mesa, Pa**	**84.59**	**47**	P	**P**	**00 30 31.8**	**+1.0**
KHC	**Kasperske Hory**	**84.78**	**328**	*eP*	**P**	**00 30 32.0**	**+0.7**
KHC				*e*		00 30 38.8	
KHC	**Kasperske Hory**	**84.78**	**328**	*eP*	**P**	**00 30 32.0**	**+0.7**
KHC				*ep*P	**pP**	**00 30 38.8**	**-0.5**
GERES	**GERESS Array B**	**84.94**	**327**	P	**P**	**00 30 31.4**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=40,slow=4.4,SNR=12						
TX32	**Lajitas Array**	**93.66**	**51**	P	**P**	**00 31 12.0**	**-1.9**
TX32				IAmb	IAmb	00 31 16.2	
	comp=Z,3.2nm,1.1s						
TXAR	**Lajitas Array**	**93.66**	**51**	P	**P**	**00 31 14.6**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=270,slow=2.5,SNR=8.7						
TXAR				LR	LR	01 08 45.5	
	comp=Z,14nm,20.8s,baz=0.0,slow=32						
TORD	**Torodi Ar. Bea**	**118.65**	**312**	PKP	**PKPdf**	**00 36 43.6**	**-2.0**
	comp=Z,0.5nm,0.7s,baz=82,slow=0.9,SNR=5.1						
LPAZ	**La Paz**	**149.89**	**62**	PKPbc	**PKiKP**	**00 37 50.0**	**+0.5**
	comp=Z,3.6nm,0.9s,baz=0.0,slow=5.9,SNR=18						
LPAZ	**La Paz**	**149.89**	**62**	PKIKP	**PKPdf**	**00 37 41.5**	**-2.2**
LPAZ						00 37 49.3	
LPAZ	**La Paz**	**149.89**	**62**	PKPdf	**PKPdf**	**00 37 41.5**	**-2.2**
LPAZ					**PKiKP**	**00 37 49.3**	**-0.1**

*IDC **29** 00:35:25.4±1.0,26.°50N×91.°90E,h0km,mb3.7/8, mb1 3.9/9,mb1mx3.6/44,mbtmp3.7/9,ML3.5/1,Error ellipse: s-maj=43.1km s-min=20.7km az=56.0*
ISC 29 00:35:26.3±2.0,26.°2N±0.°3×93.°14E±0.°09,h35km,n22,
σ2s02/29,mb3.7/8,Northeastern India

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TAPN	**Taplejung**	**4.98**	**284**		*e*Pn		**Pn**	**00 36 41.2**	**+2.4**
TAPN					*e*Sn		**Sn**	**00 37 37.4**	**+2.0**
	92nm,0.3s								
ODAN	**Odare**	**5.19**	**278**		*e*Pn		**Pn**	**00 36 44.6**	**+2.9**
RAMN	**Ramite**	**5.90**	**278**		*e*Pn		**Pn**	**00 36 54.2**	**+2.7**
JIRN	**Jiri**	**6.37**	**284**		*e*Pn		**Pn**	**00 37 00.5**	**+2.6**
JIRN					*e*Sn		**Sn**	**00 38 09.5**	**-0.1**
	179nm,0.3s								
GUN	**Gumba**	**6.69**	**286**		*e*Pn		**Pn**	**00 37 04.2**	**+1.9**
GUN					*e*Sn		**Sn**	**00 38 17.9**	**+0.4**
	70nm,0.3s								
PKI	**Pulchoki**	**7.03**	**283**		*e*Pn		**Pn**	**00 37 08.9**	**+1.8**
PKI					*e*Sn		**Sn**	**00 38 25.9**	**-0.1**
	48nm,0.4s								
PKIN	**Phulchoki**	**7.04**	**283**		*e*Pn		**Pn**	**00 37 08.9**	**+1.7**
PKIN					*e*Sn		**Sn**	**00 38 26.1**	**-0.1**
KKN	**Kakani**	**7.18**	**284**		*e*Pn		**Pn**	**00 37 11.4**	**+2.4**
KKN					*e*Sn		**Sn**	**00 38 30.1**	**+0.6**
DMN	**Daman**	**7.30**	**283**		*e*Pn		**Pn**	**00 37 11.9**	**+1.2**
GKN	**Gorkha**	**7.78**	**285**		*e*Pn		**Pn**	**00 37 19.2**	**+2.0**
GKN					*e*Sn		**Sn**	**00 38 44.6**	**+0.4**
DANN	**Dangsing**	**8.61**	**286**		*e*Pn		**Pn**	**00 37 28.8**	**+0.1**
DANN					*e*Sn		**Sn**	**00 39 03.2**	**-1.5**
	99nm,0.5s								
KOLN	**Koldanda**	**8.65**	**282**		*e*Pn		**Pn**	**00 37 29.8**	**+0.7**
KOLN					*e*Sn		**Sn**	**00 39 05.1**	**-0.5**
	37nm,0.3s								
PYUN	**Piuthan**	**9.23**	**284**		*e*Sn		**Sn**	**00 39 17.9**	**-2.0**
	81nm,0.4s								
CMAR	**Chiang Mai Arr**	**9.42**	**144**		Pn		Pn	00 37 56.6	+17
	0.1nm,0.3s,baz=312,slow=13,SNR=2.0								
MKAR	**Makanchi Array**	**22.25**	**340**		P		**P**	**00 40 18.6**	**-1.4**
	1.3nm,0.7s,baz=148,slow=13,SNR=11								
SONM	**Songino Array**	**23.94**	**22**		P		**P**	**00 40 42.7**	**+5.5**
	0.2nm,0.3s,baz=207,slow=12,SNR=2.1								
KURBB	**Kurchatov Arra**	**26.80**	**339**		P		**P**	**00 41 01.6**	**-1.3**
	0.4nm,0.6s,baz=153,slow=10,SNR=4.6								
FINES	**FINESS Array B**	**56.37**	**328**		P		**P**	**00 45 01.8**	**-1.8**
	3.0nm,0.9s,baz=101,slow=9.9,SNR=6.2								
WRA	**Warramunga Arr**	**60.88**	**135**		P		P	00 45 46.5	+11
	1.4nm,0.8s,baz=325,slow=7.2,SNR=6.8								
NOA	**NORSAR Array B**	**63.54**	**327**		P		**P**	**00 45 50.9**	**-2.1**
	0.3nm,0.5s,baz=318,slow=9.0,SNR=1.9								
GERES	**GERESS Array B**	**63.97**	**314**		P		**P**	**00 45 54.5**	**-1.6**
	0.5nm,0.6s,baz=72,slow=4.6,SNR=6.0								
TORD	**Torodi Ar. Bea**	**85.57**	**282**		P		**P**	**00 48 00.2**	**-1.3**
	0.9nm,0.8s,baz=75,slow=4.2,SNR=7.1								

*IDC **29** 00:40:02.0±2.1,13.°89S×166.°60E,h0km,mb4.3/6, mb1 4.3/6,mb1mx4.0/29,mbtmp4.2/6,MS3.6/2,Ms1 3.5/2, ms1mx2.9/25,Error ellipse: s-maj=71.2km s-min=39.6km az=143.0*
*NEIC **29** 00:40:09.7±1.0,13.°61S±0.°06×166.°3E±0.°2,h35km±1km, mb4.3/7,Error ellipse: s-maj=34.7km s-min=9.1km az=84.0*
ISC 29 00:40:09.4±0.8,13.°57S±0.°08×166.°4E±0.°2,h39km,n20,
σ0s94/19,mb4.3/10,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.51**	**303**		LR		LR	00 44 38.6	
	comp=Z,215nm,19.3s,baz=148,slow=35								
DZM	**Mont Dzumac**	**8.45**	**179**		Pn		**Pn**	**00 42 09.8**	**+0.3**
DZM					Sn		**Sn**	**00 43 45.6**	**+1.9**
EIDS	**Eidsvold**	**18.55**	**228**		P		**P**	**00 44 22.7**	**-0.3**
BSWZ	**Blackbirch Sta**	**28.79**	**168**		P		**P**	**00 46 02.6**	**-1.1**
STKA	**Stephens Creek**	**29.10**	**227**		LR		LR	00 57 29.5	
	comp=Z,165nm,18.4s,baz=31,slow=36								
STKA	**Stephens Creek**	**29.10**	**227**		P		**P**	**00 46 06.3**	**-0.2**
STKA					IAmb		IAmb	00 46 14.8	
	comp=Z,2.1nm,0.9s								
WRA	**Warramunga Arr**	**31.27**	**254**		P		**P**	**00 46 25.8**	**-0.1**
	comp=Z,1.2nm,0.9s,baz=87,slow=9.2,SNR=4.1								
BBOO	**Buckleboo**	**33.61**	**230**		P		**P**	**00 46 45.8**	**-0.5**
USRK	**Ussuriysk Ar.**	**65.46**	**333**		P		**P**	**00 50 49.6**	**+1.2**
	comp=Z,5.8nm,0.9s,baz=122,slow=5.4,SNR=12								
ENH	**Enshi**	**69.95**	**310**		P		**P**	**00 51 17.6**	**+0.5**
QSPA	**South Pole Qui**	**76.45**	**180**		P		**P**	**00 51 54.4**	**-0.6**
QSPA					IAmb		IAmb	00 52 01.1	
	comp=Z,3.9nm,1.1s								
ULN	**Ulaanbaatar**	**80.68**	**324**		P		**P**	**00 52 18.9**	**+0.3**
ULN					IAmb		IAmb	00 52 20.4	
	comp=Z,4.8nm,1.1s								
SONM	**Songino Array**	**81.04**	**324**		P		**P**	**00 52 21.1**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=139,slow=7.5,SNR=9.9								
HDA	**Harding Lake**	**85.43**	**18**		P		**P**	**00 52 43.8**	**+1.3**
HDA					IAmb		IAmb	00 52 47.6	
	comp=Z,3.0nm,1.2s								
ILAR	**Eielson Array**	**85.71**	**18**		P		**P**	**00 52 44.5**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=232,slow=5.2,SNR=17								
MKAR	**Makanchi Array**	**95.76**	**317**		P		**P**	**00 53 31.9**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=111,slow=6.6,SNR=5.3								
ZALV	**Zalesovo

MVO	**Moncorvo**	**5.32**	**107**	*e*Sn	**Sn**	**00**	**50**	**05.5 -0.5**
MVO				A	A	00	50	06.6
	1.3nm,0.4s							
PMTG	**Montargil**	**5.67**	**130**	P	**Pn**	**00**	**49**	**10.6 +1.1**
PMTG				S	**Sn**	**00**	**50**	**13.9 -0.8**
PMTG	**Montargil**	**5.67**	**130**	*e*Pn	**Pn**	**00**	**49**	**10.6 +1.1**
PMTG				*e*Sn	**Sn**	**00**	**50**	**13.9 -0.8**
PMRV	**Marv??o**	**5.93**	**123**	P	**Pn**	**00**	**49**	**14.3 +1.3**
PMRV				S	**Sn**	**00**	**50**	**20.4 -0.6**
	1.2nm,0.7s							
PMRV	**Marv??o**	**5.93**	**123**	*e*Pn	**Pn**	**00**	**49**	**14.3 +1.3**
PMRV				*e*Sn	**Sn**	**00**	**50**	**20.4 -0.6**
PMRV				A	A	00	50	25.3
	1.2nm,0.7s							
EVO	**Evora**	**6.17**	**133**	S	**Sn**	**00**	**50**	**26.0 -0.9**
EVO	**Evora**	**6.17**	**133**	*e*Sn	**Sn**	**00**	**50**	**26.0 -0.9**
PESTR	**Estremoz**	**6.17**	**128**	*e*Pn	**Pn**	**00**	**49**	**16.6 +0.3**
PESTR				*e*Sn	**Sn**	**00**	**50**	**25.6 -1.4**
PNCL	**Nicolau / Gran**	**6.22**	**138**	P	**Pn**	**00**	**49**	**17.7 +0.7**
PNCL				S	**Sn**	**00**	**50**	**26.9 -1.3**
	1.9nm,0.6s							
PNCL	**Nicolau / Gran**	**6.22**	**138**	*e*Pn	**Pn**	**00**	**49**	**17.7 +0.7**
PNCL				*e*Sn	**Sn**	**00**	**50**	**26.9 -1.3**
PNCL				A	A	00	50	33.2
	1.9nm,0.6s							
EARI	**Arriondas**	**6.29**	**83**	P	**Pn**	**00**	**49**	**18.3 +0.4**
	0.1nm,0.1s,SNR=7.9							
EARI				S	**Sn**	**00**	**50**	**27.9 -2.0**
	0.7nm,0.2s,SNR=7.9							
EPLA	**Plasencia**	**6.43**	**113**	P	**Pn**	**00**	**49**	**21.1 +1.2**
	0.3nm,0.1s,SNR=7.9							
EPLA				S	**Sn**	**00**	**50**	**33.1 -0.4**
	SNR=7.9							
EBAD	**Badajoz**	**6.58**	**127**	P	**Pn**	**00**	**49**	**22.3 +0.4**
	0.3nm,0.1s,SNR=7.9							
EBAD				S	**Sn**	**00**	**50**	**35.1 -2.0**
	0.7nm,0.1s,SNR=7.9							
PTEO	**Sao Teotonio**	**6.59**	**142**	P	**Pn**	**00**	**49**	**23.5 +1.5**
PTEO				S	**Sn**	**00**	**50**	**35.8 -1.3**
PTEO	**Sao Teotonio**	**6.59**	**142**	*e*Pn	**Pn**	**00**	**49**	**23.5 +1.5**
PTEO				*e*Sn	**Sn**	**00**	**50**	**35.8 -1.3**
MESJ	**Messejana**	**6.59**	**138**	P	**Pn**	**00**	**49**	**23.0 +1.0**
MESJ				S	**Sn**	**00**	**50**	**35.8 -1.4**
	1.7nm,0.4s							
MESJ	**Messejana**	**6.59**	**138**	*e*Pn	**Pn**	**00**	**49**	**23.0 +1.0**
MESJ				*e*Sn	**Sn**	**00**	**50**	**35.8 -1.4**
MESJ				A	A	00	50	41.6
	1.7nm,0.4s							
PVAQ	**Vaqueiros**	**7.18**	**138**	P	**Pn**	**00**	**49**	**31.0 +0.9**
PVAQ				S	**Sn**	**00**	**50**	**50.5 -1.2**
PVAQ	**Vaqueiros**	**7.18**	**138**	*e*Pn	**Pn**	**00**	**49**	**31.0 +0.9**
PVAQ				*e*Sn	**Sn**	**00**	**50**	**50.5 -1.2**
PBDV	**Barranco-do-Ve**	**7.20**	**140**	P	**Pn**	**00**	**49**	**31.8 +1.3**
PBDV	**Barranco-do-Ve**	**7.20**	**140**	*e*Pn	**Pn**	**00**	**49**	**31.8 +1.3**
EMIN	**Mina Concepcio**	**7.46**	**131**	P	**Pn**	**00**	**49**	**34.1 +0.2**
	0.5nm,0.1s,SNR=7.9							
EMIN				S	**Sn**	**00**	**50**	**56.3 -2.2**
	0.3nm,0.2s,SNR=7.9							
ELAN	**Lanestosa**	**7.59**	**84**	S	**Sn**	**00**	**50**	**59.7 -2.2**
	0.3nm,0.1s,SNR=7.9							
PAB	**San Pablo**	**7.85**	**112**	P	**Pn**	**00**	**49**	**40.5 +1.1**
	0.1nm,0.1s,SNR=7.9							
PAB				S	**Sn**	**00**	**51**	**06.9 -1.6**
	0.0nm,0.0s,SNR=7.9							
ECAB	**El Cabril**	**7.98**	**124**	P	**Pn**	**00**	**49**	**41.8 +0.6**
	0.1nm,0.1s,SNR=7.9							
ECAB				S	**Sn**	**00**	**51**	**08.2 -3.3**
	0.1nm,0.1s,SNR=7.9							

*KRNET **29** 00:48:42.1±0.1,43˚.10N×76˚.75E,h21km,mb2.2*
*NNC **29** 00:48:42.2±0.5,43˚.13N×76˚.72E,h3km,3km,mb2.7,*
mpv2.8,Error ellipse: s-maj=2.7km s-min=1.4km az=168.0
*SOME **29** 00:48:42.1,43˚.10N×76˚.75E,h10km*
ISC 29 00:48:42.3±0.9,43˚.10N±0˚.02×76˚.74E±0˚.02,h12km±5km,
n36,σ0°40/71,10C-2D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZV	**Izvestkoviy**	**0.12**	**236**	*e*P	**Pg**	**00 48 45.3**	**-0.3**
	baz=36						
IZV				*e*S	**Sg**	**00 48 47.7**	**-0.2**
	baz=36						
IZV	**Izvestkoviy**	**0.12**	**236**	*e*P	**Pg**	**00 48 45.3**	**-0.3**
	16nm,0.1s						
IZV				*e*S	**Sg**	**00 48 47.6**	**-0.2**
	23nm,0.1s						
IZV	**Izvestkoviy**	**0.12**	**236**	P	**Pg**	**00 48 45.3**	**-0.3**
	23nm,0.1s						
IZV				S	**Sg**	**00 48 47.7**	**-0.2**
	31nm,0.2s						
TNSS	**Tian-Shan**	**0.16**	**113**	*e*P	**Pg**	**00 48 46.0**	**-0.4**
	baz=15						
TNSS				*e*S	**Sg**	**00 48 48.9**	**-0.4**
	baz=15						
TNSS	**Tian-Shan**	**0.16**	**113**	*e*P	**Pg**	**00 48 46.0**	**-0.4**
	18nm,0.0s						
TNSS				*e*S	**Sg**	**00 48 48.8**	**-0.4**
	32nm,0.1s						
TNSS	**Tian-Shan**	**0.16**	**113**	P	**Pg**	**00 48 46.0**	**-0.4**
	19nm,0.1s						
TNSS				S	**Sg**	**00 48 48.8**	**-0.4**
	71nm,0.2s						
AAA	**Alma-Ata**	**0.17**	**49**	*e*P	**Pg**	**00 48 46.1**	**-0.1**
	baz=49						
AAA				*e*S	**Sg**	**00 48 49.0**	**+0.1**
	baz=49						
AAA	**Alma-Ata**	**0.17**	**49**	*e*P	**Pg**	**00 48 46.1**	**-0.1**
	57nm,0.0s						
AAA				*e*S	**Sg**	**00 48 49.0**	**+0.1**
	29nm,0.1s						
AAA	**Alma-Ata**	**0.17**	**49**	P	**Pg**	**00 48 46.2**	**0.0**
	134nm,0.1s						
AAA				S	**Sg**	**00 48 49.0**	**+0.1**
	61nm,0.1s						
MDOK	**Medeo**	**0.23**	**74**	*e*P	**Pg**	**00 48 47.1**	**-0.2**
	baz=75						
MDOK				*e*S	**Sg**	**00 48 50.7**	**-0.1**
	baz=75						
MDOK	**Medeo**	**0.23**	**74**	*e*P	**Pg**	**00 48 47.1**	**-0.2**
	6.4nm,0.1s						
MDOK				*e*S	**Sg**	**00 48 50.6**	**-0.1**
	16nm,0.1s						
MDOK	**Medeo**	**0.23**	**74**	Pg	**Pg**	**00 48 47.1**	**-0.2**
	15nm,0.2s						
MDOK				Lg	Lg	00 48 50.5	
	24nm,0.2s						
MTBS	**Maitube**	**0.23**	**277**	*e*P	**Pg**	**00 48 47.2**	**-0.1**
	baz=76						
MTBS				*e*S	**Sg**	**00 48 50.9**	**+0.2**
	baz=76						
MTBS	**Maitube**	**0.23**	**277**	*e*P	**Pg**	**00 48 47.2**	**-0.1**
	3.9nm,0.1s						
MTBS				*e*S	**Sg**	**00 48 50.8**	**+0.2**
	17nm,0.1s						
MTBS	**Maitube**	**0.23**	**277**	P	**Pg**	**00 48 47.1**	**-0.1**
	5.6nm,0.1s						
MTBS				S	**Sg**	**00 48 50.7**	**0.0**
	49nm,0.2s						
KOTS	**Kotyrbulak**	**0.30**	**64**	*e*P	**Pg**	**00 48 48.6**	**+0.1**
	baz=64						
KOTS				*e*S	**Sg**	**00 48 53.3**	**+0.6**
	baz=64						
KOTS	**Kotyrbulak**	**0.30**	**64**	*e*P	**Pg**	**00 48 48.6**	**+0.1**
	11nm,0.1s						
KOTS				*e*S	**Sg**	**00 48 53.3**	**+0.6**
	7.0nm,0.1s						
KOTS	**Kotyrbulak**	**0.30**	**64**	P	**Pg**	**00 48 48.5**	**-0.1**
	14nm,0.1s						
KOTS				S	**Sg**	**00 48 52.9**	**+0.2**
	10nm,0.3s						
KST	**Kastek**	**0.57**	**265**	*e*P	**Pg**	**00 48 53.4**	**-0.2**
	baz=64						
KST				*e*S	**Sg**	**00 49 01.6**	**+0.4**
	baz=64						
KST	**Kastek**	**0.57**	**265**	*e*P	**Pg**	**00 48 53.4**	**-0.2**
	1.3nm,0.1s						
KST				*e*S	**Sg**	**00 49 01.6**	**+0.4**
	5.8nm,0.1s						
KST	**Kastek**	**0.57**	**265**	P	**Pg**	**00 48 53.4**	**-0.2**
	4.8nm,0.2s						
KST				S	**Sg**	**00 49 01.4**	**+0.2**
	12nm,0.2s						
KTBS	**Karatobe**	**0.61**	**356**	*e*P	**Pg**	**00 48 53.8**	**-0.5**
	0.6nm,0.1s						
KTBS				*e*S	**Sg**	**00 49 02.2**	**-0.2**
	3.3nm,0.1s						
KTBS	**Karatobe**	**0.61**	**356**	P	**Pg**	**00 48 53.8**	**-0.5**
	1.2nm,0.3s						
KTBS				S	**Sg**	**00 49 02.1**	**-0.3**
	16nm,0.2s						
DGS	**Degeres**	**0.72**	**282**	*e*P	**Pg**	**00 48 55.9**	**-0.5**
	baz=81						
DGS				*e*S	**Sg**	**00 49 05.8**	**-0.1**
	baz=81						
DGS	**Degeres**	**0.72**	**282**	*e*P	**Pg**	**00 48 55.9**	**-0.5**
	0.8nm,0.1s						
DGS				*e*S	**Sg**	**00 49 05.8**	**-0.1**
	4.6nm,0.1s						
DGS	**Degeres**	**0.72**	**282**	P	**Pg**	**00 48 55.5**	**-0.9**
	1.9nm,0.3s						
DGS				S	**Sg**	**00 49 05.1**	**-0.9**
	7.8nm,0.3s						
ANVS	**Anan'yevo**	**0.75**	**115**	⇑*i*P	**Pg**	**00 48 56.2**	**-0.6**
	baz=15						
ANVS				⇑*i*S	**Sg**	**00 49 06.1**	**-0.6**
	baz=15						
KUU	**Kurty**	**0.84**	**340**	P	**Pg**	**00 48 58.0**	**-0.6**
	1.7nm,0.4s						
KUU				S	**Sg**	**00 49 09.3**	**-0.4**
	1.8nm,0.2s						
BOOM	**Boomskoye usch**	**0.85**	**224**	⇓*i*P	**Pg**	**00 48 58.5**	**-0.3**
	baz=25						
BOOM				⇓*i*S	**Sg**	**00 49 10.2**	**+0.3**
	baz=25						
TKM2	**Tokmak 2**	**0.86**	**258**	⇑*i*P	**Pg**	**00 48 58.6**	**-0.4**
	baz=58						
TKM2				⇑*i*S	**Sb**	**00 49 10.8**	**-0.1**
	baz=58						
ULHL	**Ulahol**	**0.93**	**204**	⇑*e*P	**Pg**	**00 48 59.6**	**-0.7**
	baz=4.0						
ULHL				⇑*i*S	**Sb**	**00 49 12.8**	**-0.1**
	baz=4.0						
KRBS	**Karabastau**	**0.98**	**308**	*e*P	**Pg**	**00 49 00.3**	**-0.9**
	1.1nm,0.1s						
KRBS				*e*S	**Sg**	**00 49 13.4**	**-0.7**
	0.9nm,0.1s						
ARXS	**Arharly**	**1.36**	**35**	*e*P	**Pn**	**00 49 07.4**	**+0.1**
	1.2nm,0.1s						
ARXS				*e*S	**Sn**	**00 49 25.4**	**+0.2**
	2.9nm,0.1s						
ARXS	**Arharly**	**1.36**	**35**	P	**Pn**	**00 49 07.3**	**+0.1**
	3.3nm,0.4s						
ARXS				S	**Sb**	**00 49 25.2**	**0.0**
	2.9nm,0.2s						
CHMS	**Chumysh**	**1.46**	**267**	⇑*i*P	**Pn**	**00 49 08.9**	**+0.3**
	baz=67						
CHMS				⇑*i*S	**Sb**	**00 49 28.8**	**+0.7**
	baz=67						
UCH	**Uchtor**	**1.86**	**243**	⇑*i*P	**Pn**	**00 49 15.5**	**+1.1**
	baz=43						
UCH				⇑*e*S	**Sb**	**00 49 39.6**	**-0.3**
	baz=43						

*TIR **29** 00:52:13.2,41˚.86N×20˚.24E,h7km,Md2.7/4*
*PDG **29** 00:52:13.3±0.1,41˚.86N×20˚.25E,h6km,ML2.1/13,Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*
*SKO **29** 00:52:13.8,41˚.92N×20˚.24E,h0km*
*BEO **29** 00:52:14.5±0.2,41˚.87N×20˚.28E,h4km±2km,ML1.6/10*
ISC 29 00:52:14.0±1.0,41˚.87N±0˚.02×20˚.26E±0˚.02,h8km±9km,
n39,σ0°96/73,10C-10D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.23**	**144**	*i* PG	**Pg**	**00 52 18.7**	**+0.1**
PHP				*i* SG	Sg	00 52 12.1	-10
PUK	**Puka**	**0.32**	**302**	*i* PG	**Pg**	**00 52 20.0**	**-0.4**
PUK				*i* SG	**Sg**	**00 52 24.9**	**+0.3**
BCI	**Bajram Curri**	**0.51**	**344**	*i* PG	**Pg**	**00 52 23.9**	**0.0**
BCI				*i* SG	**Sb**	**00 52 32.1**	**-0.9**
TIR	**Tirane**	**0.60**	**210**	*e*Pg	**Pg**	**00 52 25.1**	**-0.5**
TIR				*e*Sg	**Sb**	**00 52 34.3**	**-1.2**
TIR	**Tirane**	**0.60**	**210**	*i* PG	**Pg**	**00 52 25.2**	**-0.5**
TIR				*i* SG	**Sb**	**00 52 34.8**	**-0.7**
TIR	**Tirane**	**0.60**	**210**	⇓P	**Pg**	**00 52 24.9**	**-0.7**
TIR				⇓S	**Sg**	**00 52 34.1**	**+0.6**
PVY	**Plav**	**0.75**	**343**	⇑*i*Pg	**Pg**	**00 52 27.4**	**-1.1**
PVY				*i* Sg	**Sb**	**00 52 39.6**	**-0.4**
ULC	**Ulcinj**	**0.76**	**277**	⇑*i*Pg	**Pg**	**00 52 27.3**	**-1.4**
ULC				*i* Sg	**Sb**	**00 52 39.4**	**-0.7**
DRME	**Dracevica, Mon**	**0.86**	**292**	⇓*i*Pg	**Pg**	**00 52 29.3**	**-1.2**
DRME				*i* Sg	**Sb**	**00 52 42.8**	**-0.1**
OHR	**Ohrid**	**0.86**	**152**	*i* Pg	**Pg**	**00 52 30.1**	**-0.4**
OHR				*i* Sg	**Sb**	**00 52 42.5**	**-0.5**
OHR				*e*Lg	Lg	00 52 43.0	
	comp=N,24nm,0.6s						
OHR				*e*Lg	Lg	00 52 43.5	
	comp=E,35nm,0.5s						
OHR	**Ohrid**	**0.86**	**152**	*i* Pg	**Pg**	**00 52 30.1**	**-0.4**
OHR				*i* Sg	**Sb**	**00 52 42.5**	**-0.5**
OHR				*e*Lg	Lg	00 52 43.0	
	comp=N,24nm,0.6s						
OHR				*e*Lg	Lg	00 52 43.5	
	comp=E,35nm,0.5s						
SKO	**Skopje**	**0.89**	**83**	*e*Pg	**Pg**	**00 52 29.9**	**-1.1**
SKO				*e*Sg	**Sg**	**00 52 42.9**	**+0.4**
PDG	**Podgorica**	**0.93**	**307**	*e*Pg	**Pg**	**00 52 30.5**	**-1.3**
PDG				*e*Sg	**Sb**	**00 52 45.3**	**+0.4**
PDG	**Podgorica**	**0.93**	**307**	⇓P	**Pg**	**00 52 30.6**	**-1.3**
PDG				⇓S	**Sg**	**00 52 43.8**	**-0.2**
TTG	**Podgorica**	**0.93**	**307**	⇓*i*Pg	**Pg**	**00 52 30.6**	**-1.3**
TTG				*i* Sg	**Sb**	**00 52 45.3**	**+0.4**
IVA	**Berane**	**1.03**	**345**	⇓*i*Pg	**Pg**	**00 52 32.5**	**-1.4**
IVA				*i* Sg	**Sn**	**00 52 49.0**	**-0.7**
BUM	**Brajici-Budva**	**1.10**	**293**	⇑*i*Pg	**Pg**	**00 52 33.4**	**-1.8**
BUM				*i* Sg	**Sn**	**00 52 51.0**	**-0.3**
KOME	**Kolasin**	**1.12**	**331**	⇑*i*Pg	**Pg**	**00 52 33.9**	**-1.6**
KOME				*i* Sg	**Sn**	**00 52 51.9**	**+0.1**
CEME	**Cevo**	**1.20**	**304**	⇓*i*Pg	**Pg**	**00 52 35.3**	**-1.8**
CEME				*i* Sg	**Sn**	**00 52 54.5**	**+0.7**
NKME	**Niksic**	**1.32**	**313**	⇑*i*Pg	**Pn**	**00 52 37.7**	**-1.1**
NKME				*i* Sg	**Sn**	**00 52 58.2**	**+1.6**
NKY	**Niksic**	**1.33**	**315**	⇓*i*Pg	**Pn**	**00 52 37.8**	**-1.2**
NKY				*i* Sg	**Sn**	**00 52 58.7**	**+1.8**
SJES	**Sjenica**	**1.40**	**351**	*e*Pg	**Pn**	**00 52 39.8**	**-0.2**
SJES				*e*Sg	**Sn**	**00 52 59.7**	**+0.9**
HCY	**Herceg Novi**	**1.43**	**294**	⇑*i*Pg	**Pn**	**00 52 39.5**	**-0.8**
HCY				*i* Sg	**Sg**	**00 53 02.3**	**+2.2**
SELS	**Selova**	**1.49**	**25**	*e*Pg	**Pn**	**00 52 40.8**	**-0.3**
SELS				*e*Sg	**Sb**	**00 53 01.4**	**+0.4**
BARS	**Barje**	**1.49**	**50**	*e*Pg	**Pn**	**00 52 41.4**	**+0.3**
BARS				*e*Sg	**Sg**	**00 53 01.9**	**0.0**
PLE	**Pljevlja**	**1.59**	**336**	⇓*i*Pn	**Pn**	**00 52 42.7**	**+0.1**
PLE				*i* Sn	**Sg**	**00 53 06.6**	**+1.4**
BRY	**Bratogost**	**1.64**	**309**	⇑*i*Pn	**Pn**	**00 52 43.3**	**0.0**
BRY				*i* Sn	**Sg**	**00 53 08.1**	**+1.5**
TREB	**Trebinje**	**1.65**	**301**	*e*Pn	**Pn**	**00 52 43.8**	**+0.5**
TREB				*e*Sn	**Sg**	**00 53 07.5**	**+0.5**
UPM	**Unac-Piva**	**1.66**	**323**	⇑*i*Pn	**Pn**	**00 52 44.1**	**+0.4**
UPM				*i* Sn	**Sg**	**00 53 08.6**	**+1.1**
IVAS	**Ivanjica**	**1.70**	**357**	*e*Pn	**Pn**	**00 52 44.5**	**+0.4**
IVAS				*e*Sg	**Sb**	**00 53 07.6**	**+0.3**
DBRK	**Dubrovnik**	**1.76**	**298**	*e*Pn	**Pn**	**00 52 45.4**	**+0.6**
DBRK				Sn	**Sg**	**00 53 12.9**	**+2.4**
BOSS	**Bosilegrad**	**1.76**	**69**	*e*Pn	**Pb**	**00 52 46.0**	**-0.6**
BOSS				*e*Sn	**Sn**	**00 53 07.8**	**+0.2**
STON	**Ston**	**2.14**	**299**	*e*Pn	**Pn**	**00 52 51.2**	**+1.2**
STON				Sn	**Sb**	**00 53 20.3**	**+0.5**
DIVS	**Divibare**	**2.23**	**355**	*e*Pn	**Pn**	**00 52 52.8**	**+1.4**
DIVS				*e*Sn	**Sn**	**00 53 19.9**	**+0.7**
MAKA	**Makarska**	**2.78**	**302**	*i* Pn	**Pn**	**00 52 58.6**	**-0.2**
RICI	**Ricice**	**2.82**	**306**	*e*Pn	**Pn**	**00 53 00.4**	**+1.0**
RICI				Sn	**Sb**	**00 53 39.0**	**-0.3**
MDVR	**Moldovita**	**3.09**	**20**	⇑P	**Pn**	**00 53 04.0**	**+0.8**
KIJV	**Kijevo**	**3.54**	**308**	*e*Pn	**Pn**	**00 53 09.9**	**+0.6**
BZS	**Buzias**	**3.87**	**14**	⇓P	**Pn**	**00 53 14.0**	**+0.2**

*JMA **29** 00:53:44.1±0.1,36˚.84N×141˚.32E,h35km±1km,M3.2*
*IDC **29** 00:53:44.8±1.6,37˚.01N×141˚.63E,h0km,mb3.4/4,*
mb1 3.7/5,mb1mx3.4/35,mbtmp3.4/5,ML2.7/1,Error ellipse: s-maj=34.7km s-min=31.3km az=138.0
ISC 29 00:53:44.1±1.7,36˚.88N±0˚.04×141˚.32E±0˚.06,h4km±10km,
n23,σ1°86/28,mb3.4/4,Near east coast of eastern Honshu

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

ONAJ	**Iwakimizuishiy**	**0.47**	**299**	P	**Pb**	**00**	**53**	**54.5 -0.5**
ONAJ				S	**Sb**	**00**	**54**	**01.6 -0.7**
JFK	**Kawauchi**	**0.60**	**324**	P	**Pg**	**00**	**53**	**56.3 +0.6**
JFK				S	**Sg**	**00**	**54**	**04.9 +1.4**
JFFD	**Fukushimafurud**	**0.64**	**290**	P	**Pg**	**00**	**53**	**57.0 +0.6**
JFFD				S	**Sg**	**00**	**54**	**05.6 +0.9**
JHO	**Hitachi**	**0.66**	**246**	P	**Pg**	**00**	**53**	**56.5 -0.2**
JHO				*e*S	**Sg**	**00**	**54**	**05.1 -0.1**
JHYU	**Hitachinakayam**	**0.80**	**228**	P	**Pg**	**00**	**53**	**58.4 -0.9**
JHYU				*e*S	**Sg**	**00**	**54**	**08.8 -0.8**
JFT	**Otama**	**1.01**	**310**	P	**Pg**	**00**	**54**	**03.3 -0.2**
JFT				S	**Sg**	**00**	**54**	**16.7 +0.1**
JMM	**Marumori**	**1.07**	**337**	*e*S	**Sg**	**00**	**54**	**18.2 -0.3**
JFY	**Yanaizu**	**1.39**	**293**	P	**Pn**	**00**	**54**	**09.1 -1.2**
JFY				*e*S	**Sn**	**00**	**54**	**26.4 -2.8**
JAG	**Ashikaga**	**1.56**	**254**	P	**Pn**	**00**	**54**	**10.4 -2.3**
JAG				*e*S	**Sn**	**00**	**54**	**30.0 -3.4**
JOU	**Okura**	**1.57**	**341**	P	**Pn**	**00**	**54**	**11.2 -1.6**
JIO	**Ouri**	**1.57**	**1**	P	**Pn**	**00**	**54**	**10.7 -2.1**
JIO				*e*S	**Sn**	**00**	**54**	**29.3 -4.3**
MJAR	**Matsushiro Arr**	**2.52**	**263**	Pn	**Pb**	**00**	**54**	**29.3 -0.6**
	1.1nm,0.3s,baz=82,slow=16,SNR=11							
MJAR				Sn	**Sb**	**00**	**55**	**01.5 +0.3**
	0.9nm,0.3s,baz=80,slow=30,SNR=5.0							
MAT	**Matsushiro**	**2.52**	**263**	P	**Pn**	**00**	**54**	**25.5 -0.3**
MAT				S	**Sn**	**00**	**54**	**56.3 -0.7**
SONM	**Songino Array**	**27.81**	**304**	P	**P**	**00**	**59**	**37.4 +3.1**
	0.3nm,0.4s,baz=97,slow=10,SNR=2.4							
H11N2	**WAKE ISLAND Hy 28.14**	**120**		T	T	01	28	58.8
	baz=313,slow=75,SNR=64							
H11N1	**WAKE ISLAND Hy 28.14**	**120**		T	T	01	29	02.2
	baz=313,slow=75,SNR=81							
H11N3	**WAKE ISLAND Hy 28.15**	**120**		T	T	01	29	03.0
	baz=313,slow=75,SNR=68							
H11S1	**WAKE ISLAND Hy 28.84**	**123**		T	T	01	29	55.2
	baz=315,slow=76,SNR=23							
H11S3	**WAKE ISLAND Hy 28.84**	**123**		T	T	01	29	56.6
	baz=315,slow=76,SNR=22							
H11S2	**WAKE ISLAND Hy 28.86**	**123**		T	T	01	29	57.8
	baz=315,slow=76,SNR=30							
MKAR	**Makanchi Array**	**44.14**	**302**	P	**P**	**01**	**01**	**56.1 +2.5**
	0.2nm,0.5s,baz=85,slow=8.9,SNR=1.9							
ILAR	**Eielson Array**	**49.67**	**32**	P	**P**	**01**	**02**	**35.4 -1.2**
	0.3nm,0.8s,baz=266,slow=5.9,SNR=4.3							
WRA	**Warramunga Arr**	**56.90**	**188**	P	**P**	**01**	**03**	**33.1 +2.9**
	0.5nm,0.5s,baz=3.7,slow=7.6,SNR=3.0							

*IDC **29** 01:02:35.7±1.9,20˚.79S×179˚.33W,h0km,mb4.1/3,*
mb1 4.4/3,mb1mx3.9/25,mbtmp4.1/3,Error ellipse:
s-maj=169.4km s-min=33.7km az=157.0
*NEIC **29** 01:03:30.9±1.9,22˚.6S±0˚.2×179˚.6W±0˚.2,h554km±18km,*
mb4.2/13,Error ellipse: s-maj=27.5km s-min=26.2km
az=153.0
ISC 29 01:03:30.3±1.2,22˚.6S±0˚.1×179˚.5W±0˚.2,h550km,n20,
σ1°13/20,mb4.1/9,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.37**	**335**	P	**P**	**01**	**05**	**03.9 +0.4**
BKZ	**Black Stump Fm**	**16.83**	**191**	P	**P**	**01**	**06**	**57.0 -0.5**
BKZ				IAmb	IAmb	01	06	57.9
	comp=Z,11nm,1.0s							
KHZ	**Kahutara**	**20.57**	**195**	P	**P**	**01**	**07**	**31.1 -0.2**
LTZ	**Lake Taylor**	**21.23**	**197**	P	**P**	**01**	**07**	**36.5 -0.8**
ARMA	**Armidale**	**26.88**	**247**	P	**P**	**01**	**08**	**29.8 +2.0**
ARMA				IAmb	IAmb	01	08	46.4
	comp=Z,4.5nm,1.0s							
EIDS	**Eidsvold**	**26.95**	**258**	P	**P**	**01**	**08**	**28.9 +0.6**
CAN	**Canberra**	**30.16**	**238**	P	**P**	**01**	**08**	**58.4 +2.2**
CTAO	**Charters Tower**	**31.91**	**268**	P	**P**	**01**	**09**	**11.5 +0.1**
CTAO				IAmb	IAmb	01	09	11.6
	comp=Z,4.9nm,0.9s							
TOO	**Toolangi**	**33.50**	**236**	P	**P**	**01**	**09**	**25.6 +1.0**
TOO				IAmb	IAmb	01	09	26.9
	comp=Z,7.0nm,0.7s							
STKA	**Stephens Creek**	**35.60**	**246**	P	**P**	**01**	**09**	**42.9 +0.8**
	comp=Z,2.8nm,0.5s,baz=84,slow=11,SNR=8.9							
STKA	**Stephens Creek**	**35.60**	**246**	P	**P**	**01**	**09**	**42.4 +0.2**
BBOO	**Buckleboo**	**40.34**	**246**	P	**P**	**01**	**10**	**20.8 +0.1**
BBOO				IAmb	IAmb	01	10	20.9
	comp=Z,8.8nm,1.1s							
WB0	**Warramunga Arr**	**42.91**	**265**	P	**P**	**01**	**10**	**39.7 -1.5**
WB2	**Warramunga Arr**	**42.92**	**265**	P	**P**	**01**	**10**	**40.2 -1.0**
WB2				IAmb	IAmb	01	10	41.2
	comp=Z,6.5nm,1.1s							
WRA	**Warramunga Arr**	**42.93**	**265**	P	**P**	**01**	**10**	**40.0 -1.3**
	comp=Z,1.4nm,0.5s,baz=96,slow=8.5,SNR=6.9							
FORT	**

BNSI **Bone** 6.68 231 P **Pn** 01 18 26.3 +0.7
1.2nm3µm372nm,0.7s
SPSI **Sidrap Palu** 6.69 236 P **Pn** 01 18 27.1 +1.2
2.0nm5µm535nm,0.6s
KCP **Kidapawan** 7.17 358⇓ *i*P **Pn** 01 18 36.1 +3.5
KCP *i* S Sn 01 20 04.8 +12
DAV **Davao City (W)** 7.24 2 P **Pn** 01 18 35.9 +2.6
BKSI **Bulukumba** 7.27 226 P **Pn** 01 18 34.1 +0.3
0.9nm5µm2µm177nm,0.7s
KAPI **Kappang** 7.34 229 Pn **Pn** 01 18 33.3 -1.4
5.7nm,0.3s,baz=153,slow=18,SNR=3.2
KAPI Sn **Sn** 01 19 55.0 -1.7
3.8nm,0.3s,baz=292,slow=22,SNR=1.5
KAPI LR LR 01 22 13.9
comp=Z,4µm,21.1s,baz=48,slow=45
KAPI **Kappang** 7.34 229 P **Pn** 01 18 35.4 +0.7
KAPI 01 19 55.7
KAPI **Kappang** 7.34 229 **Pn** 01 18 35.4 +0.7
KAPI **Sn** 01 19 55.7 -0.9
FAKI **Fak Fak** 7.42 111 **Pn** 01 18 34.6 -1.3
FAKI Sn **Sn** 01 19 57.6 -1.1
CTBH **Cotabato--PC H** 7.46 352⇑ *i*P Pn 01 18 41.6 +5.2
BUKP **Musuan** 8.04 358 *e*P Pn 01 18 48.2 +3.8
SMKI **Samarinda** 8.13 268 P Pn 01 18 57.5 +12
PAGZ **Pagadian** 8.24 346 *e*P **Pn** 01 18 49.1 +2.1
BKB **Balikpapan** 8.50 263 P **Pn** 01 18 50.9 +0.3
3µm4µm478nm,0.8s
BKB **Balikpapan** 8.50 263 **Pn** 01 18 49.1 -1.6
SOEI **Soe** 9.54 186 P **Pn** 01 19 07.1 +2.1
3µm1µm72nm,0.8s
SOEI **Soe** 9.54 186 **Pn** 01 19 06.8 +1.7
KBKI **Kotabaru** 9.66 251 P **Pn** 01 19 09.4 +2.9
874nm77nm,0.7s
BATI **Baumata** 10.07 189 Pn **Pn** 01 19 15.7 +3.5
3.6nm,0.3s,baz=150,slow=23,SNR=3.4
BATI LR LR 01 24 35.8
comp=Z,2µm,20.4s,baz=1.0,slow=46
BATI **Baumata** 10.07 189 P **Pn** 01 19 13.8 +1.6
58nm,1.1s
CNOP **Candoni, Negro** 10.33 345 *e*P **Pn** 01 19 18.2 +2.6
KKM **Kota Kinabalu** 11.02 304 **Pn** 01 19 25.6 +0.4
GUIM **Jordan** 11.11 346 *e*P Pn 01 19 31.5 +5.2
RCP **Roxas** 11.97 348⇓ *e*P Pn 01 19 46.9 +8.7
SRBI **Singaraja** 12.76 232 P P 01 20 06.5 +7.9
SBUM **Sibu** 13.37 281 **Pn** 01 19 59.4 +2.1
KDU **Kakadu** 14.28 151 P **Pn** 01 20 08.2 -1.3
baz=14,SNR=9.0
PGP **Puerto Galera** 14.30 342⇓ *e*P **P** 01 20 13.9 -1.7
LUBP **Lubang** 14.74 340 *e*P **P** 01 20 21.7 +1.1
KSM **Kuching** 15.12 276 Pn **Pn** 01 20 19.3 -1.2
KSM IAmb IAmb 01 20 27.8
comp=Z,48nm,0.8s
KSM **Kuching** 15.12 276 P **P** 01 20 27.0 +2.3
KNRA **Kununurra** 15.74 168 P **Pn** 01 20 28.5 0.0
baz=16,SNR=15
KNRA **Kununurra** 15.74 168 Pn **Pn** 01 20 28.0 -0.5
KNRA IAmb IAmb 01 20 30.3
comp=Z,95nm,1.0s
SMRI **Semarang** 16.33 245 P **P** 01 20 40.3 +2.0
comp=Z,229nm,0.7s
SMRI **Semarang** 16.33 245 P **P** 01 20 37.4 -0.8
SMPP **San Manuel, Pa** 16.89 344 *e*P **Pn** 01 20 42.1 -1.0
FITZ **Fitzroy Crossi** 17.78 179 P **P** 01 20 56.3 +2.1
baz=18,SNR=14
FITZ **Fitzroy Crossi** 17.78 179 P **P** 01 20 54.1 -0.1
comp=Z,0.2nm,0.3s,baz=20,slow=15,SNR=6.0
FITZ LR LR 01 27 53.8
comp=Z,186nm,20.2s,baz=3.5,slow=37
FITZ **Fitzroy Crossi** 17.78 179 P **P** 01 20 53.7 -0.5
TPI **Tanjungpandan** 17.85 262 P **P** 01 20 56.8 +1.7
comp=Z,27nm,1.4s
SZP **Santa** 18.29 345 P **Pn** 01 20 59.6 -0.6
LEM **Lembang** 18.85 249 P **Pn** 01 21 05.9 -1.3
comp=Z,8.4nm,0.3s,baz=334,slow=10,SNR=19
LEM LR LR 01 29 04.5
comp=Z,2µm,21.7s,baz=44,slow=39
CISI **Cisompet, Garu** 18.93 247 P **Pn** 01 21 07.8 -0.2
CISI **Cisompet, Garu** 18.93 247 P **P** 01 21 06.0 -1.0
CISI IAmb IAmb 01 21 08.4
comp=Z,104nm,0.7s
CNJI **Cibinong** 19.47 248 P **Pn** 01 21 14.6 +0.1
comp=Z,4µmcomp=Z,131nm,0.9s
DLV **T Lat** 20.63 306 P **P** 01 21 24.1 -1.5
DLV IAmb IAmb 01 21 27.4
comp=Z,40nm,0.7s
TPRI **Tanjung Pinang** 20.84 273 P Pn 01 21 31.0 +0.4
WB0 **Warramunga Arr** 21.37 156 P **P** 01 21 32.8 -0.5
WB7 **Warramunga Arr** 21.43 156 P **P** 01 21 33.1 -0.9
baz=22
WRAB **Tennant Creek** 21.50 156⇑ *e*P **P** 01 21 34.3 -0.4
WRAB pmax pmax
comp=Z,25nm,1.3s
WRAB **Tennant Creek** 21.50 156 P **P** 01 21 33.7 -1.1
WRA **Warramunga Arr** 21.50 156 P **P** 01 21 34.1 -0.7
comp=Z,17nm,1.0s,baz=335,slow=11,SNR=29
WRA ScP **ScP** 01 29 11.1 +1.9
comp=Z,1.5nm,0.8s,baz=332,slow=2.9,SNR=5.1
WRA LR LR 01 30 17.7
comp=Z,411nm,21.8s,baz=340,slow=38
WB2 **Warramunga Arr** 21.51 156 P **P** 01 21 34.4 -0.5
MYKOM **Kota Tinggi** 21.57 275 P **P** 01 21 34.6 -1.0
WR0 **Warramunga Arr** 21.60 156 P **P** 01 21 34.7 -1.2
PSA00 **Pilbara Seismi** 21.90 194 P **P** 01 21 39.0 +0.1
XMIS **Christmas Isla** 22.07 242 P **P** 01 21 39.9 -1.0
LHSI **Lahat** 22.09 260 P P 01 21 52.0 +11
COEN **Coen** 22.33 128 P **P** 01 21 45.2 +1.5
baz=22,SNR=8.3
COEN **Coen** 22.33 128 P **P** 01 21 43.4 -0.3
YULB **Yu-li** 23.79 351 P **P** 01 21 57.8 -0.4
TPUB **Ta-pu** 23.81 349 P **P** 01 21 56.6 -1.8
TPUB IAmb IAmb 01 22 00.4
comp=Z,58nm,0.7s
SSLB **Suanglung** 24.23 350 IAmb IAmb 01 22 06.7
comp=Z,26nm,0.8s
QIZ **Qiongzhong** 24.43 322 P **P** 01 22 05.3 +1.2
QIZ S **S** 01 26 25.5 +4.9
QIZ sS **sS** 01 26 43.5 +1.9
QIZ pmax pmax
comp=Z,13nm,1.9s
QIZ pmax pmax
comp=Z,220nm,8.3s
QIZ LR LR
comp=Z,300nm,17.7s
QIZ LR LR
comp=Z,390nm,17.7s
QIZ LR LR
comp=Z,510nm,17.6s
QIS **Mount Isa** 24.57 146 P **P** 01 22 06.7 +1.2
baz=25,SNR=25
YOJ **Yonaguni jima** 24.63 355 IAmb IAmb 01 22 12.0
comp=Z,27nm,0.7s
IPM **Ipoh** 24.73 281 P **P** 01 22 06.0 -0.9
IPM IAmb IAmb 01 22 07.9
comp=Z,18nm,0.7s
IPM **Ipoh** 24.73 281 P **P** 01 22 07.0 +0.1
AS31 **Alice Springs** 24.76 161 P **P** 01 22 07.3 +0.2
WRKA **Warakurna** 24.85 174 P **P** 01 22 08.8 +1.0
baz=25,SNR=52
YHNB **Yeheng** 25.03 351 P **P** 01 22 09.0 -0.5
YHNB IAmb IAmb 01 22 13.2
comp=Z,20nm,0.7s
KULM **Kulim** 25.25 283 P **P** 01 22 09.6 -2.0
KULM **Kulim** 25.25 283 P **P** 01 22 14.0 +2.4
MTSU **Mount Surprise** 25.80 135 P **P** 01 22 18.3 +1.7
baz=26,SNR=5.1
RPSI **Rantau Prapat** 26.56 276 P **P** 01 22 21.9 -1.5
PSI **Prapat** 26.57 277 P **P** 01 22 22.7 -1.0
comp=Z,11nm,0.8s,baz=26,slow=0.1,SNR=12
PSI LR LR 01 34 23.7
comp=Z,594nm,18.5s,baz=90,slow=40
PSI **Prapat** 26.57 277 P **P** 01 22 21.9 -1.8
PSI pmax pmax
comp=Z,12nm,0.8s
KRVT **Keravat (AS076** 26.98 99 LR LR 01 35 46.3
comp=Z,341nm,18.8s,baz=278,slow=42
JOW **Kunigami** 27.04 6 P **P** 01 22 29.0 +1.4
comp=Z,6.5nm,0.7s,baz=174,slow=9.4,SNR=30
JOW **Kunigami** 27.04 6 IAmb IAmb 01 22 36.0
comp=Z,44nm,0.8s
MEEK **Meekatharra** 27.06 193 P **P** 01 22 27.9 0.0
baz=27,SNR=6.2
KCSI **Kotacane, Aceh** 27.79 278 P **P** 01 22 37.3 +2.7
comp=Z,18nm,0.7s
GSI **Gunungsitoli** 27.80 273 P **P** 01 22 32.6 -2.0
FORT **Forrest** 30.51 175 P **P** 01 22 59.9 +1.5
baz=31,SNR=9.7
CMAR **Chiang Mai Arr** 31.88 307 P **P** 01 23 10.4 -0.3
comp=Z,3.6nm,0.6s,baz=128,slow=7.0,SNR=18
CMAR PcP **PcP** 01 26 02.2 +1.6
comp=Z,4.2nm,0.8s,baz=172,slow=2.2,SNR=13
CMAR LR LR 01 35 38.1
comp=Z,444nm,21.9s,baz=185,slow=36
CMAR **Chiang Mai Arr** 31.88 307 *i* P **P** 01 23 10.5 -0.3
CMAR pmax pmax
comp=Z,5.0nm,0.6s
GYA **Guiyang** 32.04 327⇑ *i*P **P** 01 23 12.3 +0.1
GYA pP pwP 01 23 26.5 -1.3
GYA PP **PnPn** 01 24 18.3 -0.8
GYA S **S** 01 28 19.3 -1.4
GYA sS sS 01 28 44.8 +2.8
GYA SS **SnSn** 01 30 21.3 +6.9
GYA pmax pmax
comp=Z,10.0nm,0.5s
GYA pmax pmax
comp=Z,70nm,6.4s
GYA LR LR
comp=Z,300nm,15.8s
GYA LR LR
comp=Z,270nm,17.5s
GYA LR LR
comp=Z,420nm,19.1s
CHTO **Chiang Mai** 32.07 308 P **P** 01 23 12.2 -0.2
CHTO pmax pmax
comp=Z,14nm,0.8s
CHTO **Chiang Mai** 32.07 308 P **P** 01 23 12.2 -0.2
CHTO IAmb IAmb 01 23 13.6
comp=Z,14nm,0.8s
NJ2 **Nanjing** 32.67 350 *e*P **P** 01 23 17.5 +0.1
NJ2 pmax pmax
comp=Z,14nm,0.5s
NJ2 LR LR
comp=Z,450nm,17.9s
NJ2 LR LR
comp=Z,370nm,22.7s
NJ2 LR LR
comp=Z,550nm,21.6s
KMI **Kunming** 33.34 321 P **P** 01 23 26.8 +3.1
KMI pP pwP 01 23 38.0 -1.6
KMI sP sP 01 23 43.5 +1.5
KMI S **S** 01 28 43.3 +2.1
KMI pmax pmax
comp=Z,15nm,0.6s
KMI pmax pmax
comp=Z,130nm,7.6s
KMI LR LR
comp=Z,360nm,19.9s
KMI LR LR
comp=Z,180nm,18.1s
KMI LR LR
comp=Z,470nm,19.3s
JNU **Nakatsue** 33.56 8 P **P** 01 23 25.6 +0.3
comp=Z,18nm,0.8s,baz=249,slow=4.4,SNR=6.7
JNU **Nakatsue** 33.56 8 P **P** 01 23 24.1 -1.2
JNU IAmb IAmb 01 23 31.2
comp=Z,18nm,0.8s
STKA **Stephens Creek** 35.05 155 P **P** 01 23 39.5 +1.4
baz=35,SNR=15
STKA **Stephens Creek** 35.05 155 P **P** 01 23 39.2 +1.1
comp=Z,12nm,0.8s,baz=336,slow=8.5,SNR=15
STKA LR LR 01 39 38.1
comp=Z,182nm,19.2s,baz=331,slow=39
STKA **Stephens Creek** 35.05 155 P **P** 01 23 38.8 +0.6
STKA pmax pmax
comp=Z,5.0nm,1.1s
STKA **Stephens Creek** 35.05 155 P **P** 01 23 38.8 +0.6
HTT **Hallett** 35.43 160 P **P** 01 23 44.4 +3.0
baz=36,SNR=3.6
TJN **Taejon** 36.45 3 *de*P **P** 01 23 52.2 +2.2
CMSA **Cobar Meteorol** 36.64 150 P **P** 01 23 53.6 +1.9
baz=37,SNR=9.0
INU **Inuyama** 37.02 16 P **P** 01 23 54.9 0.0
INU IAmb IAmb 01 23 57.1
comp=Z,14nm,0.9s
CD2 **Chengdu** 37.12 328 P **P** 01 23 57.0 +1.1
CD2 pP pwP 01 24 09.8 -1.9
CD2 PP **PnPn** 01 25 24.0 +1.9
CD2 sS sS 01 30 05.0 +4.8
CD2 SS **SS** 01 32 24.0 +1.0
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.7s
CD2 LR LR
comp=Z,680nm,21.6s
CD2 LR LR
comp=Z,720nm,22.1s
CD2 LR LR
comp=Z,510nm,20.1s
XAN **Xi'an** 37.39 337 P **P** 01 23 57.0 -1.1
XAN pP pwP 01 24 13.0 -0.9
XAN sP sP 01 24 20.3 +3.6
XAN pmax pmax
comp=Z,37nm,0.7s
XAN pmax pmax
comp=Z,170nm,5.5s
XAN LR LR
comp=Z,490nm,22.8s
XAN LR LR
comp=Z,260nm,19.5s
XAN LR LR
comp=Z,660nm,23.9s
KSRS **Korea Array** 37.55 3 P **P** 01 23 59.4 0.0
comp=Z,9.0nm,0.8s,baz=184,slow=9.4,SNR=29
KSRS PcP **PcP** 01 26 17.7 +1.1
comp=Z,3.2nm,0.8s,baz=190,slow=2.9,SNR=7.4
KSRS LR LR 01 39 07.8
comp=Z,274nm,21.4s,baz=192,slow=36
KS19 **Wonju Array Si** 37.60 3 IAmb IAmb 01 24 15.3
comp=Z,15nm,0.9s
MAJO **Matsushiro** 38.47 17 *ce*P **P** 01 24 07.0 -0.2
MAJO pmax pmax
comp=Z,11nm,1.0s
MAJO **Matsushiro** 38.47 17 P **P** 01 24 06.5 -0.7
MAJO IAmb IAmb 01 24 20.8
comp=Z,13nm,0.8s
MAT **Matsushiro** 38.47 17 P **P** 01 24 06.9 -0.3
MAT *e*S **S** 01 29 54.0 -5.0
MJAR **Matsushiro Arr** 38.47 17 P **P** 01 24 07.1 -0.1
comp=Z,6.7nm,0.7s,baz=193,slow=8.7,SNR=17
ARMA **Armidale** 39.08 143 P **P** 01 24 14.5 +2.0
baz=39,SNR=5.6
ARMA **Armidale** 39.08 143 P **P** 01 24 13.3 +0.8
ARMA IAmb IAmb 01 24 31.6
comp=Z,9.7nm,0.7s
ARPS **Mount Arapiles** 39.46 159 P **P** 01 24 17.4 +2.0
baz=40,SNR=13
YNG **Young** 40.20 150 P **P** 01 24 24.2 +2.5
baz=40,SNR=5.3
BJI **Beijing** 40.92 349 P **P** 01 24 28.5 +1.0
BJI sP **sP** 01 24 44.8 -1.3
BJI S **S** 01 30 37.5 +1.9
BJI pmax pmax
comp=Z,10.0nm,0.7s
BJI LR LR
comp=Z,240nm,25.6s
BJI LR LR
comp=Z,150nm,31.3s
BJI LR LR
comp=Z,690nm,32.2s
LZH **Lanzhou** 41.27 333 *e*P **P** 01 24 31.8 +1.1
LZH pP sP 01 24 47.3 -2.0
LZH pmax pmax
comp=Z,20nm,1.0s
LZH pmax pmax
comp=Z,87nm,4.9s
LZH LR LR
comp=Z,310nm,16.8s
LZH LR LR
comp=Z,470nm,17.5s
LZH LR LR
comp=Z,600nm,17.0s
TOO **Toolangi** 41.57 156 P **P** 01 24 31.4 -1.5
TOO pmax pmax
comp=Z,16nm,1.1s
TOO **Toolangi** 41.57 156 P **P** 01 24 31.4 -1.5
HHC **Hu-ho-hao-te** 42.74 345 *e*P **P** 01 24 44.0 +1.5
HHC pP pwP 01 24 57.8 -0.6
HHC S S 01 31 11.8 +9.1
HHC SS **SS** 01 34 18.0 +2.9
HHC pmax pmax
comp=Z,10.0nm,0.8s
HHC pmax pmax
comp=Z,62nm,5.2s
HHC LR LR
comp=Z,190nm,19.0s
HHC LR LR
comp=Z,160nm,18.2s
HHC LR LR
comp=Z,190nm,19.2s
MSHR **Mys Shultsa** 42.92 6⇑ *e*P **P** 01 24 45.5 +1.8
MSHR pmax pmax
comp=Z,9.0nm,0.8s
VLA **Vladivostok** 43.54 7⇓ *e*P **P** 01 24 51.0 +2.3
VLA pmax pmax
comp=Z,29nm,0.7s
CN2 **Changchun** 43.82 0 *e*P **P** 01 24 50.8 -0.2
CN2 *e*PP **PcP** 01 26 35.3 -1.4
CN2 *e*S **S** 01 31 19.0 +0.9
CN2 *e*SS **SS** 01 34 28.5 -7.3
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 LR LR
comp=Z,120nm,22.0s
CN2 LR LR
comp=Z,240nm,22.0s
CN2 LR LR
comp=Z,170nm,23.0s
USA0B **Ussuriysk Arra** 44.61 7 P **P** 01 24 56.9 -0.4
USA0B pmax pmax
comp=Z,14nm,0.8s
USA0B **Ussuriysk Arra** 44.61 7 P **P** 01 24 56.9 -0.4
USA0B IAmb IAmb 01 25 02.1
comp=Z,14nm,0.8s
USRK **Ussuriysk Ar.** 44.61 7 P **P** 01 24 58.3 +1.0
comp=Z,14nm,0.8s,baz=189,slow=7.5,SNR=21
MDJ **Mudanjiang** 44.79 4 P **P** 01 25 00.0 +1.3
MDJ pmax pmax
comp=Z,13nm,0.9s
MDJ pmax pmax
comp=Z,190nm,4.1s
DZM **Mont Dzumac** 45.55 121 *e*LR LR 01 38 00.9
comp=Z,638nm,29.6s
GTA **Gaotai** 45.83 332 ⇑P **P** 01 25 07.0 -0.2
GTA pP pP 01 25 19.8 -0.5
GTA sP sP 01 25 24.8 -1.2
GTA S **S** 01 31 51.0 +3.3
GTA sS sS 01 32 17.0 +7.4
GTA SS **ScS** 01 35 05.3 +6.4
GTA pmax pmax
comp=Z,6.0nm,1.3s
GTA pmax pmax
comp=Z,95nm,8.3s
GTA LR LR
comp=Z,260nm,20.0s
GTA LR LR
comp=Z,360nm,19.4s
GTA LR LR
comp=Z,560nm,20.0s
TEY **Ternei** 46.15 11⇓ *e*P **P** 01 25 10.8 +1.4
TEY pmax pmax
comp=Z,10.0nm,1.7s
TEY pmax pmax
comp=N,10.0nm,0.9s
ASAJ **Asahikawa** 46.74 17 P **P** 01 25 15.8 +1.6
comp=N,8.3nm,0.7s,baz=241,slow=10,SNR=8.2
HYB **Hyderabad** 49.25 293 *i* P **P** 01 25 30.0 -4.0
HYB *e* 01 32 35.0
KLR **Kul'dur** 49.56 6 P **P** 01 25 36.1 +0.3
comp=N,10nm,0.7s,baz=192,slow=5.7,SNR=24
KLR **Kul'dur** 49.56 6⇑ *e*P **P** 01 25 35.7 -0.1
KLR pmax pmax
comp=Z,11nm,0.7s
ULN **Ulaanbaatar** 50.45 344⇑ *e*P **P** 01 25 42.9 +0.1
ULN pmax pmax
comp=Z,13nm,0.8s
ULN **Ulaanbaatar** 50.45 344 P **P** 01 25 41.4 -1.4
ULN IAmb IAmb 01 25 46.5
comp=Z,12nm,0.8s
SONM **Songino Array** 50.61 344 P **P** 01 25 43.7 -0.3
comp=Z,13nm,0.7s,baz=156,slow=8.9,SNR=23
SONM LR LR 01 47 53.3
comp=Z,267nm,21.0s,baz=140,slow=37
GRNR **Gornyy** 51.66 9 *e*P **P** 01 25 48.8 -2.8
GRNR MLR MLR
comp=Z,100nm,18.0s
ZEA **Zeya** 53.79 1 *e*P **P** 01 26 07.3 +0.1
ZEA pmax pmax
comp=Z,15nm,0.8s
ZAK **Zakamensk** 53.80 343 *e*P **P** 01 26 05.3 -2.3
ZAK pmax pmax
comp=Z,5.0nm,0.8s
TLY **Talaya** 54.85 344 P **P** 01 26 15.0 0.0
comp=Z,10nm,0.7s,baz=334,slow=4.6,SNR=6.2
TLY **Talaya** 54.85 344 *e*P **P** 01 26 16.5 +1.4
TLY pmax pmax
comp=Z,27nm,0.7s
TLY MLR MLR
comp=Z,371nm,19.0s
TLY **Talaya** 54.85 344 P **P** 01 26 15.2 +0.1
TLY IAmb IAmb 01 26 18.9
comp=Z,11nm,0.7s
WMQ **Urumqi** 55.20 327 *e*P **P** 01 26 19.8 +2.0
WMQ sP sP 01 26 36.8 -0.1
WMQ pmax pmax
comp=Z,18nm,0.7s
WMQ pmax pmax
comp=Z,140nm,3.8s
WMQ LR LR
comp=Z,250nm,19.3s
WMQ LR LR
comp=Z,230nm,23.1s
WMQ LR LR
comp=Z,310nm,21.1s
MOY **Mondy** 55.63 342 *e*P **P** 01 26 20.4 -0.4
BHK **Bhakra** 55.95 309 *ex* x 01 26 24.0
BOD **Bodaibo** 58.56 353 *e*P **P** 01 26 41.4 +0.2
BOD pmax pmax
comp=Z,30nm,0.8s
NIL **Nilore** 59.30 310 P **P** 01 26 45.8 -1.1
NIL pmax pmax
comp=Z,21nm,0.6s
NIL **Nilore** 59.30 310 P **P** 01 26 45.8 -1.1
DGZ **Jazzator, Alta** 59.36 332 *ce*P **P** 01 26 47.0 -0.2
DGZ pmax pmax
comp=Z,15nm,1.2s
PEA0B **Petropavlovsk-** 59.58 22 *c i*P **P** 01 26 50.3 +1.9
PEA0B **Petropavlovsk-** 59.58 22 P **P** 01 26 48.5 +0.1
PETK **Petropavlovsk-** 59.58 22 P **P** 01 26 49.8 +1.4
comp=Z,17nm,0.8s,baz=197,slow=4.6,SNR=19
PDGK **Podgornoye** 59.61 323 P **P** 01 26 47.7 -1.3
TARG **Taragay, Kyrgy** 59.80 320 P **P** 01 26 50.2 -0.5
TARG IAmb IAmb 01 27 01.1
comp=Z,8.3nm,0.7s
PET **Petropavlovsk** 59.88 23⇑ *e*P **P** 01 26 50.7 +0.3
PET pmax pmax
comp=Z,10.0nm,1.0s
KSH **Kashi** 59.90 317 P **P** 01 26 53.5 +2.5
KSH sP sP 01 27 14.0 +3.7
KSH PP **PP** 01 29 10.5 +6.8
KSH S **S** 01 35 00.0 +0.5
KSH SS **SS** 01 39 00.0 +3.3
KSH pmax pmax
comp=Z,30nm,0.7s
KSH pmax pmax
comp=Z,70nm,6.0s
KSH LR LR
comp=Z,180nm,12.4s
KSH LR LR
comp=Z,200nm,4.9s
KSH LR LR
comp=Z,410nm,15.1s
MK31 **Makanchi Array** 60.03 327 *e*P **P** 01 26 50.2 -1.5
MK31 **Makanchi Array** 60.03 327 IAmb IAmb 01 26 54.4
comp=Z,15nm,0.8s
MKAR **Makanchi Array** 60.03 327 P **P** 01 26 50.6 -1.1
comp=Z,19nm,0.6s,baz=125,slow=8.2,SNR=54
MKAR LR LR 01 54 14.0
comp=Z,267nm,18.4s,baz=118,slow=38
MAKZ **Makanchi** 60.21 327 P **P** 01 26 52.2 -0.7
MAKZ pmax pmax
comp=Z,14nm,0.7s
MAKZ **Makanchi** 60.21 327 P **P** 01 26 52.1 -0.7
ULHL **Ulahol** 61.07 320 P **P** 01 27 01.8 +2.7
SNR=9.0
BOOM **Boomskoye usch** 61.38 320 IAmb IAmb 01 27 08.8
comp=Z,5.9nm,0.8s
KZA **Kyzart** 61.62 320 P **P** 01 27 05.5 +2.4

	SNR=26							
TKM2	**Tokmak 2**	**61.82**	**321**	P		**P**	**01 27 06.0**	**+1.9**
	SNR=33							
KBK	**Karagaybulak**	**62.10**	**320**	P		**P**	**01 27 08.1**	**+2.1**
	SNR=16							
YAK	**Yakutsk**	**62.17**	**2**	P		**P**	**01 27 06.8**	**+1.1**
	comp=Z,45nm,0.6s,baz=206,slow=1.5,SNR=12							
YAK	**Yakutsk**	**62.17**	**2**	*eP*		**P**	**01 27 06.3**	**+0.5**
YAK				*e**PP		**sP**	**01 27 24.3**	**-0.7**
YAK				*e*			01 27 43.9	
YAK				*e*S		**S**	**01 35 26.5**	**-0.7**
YAK				*e**SS		sS	01 36 03.3	+13
YAK				*e*			01 36 52.5	
YAK					pmax	pmax		
	comp=Z,51nm,0.9s							
YAK					pmax	pmax		
	comp=N,20nm,1.0s							
YAK					pmax	pmax		
	comp=E,4.0nm,0.9s							
YAK					pmax	pmax		
	comp=Z,201nm,5.3s							
YAK					pmax	pmax		
	comp=N,131nm,4.6s							
YAK					pmax	pmax		
	comp=E,95nm,4.6s							
YAK					smax	smax		
	comp=E,88nm,2.8s							
YAK					smax	smax		
	comp=N,129nm,3.0s							
YAK	**Yakutsk**	**62.17**	**2**	P		**P**	**01 27 06.2**	**+0.4**
UCH	**Uchtor**	**62.17**	**319**	P		**P**	**01 27 09.5**	**+2.7**
	SNR=42							
AAK	**Ala-Archa**	**62.38**	**320**	P		**P**	**01 27 08.2**	**+0.3**
	SNR=14							
AAK	**Ala-Archa**	**62.38**	**320**	*ce*P		**P**	**01 27 08.8**	**+0.9**
AAK					pmax	pmax		
	comp=Z,16nm,0.8s							
AAK	**Ala-Archa**	**62.38**	**320**	P		**P**	**01 27 06.9**	**-0.9**
AAK					IAmb	IAmb	01 27 11.3	
	comp=Z,14nm,0.8s							
CHMS	**Chumysh**	**62.39**	**320**	P		**P**	**01 27 09.3**	**+1.5**
	SNR=5.7							
AML	**Almayashu**	**62.66**	**319**	P		**P**	**01 27 12.5**	**+2.5**
	SNR=42							
USP	**Ospenovka**	**62.69**	**320**	P		**P**	**01 27 11.5**	**+1.8**
	SNR=28							
ARSB	**Arslanbob**	**62.76**	**318**	P		**P**	**01 27 09.5**	**-0.9**
ARSB					pmax	pmax		
	comp=Z,20nm,0.8s							
ARSB	**Arslanbob**	**62.76**	**318**	P		**P**	**01 27 09.5**	**-0.9**
MA2	**Magadan**	**62.84**	**14**	P		**P**	**01 27 10.8**	**+0.5**
	comp=Z,5.3nm,0.3s,baz=201,slow=9.4,SNR=4.8							
MA2	**Magadan**	**62.84**	**14**	P		**P**	**01 27 09.9**	**-0.4**
MA2					pmax	pmax		
	comp=Z,24nm,0.9s							
MA2	**Magadan**	**62.84**	**14**	P		**P**	**01 27 09.9**	**-0.4**
EKS2	**Erkin-Say**	**62.86**	**320**	P		**P**	**01 27 13.3**	**+2.3**
	SNR=28							
KBL	**Kabul**	**62.86**	**310**	P		**P**	**01 27 10.5**	**-0.8**
KBL					pmax	pmax		
	comp=Z,31nm,0.6s							
KBL	**Kabul**	**62.86**	**310**	P		**P**	**01 27 10.5**	**-0.8**
ZAA0	**Zalesovo Array**	**63.48**	**335**	IAmb		IAmb	01 27 17.1	
	comp=Z,8.4nm,0.9s							
ZALV	**Zalesovo Beam**	**63.48**	**335**	P		**P**	**01 27 13.3**	**-1.4**
	comp=Z,5.3nm,0.6s,baz=127,slow=6.0,SNR=22							
ZALV					LR	LR	01 55 21.1	
	comp=Z,256nm,20.6s,baz=122,slow=36							
ZALV	**Zalesovo Beam**	**63.48**	**335**	*i* P		**P**	**01 27 13.6**	**-1.1**
ZALV					pmax	pmax		
	comp=Z,5.0nm,0.6s							
BTK	**Batken**	**63.69**	**316**	IAmb		IAmb	01 27 20.2	
	comp=Z,16nm,0.7s							
CHGR	**Chuyangaron**	**64.31**	**314**	P		**P**	**01 27 19.6**	**-0.9**
KURBB	**Kurchatov Arra**	**64.33**	**329**	P		**P**	**01 27 18.8**	**-1.5**
KURK	**Kurchatov**	**64.34**	**329**	*ce*P		**P**	**01 27 19.1**	**-1.3**
KURK					pmax	pmax		
	comp=Z,38nm,0.7s							
KURK	**Kurchatov**	**64.34**	**329**	P		**P**	**01 27 19.4**	**-0.9**
KK31	**Karatay Array**	**65.20**	**319**	P		**P**	**01 27 26.0**	**-0.2**
KK31					pmax	pmax		
	comp=Z,13nm,0.8s							
KK31	**Karatay Array**	**65.20**	**319**	P		**P**	**01 27 26.0**	**-0.2**
KK31					IAmb	IAmb	01 27 28.9	
	comp=Z,13nm,0.8s							
SEY	**Seymchan**	**66.16**	**13**	P		**P**	**01 27 33.1**	**+1.1**
	comp=Z,3.2nm,0.7s,baz=281,slow=1.8,SNR=6.0							
BRVK	**Borovoye**	**69.95**	**328**	*ce*P		**P**	**01 27 55.4**	**-0.6**
BRVK					pmax	pmax		
	comp=Z,22nm,1.3s							
BRVK	**Borovoye**	**69.95**	**328**	P		**P**	**01 27 55.3**	**-0.6**
BRVK					IAmb	IAmb	01 27 59.1	
	comp=Z,16nm,0.9s							
TIXI	**Tiksi**	**71.78**	**1**	⇑*eP*		**P**	**01 28 07.5**	**+0.9**
TIXI					pmax	pmax		
	comp=Z,7.0nm,0.8s							
TIXI	**Tiksi**	**71.78**	**1**	P		**P**	**01 28 06.3**	**-0.3**
TIXI					IAmb	IAmb	01 28 21.6	
	comp=Z,15nm,1.1s							
SOCY	**Socotra**	**71.82**	**283**	IAmb		IAmb	01 28 08.5	
	comp=Z,23nm,0.8s							
GEYT	**Alibeck**	**72.30**	**310**	P		**P**	**01 28 11.0**	**+0.4**
	comp=Z,7.2nm,0.7s,baz=158,slow=4.8,SNR=15							
GEYT					LR	LR	02 03 27.3	
	comp=Z,83nm,21.2s,baz=40,slow=39							
GYA0B	**ALIBECK ARRAY**	**72.30**	**310**		IAmb	IAmb	01 28 26.9	
	comp=Z,13nm,0.9s							
BILL	**Bilibino**	**73.69**	**15**	⇓*eP*		**P**	**01 28 19.8**	**+1.7**
BILL				*e*			01 28 35.7	
BILL					PPP	PPP	01 32 54.0	
BILL					SS	SS	01 42 36.0	+7.0
BILL					SSS	SSS	01 45 48.0	
BILL					pmax	pmax		
	comp=Z,10.0nm,2.0s							
BILL					MLR	MLR		
	comp=Z,70nm,19.0s							
SVE	**Sverdlovsk**	**76.59**	**329**	*e*P		**P**	**01 28 35.3**	**+0.3**
SVE					pmax	pmax		
	comp=Z,29nm,0.7s							
ARU	**Arti**	**77.52**	**328**	⇓*eP*		**P**	**01 28 40.5**	**+0.3**
ARU					pmax	pmax		
	comp=Z,23nm,0.8s							
ARU	**Arti**	**77.52**	**328**	P		**P**	**01 28 39.7**	**-0.5**
MAW	**Mawson**	**79.60**	**200**	P		**P**	**01 28 52.3**	**+0.9**
	comp=Z,7.7nm,1.2s,baz=108,slow=16,SNR=3.6							
MAW					LR	LR	01 59 43.4	
	comp=Z,103nm,20.1s,baz=58,slow=32							
MAW	**Mawson**	**79.60**	**200**	P		**P**	**01 28 50.4**	**-1.0**
MAW					pmax	pmax		
	comp=Z,1.0nm,1.1s							
MAW	**Mawson**	**79.60**	**200**	P		**P**	**01 28 50.4**	**-1.0**
VNDA	**Vanda**	**79.72**	**172**	P		**P**	**01 28 53.8**	**+1.9**
	comp=Z,1.1nm,0.8s,baz=300,slow=7.1,SNR=5.7							
VNDA					LR	LR	02 04 37.6	
	comp=Z,127nm,21.1s,baz=338,slow=36							
RAYN	**Ar Rayn**	**80.76**	**294**	P		**P**	**01 28 57.5**	**-1.2**
RAYN					pmax	pmax		
	comp=Z,10.0nm,0.8s							
RAYN	**Ar Rayn**	**80.76**	**294**	P		**P**	**01 28 57.5**	**-1.2**
RAYN					IAmb	IAmb	01 29 00.1	
	comp=Z,9.7nm,0.8s							
AKT	**Akhty**	**80.86**	**312**	*e*P		**P**	**01 28 59.2**	**+0.3**
AKT				*e*			01 32 06.1	
AKT					pmax	pmax		
	comp=Z,22nm,0.7s							
DAMY	**Dhamar**	**81.28**	**285**	IAmb		IAmb	01 29 08.7	
	comp=Z,8.6nm,0.7s							
ATD	**Arta Tunnel**	**82.68**	**282**	IAmb		IAmb	01 29 12.2	
	comp=Z,10nm,0.9s							
TBLG	**Delisi**	**83.11**	**312**	IAmb		IAmb	01 29 13.0	
	comp=Z,17nm,0.7s							
RDOG	**Red Dog Mine**	**83.44**	**21**	IAmb		IAmb	01 29 24.4	
	comp=Z,14nm,0.9s							
ZEI	**Tsey**	**83.84**	**313**	*e*P		**P**	**01 29 13.9**	**-0.7**
ZEI					pmax	pmax		
	comp=Z,13nm,0.6s							
NCK	**Nalchik**	**84.14**	**314**	⇓*eP*		**P**	**01 29 16.6**	**+0.7**
NCK					pmax	pmax		
	comp=Z,16nm,0.9s							
KBZ	**Khabaz**	**84.67**	**314**	P		**P**	**01 29 18.4**	**0.0**
	comp=Z,7.7nm,0.7s,baz=142,slow=6.0,SNR=8.9							
KBZ					LR	LR	02 13 06.2	
	comp=Z,46nm,18.4s,baz=76,slow=40							
NEY	**Neytrino**	**84.75**	**313**	⇑*eP*		**P**	**01 29 20.5**	**+1.3**
NEY					pmax	pmax		
	comp=Z,2.0nm,0.7s							
KIV	**Kislovodsk**	**84.84**	**314**	*c i*P		**P**	**01 29 19.6**	**+0.1**
KIV				*e**SP		**pwP**	**01 29 35.5**	**-1.2**
KIV				S		**S**	**01 39 43.0**	**-1.1**
KIV				PS		**PnS**	**01 40 41.0**	**-3.6**
KIV					pmax	pmax		
	comp=Z,8.0nm,0.6s							
KIV					MLR	MLR		
	comp=Z,99nm,26.0s							
KIV	**Kislovodsk**	**84.84**	**314**	P		**P**	**01 29 19.2**	**-0.3**
KIV					IAmb	IAmb	01 29 25.1	
	comp=Z,9.1nm,0.7s							
SVW2	**Sparrevohn**	**84.91**	**29**	IAmb		IAmb	01 29 26.4	
	comp=Z,10nm,1.1s							
TTA	**Tatalina**	**85.02**	**27**	P		**P**	**01 29 20.4**	**+0.4**
TTA					pmax	pmax		
	comp=Z,4.0nm,0.8s							
TTA	**Tatalina**	**85.02**	**27**	P		**P**	**01 29 20.4**	**+0.4**
PPT	**Papeete**	**85.26**	**108**	LR		LR	02 06 11.2	
	comp=Z,26nm,20.5s,baz=316,slow=35							
PPT2	**Papeete2**	**85.26**	**108**	*e*S		**S**	**01 39 48.4**	**-0.7**
	comp=Z,119nm,25.5s							
PPT2	**Papeete2**	**85.26**	**108**	*e*LR		LR	01 56 18.7	
	comp=Z,358nm,31.8s							
TBI	**Tubuai**	**85.51**	**113**	*e*S		**S**	**01 39 52.6**	**+1.3**
	comp=Z,246nm,27.8s							
TBI	**Tubuai**	**85.51**	**113**	*e*LR		LR	01 56 24.0	
	comp=Z,172nm,30.0s							
KDAK	**Kodiak Island**	**85.95**	**32**	P		**P**	**01 29 26.1**	**+1.6**
	comp=Z,5.5nm,0.7s,baz=295,slow=3.0,SNR=4.9							
KDAK	**Kodiak Island**	**85.95**	**32**	P		**P**	**01 29 25.4**	**+0.9**
KDAK					pmax	pmax		
	comp=Z,9.0nm,0.9s							
KDAK	**Kodiak Island**	**85.95**	**32**	P		**P**	**01 29 25.4**	**+0.9**
KDAK					IAmb	IAmb	01 29 41.6	
	comp=Z,8.6nm,0.8s							
VRH	**Novokhoyorsk**	**86.15**	**321**	*e*P		**P**	**01 29 25.3**	**-0.4**
VRH					pmax	pmax		
	comp=Z,70nm,0.7s							
SOC	**Sochi**	**86.96**	**313**	*e*P		**P**	**01 29 27.9**	**-2.0**
SOC				*e*			01 32 51.8	
SOC				*e*PPP		PPP	01 34 45.0	
SOC				*e*S		**SKSac**	**01 39 50.6**	**-2.3**
SOC				*e*SS		**SS**	**01 45 48.3**	**+0.1**
SOC				*e*SSS		SSS	01 49 18.3	
SOC					pmax	pmax		
	comp=Z,18nm,0.8s							
VORD	**Divnogorie**	**87.66**	**321**	*e*P		**P**	**01 29 32.0**	**-1.0**
VORD					pmax	pmax		
	comp=Z,10.0nm,0.6s							
LPSR	**Galich'ya Gora**	**87.97**	**322**	*e*P		**P**	**01 29 34.4**	**-0.1**
LPSR					pmax	pmax		
	comp=Z,20nm,1.0s							
KMBO	**Kilima Mbogo**	**88.08**	**269**	P		**P**	**01 29 38.2**	**+2.1**
	comp=Z,5.0nm,0.8s,baz=62,slow=7.5,SNR=17							
KMBO	**Kilima Mbogo**	**88.08**	**269**	P		**P**	**01 29 35.1**	**-1.1**
KMBO					pmax	pmax		
	comp=Z,10.0nm,1.1s							
KMBO	**Kilima Mbogo**	**88.08**	**269**	P		**P**	**01 29 35.1**	**-1.1**
KMBO					IAmb	IAmb	01 29 46.6	
	comp=Z,10nm,1.1s							
KLMR	**Klimovskoe**	**88.13**	**331**	*e*P		**P**	**01 29 33.7**	**-1.3**
KLMR					pmax	pmax		
	comp=Z,15nm,0.8s							
KLMR	**Klimovskoe**	**88.13**	**331**	*e*P		**P**	**01 29 33.8**	**-1.3**
KLMR					AMP		01 29 40.2	
	comp=Z,15nm,0.8s							
SYO	**Syowa Base**	**88.27**	**201**	⇑*eP*		**P**	**01 29 34.1**	**-1.5**
SYO	**Syowa Base**	**88.27**	**201**	⇑*e*PcP		**PcP**	**01 29 37.4**	**+0.2**
RND	**Reindeer**	**88.30**	**27**	IAmb		IAmb	01 29 54.3	
	comp=Z,5.0nm,0.8s							
ANN	**Anapa**	**88.65**	**315**	*e*P		**P**	**01 29 36.9**	**-1.0**
ANN				*e*S		**SKSac**	**01 40 03.1**	**+0.1**
ANN					pmax	pmax		
	comp=Z,60nm,0.7s							
MOS	**Moscow**	**88.88**	**326**	*e*P		**P**	**01 29 37.4**	**-1.3**
MOS				*e*			01 40 14.1	
MOS					pmax	pmax		
	comp=Z,37nm,0.8s							
ILAR	**Eielson Array**	**89.24**	**25**	P		**P**	**01 29 40.1**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=231,slow=6.0,SNR=6.3							
OBN	**Obninsk**	**89.46**	**325**	⇑*eP*		**P**	**01 29 41.5**	**+0.1**
OBN					*PP	**pP**	**01 29 53.0**	**-2.7**
OBN					*SP	**sP**	**01 30 00.0**	**-1.2**
OBN				*e*S		**S**	**01 40 20.1**	**-7.7**
OBN					pmax	pmax		
	comp=Z,31nm,1.1s							
OBN					MLR	MLR		
	comp=Z,130nm,20.0s							
OBN	**Obninsk**	**89.46**	**325**	P		**P**	**01 29 39.6**	**-1.8**
QSPA	**South Pole Qui**	**89.72**	**180**	P		**P**	**01 29 41.0**	**-1.6**
RIDG	**Independent Ri**	**90.11**	**26**	IAmb		IAmb	01 29 46.3	
	comp=Z,9.2nm,1.1s							
LVZ	**Lovozero**	**90.45**	**338**	*ce*P		**P**	**01 29 44.1**	**-1.8**
LVZ					pmax	pmax		
	comp=Z,25nm,1.3s							
DOT	**Dot Lake**	**90.46**	**27**	IAmb		IAmb	01 29 53.3	
	comp=Z,3.4nm,0.8s							
SIM	**Simferopol'**	**91.01**	**315**	*e*P		**P**	**01 29 48.5**	**-0.4**
SIM				*e*S		**S**	**01 40 40.8**	**-1.8**
SIM					pmax	pmax		
	comp=Z,11nm,0.7s							
BRTR	**Keskin Array B**	**91.44**	**310**	P		**P**	**01 29 50.5**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=120,slow=4.7,SNR=9.9							
BRTR					LR	LR	02 18 09.1	
	comp=Z,28nm,18.7s,baz=73,slow=40							
BRTR	**Keskin Array B**	**91.44**	**310**	*i* P		**P**	**01 29 50.5**	**-0.8**
BRTR					pmax	pmax		
	comp=Z,3.0nm,0.9s							
CSS	**Mathiatis**	**91.76**	**305**	P		**P**	**01 29 51.5**	**-1.2**
EPYK	**Eagle Plains**	**93.39**	**24**	IAmb		IAmb	01 30 02.3	
	comp=Z,8.6nm,1.0s							
ARCES	**ARCESS Array B**	**93.64**	**340**	P		**P**	**01 29 59.5**	**-1.0**
	comp=Z,2.2nm,0.6s,baz=72,slow=6.3,SNR=10							
HYT	**Haines Junctio**	**93.69**	**29**	IAmb		IAmb	01 30 10.0	
	comp=Z,4.1nm,0.8s							
AKASG	**Malin Array Be**	**94.04**	**321**	P		**P**	**01 30 01.8**	**-1.0**
	comp=Z,3.2nm,0.7s,baz=72,slow=4.5,SNR=10.0							
AKASG					LR	LR	02 16 16.0	
	comp=Z,71nm,21.9s,baz=90,slow=38							
INK	**Inuvik**	**94.31**	**21**	P		**P**	**01 30 04.4**	**+0.7**
	comp=Z,2.8nm,0.8s,baz=289,slow=2.7,SNR=7.5							
INK	**Inuvik**	**94.31**	**21**	P		**P**	**01 30 03.2**	**-0.5**
INK					pmax	pmax		
	comp=Z,4.0nm,0.9s							
INK	**Inuvik**	**94.31**	**21**	P		**P**	**01 30 03.1**	**-0.5**
INK					IAmb	IAmb	01 30 06.1	
	comp=Z,3.5nm,0.9s							
FINES	**FINESS Array B**	**94.62**	**332**	P		**P**	**01 30 05.8**	**+0.6**
	comp=Z,4.6nm,0.9s,baz=64,slow=4.4,SNR=6.5							
FINES	**FINESS Array B**	**94.62**	**332**	*i* P		**P**	**01 30 08.0**	**+2.8**
FINES					pmax	pmax		
	comp=Z,5.0nm,0.9s							
JURR	**Jurilovca**	**94.74**	**315**	⇓P		**P**	**01 30 03.8**	**-2.4**
SORM	**Soroca**	**94.83**	**318**	⇓P		**P**	**01 30 04.6**	**-1.8**
SORM	**Soroca**	**94.83**	**318**	⇓P		**P**	**01 30 04.6**	**-1.8**
MANR	**Mangalia**	**95.02**	**314**	⇓P		**P**	**01 30 06.3**	**-1.2**
TIRR	**Tirgusor**	**95.09**	**314**	⇓P		**P**	**01 30 06.8**	**-1.0**
TIRR	**Tirgusor**	**95.09**	**314**	⇓P		**P**	**01 30 06.8**	**-1.0**
CFR	**Carcaliu**	**95.23**	**315**	⇓P		**P**	**01 30 07.2**	**-1.1**
CFR	**Carcaliu**	**95.23**	**315**	⇓P		**P**	**01 30 07.2**	**-1.1**
HARR	**Harsova**	**95.42**	**315**	⇓P		**P**	**01 30 07.6**	**-1.7**
HARR	**Harsova**	**95.42**	**315**	⇓P		**P**	**01 30 07.6**	**-1.7**
TESR	**Tescani**	**96.14**	**317**	⇓P		**P**	**01 30 11.8**	**-0.7**
VRI	**Vrincioaia**	**96.15**	**316**	⇓P		**P**	**01 30 12.5**	**-0.1**
VRI	**Vrincioaia**	**96.15**	**316**	⇓P		**P**	**01 30 12.5**	**-0.1**
PLOR	**Plostina**	**96.21**	**316**	⇓P		**P**	**01 30 12.9**	**0.0**
PLOR	**Plostina**	**96.21**	**316**	⇓P		**P**	**01 30 12.9**	**0.0**
BIZ	**Bicaz**	**96.46**	**317**	⇓P		**P**	**01 30 14.2**	**+0.2**
MLR	**Muntele Rosu**	**96.74**	**316**	⇓P		**P**	**01 30 15.1**	**-0.3**
MLR	**Muntele Rosu**	**96.74**	**316**	⇓P		**P**	**01 30 15.1**	**-0.3**
MLR	**Muntele Rosu**	**96.74**	**316**	IAmb		IAmb	01 30 16.7	
	comp=Z,6.5nm,0.8s							
LSZ	**Lusaka**	**96.84**	**255**	P		**P**	**01 30 15.7**	**-0.8**
LSZ					pmax	pmax		
	comp=Z,5.0nm,0.9s							
LSZ	**Lusaka**	**96.84**	**255**	P		**P**	**01 30 15.7**	**-0.8**
LSZ					IAmb	IAmb	01 30 18.0	
	comp=Z,4.7nm,0.9s							
BURAR	**Bucovina Array**	**96.98**	**318**	⇓P		**P**	**01 30 16.9**	**+0.5**
BURAR	**Bucovina Array**	**96.98**	**318**	⇓P		**P**	**01 30 16.9**	**+0.5**
DOPR	**Dopca**	**97.07**	**316**	⇓P		Pdif	01 30 16.7	-0.2
C36M	**Paulatuk**	**97.37**	**20**	IAmb		IAmb	01 30 35.7	
	comp=Z,3.5nm,0.8s							
TRPA	**Tarpa**	**98.69**	**319**	⇓P		**P**	**01 30 23.0**	**-1.0**
UZH	**Uzhgorod**	**98.77**	**319**	*e*P		Pdif	01 30 25.2	+0.9
UZH				*e*			01 30 35.7	
DRGR		**98.79**	**317**	⇓P		Pdif	01 30 24.2	-0.3
DRGR		**98.79**	**317**	⇓P		Pdif	01 30 24.2	-0.4
VTS	**Vitosha**	**99.04**	**313**	⇓P		**Pdif**	**01 30 25.3**	**-0.6**
VTS	**Vitosha**	**99.04**	**313**	⇓P		**Pdif**	**01 30 25.3**	**-0.6**
VTS	**Vitosha**	**99.04**	**313**	IAmb		IAmb	01 30 26.7	
	comp=Z,4.5nm,0.9s							
HERR	**Herculane**	**99.29**	**315**	⇓P		**Pdif**	**01 30 26.7**	**-0.1**
MDVR	**Moldovita**	**99.80**	**315**	⇓P		**Pdif**	**01 30 29.3**	**+0.2**
DIVS	**Divibare**	**101.14**	**315**			**Pdif**	**01 30 34.5**	**-0.6**
NB2	**NORSAR Subarra**	**101.66**	**333**	P		**Pdif**	**01 30 35.1**	**-1.8**
	comp=Z,1.6nm,1.0s,baz=68,slow=5.1							
CLL	**Collm**	**103.96**	**323**	*e*PP		**PKiKP**	**01 35 02.0**	**-2.7**
CLL				*e*PS		**PS**	**01 44 18.0**	**+0.8**
CLL				*e*SS		SS	01 49 48.0	-0.7
CLL				*e*SSS		SSS	01 53 54.0	
CLL				*e*SSSS			01 57 18.0	
CLL				LmV			02 20 00.0	
	comp=Z,100nm,21.8s							
TOA0	**Torodi Ar. Sit**	**122.71**	**285**			**PKPdf**	**01 35 40.2**	**-1.1**
TORD	**Torodi Ar. Bea**	**122.71**	**285**	PKP		**PKiKP**	**01 35 41.8**	**+0.3**
	comp=Z,3.4nm,0.7s,baz=60,slow=2.1,SNR=20							
SCHQ	**Schefferville**	**124.65**	**9**	PKP		**PKiKP**	**01 35 44.8**	**+0.6**
	comp=Z,2.4nm,0.7s,baz=79,slow=2.3,SNR=5.8							
TXAR	**Lajitas Array**	**125.08**	**54**	PKP		**PKiKP**	**01 35 46.8**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=234,slow=1.3,SNR=7.6							
JCT	**Junction City**	**127.65**	**51**	PKIKP		**PKPdf**	**01 35 50.2**	**-0.2**
JCT	**Junction City**	**127.65**	**51**			**PKPdf**	**01 35 50.2**	**-0.2**
R40A	**Maddies Statio**	**128.73**	**38**			**PKPdf**	**01 35 51.9**	**-0.3**
U40A	**Yellville**	**129.54**	**40**			**PKPdf**	**01 35 53.8**	**0.0**

*SOME **29** 01:31:36.0, 43.87N×83.83E, h5km*
*NNC **29** 01:31:39.2±1.8, 43.95N×83.76E, h0km, mb4.1, mpv3.8,*
Error ellipse: s-maj=14.7km s-min=7.9km az=130.0
ISC 29 01:31:39.7±2.1, 43.80N±0.10, 84.13E±0.10, h20km, n30,
σ2s01/44, 2C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.77**	**264**	*e*P		**Pn**	**01 32 24.5**	**+1.5**
	2.9nm,0.1s							
KTMS				*e*S		**Sb**	**01 32 59.7**	**-2.3**
	58nm,0.4s							
KTMS	**Ketmen**	**2.77**	**264**	Pg		**Pn**	**01 32 24.4**	**+1.5**
	7.4nm,0.1s							
KTMS				Lg		Lg	01 32 59.3	
	58nm,0.4s							
DJR	**Jarkent**	**3.17**	**281**	*e*P		**Pb**	**01 32 32.6**	**-2.8**
	6.7nm,0.1s							
DJR				*e*S		**Sb**	**01 33 13.7**	**0.0**
	58nm,0.2s							
DJR	**Jarkent**	**3.17**	**281**	Pg		**Pb**	**01 32 32.9**	**-2.6**
	14nm,0.2s							
DJR				Lg		Lg	01 33 13.3	
	79nm,0.5s							
MK31	**Makanchi Array**	**3.26**	**337**	⇑Pg		**Pb**	**01 32 34.4**	**-2.5**
	2.7nm,0.3s,baz=150,slow=17,SNR=10							
MK31				⇓Lg		Lg	01 33 14.8	
	7.8nm,0.3s,baz=151,slow=26,SNR=11							
PDGK	**Podgornoye**	**3.40**	**264**	⇓Pn		**Pn**	**01 32 31.3**	**-0.5**
	6.8nm,0.5s							
PDGK				⇓Lg		Lg	01 33 16.1	
	19nm,0.5s							
SHLS	**Shalkode**	**3.46**	**261**	*e*P		**Pn**	**01 32 32.3**	**-0.2**
	30nm,0.2s							
SHLS				*e*S		**Sn**	**01 33 13.2**	**+0.3**
	89nm,0.3s							
SHLS	**Shalkode**	**3.46**	**261**	Pg		**Pn**	**01 32 32.8**	**+0.3**
	32nm,0.3s							
SHLS				Lg		Lg	01 33 13.0	
	90nm,0.3s							
ZSN	**Zaisan**	**3.69**	**8**	*e*P		**Pb**	**01 32 42.8**	**-1.4**
	5.1nm,0.2s							
ZSN				*e*S		**Sb**	**01 33 30.9**	**+2.5**
	25nm,0.2s							
UZB	**Uzynbulak**	**3.77**	**262**	*e*P		**Pb**	**01 32 43.4**	**-2.3**
	3.3nm,0.1s							
UZB				*e*S		**Sb**	**01 33 32.0**	**+1.0**
	10nm,0.1s							
UZB	**Uzynbulak**	**3.77**	**262**	Pg		**Pb**	**01 32 43.9**	**-1.8**
	9.4nm,0.4s							
UZB				Lg		Lg	01 33 32.1	
	14nm,0.4s							
MNBS	**Baschi**	**4.15**	**276**	*e*P		**Pb**	**01 32 49.4**	**-2.6**
	0.8nm,0.1s							
MNBS				*e*S		**Sb**	**01 33 42.2**	**+0.5**
	33nm,0.2s							
MNBS	**Baschi**	**4.15**	**276**	Pg		**Pb**	**01 32 49.6**	**-2.5**
	23nm,0.4s							
MNBS				Lg		Lg	01 33 42.2	
	24nm,0.3s							
SATY	**Saty**	**4.23**	**262**	*e*P		**Pb**	**01 32 52.1**	**-1.5**
	1.7nm,0.1s							
SATY				*e*S		**Sb**	**01 33 46.8**	**+2.6**
	15nm,0.1s							

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.17**	**282**	P	**Pn**	**01 43 24.7**	**-0.6**
JIO	**Ouri**	**2.29**	**285**	P	**Pn**	**01 43 26.6**	**-0.3**
JIO				S	**Sn**	**01 43 52.5**	**-1.4**
OFUJ	**Ofunato**	**2.30**	**302**	P	**Pn**	**01 43 26.9**	**-0.1**
JKMT	**Kesennumamotoy**	**2.31**	**295**	P	**Pn**	**01 43 26.7**	**-0.5**
JKMT				S	**Sn**	**01 43 53.0**	**-1.4**
JMK	**Ichinoseki**	**2.55**	**296**	P	**Pn**	**01 43 30.6**	**+0.1**
JMK				*e*S	**Sn**	**01 43 59.5**	**-0.8**
JOM	**Ohasama**	**2.75**	**306**	P	**Pn**	**01 43 33.7**	**+0.4**
JOM				S	**Sn**	**01 44 05.2**	**-0.2**
JFT	**Otama**	**3.05**	**264**	P	**Pn**	**01 43 38.5**	**+1.0**
JFT				*e*S	**Sn**	**01 44 12.0**	**-0.8**
JYK	**Kaneyama**	**3.16**	**290**	P	**Pn**	**01 43 39.4**	**+0.4**
JYK				S	**Sn**	**01 44 15.0**	**-0.5**
JANG	**Nango**	**3.23**	**321**	*e*S	**Sn**	**01 44 16.7**	**-0.5**
BSO1	**Boso 1**	**4.12**	**220**	P	**Pn**	**01 43 50.6**	**-1.0**
BSO1				*e*S	**Sn**	**01 44 36.4**	**-1.8**
JRY	**Ryogami san**	**4.60**	**248**	P	**Pn**	**01 43 58.1**	**-0.7**
JRY				S	**Sn**	**01 44 47.9**	**-3.1**
JCH	**Churui**	**4.77**	**353**	P	**Pn**	**01 44 00.9**	**-0.2**
JCH				S	**Sn**	**01 44 52.6**	**-2.5**
MJAR	**Matsushiro Arr**	**4.93**	**256**	Pn	**Pn**	**01 44 04.3**	**+0.9**
	0.3nm,0.3s,baz=70,slow=9.1,SNR=7.9						
MAT	**Matsushiro**	**4.93**	**256**	P	**Pn**	**01 44 04.4**	**+1.1**
MAT				S	**Sn**	**01 44 58.3**	**-0.9**
JTKR	**Abashiri--Toko**	**6.09**	**358**	P	**Pn**	**01 44 19.0**	**-0.2**
JTKR				S	**Sn**	**01 45 25.9**	**-1.7**
MKAR	**Makanchi Array**	**45.53**	**302**	P	**P**	**01 51 09.7**	**+1.9**
	0.4nm,0.6s,baz=77,slow=9.8,SNR=5.2						
WRA	**Warramunga Arr**	**58.25**	**191**	P	**P**	**01 52 42.9**	**+0.3**
	0.6nm,0.7s,baz=12,slow=7.3,SNR=2.8						

IDC ***29*** *01:47:48.8±1.1,33.76S×71.81W,h0km,mb4.1/2, mb1 4.3/4,mb1mx4.0/15,mbtmp4.0/4,ML4.2/2,MS3.5/3, Ms1 3.4/3,ms1mx3.2/16,Error ellipse: s-maj=49.2km s-min=22.4km az=84.0*

SJA ***29*** *01:47:50.4±1.2,33.64S×72.19W,h10km±11km,ML3.8, MW3.8*

NEIC ***29*** *01:47:53.7±1.5,33.72S±0.03×71.99W±0.04,h35km±7km, Error ellipse: s-maj=6.5km s-min=1.1km az=137.0*

GUC ***29*** *01:47:54.4±0.8,33.74S×71.92W,h44km±3km,ML4.2*

ISC 29 01:47:51.3±1.5,33.71S±0.03×72.13W±0.05,h17km±9km, n73,σ1°51/93,mb4.6/7,1C-7D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MT01	**Popeta**	**0.75**	**102**	*e*P	**Pg**	**01 48 06.2**	**+0.3**
MT01				*i* S	**Sg**	**01 48 14.7**	**-1.2**
MT01				IAML		01 48 15.4	
	comp=N,27μm,0.2s						
MT01	**Popeta**	**0.75**	**102**		**Pg**	**01 48 06.1**	**+0.1**
MT01				Sn	**Sg**	**01 48 15.1**	**-0.8**
MT02	**Curacav**	**0.94**	**62**	⇓*i*P	**Pb**	**01 48 09.8**	**+0.7**
MT02				*i* S	**Sb**	**01 48 20.9**	**-0.4**
MT02	**Curacav**	**0.94**	**62**		**Pb**	**01 48 09.7**	**+0.7**
MT02				Sn	**Sb**	**01 48 20.5**	**-0.8**
ROC1	**El Roble**	**1.18**	**52**		**Pn**	**01 48 13.4**	**+0.2**
ROC1				Sn	**Sb**	**01 48 27.2**	**-1.3**
ROC1	**El Roble**	**1.18**	**52**	*i* P	**Pn**	**01 48 14.2**	**+0.9**
ROC1				*e*S	**Sb**	**01 48 28.8**	**+0.3**
ROCH	**El Roble**	**1.19**	**52**	*i* P	**Pn**	**01 48 14.2**	**+0.9**
ROCH				*i* S	**Sb**	**01 48 28.7**	**+0.1**
ROCH				IAML		01 48 34.1	
	comp=N,7μm,0.4s						
MT05	**Renca**	**1.20**	**75**		**Pn**	**01 48 13.2**	**-0.2**
GO05	**Huala**	**1.31**	**173**	⇓*i*P	**Pn**	**01 48 15.8**	**+1.0**
GO05				*i* S	**Sb**	**01 48 31.2**	**-0.8**
GO05	**Huala**	**1.31**	**173**		**Pn**	**01 48 15.7**	**+1.0**
GO05				Sn	**Sb**	**01 48 31.2**	**-0.8**
GO05	**Huala**	**1.31**	**173**	*i* P	**Pn**	**01 48 15.9**	**+1.0**
GO05				*e*S	**Sb**	**01 48 31.7**	**-0.3**
PEL	**Peldehue**	**1.33**	**66**	⇑*i*P	**Pn**	**01 48 15.9**	**+0.8**
PEL				*i* S	**Sb**	**01 48 31.7**	**-0.9**
PEL				IAML		01 48 33.8	
	comp=N,6μm,0.5s						
PEL	**Peldehue**	**1.33**	**66**		**Pn**	**01 48 14.7**	**-0.4**
PEL				Sn	**Sb**	**01 48 30.4**	**-2.2**
PEL	**Peldehue**	**1.33**	**66**	*i* P	**Pn**	**01 48 15.9**	**+0.8**
PEL				*e*S	**Sb**	**01 48 32.6**	**-3.0**
CLCH	**Cerro Calan**	**1.36**	**77**	⇓*i*P	**Pn**	**01 48 16.2**	**+0.6**
CLCH				*i* S	**Sn**	**01 48 32.2**	**-1.1**
CLCH				IAML		01 48 33.1	
	comp=E,7μm,0.3s						
MT03	**Universidad Ad**	**1.37**	**82**	⇓*i*P	**Pn**	**01 48 16.0**	**+0.3**
MT03				*i* S	**Sn**	**01 48 31.6**	**-1.8**
MT03				IAML		01 48 32.7	
	comp=E,9μm,0.3s						
BO02	**Sierra Bellavi**	**1.56**	**135**	⇓*i*P	**Pn**	**01 48 18.8**	**+0.5**
BO02				*i* S	**Sn**	**01 48 37.6**	**-0.4**
BO02				IAML		01 48 39.3	
	comp=E,12μm,0.8s						
BO02	**Sierra Bellavi**	**1.56**	**135**		**Pn**	**01 48 18.2**	**0.0**
BO02				Sn	**Sn**	**01 48 36.4**	**-1.7**
LMEL	**Las Melosas**	**1.61**	**96**	⇓*i*P	**Pn**	**01 48 19.5**	**+0.4**
LMEL				*i* S	**Sn**	**01 48 38.2**	**-1.3**
LMEL				IAML		01 48 41.5	
	comp=N,7μm,0.3s						
VA03	**San Esteban**	**1.62**	**55**	*i* P	**Pn**	**01 48 20.5**	**+1.3**
VA03				*i* S	**Sn**	**01 48 39.7**	**0.0**
VA03				IAML		01 48 43.1	
	comp=E,5μm,0.2s						
VA03	**San Esteban**	**1.62**	**55**		**Pn**	**01 48 19.7**	**+0.5**
COIS	**El Sosneado**	**2.52**	**124**	*i* P	**Pb**	**01 48 36.2**	**+0.2**
COIS				*e*S	**Sb**	**01 48 49.4**	**+1.6**
CO02	**Combarbal**	**2.67**	**21**		**Pn**	**01 48 34.5**	**+0.9**
LAMA	**Las Malvinas**	**2.71**	**118**	*i* P	**Pn**	**01 48 37.4**	**+3.3**
AUSP	**Uspallata**	**2.74**	**58**	*i* P	**Pn**	**01 48 38.1**	**+3.5**
AUSP				*e*S	**Sb**	**01 49 12.4**	**-1.0**
PUMA	**Malargue**	**2.84**	**130**	*i* P	**Pb**	**01 48 40.1**	**-1.4**
BI02	**San Fabin de**	**3.03**	**167**	*e*P	**Pn**	**01 48 40.4**	**+1.9**
BI02				*e*S	**Sn**	**01 49 14.3**	**-0.2**
BI02	**San Fabin de**	**3.03**	**167**		**Pn**	**01 48 38.6**	**+0.1**
EDS3	**Malargue**	**3.05**	**133**	*i* P	**Pn**	**01 48 42.1**	**+3.3**
RTLS	**Leoncito**	**3.05**	**52**	*i* P	**Pn**	**01 48 42.5**	**+3.5**
RTLS				IAML		01 49 34.5	
	comp=Z,170nm,0.9s						
CO03	**El Pedregal**	**3.11**	**24**	⇓*i*P	**Pn**	**01 48 41.4**	**+1.8**
CO03	**El Pedregal**	**3.11**	**24**		**Pn**	**01 48 39.6**	**0.0**
RTCV	**Cerro Valdivia**	**3.54**	**60**	*i* P	**Pn**	**01 48 48.5**	**+3.0**
RTCV				IAML		01 49 56.9	
	comp=Z,142nm,0.8s						
GO04	**Tololo Observa**	**3.70**	**18**		**Pn**	**01 48 48.4**	**+0.5**
GO04	**Tololo Observa**	**3.70**	**18**	*i* P	**Pn**	**01 48 49.5**	**+1.6**
RTLL	**Cerro Villicun**	**3.89**	**53**	*i* P	**Pn**	**01 48 53.3**	**+3.0**
RTLL				IAML		01 49 56.3	
	comp=Z,169nm,0.9s						
ACCO	**Cerro Coronel**	**4.05**	**41**	*i* P	**Pn**	**01 48 56.3**	**+3.6**
ACCO				IAML		01 50 05.7	
	comp=Z,188nm,0.8s						
CO01	**Juntas del Tor**	**4.10**	**26**		**Pn**	**01 48 53.7**	**+0.3**
AROD	**Rodeo**	**4.19**	**33**	*i* P	**Pn**	**01 48 58.5**	**+3.9**
ACDV	**Cuesta del Vie**	**4.36**	**37**	*i* P	**Pn**	**01 48 60.0**	**+3.2**
ACDV				IAML		01 50 28.8	
	comp=Z,92nm,1.1s						
AC05	**El Transito**	**5.11**	**19**		**Pn**	**01 49 07.5**	**+0.4**
LC01	**Cunco**	**5.19**	**178**		**Pn**	**01 49 08.9**	**+0.9**
AGUA	**GUANDACOL**	**5.23**	**37**	*i* P	Pn	01 49 15.4	+6.6
AGUA				IAML		01 50 49.8	
	comp=Z,36nm,0.7s						
MRA	**San Martin**	**5.53**	**78**	*i* P	**Pn**	**01 49 17.1**	**+4.1**
MRA				IAML		01 50 53.8	
	comp=Z,21nm,0.7s						
AC04	**Llanos de Chal**	**5.56**	**10**		**Pn**	**01 49 13.7**	**+0.5**
VCA	**Vinchina**	**5.99**	**35**	*i* P	**Pn**	**01 49 21.6**	**+2.4**
VCA				IAML		01 51 18.9	
	comp=Z,74nm,1.3s						
GO03	**Copiap**	**6.31**	**15**		**Pn**	**01 49 23.9**	**+0.4**
TCA	**Tanti**	**6.79**	**72**	*i* P	**Pn**	**01 49 30.3**	**+0.2**
TCA				IAML		01 51 30.1	
	comp=Z,39nm,1.2s						
PLCA	**Paso Flores**	**7.13**	**170**	Pn	**Pn**	**01 49 33.9**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=339,slow=12,SNR=16						
PLCA				Lg	Lg	01 51 32.6	
	comp=Z,0.2nm,0.3s,baz=262,slow=22,SNR=1.3						
PLCA				LR	LR	01 52 31.4	
	comp=Z,194nm,21.2s,baz=11,slow=40						
PLCA	**Paso Flores**	**7.13**	**170**		**Pn**	**01 49 34.5**	**-0.2**
AC02	**Maricunga**	**7.32**	**22**		**Pn**	**01 49 37.7**	**-0.1**
GO02	**Mina Guanaco**	**8.80**	**15**		**Pn**	**01 49 56.2**	**-1.7**
LPAZ	**La Paz**	**17.71**	**13**	P	**Pn**	**01 51 57.9**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=193,slow=7.4,SNR=19						
LPAZ	**La Paz**	**17.71**	**13**	P	**Pn**	**01 51 56.0**	**-1.7**
BDFB	**Brasilia**	**28.23**	**56**	LR	LR	02 05 36.2	
	comp=Z,122nm,20.1s,baz=156,slow=38						
RUSC	**La Rusia**	**39.39**	**359**	P	**P**	**01 55 20.2**	**-0.5**
VNA3	**Neumayer Olymp**	**49.66**	**158**	P	**P**	**01 56 42.9**	**+1.3**
VNA1	**Neumayer--Stat**	**49.97**	**157**	P	**P**	**01 56 46.4**	**+2.5**
SNAA	**Sanae**	**51.89**	**158**	P	**P**	**01 56 59.3**	**+0.9**
SNAA	**Sanae**	**51.89**	**158**	P	**P**	**01 56 57.0**	**-1.4**
SNAA				IAmb	IAmb	01 57 00.5	
	comp=Z,7.0nm,1.0s						
TEIG	**Tepich**	**55.80**	**342**	P	**P**	**01 57 28.8**	**+1.3**
TEIG				IAmb	IAmb	01 57 29.8	
	comp=Z,9.9nm,0.7s						
352A	**Blakely**	**65.95**	**348**	P	**P**	**01 58 35.4**	**-0.9**
TXAR	**Lajitas Array**	**69.44**	**331**	P	**P**	**01 59 00.2**	**+1.7**
	comp=Z,0.5nm,0.6s,baz=155,slow=6.9,SNR=5.6						
TX31	**Lajitas Ar. Si**	**69.44**	**331**	P	**P**	**01 58 57.3**	**-1.2**
W50A	**Signal Mountai**	**69.65**	**349**	P	**P**	**01 58 58.6**	**-1.0**
W50A				IAmb	IAmb	01 59 01.8	
	comp=Z,5.2nm,1.0s						
V48A	**Smith Brothers**	**70.44**	**347**	P	**P**	**01 59 04.0**	**-0.4**
V48A				IAmb	IAmb	01 59 06.7	
	comp=Z,6.5nm,1.0s						
WVT	**Waverly**	**71.01**	**347**	P	**P**	**01 59 06.8**	**-1.0**
WVT				IAmb	IAmb	01 59 09.9	
	comp=Z,6.4nm,0.8s						
DBIC	**Dimbokro**	**75.16**	**71**	LR	LR	02 30 39.5	
	comp=Z,46nm,20.2s,baz=74,slow=34						
TORD	**Torodi Ar. Bea**	**84.18**	**70**	P	**P**	**02 00 20.6**	**-1.3**
	comp=Z,2.9nm,0.7s,baz=280,slow=6.4,SNR=19						
YKA	**Yellowknife Ar**	**101.75**	**341**	P	**Pdif**	**02 01 42.6**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=146,slow=4.6,SNR=3.7						
WRA	**Warramunga Arr**	**120.98**	**209**	PKP	**PKPdf**	**02 06 43.0**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=168,slow=1.7,SNR=3.2						
ZALV	**Zalesovo Beam**	**154.02**	**32**	PKPbc	**PKPbc**	**02 07 49.8**	**+0.5**
	comp=Z,2.1nm,0.5s,baz=292,slow=4.2,SNR=8.6						
ZALV				PKPab	**PKPab**	**02 08 03.4**	**+0.6**
	comp=Z,1.2nm,0.5s,baz=281,slow=5.8,SNR=4.1						
MKAR	**Makanchi Array**	**156.63**	**48**	PKPab	**PKPab**	**02 08 14.0**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=316,slow=3.3,SNR=5.1						

BJI 29 02:42:55.9±0.0,34.92N×105.28E,h6km,ML3.6/12, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**1.65**	**315**	*e*Pg	Pn	02 43 24.8	-0.8
LZH				Sg	Sn	02 43 47.0	-0.2
LZH				smax	smax		
	comp=N,2μm,0.6s						
LZH				smax	smax		
	comp=E,1μm,0.6s						
XAN	**Xi'an**	**3.13**	**105**	Pn	Pn	02 43 44.0	-1.9
XAN				Sn	Sb	02 44 32.0	+1.5
XAN				Sg	Sg	02 44 40.3	+3.7
XAN				smax	smax		
	comp=N,160nm,0.8s						
XAN				smax	smax		
	comp=E,130nm,0.8s						
GTA	**Gaotai**	**6.25**	**317**	Pn	Pn	02 44 27.5	-1.3
GTA				Pg	Pb	02 44 47.5	+2.2
GTA				Sn	Sn	02 45 37.8	-2.9
GTA				Sg	Sg	02 46 09.5	-7.2
GTA				smax	smax		
	comp=N,23nm,0.8s						
GTA				smax	smax		
	comp=E,22nm,0.8s						
BTO	**Baotou**	**6.80**	**32**	Pn	Pn	02 44 40.5	+4.1
BTO				Sn	Sn	02 45 51.3	-2.9
WMQ	**Urumqi**	**16.22**	**308**	*e*P	Pn	02 46 43.5	-0.9

ISK ***29*** *02:54:26.5,33.79N×25.42E,h70km,ML3.6/15*

IDC ***29*** *02:54:28.6±1.1,34.12N×25.92E,h0km,mb3.6/8, mb1 3.6/12,mb1mx3.5/45,mbtmp3.5/12,ML3.9/4,MS2.3/2, Ms1 2.3/2,ms1mx2.1/35,Error ellipse: s-maj=22.1km s-min=19.7km az=17.0*

NIC ***29*** *02:54:30.4±0.0,34.07N×25.63E,h9km±3km,Ml3.1/2*

THE ***29*** *02:54:32.1,34.11N×25.82E,h0km±3km,ML2.9/4,Error ellipse: s-maj=8.3km s-min=1.2km az=166.0*

GII ***29*** *02:54:35.7±0.0,33.91N×26.33E,h20km±3km,MD2.9/1, Mm3.4/2*

ATH ***29*** *02:54:37.0,34.47N×25.79E,h41km±3km,ML2.7/10,Error ellipse: s-maj=8.3km s-min=2.1km az=350.0*

ISC 29 02:54:30.9±1.6,33.93N±0.06×25.92E±0.04,h24km±12km, n86,σ1°53/94,mb3.6/8,MS2.2/3,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**1.20**	**12**	P	**Pn**	**02 54 51.8**	**-0.5**
ZKR				S	**Sn**	**02 55 08.4**	**+0.6**
	490nm,0.6s						
ZKR	**Zakros**	**1.20**	**12**	P	**Pn**	**02 54 51.7**	**-0.5**
ZKR				AML	AML	02 55 17.3	
	comp=N,556μm,0.6s						
ZKR				AML	AML	02 55 21.3	
	comp=E,1189μm,0.5s						
ZKR	**Zakros**	**1.20**	**12**	PN	**Pn**	**02 54 52.2**	**0.0**
ZKR				SN	**Sb**	**02 55 10.8**	**+2.6**
ZKR	**Zakros**	**1.20**	**12**	P	**Pn**	**02 54 51.8**	**-0.5**
ZKR				S	**Sb**	**02 55 08.9**	**+0.8**
ZKR				AML	AML	02 55 14.9	
	comp=E,1.4nm,0.6s						
ZKR				AML	AML	02 55 14.9	
	comp=E,1.4nm,0.6s						
STIA	**Sitia Lasithi**	**1.27**	**6**	P	**Pn**	**02 54 53.5**	**+0.3**
STIA				S	**Sb**	**02 55 10.5**	**+0.3**
LAST	**Lasithi**	**1.28**	**343**	P	**Pn**	**02 54 51.9**	**-1.4**
LAST				S	**Sn**	**02 55 09.6**	**-0.2**
	comp=E,462nm,0.7s						
LAST	**Lasithi**	**1.28**	**343**	P	**Pn**	**02 54 51.9**	**-1.4**
LAST				AML	AML	02 55 24.8	
	comp=E,955μm,0.8s						
LAST				AML	AML	02 55 25.0	
	comp=N,854μm,0.6s						
NPS	**Neapolis**	**1.35**	**349**	P	**Pn**	**02 54 53.6**	**-0.7**
NPS				S	**Sn**	**02 55 11.1**	**-0.3**
	comp=N,318nm,0.6s						
NPS	**Neapolis**	**1.35**	**349**	P	**Pn**	**02 54 53.5**	**-0.8**
NPS				AML	AML	02 55 26.2	
	comp=E,678μm,0.6s						
NPS				AML	AML	02 55 30.1	
	comp=N,532μm,0.7s						
SIVA	**Sivas**	**1.42**	**320**	P	**Pn**	**02 54 55.0**	**-0.2**
SIVA				S	**Sn**	**02 55 12.8**	**-0.3**
	comp=N,960nm,0.7s						
SIVA	**Sivas**	**1.42**	**320**	P	**Pn**	**02 54 55.3**	**+0.1**
SIVA				AML	AML	02 55 31.4	
	comp=N,1426μm,0.8s						
SIVA				AML	AML	02 55 40.2	
	comp=E,2062μm,0.8s						
TMBK	**Timbaki Herakl**	**1.48**	**320**	P	**Pb**	**02 54 57.0**	**-0.8**
IDI	**Anoyia**	**1.60**	**328**	P	**Pn**	**02 54 57.6**	**-0.1**
IDI	**Anoyia**	**1.60**	**328**	Pn	**Pn**	**02 54 56.9**	**-0.8**
	comp=E,3.4nm,0.3s,baz=167,slow=9.3,SNR=23						
IDI	**Anoyia**	**1.60**	**328**	P	**Pn**	**02 54 57.5**	**-0.2**
IDI				AML	AML	02 55 34.6	
	comp=E,262μm,0.9s						
IDI				AML	AML	02 55 47.8	
	comp=N,188μm,0.6s						
GVD	**Gavdhos**	**1.77**	**301**	P	**Pb**	**02 55 01.1**	**-1.5**
GVD	**Gavdhos**	**1.77**	**301**	P	**Pb**	**02 55 01.6**	**-1.0**
GVD				AML	AML	02 55 45.8	
	comp=N,618μm,0.8s						
GVD				AML	AML	02 55 53.5	
	comp=E,551μm,0.6s						
KARP	**Karpathos**	**1.91**	**32**	P	**Pn**	**02 55 03.6**	**+1.7**
KARP	**Karpathos**	**1.91**	**32**	P	**Pb**	**02 55 03.8**	**-1.2**
KARP				AML	AML	02 55 54.5	
	comp=N,374μm,0.7s						
KARP				AML	AML	02 55 55.1	
	comp=E,430μm,0.9s						
KARP	**Karpathos**	**1.91**	**32**	PN	**Pn**	**02 55 03.1**	**+1.2**
KARP				SN	**Sb**	**02 55 29.9**	**+1.5**
KARP	**Karpathos**	**1.91**	**32**	P	**Pb**	**02 55 03.9**	**-1.2**
KARP				S	**Sb**	**02 55 29.0**	**+0.6**
KARP				AML	AML	02 55 53.8	
	comp=E,0.4nm,0.7s						
KARP				AML	AML	02 55 53.8	
	comp=E,0.4nm,0.9s						
KARP				AML	AML	02 55 55.1	
	comp=E,0.4nm,0.9s						
VAM	**Vamos**	**2.04**	**316**	P	**Pn**	**02 55 04.8**	**+1.1**
VAM	**Vamos**	**2.04**	**316**	P	**Pn**	**02 55 04.9**	**+1.1**
VAM				AML	AML	02 55 55.2	
	comp=E,417μm,1.1s						
VAM				AML	AML	02 55 58.1	
	comp=N,370μm,0.9s						
IMMV	**Iera Moni Meta**	**2.21**	**314**	P	**Pn**	**02 55 07.3**	**+1.3**
IMMV	**Iera Moni Meta**	**2.21**	**314**	P	**Pn**	**02 55 07.4**	**+1.4**
IMMV				AML	AML	02 56 01.5	
	comp=E,430μm,0.8s						
IMMV				AML	AML	02 56 09.6	
	comp=N,317μm,0.6s						
ANAF	**Anafi Island**	**2.42**	**357**	P	**Pn**	**02 55 09.9**	**+0.9**
ANAF	**Anafi Island**	**2.42**	**357**	P	**Pn**	**02 55 08.7**	**-0.2**
IOSP	**Ios Island**	**2.83**	**350**	P	**Pn**	**02 55 14.0**	**-0.6**
AMGA	**Amorgos Island**	**2.89**	**360**	P	**Pn**	**02 55 14.1**	**-1.3**
ANKY	**Antikythira Is**	**2.89**	**313**	P	**Pn**	**02 55 17.3**	**+1.9**
ARG	**Arkhangelos**	**2.91**	**38**	P	**Pn**	**02 55 18.9**	**+3.3**
ARG	**Arkhangelos**	**2.91**	**38**	PN	**Pn**	**02 55 17.5**	**+1.9**
ARG	**Arkhangelos**	**2.91**	**38**	P	**Pn**	**02 55 18.1**	**+2.5**
DAT	**Datca**	**3.10**	**25**	PN	**Pn**	**02 55 19.3**	**+0.9**
APE	**Apeiranthos**	**3.15**	**354**	P	**Pn**	**02 55 19.1**	**+0.1**
APE	**Apeiranthos**	**3.15**	**354**	P	**Pn**	**02 55 18.0**	**-0.9**
APE	**Apeiranthos**	**3.15**	**354**	PN	**Pn**	**02 55 17.4**	**-1.6**
APE	**Apeiranthos**	**3.15**	**354**	P	**Pn**	**02 55 18.1**	**-0.9**
DALY	**Dalyan (Mula)**	**3.64**	**37**	PN	**Pn**	**02 55 27.8**	**+2.1**
TURN	**Turunc**	**3.66**	**36**	PN	**Pn**	**02 55 24.2**	**-1.8**
VLI	**Veliai**	**3.70**	**320**	P	**Pn**	**02 55 26.5**	**0.0**
VLI	**Veliai**	**3.70**	**320**	P	**Pn**	**02 55 26.3**	**-0.3**
VLI				AML	AML	02 56 13.6	
	comp=N,67μm,0.6s						
VLI				AML	AML	02 56 27.9	
	comp=E,61μm,0.8s						
KSL	**Kastellorizon**	**3.73**	**53**	P	**Pn**	**02 55 29.9**	**+3.0**
YER	**Yerkesik**	**3.73**	**30**	PN	**Pn**	**02 55 28.6**	**+1.6**
FETY	**Fethiye**	**3.73**	**43**	PN	**Pn**	**02 55 29.2**	**+2.2**
AKAS	**Kas**	**3.79**	**52**	PN	**Pn**	**02 55 30.3**	**+2.4**
SMG	**Samos**	**3.84**	**11**	P	**Pn**	**02 55 28.5**	**0.0**
ELL	**Elmali**	**4.30**	**48**	PN	**Pn**	**02 55 37.3**	**+2.4**
ELL	**Elmali**	**4.30**	**48**	P	**Pn**	**02 55 37.3**	**+2.4**
AYDB	**Zeytinkoy-Aydi**	**4.31**	**21**	PN	**Pn**	**02 55 35.9**	**+0.8**
KORT	**Korkueli**	**4.74**	**48**	PN	**Pn**	**02 55 43.5**	**+2.6**
OSC2	**CSNet OBS 4**	**5.37**	**97**	P	Pn	02 55 55.3	+5.8
GAZI	**Gazipasa**	**5.72**	**65**	PN	**Pn**	**02 55 56.4**	**+2.1**
LEF	**Lefka**	**5.87**	**76**	PN	**Pn**	**02 55 58.3**	**+1.9**
SEYD	**Seydisehir-KON**	**5.93**	**53**	PN	**Pn**	**02 55 59.3**	**+2.0**
CSS	**Mathiatis**	**6.21**	**78**	PN	**Pn**	**02 56 02.9**	**+1.9**
CSS	**Mathiatis**	**6.21**	**78**	Pn	**Pn**	**02 56 01.5**	**+0.5**
TEKE	**Tekeli-Mersin**	**6.30**	**67**	PN	**Pn**	**02 56 04.3**	**+2.1**
LFK	**Lefkose**	**6.42**	**76**	PN	**Pn**	**02 56 06.2**	**+2.3**
BERE	**Bereket-Mersin**	**6.45**	**66**	PN	**Pn**	**02 56 06.8**	**+2.4**
AKKU	**Akkuyu-Mersin**	**6.64**	**68**	PN	**Pn**	**02 56 09.1**	**+2.2**
IKL	**Isikli**	**6.77**	**68**	PN	**Pn**	**02 56 10.5**	**+1.8**
KEBE	**Keben-Mersin**	**6.85**	**66**	PN	**Pn**	**02 56 11.8**	**+1.9**
KZIT	**Kziot**	**7.77**	**111**	Pn	**Pn**	**02 56 23.6**	**+1.1**
KZIT				Sn	**Sn**	**02 57 47.5**	**-2.3**
MMAI	**Mount Meron Ar**	**7.97**	**94**	Pn	**Pn**	**02 56 24.6**	**-0.7**
	comp=E,1.6nm,0.3s,baz=274,slow=12,SNR=6.1						
MMAI				Sn	**Sn**	**02 57 53.4**	**-1.4**
	comp=E,1.9nm,0.3s,baz=269,slow=23,SNR=3.3						
YTIR	**Yattir**	**8.16**	**106**	Pn	**Pn**	**02 56 29.6**	**+1.6**
DSI	**Dead Sea**	**8.31**	**104**	Pn	**Pn**	**02 56 30.5**	**+0.7**
DSI				Sn	**Sn**	**02 58 00.2**	**-2.7**
KRMI	**Paran Flat**	**8.38**	**115**	Pn	**Pn**	**02 56 31.6**	**+0.7**
PRNI	**Paran**	**8.49**	**112**	Pn	**Pn**	**02 56 33.6**	**+1.3**
PRNI				Sn	**Sn**	**02 58 05.0**	**-2.4**
HRFI	**Mount Harif**	**8.66**	**114**	Pn	**Pn**	**02 56 37.0**	**+2.3**
MBRI	**Mt Berech**	**8.69**	**116**	Pn	**Pn**	**02 56 36.0**	**+0.9**
EIL	**Elat**	**8.78**	**117**	Pn	**Pn**	**02 56 37.6**	**+1.3**
	comp=E,0.9nm,0.3s,baz=290,slow=14,SNR=18						
EIL	**Elat**	**8.78**	**117**	Pn	**Pn**	**02 56 37.4**	**+1.1**
AKASG	**Malin Array Be**	**16.93**	**7**	Pn	**Pn**	**02 58 25.2**	**-0.8**
	comp=E,1.3nm,0.3s,baz=198,slow=11,SNR=4.2						
GERES	**GERESS Array B**	**17.46**	**332**	P	**Pn**	**02 58 32.0**	**-0.7**
	comp=E,0.1nm,0.3s,baz=151,slow=12,SNR=1.7						
OBN	**Obninsk**	**22.45**	**16**	LR	LR	03 09 50.3	
	comp=E,6.8nm,19.6s,baz=107,slow=41

s-min=17.4km az=137.0
*KRSC **29** 03:01:56.6±0.6, 56˚.53N× 161˚.45E, h86km±5km, ML4.1*
ISC 29 03:01:58.9±0.8, 56˚.52N±0˚.04×161˚.43E±0˚.04, h77km±5km, n48, σ0s90/70, mb3.4/4, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMKR	**Semkarok**	**0.07**	**19**	P	**Pn**	**03 02 09.8**	**-0.3**
SMKR				S	**Sn**	**03 02 19.0**	**+0.7**
BDR	**Baidarnaya**	**0.13**	**292**	P	**Pn**	**03 02 09.7**	**-0.5**
BDR				S	**Sn**	**03 02 19.4**	**+0.9**
SRKR	**Sorokina**	**0.20**	**313**	P	**Pn**	**03 02 10.2**	**-0.2**
SRKR				S	**Sn**	**03 02 19.7**	**+0.8**
KLY	**Klyuchi**	**0.48**	**245**	P	**Pn**	**03 02 10.5**	**-1.6**
KLY				S	**Sn**	**03 02 20.5**	**-1.4**
CIRR	**Tsirk**	**0.56**	**223**	P	**Pn**	**03 02 12.6**	**-0.4**
CIRR				S	**Sn**	**03 02 23.2**	**-0.2**
KRSR	**Krestovskiy**	**0.57**	**238**	P	**Pn**	**03 02 12.5**	**-0.6**
KRSR				S	**Sn**	**03 02 23.7**	**+0.1**
LGNR	**Loginova**	**0.60**	**224**	P	**Pn**	**03 02 13.4**	**-0.2**
LGNR				S	**Sn**	**03 02 25.2**	**+0.7**
ZLN	**Zelenaya**	**0.61**	**215**	P	**Pn**	**03 02 13.2**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**0.71**	**215**	P	**Pn**	**03 02 14.3**	**-0.3**
BZGR				S	**Sn**	**03 02 27.1**	**+1.0**
KBG	**Krutoberegovo**	**0.76**	**110**	P	**Sn**	**03 02 15.0**	**+0.1**
KBG				S	**Sn**	**03 02 28.8**	**+2.0**
BZWR	**Bezymyannyi-We**	**0.76**	**223**	P	**Pn**	**03 02 14.9**	**-0.3**
BZWR				S	**Sn**	**03 02 28.2**	**+1.0**
BZMR	**Bezymyannaya**	**0.79**	**222**	S	**Sn**	**03 02 28.7**	**+1.0**
KIRR	**Kirishev**	**0.83**	**227**	P	**Pn**	**03 02 15.2**	**-0.7**
KIRR				S	**Sn**	**03 02 28.8**	**+0.2**
KBTR	**Krutoberegovo**	**0.83**	**111**	P	**Pn**	**03 02 15.4**	**-0.4**
KBTR				S	**Sn**	**03 02 29.5**	**+1.2**
KPT	**Kopyto**	**0.87**	**231**	P	**Pn**	**03 02 15.9**	**-0.5**
KPT				S	**Sn**	**03 02 30.2**	**+0.9**
SRDR	**Sredinnyy**	**0.97**	**259**	P	**Pn**	**03 02 16.8**	**-0.7**
SRDR				S	**Sn**	**03 02 31.8**	**+0.5**
KOZ	**Kozyrevsk**	**0.98**	**243**	P	**Pn**	**03 02 17.0**	**-0.6**
KOZ				S	**Sn**	**03 02 32.1**	**+0.6**
KMNR	**Kamenistaya**	**1.02**	**222**	P	**Pn**	**03 02 17.9**	**-0.2**
KMNR				S	**Sn**	**03 02 33.3**	**+1.0**
TUMR	**Tumrok**	**1.44**	**211**	P	**Pn**	**03 02 23.4**	**0.0**
TUMD	**Tumrok D**	**1.44**	**204**	P	**Pn**	**03 02 23.0**	**-0.4**
TUMD				S	**Sn**	**03 02 42.7**	**+0.9**
KZV	**Kizimen**	**1.55**	**205**	P	**Pn**	**03 02 24.7**	**-0.2**
KZV				S	**Sn**	**03 02 45.6**	**+1.1**
PALN	**Palana**	**2.69**	**344**	P	**Pn**	**03 02 39.7**	**-0.2**
KII	**Karymskiy**	**2.73**	**205**	P	**Pn**	**03 02 40.5**	**-0.2**
OSSR	**Ossora**	**2.87**	**17**	P	**Pn**	**03 02 42.7**	**+0.3**
OSSR				S	**Sn**	**03 03 16.6**	**+0.8**
BKI	**Bering**	**2.88**	**115**	P	**Pn**	**03 02 41.4**	**-1.1**
BKI				S	**Sn**	**03 03 14.1**	**-2.0**
SPN	**Mys Shipunski**	**3.52**	**194**	P	**Pn**	**03 02 50.0**	**-1.3**
SPN				S	**Sn**	**03 03 29.5**	**-2.3**
KRX	**Arik**	**3.55**	**208**	P	**Pn**	**03 02 52.8**	**+1.0**
NLC	**Nalytchevo**	**3.57**	**201**	P	**Pn**	**03 02 51.6**	**-0.2**
SDLR	**Sedlovina**	**3.57**	**205**	P	**Pn**	**03 02 52.9**	**+0.9**
SDLR				S	**Sn**	**03 03 34.9**	**+1.9**
KRUK	**Koryakskii**	**3.58**	**207**	P	**Pn**	**03 02 52.9**	**+0.7**
SMAR	**Somma**	**3.60**	**206**	P	**Pn**	**03 02 53.4**	**+0.9**
AVH	**Avacha**	**3.61**	**207**	P	**Pn**	**03 02 53.4**	**+0.8**
KOK	**Koryaka**	**3.61**	**208**	P	**Pn**	**03 02 53.4**	**+0.8**
UGLR	**Uglovaya**	**3.64**	**205**	P	**Pn**	**03 02 53.9**	**+0.9**
DALK	**Dalny**	**3.82**	**205**	P	**Pn**	**03 02 55.6**	**+0.3**
PET	**Petropavlovsk**	**3.85**	**206**	P	**Pn**	**03 02 56.7**	**+1.0**
PETK	**Petropavlovsk-** 1.7nm,0.3s,baz=56,slow=17,SNR=26	**4.04**	**214**	Pn	**Pn**	**03 02 58.5**	**+0.2**
PETK				Lg	Lg	03 04 05.7	
PETK	0.1nm,0.3s,baz=349,slow=27,SNR=1.3			LR	LR	03 04 57.3	
	comp=Z,40nm,21.4s,baz=49,slow=44						
KRMR	**Karymshinskiy**	**4.16**	**209**	P	**Pn**	**03 02 59.9**	**-0.1**
APC	**Apacha**	**4.37**	**216**	P	**Pn**	**03 03 03.1**	**+0.3**
GRL	**Gorelyy**	**4.43**	**208**	P	**Pn**	**03 03 05.2**	**+1.5**
RUS	**Russkaya**	**4.43**	**204**	P	**Pn**	**03 03 05.5**	**-0.1**
MTVR	**Mutnovka**	**4.47**	**206**	P	**Pn**	**03 03 05.2**	**+1.0**
ASAK	**Asacha**	**4.63**	**208**	P	**Pn**	**03 03 07.2**	**+0.8**
KLR	**Kul'dur** 0.0nm,0.3s,baz=61,slow=9.5,SNR=4.1	**19.23**	**260**	P	**Pn**	**03 06 17.1**	**-1.2**
USRK	**Ussuriysk Ar.** 1.8nm,0.6s,baz=45,slow=11,SNR=5.5	**22.27**	**249**	P	**P**	**03 06 49.3**	**0.0**
ILAR	**Eielson Array** 0.2nm,0.6s,baz=264,slow=9.2,SNR=4.4	**25.93**	**50**	P	**P**	**03 07 24.4**	**+0.8**
SONM	**Songino Array** 0.6nm,0.6s,baz=54,slow=7.6,SNR=3.4	**33.99**	**279**	P	**P**	**03 08 34.3**	**-0.8**
YKA	**Yellowknife Ar** 0.2nm,0.6s,baz=303,slow=7.6,SNR=2.9	**40.16**	**46**	P	**P**	**03 09 27.3**	**+0.5**

*IDC **29** 03:02:40.5±0.9, 56˚.55S× 158˚.89E, h0km, mb4.5/7, mb1 4.7/8, mb1mx4.4/22, mbtmp4.5/8, ML4.2/1, MS3.7/8, Ms1 3.7/8, ms1mx3.6/12, Error ellipse: s-maj=41.3km s-min=18.2km az=83.0*
*NEIC **29** 03:02:42.2±1.8, 56˚.36S±0˚.03×158˚.7E±0˚.2, h10km±1km, mb4.7/18, Error ellipse: s-maj=20.2km s-min=3.5km az=256.0*
*GCMT **29** 03:02:46.2±0.4, 56˚.57S±0˚.02×158˚.53E±0˚.04, h34km±2km, MW5.0/70, Moment Tensor Solution. s26,c32; s70,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.47±.26; $M_{\theta\theta}$=2.87±.18; $M_{\phi\phi}$=-3.34±.16; $M_{r\theta}$=-0.29±.20; $M_{r\phi}$=1.41±.18; $M_{\theta\phi}$=-0.34±.25; Best double couple: $M_0$3.44300×10^{16} NP1:ϕs303.00000°, δ82.00000°, λ3.00000°. NP2: ϕs213.00000°, δ87.00000°, λ172.00000°. Principal axes: T 3.2230, Plg8.0000°, Azm167.0000°; N 0.4460, Plg82.0000°, Azm15.0000°; P -3.6640, Plg4.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 29 03:02:41.7±0.5, 56˚.39S±0˚.06×159˚.18E±0˚.09, h10km, n90, σ2s31/79, mb4.6/12, MS3.8/10, 6C-10D, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**1.90**	**356**		**Pn**	**03 03 12.8**	**-1.3**
MCQ				Sn	**Sn**	**03 03 38.1**	**+0.1**
APZ	**The Paps**	**11.01**	**33**	P	**Pn**	**03 05 22.1**	**+2.9**
PYZ	**Puysegur Point**	**11.25**	**28**	Pn	**Pn**	**03 05 25.9**	**+3.5**
SYZ	**Scrubby Hill**	**11.64**	**36**	P	**Pn**	**03 05 31.2**	**+3.5**
WHZ	**Wether Hill Ro**	**11.85**	**31**	P	**Pn**	**03 05 33.9**	**+3.3**
DCZ	**Deep Cove**	**12.03**	**28**	P	Pn	03 05 39.9	+6.9
DCZ	**Deep Cove**	**12.03**	**28**		**Pn**	**03 05 35.3**	**+2.3**
TUZ	**Tuapeka**	**12.32**	**36**	P	Pn	03 05 42.1	+5.1
MLZ	**Mavora Lakes**	**12.38**	**31**	P	**Pn**	**03 05 42.4**	**+4.5**
MLZ	**Mavora Lakes**	**12.38**	**31**		**Pn**	**03 05 41.1**	**+3.2**
HHSZ	**Highcliff Hill**	**12.71**	**39**	P	Pn	03 05 54.9	+13
EAZ	**Earnscleugh**	**12.86**	**34**	P	**Pn**	**03 05 49.0**	**+4.6**
WKZ	**Wanaka**	**13.13**	**32**		**Pn**	**03 05 49.8**	**+1.6**
WKZ				Sn	**Sn**	**03 08 16.7**	**+2.5**
ODZ	**Otahua Downs**	**13.46**	**37**	P	**Pn**	**03 05 56.7**	**+4.2**
ODZ	**Otahua Downs**	**13.46**	**37**	Pn	**Pn**	**03 05 55.7**	**+3.2**
JCZ	**Jackson Bay**	**13.76**	**30**	P	**P**	**03 06 03.3**	**-2.1**
LBZ	**Lake Benmore**	**13.89**	**35**	P	**Pn**	**03 06 00.7**	**+2.2**
FOZ	**Fox Glacier**	**14.55**	**32**	Pn	**Pn**	**03 06 09.6**	**+2.2**
RPZ	**Rata Peaks** 1.1nm,0.3s,baz=211,slow=22,SNR=1.2	**14.77**	**36**	Pn	**Pn**	**03 06 13.8**	**+3.3**
RPZ				LR	LR	03 10 47.2	
	comp=Z,282nm,18.5s,baz=166,slow=32						
RPZ	**Rata Peaks**	**14.77**	**36**	Pn	**Pn**	**03 06 12.4**	**+1.9**
MQZ	**McQueen's Vall**	**15.32**	**40**	Pn	**P**	**03 06 21.1**	**-1.6**
OXZ	**Oxford**	**15.44**	**38**	Pn	**Pn**	**03 06 21.5**	**+2.0**
OXZ				IAmb	IAmb	03 06 34.0	
	comp=Z,60nm,1.2s						
TAU	**Tasmania Unive**	**15.49**	**326**		**Pn**	**03 06 18.5**	**-1.5**
LTZ	**Lake Taylor**	**16.00**	**37**	Pn	**Pn**	**03 06 28.9**	**+2.1**
LTZ				IAmb	IAmb	03 06 39.9	
	comp=Z,48nm,1.1s						
KHZ	**Kahutara**	**16.77**	**40**	Pn	**P**	**03 06 38.7**	**0.0**
KHZ				IAmb	IAmb	03 06 46.6	
	comp=Z,91nm,1.4s						
QRZ	**Quartz Range**	**17.85**	**35**	P	**P**	**03 06 53.3**	**+2.7**
QRZ				IAmb	IAmb	03 07 01.9	
	comp=Z,64nm,1.1s						
TOO	**Toolangi**	**20.94**	**328**	P	**P**	**03 07 23.0**	**-1.5**
VNDA	**Vanda**	**21.25**	**178**	P	**P**	**03 07 27.3**	**-0.2**
	comp=Z,30nm,1.1s,baz=344,slow=11,SNR=38						
VNDA				LR	LR	03 14 08.9	
	comp=Z,268nm,18.8s,baz=3.0,slow=33						
VNDA	**Vanda**	**21.25**	**178**	P	**P**	**03 07 27.9**	**+0.5**
VNDA				IAmb	IAmb	03 07 32.6	
	comp=Z,51nm,1.1s						
CAN	**Canberra**	**22.18**	**337**	P	**P**	**03 07 36.6**	**-1.2**
STKA	**Stephens Creek**	**27.40**	**326**	LR	LR	03 18 17.8	
	comp=Z,172nm,18.4s,baz=176,slow=34						
EIDS	**Eidsvold**	**31.54**	**346**	P	**P**	**03 09 03.6**	**-0.3**
EIDS				IAmb	IAmb	03 09 07.1	
	comp=Z,13nm,1.1s						
QSPA	**South Pole Qui**	**33.72**	**180**	P	**P**	**03 09 21.9**	**-1.0**
	comp=Z,8.8nm,1.0s,baz=273,slow=23,SNR=14						
QSPA	**South Pole Qui**	**33.72**	**180**	P	**P**	**03 09 23.4**	**+0.6**
DZM	**Mont Dzumac**	**34.69**	**12**	eS	**S**	**03 14 54.4**	**-6.9**
	comp=Z,78nm,26.6s						
DZM				eLR	LR	03 18 32.9	
	comp=Z,212nm,31.5s						
DZM	**Mont Dzumac**	**34.69**	**12**	P	**P**	**03 09 34.3**	**+2.7**
	comp=Z,7.3nm,0.8s,baz=98,slow=22,SNR=3.5						
H01W1	**Cape Leeuwin H** baz=139,slow=76,SNR=1210	**37.21**	**286**	T	T	03 49 04.9	
H01W2	**Cape Leeuwin H** baz=139,slow=76,SNR=1206	**37.22**	**286**	T	T	03 48 59.2	
H01W3	**Cape Leeuwin H** baz=139,slow=76,SNR=1092	**37.23**	**286**	T	T	03 49 06.4	
CTA	**Charters Tower**	**37.51**	**340**	P	**P**	**03 09 57.4**	**+1.8**
	comp=Z,8.6nm,0.8s,baz=172,slow=12,SNR=6.6						
CTAO	**Charters Tower**	**37.51**	**340**	P	**P**	**03 09 54.5**	**-1.1**
CTAO				IAmb	IAmb	03 09 58.3	
	comp=Z,11nm,0.8s						
AS31	**Alice Springs**	**37.55**	**320**	P	**P**	**03 09 54.2**	**-1.7**
WR0	**Warramunga Arr**	**40.75**	**323**	P	**P**	**03 10 20.6**	**-2.1**
WR0				IAmb	IAmb	03 10 32.9	
	comp=Z,14nm,1.2s						
WB2	**Warramunga Arr**	**40.83**	**323**	P	**P**	**03 10 23.1**	**-0.2**
WRA	**Warramunga Arr**	**40.84**	**323**	P	**P**	**03 10 23.2**	**-0.2**
	comp=Z,3.8nm,1.0s,baz=162,slow=7.0,SNR=9.8						
WRA				LR	LR	03 25 40.4	
	comp=Z,180nm,21.4s,baz=170,slow=34						
WB0	**Warramunga Arr**	**40.98**	**323**	P	**P**	**03 10 23.2**	**-1.4**
MAW	**Mawson**	**41.91**	**215**	LR	LR	03 26 03.5	
	comp=Z,116nm,20.2s,baz=70,slow=34						
FITZ	**Fitzroy Crossi**	**45.77**	**313**	P	**P**	**03 11 03.4**	**+0.1**
	comp=Z,4.0nm,0.9s,baz=146,slow=9.7,SNR=4.2						
FITZ	**Fitzroy Crossi**	**45.77**	**313**	P	**P**	**03 11 02.6**	**-0.7**
FITZ				IAmb	IAmb	03 11 12.4	
	comp=Z,12nm,1.2s						
SYO	**Syowa Base**	**47.45**	**205**	↑eP	**P**	**03 11 14.6**	**-1.2**
SYO	**Syowa Base**	**47.45**	**205**	↑epP	pP	03 11 18.6	+1.1
TBI	**Tubuai**	**49.71**	**70**	eS	**S**	**03 18 38.0**	**-4.5**
	comp=Z,126nm,27.0s						
TBI				eLR	LR	03 25 37.8	
	comp=Z,190nm,29.2s						
SNAA	**Sanae**	**51.61**	**187**	P	**P**	**03 11 47.8**	**+0.1**
SNAA	**Sanae**	**51.61**	**187**	P	**P**	**03 11 47.7**	**+0.1**
SNAA				IAmb	IAmb	03 11 53.4	
	comp=Z,10nm,1.2s						
VNA3	**Neumayer Olymp**	**52.42**	**185**	P	**P**	**03 11 54.2**	**+0.6**
VNA1	**Neumayer--Stat**	**52.94**	**185**	P	**P**	**03 11 58.5**	**+1.1**
PPT2	**Papeete2**	**54.43**	**66**	eS	**S**	**03 19 40.5**	**-7.1**
	comp=Z,140nm,28.0s						
PPT2				eLR	LR	03 27 50.3	
	comp=Z,310nm,32.0s						
PPT	**Papeete**	**54.45**	**66**	LR	LR	03 31 07.3	
	comp=Z,69nm,18.8s,baz=180,slow=31						
H08S2	**Diego Garcia H** baz=145,slow=76,SNR=136	**81.85**	**269**	T	T	04 44 51.0	
H08S1	**Diego Carcia H** baz=145,slow=76,SNR=69	**81.86**	**268**	T	T	04 44 50.4	
H08S3	**Diego Garcia H** baz=145,slow=76,SNR=144	**81.87**	**269**	T	T	04 44 52.5	
BOSA	**Boshof**	**86.75**	**219**	LR	LR	03 50 48.1	
	comp=Z,45nm,18.8s,baz=207,slow=33						
CMAR	**Chiang Mai Arr**	**89.97**	**305**	P	**P**	**03 15 42.3**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=167,slow=4.5,SNR=3.0						
CMAR				LR	LR	03 55 46.6	
	comp=Z,18nm,19.1s,baz=125,slow=35						
GYA	**Guiyang**	**93.72**	**315**	eP	**P**	**03 16 00.3**	**+1.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2	**Nanjing**	**94.52**	**327**	eP	**P**	**03 16 04.3**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CD2	**Chengdu**	**98.83**	**314**	eP	Pdif	03 16 23.0	+1.6
KSH	**Kashi**	**118.41**	**299**	PKP	**PKiKP**	**03 21 31.3**	**+2.5**
MKAR	**Makanchi Array**	**121.14**	**309**	PKP	**PKiKP**	**03 21 34.1**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=151,slow=4.5,SNR=1.4						
ILAR	**Eielson Array**	**127.63**	**26**	PKP	**PKPdf**	**03 21 45.4**	**-0.1**
	comp=Z,0.8nm,1.0s,baz=263,slow=3.3,SNR=5.2						
TORD	**Torodi Ar. Bea**	**133.50**	**211**	PKP	**PKPdf**	**03 21 56.8**	**-1.4**
	comp=Z,0.9nm,0.9s,baz=149,slow=2.1,SNR=2.7						
YKA	**Yellowknife Ar**	**135.97**	**42**	PKP	**PKPdf**	**03 21 59.5**	**-1.7**
	comp=Z,0.3nm,0.7s,baz=226,slow=2.0,SNR=3.7						
VLDQ	**Val d'Or**	**145.27**	**79**		**PKPab**	**03 22 19.8**	**+1.3**
CFR	**Carcaliu**	**147.76**	**271**	↓P	**PKiKP**	**03 22 27.1**	**-0.5**
VRI	**Vrincioaia**	**148.96**	**271**	↓P	**PKPab**	**03 22 33.3**	**+0.3**
PLOR	**Plostina**	**149.00**	**271**	↓P	**PKPab**	**03 22 32.7**	**-0.5**
MLR	**Muntele Rosu**	**149.17**	**269**	↑P	**PKPbc**	**03 22 29.5**	**-0.1**
MLR	**Muntele Rosu**	**149.17**	**269**	PKPdf	**PKPdf**	**03 22 26.3**	**+1.0**
MLR					**PKPab**	**03 22 34.5**	**+0.5**
TESR	**Tescani**	**149.39**	**272**	↓P	**PKiKP**	**03 22 30.8**	**-0.2**
DOPR	**Dopca**	**149.77**	**270**	↑P	**PKPbc**	**03 22 31.4**	**+0.5**
ARR	**Arges**	**149.82**	**268**	↓P	**PKPab**	**03 22 34.6**	**-2.0**
BIZ	**Bicaz**	**149.95**	**272**	↓P	**PKPab**	**03 22 34.9**	**-2.1**
AKASG	**Malin Array Be**	**150.29**	**280**	PKPbc	**PKPbc**	**03 22 32.2**	**+0.3**
AKASG				PKPab	**PKPab**	**03 22 38.5**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=88,slow=2.4,SNR=9.4						
BURAR	**Bucovina Array**	**150.83**	**272**	↓P	**PKiKP**	**03 22 35.3**	**+1.2**
GZR	**Gura Zlata**	**150.87**	**267**	↓P	**PKiKP**	**03 22 37.4**	**+3.3**
MDVR	**Moldovita**	**151.08**	**265**	↑P	**PKPbc**	**03 22 34.4**	**+0.3**
DIVS	**Divibare**	**151.59**	**262**		**PKiKP**	**03 22 36.0**	**+0.3**
BZS	**Buzias**	**151.65**	**266**	↓P	**PKiKP**	**03 22 37.7**	**+2.1**
DRGR		**151.75**	**269**	↓P	**PKiKP**	**03 22 39.0**	**+3.0**
TRPA	**Tarpa**	**152.61**	**271**	↑P	**PKiKP**	**03 22 37.8**	**+0.3**
ESDC	**Sonseca Array**	**159.93**	**221**	PKPab	**PKPab**	**03 23 16.6**	**-3.1**
	comp=Z,0.4nm,0.7s,baz=163,slow=4.1,SNR=2.7						

*TIR **29** 03:15:07.1, 41˚.12N× 20˚.03E, h6km, Md2.7/4*
*SKO **29** 03:15:10.5, 41˚.21N× 19˚.99E, h0km*
ISC 29 03:15:09.8±1.3, 41˚.27N±0˚.07×20˚.04E±0˚.08, h11km±12km, n6, σ0s94/12, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.15**	**302**	*i* PG	**Pg**	**03 15 13.0**	**-0.4**
TIR				*i* SG	**Sg**	**03 15 16.9**	**+1.1**
PHP	**Peshkopia**	**0.52**	**36**	*i* PG	**Pg**	**03 15 20.2**	**+0.3**
PHP				*i* SG	**Sb**	**03 15 29.1**	**+0.6**
OHR	**Ohrid**	**0.59**	**105**	*i* Pg	**Pb**	**03 15 22.6**	**+0.2**
OHR				*i* Sg	**Sb**	**03 15 29.9**	**-0.8**
OHR	**Ohrid**	**0.59**	**105**	*i* Pg	**Pb**	**03 15 22.6**	**+0.2**
OHR				*i* Sg	**Sb**	**03 15 29.9**	**-0.8**
PUK	**Puka**	**0.78**	**352**	*i* PG	**Pg**	**03 15 25.3**	**+0.3**
PUK				*i* SG	**Sg**	**03 15 33.6**	**-1.7**
BCI	**Bajram Curri**	**1.10**	**1**	*i* PN	**Pb**	**03 15 30.5**	**-0.4**
BCI				*i* SN	**Sn**	**03 15 47.4**	**+0.9**

*NEIC **29** 03:23:46.6±0.7, 24˚.25N±0˚.06×94˚.5E±0˚.1, h86km±8km, mb4.6/32, Error ellipse: s-maj=17.0km s-min=4.9km az=64.0*
*IDC **29** 03:23:47.3±2.1, 24˚.21N× 94˚.63E, h84km±20km, mb3.6/15, mb1 3.8/17, mb1mx3.6/40, mbtmp3.9/17, MS3.3/7, Ms1 3.4/7, ms1mx3.1/26, Error ellipse: s-maj=17.2km s-min=14.0km az=59.0*
*NDI **29** 03:23:49.4±1.3, 24˚.39N× 94˚.47E, h85km, ML4.5, mb4.6(NEIC)*
ISC 29 03:23:46.8±0.5, 24˚.31N±0˚.05×94˚.47E±0˚.06, h82km, n78, σ1s89/98, mb4.3/28, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOHI	**KOHIMA**	**1.44**	**347**	*e*PG	**Pn**	**03 24 13.3**	**+1.7**
KOHI				*e*SG	**Sn**	**03 24 30.4**	**+0.1**
SHL	**Shillong**	**2.66**	**299**	*e*PG	**Pn**	**03 24 29.1**	**+1.3**
SHL				*e*SG	**Sn**	**03 24 59.6**	**+0.4**
SHL	**Shillong**	**2.66**	**299**		**Pn**	**03 24 28.8**	**+1.1**
SHL				Sn	**Sn**	**03 25 00.1**	**+0.9**
BELO	**BELONIA**	**2.96**	**250**	*e*SG	**Sn**	**03 25 08.4**	**+2.2**
BELO				*e*SG		03 25 08.4	
AGT	**Agartala**	**2.97**	**262**	*e*PG	**Pn**	**03 24 35.0**	**+3.2**
AGT				*e*SG	**Sn**	**03 25 08.1**	**+1.6**
BRDH	**Bariadhala**	**3.06**	**239**	P	**Pn**	**03 24 34.8**	**+1.7**
BRDH	51nm,0.3s,baz=74,slow=0.0,SNR=14			S	**Sn**	**03 25 11.2**	**+2.5**
	575nm,0.3s,baz=110,slow=21,SNR=36						
GUWA	**GUWAHATI**	**3.14**	**307**	*e*PG	**Pn**	**03 24 36.3**	**+2.3**
GUWA				*e*SG	**Sn**	**03 25 09.7**	**-0.8**
GUWA				IAML		03 25 11.1	
	comp=N,2μm,0.1s						
GUWA				IAML		03 25 11.2	
	comp=E,2μm,0.1s						
ZIRO	**ZIRO**	**3.25**	**350**	*e*PG	**Pn**	**03 24 37.3**	**+1.5**
ZIRO				*e*SG	**Sn**	**03 25 12.3**	**-1.3**
ZIRO				IAML		03 25 14.3	
	comp=E,4μm,0.8s						
ZIRO				IAML		03 25 20.1	
	comp=N,4μm,0.6s						
GTK	**Tadong**	**6.08**	**301**	*e*PG	**Pn**	**03 25 16.2**	**+2.0**
GTK				*ex*	**Sn**	**03 26 25.1**	**+2.7**
LSA	**Lhasa**	**6.13**	**332**	Pn	**Pn**	**03 25 16.9**	**+1.7**
TAPN	**Taplejung**	**6.80**	**298**	*e*Pn	**Pn**	**03 25 25.9**	**+1.7**
CHTO	**Chiang Mai**	**6.87**	**142**		**Pn**	**03 25 23.9**	**-1.1**
ODAN	**Odare**	**6.88**	**293**	*e*Pn	**Pn**	**03 25 26.1**	**+0.9**
ODAN				*e*Sn	**Sn**	**03 26 39.1**	**-3.0**
	comp=N,353nm,0.4s						
CMAR	**Chiang Mai Arr**	**7.16**	**144**	P	**Pn**	**03 25 28.8**	**-0.1**
	comp=N,0.9nm,0.3s,baz=315,slow=13,SNR=16						
CMAR				LR	LR	03 28 43.0	
	comp=N,90nm,21.7s,baz=346,slow=42						
RAMN	**Ramite**	**7.57**	**292**	*e*Pn	**Pn**	**03 25 35.9**	**+1.2**
RAMN				*e*Sn	**Sn**	**03 26 55.0**	**-4.1**
BOK	**Bokaro**	**7.86**	**268**	*e*PG	**Pn**	**03 25 40.0**	**+1.6**
BOK				*i* x	x	03 25 40.7	
JIRN	**Jiri**	**8.16**	**296**	*e*Pn	**Pn**	**03 25 44.4**	**+1.5**
JIRN				*e*Sn	**Sn**	**03 27 11.0**	**-2.7**
	comp=N,325nm,0.3s						
GUN	**Gumba**	**8.51**	**297**	*e*Pn	**Pn**	**03 25 48.7**	**+1.1**
GUN				*e*Sn	**Sn**	**03 27 19.7**	**-2.5**
	comp=N,224nm,0.5s						
PKI	**Pulchoki**	**8.78**	**294**	*e*Pn	**Pn**	**03 25 51.7**	**+0.5**
PKI				*e*Sn	**Sn**	**03 27 25.4**	**-3.3**
	comp=N,134nm,0.7s						
PKIN	**Phulchoki**	**8.79**	**294**	*e*Pn	**Pn**	**03 25 51.7**	**+0.4**
PKIN				*e*Sn	**Sn**	**03 27 25.4**	**-3.5**
	comp=N,110nm,0.3s						
BWNR	**Bhubaneshwar**	**8.96**	**245**	*e*PG	**Pn**	**03 25 54.8**	**+1.3**
BWNR				*ex*	**Sn**	**03 27 28.3**	**-4.4**
KKN	**Kakani**	**8.96**	**295**	*e*Pn	**Pn**	**03 25 54.8**	**+1.2**
DMN	**Daman**	**9.04**	**293**	*e*Pn	**Pn**	**03 25 55.3**	**+0.5**
DMN				*e*Sn	**Sn**	**03 27 31.9**	**-3.2**
	comp=N,78nm,0.3s						
GKN	**Gorkha**	**9.57**	**295**	*e*Pn	**Pn**	**03 26 02.0**	**+0.1**
GKN				*e*Sn	**Sn**	**03 27 43.9**	**-3.8**
	comp=N,109nm,0.2s						
KOLN	**Koldanda**	**10.36**	**292**	*e*Pn	**Pn**	**03 26 12.1**	**-0.6**
KOLN				*e*Sn	**Sn**	**03 28 02.1**	**-5.1**
	comp=N,114nm,0.3s						
DANN	**Dangsing**	**10.41**	**295**	*e*Pn	**Pn**	**03 26 13.2**	**-0.3**
DANN				*e*Sn	**Sn**	**03 28 03.9**	**-4.7**
	comp=N,128nm,0.6s						
PYUN	**Piuthan**	**10.98**	**293**	*e*Pn	**Pn**	**03 26 20.7**	**-0.4**
PYUN				*e*Sn	**Sn**	**03 28 16.1**	**-6.1**
	comp=N,67nm,0.3s						
NGP	**Nagpur**	**14.57**	**261**	*e*P	**Pn**	**03 27 11.0**	**+2.1**
LHMI	**Lhok Sumawe**	**19.12**	**172**	P	**P**	**03 28 03.9**	**+0.6**
LHMI				IAmb	IAmb	03 28 16.3	
	comp=Z,100nm,1.1s						
KULM	**Kulim**	**19.82**	**162**	P	**P**	**03 28 10.1**	**-1.0**
KULM				IAmb	IAmb	03 28 13.2	
	comp=Z,9.5nm,0.6s						
NIL	**Nilore**	**20.73**	**301**	P

BOSA	**Boshof**	**84.86**	**236**	P	**P**	**03 36 14.1**	**+1.3**
	comp=Z,3.0nm,0.6s,baz=30,slow=4.5,SNR=10						
BOSA				LR	LR	04 16 12.6	
	comp=Z,33nm,18.1s,baz=259,slow=37						
BOSA	**Boshof**	**84.86**	**236**	P	**P**	**03 36 13.5**	**+0.7**
TORD	**Torodi Ar. Bea**	**87.16**	**283**	P	**P**	**03 36 26.2**	**+1.8**
	comp=Z,0.3nm,0.8s,baz=56,slow=3.7,SNR=1.8						
YKA	**Yellowknife Ar**	**90.44**	**13**	P	**P**	**03 36 37.8**	**-1.1**
	comp=Z,0.1nm,0.4s,baz=337,slow=5.2,SNR=5.4						
TXAR	**Lajitas Array**	**123.89**	**19**	PKP	**PKPdf**	**03 42 35.9**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=186,slow=1.9,SNR=6.1						

*MEX **29** 03:26:12.5±0.4, 17.75N×94.26W, h13km±6km, MD4.0*
ISC 29 03:26:07.7±1.5, 17.61N±0.04×94.27W±0.04, h1km±12km, n13, σ1§18/24, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TUIG	**Tuzandepetl**	**0.45**	**341**	*i* P		**Pb**	**03 26 18.7**	**+0.3**
TUIG				*i* S		**Sg**	**03 26 21.1**	**-1.0**
TUIG				*i* S		**Sb**	**03 26 23.9**	**-1.8**
TUIG	**Tuzandepetl**	**0.45**	**341**			**Pb**	**03 26 18.8**	**+0.3**
CMIG	**Matias Romero**	**0.78**	**229**	*i* P		**Pn**	**03 26 26.9**	**+1.1**
CMIG				*i* S		**Sn**	**03 26 37.9**	**-0.3**
CMIG	**Matias Romero**	**0.78**	**229**			**Pn**	**03 26 26.9**	**+1.1**
CMIG						**Sn**	**03 26 37.9**	**-0.3**
TGIG		**1.37**	**127**	*e*P		**Pg**	**03 26 34.5**	**+0.4**
TGIG				*i* S		**Sn**	**03 26 52.8**	**-0.2**
TGIG		**1.37**	**127**			**Pg**	**03 26 34.5**	**+0.4**
TGIG						**Sn**	**03 26 52.8**	**-0.2**
PCIG		**2.14**	**152**	*i* P		**Pb**	**03 26 46.5**	**-0.8**
PCIG		**2.14**	**152**			**Pb**	**03 26 46.5**	**-0.8**
CCIG	**Comitan**	**2.43**	**123**	*i* P		**Pb**	**03 26 50.8**	**-1.6**
CCIG				*i* S		**Sn**	**03 27 19.3**	**0.0**
CCIG	**Comitan**	**2.43**	**123**			**Pb**	**03 26 51.6**	**-0.8**
CCIG						**Sb**	**03 27 22.7**	**-0.3**
TOIG	**Toxpalan**	**2.70**	**281**	*i* P		**Pn**	**03 26 53.2**	**+0.8**
TOIG				*i* S		**Sn**	**03 27 23.6**	**-2.4**
PEIG	**Puerto Escondi**	**3.19**	**240**	*i* P		**Pn**	**03 27 00.9**	**+1.9**
PEIG				*i* S		**Sn**	**03 27 37.9**	**+0.2**
TEIG	**Tepich**	**6.24**	**64**	Pn		**Pn**	**03 27 43.4**	**+2.4**
TEIG				Sn		**Sn**	**03 28 52.7**	**-0.4**

*IDC **29** 03:45:52.1±0.7, 55.14S×29.29W, h0km, mb4.5/6, mb1 4.6/6, mb1mx4.2/19, mbtmp4.5/6, MS3.4/4, Ms1 3.4/4, ms1mx3.2/18, Error ellipse: s-maj=33.1km s-min=18.8km az=60.0*
*NEIC **29** 03:45:57.3±1.2, 55.2S±0.2×29.6W±0.1, h36km±6km, mb4.8/26, Error ellipse: s-maj=22.1km s-min=7.8km az=192.0*
ISC 29 03:45:53.4±0.6, 55.2S±0.1×29.7W±0.1, h10km, n50, σ1§05/47, mb4.7/17, MS3.4/4, 1C-2D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOPE	**Hope Point**	**4.07**	**280**	Pn		**Pn**	**03 46 56.8**	**+1.3**
HOPE				Sn		**Sn**	**03 47 39.5**	**-3.6**
VNA1	**Neumayer--Stat**	**18.12**	**157**	P		**P**	**03 50 06.7**	**+1.6**
VNA3	**Neumayer Olymp**	**18.28**	**159**	P		**P**	**03 50 07.4**	**+0.6**
SNAA	**Sanae**	**20.10**	**155**	P		**P**	**03 50 26.7**	**-0.1**
SNAA	**Sanae**	**20.10**	**155**	P		**P**	**03 50 26.7**	**-0.1**
	25nm,0.8s,baz=298,slow=9.3,SNR=64							
SNAA				LR		LR	03 56 37.1	
	comp=Z,171nm,20.9s,baz=300,slow=32							
SNAA	**Sanae**	**20.10**	**155**	P		**P**	**03 50 27.0**	**+0.2**
SNAA				IAmb		IAmb	03 50 31.9	
	comp=Z,26nm,0.9s							
PLCA	**Paso Flores**	**30.47**	**281**	LR		LR	04 03 39.5	
	comp=Z,26nm,18.8s,baz=142,slow=35							
SYO	**Syowa Base**	**33.13**	**142**	*e*P		**P**	**03 52 27.0**	**-2.1**
SYO	**Syowa Base**	**33.13**	**142**	*ep*P		pP	03 52 35.0	+4.7
SYO	**Syowa Base**	**33.13**	**142**	*es*P		sP	03 52 40.0	+9.2
BO02	**Sierra Bellavi**	**34.83**	**289**	P		**P**	**03 52 44.9**	**+0.6**
BO02				IAmb		IAmb	03 53 04.0	
	comp=Z,9.5nm,0.9s							
QSPA	**South Pole Qui**	**35.06**	**180**	P		**P**	**03 52 47.1**	**+1.0**
	comp=Z,1.3nm,0.5s,baz=207,slow=1.1,SNR=12							
QSPA	**South Pole Qui**	**35.06**	**180**	P		**P**	**03 52 45.6**	**-0.5**
GO05	**Huala**	**35.30**	**287**	P		**P**	**03 52 47.8**	**-0.5**
GO05				IAmb		IAmb	03 52 55.4	
	comp=Z,18nm,1.1s							
PEL	**Peldehue**	**36.03**	**291**	P		**P**	**03 52 55.5**	**+0.8**
MT02	**Curacav**	**36.19**	**290**	P		**P**	**03 52 56.4**	**+0.5**
VA03	**San Esteban**	**36.25**	**291**	P		**P**	**03 52 57.7**	**+1.2**
VA03				IAmb		IAmb	03 52 58.8	
	comp=Z,12nm,0.7s							
CO01	**Juntas del Tor**	**38.19**	**294**	P		**P**	**03 53 15.1**	**+1.8**
AC05	**El Transito**	**39.20**	**295**	P		**P**	**03 53 22.6**	**+1.0**
AC04	**Llanos de Chal**	**40.12**	**295**	P		**P**	**03 53 30.3**	**+1.2**
AC04				IAmb		IAmb	03 53 31.6	
	comp=Z,10nm,0.8s							
AC01	**Pan de Azucar**	**41.55**	**297**	P		**P**	**03 53 40.7**	**-0.2**
MAW	**Mawson**	**41.66**	**145**	P		**P**	**03 53 40.9**	**-0.4**
	comp=Z,2.6nm,0.5s,baz=240,slow=5.0,SNR=6.3							
MAW	**Mawson**	**41.66**	**145**	P		**P**	**03 53 41.0**	**-0.4**
GO02	**Mina Guanaco**	**41.85**	**299**	P		**P**	**03 53 45.0**	**+1.2**
LVC	**Limon Verde**	**43.66**	**302**	P		**P**	**03 53 60.0**	**+1.5**
	comp=Z,7.9nm,0.5s,baz=140,slow=0.8,SNR=16							
LVC	**Limon Verde**	**43.66**	**302**	P		**P**	**03 53 59.5**	**+1.0**
LVC				IAmb		IAmb	03 54 01.7	
	comp=Z,8.4nm,0.6s							
PB09	**IPOC Station P**	**44.51**	**302**	P		**P**	**03 54 06.2**	**+1.0**
PB09				IAmb		IAmb	03 54 07.4	
	comp=Z,8.4nm,0.8s							
PB07	**IPOC Station P**	**44.88**	**302**	P		**P**	**03 54 08.9**	**+0.8**
PB07				IAmb		IAmb	03 54 09.8	
	comp=Z,10nm,1.1s							
PB01	**IPOC Station P**	**45.27**	**303**	P		**P**	**03 54 11.9**	**+0.8**
PB01				IAmb		IAmb	03 54 13.2	
	comp=Z,11nm,0.6s							
PB08	**IPOC Station P**	**45.88**	**304**	P		**P**	**03 54 17.1**	**+0.9**
PB08				IAmb		IAmb	03 54 21.0	
	comp=Z,9.0nm,1.0s							
GO01	**Chusmiza**	**46.31**	**304**	P		**P**	**03 54 20.4**	**+0.7**
GO01				IAmb		IAmb	03 54 22.0	
	comp=Z,12nm,0.7s							
PB11	**IPOC Station P**	**46.45**	**303**	P		**P**	**03 54 21.5**	**+1.1**
PB11				IAmb		IAmb	03 54 22.9	
	comp=Z,13nm,0.9s							
PSGCX	**Pisagua**	**46.81**	**303**	P		**P**	**03 54 23.8**	**+0.5**
PSGCX				IAmb		IAmb	03 54 31.2	
	comp=Z,10nm,1.1s							
MNMC	**Minye Minye**	**46.96**	**304**	P		**P**	**03 54 25.2**	**+0.6**
LPAZ	**La Paz**	**48.74**	**307**	P		**P**	**03 54 40.2**	**+1.3**
	comp=Z,12nm,0.5s,baz=122,slow=5.3,SNR=95							
LPAZ				LR		LR	04 14 21.3	
	comp=Z,46nm,21.9s,baz=110,slow=35							
LPAZ	**La Paz**	**48.74**	**307**	P		**P**	**03 54 40.1**	**+1.2**
SAML	**Samuel**	**53.21**	**317**	P		**P**	**03 55 11.8**	**+0.1**
SAML				IAmb		IAmb	03 55 12.7	
	comp=Z,9.9nm,1.0s							
TOA0	**Torodi Ar. Sit**	**73.03**	**32**	P		**P**	**03 57 22.4**	**-0.9**
TORD	**Torodi Ar. Bea**	**73.03**	**32**	P		**P**	**03 57 23.3**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=202,slow=6.6,SNR=21							
PTCN	**Pitcairn Islan**	**75.46**	**247**	P		**P**	**03 57 38.0**	**+0.5**
STKA	**Stephens Creek**	**92.95**	**173**	LR		LR	04 37 11.9	
	comp=Z,39nm,21.6s,baz=205,slow=33							
FINES	**FINESS Array B**	**124.29**	**29**	PKP		**PKPdf**	**04 04 49.7**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=90,slow=3.8,SNR=8.1							
ARCES	**ARCESS Array B**	**130.67**	**22**	PKP		**PKPdf**	**04 05 02.2**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=198,slow=1.4,SNR=12							
YKA	**Yellowknife Ar**	**134.60**	**319**	PKP		**PKPdf**	**04 05 10.1**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=124,slow=2.5,SNR=18							
INK	**Inuvik**	**144.26**	**322**	P		**PKPab**	**04 05 25.9**	**+0.1**
ILAR	**Eielson Array**	**148.50**	**313**	PKPbc		**PKPbc**	**04 05 38.5**	**-0.2**
	comp=Z,9.2nm,0.8s,baz=128,slow=2.0,SNR=82							
MCK	**McKinley**	**149.15**	**311**			**PKPbc**	**04 05 41.1**	**+0.6**
BPAW	**Bear Paw Mtn.**	**150.11**	**311**			**PKPbc**	**04 05 42.7**	**-0.1**
TOLK	**Toolik Lake Re**	**150.12**	**320**			**PKPbc**	**04 05 43.1**	**+0.3**
SONM	**Songino Array**	**152.07**	**87**	PKPbc		**PKPbc**	**04 05 47.7**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=220,slow=2.9,SNR=12							

*IDC **29** 04:06:52.2±0.6, 15.15S×173.70W, h0km, mb4.3/9, mb1 4.6/9, mb1mx4.3/25, mbtmp4.3/9, MS3.4/9, Ms1 3.4/9, ms1mx3.1/36, Error ellipse: s-maj=31.9km s-min=20.4km az=120.0*
*NEIC **29** 04:06:57.1±1.5, 15.20S±0.08×173.65W±0.08, h35km±1km, mb4.4/23, Error ellipse: s-maj=14.1km s-min=12.7km az=116.0*
ISC 29 04:06:56.4±0.5, 15.11S±0.09×173.61W±0.10, h30km, n78, σ0§82/65, mb4.3/19, MS3.5/10, 5C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AFI	**Afiamalu**	**2.14**	**56**			**Pn**	**04 07 31.0**	**+0.9**
AFI				Sn		**Sb**	**04 07 58.6**	**-2.0**
NIUE	**Niue**	**5.29**	**139**			**Pn**	**04 08 13.5**	**+0.2**
RAR	**Rarotonga**	**14.48**	**117**	LR		LR	04 14 44.7	
	comp=Z,61nm,21.3s,baz=295,slow=32							
DZM	**Mont Dzumac**	**20.12**	**247**	*e*LR		LR	04 16 00.9	
PPT	**Papeete**	**23.19**	**99**	LR		LR	04 18 54.9	
	comp=Z,42nm,20.3s,baz=253,slow=31							
PAE	**Paea**	**23.19**	**100**	*e*T		T	04 35 03.5	
	1.3nm,0.3s							
PPT2	**Papeete2**	**23.19**	**99**	*e*LR		LR	04 17 23.9	
	comp=Z,224nm,28.0s							
PPT2	**Papeete2**	**23.19**	**99**	*e*T		T	04 35 04.2	
	2.3nm,0.4s							
TVO	**Taravao**	**23.51**	**100**	*e*T		T	04 35 27.0	
	0.8nm,0.3s							
TBI	**Tubuai**	**24.20**	**113**	*e*LR		LR	04 17 55.8	
	comp=Z,218nm,28.2s,baz=295							
TBI	**Tubuai**	**24.20**	**113**	*e*T		T	04 36 36.0	
	4.1nm,0.3s							
WB0	**Warramunga Arr**	**49.67**	**257**	P		**P**	**04 15 44.3**	**-1.6**
WB2	**Warramunga Arr**	**49.70**	**257**	P		**P**	**04 15 45.0**	**-1.1**
WRA	**Warramunga Arr**	**49.71**	**257**	P		**P**	**04 15 45.1**	**-1.0**
	5.2nm,0.7s,baz=91,slow=7.4,SNR=48							
AS31	**Alice Springs**	**50.01**	**252**	P		**P**	**04 15 47.6**	**-0.8**
VNDA	**Vanda**	**63.65**	**186**	P		**P**	**04 17 25.3**	**+1.1**
	2.8nm,0.6s,baz=0.4,slow=6.2,SNR=15							
DAV	**Davao City (W)**	**64.16**	**286**	LR		LR	04 44 16.8	
	comp=Z,20nm,18.6s,baz=168,slow=35							
KAPI	**Kappang**	**66.17**	**271**	LR		LR	04 46 20.2	
	comp=Z,36nm,18.0s,baz=250,slow=36							
MJAR	**Matsushiro Arr**	**68.58**	**320**	LR		LR	04 42 26.5	
	comp=Z,27nm,21.7s,baz=175,slow=31							
PETK	**Petropavlovsk-**	**72.29**	**342**	P		**P**	**04 18 20.0**	**+1.2**
	4.2nm,0.8s,baz=123,slow=7.3,SNR=6.2							
NVAR	**Mina Array Bea**	**74.25**	**42**	P		**P**	**04 18 31.9**	**+1.0**
	1.9nm,0.8s,baz=230,slow=8.6,SNR=7.7							
NVAR				LR		LR	04 42 43.6	
	comp=Z,41nm,21.0s,baz=292,slow=29							
QSPA	**South Pole Qui**	**74.94**	**180**	P		**P**	**04 18 34.5**	**+0.1**
QSPA				IAmb		IAmb	04 18 35.6	
	comp=Z,6.9nm,0.8s							
Y14A	**Wickenburg**	**75.51**	**48**	P		**P**	**04 18 37.7**	**-0.5**
KSRS	**Korea Array**	**75.81**	**316**	LR		LR	04 45 40.4	
	comp=Z,22nm,21.8s,baz=176,slow=31							
TUC	**Tucson**	**76.36**	**51**	P		**P**	**04 18 42.8**	**-0.3**
X16A	**Lo Mia Camp, P**	**76.88**	**49**	P		**P**	**04 18 45.8**	**-0.3**
X16A				IAmb		IAmb	04 18 49.0	
	comp=Z,2.0nm,0.8s							
U15A	**North Rim**	**77.25**	**47**	P		**P**	**04 18 48.0**	**-0.2**
Q16A	**Castle Valley**	**79.25**	**45**	P		**P**	**04 18 58.7**	**-0.4**
TCUT	**Toone Canyon**	**80.17**	**43**	P		**P**	**04 19 04.1**	**-0.1**
MNTX	**Cornudas Mount**	**80.22**	**53**	P		**P**	**04 19 03.7**	**-0.7**
TX31	**Lajitas Ar. Si**	**80.62**	**56**	P		**P**	**04 19 06.7**	**0.0**
TX32	**Lajitas Array**	**80.62**	**56**	P		**P**	**04 19 06.1**	**-0.6**
TXAR	**Lajitas Array**	**80.62**	**56**	P		**P**	**04 19 08.5**	**+1.8**
	comp=Z,0.7nm,0.7s,baz=216,slow=7.8,SNR=9.3							
CN2	**Changchun**	**80.73**	**320**	*e*P		**P**	**04 19 04.5**	**-2.3**
CN2				*ep*P		PcP	04 19 09.5	-3.9
WRH	**Wood River Hil**	**81.70**	**11**	P		**P**	**04 19 11.5**	**0.0**
WRH				IAmb		IAmb	04 19 13.8	
	comp=Z,4.9nm,1.0s							
DOT	**Dot Lake**	**81.77**	**13**	P		**P**	**04 19 12.5**	**+0.6**
DOT				IAmb		IAmb	04 19 13.3	
	comp=Z,2.1nm,0.6s							
HDA	**Harding Lake**	**81.86**	**11**	P		**P**	**04 19 12.8**	**+0.5**
HDA				IAmb		IAmb	04 19 14.4	
	comp=Z,3.1nm,0.9s							
CCB	**Clear Creek Bu**	**81.92**	**11**	P		**P**	**04 19 13.4**	**+0.8**
CCB				IAmb		IAmb	04 19 13.7	
	comp=Z,3.4nm,0.6s							
SCRK	**Sand Creek**	**82.07**	**13**	P		**P**	**04 19 14.6**	**+1.0**
SCRK				IAmb		IAmb	04 19 15.1	
	comp=Z,2.0nm,0.6s							
PDAR	**Pinedale Array**	**82.18**	**42**	P		**P**	**04 19 16.1**	**+1.3**
	comp=Z,1.3nm,0.7s,baz=222,slow=2.0,SNR=7.0							
PDAR				LR		LR	04 48 43.0	
	comp=Z,25nm,19.7s,baz=285,slow=30							
ILAR	**Eielson Array**	**82.20**	**11**	P		**P**	**04 19 14.6**	**+0.5**
	comp=Z,0.8nm,0.4s,baz=225,slow=6.0,SNR=19							
PRP	**Porcupine Dome**	**83.13**	**11**	IAmb		IAmb	04 19 20.7	
	comp=Z,2.1nm,0.6s							
DAWY	**Dawson**	**83.19**	**14**	P		**P**	**04 19 20.1**	**+0.8**
DAWY				IAmb		IAmb	04 19 22.3	
	comp=Z,2.4nm,1.1s							
ISCO	**Idaho Springs**	**83.47**	**46**	P		**P**	**04 19 21.7**	**0.0**
TOLK	**Toolik Lake Re**	**85.29**	**9**	IAmb		IAmb	04 19 35.1	
	comp=Z,3.4nm,0.8s							
MAW	**Mawson**	**88.00**	**199**	P		**P**	**04 19 43.4**	**+0.1**
	comp=Z,3.0nm,0.5s,baz=149,slow=9.6,SNR=9.4							
MAW				LR		LR	04 56 56.3	
	comp=Z,32nm,18.8s,baz=70,slow=34							
MAW	**Mawson**	**88.00**	**199**	P		**P**	**04 19 43.5**	**+0.2**
MAW				IAmb		IAmb	04 19 43.6	
	comp=Z,1.4nm,0.9s							
YKA	**Yellowknife Ar**	**89.91**	**23**	P		**P**	**04 19 53.0**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=240,slow=4.1,SNR=8.2							
KSH	**Kashi**	**115.14**	**307**	PKP		**PKiKP**	**04 25 36.5**	**+1.4**
ARCES	**ARCESS Array B**	**124.29**	**352**	PKP		**PKPdf**	**04 25 51.6**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=11,slow=1.2,SNR=12							
FINES	**FINESS Array B**	**131.61**	**347**	PKP		**PKiKP**	**04 26 06.5**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=66,slow=4.8,SNR=8.4							
TRPA	**Tarpa**	**144.47**	**341**	⇑P		**PKPdf**	**04 26 29.3**	**-0.4**
KHC	**Kasperske Hory**	**145.56**	**352**	*e*PKP		**PKPab**	**04 26 32.5**	**+0.4**
DRGR		**145.60**	**340**	⇑P		**PKPbc**	**04 26 32.2**	**+0.1**
BRTR	**Keskin Array B**	**145.80**	**321**	PKPbc		**PKPab**	**04 26 33.6**	**+0.1**
	comp=Z,4.5nm,0.8s,baz=94,slow=2.5,SNR=23							
GERES	**GERESS Array B**	**145.82**	**351**	PKPbc		**PKPab**	**04 26 33.4**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=24,slow=3.4,SNR=30							
CONA	**Conrad Observa**	**146.35**	**348**	PKPab		**PKPab**	**04 26 35.4**	**+0.2**
	comp=Z,4.2nm,0.7s,SNR=5.6							
MOA	**Molln**	**146.71**	**350**	*i* PKPab		**PKPbc**	**04 26 36.1**	**+0.7**
	comp=Z,4.0nm,0.6s							
GZR	**Gura Zlata**	**146.79**	**339**	⇑P		**PKPbc**	**04 26 36.1**	**+0.3**
BFO	**Black Forest**	**146.83**	**358**			**PKPbc**	**04 26 36.2**	**+0.5**
CLF	**Chambon-Foret**	**147.00**	**5**	PKPbc		**PKPbc**	**04 26 36.6**	**+0.5**
HERR	**Herculane**	**147.37**	**339**	⇑P		**PKPbc**	**04 26 37.8**	**+0.6**
RETA	**Reutte**	**147.51**	**354**	*e*PKPab		**PKPab**	**04 26 38.9**	**-0.8**
	comp=Z,4.5nm,1.1s							
WATA	**Walderalm**	**147.58**	**353**	*i* PKPab		**PKPbc**	**04 26 39.0**	**+1.0**
	comp=Z,5.2nm,0.6s							
KBA	**Koelnbreinsper**	**147.60**	**351**	PKPab		**PKPbc**	**04 26 38.8**	**+0.7**
	comp=Z,3.8nm,0.6s,SNR=5.4							
MOTA	**Moosalm**	**147.62**	**354**	*i* PKPab		**PKPbc**	**04 26 38.5**	**+0.4**
	comp=Z,5.0nm,1.1s							
WTTA	**Wattenberg**	**147.64**	**353**	*i* PKPab		**PKPbc**	**04 26 38.8**	**+0.6**
	comp=Z,4.4nm,0.5s,SNR=11							
SOKA	**Soboth**	**147.70**	**349**	*i* PKPab		**PKPbc**	**04 26 38.7**	**+0.5**
	comp=Z,6.8nm,0.8s,SNR=7.1							
SQTA	**Sankt Quirin**	**147.73**	**354**	*i* PKPab		**PKPbc**	**04 26 39.4**	**+1.1**
	comp=Z,5.7nm,1.0s							
DAVA	**Damuels**	**147.78**	**356**	PKPab		**PKPbc**	**04 26 39.4**	**+0.8**
	comp=Z,6.0nm,0.7s,SNR=5.4							
FETA	**Feichten**	**147.97**	**354**	*i* PKiKP		**PKiKP**	**04 26 40.3**	**-0.7**
	comp=Z,2.9nm,0.7s							
MYKA	**Terra Mystica**	**147.99**	**351**	*i* PKPbc		**PKPbc**	**04 26 39.2**	**+0.2**
	comp=Z,6.1nm,0.6s							
ABTA	**Abfaltersbach**	**148.04**	**352**	*i* PKiKP		**PKPbc**	**04 26 39.6**	**+0.5**
	comp=Z,7.8nm,0.7s							
FUORN	**Ofenpass-Fuorn**	**148.41**	**355**	PKPbc		**PKPbc**	**04 26 40.6**	**+0.2**
CTI	**Castel Tesino**	**148.84**	**353**			**PKPbc**	**04 26 41.5**	**+0.2**
BNI	**Bardonecchia**	**150.15**	**360**			**PKPbc**	**04 26 45.0**	**+0.4**
PDG	**Podgorica**	**150.60**	**340**	⇑P		**PKPbc**	**04 26 45.7**	**+0.2**
TORD	**Torodi Ar. Bea**	**175.05**	**113**	PKP		**PKPdf**	**04 27 03.2**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=309,slow=1.7,SNR=3.2							
TORD				PKPab		**PKPab**	**04 28 38.7**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=225,slow=5.5,SNR=2.9							

MAN 29 04:29:04.9, 10.16N×124.27E, h1km, mb4.0, ML2.8, MS2.4, 2D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LLP	**Lapu-Lapu**	**0.34**	**298**	⇓*i*P		Pg	04 29 10.5	-0.9
LLP				*i* S		Sg	04 29 16.0	+0.3
MSLP	**Maasin**	**0.58**	**92**	*e*P		Pg	04 29 16.5	+0.4
MSLP				*e*S		Sb	04 29 27.9	+1.2
TBP	**Tagbilaran**	**0.61**	**221**	*i* P		Pg	04 29 17.0	+0.3
TBP				*i* S		Sg	04 29 23.9	-0.8
RCP	**Roxas**	**2.04**	**313**	⇓*e*P		Pn	04 29 41.0	+0.5

*IDC **29** 04:32:36.5±3.6, 24.80N×95.31E, h157km±39km, mb3.3/5, mb1 3.4/6, mb1mx3.0/52, mbtmp3.7/6, Error ellipse: s-maj=74.4km s-min=21.2km az=61.0*
ISC 29 04:32:33.8±1.0, 24.9N±0.3×95.3E±0.5, h125km, n6, σ1§43/6, mb3.5/5, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CMAR	**Chiang Mai Arr**	**7.28**	**151**	P		**Pn**	**04 34 18.7**	**+1.1**
	0.8nm,0.3s,baz=328,slow=13,SNR=5.9							
MKAR	**Makanchi Array**	**24.16**	**338**	P		**P**	**04 37 39.9**	**+1.6**
	1.0nm,0.6s,baz=147,slow=9.6,SNR=9.9							
KURBB	**Kurchatov Arra**	**28.73**	**338**	P		**P**	**04 38 19.6**	**+0.4**
	0.4nm,0.6s,baz=149,slow=9.0,SNR=4.0							
FINES	**FINESS Array B**	**58.50**	**328**	P		**P**	**04 42 16.2**	**-0.3**
	2.4nm,0.9s,baz=129,slow=7.6,SNR=3.6							
WRA	**Warramunga Arr**	**58.59**	**136**	P		**P**	**04 42 16.4**	**-1.4**
	0.3nm,0.6s,baz=321,slow=7.6,SNR=1.8							
TORD	**Torodi Ar. Bea**	**87.74**	**283**	P		**P**	**04 45 08.8**	**-0.4**
	0.7nm,1.0s,baz=75,slow=3.6,SNR=1.3							

IDC 29 04:43:16.8±4.1, 5.84S×106.58W, h0km, mb3.5/4, mb1 3.9/4, mb1mx3.7/24, mbtmp3.5/4, MS3.4/7, Ms1 3.4/7, ms1mx3.3/20, Error ellipse: s-maj=203.9km s-min=61.8km az=103.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RPN	**Rapa Nui**	**21.33**	**187**	LR		LR	04 54 10.4	
	comp=Z,140nm,18.3s,baz=120,slow=31							
JTS	**Las Juntas de**	**26.84**	**53**	LR		LR	04 56 10.8	
	comp=Z,37nm,19.4s,baz=272,slow=29							
ATAH	**Atahualpa**	**28.03**	**94**	LR		LR	04 57 38.5	
	comp=Z,142nm,19.6s,baz=233,slow=31							
NNA	**Nana**	**29.99**	**104**	LR		LR	04 57 26.4	
	comp=Z,43nm,21.9s,baz=278,slow=28							
ROSC	**El Rosal**	**33.91**	**72**	LR		LR	05 01 01.4	
	comp=Z,93nm,18.3s,baz=192,slow=31							
TXAR	**Lajitas Array**	**35.08**	**4**	P		P	04 50 12.4	+0.6
	0.3nm,0.7s,baz=156,slow=6.4,SNR=3.7							
TXAR				LR		LR	05 01 50.1	
	comp=Z,30nm,18.1s,baz=0.0,slow=32							
H03N2	**Juan Fernandez**	**37.59**	**141**	T		T	05 30 43.3	
	baz=314,slow=77,SNR=34							
H03N1	**Juan Fernandez**	**37.61**	**140**	T		T	05 30 44.6	
	baz=314,slow=77,SNR=68							
H03N3	**Juan Fernandez**	**37.61**	**141**	T		T	05 30 45.5	
	baz=314,slow=77,SNR=46							
NVAR	**Mina Array Bea**	**45.37**	**347**	P		P	04 51 37.8	+0.5
	0.8nm,0.8s,baz=174,slow=8.8,SNR=2.6							
PLCA	**Paso Flores**	**47.38**	**143**	LR		LR	05 06 55.9	
	comp=Z,112nm,18.0s,baz=280,slow=30							
YKA	**Yellowknife Ar**	**68.42**	**356**	P		P	04 54 19.4	-0.6
	0.5nm,0.8s,baz=160,slow=6.6,SNR=5.5							
ILAR	**Eielson Array**	**76.48**	**343**	P		P	04 55 07.6	-0.6
	0.5nm,0.9s,baz=143,slow=3.8,SNR

comp=Z,11µm,1.4s
SEY Seymchan 9.26 143 Pn **Pn 05 09 45.4 -1.4**
comp=Z,4.7nm,0.3s,baz=343,slow=14,SNR=18
SEY Seymchan 9.26 143 *i* P **Pn 05 09 46.4 -0.4**
BILL Bilibino 9.59 94*d i* P Pn 05 09 54.1 +2.7
BILL pmax pmax
comp=Z,91nm,1.1s
BILL MLR MLR
comp=Z,750nm,16.0s
BILL Bilibino 9.59 94 Pn **Pn** 05 09 54.1 +2.7
YAK Yakutsk 9.73 210 Pn **Pn 05 09 52.8 -0.4**
comp=Z,0.3nm,0.3s,baz=342,slow=2.5,SNR=2.0
YAK LR LR 05 14 17.9
comp=Z,880nm,19.2s,baz=32,slow=42
YAK Yakutsk 9.73 210 *i* P **Pn 05 09 50.2 -3.1**
comp=Z,9.6nm,0.3s
YAK *e*S **Sn 05 11 41.3 -1.1**
comp=Z,323nm,1.3s
YAK eLg Lg 05 12 40.0
YAK eLg Lg 05 12 40.0
YAK eLR LR 05 13 24.5
comp=Z,1µm,16.4s
YAK Yakutsk 9.73 210 *e*P **Pn 05 09 51.8 -1.5**
YAK *e*S **Sn 05 11 41.8 -0.6**
YAK pmax pmax
comp=Z,11nm,0.9s
YAK pmax pmax
comp=N,24nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=Z,104nm,0.9s
YAK pmax pmax
comp=N,179nm,1.6s
YAK pmax pmax
comp=E,60nm,1.6s
YAK smax smax
comp=N,196nm,1.2s
YAK smax smax
comp=E,140nm,1.5s
YAK MLR MLR
comp=Z,989nm,18.0s
YAK MLR MLR
comp=N,636nm,16.0s
YAK Yakutsk 9.73 210 Pn 05 09 52.2 -1.1
TBGR Tabaga 9.93 210 *e*P **Pn 05 09 52.7 -3.3**
comp=N,14nm,0.1s
TBGR *e*S **Sn 05 11 46.1 -1.4**
comp=N,569nm,0.9s
TBGR eLg Lg 05 12 46.5
TBGR eLg Lg 05 12 46.5
BLSR Buluus 10.47 210 *i* P **Pn 05 10 00.1 -3.3**
comp=N,35nm,0.1s
BLSR *e*S **Sn 05 11 59.1 -1.4**
BLSR *e*S **Sn 05 11 59.1 -1.4**
BLSR eLg Lg 05 13 03.4
BLSR eLg Lg 05 13 03.4
BLSR eLR LR 05 13 51.5
comp=N,4µm,8.7s
MA2 Magadan 12.12 153 Pn **Pn 05 10 26.2 +0.2**
comp=N,0.7nm,0.3s,baz=179,slow=20,SNR=2.0
MA2 Magadan 12.12 153 *i* P **Pn 05 10 27.5 +1.6**
MA2 pmax pmax
comp=Z,37nm,2.2s
MA2 MLR MLR
comp=Z,2µm,10.0s
CGD Chagda 12.74 203 *i* P **Pn 05 10 31.2 -3.2**
comp=Z,32nm,0.6s
CGD *e*S **Sn 05 12 54.5 -1.5**
comp=Z,156nm,0.6s
CGD *e*S **Sn 05 12 54.5 -1.5**
comp=Z,125nm,0.5s
CGD eLg Lg 05 14 15.4
CGD eLg Lg 05 14 15.4
OKH Okha 17.38 174*de*P **P 05 11 37.4 +0.4**
OKH *e*S **Sn 05 14 44.7 -4.1**
OKH MLR MLR
comp=E,2µm,12.0s
OKH MLR MLR
comp=Z,900nm,12.0s
OKH MLR MLR
comp=N,2µm,9.0s
ZEA Zeya 18.07 205 *e*P **P 05 11 44.9 +0.2**
ZEA pmax pmax
comp=N,300nm,2.0s
ZEA pmax pmax
comp=Z,200nm,2.0s
ZEA pmax pmax
comp=N,180nm,1.8s
ZEA pmax pmax
comp=Z,180nm,1.8s
ZEA MLR MLR
comp=Z,3µm,8.0s
ZEA MLR MLR
comp=N,2µm,7.0s
ZEA MLR MLR
comp=E,2µm,7.0s
PEA0B Petropavlovsk- 19.45 147 *i* P **Pn 05 12 00.6 -0.5**
PEA0B Petropavlovsk- 19.45 147 P **Pn 05 12 03.2 +2.1**
PEA0B lAmb lAmb 05 12 13.6
comp=Z,45nm,1.0s
PETK Petropavlovsk- 19.45 147 P **Pn 05 12 00.7 -0.5**
comp=Z,0.7nm,0.3s,baz=34,slow=5.6,SNR=8.9
RDOG Red Dog Mine 19.58 70 P **Pn 05 12 02.5 -0.1**
PET Petropavlovsk 19.71 145 P **Pn 05 12 05.7 +1.6**
PET pmax pmax
comp=Z,26nm,0.9s
PET Petropavlovsk 19.71 145 P **Pn 05 12 05.7 +1.6**
GRNR Gornyy 20.18 187 ‖ *i* P Pn 05 12 08.8 -1.0
GRNR pmax pmax
comp=Z,10.0nm,0.8s
GRNR MLR MLR
comp=Z,560nm,17.0s
ANM Nome 20.93 80 P Pn 05 12 17.4 -1.1
ANM pmax pmax
comp=Z,68nm,0.9s
ANM Nome 20.93 80 P Pn 05 12 17.4 -1.1
SKR Severo-Kuril's 21.52 151 *i* P **P 05 12 21.2 -1.1**
KLR Kul'dur 22.00 195 P **P 05 12 26.2 -1.3**
comp=Z,24nm,0.9s,baz=11,slow=8.2,SNR=52
KLR Kul'dur 22.00 195*c i* P **P 05 12 29.4 +1.9**
KLR pmax pmax
comp=Z,74nm,1.3s
KLR MLR MLR
comp=Z,1µm,8.0s
TOLK Toolik Lake Re 23.24 61 P **P 05 12 40.8 +0.3**
baz=308,SNR=23
TOLK Toolik Lake Re 23.24 61 P **P 05 12 40.4 -0.1**
TOLK lAmb lAmb 05 12 50.5
comp=Z,31nm,0.9s
HIA Hailar 23.62 215 *i* P **P 05 12 44.8 +0.4**
HIA pmax pmax
comp=Z,7.0nm,1.1s
COLD Coldfoot 23.95 64 P **P 05 12 47.4 0.0**
YSS Yuzh-Sakhalins 23.97 175 *e*P **P 05 12 51.2 +3.6**
YSS Yuzh-Sakhalins 23.97 175 P **P 05 12 49.7 +2.1**
IRK Irkutsk 24.61 240 *e*P **P 05 12 51.7 -1.8**
TTA Tatalina 25.09 76 P **P 05 12 58.0 +0.2**
TTA pmax pmax
comp=Z,25nm,0.8s
TTA Tatalina 25.09 76 P **P 05 12 58.0 +0.2**
TTA lAmb lAmb 05 13 04.1
comp=Z,25nm,0.8s
MLY Manley 25.27 68 P **P 05 12 59.8 +0.4**
TLY Talaya 25.29 240 P **P 05 13 00.3 +0.6**
comp=Z,3.5nm,0.7s,baz=7.7,slow=5.8,SNR=4.5
TLY LR LR 05 24 11.9
comp=Z,508nm,18.1s,baz=15,slow=40
TLY Talaya 25.29 240 *e*P **P 05 13 01.2 +1.6**
TLY pmax pmax
comp=Z,16nm,1.1s
TLY MLR MLR
comp=Z,2µm,13.0s
TLY Talaya 25.29 240 P **P 05 12 58.6 -1.0**
BPAW Bear Paw Mtn. 25.84 70 P **P 05 13 04.9 +0.3**
FYU Fort Yukon 25.86 62 P **P 05 13 05.3 +0.6**
KUR Kuril'sk 25.94 167 *i* P **P 05 13 06.8 +1.2**
MOY Mondy 26.07 243 *e*P **P 05 13 07.3 +0.4**
MOY pmax pmax
comp=Z,19nm,1.6s
MDM Murphy Dome 26.08 67 P **P 05 13 06.5 -0.2**
MDM lAmb lAmb 05 13 12.9
comp=Z,39nm,1.3s
POKR Poker Plat Res 26.21 66 P **P 05 13 08.3 +0.4**
baz=315,SNR=9.6
KTH Kantishna Hill 26.25 71 P **P 05 13 09.2 +0.8**
KTH lAmb lAmb 05 13 13.0
comp=Z,28nm,1.0s
TCOL CIGO, UAF Yank 26.25 67 P **P 05 13 09.0 +0.7**
baz=315
COLA College 26.26 67 P **P 05 13 08.7 +0.4**
COLA pmax pmax
comp=Z,20nm,0.8s
COLA College 26.26 67 P **P 05 13 08.7 +0.4**
COLA lAmb lAmb 05 13 15.3
comp=Z,20nm,0.8s
PPLA Purkeypile 26.33 73 P **P 05 13 10.3 +1.1**
PPLA lAmb lAmb 05 13 25.2
comp=Z,24nm,1.2s
CCB Clear Creek Bu 26.43 67 P **P 05 13 10.3 +0.4**
CCB lAmb lAmb 05 13 16.7
comp=Z,17nm,0.7s
WRH Wood River Hil 26.47 67 P **P 05 13 12.5 +2.2**
WRH lAmb lAmb 05 13 16.8
comp=Z,11nm,0.7s
TRF Thorofare Moun 26.52 71 P **P 05 13 11.5 +0.5**
ZAK Zakamensk 26.55 239 *e*P **P 05 13 10.8 -0.4**
ZAK pmax pmax
comp=Z,6.0nm,1.4s
SVW2 Sparrevohn 26.57 78 P **P 05 13 12.7 +1.5**
SVW2 lAmb lAmb 05 13 15.5
comp=Z,14nm,0.9s
IL31 26.62 66 P **P 05 13 11.6 0.0**
IL31 lAmb lAmb 05 13 16.0
comp=Z,16nm,1.1s
ILAR Eielson Array 26.62 66 P **P 05 13 11.9 +0.3**
comp=Z,6.2nm,0.8s,baz=309,slow=8.5,SNR=42
MCK McKinley 26.74 69 P **P 05 13 13.3 +0.6**
MCK pmax pmax
comp=Z,13nm,0.7s
MCK McKinley 26.74 69 P **P 05 13 13.3 +0.6**
MCK lAmb lAmb 05 13 17.8
comp=Z,13nm,0.7s
MDJ Mudanjiang 26.77 197 P **P 05 13 16.0 +2.9**
MDJ pPKP sP 05 13 30.5 +13
MDJ pP sP 05 13 30.5 +13
MDJ sP pP 05 13 38.8 +23
MDJ PP **PnPn 05 14 01.5 +7.3**
MDJ S **S 05 17 49.3 +0.6**
MDJ SS ScP 05 19 45.0 -30
MDJ pmax pmax
comp=Z,66nm,0.8s
MDJ pmax pmax
comp=Z,180nm,2.0s
MDJ LR LR
comp=N,2µm,8.8s
MDJ LR LR
comp=E,560nm,7.2s
MDJ LR LR
comp=Z,2µm,8.5s
ASAJ Asahikawa 26.80 176 P **P 05 13 14.2 +0.9**
comp=Z,5.4nm,0.3s,baz=270,slow=6.1,SNR=3.5
HDA Harding Lake 26.86 67 P **P 05 13 14.9 +1.1**
baz=316,SNR=6.3
HDA Harding Lake 26.86 67 P **P 05 13 14.4 +0.6**
USA0B Ussuriysk Arra 26.98 193 *i* P **P 05 13 15.9 +0.9**
USA0B Ussuriysk Arra 26.98 193 P **P 05 13 17.8 +2.8**
USA0B lAmb lAmb 05 13 20.6
comp=Z,14nm,0.9s
USRK Ussuriysk Ar. 26.99 193 P **P 05 13 16.6 +1.6**
comp=Z,9.0nm,0.8s,baz=11,slow=12,SNR=15
RND Reindeer 27.00 70 P **P 05 13 15.5 +0.4**
RND pmax pmax
comp=Z,4.0nm,0.8s
RND Reindeer 27.00 70 P **P 05 13 15.5 +0.4**
A36M Sachs Harbour 27.31 43 P **P 05 13 17.4 -0.3**
baz=314,SNR=5.6
KBS Kingsbay 27.56 341*ce*P **P 05 13 19.5 -0.4**
KBS pmax pmax
comp=Z,9.0nm,1.2s
SPITS Spitsbergen Ar 27.66 338 P **P 05 13 21.0 +0.2**
comp=Z,4.6nm,0.7s,baz=72,slow=9.1,SNR=7.3
SPITS LR LR 05 24 43.6
comp=Z,148nm,19.0s,baz=25,slow=37
DHY Denali Highway 27.70 69 P **P 05 13 21.4 -0.1**
ULN Ulaanbaatar 27.82 232*ce*P **P 05 13 21.9 -0.8**
ULN pmax pmax
comp=Z,4.0nm,1.3s
INK Inuvik 27.90 52 P **P 05 13 23.7 +0.7**
comp=Z,7.3nm,1.0s,baz=321,slow=9.1,SNR=4.8
INK Inuvik 27.90 52 P **P 05 13 22.9 -0.1**
RSO Redoubt South 27.96 77 P **P 05 13 25.1 +1.2**
RIDG Independent Ri 27.99 66 P **P 05 13 24.1 +0.1**
SONM Songino Array 28.02 233 P **P 05 13 25.0 +0.6**
comp=Z,1.3nm,0.6s,baz=28,slow=7.1,SNR=9.9
SONM Songino Array 28.02 233 P **P 05 13 25.0 +0.6**
CN2 Changchun 28.04 203 *e*P **P 05 13 22.5 -2.0**
CN2 *ep*P pP 05 13 26.8 -0.8
CN2 *e*S **S 05 18 04.5 -4.2**
CN2 LR LR
comp=N,190nm,13.0s
CN2 LR LR
comp=E,2µm,13.0s
CN2 LR LR
comp=Z,2µm,13.0s
SCRK Sand Creek 28.07 65 P **P 05 13 25.6 +0.9**
GHO Glory Hole Cre 28.19 72 P **P 05 13 27.1 +1.3**
PMR Palmer 28.26 73 P **P 05 13 26.5 +0.2**
PMR pmax pmax
comp=Z,5.0nm,0.8s
PMR Palmer 28.26 73 P **P 05 13 26.5 +0.2**
DOT Dot Lake 28.29 66 P **P 05 13 27.3 +0.7**
EGAK Eagle 28.32 62 P **P 05 13 27.8 +0.9**
SML Sawmill 28.35 72 P **P 05 13 26.4 -0.8**
SML lAmb lAmb 05 13 29.5
comp=Z,15nm,0.8s
EPYK Eagle Plains 28.43 57 P **P 05 13 27.9 +0.1**
baz=317
EPYK Eagle Plains 28.43 57 P **P 05 13 28.3 +0.5**
EPYK lAmb lAmb 05 13 36.9
comp=Z,9.5nm,0.8s
KNK Knik Glacier 28.61 72 P **P 05 13 29.9 +0.4**
KNK lAmb lAmb 05 13 32.8
comp=Z,14nm,0.8s
SCM Sheep Creek Mo 28.64 71 P **P 05 13 31.4 +1.6**
SCM pmax pmax
comp=Z,10.0nm,0.9s
SCM Sheep Creek Mo 28.64 71 P **P 05 13 31.4 +1.6**
SCM lAmb lAmb 05 13 32.8
comp=Z,9.7nm,0.9s
MSHR Mys Shultsa 28.66 194 *i* P **P 05 13 30.8 +0.8**
MSHR pmax pmax
comp=Z,23nm,2.0s
MSHR MLR MLR
comp=Z,420nm,8.0s
CNPM China Poot 29.17 77 P **P 05 13 34.5 0.0**
CNPM lAmb lAmb 05 13 38.4
comp=Z,22nm,0.9s
ZAA0 Zalesovo Array 29.23 264 P **P 05 13 34.1 -0.8**
ZALV Zalesovo Beam 29.23 264 P **P 05 13 34.9 -0.1**
comp=Z,1.0nm,0.6s,baz=34,slow=5.9,SNR=5.5
ZALV LR LR 05 26 31.8
comp=Z,321nm,18.8s,baz=34,slow=39
DAWY Dawson 29.37 62 P **P 05 13 36.0 -0.2**
GLI Glacier Island 29.44 72 P **P 05 13 37.1 +0.3**
GLI lAmb lAmb 05 13 40.1
comp=Z,14nm,0.8s
C36M Paulatuk 29.50 46 P **P 05 13 36.5 -0.7**
baz=318,SNR=7.9
C36M Paulatuk 29.50 46 P **P 05 13 36.4 -0.8**
FID Port Fidalgo 29.74 72 P **P 05 13 40.5 +1.1**
FID lAmb lAmb 05 13 41.7
comp=Z,8.5nm,0.8s
EYAK Cordova Ski Ar 30.12 71 P **P 05 13 43.3 +0.5**
EYAK lAmb lAmb 05 13 47.1
comp=Z,13nm,1.0s
VRDI Verde Repeater 30.31 69 P P 05 13 47.6 +2.9
OHAK Old Harbor 30.32 82 P **P 05 13 46.6 +2.0**
OHAK lAmb lAmb 05 13 55.9
comp=Z,27nm,1.4s
RAGM Ragged Mountai 30.58 71 P **P 05 13 47.6 +0.7**
YAH Yahtse 31.51 69 P P 05 13 58.4 +3.0
YAH lAmb lAmb 05 14 13.8
comp=Z,7.9nm,0.6s
MESA MESA 31.59 69 P **P 05 13 56.6 +0.6**
DAG Danmarks Havn 32.06 351 *i* P **P 05 13 58.8 -0.9**
DAG pmax pmax
comp=Z,6.0nm,1.1s
DAG Danmarks Havn 32.06 351 *i* P **P 05 13 58.8 -0.9**
comp=Z,6.2nm,1.1s
HHC Hu-ho-hao-te 33.35 221 *e*P **P 05 14 12.3 +0.8**
HHC sP sP 05 14 19.8 +4.0
HHC S **S 05 19 24.3 -7.7**
HHC pmax pmax
comp=Z,11nm,0.9s
HHC pmax pmax
comp=Z,32nm,6.1s
HHC LR LR
comp=N,780nm,10.4s
HHC LR LR
comp=E,570nm,11.7s
HHC LR LR
comp=Z,710nm,13.9s
ARCES ARCESS Array B 33.37 324 P **P 05 14 11.7 +0.4**
comp=Z,2.0nm,0.7s,baz=32,slow=8.6,SNR=12
ARCES PcP **PcP 05 16 54.3 +1.9**
comp=Z,1.1nm,0.7s,baz=29,slow=2.8,SNR=6.3
ARCES LR LR 05 32 29.1
comp=Z,346nm,18.1s,baz=30,slow=45
KURK Kurchatov 34.00 267*ce*P **P 05 14 16.8 -0.1**
KURK pmax pmax
comp=Z,7.0nm,1.7s
KURK Kurchatov 34.00 267 P **P 05 14 16.3 -0.6**
KSRS Korea Array 34.03 197 P **P 05 14 18.4 +1.1**
comp=Z,3.6nm,0.9s,baz=7.4,slow=7.8,SNR=13
KSRS LR LR 05 28 03.3
comp=Z,350nm,18.6s,baz=16,slow=36
KURBB Kurchatov Arra 34.11 267 P **P 05 14 17.4 -0.5**
comp=Z,3.8nm,1.0s,baz=33,slow=9.3,SNR=16
MJAR Matsushiro Arr 34.35 183 P **P 05 14 20.4 +0.3**
comp=Z,0.7nm,0.3s,baz=359,slow=9.4,SNR=5.9
MJAR LR LR 05 28 28.9
comp=Z,387nm,18.2s,baz=10.0,slow=36
BVAR Borovoye Array 34.76 277 P **P 05 14 22.5 -1.0**
comp=Z,2.8nm,0.7s,baz=43,slow=6.7,SNR=13
BRVK Borovoye 34.77 277*ce*P **P 05 14 23.0 -0.5**
BRVK pmax pmax
comp=Z,15nm,1.7s
TMCR Tamitsa 35.10 312 *e*P **P 05 14 25.7 -0.5**
ARU Arti 35.72 290 P **P 05 14 31.0 -0.6**
comp=Z,3.2nm,0.2s,baz=178,slow=1.7,SNR=4.1
ARU Arti 35.72 290 P **P 05 14 31.8 +0.1**
ARU 05 15 50.3
ARU S **S 05 20 10.8 +2.8**
ARU SS **SnSn 05 22 32.4 +3.3**
ARU MLR MLR
comp=Z,343nm,17.0s
TIY Taiyuan 36.18 219 *e*P **P 05 14 39.5 +3.6**
TIY pP sP 05 14 53.8 +14
TIY S S 05 20 31.5 +16
TIY LR LR
comp=N,2µm,13.7s
TIY LR LR
comp=E,3µm,13.0s
TIY LR LR
comp=Z,360nm,22.1s
MK31 Makanchi Array 36.20 260 P **P 05 14 35.2 -0.8**
MK31 pmax pmax
comp=Z,7.0nm,1.3s
MK31 Makanchi Array 36.20 260 P **P 05 14 35.1 -0.8**
MKAR Makanchi Array 36.20 260 P **P 05 14 35.1 -0.9**
comp=Z,2.6nm,0.6s,baz=46,slow=7.4,SNR=23
DLBC Dease Lake 36.59 62 P **P 05 14 40.4 +1.1**
SUMG Summit 36.84 359 *i* P **P 05 14 41.7 +0.2**
SUMG pmax pmax
comp=Z,58nm,1.3s
SUMG Summit 36.84 359 P **P 05 14 42.0 +0.5**
SUMG lAmb lAmb 05 14 43.1
comp=Z,24nm,1.3s
SUMG Summit 36.84 359 *i* P **P 05 14 41.7 +0.2**
comp=Z,58nm,1.3s
WMQ Urumqi 37.12 252 *e*P **P 05 14 44.5 +0.6**
WMQ pP sP 05 14 47.8 -0.4
WMQ sP pP 05 14 53.0 +6.0
WMQ S **S 05 20 33.3 +3.5**
WMQ sS sS 05 20 38.0 +3.1
WMQ pmax pmax
comp=Z,7.0nm,0.6s
WMQ pmax pmax
comp=Z,9.0nm,3.7s
WMQ LR LR
comp=N,690nm,7.5s
WMQ LR LR
comp=E,790nm,8.3s
WMQ LR LR
comp=Z,300nm,11.3s
YKA Yellowknife Ar 37.32 48 P **P 05 14 44.6 -0.6**
comp=Z,3.4nm,0.8s,baz=331,slow=7.8,SNR=36
YKA LR LR 05 32 53.2
comp=Z,175nm,20.0s,baz=0.0,slow=41
KLMR Klimovskoe 37.50 308 *e*P **P 05 14 46.3 -0.5**
KLMR pmax pmax
comp=Z,41nm,1.5s
KLMR Klimovskoe 37.50 308 *e*P **P 05 14 46.4 -0.4**
KLMR AMP 05 14 52.3
comp=Z,41nm,1.5s
KLMR LQ LQ 05 28 10.1
KLMR LQ LQ 05 28 10.1
KLMR LR LR 05 29 07.7
GTA Gaotai 37.60 235 *e*P **P 05 14 50.8 +2.8**
GTA pP sP 05 14 55.3 +2.9
GTA sP pP 05 14 58.0 +6.9
GTA PcP **PcP 05 17 09.3 +3.8**
GTA S **S 05 20 41.5 +4.2**
GTA SS **SS 05 23 13.5 -8.3**
GTA pmax pmax
comp=Z,4.0nm,0.9s
GTA pmax pmax
comp=Z,70nm,7.0s
GTA LR LR
comp=N,910nm,13.3s
GTA LR LR
comp=E,2µm,13.3s
GTA LR LR
comp=Z,890nm,12.7s
LZH Lanzhou 39.69 229 *e*P **P 05 15 02.8 -2.8**
LZH pP pP 05 15 07.0 -1.7
LZH sP sP 05 15 09.5 -0.5
LZH PP **PnPn 05 16 41.0 +1.4**
LZH pmax pmax
comp=Z,18nm,1.1s
LZH pmax pmax
comp=Z,160nm,4.9s
LZH LR LR
comp=N,2µm,10.8s
LZH LR LR
comp=E,2µm,11.9s
LZH LR LR
comp=Z,1µm,13.6s
FINES FINESS Array B 40.26 317 P **P 05 15 10.3 +0.4**
comp=Z,11nm,0.6s,baz=31,slow=8.2,SNR=24
FINES PcP **PcP 05 17 14.7 +1.4**
comp=Z,2.7nm,0.8s,baz=12,slow=4.6,SNR=4.1
FINES LR LR 05 35 17.7
comp=Z,264nm,19.8s,baz=12,slow=41
XAN Xi'an 40.46 221 P **P 05 15 15.0 +3.1**
XAN pP sP 05 15 25.5 +9.2
XAN S **S 05 21 19.5 -0.7**
XAN pmax pmax
comp=Z,8.0nm,1.2s
XAN pmax pmax
comp=Z,65nm,5.9s
XAN LR LR
comp=N,540nm,22.8s
XAN LR LR
comp=E,2µm,16.2s
XAN LR LR
comp=Z,1µm,10.8s
NJ2 Nanjing 40.52 208 *e*P **P 05 15 11.5 -0.8**
NJ2 pmax pmax
comp=Z,11nm,0.5s
AKTO Aktyubinsk 40.99 285 P **P 05 15 15.7 -0.3**
comp=Z,4.0nm,0.7s,baz=30,slow=8.1,SNR=12
SFJD Kangerlussuaq 42.26 6 P **P 05 15 25.6 -0.6**
comp=Z,14nm,0.9s,baz=351,slow=12,SNR=5.5
SFJD Kangerlussuaq 42.26 6 P **P 05 15 26.0 -0.2**
SFJD pmax pmax
comp=Z,30nm,1.2s
SFJD Kangerlussuaq 42.26 6 P **P 05 15 26.0 -0.2**
SFJD lAmb lAmb 05 15 26.9
comp=Z,30nm,1.1s
SFJD Kangerlussuaq 42.26 6 *i* P **P 05 15 24.9 -1.3**
comp=Z,1.8nm,1.1s
AAK Ala-Archa 42.45 264 LR LR 05 34 18.8
comp=Z,664nm,18.3s,baz=12,slow=38
AAK Ala-Archa 42.45 264*ce*P **P 05 15 28.1 -0.2**
AAK pmax pmax

comp=Z,17nm,1.7s
AAK Ala-Archa 42.45 264 P P 05 15 29.2 +0.9
OBN Obninsk 43.27 305 eP P 05 15 38.8 +4.3
OBN e*PP sP 05 15 39.9 +1.0
OBN e*SP pP 05 15 41.4 +3.8
OBN 05 17 19.0
OBN eS S 05 21 58.7 -2.4
OBN pmax pmax
comp=Z,13nm,0.5s
OBN MLR MLR
comp=Z,657nm,18.0s
KK31 Karatay Array 43.35 269 P P 05 15 36.5 +1.1
KK31 pmax pmax
comp=Z,9.0nm,1.2s
KK31 Karatay Array 43.35 269 P P 05 15 36.5 +1.1
NC204 NORSAR Array S 43.51 327 IAmb IAmb 05 15 42.1
comp=Z,17nm,1.1s
NB2 NORSAR Subarra 43.65 327 P P 05 15 38.4 +0.7
comp=Z,5.8nm,0.7s,baz=22,slow=7.9
NOA NORSAR Array B 43.65 327 P P 05 15 38.0 +0.4
comp=Z,3.4nm,0.7s,baz=22,slow=7.9,SNR=10
NOA LR LR 05 38 30.7
comp=Z,377nm,18.6s,baz=35,slow=43
NBO00 NORSAR Array S 43.74 327 IAmb IAmb 05 15 49.9
comp=Z,20nm,1.1s
HFS Hagfors 44.03 325 P P 05 15 41.3 +0.6
comp=Z,4.6nm,0.6s,baz=32,slow=5.9,SNR=11
CD2 Chengdu 44.65 226 eP P
CD2 pmax pmax
comp=Z,10.0nm,0.5s
KSH Kashi 44.77 261 P P 05 15 51.8 +4.8
KSH pmax pmax
comp=Z,6.0nm,1.0s
KSH pmax pmax
comp=Z,50nm,4.4s
LPSR Galich'ya Gora 44.85 302 eP P 05 15 46.7 -0.5
LPSR pmax pmax
comp=Z,10.0nm,0.7s
VRH Novokhopyorsk 45.30 299 eP P 05 15 48.8 -2.0
VRH pmax pmax
comp=Z,9.0nm,0.4s
GAR Garm 47.10 266 P P 05 16 05.7 +0.4
FFC Flin Flon 47.25 44 P P 05 16 05.3 -0.9
FFC pmax pmax
comp=Z,15nm,0.9s
FFC Flin Flon 47.25 44 P P 05 16 05.3 -0.9
GYA Guiyang 48.27 221 eP P 05 16 17.3 +2.8
GYA PP PP 05 17 59.0 -7.7
GYA S S 05 23 10.8 -3.1
GYA Guiyang 48.27 221 SS SS 05 26 39.8 -3.2
GYA pmax pmax
comp=Z,10.0nm,0.7s
GYA pmax pmax
comp=Z,70nm,6.3s
GYA LR LR
comp=N,670nm,10.1s
GYA LR LR
comp=E,2µm,12.0s
GYA LR LR
comp=Z,380nm,14.9s
AKASG Malin Array Be 49.19 308 P P 05 16 20.8 -0.3
AKASG LR LR 05 40 40.1
comp=Z,280nm,18.4s,baz=15,slow=40
AKBB Malin Array Si 49.19 308 P P 05 16 21.5 +0.4
AKBB pmax pmax
comp=Z,12nm,1.3s
AKBB Malin Array Si 49.19 308 P P 05 16 21.5 +0.4
AKBB IAmb IAmb 05 16 26.5
comp=Z,12nm,1.2s
GOF Gofitskoye 50.42 294 eP P 05 16 33.9 +3.3
MAK Makhachkala 50.94 289 eP P 05 16 29.1 -5.4
MAK eS S 05 23 42.0 -8.8
MAK MLR MLR
comp=Z,242nm,11.0s
NIL Nilore 51.01 261 P P 05 16 35.8 +0.5
NIL pmax pmax
comp=Z,9.0nm,0.8s
NIL Nilore 51.01 261 P P 05 16 35.8 +0.5
NIL IAmb IAmb 05 16 36.4
comp=Z,8.8nm,0.8s
LVV L'vov 51.31 312 eP P 05 16 40.9 +3.6
MSO Missoula 51.42 58 P P 05 16 37.3 -1.0
baz=336
EKA Eskdalemuir Ar 51.45 334 P P 05 16 37.9 -0.3
comp=Z,0.8nm,0.5s,baz=8.8,slow=6.5,SNR=2.3
KIV Kislovodsk 51.52 294 deP P 05 16 42.2 +3.2
KIV e*PP sP 05 16 43.8 +0.4
KIV e*SP pP 05 16 45.1 +2.9
KIV S S 05 24 06.0 +6.9
KIV eSS SS 05 27 34.6 +0.3
KIV pmax pmax
comp=Z,13nm,0.8s
KIV MLR MLR
comp=Z,162nm,18.0s
KBZ Khabaz 51.67 294 P P 05 16 41.1 +1.1
comp=Z,10.0nm,1.0s,baz=317,slow=4.6,SNR=12
KBZ LR LR 05 42 16.8
comp=Z,236nm,18.5s,baz=12,slow=40
GEYT Alibeck 52.09 277 P P 05 16 43.7 +0.4
comp=Z,3.3nm,0.5s,baz=353,slow=6.1,SNR=6.5
GEYT LR LR 05 41 31.1
comp=Z,295nm,18.5s,baz=40,slow=39
NEY Neytrino 52.16 293 iP P 05 16 43.7 -0.2
NEY pmax pmax
comp=Z,2.0nm,1.0s
PINE Pine Mountain 52.17 65 P P 05 16 45.0 +1.0
PINE IAmb IAmb 05 16 49.0
comp=Z,21nm,1.4s
ZEI Tsey 52.22 292 eP P 05 16 41.7 -2.6
ZEI pmax pmax
comp=Z,6.0nm,1.0s
AKT Akhty 52.22 288 eP P 05 16 46.8 +2.5
AKT e 05 17 56.2
AKT pmax pmax
comp=Z,13nm,1.0s
CLL Collm 52.44 321 e(P) P 05 16 48.0 +2.4
CLL ePPP PPP 05 19 46.0
CLL ePPPP 05 20 03.0
CLL eSS SKiKP 05 28 12.0 +5.0
CLL Lm MLR 05 42 00.0
comp=N,300nm,20.5s
CLL Lm MLR 05 42 00.0
comp=E,200nm,19.9s
CLL Lm MLR 05 42 00.0
comp=Z,200nm,18.6s
CLL Collm 52.44 321 eP P 05 16 48.0 +2.4
DGMT Dagmar 52.49 49 P P 05 16 45.4 -0.7
baz=338
J05D Fort Rock, OR 52.54 65 P P 05 16 46.5 -0.2
baz=336
LRM Limekiln Ridge 52.76 57 P P 05 16 48.3 -0.1
ULM Lac du Bonnet 52.79 42 P P 05 16 47.2 -1.0
comp=Z,7.1nm,0.7s,baz=331,slow=7.5,SNR=6.1
ULM LR LR 05 39 49.1
comp=Z,238nm,21.9s,baz=342,slow=37
ULM Lac du Bonnet 52.79 42 P P 05 16 47.4 -0.9
ULM pmax pmax
comp=Z,8.0nm,0.8s
ULM Lac du Bonnet 52.79 42 P P 05 16 47.4 -0.9
ULM IAmb IAmb 05 16 48.0
comp=Z,7.7nm,0.8s
BUR08 Bucovina Ar. S 53.03 310 P P 05 16 51.0 +0.8
BUR08 IAmb IAmb 05 17 10.1
comp=Z,12nm,1.4s
DLMT Dillon 53.14 57 P P 05 16 52.3 +1.2
DLMT IAmb IAmb 05 16 56.5
comp=Z,11nm,0.9s
SCHQ Schefferville 53.19 19 P P 05 16 49.9 -1.3
comp=Z,2.9nm,0.7s,baz=32,slow=14,SNR=3.7
SCHQ LR LR 05 40 53.1
comp=Z,378nm,18.9s,baz=0.5,slow=38
L04D Klamath Falls 53.19 67 P P 05 16 51.1 -0.4
baz=336
MCMT McKenzie Canyo 53.56 58 P P 05 16 55.2 +0.9
M04C Macdoel 53.73 67 P P 05 16 55.1 -0.4
baz=336
VYHS Vyhne 53.79 315 eP P 05 16 59.1 +3.4
VYHS pmax pmax
comp=Z,18nm,2.0s
VYHS Vyhne 53.79 315 eP P 05 16 59.1 +3.4
MOD Modoc Plateau 54.08 65 P P 05 16 59.3 +1.2
PSZ Piszkesteto 54.08 314 IAmb IAmb 05 17 17.4
comp=Z,17nm,1.2s
YHB Horse Butte 54.09 56 P P 05 16 59.1 +1.0
YHH Holmes Hill 54.16 56 P P 05 16 59.5 +0.8
YNE Yellowstone No 54.18 55 P P 05 16 59.5 +0.7
MDND Maddock 54.19 46 P P 05 16 58.0 -0.6
baz=340
YMR Madison River 54.23 56 P P 05 17 00.8 +1.6
RLMT Red Lodge 54.28 55 P P 05 16 59.7 +0.2
baz=338
RLMT Red Lodge 54.28 55 P P 05 17 00.3 +0.8
RLMT IAmb IAmb 05 17 16.3
comp=Z,7.5nm,0.9s
YMP Mirror Lake Pl 54.39 56 P P 05 17 02.5 +2.0
LKWY Lake 54.48 56 P P 05 17 03.5 +2.4
LKWY pmax pmax
comp=Z,12nm,0.9s
LKWY Lake 54.48 56 P P 05 17 03.5 +2.4
LKWY IAmb IAmb 05 17 09.8
comp=Z,12nm,0.9s
H17A Grant Village 54.59 56 P P 05 17 02.4 +0.5
baz=338,SNR=5.9
H17A Grant Village 54.59 56 P P 05 17 04.2 +2.3
H17A IAmb IAmb 05 17 04.7
comp=Z,7.2nm,1.1s
GERES GERESS Array B 54.61 319 P P 05 17 02.3 +0.5
comp=Z,0.2nm,0.3s,baz=5.7,slow=13,SNR=2.8
AGMN Agassiz Nation 54.63 43 P P 05 17 00.9 -0.8
baz=341
AGMN Agassiz Nation 54.63 43 P P 05 17 00.8 -1.0
AGMN IAmb IAmb 05 17 01.4
comp=Z,5.7nm,0.7s
YPP Pitchstone Pla 54.65 56 P P 05 17 04.5 +2.3
MLR Muntele Rosu 54.84 308 P P 05 17 05.2 +1.8
comp=Z,2.5nm,0.6s,baz=11,slow=9.2,SNR=6.1
O02D Mt. Diablo Mer 54.91 68 P P 05 17 03.7 -0.2
baz=336
IMW Indian Meadow 54.95 57 P P 05 17 05.7 +1.2
IMW IAmb IAmb 05 17 12.0
comp=Z,7.0nm,0.9s
B35A Bob, Littlefor 55.05 41 P P 05 17 03.6 -1.1
B35A IAmb IAmb 05 17 07.6
comp=Z,11nm,0.8s
O03E Paynes Creek 55.10 67 P P 05 17 05.2 -0.1
baz=337
TPAW Teton Pass 55.33 57 P P 05 17 08.4 +1.2
TPAW IAmb IAmb 05 17 26.7
comp=Z,7.7nm,1.0s
REDW Red Top Meadow 55.47 57 P P 05 17 09.1 +1.0
EYMN Ely 55.91 39 P P 05 17 09.3 -1.7
baz=342,SNR=11
EYMN Ely 55.91 39 P P 05 17 09.8 -1.2
EYMN IAmb IAmb 05 17 10.7
comp=Z,10.0nm,0.8s
BEKR Beckworth 55.93 66 P P 05 17 12.3 +0.8
PDAR Pinedale Array 56.38 56 P P 05 17 14.0 -0.7
comp=Z,1.1nm,0.6s,baz=5.2,slow=4.0,SNR=7.1
ELK Elko 56.64 62 P P 05 17 17.8 +1.2
ELK pmax pmax
comp=Z,8.0nm,1.1s
ELK Elko 56.64 62 P P 05 17 17.8 +1.2
ELK IAmb IAmb 05 17 21.7
comp=Z,7.9nm,1.1s
VCNR Virginia City 56.67 66 P P 05 17 15.8 -0.9
MATQ Matagami 56.72 28 P P 05 17 15.3 -1.4
baz=346
F33A 5 Mile Ranch, 56.85 44 P P 05 17 16.7 -1.0
CHGQ Chibougamau 57.06 26 P P 05 17 17.1 -2.0
baz=347
E38A The Farm, Brul 57.18 40 P P 05 17 18.6 -1.5
E38A IAmb IAmb 05 17 19.7
comp=Z,17nm,1.1s
K22A Casper 57.31 54 P P 05 17 20.2 -1.0
baz=339
K22A Casper 57.31 54 P P 05 17 20.4 -0.8
D41A Chassel 57.36 38 P P 05 17 21.3 0.0
KVN Kaiserville 57.36 65 P P 05 17 22.7 +1.0
KVN pmax pmax
comp=Z,8.0nm,1.0s
KVN Kaiserville 57.36 65 P P 05 17 22.7 +1.0
KVN IAmb IAmb 05 17 26.7
comp=Z,8.1nm,1.0s
F36A Milaca 57.46 42 P P 05 17 20.6 -1.4
LSQQ Lebel-sur-Quev 57.51 28 P P 05 17 20.1 -2.2
baz=346
CMAR Chiang Mai Arr 57.76 228 P P 05 17 25.4 +0.9
comp=Z,0.8nm,0.4s,baz=354,slow=12,SNR=4.2
CMAR LR LR 05 45 35.1
comp=Z,198nm,19.1s,baz=52,slow=40
DUG Dugway, Tooele 57.85 60 P P 05 17 25.9 +0.9
DUG pmax pmax
comp=Z,11nm,1.0s
DUG Dugway, Tooele 57.85 60 P P 05 17 24.2 -0.8
baz=338,SNR=9.4
DUG Dugway, Tooele 57.85 60 P P 05 17 25.9 +0.9
DUG IAmb IAmb 05 17 30.6
comp=Z,11nm,1.0s
NVAR Mina Array Bea 57.87 65 P P 05 17 26.2 +0.9
comp=Z,2.6nm,0.7s,baz=333,slow=4.7,SNR=11
BRTR Keskin Array B 58.08 299 P P 05 17 28.0 +1.3
comp=Z,0.8nm,0.7s,baz=350,slow=4.4,SNR=2.8
BRTR LR LR 05 46 08.7
comp=Z,109nm,18.9s,baz=317,slow=40
BRTR Keskin Array B 58.08 299 P P 05 17 28.0 +1.3
COWI Conover 58.16 38 P P 05 17 25.7 -1.3
COWI IAmb IAmb 05 17 29.8
comp=Z,8.9nm,1.1s
SPMN Marine on St. 58.22 42 P P 05 17 26.0 -1.4
baz=342
SPMN Marine on St. 58.22 42 P P 05 17 26.2 -1.1
SPMN IAmb IAmb 05 17 30.1
comp=Z,9.6nm,0.9s
NLU North Lily Min 58.28 59 P P 05 17 28.9 +0.7
E43A Lone Tree Farm 58.33 37 P P 05 17 26.9 -1.2
MDPB Devils Postpil 58.38 66 P P 05 17 30.4 +1.5
MDPB IAmb IAmb 05 17 34.3
comp=Z,7.9nm,1.0s
D46A Sault St. Mari 58.40 34 P P 05 17 27.1 -1.5
baz=344
D47A Chapleau 58.41 33 P P 05 17 27.2 -1.5
baz=345
D49A Beulah Townshi 58.51 32 P P 05 17 28.2 -1.2
baz=345
D48A Paudash Townsh 58.53 32 P P 05 17 27.8 -1.7
baz=345
G40A Rib Lake 58.74 39 P P 05 17 29.8 -1.2
G40A IAmb IAmb 05 17 30.6
comp=Z,13nm,1.1s
R11A Troy Canyon, C 58.76 63 P P 05 17 31.7 +0.3
baz=338,SNR=15
R11A Troy Canyon, C 58.76 63 P P 05 17 31.8 +0.4
R11A IAmb IAmb 05 17 36.2
comp=Z,11nm,1.0s
ECSD EROS Data Cent 58.77 45 P P 05 17 30.1 -1.1
baz=341
ECSD EROS Data Cent 58.77 45 P P 05 17 30.2 -1.0
ECSD IAmb IAmb 05 17 34.3
comp=Z,11nm,1.3s
D50A G1974 Best Tow 58.88 31 P P 05 17 30.2 -1.7
baz=346
E47A Iron Bridge 58.96 34 P P 05 17 31.0 -1.5
baz=345
PSUT Pine Spring 59.09 61 P P 05 17 34.8 +1.0
P17A Butcher Ranch, 59.11 58 P P 05 17 34.4 +0.6
TMUT Trail Mountain 59.14 59 P P 05 17 34.5 +0.3
O20A White River Ci 59.19 56 P P 05 17 33.6 -0.8
baz=339
F45A CMU Biological 59.28 36 P P 05 17 33.3 -1.4
baz=344
D52A ZEK Kipawa Sen 59.30 30 P P 05 17 33.1 -1.8
baz=346
Q16A Castle Valley 59.51 59 P P 05 17 37.4 +0.7
SRU San Rafael Swe 59.51 58 P P 05 17 36.8 +0.2
SRU pmax pmax
comp=Z,6.0nm,0.7s
SRU San Rafael Swe 59.51 58 P P 05 17 36.8 +0.2
E51A G1948 Merrick 59.55 31 P P 05 17 34.5 -2.1
baz=346
MSU Marysvale 59.60 60 P P 05 17 38.5 +1.2
MSU Marysvale 59.60 60 P P 05 17 38.5 +1.2
F48A Evansville 59.69 33 P P 05 17 36.1 -1.4
baz=345
D55A Sainte-Anne-du 59.72 27 P P 05 17 36.0 -1.8
baz=347
CWC Cottonwood Cre 59.78 66 P P 05 17 38.0 -0.5
baz=338
D56A ZEC Mazanza, M 59.80 27 P P 05 17 36.7 -1.6
baz=348
TPNV Topopah Spring 59.86 64 IAmb IAmb 05 17 43.8
comp=Z,10nm,1.2s
I40A Norwalk 59.96 40 P P 05 17 38.6 -0.9
E53A Dumoine, Ponti 60.00 29 P P 05 17 38.3 -1.4
baz=347
E54A Lac Daplat, Po 60.02 29 P P 05 17 38.5 -1.4
baz=347
MTPU Mount Pierson 60.03 60 P P 05 17 41.7 +1.2
OGNE Ogallala 60.08 51 P P 05 17 39.2 -1.2
baz=340
MPMC Manual Prospec 60.31 66 P P 05 17 42.2 0.0
baz=338
I42A Draeger Farm, 60.32 39 P P 05 17 40.8 -1.1
I42A IAmb IAmb 05 17 44.7
comp=Z,8.6nm,0.8s
PV21 Cone Mtn., Par 60.45 57 P P 05 17 43.7 +0.5
PV21 IAmb IAmb 05 17 47.3
comp=Z,6.9nm,1.0s
PV09 Paradox Valley 60.47 57 P P 05 17 43.6 +0.2
D60A Saint Jean D'O 60.48 24 P P 05 17 42.1 -0.8
baz=349
L34A Svendsen Farm, 60.50 46 P P 05 17 41.8 -1.4
PV22 Blue Mesa, Par 60.53 57 P P 05 17 44.2 +0.5
PV22 IAmb IAmb 05 17 47.7
comp=Z,5.6nm,1.0s
PV23 Carpenter Ridg 60.55 57 P P 05 17 44.3 +0.5
PKCU Pink Cliffs 60.55 61 P P 05 17 45.8 +1.8
D62A Allapoint, All 60.55 22 P P 05 17 42.7 -0.7
baz=350
H47A Mio 60.58 35 P P 05 17 43.1 -0.5
baz=345
SHPR Sheep Range 60.59 63 P P 05 17 45.2 +1.1
PV04 Paradox Valley 60.63 57 P P 05 17 44.5 +0.2
PV20 West Nyswonger 60.66 57 P P 05 17 45.0 +0.5
PV20 IAmb IAmb 05 18 03.6
comp=Z,5.5nm,0.8s
LCMT Little Creek M 60.68 62 P P 05 17 46.0 +1.3
D63A Stockholm 60.72 22 P P 05 17 43.6 -0.9
baz=350
PV17 East Wray Mesa 60.72 57 P P 05 17 45.6 +0.6
PV17 IAmb IAmb 05 17 49.0
comp=Z,9.2nm,0.9s
PV11 David Mesa, Pa 60.73 57 P P 05 17 45.7 +0.7
PV11 IAmb IAmb 05 17 49.1
comp=Z,13nm,1.3s
PV03 Paradox Valley 60.78 57 P P 05 17 45.4 0.0
PV15 Paradox Valley 60.80 57 P P 05 17 45.6 0.0
PV15 IAmb IAmb 05 17 59.4
comp=Z,8.9nm,1.0s
KNB Kanab 60.80 61 P P 05 17 47.4 +1.9
KNB pmax pmax
comp=Z,8.0nm,0.9s
KNB Kanab 60.80 61 P P 05 17 47.4 +1.9
PV02 Paradox Valley 60.85 57 P P 05 17 46.4 +0.5
PV02 IAmb IAmb 05 17 59.8
comp=Z,6.9nm,0.8s
PV13 Radium Mtn., P 60.87 57 P P 05 17 46.5 +0.4
PV13 IAmb IAmb 05 17 50.0
comp=Z,8.9nm,0.9s
E62A Clayton Lake 60.95 23 P P 05 17 44.9 -1.3
baz=349
PV01 Paradox Valley 60.97 57 P P 05 17 47.3 +0.6
PV01 IAmb IAmb 05 17 50.8
comp=Z,7.8nm,1.0s
JFWS Jewell Farm 60.98 40 P P 05 17 44.7 -1.7
baz=343
GSC Goldstone, Bar 61.22 65 P P 05 17 47.9 -0.4
baz=339
SCIA State Center 61.29 43 P P 05 17 47.6 -0.9
baz=343
F61A St Evariste 61.39 24 P P 05 17 47.5 -1.6
baz=349
L40A Anamosa 61.58 41 P P 05 17 48.7 -1.8
F64A Sherman 61.84 22 P P 05 17 51.2 -1.0
baz=350
J48A Bridge Port 61.91 35 P P 05 17 51.8 -0.9
baz=345
J48A Bridge Port 61.91 35 P P 05 17 51.7 -1.0
I51A Listowel 61.93 33 P P 05 17 51.7 -1.1
baz=346
G59A Clarenceville 61.96 26 P P 05 17 51.8 -1.1
baz=348
L42A Oliver, Polo 61.97 40 P P 05 17 51.8 -1.3
GMRC Granite Mounta 62.04 65 P P 05 17 53.5 -0.4
baz=339
SDCO Great Sand Dun 62.17 55 P P 05 17 54.4 -0.5
K47A Vermontville 62.28 36 P P 05 17 54.4 -0.8
baz=345
K48A Perry 62.33 35 P P 05 17 54.6 -0.9
baz=345
N38A Joes South For 62.34 43 P P 05 17 54.4 -1.2
K49A Clarkson 62.47 35 P P 05 17 55.2 -1.3
baz=345
WUAZ Wupatki 62.62 61 P P 05 17 57.4 -0.4
baz=340
I57A Carthage 62.70 28 P P 05 17 57.2 -0.8
baz=348
IRM Iron Mountain 62.78 64 P P 05 17 59.1 +0.4
baz=339
KSU1 Kansas State U 63.16 47 P P 05 18 00.1 -1.0
baz=342
KSU1 Kansas State U 63.16 47 P P 05 18 00.2 -1.0
J59A Piesco 63.34 28 P P 05 18 01.2 -1.0
baz=348
P38A Dawn 63.39 44 P P 05 18 01.0 -1.6
M47A Cromwell 63.42 37 P P 05 18 01.5 -1.4
baz=345
HDIL Hopedale 63.44 40 P P 05 18 01.6 -1.3
baz=344
K55A Perry 63.49 31 P P 05 18 01.5 -1.7
baz=347
MONP2 Monument Peak 63.57 66 P P 05 18 04.8 +0.6
baz=339
Y14A Wickenburg 63.62 63 P P 05 18 05.0 +0.8
X16A Lo Mia Camp, P 63.62 61 P P 05 18 06.0 +1.5
K56A Middlesex 63.64 30 P P 05 18 04.4 +0.1
baz=347
SWSC Sam W. Stewart 63.71 65 P P 05 18 05.4 +0.5
baz=339
J60A Lant Hill Farm 63.72 27 P P 05 18 04.3 -0.4
baz=348
P40A Paris 63.82 43 P P 05 18 03.7 -1.7
N48A Decatur 64.03 37 P P 05 18 05.4 -1.3
baz=345
SFIN Lafayette 64.07 39 P P 05 18 05.8 -1.3
baz=344
M51A Elyria 64.11 34 P P 05 18 06.7 -0.7
baz=346
N49A Columbus Grove 64.13 36 P P 05 18 06.7 -0.7
L56A Greenwood 64.15 30 P P 05 18 06.8 -0.8
baz=347
M53A WI Miller and 64.29 33 P P 05 18 07.3 -1.1
baz=346
N51A Ashland 64.48 35 P P 05 18 08.5 -1.2
baz=346
L58A Harry Jones Me 64.52 29 P P 05 18 09.1 -1.0
baz=348
O48A Farmland 64.58 37 P P 05 18 08.5 -1.9
baz=345
M56A Emporium 64.68 31 P P 05 18 10.0 -1.1
baz=347
N52A McGinn's Farm, 64.71 34 P P 05 18 10.0 -1.2
baz=346
O49A Covington 64.81 36 P P 05 18 10.5 -1.4
N53A Lisbon 64.87 33 P P 05 18 11.1 -1.2
baz=346
N53A Lisbon 64.87 33 P P 05 18 11.2 -1.1
N54A Moraine State 64.87 33 P P 05 18 11.1 -1.2
baz=347
N54A Moraine State 64.87 33 P P 05 18 11.7 -0.6
R40A Maddies Statio 64.95 43 P P 05 18 10.9 -1.9
R40A IAmb IAmb 05 18 23.0
comp=Z,5.0nm,0.8s
ACSO Alum Creek Sta 65.03 35 P P 05 18 12.0 -1.4
baz=346
ACSO Alum Creek Sta 65.03 35 P P 05 18 12.1 -1.2
O51A Pataskala 65.18 35 P P 05 18 12.7 -1.7
baz=346
N56A West Decatur 65.21 31 P P 05 18 13.5 -1.1
baz=347
T35A Sooner Cattle 65.26 47 P P 05 18 13.7 -1.3
T35A IAmb IAmb 05 18 32.3
comp=Z,8.9nm,0.9s
P48A Milroy 65.30 37 P P 05 18 13.3 -1.7
O53A New Philadelph 65.34 34 P P 05 18 14.6 -0.8
baz=346
O52A Adamsville 65.36 34 P P 05 18 14.2 -1.3

	baz=346							
CCM	**Cathedral Cave**	**65.41**	**43**	P	**P**	**05 18 17.2**	**+1.4**	
CCM				pmax	pmax			
	comp=Z,10.0nm,1.3s							
CCM	**Cathedral Cave**	**65.41**	**43**	P	**P**	**05 18 14.2**	**-1.6**	
	baz=344							
CCM	**Cathedral Cave**	**65.41**	**43**	P	**P**	**05 18 17.2**	**+1.4**	
CCM				IAmb	IAmb	05 18 31.2		
	comp=Z,9.9nm,1.2s							
P50A	**Jamestown**	**65.47**	**36**	P	**P**	**05 18 14.4**	**-1.9**	
	baz=346,SNR=5.5							
O54A	**Avella**	**65.56**	**33**	P	**P**	**05 18 15.6**	**-1.2**	
	baz=346							
P51A	**Williamsport**	**65.74**	**35**	P	**P**	**05 18 16.2**	**-1.7**	
	baz=346							
TUC	**Tucson**	**65.79**	**61**	P	**P**	**05 18 18.5**	**0.0**	
	baz=340							
MGMO	**Mountain Grove**	**66.04**	**44**	P	**P**	**05 18 18.5**	**-1.4**	
MGMO				IAmb	IAmb	05 18 35.6		
	comp=Z,7.2nm,0.9s							
P53A	**Whipple**	**66.05**	**34**	P	**P**	**05 18 19.1**	**-0.8**	
	baz=346							
P53A	**Whipple**	**66.05**	**34**	P	**P**	**05 18 18.8**	**-1.2**	
P54A	**Burton**	**66.10**	**33**	P	**P**	**05 18 18.7**	**-1.6**	
	baz=347							
O59A	**Robesonia**	**66.15**	**30**	P	**P**	**05 18 19.7**	**-0.9**	
	baz=348							
O58A	**Lewisberry**	**66.22**	**30**	P	**P**	**05 18 20.4**	**-0.6**	
	baz=348							
WCI	**Wyandotte Cave**	**66.31**	**38**	P	**P**	**05 18 20.5**	**-1.1**	
	baz=345							
P55A	**Reedsville**	**66.31**	**33**	P	**P**	**05 18 20.6**	**-1.1**	
	baz=347							
Q52A	**Bidwell**	**66.39**	**35**	P	**P**	**05 18 20.5**	**-1.7**	
	baz=346							
R49A	**Shelbyville**	**66.47**	**38**	P	**P**	**05 18 21.4**	**-1.3**	
R49A				IAmb	IAmb	05 18 21.9		
	comp=Z,8.4nm,0.9s							
P56A	**Dayton Farm, R**	**66.49**	**32**	P	**P**	**05 18 21.1**	**-1.7**	
	baz=347							
Q53A	**Leroy**	**66.63**	**34**	P	**P**	**05 18 22.0**	**-1.7**	
	baz=346							
Q54A	**Coxs Mills**	**66.64**	**34**	P	**P**	**05 18 22.0**	**-1.7**	
	baz=346							
Q54A	**Coxs Mills**	**66.64**	**34**	P	**P**	**05 18 23.2**	**-0.6**	
Q55A	**Buckhannon**	**66.77**	**33**	P	**P**	**05 18 23.5**	**-1.1**	
	baz=347							
WMOK	**Wichita Mounta**	**66.77**	**50**	P	**P**	**05 18 23.3**	**-1.4**	
WMOK				pmax	pmax			
	comp=Z,5.0nm,1.0s							
WMOK	**Wichita Mounta**	**66.77**	**50**	P	**P**	**05 18 23.2**	**-1.4**	
	baz=342							
WMOK	**Wichita Mounta**	**66.77**	**50**	P	**P**	**05 18 23.2**	**-1.4**	
WMOK				IAmb	IAmb	05 18 27.4		
	comp=Z,4.8nm,0.9s							
ESDC	**Sonseca Array**	**66.82**	**330**	P	**P**	**05 18 25.7**	**+0.8**	
	comp=Z,1.3nm,1.0s,baz=5.2,slow=6.9,SNR=6.7							
ESDC				LR	LR	05 53 32.4		
	comp=Z,170nm,19.0s,baz=180,slow=41							
R53A	**Hurricane**	**67.06**	**35**	P	**P**	**05 18 24.8**	**-1.7**	
	baz=346							
Q58A	**Fox Den Farm,**	**67.24**	**31**	P	**P**	**05 18 25.8**	**-1.7**	
	baz=348							
T47A	**Sharon Grove**	**67.33**	**40**	P	**P**	**05 18 26.8**	**-1.4**	
R54A	**Victor**	**67.39**	**34**	P	**P**	**05 18 27.1**	**-1.5**	
	baz=347							
R55A	**Marlinton**	**67.45**	**33**	P	**P**	**05 18 27.0**	**-2.0**	
	baz=347							
R57A	**Stanardsville**	**67.72**	**32**	P	**P**	**05 18 28.9**	**-1.7**	
	baz=347							
T50A	**Nancy**	**67.77**	**38**	P	**P**	**05 18 29.5**	**-1.5**	
T50A				IAmb	IAmb	05 18 30.2		
	comp=Z,8.0nm,1.1s							
WHAR	**Wooly Hollow**	**67.82**	**44**	P	**P**	**05 18 30.0**	**-1.2**	
MNTX	**Cornudas Mount**	**67.89**	**57**	P	**P**	**05 18 30.2**	**-1.6**	
	baz=341							
MNTX	**Cornudas Mount**	**67.89**	**57**	P	**P**	**05 18 34.0**	**+2.2**	
W41B	**Gary Mavity, V**	**67.94**	**44**	P	**P**	**05 18 30.2**	**-1.8**	
	baz=344							
WVT	**Waverly**	**68.00**	**40**	P	**P**	**05 18 31.1**	**-1.3**	
WVT				pmax	pmax			
	comp=Z,12nm,1.3s							
WVT	**Waverly**	**68.00**	**40**	P	**P**	**05 18 31.1**	**-1.3**	
	baz=345							
WVT	**Waverly**	**68.00**	**40**	P	**P**	**05 18 31.1**	**-1.3**	
WVT				IAmb	IAmb	05 18 35.4		
	comp=Z,12nm,1.2s							
R58B	**Mineral**	**68.16**	**32**	P	**P**	**05 18 31.5**	**-1.9**	
	baz=348							
S57A	**Dark Hollow, R**	**68.17**	**33**	P	**P**	**05 18 31.4**	**-2.1**	
	baz=347							
T54A	**Tazewell**	**68.37**	**35**	P	**P**	**05 18 32.8**	**-1.9**	
	baz=346							
X40A	**Basin Creek Fa**	**68.46**	**45**	P	**P**	**05 18 34.0**	**-1.3**	
	baz=344							
X40A	**Basin Creek Fa**	**68.46**	**45**	P	**P**	**05 18 34.3**	**-1.0**	
X40A				IAmb	IAmb	05 18 38.3		
	comp=Z,6.1nm,0.9s							
S58A	**Poland Farm, P**	**68.47**	**32**	P	**P**	**05 18 32.9**	**-2.4**	
	baz=348							
ABTX	**Abilene, Hawle**	**68.56**	**52**	P	**P**	**05 18 35.2**	**-0.8**	
	baz=342							
ABTX	**Abilene, Hawle**	**68.56**	**52**	P	**P**	**05 18 37.8**	**+1.8**	
ABTX				IAmb	IAmb	05 18 43.4		
	comp=Z,6.0nm,1.0s							
U55A	**TA2, Sparta**	**69.01**	**35**	P	**P**	**05 18 37.5**	**-1.3**	
	baz=347							
T58A	**Grand View Acr**	**69.04**	**32**	P	**P**	**05 18 37.0**	**-1.9**	
	baz=347							
U56A	**King**	**69.28**	**34**	P	**P**	**05 18 39.5**	**-0.9**	
	baz=347							
CPCT	**Cooper Cave**	**69.35**	**38**	P	**P**	**05 18 39.9**	**-0.9**	
CPCT				IAmb	IAmb	05 18 43.4		
	comp=Z,5.6nm,1.0s							
U57A	**Blanch**	**69.39**	**33**	P	**P**	**05 18 40.1**	**-0.9**	
	baz=347							
RAYN	**Ar Rayn**	**69.48**	**282**	P	**P**	**05 18 41.9**	**0.0**	
RAYN				pmax	pmax			
	comp=Z,5.0nm,1.0s							
RAYN	**Ar Rayn**	**69.48**	**282**	P	**P**	**05 18 41.9**	**0.0**	
RAYN				IAmb	IAmb	05 19 01.0		
	comp=Z,5.0nm,0.9s							
V54A	**Nebo**	**69.54**	**36**	P	**P**	**05 18 40.6**	**-1.5**	
	baz=346							
V55A	**Taylorsville**	**69.61**	**35**	P	**P**	**05 18 41.1**	**-1.3**	
	baz=347							
U59A	**Littleton**	**69.74**	**32**	P	**P**	**05 18 41.2**	**-2.0**	
	baz=348							
V56A	**Mocksville**	**69.78**	**34**	P	**P**	**05 18 41.7**	**-1.8**	
	baz=347							
W52A	**Murphy**	**69.81**	**37**	P	**P**	**05 18 42.6**	**-1.2**	
W52A				IAmb	IAmb	05 18 43.1		
	comp=Z,8.1nm,0.8s							
V57A	**Coltrane Farms**	**69.84**	**34**	P	**P**	**05 18 42.6**	**-1.3**	
	baz=347							
W54A	**Cherokee Point**	**70.17**	**36**	P	**P**	**05 18 43.9**	**-2.0**	
	baz=346							
V59A	**Middlesex**	**70.24**	**32**	P	**P**	**05 18 44.8**	**-1.4**	
	baz=348							
KMSC	**Kings Mountain**	**70.27**	**35**	P	**P**	**05 18 45.1**	**-1.4**	
	baz=347							
KMSC	**Kings Mountain**	**70.27**	**35**	P	**P**	**05 18 45.3**	**-1.2**	
KMSC				IAmb	IAmb	05 18 46.0		
	comp=Z,11nm,1.1s							
V60A	**Jim Taylor Roa**	**70.41**	**32**	P	**P**	**05 18 45.8**	**-1.4**	
	baz=348							
W56A	**Indian Trail**	**70.42**	**35**	P	**P**	**05 18 46.0**	**-1.4**	
	baz=347							
PAULI	**Pauline**	**70.49**	**36**	P	**P**	**05 18 46.9**	**-0.9**	
PAULI				IAmb	IAmb	05 18 47.0		
	comp=Z,8.3nm,0.9s							
W57A	**Gilead**	**70.52**	**34**	P	**P**	**05 18 46.2**	**-1.8**	
	baz=347							
JCT	**Junction City**	**70.55**	**52**	P	**P**	**05 18 47.6**	**-0.8**	
	baz=342							
TX31	**Lajitas Ar. Si**	**70.60**	**56**	P	**P**	**05 18 48.0**	**-0.8**	
TX32	**Lajitas Array**	**70.60**	**56**	P	**P**	**05 18 48.0**	**-0.7**	
TXAR	**Lajitas Array**	**70.60**	**56**	P	**P**	**05 18 47.9**	**-0.9**	
	comp=Z,1.8nm,0.8s,baz=1.4,slow=5.0,SNR=10							
TXAR				LR	LR	05 52 31.6		
	comp=Z,151nm,19.0s,baz=0.0,slow=38							
W58A	**Raeford**	**70.78**	**33**	P	**P**	**05 18 48.7**	**-0.9**	
	baz=347							
X55A	**Gracelyn & Ava**	**70.87**	**36**	P	**P**	**05 18 49.1**	**-1.0**	
	baz=347							
X56A	**White Oak**	**70.96**	**35**	P	**P**	**05 18 49.5**	**-1.2**	
	baz=347							
Y55A	**Saluda**	**71.34**	**36**	P	**P**	**05 18 51.8**	**-1.2**	
	baz=347							
Y59A	**Loris**	**71.85**	**33**	P	**P**	**05 18 55.2**	**-0.8**	
	baz=348							
Z57A	**Bowman**	**72.19**	**35**	P	**P**	**05 18 57.1**	**-1.0**	
	baz=347							
154A	**Montrose**	**72.38**	**37**	P	**P**	**05 18 58.3**	**-1.0**	
255A	**Hazlehurst**	**73.17**	**37**	P	**P**	**05 19 03.1**	**-0.8**	
WRA	**Warramunga Arr**	**90.60**	**185**	P	**P**	**05 20 34.4**	**-1.1**	
	comp=Z,0.7nm,0.3s,baz=358,slow=5.8,SNR=4.6							
TORD	**Torodi Ar. Bea**	**91.57**	**320**	P	**P**	**05 20 39.6**	**-0.6**	
	comp=Z,0.6nm,0.7s,baz=18,slow=5.6,SNR=2.7							
PLCA	**Paso Flores**	**146.07**	**44**	PKPbc	**PKPab**	**05 27 11.6**	**-1.6**	
	comp=Z,4.0nm,0.8s,baz=32,slow=2.7,SNR=6.1							
VNDA	**Vanda**	**148.69**	**171**	PKPbc	**PKiKP**	**05 27 19.9**	**-0.2**	
	comp=Z,1.3nm,0.9s,baz=318,slow=2.0,SNR=4.0							

ATH 29 05:10:29.9, 40.16N×25.06E, h25km±3km, ML2.1/4, Error ellipse: s-maj=3.1km s-min=1.0km az=95.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIA	**Limnos Island**	**0.28**	**160**	P	Pb	05 10 37.1	+0.4
LIA				S	Sb	05 10 41.4	+0.2
LIA				AML	AML	05 10 41.6	
	comp=E,1663μm,0.3s						
LIA				AML	AML	05 10 41.8	
	comp=N,671μm,0.1s						
SMTH	**Samothraki Isl**	**0.47**	**49**	P	Pb	05 10 40.0	+0.3
THAS	**Thassos island**	**0.52**	**330**	P	Pb	05 10 40.4	0.0
THAS				S	Sb	05 10 47.9	+0.4
THAS				AML	AML	05 10 50.5	
	comp=N,409μm,0.3s						
THAS				AML	AML	05 10 50.8	
	comp=E,288μm,0.2s						
OUR	**Ouranopolis**	**0.84**	**282**	P	Pn	05 10 46.8	+0.7
OUR				S	Sn	05 10 58.5	+0.8
OUR				AML	AML	05 11 00.7	
	comp=N,354μm,0.2s						
OUR				AML	AML	05 11 01.2	
	comp=E,312μm,0.2s						
KAVA	**Kavala**	**0.93**	**334**	P	Pb	05 10 48.1	+0.6
KAVA				S	Sn	05 11 00.8	+0.9
KAVA				AML	AML	05 11 02.5	
	comp=E,341μm,0.3s						
KAVA				AML	AML	05 11 03.1	
	comp=N,169μm,0.1s						
RDO	**Rodhopi**	**1.05**	**20**	P	Pb	05 10 50.2	+0.7
PAIG	**Paliouri**	**1.08**	**258**	P	Pb	05 10 50.4	+0.4
AOS	**Alonnisos**	**1.34**	**223**	P	Pb	05 10 54.6	+0.2

*ISK **29** 05:10:37.6, 40.41N×26.05E, h12km, ML2.6/16*
*DDA **29** 05:10:37.7, 40.38N×26.09E, h6km±2km, ML2.6*
*THE **29** 05:10:38.3, 40.40N×26.03E, h11km±1km, ML2.4/5, Error ellipse: s-maj=1.7km s-min=0.7km az=278.0*

ISC 29 05:10:37.6±0.9, 40.40N±0.02×26.05E±0.02, h17km±7km, n37, σ0.48/54, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOKA	**anakkale-Gk**	**0.23**	**208**	*i* P	**Pg**	**05 10 43.0**	**0.0**
GOKA				*i* S	**Sb**	**05 10 47.0**	**-0.2**
GOKA				IAML		05 10 49.0	
	comp=N,2μm,0.2s						
GADA	**Gvkgeada**	**0.24**	**209**	P	**Pb**	**05 10 43.4**	**-0.1**
GADA				S	**Sb**	**05 10 47.5**	**+0.1**
	comp=N,668nm,0.4s						
GADA	**Gvkgeada**	**0.24**	**209**	PG	**Pb**	**05 10 43.4**	**-0.1**
GADA				SG	**Sb**	**05 10 47.2**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.32**	**90**	PG	**Pg**	**05 10 44.7**	**+0.3**
ENEZ	**Enez**	**0.35**	**13**	P	**Pb**	**05 10 45.2**	**-0.1**
ENEZ				S	**Sb**	**05 10 50.4**	**-0.1**
	comp=N,1μm,0.2s						
ENEZ	**Enez**	**0.35**	**13**	PG	**Pg**	**05 10 45.1**	**+0.2**
ENEZ				SG	**Sg**	**05 10 49.9**	**+0.1**
SMTH	**Samothraki Isl**	**0.40**	**280**	P	**Pg**	**05 10 45.9**	**0.0**
SMTH				S	**Sg**	**05 10 51.4**	**-0.1**
	comp=N,912nm,0.4s						
ERIK	**Erikli-Kesan**	**0.45**	**52**	PG	**Pg**	**05 10 46.6**	**0.0**
LPK	**Lapseki**	**0.54**	**93**	PG	**Pb**	**05 10 48.8**	**+0.1**
BOZC	**Bozcaada**	**0.56**	**180**	PG	**Pb**	**05 10 49.1**	**+0.2**
BOZC	**Bozcaada**	**0.56**	**180**	*i* P	**Pg**	**05 10 47.5**	**-1.1**
BOZC				*i* P	**Pg**	**05 10 47.6**	**-1.1**
BOZC				IAML		05 10 55.0	
	comp=N,191nm,1.1s						
BOZC				*i* S	**Sg**	**05 10 56.2**	**+0.1**
BOZC				*i* S	**Sb**	**05 10 56.6**	**0.0**
EZN	**Ezine**	**0.61**	**160**	P	**Pb**	**05 10 58.1**	**0.0**
EZN				S	**Sb**	**05 10 58.1**	**0.0**
EZN	**Ezine**	**0.61**	**160**	PG	**Pb**	**05 10 49.9**	**+0.1**
KESN	**Edirne-Kesan**	**0.64**	**48**	*i* P	**Pg**	**05 10 49.5**	**-0.9**
KESN				*i* S	**Sb**	**05 10 59.4**	**0.0**
KESN				IAML		05 11 04.0	
	comp=E,489nm,0.2s						
KESN				IAML		05 11 06.0	
	comp=N,256nm,0.1s						
BAYC	**CANAKKALE_Bayr**	**0.76**	**150**	*i* P	**Pg**	**05 10 52.5**	**+0.1**
BAYC				*i* S	**Sg**	**05 11 02.8**	**+0.3**
RDO	**Rodhopi**	**0.84**	**333**	PG	**Pb**	**05 10 53.7**	**-0.1**
UKOP	**Uzunkopru-Edir**	**0.85**	**31**	PG	**Pg**	**05 10 54.3**	**+0.1**
RKY	**Sarkoy-Tekirda**	**0.91**	**71**	PG	**Pg**	**05 10 55.3**	**+0.1**
SART	**Tekirdag**	**0.91**	**71**	*i* P	**Pb**	**05 10 54.3**	**-0.7**
KRBG	**Karabiga-Canak**	**0.95**	**90**	PG	**Pg**	**05 10 56.2**	**+0.1**
KNL	**Balıkesir**	**1.14**	**96**	*i* P	**Pb**	**05 10 59.0**	**+0.2**
KNL				*i* S	**Sg**	**05 11 14.8**	**+0.4**
KNL				IAML		05 11 17.0	
	comp=N,180nm,0.4s						
AYVA	**Ayvalik**	**1.20**	**155**	*i* P	**Pb**	**05 10 59.9**	**+0.1**
AYVA				*i* S	**Sn**	**05 11 15.4**	**+0.1**
AYVA				IAML		05 11 17.0	
	comp=N,146nm,0.4s						
AYVA				IAML		05 11 17.0	
	comp=E,120nm,0.7s						
SIGR	**SIGRI**	**1.20**	**187**	P	**Pb**	**05 11 00.0**	**+0.2**
SIGR				S	**Sg**	**05 11 16.1**	**-0.2**
	comp=E,220nm,0.4s						
SIGR	**SIGRI**	**1.20**	**187**	PN	**Pb**	**05 11 00.2**	**+0.4**
MRMT	**Marmara Adasi**	**1.20**	**80**	PN	**Pb**	**05 11 00.2**	**+0.4**
GONE	**Gonen-Balikesi**	**1.30**	**105**	PN	**Pg**	**05 11 02.3**	**-0.4**
KDZ	**Kurdzhali**	**1.34**	**339**	*e*P	**Sb**	**05 11 19.3**	**+0.2**
BALY	**Balya**	**1.37**	**118**	*i* P	**Pb**	**05 11 03.3**	**+0.4**
BALY				*i* S	**Sb**	**05 11 20.3**	**+0.2**
EDC	**Edincik**	**1.39**	**92**	PN	**Pb**	**05 11 03.4**	**+0.4**
DKL	**Dikili**	**1.48**	**153**	PN	**Pb**	**05 11 04.6**	**0.0**
EDRB	**Edirne**	**1.54**	**20**	P	**Pb**	**05 11 05.8**	**+0.1**
EDRB				S	**Sg**	**05 11 26.4**	**-0.9**
	comp=E,62nm,0.3s						
EDRB	**Edirne**	**1.54**	**20**	PN	**Pb**	**05 11 05.2**	**-0.5**
BALB	**Balikesir**	**1.60**	**118**	PN	**Pb**	**05 11 06.1**	**-0.5**
CHOS	**Chios island**	**2.01**	**180**	P	**Pn**	**05 11 11.5**	**+0.7**
MMB	**Musomiste**	**2.12**	**305**	*e*P	**Pg**	**05 11 18.1**	**-0.2**
GDZ	**Gediz**	**2.95**	**115**	*i* P	**Pb**	**05 11 27.7**	**-2.1**
VTS	**Vitosha**	**3.06**	**317**	*e*S	**Sn**	**05 12 01.7**	**0.0**

*KRSC **29** 05:13:35.4±2.7, 49.53N×156.39E, h51km±30km, ML5.4, FELT [III-IV] at Severo-Kurilsk; [III] at cape Vasilyeva.*
*BGR **29** 05:13:35.6±0.0, 49.41N×156.51E, h33km, mb4.8, Ms4.4*
*MOS **29** 05:13:37.5±1.0, 49.66N×155.91E, h60km, mb4.9/65, MS3.7/8, Error ellipse: s-maj=7.5km s-min=2.9km az=74.4*
MOS Felt (III) at Severo-Kuril'sk.
*NEIC **29** 05:13:38.7±1.1, 49.75N±0.07×155.85E±0.07, h55km±4km, mb4.9/305, Error ellipse: s-maj=9.6km s-min=6.4km az=190.0*
*IDC **29** 05:13:38.1±0.5, 49.76N×155.81E, h48km±4km, mb4.3/39, mb1 4.5/44, mb1mx4.4/51, mbtmp4.6/44, MS4.1/18, Ms1 4.1/18, ms1mx3.8/42, Error ellipse: s-maj=11.6km s-min=7.9km az=152.0*
*GCMT **29** 05:13:40.7±0.4, 49.66N±0.03×156.12E±0.04, h43km, MW5.0/72, Moment Tensor Solution. s38,c44; s72,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.49±.21; $M_{\theta\theta}$-1.58±.13; $M_{\phi\phi}$-1.91±.14; $M_{r\theta}$0.29±.10; $M_{\theta\phi}$-1.43±.07; $M_{\phi r}$1.00±.08; Best double couple: $M_0$3.49100×10^{16} NP1:ϕ_s228.00000°, δ37.00000°, λ100.00000°. NP2: ϕ_s35.00000°, δ53.00000°, λ82.00000°. Principal axes: T 3.6680, Plg80.0000°, Azm272.0000°; N -0.3540, Plg6.0000°, Azm40.0000°; P -3.3140, Plg8.0000°, Azm131.0000°; nsta1 refers to body waves, cutoff=40s.*
nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 29 05:13:38.0±0.4, 49.65N±0.05×156.09E±0.04, h53km±3km, h53km:pP-P, n895, σ1±31/924, mb4.8/226, MS4.5/38, 31C-16D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.03**	**1**	*e*P	**Pn**	**05 13 56.7**	**+0.4**
SKR				*e*S	**Sn**	**05 14 10.5**	**+0.8**
SKR	**Severo-Kuril's**	**1.03**	**1**	‖ *i* PN	**Pn**	**05 13 56.7**	**+0.4**
SKR				*e*S	**Sn**	**05 14 10.2**	**+0.5**
SKR				pmax	pmax		
	comp=Z,7μm,0.6s						
SKR				smax	smax		
	comp=E,19μm,0.6s						
SKR				smax	smax		
	comp=N,16μm,0.7s						
ALID	**Alaid**	**1.27**	**344**	*i* P	**Pn**	**05 14 01.1**	**+1.5**
ALID				*e*S	**Sn**	**05 14 19.2**	**+3.6**
ALID	**Alaid**	**1.27**	**344**	PN	**Pn**	**05 14 01.1**	**+1.5**
ALID				S	**Sn**	**05 14 19.2**	**+3.6**
PAU	**Pauzhetka**	**1.88**	**14**	*e*P	**Pn**	**05 14 08.4**	**+0.7**
PAU				*e*S	**Sn**	**05 14 31.4**	**+1.2**
PAU	**Pauzhetka**	**1.88**	**14**	PN	**Pn**	**05 14 08.4**	**+0.7**
PAU				S	**Sn**	**05 14 31.4**	**+1.2**
MIPR	**Malaya Ipel'ka**	**2.66**	**9**	*e*P	**Pn**	**05 14 19.7**	**+1.2**
MIPR	**Malaya Ipel'ka**	**2.66**	**9**	PN	**Pn**	**05 14 19.7**	**+1.2**
ASAK	**Asacha**	**2.97**	**22**	*i* P	**Pn**	**05 14 23.8**	**+1.1**
ASAK	**Asacha**	**2.97**	**22**	PN	**Pn**	**05 14 23.8**	**+1.1**
MTVR	**Mutnovka**	**3.13**	**24**	*e*P	**Pn**	**05 14 25.8**	**+0.9**
MTVR				*e*S	**Sn**	**05 15 02.7**	**+1.6**
MTVR	**Mutnovka**	**3.13**	**24**	PN	**Pn**	**05 14 25.8**	**+0.9**
MTVR				S	**Sn**	**05 15 02.7**	**+1.6**
GRL	**Gorelyy**	**3.16**	**23**	*e*P	**Pn**	**05 14 27.0**	**+1.6**
GRL				*e*S	**Sn**	**05 15 04.8**	**+2.9**
GRL	**Gorelyy**	**3.16**	**23**	PN	**Pn**	**05 14 27.0**	**+1.6**
GRL				S	**Sn**	**05 15 04.8**	**+2.9**
RUS	**Russkaya**	**3.18**	**28**	*i* P	**Pn**	**05 14 25.5**	**0.0**
RUS				*e*S	**Sn**	**05 15 01.5**	**-0.6**
RUS	**Russkaya**	**3.18**	**28**	PN	**Pn**	**05 14 25.5**	**0.0**
RUS				S	**Sn**	**05 15 01.5**	**-0.6**
APC	**Apacha**	**3.35**	**11**	*e*P	**Pn**	**05 14 30.5**	**+2.7**
APC	**Apacha**	**3.35**	**11**	PN	**Pn**	**05 14 30.5**	**+2.7**
KRMR	**Karymshinskiy**	**3.43**	**21**	*e*P	**Pn**	**05 14 30.8**	**+1.8**
KRMR	**Karymshinskiy**	**3.43**	**21**	PN	**Pn**	**05 14 30.8**	**+1.8**
PEA0B	**Petropavlovsk-**	**3.61**	**16**	*de*PN	**Pn**	**05 14 33.3**	**+2.0**
PEA0B	**Petropavlovsk-**	**3.61**	**16**	P	**Pn**	**05 14 33.4**	**+2.0**
PETK	**Petropavlovsk-**	**3.61**	**16**	P	**Pn**	**05 14 32.6**	**+1.2**
	comp=N,16nm,0.3s,baz=176,slow=14,SNR=132						
PETK				LR	LR	05 16 17.6	
	comp=N,2μm,19.8s,baz=149,slow=45						
PET	**Petropavlovsk**	**3.74**	**24**	*e*P	**Pn**	**05 14 35.1**	**+1.9**
PET				*e*S	**Sn**	**05 15 17.7**	**+1.8**
PET	**Petropavlovsk**	**3.74**	**24**	*e*PN	**Pn**	**05 14 34.6**	**+1.4**
PET				*e*S	**Sn**	**05 15 17.4**	**+1.5**
PET				pmax	pmax		
	comp=Z,194nm,0.5s						
PET				smax	smax		
	comp=N,2μm,0.6s						
PET				smax	smax		
	comp=E,2μm,0.9s						
PET				MLR	MLR		
	comp=Z,1μm,11.0s						
PET	**Petropavlovsk**	**3.74**	**24**		**Pn**	**05 14 35.1**	**+1.9**
PET				Sn	**Sn**	**05 15 18.4**	**+2.5**
DALK	**Dalny**	**3.77**	**25**	*e*P	**Pn**	**05 14 34.9**	**+1.3**
DALK				*e*S	**Sn**	**05 15 18.7**	**+2.0**
DALK	**Dalny**	**3.77**	**25**	PN	**Pn**	**05 14 34.9**	**+1.3**
DALK				S	**Sn**	**05 15 18.7**	**+2.0**
UGLR	**Uglovaya**	**3.95**	**25**	*i* P	**Pn**	**05 14 38.6**	**+2.4**
UGLR	**Uglovaya**	**3.95**	**25**	PN	**Pn**	**05 14 38.6**	**+2.4**
KOK	**Koryaka**	**3.98**	**23**	*e*P	**Pn**	**05 14 39.5**	**+3.0**
KOK	**Koryaka**	**3.98**	**23**	PN	**Pn**	**05 14 39.5**	**+3.0**
AVH	**Avacha**	**3.98**	**24**	*e*P	**Pn**	**05 14 39.2**	**+2.6**
AVH				*e*S	**Sn**	**05 15 26.6**	**+4.7**
AVH	**Avacha**	**3.98**	**24**	PN	**Pn**	**05 14 39.2**	**+2.6**
AVH				S	**Sn**	**05 15 26.6**	**+4.7**
SMAR	**Somma**	**4.00**	**24**	*e*P	**Pn**	**05 14 39.3**	**+2.4**
SMAR				*e*S	**Sn**	**05 15 25.7**	**+3.2**
SMAR	**Somma**	**4.00**	**24**	PN	**Pn**	**05 14 39.3**	**+2.4**
SMAR				S	**Sn**	**05 15 25.7**	**+3.2**
KRER	**Koryakskii**	**4.02**	**23**	*e*P	**Pn**	**05 14 39.8**	**+2.6**
KRER	**Koryakskii**	**4.02**	**23**	PN	**Pn**	**05 14 39.8**	**+2.6**
SDLR	**Sedlovina**	**4.03**	**25**	*e*P	**Pn**	**05 14 38.9**	**+1.6**
SDLR	**Sedlovina**	**4.03**	**25**	PN	**Pn**	**05 14 38.9**	**+1.6**
KRX	**Arik**	**4.04**	**22**	*e*P	**Pn**	**05 14 40.3**	**+2.8**
KRX	**Arik**	**4.04**	**22**	PN	**Pn**	**05 14 40.3**	**+2.8**
NLC	**Nalytchevo**	**4.07**	**29**	*e*P	**Pn**	**05 14 37.6**	**-0.1**
NLC				*e*S	**Sn**	**05 15 22.1**	**-1.9**
NLC	**Nalytchevo**	**4.07**	**29**	PN	**Pn**	**05 14 37.6**	**-0.1**
NLC				S	**Sn**	**05 15 22.1**	**-1.9**
SPN	**Mys Shipunski**	**4.24**	**34**	*e*P	**Pn**	**05 14 41.0**	**+1.0**
SPN				*e*S	**Sn**	**05 15 27.7**	**-0.5**
SPN	**Mys Shipunski**	**4.24**	**34**	PN	**Pn**	**05 14 41.0**	**+1.0**
SPN				S	**Sn**	**05 15 27.7**	**-0.5**
KII

GRPR pmax pmax
comp=Z,217nm,0.5s
GRPR pmax pmax
comp=N,266nm,0.6s
GRPR pmax pmax
comp=E,124nm,0.3s
OKH Okha 9.07 301 *de*PN Pn 05 15 34.9 -11
OKH MLR MLR
comp=N,600nm,10.0s
OKH MLR MLR
comp=Z,500nm,10.0s
OKH MLR MLR
comp=E,2µm,10.0s
UGL Uglegorsk 9.17 272 *e*PN Pn 05 15 51.9 +4.3
UGL S Sn 05 17 38.1 +8.9
UGL pmax pmax
comp=Z,600nm,0.8s
UGL pmax pmax
comp=Z,528nm,0.7s
UGL MLR MLR
comp=Z,1µm,14.0s
UGL MLR MLR
comp=E,2µm,11.0s
YSS Yuzh-Sakhalins 9.29 258 ‖ *i*PN Pn 05 15 53.0 +3.8
YSS *e*S **Sn 05 17 36.0 +3.9**
YSS pmax pmax
comp=Z,120nm,0.9s
YSS pmax pmax
comp=Z,200nm,2.7s
YSS Yuzh-Sakhalins 9.29 258 Pn 05 15 50.9 +1.8
MA2 Magadan 10.41 345 P **Pn 05 16 04.1 -0.3**
comp=Z,7.2nm,0.3s,baz=162,slow=10,SNR=3.9
MA2 LR LR 05 20 07.0
comp=Z,766nm,21.8s,baz=186,slow=38
MA2 Magadan 10.41 345 PN **Pn 05 16 06.0 +1.6**
MA2 Magadan 10.41 345 Pn 05 16 06.0 +1.6
JKA Kamikawa-asahi 10.76 244 Pn 05 16 10.4 +1.2
JKA Kamikawa-asahi 10.76 244 Pn **Pn 05 16 12.3 +3.0**
ASAJ Asahikawa 10.76 244 P **Pn 05 16 10.4 +1.1**
comp=Z,3.8nm,0.3s,baz=80,slow=14,SNR=19
ASAJ LR LR 05 19 46.5
comp=Z,797nm,21.3s,baz=54,slow=35
ASAJ Asahikawa 10.76 244 PN **Pn 05 16 12.3 +3.0**
SMY Shemya 11.71 68 PN **Pn 05 16 21.9 -0.3**
SMY Shemya 11.71 68 Pn 05 16 21.9 -0.3
ERM Erimo 11.81 235 ‖ *e*PN **Pn 05 16 22.2 -1.4**
ERM Erimo 11.81 235 Pn 05 16 21.7 -1.9
SEY Seymchan 13.47 353 LR LR 05 22 26.3
comp=Z,570nm,20.0s,baz=146,slow=40
TEY Ternei 13.98 258 ‖ *e*P **P 05 16 55.5 -4.2**
TEY pmax pmax
comp=Z,20nm,1.2s
TEY pmax pmax
comp=E,20nm,1.4s
TEY pmax pmax
comp=N,10.0nm,1.1s
KLR Kul'dur 15.82 278 P **Pn 05 17 16.9 -0.2**
comp=N,0.1nm,0.3s,baz=71,slow=13,SNR=5.6
KLR LR LR 05 23 59.8
comp=N,618nm,18.8s,baz=45,slow=40
KLR Kul'dur 15.82 278 *ce*P **P 05 17 19.1 -1.0**
KLR MLR MLR
comp=Z,325nm,16.0s
USRK Ussuriysk Ar. 17.31 261 P **P 05 17 35.6 -1.0**
baz=60,slow=11,SNR=13
USA0B Ussuriysk Arra 17.31 261 P **P 05 17 37.1 +0.5**
USA0B pmax pmax
comp=Z,34nm,1.5s
USA0B Ussuriysk Arra 17.31 261 P **P 05 17 37.1 +0.5**
MJB9 Matsu-Tunnel 18.43 231 P **P 05 17 47.6 -1.5**
MAJO Matsushiro 18.43 231 *c i*P **P 05 17 49.1 +0.1**
MAJO Matsushiro 18.43 231 P **P 05 17 47.3 -1.8**
MAT Matsushiro 18.43 231 P **P 05 17 48.4 -0.6**
MJAR Matsushiro Arr 18.43 231 P **Pn 05 17 49.4 -0.2**
comp=Z,0.3nm,0.3s,baz=31,slow=10,SNR=34
MSHR Mys Shultsa 18.62 257 ‖ *e*P **Pn 05 17 51.3 -0.5**
MSHR pmax pmax
comp=Z,8.0nm,0.8s
MDJ Mudanjiang 18.67 264 P **P 05 17 50.6 -0.9**
BILL Bilibino 19.13 12 ‖ *i*P **Pn 05 17 57.1 -0.6**
BILL pmax pmax
comp=Z,26nm,0.7s
BILL MLR MLR
comp=Z,776nm,18.0s
BILL Bilibino 19.13 12 P 05 17 56.8 +0.4
YAK Yakutsk 19.15 320 P **P 05 17 55.7 -1.0**
comp=Z,0.4nm,0.3s,baz=125,slow=1.2,SNR=2.6
YAK LR LR 05 25 35.8
comp=Z,483nm,19.1s,baz=130,slow=38
YAK Yakutsk 19.15 320 *e*P **P 05 17 55.3 -1.3**
YAK pmax pmax
comp=Z,37nm,0.8s
YAK Yakutsk 19.15 320 P **P 05 17 54.9 -1.8**
YAK IAmb IAmb 05 18 00.1
comp=Z,53nm,0.7s
INU Inuyama 19.97 231 P **P 05 18 05.7 -0.1**
INU IAmb IAmb 05 18 10.4
comp=Z,36nm,0.8s
JHJ2 Mitsune 20.47 222 P **P 05 18 11.3 +0.1**
JHJ Hachijo jima 2 20.48 222 P **P 05 18 12.1 +0.7**
comp=Z,165nm,0.9s,baz=174,slow=5.1,SNR=8.5
CN2 Changchun 21.71 266 *e*P **P 05 18 19.0 -5.4**
CN2 *es*P pP 05 18 36.0 -0.4
CN2 *e*S S 05 22 08.8 -13
CN2 LR LR
comp=N,1µm,9.0s
CN2 LR LR
comp=E,1µm,9.0s
CN2 LR LR
comp=Z,1µm,10.0s
KSRS Korea Array 23.62 250 P **P 05 18 43.9 -0.2**
comp=Z,30nm,0.8s,baz=45,slow=9.9,SNR=80
KSRS PcP **PcP 05 22 28.6 +1.1**
comp=Z,2.2nm,0.8s,baz=5.6,slow=1.9,SNR=5.8
KS19 Wonju Array Si 23.63 250 P **P 05 18 44.4 +0.2**
KS19 IAmb IAmb 05 18 46.0
comp=Z,36nm,0.8s
TJN Taejon 24.67 248 ‖ *i*P **P 05 18 54.3 +0.6**
JNU Nakatsue 24.93 238 P **P 05 18 57.0 +0.8**
comp=Z,41nm,0.8s,baz=54,slow=8.6,SNR=28
JNU Nakatsue 24.93 238 P **P 05 18 56.5 +0.2**
JNU IAmb IAmb 05 18 58.5
comp=Z,43nm,0.8s
ANM Nome 25.18 39 P **P 05 18 58.0 -0.1**
ANM pmax pmax
comp=Z,28nm,0.8s
ANM Nome 25.18 39 P **P 05 18 58.0 -0.1**
ANM IAmb IAmb 05 19 01.9
comp=Z,28nm,0.8s
TIXI Tiksi 25.32 340 P **P 05 18 57.9 -1.5**
comp=Z,28nm,0.7s,baz=128,slow=10,SNR=16
TIXI LR LR 05 28 33.6
comp=Z,290nm,21.8s,baz=148,slow=36
TIXI Tiksi 25.32 340 *d i*P **P 05 18 58.7 -0.6**
TIXI pmax pmax
comp=Z,74nm,2.5s
TIXI MLR MLR
comp=Z,233nm,19.0s
TIXI Tiksi 25.32 340 P **P 05 18 58.0 -1.3**
TIXI IAmb IAmb 05 18 59.7
comp=Z,26nm,0.7s
SDPT Sand Point 26.70 61 P **P 05 19 12.3 +0.5**
SDPT IAmb IAmb 05 19 17.6
comp=Z,33nm,1.1s
RDOG Red Dog Mine 27.30 33 P **P 05 19 17.8 +0.6**
TTA Tatalina 28.94 45 P **P 05 19 32.3 +0.4**
TTA pmax pmax
comp=Z,11nm,0.8s
TTA Tatalina 28.94 45 P **P 05 19 32.3 +0.4**
SVW2 Sparrevohn 29.05 48 P **P 05 19 34.1 +1.3**
PPLA Purkeypile 30.69 45 P **P 05 19 48.3 +0.9**
SPU Mount Spurr 30.76 48 P **P 05 19 49.7 +1.6**
KDAK Kodiak Island 30.76 55 P **P 05 19 48.7 +0.7**
comp=Z,6.3nm,0.9s,baz=341,slow=5.7,SNR=3.7
KDAK Kodiak Island 30.76 55 P **P 05 19 48.7 +0.7**
KDAK pmax pmax
comp=Z,14nm,0.9s
KDAK Kodiak Island 30.76 55 IAmb IAmb 05 20 07.9
comp=Z,14nm,0.8s
H11N2 WAKE ISLAND Hy 31.08 160 T T 05 52 40.0
baz=347,slow=76,SNR=583
H11N1 WAKE ISLAND Hy 31.09 160 T T 05 52 48.9
baz=347,slow=76,SNR=832
H11N3 WAKE ISLAND Hy 31.09 160 T T 05 52 48.8
baz=347,slow=76,SNR=1093
JOW Kunigami 31.25 233 P **P 05 19 52.3 -0.3**
comp=Z,0.6nm,0.4s,baz=108,slow=12,SNR=4.8
JOW Kunigami 31.25 233 IAmb IAmb 05 19 56.0
comp=Z,6.7nm,0.7s
BPAW Bear Paw Mtn. 31.26 42 P **P 05 19 53.2 +0.9**
KTH Kantishna Hill 31.27 44 P **P 05 19 53.5 +1.0**
KTH IAmb IAmb 05 19 55.1
comp=Z,21nm,1.1s
MLY Manley 31.41 41 P **P 05 19 54.9 +1.2**
TRF Thorofare Moun 31.55 44 P **P 05 19 55.8 +0.6**
TRF IAmb IAmb 05 19 58.3
comp=Z,16nm,0.9s
COLD Coldfoot 31.81 37 P **P 05 19 58.0 +0.8**
HHC Hu-ho-hao-te 32.15 271 *e*P **P 05 20 00.8 +0.3**
HHC pmax pmax
comp=Z,13nm,0.9s
HHC pmax pmax
comp=Z,36nm,5.1s
HHC LR LR
comp=N,170nm,11.4s
HHC LR LR
comp=E,210nm,12.1s
HHC LR LR
comp=Z,240nm,14.2s
PMR Palmer 32.15 47 P **P 05 20 01.0 +0.9**
PMR pmax pmax
comp=Z,12nm,1.3s
PMR Palmer 32.15 47 P **P 05 20 01.0 +0.9**
MCK McKinley 32.16 43 P **P 05 20 00.8 +0.5**
MCK pmax pmax
comp=Z,23nm,0.9s
MCK McKinley 32.16 43 P **P 05 20 00.8 +0.5**
MCK IAmb IAmb 05 20 02.1
comp=Z,23nm,0.9s
RND Reindeer 32.20 44 P **P 05 20 01.0 +0.3**
RND pmax pmax
comp=Z,25nm,0.8s
RND Reindeer 32.20 44 P **P 05 20 01.0 +0.3**
RND IAmb IAmb 05 20 02.1
comp=Z,25nm,0.8s
H11S1 WAKE ISLAND Hy 32.22 161 T T 05 54 05.2
baz=347,slow=76,SNR=4801
TOLK Toolik Lake Re 32.23 34 P **P 05 20 01.7 +0.9**
baz=262,SNR=9.9
TOLK Toolik Lake Re 32.23 34 P **P 05 20 01.7 +0.9**
TOLK IAmb IAmb 05 20 02.3
comp=Z,11nm,0.7s
H11S3 WAKE ISLAND Hy 32.23 161 T T 05 54 06.6
baz=347,slow=76,SNR=5972
GHO Glory Hole Cre 32.23 47 P **P 05 20 01.6 +0.6**
GHO IAmb IAmb 05 20 16.4
comp=Z,12nm,0.8s
H11S2 WAKE ISLAND Hy 32.24 161 T T 05 54 07.2
baz=347,slow=76,SNR=4107
SONM Songino Array 32.34 286 P **P 05 20 00.8 -1.4**
comp=Z,0.5nm,0.4s,baz=58,slow=8.6,SNR=2.5
SONM PcP **PcP 05 22 47.8 -1.0**
comp=Z,4.4nm,0.7s,baz=100,slow=2.4,SNR=5.9
SONM LR LR 05 33 33.3
comp=Z,286nm,19.9s,baz=49,slow=37
KNK Knik Glacier 32.48 48 P **P 05 20 04.2 +1.1**
SML Sawmill 32.51 47 P **P 05 20 04.3 +0.9**
WRH Wood River Hil 32.53 42 P **P 05 20 04.8 +1.4**
WRH IAmb IAmb 05 20 08.3
comp=Z,15nm,0.9s
TCOL CIGO, UAF Yank 32.63 41 P **P 05 20 05.5 +1.2**
baz=270,SNR=8.8
COLA College 32.63 41 *c i*P **P 05 20 04.9 +0.6**
COLA pmax pmax
comp=Z,35nm,0.8s
COLA College 32.63 41 P **P 05 20 05.8 +1.5**
CCB Clear Creek Bu 32.65 41 P **P 05 20 05.4 +0.9**
CCB IAmb IAmb 05 20 06.5
comp=Z,14nm,0.8s
NJ2 Nanjing 32.78 252 *e*P **P 05 20 05.0 -0.9**
NJ2 pmax pmax
comp=Z,12nm,0.5s
NJ2 LR LR
comp=N,560nm,9.0s
NJ2 LR LR
comp=E,690nm,14.1s
NJ2 LR LR
comp=Z,540nm,21.1s
POKR Poker Flat Res 32.81 41 P **P 05 20 07.4 +1.5**
baz=270,SNR=5.9
DHY Denali Highway 32.88 44 P **P 05 20 06.8 +0.1**
DHY IAmb IAmb 05 20 08.3
comp=Z,19nm,1.1s
SCM Sheep Creek Mo 32.98 47 P **P 05 20 08.2 +0.6**
SCM pmax pmax
comp=Z,23nm,0.8s
SCM Sheep Creek Mo 32.98 47 P **P 05 20 08.2 +0.6**
HDA Harding Lake 33.02 42 P **P 05 20 08.6 +0.8**
baz=271,SNR=17
HDA Harding Lake 33.02 42 P **P 05 20 07.9 +0.1**
IL31 33.05 41 P **P 05 20 08.5 +0.6**
IL31 IAmb IAmb 05 20 09.6
comp=Z,12nm,0.8s
ILAR Eielson Array 33.05 41 P **P 05 20 08.4 +0.4**
comp=Z,6.8nm,0.8s,baz=254,slow=5.6,SNR=51
GLI Glacier Island 33.19 48 P **P 05 20 09.1 -0.2**
GLI IAmb IAmb 05 20 10.8
comp=Z,13nm,0.7s
FID Port Fidalgo 33.51 49 P **P 05 20 12.2 +0.1**
FID IAmb IAmb 05 20 13.1
comp=Z,20nm,1.0s
FYU Fort Yukon 33.73 38 P **P 05 20 15.0 +1.2**
PAX Paxson 33.76 44 P **P 05 20 15.2 +0.9**
PAX pmax pmax
comp=Z,6.0nm,0.8s
PAX Paxson 33.76 44 P **P 05 20 15.2 +0.9**
EYAK Cordova Ski Ar 33.89 49 P **P 05 20 15.4 +0.1**
EYAK IAmb IAmb 05 20 17.2
comp=Z,10nm,0.8s
RIDG Independent Ri 33.98 43 P **P 05 20 15.9 -0.2**
DOT Dot Lake 34.33 43 P **P 05 20 19.2 0.0**
DOT IAmb IAmb 05 20 20.1
comp=Z,11nm,0.8s
SCRK Sand Creek 34.34 43 P **P 05 20 19.4 +0.1**
SCRK IAmb IAmb 05 20 21.1
comp=Z,19nm,1.0s
RAGM Ragged Mountai 34.44 49 P **P 05 20 21.1 +1.0**
RAGM IAmb IAmb 05 20 22.6
comp=Z,13nm,0.9s
MENT Mentasta 34.55 44 P **P 05 20 21.8 +0.6**
MENT IAmb IAmb 05 20 30.9
comp=Z,7.8nm,0.6s
GLB Gilahina Butte 34.70 47 P **P 05 20 23.1 +0.7**
VRDI Verde Repeater 34.90 47 P **P 05 20 24.1 -0.2**
VRDI IAmb IAmb 05 20 26.5
comp=Z,10nm,0.7s
WAX Waxell Ridge 35.32 49 P **P 05 20 29.1 +1.4**
BALM Baldy 35.46 48 P **P 05 20 30.5 +1.4**
BALM IAmb IAmb 05 20 31.4
comp=Z,12nm,0.9s
EGAK Eagle 35.49 41 P **P 05 20 29.4 +0.3**
BARN Barnard Glacie 35.79 47 P **P 05 20 33.8 +1.8**
YAH Yahtse 35.88 49 P **P 05 20 33.8 +1.0**
DAWY Dawson 36.34 42 P **P 05 20 37.5 +1.0**
WHN Wuhan 36.61 254 P **P 05 20 38.3 -0.7**
WHN S **S 05 26 20.3 +2.2**
WHN LR LR
comp=N,1µm,13.9s
WHN LR LR
comp=E,5µm,15.8s
WHN LR LR
comp=Z,1µm,12.9s
PCA Pinnacle 36.66 49 P **P 05 20 40.6 +1.4**
EPYK Eagle Plains 37.15 38 P **P 05 20 44.8 +1.5**
baz=278,SNR=10
EPYK Eagle Plains 37.15 38 P **P 05 20 45.0 +1.8**
EPYK IAmb IAmb 05 20 46.0
comp=Z,19nm,0.9s
HYT Haines Junctio 37.82 47 P **P 05 20 51.3 +2.2**
HYT IAmb IAmb 05 20 52.2
comp=Z,20nm,0.8s
INK Inuvik 38.13 35 P **P 05 20 52.9 +1.5**
comp=Z,8.4nm,0.8s,baz=280,slow=7.3,SNR=26
INK Inuvik 38.13 35 P **P 05 20 53.0 +1.5**
INK IAmb IAmb 05 21 07.8
comp=Z,18nm,0.9s
TPUB Ta-pu 38.22 240 P **P 05 20 52.3 -0.5**
TPUB IAmb IAmb 05 20 55.5
comp=Z,13nm,0.8s
SKAG Skagway 39.23 49 P **P 05 21 03.6 +2.8**
SKAG IAmb IAmb 05 21 16.6
comp=Z,17nm,1.0s
LZH Lanzhou 39.83 270 *e*P **P 05 21 06.5 +0.3**
LZH pP pP 05 21 19.0 -0.9
LZH sP sP 05 21 26.0 0.0
LZH PP PP 05 22 51.3 +13
LZH pmax pmax
comp=Z,15nm,1.1s
LZH pmax pmax
comp=Z,81nm,4.3s
LZH LR LR
comp=N,2µm,10.8s
LZH LR LR
comp=E,2µm,11.9s
LZH LR LR
comp=Z,1µm,13.6s
JIS Juneau Island 40.06 50 P **P 05 21 10.0 +2.3**
JIS IAmb IAmb 05 21 23.9
comp=Z,15nm,0.8s
A36M Sachs Harbour 40.36 28 P **P 05 21 11.2 +1.3**
baz=280,SNR=11
GTA Gaotai 40.53 277 *e*P **P 05 21 12.0 0.0**
GTA pP pP 05 21 25.8 +0.2
GTA sP sP 05 21 30.3 -1.4
GTA PcP **PcP 05 23 14.3 +0.8**
GTA S **S 05 27 18.5 +1.3**
GTA sS sS 05 27 41.5 +1.2
GTA pmax pmax
comp=Z,2.0nm,0.8s
GTA pmax pmax
comp=Z,55nm,7.6s
GTA LR LR
comp=N,210nm,15.2s
GTA LR LR
comp=E,460nm,15.9s
GTA LR LR
comp=Z,450nm,16.2s
C36M Paulatuk 41.31 32 P **P 05 21 18.9 +1.1**
baz=284,SNR=20
C36M Paulatuk 41.31 32 P **P 05 21 18.3 +0.5**
C36M IAmb IAmb 05 21 20.1
comp=Z,31nm,1.1s
DLBC Dease Lake 42.16 49 P **P 05 21 26.7 +1.7**
comp=Z,5.2nm,0.9s,baz=294,slow=10.0,SNR=6.7
DLBC IAmb IAmb 05 21 41.3
comp=Z,15nm,1.0s
ZALV Zalesovo Beam 42.58 304 P **P 05 21 26.9 -1.5**
comp=Z,1.3nm,0.4s,baz=51,slow=5.9,SNR=4.2
ZALV PcP **PcP 05 23 20.1 +0.4**
comp=Z,4.0nm,0.7s,baz=57,slow=5.5,SNR=6.3
ZALV LR LR 05 38 38.8
comp=Z,145nm,18.6s,baz=62,slow=35
ZALV Zalesovo Beam 42.58 304 *i*P **P 05 21 28.2 -0.2**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
SZP Santa 42.97 235 P **P 05 21 32.3 +0.4**
DGZ Jazzator, Alta 42.98 297 ‖ *e*P **P 05 21 32.7 +0.8**
CD2 Chengdu 43.13 264 *e*P **P 05 21 32.0 -1.2**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
GYA Guiyang 44.29 257 *e*P **P 05 21 43.3 +0.6**
GYA sP sP 05 22 02.3 -0.3
GYA PP **PcP 05 23 29.0 +2.8**
GYA S **S 05 28 16.5 +3.6**
GYA sS sS 05 28 36.5 +0.4
GYA SS **SS 05 31 30.5 -2.1**
GYA pmax pmax
comp=Z,10.0nm,0.9s
GYA pmax pmax
comp=Z,50nm,4.4s
GYA LR LR
comp=N,360nm,11.8s
GYA LR LR
comp=E,320nm,12.7s
GYA LR LR
comp=Z,300nm,12.3s
WMQ Urumqi 45.77 290 *e*P **P 05 21 55.8 +1.7**
WMQ pP pP 05 22 08.5 +0.5
WMQ LR LR
comp=N,140nm,10.3s
WMQ LR LR
comp=E,73nm,12.1s
WMQ LR LR
comp=Z,110nm,14.5s
MK31 Makanchi Array 47.41 296 P **P 05 22 05.9 -1.0**
MK31 pmax pmax
comp=Z,5.0nm,0.8s
MK31 Makanchi Array 47.41 296 P **P 05 22 05.9 -1.0**
MKAR Makanchi Array 47.41 296 P **P 05 22 05.8 -1.0**
comp=Z,5.7nm,0.8s,baz=63,slow=8.2,SNR=18
MKAR PcP **PcP 05 23 36.5 -0.2**
comp=Z,3.6nm,0.9s,baz=64,slow=4.2,SNR=3.7
MKAR LR LR 05 43 28.5
comp=Z,606nm,18.2s,baz=36,slow=38
YKA Yellowknife Ar 47.41 39 P **P 05 22 07.8 +1.2**
comp=Z,8.8nm,0.8s,baz=298,slow=7.4,SNR=60
YKA PcP **PcP 05 23 37.0 +0.7**
comp=Z,1.5nm,0.8s,baz=296,slow=2.9,SNR=5.2
RES Resolute Bay 47.44 20 P **P 05 22 07.7 +1.0**
comp=Z,5.0nm,0.6s,baz=318,slow=4.8,SNR=24
RES Resolute Bay 47.44 20 P **P 05 22 07.4 +0.7**
RES pmax pmax
comp=Z,6.0nm,0.7s
RES Resolute Bay 47.44 20 P **P 05 22 07.4 +0.7**
RES IAmb IAmb 05 22 07.9
comp=Z,6.0nm,0.7s
KURK Kurchatov 47.45 303 P **P 05 22 06.8 -0.3**
KURK *PP **pP 05 22 20.2 -0.8**
KURK 05 23 35.9
KURK Kurchatov 47.45 303 P **P 05 22 05.5 -1.6**
KURK IAmb IAmb 05 22 07.4
comp=Z,18nm,0.8s
KURBB Kurchatov Arra 47.54 303 P **P 05 22 06.8 -1.0**
comp=Z,9.3nm,0.7s,baz=64,slow=7.9,SNR=33
KURBB pP **pP 05 22 20.2 -1.5**
comp=Z,5.6nm,0.9s,baz=67,slow=8.2,SNR=4.3
KURBB PcP **PcP 05 23 35.9 -1.1**
comp=Z,6.4nm,0.7s,baz=62,slow=3.4,SNR=15
MAKZ Makanchi 47.58 297 P **P 05 22 07.2 -1.0**
MAKZ pmax pmax
comp=Z,4.0nm,0.9s
MAKZ Makanchi 47.58 297 P **P 05 22 07.2 -1.0**
QIZ Qiongzhong 47.81 247 P **P 05 22 10.3 0.0**
QIZ S **S 05 29 04.0 +0.7**
QIZ LR LR
comp=N,340nm,12.3s
QIZ LR LR
comp=E,1µm,16.7s
QIZ LR LR
comp=Z,450nm,15.2s
SLVN Son La 49.73 255 P **P 05 22 24.9 -0.1**
SLVN IAmb IAmb 05 22 26.5
comp=Z,15nm,1.1s
SPITS Spitsbergen Ar 50.11 350 P **P 05 22 25.4 -1.7**
comp=Z,17nm,1.1s,baz=58,slow=8.1,SNR=5.6
SPITS PcP **PcP 05 23 46.4 +0.5**
comp=Z,7.4nm,0.7s,baz=119,slow=9.7,SNR=6.1
PGC Sidney 50.19 58 P **P 05 22 28.6 +0.6**
BVAR Borovoye Array 50.58 309 P **P 05 22 30.0 -1.0**
comp=Z,8.3nm,0.7s,baz=52,slow=9.6,SNR=23
BVAR PcP **PcP 05 23 47.9 -0.1**
comp=Z,5.8nm,0.7s,baz=77,slow=3.3,SNR=8.7
BVAR Borovoye Array 50.58 309 P **P 05 22 30.0 -1.0**
BRVK Borovoye 50.61 309 *d i*P **P 05 22 30.5 -0.7**
BRVK pmax pmax
comp=Z,15nm,0.8s
BRVK Borovoye 50.61 309 P **P 05 22 30.1 -1.1**
BRVK IAmb IAmb 05 22 31.6
comp=Z,14nm,0.8s
TULEG Thule 50.88 12 P **P 05 22 32.6 -0.3**
TULEG IAmb IAmb 05 22 33.5
comp=Z,14nm,0.9s
D03D Eldon 51.01 59 P **P 05 22 35.9 +1.5**
baz=305
B08A Colville Reser 52.61 57 P **P 05 22 46.6 +0.3**
B08A IAmb IAmb 05 23 02.3
comp=Z,8.8nm,0.9s
J01E Myrtle Point 53.08 64 P **P 05 22 51.4 +1.7**
baz=307
I03D Drain, OR 53.10 63 P **P 05 22 51.2 +1.3**
baz=307
BOOM Boomskoye usch 53.58 295 P **P 05 22 52.9 -0.8**
BOOM pmax pmax
comp=Z,7.0nm,0.9s
BOOM Boomskoye usch 53.58 295 P **P 05 22 52.9 -0.8**
I04A Tendick Farm, 53.58 63 P **P 05 22 54.8 +1.3**

baz=307
DAG Danmarks Havn 53.81 359 *i* P **P** 05 22 52.0 -2.6
DAG *i* 05 23 59.3
DAG pmax pmax
comp=Z,6.0nm,0.9s
DAG Danmarks Havn 53.81 359 *i* P **P** 05 22 52.0 -2.6
comp=Z,5.5nm,0.9s
DAG *i* 05 23 59.3
NEW Newport 53.86 56 P **P** 05 22 56.3 +0.8
comp=Z,1.0nm,0.5s,baz=344,slow=7.7,SNR=3.7
NEW PcP **PcP** 05 24 01.4 +0.9
comp=Z,4.6nm,0.9s,baz=348,slow=2.8,SNR=4.0
NEW Newport 53.86 56 P **P** 05 22 56.3 +0.8
NEW pmax pmax
comp=Z,8.0nm,1.2s
NEW Newport 53.86 56 P **P** 05 22 56.4 +0.9
baz=307
KULLO Kullorsuaq 54.06 10⇑ *i* P **P** 05 22 56.0 -0.5
KULLO pmax pmax
comp=Z,21nm,0.8s
KULLO Kullorsuaq 54.06 10⇑ *i* P **P** 05 22 56.0 -0.5
comp=Z,21nm,0.8s
J04D Umpqua Nationa 54.09 63 P **P** 05 22 59.0 +1.6
baz=308
ARU Arti 54.23 317 *d i* P **P** 05 22 56.0 -1.9
ARU *PP **pP** 05 23 09.0 -3.2
ARU 05 23 58.3
ARU 05 24 55.4
ARU S **S** 05 30 33.3 +2.3
ARU 05 32 44.6
ARU SS **SS** 05 34 07.0 -5.6
ARU pmax pmax
comp=Z,9.0nm,0.7s
ARU Arti 54.23 317 P **P** 05 22 56.5 -1.4
ARU IAmb IAmb 05 22 57.0
comp=Z,9.5nm,0.7s
AAK Ala-Archa 54.34 296 P **P** 05 22 58.0 -1.1
comp=Z,4.7nm,0.7s,baz=138,slow=3.6,SNR=9.2
AAK Ala-Archa 54.34 296 ǁ *e* P **P** 05 22 58.5 -0.7
AAK pmax pmax
comp=Z,7.0nm,1.3s
AAK Ala-Archa 54.34 296 P **P** 05 22 58.4 -0.7
SHL Shillong 54.44 269 P **P** 05 22 59.9 -0.2
SHL pmax pmax
comp=Z,13nm,0.8s
SHL Shillong 54.44 269 P **P** 05 22 59.9 -0.2
SHL IAmb IAmb 05 23 01.2
comp=Z,13nm,0.8s
J05D Fort Rock, OR 54.57 63 P **P** 05 23 03.0 +2.2
baz=308,SNR=7.5
L04D Klamath Falls 54.60 64 P **P** 05 23 02.9 +1.8
baz=308
YBH Yreka Blue Hor 54.66 65 P **P** 05 23 03.4 +2.0
comp=Z,4.7nm,0.6s,baz=350,slow=7.2,SNR=17
YBH Yreka Blue Hor 54.66 65 P **P** 05 23 03.3 +1.8
YBH pmax pmax
comp=Z,6.0nm,0.8s
YBH Yreka Blue Hor 54.66 65 P **P** 05 23 03.3 +1.8
YBH IAmb IAmb 05 23 04.7
comp=Z,5.8nm,0.8s
CHTO Chiang Mai 54.72 257 P **P** 05 23 02.7 +0.7
CHTO pmax pmax
comp=Z,26nm,0.8s
CHTO Chiang Mai 54.72 257 P **P** 05 23 02.7 +0.7
M02C Callahan 54.79 65 P **P** 05 23 04.3 +1.9
baz=308
CM31 Chiang Mai Arr 54.98 257 P **P** 05 23 05.1 +1.2
CMAR Chiang Mai Arr 54.98 257 P **P** 05 23 04.3 +0.4
comp=Z,14nm,0.8s,baz=32,slow=6.8,SNR=59
CMAR Chiang Mai Arr 54.98 257 *i* P **P** 05 23 05.0 +1.1
CMAR pmax pmax
comp=Z,14nm,0.8s
WALA Waterton Lakes 55.08 53 P **P** 05 23 05.1 +0.7
WALA pP **pP** 05 23 19.1 +0.4
K05A Summer Lake 55.11 63 P **P** 05 23 06.2 +1.4
K05A IAmb IAmb 05 23 08.1
comp=Z,14nm,1.0s
N02D Trinity Center 55.13 66 P **P** 05 23 07.0 +2.2
baz=309
M04C Macdoel 55.14 65 P **P** 05 23 06.7 +1.7
baz=309
KSH Kashi 55.39 292 P **P** 05 23 10.3 +3.5
KSH pmax pmax
comp=Z,11nm,0.8s
KSH pmax pmax
comp=Z,130nm,3.9s
ARCES ARCESS Array B 55.76 341 P **P** 05 23 06.9 -1.9
comp=Z,2.2nm,0.9s,baz=52,slow=6.9,SNR=6.8
ARCES PcP **PcP** 05 24 07.5 +0.1
comp=Z,1.9nm,0.7s,baz=46,slow=5.2,SNR=5.1
ARCES LR LR 05 52 03.6
comp=Z,134nm,18.5s,baz=28,slow=42
BMO Blue Mountains 55.84 59 P **P** 05 23 11.6 +1.7
BMO pmax pmax
comp=Z,3.0nm,0.8s
BMO Blue Mountains 55.84 59 P **P** 05 23 11.6 +1.7
MOD Modoc Plateau 55.97 64 P **P** 05 23 11.9 +1.0
MOD IAmb IAmb 05 23 13.7
comp=Z,6.1nm,0.8s
ARSB Arslanbob 56.04 296 P **P** 05 23 12.7 +1.3
ARSB pmax pmax
comp=Z,8.0nm,1.2s
ARSB Arslanbob 56.04 296 P **P** 05 23 12.7 +1.3
O03E Paynes Creek 56.09 66 P **P** 05 23 13.1 +1.4
baz=309
J08A Circle Bar Ran 56.11 61 P **P** 05 23 13.0 +1.2
J08A IAmb IAmb 05 23 14.9
comp=Z,14nm,1.3s
FAKI Fak Fak 56.27 209 P **P** 05 23 13.6 +0.5
comp=Z,42nm,0.8s
FAKI Fak Fak 56.27 209 P **P** 05 23 13.0 -0.1
KK31 Karatay Array 56.35 299 P **P** 05 23 12.6 -0.9
KK31 pmax pmax
comp=Z,6.0nm,1.2s
KK31 Karatay Array 56.35 299 P **P** 05 23 12.6 -0.9
MSO Missoula 56.45 55 P **P** 05 23 15.4 +1.2
baz=309,SNR=6.4
MSO Missoula 56.45 55 P **P** 05 23 14.9 +0.7
MSO pP **pP** 05 23 27.9 -0.6
MSO IAmb IAmb 05 23 29.9
comp=Z,12nm,1.1s
ORV Oroville 56.74 66 P **P** 05 23 17.5 +1.2
ORV pmax pmax
comp=Z,3.0nm,0.7s
ORV Oroville 56.74 66 P **P** 05 23 17.5 +1.2
BEKR Beckworth 57.22 65 P **P** 05 23 21.0 +1.1
FFC Flin Flon 57.24 42 P **P** 05 23 21.2 +1.6
FFC *PP **pP** 05 23 34.0 +0.1
FFC pmax pmax
comp=Z,11nm,1.1s
FFC Flin Flon 57.24 42 P **P** 05 23 21.2 +1.6
FFC IAmb IAmb 05 23 21.8
comp=Z,11nm,1.1s
FFC pP **pP** 05 23 34.0 +0.1
MFID Camas Ranch 57.57 60 P **P** 05 23 23.6 +1.4
MFID IAmb IAmb 05 23 37.9
comp=Z,5.4nm,0.8s
SUMG Summit 57.65 5⇑ *i* P **P** 05 23 22.8 +0.2
SUMG pmax pmax
comp=Z,66nm,0.9s
SUMG Summit 57.65 5 P **P** 05 23 22.7 0.0
SUMG Summit 57.65 5⇑ *i* P **P** 05 23 22.8 +0.2
comp=Z,66nm,0.9s
FCC Fort Churchill 57.74 35 P **P** 05 23 23.4 +0.5
FCC pmax pmax
comp=Z,11nm,0.8s
FCC Fort Churchill 57.74 35 P **P** 05 23 23.4 +0.5
FCC IAmb IAmb 05 23 39.1
comp=Z,11nm,0.8s
LRM Limekiln Ridge 57.88 56 P **P** 05 23 26.1 +1.6
LRM pP **pP** 05 23 39.6 +0.8
VCNR Virginia City 58.01 66 P **P** 05 23 26.3 +0.8
VCNR IAmb IAmb 05 23 28.1
comp=Z,5.9nm,0.7s
PNTR Pine Nut 58.17 66 P **P** 05 23 28.1 +1.5
AKTO Aktyubinsk 58.27 312 P **P** 05 23 25.3 -1.5
comp=Z,2.2nm,0.5s,baz=76,slow=9.3,SNR=8.4
MCMT McKenzie Canyo 58.31 57 P **P** 05 23 28.9 +1.4
YERR Yerington 58.45 66 P **P** 05 23 29.9 +1.4
YERR IAmb IAmb 05 23 30.7
comp=Z,5.9nm,0.9s
WAKR Walker 58.65 66 P **P** 05 23 30.9 +1.0
WAKR IAmb IAmb 05 23 32.6
comp=Z,6.3nm,0.7s
QLMT Earthquake Lak 59.07 56 P **P** 05 23 34.9 +2.1
QLMT **pP** 05 23 48.0 +0.9
KVN Kaiserville 59.08 65 P **P** 05 23 34.2 +1.3
KVN pmax pmax
comp=Z,5.0nm,0.7s
KVN Kaiserville 59.08 65 P **P** 05 23 34.2 +1.3
KVN IAmb IAmb 05 23 35.1
comp=Z,5.3nm,0.7s
GAR Garm 59.09 295 P **P** 05 23 31.8 -1.1
RYN Ryan 59.11 65 P **P** 05 23 34.6 +1.6
RYN IAmb IAmb 05 23 35.9
comp=Z,5.7nm,0.9s
YHB Horse Butte 59.25 56 P **P** 05 23 35.4 +1.4
YHB **pP** 05 23 48.8 +0.4
NVAR Mina Array Bea 59.37 66 P **P** 05 23 36.6 +1.7
comp=Z,4.7nm,0.7s,baz=295,slow=7.1,SNR=20
NVAR pP **pP** 05 23 50.4 +1.1
comp=Z,2.9nm,0.7s,baz=296,slow=7.5,SNR=6.9
YHH Holmes Hill 59.41 56 P **P** 05 23 36.5 +1.3
YMR Madison River 59.43 56 P **P** 05 23 36.4 +1.1
ELK Elko 59.63 62 P **P** 05 23 38.2 +1.5
ELK pmax pmax
comp=Z,4.0nm,1.0s
ELK Elko 59.63 62 P **P** 05 23 38.2 +1.5
YNE Yellowstone No 59.72 55 P **P** 05 23 38.6 +1.4
ILULI Ilulissat 59.77 11 P **P** 05 23 36.6 -0.3
ILULI pmax pmax
comp=Z,19nm,0.9s
ILULI Ilulissat 59.77 11 P **P** 05 23 36.6 -0.3
H17A Grant Village 59.82 56 P **P** 05 23 41.3 +3.3
baz=312,SNR=12
H17A Grant Village 59.82 56 P **P** 05 23 39.8 +1.8
IMW Indian Meadow 59.95 57 P **P** 05 23 40.3 +1.3
IMW IAmb IAmb 05 23 55.3
comp=Z,8.6nm,0.8s
FLWY Flagg Ranch 59.96 56 P **P** 05 23 40.7 +1.8
FLWY IAmb IAmb 05 23 55.6
comp=Z,8.9nm,0.8s
CHGR Chuyangaron 60.00 295 P **P** 05 23 37.7 -1.4
RLMT Red Lodge 60.04 55 P **P** 05 23 41.5 +2.1
baz=312,SNR=7.5
RLMT Red Lodge 60.04 55 P **P** 05 23 40.5 +1.1
FXWY Fox Creek 60.08 57 P **P** 05 23 41.8 +2.1
FXWY pP **pP** 05 23 55.4 +1.2
FXWY IAmb IAmb 05 23 56.0
comp=Z,7.1nm,0.8s
SCO Scoresbysund 60.17 359 *e* P **P** 05 23 40.2 +0.6
SCO *i* 05 23 59.2
SCO pmax pmax
comp=Z,1.0nm,0.4s
SCO Scoresbysund 60.17 359 *i* P **P** 05 23 40.2 +0.6
comp=Z,0.6nm,0.4s
SCO *i* 05 23 59.2
TPAW Teton Pass 60.22 57 P **P** 05 23 42.9 +2.2
SNOW Snow King Moun 60.34 57 P **P** 05 23 42.9 +1.4
SNOW IAmb IAmb 05 23 58.2
comp=Z,9.4nm,0.8s
REDW Red Top Meadow 60.35 57 P **P** 05 23 42.9 +1.3
DGMT Dagmar 60.38 49 P **P** 05 23 42.7 +1.2
baz=313
DGMT Dagmar 60.38 49 P **P** 05 23 41.8 +0.3
LAO LASA Array 60.57 52 P **P** 05 23 44.7 +1.8
baz=313,SNR=11
LAO LASA Array 60.57 52 P **P** 05 23 43.8 +1.0
VES Vestal, Richgr 60.62 68 P **P** 05 23 44.0 +0.8
baz=312
CWC Cottonwood Cre 60.82 67 P **P** 05 23 46.1 +1.3
baz=312
NIL Nilore 60.87 289 P **P** 05 23 44.8 -0.2
NIL pmax pmax
comp=Z,11nm,0.8s
NIL Nilore 60.87 289 P **P** 05 23 44.8 -0.2
NIL IAmb IAmb 05 23 46.1
comp=Z,11nm,0.8s
R11A Troy Canyon, C 61.02 64 P **P** 05 23 47.2 +1.1
baz=312,SNR=7.3
R11A Troy Canyon, C 61.02 64 P **P** 05 23 47.5 +1.3
HWUT Hardware Ranch 61.13 59 P **P** 05 23 48.4 +1.5
HWUT IAmb IAmb 05 24 02.9
comp=Z,6.6nm,0.9s
DUG Dugway, Tooele 61.38 61 P **P** 05 23 50.1 +1.5
DUG pmax pmax
comp=Z,8.0nm,1.0s
DUG Dugway, Tooele 61.38 61 P **P** 05 23 50.2 +1.7
baz=312
DUG Dugway, Tooele 61.38 61 P **P** 05 23 50.0 +1.5
DUG IAmb IAmb 05 23 51.3
comp=Z,8.0nm,0.9s
MPMC Manual Prospec 61.43 67 P **P** 05 23 49.9 +0.9
baz=313
BW06 Boulder Array 61.46 57 P **P** 05 23 50.3 +1.2
baz=313,SNR=7.1
BW06 Boulder Array 61.46 57 P **P** 05 23 49.8 +0.7
BW06 IAmb IAmb 05 24 05.2
comp=Z,13nm,0.9s
PD31 Pinedale Array 61.46 57 P **P** 05 23 50.7 +1.6
PD31 IAmb IAmb 05 24 05.2
comp=Z,13nm,0.9s
PDAR Pinedale Array 61.46 57 P **P** 05 23 50.5 +1.4
comp=Z,8.4nm,0.8s,baz=327,slow=2.5,SNR=41
PDAR pP **pP** 05 24 04.5 +0.9
comp=Z,11nm,0.8s,baz=311,slow=2.8,SNR=16
FURC Furnace Creek, 61.53 66 P **P** 05 23 50.8 +1.4
baz=313,SNR=8.1
TPNV Topopah Spring 61.57 66 P **P** 05 23 51.3 +1.4
TPNV pmax pmax
comp=Z,6.0nm,0.9s
TPNV Topopah Spring 61.57 66 P **P** 05 23 51.0 +1.1
baz=313,SNR=5.5
TPNV Topopah Spring 61.57 66 P **P** 05 23 51.3 +1.4
TPNV IAmb IAmb 05 23 52.3
comp=Z,5.8nm,0.9s
EDW2 Edwards Air Fo 61.92 68 P **P** 05 23 53.1 +0.9
baz=313
SFJD Kangerlussuaq 61.93 12 P **P** 05 23 51.1 -0.4
comp=Z,7.9nm,0.7s,baz=1.7,slow=6.7,SNR=6.8
SFJD Kangerlussuaq 61.93 12 P **P** 05 23 50.9 -0.7
SFJD IAmb IAmb 05 23 52.1
comp=Z,8.1nm,0.8s
NLU North Lily Min 61.96 61 P **P** 05 23 53.0 +0.4
FINES FINESS Array B 62.25 335 P **P** 05 23 52.3 -1.5
comp=Z,2.4nm,0.7s,baz=29,slow=7.0,SNR=14
FINES LR LR 05 53 32.2
comp=Z,257nm,19.5s,baz=28,slow=39
SHOC Shoshone, Teco 62.26 66 P **P** 05 23 55.5 +1.1
baz=313
GSC Goldstone, Bar 62.35 67 P **P** 05 23 55.6 +0.5
GSC pmax pmax
comp=Z,6.0nm,0.9s
GSC Goldstone, Bar 62.35 67 P **P** 05 23 56.4 +1.3
baz=313
GSC Goldstone, Bar 62.35 67 P **P** 05 23 55.6 +0.5
GSC IAmb IAmb 05 23 57.1
comp=Z,6.4nm,0.9s
SHPR Sheep Range 62.51 65 P **P** 05 23 57.4 +1.2
BFSC Mount Baldy Ra 62.56 69 P **P** 05 23 57.6 +1.1
baz=313
TUQ Turquoise Moun 62.79 67 P **P** 05 23 58.8 +0.8
baz=313
CCUT Cedar City 62.85 63 P **P** 05 23 59.5 +1.0
MSU Marysvale 62.88 62 P **P** 05 24 00.8 +2.1
MSU Marysvale 62.88 62 P **P** 05 24 00.8 +2.1
TMUT Trail Mountain 62.90 61 P **P** 05 23 59.8 +0.8
RDMU Red Mountain 62.94 59 P **P** 05 24 00.4 +1.3
HEC Hector,Ludlow 62.95 67 P **P** 05 24 00.6 +1.6
baz=314
SZCU Shurtz Canyon 62.98 63 P **P** 05 24 00.5 +1.1
BBRC Big Bear Solar 62.99 68 P **P** 05 24 00.7 +1.2
baz=314
MDND Maddock 63.03 47 P **P** 05 24 00.6 +1.3
baz=315
MDND Maddock 63.03 47 P **P** 05 24 00.8 +1.5
ULM Lac du Bonnet 63.03 43 P **P** 05 23 59.7 +0.5
comp=Z,1.7nm,0.4s,baz=337,slow=9.5,SNR=4.1
ULM Lac du Bonnet 63.03 43 P **P** 05 23 59.7 +0.5
ULM pmax pmax
comp=Z,7.0nm,1.2s
ULM Lac du Bonnet 63.03 43 IAmb IAmb 05 24 02.0
comp=Z,7.0nm,1.1s
P17A Butcher Ranch, 63.04 60 P **P** 05 24 00.8 +1.1
K22A Casper 63.17 55 P **P** 05 24 01.6 +1.1
baz=314
K22A Casper 63.17 55 P **P** 05 24 01.2 +0.7
MTPU Mount Pierson 63.20 62 P **P** 05 24 02.2 +1.2
MURC Murrieta 63.28 69 P **P** 05 24 02.4 +1.2
baz=314
LCMT Little Creek M 63.29 64 P **P** 05 24 02.1 +0.8
GMRC Granite Mounta 63.39 67 P **P** 05 24 03.0 +1.0
baz=314,SNR=5.5
SRU San Rafael Swe 63.41 60 P **P** 05 24 03.3 +1.1
SRU pmax pmax
comp=Z,14nm,0.8s
SRU San Rafael Swe 63.41 60 P **P** 05 24 03.3 +1.1
RSSD Black Hills 63.45 52 P **P** 05 24 03.7 +1.3
RSSD pmax pmax
comp=Z,18nm,0.8s
RSSD Black Hills 63.45 52 P **P** 05 24 03.8 +1.3
baz=315
RSSD Black Hills 63.45 52 P **P** 05 24 03.7 +1.3
RWWY Rawlins 63.47 56 P **P** 05 24 03.1 +0.5
RWWY IAmb IAmb 05 24 16.8
comp=Z,6.1nm,0.8s
KNB Kanab 63.53 63 P **P** 05 24 04.7 +1.7
KNB pmax pmax
comp=Z,9.0nm,1.0s
KNB Kanab 63.53 63 P **P** 05 24 04.7 +1.7
PKCU Pink Cliffs 63.53 63 P **P** 05 24 05.6 +2.4
BELC Belle Mtn. Jos 63.73 68 P **P** 05 24 04.8 +0.6
baz=314
109C Camp Elliot, M 63.82 69 P **P** 05 24 06.0 +1.3
baz=314
O20A White River Ci 63.98 58 P **P** 05 24 07.0 +1.1
baz=314
O20A White River Ci 63.98 58 P **P** 05 24 06.7 +0.8
IRM Iron Mountain 64.13 67 P **P** 05 24 08.0 +1.2
baz=314,SNR=8.9
W13A Hualapai Mount 64.23 66 P **P** 05 24 09.0 +1.3
MONP2 Monument Peak 64.23 69 P **P** 05 24 08.5 +0.8
baz=314
U15A North Rim 64.25 64 P **P** 05 24 09.1 +1.3
BC3 Big Chuckawall 64.29 68 P **P** 05 24 08.6 +0.6
baz=314
COEN Coen 64.35 194 P **P** 05 24 09.2 +1.1
COEN IAmb IAmb 05 24 09.8
comp=Z,16nm,0.8s
AGMN Agassiz Nation 64.45 45 P **P** 05 24 09.1 +0.5
baz=317
AGMN Agassiz Nation 64.45 45 P **P** 05 24 09.4 +0.8
PV09 Paradox Valley 64.62 60 P **P** 05 24 11.1 +0.8
PDMCI Parker Dam,Lak 64.63 66 P **P** 05 24 11.1 +1.1
baz=314,SNR=6.0
PV21 Cone Mtn., Par 64.66 60 P **P** 05 24 11.1 +0.6
PV21 IAmb IAmb 05 24 26.5
comp=Z,9.4nm,0.8s
N23A Red Feather La 64.70 56 P **P** 05 24 12.3 +1.6
baz=315,SNR=6.1
PV23 Carpenter Ridg 64.72 60 P **P** 05 24 11.4 +0.6
PV23 IAmb IAmb 05 24 27.1
comp=Z,23nm,1.4s
PV10 Paradox Valley 64.76 60 P **P** 05 24 12.9 +1.8
PV22 Blue Mesa, Par 64.79 60 P **P** 05 24 12.2 +0.9
PV22 IAmb IAmb 05 24 13.6
comp=Z,8.8nm,0.8s
PV04 Paradox Valley 64.82 60 P **P** 05 24 12.8 +1.4
PV04 IAmb IAmb 05 24 27.1
comp=Z,12nm,0.9s
PV20 West Nyswonger 64.82 60 P **P** 05 24 12.8 +1.4
PV20 IAmb IAmb 05 24 13.7
comp=Z,9.4nm,0.9s
PV17 East Wray Mesa 64.87 60 P **P** 05 24 12.6 +0.8
PV11 David Mesa, Pa 64.90 60 P **P** 05 24 12.7 +0.7
PV11 IAmb IAmb 05 24 27.6
comp=Z,15nm,0.8s
PV18 Skein Mesa, Pa 64.92 60 P **P** 05 24 13.5 +1.4
PV18 IAmb IAmb 05 24 14.5
comp=Z,17nm,1.0s
PV05 Paradox Valley 64.93 60 P **P** 05 24 13.7 +1.5
PV12 Saucer Basin, 64.93 60 P **P** 05 24 13.0 +0.8
PV12 IAmb IAmb 05 24 28.6
comp=Z,20nm,1.3s
PV07 Paradox Valley 64.93 60 P **P** 05 24 12.8 +0.6
PV03 Paradox Valley 64.95 60 P **P** 05 24 13.8 +1.5
PV03 IAmb IAmb 05 24 27.9
comp=Z,9.4nm,0.9s
PV13 Radium Mtn., P 65.03 60 P **P** 05 24 14.2 +1.3
PV13 IAmb IAmb 05 24 28.5
comp=Z,15nm,0.8s
GLA Glamis 65.09 68 P **P** 05 24 14.2 +1.2
baz=314
PV15 Paradox Valley 65.09 60 P **P** 05 24 14.6 +1.3
PV15 IAmb IAmb 05 24 29.3
comp=Z,9.2nm,0.9s
PV01 Paradox Valley 65.19 60 P **P** 05 24 14.8 +0.9
PV01 IAmb IAmb 05 24 16.4
comp=Z,13nm,1.4s
B35A Bob, Littlefor 65.38 44 P **P** 05 24 14.3 -0.3
B35A IAmb IAmb 05 24 15.9
comp=Z,7.1nm,0.8s
WUAZ Wupatki 65.41 64 P **P** 05 24 17.1 +1.8
baz=315
WUAZ Wupatki 65.41 64 P **P** 05 24 16.4 +1.2
Y14A Wickenburg 65.56 66 P **P** 05 24 17.5 +1.4
ISCO Idaho Springs 65.65 57 P **P** 05 24 18.4 +1.5
ISCO pmax pmax
comp=Z,11nm,0.9s
ISCO Idaho Springs 65.65 57 P **P** 05 24 18.7 +1.8
baz=315,SNR=13
ISCO Idaho Springs 65.65 57 P **P** 05 24 18.4 +1.5
ISCO IAmb IAmb 05 24 19.8
comp=Z,11nm,0.8s
SUSD Miller 65.79 49 P **P** 05 24 18.1 +0.8
baz=317
MVCO Mesa Verde 65.88 61 P **P** 05 24 19.6 +1.2
baz=315,SNR=5.8
MVCO Mesa Verde 65.88 61 P **P** 05 24 19.4 +1.0
MVCO IAmb IAmb 05 24 33.9
comp=Z,7.2nm,0.9s
113A Mohawk Valley, 65.92 67 P **P** 05 24 18.8 +0.5
MTN Manton Dam 65.99 207 P **P** 05 24 19.2 +0.4
F33A 5 Mile Ranch, 66.05 47 P **P** 05 24 19.3 +0.3
F33A IAmb IAmb 05 24 20.7
comp=Z,14nm,0.9s
NB2 NORSAR Subarra 66.10 342 P **P** 05 24 18.3 -0.8
comp=Z,1.2nm,0.6s,baz=24,slow=6.5
NOA NORSAR Array B 66.10 342 P **P** 05 24 17.8 -1.3
comp=Z,1.8nm,0.7s,baz=24,slow=6.3,SNR=9.8
X16A Lo Mia Camp, P 66.14 65 P **P** 05 24 21.6 +1.5
S22A 4UR Ranch, Cre 66.44 59 P **P** 05 24 23.6 +1.6
baz=316,SNR=11
Q24A Divide 66.50 57 P **P** 05 24 23.5 +1.1
baz=316
W18A Petrified Fore 66.64 63 P **P** 05 24 24.4 +1.2
baz=315
EYMN Ely 66.67 43 P **P** 05 24 23.2 +0.2
baz=319,SNR=9.6
EYMN Ely 66.67 43 P **P** 05 24 23.2 +0.2
EYMN IAmb IAmb 05 24 24.3
comp=Z,11nm,0.9s
OGNE Ogallala 66.75 54 P **P** 05 24 24.7 +1.0
baz=316,SNR=8.4
OGNE Ogallala 66.75 54 P **P** 05 24 25.1 +1.4
GEYT Alibeck 66.80 302 P **P** 05 24 24.1 +0.1
comp=Z,4.2nm,0.7s,baz=41,slow=2.7,SNR=6.9
X18A Snowflake 66.94 64 P **P** 05 24 27.2 +2.1
214A Organ Pipe Nat 67.06 67 P **P** 05 24 27.2 +1.4
baz=315
214A Organ Pipe Nat 67.06 67 P **P** 05 24 27.4 +1.7
214A IAmb IAmb 05 24 28.1
comp=Z,13nm,1.4s
PSI Prapat 67.11 246 P **P** 05 24 26.8 +0.5
PSI pmax pmax
comp=Z,8.0nm,1.0s
SDCO Great Sand Dun 67.18 58 P **P** 05 24 27.9 +1.3
baz=316,SNR=8.6
SDCO Great Sand Dun 67.18 58 P **P** 05 24 28.1 +1.4
RPSI Rantau Prapat 67.20 246 P **P** 05 24 26.8 +0.1
K31A O'Neill 67.21 51 P **P** 05 24 27.4 +0.9
ECSD EROS Data Cent 67.45 49 P **P** 05 24 28.3 +0.3
baz=318,SNR=20
ECSD EROS Data Cent 67.45 49 P **P** 05 24 28.6 +0.6
IVI Ivigtut 67.79 12 P **P** 05 24 28.9 -0.8
IVI IAmb IAmb 05 24 30.9
comp=Z,16nm,0.9s
KSCO Kaye Shedlock' 67.83 56 P **P** 05 24 31.4 +0.8
baz=317
KSCO Kaye Shedlock' 67.83 56 P **P** 05 24 31.6 +1.1
KSCO IAmb IAmb 05 24 32.6
comp=Z,10nm,0.9s
TUC Tucson 68.02 66 P **P** 05 24 33.2 +1.3
TUC pmax pmax
comp=Z,5.0nm,1.1s

TUC	Tucson	68.02	66	P		P	05 24 33.4	+1.6	
	baz=316								
TUC	Tucson	68.02	66	P		P	05 24 33.1	+1.3	
SPMN	Marine on St.	68.14	45	P		P	05 24 32.5	+0.3	
	baz=320,SNR=5.1								
SPMN	Marine on St.	68.14	45	P		P	05 24 32.7	+0.5	
SPMN				IAmb		IAmb	05 24 33.7		
	comp=Z,9.4nm,0.7s								
T25A	Trinidad	68.21	58	P		P	05 24 34.2	+1.1	
	baz=317,SNR=7.4								
BGNE	Belgrade	68.41	51	P		P	05 24 34.5	+0.5	
	baz=318								
D41A	Chassel	68.63	42	P		P	05 24 35.7	+0.4	
D41A				IAmb		IAmb	05 24 51.7		
	comp=Z,9.3nm,0.9s								
ANMO	Albuquerque	68.65	61⇑	*eP*		P	05 24 37.2	+1.3	
ANMO				pmax		pmax			
	comp=Z,4.0nm,0.8s								
ANMO	Albuquerque	68.65	61	P		P	05 24 37.1	+1.3	
	baz=316								
ANMO	Albuquerque	68.65	61	P		P	05 24 37.5	+1.7	
I37A	Lemond, Waseca	68.78	46	P		P	05 24 37.1	+0.9	
L34A	Svendsen Farm,	68.88	50	P		P	05 24 37.3	+0.3	
L34A				IAmb		IAmb	05 24 38.0		
	comp=Z,15nm,0.7s								
COWI	Conover	69.13	43	P		P	05 24 38.5	+0.1	
GOF	Gofitskoye	69.16	316⇑	*eP*		P	05 24 39.1	+0.5	
G40A	Rib Lake	69.30	44	P		P	05 24 39.9	+0.4	
CBKS	Cedar Bluff	69.51	54	P		P	05 24 41.3	+0.3	
	baz=318								
319A	Douglas	69.58	65	P		P	05 24 42.7	+1.1	
319A				IAmb		IAmb	05 24 44.1		
	comp=Z,15nm,0.9s								
E43A	Lone Tree Farm	69.84	41	P		P	05 24 42.8	0.0	
SCHQ	Schefferville	69.85	25	P		P	05 24 43.1	+0.5	
	comp=Z,8.8nm,0.6s,baz=3.4,slow=5.9,SNR=16								
SCHQ	Schefferville	69.85	25	P		P	05 24 43.2	+0.5	
SCHQ				IAmb		IAmb	05 24 44.1		
	comp=Z,25nm,1.1s								
N35A	Tabor	70.08	50	P		P	05 24 45.0	+0.6	
I40A	Norwalk	70.17	45	P		P	05 24 45.0	+0.1	
I40A				IAmb		IAmb	05 24 46.0		
	comp=Z,14nm,1.1s								
KIV	Kislovodsk	70.17	315⇓	*eP*		P	05 24 44.1	-0.9	
KIV							05 27 20.0		
KIV				S		S	05 33 44.0	-8.2	
KIV				*SS		pS	05 34 12.0	+1.8	
KIV				pmax		pmax			
	comp=Z,6.0nm,0.7s								
KIV				MLR		MLR			
	comp=Z,96nm,20.0s								
AKASG	Malin Array Be	70.21	327	P		P	05 24 42.5	-2.5	
	comp=Z,1.2nm,0.4s,baz=32,slow=6.2,SNR=8.8								
AKASG				LR		LR	05 57 47.5		
	comp=Z,168nm,20.4s,baz=15,slow=38								
KBZ	Khabaz	70.25	315	P		P	05 24 44.6	-0.7	
	comp=Z,5.7nm,0.8s,baz=57,slow=4.0,SNR=7.4								
KBZ	Khabaz	70.25	315⇓	*eP*		P	05 24 45.3	0.0	
SCIA	State Center	70.47	48	P		P	05 24 47.1	+0.3	
	baz=320								
SCIA	State Center	70.47	48	P		P	05 24 47.4	+0.7	
ZEI	Tsey	70.51	314	*eP*		P	05 24 45.2	-2.0	
ZEI				pmax		pmax			
	comp=Z,5.0nm,0.8s								
D46A	Sault St. Mari	70.67	39	P		P	05 24 47.4	-0.5	
	baz=324								
MATQ	Matagami	70.79	34	P		P	05 24 47.9	-0.6	
	baz=326								
D47A	Chapleau	70.92	38	P		P	05 24 48.8	-0.6	
	baz=324								
KSU1	Kansas State U	70.92	52	P		P	05 24 49.4	-0.1	
	baz=319								
KSU1	Kansas State U	70.92	52	P		P	05 24 49.0	-0.5	
KSU1				IAmb		IAmb	05 24 49.8		
	comp=Z,13nm,0.7s								
I42A	Draeger Farm,	70.95	44	P		P	05 24 50.0	+0.4	
I42A				IAmb		IAmb	05 24 50.1		
	comp=Z,7.4nm,0.7s								
F45A	CMU Biological	71.02	41	P		P	05 24 50.1	+0.2	
	baz=323								
N38A	Joes South For	71.32	49	P		P	05 24 52.5	+0.6	
N38A				IAmb		IAmb	05 24 53.0		
	comp=Z,17nm,0.8s								
E47A	Iron Bridge	71.33	39	P		P	05 24 51.3	-0.5	
	baz=324								
D48A	Paudash Townsh	71.34	38	P		P	05 24 51.1	-0.8	
	baz=325								
AMTX	Amarillo	71.37	58	P		P	05 24 53.3	+0.9	
	baz=318								
AMTX	Amarillo	71.37	58	P		P	05 24 53.6	+1.2	
D49A	Beulah Townshi	71.44	37	P		P	05 24 52.2	-0.3	
	baz=325								
MSTX	Muleshoe	71.44	59	P		P	05 24 53.5	+0.7	
	baz=318,SNR=6.9								
MSTX	Muleshoe	71.44	59	P		P	05 24 53.8	+0.9	
MSTX				IAmb		IAmb	05 24 54.8		
	comp=Z,11nm,0.9s								
G46A	Petoskey	71.59	41	P		P	05 24 53.6	+0.2	
	baz=324								
LSQQ	Lebel-sur-Quev	71.61	34	P		P	05 24 53.4	-0.1	
	baz=327								
MNTX	Cornudas Mount	71.63	63	P		P	05 24 55.0	+1.1	
	baz=318,SNR=8.3								
MNTX	Cornudas Mount	71.63	63	P		P	05 24 55.2	+1.3	
U32A	Winter Ranch,	71.71	55	P		P	05 24 55.2	+0.9	
U32A				IAmb		IAmb	05 24 56.5		
	comp=Z,17nm,1.0s								
WB0	Warramunga Arr	71.74	202	P		P	05 24 54.5	0.0	
CHGQ	Chibougamau	71.80	32	P		P	05 24 54.3	-0.4	
	baz=328,SNR=7.0								
WR0	Warramunga Arr	71.89	201	P		P	05 24 55.7	+0.3	
WR0				IAmb		IAmb	05 24 56.9		
	comp=Z,21nm,0.9s								
WRAB	Tennant Creek	71.91	202	*c i*	P	P	05 24 55.2	-0.3	
WRAB				pmax		pmax			
	comp=Z,19nm,0.8s								
WB2	Warramunga Arr	71.92	202	P		P	05 24 56.0	+0.4	
WRA	Warramunga Arr	71.92	202	P		P	05 24 55.6	0.0	
	comp=Z,18nm,0.9s,baz=18,slow=6.6,SNR=30								
WRA				pP		pP	05 25 08.9	-1.4	
	comp=Z,7.0nm,0.9s,baz=17,slow=6.6,SNR=6.1								
DZM	Mont Dzumac	71.99	170	*e* LR		LR	05 46 52.0		
	comp=Z,170nm,27.9s								
P38A	Dawn	72.06	50	P		P	05 24 56.7	+0.3	
P38A				IAmb		IAmb	05 24 57.5		
	comp=Z,15nm,0.8s								
GLMI	Grayling	72.09	41	P		P	05 24 56.7	+0.3	
	baz=324								
F48A	Evansville	72.11	39	P		P	05 24 56.1	-0.4	
	baz=324								
D50A	G1974 Best Tow	72.11	36	P		P	05 24 56.0	-0.5	
	baz=326								
G47A	Hillman	72.13	40	P		P	05 24 56.3	-0.3	
	baz=324								
VLDQ	Val d'Or	72.23	34	P		P	05 24 56.3	-0.9	
VLDQ				IAmb		IAmb	05 24 57.1		
	comp=Z,14nm,1.1s								
F49A	Sandfield	72.39	39	P		P	05 24 57.9	-0.3	
	baz=325								
I46A	Reed City	72.44	42	P		P	05 24 59.0	+0.4	
	baz=323								
N41A	Harden Midland	72.53	47	P		P	05 24 59.5	+0.4	
FITZ	Fitzroy Crossi	72.64	210	P		P	05 25 00.3	+0.5	
FITZ				IAmb		IAmb	05 25 01.7		
	comp=Z,17nm,1.0s								
H48A	Harrisville	72.73	40	P		P	05 25 00.5	+0.3	
	baz=324								
E51A	G1948 Merrick	72.77	37	P		P	05 25 00.2	-0.3	
	baz=326								
I47A	Gladwin	72.78	41	P		P	05 25 00.5	0.0	
	baz=324								
J46A	Howard City	72.83	42	P		P	05 25 01.4	+0.6	
	baz=323								
P40A	Paris	72.87	49	P		P	05 25 01.5	+0.4	
P40A				IAmb		IAmb	05 25 02.5		
	comp=Z,16nm,0.9s								
I48A	Sherman Twp	72.99	41	P		P	05 25 01.6	-0.2	
	baz=324								
WMOK	Wichita Mounta	73.06	56	P		P	05 25 03.2	+0.8	
WMOK				pmax		pmax			
	comp=Z,12nm,0.8s								
WMOK	Wichita Mounta	73.06	56	P		P	05 25 03.0	+0.6	
	baz=319,SNR=25								
WMOK	Wichita Mounta	73.06	56	P		P	05 25 03.2	+0.8	
WMOK				IAmb		IAmb	05 25 04.1		
	comp=Z,12nm,0.8s								
J47A	Sunmer	73.27	42	P		P	05 25 03.9	+0.4	
	baz=324,SNR=5.1								
J47A	Sunmer	73.27	42	P		P	05 25 04.5	+1.1	
D54A	Lac Fusel, La	73.33	35	P		P	05 25 03.7	-0.1	
	baz=328								
HDIL	Hopedale	73.39	46	P		P	05 25 04.5	+0.3	
	baz=322								
HDIL	Hopedale	73.39	46	P		P	05 25 04.7	+0.5	
FNO	Franklin	73.41	55	P		P	05 25 06.0	+1.5	
F52A	Sundridge	73.45	37	P		P	05 25 04.2	-0.3	
	baz=326								
K47A	Vermontville	73.65	42	P		P	05 25 05.9	+0.2	
	baz=324								
R40A	Maddies Statio	73.72	50	P		P	05 25 06.2	0.0	
R40A				IAmb		IAmb	05 25 07.1		
	comp=Z,16nm,0.8s								
E54A	Lac Daplat, Po	73.73	35	P		P	05 25 05.9	-0.3	
	baz=327								
TUL1	Leonard	73.76	53	P		P	05 25 07.0	+0.5	
	baz=320,SNR=6.2								
TUL1	Leonard	73.76	53	P		P	05 25 07.2	+0.7	
TUL1				IAmb		IAmb	05 25 07.9		
	comp=Z,15nm,0.7s								
W35A	Tecumseh	73.77	55	P		P	05 25 07.3	+0.8	
ALGO	Algonquin Park	73.81	36	P		P	05 25 06.7	+0.1	
	baz=327								
D55A	Sainte-Anne-du	73.87	34	P		P	05 25 06.6	-0.3	
	baz=328								
K48A	Perry	73.93	42	P		P	05 25 07.8	+0.5	
	baz=324,SNR=5.5								
U38A	Gravette	74.08	52	P		P	05 25 08.5	+0.1	
D56A	ZEC Mazanza, M	74.11	33	P		P	05 25 08.4	+0.1	
	baz=329								
E55A	Montcerf-Lytto	74.14	35	P		P	05 25 07.5	-1.0	
	baz=328								
ABTX	Abilene, Hawle	74.18	58	P		P	05 25 09.7	+0.7	
	baz=319,SNR=10								
ABTX	Abilene, Hawle	74.18	58	P		P	05 25 09.7	+0.7	
ABTX				IAmb		IAmb	05 25 11.0		
	comp=Z,13nm,0.9s								
H52A	Wyevale	74.18	38	P		P	05 25 08.6	-0.2	
	baz=326								
BUR08	Bucovina Ar. S	74.21	328	P		P	05 25 08.1	-1.0	
BURAR	Bucovina Array	74.23	328	⇑P		P	05 25 07.6	-1.5	
BURAR	Bucovina Array	74.23	328	P		P	05 25 09.0	-0.1	
K49A	Clarkson	74.23	41	P		P	05 25 09.9	+0.8	
	baz=325,SNR=5.6								
G53A	Haliburton	74.28	37	P		P	05 25 09.3	0.0	
	baz=327								
TX31	Lajitas Ar. Si	74.37	63	P		P	05 25 11.4	+1.2	
TX32	Lajitas Array	74.37	63	P		P	05 25 11.4	+1.2	
TX32				IAmb		IAmb	05 25 12.4		
	comp=Z,13nm,0.8s								
TXAR	Lajitas Array	74.37	63	P		P	05 25 11.4	+1.2	
	comp=Z,10nm,0.7s,baz=299,slow=4.2,SNR=108								
TXAR				pP		PcP	05 25 24.1	-0.6	
	comp=Z,4.4nm,0.6s,baz=304,slow=4.8,SNR=9.4								
CCM	Cathedral Cave	74.41	49	P		P	05 25 10.8	+0.6	
	baz=322								
HHAR	Hobbs	74.43	52	P		P	05 25 10.0	-0.4	
HHAR				IAmb		IAmb	05 25 11.3		
	comp=Z,9.5nm,0.6s								
M47A	Cromwell	74.43	43	P		P	05 25 10.7	+0.4	
	baz=324								
E56A	St. Veronique	74.44	34	P		P	05 25 10.1	-0.1	
	baz=329								
OSTC	Ostas	74.44	335	AMS		AMS	05 41 30.0		
	comp=Z,200nm,24.0s								
D57A	Chemin Vers le	74.44	33	P		P	05 25 10.6	+0.3	
	baz=329,SNR=8.9								
CHVC	Chvalec	74.45	335	AMS		AMS	05 41 30.0		
	comp=Z,300nm,24.9s								
BIZ	Bicaz	74.50	327	⇑P		P	05 25 09.0	-1.5	
LATQ	La Tuque	74.51	32	P		P	05 25 10.8	+0.1	
	baz=330								
OKC	Ostrava-Krasne	74.53	333	AMS		AMS	05 47 20.0		
	comp=Z,300nm,18.1s								
AAM	Ann Arbor	74.53	42	P		P	05 25 11.4	+0.6	
	baz=325								
UPC	Upice	74.54	335	AMS		AMS	05 41 30.0		
	comp=Z,300nm,23.9s								
SFIN	Lafayette	74.55	45	P		P	05 25 10.8	-0.1	
	baz=323								
F55A	Otter Lake	74.55	35	P		P	05 25 10.6	-0.3	
	baz=328								
K50A	Casco	74.59	41	P		P	05 25 10.8	-0.4	
	baz=325								
DPC	Dobruska-Polom	74.59	335	AMS		AMS	05 45 10.0		
	comp=Z,200nm,12.3s								
MGMO	Mountain Grove	74.60	50	P		P	05 25 10.8	-0.6	
CLL	Collm	74.61	337	*eP*		P	05 25 11.0	-0.1	
	comp=Z,7.0nm,1.1s								
CLL				*ep*	P	pP	05 25 27.0	+1.0	
CLL				*es*	P	sP	05 25 30.0	-1.9	
CLL				LmV			06 00 00.0		
	comp=Z,200nm,19.6s								
CLL	Collm	74.61	337	P		P	05 25 11.6	+0.5	
CLL				pmax		pmax			
	comp=Z,7.0nm,1.1s								
CLL	Collm	74.61	337	P		P	05 25 11.6	+0.5	
TESR	Tescani	74.67	326	⇑P		P	05 25 10.4	-1.2	
TRPA	Tarpa	74.68	330	⇑P		P	05 25 11.0	-0.6	
D58A	Chemin du LacG	74.73	32	P		P	05 25 12.2	+0.3	
	baz=330								
H53A	Bobcaygeon	74.76	37	P		P	05 25 11.9	-0.2	
	baz=327								
MORC	Moravsky Berou	74.76	334	*eP*		P	05 25 12.7	+0.6	
MORC	Moravsky Berou	74.76	334	⇑P		P	05 25 12.0	-0.1	
MORC	Moravsky Berou	74.76	334	P		P	05 25 12.1	-0.1	
MORC				pmax		pmax			
	comp=Z,7.0nm,0.9s								
MORC	Moravsky Berou	74.76	334	P		P	05 25 12.1	-0.1	
E57A	Chemin Saint G	74.87	33	P		P	05 25 12.4	-0.4	
	baz=329								
G55A	Calabogie	74.91	36	P		P	05 25 13.0	+0.1	
	baz=328								
PVCC	Panska Ves	74.91	336	AMS		AMS	05 40 50.0		
	comp=Z,300nm,24.3s								
U40A	Yellville	74.93	51	P		P	05 25 13.3	+0.1	
	baz=321,SNR=24								
U40A	Yellville	74.93	51	P		P	05 25 13.4	+0.1	
X37A	Clayton	74.99	54	P		P	05 25 14.2	+0.5	
N48A	Decatur	75.10	43	P		P	05 25 14.1	-0.1	
	baz=324,SNR=5.9								
J52A	Paris	75.11	39	P		P	05 25 14.0	-0.2	
	baz=326								
K51A	Iona Station	75.11	40	P		P	05 25 14.3	+0.2	
	baz=326								
P46A	Rosedale	75.11	46	P		P	05 25 14.6	+0.4	
P46A				IAmb		IAmb	05 25 15.4		
	comp=Z,19nm,0.8s								
L50A	Kingsville	75.11	41	P		P	05 25 14.6	+0.5	
	baz=325								
D59A	Saint-Raymond	75.16	32	P		P	05 25 14.9	+0.5	
	baz=330								
E58A	La Victoria	75.21	33	P		P	05 25 14.9	+0.2	
	baz=330,SNR=5.4								
CFR	Carcaliu	75.26	325	⇑P		P	05 25 14.3	-0.7	
T42A	Van Buren	75.29	50	P		P	05 25 15.0	-0.3	
DIKM	Dikmen	75.32	318	⇑P		P	05 25 15.4	0.0	
H55A	Tweed	75.32	36	P		P	05 25 15.5	+0.1	
	baz=328								
W39A	Magazine	75.35	53	P		P	05 25 15.8	+0.2	
	baz=321,SNR=5.9								
W39A	Magazine	75.35	53	P		P	05 25 16.1	+0.4	
W39A				IAmb		IAmb	05 25 16.5		
	comp=Z,8.8nm,0.8s								
PRA	Prague	75.37	336	AMS		AMS	05 41 10.0		
	comp=Z,200nm,26.3s								
K52A	Tillsonburg	75.39	40	P		P	05 25 16.1	+0.3	
	baz=326								
OLIL	Olney	75.39	47	P		P	05 25 16.2	+0.4	
OLIL				IAmb		IAmb	05 25 17.3		
	comp=Z,14nm,1.1s								
I55A	Frankford	75.41	37	P		P	05 25 15.8	-0.1	
	baz=327								
PRU	Pruhonice	75.41	335	*eP*		P	05 25 16.5	+0.7	
PRU				MLR		MLR			
	comp=Z,300nm,22.5s								
PRU	Pruhonice	75.41	335	*eP*		P	05 25 16.5	+0.7	
PRU				AMS		AMS	05 41 30.0		
	comp=Z,300nm,22.5s								
GOPC	GO Pecny, Ondr	75.41	335	AMS		AMS	05 41 30.0		
	comp=Z,300nm,25.5s								
VRAC	Vranov	75.46	334	*eP*		P	05 25 17.0	+0.9	
VYHS	Vyhne	75.53	332	*eP*		P	05 25 17.6	+1.1	
VYHS				pmax		pmax			
	comp=Z,5.0nm,0.9s								
VYHS	Vyhne	75.53	332	*eP*		P	05 25 17.6	+1.1	
O48A	Farmland	75.53	44	P		P	05 25 16.4	-0.2	
	baz=324,SNR=5.8								
D61A	St Aubert, Com	75.55	31	P		P	05 25 16.7	+0.1	
	baz=331								
JAVC	Velka Javorina	75.55	333	*eP*		P	05 25 18.1	+1.4	
D60A	Saint Jean D'O	75.55	31	P		P	05 25 16.9	+0.3	
	baz=331								
MOX	Moxa	75.57	338	*e* L		L	05 59 32.6		
	comp=Z,181nm,21.6s								
AS31	Alice Springs	75.61	201	P		P	05 25 17.6	+0.5	
H56A	Elgin	75.64	36	P		P	05 25 17.1	0.0	
	baz=328								
FCAR	Ozark Folk Cen	75.66	51	P		P	05 25 17.4	-0.1	
FCAR				IAmb		IAmb	05 25 18.2		
	comp=Z,13nm,0.7s								
S44A	Carbondale	75.66	48	P		P	05 25 18.0	+0.6	
S44A				IAmb		IAmb	05 25 18.8		
	comp=Z,11nm,0.7s								
SIUC	Southern Illin	75.66	48	P		P	05 25 18.2	+0.8	
SIUC				IAmb		IAmb	05 25 18.8		
	comp=Z,9.7nm,0.6s								
G57A	Newington	75.68	35	P		P	05 25 17.2	-0.1	
	baz=329								
JCT	Junction City	75.71	60	P		P	05 25 18.7	+0.8	
JCT				pmax		pmax			
	comp=Z,14nm,0.9s								
JCT	Junction City	75.71	60	P		P	05 25 18.6	+0.6	
	baz=320,SNR=5.2								
JCT	Junction City	75.71	60	P		P	05 25 18.7	+0.8	
JCT				IAmb		IAmb	05 25 19.6		
	comp=Z,14nm,0.8s								
KRUC	Moravsky	75.74	334	*eP*		P	05 25 18.4	+0.7	
NKC	Novy Kostel	75.74	337	AMS		AMS	05 43 10.0		
	comp=Z,300nm,20.7s								
HARR	Harsova	75.75	325	⇑P		P	05 25 16.7	-1.1	
TIRR	Tirgusor	75.76	324	P		P	05 25 17.8	-0.1	
TIRR				pmax		pmax			
	comp=Z,12nm,0.9s								
TIRR	Tirgusor	75.76	324	P		P	05 25 17.8	-0.1	
TIRR				IAmb		IAmb	05 25 22.7		
	comp=Z,12nm,0.9s								
TREC	Trest	75.78	335	AMS		AMS	05 44 40.0		
	comp=Z,300nm,16.5s								
DRGR		75.79	329	⇓P		P	05 25 17.3	-0.8	
MLR	Muntele Rosu	75.80	326	⇑P		P	05 25 17.8	-0.5	
MLR	Muntele Rosu	75.80	326	P		P	05 25 17.7	-0.5	
MLR				pmax		pmax			
	comp=Z,4.0nm,0.7s								
MLR	Muntele Rosu	75.80	326	P		P	05 25 17.7	-0.6	
J54A	Appleton	75.82	38	P		P	05 25 18.5	+0.3	
	baz=327								
F59A	Saint Guilaume	75.83	33	P		P	05 25 18.4	+0.2	
	baz=330								
E60A	Ste Agathe de	75.85	32	P		P	05 25 18.2	-0.1	
	baz=331								
WHTX	Lake Whitney,	75.86	57	P		P	05 25 19.4	+0.8	
	baz=320,SNR=10								
WHTX	Lake Whitney,	75.86	57	P		P	05 25 19.6	+0.9	
WHTX				IAmb		IAmb	05 25 20.4		
	comp=Z,15nm,0.8s								
MIAR	Mount Ida	75.96	53	P		P	05 25 20.0	+0.8	
MIAR				pmax		pmax			
	comp=Z,16nm,0.8s								
MIAR	Mount Ida	75.96	53	P		P	05 25 19.7	+0.5	
	baz=321,SNR=18								
MIAR	Mount Ida	75.96	53	P		P	05 25 19.9	+0.8	
MIAR				IAmb		IAmb	05 25 20.8		
	comp=Z,16nm,0.8s								
G58A	Ormstown	75.98	34	P		P	05 25 18.7	-0.4	
	baz=329								
N50A	Nevada	76.00	42	P		P	05 25 19.8	+0.5	
	baz=325								
D62A	Allapoint, All	76.03	30	P		P	05 25 19.7	+0.3	
	baz=332								
WHAR	Wooly Hollow	76.05	52	P		P	05 25 19.9	+0.3	
WHAR				IAmb		IAmb	05 25 20.9		
	comp=Z,27nm,1.3s								
P48A	Milroy	76.05	45	P		P	05 25 19.1	-0.5	
P48A				IAmb		IAmb	05 25 20.2		
	comp=Z,13nm,0.9s								
MODS	Modra-Piesok	76.10	333	*eP*		P	05 25 19.8	0.0	
MODS				pmax		pmax			
	comp=Z,11nm,1.0s								
MODS	Modra-Piesok	76.10	333	*eP*		P	05 25 19.8	0.0	
J55A	Hilton	76.16	37	P		P	05 25 20.3	+0.2	
	baz=328								
J55A	Hilton	76.16	37	P		P	05 25 20.4	+0.2	
J55A				IAmb		IAmb	05 25 21.0		
	comp=Z,15nm,0.8s								
W41B	Gary Mavity, V	76.16	52	P		P	05 25 20.3	0.0	
	baz=322,SNR=11								
VOIR		76.16	327	⇑P		P	05 25 19.8	-0.5	
USIN	University of	76.21	47	P		P	05 25 21.0	+0.5	
N51A	Ashland	76.22	42	P		P	05 25 20.6	0.0	
	baz=326								
PARMO	Parma	76.24	49	P		P	05 25 21.4	+0.7	
E62A	Clayton Lake	76.28	30	P		P	05 25 21.2	+0.4	
	baz=332								
O50A	Cable	76.31	43	P		P	05 25 21.5	+0.5	
	baz=325								
P49A	Miami Univ. Ec	76.31	44	P		P	05 25 21.4	+0.3	
	baz=324								
F61A	St Evariste	76.35	32	P		P	05 25 21.9	+0.7	
	baz=331								
K54A	Basiliko Farm,	76.36	38	P		P	05 25 21.3	0.0	
	baz=327								
ARR	Arges	76.37	327	⇑P		P	05 25 21.4	0.0	
X40A	Basin Creek Fa	76.39	52	P		P	05 25 22.1	+0.4	
	baz=322								
X40A	Basin Creek Fa	76.39	52	P		P	05 25 22.3	+0.7	
I57A	Carthage	76.42	36	P		P	05 25 21.7	+0.1	
	baz=329								
KHC	Kasperske Hory	76.45	336	*ce*	P	P	05 25 22.8	+1.0	
KHC				pmax		pmax			
	comp=Z,12nm,0.8s								
KHC	Kasperske Hory	76.45	336	*eP*		P	05 25 22.8	+1.0	
KHC				*ex*		x	05 25 26.7		
KHC				AMS		AMS	05 42 20.0		
	comp=Z,300nm,23.8s								
KHC	Kasperske Hory	76.45	336	P		P	05 25 22.4	+0.7	
T45A	Paducah	76.49	48

	comp=Z,9.7nm,1.1s							
MEM					pP		pP	05 25 37.9 -1.2
CONA	**Conrad Observa**	**76.91**	**334**	*i* P		P		05 25 25.8 +1.3
	comp=Z,6.8nm,0.9s							
N53A	**Lisbon**	**76.97**	**41**	P		P		05 25 25.0 +0.2
	baz=326							
E64A	**Bridgewater**	**77.01**	**30**	P		P		05 25 25.0 +0.1
	baz=333							
J58A	**Remsen**	**77.06**	**36**	P		P		05 25 25.1 -0.2
	baz=329							
P51A	**Williamsport**	**77.10**	**43**	P		P		05 25 25.7 +0.2
	baz=325							
O52A	**Adamsville**	**77.11**	**42**	P		P		05 25 25.8 +0.2
	baz=326							
G62A	**West of Eustis**	**77.17**	**32**	P		P		05 25 26.4 +0.6
	baz=331							
N54A	**Moraine State**	**77.20**	**40**	P		P		05 25 26.5 +0.4
	baz=327							
L56A	**Greenwood**	**77.21**	**38**	P		P		05 25 26.3 +0.1
	baz=328							
I59A	**Olmsteadville**	**77.21**	**35**	P		P		05 25 26.1 -0.1
	baz=330							
F63A	**Nahmakanta, Br**	**77.22**	**31**	P		P		05 25 26.1 0.0
	baz=332							
T47A	**Sharon Grove**	**77.26**	**47**	P		P		05 25 27.6 +1.2
T47A				IAmb		IAmb		05 25 28.2
	comp=Z,11nm,0.9s							
WSAR	**Wadi Sarin**	**77.26**	**291**	LR		LR		06 03 49.3
	comp=Z,236nm,19.6s,baz=76,slow=39							
J59A	**Piesco**	**77.26**	**35**	P		P		05 25 26.4 -0.1
	baz=329							
O53A	**New Philadelph**	**77.27**	**41**	P		P		05 25 26.8 +0.3
	baz=326							
H61A	**Lyndonville**	**77.28**	**33**	P		P		05 25 27.0 +0.5
	baz=331							
M55A	**Ridgway**	**77.28**	**39**	P		P		05 25 26.5 -0.1
	baz=327							
F64A	**Sherman**	**77.33**	**30**	P		P		05 25 26.7 0.0
	baz=332							
SNF	**Seneffe**	**77.34**	**342**	P		P		05 25 23.5 -3.2
X43A	**Marvell**	**77.37**	**51**	P		P		05 25 27.8 +0.8
	baz=322							
Z41A	**Richland Creek**	**77.37**	**53**	P		P		05 25 28.3 +1.2
	baz=322							
K58A	**Earlville**	**77.43**	**36**	P		P		05 25 27.8 +0.4
	baz=329							
MOA	**Molln**	**77.44**	**335**	*i* P		P		05 25 26.8 -0.5
	comp=Z,4.2nm,1.0s							
UOSS	**Minazif**	**77.44**	**294**	P		P		05 25 27.3 -0.4
H62A	**Milan**	**77.52**	**33**	P		P		05 25 28.4 +0.6
	baz=331							
LBNH	**Lisbon**	**77.53**	**33**	P		P		05 25 28.2 +0.3
	baz=331							
PKME	**Peaks-Kenny Pk**	**77.55**	**31**	P		P		05 25 28.4 +0.5
	baz=332							
NATX	**Nacogdoches**	**77.55**	**55**	P		P		05 25 29.3 +1.1
	baz=321							
NATX	**Nacogdoches**	**77.55**	**55**	P		P		05 25 29.9 +1.7
HERR	**Herculane**	**77.56**	**328**	⇑P		P		05 25 26.3 -1.7
833A	**Chaparral WMA,**	**77.58**	**61**	P		P		05 25 29.6 +1.2
	baz=320							
BRTR	**Keskin Array B**	**77.60**	**318**	P		P		05 25 28.2 -0.3
	comp=Z,3.0nm,0.9s,baz=90,slow=2.5,SNR=12							
WVT	**Waverly**	**77.60**	**48**	P		P		05 25 29.1 +0.7
WVT				pmax		pmax		
	comp=Z,6.0nm,0.8s							
WVT	**Waverly**	**77.60**	**48**	P		P		05 25 29.3 +0.9
	baz=324							
WVT	**Waverly**	**77.60**	**48**	P		P		05 25 29.1 +0.7
WVT				IAmb		IAmb		05 25 29.9
	comp=Z,6.2nm,0.8s							
ARSA	**Arzberg**	**77.62**	**334**	*i* P		P		05 25 29.7 +1.3
	comp=Z,4.5nm,1.0s							
O54A	**Avella**	**77.68**	**41**	P		P		05 25 28.9 +0.1
	baz=327							
I61A	**Oroboro, Fairl**	**77.70**	**34**	P		P		05 25 29.4 +0.6
	baz=330							
K59A	**Cooperstown**	**77.72**	**36**	P		P		05 25 28.9 -0.1
	baz=329							
N55A	**Marion Center**	**77.77**	**40**	P		P		05 25 29.6 +0.3
	baz=327							
BINY	**Binghamton**	**77.78**	**37**	P		P		05 25 29.5 +0.2
	baz=329							
H63A	**New Sharon**	**77.83**	**32**	P		P		05 25 30.0 +0.5
	baz=332							
Q52A	**Bidwell**	**77.87**	**43**	P		P		05 25 30.0 +0.2
	baz=326							
N56A	**West Decatur**	**77.94**	**39**	P		P		05 25 30.3 0.0
	baz=328							
M57A	**Sunshine Farm,**	**78.06**	**38**	P		P		05 25 30.9 0.0
	baz=328							
J61A	**Chester**	**78.08**	**34**	P		P		05 25 30.5 -0.5
	baz=330							
OXF	**Oxford**	**78.11**	**50**	P		P		05 25 31.7 +0.5
	baz=323							
O55A	**Ligonier**	**78.11**	**40**	P		P		05 25 31.5 +0.3
	baz=327							
P54A	**Burton**	**78.12**	**41**	P		P		05 25 31.8 +0.5
	baz=327							
U49A	**Red Boiling Sp**	**78.27**	**47**	P		P		05 25 33.0 +0.8
U49A				IAmb		IAmb		05 25 33.6
	comp=Z,9.5nm,1.0s							
Q53A	**Leroy**	**78.28**	**42**	P		P		05 25 32.8 +0.6
	baz=326							
SOKA	**Soboth**	**78.28**	**334**	*i* P		P		05 25 32.5 +0.3
	comp=Z,11nm,1.1s							
T50A	**Nancy**	**78.30**	**46**	P		P		05 25 32.8 +0.5
T50A				IAmb		IAmb		05 25 33.7
	comp=Z,10nm,0.8s							
CLTN	**Cedars of Leba**	**78.35**	**47**	P		P		05 25 33.6 +1.0
CLTN				IAmb		IAmb		05 25 34.1
	comp=Z,10nm,0.8s							
S51A	**Beattyville**	**78.36**	**44**	P		P		05 25 32.6 0.0
S51A				IAmb		IAmb		05 25 33.9
	comp=Z,8.2nm,0.8s							
O56A	**Blue Knob Stat**	**78.37**	**40**	P		P		05 25 32.7 0.0
	baz=328							
N57A	**Milroy**	**78.38**	**39**	P		P		05 25 32.7 +0.1
	baz=328							
KBA	**Koelnbreinsper**	**78.39**	**335**	*i* P		P		05 25 33.5 +0.6
	comp=Z,23nm,1.0s							
PLAL	**Pickwick Lake**	**78.40**	**49**	P		P		05 25 33.0 +0.1
V48A	**Smith Brothers**	**78.40**	**48**	P		P		05 25 33.6 +0.7
V48A				IAmb		IAmb		05 25 34.1
	comp=Z,7.3nm,0.8s							
P55A	**Reedsville**	**78.48**	**41**	P		P		05 25 33.8 +0.5
	baz=327							
Q54A	**Coxs Mills**	**78.48**	**42**	P		P		05 25 33.5 +0.3
	baz=326							
R53A	**Hurricane**	**78.53**	**43**	P		P		05 25 33.8 +0.3
	baz=326							
OBKA	**Obir**	**78.58**	**334**	*i* P		P		05 25 33.2 -0.5
	comp=Z,13nm,1.6s							
WATA	**Walderalm**	**78.63**	**336**	*i* P		P		05 25 35.3 +1.2
	comp=Z,7.0nm,0.8s							
L60A	**Shokan**	**78.63**	**36**	P		P		05 25 34.1 +0.1
	baz=330							
WTTA	**Wattenberg**	**78.68**	**336**	*i* P		P		05 25 35.6 +1.2
	comp=Z,16nm,0.8s,SNR=9.6							
RETA	**Reutte**	**78.70**	**337**	*i* P		P		05 25 35.4 +0.9
	comp=Z,5.0nm,0.9s							
MOTA	**Moosalm**	**78.75**	**337**	*i* P		P		05 25 35.7 +0.9
	comp=Z,14nm,0.9s							
Q55A	**Buckhannon**	**78.80**	**41**	P		P		05 25 35.6 +0.5
	baz=327							
SQTA	**Sankt Quirin**	**78.83**	**336**	*i* P		P		05 25 36.1 +0.9
	comp=Z,10nm,0.9s							
ECH	**Echery**	**78.89**	**339**	P		P		05 25 34.9 -0.5
ECH				pmax		pmax		
	comp=Z,4.0nm,0.8s							
ECH	**Echery**	**78.89**	**339**	P		P		05 25 34.9 -0.5
P56A	**Dayton Farm, R**	**78.90**	**40**	P		P		05 25 36.1 +0.6
	baz=327							
ABTA	**Abfaltersbach**	**78.92**	**335**	*i* P		P		05 25 36.1 +0.5
	comp=Z,4.3nm,0.8s							
DIVS	**Divibare**	**79.07**	**329**	P		P		05 25 35.0 -1.6
R54A	**Victor**	**79.08**	**42**	P		P		05 25 37.0 +0.4
	baz=326							
DAVA	**Damuels**	**79.11**	**337**	*i* P		P		05 25 37.6 +0.8
	comp=Z,9.7nm,0.9s							
FETA	**Feichten**	**79.14**	**337**	*i* P		P		05 25 37.8 +0.9
	comp=Z,6.2nm,0.9s							
O58A	**Lewisberry**	**79.17**	**39**	P		P		05 25 37.3 +0.3
	baz=328							
SWET	**Sewanee**	**79.25**	**47**	P		P		05 25 37.2 -0.3
SWET				IAmb		IAmb		05 25 38.5
	comp=Z,11nm,0.7s							
S54A	**Dingess, Beckl**	**79.25**	**43**	P		P		05 25 37.7 +0.1
	baz=326							
VTS	**Vitosha**	**79.26**	**327**	⇑P		P		05 25 37.5 -0.1
VTS	**Vitosha**	**79.26**	**327**	P		P		05 25 38.2 +0.6
VTS	**Vitosha**	**79.26**	**327**	P		P		05 25 36.8 -0.9
TZTN	**Tazewell**	**79.28**	**45**	P		P		05 25 38.3 +0.7
	baz=326							
R55A	**Marlinton**	**79.38**	**42**	P		P		05 25 38.4 +0.2
	baz=327							
T53A	**Wise**	**79.38**	**44**	P		P		05 25 38.9 +0.6
	baz=326							
M61A	**Granite Spring**	**79.39**	**36**	P		P		05 25 38.4 +0.2
	baz=330							
P58A	**Pank, Wackersv**	**79.55**	**39**	P		P		05 25 39.5 +0.4
	baz=328							
W50A	**Signal Mountai**	**79.55**	**47**	P		P		05 25 39.5 +0.2
PAL	**Palisades**	**79.60**	**36**	P		P		05 25 39.6 +0.3
	baz=330							
FUORN	**Ofenpass-Fuorn**	**79.63**	**337**	P		P		05 25 39.6 -0.2
FUORN				IAmb		IAmb		05 25 43.0
	comp=Z,9.1nm,0.8s							
S55A	**Lewisburg**	**79.63**	**42**	P		P		05 25 40.1 +0.4
	baz=327							
T54A	**Tazewell**	**79.75**	**43**	P		P		05 25 41.1 +0.8
	baz=326							
Z47A	**Carrollton**	**79.83**	**50**	P		P		05 25 41.5 +0.8
Z47A				IAmb		IAmb		05 25 42.1
	comp=Z,17nm,0.8s							
344A	**Westbrook Farm**	**79.86**	**53**	P		P		05 25 42.8 +1.9
FPAL	**Fort Paine**	**79.95**	**48**	P		P		05 25 41.6 +0.2
FPAL				IAmb		IAmb		05 25 42.5
	comp=Z,8.2nm,0.8s							
TUE	**Stuetta**	**80.00**	**337**	P		P		05 25 42.0 +0.3
TUE				IAmb		IAmb		05 25 43.4
	comp=Z,13nm,0.7s							
R57A	**Stanardsville**	**80.05**	**41**	P		P		05 25 41.9 +0.1
	baz=328							
U54A	**Nelsons Funny**	**80.09**	**44**	P		P		05 25 42.5 +0.3
	baz=326							
R58A	**Rapidan**	**80.26**	**40**	P		P		05 25 43.5 +0.6
	baz=328							
S57A	**Dark Hollow, R**	**80.31**	**41**	P		P		05 25 44.0 +0.8
	baz=328							
TAOE	**Nuku Hiva Isla**	**80.34**	**116**	*e*LR		LR		05 50 41.9
	comp=Z,265nm,23.4s,baz=328							
U55A	**TA2, Sparta**	**80.45**	**43**	P		P		05 25 44.4 +0.3
	baz=327							
T56A	**Rocky Mt**	**80.46**	**42**	P		P		05 25 44.5 +0.5
	baz=327							
LRAL	**Lakeview Retre**	**80.49**	**49**	P		P		05 25 43.6 -0.7
	baz=324							
R58B	**Mineral**	**80.60**	**40**	P		P		05 25 45.3 +0.6
	baz=328							
SENIN	**Lac Senin/Sane**	**80.60**	**339**	P		P		05 25 45.7 +0.8
V54A	**Nebo**	**80.64**	**44**	P		P		05 25 45.0 -0.1
	baz=326							
MANT	**Manisa**	**80.78**	**321**	P		P		05 25 45.2 -0.8
M66A	**Nantucket**	**80.78**	**33**	P		P		05 25 45.4 -0.2
	baz=332							
PDG	**Podgorica**	**80.80**	**329**	⇑P		P		05 25 45.0 -0.7
PDG	**Podgorica**	**80.80**	**329**	P		P		05 25 44.7 -1.0
PDG				IAmb		IAmb		05 25 45.6
	comp=Z,11nm,0.8s							
U57A	**Blanch**	**81.26**	**42**	P		P		05 25 48.6 +0.3
	baz=328							
V56A	**Mocksville**	**81.27**	**43**	P		P		05 25 48.9 +0.5
	baz=327							
KMSC	**Kings Mountain**	**81.45**	**44**	P		P		05 25 49.8 +0.4
	baz=327							
X54A	**Beon**	**81.47**	**45**	P		P		05 25 50.4 +0.9
	baz=326							
TIR	**Tirane**	**81.56**	**328**	⇑P		P		05 25 49.2 -0.6
U58A	**Oxford**	**81.64**	**42**	P		P		05 25 50.8 +0.5
	baz=328							
ELL	**Elmali**	**81.69**	**319**	P		P		05 25 49.8 -0.9
ELL				pmax		pmax		
	comp=Z,31nm,0.9s							
ELL	**Elmali**	**81.69**	**319**	P		P		05 25 49.8 -0.9
GOGA	**Godfrey**	**81.89**	**47**	P		P		05 25 52.2 +0.5
	baz=326							
V58A	**Windy Hill, Pi**	**81.90**	**42**	P		P		05 25 52.0 +0.3
	baz=328							
BNI	**Bardonecchia**	**81.98**	**339**	P		P		05 25 52.3 +0.1
BNI				pmax		pmax		
	comp=Z,7.0nm,0.9s							
BNI	**Bardonecchia**	**81.98**	**339**	P		P		05 25 52.3 +0.1
W57A	**Gilead**	**82.05**	**43**	P		P		05 25 52.7 +0.2
	baz=327							
MURB	**Monte Urbino**	**82.13**	**334**	P		P		05 25 53.4 +0.6
X56A	**White Oak**	**82.13**	**44**	P		P		05 25 53.3 +0.4
	baz=327							
STKA	**Stephens Creek**	**82.18**	**192**	P		P		05 25 52.5 -0.3
	comp=Z,2.3nm,1.0s,baz=122,slow=4.6,SNR=4.1							
STKA	**Stephens Creek**	**82.18**	**192**	P		P		05 25 52.9 0.0
Y55A	**Saluda**	**82.21**	**45**	P		P		05 25 53.6 +0.3
	baz=326							
V59A	**Middlesex**	**82.30**	**42**	P		P		05 25 54.1 +0.3
	baz=328							
PPT2	**Papeete2**	**82.34**	**129**	*e*LR		LR		05 51 45.0
	comp=Z,178nm,23.5s							
PPT2	**Papeete2**	**82.34**	**129**	*e*T		T		06 56 30.2
	comp=Z,3.0nm,0.3s							
NRCA	**Norcia**	**82.35**	**333**	P		P		05 25 53.9 -0.1
W58A	**Raeford**	**82.49**	**43**	P		P		05 25 55.5 +0.7
	baz=328							
154A	**Montrose**	**82.72**	**47**	P		P		05 25 57.2 +1.2
352A	**Blakely**	**82.77**	**49**	P		P		05 25 56.7 +0.4
X58A	**Rowland**	**82.84**	**43**	P		P		05 25 57.4 +0.8
	baz=328							
INTR	**Introdacqua**	**82.87**	**333**	P		P		05 25 57.4 +0.6
Z57A	**Bowman**	**83.27**	**45**	P		P		05 25 59.4 +0.5
	baz=327							
TIGA	**Tifton**	**83.45**	**48**	P		P		05 26 00.5 +0.7
	baz=326							
TIGA	**Tifton**	**83.45**	**48**	P		P		05 26 00.9 +1.1
Y59A	**Loris**	**83.52**	**43**	P		P		05 26 00.7 +0.6
	baz=328							
Z58A	**St. Stephen**	**83.65**	**44**	P		P		05 26 01.3 +0.5
	baz=328							
157A	**Early Branch**	**83.66**	**45**	P		P		05 26 01.2 +0.4
	baz=327							
NHSC	**New Hope**	**83.67**	**45**	P		P		05 26 01.3 +0.4
	baz=327							
FORT	**Forrest**	**83.87**	**204**	P		P		05 26 02.7 +1.1
KARP	**Karpathos**	**83.87**	**320**	P		P		05 26 00.7 -1.3
TIP	**Timpagrande**	**84.55**	**329**	⇑P		P		05 26 04.3 -1.1
TIP	**Timpagrande**	**84.55**	**329**	P		P		05 26 05.3 -0.1
TIP				IAmb		IAmb		05 26 06.3
	comp=Z,14nm,1.1s							
RAYN	**Ar Rayn**	**84.73**	**300**	P		P		05 26 06.3 -0.2
RAYN				pmax		pmax		
	comp=Z,20nm,0.8s							
RAYN	**Ar Rayn**	**84.73**	**300**	P		P		05 26 06.3 -0.2
EIL	**Elat**	**85.31**	**312**	LR		LR		06 07 31.3
	comp=Z,74nm,19.9s,baz=71,slow=38							
VSL	**Villasalto**	**86.50**	**335**	P		P		05 26 15.5 +0.5
VAE	**Valguarnera**	**86.86**	**330**	LR		LR		06 09 08.2
	comp=Z,126nm,18.4s,baz=22,slow=38							
TBI	**Tubuai**	**87.26**	**132**	*e*LR		LR		05 53 49.6
	comp=Z,167nm,28.0s							
TBI	**Tubuai**	**87.26**	**132**	*e*T		T		07 02 37.7
	comp=Z,4.7nm,0.4s							
ESDC	**Sonseca Array**	**89.33**	**345**	P		P		05 26 27.1 -1.5
	comp=Z,2.6nm,0.9s,baz=12,slow=4.1,SNR=12							
KEST	**Kesra**	**90.02**	**334**	P		P		05 26 31.7 -0.2
	comp=Z,8.4nm,0.9s,baz=252,slow=5.5,SNR=7.6							
KEST				LR		LR		06 10 48.5
	comp=Z,253nm,20.4s,baz=329,slow=38							
KEST	**Kesra**	**90.02**	**334**	IAmb		IAmb		05 26 33.3
	comp=Z,8.3nm,0.8s							
MDT	**Midelt**	**96.12**	**344**	LR		LR		06 16 14.5
	comp=Z,36nm,18.2s,baz=46,slow=39							
TORD	**Torodi Ar. Bea**	**113.53**	**333**	PKKPbc		PKKPbc		05 43 01.0 +8.7
	comp=Z,1.1nm,0.8s,baz=210,slow=2.5,SNR=6.1							
LPAZ	**La Paz**	**131.24**	**63**	PKP		**PKPdf**		05 32 45.6 +0.6
	comp=Z,1.7nm,0.8s,baz=21,slow=9.8,SNR=7.6							
LPAZ	**La Paz**	**131.24**	**63**	PKIKP		**PKPdf**		05 32 44.5 -0.5
LPAZ	**La Paz**	**131.24**	**63**			**PKPdf**		05 32 44.5 -0.5
BOSA	**Boshof**	**137.37**	**281**	PKP		**PKiKP**		05 32 56.7 -0.8
	comp=Z,2.1nm,0.7s,baz=131,slow=3.0,SNR=3.6							
BOSA	**Boshof**	**137.37**	**281**			**PKiKP**		05 32 56.9 -0.5
QSPA	**South Pole Qui**	**139.39**	**180**			**PKPdf**		05 32 58.9 +1.0
BDFB	**Brasilia**	**140.83**	**39**	PKP		**PKPdf**		05 33 03.6 +1.5
	comp=Z,2.1nm,0.7s,baz=139,slow=5.5,SNR=3.4							
BDFB	**Brasilia**	**140.83**	**39**	PKIKP		**PKPdf**		05 33 02.5 +0.3
BDFB	**Brasilia**	**140.83**	**39**			**PKPdf**		05 33 02.5 +0.3
PLCA	**Paso Flores**	**146.42**	**93**	PKPbc		**PKPdf**		05 33 12.3 +1.1
	comp=Z,6.1nm,0.8s,baz=288,slow=4.8,SNR=11							
PLCA	**Paso Flores**	**146.42**	**93**			**PKPbc**		05 33 12.9 +0.2
SNAA	**Sanae**	**155.90**	**196**	PKPdf		PKPdf		05 33 33.7 +9.0
SNAA	**Sanae**	**155.90**	**196**	PKP		**PKPdf**		05 33 24.7 0.0
	comp=Z,0.5nm,0.7s,baz=224,slow=3.0,SNR=1.4							
SNAA				PKPab		**PKPab**		05 33 52.0 0.0
	comp=Z,5.6nm,0.9s,baz=134,slow=2.9,SNR=15							
VNA3	**Neumayer Olymp**	**157.35**	**192**	PKPdf		PKPdf		05 33 34.8 +8.3

OSPL ***29*** *05:16:44.6±0.9, 17°.79N×68°.32W, h17km±7km, ML2.4*
RSPR ***29*** *05:16:45.5, 17°.89N×68°.19W, h98km±1km, MD3.3/10*

ISC 29 05:16:45.6±1.5, 18°.0N±0°.1×68°.30W±0°.05, h67km±15km, n39, σ0°75/46, 9C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.51**	**351**			**Pn**	**05 16 57.2**	**-1.1**
PCDR						Sn	05 17 08.1	+0.5
PCDR	**Punta Cana, DR**	**0.51**	**351**	*i* P		**Pn**	**05 16 57.1**	**-1.1**
PCDR				*e*S		Sn	05 17 07.4	-0.2
PCDR				IAML			05 17 12.6	
	comp=Z,174nm,0.2s							
MPR	**Mayaguez**	**1.12**	**79**	Pn		Pn	05 17 05.4	-0.1
CRPR	**Cabo Rojo, PR**	**1.13**	**90**	*e*S		Sn	05 17 21.4	+0.9
CRPR	**Cabo Rojo, PR**	**1.13**	**90**	⇑*e*P		Pn	05 17 05.5	-0.1
CRPR	**Cabo Rojo, PR**	**1.13**	**90**	Pn		Pn	05 17 05.3	-0.3
CRPR						Sn	05 17 21.2	+0.7
LSP	**Las Mesas**	**1.16**	**81**	*e*S		Sn	05 17 22.3	+1.0
LSP	**Las Mesas**	**1.16**	**81**	⇓*e*P		Pn	05 17 06.4	+0.3
LSP	**Las Mesas**	**1.16**	**81**			**Pn**	**05 17 06.4**	**+0.3**
LSP						Sn	05 17 22.3	+1.0
MLPR	**Magueyes Islan**	**1.19**	**91**	*e*S		Sn	05 17 23.0	+1.0
MLPR	**Magueyes Islan**	**1.19**	**91**	⇑*e*P		Pn	05 17 06.0	-0.4
MLPR	**Magueyes Islan**	**1.19**	**91**			**Pn**	**05 17 06.0**	**-0.4**
MLPR	**Magueyes Islan**	**1.19**	**91**			Sn	05 17 06.9	+0.5
AGPR	**Aguadilla, PR**	**1.22**	**68**	*e*S		Sn	05 17 24.6	+2.0
AGPR	**Aguadilla, PR**	**1.22**	**68**	⇑*e*P		Pn	05 17 07.5	+0.8
AGPR	**Aguadilla, PR**	**1.22**	**68**			**Pn**	**05 17 07.3**	**+0.6**
AGPR	**Aguadilla, PR**	**1.22**	**68**	*i* P		**Pn**	**05 17 07.0**	**+0.3**
AGPR				*e*S		Sn	05 17 22.9	+0.4
AGPR				IAML			05 17 30.9	
	comp=Z,66nm,0.1s							
AOPR	**Arecibo Observ**	**1.50**	**77**	⇑*e*P		**Pn**	**05 17 10.8**	**+0.3**
AOPR	**Arecibo Observ**	**1.50**	**77**	*e*S		Sn	05 17 30.1	+0.7
AOPR	**Arecibo Observ**	**1.50**	**77**			**Pn**	**05 17 10.4**	**-0.2**
OBIP	**Obispado Ponce**	**1.61**	**88**	⇑*e*P		**Pn**	**05 17 11.4**	**-0.5**
OBIP				*e*S		Sn	05 17 31.9	+0.1
OBIP	**Obispado Ponce**	**1.61**	**88**			**Pn**	**05 17 11.4**	**-0.5**
EMPR	**Esperanza - Ma**	**1.74**	**74**	⇑*e*P		**Pn**	**05 17 13.4**	**-0.2**
EMPR	**Esperanza - Ma**	**1.74**	**74**	*e*S		Sn	05 17 35.5	+0.5
EMPR	**Esperanza - Ma**	**1.74**	**74**	Pn		**Pn**	**05 17 13.6**	**-0.1**
EMPR						Pn	05 17 17.1	+3.4
GCPR	**Guaynabo City**	**2.12**	**81**	Pn		**Pn**	**05 17 17.3**	**-1.5**
HUMP	**Col San Antoni**	**2.33**	**86**	⇑*e*P		**Pn**	**05 17 20.8**	**-0.8**
HUMP	**Col San Antoni**	**2.33**	**86**	*e*S		Sn	05 17 48.4	-0.8
HUMP	**Col San Antoni**	**2.33**	**86**			**Pn**	**05 17 21.0**	**-0.7**
HUMP						Pn	05 17 21.2	-0.4
CBYP	**Canovanas**	**2.33**	**83**	⇑*e*P		**Pn**	**05 17 21.2**	**-0.5**
CBYP	**Canovanas**	**2.33**	**83**	*e*S		Sn	05 17 48.6	-0.8
CBYP	**Canovanas**	**2.33**	**83**			**Pn**	**05 17 20.4**	**-1.4**
CBYP						Pn	05 17 21.0	-0.8
MTP	**Monte Pirata**	**2.61**	**88**	⇑*e*P		**Pn**	**05 17 24.6**	**-0.9**
MTP	**Monte Pirata**	**2.61**	**88**	*e*S		Sn	05 17 55.1	-1.0
MTP	**Monte Pirata**	**2.61**	**88**			**Pn**	**05 17 25.1**	**-0.3**
MTP						Pn	05 17 25.9	+0.4
SC01	**Santiago de lo**	**2.71**	**302**	Pn		**Pn**	**05 17 26.8**	**+0.1**
SC01	**Santiago de lo**	**2.71**	**302**	*i* P		Pn	05 17 26.6	-0.1
SC01				*e*S		Sn	05 17 58.7	+0.3
SC01				IAML			05 18 21.0	
	comp=Z,23nm,0.6s							
SDDR	**Presa de Saban**	**3.00**	**289**	Pn		**Pn**	**05 17 31.0**	**+0.1**
SDDR	**Presa de Saban**	**3.00**	**289**	*i* P		**Pn**	**05 17 31.2**	**+0.4**
SDDR				IAML			05 18 16.7	
	comp=Z,12nm,0.3s							

IDC 29 05:28:51.4±6.7, 21°.02N×145°.56E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/28, mbtmp3.6/4, Error ellipse: s-maj=169.5km s-min=49.7km az=10.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KSRS	**Korea Array**	**22.41**	**321**	P		P	05 33 52.1	+0.5
	1.1nm,0.9s,baz=128,slow=12,SNR=1.8							
ILAR	**Eielson Array**	**61.63**	**27**	P		P	05 39 10.2	-0.5
	0.3nm,0.6s,baz=259,slow=5.2,SNR=5.5							
YKA	**Yellowknife Ar**	**76.01**	**28**	P		P	05 40 40.9	+0.6
	0.3n

comp=N,841nm,0.3s
PB07 IPOC Station P 2.01 152 ⇓*i*P **Pn 05 36 13.6 +0.3**
PB07 *i*S **Sb 05 36 40.0 -1.4**
PB07 IAML 05 36 49.6
comp=E,496nm,0.8s
PB07 IPOC Station P 2.01 152 *e*P **Pb 05 36 15.9 -0.7**
PB07 IAML 05 36 50.5
comp=Z,277nm,0.3s
PB03 IPOC Station P 2.35 153 *e*P **Pn 05 36 18.5 +0.5**
PB03 IAML 05 37 03.1
comp=E,286nm,0.4s
PB03 IPOC Station P 2.35 153 *e*P **Pb 05 36 19.8 -2.7**
PB03 IAML 05 37 01.9
comp=Z,164nm,0.8s
PB09 IPOC Station P 2.40 141 ⇑*i*P **Pb 05 36 20.4 -2.9**
PB09 *e*S **Sb 05 36 49.9 -2.8**
PB09 IAML 05 37 03.2
comp=N,441nm,0.5s
PB09 IPOC Station P 2.40 141 *i*P **Pb 05 36 20.5 -2.9**
PB09 *e*S **Sb 05 36 50.6 -2.1**
PB09 IAML 05 37 03.9
comp=Z,432nm,0.9s
PB04 IPOC Station P 2.48 164 ⇓*i*P **Pn 05 36 19.6 -0.2**
PB04 IAML 05 37 10.9
comp=E,260nm,0.6s
PB04 IPOC Station P 2.48 164 *i*P **Pn 05 36 19.4 -0.3**
PB04 *e*S **Sb 05 36 59.4 +4.5**
PB04 IAML 05 37 12.6
comp=Z,230nm,0.6s
PB05 IPOC Station P 2.97 168 ⇓*i*P **Pn 05 36 25.8 -0.7**
PB05 IPOC Station P 2.97 168 *i*P **Pn 05 36 25.8 -0.7**
PB05 ⇓*e*S Sb 05 37 17.1 +8.1
PB05 IAML 05 37 25.8
comp=Z,70nm,0.5s
PB06 IPOC Station P 3.01 156 *e*P **Pn 05 36 27.0 -0.1**
PB06 IPOC Station P 3.01 156 *i*P **Pn 05 36 27.0 -0.1**
PB06 *e*S **Sb 05 37 14.5 +4.2**
PB06 IAML 05 37 21.7
comp=Z,140nm,0.8s
LVC Limon Verde 3.23 146 *i*P **Pn 05 36 32.1 +1.8**
LVC IAML 05 37 25.6
comp=E,59nm,0.7s
PB15 IPOC Station P 3.51 158 ⇓*i*P **Pn 05 36 34.6 +0.7**
PB15 *e*S **Sb 05 37 29.9 +5.4**
PB15 IAML 05 37 33.6
comp=Z,155nm,0.4s
PB10 IPOC Station P 3.57 175 *i*P **Pn 05 36 34.5 -0.1**
PB10 IAML 05 38 15.8
comp=Z,20nm,0.8s
LPAZ La Paz 4.48 36 Pn **Pn 05 36 49.0 +1.4**
comp=Z,0.2nm,0.3s,baz=222,slow=8.5,SNR=4.7
LPAZ LR LR 05 38 44.0
comp=Z,43nm,19.4s,baz=282,slow=40
LPAZ La Paz 4.48 36 *i*P **Pb 05 36 55.0 -4.0**
TORD Torodi Ar. Bea 78.59 71 P **P 05 47 40.6 -0.3**
comp=Z,0.8nm,0.6s,baz=233,slow=6.3,SNR=5.6
MAW Mawson 86.34 164 LR LR 06 26 48.8
comp=Z,103nm,19.1s,baz=56,slow=36
MKAR Makanchi Array 145.40 33 PKPbc **PKPab 05 55 16.8 0.0**
comp=Z,0.4nm,0.6s,baz=298,slow=3.1,SNR=3.9

*NIED **29** 05:49:00,36.°90N×137.°10E,h270km,Mw4.1 Best double couple: M0 1.51000×10^15 NP1:ϕs67.00000°, δ75.00000°,λ-144.00000°. NP2:ϕs326.00000°, δ55.00000°,λ-19.00000°.*
*MOS **29** 05:49:07.7±0.8,37.°00N×137.°05E,h268km,mb4.2/15, Error ellipse: s-maj=10.0km s-min=7.0km az=110.1*
*JMA **29** 05:49:08.8±0.1,36.°90N×137.°08E,h262km±1km,M3.6*
*IDC **29** 05:49:08.4±0.5,36.°98N×137.°02E,h261km±6km,mb3.8/17, mb1 3.8/23,mb1mx3.5/56,mbtmp4.4/23,Error ellipse: s-maj=16.5km s-min=12.2km az=65.0*
*NEIC **29** 05:49:08.4±1.0,36.°99N±0.°09×137.°0E±0.°1,h264km±8km, mb4.2/17,Error ellipse: s-maj=14.6km s-min=12.5km az=75.0*

ISC 29 05:49:08.2±0.5,37.°00N±0.°05×137.°06E±0.°05,h261km±5km, n103,σ1s01/125,mb4.0/32,9C-3D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JJH	**Hakui**	**0.24**	**252**	P		**Pn**	**05 49 42.6**	**+0.9**
JJH				*e*S		**S**	**05 50 09.2**	**+1.1**
JSZ	**Suzu**	**0.51**	**28**	P		**Pn**	**05 49 43.4**	**+1.1**
JSZ				S		**S**	**05 50 09.9**	**+0.7**
JHG	**Hegura jima**	**0.86**	**352**	P		**Pn**	**05 49 45.1**	**+1.5**
JHG				S		**S**	**05 50 12.8**	**+1.2**
JKG	**Kaga**	**0.93**	**219**	P		**Pn**	**05 49 44.5**	**+0.5**
JKG				*e*S		**S**	**05 50 12.3**	**+0.1**
MJB9	**Matsu-Tunnel**	**1.02**	**116**			**Pn**	**05 49 45.4**	**+0.9**
MAJO	**Matsushiro**	**1.02**	**116**	*d*	*i*P	**Pn**	**05 49 45.2**	**+0.7**
MAJO	**Matsushiro**	**1.02**	**116**			**Pn**	**05 49 45.4**	**+0.9**
MAT	**Matsushiro**	**1.02**	**116**	P		**Pn**	**05 49 45.3**	**+0.8**
MAT				S		**S**	**05 50 14.4**	**+1.2**
MAT	**Matsushiro**	**1.02**	**116**	P		**Pn**	**05 49 45.3**	**+0.8**
MAT				*e*S		**S**	**05 50 13.5**	**+0.3**
MJAR	**Matsushiro Arr**	**1.03**	**116**	P		**Pn**	**05 49 45.7**	**+1.1**
MJAR	15nm,0.3s,baz=291,slow=6.0,SNR=527			S		**S**	**05 50 14.1**	**+0.9**
	baz=330,slow=12,SNR=4.5							
JSD	**Sado**	**1.41**	**42**	P		**Pn**	**05 49 48.3**	**+1.5**
JSD				S		**S**	**05 50 17.9**	**+0.5**
JYTA	**Yamagatataniai**	**1.43**	**191**	P		**Pn**	**05 49 47.4**	**+0.4**
JYTA				S		**S**	**05 50 17.1**	**-0.6**
INU	**Inuyama**	**1.65**	**181**			**Pn**	**05 49 48.5**	**-0.2**
JRY	**Ryogami san**	**1.78**	**123**	P		**Pn**	**05 49 49.8**	**+0.1**
JYN	**Shimob**	**1.92**	**141**	P		**Pn**	**05 49 51.0**	**0.0**
JNS	**Sasagawa**	**1.97**	**65**	P		**Pn**	**05 49 52.6**	**+1.3**
JNS				*e*S		**S**	**05 50 25.3**	**-0.1**
JAG	**Ashikaga**	**2.00**	**106**	P		**Pn**	**05 49 51.5**	**-0.1**
JWT	**Wachi**	**2.17**	**219**	P		**Pn**	**05 49 52.9**	**-0.3**
JWT				S		**S**	**05 50 26.3**	**-2.5**
JAW	**Awa shima**	**2.27**	**49**	P		**Pn**	**05 49 55.5**	**+1.6**
JAW				S		**S**	**05 50 31.4**	**+1.3**
JOD2	**Odawara 2**	**2.38**	**136**	P		**Pn**	**05 49 55.4**	**+0.2**
JOD2				*e*S		**S**	**05 50 31.5**	**-0.8**
JIE	**Ise**	**2.62**	**186**	P		**Pn**	**05 49 57.9**	**+0.5**
JIE				S		**S**	**05 50 35.2**	**-1.2**
JFT	**Otama**	**2.66**	**78**	P		**Pn**	**05 49 59.2**	**+1.4**
JFT				*e*S		**S**	**05 50 38.4**	**+1.2**
JWY	**Kouya**	**3.02**	**204**	P		**Pn**	**05 50 01.7**	**0.0**
JHJ	**Hachijo jima 2**	**4.47**	**149**	P		**Pn**	**05 50 18.2**	**+0.2**
JHJ	18nm,0.3s,baz=162,slow=23,SNR=15			S		**S**	**05 51 13.6**	**0.0**
	58nm,0.3s,baz=103,slow=23,SNR=8.9							
JHJ2	**Mitsune**	**4.49**	**149**	Pn		**Pn**	**05 50 18.2**	**+0.1**
JHJ2						**S**	**05 51 14.1**	**+0.1**
JNU	**Nakatsue**	**6.38**	**234**	P		**Pn**	**05 50 41.5**	**+0.2**
	0.8nm,0.3s,baz=259,slow=4.0,SNR=5.6							
JNU	**Nakatsue**	**6.38**	**234**			**Pn**	**05 50 40.8**	**-0.4**
ERM	**Erimo**	**6.88**	**41**	*ce*P		**Pn**	**05 50 46.9**	**-0.4**
ERM				pmax		pmax		
	comp=Z,69nm,0.8s							
ERM	**Erimo**	**6.88**	**41**			**Pn**	**05 50 46.8**	**-0.5**
ERM				S		**S**	**05 52 03.4**	**-3.6**
MSHR	**Mys Shultsa**	**7.19**	**323**	*i*P		**Pn**	**05 50 51.2**	**0.0**
KSRS	**Korea Array**	**7.31**	**276**	P		**Pn**	**05 50 54.5**	**+1.8**
	comp=Z,0.7nm,0.3s,baz=95,slow=13,SNR=37							
KS19	**Wonju Array Si**	**7.35**	**277**			**Pn**	**05 50 52.5**	**-0.8**
TJN	**Taejon**	**7.82**	**268**	*i*P		**Pn**	**05 50 59.5**	**+0.3**
USA0B	**Ussuriysk Arra**	**8.16**	**333**	P		**Pn**	**05 51 03.5**	**+0.1**
USA0B	**Ussuriysk Arra**	**8.16**	**333**			**Pn**	**05 51 03.5**	**+0.1**
USRK	**Ussuriysk Ar.**	**8.16**	**333**	P		**Pn**	**05 51 05.0**	**+1.6**
	baz=155,slow=12,SNR=24							
USRK	**Ussuriysk Ar.**	**8.16**	**333**	P		**Pn**	**05 51 05.0**	**+1.6**
ASAJ	**Asahikawa**	**8.26**	**29**	P		**Pn**	**05 51 04.0**	**-0.7**
	comp=Z,26nm,0.3s,baz=220,slow=11,SNR=42							
ASAJ	**Asahikawa**	**8.26**	**29**	P		**Pn**	**05 51 04.0**	**-0.7**
JKA	**Kamikawa-asahi**	**8.27**	**29**			**Pn**	**05 51 04.0**	**-0.7**
JKA	**Kamikawa-asahi**	**8.27**	**29**	Pn		**Pn**	**05 51 03.6**	**-1.0**
YUK	**Yuzh-Kuril'sk**	**9.71**	**41**	*i*P		**Pn**	**05 51 22.7**	**-0.1**
JCJ	**Chichijima**	**10.78**	**155**	P		Pn	05 51 31.1	-5.4
	comp=Z,4.8nm,0.3s,baz=352,slow=20,SNR=7.8							
YSS	**Yuzh-Sakhalins**	**10.81**	**21**	*e*P		**Pn**	**05 51 36.1**	**-0.4**
YSS				pmax		pmax		
	comp=Z,140nm,0.4s							
YSS	**Yuzh-Sakhalins**	**10.81**	**21**			**Pn**	**05 51 35.7**	**-0.8**
KUR	**Kuril'sk**	**11.57**	**41**	P		**P**	**05 51 48.1**	**-1.1**
KUR				S		**S**	**05 53 50.6**	**-4.5**
KUR				pmax		pmax		
	comp=Z,32nm,0.7s							
KUR				smax		smax		
	comp=N,35nm,0.5s							
KUR				smax		smax		
	comp=E,30nm,0.4s							
KLR	**Kul'dur**	**12.82**	**344**	P		**Pn**	**05 52 00.9**	**-0.5**
	comp=E,0.7nm,0.3s,baz=145,slow=9.7,SNR=20							
KLR	**Kul'dur**	**12.82**	**344**	*ce*P		**Pn**	**05 52 01.5**	**+0.1**
KLR				pmax		pmax		
	comp=Z,2.0nm,0.3s							
XAN	**Xi'an**	**23.06**	**271**	P		**P**	**05 53 49.4**	**-1.6**
XAN				pmax		pmax		
	comp=Z,5.0nm,0.5s							
XAN	**Xi'an**	**23.06**	**271**	P		**P**	**05 53 49.4**	**-1.6**
XAN				lAmb		lAmb	05 53 50.2	
	comp=Z,4.8nm,0.5s							
ENH	**Enshi**	**23.87**	**262**	P		**P**	**05 53 57.8**	**-0.5**
ULN	**Ulaanbaatar**	**24.52**	**306**	*ce*P		**P**	**05 54 04.5**	**+0.3**
ULN				pmax		pmax		
	comp=Z,2.0nm,0.6s							
ULN	**Ulaanbaatar**	**24.52**	**306**	P		**P**	**05 54 03.6**	**-0.5**
SONM	**Songino Array**	**24.94**	**305**	P		**P**	**05 54 07.1**	**-0.8**
	comp=Z,1.9nm,0.5s,baz=110,slow=9.0,SNR=10							
TIXI	**Tiksi**	**34.98**	**355**	*ce*P		**P**	**05 55 36.2**	**+0.8**
TIXI				pmax		pmax		
	comp=Z,2.0nm,0.8s							
TIXI	**Tiksi**	**34.98**	**355**	P		**P**	**05 55 34.9**	**-0.6**
DGZ	**Jazzator, Alta**	**37.59**	**306**	*i*P		**P**	**05 55 58.2**	**+0.3**
DGZ				pmax		pmax		
	comp=Z,4.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**38.15**	**252**	*i*P		**P**	**05 56 04.0**	**+1.2**
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
ZALV	**Zalesovo Beam**	**39.37**	**313**	P		**P**	**05 56 12.3**	**-0.1**
	comp=Z,1.6nm,0.3s,baz=103,slow=8.2,SNR=8.4							
ZALV				PcP		**PcP**	**05 58 14.5**	**-0.5**
	comp=Z,0.9nm,0.4s,baz=95,slow=4.8,SNR=4.8							
ZALV	**Zalesovo Beam**	**39.37**	**313**	*i*P		**P**	**05 56 13.1**	**+0.7**
ZALV				pmax		pmax		
	comp=Z,2.0nm,0.3s							
SHL	**Shillong**	**39.92**	**267**	P		**P**	**05 56 16.7**	**-0.9**
SHL				pmax		pmax		
	comp=Z,7.0nm,0.6s							
SHL	**Shillong**	**39.92**	**267**	P		**P**	**05 56 16.7**	**-0.9**
SHL				lAmb		lAmb	05 56 17.0	
	comp=Z,7.1nm,0.6s							
FAKI	**Fak Fak**	**39.96**	**187**	P		**P**	**05 56 17.9**	**+0.2**
MK31	**Makanchi Array**	**41.18**	**302**	P		**P**	**05 56 26.4**	**-0.9**
MK31				pmax		pmax		
	comp=Z,1.0nm,0.5s							
MK31	**Makanchi Array**	**41.18**	**302**	P		**P**	**05 56 26.4**	**-0.9**
MKAR	**Makanchi Array**	**41.18**	**302**	P		**P**	**05 56 26.7**	**-0.6**
	comp=Z,1.5nm,0.5s,baz=87,slow=10,SNR=27							
KURK	**Kurchatov**	**43.21**	**308**	*ce*P		**P**	**05 56 43.2**	**-0.3**
KURK				pmax		pmax		
	comp=Z,6.0nm,0.5s							
KURK	**Kurchatov**	**43.21**	**308**	P		**P**	**05 56 43.0**	**-0.5**
KURK				lAmb		lAmb	05 56 44.8	
	comp=Z,9.9nm,0.5s							
KURBB	**Kurchatov Arra**	**43.27**	**308**	P		**P**	**05 56 43.8**	**-0.3**
	comp=Z,4.2nm,0.5s,baz=84,slow=8.2,SNR=35							
AAK	**Ala-Archa**	**47.42**	**297**	P		**P**	**05 57 17.8**	**+0.9**
	comp=Z,2.6nm,0.4s,baz=72,slow=12,SNR=4.1							
AAK	**Ala-Archa**	**47.42**	**297**	*ce*P		**P**	**05 57 17.2**	**+0.3**
AAK				pmax		pmax		
	comp=Z,11nm,1.6s							
AAK	**Ala-Archa**	**47.42**	**297**	P		**P**	**05 57 16.4**	**-0.5**
AAK				lAmb		lAmb	05 57 17.9	
	comp=Z,4.9nm,0.7s							
BVAR	**Borovoye Array**	**48.01**	**312**	P		**P**	**05 57 21.0**	**0.0**
	comp=Z,3.6nm,0.3s,baz=104,slow=8.7,SNR=22							
BVAR	**Borovoye Array**	**48.01**	**312**	P		**P**	**05 57 21.0**	**0.0**
BRVK	**Borovoye**	**48.07**	**312**	*ce*P		**P**	**05 57 21.9**	**+0.5**
BRVK				pmax		pmax		
	comp=Z,3.0nm,0.5s							
BRVK	**Borovoye**	**48.07**	**312**	P		**P**	**05 57 21.5**	**+0.1**
BRVK				lAmb		lAmb	05 57 22.4	
	comp=Z,4.9nm,0.6s							
ARU	**Arti**	**54.06**	**318**	P		**P**	**05 58 06.0**	**+0.3**
	comp=Z,2.3nm,0.4s,baz=182,slow=1.6,SNR=8.8							
ARU	**Arti**	**54.06**	**318**	*d*	*i*P	**P**	**05 58 05.4**	**-0.3**
ARU							06 00 08.3	
ARU				S		**S**	**06 05 22.3**	**+1.3**
ARU				SS		**SS**	**06 09 03.4**	**-2.6**
ARU				pmax		pmax		
	comp=Z,6.0nm,0.6s							
ARU	**Arti**	**54.06**	**318**	P		**P**	**05 58 05.0**	**-0.7**
ARU				lAmb		lAmb	05 58 06.5	
	comp=Z,7.1nm,0.6s							
AKTO	**Aktyubinsk**	**56.09**	**311**	P		**P**	**05 58 20.3**	**0.0**
	comp=Z,4.2nm,0.5s,baz=61,slow=6.3,SNR=5.8							
WB0	**Warramunga Arr**	**56.51**	**183**	P		**P**	**05 58 23.3**	**-0.2**
WB0				lAmb		lAmb	05 58 24.1	
	comp=Z,9.3nm,1.0s							
WRAB	**Tennant Creek**	**56.68**	**183**	*i*P		**P**	**05 58 24.8**	**+0.1**
WRAB				pmax		pmax		
	comp=Z,4.0nm,0.9s							
WB2	**Warramunga Arr**	**56.69**	**183**	P		**P**	**05 58 24.6**	**-0.2**
WRA	**Warramunga Arr**	**56.69**	**183**	P		**P**	**05 58 24.7**	**-0.1**
	comp=Z,7.3nm,0.4s,baz=360,slow=7.6,SNR=175							
WR0	**Warramunga Arr**	**56.70**	**183**	P		**P**	**05 58 24.9**	**+0.1**
AS31	**Alice Springs**	**60.41**	**183**	P		**P**	**05 58 50.3**	**-0.1**
GEYT	**Alibeck**	**60.78**	**297**	P		**P**	**05 58 52.6**	**-0.2**
	comp=Z,4.5nm,0.8s,baz=51,slow=2.8,SNR=6.4							
ARCES	**ARCESS Array B**	**62.78**	**338**	P		**P**	**05 59 06.1**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=63,slow=7.5,SNR=14							
YKA	**Yellowknife Ar**	**65.56**	**29**	P		**P**	**05 59 25.3**	**+1.7**
	comp=Z,0.1nm,0.4s,baz=299,slow=12,SNR=3.6							
OBN	**Obninsk**	**66.00**	**322**	⇓*e*P		**P**	**05 59 26.8**	**+0.3**
OBN				pmax		pmax		
	comp=Z,11nm,0.5s							
FINES	**FINESS Array B**	**67.19**	**331**	P		**P**	**05 59 34.3**	**+0.4**
	comp=Z,3.0nm,0.4s,baz=64,slow=6.0,SNR=25							
KBZ	**Khabaz**	**68.25**	**309**	P		**P**	**05 59 41.5**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=193,slow=3.5,SNR=4.1							
KBZ	**Khabaz**	**68.25**	**309**	*ce*P		**P**	**05 59 41.8**	**+1.0**
KBZ				pmax		pmax		
	comp=Z,5.0nm,1.1s							
KIV	**Kislovodsk**	**68.26**	**309**	⇑*e*P		**P**	**05 59 42.1**	**+1.0**
KIV				*PP		**pwP**	**06 00 43.0**	**0.0**
KIV				*e*			06 01 16.8	
KIV							06 02 18.0	
KIV				pmax		pmax		
	comp=Z,9.0nm,1.0s							
KIV	**Kislovodsk**	**68.26**	**309**	P		**P**	**05 59 42.1**	**+1.0**
SUMG	**Summit**	**70.68**	**359**	*i*P		**P**	**05 59 57.5**	**+1.9**
SUMG				pmax		pmax		
	comp=Z,8.0nm,0.6s							
SUMG	**Summit**	**70.68**	**359**	*i*P		**P**	**05 59 57.5**	**+1.9**
	comp=Z,7.9nm,0.6s							
AKASG	**Malin Array Be**	**72.15**	**321**	P		**P**	**06 00 04.1**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=48,slow=6.3,SNR=11							
NB2	**NORSAR Subarra**	**72.83**	**336**	P		**P**	**06 00 08.5**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=41,slow=6.2							
NOA	**NORSAR Array B**	**72.83**	**336**	P		**P**	**06 00 08.6**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=41,slow=5.9,SNR=9.7							
BUR08	**Bucovina Ar. S**	**76.12**	**320**	P		**P**	**06 00 27.7**	**+0.3**
BUR08				lAmb		lAmb	06 00 28.4	
	comp=Z,5.2nm,1.5s							
BRTR	**Keskin Array B**	**76.23**	**309**	P		**P**	**06 00 29.2**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=72,slow=5.3,SNR=5.4							
GERES	**GERESS Array B**	**80.85**	**326**	P		**P**	**06 00 53.1**	**0.0**
	comp=Z,0.3nm,0.5s,baz=35,slow=4.9,SNR=5.8							

*IDC **29** 05:55:24.9±8.7,37.°43N×71.°95E,h132km±58km,mb3.1/2, mb1 3.2/6,mb1mx2.9/45,mbtmp3.5/6,Error ellipse: s-maj=73.5km s-min=67.4km az=157.0*

ISC 29 05:55:24.0±2.5,37.°3N±0.°2×72.0E±0.°3,h130km,n6, σ0s72/7,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AAK	**Ala-Archa**	**5.62**	**19**	P		**Pn**	**05 56 45.9**	**+0.3**
	2.6nm,0.3s,baz=190,slow=6.5,SNR=10							
AAK				S		**Sn**	**05 57 48.7**	**-0.5**
	0.8nm,0.3s,baz=22,slow=13,SNR=7.2							
MKAR	**Makanchi Array**	**12.13**	**36**	P		**Pn**	**05 58 12.0**	**-0.5**
	0.1nm,0.3s,baz=208,slow=9.0,SNR=2.0							
KURBB	**Kurchatov Arra**	**14.07**	**17**	P		**Pn**	**05 58 37.6**	**+0.1**
	0.1nm,0.3s,baz=207,slow=10,SNR=4.9							
ZALV	**Zalesovo Beam**	**18.82**	**24**	P		**P**	**05 59 34.5**	**+1.1**
	0.3nm,0.3s,baz=217,slow=12,SNR=3.1							
ARCES	**ARCESS Array B**	**40.70**	**337**	P		**P**	**06 02 50.8**	**-0.5**
	1.1nm,0.8s,baz=115,slow=8.1,SNR=3.7							
YKA	**Yellowknife Ar**	**80.37**	**3**	P		**P**	**06 07 20.4**	**-0.1**
	0.2nm,0.4s,baz=355,slow=5.3,SNR=5.3							

*THE **29** 06:00:05.4,38.°43N×20.°46E,h10km,ML3.2/14,Error ellipse: s-maj=0.8km s-min=0.3km az=117.0*
*ATH **29** 06:00:05.3,38.°43N×20.°51E,h13km±1km,ML3.0/20,Error ellipse: s-maj=1.6km s-min=0.6km az=267.0*

ISC 29 06:00:04.8±0.8,38.°44N±0.°02×20.°44E±0.°03,h14km±4km, n81,σ0s98/115,6C-4D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FSK	**Fiskardo**	**0.10**	**77**	P		**Pg**	**06 00 07.5**	**-0.3**
FSK				S		**Sg**	**06 00 09.4**	**-0.5**
	32μm,0.3s							
FSK	**Fiskardo**	**0.10**	**77**	P		**Pg**	**06 00 07.5**	**-0.3**
FSK				S		**Sg**	**06 00 09.3**	**-0.6**
FSK				AML		AML	06 00 09.3	
	comp=N,32744μm,0.4s							
FSK				AML		AML	06 00 09.5	
	comp=E,93754μm,0.2s							
VSK1	**VASILIKIADES**	**0.10**	**107**	P		**Pg**	**06 00 07.6**	**-0.3**
VSK1				S		**Sg**	**06 00 09.2**	**-0.8**
	comp=E,69μm,0.3s							
KEF4	**Livadi, Kephal**	**0.18**	**185**	P		**Pg**	**06 00 09.2**	**+0.3**
KEF4				S		**Sg**	**06 00 12.5**	**+0.8**
AGT1	**Agia Thekli**	**0.19**	**194**	P		**Pg**	**06 00 09.5**	**+0.3**
AGT1				S		**Sg**	**06 00 12.8**	**+0.7**
	comp=E,54μm,0.2s							
LXRA	**Lixouri, Kepha**	**0.24**	**181**	P		**Pg**	**06 00 10.3**	**+0.5**
LXRA				S		**Sg**	**06 00 14.6**	**+1.2**
KEF3	**Kipouria, Keph**	**0.25**	**198**	P		**Pg**	**06 00 10.4**	**+0.3**
KEF3				S		**Sg**	**06 00 14.9**	**+1.3**
EVGI	**Lefkada island**	**0.25**	**42**	P		**Pg**	**06 00 10.4**	**+0.3**
EVGI				S		**Sg**	**06 00 14.4**	**+0.6**
EVGI	**Lefkada island**	**0.25**	**42**	P		**Pg**	**06 00 10.3**	**+0.2**
EVGI				S		**Sg**	**06 00 14.3**	**+0.6**
ARG2	**Argostoli**	**0.26**	**172**	P		**Pg**	**06 00 10.4**	**+0.1**
ARG2				S		**Sg**	**06 00 14.6**	**+0.6**
	comp=E,29μm,0.2s							
ARGA	**Argostoli. Kep**	**0.26**	**174**	P		**Pg**	**06 00 10.4**	**0.0**
ARGA				S		**Sg**	**06 00 14.5**	**+0.5**
VLS	**Valsamata**	**0.28**	**156**	P		**Pg**	**06 00 10.6**	**-0.1**
VLS				S		**Sg**	**06 00 15.1**	**+0.4**
	comp=E,4μm,0.1s							
VLS	**Valsamata**	**0.28**	**156**	P		**Pg**	**06 00 10.5**	**-0.3**
VLS				S		**Sg**	**06 00 15.2**	**+0.4**
VLS				AML		AML	06 00 15.6	
	comp=E,7843μm,0.1s							
VLS				AML		AML	06 00 17.8	
	comp=N,9165μm,0.2s							
MGNA	**Meganis**	**0.35**	**51**	P		**Pg**	**06 00 11.8**	**0.0**
MGNA				S		**Sg**	**06 00 17.3**	**+0.6**
MGNA				AML		AML	06 00 17.5	
	comp=E,7767μm,0.1s							
MGNA				AML		AML	06 00 18.1	
	comp=N,9504μm,0.2s							
LKD2	**Lefkada island**	**0.39**	**26**	P		**Pg**	**06 00 12.8**	**+0.2**
LKD2				S		**Sg**	**06 00 19.1**	**+1.1**
	comp=N,4μm,0.4s							
LKD2	**Lefkada island**	**0.39**	**26**	P		**Pg**	**06 00 12.8**	**+0.2**
LKD2				S		**Sg**	**06 00 19.1**	**+1.1**
LKD2				AML		AML	06 00 19.8	
	comp=N,7698μm,0.4s							
LKD2				AML		AML	06 00 20.5	
	comp=E,7204μm,0.4s							
TSLK	**Tsoukalades, L**	**0.42**	**23**	P		**Pg**	**06 00 13.5**	**+0.3**
TSLK				S		**Sb**	**06 00 20.5**	**+0.2**
	comp=E,5μm,0.6s							
TSLK	**Tsoukalades, L**	**0.42**	**23**	P		**Pg**	**06 00 13.6**	**+0.3**
TSLK				S		**Sb**	**06 00 20.3**	**0.0**
TSLK				AML		AML	06 00 21.2	
	comp=N,7561μm,0.5s							
TSLK				AML		AML	06 00 22.2	
	comp=E,8359μm,0.5s							
KFL	**Anninata**	**0.42**	**140**	P		**Pg**	**06 00 13.1**	**-0.2**
KFL				S		**Sb**	**06 00 20.0**	**-0.3**
	comp=E,6μm,0.4s							
KFL	**Anninata**	**0.42**	**140**	P		**Pg**	**06 00 13.1**	**-0.2**
KFL				S		**Sg**	**06 00 19.2**	**+0.2**
KFL				AML		AML	06 00 20.5	
	comp=E,15410μm,0.3s							
KFL				AML		AML	06 00 22.0	
	comp=N,9200μm,0.4s							
AST1	**Astakos**	**0.52**	**78**	P		**Pg**	**06 00 15.0**	**0.0**
AST1				S		**Sb**	**06 00 23.1**	**+0.1**
	comp=N,5μm,0.3s							
VLMS	**Volimes, Zakyn**	**0.59**	**163**	P		**Pg**	**06 00 15.9**	**-0.3**
VLMS				S		**Sg**	**06 00 24.3**	**+0.3**
VLMS				AML		AML	06 00 30.4	
	comp=N,10257μm,0.5s							
VLMS				AML		AML	06 00 33.6	
	comp=E,7698μm,0.3s							
PDO	**Prodromos**	**0.60**	**74**	P		**Pg**	**06 00 16.4**	**-0.2**
PDO				S		**Sb**	**06 00 25.7**	**+0.2**
	comp=E,3μm,0.5s							
PDO	**Prodromos**	**0.60**	**74**	P		**Pg**	**06 00 16.2**	**-0.3**
PDO				AML		AML	06 00 31.4	
	comp=E,2971μm,0.6s							
PDO				AML		AML	06 00 32.7	
	comp=N,4395μm,0.4s							
VTN	**Vitineika**	**0.78**	**131**	P		**Pg**	**06 00 20.0**	**0.0**
KRI1	**kERI**	**0.83**	**159**	P		**Pg**

KALE	**Kalithea**	**1.33**	**91**	P	**Pn**	**06 00 28.6**	**-0.4**
KALE	**Kalithea**	**1.33**	**91**	P	**Pn**	**06 00 29.0**	**0.0**
KALE	comp=N,1161µm,0.7s			AML	AML	06 00 54.7	
KALE	comp=E,737µm,0.6s			AML	AML	06 00 54.8	
AMT	**Artemida-Makis**	**1.35**	**132**	P	**Pb**	**06 00 30.0**	**+0.2**
AMT	comp=N,1604µm,0.6s			AML	AML	06 00 59.9	
AMT	comp=E,638µm,0.9s			AML	AML	06 01 10.1	
KASA	**Kassiopi**	**1.37**	**343**	P	**Pg**	**06 00 31.7**	**+0.6**
KEK	**Kerkira**	**1.37**	**339**	P	**Pn**	**06 00 30.5**	**+1.0**
KEK	**Kerkira**	**1.37**	**339**	P	**Pn**	**06 00 30.7**	**+1.2**
KEK	comp=E,638µm,0.3s			AML	AML	06 01 00.8	
KEK	comp=N,566µm,0.3s			AML	AML	06 01 04.0	
KLV	**Kalavryta, Ach**	**1.40**	**106**	P	**Pn**	**06 00 30.2**	**+0.2**
KLV	**Kalavryta, Ach**	**1.40**	**106**	P	**Pn**	**06 00 30.2**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.44**	**66**	P	**Pn**	**06 00 31.4**	**+0.9**
SRN	**Sarande**	**1.48**	**347**	P	**Pn**	**06 00 32.1**	**+1.1**
AGG	**Agios Georgios**	**1.59**	**68**	P	**Pb**	**06 00 33.8**	**-0.1**
THL	**Klokotos Trika**	**1.66**	**47**	P	**Pg**	**06 00 36.6**	**-0.1**
KPRO	**Kipourio**	**1.68**	**25**	P	**Pg**	**06 00 37.0**	**+0.1**
TRIP	**Tripoli**	**1.71**	**122**	P	**Pb**	**06 00 36.4**	**+0.4**
ITM	**Ithomi**	**1.72**	**136**	P	**Pb**	**06 00 37.0**	**+0.9**
PYL	**PYLOS**	**1.85**	**146**	P	**Pb**	**06 00 37.8**	**-0.6**
PROD	**Prodromos**	**1.94**	**95**	P	**Pb**	**06 00 40.1**	**+0.2**
DBRK	**Dubrovnik**	**4.58**	**338**	*e*Pn	**Pn**	**06 01 12.7**	**-0.8**
DBRK				Sn	**Sn**	**06 02 04.8**	**-1.7**
STON	**Ston**	**4.90**	**336**	*e*Pn	**Pn**	**06 01 17.9**	**0.0**
STON				Sn	**Sn**	**06 02 11.7**	**-2.6**
MAKA	**Makarska**	**5.50**	**333**	*i* Pn	**Pn**	**06 01 26.0**	**-0.1**
MAKA				Sn	**Sn**	**06 02 27.1**	**-2.0**
RICI	**Ricice**	**5.64**	**335**	*e*Pn	**Pn**	**06 01 28.1**	**-0.1**
RICI				Sn	**Sn**	**06 02 31.4**	**-1.3**
PLVB	**Pleven**	**5.87**	**31**	⇓P	**Pb**	**06 01 49.2**	**+2.4**
PLVB				⇓S	Sn	06 02 24.2	-1.4
PUNG	**Punghina**	**6.13**	**17**	⇑P	**Pb**	**06 02 03.4**	**+1.3**
VLAD	**Vladila**	**6.31**	**27**	⇑P	**Pb**	**06 01 56.9**	**+2.6**
KIJV	**Kijevo**	**6.34**	**333**	*e*Pn	**Pn**	**06 01 38.1**	**+0.3**
ZIRJ	**Zirje**	**6.35**	**327**	*e*Pn	**Pn**	**06 01 37.3**	**-0.6**
ZIRJ				Sn	**Sn**	**06 02 45.6**	**-4.5**
MORI	**Morici**	**6.49**	**328**	*i* Pn	**Pn**	**06 01 40.5**	**+0.7**
SRE	**Strehaia**	**6.55**	**18**	⇑P	**Pg**	**06 02 07.9**	**-2.3**
HERR	**Herculane**	**6.61**	**12**	⇑P	**Pg**	**06 02 11.7**	**+0.5**
DUGI	**Dugi Otok**	**6.87**	**326**	*i* Pn	**Pn**	**06 01 45.0**	**-0.1**
DUGI				Sn	**Sn**	**06 03 00.2**	**-2.9**
HUMR	**Humele**	**6.97**	**28**	⇓P	**Pb**	**06 02 04.3**	**-1.3**
ARR	**Arges**	**7.60**	**23**	⇓P	**Pb**	**06 02 16.2**	**-0.1**
MTUR	**Matau**	**7.61**	**25**	⇑P	**Pb**	**06 02 15.7**	**-0.8**
VOIR		**7.79**	**25**	⇑P	**Pb**	**06 02 17.7**	**-1.8**
SOKA	**Soboth**	**9.15**	**336**	*i* Pn	**Pn**	**06 02 16.2**	**-0.2**
	comp=N,1.3nm,0.3s						
OBKA	**Obir**	**9.16**	**334**	*e*Pn	**Pn**	**06 02 18.4**	**+1.8**
	comp=N,1.0nm,0.2s						

DDA **29** *06:00:53.9,40.12N×24.36E,h21km±1km,MW4.0*
IDC **29** *06:00:55.1±0.7,40.11N×24.37E,h0km,mb3.9/17, mb1 4.0/22,mb1mx3.9/42,mbtmp3.9/22,ML3.9/5,MS3.3/10, Ms1 3.4/10,ms1mx3.0/49,Error ellipse: s-maj=13.8km s-min=13.0km az=130.0*
ISK **29** *06:00:55.3,40.05N×24.44E,h9km,ML4.1/28*
ATH **29** *06:00:55.9,40.06N×24.40E,h28km±1km,ML3.9/26,Error ellipse: s-maj=1.1km s-min=0.6km az=25.0*
MOS **29** *06:00:55.9±1.0,40.10N×24.38E,h16km,mb4.4/8,Error ellipse: s-maj=8.1km s-min=5.6km az=83.1*
BEO **29** *06:00:56.9±0.5,40.11N×24.33E,h0km,ML3.9/15*
PDG **29** *06:00:56.2±1.0,40.05N×24.43E,h17km±1km,ML3.8/11, Error ellipse: s-maj=0.8km s-min=1.0km az=0.0*
THE **29** *06:00:56.5,40.05N×24.41E,h10km,ML3.9/17,Error ellipse: s-maj=0.8km s-min=0.4km az=343.0*
NEIC **29** *06:00:56.6±1.7,40.04N±0.03×24.40E±0.05,h10km±1km, Error ellipse: s-maj=7.2km s-min=2.9km az=239.0*
SOF **29** *06:00:58.1,40.21N×24.46E,h20km,MD3.9*
ISC 29 06:00:56.1±1.0, 40.05N±0.01×24.43E±0.01, h7km±6km, n323,σ1s09/391, mb4.2/36, MS3.2/11, 31C-10D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.44**	**310**	P	**Pb**	**06 01 05.2**	**-1.0**
OUR				S	**Sg**	**06 01 11.1**	**+0.7**
	13µm,0.3s						
OUR	**Ouranopolis**	**0.44**	**310**	P	**Pb**	**06 01 05.2**	**-1.0**
OUR				S	**Sb**	**06 01 11.3**	**-1.8**
OUR				AML	AML	06 01 15.4	
OUR	comp=E,29049µm,0.2s			AML	AML	06 01 15.9	
	comp=N,23758µm,0.4s						
OUR	**Ouranopolis**	**0.44**	**310**	PG	**Pg**	**06 01 04.9**	**+0.3**
OUR				SG	**Sb**	**06 01 11.2**	**-1.8**
OUR	**Ouranopolis**	**0.44**	**310**	P	**Pb**	**06 01 05.2**	**-1.0**
OUR						06 01 11.1	
OUR	**Ouranopolis**	**0.44**	**310**		**Pb**	**06 01 05.2**	**-1.0**
OUR					**Sg**	**06 01 11.1**	**+0.7**
PAIG	**Paliouri**	**0.59**	**258**	P	**Pg**	**06 01 07.6**	**+0.2**
PAIG				S	**Sg**	**06 01 15.7**	**+0.6**
	comp=N,13µm,0.4s						
PAIG	**Paliouri**	**0.59**	**258**	P	**Pg**	**06 01 07.7**	**+0.2**
PAIG				S	**Sg**	**06 01 16.0**	**+0.9**
PAIG				AML	AML	06 01 18.7	
PAIG	comp=N,30400µm,0.5s			AML	AML	06 01 19.3	
	comp=E,22886µm,0.5s						
PAIG	**Paliouri**	**0.59**	**258**		**Pg**	**06 01 07.6**	**+0.2**
PAIG					**Sg**	**06 01 15.7**	**+0.6**
THAS	**Thassos island**	**0.60**	**22**	P	**Pg**	**06 01 07.7**	**+0.1**
THAS				S	**Sb**	**06 01 17.7**	**+0.2**
	comp=E,22µm,0.3s						
THAS	**Thassos island**	**0.60**	**22**	P	**Pg**	**06 01 07.8**	**+0.2**
THAS				S	**Sb**	**06 01 17.6**	**+0.2**
THAS				AML	AML	06 01 18.5	
THAS	comp=E,63682µm,0.3s			AML	AML	06 01 18.9	
	comp=N,24723µm,0.3s						
THAS	**Thassos island**	**0.60**	**22**		**Pg**	**06 01 07.7**	**+0.1**
LIA	**Limnos Island**	**0.60**	**105**	P	**Pg**	**06 01 08.6**	**+0.9**
LIA				S	**Sb**	**06 01 17.5**	**-0.2**
	comp=N,14µm,0.6s						
LIA	**Limnos Island**	**0.60**	**105**	P	**Pb**	**06 01 08.7**	**-0.2**
LIA				S	**Sb**	**06 01 17.4**	**-0.2**
LIA				AML	AML	06 01 20.1	
LIA	comp=E,29367µm,0.8s			AML	AML	06 01 20.3	
	comp=N,27451µm,0.4s						
LIA	**Limnos Island**	**0.60**	**105**		**Pg**	**06 01 08.6**	**+0.9**
EFSA	**Agios Efstrati**	**0.67**	**140**	P	**Pb**	**06 01 10.4**	**+0.3**
PLG	**Polygyros**	**0.82**	**293**	P	**Pb**	**06 01 12.1**	**-0.5**
PLG				S	**Sb**	**06 01 23.0**	**-0.9**
	comp=N,6µm,0.6s						
PLG	**Polygyros**	**0.82**	**293**	P	**Pg**	**06 01 11.9**	**+0.1**
PLG				S	**Sb**	**06 01 22.8**	**-1.1**
PLG				AML	AML	06 01 27.0	
PLG	comp=E,7878µm,0.5s			AML	AML	06 01 28.6	
	comp=N,11311µm,0.3s						
KVLA	**Kavala**	**0.88**	**358**	P	**Pb**	**06 01 13.4**	**-0.4**
KVLA				S	**Sb**	**06 01 25.9**	**+0.2**
KVLA				AML	AML	06 01 27.0	
KVLA	comp=E,52958µm,0.4s			AML	AML	06 01 27.2	
	comp=N,24888µm,0.3s						
SMTH	**Samothraki Isl**	**0.94**	**63**	P	**Pg**	**06 01 14.1**	**-0.1**
SMTH				S	**Sb**	**06 01 27.4**	**-0.1**
	comp=N,7µm,0.5s						
SMTH	**Samothraki Isl**	**0.94**	**63**	P	**Pg**	**06 01 14.2**	**+0.1**
SMTH				S	**Sb**	**06 01 27.8**	**+0.3**
SMTH				AML	AML	06 01 29.1	
SMTH	comp=E,13293µm,0.5s			AML	AML	06 01 30.4	
	comp=N,15014µm,0.5s						
KAVA	**Kavala**	**0.94**	**4**	P	**Pb**	**06 01 14.2**	**-0.6**
KAVA				S	**Sb**	**06 01 27.4**	**-0.1**
	comp=N,10µm,0.2s						
KAVA	**Kavala**	**0.94**	**4**	P	**Pb**	**06 01 14.1**	**-0.6**
KAVA				S	**Sb**	**06 01 27.2**	**-0.3**
KAVA				AML	AML	06 01 28.7	
	comp=N,25024µm,0.2s						
KAVA				AML	AML	06 01 30.3	
	comp=E,11193µm,0.4s						
AOS	**Alonnisos**	**0.98**	**206**	P	**Pg**	**06 01 14.3**	**-0.5**
AOS				S	**Sb**	**06 01 28.8**	**+0.3**
	comp=E,17µm,0.6s						
AOS	**Alonnisos**	**0.98**	**206**	P	**Pg**	**06 01 15.0**	**+0.1**
AOS				S	**Sb**	**06 01 28.7**	**+0.3**
AOS				AML	AML	06 01 31.2	
AOS	comp=E,38411µm,0.7s			AML	AML	06 01 33.0	
	comp=N,30972µm,0.4s						
AOS	**Alonnisos**	**0.98**	**206**	PG	**Pg**	**06 01 15.0**	**+0.1**
AOS				SG	**Sg**	**06 01 28.5**	**+1.0**
ALNA	**Alonissos**	**1.00**	**206**	P	**Pg**	**06 01 15.5**	**+0.2**
ALNA				S	**Sb**	**06 01 29.7**	**+0.6**
GADA	**Gvkgeada**	**1.14**	**83**	P	**Pg**	**06 01 17.7**	**-0.2**
GADA				S	**Sb**	**06 01 33.7**	**+0.7**
	comp=N,6µm,0.5s						
GADA	**Gvkgeada**	**1.14**	**83**	PN	**Pg**	**06 01 17.7**	**-0.2**
GADA				SN	**Sg**	**06 01 32.9**	**+0.2**
GOKA	**anakkale-Gk**	**1.15**	**83**	*i* P	**Pg**	**06 01 17.9**	**-0.2**
GOKA				*i* S	**Sg**	**06 01 33.2**	**+0.3**
HORT	**Hortiatis**	**1.15**	**299**	P	**Pg**	**06 01 17.9**	**-0.3**
HORT				S	**Sb**	**06 01 33.5**	**0.0**
HORT	**Hortiatis**	**1.15**	**299**	P	**Pg**	**06 01 17.8**	**-0.3**
HORT				S	**Sb**	**06 01 33.6**	**0.0**
HORT				AML	AML	06 01 36.8	
HORT	comp=N,5168µm,0.3s			AML	AML	06 01 38.1	
	comp=E,3337µm,0.3s						
HORT	**Hortiatis**	**1.15**	**299**	PN	**Pb**	**06 01 18.1**	**-0.3**
HORT				SN	**Sn**	**06 01 33.7**	**-1.0**
SKIA	**Skiathos**	**1.16**	**220**	P	**Pg**	**06 01 17.4**	**-0.8**
SKIA				S	**Sg**	**06 01 33.4**	**+0.2**
	comp=E,10µm,0.5s						
SKIA	**Skiathos**	**1.16**	**220**	P	**Pg**	**06 01 17.6**	**-0.6**
SKIA				S	**Sg**	**06 01 33.1**	**-0.1**
XOR	**Xorichti**	**1.17**	**235**	P	**Pg**	**06 01 17.9**	**-0.7**
XOR				S	**Sg**	**06 01 33.7**	**-0.1**
	comp=E,6µm,0.4s						
XOR	**Xorichti**	**1.17**	**235**	P	**Pg**	**06 01 17.9**	**-0.7**
XOR				S	**Sg**	**06 01 33.5**	**-0.3**
XOR				AML	AML	06 01 38.7	
XOR	comp=N,12721µm,0.4s			AML	AML	06 01 41.0	
	comp=E,9711µm,0.4s						
SKY	**Skiros Island**	**1.18**	**175**	P	**Pb**	**06 01 18.2**	**-0.5**
SKY	**Skiros Island**	**1.18**	**175**	P	**Pb**	**06 01 18.2**	**-0.5**
SKY				AML	AML	06 01 38.6	
SKY	comp=N,39198µm,0.2s			AML	AML	06 01 38.8	
	comp=E,36487µm,0.3s						
NEO	**Neokhori**	**1.19**	**232**	P	**Pb**	**06 01 18.1**	**-0.9**
NEO				S	**Sn**	**06 01 35.4**	**-0.2**
	comp=E,5µm,0.4s						
NEO	**Neokhori**	**1.19**	**232**	P	**Pb**	**06 01 18.1**	**-0.9**
NEO				S	**Sn**	**06 01 35.5**	**-0.2**
NEO				AML	AML	06 01 38.3	
NEO	comp=E,9536µm,0.4s			AML	AML	06 01 39.2	
	comp=N,11685µm,0.4s						
SRS	**Serrai**	**1.24**	**329**	*e*Pn	**Pb**	**06 01 19.0**	**-0.9**
SRS				*e*Sn	**Sg**	**06 01 33.9**	**-2.0**
SRS	**Serrai**	**1.24**	**329**	P	**Pb**	**06 01 18.9**	**-0.9**
SRS				S	**Sb**	**06 01 35.5**	**-0.5**
	comp=N,3µm,0.3s						
SRS	**Serrai**	**1.24**	**329**	P	**Pb**	**06 01 18.9**	**-0.9**
SRS				AML	AML	06 01 39.1	
SRS	comp=E,3917µm,0.3s			AML	AML	06 01 40.1	
	comp=N,5114µm,0.2s						
THE	**Thessaloniki**	**1.26**	**298**	P	**Pn**	**06 01 19.4**	**-0.7**
THE	**Thessaloniki**	**1.26**	**298**	P	**Pn**	**06 01 19.5**	**-0.5**
THE				AML	AML	06 01 45.4	
THE	comp=E,1782µm,0.5s			AML	AML	06 01 47.3	
	comp=N,2353µm,1.0s						
BOZC	**Bozcaada**	**1.27**	**99**	PN	**Pn**	**06 01 19.7**	**-0.5**
BOZC				SN	**Sb**	**06 01 36.6**	**-0.2**
BOZC	**Bozcaada**	**1.27**	**99**	*i* P	**Pn**	**06 01 19.6**	**-0.6**
BOZC				*i* S	**Sb**	**06 01 35.4**	**-1.4**
BOZC				IAML		06 01 40.0	
BOZC	comp=N,942nm,0.5s			IAML		06 01 40.0	
	comp=E,2µm,0.6s						
RDO	**Rodhopi**	**1.38**	**37**	P	**Pn**	**06 01 20.9**	**-0.9**
RDO				S	**Sg**	**06 01 40.5**	**0.0**
RDO	**Rodhopi**	**1.38**	**37**	P	**Pn**	**06 01 20.9**	**-0.9**
RDO				AML	AML	06 01 53.4	
RDO	comp=N,4927µm,0.8s			AML	AML	06 01 53.9	
	comp=E,2611µm,0.8s						
RDO	**Rodhopi**	**1.38**	**37**	PN	**Pn**	**06 01 20.9**	**-0.9**
SIGR	**SIGRI**	**1.39**	**127**	P	**Pn**	**06 01 21.7**	**-0.1**
SIGR				S	**Sb**	**06 01 39.7**	**-0.5**
	comp=E,4µm,0.5s						
SIGR	**SIGRI**	**1.39**	**127**	P	**Pn**	**06 01 21.7**	**-0.1**
SIGR				AML	AML	06 01 44.7	
SIGR	comp=E,7032µm,0.5s			AML	AML	06 01 45.2	
	comp=N,9082µm,0.4s						
SIGR	**SIGRI**	**1.39**	**127**	PN	**Pn**	**06 01 21.6**	**-0.2**
SIGR				SN	**Sb**	**06 01 40.3**	**+0.1**
KYMI	**Kymi, Euboea I**	**1.44**	**190**	P	**Pn**	**06 01 21.7**	**-0.9**
KYMI				S	**Sn**	**06 01 41.9**	**+0.1**
KYMI	**Kymi, Euboea I**	**1.44**	**190**	P	**Pn**	**06 01 21.7**	**-0.9**
KYMI				AML	AML	06 01 48.5	
KYMI	comp=E,15610µm,0.4s			AML	AML	06 01 49.0	
	comp=N,13198µm,0.5s						
EZN	**Ezine**	**1.48**	**98**	P	**Pn**	**06 01 22.9**	**-0.2**
EZN				S	**Sn**	**06 01 42.2**	**-0.4**
	comp=N,2µm,0.4s						
EZN	**Ezine**	**1.48**	**98**	PN	**Pn**	**06 01 22.8**	**-0.3**
ENEZ	**Enez**	**1.48**	**62**	P	**Pn**	**06 01 22.3**	**-0.9**
ENEZ	**Enez**	**1.48**	**62**	PN	**Pn**	**06 01 22.7**	**-0.5**
LIT	**Litokhoron**	**1.49**	**272**	P	**Pn**	**06 01 22.3**	**-1.0**
LIT				S	**Sn**	**06 01 41.7**	**-1.2**
	comp=N,775nm,0.6s						
LIT	**Litokhoron**	**1.49**	**272**	P	**Pn**	**06 01 22.3**	**-1.0**
LIT				AML	AML	06 01 54.6	
LIT	comp=E,1410µm,0.9s			AML	AML	06 01 55.8	
	comp=N,1409µm,0.4s						
LIT	**Litokhoron**	**1.49**	**272**	P	**Pn**	**06 01 22.3**	**-1.0**
LIT	**Litokhoron**	**1.49**	**272**		**Pn**	**06 01 22.3**	**-1.0**
MRKA	**Markates**	**1.49**	**206**	P	**Pn**	**06 01 22.4**	**-0.9**
MRKA				S	**Sn**	**06 01 42.0**	**-1.1**
	comp=N,7µm,0.5s						
MRKA	**Markates**	**1.49**	**206**	P	**Pn**	**06 01 22.4**	**-0.9**
MRKA				AML	AML	06 01 49.9	
MRKA	comp=N,16713µm,0.4s			AML	AML	06 01 51.1	
	comp=E,10853µm,0.6s						
GELI	**Tayfur-Gelibol**	**1.61**	**77**	PN	**Pn**	**06 01 24.4**	**-0.5**
KNT	**Kendrikon**	**1.61**	**314**	P	**Pn**	**06 01 24.8**	**-0.2**
KNT	**Kendrikon**	**1.61**	**314**	P	**Pn**	**06 01 24.7**	**-0.2**
KNT				AML	AML	06 01 49.7	
KNT	comp=N,3684µm,0.3s			AML	AML	06 01 53.3	
	comp=E,2965µm,0.3s						
KNT	**Kendrikon**	**1.61**	**314**	PN	**Pn**	**06 01 24.7**	**-0.2**
MMB	**Musomiste**	**1.62**	**341**	*i* P	**Pn**	**06 01 24.2**	**-1.0**
PRK	**Paraskevi**	**1.64**	**119**	P	**Pn**	**06 01 25.9**	**+0.7**
PRK				AML	AML	06 01 59.5	
PRK	comp=E,7051µm,0.8s			AML	AML	06 02 05.2	
	comp=N,9553µm,0.8s						
RZN	**Rozhen**	**1.65**	**8**	*i* P	**Pn**	**06 01 25.4**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**1.66**	**100**	*i* P	**Pn**	**06 01 25.4**	**-0.3**
BAYC				IAML		06 01 53.0	
BAYC	comp=N,545nm,0.3s			IAML		06 01 53.0	
	comp=E,514nm,0.3s						
ERIK	**Erikli-Kesan**	**1.71**	**68**	PN	**Pn**	**06 01 25.7**	**-0.6**
PSRA	**Psara**	**1.75**	**149**	P	**Pn**	**06 01 27.7**	**+0.9**
KDZ	**Kurdzhali**	**1.76**	**25**	*i* P	**Pn**	**06 01 25.9**	**-1.2**
KDZ	**Kurdzhali**	**1.76**	**25**	PN	**Pn**	**06 01 26.1**	**-1.0**
LKR	**Lokris**	**1.79**	**219**	P	**Pn**	**06 01 26.6**	**-0.8**
LKR	**Lokris**	**1.79**	**219**	P	**Pn**	**06 01 26.5**	**-0.8**
GRG	**Griva**	**1.79**	**301**	P	**Pn**	**06 01 27.4**	**-0.1**
GRG	**Griva**	**1.79**	**301**	P	**Pn**	**06 01 27.3**	**-0.1**
GRG	comp=N,3924µm,0.8s			AML	AML	06 02 00.5	
GRG	comp=E,3471µm,0.8s			AML	AML	06 02 03.5	
GRG	**Griva**	**1.79**	**301**	PN	**Pn**	**06 01 27.3**	**-0.1**
LPK	**Lapseki**	**1.82**	**79**	PN	**Pn**	**06 01 27.5**	**-0.3**
KESN	**Edirne-Kesan**	**1.89**	**65**	*i* P	**Pn**	**06 01 27.8**	**-1.2**
KESN				IAML		06 01 58.0	
KESN	comp=E,1µm,0.7s			IAML		06 02 00.0	
	comp=N,1µm,0.5s						
VAY	**Valandovo**	**1.90**	**313**	*e*Pn	**Pn**	**06 01 29.4**	**+0.5**
VAY				*e*Sn	**Sn**	**06 01 52.8**	**-0.2**
VAY	**Valandovo**	**1.90**	**313**	*i* Pn	**Pn**	**06 01 28.8**	**0.0**
VAY	**Valandovo**	**1.90**	**313**	*i* Pn	**Pn**	**06 01 28.8**	**0.0**
AYVA	**Ayvalik**	**1.90**	**112**	*i* P	**Pn**	**06 01 29.3**	**+0.4**
AYVA				IAML		06 02 05.0	
AYVA	comp=N,812nm,0.5s			IAML		06 02 13.0	
	comp=E,875nm,0.7s						
AGG	**Agios Georgios**	**1.92**	**238**	P	**Pn**	**06 01 28.8**	**-0.4**
AGG	**Agios Georgios**	**1.92**	**238**	P	**Pn**	**06 01 28.8**	**-0.4**
AGG	**Agios Georgios**	**1.92**	**238**	PN	**Pn**	**06 01 29.0**	**-0.3**
AGG	**Agios Georgios**	**1.92**	**238**	P	**Pn**	**06 01 28.9**	**-0.3**
AGG	**Agios Georgios**	**1.92**	**238**		**Pn**	**06 01 28.9**	**-0.3**
THL	**Klokotos Trika**	**1.92**	**256**	P	**Pn**	**06 01 28.9**	**-0.3**
UKOP	**Uzunkopru-Edir**	**1.99**	**57**	PN	**Pn**	**06 01 30.4**	**+0.2**
DION	**Dionisos Attik**	**2.01**	**191**	P	**Pn**	**06 01 29.8**	**-0.6**
DION	**Dionisos Attik**	**2.01**	**191**	P	**Pn**	**06 01 29.7**	**-0.7**
DION				AML	AML	06 02 04.7	
DION	comp=N,15455µm,0.4s			AML	AML	06 02 09.1	
	comp=E,14087µm,0.6s						
KARY	**Karystos**	**2.02**	**180**	P	**Pn**	**06 01 30.0**	**-0.6**
KARY	**Karystos**	**2.02**	**180**	P	**Pn**	**06 01 29.9**	**-0.6**
VIL2	**Platees**	**2.05**	**206**	P	**Pn**	**06 01 30.7**	**-0.3**
KZN	**Kozani**	**2.05**	**278**	P	**Pn**	**06 01 31.1**	**0.0**
MAKR	**Makrakomi, Fth**	**2.06**	**240**	P	**Pn**	**06 01 31.1**	**0.0**
PLD	**Plovdiv**	**2.06**	**6**	*e*Pn	**Pn**	**06 01 30.9**	**-0.2**
PLD				*e*Sn	**Sb**	**06 01 58.4**	**-1.2**
PLD	**Plovdiv**	**2.06**	**6**	*i* P	**Pb**	**06 01 32.4**	**-1.4**
PLD	**Plovdiv**	**2.06**	**6**	PN	**Pn**	**06 01 31.2**	**+0.1**
KKB	**Krupnik**	**2.08**	**331**	*i* P	**Pn**	**06 01 31.0**	**-0.4**
CHOS	**Chios island**	**2.09**	**142**	P	**Pn**	**06 01 31.5**	**-0.1**
CHOS	**Chios island**	**2.09**	**142**	P	**Pn**	**06 01 31.7**	**+0.1**
CHOS				AML	AML	06 02 07.1	
CHOS	comp=N,6134µm,0.5s			AML	AML	06 02 11.2	
	comp=E,5530µm,0.7s						
CHOS	**Chios island**	**2.09**	**142**	PN	**Pn**	**06 01 31.0**	**-0.6**
ATHU	**Athens Univers**	**2.14**	**194**	P	**Pn**	**06 01 31.8**	**-0.5**
ATHU	**Athens Univers**	**2.14**	**194**	P	**Pn**	**06 01 31.7**	**-0.6**
PROD	**Prodromos**	**2.15**	**214**	P	**Pn**	**06 01 31.5**	**-0.8**
ATH	**Athens Observa**	**2.15**	**195**	P	**Pn**	**06 01 32.2**	**-0.1**
ATH	**Athens Observa**	**2.15**	**195**	P	**Pn**	**06 01 32.1**	**-0.2**
ATH				AML	AML	06 02 13.5	
ATH	comp=N,7262µm,0.5s			AML	AML	06 02 13.7	
	comp=E,4711µm,0.6s						
DKL	**Dikili**	**2.15**	**116**	PN	**Pn**	**06 01 32.2**	**-0.2**
DIM	**Dimitrovgrad**	**2.16**	**22**	*i* P	**Pn**	**06 01 32.7**	**+0.2**
RKY	**Sarkoy-Tekirda**	**2.20**	**72**	PN	**Pn**	**06 01 32.9**	**-0.1**
KRBG	**Karabiga-Canak**	**2.23**	**80**	PN	**Pn**	**06 01 33.2**	**-0.2**
VLY	**Voula,Athens**	**2.25**	**193**	P	**Pn**	**06 01 33.3**	**-0.5**
ZEDA	**zmir-Bergama**	**2.32**	**117**	*i* P	**Pn**	**06 01 35.5**	**+0.9**
ZEDA				IAML		06 02 19.0	
ZEDA	comp=E,301nm,0.6s			IAML		06 02 22.0	
	comp=N,399nm,0.8s						
EVR	**Evrytania**	**2.32**	**242**	P	**Pn**	**06 01 35.0**	**+0.2**
LOUT	**Loutraki**	**2.35**	**209**	P	**Pn**	**06 01 34.8**	**-0.4**
URLA	**Izmir**	**2.39**	**134**	PN	**Pn**	**06 01 35.7**	**0.0**
URLA	**Izmir**	**2.39**	**134**	*i* P	**Pn**	**06 01 35.7**	**0.0**
URLA				IAML		06 02 23.0	
URLA	comp=E,231nm,0.5s			IAML		06 02 24.0	
	comp=N,227nm,0.9s						
ANX	**Ano Chora**	**2.43**	**234**	P	**Pn**	**06 01 36.4**	**+0.1**
KALE	**Kalithea**	**2.43**	**228**	P	**Pn**	**06 01 36.5**	**+0.3**
SERG	**Sergoula**	**2.46**	**229**	P	**Pn**	**06 01 35.4**	**-1.3**
BALY	**Balya**	**2.48**	**96**	*i* P	**Pn**	**06 01 37.2**	**+0.3**
BALY				IAML		06 02 20.0	
BALY	comp=E,661nm,0.6s			IAML		06 02 21.0	
	comp=N,656nm,0.7s						
MRMT	**Marmara Adasi**	**2.48**	**76**	PN	**Pn**	**06 01 36.6**	**-0.4**
GONE	**Gonen-Balikesi**	**2.50**	**89**	PN	**Pn**	**06 01 37.3**	**+0.1**
PGB	**Panagyurishte**	**2.50**	**356**	*e*P	**Pb**	**06 01 39.6**	**-1.8**
EDRB	**Edirne**	**2.51**	**44**	PN	**Pn**	**06 01 37.5**	**+0.2**
EFP	**Efpalio**	**2.54**	**231**	P	**Pn**	**06 01 36.8**	**-0.9**
BLCB	**Balcova**	**2.63**	**129**	PN	**Pn**	**06 01 38.2**	**-0.1**
STEP	**BALIKESIR_Sava**	**2.63**	**104**	*i* P	**Pn**	**06 01 38.9**	**-0.1**
STEP				IAML		06 02 33.0	
STEP	comp=N,733nm,0.8s			IAML		06 02 54.0	
	comp=E,565nm,1.3s						
EDC	**Edincik**	**2.65**	**83**	PN	**Pn**	**06 01 39.7**	**+0.5**
KIRK	**Kırklareli**	**2.66**	**49**	*i* P	**Pn**	**06 01 38.9**	**-0.4**
KIRK				IAML		06 02 28.0	
KIRK	comp=N,128nm,0.5s			IAML		06 02 33.0	
	comp=E,152nm,0.5s						
KLV	**Kalavryta, Ach**	**2.68**	**222**	P	**Pn**	**06 01 39.4**	**-0.3**
BALB	**Balikesir**	**2.69**	**98**	PN	**Pn**	**06 01 39.9**	**+0.1**
DID	**Didima**	**2.71**	**200**	P	**Pn**	**06 01 39.3**	**-0.7**
DID	**Didima**	**2.71**	**200**	P

MANT IAML 06 02 52.0
comp=E,115nnm,0.6s
comp=N,70nm,0.7s
MANT Manisa 3.57 115 Pn 06 01 53.3 +1.3
ULDT Uludag 3.61 87 *i* P **Pn 06 01 51.8 -0.9**
ULDT IAML 06 02 58.0
comp=N,201nm,0.6s
ULDT IAML 06 03 00.0
comp=E,245nm,0.8s
KULA Kula-Manisa 3.63 114 PN **Pn 06 01 53.4 +0.7**
IGD Bursa 3.67 85 *i* P **Pn 06 01 53.0 -0.2**
IGD IAML 06 02 57.0
comp=E,118nm,0.5s
IGD IAML 06 03 01.0
comp=N,86nm,0.6s
BUY Buyukada 3.67 76 *i* P **Pb 06 01 57.4 -3.8**
TIR Tirane 3.70 292 Pn 06 01 46.3 -7.4
SANT Santorini 3.77 167 ⇑P **Pn 06 01 51.5 -3.1**
SANT Santorini 3.77 167 Pn 06 01 54.1 -0.5
RAZG Razgrad 3.84 23 ⇑P **Pn 06 01 55.5 -0.1**
SELS Selova 4.02 323 *e*Pn **Pn 06 01 57.6 -0.5**
SELS *e*Sn **Sn 06 02 44.7 -0.7**
GDZ Gediz 4.02 102 *i* P **Pn 06 01 59.2 +1.0**
GDZ IAML 06 03 19.0
comp=E,35nm,0.9s
GDZ IAML 06 03 21.0
comp=N,46nm,1.6s
ZAGS Zajecar 4.10 337 *e*Pn **Pn 06 01 58.6 -0.5**
ZAGS *e*Sn **Sn 06 02 46.5 -0.8**
BOVS Bovan 4.12 331 *e*Pn **Pn 06 01 59.6 +0.2**
BOVS *e*Sn **Sn 06 02 46.4 -1.3**
DAT Datca 4.14 142 *i* P **Pn 06 01 59.5 -0.4**
DAT IAML 06 03 39.0
comp=N,13nm,1.6s
DAT IAML 06 03 53.0
comp=E,12nm,1.8s
PVY Plav 4.21 308 ⇓*i* Pn **Pn 06 01 58.8 -2.0**
PVY *i* Sn **Sn 06 02 50.6 +0.2**
KHAL Karahalli 4.28 112 *i* P **Pn 06 02 03.2 +1.5**
KHAL IAML 06 03 18.0
comp=E,28nm,1.0s
KHAL IAML 06 03 32.0
comp=N,35nm,0.9s
TAVA DENIZLI_Tavas 4.36 125 *i* P **Pn 06 02 04.0 +1.2**
TAVA IAML 06 03 28.0
comp=N,30nm,1.1s
TAVA IAML 06 03 29.0
comp=E,29nm,0.9s
ULC Ulcinj 4.36 298 ⇓*i* Pn **Pn 06 02 03.6 +0.8**
ULC *i* Sn **Sn 06 02 53.6 -0.2**
IVA Berane 4.42 311 ⇑*i* Pn **Pn 06 02 04.2 +0.6**
IVA *i* Sn **Sn 06 02 54.9 -0.5**
DRME Dracevica, Mon 4.50 300 ⇑*i* Pn **Pn 06 02 06.9 +2.3**
DRME *i* Sn **Sn 06 02 58.9 +1.8**
KAND Kocaeli-Kandir 4.51 75 *i* P **Pn 06 02 04.3 -0.5**
KAND IAML 06 03 25.0
comp=E,83nm,0.7s
KAND IAML 06 03 40.0
comp=N,88nm,0.8s
PDG Podgorica 4.56 303 ⇑P **Pn 06 02 06.4 +0.9**
PDG Podgorica 4.56 303 Pn 06 01 54.3 -11
TTG Podgorica 4.56 303 *e*Pn **Pn 06 02 06.3 +0.8**
TTG *i* Sn **Sn 06 02 59.3 +0.5**
SJES Sjenica 4.62 315 *e*Pn **Pn 06 02 07.3 +0.8**
KOME Kolasin 4.63 309 ⇓*i* Pn **Pn 06 02 06.9 +0.4**
KOME *i* Sn **Sn 06 03 01.0 +0.5**
DALY Dalyan (Mula) 4.63 133 *i* P **Pn 06 02 06.6 +0.2**
DALY IAML 06 03 45.0
comp=N,51nm,1.8s
DALY IAML 06 04 33.0
comp=E,171nm,0.2s
BORA Eskisehir 4.63 90 *i* P **Pn 06 02 06.8 +0.2**
BORA IAML 06 03 27.0
comp=N,35nm,0.7s
BORA IAML 06 03 32.0
comp=E,27nm,0.5s
GRUS Gruza 4.73 325 *e*Pn **Pn 06 02 07.5 -0.3**
BUM Brajici-Budva 4.74 300 ⇑*i* Pn **Pn 06 02 08.8 +0.8**
BUM *i* Sn **Sn 06 03 03.4 +0.1**
SRCK Saricakaya, Es 4.76 88 *i* P **Pn 06 02 08.8 +0.6**
SRCK IAML 06 03 33.0
comp=E,81nm,0.6s
SRCK IAML 06 03 38.0
comp=N,106nm,0.8s
IDI Anoyia 4.77 175 Pn **Pn 06 02 08.0 -0.5**
comp=N,3.0nm,0.3s,baz=335,slow=12,SNR=15
IDI Sn **Sn 06 03 00.6 -3.4**
comp=N,5.4nm,0.3s,baz=305,slow=22,SNR=2.3
IDI Anoyia 4.77 175 ⇑P **Pn 06 02 08.0 -0.5**
IDI Anoyia 4.77 175 Pn 06 02 09.9 +1.4
KZIL AFYON_Kizioren 4.79 110 *i* P **Pn 06 02 09.9 +1.1**
KZIL IAML 06 03 47.0
comp=E,42nm,1.4s
KZIL IAML 06 03 57.0
comp=N,32nm,0.9s
KUBS Kucevo 4.81 336 *e*Pn **Pn 06 02 08.4 -0.5**
CEME Cevo 4.84 303 ⇓*i* Pn **Pn 06 02 09.7 +0.3**
CEME *i* Sn **Sn 06 03 05.4 -0.3**
GOLH Golhisar 4.91 123 *i* P **Pn 06 02 12.0 +1.7**
GOLH IAML 06 03 54.0
comp=N,59nm,2.0s
GOLH IAML 06 05 09.0
comp=E,16nm,4.2s
NKME Niksic 4.93 305 ⇑*i* Pn **Pn 06 02 11.4 +0.8**
NKME *i* Sn **Sn 06 03 08.0 +0.1**
KARP Karpathos 4.99 153 Pn 06 02 11.9 +0.4
FETY Fethiye 5.00 132 *i* P **Pn 06 02 12.8 +1.2**
FETY IAML 06 03 53.0
comp=E,13nm,1.2s
FETY IAML 06 04 07.0
comp=N,13nm,1.1s
SECR 5.12 13 ⇑P **Pn 06 02 14.8 +1.5**
TRUS Trudelj 5.13 326 *e*Pn **Pn 06 02 13.0 -0.3**
MDVR Moldovita 5.13 338 ⇑P **Pn 06 02 13.1 -0.3**
MDUB Mudurnu 5.20 83 Pn 06 02 14.9 +0.6
MDUB Sn **Sn 06 03 16.3 +1.7**
UPM Unac-Piva 5.20 309 ⇓*i* Pn **Pn 06 02 15.2 +0.8**
UPM *i* Sn **Sn 06 03 13.7 -1.0**
DIVS Divibare 5.22 322 *e*Pn **Pn 06 02 14.4 -0.2**
DIVS Divibare 5.22 322 Pn 06 02 14.7 +0.1
ISP Isparta 5.25 113 P **Pn 06 02 16.5 +1.4**
ISP Isparta 5.25 113 Pn **Pn 06 02 16.5 +1.4**
BRY Bratogost 5.26 305 ⇓*i* Pn **Pn 06 02 15.5 +0.3**
BRY *i* Sn **Sn 06 03 16.0 -0.1**
ISR Istrita 5.30 16 ⇑P **Pn 06 02 16.8 +1.1**
TIRR Tirgusor 5.30 33 ⇑P **Pn 06 02 16.4 +0.7**
TIRR Tirgusor 5.30 33 P **Pn 06 02 15.6 0.0**
TIRR Tirgusor 5.30 33 Pn 06 02 15.6 0.0
HARR Harsova 5.31 28 ⇑P **Pn 06 02 16.4 +0.7**
BBLS Lazići 5.34 317 *e*Pn **Pn 06 02 16.5 +0.2**
BAGO Egridir - ISPA 5.37 111 *i* P **Pn 06 02 17.2 +0.6**
LOT Lotru 5.41 355 ⇑P **Pn 06 02 17.1 -0.2**
ELL Elmali 5.42 126 P **Pn 06 02 20.3 +2.8**
ELL Elmali 5.42 126 Pn 06 02 20.3 +2.8
GZR Gura Zlata 5.47 348 ⇑P **Pn 06 02 18.5 +0.4**
MLR Muntele Rosu 5.55 11 Pn **Pn 06 02 18.2 -1.0**
comp=N,3.7nm,0.3s,baz=240,slow=7.3,SNR=41
MLR Sn **Sn 06 03 23.9 +0.6**
comp=N,2.9nm,0.3s,baz=159,slow=9.5,SNR=4.5
MLR Lg Lg 06 03 57.1
comp=N,1.4nm,0.3s,baz=168,slow=10,SNR=9.0
MLR LR LR 06 05 00.5
comp=N,347nm,19.3s,baz=135,slow=45
MLR Muntele Rosu 5.55 11 ⇓P **Pn 06 02 20.6 +1.4**
MLR Muntele Rosu 5.55 11 Pn 06 02 19.5 +0.3
BISRR Bisoca 5.74 16 ⇑P **Pn 06 02 23.9 +2.1**
JURR Jurilovca 5.75 34 ⇑P **Pn 06 02 21.1 -0.6**
CFR Carcaliu 5.81 27 ⇑P **Pn 06 02 22.4 -0.2**
DOPR Dopca 5.95 6 ⇑P **Pn 06 02 25.4 +0.8**
PLOR Plostina 6.02 15 ⇑P **Pn 06 02 27.4 +1.8**
VRI Vrincioaia 6.05 15 ⇑P **Pn 06 02 27.9 +1.9**
OZUR 6.12 9 ⇑P **Pn 06 02 28.4 +1.4**
SIRR Siria 6.53 343 ⇑P **Pn 06 02 32.8 +0.2**
TESR Tescani 6.66 13 ⇓P **Pn 06 02 35.5 +1.2**
ELDT Eldivan 6.90 83 *i* P **Pn 06 02 36.1 -1.6**
BIZ Bicaz 6.99 9 ⇑P **Pn 06 02 40.3 +1.5**
BR131 Keskin Array S 7.09 90 P **Pn 06 02 41.5 +1.1**
BR131 Keskin Array S 7.09 90 Pn 06 02 41.5 +1.1
BRTR Keskin Array B 7.09 90 Pn **Pn 06 02 41.1 +0.7**
comp=N,1.7nm,0.3s,baz=265,slow=11,SNR=18
BRTR Sn **Sn 06 03 58.9 -2.5**
comp=N,1.5nm,0.3s,baz=229,slow=12,SNR=8.7
BURAR Bucovina Array 7.58 4 ⇑P **Pn 06 02 48.5 +1.4**
BUR08 Bucovina Ar. S 7.61 4 Pn 06 02 48.5 +1.0
SEV Sevastopol' 8.19 54 *e*P **Pn 06 02 55.3 +0.1**
SEV *e*S **Sn 06 04 20.3 -7.7**
UZH Uzhgorod 8.71 351 *e*P **Pn 06 03 06.1 +3.7**
UZH *e*S **Sn 06 04 47.2 +6.4**
SUDU Sudak 9.19 55 *e*P **Pn 06 03 12.3 +3.4**
SUDU *e*S **Sn 06 04 52.5 0.0**
SOKA Soboth 9.52 317 *i* Pn **Pn 06 03 15.0 +1.4**
comp=N,0.9nm,0.5s
OBKA Obir 9.66 315 *e*Pn **Pn 06 03 17.9 +2.2**
comp=N,3.1nm,0.4s
AKASG Malin Array Be 11.17 16 Pn **Pn 06 03 35.9 -0.1**
comp=N,1.6nm,0.3s,baz=200,slow=13,SNR=6.6
AKASG Lg Lg 06 06 57.8
comp=N,0.3nm,0.3s,baz=191,slow=29,SNR=1.4
AKASG Malin Array Be 11.17 16 *e*P **Pn 06 03 36.9 +0.9**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
GERES GERESS Array B 11.65 323 Pn **Pn 06 03 43.3 +0.5**
comp=Z,0.1nm,0.3s,baz=160,slow=12,SNR=1.7
KIV Kislovodsk 14.12 68 *i* P **Pn 06 04 17.5 +0.9**
KIV pmax pmax
comp=Z,4.0nm,0.5s
OBN Obninsk 17.11 24 *i* P **P 06 04 56.2 -1.0**
OBN pmax pmax
OBN comp=Z,8.0nm,0.9s MLR MLR
comp=Z,82nm,11.9s
MOS Moscow 17.96 25 *e*P **Pn 06 05 06.2 +0.1**
VSU Vasula 18.49 4 *i* P **Pn 06 05 12.6 +0.1**
VSU pmax pmax
comp=Z,27nm,1.3s
HFS Hagfors 21.20 345 P **P 06 05 40.9 -1.1**
comp=Z,3.9nm,1.0s,baz=152,slow=12,SNR=2.1
HFS LR LR 06 15 31.8
comp=Z,58nm,18.0s,baz=160,slow=42
FINES FINESS Array B 21.44 2 P **P 06 05 43.0 -1.6**
comp=Z,3.2nm,0.9s,baz=129,slow=13,SNR=2.0
FINES LR LR 06 14 46.8
comp=Z,138nm,18.6s,baz=198,slow=39
FINES FINESS Array B 21.44 2 P **P 06 05 43.0 -1.6**
KONO Kongsberg 21.72 339 P **P 06 05 46.7 -0.9**
KONO pmax pmax
comp=Z,24nm,1.4s
KONO Kongsberg 21.72 339 P **P 06 05 46.7 -0.9**
KONO IAmb IAmb 06 05 57.8
comp=Z,24nm,1.4s
ESDC Sonseca Array 21.76 278 P **P 06 05 47.3 -1.0**
comp=Z,2.1nm,0.9s,baz=62,slow=11,SNR=9.3
NC602 NORSAR Array S 22.20 343 P **P 06 05 52.2 -0.5**
NC602 IAmb IAmb 06 05 56.4
comp=Z,20nm,1.1s
NAO01 NORSAR Array S 22.44 343 P **P 06 05 54.5 -0.8**
NB2 NORSAR Subarra 22.54 343 P **P 06 05 54.9 -1.5**
comp=Z,4.0nm,0.9s,baz=153,slow=10
NOA NORSAR Array B 22.54 343 P **P 06 05 55.1 -1.3**
comp=Z,2.3nm,0.8s,baz=148,slow=9.2,SNR=11
NOA LR LR 06 16 04.5
comp=Z,54nm,18.6s,baz=130,slow=40
NBO00 NORSAR Array S 22.63 343 P **P 06 05 56.7 -0.6**
KLMR Klimovskoe 22.82 19 *e*P **P 06 05 59.6 +0.3**
KLMR pmax pmax
comp=Z,11nm,1.1s
KLMR Klimovskoe 22.82 19 *e*P **P 06 05 59.6 +0.3**
KLMR AMP 06 06 01.1
comp=Z,11nm,1.1s
EKA Eskdalemuir Ar 23.83 319 P **P 06 06 08.8 -0.8**
comp=Z,1.5nm,0.6s,baz=120,slow=9.7,SNR=6.2
RAYN Ar Rayn 24.25 127 P **P 06 06 15.2 +1.4**
RAYN pmax pmax
comp=Z,7.0nm,1.2s
RAYN Ar Rayn 24.25 127 P **P 06 06 15.2 +1.4**
KIRV Kirov 24.44 32 LR LR 06 16 24.6
comp=Z,71nm,19.1s,baz=231,slow=38
AKTO Aktyubinsk 25.62 55 P **P 06 06 26.6 +0.6**
comp=Z,1.2nm,0.7s,baz=265,slow=8.9,SNR=3.5
GEYT Alibeck 26.19 84 P **P 06 06 32.5 +1.2**
comp=Z,1.1nm,0.5s,baz=234,slow=5.0,SNR=2.1
ARU Arti 27.64 42 LR LR 06 18 04.2
comp=Z,44nm,20.9s,baz=178,slow=37
ARU Arti 27.64 42 *d* P **P 06 06 44.2 +0.1**
ARU S **S 06 11 28.1 +2.2**
ARU SS **SnSn 06 12 35.6 -1.1**
ARU pmax pmax
comp=Z,8.0nm,2.6s
ARCES ARCESS Array B 29.55 1 LR LR 06 19 46.8
comp=Z,143nm,18.6s,baz=170,slow=38
TORD Torodi Ar. Bea 33.44 223 P **P 06 07 36.0 +0.4**
comp=Z,2.5nm,0.8s,baz=36,slow=8.8,SNR=12
BORG Borgarnes 36.03 329 LR LR 06 23 18.1
comp=Z,27nm,18.0s,baz=309,slow=37
SPITS Spitsbergen Ar 38.38 357 LR LR 06 25 28.3
comp=Z,73nm,18.3s,baz=175,slow=38
KSH Kashi 39.16 74 P **P 06 08 25.8 +1.3**
KSH pP sP 06 08 29.8 +2.7
KSH pmax pmax
comp=Z,5.0nm,0.5s
KSH pmax pmax
comp=Z,48nm,6.0s
MK31 Makanchi Array 41.73 61 P **P 06 08 46.7 +1.1**
MK31 pmax pmax
comp=Z,3.0nm,0.7s
MK31 Makanchi Array 41.73 61 P **P 06 08 46.7 +1.1**
MKAR Makanchi Array 41.73 61 P **P 06 08 45.8 +0.2**
comp=Z,2.3nm,0.6s,baz=273,slow=4.8,SNR=6.9
ZALV Zalesovo Beam 42.17 50 LR LR 06 28 25.1
comp=Z,26nm,19.7s,baz=230,slow=39
DBIC Dimbokro 42.36 226 P **P 06 08 50.9 -0.1**
comp=Z,7.5nm,1.1s,baz=24,slow=4.9,SNR=3.9
DBIC Dimbokro 42.36 226 P **P 06 08 50.9 -0.1**
DBIC pmax pmax
comp=Z,9.0nm,1.1s
DBIC Dimbokro 42.36 226 IAmb IAmb 06 08 51.9
comp=Z,8.9nm,1.1s
WMQ Urumqi 46.20 64 *e*P **P 06 09 24.0 +2.4**
WMQ sP sP 06 09 30.8 +6.6
WMQ pmax pmax
comp=Z,11nm,0.7s
WMQ LR LR
comp=N,130nm,26.5s
WMQ LR LR
comp=E,100nm,19.1s
WMQ LR LR
comp=Z,59nm,19.1s
GTA Gaotai 56.27 64 *e*P **P 06 10 36.0 -1.3**
GTA pP sP 06 10 42.5 +2.5
GTA sP pP 06 10 45.3 +6.0
GTA pmax pmax
comp=Z,3.0nm,0.6s
GTA pmax pmax
comp=Z,67nm,7.1s
GTA LR LR
comp=N,62nm,16.2s
GTA LR LR
comp=E,210nm,17.5s
GTA LR LR
comp=Z,53nm,16.2s
TIXI Tiksi 56.82 22 *i* P **P 06 10 41.4 +0.9**
TIXI pmax pmax
comp=Z,3.0nm,1.4s
SONM Songino Array 56.91 53 P **P 06 10 42.4 +0.6**
comp=Z,1.5nm,0.7s,baz=288,slow=10,SNR=2.3
SCHQ Schefferville 59.13 318 P **P 06 10 56.9 -0.2**
comp=Z,3.6nm,0.9s,baz=225,slow=1.4,SNR=3.2
SCHQ Schefferville 59.13 318 IAmb IAmb 06 10 59.7
comp=Z,9.7nm,1.2s
LZH Lanzhou 60.66 66 *e*P **P 06 11 07.3 -0.7**
LZH pP sP 06 11 12.5 +1.8
LZH sP pP 06 11 15.5 +5.5
LZH PP **PP 06 13 16.5 -4.9**
LZH pmax pmax
comp=Z,17nm,1.3s
LZH pmax pmax
comp=Z,78nm,4.9s
HHC Hu-ho-hao-te 63.47 58 *e*P **P 06 11 28.5 +1.7**
HHC pmax pmax
comp=Z,7.0nm,0.8s
HHC pmax pmax
comp=Z,44nm,4.9s
C36M Paulatuk 68.46 349 P **P 06 11 59.1 +0.9**
C36M IAmb IAmb 06 11 59.6
comp=Z,2.3nm,0.8s
KLR Kul'dur 70.48 42 *i* P **P 06 12 10.7 -0.4**
KLR pmax pmax
comp=Z,1.0nm,0.9s
INK Inuvik 70.70 351 P **P 06 12 12.9 +0.8**
INK pmax pmax
comp=Z,6.0nm,1.4s
INK Inuvik 70.70 351 P **P 06 12 12.8 +0.8**
INK IAmb IAmb 06 12 23.2
comp=Z,5.7nm,1.4s
YKA Yellowknife Ar 72.63 341 P **P 06 12 23.4 -0.4**
comp=Z,0.5nm,0.8s,baz=33,slow=5.6,SNR=9.2
EPYK Eagle Plains 72.92 352 P **P 06 12 26.3 +0.8**
EPYK IAmb IAmb 06 12 26.7
comp=Z,3.6nm,0.9s
USRK Ussuriysk Ar. 73.82 46 P **P 06 12 30.8 -0.3**
comp=Z,1.4nm,0.7s,baz=317,slow=6.1,SNR=4.1
ILAR Eielson Array 75.29 356 P **P 06 12 39.1 -0.2**
comp=Z,0.6nm,0.9s,baz=346,slow=3.1,SNR=5.0
DAWY Dawson 75.43 353 P **P 06 12 41.9 +1.6**
KSRS Korea Array 75.78 53 P **P 06 12 43.0 +0.4**
comp=Z,1.2nm,0.6s,baz=315,slow=4.8,SNR=5.6
BPAW Bear Paw Mtn. 76.12 358 P **P 06 12 45.2 +1.0**
BPAW IAmb IAmb 06 12 45.5
comp=Z,3.0nm,0.9s
DHY Denali Highway 77.01 356 P **P 06 12 50.1 +0.8**
DHY IAmb IAmb 06 12 50.5
comp=Z,4.6nm,1.1s
W50A Signal Mountai 81.05 309 P **P 06 13 10.2 -1.8**
W50A IAmb IAmb 06 13 12.9
comp=Z,3.8nm,0.8s
NVAR Mina Array Bea 94.76 331 P **P 06 14 19.6 +1.0**
comp=Z,0.2nm,0.5s,baz=108,slow=4.8,SNR=3.5

ASRS 29 06:04:00.1±0.2,52°N±1°×95°9E±0°8,h10km,MLh4.3/20, 1C-4D,smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TDJR	**Todzha**	**0.52**	**17**	Pg	Pb	06 04 11.9	+0.5
TDJR				Sg	Sb	06 04 20.2	+1.2
KZLR	**Kyzyl**	**0.89**	**258**	Pg	Pg	06 04 17.3	+0.1
KZLR				Sg	Sg	06 04 29.2	+0.3
ARDR	**Aradan**	**1.64**	**295**	Pg	Pb	06 04 30.9	+0.5
ARDR				Sg	Sg	06 04 55.1	+2.5
ORL	**Orlik**	**2.52**	**74**	Pn	Pn	06 04 42.6	+1.5
ORL				Pg	Pb	06 04 45.2	-0.3
ORL				Sg	Sb	06 05 16.5	0.0
DJOS	**Djoyskaya Sosn**	**2.87**	**290**	Pg	Pb	06 04 49.9	-1.6
DJOS				Sg	Sg	06 05 30.4	-1.9
DJO	**Djoy, Khakassi**	**2.98**	**289**	Pn	Pb	06 04 51.0	-2.2
DJO				Pg	Pg	06 04 55.4	-1.7
DJO				Sg	Sb	06 05 31.9	+2.4
ORY	**Orie**	**3.13**	**352**	Pn	Pb	06 04 53.2	-2.7
ORY				Pg	Pg	06 04 57.4	-2.8
ORY				Sg	Sb	06 05 36.9	+2.8
MINR	**Mina**	**3.16**	**342**	Pn	Pb	06 04 54.8	-1.5
MINR				Pg	Pg	06 05 00.7	+0.1
MINR				Sg	Sg	06 05 41.4	-0.1
MOY	**Mondy**	**3.20**	**92**	Pn	Pn	06 04 52.3	+1.7
MOY				Pg	Pg	06 04 59.6	-1.8
MOY				Sg	Sb	06 05 37.3	+1.1
ABNR	**Abakan**	**3.24**	**306**	Sg	Sg	06 05 44.7	+0.5
VEH	**Verkhnyaya Baz**	**3.64**	**294**	Pn	Pn	06 04 58.9	+2.3
VEH				Pg	Pg	06 05 08.0	-1.7
VEH				Sg	Sg	06 05 53.2	-3.7
LUZB	**Luzhba, Kemero**	**4.57**	**295**	Pn	Pn	06 05 13.3	+4.0
LUZB				Pg	Pg	06 05 26.5	-1.1
LUZB				Sg	Sg	06 06 23.3	-3.5
GZL	**Zheleznogorsk**	**4.58**	**344**	Sg	Sg	06 06 21.3	-5.6
TLY	**Talaya**	**4.84**	**90**	Pg	Pb	06 05 27.4	+2.4
TLY				Sg	Sb	06 06 28.2	+4.9
ZAK	**Zakamensk**	**4.92**	**105**	Pg	Pb	06 05 26.8	+0.4
ZAK				Sg	Sb	06 06 30.5	+4.9
TASR	**Tashtagol**	**4.96**	**283**	Pg	Pg	06 05 31.6	-3.5
TASR				Sg	Sg	06 06 34.5	-4.9
CUR	**Chagan-Uzun**	**5.07**	**252**	Pn	Pn	06 05 18.5	+2.2
CUR				Pg	Pb	06 05 32.0	+3.0
CUR				Sg	Sg	06 06 36.6	-6.3
SLNR	**Muhor-Tarhata,**	**5.14**	**248**	Pg	Pg	06 05 34.7	-3.9
SLNR				Sg	Sg	06 06 39.6	-5.5
AKAR	**Aktash**	**5.42**	**256**	Pn	Pn	06 05 22.2	+1.1
AKAR				Pg	Pb	06 05 39.4	+4.4
AKAR				Sg	Sb	06 06 46.6	+6.5
CHBI	**Chibit, Altay**	**5.50**	**256**	Pn	Pn	06 05 24.0	+2.0
CHBI				Pg	Pg	06 05 41.3	-4.0
CHBI				Sg	Sg	06 06 53.0	-3.4
DGZ	**Jazzator, Alta**	**5.78**	**251**	Pn	Pn	06 05 27.8	+1.8
DGZ				Pg	Pg	06 05 46.6	-4.1
DGZ				Sg	Sg	06 06 59.4	-6.1
ELT	**Eltsovka**	**6.02**	**287**	Pn	Pn	06 05 29.7	+0.6
ELT				Pg	Pb	06 05 49.8	+4.9
ELT				Sg	Sg	06 07 05.7	-7.4
ELDR	**Elanda**	**6.13**	**267**	Pg	Pg	06 05 53.1	-4.3
ELDR				Sg	Sg	06 07 11.2	-5.5
GALT	**Gorno-Altaysk,**	**6.13**	**274**	Sg	Sg	06 07 13.7	-3.0
TUNR	**Tungur**	**6.26**	**258**	Pn	Pn	06 05 33.0	+0.5
TUNR				Pg	Pg	06 05 55.2	-4.7
TUNR				Sg	Sg	06 07 18.0	-2.8
TRG	**Tyrgan**	**6.49**	**78**	Pg	Pb	06 05 56.7	+3.6
TRG				Sg	Sg	06 07 19.9	-8.4
SALR	**Pechorkino, Sa**	**6.60**	**296**	Pg	Pg	06 06 01.6	-4.8
SALR				Sg	Sg	06 07 27.3	-4.6
UKR	**Ust'-Kan**	**7.00**	**266**	Pn	Pn	06 05 38.7	-4.0
UKR				Pg	Pb	06 06 07.9	+6.1
UKR				Sg	Sg	06 07 40.5	-4.1
NVSII	**Novosibirsk**	**8.10**	**296**	Sg	Sg	06 08 14.4	-5.3
NVS	**Novosibirsk**	**8.10**	**296**	Pg	Pg	06 06 30.9	-4.1
NVS				Sg	Sg	06 08 14.6	-5.2
BSTK	**Bystrovka, Nov**	**8.36**	**294**	Sg	Sg	06 08 26.9	-1.1
MK31	**Makanchi Array**	**10.22**	**245**	⇓Pn	Pn	06 06 32.6	+5.9
	1.2nm,0.8s,baz=39,slow=11,SNR=4.5						
MK31				⇓Pg		06 07 15.6	
	2.6nm,0.9s,baz=67,slow=16,SNR=3.8						
MK31				Lg	Lg	06 09 34.5	
	6.1nm,0.8s,baz=59,slow=30,SNR=3.7						
KURBB	**Kurchatov Arra**	**10.93**	**270**	⇑Pn	Pn	06 06 53.5	+17
	2.4nm,0.5s						
KURBB				⇓Sn	Sn	06 09 02.0	+23
	9.9nm,0.9s						
KURBB				⇓Lg	Lg	06 10 09.3	
	29nm,0.9s						

VIE ***29*** *06:08:26.3,52°.04N×16°.57E,h0km,mb3.3/1,ML3.2/1 47 km SSW of Poznan Suspected Mining induced.*
PRU ***29*** *06:08:28.2±0.0,51°.44N×16°.18E,h0km*
ISC 29 06:08:27.5±1.4,51°.42N±0°.06×16°.21E±0°.04,h0km,n18, σ0s63/34,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHVC	**Chvalec**	**0.84**	**187**	*e*PG	**Pb**	**06 08 44.7**	**-0.2**
CHVC				*e*SG	**Sb**	**06 08 56.5**	**-0.1**
	comp=Z,16nm,0.4s						
OSTC	**Ostas**	**0.86**	**180**	*e*PG	**Pb**	**06 08 45.6**	**+0.3**
OSTC				*e*SG	**Sb**	**06 08 57.4**	**0.0**
	comp=Z,24nm,0.4s						
UPC	**Upice**	**0.92**	**188**	*e*PG	**Pb**	**06 08 46.4**	**+0.1**
UPC				*e*SG	**Sb**	**06 08 58.7**	**-0.3**
	comp=Z,46nm,0.4s						
DPC	**Dobruska-Polom**	**1.07**	**176**	*e*PG	**Pg**	**06 08 48.5**	**+0.6**
DPC				*e*SG	**Sb**	**06 09 03.1**	**-0.3**
	comp=Z,20nm,0.3s						
PVCC	**Panska Ves**	**1.37**	**230**	*e*PG	**Pn**	**06 08 53.9**	**+0.1**
PVCC				*e*SG	**Sn**	**06 09 12.8**	**+0.2**
	comp=Z,46nm,0.6s						
BRG	**Berggiesshubel**	**1.53**	**250**	PG	**Pg**	**06 08 56.8**	**+0.1**
BRG				SG	**Sn**	**06 09 16.9**	**+0.3**
	24nm,0.3s						
GOPC	**GO Pecny, Ondr**	**1.76**	**212**	*e*PG	**Pb**	**06 09 00.8**	**+0.2**
GOPC				*e*SG	**Sg**	**06 09 24.4**	**+0.5**
	comp=Z,12nm,0.6s						
PRU	**Pruhonice**	**1.78**	**217**	*e*PG	**Pb**	**06 09 00.5**	**-0.5**
PRU				*e*SG	**Sg**	**06 09 24.7**	**0.0**
	comp=Z,11nm,0.4s						
MORC	**Moravsky Berou**	**1.85**	**152**	*e*PN	**Pn**	**06 09 00.0**	**-0.4**
MORC				*e*SG	**Sn**	**06 09 24.5**	**0.0**
OKC	**Ostrava-Krasne**	**2.00**	**141**	*e*PG	**Pg**	**06 09 05.9**	**+0.1**
OKC				*e*SG	**Sg**	**06 09 32.8**	**+1.0**
	comp=Z,12nm,0.6s						
CLL	**Collm**	**2.02**	**268**	*e*Pg	**Pb**	**06 09 05.0**	**+0.1**
CLL				*e*Sg	**Sb**	**06 09 31.0**	**+0.5**
	comp=Z,7.0nm,0.5s						
VRAC	**Vranov**	**2.13**	**173**	*e*PN	**Pb**	**06 09 05.7**	**-1.1**

VRAC				*e*SG	**Sg**	**06 09 35.9**	**+0.2**
KRUC	**Moravsky**	**2.36**	**177**	*e*SG	**Sg**	**06 09 43.3**	**+0.1**
OJC	**Ojcow**	**2.57**	**116**	*e*Sg	**Sg**	**06 09 49.7**	**-0.3**
NKC	**Novy Kostel**	**2.67**	**245**	*e*PG	**Pg**	**06 09 17.4**	**-1.1**
NKC				*e*SG	**Sg**	**06 09 54.6**	**+1.6**
	comp=Z,12nm,0.3s						
KHC	**Kasperske Hory**	**2.84**	**217**	*e*PG	**Pg**	**06 09 20.6**	**-1.3**
KHC				*e*SN	**Sn**	**06 09 49.0**	**-0.1**
KHC				*e*SG	**Sg**	**06 09 58.4**	**-0.4**
	comp=Z,6.4nm,0.7s						
CONA	**Conrad Observa**	**3.50**	**184**	*e*Pn	**Pb**	**06 09 31.6**	**+1.3**
	comp=Z,0.3nm,0.2s						
CONA				Sn	**Sg**	**06 10 20.6**	**+0.8**
	comp=Z,8.8nm,0.6s						
ARSA	**Arzberg**	**4.20**	**186**	*e*Sn	**Sg**	**06 10 42.6**	**+0.4**
	comp=Z,2.1nm,0.4s						

MOS **29** *06:39:04.6±0.9,30°.19S×177°.92W,h45km,mb5.4/46, MS4.9/4, Error ellipse: s-maj=9.7km s-min=8.0km az=91.6*

NEIC **29** *06:39:04.5±1.5,30°.22S±0°.04×177°.88W±0°.06,h35km±1km, mb5.3/143, Error ellipse: s-maj=10.1km s-min=4.6km az=63.0*

IDC **29** *06:39:05.6±1.3,30°.11S×177°.85W,h44km±10km,mb4.7/21, mb1 4.7/22,mb1mx4.7/31,mbtmp4.9/22,ML3.9/1,MS4.6/23, Ms1 4.6/23,ms1mx4.6/24, Error ellipse: s-maj=14.2km s-min=12.2km az=105.0*

GCMT **29** *06:39:06.5±0.1,30°.23S±0°.01×177°.55W±0°.01,h40km, MW5.4/135,Moment Tensor Solution. s135,c224; s134,c231; Duration: 1!2 Moment tensor: Scale 10^17 Nm; Mrr1.26±.02; Mθθ-0.09±.01; Mφφ-1.16±.01; Mrθ0.14±.02; Mθφ-0.28±.01; Mφr0.67±.02; Best double couple: Mo1.42000×10^17 NP1:φs195.00000°,δ31.00000°, λ91.00000°. NP2:φs13.00000°,δ59.00000°,λ89.00000°. Principal axes: T 1.4360, Plg76.0000°, Azm281.0000°; N -0.0240, Plg1.0000°, Azm13.0000°; P -1.4040, Plg14.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 06:39:03.6±0.2,30°.34S±0°.04×177°.69W±0°.05,h33km, h34km:pP-P,n718,σ1§45/738,mb5.3/112,MS4.7/36, 29C-12D,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GLKZ	**Green Lake**	**1.09**	**350**	P		**Pn**	**06 39 23.4**	**+0.8**
GLKZ				S		**Sn**	**06 39 31.6**	**-5.0**
RAO	**Raoul Island**	**1.10**	**350**	P		**Pn**	**06 39 21.1**	**-1.6**
	6μm,0.3s,baz=108,slow=2.9,SNR=186							
RAO				S		**Sn**	**06 39 33.5**	**-3.3**
	28μm,0.3s,baz=246,slow=23,SNR=23							
RAO	**Raoul Island**	**1.10**	**350**	P		**Pn**	**06 39 21.4**	**-1.4**
RAO							06 39 33.9	
RAO	**Raoul Island**	**1.10**	**350**			**Pn**	**06 39 21.4**	**-1.4**
RAO				Sn		**Sn**	**06 39 33.9**	**-2.9**
RIZ	**Raoul Island**	**1.11**	**349**	P		**Pn**	**06 39 21.7**	**-1.2**
RIZ				S		**Sn**	**06 39 33.4**	**-3.7**
MXZ	**Matakaoa Point**	**7.93**	**204**	P		**Pn**	**06 40 54.8**	**-1.7**
MXZ				S		**Sn**	**06 42 23.2**	**-1.9**
MXZ	**Matakaoa Point**	**7.93**	**204**	Pn		**Pn**	**06 40 55.4**	**-1.2**
MXZ				Sn		**Sn**	**06 42 27.2**	**+2.1**
WMGZ	**Waiomatatini S**	**8.12**	**202**	P		**Pn**	**06 40 57.7**	**-1.5**
WMGZ				S		**Sn**	**06 42 25.9**	**-3.9**
HAZ	**Te Kaha**	**8.29**	**206**	P		**Pn**	**06 40 59.9**	**-1.5**
HAZ				S		**Sn**	**06 42 32.0**	**-2.0**
PKGZ	**Pakihiroa**	**8.30**	**204**	P		Pn	06 40 53.5	-8.2
PKGZ				S		**Sn**	**06 42 29.8**	**-4.6**
PUZ	**Puketiti**	**8.41**	**202**	P		**Pn**	**06 41 01.1**	**-2.0**
PUZ				S		**Sn**	**06 42 33.1**	**-3.8**
KUZ	**Kuaotunu**	**8.42**	**219**	P		**Pn**	**06 41 07.7**	**+4.4**
RUGZ	**Raukumara Rang**	**8.52**	**206**	P		**Pn**	**06 41 02.8**	**-1.9**
RUGZ				S		**Sn**	**06 42 35.3**	**-4.4**
TWGZ	**Tauwhareparae**	**8.59**	**203**	P		**Pn**	**06 41 04.0**	**-1.7**
TWGZ				S		**Sn**	**06 42 39.9**	**-1.6**
WCZ	**Waipu Caves**	**8.70**	**228**	P		Pn	06 41 16.9	+10
CNGZ	**Carnagh Statio**	**8.80**	**202**	P		**Pn**	**06 41 05.6**	**-2.8**
CNGZ				S		**Sn**	**06 42 39.7**	**-6.7**
OUZ	**Omahuta**	**8.80**	**234**	P		Pn	06 41 15.9	+7.5
OPRZ	**Ohinepanea**	**8.87**	**211**	P		**Pn**	**06 41 09.9**	**+0.5**
TKGZ	**Te Karaka**	**8.88**	**203**	P		**Pn**	**06 41 08.1**	**-1.4**
TKGZ				S		**Sn**	**06 42 43.0**	**-5.3**
MWZ	**Matawai**	**8.89**	**205**	P		**Pn**	**06 41 06.8**	**-3.0**
MWZ				S		**Sn**	**06 42 43.8**	**-5.1**
URZ	**Urewera**	**8.99**	**207**	P		**Pn**	**06 41 08.3**	**-2.8**
URZ				S		**Sn**	**06 42 46.8**	**-4.3**
RIGZ	**Rimuhau**	**9.14**	**203**	P		**Pn**	**06 41 10.3**	**-2.9**
TOZ	**Tahuroa Road**	**9.28**	**216**	P		Pn	06 41 19.9	+4.9
PRGZ	**Paritu Road**	**9.30**	**202**	P		**Pn**	**06 41 12.0**	**-3.4**
MUGZ	**Murupara**	**9.31**	**208**	P		**Pn**	**06 41 12.5**	**-3.0**
RTZ	**Ruatahuna**	**9.35**	**207**	P		**Pn**	**06 41 13.7**	**-2.4**
SNGZ	**Shannon Statio**	**9.36**	**205**	P		**Pn**	**06 41 14.0**	**-2.1**
RAHZ	**Arahi**	**9.57**	**205**	P		**Pn**	**06 41 18.4**	**-0.7**
MTHZ	**Maungataniwha**	**9.61**	**206**	P		**Pn**	**06 41 18.0**	**-1.6**
NMHZ	**Naumai**	**9.83**	**206**	P		**Pn**	**06 41 21.7**	**-1.0**
BKZ	**Black Stump Fm**	**10.01**	**207**			**Pn**	**06 41 23.2**	**-1.9**
BKZ				Sn		**Sn**	**06 43 18.1**	**+1.7**
MCHZ	**McNeill Hill**	**10.18**	**205**	P		**Pn**	**06 41 24.7**	**-2.7**
HIZ	**Hauiti**	**10.21**	**215**	Pn		**Pn**	**06 41 28.6**	**+0.8**
KRHZ	**Kereru**	**10.47**	**206**	P		**Pn**	**06 41 27.6**	**-3.9**
MOVZ	**Moawhango**	**10.52**	**209**	P		**Pn**	**06 41 32.7**	**+0.6**
VRZ	**Vera Road**	**10.73**	**213**	P		Pn	06 41 40.1	+5.1
WAZ	**Wanganui**	**11.14**	**211**	P		**Pn**	**06 41 44.3**	**+3.8**
PRWZ	**Pori Road**	**11.42**	**205**	P		**Pn**	**06 41 47.5**	**+3.2**
BFZ	**Birch Farm**	**11.43**	**204**			**Sn**	**06 43 51.2**	**+0.1**
MSWZ	**Moikau Station**	**12.44**	**205**	Pn		**Pn**	**06 41 56.2**	**-2.1**
DUWZ	**D'Urville Isla**	**12.46**	**211**	P		**Pn**	**06 41 57.0**	**-1.6**
SNZO	**South Karori**	**12.55**	**207**	Pn		**Pn**	**06 42 00.6**	**+0.8**
PLWZ	**Palliser**	**12.57**	**205**	P		Pn	06 41 54.5	-5.6
PLWZ	**Palliser**	**12.57**	**205**	Pn		**Pn**	**06 41 58.5**	**-1.6**
BHW	**Baring Head**	**12.57**	**207**	Pn		**Pn**	**06 41 57.1**	**-3.0**
TCW	**Tory Channel**	**12.64**	**209**	P		**Pn**	**06 41 58.8**	**-2.2**
TUWZ	**Tuamarina**	**12.97**	**209**	P		**Pn**	**06 42 06.8**	**+1.3**
TUWZ	**Tuamarina**	**12.97**	**209**			**Pn**	**06 42 05.9**	**+0.4**
NNZ	**Nelson**	**13.04**	**211**	P		**Pn**	**06 42 08.7**	**+2.3**
QRZ	**Quartz Range**	**13.13**	**215**	Pn		**Pn**	**06 42 07.8**	**+0.1**
MSVF	**Nonsavu**	**13.14**	**342**	*i* P		**Pn**	**06 42 08.5**	**+0.5**
MSVF	**Nonsavu**	**13.14**	**342**			**Pn**	**06 42 05.8**	**-2.2**
BSWZ	**Blackbirch Sta**	**13.23**	**209**	P		**Pn**	**06 42 07.7**	**-1.4**
DSZ	**Denniston Nort**	**14.19**	**214**	P		**Pn**	**06 42 22.0**	**-0.2**
GVZ	**Greta Valley S**	**14.62**	**208**	P		**Pn**	**06 42 27.9**	**-0.1**
INZ	**Inchbonnie**	**15.11**	**212**	P		**Pn**	**06 42 33.7**	**-0.9**
MQZ	**McQueen's Vall**	**15.39**	**207**	P		**Pn**	**06 42 35.8**	**-2.4**
RPZ	**Rata Peaks**	**16.07**	**211**	P		**Pn**	**06 42 47.3**	**+0.3**
	5.3nm,0.3s,baz=78,slow=2.0,SNR=12							
RPZ				S		Sn	06 45 29.7	-14
	1.8nm,0.3s,baz=99,slow=21,SNR=1.8							
RPZ				LR		LR	06 49 55.4	
	comp=Z,2μm,18.6s,baz=46,slow=40							
DZM	**Mont Dzumac**	**16.43**	**296**	*e*Pn		**Pn**	**06 42 50.2**	**-1.7**
	323nm,1.4s							
DZM				*e*LR		LR	06 46 43.0	
	comp=Z,11μm,24.9s							
DZM	**Mont Dzumac**	**16.43**	**296**	P		**P**	**06 42 56.7**	**+2.3**
	3.0nm,0.3s,baz=108,slow=14,SNR=30							
DZM				LR		LR	06 48 00.0	
	comp=Z,6μm,19.0s,baz=134,slow=33							
FOZ	**Fox Glacier**	**16.50**	**214**	P		**Pn**	**06 42 51.3**	**-1.1**
LBZ	**Lake Benmore**	**16.98**	**211**	P		**Pn**	**06 42 57.2**	**-1.4**
ODZ	**Otahua Downs**	**17.31**	**209**	P		**Pn**	**06 43 00.7**	**-1.9**
RAR	**Rarotonga**	**18.50**	**65**	P		**P**	**06 43 17.4**	**+0.4**
	3.6nm,0.3s,baz=228,slow=5.8,SNR=8.3							
RAR				LR		LR	06 48 40.0	
	comp=Z,2μm,21.1s,baz=251,slow=31							
RAR	**Rarotonga**	**18.50**	**65**	P		**P**	**06 43 16.6**	**-0.5**
RAR				pmax		pmax		
	comp=Z,204nm,1.3s							
RAR	**Rarotonga**	**18.50**	**65**	P		**P**	**06 43 16.6**	**-0.5**
RAR				IAmb		IAmb	06 43 32.9	
	comp=Z,204nm,1.2s							
LHI	**Lord Howe Isla**	**19.97**	**261**	P		**Pn**	**06 43 38.3**	**+3.3**
	baz=20,SNR=3.5							
LHI	**Lord Howe Isla**	**19.97**	**261**	P		**Pn**	**06 43 38.5**	**+3.6**
LHI				IAmb		IAmb	06 43 42.5	
	comp=Z,181nm,1.3s							
TBI	**Tubuai**	**26.09**	**81**	*e*S		**S**	**06 49 00.9**	**-2.7**
	comp=Z,1μm,29.2s							
TBI				*e*LQ		LQ	06 49 41.5	
	comp=Z,2μm,26.0s							
TBI				*e*LR		LR	06 51 06.4	
	comp=Z,5μm,26.8s,baz=244							

TBI	**Tubuai**	**26.09**	**81**	*e*T		T	07 11 35.6	
	comp=Z,98nm,0.4s							
ARMA	**Armidale**	**26.43**	**262**	P		**P**	**06 44 41.1**	**+3.6**
	baz=27,SNR=21							
ARMA	**Armidale**	**26.43**	**262**	P		**P**	**06 44 41.0**	**+3.4**
MGCD	**Mangrove Creek**	**26.63**	**256**	P		**P**	**06 44 42.9**	**+3.7**
	baz=27,SNR=9.9							
EIDS	**Eidsvold**	**28.00**	**273**	P		**P**	**06 44 53.3**	**+1.7**
	baz=28,SNR=13							
EIDS	**Eidsvold**	**28.00**	**273**	P		**P**	**06 44 53.4**	**+1.9**
CNB	**Canberra Magne**	**28.05**	**251**	P		**P**	**06 44 54.9**	**+2.9**
	baz=28,SNR=14							
CAN	**Canberra**	**28.34**	**251**	P		**P**	**06 44 57.1**	**+2.5**
CAN				pmax		pmax		
	comp=Z,26nm,0.8s							
CAN	**Canberra**	**28.34**	**251**	P		**P**	**06 44 57.0**	**+2.5**
PAE	**Paea**	**28.53**	**70**	*e*T		T	07 14 41.6	
	comp=Z,21nm,0.3s							
PPT2	**Papeete2**	**28.57**	**70**	*e*S		**S**	**06 49 41.4**	**-1.6**
	comp=Z,799nm,26.8s							
PPT2				*e*LQ		LQ	06 50 35.8	
	comp=Z,2μm,25.8s							
PPT2				*e*LR		LR	06 52 15.3	
	comp=Z,5μm,26.0s,baz=234							
PPT2	**Papeete2**	**28.57**	**70**	*e*T		T	07 14 45.5	
	comp=Z,17nm,0.3s							
PPT	**Papeete**	**28.58**	**70**	LR		LR	06 53 20.5	
	comp=Z,1μm,21.9s,baz=239,slow=30							
TVO	**Taravao**	**28.73**	**71**	*e*T		T	07 14 56.7	
	comp=Z,5.3nm,0.3s							
TIAR	**Tiarei**	**28.77**	**70**	*e*T		T	07 14 59.2	
	comp=Z,3.6nm,0.3s							
YNG	**Young**	**28.85**	**253**	P		**P**	**06 45 02.0**	**+3.0**
	baz=29,SNR=12							
HNR	**Honiara**	**29.46**	**310**	LR		LR	06 54 57.4	
	comp=Z,1μm,21.2s,baz=147,slow=33							
MEH	**Mehetia**	**29.66**	**72**	*e*T		T	07 16 04.3	
	comp=Z,30nm,0.3s							
RMQ	**Roma**	**29.69**	**269**	P		**P**	**06 45 09.4**	**+2.8**
	baz=30,SNR=26							
MOO	**Moorlands**	**30.53**	**237**	P		**P**	**06 45 15.5**	**+1.7**
	baz=31,SNR=4.4							
TAU	**Tasmania Unive**	**30.53**	**236**	P		**P**	**06 45 15.0**	**+1.2**
TAU				pmax		pmax		
	comp=Z,62nm,1.4s							
TAU	**Tasmania Unive**	**30.53**	**236**	P		**P**	**06 45 15.0**	**+1.2**
TAU				IAmb		IAmb	06 45 16.8	
	comp=Z,62nm,1.4s							
TOO	**Toolangi**	**31.23**	**247**	P		**P**	**06 45 22.1**	**+2.1**
	baz=32,SNR=26							
TOO	**Toolangi**	**31.23**	**247**	P		**P**	**06 45 22.2**	**+2.1**
TOO				pmax		pmax		
	comp=Z,24nm,0.7s							
TOO	**Toolangi**	**31.23**	**247**	P		**P**	**06 45 22.2**	**+2.1**
TOO				IAmb		IAmb	06 45 24.7	
	comp=Z,24nm,0.7s							
CMSA	**Cobar Meteorol**	**31.34**	**258**	P		**P**	**06 45 23.6**	**+2.5**
	baz=32,SNR=29							
QLP	**Quilpie**	**33.58**	**267**	P		**P**	**06 45 42.1**	**+1.4**
	baz=34,SNR=20							
CTA	**Charters Tower**	**34.05**	**279**	P		**P**	**06 45 44.6**	**-0.3**
	comp=Z,85nm,0.4s,baz=102,slow=11,SNR=201							
CTA				LR		LR	06 57 27.1	
	comp=Z,2μm,21.6s,baz=106,slow=32							
CTAO	**Charters Tower**	**34.05**	**279**	P		**P**	**06 45 46.6**	**+1.7**
CTAO				pmax		pmax		
	comp=Z,119nm,0.7s							
CTAO	**Charters Tower**	**34.05**	**279**	P		**P**	**06 45 46.6**	**+1.7**
ARPS	**Mount Arapiles**	**34.14**	**248**	P		**P**	**06 45 47.5**	**+2.0**
	baz=34,SNR=15							
STKA	**Stephens Creek**	**34.75**	**257**	P		**P**	**06 45 52.5**	**+1.6**
	baz=35,SNR=76							
STKA	**Stephens Creek**	**34.75**	**257**	P		**P**	**06 45 51.6**	**+0.7**
	comp=Z,28nm,0.5s,baz=100,slow=10,SNR=119							
STKA				LR		LR	06 59 18.7	
	comp=Z,2μm,18.0s,baz=89,slow=35							
STKA	**Stephens Creek**	**34.75**	**257**	*e*P		**P**	**06 45 52.7**	**+1.8**
STKA				pmax		pmax		
	comp=Z,28nm,0.5s							
STKA	**Stephens Creek**	**34.75**	**257**	P		**P**	**06 45 52.1**	**+1.2**
MTSU	**Mount Surprise**	**36.54**	**281**	P		**P**	**06 46 08.2**	**+1.8**
	baz=37,SNR=39							
HTT	**Hallett**	**36.77**	**254**	P		**P**	**06 46 09.3**	**+1.0**
	baz=37,SNR=78							
PMG	**Port Moresby**	**38.82**	**295**	P		**P**	**06 46 25.9**	**+0.3**
	comp=Z,5.9nm,0.3s,baz=128,slow=9.1,SNR=3.8							
PMG				LR		LR	06 59 41.8	
	comp=Z,1μm,22.0s,baz=130,slow=32							
PMG	**Port Moresby**	**38.82**	**295**	*ce*P		**P**	**06 46 25.1**	**-0.5**
PMG				pmax		pmax		
	comp=Z,165nm,1.0s							
PMG	**Port Moresby**	**38.82**	**295**	P		P	06 46 21.1	-4.5
PMG				IAmb		IAmb	06 46 28.5	
	comp=Z,39nm,1.0s							
BBOO	**Buckleboo**	**39.24**	**254**	P		**P**	**06 46 29.0**	**0.0**
	baz=40,SNR=104							
BBOO	**Buckleboo**	**39.24**	**254**	P		**P**	**06 46 28.8**	**-0.2**
COEN	**Coen**	**39.51**	**286**	P		**P**	**06 46 33.0**	**+1.6**
	baz=40,SNR=6.8							
COEN	**Coen**	**39.51**	**286**	P		**P**	**06 46 31.0**	**-0.5**
QIS	**Mount Isa**	**39.57**	**274**	P		**P**	**06 46 32.9**	**+0.9**
	baz=40,SNR=11							
TAOE	**Nuku Hiva Isla**	**41.04**	**67**	*e*LR		LR	06 57 56.9	
	comp=Z,3μm,26.9s							
AS31	**Alice Springs**	**43.38**	**267**	P		**P**	**06 47 02.3**	**-0.9**
WR0	**Warramunga Arr**	**44.18**	**272**	P		**P**	**06 47 09.5**	**-0.1**
WR0				IAmb		IAmb	06 47 11.0	
	comp=Z,63nm,0.9s							
WB2	**Warramunga Arr**	**44.35**	**272**	P		**P**	**06 47 10.7**	**-0.2**
WRAB	**Tennant Creek**	**44.35**	**272**	P		**P**	**06 47 10.8**	**-0.2**
WRAB				pmax		pmax		
	comp=Z,91nm,0.6s							
WRAB	**Tennant Creek**	**44.35**	**272**	P		**P**	**06 47 10.8**	**-0.2**
WRA	**Warramunga Arr**	**44.36**	**272**	P		**P**	**06 47 10.3**	**-0.7**
	comp=Z,62nm,0.4s,baz=111,slow=8.1,SNR=232							
WRA				PKiKP		**PKiKP**	**06 55 53.9**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=127,slow=1.0,SNR=7.2							
WRA				LR		LR	07 05 36.2	
	comp=Z,2μm,18.0s,baz=110,slow=36							
WB7	**Warramunga Arr**	**44.37**	**272**	P		**P**	**06 47 11.7**	**+0.6**
	baz=45							
WB0	**Warramunga Arr**	**44.38**	**272**	P		**P**	**06 47 11.0**	**-0.2**
FORT	**Forrest**	**46.32**	**255**	P		**P**	**06 47 25.6**	**-0.8**
	baz=47,SNR=29							
FORT	**Forrest**	**46.32**	**255**	P		**P**	**06 47 25.9**	**-0.6**
FORT				IAmb		IAmb	06 47 44.8	
	comp=Z,39nm,0.8s							
WRKA	**Warakurna**	**47.75**	**263**	P		**P**	**06 47 36.7**	**-1.0**
	baz=48,SNR=45							
JAY	**Jayapura**	**48.11**	**297**	P		**P**	**06 47 39.6**	**-0.9**
	comp=Z,12nm,0.5s,baz=318,slow=1.5,SNR=8.0							
JAY				LR		LR	07 05 34.9	
	comp=Z,485nm,21.7s,baz=160,slow=33							
VNDA	**Vanda**	**48.18**	**186**	P		**P**	**06 47 43.7**	**+3.5**
	comp=Z,4.1nm,0.6s,baz=354,slow=8.0,SNR=15							
VNDA				LR		LR	07 04 52.3	
	comp=Z,214nm,20.7s,baz=33,slow=32							
VNDA	**Vanda**	**48.18**	**186**	P		**P**	**06 47 42.4**	**+2.1**
VNDA				pmax		pmax		
	comp=Z,6.0nm,0.8s							
VNDA	**Vanda**	**48.18**	**186**	P		**P**	**06 47 42.4**	**+2.1**
KDU	**Kakadu**	**49.17**	**280**	P		**P**	**06 47 48.3**	**-0.3**
	baz=50,SNR=5.0							
SMPI	**Sarmi**	**49.98**	**296**	P		**P**	**06 47 53.9**	**-1.0**
	comp=Z,535nmcomp=Z,18nm,1.0s							
MTN	**Manton Dam**	**50.24**	**279**	P		**P**	**06 47 57.1**	**+0.3**
	baz=50,SNR=5.4							
MTN	**Manton Dam**	**50.24**	**279**	P		**P**	**06 47 55.3**	**-1.5**
MTN				IAmb		IAmb	06 47 57.3	
	comp=Z,15nm,0.7s							
KNRA	**Kununurra**	**50.97**	**274**	P		**P**	**06 48 02.0**	**-0.3**
	baz=51,SNR=23							
KNRA	**Kununurra**	**50.97**	**274**	P		**P**	**06 48 02.0**	**-0.3**
KNRA				IAmb		IAmb	06 48 04.7	
	comp=Z,68nm,1.2s							
KMBL	**Kambalda**	**51.29**	**252**	P		**P**	**06 48 04.4**	**-0.2**
	baz=52,SNR=6.1							
FITZ	**Fitzroy Crossi**	**52.62**	**270**	P		**P**	**06 48 14.1**	**-0.6**
	baz=53,SNR=52							
FITZ	**Fitzroy Crossi**	**52.62**	**270**	P		**P**	**06 48 13.7**	**-0.9**
	comp=Z,25nm,0.6s,baz=161,slow=7.2,SNR=81							
FITZ	**Fitzroy Crossi**	**52.62**	**270**	P		**P**	**06 48 13.8**	**-0.9**
FITZ				IAmb		IAmb	06 48 17.0	
	comp=Z,24nm,0.7s							
FAKI	**Fak Fak**	**54.57**	**290**	P		**P**	**06 48 25.3**	**-3.7**
	comp=Z,539nmcomp=Z,30nm,1.5s							
FAKI	**Fak Fak**	**54.57**	**290**	P		**P**	**06 48 27.6**	**-1.4**

FAKI				IAmb		IAmb	06 48 29.1	
	comp=Z,42nm,1.2s							
KLBR	**Kellerberrin**	**54.62**	**251**	P		**P**	**06 48 28.3**	**-0.8**
	baz=55,SNR=15							
NWAO	**Narrogin (SRO)**	**54.66**	**249**	P		**P**	**06 48 28.3**	**-1.2**
NWAO				pmax		pmax		
	comp=Z,32nm,1.5s							
NWAO	**Narrogin (SRO)**	**54.66**	**249**	P		**P**	**06 48 28.3**	**-1.2**
NWAO				IAmb		IAmb	06 48 42.1	
	comp=Z,32nm,1.4s							
KIP	**Kipapa**	**54.84**	**23**	*ce*P		**P**	**06 48 32.5**	**+1.9**
KIP				pmax		pmax		
	comp=Z,86nm,1.3s							
KIP	**Kipapa**	**54.84**	**23**	P		**P**	**06 48 31.0**	**+0.4**
CASY	**Casey**	**55.31**	**208**	P		**P**	**06 48 33.6**	**0.0**
MEEK	**Meekatharra**	**55.45**	**257**	P		**P**	**06 48 34.0**	**-1.3**
	baz=56,SNR=11							
PSA00	**Pilbara Seismi**	**56.24**	**263**	P		**P**	**06 48 39.5**	**-1.4**
MORW	**Morawa**	**56.80**	**253**	P		**P**	**06 48 43.8**	**-1.1**
	baz=57,SNR=4.1							
MORW	**Morawa**	**56.80**	**253**	P		**P**	**06 48 44.2**	**-0.6**
MORW				IAmb		IAmb	06 48 44.6	
	comp=Z,25nm,1.1s							
SOEI	**Soe**	**57.61**	**278**	P		**P**	**06 48 52.0**	**+1.1**
	comp=Z,32nm,0.7s							
SOEI	**Soe**	**57.61**	**278**	P		**P**	**06 48 52.5**	**+1.6**
SOEI				IAmb		IAmb	06 49 08.3	
	comp=Z,57nm,1.3s							
QSPA	**South Pole Qui**	**59.77**	**180**	P		**P**	**06 49 07.5**	**+2.3**
	comp=Z,27nm,1.1s,baz=30,slow=1.4,SNR=62							
QSPA	**South Pole Qui**	**59.77**	**180**	P		**P**	**06 49 07.0**	**+1.8**
SANI	**Sanana**	**60.20**	**287**	P		**P**	**06 49 06.2**	**-2.5**
	comp=Z,1μmcomp=Z,37nm,1.7s							
GIRL	**Giralia**	**60.62**	**260**	P		**P**	**06 49 11.8**	**+0.4**
	baz=61,SNR=7.0							
GIRL	**Giralia**	**60.62**	**260**	P		**P**	**06 49 11.9**	**+0.4**
TNTI	**Ternate**	**60.67**	**290**	P		**P**	**06 49 10.8**	**-1.1**
TNTI				IAmb		IAmb	06 49 22.2	
	comp=Z,22nm,1.0s							
BNSI	**Bone**	**63.88**	**281**	P		**P**	**06 49 33.0**	**-0.4**
	comp=Z,22nm,1.6s							
SPSI	**Sidrap Palu**	**64.39**	**281**	P		**P**	**06 49 36.0**	**-0.8**
	comp=Z,12nm,0.9s							
MPSI	**Mapaga**	**66.58**	**285**	P		**P**	**06 49 49.2**	**-1.7**
	comp=Z,16nm,1.5s							
MAW	**Mawson**	**72.45**	**200**	P		**P**	**06 50 27.7**	**+1.5**
	baz=72,SNR=8.9							
MAW	**Mawson**	**72.45**	**200**	P		**P**	**06 50 27.8**	**+1.5**
	comp=Z,15nm,0.7s,baz=132,slow=8.6,SNR=22							
MAW				LR		LR	07 20 52.0	
	comp=Z,697nm,20.9s,baz=88,slow=34							
MAW	**Mawson**	**72.45**	**200**	P		**P**	**06 50 27.8**	**+1.5**
MAW				pmax		pmax		
	comp=Z,5.0nm,0.9s							
MAW	**Mawson**	**72.45**	**200**	P		**P**	**06 50 27.8**	**+1.5**
KKM	**Kota Kinabalu**	**72.79**	**288**	P		**P**	**06 50 28.6**	**-0.7**
KKM				IAmb		IAmb	06 50 29.6	
	comp=Z,31nm,0.9s							
LEM	**Lembang**	**73.38**	**272**	P		**P**	**06 50 32.0**	**-0.9**
	comp=Z,20nm,0.4s,baz=157,slow=10.0,SNR=3.9							
SBUM	**Sibu**	**74.17**	**282**	P		**P**	**06 50 37.0**	**-0.3**
KSM	**Kuching**	**75.27**	**281**	P		**P**	**06 50 43.0**	**-0.7**
SYO	**Syowa Base**	**77.23**	**193**	*i* P		**P**	**06 50 54.2**	**+0.3**
SYO	**Syowa Base**	**77.23**	**193**	*i* PcP		**PcP**	**06 51 04.0**	**-0.5**
SYO	**Syowa Base**	**77.23**	**193**	*i* pP		pP	06 51 05.0	+2.0
MDSI	**Maura Dua**	**77.50**	**272**	P		**P**	**06 50 53.7**	**-2.7**
	comp=Z,29nm,0.6s							
INU	**Inuyama**	**78.01**	**324**	P		**P**	**06 50 58.1**	**-0.6**
SNAA	**Sanae**	**78.20**	**178**	P		**P**	**06 51 00.5**	**+1

comp=Z,138nm,18.2s,baz=145,slow=35
KSRS Korea Array 84.48 319 *e*P **P 06 51 33.9 +1.0**
KSRS pmax pmax
comp=Z,3.0nm,0.7s
PKM Mcpherson Peak 84.74 44 P **P 06 51 36.3 +1.7**
baz=227
IPM Ipoh 84.74 278 P **P 06 51 34.2 -0.7**
IPM lAmb lAmb 06 51 35.0
comp=Z,14nm,1.0s
IPM Ipoh 84.74 278 P **P 06 51 34.0 -0.9**
AKUT Akutan 84.76 7 P **P 06 51 34.0 +0.1**
YSS Yuzh-Sakhalins 84.81 334J *e*P **P 06 51 35.6 +1.2**
YSS *e* 06 51 51.8
YSS pmax pmax
comp=Z,20nm,0.6s
YSS MLR MLR
comp=Z,400nm,17.0s
109C Camp Elliot, M 85.09 47 P **P 06 51 37.7 +1.6**
baz=229
QIZ Qiongzhong 85.21 295 P **P 06 51 37.8 +0.7**
QIZ S **S 07 02 09.8 +4.6**
QIZ SS **SS 07 07 41.0 +0.8**
QIZ pmax pmax
comp=Z,160nm,10.8s
QIZ LR LR
comp=Z,140nm,16.7s
QIZ LR LR
comp=Z,140nm,16.7s
QIZ LR LR
comp=Z,150nm,18.1s
KULM Kulim 85.48 279 P **P 06 51 38.0 -0.6**
BO02 Sierra Bellavi 85.50 128 P **P 06 51 36.1 -2.4**
ARVC Arvin 85.50 45 P **P 06 51 39.3 +1.2**
baz=228
MURC Murrieta 85.50 47 P **P 06 51 39.9 +1.7**
baz=229,SNR=8.7
MONP2 Monument Peak 85.53 48 P **P 06 51 40.5 +1.8**
baz=230,SNR=8.0
PET Petropavlovsk 85.54 346 *e*P **P 06 51 36.2 -1.6**
PET *e*S **S 07 02 04.2 -2.7**
PET pmax pmax
comp=Z,100nm,17.2s
IKP In-Ko-Pah, Jac 85.57 48 P **P 06 51 40.1 +1.4**
baz=230
BFSC Mount Baldy Ra 85.63 46 P **P 06 51 40.5 +1.5**
baz=229,SNR=9.7
RPSI Rantau Prapat 85.64 276 P **P 06 51 37.9 -1.5**
RPSI lAmb lAmb 06 51 55.0
comp=Z,17nm,1.2s
PSI Prapat 85.69 276 P **P 06 51 37.9 -1.9**
PSI pmax pmax
comp=Z,17nm,1.2s
HOPS Hopland Field 85.70 40 P **P 06 51 41.1 +2.1**
VES Vestal, Richgr 85.82 44 P **P 06 51 41.0 +1.3**
baz=228,SNR=5.9
PEA0B Petropavlovsk- 85.82 345*ce*P **P 06 51 38.8 -0.5**
PEA0B Petropavlovsk- 85.82 345 P **P 06 51 39.9 +0.6**
PETK Petropavlovsk- 85.82 345 P **P 06 51 39.3 0.0**
comp=Z,23nm,0.9s,baz=122,slow=6.7,SNR=28
PETK LR LR 07 23 27.2
comp=Z,294nm,21.5s,baz=166,slow=31
EDW2 Edwards Air Fo 85.85 45 P **P 06 51 41.3 +1.3**
baz=228,SNR=7.0
SWSC Sam W. Stewart 85.96 48 P **P 06 51 41.8 +1.3**
baz=230
PFO Pinyon Flats O 85.97 47 P **P 06 51 43.1 +2.4**
PFO pmax pmax
comp=Z,24nm,1.1s
PFO Pinyon Flats O 85.97 47 P **P 06 51 42.2 +1.5**
baz=230
PFO Pinyon Flats O 85.97 47 P **P 06 51 43.1 +2.4**
PFO lAmb lAmb 06 51 58.8
comp=Z,24nm,1.1s
XPFO Pion Flat 85.97 47 P **P 06 51 43.1 +2.4**
XPFO lAmb lAmb 06 51 58.8
comp=Z,24nm,1.1s
ISA Isabella, Lake 86.07 45 P **P 06 51 43.5 +2.4**
ISA pmax pmax
comp=Z,38nm,1.1s
ISA Isabella, Lake 86.07 45 P **P 06 51 42.3 +1.2**
baz=228,SNR=9.0
ISA Isabella, Lake 86.07 45 P **P 06 51 43.5 +2.4**
GSI Gunungsitoli 86.10 274 P **P 06 51 42.1 +0.4**
MT02 Curacav 86.10 126 P **P 06 51 43.2 +1.8**
BBRC Big Bear Solar 86.11 46 P **P 06 51 42.5 +1.0**
baz=229
CNBA Chernabura Isl 86.24 10 P **P 06 51 42.7 +1.5**
NJ2 Nanjing 86.41 310 *e*P **P 06 51 44.8 +2.1**
NJ2 pmax pmax
comp=Z,17nm,0.6s
NJ2 LR LR
comp=Z,370nm,20.6s
NJ2 LR LR
comp=Z,310nm,19.8s
NJ2 LR LR
comp=Z,600nm,23.7s
LRMC Laurel Mtn Rad 86.43 45 P **P 06 51 44.6 +1.6**
baz=229
PEL Peldehue 86.48 127 P **P 06 51 45.5 +2.1**
PEL pmax pmax
comp=Z,25nm,0.9s
PEL Peldehue 86.48 127 P **P 06 51 45.5 +2.1**
PEL lAmb lAmb 06 52 01.9
comp=Z,25nm,0.9s
BELC Belle Mtn. Jos 86.52 47 P **P 06 51 44.8 +1.4**
baz=230,SNR=8.4
CMB Columbia Colle 86.54 42 P **P 06 51 43.7 +0.4**
CMB pmax pmax
comp=Z,24nm,1.1s
CMB Columbia Colle 86.54 42 P **P 06 51 43.7 +0.4**
CMB lAmb lAmb 06 52 00.8
comp=Z,24nm,1.1s
SDPT Sand Point 86.61 10 P **P 06 51 44.4 +1.3**
BC3 Big Chuckawall 86.64 48 P **P 06 51 45.8 +1.9**
baz=230,SNR=11
GLA Glamis 86.66 48 P **P 06 51 45.7 +1.7**
baz=230
O02D Mt. Diablo Mer 86.69 39 P **P 06 51 46.1 +2.1**
baz=225
CWC Cottonwood Cre 86.83 44 P **P 06 51 46.3 +1.4**
baz=228
AFDM Forest Hills D 86.83 41 P **P 06 51 44.7 0.0**
AFDM lAmb lAmb 06 52 02.9
comp=Z,36nm,1.5s
HEC Hector,Ludlow 86.84 46 P **P 06 51 46.2 +1.3**
baz=230
GSC Goldstone, Bar 86.86 46 P **P 06 51 45.9 +0.9**
GSC pmax pmax
comp=Z,32nm,1.1s
GSC Goldstone, Bar 86.86 46 P **P 06 51 46.4 +1.5**
baz=229,SNR=10
GSC Goldstone, Bar 86.86 46 P **P 06 51 45.9 +0.9**
GSC lAmb lAmb 06 52 03.0
comp=Z,32nm,1.1s
MPMC Manual Prospec 86.93 45 P **P 06 51 46.9 +1.4**
baz=229,SNR=8.2
ORV Oroville 86.96 40 P **P 06 51 45.6 +0.4**
ORV pmax pmax
comp=Z,13nm,1.2s
ORV Oroville 86.96 40 P **P 06 51 45.6 +0.4**
MDPB Devils Postpil 87.03 43 P **P 06 51 43.2 -2.7**
MDPB lAmb lAmb 06 51 58.2
comp=Z,18nm,1.4s
OMMB Old Mammoth Mi 87.06 43 P **P 06 51 45.7 -0.5**
WDC Whiskeytown Da 87.10 39 P **P 06 51 46.1 +0.2**
WDC pmax pmax
comp=Z,32nm,1.3s
WDC Whiskeytown Da 87.10 39 P **P 06 51 46.1 +0.2**
WDC lAmb lAmb 06 52 04.3
comp=Z,32nm,1.2s
IRM Iron Mountain 87.16 47 P **P 06 51 47.9 +1.5**
baz=230,SNR=21
113A Mohawk Valley, 87.17 49 P **P 06 51 48.1 +1.7**
113A lAmb lAmb 06 52 04.7
comp=Z,23nm,1.1s
MLAC Mammoth, Mammo 87.17 43 P **P 06 51 47.9 +1.3**
baz=228
GMRC Granite Mounta 87.23 47 P **P 06 51 48.4 +1.5**
baz=230,SNR=5.9
USA0B Ussuriysk Arra 87.26 326 P **P 06 51 45.4 -1.1**
USA0B pmax pmax
comp=Z,20nm,1.4s
USA0B Ussuriysk Arra 87.26 326 P **P 06 51 45.4 -1.1**
USA0B lAmb lAmb 06 52 00.4
comp=Z,20nm,1.4s
USRK Ussuriysk Ar. 87.26 326 P **P 06 51 47.2 +0.7**
comp=Z,3.6nm,0.6s,baz=133,slow=3.6,SNR=9.8
USRK LR LR 07 27 26.1
comp=Z,194nm,20.1s,baz=115,slow=33
N02D Trinity Center 87.29 38 P **P 06 51 48.0 +1.1**
baz=225
214A Organ Pipe Nat 87.30 50 P **P 06 51 48.6 +1.5**
baz=232
214A Organ Pipe Nat 87.30 50 P **P 06 51 48.4 +1.3**
O03E Paynes Creek 87.31 39 P **P 06 51 47.8 +0.8**
baz=226
WAKR Walker 87.41 42 P **P 06 51 48.5 +0.8**
WAKR lAmb lAmb 06 52 05.6
comp=Z,30nm,1.2s
TUQ Turquoise Moun 87.49 46 P **P 06 51 49.4 +1.4**
baz=230
M02C Callahan 87.51 38 P **P 06 51 49.3 +1.4**
baz=225
SHOC Shoshone, Teco 87.57 46 P **P 06 51 49.9 +1.6**
baz=230,SNR=5.8
GRAC Grapevine Rang 87.62 44 P **P 06 51 50.0 +1.4**
baz=229,SNR=13
PNTR Pine Nut 87.71 41 P **P 06 51 50.3 +1.2**
PNTR lAmb lAmb 06 52 06.7
comp=Z,24nm,1.0s
BEKR Beckworth 87.81 40 P **P 06 51 50.7 +1.1**
VCNR Virginia City 87.82 41 P **P 06 51 50.7 +1.0**
VCNR lAmb lAmb 06 52 07.1
comp=Z,13nm,1.1s
YERR Yerington 87.85 42 P **P 06 51 50.9 +1.1**
YERR lAmb lAmb 06 52 07.2
comp=Z,14nm,0.9s
CHGN Chignik 87.85 11 P **P 06 51 49.7 +0.7**
NEE2 Needles Airpor 87.88 47 P **P 06 51 51.5 +1.7**
baz=230
PDMCI Parker Dam,Lak 87.89 48 P **P 06 51 51.9 +2.1**
baz=231,SNR=8.0
K02D Willamette Mer 88.01 37 P **P 06 51 51.9 +1.6**
baz=224
NVAR Mina Array Bea 88.02 43 P **P 06 51 51.7 +1.0**
comp=Z,5.1nm,0.7s,baz=220,slow=7.8,SNR=26
NVAR LR LR 07 28 02.8
comp=Z,514nm,18.1s,baz=268,slow=33
RYN Ryan 88.02 42 P **P 06 51 49.4 -1.2**
RYN lAmb lAmb 06 52 08.1
comp=Z,15nm,1.2s
NV11 Mina Array Sit 88.11 43 P **P 06 51 51.3 +0.3**
NV11 lAmb lAmb 06 52 08.5
comp=Z,20nm,1.1s
TYV Tymovskoe 88.11 336 *e*P **P 06 51 51.2 +0.8**
TYV *e*S **S 07 02 32.0 +0.1**
TYV pmax pmax
comp=Z,24nm,1.4s
TYV smax smax
comp=E,12nm,1.3s
TYV MLR MLR
comp=Z,500nm,20.0s
PAHR Pah Rah Range 88.25 41 P **P 06 51 52.1 +0.5**
PAHR lAmb lAmb 06 52 08.9
comp=Z,13nm,1.0s
TPNV Topopah Spring 88.27 45 P **P 06 51 52.6 +0.8**
TPNV pmax pmax
comp=Z,26nm,1.2s
TPNV Topopah Spring 88.27 45 P **P 06 51 53.5 +1.7**
baz=230,SNR=7.0
TPNV Topopah Spring 88.27 45 P **P 06 51 52.6 +0.8**
TPNV lAmb lAmb 06 52 09.9
comp=Z,26nm,1.1s
M04C Macdoel 88.32 38 P **P 06 51 53.4 +1.5**
baz=226
Y14A Wickenburg 88.40 49 P **P 06 51 53.7 +1.4**
Y14A lAmb lAmb 06 52 10.7
comp=Z,21nm,0.8s
KVN Kaiserville 88.55 42 P **P 06 51 53.8 +0.7**
KVN pmax pmax
comp=Z,15nm,0.9s
KVN Kaiserville 88.55 42 P **P 06 51 53.8 +0.7**
KVN lAmb lAmb 06 52 10.4
comp=Z,15nm,0.9s
W13A Hualapai Mount 88.56 47 P **P 06 51 53.6 +0.3**
W13A lAmb lAmb 06 52 11.6
comp=Z,18nm,1.0s
SHPR Sheep Range 88.65 46 P **P 06 51 55.5 +1.9**
SHPR lAmb lAmb 06 52 12.1
comp=Z,24nm,1.3s
MDJ Mudanjiang 88.73 325 P **P 06 51 53.2 -0.3**
TUC Tucson 88.87 51 P **P 06 51 56.0 +1.3**
TUC pmax pmax
comp=Z,24nm,1.1s
TUC Tucson 88.87 51 P **P 06 51 56.1 +1.5**
baz=233
TUC Tucson 88.87 51 P **P 06 51 56.0 +1.3**
TUC lAmb lAmb 06 52 13.5
comp=Z,24nm,1.1s
I03D Drain, OR 88.88 36 P **P 06 51 55.7 +1.4**
baz=225
AC05 El Transito 89.19 123 P **P 06 51 58.4 +1.9**
AC05 lAmb lAmb 06 51 59.2
comp=Z,12nm,0.8s
J04D Umpqua Nationa 89.20 37 P **P 06 51 57.4 +1.3**
baz=226,SNR=5.7
MOD Modoc Plateau 89.23 39 P **P 06 51 57.4 +1.1**
MOD lAmb lAmb 06 52 13.5
comp=Z,14nm,1.0s
HPIG 89.33 58 P **P 06 51 57.6 +0.5**
HPIG lAmb lAmb 06 52 14.6
comp=Z,12nm,1.0s
319A Douglas 89.33 53 P **P 06 51 58.9 +2.0**
I04A Tendick Farm, 89.43 37 P **P 06 51 58.3 +1.3**
baz=225
R11A Troy Canyon, C 89.58 44 P **P 06 51 59.0 +1.1**
baz=230
R11A Troy Canyon, C 89.58 44 P **P 06 51 59.0 +1.1**
J05D Fort Rock, OR 89.69 37 P **P 06 51 59.7 +1.4**
baz=226,SNR=6.5
X16A Lo Mia Camp, P 89.71 49 P **P 06 51 59.8 +1.1**
H04D Lebanon 89.78 36 P **P 06 51 59.8 +1.3**
baz=225
LCMT Little Creek M 90.16 46 P **P 06 52 01.5 +0.9**
H04A Detroit Lake 90.17 36 P **P 06 52 00.7 +0.4**
H04A lAmb lAmb 06 52 17.5
comp=Z,24nm,1.0s
PINE Pine Mountain 90.19 37 P **P 06 52 02.2 +1.5**
CN2 Changchun 90.26 323 *e*P **P 06 51 59.8 -0.9**
CN2 pmax pmax
comp=Z,20nm,1.0s
GRNR Gornyy 90.35 333J *i*P **P 06 52 02.3 +1.3**
GRNR pmax pmax
comp=Z,9.0nm,1.3s
I05D Terrebonne, OR 90.37 37 P **P 06 52 02.9 +1.6**
baz=226,SNR=5.8
U15A North Rim 90.40 47 P **P 06 52 03.6 +1.6**
U15A lAmb lAmb 06 52 20.6
comp=Z,23nm,0.9s
CCUT Cedar City 90.42 46 P **P 06 52 03.0 +1.0**
WUAZ Wupatki 90.43 48 P **P 06 52 03.4 +1.5**
baz=232
WUAZ Wupatki 90.43 48 P **P 06 52 04.1 +2.1**
KNB Kanab 90.43 46 P **P 06 52 03.5 +1.5**
KNB pmax pmax
comp=Z,28nm,1.1s
KNB Kanab 90.43 46 P **P 06 52 03.5 +1.5**
WVOR Wild Horse Val 90.51 39 P **P 06 52 03.3 +1.2**
WVOR pmax pmax
comp=Z,19nm,1.4s
WVOR Wild Horse Val 90.51 39 P **P 06 52 03.3 +1.2**
WVOR lAmb lAmb 06 52 19.6
comp=Z,19nm,1.4s
SZCU Shurtz Canyon 90.62 46 P **P 06 52 04.1 +1.2**
PSUT Pine Spring 90.74 45 P **P 06 52 04.2 +0.8**
X18A Snowflake 90.76 50 P **P 06 52 04.6 +1.1**
X18A lAmb lAmb 06 52 22.1
comp=Z,25nm,1.1s
F04A Amboy 90.93 35 P **P 06 52 05.2 +1.4**
G05D Wamic, OR 91.00 36 P **P 06 52 05.4 +1.2**
baz=226
PKCU Pink Cliffs 91.01 46 P **P 06 52 06.2 +1.3**
KLR Kul'dur 91.12 330 P **P 06 52 04.7 +0.1**
comp=Z,4.2nm,0.7s,baz=112,slow=4.3,SNR=9.0
KLR LR LR 07 28 19.3
comp=Z,334nm,21.1s,baz=144,slow=32
KLR Kul'dur 91.12 330*ce*P **P 06 52 04.3 -0.3**
KLR pmax pmax
comp=Z,4.0nm,1.0s
I07A Izee 91.15 38 P **P 06 52 05.2 +0.1**
I07A lAmb lAmb 06 52 22.6
comp=Z,15nm,1.0s
J08A Circle Bar Ran 91.21 39 P **P 06 52 06.4 +1.1**
J08A lAmb lAmb 06 52 23.5
comp=Z,16nm,1.1s
W18A Petrified Fore 91.25 49 P **P 06 52 07.5 +1.6**
baz=233
E04D Cinebar 91.30 34 P **P 06 52 07.5 +2.0**
baz=225
ELK Elko 91.32 42 P **P 06 52 06.4 +0.3**
ELK pmax pmax
comp=Z,7.0nm,1.0s
ELK Elko 91.32 42 P **P 06 52 06.4 +0.3**
G06A Carlson Farm, 91.35 36 P **P 06 52 06.2 +0.4**
MTPU Mount Pierson 91.46 46 P **P 06 52 08.5 +1.6**
D03D Eldon 91.74 34 P **P 06 52 08.6 +1.1**
baz=225
GYA Guiyang 91.75 300 *e*P **P 06 52 10.5 +2.2**
GYA pmax pmax
comp=Z,10.0nm,0.5s
MSU Marysvale 91.75 46 P **P 06 52 09.6 +1.5**
MSU Marysvale 91.75 46 P **P 06 52 09.6 +1.5**
TXAR Lajitas Array 92.14 57 P **P 06 52 11.8 +1.8**
comp=Z,1.2nm,0.8s,baz=201,slow=6.7,SNR=12
TXAR PKKPbc **PKKPbc 07 09 27.0 +1.1**
comp=Z,0.1nm,0.5s,baz=128,slow=2.7,SNR=4.6
TXAR LR LR 07 29 18.5
comp=Z,268nm,18.1s,baz=0.0,slow=33
MNTX Cornudas Mount 92.23 54 P **P 06 52 11.3 +1.0**
baz=236
G08A Pilot Rock 92.25 37 P **P 06 52 11.4 +1.2**
MFID Camas Ranch 92.70 40 P **P 06 52 13.4 +1.1**
MFID lAmb lAmb 06 52 29.6
comp=Z,12nm,0.9s
TMUT Trail Mountain 92.83 45 P **P 06 52 14.6 +1.4**
BMO Blue Mountains 92.83 38 P **P 06 52 13.7 +0.9**
BMO pmax pmax
comp=Z,6.0nm,1.0s
BMO Blue Mountains 92.83 38 P **P 06 52 13.7 +0.9**
BJI Beijing 93.07 315 P **P 06 52 15.3 +1.5**
BJI S **S 07 03 19.8 +1.9**
BJI pmax pmax
comp=Z,5.0nm,1.0s
BJI LR LR
comp=Z,170nm,22.7s
BJI LR LR
comp=Z,160nm,21.6s
BJI LR LR
comp=Z,440nm,64.4s
SRU San Rafael Swe 93.14 46 P **P 06 52 15.2 +0.7**
SRU San Rafael Swe 93.14 46 P **P 06 52 15.2 +0.7**
ANMO Albuquerque 93.33 51*ce*P **P 06 52 17.3 +1.8**
ANMO pmax pmax
comp=Z,7.0nm,1.3s
ANMO Albuquerque 93.33 51 P **P 06 52 17.3 +1.8**
baz=235
ANMO Albuquerque 93.33 51 P **P 06 52 16.6 +1.1**
ANMO lAmb lAmb 06 52 33.2
comp=Z,8.6nm,1.0s
F10A Beach Ranch, E 93.61 37 P **P 06 52 16.3 -0.1**
F10A lAmb lAmb 06 52 32.9
comp=Z,15nm,1.0s
LVC Limon Verde 93.73 119 P **P 06 52 19.4 +1.4**
LVC pmax pmax
comp=Z,5.0nm,1.0s
LVC Limon Verde 93.73 119 P **P 06 52 19.4 +1.4**
PV12 Saucer Basin, 93.75 47 P **P 06 52 17.6 +0.2**
PV12 lAmb lAmb 06 52 34.8
comp=Z,9.2nm,1.0s
XAN Xi'an 94.29 307 P **P 06 52 16.8 -2.9**
XAN pP pP 06 52 26.8 -2.4
XAN Xi'an 94.29 307 SKS **SKKSac 07 03 08.8 -4.8**
XAN Xi'an 94.29 307 S **S 07 03 27.3 -1.7**
XAN Xi'an 94.29 307 SS SS 07 10 00.3 +8.7
XAN LR LR
comp=N,140nm,19.5s
XAN LR LR
comp=E,230nm,20.6s
XAN LR LR
comp=Z,300nm,19.5s
TTA Tatalina 94.56 10 P **P 06 52 20.3 +0.1**
TTA pmax pmax
comp=Z,6.0nm,1.0s
TTA Tatalina 94.56 10 P **P 06 52 20.3 +0.1**
S22A 4UR Ranch, Cre 94.69 49 P **P 06 52 23.4 +1.7**
baz=235
GHO Glory Hole Cre 94.70 13 P **P 06 52 20.7 -0.2**
GHO lAmb lAmb 06 52 28.2
comp=Z,10nm,0.9s
SCM Sheep Creek Mo 95.08 14 P **P 06 52 22.4 -0.3**
SCM pmax pmax
comp=Z,8.0nm,0.6s
SCM Sheep Creek Mo 95.08 14 P **P 06 52 22.4 -0.3**
SCM lAmb lAmb 06 52 26.3
comp=Z,7.9nm,0.6s
MNMC Minye Minye 95.17 116 P **P 06 52 24.9 +0.4**
MCMT McKenzie Canyo 95.26 40 P **P 06 52 25.0 +0.9**
GLB Gilahina Butte 95.50 16 P **P 06 52 24.8 +0.2**
REDW Red Top Meadow 95.50 42 P **P 06 52 26.1 +0.8**
REDW lAmb lAmb 06 52 42.6
comp=Z,13nm,1.0s
TPAW Teton Pass 95.52 42 P **P 06 52 26.3 +0.8**
TPAW lAmb lAmb 06 52 42.9
comp=Z,8.4nm,1.1s
SDCO Great Sand Dun 95.56 49 P **P 06 52 27.5 +1.7**
baz=236
SDCO Great Sand Dun 95.56 49 P **P 06 52 26.8 +1.1**
FXWY Fox Creek 95.57 42 P **P 06 52 26.3 +0.7**
SNOW Snow King Moun 95.62 42 P **P 06 52 26.6 +0.7**
SNOW lAmb lAmb 06 52 43.3
comp=Z,11nm,0.8s
IMW Indian Meadow 95.78 42 P **P 06 52 27.4 +0.8**
PDAR Pinedale Array 95.91 43 P **P 06 52 28.4 +1.3**
comp=Z,0.8nm,0.6s,baz=224,slow=4.1,SNR=5.6
PDAR PKKPbc **PKKPbc 07 09 16.2 -0.4**
comp=Z,1.1nm,0.6s,baz=104,slow=4.6,SNR=7.2
PDAR LR LR 07 33 15.2
comp=Z,308nm,18.1s,baz=246,slow=34
TRF Thorofare Moun 95.98 12 P **P 06 52 26.9 +0.1**
TRF lAmb lAmb 06 52 31.8
comp=Z,7.2nm,0.8s
SEY Seymchan 95.98 347 P **P 06 52 25.9 -0.7**
comp=Z,5.9nm,0.5s,baz=153,slow=4.6,SNR=14
RND Reindeer 96.20 13 P **P 06 52 28.2 +0.5**
RND pmax pmax
comp=Z,14nm,1.3s
RND Reindeer 96.20 13 P **P 06 52 28.2 +0.5**
RND lAmb lAmb 06 52 47.9
comp=Z,14nm,1.3s
CD2 Chengdu 96.28 302 *e*P **P 06 52 29.0 +0.1**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
H17A Grant Village 96.28 42 P **P 06 52 31.0 +2.2**
baz=233
ZEA Zeya 96.33 331 *e*P **P 06 52 28.1 -0.3**
HHC Hu-ho-hao-te 96.39 314 *e*P **P 06 52 29.8 +0.6**
HHC *e*S **S 07 03 51.3 +4.2**
HHC pmax pmax
comp=Z,12nm,0.8s
HHC pmax pmax
comp=Z,63nm,5.1s
HHC LR LR
comp=Z,190nm,23.3s
HHC LR LR
comp=Z,170nm,21.4s
HHC LR LR
comp=Z,180nm,21.8s
MCK McKinley 96.48 12 P **P 06 52 28.5 -0.4**
MCK pmax pmax
comp=Z,8.0nm,1.1s
MCK McKinley 96.48 12 P **P 06 52 28.5 -0.4**
MCK lAmb lAmb 06 52 37.5
comp=Z,8.2nm,1.1s
WRH Wood River Hil 97.31 12 P Pdif 06 52 33.5 +0.8
DOT Dot Lake 97.39 14 P **P 06 52 33.3 +0.2**
RLMT Red Lodge 97.47 42 P Pdif 06 52 36.3 +2.1
baz=234
HDA Harding Lake 97.47 13 P **P 06 52 32.4 -1.0**
CCB Clear Creek Bu 97.53 12 P **P 06 52 33.4 -0.2**
ILAR Eielson Array 97.81 13 P **P 06 52 34.9 -0.1**
comp=Z,0.8nm,0.8s,baz=211,slow=5.9,SNR=8.8
ILAR PP **PP 06 56 37.5 +3.6**
comp=Z,0.9nm,0.9s,baz=227,slow=7.9,SNR=4.5
ILAR PKKPbc **PKKPbc 07 09 09.9 -2.0**
comp=Z,0.5nm,0.8s,baz=288,slow=1.8,SNR=5.7
ILAR LR LR 07 29 40.0
comp=Z,78nm,21.5s,baz=216,slow=31

LPAZ La Paz 97.92 114 P Pdif 06 52 39.5 +2.0
comp=Z,1.0nm,0.6s,baz=15,slow=1.7,SNR=8.4
LPAZ LR LR 07 27 57.6
comp=Z,216nm,21.9s,baz=240,slow=30
LPAZ La Paz 97.92 114 P Pdif 06 52 37.7 +0.2
LPAZ pmax pmax
comp=Z,2.0nm,0.9s
LPAZ La Paz 97.92 114 P Pdif 06 52 37.7 +0.2
BILL Bilibino 98.81 354 ⇓*i*P Pdif 06 52 39.8 +0.5
BILL *e**PP pP 06 52 49.6 +0.9
BILL *SP pwP 06 52 57.0 +3.5
BILL pmax pmax
comp=Z,14nm,2.4s
BILL MLR MLR
comp=Z,343nm,19.0s
EGMT Eagleton 98.89 39 P Pdif 06 52 42.4 +2.1
baz=234
LZH Lanzhou 98.90 307 *e*P Pdif 06 52 43.8 +3.1
LZH pP sP 06 52 52.8 -0.6
LZH sP pwP 06 52 57.5 +2.9
LZH pmax pmax
comp=Z,12nm,1.1s
LZH pmax pmax
comp=Z,81nm,5.4s
LZH LR LR
comp=Z,130nm,17.8s
LZH LR LR
comp=Z,140nm,18.1s
LZH LR LR
comp=Z,180nm,19.9s
RSSD Black Hills 99.99 45 P **Pdif 06 52 47.1 +1.7**
baz=238
YKA Yellowknife Ar 105.28 25 Pdiff **Pdif 06 53 07.7 -0.5**
comp=Z,0.0nm,0.3s,baz=258,slow=3.1,SNR=2.0
YKA PKKPbc **PKKPbc 07 08 45.7 -4.2**
comp=Z,1.0nm,0.8s,baz=48,slow=3.0,SNR=11
WMQ Urumqi 113.40 308 *e*PKP **PKiKP 06 57 38.3 +0.3**
WMQ LR LR
comp=Z,510nm,29.2s
WMQ LR LR
comp=Z,1μm,28.8s
WMQ LR LR
comp=Z,190nm,22.9s
BOSA Boshof 117.42 203 PKP **PKPdf 06 57 46.1 -0.3**
comp=Z,2.0nm,0.6s,baz=137,slow=2.8,SNR=5.3
MK31 Makanchi Array 117.94 310 PKiKP **PKPdf 06 57 45.4 -1.2**
MK31 Makanchi Array 117.94 310 **PKPdf 06 57 45.4 -1.2**
MKAR Makanchi Array 117.94 310 PKP **PKPdf 06 57 45.5 -1.1**
comp=Z,4.1nm,0.6s,baz=180,slow=1.0,SNR=31
MKAR PKKPbc **PKKPab 07 08 08.1 -0.2**
comp=Z,0.4nm,0.5s,baz=268,slow=4.1,SNR=5.0
MAKZ Makanchi 118.15 310 PKiKP **PKPdf 06 57 45.8 -1.2**
MAKZ Makanchi 118.15 310 **PKPdf 06 57 45.8 -1.2**
ZAA0 Zalesovo Array 118.17 318 **PKPdf 06 57 45.8 -0.9**
ZALV Zalesovo Beam 118.17 318 PKP **PKPdf 06 57 45.1 -1.6**
comp=Z,3.7nm,0.7s,baz=157,slow=0.8,SNR=11
PRZ Przheval'sk 119.47 304 PKiKP **PKiKP 06 57 50.5 +0.5**
PRZ Przheval'sk 119.47 304 **PKiKP 06 57 50.5 +0.5**
TARG Taragay, Kyrgy 119.69 303 **PKPdf 06 57 50.2 -0.4**
ULHL Ulahol 120.95 304 P **PKPdf 06 57 52.6 -0.1**
SNR=6.3
KURK Kurchatov 121.20 314*c* iPKiKP **PKPdf 06 57 51.9 -0.7**
KURK pmax pmax
comp=Z,21nm,0.8s
KURK Kurchatov 121.20 314 **PKPdf 06 57 51.7 -0.9**
BOOM Boomskoye usch 121.23 304 PKiKP **PKPdf 06 57 52.2 -1.0**
BOOM Boomskoye usch 121.23 304 **PKPdf 06 57 52.2 -1.0**
KURBB Kurchatov Arra 121.24 314 PKP **PKPdf 06 57 51.7 -1.0**
comp=Z,13nm,0.6s,baz=110,slow=1.8,SNR=106
TKM2 Tokmak 2 121.58 304 P **PKPdf 06 57 53.3 -0.6**
SNR=7.7
KZA Kyzart 121.63 303 P **PKPdf 06 57 54.4 0.0**
SNR=6.1
UCH Uchtor 122.19 303 P **PKPdf 06 57 55.1 -0.4**
SNR=12
CHMS Chumysh 122.20 304 P **PKPdf 06 57 54.2 -0.7**
SNR=10
AAK Ala-Archa 122.30 304 PKP **PKPdf 06 57 55.0 -0.3**
comp=Z,7.2nm,0.4s,baz=124,slow=4.2,SNR=4.4
AAK Ala-Archa 122.30 304*c* iPKiKP **PKiKP 06 57 55.7 +0.2**
AAK pmax pmax
comp=Z,6.0nm,0.8s
AAK Ala-Archa 122.30 304 **PKPdf 06 57 54.6 -0.6**
E61A Lac Etchemin 122.67 52 P **PKiKP 06 57 56.4 +0.5**
baz=259
AML Almayashu 122.76 303 P **PKPdf 06 57 56.4 -0.1**
SNR=14
TULEG Thule 123.65 15 **PKPdf 06 57 56.4 -0.2**
E63A Oxbow 124.08 52 P **PKiKP 06 57 59.5 +0.9**
baz=260
KBL Kabul 124.44 293 PKiKP **PKPdf 06 57 59.0 -0.7**
KBL Kabul 124.44 293 **PKPdf 06 57 59.0 -0.7**
G65A Princeton 124.46 54 P **PKiKP 06 57 59.9 +0.5**
baz=260
E64A Bridgewater 124.48 52 P **PKiKP 06 57 59.6 +0.2**
baz=261
GAR Garm 124.56 299 **PKPdf 06 57 59.3 -0.4**
H66A Whiting 124.56 54 P **PKiKP 06 57 59.9 +0.3**
baz=260
KK31 Karatay Array 125.26 304 PKiKP **PKPdf 06 57 59.9 -0.8**
KK31 Karatay Array 125.26 304 **PKPdf 06 57 59.9 -0.8**
CHGR Chuyangaron 125.36 298 **PKPdf 06 58 00.8 -0.4**
SCHQ Schefferville 126.02 42 PKP **PKPdf 06 58 01.1 -0.7**
comp=Z,4.7nm,0.8s,baz=241,slow=9.1,SNR=6.0
SCHQ Schefferville 126.02 42 **PKPdf 06 58 01.6 -0.2**
LMN Caledonia Moun 126.47 53 **PKPdf 06 58 03.1 +0.2**
BVAR Borovoye Array 126.55 316 PKP **PKPdf 06 58 02.3 -0.6**
comp=Z,15nm,0.6s,baz=97,slow=1.4,SNR=60
BRVK Borovoye 126.61 316*c* iPKiKP **PKPdf 06 58 03.4 +0.4**
BRVK pmax pmax
comp=Z,20nm,1.0s
DAG Danmarks Havn 132.46 6⇑*i*PKiKP **PKPdf 06 58 12.1 -1.3**
DAG pmax pmax
comp=Z,2.0nm,0.6s
DAG Danmarks Havn 132.46 6⇑*i*P **PKPdf 06 58 12.1 -1.3**
comp=Z,2.2nm,0.6s
SUMG Summit 132.58 15 *i* PKiKP **PKiKP 06 58 15.6 +0.2**
SUMG pmax pmax
comp=Z,13nm,0.8s
SUMG Summit 132.58 15 **PKPdf 06 58 15.0 +0.8**
SUMG Summit 132.58 15 *i* P **PKiKP 06 58 15.6 +0.2**
comp=Z,13nm,0.8s
ARU Arti 133.22 321 PKP **PKPdf 06 58 15.4 +0.1**
comp=Z,5.8nm,0.6s,baz=196,slow=1.0,SNR=22
ARU Arti 133.22 321 *i* PKiKP **PKPdf 06 58 16.1 +0.7**
ARU 07 00 37.8
ARU MLR MLR
comp=Z,328nm,19.0s
ARU Arti 133.22 321 **PKPdf 06 58 15.3 -0.1**
GEYT Alibeck 133.78 295 PKP **PKPdf 06 58 17.5 +0.4**
comp=Z,5.4nm,0.7s,baz=199,slow=2.7,SNR=7.7
AKTO Aktyubinsk 134.26 312 PKP **PKPdf 06 58 17.5 0.0**
comp=Z,8.1nm,0.7s,baz=57,slow=6.6,SNR=16
KMBO Kilima Mbogo 134.32 233 PKP **PKiKP 06 58 20.8 +0.2**
comp=Z,1.7nm,0.5s,baz=44,slow=3.9,SNR=5.1
KMBO Kilima Mbogo 134.32 233 PKiKP **PKPdf 06 58 18.3 -0.9**
KMBO Kilima Mbogo 134.32 233 **PKPdf 06 58 18.3 -0.9**
KIRV Kirov 137.42 325 PKP **PKPdf 06 58 23.8 +0.6**
comp=Z,13nm,0.5s,baz=263,slow=2.6,SNR=7.2
ARCES ARCESS Array B 138.59 348 PKhKP PKPpre 06 58 16.1
comp=Z,4.1nm,0.7s,baz=29,slow=2.8,SNR=41
ARCES PKP **PKPdf 06 58 26.1 +1.1**
comp=Z,4.0nm,0.6s,baz=52,slow=1.5,SNR=8.3
H10N3 ASCENSION HYDR 138.75 154 T T 09 35 15.6
baz=203,slow=75,SNR=25
H10N1 ASCENSION HYDR 138.75 154 T T 09 35 18.0
baz=203,slow=75,SNR=23
H10N2 ASCENSION HYDR 138.76 154 T T 09 35 18.4
baz=203,slow=75,SNR=27
KLMR Klimovskoe 140.84 332 *e*PKiKP **PKPdf 06 58 28.3 -1.0**
KLMR pmax pmax
comp=Z,13nm,0.7s
KLMR Klimovskoe 140.84 332 *e*PKPdf **PKPdf 06 58 28.3 -1.0**
KLMR AMP 06 58 30.3
comp=Z,13nm,0.7s
RAYN Ar Rayn 141.07 271 PKiKP **PKPdf 06 58 29.2 -1.8**
RAYN Ar Rayn 141.07 271 **PKPdf 06 58 29.2 -1.8**
STEI Steigen 141.61 352 *e*PKPdf **PKPdf 06 58 28.0 -2.5**
KONS Konsvik 142.33 353 *e*PKPdf PKPbc 06 58 30.7 +0.2
VRH Novokhopyorsk 144.18 317 *e*PKiKP PKPbc 06 58 34.2 +0.4
VRH pmax pmax
comp=Z,10.0nm,0.6s
MOS Moscow 144.44 326 *e*PKHKP PKPpre 06 58 32.1
MOS pmax pmax
comp=Z,57nm,1.1s
ZEI Tsey 144.70 302 *i* PKiKP **PKPab 06 58 35.9 0.0**
ZEI pmax pmax
comp=Z,14nm,0.6s
PUL Pulkovo 145.06 335*c i*PKiKP **PKPab 06 58 36.8 +0.5**
PUL pmax pmax
comp=Z,253nm,0.4s
AKH Akhalkalaki 145.14 300 ⇑P **PKPdf 06 58 38.1 +0.3**
AKH Akhalkalaki 145.14 300 PKiKP **PKPbc 06 58 37.5 +0.1**
AKH Akhalkalaki 145.14 300 **PKPbc 06 58 37.5 +0.1**
FIA1 FINESS Array S 145.18 340 **PKPbc 06 58 36.1 -0.5**
FINES FINESS Array B 145.18 340 PKP **PKPbc 06 58 35.5 -1.1**
comp=Z,115nm,0.5s,baz=61,slow=3.4,SNR=747
LPSR Galich'ya Gora 145.24 320 *e*PKiKP **PKPbc 06 58 36.2 -0.9**
LPSR pmax pmax
comp=Z,40nm,0.8s
NSS Namsos 145.26 353 *e*PKPbc **PKPbc 06 58 35.8 -1.0**
OBN Obninsk 145.28 325*c i*PKP2 **PKPbc 06 58 36.0 -1.1**
OBN PPS PPS 07 14 28.0
OBN pmax pmax
comp=Z,163nm,1.2s
OBN pmax pmax
comp=Z,73nm,2.2s
OBN Obninsk 145.28 325 **PKPbc 06 58 36.6 -0.5**
KBZ Khabaz 145.30 304 PKPbc **PKPbc 06 58 37.5 -0.1**
comp=Z,9.0nm,0.8s,baz=73,slow=2.6,SNR=16
KIV Kislovodsk 145.41 304 ⇓P **PKPab 06 58 39.1 +0.8**
KIV Kislovodsk 145.41 304*c i*PKP2 **PKPdf 06 58 36.8 -1.3**
KIV 07 01 53.0
KIV pmax pmax
comp=Z,24nm,1.1s
KIV pmax pmax
comp=Z,10.0nm,0.7s
KIV Kislovodsk 145.41 304 **PKPdf 06 58 37.9 -0.2**
NEY Neytrino 145.50 303 *i* PKiKP **PKPdf 06 58 38.6 +0.2**
BATM Batumi 146.47 301 ⇑P **PKiKP 06 58 44.1 -0.1**
BATM Batumi 146.47 301 ⇑PKP2 **PKiKP 06 58 44.1 -0.1**
BCA Borcka 146.54 300 ⇓P **PKPab 06 58 42.8 +0.2**
TBLU Trondheim 146.68 353 *e*PKPdf **PKPdf 06 58 39.6 +0.1**
VSU Vasula 147.28 336 *e*P **PKPbc 06 58 42.4 -0.6**
MOL Molde 147.58 355 *e*PKPbc **PKPbc 06 58 43.6 -0.1**
SOC Sochi 147.60 305 *i* PKiKP **PKPdf 06 58 40.9 -0.8**
SOC pmax pmax
comp=Z,17nm,0.9s
SOC MLR MLR
comp=Z,218nm,21.0s
DOMB Dombas 147.99 354 *e*PKPbc **PKPbc 06 58 44.5 -0.4**
AKN Aaknes 148.01 356 *e*PKPdf **PKPbc 06 58 44.2 -0.7**
NC303 NORSAR Array S 148.53 352 **PKPbc 06 58 46.0 -0.3**
NC303 PKPab **PKPab 06 58 50.8 +1.0**
NC204 NORSAR Array S 148.56 352 **PKPbc 06 58 46.4 0.0**
NC204 PKPab **PKPab 06 58 51.0 +1.0**
NC405 NORSAR Array S 148.60 351 **PKPbc 06 58 47.0 +0.6**
NC405 PKPab **PKPab 06 58 50.5 +0.4**
FOO Floro 148.69 357 *e*PKPbc **PKPbc 06 58 46.3 -0.3**
NB201 NORSAR Array S 148.72 352 **PKPbc 06 58 47.0 +0.2**
NB201 PKPab **PKPab 06 58 51.4 +0.8**
NB2 NORSAR Subarra1 148.73 352 PKP **PKPbc 06 58 46.1 -0.8**
comp=Z,73nm,1.1s,baz=12,slow=2.7
NB2 NORSAR Subarra1 148.73 352 PKPab **PKPbc 06 58 46.1 -0.8**
baz=12,slow=2.7
NOA NORSAR Array B 148.73 352 PKPbc **PKPbc 06 58 46.0 -0.8**
comp=Z,16nm,0.8s,baz=15,slow=4.3,SNR=53
NBO00 NORSAR Array S 148.80 352 **PKPdf 06 58 42.7 -0.4**
NBO00 PKPbc **PKPbc 06 58 47.6 +0.6**
ANN Anapa 148.91 308 *i* PKP2 **PKPbc 06 58 47.1 -0.6**
ANN pmax pmax
comp=Z,76nm,1.0s
NAO01 NORSAR Array S 148.96 352 **PKPbc 06 58 48.2 +0.8**
NAO01 PKPab **PKPab 06 58 52.3 +0.8**
NC602 NORSAR Array S 148.99 351 **PKPbc 06 58 47.0 -0.5**
NC602 PKPab **PKPab 06 58 52.3 +0.7**
NC602 NORSAR Array S 148.99 351 *e*PKPbc **PKPbc 06 58 46.6 -0.9**
HYA Hoyanger 149.06 356 *e*PKPbc **PKPbc 06 58 47.8 +0.2**
SUE Sulen 149.24 358 *e*PKPbc **PKPbc 06 58 47.4 -0.6**
HFS Hagfors 149.24 349 PKPbc **PKPbc 06 58 47.2 -0.9**
comp=Z,22nm,0.5s,baz=45,slow=0.6,SNR=34
SKAR Skarslia 149.40 354 *e*PKPbc **PKPbc 06 58 48.4 -0.2**
ISAL Salakas 149.64 333 *e*P **PKPbc 06 58 49.2 0.0**
MICGM Minsk 149.67 330 *e*P **PKPbc 06 58 49.0 -0.3**
MNK Minsk 149.67 330 *e*PKP2 **PKPbc 06 58 49.0 -0.3**
IIGN Ignalina 149.76 333 *e*P **PKPbc 06 58 49.5 0.0**
ASK Askoy 149.79 357 *e*PKPbc **PKPbc 06 58 49.3 -0.1**
BER Bergen 149.89 357 *e*PKPbc **PKPbc 06 58 49.3 -0.4**
LRW Lerwick 150.11 4 *e*P **PKPbc 06 58 49.9 -0.3**
KONO Kongsberg 150.28 353 PKiKP **PKPbc 06 58 50.7 +0.1**
KONO Kongsberg 150.28 353 **PKPbc 06 58 50.7 +0.1**
KONO Kongsberg 150.28 353 *e*PKPbc **PKPbc 06 58 50.2 -0.4**
ODD1 Odda 150.29 356 *e*PKPbc **PKiKP 06 58 52.3 +0.7**
GAZ Gaziantep 150.31 293 PKPdf **PKPdf 06 58 47.0 +0.6**
GAZ PKPbc **PKPbc 06 58 52.0 +0.5**
ASF Jabal al Asfar 150.45 283 PKPbc **PKPbc 06 58 52.4 +0.3**
comp=Z,9.6nm,0.8s,baz=91,slow=0.8,SNR=17
PABE Paberze 150.51 335 *e*P **PKPbc 06 58 51.2 -0.1**
BLS5 Blasjo 150.78 356 *e*PKPbc **PKPbc 06 58 52.1 +0.2**
PBUR Paburge 150.82 337 *e*P **PKPbc 06 58 51.7 -0.3**
SIM Simferopol' 151.12 309 *e*PKiKP **PKPbc 06 58 52.8 -0.3**
SIM pmax pmax
comp=Z,40nm,0.8s
AKASG Malin Array Be 151.41 323 PKPbc **PKPbc 06 58 52.6 -0.9**
comp=Z,50nm,0.7s,baz=48,slow=2.9,SNR=9.4
LEWI Lewis, Hebride 151.49 10 *e*P **PKPbc 06 58 53.3 -0.3**
BIGH Upper Bighouse 151.53 7 *e*P **PKPbc 06 58 53.5 -0.1**
HOMB Homborsund 151.75 353 *e*PKPbc **PKPbc 06 58 53.9 -0.2**
MMAI Mount Meron Ar 151.77 284 PKPbc **PKiKP 06 58 55.8 +0.2**
comp=Z,20nm,0.6s,baz=77,slow=5.2,SNR=22
EIL Elat 151.77 277 PKP **PKPdf 06 58 48.9 +0.2**
comp=Z,3.5nm,0.7s,baz=252,slow=2.7,SNR=5.3
EIL PKPbc **PKiKP 06 58 55.8 +0.3**
comp=Z,20nm,0.6s,baz=152,slow=0.7,SNR=14
SNART Snartemo 151.81 355 *e*PKPbc **PKPbc 06 58 53.7 -0.6**
SUW Suwalki 151.94 333 PKiKP **PKiKP 06 58 55.4 +0.4**
SUW Suwalki 151.94 333 **PKiKP 06 58 55.4 +0.4**
KAC Achnashellach 152.34 9 *e*P **PKPbc 06 58 55.6 +0.1**
KPL Plockton 152.45 9 *e*P **PKPbc 06 58 55.2 -0.5**
ILGA Ilgaz 152.48 301 PKPdf **PKPdf 06 58 47.5 -2.2**
ILGA **PKPbc 06 58 55.9 +0.2**
MCD Coleburn Disti 152.49 6 *e*P **PKPbc 06 58 55.3 -0.5**
MDO Dochfour 152.51 8 *e*P **PKPbc 06 58 55.7 -0.2**
BR131 Keskin Array S 152.81 299 PKiKP **PKPbc 06 58 56.7 -0.6**
BR131 Keskin Array S 152.81 299 PKPdf **PKPdf 06 58 49.1 -1.0**
BR131 **PKPbc 06 58 56.6 -0.6**
BRTR Keskin Array B 152.81 299 PKP **PKPdf 06 58 50.6 +0.4**
comp=Z,1.1nm,0.8s,baz=104,slow=4.0,SNR=4.7
BRTR PKPbc **PKPbc 06 58 56.8 -0.6**
comp=Z,6.5nm,0.5s,baz=145,slow=5.6,SNR=25
ANTO Ankara 153.42 299 ⇓P **PKPbc 06 58 58.5 -0.1**
ANTO Ankara 153.42 299 ⇓PKiKP **PKPbc 06 58 58.5 -0.1**
ANTO Ankara 153.42 299 PKPdf **PKPdf 06 58 50.3 -0.7**
ANTO **PKPbc 06 58 58.4 -0.1**
LAWE Loch Awe, Argy 153.53 10 *e*P **PKPbc 06 58 57.8 -0.3**
CSS Mathiatis 153.53 288 **PKPbc 06 58 58.8 -0.1**
ESY Stoneypath 154.20 6 *e*P **PKPbc 06 58 59.5 -0.1**
MDUB Mudurnu 154.48 301 PKPdf **PKPdf 06 58 51.6 -0.8**
MDUB **PKPbc 06 59 00.4 -0.4**
LVV L'vov 154.57 326 *e*PKiKP **PKPbc 06 59 00.8 +0.2**
EKA Eskdalemuir Ar 154.72 7 PKPbc **PKPbc 06 59 00.4 -0.3**
comp=Z,1.3nm,0.6s,baz=20,slow=2.3,SNR=3.7
EKA PKPab **PKPab 06 59 15.9 +0.2**
comp=Z,4.8nm,0.7s,baz=329,slow=2.9,SNR=6.3
CFR Carcaliu 154.92 313 ⇓P **PKPbc 06 59 01.4 -0.1**
CFR Carcaliu 154.92 313 ⇓PKiKP **PKPbc 06 59 01.4 -0.1**
LIC Lamto 155.03 162 *e*PKP1 **PKPab 06 59 20.1 +2.0**
comp=Z,18nm,0.7s
KIC Kosan Boka 155.24 163 *e*PKP1 **PKPab 06 59 20.8 +1.8**
comp=Z,53nm,1.1s
BIZ Bicaz 155.24 319 ⇑P PKPdf 06 59 02.7 +10
HARR Harsova 155.27 312 ⇑P PKPdf 06 59 02.5 +9.3
HARR Harsova 155.27 312 ⇑PKiKP PKPdf 06 59 02.5 +9.3
BUR08 Bucovina Ar. S 155.34 321 PKPdf **PKPdf 06 58 53.3 -0.2**
BUR08 **pPKPdf 06 59 03.7 +0.6**
BURAR Bucovina Array 155.35 321 ⇑P PKPdf 06 59 03.7 +10
BURAR Bucovina Array 155.35 321 ⇑PKiKP PKPdf 06 59 03.7 +10
TIC Toumodi 155.44 162 *e*PKP1 **PKPab 06 59 20.6 +0.7**
VRI Vrincioaia 155.45 316 ⇑P PKPdf 06 59 02.9 +9.4
VRI Vrincioaia 155.45 316 ⇑PKiKP PKPdf 06 59 02.9 +9.4
DBIC Dimbokro 155.51 163 PKP **PKPdf 06 58 52.8 -1.7**
comp=Z,5.7nm,0.9s,baz=116,slow=4.4,SNR=4.0
DBIC PKPab **PKPab 06 59 21.9 +1.8**
comp=Z,6.1nm,0.9s,baz=190,slow=5.9,SNR=3.4
BSEG Bad Segeberg 155.72 348 *e*PKPab **PKPab 06 59 19.7 -0.3**
baz=20,slow=4.4
BSEG Bad Segeberg 155.72 348 *e*PKPab **PKPab 06 59 19.7 -0.3**
baz=20,slow=4.4
MLR Muntele Rosu 156.11 316 ⇑P PKPdf 06 59 04.6 +10
MLR Muntele Rosu 156.11 316 ⇑PKiKP PKPdf 06 59 04.6 +10
ARR Arges 156.96 317 ⇑P **PKPdf 06 58 55.7 +0.1**
RETH Rethem/Aller, 157.03 349 *e*PKPab **PKPab 06 59 25.2 -0.5**
baz=20,slow=4.4
RETH Rethem/Aller, 157.03 349 *e*PKPab **PKPab 06 59 25.2 -0.5**
baz=20,slow=4.4
NRDL Niedersach Rie 157.13 348 *e*PKPab **PKPab 06 59 25.4 -0.6**
baz=20,slow=4.4
NRDL Niedersach Rie 157.13 348 *e*PKPab **PKPab 06 59 25.4 -0.6**
baz=20,slow=4.4
DRGR 157.21 322 ⇑P PKPab 06 59 18.6 -8.2
DRGR 157.21 322 ⇑PKP2 PKPab 06 59 18.6 -8.2
OSTC Ostas 157.28 337 *e*PKPAB **PKPab 06 59 26.9 0.0**
CHVC Chvalec 157.30 337 *e*PKPAB **PKPab 06 59 27.0 0.0**
DPC Dobruska-Polom 157.41 336 *e*PKP2 **PKPab 06 59 27.4 -0.1**
DPC Dobruska-Polom 157.41 336 *e*PKPAB **PKPab 06 59 27.4 -0.1**
MORC Moravsky Berou 157.44 334 *e*PKP **PKPdf 06 58 55.5 -0.5**
MORC *e* 06 59 31.1
CLL Collm 157.59 342 *e*PKPdf **PKPdf 06 58 57.0 +1.0**
CLL *e*PKPdiff **sPKPdf 06 59 09.0 0.0**
CLL *i* PKPab **PKPab 06 59 27.6 -0.5**
comp=Z,25nm,1.0s
CLL *e*PP **PP 07 03 04.0 -3.0**
CLL *e*PPP PPP 07 06 44.0
CLL *e* 07 09 30.0
CLL *e*PPPrev 07 11 57.0
CLL *e*PSKS 07 13 34.0
CLL *e*PPS PPS 07 16 24.0
CLL *e*SS SS 07 23 00.0 -0.8
CLL *e*SSS SSS 07 29 18.0
CLL *e*SSSS 07 33 06.0
CLL Collm 157.59 342 *e*PKIKP **PKPdf 06 58 57.0 +1.0**
CLL *e* 06 59 09.0
CLL pmax pmax
comp=Z,25nm,1.0s
CLL Collm 157.59 342 PKPdf **PKPdf 06 58 57.1 +1.0**
CLL **PKPab 06 59 29.4 +1.3**
IBBN Ibbenburen 157.69 351 *e*PKPab **PKPab 06 59 28.3 -0.2**
baz=20,slow=4.4
IBBN Ibbenburen 157.69 351 *e*PKPab **PKPab 06 59 28.3 -0.2**
baz=20,slow=4.4
BRG Berggiesshubel 157.72 340 *e*PKP **PKPdf 06 58 56.3 0.0**
comp=Z,9.7nm,1.4s
BRG Berggiesshubel 157.72 340 *i* PKP **PKPab 06 59 28.4 -0.4**
comp=Z,18nm,0.8s
BRG PP **PP 07 03 04.0 -3.7**
BRG Berggiesshubel 157.72 340 *e*PKPab **PKPab 06 59 28.2 -0.6**
baz=20,slow=4.4
BRG Berggiesshubel 157.72 340 *e*PKPab **PKPab 06 59 28.2 -0.6**
baz=20,slow=4.4
BRG Berggiesshubel 157.72 340 *e*PKIKP **PKPdf 06 58 56.3 0.0**
BRG 07 03 04.0
BRG pmax pmax
comp=Z,10.0nm,1.4s
BRG pmax pmax
comp=Z,18nm,0.8s
PVCC Panska Ves 157.84 339 *e*PKP2 **PKPab 06 59 29.7 +0.5**
PVCC Panska Ves 157.84 339 *e*PKPAB **PKPab 06 59 29.7 +0.5**
FBE Freiberg 157.85 341 *e*PKPab **PKPab 06 59 29.2 -0.1**
baz=20,slow=4.4
FBE Freiberg 157.85 341 *e*PKPab **PKPab 06 59 29.2 -0.1**
baz=20,slow=4.4
PSZ Piszkesteto 157.86 327 PKIKP **PKPdf 06 58 55.2 -1.4**
PSZ Piszkesteto 157.86 327 PKPdf **PKPdf 06 58 55.2 -1.4**
PSZ **PKPab 06 59 29.6 0.0**
NEUB Neuenburg 157.99 344 *e*PKPab **PKPab 06 59 29.4 -0.4**
baz=20,slow=4.4
NEUB Neuenburg 157.99 344 *e*PKPab **PKPab 06 59 29.4 -0.4**
baz=20,slow=4.4
GTTG Gottingen 158.07 347 *e*PKPab **PKPab 06 59 29.8 -0.3**
baz=20,slow=4.4
GTTG Gottingen 158.07 347 *e*PKPab **PKPab 06 59 29.8 -0.3**
baz=20,slow=4.4
JAVC Velka Javorina 158.12 332 *e*PKP **PKPdf 06 58 56.8 -0.1**
JAVC *e* 06 59 31.9
VRAC Vranov 158.18 334 *e* **PKPab 06 59 31.3 +0.5**
PRU Pruhonice 158.32 338 *e*PKP2 **PKPab 06 59 31.9 +0.6**
PRU Pruhonice 158.32 338 *e*PKPAB **PKPab 06 59 31.9 +0.6**
KRUC Moravsky 158.46 334 *e*PKP **PKPdf 06 58 56.8 -0.4**
KRUC *e* 06 59 31.8
TANN Tannenbergstha 158.55 342 *e*PKPab **PKPab 06 59 32.1 -0.3**
baz=20,slow=4.4
TANN Tannenbergstha 158.55 342 *e*PKPab **PKPab 06 59 32.1 -0.3**
baz=20,slow=4.4
MOX Moxa 158.55 344 *e*PKPab **PKPab 06 59 31.7 -0.6**
baz=20,slow=4.4
MOX Moxa 158.55 344 *e*PKPab **PKPab 06 59 31.7 -0.6**
baz=20,slow=4.4
MOX *e*L L 08 24 11.9
comp=Z,235nm,19.7s
PLN Plauen 158.56 343 *e*PKPab **PKPab 06 59 32.0 -0.4**
baz=20,slow=4.4
PLN Plauen 158.56 343 *e*PKPab **PKPab 06 59 32.0 -0.4**
baz=20,slow=4.4
GUNZ Gunzen 158.63 342 *e*PKPab **PKPab 06 59 32.6 -0.2**
baz=20,slow=4.4
GUNZ Gunzen 158.63 342 *e*PKPab **PKPab 06 59 32.6 -0.2**
baz=20,slow=4.4
WERN Wernitzgruen 158.69 342 *e*PKPab **PKPab 06 59 33.0 0.0**
baz=20,slow=4.4
WERN Wernitzgruen 158.69 342 *e*PKPab **PKPab 06 59 33.0 0.0**
baz=20,slow=4.4
NKC Novy Kostel 158.72 342 *e*PKP2 **PKPab 06 59 32.9 -0.2**
NKC Novy Kostel 158.72 342 *e*PKPAB **PKPab 06 59 32.9 -0.2**
UBBA Unterbreizbach 158.75 346 *e*PKPab **PKPab 06 59 32.3 -0.7**
baz=20,slow=4.4
UBBA Unterbreizbach 158.75 346 *e*PKPab **PKPab 06 59 32.3 -0.7**
baz=20,slow=4.4
ROTZ Rotzenmuhle 159.21 342 *e*PKPab **PKPab 06 59 35.1 -0.1**
baz=20,slow=4.4
ROTZ Rotzenmuhle 159.21 342 *e*PKPab **PKPab 06 59 35.1 -0.1**
baz=20,slow=4.4
VTS Vitosha 159.25 312 PKP2 **PKPab 06 59 35.2 -0.7**
VTS Vitosha 159.25 312 **PKPab 06 59 35.2 -0.7**
KHC Kasperske Hory 159.37 339 *e*PKP2 **PKPab 06 59 35.6 -0.4**
KHC Kasperske Hory 159.37 339 *e*PKPAB **PKPab 06 59 35.6 -0.4**
KHC *ep*PKP **sPKPab 06 59 50.0 +1.3**
KHC Kasperske Hory 159.37 339 PKPdf **PKPdf 06 58 58.9 +0.6**
KHC **PKPab 06 59 36.8 +0.8**
BEBN Eben Emael 159.41 354 PKPab **PKPab 06 59 35.5 -0.5**
GRA1 Grafenberg Arr 159.53 343 PKPdf **PKPdf 06 58 59.0 +0.5**
GRA1 **PKPab 06 59 37.2 +0.6**
GRF Grafenberg Arr 159.53 343 *e*PKPab **PKPab 06 59 36.6 0.0**
baz=20,slow=4.4
GRF Grafenberg Arr 159.53 343 *e*PKPab **PKPab 06 59 36.6 0.0**
baz=20,slow=4.4
GRF *e*L L 08 22 45.1
comp=Z,216nm,20.6s
GRF Grafenberg Arr 159.53 343 PKP2 **PKPab 06 59 37.3 +0.6**
MEM Membach 159.57 353 PKPab **PKPab 06 59 36.1 -0.5**
WET Wettzell 159.58 340 *e*PKPab **PKPab 06 59 36.7 -0.2**
baz=20,slow=4.4
WET Wettzell 159.58 340 *e*PKPab **PKPab 06 59 36.7 -0.2**
baz=20,slow=4.4
GEC2 GERESS Array S 159.58 338 *e*PKPab **PKPab 06 59 36.4 -0.6**
baz=20,slow=4.4
GEC2 GERESS Array S 159.58 338 *e*PKPab **PKPab 06 59 36.4 -0.6**
baz=20,slow=4.4
GEC2 GERESS Array S 159.58 338 PKPdf **PKPdf 06 58 57.7 -1.0**
GEC2 **PKPab 06 59 37.4 +0.4**
GERES GERESS Array B 159.58 338 PKP **PKPdf 06 58 56.0 -2.7**
comp=Z,1.0nm,0.8s,baz=112,slow=1.4,SNR=7.4
GERES PKPab **PKPab 06 59 35.7 -1.3**
comp=Z,1.7nm,0.6s,baz=46,slow=3.9,SNR=5.0
CONA Conrad Observa 159.59 333 *i* PKPab **PKPab 06 59 37.7 +0.7**
comp=Z,12nm,1.6s
CONA *i* sPKPab **sPKPab 06 59 54.5 +4.7**
comp=Z,9.4nm,1.5s
TNS Taunus Mts 159.61 349 *e*PKPab **PKPab 06 59 36.5 -0.5**
baz=20,slow=4.4
TNS Taunus Mts 159.61 349 *e*PKPab **PKPab 06 59 36.5 -0.5**
baz=20,slow=4.4
BSTI Sart Tilman 159.63 354 PKPab **PKPab 06 59 36.6 -0.4**
SNF Seneffe 159.80 356 PKPab **PKPab 06 59 36.8 -0.9**
BHOU Houvegnez 159.82 353 PKPab **PKPab 06 59 37.5 -0.4**
BCLA Clavier 159.82 354 PKPab **PKPab 06 59 37.1 -0.7**
BGES Gesves 159.87 355 PKPab **PKPab 06 59 37.4 -0.7**
DOU Dourbes 160.19 356 PKPab **PKPab 06 59 39.1 -0.3**
MOA Molln 160.25 336 *i* PKPab **PKPab 06 59 40.6 +0.7**
comp=Z,9.3nm,1.3s
MOA *i* sPKPab **sPKPab 06 56.9 +4.3**
comp=Z,10nm,1.4s
ARSA Arzberg 160.27 333 *i* PKPab **PKPab 06 59 38.2 -1.8**
comp=Z,3.5nm,0.8s
DIVS Divibare 160.39 319 **PKPdf 06 58 58.6 -1.2**

IDI	Anoyia	160.40	291	PKP		PKPdf	06 58 58.2	-1.8	
	comp=Z,12nm,1.2s,baz=144,slow=8.8,SNR=3.5								
IDI	Anoyia	160.40	291			PKPdf	06 58 59.5	-0.5	
WLF	Walferdange	160.48	353	PKPab		PKPab	06 59 39.9	-0.8	
WLF	Walferdange	160.48	353	PKP2		PKPab	06 59 40.5	-0.2	
WLF	Walferdange	160.48	353			PKPab	06 59 40.5	-0.2	
RJOB	Jochberg	160.85	338	*e*PKPab		PKPab	06 59 42.7	+0.2	
	baz=20,slow=4.4								
RJOB	Jochberg	160.85	338	*e*PKPab		PKPab	06 59 42.7	+0.2	
	baz=20,slow=4.4								
FUR	Furstenfeldbru	160.92	341	*e*PKPab		PKPab	06 59 42.7	0.0	
	baz=20,slow=4.4								
FUR	Furstenfeldbru	160.92	341	*e*PKPab		PKPab	06 59 42.7	0.0	
	baz=20,slow=4.4								
SOKA	Soboth	160.93	332	*i* PKPab		PKPab	06 59 42.9	0.0	
	comp=Z,9.0nm,1.1s								
KBA	Koelnbreinsper	161.23	336	*i* PKPab		PKPab	06 59 45.0	+0.7	
	comp=Z,6.1nm,0.7s								
OBKA	Obir	161.26	333	*i* PKPab		PKPab	06 59 43.9	-0.5	
	comp=Z,9.5nm,1.6s								
FNA	Florina	161.35	309	PKIKP		PKPdf	06 59 00.3	-0.5	
FNA	Florina	161.35	309			PKPdf	06 59 00.3	-0.5	
BFO	Black Forest	161.45	347	*e*PKPab		PKPab	06 59 44.4	-0.7	
	baz=20,slow=4.4								
BFO	Black Forest	161.45	347	*e*PKPab		PKPab	06 59 44.4	-0.7	
	baz=20,slow=4.4								
BFO	Black Forest	161.45	347	PKP2		PKPab	06 59 44.9	-0.2	
BFO	Black Forest	161.45	347			PKPab	06 59 44.9	-0.2	
MYKA	Terra Mystica	161.51	335	*i* PKPab		PKPab	06 59 43.4	-2.0	
	comp=Z,7.5nm,0.9s								
MYKA				*i* sPKPab		sPKPab	07 00 00.5	+2.4	
	comp=Z,8.2nm,1.1s								
WATA	Walderalm	161.58	340	*i* PKPab		PKPab	06 59 46.2	+0.4	
	comp=Z,21nm,1.2s,SNR=6.0								
WTTA	Wattenberg	161.63	339	*i* PKPab		PKPab	06 59 45.9	-0.2	
	comp=Z,18nm,0.8s,SNR=5.4								
RETA	Reutte	161.68	342	*i* PKPab		PKPab	06 59 46.1	0.0	
	comp=Z,24nm,1.2s,SNR=10								
MOTA	Moosalm	161.71	341	*i* PKPab		PKPab	06 59 47.0	+0.6	
	comp=Z,22nm,0.9s,SNR=8.0								
ECH	Echery	161.77	350	PKP2		PKPab	06 59 46.6	+0.2	
ECH	Echery	161.77	350			PKPab	06 59 46.6	+0.2	
SQTA	Sankt Quirin	161.80	340	*i* PKPab		PKPab	06 59 47.3	+0.6	
	comp=Z,24nm,1.1s								
SQTA				*i* sPKPab		sPKPab	07 00 03.8	+4.3	
	comp=Z,18nm,1.3s								
ABTA	Abfaltersbach	161.81	337	*i* PKPab		PKPab	06 59 46.4	-0.3	
	comp=Z,6.2nm,0.7s								
ABTA				*i* sPKPab		sPKPab	07 00 03.2	+3.8	
	comp=Z,11nm,1.3s								
DAVA	Damuels	162.10	343	*i* PKPab		PKPab	06 59 47.9	-0.2	
	comp=Z,16nm,0.7s,SNR=7.1								
FETA	Feichten	162.12	341	*i* PKPab		PKPab	06 59 48.8	+0.6	
	comp=Z,13nm,1.2s								
CLF	Chambon-Foret	162.34	0			PKPab	06 59 49.4	+0.5	
FUORN	Ofenpass-Fuorn	162.61	341	PKPdf		PKPdf	06 59 02.7	+0.5	
FUORN						PKPab	06 59 50.6	+0.1	
TOA0	Torodi Ar. Sit	162.88	178	PKPdf		PKPdf	06 59 03.4	+0.3	
TOA0						PKPab	06 59 53.0	+1.0	
TORD	Torodi Ar. Bea	162.88	178	PKP		PKPdf	06 59 03.1	0.0	
	comp=Z,1.6nm,0.9s,baz=8.8,slow=0.7,SNR=5.8								
TORD				PKPab		PKPab	06 59 52.2	+0.2	
	comp=Z,6.3nm,0.6s,baz=181,slow=3.3,SNR=18								
TUE	Stuetta	162.99	343	PKPdf		PKPdf	06 59 02.4	-0.1	
TUE						PKPab	06 59 52.6	+0.5	
SENIN	Lac Senin/Sane	163.54	348	PKPdf		PKPdf	06 59 02.8	-0.2	
SENIN						PKPab	06 59 54.5	0.0	
BNI	Bardonecchia	164.92	348			PKPab	06 59 59.9	-0.6	
ESDC	Sonseca Array	169.37	27	PKP		PKPdf	06 59 07.0	-0.6	
	comp=Z,1.9nm,0.9s,baz=357,slow=2.5,SNR=11								
ESDC				PKPab		PKPab	07 00 19.6	-0.6	
	comp=Z,0.8nm,0.7s,baz=317,slow=5.6,SNR=4.3								
MDT	Midelt	173.61	66	PKP		PKPdf	06 59 09.6	-0.3	
	comp=Z,3.2nm,0.9s,baz=157,slow=1.0,SNR=4.6								

*NEIC **29** 06:42:51.3±0.4,30.20S±0.05×177.50W±0.09,h35km±2km, mb4.6/10,Error ellipse: s-maj=14.5km s-min=6.3km az=113.0*
*IDC **29** 06:42:53.0±6.4,30.15S×177.65W,h41km±47km,mb4.2/4, mb1 4.3/4,mb1mx3.8/30,mbtmp4.4/4,Error ellipse: s-maj=64.8km s-min=39.9km az=121.0*

ISC 29 06:42:51.3±1.0,**30.20S**±0.10×**177.5W**±0.1,**h35**km,**n17,** σ0=**76**/19,**mb4.5**/8,**Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	Raoul Island	1.03	337	P		Pn	06 43 09.6	+0.5
	192nm,0.3s,baz=102,slow=22,SNR=1.5							
RAO				S		Sn	06 43 22.2	-0.1
	608nm,0.3s,baz=130,slow=23,SNR=3.8							
RAO	Raoul Island	1.03	337			Pn	06 43 08.9	-0.2
RAO						Sn	06 43 22.0	-0.3
CTA	Charters Tower	34.22	279	P		P	06 49 35.0	+1.2
	5.0nm,0.5s,baz=113,slow=11,SNR=3.8							
CTAO	Charters Tower	34.22	279	P		P	06 49 35.4	+1.6
CTAO				IAmb	IAmb		06 49 36.0	
	comp=Z,11nm,1.0s							
STKA	Stephens Creek	34.97	257	P		P	06 49 40.8	+0.6
	comp=Z,3.5nm,0.8s,baz=126,slow=14,SNR=2.8							
BBOO	Buckleboo	39.47	254	P		P	06 50 18.2	-0.1
COEN	Coen	39.66	285	P		P	06 50 19.2	-0.9
COEN				IAmb	IAmb		06 50 34.1	
	comp=Z,14nm,1.2s							
PTCN	Pitcairn Islan	42.04	95	P		P	06 50 39.8	+0.2
WR0	Warramunga Arr	44.37	272	P		P	06 50 58.3	-0.2
WB2	Warramunga Arr	44.54	272	P		P	06 50 59.7	-0.2
WB2				IAmb	IAmb		06 51 07.6	
	comp=Z,12nm,1.3s							
WRAB	Tennant Creek	44.55	272	P		P	06 50 59.6	-0.3
WRA	Warramunga Arr	44.55	272	P		P	06 50 58.7	-1.2
	comp=Z,2.4nm,0.3s,baz=110,slow=8.1,SNR=4.8							
WB0	Warramunga Arr	44.57	272	P		P	06 51 00.1	-0.1
WB0				IAmb	IAmb		06 51 01.4	
	comp=Z,7.1nm,0.8s							
FITZ	Fitzroy Crossi	52.82	269	P		P	06 52 02.1	-1.4
	comp=Z,1.9nm,0.7s,baz=163,slow=13,SNR=1.6							
FITZ	Fitzroy Crossi	52.82	269	P		P	06 52 03.5	-0.1
FITZ				IAmb	IAmb		06 52 07.5	
	comp=Z,5.3nm,1.1s							
CASY	Casey	55.53	208	P		P	06 52 22.1	-0.4
CASY				IAmb	IAmb		06 52 35.9	
	comp=Z,13nm,1.4s							
FINES	FINESS Array B	145.12	340	PKPbc		PKPbc	07 02 23.9	+0.1
	comp=Z,5.1nm,0.7s,baz=48,slow=4.3,SNR=5.0							

*NEIC **29** 06:43:16.1±1.1,30.22S±0.08×177.6W±0.1,h35km±1km, mb4.9/13,Error ellipse: s-maj=21.5km s-min=12.2km az=73.0*
*IDC **29** 06:43:18.3±0.9,30.08S×177.70W,h52km±7km,mb4.2/8, mb1 4.4/8,mb1mx4.0/30,mbtmp4.5/8,Error ellipse: s-maj=20.6km s-min=12.5km az=73.0*

ISC 29 06:43:16.3±0.6,**30.19S**±0.08×**177.6W**±0.1,**h35**km,**n40,** σ0=**87**/45,**mb4.8**/13,**Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	Raoul Island	0.98	342	P		Pn	06 43 34.3	+0.7
	1µm,0.3s,baz=229,slow=19,SNR=4.7							
RAO				S		Sn	06 43 46.6	+0.3
	2µm,0.3s,baz=30,slow=23,SNR=7.7							
RAO	Raoul Island	0.98	342			Pn	06 43 34.0	+0.4
RAO						Sn	06 43 46.5	+0.2
EIDS	Eidsvold	28.09	272	P		P	06 49 05.7	+0.9
CAN	Canberra	28.49	251	P		P	06 49 09.8	+1.5
CAN				IAmb	IAmb		06 49 10.5	
	comp=Z,11nm,0.8s							
CTA	Charters Tower	34.13	279	P		P	06 49 58.3	+0.2
	comp=Z,21nm,0.6s,baz=102,slow=11,SNR=12							
CTAO	Charters Tower	34.13	279	P		P	06 49 59.5	+1.5
STKA	Stephens Creek	34.88	257	P		P	06 50 04.8	+0.4
	comp=Z,8.1nm,0.6s,baz=106,slow=12,SNR=5.1							
STKA	Stephens Creek	34.88	257	P		P	06 50 05.4	+0.9
BBOO	Buckleboo	39.38	254	P		P	06 50 42.4	-0.3
AS31	Alice Springs	43.49	267	P		P	06 51 16.2	-0.3
WR0	Warramunga Arr	44.27	272	P		P	06 51 22.6	-0.2
WR0				IAmb	IAmb		06 51 23.0	
	comp=Z,10nm,0.5s							
WB2	Warramunga Arr	44.45	272	P		P	06 51 23.5	-0.6
WRAB	Tennant Creek	44.45	272	P		P	06 51 23.6	-0.6
WRAB				IAmb	IAmb		06 51 25.6	
	comp=Z,16nm,0.8s							
WRA	Warramunga Arr	44.46	272	P		P	06 51 22.9	-1.3
	comp=Z,14nm,0.5s,baz=111,slow=7.8,SNR=16							
WB0	Warramunga Arr	44.48	272	P		P	06 51 24.1	-0.4
WB0				IAmb	IAmb		06 51 24.6	
	comp=Z,17nm,0.6s							
FORT	Forrest	46.45	255	P		P	06 51 38.5	-1.4
FITZ	Fitzroy Crossi	52.73	270	P		P	06 52 26.7	-1.2
	comp=Z,5.0nm,0.6s,baz=137,slow=7.5,SNR=5.5							
FITZ	Fitzroy Crossi	52.73	270	P		P	06 52 27.2	-0.6
FITZ				IAmb	IAmb		06 52 28.8	
	comp=Z,5.6nm,0.7s							
CASY	Casey	55.49	208	P		P	06 52 46.4	-0.9
CASY				IAmb	IAmb		06 52 47.0	
	comp=Z,13nm,0.8s							
QSPA	South Pole Qui	59.92	180	P		P	06 53 20.0	+1.4
	comp=Z,2.7nm,0.8s,baz=63,slow=6.0,SNR=3.3							
MAW	Mawson	72.63	200	P		P	06 54 40.8	+1.0
PETK	Petropavlovsk-	85.70	345	P		P	06 55 50.6	-0.5
	comp=Z,3.8nm,0.9s,baz=68,slow=9.7,SNR=3.7							
NVAR	Mina Array Bea	87.84	43	P		P	06 56 02.9	+0.6
	comp=Z,0.3nm,0.4s,baz=196,slow=6.4,SNR=3.7							
NVAR				pP		pwP	06 56 17.1	0.0
	comp=Z,1.8nm,0.8s,baz=222,slow=9.3,SNR=6.8							
TXAR	Lajitas Array	91.97	57	P		P	06 56 21.6	-0.1
	comp=Z,0.3nm,1.0s,baz=148,slow=5.3,SNR=1.9							
TXAR				pP		pwP	06 56 37.1	+0.2
	comp=Z,0.8nm,1.1s,baz=224,slow=5.2,SNR=4.2							
YKA	Yellowknife Ar	105.10	25	Pdiff		Pdif	06 57 20.9	+1.0
	comp=Z,0.5nm,0.6s,baz=243,slow=1.2,SNR=13							
MKAR	Makanchi Array	117.92	310	PKP		PKPdf	07 01 57.4	-1.6
	comp=Z,0.6nm,0.8s,baz=239,slow=0.8,SNR=3.9							
ZALV	Zalesovo Beam	118.12	318	PKP		PKPdf	07 01 58.0	-1.0
	comp=Z,0.6nm,0.3s,baz=152,slow=6.5,SNR=2.4							
KURK	Kurchatov	121.17	314	PKPdf		PKPdf	07 02 04.9	-0.1
KURBB	Kurchatov Arra	121.21	314	PKP		PKPdf	07 02 04.1	-1.0
	comp=Z,1.8nm,0.7s,baz=109,slow=1.8,SNR=9.3							
BVAR	Borovoye Array	126.51	316	PKP		PKPdf	07 02 14.7	-0.5
	comp=Z,2.1nm,0.7s,baz=170,slow=4.1,SNR=5.3							
ARCES	ARCESS Array B	138.46	348	PKP		PKPdf	07 02 37.9	+0.6
	comp=Z,1.2nm,0.7s,baz=28,slow=4.1,SNR=1.7							
FINES	FINESS Array B	145.07	340	PKP		PKPbc	07 02 48.1	-0.6
	comp=Z,14nm,0.6s,baz=56,slow=3.3,SNR=17							
FINES				pPKP		sPKPdf	07 03 03.5	+0.5
	comp=Z,4.6nm,0.6s,baz=75,slow=4.0,SNR=2.7							
NB2	NORSAR Subarra	148.60	352	PKP		PKPbc	07 02 58.8	-0.2
	comp=Z,5.2nm,1.0s,baz=17,slow=2.6							
NOA	NORSAR Array B	148.60	352	PKPbc		PKPbc	07 02 58.7	-0.2
	comp=Z,2.6nm,0.8s,baz=14,slow=4.3,SNR=6.9							
HFS	Hagfors	149.11	349	PKPbc		PKPbc	07 03 00.0	-0.2
	comp=Z,4.8nm,0.8s,baz=90,slow=4.3,SNR=3.6							
AKASG	Malin Array Be	151.35	323	PKPbc		PKPbc	07 03 03.6	-2.3
	comp=Z,4.2nm,0.5s,baz=48,slow=2.7,SNR=7.4							
AKBB	Malin Array Si	151.35	323			PKPbc	07 03 05.7	-0.2
MMAI	Mount Meron Ar	151.83	284	PKPbc		PKPbc	07 03 06.9	-0.8
	comp=Z,3.1nm,0.6s,baz=67,slow=8.4,SNR=3.7							
BRTR	Keskin Array B	152.82	299	PKPbc		PKPbc	07 03 09.2	-0.6
	comp=Z,0.9nm,0.6s,baz=77,slow=5.5,SNR=3.7							
TORD	Torodi Ar. Bea	163.03	178	PKPab		PKPab	07 04 05.0	-0.1
	comp=Z,0.6nm,0.5s,baz=173,slow=3.2,SNR=2.2							

*OSPL **29** 06:46:03.8±0.3,18.23N×67.00W,h23km±1km,ML1.4*
*RSPR **29** 06:46:04.4,18.27N×67.20W,h22km,MD2.6/9*

ISC 29 06:46:03.6±1.1,**18.26N**±0.03×**67.17W**±0.04,**h27**km±5km, **n41,** σ0=**51**/53,**13C,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MPR	Mayaguez	0.06	153	*e*P		Pb	06 46 08.2	-0.1
MPR	Mayaguez	0.06	153			Pb	06 46 08.1	-0.1
MPR				Sg		Sb	06 46 10.7	-0.7
MPR	Mayaguez	0.06	153	*i* P		Pb	06 46 08.2	-0.1
MPR				*e*S		Sb	06 46 11.3	-0.1
MPR				IAML			06 46 11.5	
	comp=Z,59nm,0.1s							
LSP	Las Mesas	0.12	138	*e*S		Sb	06 46 12.4	+0.4
LSP	Las Mesas	0.12	138	*e*P		Pb	06 46 08.9	+0.2
LSP	Las Mesas	0.12	138			Pb	06 46 08.9	+0.2
LSP						Sb	06 46 12.4	+0.4
AGPR	Aguadilla, PR	0.21	15	*e*P		Pb	06 46 09.3	-0.3
AGPR	Aguadilla, PR	0.21	15			Pb	06 46 09.5	-0.1
AGPR						Sb	06 46 13.4	-0.2
AGPR							06 46 13.8	
AGPR	Aguadilla, PR	0.21	15			Pb	06 46 09.8	+0.2
AGPR						Sb	06 46 13.8	+0.2
AGPR	Aguadilla, PR	0.21	15	*i* P		Pb	06 46 09.5	-0.1
AGPR				*e*S		Sb	06 46 13.8	+0.2
AGPR				IAML			06 46 14.0	
	comp=Z,46nm,0.2s							
CRPR	Cabo Rojo, PR	0.26	168	*e*P		Pb	06 46 10.2	-0.1
CRPR	Cabo Rojo, PR	0.26	168	*e*S		Sb	06 46 15.1	+0.4
CRPR	Cabo Rojo, PR	0.26	168			Pb	06 46 10.2	-0.1
CRPR						Sb	06 46 15.1	+0.4
MLPR	Magueyes Islan	0.32	158	*e*P		Pb	06 46 11.0	0.0
MLPR	Magueyes Islan	0.32	158	*e*S		Sb	06 46 16.5	+0.4
MLPR	Magueyes Islan	0.32	158			Pb	06 46 11.0	0.0
MLPR						Sb	06 46 16.4	+0.4
AOPR	Arecibo Observ	0.40	78	*e*P		Pb	06 46 12.4	+0.1
AOPR	Arecibo Observ	0.40	78	*e*S		Sb	06 46 18.7	+0.4
AOPR	Arecibo Observ	0.40	78			Pb	06 46 12.5	+0.1
AOPR						Sb	06 46 18.7	+0.4
UUPR	Utuado, UPR, P	0.43	91			Pb	06 46 12.9	+0.2
UUPR						Sb	06 46 19.3	+0.4
OBIP	Obispado Ponce	0.58	112	*e*P		Pb	06 46 15.0	-0.2
OBIP	Obispado Ponce	0.58	112	*e*S		Sn	06 46 23.7	-1.0
OBIP	Obispado Ponce	0.58	112			Pb	06 46 15.0	-0.2
EMPR	Esperanza - Ma	0.64	71	*e*P		Pb	06 46 16.2	-0.1
EMPR	Esperanza - Ma	0.64	71	*e*S		Sb	06 46 25.1	+0.2
GCPR	Guaynabo City	1.03	87	Pn		Pb	06 46 23.5	+0.7
IGPR	InterUniversit	1.05	106	*e*P		Pn	06 46 21.7	-0.9
IGPR	InterUniversit	1.05	106	*e*S		Sn	06 46 35.2	-1.2
IGPR	InterUniversit	1.05	106	Pn		Pb	06 46 24.0	+0.8
PCDR	Punta Cana, DR	1.18	282	*i* P		Pb	06 46 25.6	+0.2
PCDR				IAML			06 47 10.8	
	comp=Z,48nm,0.8s							
CBYP	Canovanas	1.25	89	*e*P		Pb	06 46 25.9	-0.6
CBYP	Canovanas	1.25	89	*e*P		Pb	06 46 26.2	-0.3
CBYP				*e*S		Sb	06 46 42.5	+0.3
CBYP	Canovanas	1.25	89	*e*S		Sb	06 46 41.7	-0.5
CBYP	Canovanas	1.25	89	Pn		Pb	06 46 26.4	-0.1
CBYP						Pn	06 46 26.9	+1.6
HUMP	Col San Antoni	1.26	95	*e*P		Pn	06 46 25.6	+0.2
HUMP	Col San Antoni	1.26	95	*e*S		Sb	06 46 42.8	+0.3
HUMP	Col San Antoni	1.26	95	*e*S		Sb	06 46 43.4	+0.9
HUMP	Col San Antoni	1.26	95			Pb	06 46 26.7	0.0
MTP	Monte Pirata	1.54	96	*e*P		Pb	06 46 30.7	-0.9
MTP	Monte Pirata	1.54	96	*e*S		Sb	06 46 51.1	+0.4
MTP	Monte Pirata	1.54	96			Pn	06 46 30.2	+0.8

*BEO **29** 06:48:55.8±0.7,39.98N×24.41E,h0km,ML3.7/16*
*IDC **29** 06:48:56.2±1.0,40.05N×24.40E,h0km,mb3.5/9, mb1 3.6/14,mb1mx3.5/49,mbtmp3.5/14,ML3.6/5,MS3.3/3, Ms1 3.3/3,ms1mx2.7/38,Error ellipse: s-maj=16.1km s-min=15.7km az=122.0*
*ATH **29** 06:48:56.9,40.05N×24.39E,h28km±1km,ML3.7/32,Error ellipse: s-maj=1.1km s-min=0.6km az=48.0*
*ISK **29** 06:48:56.2,40.05N×24.42E,h10km,ML3.8/19*
*SOF **29** 06:48:57.6,40.21N×24.47E,h11km,MD3.7*
*THE **29** 06:48:57.9,40.06N×24.39E,h16km,ML3.6/22,Error ellipse: s-maj=0.8km s-min=0.4km az=350.0*
*PDG **29** 06:48:57.1±0.5,40.03N×24.43E,h15km,ML3.3/11,Error ellipse: s-maj=0.5km s-min=0.5km az=0.0*
*DDA **29** 06:49:12.0,39.65N×25.61E,h21km±19km,MW3.5*

ISC 29 06:48:56.8±1.0,**40.02N**±0.01×**24.44E**±0.02,**h8**km±7km, **n222,** σ0=**87**/286,**mb3.5**/9,**28C-16D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OUR	Ouranopolis	0.47	312	P		Pg	06 49 06.1	0.0
OUR				S		Sg	06 49 12.0	-0.2
	10µm,0.2s							
OUR	Ouranopolis	0.47	312	P		Pg	06 49 06.1	0.0
OUR	Ouranopolis	0.47	312	PG		Pg	06 49 05.9	-0.2
OUR				SG		Sg	06 49 12.1	-0.2
LIA	Limnos Island	0.58	101	P		Pb	06 49 09.9	+0.6
LIA				S		Sn	06 49 19.6	-1.6
	8µm,0.6s							
LIA	Limnos Island	0.58	101	P		Pb	06 49 09.8	+0.5
LIA				S		Sn	06 49 19.4	-1.8
LIA				AML	AML		06 49 21.1	
	comp=E,16320µm,0.8s							
LIA				AML	AML		06 49 21.3	
	comp=N,14476µm,0.4s							
PAIG	Paliouri	0.59	262	P		Pg	06 49 08.4	+0.1
PAIG				S		Sg	06 49 16.9	+0.9
	comp=N,10µm,0.4s							
PAIG	Paliouri	0.59	262	P		Pg	06 49 08.4	+0.1
PAIG				S		Sg	06 49 16.8	+0.9
PAIG				AML	AML		06 49 19.7	
	comp=E,19181µm,0.4s							
PAIG				AML	AML		06 49 19.9	
	comp=N,22271µm,0.4s							
THAS	Thassos island	0.63	20	P		Pg	06 49 08.7	-0.2
THAS				S		Sb	06 49 19.2	+0.1
	comp=N,18µm,0.4s							
THAS	Thassos island	0.63	20	P		Pg	06 49 08.7	-0.2
THAS				S		Sb	06 49 18.3	-0.7
THAS				AML	AML		06 49 20.0	
	comp=E,41921µm,0.5s							
THAS				AML	AML		06 49 20.0	
	comp=N,29383µm,0.4s							
EFSA	Agios Efstrati	0.64	138	P		Pn	06 49 11.2	-0.9
EFSA				S		Sn	06 49 21.2	-1.3
PLG	Polygyros	0.84	295	P		Pg	06 49 13.0	0.0
PLG				S		Sg	06 49 23.9	-0.1
	comp=N,5µm,0.5s							
PLG	Polygyros	0.84	295	P		Pg	06 49 13.0	0.0
PLG				S		Sg	06 49 23.2	-0.8
PLG				AML	AML		06 49 27.0	
	comp=E,10906µm,0.5s							
PLG				AML	AML		06 49 29.5	
	comp=N,6347µm,0.8s							
KVLA	Kavala	0.92	357	P		Pg	06 49 14.3	-0.3
KVLA				S		Sg	06 49 26.7	+0.2
KVLA				AML	AML		06 49 28.0	
	comp=E,46925µm,0.4s							
KVLA				AML	AML		06 49 28.5	
	comp=N,12262µm,0.3s							
AOS	Alonnisos	0.95	207	P		Pg	06 49 15.3	+0.2
AOS				S		Sn	06 49 30.3	0.0
	comp=N,7µm,0.5s							
AOS	Alonnisos	0.95	207	P		Pg	06 49 15.3	+0.2
AOS				S		Sn	06 49 29.5	-0.8
AOS				AML	AML		06 49 31.9	
	comp=E,16244µm,0.5s							
AOS				AML	AML		06 49 33.8	
	comp=N,13228µm,0.5s							
AOS	Alonnisos	0.95	207	PG		Pb	06 49 15.4	-0.2
AOS				SG		Sn	06 49 29.7	-0.6
SMTH	Samothraki Isl	0.95	61	P		Pb	06 49 15.1	-0.5
SMTH				S		Sn	06 49 29.1	-1.2
	comp=N,4µm,0.4s							
SMTH	Samothraki Isl	0.95	61	P		Pb	06 49 15.1	-0.5
SMTH				AML	AML		06 49 30.1	
	comp=E,7101µm,0.4s							
SMTH				AML	AML		06 49 31.4	
	comp=N,7872µm,0.4s							
ALNA	Alonissos	0.97	207	P		Pb	06 49 16.3	+0.3
ALNA				S		Sb	06 49 29.7	+0.7
ALNA				AML	AML		06 49 32.8	
	comp=N,16704µm,0.7s							
ALNA				AML	AML		06 49 34.1	
	comp=E,17726µm,0.6s							
KAVA	Kavala	0.98	3	P		Pg	06 49 15.2	-0.5
KAVA				S		Sg	06 49 28.0	-0.5
	comp=E,8µm,0.3s							
KAVA	Kavala	0.98	3	P		Pg	06 49 15.1	-0.6
KAVA				S		Sg	06 49 28.4	0.0
KAVA				AML	AML		06 49 29.3	
	comp=E,8522µm,0.3s							
KAVA				AML	AML		06 49 29.7	
	comp=N,18529µm,0.3s							
GADA	Gvkgeada	1.13	81	P		Pn	06 49 18.8	-0.2
GADA				S		Sn	06 49 34.2	-0.6
	comp=N,4µm,0.5s							
GADA	Gvkgeada	1.13	81	PN		Pn	06 49 18.8	-0.2
GADA				SN		Sn	06 49 34.4	-0.4
SKIA	Skiathos	1.14	222	P		Pg	06 49 18.3	-0.3
SKIA				S		Sg	06 49 33.5	+0.2
	comp=N,6µm,0.5s							
SKIA	Skiathos	1.14	222	P		Pg	06 49 18.2	-0.3
SKIA				S		Sg	06 49 33.8	+0.5
SKIA				AML	AML		06 49 40.2	
	comp=E,16671µm,0.6s							
SKIA				AML	AML		06 49 41.1	
	comp=N,9625µm,0.5s							
SKY	Skiros Island	1.14	176	P		Pn	06 49 19.3	+0.2
SKY

GELI	**Tayfur-Gelibol**	**1.60**	**76**	PN	**Pn**	**06 49 25.3**	**-0.2**
PRK	**Paraskevi**	**1.61**	**118**	P	**Pb**	**06 49 26.7**	**-0.1**
PRK				AML	AML	06 49 57.4	
	comp=E,4973µm,0.7s						
PRK				AML	AML	06 50 04.2	
	comp=N,3403µm,0.8s						
KNT	**Kendrikon**	**1.64**	**315**	P	**Pn**	**06 49 25.4**	**-0.7**
KNT				S	**Sn**	**06 49 45.5**	**-1.9**
	comp=N,2µm,0.5s						
KNT	**Kendrikon**	**1.64**	**315**	P	**Pn**	**06 49 25.5**	**-0.6**
KNT				AML	AML	06 49 51.9	
	comp=E,3551µm,0.4s						
KNT				AML	AML	06 49 54.5	
	comp=N,2788µm,0.4s						
KNT	**Kendrikon**	**1.64**	**315**	PN	**Pn**	**06 49 25.2**	**-0.9**
BAYC	**CANAKKALE_Bayr**	**1.64**	**99**	*i* P	**Pn**	**06 49 26.0**	**-0.1**
BAYC				IAML		06 49 54.0	
	comp=N,293nm,0.5s						
BAYC				IAML		06 49 54.0	
	comp=E,333nm,0.6s						
MMB	**Musomiste**	**1.66**	**341**	*i* P	**Pn**	**06 49 25.1**	**-1.3**
RZN	**Rozhen**	**1.68**	**7**	*i* P	**Pn**	**06 49 26.3**	**-0.5**
ERIK	**Erikli-Kesan**	**1.71**	**67**	PN	**Pn**	**06 49 26.7**	**-0.3**
LKR	**Lokris**	**1.76**	**220**	P	**Pn**	**06 49 27.4**	**-0.3**
LKR	**Lokris**	**1.76**	**220**	P	**Pn**	**06 49 27.4**	**-0.3**
KDZ	**Kurdzhali**	**1.79**	**24**	*i* P	**Pn**	**06 49 26.8**	**-1.4**
KDZ	**Kurdzhali**	**1.79**	**24**	PN	**Pn**	**06 49 26.9**	**-1.3**
LPK	**Lapseki**	**1.81**	**78**	PN	**Pn**	**06 49 28.2**	**-0.2**
GRG	**Griva**	**1.82**	**302**	P	**Pn**	**06 49 28.4**	**-0.1**
GRG	**Griva**	**1.82**	**302**	P	**Pn**	**06 49 28.4**	**-0.1**
GRG				AML	AML	06 50 01.0	
	comp=E,2470µm,0.5s						
GRG				AML	AML	06 50 05.4	
	comp=N,2400µm,0.6s						
GRG	**Griva**	**1.82**	**302**	PN	**Pn**	**06 49 27.8**	**-0.7**
KTI	**Kastanea**	**1.82**	**283**	P	**Pn**	**06 49 28.3**	**-0.3**
AXAR	**Agios Charalam**	**1.86**	**228**	P	**Pn**	**06 49 29.6**	**+0.5**
AXAR	**Agios Charalam**	**1.86**	**228**	P	**Pn**	**06 49 29.3**	**+0.2**
AXAR				AML	AML	06 50 12.5	
	comp=N,2854µm,0.6s						
AXAR				AML	AML	06 50 13.8	
	comp=E,2215µm,0.5s						
AYVA	**Ayvalik**	**1.87**	**111**	*i* P	**Pb**	**06 49 30.1**	**-1.2**
AYVA				IAML		06 49 53.0	
	comp=N,548nm,0.6s						
AYVA				IAML		06 50 09.0	
	comp=E,246nm,0.9s						
AGG	**Agios Georgios**	**1.91**	**239**	P	**Pn**	**06 49 29.8**	**0.0**
AGG	**Agios Georgios**	**1.91**	**239**	P	**Pn**	**06 49 29.5**	**-0.3**
AGG				AML	AML	06 50 09.3	
	comp=N,1455µm,0.9s						
AGG				AML	AML	06 50 09.8	
	comp=E,1595µm,0.8s						
AGG	**Agios Georgios**	**1.91**	**239**	PN	**Pn**	**06 49 29.7**	**0.0**
THL	**Klokotos Trika**	**1.92**	**257**	P	**Pn**	**06 49 29.6**	**-0.3**
THL	**Klokotos Trika**	**1.92**	**257**	P	**Pn**	**06 49 29.3**	**-0.6**
VAY	**Valandovo**	**1.93**	**313**	*e*Pn	**Sn**	**06 49 29.7**	**-0.3**
VAY				*e*Sn	**Sn**	**06 49 54.6**	**+0.1**
VAY	**Valandovo**	**1.93**	**313**	*i* Pn	**Pn**	**06 49 29.7**	**-0.3**
VAY	**Valandovo**	**1.93**	**313**	*i* Pn	**Pn**	**06 49 29.7**	**-0.3**
DION	**Dionisos Attik**	**1.98**	**192**	P	**Pn**	**06 49 30.6**	**-0.1**
DION	**Dionisos Attik**	**1.98**	**192**	P	**Pn**	**06 49 30.5**	**-0.1**
DION				AML	AML	06 50 05.5	
	comp=N,5425µm,0.5s						
DION				AML	AML	06 50 09.0	
	comp=E,7372µm,0.4s						
KARY	**Karystos**	**1.98**	**180**	P	**Pn**	**06 49 31.0**	**+0.3**
KARY				S	**Sn**	**06 49 55.2**	**-0.5**
KARY	**Karystos**	**1.98**	**180**	P	**Pn**	**06 49 31.0**	**+0.3**
UKOP	**Uzunkopru-Edir**	**2.00**	**56**	PN	**Pn**	**06 49 31.2**	**+0.2**
VIL2	**Platees**	**2.02**	**207**	P	**Pn**	**06 49 31.4**	**+0.2**
VIL2				AML	AML	06 50 11.4	
	comp=N,2175µm,0.5s						
VIL2				AML	AML	06 50 15.5	
	comp=E,3592µm,0.9s						
VILL	**Villia**	**2.05**	**206**	P	**Pn**	**06 49 31.5**	**-0.2**
MAKR	**Makrakomi, Fth**	**2.05**	**241**	P	**Pn**	**06 49 32.0**	**+0.3**
MAKR	**Makrakomi, Fth**	**2.05**	**241**	P	**Pn**	**06 49 32.0**	**+0.3**
MAKR				AML	AML	06 50 17.5	
	comp=E,2641µm,0.9s						
MAKR				AML	AML	06 50 18.1	
	comp=N,2114µm,0.8s						
CHOS	**Chios island**	**2.05**	**142**	P	**Pn**	**06 49 32.7**	**+0.9**
CHOS	**Chios island**	**2.05**	**142**	P	**Pn**	**06 49 32.7**	**+0.9**
CHOS				AML	AML	06 50 12.1	
	comp=E,2323µm,0.6s						
CHOS				AML	AML	06 50 15.6	
	comp=N,1766µm,0.7s						
CHOS	**Chios island**	**2.05**	**142**	PN	**Pn**	**06 49 32.1**	**+0.3**
KZN	**Kozani**	**2.07**	**279**	P	**Pn**	**06 49 31.8**	**-0.2**
KZN				S	**Sn**	**06 49 56.3**	**-1.7**
	comp=N,480nm,0.5s						
KZN	**Kozani**	**2.07**	**279**	P	**Pn**	**06 49 31.8**	**-0.2**
KZN				AML	AML	06 49 57.3	
	comp=E,1244µm,0.5s						
KZN				AML	AML	06 49 57.6	
	comp=N,637µm,0.7s						
PLD	**Plovdiv**	**2.10**	**5**	*e*Pn	**Pn**	**06 49 33.5**	**+1.1**
PLD				*e*Sn	**Sb**	**06 49 59.9**	**-1.5**
PLD	**Plovdiv**	**2.10**	**5**	*e*P	**Pn**	**06 49 33.4**	**+1.1**
PLD	**Plovdiv**	**2.10**	**5**	PN	**Pn**	**06 49 32.5**	**+0.2**
ATHU	**Athens Univers**	**2.11**	**194**	P	**Pn**	**06 49 32.5**	**0.0**
ATHU	**Athens Univers**	**2.11**	**194**	P	**Pn**	**06 49 32.3**	**-0.2**
ATHU				AML	AML	06 50 08.5	
	comp=N,1122µm,0.6s						
ATHU				AML	AML	06 50 10.0	
	comp=E,513µm,0.5s						
KKB	**Krupnik**	**2.12**	**331**	*i* P	**Pn**	**06 49 31.9**	**-0.7**
DIM	**Dimitrovgrad**	**2.19**	**22**	*i* P	**Pg**	**06 49 37.6**	**-1.3**
RKY	**Sarkoy-Tekirda**	**2.20**	**71**	PN	**Pn**	**06 49 33.8**	**+0.1**
EVR	**Evrytania**	**2.31**	**243**	P	**Pn**	**06 49 35.6**	**+0.2**
EVR				AML	AML	06 50 26.3	
	comp=E,788µm,0.9s						
EVR				AML	AML	06 50 36.7	
	comp=N,690µm,1.0s						
URLA	**Izmir**	**2.35**	**134**	PN	**Pn**	**06 49 37.1**	**+1.2**
KPRO	**Kipourio**	**2.37**	**270**	P	**Pn**	**06 49 35.6**	**-0.5**
KPRO				S	**Sn**	**06 50 04.6**	**-0.8**
	comp=N,470nm,1.0s						
KPRO	**Kipourio**	**2.37**	**270**	P	**Pn**	**06 49 36.2**	**+0.1**
KPRO				AML	AML	06 50 34.1	
	comp=E,1024µm,0.9s						
KPRO				AML	AML	06 50 50.0	
	comp=N,857µm,1.1s						
KALE	**Kalithea**	**2.42**	**229**	P	**Pn**	**06 49 36.7**	**0.0**
KALE	**Kalithea**	**2.42**	**229**	P	**Pn**	**06 49 37.0**	**+0.3**
ANX	**Ano Chora**	**2.42**	**235**	P	**Pn**	**06 49 37.2**	**+0.4**
ANX	**Ano Chora**	**2.42**	**235**	P	**Pn**	**06 49 37.0**	**+0.2**
SERG	**Sergoula**	**2.45**	**230**	P	**Pn**	**06 49 37.5**	**+0.3**
SERG	**Sergoula**	**2.45**	**230**	P	**Pn**	**06 49 37.4**	**+0.2**
BALY	**Balya**	**2.46**	**95**	*i* P	**Pn**	**06 49 38.1**	**+0.8**
BALY				IAML		06 50 18.0	
	comp=N,354nm,0.5s						
BALY				IAML		06 50 21.0	
	comp=E,300nm,0.6s						
FNA	**Florina**	**2.46**	**289**	*e*Pn	**Pn**	**06 49 37.4**	**0.0**
MEV	**Metsovon**	**2.48**	**266**	P	**Pn**	**06 49 38.0**	**+0.3**
MRMT	**Marmara Adasi**	**2.48**	**75**	PN	**Pn**	**06 49 38.4**	**+0.7**
EDRB	**Edirne**	**2.53**	**43**	PN	**Pn**	**06 49 38.4**	**+0.2**
PENT	**Pentalofos**	**2.54**	**275**	P	**Pn**	**06 49 38.9**	**+0.4**
PGB	**Panagyurishte**	**2.54**	**355**	*i* P	**Pb**	**06 49 43.4**	**+0.6**
NEST	**Nestorio**	**2.63**	**280**	P	**Pn**	**06 49 39.0**	**-0.7**
KLV	**Kalavryta, Ach**	**2.66**	**223**	P	**Pn**	**06 49 40.1**	**0.0**
KLV	**Kalavryta, Ach**	**2.66**	**223**	P	**Pn**	**06 49 40.0**	**+0.1**
PVO	**Paravola**	**2.66**	**239**	P	**Pn**	**06 49 40.2**	**+0.2**
BALB	**Balikesir**	**2.67**	**97**	PN	**Pn**	**06 49 41.3**	**+1.1**
DID	**Didima**	**2.68**	**201**	P	**Pn**	**06 49 40.3**	**0.0**
DID	**Didima**	**2.68**	**201**	P	**Pn**	**06 49 40.2**	**0.0**
DID				AML	AML	06 50 31.4	
	comp=E,1010µm,0.4s						
DID				AML	AML	06 50 31.5	
	comp=N,877µm,0.9s						
DGB	**zmir**	**2.73**	**135**	*i* P	**Pn**	**06 49 41.3**	**+0.3**
VTS	**Vitosha**	**2.75**	**341**	*e*Pn	**Pn**	**06 49 41.4**	**-0.1**
VTS				*e*Sn	**Sn**	**06 50 14.6**	**-0.5**
VTS	**Vitosha**	**2.75**	**341**	⇓P	**Pn**	**06 49 41.6**	**+0.1**
VTS				⇑S	**Sn**	**06 50 17.0**	**+1.9**
VTS	**Vitosha**	**2.75**	**341**	*i* P	**Pn**	**06 49 41.4**	**-0.1**
SERI	**Serifos**	**2.85**	**179**	P	**Pn**	**06 49 42.9**	**+0.2**
BOSS	**Bosilegrad**	**2.89**	**330**	*e*Pn	**Pn**	**06 49 43.2**	**0.0**
BOSS				*e*Sn	**Sn**	**06 50 19.5**	**+1.4**
JMB	**Yambol**	**2.93**	**33**	*e*P	**Pg**	**06 49 52.0**	**-1.0**
DRO	**Drossia**	**2.96**	**227**	P	**Pn**	**06 49 44.6**	**+0.4**
DRO	**Drossia**	**2.96**	**227**	P	**Pn**	**06 49 44.9**	**+0.7**
DRO				AML	AML	06 50 48.7	
	comp=E,548µm,0.7s						
DRO				AML	AML	06 50 49.1	
	comp=N,481µm,0.6s						
APE	**Apeiranthos**	**3.06**	**163**	⇓P	**Pn**	**06 49 45.4**	**-0.3**
APE				⇑S	**Sn**	**06 50 21.4**	**-1.1**
APE	**Apeiranthos**	**3.06**	**163**	PN	**Pn**	**06 49 46.9**	**+1.2**
ELND	**Elena**	**3.10**	**20**	⇑P	**Pn**	**06 49 46.2**	**+0.1**
SLVT	**Silivri**	**3.11**	**66**	PN	**Pn**	**06 49 46.9**	**+0.6**
DURS	**Dursunbey**	**3.13**	**96**	*i* P	**Pn**	**06 49 48.2**	**+1.6**
DURS				IAML		06 50 40.0	
	comp=E,164nm,0.5s						
DURS				IAML		06 50 42.0	
	comp=N,151nm,0.5s						
PLVB	**Pleven**	**3.37**	**2**	⇑P	**Pn**	**06 49 50.5**	**+0.7**
PLVB				⇑S	**Sn**	**06 50 32.3**	**+2.2**
BARS	**Barje**	**3.42**	**326**	*e*Pn	**Pn**	**06 49 50.5**	**-0.1**
BARS	**Barje**	**3.42**	**326**	*e*Pn	**Pg**	**06 50 03.1**	**+0.6**
BARS				*e*Sn	**Sn**	**06 50 31.8**	**+0.4**
VLI	**Veliai**	**3.50**	**200**	P	**Pn**	**06 49 51.8**	**+0.2**
ZAPS	**Zavoj**	**3.53**	**338**	*e*Pn	**Pn**	**06 49 52.9**	**+0.9**
ZAPS				*e*Sn	**Sn**	**06 50 34.6**	**+0.7**
AYDN	**Tasoluk**	**3.57**	**130**	*i* P	**Pn**	**06 49 52.8**	**+0.2**
AYDN				IAML		06 51 07.0	
	comp=N,24nm,0.8s						
AYDN				IAML		06 51 16.0	
	comp=E,22nm,0.8s						
BUY	**Buyukada**	**3.67**	**75**	*i* P	**Pb**	**06 50 00.0**	**-1.8**
BUY				IAML		06 51 12.0	
	comp=N,79nm,0.6s						
BUY				IAML		06 51 13.0	
	comp=E,95nm,0.7s						
TIR	**Tirane**	**3.73**	**292**	⇑P	**Pn**	**06 49 54.4**	**-0.3**
RAZG	**Razgrad**	**3.87**	**23**	⇑P	**Pn**	**06 49 59.1**	**+2.4**
VLAD	**Vladila**	**3.98**	**360**	⇓P	**Pn**	**06 49 59.4**	**+1.3**
SELS	**Selova**	**4.06**	**323**	*e*Pn	**Pn**	**06 49 58.4**	**-0.9**
SELS				*e*Sn	**Sn**	**06 50 46.6**	**-0.4**
ZAGS	**Zajecar**	**4.14**	**337**	*e*Pn	**Pn**	**06 49 59.6**	**-0.7**
ZAGS				*e*Sn	**Sn**	**06 50 47.3**	**-1.6**
BOVS	**Bovan**	**4.15**	**331**	*e*Pn	**Pn**	**06 50 00.7**	**+0.1**
BOVS				*e*Sn	**Sn**	**06 50 49.5**	**+0.1**
COPA	**Copaceanca**	**4.16**	**8**	⇑P	**Pg**	**06 50 19.9**	**+3.5**
PVY	**Plav**	**4.25**	**309**	⇓*i*Pn	**Pn**	**06 50 02.6**	**+0.6**
PVY				*i* Sn	**Sn**	**06 50 52.4**	**+0.5**
ULC	**Ulcinj**	**4.39**	**298**	⇓*i*Pn	**Pn**	**06 50 04.5**	**+0.7**
ULC				*e*Sn	**Sn**	**06 50 55.4**	**+0.2**
IVA	**Berane**	**4.45**	**311**	⇓*i*Pn	**Pn**	**06 50 05.7**	**+0.9**
IVA				*i* Sn	**Sn**	**06 50 57.3**	**+0.4**
DRME	**Dracevica, Mon**	**4.53**	**300**	⇓*i*Pn	**Pn**	**06 50 07.5**	**+1.8**
DRME				*i* Sn	**Sn**	**06 50 59.2**	**+0.7**
PDG	**Podgorica**	**4.59**	**303**	⇑P	**Pn**	**06 50 05.0**	**-1.6**
TTG	**Podgorica**	**4.59**	**303**	⇑*i*Pn	**Pn**	**06 50 07.9**	**+1.3**
TTG				*e*Sn	**Sn**	**06 51 08.7**	**+0.5**
BORA	**Eskisehir**	**4.62**	**90**	*i* P	**Pn**	**06 50 07.8**	**+0.7**
BORA				IAML		06 51 28.0	
	comp=N,24nm,0.6s						
BORA				IAML		06 51 35.0	
	comp=E,15nm,0.8s						
SJES	**Sjenica**	**4.66**	**316**	*e*Pn	**Pn**	**06 50 08.1**	**+0.4**
KOME	**Kolasin**	**4.66**	**309**	⇓*i*Pn	**Pn**	**06 50 08.3**	**+0.6**
KOME				*i* Sn	**Sn**	**06 51 02.2**	**+0.2**
IDI	**Anoyia**	**4.73**	**176**	Pn	**Pn**	**06 50 08.6**	**0.0**
	comp=E,0.6nm,0.3s,baz=257,slow=17,SNR=1.6						
IDI				Sn	**Sn**	**06 51 00.2**	**-3.6**
	comp=E,1.0nm,0.3s,baz=85,slow=22,SNR=1.8						
GRUS	**Gruza**	**4.76**	**326**	*e*Pn	**Pn**	**06 50 08.2**	**-0.8**
GRUS				*e*Sn	**Sn**	**06 51 04.0**	**-0.4**
BUM	**Brajici-Budva**	**4.77**	**300**	⇑*i*Pn	**Pn**	**06 50 09.8**	**+0.7**
BUM				*i* Sn	**Sn**	**06 51 04.8**	**+0.2**
CEME	**Cevo**	**4.87**	**303**	⇓*i*Pn	**Pn**	**06 50 11.2**	**+0.7**
CEME				*i* Sn	**Sn**	**06 51 07.2**	**+0.1**
NKY	**Niksic**	**4.96**	**306**	⇓*i*Pn	**Pn**	**06 50 12.2**	**+0.4**
NKY				*i* Sn	**Sn**	**06 51 09.4**	**0.0**
NKME	**Niksic**	**4.96**	**305**	⇓*i*Pn	**Pn**	**06 50 12.2**	**+0.5**
NKME				*i* Sn	**Sn**	**06 51 09.5**	**+0.2**
HERR	**Herculane**	**5.09**	**344**	⇑P	**Pn**	**06 50 12.5**	**-0.9**
HCY	**Herceg Novi**	**5.10**	**300**	⇑*i*Pn	**Pn**	**06 50 14.4**	**+0.8**
HCY				*i* Sn	**Sn**	**06 51 12.8**	**+0.1**
TRUS	**Trudelj**	**5.17**	**326**	*e*Pn	**Pn**	**06 50 12.5**	**-2.0**
MDVR	**Moldovita**	**5.17**	**338**	⇑P	**Pn**	**06 50 14.0**	**-0.6**
UPM	**Unac-Piva**	**5.23**	**309**	⇑*i*Pn	**Pn**	**06 50 15.9**	**+0.3**
UPM				*i* Sn	**Sn**	**06 51 16.1**	**-0.1**
DIVS	**Divibare**	**5.25**	**322**	*e*Pn	**Pn**	**06 50 15.0**	**-0.8**
BRY	**Bratogost**	**5.29**	**305**	⇑*i*Pn	**Pn**	**06 50 16.7**	**+0.4**
BRY				*i* Sn	**Sn**	**06 51 17.4**	**-0.2**
ISR	**Istrita**	**5.33**	**16**	⇑P	**Pn**	**06 50 19.0**	**+2.2**
HARR	**Harsova**	**5.34**	**28**	⇑P	**Pn**	**06 50 17.5**	**+0.6**
ARR	**Arges**	**5.35**	**1**	⇓P	**Pn**	**06 50 17.2**	**+0.1**
BBLS	**Lazići**	**5.38**	**317**	*e*Pn	**Pn**	**06 50 17.8**	**+0.3**
LOT	**Lotru**	**5.45**	**355**	⇑P	**Pn**	**06 50 18.4**	**-0.1**
GZR	**Gura Zlata**	**5.51**	**348**	⇑P	**Pn**	**06 50 19.2**	**-0.2**
MLR	**Muntele Rosu**	**5.58**	**11**	Pn	**Pn**	**06 50 21.1**	**+0.8**
	comp=E,2.4nm,0.3s,baz=178,slow=11,SNR=15						
MLR				Lg	Lg	06 51 57.5	
	comp=E,0.5nm,0.3s,baz=186,slow=13,SNR=6.1						
MLR				LR	LR	06 53 18.2	
	comp=E,154nm,18.2s,baz=115,slow=47						
MLR	**Muntele Rosu**	**5.58**	**11**	⇑P	**Pn**	**06 50 21.6**	**+1.3**
JURR	**Jurilovca**	**5.77**	**33**	⇑P	**Pn**	**06 50 23.7**	**+0.9**
BISRR	**Bisoca**	**5.78**	**16**	⇓P	**Pn**	**06 50 22.9**	**0.0**
CFR	**Carcaliu**	**5.83**	**27**	⇓P	**Pn**	**06 50 23.9**	**+0.2**
DOPR	**Dopca**	**5.99**	**6**	⇑P	**Pn**	**06 50 26.7**	**+0.9**
PLOR	**Plostina**	**6.05**	**15**	⇑P	**Pn**	**06 50 28.3**	**+1.6**
VRI	**Vrincioaia**	**6.08**	**15**	⇑P	**Pn**	**06 50 29.2**	**+2.1**
MDB	**Medias**	**6.12**	**360**	⇑P	**Pn**	**06 50 28.1**	**+0.4**
OZUR		**6.16**	**9**	⇓P	**Pn**	**06 50 30.1**	**+1.9**
RICI	**Ricice**	**6.48**	**305**	P	**Pn**	**06 50 33.5**	**+1.0**
TESR	**Tescani**	**6.69**	**13**	⇑P	**Pn**	**06 50 36.1**	**+0.7**
BIZ	**Bicaz**	**7.03**	**9**	⇓P	**Pn**	**06 50 42.0**	**+2.0**
BRTR	**Keskin Array B**	**7.08**	**89**	Pn	**Pn**	**06 50 42.1**	**+1.2**
	comp=E,0.9nm,0.3s,baz=264,slow=12,SNR=11						
KIJV	**Kijevo**	**7.19**	**306**	*i* P	**Pn**	**06 50 43.3**	**+1.0**
ZIRJ	**Zirje**	**7.51**	**302**	*i* P	**Pn**	**06 50 46.9**	**+0.3**
MORI	**Morici**	**7.56**	**303**	*i* P	**Pn**	**06 50 47.7**	**+0.4**
BURAR	**Bucovina Array**	**7.62**	**4**	⇑P	**Pn**	**06 50 49.1**	**+0.9**
MOSL	**Moslavina**	**7.95**	**317**	*i* P	**Pn**	**06 50 52.1**	**-0.6**
DUGI	**Dugi Otok**	**8.04**	**303**	*i* P	**Pn**	**06 50 53.5**	**-0.4**
AKASG	**Malin Array Be**	**11.20**	**16**	Pn	**Pn**	**06 51 35.7**	**-1.5**
	comp=E,1.0nm,0.3s,baz=197,slow=13,SNR=4.9						
GERES	**GERESS Array B**	**11.69**	**323**	Pn	**Pn**	**06 51 43.9**	**-0.1**
	comp=E,0.1nm,0.3s,baz=121,slow=11,SNR=1.7						
OBN	**Obninsk**		**17.14**	**24**	LR	LR	06 58 59.5
	comp=E,50nm,19.7s,baz=28,slow=35						
FINES	**FINESS Array B**	**21.48**		**2**	P	**P**	**06 53 47.4**	**+1.7**
	comp=E,1.9nm,0.8s,baz=182,slow=19,SNR=1.8						
ESDC	**Sonseca Array**	**21.78**	**278**	P	**P**		**06 53 51.0**	**+1.9**
	comp=E,0.6nm,0.6s,baz=81,slow=11,SNR=4.5						
NB2	**NORSAR Subarra**	**22.58**	**343**	P	**P**		**06 53 56.0**	**-1.5**
	comp=Z,4.8nm,1.2s,baz=153,slow=10						
NOA	**NORSAR Array B**	**22.58**	**343**	P	**P**		**06 53 57.0**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=158,slow=11,SNR=4.6						
EKA	**Eskdalemuir Ar**	**23.87**	**319**	P	**P**		**06 54 09.4**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=111,slow=9.2,SNR=2.8						
TORD	**Torodi Ar. Bea**	**33.42**	**223**	P	**P**		**06 55 36.6**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=34,slow=9.9,SNR=6.3						
KURBB	**Kurchatov Arra**	**38.68**	**56**	P	**P**		**06 56 21.8**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=283,slow=9.2,SNR=2.0						
MKAR	**Makanchi Array**	**41.74**	**61**	P	**P**		**06 56 47.8**	**+1.4**
	comp=Z,0.8nm,0.5s,baz=293,slow=5.5,SNR=8.2						
ZALV	**Zalesovo Beam**	**42.19**	**50**	P	**P**		**06 56 50.1**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=296,slow=8.3,SNR=4.5						
TIXI	**Tiksi**	**56.85**	**21**	LR	LR		07 26 14.1
	comp=Z,70nm,19.1s,baz=321,slow=39						
YKA	**Yellowknife Ar**	**72.67**	**341**	P	**P**		**07 00 24.1**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=37,slow=5.4,SNR=2.5						

*IDC **29** 06:53:12.4±3.2, 37.4ºN×70.1ºE, h0km, mb3.4/1, mb1 3.5/7, mb1mx3.4/52, mbtmpp3.5/7, ML3.4/5, Error ellipse: s-maj=47.6km s-min=25.4km az=152.0*
*NNC **29** 06:53:22.5±4.3, 38.5ºN×68.9ºE, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=33.8km s-min=23.4km az=36.0*
ISC 29 06:53:16.4±2.2, 37.9ºN±0.2º×69.6ºE±0.1, h12km, n13, σ1º91/12, 3C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
IUG	**luzhnay**	**4.21**	**4**	Pg		**Pb**	**Pn**	**06 54 28.0**	**-2.4**
	9.4nm,0.4s								
IUG				Lg		Lg	Pn	06 55 18.3	
	115nm,0.6s								
BRLS	**Borolday**	**5.09**	**2**	Pg		Pn	Pn	06 54 39.4	+7.0
	14nm,0.4s								
BRLS				Lg		Lg	Lg	06 55 37.5	
	40nm,0.5s								
KK31	**Karatay Array**	**5.20**	**7**	⇓Pn		**Pn**	**Pn**	**06 54 34.5**	**+0.5**
	0.6nm,0.3s,baz=185,slow=12,SNR=9.8								
KK31				⇓Pg		**Pb**	**Pn**	**06 54 46.2**	**-1.0**
	25nm,0.8s,baz=192,slow=18,SNR=30								
KK31				⇑Lg		Lg	Lg	06 55 53.4	
	25nm,0.8s,baz=197,slow=28,SNR=7.5								
AAK	**Ala-Archa**	**5.99**	**37**	Pn		**Pn**	**Pn**	**06 54 47.2**	**+2.2**
	1.2nm,0.3s,baz=194,slow=6.2,SNR=11								
AAK				Sn		**Sn**	**Sn**	**06 55 56.9**	**+3.3**
	0.6nm,0.3s,baz=316,slow=5.2,SNR=3.9								
AAK				Lg		Lg	Lg	06 56 18.8	
	0.7nm,0.3s,baz=132,slow=21,SNR=3.5								
MDOK	**Medeo**	**7.70**	**45**	Pn		Pn	Pn	06 55 16.0	+7.6
	4.9nm,0.7s								
MDOK				Lg		Lg	Lg	06 57 29.1	
	3.1nm,0.6s								
PDGK	**Podgornoye**	**9.24**	**51**	⇑Pn		Pn	Pn	06 55 38.4	+8.9
	3.0nm,1.1s								
PDGK				⇓Sn		Sn	Sn	06 57 24.5	+11
	1.6nm,0.8s								
MKAR	**Makanchi Array**	**12.88**	**43**	Pn		**Pn**	**Pn**	**06 56 18.2**	**-0.9**
	0.1nm,0.3s,baz=225,slow=12,SNR=4.4								
KURBB	**Kurchatov Arra**	**14.18**	**24**	Pn		**Pn**	**Pn**	**06 56 34.9**	**-2.0**
	0.0nm,0.3s,baz=210,slow=11,SNR=1.9								
AKTO	**Aktyubinsk**	**14.98**	**330**	Pn		**Pn**	**Pn**	**06 56 49.4**	**+1.5**
	0.2nm,0.3s,baz=162,slow=6.4,SNR=2.0								
BVAR	**Borovoye Array**	**15.10**	**2**	Pn		**Pn**	**Pn**	**06 56 49.9**	**+0.6**
	0.4nm,0.3s,baz=170,slow=8.8,SNR=4.8								
ZALV	**Zalesovo Beam**	**19.12**	**28**	P		**P**	**P**	**06 57 37.5**	**-1.5**
	0.3nm,0.3s,baz=231,slow=9.1,SNR=1.7								
DIKM	**Dikmen**	**26.55**	**289**	⇑P		**P**	**P**	**06 58 53.9**	**-0.1**
YKA	**Yellowknife Ar**	**79.85**	**2**	P		**P**	**P**	**07 05 24.9**	**+0.5**
	0.2nm,0.5s,baz=355,slow=5.3,SNR=4.7								

*ASRS **29** 07:09:44.5, 53.70N×91.14E, M2.6, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*IDC **29** 07:09:49.5±1.0, 53.82N×90.97E, h0km, mb3.6/2, mb1 3.6/6, mb1mx3.4/38, mbtmpp3.5/6, ML2.9/4, Error ellipse: s-maj=19.4km s-min=9.8km az=155.0*
*NNC **29** 07:09:59.5±4.1, 53.28N×90.27E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=34.3km s-min=25.2km az=81.0, Suspected Mining explosion.*
ISC 29 07:09:49.6±1.0, 53.8ºN±0.1º×90.86E±0.0º, h0km, n11, σ1º68/13, 4C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.58**	**275**	*i*

VIE **29** *07:24:18.6±0.2,46.12N×13.87E,h3km±2km,mb3.6/12, ml4.2/13,Error ellipse: s-maj=1.5km s-min=1.1km az=171.0 13 km SE of Tolmin*
PDG **29** *07:24:18.6±0.7,46.06N×13.86E,h14km,ML3.5/13,Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
NEIC **29** *07:24:18.0±1.1,46.07N±0.05×13.85E±0.06,h4km±2km, Error ellipse: s-maj=7.9km s-min=5.0km az=220.0*
LJU **29** *07:24:18.1,46.10N×13.87E,h15km,ML3.4*
PRU **29** *07:24:18.7±0.0,46.10N×13.86E,h0km*
ROM **29** *07:24:18.4±0.2,46.09N±0.010×13.87E±0.01,h9km±1km, ML3.7/61,Mw3.4,Error ellipse: s-maj=0.9km s-min=0.7km az=207.0,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.33; $M_{\theta\theta}$-1.34; $M_{\phi\phi}$1.67; $M_{r\theta}$0.63; $M_{\theta\phi}$0.08; $M_{\phi r}$-0.12; Fault plane solution: $M_0$1.66455×10^{14} NP1:ϕ_s224.00000°,δ70.00000°,λ-17.00000°. NP2: ϕ_s319.00000°,δ74.00000°,λ-159.00000°.*
RHSSO **29** *07:24:19.0±0.6,46.10N×13.83E,h2km±1km,ML3.8/15*
BEO **29** *07:24:19.3±0.6,46.09N×13.87E,h6km±2km,ML3.6/10*
LDG **29** *07:24:20.0±0.1,46.08N×13.91E,h2km,Ml3.3/43,Error ellipse: s-maj=1.9km az=176.0*
BGR **29** *07:24:21.3±0.3,46.19N×13.88E,h10km,ML4.1/24,Error ellipse: s-maj=5.6km s-min=5.6km az=35.0*

ISC 29 07:24:19.0±0.8,46°07'N±0'01×13°83'E±0'01,h18km±3km, **n351,σ1s79/529,48C-16D,Austria**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VOJS	**Vojsko**	**0.05**	**135**	*i*	Pg		**Pg**	**07 24 21.7**	**-0.8**
VOJS				*i*	Sg		**Sg**	**07 24 23.7**	**-1.1**
	comp=Z,5μm,0.1s								
DRE	**Drenchia**	**0.17**	**309**	↑ *e*	Pg		**Pg**	**07 24 22.8**	**-0.8**
DRE				*e*	Sg		**Sg**	**07 24 26.2**	**-0.6**
CADS	**Cadrg**	**0.17**	**338**	↓ *i*	Pg		**Pg**	**07 24 22.5**	**-1.1**
CADS				*i*	Sg		**Sg**	**07 24 25.4**	**-1.4**
	comp=Z,12μm,0.2s								
SABO	**M.te Sabotino**	**0.18**	**241**	↑ *e*	Pg		**Pg**	**07 24 23.3**	**-0.5**
SABO				*e*	Sg		**Sg**	**07 24 26.9**	**-0.1**
SABO	**M.te Sabotino**	**0.18**	**241**		P		**Pg**	**07 24 23.3**	**-0.5**
SABO					S		**Sg**	**07 24 26.9**	**-0.1**
SABO					AML		AML		
	comp=E,94400μm,0.8s								
SABO					AML		AML		
JAVS	**Javornik**	**0.24**	**137**	↑ *i*	Pg		**Pg**	**07 24 24.0**	**-0.6**
JAVS				*i*	Sg		**Sg**	**07 24 28.3**	**-0.2**
	comp=Z,6μm,0.2s								
GORS	**Gorjuse**	**0.27**	**25**	↓ *i*	Pg		**Pg**	**07 24 23.9**	**-1.4**
GORS				*i*	Sg		**Sg**	**07 24 27.8**	**-1.7**
	comp=Z,3μm,0.1s								
ROBS	**Robic**	**0.28**	**308**	↑ *i*	Pg		**Pg**	**07 24 24.4**	**-0.9**
ROBS				*i*	Sg		**Sg**	**07 24 28.9**	**-0.8**
	comp=Z,8μm,0.2s								
CRNS	**Crni Vrh**	**0.30**	**87**	↑ *i*	Pg		**Pg**	**07 24 24.4**	**-1.2**
CRNS				*i*	Sg		**Sg**	**07 24 29.4**	**-0.7**
	comp=Z,6μm,0.3s								
COLI	**Coloredo**	**0.32**	**282**	↑ *e*	Pg		**Pg**	**07 24 25.6**	**-0.4**
COLI				*e*	Sg		**Sg**	**07 24 31.4**	**+0.7**
TRI	**Trieste**	**0.36**	**187**	↓ *e*	Pg		**Pg**	**07 24 26.2**	**-0.5**
TRI				*e*	Sg		**Sb**	**07 24 32.8**	**+0.5**
PRED	**Cave del Predi**	**0.42**	**334**	↑ *e*	Pg		**Pg**	**07 24 26.3**	**-1.4**
PRED				*e*	Sg		**Sg**	**07 24 32.7**	**-0.8**
PRED	**Cave del Predi**	**0.42**	**334**		Pg		**Pg**	**07 24 26.3**	**-1.4**
PRED					Sg		**Sg**	**07 24 32.0**	**-1.5**
BAD	**Bernadia**	**0.44**	**293**	↑ *e*	Pg		**Pg**	**07 24 27.1**	**-1.0**
BAD				*e*	Sg		**Sg**	**07 24 34.7**	**+0.5**
GBAS	**Gorenja Brezov**	**0.45**	**107**	↑ *i*	Pg		**Pg**	**07 24 26.9**	**-1.3**
GBAS				*i*	Sg		**Sg**	**07 24 33.5**	**-0.9**
	comp=Z,1μm,0.1s								
LSR	**Lussari**	**0.46**	**333**	↑ *e*	Pg		**Pg**	**07 24 27.1**	**-1.4**
LSR				*e*	Sg		**Sg**	**07 24 34.4**	**-0.4**
PTCC	**Patocco-Chiusa**	**0.47**	**316**		P		**Pg**	**07 24 27.2**	**-1.5**
PTCC					S		**Sg**	**07 24 34.2**	**-1.0**
PTCC					AML		AML		
	comp=N,6555μm,0.5s								
PTCC					AML		AML		
	comp=E,8285μm,1.4s								
MOZS	**Mozjanca**	**0.48**	**62**	↑ *i*	Pg		**Pg**	**07 24 27.8**	**-1.0**
MOZS				*i*	Sg		**Sg**	**07 24 34.6**	**-0.8**
	comp=Z,3μm,0.2s								
LJU	**Ljubljana**	**0.49**	**93**	*e*	Pg		**Pg**	**07 24 27.9**	**-0.9**
LJU				*e*	Sg		**Sg**	**07 24 34.9**	**-0.5**
LJU	**Ljubljana**	**0.49**	**93**	↑ *i*	Pg		**Pg**	**07 24 28.0**	**-0.9**
LJU				*i*	Sg		**Sg**	**07 24 35.0**	**-0.5**
	comp=Z,1μm,0.1s								
LJU	**Ljubljana**	**0.49**	**93**	↑ *i*	Pg		**Pg**	**07 24 27.9**	**-0.9**
LJU				*e*	Sg		**Sg**	**07 24 35.0**	**-0.5**
LJU	**Ljubljana**	**0.49**	**93**		P		**Pg**	**07 24 27.9**	**-0.9**
LJU					S		**Sg**	**07 24 35.5**	**0.0**
LJU					AML		AML		
	comp=E,16500μm,0.4s								
LJU					AML		AML		
	comp=N,26900μm,0.5s								
LJU					AML		AML		
	comp=N,26900μm,0.5s								
ACOM	**Acomizza, Ital**	**0.53**	**335**	↓ *e*	Pg		**Pg**	**07 24 28.4**	**-1.4**
ACOM				*e*	Sg		**Sg**	**07 24 36.2**	**-0.7**
ACOM	**Acomizza, Ital**	**0.53**	**335**		P		**Pg**	**07 24 28.5**	**-1.2**
ACOM					S		**Sg**	**07 24 36.2**	**-0.7**
ACOM					AML		AML		
	comp=E,22100μm,0.2s								
ACOM					AML		AML		
	comp=E,22100μm,0.2s								
ACOM					AML		AML		
	comp=N,14400μm,0.8s								
CEY	**Cerknica**	**0.53**	**128**	*e*	Pg		**Pg**	**07 24 28.7**	**-1.0**
CEY				*e*	Sg		**Sg**	**07 24 36.7**	**-0.2**
CEY	**Cerknica**	**0.53**	**128**	↑ *i*	Pg		**Pg**	**07 24 28.5**	**-1.2**
CEY				*i*	Sg		**Sg**	**07 24 37.1**	**+0.3**
CEY	**Cerknica**	**0.53**	**128**	↑ *i*	Pg		**Pg**	**07 24 28.5**	**-1.2**
CEY				*e*	Sg		**Sg**	**07 24 37.0**	**+0.1**
SKDS	**Skadanscina**	**0.54**	**166**	↓ *i*	Pg		**Pg**	**07 24 29.0**	**-0.8**
SKDS				*i*	Sg		**Sb**	**07 24 37.5**	**+0.2**
	comp=Z,493nm,0.1s								
BOO	**Bordano**	**0.57**	**297**	↑ *e*	Pg		**Pg**	**07 24 29.2**	**-1.2**
BOO				*e*	Sg		**Sg**	**07 24 38.1**	**+0.1**
MYKA	**Terra Mystica**	**0.58**	**347**	*i*	Pg		**Pg**	**07 24 29.3**	**-1.3**
	comp=Z,113nm,0.1s,SNR=192								
MYKA				*i*	Sg		**Sg**	**07 24 37.3**	**-1.0**
	comp=Z,3μm,0.3s								
VNDS	**Vrh nad Dolski**	**0.61**	**87**	↑ *i*	Pg		**Pg**	**07 24 30.1**	**-1.1**
VNDS				*i*	Sg		**Sg**	**07 24 38.6**	**-0.6**
	comp=Z,1μm,0.2s								
MPRI	**Monte Prat**	**0.61**	**287**	↑ *e*	Pg		**Pg**	**07 24 30.5**	**-0.7**
MPRI				*e*	Sg		**Sg**	**07 24 40.0**	**+0.7**
KNDS	**Knezji Dol**	**0.66**	**144**	*i*	Pg		**Pg**	**07 24 30.9**	**-1.3**
KNDS				*i*	Sg		**Sg**	**07 24 40.9**	**-0.2**
	comp=Z,612nm,0.2s								
OBKA	**Obir**	**0.67**	**48**	*e*	Pg		**Pg**	**07 24 30.6**	**-1.6**
OBKA				*e*	Sg		**Sg**	**07 24 40.1**	**-1.0**
OBKA	**Obir**	**0.67**	**48**	*i*	Pg		**Pg**	**07 24 30.5**	**-1.6**
	SNR=162								
OBKA				*i*	Sg		**Sg**	**07 24 39.7**	**-1.5**
FUSE	**Fusea**	**0.67**	**301**	*e*	Pg		**Pg**	**07 24 31.3**	**-1.0**
PLRO	**Paularo**	**0.68**	**316**	↓ *e*	Pg		**Pg**	**07 24 31.2**	**-1.2**
VISS	**Visnje**	**0.75**	**110**	↑ *i*	Pb		**Pb**	**07 24 32.7**	**-0.9**
VISS				*i*	Sg		**Sb**	**07 24 42.9**	**-0.6**
	comp=Z,941nm,0.2s								
CLUD	**Cludinico**	**0.77**	**301**	↑ *e*	Pg		**Pb**	**07 24 32.2**	**-1.7**
CLUD				*e*	Sg		**Sb**	**07 24 44.2**	**+0.2**
ZOU	**Zoufplan**	**0.77**	**310**	↑ *e*	Pg		**Pb**	**07 24 32.7**	**-1.3**
ZOU				*e*	Sg		**Sb**	**07 24 44.5**	**+0.2**
ZOU	**Zoufplan**	**0.77**	**310**	↑ *e*	Pg		**Pb**	**07 24 32.8**	**-1.3**
ZOU				*e*	Sg		**Sb**	**07 24 44.4**	**+0.2**
ZOU	**Zoufplan**	**0.77**	**310**		Pg		**Pb**	**07 24 32.7**	**-1.3**
ZOU					Sg		**Sb**	**07 24 43.0**	**-1.2**
STAL	**STALIGIAL**	**0.80**	**284**		P		**Pb**	**07 24 33.7**	**-0.8**
STAL					S		**Sg**	**07 24 46.6**	**+1.2**
STAL					AML		AML		
	comp=E,7225μm,0.2s								
STAL					AML		AML		
	comp=N,9005μm,0.2s								
STAL					AML		AML		
	comp=N,7380μm,0.9s								
STAL					AML		AML		
	comp=E,7230μm,0.2s								
STAL					AML		AML		
	comp=E,9645μm,0.3s								
STAL	**STALIGIAL**	**0.80**	**284**		Pg		**Pb**	**07 24 33.5**	**-1.0**
PDKS	**Podkum**	**0.81**	**90**	↑ *i*	Pg		**Pb**	**07 24 33.8**	**-0.8**
PDKS				*i*	Sg		**Sb**	**07 24 45.0**	**-0.2**
	comp=Z,555nm,0.1s								
MLNI	**Malnisio**	**0.85**	**276**	↑ *e*	Pg		**Pb**	**07 24 34.8**	**-0.5**
GBRS	**Gornja Briga**	**0.87**	**128**	*i*	Pg		**Pb**	**07 24 35.1**	**-0.5**
GBRS				*i*	Sg		**Sb**	**07 24 47.1**	**+0.2**
	comp=Z,290nm,0.1s								
RIY	**Rijeka**	**0.87**	**148**	*e*	Pg		**Pb**	**07 24 34.7**	**-0.9**
RIY				*e*	Sg		**Sg**	**07 24 48.0**	**+0.4**
RIY	**Rijeka**	**0.87**	**148**	*e*	Pg		**Pb**	**07 24 34.2**	**-1.4**
RIY				*e*	Sg		**Sg**	**07 24 47.8**	**+0.2**
RIY	**Rijeka**	**0.87**	**148**	*i*	Pg		**Pb**	**07 24 35.1**	**-0.5**
RIY				*i*	Sg		**Sg**	**07 24 47.9**	**+0.4**
FVI	**Forni Avoltri**	**0.90**	**306**		P		**Pb**	**07 24 34.8**	**-1.4**
FVI					S		**Sb**	**07 24 48.1**	**+0.3**
FVI					AML		AML		
	comp=N,2630μm,0.3s								
FVI					AML		AML		
	comp=E,3000μm,0.5s								
CSMI	**Casera Mimoias**	**0.93**	**299**	↓ *e*	Pg		**Pb**	**07 24 35.4**	**-1.3**
CIMO	**Cimolais**	**1.00**	**285**		Pg		**Pb**	**07 24 36.5**	**-1.3**
FRE8	**Fregona**	**1.03**	**268**		P		**Pb**	**07 24 39.1**	**+0.7**
FRE8					S		**Sn**	**07 24 54.8**	**+2.3**
SOKA	**Soboth**	**1.03**	**53**	*e*	Pg		**Pb**	**07 24 37.2**	**-1.3**
	comp=E,132nm,0.2s,SNR=155								
SOKA				*i*	Sg		**Sb**	**07 24 50.8**	**-0.9**
	comp=E,1μm,0.3s								
LEGS	**Legarje**	**1.04**	**96**	↑ *i*	Pg		**Pb**	**07 24 37.8**	**-0.8**
LEGS				*e*	Sg		**Sg**	**07 24 53.3**	**+0.3**
PERS	**Pernice**	**1.06**	**57**	↑ *i*	Pg		**Pb**	**07 24 37.4**	**-1.4**
PERS				*e*	Sg		**Sb**	**07 24 51.3**	**-1.1**
	comp=Z,2μm,0.2s								
KBA	**Koelnbreinsper**	**1.06**	**342**	*e*	Pg		**Pb**	**07 24 38.4**	**-0.7**
KBA				*e*	Sg		**Sb**	**07 24 52.9**	**+0.2**
KBA	**Koelnbreinsper**	**1.06**	**342**		Pg		**Pb**	**07 24 38.0**	**-1.1**
	SNR=114								
KBA				*e*	Sg		**Sb**	**07 24 52.9**	**+0.2**
	comp=Z,442nm,0.2s								
BISS	**Bistriski jare**	**1.07**	**57**	↑ *i*	Pg		**Pb**	**07 24 37.7**	**-1.3**
BISS				*i*	Sg		**Sb**	**07 24 51.9**	**-0.8**
	comp=Z,564nm,0.1s								
ABTA	**Abfaltersbach**	**1.14**	**307**	*i*	Pg		**Pn**	**07 24 40.4**	**+0.2**
	comp=Z,47nm,0.4s,SNR=158								
ABTA				*i*	Sg		**Sb**	**07 24 56.1**	**+1.4**
	comp=Z,216nm,0.2s								
CESS	**Cesta pri Krsk**	**1.14**	**94**	↑ *i*	Pg		**Pn**	**07 24 39.6**	**-0.5**
CESS				*i*	Sg		**Sb**	**07 24 55.7**	**+1.0**
	comp=Z,619nm,0.2s								
BOJS	**Bojanci**	**1.14**	**119**	*i*	Pg		**Pn**	**07 24 40.3**	**+0.2**
BOJS				*i*	Sg		**Sn**	**07 24 55.8**	**+0.5**
	comp=Z,442nm,0.2s								
BOJS	**Bojanci**	**1.14**	**119**		P		**Pn**	**07 24 39.7**	**-0.4**
BOJS					S		**Sb**	**07 24 55.3**	**+0.6**
BOJS					AML		AML		
	comp=E,2175μm,1.3s								
BOJS					AML		AML		
	comp=N,3730μm,0.5s								
DOBS	**Dobrina**	**1.14**	**85**	↑ *i*	Pg		**Pn**	**07 24 39.4**	**-0.8**
DOBS				*i*	Sg		**Sn**	**07 24 56.5**	**+1.2**
	comp=Z,481nm,0.2s								
CRES	**Cresnjev**	**1.16**	**101**	↑ *i*	Pg		**Pn**	**07 24 39.9**	**-0.5**
CRES				*i*	Sg		**Sn**	**07 24 56.6**	**+0.9**
	comp=Z,289nm,0.2s								
CRES	**Cresnjev**	**1.16**	**101**	↑ *i*	Pg		**Pn**	**07 24 39.8**	**-0.5**
CRES				*e*	Sg		**Sb**	**07 24 56.0**	**+0.7**
GROS	**Grobnik**	**1.22**	**71**	↑ *i*	Pg		**Pn**	**07 24 40.5**	**-0.8**
	comp=Z,685nm,0.3s								
OZLJ	**Ozalj**	**1.23**	**111**	*i*	Pg		**Pn**	**07 24 41.3**	**0.0**
OZLJ					Sg		**Sn**	**07 24 58.0**	**+0.6**
GOLS	**Golise**	**1.25**	**92**	*i*	Pg		**Pn**	**07 24 41.5**	**-0.1**
GOLS				*i*	Sg		**Sn**	**07 24 59.2**	**+1.1**
	comp=Z,885nm,0.4s								
GCIS	**Gornji Cirnik**	**1.27**	**98**	↑ *i*	Pg		**Pn**	**07 24 41.8**	**0.0**
GCIS				*i*	Sg		**Sn**	**07 24 59.6**	**+1.2**
	comp=Z,197nm,0.2s								
CGRP	**Cima Grappa**	**1.43**	**263**		P		**Pn**	**07 24 45.2**	**+1.0**
CGRP					S		**Sb**	**07 25 05.2**	**+2.1**
CGRP					AML		AML		
	comp=N,5675μm,0.5s								
CGRP					AML		AML		
	comp=E,5840μm,0.4s								
RISI	**Rein**	**1.50**	**307**		P		**Pn**	**07 24 46.0**	**+0.8**
RISI					AML		AML		
	comp=N,9145μm,0.7s								
RISI					AML		AML		
	comp=E,7320μm,0.4s								
PTJ	**Puntijarka**	**1.50**	**95**	*i*	Pn		**Pn**	**07 24 46.1**	**+1.0**
CTI	**Castel Tesino**	**1.52**	**270**		P		**Pn**	**07 24 46.5**	**+1.1**
CTI					S		**Sb**	**07 25 07.3**	**+1.6**
CTI					AML		AML		
	comp=N,9050μm,0.3s								
CTI					AML		AML		
	comp=E,9225μm,0.4s								
CTI	**Castel Tesino**	**1.52**	**270**				**Pn**	**07 24 46.5**	**+1.1**
ZAG	**Zagreb**	**1.52**	**98**	*e*	Pn		**Pn**	**07 24 46.9**	**+1.6**
ZAG				*e*	Sn		**Sg**	**07 25 08.2**	**0.0**
ZAG	**Zagreb**	**1.52**	**98**	*i*	Pn		**Pb**	**07 24 47.1**	**+0.4**
BRES	**Bressanone**	**1.58**	**294**		P		**Pn**	**07 24 48.3**	**+1.8**
BRES					AML		AML		
	comp=E,2870μm,0.8s								
BRES					AML		AML		
	comp=N,3935μm,1.0s								
BRES					AML		AML		
	comp=E,2880μm,0.8s								
ARSA	**Arzberg**	**1.66**	**44**	*e*	Pn		**Pn**	**07 24 47.6**	**+0.3**
ARSA				*e*	Sg		**Sn**	**07 25 09.7**	**+1.6**
ARSA	**Arzberg**	**1.66**	**44**	*e*	Pn		**Pn**	**07 24 48.2**	**+1.0**
	comp=E,154nm,0.3s,SNR=102								
ARSA				*e*	Sg		**Sn**	**07 25 09.2**	**+1.0**
	comp=E,188nm,0.3s								
ARSA	**Arzberg**	**1.66**	**44**		P		**Pn**	**07 24 47.7**	**+0.5**
ARSA					AML		AML		
	comp=E,793μm,1.5s								
ARSA					AML		AML		
	comp=N,746μm,0.6s								
NVLJ	**Novalja**	**1.67**	**154**	*i*	Pn		**Pb**	**07 24 49.0**	**-0.3**
NVLJ					Sn		**Sg**	**07 25 12.3**	**-0.7**
KOGS	**Kog**	**1.72**	**76**	↑ *i*	Pn		**Pn**	**07 24 49.9**	**+1.8**
KOGS				*e*	Sn		**Sb**	**07 25 12.8**	**+1.4**
	comp=Z,412nm,0.3s								
KOGS	**Kog**	**1.72**	**76**		P		**Pn**	**07 24 49.7**	**+1.6**
KOGS					AML		AML		
	comp=E,1785μm,0.4s								
KOGS					AML		AML		
	comp=N,3250μm,0.8s								
KOGS					AML		AML		
	comp=E,5740μm,0.7s								
KOGS					AML		AML		
	comp=N,8170μm,0.7s								
KOSI	**Kohlern**	**1.75**	**284**		P		**Pn**	**07 24 50.3**	**+1.7**
KOSI					AML		AML		
	comp=E,2905μm,0.5s								
KOSI					AML		AML		
	comp=N,2895μm,0.9s								
MOA	**Molln**	**1.81**	**9**	*e*	Pn		**Pn**	**07 24 51.1**	**+1.8**
MOA				*e*	Sn		**Sn**	**07 25 13.8**	**+2.0**
MOA	**Molln**	**1.81**	**9**	*e*	Pn		**Pn**	**07 24 50.6**	**+1.3**
MOA	**Molln**	**1.81**	**9**	*e*	Pn		**Pn**	**07 24 50.8**	**+1.5**
	comp=N,50nm,0.2s,SNR=63								
MOA				*i*	Sn		**Sn**	**07 25 13.0**	**+1.2**
	comp=N,150nm,0.4s								
RJOB	**Jochberg**	**1.81**	**337**	*e*	Pg		**Pn**	**07 24 52.1**	**+2.6**
RJOB				*e*	Sg		**Sb**	**07 25 16.7**	**+2.6**
RJOB	**Jochberg**	**1.81**	**337**	*e*	Pn		**Pn**	**07 24 52.0**	**+2.6**
RJOB				*e*	Pg		**Pb**	**07 24 53.0**	**+1.3**
RJOB				*e*	Sg		**Sb**	**07 25 16.7**	**+2.6**
KALN	**Kalnik**	**1.83**	**87**	*i*	Pn		**Pn**	**07 24 51.6**	**+2.0**
APPI	**Appiano**	**1.85**	**284**		P		**Pn**	**07 24 51.7**	**+1.7**
APPI					AML		AML		
	comp=N,2710μm,0.5s								
APPI					AML		AML		
	comp=E,1835μm,0.6s								
ABSI	**Aberstueckl**	**1.86**	**292**		AML		AML		
	comp=N,8590μm,0.5s								
ABSI					AML		AML		
	comp=E,5915μm,1.1s								
ROSI	**Rosskopf**	**1.88**	**298**		AML		AML		
	comp=E,2420μm,0.6s								
ROSI					AML		AML		
	comp=N,2530μm,1.5s								
WTTA	**Wattenberg**	**1.93**	**309**	*e*	Pn		**Pn**	**07 24 53.2**	**+2.2**
	comp=N,82nm,0.3s,SNR=96								
WTTA				*i*	Sg		**Sb**	**07 25 19.7**	**+2.2**
	comp=N,724nm,0.4s								
WTTA	**Wattenberg**	**1.93**	**309**		P		**Pn**	**07 24 53.3**	**+2.2**
WTTA					AML		AML		
	comp=N,1590μm,0.9s								
WTTA					AML		AML		
	comp=E,1905μm,0.6s								
ROVR	**Rover Verones**	**1.97**	**259**		P		**Pn**	**07 24 52.5**	**+0.9**
ROVR					AML		AML		
	comp=E,1060μm,0.4s								
ROVR					AML		AML		
	comp=N,1870μm,1.4s								
ROVR					AML		AML		
	comp=N,4695μm,1.4s								
ROVR					AML		AML		
	comp=E,2690μm,0.4s								
WATA	**Walderalm**	**2.00**	**310**	*e*	Pn		**Pn**	**07 24 54.4**	**+2.3**
	comp=E,30nm,0.2s,SNR=43								
WATA				*i*	Sg		**Sb**	**07 25 22.2**	**+2.6**
	comp=E,292nm,0.5s								
UDBI	**Udbina**	**2.06**	**138**	*i*	Pn		**Pb**	**07 24 55.4**	**-0.5**
BEHE	**Becsehely**	**2.08**	**78**	*e*	Pn		**Pn**	**07 24 55.0**	**+2.0**
BEHE				*e*	Sn		**Sn**	**07 25 20.7**	**+2.2**
MOSL	**Moslavina**	**2.09**	**101**	*e*	Pn		**Pb**	**07 24 57.0**	**+0.6**
MOSL					Sn		**Sb**	**07 25 23.5**	**+1.4**
SQTA	**Sankt Quirin**	**2.14**	**303**	*i*	Pn		**Pn**	**07 24 56.7**	**+2.7**
	comp=E,109nm,0.3s,SNR=64								
SQTA				*e*	Sg		**Sb**	**07 25 26.6**	**+3.0**
	comp=E,200nm,0.4s								
PESA	**Pesaro**	**2.24**	**199**		P		**Pn**	**07 24 56.2**	**+1.0**
PESA					AML		AML		
	comp=E,1245μm,0.9s								
PESA					AML		AML		
	comp=N,1355μm,0.8s								
DUGI	**Dugi Otok**	**2.25**	**157**	*e*	Pn		**Pn**	**07 24 56.6**	**+1.2**
MAGA	**Magasa**	**2.25**	**264**		P		**Pn**	**07 24 56.7**	**+1.2**
MAGA					AML		AML		
	comp=E,5465μm,0.6s								
MAGA					AML		AML		
	comp=N,3295μm,0.4s								
MOTA	**Moosalm**	**2.27**	**305**	*i*	Pn		**Pn**	**07 24 58.4**	**+2.7**
	SNR=37								
MABI	**Malga Bissina**	**2.31**	**271**		P		**Pn**	**07 24 57.5**	**+1.2**
MABI					AML		AML		
	comp=E,800μm,0.4s								
MABI					AML		AML		
	comp=N,828μm,1.6s								
CONA	**Conrad Observa**	**2.32**	**36**	*e*	Pn		**Pn**	**07 24 57.4**	**+1.0**
	comp=N,3.8nm,0.2s,SNR=31								
CONA				*e*	Sg		**Sb**	**07 25 32.9**	**+4.1**
	comp=N,220nm,0.5s								
MOSI	**Grossmontoni**	**2.34**	**285**		P		**Pn**	**07 24 58.5**	**+1.7**
MOSI					AML		AML		
	comp=E,3175μm,0.6s								
MOSI					AML		AML		
	comp=N,4115μm,0.5s								
FETA	**Feichten**	**2.34**	**295**	*e*	Pn		**Pn**	**07 24 59.7**	**+2.9**
	comp=N,52nm,0.3s,SNR=54								
FETA				*e*	Sg		**Sb**	**07 25 32.9**	**+3.5**
	comp=N,111nm,0.4s								
SALO	**Salr**	**2.35**	**260**		P		**Pn**	**07 24 58.5**	**+1.7**
SALO					AML		AML		
	comp=E,3260μm,0.6s								
SALO					AML		AML		
	comp=E,3185μm,0.6s								
SALO					AML		AML		
	comp=N,2660μm,0.4s								
SALO					AML		AML		
	comp=N,2730μm,0.4s								
SALO	**Salr**	**2.35**	**260**				**Pn**	**07 24 57.2**	**+0.4**
BRMO	**Bormio**	**2.43**	**281**		AML		AML		
	comp=N,483μm,1.5s								
BRMO					AML		AML		
	comp=E,522μm,0.4s								
FSSB	**Fossombrone**	**2.49**	**198**		P		**Pn**	**07 24 59.5**	**+0.8**
FSSB					AML		AML		
	comp=E,1300μm,0.7s								
FSSB					AML		AML		
	comp=N,1545μm,0.4s								
COR1	**Corinaldo**	**2.51**	**194**		AML		AML		
	comp=N,965μm,0.8s								
COR1					AML		AML		
	comp=E,560μm,1.4s								
CPGN	**Carpegna, Ital**	**2.51**	**206**		P		**Pn**	**07 25 00.2**	**+1.2**
CPGN					AML		AML		
	comp=E,700μm,0.8s								
CPGN					AML		AML		
	comp=N,660μm,0.7s								
FUORN	**Ofenpass-Fuorn**	**2.53**	**284**		P		**Pn**	**07 25 01.0**	**+1.6**
FUORN					AML		AML		
	comp=N,716μm,0.4s								
FUORN					AML		AML		
	comp=E,492μm,0.6s								
FUORN	**Ofenpass-Fuorn**	**2.53**	**284**				**Pn**	**07 25 00.3**	**+0.9**
RETA	**Reutte**	**2.54**	**305**	*i*	Pn		**Pn**	**07 25 02.0**	**+2.5**
	comp=E,3.2nm,0.1s,SNR=27								
RETA				*e*	Sn		**Sb**	**07 25 36.1**	**+1.1**
	comp=E,110nm,0.4s								
MPAG	**Monte Paganucc**	**2.56**	**198**		P		**Pn**	**07 25 00.4**	**+

DAVOX AML AML
comp=N,414µm,0.8s
MGRS Mrkonjic Grad 2.83 125 *e*Pn **Pn 07 25 05.2 +1.9**
MGRS *e*Sn **Sn 07 25 40.1 +3.1**
ATVO AVT- Monte Val 2.87 201 AML AML
comp=E,566µm,0.6s
ATVO AML AML
comp=N,812µm,0.7s
FOSV Fossato di Vic 2.88 196 AML AML
comp=N,486µm,0.6s
FOSV AML AML
comp=E,390µm,0.5s
SNTG Esanatoglia 2.88 193 P **Pn 07 25 05.0 +0.9**
SNTG AML AML
comp=E,363µm,0.8s
SNTG AML AML
comp=N,376µm,0.7s
MDI Monti di Nese 2.89 266 AML AML
comp=E,670µm,1.3s
MDI AML AML
comp=N,704µm,0.9s
MDI AML AML
comp=N,730µm,0.8s
MDI AML AML
comp=E,662µm,1.3s
MURB Monte Urbino 2.96 199 AML AML
comp=E,1320µm,0.4s
MURB AML AML
comp=N,840µm,0.4s
MURB Monte Urbino 2.96 199 Pn **Pn 07 25 06.1 +1.0**
DAVA Damuels 2.98 296 *e*Pn **Pn 07 25 08.0 +2.5**
DAVA Damuels 2.98 296 *i* Pn **Pn 07 25 08.0 +2.5**
SNR=24
DAVA *e*Sg **Sg 07 25 54.5 -0.3**
ATCC AVT- Casa Cast 3.00 197 AML AML
comp=N,972µm,0.5s
ATCC AML AML
comp=E,910µm,0.6s
UBR Ueberruh 3.02 304 *e*Pn **Pn 07 25 08.1 +2.1**
UBR *e*Pg **Pb 07 25 15.5 +3.2**
UBR Ueberruh 3.02 304 *e*Pn **Pn 07 25 08.1 +2.1**
UBR *e*Pg **Pb 07 25 15.5 +3.2**
CAFI Castiglion Fio 3.04 207 AML AML
comp=E,324µm,1.1s
CAFI AML AML
comp=N,262µm,0.6s
ATTE AVT- Monte Tez 3.06 201 AML AML
comp=E,404µm,1.0s
ATTE AML AML
comp=N,398µm,0.4s
KHC Kasperske Hory 3.07 357 *e*PN **Pn 07 25 07.5 +0.9**
KHC *e*PG **Pb 07 25 15.4 +2.3**
KHC *e*SG **Sg 07 25 56.3 -1.3**
comp=N,130nm,0.6s
KHC Kasperske Hory 3.07 357 **Pn 07 25 07.2 +0.5**
FDMO Fiordimonte 3.08 190 P **Pn 07 25 07.4 +0.7**
FDMO AML AML
comp=N,312µm,0.6s
FDMO AML AML
comp=E,316µm,0.5s
ZST Bratislava 3.09 45 *e*PN **Pn 07 25 08.0 +1.2**
ZST *e*SG **Sg 07 25 57.8 -0.3**
ZST *e*LG Lg 07 25 59.6
GRAM Graiana 3.09 241 AML AML
comp=E,514µm,0.9s
GRAM AML AML
comp=N,741µm,0.6s
VLC Villacollemand 3.10 233 **Pn 07 25 07.1 +0.1**
CESI CESI - Serrava 3.13 193 P **Pn 07 25 08.3 +0.7**
CESI AML AML
comp=E,83µm,0.7s
CESI AML AML
comp=N,240µm,0.8s
TUE Stuetta 3.14 279 **Pn 07 25 09.3 +1.6**
ASSB Assisi San Ben 3.14 196 AML AML
comp=E,424µm,0.6s
ASSB AML AML
comp=N,438µm,0.6s
OSSC Osservatorio P 3.14 217 **Pn 07 25 08.8 +1.2**
WET Wettzell 3.15 349 *e*Pn **Pn 07 25 08.4 +0.7**
WET *e*Sn **Sn 07 25 43.9 -0.8**
WET Wettzell 3.15 349 *e*Pn **Pn 07 25 08.4 +0.7**
WET *e*Sn **Sn 07 25 43.9 -0.8**
PLONS Plons/SG 3.22 289 *e*Pn **Pn 07 25 11.3 +2.5**
PLONS Plons/SG 3.22 289 AML AML
comp=E,126µm,1.4s
PLONS AML AML
comp=N,312µm,0.7s
NRCA Norcia 3.27 189 P **Pn 07 25 10.1 +0.6**
NRCA AML AML
comp=E,197µm,1.3s
NRCA AML AML
comp=N,238µm,0.6s
NRCA Norcia 3.27 189 **Pn 07 25 10.1 +0.6**
MODS Modra-Piesok 3.29 44 *e*PN **Pn 07 25 09.4 -0.3**
MODS *e*PG **Pb 07 25 20.7 +3.8**
MODS *e*SG **Sg 07 26 02.9 -1.9**
MODS *e*LG Lg 07 26 08.4
PII Pisa 3.32 226 AML AML
comp=N,412µm,0.4s
PII AML AML
comp=E,411µm,0.5s
MGAB Montegabbione 3.39 202 AML AML
comp=E,444µm,0.6s
MGAB AML AML
comp=N,378µm,0.5s
TREC Trest 3.42 19 *e*PN **Pn 07 25 11.3 -0.1**
TREC *e*SG **Sb 07 26 06.1 +5.9**
comp=N,47nm,0.5s
KRUC Moravsky 3.46 29 *e*PN **Pn 07 25 11.9 -0.1**
KRUC *e* 07 25 20.3
KRUC Moravsky 3.46 29 *e*SB **Sb 07 26 05.3 +3.8**
RICI Ricice 3.49 136 *i* Pn **Pn 07 25 15.1 +2.8**
SACS San Casciano d 3.50 204 AML AML
comp=N,197µm,0.9s
SACS AML AML
comp=E,156µm,0.6s
LNSS Leonessa 3.51 190 P **Pn 07 25 13.7 +0.9**
LNSS AML AML
comp=E,281µm,0.9s
LNSS AML AML
comp=N,262µm,0.6s
MSSA Maissana 3.52 242 P **Pn 07 25 15.0 +2.2**
MSSA AML AML
comp=N,294µm,0.9s
MSSA AML AML
comp=E,224µm,0.8s
MSSA Maissana 3.52 242 **Pn 07 25 14.8 +1.9**
PBCC Pribram 3.62 2 *e*PG **Pb 07 25 24.5 +2.0**
PBCC *e*SG **Sg 07 26 13.8 -1.5**
VRAC Vranov 3.74 29 *e*PN **Pn 07 25 16.5 +0.7**
VRAC *e* 07 25 24.3
VRAC Vranov 3.74 29 *e*SB **Sb 07 26 14.1 +4.6**
VRAC Vranov 3.74 29 ⇓P **Pb 07 25 24.5 0.0**
LATE Laterza 3.75 204 Pn **Pn 07 25 16.6 +0.7**
JAVC Velka Javorina 3.82 42 *e*PN **Pn 07 25 18.3 +1.3**
BNALP Bannalp 3.82 284 AML AML
comp=N,166µm,1.2s
BNALP AML AML
comp=E,186µm,0.7s
ROTZ Rotzenmuhle 3.86 344 *e*Pn **Pn 07 25 17.3 -0.2**
ROTZ *e*Sn **Sn 07 26 02.0 -0.3**
ROTZ *e*Sg **Sg 07 26 20.4 -2.5**
ROTZ Rotzenmuhle 3.86 344 *e*Pn **Pn 07 25 17.3 -0.2**
ROTZ *e*Sn **Sn 07 26 02.0 -0.3**
GOPC GO Pecny, Ondr 3.90 9 *e*PN **Pn 07 25 19.5 +1.4**
GOPC *e*PG **Pb 07 25 30.9 +3.6**
GOPC *e*SG **Sg 07 26 21.8 -2.5**
comp=E,67nm,0.4s
CASP Castiglione de 3.90 214 Pn **Pn 07 25 17.9 -0.2**
PRU Pruhonice 3.95 7 *e*PN **Pn 07 25 20.0 +1.3**
PRU *e*PG **Pb 07 25 31.3 +3.2**
PRU *e*SG **Sg 07 26 23.1 -2.8**
comp=E,51nm,0.5s
PRA Prague 4.03 6 *e*PG **Pb 07 25 33.3 +3.9**
PRA *e*SG **Sg 07 26 25.3 -2.9**
comp=E,48nm,0.8s
LPEL Lama dei Pelig 4.03 176 AML AML
comp=N,105µm,1.0s
LPEL AML AML
comp=E,146µm,1.0s
GRA1 Grafenberg Arr 4.03 335 **Pn 07 25 19.4 -0.4**
GRF Grafenberg Arr 4.03 335 *e*Pg **Pg 07 25 35.5 -0.6**
GRF *e*Sg **Sg 07 26 26.0 -2.4**
GRF Grafenberg Arr 4.03 335 *e*Pg **Pg 07 25 35.5 -0.6**
GRF *e*Sg **Sg 07 26 26.0 -2.4**
PCP Piancastagn 4.03 250 AML AML
comp=E,190µm,0.5s
PCP AML AML
comp=N,220µm,0.6s
INTR Introdacqua 4.06 179 **Pn 07 25 20.6 +0.4**
MANZ Manzenberg 4.09 344 *e*Pn **Pn 07 25 20.9 +0.2**
MANZ *e*Sn **Sn 07 26 05.0 -3.0**
MANZ *e*Sg **Sg 07 26 26.9 -3.3**
MANZ Manzenberg 4.09 344 *e*Pn **Pn 07 25 20.9 +0.2**
MANZ *e*Sn **Sn 07 26 05.0 -3.0**
MANZ *e*Sg **Sg 07 26 26.9 -3.3**
VYHS Vyhne 4.18 53 *e*PN **Pn 07 25 22.3 +0.4**
STON Ston 4.23 138 *e*Pn **Pn 07 25 24.2 +1.7**
STON Ston 4.23 138 *e*Pn **Pn 07 25 24.5 +2.0**
STON *e*Sn **Sn 07 26 13.1 +1.7**
STON Ston 4.23 138 *e*Pn **Pn 07 25 23.9 +1.4**
NKC Novy Kostel 4.27 348 *e*PN **Pn 07 25 24.7 +1.6**
NKC *e*PG Pb 07 25 38.0 +4.5
NKC *e*SG **Sg 07 26 34.1 -1.9**
comp=N,91nm,0.8s
FRGS Fruska Gora 4.29 100 *e*Pn **Pn 07 25 23.5 +0.1**
FRGS *e*Sn **Sn 07 26 14.1 +1.0**
FRGS Fruska Gora 4.29 100 *e*Pn **Pn 07 25 25.2 +1.8**
TEKS Tekeris 4.30 109 *e*Pn **Pn 07 25 23.8 +0.3**
TEKS Tekeris 4.30 109 *e*Sn **Sn 07 26 15.3 +2.2**
WERN Wernitzgruen 4.33 348 *e*Pn **Pn 07 25 24.9 +0.9**
WERN Wernitzgruen 4.33 348 *e*Pn **Pn 07 25 24.9 +0.9**
BFO Black Forest 4.38 303 *e*Pn **Pn 07 25 25.7 +1.1**
BFO *e*Sg **Sg 07 26 37.1 -2.4**
BFO Black Forest 4.38 303 *e*Pn **Pn 07 25 25.7 +1.1**
BFO *e*Sg **Sg 07 26 37.1 -2.4**
BFO Black Forest 4.38 303 Pn **Pn 07 25 25.5 +0.9**
GUNZ Gunzen 4.41 347 *e*Pn **Pn 07 25 26.4 +1.3**
GUNZ *e*Pg **Pg 07 25 41.7 -1.9**
GUNZ *e*Sg **Sg 07 26 37.3 -3.4**
GUNZ Gunzen 4.41 347 *e*Pn **Pn 07 25 26.4 +1.3**
GUNZ *e*Pg **Pg 07 25 41.7 -1.9**
GUNZ *e*Sg **Sg 07 26 37.3 -3.4**
TANN Tannenbergstha 4.45 349 *e*Pn **Pn 07 25 27.1 +1.5**
TANN *e*Sg **Sg 07 26 38.5 -3.2**
TANN Tannenbergstha 4.45 349 *e*Pn **Pn 07 25 27.1 +1.5**
TANN *e*Sg **Sg 07 26 38.5 -3.2**
MORC Moravsky Berou 4.47 33 *e*PN **Pn 07 25 26.9 +1.0**
MORC *e* 07 25 40.9
MORC Moravsky Berou 4.47 33 ⇓P **Pn 07 25 27.1 +1.2**
MORC Moravsky Berou 4.47 33 **Pn 07 25 26.9 +1.0**
PVCC Panska Ves 4.49 6 *e*PG **Pb 07 25 41.3 +4.0**
PVCC *e*SG **Sg 07 26 41.4 -1.7**
comp=N,110nm,0.7s
BBLS Lazići 4.53 117 *e*Pn **Pn 07 25 27.6 +0.9**
BBLS Lazići 4.53 117 *e*Pn **Pn 07 25 28.0 +1.3**
BBLS *e*Sn **Sn 07 26 19.6 +0.7**
SGRT San Giovanni R 4.53 162 AML AML
comp=E,158µm,1.5s
SGRT AML AML
comp=N,182µm,1.4s
SGRT San Giovanni R 4.53 162 Pn **Pn 07 25 26.4 -0.3**
PSZ Piszkesteto 4.54 64 ⇑P **Pn 07 25 29.1 +2.1**
PSZ Piszkesteto 4.54 64 **Pn 07 25 27.1 +0.1**
SENIN Lac Senin/Sane 4.54 276 **Pn 07 25 29.4 +2.3**
PLN Plauen 4.56 346 *e*Pn **Pn 07 25 28.4 +1.4**
PLN *e*Pg **Pg 07 25 45.6 -0.7**
PLN Plauen 4.56 346 *e*Pn **Pn 07 25 28.4 +1.4**
PLN *e*Pg **Pg 07 25 45.6 -0.7**
DBRK Dubrovnik 4.59 136 *e*Pn **Pn 07 25 29.6 +2.0**
DPC Dobruska-Polom 4.60 20 *e*PG **Pb 07 25 42.2 +3.1**
DPC *e*SG **Sg 07 26 43.8 -2.8**
comp=N,57nm,0.9s
MSAG Monte S. Angel 4.61 160 AML AML
comp=E,186µm,0.6s
MSAG AML AML
comp=N,366µm,0.5s
UPM Unac-Piva 4.62 127 *e*Pn **Pn 07 25 29.8 +1.8**
UPM *e*Sn **Sn 07 26 22.8 +1.5**
UPM Unac-Piva 4.62 127 ⇑*i*Pn **Pn 07 25 29.0 +0.9**
UPM *i* Sn **Sn 07 26 23.1 +1.8**
BRY Bratogost 4.62 132 *e*Pn **Pn 07 25 30.2 +2.1**
BRY *e*Sn **Sn 07 26 23.0 +1.7**
BRY Bratogost 4.62 132 ⇑*i*Pn **Pn 07 25 29.1 +1.0**
BRY *i* Sn **Sn 07 26 22.4 +1.1**
TREB Trebinje 4.66 134 *e*Sn **Sn 07 26 23.7 +1.7**
TREB Trebinje 4.66 134 *e*Pn **Pn 07 25 30.3 +1.8**
TREB *e*Sn **Sn 07 26 24.1 +2.1**
UPC Upice 4.67 17 *e*PG **Pb 07 25 44.5 +4.1**
UPC *e*SG **Sg 07 26 46.7 -2.3**
comp=N,98nm,0.8s
CHVC Chvalec 4.76 17 *e*PN **Pn 07 25 29.8 -0.1**
CHVC *e*PG **Pb 07 25 44.8 +2.9**
CHVC *e*SG **Sg 07 26 48.2 -3.6**
comp=N,97nm,1.0s
OSTC Ostas 4.76 19 *e*PN **Pn 07 25 30.0 +0.1**
OSTC *e*PG **Pb 07 25 44.9 +2.9**
OSTC *e*SG **Sg 07 26 48.3 -3.6**
comp=N,84nm,1.0s
DIVS Divibare 4.79 112 *e*Pn **Pn 07 25 30.9 +0.6**
DIVS Divibare 4.79 112 *e*Pn **Pn 07 25 31.3 +1.0**
DIVS *e*Sn **Sn 07 26 26.3 +1.0**
BRG Berggiesshubel 4.81 1 PN **Pn 07 25 33.3 +2.8**
BRG PG Pb 07 25 47.5 +4.8
BRG SG **Sg 07 26 53.2 -0.2**
comp=N,42nm,0.5s
BRG Berggiesshubel 4.81 1 *e*Pn **Pn 07 25 30.8 +0.3**
BRG *e*Pg Pb 07 25 48.0 +5.3
BRG Berggiesshubel 4.81 1 *e*Pn **Pn 07 25 30.8 +0.3**
BRG *e*Pg Pb 07 25 48.0 +5.3
MOX Moxa 4.81 343 *e*Pn **Pn 07 25 31.2 +0.6**
MOX *e*Sn **Sn 07 26 23.5 -2.3**
MOX Moxa 4.81 343 *e*Pn **Pn 07 25 31.2 +0.6**
MOX *e*Sn **Sn 07 26 23.5 -2.3**
PLE Pljevlja 4.82 123 ⇓*i*Pn **Pn 07 25 31.8 +1.1**
PLE *i* Sn **Sn 07 26 28.2 +2.1**
FBE Freiberg 4.87 356 *e*Pn **Pn 07 25 32.1 +0.8**
FBE *e*Pg Pb 07 25 49.1 +5.4
FBE *e*Sn **Sn 07 25 25.7 -1.4**
FBE *e*Sg **Sg 07 26 52.0 -3.2**
FBE Freiberg 4.87 356 *e*Pn **Pn 07 25 32.1 +0.8**
FBE *e*Pg Pb 07 25 49.1 +5.4
FBE *e*Sn **Sn 07 26 25.7 -1.4**
FBE *e*Sg **Sg 07 26 52.0 -3.2**
NKY Niksic 4.92 130 ⇓*i*Pn **Pn 07 25 32.8 +0.6**
NKY *i* Sn **Sn 07 26 29.6 +0.9**
HCY Herceg Novi 4.93 136 *e*Pn **Pn 07 25 33.5 +1.3**
HCY *e*Sn **Sn 07 26 30.1 +1.4**
HCY Herceg Novi 4.93 136 ⇓*i*Pn **Pn 07 25 33.2 +1.0**
HCY *i* Sn **Sn 07 26 30.7 +2.0**
NKME Niksic 4.93 130 ⇑*i*Pn **Pn 07 25 33.4 +1.1**
NKME *e*Sn **Sn 07 26 30.6 +1.7**
PGF Pioggiola 4.94 226 *e*Pn **Pn 07 25 33.4 +1.0**
PGF *e*Sn **Sn 07 26 27.9 -1.2**
comp=N,5.4nm,0.3s
LPG La Plagne 4.99 266 *e*Pn **Pn 07 25 34.7 +1.5**
LPG *e*Sn **Sn 07 26 30.1 -0.4**
comp=N,2.5nm,0.2s
LPL La Plagne 5.00 266 *e*Pn **Pn 07 25 35.0 +1.7**
LPL *e*Sn **Sn 07 26 30.0 -0.6**
comp=N,3.1nm,0.2s
TRUS Trudelj 5.00 109 *e*Pn **Pn 07 25 33.7 +0.5**
ECH Echery 5.03 298 Pn **Pn 07 25 34.2 +0.5**
CDF Champ du Feu 5.04 300 *e*Pn **Pn 07 25 34.5 +0.7**
CDF *e*Sn **Sn 07 26 31.3 -0.3**
comp=N,4.6nm,0.2s
SBF Sospel 5.04 246 *e*Pn **Pn 07 25 35.2 +1.4**
SBF *e*Sn **Sn 07 26 30.2 -1.4**
comp=N,15nm,0.2s
CEME Cevo 5.07 132 ⇑*i*Pn **Pn 07 25 36.5 +2.3**
CEME *e*Sn **Sn 07 26 34.0 +1.7**
HINF Hinteralfeld 5.09 293 *e*Pn **Pn 07 25 34.9 +0.5**
HINF *e*Sn **Sn 07 26 32.2 -0.5**
comp=N,6.3nm,0.2s
BNI Bardonecchia 5.12 261 **Pn 07 25 35.3 +0.3**
MBDF Montbardon 5.15 257 *e*Pn **Pn 07 25 35.2 -0.1**
MBDF *e*Sn **Sn 07 26 33.7 -0.6**
comp=N,6.5nm,0.2s
KOME Kolasin 5.19 126 ⇑*i*Pn **Pn 07 25 37.4 +1.6**
KOME *i* Sn **Sn 07 26 36.6 +1.4**
BUM Brajici-Budva 5.24 134 ⇑*i*Pn **Pn 07 25 37.6 +1.1**
BUM *i* Sn **Sn 07 26 37.1 +0.7**
CLL Collm 5.27 354 *e*Pn **Pn 07 25 38.8 +2.0**
CLL *e*Sg **Sg 07 25 05.0 -3.2**
CLL Collm 5.27 354 *e*Pn **Pn 07 25 40.0 +3.2**
CLL *i* Pg **Pg 07 25 58.5 -1.4**
CLL *e* 07 26 44.0
CLL *e* 07 26 59.0
CLL *e*Sg **Sg 07 27 06.0 -2.2**
comp=Z,131nm,1.3s
CLL Collm 5.27 354 *e*Pn **Pn 07 25 38.8 +2.0**
CLL *e*Sg **Sg 07 27 05.0 -3.2**
CLL Collm 5.27 354 **Pn 07 25 37.5 +0.7**
NEUB Neuenburg 5.32 346 *e*Sg **Sg 07 27 06.4 -3.3**
NEUB Neuenburg 5.32 346 *e*Sg **Sg 07 27 06.4 -3.3**
PDG Podgorica 5.33 131 ⇓P **Pn 07 25 40.9 +3.3**
PDG Podgorica 5.33 131 *e*Pn **Pn 07 25 39.6 +2.0**
PDG *e*Sn **Sn 07 26 39.4 +0.9**
PDG Podgorica 5.33 131 **Pn 07 25 40.0 +2.4**
TTG Podgorica 5.33 131 ⇓*i*Pn **Pn 07 25 38.5 +0.9**
TTG *i* Sn **Sn 07 26 39.4 +0.9**
GRUS Gruza 5.35 112 *e*Pn **Pn 07 25 39.2 +1.3**
IVA Berane 5.39 124 ⇑*i*Pn **Pn 07 25 39.9 +1.4**
IVA *i* Sn **Sn 07 26 40.9 +0.8**
CABF La Chapelle 5.39 279 *e*Pn **Pn 07 25 39.8 +1.2**
CABF *e*Sn **Sn 07 26 39.7 -0.5**
comp=Z,2.1nm,0.2s
UBBA Unterbreizbach 5.39 333 *e*Pn **Pn 07 25 42.1 +3.7**
SIRR Siria 5.44 85 ⇑P **Pn 07 25 39.0 -0.2**
DRME Dracevica, Mon 5.47 133 *e*Pn **Pn 07 25 41.7 +2.1**
DRME *e*Sn **Sn 07 26 42.6 +0.6**
DRME Dracevica, Mon 5.47 133 ⇓*i*Pn **Pn 07 25 40.9 +1.3**
DRME *i* Sn **Sn 07 26 43.4 +1.4**
HAU Haudompre 5.47 293 *e*Pn **Pn 07 25 40.2 +0.6**
HAU *e*Sn **Sn 07 26 41.7 -0.3**
comp=Z,15nm,0.3s
TNS Taunus Mts 5.50 321 *e*Pn **Pn 07 25 42.3 +2.3**
TNS Taunus Mts 5.50 321 *e*Pn **Pn 07 25 42.3 +2.3**
PVY Plav 5.60 126 ⇑*i*Pn **Pn 07 25 42.7 +1.2**
PVY *i* Sn **Sn 07 26 46.7 +1.3**
ULC Ulcinj 5.66 135 ⇑*i*Pn **Pn 07 25 43.7 +1.4**
ULC *i* Sn **Sn 07 26 47.6 +0.8**
FRF La Foret Royal 5.69 246 *e*Pn **Pn 07 25 43.9 +1.3**
FRF *e*Sn **Sn 07 26 46.3 -1.2**
comp=Z,4.5nm,0.2s
MDVR Moldovita 5.70 100 ⇓P Pn 07 25 30.4 -12
ORIF Oris-en-Rattie 5.71 261 *e*Pn **Pn 07 25 46.0 +3.1**
ORIF *e*Sn **Sn 07 26 47.0 -1.0**
comp=Z,6.2nm,0.3s
LMR La Mourre 5.89 245 *e*Pn **Pn 07 25 46.3 +1.0**
LMR *e*Sn **Sn 07 26 49.3 -3.0**
comp=Z,12nm,0.2s
SELS Selova 5.93 116 *e*Pn **Pn 07 25 46.7 +0.8**
GTTG Gottingen 6.05 336 *e*Sg **Sg 07 27 29.9 -3.0**
GTTG Gottingen 6.05 336 *e*Sg **Sg 07 27 29.9 -3.0**
PAGF Fort de Pagny 6.05 297 *e*Pn **Pn 07 25 49.2 +1.7**
baz=119
PAGF *e*Sn **Sn 07 26 54.9 -1.3**
comp=Z,3.4nm,0.2s
HERR Herculane 6.15 98 ⇑P **Pn 07 25 49.6 +0.7**
CLZ Clausthal 6.21 340 *e*Sg **Sg 07 27 32.9 -5.3**
CLZ Clausthal 6.21 340 *e*Sg **Sg 07 27 32.9 -5.3**
SMRF Simiane la Rot 6.21 253 *e*Pn **Pn 07 25 51.1 +1.3**
SMRF *e*Sn **Sn 07 26 59.1 -1.3**
comp=Z,3.4nm,0.3s
WLF Walferdange 6.29 308 *e*Pn **Pn 07 25 54.7 +3.8**
WLF Walferdange 6.29 308 *e*Pn **Pn 07 25 54.7 +3.8**
GZR Gura Zlata 6.30 93 ⇑P **Pn 07 25 51.1 0.0**
SFTF Sexfontaines 6.37 293 *e*Pn **Pn 07 25 52.7 +0.8**
SFTF *e*Sn **Sn 07 27 03.2 -0.9**
comp=Z,2.2nm,0.2s
ZAGS Zajecar 6.38 108 *e*Pn **Pn 07 25 52.3 +0.3**
ASSE Asse, Remlinge 6.41 342 *e*Sg **Sg 07 27 41.5 -3.1**
ASSE Asse, Remlinge 6.41 342 *e*Sg **Sg 07 27 41.5 -3.1**
MEZF Maizieres J'vi 6.45 295 *e*Pn **Pn 07 25 54.7 +1.7**
baz=110
MEZF *e*Sn **Sn 07 27 04.1 -2.0**
comp=Z,2.1nm,0.2s
VIVF Saint-Julien-l 6.55 263 *e*Pn **Pn 07 25 55.3 +0.8**
VIVF *e*Sn **Sn 07 27 07.4 -1.4**
comp=Z,2.2nm,0.2s
BARS Barje 6.57 117 *e*Pn **Pn 07 25 54.9 +0.1**
ZAPS Zavoj 6.87 111 *e*Pn **Pn 07 25 58.8 0.0**
NRDL Niedersach Rie 6.88 341 *e*Sg **Sg 07 28 00.5 +1.0**
SCTE Santa Cesarea 6.89 149 Pn **Pn 07 25 58.6 -0.4**
SMF Signal de Mont 6.94 278 *e*Pn **Pn 07 26 00.8 +1.1**
SMF *e*Sn **Sn 07 27 16.0 -2.2**
comp=Z,4.8nm,0.2s
LOR Lormes 6.97 284 *e*Pn **Pn 07 26 00.4 +0.3**
baz=105
LOR Lormes 6.97 284 *e*Pg **Pg 07 26 29.5 -2.8**
LOR *e*Sn **Sn 07 27 16.2 -2.7**
comp=Z,5.5nm,0.2s
SSF Saint Saulge 7.19 282 *e*Pn **Pn 07 26 03.8 +0.6**
SSF Saint Saulge 7.19 282 *e*Pg **Pg 07 26 33.7 -2.8**
SSF *e*Sn **Sn 07 27 22.2 -2.1**
comp=Z,2.9nm,0.3s
GIVF Givet 7.26 307 *e*Pn **Pn 07 26 05.5 +1.4**
GIVF *e*Sn **Sn 07 27 23.9 -2.0**
comp=Z,4.9nm,0.3s
AVF Avril sur Loir 7.28 279 *e*Pn **Pn 07 26 05.0 +0.6**
AVF *e*Sn **Sn 07 27 25.0 -1.5**
comp=Z,0.3nm,0.2s
LASF Ste Croix 7.34 258 *e*Pn **Pn 07 26 06.0 +0.8**
LASF *e*Sn **Sn 07 27 25.9 -2.1**
comp=Z,5.0nm,0.3s
BAIF Baives 7.58 305 *e*Pn **Pn 07 26 10.2 +1.7**
BAIF *e*Sn **Sn 07 27 32.6 -1.3**
comp=Z,0.6nm,0.2s
BGF Bois d'Agland 7.62 278 *e*Pn **Pn 07 26 10.2 +1.1**
BGF *e*Sn **Sn 07 27 32.8 -2.2**
comp=Z,4.9nm,0.2s
HYF Humbligny 7.79 283 *e*Pn **Pn 07 26 12.7 +1.2**
HYF *e*Sn **Sn 07 27 37.3 -1.9**
TCF Toulx Ste Croi 8.07 276 *e*Pn **Pn 07 26 16.3 +1.0**
TCF *e*Sn **Sn 07 27 43.5 -2.5**
comp=Z,0.9nm,0.2s
CLF Chambon-Foret 8.14 288 **Pn 07 26 17.4 +1.1**
CAF Calviac 8.35 266 *e*Pn **Pn 07 26 20.0 +0.9**
CAF *e*Sn **Sn 07 27 50.1 -2.7**
comp=Z,0.4nm,0.2s
RJF Les Rejaudoux 8.66 269 *e*Pn **Pn 07 26 24.1 +0.8**
RJF *e*Sn **Sn 07 27 57.6 -2.8**
comp=Z,0.5nm,0.1s
MTLF Montolieu 8.71 256 *e*Pn **Pn 07 26 24.7 +0.7**
MTLF *e*Sn **Sn 07 27 58.5 -3.2**
comp=Z,1.1nm,0.3s
LFF La Frestale 9.26 268 *e*Pn **Pn 07 26 32.3 +0.7**
LFF *e*Sn **Sn 07 28 11.8 -3.5**
comp=Z,0.7nm,0.2s
MFF Saint Martin d 9.69 278 *e*Pn **Pn 07 26 38.5 +1.1**
MFF *e*Sn **Sn 07 28 22.2 -3.4**
comp=Z,0.8nm,0.2s
LDF La Druitiere 9.81 290 *e*Pn **Pn 07 26 39.3 +0.3**
LDF *e*Sn **Sn 07 28 25.3 -3.3**
comp=Z,0.5nm,0.2s
FLN La Foliniere 10.07 291 *e*Pn **Pn 07 26 43.9 +1.3**
baz=122
FLN *e*Sn **Sn 07 28 31.4 -3.6**
comp=Z,0.7nm,0.2s
EPF Esparros 10.10 257 *e*Pn **Pn 07 26 44.1 +1.0**
EPF *e*Sn **Sn 07 28 31.4 -4.5**
comp=Z,0.5nm,0.2s
GRR Gorron 10.26 288 *e*Pn **Pn 07 26 46.2 +1.0**
GRR *e*Sn **Sn 07 28 35.9 -3.8**
comp=Z,0.4nm,0.2s
ETSF Etsaut 10.76 258 *e*Pn **Pn 07 26 53.2 +1.0**
SJPF Ste Jean 11.14 260 *e*Pn **Pn 07 26 57.8 +0.5**
SJPF Ste Jean 11.14 260 *e*Pg Pn 07 27 46.4 +49
comp=Z,0.6nm,0.2s
SGMF Saint Gilles 11.37 287 *e*Pn **Pn 07 27 01.2 +0.8**
SGMF *e*Sn **Sn 07 29 02.9 -4.0**
comp=Z,0.7nm,0.2s
ROSF Rostrenen 11.86 287 *e*Pn **Pn 07 27 08.3 +1.2**
ROSF *e*Sn **Sn 07 29 13.5 -5.3**
comp=Z,0.4nm,0.2s

*ISK **29** 07:24:28.9, 40.03N×24.33E, h13km, ML2.5/7*
*DDA **29** 07:24:28.9, 40.02N×24.33E, h7km±2km, ML2.4*
*ATH **29** 07:24:29.1, 40.03N×24.32E, h28km± 1km, ML2.4/13, Error ellipse: s-maj=1.7km s-min=1.1km az=53.0*
*THE **29** 07:24:29.9, 40.03N×24.32E, h16km, ML2.4/14, Error ellipse: s-maj=0.9km s-min=0.5km az=17.0*
ISC 29 07:24:29.3±1.0, **40.03N**±0.02×**24.33E**±0.02, **h15**km±9km, **n54**, σ0.8**s55**/87, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.40**	**319**	P	**Pb**	**07 24 38.1**	**+0.1**
OUR				S	**Sb**	**07 24 43.9**	**0.0**
	1μm,0.2s						
OUR	**Ouranopolis**	**0.40**	**319**	P	**Pb**	**07 24 38.1**	**+0.1**
OUR				S	**Sb**	**07 24 43.9**	**0.0**
OUR				AML	AML	07 24 44.1	
	comp=E,2410μm,0.3s						
OUR				AML	AML	07 24 46.5	
	comp=N,1995μm,0.1s						
OUR	**Ouranopolis**	**0.40**	**319**	PG	**Pb**	**07 24 38.1**	**+0.1**
OUR				SG	**Sb**	**07 24 43.6**	**-0.3**
PAIG	**Paliouri**	**0.51**	**258**	P	**Pb**	**07 24 39.7**	**-0.1**
PAIG				S	**Sb**	**07 24 47.4**	**+0.4**
	comp=N,320nm,0.3s						
PAIG	**Paliouri**	**0.51**	**258**	P	**Pb**	**07 24 39.9**	**+0.1**
PAIG				S	**Sb**	**07 24 47.0**	**0.0**
PAIG				AML	AML	07 24 49.2	
	comp=N,515μm,0.2s						
PAIG				AML	AML	07 24 50.3	
	comp=E,600μm,0.3s						
THAS	**Thassos island**	**0.65**	**28**	P	**Pg**	**07 24 41.7**	**-0.2**
THAS				S	**Sb**	**07 24 52.0**	**+1.0**
	comp=E,548nm,0.2s						
THAS	**Thassos island**	**0.65**	**28**	P	**Pg**	**07 24 41.8**	**-0.2**
THAS				AML	AML	07 24 53.0	
	comp=N,1203μm,0.2s						
THAS				AML	AML	07 24 53.6	
	comp=E,954μm,0.3s						
LIA	**Limnos Island**	**0.67**	**101**	P	**Pb**	**07 24 43.1**	**+0.5**
LIA				S	**Sb**	**07 24 52.6**	**+0.9**
	comp=E,712nm,0.5s						
LIA	**Limnos Island**	**0.67**	**101**	P	**Pb**	**07 24 43.1**	**+0.5**
LIA				S	**Sb**	**07 24 52.6**	**+0.9**
LIA				AML	AML	07 24 53.1	
	comp=E,981μm,0.4s						
LIA				AML	AML	07 24 53.6	
	comp=N,1870μm,0.6s						
PLG	**Polygyros**	**0.76**	**297**	P	**Pb**	**07 24 44.3**	**+0.2**
PLG				S	**Sb**	**07 24 54.8**	**+0.6**
	comp=N,285nm,0.3s						
PLG	**Polygyros**	**0.76**	**297**	P	**Pb**	**07 24 44.3**	**+0.2**
PLG				S	**Sb**	**07 24 54.4**	**+0.2**
PLG				AML	AML	07 24 57.6	
	comp=E,430μm,0.2s						
PLG				AML	AML	07 24 57.6	
	comp=N,603μm,0.3s						
KVLA	**Kavala**	**0.91**	**3**	P	**Pn**	**07 24 47.0**	**-0.3**
KVLA				S	**Sn**	**07 24 59.4**	**-0.8**
AOS	**Alonnisos**	**0.93**	**202**	P	**Pb**	**07 24 46.8**	**-0.2**
AOS				S	**Sn**	**07 25 00.6**	**-0.1**
	comp=N,240nm,0.5s						
AOS	**Alonnisos**	**0.93**	**202**	P	**Pb**	**07 24 46.9**	**-0.1**
AOS				S	**Sn**	**07 25 00.1**	**-0.6**
AOS				AML	AML	07 25 03.0	
	comp=N,483μm,0.5s						
AOS				AML	AML	07 25 03.6	
	comp=E,488μm,0.4s						
AOS	**Alonnisos**	**0.93**	**202**	PG	**Pn**	**07 24 47.4**	**-0.3**
AOS				SG	**Sn**	**07 25 00.7**	**0.0**
ALNA	**Alonissos**	**0.95**	**202**	P	**Pn**	**07 24 48.6**	**+0.6**
ALNA				S	**Sn**	**07 25 01.1**	**-0.2**
KAVA	**Kavala**	**0.97**	**8**	P	**Pg**	**07 24 47.9**	**-0.2**
KAVA				S	**Sg**	**07 25 00.9**	**0.0**
	comp=E,330nm,0.2s						
KAVA	**Kavala**	**0.97**	**8**	P	**Pg**	**07 24 48.0**	**-0.2**
KAVA				AML	AML	07 25 02.5	
	comp=E,741μm,0.2s						
KAVA				AML	AML	07 25 03.3	
	comp=N,568μm,0.2s						
SKIA	**Skiathos**	**1.09**	**218**	P	**Pb**	**07 24 49.7**	**-0.1**
SKIA				S	**Sg**	**07 25 04.1**	**-0.5**
	comp=N,198nm,0.3s						
HORT	**Hortiatis**	**1.09**	**301**	P	**Pg**	**07 24 50.6**	**+0.2**
HORT				S	**Sn**	**07 25 05.2**	**+0.3**
	comp=N,95nm,0.3s						
HORT	**Hortiatis**	**1.09**	**301**	P	**Pg**	**07 24 50.7**	**+0.2**
HORT				S	**Sn**	**07 25 05.3**	**+0.3**
HORT				AML	AML	07 25 06.2	
	comp=N,216μm,0.1s						
HORT				AML	AML	07 25 08.2	
	comp=E,183μm,0.4s						
HORT	**Hortiatis**	**1.09**	**301**	PN	**Pg**	**07 24 50.4**	**0.0**
HORT				SN	**Sn**	**07 25 05.5**	**+0.5**
XOR	**Xorichti**	**1.10**	**233**	P	**Pb**	**07 24 49.6**	**-0.4**
XOR				S	**Sn**	**07 25 04.6**	**-0.4**
	comp=E,118nm,0.4s						
XOR	**Xorichti**	**1.10**	**233**	P	**Pn**	**07 24 49.9**	**-0.2**
XOR				AML	AML	07 25 08.8	
	comp=E,220μm,0.4s						
XOR				AML	AML	07 25 11.1	
	comp=N,249μm,0.3s						
NEO	**Neokhori**	**1.12**	**230**	P	**Pn**	**07 24 50.3**	**-0.1**
NEO				S	**Sn**	**07 25 05.3**	**-0.1**
	comp=N,120nm,0.5s						
NEO	**Neokhori**	**1.12**	**230**	P	**Pn**	**07 24 50.3**	**-0.1**
NEO				AML	AML	07 25 08.5	
	comp=N,232μm,0.5s						
NEO				AML	AML	07 25 09.1	
	comp=E,237μm,0.4s						
SKY	**Skiros Island**	**1.17**	**171**	P	**Pn**	**07 24 50.4**	**-0.5**
SKY				AML	AML	07 25 09.9	
	comp=N,706μm,0.2s						
SKY				AML	AML	07 25 11.7	
	comp=E,651μm,0.2s						
GADA	**Gvkgeada**	**1.22**	**82**	P	**Pb**	**07 24 52.1**	**+0.2**
GADA				S	**Sg**	**07 25 08.7**	**+0.1**
	comp=E,165nm,0.7s						
GADA	**Gvkgeada**	**1.22**	**82**	PN	**Pg**	**07 24 52.4**	**-0.3**
GADA				SN	**Sg**	**07 25 08.9**	**+0.3**
SRS	**Serrai**	**1.22**	**333**	P	**Pb**	**07 24 52.0**	**0.0**
SRS				S	**Sg**	**07 25 08.3**	**-0.4**
SRS	**Serrai**	**1.22**	**333**	P	**Pb**	**07 24 51.9**	**0.0**
SRS				AML	AML	07 25 11.3	
	comp=E,206μm,0.3s						
SRS				AML	AML	07 25 13.8	
	comp=N,159μm,0.2s						
GOKA	**anakkale-Gk**	**1.22**	**82**	*i* P	**Pn**	**07 24 51.6**	**-0.2**
GOKA				IAML		07 25 10.0	
	comp=N,329nm,0.5s						
GOKA				IAML		07 25 10.0	
	comp=E,281nm,0.5s						
GOKA				*i* S	**Sg**	**07 25 10.2**	**+1.4**
BOZC	**Bozcaada**	**1.34**	**98**	PN	**Pb**	**07 24 54.3**	**+0.3**
BOZC	**Bozcaada**	**1.34**	**98**	*i* P	**Pn**	**07 24 53.4**	**0.0**
BOZC				*i* P	**Pg**	**07 24 54.8**	**-0.3**
BOZC				IAML		07 25 11.0	
	comp=E,671nm,2.3s						
BOZC				IAML		07 25 13.0	
	comp=N,89nm,0.7s						
BOZC				IAML		07 25 13.0	
	comp=E,59nm,0.2s						
BOZC				*i* S	**Sg**	**07 25 13.0**	**+0.5**
BOZC				*i* S	**Sb**	**07 25 13.7**	**+2.7**
KYMI	**Kymi, Euboea I**	**1.41**	**187**	P	**Pn**	**07 24 53.9**	**-0.4**
KYMI	**Kymi, Euboea I**	**1.41**	**187**	P	**Pn**	**07 24 53.8**	**-0.4**
SIGR	**SIGRI**	**1.44**	**124**	PN	**Pb**	**07 24 55.0**	**-0.7**
MRKA	**Markates**	**1.44**	**204**	P	**Pn**	**07 24 55.0**	**+0.2**
MRKA				S	**Sb**	**07 25 14.1**	**+0.1**
	comp=E,102nm,0.7s						
RDO	**Rodhopi**	**1.45**	**39**	P	**Pn**	**07 24 54.4**	**-0.4**
RDO	**Rodhopi**	**1.45**	**39**	PN	**Pb**	**07 24 55.4**	**-0.4**
ENEZ	**Enez**	**1.56**	**63**	P	**Pn**	**07 24 56.5**	**+0.1**
ENEZ				S	**Sn**	**07 25 16.3**	**-0.1**
	comp=E,265nm,0.3s						
ENEZ	**Enez**	**1.56**	**63**	PN	**Pn**	**07 24 56.2**	**-0.2**
KNT	**Kendrikon**	**1.57**	**317**	P	**Pb**	**07 24 57.5**	**-0.4**
KNT	**Kendrikon**	**1.57**	**317**	P	**Pb**	**07 24 57.9**	**0.0**
KNT				AML	AML	07 25 22.6	
	comp=N,160μm,0.4s						
KNT				AML	AML	07 25 23.3	
	comp=E,114μm,0.4s						
KNT	**Kendrikon**	**1.57**	**317**	PN	**Pb**	**07 24 57.3**	**-0.6**
GELI	**Tayfur-Gelibol**	**1.69**	**77**	PN	**Pb**	**07 24 59.0**	**-0.9**
PRK	**Paraskevi**	**1.69**	**117**	P	**Pb**	**07 24 59.5**	**-0.5**
BAYC	**CANAKKALE_Bayr**	**1.73**	**99**	*i* P	**Pb**	**07 25 01.4**	**+0.6**
BAYC				*i* S	**Sn**	**07 25 19.7**	**-0.9**
KDZ	**Kurdzhali**	**1.81**	**27**	PN	**Pn**	**07 24 59.3**	**-0.6**
AGG	**Agios Georgios**	**1.84**	**237**	P	**Pn**	**07 25 01.1**	**+0.8**
VAY	**Valandovo**	**1.85**	**315**	*i* Pn	**Pg**	**07 25 05.6**	**+0.7**
VAY	**Valandovo**	**1.85**	**315**	*i* Pn	**Pg**	**07 25 05.6**	**+0.7**
KESN	**Edirne-Kesan**	**1.96**	**65**	*i* P	**Pg**	**07 25 06.1**	**-0.9**
KESN				*i* S	**Sg**	**07 25 32.3**	**-0.2**
KESN				IAML		07 25 35.0	
	comp=E,55nm,0.4s						
KESN				IAML		07 25 37.0	
	comp=N,38nm,0.4s						
BALY	**Balya**	**2.55**	**96**	*i* P	**Pg**	**07 25 17.1**	**-1.0**
BALY				IAML		07 25 54.0	
	comp=N,22nm,0.7s						

*IDC **29** 07:32:21.4±0.5, 44°.69S×37°.27E, h0km, mb4.3/14, mb1 4.4/16, mb1mx4.2/44, mbtmp4.3/16, ML3.9/2, MS4.0/7, Ms1 4.0/7, ms1mx3.6/34, Error ellipse: s-maj=25.5km s-min=14.6km az=62.0*
*NEIC **29** 07:32:22.9±2.0, 44°.7S±0°.1×37°.1E±0°.2, h10km±1km, mb4.7/22, Error ellipse: s-maj=22.0km s-min=16.5km az=62.0*
ISC 29 07:32:22.9±0.4, **44°.72S**±0°.08×**36°.9E**±0°.1, **h10**km, **n78, σ1°17/80, mb4.5/26, MS4.1/7, 1D, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**17.59**	**309**	P	**P**	**07 36 29.0**	**-0.3**
	0.7nm,0.3s,baz=148,slow=14,SNR=2.8						
SUR	**Sutherland**	**17.59**	**309**	Pn	**Pn**	**07 36 26.8**	**-1.5**
SUR				IAmb	IAmb	07 36 39.2	
	comp=Z,42nm,1.1s						
BOSA	**Boshof**	**18.57**	**326**	P	**Pn**	**07 36 41.5**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=144,slow=12,SNR=6.3						
BOSA				LR	LR	07 42 33.6	
	comp=Z,767nm,18.3s,baz=162,slow=33						
BOSA	**Boshof**	**18.57**	**326**	P	**Pn**	**07 36 40.3**	**+0.1**
LBTB	**Lobatse**	**21.71**	**331**	P	**P**	**07 37 12.8**	**-1.3**
SYO	**Syowa Base**	**24.39**	**178**	*e*P	**P**	**07 37 42.0**	**+1.1**
MATP	**Matopo**	**25.22**	**341**	P	**P**	**07 37 48.0**	**-1.0**
	comp=Z,3.6nm,0.7s,baz=163,slow=12,SNR=5.5						
MAW	**Mawson**	**26.70**	**158**	P	**P**	**07 38 01.2**	**-0.6**
	comp=Z,3.6nm,0.9s,baz=5.2,slow=11,SNR=2.5						
MAW				LR	LR	07 46 14.3	
	comp=Z,194nm,20.3s,baz=40,slow=31						
MAW	**Mawson**	**26.70**	**158**	P	**P**	**07 38 02.2**	**+0.4**
TSUM	**Tsumeb**	**30.12**	**321**	P	**P**	**07 38 33.5**	**+0.6**
TSUM				IAmb	IAmb	07 38 41.4	
	comp=Z,31nm,1.4s						
LSZ	**Lusaka**	**30.27**	**343**	P	**P**	**07 38 32.8**	**-1.5**
LSZ				IAmb	IAmb	07 38 35.0	
	comp=Z,11nm,1.2s						
SNAA	**Sanae**	**33.01**	**202**	P	**P**	**07 38 58.5**	**+0.7**
	comp=Z,1.5nm,0.8s,baz=82,slow=8.6,SNR=6.1						
SNAA	**Sanae**	**33.01**	**202**	P	**P**	**07 38 59.3**	**+1.5**
QSPA	**South Pole Qui**	**45.49**	**180**	P	**P**	**07 40 42.1**	**0.0**
	comp=Z,3.6nm,0.9s,baz=266,slow=2.7,SNR=13						
QSPA	**South Pole Qui**	**45.49**	**180**	P	**P**	**07 40 41.7**	**-0.4**
QSPA				IAmb	IAmb	07 40 45.8	
	comp=Z,16nm,1.4s						
VNDA	**Vanda**	**53.44**	**167**	LR	LR	08 02 27.4	
	comp=Z,189nm,21.4s,baz=235,slow=34						
H10S2	**ASCENSION HYDR**	**56.89**	**292**	T	T	08 43 59.5	
	baz=136,slow=74,SNR=96						
H10S3	**ASCENSION HYDR**	**56.91**	**292**	T	T	08 44 01.0	
	baz=84,slow=74,SNR=459						
DBIC	**Dimbokro**	**63.44**	**312**	P	**P**	**07 42 54.2**	**+1.3**
	comp=Z,9.7nm,0.8s,baz=134,slow=5.8,SNR=7.4						
DBIC				LR	LR	08 06 42.4	
	comp=Z,241nm,20.2s,baz=172,slow=32						
DBIC	**Dimbokro**	**63.44**	**312**	P	**P**	**07 42 54.2**	**+1.3**
TOA0	**Torodi Ar. Sit**	**65.88**	**322**	P	**P**	**07 43 07.1**	**-1.7**
TOA0				IAmb	IAmb	07 43 10.9	
	comp=Z,5.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**65.88**	**322**	P	**P**	**07 43 10.3**	**+1.6**
	comp=Z,6.3nm,1.0s,baz=157,slow=6.4,SNR=14						
RAYN	**Ar Rayn**	**68.36**	**8**	P	**P**	**07 43 24.1**	**-0.3**
RAYN				IAmb	IAmb	07 43 26.1	
	comp=Z,6.1nm,1.2s						
STKA	**Stephens Creek**	**77.58**	**123**	P	**P**	**07 44 19.2**	**0.0**
	comp=Z,3.1nm,0.8s,baz=271,slow=5.0,SNR=4.8						
STKA	**Stephens Creek**	**77.58**	**123**	P	**P**	**07 44 19.4**	**+0.2**
ASAR	**Alice Springs**	**78.43**	**112**	P	**P**	**07 44 23.2**	**-0.9**
	comp=Z,2.3nm,0.9s,baz=217,slow=5.1,SNR=13						
CO03	**El Pedregal**	**80.09**	**236**	P	**P**	**07 44 33.4**	**+0.3**
CO03				IAmb	IAmb	07 44 35.3	
	comp=Z,9.7nm,1.0s						
CO01	**Juntas del Tor**	**80.36**	**237**	P	**P**	**07 44 34.8**	**0.0**
CO01				IAmb	IAmb	07 44 38.5	
	comp=Z,20nm,1.4s						
WRA	**Warramunga Arr**	**81.30**	**109**	P	**P**	**07 44 38.0**	**-1.7**
	comp=Z,1.3nm,0.9s,baz=223,slow=4.2,SNR=8.0						
WRA				LR	LR	08 15 17.8	
	comp=Z,87nm,19.6s,baz=90,slow=32						
WB2	**Warramunga Arr**	**81.31**	**109**	P	**P**	**07 44 38.1**	**-1.6**
WB2				IAmb	IAmb	07 44 44.2	
	comp=Z,5.6nm,1.1s						
WRAB	**Tennant Creek**	**81.31**	**109**	P	**P**	**07 44 37.4**	**-2.3**
WRAB				IAmb	IAmb	07 44 42.9	
	comp=Z,5.5nm,1.1s						
ELL	**Elmali**	**81.34**	**354**	P	**P**	**07 44 40.1**	**+0.7**
WB0	**Warramunga Arr**	**81.46**	**109**	P	**P**	**07 44 39.4**	**-1.1**
WB0				IAmb	IAmb	07 44 49.9	
	comp=Z,7.6nm,1.2s						
RPZ	**Rata Peaks**	**82.93**	**148**	LR	LR	08 17 00.9	
	comp=Z,63nm,20.5s,baz=252,slow=32						
BRTR	**Keskin Array B**	**84.12**	**357**	P	**P**	**07 44 53.5**	**-0.2**
	comp=Z,2.4nm,0.9s,baz=175,slow=7.4,SNR=8.1						
CM31	**Chiang Mai Arr**	**84.44**	**57**	P	**P**	**07 44 55.3**	**-0.5**
CMAR	**Chiang Mai Arr**	**84.44**	**57**	P	**P**	**07 44 54.9**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=202,slow=7.4,SNR=4.3						
CMAR				LR	LR	08 15 02.5	
	comp=Z,25nm,20.8s,baz=198,slow=30						
GEYT	**Alibeck**	**84.47**	**17**	P	**P**	**07 44 55.9**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=270,slow=3.0,SNR=4.5						
NIL	**Nilore**	**84.70**	**30**	P	**P**	**07 44 56.8**	**0.0**
KBZ	**Khabaz**	**88.22**	**4**	P	**P**	**07 45 13.8**	**+0.1**
	comp=Z,2.4nm,0.9s,baz=178,slow=1.5,SNR=4.7						
MLR	**Muntele Rosu**	**90.35**	**352**	P	**P**	**07 45 24.0**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=108,slow=1.8,SNR=5.5						
MLR	**Muntele Rosu**	**90.35**	**352**	P	**P**	**07 45 24.2**	**+0.3**
KSH	**Kashi**	**90.92**	**29**	P	**P**	**07 45 27.8**	**+1.2**
KSH				pP	pwP	07 45 31.5	-1.6
KSH				pmax	pmax		
	comp=Z,26nm,1.2s						
KSH				pmax	pmax		
	comp=Z,100nm,3.8s						
BUR08	**Bucovina Ar. S**	**92.56**	**352**	P	**P**	**07 45 34.6**	**+0.6**
BUR08				IAmb	IAmb	07 45 38.0	
	comp=Z,6.2nm,1.4s						
WMQ	**Urumqi**	**99.06**	**35**	*e*P	**Pdif**	**07 46 06.3**	**+2.6**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WMQ				LR	LR		
	comp=N,190nm,21.3s						
WMQ				LR	LR		
	comp=E,260nm,18.1s						
WMQ				LR	LR		
	comp=Z,200nm,18.1s						
LZH	**Lanzhou**	**100.65**	**49**	*e*P	**Pdif**	**07 46 12.3**	**+1.2**
LZH				pP	pwP	07 46 16.8	-0.8
LZH				sP	sP	07 46 20.0	+5.7
LZH				PP	**PP**	**07 50 22.5**	**+3.7**
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				pmax	pmax		
	comp=Z,73nm,5.0s						
T35A	**Sooner Cattle**	**144.32**	**274**		**PKPab**	**07 51 56.7**	**-0.2**
ABTX	**Abilene, Hawle**	**144.41**	**265**		PKPbc	07 51 58.2	+0.6
E38A	**The Farm, Brul**	**144.47**	**292**		PKPbc	07 51 57.6	+0.2
EYMN	**Ely**	**144.79**	**294**		PKPbc	07 51 58.5	+0.1
WMOK	**Wichita Mounta**	**144.89**	**269**		**PKPab**	**07 51 58.9**	**-0.2**
SPMN	**Marine on St.**	**144.91**	**289**		**PKPab**	**07 51 58.6**	**-0.2**
I37A	**Lemond, Waseca**	**144.93**	**287**		**PKPdf**	**07 51 59.6**	**-0.1**
BILL	**Bilibino**	**145.06**	**31**		**PKPdf**	**07 51 59.1**	**-0.1**
KSU1	**Kansas State U**	**145.35**	**277**		**PKPab**	**07 52 01.1**	**+0.5**
TXAR	**Lajitas Array**	**145.37**	**257**	PKPbc	**PKPab**	**07 52 01.9**	**+0.8**
	comp=Z,3.6nm,0.7s,baz=141,slow=5.9,SNR=54						
TX31	**Lajitas Ar. Si**	**145.37**	**257**		**PKPdf**	**07 52 01.1**	**+0.1**
TX32	**Lajitas Array**	**145.37**	**257**		**PKPab**	**07 52 01.8**	**+0.7**
N35A	**Tabor**	**145.37**	**281**		**PKPab**	**07 52 01.4**	**+0.7**
F36A	**Milaca**	**145.57**	**290**		**PKPbc**	**07 52 00.9**	**-0.1**
B35A	**Bob, Littlefor**	**146.34**	**294**	PKPbc	**PKPbc**	**07 52 03.4**	**+0.2**
R32A	**Long Quarter,**	**146.55**	**275**	PKPdf	**PKPdf**	**07 52 02.5**	**-0.2**
ECSD	**EROS Data Cent**	**147.04**	**285**	PKPdf	**PKPdf**	**07 52 02.0**	**-1.3**
ECSD				PKPbc	**PKPbc**	**07 52 05.6**	**+0.1**
MSTX	**Muleshoe**	**147.34**	**265**		**PKPbc**	**07 52 07.0**	**+0.4**
FCC	**Fort Churchill**	**147.39**	**313**		**PKPbc**	**07 52 06.2**	**+0.4**
F33A	**5 Mile Ranch,**	**147.43**	**289**		**PKPbc**	**07 52 06.9**	**+0.5**
AGMN	**Agassiz Nation**	**147.72**	**293**		**PKPbc**	**07 52 06.7**	**-0.4**
MNTX	**Cornudas Mount**	**147.95**	**259**		**PKPdf**	**07 52 04.2**	**-1.0**
ULM	**Lac du Bonnet**	**148.07**	**297**	PKPbc	**PKPbc**	**07 52 07.5**	**-0.5**
	comp=Z,9.4nm,0.7s,baz=85,slow=3.8,SNR=8.7						
ULM	**Lac du Bonnet**	**148.07**	**297**	PKPdf	**PKPdf**	**07 52 02.3**	**-2.4**
ULM					**PKPbc**	**07 52 07.4**	**-0.5**
OGNE	**Ogallala**	**149.90**	**277**	PKPdf	**PKPdf**	**07 52 06.1**	**-2.0**
OGNE					**PKiKP**	**07 52 14.3**	**+0.4**
OGNE				PKPab	**pPKPab**	**07 52 21.0**	**0.0**
BNM	**Barren Site**	**150.17**	**262**	PKPdf	**PKPdf**	**07 52 04.9**	**-4.1**
BNM					**PKiKP**	**07 52 15.4**	**+0.5**
BNM				PKPab	**pPKPab**	**07 52 21.7**	**-0.8**
ANMO	**Albuquerque**	**150.46**	**263**		**PKiKP**	**07 52 16.0**	**+0.5**
SDCO	**Great Sand Dun**	**151.09**	**269**		**PKiKP**	**07 52 17.5**	**+0.7**
SDCO				PKPab	**PKPab**	**07 52 23.6**	**-0.4**
YKA	**Yellowknife Ar**	**155.79**	**327**	PKP	**PKPdf**	**07 52 13.4**	**-2.5**
	comp=Z,0.5nm,0.8s,baz=71,slow=1.8,SNR=6.6						
YKA				PKPbc	pPKPbc	07 52 25.0	-2.6
	comp=Z,0.5nm,0.7s,baz=57,slow=2.1,SNR=7.6						
YKA				PKPab	**PKPab**	**07 52 43.9**	**+1.2**
	comp=Z,1.3nm,0.8s,baz=54,slow=4.7,SNR=15						
ILAR	**Eielson Array**	**159.79**	**5**	PKPab	**PKPab**	**07 52 58.9**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=328,slow=4.0,SNR=6.4						
BPAW	**Bear Paw Mtn.**	**160.07**	**10**		**PKPab**	**07 53 00.8**	**-0.4**
SCRK	**Sand Creek**	**160.70**	**1**		**PKPab**	**07 53 04.2**	**+0.2**

*IDC **29** 07:56:58.7±1.8, 30°.19S×177°.68W, h0km, mb4.2/5, mb1 4.4/5, mb1mx4.0/24, mbtmp4.2/5, Error ellipse: s-maj=38.5km s-min=23.6km az=97.0*
*NEIC **29** 07:57:03.7±1.6, 30°.02S±0°.07×177°.7W±0°.2, h38km±10km, mb4.6/15, Error ellipse: s-maj=22.5km s-min=9.8km az=88.0*
ISC 29 07:57:02.5±1.4, **30°.06S**±0°.08×**177°.4W**±0°.2, **h35**km, **n40, σ1°25/35, mb4.5/11, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.92**	**332**	Pn	**Pn**	**07 57 19.7**	**+0.8**
	244nm,0.3s,baz=43,slow=24,SNR=11						
RAO				Sn	**Sn**	**07 57 31.4**	**+0.5**
	2μm,0.3s,baz=143,slow=16,SNR=18						
RAO	**Raoul Island**	**0.92**	**332**		**Pn**	**07 57 18.5**	**-0.4**
MXZ	**Matakaoa Point**	**8.28**	**204**	Pn	**Pn**	**07 59 01.2**	**+1.1**
OUZ	**Omahuta**	**9.15**	**233**	Pn	**Pn**	**07 59 12.9**	**+0.9**
BKZ	**Black Stump Fm**	**10.37**	**207**	Pn	**Pn**	**07 59 26.6**	**-2.1**
HIZ	**Hauiti**	**10.57**	**215**	Pn	**Pn**	**07 59 32.1**	**+0.6**
BFZ	**Birch Farm**	**11.78**	**204**	Pn	**Pn**	**07 59 46.0**	**-2.0**
TUWZ	**Tuamarina**	**13.32**	**209**	Pn	**Pn**	**08 00 09.4**	**+0.4**
NNZ	**Nelson**	**13.40**	**211**	Pn	**Pn**	**08 00 09.2**	**-0.9**
CMWZ	**Cape Campbell**	**13.48**	**208**	Pn	**Pn**	**08 00 11.8**	**+0.6**
QRZ	**Quartz Range**	**13.49**	**215**	Pn	**Pn**	**08 00 11.5**	**+0.1**
THZ	**Tophouse**	**14.05**	**211**	Pn	**Pn**	**08 00 17.5**	**-1.5**
KHZ	**Kahutara**	**14.31**	**208**	Pn	**Pn**	**08 00 23.8**	**+1.3**
LTZ	**Lake Taylor**	**15.15**	**210**	Pn	**Pn**	**08 00 31.6**	**-2.2**
OXZ	**Oxford**	**15.69**	**210**	Pn	**Pn**	**08 00 41.1**	**+0.3**
OXZ				IAmb	IAmb	08 00 41.9	
	comp=Z,55nm,1.4s						
FOZ	**Fox Glacier**	**16.86**	**214**	Pn	**Pn**	**08 00 54.7**	**-0.9**
ODZ	**Otahua Downs**	**17.67**	**209**		**P**	**08 01 06.5**	**+0.2**
ODZ				IAmb	IAmb	08 01 13.5	
	comp=Z,77nm,1.4s						
CTA	**Charters Tower**	**34.24**	**278**	P	**P**	**08 03 45.4**	**+0.1**
	comp=Z,4.5nm,0.5s,baz=107,slow=10.0,SNR=7.8						
CTAO	**Charters Tower**	**34.24**	**278**	P	**P**	**08 03 46.3**	**+1.1**
STKA	**Stephens Creek**	**35.04**	**256**	P	**P**	**08 03 51.5**	**-0.5**
	comp=Z,3.3nm,0.7s,baz=104,slow=13,SNR=8.2						
STKA	**Stephens Creek**	**35.04**	**256**	P	**P**	**08 03 52.4**	**+0.4**
BBOO	**Buckleboo**	**39.54**	**254**	P	**P**	**08 04 28.9**	**-1.3**
BBOO				IAmb	IAmb	08 04 47.8	
	comp=Z,14nm,1.5s						
PATS	**Pohnpei**	**43.46**	**324**	P	**P**	**08 05 00.0**	**-2.4**
AS31	**Alice Springs**	**43.63**	**266**	P	**P**	**08 05 02.9**	**-0.9**
ASAR	**Alice Springs**	**43.63**	**266**	P	**P**	**08 05 02.1**	**-1.7**
	comp=Z,1.2nm,0.4s,baz=105,slow=7.1,SNR=21						
WR0	**Warramunga Arr**	**44.41**	**272**	P	**P**	**08 05 09.6**	**-0.4**
WR0				IAmb	IAmb	08 05 13.6	
	comp=Z,14nm,1.5s						
WB2	**Warramunga Arr**	**44.58**	**272**	P	**P**	**08 05 10.8**	**-0.6**
WB2				IAmb	IAmb	08 05 11.3	
	comp=Z,5.5nm,0.9s						
WRAB	**Tennant Creek**	**44.58**	**272**	P	**P**	**08 05 10.9**	**-0.5**
WRAB				IAmb	IAmb	08 05 24.2	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	**44.59**	**271**	P	**P**	**08 05 10.9**

LIA				AML	AML	08 13 35.5	
	comp=E,14724μm,0.4s						
LIA				AML	AML	08 13 35.7	
	comp=N,19489μm,0.4s						
EFSA	Agios Efstrati	0.68	139	P	Pb	08 13 25.9	0.0
EFSA				S	Sb	08 13 36.3	+1.2
PLG	Polygyros	0.81	294	P	Pg	08 13 27.8	-0.1
PLG				S	Sb	08 13 38.6	-0.5
	comp=N,6μm,0.3s						
PLG	Polygyros	0.81	294	P	Pg	08 13 27.9	-0.1
PLG				S	Sg	08 13 38.5	-0.1
PLG				AML	AML	08 13 41.9	
	comp=E,13094μm,0.4s						
PLG				AML	AML	08 13 42.7	
	comp=N,9417μm,0.3s						
KVLA	Kavala	0.89	359	P	Pg	08 13 29.6	+0.2
KVLA				AML	AML	08 13 42.3	
	comp=N,15438μm,0.3s						
KVLA				AML	AML	08 13 42.8	
	comp=E,50442μm,0.4s						
KAVA	Kavala	0.95	5	P	Pb	08 13 29.9	-0.7
KAVA				S	Sg	08 13 43.2	+0.2
	comp=E,8μm,0.3s						
KAVA	Kavala	0.95	5	P	Pb	08 13 30.2	-0.4
KAVA				S	Sg	08 13 43.3	+0.2
KAVA				AML	AML	08 13 44.1	
	comp=E,12964μm,0.4s						
KAVA				AML	AML	08 13 44.5	
	comp=N,20755μm,0.3s						
SMTH	Samothraki Isl	0.95	63	P	Pb	08 13 29.4	-1.3
SMTH				S	Sg	08 13 43.6	+0.5
	comp=N,4μm,0.3s						
SMTH	Samothraki Isl	0.95	63	P	Pb	08 13 30.2	-0.5
SMTH				S	Sg	08 13 43.5	+0.3
SMTH				AML	AML	08 13 44.7	
	comp=E,8952μm,0.4s						
SMTH				AML	AML	08 13 46.0	
	comp=N,8245μm,0.3s						
AOS	Alonnisos	0.97	205	P	Pb	08 13 30.0	-0.9
AOS				S	Sn	08 13 45.1	-0.1
	comp=N,9μm,0.4s						
AOS	Alonnisos	0.97	205	P	Pb	08 13 30.5	-0.5
AOS				S	Sn	08 13 44.9	-0.4
AOS				AML	AML	08 13 47.6	
	comp=E,23534μm,0.3s						
AOS				AML	AML	08 13 48.5	
	comp=N,14404μm,0.4s						
AOS	Alonnisos	0.97	205	PG	Pb	08 13 30.8	-0.1
AOS				SG	Sn	08 13 44.8	-0.4
ALNA	Alonnisos	0.99	205	P	Pb	08 13 31.0	-0.4
ALNA				S	Sn	08 13 45.4	-0.4
ALNA				AML	AML	08 13 48.1	
	comp=E,18964μm,0.5s						
ALNA				AML	AML	08 13 48.2	
	comp=N,19028μm,0.8s						
HORT	Hortiatis	1.14	299	P	Pb	08 13 33.7	-0.3
HORT				S	Sb	08 13 48.5	-0.3
	comp=N,2μm,0.4s						
HORT	Hortiatis	1.14	299	P	Pb	08 13 33.7	-0.3
HORT				S	Sb	08 13 48.3	-0.5
HORT				AML	AML	08 13 52.0	
	comp=N,5185μm,0.4s						
HORT				AML	AML	08 13 54.8	
	comp=E,3201μm,0.4s						
HORT	Hortiatis	1.14	299	PN	Pb	08 13 33.6	-0.4
SKIA	Skiathos	1.15	220	P	Pb	08 13 32.9	-1.0
SKIA				S	Sb	08 13 48.6	-0.1
	comp=E,5μm,0.4s						
SKIA	Skiathos	1.15	220	P	Pb	08 13 33.0	-1.0
SKIA				S	Sb	08 13 48.5	-0.2
SKIA				AML	AML	08 13 54.9	
	comp=E,9205μm,0.3s						
SKIA				AML	AML	08 13 57.5	
	comp=N,9839μm,0.5s						
GADA	Gvkgeada	1.15	82	P	Pb	08 13 33.3	-0.7
GADA				S	Sb	08 13 48.3	-0.5
	comp=N,3μm,0.5s						
GADA	Gvkgeada	1.15	82	PN	Pb	08 13 33.3	-0.7
GADA				SN	Sb	08 13 48.6	-0.2
GOKA	anakkale-Gk	1.16	82	*i* P	Pn	08 13 32.3	-1.8
GOKA				*i* S	Sb	08 13 48.5	-0.5
XOR	Xorichti	1.16	234	P	Pn	08 13 33.3	-1.0
XOR				S	Sb	08 13 48.9	-0.3
	comp=N,4μm,0.6s						
XOR	Xorichti	1.16	234	P	Pn	08 13 33.3	-1.0
XOR				S	Sb	08 13 49.0	-0.3
XOR				AML	AML	08 13 54.1	
	comp=N,11217μm,0.6s						
XOR				AML	AML	08 13 56.6	
	comp=E,5447μm,0.5s						
SKY	Skiros Island	1.18	175	P	Pn	08 13 33.8	-0.6
SKY				S	Sn	08 13 50.0	-0.3
	comp=E,9μm,0.4s						
SKY	Skiros Island	1.18	175	P	Pn	08 13 33.8	-0.6
SKY				S	Sb	08 13 49.5	-0.1
SKY				AML	AML	08 13 54.1	
	comp=N,15538μm,0.5s						
SKY				AML	AML	08 13 55.4	
	comp=E,20896μm,0.3s						
NEO	Neokhori	1.18	231	P	Pn	08 13 33.6	-0.9
NEO				S	Sb	08 13 49.6	-0.2
	comp=E,5μm,0.6s						
NEO	Neokhori	1.18	231	P	Pn	08 13 33.6	-0.9
NEO				AML	AML	08 13 53.9	
	comp=E,7517μm,0.4s						
NEO				AML	AML	08 13 54.3	
	comp=N,12759μm,0.4s						
SRS	Serrai	1.24	330	*e* Pn	Pn	08 13 34.8	-0.5
SRS				*e* Sn	Sn	08 13 51.5	-0.4
SRS	Serrai	1.24	330	P	Pn	08 13 34.6	-0.7
SRS				S	Sb	08 13 50.5	-0.9
	comp=N,2μm,0.3s						
SRS	Serrai	1.24	330	P	Pn	08 13 34.7	-0.7
SRS				AML	AML	08 13 54.4	
	comp=E,5309μm,0.3s						
SRS				AML	AML	08 13 57.5	
	comp=N,4368μm,0.3s						
THE	Thessaloniki	1.25	298	P	Pn	08 13 35.0	-0.5
THE				S	Sb	08 13 51.2	-0.5
	comp=N,638nm,0.8s						
THE	Thessaloniki	1.25	298	P	Pn	08 13 34.8	-0.7
THE				AML	AML	08 13 56.6	
	comp=E,1234μm,0.6s						
THE				AML	AML	08 14 03.0	
	comp=N,1231μm,0.7s						
BOZC	Bozcaada	1.28	99	PN	Pn	08 13 35.3	-0.5
BOZC	Bozcaada	1.28	99	*i* P	Pn	08 13 34.9	-1.0
BOZC				*i* S	Sb	08 13 51.4	-1.2
BOZC				IAML		08 13 55.0	
	comp=N,441nm,0.2s						
BOZC				IAML		08 13 56.0	
	comp=E,960nm,0.7s						
RDO	Rodhopi	1.39	38	P	Pn	08 13 36.4	-0.9
RDO	Rodhopi	1.39	38	P	Pn	08 13 36.5	-0.9
RDO				AML	AML	08 14 07.2	
	comp=N,2103μm,0.7s						
RDO				AML	AML	08 14 07.7	
	comp=E,2653μm,0.6s						
RDO	Rodhopi	1.39	38	PN	Pn	08 13 36.5	-0.9
RDO				SN	Sb	08 13 55.9	+0.1
SIGR	SIGRI	1.39	126	P	Pn	08 13 37.3	-0.1
SIGR				S	Sn	08 13 55.2	-0.5
	comp=E,1μm,0.5s						
SIGR	SIGRI	1.39	126	P	Pn	08 13 37.3	-0.1
SIGR				AML	AML	08 14 00.1	
	comp=E,2291μm,0.5s						
SIGR				AML	AML	08 14 00.6	
	comp=N,3352μm,0.4s						
SIGR	SIGRI	1.39	126	PN	Pn	08 13 37.3	-0.1
SIGR				SN	Sn	08 13 55.2	-0.5
KYMI	Kymi, Euboea I	1.44	190	P	Pn	08 13 37.3	-0.7
KYMI				S	Sn	08 13 55.7	-1.0
KYMI	Kymi, Euboea I	1.44	190	P	Pn	08 13 37.3	-0.7
LIT	Litokhoron	1.48	273	P	Pn	08 13 37.9	-0.7
LIT				S	Sn	08 13 57.1	-0.7
	comp=N,628nm,0.5s						
LIT	Litokhoron	1.48	273	P	Pn	08 13 37.9	-0.7
LIT				AML	AML	08 14 03.7	
	comp=E,1167μm,0.5s						
LIT				AML	AML	08 14 14.9	
	comp=N,1324μm,0.5s						
MRKA	Markates	1.49	206	P	Pn	08 13 37.9	-0.8
MRKA				S	Sn	08 13 57.6	-0.4
	comp=E,4μm,0.5s						
MRKA	Markates	1.49	206	P	Pn	08 13 37.9	-0.8
MRKA				S	Sn	08 13 57.7	-0.4
MRKA				AML	AML	08 14 05.4	
	comp=N,8397μm,0.4s						
MRKA				AML	AML	08 14 06.6	
	comp=E,6070μm,0.6s						
EZN	Ezine	1.49	98	P	Pn	08 13 38.4	-0.2
EZN				S	Sn	08 13 57.3	-0.7
	comp=E,1μm,0.4s						
EZN	Ezine	1.49	98	PN	Pn	08 13 38.5	-0.2
EZN				SN	Sn	08 13 57.2	-0.7
ENEZ	Enez	1.50	62	P	Pn	08 13 37.9	-0.9
ENEZ				S	Sb	08 13 58.4	-0.4
	comp=E,8μm,0.4s						
ENEZ	Enez	1.50	62	PN	Pn	08 13 38.5	-0.3
ENEZ				SN	Sn	08 13 58.2	0.0
KNT	Kendrikon	1.60	314	P	Pn	08 13 40.4	+0.1
KNT	Kendrikon	1.60	314	P	Pn	08 13 40.6	+0.3
KNT	Kendrikon	1.60	314	PN	Pn	08 13 40.6	+0.3
KNT				SN	Sb	08 14 02.2	+0.3
GELI	Tayfur-Gelibol	1.62	77	PN	Pn	08 13 39.8	-0.7
GELI				SN	Sn	08 14 00.3	-0.9
MMB	Musomiste	1.62	342	*i* P	Pn	08 13 40.1	-0.6
MMB	Musomiste	1.62	342	*i* P	Pn	08 13 40.1	-0.6
PRK	Paraskevi	1.64	119	P	Pb	08 13 42.0	-0.4
PRK				AML	AML	08 14 15.0	
	comp=E,5272μm,0.6s						
PRK				AML	AML	08 14 19.9	
	comp=N,4586μm,0.8s						
RZN	Rozhen	1.65	8	*i* P	Pn	08 13 41.0	-0.2
RZN	Rozhen	1.65	8	*i* P	Pn	08 13 41.0	-0.2
BAYC	CANAKKALE_Bayr	1.67	100	*i* P	Pn	08 13 40.8	-0.4
BAYC				*i* S	Sn	08 14 01.7	-0.8
BAYC				IAML		08 14 09.0	
	comp=E,378nm,0.5s						
BAYC				IAML		08 14 10.0	
	comp=N,334nm,0.4s						
ERIK	Erikli-Kesan	1.72	68	PN	Pn	08 13 41.2	-0.7
PSRA	Psara	1.75	149	P	Pn	08 13 42.9	+0.6
KDZ	Kurdzhali	1.77	25	*i* P	Pn	08 13 41.5	-1.1
KDZ	Kurdzhali	1.77	25	*i* P	Pn	08 13 41.5	-1.1
KDZ	Kurdzhali	1.77	25	PN	Pn	08 13 41.6	-1.1
KDZ				SN	Sn	08 14 04.3	-0.8
LKR	Lokris	1.78	219	P	Pn	08 13 42.0	-0.7
LKR	Lokris	1.78	219	P	Pn	08 13 42.0	-0.7
GRG	Griva	1.78	301	P	Pn	08 13 43.2	+0.4
GRG	Griva	1.78	301	P	Pn	08 13 43.2	+0.4
GRG	Griva	1.78	301	PN	Pn	08 13 43.1	+0.3
GRG				SN	Sb	08 14 06.7	-0.4
KTI	Kastanea	1.79	282	P	Pn	08 13 42.4	-0.6
LPK	Lapseki	1.83	79	PN	Pn	08 13 43.1	-0.3
LPK				SN	Sn	08 14 06.4	0.0
AXAR	Agios Charalam	1.87	227	P	Pn	08 13 44.0	0.0
AXAR	Agios Charalam	1.87	227	P	Pn	08 13 44.0	0.0
AXAR				AML	AML	08 14 24.7	
	comp=E,2274μm,0.5s						
AXAR				AML	AML	08 14 27.3	
	comp=N,2924μm,0.8s						
VAY	Valandovo	1.89	313	*e* Pn	Pn	08 13 44.9	+0.6
VAY				*e* Sn	Sn	08 14 07.9	-0.1
VAY	Valandovo	1.89	313	*i* Pn	Pn	08 13 44.9	+0.6
VAY	Valandovo	1.89	313	*i* Pn	Pn	08 13 44.9	+0.6
KESN	Edirne-Kesan	1.90	65	*i* P	Pn	08 13 43.7	-1.0
KESN				*i* S	Sn	08 14 07.7	-1.0
KESN				IAML		08 14 19.0	
	comp=N,943nm,0.4s						
AYVA	Ayvalik	1.91	112	*i* P	Pn	08 13 44.5	+0.1
AYVA				*i* S	Sn	08 14 07.7	-0.7
AYVA				IAML		08 14 20.0	
	comp=N,464nm,0.5s						
AYVA				IAML		08 14 29.0	
	comp=E,352nm,0.7s						
AGG	Agios Georgios	1.91	238	P	Pn	08 13 44.2	-0.4
AGG	Agios Georgios	1.91	238	P	Pn	08 13 44.4	-0.1
AGG	Agios Georgios	1.91	238	PN	Pn	08 13 44.8	+0.2
THL	Klokotos Trika	1.91	256	P	Pn	08 13 44.3	-0.2
THL	Klokotos Trika	1.91	256	P	Pn	08 13 44.3	-0.2
DION	Dionisos Attik	2.00	191	P	Pn	08 13 45.1	-0.8
DION	Dionisos Attik	2.00	191	P	Pn	08 13 45.3	-0.5
DION				AML	AML	08 14 21.7	
	comp=N,6774μm,0.4s						
DION				AML	AML	08 14 24.5	
	comp=E,6793μm,0.4s						
UKOP	Uzunkopru-Edir	2.00	57	PN	Pn	08 13 45.7	-0.1
KARY	Karystos	2.01	179	P	Pn	08 13 45.6	-0.4
KARY	Karystos	2.01	179	P	Pn	08 13 45.5	-0.4
VIL2	Platees	2.04	206	P	Pn	08 13 46.3	0.0
VIL2				AML	AML	08 14 26.0	
	comp=N,2305μm,0.6s						
VIL2				AML	AML	08 14 30.1	
	comp=E,4965μm,0.8s						
KZN	Kozani	2.04	278	P	Pn	08 13 46.6	+0.2
KZN	Kozani	2.04	278	P	Pn	08 13 46.9	+0.4
MAKR	Makrakomi, Fth	2.04	240	P	Pn	08 13 46.7	+0.2
MAKR	Makrakomi, Fth	2.04	240	P	Pn	08 13 46.7	+0.2
MAKR				AML	AML	08 14 32.3	
	comp=E,3087μm,0.8s						
MAKR				AML	AML	08 14 32.9	
	comp=N,1824μm,0.8s						
PLD	Plovdiv	2.06	6	*e* Pn	Pn	08 13 47.4	+0.7
PLD				*e* Sn	Sb	08 14 13.5	-1.7
PLD	Plovdiv	2.06	6	*i* P	Pn	08 13 47.4	+0.7
PLD	Plovdiv	2.06	6	*i* P	Pn	08 13 47.4	+0.7
PLD	Plovdiv	2.06	6	PN	Pn	08 13 47.1	+0.4
VILL	Villia	2.07	205	P	Pn	08 13 46.3	-0.5
KKB	Krupnik	2.08	331	*i* P	Pn	08 13 46.9	0.0
KKB	Krupnik	2.08	331	*i* P	Pn	08 13 46.9	0.0
CHOS	Chios island	2.09	142	P	Pn	08 13 47.2	+0.1
CHOS	Chios island	2.09	142	P	Pn	08 13 47.3	+0.2
CHOS	Chios island	2.09	142	PN	Pn	08 13 47.1	0.0
ATHU	Athens Univers	2.14	193	P	Pn	08 13 47.4	-0.3
ATHU	Athens Univers	2.14	193	P	Pn	08 13 47.3	-0.3
ATHU				AML	AML	08 14 27.4	
	comp=N,1015μm,0.9s						
ATHU				AML	AML	08 14 30.6	
	comp=E,462μm,0.5s						
PROD	Prodromos	2.14	214	P	Pn	08 13 47.1	-0.7
PROD				AML	AML	08 14 31.4	
	comp=N,993μm,0.4s						
PROD				AML	AML	08 14 32.1	
	comp=E,1459μm,0.8s						
ATH	Athens Observa	2.14	195	P	Pn	08 13 47.6	-0.1
ATH				AML	AML	08 14 25.5	
	comp=E,2370μm,0.6s						
ATH				AML	AML	08 14 28.9	
	comp=N,3695μm,0.4s						
DKL	Dikili	2.16	116	PN	Pn	08 13 48.1	+0.1
DIM	Dimitrovgrad	2.17	23	*i* P	Pn	08 13 48.1	0.0
DIM	Dimitrovgrad	2.17	23	*i* P	Pn	08 13 48.1	0.0
RKY	Sarkoy-Tekirda	2.21	72	PN	Pn	08 13 48.2	-0.5
SART	Tekirdag	2.21	72	*i* P	Pn	08 13 47.6	-1.1
SART				*i* S	Sn	08 14 15.0	-1.0
SART				IAML		08 14 15.0	
	comp=E,169nm,0.5s						
KRBG	Karabiga-Canak	2.23	80	PN	Pn	08 13 48.9	-0.1
VLY	Voula,Athens	2.25	193	P	Pn	08 13 48.6	-0.6
VLY	Voula,Athens	2.25	193	P	Pn	08 13 49.1	-0.1
EVR	Evrytania	2.31	242	P	Pn	08 13 50.3	+0.1
ZEDA	zmir-Bergama	2.33	117	*i* P	Pn	08 13 50.3	+0.1
ZEDA				IAML		08 14 31.0	
	comp=N,188nm,0.6s						
ZEDA				IAML		08 14 35.0	
	comp=E,170nm,0.5s						
LOUT	Loutraki	2.34	209	P	Pn	08 13 49.9	-0.6
LOUT	Loutraki	2.34	209	P	Pn	08 13 50.0	-0.6
KPRO	Kipourio	2.34	269	P	Pn	08 13 50.8	+0.2
KPRO	Kipourio	2.34	269	P	Pn	08 13 51.1	+0.5
URLA	Izmir	2.39	134	PN	Pn	08 13 51.5	+0.3
URLA	Izmir	2.39	134	*i* P	Pn	08 13 50.8	-0.3
ANX	Ano Chora	2.42	234	P	Pn	08 13 51.8	+0.1
ANX	Ano Chora	2.42	234	P	Pn	08 13 51.7	+0.1
KALE	Kalithea	2.42	228	P	Pn	08 13 51.6	0.0
KALE	Kalithea	2.42	228	P	Pn	08 13 51.7	+0.1
KALE				AML	AML	08 14 40.8	
	comp=E,646μm,0.6s						
KALE				AML	AML	08 14 52.8	
	comp=N,497μm,0.5s						
FNA	Florina	2.43	289	*e* Pn	Pn	08 13 52.3	+0.5
FNA	Florina	2.43	289	P	Pn	08 13 52.2	+0.5
FNA	Florina	2.43	289	P	Pn	08 13 52.4	+0.7
SERG	Sergoula	2.45	229	P	Pn	08 13 52.0	0.0
SERG	Sergoula	2.45	229	P	Pn	08 13 52.2	+0.1
BALY	Balya	2.49	96	*i* P	Pn	08 13 51.9	-0.6
BALY				*i* S	Sn	08 14 22.9	+0.2
BALY				IAML		08 14 36.0	
	comp=N,400nm,0.5s						
BALY				IAML		08 14 36.0	
	comp=E,333nm,0.5s						
MRMT	Marmara Adasi	2.50	76	PN	Pn	08 13 52.8	+0.2
GONE	Gonen-Balikesi	2.51	89	PN	Pn	08 13 53.1	+0.3
PENT	Pentalofos	2.52	274	P	Pn	08 13 53.6	+0.6
PENT	Pentalofos	2.52	274	P	Pn	08 13 53.6	+0.6
EDRB	Edirne	2.52	44	P	Pn	08 13 52.1	-0.8
EDRB	Edirne	2.52	44	PN	Pn	08 13 53.1	+0.2
EFP	Efpalio	2.53	231	P	Pn	08 13 53.1	0.0
EFP	Efpalio	2.53	231	P	Pn	08 13 53.4	+0.3
NEST	Nestorio	2.60	279	P	Pn	08 13 55.1	+1.0
LAKA	Lakka	2.62	227	P	Pn	08 13 54.0	-0.3
BLCB	Balcova	2.63	128	PN	Pn	08 13 54.9	+0.4
STEP	BALIKESIR_Sava	2.64	104	*i* P	Pn	08 13 54.7	+0.2
STEP				IAML		08 14 47.0	
	comp=N,313nm,0.6s						
STEP				IAML		08 14 49.0	
	comp=E,270nm,0.6s						
PVO	Paravola	2.66	238	P	Pn	08 13 55.5	+0.7
EDC	Edincik	2.66	82	PN	Pn	08 13 54.9	+0.1
KLV	Kalavryta, Ach	2.67	222	P	Pn	08 13 54.5	-0.5
KLV	Kalavryta, Ach	2.67	222	P	Pn	08 13 54.7	-0.3
BALB	Balikesir	2.70	98	PN	Pn	08 13 55.4	0.0
DID	Didima	2.70	200	P	Pn	08 13 54.9	-0.6
DID	Didima	2.70	200	P	Pn	08 13 54.8	-0.6
VTS	Vitosha	2.71	341	*e* Pn	Pn	08 13 56.4	+0.6
VTS				*e* Sn	Sn	08 14 28.0	-0.6
VTS	Vitosha	2.71	341	⇑P	Pn	08 13 57.3	+1.5
VTS				⇓S	Sn	08 14 28.0	-0.6
VTS	Vitosha	2.71	341	*i* P	Pn	08 13 56.3	+0.5
VTS	Vitosha	2.71	341	*i* P	Pn	08 13 56.3	+0.5
JAN	Janina	2.77	263	P	Pn	08 13 57.8	+1.4
KRND	KRANIDI	2.84	201	P	Pn	08 13 56.4	-0.9
BOSS	Bosilegrad	2.85	330	*e* Pn	Pn	08 13 57.9	+0.5
BOSS				*e* Sn	Sn	08 14 31.3	-0.3
SERI	Serifos	2.88	179	P	Pn	08 13 57.3	-0.6
JMB	Yambol	2.92	33	*e* P	Pn	08 13 57.8	-0.6
JMB	Yambol	2.92	33	*e* P	Pn	08 13 57.8	-0.6
OHR	Ohrid	2.95	292	*i* Pn	Pn	08 14 00.0	+1.1
OHR	Ohrid	2.95	292	*i* Pn	Pn	08 14 00.0	+1.1
SKO	Skopje	2.96	311	*e* Pn	Pn	08 13 59.4	+0.4
SKO	Skopje	2.96	311	*i* Pn	Pn	08 13 59.9	+1.0
SKO	Skopje	2.96	311	*i* Pn	Pn	08 13 59.9	+1.0
SMG	Samos	3.01	140	P	Pn	08 13 59.8	+0.2
TRIP	Tripoli	3.02	214	P	Pn	08 14 00.1	+0.2
ELND	Elena	3.08	20	⇓P	Pn	08 14 00.8	+0.1
APE	Apeiranthos	3.10	163	P	Pn	08 14 00.4	-0.5
APE	Apeiranthos	3.10	163	⇑P	Pn	08 14 00.7	-0.3
APE	Apeiranthos	3.10	163	PN	Pn	08 14 01.0	0.0
VLX	Vlachokerasia	3.11	211	P	Pn	08 14 01.3	+0.2
PLVB	Pleven	3.34	3	⇑P	Pn	08 14 04.5	+0.3
BARS	Barje	3.38	326	*e* Pn	Pn	08 14 05.3	+0.5
BARS	Barje	3.38	326	*e* Pn	Pg	08 14 17.3	+0.2
BARS				*e* Sn	Sn	08 14 45.3	+0.4
SZH	Strazhica	3.41	19	*e* P	Pn	08 14 05.4	+0.2
SZH	Strazhica	3.41	19	*e* P	Pn	08 14 05.4	+0.2
AYDB	Zeytinkoy-Aydi	3.43	127	PN	Pn	08 14 05.9	+0.4
DEMI	Demirci	3.48	105	*i* P	Pn	08 14 05.6	-0.5
DEMI				IAML		08 14 59.0	
	comp=N,51nm,0.6s						
DEMI				IAML		08 14 59.0	
	comp=E,76nm,1.3s						
ZAPS	Zavoj	3.49	338	*e* Pn	Pn	08 14 07.7	+1.4
ZAPS				*e* Sn	Sn	08 14 46.3	-1.1
ULDT	Uludag	3.62	87	*i* P	Pn	08 14 07.8	-0.5
ULDT				*i* S	Sn	08 14 48.9	-2.1
ULDT				IAML		08 14 53.0	
	comp=N,62nm,0.4s						
ULDT				IAML		08 14 53.0	
	comp=E,65nm,0.5s						
KULA	Kula-Manisa	3.63	114	PN	Pn	08 14 08.8	+0.5
TIR	Tirane	3.69	292	⇓P	Pn	08 14 09.9	+0.9
KLYT	Kilyos	3.72	70	PN	Pn	08 14 10.2	+0.8
RAZG	Razgrad	3.85	23	⇑P	Pn	08 14 11.0	-0.2
TVSB	Tavsanli	3.94	97	PN	Pn	08 14 12.9	+0.4
VLAD	Vladila	3.95	360	⇑P	Pn	08 14 12.7	+0.2
SELS	Selova	4.02	323	*e* Pn	Pn	08 14 13.4	-0.1
SELS				*e* Sn	Sn	08 14 59.2	-1.2
ZAGS	Zajecar	4.10	337	*e* Pn	Pn	08 14 14.1	-0.5
ZAGS				*e* Sn	Sn	08 15 01.5	-0.9
BOVS	Bovan	4.11	331	*e* Pn	Pn	08 14 15.3	+0.5
BOVS				*e* Sn	Sn	08 15 00.1	-2.7
SILT	Sile	4.13	73	PN	Pn	08 14 15.8	+0.7
DRME	Dracevica, Mon	4.49	300	*e* Pn	Pn	08 14 22.2	+2.2
HUMR	Humele	4.50	5	⇑P	Pn	08 14 20.0	-0.1
PDG	Podgorica	4.56	303	*e* Pn	Pn	08 14 23.2	+2.3
SJES	Sjenica	4.62	315	*e* Pn	Pn	08 14 23.1	+1.2
SRE	Strehaia	4.70	349	⇑P	Pn	08 14 22.8	-0.1
GRUS	Gruza	4.72	326	*e* Pn	Pn	08 14 23.1	-0.1
IDI	Anoyia	4.77	175	Pn	Pn	08 14 23.4	-0.5
	comp=E,2.7nm,0.3s,baz=1.1,slow=10,SNR=12						
IDI				Sn	Sn	08 15 17.3	-1.7
	comp=E,2.3nm,0.3s,baz=270,slow=20,SNR=2.4						
IDI	Anoyia	4.77	175	⇓P	Pn	08 14 23.9	0.0
ICOR	Ion Corvin	4.78	31	⇑P	Pn	08 14 24.4	+0.4
KUBS	Kucevo	4.81	336	*e* Pn	Pn	08 14 23.8	-0.6
HERR	Herculane	5.05	344	⇑P	Pn	08 14 27.5	-0.1
HCY	Herceg Novi	5.06	300	*e* Pn	Pn	08 14 29.5	+1.6
TRUS	Trudelj	5.12	326	*e* Pn	Pn	08 14 28.2	-0.5
MDVR	Moldovita	5.13	338	⇑P	Pn	08 14 29.0	+0.1
UPM	Unac-Piva	5.19	309	*e* Pn	Pn	08 14 31.6	+1.8
MTUR	Matau	5.20	5	⇓P	Pn	08 14 30.5	+0.7
DIVS	Divibare	5.21	322	*e* Pn	Pn	08 14 30.2	+0.2
DIVS	Divibare	5.21	322	*e* Pn	Pn	08 14 29.9	-0.1
BRY	Bratogost	5.25	305	*e* Pn	Pn	08 14 32.8	+2.2
TREB	Trebinje	5.28	302	*e* Pn	Pn	08 14 34.6	+3.7
TIRR	Tirgusor	5.31	33	⇑P	Pn	08 14 31.9	+0.6
TIRR	Tirgusor	5.31	33	⇑P	Pn	08 14 31.9	+0.6
ARR	Arges	5.32	2	⇑P	Pn	08 14 31.7	+0.3
HARR	Harsova	5.32	28	⇑P	Pn	08 14 30.5	-0.9
BBLS	Lazići	5.34	317	*e* Pn	Pn	08 14 33.4	+1.7
BBLS	Lazići	5.34	317	*e* Pn	Pn	08 14 32.5	+0.8
VOIR		5.41	5	⇓P	Pn	08 14 33.4	+0.8
GZR	Gura Zlata	5.47	348	⇑P	Pn	08 14 33.6	0.0
MLR	Muntele Rosu	5.55	11	*e* Pn	Pn	08 14 35.8	+1.1
MLR	Muntele Rosu	5.55	11	Pn	Pn	08 14 34.3	-0.4
	comp=E,3.0nm,0.3s,baz=235,slow=7.3,SNR=26						
MLR				Sn	Sn	08 15 39.7	+1.2
	comp=E,2.3nm,0.3s,baz=220,slow=18,SNR=3.8						
MLR				Lg	Lg	08 16 12.6	
	comp=E,1.7nm,0.3s,baz=183,slow=16,SNR=5.5						
MLR	Muntele Rosu	5.55	11	⇑P	Pn	08 14 35.9	+1.2
TEKS	Tekeris	5.77	323	*e* Pn	Pn	08 14 37.6	0.0
STON	Ston	5.78	301	*e* Pn	Pn	08 14 44.1	+6.4
CFR	Carcaliu	5.81	27	⇑P	Pn	08 14 38.3	+0.1
DOPR	Dopca	5.96	7	⇑P	Pn	08 14 41.5	+1.4
TIP	Timpagrande	5.97	264	⇓P	Pn	08 14 41.5	+1.0
PLOR	Plostina	6.03	15	⇑P	Pn	08 14 43.0	+1.8
VRI	Vrincioaia	6.06	16	⇓P	Pn	08 14 43.2	+1.6
MDB	Medias	6.09	360	⇑P	Pn	08 14 42.3	+0.3
OZUR		6.13	9	⇑P	Pn	08 14 43.8	+1.2
RICI	Ricice	6.44	305	P	Pn	08 14 48.2	+1.4
TESR	Tescani	6.66	13	⇑P	Pn	08 14 50.5	+0.7
HVAR	Hvar	6.74	300	*i* P	Pn	08 14 50.8	0.0
BIZ	Bicaz	7.00	10	⇓P	Pn	08 14 55.5	+1.1
BRTR	Keskin Array B	7.10	90	Pn	Pn	08 14 56.9	+0.9
	comp=E,0.9nm,0.3s,baz=267,slow=11,SNR=10						
BLY	Banja Luka	7.12	314	*e* Pn	Pn	08 14 57.8	+1.7
KIJV	Kijevo	7.15	306	*i* P	Pn	08 14 58.2	+1.6
ZIRJ	Zirje	7.47	302	*i* P	Pn	08 15 01.4	+0.5
MORI	Morici	7.53	303	*i* P	Pn	08 15 02.5	+0.8
DUGI	Dugi Otok	8.00	303	*i* P	Pn	08 15 08.6	+0.4
SORM	Soroca	8.56	18	⇑P	Pn	08 15 15.5	-0.4
CRES	Cresnjev	8.74	314	*e* Pn	Pn	08 15 19.7	+1.3
KOLS	Kolonicke sedl	9.01	351	*e* SG	Sn	08 18 01.6	+58
AKASG	Malin Array Be	11.17	16	Pn	Pn	08 15 50.9	-0.7
	comp=E,2.4nm,0.3s,baz=204,slow=11,SNR=4.4						
ESDC	Sonseca Array	21.75	278	P	P	08 18 03.2	-0.3
	comp=E,0.3nm,0.4s,baz=66,slow=6.2,SNR=2.4						
NB2	NORSAR Subarra	22.54	343	P	P	08 18 11.2	-0.6
	comp=Z,5.1nm,1.4s,baz=153,slow=10						
NOA	NORSAR Array B	22.54	343	P	P	08 18 10.7	-1.1
	comp=Z,0.6nm,0.7s,baz=155,slow=10,SNR=4.1						
EKA	Eskdalemuir Ar	23.83	319	P	P	08 18 24.1	-0.7
	comp=Z,0.7nm,0.4s,baz=119,slow=9.6,SNR=3.4						
TORD	Torodi Ar. Bea	33.43	223	P	P	08 19 51.6	+0.7
	comp=Z,1.2nm,0.5s,baz=38,slow=8.9,SNR=7.2						
MKAR	Makanchi Array	41.74	61	P	P	08 21 02.4	+1.4

comp=Z,1.4nm,0.6s,baz=272,slow=7.1,SNR=7.3
ZALV Zalesovo Beam 42.18 50 P **P 08 21 05.0 +0.6**
comp=Z,0.7nm,0.4s,baz=296,slow=10,SNR=4.1
SONM Songino Array 56.92 53 P **P 08 22 58.0 +0.9**
comp=Z,0.4nm,0.5s,baz=324,slow=7.1,SNR=2.1
YKA Yellowknife Ar 72.63 341 P **P 08 24 39.2 +0.2**
comp=Z,0.3nm,0.7s,baz=31,slow=5.1,SNR=2.7
KSRS Korea Array 75.80 53 P **P 08 24 58.4 +0.5**
comp=Z,0.7nm,0.7s,baz=308,slow=8.1,SNR=1.4
ASAR Alice Springs 119.38 97 PKP **PKPdf 08 32 01.1 -0.6**
comp=Z,0.4nm,0.8s,baz=352,slow=1.3,SNR=2.6

*IDC **29** 08:16:18.2±1.2,35°.93N×27°.30E,h0km,mb3.7/3,*
mb1 3.6/7,mb1mx3.4/49,mbtmp3.6/7,ML3.4/4, Error
ellipse: s-maj=31.4km s-min=17.7km az=155.0
*NIC **29** 08:16:19.8±0.0,35°.89N×27°.28E,h3km±3km,Ml3.2/3*
*ATH **29** 08:16:20.0,35°.84N×27°.33E,h27km±1km,ML3.5/10, Error*
ellipse: s-maj=3.9km s-min=1.1km az=107.0
*DDA **29** 08:16:20.2,35°.81N×27°.43E,h2km±2km,MW3.5*
*ISK **29** 08:16:20.5,35°.86N×27°.33E,h7km,ML3.4/17*
*THE **29** 08:16:21.1,35°.85N×27°.34E,h6km±1km,ML3.3/9, Error*
ellipse: s-maj=2.3km s-min=0.6km az=127.0
ISC 29 08:16:20.9±0.9,35°.85N±0'.02×27°.35E±0'.02,h16km±7km,
n84,σ1º26/124,mb3.7/3,5C,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KARP	**Karpathos**	**0.34**	**207**	P		**Pg**	**08 16 27.8**	**-0.3**
KARP				S		**Sg**	**08 16 32.9**	**0.0**
	9µm,0.1s							
KARP	**Karpathos**	**0.34**	**207**	P		**Pg**	**08 16 27.7**	**-0.3**
KARP				S		**Sg**	**08 16 32.9**	**0.0**
KARP				AML		AML	08 16 33.7	
	comp=E,20052µm,0.1s							
KARP				AML		AML	08 16 34.7	
	comp=N,16545µm,0.1s							
KARP	**Karpathos**	**0.34**	**207**	PG		**Pg**	**08 16 27.7**	**-0.3**
KARP				SG		**Sg**	**08 16 33.1**	**+0.2**
KARP	**Karpathos**	**0.34**	**207**	⇑P		**Pg**	**08 16 27.7**	**-0.3**
KARP				S		**Sg**	**08 16 32.8**	**0.0**
KARP				AML		AML	08 16 33.3	
	comp=N,20nm,0.1s							
KARP				AML		AML	08 16 33.3	
	comp=N,20nm,0.1s							
KARP				AML		AML	08 16 33.4	
	comp=N,16nm,0.1s							
KARP				AML		AML	08 16 33.4	
	comp=N,16nm,0.1s							
ARG	**Arkhangelos**	**0.72**	**60**	P		**Pg**	**08 16 34.9**	**-0.2**
ARG				S		**Sb**	**08 16 46.1**	**+1.3**
	comp=N,6µm,0.3s							
ARG	**Arkhangelos**	**0.72**	**60**	P		**Pg**	**08 16 34.3**	**-0.8**
ARG				AML		AML	08 16 49.1	
	comp=N,9259µm,0.4s							
ARG				AML		AML	08 16 49.5	
	comp=E,15043µm,0.3s							
ARG	**Arkhangelos**	**0.72**	**60**	PG		**Pg**	**08 16 34.9**	**-0.2**
ARG				SG		**Sb**	**08 16 46.2**	**+1.4**
ARG	**Arkhangelos**	**0.72**	**60**	⇑P		**Pg**	**08 16 34.8**	**-0.3**
ARG				S		**Sb**	**08 16 45.9**	**+1.1**
NISR	**Nisiros**	**0.78**	**347**	P		**Pb**	**08 16 36.3**	**+0.2**
NISR				S		**Sn**	**08 16 47.6**	**-1.0**
	comp=E,2µm,0.5s							
NISR	**Nisiros**	**0.78**	**347**	P		**Pb**	**08 16 36.0**	**-0.1**
NISR				S		**Sb**	**08 16 47.1**	**+0.7**
NISR				AML		AML	08 16 50.8	
	comp=N,2377µm,0.4s							
NISR				AML		AML	08 16 51.8	
	comp=E,3873µm,0.3s							
DAT	**Datca**	**0.90**	**12**	P		**Pb**	**08 16 37.8**	**-0.3**
DAT				S		**Sn**	**08 16 51.1**	**-0.5**
DAT	**Datca**	**0.90**	**12**	PG		**Pn**	**08 16 38.5**	**-0.4**
DAT				SG		**Sn**	**08 16 51.2**	**-0.4**
DAT	**Datca**	**0.90**	**12**	*i* P		**Pb**	**08 16 37.8**	**-0.3**
DAT				*i* S		**Sn**	**08 16 51.5**	**-0.1**
DAT				IAML			08 16 53.0	
	comp=N,370nm,0.2s							
DAT				IAML			08 16 53.0	
	comp=E,304nm,0.2s							
KOSK	**Kos Island**	**0.95**	**342**	P		**Pn**	**08 16 39.6**	**+0.1**
KOSK				S		**Sn**	**08 16 53.6**	**+0.9**
	comp=E,1µm,0.4s							
KOSK	**Kos Island**	**0.95**	**342**	PG		**Pg**	**08 16 38.8**	**-0.5**
KOSK				SG		**Sn**	**08 16 52.7**	**0.0**
MRSB	**Marmaris-Mugla**	**1.10**	**38**	PN		**Pn**	**08 16 41.9**	**+0.2**
MRSB				SN		**Sn**	**08 16 57.9**	**+1.4**
ZKR	**Zakros**	**1.18**	**232**	P		**Pn**	**08 16 42.8**	**0.0**
ZKR				S		**Sn**	**08 16 58.6**	**+0.1**
	comp=E,2µm,0.4s							
ZKR	**Zakros**	**1.18**	**232**	P		**Pn**	**08 16 42.6**	**-0.1**
ZKR				S		**Sb**	**08 16 58.1**	**+0.1**
ZKR				AML		AML	08 17 01.8	
	comp=E,4808µm,0.4s							
ZKR				AML		AML	08 17 01.9	
	comp=N,1870µm,0.4s							
ZKR	**Zakros**	**1.18**	**232**	PN		**Pn**	**08 16 42.8**	**0.0**
ZKR	**Zakros**	**1.18**	**232**	⇑P		**Pn**	**08 16 42.5**	**-0.3**
ZKR				S		**Sg**	**08 16 59.5**	**+0.3**
ZKR				AML		AML	08 17 01.4	
	comp=N,4.8nm,0.4s							
ZKR				AML		AML	08 17 01.4	
	comp=N,4.8nm,0.4s							
ZKR				AML		AML	08 17 01.6	
	comp=N,1.9nm,0.4s							
ZKR				AML		AML	08 17 01.6	
	comp=N,1.9nm,0.4s							
BODT	**Bodrum**	**1.21**	**358**	P		**Pn**	**08 16 42.6**	**-0.6**
BODT				S		**Sg**	**08 17 01.1**	**+1.0**
BODT	**Bodrum**	**1.21**	**358**	PN		**Pg**	**08 16 43.8**	**-0.5**
BDRM	**Kayabasi**	**1.22**	**3**	*i* P		**Pg**	**08 16 43.8**	**-0.6**
BDRM				*i* P		**Pb**	**08 16 44.8**	**+1.2**
BDRM				IAML			08 17 05.0	
	comp=E,156nm,0.5s							
BDRM				IAML			08 17 07.0	
	comp=E,153nm,0.4s							
BDRM				IAML			08 17 09.0	
	comp=N,226nm,0.5s							
STIA	**Sitia Lasithi**	**1.22**	**238**	P		**Pb**	**08 16 43.5**	**0.0**
STIA				S		**Sb**	**08 16 58.9**	**0.0**
ANAF	**Anafi Island**	**1.38**	**292**	P		**Pn**	**08 16 44.8**	**-0.7**
ANAF				S		**Sb**	**08 17 03.5**	**-0.1**
ANAF	**Anafi Island**	**1.38**	**292**	P		**Pn**	**08 16 44.8**	**-0.7**
ANAF				AML		AML	08 17 04.9	
	comp=N,6454µm,0.5s							
ANAF				AML		AML	08 17 08.1	
	comp=E,9208µm,0.4s							
DALY	**Dalyan (Mula)**	**1.43**	**47**	PN		**Pb**	**08 16 47.5**	**+0.4**
DALY	**Dalyan (Mula)**	**1.43**	**47**	*i* P		**Pb**	**08 16 47.2**	**+0.2**
DALY				*i* S		**Sg**	**08 17 06.7**	**-0.2**
DALY				IAML			08 17 11.0	
	comp=N,488nm,0.6s							
DALY				IAML			08 17 12.0	
	comp=E,311nm,0.6s							
TURN	**Turunc**	**1.44**	**44**	PN		**Pn**	**08 16 43.2**	**-3.0**
TURN	**Turunc**	**1.44**	**44**	*i* P		**Pn**	**08 16 42.3**	**-3.9**
TURN				*i* S		**Sn**	**08 16 59.3**	**-5.4**
TURN				IAML			08 17 00.0	
	comp=E,486nm,0.7s							
TURN				IAML			08 17 02.0	
	comp=N,556nm,0.3s							
YER	**Yerkesik**	**1.48**	**30**	P		**Pb**	**08 16 47.7**	**-0.5**
YER				S		**Sb**	**08 17 07.0**	**+0.2**
YER	**Yerkesik**	**1.48**	**30**	PN		**Pb**	**08 16 48.4**	**+0.2**
NPS	**Neapolis**	**1.54**	**248**	P		**Pn**	**08 16 47.6**	**0.0**
NPS				S		**Sn**	**08 17 06.8**	**-0.5**
	comp=N,2µm,0.2s							
NPS	**Neapolis**	**1.54**	**248**	P		**Pn**	**08 16 47.6**	**0.0**
NPS				AML		AML	08 17 07.4	
	comp=E,3955µm,0.2s							
NPS				AML		AML	08 17 07.5	
	comp=N,3787µm,0.3s							
FRMA	**Ierapetra Chan**	**1.56**	**238**	P		**Pn**	**08 16 47.5**	**-0.5**
FRMA				S		**Sn**	**08 17 06.8**	**-1.1**
FETY	**Fethiye**	**1.60**	**60**	PN		**Pb**	**08 16 50.2**	**+0.1**
FETY	**Fethiye**	**1.60**	**60**	*i* P		**Pb**	**08 16 50.2**	**+0.1**
FETY				*i* S		**Sg**	**08 17 12.7**	**+0.1**
FETY				IAML			08 17 19.0	
	comp=N,177nm,0.5s							
FETY				IAML			08 17 23.0	
	comp=E,135nm,0.8s							
SANT	**Santorini**	**1.62**	**289**	P		**Pn**	**08 16 49.2**	**+0.3**
SANT	**Santorini**	**1.62**	**289**	P		**Pn**	**08 16 49.1**	**+0.3**
SANT				AML		AML	08 17 17.3	
	comp=N,749µm,0.3s							
SANT				AML		AML	08 17 19.0	
	comp=E,1478µm,0.3s							
SANT	**Santorini**	**1.62**	**289**	PN		**Pb**	**08 16 49.7**	**-0.7**
SNT1	**Gialos, Santor**	**1.66**	**290**	P		**Pn**	**08 16 49.2**	**-0.1**
LAST	**Lasithi**	**1.68**	**246**	P		**Pn**	**08 16 50.1**	**+0.4**
LAST				S		**Sn**	**08 17 10.7**	**-0.1**
	comp=E,432nm,0.6s							
LAST	**Lasithi**	**1.68**	**246**	P		**Pn**	**08 16 50.0**	**+0.4**
KSL	**Kastellorizon**	**1.83**	**80**	⇑P		**Pb**	**08 16 53.7**	**-0.3**
KSL				S		**Sg**	**08 17 19.5**	**-0.5**
KSL				AML		AML	08 17 20.3	
	comp=E,0.6nm,0.5s							
KSL				AML		AML	08 17 20.3	
	comp=E,0.6nm,0.5s							
KSL				AML		AML	08 17 20.5	
	comp=E,0.6nm,0.5s							
KSL				AML		AML	08 17 20.5	
	comp=E,0.6nm,0.5s							
GCAM	**G?zelcaml?**	**1.85**	**357**	PN		**Pb**	**08 16 53.4**	**-0.9**
AKAS	**Kas**	**1.86**	**78**	PN		**Pb**	**08 16 54.8**	**+0.1**
AKAS	**Kas**	**1.86**	**78**	*i* P		**Pb**	**08 16 54.3**	**-0.3**
AKAS				*i* S		**Sg**	**08 17 20.1**	**-0.9**
AKAS				IAML			08 17 24.0	
	comp=N,155nm,0.4s							
AKAS				IAML			08 17 30.0	
	comp=E,89nm,0.4s							
IOSP	**Ios Island**	**1.88**	**298**	P		**Pn**	**08 16 51.8**	**-0.6**
IOSP	**Ios Island**	**1.88**	**298**	P		**Pn**	**08 16 51.8**	**-0.6**
IOSP				AML		AML	08 17 13.7	
	comp=N,1494µm,0.2s							
IOSP				AML		AML	08 17 15.1	
	comp=E,1604µm,0.3s							
APE	**Apeiranthos**	**1.91**	**310**	P		**Pn**	**08 16 52.2**	**-0.6**
APE	**Apeiranthos**	**1.91**	**310**	P		**Pn**	**08 16 52.2**	**-0.6**
APE	**Apeiranthos**	**1.91**	**310**	PN		**Pn**	**08 16 52.9**	**+0.1**
APE	**Apeiranthos**	**1.91**	**310**	⇑P		**Pn**	**08 16 52.1**	**-0.6**
HRKL	**Herakleio**	**1.91**	**254**	PN		**Pn**	**08 16 54.0**	**+1.2**
TAVA	**DENIZLI_Tavas**	**2.04**	**37**	*i* P		**Pb**	**08 16 56.8**	**-0.9**
TAVA				*i* S		**Sg**	**08 17 25.1**	**-1.6**
TAVA				IAML			08 17 26.0	
	comp=E,174nm,0.3s							
TAVA				IAML			08 17 29.0	
	comp=N,226nm,0.5s							
IDI	**Anoyia**	**2.08**	**255**	P		**Pn**	**08 16 55.3**	**+0.1**
IDI				S		**Sn**	**08 17 20.4**	**-0.5**
	comp=N,290nm,0.4s							
IDI	**Anoyia**	**2.08**	**255**	Pn		**Pn**	**08 16 54.4**	**-0.8**
	comp=N,9.5nm,0.3s,baz=60,slow=10,SNR=26							
IDI				Sn		**Sn**	**08 17 20.1**	**-0.8**
	comp=N,26nm,0.3s,baz=321,slow=22,SNR=9.5							
IDI	**Anoyia**	**2.08**	**255**	P		**Pn**	**08 16 55.1**	**-0.1**
IDI	**Anoyia**	**2.08**	**255**	PN		**Pn**	**08 16 56.5**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**2.14**	**11**	PN		**Pb**	**08 16 58.1**	**-1.2**
DGB	**zmir**	**2.23**	**350**	*i* P		**Pn**	**08 16 55.3**	**-1.8**
DGB				*i* S		**Sg**	**08 17 37.6**	**+5.0**
SIVA	**Sivas**	**2.24**	**249**	P		**Pn**	**08 16 58.0**	**+0.7**
SIVA				AML		AML	08 17 35.9	
	comp=E,1124µm,0.7s							
SIVA				AML		AML	08 17 36.8	
	comp=N,806µm,0.8s							
GOLH	**Golhisar**	**2.25**	**51**	*i* P		**Pb**	**08 17 00.3**	**-1.0**
GOLH				*i* S		**Sg**	**08 17 33.0**	**-0.4**
GOLH				IAML			08 17 35.0	
	comp=N,244nm,0.9s							
AKUM	**Antalya-Kumluc**	**2.47**	**78**	*i* P		**Pn**	**08 17 01.4**	**+1.0**
AKUM				*i* S		**Sb**	**08 17 35.1**	**+0.2**
AKUM				IAML			08 17 36.0	
	comp=E,43nm,0.4s							
AKUM				IAML			08 17 36.0	
	comp=N,50nm,0.5s							
URLA	**Izmir**	**2.58**	**347**	*i* S		**Sg**	**08 17 48.0**	**+4.3**
KORT	**Korkueli**	**2.68**	**64**	PN		**Pn**	**08 17 05.9**	**+2.5**
KORT	**Korkueli**	**2.68**	**64**	*i* P		**Pb**	**08 17 07.8**	**-0.7**
KORT				*i* S		**Sb**	**08 17 42.8**	**+1.7**
KORT				IAML			08 17 55.0	
	comp=N,55nm,0.4s							
KORT				IAML			08 17 59.0	
	comp=E,75nm,0.9s							
CHOS	**Chios island**	**2.74**	**338**	P		**Pn**	**08 17 04.8**	**+0.6**
IMMV	**Iera Moni Meta**	**2.77**	**263**	P		**Pn**	**08 17 04.2**	**-0.5**
BRDR	**BURDUR-Merkez**	**2.85**	**49**	*i* P		**Pb**	**08 17 13.4**	**+2.0**
BRDR				*i* S		**Sb**	**08 17 49.1**	**+3.1**
BRDR				IAML			08 18 01.0	
	comp=N,55nm,0.6s							
BRDR				IAML			08 18 09.0	
	comp=E,42nm,0.7s							
GVD	**Gavdhos**	**2.85**	**250**	PN		**Pn**	**08 17 07.9**	**+2.2**
ANKY	**Antikythira Is**	**3.29**	**271**	P		**Pn**	**08 17 12.5**	**+0.7**
VLI	**Veliai**	**3.67**	**285**	P		**Pn**	**08 17 17.7**	**+0.7**
VLI				S		**Sn**	**08 18 00.8**	**+0.9**
	comp=E,98nm,0.6s							
VLI	**Veliai**	**3.67**	**285**	P		**Pn**	**08 17 17.6**	**+0.6**
VLI				AML		AML	08 18 02.9	
	comp=E,323µm,0.4s							
VLI				AML		AML	08 18 05.8	
	comp=N,271µm,0.7s							
AKMS	**Akamas**	**4.15**	**100**	P		**Pn**	**08 17 24.8**	**+1.1**
SZAC	**Souni**	**4.65**	**102**	P		**Pn**	**08 17 32.3**	**+1.7**
OSC2	**CSNet OBS 4**	**4.91**	**123**	P		**Pn**	**08 17 37.1**	**+3.0**
CSS	**Mathiatis**	**4.96**	**99**	P		**Pn**	**08 17 36.3**	**+1.6**
BRTR	**Keskin Array B**	**6.30**	**50**	Pn		**Pn**	**08 17 55.2**	**+1.9**
	comp=N,0.3nm,0.3s,baz=212,slow=12,SNR=1.7							
MMAI	**Mount Meron Ar**	**7.23**	**111**	Pn		**Pn**	**08 18 04.7**	**-1.2**
	comp=N,1.3nm,0.3s,baz=288,slow=10,SNR=2.0							
EIL	**Elat**	**8.88**	**132**	Pn		**Pn**	**08 18 27.9**	**-0.6**
	comp=N,0.6nm,0.3s,baz=297,slow=11,SNR=2.0							
TORD	**Torodi Ar. Bea**	**32.31**	**232**	P		**P**	**08 22 49.7**	**+0.4**
	comp=N,0.5nm,0.3s,baz=34,slow=9.2,SNR=13							
ARCES	**ARCESS Array B**	**33.76**	**359**	P		**P**	**08 22 59.3**	**-2.1**
	comp=N,0.7nm,0.7s,baz=171,slow=8.6,SNR=3.8							
MKAR	**Makanchi Array**	**41.90**	**57**	P		**P**	**08 24 11.1**	**+0.6**
	comp=N,0.3nm,0.4s,baz=272,slow=8.0,SNR=3.7							

*TEH **29** 08:31:07.5,34°.35N×45°.40E,h10km,ML2.9*
*ISN **29** 08:31:08.3±0.4,34°.35N×45°.36E,h18km±12km,ML2.6*
ISC 29 08:31:08.2±1.0,34°.35N±0'.04×45°.42E±0'.04,h10km,n11,
σ0º71/14,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IDHR	**Dehrash**	**0.87**	**66**	*e*Pg		**Pg**	**08 31 24.4**	**-0.7**
IDHR				*e*			08 31 39.2	
IGHG	**Ghaleghazi**	**0.95**	**91**	*e*Pg		**Pb**	**08 31 26.5**	**-0.5**
IGHG				*e*			08 31 41.9	
IVIS	**Veis**	**1.20**	**81**	*e*Pg		**Pg**	**08 31 30.7**	**-0.6**
IVIS				*e*			08 31 52.1	
IBDR	**Badra**	**1.31**	**161**	*e*Pg		**Pg**	**08 31 33.0**	**-0.3**
IBDR				*e*Sg		**Sg**	**08 31 50.5**	**+0.2**
IBDR				AML		AML	08 31 56.0	
	comp=E,165nm,0.4s							
IBDR				AML		AML	08 31 56.1	
	comp=N,88nm,0.5s							
KCHF	**Cheshme Sefid,**	**1.34**	**93**	*e*Pg		**Pb**	**08 31 33.3**	**-0.4**
KCHF				*e*			08 31 54.6	
IKRK	**Kirkuk**	**1.37**	**320**	*e*Pn		**Pg**	**08 31 34.0**	**-0.6**
IKRK				*e*Sn		**Sg**	**08 31 53.0**	**+0.5**
IKRK				AML		AML	08 32 02.5	
	comp=N,103nm,0.6s							
IKRK				AML		AML	08 32 09.2	
	comp=E,129nm,0.6s							
BHD	**Baghdad**	**1.38**	**219**	*e*Pn		**Pg**	**08 31 34.0**	**-0.7**
BHD				*e*Sn		**Sg**	**08 31 53.0**	**+0.4**
ILIN	**Lien**	**1.40**	**65**	*e*Pg		**Pg**	**08 31 35.2**	**+0.1**
ILIN				*e*			08 31 55.4	
IKOM	**Komasi**	**1.74**	**95**	*e*Pn		**Pg**	**08 31 40.7**	**-1.0**
IKOM				*e*			08 32 08.8	
IBZA	**Bozab**	**2.02**	**86**	*e*Pg		**Pb**	**08 31 44.7**	**-0.6**
IBZA				*e*			08 32 14.1	
BMDN	**Meydan**	**2.91**	**102**	*e*Pn		**Pn**	**08 31 56.0**	**+1.2**
BMDN				*e*			08 32 47.5	

*BEO **29** 08:39:20.0±0.7,39°.78N×24°.28E,h0km,ML3.6/15*
*IDC **29** 08:39:22.2±1.1,40°.09N×24°.44E,h0km,mb3.6/6,*
mb1 3.8/10,mb1mx3.5/45,mbtmp3.6/10,ML3.6/4,MS3.1/5,
Ms1 3.1/5,ms1mx2.6/48,Error ellipse: s-maj=18.7km
s-min=16.6km az=110.0
*ISK **29** 08:39:22.5,40°.05N×24°.44E,h9km,ML3.7/18*
*DDA **29** 08:39:22.8,40°.07N×24°.50E,h26km±4km,MW3.8*
*ATH **29** 08:39:23.1,40°.05N×24°.38E,h31km±1km,ML3.5/20,Error*
ellipse: s-maj=1.1km s-min=0.7km az=359.0
*THE **29** 08:39:23.9,40°.06N×24°.39E,h15km,ML3.5/20,Error*
ellipse: s-maj=0.8km s-min=0.4km az=351.0
*SOF **29** 08:39:24.6,40°.22N×24°.48E,h16km,MD3.6*
ISC 29 08:39:23.2±1.0,40°.04N±0'.01×24°.42E±0'.01,h9km±7km,
n180,σ0º90/240,mb3.7/6,MS3.2/3,22C-3D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OUR	**Ouranopolis**	**0.45**	**311**	P		**Pg**	**08 39 32.3**	**+0.3**
OUR				S		**Sg**	**08 39 38.0**	**+0.1**
	5µm,0.3s							
OUR	**Ouranopolis**	**0.45**	**311**	P		**Pg**	**08 39 32.3**	**+0.3**
OUR				S		**Sg**	**08 39 38.2**	**+0.3**
OUR				AML		AML	08 39 39.4	
	comp=N,9767µm,0.3s							
OUR				AML		AML	08 39 39.4	
	comp=E,9661µm,0.3s							
OUR	**Ouranopolis**	**0.45**	**311**	PG		**Pg**	**08 39 32.3**	**+0.3**
OUR				SG		**Sg**	**08 39 38.6**	**+0.7**
PAIG	**Paliouri**	**0.58**	**259**	P		**Pg**	**08 39 34.4**	**-0.1**
PAIG				S		**Sg**	**08 39 42.5**	**+0.4**
	comp=E,3µm,0.6s							
PAIG	**Paliouri**	**0.58**	**259**	P		**Pg**	**08 39 34.6**	**+0.1**
PAIG				S		**Sg**	**08 39 43.0**	**+0.9**
PAIG				AML		AML	08 39 46.1	
	comp=N,7410µm,0.4s							
PAIG				AML		AML	08 39 46.2	
	comp=E,5392µm,0.6s							
LIA	**Limnos Island**	**0.60**	**103**	P		**Pb**	**08 39 35.8**	**0.0**
LIA				S		**Sn**	**08 39 45.8**	**-1.9**
	comp=E,6µm,0.6s							
LIA	**Limnos Island**	**0.60**	**103**	P		**Pb**	**08 39 36.2**	**+0.4**
LIA				S		**Sb**	**08 39 45.2**	**+0.8**
LIA				AML		AML	08 39 47.3	
	comp=E,12480µm,0.4s							
LIA				AML		AML	08 39 47.5	
	comp=N,10527µm,0.4s							
THAS	**Thassos island**	**0.61**	**22**	P		**Pg**	**08 39 34.9**	**-0.2**
THAS				S		**Sb**	**08 39 45.0**	**+0.3**
	comp=N,17µm,0.4s							
THAS	**Thassos island**	**0.61**	**22**	P		**Pb**	**08 39 36.1**	**+0.1**
THAS				S		**Sb**	**08 39 44.6**	**-0.2**
THAS				AML		AML	08 39 46.1	
	comp=E,41120µm,0.5s							
THAS				AML		AML	08 39 46.1	
	comp=N,27143µm,0.4s							
EFSA	**Agios Efstrati**	**0.66**	**139**	P		**Pn**	**08 39 38.2**	**-0.5**
EFSA				S		**Sb**	**08 39 47.0**	**+0.9**
PLG	**Polygyros**	**0.82**	**294**	P		**Pg**	**08 39 39.0**	**0.0**
PLG				S		**Sb**	**08 39 50.5**	**-0.3**
	comp=N,2µm,0.8s							
PLG	**Polygyros**	**0.82**	**294**	P		**Pg**	**08 39 39.0**	**0.0**
PLG				S		**Sb**	**08 39 50.1**	**-0.7**
PLG				AML		AML	08 39 53.1	
	comp=N,2840µm,0.4s							
PLG				AML		AML	08 39 54.6	
	comp=E,3774µm,0.6s							
KVLA	**Kavala**	**0.90**	**358**	P		**Pn**	**08 39 41.0**	**-0.9**
KVLA				S		**Sb**	**08 39 52.5**	**-0.5**
KVLA				AML		AML	08 39 54.1	
	comp=E,39958µm,0.4s							
KVLA				AML		AML	08 39 54.2	
	comp=N,11780µm,0.6s							
SMTH	**Samothraki Isl**	**0.95**	**63**	P		**Pg**	**08 39 41.1**	**-0.4**
SMTH				S		**Sn**	**08 39 55.1**	**-1.3**
	comp=N,4µm,0.4s							
SMTH	**Samothraki Isl**	**0.95**	**63**	P		**Pn**	**08 39 41.8**	**-1.0**
SMTH				S		**Sb**	**08 39 54.6**	**0.0**
SMTH				AML		AML	08 39 56.3	
	comp=E,8735µm,0.4s							
SMTH				AML		AML	08 39 57.6	
	comp=N,8951µm,0.3s							
KAVA	**Kavala**	**0.96**	**4**	P		**Pg**	**08 39 41.2**	**-0.5**
KAVA				S		**Sb**	**08 39 54.4**	**-0.4**
	comp=N,7µm,0.5s							
KAVA	**Kavala**	**0.96**	**4**	P		**Pb**	**08 39 41.8**	**-0.2**
KAVA				S		**Sb**	**08 39 54.2**	**-0.6**
KAVA				AML		AML	08 39 55.5	
	comp=E,9798µm,0.4s							
KAVA				AML		AML	08 39 55.9	
	comp=N,16345µm,0.3s							
AOS	**Alonnisos**	**0.96**	**206**	P		**Pg**	**08 39 41.4**	**-0.3**
AOS				S		**Sn**	**08 39 56.1**	**-0.5**
	comp=N,3µm,0.6s							
AOS	**Alonnisos**	**0.96**	**206**	P		**Pg**	**08 39 41.8**	**+0.1**
AOS				S		**Sg**	**08 39 54.4**	**+0.2**
AOS				AML		AML	08 39 58.2	
	comp=E,8416µm,0.7s							
AOS				AML		AML	08 39 59.2	
	comp=N,5482µm,0.4s							
AOS	**Alonnisos**	**0.96**	**206**	PG		**Pg**	**08 39 41.6**	**-0.1**
AOS				SG		**Sb**	**08 39 55.9**	**+1.1**
GADA	**Gvkgeada**	**1.14**	**82**	P		**Pn**	**08 39 44.9**	**-0.4**
GADA				S		**Sn**	**08 40 00.6**	**-0.5**
	comp=N,4µm,0.4s							
GADA	**Gvkgeada**	**1.14**	**82**	PN		**Pn**	**08 39 44.9**	**-0.4**
GADA				SN		**Sn**	**08 39 59.9**	**-1.2**
SKIA	**Skiathos**	**1.14**	**221**	P		**Pb**	**08 39 44.4**	**-0.7**
SKIA				S		**Sb**	**08 40 00.0**	**0.0**
	comp=N,3µm,0.6s							
SKIA	**Skiathos**	**1.14**	**221**	P		**Pb**	**08 39 44.6**	**-0.5**
SKIA				S		**Sb**	**08 39 58.7**	**-1.3**
SKIA				AML		AML	08 40 06.5	
	comp=E,7061µm,0.7s							
SKIA				AML		AML	08 40 07.4	
	comp=N,5084µm,0.5s							
GOKA	**anakkale-Gk**	**1.15**	**82**	*i* P		**Pb**	**08 39 44.5**	**-0.7**
GOKA				*i* S		**Sg**	**08 39 59.9**	**-0.3**
GOKA				IAML			08 40 08.0	
	comp=E,4µm,0.6s						

BOZC			*i* S		**Sb**	**08 40 02.8**	**-0.8**
BOZC			IAML			08 40 07.0	
	comp=N,906nm,1.2s						
BOZC			IAML			08 40 07.0	
	comp=E,707nm,0.7s						
SIGR	**SIGRI**	**1.38 126**	P		**Pb**	**08 39 48.9**	**-0.3**
SIGR			S		**Sg**	**08 40 08.1**	**+0.5**
	comp=E,1μm,0.5s						
SIGR	**SIGRI**	**1.38 126**	P		**Pb**	**08 39 48.8**	**-0.3**
SIGR			S		**Sg**	**08 40 07.4**	**-0.2**
SIGR			AML	AML		08 40 11.4	
	comp=E,1910μm,0.6s						
SIGR			AML	AML		08 40 16.3	
	comp=N,3163μm,0.6s						
SIGR	**SIGRI**	**1.38 126**	PN		**Pb**	**08 39 48.9**	**-0.3**
RDO	**Rodhopi**	**1.40 37**	P		**Pn**	**08 39 48.0**	**-0.8**
RDO			S		**Sb**	**08 40 06.3**	**-1.0**
	comp=N,1μm,0.5s						
RDO	**Rodhopi**	**1.40 37**	P		**Pn**	**08 39 48.0**	**-0.8**
RDO			S		**Sg**	**08 40 08.3**	**+0.2**
RDO			AML	AML		08 40 13.4	
	comp=E,2061μm,0.3s						
RDO			AML	AML		08 40 18.6	
	comp=N,3138μm,0.7s						
RDO	**Rodhopi**	**1.40 37**	PN		**Pn**	**08 39 48.4**	**-0.4**
KYMI	**Kymi, Euboea I**	**1.43 190**	P		**Pn**	**08 39 48.8**	**-0.5**
KYMI			S		**Sb**	**08 40 08.5**	**+0.4**
KYMI	**Kymi, Euboea I**	**1.43 190**	P		**Pn**	**08 39 48.7**	**-0.5**
KYMI			S		**Sn**	**08 40 06.3**	**-1.7**
KYMI			AML	AML		08 40 15.5	
	comp=N,3743μm,0.6s						
KYMI			AML	AML		08 40 15.5	
	comp=E,4342μm,0.5s						
EZN	**Ezine**	**1.48 98**	P		**Pb**	**08 39 50.1**	**-0.7**
EZN			S		**Sb**	**08 40 09.3**	**-0.4**
	comp=E,980nm,0.5s						
EZN	**Ezine**	**1.48 98**	PN		**Pn**	**08 39 49.6**	**-0.3**
MRKA	**Markates**	**1.48 206**	P		**Pn**	**08 39 49.4**	**-0.6**
MRKA			S		**Sn**	**08 40 08.5**	**-0.9**
	comp=E,2μm,0.9s						
MRKA	**Markates**	**1.48 206**	P		**Pn**	**08 39 49.0**	**-1.0**
LIT	**Litokhoron**	**1.48 273**	P		**Pn**	**08 39 49.3**	**-0.8**
LIT	**Litokhoron**	**1.48 273**	P		**Pn**	**08 39 49.0**	**-1.1**
ENEZ	**Enez**	**1.49 62**	P		**Pn**	**08 39 49.6**	**-0.6**
ENEZ			S		**Sb**	**08 40 09.8**	**-0.3**
	comp=E,5μm,0.6s						
ENEZ	**Enez**	**1.49 62**	PN		**Pb**	**08 39 50.4**	**-0.7**
GELI	**Tayfur-Gelibol**	**1.61 76**	PN		**Pn**	**08 39 51.6**	**-0.2**
KNT	**Kendrikon**	**1.61 315**	P		**Pn**	**08 39 51.4**	**-0.5**
KNT	**Kendrikon**	**1.61 315**	P		**Pn**	**08 39 52.0**	**+0.1**
KNT			S		**Sn**	**08 40 12.3**	**-0.5**
KNT			AML	AML		08 40 17.2	
	comp=N,1877μm,0.4s						
KNT			AML	AML		08 40 18.0	
	comp=E,1885μm,0.5s						
KNT	**Kendrikon**	**1.61 315**	PN		**Pn**	**08 39 51.8**	**-0.1**
PRK	**Paraskevi**	**1.63 118**	P		**Pn**	**08 39 51.5**	**-0.5**
PRK			S		**Sb**	**08 40 11.6**	**+0.5**
PRK			AML	AML		08 40 29.3	
	comp=E,4332μm,0.9s						
PRK			AML	AML		08 40 32.5	
	comp=N,2489μm,0.7s						
MMB	**Musomiste**	**1.64 341**	*i* P		**Pn**	**08 39 51.3**	**-0.9**
BAYC	**CANAKKALE_Bayr**	**1.66 100**	*i* P		**Pn**	**08 39 52.1**	**-0.4**
BAYC			*i* S		**Sb**	**08 40 14.0**	**-1.0**
BAYC			IAML			08 40 22.0	
	comp=E,304nm,0.5s						
BAYC			IAML			08 40 25.0	
	comp=N,219nm,0.4s						
RZN	**Rozhen**	**1.66 8**	*i* P		**Pn**	**08 39 52.5**	**-0.2**
ERIK	**Erikli-Kesan**	**1.72 68**	PN		**Pn**	**08 39 52.7**	**-0.5**
LKR	**Lokris**	**1.77 219**	P		**Pn**	**08 39 53.5**	**-0.5**
LKR	**Lokris**	**1.77 219**	P		**Pn**	**08 39 53.3**	**-0.6**
KDZ	**Kurdzhali**	**1.78 25**	*i* P		**Pn**	**08 39 53.0**	**-1.1**
KDZ	**Kurdzhali**	**1.78 25**	PN		**Pn**	**08 39 53.1**	**-1.1**
GRG	**Griva**	**1.79 301**	P		**Pn**	**08 39 53.5**	**-0.8**
GRG	**Griva**	**1.79 301**	P		**Pn**	**08 39 53.2**	**-1.1**
GRG	**Griva**	**1.79 301**	PN		**Pn**	**08 39 54.6**	**+0.3**
LPK	**Lapseki**	**1.82 79**	PN		**Pb**	**08 39 55.2**	**-1.5**
AXAR	**Agios Charalam**	**1.86 228**	P		**Pn**	**08 39 55.6**	**+0.3**
KESN	**Edirne-Kesan**	**1.89 65**	*i* P		**Pn**	**08 39 56.1**	**+0.1**
KESN			IAML			08 40 27.0	
	comp=E,668nm,1.0s						
KESN			IAML			08 40 33.0	
	comp=N,619nm,0.3s						
AYVA	**Ayvalik**	**1.90 112**	*i* P		**Pg**	**08 39 59.4**	**-0.1**
AYVA			IAML			08 40 33.0	
	comp=N,369nm,0.4s						
AYVA			IAML			08 40 36.0	
	comp=E,350nm,0.7s						
VAY	**Valandovo**	**1.91 313**	*e*Pn		**Pn**	**08 39 55.7**	**-0.1**
VAY			*e*Sn		**Sb**	**08 40 20.7**	**-1.3**
VAY	**Valandovo**	**1.91 313**	*i* Pn		**Pn**	**08 39 55.7**	**-0.1**
VAY	**Valandovo**	**1.91 313**	*i* Pn		**Pn**	**08 39 55.7**	**-0.1**
AGG	**Agios Georgios**	**1.91 239**	P		**Pn**	**08 39 55.7**	**-0.2**
AGG	**Agios Georgios**	**1.91 239**	P		**Pn**	**08 39 54.9**	**-1.0**
AGG	**Agios Georgios**	**1.91 239**	PN		**Pn**	**08 39 56.0**	**+0.1**
THL	**Klokotos Trika**	**1.92 256**	P		**Pn**	**08 39 55.7**	**-0.2**
THL	**Klokotos Trika**	**1.92 256**	P		**Pn**	**08 39 55.1**	**-0.8**
DION	**Dionisos Attik**	**1.99 191**	P		**Pn**	**08 39 56.9**	**-0.2**
DION	**Dionisos Attik**	**1.99 191**	P		**Pn**	**08 39 56.9**	**-0.2**
KARY	**Karystos**	**2.00 180**	P		**Pn**	**08 39 57.0**	**-0.2**
KARY	**Karystos**	**2.00 180**	P		**Pn**	**08 39 56.5**	**-0.6**
UKOP	**Uzunkopru-Edir**	**2.00 56**	PN		**Pn**	**08 39 57.3**	**+0.1**
VIL2	**Platees**	**2.03 207**	P		**Pn**	**08 39 57.4**	**-0.2**
MAKR	**Makrakomi, Fth**	**2.05 241**	P		**Pn**	**08 39 58.2**	**+0.4**
MAKR	**Makrakomi, Fth**	**2.05 241**	P		**Pn**	**08 39 57.7**	**-0.1**
PLD	**Plovdiv**	**2.08 6**	*e*Pn		**Pb**	**08 39 59.1**	**-1.9**
PLD			*e*Sn		**Sg**	**08 40 29.5**	**-0.4**
PLD	**Plovdiv**	**2.08 6**	*i* P		**Pb**	**08 40 00.6**	**-0.4**
PLD	**Plovdiv**	**2.08 6**	PN		**Pn**	**08 39 58.5**	**+0.3**
CHOS	**Chios island**	**2.08 142**	P		**Pn**	**08 39 58.9**	**+0.6**
CHOS	**Chios island**	**2.08 142**	P		**Pn**	**08 39 58.7**	**+0.4**
CHOS	**Chios island**	**2.08 142**	PN		**Pn**	**08 39 58.8**	**+0.5**
KKB	**Krupnik**	**2.09 331**	*i* P		**Pn**	**08 39 58.0**	**-0.4**
ATHU	**Athens Univers**	**2.13 194**	P		**Pn**	**08 39 58.5**	**-0.4**
ATHU	**Athens Univers**	**2.13 194**	P		**Pn**	**08 39 58.3**	**-0.6**
PROD	**Prodromos**	**2.13 214**	P		**Pn**	**08 39 58.5**	**-0.5**
PROD	**Prodromos**	**2.13 214**	P		**Pn**	**08 39 58.2**	**-0.8**
DKL	**Dikili**	**2.15 116**	PN		**Pn**	**08 39 59.6**	**+0.5**
DIM	**Dimitrovgrad**	**2.18 22**	*i* P		**Pn**	**08 39 59.5**	**-0.1**
RKY	**Sarkoy-Tekirda**	**2.20 72**	PN		**Pn**	**08 39 59.6**	**-0.4**
SART	**Tekirdag**	**2.21 72**	*i* P		**Pn**	**08 39 59.1**	**-0.9**
SART			IAML			08 40 53.0	
	comp=E,129nm,1.0s						
KRBG	**Karabiga-Canak**	**2.23 80**	PN		**Pn**	**08 40 00.2**	**-0.1**
VLY	**Voula,Athens**	**2.24 193**	P		**Pn**	**08 40 00.3**	**-0.1**
EVR	**Evrytania**	**2.31 242**	P		**Pn**	**08 40 00.7**	**-0.8**
ZEDA	**zmir-Bergama**	**2.31 117**	*i* P		**Pb**	**08 40 04.8**	**-0.3**
ZEDA			*i* S		**Sg**	**08 40 40.6**	**+3.1**
ZEDA			IAML			08 40 43.0	
	comp=N,148nm,0.5s						
ZEDA			IAML			08 40 50.0	
	comp=E,101nm,0.9s						
URLA	**Izmir**	**2.38 134**	PN		**Pn**	**08 40 03.3**	**+0.9**
URLA	**Izmir**	**2.38 134**	*i* P		**Pn**	**08 40 01.9**	**-0.5**
URLA			IAML			08 40 51.0	
	comp=N,85nm,0.9s						
URLA			IAML			08 41 01.0	
	comp=E,72nm,1.3s						
ANX	**Ano Chora**	**2.42 234**	P		**Pn**	**08 40 03.3**	**+0.3**
ANX	**Ano Chora**	**2.42 234**	P		**Pn**	**08 40 03.1**	**+0.2**
FNA	**Florina**	**2.44 289**	*e*Pn		**Pn**	**08 40 01.3**	**-2.0**
MRMT	**Marmara Adasi**	**2.49 76**	PN		**Pn**	**08 40 04.7**	**+0.8**
EDRB	**Edirne**	**2.52 43**	PN		**Pn**	**08 40 04.5**	**+0.2**
KLV	**Kalavryta, Ach**	**2.66 222**	P		**Pn**	**08 40 06.3**	**0.0**
BALB	**Balikesir**	**2.69 97**	PN		**Pn**	**08 40 06.8**	**+0.2**
DID	**Didima**	**2.69 201**	P		**Pn**	**08 40 06.4**	**-0.3**
VTS	**Vitosha**	**2.73 341**	*e*Pn		**Pn**	**08 40 07.9**	**+0.6**
VTS			*e*Sn		**Sb**	**08 40 43.4**	**-2.4**
VTS	**Vitosha**	**2.73 341**	⇑P		**Pn**	**08 40 08.0**	**+0.6**
VTS	**Vitosha**	**2.73 341**	*i* P		**Pn**	**08 40 07.6**	**+0.3**
BOSS	**Bosilegrad**	**2.86 330**	*e*Pn		**Pn**	**08 40 09.3**	**+0.3**
BOSS			*e*Sn		**Sb**	**08 40 46.5**	**-3.0**
JMB	**Yambol**	**2.92 33**	*e*P		**Pg**	**08 40 18.5**	**-0.7**
OHR	**Ohrid**	**2.96 292**	*i* Pn		**Pn**	**08 40 11.4**	**+1.0**
OHR	**Ohrid**	**2.96 292**	*i* Pn		**Pn**	**08 40 11.4**	**+1.0**
SKO	**Skopje**	**2.97 312**	*i* Pn		**Pn**	**08 40 11.3**	**+0.8**
SKO	**Skopje**	**2.97 312**	*i* Pn		**Pn**	**08 40 11.3**	**+0.8**
ELND	**Elena**	**3.09 20**	⇑P		**Pn**	**08 40 12.5**	**+0.4**
APE	**Apeiranthos**	**3.09 163**	⇑P		**Pn**	**08 40 12.2**	**0.0**
APE			⇑S		**Sn**	**08 40 47.7**	**-1.5**
PLVB	**Pleven**	**3.35 2**	⇑P		**Pn**	**08 40 16.7**	**+1.0**
BARS	**Barje**	**3.40 326**	*e*Pn		**Pn**	**08 40 16.2**	**-0.2**
BARS			*e*Sn		**Sn**	**08 40 59.6**	**+2.8**
ZAPS	**Zavoj**	**3.50 338**	*e*Pn		**Pn**	**08 40 19.2**	**+1.4**
ZAPS			*e*Sn		**Sn**	**08 41 02.8**	**+3.5**
RAZG	**Razgrad**	**3.85 23**	⇑P		**Pn**	**08 40 22.8**	**+0.2**
SELS	**Selova**	**4.03 323**	*e*Pn		**Pn**	**08 40 24.7**	**-0.4**
SELS			*e*Sn		**Sn**	**08 41 11.6**	**-0.8**
ZAGS	**Zajecar**	**4.11 337**	*e*Pn		**Pn**	**08 40 25.8**	**-0.3**
ZAGS			*e*Sn		**Sn**	**08 41 17.0**	**+2.7**
BOVS	**Bovan**	**4.13 331**	*e*Pn		**Pn**	**08 40 26.8**	**+0.4**
SGRR	**Singureni**	**4.34 15**	⇓P		**Pb**	**08 40 39.0**	**-0.6**
GRUS	**Gruza**	**4.74 326**	*e*Pn		**Pn**	**08 40 34.1**	**-0.6**
IDI	**Anoyia**	**4.76 175**	Pn		**Pn**	**08 40 35.2**	**+0.2**
IDI	comp=E,1.3nm,0.3s,baz=359,slow=13,SNR=8.4		LR		LR	08 42 26.8	
	comp=E,65nm,20.8s,baz=284,slow=38						
IDI	**Anoyia**	**4.76 175**	⇑P		**Pn**	**08 40 33.1**	**-1.9**
IDI			⇑S		**Sn**	**08 41 27.3**	**-3.0**
HERR	**Herculane**	**5.06 344**	⇑P		**Pn**	**08 40 38.7**	**-0.5**
TRUS	**Trudelj**	**5.14 326**	*e*Pn		**Pn**	**08 40 39.3**	**-1.0**
MDVR	**Moldovita**	**5.15 338**	⇑P		**Pn**	**08 40 39.5**	**-1.0**
DIVS	**Divibare**	**5.23 322**	*e*Pn		**Pn**	**08 40 41.6**	**0.0**
TIRR	**Tirgusor**	**5.32 33**	⇑P		**Pn**	**08 40 44.3**	**+1.6**
HARR	**Harsova**	**5.33 28**	⇓P		**Pn**	**08 40 42.7**	**-0.1**
ARR	**Arges**	**5.33 2**	⇓P		**Pn**	**08 40 43.7**	**+0.8**
BBLS	**Lazići**	**5.35 317**	*e*Pn		**Pn**	**08 40 41.8**	**-1.4**
VOIR		**5.42 5**	⇑P		**Pn**	**08 40 45.3**	**+1.2**
LOT	**Lotru**	**5.43 355**	⇑P		**Pn**	**08 40 44.6**	**+0.3**
GZR	**Gura Zlata**	**5.49 348**	⇑P		**Pn**	**08 40 45.4**	**+0.3**
MLR	**Muntele Rosu**	**5.56 11**	Pn		**Pn**	**08 40 45.9**	**-0.4**
	comp=E,0.8nm,0.3s,baz=247,slow=5.8,SNR=12						
MLR			Sn		**Sn**	**08 41 50.3**	**0.0**
	comp=E,1.2nm,0.3s,baz=165,slow=8.8,SNR=3.4						
MLR			Lg		Lg	08 42 24.2	
	comp=E,1.0nm,0.3s,baz=186,slow=12,SNR=7.8						
MLR			LR		LR	08 43 27.1	
	comp=E,103nm,20.1s,baz=122,slow=44						
MLR	**Muntele Rosu**	**5.56 11**	⇑P		**Pn**	**08 40 47.8**	**+1.6**
CFR	**Carcaliu**	**5.82 27**	⇑P		**Pn**	**08 40 50.1**	**+0.5**
DOPR	**Dopca**	**5.97 6**	⇑P		**Pn**	**08 40 53.3**	**+1.6**
VRI	**Vrincioaia**	**6.07 15**	⇑P		**Pn**	**08 40 54.9**	**+1.8**
OZUR		**6.14 9**	⇑P		**Pn**	**08 40 55.2**	**+1.2**
RICI	**Ricice**	**6.45 305**	P		**Pn**	**08 40 59.3**	**+1.0**
TESR	**Tescani**	**6.67 13**	⇑P		**Pn**	**08 41 02.7**	**+1.4**
BIZ	**Bicaz**	**7.01 9**	⇑P		**Pn**	**08 41 07.5**	**+1.6**
BRTR	**Keskin Array B**	**7.09 90**	Pn		**Pn**	**08 41 07.5**	**+0.2**
	comp=E,1.2nm,0.3s,baz=262,slow=11,SNR=13						
KIJV	**Kijevo**	**7.17 306**	*i* P		**Pn**	**08 41 08.2**	**+0.1**
ZIRJ	**Zirje**	**7.48 302**	*i* P		**Pn**	**08 41 12.5**	**+0.1**
MORI	**Morici**	**7.54 303**	*i* P		**Pn**	**08 41 13.8**	**+0.6**
BURAR	**Bucovina Array**	**7.60 4**	⇑P		**Pn**	**08 41 15.6**	**+1.5**
AKASG	**Malin Array Be**	**11.18 16**	Pn		**Pn**	**08 42 02.1**	**-1.0**
	comp=E,1.0nm,0.3s,baz=206,slow=11,SNR=3.8						
FINES	**FINESS Array B**	**21.46 2**	LR		LR	08 52 46.6	
	comp=E,62nm,19.1s,baz=148,slow=38						
ESDC	**Sonseca Array**	**21.76 278**	P		**P**	**08 44 16.1**	**+1.0**
	comp=E,1.4nm,1.1s,baz=95,slow=11,SNR=4.7						
NB2	**NORSAR Subarra**	**22.55 343**	P		**P**	**08 44 22.6**	**-0.7**
	comp=Z,5.9nm,1.7s,baz=153,slow=10						
NOA	**NORSAR Array B**	**22.55 343**	P		**P**	**08 44 22.9**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=157,slow=11,SNR=4.5						
EKA	**Eskdalemuir Ar**	**23.82 319**	P		**P**	**08 44 36.0**	**-0.4**
	comp=Z,2.5nm,1.0s,baz=121,slow=11,SNR=2.1						
MDT	**Midelt**	**24.37 262**	LR		LR	08 54 31.0	
	comp=Z,72nm,18.4s,baz=178,slow=37						
ARCES	**ARCESS Array B**	**29.57 1**	LR		LR	08 58 13.4	
	comp=Z,76nm,18.0s,baz=133,slow=38						
TORD	**Torodi Ar. Bea**	**33.42 223**	P		**P**	**08 46 03.1**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=22,slow=9.4,SNR=2.8						
MKAR	**Makanchi Array**	**41.74 61**	P		**P**	**08 47 12.8**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=284,slow=5.9,SNR=11						
ZALV	**Zalesovo Beam**	**42.18 50**	P		**P**	**08 47 17.4**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=268,slow=8.5,SNR=4.4						

LJU 29 08:39:45.6, 46°39N×15°07E, h0km Rockburst, Northwestern Balkan Peninsula

LJU 29 08:39:50.3, 46°10N×13°85E, h14km, ML0.4, 1C, Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VOJS	**Vojsko**	**0.07**	**160**	*i* Pg	Pg	08 39 53.3	+0.1
VOJS				*i* Sg	Sg	08 39 55.4	+0.2
	comp=Z,5.0nm,0.1s						
CADS	**Cadrg**	**0.15**	**329**	*i* Pg	Pg	08 39 54.1	0.0
CADS				*i* Sg	Sg	08 39 57.0	+0.2
	comp=Z,2.0nm,0.1s						
GORS	**Gorjuse**	**0.24**	**25**	*i* Pg	Pg	08 39 55.7	+0.1
GORS				*i* Sg	Sg	08 39 59.6	+0.5
	comp=Z,3.0nm,0.1s						
JAVS	**Javornik**	**0.26**	**144**	*i* Pg	Pg	08 39 55.8	0.0
JAVS				*i* Sg	Sg	08 40 00.1	+0.6
	comp=Z,1.0nm,0.1s						

IDC 29 08:49:08.8±3.1, 54°18N×87°35E, h0km, mb1 3.0/2, mb1mx2.9/37, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=27.2km s-min=18.5km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.51**	**262**	*i*		08 58 41.7	
	baz=77,slow=319,SNR=2.4						
ZALV	**Zalesovo Beam**	**1.51**	**262**	Pg	Pn	08 49 35.7	-1.4
	2.4nm,0.3s,baz=83,slow=16,SNR=10						
ZALV				Lg	Lg	08 49 56.7	
	2.1nm,0.3s,baz=80,slow=24,SNR=5.8						
KURBB	**Kurchatov Arra**	**6.47**	**240**	Pn	Pn	08 50 46.4	+1.2
	0.1nm,0.3s,baz=53,slow=13,SNR=6.4						
KURBB				Lg	Lg	08 52 34.5	
	0.0nm,0.3s,baz=53,slow=33,SNR=2.1						
MKAR	**Makanchi Array**	**8.07**	**206**	Pn	Pn	08 51 08.1	+0.9
	0.1nm,0.3s,baz=26,slow=14,SNR=6.7						
MKAR				Lg	Lg	08 53 22.2	
	0.0nm,0.3s,baz=21,slow=22,SNR=2.0						

*NEIC **29** 08:50:52.9±1.6, 16°59N±0°07×94°75W±0°05, h106km±6km, Error ellipse: s-maj=10.1km s-min=7.2km az=187.0*
*MEX **29** 08:50:53.7±0.4, 16°67N×94°72W, h115km±3km, MD4.0*
ISC 29 08:50:53.2±1.3, 16°62N±0°05×94°71W±0°03, h104km±12km, n21, σ0°85/36, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.50**	**340**	*i* P	Pn	08 51 09.7	+0.2
CMIG				*i* S	Sn	08 51 21.8	+0.3
CMIG	**Matias Romero**	**0.50**	**340**		Pn	08 51 09.7	+0.2
CMIG					Sn	08 51 21.8	+0.3
TUIG	**Tuzandepetl**	**1.43**	**11**	*e*P	Pn	08 51 18.4	-0.5
TUIG	**Tuzandepetl**	**1.43**	**11**		Pn	08 51 18.4	-0.5
TGIG		**1.53**	**84**	*e*P	Pn	08 51 19.9	-0.2
TGIG				*i* S	Sn	08 51 40.4	-0.1
TGIG		**1.53**	**84**		Pn	08 51 19.9	-0.2
TGIG					Sn	08 51 40.4	-0.1
HUIG	**Huatulco**	**1.59**	**238**	*e*P	Pn	08 51 19.9	-1.0
HUIG				*i* S	Sn	08 51 41.5	-0.3
HUIG	**Huatulco**	**1.59**	**238**		Pn	08 51 19.9	-1.0
HUIG					Sn	08 51 41.5	-0.3
PCIG		**1.70**	**122**	*e*P	Pn	08 51 22.3	+0.2
PCIG				*e*S	Sn	08 51 43.8	-0.2
PCIG		**1.70**	**122**		Pn	08 51 22.3	+0.2
PCIG					Sn	08 51 43.8	-0.2
VHO	**Vista Hermosa**	**1.99**	**283**	*e*P	Pn	08 51 28.0	+1.9
VHO				*i* S	Sn	08 51 53.1	+2.1
PEIG	**Puerto Escondi**	**2.42**	**256**	*e*P	Pn	08 51 30.6	-0.9
PEIG				*i* S	Sn	08 52 01.1	+0.3
CCIG	**Comitan**	**2.49**	**97**	*e*P	Pn	08 51 32.8	+0.3
CCIG				*i* S	Sn	08 52 02.9	+0.3
CCIG	**Comitan**	**2.49**	**97**		Pn	08 51 32.9	+0.3
TOIG	**Toxpalan**	**2.69**	**303**	*i* P	Pn	08 51 34.4	-0.7
TOIG				*i* S	Sn	08 52 06.2	-0.9
YOIG	**Yosondua**	**2.73**	**275**	*e*P	Pn	08 51 35.6	-0.2
YOIG				*i* S	Sn	08 52 07.8	-0.6
THIG		**2.90**	**126**	*i* P	Pn	08 51 38.5	+0.7
THIG				*e*S	Sn	08 52 12.7	+0.6
THIG		**2.90**	**126**		Pn	08 51 38.5	+0.7
THIG					Sn	08 52 12.7	+0.6
TLIG	**Tlapa**	**3.81**	**285**		Pn	08 51 50.9	+0.8
TEIG	**Tepich**	**7.08**	**59**		Pn	08 52 31.8	-2.5
JTS	**Las Juntas de**	**11.38**	**122**	Pn	Pn	08 53 32.1	-0.6

*IDC **29** 09:15:42.6±0.8, 6°67S×155°22E, h0km, mb4.3/14, mb1 4.4/16, mb1mx4.2/41, mbtmp4.3/16, ML2.2/1, MS3.3/13, Ms1 3.4/13, ms1mx3.1/39, Error ellipse: s-maj=20.7km s-min=16.4km az=111.0*
*NEIC **29** 09:15:49.0±1.7, 6°67S±0°08×155°02E±0°07, h35km±2km, mb4.5/14, Error ellipse: s-maj=17.7km s-min=4.3km az=40.0*
ISC 29 09:15:51.2±0.6, 6°71S±0°08×154°96E±0°09, h56km, n46, σ1§03/38, mb4.4/22, MS3.2/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.75**	**312**		**Pn**	**09 16 49.8**	**+3.2**
KRVT	**Keravat (AS076**	**3.77**	**309**	Pn	**Pn**	**09 16 46.5**	**-0.4**
	9.5nm,0.3s,baz=244,slow=0.8,SNR=9.8						
KRVT				Lg	Lg	09 17 46.9	
	44nm,0.3s,baz=91,slow=22,SNR=7.6						
KRVT				LR	LR	09 18 39.7	
	comp=Z,1μm,18.4s,baz=141,slow=45						
HNR	**Honiara**	**5.63**	**119**	LR	LR	09 19 19.4	
	comp=Z,621nm,20.7s,baz=296,slow=40						
HNR	**Honiara**	**5.63**	**119**	Pn	**Pn**	**09 17 13.7**	**+1.3**
PMG	**Port Moresby**	**8.18**	**250**	Pn	**Pn**	**09 17 48.0**	**+0.7**
	1.6nm,0.3s,baz=90,slow=11,SNR=1.5						
PMG				LR	LR	09 20 45.9	
	comp=Z,298nm,21.8s,baz=79,slow=36						
PMG	**Port Moresby**	**8.18**	**250**		**Pn**	**09 17 47.6**	**+0.3**
JAY	**Jayapura**	**14.81**	**286**	LR	LR	09 25 23.7	
	comp=Z,117nm,21.0s,baz=69,slow=39						
DZM	**Mont Dzumac**	**18.87**	**145**	P	**Pn**	**09 20 07.6**	**-0.6**
	0.3nm,0.3s,baz=306,slow=18,SNR=1.5						
DZM				LR	LR	09 26 17.0	
	comp=Z,128nm,21.4s,baz=346,slow=34						
FAKI	**Fak Fak**	**22.94**	**278**	P	**P**	**09 20 50.9**	**-0.1**
FAKI				IAmb	IAmb	09 20 52.6	
	comp=Z,17nm,1.0s						
WR0	**Warramunga Arr**	**23.80**	**234**	P	**P**	**09 20 59.9**	**+0.8**
WR0				IAmb	IAmb	09 21 01.0	
	comp=Z,18nm,0.9s						
WB0	**Warramunga Arr**	**23.82**	**235**	P	**P**	**09 21 00.3**	**+1.0**
WRAB	**Tennant Creek**	**23.94**	**235**	P	**P**	**09 21 01.3**	**+0.9**
WRAB				IAmb	IAmb	09 21 02.3	
	comp=Z,15nm,0.9s						
WB2	**Warramunga Arr**	**23.94**	**235**	P	**P**	**09 21 01.4**	**+1.0**
WB2				IAmb	IAmb	09 21 02.4	
	comp=Z,19nm,0.9s						
WRA	**Warramunga Arr**	**23.95**	**235**	P	**P**	**09 21 01.4**	**+0.9**
	comp=Z,10.0nm,0.8s,baz=57,slow=10,SNR=47						
WRA				PcP	**PcP**	**09 24 42.0**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=55,slow=2.5,SNR=9.6						
SIJI	**Sorong**	**24.34**	**283**	P	**P**	**09 21 04.7**	**+0.7**
	comp=Z,26nm,0.7s,baz=68,slow=8.2,SNR=11						
SIJI				LR	LR	09 31 31.3	
	comp=Z,110nm,21.2s,baz=79,slow=39						
AS31	**Alice Springs**	**26.34**	**228**	P	**P**	**09 21 22.6**	**+0.4**
ASAR	**Alice Springs**	**26.34**	**228**	P	**P**	**09 21 22.1**	**-0.1**
	comp=Z,4.1nm,0.7s,baz=61,slow=8.7,SNR=63						
ASAR				PcP	**PcP**	**09 24 47.5**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=61,slow=2.2,SNR=6.9						
H11S3	**WAKE ISLAND Hy**	**27.59**	**25**	T	T	09 50 19.0	
	baz=202,slow=75,SNR=31						
H11S2	**WAKE ISLAND Hy**	**27.59**	**25**	T	T	09 49 58.4	
	baz=202,slow=75,SNR=26					

	0.8nm,0.7s,baz=134,slow=9.2,SNR=9.7						
YKA	Yellowknife Ar	54.03	344	P	P	09 35 44.6	+0.7
	0.1nm,0.3s,baz=138,slow=7.1,SNR=4.3						
CMAR	Chiang Mai Arr	148.90	352	PKPbc	PKPbc	09 46 08.0	-0.7
	0.4nm,0.4s,baz=328,slow=3.2,SNR=4.2						

*IDC **29** 09:29:21.2±2.3, 10°.43S×113°.10E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.6/37, mbtmp3.8/6, ML3.8/1, Error ellipse: s-maj=135.5km s-min=19.4km az=48.0*
*NEIC **29** 09:29:22.3±2.6, 10°.52S±0°.08×113°.06E±0°.09, h10km±2km, mb4.0/6, Error ellipse: s-maj=14.9km s-min=13.4km az=102.0*
ISC 29 09:29:24.5±1.0**, 10°.3S**±0°.1×**113°.4E**±0°.1**, h23km, n16,** σ2^{s}**41**/16**, mb4.0**/8**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	Jajag, Banyuwa	1.96	22	Pn	Pb	09 29 59.4	-0.1
UGM	Wanagama	3.71	309		Pn	09 30 18.2	-2.4
PSA00	Pilbara Seismi	12.80	152		Pn	09 32 20.7	-4.5
FITZ	Fitzroy Crossi	14.15	125	Pn	Pn	09 32 44.2	+0.5
	0.3nm,0.3s,baz=304,slow=8.2,SNR=20						
FITZ				Sn	Sn	09 35 14.3	-5.8
	0.9nm,0.3s,baz=198,slow=20,SNR=9.6						
FITZ	Fitzroy Crossi	14.15	125		Pn	09 32 44.6	+0.9
KNRA	Kununurra	15.88	111	Pn	Pn	09 33 07.8	+1.1
KNRA				IAmb	IAmb	09 33 18.5	
	comp=Z,3.7nm,0.9s						
WB0	Warramunga Arr	22.31	117	P	P	09 34 23.3	+2.5
WB0				IAmb	IAmb	09 34 24.7	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	22.33	118	P	P	09 34 23.4	+2.5
	comp=Z,1.2nm,0.7s,baz=292,slow=11,SNR=4.0						
WRA				S	S	09 38 24.5	-1.0
	comp=Z,0.4nm,0.7s,baz=288,slow=26,SNR=1.8						
WRAB	Tennant Creek	22.34	118	P	P	09 34 21.6	+0.6
WRAB				IAmb	IAmb	09 34 23.6	
	comp=Z,8.9nm,1.2s						
WB2	Warramunga Arr	22.34	118	P	P	09 34 22.8	+1.8
WB2				IAmb	IAmb	09 34 26.5	
	comp=Z,7.1nm,1.2s						
WR0	Warramunga Arr	22.52	118	P	P	09 34 26.0	+3.1
ASAR	Alice Springs	23.63	127	P	P	09 34 35.9	+1.6
	comp=Z,1.2nm,0.6s,baz=303,slow=9.2,SNR=25						
ASAR				S	Sn	09 38 59.4	-10
	comp=Z,1.2nm,0.8s,baz=292,slow=23,SNR=5.9						
CMAR	Chiang Mai Arr	31.95	333	P	P	09 35 50.1	+1.2
	comp=Z,1.2nm,0.4s,baz=169,slow=8.3,SNR=4.2						
STKA	Stephens Creek	33.76	134	P	P	09 36 06.2	+1.6
	comp=Z,1.5nm,0.7s,baz=304,slow=13,SNR=5.3						
STKA	Stephens Creek	33.76	134	IAmb	IAmb	09 36 06.4	
	comp=Z,0.4nm,0.7s						
MKAR	Makanchi Array	63.27	337	P	P	09 39 50.8	-0.6
	comp=Z,0.3nm,0.4s,baz=159,slow=7.3,SNR=5.3						

*KRAR **29** 09:59:46.9±0.1, 53°.71N×87°.25E, M1.8, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
IDC 29 09:59:56.9±3.6**, 53°.64N×87°.91E, h0km, mb1 2.7**/2**, mb1mx2.6**/60**, mbtmp2.7**/2**, ML2.4**/2**, Error ellipse: s-maj=35.8km s-min=20.1km az=52.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.86	281	*i*		10 12 01.7	
	baz=96,slow=324,SNR=1.6						
ZALV	Zalesovo Beam	1.86	281	Pn	Pn	10 00 30.5	+0.4
	1.0nm,0.3s,baz=101,slow=14,SNR=6.4						
ZALV				Lg	Lg	10 00 55.5	
	1.2nm,0.3s,baz=101,slow=22,SNR=4.0						
KURBB	Kurchatov Arra	6.51	246	Pn	Pn	10 01 34.5	+0.6
	0.1nm,0.3s,baz=60,slow=13,SNR=4.6						
MKAR	Makanchi Array	7.74	210	Pn	Pn	10 01 51.8	+1.0
	0.1nm,0.3s,baz=29,slow=14,SNR=2.0						

*NNC **29** 10:01:02.2±3.1, 54°.13N×87°.46E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=27.4km s-min=15.9km az=20.0, Suspected Mining explosion.*
*IDC **29** 10:01:03.7±3.0, 54°.22N×87°.38E, h0km, mb1 3.1/2, mb1mx3.0/60, mbtmp3.1/2, ML2.9/2, Error ellipse: s-maj=25.3km s-min=16.9km az=54.0*
ISC 29 10:01:02.5±3.7**, 54°.2N**±0°.2×**87°.3E**±0°.2**, h0km, n7,** σ1^{s}**77**/9**, 7C-1D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.50	260	*i*		10 10 00.0	
	baz=77,slow=320,SNR=7.8						
ZAA0	Zalesovo Array	1.50	260	⇑P	Pg	10 01 30.1	-1.2
	0.9nm,0.8s						
ZAA0				⇓S	Sg	10 01 52.4	+1.6
	3.6nm,0.8s						
ZALV	Zalesovo Beam	1.50	260	Pg	Pb	10 01 29.8	-1.5
	2.0nm,0.3s,baz=83,slow=16,SNR=6.2						
ZALV				Lg	Lg	10 01 52.7	
	3.2nm,0.3s,baz=79,slow=16,SNR=7.3						
KURBB	Kurchatov Arra	6.48	240	Pn	Pn	10 02 41.3	+2.2
	0.1nm,0.3s,baz=56,slow=14,SNR=8.8						
KURBB				Lg	Lg	10 04 31.8	
	0.1nm,0.3s,baz=56,slow=33,SNR=5.4						
KURBB	Kurchatov Arra	6.48	240	⇑Pn	Pn	10 02 40.6	+1.5
	1.1nm,0.5s						
KURBB				⇑Sn	Sn	10 03 53.4	-0.2
	2.6nm,0.5s						
KURBB				⇑Lg	Lg	10 04 24.9	
	6.3nm,0.9s						
MK31	Makanchi Array	8.11	205	⇑Pn	Pn	10 03 03.0	+1.6
	0.4nm,0.5s,baz=28,slow=13,SNR=9.3						
MK31				⇑Sn	Sn	10 04 32.2	-1.6
	0.6nm,0.6s,baz=25,slow=28,SNR=5.1						
MK31				⇑Lg	Lg	10 05 18.3	
	5.3nm,1.1s,baz=50,slow=31,SNR=2.7						
MKAR	Makanchi Array	8.11	205	Pn	Pn	10 03 04.2	+2.8
	0.3nm,0.3s,baz=27,slow=13,SNR=12						
MKAR				Sn	Sn	10 04 33.3	-0.5
	0.1nm,0.3s,baz=24,slow=28,SNR=6.4						
MKAR				Lg	Lg	10 05 22.4	
	0.1nm,0.3s,baz=32,slow=30,SNR=4.3						

*IDC **29** 10:08:31.9±1.2, 30°.21S×177°.78W, h0km, mb4.2/7, mb1 4.4/7, mb1mx3.9/38, mbtmp4.2/7, MS3.2/1, Ms1 3.2/1, ms1mx2.7/21, Error ellipse: s-maj=27.2km s-min=17.6km az=101.0*
*NEIC **29** 10:08:37.2±1.5, 30°.15S±0°.05×177°.76W±0°.10, h39km±7km, mb4.5/12, Error ellipse: s-maj=14.2km s-min=2.2km az=122.0*
ISC 29 10:08:36.5±0.9**, 30°.21S**±0°.07×**177°.7W**±0°.1**, h35km, n37,** σ1^{s}**13**/26**, mb4.5**/12**, 1C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.98	347	Pn	Pn	10 08 53.7	-0.1
	304nm,0.3s,baz=76,slow=15,SNR=13						
RAO				Sn	Sn	10 09 06.1	-0.4
	2µm,0.3s,baz=141,slow=20,SNR=15						
RAO	Raoul Island	0.98	347		Pn	10 08 53.6	-0.2
OUZ	Omahuta	8.89	234	Pn	Pn	10 10 43.1	+0.6
BKZ	Black Stump Fm	10.14	207	Pn	Pn	10 10 58.7	-0.9
TUWZ	Tuamarina	13.09	209	Pn	Pn	10 11 39.6	-0.3
THZ	Tophouse	13.81	211	Pn	Pn	10 11 52.3	+2.5
DZM	Mont Dzumac	16.40	296	*e*P	P	10 12 36.3	+10
	9.6nm,0.7s						
DZM				*e*LR	LR	10 16 19.6	
DZM	Mont Dzumac	16.40	296	LR	LR	10 17 31.5	
	comp=Z,85nm,18.0s,baz=212,slow=33						
PPT2	Papeete2	28.50	70	*e*LR	LR	10 21 46.8	
	comp=Z,53nm,24.0s						
CTA	Charters Tower	34.05	279	P	P	10 15 18.8	+1.2
	5.5nm,0.5s,baz=100,slow=10,SNR=10						
STKA	Stephens Creek	34.80	257	P	P	10 15 23.6	-0.4
	2.3nm,0.6s,baz=100,slow=11,SNR=8.0						
STKA	Stephens Creek	34.80	257	IAmb	IAmb	10 15 29.2	
	comp=Z,0.8nm,1.0s						
BBOO	Buckleboo	39.30	254	P	P	10 16 02.1	-0.1
AS31	Alice Springs	43.41	267	P	P	10 16 35.5	-0.6
ASAR	Alice Springs	43.41	267	P	P	10 16 35.1	-0.9
	comp=Z,1.1nm,0.4s,baz=106,slow=7.5,SNR=31						
WR0	Warramunga Arr	44.20	272	P	P	10 16 42.5	+0.1
WR0				IAmb	IAmb	10 16 42.9	
	comp=Z,3.9nm,0.4s						
WB2	Warramunga Arr	44.37	272	P	P	10 16 43.8	0.0
WB2				IAmb	IAmb	10 16 45.2	
	comp=Z,6.7nm,0.6s						
WRAB	Tennant Creek	44.37	272	P	P	10 16 43.7	-0.1
WRAB				IAmb	IAmb	10 16 45.2	
	comp=Z,5.1nm,0.7s						
WRA	Warramunga Arr	44.38	272	P	P	10 16 42.9	-0.9
	comp=Z,5.2nm,0.5s,baz=110,slow=8.1,SNR=75						
WB0	Warramunga Arr	44.40	272	P	P	10 16 43.6	-0.4
WB0				IAmb	IAmb	10 16 44.5	
	comp=Z,5.2nm,0.6s						
KNRA	Kununurra	50.98	274	P	P	10 17 32.4	-2.7
FITZ	Fitzroy Crossi	52.65	270	P	P	10 17 46.8	-0.7
	comp=Z,1.4nm,0.6s,baz=167,slow=7.8,SNR=6.7						
FITZ	Fitzroy Crossi	52.65	270	P	P	10 17 47.2	-0.3
FITZ				IAmb	IAmb	10 17 59.3	
	comp=Z,4.8nm,1.1s						
CASY	Casey	55.44	208	P	P	10 18 06.5	-0.6
CASY				IAmb	IAmb	10 18 07.3	
	comp=Z,3.6nm,0.8s						
QSPA	South Pole Qui	59.90	180	P	P	10 18 40.0	+1.3
	comp=Z,1.0nm,0.9s,baz=332,slow=2.9,SNR=1.8						
QSPA	South Pole Qui	59.90	180	IAmb	IAmb	10 18 47.3	
	comp=Z,4.9nm,0.8s						
SYO	Syowa Base	77.36	193	⇑*e*P	P	10 20 24.8	-2.5
SNAA	Sanae	78.33	178	P	P	10 20 32.8	0.0
H03S2	Juan Fernandez	80.33	123	T	T	11 50 01.6	
	baz=238,slow=74,SNR=6.1						
H03S1	Juan Fernandez	80.34	123	T	T	11 50 02.6	
	baz=238,slow=74,SNR=6.3						
H03S3	Juan Fernandez	80.35	123	T	T	11 49 59.7	
	baz=238,slow=74,SNR=7.6						
H03N3	Juan Fernandez	80.52	123	T	T	11 50 08.2	
	baz=241,slow=72,SNR=4.9						
H03N2	Juan Fernandez	80.52	123	T	T	11 50 07.6	
	baz=241,slow=72,SNR=4.0						
H03N1	Juan Fernandez	80.53	123	T	T	11 50 08.0	
	baz=241,slow=72,SNR=6.7						
NVAR	Mina Array Bea	87.91	43	P	P	10 21 24.0	+1.3
	comp=Z,0.3nm,0.7s,baz=215,slow=4.4,SNR=2.5						
FINES	FINESS Array B	145.07	340	PKPbc	PKPbc	10 28 08.3	-0.6
	comp=Z,5.2nm,0.6s,baz=52,slow=3.6,SNR=34						
TORD	Torodi Ar. Bea	163.01	178	PKPab	PKPab	10 29 25.5	+0.3
	comp=Z,0.5nm,0.7s,baz=181,slow=3.7,SNR=2.1						

IDC 29 10:12:23.8±10.0**, 1°.22S×14°.13W, h0km, mb3.4**/2**, mb1 3.8**/3**, mb1mx3.5**/28**, mbtmp3.7**/3**, ML3.7**/1**, MS3.0**/2**, Ms1 3.0**/2**, ms1mx2.7**/19**, Error ellipse: s-maj=304.7km s-min=63.3km az=158.0, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	6.57	183	T	T	10 20 43.6	
	baz=357,slow=74,SNR=11						
H10N3	ASCENSION HYDR	6.58	183	T	T	10 20 47.0	
	baz=357,slow=74,SNR=13						
H10N1	ASCENSION HYDR	6.59	183	T	T	10 20 46.3	
	baz=357,slow=74,SNR=12						
H10S3	ASCENSION HYDR	7.70	184	T	T	10 22 10.0	
	baz=222,slow=74,SNR=12						
H10S2	ASCENSION HYDR	7.70	184	T	T	10 22 08.7	
	baz=358,slow=74,SNR=4.3						
DBIC	Dimbokro	12.13	50	Pn	Pn	10 15 18.6	+0.5
	0.5nm,0.3s,baz=238,slow=18,SNR=6.5						
DBIC				Sn	Sn	10 17 35.6	+1.3
	0.3nm,0.3s,baz=8.9,slow=17,SNR=2.5						
DBIC				LR	LR	10 19 19.4	
	comp=Z,42nm,18.6s,baz=131,slow=34						
TORD	Torodi Ar. Bea	21.22	47	P	P	10 17 11.1	-0.4
	2.6nm,0.9s,baz=234,slow=10,SNR=4.7						
TORD				LR	LR	10 24 44.2	
	comp=Z,72nm,19.6s,baz=175,slow=35						
GERES	GERESS Array B	55.38	22	P	P	10 21 59.8	0.0
	0.5nm,0.7s,baz=203,slow=7.3,SNR=4.2						

*IDC **29** 10:23:24.1±10.0, 52°.54N×171°.04E, h0km, mb3.3/2, mb1 3.7/3, mb1mx3.3/36, mbtmp3.4/3, ML3.0/1, Error ellipse: s-maj=303.5km s-min=34.7km az=168.0*
*KRSC **29** 10:23:27.5±1.5, 52°.89N×170°.60E, h70km±43km, ML3.9*
*NEIC **29** 10:23:29.4±1.1, 53°.0N±0°.2×170°.8E±0°.1, h24km±9km, mb3.8/6, Error ellipse: s-maj=25.4km s-min=10.5km az=176.0*
ISC 29 10:23:27.8±1.1**, 52°.8N**±0°.1×**170°.69E**±0°.06**, h28km, n44,** σ2^{s}**00**/59**, mb3.7**/6**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	2.07	90	*e*P	Pn	10 24 02.4	+1.7
SMY				*e*S	Sn	10 24 26.5	+1.0
SMY	Shemya	2.07	90		Pn	10 24 01.5	+0.9
BKI	Bering	3.69	313	*e*S	Sn	10 25 02.6	-2.8
KBTR	Krutoberegovo	5.72	310	*e*P	Pn	10 24 49.9	-1.0
KBTR				S	Sn	10 25 50.9	-4.6
SPN	Mys Shipunski	6.46	277	*e*P	Pn	10 25 00.7	-0.2
SPN				S	Sn	10 26 09.3	-4.3
TUMD	Tumrok D	6.53	296	*e*P	Pn	10 25 02.8	+0.8
TUMD				S	Sn	10 26 15.9	+0.4
KZV	Kizimen	6.56	295	*e*P	Pn	10 25 03.4	+0.8
KZV				*e*S	Sn	10 26 15.1	-1.4
BZGR	Bezymyannyi-Gr	6.64	302	*e*P	Pn	10 25 05.0	+1.5
TUMR	Tumrok	6.70	296	*e*P	Pn	10 25 05.8	+1.5
LGNR	Loginova	6.70	303	*e*P	Pn	10 25 06.4	+1.8
BZWR	Bezymyannyi-We	6.75	302	*e*P	Pn	10 25 06.3	+1.2
KMNR	Kamenistaya	6.81	300	*e*P	Pn	10 25 07.0	+1.2
KMNR				*e*S	Sn	10 26 21.9	-0.4
KLY	Klyuchi	6.82	305	*e*P	Pn	10 25 04.9	-1.0
KRSR	Krestovskiy	6.82	304	*e*P	Pn	10 25 06.7	+0.7
KRSR				*e*S	Sn	10 26 22.3	-0.5
KIRR	Kirishev	6.83	302	*e*P	Pn	10 25 08.1	+2.0
KII	Karymskiy	6.84	285	*e*S	Sn	10 26 18.8	-4.3
KPT	Kopyto	6.89	302	*e*P	Pn	10 25 08.5	+1.5
KOZ	Kozyrevsk	7.11	302	*e*P	Pn	10 25 11.7	+1.8
SDLR	Sedlovina	7.14	279	*e*P	Pn	10 25 12.3	+1.9
SDLR				*e*S	Sn	10 26 30.2	-0.4
UGLR	Uglovaya	7.18	278	*e*P	Pn	10 25 13.0	+2.1
SMAR	Somma	7.19	279	*e*P	Pn	10 25 13.0	+1.8
KRER	Koryakskii	7.22	279	*e*P	Pn	10 25 13.7	+2.1
DALK	Dalny	7.23	277	*e*P	Pn	10 25 13.0	+1.5
DALK				*e*S	Sn	10 26 30.6	-1.9
AVH	Avacha	7.23	279	*e*P	Pn	10 25 13.3	+1.7
AVH				*e*S	Sn	10 26 31.6	-1.1
KRX	Arik	7.28	279	*e*P	Pn	10 25 14.0	+1.6
KRX				*e*S	Sn	10 26 32.3	-1.8
PET	Petropavlovsk	7.29	277	Pn	Pn	10 25 15.1	+2.8
KOK	Koryaka	7.29	279	*e*P	Pn	10 25 14.3	+1.9
SRDR	Sredinnyy	7.29	303	*e*P	Pn	10 25 14.4	+1.9
SRDR				S	Sn	10 26 34.3	0.0
RUS	Russkaya	7.43	272	P	Pn	10 25 16.2	+2.0
RUS				S	Sn	10 26 35.5	-1.9
MTVR	Mutnovka	7.62	273	*e*P	Pn	10 25 19.5	+2.5
MTVR				*e*S	Sn	10 26 40.5	-1.9
GRL	Gorelyy	7.68	273	*e*P	Pn	10 25 20.0	+2.2
ASAK	Asacha	7.81	272	*e*P	Pn	10 25 22.6	+3.1
ASAK				S	Sn	10 26 45.9	-1.0
PEA0B	Petropavlovsk-	7.86	277	Pn	Pn	10 25 22.9	+2.7
PETK	Petropavlovsk-	7.86	277	Pn	Pn	10 25 23.1	+2.9
	1.0nm,0.3s,baz=91,slow=16,SNR=14						
TILK	Tilichiki	8.07	344	*e*P	Pn	10 25 26.0	+3.0
ALID	Alaid	9.57	264	*e*P	Pn	10 25 46.9	+3.1
KDAK	Kodiak Island	21.31	62	P	P	10 28 10.7	-1.3
TOLK	Toolik Lake Re	24.45	34	P	P	10 28 43.3	-0.6
TOLK				IAmb	IAmb	10 28 46.9	
	comp=Z,2.3nm,0.6s						
ILAR	Eielson Array	24.50	44	P	P	10 28 45.1	+0.8
	comp=Z,0.8nm,0.7s,baz=256,slow=7.5,SNR=10						
DOT	Dot Lake	25.61	47	P	P	10 28 55.8	+1.5
DOT				IAmb	IAmb	10 28 57.2	
	comp=Z,3.2nm,0.8s						
SCRK	Sand Creek	25.66	46	P	P	10 28 54.6	-0.3
SCRK				IAmb	IAmb	10 28 58.8	
	comp=Z,1.5nm,0.7s						
EGAK	Eagle	26.94	45	P	P	10 29 07.1	+0.7
EGAK				IAmb	IAmb	10 29 07.8	
	comp=Z,2.0nm,1.0s						
DAWY	Dawson	27.69	46	P	P	10 29 15.7	+2.5
YKA	Yellowknife Ar	38.92	45	P	P	10 30 50.9	+0.3
	comp=Z,0.1nm,0.5s,baz=291,slow=8.4,SNR=3.7						

*BEO **29** 10:26:13.4±0.6, 40°.01N×24°.53E, h0km, ML3.4/15*
*IDC **29** 10:26:14.1±1.6, 40°.03N×24°.43E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.4/27, mbtmp3.5/4, ML3.5/1, MS2.7/2, Ms1 2.7/2, ms1mx2.4/21, Error ellipse: s-maj=36.8km s-min=25.9km az=168.0*
*ISK **29** 10:26:14.1, 40°.07N×24°.42E, h9km, ML3.5/22*
*DDA **29** 10:26:14.7, 39°.96N×24°.45E, h10km±2km, MW3.6*
*ATH **29** 10:26:14.7, 40°.04N×24°.36E, h28km±1km, ML3.4/16, Error ellipse: s-maj=1.6km s-min=0.9km az=12.0*
*THE **29** 10:26:15.6, 40°.06N×24°.39E, h14km, ML3.3/15, Error ellipse: s-maj=0.9km s-min=0.5km az=349.0*
*SOF **29** 10:26:16.7, 40°.23N×24°.47E, h16km, MD3.5*
ISC 29 10:26:14.7±1.0**, 40°.03N**±0°.01×**24°.42E**±0°.01**, h6km**±8km**, n156,** σ0^{s}**82**/217**, mb3.6**/3**, 15C-8D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUR	Ouranopolis	0.45	312	P	Pg	10 26 24.0	+0.6
OUR				S	Sg	10 26 29.7	+0.4
	5µm,0.2s						
OUR	Ouranopolis	0.45	312	P	Pg	10 26 23.9	+0.5
OUR				S	Sg	10 26 29.7	+0.4
OUR				AML	AML	10 26 30.1	
	comp=E,10600µm,0.4s						
OUR				AML	AML	10 26 30.5	
	comp=N,9891µm,0.2s						
OUR	Ouranopolis	0.45	312	PG	Pg	10 26 23.9	+0.5
OUR				SG	Sg	10 26 29.5	+0.2
PAIG	Paliouri	0.58	260	P	Pg	10 26 26.4	+0.6
PAIG				S	Sg	10 26 34.4	+1.1
	comp=N,3µm,0.4s						
PAIG	Paliouri	0.58	260	P	Pg	10 26 26.3	+0.5
PAIG				S	Sg	10 26 32.8	-0.5
PAIG				AML	AML	10 26 37.9	
	comp=N,5524µm,0.4s						
PAIG				AML	AML	10 26 38.0	
	comp=E,4709µm,0.3s						
LIA	Limnos Island	0.60	103	P	Pb	10 26 27.4	-0.2
LIA				S	Sb	10 26 37.5	+1.1
	comp=E,3µm,0.4s						
LIA	Limnos Island	0.60	103	P	Pb	10 26 27.7	0.0
LIA				S	Sb	10 26 37.2	+0.8
LIA				AML	AML	10 26 39.0	
	comp=N,4534µm,0.3s						
LIA				AML	AML	10 26 39.8	
	comp=E,6017µm,0.5s						
THAS	Thassos island	0.62	22	P	Pg	10 26 26.6	+0.1
THAS				S	Sb	10 26 36.5	-0.3
	comp=E,12µm,0.2s						
THAS	Thassos island	0.62	22	P	Pg	10 26 27.0	+0.5
THAS				S	Sb	10 26 36.6	-0.3
THAS				AML	AML	10 26 37.4	
	comp=E,32782µm,0.2s						
THAS				AML	AML	10 26 37.5	
	comp=N,13893µm,0.1s						
PLG	Polygyros	0.82	295	P	Pg	10 26 30.8	+0.3
PLG				S	Sg	10 26 41.5	+0.4
	comp=N,1µm,0.3s						
PLG	Polygyros	0.82	295	P	Pg	10 26 30.8	+0.3
PLG				S	Sg	10 26 40.5	-0.6
PLG				AML	AML	10 26 45.5	
	comp=E,2749µm,0.3s						
PLG				AML	AML	10 26 46.2	
	comp=N,2818µm,0.4s						
KVLA	Kavala	0.90	358	P	Pb	10 26 32.6	-0.2
KVLA				S	Sb	10 26 44.5	-0.6
KVLA				AML	AML	10 26 45.8	
	comp=E,29596µm,0.4s						
KVLA				AML	AML	10 26 45.8	
	comp=N,11861µm,0.3s						
SMTH	Samothraki Isl	0.95	62	P	Pb	10 26 33.3	-0.4
SMTH				S	Sb	10 26 46.8	+0.2
	comp=N,2µm,0.5s						
SMTH	Samothraki Isl	0.95	62	P	Pb	10 26 33.3	-0.4
SMTH				S	Sb	10 26 47.1	+0.5
SMTH				AML	AML	10 26 48.0	
	comp=E,5161µm,0.4s						
SMTH				AML	AML	10 26 49.3	
	comp=N,3670µm,0.3s						
AOS	Alonnisos	0.96	206	P	Pg	10 26 33.3	+0.2
AOS				S	Sn	10 26 47.8	-0.9
	comp=N,2µm,0.4s						
AOS	Alonnisos	0.96	206	P	Pb	10 26 33.8	+0.1
AOS				S	Sg	10 26 46.0	+0.5
AOS				AML	AML	10 26 50.0	
	comp=E,5221µm,0.5s						
AOS				AML	AML	10 26 51.0	
	comp=N,4506µm,0.4s						
AOS	Alonnisos	0.96	206	PG	Pb	10 26 33.8	+0.1
AOS				SG	Sn	10 26 47.9	-0.8
KAVA	Kavala	0.96	4	P	Pg	10 26 33.0	-0.2
KAVA				S	Sb	10 26 46.2	-0.7
	comp=N,6µm,0.3s						
KAVA	Kavala	0.96	4	P	Pb	10 26 33.7	-0.1
KAVA				S	Sg	10 26 45.9	+0.2
KAVA				AML	AML	10 26 47.5	
	comp=N,17350µm,0.2s						
KAVA				AML	AML	10 26 47.7	
	comp=E,7768µm,0.3s						
SKIA	Skiathos	1.14	221	P	Pg	10 26 36.2	-0.3
SKIA				S	Sb	10 26 51.7	-0.2
	comp=E,2µm,0.5s						
SKIA	Skiathos	1.14	221	P	Pg	10 26 36.1	-0.3
SKIA				S	Sg	10 26 50.8	-0.4
SKIA				AML	AML	10 26 58.3	
	comp=E,5102µm,0.6s						
SKIA				AML	AML	10 26 59.2	
	comp=N,3161µm,0.5s						
GADA	Gvkgeada	1.15	82	P	Pg	10 26 36.6	0.0
GADA				S	Sb	10 26 52.2	+0.2
	comp=N,2µm,0.4s						
GADA	Gvkgeada	1.15	82	PN	Pg	10 26 36.6	0.0
GOKA	anakkale-Gk	1.15	82	*i* P	Pb	10 26 36.9	-0.1
GOKA				*i* S	Sb	10 26 52.2	0.0
HORT	Hortiatis	1.16	300	P	Pg	10 26 36.8	-0.1
HORT				S	Sg	10 26 51.1	-0.8
	comp=N,665nm,0.6s						
HORT	Hortiatis	1.16	300	P	Pg	10 26 36.4	-0.4
HORT				S	Sg	10 26 50.5	-1.3
HORT				AML	AML	10 26 54.9	
	comp=N,1436µm,0.4s						
HORT				AML	AML	10 26 57.7	
	comp=E,1082µm,0.5s						
HORT	Hortiatis	1.16	300	PN	Pg	10 26 36.3	-0.6
HORT				SN	Sb	10 26 52.5	0.0
SKY	Skiros Island	1.16	175	P	Pn	10 26 37.4	-0.1
SKY	Skiros Island	1.16	175	P	Pb	10 26 37.3	+0.1
SKY				S	Sb	10 26 52.3	-0.1
SKY				AML	AML	10 26 58.1	
	comp=N,6554µm,0.3s						
SKY				AML	AML	10 26 59.4	
	comp=E,5009µm,0.3s						
XOR	Xorichti	1.16	235	P	Pg	10 26 36.6	-0.3
XOR				S	Sg	10 26 52.2	+0.3
	comp=E,950nm,0.5s						
XOR	Xorichti	1.16	235	P	Pg	10 26 36.6	-0.3
NEO	Neokhori	1.18	232	P	Pg	10 26 36.8	-0.4
NEO				S	Sg	10 26 52.6	+0.1
SRS	Serrai	1.25	330	*e*Pg	Pn	10 26 37.8	-1.1
SRS				*e*Sg	Sg	10 26 53.0	-2.0
SRS	Serrai	1.25	330	P	Pn	10 26 37.7	-1.1
SRS				S	Sg	10 26 53.9	-1.1
	comp=E,1µm,0.6s						
SRS	Serrai	1.25	330	P	Pn	10 26 37.5	-1.3
SRS				S	Sg	10 26 54.3	-0.7
SRS				AML	AML	10 26 57.9	
	comp=E,1910µm,0.3s						
SRS				AML	AML	10 26 58.8	
	comp=N,1906µm,0.3s						
THE	Thessaloniki	1.26	299	P	Pn	10 26 38.4	-0.5
BOZC	Bozcaada	1.27	98	PN	Pn	10 26 38.7	-0.3
BOZC	Bozcaada	1.27	98	*i* P	Pn	10 26 38.6	-0.4
BOZC				*i* S	Sb	10 26 55.6	-0.1
BOZC				IAML		10 26 59.0	
	comp=N,458nm,1.0s						
BOZC				IAML		10 26 59.0	
	comp=E,512nm,0.5s						
SIGR	SIGRI	1.38	126	P	Pn	10 26 40.5	0.0
SIGR	SIGRI	1.38	126	P	Pg	10 26 41.0	-0.1
SIGR				S	Sn	10 26 58.8	-0.3
SIGR				AML	AML	10 27 03.3	
	comp=E,2304µm,0.6s						
SIGR				AML	AML	10 27 03.8	
	comp=N,2462µm,0.6s						

SIGR	**SIGRI**	**1.38**	**126**	PN	**Pb**	**10 26 40.7**	**-0.2**
RDO	**Rodhopi**	**1.40**	**37**	P	**Pn**	**10 26 39.8**	**-1.0**
RDO	**Rodhopi**	**1.40**	**37**	P	**Pn**	**10 26 39.6**	**-1.2**
RDO	**Rodhopi**	**1.40**	**37**	PN	**Pn**	**10 26 39.8**	**-1.0**
KYMI	**Kymi, Euboea I**	**1.42**	**190**	P	**Pn**	**10 26 40.7**	**-0.4**
MRKA	**Markates**	**1.48**	**206**	P	**Pn**	**10 26 41.1**	**-0.8**
MRKA				S	**Sn**	**10 27 01.2**	**-0.3**
	comp=N,1μm,0.7s						
MRKA	**Markates**	**1.48**	**206**	P	**Pn**	**10 26 41.0**	**-0.8**
EZN	**Ezine**	**1.48**	**97**	P	**Pn**	**10 26 41.9**	**0.0**
EZN				S	**Sn**	**10 27 00.7**	**-0.9**
	comp=N,598nm,0.6s						
EZN	**Ezine**	**1.48**	**97**	PN	**Pn**	**10 26 41.7**	**-0.2**
LIT	**Litokhoron**	**1.48**	**273**	P	**Pn**	**10 26 41.2**	**-0.8**
ENEZ	**Enez**	**1.50**	**62**	P	**Pn**	**10 26 41.4**	**-0.8**
ENEZ	**Enez**	**1.50**	**62**	PN	**Pn**	**10 26 41.6**	**-0.6**
GELI	**Tayfur-Gelibol**	**1.61**	**76**	PN	**Pn**	**10 26 43.1**	**-0.7**
KNT	**Kendrikon**	**1.62**	**315**	P	**Pn**	**10 26 43.6**	**-0.3**
KNT	**Kendrikon**	**1.62**	**315**	P	**Pn**	**10 26 43.5**	**-0.3**
KNT				S	**Sn**	**10 27 03.6**	**-1.4**
KNT				AML	AML	10 27 08.1	
	comp=N,1418μm,0.3s						
KNT				AML	AML	10 27 08.7	
	comp=E,1246μm,0.3s						
PRK	**Paraskevi**	**1.63**	**118**	P	**Pb**	**10 26 45.3**	**+0.1**
PRK				S	**Sg**	**10 27 06.9**	**-0.2**
PRK				AML	AML	10 27 13.8	
	comp=N,1635μm,0.4s						
PRK				AML	AML	10 27 15.5	
	comp=E,2637μm,0.5s						
MMB	**Musomiste**	**1.64**	**342**	*i* P	**Pn**	**10 26 43.0**	**-1.2**
BAYC	**CANAKKALE_Bayr**	**1.66**	**99**	*i* P	**Pn**	**10 26 44.4**	**0.0**
BAYC				*i* S	**Sn**	**10 27 04.2**	**-1.9**
BAYC				IAML		10 27 12.0	
	comp=N,164nm,0.4s						
BAYC				IAML		10 27 14.0	
	comp=E,172nm,0.4s						
RZN	**Rozhen**	**1.67**	**8**	*i* P	**Pn**	**10 26 44.4**	**-0.3**
ERIK	**Erikli-Kesan**	**1.72**	**68**	PN	**Pn**	**10 26 44.4**	**-0.8**
KDZ	**Kurdzhali**	**1.78**	**25**	*i* P	**Pn**	**10 26 44.8**	**-1.3**
KDZ	**Kurdzhali**	**1.78**	**25**	PN	**Pn**	**10 26 45.0**	**-1.1**
GRG	**Griva**	**1.79**	**302**	P	**Pn**	**10 26 45.6**	**-0.7**
LPK	**Lapseki**	**1.82**	**79**	PN	**Pn**	**10 26 46.3**	**-0.3**
AXAR	**Agios Charalam**	**1.86**	**228**	P	**Pn**	**10 26 45.6**	**-1.6**
AYVA	**Ayvalik**	**1.90**	**112**	*i* P	**Pn**	**10 26 44.4**	**-3.2**
AYVA				*i* S	**Sg**	**10 27 15.4**	**-0.1**
KESN	**Edirne-Kesan**	**1.90**	**65**	*i* P	**Pn**	**10 26 47.6**	**-0.4**
KESN				*i* S	**Sg**	**10 27 16.4**	**+0.7**
AGG	**Agios Georgios**	**1.91**	**239**	P	**Pn**	**10 26 47.6**	**-0.2**
VAY	**Valandovo**	**1.91**	**313**	*e*Pn	**Pn**	**10 26 48.3**	**+0.6**
VAY				*e*Sn	**Sb**	**10 27 14.7**	**+0.7**
VAY	**Valandovo**	**1.91**	**313**	*i* Pn	**Pn**	**10 26 48.4**	**+0.6**
VAY	**Valandovo**	**1.91**	**313**	*i* Pn	**Pn**	**10 26 48.4**	**+0.6**
THL	**Klokotos Trika**	**1.91**	**257**	P	**Pn**	**10 26 47.7**	**-0.1**
DION	**Dionisos Attik**	**1.99**	**191**	P	**Pn**	**10 26 48.9**	**-0.1**
DION	**Dionisos Attik**	**1.99**	**191**	P	**Pn**	**10 26 48.8**	**-0.2**
UKOP	**Uzunkopru-Edir**	**2.01**	**56**	PN	**Pn**	**10 26 49.0**	**-0.2**
MAKR	**Makrakomi, Fth**	**2.04**	**241**	P	**Pn**	**10 26 49.7**	**0.0**
MAKR	**Makrakomi, Fth**	**2.04**	**241**	P	**Pn**	**10 26 49.2**	**-0.5**
VILL	**Villia**	**2.06**	**205**	P	**Pn**	**10 26 49.7**	**-0.2**
CHOS	**Chios island**	**2.08**	**142**	P	**Pn**	**10 26 50.8**	**+0.6**
CHOS	**Chios island**	**2.08**	**142**	PN	**Pn**	**10 26 50.8**	**+0.6**
PLD	**Plovdiv**	**2.08**	**6**	*e*Pn	**Pn**	**10 26 51.0**	**+0.8**
PLD	**Plovdiv**	**2.08**	**6**	*i* P	**Pn**	**10 26 50.7**	**+0.5**
PLD	**Plovdiv**	**2.08**	**6**	PN	**Pn**	**10 26 49.7**	**-0.5**
KKB	**Krupnik**	**2.09**	**331**	*i* P	**Pn**	**10 26 50.0**	**-0.4**
DKL	**Dikili**	**2.15**	**116**	PN	**Pn**	**10 26 51.4**	**+0.3**
DIM	**Dimitrovgrad**	**2.18**	**22**	*i* P	**Pn**	**10 26 51.3**	**-0.3**
RKY	**Sarkoy-Tekirda**	**2.21**	**72**	PN	**Pn**	**10 26 51.7**	**-0.3**
KRBG	**Karabiga-Canak**	**2.23**	**80**	PN	**Pn**	**10 26 52.2**	**-0.1**
ZEDA	**zmir-Bergama**	**2.32**	**117**	*i* P	**Pn**	**10 26 54.4**	**+1.0**
ZEDA				*i* S	**Sg**	**10 27 28.5**	**-0.6**
ZEDA				IAML		10 27 34.0	
	comp=N,87nm,0.6s						
ZEDA				IAML		10 27 45.0	
	comp=E,57nm,0.6s						
URLA	**Izmir**	**2.38**	**134**	PN	**Pn**	**10 26 55.0**	**+0.7**
URLA	**Izmir**	**2.38**	**134**	*i* P	**Pn**	**10 26 54.4**	**+0.1**
URLA				*i* S	**Sb**	**10 27 27.2**	**-0.4**
URLA				IAML		10 27 41.0	
	comp=N,62nm,0.7s						
URLA				IAML		10 28 06.0	
	comp=E,45nm,1.0s						
KNL	**Balıkesir**	**2.39**	**83**	*i* P	**Pb**	**10 26 59.1**	**+0.9**
KNL				*i* S	**Sn**	**10 27 23.0**	**-1.1**
ANX	**Ano Chora**	**2.41**	**234**	P	**Pn**	**10 26 55.0**	**+0.1**
KALE	**Kalithea**	**2.41**	**228**	P	**Pn**	**10 26 53.8**	**-1.1**
FNA	**Florina**	**2.44**	**289**	*e*Pn	**Pn**	**10 26 55.5**	**+0.3**
BALY	**Balya**	**2.48**	**96**	*i* P	**Pb**	**10 27 00.0**	**+0.3**
BALY				*i* S	**Sg**	**10 27 33.0**	**-1.4**
MRMT	**Marmara Adasi**	**2.49**	**76**	PN	**Pn**	**10 26 55.9**	**0.0**
GONE	**Gonen-Balikesi**	**2.51**	**89**	PN	**Pn**	**10 26 56.5**	**+0.5**
PGB	**Panagyurishte**	**2.52**	**356**	*e*P	**Pg**	**10 27 01.9**	**-1.1**
EDRB	**Edirne**	**2.53**	**43**	P	**Pn**	**10 26 56.0**	**-0.3**
EDRB	**Edirne**	**2.53**	**43**	PN	**Pn**	**10 26 56.2**	**-0.1**
BLCB	**Balcova**	**2.62**	**128**	PN	**Pn**	**10 26 58.4**	**+0.8**
STEP	**BALIKESIR_Sava**	**2.63**	**103**	*i* P	**Pn**	**10 26 58.9**	**+1.1**
STEP				*i* S	**Sb**	**10 27 35.8**	**+1.0**
STEP				IAML		10 27 55.0	
	comp=E,108nm,0.9s						
STEP				IAML		10 28 07.0	
	comp=N,127nm,0.9s						
EDC	**Edincik**	**2.66**	**82**	PN	**Pn**	**10 26 58.6**	**+0.5**
KIRK	**Kırklareli**	**2.68**	**48**	*i* P	**Pg**	**10 27 06.6**	**+0.6**
KIRK				*i* S	**Sg**	**10 27 39.0**	**-1.7**
DID	**Didima**	**2.69**	**200**	P	**Pn**	**10 26 58.2**	**-0.4**
BALB	**Balikesir**	**2.69**	**97**	PN	**Pn**	**10 26 59.1**	**+0.5**
VTS	**Vitosha**	**2.73**	**341**	*e*Pn	**Pn**	**10 26 59.3**	**0.0**
VTS				*e*Sn	**Sn**	**10 27 32.5**	**-0.2**
VTS	**Vitosha**	**2.73**	**341**	⇓P	**Pn**	**10 26 59.5**	**+0.2**
VTS				⇑S	**Sn**	**10 27 32.3**	**-0.5**
VTS	**Vitosha**	**2.73**	**341**	*i* P	**Pn**	**10 26 59.6**	**+0.3**
BOSS	**Bosilegrad**	**2.86**	**330**	*e*Pn	**Pn**	**10 27 00.4**	**-0.5**
BOSS				*e*Sn	**Sn**	**10 27 37.5**	**+1.8**
JMB	**Yambol**	**2.93**	**33**	*e*P	**Pg**	**10 27 11.4**	**+0.6**
OHR	**Ohrid**	**2.96**	**292**	*i* Pn	**Pg**	**10 27 12.2**	**+0.7**
OHR	**Ohrid**	**2.96**	**292**	*i* Pn	**Pg**	**10 27 12.2**	**+0.7**
SKO	**Skopje**	**2.97**	**312**	*i* Pn	**Pb**	**10 27 06.6**	**-1.5**
SKO	**Skopje**	**2.97**	**312**	*i* Pn	**Pb**	**10 27 06.6**	**-1.5**
APE	**Apeiranthos**	**3.09**	**163**	⇓P	**Pn**	**10 27 03.9**	**-0.2**
ELND	**Elena**	**3.09**	**20**	⇑P	**Pn**	**10 27 04.3**	**+0.2**
DURS	**Dursunbey**	**3.15**	**97**	*i* P	**Pg**	**10 27 15.4**	**+0.3**
DURS				*i* S	**Sb**	**10 27 47.4**	**-2.6**
ELBA	**Catalca**	**3.25**	**69**	*i* P	**Pg**	**10 27 17.2**	**+0.2**
ELBA				*i* S	**Sb**	**10 27 55.0**	**+2.3**
PLVB	**Pleven**	**3.35**	**3**	⇑P	**Pn**	**10 27 08.7**	**+1.0**
PLVB				⇑S	**Sn**	**10 27 49.6**	**+1.8**
BARS	**Barje**	**3.40**	**326**	*e*Pn	**Pn**	**10 27 08.1**	**-0.2**
BARS				*e*Sn	**Sn**	**10 27 50.3**	**+1.3**
DEMI	**Demirci**	**3.47**	**105**	*i* P	**Pg**	**10 27 19.8**	**-1.3**
DEMI				*i* S	**Sg**	**10 28 04.3**	**-1.8**
ZAPS	**Zavoj**	**3.50**	**338**	*e*Pn	**Pn**	**10 27 09.9**	**+0.1**
ZAPS				*e*Sn	**Sn**	**10 27 51.9**	**+0.3**
ULDT	**Uludag**	**3.62**	**87**	*i* S	**Sg**	**10 28 10.2**	**-0.7**
BDRM	**Kayabasi**	**3.79**	**140**	*i* P	**Pn**	**10 27 14.5**	**+0.7**
BDRM				IAML		10 28 31.0	
	comp=N,18nm,0.7s						
RAZG	**Razgrad**	**3.86**	**23**	⇑P	**Pn**	**10 27 15.7**	**+1.0**
SELS	**Selova**	**4.03**	**323**	*e*Pn	**Pn**	**10 27 16.1**	**-0.9**
SELS				*e*Sn	**Sn**	**10 28 05.8**	**+1.2**
ZAGS	**Zajecar**	**4.11**	**337**	*e*Pn	**Pn**	**10 27 17.2**	**-0.9**
ZAGS				*e*Sn	**Sn**	**10 28 05.3**	**-1.3**
BOVS	**Bovan**	**4.13**	**331**	*e*Pn	**Pn**	**10 27 18.2**	**-0.1**
BOVS				*e*Sn	**Sn**	**10 28 07.2**	**+0.2**
SJES	**Sjenica**	**4.64**	**316**	*e*Pn	**Pn**	**10 27 25.1**	**-0.3**
GRUS	**Gruza**	**4.74**	**326**	*e*Pn	**Pn**	**10 27 26.0**	**-0.7**
GRUS				*e*Sn	**Sn**	**10 28 22.6**	**+0.6**
ICOR	**Ion Corvin**	**4.79**	**31**	⇓P	**Pn**	**10 27 27.4**	**-0.1**
HERR	**Herculane**	**5.07**	**344**	⇑P	**Pn**	**10 27 30.5**	**-0.7**
TRUS	**Trudelj**	**5.14**	**326**	*e*Pn	**Pn**	**10 27 31.3**	**-0.9**
MDVR	**Moldovita**	**5.15**	**338**	⇑P	**Pn**	**10 27 32.0**	**-0.4**
DIVS	**Divibare**	**5.23**	**322**	*e*Pn	**Pn**	**10 27 32.4**	**-1.1**
DIVS				*e*Sn	**Sn**	**10 28 33.1**	**-1.1**
ISR	**Istrita**	**5.32**	**16**	⇑P	**Pn**	**10 27 35.0**	**+0.3**
TIRR	**Tirgusor**	**5.32**	**33**	⇑P	**Pn**	**10 27 35.2**	**+0.5**
ARR	**Arges**	**5.33**	**2**	⇓P	**Pn**	**10 27 35.2**	**+0.3**
BBLS	**Lazi?i**	**5.35**	**317**	*e*Pn	**Pn**	**10 27 35.3**	**+0.1**
LOT	**Lotru**	**5.43**	**355**	⇑P	**Pn**	**10 27 36.6**	**+0.2**
GZR	**Gura Zlata**	**5.49**	**348**	⇑P	**Pn**	**10 27 37.5**	**+0.4**
MLR	**Muntele Rosu**	**5.57**	**11**	⇑P	**Pn**	**10 27 39.7**	**+1.5**
CFR	**Carcaliu**	**5.83**	**27**	⇓P	**Pn**	**10 27 41.6**	**0.0**
DOPR	**Dopca**	**5.97**	**7**	⇑P	**Pn**	**10 27 44.3**	**+0.6**
PLOR	**Plostina**	**6.04**	**15**	⇓P	**Pn**	**10 27 45.6**	**+1.0**
VRI	**Vrincioaia**	**6.07**	**15**	⇑P	**Pn**	**10 27 47.4**	**+2.4**
TESR	**Tescani**	**6.68**	**13**	⇓P	**Pn**	**10 27 54.7**	**+1.4**
BIZ	**Bicaz**	**7.01**	**9**	⇓P	**Pn**	**10 28 00.0**	**+2.1**
BRTR	**Keskin Array B**	**7.10**	**90**	Pn	**Pn**	**10 27 59.3**	**0.0**
	comp=N,0.9nm,0.3s,baz=269,slow=11,SNR=7.4						
BURAR	**Bucovina Array**	**7.60**	**4**	⇑P	**Pn**	**10 28 07.9**	**+1.8**
FINES	**FINESS Array B**	**21.46**	**2**	LR	LR	10 40 51.6	
	comp=N,20nm,18.5s,baz=182,slow=41						
NOA	**NORSAR Array B**	**22.56**	**343**	P	**P**	**10 31 14.9**	**-0.5**
	comp=N,0.6nm,0.7s,baz=171,slow=8.1,SNR=3.5						
NOA				LR	LR	10 41 22.5	
	comp=N,16nm,18.4s,baz=5.0,slow=40						
TORD	**Torodi Ar. Bea**	**33.42**	**223**	P	**P**	**10 32 54.6**	**+0.3**
	comp=N,0.4nm,0.5s,baz=29,slow=9.9,SNR=2.1						
MKAR	**Makanchi Array**	**41.75**	**61**	P	**P**	**10 34 05.7**	**+1.1**
	comp=N,0.8nm,0.6s,baz=278,slow=7.2,SNR=9.4						

WEL 29 10:31:09.2±0.8, 35°S±4°×17°9E±1°0, h33km, M3.9/12, ML4.2/12, MLv3.9/12, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**3.27**	**189**	P	Pn	10 31 59.4	+1.2
WMGZ				S	Sn	10 32 38.4	+2.4
HAZ	**Te Kaha**	**3.33**	**197**	P	Pn	10 32 00.3	+1.3
HAZ				S	Sn	10 32 40.4	+3.0
PKGZ	**Pakihiroa**	**3.40**	**193**	P	Pn	10 32 00.8	+0.8
PKGZ				S	Sn	10 32 38.9	-0.2
PUZ	**Puketiti**	**3.54**	**190**	P	Pn	10 32 02.0	+0.1
PUZ				S	Sn	10 32 41.5	-1.2
RUGZ	**Raukumara Rang**	**3.56**	**198**	P	Pn	10 32 03.0	+0.8
RUGZ				S	Sn	10 32 42.4	-0.7
OPRZ	**Ohinepanea**	**3.83**	**211**	P	Pn	10 32 07.8	+2.0
MWZ	**Matawai**	**3.94**	**197**	P	Pn	10 32 07.6	+0.2
MWZ				S	Sn	10 32 52.2	-0.4
URZ	**Urewera**	**3.99**	**202**	P	Pn	10 32 07.9	-0.2
URZ				S	Sn	10 32 55.3	+1.7
WCZ	**Waipu Caves**	**4.07**	**249**	P	Pn	10 32 09.5	+0.4
RAGZ	**Rawiri**	**4.12**	**198**	P	Pn	10 32 09.8	-0.2
MUGZ	**Murupara**	**4.30**	**204**	P	Pn	10 32 12.0	-0.3
RTZ	**Ruatahuna**	**4.36**	**202**	P	Pn	10 32 11.9	-1.2
SNGZ	**Shannon Statio**	**4.41**	**197**	P	Pn	10 32 10.2	-3.7
RAHZ	**Arahi**	**4.61**	**199**	P	Pn	10 32 15.2	-1.3
MRHZ	**Matea Rd**	**4.74**	**206**	P	Pn	10 32 17.4	-1.0
NMHZ	**Naumai**	**4.85**	**201**	P	Pn	10 32 18.8	-1.2
BKZ	**Black Stump Fm**	**5.01**	**203**	P	Pn	10 32 20.5	-1.7
TSZ	**Takapari Road**	**6.00**	**203**	P	Pn	10 32 31.2	-4.4
MRZ	**Mangatainoka R**	**6.66**	**203**	P	Pn	10 32 39.5	-5.3
CAW	**Cannon Point**	**7.24**	**205**	P	Pn	10 32 46.6	-6.0
TCW	**Tory Channel**	**7.61**	**208**	P	Pn	10 32 52.4	-5.4

*NIED **29** 10:53:00, 31.60N×142.30E, h5km, Mw3.5 Best double couple: M₀1.74000×10¹⁴ NP1:φs5.00000°, δ54.00000°, λ-63.00000°. NP2:φs143.00000°, δ44.00000°, λ-122.00000°.*

JMA 29 10:53:04.9±0.2, 31.62N×142.31E, h56km, M3.8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**3.23**	**340**	P	Pn	10 53 54.2	+1.7
BSO3	**Boso 3**	**3.51**	**335**	P	Pn	10 53 58.2	+1.5
CBIJ	**Chichi jima**	**4.51**	**181**	P	Pn	10 54 11.8	+1.1
JHU	**Hanno**	**4.92**	**330**	*e*S	Sn	10 55 12.4	+0.6
JHO	**Hitachi**	**5.18**	**344**	P	Pn	10 54 21.2	+1.3
JAG	**Ashikaga**	**5.35**	**334**	P	Pn	10 54 24.2	+2.1

MAN 29 11:04:17.3, 6.56N×126.81E, h128km, mb4.8, ML3.6, MS3.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.67**	**305**	*e*P	Pn	11 04 38.4	+1.1
MATI				*e*S	Sn	11 05 11.1	+19
KCP	**Kidapawan**	**1.77**	**285**	⇑*e*P	Pn	11 04 49.3	+0.9
KCP				*i* S	Sn	11 05 13.1	+0.9

IDC 29 11:07:03.8±3.8, 4.95S×142.44E, h0km, mb3.3/2, mb1 3.6/4, mb1mx3.4/24, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=79.5km s-min=31.1km az=85.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.98**	**324**	Pn	Pn	11 07 52.6	+0.3
	1.9nm,0.3s,baz=166,slow=8.4,SNR=20						
JAY				Sn	Sg	11 08 37.6	-1.9
	6.2nm,0.3s,baz=184,slow=8.5,SNR=5.4						
WRA	**Warramunga Arr**	**16.86**	**207**	Pn	Pn	11 11 02.4	+1.0
	0.3nm,0.3s,baz=26,slow=13,SNR=13						
ASAR	**Alice Springs**	**20.34**	**203**	P	P	11 11 42.2	+0.2
	0.3nm,0.4s,baz=35,slow=11,SNR=11						
FITZ	**Fitzroy Crossi**	**20.98**	**230**	P	P	11 11 48.2	-0.6
	1.2nm,0.4s,baz=54,slow=8.9,SNR=16						
LPAZ	**La Paz**	**143.12**	**126**	PKP	PKPdf	11 26 40.7	-1.0
	0.8nm,0.3s,baz=198,slow=3.2,SNR=6.3						

*DJA **29** 11:30:56.1±0.9, 5°N±6°×12°7E±°, h94km±15km, M4.2/6, mB4.7/1, mb4.2/4, MLv4.2/6, Mw(mB)3.9/1*

*IDC **29** 11:30:58.3±5.5, 4.16N×127.02E, h60km±57km, mb3.6/6, mb1 3.8/7, mb1mx3.3/50, mbtmp3.9/7, ML3.7/1, MS2.9/1, Ms1 2.9/1, ms1mx2.2/42, Error ellipse: s-maj=82.1km s-min=21.3km az=71.0*

*MAN **29** 11:30:59.9, 4.63N×127.11E, h7km, mb4.7, ML3.6, MS3.5*

*NEIC **29** 11:31:01.2±0.6, 4.3N±0.1×127.5E±0.2, h92km±11km, mb4.1/7, Error ellipse: s-maj=34.9km s-min=12.6km az=69.0*

ISC 29 11:31:00.1±1.0, 4.43N±0.07×127.3E±0.2, h100km, n27, σ1943/26, mb4.0/9, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**2.29**	**317**	*e*P	**Pn**	**11 31 34.2**	**-2.3**
DDMP				*e*S	**Sn**	**11 32 01.1**	**-3.2**
MATI	**Mati**	**2.70**	**338**	*e*P	**Pn**	**11 31 40.8**	**-1.2**
MATI				*e*S	**Sn**	**11 32 11.5**	**-2.7**
DAV	**Davao City (W)**	**3.13**	**327**	S	Sn	11 32 30.3	+6.0
	10nm,0.3s,baz=61,slow=18,SNR=1.1						
KCP	**Kidapawan**	**3.37**	**320**	⇑*i*P	**Pn**	**11 31 50.8**	**-0.2**
KCP				*i* S	**Sn**	**11 32 30.3**	**+0.2**
SKMP	**Bagumbayan, Su**	**3.43**	**307**	*e*P	**Pn**	**11 31 50.5**	**-1.2**
SKMP				*e*S	**Sn**	**11 32 33.8**	**+2.2**
TNTI	**Ternate**	**3.63**	**179**	P	**Pn**	**11 31 53.3**	**-1.1**
TNTI				S	**Sn**	**11 32 35.9**	**-0.5**
TNTI	**Ternate**	**3.63**	**179**		**Pn**	**11 31 53.5**	**-0.9**
BUKP	**Musuan**	**4.08**	**327**	*e*P	**Pn**	**11 32 01.1**	**+0.6**
BUKP				*e*S	Sn	11 32 52.8	+5.5
LBMI	**Labuha**	**5.04**	**178**	P	**Pn**	**11 32 11.2**	**-2.2**
	0.3nm49nm,0.9s						
LBMI				S	**Sn**	**11 33 10.9**	**+0.5**
	0.3nm49nm,0.9s						
SANI	**Sanana**	**6.56**	**191**	P	Pn	11 32 30.6	-3.6
SANI				S	Sn	11 33 39.7	-7.9
SIJI	**Sorong**	**6.59**	**143**	P	Pn	11 32 31.9	-2.7
	1.5nm,0.3s,baz=337,slow=23,SNR=4.6						
SIJI				S	Sn	11 33 40.9	-7.5
	1.7nm,0.3s,baz=168,slow=22,SNR=2.2						
MPSI	**Mapaga**	**8.43**	**241**	P	Pn	11 33 06.0	+6.5
FAKI	**Fak Fak**	**8.82**	**146**	Pn	Pn	11 33 03.0	-2.0
KNRA	**Kununurra**	**20.03**	**176**	P	**P**	**11 35 25.3**	**+0.1**
KNRA				IAmb	IAmb	11 35 31.0	
	comp=Z,7.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**22.44**	**184**	P	**P**	**11 35 49.9**	**-1.1**
	comp=Z,5.6nm,0.9s,baz=1.1,slow=9.0,SNR=6.5						
FITZ	**Fitzroy Crossi**	**22.44**	**184**	P	**P**	**11 35 50.5**	**-0.4**
FITZ				IAmb	IAmb	11 35 54.0	
	comp=Z,4.8nm,0.9s						
PMG	**Port Moresby**	**24.11**	**125**	LR	LR	11 47 34.4	
	comp=Z,26nm,18.6s,baz=254,slow=41						
WB0	**Warramunga Arr**	**25.04**	**164**	P	**P**	**11 36 14.9**	**-0.3**
WRAB	**Tennant Creek**	**25.18**	**164**	P	**P**	**11 36 17.1**	**+0.6**
WRAB				IAmb	IAmb	11 36 18.0	
	comp=Z,13nm,1.3s						
WRA	**Warramunga Arr**	**25.19**	**164**	P	**P**	**11 36 16.9**	**+0.4**
	comp=Z,5.9nm,0.9s,baz=341,slow=10.0,SNR=16						
WB2	**Warramunga Arr**	**25.19**	**164**	P	**P**	**11 36 16.7**	**+0.1**
WB2				IAmb	IAmb	11 36 18.0	
	comp=Z,8.6nm,1.1s						
WR0	**Warramunga Arr**	**25.26**	**164**	P	**P**	**11 36 17.5**	**+0.3**
WR0				IAmb	IAmb	11 36 23.7	
	comp=Z,10nm,1.1s						
ASAR	**Alice Springs**	**28.66**	**167**	P	**P**	**11 36 47.8**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=355,slow=8.8,SNR=5.9						
STKA	**Stephens Creek**	**38.59**	**160**	P	**P**	**11 38 14.1**	**+0.6**
	comp=Z,1.1nm,0.4s,baz=325,slow=10,SNR=6.2						
STKA	**Stephens Creek**	**38.59**	**160**	P	**P**	**11 38 13.5**	**0.0**
MKAR	**Makanchi Array**	**57.31**	**325**	P	P	11 40 41.1	+3.5
	comp=Z,0.4nm,0.4s,baz=119,slow=7.9,SNR=1.7						
KURBB	**Kurchatov Arra**	**61.46**	**327**	P	**P**	**11 41 08.5**	**+2.4**
	comp=Z,0.7nm,0.7s,baz=126,slow=6.6,SNR=5.7						

*NEIC **29** 11:44:19.9±1.1, 18.80N±0.05×67.48W±0.03, h29km±8km, Error ellipse: s-maj=8.4km s-min=2.4km az=204.0*

*RSPR **29** 11:44:20.1, 18.82N×67.50W, h7km, MD3.1/13*

ISC 29 11:44:19.7±1.1, 18.78N±0.06×67.50W±0.03, h27km, n53, σ0.59/69, 13C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.48**	**130**	⇑*e*P	**Pb**	**11 44 29.9**	**+0.2**
AGPR	**Aguadilla, PR**	**0.48**	**130**	*e*S	**Sn**	**11 44 37.4**	**-1.0**
AGPR	**Aguadilla, PR**	**0.48**	**130**		**Pb**	**11 44 29.9**	**+0.2**
AGPR					**Sn**	**11 44 37.4**	**-1.0**
AGPR	**Aguadilla, PR**	**0.48**	**130**		**Pb**	**11 44 29.4**	**-0.3**
AGPR					**Sn**	**11 44 37.2**	**-1.2**
MPR	**Mayaguez**	**0.66**	**149**		**Pn**	**11 44 33.0**	**-0.3**
LSP	**Las Mesas**	**0.72**	**147**	⇑*e*P	**Pn**	**11 44 33.9**	**-0.3**
LSP	**Las Mesas**	**0.72**	**147**	*e*S	**Sn**	**11 44 44.4**	**+0.1**
LSP	**Las Mesas**	**0.72**	**147**		**Pn**	**11 44 33.9**	**-0.3**
LSP					**Sn**	**11 44 44.4**	**+0.1**
AOPR	**Arecibo Observ**	**0.83**	**121**	⇓*e*P	**Pb**	**11 44 34.8**	**-0.8**
AOPR	**Arecibo Observ**	**0.83**	**121**	⇑*e*P	**Pb**	**11 44 35.0**	**-0.5**
AOPR				*e*S	**Sn**	**11 44 46.9**	**-0.2**
AOPR	**Arecibo Observ**	**0.83**	**121**		**Pb**	**11 44 35.0**	**-0.5**
AOPR					**Sn**	**11 44 46.9**	**-0.2**
AOPR	**Arecibo Observ**	**0.83**	**121**	Pg	**Pb**	**11 44 34.6**	**-0.9**
CRPR	**Cabo Rojo, PR**	**0.86**	**154**	⇑*e*P	**Pb**	**11 44 36.0**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.86**	**154**	*e*S	**Sn**	**11 44 48.3**	**+0.7**
CRPR	**Cabo Rojo, PR**	**0.86**	**154**		**Pb**	**11 44 36.0**	**0.0**
CRPR					**Sn**	**11 44 48.3**	**+0.7**
PCDR	**Punta Cana, DR**	**0.88**	**252**	⇑*e*P	**Pn**	**11 44 35.9**	**-0.4**
PCDR	**Punta Cana, DR**	**0.88**	**252**	*e*S	**Sb**	**11 44 47.5**	**-0.1**
PCDR	**Punta Cana, DR**	**0.88**	**252**		**Pn**	**11 44 35.9**	**-0.4**
PCDR					**Sb**	**11 44 47.5**	**-0.1**
MLPR	**Magueyes Islan**	**0.92**	**152**	⇑*e*P	**Pn**	**11 44 36.

YM10	**YM10** baz=297	**0.90 306**	P	**Pn**	12 10 27.0	-0.4
YM10	baz=297		S	**Sn**	12 10 40.4	-0.9
YHNB	**Yeheng** baz=277	**0.91 273**	⇑P	**Pn**	12 10 27.5	+0.1
YHNB	baz=277		S	**Sn**	12 10 41.6	+0.1
ETLH	**Xiulin Townshi** baz=235	**0.91 243**	P	**Pn**	12 10 27.2	-0.3
ETLH	baz=235		S	**Sn**	12 10 41.8	+0.2
YM04	**YM04** baz=297	**0.92 305**	*e*P	**Pn**	12 10 27.4	-0.1
YM04	baz=297		S	**Sn**	12 10 40.7	-1.0
NNSB	**Datong** baz=250	**0.92 258**	P	**Pn**	12 10 27.7	+0.1
NNSB	baz=250		S	**Sn**	12 10 42.3	+0.4
NNSH	**Datong** baz=251	**0.92 258**	*e*P	**Pn**	12 10 27.7	+0.1
NNSH	baz=251		*e*S	**Sn**	12 10 42.5	+0.6
NSK	**Sanguang** baz=278	**0.92 273**	*i* P	**Pn**	12 10 27.5	0.0
NSK	baz=278		*i* S	**Sn**	12 10 41.8	+0.1
NNS	**Nan Shan** baz=251	**0.93 259**	*i* P	**Pn**	12 10 27.1	-0.5
NNS	baz=251		*i* S	**Sn**	12 10 42.0	0.0
HWA	**Hwalien** baz=216	**0.95 227**	P	**Pn**	12 10 28.4	+0.6
HWA	baz=216		S	**Sn**	12 10 43.4	+1.1
WHF	**Hehuan Shan** baz=242	**1.12 245**	⇑*i* P	**Pn**	12 10 30.0	-0.1
WHF	baz=242		*i* S	**Sn**	12 10 46.0	-0.3
TDCB	**Techi** baz=243	**1.17 252**	P	**Pn**	12 10 31.0	+0.6
TDCB	baz=243		S	**Sn**	12 10 46.8	-0.1
CHGB	**Renai** baz=235	**1.23 243**	P	**Pn**	12 10 31.5	+0.3
CHGB	baz=235		S	**Sn**	12 10 48.5	+0.2
LIOB	**Emei** baz=269	**1.23 271**	P	**Pn**	12 10 30.8	-0.3
LIOB	baz=269		*e*S	**Sn**	12 10 47.9	-0.2
NSTT	**Nanjuang** baz=268	**1.25 270**	*i* P	**Pn**	12 10 31.2	0.0
NSTT	baz=268		*i* S	**Sn**	12 10 48.1	-0.2
IRIF	**Iriomote-Funau**	**1.27 103**	P	**Pn**	12 10 31.6	+0.1
IRIF			S	**Sn**	12 10 49.2	+0.4
EGFH	**Guangfu** baz=230	**1.29 222**	*e*P	**Pn**	12 10 31.0	-0.8
EGFH	baz=230		*e*S	**Sn**	12 10 48.4	-0.8
WHP	**Taichung City** baz=253	**1.34 255**	P	**Pn**	12 10 33.1	+0.6
WHP	baz=253		S	**Sn**	12 10 51.3	+0.7
VWDT	**VWDT** baz=225	**1.42 232**	P	**Pn**	12 10 33.3	0.0
VWDT	baz=225		*e*S	**Sn**	12 10 51.6	-0.5
HGSD	**Ruisui** baz=210	**1.42 218**	P	**Pn**	12 10 32.9	-0.5
HGSD	baz=210		S	**Sn**	12 10 52.5	+0.3
HATJ	**Hateruma jima**	**1.43 113**	*e*S	**Sn**	12 10 52.6	+0.4
DPDB	**Guoxing** baz=254	**1.45 246**	P	**Pn**	12 10 34.4	+0.7
EHY	**Hungye** baz=227	**1.47 221**	P	**Pn**	12 10 32.7	-1.3
EHY	baz=227		*e*S	**Sn**	12 10 53.2	-0.1
SMLT	**Sun Moon Lake** baz=234	**1.53 241**	*e*P	**Pn**	12 10 36.1	+1.2
SMLT	baz=234		S	**Sn**	12 10 55.5	+0.6
SSLB	**Suanglung** baz=231	**1.54 237**	P	**Pn**	12 10 35.8	+0.8
SSLB	baz=231		*e*S	**Sn**	12 10 55.9	+1.0
JKRS	**Kuro-shima**	**1.54 104**	P	**Pn**	12 10 35.3	+0.4
JKRS			S	**Sn**	12 10 55.1	+0.2
TYC	**Yuchr** baz=241	**1.56 243**	P	**Pn**	12 10 36.1	+1.0
TYC	baz=241		*e*S	**Sn**	12 10 56.5	+1.2
YULB	**Yu-li** baz=217	**1.57 219**	P	**Pn**	12 10 34.1	-1.2
YULB	baz=217		*e*S	**Sn**	12 10 53.7	-1.9
TWF1	**Yuli** baz=223	**1.61 218**	P	**Pn**	12 10 34.6	-1.1
TWF1	baz=223		*e*S	**Sn**	12 10 54.9	-1.4
JIJ	**Ishigaki jima**	**1.64 99**	P	**Pn**	12 10 36.0	-0.1
JIJ			*e*S	**Sn**	12 10 56.7	-0.3
WHYT	**Xinyi Township** baz=229	**1.67 237**	P	**Pn**	12 10 37.7	+1.1
WHYT	baz=229		*e*S	**Sn**	12 10 59.9	+2.1
WNT	**Mingjian** baz=243	**1.71 244**	P	**Pn**	12 10 38.4	+1.3
WNT	baz=243		S	**Sn**	12 11 01.2	+2.5
YUS	**Yu-Shan** baz=220	**1.72 229**	P	**Pn**	12 10 37.8	0.0
YUS	baz=220		*e*S	**Sn**	12 10 58.9	-0.8
FULB	**Fuli** baz=222	**1.73 215**	P	**Pn**	12 10 37.1	-0.3
FULB	baz=222		*e*S	**Sn**	12 10 59.9	+0.6
JISG	**Ishigakijimahi**	**1.77 91**	P	**Pn**	12 10 37.8	0.0
JISG			*e*S	**Sn**	12 11 00.4	+0.4
CHKT	**Chengkung** baz=203	**1.78 211**	P	**Pn**	12 10 36.9	-1.1
CHKT	baz=203		S	**Sn**	12 10 59.1	-1.2
ALS	**Alishan** baz=224	**1.81 232**	*e*P	**Pn**	12 10 39.8	+1.1
ALS	baz=224		*e*S	**Sn**	12 11 00.8	-0.7
CHN5	**Tsauling** baz=245	**1.86 237**	P	**Pn**	12 10 40.1	+1.0
CHN5	baz=245		*e*S	**Sn**	12 11 03.3	+1.1
ELDTW	**Lidau** baz=219	**1.89 221**	P	**Pn**	12 10 39.0	-0.6
ELDTW	baz=219		*e*S	**Sn**	12 11 02.1	-1.0
TPUB	**Ta-pu** baz=228	**2.07 231**	P	**Pn**	12 10 42.7	+0.9
STYT	**Tauyuan** baz=216	**2.08 226**	*e*P	**Pn**	12 10 42.8	+0.9
TWH	**Lutao** baz=205	**2.08 203**	*e*P	**Pn**	12 10 40.9	-1.0
WTP	**Ta-pu** baz=227	**2.12 230**	*e*P	**Pn**	12 10 43.0	+0.6
TWGBT	**Beinan** baz=211	**2.16 214**	*e*P	**Pn**	12 10 41.6	-1.3
TWG	**Pinlang** baz=211	**2.16 214**	*e*P	**Pn**	12 10 41.6	-1.3
CHN1	**Nanshi** baz=228	**2.22 230**	*e*P	**Pn**	12 10 44.5	+0.8
SGST	**Jiashian** baz=225	**2.25 227**	*e*P	**Pn**	12 10 44.7	+0.6
SLGT	**Liugui** baz=232	**2.27 224**	*e*P	**Pn**	12 10 45.2	+0.9
MASBT	**Mashibuluo** baz=216	**2.56 219**	*e*P	**Pn**	12 10 48.1	-0.2
LAY	**Lan-yu** baz=194	**2.69 196**	*e*P	**Pn**	12 10 48.7	-1.3

IDC 29 12:11:15.8±1.8, 6°49S×151°96E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.5/37, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=65.6km s-min=19.2km az=116.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076** 19nm,0.3s,baz=121,slow=1.5,SNR=29	**2.17**	**2**	Pn	Pb	12 11 54.6	-1.3
KRVT				Sn	Sn	12 12 21.4	+0.5
WRA	**Warramunga Arr** 39nm,0.3s,baz=59,slow=19,SNR=7.7	**21.72**	**230**	P	P	12 16 08.8	0.0
ASAR	**Alice Springs** 1.0nm,0.8s,baz=55,slow=10,SNR=7.4	**24.35**	**224**	P	P	12 16 36.4	+0.7
FITZ	**Fitzroy Crossi** 0.9nm,0.7s,baz=56,slow=9.2,SNR=11	**28.14**	**243**	P	P	12 17 09.1	-0.9
ILAR	**Eielson Array** 1.4nm,0.8s,baz=66,slow=10.0,SNR=1.8	**84.03**	**22**	P	P	12 23 47.1	-0.8
TORD	**Torodi Ar. Bea** 0.5nm,0.6s,baz=236,slow=4.7,SNR=13	**149.98**	**285**	PKPbc	PKPbc	12 31 09.7	+0.3
	0.2nm,0.4s,baz=88,slow=3.8,SNR=1.9						

IDC 29 12:15:21.1±2.3, 4°.76N×61°.48E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.5/51, mbtmp3.7/8, MS3.5/6, Ms1 3.5/6, ms1mx3.0/31, Error ellipse: s-maj=62.2km s-min=29.1km az=61.0

ISC 29 12:15:22.7±2.2, 4°.8N±0°.3×61°.5E±0°.3, h10km, n12, σ0°81/8, mb3.7/8, MS3.5/6, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr** 0.5nm,0.7s,baz=260,slow=11,SNR=1.3	**38.99**	**67**	P	**P**	**12 22 48.8**	**-0.8**
CMAR				LR	LR	12 39 15.2	
	comp=Z,32nm,18.2s,baz=250,slow=37						
MKAR	**Makanchi Array** 0.5nm,0.8s,baz=224,slow=10,SNR=4.4	**45.52**	**20**	P	**P**	**12 23 42.7**	**+0.2**
KURBB	**Kurchatov Arra** 0.5nm,0.7s,baz=215,slow=8.1,SNR=6.1	**47.85**	**15**	P	**P**	**12 24 01.9**	**+1.4**
ZALV	**Zalesovo Beam** 0.5nm,0.3s,baz=224,slow=8.2,SNR=3.9	**52.55**	**17**	P	**P**	**12 24 36.4**	**+0.3**
AKASG	**Malin Array Be** 0.4nm,0.4s,baz=139,slow=9.8,SNR=1.8	**53.13**	**335**	P	**P**	**12 24 39.8**	**-0.7**
SONM	**Songino Array** 0.5nm,0.5s,baz=233,slow=6.4,SNR=4.1	**57.51**	**34**	P	**P**	**12 25 12.5**	**+0.1**
SONM				LR	LR	12 49 37.8	
	comp=Z,32nm,18.1s,baz=217,slow=36						
TORD	**Torodi Ar. Bea** comp=Z,35nm,20.5s,baz=205,slow=36	**59.53**	**282**	LR	LR	12 51 00.2	
DBIC	**Dimbokro** comp=Z,36nm,19.4s,baz=113,slow=35	**66.01**	**275**	LR	LR	12 54 14.6	
WRA	**Warramunga Arr** 0.9nm,0.8s,baz=288,slow=5.5,SNR=3.8	**75.62**	**112**	P	**P**	**12 27 09.0**	**+0.5**
ASAR	**Alice Springs** 0.4nm,0.6s,baz=291,slow=5.7,SNR=3.1	**75.94**	**116**	P	**P**	**12 27 10.5**	**+0.1**
STKA	**Stephens Creek** comp=Z,34nm,20.6s,baz=205,slow=34	**84.14**	**123**	LR	LR	13 02 19.6	
PETK	**Petropavlovsk-** comp=Z,32nm,18.7s,baz=239,slow=37	**89.91**	**37**	LR	LR	13 10 11.3	

IDC 29 12:19:12.2±1.2, 5°.12N×62°.13E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/47, mbtmp3.8/7, Error ellipse: s-maj=36.8km s-min=27.6km az=26.0

ISC 29 12:19:14.9±1.3, 5°2N±0°.3×62°.1E±0°.2, h16km, n7, σ0°74/7, mb3.7/7, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array** 0.6nm,0.9s,baz=191,slow=6.5,SNR=4.1	**44.98**	**20**	P	**P**	**12 27 30.3**	**+0.8**
ZALV	**Zalesovo Beam** 1.0nm,0.3s,baz=216,slow=7.3,SNR=3.5	**52.03**	**17**	P	**P**	**12 28 22.7**	**-0.9**
SONM	**Songino Array** 0.3nm,0.4s,baz=220,slow=7.8,SNR=4.5	**56.87**	**34**	P	**P**	**12 28 59.2**	**+0.2**
TORD	**Torodi Ar. Bea** 0.4nm,0.6s,baz=79,slow=7.5,SNR=2.2	**60.08**	**282**	P	**P**	**12 29 22.3**	**+0.4**
ESDC	**Sonseca Array** 1.3nm,0.9s,baz=83,slow=6.0,SNR=7.0	**68.40**	**311**	P	**P**	**12 30 15.7**	**-0.5**
WRA	**Warramunga Arr** 1.3nm,0.9s,baz=292,slow=5.0,SNR=5.5	**75.16**	**112**	P	**P**	**12 30 56.6**	**-0.4**
ASAR	**Alice Springs** 0.5nm,0.9s,baz=296,slow=5.5,SNR=3.0	**75.52**	**116**	P	**P**	**12 30 59.4**	**+0.3**

ISK 29 12:22:17.9, 40°.64N×30°.49E, h8km, ML1.8/11
DDA 29 12:22:18.7, 40°.60N×30°.47E, h7km±2km, MW2.6

ISC 29 12:22:17.0±1.2, 40°.65N±0°.04×30°.54E±0°.04, h18km±5km, n17, σ0°946/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPNC	**Sapanca-Adapaz**	**0.18**	**280**	PG	**Pb**	**12 22 21.9**	**+0.3**
SPNC				SG	**Sb**	**12 22 24.5**	**-0.2**
SAUV	**Serdivan-Sakar**	**0.18**	**298**	PG	**Pb**	**12 22 21.7**	**0.0**
GULT	**Gulveren**	**0.22**	**185**	PG	**Pb**	**12 22 22.5**	**+0.1**
GULT				SG	**Sb**	**12 22 26.3**	**+0.2**
GEYV	**SAKARYA_Geyve** comp=N,87nm,0.7s	**0.25**	**228**	*i* P	**Pb**	**12 22 22.5**	**-0.6**
GEYV				IAML		12 22 26.0	
GEYV				*i* S	**Sg**	**12 22 26.0**	**-0.6**
SAHE	**Sakarya_HENDEK**	**0.31**	**50**	*i* P	**Pn**	**12 22 26.4**	**-0.3**
SAHE				*i* S	**Sn**	**12 22 32.7**	**-0.1**
SAHE				IAML		12 22 33.0	
	comp=E,35nm,0.5s						
MDUB	**Mudurnu**	**0.53**	**110**	PG	**Pn**	**12 22 29.5**	**-0.3**
SRCK	**Saricakaya, Es**	**0.61**	**174**	PG	**Pn**	**12 22 30.2**	**-0.7**
SRCK	**Saricakaya, Es**	**0.61**	**174**	*i* P	**Pb**	**12 22 29.7**	**+0.5**
SRCK				*i* S	**Sb**	**12 22 38.7**	**+1.1**
SRCK				IAML		12 22 46.0	
	comp=N,22nm,0.3s						
ADVT	**Abdulvahap**	**0.65**	**250**	PG	**Pb**	**12 22 29.5**	**-0.3**
CAVI	**Cavuskoy**	**0.70**	**230**	PG	**Pb**	**12 22 30.8**	**+0.1**
BORA	**Eskisehir**	**0.78**	**185**	PG	**Pn**	**12 22 32.9**	**-0.3**
BORA	**Eskisehir**	**0.78**	**185**	*i* P	**Pg**	**12 22 32.3**	**+0.1**
BORA				*i* S	**Sn**	**12 22 44.1**	**-0.3**
YLV	**Yalova**	**0.90**	**265**	PG	**Pn**	**12 22 35.1**	**+0.3**
ULDT	**Uludag**	**1.19**	**245**	*i* P	**Pg**	**12 22 40.1**	**0.0**
ULDT				*i* S	**Sg**	**12 22 56.5**	**+0.8**
ISK	**Istanbul-Kandi**	**1.20**	**291**	PN	**Pg**	**12 22 40.4**	**+0.2**
ARMT	**Armutlu**	**1.28**	**267**	PN	**Pg**	**12 22 41.6**	**-0.2**
TVSB	**Tavsanli**	**1.46**	**215**	PN	**Pg**	**12 22 45.2**	**0.0**

NIED 29 12:27:00, 24°.00N×124°.60E, h35km, Mw3.7 Best double couple: M0=4.37000×10^14 NP1:φ=121.00000°, δ60.00000°, λ-82.00000°. NP2:φ=285.00000°, δ31.00000°, λ-104.00000°.

IDC 29 12:27:05.8±2.5, 24°.91N×124°.82E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.4/39, mbtmp3.7/4, Error ellipse: s-maj=194.3km s-min=30.2km az=65.0

JMA 29 12:27:07.7±0.2, 24°.03N×124°.58E, h19km, M3.5

ISC 29 12:27:06.6±2.4, 24°.0N±0°.1×124°.56E±0°.05, h29km±12km, n15, σ0°895/23, mb3.4/5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIJ	**Ishigaki jima**	**0.54**	**315**	P	**Pb**	**12 27 17.8**	**+0.1**
JIJ				S	**Sb**	**12 27 25.0**	**-0.2**
JKRS	**Kuro-shima**	**0.56**	**297**	P	**Pn**	**12 27 19.0**	**+0.3**
JKRS				S	**Sn**	**12 27 27.8**	**+0.7**
JISG	**Ishigakijimahi**	**0.65**	**340**	P	**Pb**	**12 27 19.0**	**-0.5**
JISG				*e*S	**Sb**	**12 27 27.9**	**-0.3**
JTJ	**Tarama**	**0.67**	**11**	P	**Pb**	**12 27 19.9**	**0.0**
JTJ				*e*S	**Sb**	**12 27 29.0**	**+0.1**
HATJ	**Hateruma jima**	**0.69**	**277**	P	**Pn**	**12 27 21.2**	**+0.7**
HATJ				S	**Sn**	**12 27 31.7**	**+1.4**
IRIF	**Iriomote-Funau**	**0.83**	**295**	P	**Pn**	**12 27 23.0**	**+0.5**
IRIF				*e*S	**Sb**	**12 27 34.2**	**+0.7**
JIRB	**Irabujima**	**1.02**	**33**	P	**Pn**	**12 27 25.1**	**+0.9**
JIRB				S	**Sn**	**12 27 39.2**	**+0.9**
JMJ2	**Miyako jima3**	**1.03**	**43**	P	**Pn**	**12 27 26.1**	**+0.9**
JMJ2				S	**Sn**	**12 27 40.1**	**+1.4**
JOGS	**Gusukube**	**1.10**	**45**	P	**Pb**	**12 27 26.7**	**-0.3**
JOGS				*e*S	**Sn**	**12 27 42.5**	**+2.2**
JIKM	**Ikemajima**	**1.13**	**34**	P	**Pb**	**12 27 27.1**	**-0.5**
JIKM				S	**Sn**	**12 27 41.8**	**+0.7**
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=105,slow=10.0,SNR=3.0	**40.65**	**315**	P	**P**	**12 34 43.7**	**-0.5**
ZALV	**Zalesovo Beam** 0.9nm,0.4s,baz=134,slow=8.9,SNR=4.2	**42.12**	**326**	P	**P**	**12 34 54.4**	**-1.8**
WRA	**Warramunga Arr** 0.2nm,0.6s,baz=348,slow=9.0,SNR=1.7	**44.68**	**167**	P	P	12 35 27.3	+10
ASAR	**Alice Springs** 0.2nm,0.6s,baz=354,slow=7.5,SNR=1.6	**48.22**	**168**	P	P	12 35 59.0	+14
FINES	**FINESS Array B** 4.6nm,1.2s,baz=57,slow=7.0,SNR=5.0	**73.17**	**330**	P	**P**	**12 38 33.8**	**-0.5**

IDC 29 12:33:57.7±1.2, 34°.67N×138°.00E, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.4/36, mbtmp3.8/3, ML3.3/1, Error ellipse: s-maj=38.7km s-min=12.8km az=90.0

JMA 29 12:33:58.9±0.2, 35°.48N×140°.27E, h81km±2km, M3.2

ISC 29 12:33:59.6±1.1, 35°.46N±0°.05×140°.25E±0°.05, h81km, n26, σ0°877/30, 5C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.06**	**223**	⇑P	**Pn**	**12 34 11.2**	**+0.1**
JCN				*e*S	**Sn**	**12 34 20.7**	**+1.1**
JSMT	**Sammumatsuo**	**0.24**	**42**	⇑P	**Pn**	**12 34 11.3**	**-0.4**
JKUC	**kamogawauchiur**	**0.30**	**188**	⇑P	**Pn**	**12 34 11.4**	**-0.6**
JKUC				S	**Sn**	**12 34 20.2**	**-1.0**
KTR	**Katsuura**	**0.32**	**170**	P	**Pn**	**12 34 11.4**	**-0.7**
KTR				S	**Sn**	**12 34 20.2**	**-1.1**
BSO4	**Boso 4**	**0.48**	**171**	P	**Pn**	**12 34 12.7**	**-0.4**
BSO4				*e*X		12 34 24.0	
CHOJ	**Chosi**	**0.55**	**64**	⇑P	**Pn**	**12 34 13.1**	**-0.7**
BSO3	**Boso 3**	**0.69**	**162**	⇑P	**Pn**	**12 34 14.5**	**-0.5**
BSO3				X		12 34 27.1	
JOD2	**Odawara 2**	**0.97**	**259**	⇓P	**Pn**	**12 34 17.7**	**-0.7**
JOD2				*e*S	**Sn**	**12 34 31.0**	**-1.4**
JIM2	**Oshima 3**	**1.00**	**222**	P	**Pn**	**12 34 18.0**	**-0.7**
JIM2				*e*S	**Sn**	**12 34 32.3**	**-0.8**
BSO1	**Boso 1**	**1.00**	**143**	P	**Pn**	**12 34 17.6**	**-0.6**
BSO1				*e*X		12 34 32.9	
JAG	**Ashikaga**	**1.16**	**326**	⇓P	**Pn**	**12 34 20.0**	**-0.6**
JAG				*e*S	**Sn**	**12 34 35.2**	**-1.2**
JRY	**Ryogami san**	**1.23**	**297**	⇓P	**Pn**	**12 34 21.5**	**0.0**
JFNN	**Fujinakano**	**1.31**	**259**	P	**Pn**	**12 34 22.4**	**-0.1**
JFNN				*e*S	**Sn**	**12 34 39.4**	**-0.3**
JIZS	**Izushimoda**	**1.35**	**237**	⇓P	**Pn**	**12 34 22.5**	**-0.5**
JIZS				S	**Sn**	**12 34 40.0**	**-0.6**
JYN	**Shimob**	**1.39**	**272**	⇓P	**Pn**	**12 34 23.3**	**-0.3**
MJAR	**Matsushiro Arr** 2.3nm,0.3s,baz=166,slow=14,SNR=58	**1.98**	**304**	Pg	**Pn**	**12 34 31.6**	**+0.5**
MJAR				Lg	Lg	12 34 57.4	
	1.2nm,0.3s,baz=142,slow=12,SNR=2.3						
MAT	**Matsushiro**	**1.98**	**304**	P	**Pn**	**12 34 31.4**	**+0.2**
MAT				*e*S	**Sn**	**12 34 54.7**	**-0.6**
JHJ	**Hachijo jima 2** 22nm,0.3s,baz=323,slow=22,SNR=56	**2.37**	**190**	Pn	**Pn**	**12 34 36.5**	**0.0**
JHJ				Sn	**Sn**	**12 35 05.0**	**+0.4**
	90nm,0.3s,baz=99,slow=23,SNR=14						
H11N2	**WAKE ISLAND Hy** baz=309,slow=75,SNR=8.5	**28.22**	**117**	T	T	13 09 03.3	
H11N1	**WAKE ISLAND Hy** baz=309,slow=75,SNR=12	**28.23**	**117**	T	T	13 09 21.7	
H11N3	**WAKE ISLAND Hy** baz=309,slow=75,SNR=9.8	**28.24**	**117**	T	T	13 09 08.1	
H11S3	**WAKE ISLAND Hy** baz=311,slow=76,SNR=7.0	**28.86**	**119**	T	T	13 09 53.2	
H11S1	**WAKE ISLAND Hy** baz=311,slow=76,SNR=7.2	**28.88**	**119**	T	T	13 09 57.9	
H11S2	**WAKE ISLAND Hy** baz=311,slow=76,SNR=7.0	**28.88**	**119**	T	T	13 09 48.2	
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=21,slow=7.1,SNR=19	**55.38**	**187**	P	**P**	**12 43 25.5**	**+0.1**
ASAR	**Alice Springs** 0.6nm,0.4s,baz=2.4,slow=5.8,SNR=23	**59.11**	**187**	P	**P**	**12 43 53.5**	**+1.9**

BGR 29 12:59:27.8±0.5, 51°.49N×16°.05E, h1km, ML3.0/14, Error ellipse: s-maj=5.6km s-min=2.2km az=14.0

ISC 29 12:59:25.8±0.9, 51°54N±0°.03×16°04E±0°.02, h0km, n51, σ1°994/92, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**167**	*e*Pg	**Pg**	**12 59 40.2**	**+0.7**
KSP				*e*Sg	**Sb**	**12 59 50.0**	**-1.5**
CHVC	**Chvalec**	**0.95**	**179**	*e*PG	**Pb**	**12 59 44.9**	**-0.3**
CHVC				*e*SG	**Sb**	**12 59 57.7**	**-0.6**
	comp=Z,61nm,0.4s						
OSTC	**Ostas**	**0.99**	**173**	*e*PG	**Pg**	**12 59 45.4**	**+0.7**
OSTC				*e*SG	**Sb**	**12 59 58.8**	**-0.6**
	comp=Z,57nm,0.4s						
UPC	**Upice**	**1.03**	**181**	*e*PG	**Pg**	**12 59 45.9**	**+0.3**
UPC				*e*SG	**Sb**	**13 00 00.0**	**-0.6**
	comp=Z,115nm,0.2s						
DPC	**Dobruska-Polom**	**1.20**	**171**	*e*Pg	**Pg**	**12 59 49.0**	**+0.2**
DPC				*e*Sg	**Sg**	**13 00 04.7**	**+0.3**
DPC	**Dobruska-Polom**	**1.20**	**171**	*e*PG	**Pg**	**12 59 48.7**	**-0.1**
DPC				*e*SG	**Sb**	**13 00 05.4**	**-0.2**
	comp=Z,58nm,0.7s						
PVCC	**Panska Ves**	**1.37**	**223**	*e*PG	**Pn**	**12 59 52.9**	**+0.7**
PVCC				*e*SG	**Sn**	**13 00 11.5**	**+0.4**
	comp=Z,188nm,0.4s						
BRG	**Berggiesshubel**	**1.48**	**244**	PG	**Pg**	**12 59 54.5**	**+0.4**
BRG				SG	**Sn**	**13 00 14.6**	**+0.9**
	151nm,0.3s						
BRG	**Berggiesshubel**	**1.48**	**244**	*e*Pg	**Pn**	**12 59 54.4**	**+0.7**
BRG				*e*Sg	**Sn**	**13 00 14.5**	**+0.9**
KRLC	**Kraliky**	**1.54**	**162**	*e*PG	**Pn**	**12 59 54.2**	**+0.4**
KRLC				*e*SG	**Sn**	**13 00 15.5**	**+0.2**
	comp=Z,40nm,0.4s						
PRA	**Prague**	**1.79**	**215**	*e*SG	**Sg**	**13 00 23.5**	**+0.3**
	comp=Z,23nm,0.4s						
FBE	**Freiberg**	**1.80**	**251**	*e*Pg	**Pg**	**13 00 00.9**	**+0.7**
FBE				*e*Sg	**Sg**	**13 00 23.7**	**+0.2**
GOPC	**GO Pecny, Ondr**	**1.81**	**207**	*e*PG	**Pb**	**12 59 59.6**	**-0.2**
GOPC				*e*SG	**Sg**	**13 00 23.9**	**0.0**
	comp=Z,35nm,0.3s						
PRU	**Pruhonice**	**1.82**	**212**	*e*PG	**Pb**	**12 59 59.9**	**-0.1**
PRU				*e*SG	**Sg**	**13 00 24.5**	**+0.3**
	comp=Z,54nm,0.3s						
CLL	**Collm**	**1.92**	**264**	*i* Pn	**Pn**	**13 00 00.1**	**+0.4**
CLL				*i* Pg	**Pg**	**13 00 03.0**	**+0.5**
CLL				*i*		13 00 06.9	
CLL				*i* Sg	**Sg**	**13 00 28.2**	**+0.9**
	comp=Z,37nm,0.4s						
MORC	**Moravsky Berou**	**2.01**	**151**	*e*PN	**Pn**	**13 00 00.3**	**-0.7**
MORC				*e*SG	**Sb**	**13 00 28.9**	**+0.2**
MORC	**Moravsky Berou**	**2.01**	**151**	*e*Pn	**Pn**	**13 00 00.7**	**-0.3**
MORC				*e*Sg	**Sb**	**13 00 29.0**	**+0.3**
OKC	**Ostrava-Krasne**	**2.17**	**141**	*e*Sg	**Sg**	**13 00 35.4**	**0.0**
OKC	**Ostrava-Krasne**	**2.17**	**141**	*e*PG	**Pb**	**13 00 06.8**	**+0.9**
OKC				*e*SG	**Sg**	**13 00 35.0**	**-0.4**
	comp=Z,32nm,0.6s						
VRAC	**Vranov**	**2.26**	**171**	*e*PN	**Pn**	**13 00 05.3**	**+0.9**
VRAC				*e*SG	**Sg**	**13 00 38.2**	**-0.2**
PBCC	**Pribram**	**2.27**	**216**	*e*PG	**Pb**	**13 00 08.2**	**+0.6**
PBCC				*e*SG	**Sg**	**13 00 38.1**	**-0.5**
TREC	**Trest**	**2.27**	**189**	*e*PN	**Pn**	**13 00 06.0**	**+1.4**
TREC				*e*SG	**Sg**	**13 00 38.4**	**-0.4**
	comp=Z,33nm,0.3s						
KRUC	**Moravsky**	**2.49**	**175**	*e*PN	**Pn**	**13 00 08.7**	**+1.1**
KRUC				*e*SG	**Sg**	**13 00 45.5**	**-0.2**
TANN	**Tannenbergstha**	**2.52**	**245**	*e*Pn	**Pn**	**13 00 08.4**	**+0.2**
TANN				*e*Sg	**Sg**	**13 00 47.5**	**+0.6**
NKC	**Novy Kostel**	**2.62**	**242**	*e*PN	**Pn**	**13 00 10.2**	**+0.8**
NKC				*e*SG	**Sg**	**13 00 49.7**	**-0.3**
	comp=Z,55nm,0.3s						
OJC	**Ojcow**	**2.72**	**118**	*e*Pg	**Pg**	**13 00 18.0**	**+0.1**
OJC				*e*Sg	**Sg**	**13 00 54.0**	**+0.7**
JAVC	**Velka Javorina**	**2.88**	**158**	*e*PN	**Pn**	**13 00 13.8**	**+0.8**
KHC	**Kasperske Hory**	**2.88**	**214**	*e*PN	**Pn**	**13 00 13.1**	**+0.1**
KHC				*e*PG	**Pb**	**13 00 18.7**	**+0.6**
KHC				*

MOA *i* Sg **Sg** **13 01 27.5 -2.5**
comp=Z,1.6nm,0.2s
ARSA **Arzberg** **4.30 185** *i* Pn **Pn** **13 00 34.5 +2.0**
comp=Z,0.5nm,0.2s
ARSA *i* Sg **Sg** **13 01 40.4 -3.6**
comp=Z,2.3nm,0.3s
KBA **Koelnbreinsper** **4.80 203** *i* Sg **Sb** **13 01 53.8 +4.6**
comp=Z,2.5nm,0.4s
SOKA **Soboth** **4.91 188** *i* Pg **Pg** **13 01 00.6 +0.8**
comp=Z,0.3nm,0.1s
SOKA *i* Sg **Sg** **13 01 59.2 -4.2**
comp=Z,1.1nm,0.4s
WATA **Walderalm** **5.11 216** *i* Pn **Pn** **13 00 45.4 +1.6**
comp=Z,0.5nm,0.2s
WATA *i* Sg **Sg** **13 02 06.3 -3.7**
comp=Z,1.7nm,0.3s
OBKA **Obir** **5.13 192** *i* Sg **Sg** **13 02 05.2 -5.2**
comp=Z,4.1nm,0.4s
WTTA **Wattenberg** **5.15 216** *i* Pn **Pn** **13 00 45.8 +1.4**
comp=Z,0.3nm,0.2s
WTTA *i* Sg **Sg** **13 02 08.1 -3.2**
comp=Z,4.4nm,0.7s
MYKA **Terra Mystica** **5.16 199** *i* Sg **Sg** **13 02 07.0 -4.4**
comp=Z,2.1nm,0.3s
MOTA **Moosalm** **5.29 219** *i* Sg **Sg** **13 02 11.4 -4.2**
comp=Z,2.4nm,0.4s
RETA **Reutte** **5.31 222** *i* Pn **Pn** **13 00 47.0 +0.6**
comp=Z,0.3nm,0.2s
RETA *i* Sg **Sg** **13 02 10.2 -6.2**
comp=Z,2.1nm,0.3s
ABTA **Abfaltersbach** **5.32 207** *i* Pn **Pb** **13 01 00.2 +0.5**
ABTA *i* Sg **Sg** **13 02 12.2 -4.5**
comp=Z,1.0nm,0.3s
SQTA **Sankt Quirin** **5.35 218** *i* Sg **Sg** **13 02 13.9 -3.6**
comp=Z,0.6nm,0.2s
FETA **Feichten** **5.70 220** *i* Sg **Sg** **13 02 22.2 -6.7**
comp=Z,1.6nm,0.6s

IDC ***29*** *13:01:38.3±3.1, 35°.90N×69°.66E, h102km±27km, mb3.4/8, mb1 3.6/13, mb1mx3.3/52, mbtmp3.8/13, Error ellipse: s-maj=25.3km s-min=20.3km az=20.0*
NNC ***29*** *13:01:44.9±9.3, 36°.58N×68°.80E, h23km±296km, mb4.3, mpv4.5, Error ellipse: s-maj=283.4km s-min=26.9km az=170.0*

ISC 29 13:01:37.6±0.7, 35°.98N±0°.07×69°.67E±0°.06, h100km, n28, σ2§40/34, mb3.5/7, 4C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**6.13**	**123**	*ex*		**Sn**	**13 04 13.5**	**-0.9**
THN				*ex*		x	13 04 17.0	
DHRM	**DHARAMSHALA**	**6.64**	**122**	*ex*		**Pn**	**13 03 13.3**	**+0.5**
DHRM				*ex*		**Sn**	**13 04 25.6**	**-1.5**
DHRM				IAML			13 04 26.9	
	comp=N,159nm,0.2s							
DHRM				IAML			13 04 27.1	
	comp=E,130nm,0.1s							
AML	**Almayashu**	**6.89**	**26**	P		**Pn**	**13 03 17.6**	**+1.3**
	SNR=23							
KK31	**Karatay Array**	**7.14**	**5**	⇓P		**Pn**	**13 03 20.7**	**+1.3**
	comp=E,19nm,0.5s,baz=195,slow=15,SNR=112							
KK31				⇑S		**Sn**	**13 04 36.8**	**-2.2**
	comp=E,3.2nm,0.3s,baz=198,slow=26,SNR=5.5							
UCH	**Uchtor**	**7.29**	**30**	P		**Pn**	**13 03 23.1**	**+1.4**
	SNR=23							
KZA	**Kyzart**	**7.48**	**34**	P		**Pn**	**13 03 25.1**	**+0.8**
	SNR=8.5							
AAK	**Ala-Archa**	**7.63**	**28**	P		**Pn**	**13 03 27.8**	**+1.7**
	comp=E,2.9nm,0.3s,baz=194,slow=6.1,SNR=31							
AAK				S		**Sn**	**13 04 48.4**	**-2.6**
	comp=E,1.2nm,0.3s,baz=296,slow=23,SNR=6.1							
AAK	**Ala-Archa**	**7.63**	**28**	P		**Pn**	**13 03 27.8**	**+1.7**
	SNR=14							
KBK	**Karagaybulak**	**7.82**	**30**	P		**Pn**	**13 03 31.1**	**+2.4**
	SNR=5.8							
SMLA	**Simla**	**7.91**	**126**	*e*P		**Pn**	**13 03 30.9**	**+1.1**
SMLA				*e*S		**Sn**	**13 04 54.4**	**-3.2**
SMLA				IAML			13 04 56.4	
	comp=N,72nm,0.2s							
SMLA				IAML			13 04 58.1	
	comp=E,88nm,0.3s							
CHMS	**Chumysh**	**8.03**	**28**	P		**Pn**	**13 03 32.9**	**+1.4**
	SNR=6.2							
TKM2	**Tokmak 2**	**8.31**	**32**	P		**Pn**	**13 03 36.4**	**+0.9**
	SNR=8.1							
GEYT	**Alibeck**	**9.45**	**285**	P		**Pn**	**13 03 52.0**	**+1.2**
	comp=E,1.0nm,0.3s,baz=105,slow=11,SNR=6.4							
GEYT				S		**Sn**	**13 05 32.6**	**-2.7**
	comp=E,0.5nm,0.3s,baz=98,slow=26,SNR=2.0							
NDI	**New Delhi**	**9.67**	**137**	*ex*		**Sn**	**13 05 34.0**	**-6.7**
MKAR	**Makanchi Array**	**14.35**	**127**	P		**Pn**	**13 04 57.2**	**+1.3**
	comp=E,0.1nm,0.3s,baz=216,slow=9.9,SNR=7.0							
AB31	**Akbulak array**	**15.06**	**335**	⇑P		**Pn**	**13 05 05.8**	**+0.9**
	comp=E,1.6nm,0.3s,baz=162,slow=8.3,SNR=51							
AB31				⇑S		Sn	13 07 42.2	-8.8
	comp=E,3.9nm,0.3s,baz=156,slow=24,SNR=2.7							
KURBB	**Kurchatov Arra**	**15.98**	**21**	P		**Pn**	**13 05 15.2**	**-1.2**
	comp=E,0.1nm,0.3s,baz=213,slow=11,SNR=8.8							
AKTO	**Aktyubinsk**	**16.73**	**333**	P		**Pn**	**13 05 27.1**	**+1.4**
	comp=E,0.2nm,0.3s,baz=143,slow=14,SNR=5.5							
AKTO	**Aktyubinsk**	**16.73**	**333**	⇑P		**Pn**	**13 05 26.0**	**+0.2**
	comp=E,4.0nm,1.1s							
AKTO				⇓S		**Sn**	**13 08 23.1**	**-8.2**
	comp=E,3.0nm,1.2s							
BVAR	**Borovoye Array**	**17.05**	**1**	P		**Pn**	**13 05 30.0**	**+0.4**
	comp=E,0.4nm,0.3s,baz=168,slow=10,SNR=15							
ZALV	**Zalesovo Beam**	**20.84**	**26**	P		**P**	**13 06 12.2**	**+1.1**
	comp=E,5.4nm,0.6s,baz=224,slow=11,SNR=22							
CMAR	**Chiang Mai Arr**	**31.17**	**116**	P		**P**	**13 07 47.9**	**+0.7**
	comp=E,0.3nm,0.4s,baz=317,slow=7.7,SNR=2.4							
ARCES	**ARCESS Array B**	**41.22**	**338**	P		**P**	**13 09 13.6**	**+1.5**
	comp=E,0.7nm,0.5s,baz=111,slow=7.9,SNR=13							
NOA	**NORSAR Array B**	**44.15**	**323**	P		**P**	**13 09 36.3**	**+0.3**
	comp=E,0.3nm,0.6s,baz=97,slow=8.0,SNR=2.2							
TORD	**Torodi Ar. Bea**	**64.63**	**268**	P		**P**	**13 12 04.9**	**0.0**
	comp=E,0.5nm,0.6s,baz=53,slow=6.7,SNR=2.5							
INK	**Inuvik**	**74.59**	**9**	P		**P**	**13 13 06.3**	**+1.1**
	comp=E,0.8nm,0.6s,baz=347,slow=8.6,SNR=5.4							
YKA	**Yellowknife Ar**	**81.81**	**2**	P		**P**	**13 13 46.0**	**+0.9**
	comp=E,0.2nm,0.5s,baz=352,slow=5.6,SNR=5.0							
ASAR	**Alice Springs**	**84.85**	**124**	P		**P**	**13 14 01.1**	**-0.2**
	comp=E,0.3nm,0.4s,baz=310,slow=4.4,SNR=5.3							

IDC ***29*** *13:04:33.0±1.0, 30°.59N×83°.37E, h0km, mb3.8/18, mb1 3.9/20, mb1mx3.8/54, mbtmp3.8/20, ML3.6/2, MS3.1/9, Ms1 3.1/9, ms1mx2.9/48, Error ellipse: s-maj=25.5km s-min=17.6km az=32.0*
BJI ***29*** *13:04:35.8±0.0, 30°.80N×83°.30E, h11km, mB4.0/1, mb4.0/6, Ms3.5/4, Ms7 3.5/1*

ISC 29 13:04:35.7±0.8, 30°.6N±0°.1×83°.4E±0°.1, h18km, n30, σ0§96/22, mb3.8/18, MS3.4/10, Xizang

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**13.64**	**13**	*e*P		**Pn**	**13 07 49.8**	**+1.4**
AAK	**Ala-Archa**	**13.96**	**332**	LR		LR	13 12 39.4	
	comp=Z,21nm,19.8s,baz=154,slow=35							
GTA	**Gaotai**	**16.07**	**52**	*e*P		**Pn**	**13 08 20.0**	**-1.0**
GTA				pP		P	13 08 24.5	+0.3
GTA				sP		pP	13 08 27.3	-3.6
GTA				pmax		pmax		
	comp=Z,2.0nm,0.8s							
MKAR	**Makanchi Array**	**16.20**	**357**	Pn		**Pn**	**13 08 19.8**	**-2.6**
	0.1nm,0.3s,baz=178,slow=11,SNR=3.9							
CMAR	**Chiang Mai Arr**	**18.60**	**127**	P		**P**	**13 08 51.4**	**-0.7**
	0.1nm,0.3s,baz=312,slow=9.5,SNR=3.2							
CMAR				LR		LR	13 17 04.1	
	comp=Z,48nm,19.3s,baz=3.5,slow=40							
KURBB	**Kurchatov Arra**	**20.33**	**351**	P		**P**	**13 09 09.2**	**-1.7**
	3.2nm,0.2s,baz=174,slow=9.7,SNR=28							
XAN	**Xi'an**	**21.85**	**74**	P		P	13 09 34.8	+7.4
XAN				pmax		pmax		
	comp=Z,8.0nm,1.2s							
XAN				LR		LR		
	comp=N,120nm,16.3s							
WSAR	**Wadi Sarin**	**23.21**	**258**	LR		LR	13 19 24.0	
	comp=Z,52nm,19.6s,baz=94,slow=38							
ZALV	**Zalesovo Beam**	**23.36**	**2**	P		**P**	**13 09 42.6**	**-0.5**
	0.9nm,0.4s,baz=186,slow=12,SNR=7.5							
BVAR	**Borovoye Array**	**24.34**	**341**	P		**P**	**13 09 52.8**	**+0.4**
	1.4nm,0.7s,baz=157,slow=13,SNR=5.9							
SONM	**Songino Array**	**24.65**	**39**	P		**P**	**13 09 56.2**	**+0.8**
	1.6nm,0.7s,baz=233,slow=9.5,SNR=9.0							
TLY	**Talaya**	**25.86**	**30**	LR		LR	13 21 04.0	
	comp=Z,22nm,19.9s,baz=214,slow=38							
AKTO	**Aktyubinsk**	**27.42**	**324**	LR		LR	13 21 23.4	
	comp=Z,26nm,18.8s,baz=138,slow=37							
ARU	**Arti**	**31.14**	**333**	P		**P**	**13 10 53.5**	**+0.3**
	0.7nm,0.3s,baz=131,slow=24,SNR=3.6							
ARU				LR		LR	13 25 33.3	
	comp=Z,734nm,20.6s,baz=214,slow=40							
KSRS	**Korea Array**	**37.28**	**67**	P		**P**	**13 11 46.4**	**-0.3**
	0.9nm,0.5s,baz=277,slow=9.6,SNR=4.2							
KSRS				LR		LR	13 27 57.0	
	comp=Z,38nm,20.0s,baz=266,slow=38							
MLR	**Muntele Rosu**	**46.64**	**305**	P		**P**	**13 13 03.9**	**+0.8**
	3.5nm,0.9s,baz=66,slow=6.5,SNR=5.3							
FINES	**FINESS Array B**	**48.09**	**327**	P		**P**	**13 13 14.3**	**+0.3**
	2.0nm,0.8s,baz=110,slow=12,SNR=2.1							
ARCES	**ARCESS Array B**	**50.55**	**337**	P		**P**	**13 13 33.3**	**+0.5**
	2.0nm,1.0s,baz=104,slow=6.7,SNR=3.3							
ARCES				LR		LR	13 34 03.9	
	comp=Z,31nm,18.7s,baz=89,slow=35							
GERES	**GERESS Array B**	**54.68**	**311**	P		**P**	**13 14 04.2**	**+0.5**
	0.1nm,0.3s,baz=55,slow=8.5,SNR=1.6							
NOA	**NORSAR Array B**	**55.18**	**326**	P		**P**	**13 14 06.4**	**-0.6**
	0.6nm,0.8s,baz=88,slow=6.9,SNR=2.3							
SIJI	**Sorong**	**55.22**	**115**	LR		LR	13 40 16.8	
	comp=Z,40nm,18.6s,baz=0.5,slow=39							
PETK	**Petropavlovsk-**	**57.02**	**44**	P		**P**	**13 14 21.2**	**+0.9**
	1.3nm,0.8s,baz=280,slow=9.0,SNR=2.0							
DAVOX	**Davos/Dischmat**	**57.57**	**309**	LR		LR	13 41 38.9	
	comp=Z,34nm,20.1s,baz=263,slow=39							
ESDC	**Sonseca Array**	**69.33**	**305**	P		**P**	**13 15 42.7**	**+0.4**
	0.3nm,0.5s,baz=82,slow=9.2,SNR=2.0							
WRA	**Warramunga Arr**	**70.18**	**129**	P		**P**	**13 15 47.9**	**+0.3**
	0.6nm,0.5s,baz=325,slow=6.2,SNR=6.3							
KRVT	**Keravat (AS076**	**74.03**	**105**	LR		LR	13 48 30.2	
	comp=Z,164nm,20.2s,baz=239,slow=36							
TORD	**Torodi Ar. Bea**	**76.34**	**277**	P		**P**	**13 16 23.9**	**-0.3**
	0.6nm,0.8s,baz=52,slow=5.7,SNR=2.2							
ILAR	**Eielson Array**	**77.22**	**20**	P		**P**	**13 16 28.0**	**-0.3**
	0.9nm,1.0s,baz=308,slow=5.1,SNR=6.8							
INK	**Inuvik**	**77.66**	**13**	P		**P**	**13 16 30.9**	**+0.2**
	0.7nm,0.6s,baz=306,slow=6.5,SNR=4.7							
YKA	**Yellowknife Ar**	**86.12**	**8**	P		**P**	**13 17 14.8**	**-0.5**
	0.2nm,0.5s,baz=337,slow=5.2,SNR=4.8							

ROM 29 13:06:00.8±0.1, 43°.208N±0°.007×11°.02E±0°.01, h9km, ML1.6/5, Error ellipse: s-maj=1.1km s-min=0.4km az=130.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FROS	**Frosini**	**0.10**	**89**	P		Pg	13 06 03.8	+0.6
FROS				S		Sg	13 06 05.3	+0.4
FROS				AML		AML		
	comp=E,1410μm,0.6s							
FROS				AML		AML		
	comp=N,1071μm,1.3s							
TRIF	**Trifonti**	**0.13**	**224**	P		Pg	13 06 04.4	+0.7
TRIF				S		Sg	13 06 06.2	+0.5
TRIF				AML		AML		
	comp=E,496μm,0.4s							
TRIF				AML		AML		
	comp=N,489μm,0.7s							
CSNT	**Castellina Chi**	**0.33**	**36**	P		Pb	13 06 08.3	-0.5
CSNT				S		Sb	13 06 13.2	-1.1
CSNT				AML		AML		
	comp=E,23μm,0.5s							
CSNT				AML		AML		
	comp=E,23μm,0.5s							
CSNT				AML		AML		
	comp=N,19μm,1.1s							
OSSC	**Osservatorio P**	**0.35**	**27**	P		Pb	13 06 08.8	-0.5
OSSC				S		Sb	13 06 14.1	-1.0
OSSC				AML		AML		
	comp=E,35μm,1.3s							
OSSC				AML		AML		
	comp=N,26μm,1.0s							
CASP	**Castiglione de**	**0.43**	**196**	P		Pb	13 06 10.0	-0.6
CASP				AML		AML		
	comp=N,176μm,0.3s							
CASP				AML		AML		
	comp=E,123μm,0.4s							
MAON	**Monte Argentar**	**0.78**	**174**	P		Pg	13 06 15.9	0.0
MAON				S		Sb	13 06 26.9	-0.4
CPGN	**Carpegna, Ital**	**1.11**	**57**	S		Sb	13 06 37.0	0.0
MNTV	**Mantova**	**1.95**	**355**	P		Pg	13 06 38.8	+0.7
LAV9	**Lanuvio**	**1.97**	**140**	P		Pn	13 06 35.3	+1.0
LAV9				AML		AML		
	comp=E,694μm,0.9s							
LAV9				AML		AML		
	comp=N,806μm,0.4s							
LATB	**Latina**	**2.24**	**139**	P		Pb	13 06 39.7	-1.6
EUCT	**Pavia**	**2.41**	**326**	P		Pg	13 06 48.0	+1.0
MELA	**Melanico ??? S**	**3.39**	**115**	P		Pb	13 07 02.8	+1.8
PTCC	**Patocco-Chiusa**	**3.60**	**27**	S		Sn	13 07 38.0	-1.5
LJU	**Ljubljana**	**3.78**	**40**	P		Pg	13 07 10.9	-2.3
RISI	**Rein**	**3.81**	**11**	P		Pb	13 07 06.9	-1.5
SCHR	**S. Chirico Rap**	**4.83**	**127**	P		Pn	13 07 13.5	-0.3

MOS ***29*** *13:13:35.2±2.9, 41°.20N×49°.70E, h20km, mb3.7/1, Error ellipse: s-maj=15.1km s-min=6.8km az=134.0*
DRS ***29*** *13:13:45.3±0.0, 41°.96N×49°.60E, h21km*

ISC 29 13:13:42.9±1.5, 41°.8N±0°.1×49°.55E±0°.08, h44km±24km, n27, σ1§75/37, 6C-2D, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DRN	**Derbent**	**0.93**	**283**	*e*Pg		**Pn**	**13 13 59.8**	**+0.3**
	269nm,0.7s							
DRN				*e*Sg		**Sn**	**13 14 10.1**	**-1.7**
	2μm,0.5s							
DRN	**Derbent**	**0.93**	**283**	⇑*e*PG		**Pn**	**13 13 59.8**	**+0.3**
DRN				pmax		pmax		
	comp=Z,269nm,0.7s							
AKT	**Akhty**	**1.41**	**256**	*e*Pg		**Pn**	**13 14 07.3**	**+1.1**
	comp=Z,450nm,0.5s							
AKT				*e*Sg		**Sn**	**13 14 22.6**	**-1.0**
	comp=Z,2μm,0.6s							
AKT	**Akhty**	**1.41**	**256**	⇓*e*PG		**Pn**	**13 14 07.3**	**+1.1**
AKT				*e*			13 14 22.5	
AKT				pmax		pmax		
	comp=Z,450nm,0.2s							
AKT				smax		smax		
	comp=N,1μm,0.5s							
URKR	**Urkarakh**	**1.47**	**284**	⇑*e*PN		**Pn**	**13 14 07.4**	**+0.4**
URKR				pmax		pmax		
	comp=Z,151nm,0.3s							
SGKR	**Sergokala**	**1.54**	**295**	*e*Pg		**Pn**	**13 14 08.5**	**+0.6**
SGKR				*e*Sg		**Sn**	**13 14 24.5**	**-2.2**
	comp=Z,791nm,0.2s							
SGKR	**Sergokala**	**1.54**	**295**	*e*PN		**Pn**	**13 14 08.5**	**+0.6**
KMKR	**Kumukh**	**1.85**	**280**	*e*Pg		**Pn**	**13 14 14.0**	**+1.7**
	comp=Z,59nm,0.2s							
KMKR				*e*Sg		**Sn**	**13 14 33.0**	**-1.7**
	comp=Z,595nm,0.3s							
KMKR	**Kumukh**	**1.85**	**280**	*e*PN		**Pn**	**13 14 14.0**	**+1.7**
KMKR				pmax		pmax		
	comp=Z,59nm,0.2s							
MAK	**Makhachkala**	**1.89**	**307**	*e*PN		**Pn**	**13 14 10.9**	**-1.7**
MAK				pmax		pmax		
	comp=Z,106nm,0.3s							
MAK				MLR		MLR		
	comp=Z,92nm,2.0s							
GNBR	**Gunib**	**2.00**	**287**	*e*Pg		**Pn**	**13 14 16.9**	**+2.6**
	comp=Z,75nm,0.7s							
GNBR				*e*Sg		**Sn**	**13 14 38.7**	**+0.5**
	comp=Z,474nm,0.6s							
GNBR	**Gunib**	**2.00**	**287**	⇑*e*PN		**Pn**	**13 14 16.9**	**+2.6**
GNBR				pmax		pmax		
	comp=Z,95nm,0.6s							
ARKR	**Arakani**	**2.05**	**293**	*e*Pg		**Pn**	**13 14 17.5**	**+2.6**
ARKR				*e*Sg		**Sn**	**13 14 39.0**	**-0.3**
	comp=Z,202nm,0.3s							
ARKR	**Arakani**	**2.05**	**293**	*e*PN		**Pn**	**13 14 17.5**	**+2.6**
UNCR	**Uncukul**	**2.23**	**294**	*e*Pg		**Pn**	**13 14 20.0**	**+2.7**
	comp=Z,34nm,0.3s							
UNCR				*e*Sg		**Sn**	**13 14 45.0**	**+1.4**
	comp=Z,399nm,1.0s							
UNCR	**Uncukul**	**2.23**	**294**	*e*PN		**Pn**	**13 14 20.0**	**+2.7**
UNCR				pmax		pmax		
	comp=Z,34nm,0.3s							
DBC	**Dubki**	**2.34**	**301**	*e*Pn		**Pn**	**13 14 20.9**	**+2.0**
DBC				*e*Sn		**Sn**	**13 14 45.6**	**-0.8**
	comp=Z,182nm,0.7s							
DBC	**Dubki**	**2.34**	**301**	*e*PN		**Pn**	**13 14 21.0**	**+2.1**
DBC				pmax		pmax		
	comp=Z,23nm,0.3s							
NEY	**Neytrino**	**5.24**	**288**	*i* P		**Pn**	**13 14 59.6**	**+0.8**
NEY				pmax		pmax		
	comp=Z,1.0nm,0.8s							
KBZ	**Khabaz**	**5.25**	**293**	*i* P		**Pn**	**13 14 57.5**	**-1.2**
KIV	**Kislovodsk**	**5.47**	**295**	*i* P		**Pn**	**13 15 01.3**	**-0.6**
KIV				pmax		pmax		
	comp=Z,2.0nm,0.3s							
ANN	**Anapa**	**9.32**	**293**	*e*P		**Pn**	**13 15 53.5**	**-1.0**
ANN				pmax		pmax		
	comp=Z,35nm,1.1s							
AB31	**Akbulak array**	**10.40**	**41**	⇓Pn		**Pn**	**13 16 06.0**	**-3.2**
	comp=Z,13nm,0.3s,baz=230,slow=14,SNR=12							
AB31				⇑Sn		**Sn**	**13 18 04.5**	**+0.3**
	comp=Z,2.2nm,0.3s,baz=221,slow=25,SNR=4.0							
AKTO	**Aktyubinsk**	**10.41**	**31**	⇑Pn		**Pn**	**13 16 11.8**	**+2.4**
	comp=Z,2.1nm,0.8s							
AKTO				⇑Sn		**Sn**	**13 18 06.6**	**+2.0**
	comp=Z,4.6nm,0.6s							
ARU	**Arti**	**15.73**	**19**	*i* P		**P**	**13 17 24.6**	**+0.1**
ARU				pmax		pmax		
	comp=Z,4.0nm,1.1s							
OBN	**Obninsk**	**15.80**	**332**	*i* P		**Pn**	**13 17 22.1**	**+0.1**
OBN				pmax		pmax		
	comp=Z,18nm,0.4s							
FINES	**FINESS Array B**	**24.20**	**332**	*i* P		**P**	**13 18 54.2**	**-0.7**
FINES				pmax		pmax		
	comp=Z,1.0nm,0.7s							

IDC ***29*** *13:14:33.1±1.0, 38°.93N×67°.60E, h0km, mb3.8/5, mb1 3.9/10, mb1mx3.6/39, mbtmp3.7/10, ML3.4/7, MS3.1/2, Ms1 3.1/2, ms1mx2.5/39, Error ellipse: s-maj=16.9km s-min=12.3km az=158.0*
ISU ***29*** *13:14:34.9, 39°.20N×67°.80E, h5km*
NNC ***29*** *13:14:36.1±5.4, 39°.28N×67°.49E, h0km±25km, mb4.0, mpv3.8, Error ellipse: s-maj=42.5km s-min=34.7km az=120.0*

ISC 29 13:14:36.3±0.7, 39°.30N±0°.05×67°.59E±0°.04, h10km, n35, σ2§14/44, mb3.8/5, 3C-2D, Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SAM	**Samarkand**	**0.59**	**309**	*e*P		**Pn**	**13 14 50.4**	**-0.5**
SAM				*e*S		**Sn**	**13 15 02.1**	**+1.4**
DZI	**Dzhizak**	**0.83**	**12**	*e*P		**Pn**	**13 14 54.6**	**+0.4**
DZI				*e*S		**Sn**	**13 15 07.5**	**+1.0**
PKMR	**Pachkamar**	**1.21**	**231**	*e*P		**Pn**	**13 14 59.0**	**-0.3**
PKMR				*i* P		**Pg**	**13 15 00.4**	**+0.9**
PKMR				*e*S		**Sn**	**13 15 17.5**	**+1.8**
NUT	**Nurota**	**1.93**	**311**	*e*P		**Pg**	**13 15 14.1**	**+0.8**
NUT				*e*S		**Sg**	**13 15 43.2**	**+4.8**
BTK	**Batken**	**2.60**	**72**	*i* P		**Pn**	**13 15 21.1**	**+2.6**
BTK				*e*S		**Sb**	**13 15 55.8**	**+0.7**
CHMI	**Chimion**	**3.18**	**71**	*e*P		**Pn**	**13 15 29.5**	**+3.1**
CHMI				*i* S		**Sg**	**13 16 17.4**	**-1.0**
IUG	**Iuzhnay**	**3.39**	**32**	Pg		**Pb**	**13 15 38.2**	**+1.6**
	1.6nm,0.1s							
IUG				Lg		Lg	13 16 26.3	
	190nm,0.3s							
BRLS	**Borolday**	**4.09**	**24**	Pg		**Pb**	**13 15 46.1**	**-2.4**
	3.1nm,0.1s							
BRLS				Lg		Lg	13 16 40.3	
	84nm,0.3s							
KK31	**Karatay Array**	**4.39**	**29**	⇑Pn		**Pn**	**13 15 44.5**	**+1.5**
	2.2nm,0.5s,baz=216,slow=14,SNR=28							
KK31				⇑Pg		**Pg**	**13 15 58.9**	**-1.5**
	6.8nm,0.5s,baz=208,slow=16,SNR=13							
KK31				⇓Lg		Lg	13 16 56.8	
	30nm,0.4s,baz=213,slow=30,SNR=13							
AML	**Almayashu**	**5.43**	**57**	P		**Pn**	**13 15 59.0**	**+1.4**
	SNR=32							
MRKS	**Merke**	**5.47**	**49**	Pg		**Pn**	**13 16 00.7**	**+2.6**
	9.0nm,0.2s							
MRKS				Lg		Lg	13 17 05.4	
	34nm,0.3s							
UCH	**Uchtor**	**6.01**	**59**	P		**Pn**	**13 16 07.3**	**+1.5**
	SNR=9.1							
AAK	**Ala-Archa**	**6.19**	**55**	Pn		**Pn**	**13 16 10.1**	**+2.1**
	2.4nm,0.3s,baz=201,slow=6.8,SNR=14							
AAK				Sn		**Sn**	**13 17 23.8**	**+4.9**
	3.7nm,0.3s,baz=75,slow=16,SNR=6.6							
AAK				Lg		Lg	13 17 50.7	
	1.0nm,0.3s,baz=47,slow=19,SNR=1.2							
AAK	**Ala-Archa**	**6.19**	**55**	P		**Pn**	**13 16 10.6**	**+2.6**
	SNR=8.4							
KZA	**Kyzart**	**6.45**	**62**	P		**Pn**	**13 16 13.6**	**+1.9**
	SNR=13							
TKM2	**Tokmak 2**	**7.04**	**57**	P		**Pn**	**13 16 21.5**	**+1.9**
	SNR=5.7							
GEYT	**Alibeck**	**7.54**	**263**	Pn		**Pn**	**13 16 24.8**	**-1.6**
	0.7nm,0.3s,baz=97,slow=12,SNR=2.1							
GEYT				Sn		**Sn**	**13 17 50.6**	**-1.4**
	2.3nm,0.3s,baz=260,slow=13,SNR=5.2							
GEYT				Lg		Lg	13 18 28.5	
	1.5nm,0.3s,baz=75,slow=22,SNR=2.2							
MDOK	**Medeo**	**8.10**	**59**	Pn		**Pn**	**13 16 34.5**	**+0.4**
	4.5nm,0.5s							
MDOK				Lg		Lg	13 18 51.8	
	16nm,1.1s							
PDGK	**Podgornoye**	**9.81**	**62**	⇓Pn		**Pn**	**13 17 02.1**	**+4.6**
	3.6nm,1.1s							
PDGK				⇑Lg		Lg	13 19 49.1	
	5.0nm,0.9s							
AKTO	**Aktyubinsk**	**13.03**	**332**	Pn		**Pn**	**13 17 41.3**	**0.0**
	0.4nm,0.3s,baz=153,slow=13,SNR=2.5	

*IDC **29** 13:33:39.5±1.6,0.07S×122.95E,h90km±13km,mb4.0/20, mb1 4.1/23,mb1mx4.0/39,mbtmp4.4/23,MS3.1/13, Ms1 3.2/13,ms1mx3.0/36,Error ellipse: s-maj=19.0km s-min=9.7km az=77.0*

*NEIC **29** 13:33:40±2.3,0.23S±0.08×122.97E±0.07,h97km±2km, mb4.7/31,Error ellipse: s-maj=11.8km s-min=9.1km az=149.0*

*DJA **29** 13:33:40.5±0.2,0.7S±2.2×122.3E±.°,h82km±4km,M4.5/26, mb4.7/26,mB5.0/12,MLv4.8/18,Mw(mB)4.3/12*

*KLM **29** 13:33:40.0,0.13S×123.08E,h81km,mb4.3*

ISC 29 13:33:40.5±0.3,0.10S±0.04×123.01E±0.05,h100km,n130, σ1§41/133,mb4.5/41,3C-2D,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.97**	**194**	P	Pn	13 34 12.8	+12
LUWI	**Luwuk**	**0.97**	**194**		**Pn**	**13 33 58.1**	**-2.5**
KMSI	**Cibinong**	**1.18**	**55**	P	**Pn**	**13 34 01.9**	**-1.0**
APSI	**Ampana**	**1.58**	**239**	P	**Pn**	**13 34 06.4**	**-1.4**
MPSI	**Mapaga**	**3.14**	**278**	P	**Pn**	**13 34 27.9**	**-0.2**
SANI	**Sanana**	**3.55**	**123**	P	**Pn**	**13 34 30.8**	**-2.8**
TTSI	**Tana Toraja**	**4.33**	**227**	P	**Pn**	**13 34 43.7**	**-0.5**
TNTI	**Ternate**	**4.44**	**79**	P	**Pn**	**13 34 45.9**	**+0.3**
TNTI	**Ternate**	**4.44**	**79**		**Pn**	**13 34 46.2**	**+0.6**
LBMI	**Labuha**	**4.52**	**97**	P	**Pn**	**13 34 47.1**	**+0.4**
SPSI	**Sidrap Palu**	**5.03**	**220**	P	**Pn**	**13 34 53.0**	**-0.6**
NLAI	**Namlea**	**5.14**	**127**	P	**Pn**	**13 34 54.5**	**-0.6**
	1.9nm6µm480nm,0.9s						
BNSI	**Bone**	**5.17**	**214**	P	**Pn**	**13 34 55.9**	**+0.4**
	0.8nm2µm104nm,0.8s						
BBSI	**Bau Bau**	**5.37**	**185**	P	**Pn**	**13 34 58.5**	**+0.2**
	0.3nm377nm26nm,0.6s						
SMKI	**Samarinda**	**5.81**	**267**	P	**Pn**	**13 35 04.7**	**+0.4**
	1.2nm4µm277nm,0.8s						
KAPI	**Kappang**	**5.87**	**214**	P	**Pn**	**13 35 05.1**	**+0.1**
	19nm,0.3s,baz=17,slow=7.3,SNR=15						
KAPI				S	**Sn**	**13 36 05.8**	**-5.2**
	4.7nm,0.3s,baz=235,slow=19,SNR=1.5						
KAPI	**Kappang**	**5.87**	**214**		**Pn**	**13 35 01.4**	**-3.6**
BKSI	**Bulukumba**	**5.94**	**209**	P	**Pn**	**13 35 05.2**	**-0.8**
	0.3nm821nm63nm,0.6s						
BKB	**Balikpapan**	**6.22**	**259**	P	**Pn**	**13 35 09.1**	**-0.7**
	1.7nm4µm508nm,0.8s						
BKB	**Balikpapan**	**6.22**	**259**		**Pn**	**13 35 09.6**	**-0.2**
AAI	**Ambon**	**6.29**	**125**	P	**Pn**	**13 35 10.9**	**+0.2**
	1.9nm5µm614nm,0.8s						
DDMP	**Don Marcelino,**	**6.72**	**24**	*e*P	**Pn**	**13 35 16.4**	**-0.2**
MSAI	**Masohi**	**6.74**	**119**	P	**Pn**	**13 35 18.1**	**+1.3**
	0.2nm40nm,0.6s						
SKMP	**Bagumbayan, Su**	**6.75**	**13**	*e*P	**Pn**	**13 35 15.9**	**-1.1**
SKMP				*e*S	**Sn**	**13 36 26.6**	**-5.7**
KCP	**Kidapawan**	**7.36**	**16⇓**	*e*P	Pn	13 35 19.5	-5.9
CTBH	**Cotabato--PC H**	**7.37**	**10⇑**	*i*P	**Pn**	**13 35 25.9**	**+0.4**
KBKI	**Kotabaru**	**7.54**	**245**	P	**Pn**	**13 35 26.7**	**-1.1**
	0.2nm939nm35nm,0.8s						
DAV	**Davao City (W)**	**7.57**	**20**	LR	LR	13 39 25.3	
	comp=Z,72nm,19.1s,baz=162,slow=46						
MATI	**Mati**	**7.71**	**25**	*e*P	**Pn**	**13 35 27.3**	**-2.8**
PAGZ	**Pagadian**	**7.90**	**3**	*e*P	**Pn**	**13 35 32.9**	**+0.2**
SPMM	**Sapulut**	**8.10**	**306**	P	**Pn**	**13 35 37.0**	**+1.6**
BNDI	**Bandanaira**	**8.17**	**123**	P	**Pn**	**13 35 36.0**	**-0.3**
	5µm398nm,0.8s						
SIJI	**Sorong**	**8.29**	**95**	P	**Pn**	**13 35 38.2**	**+0.2**
	4.8nm,0.3s,baz=246,slow=12,SNR=17						
SIJI				S	**Sn**	**13 37 13.9**	**+3.9**
	0.6nm,0.3s,baz=135,slow=20,SNR=1.4						
EDFI	**Ende, Flores**	**8.70**	**189**	P	**Pn**	**13 35 43.6**	**0.0**
	274nm15nm,0.6s						
KKM	**Kota Kinabalu**	**9.12**	**312**		**Pn**	**13 35 51.2**	**+1.8**
FAKI	**Fak Fak**	**9.65**	**107**	P	**Pn**	**13 35 54.4**	**-2.1**
	699nm83nm,0.8s						
FAKI	**Fak Fak**	**9.65**	**107**		**Pn**	**13 35 54.3**	**-2.1**
SOEI	**Soe**	**9.68**	**173**	P	**Pn**	**13 35 54.2**	**-2.7**
	54nm,0.9s						
BATI	**Baumata**	**10.06**	**176**	LR	LR	13 40 06.1	
	comp=Z,194nm,19.1s,baz=70,slow=38						
SBUM	**Sibu**	**11.08**	**283**	P	**Pn**	**13 36 17.0**	**+1.1**
KSM	**Kuching**	**12.80**	**277**	P	**P**	**13 36 47.0**	**+1.2**
TGY	**Tagaytay City**	**14.26**	**352**	LR	LR	13 42 28.6	
	comp=Z,36nm,19.6s,baz=170,slow=37						
MTN	**Manton Dam**	**15.01**	**148**	P	**P**	**13 37 09.6**	**-0.8**
SMPI	**Sarmi**	**15.81**	**97**	P	**P**	**13 37 19.3**	**0.0**
	32nm,1.1s						
KNRA	**Kununurra**	**16.49**	**160**	P	**P**	**13 37 27.3**	**+0.5**
LEM	**Lembang**	**16.75**	**246**	P	**P**	**13 37 34.2**	**+4.3**
	2.4nm,0.3s,baz=127,slow=20,SNR=1.8						
LEM				LR	LR	13 43 52.4	
	comp=Z,117nm,20.1s,baz=164,slow=37						
JAY	**Jayapura**	**17.85**	**98**	LR	LR	13 45 32.5	
	comp=Z,56nm,19.0s,baz=267,slow=40						
FITZ	**Fitzroy Crossi**	**18.07**	**172**	P	**Pn**	**13 37 44.8**	**-0.4**
	0.6nm,0.3s,baz=6.9,slow=7.2,SNR=23						
FITZ	**Fitzroy Crossi**	**18.07**	**172**	P	**Pn**	**13 37 45.0**	**-0.2**
MDSI	**Maura Dua**	**19.31**	**257**	P	**Pn**	**13 37 58.9**	**-1.0**
	12nm,1.1s						
WB0	**Warramunga Arr**	**22.51**	**151**	P	**P**	**13 38 31.4**	**-0.6**
WRAB	**Tennant Creek**	**22.63**	**151**	P	**P**	**13 38 32.7**	**-0.5**
WRA	**Warramunga Arr**	**22.63**	**151**	P	**P**	**13 38 32.4**	**-0.9**
	3.9nm,0.4s,baz=335,slow=9.9,SNR=44						
WRA				ScP	**ScP**	**13 45 53.8**	**+2.1**
	1.0nm,0.6s,baz=324,slow=2.6,SNR=14						
WB2	**Warramunga Arr**	**22.64**	**151**	P	**P**	**13 38 32.9**	**-0.5**
WR0	**Warramunga Arr**	**22.74**	**151**	P	**P**	**13 38 34.0**	**-0.4**
TPUB	**Ta-pu**	**23.37**	**354**	P	**P**	**13 38 41.4**	**+1.0**
TPUB				IAmb	IAmb	13 38 43.6	
	comp=Z,45nm,0.9s						
YULB	**Yu-li**	**23.41**	**356**	P	**P**	**13 38 40.2**	**-0.5**
YULB				IAmb	IAmb	13 38 46.5	
	comp=Z,26nm,1.3s						
YHNB	**Yeheng**	**24.67**	**356**	P	**P**	**13 38 53.7**	**+1.5**
YHNB				IAmb	IAmb	13 38 55.6	
	comp=Z,14nm,0.7s						
AS31	**Alice Springs**	**25.70**	**156**	P	**P**	**13 39 02.9**	**+1.3**
ASAR	**Alice Springs**	**25.71**	**156**	P	**P**	**13 39 02.2**	**+0.6**
	comp=Z,2.4nm,0.6s,baz=330,slow=8.4,SNR=23						
ASAR				PcP	**PcP**	**13 42 30.3**	**+0.8**
	comp=Z,3.3nm,0.5s,baz=341,slow=2.0,SNR=24						
ASAR				ScP	**ScP**	**13 46 02.1**	**+2.0**
	comp=Z,0.9nm,0.6s,baz=342,slow=2.8,SNR=13						
ASAR				LR	LR	13 49 46.7	
	comp=Z,48nm,21.1s,baz=324,slow=38						
PMG	**Port Moresby**	**25.75**	**112**	P	**P**	**13 39 02.7**	**+0.6**
	comp=Z,17nm,0.8s,baz=170,slow=6.1,SNR=2.5						
PMG				LR	LR	13 53 40.0	
	comp=Z,58nm,19.3s,baz=308,slow=46						
PMG	**Port Moresby**	**25.75**	**112**	P	**P**	**13 39 02.6**	**+0.5**
PMG				IAmb	IAmb	13 39 04.5	
	comp=Z,28nm,1.1s						
CMAR	**Chiang Mai Arr**	**29.99**	**309**	P	**P**	**13 39 42.4**	**+2.5**
	comp=Z,4.8nm,0.8s,baz=139,slow=7.4,SNR=35						
CMAR				LR	LR	13 53 01.5	
	comp=Z,27nm,18.3s,baz=130,slow=39						
CHTO	**Chiang Mai**	**30.19**	**310**	P	**P**	**13 39 41.1**	**-0.5**
CHTO				IAmb	IAmb	13 39 45.3	
	comp=Z,15nm,0.8s						
GYA	**Guiyang**	**30.74**	**330⇓**	*i*P	**P**	**13 39 49.3**	**+2.8**
GYA				pmax	pmax		
	comp=Z,20nm,0.7s						
STKA	**Stephens Creek**	**36.17**	**153**	P	**P**	**13 40 34.6**	**+1.2**
	comp=Z,1.7nm,0.4s,baz=327,slow=9.8,SNR=6.5						
STKA				PcP	**PcP**	**13 42 57.1**	**+0.1**
	comp=Z,4.5nm,0.7s,baz=326,slow=5.5,SNR=5.8						
XAN	**Xi'an**	**36.44**	**340**	P	**P**	**13 40 37.0**	**+1.3**
XAN				pP	pP	13 41 02.8	+4.2
XAN				sP	sP	13 41 12.5	+2.3
XAN				pmax	pmax		
	comp=Z,18nm,0.7s						
XAN				pmax	pmax		
	comp=Z,81nm,5.3s						
XAN	**Xi'an**	**36.44**	**340**	P	**P**	**13 40 37.8**	**+2.0**
KSRS	**Korea Array**	**37.64**	**6**	P	**P**	**13 40 46.0**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=172,slow=9.8,SNR=4.8						
KSRS				LR	LR	13 57 42.0	
	comp=Z,20nm,19.1s,baz=212,slow=38						
MAT	**Matsushiro**	**39.09**	**20**	P	**P**	**13 40 57.1**	**-0.9**
MJAR	**Matsushiro Arr**	**39.09**	**20**	P	**P**	**13 40 57.2**	**-0.8**
	comp=Z,7.8nm,0.9s,baz=195,slow=9.4,SNR=22						
MJAR				LR	LR	13 55 27.6	
	comp=Z,13nm,21.4s,baz=195,slow=34						
ODAN	**Odare**	**43.50**	**311**	*e*P	**P**	**13 41 35.6**	**+1.1**
	comp=Z,16nm,0.6s						
TAPN	**Taplejung**	**43.52**	**312**	*e*P	**P**	**13 41 35.8**	**+1.1**
	comp=Z,20nm,0.7s						
RAMN	**Ramite**	**44.14**	**310**	*e*P	**P**	**13 41 41.0**	**+1.3**
	comp=Z,39nm,0.6s						
GTA	**Gaotai**	**44.68**	**334**	*e*P	**P**	**13 41 45.0**	**+1.4**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,74nm,6.7s						
GTA				LR	LR		
	comp=N,56nm,14.9s						
GTA				LR	LR		
	comp=E,45nm,18.7s						
GTA				LR	LR		
	comp=Z,42nm,17.1s						
JIRN	**Jiri**	**44.82**	**311**	*e*P	**P**	**13 41 46.1**	**+0.9**
	comp=Z,30nm,0.4s						
USRK	**Ussuriysk Ar.**	**44.82**	**9**	P	**P**	**13 41 44.9**	**+0.4**
	comp=Z,4.2nm,0.7s,baz=200,slow=5.8,SNR=12						
GUN	**Gumba**	**45.19**	**311**	*e*P	**P**	**13 41 48.9**	**+0.8**
	comp=Z,32nm,0.4s						
PKI	**Pulchoki**	**45.37**	**310**	*e*P	**P**	**13 41 50.0**	**+0.5**
	comp=Z,6.6nm,0.3s						
PKIN	**Phulchoki**	**45.38**	**310**	*e*P	**P**	**13 41 50.3**	**+0.8**
	comp=Z,12nm,0.4s						
DMN	**Daman**	**45.62**	**310**	*e*P	**P**	**13 41 52.1**	**+0.7**
	comp=Z,8.5nm,0.4s						
GKN	**Gorkha**	**46.18**	**310**	*e*P	**P**	**13 41 56.6**	**+0.9**
	comp=Z,22nm,0.3s						
KOLN	**Koldanda**	**46.86**	**310**	*e*P	**P**	**13 42 02.1**	**+1.1**
	comp=Z,30nm,0.4s						
DANN	**Dangsing**	**47.02**	**310**	*e*P	**P**	**13 42 03.0**	**+0.6**
	comp=Z,37nm,0.4s						
ASAJ	**Asahikawa**	**47.36**	**19**	P	**P**	**13 42 05.2**	**+0.8**
	comp=Z,19nm,1.0s,baz=267,slow=6.9,SNR=13						
JKA	**Kamikawa-asahi**	**47.36**	**19**	P	**P**	**13 42 05.2**	**+0.8**
DZM	**Mont Dzumac**	**47.61**	**120**	LR	LR	14 03 20.2	
	comp=Z,44nm,18.2s,baz=8.0,slow=37						
KLR	**Kul'dur**	**49.71**	**8**	P	**P**	**13 42 21.4**	**-0.9**
	comp=Z,1.8nm,0.5s,baz=230,slow=7.1,SNR=5.8						
SONM	**Songino Array**	**49.88**	**345**	P	**P**	**13 42 24.7**	**+0.9**
	comp=Z,6.3nm,0.8s,baz=161,slow=8.0,SNR=31						
SONM				PcP	**PcP**	**13 43 42.3**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=168,slow=3.9,SNR=5.1						
SONM				ScP	**ScP**	**13 47 30.6**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=159,slow=4.3,SNR=2.0						
TLY	**Talaya**	**54.12**	**345**	LR	LR	14 06 26.0	
	comp=Z,33nm,18.9s,baz=41,slow=36						
KSH	**Kashi**	**58.26**	**318**	P	**P**	**13 43 26.3**	**+1.4**
KSH				pmax	pmax		
	comp=Z,25nm,1.2s						
KSH				pmax	pmax		
	comp=Z,140nm,4.6s						
MK31	**Makanchi Array**	**58.70**	**328**	P	**P**	**13 43 28.1**	**+0.4**
MK31				IAmb	IAmb	13 43 29.2	
	comp=Z,3.2nm,0.7s						
MKAR	**Makanchi Array**	**58.70**	**328**	P	**P**	**13 43 27.7**	**0.0**
	comp=Z,2.4nm,0.3s,baz=123,slow=8.7,SNR=46						
MKAR				ScP	**ScP**	**13 48 07.6**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=134,slow=3.5,SNR=3.9						
MAKZ	**Makanchi**	**58.88**	**328**	P	**P**	**13 43 28.8**	**-0.1**
MAKZ				IAmb	IAmb	13 43 30.3	
	comp=Z,9.0nm,1.4s						
PETK	**Petropavlovsk-**	**60.37**	**23**	P	**P**	**13 43 40.0**	**+1.0**
	comp=Z,4.6nm,0.7s,baz=203,slow=5.3,SNR=8.3						
AAK	**Ala-Archa**	**60.81**	**321**	P	**P**	**13 43 43.3**	**+0.9**
	comp=Z,2.1nm,0.6s,baz=105,slow=4.8,SNR=4.6						
AAK				LR	LR	14 12 52.4	
	comp=Z,26nm,18.3s,baz=127,slow=39						
GAR	**Garm**	**61.89**	**315**	P	**P**	**13 43 47.9**	**-1.8**
GAR				IAmb	IAmb	13 43 50.9	
	comp=Z,7.6nm,0.7s						
YAK	**Yakutsk**	**62.17**	**4**	P	**P**	**13 43 50.8**	**-0.1**
ZALV	**Zalesovo Beam**	**62.41**	**336**	P	**P**	**13 43 51.2**	**-1.5**
	comp=Z,2.1nm,0.6s,baz=114,slow=6.4,SNR=11						
ZALV				PP	**PP**	**13 46 11.1**	**0.0**
	comp=Z,0.9nm,0.7s,baz=152,slow=6.7,SNR=3.9						
KURK	**Kurchatov**	**63.06**	**330**	P	**P**	**13 43 56.8**	**-0.3**
KURK				IAmb	IAmb	13 43 58.0	
	comp=Z,10nm,0.7s						
MA2	**Magadan**	**63.33**	**15**	P	**P**	**13 43 57.7**	**-1.0**
BVAR	**Borovoye Array**	**68.57**	**329**	P	**P**	**13 44 32.0**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=131,slow=8.1,SNR=9.8						
TIXI	**Tiksi**	**71.73**	**2**	P	**P**	**13 44 50.5**	**-0.8**
TIXI				IAmb	IAmb	13 44 53.1	
	comp=Z,17nm,1.2s						
MAW	**Mawson**	**78.91**	**200**	P	**P**	**13 45 32.4**	**-0.1**
	comp=Z,3.1nm,0.8s,baz=72,slow=3.2,SNR=2.5						
VNDA	**Vanda**	**80.15**	**172**	P	**P**	**13 45 39.2**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=303,slow=6.7,SNR=11						
FALS	**False Pass**	**80.67**	**34**	P	**P**	**13 45 41.9**	**-0.4**
SDPT	**Sand Point**	**82.42**	**34**	P	**P**	**13 45 50.6**	**-0.9**
KBZ	**Khabaz**	**82.92**	**314**	P	**P**	**13 45 54.8**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=146,slow=5.1,SNR=3.8						
RDOG	**Red Dog Mine**	**84.17**	**21**	P	**P**	**13 46 00.9**	**+0.6**
RDOG				IAmb	IAmb	13 46 03.5	
	comp=Z,9.4nm,0.8s						
KLMR	**Klimovskoe**	**86.90**	**331**	*e*P	**P**	**13 46 11.9**	**-2.0**
KLMR				AMP		13 46 13.7	
	comp=Z,6.0nm,0.8s						
SYO	**Syowa Base**	**87.54**	**201⇑**	*e*P	**P**	**13 46 16.0**	**-0.8**
SYO	**Syowa Base**	**87.54**	**201⇑**	*e*PcP	**PcP**	**13 46 18.2**	**-0.5**
BPAW	**Bear Paw Mtn.**	**88.33**	**26**	P	**P**	**13 46 21.7**	**+0.9**
BPAW				IAmb	IAmb	13 46 22.5	
	comp=Z,3.0nm,0.8s						
MLY	**Manley**	**88.50**	**25**	P	**P**	**13 46 20.7**	**-0.9**
MLY				IAmb	IAmb	13 46 24.1	
	comp=Z,5.2nm,0.8s						
TOLK	**Toolik Lake Re**	**89.14**	**21**	P	**P**	**13 46 24.8**	**+0.3**
TOLK				IAmb	IAmb	13 46 29.1	
	comp=Z,2.4nm,0.8s						
RND	**Reindeer**	**89.25**	**27**	IAmb	IAmb	13 46 26.0	
	comp=Z,5.5nm,0.8s						
ILAR	**Eielson Array**	**90.13**	**25**	P	**P**	**13 46 27.8**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=223,slow=4.3,SNR=14						
ARCES	**ARCESS Array B**	**92.72**	**340**	P	**P**	**13 46 39.1**	**-2.0**
	comp=Z,0.6nm,0.5s,baz=82,slow=6.5,SNR=8.7						
DAWY	**Dawson**	**93.42**	**26**	P	**P**	**13 46 45.4**	**+0.9**
DAWY				IAmb	IAmb	13 46 46.8	
	comp=Z,4.1nm,0.8s						
HYT	**Haines Junctio**	**94.72**	**29**	P	**P**	**13 46 51.8**	**+1.2**
INK	**Inuvik**	**95.06**	**21**	P	**P**	**13 46 51.5**	**-0.2**
INK				IAmb	IAmb	13 46 53.7	
	comp=Z,5.3nm,1.2s						
C36M	**Paulatuk**	**98.03**	**19**	P	**P**	**13 47 04.8**	**-0.4**
YKA	**Yellowknife Ar**	**104.49**	**24**	Pdiff	**Pdif**	**13 47 34.8**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=309,slow=4.8,SNR=5.8						
NVAR	**Mina Array Bea**	**112.21**	**48**	PKiKP	**PKiKP**	**13 52 06.9**	**+1.7**
	comp=Z,0.8nm,0.6s,baz=252,slow=2.5,SNR=6.1						
PDAR	**Pinedale Array**	**116.66**	**41**	PKP	**PKPdf**	**13 52 12.7**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=347,slow=3.7,SNR=1.6						
PDAR				PKKPbc	**PKKPab**	**14 02 45.0**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=106,slow=4.8,SNR=3.8						
ULM	**Lac du Bonnet**	**120.07**	**28**	PKP	**PKiKP**	**13 52 20.0**	**+0.3**
	comp=Z,3.5nm,0.7s,baz=232,slow=2.7,SNR=4.3						
TORD	**Torodi Ar. Bea**	**120.44**	**285**	PKP	**PKiKP**	**13 52 20.9**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=72,slow=1.9,SNR=5.2						
SCHQ	**Schefferville**	**124.85**	**7**	PKP	**PKiKP**	**13 52 28.8**	**-0.3**
	comp=Z,1.6nm,0.4s,baz=256,slow=19,SNR=2.1						
TXAR	**Lajitas Array**	**126.86**	**53**	PKP	**PKiKP**	**13 52 34.8**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=343,slow=1.9,SNR=7.2						
LPAZ	**La Paz**	**160.36**	**146**	PKP	**PKPdf**	**13 53 29.1**	**-1.1**
	comp=Z,3.2nm,1.2s,baz=99,slow=1.7,SNR=5.0						

*IDC **29** 13:57:06.0±1.9,50.16S×111.12E,h0km,mb3.9/3, mb1 4.2/3,mb1mx3.8/22,mbtmp3.9/3,MS3.3/2,Ms1 3.3/2, ms1mx2.9/15,Error ellipse: s-maj=65.7km s-min=46.9km az=116.0*

ISC 29 13:57:06.8±1.8,50.3S±0.3×111.2E±0.4,h10km,n10, σ0§68/6,mb4.0/3,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**15.53**	**9**	T	T	14 16 20.9	
	baz=188,slow=74,SNR=116						
H01W1	**Cape Leeuwin H**	**15.54**	**9**	T	T	14 16 16.0	
	baz=188,slow=74,SNR=88						
H01W3	**Cape Leeuwin H**	**15.55**	**9**	T	T	14 16 15.6	
	baz=188,slow=74,SNR=91						
ASAR	**Alice Springs**	**31.93**	**42**	P	**P**	**14 03 32.5**	**-0.1**
	1.1nm,0.6s,baz=208,slow=8.0,SNR=9.3						
ASAR				LR	LR	14 14 25.1	
	comp=Z,41nm,21.1s,baz=194,slow=33						
WRA	**Warramunga Arr**	**35.42**	**40**	P	**P**	**14 04 03.1**	**+0.1**
	2.0nm,0.7s,baz=206,slow=10.0,SNR=6.6						
CMAR	**Chiang Mai Arr**	**69.29**	**348**	P	**P**	**14 08 14.0**	**-0.1**
	0.7nm,0.8s,baz=186,slow=6.3,SNR=1.9						
MKAR	**Makanchi Array**	**99.87**	**340**	LR	LR	14 52 09.3	
	comp=Z,19nm,21.3s,baz=167,slow=33						
NVAR	**Mina Array Bea**	**143.35**	**89**	PKP	**PKPdf**	**14 16 40.3**	**-0.9**
	0.3nm,0.6s,baz=194,slow=2.5,SNR=2.0						
TXAR	**Lajitas Array**	**146.48**	**115**	PKPbc	**PKPbc**	**14 16 48.3**	**+0.2**
	0.7nm,0.7s,baz=193,slow=6.5,SNR=5.5						
YKA	**Yellowknife Ar**	**152.52**	**46**	PKPbc	**PKiKP**	**14 17 03.0**	**+0.8**
	0.1nm,0.5s,baz=268,slow=1.8,SNR=4.3						

*MOS **29** 14:04:14.7±1.0,56.02N×114.05E,h3km,mb4.0/6, MS3.0/6,Error ellipse: s-maj=9.9km s-min=6.9km az=70.5*

*IDC **29** 14:04:15.8±0.8,55.97N×114.14E,h0km,mb3.7/14, mb1 3.9/17,mb1mx3.7/39,mbtmp3.7/17,ML3.2/3,Error ellipse: s-maj=18.7km s-min=14.5km az=163.0*

*BYKL **29** 14:04:16.3±0.2,56.09N×113.94E,h4km±3km*

ISC 29 14:04:16.0±0.6,56.02N±0.02×114.02E±0.02,h2km±4km, n87,σ2§47/139,mb3.7/18,MS3.1/3,13C-2D,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.27**	**291⇑**	*i*Pg	**Pg**	**14 04 20.2**	**-1.1**
SVKR				Pmax		14 04 20.6	
	2µm,0.2s						
SVKR				*e*Sg	**Sg**	**14 04 24.0**	**-0.9**
SVKR				Smax		14 04 32.2	
	28µm,0.8s						
SVKR	**Severomuysk**	**0.27**	**291⇑**	*i*PG	**Pg**	**14 04 20.2**	**-1.1**
SVKR				*e*		14 04 24.2	
SVKR				pmax	pmax		
	comp=Z,2µm,0.3s						
SVKR				smax	smax		
	comp=N,5µm,1.0s						
UKT	**Uakit**	**0.58**	**203⇑**	*i*Pg	**Pg**	**14 04 27.0**	**0.0**
UKT				*e*Pb	**Pb**	**14 04 29.4**	**+0.5**
UKT				max		14 04 29.7	
	comp=N,490nm,0.6s						
UKT				*e*Sg	**Sg**	**14 04 35.4**	**+0.9**
UKT				*e*Sb	**Sb**	**14 04 38.4**	**+0.9**
UKT				max		14 04 39.9	
	comp=N,2µm,0.7s						
UKT	**Uakit**	**0.58**	**203⇑**	*i*PG	**Pg**	**14 04 27.1**	**0.0**
UKT				*e*		14 04 35.7	
UKT				pmax	pmax		
	comp=Z,433nm,0.7s						
UKT				smax	smax		
	comp=E,3µm,0.8s						
NLYR	**Nelyaty**	**1.05**	**63⇓**	*i*Pg	**Pg**	**14 04 35.4**	**-0.8**
NLYR				*e*Pb	**Pn**	**14 04 38.1**	**+0.3**
NLYR				max		14 04 38.4	
	comp=E,356nm,0.6s						
NLYR				*e*		14 04 39.8	
NLYR				*e*Sg	**Sb**	**14 04 50.4**	**-0.8**
NLYR				*e*Sb	**Sn**	**14 04 54.4**	**+1.4**
NLYR				max		14 04 55.2	
	comp=E,1µm,0.9s						
NLYR	**Nelyaty**	**1.05**	**63**	*e*PG	**Pg**	**14 04 35.3**	**-0.9**
NLYR				*e*		14 04 49.0	
NLYR				pmax	pmax		
	comp=Z,338nm,0.6s						
NLYR				smax	smax		
	comp=E,987nm,1.0s						
YOA	**Uoyan**	**1.29**	**276**	*e*Pg	**Pg**	**14 04 39.0**	**-1.7**
YOA				*e*Pb	**Pb**	**14 04 41.0**	**0.0**
YOA				max		14 04 42.4	
	comp=E,838nm,0.4s						
YOA				*e*Sg	**Sg**	**14 04 55.7**	**-1.7**
YOA				*e*		14 05 01.5	
YOA				max		14 05 22.6	
	comp=E,5µm,1.1s						
YOA	**Uoyan**	**1.29**	**276⇑**	*i*PG	**Pg**	**14 04 39.0**	**-1.7**
YOA				*i*		14 04 56.1	
YOA				pmax	pmax		
	comp=Z,242nm,0.2s						
YOA				smax	smax		
	comp=E,4µm,0.5s						
KMO	**Kumora**	**1.59**	**266⇑**	*i*Pg	**Pn**	**14 04 44.2**	**-0.9**
KMO				*e*Pb	**Pb**	**14 04 45.6**	**-0.5**
KMO				max		14 04 47.8	
	comp=E,907nm,0.5s						
KMO				*e*Sg	**Sn**	**14 05 05.7**	**-0.5**
KMO				Smax		14 05 11.5	
	comp=E,3µm,0.9s						
KMO	**Kumora**	**1.59**	**266**	*e*PG	**Pn

KHNR				*e*Pg	**Pb**	**14 05 18.5**	**+1.1**	
KHNR				*e*Sn	**Sn**	**14 05 50.9**	**-0.7**	
KHNR				*e*Sg	**Sg**	**14 06 03.1**	**-2.9**	
VTMR	**Vitim**	**3.52**	**348**	*e*Pn	**Pn**	**14 05 10.7**	**-0.9**	
VTMR				*e*		14 05 19.4		
VTMR				*e*Sg	**Sb**	**14 06 02.1**	**+0.1**	
TUP	**Tupik**	**3.76**	**113**	⇓*i*Pn	**Pn**	**14 05 15.6**	**+0.6**	
TUP				*e*Pg	**Pg**	**14 05 25.9**	**-2.1**	
TUP				Pmax		14 05 26.4		
	comp=N,83nm,0.5s							
TUP				*e*Sn	**Sn**	**14 05 59.0**	**-0.7**	
TUP				*e*Sg	**Sg**	**14 06 15.4**	**-1.2**	
TUP				*e*		14 06 19.1		
TUP				max		14 06 19.9		
	comp=N,666nm,0.7s							
TUP	**Tupik**	**3.76**	**113**	*e*PN	**Pn**	**14 05 15.5**	**+0.6**	
TUP				*e*		14 05 24.9		
TUP				*e*S	**Sn**	**14 05 59.0**	**-0.7**	
TUP				*e*		14 06 14.1		
TUP				pmax	pmax			
	comp=Z,83nm,0.5s							
TUP				smax	smax			
	comp=E,664nm,1.1s							
CIT	**Chita**	**4.02**	**184**	*e*Pg	**Pb**	**14 05 29.8**	**+2.3**	
CIT				Pmax		14 05 32.7		
	comp=E,65nm,0.3s							
CIT				*e*Sg	**Sg**	**14 06 23.2**	**-1.8**	
CIT				Smax		14 06 38.8		
	comp=E,855nm,1.0s							
MXMB	**Maximikha**	**4.12**	**230**	*e*Pg	**Pb**	**14 05 30.5**	**+1.2**	
MXMB				*e*		14 06 04.6		
MXMB				*e*Sg	**Sg**	**14 06 24.7**	**-3.7**	
MXMB				*e*		14 06 29.4		
YKLR	**Yuktali**	**4.29**	**79**	*e*Pn	**Pn**	**14 05 23.0**	**+0.7**	
YKLR				*e*Pg	**Pb**	**14 05 33.1**	**+1.0**	
YKLR				*e*Sg	**Sg**	**14 06 30.3**	**-3.5**	
OGRR	**Ongureny**	**4.41**	**240**	*e*Pn	**Pn**	**14 05 25.4**	**+1.5**	
OGRR				*e*Pg	**Pb**	**14 05 35.3**	**+1.1**	
OGRR				*e*		14 05 41.0		
OGRR				max		14 05 41.4		
	comp=E,45nm,1.0s							
OGRR				*e*Sn	**Sn**	**14 06 13.6**	**-2.2**	
OGRR				*e*Sg	**Sg**	**14 06 33.2**	**-4.4**	
OGRR				Smax		14 06 41.5		
	comp=E,262nm,1.4s							
OGRR	**Ongureny**	**4.41**	**240**	*e*PN	**Pn**	**14 05 25.4**	**+1.5**	
OGRR				*e*		14 05 36.7		
OGRR				*e*		14 06 32.2		
OGRR				pmax	pmax			
	comp=Z,45nm,1.0s							
OGRR				smax	smax			
	comp=N,261nm,1.7s							
KELR	**Kotokel**	**4.76**	**229**	*e*Pg	**Pb**	**14 05 41.6**	**+1.4**	
KELR				*e*Sg	**Sg**	**14 06 44.6**	**-4.4**	
TRG	**Tyrgan**	**5.54**	**237**	*e*Pn	**Pn**	**14 05 40.3**	**+0.8**	
TRG				*e*		14 05 51.7		
TRG				*e*Pg	**Pb**	**14 05 55.2**	**+1.7**	
TRG				Pmax		14 06 02.8		
	comp=N,15nm,0.8s							
TRG				*e*Sn	**Sn**	**14 06 41.7**	**-2.1**	
TRG				*e*Sg	**Sb**	**14 07 07.1**	**+6.7**	
TRG				Smax		14 07 19.4		
	comp=N,109nm,0.9s							
UUDB	**Ulan-Yde**	**5.60**	**225**	*e*Pn	**Pn**	**14 05 43.2**	**+2.9**	
UUDB				*e*Pg	**Pb**	**14 05 58.2**	**+3.8**	
UUDB				Pmax		14 06 04.5		
	comp=N,55nm,1.0s							
UUDB				*e*Sn	**Sn**	**14 06 44.3**	**-0.9**	
UUDB				*e*Sg	**Sg**	**14 07 11.3**	**-4.5**	
UUDB				Smax		14 07 16.0		
	comp=N,489nm,1.2s							
FFNB	**Fofonovo**	**5.84**	**230**	*e*Pg	**Pb**	**14 06 01.9**	**+3.4**	
FFNB				*e*Sg	**Sg**	**14 07 18.2**	**-5.2**	
IENR	**Iengra**	**6.07**	**84**	*e*Pn	**Pn**	**14 05 47.1**	**+0.4**	
IENR				*e*Pg	**Pb**	**14 06 05.2**	**+2.8**	
IENR				*e*Sn	**Sn**	**14 06 54.9**	**-1.7**	
IENR				*e*Sg	**Sg**	**14 07 24.8**	**-5.9**	
IENR				*e*		14 07 33.8		
HRMR	**Khuramsha**	**6.07**	**226**	*e*Pn	**Pn**	**14 05 49.0**	**+2.3**	
HRMR				*e*Pg	**Pb**	**14 06 06.3**	**+3.9**	
HRMR				Pmax		14 06 13.3		
	comp=N,32nm,0.5s							
HRMR				*e*Sn	**Sn**	**14 06 56.0**	**-0.7**	
HRMR				*e*		14 07 15.4		
HRMR				*e*Sg	**Sg**	**14 07 25.3**	**-5.5**	
HRMR				Smax		14 07 48.7		
	comp=N,425nm,1.4s							
CLNS	**Chul'man**	**6.09**	**78**	*e*	Pb	14 05 56.0	-6.7	
CLNS				*e*Pg	Pg	14 06 06.1	-6.5	
CLNS				*e*		14 07 12.9		
CLNS				*e*Sg	**Sg**	**14 07 25.6**	**-5.8**	
CLNS				*e*		14 07 44.9		
KPC	**Khapcheranga**	**6.41**	**190**	*e*Pn	**Pn**	**14 05 52.0**	**+0.6**	
KPC				*e*		14 06 01.0		
KPC				*e*Pg	Pb	14 06 13.1	+4.9	
KPC				Pmax		14 06 16.8		
	comp=N,16nm,1.3s							
KPC				*e*Sn	**Sn**	**14 07 02.7**	**-2.3**	
KPC				*e*Sg	**Sg**	**14 07 36.5**	**-5.1**	
KPC				*e*		14 07 42.5		
KPC				max		14 07 47.8		
	comp=N,290nm,1.6s							
KPC	**Khapcheranga**	**6.41**	**190**	*e*PN	**Pn**	**14 05 51.2**	**-0.2**	
KPC				*e*		14 06 11.1		
KPC				*e*S	**Sn**	**14 07 02.9**	**-2.1**	
KPC				*e*		14 07 32.9		
KPC				pmax	pmax			
	comp=Z,16nm,1.3s							
KPC				smax	smax			
	comp=E,289nm,1.6s							
BGT	**Bolshoye Golou**	**6.45**	**235**	*e*Sg	**Sg**	**14 07 35.8**	**-7.1**	
BGT				Smax		14 07 44.1		
	comp=E,61nm,1.1s							
LSTR	**Listvyanka**	**6.83**	**236**	*e*Pg	**Pb**	**14 06 19.1**	**+3.7**	
LSTR				Pmax		14 06 20.0		
	comp=E,5.0nm,0.7s							
LSTR				*e*Sg	**Sg**	**14 07 47.7**	**-7.5**	
LSTR				Smax		14 07 55.2		
	comp=E,126nm,1.6s							
IRK	**Irkutsk**	**6.86**	**241**	*e*PG	Pb	14 06 20.7	+4.8	
IRK				*e*		14 07 47.7		
IRK				pmax	pmax			
	comp=Z,89nm,0.1s							
IRK				smax	smax			
	comp=N,188nm,0.5s							
IVK	**Ivanovka**	**7.07**	**237**	*e*Pg	**Pb**	**14 06 22.5**	**+3.1**	
IVK				Pmax		14 06 24.4		
	comp=N,3.0nm,0.2s							
IVK				*e*Sg	Sb	14 07 53.7	+9.5	
IVK				*e*		14 08 05.6		
IVK				max		14 08 13.0		
	comp=N,72nm,1.3s							
TLY	**Talaya**	**7.52**	**239**	*e*Pg	Pb	14 06 32.0	+5.0	
TLY				Pmax		14 06 37.8		
	comp=N,10.0nm,0.7s							
TLY				*e*Sg	Sg	14 08 08.3	-8.9	
TLY				Smax		14 08 23.4		
	comp=N,58nm,1.1s							
TLY	**Talaya**	**7.52**	**239**	Pg	**Pb**	**14 06 22.9**	**-4.1**	
	comp=N,0.0nm,0.3s,baz=39,slow=6.5,SNR=3.4							
TLY				Lg	Lg	14 08 06.3		
	comp=N,0.0nm,0.3s,baz=130,slow=18,SNR=5.7							
TLY	**Talaya**	**7.52**	**239**	*i* PN	**Pn**	**14 06 11.1**	**+4.6**	
TLY				pmax	pmax			
	comp=Z,1.0nm,0.3s							
TLY				MLR	MLR			
	comp=Z,118nm,12.0s							
HIA	**Hailar**	**7.61**	**150**	*e*Sg	**Sg**	**14 08 12.6**	**-7.5**	
HIA	**Hailar**	**7.61**	**150**	*i* PN	Pb	14 06 19.5	-9.1	
ZEA	**Zeya**	**7.97**	**101**	*e*PN	Pn	14 06 21.3	+8.6	
ZEA				pmax	pmax			
	comp=Z,12nm,1.0s							
ZEA				MLR	MLR			
	comp=E,600nm,6.0s							
ZEA				MLR	MLR			
	comp=Z,300nm,6.0s							
ZAK	**Zakamensk**	**8.56**	**233**	*e*PG	**Pg**	**14 06 56.9**	**-3.0**	
ZAK				*e*		14 08 48.0		
ZAK				pmax	pmax			
	comp=Z,4.0nm,0.3s							
ZAK				smax	smax			
	comp=E,38nm,0.9s							
MOY	**Mondy**	**8.85**	**246**	*e*Pn	**Pn**	**14 06 26.6**	**+1.8**	
MOY				*e*		14 06 35.9		
MOY				max		14 06 41.4		
	comp=E,13nm,1.2s							
MOY				*e*		14 08 07.5		
MOY				*e*Sg	Sg	14 08 48.8	-11	
MOY				Smax		14 08 51.9		
	comp=E,111nm,1.3s							
ORL	**Orlik**	**9.01**	**253**	*e*Pn	**Pn**	**14 06 27.4**	**+0.3**	
ORL				max		14 06 39.7		
	comp=E,8.0nm,0.5s							
ORL				*e*		14 06 40.7		
ORL				*e*Sn	**Sn**	**14 08 02.2**	**-6.9**	
ORL				*e*Sg		14 08 53.7		
ORL				Smax		14 09 19.1		
	comp=E,73nm,1.2s							
ULN	**Ulaanbaatar**	**9.23**	**211**	*e*Sg	Sn	14 09 04.9	+50	
ULN				*e*		14 09 21.5		
ULN	**Ulaanbaatar**	**9.23**	**211**	*i* P	Pn	14 06 38.4	+8.3	
ULN				pmax	pmax			
	comp=Z,1.0nm,1.0s							
SONM	**Songino Array**	**9.45**	**213**	Pn	**Pn**	**14 06 35.0**	**+1.9**	
	comp=Z,0.2nm,0.3s,baz=14,slow=15,SNR=2.4							
SONM				Lg	Lg	14 09 13.7		
	comp=Z,0.8nm,0.3s,baz=23,slow=29,SNR=3.8							
SONM	**Songino Array**	**9.45**	**213**	P	**Pn**	**14 06 35.0**	**+1.9**	
YAK	**Yakutsk**	**10.05**	**47**	Lg	Lg	14 09 22.6		
	baz=310,slow=22,SNR=14							
YAK	**Yakutsk**	**10.05**	**47**	*e*P	**Pn**	**14 06 42.6**	**+1.4**	
YAK				*e*S	**Sn**	**14 08 36.0**	**+1.6**	
YAK				pmax	pmax			
	comp=Z,5.0nm,1.0s							
YAK				pmax	pmax			
	comp=N,2.0nm,1.0s							
YAK				pmax	pmax			
	comp=E,4.0nm,1.5s							
YAK				smax	smax			
	comp=N,16nm,1.1s							
YAK				smax	smax			
	comp=E,16nm,1.0s							
TDJR	**Todzha**	**11.10**	**258**	*e*Pn	**Pn**	**14 06 56.4**	**+0.8**	
TDJR				*e*Pg		14 07 35.5		
TDJR				*e*		14 07 44.3		
TDJR				*e*Sg	Sn	14 09 57.4	+57	
ARDR	**Aradan**	**12.50**	**263**	*e*		14 10 06.3		
ARDR				*e*Sg		14 10 41.6		
KLR	**Kul'dur**	**12.72**	**115**	Pn	**Pn**	**14 07 17.9**	**+0.2**	
	comp=E,0.4nm,0.3s,baz=310,slow=16,SNR=7.4							
KLR				Lg	Lg	14 10 54.7		
	comp=E,0.4nm,0.3s,baz=41,slow=16,SNR=6.2							
USRK	**Ussuriysk Ar.**	**16.46**	**128**	Lg	Lg	14 12 56.2		
	baz=316,slow=27,SNR=6.9							
ZALV	**Zalesovo Beam**	**16.83**	**275**	Pn	**P**	**14 08 14.2**	**-0.5**	
	comp=E,0.2nm,0.3s,baz=57,slow=14,SNR=2.0							
ZALV				Lg	Lg	14 12 57.8		
	comp=E,0.3nm,0.3s,baz=52,slow=26,SNR=2.5							
TIXI	**Tiksi**	**16.90**	**16**	Pn	**Pn**	**14 08 09.3**	**-4.0**	
	comp=E,0.7nm,0.3s,baz=222,slow=9.2,SNR=7.1							
TIXI				Sn	Sn	14 11 05.8	-16	
	comp=E,0.2nm,0.3s,baz=315,slow=10.0,SNR=4.1							
TIXI				Lg	Lg	14 13 09.5		
	baz=144,slow=22,SNR=3.8							
TIXI	**Tiksi**	**16.90**	**16**	*i* P	**Pn**	**14 08 11.9**	**-1.4**	
TIXI				pmax	pmax			
	comp=Z,6.0nm,0.9s							
TIXI				MLR	MLR			
	comp=Z,19nm,9.0s							
SEY	**Seymchan**	**20.41**	**55**	P	Pn	14 08 55.4	-0.5	
	comp=Z,0.9nm,0.6s,baz=21,slow=23,SNR=1.9							
SEY				Lg	Lg	14 15 00.4		
	comp=Z,1.1nm,0.8s,baz=204,slow=20,SNR=1.6							
KURK	**Kurchatov**	**21.61**	**271**	P	**P**	**14 09 08.4**	**+1.5**	
MK31	**Makanchi Array**	**21.66**	**258**	*e*P	**P**	**14 09 09.2**	**+1.6**	
MKAR	**Makanchi Array**	**21.66**	**258**	P	**P**	**14 09 08.2**	**+0.6**	
	comp=Z,2.0nm,0.7s,baz=55,slow=10,SNR=14							
MKAR	**Makanchi Array**	**21.66**	**258**	*e*P	**P**	**14 09 08.6**	**+1.0**	
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.7s							
KURBB	**Kurchatov Arra**	**21.70**	**271**	P	**P**	**14 09 08.4**	**+0.4**	
	comp=Z,3.0nm,0.6s,baz=64,slow=12,SNR=16							
BVAR	**Borovoye Array**	**25.18**	**282**	P	**P**	**14 09 43.7**	**+1.2**	
	comp=Z,1.8nm,0.8s,baz=67,slow=8.2,SNR=11							
BRVK	**Borovoye**	**25.23**	**282**	*i* P	**P**	**14 09 43.9**	**+1.1**	
BRVK				pmax	pmax			
	comp=Z,3.0nm,0.8s							
BILL	**Bilibino**	**26.36**	**42**	⇑*e*P	**P**	**14 09 54.8**	**+1.8**	
BILL				*PP	**sP**	**14 09 57.0**	**+2.6**	
BILL						14 13 22.0		
BILL				pmax	pmax			
	comp=Z,1.0nm,1.1s							
BILL				MLR	MLR			
	comp=Z,90nm,21.0s							
AAK	**Ala-Archa**	**28.59**	**259**	*i* P	**P**	**14 10 15.7**	**+2.3**	
AAK				pmax	pmax			
	comp=Z,1.0nm,1.0s							
ARU	**Arti**	**30.12**	**294**	*i* P	**P**	**14 10 27.3**	**+0.6**	
ARU				pmax	pmax			
	comp=Z,1.0nm,1.0s							
ARU				MLR	MLR			
	comp=Z,27nm,16.0s							
ARCES	**ARCESS Array B**	**38.76**	**326**	P	**P**	**14 11 42.4**	**+1.2**	
	comp=Z,0.8nm,0.8s,baz=80,slow=10,SNR=2.2							
FINES	**FINESS Array B**	**42.66**	**315**	P	**P**	**14 12 13.7**	**+0.3**	
	comp=Z,1.0nm,0.6s,baz=67,slow=12,SNR=5.8							
ILAR	**Eielson Array**	**44.80**	**37**	P	**P**	**14 12 31.5**	**+0.9**	
	comp=Z,1.2nm,1.1s,baz=298,slow=5.0,SNR=8.5							
KIV	**Kislovodsk**	**45.40**	**286**	⇑*e*P	**P**	**14 12 36.1**	**+0.3**	
KIV				*PP	**sP**	**14 12 39.0**	**+1.8**	
KIV				S	S	14 19 34.0	+17	
KIV				pmax	pmax			
	comp=Z,3.0nm,1.0s							
KIV				MLR	MLR			
	comp=Z,17nm,16.0s							
KBZ	**Khabaz**	**45.44**	**286**	P	**P**	**14 12 37.2**	**+1.4**	
	comp=Z,0.7nm,0.3s,baz=180,slow=7.1,SNR=2.2							
KBZ	**Khabaz**	**45.44**	**286**	*e*P	**P**	**14 12 36.2**	**+0.3**	
KBZ				pmax	pmax			
	comp=Z,2.0nm,1.1s							
NOA	**NORSAR Array B**	**48.52**	**321**	P	**P**	**14 13 00.3**	**+0.4**	
	comp=Z,0.4nm,0.6s,baz=49,slow=7.0,SNR=2.5							
YKA	**Yellowknife Ar**	**55.90**	**25**	P	**P**	**14 13 53.6**	**-1.0**	
	comp=Z,0.4nm,0.7s,baz=334,slow=6.6,SNR=6.3							
ESDC	**Sonseca Array**	**71.16**	**314**	P	**P**	**14 15 37.0**	**+1.1**	
	comp=Z,1.3nm,0.8s,baz=26,slow=6.3,SNR=8.2							
WRA	**Warramunga Arr**	**77.60**	**160**	P	**P**	**14 16 12.8**	**-0.6**	
	comp=Z,5.5nm,0.8s,baz=353,slow=6.5,SNR=2.5							
ASAR	**Alice Springs**	**81.15**	**162**	P	**P**	**14 16 32.2**	**-0.5**	
	comp=Z,0.3nm,0.8s,baz=350,slow=4.7,SNR=2.0							
TORD	**Torodi Ar. Bea**	**91.19**	**296**	P	**P**	**14 17 21.5**	**-1.1**	
	comp=Z,0.6nm,0.7s,baz=23,slow=7.8,SNR=2.5							

IEPN ***29*** *14:26:23.0, 84.62N×7.05E, h20km*
ISC 29 14:26:25.6±4.2, 84.4N±0.2×9.7E±0.2, h10km, n23, σ0s80/36, 2D, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**5.50**	**176**	Pn	**Pn**	**14 27 47.1**	**-0.3**
KBS				Sn	**Sn**	**14 28 49.7**	**-1.0**
KBS	**Kingsbay**	**5.50**	**176**	*e*P	**Pn**	**14 27 46.8**	**-0.6**
KBS				*e*S	**Sn**	**14 28 49.2**	**-1.4**
KBS	**Kingsbay**	**5.50**	**176**	*e*P	**Pn**	**14 27 46.8**	**-0.6**
KBS				*e*S	**Sn**	**14 28 49.2**	**-1.4**
KBS	**Kingsbay**	**5.50**	**176**	*e*P	**Pn**	**14 27 47.3**	**-0.2**
KBS				*e*S	**Sn**	**14 28 50.1**	**-0.6**
KBS				IAML		14 28 50.5	
	comp=Z,2.6nm,0.5s						
ZFI2	**Zemlya Franca-**	**5.91**	**106**	⇓*i*P	**Pn**	**14 27 52.8**	**-0.3**
ZFI2				*e*S	**Sn**	**14 29 00.1**	**-0.5**
	comp=Z,11nm,0.2s						
ZFI2	**Zemlya Franca-**	**5.91**	**106**	⇓*i*P	**Pn**	**14 27 52.8**	**-0.3**
ZFI2				*e*S	**Sn**	**14 29 00.1**	**-0.5**
	comp=Z,11nm,0.2s						
SPA0	**Spitsbergen Ar**	**6.32**	**167**	Pn	**Pn**	**14 27 59.1**	**+0.5**
	baz=8.7,slow=12						
SPA0	**Spitsbergen Ar**	**6.32**	**167**	*e*P	**Pn**	**14 27 58.9**	**+0.2**
SPA0				*e*S	**Sn**	**14 29 09.5**	**-1.3**
SPA0	**Spitsbergen Ar**	**6.32**	**167**	*e*P	**Pn**	**14 27 58.9**	**+0.2**
SPA0				*e*S	**Sn**	**14 29 09.5**	**-1.3**
SPA0	**Spitsbergen Ar**	**6.32**	**167**	*e*P	**Pn**	**14 27 59.1**	**+0.5**
SPA0				IAML		14 29 16.7	
	comp=Z,4.6nm,0.9s						
BRBB	**Barentsburg B**	**6.37**	**172**	Pn	**Pn**	**14 27 59.4**	**+0.2**
BRBB				Sn	**Sn**	**14 29 12.4**	**+0.6**
BRBB	**Barentsburg B**	**6.37**	**172**	*e*P	**Pn**	**14 27 59.6**	**+0.4**
BRBB				*e*S	**Sn**	**14 29 11.2**	**-0.6**
BRBA	**Barentsburg A**	**6.40**	**172**	Pn	**Pn**	**14 27 59.9**	**+0.1**
BRBA	**Barentsburg A**	**6.40**	**172**	*e*P	**Pn**	**14 28 00.6**	**+0.9**
HSPB	**Hornsund (broa**	**7.48**	**170**	Pn	**Pn**	**14 28 15.1**	**+0.6**
HSPB				Sn	**Sn**	**14 29 40.2**	**+1.0**
HSPB	**Hornsund (broa**	**7.48**	**170**	*e*P	**Pn**	**14 28 15.1**	**+0.6**
HSPB				*e*S	**Sn**	**14 29 39.6**	**+0.4**
HSPB	**Hornsund (broa**	**7.48**	**170**	*e*P	**Pn**	**14 28 15.1**	**+0.6**
HSPB				*e*S	**Sn**	**14 29 39.6**	**+0.4**
HSPB	**Hornsund (broa**	**7.48**	**170**	*e*P	**Pn**	**14 28 15.2**	**+0.6**
HOPEN	**Hopen**	**8.26**	**154**	Pn	**Pn**	**14 28 26.6**	**+1.5**
HOPEN	**Hopen**	**8.26**	**154**	*e*P	**Pn**	**14 28 26.3**	**+1.1**
HOPEN	**Hopen**	**8.26**	**154**	*e*P	**Pn**	**14 28 26.3**	**+1.1**
HOPEN	**Hopen**	**8.26**	**154**	*e*P	**Pn**	**14 28 26.1**	**+0.9**
ARA0	**ARCESS Array S**	**15.23**	**159**	Pn	**Pn**	**14 30 00.2**	**0.0**
	slow=9.3						

BER ***29*** *15:28:20.8±1.8, 80.45N×1.99W, h23km±21km, ML1.8, ML2.8(DNK), Confirmed Earthquake*
IEPN ***29*** *15:28:21.0, 80.21N×0.90W, h15km*
ISC 29 15:28:14.6±1.2, 80.35N±0.08×1.95W±0.05, h10km, n16, σ2s95/26, 1C, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOR	**Nord**	**2.63**	**306**	*i* P	**Pn**	**15 28 59.7**	**+2.6**
NOR	**Nord**	**2.63**	**306**	*i* P	**Pn**	**15 28 59.7**	**+2.6**
KBS	**Kingsbay**	**2.88**	**113**	*e*P	**Pn**	**15 29 03.3**	**+2.8**
KBS				*e*S	**Sn**	**15 29 34.3**	**-0.9**
KBS	**Kingsbay**	**2.88**	**113**	*e*P	**Pn**	**15 29 03.5**	**+3.0**
KBS				*e*S	**Sn**	**15 29 36.3**	**+1.1**
KBS				IAML		15 29 43.3	
	comp=Z,4.2nm,0.3s						
BRBB	**Barentsburg B**	**3.77**	**119**	*e*P	**Pb**	**15 29 17.6**	**-3.6**
BRBA	**Barentsburg A**	**3.80**	**119**	*e*P	**Pb**	**15 29 18.0**	**-3.6**
BRBA				IAML		15 30 24.3	
	comp=Z,5.3nm,0.1s						
SPA0	**Spitsbergen Ar**	**4.04**	**113**	⇑*i*P	**Pn**	**15 29 20.2**	**+3.7**
SPA0				*e*S	**Sn**	**15 30 03.3**	**-0.5**
SPA0	**Spitsbergen Ar**	**4.04**	**113**	*e*P	**Pn**	**15 29 20.2**	**+3.7**
SPA0				*e*S	**Sn**	**15 30 04.0**	**+0.2**
SPA0				IAML		15 30 17.4	
	comp=Z,2.7nm,0.7s						
HSPB	**Hornsund (broa**	**4.79**	**125**	*e*P	**Pn**	**15 29 31.1**	**+4.4**
HSPB				*e*S	**Sn**	**15 30 23.3**	**+1.2**
HSPB	**Hornsund (broa**	**4.79**	**125**	*e*P	**Pn**	**15 29 31.2**	**+4.6**
DAG	**Danmarks Havn**	**4.87**	**231**	*i* P	**Pn**	**15 29 30.3**	**+2.5**
DAG				*i* S	**Sn**	**15 30 23.9**	**-0.2**
DAG	**Danmarks Havn**	**4.87**	**231**	*i* P	**Pn**	**15 29 30.3**	**+2.5**
DAG				*i* S	**Sn**	**15 30 23.9**	**-0.2**
DAG				IAML		15 30 30.4	
	comp=Z,7.7nm,0.4s						
HOPEN	**Hopen**	**6.58**	**112**	*e*P	**Pn**	**15 29 54.5**	**+3.4**
HOPEN				*e*S	**Sn**	**15 31 04.2**	**-1.8**
HOPEN	**Hopen**	**6.58**	**112**	*e*P	**Pn**	**15 29 54.5**	**+3.4**
DBG	**Daneborg**	**7.22**	**223**	*i* P	**Pn**	**15 30 02.7**	**+2.6**
DBG				*i* S	**Sn**	**15 31 19.3**	**-2.7**
DBG				IAML		15 31 26.3	
	comp=Z,2.5nm,0.4s						
ZFI2	**Zemlya Franca-**	**7.94**	**62**	*e*P	**Pn**	**15 30 12.9**	**+3.2**
ZFI2				*e*S	**Sn**	**15 31 36.2**	**-3.2**
	comp=Z,3.9nm,0.5s						

ZUR 29 15:35:28.1, 47.72N×9.02E, h9km±2km, MLh0.7/4, 2C-2D, Error ellipse: s-maj=5.7km s-min=1.0km az=132.0, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WALHA	**Wallhausen, DE**	**0.07**	**65**	⇑Pg	Pg	15 35 30.4	+0.1
WALHA				⇑Pg	Pg	15 35 30.4	+0.1
	0.1nm,SNR=6.6						
WALHA				Sg	Sg	15 35 32.1	+0.2
STEIN	**Stein am Rhein**	**0.12**	**244**	Pg	Pg	15 35 31.2	+0.3
STEIN				Pg	Pg	15 35 31.2	+0.3
	0.1nm,SNR=2.4						
STEIN				Sg	Sg	15 35 33.3	+0.5
EMING	**Emmingen-Lipti**	**0.21**	**325**	⇓Pg	Pg	15 35 32.8	+0.3
EMING				⇓Pg	Pg	15 35 32.8	+0.3
	SNR=3.2						
EMING				Sg	Sg	15 35 36.0	+0.6
TRULL	**Truellikon**	**0.24**	**253**	Sg	Sg	15 35 37.0	+0.7
GUT	**Gutenstein**	**0.36**	**10**	Sg	Sg	15 35 40.5	+0.7
	SNR=2.4						
GUT				Sg	Sg	15 35 40.5	+0.7
SLE	**Schleitheim**	**0.36**	**277**	Sg	Sg	15 35 40.4	+0.4
SLE				Sg	Sg	15 35 40.4	+0.4
	SNR=3.5						

GEN ***29*** *15:35:49.7, 44.43N×7.42E, h12km±2km, Ml0.5*
LDG 29 15:35:49.5±0.1, 44.40N×7.36E, h12km, Md1.3/2, Ml1.1/3, Error ellipse: s-maj=3.4km s-min=2.1km az=46.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STV	**Sant Anna di V**	**0.15**	**189**	P	Pb	15 35 54.1	-0.3
STV				S	Sg	15 35 57.0	+1.2
ENR	**Entracque**	**0.18**	**165**	P	Pb	15 35 54.2	-0.5
ENR				S	Sg	15 35 57.1	+0.7
PZZ	**Stroppo**	**0.20**	**303**	P	Pb	15 35 54.8	-0.5
PZZ				S	Sg	15 35 58.1	+0.9
GBOS	**Grotte di Boss**	**0.38**	**114**	P	Pg	15 35 56.8	-0.3
GBOS				S	Sg	15 36 01.2	-1.0
MBDF	**Montbardon**	**0.53**	**308**	*e*Pg	Pg	15 35 59.5	-0.5
MBDF				*e*Sg	Sg	15 36 06.6	-0.5
	0.6nm,0.2s						
SBF	**

TIPB	**Shuangxi** baz=356	**0.38**	**350**	P	**Pn**	**15 36 49.7**	**+0.2**
TIPB	baz=356			*e*S	**Sn**	**15 36 57.7**	**+0.5**
NWLT	**Wulai** baz=300	**0.40**	**297**	P	**Pn**	**15 36 49.3**	**-0.4**
NWLT	baz=300			*e*S	**Sn**	**15 36 57.4**	**-0.2**
TWB1	**Santiao Chiao** baz=18	**0.42**	**11**	P	**Pn**	**15 36 49.5**	**-0.3**
TWB1	baz=18			S	**Sn**	**15 36 58.4**	**+0.6**
TWA	**Mucha** baz=328	**0.48**	**324**	*e*P	**Pn**	**15 36 50.2**	**-0.2**
TWA	baz=328			S	**Sn**	**15 36 58.9**	**0.0**
YHNB	**Yeheng** baz=280	**0.48**	**279**	P	**Pn**	**15 36 50.0**	**-0.5**
YHNB	baz=280			*e*S	**Sn**	**15 36 58.6**	**-0.4**
NNSB	**Datong** baz=248	**0.49**	**251**	*e*P	**Pn**	**15 36 50.1**	**-0.5**
NNSB	baz=248			S	**Sn**	**15 36 58.9**	**-0.5**
NNSH	**Datong** baz=248	**0.49**	**251**	P	**Pn**	**15 36 50.3**	**-0.3**
NNSH	baz=248			S	**Sn**	**15 36 58.6**	**-0.7**
NSK	**Sanguang** baz=280	**0.50**	**280**	P	**Pn**	**15 36 50.1**	**-0.5**
NSK	baz=280			S	**Sn**	**15 36 58.7**	**-0.6**
NACB	**Ninganchiao** baz=209	**0.50**	**213**	P	**Pn**	**15 36 50.0**	**-0.6**
NACB	baz=209			*e*S	**Sn**	**15 36 59.1**	**-0.1**
NHDH	**Xindian Distri** baz=321	**0.50**	**318**	*e*P	**Pn**	**15 36 50.6**	**+0.1**
NHDH	baz=321			*e*S	**Sn**	**15 36 59.0**	**-0.2**
NNS	**Nan Shan** baz=250	**0.50**	**252**	*e*P	**Pn**	**15 36 50.4**	**-0.3**
NNS	baz=250			*e*S	**Sn**	**15 36 58.7**	**-0.7**
TATO	**Taipei** baz=319	**0.53**	**316**	*e*S	**Sn**	**15 36 58.9**	**-0.9**
ETLH	**Xiulin Townshi** baz=221	**0.54**	**225**	P	**Pn**	**15 36 50.5**	**-0.6**
ETLH	baz=221			*e*S	**Sn**	**15 36 59.7**	**-0.4**
TWD	**Chiawan** baz=203	**0.58**	**208**	P	**Pn**	**15 36 51.1**	**-0.3**
TWD	baz=203			*e*S	**Sn**	**15 37 00.6**	**-0.1**
YM01	**YM01** baz=335	**0.63**	**332**	P	**Pn**	**15 36 51.3**	**-0.8**
YM01	baz=335			*e*S	**Sn**	**15 37 01.5**	**-0.3**
YM10	**YM10** baz=335	**0.64**	**332**	*e*P	**Pn**	**15 36 51.9**	**-0.3**
YM10	baz=335			S	**Sn**	**15 37 02.3**	**+0.2**
YM11	**YM11** baz=336	**0.64**	**333**	P	**Pn**	**15 36 52.0**	**-0.3**
YM11	baz=336			*e*S	**Sn**	**15 37 03.1**	**+0.9**
YM05	**YM05** baz=335	**0.64**	**332**	P	**Pn**	**15 36 52.1**	**-0.2**
YM05	baz=335			*e*S	**Sn**	**15 37 02.5**	**+0.3**
YM04	**YM04** baz=333	**0.65**	**330**	*e*P	**Pn**	**15 36 52.1**	**-0.2**
YM04	baz=333			*e*S	**Sn**	**15 37 02.1**	**-0.1**
YM08	**YM08** baz=338	**0.66**	**335**	*e*P	**Pn**	**15 36 51.5**	**-0.9**
YM08	baz=338			*e*S	**Sn**	**15 37 02.1**	**-0.3**
TWS1	**Kuangyinshan** baz=322	**0.67**	**319**	P	**Pn**	**15 36 52.3**	**-0.1**
TWS1	baz=322			S	**Sn**	**15 37 02.7**	**+0.1**
YM03	**YM03** baz=334	**0.67**	**331**	*e*P	**Pn**	**15 36 53.9**	**+1.3**
YM03	baz=334			*e*S	**Sn**	**15 37 03.2**	**+0.5**
NTST	**Danshui** baz=327	**0.70**	**325**	*e*S	**Sn**	**15 37 03.5**	**+0.3**
WHF	**Hehuan Shan** baz=229	**0.73**	**232**	P	**Pn**	**15 36 53.3**	**-0.4**
WHF	baz=229			*e*S	**Sn**	**15 37 03.5**	**-1.0**
TWY	**Chenhua** baz=342	**0.73**	**338**	P	**Pn**	**15 36 53.1**	**-0.2**
TWY	baz=342			S	**Sn**	**15 37 05.0**	**+1.1**
TWT	**Tachien** baz=241	**0.74**	**243**	*e*P	**Pn**	**15 36 53.7**	**+0.2**
TWT	baz=241			*e*S	**Sn**	**15 37 04.3**	**0.0**
TDCB	**Techi** baz=241	**0.75**	**243**	*e*P	**Pn**	**15 36 53.7**	**0.0**
TDCB	baz=241			*e*S	**Sn**	**15 37 04.4**	**-0.3**
LIOB	**Emei** baz=274	**0.80**	**274**	P	**Pn**	**15 36 53.6**	**-0.6**
LIOB	baz=274			*e*S	**Sn**	**15 37 04.4**	**-1.2**
NSTT	**Nanjuang** baz=272	**0.82**	**273**	P	**Pn**	**15 36 53.9**	**-0.5**
NSTT	baz=272			S	**Sn**	**15 37 05.2**	**-0.6**
CHGB	**Renai** baz=229	**0.84**	**231**	P	**Pn**	**15 36 54.8**	**-0.1**
CHGB	baz=229			*e*S	**Sn**	**15 37 06.6**	**-0.2**
NHW	**Xinwu Township** baz=299	**0.88**	**298**	*e*S	**Sn**	**15 37 06.9**	**-0.2**
ESL	**Shilin** baz=205	**0.88**	**209**	*e*P	**Pn**	**15 36 55.3**	**+0.1**
ESL	baz=205			*e*S	**Sn**	**15 37 06.5**	**-0.9**
WHP	**Taichung City** baz=249	**0.92**	**250**	*e*P	**Pn**	**15 36 56.2**	**+0.4**
WHP	baz=249			*e*S	**Sn**	**15 37 08.1**	**-0.3**
JYNG	**Yonagunijimaku**	**0.97**	**98**	P	**Pn**	**15 36 56.0**	**-0.2**
JYNG				*e*S	**Sn**	**15 37 09.0**	**-0.2**
EGFH	**Guangfu** baz=202	**1.01**	**205**	*e*P	**Pn**	**15 36 56.5**	**-0.4**
EGFH	baz=202			*e*S	**Sn**	**15 37 10.5**	**+0.1**
YOJ	**Yonaguni jima** baz=96	**1.02**	**97**	*e*P	**Pn**	**15 36 56.3**	**-0.7**
YOJ	baz=96			*e*S	**Sn**	**15 37 10.5**	**-0.1**
YOJ	**Yonaguni jima**	**1.02**	**97**	P	**Pn**	**15 36 57.0**	**0.0**
YOJ				*e*S	**Sn**	**15 37 10.5**	**-0.1**
DPDB	**Guoxing** baz=236	**1.04**	**238**	*e*P	**Pn**	**15 36 57.6**	**+0.2**
DPDB	baz=236			*e*S	**Sn**	**15 37 11.6**	**+0.4**
VWDT	**VWDT** baz=217	**1.08**	**220**	*e*P	**Pn**	**15 36 57.3**	**-0.5**
VWDT	baz=217			*e*S	**Sn**	**15 37 11.8**	**-0.1**
SMLT	**Sun Moon Lake** baz=230	**1.15**	**232**	P	**Pn**	**15 36 59.4**	**+0.5**
SMLT	baz=230			*e*S	**Sn**	**15 37 14.7**	**+0.9**
TYC	**Yuchr** baz=232	**1.17**	**234**	P	**Pn**	**15 36 60.0**	**+1.1**
TYC	baz=232			*e*S	**Sn**	**15 37 14.0**	**0.0**
SSLB	**Suanglung** baz=225	**1.18**	**227**	*e*P	**Pn**	**15 36 59.8**	**+0.7**
SSLB	baz=225			*e*S	**Sn**	**15 37 13.9**	**-0.3**
HGSD	**Ruisui** baz=199	**1.18**	**202**	*e*P	**Pn**	**15 36 58.9**	**-0.2**
HGSD	baz=199			S	**Sn**	**15 37 15.5**	**+1.3**
WHYT	**Xinyi Township** baz=225	**1.30**	**227**	*e*P	**Pn**	**15 37 01.2**	**+0.4**
WHYT	baz=225			*e*S	**Sn**	**15 37 17.7**	**+0.4**
YULB	**Yu-li** baz=202	**1.31**	**205**	P	**Pn**	**15 37 00.9**	**0.0**
YULB	baz=202			S	**Sn**	**15 37 17.4**	**-0.1**
TWF1	**Yuli** baz=201	**1.35**	**204**	*e*S	**Sn**	**15 37 19.5**	**+1.2**
ALS	**Alishan** baz=221	**1.47**	**223**	*e*P	**Pn**	**15 37 02.8**	**-0.4**
CHN5	**Tsauling** baz=227	**1.49**	**229**	*e*P	**Pn**	**15 37 04.8**	**+1.5**
CHN5	baz=227			S	**Sn**	**15 37 23.2**	**+1.4**
FULB	**Fuli** baz=200	**1.49**	**202**	*e*S	**Sn**	**15 37 22.6**	**+0.8**
ELDTW	**Lidau** baz=208	**1.61**	**210**	P	**Pn**	**15 37 05.3**	**+0.3**
ELDTW	baz=208			*e*S	**Sn**	**15 37 25.0**	**+0.2**
IRIF	**Iriomote-Funau**	**1.69**	**98**	S	**Sn**	**15 37 26.6**	**+0.1**
WTP	**Ta-pu** baz=219	**1.78**	**221**	*e*P	**Pn**	**15 37 06.9**	**-0.3**
WTP	baz=219			*e*S	**Sn**	**15 37 28.9**	**0.0**
JKRS	**Kuro-shima**	**1.96**	**100**	*e*S	**Sn**	**15 37 32.2**	**-0.8**
JIJ	**Ishigaki jima**	**2.06**	**96**	S	**Sn**	**15 37 35.3**	**-0.2**

ROM 29 15:37:18.9±0.1, 43°.335N±0°.002×12°.660E±0°.003, h9km, ML0.8/5, Error ellipse: s-maj=0.2km s-min=0.1km az=71.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.07**	**296**	P	Pg	15 37 21.4	+0.4
ATFO				S	Sg	15 37 22.9	+0.3
ATFO				AML	AML		
	comp=E,63μm,0.2s						
ATFO				AML	AML		
	comp=N,71μm,0.3s						
ATFO				AML	AML		
	comp=N,71μm,0.3s						
FOSV	**Fossato di Vic**	**0.08**	**118**	P	Pg	15 37 21.5	+0.3
FOSV				S	Sg	15 37 23.1	+0.3
MURB	**Monte Urbino**	**0.12**	**234**	P	Pg	15 37 22.2	+0.4
MURB				S	Sg	15 37 24.6	+0.9
MURB				AML	AML		
	comp=E,202μm,1.0s						
MURB				AML	AML		
	comp=N,234μm,0.3s						
MURB				AML	AML		
	comp=E,250μm,0.3s						
ATCC	**AVT- Casa Cast**	**0.15**	**186**	P	Pg	15 37 22.7	+0.5
ATCC				S	Sg	15 37 25.5	+1.1
ATCC				AML	AML		
	comp=E,68μm,1.2s						
ATCC				AML	AML		
	comp=N,67μm,0.9s						
ATCC				AML	AML		
	comp=E,68μm,1.2s						
FRON	**Frontone**	**0.19**	**15**	P	Pg	15 37 23.4	+0.6
FRON				S	Sg	15 37 26.9	+1.4
ATVO	**AVT- Monte Val**	**0.19**	**284**	P	Pg	15 37 23.4	+0.6
ATVO				S	Sg	15 37 26.7	+1.1
ATVO				AML	AML		
	comp=E,40μm,0.1s						
ATVO				AML	AML		
	comp=N,40μm,0.7s						
ATPI	**Pietralunga -**	**0.22**	**302**	P	Pg	15 37 23.8	+0.4
ATPI				S	Sg	15 37 27.9	+1.4
PIEI	**Pieia**	**0.22**	**336**	P	Pg	15 37 24.1	+0.7
PIEI				S	Sg	15 37 28.0	+1.5
PIEI				AML	AML		
	comp=E,22μm,1.5s						
PIEI				AML	AML		
	comp=N,13μm,0.2s						

ZUR 29 15:37:20.2, 47°.72N×9°.02E, h10km±1km, MLh1.1/16, 10C-4D, Error ellipse: s-maj=1.9km s-min=0.6km az=180.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WALHA	**Wallhausen, DE** 0.6nm,SNR=57	**0.07**	**64**	⇑P	Pg	15 37 22.6	+0.1
WALHA				⇑P	Pg	15 37 22.6	+0.1
WALHA				Sg	Sg	15 37 24.3	+0.2
STEIN	**Stein am Rhein**	**0.12**	**244**	⇑P	Pg	15 37 23.4	+0.3
STEIN				⇑P	Pg	15 37 23.4	+0.3
	0.4nm,SNR=32						
STEIN				Sg	Sg	15 37 25.5	+0.4
WEIN	**Weingarten**	**0.19**	**188**	⇑P	Pg	15 37 24.7	+0.4
WEIN				⇑P	Pg	15 37 24.7	+0.4
	0.1nm,SNR=13						
WEIN				Sg	Sg	15 37 27.9	+0.8
EMING	**Emmingen-Lipti** SNR=20	**0.21**	**325**	⇓P	Pg	15 37 25.0	+0.4
EMING				⇓P	Pg	15 37 25.0	+0.4
TRULL	**Truellikon** 0.2nm,SNR=6.3	**0.24**	**253**	Sg	Sg	15 37 29.2	+0.7
TRULL				Sg	Sg	15 37 29.2	+0.7
SGT02	**Zihlschlacht** SNR=3.0	**0.26**	**144**	Sg	Sg	15 37 29.8	+0.9
SGT02				Sg	Sg	15 37 29.8	+0.9
WILA	**Wila** SNR=9.6	**0.32**	**194**	Sg	Sg	15 37 31.7	+1.0
WILA				Sg	Sg	15 37 31.7	+1.0
STIEG	**Stiegenhof Hun**	**0.34**	**228**	⇓P	Pg	15 37 27.2	+0.3
STIEG				⇓P	Pg	15 37 27.2	+0.3
	SNR=3.3						
FLACH	**Flaach** SNR=5.3	**0.34**	**244**	Pg	Pg	15 37 27.5	+0.5
FLACH				Pg	Pg	15 37 27.5	+0.5
SGT00	**Sennhlsen**	**0.35**	**147**	Sg	Sg	15 37 32.8	+0.9
SGT00				Sg	Sg	15 37 32.8	+0.9
	SNR=3.3						
GUT	**Gutenstein** SNR=18	**0.36**	**10**	⇑P	Pg	15 37 27.6	+0.3
GUT				⇑P	Pg	15 37 27.6	+0.3
GUT				Sg	Sg	15 37 32.6	+0.6
SLE	**Schleitheim** 0.1nm,SNR=32	**0.36**	**277**	⇑P	Pg	15 37 27.6	+0.3
SLE				⇑P	Pg	15 37 27.6	+0.3
SLE				Sg	Sg	15 37 32.6	+0.4
SGT03	**Degersheim** SNR=6.0	**0.37**	**161**	Sg	Sg	15 37 33.6	+1.0
SGT03				Sg	Sg	15 37 33.6	+1.0
SGT05	**Eggersriet** SNR=5.7	**0.40**	**133**	Sg	Sg	15 37 34.6	+1.1
SGT05				Sg	Sg	15 37 34.6	+1.1
SGT04	**Schlatt-Haslen** SNR=7.7	**0.43**	**149**	Pg	Pg	15 37 29.3	+0.6
SGT04				Pg	Pg	15 37 29.3	+0.6
METMA	**Mettma DE** SNR=9.2	**0.52**	**269**	Pg	Pg	15 37 30.4	+0.1
METMA				Pg	Pg	15 37 30.4	+0.1
BERGE	**Lenzkirch (DE)**	**0.59**	**285**	Pg	Pg	15 37 31.9	+0.3
BERGE				Pg	Pg	15 37 31.9	+0.3
	SNR=13						
BERGE				Sg	Sg	15 37 39.8	+0.4

UCR 29 15:55:25.9±1.5, 9°.39N×84°.59W, h2km±4km, MD4.0, 1C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCR2	**La Lucha 2**	**0.68**	**59**	⇓*e*P	Pg	15 55 39.3	+0.4
LCR2				*e*S	Sb	15 55 50.7	+0.1
SRA1	**San Ramn**	**0.70**	**9**	*e*P	Pg	15 55 39.8	+0.5
SRA1				*e*S	Sb	15 55 51.3	+0.1
EDDO	**Dominical**	**0.73**	**101**	*e*P	Pg	15 55 40.6	+0.7
EDDO				*e*S	Sb	15 55 51.5	-0.4
JTS	**Las Juntas de**	**0.96**	**338**	⇓*e*P	Pg	15 55 43.9	-0.5
JTS				*e*S	Sb	15 55 58.3	-0.3
CVTR	**Volcan Turrial**	**1.03**	**53**	*e*P	Pb	15 55 46.3	-0.5
CVTR				*e*S	Sn	15 56 02.8	-0.4
CASO	**Castillo**	**1.05**	**352**	*i* P	Pg	15 55 45.7	-0.3
CASO				*i* S	Sb	15 56 01.7	+0.7
ARE1	**Arenal 1**	**1.07**	**353**	⇓*e*P	Pg	15 55 46.5	+0.1
ARE1				*e*S	Sn	15 56 04.2	+0.7
FORC	**Fortuna**	**1.07**	**356**	*i* P	Pg	15 55 46.5	+0.1
FORC				*i* S	Sb	15 56 01.9	+0.1
CEDE	**Laguna Cedeo**	**1.09**	**354**	*e*P	Pg	15 55 46.9	-0.1
PLVR	**Palo Verde**	**1.21**	**322**	*e*P	Pg	15 55 47.9	-1.3
PLVR				*e*S	Sb	15 56 05.8	-0.1
GUAI	**GUAI**	**1.26**	**314**	*i* P	Pg	15 55 50.2	+0.1
ACAL	**Aguas Claras**	**1.31**	**341**	*i* P	Pg	15 55 50.1	-0.9
DRK0	**Durika**	**1.33**	**95**	⇑*e*P	Pg	15 55 50.5	-1.1
CUI	**Cuipilapa**	**1.38**	**336**	*e*P	Pn	15 55 51.1	-1.2
CUI				*e*S	Sg	15 56 10.4	+0.1
HORNC	**Hornillas**	**1.44**	**336**	*i* P	Pn	15 55 52.2	-0.9
LIM1	**Limonal**	**1.45**	**333**	*i* P	Pn	15 55 52.1	-1.2
GPS2	**Hotel Rincn d**	**1.55**	**331**	*e*P	Pn	15 55 53.9	-0.7
GPS1	**Guardaparques**	**1.56**	**332**	*i* P	Pn	15 55 54.2	-0.7
GBS3	**Finca Las Img**	**1.62**	**329**	*i* P	Pn	15 55 54.5	-1.1
GB1A	**Borinquen Arri**	**1.63**	**331**	*e*P	Pn	15 55 55.5	-0.3
GB1A				*e*S	Sn	15 56 17.3	-0.1
BUAI	**Buenos Aires**	**1.65**	**334**	*i* P	Pn	15 55 55.5	-0.5
ACON	**Acoyapa**	**2.62**	**347**	*e*P	Pn	15 56 08.7	-0.7

*IDC **29** 15:56:16.3±0.8, 55°.92S×27°.79W, h124km±7km, mb3.8/5, mb1 4.0/7, mb1mx3.8/24, mbtmp4.3/7, Error ellipse: s-maj=28.4km s-min=15.8km az=91.0*
*NEIC **29** 15:56:17.2±1.8, 55°.9S±0°.1×27°.9W±0°.2, h133km±6km, mb4.2/10, Error ellipse: s-maj=21.5km s-min=14.2km az=208.0*

ISC 29 15:56:16.1±0.7, 55°.9S±0°.1×27°.96W±0°.10, h121km, n28, σ1°.05/32, mb4.2/9, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.17**	**285**	Pn	**Pn**	**15 57 32.3**	**+1.1**
HOPE				Sn	**Sn**	**15 58 26.7**	**-3.0**
VNA1	**Neumayer--Stat**	**17.06**	**157**	P	**P**	**16 00 06.3**	**-0.3**
VNA3	**Neumayer Olymp**	**17.24**	**160**	P	**P**	**16 00 07.8**	**-0.9**
VNA2	**Neumayer--Watz** baz=315,slow=13	**17.46**	**157**	P	**P**	**16 00 10.5**	**-0.5**
SNAA	**Sanae**	**19.02**	**156**	P	**P**	**16 00 27.3**	**-0.8**
SNAA	**Sanae** 8.6nm,0.3s,baz=312,slow=11,SNR=586	**19.02**	**156**	P	**P**	**16 00 27.2**	**-1.0**
SNAA	**Sanae**	**19.02**	**156**	P	**P**	**16 00 27.2**	**-1.0**
PMSA	**Palmer Station** 0.8nm,0.3s,baz=39,slow=6.5,SNR=1.6	**19.65**	**229**	P	**P**	**16 00 36.1**	**+1.2**
PMSA	**Palmer Station**	**19.65**	**229**	P	**P**	**16 00 36.6**	**+1.7**
QSPA	**South Pole Qui** 3.3nm,0.7s,baz=187,slow=3.0,SNR=41	**34.31**	**180**	P	**P**	**16 02 50.4**	**-0.1**
QSPA	1.2nm,0.9s,baz=252,slow=9.8,SNR=1.3			pP	**pwP**	**16 03 19.8**	**-0.5**
QSPA	**South Pole Qui**	**34.31**	**180**	P	**P**	**16 02 50.6**	**0.0**
QSPA	comp=Z,14nm,1.6s			IAmb	IAmb	16 02 52.4	
PB01	**IPOC Station P**	**46.48**	**301**		**P**	**16 04 31.5**	**+0.5**
PB01	comp=Z,5.6nm,1.3s			IAmb	IAmb	16 04 31.7	
VNDA	**Vanda** comp=Z,0.8nm,0.5s,baz=187,slow=5.9,SNR=5.9	**46.66**	**183**	P	**P**	**16 04 32.1**	**+0.5**
VNDA	**Vanda**	**46.66**	**183**	P	**P**	**16 04 32.4**	**+0.8**
PB08	**IPOC Station P**	**47.10**	**302**	P	**P**	**16 04 37.9**	**+1.7**
PB08	comp=Z,5.0nm,0.9s			IAmb	IAmb	16 04 55.1	
MNMC	**Minye Minye**	**48.17**	**303**	P	**P**	**16 04 45.4**	**+1.0**
MNMC	comp=Z,6.4nm,1.2s			IAmb	IAmb	16 04 47.3	
LPAZ	**La Paz** comp=Z,0.6nm,0.5s,baz=213,slow=6.2,SNR=4.1	**49.96**	**306**	P	**P**	**16 04 58.5**	**+0.1**
LPAZ	**La Paz**	**49.96**	**306**		**P**	**16 04 58.9**	**+0.6**
LPAZ	**La Paz**	**49.96**	**306**	P	**P**	**16 04 58.4**	**0.0**
LPAZ	comp=Z,3.0nm,1.2s			IAmb	IAmb	16 05 05.6	
CASY	**Casey**	**54.16**	**161**	P	**P**	**16 05 28.0**	**-0.1**
CASY	comp=Z,5.6nm,1.2s			IAmb	IAmb	16 05 33.1	
TOA0	**Torodi Ar. Sit**	**73.17**	**30**	P	**P**	**16 07 33.0**	**-0.4**
TOA0	comp=Z,5.0nm,1.4s			IAmb	IAmb	16 07 45.7	
TORD	**Torodi Ar. Bea** comp=Z,1.2nm,0.4s,baz=194,slow=6.4,SNR=9.6	**73.17**	**30**	P	**P**	**16 07 33.7**	**+0.3**
TORD	comp=Z,0.3nm,0.4s,baz=215,slow=8.3,SNR=2.3			pP	**pP**	**16 08 04.0**	**+1.5**
ASAR	**Alice Springs** comp=Z,0.4nm,0.8s,baz=186,slow=4.4,SNR=7.9	**99.22**	**163**	P	**Pdif**	**16 09 42.4**	**-1.6**
FINES	**FINESS Array B** comp=Z,1.7nm,0.8s,baz=135,slow=0.8,SNR=7.2	**124.49**	**28**	PKP	**PKPdf**	**16 14 58.3**	**-1.0**
ARCES	**ARCESS Array B** comp=Z,0.4nm,0.5s,baz=177,slow=2.4,SNR=7.0	**131.00**	**22**	PKP	**PKPdf**	**16 15 11.0**	**-0.6**
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.6s,baz=138,slow=1.9,SNR=3.1	**135.80**	**318**	PKP	**PKPdf**	**16 15 20.7**	**0.0**
ILAR	**Eielson Array** comp=Z,1.7nm,0.6s,baz=130,slow=1.7,SNR=17	**149.72**	**312**	PKPbc	**PKPbc**	**16 15 49.7**	**-0.3**
ILAR	comp=Z,0.6nm,0.8s,baz=142,slow=1.6,SNR=3.6			pPKPbc	**pPKPbc**	**16 16 21.5**	**-0.5**
SONM	**Songino Array** comp=Z,2.1nm,0.4s,baz=223,slow=3.7,SNR=13	**151.15**	**87**	PKPbc	**PKPbc**	**16 15 53.1**	**-1.0**

ZUR 29 16:01:25.9, 47°.72N×9°.02E, h10km±2km, MLh0.9/4, 2C, Error ellipse: s-maj=3.8km s-min=1.0km az=156.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WALHA	**Wallhausen, DE** 0.2nm,SNR=16	**0.07**	**66**	⇑P	Pg	16 01 28.3	+0.2
WALHA				⇑P	Pg	16 01 28.3	+0.2
WALHA				Sg	Sg	16 01 30.0	+0.2
STEIN	**Stein am Rhein**	**0.12**	**243**	Pg	Pg	16 01 28.9	+0.2
STEIN				Pg	Pg	16 01 28.9	+0.2
	0.1nm,SNR=4.7						
STEIN				Sg	Sg	16 01 31.2	+0.5
WEIN	**Weingarten** SNR=3.9	**0.20**	**187**	Sg	Sg	16 01 33.5	+0.7
WEIN				Sg	Sg	16 01 33.5	+0.7
GUT	**Gutenstein**	**0.35**	**10**	Sg	Sg	16 01 38.5	+0.8
GUT				Sg	Sg	16 01 38.5	+0.8
	SNR=5.2						
SLE	**Schleitheim** SNR=9.7	**0.36**	**277**	Sg	Sg	16 01 38.3	+0.5
SLE				Sg	Sg	16 01 38.3	+0.5

ROM 29 16:02:36.1±0.1, 43°.396N±0°.003×12°.40E±0°.01, h7km, ML1.1/1, Error ellipse: s-maj=1.0km s-min=0.1km az=254.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATVO	**AVT- Monte Val**	**0.01**	**162**	P	Pg	16 02 37.5	+0.1
ATVO				S	Sg	16 02 38.5	+0.2
ATVO				AML	AML		
	comp=E,102μm,0.4s						
ATVO				AML	AML		
	comp=N,69μm,0.1s						
ATPI	**Pietralunga -**	**0.06**	**1**	P	Pg	16 02 37.9	+0.2
ATPI				S	Sg	16 02 39.2	+0.3
MURB	**Monte Urbino**	**0.16**	**146**	P	Pg	16 02 39.8	+0.4
MURB				S	Sg	16 02 42.7	+1.1
MURB				AML	AML		
	comp=E,102μm,0.3s						
MURB				AML	AML		
	comp=N,92μm,0.3s						
IMOL	**Imola, Italy**	**1.07**	**334**	S	Sn	16 03 15.0	+2.3

*NEIC **29** 16:06:48.2±0.8, 64°.91N±0°.04×146°.91W±0°.03, h8km±10km, Error ellipse: s-maj=5.8km s-min=1.7km az=187.0*
*ANF **29** 16:06:48.2±0.7, 64°.91N×146°.89W, h0km, ML3.6/5, Error ellipse: s-maj=8.6km s-min=2.0km az=62.0*
*AEIC **29** 16:06:48.2±0.9, 64°.92N±0°.04×146°.91W±0°.09, h7km±3km, ML3.1/69, Error ellipse: s-maj=6.1km s-min=4.6km az=135.0*

ISC 29 16:06:47.8±0.9, 64°.90N±0°.02×147°.02W±0°.03, h11km±7km, n68, σ1°.25/78, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IL31		**0.14**	**156**		**Pg**	**16 06 51.2**	**+0.2**
IL31				Sg	**Sg**	**16 06 53.3**	**0.0**
POKR	**Poker Plat Res** baz=132	**0.28**	**322**	P	**Pb**	**16 06 54.3**	**-0.5**
POKR	baz=132			S	**Sb**	**16 06 58.3**	**-1.3**
POKR	**Poker Plat Res**	**0.28**	**322**		**Pb**	**16 06 54.2**	**-0.7**
POKR					**Sb**	**16 06 58.4**	**-1.2**
TCOL	**CIGO, UAF Yank** baz=84	**0.36**	**267**	P	**Pb**	**16 06 56.3**	**+0.1**
TCOL	**CIGO, UAF Yank**	**0.36**	**267**		**Pb**	**16 06 56.2**	**+0.1**
TCOL					**Sb**	**16 07 02.1**	**+0.3**
PS08	**TAPS Pump Stn8**	**0.37**	**166**		**Pg**	**16 06 55.4**	**+0.3**
PS08					**Sg**	**16 07 00.8**	**+0.8**

CCB	**Clear Creek Bu**	**0.42 234**		**Pb**	**16 06 57.0**	**-0.1**
CCB			Sg	**Sb**	**16 07 03.1**	**-0.4**
HDA	**Harding Lake**	**0.49 176**	P	**Pb**	**16 06 57.9**	**-0.6**
	baz=2.1					
HDA	**Harding Lake**	**0.49 176**	Pg	**Pb**	**16 06 57.8**	**-0.6**
MDM	**Murphy Dome**	**0.52 277**		**Pb**	**16 06 59.0**	**+0.1**
WRH	**Wood River Hil**	**0.63 228**	Pg	**Pn**	**16 07 00.9**	**-1.7**
WRH			Sg	**Sb**	**16 07 09.8**	**+0.3**
PS07	**TAPS Pump Stn7**	**0.68 308**		**Pb**	**16 07 01.9**	**+0.4**
PS07				**Sb**	**16 07 11.2**	**+0.3**
PRP	**Porcupine Dome**	**0.89 45**		**Pg**	**16 07 04.0**	**-0.8**
MCK	**McKinley**	**1.44 216**	Pn	**Pb**	**16 07 15.0**	**+0.5**
PS06	**TAPS Pump Stn6**	**1.49 311**		**Pg**	**16 07 15.5**	**-0.9**
RIDG	**Independent Ri**	**1.50 140**	Pn	**Pn**	**16 07 14.6**	**0.0**
PS10	**TAPS Pump St10**	**1.58 159**		**Pn**	**16 07 15.9**	**+0.2**
PS10				**Sn**	**16 07 36.8**	**+0.7**
MLY	**Manley**	**1.59 277**		**Pg**	**16 07 16.2**	**-2.0**
MLY				**Sn**	**16 07 37.1**	**+0.7**
RND	**Reindeer**	**1.70 209**	Pn	**Pg**	**16 07 18.6**	**-1.7**
DOT	**Dot Lake**	**1.80 133**	Pn	**Pn**	**16 07 18.4**	**-0.4**
FYU	**Fort Yukon**	**1.83 23**	Pn	**Pn**	**16 07 19.5**	**+0.4**
DHY	**Denali Highway**	**1.84 185**		**Pb**	**16 07 21.1**	**-0.4**
BPAW	**Bear Paw Mtn.**	**1.90 247**	Pn	**Pb**	**16 07 20.3**	**-2.1**
TRF	**Thorofare Moun**	**2.04 226**	Pn	**Pb**	**16 07 23.5**	**-1.4**
PAX	**Paxson**	**2.05 160**	Pn	**Pn**	**16 07 23.0**	**+0.8**
WAT2	**Susitna Watana**	**2.06 200**		**Pb**	**16 07 24.2**	**-1.0**
KTH	**Kantishna Hill**	**2.17 233**		**Pb**	**16 07 25.4**	**-1.8**
WAT6	**Susitna Watana**	**2.35 188**		**Pn**	**16 07 28.0**	**+1.6**
MENT	**Mentasta**	**2.45 142**		**Pn**	**16 07 27.7**	**+0.1**
COLD	**Coldfoot**	**2.67 332**	Pn	**Pn**	**16 07 32.2**	**+1.4**
BM03	**Burnt Mountain**	**2.72 20**		**Pn**	**16 07 31.9**	**+0.6**
BC03		**2.95 126**		**Pn**	**16 07 34.0**	**-0.4**
IM03		**3.02 294**		**Pn**	**16 07 36.2**	**+0.9**
PPLA	**Purkeypile**	**3.04 231**	Pn	**Pn**	**16 07 36.7**	**+0.8**
SCM	**Sheep Creek Mo**	**3.08 183**		**Pn**	**16 07 38.6**	**+2.3**
SML	**Sawmill**	**3.16 191**		**Pn**	**16 07 38.8**	**+1.4**
GHO	**Glory Hole Cre**	**3.25 196**		**Pn**	**16 07 40.0**	**+1.2**
DAWY	**Dawson**	**3.41 101**	Pn	**Pn**	**16 07 41.1**	**+0.3**
PMR	**Palmer**	**3.45 197**	Pn	**Pn**	**16 07 43.2**	**+1.8**
KNK	**Knik Glacier**	**3.56 191**		**Pn**	**16 07 44.1**	**+1.3**
PS04	**TAPS Pump Stn4**	**3.66 346**		**Pn**	**16 07 46.5**	**+2.2**
BVCY	**Beaver Creek**	**3.71 129**		**Pn**	**16 07 45.0**	**+0.1**
GLB	**Gilahina Butte**	**3.76 156**		**Pn**	**16 07 48.3**	**+2.6**
TOLK	**Toolik Lake Re**	**3.89 346**	P	**Pn**	**16 07 49.9**	**+2.4**
	baz=163					
TOLK	**Toolik Lake Re**	**3.89 346**	Pn	**Pn**	**16 07 49.8**	**+2.3**
YUK1	**Sand Pete Hill**	**4.00 131**		**Pn**	**16 07 49.2**	**+0.1**
RC01	**Rabbit Creek A**	**4.02 199**		**Pn**	**16 07 51.2**	**+2.1**
VRDI	**Verde Repeater**	**4.03 155**	Pn	**Pn**	**16 07 50.3**	**+0.8**
GLI	**Glacier Island**	**4.03 181**		**Pn**	**16 07 50.2**	**+0.8**
PWL	**Port Wells**	**4.10 189**		**Pn**	**16 07 53.2**	**+2.9**
FID	**Port Fidalgo**	**4.17 176**		**Pn**	**16 07 53.0**	**+1.7**
YUK2	**White River**	**4.18 135**		**Pn**	**16 07 51.4**	**-0.1**
YUK3	**Moose Creek**	**4.31 134**		**Pn**	**16 07 53.0**	**-0.3**
EYAK	**Cordova Ski Ar**	**4.40 172**		**Pn**	**16 07 57.3**	**+2.9**
BALM	**Baldy**	**4.42 149**		**Pn**	**16 07 55.3**	**+0.5**
TTA	**Tatalina**	**4.43 248**		**Pn**	**16 07 55.7**	**+0.8**
TT01	**Tatalina**	**4.45 247**		**Pn**	**16 07 57.2**	**+2.1**
EPYK	**Eagle Plains**	**4.52 66**	P	**Pn**	**16 07 56.2**	**+0.1**
	baz=256					
EPYK	**Eagle Plains**	**4.52 66**	Pn	**Pn**	**16 07 55.4**	**-0.6**
KIAG	**Kiagna River**	**4.52 150**		**Pn**	**16 07 57.0**	**+0.8**
HIN	**Hinchinbrook I**	**4.52 177**		**Pn**	**16 07 54.9**	**-1.2**
BARN	**Barnard Glacie**	**4.56 145**		**Pn**	**16 07 57.1**	**+0.3**
RAGM	**Ragged Mountai**	**4.66 165**		**Pn**	**16 07 59.1**	**+1.1**
WAX	**Waxell Ridge**	**4.86 155**		**Pn**	**16 08 02.3**	**+1.6**
RSO	**Redoubt South**	**5.17 213**	Pn	**Pn**	**16 08 06.7**	**+1.5**
YUK4	**Talbot Arm**	**5.21 129**		**Pn**	**16 08 06.0**	**+0.3**
CNPM	**China Poot**	**5.74 202**		**Pn**	**16 08 14.5**	**+1.7**
INK	**Inuvik**	**6.37 51**		**Pn**	**16 08 22.0**	**+0.7**

UCR 29 16:23:33.9±1.7, 9.34N×84.60W, h5km±4km, MD4.0, MW3.8, 2C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCR2	**La Lucha 2**	**0.71**	**56**	*e*P	Pg	16 23 47.6	0.0
LCR2				*e*S	Sb	16 23 58.7	-0.5
EDDO	**Dominical**	**0.73**	**97**	*e*P	Pb	16 23 48.7	-0.5
EDDO				*e*S	Sb	16 23 59.8	+0.3
SRA1	**San Ramn**	**0.75**	**9**	*e*P	Pg	16 23 48.0	-0.2
SRA1				*e*S	Sb	16 23 59.9	-0.2
SJS	**Escuela Geolog**	**0.80**	**42**	*e*P	Pg	16 23 49.3	0.0
SJS				*e*S	Sg	16 23 60.0	+0.3
EDLM	**Las Mercedes**	**1.00**	**94**	*e*P	Pg	16 23 53.4	+0.3
JTS	**Las Juntas de**	**1.00**	**340**	*e*P	Pg	16 23 52.1	-1.0
JTS				*e*S	Sg	16 24 06.5	+0.3
CVTR	**Volcan Turrial**	**1.07**	**51**	*e*P	Pg	16 23 54.0	-0.5
CVTR				*e*S	Sn	16 24 11.2	-0.2
CASO	**Castillo**	**1.09**	**353**	*i* P	Pg	16 23 53.9	-1.0
ARE1	**Arenal 1**	**1.12**	**354**	*e*P	Pg	16 23 54.8	-0.6
ARE1				*e*S	Sn	16 24 12.4	+0.3
FORC	**Fortuna**	**1.12**	**357**	*i* P	Pg	16 23 54.8	-0.6
FORC				*i* S	Sb	16 24 10.7	0.0
CEDE	**Laguna Cedeo**	**1.14**	**355**	*e*P	Pg	16 23 55.2	-0.6
EDPN	**Palmar Norte**	**1.19**	**108**	*e*P	Pg	16 23 55.5	-1.2
EDPN				*e*S	Sg	16 24 12.2	-0.1
PLVR	**Palo Verde**	**1.24**	**324**	*e*P	Pg	16 23 56.1	-1.7
PLVR				*e*S	Sg	16 24 14.1	+0.2
GUAI	**GUAI**	**1.28**	**316**	*i* P	Pn	16 23 57.3	-1.2
EDBA	**Buenos Aires**	**1.32**	**98**	*e*P	Pn	16 23 56.1	-3.0
EDBA				*e*S	Sg	16 24 16.1	-0.3
DRK0	**Durika**	**1.34**	**93**	*e*P	Pn	16 23 58.7	-0.8
DRK0				*e*S	Sg	16 24 18.4	-0.6
ACAL	**Aguas Claras**	**1.35**	**342**	*i* P	Pn	16 23 58.1	-1.5
PTEN	**Parque Tenorio**	**1.41**	**344**	*i* P	Pn	16 23 59.7	-0.7
CUI	**Cuipilapa**	**1.42**	**337**	*i* P	Pn	16 23 59.4	-1.1
CUI				*e*S	Sb	16 24 18.8	-0.5
HORNC	**Hornillas**	**1.47**	**337**	*i* P	Pn	16 24 00.1	-1.1
GUAB	**Guayabo de Bag**	**1.49**	**336**	*i* P	Pn	16 24 00.5	-1.0
LIM1	**Limonal**	**1.49**	**335**	*i* P	Pn	16 24 00.3	-1.1
GPS2	**Hotel Rincn d**	**1.58**	**332**	*e*P	Pn	16 24 02.3	-0.5
GPS2				*e*S	Sb	16 24 24.0	-0.2
NY14	**Universidad de**	**1.59**	**325**	*i* P	Pn	16 24 02.7	-0.1
GPS1	**Guardaparques**	**1.60**	**333**	*i* P	Pn	16 24 02.3	-0.7
LAPC	**Finca la Perla**	**1.64**	**330**	*i* P	Pn	16 24 02.2	-1.3
BUEV	**Buena Vista**	**1.65**	**331**	*e*P	Pn	16 24 03.2	-0.5
BUEV				*e*S	Sg	16 24 26.7	-0.2
GBS3	**Finca Las Img**	**1.66**	**330**	*i* P	Pn	16 24 03.1	-0.7
GB1A	**Borinquen Arri**	**1.66**	**332**	*e*P	Pn	16 24 03.3	-0.5
GB1A				*e*S	Sn	16 24 25.4	-0.3
BUAI	**Buenos Aires**	**1.69**	**335**	*i* P	Pn	16 24 03.5	-0.6
BRU2	**Volcan**	**1.96**	**106**	*e*P	Pn	16 24 08.1	0.0
ACON	**Acoyapa**	**2.67**	**348**	*e*P	Pn	16 24 16.9	-0.7

JMA 29 16:30:59.4±0.2, 24.84N×123.29E, h27km, M1.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.45**	**214**	P	Pb	16 31 08.7	-0.3
YOJ				S	Sb	16 31 14.8	-0.6
JYNG	**Yonagunijimaku**	**0.50**	**219**	P	Pb	16 31 09.5	-0.2
JYNG				S	Sb	16 31 16.3	-0.3
IRIF	**Iriomote-Funau**	**0.64**	**141**	P	Pb	16 31 11.8	-0.3
IRIF				S	Sb	16 31 21.1	+0.4
JKRS	**Kuro-shima**	**0.89**	**132**	P	Pn	16 31 15.8	-0.3
JKRS				S	Sb	16 31 27.5	-0.2
HATJ	**Hateruma jima**	**0.91**	**149**	P	Pn	16 31 16.3	-0.1
JIJ	**Ishigaki jima**	**0.91**	**121**	P	Pn	16 31 16.0	-0.4
JIJ				S	Sb	16 31 27.3	-1.0
JISG	**Ishigakijimahi**	**0.96**	**105**	P	Pn	16 31 16.6	-0.5
JISG				*e*S	Sb	16 31 29.0	-0.8

TAP 29 16:31:37.2, 24.39N×121.78E, h19km±1km, ML1.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.06**	**322**	*i* P	Pg	16 31 40.5	-0.2
	baz=327						
ENA				*e*S	Sg	16 31 43.1	0.0
	baz=327						
TWC	**Suao**	**0.23**	**16**	*e*S	Sb	16 31 46.0	+0.1
	baz=18						
NACB	**Ninganchiao**	**0.27**	**219**	P	Pb	16 31 43.2	-0.1
	baz=218						
NACB				*e*S	Sg	16 31 47.5	0.0
	baz=218						

ENTT	**Nioudou**	**0.32**	**323**	P	Pg	16 31 43.9	-0.2
	baz=323						
ENTT				*e*S	Sg	16 31 48.9	0.0
	baz=323						
ETLH	**Xiulin Townshi**	**0.32**	**237**	*e*P	Pg	16 31 43.9	-0.4
	baz=236						
ETLH				*e*S	Sg	16 31 48.9	-0.2
	baz=236						
NDT	**Datong Townshi**	**0.32**	**312**	P	Pg	16 31 44.0	-0.3
	baz=311						
NDT				*e*S	Sg	16 31 49.1	+0.1
	baz=311						
NNSB	**Datong**	**0.36**	**277**	P	Pg	16 31 44.8	-0.2
	baz=276						
NNSB				*e*S	Sg	16 31 50.1	-0.2
	baz=276						
NNSH	**Datong**	**0.36**	**277**	P	Pg	16 31 44.7	-0.3
	baz=276						
NNSH				*e*S	Sg	16 31 49.8	-0.5
	baz=276						
YHNB	**Yeheng**	**0.46**	**308**	*e*P	Pg	16 31 46.6	-0.1
	baz=307						
YHNB				*e*S	Sg	16 31 53.0	-0.1
	baz=307						
NWLT	**Wulai**	**0.46**	**327**	*e*S	Sg	16 31 53.2	+0.1
	baz=327						
NSK	**Sanguang**	**0.48**	**307**	*e*S	Sg	16 31 53.0	-0.6
	baz=307						
WHF	**Hehuan Shan**	**0.53**	**243**	*e*S	Sb	16 31 55.3	0.0
	baz=242						

*IDC **29** 16:34:51.7±2.7, 17.06S×173.84W, h0km, mb4.2/5, mb1 4.4/5, mb1mx3.9/31, mbtmp4.2/5, Error ellipse: s-maj=113.4km s-min=27.7km az=134.0*
*NEIC **29** 16:35:08.6±1.4, 16.92S±0.04×174.71W±0.1, h128km±8km, mb4.6/13, Error ellipse: s-maj=17.5km s-min=5.5km az=87.0*

ISC 29 16:35:07.9±0.6, 16.90S±0.08×174.05W±0.08, h124km, n25, σ1§32/29, mb4.5/12, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.69**	**37**		**Pn**	**16 36 05.6**	**+2.0**
AFI				Sn	**Sn**	**16 36 44.0**	**-2.6**
NIUE	**Niue**	**4.48**	**119**	Pn	**Pn**	**16 36 16.2**	**+2.3**
NIUE				Sn	**Sn**	**16 37 02.3**	**-2.9**
ARMA	**Armidale**	**34.05**	**240**	P	**P**	**16 41 40.9**	**+0.3**
ARMA				IAmb	IAmb	16 41 55.3	
	comp=Z,12nm,1.2s						
RABL	**Rabaul**	**35.46**	**287**	P	**P**	**16 41 52.4**	**-0.3**
STKA	**Stephens Creek**	**42.76**	**241**	P	**P**	**16 42 52.6**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=80,slow=10,SNR=9.6						
STKA	**Stephens Creek**	**42.76**	**241**	P	**P**	**16 42 53.0**	**-0.3**
BBOO	**Buckleboo**	**47.53**	**241**	P	**P**	**16 43 30.6**	**-0.4**
BBOO				IAmb	IAmb	16 43 31.0	
	comp=Z,29nm,1.5s						
WR0	**Warramunga Arr**	**48.72**	**258**	P	**P**	**16 43 39.8**	**-0.5**
WR0				IAmb	IAmb	16 43 44.8	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**48.88**	**258**	P	**P**	**16 43 41.0**	**-0.5**
WB0				IAmb	IAmb	16 43 54.6	
	comp=Z,15nm,1.4s						
WB2	**Warramunga Arr**	**48.90**	**258**	P	**P**	**16 43 40.6**	**-1.1**
WB2				IAmb	IAmb	16 44 01.0	
	comp=Z,12nm,1.5s						
WRAB	**Tennant Creek**	**48.90**	**258**	P	**P**	**16 43 40.4**	**-1.2**
WRAB				IAmb	IAmb	16 43 56.8	
	comp=Z,16nm,1.5s						
WRA	**Warramunga Arr**	**48.91**	**258**	P	**P**	**16 43 40.3**	**-1.4**
	comp=Z,0.8nm,0.4s,baz=96,slow=6.9,SNR=46						
WRA				PcP	**PcP**	**16 45 04.5**	**+0.1**
	comp=Z,0.7nm,1.1s,baz=90,slow=3.6,SNR=1.7						
AS31	**Alice Springs**	**49.07**	**253**	P	**P**	**16 43 42.1**	**-0.9**
ASAR	**Alice Springs**	**49.07**	**253**	P	**P**	**16 43 42.2**	**-0.7**
	comp=Z,12nm,0.6s,baz=87,slow=8.9,SNR=375						
ASAR				PcP	**PcP**	**16 45 05.0**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=103,slow=3.7,SNR=2.5						
SAUI	**Saumlaki**	**53.96**	**272**	P	**P**	**16 44 19.8**	**+0.4**
KNRA	**Kununurra**	**54.74**	**263**	P	**P**	**16 44 25.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**57.30**	**259**	P	**P**	**16 44 42.8**	**-0.5**
FITZ				IAmb	IAmb	16 45 10.2	
	comp=Z,16nm,1.6s						
QSPA	**South Pole Qui**	**73.15**	**180**	P	**P**	**16 46 25.3**	**+0.5**
PETK	**Petropavlovsk-**	**73.87**	**343**	P	**P**	**16 46 29.8**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=127,slow=9.4,SNR=2.7						
GLA	**Glamis**	**75.25**	**48**		**PcP**	**16 46 51.9**	**+1.6**
SZCU	**Shurtz Canyon**	**78.84**	**45**		**PcP**	**16 47 03.4**	**-2.6**
ILAR	**Eielson Array**	**84.03**	**11**	P	**P**	**16 47 24.2**	**+0.1**
	comp=Z,0.7nm,0.9s,baz=230,slow=6.9,SNR=6.3						
MKAR	**Makanchi Array**	**111.43**	**314**	PKiKP	**PKiKP**	**16 53 27.2**	**-0.4**
	comp=Z,0.1nm,0.5s,baz=129,slow=2.9,SNR=2.3						
CLL	**Collm**	**145.22**	**352**	*i* PKPbc	**PKPdf**	**16 54 32.2**	**+1.4**
BRTR	**Keskin Array B**	**146.90**	**319**	PKPbc	**PKPab**	**16 54 37.2**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=119,slow=3.1,SNR=5.1						

*ATH **29** 16:41:54.9, 41.04N×19.89E, h47km±5km, ML2.3/4, Error ellipse: s-maj=6.2km s-min=1.3km az=336.0*
*TIR **29** 16:41:55.2, 40.97N×20.01E, h32km, Md2.8/5*
*THE **29** 16:41:56.7, 40.94N×20.01E, h17km±3km, ML2.2/5, Error ellipse: s-maj=4.0km s-min=0.9km az=303.0*
*SKO **29** 16:41:57.4, 41.07N×20.06E, h23km*
*BEO **29** 16:41:58.3±0.6, 41.06N×20.12E, h15km±2km, ML1.9/10*

ISC 29 16:41:54.8±1.1, 40.96N±0.02×19.94E±0.02, h13km±9km, n56, σ1§08/96, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.39**	**352**	*e*Pg	**Pb**	**16 42 04.4**	**+0.8**
TIR				*e*Sg	**Sb**	**16 42 12.3**	**+2.8**
TIR	**Tirane**	**0.39**	**352**	P	**Pb**	**16 42 04.6**	**+1.0**
TIR				S	**Sb**	**16 42 11.8**	**+2.3**
	175nm,0.4s						
TIR	**Tirane**	**0.39**	**352**	*i* PG	**Pb**	**16 42 04.4**	**+0.8**
TIR				*i* SG	**Sb**	**16 42 11.4**	**+1.9**
TIR	**Tirane**	**0.39**	**352**	P	**Pb**	**16 42 04.5**	**+0.8**
TIR				S	**Sb**	**16 42 10.8**	**+1.2**
TIR				AML	AML	16 42 15.9	
	comp=N,1002μm,0.2s						
TIR				AML	AML	16 42 19.4	
	comp=E,836μm,0.5s						
OHR	**Ohrid**	**0.67**	**77**	*i* Pg	**Pg**	**16 42 07.7**	**-0.1**
OHR				*i* Sg	**Sb**	**16 42 18.0**	**+0.5**
OHR				*e*Lg	Lg	16 42 19.4	
	comp=N,53nm,0.5s						
OHR	**Ohrid**	**0.67**	**77**	*i* Pg	**Pg**	**16 42 07.7**	**-0.1**
OHR				*i* Sg	**Sb**	**16 42 18.0**	**+0.5**
OHR				*e*Lg	Lg	16 42 19.4	
	comp=N,53nm,0.5s						
PHP	**Peshkopia**	**0.82**	**27**	P	**Pb**	**16 42 11.1**	**+0.2**
PHP				S	**Sn**	**16 42 24.6**	**+0.5**
PHP	**Peshkopia**	**0.82**	**27**	*i* PG	**Pb**	**16 42 11.0**	**+0.1**
PHP				*i* SG	**Sb**	**16 42 22.5**	**+0.6**
NEST	**Nestorio**	**1.00**	**122**	P	**Pn**	**16 42 14.6**	**-0.1**
NEST	**Nestorio**	**1.00**	**122**	P	**Pn**	**16 42 14.6**	**-0.1**
NEST				S	**Sn**	**16 42 28.8**	**+0.1**
NEST				AML	AML	16 42 33.2	
	comp=N,81μm,0.3s						
NEST				AML	AML	16 42 34.9	
	comp=E,124μm,0.4s						
SRN	**Sarande**	**1.08**	**177**	P	**Pn**	**16 42 16.0**	**+0.4**
SRN				S	**Sn**	**16 42 31.3**	**+0.9**
	comp=E,90nm,0.6s						
SRN	**Sarande**	**1.08**	**177**	*i* PG	**Pn**	**16 42 16.9**	**+1.3**
SRN				*i* SG	**Sn**	**16 42 31.8**	**+1.4**
PUK	**Puka**	**1.08**	**358**	*i* PN	**Pn**	**16 42 16.6**	**+0.8**
PUK				*i* SN	**Sn**	**16 42 31.6**	**+1.0**
FNA	**Florina**	**1.10**	**99**	P	**Pb**	**16 42 15.4**	**-0.4**
FNA				S	**Sg**	**16 42 30.3**	**-0.1**
	comp=E,150nm,0.3s						
FNA	**Florina**	**1.10**	**99**	*i* PG	**Pb**	**16 42 15.2**	**-0.6**
FNA				*i* SG	**Sn**	**16 42 30.8**	**-0.3**
FNA	**Florina**	**1.10**	**99**	P	**Pb**	**16 42 15.5**	**-0.2**
FNA				S	**Sg**	**16 42 30.3**	**-0.1**
FNA				AML	AML	16 42 34.9	
	comp=E,299μm,0.3s						
FNA				AML	AML	16 42 35.1	
	comp=N,315μm,0.4s						
PENT	**Pentalofos**	**1.19**	**129**	P	**Pg**	**16 42 17.9**	**+0.2**
PENT	**Pentalofos**	**1.19**	**129**	P	**Pg**	**16 42 17.9**	**+0.2**
KASA	**Kassiopi**	**1.21**	**180**	P	**Pg**	**16 42 18.5**	**+0.4**
KASA				S	**Sn**	**16 42 34.5**	**+0.8**

KEK	**Kerkira**	**1.25**	**185**	P	**Pn**	**16 42 18.4**	**+0.4**
KEK				S	**Sb**	**16 42 34.6**	**+0.4**
	comp=N,82nm,0.3s						
KEK	**Kerkira**	**1.25**	**185**	P	**Pn**	**16 42 17.6**	**-0.3**
KEK				S	**Sb**	**16 42 34.3**	**+0.1**
SCTE	**Santa Cesarea**	**1.43**	**232**	P	**Pn**	**16 42 19.5**	**-0.9**
IGT	**Igoumenitsa**	**1.46**	**168**	P	**Pb**	**16 42 21.9**	**+0.1**
IGT				S	**Sb**	**16 42 40.7**	**+0.5**
	comp=N,88nm,0.7s						
IGT	**Igoumenitsa**	**1.46**	**168**	P	**Pn**	**16 42 21.5**	**+0.6**
IGT				S	**Sb**	**16 42 41.1**	**+0.9**
IGT				AML	AML	16 42 42.4	
	comp=E,195μm,0.9s						
IGT				AML	AML	16 42 43.1	
	comp=N,153μm,0.3s						
KPRO	**Kipourio**	**1.48**	**132**	P	**Pb**	**16 42 22.3**	**+0.1**
SKO	**Skopje**	**1.52**	**48**	*e*Pg	**Pb**	**16 42 22.2**	**-0.5**
SKO				*e*Sg	**Sb**	**16 42 41.9**	**0.0**
SKO	**Skopje**	**1.52**	**48**	*e*Pg	**Pb**	**16 42 22.1**	**-0.7**
SKO				*i* Sg	**Sg**	**16 42 42.4**	**-1.2**
SKO				*e*Lg	Lg	16 42 43.8	
	comp=N,4.5nm,0.4s						
SKO	**Skopje**	**1.52**	**48**	*e*Pg	**Pb**	**16 42 22.1**	**-0.7**
SKO				*i* Sg	**Sg**	**16 42 42.4**	**-1.2**
SKO				*e*Lg	Lg	16 42 43.8	
	comp=N,4.5nm,0.4s						
KZN	**Kozani**	**1.54**	**114**	P	**Pn**	**16 42 22.1**	**0.0**
PDG	**Podgorica**	**1.56**	**341**	*e*Pg	**Pg**	**16 42 25.7**	**+1.0**
PDG				*e*Sg	**Sg**	**16 42 45.1**	**+0.2**
GRG	**Griva**	**1.86**	**89**	P	**Pn**	**16 42 26.4**	**0.0**
THL	**Klokotos Trika**	**2.11**	**131**	P	**Pn**	**16 42 30.0**	**+0.2**
TREB	**Trebinje**	**2.12**	**326**	*e*Pn	**Pb**	**16 42 33.0**	**0.0**
LIT	**Litokhoron**	**2.13**	**113**	P	**Pn**	**16 42 30.9**	**+0.9**
NOCI	**Noci**	**2.19**	**266**	P	**Pn**	**16 42 29.6**	**-1.3**
LKD2	**Lefkada island**	**2.24**	**165**	P	**Pn**	**16 42 31.7**	**+0.1**
KNT	**Kendrikon**	**2.25**	**84**	P	**Pn**	**16 42 31.6**	**0.0**
SJES	**Sjenica**	**2.30**	**1**	*e*Pn	**Pb**	**16 42 35.7**	**-0.5**
SJES				*e*Sn	**Sn**	**16 43 01.3**	**+0.6**
BARS	**Barje**	**2.33**	**36**	*e*Pn	**Pn**	**16 42 34.7**	**-1.9**
BARS				*e*Sn	**Sn**	**16 43 00.3**	**-0.9**
BOSS	**Bosilegrad**	**2.44**	**50**	*e*Pn	**Pn**	**16 42 35.0**	**+0.6**
BOSS				*e*Sn	**Sn**	**16 43 02.5**	**-1.7**
STON	**Ston**	**2.54**	**320**	*e*Pn	**Pn**	**16 42 36.1**	**+0.5**
STON				Sn	**Sn**	**16 43 05.7**	**-0.7**
PDO	**Prodromos**	**2.55**	**157**	P	**Pn**	**16 42 36.1**	**+0.3**
MAKR	**Makrakomi, Fth**	**2.57**	**138**	P	**Pn**	**16 42 37.2**	**+1.1**
IVAS	**Ivanjica**	**2.62**	**3**	*e*Pn	**Pb**	**16 42 39.8**	**-1.8**
IVAS				*e*Sn	**Sn**	**16 43 10.6**	**+2.0**
AGG	**Agios Georgios**	**2.67**	**136**	P	**Pn**	**16 42 38.2**	**+0.7**
AGG				S	**Sn**	**16 43 09.6**	**-0.1**
VTS	**Vitosha**	**2.97**	**55**	*e*Pn	**Pn**	**16 42 41.6**	**-0.1**
ZAPS	**Zavoj**	**3.06**	**40**	*e*Pn	**Pn**	**16 42 43.5**	**+0.6**
ZAPS				*e*Sn	**Sn**	**16 43 17.0**	**-2.4**
DIVS	**Divibare**	**3.14**	**1**	*e*Pn	**Pn**	**16 42 46.4**	**+2.4**
DIVS				*e*Sn	**Sn**	**16 43 21.3**	**0.0**
MAKA	**Makarska**	**3.18**	**318**	*e*Pn	**Pn**	**16 42 42.3**	**-2.2**
MAKA				Sn	**Sn**	**16 43 21.3**	**-1.0**
RICI	**Ricice**	**3.28**	**321**	*e*Pn	**Pn**	**16 42 45.6**	**-0.2**
RICI				Sn	**Sn**	**16 43 23.9**	**-0.8**
HVAR	**Hvar**	**3.41**	**312**	*e*Pn	**Pn**	**16 42 46.1**	**-1.6**
HVAR				Sn	**Sn**	**16 43 25.4**	**-2.7**
KIJV	**Kijevo**	**4.01**	**321**	*i* Pn	**Pn**	**16 42 56.6**	**+0.7**
KIJV				Sn	**Sn**	**16 43 42.2**	**-0.6**
ZIRJ	**Zirje**	**4.17**	**312**	*e*Pn	**Pn**	**16 42 57.9**	**-0.2**
ZIRJ				Sn	**Sn**	**16 43 45.8**	**-0.9**
MORI	**Morici**	**4.27**	**314**	*e*Pn	**Pn**	**16 42 59.9**	**+0.5**
MORI				Sn	**Sn**	**16 43 48.0**	**-1.2**
DUGI	**Dugi Otok**	**4.71**	**312**	*e*Pn	**Pn**	**16 43 04.7**	**-0.8**
DUGI				Sn	**Sn**	**16 43 57.9**	**-2.1**
NVLJ	**Novalja**	**5.18**	**316**	*e*Pn	**

DDMP			*e*S		**Sn**	**17 32 26.3**	**+0.2**
SKMP	**Bagumbayan, Su**	**3.01 337**	*e*P		**Pn**	**17 32 06.1**	**+1.1**
SKMP			*e*S		**Sn**	**17 32 40.5**	**-0.4**
MATI	**Mati**	**3.25 10**	*e*P		**Pn**	**17 32 06.7**	**-1.4**
MATI			*e*S		**Sn**	**17 32 43.6**	**-2.9**
KCP	**Kidapawan**	**3.32 349**	*e*P		**Pn**	**17 32 10.9**	**+1.8**
KCP			*i* S		**Sn**	**17 32 50.8**	**+2.4**
DAV	**Davao City (W)**	**3.33 358**	P		**Pn**	**17 32 09.8**	**+0.7**
	210nm,0.3s,baz=71,slow=5.5,SNR=6.2						
DAV			S		**Sn**	**17 32 48.5**	**+0.2**
	15nm,0.3s,baz=92,slow=8.9,SNR=1.0						
TNTI	**Ternate**	**3.37 151**			**Pn**	**17 32 10.2**	**+0.5**
CTBH	**Cotabato--PC H**	**3.77 337**	*i*P		**Pn**	**17 32 16.4**	**+1.5**
BUKP	**Musuan**	**4.18 351**	*e*P		**Pn**	**17 32 21.8**	**+1.4**
BUKP			*e*S		**Sn**	**17 33 13.2**	**+4.5**
TBP	**Tagbilaran**	**6.20 343**	*e*P		**Sn**	**17 33 53.8**	**-3.5**
SIJI	**Sorong**	**7.19 129**	P		**Pn**	**17 33 02.2**	**+1.3**
	1.4nm,0.3s,baz=315,slow=20,SNR=5.7						
SIJI			S		**Sn**	**17 34 22.0**	**+0.9**
	0.5nm,0.3s,baz=223,slow=18,SNR=1.7						
FAKI	**Fak Fak**	**9.29 135**	Pn		**Pn**	**17 33 30.7**	**+1.5**
MTN	**Manton Dam**	**17.32 162**	P		**P**	**17 35 10.9**	**-1.0**
MTN			IAmb		IAmb	17 35 19.4	
	comp=Z,29nm,1.5s						
UGM	**Wanagama**	**19.06 233**	P		**P**	**17 35 29.8**	**-1.2**
KNRA	**Kununurra**	**19.51 171**	P		**P**	**17 35 36.2**	**+0.4**
KNRA			IAmb		IAmb	17 35 56.9	
	comp=Z,19nm,1.4s						
FITZ	**Fitzroy Crossi**	**21.69 180**	P		**P**	**17 35 57.4**	**-1.8**
	comp=Z,2.5nm,1.0s,baz=4.1,slow=9.5,SNR=6.5						
FITZ	**Fitzroy Crossi**	**21.69 180**	P		**P**	**17 35 58.5**	**-0.7**
WB0	**Warramunga Arr**	**24.86 160**	P		**P**	**17 36 29.3**	**+0.1**
WB0			IAmb		IAmb	17 36 32.4	
	comp=Z,6.2nm,0.6s						
WRAB	**Tennant Creek**	**25.00 160**	P		**P**	**17 36 30.6**	**+0.1**
WRAB			IAmb		IAmb	17 36 39.0	
	comp=Z,8.4nm,1.2s						
WRA	**Warramunga Arr**	**25.00 160**	P		**P**	**17 36 30.4**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=341,slow=10,SNR=47						
WB2	**Warramunga Arr**	**25.01 160**	P		**P**	**17 36 30.7**	**+0.1**
WB2			IAmb		IAmb	17 36 37.3	
	comp=Z,7.9nm,1.2s						
WR0	**Warramunga Arr**	**25.09 160**	P		**P**	**17 36 31.4**	**+0.1**
WR0			IAmb		IAmb	17 36 34.8	
	comp=Z,4.0nm,0.8s						
AS31	**Alice Springs**	**28.37 164**	P		**P**	**17 37 00.9**	**+0.1**
ASAR	**Alice Springs**	**28.37 164**	P		**P**	**17 37 01.1**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=343,slow=7.2,SNR=22						
BBOO	**Buckleboo**	**37.64 166**	P		**P**	**17 38 21.2**	**+0.1**
STKA	**Stephens Creek**	**38.50 158**	P		**P**	**17 38 28.5**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=340,slow=7.8,SNR=4.9						
STKA	**Stephens Creek**	**38.50 158**	P		**P**	**17 38 28.5**	**+0.2**
MKAR	**Makanchi Array**	**56.98 326**	P		**P**	**17 40 49.9**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=112,slow=9.0,SNR=4.3						
YAH	**Yahtse**	**88.05 30**	P		**P**	**17 43 54.2**	**-0.3**

*IDC **29** 17:37:40.0±5.1,20°.38S×176°.13W,h246km±50km,mb3.3/6, mb1 3.5/8,mb1mx3.3/38,mbtmp4.0/8,Error ellipse: s-maj=52.2km s-min=18.3km az=160.0*
*NEIC **29** 17:37:40.3±0.4,20°.3S±0°.4×176°.2W±0°.3,h250km±13km, mb4.1/6,Error ellipse: s-maj=71.4km s-min=18.4km az=145.0*

ISC 29 17:37:40.1±0.9,20°.4S±0°.3×176°.2W±0°.1,h250km,n19, σ0s50/19,mb3.6/10,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**15.33**	**96**	P	**P**	**17 41 03.2**	**-0.4**
	2.2nm,0.3s,baz=344,slow=6.6,SNR=1.2						
DZM	**Mont Dzumac**	**16.31**	**261**	P	**Pn**	**17 41 15.7**	**-0.4**
	0.3nm,0.3s,baz=91,slow=18,SNR=1.3						
WR0	**Warramunga Arr**	**46.14**	**262**	P	**P**	**17 45 39.8**	**-0.3**
WR0				IAmb	IAmb	17 47 23.2	
	comp=Z,24nm,1.9s						
AS31	**Alice Springs**	**46.22**	**256**	P	**P**	**17 45 40.6**	**-0.2**
ASAR	**Alice Springs**	**46.22**	**256**	P	**P**	**17 45 41.2**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=90,slow=8.5,SNR=15						
ASAR				PcP	**PcP**	**17 47 12.9**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=104,slow=4.0,SNR=5.8						
WB0	**Warramunga Arr**	**46.31**	**262**	P	**P**	**17 45 41.5**	**+0.1**
WB0				IAmb	IAmb	17 47 08.4	
	comp=Z,15nm,1.4s						
WB2	**Warramunga Arr**	**46.32**	**262**	P	**P**	**17 45 41.0**	**-0.5**
WB2				IAmb	IAmb	17 46 00.6	
	comp=Z,21nm,1.6s						
WRAB	**Tennant Creek**	**46.32**	**262**	P	**P**	**17 45 41.0**	**-0.5**
WRAB				IAmb	IAmb	17 46 55.1	
	comp=Z,9.3nm,1.2s						
WRA	**Warramunga Arr**	**46.33**	**262**	P	**P**	**17 45 41.2**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=92,slow=7.5,SNR=43						
KNRA	**Kununurra**	**52.40**	**266**	P	**P**	**17 46 27.5**	**+0.2**
FITZ	**Fitzroy Crossi**	**54.76**	**262**	P	**P**	**17 46 45.7**	**+1.3**
	comp=Z,1.9nm,1.0s,baz=106,slow=8.4,SNR=1.9						
PETK	**Petropavlovsk-**	**76.67**	**344**	P	**P**	**17 49 03.1**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=124,slow=7.6,SNR=4.7						
NVAR	**Mina Array Bea**	**79.79**	**43**	P	**P**	**17 49 21.4**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=231,slow=5.7,SNR=4.6						
ILAR	**Eielson Array**	**87.87**	**12**	P	**P**	**17 50 00.6**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=223,slow=4.8,SNR=4.3						
MKAR	**Makanchi Array**	**112.42**	**313**	PKiKP	**PKiKP**	**17 55 46.1**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=235,slow=0.8,SNR=5.2						
BVAR	**Borovoye Array**	**120.14**	**320**	PKP	**PKPdf**	**17 56 00.8**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=91,slow=3.6,SNR=3.8						
AKASG	**Malin Array Be**	**143.78**	**333**	PKP	PKPab	17 56 42.6	-0.1
	comp=Z,0.4nm,0.3s,baz=41,slow=3.7,SNR=4.3						
EKA	**Eskdalemuir Ar**	**144.75**	**7**	PKP	**PKPab**	**17 56 46.1**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=336,slow=2.7,SNR=5.1						
GERES	**GERESS Array B**	**150.57**	**347**	PKPbc	**PKiKP**	**17 57 03.0**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=41,slow=4.3,SNR=5.9						

MAN 29 17:51:14.3,12°.54N×120°.25E,h97km,mb3.8,ML2.5, MS2.1,1C,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUSP	**Coron**	**0.53**	**186**	*e*P	Pn	17 51 31.7	+1.6
PGP	**Puerto Galera**	**1.18**	**35**	*i*P	Pn	17 51 37.1	+0.5
PGP				*e*S	Sn	17 51 48.7	-4.7
LUBP	**Lubang**	**1.19**	**360**	*e*P	Pn	17 51 37.2	+0.5
LUBP				*e*S	Sn	17 51 48.4	-5.2

TAP 29 18:00:25.4,25°.17N×121°.55E,h3km,ML0.9,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YM03	**YM03**	**0.01**	**313**	P	Pg	18 00 26.2	+0.1
	baz=312						
YM03				S	Sg	18 00 26.8	+0.2
	baz=312						
YM04	**YM04**	**0.02**	**207**	*e*P	Pg	18 00 26.2	+0.2
	baz=207						
YM04				*e*S	Sg	18 00 27.2	+0.6
	baz=207						
YM10	**YM10**	**0.02**	**144**	*e*P	Pg	18 00 26.4	+0.3
	baz=144						
YM10				*e*S	Sg	18 00 27.1	+0.5
	baz=144						
YM11	**YM11**	**0.03**	**106**	*e*P	Pg	18 00 26.5	+0.3
	baz=106						
ANP	**Anpu**	**0.03**	**299**	P	Pg	18 00 26.4	+0.2
	baz=300						
ANP				S	Sg	18 00 27.0	+0.2
	baz=300						
YM01	**YM01**	**0.03**	**142**	*e*P	Pg	18 00 26.5	+0.3
	baz=142						
YM08	**YM08**	**0.04**	**69**	*e*P	Pg	18 00 26.8	+0.5
	baz=68						

JMA 29 18:01:14.2±0.2,24°.90N×123°.24E,h26km,M1.0, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.48**	**206**	P	Pb	18 01 23.8	-0.4
YOJ				*e*S	Sb	18 01 30.3	-0.6
JYNG	**Yonagunijimaku**	**0.52**	**211**	P	Pb	18 01 24.6	-0.2
JYNG				S	Sb	18 01 31.8	-0.2
IRIF	**Iriomote-Funau**	**0.72**	**142**	P	Pb	18 01 28.0	-0.1
IRIF				S	Sb	18 01 37.4	-0.2
JKRS	**Kuro-shima**	**0.96**	**133**	P	Pn	18 01 31.4	-0.6
JKRS				*e*S	Sb	18 01 44.0	-0.5
JIJ	**Ishigaki jima**	**0.98**	**123**	P	Pn	18 01 32.0	-0.3
JIJ				S	Sb	18 01 44.2	-0.9
HATJ	**Hateruma jima**	**0.98**	**148**	P	Pn	18 01 32.3	0.0
HATJ				S	Sb	18 01 44.5	-0.7
JISG	**Ishigakijimahi**	**1.02**	**108**	P	Pn	18 01 32.1	-0.7
JTJ	**Tarama**	**1.35**	**101**	P	Pb	18 01 38.3	-0.6

*IDC **29** 18:15:41.9±1.4,14°.23N×144°.92E,h0km,mb3.6/5, mb1 3.8/5,mb1mx3.4/39,mbtmp3.6/5,MS3.1/2,Ms1 3.1/2, ms1mx2.5/30,Error ellipse: s-maj=60.0km s-min=28.4km az=89.0*
*NEIC **29** 18:16:04.3±1.0,14°.1N±0°.1×144°.4E±0°.6,h178km±16km, mb4.3/5,Error ellipse: s-maj=81.2km s-min=17.4km az=82.0*

ISC 29 18:16:03.0±1.1,13°.9N±0°.2×143°.8E±0°.2,h150km,n14, σ1s38/14,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.07**	**109**		**Pn**	**18 16 29.2**	**+0.8**
JAY	**Jayapura**	**16.64**	**191**	LR	LR	18 25 16.4	
	comp=Z,46nm,19.2s,baz=165,slow=34						
WB0	**Warramunga Arr**	**34.76**	**196**	P	**P**	**18 22 40.8**	**+1.6**
WRAB	**Tennant Creek**	**34.92**	**196**	P	**P**	**18 22 41.8**	**+1.2**
WRAB				IAmb	IAmb	18 24 02.7	
	comp=Z,23nm,1.6s						
WB2	**Warramunga Arr**	**34.93**	**196**	P	**P**	**18 22 41.5**	**+0.8**
WB2				IAmb	IAmb	18 23 11.7	
	comp=Z,19nm,1.8s						
WRA	**Warramunga Arr**	**34.94**	**196**	P	**P**	**18 22 39.9**	**-0.9**
	comp=Z,0.4nm,0.8s,baz=24,slow=8.4,SNR=7.6						
WRA				PcP	**PcP**	**18 25 09.0**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=4.7,slow=2.9,SNR=1.5						
FITZ	**Fitzroy Crossi**	**36.54**	**210**	P	**P**	**18 22 56.8**	**+2.5**
	comp=Z,4.1nm,1.2s,baz=30,slow=8.1,SNR=2.5						
AS31	**Alice Springs**	**38.61**	**195**	P	**P**	**18 23 12.9**	**+1.1**
ASAR	**Alice Springs**	**38.61**	**195**	P	**P**	**18 23 12.2**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=17,slow=13,SNR=5.5						
ASAR				LR	LR	18 39 24.9	
	comp=Z,40nm,18.8s,baz=260,slow=36						
STKA	**Stephens Creek**	**45.60**	**183**	P	**P**	**18 24 06.8**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=355,slow=9.5,SNR=6.4						
STKA	**Stephens Creek**	**45.60**	**183**	P	**P**	**18 24 07.0**	**-1.3**
STKA				IAmb	IAmb	18 24 14.6	
	comp=Z,8.0nm,1.9s						
MKAR	**Makanchi Array**	**60.54**	**316**	P	**P**	**18 25 58.0**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=90,slow=8.5,SNR=3.3						
TORD	**Torodi Ar. Bea**	**133.83**	**304**	PKP	**PKPdf**	**18 35 01.7**	**-1.5**
	comp=Z,0.8nm,1.0s,baz=34,slow=3.9,SNR=2.5						
LPAZ	**La Paz**	**149.08**	**98**	PKPbc	**PKPdf**	**18 35 31.2**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=342,slow=5.9,SNR=4.4						

DJA 29 18:22:31.2±0.3,5°.S±3°×13°.8E±°,h10km,M3.7/7,mb4.1/6, MLv3.5/7,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAMI	**Wamena**	**1.14**	**51**	P	Pb	18 22 52.9	-0.1
WAMI				S	Sn	18 23 10.9	+2.0
SMPI	**Sarmi**	**2.74**	**19**	P	Pn	18 23 15.0	-0.3
GENI	**Genyem**	**3.08**	**50**	P	Pn	18 23 20.3	+0.4
SRPI	**Serui, Papua**	**3.14**	**330**	P	Pn	18 23 21.5	+0.8
JAY	**Jayapura**	**3.55**	**54**	P	Pn	18 23 26.6	+0.2
FAKI	**Fak Fak**	**5.80**	**287**	P	Pn	18 23 55.5	-1.9
	0.1nm21nm,1.2s						

*MAN **29** 18:42:12.5,15°.31N×120°.13E,h98km,mb4.9,ML3.8, MS3.8*
*NEIC **29** 18:42:13.2±2.9,15°.27N±0°.02×120°.3E±0°.1,h131km±8km, mb4.4/11,Error ellipse: s-maj=19.1km s-min=2.9km az=86.0*
*IDC **29** 18:42:14.9±0.8,15°.22N×120°.46E,h139km±7km,mb3.4/11, mb1 3.6/12,mb1mx3.3/39,mbtmp3.8/12,MS2.6/1, Ms1 2.8/1,ms1mx2.2/21,Error ellipse: s-maj=29.4km s-min=13.3km az=62.0*

ISC 29 18:42:12.5±0.7,15°.27N±0°.04×120°.21E±0°.05,h116km±6km, n53,σ1s76/65,mb3.9/14,3C-2D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.58**	**330**	*e*P	**Pn**	**18 42 30.1**	**-0.5**
SCZP				*e*S	**Sn**	**18 42 42.6**	**-1.6**
PCPH	**Palayan**	**0.90**	**71**	*e*P	**Pn**	**18 42 32.4**	**-0.8**
PCPH				*i* S	**Sn**	**18 42 47.0**	**-1.9**
SMPP	**San Manuel, Pa**	**0.99**	**27**	*e*P	**Pn**	**18 42 33.3**	**-0.8**
SMPP				*e*S	**Sn**	**18 42 47.1**	**-3.3**
BOLP	**Bolinao**	**1.14**	**345**	*e*P	**Pn**	**18 42 35.4**	**-0.3**
BOLP				*e*S	**Sn**	**18 42 53.5**	**+0.3**
TGY	**Tagaytay City**	**1.35**	**149**	P	**Pn**	**18 42 39.8**	**+1.6**
	400nm,0.3s,baz=289,slow=2.3,SNR=35						
TGY				S	**Sn**	**18 43 00.5**	**+3.0**
	223nm,0.3s,baz=292,slow=21,SNR=12						
TGY	**Tagaytay City**	**1.35**	**149**	*i* P	**Pn**	**18 42 40.0**	**+1.9**
TGY				*e*S	**Sn**	**18 43 01.1**	**+3.6**
BALP	**Baler**	**1.40**	**70**	*e*P	**Pn**	**18 42 38.5**	**+0.1**
BALP				*e*S	**Sn**	**18 42 58.9**	**+0.7**
LUBP	**Lubang**	**1.52**	**179**	*e*P	**Pn**	**18 42 39.9**	**-0.1**
LUBP				*e*S	**Sn**	**18 43 01.4**	**+0.6**
LQP	**Lukban**	**1.72**	**132**	*e*P	**Pn**	**18 42 43.3**	**+0.7**
LQP				*i* S	**Sn**	**18 43 06.7**	**+1.2**
POLP	**Polilio Island**	**1.75**	**108**	*e*P	**Pn**	**18 42 42.3**	**-0.4**
POLP				*e*S	**Sn**	**18 43 06.5**	**+0.7**
PGP	**Puerto Galera**	**1.90**	**158**	*e*P	**Pn**	**18 42 45.2**	**+0.7**
PGP				*e*S	**Sn**	**18 43 10.7**	**+1.7**
CAUP	**Cauayan**	**2.27**	**43**	*e*P	**Pn**	**18 42 49.8**	**+0.5**
CAUP				*e*S	Sn	18 43 28.1	+11
SZP	**Santa**	**2.28**	**6**	Pn	**Pn**	**18 42 49.9**	**+0.5**
BOAC	**Boac**	**2.40**	**138**	*e*P	**Pn**	**18 42 52.2**	**+1.4**
ABRA	**Dolores**	**2.42**	**11**	*e*P	**Pn**	**18 42 50.8**	**-0.3**
ABRA				*e*S	**Sn**	**18 43 19.1**	**-1.6**
GQP	**Guinayangan**	**2.55**	**122**	*e*P	**Pn**	**18 42 54.3**	**+1.5**
SIPP	**Brgy, Tapao**	**2.65**	**5**	*e*P	**Pn**	**18 42 55.1**	**+1.0**
SIPP				*e*S	**Sn**	**18 43 33.7**	**+7.5**
APYP	**Conner**	**2.76**	**21**	*e*P	**Pn**	**18 42 55.7**	**+0.1**
APYP				*e*S	**Sn**	**18 43 28.7**	**-0.1**
PALP	**Palanan**	**2.78**	**50**	*e*P	**Pn**	**18 42 56.3**	**+0.5**
SJMP	**San Jose**	**2.93**	**162**	*e*P	**Pn**	**18 42 59.0**	**+1.3**
SJMP				*e*S	**Sn**	**18 43 33.2**	**+0.6**
BUSP	**Coron**	**3.25**	**180**	*e*P	**Pn**	**18 43 02.0**	**+0.1**
ENPP	**El Nido**	**4.11**	**191**	*e*P	**Pn**	**18 43 14.4**	**+0.9**
CUYO	**Cuyo Island**	**4.46**	**170**	*e*P	**Pn**	**18 43 18.9**	**+0.7**
GUIM	**Jordan**	**5.16**	**153**	*e*P	**Pn**	**18 43 30.1**	**+2.4**
TPUB	**Ta-pu**	**8.00**	**3**		**Pn**	**18 44 08.0**	**+2.0**
YULB	**Yu-li**	**8.15**	**7**		**Pn**	**18 44 10.5**	**+2.5**
SSLB	**Suanglung**	**8.50**	**5**	Pn	**Pn**	**18 44 11.7**	**-1.1**
NACB	**Ninganchiao**	**8.96**	**8**	Pn	**Pn**	**18 44 18.0**	**-0.9**
HKPS	**Hong Kong Po S**	**9.04**	**321**	Pn	**Pn**	**18 44 20.8**	**+0.7**
KNMB	**Chin-men Tao**	**9.31**	**350**	Pn	**Pn**	**18 44 24.5**	**+0.8**
PBKT	**Sadao Pong**	**18.55**	**277**	P	**Pn**	**18 46 23.3**	**+1.3**
SIJI	**Sorong**	**19.41**	**145**	P	**Pn**	**18 46 30.4**	**-1.7**
	0.8nm,0.3s,baz=274,slow=4.3,SNR=5.8						
CM31	**Chiang Mai Arr**	**20.60**	**282**	P	Pn	18 46 46.8	+0.9
CM31				IAmb	IAmb	18 46 48.0	
	comp=Z,4.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**20.60**	**282**	P	Pn	18 46 46.7	+0.8
	comp=Z,3.9nm,0.9s,baz=91,slow=8.4,SNR=33						
CMAR				LR	LR	18 53 51.1	
	comp=Z,17nm,21.0s,baz=195,slow=33						
FITZ	**Fitzroy Crossi**	**33.58**	**171**	P	**P**	**18 48 40.9**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=355,slow=7.3,SNR=1.0						
FITZ	**Fitzroy Crossi**	**33.58**	**171**	IAmb	IAmb	18 49 07.0	
	comp=Z,13nm,1.6s						
WB0	**Warramunga Arr**	**37.51**	**158**	P	**P**	**18 49 13.1**	**-2.2**
WB0				IAmb	IAmb	18 49 58.1	
	comp=Z,28nm,1.8s						
WRAB	**Tennant Creek**	**37.64**	**158**	P	**P**	**18 49 14.7**	**-1.8**
WRAB				IAmb	IAmb	18 49 49.6	
	comp=Z,27nm,1.8s						
WRA	**Warramunga Arr**	**37.65**	**158**	P	**P**	**18 49 15.0**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=335,slow=9.6,SNR=3.5						
WB2	**Warramunga Arr**	**37.65**	**158**	P	**P**	**18 49 13.8**	**-2.8**
WR0	**Warramunga Arr**	**37.74**	**158**	P	**P**	**18 49 15.4**	**-1.9**
WR0				IAmb	IAmb	18 49 44.2	
	comp=Z,18nm,1.6s						
AS31	**Alice Springs**	**40.95**	**161**	P	**P**	**18 49 42.0**	**-1.9**
ASAR	**Alice Springs**	**40.95**	**161**	P	**P**	**18 49 43.0**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=339,slow=6.8,SNR=20						
MKAR	**Makanchi Array**	**44.50**	**323**	P	**P**	**18 50 13.5**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=121,slow=12,SNR=4.6						
MKAR				pP	**pP**	**18 50 41.1**	**+2.1**
	comp=Z,0.4nm,0.7s,baz=116,slow=11,SNR=3.2						
ZALV	**Zalesovo Beam**	**47.46**	**332**	P	**P**	**18 50 36.4**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=131,slow=7.9,SNR=2.2						
PETK	**Petropavlovsk-**	**47.90**	**30**	P	**P**	**18 50 38.9**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=218,slow=8.7,SNR=1.7						
KURK	**Kurchatov**	**48.63**	**326**	P	**P**	**18 50 46.1**	**+1.6**
KURK				IAmb	IAmb	18 50 47.2	
	comp=Z,3.1nm,0.8s						
BBOO	**Buckleboo**	**50.15**	**163**	P	**P**	**18 50 54.4**	**-1.9**
STKA	**Stephens Creek**	**51.17**	**157**	P	**P**	**18 51 02.6**	**-1.3**
	comp=Z,1.2nm,0.8s,baz=325,slow=12,SNR=4.7						
STKA	**Stephens Creek**	**51.17**	**157**	IAmb	IAmb	18 51 35.8	
	comp=Z,5.9nm,1.9s						
FINES	**FINESS Array B**	**78.69**	**331**	P	**P**	**18 54 02.7**	**+1.0**
	comp=Z,1.7nm,0.9s,baz=24,slow=11,SNR=1.3						
NOA	**NORSAR Array B**	**85.66**	**333**	P	**P**	**18 54 37.9**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=68,slow=4.8,SNR=2.9						
YKA	**Yellowknife Ar**	**91.51**	**22**	P	**P**	**18 55 05.0**	**-0.8**
	comp=Z,0.1nm,0.5s,baz=307,slow=3.9,SNR=7.9						

*NEIC **29** 19:09:26.7±1.8,19°.12N±0°.07×67°.20W±0°.04,h23km±7km, Error ellipse: s-maj=10.6km s-min=4.8km az=177.0*
*RSPR **29** 19:09:27.2,19°.27N×67°.24W,h28km±14km,MD3.1/9*

ISC 29 19:09:25.9±1.4,19°.19N±0°.07×67°.21W±0°.04,h29km,n37, σ1s23/40,6C-3D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.72**	**173**		**Pn**	**19 09 40.0**	**-0.3**
IDE	**Isla Desecheo**	**0.84**	**198**	*i*P	**Pb**	**19 09 42.0**	**0.0**
IDE	**Isla Desecheo**	**0.84**	**198**	*e*S	**Sn**	**19 09 53.8**	**+0.6**
IDE	**Isla Desecheo**	**0.84**	**198**		**Pb**	**19 09 42.0**	**0.0**
IDE					**Sn**	**19 09 53.8**	**+0.6**
AOPR	**Arecibo Observ**	**0.94**	**153**	*i*P	**Pb**	**19 09 43.0**	**-0.7**
AOPR	**Arecibo Observ**	**0.94**	**153**	*e*S	**Sb**	**19 09 56.5**	**+0.6**
AOPR	**Arecibo Observ**	**0.94**	**153**		**Pn**	**19 09 42.9**	**-0.4**
AOPR	**Arecibo Observ**	**0.94**	**153**		**Sb**	**19 09 56.5**	**+0.6**
EMPR	**Esperanza - Ma**	**0.96**	**138**	*i*P	**Pb**	**19 09 43.8**	**-0.1**
EMPR	**Esperanza - Ma**	**0.96**	**138**	*e*S	**Sb**	**19 09 58.7**	**+2.5**
EMPR	**Esperanza - Ma**	**0.96**	**138**		**Pb**	**19 09 44.6**	**+0.7**
MPR	**Mayaguez**	**0.98**	**176**		**Pb**	**19 09 43.7**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.18**	**176**	*i*P	**Pb**	**19 09 47.6**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.18**	**176**		**Pb**	**19 09 47.5**	**-0.3**
MLPR	**Magueyes Islan**	**1.23**	**173**	*e*S	**Sb**	**19 10 04.0**	**+0.1**
MLPR	**Magueyes Islan**	**1.23**	**173**	*i*P	**Pb**	**19 09 47.6**	**-1.0**
MLPR	**Magueyes Islan**	**1.23**	**173**		**Pb**	**19 09 47.5**	**-1.0**
MLPR	**Magueyes Islan**	**1.23**	**173**		**Sb**	**19 10 04.0**	**+0.1**
OBIP	**Obispado Ponce**	**1.27**	**153**	*i*P	**Pb**	**19 09 48.3**	**-1.0**
OBIP	**Obispado Ponce**	**1.27**	**153**	*e*S	**Sb**	**19 10 05.5**	**+0.1**
OBIP	**Obispado Ponce**	**1.27**	**153**		**Pb**	**19 09 48.1**	**-1.2**
OBIP	**Obispado Ponce**	**1.27**	**153**		**Sb**	**19 10 05.5**	**+0.1**
PCDR	**Punta Cana, DR**	**1.30**	**239**	Pn	**Pn**	**19 09 47.0**	**-1.2**
GCPR	**Guaynabo City**	**1.38**	**129**		**Pb**	**19 09 53.0**	**+1.9**
SJG	**San Juan**	**1.47**	**137**	Pn	**Pb**	**19 09 51.1**	**-1.5**
CBYP	**Canovanas**	**1.57**	**125**	*e*S	**Sn**	**19 10 12.0**	**+0.7**
CBYP	**Canovanas**	**1.57**	**125**	*i*P	**Pb**	**19 09 52.6**	**-1.8**
CBYP	**Canovanas**	**1.57**	**125**		**Pb**	**19 09 52.6**	**-1.8**
CBYP					**Sn**	**19 10 12.0**	**+0.7**
IGPR	**InterUniversit**	**1.60**	**139**	*e*S	**Sb**	**19 10 13.2**	**-1.5**
IGPR	**InterUniversit**	**1.60**	**139**	*i*P	**Pb**	**19 09 53.4**	**-1.5**
HUMP	**Col San Antoni**	**1.66**	**129**	*e*S	**Sb**	**19 10 14.3**	**-1.9**
HUMP	**Col San Antoni**	**1.66**	**129**	*i*P	**Pn**	**19 09 53.7**	**+0.7**
HUMP	**Col San Antoni**	**1.66**	**129**		**Pn**	**19 09 53.7**	**+0.7**
HUMP					**Sb**	**19 10 14.3**	**-1.9**
MTP	**Monte Pirata**	**1.91**	**125**	Pn	**Pn**	**19 09 57.0**	**+0.5**
CUPR	**Culebra, Puert**	**2.02**	**115**	Pn	**Pn**	**19 09

	comp=Z,18nm,1.1s						
KHZ	**Kahutara**	**25.40**	**194**	P	**P**	**19 32 24.3**	**+0.2**
LTZ	**Lake Taylor**	**26.05**	**195**	P	**P**	**19 32 29.2**	**-0.7**
OXZ	**Oxford**	**26.62**	**195**	P	**P**	**19 32 34.2**	**-0.6**
FOZ	**Fox Glacier**	**27.43**	**199**	P	**P**	**19 32 41.1**	**-0.7**
WKZ	**Wanaka**	**28.84**	**198**	P	**P**	**19 32 53.2**	**-1.0**
EIDS	**Eidsvold**	**29.14**	**250**	P	**P**	**19 32 57.1**	**+0.1**
EIDS				IAmb	IAmb	19 32 57.7	
	comp=Z,7.6nm,0.9s						
ARMA	**Armidale**	**29.83**	**240**	P	**P**	**19 33 04.6**	**+1.5**
ARMA				IAmb	IAmb	19 33 05.1	
	comp=Z,7.7nm,0.8s						
CTAO	**Charters Tower**	**33.30**	**260**	P	**P**	**19 33 31.1**	**-1.5**
CTAO				IAmb	IAmb	19 33 36.5	
	comp=Z,27nm,1.4s						
CAN	**Canberra**	**33.61**	**232**	P	**P**	**19 33 35.7**	**+0.6**
CAN				IAmb	IAmb	19 33 35.9	
	comp=Z,25nm,1.4s						
PMG	**Port Moresby**	**34.29**	**280**	P	**P**	**19 33 41.7**	**+0.8**
COEN	**Coen**	**36.94**	**270**	P	**P**	**19 34 03.6**	**+0.8**
COEN				IAmb	IAmb	19 34 04.2	
	comp=Z,13nm,0.7s						
TOO	**Toolangi**	**37.08**	**231**	P	**P**	**19 34 04.2**	**+0.4**
TOO				IAmb	IAmb	19 34 05.6	
	comp=Z,6.1nm,0.8s						
STKA	**Stephens Creek**	**38.52**	**241**	P	**P**	**19 34 16.7**	**+1.3**
	comp=Z,6.7nm,0.5s,baz=84,slow=7.6,SNR=26						
STKA	**Stephens Creek**	**38.52**	**241**	P	**P**	**19 34 16.4**	**+0.9**
JAY	**Jayapura**	**42.73**	**286**	P	**P**	**19 34 50.2**	**+1.1**
	comp=Z,7.7nm,0.4s,baz=174,slow=7.3,SNR=8.4						
BBOO	**Buckleboo**	**43.29**	**241**	P	**P**	**19 34 53.9**	**+0.6**
BBOO				IAmb	IAmb	19 35 00.1	
	comp=Z,40nm,1.5s						
WR0	**Warramunga Arr**	**44.29**	**259**	P	**P**	**19 35 00.6**	**-0.6**
WB0	**Warramunga Arr**	**44.45**	**260**	P	**P**	**19 35 01.7**	**-0.7**
WB0				IAmb	IAmb	19 35 02.8	
	comp=Z,7.9nm,0.8s						
WB2	**Warramunga Arr**	**44.47**	**259**	P	**P**	**19 35 01.9**	**-0.7**
WB2				IAmb	IAmb	19 35 03.0	
	comp=Z,10nm,0.5s						
WRAB	**Tennant Creek**	**44.47**	**260**	P	**P**	**19 35 01.9**	**-0.6**
WRAB				IAmb	IAmb	19 35 03.0	
	comp=Z,6.8nm,0.5s						
WRA	**Warramunga Arr**	**44.48**	**259**	P	**P**	**19 35 02.2**	**-0.4**
	comp=Z,4.4nm,0.4s,baz=91,slow=8.2,SNR=154						
WRA				PcP	**PcP**	**19 36 33.7**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=94,slow=3.6,SNR=2.2						
AS31	**Alice Springs**	**44.65**	**254**	P	**P**	**19 35 03.9**	**0.0**
AS31				IAmb	IAmb	19 35 04.8	
	comp=Z,13nm,0.8s						
ASAR	**Alice Springs**	**44.65**	**254**	P	**P**	**19 35 04.2**	**+0.3**
	comp=Z,33nm,0.4s,baz=89,slow=7.7,SNR=1010						
ASAR				PcP	**PcP**	**19 36 34.3**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=104,slow=4.0,SNR=3.7						
FORT	**Forrest**	**49.89**	**245**	P	**P**	**19 35 42.7**	**-0.2**
FORT				IAmb	IAmb	19 35 54.1	
	comp=Z,24nm,1.0s						
KNRA	**Kununurra**	**50.33**	**264**	P	**P**	**19 35 46.3**	**0.0**
KNRA				IAmb	IAmb	19 35 47.1	
	comp=Z,14nm,0.7s						
FAKI	**Fak Fak**	**50.41**	**281**	P	**P**	**19 35 47.2**	**+0.2**
FAKI				IAmb	IAmb	19 36 02.1	
	comp=Z,18nm,1.0s						
FITZ	**Fitzroy Crossi**	**52.88**	**261**	P	**P**	**19 36 05.1**	**+0.5**
SOEI	**Soe**	**55.91**	**270**	P	**P**	**19 36 26.5**	**+0.4**
SOEI				IAmb	IAmb	19 36 31.7	
	comp=Z,43nm,1.4s						
PSA00	**Pilbara Seismi**	**57.77**	**255**	P	**P**	**19 36 38.3**	**-0.3**
MORW	**Morawa**	**60.36**	**246**	P	**P**	**19 36 55.7**	**-0.1**
JAGI	**Jajag, Banyuwa**	**65.88**	**269**	P	**P**	**19 37 30.3**	**-1.0**
JAGI				IAmb	IAmb	19 37 30.4	
	comp=Z,47nm,1.2s						
MJAR	**Matsushiro Arr**	**67.76**	**323**	P	**P**	**19 37 42.1**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=142,slow=5.3,SNR=2.4						
KKM	**Kota Kinabalu**	**68.57**	**284**	P	**P**	**19 37 48.1**	**+0.2**
UGM	**Wanagama**	**69.49**	**268**	P	**P**	**19 37 53.3**	**0.0**
QSPA	**South Pole Qui**	**72.21**	**180**	P	**P**	**19 38 08.8**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=315,slow=21,SNR=7.4						
QSPA	**South Pole Qui**	**72.21**	**180**	P	**P**	**19 38 09.0**	**+0.5**
PETK	**Petropavlovsk-**	**73.58**	**345**	P	**P**	**19 38 16.2**	**0.0**
	comp=Z,0.4nm,0.5s,baz=61,slow=18,SNR=2.3						
SDPT	**Sand Point**	**74.51**	**11**	P	**P**	**19 38 22.1**	**+0.8**
SDPT				IAmb	IAmb	19 38 36.4	
	comp=Z,40nm,1.1s						
NVAR	**Mina Array Bea**	**79.49**	**44**	P	**P**	**19 38 49.3**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=229,slow=6.9,SNR=2.6						
GHO	**Glory Hole Cre**	**82.78**	**14**	P	**P**	**19 39 05.0**	**-0.4**
ILAR	**Eielson Array**	**85.86**	**13**	P	**P**	**19 39 18.8**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=216,slow=4.5,SNR=2.2						
TXAR	**Lajitas Array**	**86.10**	**58**	P	**P**	**19 39 22.6**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=223,slow=4.8,SNR=2.3						
PDAR	**Pinedale Array**	**87.42**	**43**	P	**P**	**19 39 28.2**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=191,slow=4.3,SNR=2.0						
CMAR	**Chiang Mai Arr**	**88.71**	**290**	P	**P**	**19 39 35.2**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=112,slow=1.9,SNR=6.4						
SYO	**Syowa Base**	**89.18**	**193**⇓	*epP*	pP	19 41 42.2	+1.4
MKAR	**Makanchi Array**	**108.97**	**314**	PKiKP	**PKiKP**	**19 45 04.7**	**-1.2**
	comp=Z,0.1nm,0.5s,baz=126,slow=2.0,SNR=1.7						
BRTR	**Keskin Array B**	**144.62**	**315**	PKP	**PKPdf**	**19 46 13.2**	**0.0**
	comp=Z,0.8nm,0.4s,baz=146,slow=2.6,SNR=5.2						
GERES	**GERESS Array B**	**147.51**	**345**	PKPbc	**PKPbc**	**19 46 21.2**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=32,slow=5.2,SNR=4.0						

*IEPN **29** 19:34:12.6, 79.80N×21.76E, h10km*
*IDC **29** 19:34:14.1±2.2, 79.95N×21.12E, h0km, mb3.2/1, mb1 3.5/4, mb1mx3.1/48, mbtmp3.4/4, ML3.3/2, Error ellipse: s-maj=26.0km s-min=13.7km az=137.0*
*BER **29** 19:34:15.9±3.2, 80.06N×20.70E, h22km±12km, ML2.9, ML3.3(NAO), Confirmed Earthquake*
*NAO **29** 19:34:17.4±2.7, 79.85N×20.41E, h23km±13km, ML3.3*

ISC 29 19:34:13.4±1.0, 79.92N±0.06×21.24E±0.04, h10km, n40, σ1995/69, 4D, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.99**	**244**	Pn	**Pn**	**19 34 46.1**	**-0.8**
KBS				Pg	**Pb**	**19 34 50.4**	**+0.9**
KBS				Lg	Lg	19 35 14.3	
KBS	**Kingsbay**	**1.99**	**244**	⇓*iP*	**Pn**	**19 34 45.7**	**-1.2**
KBS				*i* S	**Sn**	**19 35 07.9**	**-3.9**
KBS	**Kingsbay**	**1.99**	**244**	*eP*	**Pn**	**19 34 46.1**	**-0.8**
KBS				*ePg*	**Pb**	**19 34 50.4**	**+0.9**
KBS				*eSg*	**Sb**	**19 35 14.2**	**0.0**
KBS				IAML		19 35 19.1	
	comp=Z,162nm,0.3s						
SPA0	**Spitsbergen Ar**	**1.99**	**210**	Pn	**Pn**	**19 34 47.2**	**+0.2**
	baz=38,slow=16						
SPA0				Pg	**Pb**	**19 34 50.9**	**+1.3**
	baz=35,slow=16						
SPA0				Lg	Lg	19 35 16.6	
	baz=36,slow=22						
SPA0	**Spitsbergen Ar**	**1.99**	**210**	⇓*iP*	**Pn**	**19 34 47.2**	**+0.2**
SPA0				*i* S	**Sn**	**19 35 11.5**	**-0.4**
SPA0	**Spitsbergen Ar**	**1.99**	**210**	Pn	**Pn**	**19 34 47.2**	**+0.2**
	baz=38,slow=16						
SPA0				Pg	**Pb**	**19 34 50.9**	**+1.3**
	baz=35,slow=16						
SPA0				*eSg*	**Sg**	**19 35 17.1**	**0.0**
SPA0				IAML		19 35 25.4	
	comp=Z,214nm,0.6s						
SPITS	**Spitsbergen Ar**	**1.99**	**210**	Pn	**Pn**	**19 34 47.0**	**+0.1**
	baz=33,slow=19,SNR=156						
SPITS				Pg	**Pb**	**19 34 50.9**	**+1.3**
	baz=25,slow=18,SNR=67						
SPITS				Sn	**Sn**	**19 35 11.4**	**-0.4**
	baz=29,slow=17,SNR=7.7						
SPITS				Lg	Lg	19 35 17.5	
	baz=40,slow=27,SNR=12						
BRBB	**Barentsburg B**	**2.28**	**220**	Pn	**Pn**	**19 34 51.0**	**0.0**
BRBB				Sn	**Sn**	**19 35 17.8**	**-1.2**
BRBB				Lg	Lg	19 35 26.4	
BRBB	**Barentsburg B**	**2.28**	**220**	⇓*iP*	**Pn**	**19 34 51.0**	**0.0**
BRBB				*eS*	**Sn**	**19 35 17.4**	**-1.6**
BRBA	**Barentsburg A**	**2.31**	**219**	Pn	**Pn**	**19 34 51.5**	**+0.2**
BRBA				Sn	**Sn**	**19 35 18.4**	**-1.3**
BRBA				Lg	Lg	19 35 27.5	
BRBA	**Barentsburg A**	**2.31**	**219**	*eP*	**Pn**	**19 34 51.6**	**+0.3**
BRBA				*eS*	**Sn**	**19 35 18.2**	**-1.6**
BRBA				*eSg*	**Sg**	**19 35 27.0**	**-0.4**
BRBA				IAML		19 35 32.8	
	comp=Z,135nm,0.4s						
HSPB	**Hornsund (broa**	**3.15**	**204**	Pn	**Pn**	**19 35 03.5**	**+0.5**
HSPB				Pg	**Pb**	**19 35 12.3**	**+3.0**
HSPB				Lg	Lg	19 35 52.9	
HSPB	**Hornsund (broa**	**3.15**	**204**	*eP*	**Pn**	**19 35 03.4**	**+0.5**
HSPB				*eS*	**Sn**	**19 35 39.3**	**-1.3**
HSPB	**Hornsund (broa**	**3.15**	**204**	*eP*	**Pn**	**19 35 03.5**	**+0.5**
HSPB				*ePg*	**Pb**	**19 35 11.6**	**+2.2**
HSPB				*eSg*	**Sg**	**19 35 52.9**	**-1.6**
HSPB				IAML		19 36 00.5	
	comp=Z,64nm,0.7s						
HOPEN	**Hopen**	**3.52**	**165**	Pn	**Pn**	**19 35 09.8**	**+1.9**
HOPEN				Sn	**Sn**	**19 35 50.0**	**+0.4**
HOPEN				Lg	Lg	19 36 09.4	
HOPEN	**Hopen**	**3.52**	**165**	*eP*	**Pn**	**19 35 10.0**	**+2.0**
HOPEN				*eS*	**Sn**	**19 35 49.3**	**-0.2**
HOPEN	**Hopen**	**3.52**	**165**	*eP*	**Pn**	**19 35 09.8**	**+1.9**
HOPEN				*ePg*	**Pg**	**19 35 21.1**	**+0.4**
HOPEN				*eS*	**Sn**	**19 35 50.1**	**+0.6**
HOPEN				IAML		19 36 12.5	
	comp=Z,104nm,0.2s						
ZFI2	**Zemlya Franca-**	**4.50**	**66**⇓	*iP*	**Pn**	**19 35 22.8**	**+1.4**
ZFI2				*i* S	**Sn**	**19 36 12.7**	**-0.9**
	comp=Z,10nm,0.2s						
BJO1	**Bjornoya**	**5.48**	**186**	Pn	**Pn**	**19 35 34.8**	**0.0**
BJO1				Sn	**Sn**	**19 36 34.1**	**-3.6**
BJO1				Lg	Lg	19 37 07.0	
BJO1	**Bjornoya**	**5.48**	**186**	*eP*	**Pn**	**19 35 34.8**	**0.0**
BJO1				*eS*	**Sn**	**19 36 33.0**	**-4.8**
BJO1	**Bjornoya**	**5.48**	**186**	*eP*	**Pn**	**19 35 34.9**	**0.0**
BJO1				*eS*	**Sn**	**19 36 34.1**	**-3.6**
BJO1				IAML		19 37 14.8	
	comp=Z,22nm,0.3s						
NOR	**Nord**	**6.23**	**304**	Pn	**Pn**	**19 35 47.2**	**+2.1**
NOR	**Nord**	**6.23**	**304**	Pn	**Pn**	**19 35 47.2**	**+2.1**
HAMF	**Hammerfest**	**9.35**	**175**	Pn	**Pn**	**19 36 29.3**	**+1.3**
HAMF				Sn	**Sn**	**19 38 05.6**	**-7.4**
HAMF	**Hammerfest**	**9.35**	**175**	*eP*	**Pn**	**19 36 29.2**	**+1.3**
ARA0	**ARCESS Array S**	**10.50**	**172**	Pn	**Pn**	**19 36 44.9**	**+1.1**
	baz=1.5,slow=11						
ARA0				Sn	Sn	19 38 32.7	-8.5
	baz=4.4,slow=22						
ARA0	**ARCESS Array S**	**10.50**	**172**	Pn	**Pn**	**19 36 44.9**	**+1.1**
	baz=1.5,slow=11						
ARA0				Sn	Sn	19 38 32.7	-8.5
	baz=4.4,slow=22						
ARCES	**ARCESS Array B**	**10.50**	**172**	Pn	**Pn**	**19 36 44.9**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=358,slow=9.8,SNR=24						
ARCES				Sn	**Sn**	**19 38 35.4**	**-5.8**
	comp=Z,0.8nm,0.3s,baz=351,slow=17,SNR=7.4						
ARE0	**ARCESS Array S**	**10.50**	**172**	*eP*	**Pn**	**19 36 45.4**	**+1.6**
KIF	**Kilpisjarvi**	**10.98**	**181**	*eP*	**Pn**	**19 36 51.0**	**+0.8**
HEF	**Hetta**	**11.60**	**176**	*eP*	**Pn**	**19 36 58.9**	**+0.2**
AMDE	**Amderma**	**14.19**	**113**	*eP*	**Pn**	**19 37 31.9**	**-2.1**
	comp=Z,0.9nm,0.5s						
AMDE				*eS*	Sn	19 40 02.7	-8.5
LSH	**Leshukonskoye**	**16.55**	**142**	*eP*	**Pn**	**19 38 02.9**	**-2.2**
	comp=Z,14nm,1.6s						
LSH				*eS*	Sn	19 40 56.8	-12
FIA0	**FINESS Array S**	**18.63**	**173**	P	**P**	**19 38 31.6**	**+0.9**
	baz=4.0,slow=11						
FIA0	**FINESS Array S**	**18.63**	**173**	P	**P**	**19 38 31.6**	**+0.9**
	baz=4.0,slow=11						
FINES	**FINESS Array B**	**18.63**	**173**	P	**Pn**	**19 38 33.5**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=3.8,slow=12,SNR=4.9						
NOA	**NORSAR Array B**	**19.21**	**195**	P	**Pn**	**19 38 40.1**	**+2.2**
	baz=8.1,slow=11,SNR=1.4						
HFS	**Hagfors**	**20.02**	**191**	P	**P**	**19 38 47.0**	**+1.2**
	baz=5.3,slow=11						
HFS	**Hagfors**	**20.02**	**191**	P	**P**	**19 38 47.5**	**+1.6**
	comp=Z,0.8nm,0.6s,baz=21,slow=9.5,SNR=6.3						
HFS	**Hagfors**	**20.02**	**191**	P	**P**	**19 38 47.0**	**+1.2**
	baz=5.3,slow=11						

MAN 29 19:56:41.0, 6.19N×125.57E, h191km, mb4.3, ML3.1, MS2.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.16**	**121**	*eP*	Pn	19 57 06.4	+0.2
DDMP				*eS*	Sn	19 57 26.3	+0.8
MATI	**Mati**	**1.01**	**42**	*eP*	Pn	19 57 15.8	+5.9
SKMP	**Bagumbayan, Su**	**1.07**	**288**	*eP*	Pn	19 57 12.4	+2.1
SKMP				*eS*	Sn	19 57 36.4	+3.4
CTBH	**Cotabato--PC H**	**1.67**	**308**⇑	*iP*	Pn	19 57 19.7	+4.2
BUKP	**Musuan**	**1.75**	**343**	*eP*	Pn	19 57 17.5	+1.2

TAP 29 19:56:49.8, 23.35N×121.98E, h43km±1km, ML2.0, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.53**	**286**	P	Pn	19 57 00.3	-0.9
	baz=286						
HGSD				S	Sn	19 57 08.2	-0.9
	baz=286						
EGFH	**Guangfu**	**0.60**	**302**	P	Pn	19 57 01.6	-0.4
	baz=309						
EGFH				*eS*	Sn	19 57 10.6	-0.1
	baz=309						
CHKT	**Chengkung**	**0.62**	**247**	S	Sn	19 57 10.0	-1.1
	baz=241						
EHY	**Hungye**	**0.63**	**285**	P	Pn	19 57 02.0	-0.4
	baz=285						
EHY				S	Sn	19 57 11.4	0.0
	baz=285						
TWF1	**Yuli**	**0.63**	**271**	*i* P	Pn	19 57 02.0	-0.4
	baz=264						
YULB	**Yu-li**	**0.63**	**274**	P	Pn	19 57 02.0	-0.4
	baz=274						
YULB				S	Sn	19 57 12.2	+0.7
	baz=274						
FULB	**Fuli**	**0.65**	**257**	P	Pn	19 57 02.0	-0.7
	baz=250						
FULB				S	Sn	19 57 11.3	-0.6
	baz=250						
ESL	**Shilin**	**0.69**	**313**	P	Pn	19 57 02.1	-1.1
	baz=317						
ESL				*eS*	Sn	19 57 11.1	-1.6
	baz=317						
TWH	**Lutao**	**0.79**	**216**	*eS*	Sn	19 57 14.0	-1.2
	baz=214						
TWD	**Chiawan**	**0.81**	**334**	*eS*	Sn	19 57 14.3	-1.4
	baz=335						
VWDT	**VWDT**	**0.87**	**298**	P	Pn	19 57 05.9	+0.2
	baz=298						
VWDT				S	Sn	19 57 17.5	+0.3
	baz=298						
NACB	**Ninganchiao**	**0.90**	**337**	P	Pn	19 57 05.5	-0.6
	baz=337						
NACB				*eS*	Sn	19 57 16.6	-1.2
	baz=337						
ELDTW	**Lidau**	**0.90**	**260**	P	Pn	19 57 05.9	-0.3
	baz=252						
ELDTW				*eS*	Sn	19 57 17.5	-0.6
	baz=252						
ETLH	**Xiulin Townshi**	**0.97**	**332**	S	Sn	19 57 18.7	-1.1
	baz=339						
TWGBT	**Beinan**	**0.98**	**238**	S	Sn	19 57 20.2	+0.3
	baz=249						
TWG	**Pinlang**	**0.99**	**238**	P	Pn	19 57 07.2	-0.1
	baz=249						
TWG				S	Sn	19 57 20.1	0.0
	baz=249						
CHGB	**Renai**	**1.02**	**314**	P	Pn	19 57 08.0	0.0
	baz=314						
CHGB				S	Sn	19 57 20.9	-0.5
	baz=314						
WHF	**Hehuan Shan**	**1.03**	**321**	*eS*	Sn	19 57 20.7	-1.0
	baz=321						
SSLB	**Suanglung**	**1.04**	**295**	*eS*	Sn	19 57 21.5	+0.1
	baz=295						
ALS	**Alishan**	**1.09**	**279**	P	Pn	19 57 09.8	+0.8
	baz=279						
ALS				S	Sn	19 57 24.3	+1.2
	baz=279						
WHYT	**Xinyi Township**	**1.09**	**289**	P	Pn	19 57 09.6	+0.9
	baz=286						
WHYT				*eS*	Sn	19 57 23.5	+0.8
	baz=286						
DPDB	**Guoxing**	**1.18**	**305**	*eP*	Pn	19 57 10.3	+0.3
	baz=313						
DPDB				*eS*	Sn	19 57 25.9	+0.9
	baz=313						
ECL	**Taimali**	**1.21**	**232**	*eS*	Sn	19 57 24.6	-0.9
	baz=241						
NNSB	**Datong**	**1.21**	**333**	*eP*	Pn	19 57 10.3	-0.1
	baz=333						
NNSB				S	Sn	19 57 25.1	-0.6
	baz=333						
NNSH	**Datong**	**1.21**	**333**	S	Sn	19 57 25.5	-0.1
	baz=333						
NNS	**Nan Shan**	**1.22**	**333**	*eS*	Sn	19 57 25.6	-0.4
	baz=333						
TPUB	**Ta-pu**	**1.24**	**268**	*eP*	Pn	19 57 12.4	+1.6
	baz=268						
SLGT	**Liugui**	**1.28**	**254**	*eP*	Pn	19 57 12.2	+1.0
	baz=250						
NDT	**Datong Townshi**	**1.32**	**341**	*eS*	Sn	19 57 28.2	-0.1
	baz=341						
ENTT	**Nioudou**	**1.34**	**344**	*eP*	Pn	19 57 12.3	+0.2
	baz=344						
CHN1	**Nanshi**	**1.35**	**263**	*eP*	Pn	19 57 14.1	+1.9
	baz=263						
YHNB	**Yeheng**	**1.43**	**337**	*eP*	Pn	19 57 12.7	-0.7
	baz=337						
YHNB				*eS*	Sn	19 57 30.8	-0.3
	baz=337						
NSK	**Sanguang**	**1.44**	**337**	*eS*	Sn	19 57 30.8	-0.5
	baz=337						

JMA 29 19:57:20.3±0.3, 24.92N×123.28E, h15km, M2.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.52**	**208**	P	Pg	19 57 30.1	-0.5
YOJ				*eS*	Sg	19 57 37.3	-0.2
JYNG	**Yonagunijimaku**	**0.56**	**213**	P	Pg	19 57 31.2	-0.1
JYNG				*eS*	Sg	19 57 38.5	-0.2
IRIF	**Iriomote-Funau**	**0.71**	**145**	P	Pg	19 57 33.9	-0.3
IRIF				*eS*	Sg	19 57 42.9	-0.7
JKRS	**Kuro-shima**	**0.95**	**136**	P	Pb	19 57 38.4	-0.1
JIJ	**Ishigaki jima**	**0.96**	**125**	P	Pb	19 57 38.5	-0.2
JIJ				*eS*	Sb	19 57 50.6	-0.6
HATJ	**Hateruma jima**	**0.98**	**151**	P	Pb	19 57 38.1	-0.9
JISG	**Ishigakijimahi**	**0.99**	**109**	P	Pb	19 57 38.0	-1.2
JISG				*eS*	Sb	19 57 50.2	-1.9
JTJ	**Tarama**	**1.32**	**102**	*eS*	Sn	19 58 00.6	-1.0

TAP 29 20:18:05.3, 24.37N×121.73E, h16km, ML1.8, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.06**	**9**	*i* P	Pg	20 18 09.0	+0.6
	baz=16						
ENA				S	Sg	20 18 11.4	+1.0
	baz=16						
NACB	**Ninganchiao**	**0.23**	**213**	P	Pb	20 18 10.8	-0.3
	baz=212						
NACB				S	Sb	20 18 14.8	-0.2
	baz=212						
TWC	**Suao**	**0.26**	**24**	*i* P	Pb	20 18 11.6	-0.1
	baz=26						
TWC				*i* S	Sb	20 18 15.5	-0.4
	baz=26						
ETLH	**Xiulin Townshi**	**0.28**	**235**	P	Pb	20 18 11.8	-0.1
	baz=234						
ETLH				*eS*	Sb	20 18 16.5	0.0
	baz=234						
NDT	**Datong Townshi**	**0.31**	**320**	*eP*	Pb	20 18 12.9	+0.5
	baz=319						
NDT				*eS*	Sb	20 18 17.8	+0.6
	baz=319						
ENTT	**Nioudou**	**0.31**	**331**	P	Pb	20 18 12.6	+0.1
	baz=331						
ENTT				*eS*	Sb	20 18 17.5	+0.2
	baz=331						
TWD	**Chiawan**	**0.31**	**203**	*eS*	Sb	20 18 17.8	+0.5
	baz=201						
NNSB	**Datong**	**0.32**	**281**	P	Pb	20 18 13.2	+0.5
	baz=280						
NNSB				S	Sb	20 18 18.0	+0.2
	baz=280						
NNSH	**Datong**	**0.32**	**281**	P	Pb	20 18 13.2	+0.5
	baz=280						
NNSH				S	Sb	20 18 17.9	+0.1
	baz=280						
NNS	**Nan Shan**	**0.33**	**282**	P	Pb	20 18 13.4	+0.5
	baz=282						
NNS				*i* S	Sb	20 18 18.4	+0.3
	baz=282						
TWE	**Neicheng**	**0.35**	**351**	P	Pb	20 18 13.4	+0.2
	baz=352						
TWE				S	Sb	20 18 19.1	+0.5
	baz=352						
YHNB	**Yeheng**	**0.44**	**313**	*eP*	Pb	20 18 15.1	+0.3
	baz=312						
YHNB				*eS*	Sb	20 18 21.5	+0.3
	baz=312						
NSK	**Sanguang**	**0.46**	**312**	*i* P	Pb	20 18 15.3	+0.2
	baz=312						
NSK				*i* S	Sb	20 18 21.6	0.0
	baz=312						
NWLT	**Wulai**	**0.46**	**333**	*eS*	Sb	20 18 21.5	0.0
	baz=332						
WHF	**Hehuan Shan**	**0.48**	**242**	P	Pb	20 18 15.8	+0.2
	baz=241						
WHF				S	Sb	20 18 22.7	+0.1
	baz=241						
CHGB	**Renai**	**0.59**	**239**	*eS*	Sb	20 18 26.4	+0.7
	baz=238						
TIPB	**Shuangxi**	**0.61**	**8**	*eS*	Sb	20 18 25.9	+0.1
	baz=8.0						

JMA 29 20:18:05.6±0.3, 24.80N×123.29E, h19km, M1.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.42**	**217**	P	Pg	20 18 13.9	-0.4
YOJ				*eS*	Sg	20 18 19.4	-0.8
JYNG	**Yonagunijimaku**	**0.47**	**222**	P	Pg	20 18 14.8	-0.4
JYNG				S	Sg	20 18 21.5	-0.1
IRIF	**Iriomote-Funau**	**0.61**	**139**	P	Pb	20 18 17.1	-0.5
IRIF				S	Sg	20 18 26.7	+0.7
JKRS	**Kuro-shima**	**0.86**	**130**	P	Pb	20 18 21.3	-0.6
JKRS				*eS*	Sb	20 18 32.6	-0.5
JIJ	**Ishigaki jima**	**0.89**	**119**	P	Pb	20 18 22.0	-0.4
JIJ				*eS*	Sg

ellipse: s-maj=14.5km s-min=6.2km az=121.0
*NAO **29** 21:06:57.7±0.7, 67.82N×20.49E, ML2.9*
*HEL **29** 21:06:58.1±0.0, 67.84N×20.20E, h0km, ML2.5, Suspected explosion*
*BER **29** 21:06:59.2±4.3, 67.81N×20.45E, h0km, ML2.3, Suspected explosion*

ISC 29 21:06:56.7±0.6, **67.79N**±0.02×**20.23E**±0.02, **h0**km, **n47**, **σ1s58/89, 5D, Sweden**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.17**	**14**	*i* P			**Pg**	**21 07 00.3**	**+0.4**
KUA				*i* S			**Sg**	**21 07 02.2**	**+0.1**
KOVU	**Salmi**	**0.43**	**357**	↓*i* P			**Pg**	**21 07 05.0**	**0.0**
KOVU				*i* S			**Sg**	**21 07 10.2**	**-0.4**
NIKU	**Nikkaluokta**	**0.46**	**280**	↓*i* P			**Pg**	**21 07 06.0**	**+0.5**
NIKU				*i* S			**Sg**	**21 07 12.1**	**+0.8**
DUNU	**Dundret**	**0.69**	**169**	↓*i* P			**Pg**	**21 07 11.0**	**+1.3**
DUNU				*i* S			**Sb**	**21 07 21.1**	**-0.4**
LANU	**Lannavaara**	**0.71**	**68**	*e*P			**Pg**	**21 07 10.8**	**+0.5**
LANU				*e*S			**Sg**	**21 07 20.5**	**+1.0**
MASU	**Masugnsbyn**	**0.76**	**116**	↓*i* P			**Pg**	**21 07 12.2**	**+1.1**
MASU				*i* S			**Sb**	**21 07 23.1**	**-0.4**
KIF	**Kilpisjarvi**	**1.24**	**10**	Pg			**Pg**	**21 07 20.3**	**0.0**
KIF				Lg			Lg	21 07 37.2	
KIF	**Kilpisjarvi**	**1.24**	**10**	*e*P			**Pg**	**21 07 20.5**	**+0.2**
KIF				*e*S			**Sg**	**21 07 36.1**	**-0.2**
KIF	**Kilpisjarvi**	**1.24**	**10**	Pg			**Pg**	**21 07 20.3**	**0.0**
KIF				Sg			**Sb**	**21 07 37.2**	**-0.1**
PAJU	**Pajala**	**1.35**	**123**	↓*e*P			**Pg**	**21 07 22.8**	**+0.2**
PAJU				*e*S			**Sb**	**21 07 41.2**	**+0.5**
HEF	**Hetta**	**1.43**	**63**	Pg			**Pn**	**21 07 23.6**	**-0.2**
HEF				Lg			Lg	21 07 42.2	
HEF	**Hetta**	**1.43**	**63**	*e*P			**Pn**	**21 07 23.7**	**-0.1**
HEF				*e*S			**Sg**	**21 07 41.8**	**-0.6**
HEF	**Hetta**	**1.43**	**63**	Pg			**Pn**	**21 07 23.6**	**-0.2**
HEF				Sg			**Sg**	**21 07 42.2**	**-0.2**
ERTU	**Ertsjaerv**	**1.46**	**147**	*e*P			**Pg**	**21 07 24.9**	**+0.3**
ERTU				*e*S			**Sn**	**21 07 44.8**	**+0.8**
KTK1	**Kautokeino**	**1.66**	**41**	Pn			**Pn**	**21 07 27.1**	**+0.2**
KTK1				Sn			**Sn**	**21 07 48.4**	**-0.4**
KTK1	**Kautokeino**	**1.66**	**41**	*e*P			**Pn**	**21 07 27.2**	**+0.2**
KTK1				*e*S			**Sn**	**21 07 47.8**	**-1.1**
KTK1				IAML				21 07 52.4	
	comp=Z,49nm,0.2s								
HARU	**Harads**	**1.66**	**169**	*e*P			**Pb**	**21 07 28.3**	**+0.2**
HARU				*e*S			**Sg**	**21 07 52.1**	**+2.2**
STEI	**Steigen**	**1.90**	**277**	Pn			**Pn**	**21 07 31.6**	**+1.4**
STEI				Sn			**Sb**	**21 07 57.1**	**+0.8**
STEI	**Steigen**	**1.90**	**277**	*e*P			**Pb**	**21 07 31.9**	**-0.2**
STEI				*e*S			**Sb**	**21 07 57.0**	**+0.8**
STEI				IAML				21 07 59.9	
	comp=Z,47nm,0.3s								
TOF	**Tornio**	**2.36**	**135**	*e*PB			**Pb**	**21 07 39.5**	**-0.4**
TOF				*e*SB			**Sb**	**21 08 10.4**	**+0.9**
TOF				MSG				21 08 12.5	
	comp=Z,25nm,0.2s								
SGF	**Sodankyl**	**2.44**	**95**	*e*PB			**Pb**	**21 07 40.6**	**-0.6**
SGF				*e*SG			**Sg**	**21 08 13.5**	**-1.3**
SGF				MSG				21 08 14.7	
	comp=Z,15nm,0.1s								
RNF	**Rovaniemi**	**2.55**	**115**	*e*PB			**Pb**	**21 07 42.3**	**-0.8**
RNF				*e*SB			**Sb**	**21 08 15.5**	**+0.6**
RNF				MSG				21 08 18.2	
	comp=Z,47nm,0.2s								
ARA0	**ARCESS Array S**	**2.61**	**45**	Pn			**Pn**	**21 07 40.8**	**+0.8**
	baz=226,slow=16								
ARA0				Sn			**Sn**	**21 08 11.2**	**-1.1**
	baz=234,slow=22								
ARA0				Lg			Lg	21 08 15.2	
	baz=226,slow=28								
ARA0	**ARCESS Array S**	**2.61**	**45**	Pn			**Pn**	**21 07 40.8**	**+0.8**
	baz=226,slow=16								
ARA0				Sn			**Sn**	**21 08 11.2**	**-1.1**
	baz=234,slow=22								
ARA0				Sg			**Sb**	**21 08 15.2**	**-1.5**
	baz=226,slow=28								
ARCES	**ARCESS Array B**	**2.61**	**45**	Pn			**Pn**	**21 07 40.7**	**+0.7**
	comp=Z,3.5nm,0.3s,baz=234,slow=14,SNR=128								
ARCES				Lg			Lg	21 08 15.1	
	comp=Z,9.1nm,0.3s,baz=229,slow=24,SNR=22								
ARE0	**ARCESS Array S**	**2.61**	**45**	*e*PB			**Pb**	**21 07 42.7**	**-1.5**
ARE0				*e*SB			**Sb**	**21 08 15.9**	**-0.8**
KEV	**Kevo**	**3.16**	**48**	*e*P			**Pn**	**21 07 48.6**	**+1.1**
KEV				*e*S			**Sn**	**21 08 27.0**	**+1.2**
APA0	**Apatity Array**	**4.87**	**86**	Pn			**Pn**	**21 08 10.9**	**-0.1**
	baz=291,slow=12								
APA0				Sn			**Sn**	**21 09 06.2**	**-1.7**
	baz=273,slow=28								
APA0				Lg			Lg	21 09 24.9	
	baz=279,slow=37								
APA0	**Apatity Array**	**4.87**	**86**	Pn			**Pn**	**21 08 10.9**	**-0.1**
	baz=291,slow=12								
APA0				Sn			**Sn**	**21 09 06.2**	**-1.7**
	baz=273,slow=28								
APA0				Sg			**Sb**	**21 09 24.9**	**+3.2**
	baz=279,slow=37								
FIA0	**FINESS Array S**	**6.85**	**156**	Pn			**Pn**	**21 08 40.3**	**+2.1**
	baz=347,slow=14								
FIA0				Sn			**Sn**	**21 09 56.3**	**-0.4**
	baz=342,slow=22								
FIA0				Lg			Lg	21 10 29.0	
	baz=344,slow=37								
FIA0	**FINESS Array S**	**6.85**	**156**	Pn			**Pn**	**21 08 40.3**	**+2.1**
	baz=347,slow=14								
FIA0				Sn			**Sn**	**21 09 56.3**	**-0.4**
	baz=342,slow=22								
FIA0				Sg			**Sg**	**21 10 29.0**	**-7.3**
	baz=344,slow=37								
FINES	**FINESS Array B**	**6.85**	**156**	Pn			**Pn**	**21 08 40.2**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=347,slow=13,SNR=19								
FINES				Pg			**Pb**	**21 08 58.1**	**+1.8**
	comp=Z,0.4nm,0.3s,baz=348,slow=16,SNR=8.0								
FINES				Sn			**Sn**	**21 09 57.1**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=344,slow=21,SNR=6.2								
FINES				Lg			Lg	21 10 30.5	
	comp=Z,1.0nm,0.3s,baz=349,slow=27,SNR=10								
NB2	**NORSAR Subarra**	**7.81**	**214**	Pn			**Pn**	**21 08 52.4**	**+0.9**
	baz=27,slow=14								
NB2				Lg			Lg	21 11 04.3	
	baz=22,slow=37								
NB2	**NORSAR Subarra**	**7.81**	**214**	Pn			**Pn**	**21 08 52.4**	**+0.9**
	baz=27,slow=14								
NB2				Sg			**Sg**	**21 11 04.3**	**-2.9**
	baz=22,slow=37								
NOA	**NORSAR Array B**	**7.81**	**214**	Pn			**Pn**	**21 08 52.8**	**+1.3**
	comp=Z,0.0nm,0.3s,baz=20,slow=11,SNR=5.0								
NOA				Sn			**Sn**	**21 10 20.5**	**0.0**
	comp=Z,0.0nm,0.3s,baz=358,slow=14,SNR=1.7								
NOA				Lg			Lg	21 11 01.6	
	comp=Z,0.1nm,0.3s,baz=183,slow=14,SNR=5.0								
NRA0	**NORESS Array S**	**8.02**	**212**	Pn			**Pn**	**21 08 55.4**	**+1.1**
	baz=39,slow=16								
NRA0				Sn			**Sn**	**21 10 24.2**	**-1.3**
	baz=14,slow=22								
NRA0				Lg			Lg	21 11 10.8	
	baz=9.8,slow=28								
NRA0	**NORESS Array S**	**8.02**	**212**	Pn			**Pn**	**21 08 55.4**	**+1.1**
	baz=39,slow=16								
NRA0				Sn			**Sn**	**21 10 24.2**	**-1.3**
	baz=14,slow=22								
NRA0				Sg			**Sg**	**21 11 10.8**	**-3.1**
	baz=9.8,slow=28								
HFS	**Hagfors**	**8.20**	**204**	Pn			**Pn**	**21 08 58.1**	**+1.4**
	baz=18,slow=14								
HFS				Sn			**Sn**	**21 10 28.2**	**-1.8**
	baz=34,slow=22								
HFS				Lg			Lg	21 11 13.7	
	baz=17,slow=28								
HFS	**Hagfors**	**8.20**	**204**	Pn			**Pn**	**21 08 57.3**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=17,slow=13,SNR=4.0								
HFS				Sn			**Sn**	**21 10 28.6**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=30,slow=24,SNR=2.5								
HFS				Lg			Lg	21 11 14.3	
	comp=Z,0.5nm,0.3s,baz=24,slow=23,SNR=3.3								
HFS	**Hagfors**	**8.20**	**204**	Pn			**Pn**	**21 08 58.1**	**+1.4**
	baz=18,slow=14								
HFS				Sn			**Sn**	**21 10 28.2**	**-1.8**
	baz=34,slow=22								
HFS				Sg			**Sg**	**21 11 13.7**	**-6.0**
	baz=17,slow=28								
SPA0	**Spitsbergen Ar**	**10.50**	**356**	Pn			**Pn**	**21 09 28.1**	**0.0**
	baz=149,slow=14								
SPA0	**Spitsbergen Ar**	**10.50**	**356**	Pn			**Pn**	**21 09 28.1**	**0.0**
	baz=149,slow=14								
SPITS	**Spitsbergen Ar**	**10.50**	**356**	Pn			**Pn**	**21 09 24.2**	**-4.0**
	baz=182,slow=15,SNR=2.0								
EKA	**Eskdalemuir Ar**	**16.58**	**233**	Pn			**P**	**21 10 52.5**	**-0.3**
	baz=28,slow=17,SNR=1.9								
ARU	**Arti**	**20.82**	**104**	P			**P**	**21 11 39.6**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=308,slow=12,SNR=3.8								
BVAR	**Borovoye Array**	**27.84**	**97**	P			**P**	**21 12 48.1**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=316,slow=12,SNR=3.9								
MKAR	**Makanchi Array**	**37.40**	**92**	P			**P**	**21 14 12.7**	**+1.9**
	comp=Z,0.8nm,1.0s,baz=335,slow=8.8,SNR=1.8								

*SNET **29** 21:55:13.5±1.0, 13.67N×91.46W, h15km±13km, ML3.1*
*MEX **29** 21:55:13.0±0.4, 13.74N×91.64W, h20km, MD3.8*
*GCG **29** 21:55:14.2±0.7, 13.70N×91.48W, h13km↓999km, MD3.7*

ISC 29 21:55:10.8±2.6, **13.7N**±0.1×**91.74W**±0.07, **h27**km±18km, **n15, σ0s83/24, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**1.16**	**49**	*e*P			**Pn**	**21 55 31.8**	**+0.4**
PCG	**Pacaya**	**1.31**	**57**	*e*P			**Pb**	**21 55 34.9**	**0.0**
THIG		**1.32**	**338**	*e*P			**Pn**	**21 55 33.4**	**-0.1**
THIG				*i* S			**Sn**	**21 55 48.7**	**-1.5**
IXG	**Ixpaco**	**1.35**	**69**	*e*P			**Pn**	**21 55 34.3**	**+0.3**
IXG	**Ixpaco**	**1.35**	**69**	*e*P			**Pn**	**21 55 33.5**	**-0.5**
NBG	**Las Nubes**	**1.63**	**56**	*e*P			**Pb**	**21 55 40.0**	**-0.3**
NBG				*e*S			**Sn**	**21 55 59.7**	**+1.5**
RTR	**El Retiro**	**2.05**	**84**	*e*P			**Pn**	**21 55 44.3**	**+0.7**
RTR				*e*S			**Sn**	**21 56 06.9**	**-1.5**
CEVE	**Cerro Verde**	**2.06**	**86**	*e*P			**Pn**	**21 55 44.4**	**+0.5**
CEVE				*e*S			**Sn**	**21 56 08.4**	**-0.5**
CEVE				IAML				21 56 12.2	
	comp=Z,776nm,0.3s								
SBLS	**San Blas**	**2.07**	**85**	*e*P			**Pn**	**21 55 44.6**	**+0.7**
SBLS				*e*S			**Sn**	**21 56 08.8**	**-0.2**
SNJE	**San Jose**	**2.08**	**85**	*e*P			**Pn**	**21 55 44.7**	**+0.5**
SNJE				*e*S			**Sn**	**21 56 09.6**	**+0.3**
MTO3	**Montecristo**	**2.42**	**73**	*e*P			**Pn**	**21 55 49.5**	**+0.7**
MTO3				IAML				21 56 21.0	
	comp=Z,35nm,0.4s								
MRL	**Marmol**	**2.43**	**55**	*e*P			**Pn**	**21 55 49.9**	**+0.9**
LFRS	**El Faro**	**2.61**	**91**	*e*P			**Pn**	**21 55 51.1**	**-0.2**
LFRS				*e*S			**Sn**	**21 56 21.1**	**-1.0**
CCIG	**Comitan**	**2.62**	**352**	*e*P			**Pn**	**21 55 51.6**	**+0.1**
CCIG				*i* S			**Sn**	**21 56 21.6**	**-0.8**
CMIG	**Matias Romero**	**4.55**	**319**	*e*P			**Pn**	**21 56 18.6**	**+0.7**
CMIG				*i* S			**Sn**	**21 57 10.7**	**+0.8**

*NIED **29** 21:58:00, 43.90N×147.90E, h80km, Mw4.7 Best double couple: M0 1.06000×10^16 NP1:φs243.00000°, δ79.00000°, λ-128.00000°. NP2:φs140.00000°, δ39.00000°, λ-17.00000°.*
*MOS **29** 21:58:33.2±1.2, 44.23N×148.30E, h71km, mb5.3/30, Error ellipse: s-maj=6.0km s-min=4.3km az=97.3*
MOS Felt (II) at Yuzhno-Kuril'sk.
*JMA **29** 21:58:35.3±0.2, 43.92N×147.93E, h0km, M4.8*
JMA Felt I J1.
*IDC **29** 21:58:35.3±0.6, 44.40N×148.09E, h66km±4km, mb4.3/26, mb1 4.5/33, mb1mx4.3/47, mbtmp4.6/33, MS3.3/11, Ms1 3.3/11, ms1mx3.1/43, Error ellipse: s-maj=12.2km s-min=9.7km az=143.0*
*SKHL **29** 21:58:35.2±0.2, 44.25N×148.29E, h81km±5km, mb5.4/15, msh6.2/1*
SKHL Felt (II-III) at Kuril'sk, Reidovo; (II) at Yushno-Kuril'sk.
*NEIC **29** 21:58:35.6±2.0, 44.26N±0.07×148.14E±0.09, h78km±5km, mb4.8/216, Error ellipse: s-maj=10.4km s-min=8.9km az=134.0*
*BGR **29** 21:58:35.1±0.0, 45.49N×147.90E, h33km, mb5.3, Ms4.2*

ISC 29 21:58:34.9±0.4, **44.28N**±0.04×**148.16E**±0.04, **h73**km±3km, **h73km:pP-P, n593,** σ1s56/604, **mb4.9**/211, **53C-24D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.98**	**348**	*i* P			**Pn**	**21 58 54.1**	**+0.8**
KUR						AMB	AMB	21 58 55.0	
	900nm,0.4s								
KUR						AMB	AMB	21 58 55.0	
	2μm,0.4s								
KUR						AMB	AMB	21 58 55.0	
	3μm,0.4s								
KUR				*i* S			**Sn**	**21 59 08.2**	**+1.2**
KUR						A	A	21 59 09.0	
	11μm,0.5s								
KUR						A	A	21 59 09.0	
	19μm,0.5s								
KUR	**Kuril'sk**	**0.98**	**348**	*d i* PN			**Pn**	**21 58 54.0**	**+0.8**
KUR				*i* S			**Sn**	**21 59 08.2**	**+1.2**
KUR						pmax	pmax		
	comp=N,902nm,0.2s								
KUR						pmax	pmax		
	comp=E,2μm,0.2s								
KUR						pmax	pmax		
	comp=Z,2μm,0.2s								
KUR						smax	smax		
	comp=N,18nm,0.2s								
KUR						smax	smax		
	comp=E,5.0nm,0.3s								
YUK	**Yuzh-Kuril'sk**	**1.67**	**262**	*i* P			**Pn**	**21 59 03.4**	**+1.2**
YUK						AMB	AMB	21 59 04.0	
	comp=E,410nm,0.3s								
YUK						AMB	AMB	21 59 04.0	
	comp=E,570nm,0.3s								
YUK						AMB	AMB	21 59 04.0	
	comp=E,1μm,0.3s								
YUK				*i* S			**Sn**	**21 59 24.7**	**+1.8**
YUK						A	A	21 59 26.5	
	comp=E,10μm,1.1s								
YUK						A	A	21 59 26.5	
	comp=E,14μm,1.1s								
YUK						A	A	21 59 26.7	
	comp=E,6μm,0.5s								
YUK						A	A	21 59 26.7	
	comp=E,11μm,0.5s								
YUK	**Yuzh-Kuril'sk**	**1.67**	**262**	*d i* PN			**Pn**	**21 59 03.2**	**+1.0**
YUK				*i* S			**Sn**	**21 59 23.1**	**+0.2**
YUK						pmax	pmax		
	comp=Z,1μm,0.3s								
YUK						pmax	pmax		
	comp=N,410nm,0.2s								
YUK						pmax	pmax		
	comp=E,570nm,0.2s								
YUK						smax	smax		
	comp=N,10μm,1.1s								
YUK						smax	smax		
	comp=E,14μm,0.5s								
YUK						smax	smax		
	comp=N,6μm,0.2s								
YUK						smax	smax		
	comp=E,11μm,0.7s								
GRPR	**Tuman**	**1.74**	**261**	*i* P			**Pn**	**21 59 04.2**	**+1.1**
GRPR						AMB	AMB	21 59 05.0	
	comp=E,860nm,0.3s								
GRPR				*i* S			**Sn**	**21 59 24.5**	**-0.1**
GRPR						A	A	21 59 28.0	
	comp=E,14μm,0.5s								
GRPR						A	A	21 59 28.0	
	comp=E,7μm,0.5s								
GRPR	**Tuman**	**1.74**	**261**	↓*i* PN			**Pn**	**21 59 04.2**	**+1.1**
GRPR				*i* S			**Sn**	**21 59 24.4**	**-0.1**
GRPR						pmax	pmax		
	comp=E,235nm,0.1s								
GRPR						pmax	pmax		
	comp=Z,861nm,0.1s								
GRPR						smax	smax		
	comp=N,7μm,0.8s								
GRPR						smax	smax		
	comp=E,5μm,1.4s								
GRPR						smax	smax		
	comp=N,14μm,0.2s								
GRPR						smax	smax		
	comp=E,7μm,0.1s								
NEM2	**Nemuro 2**	**1.97**	**243**	P			**Pn**	**21 59 06.4**	**+0.2**
NEM2				*e*S			**Sn**	**21 59 28.4**	**-1.6**
GLVR	**Golovnino**	**1.98**	**255**	*i* P			**Pn**	**21 59 07.6**	**+1.3**
GLVR						AMB	AMB	21 59 08.0	
	comp=E,80nm,0.4s								
GLVR						AMB	AMB	21 59 08.0	
	comp=E,220nm,0.4s								
GLVR						AMB	AMB	21 59 08.0	
	comp=E,1μm,0.4s								
GLVR				*i* S			**Sn**	**21 59 30.7**	**+0.5**
GLVR						A	A	21 59 33.0	
	comp=E,10μm,0.5s								
GLVR						A	A	21 59 33.0	
	comp=E,6μm,0.5s								
GLVR	**Golovnino**	**1.98**	**255**	↓*i* PN			**Pn**	**21 59 07.6**	**+1.3**
GLVR				*i* S			**Sn**	**21 59 30.7**	**+0.5**
GLVR						pmax	pmax		
	comp=N,82nm,0.4s								
GLVR						pmax	pmax		
	comp=E,221nm,0.4s								
GLVR						pmax	pmax		
	comp=Z,1μm,0.4s								
GLVR						smax	smax		
	comp=E,6μm,0.2s								
GLVR						smax	smax		
	comp=N,10μm,0.3s								
GLVR						smax	smax		
	comp=N,12μm,1.3s								
GLVR						smax	smax		
	comp=E,8μm,0.7s								
JRA	**Rausu**	**2.21**	**262**	P			**Pn**	**21 59 11.5**	**+2.1**
JRA				*e*S			**Sn**	**21 59 38.1**	**+2.3**
JNSB	**Nemuroshibetsu**	**2.33**	**259**	P			**Pn**	**21 59 12.9**	**+1.9**
JNSB				*e*S			**Sn**	**21 59 40.2**	**+1.5**
JKHN	**Kushirohamanak**	**2.48**	**242**	P			**Pn**	**21 59 13.7**	**+0.6**
JKHN				*e*S			**Sn**	**21 59 41.3**	**-1.0**
JNK	**Nakash**	**2.58**	**256**	P			**Pn**	**21 59 15.8**	**+1.4**
JNK				*e*S			**Sn**	**21 59 45.4**	**+0.7**
JAK	**Akkeshi**	**2.82**	**244**	P			**Pn**	**21 59 18.2**	**+0.5**
JAK				*e*S			**Sn**	**21 59 49.6**	**-1.0**
JTKR	**Abashiri--Toko**	**3.08**	**266**	P			**Pn**	**21 59 23.2**	**+2.1**
JAR	**Ashorobuto**	**3.33**	**254**	P			**Pn**	**21 59 26.5**	**+2.0**
JAR				*e*S			**Sn**	**22 00 04.2**	**+1.3**
JOB	**Onbets**	**3.43**	**248**	P			**Pn**	**21 59 27.3**	**+1.4**
JOB				*e*S			**Sn**	**22 00 05.2**	**-0.2**
JMP	**Maruseppu**	**3.47**	**267**	P			**Pn**	**21 59 28.9**	**+2.4**
JCH	**Churui**	**3.87**	**246**	P			**Pn**	**21 59 32.7**	**+0.8**
JCH				*e*S			**Sn**	**22 00 15.5**	**-0.6**
JKK2	**Kamakawa 2**	**3.92**	**266**	P			**Pn**	**21 59 35.5**	**+2.9**
JKA	**Kamikawa-asahi**	**4.00**	**270**				**Pn**	**21 59 35.1**	**+1.3**
JKA							**Sn**	**22 00 16.4**	**-3.0**
ASAJ	**Asahikawa**	**4.00**	**270**	P			**Pn**	**21 59 35.1**	**+1.3**
	comp=E,9.0nm,0.3s,baz=84,slow=16,SNR=65								
ASAJ				S			**Sn**	**22 00 16.4**	**-3.0**
	comp=E,11nm,0.3s,baz=75,slow=10.0,SNR=5.6								
ASAJ				LR			LR	22 01 29.1	
	comp=E,362nm,19.0s,baz=148,slow=44								
JSE	**Soyaes**	**4.04**	**282**	P			**Pn**	**21 59 36.9**	**+2.7**
JFR	**Furan**	**4.18**	**257**	*e*S			**Sn**	**22 00 25.9**	**+2.0**
ERM	**Erimo**	**4.30**	**240**	*c i* PN			**Pn**	**21 59 40.0**	**+2.2**
ERM	**Erimo**	**4.30**	**240**	Pn			**Pn**	**21 59 39.6**	**+1.8**
JNBK	**Urakawa-nobuka**	**4.42**	**245**	P			**Pn**	**21 59 40.1**	**+0.6**
JNBK				*e*S			**Sn**	**22 00 29.3**	**-0.4**
JWK2	**Keihoku**	**4.58**	**285**	P			**Pn**	**21 59 45.8**	**+4.2**
YSS	**Yuzh-Sakhalins**	**4.64**	**307**	*i* P			**Pn**	**21 59 45.0**	**+2.6**
YSS				*i* P			**Pn**	**21 59 45.0**	**+2.6**
YSS						AMB	AMB	21 59 45.5	
	comp=E,200nm,2.3s								
YSS						AMB	AMB	21 59 46.2	
	comp=E,60nm,0.6s								
YSS						AMB	AMB	21 59 46.2	
	comp=E,160nm,0.6s								
YSS				*i* S			**Sn**	**22 00 35.3**	**+0.3**
YSS						A	A	22 00 41.8	
	comp=E,180nm,1.0s								
YSS						A	A	22 00 41.8	
	comp=E,240nm,1.0s								
YSS						A	A	22 00 41.9	
	comp=E,400nm,2.0s								
YSS						A	A	22 00 41.9	
	comp=E,300nm,2.0s								
YSS	**Yuzh-Sakhalins**	**4.64**	**307**	κ *i* PN			**Pn**	**21 59 45.0**	**+2.6**
YSS				*e*S			**Sn**	**22 00 39.6**	**+4.6**
YSS						pmax	pmax		
	comp=Z,200nm,2.3s								
YSS						pmax	pmax		
	comp=Z,160nm,0.5s								
YSS						pmax	pmax		
	comp=N,60nm,0.7s								
YSS						pmax	pmax		
	comp=E,70nm,1.0s								
YSS						smax	smax		
	comp=N,180nm,1.2s								
YSS						smax	smax		
	comp=E,240nm,1.0s								
YSS						smax	smax		
	comp=N,400nm,2.0s								
YSS						MLR	MLR		
	comp=Z,400nm,11.0s								
YSS	**Yuzh-Sakhalins**	**4.64**	**307**				**Pn**	**21 59 44.4**	**+2.0**
JRBN	**Rebuntou**	**5.17**	**285**	P			**Pn**	**21 59 53.0**	**+3.3**
UGL	**Uglegorsk**	**6.37**	**321**	*i* P			**Pn**	**22 00 08.2**	**+2.1**
UGL						AMB	AMB	22 00 10.0	
	comp=Z,130nm,0.8s								
UGL				*e*S			**Sn**	**22 01 17.5**	**+0.2**
UGL						A	A	22 01 22.0	
	comp=Z,100nm,0.9s								
UGL						A	A	22 01 22.0	
	comp=Z,80nm,0.9s								
UGL	**Uglegorsk**	**6.37**	**321**	↓*i* PN			**Pn**	**22 00 09.9**	**+3.8**
UGL				S			**Sn**	**22 01 19.7**	**+2.4**
UGL						pmax	pmax		
	comp=Z,134nm,0.8s								
UGL						smax	smax		
	comp=N,99nm,0.9s								
TYV	**Tymovskoe**	**7.57**	**333**	*e*P			**Pn**	**22 00 24.6**	**+2.2**
TEY	**Ternei**	**8.28**	**279**	*e*P			**Pn**	**22 00 35.9**	**+3.8**
TEY						AMB	AMB	22 00 37.2	
	comp=N,30nm,1.0s								
TEY	**Ternei**	**8.28**	**279**	*e*PN			Pn	22 00 37.0	+4.9
SKR	**Severo-Kuril's**	**8.37**	**37**	*e*P			**Pn**	**22 00 33.7**	**+0.4**
SKR						AMB	AMB	22 00 35.7	
	comp=N,160nm,1.0s								
SKR	**Severo-Kuril's**	**8.37**	**37**	*ce*PN			**Pn**	**22 00 33.1**	**-0.2**
PAU	**Pauzhetka**	**9.24**	**36**	*i* P			**Pn**	**22 00 44.8**	**-0.4**

KLR pmax pmax
comp=Z,4.0nm,0.9s
INU Inuyama 12.35 228 Pn **Pn 22 01 26.2 -1.6**
JHJ2 Mitsune 12.90 213 Pn **Pn 22 01 35.1 -0.1**
JHJ Hachijo jima 2 12.91 213 P **Pn 22 01 34.5 -0.8**
comp=Z,3.3nm,0.3s,baz=136,slow=22,SNR=10
JHJ S Sn 22 03 47.1 -10
comp=Z,12nm,0.3s,baz=106,slow=22,SNR=8.6
JHJ LR LR 22 07 15.5
comp=Z,35nm,18.8s,baz=64,slow=40
MDJ Mudanjiang 13.28 278 Pn **Pn 22 01 39.9 -0.3**
EKMR Ekimchan 13.33 317 *i* P **Pn 22 01 40.4 -0.5**
EKMR AMB AMB 22 01 42.5
comp=Z,100nm,1.0s
MA2 Magadan 15.40 5 P **Pn 22 02 06.5 -1.2**
comp=Z,1.9nm,0.3s,baz=179,slow=10,SNR=14
MA2 LR LR 22 07 31.4
comp=Z,135nm,20.2s,baz=180,slow=35
MA2 Magadan 15.40 5 *eP* **Pn 22 02 08.0 +0.3**
MA2 AMB AMB 22 02 09.7
comp=Z,20nm,0.7s
MA2 Magadan 15.40 5 *d i* P **Pn 22 02 08.0 +0.3**
MA2 pmax pmax
comp=Z,24nm,0.7s
MA2 Magadan 15.40 5 Pn **Pn 22 02 08.3 +0.6**
MA2 IAmb IAmb 22 02 09.9
comp=Z,48nm,0.9s
BMKR Bomnak 16.27 317 *eP* **Pn 22 02 17.1 -1.5**
BMKR AMB AMB 22 02 23.8
comp=Z,10.0nm,0.4s
CN2 Changchun 16.34 276 *eP* **Pn 22 02 13.5 -6.0**
CN2 *eP*P **PnPn 22 02 27.3 -2.9**
CN2 *eS* **Sn 22 05 15.0 -5.0**
CN2 LR LR
comp=N,220nm,14.0s
CN2 LR LR
comp=E,70nm,14.0s
CN2 LR LR
comp=Z,180nm,14.0s
ZEA Zeya 16.61 312 *eP* **Pn 22 02 21.2 -1.7**
ZEA AMB AMB 22 02 26.1
comp=Z,10.0nm,1.0s
ZEA Zeya 16.61 312 *eP* **Pn 22 02 20.6 -2.3**
ZEA pmax pmax
comp=Z,12nm,1.0s
KSRS Korea Array 16.73 253 P **Pn 22 02 24.2 -0.3**
comp=Z,0.2nm,0.3s,baz=63,slow=12,SNR=4.1
KS19 Wonju Array Si 16.75 253 Pn **Pn 22 02 22.2 -2.5**
KROS Kirovskiy 17.07 314 *eP* **Pn 22 02 27.2 -1.4**
KROS AMB AMB 22 02 32.1
comp=Z,10.0nm,0.5s
JNU Nakatsue 17.45 236 P **P 22 02 35.1 +1.4**
comp=Z,0.2nm,0.3s,baz=330,slow=21,SNR=1.8
SEY Seymchan 18.85 6 P **P 22 02 47.9 -0.8**
comp=Z,2.0nm,0.3s,baz=186,slow=9.0,SNR=29
YAK Yakutsk 20.82 335 P **P 22 03 08.0 -2.0**
comp=Z,69nm,0.6s,baz=347,slow=0.8,SNR=29
YAK LR LR 22 11 43.3
comp=Z,114nm,19.8s,baz=136,slow=38
YAK Yakutsk 20.82 335 *eP* **P 22 03 07.2 -2.8**
YAK *eS* **S 22 06 51.5 -6.3**
YAK *e*SS Sn 22 07 12.7 +5.3
YAK pmax pmax
comp=Z,70nm,0.8s
YAK pmax pmax
comp=E,21nm,1.0s
YAK pmax pmax
comp=N,38nm,1.2s
YAK smax smax
comp=N,62nm,2.5s
YAK smax smax
comp=E,64nm,2.6s
YAK Yakutsk 20.82 335 **P 22 03 08.1 -1.9**
JOW Kunigami 23.66 229 P **P 22 03 39.6 -0.1**
BJT Baijiatuau 24.01 271 P **P 22 03 41.7 -1.1**
BJT pmax pmax
comp=Z,10.0nm,1.1s
BJT Baijiatuau 24.01 271 P **P 22 03 41.7 -1.1**
GSTR Great Sitkin T 24.90 59 P **P 22 03 49.4 -1.3**
TIA Tai'an 24.91 262 P **P 22 03 53.3 +2.3**
TIA pmax pmax
comp=Z,6.0nm,0.6s
TIA LR LR
comp=Z,1μm,12.8s
TIA LR LR
comp=Z,420nm,10.7s
TIA LR LR
comp=Z,1μm,11.4s
SSE Sheshan 24.95 247 P **P 22 03 53.0 +1.7**
SSE S **S 22 08 20.3 +11**
SSE pmax pmax
comp=Z,29nm,0.7s
SSE LR LR
comp=Z,630nm,19.0s
SSE LR LR
comp=Z,960nm,19.4s
SSE LR LR
comp=Z,670nm,16.8s
BILL Bilibino 25.65 16 *de*P **P 22 03 56.0 -1.4**
BILL *e* 22 04 11.5
BILL pmax pmax
comp=Z,18nm,0.8s
BILL MLR MLR
comp=Z,431nm,26.0s
BILL Bilibino 25.65 16 P **P 22 03 55.2 -2.2**
BILL IAmb IAmb 22 03 58.9
comp=Z,17nm,0.8s
ULN Ulaanbaatar 28.50 292⇑ *e*P **P 22 04 24.7 +1.4**
ULN Ulaanbaatar 28.50 292 P **P 22 04 23.1 -0.2**
ULN Ulaanbaatar 28.50 292 **P 22 04 23.3 0.0**
ULN IAmb IAmb 22 04 25.9
comp=Z,6.4nm,0.6s
SONM Songino Array 28.95 292 P **P 22 04 27.1 -0.1**
comp=Z,4.4nm,0.7s,baz=84,slow=8.1,SNR=29
TIXI Tiksi 29.00 348 P **P 22 04 24.2 -3.0**
comp=Z,2.1nm,0.3s,baz=142,slow=6.7,SNR=8.5
TIXI LR LR 22 15 45.7
comp=Z,57nm,20.9s,baz=158,slow=36
TIXI Tiksi 29.00 348⇑ *e*P **P 22 04 24.1 -3.2**
TIXI Tiksi 29.00 348 P **P 22 04 24.0 -3.2**
H11N2 WAKE ISLAND Hy 29.04 141 T T 22 35 23.8
baz=331,slow=75,SNR=1919
H11N1 WAKE ISLAND Hy 29.05 141 T T 22 35 24.9
baz=331,slow=75,SNR=778
H11N3 WAKE ISLAND Hy 29.06 141 T T 22 35 25.2
baz=331,slow=75,SNR=854
H11S1 WAKE ISLAND Hy 30.03 143 T T 22 36 35.9
baz=332,slow=76,SNR=2300
H11S3 WAKE ISLAND Hy 30.04 143 T T 22 36 27.4
baz=332,slow=76,SNR=2804
H11S2 WAKE ISLAND Hy 30.05 143 T T 22 36 37.2
baz=332,slow=76,SNR=2260
TLY Talaya 30.31 300 P **P 22 04 36.7 -2.4**
comp=Z,3.2nm,0.3s,baz=278,slow=7.3,SNR=3.1
TLY Talaya 30.31 300 *i* P **P 22 04 38.7 -0.4**
TLY pmax pmax
comp=Z,4.0nm,0.8s
TLY Talaya 30.31 300 IAmb IAmb 22 04 52.5
comp=Z,8.6nm,0.7s
GUMO Guam 30.71 186 P **P 22 04 43.2 +0.3**
GUMO pmax pmax
comp=Z,145nm,1.1s
GUMO Guam 30.71 186 P **P 22 04 43.2 +0.3**
FALS False Pass 32.52 54 P **P 22 05 00.6 +2.2**
FALS IAmb IAmb 22 05 04.5
comp=Z,42nm,1.5s
ANM Nome 32.74 35 P **P 22 05 01.3 +1.1**
ANM pmax pmax
comp=Z,23nm,1.2s
ANM Nome 32.74 35 P **P 22 05 01.3 +1.1**
ANM IAmb IAmb 22 05 02.8
comp=Z,22nm,1.2s
LZH Lanzhou 34.48 272 *eP* **P 22 05 18.3 +2.4**
LZH pmax pmax
comp=Z,28nm,1.0s
RDOG Red Dog Mine 34.71 30 P **P 22 05 18.0 +0.7**
RDOG IAmb IAmb 22 05 19.8
comp=Z,19nm,1.0s
CHGN Chignik 35.30 51 P **P 22 05 22.4 0.0**
CHGN IAmb IAmb 22 05 24.9
comp=Z,20nm,1.1s
GTA Gaotai 35.93 279 ⇑P **P 22 05 30.0 +1.8**
GTA pmax pmax
comp=Z,6.0nm,0.8s
GTA pmax pmax
comp=Z,28nm,5.4s
GTA LR LR
comp=Z,160nm,16.5s
GTA LR LR
comp=Z,280nm,15.6s
GTA LR LR
comp=Z,180nm,14.9s
TTA Tatalina 36.56 39 P **P 22 05 34.4 +1.1**
TTA pmax pmax
comp=Z,19nm,0.9s
TTA Tatalina 36.56 39 P **P 22 05 34.4 +1.1**
TTA IAmb IAmb 22 05 35.8
comp=Z,19nm,0.9s
SVW2 Sparrevohn 36.69 43 P **P 22 05 35.2 +0.9**
SVW2 IAmb IAmb 22 05 37.4
comp=Z,15nm,1.0s
PPLA Purkeypile 38.31 40 P **P 22 05 49.7 +1.5**
KDAK Kodiak Island 38.36 48 P **P 22 05 49.0 +0.6**
comp=Z,11nm,0.7s,baz=303,slow=2.4,SNR=17
KDAK Kodiak Island 38.36 48 P **P 22 05 49.0 +0.6**
KDAK pmax pmax
comp=Z,18nm,0.9s
KDAK Kodiak Island 38.36 48 IAmb IAmb 22 05 50.3
comp=Z,18nm,0.8s
HOM Homer 38.68 45 P **P 22 05 49.0 -2.1**
BPAW Bear Paw Mtn. 38.86 38 P **P 22 05 54.1 +1.5**
BPAW IAmb IAmb 22 05 55.2
comp=Z,12nm,0.8s
KTH Kantishna Hill 38.88 39 P **P 22 05 54.6 +1.8**
MLY Manley 38.99 36 P **P 22 05 55.0 +1.3**
MLY IAmb IAmb 22 05 56.4
comp=Z,16nm,0.8s
BRLK Bradley Lake 39.05 45 P **P 22 05 55.2 +1.0**
BRLK IAmb IAmb 22 05 57.6
comp=Z,8.7nm,0.8s
TRF Thorofare Moun 39.17 39 P **P 22 05 56.2 +0.9**
TRF IAmb IAmb 22 06 01.5
comp=Z,7.1nm,0.8s
COLD Coldfoot 39.32 33 P **P 22 05 57.9 +1.5**
COLD IAmb IAmb 22 06 02.3
comp=Z,7.2nm,0.9s
RC01 Rabbit Creek A 39.52 42 P **P 22 05 58.4 +0.3**
RC01 IAmb IAmb 22 05 59.8
comp=Z,14nm,0.9s
TOLK Toolik Lake Re 39.66 31 P **P 22 06 00.5 +1.3**
TOLK IAmb IAmb 22 06 02.2
comp=Z,18nm,1.0s
SEW Seward 39.74 44 P **P 22 06 00.1 +0.2**
MCK McKinley 39.77 38 P **P 22 06 01.5 +1.3**
MCK pmax pmax
comp=Z,18nm,0.9s
MCK McKinley 39.77 38 P **P 22 06 01.5 +1.3**
MCK IAmb IAmb 22 06 02.2
comp=Z,18nm,0.9s
PMR Palmer 39.78 42 P **P 22 06 01.0 +0.8**
PMR pmax pmax
comp=Z,7.0nm,0.5s
PMR Palmer 39.78 42 P **P 22 06 01.0 +0.8**
PMR IAmb IAmb 22 06 07.7
comp=Z,6.9nm,0.5s
RND Reindeer 39.82 39 P **P 22 06 01.1 +0.5**
RND pmax pmax
comp=Z,18nm,0.9s
RND Reindeer 39.82 39 P **P 22 06 01.1 +0.5**
RND IAmb IAmb 22 06 02.3
comp=Z,18nm,0.9s
GHO Glory Hole Cre 39.87 41 P **P 22 06 02.0 +1.0**
GHO IAmb IAmb 22 06 13.9
comp=Z,9.8nm,0.9s
MDM Murphy Dome 40.05 36 P **P 22 06 03.6 +1.0**
MDM IAmb IAmb 22 06 05.0
comp=Z,14nm,0.8s
KNK Knik Glacier 40.12 42 P **P 22 06 03.8 +0.7**
KNK IAmb IAmb 22 06 15.8
comp=Z,13nm,0.8s
WRH Wood River Hil 40.12 37 P **P 22 06 04.1 +1.1**
WRH IAmb IAmb 22 06 12.6
comp=Z,18nm,0.9s
COLA College 40.22 36 *c i*P **P 22 06 04.9 +1.1**
COLA pmax pmax
comp=Z,47nm,0.9s
COLA College 40.22 36 P **P 22 06 05.8 +2.0**
CCB Clear Creek Bu 40.24 37 P **P 22 06 05.0 +1.0**
CCB IAmb IAmb 22 06 09.4
comp=Z,16nm,1.2s
DHY Denali Highway 40.50 39 IAmb IAmb 22 06 08.2
comp=Z,19nm,1.0s
HDA Harding Lake 40.62 37 IAmb IAmb 22 06 09.2
comp=Z,20nm,0.8s
IL31 40.63 37 IAmb IAmb 22 06 09.1
comp=Z,23nm,1.1s
ILAR Eielson Array 40.63 37 P **P 22 06 08.2 +1.0**
comp=Z,13nm,0.9s,baz=252,slow=6.9,SNR=73
QIZ Qiongzhong 40.66 244 P **P 22 06 07.1 -0.8**
QIZ IAmb IAmb 22 06 09.6
comp=Z,33nm,1.3s
GLI Glacier Island 40.83 43 P **P 22 06 08.7 -0.2**
HIN Hinchinbrook I 41.17 43 P **P 22 06 12.5 +0.7**
HIN IAmb IAmb 22 06 23.6
comp=Z,15nm,0.9s
FYU Fort Yukon 41.26 34 P **P 22 06 13.8 +1.4**
ZAA0 Zalesovo Array 41.27 307 P **P 22 06 13.0 +0.5**
ZALV Zalesovo Beam 41.27 307 P **P 22 06 12.5 -0.1**
comp=Z,2.3nm,0.6s,baz=72,slow=6.8,SNR=11
ZALV PcP **PcP 22 08 11.2 +1.2**
comp=Z,2.5nm,0.6s,baz=81,slow=2.7,SNR=9.6
RIDG Independent Ri 41.59 38 IAmb IAmb 22 06 17.3
comp=Z,21nm,0.9s
DOT Dot Lake 41.94 38 P **P 22 06 18.8 +0.8**
DOT IAmb IAmb 22 06 20.7
comp=Z,12nm,0.8s
SCRK Sand Creek 41.94 38 P **P 22 06 18.6 +0.4**
SCRK IAmb IAmb 22 06 19.7
comp=Z,17nm,0.8s
RAGM Ragged Mountai 42.07 43 P **P 22 06 20.0 +0.9**
RAGM IAmb IAmb 22 06 28.7
comp=Z,14nm,1.2s
GLB Gilahina Butte 42.33 41 P **P 22 06 23.4 +2.1**
VRDI Verde Repeater 42.53 42 P **P 22 06 24.5 +1.5**
WAX Waxell Ridge 42.95 43 P **P 22 06 27.5 +1.1**
WAX IAmb IAmb 22 06 29.2
comp=Z,13nm,0.7s
EGAK Eagle 43.08 36 P **P 22 06 27.9 +0.8**
BARN Barnard Glacie 43.42 42 P **P 22 06 31.5 +1.3**
BARN IAmb IAmb 22 06 35.0
comp=Z,8.5nm,0.8s
MESA MESA 43.45 43 P **P 22 06 31.1 +0.7**
MESA IAmb IAmb 22 06 38.5
comp=Z,20nm,0.7s
YAH Yahtse 43.51 43 P **P 22 06 31.6 +0.6**
YAH IAmb IAmb 22 06 33.8
comp=Z,10nm,0.8s
PCA Pinnacle 44.29 43 P **P 22 06 36.7 -0.4**
PCA IAmb IAmb 22 06 39.2
comp=Z,5.8nm,0.6s
EPYK Eagle Plains 44.68 34 P **P 22 06 41.6 +1.5**
MK31 Makanchi Array 44.99 298 P **P 22 06 43.5 +0.7**
MK31 pmax pmax
comp=Z,18nm,0.8s
MK31 Makanchi Array 44.99 298 P **P 22 06 43.5 +0.7**
MK31 IAmb IAmb 22 06 45.1
comp=Z,18nm,0.8s
MKAR Makanchi Array 44.99 298 P **P 22 06 44.0 +1.2**
comp=Z,15nm,0.7s,baz=75,slow=8.2,SNR=90
MKAR pP **pP 22 07 03.9 +3.1**
comp=Z,1.9nm,0.7s,baz=38,slow=6.1,SNR=1.9
MKAR PcP **PcP 22 08 24.2 +1.5**
comp=Z,0.5nm,0.6s,baz=66,slow=2.7,SNR=1.9
MKAR Makanchi Array 44.99 298 *i* P **P 22 06 44.0 +1.2**
MKAR Makanchi Array 44.99 298 *i* P **P 22 06 44.0 +1.2**
MKAR pmax pmax
comp=Z,15nm,0.7s
MAKZ Makanchi 45.18 298 P **P 22 06 44.5 +0.2**
MAKZ pmax pmax
comp=Z,18nm,0.8s
MAKZ Makanchi 45.18 298 P **P 22 06 44.5 +0.2**
MAKZ IAmb IAmb 22 06 46.6
comp=Z,18nm,0.8s
INK Inuvik 45.58 31 P **P 22 06 48.3 +1.3**
comp=Z,8.8nm,0.4s,baz=271,slow=4.3,SNR=61
KURK Kurchatov 45.84 304 P **P 22 06 49.7 +0.3**
KURK pmax pmax
comp=Z,13nm,0.7s
KURK Kurchatov 45.84 304 P **P 22 06 49.7 +0.3**
KURK IAmb IAmb 22 06 50.8
comp=Z,13nm,0.7s
LSA Lhasa 46.90 272 *eP* **P 22 06 59.6 +1.1**
LSA Lhasa 46.90 272 P **P 22 06 59.6 +1.1**
LSA pmax pmax
comp=Z,4.0nm,0.8s
LSA Lhasa 46.90 272 P **P 22 06 59.6 +1.1**
BESE Bessie Mountai 47.36 44 P **P 22 07 02.5 +1.3**
JIS Juneau Island 47.69 44 P **P 22 07 05.1 +1.4**
JIS IAmb IAmb 22 07 07.1
comp=Z,8.9nm,0.8s
CHTO Chiang Mai 48.13 254 P **P 22 07 08.1 +0.5**
CHTO pmax pmax
comp=Z,5.0nm,1.0s
CHTO Chiang Mai 48.13 254 P **P 22 07 08.1 +0.5**
PBKT Sadao Pong 48.29 250 P **P 22 07 08.8 0.0**
CMAR Chiang Mai Arr 48.37 254 P **P 22 07 13.5 +4.1**
comp=Z,0.5nm,0.6s,baz=32,slow=8.4,SNR=4.8
CMAR pP **pP 22 07 27.6 0.0**
comp=Z,1.4nm,0.8s,baz=40,slow=7.5,SNR=4.5
SHL Shillong 48.79 267 P **P 22 07 13.5 +0.7**
SHL pmax pmax
comp=Z,7.0nm,1.0s
SHL Shillong 48.79 267 P **P 22 07 13.5 +0.7**
SHL IAmb IAmb 22 07 31.9
comp=Z,7.2nm,1.0s
PRZ Przheval'sk 49.31 294 P **P 22 07 16.4 -0.2**
PRZ pmax pmax
comp=Z,25nm,1.0s
PRZ Przheval'sk 49.31 294 P **P 22 07 16.4 -0.2**
BRVK Borovoye 49.78 309 *eP* **P 22 07 20.5 +0.7**
BRVK Borovoye 49.78 309 *de*P **P 22 07 20.5 +0.7**
BRVK pmax pmax
comp=Z,7.0nm,1.9s
BRVK Borovoye 49.78 309 P **P 22 07 18.2 -1.6**
DLBC Dease Lake 49.80 43 P **P 22 07 21.9 +2.0**
comp=Z,3.8nm,0.7s,baz=294,slow=9.3,SNR=12
DLBC Dease Lake 49.80 43 P **P 22 07 21.7 +1.8**
TARG Taragay, Kyrgy 50.05 293 P **P 22 07 23.5 +1.0**
TARG IAmb IAmb 22 07 25.4
comp=Z,11nm,1.0s
KDJ Kajisay 50.27 294 P **P 22 07 24.5 +0.6**
KDJ pmax pmax
comp=Z,19nm,0.9s
KDJ Kajisay 50.27 294 P **P 22 07 24.4 +0.6**
TAPN Taplejung 50.73 272 *eP* **P 22 07 29.1 +1.5**
comp=Z,4.3nm,0.5s
ULHL Ulahol 50.84 294 P **P 22 07 29.7 +1.5**
SNR=19
TKM2 Tokmak 2 50.94 296 P **P 22 07 30.6 +1.7**
SNR=29
USP Ospenovka 51.48 296 P **P 22 07 34.3 +1.5**
SNR=20
KBK Karagaybulak 51.48 295 P **P 22 07 34.4 +1.4**
SNR=23
KZA Kyzart 51.56 295 P **P 22 07 36.1 +2.3**
SNR=22
FRU1 Bishkek 51.62 296 P **P 22 07 34.6 +0.8**
FRU1 pmax pmax
comp=Z,15nm,0.8s
FRU1 Bishkek 51.62 296 P **P 22 07 34.6 +0.8**
JIRN Jiri 51.63 273 *eP* **P 22 07 35.9 +1.4**
comp=Z,22nm,0.7s
GUN Gumba 51.71 274 *eP* **P 22 07 36.3 +1.2**
comp=Z,8.2nm,0.4s
RAMN Ramite 51.76 272 *eP* **P 22 07 36.6 +1.3**
comp=Z,27nm,0.7s
AAK Ala-Archa 51.79 296 P **P 22 07 36.6 +1.3**
SNR=9.6
AAK Ala-Archa 51.79 296 *eP* **P 22 07 36.5 +1.3**
AAK Ala-Archa 51.79 296 *ce*P **P 22 07 36.5 +1.3**
AAK pmax pmax
comp=Z,15nm,1.1s
AAK Ala-Archa 51.79 296 P **P 22 07 35.8 +0.5**
AAK IAmb IAmb 22 07 37.5
comp=Z,11nm,0.9s
EKS2 Erkin-Say 52.24 296 P **P 22 07 40.0 +1.5**
SNR=19
PKI Pulchoki 52.25 273 *eP* **P 22 07 40.0 +1.0**
comp=Z,5.0nm,0.6s
PKIN Phulchoki 52.25 273 *eP* **P 22 07 40.0 +1.0**
comp=Z,5.7nm,0.5s
KSH Kashi 52.35 292 P P 22 07 44.8 +5.4
KSH PcP **PcP 22 08 56.0 +6.5**
KSH S S 22 15 09.3 +10
KSH pmax pmax
comp=Z,32nm,1.2s
KSH pmax pmax
comp=Z,79nm,4.6s
KSH LR LR
comp=Z,190nm,5.4s
KSH LR LR
comp=Z,200nm,6.7s
KSH LR LR
comp=Z,150nm,14.2s
DMN Daman 52.44 274 *eP* **P 22 07 41.8 +1.4**
comp=Z,26nm,0.9s
GKN Gorkha 52.55 274 *eP* **P 22 07 42.3 +1.3**
comp=Z,8.7nm,0.4s
AML Almayashu 52.55 295 P **P 22 07 42.9 +1.8**
SNR=15
DANN Dangsing 52.97 275 *eP* **P 22 07 46.0 +1.7**
comp=Z,38nm,0.7s
SVE Sverdlovsk 53.26 317 *eP* **P 22 07 45.6 0.0**
SVE Sverdlovsk 53.26 317 *eP* **P 22 07 45.6 0.0**
SVE pmax pmax
comp=Z,13nm,0.9s
KOLN Koldanda 53.42 275 *eP* **P 22 07 49.0 +1.4**
comp=Z,23nm,0.9s
PYUN Piuthan 53.67 276 *eP* **P 22 07 50.8 +1.5**
comp=Z,9.6nm,0.3s
NOR Nord 54.11 357 *i* P **P 22 07 49.3 -2.3**
NOR pmax pmax
comp=Z,3.0nm,1.1s
NOR Nord 54.11 357 *i* P **P 22 07 49.3 -2.3**
comp=Z,3.0nm,1.1s
RES Resolute Bay 54.25 17 P **P 22 07 52.6 0.0**
comp=Z,13nm,0.7s,baz=329,slow=2.7,SNR=19
RES Resolute Bay 54.25 17 P **P 22 07 53.1 +0.4**
RES pmax pmax
comp=Z,14nm,0.7s
RES Resolute Bay 54.25 17 P **P 22 07 53.0 +0.4**
ARU Arti 54.46 317 *ce*P **P 22 07 53.6 -0.8**
ARU pmax pmax
comp=Z,13nm,0.7s
ARU Arti 54.46 317 P **P 22 07 53.5 -1.0**
ARU IAmb IAmb 22 07 55.7
comp=Z,13nm,0.7s
YKA Yellowknife Ar 54.96 34 P **P 22 07 58.9 +1.0**
comp=Z,3.5nm,0.6s,baz=300,slow=6.7,SNR=56
BTK Batken 55.47 295 IAmb IAmb 22 08 04.1
comp=Z,17nm,1.1s
GAR Garm 56.36 294 P **P 22 08 09.4 +0.8**
KULM Kulim 56.85 241 P **P 22 08 07.5 -4.6**
KULM IAmb IAmb 22 08 08.6
comp=Z,17nm,1.2s
NIL Nilore 57.34 287 P **P 22 08 15.5 +0.2**
NIL pmax pmax
comp=Z,15nm,1.2s
NIL Nilore 57.34 287 P **P 22 08 15.5 +0.2**
NIL IAmb IAmb 22 08 19.7
comp=Z,15nm,1.1s
LVZ Lovozero 57.62 336 *ce*P **P 22 08 15.0 -1.8**
LVZ pmax pmax
comp=Z,15nm,1.2s
LVZ Lovozero 57.62 336 P **P 22 08 14.6 -2.2**
LVZ IAmb IAmb 22 08 15.9
comp=Z,15nm,1.2s
COEN Coen 58.13 186 P **P 22 08 21.0 +0.1**
NLWA Neilton Lookou 58.15 53 P **P 22 08 22.3 +1.5**
KEV Kevo 58.48 340 P **P 22 08 20.8 -1.9**
KEV pmax pmax
comp=Z,5.0nm,0.8s
KEV Kevo 58.48 340 P **P 22 08 20.8 -1.9**
KEV IAmb IAmb 22 08 22.5
comp=Z,5.2nm,0.8s
TMCR Tamitsa 58.86 331 *eP* **P 22 08 24.4 -1.1**
TMCR pmax pmax
comp=Z,19nm,1.0s
MTN Manton Dam 58.92 199 P **P 22 08 26.7 +0.3**
DAG Danmarks Havn 58.94 356 *i* P **P 22 08 23.8 -2.0**
DAG pmax pmax
comp=Z,5.0nm,1.0s
DAG Danmarks Havn 58.94 356 *i* P **P 22 08 23.8 -2.0**
comp=Z,4.9nm,1.0s
KNTN Kanton 58.99 131 P **P 22 08 26.6 -0.4**
ARCES ARCESS Array B 59.01 340 P **P 22 08 25.2 -1.3**
comp=Z,2.3nm,0.7s,baz=52,slow=7.7,SNR=22

ARCES PcP **PcP** **22 09 15.1 +0.4**
comp=Z,0.8nm,0.6s,baz=57,slow=4.5,SNR=4.1
ARE0 ARCESS Array S 59.01 340 P **P** **22 08 25.2 -1.2**
D05A Enumclaw 59.33 52 P **P** **22 08 30.6 +1.6**
D05A IAmb IAmb 22 08 49.5
comp=Z,14nm,1.2s
KBL Kabul 59.69 290 P **P** **22 08 31.2 -0.8**
KBL pmax pmax
comp=Z,5.0nm,0.6s
KBL Kabul 59.69 290 P **P** **22 08 31.2 -0.8**
KBL IAmb IAmb 22 08 32.9
comp=Z,4.5nm,0.6s
KULLO Kullorsuaq 60.22 8 *i* P **P** **22 08 33.7 -0.9**
KULLO pmax pmax
comp=Z,22nm,1.0s
KULLO Kullorsuaq 60.22 8 *i* P **P** **22 08 33.7 -0.9**
comp=Z,22nm,1.0s
KLMR Klimovskoe 60.38 328 *e*P **P** **22 08 33.9 -2.0**
KLMR pmax pmax
comp=Z,15nm,1.4s
KLMR Klimovskoe 60.38 328 *e*P **P** **22 08 33.9 -2.0**
KLMR AMP 22 08 36.4
comp=Z,15nm,1.4s
H04A Detroit Lake 60.62 55 P **P** **22 08 38.8 +0.9**
H04A IAmb IAmb 22 08 42.1
comp=Z,10.0nm,1.2s
NEW Newport 61.44 49 P **P** **22 08 43.3 -0.1**
NEW pmax pmax
comp=Z,7.0nm,1.4s
NEW Newport 61.44 49 P **P** **22 08 43.2 -0.1**
NEW IAmb IAmb 22 08 53.4
comp=Z,7.2nm,1.4s
PINE Pine Mountain 61.86 55 P **P** **22 08 47.7 +1.2**
PINE IAmb IAmb 22 08 50.3
comp=Z,5.8nm,0.8s
WDC Whiskeytown Da 62.77 59 P **P** **22 08 51.5 -0.9**
WDC pmax pmax
comp=Z,10.0nm,1.3s
WDC Whiskeytown Da 62.77 59 P **P** **22 08 51.5 -0.9**
WDC IAmb IAmb 22 09 04.2
comp=Z,10nm,1.2s
SUMG Summit 63.36 2 *i* P **P** **22 08 56.2 -0.1**
SUMG pmax pmax
comp=Z,62nm,1.0s
SUMG Summit 63.36 2 *i* P **P** **22 08 56.2 -0.1**
comp=Z,62nm,1.0s
HRA Herat 64.31 294 P **P** **22 09 02.8 -0.1**
HRA IAmb IAmb 22 09 05.8
comp=Z,7.5nm,0.8s
AFDM Forest Hills D 64.72 60 P **P** **22 09 05.0 -0.2**
FIA1 FINESS Array S 64.73 333 IAmb IAmb 22 09 05.8
comp=Z,15nm,0.7s
FINES FINESS Array B 64.73 333 P **P** **22 09 03.8 -1.1**
comp=Z,12nm,0.5s,baz=39,slow=6.7,SNR=83
GEYT Alibeck 64.82 299 P **P** **22 09 07.5 +1.5**
comp=Z,7.7nm,0.5s,baz=29,slow=3.4,SNR=25
GYA0B ALIBECK ARRAY 64.82 299 P **P** **22 09 06.3 +0.3**
GYA0B IAmb IAmb 22 09 08.8
comp=Z,12nm,0.8s
FFC Flin Flon 64.84 37 P **P** **22 09 06.5 +0.7**
FFC pmax pmax
comp=Z,8.0nm,0.8s
FFC Flin Flon 64.84 37 P **P** **22 09 06.5 +0.7**
FFC IAmb IAmb 22 09 08.3
comp=Z,8.2nm,0.8s
WB2 Warramunga Arr 65.14 194 P **P** **22 09 08.3 +0.3**
WB2 IAmb IAmb 22 09 10.2
comp=Z,8.3nm,1.0s
WRA Warramunga Arr 65.14 194 P **P** **22 09 09.6 +1.6**
comp=Z,0.8nm,0.4s,baz=7.7,slow=5.9,SNR=8.6
WRA pP **pP** **22 09 27.3 +0.7**
comp=Z,2.7nm,0.8s,baz=9.6,slow=6.8,SNR=6.3
FCC Fort Churchill 65.20 31 P **P** **22 09 07.8 -0.1**
FCC pmax pmax
comp=Z,8.0nm,0.7s
FCC Fort Churchill 65.20 31 P **P** **22 09 07.8 -0.1**
FCC IAmb IAmb 22 09 09.5
comp=Z,8.1nm,0.7s
OBN Obninsk 65.32 324 *i* P **P** **22 09 09.2 +0.4**
OBN Obninsk 65.32 324 *d i*P **P** **22 09 09.2 +0.4**
OBN *e**PP **pP** **22 09 30.0 +2.2**
OBN S **S** **22 17 49.5 +2.9**
OBN pmax pmax
comp=Z,14nm,0.8s
OBN Obninsk 65.32 324 P **P** **22 09 08.4 -0.4**
OBN IAmb IAmb 22 09 09.8
comp=Z,12nm,0.8s
SCO Scoresbysund 65.33 356 *i* P **P** **22 09 07.7 -0.9**
SCO pmax pmax
comp=Z,11nm,1.0s
SCO Scoresbysund 65.33 356 *i* P **P** **22 09 07.7 -0.9**
comp=Z,11nm,1.0s
LRM Limekiln Ridge 65.46 49 P **P** **22 09 09.8 -0.5**
VRH Novokhopyorsk 65.61 319 *e*P **P** **22 09 10.0 -0.8**
VRH pmax pmax
comp=Z,20nm,0.5s
CMB Columbia Colle 65.64 60 P **P** **22 09 09.0 -2.3**
CMB pmax pmax
comp=Z,2.0nm,0.9s
CMB Columbia Colle 65.64 60 P **P** **22 09 08.9 -2.3**
DLMT Dillon 65.67 50 P **P** **22 09 12.2 +0.7**
ILULI Ilulissat 65.93 7 P **P** **22 09 11.6 -0.9**
ILULI pmax pmax
comp=Z,14nm,1.0s
ILULI Ilulissat 65.93 7 P **P** **22 09 11.6 -0.9**
ILULI IAmb IAmb 22 09 13.4
comp=Z,14nm,1.0s
LPSR Galich'ya Gora 65.98 321 *e*P **P** **22 09 13.3 +0.2**
LPSR pmax pmax
comp=Z,30nm,0.8s
KVN Kaiserville 66.42 58 P **P** **22 09 17.1 +0.7**
KVN pmax pmax
comp=Z,3.0nm,0.8s
KVN Kaiserville 66.42 58 P **P** **22 09 17.1 +0.7**
PMPB Monarch Peak 66.50 62 P **P** **22 09 19.0 +2.2**
NVAR Mina Array Bea 66.68 59 P **P** **22 09 19.7 +1.6**
comp=Z,2.0nm,0.7s,baz=296,slow=6.5,SNR=16
NVAR pP **pP** **22 09 39.4 +2.2**
comp=Z,0.4nm,0.4s,baz=298,slow=6.6,SNR=3.7
XMIS Christmas Isla 66.73 226 P **P** **22 09 18.1 -0.2**
VORD Divnogorie 66.92 319 *e*P **P** **22 09 19.4 +0.3**
VORD pmax pmax
comp=Z,20nm,0.8s
H17A Grant Village 67.39 50 P **P** **22 09 21.6 -1.0**
IMW Indian Meadow 67.51 50 P **P** **22 09 24.0 +0.6**
DZM Mont Dzumac 68.11 162 P **P** **22 09 26.1 -0.9**
DZM IAmb IAmb 22 09 27.9
comp=Z,20nm,1.4s
SFJD Kangerlussuaq 68.13 8 *i* P **P** **22 09 26.5 0.0**
SFJD Kangerlussuaq 68.13 8 P **P** **22 09 27.1 +0.6**
SFJD IAmb IAmb 22 09 27.7
comp=Z,12nm,0.8s
SFJD Kangerlussuaq 68.13 8 *i* P **P** **22 09 26.5 0.0**
LAO LASA Array 68.19 46 P **P** **22 09 26.7 -0.7**
BGU Big Grassy Mou 68.25 54 P **P** **22 09 27.5 -0.4**
R11A Troy Canyon, C 68.39 57 P **P** **22 09 28.7 -0.1**
AKT Akhty 68.82 308 *e*P **P** **22 09 32.6 +1.2**
AKT *e* 22 09 58.0
AKT pmax pmax
comp=Z,17nm,0.6s
ASAR Alice Springs 68.86 194 P **P** **22 09 33.2 +1.6**
comp=Z,2.4nm,0.7s,baz=14,slow=6.5,SNR=17
TPNV Topopah Spring 68.88 59 P **P** **22 09 31.8 -0.1**
TPNV pmax pmax
comp=Z,5.0nm,1.1s
TPNV Topopah Spring 68.88 59 P **P** **22 09 31.8 -0.1**
PDAR Pinedale Array 69.01 50 P **P** **22 09 32.7 -0.1**
comp=Z,0.7nm,0.6s,baz=297,slow=1.3,SNR=5.3
PDAR pP **pP** **22 09 51.8 -0.1**
comp=Z,0.3nm,0.4s,baz=195,slow=20,SNR=2.5
GOF Gofitskoye 69.02 313⇑ *e*P **P** **22 09 33.5 +1.1**
GOF pmax pmax
comp=Z,68nm,0.6s
NC303 NORSAR Array S 69.17 339 IAmb IAmb 22 09 34.8
comp=Z,24nm,1.1s
SNCC San Nicolas Is 69.19 64 P **P** **22 09 32.8 -0.9**
NB201 NORSAR Array S 69.34 339 P **P** **22 09 33.8 -0.4**
EIDS Eidsvold 69.36 177 P **P** **22 09 35.3 +0.7**
EIDS IAmb IAmb 22 09 36.7
comp=Z,11nm,1.2s
NB2 NORSAR Subarra 69.37 339 P **P** **22 09 33.6 -0.8**
comp=Z,3.9nm,0.4s,baz=32,slow=6.5
NOA NORSAR Array B 69.37 339 P **P** **22 09 33.8 -0.6**
comp=Z,7.3nm,0.6s,baz=31,slow=6.6,SNR=58
NOA pP **pP** **22 09 52.8 -0.8**
comp=Z,0.9nm,0.6s,baz=31,slow=6.6,SNR=1.7
NLU North Lily Min 69.43 54 P **P** **22 09 34.5 -0.8**
NC602 NORSAR Array S 69.55 339 P **P** **22 09 35.3 -0.1**
NC602 IAmb IAmb 22 09 44.3
comp=Z,30nm,1.4s
NAO01 NORSAR Array S 69.62 339 IAmb IAmb 22 09 37.3
comp=Z,21nm,0.9s
NCK Nalchik 69.78 311 *i* P **P** **22 09 38.9 +1.7**
NCK pmax pmax
comp=Z,36nm,0.8s
SHPR Sheep Range 69.83 58 P **P** **22 09 38.0 +0.2**
KIV Kislovodsk 69.95 312 ⇓P **P** **22 09 40.4 +2.1**
KIV Kislovodsk 69.95 312 *i* P **P** **22 09 39.7 +1.4**
KIV Kislovodsk 69.95 312 *c i*P **P** **22 09 39.7 +1.4**
KIV *e* 22 09 58.5
KIV S **S** **22 18 38.0 -4.7**
KIV pmax pmax
comp=Z,55nm,1.0s
KIV MLR MLR
comp=Z,51nm,21.0s
KIV Kislovodsk 69.95 312 P **P** **22 09 39.6 +1.2**
KBZ Khabaz 69.99 312 P **P** **22 09 40.0 +1.6**
comp=Z,25nm,0.8s,baz=49,slow=3.7,SNR=45
KBZ LR LR 22 42 57.6
comp=Z,70nm,21.0s,baz=42,slow=38
KBZ Khabaz 69.99 312 *e*P **P** **22 09 39.9 +1.5**
KBZ Khabaz 69.99 312 *ce*P **P** **22 09 39.9 +1.5**
KBZ pmax pmax
comp=Z,32nm,0.9s
ZEI Tsey 70.08 311 *e*P **P** **22 09 38.3 -1.0**
ZEI pmax pmax
comp=Z,19nm,1.0s
TBLG Delisi 70.33 309 P **P** **22 09 41.1 +0.5**
TBLG Delisi 70.33 309 P **P** **22 09 41.1 +0.5**
P17A Butcher Ranch, 70.52 54 P **P** **22 09 42.6 +0.7**
MTPU Mount Pierson 70.62 56 P **P** **22 09 41.7 -1.2**
ULM Lac du Bonnet 70.64 38 P **P** **22 09 41.2 -1.1**
ULM pmax pmax
comp=Z,7.0nm,1.3s
ULM Lac du Bonnet 70.64 38 P **P** **22 09 41.2 -1.1**
SRU San Rafael Swe 70.89 54 P **P** **22 09 44.5 +0.3**
SRU pmax pmax
comp=Z,5.0nm,0.8s
SRU San Rafael Swe 70.89 54 P **P** **22 09 44.5 +0.3**
KNB Kanab 70.92 57 P **P** **22 09 44.3 -0.1**
KNB pmax pmax
comp=Z,4.0nm,1.2s
KNB Kanab 70.92 57 P **P** **22 09 44.3 -0.1**
BORG Borgarnes 71.00 355 P **P** **22 09 45.4 +1.2**
BORG pmax pmax
comp=Z,63nm,1.5s
BORG Borgarnes 71.00 355 P **P** **22 09 45.4 +1.2**
RSSD Black Hills 71.07 46 P **P** **22 09 44.3 -0.9**
RSSD pmax pmax
comp=Z,3.0nm,0.9s
RSSD Black Hills 71.07 46 P **P** **22 09 44.3 -0.9**
AKH Akhalkalaki 71.24 310 ⇑P **P** **22 09 48.5 +2.2**
AKH Akhalkalaki 71.24 310 P **P** **22 09 45.8 -0.5**
AKH pmax pmax
comp=Z,9.0nm,1.0s
AKH Akhalkalaki 71.24 310 P **P** **22 09 45.8 -0.5**
AKH IAmb IAmb 22 09 49.6
comp=Z,9.3nm,1.0s
AKASG Malin Array Be 71.58 324 P **P** **22 09 48.1 +0.2**
comp=Z,22nm,0.7s,baz=38,slow=6.3,SNR=89
AKASG pP **PcP** **22 10 06.5 -0.3**
comp=Z,0.4nm,0.3s,baz=87,slow=39,SNR=1.2
SOC Sochi 71.77 313 *e*P **P** **22 09 48.8 -0.4**
SOC *e* 22 12 25.3
SOC *e*PPP PPP 22 14 08.8
SOC *e*S **S** **22 19 04.3 +0.7**
SOC *e*SS **SS** **22 23 42.0 +2.2**
SOC pmax pmax
comp=Z,11nm,0.7s
AGMN Agassiz Nation 72.08 39 P **P** **22 09 51.1 +0.2**
AGMN IAmb IAmb 22 10 05.3
comp=Z,6.4nm,0.3s
PV23 Carpenter Ridg 72.20 54 P **P** **22 09 52.1 -0.1**
BCA Borcka 72.24 311 ⇑P **P** **22 09 53.5 +1.4**
PV14 Lion Creek, Pa 72.25 54 P **P** **22 09 53.0 +0.5**
PV22 Blue Mesa, Par 72.28 53 P **P** **22 09 53.5 +0.9**
PV17 East Wray Mesa 72.35 54 IAmb IAmb 22 10 00.5
comp=Z,7.1nm,0.8s
PV18 Skein Mesa, Pa 72.40 54 P **P** **22 09 54.0 +0.6**
PV07 Paradox Valley 72.42 53 P **P** **22 09 54.7 +1.2**
PV13 Radium Mtn., P 72.51 54 P **P** **22 09 53.0 -1.0**
BSD Bornholm Skovb 73.34 334 *i* P **P** **22 09 58.7 +0.4**
BSD Bornholm Skovb 73.34 334 *i* P **P** **22 09 58.7 +0.4**
GIRL Giralia 73.48 213 P **P** **22 09 57.6 -1.9**
X16A Lo Mia Camp, P 73.49 58 P **P** **22 10 00.7 +0.9**
SIM Simferopol' 73.62 317 *e*P **P** **22 10 01.4 +1.2**
SIM pmax pmax
comp=Z,24nm,1.0s
MUD Monsted U'grnd 73.88 338 *i* P **P** **22 10 02.3 +0.9**
MUD Monsted U'grnd 73.88 338 *i* P **P** **22 10 02.3 +0.9**
SORM Soroca 73.90 323 ⇓P **P** **22 10 02.2 +0.8**
BEL Belsk 74.03 329 *e*P **P** **22 10 03.6 +1.1**
BEL LMZ LR 22 53 41.0
comp=Z,0.1nm,22.9s
EYMN Ely 74.27 37 P **P** **22 10 03.6 -0.3**
LVV L'vov 74.40 326 *e*P **P** **22 10 05.0 +0.4**
KIS Kishinev 74.56 322 ⇓ *i*P **P** **22 10 07.0 +1.4**
comp=Z,80nm,1.0s
KIS Kishinev 74.56 322 ⇓ *i*P **P** **22 10 07.0 +1.4**
KIS *e* 22 19 34.0
KIS pmax pmax
comp=Z,80nm,1.0s
MILM Milestii Mici 74.62 322 ⇑P **P** **22 10 06.2 +0.3**
IAS Iasi 74.96 323 ⇑P **P** **22 10 09.3 +1.4**
KWP Kalwaria Pacla 75.07 327 *e*P **P** **22 10 09.8 +1.4**
KWP LMZ LR 22 55 34.0
comp=Z,0.1nm,20.4s
KWP Kalwaria Pacla 75.07 327 P **P** **22 10 09.9 +1.4**
KWP pmax pmax
comp=Z,59nm,0.9s
KWP Kalwaria Pacla 75.07 327 P **P** **22 10 09.9 +1.4**
ECSD EROS Data Cent 75.09 43 P **P** **22 10 10.2 +1.5**
LEOM Leova 75.21 322 ⇓P **P** **22 10 11.2 +1.9**
E38A The Farm, Brul 75.28 38 P **P** **22 10 08.9 -0.8**
VASR Vaslui 75.28 322 ⇑P **P** **22 10 11.5 +1.7**
TUC Tucson 75.32 59 P **P** **22 10 10.4 0.0**
TUC pmax pmax
comp=Z,2.0nm,1.0s
TUC Tucson 75.32 59 P **P** **22 10 10.4 0.0**
PRAR RASCA 75.41 323 ⇑P **P** **22 10 11.6 +1.1**
BURAR Bucovina Array 75.64 324 ⇓P **P** **22 10 12.7 +0.8**
BURAR Bucovina Array 75.64 324 P **P** **22 10 14.1 +2.2**
BIR Birlad 75.65 322 ⇑P **P** **22 10 14.1 +2.3**
BIR Birlad 75.65 322 P **P** **22 10 14.8 +3.0**
OJC Ojcow 75.71 329 *e*P **P** **22 10 13.0 +0.9**
OJC LMZ LR 22 55 41.6
comp=Z,0.1nm,20.6s
BSEG Bad Segeberg 75.75 336 *e*P **P** **22 10 13.0 +0.8**
comp=Z,25nm,1.0s,baz=30,slow=5.6
BIZ Bicaz 75.79 323 ⇑P **P** **22 10 13.8 +1.1**
KOLS Kolonicke sedl 75.80 327 *e*P **P** **22 10 13.7 +1.0**
KOLS pmax pmax
comp=Z,16nm,1.0s
KOLS Kolonicke sedl 75.80 327 *e*P **P** **22 10 13.7 +1.0**
BZK Bozkurt 75.87 315 ⇑P **P** **22 10 15.2 +2.0**
TESR Tescani 75.89 323 ⇑P **P** **22 10 13.8 +0.6**
TLCR 75.94 321 ⇓P **P** **22 10 15.3 +1.8**
TLCR 75.94 321 P **P** **22 10 15.9 +2.4**
STKA Stephens Creek 76.03 186 P **P** **22 10 16.0 +2.1**
comp=Z,1.9nm,0.7s,baz=358,slow=4.8,SNR=5.4
STKA pP **pP** **22 10 33.4 +0.2**
comp=Z,1.8nm,0.7s,baz=260,slow=8.2,SNR=2.6
STKA Stephens Creek 76.03 186 P **P** **22 10 14.4 +0.5**
UZH Uzhgorod 76.03 326 *c i*P **P** **22 10 14.3 +0.3**
UZH *e* 22 10 27.5
LHI Lord Howe Isla 76.09 170 P **P** **22 10 15.2 +0.9**
PETR Petresti 76.24 322 ⇑P **P** **22 10 18.1 +2.9**
CFR Carcaliu 76.25 321 ⇑P **P** **22 10 16.0 +0.7**
ODBI Odobesti 76.29 322 ⇑P **P** **22 10 18.0 +2.5**
TRPA Tarpa 76.33 326 ⇓P **P** **22 10 17.4 +1.7**
VRI Vrincioaia 76.35 322 ⇑P **P** **22 10 17.7 +1.8**
PLOR Plostina 76.40 322 ⇑P **P** **22 10 17.8 +1.6**
KSP Ksiaz 76.46 331 *e*P **P** **22 10 17.2 +0.8**
KSP LMZ LR 22 55 09.5
comp=Z,0.1nm,22.8s
OZUR 76.59 323 ⇑P **P** **22 10 18.9 +1.7**
OKC Ostrava-Krasne 76.64 329 *e*P **P** **22 10 18.3 +0.9**
OKC Ostrava-Krasne 76.64 329 *e*P **P** **22 10 18.3 +0.9**
LANS Liptovska Anna 76.71 328 *e*P **P** **22 10 20.2 +2.3**
LANS pmax pmax
comp=Z,22nm,0.9s
LANS Liptovska Anna 76.71 328 *e*P **P** **22 10 20.2 +2.3**
HARR Harsova 76.72 321 ⇑P **P** **22 10 18.6 +0.7**
HARR Harsova 76.72 321 P **P** **22 10 20.6 +2.6**
OSTC Ostas 76.73 331 *e*P **P** **22 10 18.6 +0.6**
CHVC Chvalec 76.76 331 *e*P **P** **22 10 19.2 +1.1**
UPC Upice 76.84 331 *e*P **P** **22 10 20.0 +1.4**
UPC Upice 76.84 331 *e*P **P** **22 10 20.0 +1.4**
DOPR Dopca 76.86 323 ⇑P **P** **22 10 21.0 +2.2**
DPC Dobruska-Polom 76.86 331 *e*P **P** **22 10 20.0 +1.2**
DPC Dobruska-Polom 76.86 331 *e*P **P** **22 10 20.0 +1.2**
SCHQ Schefferville 76.88 20 P **P** **22 10 19.5 +0.8**
comp=Z,7.8nm,0.6s,baz=18,slow=6.5,SNR=17
SCHQ Schefferville 76.88 20 IAmb IAmb 22 10 22.4
comp=Z,18nm,1.1s
MORC Moravsky Berou 76.91 330 *e*P **P** **22 10 20.0 +1.0**
MORC Moravsky Berou 76.91 330 ⇑P **P** **22 10 20.0 +1.0**
MORC Moravsky Berou 76.91 330 P **P** **22 10 21.3 +2.3**
KRLC Kraliky 76.93 330 *e*P **P** **22 10 20.0 +0.9**
KRLC *e* 22 10 24.8
KRLC Kraliky 76.93 330 *e*P **P** **22 10 20.0 +0.9**
KRLC *ex* x 22 10 24.8
MLR Muntele Rosu 76.99 322 ⇓P **P** **22 10 20.5 +0.9**
MLR Muntele Rosu 76.99 322 IAmb IAmb 22 10 23.2
comp=Z,13nm,0.8s
ISR Istrita 77.02 322 ⇑P **P** **22 10 21.3 +1.6**
AMRR Amara 77.06 321 ⇑P **P** **22 10 22.0 +2.2**
NRDL Niedersach Rie 77.06 335 *e*P **P** **22 10 20.4 +0.8**
comp=Z,17nm,1.1s,baz=30,slow=5.6
RETH Rethem/Aller, 77.07 336 *e*P **P** **22 10 20.5 +0.8**
comp=Z,42nm,1.1s,baz=30,slow=5.6
CLL Collm 77.18 333 *i*P **P** **22 10 21.8 +1.4**
comp=Z,46nm,0.9s
CLL Lm MLR 22 59 00.0
comp=Z,100nm,18.1s
CLL Collm 77.18 333 *e*P **P** **22 10 21.7 +1.3**
comp=Z,46nm,0.9s,baz=30,slow=5.6
CLL Collm 77.18 333⇑ *i*P **P** **22 10 21.8 +1.4**
CLL pmax pmax
comp=Z,46nm,0.9s
CLL Collm 77.18 333 P **P** **22 10 20.8 +0.4**
ASSE Asse, Remlinge 77.21 335 *e*P **P** **22 10 21.3 +0.8**
comp=Z,23nm,1.1s,baz=30,slow=5.6
ICOR Ion Corvin 77.22 320 ⇑P **P** **22 10 23.0 +2.2**
BRG Berggiesshubel 77.24 332 *i* P **P** **22 10 21.2 +0.4**
comp=Z,18nm,1.1s
BRG Berggiesshubel 77.24 332 *e*P **P** **22 10 21.2 +0.4**
comp=Z,18nm,1.1s,baz=30,slow=5.6
BRG Berggiesshubel 77.24 332 *i* P **P** **22 10 21.2 +0.4**
BRG pmax pmax
comp=Z,18nm,1.1s
PVCC Panska Ves 77.32 332 *e*P **P** **22 10 22.1 +0.9**
PVCC Panska Ves 77.32 332 *e*P **P** **22 10 22.1 +0.9**
DRGR 77.34 325 ⇑P **P** **22 10 23.5 +2.0**
FBE Freiberg 77.39 333 *e*P **P** **22 10 22.4 +0.8**
comp=Z,27nm,0.9s,baz=30,slow=5.6
VOIR 77.42 323 ⇑P **P** **22 10 23.5 +1.5**
VYHS Vyhne 77.49 328 *e*P **P** **22 10 23.3 +1.1**
VYHS pmax pmax
comp=Z,17nm,0.8s
VYHS Vyhne 77.49 328 *e*P **P** **22 10 23.3 +1.1**
SULR 77.49 322 ⇑P **P** **22 10 25.0 +2.8**
CLZ Clausthal 77.55 335 *e*P **P** **22 10 23.4 +0.9**
comp=Z,46nm,1.1s,baz=30,slow=5.6
PSZ Piszkesteto 77.55 327 ⇓P **P** **22 10 23.9 +1.2**
PSZ Piszkesteto 77.55 327 P **P** **22 10 25.4 +2.7**
PSZ Piszkesteto 77.55 327 IAmb IAmb 22 10 25.2
comp=Z,21nm,1.1s
JAVC Velka Javorina 77.62 329 *e*P **P** **22 10 25.1 +2.1**
VRAC Vranov 77.64 330 *e*P **P** **22 10 24.2 +1.1**
VRAC Vranov 77.64 330 ⇑P **P** **22 10 24.4 +1.3**
VRAC Vranov 77.64 330 P **P** **22 10 25.7 +2.6**
ARR Arges 77.66 323 ⇓P **P** **22 10 25.4 +2.1**
NEUB Neuenburg 77.66 334 *e*P **P** **22 10 23.7 +0.6**
comp=Z,43nm,1.0s,baz=30,slow=5.6
BRTR Keskin Array B 77.70 314 P **P** **22 10 25.1 +1.3**
comp=Z,2.2nm,0.7s,baz=91,slow=3.1,SNR=10
BRTR pP **pP** **22 10 42.9 -0.4**
comp=Z,0.4nm,0.4s,baz=306,slow=36,SNR=3.0
PRA Prague 77.76 332 *e*P **P** **22 10 25.5 +1.8**
PRA Prague 77.76 332 *e*P **P** **22 10 25.5 +1.8**
GOPC GO Pecny, Ondr 77.77 331 *e*P **P** **22 10 25.0 +1.2**
GOPC GO Pecny, Ondr 77.77 331 *e*P **P** **22 10 25.0 +1.2**
PRU Pruhonice 77.79 331 *e*P **P** **22 10 25.0 +1.1**
PRU Pruhonice 77.79 331 *e*P **P** **22 10 25.0 +1.1**
KRUC Moravsky 77.92 330 *e*P **P** **22 10 25.6 +1.0**
IBBN Ibbenburen 77.92 336 *e*P **P** **22 10 25.1 +0.6**
comp=Z,35nm,1.1s,baz=30,slow=5.6
GTTG Gottingen 77.94 335 *e*P **P** **22 10 25.7 +1.0**
comp=Z,36nm,1.1s,baz=30,slow=5.6
DEV Deva 77.98 324 ⇑P **P** **22 10 27.5 +2.5**
DEV Deva 77.98 324 ⇑P **P** **22 10 27.5 +2.5**
ANO Ankara 78.03 315 ⇑P **P** **22 10 26.8 +1.3**
ANTO Ankara 78.03 315 P **P** **22 10 27.5 +2.0**
ANTO pmax pmax
comp=Z,13nm,0.7s
ANTO Ankara 78.03 315 P **P** **22 10 27.5 +2.0**
ANTO IAmb IAmb 22 10 28.0
comp=Z,13nm,0.7s
TREC Trest 78.05 331 *e*P **P** **22 10 26.9 +1.6**
TREC Trest 78.05 331 *e*P **P** **22 10 26.9 +1.6**
TANN Tannenbergstha 78.12 333 *e*P **P** **22 10 26.4 +0.6**
comp=Z,20nm,1.1s,baz=30,slow=5.6
PLN Plauen 78.16 333 *e*P **P** **22 10 26.7 +0.8**
comp=Z,18nm,1.1s,baz=30,slow=5.6
MODS Modra-Piesok 78.17 329 *e*P **P** **22 10 27.1 +1.1**
MODS pmax pmax
comp=Z,22nm,1.1s
MODS Modra-Piesok 78.17 329 *e*P **P** **22 10 27.1 +1.1**
SIRR Siria 78.19 325 ⇑P **P** **22 10 28.0 +1.8**
MOX Moxa 78.20 333 *e*P **P** **22 10 26.8 +0.7**
comp=Z,19nm,1.0s,baz=30,slow=5.6
MOX *e*L L 23 00 11.6
comp=Z,114nm,18.2s
GUNZ Gunzen 78.21 333 *e*P **P** **22 10 27.1 +0.8**
comp=Z,17nm,0.9s,baz=30,slow=5.6
PBCC Pribram 78.23 332 *e*P **P** **22 10 27.7 +1.4**
SRO2 Moca 78.26 328 *e*P **P** **22 10 27.7 +1.2**
SRO2 pmax pmax
comp=Z,17nm,1.0s
SRO2 Moca 78.26 328 *e*P **P** **22 10 27.7 +1.2**
WERN Wernitzgruen 78.26 333 *e*P **P** **22 10 27.4 +0.9**
comp=Z,18nm,0.8s,baz=30,slow=5.6
NKC Novy Kostel 78.28 333 *e*P **P** **22 10 27.1 +0.5**
NKC Novy Kostel 78.28 333 *e*P **P** **22 10 27.1 +0.5**
COPA Copaceanca 78.38 322 ⇑P **P** **22 10 28.1 +0.9**
MDUB Mudurnu 78.39 316 P **P** **22 10 26.8 -0.7**
GZR Gura Zlata 78.43 324 ⇑P **P** **22 10 28.4 +0.8**
UBBA Unterbreizbach 78.56 334 *e*P **P** **22 10 28.7 +0.8**
comp=Z,7.5nm,0.9s,baz=30,slow=5.6
MANZ Manzenberg 78.61 333 *e*P **P** **22 10 29.1 +0.7**
comp=Z,14nm,1.0s,baz=30,slow=5.6
ROTZ Rotzenmuhle 78.76 333 *e*P **P** **22 10 30.3 +1.1**
comp=Z,26nm,1.2s,baz=30,slow=5.6
BUG Bochum--Univer 78.83 336 *e*P **P** **22 10 30.2 +0.6**
comp=Z,32nm,1.1s,baz=30,slow=5.6
KHC Kasperske Hory 78.85 332 *ce*P **P** **22 10 30.7 +1.0**
KHC pmax pmax
comp=Z,46nm,0.6s
KHC Kasperske Hory 78.85 332 *e*P **P** **22 10 30.8 +1.0**
KHC Kasperske Hory 78.85 332 IAmb IAmb 22 10 32.6
comp=Z,10nm,0.7s
HERR Herculane 78.99 324 ⇑P **P** **22 10 30.8 +0.3**
GEC2 GERESS Array S 79.05 331 *e*P **P** **22 10 31.6 +0.6**
comp=Z,11nm,0.7s,baz=30,slow=5.6
GEC2 GERESS Array S 79.05 331 P **P** **22 10 30.8 -0.1**
GEC2 IAmb IAmb 22 10 32.8
comp=Z,9.1nm,0.6s
GERES GERESS Array B 79.05 331 P **P** **22 10 32.0 +1.1**
comp=Z,5.9nm,0.5s,baz=34,slow=5.3,SNR=64
CONA Conrad Observa 79.06 330 *i* P **P** **22 10 32.7 +1.7**
comp=Z,17nm,0.7s,SNR=14
WET Wettzell 79.08 332 *e*P **P** **22 10 32.2 +1.2**
comp=Z,23nm,0.9s,baz=30,slow=5.6
GRA1 Grafenberg Arr 79.15 333 P **P** **22 10 32.3 +0.9**
GRF Grafenberg Arr 79.15 333 *e*P **P** **22 10 32.7 +1.3**
comp=Z,41nm,0.8s,baz=30,slow=5.6
GRF *e*L L 23 00 54.8
comp=Z,108nm,18.7s
GRF Grafenberg Arr 79.15 333 P **P** **22 10 32.3 +0.9**
GRF pmax pmax
comp=Z,40nm,0.8s

PLVB Pleven 79.23 322 ⇓P P **22 10 33.2 +1.3**
MDVR Moldovita 79.37 324 ⇑P P **22 10 33.6 +0.9**
TNS Taunus Mts 79.56 335 *e*P P **22 10 34.5 +0.8**
comp=Z,20nm,0.9s,baz=30,slow=5.6
VLDQ Val d'Or 79.65 29 P P **22 10 33.1 -0.9**
AHRW Bad Neuenahr-A 79.69 336 *e*P P **22 10 35.1 +0.9**
comp=Z,24nm,1.1s,baz=30,slow=5.6
MOA Molln 79.70 330 *i* P P **22 10 36.2 +1.8**
comp=Z,6.8nm,0.7s,SNR=7.0
ARSA Arzberg 79.76 329 *i* P P **22 10 36.8 +2.0**
comp=Z,8.5nm,1.4s
UCC Uccle 80.22 338 P P **22 10 34.4 -2.7**
UCC pmax pmax
comp=Z,10.0nm,1.0s
UCC Uccle 80.22 338 P P **22 10 34.4 -2.7**
UCC IAmb IAmb 22 10 38.7
comp=Z,9.8nm,1.0s
SOKA Soboth 80.42 329 *i* P P **22 10 39.3 +0.9**
comp=Z,20nm,1.1s,SNR=22
PERS Pernice 80.42 329 *i* P P **22 10 39.1 +0.8**
DSB Dublin 80.43 345 P P **22 10 36.5 -1.7**
VTS Vitosha 80.46 322 ⇑P P **22 10 40.1 +1.3**
VTS Vitosha 80.46 322 P P **22 10 42.2 +3.5**
VTS Vitosha 80.46 322 IAmb IAmb 22 10 42.1
comp=Z,13nm,0.9s
DIVS Divibare 80.64 325 P P **22 10 39.5 -0.1**
DIVS IAmb IAmb 22 10 42.0
comp=Z,7.1nm,0.8s
KBA Koelnbreinsper 80.69 331 *i* P P **22 10 41.4 +1.4**
comp=Z,24nm,0.9s,SNR=17
WLF Walferdange 80.74 336 P P **22 10 40.3 +0.4**
WLF pmax pmax
comp=Z,14nm,1.4s
WLF Walferdange 80.74 336 P P **22 10 40.2 +0.4**
WLF IAmb IAmb 22 10 43.2
comp=Z,14nm,1.4s
OBKA Obir 80.74 330 *i* P P **22 10 40.7 +0.6**
comp=Z,7.7nm,0.7s,SNR=5.2
GOLS Golise 80.77 329 *i* P P **22 10 40.5 +0.3**
MYKA Terra Mystica 80.96 330 *i* P P **22 10 41.9 +0.6**
comp=Z,4.1nm,0.7s
WATA Walderalm 81.08 332 *i* P P **22 10 43.0 +1.1**
comp=Z,15nm,0.5s,SNR=13
WTTA Wattenberg 81.12 332 *i* P P **22 10 43.3 +1.1**
comp=Z,17nm,0.5s,SNR=18
PRED Cave del Predi 81.15 330 P P **22 10 41.5 -0.8**
PRED IAmb IAmb 22 10 44.0
comp=Z,7.4nm,0.6s
RETA Reutte 81.22 332 *i* P P **22 10 44.0 +1.4**
comp=Z,9.4nm,0.7s,SNR=6.4
MOTA Moosalm 81.23 332 *i* P P **22 10 43.8 +1.0**
comp=Z,31nm,1.3s,SNR=15
ABTA Abfaltersbach 81.26 331 *i* PcP P **22 10 44.8 +1.9**
comp=Z,5.7nm,1.0s
ZOU Zoufplan 81.27 331 P P **22 10 41.8 -1.3**
BFO Black Forest 81.27 334 *e*P P **22 10 43.7 +0.9**
comp=Z,13nm,0.9s,baz=30,slow=5.6
BFO Black Forest 81.27 334 P P **22 10 43.4 +0.6**
BFO pmax pmax
comp=Z,10.0nm,0.9s
BFO Black Forest 81.27 334 P P **22 10 43.4 +0.6**
BFO IAmb IAmb 22 10 45.3
comp=Z,10nm,0.9s
SQTA Sankt Quirin 81.30 332 *i* P P **22 10 44.3 +1.2**
comp=Z,18nm,0.7s,SNR=10
BOJS Bojanci 81.33 329 *i* P P **22 10 43.4 +0.3**
STAL STALIGIAL 81.61 331 P P **22 10 43.8 -0.9**
FETA Feichten 81.64 332 *i* P P **22 10 45.9 +0.9**
comp=Z,9.7nm,1.1s
CIMO Cimolais 81.67 331 P P **22 10 44.2 -0.8**
DAVA Damuels 81.69 333 *i* P P **22 10 46.0 +0.8**
comp=Z,10nm,0.6s,SNR=8.1
ECH Echery 81.73 335 IAmb IAmb 22 10 47.1
comp=Z,9.5nm,0.6s
TX31 Lajitas Ar. Si 81.75 57 IAmb IAmb 22 10 47.6
comp=Z,5.7nm,0.7s
TXAR Lajitas Array 81.75 57 P P **22 10 46.7 +0.9**
comp=Z,1.6nm,0.6s,baz=302,slow=3.9,SNR=27
UDBI Udbina 81.97 328 *i* P P **22 10 47.1 +0.5**
FUORN Ofenpass-Fuorn 82.14 332 P P **22 10 48.3 +0.5**
FUORN IAmb IAmb 22 10 50.9
comp=Z,10nm,0.9s
KIJV Kijevo 82.16 327 *i* P P **22 10 48.1 +0.5**
CTI Castel Tesino 82.17 331 IAmb IAmb 22 10 49.2
comp=Z,7.7nm,0.7s
NVLJ Novalja 82.27 328 *i* P P **22 10 47.2 -0.8**
RICI Ricice 82.30 326 P P **22 10 48.2 -0.1**
PDG Podgorica 82.32 324 IAmb IAmb 22 10 50.8
comp=Z,15nm,0.7s
RAYN Ar Rayn 82.44 295 P P **22 10 49.7 +0.3**
RAYN pmax pmax
comp=Z,9.0nm,1.5s
RAYN Ar Rayn 82.44 295 P P **22 10 49.7 +0.3**
MORI Morici 82.55 327 *i* P P **22 10 48.7 -0.8**
U40A Yellville 82.55 45 P P **22 10 49.3 -0.4**
TUE Stuetta 82.58 333 P P **22 10 51.6 +1.6**
TUE IAmb IAmb 22 10 52.8
comp=Z,12nm,0.7s
DUGI Dugi Otok 82.69 328 *i* P P **22 10 50.0 -0.3**
FNA Florina 82.76 322 P P **22 10 50.8 0.0**
FNA pmax pmax
comp=Z,8.0nm,0.8s
FNA Florina 82.76 322 P P **22 10 50.8 0.0**
FNA IAmb IAmb 22 10 53.7
comp=Z,7.8nm,0.8s
TAOE Nuku Hiva Isla 83.30 109 P P **22 10 51.5 -2.4**
SENIN Lac Senin/Sane 83.33 334 P P **22 10 54.0 +0.1**
SENIN IAmb IAmb 22 10 56.5
comp=Z,6.0nm,0.7s
PPT2 Papeete2 83.69 122 *e*LR LR 22 37 23.3
comp=Z,95nm,26.0s
PPT2 Papeete2 83.69 122 *e*T T 23 43 28.6
comp=Z,6.2nm,0.3s
M52A Chesterland 83.71 35 P P **22 10 55.4 -0.2**
PAE Paea 83.74 122 *e*T T 23 43 31.7
comp=Z,1.1nm,0.3s
TIAR Tiarei 83.81 122 *e*T T 23 43 36.3
comp=Z,3.2nm,0.2s
ZCCA Zocca 83.88 331 P P **22 10 54.6 -1.9**
ZCCA IAmb IAmb 22 11 00.9
comp=Z,9.9nm,0.8s
MURB Monte Urbino 84.26 329 P P **22 10 58.7 +0.2**
MURB IAmb IAmb 22 11 02.0
comp=Z,12nm,0.7s
NRCA Norcia 84.41 329 IAmb IAmb 22 11 01.6
comp=Z,15nm,0.9s
OSSC Osservatorio P 84.50 330 P P **22 10 59.1 -0.5**
OSSC IAmb IAmb 22 11 02.0
comp=Z,7.9nm,1.0s
SCTE Santa Cesarea 84.60 324 P P **22 10 59.1 -1.0**
BNI Bardonecchia 84.70 334 IAmb IAmb 22 11 07.3
comp=Z,6.5nm,0.8s
AQU L'Aquila 84.72 328 P P **22 11 00.5 -0.3**
AQU pmax pmax
comp=Z,26nm,1.4s
AQU L'Aquila 84.72 328 P P **22 11 00.5 -0.3**
AQU IAmb IAmb 22 11 02.8
comp=Z,26nm,1.4s
INTR Introdacqua 84.82 328 P P **22 11 00.7 -0.6**
INTR IAmb IAmb 22 11 03.4
comp=Z,9.5nm,0.9s
MEH Mehetia 84.83 121 *e*T T 23 44 53.7
comp=Z,16nm,0.2s
LBNH Lisbon 84.91 28 P P **22 11 01.5 -0.1**
LBNH pmax pmax
comp=Z,16nm,1.3s
LBNH Lisbon 84.91 28 P P **22 11 01.5 -0.1**
LBNH IAmb IAmb 22 11 13.4
comp=Z,16nm,1.3s
TBI Tubuai 88.17 125 *e*T T 23 49 00.6
comp=Z,5.4nm,0.4s
KEST Kesra 92.03 328 LR LR 22 58 09.6
comp=Z,74nm,18.4s,baz=238,slow=39
ESDC Sonseca Array 92.73 339 P P **22 11 39.4 +0.4**
comp=Z,1.0nm,0.8s,baz=19,slow=4.4,SNR=8.8
TORD Torodi Ar. Bea 115.22 324 PKP **PKiKP 22 17 07.9 -0.3**
comp=Z,0.3nm,0.6s,baz=23,slow=3.8,SNR=1.7
TORD pPKP **pPKiKP 22 17 26.6 -2.4**
comp=Z,0.2nm,0.3s,baz=23,slow=2.3,SNR=2.0
H03N2 Juan Fernandez 142.23 90 T T 00 57 18.6
baz=304,slow=77,SNR=15
H03N3 Juan Fernandez 142.25 90 T T 00 57 23.1
baz=304,slow=77,SNR=21
H03N1 Juan Fernandez 142.25 90 T T 00 57 20.4
baz=304,slow=77,SNR=19

2014 MAY

NIED **29** *22:05:00.24˚.90N×123˚.30E.h5km.Mw4.6 Best double couple: M₀8.64000×10¹⁵ NP1:φ₀74.00000°, δ67.00000°, λ-77.00000°. NP2:φ₀223.00000°, δ27.00000°, λ-118.00000°.*
JMA **29** *22:05:57.8±0.1,24˚.87N×123˚.32E,h27km±4km,M4.7*
NEIC **29** *22:06:00.6±1.9,24˚.72N±0˚.06×123˚.27E±0˚.06,h40km±6km, mb4.4/66,Error ellipse: s-maj=9.4km s-min=7.9km az=141.0*
IDC **29** *22:06:03.5±2.9,24˚.83N×123˚.38E,h50km±29km,mb3.7/15, mb1 3.9/17,mb1mx3.7/40,mbtmp4.0/17,ML2.8/2,MS3.8/22, Ms1 3.8/22,ms1mx3.6/45,Error ellipse: s-maj=21.7km s-min=12.9km az=72.0*
ISC 29 22:05:58.6±0.8,24˚.75N±0˚.04×123˚.37E±0˚.03,h22km±6km, n137,σ1$67/131,mb4.3/43,MS3.8/18,1D,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.43**	**229**	P		**Pb**		**22 06 07.6**	**0.0**
YOJ				S		**Sb**		**22 06 14.3**	**+0.7**
YOJ	**Yonaguni jima**	**0.43**	**229**			**Pb**		**22 06 07.5**	**0.0**
JYNG	**Yonagunijimaku**	**0.49**	**233**	P		**Pb**		**22 06 08.4**	**0.0**
JYNG				S		**Sb**		**22 06 15.5**	**+0.4**
IRIF	**Iriomote-Funau**	**0.53**	**141**	P		**Pn**		**22 06 10.4**	**-0.3**
IRIF				*e*S		**Sn**		**22 06 19.1**	**+0.1**
JKRS	**Kuro-shima**	**0.77**	**131**	P		**Pn**		**22 06 14.3**	**+0.2**
JKRS				*e*S		**Sn**		**22 06 26.0**	**+0.9**
HATJ	**Hateruma jima**	**0.80**	**150**	P		**Pn**		**22 06 14.9**	**+0.5**
HATJ				*e*S		**Sn**		**22 06 26.4**	**+0.8**
JIJ	**Ishigaki jima**	**0.80**	**118**	P		**Pb**		**22 06 14.0**	**+0.2**
JIJ				S		**Sn**		**22 06 26.2**	**+0.4**
JISG	**Ishigakijimahi**	**0.87**	**100**	P		**Pb**		**22 06 14.8**	**-0.2**
JISG				*e*S		**Sb**		**22 06 27.1**	**+0.8**
JTJ	**Tarama**	**1.22**	**95**	P		**Pn**		**22 06 20.5**	**+0.3**
JTJ				*e*S		**Sn**		**22 06 36.4**	**+0.4**
JIRB	**Irabujima**	**1.64**	**87**	P		**Pn**		**22 06 26.7**	**+0.6**
JIRB				*e*S		**Sn**		**22 06 46.6**	**+0.1**
NACB	**Ninganchiao**	**1.71**	**251**			**Pn**		**22 06 27.0**	**-0.1**
JIKM	**Ikemajima**	**1.72**	**84**	P		**Pn**		**22 06 28.1**	**+1.0**
TATO	**Taipei**	**1.72**	**278**			**Pn**		**22 06 26.6**	**-0.6**
JMJ2	**Miyako jima3**	**1.78**	**90**	P		**Pn**		**22 06 29.1**	**+1.1**
YHNB	**Yeheng**	**1.81**	**268**			**Pn**		**22 06 27.9**	**-0.6**
JOGS	**Gusukube**	**1.85**	**89**	P		**Pn**		**22 06 30.0**	**+1.0**
YULB	**Yu-li**	**2.33**	**235**			**Pn**		**22 06 35.3**	**-0.3**
SSLB	**Suanglung**	**2.40**	**247**			**Pn**		**22 06 36.7**	**+0.1**
TWG	**Pinlang**	**2.85**	**228**			**Pn**		**22 06 42.1**	**-0.6**
TPUB	**Ta-pu**	**2.89**	**241**	Pn		**Pn**		**22 06 45.3**	**+2.0**
KNMB	**Chin-men Tao**	**4.54**	**267**			Pn		22 06 58.3	-7.7
JOW	**Kunigami**	**4.88**	**64**	P		**Pn**		**22 07 13.0**	**+2.3**
	0.3nm,0.3s,baz=191,slow=15,SNR=9.8								
JOW	**Kunigami**	**4.88**	**64**	Pn		**Pn**		**22 07 12.7**	**+2.0**
SSE	**Sheshan**	**6.61**	**344**	Pn		**Pn**		**22 07 35.0**	**+0.6**
NJ2	**Nanjing**	**8.29**	**332**	*e*P		Pb		22 08 15.0	-6.4
NJ2				S		Sb		22 09 46.0	-14
NJ2				pmax	pmax				
	comp=Z,13nm,0.7s								
NJ2				smax	smax				
	comp=N,76nm,1.1s								
NJ2				smax	smax				
	comp=E,81nm,1.9s								
NJ2				LR	LR				
	comp=N,2μm,12.3s								
NJ2				LR	LR				
	comp=E,1μm,7.8s								
NJ2				LR	LR				
	comp=Z,2μm,11.7s								
HKPS	**Hong Kong Po S**	**8.82**	**256**	Pn		**Pn**		**22 08 02.8**	**-1.9**
WHN	**Wuhan**	**9.86**	**308**	⇓P		Pn		22 08 24.3	+5.3
WHN				S		**Sn**		**22 10 10.3**	**+1.3**
WHN				LR	LR				
	comp=Z,3μm,8.8s								
WHN				LR	LR				
	comp=Z,3μm,8.0s								
WHN				LR	LR				
	comp=Z,6μm,12.2s								
JNU	**Nakatsue**	**10.62**	**37**	P		Pn		22 08 36.6	+7.1
	comp=Z,0.2nm,0.3s,baz=207,slow=13,SNR=4.3								
JNU				LR	LR			22 12 38.4	
	comp=Z,218nm,20.4s,baz=216,slow=37								
JNU	**Nakatsue**	**10.62**	**37**	Pn		**Pn**		**22 08 31.4**	**+1.9**
TGY	**Tagaytay City**	**10.84**	**193**	LR	LR			22 13 12.9	
	comp=Z,474nm,18.7s,baz=26,slow=39								
INCN	**Inchon**	**13.00**	**12**	Pn		**Pn**		**22 09 02.1**	**+0.1**
KSRS	**Korea Array**	**13.25**	**16**	P		**Pn**		**22 09 08.2**	**+2.9**
	comp=Z,0.4nm,0.3s,baz=228,slow=8.6,SNR=1.7								
KS19	**Wonju Array Si**	**13.28**	**16**	Pn		**Pn**		**22 09 07.3**	**+1.5**
ENH	**Enshi**	**13.49**	**297**	Pn		**Pn**		**22 09 07.2**	**-1.5**
XAN	**Xi'an**	**15.62**	**310**	P		**P**		**22 09 41.5**	**+0.1**
XAN				pP	pwP			22 09 48.0	-1.4
XAN				pmax	pmax				
	comp=Z,34nm,1.3s								
XAN				pmax	pmax				
	comp=Z,180nm,10.3s								
XAN				LR	LR				
	comp=Z,420nm,18.4s								
XAN				LR	LR				
	comp=Z,2μm,11.8s								
XAN				LR	LR				
	comp=Z,2μm,12.2s								
XAN	**Xi'an**	**15.62**	**310**			**Pn**		**22 09 37.9**	**+0.6**
XAN				IAmb	IAmb			22 09 48.9	
	comp=Z,30nm,1.1s								
INU	**Inuyama**	**15.83**	**45**	Pn		**Pn**		**22 09 41.6**	**+1.5**
BJT	**Baijiatuan**	**16.39**	**340**	Pn		**Pn**		**22 09 47.5**	**+0.4**
JHJ	**Hachijo jima 2**	**16.60**	**56**	LR	LR			22 15 38.3	
	comp=Z,156nm,20.7s,baz=269,slow=35								
MAJO	**Matsushiro**	**17.33**	**44**	Pn		**P**		**22 10 00.1**	**-0.3**
MJB9	**Matsu-Tunnel**	**17.33**	**44**			**P**		**22 10 00.2**	**-0.1**
MJAR	**Matsushiro Ar**	**17.33**	**44**	P		**P**		**22 10 02.0**	**+1.7**
	baz=226,slow=8.6,SNR=5.3								
MJAR				LR	LR			22 17 10.4	
	comp=Z,85nm,19.8s,baz=225,slow=39								
DAV	**Davao City (W)**	**17.70**	**173**	LR	LR			22 17 06.2	
	comp=Z,326nm,19.9s,baz=351,slow=37								
SLVN	**Son La**	**18.23**	**263**			**Pn**		**22 10 05.5**	**-4.9**
KMI	**Kunming**	**18.71**	**275**	P		**Pn**		**22 10 21.3**	**+4.9**
KMI				pmax	pmax				
	comp=Z,13nm,0.6s								
KMI				LR	LR				
	comp=Z,950nm,8.4s								
KMI				LR	LR				
	comp=Z,1μm,12.8s								
KMI				LR	LR				
	comp=Z,1μm,12.5s								
DLV	**T Lat**	**19.00**	**231**			**P**		**22 10 17.0**	**-2.0**
CN2	**Changchun**	**19.08**	**5**	*e*P		**Pn**		**22 10 21.5**	**+1.1**
CN2				*e*PP		**PnPn**		**22 10 37.0**	**+3.7**
CN2				*e*S		**Sn**		**22 13 43.5**	**-10**
CN2				pmax	pmax				
	comp=Z,10.0nm,0.7s								
CN2				LR	LR				
	comp=Z,200nm,14.0s								
CN2				LR	LR				
	comp=Z,1μm,14.0s								
CN2				LR	LR				
	comp=Z,770nm,15.0s								
KKM	**Kota Kinabalu**	**19.82**	**201**	P		**P**		**22 10 28.7**	**+0.8**
KKM				IAmb	IAmb			22 10 40.7	
	comp=Z,14nm,0.9s								
LZH	**Lanzhou**	**20.24**	**309**	*e*P		Pn		22 10 36.0	+1.5
LZH				pP		sP		22 10 41.0	+0.1
LZH				sP		pwP		22 10 45.5	+5.0
LZH				pmax	pmax				
	comp=Z,23nm,1.1s								
MDJ	**Mudanjiang**	**20.46**	**13**	P		Pn		22 10 36.1	-0.6
USA0B	**Ussuriysk Arra**	**20.64**	**18**	P		**P**		**22 10 35.7**	**-0.8**
USA0B				IAmb	IAmb			22 10 39.7	
	comp=Z,9.1nm,1.1s								
USRK	**Ussuriysk Ar.**	**20.64**	**18**	P		Pn		22 10 39.8	+0.9
	comp=Z,3.6nm,0.9s,baz=236,slow=48,SNR=5.4								
USRK				LR	LR			22 18 36.7	
	comp=Z,136nm,20.0s,baz=126,slow=37								
PBKT	**Sadao Pong**	**22.46**	**253**	P		**P**		**22 10 55.0**	**-1.3**
GUMO	**Guam**	**23.11**	**115**	P		**P**		**22 11 03.8**	**+0.7**
CHTO	**Chiang Mai**	**23.42**	**260**	P		**P**		**22 11 05.8**	**-0.5**
CHTO				IAmb	IAmb			22 11 14.8	
	comp=Z,8.4nm,1.1s								
CM31	**Chiang Mai Arr**	**23.54**	**259**	P		**P**		**22 11 07.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**23.54**	**259**	P		**P**		**22 11 09.9**	**+2.5**
	comp=Z,0.3nm,0.4s,baz=63,slow=8.2,SNR=3.9								
CMAR				LR	LR			22 20 42.8	
	comp=Z,118nm,19.0s,baz=100,slow=37								

TNTI Ternate 24.15 170 P **P** **22 11 13.9 +0.8**
TNTI IAmb IAmb 22 11 19.4
comp=Z,16nm,0.7s
HIA Hailar 24.64 354 P **P** **22 11 17.8 +0.4**
HIA IAmb IAmb 22 11 21.0
comp=Z,20nm,1.1s
SBUM Sibu 24.64 208 P **P** **22 11 17.4 -0.3**
SBUM IAmb IAmb 22 11 29.4
comp=Z,8.0nm,1.1s
GTA Gaotai 24.64 312 *e*P **P** **22 11 19.5 +1.8**
GTA pP pP 22 11 24.0 +0.1
GTA sP pwP 22 11 26.5 +0.4
GTA S **S** **22 15 44.3 +6.3**
GTA pmax pmax
GTA pmax pmax
comp=Z,4.0nm,0.9s
GTA LR LR
comp=Z,110nm,6.5s
GTA LR LR
comp=Z,260nm,13.3s
GTA LR LR
comp=Z,640nm,11.4s
GTA LR LR
comp=Z,640nm,12.7s
KLR Kul'dur 25.30 13 P **P** **22 11 24.8 +1.4**
comp=Z,4.1nm,0.8s,baz=219,slow=6.9,SNR=11
KLR LR LR 22 21 37.1
comp=Z,202nm,18.3s,baz=196,slow=37
LUWI Luwuk 25.64 181 P **P** **22 11 25.3 -1.4**
KSM Kuching 26.36 211 P **P** **22 11 32.0 -1.2**
KSM IAmb IAmb 22 11 44.7
comp=Z,9.2nm,0.9s
ULN Ulaanbaatar 26.45 335 P **P** **22 11 33.7 -0.2**
SONM Songino Array 26.68 334 P **P** **22 11 36.9 +0.9**
comp=Z,3.6nm,0.8s,baz=147,slow=9.6,SNR=20
SONM LR LR 22 23 13.0
comp=Z,445nm,19.1s,baz=117,slow=39
SHL Shillong 28.48 278 P **P** **22 11 52.0 -0.4**
SHL IAmb IAmb 22 12 02.4
comp=Z,7.0nm,0.8s
LSA Lhasa 29.02 287 P **P** **22 11 57.6 0.0**
KAPI Kappang 29.79 187 P **P** **22 12 03.3 -0.6**
TLY Talaya 30.84 336 LR LR 22 25 02.5
comp=Z,127nm,21.3s,baz=127,slow=37
TLY Talaya 30.84 336 P **P** **22 12 12.7 -0.2**
LHMI Lhok Sumawe 31.94 237 P **P** **22 12 21.5 -1.4**
RPSI Rantau Prapat 32.19 231 P **P** **22 12 24.2 -0.9**
RPSI IAmb IAmb 22 12 33.6
comp=Z,8.0nm,1.1s
EDFI Ende, Flores 33.33 183 P **P** **22 12 36.5 +1.3**
PETK Petropavlovsk- 38.30 33 LR LR 22 29 36.0
comp=Z,52nm,19.0s,baz=239,slow=37
XMIS Christmas Isla 39.05 208 P **P** **22 13 24.7 +0.8**
MK31 Makanchi Array 39.34 315 P **P** **22 13 27.1 +0.9**
MK31 IAmb IAmb 22 13 36.8
comp=Z,4.5nm,1.1s
MKAR Makanchi Array 39.34 315 P **P** **22 13 27.2 +1.0**
comp=Z,1.5nm,0.7s,baz=110,slow=10,SNR=8.2
MAKZ Makanchi 39.55 314 P **P** **22 13 27.9 0.0**
MAKZ IAmb IAmb 22 13 37.5
comp=Z,7.2nm,1.1s
KRVT Keravat (AS076 40.13 132 LR LR 22 27 16.7
comp=Z,160nm,21.7s,baz=274,slow=32
KNRA Kununurra 40.52 172 P **P** **22 13 35.6 -0.6**
KNRA IAmb IAmb 22 13 47.3
comp=Z,19nm,1.1s
ZAA0 Zalesovo Array 40.88 326 P **P** **22 13 40.1 +1.4**
ZAA0 IAmb IAmb 22 13 51.6
comp=Z,4.3nm,1.1s
ZALV Zalesovo Beam 40.88 326 P **P** **22 13 38.7 0.0**
comp=Z,2.3nm,0.8s,baz=110,slow=8.7,SNR=8.6
ZALV LR LR 22 31 35.6
comp=Z,278nm,19.4s,baz=113,slow=38
PMG Port Moresby 41.12 143 LR LR 22 28 10.3
comp=Z,104nm,19.9s,baz=315,slow=32
PMG Port Moresby 41.12 143 P **P** **22 13 41.5 +0.3**
PMG IAmb IAmb 22 13 58.4
comp=Z,20nm,0.8s
TARG Taragay, Kyrgy 41.19 306 P **P** **22 13 42.5 +0.5**
KDJ Kajisay 41.72 306 P **P** **22 13 45.2 -0.8**
KDJ IAmb IAmb 22 14 03.0
comp=Z,5.1nm,1.1s
KURK Kurchatov 42.96 319 P **P** **22 13 55.3 -0.5**
KURK IAmb IAmb 22 14 01.7
comp=Z,6.1nm,1.1s
COEN Coen 43.05 151 P **P** **22 13 57.6 +0.7**
COEN IAmb IAmb 22 14 00.3
comp=Z,9.0nm,0.7s
AAK Ala-Archa 43.76 307 P **P** **22 14 05.5 +2.9**
comp=Z,1.1nm,0.3s,baz=18,slow=4.6,SNR=4.3
AAK Ala-Archa 43.76 307 P **P** **22 14 02.6 0.0**
WB0 Warramunga Arr 45.53 165 P **P** **22 14 15.7 -0.9**
WB0 IAmb IAmb 22 14 19.2
comp=Z,8.4nm,0.7s
WRAB Tennant Creek 45.68 165 P **P** **22 14 17.5 -0.3**
WRA Warramunga Arr 45.69 166 P **P** **22 14 19.7 +1.8**
comp=Z,10nm,0.7s,baz=347,slow=8.7,SNR=30
WB2 Warramunga Arr 45.69 165 P **P** **22 14 17.3 -0.6**
WR0 Warramunga Arr 45.75 165 P **P** **22 14 18.7 +0.3**
PSA00 Pilbara Seismi 46.17 185 P **P** **22 14 22.1 +0.4**
TIXI Tiksi 47.04 2 P **P** **22 14 28.1 +0.2**
comp=Z,1.2nm,0.3s,baz=160,slow=3.6,SNR=5.0
TIXI Tiksi 47.04 2 P **P** **22 14 27.2 -0.7**
TIXI IAmb IAmb 22 14 28.7
comp=Z,4.8nm,1.1s
BRVK Borovoye 48.58 320 P **P** **22 14 39.9 -0.3**
BRVK IAmb IAmb 22 14 50.2
comp=Z,3.1nm,0.8s
AS31 Alice Springs 49.20 167 P **P** **22 14 45.7 +0.4**
AS31 IAmb IAmb 22 14 49.8
comp=Z,1.6nm,0.5s
ASAR Alice Springs 49.20 167 P **P** **22 14 47.6 +2.4**
comp=Z,2.6nm,0.6s,baz=351,slow=13,SNR=34
HNR Honiara 49.26 129 LR LR 22 34 52.2
comp=Z,65nm,18.4s,baz=318,slow=35
ARU Arti 55.86 323 P **P** **22 15 33.1 -1.2**
ARU IAmb IAmb 22 15 40.2
comp=Z,2.4nm,0.7s
NIKH Nikolski High 57.35 42 P **P** **22 15 43.3 -1.5**
NWAO Narrogin (SRO) 57.65 186 P **P** **22 15 46.5 -0.6**
NWAO IAmb IAmb 22 15 49.8
comp=Z,5.9nm,0.7s
NWAO Narrogin (SRO) 57.65 186 P **P** **22 15 47.1 0.0**
NWAO IAmb IAmb 22 15 49.8
comp=Z,7.4nm,0.7s
STKA Stephens Creek 58.94 162 P **P** **22 15 58.2 +2.1**
comp=Z,4.4nm,0.6s,baz=339,slow=7.3,SNR=17
STKA Stephens Creek 58.94 162 P **P** **22 15 55.2 -1.0**
STKA IAmb IAmb 22 15 58.5
comp=Z,1.1nm,0.7s
ARMA Armidale 61.18 152 P **P** **22 16 10.6 -1.1**
RSO Redoubt South 65.82 33 P **P** **22 16 41.0 -1.2**
TOLK Toolik Lake Re 66.14 24 P **P** **22 16 43.9 0.0**
AKH Akhalkalaki 66.76 306 P **P** **22 16 48.3 -0.3**
AKH IAmb IAmb 22 16 56.9
comp=Z,2.1nm,0.6s
KIV Kislovodsk 66.78 309 P **P** **22 16 48.6 +0.1**
KIV IAmb IAmb 22 17 00.5
comp=Z,3.8nm,0.8s
FYU Fort Yukon 68.12 26 P **P** **22 16 57.1 +0.7**
FYU IAmb IAmb 22 17 16.6
comp=Z,4.7nm,0.6s
KNTN Kanton 68.59 104 P **P** **22 16 58.6 -1.6**
KEV Kevo 69.19 338 P **P** **22 17 02.0 -1.1**
KEV IAmb IAmb 22 17 19.8
comp=Z,3.3nm,1.1s
DOT Dot Lake 69.25 28 P **P** **22 17 03.6 +0.1**
DOT IAmb IAmb 22 17 09.1
comp=Z,2.5nm,1.2s
ARCES ARCESS Array B 69.76 338 LR LR 22 53 26.8
comp=Z,70nm,18.5s,baz=84,slow=41
KIP Kipapa 71.44 74 P **P** **22 17 19.4 +0.2**
EPYK Eagle Plains 71.46 25 P **P** **22 17 16.1 -1.0**
EPYK IAmb IAmb 22 17 26.7
comp=Z,4.4nm,1.1s
FINES FINESS Array B 71.96 330 P **P** **22 17 22.1 +2.0**
comp=Z,0.5nm,0.4s,baz=70,slow=6.3,SNR=9.5
FINES LR LR 22 52 14.0
comp=Z,241nm,18.9s,baz=42,slow=38
AKASG Malin Array Be 73.77 319 P **P** **22 17 31.2 +0.2**
comp=Z,0.1nm,0.3s,baz=63,slow=4.4,SNR=4.9
AKASG LR LR 22 52 57.8
comp=Z,50nm,18.3s,baz=45,slow=38
AKBB Malin Array Si 73.77 319 P **P** **22 17 30.2 -0.8**
MDUB Mudurnu 75.94 308 P **P** **22 17 41.8 -2.1**
BUR08 Bucovina Ar. S 77.33 317 P **P** **22 17 49.9 -1.8**

ELL	**Elmali**	**78.23**	**305**	P	**P**	**22 17 54.8 -2.1**
NOA	**NORSAR Array B**	**78.65**	**333**	LR	LR	22 56 13.9
	comp=Z,158nm,19.5s,baz=45,slow=38					
MORC	**Moravsky Berou**	**81.01**	**321**	P	**P**	**22 18 09.5 -2.1**
MORC				IAmb	IAmb	22 18 10.5
	comp=Z,2.7nm,0.9s					
MSWZ	**Moikau Station**	**81.50**	**143**	P	**P**	**22 18 13.6 -0.5**
YKA	**Yellowknife Ar**	**81.67**	**23**	P	**P**	**22 18 15.4 +0.6**
	comp=Z,2.6nm,0.9s,baz=309,slow=4.7,SNR=31					
YKA				LR	LR	23 00 23.1
	comp=Z,35nm,19.0s,baz=0.0,slow=40					
GERES	**GERESS Array B**	**83.66**	**321**	P	**P**	**22 18 27.7 +2.1**
	comp=Z,0.2nm,0.5s,baz=29,slow=8.4,SNR=1.8					
GERES				LR	LR	22 57 54.9
	comp=Z,65nm,19.9s,baz=79,slow=37					
FFC	**Flin Flon**	**91.81**	**24**	P	**P**	**22 19 05.3 +0.7**
PPT	**Papeete**	**94.61**	**107**	LR	LR	22 53 07.5
	comp=Z,24nm,20.0s,baz=4.0,slow=30					
NVAR	**Mina Array Bea**	**94.66**	**44**	P	**P**	**22 19 20.1 +1.7**
	comp=Z,0.6nm,0.7s,baz=297,slow=4.0,SNR=1.2					
RDMU	**Red Mountain**	**98.49**	**38**	P	**P**	**22 19 35.4 -0.4**
MTPU	**Mount Pierson**	**98.66**	**41**		pP	22 19 46.1 +2.5

*VAO **29** 22:14:36.1±4.6,0.°56S×79.°84W,h10km,mb4.6*
*IDC **29** 22:15:09.8±1.7,1.°65S×77.°91W,h156km±16km,mb3.7/14, mb1 3.8/20,mb1mx3.7/34,mbtmp4.2/20,MS3.4/2, Ms1 3.4/2,ms1mx2.8/29,Error ellipse: s-maj=15.9km s-min=11.5km az=85.0*
*NEIC **29** 22:15:10.3±1.6,1.°66S±0.°07×77.°9W±0.°1,h165km±6km, mb4.4/9,Error ellipse: s-maj=15.6km s-min=9.5km az=83.0*
*IGQ **29** 22:15:10.2±0.5,2.°S±3.°×7.°8W±.°,h158km,M4.1*

ISC 29 22:15:09.6±0.5,1.°68S±0.°04×77.°96W±0.°06,h160km±5km, n152,σ1§22/160,mb4.0/14,Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKYU	**Pakayacu**	**0.36**	**86**	P	**Pn**	**22 15 32.3**	**+0.6**
BPAT	**Tungurahua Vol**	**0.51**	**290**	P	**Pn**	**22 15 32.5**	**-0.2**
BPAT				S	**Sn**	**22 15 50.3**	**-0.1**
PAT1	**Patacocha**	**0.51**	**289**	P	**Pn**	**22 15 32.1**	**-0.7**
BULB	**Ulba Tungurahu**	**0.51**	**298**	P	**Pn**	**22 15 32.6**	**-0.1**
BULB				S	**Sn**	**22 15 49.8**	**-0.5**
BRUN	**Tungurahua Vol**	**0.52**	**299**	P	**Pn**	**22 15 32.6**	**-0.1**
ARRY	**Arrayan**	**0.53**	**289**	P	**Pn**	**22 15 32.1**	**-0.6**
RUN5	**Runtun**	**0.53**	**299**	P	**Pn**	**22 15 32.6**	**-0.1**
RETU	**Refugio**	**0.54**	**294**	P	**Pn**	**22 15 32.8**	**-0.2**
BMAS	**Trigal station**	**0.55**	**288**	P	**Pn**	**22 15 32.4**	**-0.5**
BMAS				S	**Sn**	**22 15 50.8**	**+0.2**
SANGA	**Volcan Sangay**	**0.56**	**228**	P	**Pn**	**22 15 32.8**	**-0.2**
SANGA				S	**Sn**	**22 15 50.7**	**-0.2**
BBIL	**Ulba Tungurahu**	**0.57**	**293**	P	**Pn**	**22 15 32.8**	**-0.1**
BIL2	**Estacion Bilba**	**0.59**	**292**	P	**Pn**	**22 15 32.7**	**-0.3**
IGUA	**Igualata**	**0.71**	**285**	P	**Pn**	**22 15 34.0**	**0.0**
PIS1	**Pisayambo**	**0.75**	**325**	P	**Pn**	**22 15 34.1**	**-0.1**
PISA	**Pisayambo**	**0.75**	**325**	P	**Pn**	**22 15 34.3**	**+0.1**
VCES	**Cotopaxi**	**0.97**	**333**	P	**Pn**	**22 15 36.5**	**+0.7**
BMOR	**Cotopaxi Volca**	**1.06**	**332**	P	**Pn**	**22 15 36.6**	**0.0**
BREF	**Cotopaxi Volca**	**1.11**	**334**	P	**Pn**	**22 15 38.4**	**+1.3**
VC1	**Cotopaxi 1**	**1.12**	**337**	P	**Pn**	**22 15 37.2**	**+0.2**
BNAS	**Cotopaxi Volca**	**1.13**	**332**	P	**Pn**	**22 15 37.4**	**+0.4**
ANTM	**Antisana-La Mi**	**1.16**	**347**	P	**Pn**	**22 15 37.5**	**+0.1**
ANTS	**Antisana-Sarah**	**1.19**	**350**	P	**Pn**	**22 15 37.8**	**+0.1**
ANTG	**Antisana-Guama**	**1.20**	**346**	P	**Pn**	**22 15 37.7**	**0.0**
ILLI	**Illinizas Sur**	**1.23**	**321**	P	**Pn**	**22 15 37.6**	**-0.4**
COHC	**Cochancay**	**1.52**	**239**	P	**Pn**	**22 15 38.9**	**-1.2**
BOSC	**San Juan Bosco**	**1.56**	**200**	P	**Pn**	**22 15 40.9**	**+0.1**
BOSC				S	**Sn**	**22 16 05.8**	**+0.9**
REVS	**Reventador Sur**	**1.59**	**12**	P	**Pn**	**22 15 41.7**	**+0.4**
LAV4	**Lava4-Reventad**	**1.61**	**12**	P	**Pn**	**22 15 41.9**	**+0.5**
GGPC	**Guagua Pichinc**	**1.62**	**337**	P	**Pn**	**22 15 41.4**	**-0.5**
REVN	**San Rafael**	**1.62**	**12**	P	**Pn**	**22 15 41.9**	**+0.3**
PINO	**Pino**	**1.64**	**337**	P	**Pn**	**22 15 41.9**	**-0.2**
YANA	**Yana**	**1.66**	**338**	P	**Pn**	**22 15 42.0**	**-0.3**
PULU	**Pululahua**	**1.77**	**342**	P	**Pn**	**22 15 42.9**	**-0.4**
CASC	**Dorado de Casc**	**1.90**	**19**	P	**Pn**	**22 15 44.6**	**+0.1**
IMBA	**Imbabura, San**	**1.95**	**353**	P	**Pn**	**22 15 46.3**	**+0.9**
CUSE	**Cuicocha Este**	**2.02**	**347**	*eP*	**Pn**	**22 15 46.3**	**+0.3**
AGUAY	**Guayaquil**	**2.03**	**259**	P	**Pn**	**22 15 42.7**	**-3.0**
YAHU	**Yahuarcocha**	**2.03**	**357**	P	**Pn**	**22 15 46.8**	**+0.5**
PAC1	**Pacto, Paraso**	**2.10**	**337**	*eP*	**Pn**	**22 15 44.5**	**-2.2**
URCU	**Urcuqui**	**2.12**	**352**	P	**Pn**	**22 15 47.8**	**+0.5**
MORR	**Playas El Morr**	**2.56**	**248**	P	**Pn**	**22 15 49.8**	**-2.3**
PUAC	**Puerto Asis, P**	**2.61**	**32**	*eP*	**Pn**	**22 15 53.1**	**+0.5**
CABP	**Cabo Pasado**	**2.78**	**297**	P	**Pn**	**22 15 54.5**	**-0.2**
PPLP	**Puerto Lpez**	**2.82**	**273**	P	**Pn**	**22 15 52.2**	**-3.0**
GONZ	**Gonzanam**	**2.92**	**209**	P	**Pn**	**22 15 55.7**	**-1.1**
GCUF	**Volcan Galeras**	**2.95**	**12**	*eP*	**Pn**	**22 15 58.0**	**+0.7**
SALI	**Salinas**	**3.07**	**260**	P	**Pn**	**22 15 55.4**	**-2.9**
CRUC	**La Cruz**	**3.37**	**17**	*eP*	**Pn**	**22 16 03.0**	**+0.5**
PTLC	**Puerto Leguiza**	**3.65**	**60**	*eP*	**Pn**	**22 16 04.1**	**-1.6**
BBAC	**Balboa, Cauca**	**3.74**	**11**	*eP*	**Pn**	**22 16 06.7**	**-0.4**
SOTA	**Rioblanco**	**4.02**	**20**	*eP*	**Pn**	**22 16 11.8**	**+0.9**
PCON	**Cinco Dias**	**4.27**	**21**	*eP*	**Pn**	**22 16 15.1**	**+0.9**
GARC	**Garzon, Huila**	**4.56**	**33**	*eP*	**Pn**	**22 16 18.4**	**-0.3**
GR1C	**Gorgona, Isla**	**4.65**	**357**	*eP*	**Pn**	**22 16 18.4**	**-0.2**
ATAH	**Atahualpa**	**5.44**	**185**	P	**Pn**	**22 16 29.9**	**+0.4**
	10.0nm,0.3s,baz=16,slow=8.0,SNR=38						
ATAH				S	**Sn**	**22 17 30.8**	**-1.2**
	21nm,0.3s,baz=273,slow=21,SNR=9.5						
MACC	**Macarena, Meta**	**5.59**	**47**	*eP*	**Pn**	**22 16 31.5**	**+0.4**
MALC	**Bahia Malaga**	**5.68**	**6**	*eP*	**Pn**	**22 16 32.2**	**-0.1**
YOTC	**Yotoco, Valle**	**5.85**	**16**	*eP*	**Pn**	**22 16 31.8**	**-2.8**
PRAC	**Prado**	**6.17**	**30**	*eP*	**Pn**	**22 16 38.4**	**-0.4**
ORTC	**Ortega, Tolima**	**6.17**	**26**	*eP*	**Pn**	**22 16 38.4**	**-0.4**
PLMC	**San Jos del P**	**6.75**	**14**	*eP*	**Pn**	**22 16 44.3**	**-2.2**
TOLC	**Tolima**	**6.75**	**23**	*eP*	**Pn**	**22 16 45.1**	**-1.7**
RREF	**El Recreo**	**7.00**	**22**	*eP*	**Pn**	**22 16 48.9**	**-1.9**
VILC	**Villavicencio,**	**7.16**	**24**	*eP*	**Pn**	**22 16 53.0**	**+1.0**
GUY2C	**Guyana, Caldas**	**7.33**	**21**	*eP*	**Pn**	**22 16 51.9**	**-2.6**
ROSC	**El Rosal**	**7.42**	**29**	P	**Pn**	**22 16 55.9**	**+0.1**
	1.6nm,0.3s,baz=330,slow=22,SNR=1.5						
CBOC	**Ciudad Bolivar**	**7.74**	**15**	*eP*	**Pn**	**22 16 57.1**	**-2.6**
SPBC	**San Pablo de B**	**8.25**	**28**	*eP*	**Pn**	**22 17 06.4**	**-0.1**
PTBC	**PUERTO BERRIO,**	**8.88**	**23**	*eP*	**Pn**	**22 17 10.4**	**-4.3**
RUSC	**La Rusia**	**8.96**	**33**	*eP*	**Pn**	**22 17 17.4**	**+1.3**
RUSC	**La Rusia**	**8.96**	**33**	Pn	**Pn**	**22 17 17.3**	**+1.1**
ZARC	**Zaragoza, Cauc**	**9.62**	**19**	*eP*	**Pn**	**22 17 20.5**	**-4.0**
URCC	**San Jos de Ur**	**9.67**	**14**	*eP*	**Pn**	**22 17 25.2**	**-0.1**
NNA	**Nana**	**10.30**	**174**	P	**Pn**	**22 17 34.2**	**+0.6**
	1.3nm,0.3s,baz=10.0,slow=15,SNR=1.9						
NNA				S	**Sn**	**22 19 23.7**	**-4.2**
	6.5nm,0.3s,baz=141,slow=20,SNR=5.8						
BCIP	**Isla Barro Col**	**10.93**	**350**	Pn	**Pn**	**22 17 43.2**	**+1.5**
SMLC	**San Martn de**	**11.10**	**20**	*eP*	**Pn**	**22 17 42.1**	**-1.9**
SJCC	**San Jacinto, C**	**11.82**	**13**	*eP*	**P**	**22 18 00.7**	**+0.7**
SDV	**Santo Domingo**	**12.78**	**35**	P	**Pn**	**22 18 05.9**	**0.0**
	1.5nm,0.3s,baz=192,slow=20,SNR=2.0						
JTS	**Las Juntas de**	**13.78**	**330**	LR	LR	22 23 08.1	
	comp=Z,44nm,19.4s,baz=195,slow=35						
URIC	**Uribia, Colomb**	**14.55**	**24**	*eP*	Pn	22 18 18.3	-10
URIC	**Uribia, Colomb**	**14.55**	**24**	Pn	**Pn**	**22 18 26.2**	**-1.9**
SAML	**Samuel**	**16.38**	**117**	P	**P**	**22 18 49.5**	**-1.0**
MACA	**Manacapuru-AM**	**17.32**	**95**	*eP*	**Pn**	**22 19 01.8**	**-0.1**
LPAZ	**La Paz**	**17.45**	**147**	P	**P**	**22 19 03.4**	**+0.5**
	1.0nm,0.3s,baz=327,slow=8.8,SNR=24						
LPAZ	**La Paz**	**17.45**	**147**		**Pn**	**22 19 05.0**	**+0.9**
LPAZ	**La Paz**	**17.45**	**147**	*eP*	**P**	**22 19 03.5**	**+0.6**
PTGA	**Pitinga**	**18.01**	**87**	P	**Pn**	**22 19 09.8**	**-0.3**
	0.2nm,0.3s,baz=260,slow=23,SNR=2.1						
PTGA	**Pitinga**	**18.01**	**87**	P	**P**	**22 19 07.6**	**-0.8**
PB12	**IPOC Station P**	**18.42**	**157**	P	**P**	**22 19 12.8**	**-0.2**
MNMC	**Minye Minye**	**19.18**	**155**	P	**Pn**	**22 19 23.0**	**-1.1**
PSGCX	**Pisagua**	**19.39**	**157**	P	**P**	**22 19 24.1**	**+0.6**
MTO3	**Montecristo**	**19.56**	**325**	P	**P**	**22 19 26.0**	**+0.5**
PB11	**IPOC Station P**	**19.72**	**156**	P	**Pn**	**22 19 30.3**	**-0.1**
MTDJ	**Mount Denham**	**19.78**	**1**	P	**P**	**22 19 28.8**	**+1.1**
GO01	**Chusmiza**	**19.80**	**155**	P	**Pn**	**22 19 31.1**	**-0.9**
PB08	**IPOC Station P**	**20.27**	**155**	P	**P**	**22 19 33.8**	**+0.6**
PB01	**IPOC Station P**	**20.95**	**157**	P	**P**	**22 19 40.1**	**0.0**
PB07	**IPOC Station P**	**21.43**	**159**	P	**P**	**22 19 46.0**	**+0.7**
TOSP	**Speyside**	**21.59**	**53**	P	**P**	**22 19 45.3**	**-1.7**
GTBY	**Guantanamo Bay**	**21.65**	**7**	P	**P**	**22 19 48.0**	**+0.5**
PB09	**IPOC Station P**	**21.73**	**158**	P	**P**	**22 19 48.6**	**+0.1**
SIV	**San Ignacio**	**21.89**	**131**	P	**P**	**22 19 50.9**	**+0.8**
	6.7nm,0.8s,baz=310,slow=9.7,SNR=23						
LVC	**Limon Verde**	**22.59**	**158**	P	**P**	**22 19 59.5**	**+2.4**
	3.6nm,0.6s,baz=340,slow=5.1,SNR=6.4						
LVC	**Limon Verde**	**22.59**	**158**	P	**P**	**22 19 57.4**	**+0.2**
AGPR	**Aguadilla, PR**	**22.68**	**28**	P	**P**	**22 19 54.9**	**-2.8**
AOPR	**Arecibo Observ**	**22.75**	**29**	P	**P**	**22 19 55.9**	**-2.4**
SJG	**San Juan**	**22.84**	**30**	P	**P**	**22 20 01.3**	**+2.2**
	3.6nm,0.3s,baz=94,slow=23,SNR=1.3						
PTLB	**Pontes e Lacer**	**23.06**	**127**	*eP*	**P**	**22 20 02.6**	**+1.4**
NPGB	**Novo Progresso**	**23.15**	**104**	*eP*	**P**	**22 20 02.1**	**+0.1**
MALB	**Monte Alegre**	**23.68**	**91**	*eP*	**P**	**22 20 07.0**	**+0.1**
CLDB	**Colider**	**23.83**	**113**	*eP*	**P**	**22 20 08.3**	**+0.1**
GO02	**Mina Guanaco**	**24.71**	**162**	P	**P**	**22 20 17.2**	**+0.8**
AC01	**Pan de Azucar**	**25.34**	**164**	P	**P**	**22 20 22.0**	**+0.2**
MDP	**Montagnes des**	**26.17**	**75**	P	**P**	**22 20 29.5**	**+0.1**
	7.0nm,0.8s,baz=265,slow=7.0,SNR=5.0						
ROC1	**El Roble**	**31.81**	**169**	P	**P**	**22 21 19.6**	**+0.2**
MT02	**Curacav**	**32.06**	**169**	P	**P**	**22 21 22.0**	**+0.6**
IPMB	**Ipameri, GO**	**33.39**	**121**	*eP*	**P**	**22 21 33.5**	**+0.3**
ROSB	**Rosrio**	**33.83**	**93**	*eP*	**P**	**22 21 35.8**	**-1.2**
V48A	**Smith Brothers**	**38.13**	**348**	P	**P**	**22 22 12.8**	**-0.5**
CLTN	**Cedars of Leba**	**38.38**	**349**	P	**P**	**22 22 15.4**	**+0.1**
T57A	**Hurt**	**38.50**	**358**	P	**P**	**22 22 16.1**	**-0.1**
T50A	**Nancy**	**39.03**	**351**	P	**P**	**22 22 17.3**	**-3.4**
TXAR	**Lajitas Array**	**39.44**	**323**	P	**P**	**22 22 25.7**	**+1.3**
	0.3nm,0.8s,baz=178,slow=6.3,SNR=4.4						
TXAR				pP	**pP**	**22 23 01.8**	**+1.6**
	0.5nm,0.9s,baz=146,slow=9.1,SNR=4.1						
TXAR				PcP	**PcP**	**22 24 30.2**	**+1.0**
	0.4nm,0.7s,baz=134,slow=5.4,SNR=5.0						
PLCA	**Paso Flores**	**39.45**	**171**	P	**P**	**22 22 25.8**	**+1.5**
	5.0nm,0.8s,baz=344,slow=9.8,SNR=8.5						
PLCA	**Paso Flores**	**39.45**	**171**	P	**P**	**22 22 25.5**	**+1.2**
CCM	**Cathedral Cave**	**41.40**	**344**		**P**	**22 22 38.7**	**-1.5**
ANMO	**Albuquerque**	**45.16**	**326**	P	**P**	**22 23 11.3**	**+0.6**
SDCO	**Great Sand Dun**	**46.77**	**330**	P	**P**	**22 23 24.6**	**+1.2**
G62A	**West of Eustis**	**47.16**	**7**	P	**P**	**22 23 26.4**	**+0.6**
PKME	**Peaks-Kenny Pk**	**47.37**	**8**	P	**P**	**22 23 27.6**	**+0.2**
G65A	**Princeton**	**47.58**	**10**	P	**P**	**22 23 28.1**	**-0.9**
F63A	**Nahmakanta, Br**	**47.82**	**8**	P	**P**	**22 23 30.6**	**-0.3**
GLA	**Glamis**	**49.02**	**318**	P	**P**	**22 23 41.1**	**+0.8**
D62A	**Allapoint, All**	**49.18**	**8**	P	**P**	**22 23 41.3**	**+0.1**
EFI	**East Falkland**	**52.55**	**165**	P	**P**	**22 24 06.3**	**-0.1**
NVAR	**Mina Array Bea**	**54.52**	**321**	P	**P**	**22 24 22.4**	**+1.1**
	0.6nm,0.7s,baz=118,slow=7.9,SNR=4.8						
NVAR				PcP	**PcP**	**22 25 23.3**	**+0.7**
	0.6nm,0.7s,baz=128,slow=6.5,SNR=3.7						
SCHQ	**Schefferville**	**57.06**	**8**	P	**P**	**22 24 39.0**	**+0.2**
	1.8nm,0.8s,baz=216,slow=12,SNR=4.0						
SCHQ	**Schefferville**	**57.06**	**8**	P	**P**	**22 24 38.5**	**-0.3**
YKA	**Yellowknife Ar**	**69.72**	**343**	P	**P**	**22 26 01.4**	**-0.3**
	0.3nm,0.3s,baz=139,slow=5.7,SNR=5.5						
MOBC	**Moresby Island**	**70.69**	**329**	P	**P**	**22 26 08.2**	**+0.3**
DBIC	**Dimbokro**	**73.42**	**83**	P	**P**	**22 26 24.7**	**-0.3**
	6.0nm,0.9s,baz=269,slow=4.1,SNR=14						
ESDC	**Sonseca Array**	**78.80**	**49**	P	**P**	**22 26 56.5**	**+1.6**
	0.3nm,0.7s,baz=266,slow=4.5,SNR=4.0						
INK	**Inuvik**	**79.44**	**342**	P	**P**	**22 26 58.7**	**+1.0**
TORD	**Torodi Ar. Bea**	**80.31**	**76**	P	**P**	**22 27 02.5**	**-1.0**
	1.0nm,0.3s,baz=283,slow=5.9,SNR=36						
EGAK	**Eagle**	**80.39**	**337**	P	**P**	**22 27 02.9**	**0.0**
ILAR	**Eielson Array**	**82.66**	**336**	P	**P**	**22 27 14.7**	**-0.1**
	1.3nm,0.8s,baz=120,slow=5.8,SNR=6.0						
VNDA	**Vanda**	**94.65**	**191**	P	**P**	**22 28 13.8**	**+2.0**
	0.5nm,0.7s,baz=125,slow=5.2,SNR=2.0						
VNDA				LR	LR	23 07 35.7	
	comp=Z,49nm,19.5s,baz=40,slow=33						
ZALV	**Zalesovo Beam**	**126.00**	**12**	PKP	**PKPdf**	**22 33 52.4**	**-0.3**
	0.5nm,0.4s,baz=221,slow=5.7,SNR=3.8						
SONM	**Songino Array**	**133.87**	**356**	PKP	**PKiKP**	**22 34 08.7**	**-0.6**
	0.2nm,0.4s,baz=45,slow=0.4,SNR=1.9						
KSRS	**Korea Array**	**137.16**	**329**	PKP	**PKPdf**	**22 34 15.0**	**+0.8**
	1.1nm,0.6s,baz=56,slow=2.2,SNR=4.7						
ASAR	**Alice Springs**	**140.07**	**229**	PKP	**PKPdf**	**22 34 19.8**	**-0.3**
	1.0nm,0.6s,baz=110,slow=1.7,SNR=7.8						
WRA	**Warramunga Arr**	**141.72**	**234**	PKhKP	PKPpre	22 34 16.5	
	0.6nm,0.4s,baz=117,slow=2.9,SNR=6.0						
WRA				PKP	**PKPdf**	**22 34 22.4**	**-0.7**
	1.1nm,0.3s,baz=132,slow=1.7,SNR=14						

IDC 29 22:26:58.9±1.7,8.°10S×120.°69E,h0km,mb3.6/2, mb1 3.7/5,mb1mx3.5/32,mbtmp3.6/5,ML2.9/2,Error ellipse: s-maj=134.6km s-min=20.6km az=60.0,Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.20**	**343**	Pn	Pn	22 27 50.1	-0.4
	1.2nm,0.3s,baz=159,slow=14,SNR=2.3						
KAPI				Sn	Sn	22 28 25.9	-3.5
	0.4nm,0.3s,baz=58,slow=23,SNR=1.3						
FITZ	**Fitzroy Crossi**	**11.05**	**155**	Pn	Pn	22 29 39.1	+0.8
	0.1nm,0.3s,baz=328,slow=9.5,SNR=2.7						
FITZ				Sn	Sn	22 31 42.7	0.0
	0.1nm,0.3s,baz=103,slow=12,SNR=2.1						
WRA	**Warramunga Arr**	**17.70**	**133**	P	Pn	22 31 06.8	-0.3
	baz=303,slow=12,SNR=1.6						
ASAR	**Alice Springs**	**20.00**	**142**	P	P	22 31 33.4	0.0
	2.2nm,0.9s,baz=322,slow=9.9,SNR=11						
MKAR	**Makanchi Array**	**64.44**	**332**	P	P	22 37 37.2	+0.1
	0.3nm,0.4s,baz=116,slow=8.4,SNR=6.6						

*MAN **29** 22:46:46.2,9.°97N×124.°13E,h3km,mb4.8,ML3.7,MS3.6*
MAN Intensity II - Lapu-Lapu Cebu City.
*IDC **29** 22:46:59.4±2.3,9.°70N×123.°64E,h121km±25km,mb3.4/9, mb1 3.6/11,mb1mx3.4/41,mbtmp4.0/11,MS3.3/5, Ms1 3.3/5,ms1mx2.8/31,Error ellipse: s-maj=40.3km s-min=16.0km az=71.0*

ISC 29 22:46:47.4±1.1,10.°01N±0.°03×124.°13E±0.°03,h15km±7km, n35,σ1§57/40,mb3.9/9,MS3.3/5,4C-2D,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.34**	**333**	*i* P	**Pg**	**22 46 53.7**	**-0.8**
LLP				*i* S	**Sg**	**22 46 59.4**	**0.0**
TBP	**Tagbilaran**	**0.41**	**219**	*eP*	**Pn**	**22 46 59.1**	**+0.2**
TBP				*i* S	**Sn**	**22 47 06.7**	**+0.5**
MSLP	**Maasin**	**0.73**	**80**	*eP*	**Pb**	**22 47 00.6**	**-1.3**
MSLP				*eS*	**Sg**	**22 47 12.5**	**+1.0**
SCPH	**Surigao**	**1.36**	**99**	*eP*	**Pn**	**22 47 11.5**	**-0.4**
SCPH				*eS*	**Sn**	**22 47 29.1**	**-0.7**
CNOP	**Candoni, Negro**	**1.48**	**263**	*eP*	**Pn**	**22 47 13.0**	**-0.5**
CNOP				*eS*	**Sn**	**22 47 33.2**	**+0.7**
GUIM	**Jordan**	**1.63**	**292**	*eP*	**Pn**	**22 47 15.3**	**-0.3**
GUIM				*eS*	**Sb**	**22 47 37.6**	**-0.1**
CGP	**Cagayan de Oro**	**1.64**	**160**	*eP*	**Pn**	**22 47 14.6**	**-1.2**
CGP				*i* S	**Sg**	**22 47 43.7**	**+3.2**
RCP	**Roxas**	**2.05**	**319**	*eP*	**Pn**	**22 47 21.5**	**+0.1**
JAP	**San Jose, Anti**	**2.27**	**289**	*eP*	**Pn**	**22 47 26.4**	**+2.0**
PAGZ	**Pagadian**	**2.27**	**199**	*eP*	**Pn**	**22 47 24.4**	**-0.1**
BUKP	**Musuan**	**2.31**	**156**	*eP*	**Pn**	**22 47 25.0**	**0.0**
BUKP				*eS*	**Sn**	**22 47 54.5**	**+1.2**
CNP	**Catarman**	**2.54**	**12**	*eP*	**Pn**	**22 47 29.8**	**+1.7**
CTBH	**Cotabato--PC H**	**2.77**	**178**	*i* P	**Pn**	**22 47 31.7**	**+0.3**
CTBH				*i* S	**Sn**	**22 48 07.2**	**+2.6**
OTRP	**Odiongan**	**3.12**	**319**	*eP*	**Pn**	**22 47 37.5**	**+1.4**
KCP	**Kidapawan**	**3.13**	**162**	*i* P	**Pn**	**22 47 38.4**	**+2.1**
CUYO	**Cuyo Island**	**3.17**	**286**	*eP*	**Pn**	**22 47 37.4**	**+0.6**
DAV	**Davao City (W)**	**3.26**	**154**	P	**Pg**	**22 47 48.8**	**-1.1**
	41nm,0.3s,baz=333,slow=2.3,SNR=6.8						
DAV				S	**Sb**	**22 48 27.7**	**+3.2**
	29nm,0.3s,baz=227,slow=21,SNR=3.7						
PVCP	**Virac**	**3.56**	**0**	*eP*	**Pn**	**22 47 45.2**	**+3.0**
SJMP	**San Jose**	**3.83**	**310**	*eP*	**Pn**	**22 47 49.9**	**+4.1**
DDMP	**Don Marcelino,**	**4.19**	**158**	*eP*	**Pn**	**22 47 51.2**	**+0.4**
BATI	**Baumata**	**20.09**	**181**	P	**P**	**22 51 20.5**	**-0.1**
	7.0nm,0.3s,baz=298,slow=6.3,SNR=2.6						
JNU	**Nakatsue**	**23.83**	**14**	LR	LR	23 00 40.5	
	comp=Z,9nm,20.1s,baz=210,slow=34						
CMAR	**Chiang Mai Arr**	**25.79**	**292**	P	**P**	**22 52 16.7**	**-1.4**
	0.4nm,0.3s,baz=207,slow=25,SNR=1.7						
WRA	**Warramunga Arr**	**31.42**	**161**	P	**P**	**22 53 08.1**	**-0.1**
	0.8nm,1.0s,baz=325,slow=11,SNR=2.1						
USRK	**Ussuriysk Ar.**	**34.74**	**10**	P	P	22 53 42.2	+5.2
	1.6nm,0.8s,baz=186,slow=13,SNR=2.7						
ASAR	**Alice Springs**	**34.81**	**164**	P	**P**	**22 53 37.5**	**-0.4**
	0.7nm,0.7s,baz=333,slow=7.0,SNR=7.9						
SONM	**Songino Array**	**40.56**	**342**	P	**P**	**22 54 27.9**	**+1.5**
	0.3nm,0.6s,baz=116,slow=6.6,SNR=2.2						
SONM				LR	LR	23 11 46.0	
	comp=Z,41nm,19.3s,baz=242,slow=36						
MKAR	**Makanchi Array**	**50.97**	**324**	P	**P**	**22 55 48.8**	**+0.2**
	2.3nm,0.8s,baz=124,slow=9.2,SNR=16						
ZALV	**Zalesovo Beam**	**53.86**	**332**	P	**P**	**22 56 09.2**	**-0.5**
	0.8nm,0.6s,baz=138,slow=6.8,SNR=4.8						
AKTO	**Aktyubinsk**	**67.18**	**321**	LR	LR	23 28 16.0	
	comp=Z,28nm,18.7s,baz=124,slow=37						
MMAI	**Mount Meron Ar**	**83.56**	**302**	LR	LR	23 40 42.3	
	comp=Z,34nm,18.7s,baz=125,slow=39						
ARCES	**ARCESS Array B**	**83.70**	**340**	P	**P**	**22 59 14.2**	**-1.2**
	1.0nm,0.8s,baz=72,slow=7.8,SNR=4.7						
FINES	**FINESS Array B**	**85.11**	**331**	P	**P**	**22 59 21.7**	**-0.9**
	0.6nm,0.5s,baz=217,slow=31,SNR=2.1						
NOA	**NORSAR Array B**	**92.05**	**333**	LR	LR	23 46 14.7	
	comp=Z,11nm,19.3s,baz=215,slow=39						
TORD	**Torodi Ar. Bea**	**118.39**	**291**	PKP	**PKPdf**	**23 05 33.1**	**-2.3**
	1.0nm,0.8s,baz=45,slow=3.3,SNR=5.0						

*IDC **29** 22:48:56.2±1.1,41.°23N×117.°23W,h0km,mb2.7/1, mb1 3.1/3,mb1mx3.0/31,mbtmp2.7/3,ML2.5/2,Error ellipse: s-maj=11.2km s-min=6.1km az=180.0*
*NEIC **29** 22:48:57.8±1.5,41.°23N±0.°04×117.°29W±0.°06,h0km±2km, ML2.5/92,Error ellipse: s-maj=8.0km s-min=7.3km az=92.0*

ISC 29 22:48:57.4±1.0,41.°21N±0.°04×117.°27W±0.°04,h0km,n48, σ1§04/49,Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WVOR	**Wild Horse Val**	**1.59**	**321**		**Pn**	**22 49 26.6**	**-0.4**
ELK	**Elko**	**1.61**	**106**	Pg	**Pn**	**22 49 25.7**	**-1.6**
	2.2nm,0.3s,baz=291,slow=18,SNR=55						
ELK				Lg	Lg	22 49 47.2	
	5.6nm,0.3s,baz=35,slow=21,SNR=11						
ELK	**Elko**	**1.61**	**106**		**Pn**	**22 49 25.6

NNS	**Nan Shan**	**0.05**	**270**	*i* P		Pg	22 55 22.4	+0.1
	baz=266								
NNS					S	Sg	22 55 23.6	+0.3
	baz=266								
NDT	**Datong Townshi**	**0.18**	**27**⇑	*i* P		Pg	22 55 24.7	+0.4
	baz=26								
NDT					S	Sg	22 55 27.5	+0.7
	baz=26								
YHNB	**Yeheng**	**0.23**	**349**	⇑P		Pg	22 55 26.0	+0.7
	baz=349								
YHNB					S	Sg	22 55 28.9	+0.4
	baz=349								
ENTT	**Nioudou**	**0.24**	**33**⇑	*i* P		Pg	22 55 25.9	+0.5
	baz=24								
ENTT					S	Sg	22 55 29.3	+0.7
	baz=24								
ETLH	**Xiulin Townshi**	**0.24**	**167**	P		Pg	22 55 26.6	+1.2
	baz=166								
ETLH					*e*S	Sg	22 55 29.7	+1.1
	baz=166								
NSK	**Sanguang**	**0.24**	**346**	*i* P		Pg	22 55 26.2	+0.7
	baz=348								
NSK					S	Sg	22 55 29.2	+0.5
	baz=348								
ENA	**Nanau**	**0.29**	**92**	*e*P		Pg	22 55 26.9	+0.5
	baz=91								
ENA					*e*S	Sg	22 55 30.9	+0.7
	baz=91								
TDCB	**Techi**	**0.30**	**232**	*e*P		Pg	22 55 26.7	0.0
	baz=229								
TDCB					*e*S	Sg	22 55 31.8	+1.0
	baz=229								
NACB	**Ninganchiao**	**0.31**	**149**	P		Pg	22 55 27.6	+0.9
	baz=149								
NACB					*e*S	Sg	22 55 31.8	+1.1
	baz=149								
WHF	**Hehuan Shan**	**0.33**	**206**	*i* P		Pg	22 55 27.7	+0.5
	baz=193								
WHF					*e*S	Sg	22 55 33.0	+1.4
	baz=193								
NWLT	**Wulai**	**0.34**	**12**	P		Pg	22 55 27.9	+0.5
	baz=12								
NWLT					*e*S	Sg	22 55 32.2	+0.2
	baz=12								
TWE	**Neicheng**	**0.36**	**38**	P		Pg	22 55 28.3	+0.6
	baz=36								
TWE					*e*S	Sg	22 55 33.1	+0.7
	baz=36								
TWD	**Chiawan**	**0.39**	**156**	*e*P		Pb	22 55 29.5	-0.6
	baz=154								
TWD					*e*S	Sg	22 55 34.7	+1.3
	baz=154								
TWC	**Suao**	**0.42**	**66**	P		Pg	22 55 29.3	+0.4
	baz=75								
TWC					S	Sg	22 55 35.1	+0.7
	baz=75								
LIOB	**Emei**	**0.42**	**299**	*e*P		Pb	22 55 30.2	-0.4
	baz=301								
LIOB					*e*S	Sb	22 55 36.0	-1.3
	baz=301								
NSTT	**Nanjuang**	**0.43**	**296**	*e*P		Pb	22 55 30.1	-0.6
	baz=297								
CHGB	**Renai**	**0.44**	**211**	*e*P		Pg	22 55 29.4	+0.2
	baz=212								
CHGB					*e*S	Sg	22 55 35.7	+0.6
	baz=212								
WHP	**Taichung City**	**0.46**	**250**⇑	*i* P		Pg	22 55 30.5	+0.8
	baz=252								
WHP					S	Sg	22 55 36.2	+0.4
	baz=252								
NTC	**Toucheng**	**0.55**	**42**	*e*P		Pg	22 55 31.7	+0.3
	baz=28								
NCUH	**Zhongli**	**0.57**	**338**	*e*P		Pg	22 55 31.8	+0.1
	baz=346								
NCUH					*e*S	Sg	22 55 40.2	+1.1
	baz=346								
TIPB	**Shuangxi**	**0.64**	**35**⇑	P		Pg	22 55 33.5	+0.3
	baz=20								
TIPB					*e*S	Sg	22 55 41.3	-0.2
	baz=20								
TYC	**Yuchr**	**0.74**	**224**	*e*P		Pg	22 55 35.1	+0.1
	baz=224								

JMA 29 22:55:36.1±0.3, 24°.79N×123°.24E, h25km, M1.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.39**	**213**	P	Pb	22 55 44.0	-0.5
YOJ				S	Sb	22 55 50.1	-0.1
JYNG	**Yonagunijimaku**	**0.43**	**219**	P	Pb	22 55 45.3	+0.1
JYNG				S	Sb	22 55 51.3	0.0
IRIF	**Iriomote-Funau**	**0.64**	**135**	P	Pb	22 55 48.5	-0.1
IRIF				S	Sb	22 55 57.6	+0.5
JKRS	**Kuro-shima**	**0.89**	**128**	P	Pb	22 55 52.2	-0.7
JKRS				S	Sb	22 56 04.3	-0.1
HATJ	**Hateruma jima**	**0.89**	**145**	P	Pb	22 55 52.1	-0.8
HATJ				S	Sb	22 56 04.1	-0.4
JIJ	**Ishigaki jima**	**0.93**	**117**	P	Pb	22 55 53.2	-0.3
JIJ				*e*S	Sb	22 56 05.0	-0.4

JMA 29 22:59:04.7±0.1, 24°.87N×123°.22E, h16km, M1.9, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.45**	**205**	P	Pg	22 59 13.5	-0.2
YOJ				S	Sg	22 59 19.6	-0.2
JYNG	**Yonagunijimaku**	**0.49**	**211**	P	Pg	22 59 14.3	-0.1
JYNG				S	Sg	22 59 20.9	-0.1
IRIF	**Iriomote-Funau**	**0.71**	**139**	P	Pg	22 59 18.1	-0.4
IRIF				S	Sg	22 59 27.3	-0.6
JKRS	**Kuro-shima**	**0.95**	**131**	P	Pb	22 59 22.7	-0.2
JKRS				S	Sb	22 59 34.7	-0.6
HATJ	**Hateruma jima**	**0.97**	**147**	P	Pb	22 59 22.8	-0.3
HATJ				*e*S	Sb	22 59 34.8	-0.9
JIJ	**Ishigaki jima**	**0.98**	**121**	P	Pb	22 59 22.6	-0.7
JIJ				*e*S	Sb	22 59 36.1	+0.1
JISG	**Ishigakijimahi**	**1.03**	**106**	P	Pb	22 59 23.0	-1.2

TAP 29 22:59:11.2, 24°.46N×121°.90E, h13km, ML1.5, 2C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.14**	**257**	*i* P	Pg	22 59 14.9	+0.1
	baz=255						
ENA				*e*S	Sg	22 59 17.4	+0.1
	baz=255						
TWC	**Suao**	**0.15**	**344**⇑	*i* P	Pg	22 59 15.1	+0.2
	baz=355						
TWC				*i* S	Sg	22 59 17.4	0.0
	baz=355						
TWE	**Neicheng**	**0.33**	**321**	*e*P	Pg	22 59 18.4	+0.4
	baz=323						
ENTT	**Nioudou**	**0.35**	**301**⇑	*i* P	Pg	22 59 18.6	+0.3
	baz=301						
ENTT				S	Sb	22 59 24.0	-0.8
	baz=301						
NDT	**Datong Townshi**	**0.38**	**292**	*i* P	Pb	22 59 19.3	-0.5
	baz=292						
NDT				*e*S	Sb	22 59 25.3	-0.3
	baz=292						
NACB	**Ninganchiao**	**0.40**	**224**	P	Pg	22 59 19.0	-0.2
	baz=224						
NACB				*e*S	Sg	22 59 24.7	+0.2
	baz=224						
ETLH	**Xiulin Townshi**	**0.46**	**236**	*e*P	Pg	22 59 20.1	-0.1
	baz=236						
ETLH				*e*S	Sg	22 59 26.2	-0.2
	baz=236						
NNSB	**Datong**	**0.47**	**266**	*e*P	Pg	22 59 20.6	0.0
	baz=266						
NNSB				*e*S	Sg	22 59 26.9	+0.1
	baz=266						
NNSH	**Datong**	**0.47**	**266**	*e*P	Pg	22 59 20.6	+0.1
	baz=267						
NNSH				*e*S	Sg	22 59 27.0	+0.1
	baz=267						
TWD	**Chiawan**	**0.47**	**216**	*e*P	Pg	22 59 20.5	0.0
	baz=214						
NWLT	**Wulai**	**0.48**	**311**	*e*P	Pb	22 59 21.1	-0.4
	baz=306						
NWLT				*e*S	Sg	22 59 26.9	-0.1
	baz=306						
TIPB	**Shuangxi**	**0.51**	**353**	*e*P	Pb	22 59 21.8	-0.3
	baz=353						
TIPB				*e*S	Sg	22 59 28.5	+0.4
	baz=353						
YHNB	**Yeheng**	**0.52**	**294**	*e*P	Pg	22 59 21.8	+0.4
	baz=300						
YHNB				*e*S	Sg	22 59 28.9	+0.6
	baz=300						
NSK	**Sanguang**	**0.53**	**294**	*e*P	Pb	22 59 22.4	-0.2
	baz=293						
WHF	**Hehuan Shan**	**0.66**	**241**	*e*P	Pg	22 59 24.0	-0.1
	baz=241						
WHF				*e*S	Sb	22 59 33.7	-0.4
	baz=241						

MAN 29 23:05:34.1, 10°.18N×124°.27E, h13km, mb4.0, ML2.8, MS2.4, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.33**	**294**⇓	*i* P	Pb	23 05 41.4	-0.5
LLP				*i* S	Sb	23 05 47.2	+0.1
MSLP	**Maasin**	**0.58**	**95**	*e*P	Pb	23 05 46.2	+0.1
MSLP				*e*S	Sn	23 05 57.7	+0.3
TBP	**Tagbilaran**	**0.64**	**220**	*i* P	Pg	23 05 46.5	0.0
GUIM	**Jordan**	**1.71**	**285**	*e*P	Pn	23 06 03.6	0.0
SJMP	**San Jose**	**3.83**	**306**	*e*P	Pg	23 06 49.1	+1.5

*IDC **29** 23:15:38.8±1.7, 5°.28S×140°.52E, h0km, mb4.0/5, mb1 4.0/9, mb1mx3.7/42, mbtmp3.9/9, ML3.8/4, MS2.9/2, Ms1 2.9/2, ms1mx2.5/36, Error ellipse: s-maj=55.7km s-min=21.8km az=105.0*

*NEIC **29** 23:15:43.8±1.3, 5°.38S±0°.04×140°.3E±0°.1, h38km±8km, mb4.0/9, Error ellipse: s-maj=15.1km s-min=6.3km az=90.0*

ISC 29 23:15:43.9±0.8, 5°.43S±0°.06×140°.1E±0°.1, h35km, n22, σ2s10/25, mb3.9/5, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.95**	**11**	Pn	**Pn**	**23 16 25.8**	**-2.5**
	9.7nm,0.3s,baz=204,slow=12,SNR=20						
JAY				Sn	**Sn**	**23 16 59.8**	**-2.8**
	23nm,0.3s,baz=277,slow=23,SNR=8.1						
JAY				LR	LR	23 17 08.8	
	comp=Z,85nm,18.4s,baz=235,slow=33						
FAKI	**Fak Fak**	**8.24**	**287**	Pn	**Pn**	**23 17 42.6**	**+1.5**
COEN	**Coen**	**8.99**	**161**	Pn	**Pn**	**23 17 51.6**	**+0.2**
MTN	**Manton Dam**	**11.54**	**230**	Pn	**Pn**	**23 18 28.0**	**+1.7**
KNRA	**Kununurra**	**15.11**	**227**	Pn	**Pn**	**23 19 16.2**	**+1.3**
WB0	**Warramunga Arr**	**15.31**	**201**	Pn	**Pn**	**23 19 18.8**	**+1.3**
WR0	**Warramunga Arr**	**15.44**	**200**	Pn	**Pn**	**23 19 19.9**	**+0.7**
WRAB	**Tennant Creek**	**15.48**	**201**	Pn	**Pn**	**23 19 20.2**	**+0.5**
WRAB				IAmb	IAmb	23 19 33.1	
	comp=Z,9.0nm,1.1s						
WB2	**Warramunga Arr**	**15.49**	**201**	Pn	**Pn**	**23 19 21.1**	**+1.3**
WB2				IAmb	IAmb	23 19 33.2	
	comp=Z,14nm,1.2s						
WRA	**Warramunga Arr**	**15.49**	**201**	Pn	**Pn**	**23 19 20.7**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=18,slow=13,SNR=12						
WRA				Sn	**Sn**	**23 22 08.8**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=23,slow=25,SNR=3.2						
WRA				Lg	Lg	23 23 54.4	
	comp=Z,0.2nm,0.3s,baz=16,slow=28,SNR=4.8						
CTAO	**Charters Tower**	**15.74**	**158**	Pn	**Pn**	**23 19 22.8**	**-0.4**
CTAO				IAmb	IAmb	23 19 31.0	
	comp=Z,9.3nm,1.1s						
SOEI	**Soe**	**16.30**	**254**	Pn	**Pn**	**23 19 30.8**	**+0.4**
SOEI				IAmb	IAmb	23 19 46.0	
	comp=Z,18nm,0.9s						
LUWI	**Luwuk**	**17.86**	**284**	Pn	**Pn**	**23 19 49.5**	**-0.4**
FITZ	**Fitzroy Crossi**	**18.95**	**227**	P	**Pn**	**23 20 06.3**	**+3.3**
	comp=Z,0.3nm,0.3s,baz=51,slow=11,SNR=17						
FITZ				S	**Sn**	**23 23 29.3**	**-5.0**
	comp=Z,0.3nm,0.3s,baz=0.0,slow=14,SNR=6.0						
FITZ	**Fitzroy Crossi**	**18.95**	**227**	P	**P**	**23 20 03.5**	**+1.4**
FITZ				IAmb	IAmb	23 20 10.1	
	comp=Z,11nm,1.4s						
ASAR	**Alice Springs**	**19.10**	**198**	P	**Pn**	**23 20 07.4**	**+2.5**
	comp=Z,0.4nm,0.3s,baz=30,slow=9.3,SNR=12						
ASAR				S	**Sn**	**23 23 34.1**	**-3.8**
	comp=Z,0.1nm,0.3s,baz=21,slow=26,SNR=2.0						
STKA	**Stephens Creek**	**26.35**	**177**	LR	LR	23 32 46.8	
	comp=Z,66nm,18.2s,baz=208,slow=39						
CMAR	**Chiang Mai Arr**	**47.03**	**301**	P	**P**	**23 24 13.4**	**+1.1**
	comp=Z,1.0nm,0.3s,baz=126,slow=5.9,SNR=1.9						
MKAR	**Makanchi Array**	**72.79**	**322**	P	**P**	**23 27 10.8**	**+1.9**
	comp=Z,1.7nm,0.8s,baz=120,slow=7.2,SNR=9.4						
ZALV	**Zalesovo Beam**	**74.98**	**330**	P	**P**	**23 27 21.3**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=123,slow=5.3,SNR=1.5						
BVAR	**Borovoye Array**	**82.33**	**325**	P	**P**	**23 28 03.2**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=98,slow=7.6,SNR=5.8						
ILAR	**Eielson Array**	**87.71**	**24**	P	**P**	**23 28 27.1**	**-1.7**
	comp=Z,0.3nm,0.6s,baz=254,slow=6.1,SNR=4.4						

MAN 29 23:18:35.1, 10°.30N×124°.11E, h42km, mb3.6, ML2.3, MS1.8, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.14**	**278**⇓	*i* P	Pn	23 18 43.6	+1.4
LLP				*i* S	Sn	23 18 49.1	+2.0
TBP	**Tagbilaran**	**0.65**	**202**	*e*P	Pn	23 18 49.2	+1.3
MSLP	**Maasin**	**0.76**	**102**	*e*P	Pn	23 18 50.2	+0.8
MSLP				*e*S	Sn	23 19 02.1	+2.4

IDC 29 23:29:54.3±6.0, 10°.35S×161°.60E, h77km±43km, mb3.6/4, mb1 3.8/4, mb1mx3.4/37, mbtmp4.0/4, MS2.8/1, Ms1 2.8/1, ms1mx2.3/32, Error ellipse: s-maj=48.4km s-min=34.1km az=115.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.86**	**299**	P	Pn	23 30 24.5	+0.2
	64nm,0.3s,baz=23,slow=16,SNR=11						
HNR				S	Sn	23 30 47.4	+0.3
	389nm,0.3s,baz=282,slow=23,SNR=16						
HNR				LR	LR	23 31 24.2	
	comp=Z,92nm,18.5s,baz=186,slow=48						
DZM	**Mont Dzumac**	**12.55**	**159**	LR	LR	23 36 33.3	
	comp=Z,40nm,19.4s,baz=21,slow=32						
WRA	**Warramunga Arr**	**27.95**	**247**	P	P	23 35 37.6	0.0
	1.2nm,0.6s,baz=76,slow=9.1,SNR=7.4						
WRA				pP	pP	23 35 56.9	+2.5
	1.0nm,0.8s,baz=77,slow=9.5,SNR=3.2						
USRK	**Ussuriysk Ar.**	**60.57**	**336**	P	P	23 39 57.2	+0.5
	1.9nm,0.8s,baz=134,slow=6.2,SNR=4.4						
SONM	**Songino Array**	**75.73**	**325**	P	P	23 41 31.5	-0.1
	1.0nm,0.7s,baz=136,slow=5.7,SNR=4.3						
SONM				pP	pP	23 41 51.4	-0.4
	1.1nm,0.6s,baz=142,slow=5.7,SNR=4.0						
ILAR	**Eielson Array**	**84.19**	**20**	P	P	23 42 16.3	-0.4
	0.3nm,0.4s,baz=243,slow=4.0,SNR=4.0						

*NEIC **29** 23:30:30.8±1.8, 5°.90S±0°.05×103°.46E±0°.06, h6km±3km, mb4.5/34, Error ellipse: s-maj=8.8km s-min=6.6km az=95.0*

*IDC **29** 23:30:31.1±0.8, 5°.79S×103°.55E, h0km, mb4.3/16, mb1 4.4/16, mb1mx4.1/44, mbtmp4.3/16, MS3.2/3, Ms1 3.2/3, ms1mx2.7/42, Error ellipse: s-maj=32.1km s-min=12.8km az=47.0*

*DJA **29** 23:30:35.8±0.6, 6°.5±5°.1×10°.4E±°, h22km±5km, M4.5/13, mb4.4/2, MLv4.5/13*

ISC 29 23:30:32.5±1.1, 5°.95S±0°.05×103°.48E±0°.05, h17km±6km, n90, σ1s50/92, mb4.5/32, 6C-4D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.09**	**32**	P	**Pg**	**23 30 54.1**	**+0.5**
LWLI				S	**Sn**	**23 31 09.4**	**+1.6**
KASI	**Kota Agung**	**1.09**	**68**	P	**Pg**	**23 30 53.2**	**-0.5**
KASI				S	**Sn**	**23 31 07.8**	**0.0**
MNAI	**Manna**	**1.66**	**342**	P	**Pg**	**23 31 04.0**	**-0.4**
MNAI				S	**Sg**	**23 31 27.2**	**+1.2**
MNAI	**Manna**	**1.66**	**342**	Pn	**Pn**	**23 31 01.4**	**+0.5**
BLSI	**Bandar Lampung**	**1.85**	**72**	P	**Pb**	**23 31 04.4**	**-1.5**
BLSI				S	**Sb**	**23 31 28.8**	**+0.1**
LHSI	**Lahat**	**2.10**	**1**	P	**Pb**	**23 31 09.9**	**-0.4**
LHSI				S	**Sg**	**23 31 40.0**	**-0.3**
MASI	**Maura Aman, Be**	**3.05**	**336**	P	**Pb**	**23 31 23.6**	**-2.8**
PMBI	**Palembang**	**3.26**	**23**	P	**Pn**	**23 31 24.9**	**+2.0**
PMBI	**Palembang**	**3.26**	**23**	Pn	**Pn**	**23 31 21.9**	**-1.0**
DBJI	**Dramaga**	**3.31**	**101**	P	**Pn**	**23 31 24.3**	**+0.8**
CNJI	**Cibinong**	**3.87**	**111**	P	**Pn**	**23 31 33.8**	**+2.5**
LEM	**Lembang**	**4.20**	**102**	Pg	**Pb**	**23 31 45.3**	**-0.8**
	7.6nm,0.3s,baz=215,slow=20,SNR=7.5						
LEM				LR	LR	23 33 35.7	
	comp=Z,160nm,18.2s,baz=355,slow=44						
LEM	**Lembang**	**4.20**	**102**	P	**Pb**	**23 31 42.5**	**-3.6**
KRJI	**Kerinci**	**4.33**	**332**	P	**Pn**	**23 31 41.3**	**+3.6**
CISI	**Cisompet, Garu**	**4.59**	**111**	P	Pb	23 31 47.1	-5.6
CISI	**Cisompet, Garu**	**4.59**	**111**	Pn	**Pn**	**23 31 41.7**	**+0.4**
TPI	**Tanjungpandan**	**5.23**	**53**	P	**Pn**	**23 31 51.8**	**+1.8**
	0.2nm19nm,1.2s						
UGM	**Wanagama**	**7.26**	**106**	Pn	**Pn**	**23 32 19.2**	**+1.3**
GSI	**Gunungsitoli**	**9.31**	**321**	Pn	**Pn**	**23 32 44.4**	**-1.6**
JAGI	**Jajag, Banyuwa**	**10.88**	**104**	Pn	**Pn**	**23 33 08.3**	**+0.7**
KAPI	**Kappang**	**16.22**	**88**	LR	LR	23 41 28.3	
	comp=Z,72nm,18.2s,baz=264,slow=41						
EDFI	**Ende, Flores**	**18.27**	**100**	P	**P**	**23 34 47.0**	**+1.3**
EDFI				pP	**pwP**	**23 34 52.6**	**-0.1**
BATI	**Baumata**	**20.42**	**103**	P	Pn	23 35 10.2	-1.1
	20nm,0.6s,baz=297,slow=4.5,SNR=2.4						
CMAR	**Chiang Mai Arr**	**24.66**	**350**	P	**P**	**23 35 51.6**	**-0.9**
	1.0nm,0.4s,baz=181,slow=9.3,SNR=8.7						
FITZ	**Fitzroy Crossi**	**24.77**	**121**	P	**P**	**23 35 55.1**	**+1.5**
	4.4nm,0.9s,baz=297,slow=6.1,SNR=9.2						
FITZ	**Fitzroy Crossi**	**24.77**	**121**	P	**P**	**23 35 54.0**	**+0.3**
FITZ				IAmb	IAmb	23 35 56.2	
	comp=Z,6.8nm,0.8s						
CHTO	**Chiang Mai**	**25.01**	**350**	P	**P**	**23 35 53.3**	**-2.5**
KNRA	**Kununurra**	**26.62**	**113**	P	**P**	**23 36 09.6**	**-0.8**
KNRA				IAmb	IAmb	23 36 26.1	
	comp=Z,12nm,0.9s						
H01W3	**Cape Leeuwin H**	**30.43**	**163**	T	T	00 08 39.0	
	baz=341,slow=74						
H01W2	**Cape Leeuwin H**	**30.45**	**163**	T	T	00 08 46.2	
	baz=341,slow=74						
H01W1	**Cape Leeuwin H**	**30.45**	**163**	T	T	00 08 51.0	
	baz=341						
H08S2	**Diego Garcia H**	**30.81**	**265**	T	T	00 09 33.5	
	baz=86,slow=76,SNR=8.1						
H08S3	**Diego Garcia H**	**30.82**	**265**	T	T	00 09 35.6	
	baz=86,slow=76,SNR=6.8						
H08S1	**Diego Garcia H**	**30.83**	**265**	T	T	00 09 33.2	
	baz=86,slow=76,SNR=2.1						
WB0	**Warramunga Arr**	**33.04**	**117**	P	**P**	**23 37 08.1**	**+0.8**
WRA	**Warramunga Arr**	**33.05**	**118**	P	**P**	**23 37 07.9**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=287,slow=11,SNR=6.7						
WRA				PcP	**PcP**	**23 39 52.1**	**+1.0**
	comp=Z,0.9nm,0.5s,baz=298,slow=2.2,SNR=5.9						
WRAB	**Tennant Creek**	**33.06**	**118**	P	**P**	**23 37 07.0**	**-0.5**
WRAB				IAmb	IAmb	23 37 24.0	
	comp=Z,5.3nm,1.1s						
WB2	**Warramunga Arr**	**33.06**	**118**	P	**P**	**23 37 06.8**	**-0.7**
WB2				IAmb	IAmb	23 37 08.8	
	comp=Z,8.9nm,1.1s						
WR0	**Warramunga Arr**	**33.23**	**118**	P	**P**	**23 37 09.1**	**0.0**
WR0				IAmb	IAmb	23 37 19.0	
	comp=Z,3.4nm,0.8s						
YULB	**Yu-li**	**33.96**	**30**	P	**P**	**23 37 11.9**	**-3.4**
YULB				IAmb	IAmb	23 37 29.2	
	comp=Z,3.8nm,0.9s						
ASAR	**Alice Springs**	**34.16**	**124**	P	**P**	**23 37 18.2**	**+1.1**
	comp=Z,2.3nm,0.8s,baz=303,slow=8.1,SNR=12						
ASAR				PcP	**PcP**	**23 39 55.7**	**+1.5**
	comp=Z,1.2nm,0.7s,baz=292,slow=2.0,SNR=8.3						
STKA	**Stephens Creek**	**43.95**	**131**	P	**P**	**23 38 40.3**	**+1.3**
	comp=Z,6.2nm,0.7s,baz=299,slow=8.5,SNR=12						
STKA	**Stephens Creek**	**43.95**	**131**	P	**P**	**23 38 39.3**	**+0.3**
KRVT	**Keravat (AS076**	**48.37**	**90**	LR	LR	23 59 05.0	
	comp=Z,61nm,21.4s,baz=124,slow=36						
NIL	**Nilore**	**48.69**	**326**	P	**P**	**23 39 15.6**	**-0.6**
KSRS	**Korea Array**	**48.83**	**26**	P	**P**	**23 39 17.6**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=225,slow=7.8,SNR=9.2						
TOO	**Toolangi**	**49.48**	**136**	P	**P**	**23 39 20.7**	**-1.5**
TOO				IAmb	IAmb	23 39 25.8	
	comp=Z,3.4nm,0.8s						
KSH	**Kashi**	**51.89**	**333**	P	**P**	**23 39 40.0**	**-0.4**
KSH				pP	pP	23 39 45.0	0.0
KSH				PP	**PP**	**23 41 41.5**	**+3.0**
KSH				S	**S**	**23 47 01.8**	**-0.8**
KSH				SS	**ScS**	**23 49 26.3**	**-3.9**
KSH				pmax	pmax		
	comp=Z,20nm,0.8s						
KSH				pmax	pmax		
	comp=Z,190nm,4.2s						
KSH				LR	LR		
	comp=N,71nm,9.6s						
KSH				LR	LR		
	comp=E,140nm,4.9s						
KSH				LR	LR		
	comp=Z,270nm,4.5s						
TARG	**Taragay, Kyrgy**	**52.93**	**336**	P	**P**	**23 39 46.7**	**-1.8**
KDJ	**Kajisay**	**53.52**	**336**	P	**P**	**23 39 52.5**	**0.0**
SONM	**Songino Array**	**53.61**	**2**	P	**P**	**23 39 53.5**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=180,slow=8.5,SNR=11						
SONM				PcP	**PcP**	**23 41 00.0**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=196,slow=3.6,SNR=4.8						
GAR	**Garm**	**54.24**	**328**	P	**P**	**23 39 56.5**	**-1.3**
ARSB	**Arslanbob**	**54.70**	**332**	P	**P**	**23 40 00.0**	**-1.1**
BTK	**Batken**	**54.78**	**330**	P	**P**	**23 40 01.3**	**-0.3**
BTK				IAmb	IAmb	23 40 02.8	
	comp=Z,4.8nm,0.6s						
AAK	**Ala-Archa**	**55.07**	**334**	P	**P**	**23 40 01.1**	**-2.6**
MK31	**Makanchi Array**	**55.77**	**343**	P	**P**	**23 40 07.8**	**-0.8**
MK31				IAmb	IAmb	23 40 09.5	
	comp=Z,4.3nm,0.7s						
MKAR	**Makanchi Array**	**55.77**	**343**	P	**P**	**23 40 08.6**	**0.0**
	comp=Z,5.2nm,0.6s,baz=147,slow=7.8,SNR=43						
MAKZ	**Makanchi**	**55.88**	**342**	P	**P**	**23 40 09.1**	**-0.3**
USA0B	**Ussuriysk Arra**	**56.14**	**24**	P	**P**	**23 40 10.2**	**-0.9**
USA0B				IAmb	IAmb	23 40 14.9	
	comp=Z,4.2nm,0.8s						
USRK	**Ussuriysk Ar.**	**56.14**	**24**	P	**P**	**23 40 10.9**	**-0.3**
	comp=Z,2.6nm,0.6s,baz=198,slow=5.8,SNR=7.6						
KURK	**Kurchatov**	**60.38**	**342**	P	**P**	**23 40 40.2**	**-0.4**
KURK				IAmb	IAmb	23 40 41.8	
	comp=Z,5.9nm,0.9s						
ZALV	**Zalesovo Beam**	**61.70**	**348**	P	**P**	**23 40 49.1**	**-0.5**
	comp=Z,3.3nm,0.8s,baz=163,slow=4.6,SN

	comp=Z,5.9nm,1.1s							
TIP	**Timpagrande**	**91.18**	**309**	P	**P**	**23 43 38.8**	**+1.8**
GERES	**GERESS Array B**	**94.28**	**319**	P	**P**	**23 43 52.2**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=97,slow=8.1,SNR=2.5							
TXAR	**Lajitas Array**	**145.39**	**45**	PKPbc	**PKPdf**	**23 50 11.7**	**+1.2**
	comp=Z,4.2nm,0.7s,baz=280,slow=1.2,SNR=48							

*IDC **29** 23:49:33.3±1.0, 11°.04S×164°.92E, h0km, mb4.3/16, mb1 4.4/18, mb1mx4.2/47, mbtmp4.3/18, ML4.5/2, MS3.5/8, Ms1 3.5/8, ms1mx3.1/37, Error ellipse: s-maj=27.5km s-min=17.7km az=125.0*

*NEIC **29** 23:49:38.4±2.0, 11°.10S±0°.08×164°.96E±0°.06, h43km±5km, mb4.5/40, Error ellipse: s-maj=11.3km s-min=8.9km az=178.0*

ISC 29 23:49:37.1±0.5, 11°.08S±0°.07×164°.96E±0°.08, h31km, n73, σ1ᵍ17/61, mb4.5/32, MS3.5/7, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.20**	**288**	Pn	**Pn**	**23 50 53.5**	**+0.8**
	47nm,0.3s,baz=128,slow=6.2,SNR=4.5						
HNR				Sn	**Sn**	**23 51 50.2**	**-1.5**
	16nm,0.3s,baz=217,slow=20,SNR=2.1						
HNR				LR	LR	23 52 54.9	
	comp=Z,609nm,21.6s,baz=334,slow=39						
DZM	**Mont Dzumac**	**11.02**	**173**	*e*Pn	**Pn**	**23 52 14.1**	**+1.4**
	16nm,0.5s						
DZM				*e*LR	LR	23 54 54.8	
DZM	**Mont Dzumac**	**11.02**	**173**	Pn	**Pn**	**23 52 15.1**	**+2.4**
	1.5nm,0.3s,baz=333,slow=13,SNR=26						
DZM				Sn	**Sn**	**23 54 14.6**	**-0.4**
	0.3nm,0.3s,baz=319,slow=20,SNR=2.3						
DZM				LR	LR	23 56 04.0	
	comp=Z,174nm,18.4s,baz=28,slow=35						
DZM	**Mont Dzumac**	**11.02**	**173**		**Pn**	**23 52 15.2**	**+2.5**
PMG	**Port Moresby**	**17.60**	**274**	LR	LR	23 59 30.1	
	comp=Z,175nm,20.8s,baz=107,slow=34						
CTA	**Charters Tower**	**20.10**	**241**	P	Pn	23 54 10.5	+0.1
	9.2nm,0.8s,baz=68,slow=10,SNR=8.5						
CTAO	**Charters Tower**	**20.10**	**241**	P	**P**	**23 54 08.9**	**+0.5**
CTAO				IAmb	IAmb	23 54 26.9	
	comp=Z,21nm,1.1s						
CTAO	**Charters Tower**	**20.10**	**241**		**P**	**23 54 09.1**	**+0.7**
COEN	**Coen**	**21.46**	**260**	P	**P**	**23 54 23.3**	**+0.2**
H11S2	**WAKE ISLAND Hy**	**29.43**	**3**	T	T	00 26 13.3	
	baz=184,slow=76,SNR=26						
H11S3	**WAKE ISLAND Hy**	**29.44**	**3**	T	T	00 26 01.4	
	baz=184,slow=76,SNR=20						
H11S1	**WAKE ISLAND Hy**	**29.45**	**3**	T	T	00 26 32.1	
	baz=184,slow=76,SNR=23						
STKA	**Stephens Creek**	**29.89**	**223**	LR	LR	00 06 42.1	
	comp=Z,81nm,19.2s,baz=354,slow=34						
WR0	**Warramunga Arr**	**30.57**	**249**	P	**P**	**23 55 47.5**	**-0.8**
WR0				IAmb	IAmb	23 55 48.3	
	comp=Z,8.8nm,1.1s						
H11N1	**WAKE ISLAND Hy**	**30.66**	**4**	T	T	00 27 43.9	
	baz=183,slow=76,SNR=31						
WB0	**Warramunga Arr**	**30.66**	**250**	P	**P**	**23 55 49.0**	**-0.1**
WB0				IAmb	IAmb	23 55 49.5	
	comp=Z,11nm,0.8s						
H11N3	**WAKE ISLAND Hy**	**30.67**	**4**	T	T	00 27 32.5	
	baz=183,slow=76,SNR=22						
H11N2	**WAKE ISLAND Hy**	**30.68**	**4**	T	T	00 27 48.3	
	baz=183,slow=76,SNR=21						
WRAB	**Tennant Creek**	**30.73**	**250**	P	**P**	**23 55 49.0**	**-0.7**
WRAB				IAmb	IAmb	23 55 51.6	
	comp=Z,7.7nm,1.1s						
WB2	**Warramunga Arr**	**30.74**	**250**	P	**P**	**23 55 48.8**	**-0.9**
WB2				IAmb	IAmb	23 55 49.8	
	comp=Z,6.1nm,0.7s						
WRA	**Warramunga Arr**	**30.75**	**250**	P	**P**	**23 55 49.3**	**-0.5**
	comp=Z,4.9nm,0.6s,baz=79,slow=9.2,SNR=21						
WRA				PcP	**PcP**	**23 58 48.6**	**+1.4**
	comp=Z,0.6nm,0.9s,baz=75,slow=3.4,SNR=6.3						
BFZ	**Birch Farm**	**31.12**	**163**	P	**P**	**23 55 50.5**	**-2.3**
SNZO	**South Karori**	**31.31**	**166**	P	**P**	**23 55 53.6**	**-0.8**
PLWZ	**Palliser**	**31.69**	**165**	P	**P**	**23 55 58.6**	**+0.8**
ASAR	**Alice Springs**	**32.09**	**243**	P	**P**	**23 56 01.1**	**-0.6**
	comp=Z,4.2nm,0.5s,baz=63,slow=10,SNR=41						
ASAR				PcP	**PcP**	**23 58 51.9**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=66,slow=2.1,SNR=7.0						
BBOO	**Buckleboo**	**34.24**	**226**	P	**P**	**23 56 17.2**	**-3.1**
BBOO				IAmb	IAmb	23 56 36.0	
	comp=Z,16nm,1.1s						
RAR	**Rarotonga**	**35.27**	**111**	LR	LR	00 08 15.7	
	comp=Z,54nm,18.1s,baz=264,slow=32						
RAR	**Rarotonga**	**35.27**	**111**	P	**P**	**23 56 29.0**	**-0.2**
FITZ	**Fitzroy Crossi**	**38.62**	**255**	P	**P**	**23 56 58.3**	**+0.4**
	comp=Z,4.6nm,1.0s,baz=99,slow=12,SNR=2.4						
FITZ	**Fitzroy Crossi**	**38.62**	**255**	IAmb	IAmb	23 57 03.8	
	comp=Z,4.0nm,0.9s						
DAV	**Davao City (W)**	**43.14**	**293**	LR	LR	00 14 29.8	
	comp=Z,93nm,19.8s,baz=20,slow=35						
PPT	**Papeete**	**44.44**	**104**	LR	LR	00 14 25.1	
	comp=Z,38nm,19.1s,baz=8.5,slow=34						
PPT2	**Papeete2**	**44.44**	**104**	*e*LR	LR	00 10 17.0	
	comp=Z,74nm,23.5s						
TBI	**Tubuai**	**45.03**	**112**	*e*LR	LR	00 10 34.8	
	comp=Z,173nm,29.2s						
MJAR	**Matsushiro Arr**	**53.65**	**333**	P	**P**	**23 58 56.0**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=166,slow=6.5,SNR=4.6						
JNU	**Nakatsue**	**54.66**	**325**	P	**P**	**23 59 03.7**	**+0.4**
	comp=Z,4.8nm,0.7s,baz=125,slow=3.0,SNR=4.8						
JNU	**Nakatsue**	**54.66**	**325**	P	**P**	**23 59 03.9**	**+0.7**
JNU				IAmb	IAmb	23 59 04.6	
	comp=Z,12nm,1.0s						
KSRS	**Korea Array**	**59.48**	**326**	P	**P**	**23 59 38.0**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=134,slow=5.8,SNR=6.6						
USRK	**Ussuriysk Ar.**	**62.64**	**334**	P	**P**	**00 00 00.1**	**+1.6**
	comp=Z,3.9nm,0.8s,baz=144,slow=7.1,SNR=9.1						
PETK	**Petropavlovsk-**	**64.23**	**355**	P	**P**	**00 00 10.1**	**+1.1**
	comp=Z,3.6nm,0.9s,baz=140,slow=7.2,SNR=5.7						
CMAR	**Chiang Mai Arr**	**71.42**	**294**	P	**P**	**00 00 55.7**	**+0.8**
	comp=Z,1.7nm,0.3s,baz=114,slow=4.2,SNR=4.3						
SONM	**Songino Array**	**78.24**	**324**	P	**P**	**00 01 34.7**	**+0.7**
	comp=Z,2.1nm,0.9s,baz=133,slow=5.2,SNR=7.8						
ANM	**Nome**	**78.69**	**13**	P	**P**	**00 01 35.2**	**-0.6**
ANM				IAmb	IAmb	00 01 42.8	
	comp=Z,5.5nm,1.2s						
QSPA	**South Pole Qui**	**78.92**	**180**	P	**P**	**00 01 38.0**	**+0.6**
FID	**Port Fidalgo**	**81.22**	**22**	P	**P**	**00 01 48.6**	**-1.0**
RND	**Reindeer**	**82.22**	**19**	P	**P**	**00 01 55.6**	**+0.6**
RND				IAmb	IAmb	00 01 59.2	
	comp=Z,4.7nm,1.2s						
VRDI	**Verde Repeater**	**82.65**	**22**	P	**P**	**00 01 57.5**	**+0.1**
GLB	**Gilahina Butte**	**82.65**	**22**	P	**P**	**00 01 57.7**	**+0.5**
GLB				IAmb	IAmb	00 01 59.3	
	comp=Z,4.6nm,1.1s						
PCA	**Pinnacle**	**83.20**	**24**	P	**P**	**00 02 00.4**	**+0.3**
PCA				IAmb	IAmb	00 02 09.1	
	comp=Z,5.4nm,1.2s						
BARN	**Barnard Glacie**	**83.23**	**23**	P	**P**	**00 02 01.2**	**+0.8**
HDA	**Harding Lake**	**83.53**	**19**	P	**P**	**00 02 02.0**	**+0.4**
HDA				IAmb	IAmb	00 02 04.2	
	comp=Z,6.6nm,0.9s						
SAO	**San Andreas Ge**	**83.75**	**51**	P	**P**	**00 02 03.3**	**-0.1**
ILAR	**Eielson Array**	**83.79**	**19**	P	**P**	**00 02 04.0**	**+1.0**
	comp=Z,1.2nm,0.9s,baz=218,slow=6.0,SNR=6.9						
CMB	**Columbia Colle**	**84.95**	**50**	P	**P**	**00 02 08.1**	**-1.4**
E03A	**Lebam**	**85.58**	**41**	P	**P**	**00 02 12.9**	**+0.6**
EGAK	**Eagle**	**85.68**	**20**	P	**P**	**00 02 12.6**	**+0.1**
EGAK				IAmb	IAmb	00 02 15.0	
	comp=Z,4.8nm,1.1s						
ISA	**Isabella, Lake**	**85.71**	**53**	P	**P**	**00 02 12.8**	**-0.6**
ISA				IAmb	IAmb	00 02 29.1	
	comp=Z,3.0nm,1.1s						
TIXI	**Tiksi**	**85.98**	**349**	P	**P**	**00 02 13.7**	**-0.2**
TIXI				IAmb	IAmb	00 02 16.2	
	comp=Z,2.2nm,0.8s						
F04A	**Amboy**	**86.11**	**42**	P	**P**	**00 02 12.6**	**-2.4**
BAR	**Barrett**	**86.31**	**56**	P	**P**	**00 02 14.6**	**-1.9**
BAR				IAmb	IAmb	00 02 24.1	
	comp=Z,5.2nm,1.1s						
PGC	**Sidney**	**86.41**	**39**	P	**P**	**00 02 14.8**	**-1.6**
NVAR	**Mina Array Bea**	**86.64**	**50**	P	**P**	**00 02 19.4**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=227,slow=5.7,SNR=6.1						
D05A	**Enumclaw**	**86.82**	**41**	P	**P**	**00 02 19.0**	**+0.5**
I07A	**Izee**	**87.46**	**44**	P	**P**	**00 02 21.7**	**-0.2**
U15A	**North Rim**	**90.74**	**53**	P	**P**	**00 02 37.3**	**-0.4**
WUAZ	**Wupatki**	**91.27**	**54**	P	**P**	**00 02 37.0**	**-3.0**
MKAR	**Makanchi Array**	**93.02**	**317**	P	**P**	**00 02 48.1**	**+0.4**
	comp=Z,1.5nm,0.9s,baz=87,slow=5.2,SNR=5.6						
ZAA0	**Zalesovo Array**	**93.14**	**324**	P	**P**	**00 02 46.9**	**-1.1**
ZAA0				IAmb	IAmb	00 02 48.7	
	comp=Z,2.4nm,1.1s						
ZALV	**Zalesovo Beam**	**93.14**	**324**	P	**P**	**00 02 48.4**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=109,slow=3.5,SNR=3.7						
MAKZ	**Makanchi**	**93.23**	**317**	P	**P**	**00 02 47.8**	**-0.9**
MAKZ				IAmb	IAmb	00 03 06.7	
	comp=Z,2.5nm,1.1s						
TPAW	**Teton Pass**	**93.29**	**46**	P	**P**	**00 02 48.3**	**-1.1**
TPAW				IAmb	IAmb	00 02 51.7	
	comp=Z,1.9nm,0.9s						
YKA	**Yellowknife Ar**	**95.36**	**27**	P	**P**	**00 02 57.4**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=248,slow=3.3,SNR=2.1						
TXAR	**Lajitas Array**	**96.52**	**61**	LR	LR	00 37 16.9	
	comp=Z,21nm,21.5s,baz=0.0,slow=30						

*IDC **29** 23:49:59.5±1.1, 2°.09S×121°.00E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.7/39, mbtmp3.8/7, ML3.9/1, MS3.3/7, Ms1 3.3/7, ms1mx3.0/36, Error ellipse: s-maj=49.4km s-min=18.3km az=66.0*

*DJA **29** 23:50:02.1±0.2, 2°.5S±3°×12°.1E±°, h10km, M4.6/13, mB4.9/2, mb4.6/4, MLv4.5/13, Mw(mB)4.2/2*

*NEIC **29** 23:50:03.9±1.2, 2°.15S±0°.08×120°.90E±0°.04, h34km±7km, mb4.2/8, Error ellipse: s-maj=11.9km s-min=6.0km az=169.0*

ISC 29 23:50:04.4±0.7, 2°.17S±0°.04×120°.80E±0°.06, h35km, n34, σ1ᵍ47/35, mb4.0/10, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**1.31**	**229**	P	**Pn**	**23 50 23.9**	**-2.3**
TTSI				S	**Sn**	**23 50 41.4**	**-1.1**
APSI	**Ampana**	**1.51**	**34**	P	**Pn**	**23 50 29.5**	**+0.5**
APSI				S	**Sn**	**23 50 49.7**	**+2.3**
SPSI	**Sidrap Palu**	**2.06**	**210**	P	**Pn**	**23 50 35.3**	**-1.2**
LUWI	**Luwuk**	**2.27**	**60**	P	**Pn**	**23 50 39.6**	**+0.3**
LUWI	**Luwuk**	**2.27**	**60**	Pn	**Pn**	**23 50 37.5**	**-1.8**
BNSI	**Bone**	**2.32**	**197**	P	**Pn**	**23 50 39.8**	**-0.3**
BNSI				S	**Sn**	**23 51 10.4**	**+3.0**
MPSI	**Mapaga**	**2.65**	**340**	P	**Pn**	**23 50 45.5**	**+0.9**
MRSI	**Marisa**	**2.87**	**23**	P	**Pn**	**23 50 47.5**	**-0.1**
MRSI				S	**Sn**	**23 51 21.4**	**+0.5**
KAPI	**Kappang**	**3.01**	**200**	Pn	**Pn**	**23 50 50.5**	**+0.8**
	13nm,0.3s,baz=12,slow=7.7,SNR=24						
KAPI				Sn	**Sn**	**23 51 26.4**	**+1.9**
	9.3nm,0.3s,baz=18,slow=20,SNR=6.3						
KAPI				LR	LR	23 51 44.9	
	comp=Z,118nm,20.0s,baz=26,slow=33						
KAPI	**Kappang**	**3.01**	**200**		**Pn**	**23 50 50.1**	**+0.5**
BKSI	**Bulukumba**	**3.20**	**192**	P	**Pn**	**23 50 53.9**	**+1.7**
BKSI				S	**Sn**	**23 51 32.4**	**+3.2**
BKB	**Balikpapan**	**4.01**	**283**	Pn	**Pn**	**23 51 04.5**	**+1.2**
KBKI	**Kotabaru**	**4.76**	**256**	P	**Pn**	**23 51 15.5**	**+1.8**
LBMI	**Labuha**	**6.87**	**77**	P	**Pn**	**23 51 43.7**	**+1.0**
	0.3nm1μm60nm,0.8s						
BATI	**Baumata**	**8.47**	**161**	LR	LR	23 55 39.9	
	comp=Z,750nm,19.6s,baz=254,slow=40						
DAV	**Davao City (W)**	**10.34**	**27**	LR	LR	23 56 41.6	
	comp=Z,54nm,18.4s,baz=240,slow=40						
FAKI	**Fak Fak**	**11.46**	**94**	Pn	**Pn**	**23 52 43.1**	**-2.6**
LEM	**Lembang**	**13.93**	**250**	LR	LR	23 59 06.7	
	comp=Z,258nm,18.3s,baz=115,slow=39						
FITZ	**Fitzroy Crossi**	**16.52**	**164**	LR	LR	00 01 30.1	
	comp=Z,72nm,18.7s,baz=355,slow=42						
KULM	**Kulim**	**21.45**	**290**	P	**P**	**23 54 48.3**	**-1.5**
KULM				IAmb	IAmb	23 54 58.3	
	comp=Z,11nm,1.0s						
WB0	**Warramunga Arr**	**21.96**	**144**	P	**P**	**23 54 53.8**	**-1.5**
WB0				IAmb	IAmb	23 54 59.1	
	comp=Z,9.9nm,1.1s						
WRAB	**Tennant Creek**	**22.07**	**144**	P	**P**	**23 54 55.3**	**-1.1**
WRA	**Warramunga Arr**	**22.07**	**144**	P	**P**	**23 54 55.0**	**-1.4**
	comp=Z,2.1nm,0.9s,baz=318,slow=8.7,SNR=8.7						
WB2	**Warramunga Arr**	**22.07**	**144**	P	**P**	**23 54 56.0**	**-0.6**
WB2				IAmb	IAmb	23 55 00.8	
	comp=Z,13nm,1.1s						
WR0	**Warramunga Arr**	**22.20**	**144**	P	**P**	**23 54 56.5**	**-1.4**
PSI	**Prapat**	**22.42**	**283**	LR	LR	00 04 05.6	
	comp=Z,162nm,19.0s,baz=94,slow=38						
ASAR	**Alice Springs**	**24.85**	**150**	P	**P**	**23 55 24.1**	**+0.3**
	comp=Z,1.7nm,0.9s,baz=347,slow=16,SNR=7.7						
MORW	**Morawa**	**27.13**	**189**	P	**P**	**23 55 44.2**	**-0.1**
MORW				IAmb	IAmb	23 55 54.8	
	comp=Z,8.8nm,1.1s						
CMAR	**Chiang Mai Arr**	**29.72**	**315**	P	**P**	**23 56 08.5**	**+1.0**
	comp=Z,0.7nm,0.4s,baz=140,slow=7.5,SNR=6.0						
CMAR				LR	LR	00 11 11.3	
	comp=Z,44nm,18.2s,baz=188,slow=43						
SONM	**Songino Array**	**51.37**	**348**	P	**P**	**23 59 05.7**	**0.0**
	comp=Z,0.6nm,0.4s,baz=163,slow=6.2,SNR=4.6						
MKAR	**Makanchi Array**	**59.34**	**330**	P	**P**	**00 00 03.0**	**0.0**
	comp=Z,1.2nm,0.9s,baz=138,slow=7.5,SNR=5.3						
ZALV	**Zalesovo Beam**	**63.41**	**337**	P	**P**	**00 00 31.3**	**+1.0**
	comp=Z,0.2nm,0.2s,baz=113,slow=3.7,SNR=1.6						
BRVK	**Borovoye**	**69.30**	**330**	P	**P**	**00 01 07.8**	**-0.2**
EYAK	**Cordova Ski Ar**	**93.58**	**30**	P	**P**	**00 03 16.2**	**-0.4**

IDC 29 23:55:05.7±2.4, 7°.23S×154°.90E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.7/39, mbtmp3.9/5, Error ellipse: s-maj=84.8km s-min=29.4km az=123.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.61**	**236**	P	P	00 00 18.7	+0.2
	2.1nm,0.9s,baz=61,slow=9.6,SNR=8.0						
ASAR	**Alice Springs**	**25.95**	**229**	P	P	00 00 40.1	+0.1
	0.7nm,0.8s,baz=63,slow=9.1,SNR=2.1						
SONM	**Songino Array**	**69.48**	**327**	P	P	00 06 16.4	+0.3
	0.9nm,0.8s,baz=134,slow=6.4,SNR=4.9						
MKAR	**Makanchi Array**	**83.52**	**319**	P	P	00 07 35.7	+0.1
	1.0nm,0.8s,baz=105,slow=4.3,SNR=6.0						
YKA	**Yellowknife Ar**	**96.59**	**28**	P	P	00 08 37.1	-0.1
	0.8nm,0.8s,baz=261,slow=4.5,SNR=6.6						
TORD	**Torodi Ar. Bea**	**152.99**	**285**	PKPab	PKPab	00 15 15.9	-1.5
	0.4nm,0.6s,baz=77,slow=2.3,SNR=2.1						

*IDC **29** 23:58:05.3±2.3, 8°.09S×119°.26E, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.5/37, mbtmp3.6/4, ML3.3/2, Error ellipse: s-maj=208.9km s-min=27.0km az=54.0*

*DJA **29** 23:58:06.0±0.7, 8°.5S×11°.9E±°, h10km, M3.8/5, MLv3.8/5*

ISC 29 23:58:06.0±1.2, 8°.27S±0°.08×119°.07E±0°.05, h10km, n8, σ1ᵍ21/12, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.39**	**246**	P	**Pn**	**23 58 30.8**	**-0.6**
PLAI				S	**Sn**	**23 58 50.6**	**+0.8**
WBSI	**Waikabubak, Su**	**1.40**	**167**	P	**Pn**	**23 58 30.6**	**-1.0**
WBSI				S	**Sg**	**23 58 52.4**	**+1.4**
WSI	**Waingapu**	**1.85**	**139**	P	**Pn**	**23 58 37.2**	**-0.5**
WSI				S	**Sn**	**23 59 03.0**	**+1.9**
EDFI	**Ende, Flores**	**2.64**	**101**	P	**Pn**	**23 58 49.3**	**+0.6**
EDFI				S	**Sg**	**23 59 29.7**	**-1.2**
FITZ	**Fitzroy Crossi**	**11.68**	**147**	Pn	**Pn**	**00 00 52.4**	**-0.3**
	0.1nm,0.3s,baz=336,slow=14,SNR=4.9						
FITZ				Sn	**Sn**	**00 03 01.4**	**-1.8**
	0.1nm,0.3s,baz=245,slow=16,SNR=1.8						
WRA	**Warramunga Arr**	**18.80**	**130**	P	**P**	**00 02 26.2**	**+0.5**
	0.1nm,0.3s,baz=306,slow=13,SNR=2.2						
ASAR	**Alice Springs**	**20.89**	**139**	P	Pn	00 02 50.4	-0.8
	3.0nm,0.8s,baz=324,slow=11,SNR=14						
MKAR	**Makanchi Array**	**63.84**	**333**	P	**P**	**00 08 39.0**	**+0.3**
	0.2nm,0.5s,baz=141,slow=7.8,SNR=1.6						

*IDC **30** 00:02:10.2±1.8, 8°.27S×119°.22E, h0km, mb3.4/3, mb1 3.6/6, mb1mx3.5/38, mbtmp3.5/6, ML3.1/3, MS3.4/2, Ms1 3.4/2, ms1mx2.8/31, Error ellipse: s-maj=75.9km s-min=20.0km az=63.0*

*DJA **30** 00:02:11.7±0.3, 8°.5S±3°×11°.9E±°, h10km, M3.9/9, MLv3.9/9*

ISC 30 00:02:10.9±0.8, 8°.25S±0°.05×119°.14E±0°.08, h10km, n16, σ1ᵍ12/16, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.40**	**170**	P	**Pg**	**00 02 36.4**	**-1.5**
PLAI	**Plampang**	**1.46**	**247**	P	**Pg**	**00 02 37.9**	**-1.1**
WSI	**Waingapu**	**1.82**	**141**	P	**Pn**	**00 02 43.0**	**+0.7**
BASI	**Baing, Sumba**	**2.42**	**144**	P	**Pn**	**00 02 51.7**	**+1.2**
EDFI	**Ende, Flores**	**2.58**	**101**	P	**Pn**	**00 02 53.8**	**+1.0**
BKSI	**Bulukumba**	**3.07**	**19**	P	**Pn**	**00 02 59.6**	**0.0**
MMRI	**Maumere**	**3.09**	**97**	P	**Pn**	**00 03 00.4**	**+0.6**
KAPI	**Kappang**	**3.28**	**11**	Pn	**Pn**	**00 03 02.8**	**+0.5**
	2.8nm,0.3s,baz=196,slow=2.7,SNR=18						
KAPI				Sn	**Sn**	**00 03 39.2**	**-2.2**
	1.7nm,0.3s,baz=148,slow=20,SNR=1.6						
BNSI	**Bone**	**3.95**	**14**	P	**Pn**	**00 03 12.6**	**+1.0**
LEM	**Lembang**	**11.51**	**276**	LR	LR	00 10 57.6	
	comp=Z,104nm,19.9s,baz=20,slow=46						
FITZ	**Fitzroy Crossi**	**11.65**	**148**	Pn	**Pn**	**00 04 57.3**	**-0.1**
	0.1nm,0.3s,baz=329,slow=5.9,SNR=1.0						
FITZ				Sn	**Sn**	**00 07 07.1**	**-0.6**
	0.1nm,0.3s,baz=251,slow=16,SNR=2.6						
WRA	**Warramunga Arr**	**18.75**	**130**	P	**P**	**00 06 29.4**	**-0.9**
	0.1nm,0.3s,baz=306,slow=12,SNR=4.8						
ASAR	**Alice Springs**	**20.86**	**139**	P	**P**	**00 06 53.9**	**+0.7**
	1.0nm,0.5s,baz=315,slow=9.1,SNR=5.1						
PMG	**Port Moresby**	**27.71**	**94**	LR	LR	00 18 52.1	
	comp=Z,124nm,20.6s,baz=277,slow=36						
SONM	**Songino Array**	**56.97**	**350**	P	**P**	**00 11 57.8**	**+1.1**
	0.3nm,0.5s,baz=183,slow=5.5,SNR=2.6						
MKAR	**Makanchi Array**	**63.86**	**333**	P	**P**	**00 12 44.7**	**+1.0**
	0.7nm,0.7s,baz=128,slow=7.9,SNR=4.2						

*LSZ **30** 00:02:46.8±0.3, 15°.94S×28°.98E, h10km, MD2.9*

ISC 30 00:02:44.3±2.0, 16°.55S±0°.07×28°.7E±0°.2, h10km, n5, σ1ᵍ27/8, Zambia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**1.36**	**339**	*i* P	Pg	00 03 15.6	+5.3
LSZ				*i* S	**Sg**	**00 03 27.7**	**-0.2**
LSZ	**Lusaka**	**1.36**	**339**	*i* P	Pg	00 03 15.6	+5.3
LSZ				*i* S	**Sg**	**00 03 27.7**	**-0.2**
ITZ	**Itezhi-Tezhi**	**2.69**	**287**	*e*P	**Pb**	**00 03 32.6**	**0.0**
ITZ				*i*		00 03 32.6	
	baz=94,slow=22						
ITZ				*e*S	**Sb**	**00 04 06.0**	**+0.2**
MATP	**Matopo**	**3.86**	**183**	*i* P	**Pg**	**00 03 59.4**	**+1.2**
MATP				*i* S	**Sn**	**00 04 27.7**	**-1.6**
MATP	**Matopo**	**3.86**	**183**	*i* P	**Pg**	**00 03 59.4**	**+1.2**
MATP				*i* S	**Sn**	**00 04 27.7**	**-1.6**

*DJA **30** 00:04:43.2±0.2, 3°.5S±2°×12°.8E±°, h10km, M4.6/10, mB5.4/2, mb5.2/2, MLv4.3/10, Mw(mB)4.8/2*

*NEIC **30** 00:04:45.9±2.1, 2°.94S±0°.06×128°.17E±0°.06, h50km±9km, mb4.3/15, Error ellipse: s-maj=9.4km s-min=8.8km az=69.0*

*IDC **30** 00:04:46.4±1.6, 2°.92S×128°.17E, h46km±16km, mb3.9/9, mb1 4.2/14, mb1mx3.9/37, mbtmp4.2/14, ML4.2/5, MS3.5/7, Ms1 3.5/7, ms1mx3.1/42, Error ellipse: s-maj=16.8km s-min=12.2km az=119.0*

ISC 30 00:04:45.9±0.9, 2°.88S±0°.04×128°.08E±0°.04, h48km±9km, n51, σ1ᵍ82/59, mb4.2/13, MS3.4/4, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.81**	**172**	P	**Pn**	**00 05 01.3**	**+0.2**
AAI				S	**Sn**	**00 05 14.0**	**+1.8**
MSAI	**Masohi**	**0.97**	**119**	P	**Pn**	**00 05 03.5**	**+0.3**
MSAI				S	**Sn**	**00 05 17.5**	**+1.6**
NLAI	**Namlea**	**1.04**	**250**	P	**Pn**	**00 05 02.9**	**-1.2**
NLAI				S	**Sn**	**00 05 18.8**	**+1.2**
LBMI	**Labuha**	**2.30**	**345**	P	**Pn**	**00 05 19.9**	**-1.4**
LBMI				S	**Sn**	**00 05 47.7**	**-0.7**
BNDI	**Bandanaira**	**2.45**	**132**	P	**Pn**	**00 05 24.5**	**+1.1**
BNDI				S	**Sn**	**00 05 56.2**	**+4.1**
TNTI	**Ternate**	**3.69**	**349**	P	**Pn**	**00 05 39.0**	**-1.5**
TNTI	**Ternate**	**3.69**	**349**	Pn	**Pn**	**00 05 40.4**	**-0.1**
SIJI	**Sorong**	**3.76**	**58**	P	**Pn**	**00 05 40.8**	**-0.6**
	33nm,0.3s,baz=245,slow=8.6,SNR=62						
SIJI				S	**Sn**	**00 06 24.5**	**+0.1**
	29nm,0.3s,baz=38,slow=20,SNR=27						
FAKI	**Fak Fak**	**4.17**	**91**	P	**Pn**	**00 05 46.5**	**-0.5**
FAKI				S	**Sn**	**00 06 32.5**	**-1.9**
FAKI	**Fak Fak**	**4.17**	**91**	Pn	**Pn**	**00 05 45.9**	**-1.1

KURK					IAmb	IAmb	00 15 42.2		
	comp=Z,4.5nm,1.0s								
TIXI	**Tiksi**	**74.39**	**0**	LR	LR	00 49 17.5			
	comp=Z,29nm,19.5s,baz=178,slow=36								
TORD	**Torodi Ar. Bea**	**126.04**	**284**	PKP	**PKPdf**	**00 23 44.4**	**+0.5**		
	comp=Z,0.6nm,0.8s,baz=66,slow=3.5,SNR=3.3								

TAP 30 00:11:19.7, 24°.34N × 121°.44E, h7 km, ML1.8, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNSB	**Datong**	**0.10**	**330**	P	Pg	00 11 21.9	-0.2
	baz=330						
NNSB				S	Sg	00 11 23.6	-0.2
	baz=330						
NNSH	**Datong**	**0.10**	**330**	*i* P	Pg	00 11 21.9	-0.2
	baz=330						
NNSH				*i* S	Sg	00 11 23.6	-0.2
	baz=330						
NNS	**Nan Shan**	**0.12**	**329**	P	Pg	00 11 22.2	-0.2
	baz=332						
NNS				S	Sg	00 11 24.1	-0.1
	baz=332						
ETLH	**Xiulin Townshi**	**0.14**	**163**	*e*P	Pg	00 11 22.8	+0.1
	baz=163						
ETLH				*e*S	Sg	00 11 25.0	+0.3
	baz=163						
NACB	**Ninganchiao**	**0.22**	**139**	*e*P	Pg	00 11 24.1	0.0
	baz=139						
NACB				*e*S	Sg	00 11 27.2	+0.2
	baz=139						
WHF	**Hehuan Shan**	**0.25**	**219**	P	Pg	00 11 24.5	-0.3
	baz=217						
WHF				S	Sg	00 11 28.2	-0.1
	baz=217						
NDT	**Datong Townshi**	**0.27**	**15**	P	Pg	00 11 25.1	0.0
	baz=14						
NDT				*e*S	Sg	00 11 28.7	0.0
	baz=14						
TDCB	**Techi**	**0.27**	**251**	*e*P	Pg	00 11 25.0	-0.1
	baz=250						
TDCB				*e*S	Sg	00 11 28.5	-0.2
	baz=250						
ENA	**Nanau**	**0.29**	**73**	*e*P	Pg	00 11 25.2	-0.3
	baz=73						
ENA				*e*S	Sg	00 11 30.1	+0.8
	baz=73						
TWD	**Chiawan**	**0.30**	**151**	*e*P	Pg	00 11 25.7	+0.2
	baz=149						
TWD				*e*S	Sg	00 11 30.0	+0.5
	baz=149						
ENTT	**Nioudou**	**0.32**	**22**	*e*P	Pg	00 11 25.9	-0.1
	baz=22						
ENTT				*e*S	Sg	00 11 30.4	0.0
	baz=22						
YHNB	**Yeheng**	**0.33**	**350**	*e*P	Pg	00 11 26.6	+0.4
	baz=350						
YHNB				*e*S	Sg	00 11 30.6	-0.1
	baz=350						
NSK	**Sanguang**	**0.34**	**348**	*e*P	Pg	00 11 26.8	+0.3
	baz=349						
NSK				*e*S	Sg	00 11 31.0	0.0
	baz=349						
CHGB	**Renai**	**0.37**	**221**	*e*P	Pg	00 11 26.5	-0.5
	baz=220						
CHGB				*e*S	Sg	00 11 32.8	+0.9
	baz=220						
TWE	**Neicheng**	**0.43**	**29**	*e*P	Pg	00 11 28.1	-0.1
	baz=30						
TWE				*e*S	Sg	00 11 34.8	+1.0
	baz=30						
WHP	**Taichung City**	**0.45**	**262**	*e*P	Pg	00 11 29.0	+0.4
	baz=261						
WHP				*e*S	Sg	00 11 34.9	+0.4
	baz=261						
TWC	**Suao**	**0.46**	**54**	*e*P	Pg	00 11 28.3	-0.4
	baz=55						
TWC				*e*S	Sb	00 11 36.1	-1.1
	baz=55						
LIOB	**Emei**	**0.49**	**308**	*e*S	Sg	00 11 36.8	+1.1
	baz=308						
NSTT	**Nanjuang**	**0.49**	**306**	*e*S	Sg	00 11 36.6	+0.9
	baz=306						
DPDB	**Guoxing**	**0.56**	**237**	*e*P	Pg	00 11 30.7	+0.2
	baz=236						
VWDT	**VWDT**	**0.64**	**205**	*e*P	Pg	00 11 31.4	-0.7
	baz=204						
VWDT				*e*S	Sg	00 11 41.5	+0.9
	baz=204						
SMLT	**Sun Moon Lake**	**0.67**	**227**	*e*P	Pg	00 11 32.2	-0.4
	baz=226						
EGS		**0.67**	**42**	*e*P	Pg	00 11 33.0	+0.3
	baz=42						
EGS				*e*S	Sg	00 11 42.3	+0.7
	baz=42						
TYC	**Yuchr**	**0.69**	**231**	*e*P	Pg	00 11 32.7	-0.2
	baz=230						
SSLB	**Suanglung**	**0.71**	**219**	*e*P	Pg	00 11 32.5	-0.8
	baz=218						
TIPB	**Shuangxi**	**0.72**	**29**	*e*S	Sg	00 11 42.9	-0.2
	baz=29						
YULB	**Yu-li**	**0.95**	**188**	*e*P	Pg	00 11 37.4	-0.6
	baz=187						
YULB				*e*S	Sg	00 11 50.9	+0.5
	baz=187						

JMA 30 00:11:41.4±0.1, 24°.85N × 123°.31E, h28 km±3 km, M3.0, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.47**	**215**	P	Pb	00 11 51.1	-0.2
YOJ				S	Sb	00 11 57.8	-0.2
JYNG	**Yonagunijimaku**	**0.52**	**220**	P	Pb	00 11 51.8	-0.2
JYNG				S	Sb	00 11 59.3	+0.1
IRIF	**Iriomote-Funau**	**0.64**	**143**	P	Pb	00 11 53.8	-0.3
JKRS	**Kuro-shima**	**0.88**	**134**	P	Pn	00 11 57.9	0.0
JKRS				S	Sb	00 12 09.3	-0.2
JIJ	**Ishigaki jima**	**0.90**	**122**	P	Pn	00 11 57.8	-0.4
JIJ				S	Sb	00 12 09.3	-0.7
HATJ	**Hateruma jima**	**0.91**	**150**	P	Pn	00 11 58.0	-0.3
HATJ				S	Sb	00 12 09.7	-0.6
JISG	**Ishigakijimahi**	**0.95**	**106**	P	Pn	00 11 58.5	-0.3
JISG				S	Sb	00 12 10.6	-0.8
JTJ	**Tarama**	**1.28**	**99**	P	Pb	00 12 04.2	-0.7
JTJ				S	Sn	00 12 20.0	+0.3

*IDC **30** 00:16:21.3±3.0, 11°.45S × 161°.54E, h70 km±28 km, mb3.4/4, mb1 3.7/6, mb1mx3.4/28, mbtmp3.8/6, Error ellipse: s-maj=36.0km s-min=27.4km az=95.0*

ISC 30 00:16:18.9±1.1, 11°.4S±0°.1 × 161°.5E±0°.2, h35 km, n12, σ 2§32/7, mb3.6/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.48**	**322**	P	**Pn**	**00 17 00.2**	**+3.2**
	38nm,0.3s,baz=211,slow=4.1,SNR=2.4						
HNR				S	**Sn**	**00 17 25.1**	**-0.9**
	40nm,0.3s,baz=346,slow=22,SNR=2.3						
DZM	**Mont Dzumac**	**11.62**	**157**	P	**Pn**	**00 19 04.0**	**+1.6**
	0.1nm,0.3s,baz=333,slow=16,SNR=2.0						
WRA	**Warramunga Arr**	**27.48**	**249**	P	**P**	**00 22 01.9**	**-0.2**
	1.4nm,0.9s,baz=81,slow=8.9,SNR=4.7						
ASAR	**Alice Springs**	**28.95**	**241**	P	**P**	**00 22 13.4**	**-1.8**
	0.7nm,0.8s,baz=76,slow=8.7,SNR=5.5						
H11S2	**WAKE ISLAND Hy**	**30.13**	**10**	T	T	00 53 19.8	
	baz=188,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**30.14**	**10**	T	T	00 53 20.0	
	baz=188,slow=76,SNR=9.8						
H11S1	**WAKE ISLAND Hy**	**30.15**	**10**	T	T	00 53 20.9	
	baz=188,slow=76,SNR=9.5						
H11N1	**WAKE ISLAND Hy**	**31.36**	**10**	T	T	00 54 54.2	
	baz=188						
H11N3	**WAKE ISLAND Hy**	**31.37**	**10**	T	T	00 54 53.8	
	baz=188						
H11N2	**WAKE ISLAND Hy**	**31.38**	**10**	T	T	00 54 53.8	
	baz=188						
SONM	**Songino Array**	**76.54**	**325**	P	**P**	**00 28 04.7**	**-1.0**
	0.3nm,0.4s,baz=144,slow=5.2,SNR=2.1						
ILAR	**Eielson Array**	**85.20**	**20**	P	**P**	**00 28 49.6**	**-1.8**
	0.2nm,0.4s,baz=232,slow=6.1,SNR=1.7						

*DJA **30** 00:31:54.9±0.6, 1°.N±3°.× 12°.7E±°, h117 km±8 km, M3.9/10, MLv3.9/10*

*IDC **30** 00:32:05.7±16.0, 0°.42N × 127°.21E, h229 km±170 km, mb3.2/5, mb1 3.4/5, mb1mx2.9/47, mbtmp3.7/5, MS2.9/1, Ms1 2.9/1, ms1mx2.3/23, Error ellipse: s-maj=148.1km s-min=40.4km az=64.0*

ISC 30 00:31:54.8±1.1, 0.70N±0°.10 × 127°.3E±0°.1, h122 km±9 km, n11, σ 0§61/11, mb3.6/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.08**	**23**	P	**Pn**	**00 32 11.2**	**-0.2**
LBMI	**Labuha**	**1.34**	**173**	P	**Pn**	**00 32 21.0**	**+0.4**
LBMI				S	**Sn**	**00 32 40.2**	**+0.1**
KMSI	**Cibinong**	**3.36**	**268**	P	**Pn**	**00 32 45.6**	**-0.2**
NLAI	**Namlea**	**3.92**	**183**	P	**Pn**	**00 32 53.3**	**0.0**
AAI	**Ambon**	**4.44**	**169**	P	**Pn**	**00 32 59.9**	**-0.4**
WRA	**Warramunga Arr**	**21.63**	**162**	P	**P**	**00 36 35.0**	**-0.4**
	1.5nm,0.5s,baz=339,slow=10,SNR=42						
ASAR	**Alice Springs**	**25.05**	**166**	P	**P**	**00 37 08.0**	**+0.1**
	0.6nm,0.3s,baz=351,slow=15,SNR=12						
KLR	**Kul'dur**	**48.49**	**4**	LR	LR	01 02 09.3	
	comp=Z,13nm,20.1s,baz=169,slow=37						
MKAR	**Makanchi Array**	**60.38**	**326**	P	**P**	**00 41 52.2**	**+1.1**
	0.3nm,0.4s,baz=122,slow=7.4,SNR=1.8						
KURBB	**Kurchatov Arra**	**64.61**	**328**	P	**P**	**00 42 19.7**	**+0.5**
	0.2nm,0.6s,baz=125,slow=6.7,SNR=4.3						
ARCES	**ARCESS Array B**	**93.48**	**340**	P	**P**	**00 44 55.6**	**-0.7**
	0.8nm,1.1s,baz=78,slow=6.5,SNR=4.1						

*IDC **30** 00:39:26.0±0.7, 54°.03S × 147°.08W, h0 km, mb4.1/7, mb1 4.4/7, mb1mx4.1/32, mbtmp4.1/7, MS3.5/2, Ms1 3.5/2, ms1mx3.0/36, Error ellipse: s-maj=36.0km s-min=23.7km az=171.0*

*NEIC **30** 00:39:27.4±1.8, 54°.13S±0°.10 × 147°.2W±0°.2, h10 km±1 km, mb4.8/13, Error ellipse: s-maj=21.6km s-min=15.6km az=69.0*

ISC 30 00:39:26.8±0.5, 54°.1S±0°.1 × 147°.2W±0°.1, h10 km, n49, σ 1§02/39, mb4.5/13, 1C-1D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLWZ	**Palliser**	**27.80**	**281**	P	**P**	**00 45 15.6**	**-0.3**
MSWZ	**Moikau Station**	**27.90**	**282**	P	**P**	**00 45 17.3**	**+0.6**
BHW	**Baring Head**	**28.12**	**281**	P	**P**	**00 45 16.6**	**-2.1**
OXZ	**Oxford**	**28.59**	**275**	P	**P**	**00 45 22.0**	**-0.9**
OXZ				IAmb	IAmb	00 45 22.7	
	comp=Z,12nm,0.9s						
RPZ	**Rata Peaks**	**28.93**	**274**	LR	LR	00 54 13.2	
	comp=Z,100nm,21.2s,baz=120,slow=31						
PYZ	**Puysegur Point**	**30.13**	**266**	P	**P**	**00 45 37.1**	**+0.6**
RAO	**Raoul Island**	**33.37**	**306**	P	**P**	**00 46 03.1**	**-1.9**
QSPA	**South Pole Qui**	**36.02**	**180**	P	**P**	**00 46 30.0**	**+2.2**
	comp=Z,3.1nm,1.1s,baz=95,slow=3.1,SNR=4.4						
H03S2	**Juan Fernandez**	**51.00**	**96**	T	T	01 43 11.3	
	baz=222,slow=74,SNR=5.2						
H03S1	**Juan Fernandez**	**51.00**	**96**	T	T	01 43 08.4	
	baz=222,slow=74,SNR=4.7						
H03S3	**Juan Fernandez**	**51.01**	**96**	T	T	01 43 11.9	
	baz=222,slow=74,SNR=4.7						
H03N3	**Juan Fernandez**	**51.27**	**95**	T	T	01 43 23.8	
	baz=226,slow=72,SNR=25						
H03N2	**Juan Fernandez**	**51.27**	**95**	T	T	01 43 22.9	
	baz=226,slow=72,SNR=28						
H03N1	**Juan Fernandez**	**51.28**	**95**	T	T	01 43 23.0	
	baz=226,slow=72,SNR=26						
VNA3	**Neumayer Olymp**	**51.34**	**164**	P	**P**	**00 48 30.6**	**-0.1**
VNA2	**Neumayer--Watz**	**51.99**	**164**	P	**P**	**00 48 35.0**	**-0.6**
	baz=213,slow=8.9						
SNAA	**Sanae**	**52.00**	**166**	P	**P**	**00 48 35.1**	**-0.6**
SNAA	**Sanae**	**52.00**	**166**	LR	LR	01 08 00.6	
	comp=Z,42nm,20.5s,baz=276,slow=33						
SNAA	**Sanae**	**52.00**	**166**	P	**P**	**00 48 35.3**	**-0.4**
SNAA				IAmb	IAmb	00 48 36.6	
	comp=Z,7.0nm,1.1s						
VNA1	**Neumayer--Stat**	**52.09**	**164**	P	**P**	**00 48 35.7**	**-0.5**
FUNA	**Funafuti**	**52.85**	**317**	P	**P**	**00 48 42.1**	**-0.5**
GO05	**Huala**	**54.23**	**102**	P	**P**	**00 48 52.5**	**-0.1**
GO05				IAmb	IAmb	00 49 05.6	
	comp=Z,25nm,1.1s						
KNTN	**Kanton**	**54.99**	**330**	P	**P**	**00 48 59.3**	**+1.1**
KNTN				IAmb	IAmb	00 49 17.1	
	comp=Z,58nm,1.1s						
SYO	**Syowa Base**	**57.06**	**183**	*e*P	**P**	**00 49 10.0**	**-2.4**
SYO	**Syowa Base**	**57.06**	**183**	*e*pP	**P**	**00 49 11.8**	**-0.6**
ASAR	**Alice Springs**	**64.74**	**264**	P	**P**	**00 50 06.2**	**+0.9**
	comp=Z,3.6nm,0.8s,baz=138,slow=6.6,SNR=24						
AS31	**Alice Springs**	**64.74**	**264**	P	**P**	**00 50 05.5**	**+0.2**
LVC	**Limon Verde**	**65.21**	**95**	P	**P**	**00 50 06.6**	**-2.1**
LVC				IAmb	IAmb	00 50 11.1	
	comp=Z,4.9nm,1.1s						
H01W1	**Cape Leeuwin H**	**67.18**	**242**	T	T	02 04 10.9	
	baz=140,slow=76,SNR=16						
H01W2	**Cape Leeuwin H**	**67.19**	**242**	T	T	02 04 10.5	
	baz=140,slow=76,SNR=21						
H01W3	**Cape Leeuwin H**	**67.20**	**242**	T	T	02 04 10.8	
	baz=140,slow=76,SNR=15						
WB2	**Warramunga Arr**	**67.35**	**267**	P	**P**	**00 50 22.2**	**+0.1**
WRA	**Warramunga Arr**	**67.36**	**267**	P	**P**	**00 50 23.5**	**+1.4**
	comp=Z,2.1nm,0.8s,baz=145,slow=5.3,SNR=9.2						
LPAZ	**La Paz**	**70.58**	**91**	P	**P**	**00 50 42.3**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=225,slow=10.0,SNR=3.9						
FITZ	**Fitzroy Crossi**	**73.89**	**261**	P	**P**	**00 51 03.0**	**+1.1**
	comp=Z,5.0nm,0.9s,baz=151,slow=8.3,SNR=3.8						
FITZ	**Fitzroy Crossi**	**73.89**	**261**	P	**P**	**00 51 01.8**	**-0.2**
FITZ				IAmb	IAmb	00 51 05.1	
	comp=Z,4.7nm,0.9s						
GLA	**Glamis**	**91.23**	**27**	P	**P**	**00 52 32.5**	**+0.6**
TXAR	**Lajitas Array**	**91.24**	**37**	P	**P**	**00 52 32.3**	**+0.3**
	comp=Z,0.2nm,0.8s,baz=194,slow=7.1,SNR=2.1						
319A	**Douglas**	**91.26**	**32**	P	**P**	**00 52 32.2**	**+0.2**
319A				IAmb	IAmb	00 52 35.6	
	comp=Z,2.4nm,0.9s						
NVAR	**Mina Array Bea**	**95.50**	**22**	P	**P**	**00 52 53.2**	**+1.6**
	comp=Z,0.2nm,0.4s,baz=216,slow=5.6,SNR=2.3						
ILAR	**Eielson Array**	**118.58**	**0**	PKP	**PKiKP**	**00 58 13.8**	**+0.5**
	comp=Z,2.1nm,0.9s,baz=231,slow=1.6,SNR=12						
YKA	**Yellowknife Ar**	**119.08**	**17**	PKP	**PKPdf**	**00 58 14.2**	**0.0**
	comp=Z,0.2nm,0.7s,baz=184,slow=1.8,SNR=4.6						
INK	**Inuvik**	**122.55**	**6**		**PKiKP**	**00 58 21.7**	**+0.7**
SUMG	**Summit**	**145.89**	**31**		**PKPbc**	**00 59 05.8**	**+0.5**
RAYN	**Ar Rayn**	**147.97**	**202**		**PKiKP**	**00 59 13.5**	**-0.5**
MK31	**Makanchi Array**	**148.22**	**277**		**PKiKP**	**00 59 13.6**	**-0.2**
MKAR	**Makanchi Array**	**148.22**	**277**	PKPbc	**PKPbc**	**00 59 13.0**	**+0.9**
	comp=Z,3.5nm,0.9s,baz=100,slow=6.3,SNR=16						
ZALV	**Zalesovo Beam**	**150.02**	**291**	PKPbc	**PKPbc**	**00 59 16.3**	**0.0**
	comp=Z,0.4nm,0.4s,baz=169,slow=3.0,SNR=6.0						
ZALV				PKPab	**PKPab**	**00 59 22.8**	**+0.6**
	comp=Z,2.9nm,0.8s,baz=132,slow=2.1,SNR=12						
ESDC	**Sonseca Array**	**151.40**	**105**	PKPbc	**PKiKP**	**00 59 20.8**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=244,slow=1.8,SNR=12						

*IDC **30** 00:47:01.2±1.4, 17°.27S × 167°.89E, h0 km, mb4.1/4, mb1 4.3/5, mb1mx3.8/40, mbtmp4.2/5, ML5.1/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/39, Error ellipse: s-maj=60.9km s-min=29.8km az=137.0*

ISC 30 00:47:04.3±1.3, 18°.5S±0°.1 × 168°.7E±0°.2, h27 km, n7, σ 2§25/8, mb4.0/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.10**	**211**	Pn	**Pb**	**00 48 16.4**	**+0.5**
	66nm,0.3s,baz=308,slow=4.2,SNR=462						
DZM				Sn	**Sb**	**00 49 04.5**	**-0.5**
	9.0nm,0.3s,baz=313,slow=23,SNR=2.5						
DZM				LR	LR	00 49 36.7	
	comp=Z,33nm,21.9s,baz=232,slow=31						
ASAR	**Alice Springs**	**32.80**	**255**	P	**P**	**00 53 34.2**	**-1.4**
	1.0nm,0.7s,baz=74,slow=9.2,SNR=7.1						
ASAR				LR	LR	01 04 46.1	
	comp=Z,124nm,20.2s,baz=286,slow=33						
FITZ	**Fitzroy Crossi**	**40.80**	**264**	S	**S**	**01 00 56.0**	**+2.7**
	baz=11						
NWAO	**Narrogin (SRO)**	**48.07**	**242**	P	**P**	**00 55 41.5**	**-0.3**
	2.5nm,0.6s,baz=84,slow=10,SNR=1.1						
TXAR	**Lajitas Array**	**96.89**	**61**	P	**P**	**01 00 35.7**	**+2.1**
	0.6nm,1.1s,baz=218,slow=5.5,SNR=2.4						
YKA	**Yellowknife Ar**	**100.29**	**27**	P	**Pdif**	**01 00 46.9**	**-0.9**
	0.1nm,0.7s,baz=262,slow=4.3,SNR=2.4						
ARCES	**ARCESS Array B**	**124.26**	**345**	PKP	**PKPdf**	**01 05 56.8**	**-3.1**
	0.4nm,0.6s,baz=20,slow=2.9,SNR=5.1						

*IDC **30** 00:51:38.2±1.3, 8°.25S × 118°.97E, h0 km, mb4.0/6, mb1 4.2/10, mb1mx3.8/48, mbtmp4.0/10, ML3.6/4, Error ellipse: s-maj=50.6km s-min=16.2km az=59.0*

*DJA **30** 00:51:39.2±0.3, 8°.S±3°.× 11°.9E±°, h10 km, M4.0/7, MLv4.0/7*

*NEIC **30** 00:51:43.1±2.4, 8°.15S±0°.07 × 119°.14E±0°.05, h40 km±11 km, mb4.1/13, Error ellipse: s-maj=12.6km s-min=2.7km az=211.0*

ISC 30 00:51:42.5±0.6, 8°.16S±0°.05 × 119°.11E±0°.06, h34 km, n38, σ 1§19/37, mb4.2/9, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**1.48**	**243**	P	**Pn**	**00 52 04.8**	**-2.0**
WBSI	**Waikabubak, Su**	**1.50**	**169**	P	**Pn**	**00 52 05.1**	**-2.0**
WSI	**Waingapu**	**1.91**	**142**	P	**Pn**	**00 52 13.4**	**+0.8**
BASI	**Baing, Sumba**	**2.51**	**145**	P	**Pn**	**00 52 21.0**	**+0.1**
EDFI	**Ende, Flores**	**2.62**	**103**	P	**Pn**	**00 52 23.2**	**+0.7**
BKSI	**Bulukumba**	**2.99**	**20**	P	**Pn**	**00 52 26.9**	**-0.7**
MMRI	**Maumere**	**3.13**	**99**	P	**Pn**	**00 52 27.9**	**-1.6**
MMRI	**Maumere**	**3.13**	**99**	Pn	**Pn**	**00 52 30.0**	**+0.5**
KAPI	**Kappang**	**3.19**	**12**	Pn	**Pn**	**00 52 29.9**	**-0.4**
	2.8nm,0.3s,baz=223,slow=4.3,SNR=9.8						
KAPI				Sn	**Sn**	**00 53 06.4**	**-0.7**
	1.9nm,0.3s,baz=217,slow=12,SNR=2.5						
BNSI	**Bone**	**3.86**	**15**	P	**Pn**	**00 52 38.1**	**-1.5**
JAGI	**Jajag, Banyuwa**	**4.92**	**266**	Pn	**Pn**	**00 52 55.8**	**+1.7**
BATI	**Baumata**	**4.93**	**115**	Pn	**Pn**	**00 52 56.7**	**+2.4**
	5.4nm,0.3s,baz=52,slow=7.2,SNR=2.3						
SOEI	**Soe**	**5.33**	**108**	Pn	**Pn**	**00 52 59.6**	**-0.4**
SMRI	**Semarang**	**8.67**	**277**	Pn	**Pn**	**00 53 46.6**	**+1.0**
FITZ	**Fitzroy Crossi**	**11.75**	**148**	Pn	**Pn**	**00 54 27.4**	**-0.4**
	0.3nm,0.3s,baz=350,slow=4.3,SNR=8.9						
FITZ				Sn	**Sn**	**00 56 37.1**	**-0.7**
	0.5nm,0.3s,baz=171,slow=14,SNR=7.0						
KNRA	**Kununurra**	**12.04**	**129**	Pn	**Pn**	**00 54 30.1**	**-1.7**
WB0	**Warramunga Arr**	**18.77**	**130**		**Pn**	**00 55 59.1**	**-0.5**
WB0				IAmb	IAmb	00 56 08.3	
	comp=Z,12nm,1.3s						
WRA	**Warramunga Arr**	**18.83**	**130**	P	**P**	**00 55 59.5**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=306,slow=12,SNR=9.8						
WRAB	**Tennant Creek**	**18.84**	**130**	P	**P**	**00 55 59.6**	**-0.1**
WRAB				IAmb	IAmb	00 56 11.1	
	comp=Z,15nm,0.8s						
WB2	**Warramunga Arr**	**18.84**	**130**	P	**P**	**00 55 59.6**	**-0.2**
WR0	**Warramunga Arr**	**19.00**	**130**	P	**Pn**	**00 56 02.1**	**-0.2**
AS31	**Alice Springs**	**20.95**	**139**	P	Pn	00 56 24.7	-0.7
AS31				IAmb	IAmb	00 56 30.7	
	comp=Z,4.8nm,0.8s						
ASAR	**Alice Springs**	**20.95**	**139**	P	**P**	**00 56 22.7**	**0.0**
	comp=Z,4.4nm,0.8s,baz=313,slow=9.3,SNR=21						
IPM	**Ipoh**	**21.98**	**304**	P	**P**	**00 56 33.3**	**-0.5**
IPM				IAmb	IAmb	00 56 39.2	
	comp=Z,8.7nm,0.9s						
KULM	**Kulim**	**22.75**	**305**	P	**P**	**00 56 42.4**	**+0.3**
KULM				IAmb	IAmb	00 56 52.6	
	comp=Z,14nm,1.2s						
RPSI	**Rantau Prapat**	**22.84**	**297**	P	**P**	**00 56 42.4**	**-0.6**
RPSI				IAmb	IAmb	00 57 01.2	
	comp=Z,7.0nm,1.1s						
NWAO	**Narrogin (SRO)**	**24.71**	**184**	P	**P**	**00 56 59.9**	**-0.8**
NWAO	**Narrogin (SRO)**	**24.71**	**184**	P	**P**	**00 56 59.4**	**-1.2**
NWAO				IAmb	IAmb	00 57 04.8	
	comp=Z,20nm,1.2s						
PMG	**Port Moresby**	**27.74**	**95**	P	**P**	**00 57 27.0**	**-1.3**
PBKT	**Sadao Pong**	**30.43**	**324**	P	**P**	**00 57 52.2**	**+0.2**
YULB	**Yu-li**	**31.43**	**4**	P	**P**	**00 57 58.9**	**-1.9**
YULB				IAmb	IAmb	00 58 10.9	
	comp=Z,5.2nm,0.9s						
STKA	**Stephens Creek**	**31.53**	**142**	P	**P**	**00 58 02.5**	**+0.8**
	comp=Z,2.8nm,0.8s,baz=300,slow=11,SNR=5.0						
STKA	**Stephens Creek**	**31.53**	**142**	IAmb	IAmb	00 58 03.3	
	comp=Z,1.2nm,1.2s						
CMAR	**Chiang Mai Arr**	**33.10**	**323**	P	**P**	**00 58 16.7**	**+1.1**
	comp=Z,1.3nm,0.3s,baz=150,slow=9.3,SNR=1.5						
KSRS	**Korea Array**	**46.12**	**10**	P	**P**	**01 00 04.6**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=187,slow=8.6,SNR=4.4						
DZM	**Mont Dzumac**	**47.54**	**112**	*e*LR	LR	01 00 55.6	
	comp=Z,116nm,26.0s						
SONM	**Songino Array**	**56.87**	**350**	P	**P**	**01 01 27.0**	**+2.9**
	comp=Z,0.4nm,0.5s,baz=177,slow=5.8,SNR=4.4						
MKAR	**Makanchi Array**	**63.76**	**333**	P	**P**	**01 02 10.7**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=140,slow=6.3,SNR=4.6						

JMA 30 00:53:25.3±0.3, 24°.79N × 123°.38E, h26 km, M1.9, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.47**	**226**	P	Pb	00 53 34.6	-0.4
YOJ				S	Sb	00 53 41.2	-0.4
JYNG	**Yonagunijimaku**	**0.52**	**230**	P	Pb	00 53 36.0	+0.1
JYNG				S	Sb	00 53 42.9	-0.2
IRIF	**Iriomote-Funau**	**0.55**	**145**	P	Pb	00 53 36.2	-0.3
IRIF				S	Sb	00 53 44.6	+0.6
JKRS	**Kuro-shima**	**0.79**	**134**	P	Pb	00 53 39.9	-0.6
JKRS				*e*S	Sb	00 53 50.6	-0.2
JIJ	**Ishigaki jima**	**0.81**	**121**	P	Pb	00 53 40.4	-0.4
JIJ				S	Sb	00 53 50.4	-1.0
HATJ	**Hateruma jima**	**0.83**	**152**	P	Pb	00 53 40.5	-0.

ϕ_s302.00000°, δ77.00000°, λ71.00000°. Principal axes: T 5.0970, Plg54.0000°, Azm189.0000°; N 0.7090, Plg18.0000°, Azm306.0000°; P -5.8120, Plg30.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*IDC **30** 00:56:21.7$\pm$0.4, 8.27S$\times$119.63E, h189km$\pm$3km, mb4.9/36, mb1 4.9/41, mb1mx4.9/45, mbtmp5.4/41, MS3.6/3, Ms1 3.6/3, ms1mx3.2/35 Error ellipse: s-maj=8.1km s-min=5.6km az=75.0*

*KLM **30** 00:56:21.0, 8.55S$\times$119.73E, h193km, mb5.3*

ISC 30 00:56:20.0$\pm$0.3, 8.40S$\pm$0.03$\times$119.59E$\pm$0.03, h180km$\pm$2km, h181km; pP-P, n807, σ1978/837, mb5.1/132, 23C-14D, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**1.25**	**189**	P		**Pn**	**00 56 49.2**	**-0.6**
PLAI	**Plampang**	**1.84**	**257**	P		**Pn**	**00 56 55.3**	**-0.1**
BASI	**Baing, Sumba**	**2.05**	**152**	P		**Pn**	**00 56 58.1**	**+0.5**
EDFI	**Ende, Flores**	**2.10**	**100**	P		**Pn**	**00 56 59.6**	**+1.3**
MMRI	**Maumere**	**2.63**	**95**	P		**Pn**	**00 57 06.1**	**+1.9**
MMRI	**Maumere**	**2.63**	**95**	Pn		**Pn**	**00 57 06.0**	**+1.7**
MMRI						Sn		
BKSI	**Bulukumba**	**3.11**	**10**	P		**Pn**	**00 57 12.0**	**+2.0**
KAPI	**Kappang**	**3.37**	**3**	P		**Pn**	**00 57 15.4**	**+2.1**
	150nm,0.3s,baz=181,slow=7.7,SNR=243							
KAPI				S		**Sn**	**00 57 56.3**	**+1.4**
	51nm,0.3s,baz=170,slow=23,SNR=5.8							
KAPI	**Kappang**	**3.37**	**3**			**Pn**	**00 57 14.0**	**+0.8**
BNSI	**Bone**	**4.01**	**7**	P		**Pn**	**00 57 24.9**	**+3.6**
BBSI	**Bau Bau**	**4.14**	**46**	P		**Pn**	**00 57 26.1**	**+3.2**
BATI	**Baumata**	**4.40**	**114**	P		**Pn**	**00 57 28.1**	**+1.8**
	625nm,0.3s,baz=310,slow=2.0,SNR=189							
BATI				S		**Sn**	**00 58 16.9**	**-1.3**
	472nm,0.3s,baz=204,slow=13,SNR=5.1							
BATI	**Baumata**	**4.40**	**114**	P		**Pn**	**00 57 28.1**	**+1.8**
SPSI	**Sidrap Palu**	**4.41**	**2**	P		**Pn**	**00 57 29.1**	**+2.6**
SOEI	**Soe**	**4.81**	**107**	P		**Pn**	**00 57 33.1**	**+1.5**
SOEI	**Soe**	**4.81**	**107**			**Pn**	**00 57 33.4**	**+1.8**
TTSI	**Tana Toraja**	**5.33**	**2**	P		**Pn**	**00 57 42.8**	**+4.5**
	1.7nm5μm534nm,0.8s							
JAGI	**Jajag, Banyuwa**	**5.38**	**269**	P		**Pn**	**00 57 35.8**	**-3.2**
	9.1nm15μm832nm,1.0s							
JAGI	**Jajag, Banyuwa**	**5.38**	**269**			**Pn**	**00 57 36.5**	**-2.5**
KMMI	**Kalianget**	**5.73**	**283**	P		**Pn**	**00 57 45.0**	**+1.4**
	1.8nm5μm425nm,0.9s							
KBKI	**Kotabaru**	**6.11**	**326**	P		**Pn**	**00 57 50.5**	**+2.0**
	0.4nm1μm109nm,0.9s							
GRJI	**Gresik**	**7.20**	**281**	P		**Pn**	**00 58 03.3**	**+0.4**
	3.1nm8μm1μm,0.8s							
BKB	**Balikpapan**	**7.59**	**339**	Pn		**Pn**	**00 58 07.9**	**0.0**
LUWI	**Luwuk**	**7.97**	**24**	P		**Pn**	**00 58 15.6**	**+2.6**
	7μm612nm,1.2s							
LUWI	**Luwuk**	**7.97**	**24**			**Pn**	**00 58 14.9**	**+2.0**
SMKI	**Samarinda**	**8.25**	**343**	P		**Pn**	**00 58 21.1**	**+4.4**
	19μm206nm,1.1s							
WOJI	**Wonogiri, Jawa**	**8.60**	**273**	P		**Pn**	**00 58 20.1**	**-1.2**
	2.3nm10μm436nm,0.6s							
MPSI	**Mapaga**	**8.69**	**2**	P		**Pn**	**00 58 25.6**	**+3.2**
	3μm25nm,0.9s							
UGM	**Wanagama**	**8.99**	**272**	P		**Pn**	**00 58 25.3**	**-1.1**
	11μm1μm,0.6s							
UGM	**Wanagama**	**8.99**	**272**	Pn		**Pn**	**00 58 23.9**	**-2.6**
NLAI	**Namlea**	**9.06**	**56**	P		**Pn**	**00 58 31.6**	**+4.3**
	559nm,0.9s							
SMRI	**Semarang**	**9.17**	**278**	P		**Pn**	**00 58 29.4**	**+0.7**
	16μm2μm,0.8s							
SMRI	**Semarang**	**9.17**	**278**	Pn		**Pn**	**00 58 28.9**	**+0.1**
YOGI	**Yogyakarta**	**9.22**	**273**	P		**Pn**	**00 58 28.4**	**-1.1**
	5μm374nm,0.8s							
AAI	**Ambon**	**9.75**	**62**	P		**Pn**	**00 58 39.1**	**+2.7**
	13μm1μm,1.6s							
KMSI	**Cibinong**	**9.94**	**26**	P		**Pn**	**00 58 42.6**	**+3.8**
	524nm,1.2s							
MSAI	**Masohi**	**10.56**	**62**	P		**Pn**	**00 58 49.4**	**+2.5**
	1μm106nm,0.7s							
BNDI	**Bandanaira**	**10.95**	**70**	P		**P**	**00 58 59.4**	**+0.2**
LBMI	**Labuha**	**11.03**	**46**	P		**Pn**	**00 58 55.6**	**+2.6**
	4μm414nm,0.9s							
FITZ	**Fitzroy Crossi**	**11.29**	**149**	P		**Pn**	**00 58 56.8**	**+0.5**
	5.2nm,0.3s,baz=339,slow=8.4,SNR=70							
FITZ				S		**Sn**	**01 00 55.2**	**-6.7**
	34nm,0.3s,baz=210,slow=14,SNR=12							
FITZ				LR		LR	01 04 00.5	
	comp=Z,204nm,20.7s,baz=330,slow=40							
FITZ	**Fitzroy Crossi**	**11.29**	**149**	Pn		**Pn**	**00 58 56.7**	**+0.4**
KNRA	**Kununurra**	**11.52**	**130**	S		**Sn**	**01 01 00.5**	**-6.8**
	baz=12							
KNRA	**Kununurra**	**11.52**	**130**	Pn		**Pn**	**00 58 59.3**	**0.0**
SAUI	**Saumlaki**	**11.60**	**89**	P		**Pn**	**00 59 00.3**	**-0.1**
	32μm1μm,0.7s							
SAUI	**Saumlaki**	**11.60**	**89**	Pn		**Pn**	**00 58 60.0**	**-0.4**
CISI	**Cisompet, Garu**	**11.69**	**273**	P		**Pn**	**00 58 57.9**	**-3.8**
	11μm542nm,0.7s							
CISI	**Cisompet, Garu**	**11.69**	**273**	Pn		**Pn**	**00 58 58.3**	**-3.3**
TNTI	**Ternate**	**11.96**	**41**	P		**P**	**00 59 07.9**	**-2.7**
	5μm468nm,1.1s							
TNTI	**Ternate**	**11.96**	**41**			**Pn**	**00 59 07.7**	**+2.6**
LEM	**Lembang**	**11.97**	**277**	P		**Pn**	**00 59 04.7**	**-0.7**
	21nm,0.3s,baz=64,slow=11,SNR=44							
LEM				S		**Sn**	**01 01 16.6**	**-1.9**
	3.5nm,0.3s,baz=331,slow=23,SNR=1.5							
CNJI	**Cibinong**	**12.39**	**274**	P		**Pn**	**00 59 07.1**	**-3.5**
	4μm457nm,0.8s							
MBWA	**Marble Bar**	**12.68**	**179**	Pn		**Pn**	**00 59 14.4**	**+0.3**
DBJI	**Dramaga**	**12.87**	**277**	P		**Pn**	**00 59 15.3**	**-1.3**
	10μm440nm,0.9s							
SBUM	**Sibu**	**13.05**	**325**			**P**	**00 59 22.2**	**-0.5**
SBUM	**Sibu**	**13.05**	**325**	P		**P**	**00 59 26.0**	**+3.4**
PSA00	**Pilbara Seismi**	**13.10**	**179**	Pn		**Pn**	**00 59 19.1**	**-0.3**
TPI	**Tanjungpandan**	**13.13**	**295**	P		P	00 59 28.9	+5.3
KSM	**Kuching**	**13.49**	**316**			**Pn**	**00 59 22.7**	**-1.7**
FAKI	**Fak Fak**	**13.72**	**67**	P		**Pn**	**00 59 26.9**	**-0.4**
	2μm10μm866nm,0.6s							
FAKI	**Fak Fak**	**13.72**	**67**	Pn		**Pn**	**00 59 26.6**	**-0.8**
SIJI	**Sorong**	**13.83**	**58**	P		**Pn**	**00 59 29.2**	**+0.5**
	46nm,0.3s,baz=233,slow=6.5,SNR=156							
SIJI				S		**Sn**	**01 01 59.3**	**-3.5**
	baz=245,slow=22,SNR=1.2							
XMIS	**Christmas Isla**	**13.90**	**260**			**Pn**	**00 59 29.6**	**0.0**
KKM	**Kota Kinabalu**	**14.74**	**347**			**P**	**00 59 42.6**	**+1.0**
GIRL	**Giralia**	**15.06**	**199**	P		**P**	**00 59 45.2**	**+0.3**
KASI	**Kota Agung**	**15.25**	**280**	P		**Pn**	**00 59 43.6**	**-2.7**
RKPI	**Ransiki, Papua**	**16.06**	**66**	P		**Pn**	**00 59 56.3**	**+0.2**
	20μm997nm,0.6s							
KCP	**Kidapawan**	**16.26**	**20**	$\Uparrow$*i*P		**Pn**	**01 00 00.6**	**+2.0**
DAV	**Davao City (W)**	**16.49**	**21**	P		**P**	**01 00 00.1**	**-0.6**
	26nm,0.3s,baz=206,slow=3.5,SNR=1.2							
DAV	**Davao City (W)**	**16.49**	**21**	$\Downarrow$*i*P		**Pn**	**01 00 01.9**	**+0.6**
LHSI	**Lahat**	**16.61**	**285**	P		**Pn**	**01 00 03.6**	**+0.9**
	5μm125nm,0.8s							
BATP	**Bataraza**	**17.18**	**354**	*e*P		**Pn**	**01 00 10.5**	**+1.0**
CGP	**Cagayan de Oro**	**17.50**	**17**	*e*P		**Pn**	**01 00 15.3**	**+2.0**
SRPI	**Serui, Papua**	**17.80**	**70**	P		**Pn**	**01 00 16.2**	**-0.7**
	174nm2.5nm,0.6s							
MASI	**Maura Aman, Be**	**18.03**	**286**	P		Pn	01 00 32.4	+13
WB0	**Warramunga Arr**	**18.25**	**130**	IAmb		IAmb	01 00 23.7	
	comp=Z,94nm,0.8s							
WRA	**Warramunga Arr**	**18.31**	**130**	P		**P**	**01 00 21.5**	**+0.8**
	comp=Z,16nm,0.3s,baz=300,slow=12,SNR=440							
WRA				S		**S**	**01 03 37.4**	**-3.3**
	comp=Z,8.5nm,0.3s,baz=308,slow=20,SNR=12							
WRA				LR		LR	01 07 32.6	
	comp=Z,153nm,19.3s,baz=275,slow=36							
WRA				ScP		**ScP**	**01 08 02.3**	**-0.8**
	baz=296,slow=3.5,SNR=5.3							
WRAB	**Tennant Creek**	**18.31**	**130**	*i* P		**P**	**01 00 21.7**	**+1.0**
WB2	**Warramunga Arr**	**18.32**	**130**			IAmb	IAmb	01 00 28.2
	comp=Z,117nm,0.7s							
WR0	**Warramunga Arr**	**18.47**	**130**	P		**P**	**01 00 23.6**	**+1.1**
KRJI	**Kerinci**	**19.10**	**288**	P		**Pn**	**01 00 38.2**	**+5.9**
WAMI	**Wamena**	**19.53**	**78**	P		**Pn**	**01 00 37.0**	**-0.3**
	comp=Z,406nm,0.9s							
SMPI	**Sarmi**	**20.07**	**73**	P		**P**	**01 00 40.2**	**+0.5**
	comp=Z,2μmcomp=Z,134nm,1.3s							
RCP	**Roxas**	**20.08**	**9**	$\Uparrow$*e*P		Pn	01 00 50.3	+6.4
AS31	**Alice Springs**	**20.45**	**140**	P		**P**	**01 00 45.1**	**+1.4**
AS31						IAmb	IAmb	01 00 48.2
	comp=Z,97nm,0.7s							
ASAR	**Alice Springs**	**20.45**	**140**	P		**P**	**01 00 44.9**	**+1.2**
	comp=Z,207nm,0.5s,baz=313,slow=9.6,SNR=780							
ASAR				S		**S**	**01 04 17.2**	**-5.7**
	comp=Z,32nm,1.0s,baz=310,slow=16,SNR=5.2							
ASAR				ScP		**ScP**	**01 08 07.0**	**-0.9**
	comp=Z,38nm,0.7s,baz=337,slow=2.2,SNR=14							
MMPI	**Merauke**	**20.57**	**92**	P		**P**	**01 00 45.3**	**+0.3**
	comp=Z,65μmcomp=Z,2μm,0.7s							
OTRP	**Odiongan**	**20.77**	**7**	*e*P		**P**	**01 00 48.5**	**+1.4**
SJMP	**San Jose**	**20.78**	**4**	*e*P		**P**	**01 00 49.0**	**+1.7**
MORW	**Morawa**	**20.83**	**189**	P		**P**	**01 00 48.3**	**+0.7**
MORW						IAmb	IAmb	01 00 51.0
	comp=Z,110nm,1.0s							
GENI	**Genyem**	**21.27**	**75**	P		**P**	**01 00 52.0**	**-0.5**
	comp=Z,16μmcomp=Z,507nm,1.0s							
CNP	**Catarman**	**21.38**	**14**	*e*P		**P**	**01 00 53.5**	**-0.1**
PGP	**Puerto Galera**	**21.80**	**4**	$\downarrow$*i*P		**P**	**01 00 59.2**	**+1.2**
JAY	**Jayapura**	**21.81**	**76**	P		**P**	**01 00 56.7**	**-1.5**
	comp=Z,119nm,0.8s,baz=227,slow=6.4,SNR=36							
JAY	**Jayapura**	**21.81**	**76**	P		**P**	**01 00 57.4**	**-0.8**
	comp=Z,602nmcomp=Z,82nm,0.9s							
LUBP	**Lubang**	**22.00**	**2**	*e*P		**P**	**01 01 00.6**	**+0.6**
PVCP	**Virac**	**22.32**	**12**	*e*P		**P**	**01 01 02.4**	**-0.7**
TGY	**Tagaytay City**	**22.40**	**3**	P		**P**	**01 01 04.9**	**+1.1**
	comp=Z,2μm,0.6s,baz=190,slow=2.6,SNR=36							
IPM	**Ipoh**	**22.51**	**304**	P		**P**	**01 01 05.4**	**+0.6**
IPM	**Ipoh**	**22.51**	**304**	P		**P**	**01 01 06.0**	**+1.2**
DLV	**T Lat**	**23.03**	**331**	P		**P**	**01 01 10.5**	**+0.7**
KULM	**Kulim**	**23.28**	**305**	P		**P**	**01 01 12.0**	**+0.2**
KULM	**Kulim**	**23.28**	**305**	P		**P**	**01 01 12.0**	**+0.2**
RPSI	**Rantau Prapat**	**23.37**	**297**	P		**P**	**01 01 13.1**	**+0.4**
PSI	**Prapat**	**23.42**	**298**	P		**P**	**01 01 12.8**	**-0.5**
	comp=Z,21nm,0.9s,baz=180,slow=4.5,SNR=12							
PSI				ScP		**ScP**	**01 08 14.1**	**-1.7**
	comp=Z,10nm,0.9s,baz=180,slow=5.7,SNR=6.1							
PSI	**Prapat**	**23.42**	**298**	P		**P**	**01 01 13.1**	**-0.2**
PSI				pmax		pmax		
	comp=Z,30nm,1.1s							
FORT	**Forrest**	**23.63**	**162**	P		**P**	**01 01 16.2**	**+1.5**
COEN	**Coen**	**23.77**	**106**	P		**P**	**01 01 17.6**	**+1.3**
PCPH	**Palayan**	**23.86**	**4**	$\Uparrow$*e*P		**P**	**01 01 18.0**	**+1.1**
SMPP	**San Manuel, Pa**	**24.42**	**3**	*e*P		**P**	**01 01 21.5**	**-0.6**
NWAO	**Narrogin (SRO)**	**24.50**	**185**	P		**P**	**01 01 23.4**	**+0.7**
	comp=Z,64nm,0.5s,baz=10,slow=8.9,SNR=59							
NWAO	**Narrogin (SRO)**	**24.50**	**185**	P		**P**	**01 01 23.7**	**+1.0**
NWAO				pmax		pmax		
	comp=Z,93nm,0.7s							
NWAO	**Narrogin (SRO)**	**24.50**	**185**	P		**P**	**01 01 23.7**	**+1.0**
BOLP	**Bolinao**	**24.63**	**1**	*e*P		**P**	**01 01 18.2**	**-5.7**
PALP	**Palanan**	**25.46**	**6**	*e*P		**P**	**01 01 31.9**	**+0.4**
H01W3	**Cape Leeuwin H**	**26.83**	**190**	P		**P**	**01 01 42.7**	**-0.7**
	baz=19,slow=12,SNR=4.0							
H01W1	**Cape Leeuwin H**	**26.83**	**190**	P		**P**	**01 01 42.7**	**-0.7**
	baz=19,slow=12,SNR=7.1							
H01W2	**Cape Leeuwin H**	**26.84**	**190**	P		**P**	**01 01 42.6**	**-0.9**
	baz=19,slow=12,SNR=5.4							
PMG	**Port Moresby**	**27.25**	**94**	P		**P**	**01 01 47.5**	**-0.2**
	comp=Z,18nm,0.5s,baz=295,slow=5.8,SNR=4.9							
PMG	**Port Moresby**	**27.25**	**94**	*i* P		**P**	**01 01 47.8**	**+0.1**
PMG				pmax		pmax		
	comp=Z,103nm,1.0s							
CTA	**Charters Tower**	**28.28**	**117**	P		**P**	**01 01 58.8**	**+2.0**
	comp=Z,26nm,0.8s,baz=284,slow=12,SNR=21							
CTA				PcP		**PcP**	**01 05 06.5**	**+1.0**
	comp=Z,7.4nm,0.5s,baz=265,slow=6.0,SNR=2.5							
CTAO	**Charters Tower**	**28.28**	**117**	P		**P**	**01 01 59.4**	**+2.6**
CTAO				pmax		pmax		
	comp=Z,31nm,0.8s							
CTAO	**Charters Tower**	**28.28**	**117**	P		**P**	**01 01 59.4**	**+2.6**
CTAO				IAmb		IAmb	01 02 00.1	
	comp=Z,31nm,0.8s							
BBOO	**Buckleboo**	**28.68**	**150**	P		**P**	**01 02 01.5**	**+1.4**
QIZ	**Qiongzhong**	**28.91**	**341**	P		**P**	**01 02 04.0**	**+1.8**
QIZ				S		**S**	**01 06 40.0**	**+0.5**
QIZ				pmax		pmax		
	comp=Z,54nm,1.2s							
QIZ	**Qiongzhong**	**28.91**	**341**	IAmb		IAmb	01 02 05.7	
	comp=Z,43nm,1.0s							
STKA	**Stephens Creek**	**31.05**	**142**	P		**P**	**01 02 23.0**	**+1.9**
	comp=Z,238nm,0.5s,baz=316,slow=9.2,SNR=732							
STKA				ScP		**ScP**	**01 08 37.8**	**-0.6**
	comp=Z,22nm,0.6s,baz=339,slow=5.0,SNR=12							
STKA	**Stephens Creek**	**31.05**	**142**	P		**P**	**01 02 23.2**	**+2.2**
STKA				pmax		pmax		
	comp=Z,51nm,0.7s							
STKA	**Stephens Creek**	**31.05**	**142**	P		**P**	**01 02 23.2**	**+2.2**
STKA				IAmb		IAmb	01 02 23.9	
	comp=Z,51nm,0.7s							
TPUB	**Ta-pu**	**31.53**	**2**	IAmb		IAmb	01 02 27.1	
	comp=Z,50nm,0.8s							
YULB	**Yu-li**	**31.64**	**3**	P		**P**	**01 02 25.0**	**-1.3**
YULB				IAmb		IAmb	01 02 28.9	
	comp=Z,45nm,0.7s							
SSLB	**Suanglung**	**32.02**	**2**	P		**P**	**01 02 29.7**	**0.0**
SSLB				IAmb		IAmb	01 02 31.7	
	comp=Z,43nm,0.6s							
NACB	**Ninganchiao**	**32.44**	**3**	IAmb		IAmb	01 02 33.4	
	comp=Z,31nm,0.7s							
KRVT	**Keravat (AS076**	**32.48**	**85**	P		**P**	**01 02 33.9**	**+0.1**
	comp=Z,24nm,0.5s,baz=0.3,slow=23,SNR=4.0							
KRVT				LR		LR	01 17 44.7	
	comp=Z,257nm,20.3s,baz=328,slow=40							
KNMB	**Chin-men Tao**	**32.69**	**358**	P		**P**	**01 02 35.9**	**+0.5**
QZH	**Quanzhou**	**33.16**	**358**	$\Downarrow$*i*P		**P**	**01 02 40.0**	**+0.5**
QZH				S		**S**	**01 07 44.0**	**-1.6**
QZH				pmax		pmax		
	comp=Z,70nm,0.9s							
TATO	**Taipei**	**33.23**	**3**	P		**P**	**01 02 39.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**33.58**	**323**	P		**P**	**01 02 43.9**	**+0.6**
	comp=Z,7.2nm,0.7s,baz=152,slow=6.7,SNR=36							
CMAR				PcP		**PcP**	**01 05 19.6**	**0.0**
	comp=Z,3.0nm,0.6s,baz=182,slow=2.5,SNR=5.6							
CMAR				ScP		**ScP**	**01 08 46.7**	**-0.6**
	comp=Z,3.0nm,0.6s,baz=163,slow=2.7,SNR=9.0							
CHTO	**Chiang Mai**	**33.85**	**323**	P		**P**	**01 02 45.1**	**-0.5**
CHTO				pmax		pmax		
	comp=Z,19nm,0.9s							
CHTO	**Chiang Mai**	**33.85**	**323**	P		**P**	**01 02 45.1**	**-0.5**
JOW	**Kunigami**	**36.02**	**13**	P		**P**	**01 03 04.1**	**0.0**
	comp=Z,5.9nm,0.6s,baz=126,slow=14,SNR=29							
JOW	**Kunigami**	**36.02**	**13**	IAmb		IAmb	01 03 05.4	
	comp=Z,43nm,0.7s							
GYA	**Guiyang**	**36.86**	**340**	$\downarrow$*i*P		**P**	**01 03 13.0**	**+1.7**
GYA				sP		sP	01 04 10.8	+2.0
GYA				PP		**PnPn**	**01 04 43.0**	**+1.2**
GYA				S		**S**	**01 08 41.8**	**-0.7**
GYA				pmax		pmax		
	comp=Z,50nm,0.8s							
GYA				pmax		pmax		
	comp=Z,110nm,3.5s							
GYA				LR		LR		
	comp=Z,50nm,5.7s							
GYA				LR		LR		
	comp=Z,40nm,4.0s							
GYA				LR		LR		
	comp=Z,70nm,10.6s							
ARMA	**Armidale**	**37.09**	**131**	IAmb		IAmb	01 03 18.0	
	comp=Z,46nm,0.7s							
KMI	**Kunming**	**37.15**	**334**	P		**P**	**01 03 17.5**	**+3.6**
KMI				pP		pwP	01 03 58.8	+4.4
KMI				sP		sP	01 04 14.8	+3.1
KMI				S		**S**	**01 08 51.0**	**+3.8**
KMI				pmax		pmax		
	comp=Z,34nm,0.8s							
KMI				pmax		pmax		
	comp=Z,95nm,3.9s							
KMI				LR		LR		
	comp=Z,150nm,16.6s							
KMI				LR		LR		
	comp=Z,170nm,12.8s							
KMI				LR		LR		
	comp=Z,120nm,12.4s							
CAN	**Canberra**	**37.96**	**139**	IAmb		IAmb	01 03 24.2	
	comp=Z,51nm,0.9s							
WHN	**Wuhan**	**39.05**	**353**	$\downarrow$*i*P		**P**	**01 03 31.3**	**+1.9**
WHN				pmax		pmax		
	comp=Z,310nm,0.8s							
HNR	**Honiara**	**39.87**	**95**	P		**P**	**01 03 36.6**	**+0.2**
	comp=Z,370nm,0.8s,baz=220,slow=7.1,SNR=6.7							
HNR	**Honiara**	**39.87**	**95**	P		**P**	**01 03 37.4**	**+0.9**
HNR				pmax		pmax		
	comp=Z,492nm,0.9s							
HNR	**Honiara**	**39.87**	**95**	P		**P**	**01 03 37.4**	**+0.9**
NJ2	**Nanjing**	**40.23**	**359**	$\downarrow$*i*P		**P**	**01 03 40.8**	**+1.7**
NJ2				pmax		pmax		
	comp=Z,140nm,0.8s							
CD2	**Chengdu**	**41.94**	**339**	$\Uparrow$P		**P**	**01 03 54.5**	**+1.4**
CD2				pmax		pmax		
	comp=Z,260nm,0.6s							
TAU	**Tasmania Unive**	**42.10**	**149**	P		**P**	**01 03 57.3**	**+3.0**
TAU				pmax		pmax		
	comp=Z,40nm,0.9s							
TAU	**Tasmania Unive**	**42.10**	**149**	P		**P**	**01 03 57.3**	**+3.0**
TAU				IAmb		IAmb	01 03 58.2	
	comp=Z,40nm,0.8s							
JNU	**Nakatsue**	**42.67**	**14**	P		**P**	**01 03 58.1**	**-0.9**
	comp=Z,36nm,0.8s,baz=194,slow=2.3,SNR=31							
SHL	**Shillong**	**43.21**	**322**	P		**P**	**01 04 03.9**	**+0.2**
SHL				pmax		pmax		
	comp=Z,32nm,0.7s							
SHL	**Shillong**	**43.21**	**322**	P		**P**	**01 04 03.9**	**+0.2**
SHL				IAmb		IAmb	01 04 04.8	
	comp=Z,32nm,0.7s							
XAN	**Xi'an**	**43.41**	**347**	P		**P**	**01 04 05.3**	**+0.4**
XAN				S		**S**	**01 10 13.5**	**-6.0**
XAN				pmax		pmax		
	comp=Z,210nm,0.9s							
XAN	**Xi'an**	**43.41**	**347**	P		**P**	**01 04 05.5**	**+0.6**
XAN				pmax		pmax		
	comp=Z,132nm,0.7s							
XAN	**Xi'an**	**43.41**	**347**	P		**P**	**01 04 05.5**	**+0.6**
TIA	**Tai'an**	**44.44**	**357**	P		**P**	**01 04 12.8**	**-0.3**
TIA				pmax		pmax		
	comp=Z,25nm,0.6s							
TJN	**Taejon**	**45.14**	**9**	*ce*P		**P**	**01 04 18.8**	**+0.3**
KSRS	**Korea Array**	**46.28**	**9**	P		**P**	**01 04 27.2**	**-0.3**
	comp=Z,27nm,0.7s,baz=184,slow=8.4,SNR=105							
KSRS				pP		**pP**	**01 05 07.3**	**+1.3**
	comp=Z,8.9nm,0.9s,baz=186,slow=8.7,SNR=2.1							
KSRS				PcP		**PcP**	**01 05 59.2**	**-0.6**
	comp=Z,6.6nm,0.7s,baz=189,slow=4.1,SNR=6.4							
KSRS				ScP		**ScP**	**01 09 35.3**	**-0.9**
	comp=Z,2.2nm,0.7s,baz=186,slow=3.8,SNR=6.4							
LZH	**Lanzhou**	**46.67**	**342**	$\Uparrow$P		**P**	**01 04 32.8**	**+2.0**
LZH				sP		sP	01 05 29.8	+0.7
LZH				S		**S**	**01 11 05.3**	**-1.3**
LZH				pmax		pmax		
	comp=Z,91nm,1.1s							
LZH				pmax		pmax		
	comp=Z,78nm,5.4s							
LZH				LR		LR		
	comp=Z,1μm,14.1s							
LZH				LR		LR		
	comp=Z,2μm,17.0s							
LZH				LR		LR		
	comp=Z,2μm,18.4s							
LSA	**Lhasa**	**46.74**	**325**	P		**P**	**01 04 33.5**	**+1.7**
LSA				LR		LR		
	comp=Z,497μm,13.2s							
LSA				LR		LR		
	comp=Z,304μm,17.4s							
LSA				LR		LR		
	comp=Z,690μm,17.1s							
LSA	**Lhasa**	**46.74**	**325**	IAmb		IAmb	01 04 33.7	
	comp=Z,32nm,0.6s							
ODAN	**Odare**	**46.95**	**319**	*e*P		**P**	**01 04 33.3**	**+0.1**
	comp=Z,96nm,0.6s							
DZM	**Mont Dzumac**	**47.01**	**112**	P		**P**	**01 04 34.2**	**+0.6**
	comp=Z,57nm,0.9s,baz=247,slow=11,SNR=33							
DZM	**Mont Dzumac**	**47.01**	**112**	P		**P**	**01 04 36.4**	**+2.8**
DZM				IAmb		IAmb	01 04 42.6	
	comp=Z,70nm,0.9s							
TAPN	**Taplejung**	**47.08**	**320**	*e*P		**P**	**01 04 34.7**	**+0.4**
	comp=Z,150nm,0.6s							
RAMN	**Ramite**	**47.52**	**319**	*e*P		**P**	**01 04 37.9**	**+0.3**
	comp=Z,199nm,0.5s							
HYB	**Hyderabad**	**47.99**	**302**	*i* P		**P**	**01 04 39.0**	**-2.1**
HYB				*es*P		**sP**	**01 05 38.0**	**-1.8**
MJAR	**Matsushiro Arr**	**48.01

comp=Z,26nm,0.9s
ERM Erimo 54.62 21 P **P** **01 05 29.7 -0.2**
ERM IAmb IAmb 01 05 31.3
comp=Z,26nm,0.9s
TEY Ternei 55.36 15⇓*e*P **P** **01 05 34.5 -0.6**
TEY pmax pmax
comp=N,30nm,1.2s
TEY pmax pmax
comp=Z,40nm,1.2s
TEY pmax pmax
comp=E,10.0nm,0.7s
ASAJ Asahikawa 56.27 20 P **P** **01 05 41.4 -0.3**
comp=E,34nm,0.6s,baz=225,slow=9.9,SNR=19
RPZ Rata Peaks 56.84 137 P **P** **01 05 47.4 +1.6**
comp=E,73nm,0.9s,baz=326,slow=1.0,SNR=16
RPZ Rata Peaks 56.84 137 P **P** **01 05 48.2 +2.3**
ULN Ulaanbaatar 57.11 350*ce*P **P** **01 05 48.4 +0.7**
ULN pmax pmax
comp=Z,67nm,1.1s
ULN Ulaanbaatar 57.11 350 P **P** **01 05 48.3 +0.5**
ULN IAmb IAmb 01 05 49.9
comp=Z,63nm,1.1s
SONM Songino Array 57.20 349 P **P** **01 05 49.0 +0.7**
comp=Z,35nm,1.0s,baz=169,slow=8.1,SNR=138
SONM ScP **ScP** **01 10 22.3 -1.1**
comp=Z,1.2nm,0.7s,baz=179,slow=5.2,SNR=4.3
OXZ Oxford 57.36 137 P **P** **01 05 51.5 +2.0**
OXZ IAmb IAmb 01 05 52.1
comp=Z,32nm,0.8s
THZ Tophouse 57.41 135 P **P** **01 05 51.9 +2.0**
THZ IAmb IAmb 01 05 53.2
comp=Z,44nm,0.9s
HIA Hailar 57.42 0 IAmb IAmb 01 05 50.9
comp=Z,32nm,0.7s
MSVF Nonsavu 57.50 106 *i* P **P** **01 05 53.1 +2.1**
MSVF pmax pmax
comp=Z,84nm,0.9s
MSVF Nonsavu 57.50 106 P **P** **01 05 51.4 +0.5**
MSVF Nonsavu 57.50 106 P **P** **01 05 52.2 +1.2**
CASY Casey 58.13 184 P **P** **01 05 55.7 +1.4**
CASY IAmb IAmb 01 05 56.7
comp=Z,70nm,1.1s
KLR Kul'dur 58.37 9*de*P **P** **01 05 55.7 -0.6**
comp=Z,7.1nm,0.5s,baz=194,slow=6.6,SNR=32
KLR Kul'dur 58.37 9*de*P **P** **01 05 55.4 -0.9**
KLR pmax pmax
comp=Z,27nm,1.2s
YSS Yuzh-Sakhalins 58.84 18⇓*e*P **P** **01 05 59.0 -0.6**
YSS *e* 01 06 41.6
YSS pmax pmax
comp=Z,30nm,0.7s
WMQ Urumqi 59.48 334 *e*P **P** **01 06 06.3 +2.2**
WMQ LR LR
comp=Z,2μm,10.5s
WMQ LR LR
comp=Z,1μm,11.9s
WMQ LR LR
comp=Z,3μm,12.7s
ZAK Zakamensk 60.24 348 *e*P **P** **01 06 09.6 +0.4**
ZAK pmax pmax
comp=Z,22nm,1.4s
ZAK pmax pmax
comp=Z,9.0nm,1.2s
NIL Nilore 60.68 316 P **P** **01 06 11.4 -1.1**
NIL pmax pmax
comp=Z,13nm,0.7s
NIL Nilore 60.68 316 P **P** **01 06 11.4 -1.1**
GRNR Gornyy 60.71 12⇓*i*P **P** **01 06 12.6 +0.3**
GRNR pmax pmax
comp=Z,40nm,1.0s
GRNR MLR MLR
comp=Z,520nm,17.0s
TLY Talaya 61.40 349*d i*P **P** **01 06 17.7 +0.8**
TLY pmax pmax
comp=Z,89nm,1.0s
TLY Talaya 61.40 349 P **P** **01 06 17.5 +0.6**
TLY IAmb IAmb 01 06 19.9
comp=Z,23nm,0.7s
MOY Mondy 61.94 347 *e*P **P** **01 06 21.7 +1.1**
MOY pmax pmax
comp=Z,65nm,1.4s
ZEA Zeya 62.24 5 *e*P **P** **01 06 22.8 +0.4**
ZEA pmax pmax
comp=N,110nm,1.0s
ZEA pmax pmax
comp=E,47nm,1.0s
ZEA pmax pmax
comp=Z,160nm,0.8s
TYV Tymovskoe 62.32 16 *e*P **P** **01 06 23.8 +0.8**
TYV pmax pmax
comp=Z,300nm,3.2s
TYV pmax pmax
comp=Z,34nm,1.4s
KSH Kashi 62.48 323 P **P** **01 06 24.5 0.0**
KSH sP sP 01 07 24.8 +0.4
KSH PP **PP** **01 08 50.5 +6.1**
KSH S **S** **01 14 32.3 -5.3**
KSH pmax pmax
comp=Z,56nm,0.6s
KSH pmax pmax
comp=Z,180nm,3.9s
PDGK Podgornoye 63.06 328 P **P** **01 06 27.5 -0.8**
KBL Kabul 64.08 315 P **P** **01 06 34.5 -0.8**
KBL pmax pmax
comp=Z,27nm,0.6s
KBL Kabul 64.08 315 P **P** **01 06 34.5 -0.8**
KBL IAmb IAmb 01 06 34.9
comp=Z,27nm,0.6s
MK31 Makanchi Array 64.20 332 *e*P **P** **01 06 35.4 -0.1**
MK31 Makanchi Array 64.20 332 IAmb IAmb 01 06 37.6
comp=Z,18nm,0.8s
MKAR Makanchi Array 64.20 332 P **P** **01 06 35.5 0.0**
comp=Z,24nm,0.5s,baz=154,slow=7.2,SNR=267
MKAR pP **pP** **01 07 18.3 +2.0**
comp=Z,4.4nm,0.7s,baz=140,slow=7.6,SNR=1.5
MKAR S **S** **01 14 57.2 -1.2**
comp=Z,2.4nm,1.1s,baz=134,slow=10,SNR=4.7
MKAR LR LR 01 36 41.1
comp=Z,10μm,18.3s,baz=146,slow=38
MAKZ Makanchi 64.35 332 P **P** **01 06 36.2 -0.3**
MAKZ pmax pmax
comp=Z,11nm,0.6s
MAKZ Makanchi 64.35 332 P **P** **01 06 36.2 -0.3**
MAKZ IAmb IAmb 01 06 37.1
comp=Z,11nm,0.6s
KZA Kyzart 64.54 325 P **P** **01 06 38.3 0.0**
SNR=6.5
TKM2 Tokmak 2 64.89 326 P **P** **01 06 40.0 -0.4**
SNR=13
UCH Uchtor 65.06 325 P **P** **01 06 41.6 -0.1**
SNR=7.5
KBK Karagaybulak 65.08 325 P **P** **01 06 41.7 +0.2**
SNR=8.1
AAK Ala-Archa 65.33 325⇑*e*P **P** **01 06 43.3 +0.2**
AAK Ala-Archa 65.33 325 P **P** **01 06 43.2 +0.2**
ARSB Arslanbob 65.39 323 IAmb IAmb 01 06 46.9
comp=Z,36nm,0.9s
AML Almayashu 65.47 324 P **P** **01 06 44.4 +0.1**
SNR=13
GAR Garm 65.67 320 IAmb IAmb 01 06 45.7
comp=Z,42nm,0.7s
USP Ospenovka 65.73 325 P **P** **01 06 45.4 -0.1**
SNR=6.7
EKS2 Erkin-Say 65.75 325 P **P** **01 06 46.2 +0.4**
SNR=8.2
BOD Bodaibo 66.15 357⇑*i*P **P** **01 06 47.7 -0.1**
BOD pmax pmax
comp=Z,104nm,0.9s
WSAR Wadi Sarin 67.37 299 P **P** **01 06 56.0 -0.2**
SMDO Samad 67.81 299 P **P** **01 06 58.5 -0.6**
BIDO Bidbid 67.90 300 P **P** **01 06 59.3 -0.2**
SOCY Socotra 68.34 287 P **P** **01 07 02.2 -0.4**
SOCY Socotra 68.34 287 P **P** **01 07 02.0 -0.5**
SOCY IAmb IAmb 01 07 03.3
comp=Z,30nm,0.8s
BSY Bisya 68.44 298 P **P** **01 07 02.4 -0.6**
KNTN Kanton 68.52 90 P **P** **01 07 03.7 +0.1**
KNTN IAmb IAmb 01 07 05.8
comp=Z,54nm,0.9s
CRZF Crozet Islands 68.64 223 P **P** **01 07 02.9 -0.8**
ZAA0 Zalesovo Array 68.70 339 IAmb IAmb 01 07 06.2
comp=Z,25nm,0.6s
ZALV Zalesovo Beam 68.70 339 P **P** **01 07 02.8 -1.0**
comp=Z,29nm,0.5s,baz=144,slow=5.4,SNR=105
ZALV pP **pP** **01 07 47.8 +2.6**
comp=Z,7.3nm,0.7s,baz=141,slow=4.2,SNR=2.1
ZALV S **S** **01 15 50.4 -1.7**
comp=Z,0.4nm,0.3s,baz=142,slow=13,SNR=2.0
ZALV Zalesovo Beam 68.70 339 *i* P **P** **01 07 03.0 -0.8**
ZALV pmax pmax
comp=Z,29nm,0.5s
KURBB Kurchatov Arra 68.70 333 S **S** **01 15 50.9 -1.4**
comp=Z,0.2nm,0.6s,baz=136,slow=12,SNR=2.7
KURBB Kurchatov Arra 68.70 333 P **P** **01 07 01.8 -2.1**
KURK Kurchatov 68.73 333 P **P** **01 07 03.5 -0.6**
KURK pmax pmax
comp=Z,12nm,0.8s
KURK Kurchatov 68.73 333 P **P** **01 07 03.5 -0.6**
KURK Kurchatov 68.73 333 P **P** **01 07 03.7 -0.4**
HRA Herat 68.91 312 P **P** **01 07 04.7 -1.2**
PEA0B Petropavlovsk- 69.30 23*ce*P **P** **01 07 08.5 +0.9**
PETK Petropavlovsk- 69.30 23 P **P** **01 07 08.0 +0.5**
comp=Z,51nm,0.6s,baz=198,slow=5.7,SNR=123
PET Petropavlovsk 69.61 24 *e*P **P** **01 07 09.4 -0.1**
PET *e**SP **sP** **01 08 07.2 -2.3**
PET *e*S **S** **01 16 03.8 +0.9**
PET pmax pmax
comp=Z,72nm,0.8s
PET Petropavlovsk 69.61 24 P **P** **01 07 08.8 -0.7**
PET IAmb IAmb 01 07 11.1
comp=Z,47nm,0.8s
MAW Mawson 69.99 200 P **P** **01 07 13.9 +2.3**
comp=Z,69nm,0.9s,baz=70,slow=6.5,SNR=88
WHFO Wadi Hawf 70.03 292 P **P** **01 07 11.7 -1.2**
SNR=5.6
WHFO S **pP** **01 07 59.5 +4.0**
OTUK Ortayu 70.07 329 P **P** **01 07 11.9 -0.5**
ABTO Aybut 70.31 292 P **P** **01 07 13.9 -0.7**
YAK Yakutsk 70.66 5*d i*P **P** **01 07 15.3 -0.4**
YAK pmax pmax
comp=Z,177nm,0.9s
YAK pmax pmax
comp=N,73nm,1.1s
YAK pmax pmax
comp=E,8.0nm,0.9s
YAK Yakutsk 70.66 5 P **P** **01 07 15.2 -0.4**
ABPO Ambohimpanom 70.69 253 P **P** **01 07 17.8 +0.7**
ABPO pmax pmax
comp=Z,13nm,0.7s
ABPO Ambohimpanom 70.69 253 P **P** **01 07 17.8 +0.7**
OPO Ambohidratompo 70.75 253 P **P** **01 07 18.6 +1.3**
comp=Z,26nm,0.7s,baz=88,slow=4.5,SNR=37
MA2 Magadan 72.19 16 P **P** **01 07 25.4 +0.5**
comp=Z,110nm,0.7s,baz=193,slow=5.8,SNR=34
MA2 Magadan 72.19 16*ce*P **P** **01 07 25.7 +0.8**
MA2 pmax pmax
comp=Z,131nm,0.8s
MA2 Magadan 72.19 16 P **P** **01 07 25.8 +0.8**
VNDA Vanda 72.48 171 P **P** **01 07 28.6 +2.1**
comp=Z,24nm,0.5s,baz=316,slow=6.5,SNR=233
VNDA Vanda 72.48 171 P **P** **01 07 28.9 +2.5**
VNDA pmax pmax
comp=Z,34nm,0.6s
VNDA Vanda 72.48 171 P **P** **01 07 28.9 +2.5**
VNDA IAmb IAmb 01 07 29.3
comp=Z,34nm,0.6s
GEYT Alibeck 73.46 314 P **P** **01 07 32.8 -0.1**
comp=Z,10.0nm,0.6s,baz=145,slow=5.4,SNR=28
GEYT pP **pwP** **01 08 18.5 -1.0**
comp=Z,4.8nm,0.8s,baz=142,slow=8.8,SNR=3.1
BVAR Borovoye Array 74.05 332 S **SKiKP** **01 16 47.5 +1.8**
comp=Z,0.2nm,0.5s,baz=124,slow=7.2,SNR=2.1
BRVK Borovoye 74.12 332*ce*P **P** **01 07 35.5 -0.9**
BRVK pmax pmax
comp=Z,11nm,0.9s
BRVK Borovoye 74.12 332 P **P** **01 07 35.7 -0.7**
SEY Seymchan 75.44 15 P **P** **01 07 44.3 +0.6**
comp=Z,111nm,0.6s,baz=219,slow=5.0,SNR=212
AB31 Akbulak array 77.42 325 *i* P **P** **01 07 54.0 -1.1**
SYO Syowa Base 78.62 201⇓*i*P **P** **01 08 01.6 +0.2**
SYO Syowa Base 78.62 201⇑*i*PcP **PcP** **01 08 09.0 -0.7**
SYO Syowa Base 78.62 201⇑*es*P sP 01 09 02.0 -1.9
RAYN Ar Rayn 78.97 296 P **P** **01 08 04.0 -0.3**
RAYN pmax pmax
comp=Z,5.0nm,0.9s
RAYN Ar Rayn 78.97 296 P **P** **01 08 04.0 -0.3**
AKTO Aktyubinsk 79.07 325 P **P** **01 08 03.0 -1.2**
TIXI Tiksi 80.12 3*ce*P **P** **01 08 08.4 -0.9**
TIXI pmax pmax
comp=Z,60nm,1.1s
TIXI Tiksi 80.12 3 P **P** **01 08 08.5 -0.9**
TIXI IAmb IAmb 01 08 09.6
comp=Z,49nm,1.0s
SVE Sverdlovsk 80.84 332 *e*P **P** **01 08 12.4 -1.1**
SVE pmax pmax
comp=Z,15nm,0.9s
ADK Adak 80.94 34 P **P** **01 08 13.4 -0.7**
ADK pmax pmax
comp=Z,50nm,1.2s
ADK Adak 80.94 34 P **P** **01 08 13.4 -0.7**
ADK IAmb IAmb 01 08 22.6
comp=Z,50nm,1.1s
GSTR Great Sitkin T 81.38 34 P **P** **01 08 16.2 -0.3**
QSPA South Pole Qui 81.59 180 P **P** **01 08 19.2 +1.7**
comp=Z,26nm,0.7s,baz=309,slow=1.5,SNR=65
QSPA South Pole Qui 81.59 180 P **P** **01 08 19.3 +1.7**
QSPA IAmb IAmb 01 08 20.5
comp=Z,38nm,0.9s
ARU Arti 81.63 331 P **P** **01 08 17.1 -0.6**
ARU 01 11 23.0
ARU S **S** **01 18 15.2 +0.5**
ARU SS **SS** **01 23 30.8 -5.7**
ARU Arti 81.63 331 P **P** **01 08 16.2 -1.5**
AKT Akhty 82.20 314 *e*P **P** **01 08 21.5 +0.3**
AKT *e**SP **sP** **01 09 24.3 +0.9**
AKT pmax pmax
comp=Z,25nm,0.7s
KMBO Kilima Mbogo 82.26 270 P **P** **01 08 24.1 +1.8**
comp=Z,17nm,0.9s,baz=78,slow=7.3,SNR=35
KMBO pP **pP** **01 09 08.6 +2.1**
comp=Z,6.8nm,0.9s,baz=31,slow=6.7,SNR=3.2
KMBO Kilima Mbogo 82.26 270 P **P** **01 08 22.4 +0.1**
BILL Bilibino 83.06 16*de*P **P** **01 08 24.8 -0.1**
BILL *e**PP **pP** **01 09 04.7 -3.0**
BILL *e* 01 11 37.6
BILL pmax pmax
comp=Z,13nm,1.0s
BILL Bilibino 83.06 16 P **P** **01 08 24.7 -0.2**
TBLG Delisi 84.42 313 P **P** **01 08 32.9 +0.5**
TBLG pmax pmax
comp=Z,22nm,0.7s
TBLG Delisi 84.42 313 P **P** **01 08 32.9 +0.5**
TBLG IAmb IAmb 01 08 33.9
comp=Z,22nm,0.7s
AKH Akhalkalaki 85.23 313 P **P** **01 08 36.6 -0.1**
AKH pmax pmax
comp=Z,10.0nm,0.7s
AKH Akhalkalaki 85.23 313 P **P** **01 08 36.6 -0.1**
ZEI Tsey 85.31 314 *e*P **P** **01 08 36.2 -0.9**
ZEI pmax pmax
comp=Z,6.0nm,0.4s
KBZ Khabaz 86.27 315 P **P** **01 08 40.8 -0.7**
comp=Z,7.3nm,0.8s,baz=109,slow=5.7,SNR=18
KBZ Khabaz 86.27 315*ce*P **P** **01 08 41.6 +0.1**
KBZ pmax pmax
comp=Z,7.0nm,0.8s
KIV Kislovodsk 86.48 315 *e*P **P** **01 08 42.2 -0.4**
KIV *e**PP **pP** **01 09 23.1 -3.3**
KIV *e**SP **sP** **01 09 44.0 -1.0**
KIV *e* 01 12 05.2
KIV pmax pmax
comp=Z,3.0nm,0.8s
GOF Gofitskoye 86.52 316⇓*e*P **P** **01 08 42.8 +0.1**
GOF pmax pmax
comp=Z,28nm,0.9s
NVL N'lazarevskaya 87.88 198 *e*P **P** **01 08 50.2 +1.5**
NVL *e*S **SKSac** **01 18 58.5 -1.1**
NVL pmax pmax
comp=Z,29nm,0.8s
MBAR Mbarara 88.78 270*ce*P **P** **01 08 55.5 +1.1**
MBAR pmax pmax
comp=Z,20nm,1.0s
MBAR Mbarara 88.78 270 P **P** **01 08 55.2 +0.9**
VRH Novokhopyorsk 88.97 322 *e*P **P** **01 08 53.1 -1.0**
VRH pmax pmax
comp=Z,10.0nm,0.8s
LSZ Lusaka 89.16 255 P **P** **01 08 57.1 +1.0**
LSZ pmax pmax
comp=Z,17nm,0.7s
LSZ Lusaka 89.16 255 P **P** **01 08 57.1 +1.0**
LSZ IAmb IAmb 01 08 58.7
comp=Z,17nm,0.7s
BOSA Boshof 89.80 241 P **P** **01 08 59.8 +1.0**
comp=Z,6.7nm,0.5s,baz=109,slow=4.2,SNR=27
BOSA Boshof 89.80 241 P **P** **01 08 59.0 +0.1**
LBTB Lobatse 90.08 245 P **P** **01 08 59.1 -1.1**
LBTB pmax pmax
comp=Z,13nm,1.0s
LBTB Lobatse 90.08 245 P **P** **01 08 59.1 -1.1**
VORD Divnogorie 90.40 321 *e*P **P** **01 08 59.1 -1.7**
VORD pmax pmax
comp=Z,6.0nm,0.8s
SDPT Sand Point 91.17 34 P **P** **01 09 02.5 -1.8**
ANM Nome 91.18 25 P **P** **01 09 03.1 -1.1**
ANM pmax pmax
comp=Z,11nm,0.9s
ANM Nome 91.18 25 P **P** **01 09 03.1 -1.1**
ANM IAmb IAmb 01 09 05.5
comp=Z,11nm,0.9s
SNAA Sanae 91.73 195 P **P** **01 09 08.9 +2.1**
SNAA Sanae 91.73 195 P **P** **01 09 08.3 +1.6**
comp=Z,17nm,0.6s,baz=168,slow=4.6,SNR=142
SNAA Sanae 91.73 195 P **P** **01 09 08.9 +2.1**
SNAA pmax pmax
comp=Z,21nm,0.7s
SNAA Sanae 91.73 195 P **P** **01 09 08.8 +2.1**
SNAA IAmb IAmb 01 09 09.9
comp=Z,21nm,0.7s
BRTR Keskin Array B 92.21 310 P **P** **01 09 08.6 -1.2**
comp=Z,1.3nm,0.9s,baz=60,slow=7.7,SNR=4.0
KLMR Klimovskoe 92.47 331 *e*P **P** **01 09 07.3 -2.9**
KLMR *e* 01 12 50.7
KLMR pmax pmax
comp=Z,11nm,1.4s
KLMR Klimovskoe 92.47 331 *e*P **P** **01 09 07.3 -2.9**
KLMR AMP 01 09 12.9
comp=Z,11nm,1.4s
KLMR *e*pP **pP** **01 09 55.7 +1.7**
KLMR *e*PP **PP** **01 12 50.8 -3.1**
OBN Obninsk 92.85 325 *e*P **P** **01 09 12.0 -0.1**
OBN *e**PP **pP** **01 09 54.6 -1.6**
OBN *e**SP **sP** **01 10 11.4 -3.4**
OBN *e* 01 12 54.1
OBN pmax pmax
comp=Z,3.0nm,0.9s
RDOG Red Dog Mine 93.10 22 P **P** **01 09 12.7 -0.3**
RDOG IAmb IAmb 01 09 15.1
comp=Z,28nm,1.1s
VNA2 Neumayer--Watz 93.36 195 P **P** **01 09 16.4 +2.2**
baz=113,slow=3.5
VNA3 Neumayer Olymp 93.74 195 P **P** **01 09 17.8 +1.8**
VNA1 Neumayer--Stat 93.75 195 P **P** **01 09 18.1 +2.1**
SVW2 Sparrevohn 94.79 29 P **P** **01 09 20.6 -0.3**
SVW2 IAmb IAmb 01 09 22.0
comp=Z,11nm,0.9s
TTA Tatalina 94.87 27 P **P** **01 09 20.9 -0.4**
TTA pmax pmax
comp=Z,9.0nm,1.0s
TTA Tatalina 94.87 27 P **P** **01 09 20.9 -0.4**
TTA IAmb IAmb 01 09 21.6
comp=Z,8.9nm,1.0s
KDAK Kodiak Island 95.88 33 P **P** **01 09 23.7 -2.2**
comp=Z,15nm,1.0s,baz=292,slow=5.4,SNR=3.1
RSO Redoubt South 96.09 30 P **P** **01 09 25.5 -1.6**
AKASG Malin Array Be 96.67 320 P **P** **01 09 27.0 -2.6**
comp=Z,1.3nm,0.5s,baz=78,slow=4.5,SNR=4.9
AKASG Malin Array Be 96.67 320*ce*P **P** **01 09 27.8 -1.8**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
KTH Kantishna Hill 97.23 27 P **P** **01 09 31.2 -0.7**
KTH IAmb IAmb 01 09 32.2
comp=Z,7.7nm,0.8s
BPAW Bear Paw Mtn. 97.24 26 IAmb IAmb 01 09 33.1
comp=Z,5.1nm,0.6s
TRF Thorofare Moun 97.51 27 P **P** **01 09 32.3 -1.0**
TRF IAmb IAmb 01 09 33.2
comp=Z,13nm,0.9s
COLD Coldfoot 97.77 23 IAmb IAmb 01 09 35.9
comp=Z,5.0nm,0.7s
PMR Palmer 97.94 29 IAmb IAmb 01 09 34.9
comp=Z,16nm,1.0s
GHO Glory Hole Cre 98.04 29 IAmb IAmb 01 09 35.8
comp=Z,10nm,0.9s
TOLK Toolik Lake Re 98.07 22 P Pdif 01 09 36.2 +0.5
baz=268
TOLK Toolik Lake Re 98.07 22 IAmb IAmb 01 09 37.3
comp=Z,11nm,0.8s
BIZ Bicaz 98.45 316⇑P pP 01 10 18.0 -4.3
WRH Wood River Hil 98.52 26 IAmb IAmb 01 09 38.4
comp=Z,13nm,1.0s
CCB Clear Creek Bu 98.65 26 IAmb IAmb 01 09 38.0
comp=Z,8.3nm,0.7s
SCM Sheep Creek Mo 98.80 29 IAmb IAmb 01 09 39.7
comp=Z,13nm,1.0s
FINES FINESS Array B 99.00 331 P **Pdif** **01 09 38.8 -1.0**
comp=Z,2.4nm,1.0s,baz=176,slow=2.9,SNR=5.3
FINES PKiKP **PKiKP** **01 14 09.9 +0.5**
comp=Z,0.6nm,0.4s,baz=103,slow=4.1,SNR=7.6
FINES FINESS Array B 99.00 331*ce*P **Pdif** **01 09 38.7 -1.1**
FINES pmax pmax
comp=Z,2.0nm,1.0s
HDA Harding Lake 99.02 26 P **Pdif** **01 09 38.5 -1.4**
baz=270,SNR=7.3
HDA Harding Lake 99.02 26 IAmb IAmb 01 09 39.2
comp=Z,7.4nm,0.9s
ILAR Eielson Array 99.05 26 P **Pdif** **01 09 38.1 -1.9**
comp=Z,1.5nm,0.6s,baz=248,slow=4.7,SNR=13
ILAR pP **pwP** **01 10 27.2 -2.5**
comp=Z,2.8nm,1.0s,baz=277,slow=4.4,SNR=6.8
ILAR PKKPbc **PKKPbc** **01 26 06.4 -1.8**
comp=Z,0.9nm,0.6s,baz=120,slow=1.4,SNR=8.6
BUR08 Bucovina Ar. S 99.10 317 **Pdif** **01 09 39.1 -1.7**
ARCES ARCESS Array B 99.25 339 P **Pdif** **01 09 41.2 +0.4**
comp=Z,0.8nm,0.7s,baz=98,slow=6.2,SNR=4.1
ARCES PP **PP** **01 13 42.3 -3.6**
comp=Z,1.8nm,0.9s,baz=81,slow=5.6,SNR=6.0
ARCES PKiKP **PKiKP** **01 14 09.6 -0.1**
comp=Z,0.3nm,0.4s,baz=90,slow=1.8,SNR=6.3
ARCES PKKPbc **PKKPbc** **01 26 05.9 -1.8**
comp=Z,0.3nm,0.4s,baz=274,slow=3.7,SNR=10
SCRK Sand Creek 100.32 26 Pdif **Pdif** **01 09 44.8 -1.0**
DAWY Dawson 102.33 26 Pdif **Pdif** **01 09 54.6 -0.1**
EPYK Eagle Plains 103.14 24 P **Pdif** **01 09 57.8 -0.5**
baz=279
INK Inuvik 103.98 22 Pdiff **Pdif** **01 10 01.7 -0.1**
comp=Z,1.0nm,0.5s,baz=291,slow=3.4,SNR=7.8
INK pPdiff **pPdif** **01 10 50.9 +5.4**
comp=Z,4.3nm,1.0s,baz=269,slow=6.0,SNR=6.8
INK PKiKP **PKiKP** **01 14 18.4 +0.2**
comp=Z,1.7nm,0.8s,baz=252,slow=1.9,SNR=4.0
NOA NORSAR Array B 106.18 331 PP **PP** **01 14 37.5 -0.3**
comp=Z,0.8nm,0.9s,baz=78,slow=6.4,SNR=2.8
GERES GERESS Array B 106.73 318 PKiKP **PKiKP** **01 14 24.4 +0.3**
comp=Z,0.4nm,0.7s,baz=75,slow=1.5,SNR=5.3
CLL Colln 106.88 321 *e*PP **PP** **01 14 40.0 -3.2**
YKA Yellowknife Ar 113.41 24 Pdiff **Pdif** **01 10 44.2 +0.3**
comp=Z,0.2nm,0.6s,baz=296,slow=4.0,SNR=4.3
YKA PKiKP **PKiKP** **01 14 35.9 -0.2**
comp=Z,5.0nm,0.7s,baz=293,slow=1.6,SNR=59
YKA SKP **SKPdf** **01 17 52.7 -2.0**
comp=Z,2.0nm,0.9s,baz=289,slow=1.6,SNR=7.5
YKA PKKPbc **PKKPbc** **01 25 20.1 -3.6**
comp=Z,0.5nm,0.7s,baz=125,slow=3.9,SNR=5.0
YKA PKKPab **PKKPab** **01 25 28.8 -0.2**
comp=Z,0.4nm,0.6s,baz=112,slow=4.9,SNR=7.0
YKA SKKPbc **SKKPbc** **01 28 47.5 -5.1**
comp=Z,0.9nm,0.9s,baz=114,slow=2.3,SNR=8.7
D03D Eldon 114.49 41 P **PKiKP** **01 14 39.6 +1.0**
baz=285
B05A Bryant 114.93 40 P PKPdf 01 14 41.0 +1.6
baz=286
E04D Cinebar 115.08 42 P **PKPdf** **01 14 41.3 +1.5**
baz=285
I03D Drain, OR 115.24 46 P **PKPdf** **01 14 42.0 +1.8**
baz=283
H04D Lebanon 115.48 45 P **PKPdf** **01 14 42.4 +1.8**
baz=284
LON Longmire 115.54 42 PKIKP **PKPdf** **01 14 40.7 -0.1**
LON Longmire 115.54 42 **PKPdf** **01 14 40.7 -0.1**
I04A Tendick Farm, 115.88 45 P **PKiKP** **01 14 43.1 +1.6**
baz=284
F05D White Salmon 116.00 43 P **PKiKP** **01 14 43.8 +2.1**
baz=286
M02C Callahan 116.11 48 P **PKiKP** **01 14 43.9 +1.8**
baz=283
PNT Penticton 116.18 39 PKIKP **PKiKP** **01 14 48.4 +6.5**

J04D	Umpqua Nationa	116.22	46	P	PKiKP	01 14 44.0	+1.6
	baz=284,SNR=5.9						
G05D	Wamic, OR	116.27	44	P	PKiKP	01 14 43.9	+1.7
	baz=286						
N02D	Trinity Center	116.30	48	P	PKiKP	01 14 43.6	+1.1
	baz=282						
L04D	Klamath Falls	116.32	47	P	PKiKP	01 14 44.0	+1.4
	baz=283						
O02D	Mt. Diablo Mer	116.41	49	P	PKiKP	01 14 44.2	+1.6
	baz=282						
I05D	Terrebonne, OR	116.49	44	P	PKiKP	01 14 44.1	+1.5
	baz=285						
K04D	Chiloquin, OR	116.62	46	P	PKiKP	01 14 44.8	+1.7
	baz=284						
M04C	Macdoel	116.76	47	P	PKiKP	01 14 44.9	+1.5
	baz=284						
J05D	Fort Rock, OR	116.83	46	P	PKiKP	01 14 45.8	+2.3
	baz=285,SNR=13						
O03E	Paynes Creek	117.12	49	P	PKiKP	01 14 45.7	+1.6
	baz=283						
HAWA	Hanford	117.14	42	PKPdf	PKiKP	01 14 43.8	0.0
K05A	Summer Lake	117.22	46	PKPdf	PKiKP	01 14 45.1	+0.8
I07A	Izee	117.83	44	PKPdf	PKiKP	01 14 45.6	+0.3
MOD	Modoc Plateau	117.85	47	PKPdf	PKiKP	01 14 46.0	+0.5
G08A	Pilot Rock	117.86	43	PKPdf	PKiKP	01 14 45.4	0.0
AFDM	Forest Hills D	118.04	50	PKPdf	PKiKP	01 14 46.3	+0.5
NEW	Newport	118.09	39	P	PKiKP	01 14 47.7	+2.1
	baz=291						
BEKR	Beckworth	118.30	49		PKiKP	01 14 46.6	+0.1
CMB	Columbia Colle	118.69	51	PKiKP	PKPdf	01 14 46.3	-0.8
CMB	Columbia Colle	118.69	51	PKPdf	PKPdf	01 14 46.3	-0.8
F10A	Beach Ranch, E	118.80	42	PKPdf	PKiKP	01 14 47.4	+0.2
TOA0	Torodi Ar. Sit	118.93	280	PKPdf	PKPdf	01 14 47.6	-0.5
TORD	Torodi Ar. Bea	118.93	280	PKP	PKPdf	01 14 48.1	0.0
	comp=Z,5.7nm,0.6s,baz=47,slow=2.0,SNR=57						
TORD				pPKP	pPKPdf	01 15 35.1	-0.1
	comp=Z,1.9nm,0.6s,baz=71,slow=2.2,SNR=3.2						
TORD				SKP	SKPdf	01 18 05.6	-1.1
	comp=Z,1.8nm,0.8s,baz=64,slow=2.5,SNR=5.3						
TORD				PKKPbc	PKKPab	01 25 04.7	-1.1
	comp=Z,0.9nm,0.6s,baz=296,slow=4.7,SNR=7.4						
VCNR	Virginia City	118.96	50		PKiKP	01 14 48.7	+0.9
PNTR	Pine Nut	119.05	50		PKiKP	01 14 48.4	+0.3
WAKR	Walker	119.31	50		PKiKP	01 14 48.6	0.0
YERR	Yerington	119.34	50		PKPdf	01 14 48.0	-0.5
PKM	Mcpherson Peak	119.78	55	P	PKiKP	01 14 51.6	+2.1
	baz=281						
RYN	Ryan	119.97	50		PKiKP	01 14 49.9	+0.1
NVAR	Mina Array Bea	120.19	50	PKP	PKiKP	01 14 51.4	+1.1
	comp=Z,6.2nm,0.7s,baz=251,slow=1.9,SNR=38						
NVAR				PP	PP	01 16 15.8	-2.1
	comp=Z,4.1nm,1.0s,baz=272,slow=9.2,SNR=8.7						
NVAR				SKP	SKPdf	01 18 08.0	-0.8
	comp=Z,0.9nm,0.7s,baz=281,slow=1.8,SNR=3.9						
NVAR				PKKPbc	PKKPab	01 25 00.8	+0.9
	comp=Z,0.9nm,0.6s,baz=138,slow=3.3,SNR=7.5						
MSO	Missoula	120.62	40	P	PKiKP	01 14 51.9	+1.1
	baz=293						
ISA	Isabella, Lake	120.69	53	P	PKiKP	01 14 53.0	+1.9
	baz=283						
CWC	Cottonwood Cre	120.83	53	P	PKiKP	01 14 52.8	+1.3
	baz=283						
ESDC	Sonseca Array	120.96	311	PKP	PKiKP	01 14 51.7	+0.1
	comp=Z,1.4nm,0.8s,baz=26,slow=2.7,SNR=11						
ESDC				pPKP	pPKPdf	01 15 40.0	+1.6
	comp=Z,0.6nm,0.8s,baz=114,slow=3.1,SNR=1.7						
EDW2	Edwards Air Fo	121.25	54	P	PKiKP	01 14 54.2	+1.9
	baz=282,SNR=13						
GRAC	Grapevine Rang	121.26	52	P	PKiKP	01 14 54.8	+2.6
	baz=284,SNR=6.1						
LRMC	Laurel Mtn Rad	121.36	54	P	PKiKP	01 14 54.9	+2.3
	baz=283						
MPMC	Manual Prospec	121.39	53	P	PKiKP	01 14 55.2	+2.6
	baz=284,SNR=14						
BFSC	Mount Baldy Ra	121.65	55	P	PKiKP	01 14 54.9	+1.7
	baz=282						
FURC	Furnace Creek,	121.78	52	P	PKiKP	01 14 56.1	+3.0
	baz=284,SNR=8.9						
GSC	Goldstone, Bar	122.10	54	PKIKP	PKiKP	01 14 54.6	+0.6
GSC	Goldstone, Bar	122.10	54	P	PKiKP	01 14 56.6	+2.6
	baz=284,SNR=11						
GSC	Goldstone, Bar	122.10	54	PKPdf	PKiKP	01 14 54.6	+0.6
TPNV	Topopah Spring	122.14	52	PKIKP	PKiKP	01 14 55.0	+0.9
TPNV	Topopah Spring	122.14	52	P	PKiKP	01 14 56.4	+2.3
	baz=285,SNR=6.5						
TPNV	Topopah Spring	122.14	52	PKPdf	PKiKP	01 14 55.0	+0.9
MURC	Murrieta	122.16	56	P	PKiKP	01 14 55.8	+1.8
	baz=282						
R11A	Troy Canyon, C	122.27	50	P	PKiKP	01 14 56.8	+2.5
	baz=286,SNR=16						
HEC	Hector,Ludlow	122.59	54	P	PKiKP	01 14 57.0	+2.0
	baz=284						
EGMT	Eagleton	122.71	37	P	PKiKP	01 14 56.4	+1.6
	baz=297,SNR=9.6						
PFO	Pinyon Flats O	122.76	55	PKP	PKiKP	01 14 55.3	-0.1
	comp=Z,13nm,0.8s,baz=278,slow=3.0,SNR=16						
PFO	Pinyon Flats O	122.76	55	PKIKP	PKiKP	01 14 56.5	+1.1
PFO	Pinyon Flats O	122.76	55	P	PKiKP	01 14 57.8	+2.4
	baz=283,SNR=8.0						
PFO	Pinyon Flats O	122.76	55	PKPdf	PKiKP	01 14 56.5	+1.1
TUQ	Turquoise Moun	122.77	53	P	PKiKP	01 14 58.0	+2.6
	baz=284,SNR=6.1						
MONP2	Monument Peak	122.94	56	P	PKiKP	01 14 58.5	+2.6
	baz=282,SNR=9.4						
BELC	Belle Mtn. Jos	123.05	55	P	PKiKP	01 14 58.7	+2.7
	baz=283,SNR=15						
SHPR	Sheep Range	123.10	52	PKPdf	PKiKP	01 14 56.7	+0.7
GMRC	Granite Mounta	123.14	54	P	PKiKP	01 14 58.5	+2.4
	baz=284,SNR=24						
FFC	Flin Flon	123.21	27	PKIKP	PKiKP	01 14 55.8	+0.4
FFC	Flin Flon	123.21	27	PKPdf	PKiKP	01 14 55.8	+0.4
IKP	In-Ko-Pah, Jac	123.25	56	P	PKiKP	01 14 58.0	+1.7
	baz=282						
SWSC	Sam W. Stewart	123.44	56	P	PKiKP	01 14 58.6	+2.1
	baz=283						
PSUT	Pine Spring	123.52	49		PKiKP	01 14 57.3	+0.5
BC3	Big Chuckawall	123.57	55	P	PKiKP	01 14 59.8	+2.8
	baz=284,SNR=11						
IRM	Iron Mountain	123.70	54	P	PKiKP	01 14 59.3	+2.2
	baz=284,SNR=8.5						
H17A	Grant Village	123.75	41	P	PKiKP	01 14 59.2	+2.0
	baz=294,SNR=5.5						
DUG	Dugway, Tooele	123.76	47	P	PKiKP	01 14 58.7	+1.5
	baz=290						
CCUT	Cedar City	124.19	50	PKPdf	PKiKP	01 14 58.3	+0.1
GLA	Glamis	124.22	56	PKIKP	PKiKP	01 14 58.3	+0.1
GLA	Glamis	124.22	56	P	PKiKP	01 15 00.2	+2.0
	baz=284,SNR=6.0						
GLA	Glamis	124.22	56	PKPdf	PKiKP	01 14 58.2	+0.1
RLMT	Red Lodge	124.29	40	P	PKiKP	01 14 59.6	+1.5
	baz=296						
CTU	Camp Tracy	124.35	46		PKPdf	01 14 58.0	-0.1
PDMCI	Parker Dam,Lak	124.47	54	P	PKiKP	01 14 59.6	+1.1
	baz=285						
TCRU	Three Creeks R	124.55	49		PKiKP	01 14 59.5	+0.6
JLU	Jordanelle	124.60	46		PKiKP	01 14 59.7	+0.8
DBIC	Dimbokro	124.94	272	PKP	PKiKP	01 15 00.2	+0.1
	comp=Z,9.5nm,0.9s,baz=28,slow=8.3,SNR=4.7						
DBIC				pPKP	pPKPdf	01 15 49.4	+2.7
	comp=Z,6.3nm,0.8s,baz=327,slow=1.6,SNR=3.1						
BW06	Boulder Array	125.08	43	P	PKiKP	01 15 00.4	+0.5
	baz=294,SNR=5.7						
BW06	Boulder Array	125.08	43	PKPdf	PKPdf	01 14 59.2	-0.3
PD31	Pinedale Array	125.09	43		PKPdf	01 14 59.2	-0.3
PDAR	Pinedale Array	125.09	43	PKP	PKPdf	01 14 58.8	-0.7
	comp=Z,2.8nm,0.8s,baz=342,slow=1.9,SNR=17						
PDAR				PKKPab	PKKPbc	01 24 39.9	-0.8
	comp=Z,0.6nm,0.6s,baz=142,slow=5.6,SNR=3.9						
TMUT	Trail Mountain	125.23	47		PKiKP	01 15 00.5	+0.1
LAO	LASA Array	125.45	37	P	PKiKP	01 15 01.5	+1.2
	baz=300						
DGMT	Dagmar	125.71	35	P	PKiKP	01 15 01.8	+1.2
	baz=303						
RDMU	Red Mountain	125.94	45		PKiKP	01 15 01.5	-0.1
214A	Organ Pipe Nat	126.13	56	P	PKiKP	01 15 03.6	+1.6
	baz=284,SNR=5.5						
214A	Organ Pipe Nat	126.13	56	PKPdf	PKiKP	01 15 02.7	+0.7
WUAZ	Wupatki	126.32	52	P	PKiKP	01 15 04.3	+1.8
	baz=288,SNR=13						
O20A	White River Ci	127.04	45	P	PKiKP	01 15 05.2	+1.5
	baz=294,SNR=13						
O20A	White River Ci	127.04	45	PKPdf	PKiKP	01 15 04.2	+0.4
PV23	Carpenter Ridg	127.13	48		PKiKP	01 15 04.7	+0.6
K22A	Casper	127.16	42	P	PKiKP	01 15 04.6	+0.7
	baz=297						
PV20	West Nyswonger	127.20	48	PKPdf	PKiKP	01 15 04.7	+0.6
PV04	Paradox Valley	127.23	48		PKiKP	01 15 04.6	+0.4
PV22	Blue Mesa, Par	127.26	47		PKiKP	01 15 04.8	+0.5
PV18	Skein Mesa, Pa	127.28	48	PKPdf	PKiKP	01 15 04.7	+0.4
PV03	Paradox Valley	127.32	48		PKPdf	01 15 03.7	-0.2
TUC	Tucson	127.70	56	PKIKP	PKiKP	01 15 06.6	+1.4
TUC	Tucson	127.70	56	P	PKiKP	01 15 06.2	+1.1
	baz=286						
TUC	Tucson	127.70	56	PKPdf	PKiKP	01 15 06.6	+1.4
W18A	Petrified Fore	127.72	52	P	PKiKP	01 15 06.9	+1.6
	baz=289,SNR=7.0						
MVCO	Mesa Verde	127.96	49	P	PKiKP	01 15 07.7	+1.9
	baz=291,SNR=12						
RSSD	Black Hills	128.06	39	PKIKP	PKiKP	01 15 05.8	+0.1
RSSD	Black Hills	128.06	39	P	PKiKP	01 15 06.7	+0.9
	baz=300						
RSSD	Black Hills	128.06	39	PKPdf	PKiKP	01 15 05.8	+0.1
N23A	Red Feather La	128.32	44	P	PKiKP	01 15 07.3	+0.9
	baz=296						
E28A	Huff	128.74	35		PKPdf	01 15 06.3	+0.3
ULM	Lac du Bonnet	128.95	29	PKP	PKPdf	01 15 05.5	-0.8
	comp=Z,7.0nm,0.7s,baz=132,slow=5.5,SNR=5.5						
S22A	4UR Ranch, Cre	128.99	48	P	PKiKP	01 15 09.6	+1.7
	baz=293,SNR=9.9						
ISCO	Idaho Springs	129.02	45	PKIKP	PKPdf	01 15 07.5	+0.3
ISCO	Idaho Springs	129.02	45	P	PKiKP	01 15 09.1	+1.2
	baz=296						
ISCO	Idaho Springs	129.02	45	PKPdf	PKPdf	01 15 07.5	+0.3
SDCO	Great Sand Dun	129.96	47	P	PKiKP	01 15 11.1	+1.3
	baz=294,SNR=15						
SDCO	Great Sand Dun	129.96	47	PKPdf	PKPdf	01 15 08.8	-0.2
121A	Cookes Peak, D	130.07	54	P	PKiKP	01 15 11.6	+1.5
	baz=288,SNR=5.2						
121A	Cookes Peak, D	130.07	54	PKPdf	PKiKP	01 15 10.0	0.0
PLCA	Paso Flores	130.22	170	PKP	PKiKP	01 15 09.8	-0.2
	comp=Z,1.8nm,0.6s,baz=32,slow=3.7,SNR=5.5						
PLCA				SKPbc	SKPab	01 18 15.1	-0.3
	comp=Z,22nm,0.9s,baz=222,slow=3.3,SNR=23						
ANMO	Albuquerque	130.31	51	PKP	PKPdf	01 15 09.8	+0.2
	comp=Z,8.6nm,0.9s,baz=176,slow=3.3,SNR=21						
ANMO				SKPbc	SKPbc	01 18 14.8	-1.3
	comp=Z,8.9nm,0.8s,baz=285,slow=4.1,SNR=22						
ANMO	Albuquerque	130.31	51*c*	PKiKP	PKiKP	01 15 11.4	+0.9
ANMO				pmax	pmax		
	comp=Z,11nm,1.0s						
ANMO	Albuquerque	130.31	51	P	PKiKP	01 15 11.7	+1.2
	baz=291						
ANMO	Albuquerque	130.31	51	PKPdf	PKiKP	01 15 12.1	+1.6
T25A	Trinidad	131.00	47	P	PKiKP	01 15 13.2	+1.3
	baz=295,SNR=11						
KSCO	Kaye Shedlock'	131.44	44	P	PKiKP	01 15 13.8	+1.2
	baz=298						
MNTX	Cornudas Mount	132.26	54	P	PKiKP	01 15 15.3	+1.0
	baz=289,SNR=26						
EYMN	Ely	132.62	28	P	PKiKP	01 15 15.1	+0.6
	baz=316						
ECSD	EROS Data Cent	132.75	36	P	PKiKP	01 15 15.2	+0.3
	baz=308						
BGNE	Belgrade	133.17	39	P	PKiKP	01 15 16.2	+0.4
	baz=304						
SCHQ	Schefferville	133.41	5	PKP	PKiKP	01 15 15.3	-0.6
	comp=Z,10nm,0.7s,baz=331,slow=2.6,SNR=15						
SCHQ				SKPbc	SKPbc	01 18 24.3	-1.9
	comp=Z,9.8nm,0.9s,baz=10,slow=3.8,SNR=9.9						
MSTX	Muleshoe	133.50	51	P	PKiKP	01 15 17.1	+0.2
	baz=294,SNR=9.8						
CBKS	Cedar Bluff	133.51	43	P	PKiKP	01 15 17.0	+0.4
	baz=300						
AMTX	Amarillo	133.95	49	P	PKiKP	01 15 17.8	+0.1
	baz=295						
TXAR	Lajitas Array	134.42	57	PKhKP	PKPpre	01 15 06.2	
	comp=Z,0.7nm,0.7s,baz=254,slow=2.4,SNR=7.0						
TXAR				PKP	PKiKP	01 15 18.9	0.0
	comp=Z,4.8nm,0.8s,baz=208,slow=1.0,SNR=26						
TXAR				SKPbc	SKPbc	01 18 28.9	-1.6
	comp=Z,0.6nm,0.6s,baz=222,slow=1.7,SNR=4.8						
TXAR				SKKPbc	SKKPbc	01 27 37.5	-3.4
	comp=Z,0.8nm,1.1s,baz=104,slow=0.4,SNR=3.8						
KSU1	Kansas State U	135.43	41	P	PKiKP	01 15 20.0	-0.5
	baz=304,SNR=6.3						
E43A	Lone Tree Farm	135.84	26	PKPdf	PKiKP	01 15 21.4	+0.3
SCIA	State Center	135.84	35	P	PKiKP	01 15 21.0	-0.2
	baz=310						
WMOK	Wichita Mounta	136.15	48	PKIKP	PKiKP	01 15 21.9	-0.2
WMOK	Wichita Mounta	136.15	48	P	PKiKP	01 15 21.8	-0.2
	baz=298,SNR=12						
WMOK	Wichita Mounta	136.15	48	PKPdf	PKiKP	01 15 21.9	-0.2
MATQ	Matagami	136.34	16	P	PKiKP	01 15 21.4	-0.5
	baz=335						
ABTX	Abilene, Hawle	136.44	51	P	PKiKP	01 15 22.2	-0.6
	baz=295						
D46A	Sault St. Mari	136.66	24	P	PKiKP	01 15 22.3	-0.4
	baz=325						
I42A	Draeger Farm,	136.80	30	PKPdf	PKPdf	01 15 20.8	-0.4
JFWS	Jewell Farm	136.80	32	P	PKiKP	01 15 22.5	-0.6
	baz=314						
L40A	Anamosa	136.86	34	PKPdf	PKPdf	01 15 21.9	+0.5
D47A	Chapleau	136.89	23	P	PKiKP	01 15 22.6	-0.6
	baz=326,SNR=7.4						
E46A	Sault Ste Mari	136.98	24	PKPdf	PKiKP	01 15 23.0	-0.4
CHGQ	Chibougamau	137.01	13	P	PKiKP	01 15 22.8	-0.6
	baz=300						
F45A	CMU Biological	137.02	26	P	PKiKP	01 15 23.2	-0.2
	baz=322						
P38A	Dawn	137.07	38	PKPdf	PKiKP	01 15 22.9	-0.8
LSQQ	Lebel-sur-Quev	137.15	16	P	PKiKP	01 15 23.1	-0.6
	baz=336						
JCT	Junction City	137.17	54	P	PKiKP	01 15 23.6	-0.7
	baz=293						
D48A	Paudash Townsh	137.28	22	P	PKiKP	01 15 23.2	-0.8
	baz=328						
E47A	Iron Bridge	137.32	23	P	PKiKP	01 15 23.5	-0.5
	baz=326						
D49A	Beulah Townshi	137.35	21	P	PKiKP	01 15 23.8	-0.3
	baz=329						
G45A	Suttons Bay	137.46	27	P	PKiKP	01 15 23.8	-0.6
	baz=322						
E48A	Lockeyer	137.73	22	P	PKiKP	01 15 24.1	-0.8
	baz=327,SNR=5.6						
D50A	G1974 Best Tow	137.97	20	P	PKiKP	01 15 24.6	-0.8
	baz=331						
P40A	Paris	138.03	37	PKPdf	PKiKP	01 15 25.0	-0.7
G47A	Hillman	138.13	25	P	PKiKP	01 15 25.0	-0.7
	baz=324						
E50A	Wahnapitae	138.30	21	P	PKiKP	01 15 25.7	-0.3
	baz=329						
U38A	Gravette	138.37	43	PKPdf	PKiKP	01 15 26.6	+0.1
F49A	Sandfield	138.38	23	P	PKiKP	01 15 25.9	-0.3
	baz=327						
D52A	ZEK Kipawa Sen	138.60	19	P	PKiKP	01 15 26.2	-0.5
	baz=333						
R40A	Maddies Statio	138.66	39	PKPdf	PKiKP	01 15 27.4	+0.4
D53A	Lac Vacive, Po	138.73	18	P	PKPdf	01 15 25.6	+0.9
	baz=334						
D53A	Lac Vacive, Po	138.73	18	PKPdf	PKiKP	01 15 27.2	+0.2
D54A	Lac Fusel, La	138.97	17	P	PKPdf	01 15 26.0	+0.8
	baz=335						
I48A	Sherman Twp	138.99	26	P	PKPdf	01 15 26.1	+0.8
	baz=324						
F51A	Arnstein	139.02	21	P	PKPdf	01 15 26.0	+0.7
	baz=330						
E52A	Mattawa	139.13	19	P	PKPdf	01 15 26.1	+0.6
	baz=332						
MGMO	Mountain Grove	139.35	40	PKPdf	PKiKP	01 15 28.4	-0.2
E53A	Dumoine, Ponti	139.37	18	P	PKPdf	01 15 27.1	+1.2
	baz=334						
D55A	Sainte-Anne-du	139.43	16	P	PKPdf	01 15 26.6	+0.6
	baz=337						
U40A	Yellville	139.44	42	P	PKPdf	01 15 27.2	+0.8
	baz=306,SNR=6.2						
U40A	Yellville	139.44	42	PKPdf	PKiKP	01 15 29.8	+1.1
CCM	Cathedral Cave	139.44	38	PKIKP	PKiKP	01 15 29.8	+1.1
CCM	Cathedral Cave	139.44	38	P	PKPdf	01 15 27.1	+0.7
	baz=309						
CCM	Cathedral Cave	139.44	38		PKPpre	01 15 17.6	
CCM				PKPdf	PKiKP	01 15 29.8	+1.1
W39A	Magazine	139.46	44	P	PKPdf	01 15 27.1	+0.7
	baz=304,SNR=5.9						
E54A	Lac Daplat, Po	139.47	18	P	PKPdf	01 15 26.8	+0.7
	baz=334						
D56A	ZEC Mazanza, M	139.59	15	P	PKPdf	01 15 27.2	+0.9
	baz=338						
ALGO	Algonquin Park	139.62	19	P	PKPdf	01 15 27.1	+0.7
	baz=333						
J48A	Bridge Port	139.67	27	P	PKPdf	01 15 26.8	+0.2
	baz=323						
LATQ	La Tuque	139.75	13	P	PKPdf	01 15 27.2	+0.6
	baz=341						
CO03	El Pedregal	139.75	166	PKPdf	PKPdf	01 15 24.0	-3.3
E55A	Montcerf-Lytto	139.78	17	P	PKPdf	01 15 27.6	+0.9
	baz=336						
J49A	Marlette	139.90	26	P	PKPdf	01 15 27.5	+0.6
	baz=324						
MIAR	Mount Ida	139.96	45	P	PKPdf	01 15 28.6	+1.2
	baz=303,SNR=5.5						
E56A	St. Veronique	139.98	16	P	PKPdf	01 15 27.9	+0.9
	baz=337						
G54A	Lake Saint Pet	140.10	19	P	PKPdf	01 15 28.1	+0.8
	baz=332						
G53A	Haliburton	140.17	20	P	PKPdf	01 15 28.2	+0.8
	baz=331						
T42A	Van Buren	140.17	40	PKPdf	PKiKP	01 15 31.6	+1.4
FCAR	Ozark Folk Cen	140.19	42	PKPdf	PKPdf	01 15 28.8	+1.1
Q44A	Meyer Farm, Va	140.22	36		PKPpre	01 15 21.7	
SADO	Sadowa	140.29	21	PKhKP	PKPpre	01 15 18.3	
	comp=Z,3.7nm,0.6s,baz=311,slow=3.5,SNR=7.2						
SADO				PKP	PKPdf	01 15 27.6	0.0
	comp=Z,7.5nm,0.7s,baz=323,slow=2.7,SNR=4.2						
SADO				SKPbc	SKPbc	01 18 45.3	-1.7
	comp=Z,3.9nm,0.7s,baz=282,slow=2.0,SNR=4.8						
SADO	Sadowa	140.29	21	PKPdf	PKPdf	01 15 25.2	-2.5
E57A	Chemin Saint G	140.34	15	P	PKPdf	01 15 28.9	+1.2
	baz=339						
G55A	Calabogie	140.67	18	P	PKiKP	01 15 30.0	-1.0
	baz=334						
LCAR	Lake Charles	140.72	41	PKPdf	PKiKP	01 15 31.8	+0.5
CO01	Juntas del Tor	140.72	167	PKPdf	PKiKP	01 15 31.5	-0.4
DELO	Delore Mine	141.04	20	PKPdf	PKiKP	01 15 30.6	-1.2
PARMO	Parma	141.24	39	PKPdf	PKiKP	01 15 33.2	+0.8
PQI	Presque Isle	141.32	8	PKPdf	PKiKP	01 15 32.6	+0.4
BLO	Bloomington	141.44	33	PKIKP	PKiKP	01 15 33.2	+0.5
BLO	Bloomington	141.44	33	PKPdf	PKiKP	01 15 33.2	+0.5
PECO	Prince Edward	141.76	19	PKPdf	PKPdf	01 15 29.8	-0.5
J55A	Hilton	142.07	21	P	PKPdf	01 15 26.2	-4.6
	baz=332						
J55A	Hilton	142.07	21	PKPdf	PKiKP	01 15 32.4	-1.4
H59A	Cadyville	142.10	15	P	PKPdf	01 15 26.2	-4.7
	baz=339						
P49A	Miami Univ. Ec	142.13	31	P	PKPdf	01 15 26.8	-4.4
	baz=319						
H58A	Gabriels	142.18	16	P	PKPdf	01 15 25.9	-5.2
	baz=338,SNR=6.4						
I57A	Carthage	142.18	18	P	PKPdf	01 15 27.0	-4.1
	baz=335						
N51A	Ashland	142.19	28	P	PKPdf	01 15 27.3	-3.9
	baz=323						
O50A	Cable	142.21	30	P	PKPdf	01 15 26.1	-5.2
	baz=321,SNR=8.5						
WCI	Wyandotte Cave	142.23	34	PKHKP	PKPdf	01 15 26.4	-5.0
WCI	Wyandotte Cave	142.23	34	P	PKPdf	01 15 27.1	-4.2
	baz=316						
WCI	Wyandotte Cave	142.23	34		PKPdf	01 15 26.4	-5.0
K54A	Basiliko Farm,	142.32	22	P	PKPdf	01 15 27.0	-4.4
	baz=330						
J56A	Wolcott	142.39	20	P	PKPdf	01 15 27.3	-4.2
	baz=333						
L54A	Sinclairville	142.41	23	P	PKPdf	01 15 27.2	-4.4
	baz=329						
H60A	Morristown	142.43	14	P	PKPdf	01 15 27.1	-4.5
	baz=340						
ACSO	Alum Creek Sta	142.45	29	P	PKPdf	01 15 27.1	-4.6
	baz=322						
ACSO	Alum Creek Sta	142.45	29		PKPdf	01 15 26.6	-5.1
K55A	Perry	142.45	22	P	PKPdf	01 15 26.8	-4.8
	baz=331,SNR=5.8						
MMNY	Mt. Morris Dam	142.51	21		PKPdf	01 15 26.2	-5.5
M53A	WI Miller and	142.52	25	P	PKPdf	01 15 27.2	-4.6
	baz=326						
WVNY	West Valley, N	142.53	22		PKPdf	01 15 27.8	-4.0
P50A	Jamestown	142.53	30	P	PKPdf	01 15 26.8	-5.1
	baz=320,SNR=6.9						
J57A	Williamstown	142.56	19	P	PKPdf	01 15 27.2	-4.5
	baz=334						
J57A	Williamstown	142.56	19		PKPdf	01 15 27.9	-3.8
G63A	Kingsbury	142.57	11	P	PKPdf	01 15 27.2	-4.6
	baz=345						
G64A	Maxfield	142.59	10	P	PKPdf	01 15 27.2	-4.5
	baz=347						
I58A	Old Forge	142.62	17	P	PKPdf	01 15 27.5	-4.4
	baz=336						
T47A	Sharon Grove	142.63	36		PKPdf	01 15 27.9	-4.2
H61

baz=331,SNR=12
J63A Strafford 144.03 13 P PKPab 01 15 32.2 +0.1
baz=342,SNR=5.5
K61A Williamstown 144.04 16 P PKPbc 01 15 32.6 -0.2
baz=338,SNR=5.1
P54A Burton 144.11 27 P PKPab 01 15 32.6 -0.1
baz=325,SNR=25
O55A Ligonier 144.12 25 P PKPab 01 15 32.5 -0.2
baz=327,SNR=8.8
M58A Price's Panora 144.22 21 P PKPab 01 15 33.2 +0.2
baz=332,SNR=11
Q53A Leroy 144.23 29 P PKPab 01 15 32.9 -0.2
baz=323,SNR=20
K62A Royalston 144.32 15 P PKPbc 01 15 33.9 +0.2
baz=340
SSPA Standing Stone 144.33 23 PKPbc 01 15 33.8 0.0
MCWV Mont Chateau 144.35 26 P PKPbc 01 15 33.7 -0.1
baz=326,SNR=37
N57A Milroy 144.36 23 P PKPab 01 15 33.4 -0.1
baz=330,SNR=23
O56A Blue Knob Stat 144.37 24 P PKPab 01 15 33.7 0.0
baz=328,SNR=15
L60A Shokan 144.39 18 P PKPab 01 15 33.3 -0.3
baz=336
L61A Hillsdale 1, H 144.40 17 P PKPbc 01 15 33.8 -0.1
baz=338,SNR=8.0
L61B Northampton 144.41 16 P PKPab 01 15 33.5 -0.2
baz=339
M59A Waymart 144.42 20 P PKPab 01 15 33.8 0.0
baz=334,SNR=8.2
R53A Hurricane 144.44 30 P PKPab 01 15 33.6 -0.2
baz=322,SNR=7.5
Q54A Coxs Mills 144.45 28 P PKPbc 01 15 34.1 0.0
baz=324,SNR=60
K63A Dunstable 144.48 14 P PKPbc 01 15 34.4 +0.3
baz=341,SNR=9.3
P55A Reedsville 144.48 26 P PKPab 01 15 34.1 0.0
baz=326,SNR=34
N58A Sunbury 144.59 22 P PKPab 01 15 34.2 -0.2
baz=332,SNR=18
HRV Adam Dziewonsk 144.64 14 PKIKP PKPbc 01 15 35.0 +0.4
HRV Adam Dziewonsk 144.64 14 P PKPbc 01 15 34.6 -0.1
baz=341
HRV Adam Dziewonsk 144.64 14 PKPdf PKPbc 01 15 35.0 +0.4
Q55A Buckhannon 144.78 27 P PKPab 01 15 35.1 -0.1
baz=325,SNR=53
O57A Amberson 144.79 23 P PKPab 01 15 34.7 -0.4
baz=330,SNR=20
S53A Williamson 144.85 31 P PKPbc 01 15 35.1 -0.3
baz=321,SNR=5.5
N59A State Game Lan 144.86 20 P PKPbc 01 15 35.4 0.0
baz=333,SNR=66
M60A Port Jervis 144.87 19 P PKPab 01 15 35.5 +0.1
baz=335,SNR=14
P56A Dayton Farm, R 144.91 25 P PKPbc 01 15 35.2 -0.3
baz=327,SNR=63
TZTN Tazewell 144.96 33 P PKPbc 01 15 35.7 -0.2
baz=318,SNR=59
R54A Victor 145.02 29 P PKPbc 01 15 35.7 -0.2
baz=323,SNR=30
N60A Cedar Hill Far 145.13 20 P PKPbc 01 15 36.1 -0.1
baz=334,SNR=33
Y49A Blount Mountai 145.13 40 PKPbc 01 15 36.3 -0.2
O58A Lewisberry 145.14 22 P PKPbc 01 15 36.1 -0.2
baz=331,SNR=23
Q56A Snyder Ridge, 145.14 26 P PKPbc 01 15 36.4 0.0
baz=326,SNR=51
M61A Granite Spring 145.15 18 P PKPdf 01 15 36.4 0.0
baz=337,SNR=13
S54A Dingess, Beckl 145.16 30 P PKPbc 01 15 36.5 0.0
baz=322,SNR=38
T53A Wise 145.18 32 P PKPbc 01 15 36.4 -0.1
baz=320,SNR=40
L63A North Scituate 145.24 15 P PKPab 01 15 36.6 -0.1
baz=341,SNR=6.5
O59A Robesonia 145.25 21 P PKPab 01 15 36.9 0.0
baz=332,SNR=39
P57A Homestead Farm 145.26 24 P PKPdf 01 15 36.4 -0.2
baz=329,SNR=29
LRAL Lakeview Retre 145.28 41 P PKPdf 01 15 36.8 0.0
baz=309,SNR=51
M62A Hamden 145.29 17 P PKPbc 01 15 36.7 +0.1
baz=338
CMIG Matias Romero 145.33 72 PKPbc PKPab 01 15 38.4 +0.5
comp=Z,29nm,0.7s,baz=297,slow=3.5,SNR=31
R55A Marlinton 145.35 28 P PKPab 01 15 37.5 +0.1
baz=324,SNR=42
L64A Middleborough 145.35 14 P PKPab 01 15 37.2 +0.1
baz=342,SNR=6.1
PAL Palisades 145.39 18 P PKPbc 01 15 37.1 +0.2
baz=336,SNR=25
Q57A Strasburg 145.48 25 P PKPbc 01 15 37.4 0.0
baz=328,SNR=21
TKL Tuckaleechee C 145.48 35 PKPbc PKPab 01 15 37.9 0.0
comp=Z,187nm,0.7s,baz=158,slow=3.3,SNR=329
TKL SKPbc **SKPbc** 01 18 58.1 -1.9
comp=Z,12nm,0.8s,baz=53,slow=0.1,SNR=5.2
N61A South Mountain 145.50 19 P PKPab 01 15 37.9 +0.2
baz=336,SNR=16
O60A Telford 145.52 20 P PKPbc 01 15 37.4 0.0
baz=333,SNR=24
P58A Pank, Wackersv 145.54 23 P PKPab 01 15 37.9 0.0
baz=330,SNR=39
CPNY Central Park 145.57 18 PKPab 01 15 38.3 +0.3
S55A Lewisburg 145.58 29 P PKPbc 01 15 37.6 -0.2
baz=323,SNR=11
N62A Caumsett State 145.59 18 P PKPab 01 15 37.9 -0.2
baz=337,SNR=6.7
T54A Tazewell 145.61 31 P PKPbc 01 15 38.1 +0.2
baz=321,SNR=37
M64A Tiverton 145.63 14 P PKPab 01 15 38.0 -0.2
baz=341
SPB Sao Paulo 145.76 201 PKPab 01 15 39.7 +0.5
P59A Jarrettsville 145.77 22 P PKPbc 01 15 38.4 +0.2
baz=331,SNR=19
Q58A Fox Den Farm, 145.86 24 P PKPbc 01 15 38.7 +0.2
baz=329,SNR=17
P60A Greenville 145.89 21 P PKPbc 01 15 38.8 +0.3
baz=333,SNR=27
U54A Nelsons Funny 145.90 32 P PKPbc 01 15 38.8 0.0
baz=320,SNR=38
T55A Pulaski 145.96 30 P PKPbc 01 15 39.0 +0.1
baz=322,SNR=24
O61A Allentown 146.01 20 P PKPbc 01 15 39.0 +0.1
baz=335
R57A Stanardsville 146.05 26 P PKPbc 01 15 39.3 +0.2
baz=327,SNR=13
BLA Blacksburg 146.06 29 P PKPbc 01 15 39.2 0.0
baz=323,SNR=9.3
S56A Natural Bridge 146.09 28 P PKPbc 01 15 39.5 +0.2
baz=325,SNR=8.8
R58A Rapidan 146.27 25 P PKPab 01 15 40.7 -0.1
baz=328,SNR=13
S57A Dark Hollow, R 146.30 27 P PKPab 01 15 40.8 -0.1
baz=326,SNR=9.3
P61A Hammonton 146.31 20 P PKPbc 01 15 40.1 +0.3
baz=334
U55A TA2, Sparta 146.31 31 P PKPbc 01 15 40.3 +0.3
baz=321,SNR=32
Q59A Harwood 146.34 23 P PKPbc 01 15 40.2 +0.3
baz=330
V54A Nebo 146.39 33 P PKPbc 01 15 40.4 +0.1
baz=319,SNR=50
T56A Rocky Mt 146.40 29 P PKPbc 01 15 40.0 -0.2
baz=324,SNR=18
Q60A Greensboro 146.53 22 P PKPbc 01 15 40.5 +0.1
baz=332
R58B Mineral 146.60 26 P PKPbc 01 15 40.8 0.0
baz=328
CBN Corbin Frederi 146.61 25 P PKPbc 01 15 41.3 +0.6
baz=329,SNR=9.2
V55A Taylorsville 146.72 32 P PKPbc 01 15 41.0 -0.1
baz=320,SNR=16
PB10 IPOC Station P 146.76 163 PKPab **PKiKP** 01 15 43.9 -0.2
U56A King 146.76 30 P PKPbc 01 15 41.2 -0.1
baz=322,SNR=5.6
W54A Cherokee Point 146.78 34 P PKPbc 01 15 41.9 +0.6
baz=318,SNR=25
T57A Hurt 146.79 28 P PKPbc 01 15 40.9 -0.4
baz=325,SNR=11
S58A Poland Farm, P 146.82 26 P PKPbc 01 15 41.5 +0.1
baz=327,SNR=7.4
S59A Mechanicsville 147.02 25 P PKPbc 01 15 42.1 +0.3
baz=328,SNR=8.4
X54A Belton 147.07 35 P PKPbc 01 15 42.4 +0.2
baz=318,SNR=84
V56A Mocksville 147.13 31 P PKPbc 01 15 42.8 +0.5
baz=322,SNR=18

T58A Grand View Acr 147.16 27 P PKPbc 01 15 42.7 +0.4
baz=326,SNR=9.9
KMSC Kings Mountain 147.20 33 P PKPbc 01 15 42.3 -0.2
baz=320,SNR=22
U57A Blanch 147.21 29 P PKPbc 01 15 42.7 +0.2
baz=324,SNR=8.3
GOGA Godfrey 147.25 37 P PKPbc 01 15 42.1 -0.5
baz=315,SNR=17
V57A Coltrane Farms 147.43 30 P PKPbc 01 15 42.5 -0.6
baz=323,SNR=11
X55A Gracelyn & Ava 147.54 34 P PKPbc 01 15 43.3 -0.1
baz=318,SNR=26
T59A Double "B" Far 147.58 26 P PKPbc 01 15 42.7 -0.7
baz=327,SNR=8.5
W56A Indian Trail 147.60 32 P PKPbc 01 15 43.1 -0.4
baz=321,SNR=12
U58A Oxford 147.61 28 P PKPbc 01 15 43.2 -0.3
baz=325,SNR=11
Y55A Saluda 147.81 35 P PKPbc 01 15 44.4 +0.2
baz=318,SNR=47
V58A Windy Hill, Pi 147.82 29 P PKPbc 01 15 43.9 -0.2
baz=324,SNR=9.2
X56A White Oak 147.85 33 P PKPbc 01 15 44.6 +0.3
baz=320,SNR=15
W57A Gilead 147.90 31 P PKPbc 01 15 44.4 +0.1
baz=322,SNR=12
U59A Littleton 147.99 27 P PKPbc 01 15 45.0 +0.4
baz=326
BIRD Birdtown, Kers 148.04 32 PKPbc **PKiKP** 01 15 46.6 +0.1
LVC Limon Verde 148.07 165 PKP2 **PKPab** 01 15 48.2 -0.6
LVC Limon Verde 148.07 165 **PKPab** 01 15 48.2 -0.6
U60A Pendleton 148.17 26 P PKPbc 01 15 45.7 +0.7
baz=328,SNR=7.2
V59A Middlesex 148.27 28 P PKPbc 01 15 45.3 +0.1
baz=325,SNR=7.5
W58A Raeford 148.38 30 P PKPbc 01 15 46.1 +0.5
baz=323,SNR=9.6
TIGA Tifton 148.51 40 P PKPbc 01 15 45.9 -0.1
baz=312
TIGA Tifton 148.51 40 PKPbc 01 15 45.2 -0.9
X58A Rowland 148.70 31 P PKPbc 01 15 46.7 +0.3
baz=322,SNR=6.4
V60A Jim Taylor Roa 148.71 27 P PKPbc 01 15 46.0 -0.4
baz=327,SNR=10
553A Crawfordville 148.77 43 **PKiKP** 01 15 48.3 +0.2
Z57A Bowman 148.93 34 P **PKiKP** 01 15 48.3 0.0
baz=319,SNR=8.4
Y58A Scranton 149.03 32 P **PKiKP** 01 15 48.1 -0.4
baz=321
Y58A Scranton 149.03 32 PKPbc **PKiKP** 01 15 50.1 +1.6
X59A McDuffie Farm, 149.05 30 P PKPbc 01 15 47.9 +0.5
baz=324,SNR=8.7
W60A Pink Hill 149.09 28 P **PKiKP** 01 15 48.0 -0.5
baz=325
157A Early Branch 149.22 35 P **PKiKP** 01 15 48.6 -0.3
baz=318
W61A Ground Anchor 149.32 27 P PKPbc 01 15 48.4 +0.4
baz=327
X60A Albert Glenn T 149.35 29 P PKPbc 01 15 48.6 +0.5
baz=324
NHSC New Hope 149.36 34 P **PKiKP** 01 15 48.8 -0.3
baz=319
Z58A St. Stephen 149.39 33 P **PKiKP** 01 15 49.0 -0.2
baz=320
TEIG Tepich 150.61 63 PKPbc PKPbc 01 15 51.1 -0.3
comp=Z,48nm,1.0s,baz=319,slow=4.9,SNR=11
TEIG Tepich 150.61 63 **PKiKP** 01 15 52.2 +0.1
DWPF Disney Wildern 152.11 43 P **PKiKP** 01 15 55.3 +0.3
baz=311
DWPF Disney Wildern 152.11 43 PKPdf **PKPdf** 01 15 50.7 +2.7
DWPF PKPbc **PKiKP** 01 15 56.1 +1.1
DWPF PKPab **PKPab** 01 16 05.7 +0.8
BDFB Brasilia 153.14 207 PKP **PKPdf** 01 15 50.5 +0.6
comp=Z,3.0nm,0.5s,baz=141,slow=2.6,SNR=5.3
BDFB PKPbc **PKiKP** 01 15 58.7 +1.1
comp=Z,6.7nm,0.6s,baz=126,slow=1.9,SNR=11
BDFB PKPab **PKPab** 01 16 11.5 +2.0
comp=Z,12nm,0.7s,baz=181,slow=0.7,SNR=7.0
BDFB Brasilia 153.14 207 PKPdf **PKPdf** 01 15 51.9 +2.0
BDFB PKPbc **PKiKP** 01 15 58.5 +0.9
BDFB PKPab **PKPab** 01 16 11.3 +1.8
LPAZ La Paz 154.30 163 PKPbc **PKiKP** 01 16 01.5 +0.9
comp=Z,4.9nm,1.0s,baz=50,slow=1.4,SNR=12
LPAZ PKPab **PKPab** 01 16 16.1 +1.1
comp=Z,22nm,0.7s,baz=192,slow=4.4,SNR=39
LPAZ La Paz 154.30 163 PKIKP **PKPdf** 01 15 54.5 +2.3
LPAZ La Paz 154.30 163 PKPdf **PKPdf** 01 15 54.5 +2.3
LPAZ PKPab **PKPab** 01 16 17.5 +2.4
SAML Samuel 162.54 171 PKP2 **PKPab** 01 16 52.0 +2.0
SAML Samuel 162.54 171 **PKPab** 01 16 52.0 +2.0
RUSC La Rusia 167.18 100 **PKPdf** 01 16 05.9 -0.1
SJG San Juan 168.85 29 PKPab **PKPab** 01 17 17.2 -0.6
comp=Z,6.8nm,0.5s,baz=52,slow=14,SNR=3.8
MTP Monte Pirata 169.14 27 PKPab **PKPab** 01 17 18.9 -0.1
SDV Santo Domingo 169.88 87 PKP **PKPdf** 01 16 08.1 +0.7
comp=Z,7.1nm,0.4s,baz=34,slow=3.6,SNR=3.2
SDV PKPab **PKPab** 01 17 22.8 -0.3
comp=Z,9.5nm,0.3s,baz=320,slow=1.3,SNR=3.5
PTGA Pitinga 170.91 183 PKPab **PKPab** 01 17 29.1 +2.2

*VAO **30** 01:03:31.2±0.6, 24°.30S×67°.50W, h210km±5km, mb4.0*
*NEIC **30** 01:03:33.5±1.7, 24°.21S±0°.06×66°.90W±0°.09, h178km±6km, mb4.3/12, Error ellipse: s-maj=12.6km s-min=8.0km az=79.0*
*IDC **30** 01:03:34.6±1.4, 24°.08S×66°.85W, h178km±11km, mb3.8/10, mb1 3.8/14, mb1mx3.6/42, mbtmp4.2/14, Error ellipse: s-maj=19.1km s-min=15.3km az=18.0*

ISC 30 01:03:33.7±0.5, 24°.18S±0°.05×66°.97W±0°.05, h181km, n58, σ1°55/60, mb4.2/14, Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.37**	**311**	P	**Pn**	**01 04 17.0**	**+1.6**
	63nm,0.3s,baz=133,slow=6.3,SNR=120						
LVC				S	**Sn**	**01 04 48.7**	**+1.1**
	26nm,0.3s,baz=25,slow=21,SNR=11						
LVC	**Limon Verde**	**2.37**	**311**	*e*S	**Sn**	**01 04 44.0**	**-3.7**
GO02	**Mina Guanaco**	**2.58**	**247**		**Pn**	**01 04 18.9**	**+1.2**
PB06	**IPOC Station P**	**2.80**	**301**	Pn	**Pn**	**01 04 21.2**	**+1.0**
PB09	**IPOC Station P**	**3.16**	**318**	Pn	**Pn**	**01 04 25.2**	**+0.6**
AC02	**Maricunga**	**3.29**	**216**		**Pn**	**01 04 27.1**	**+0.7**
AC02					**Sn**	**01 05 08.5**	**+1.0**
PB04	**IPOC Station P**	**3.45**	**302**	Pn	**Pn**	**01 04 28.7**	**+0.5**
AC01	**Pan de Azucar**	**3.83**	**238**	Pn	**Pn**	**01 04 32.6**	**-0.1**
GO03	**Copiap**	**4.49**	**220**	Pn	**Pn**	**01 04 40.5**	**-0.8**
GO03					**Sn**	**01 05 30.7**	**-3.5**
PB08	**IPOC Station P**	**4.50**	**333**	Pn	**Pn**	**01 04 42.5**	**+0.8**
PB11	**IPOC Station P**	**5.05**	**330**	Pn	**Pn**	**01 04 49.4**	**+0.8**
AC04	**Llanos de Chal**	**5.44**	**222**		**Pn**	**01 04 53.0**	**-0.4**
AC05	**El Transito**	**5.50**	**212**		**Pn**	**01 04 54.2**	**-0.1**
CO01	**Juntas del Tor**	**6.41**	**205**	Pn	**Pn**	**01 05 06.3**	**-0.1**
GO04	**Tololo Observa**	**6.87**	**209**	Pn	**Pn**	**01 05 10.9**	**-1.5**
CO03	**El Pedregal**	**7.41**	**206**	Pn	**Pn**	**01 05 18.6**	**-0.7**
LPAZ	**La Paz**	**7.93**	**352**	P	**Pn**	**01 05 27.7**	**+0.9**
	1.1nm,0.3s,baz=144,slow=4.7,SNR=14						
LPAZ				S	**Sn**	**01 06 54.1**	**-2.0**
	0.2nm,0.3s,baz=295,slow=20,SNR=1.7						
LPAZ	**La Paz**	**7.93**	**352**	Pn	**Pn**	**01 05 26.8**	**0.0**
LPAZ	**La Paz**	**7.93**	**352**	*e*S	**Sn**	**01 06 54.8**	**-1.3**
SIV	**San Ignacio**	**9.85**	**35**	P	**Pn**	**01 05 49.7**	**-1.7**
	0.5nm,0.3s,baz=228,slow=12,SNR=5.4						
PTGB	**Pitanga**	**13.59**	**95**	*e*P	**P**	**01 06 42.7**	**+0.3**
PTGB				*e*S	**S**	**01 09 19.9**	**+5.4**
PLTB	**Pedras Altas**	**14.01**	**126**	*e*P	**Pn**	**01 06 44.1**	**-0.5**
PCMB	**Pacaembu**	**14.70**	**83**	*e*P	**P**	**01 06 55.5**	**+0.8**
CNLB	**Canela**	**15.28**	**113**	*e*P	**P**	**01 07 00.4**	**-0.6**
SAML	**Samuel**	**15.57**	**14**	Pn	**Pn**	**01 07 01.9**	**-2.0**
SAML				IAmb	IAmb	01 07 05.1	
	comp=Z,3.7nm,0.7s						
ARAG	**Araguaiana, MT**	**16.55**	**62**	*e*P	**Pn**	**01 07 16.2**	**+0.5**
CLDB	**Colider**	**16.98**	**41**	*e*P	**P**	**01 07 18.9**	**-0.9**
VAO	**Valinhos**	**18.38**	**90**	*e*P	**P**	**01 07 35.3**	**+0.2**
IPMB	**Ipameri, GO**	**18.55**	**74**	*e*P	**Pn**	**01 07 37.9**	**-1.5**
IPMB				*e*S	**Sn**	**01 11 03.2**	**-5.8**
BDFB	**Brasilia**	**19.73**	**68**	P	**P**	**01 07 50.2**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=258,slow=7.8,SNR=9.7						
BDFB	**Brasilia**	**19.73**	**68**	P	**P**	**01 07 48.7**	**-1.1**
BDFB				IAmb	IAmb	01 07 50.9	
	comp=Z,6.5nm,0.8s						
PEXB	**Peixe**	**21.39**	**59**	*e*P	**P**	**01 08 08.1**	**+0.7**
JANB	**Januaria**	**23.17**	**71**	*e*P	**P**	**01 08 24.0**	**-0.5**
JANB				*e*S	**S**	**01 12 23.4**	**+0.8**
SMTB	**Santa Maria do**	**23.98**	**54**	*e*P	**P**	**01 08 31.8**	**0.0**
SMTB				*e*S	**S**	**01 12 36.7**	**+1.2**
PTGA	**Pitinga**	**24.28**	**17**	P	**P**	**01 08 34.2**	**-0.3**
	comp=Z,1.8nm,0.3s,baz=305,slow=22,SNR=5.1						
PTGA	**Pitinga**	**24.28**	**17**	IAmb	IAmb	01 08 35.6	
	comp=Z,2.4nm,0.8s						
GDU01	**Guandu, BA**	**27.87**	**73**	*e*P	**P**	**01 09 05.9**	**-0.9**
MDP	**Montagnes des**	**32.28**	**27**	P	**P**	**01 09 45.0**	**-0.6**
	comp=Z,16nm,1.0s,baz=192,slow=9.3,SNR=1.9						
TEIG	**Tepich**	**49.77**	**333**	P	**P**	**01 12 01.1**	**+0.7**
	comp=Z,9.9nm,1.1s,baz=139,slow=18,SNR=1.7						
SNAA	**Sanae**	**59.17**	**161**	P	**P**	**01 13 16.2**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=294,slow=10.0,SNR=1.1						
SNAA	**Sanae**	**59.17**	**161**	IAmb	IAmb	01 13 23.0	
	comp=Z,1.4nm,0.9s						
TKL	**Tuckaleechee C**	**61.60**	**344**	P	**P**	**01 13 32.0**	**0.0**
	comp=Z,1.9nm,0.4s,baz=161,slow=7.4,SNR=6.3						
JCT	**Junction City**	**62.81**	**328**	P	**P**	**01 13 40.8**	**+0.6**
JCT				IAmb	IAmb	01 13 42.0	
	comp=Z,6.1nm,0.8s						
WVT	**Waverly**	**63.14**	**341**	P	**P**	**01 13 42.0**	**-0.2**
TXAR	**Lajitas Array**	**63.84**	**324**	P	**P**	**01 13 48.3**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=154,slow=7.4,SNR=8.9						
CCM	**Cathedral Cave**	**65.97**	**339**	P	**P**	**01 14 00.8**	**+0.3**
CCM				IAmb	IAmb	01 14 01.6	
	comp=Z,6.2nm,0.7s						
MSTX	**Muleshoe**	**67.10**	**328**	IAmb	IAmb	01 14 09.8	
	comp=Z,9.7nm,1.2s						
ANMO	**Albuquerque**	**69.71**	**326**	P	**P**	**01 14 26.3**	**+2.1**
	comp=Z,2.0nm,0.7s,baz=153,slow=8.0,SNR=9.0						
ECSD	**EROS Data Cent**	**72.86**	**338**	IAmb	IAmb	01 14 44.0	
	comp=Z,4.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**76.61**	**69**	P	**P**	**01 15 05.2**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=252,slow=4.9,SNR=16						
BOSA	**Boshof**	**80.63**	**117**	P	**P**	**01 15 27.5**	**+0.7**
	comp=Z,3.9nm,1.1s,baz=270,slow=4.0,SNR=2.2						
BOSA	**Boshof**	**80.63**	**117**	IAmb	IAmb	01 15 29.2	
	comp=Z,24nm,1.4s						
YKA	**Yellowknife Ar**	**94.30**	**340**	P	**P**	**01 16 32.3**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=135,slow=4.7,SNR=19						
WRA	**Warramunga Arr**	**131.48**	**207**	PKP	**PKiKP**	**01 22 26.1**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=174,slow=0.8,SNR=2.5						
ZALV	**Zalesovo Beam**	**143.54**	**28**	PKP	PKPbc	01 22 45.4	+1.1
	comp=Z,1.7nm,0.5s,baz=294,slow=3.5,SNR=8.3						
MKAR	**Makanchi Array**	**146.65**	**40**	PKPbc	**PKPab**	**01 22 55.1**	**-0.5**
	comp=Z,2.1nm,0.5s,baz=304,slow=2.7,SNR=15						
KLR	**Kul'dur**	**151.00**	**334**	PKPbc	**PKPbc**	**01 23 05.2**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=86,slow=2.4,SNR=7.6						
SONM	**Songino Array**	**155.81**	**11**	PKPab	**PKPab**	**01 23 34.9**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=356,slow=4.6,SNR=2.7						

JMA 30 01:09:10.7±0.2, 24°.85N×123°.26E, h31km, M1.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.45**	**210**	P	Pb	01 09 20.0	-0.4
YOJ				*e*S	Sb	01 09 26.3	-0.7
JYNG	**Yonagunijimaku**	**0.49**	**216**	P	Pb	01 09 20.8	-0.2
JYNG				S	Sb	01 09 27.8	-0.3
IRIF	**Iriomote-Funau**	**0.67**	**140**	P	Pb	01 09 23.6	-0.3
IRIF				*e*S	Sb	01 09 32.7	-0.2
JKRS	**Kuro-shima**	**0.92**	**132**	P	Pn	01 09 27.2	-0.2
JKRS				*e*S	Sn	01 09 39.2	-0.3
HATJ	**Hateruma jima**	**0.93**	**148**	P	Pn	01 09 27.5	-0.2
JISG	**Ishigakijimahi**	**0.99**	**105**	P	Pn	01 09 28.0	-0.5

TAP 30 01:09:14.2, 24°.44N×121°.42E, h9km, ML2.3, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNSB	**Datong**	**0.04**	**260**	*e*P	Pg	01 09 16.7	+0.6
	baz=259						
NNSB				*e*S	Sg	01 09 17.4	0.0
	baz=259						
NNSH	**Datong**	**0.04**	**260**	*i* P	Pg	01 09 16.6	+0.5
	baz=258						
NNSH				*i* S	Sg	01 09 17.3	-0.1
	baz=258						
NNS	**Nan Shan**	**0.04**	**276**	*i* P	Pg	01 09 16.7	+0.6
	baz=273						
NNS				*i* S	Sg	01 09 17.6	+0.1
	baz=273						
NDT	**Datong Townshi**	**0.19**	**26**	*i* P	Pg	01 09 19.1	+1.0
	baz=26						
ETLH	**Xiulin Townshi**	**0.23**	**166**	*e*P	Pg	01 09 20.6	+1.6
	baz=166						
ETLH				*e*S	Sg	01 09 23.8	+1.6
	baz=166						
YHNB	**Yeheng**	**0.24**	**350**	*e*P	Pg	01 09 20.4	+1.3
	baz=349						
YHNB				*e*S	Sg	01 09 23.2	+0.8
	baz=349						
ENTT	**Nioudou**	**0.24**	**33**	P	Pg	01 09 20.3	+1.1
	baz=34						
NSK	**Sanguang**	**0.25**	**346**	*e*P	Pg	01 09 20.5	+1.2
	baz=347						
NSK				*e*S	Sg	01 09 23.6	+0.9
	baz=347						
TWT	**Tachien**	**0.29**	**231**	*e*P	Pb	01 09 21.4	-0.3
	baz=232						
ENA	**Nanau**	**0.29**	**91**	*e*P	Pb	01 09 21.1	-0.5
	baz=91						
ENA				*e*S	Sb	01 09 25.3	-1.3
	baz=91						
TDCB	**Techi**	**0.30**	**233**	*e*P	Pb	01 09 21.2	-0.7
	baz=232						
NACB	**Ninganchiao**	**0.30**	**149**	*e*P	Pb	01 09 21.8	-0.1
	baz=148						
NACB				*e*S	Sb	01 09 25.9	-1.1
	baz=148						
WHF	**Hehuan Shan**	**0.32**	**206**	P	Pb	01 09 22.1	-0.4
	baz=205						
WHF				*e*S	Sg	01 09 26.5	+1.4
	baz=205						
NWLT	**Wulai**	**0.35**	**12**	P	Pb	01 09 22.2	-0.5
	baz=12						
NWLT				S	Sg	01 09 26.5	+0.7
	baz=12						
TWE	**Neicheng**	**0.36**	**38**	P	Pb	01 09 22.7	-0.1
	baz=40						
TWD	**Chiawan**	**0.39**	**156**	P	Pb	01 09 23.7	+0.4
	baz=154						
TWD				S	Sb	01 09 28.9	-0.5
	baz=154						
LIOB	**Emei**	**0.42**	**300**	*e*P	Pb	01 09 24.1	+0.2
	baz=299						
LIOB				*e*S	Sb	01 09 29.6	-1.0
	baz=299						
TWC	**Suao**	**0.43**	**66**	P	Pb	01 09 23.4	-0.5
	baz=66						
TWC				S	Sb	01 09 29.7	-0.8
	baz=66						
NSTT	**Nanjuang**	**0.43**	**297**	*e*P	Pb	01 09 24.0	0.0
	baz=297						
NSTT				*e*S	Sb	01 09 30.2	-0.5
	baz=297						
CHGB	**Renai**	**0.44**	**211**	*e*P	Pb	01 09 23.7	-0.6
	baz=211						
CHGB				*e*S	Sg	01 09 29.6	+1.0
	baz=211						
WHP	**Taichung City**	**0.46**	**250**	P	Pb	01 09 24.8	+0.2
	baz=250						
WHP				S	Sb	01 09 30.6	-1.1
	baz=250						
NTC	**Toucheng**	**0.56**	**42**	*e*P	Pb	01 09 26.4	+0.2
	baz=41						
DPDB	**Guoxing**	**0.60**	**229**	*e*P	Pb	01 09 26.9	-0.2
	baz=228						
TIPB	**Shuangxi**	**0.65**	**34**	P	Pb	01 09 27.8	0.0
	baz=34						
TIPB				S	Sg	01 09 35.6	+0.3
	baz=34						
WFSB	**Wu-fen Shan**	**0.71**	**27**	*e*P	Pb	01 09 28.8	0.0
	baz=27						
YM01	**YM01**	**0.72**	**11**	*e*P	Pb	01 09 29.6	+0.6
	baz=10.0						
VWDT	**VWDT**	**0.72**	**201**	*e*P	Pg	01 09 28.6	+0.4
	baz=200						
VWDT				*e*S	Sg	01 09 38.3	+0.6
	baz=200						
SMLT	**Sun Moon Lake**	**0.73**	**221**	*e*P	Pb	01 09 29.3	+0.2
	baz=220						
TYC	**Yuchr**	**0.74**	**224**	*e*P	Pg	01 09 28.5	+0.1
	baz=223						
TYC				*e*S	Sg	01 09 37.8	-0.3
	baz=223						

EGFH	**Guangfu**	**0.76 180**	*e*P	Pb	01 09 30.2	+0.5
	baz=179					
EGFH			*e*S	Sb	01 09 40.1	-0.1
	baz=179					
SSLB	**Suanglung**	**0.77 214**	*e*P	Pg	01 09 29.4	+0.2
	baz=213					
SSLB			*e*S	Sg	01 09 38.7	-0.5
	baz=213					
EHY	**Hungye**	**0.93 186**	*e*P	Pn	01 09 33.7	+0.1
	baz=185					
EHY			*e*S	Sn	01 09 46.0	-0.9
	baz=185					
HGSD	**Ruisui**	**0.94 180**	*e*P	Pn	01 09 33.2	-0.4
	baz=179					
HGSD			*e*S	Sn	01 09 47.7	+0.5
	baz=179					
YULB	**Yu-li**	**1.04 186**	*e*P	Pn	01 09 35.2	+0.1
	baz=186					
YULB			*e*S	Sb	01 09 49.0	+0.6
	baz=186					
CHN5	**Tsauling**	**1.08 219**	*e*P	Pn	01 09 36.7	+1.0
	baz=219					
CHN5			*e*S	Sn	01 09 51.5	+0.7
	baz=219					
TWF1	**Yuli**	**1.08 186**	*e*P	Pn	01 09 36.1	+0.5
	baz=185					
TWF1			*e*S	Sn	01 09 50.5	-0.3
	baz=185					
CHN1	**Nanshi**	**1.49 214**	*e*P	Pg	01 09 43.9	+1.1
	baz=213					
CHN1			*e*S	Sg	01 10 03.0	+0.8
	baz=213					

INET ***30*** *01:10:35.8, 11°.56N×87°.39W, h15km, ML3.6*

UCR 30 01:10:36.7±1.9, 11°.58N×87°.40W, h35km±53km, MD4.2, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
CRIN	**San Cristobal**	**1.16**	**17**	*e*P		Pn	01 10 56.5	-0.1
MATN	**Matagalpa**	**1.97**	**47**	*e*P		Pn	01 11 07.4	-0.2
NY14	**Universidad de**	**2.06**	**117**	*i* P		Pn	01 11 08.4	-0.3
NY14				*i* S		Sn	01 11 32.7	-0.5
BUEV	**Buena Vista**	**2.11**	**112**	*e*P		Pn	01 11 09.3	-0.2
BUEV				*e*S		Sn	01 11 36.0	+1.4
GB1A	**Borinquen Arri**	**2.11**	**111**	*e*P		Pn	01 11 09.1	-0.5
GB1A				*e*S		Sn	01 11 34.8	+0.2
ACON	**Acoyapa**	**2.21**	**80**	*e*P		Pn	01 11 11.1	+0.2
GUAI	**GUAI**	**2.27**	**125**	*i* P		Pn	01 11 10.6	-1.1
LIM1	**Limonal**	**2.29**	**112**	*i* P		Pn	01 11 11.8	-0.2
HORNC	**Hornillas**	**2.35**	**111**	*i* P		Pn	01 11 12.5	-0.4
PLVR	**Palo Verde**	**2.36**	**121**	*e*P		Pn	01 11 12.5	-0.6
PLVR				*e*S		Sn	01 11 39.8	-1.1
CUI	**Cuipilapa**	**2.38**	**112**	*e*P		Pn	01 11 13.7	+0.4
CUI				*e*S		Sn	01 11 42.1	+0.8
ARE1	**Arenal 1**	**2.86**	**113**	*e*P		Pn	01 11 24.1	+4.2
CEDE	**Laguna Cedeo**	**2.86**	**112**	*e*P		Pn	01 11 20.1	+0.2
CEDE				*e*S		Sn	01 11 54.5	+1.2
LCR2	**La Lucha 2**	**3.81**	**118**	*e*P		Pn	01 11 34.3	+1.2
CVTR	**Volcan Turrial**	**3.90**	**113**	*e*P		Pn	01 11 36.6	+2.0
DRK0	**Durika**	**4.69**	**119**	*e*P		Pn	01 11 45.9	+0.6

DJA 30 01:16:14.7±0.4, 8°S±4°, 11°9E±°, h10km, M3.8/7, MLv3.8/7, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
PLAI	**Plampang**	**1.50**	**233**	P		Pn	01 16 41.4	-0.2
PLAI				S		Sb	01 17 02.0	+0.3
WBSI	**Waikabubak, Su**	**1.75**	**167**	P		Pn	01 16 43.1	-2.0
WSI	**Waingapu**	**2.16**	**143**	P		Pn	01 16 51.3	+0.6
WSI				S		Sn	01 17 18.6	+1.0
BASI	**Baing, Sumba**	**2.76**	**146**	P		Pn	01 16 59.5	+0.4
BASI				S		Sn	01 17 33.5	+1.0
BKSI	**Bulukumba**	**2.83**	**24**	P		Pn	01 16 59.4	-0.5
MMRI	**Maumere**	**3.29**	**103**	P		Pn	01 17 06.3	0.0
BNSI	**Bone**	**3.68**	**18**	P		Pn	01 17 11.5	-0.2
DNP	**Denpasar**	**3.81**	**259**	P		Pn	01 17 13.0	-0.5

IDC ***30*** *01:20:13.5±0.3, 25°.02N×97°.92E, h0km, mb5.4/40, mb1 5.4/41, mb1mx5.4/42, mbtmp5.3/41, ML5.9/2, MS5.6/37, Ms1 5.6/37, ms1mx5.6/43, Error ellipse: s-maj=9.3km s-min=6.6km az=60.0*

BJI ***30*** *01:20:13.2±0.0, 25°.02N×97°.80E, h12km, mB5.9/60, mb5.6/51, ML5.9/7, Ms6.1/87, Ms7 6.1/84*

NEIC ***30*** *01:20:15.2±1.7, 25°.00N±0°.06×97°.85E±0°.06, h10km±1km, mb5.9/261, Ms_20 5.9/798, Mwb5.8/66, Mww5.9, Mwc6.0(GCMT), Error ellipse: s-maj=10.5km s-min=9.7km az=205.0*

MOS ***30*** *01:20:15.3±0.9, 24°.97N×97°.88E, h23km, mb6.2/89, MS5.8/81, Error ellipse: s-maj=5.4km s-min=3.4km az=116.1*

NEIC ***30*** *01:20:15.2, 24°.96N×97°.86E, h8km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=0.52; Mθθ=1.49; Mϕϕ 2.01; Mrθ=-0.06; Mθϕ 5.00; Mϕr 0.64; Fault plane solution: Mo 5.36000×10^17 NP1:ϕs 80.36000°, δ 83.07000°, λ=-0.50000°. NP2:ϕs 170.42000°, δ 89.50000°, λ=-173.07000°. Principal axes: T 5.5976, Plg5.0000°, Azm305.0000°; N -0.5212, Plg83.0000°, Azm174.0000°; P -5.0764, Plg5.0000°, Azm36.0000°;*

GCMT ***30*** *01:20:17.2±0.1, 24°.93N×97°.90E, h15km, MW5.9/169, Moment Tensor Solution. s160,c326; s169,c561; Duration: 2≥2 Moment tensor: Scale 10^17 Nm; Mrr=0.73±.05; Mθθ=2.13±.06; Mϕϕ 2.86±.06; Mrθ 0.78±.11; Mθϕ 8.40±.06; Mϕr 1.97±.13; Best double couple: Mo 8.98700×10^17 NP1:ϕs 82.00000°, δ 79.00000°, λ 5.00000°. NP2:ϕs 351.00000°, δ 85.00000°, λ 169.00000°. Principal axes: T 9.5360, Plg11.0000°, Azm306.0000°; N -1.0950, Plg78.0000°, Azm147.0000°; P -8.4380, Plg4.0000°, Azm37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***30*** *01:20:19, 24°.95N×97°.92E, h14km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=1.19; Mθθ=2.14; Mϕϕ 3.32; Mrθ 0.83; Mθϕ 9.04; Mϕr 1.15; Fault plane solution: Mo 9.60000×10^17 NP1:ϕs 82.00000°, δ 85.00000°, λ 5.00000°. NP2:ϕs 351.00000°, δ 85.00000°, λ 175.00000°. Principal axes: T 10.2130, Plg7.0000°, Azm307.0000°; N -1.3630, Plg83.0000°, Azm128.0000°; P -8.8499, Plg0.0000°, Azm37.0000°;*

BGR ***30*** *01:20:20.5±0.0, 24°.28N×96°.72E, h33km, mb6.4, mB_BB6.7, Ms5.8*

NEIC ***30*** *01:20:23, 24°.78N×97°.64E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=1.68; Mθθ=1.68; Mϕϕ 3.36; Mrθ=-1.84; Mθϕ 7.94; Mϕr=0.16; Fault plane solution: Mo 8.66000×10^17 NP1:ϕs 172.00000°, δ 76.00000°, λ=-175.00000°. NP2:ϕs 80.00000°, δ 85.00000°, λ=-13.00000°. Principal axes: T 9.3081, Plg6.0000°, Azm127.0000°; N -1.4962, Plg76.0000°, Azm242.0000°; P -7.8119, Plg13.0000°, Azm35.0000°;*

ISC 30 01:20:15.4±0.4, 24°.99N±0°.02×97°.90E±0°.02, h10km±2km, h10km:pP-P, n1460, σ2≥01/1286, mb6.0/331, MS5.9/529, 91C-55D, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
KMI	**Kunming**	**4.39**	**87**	Pn		**Pn**	**01 21 24.5**	**+2.1**
KMI				Sn		**Sb**	**01 22 20.5**	**-5.5**
KMI				Sg		**Sg**	**01 22 40.0**	**+3.5**
KMI				smax		smax		
	comp=N,18μm,1.3s							
KMI				smax		smax		
	comp=E,12μm,1.1s							
KMI				LR		LR		
	comp=N,1130nm,8.0s							
KMI				LR		LR		
	comp=E,312μm,7.3s							
KMI				LR		LR		
	comp=Z,176μm,9.1s							
KMI	**Kunming**	**4.39**	**87**	P		**Pn**	**01 21 24.0**	**+1.6**
KMI	**Kunming**	**4.39**	**87**			**Pn**	**01 21 24.0**	**+1.6**
ZIRO	**ZIRO**	**4.43**	**306**	*e*P		**Pn**	**01 21 20.7**	**-2.1**
CRAI	**Chiangrai**	**5.26**	**154**	P		**Pn**	**01 21 33.8**	**-0.4**
SHL	**Shillong**	**5.48**	**277**	*e*P		**Pn**	**01 21 37.1**	**-0.1**
SHL				*ex*		x	01 21 37.1	
SHL	**Shillong**	**5.48**	**277**	P		**Pn**	**01 21 35.9**	**-1.3**
SHL	**Shillong**	**5.48**	**277**	Pn		**Pn**	**01 21 35.9**	**-1.3**
GUWA	**GUWAHATI**	**5.73**	**283**	*e*P		**Pn**	**01 21 38.4**	**-2.2**
PAYA	**Payao**	**5.89**	**162**	P		**Pn**	**01 21 43.4**	**+0.6**
PAYA				S		**Sb**	**01 23 15.4**	**+6.4**
BELO	**BELONIA**	**6.14**	**255**	*e*P		**Pn**	**01 21 48.2**	**+2.0**
BRDH	**Bariadhala**	**6.17**	**249**	Pn		**Pn**	**01 21 46.9**	**+0.3**
	2μm,0.3s,baz=262,slow=0.1,SNR=13							
BRDH				Sn		**Sn**	**01 22 59.2**	**+1.9**
	2μm,0.3s,baz=81,slow=0.1,SNR=1.6							
CM34	**Chiang Mai Arr**	**6.22**	**169**	P		**Pn**	**01 21 48.4**	**+1.1**
CHTO	**Chiang Mai**	**6.22**	**171**	P		**Pn**	**01 21 47.4**	**+0.1**
CHTO	**Chiang Mai**	**6.22**	**171**	Pn		**Pn**	**01 21 47.4**	**+0.1**
CMMT	**Chiang Mai**	**6.22**	**171**	P		**Pn**	**01 21 47.5**	**+0.2**
CMMT				S		**Sb**	**01 23 17.6**	**-0.8**
CM32	**Chiang Mai Arr**	**6.37**	**172**	P		**Pn**	**01 21 50.1**	**+0.7**
CM31	**Chiang Mai Arr**	**6.57**	**171**	P		**Pn**	**01 21 52.9**	**+0.7**
	SNR=103							
CM31	**Chiang Mai Arr**	**6.57**	**171**			**Pn**	**01 21 52.9**	**+0.7**
CMAR	**Chiang Mai Arr**	**6.57**	**171**	Pn		**Pn**	**01 21 52.5**	**+0.4**
	19nm,0.3s,baz=346,slow=13,SNR=101							
CMAR				Pg		**Pg**	**01 22 18.0**	**-3.3**
	27nm,0.3s,baz=347,slow=13,SNR=26							
CMAR				Lg		Lg	01 23 39.8	
	26nm,0.3s,baz=357,slow=31,SNR=2.6							
CMAR				LR		LR	01 24 50.9	
	comp=Z,21μm,18.4s,baz=28,slow=42							
CMAR	**Chiang Mai Arr**	**6.57**	**171**	*i* P		**Pn**	**01 21 52.5**	**+0.4**
CMAR				pmax		pmax		
	comp=Z,87nm,0.5s							
SLVN	**Son La**	**6.62**	**122**	Pn		**Pn**	**01 21 52.9**	**+0.1**
LAMP	**Lampang**	**6.63**	**166**	P		**Pn**	**01 21 54.2**	**+1.2**
LAMP				S		**Sb**	**01 23 38.6**	**+8.3**
MHMT	**Maesarieng**	**6.78**	**180**	P		**Pn**	**01 21 55.6**	**+0.6**
LSA	**Lhasa**	**7.62**	**310**	*i* P		**Pn**	**01 22 06.7**	**-0.2**
	SNR=195							
LSA	**Lhasa**	**7.62**	**310**	P		**Pn**	**01 22 07.6**	**+0.7**
LSA	**Lhasa**	**7.62**	**310**	Pn		**Pn**	**01 22 07.6**	**+0.7**
CD2	**Chengdu**	**7.85**	**40**	P		**Pn**	**01 22 10.8**	**+1.1**
CD2				LR		LR		
	comp=Z,289μm,8.8s							
CD2				LR		LR		
	comp=Z,305μm,10.6s							
CD2				LR		LR		
	comp=Z,245μm,10.8s							
GYA	**Guiyang**	**8.04**	**78**	*i* P		**Pn**	**01 22 13.5**	**+1.1**
GYA				LR		LR		
	comp=Z,189μm,6.7s							
GYA				LR		LR		
	comp=Z,134μm,8.2s							
GYA				LR		LR		
	comp=Z,146μm,9.7s							
PHIT	**Phitsanulok**	**8.11**	**163**	P		**Pn**	**01 22 14.8**	**+1.5**
GTK	**Tadong**	**8.67**	**288**	*e*P		**Pn**	**01 22 19.1**	**-2.0**
PBKT	**Sadao Pong**	**8.86**	**161**			**Pn**	**01 22 25.5**	**+2.0**
TAPN	**Tapejung**	**9.45**	**287**	*e*P		**Pn**	**01 22 31.3**	**-0.6**
ODAN	**Odare**	**9.64**	**283**	*e*P		**Pn**	**01 22 32.9**	**-1.6**
RAMN	**Ramite**	**10.35**	**283**	*e*P		**Pn**	**01 22 42.6**	**-1.6**
	comp=Z,2μm,1.1s							
JIRN	**Jiri**	**10.83**	**287**	*e*P		**Pn**	**01 22 49.1**	**-1.8**
	comp=Z,4μm,1.2s							
BOK	**Bokaro**	**11.01**	**266**	*e*P		**Pn**	**01 22 51.6**	**-1.5**
BOK				IAmb		IAmb	01 22 58.9	
	comp=Z,368nm,1.2s							
GUN	**Gumba**	**11.15**	**288**	*e*P		**Pn**	**01 22 53.3**	**-2.0**
	comp=Z,3μm,1.1s							
PKI	**Pulchoki**	**11.50**	**286**	*e*P		**Pn**	**01 22 57.3**	**-2.7**
	comp=Z,437nm,0.8s							
PKIN	**Phulchoki**	**11.51**	**286**	*e*P		**Pn**	**01 22 57.4**	**-2.7**
	comp=Z,381nm,0.7s							
ENH	**Enshi**	**11.54**	**60**	Pn		**Pn**	**01 23 00.0**	**-0.3**
KKN	**Kakani**	**11.65**	**287**	*e*P		**Pn**	**01 23 01.3**	**-0.7**
DMN	**Daman**	**11.77**	**286**	*e*P		**Pn**	**01 23 00.7**	**-2.9**
LZH	**Lanzhou**	**12.19**	**23**	⇓P		**Pn**	**01 23 10.0**	**+0.8**
LZH				sP		P	01 23 17.0	-4.9
LZH				PP			01 23 21.5	
LZH				S		**Sn**	**01 25 26.5**	**+1.3**
LZH				sS			01 25 38.8	
LZH				pmax		pmax		
	comp=Z,130nm,1.4s							
LZH				pmax		pmax		
	comp=Z,1μm,4.3s							
LZH				LR		LR		
	comp=Z,111μm,11.9s							
LZH				LR		LR		
	comp=Z,111μm,10.3s							
LZH				LR		LR		
	comp=Z,100μm,10.3s							
GKN	**Gorkha**	**12.25**	**287**	*e*P		**Pn**	**01 23 06.9**	**-3.2**
QIZ	**Qiongzhong**	**12.56**	**116**	P		**Pn**	**01 23 13.0**	**-1.3**
QIZ				sP		P	01 23 19.3	-6.6
QIZ				S		**Sn**	**01 25 35.0**	**+0.7**
QIZ				SS		**SnSn**	**01 25 48.3**	**+1.8**
QIZ				pmax		pmax		
	comp=Z,60nm,1.1s							
QIZ				pmax		pmax		
	comp=Z,2μm,4.3s							
QIZ				LR		LR		
	comp=Z,69μm,16.7s							
QIZ				LR		LR		
	comp=Z,56μm,15.2s							
QIZ				LR		LR		
	comp=Z,53μm,12.6s							
QIZ	**Qiongzhong**	**12.56**	**116**			**Pn**	**01 23 14.1**	**-0.2**
DANN	**Dangsing**	**13.08**	**288**	*e*P		Pn	01 23 16.7	-4.8
KOLN	**Koldanda**	**13.11**	**285**	*e*P		**Pn**	**01 23 17.9**	**-4.1**
	comp=Z,1μm,1.2s							
XAN	**Xi'an**	**13.16**	**44**	P		**Pn**	**01 23 21.5**	**-0.9**
XAN				pP		P	01 23 30.8	-1.8
XAN				sP			01 23 35.3	
XAN				S		**Sn**	**01 25 46.8**	**-2.1**
XAN				SS		**S**	**01 26 08.5**	**-5.4**
XAN				pmax		pmax		
	comp=Z,100nm,1.2s							
XAN				pmax		pmax		
	comp=Z,2μm,10.7s							
XAN				LR		LR		
	comp=Z,99μm,13.2s							
XAN				LR		LR		
	comp=Z,145μm,16.7s							
XAN	**Xi'an**	**13.16**	**44**	P		**Pn**	**01 23 22.6**	**+0.2**
XAN	**Xi'an**	**13.16**	**44**	Pn		**Pn**	**01 23 22.6**	**+0.2**
PYUN	**Piuthan**	**13.70**	**286**	*e*P		Pn	01 23 25.0	-5.0
PBA	**Port Blair**	**14.13**	**201**	*e*P		Pn	01 23 36.1	+0.3
PBA						IAmb	IAmb	01 23 49.8
	comp=Z,970nm,1.6s							
PBA	**Port Blair**	**14.13**	**201**	P		Pn	01 23 38.8	+3.0
	SNR=26							
PBA	**Port Blair**	**14.13**	**201**	Pn		Pn	01 23 35.1	-0.6
GZH	**Guangzhou**	**14.24**	**94**	P		**Pn**	**01 23 39.0**	**+1.8**
GZH				S		**Sn**	**01 26 22.3**	**+7.0**
GZH				LR		LR		
	comp=Z,35μm,6.3s							
GTA	**Gaotai**	**14.47**	**6**	⇑P		**Pn**	**01 23 39.8**	**-0.6**
GTA				pP		P	01 23 44.3	-2.9
GTA				sP			01 23 47.5	
GTA				S		**Sn**	**01 26 23.3**	**+2.4**
GTA				sS		S	01 26 30.3	-11
GTA				SS		**SnSn**	**01 26 41.5**	**+7.7**
GTA				pmax		pmax		
	comp=Z,870nm,7.8s							
GTA				LR		LR		
	comp=Z,65μm,10.5s							
GTA				LR		LR		
	comp=Z,253μm,12.4s							
GTA				LR		LR		
	comp=Z,61μm,10.2s							
HKPS	**Hong Kong Po S**	**15.13**	**97**	P		**P**	**01 23 52.1**	**-2.3**
WHN	**Wuhan**	**15.57**	**66**	⇓P		**Pn**	**01 23 52.8**	**-2.2**
WHN				S		**Sn**	**01 26 45.3**	**-2.4**
WHN				pmax		pmax		
	comp=Z,3μm,3.5s							
WHN				LR		LR		
	comp=Z,99μm,8.0s							
WHN				LR		LR		
	comp=Z,106μm,11.4s							
DLV	**T Lat**	**16.39**	**140**	Pn		**Pn**	**01 24 05.7**	**-0.3**
JBP	**Jabalpur**	**16.46**	**267**	*ex*		**P**	**01 24 12.2**	**+2.9**
PVM	**Polavaram**	**17.02**	**246**	*e*P		**Pn**	**01 24 11.8**	**-1.8**
PVM				IVmB_BB		IVMs_BB	01 24 21.4	
	comp=Z,7μm,2.9s							
PVM				IVMs_BB		IVMs_BB	01 32 38.6	
	comp=Z,7μm,14.4s							
TIY	**Taiyuan**	**17.72**	**41**	*e*P		**Pn**	**01 24 20.0**	**-2.3**
TIY				SS		S	01 28 00.3	+13
TIY				pmax		pmax		
	comp=Z,1μm,3.7s							
TIY				LR		LR		
	comp=Z,38μm,7.9s							
TIY				LR		LR		
	comp=Z,38μm,7.8s							
TIY				LR		LR		
	comp=Z,33μm,16.1s							
RPR	**Rampur**	**18.30**	**254**	*e*P		**Pn**	**01 24 29.1**	**-0.4**
RPR				IVmB_BB			01 24 35.3	
	comp=Z,4μm,1.9s							
RPR				IVMsBB			01 34 22.6	
	comp=Z,5μm,7.8s							
DDI	**Dehra Dun**	**18.36**	**291**	*e*P		**Pn**	**01 24 28.3**	**-1.9**
DDI				IAmb		IAmb	01 24 36.8	
	comp=Z,703nm,0.7s							
BTO	**Baotou**	**18.58**	**30**	*e*P		**P**	**01 24 32.0**	**-0.7**
BTO				S		**Sn**	**01 27 53.0**	**-7.6**
KNMB	**Chin-men Tao**	**18.62**	**87**	P		**P**	**01 24 33.0**	**-0.1**
QZH	**Quanzhou**	**18.76**	**86**	P		**Pn**	**01 24 35.5**	**+0.4**
QZH				S		**S**	**01 28 11.3**	**+3.0**
QZH				pmax		pmax		
	comp=Z,2μm,10.9s							
QZH				LR		LR		
	comp=Z,66μm,11.8s							
BHPL	**Bhopal**	**18.77**	**269**	*e*P		**P**	**01 24 33.7**	**-1.1**
BHPL				IAmb		IAmb	01 24 41.9	
	comp=Z,630nm,1.0s							
NDI	**New Delhi**	**18.82**	**286**	*ex*		**P**	**01 24 32.0**	**-3.3**
NDI				*ex*		**S**	**01 28 16.0**	**+6.6**
ADKI	**Addanki**	**19.09**	**245**	*e*P		**P**	**01 24 37.8**	**-0.5**
ADKI				IVmB_BB			01 24 42.9	
	comp=Z,4μm,1.8s							
ADKI				IVMsBB			01 33 12.7	
	comp=Z,5μm,9.3s							
SRSP	**Sriramsagar**	**19.11**	**255**	*e*P		**P**	**01 24 36.9**	**-1.6**
SRSP				IVmB_BB			01 24 44.5	
	comp=Z,3μm,1.8s							
SRSP				IVMsBB			01 34 38.8	
	comp=Z,6μm,7.8s							
SMLA	**Simla**	**19.28**	**293**	*e*P		**P**	**01 24 37.4**	**-2.9**
NJS	**Nagarjunasagar**	**19.29**	**248**	*e*P		**P**	**01 24 39.7**	**-0.8**
NJS				IVmB_BB			01 24 47.3	
	comp=Z,4μm,2.1s							
NJS				IVMs_BB		IVMs_BB	01 32 59.4	
	comp=Z,9μm,18.0s							
HHC	**Hu-ho-hao-te**	**19.50**	**32**	*i* P		**Pn**	**01 24 44.3**	**+0.3**
HHC				pP		sP	01 24 48.0	+0.2
HHC				sP		pP	01 24 51.0	+4.8
HHC				PP		**PnPn**	**01 25 02.3**	**+5.0**
HHC				S		**Sn**	**01 28 17.0**	**-5.8**
HHC				sS		S	01 28 25.8	+2.7
HHC				pmax		pmax		
	comp=Z,3μm,6.9s							
HHC				LR		LR		
	comp=Z,22μm,12.5s							
HHC				LR		LR		
	comp=Z,33μm,12.1s							
HYB	**Hyderabad**	**19.53**	**251**	*i* P		**P**	**01 24 43.0**	**-0.2**
HYB				*e*S		**Sn**	**01 28 16.0**	**-7.9**
HYB				*e*LR		LR		
	comp=Z,22nm,20.0s							
HYB	**Hyderabad**	**19.53**	**251**	*e*P		**P**	**01 24 43.2**	**0.0**
HYB				IAmb		IAmb	01 24 50.0	
	comp=Z,588nm,1.2s							
HYBB	**Hyderabad (bro**	**19.53**	**251**	*e*P		**P**	**01 24 42.1**	**-1.1**
HYBB				IVmB_BB			01 24 47.4	
	comp=Z,5μm,1.9s							
HYBB				IVMs_BB		IVMs_BB	01 35 09.3	
	comp=Z,9μm,9.1s							
LHMI	**Lhok Sumawe**	**19.67**	**183**			**Pn**	**01 24 46.1**	**0.0**
LHMI				IAmb		IAmb	01 24 52.7	
	comp=Z,916nm,1.4s							
NJ2	**Nanjing**	**19.70**	**64**	⇓*i* P		**Pn**	**01 24 46.0**	**-0.3**
NJ2				pP		**pP**	**01 24 48.3**	**0.0**
NJ2				sP		**sP**	**01 24 50.0**	**+0.2**
NJ2				S		**Sn**	**01 28 27.5**	**0.0**
NJ2				pmax		pmax		
	comp=Z,270nm,1.1s							
NJ2				pmax		pmax		
	comp=Z,4μm,4.1s							
NJ2				LR		LR		
	comp=Z,80μm,14.7s							
NJ2				LR		LR		
	comp=Z,43μm,8.5s							
KULM	**Kulim**	**19.77**	**172**			**P**	**01 24 45.7**	**0.0**
KULM				IAmb		IAmb	01 24 51.7	
	comp=Z,715nm,1.1s							
KULM	**Kulim**	**19.77**	**172**	P		**Pn**	**01 24 47.0**	**-0.2**
SRLM	**Srisailam**	**19.86**	**247**	*e*P		**P**	**01 24 46.2**	**-0.5**
SRLM				IVmB_BB			01 24 53.9	
	comp=Z,7μm,1.7s							
SRLM				IVMsBB			01 34 37.3	
	comp=Z,6μm,10.0s							
TIA	**Tai'an**	**19.94**	**51**	P		**Pn**	**01 24 48.5**	**-0.6**
TIA				sP		**sP**	**01 24 55.5**	**+3.0**
TIA				S		**S**	**01 28 32.5**	**+0.7**
TIA				pmax		pmax		
	comp=Z,4μm,4.9s							
TIA				LR		LR		
	comp=Z,34μm,13.7s							
TIA				LR		LR		
	comp=Z,67μm,16.0s							
DHRM	**DHARAMSHALA**	**20.27**	**296**	*e*P		**P**	**01 24 50.1**	**-1.4**
MDRS	**Chennai**	**20.44**	**238**	*e*P		Pn	01 24 54.4	-0.8
MDRS				IAmb		IAmb	01 24 59.4	
	comp=Z,1μm,1.6s							
SKHT	**Srikalahasti**	**20.46**	**240**	*e*P		**P**	**01 24 53.0**	**-0.2**
SKHT				IVmB_BB			01 25 01.5	
	comp=Z,9μm,2.0s							
SKHT				IVMs_BB		IVMs_BB	01 34 17.3	
	comp=Z,4μm,16.9s							
WMQ	**Urumqi**	**20.55**	**339**	*e*P		**P**	**01 24 54.5**	**+0.3**
WMQ				pP		sP	01 24 59.0	-0.1
WMQ				sP		pP	01 25 04.0	+6.4
WMQ				S		**S**	**01 28 42.8**	**-1.3**
WMQ				sS		Sn	01 28 46.5	-1.7
WMQ				pmax		pmax		
	comp=Z,720nm,1.1s							
WMQ				pmax		pmax		
	comp=Z,9μm,3.8s							
WMQ				LR		LR		
	comp=Z,15μm,10.3s							
WMQ				LR		LR		
	comp=Z,16μm,9.1s							
IPM	**Ipoh**	**20.61**	**171**			**P**	**01 24 54.1**	**-0.9**
IPM				IAmb		IAmb	01 25 03.7	
	comp=Z,334nm,1.1s							
IPM	**Ipoh**	**20.61**	**171**	P		**P**	**01 24 56.0**	**+1.0**
TPUB	**Ta-pu**	**20.81**	**90**	P		**P**	**01 24 57.7**	**+0.6**
TPUB				IAmb		IAmb	01 25 04.0	
	comp=Z,284nm,0.9s							
KLRI	**Killari**	**20.96**	**255**	*e*P		**P**	**01 24 58.0**	**-0.8**
KLRI				IVmBBB			01 25 03.4	
	comp=Z,5μm,1.2s							
KLRI				IVMsBB			01 35 40.1	
	comp=Z,9μm,9.6s							
SSLB	**Suanglung**	**21.03**	**88**	P		**P**	**01 25 00.4**	**+1.0**
TWG	**Pinlang**	**21.29**	**91**	P		**P**	**

comp=Z,21µm,19.0s
BJT Baijiatuau 21.43 41 P **P** **01 25 03.9 +0.3**
BJI Beijing 21.45 41 P **P** **01 25 05.0 +1.2**
BJI pmax pmax
comp=Z,2µm,3.1s
BJI LR LR
comp=Z,44µm,15.2s
BJI LR LR
comp=Z,15µm,19.9s
NACB Ninganchiao 21.56 87 P **P** **01 25 06.4 +1.3**
NACB IAmb IAmb 01 25 26.1
comp=Z,531nm,1.3s
NACB IAMs_20 IAMs_20 01 33 52.3
comp=Z,60µm,18.0s
URV Uravakonda 21.79 247 *e*P **P** **01 25 06.6 -1.1**
URV IVmB_BB 01 25 16.6
comp=Z,6µm,2.4s
URV IVMs_BB IVMs_BB 01 35 32.1
comp=Z,8µm,18.4s
PSI Prapat 22.08 177 P **P** **01 25 11.8 +0.9**
comp=Z,169nm,1.0s,baz=360,slow=7.7,SNR=30
PSI S **S** **01 29 18.9 +4.3**
comp=Z,4.0nm,0.7s,baz=0.2,slow=23,SNR=1.4
PSI LR LR 01 34 44.4
comp=Z,23µm,18.0s,baz=271,slow=39
RPSI Rantau Prapat 22.19 177 P **P** **01 25 11.8 -0.1**
RPSI IAmb IAmb 01 25 18.8
comp=Z,283nm,1.1s
RPSI Rantau Prapat 22.19 177 **S** **01 29 18.9 +2.5**
SZP Santa 22.27 105 P **P** **01 25 14.1 +1.3**
SZP IAmb IAmb 01 25 35.3
comp=Z,461nm,1.2s
BOLP Bolinao 22.28 108 *e*P **P** **01 25 14.8 +1.9**
SCZP Santa Cruz 22.55 110 *e*P **P** **01 25 19.2 +3.4**
YOJ Yonaguni jima 22.81 86 P **P** **01 25 17.2 -1.3**
YOJ pmax pmax
comp=Z,250nm,1.2s
YOJ MLR MLR
comp=Z,15µm,18.0s
YOJ Yonaguni jima 22.81 86 P **P** **01 25 17.2 -1.3**
YOJ IAmb IAmb 01 25 43.3
comp=Z,250nm,1.2s
APYP Conner 22.84 104 *e*P **P** **01 25 20.9 +2.1**
SMPP San Manuel, Pa 23.04 108 *e*P **P** **01 25 21.0 0.0**
NIL Nilore 23.11 298 P **P** **01 25 20.4 -1.2**
NIL pmax pmax
comp=Z,3µm,1.5s
NIL Nilore 23.11 298 P **P** **01 25 20.4 -1.2**
POO Poona 23.22 259 *e*P **P** **01 25 21.4 -1.5**
POO *ex* x 01 25 24.0
comp=Z,250nm,1.0s
POO IAmb IAmb 01 25 28.0
comp=Z,424nm,1.2s
POO *i* x **S** **01 29 41.0 +5.9**
KSH Kashi 23.45 313 P **P** **01 25 25.3 +0.3**
KSH sP sP 01 25 33.5 +3.4
KSH PP **PnPn** **01 25 58.8 +7.4**
KSH S **S** **01 29 33.8 -4.8**
KSH pmax pmax
comp=Z,4µm,2.2s
KSH pmax pmax
comp=Z,14µm,4.0s
KSH LR LR
comp=Z,11µm,6.8s
KSH LR LR
comp=Z,9µm,8.6s
KSH LR LR
comp=Z,12µm,9.6s
GSI Gunungsitoli 23.55 181 P **P** **01 25 24.2 -1.9**
SHLS Shalkode 23.61 325 *e*P **P** **01 25 23.9 -2.7**
comp=Z,2µm,1.7s
SHLS *e*S **S** **01 29 42.4 +1.3**
SHLS *e*LR LR 01 34 54.5
SHLS Shalkode 23.61 325 *e*P **P** **01 25 23.9 -2.7**
SHLS pmax pmax
comp=Z,2µm,1.7s
PDGK Podgornoye 23.71 325 P **P** **01 25 28.8 +1.2**
SONM Songino Array 23.77 14 P **P** **01 25 27.6 -0.6**
comp=Z,51nm,0.9s,baz=200,slow=8.5,SNR=98
SONM S **S** **01 29 44.8 +1.1**
comp=Z,1.5nm,0.9s,baz=94,slow=1.0,SNR=0.5
SONM ScP **ScP** **01 32 50.7 +0.6**
comp=Z,6.8nm,1.3s,baz=204,slow=3.2,SNR=3.0
SONM LR LR 01 35 41.9
comp=Z,23µm,20.0s,baz=198,slow=39
SONM P3KPbc 01 58 45.4
comp=Z,0.3nm,0.4s,baz=22,slow=1.6,SNR=2.9
LUBP Lubang 23.83 114 *e*P **P** **01 25 28.2 -0.6**
UZB Uzynbulak 23.83 324 *e*P **P** **01 25 28.6 -0.3**
comp=Z,2µm,2.4s
UZB *e*S **S** **01 29 51.1 +6.4**
UZB *e*LR LR 01 34 46.1
UZB Uzynbulak 23.83 324 *e*P **P** **01 25 28.5 -0.3**
UZB pmax pmax
comp=Z,2µm,2.4s
ULN Ulaanbaatar 23.95 15 P **P** **01 25 30.4 +0.5**
ULN P **P** **01 25 30.4 +0.5**
ULN Ulaanbaatar 23.95 15 P **P** **01 25 29.1 -0.8**
ULN pmax pmax
comp=Z,276nm,1.2s
ULN MLR MLR
comp=Z,23µm,21.0s
ULN Ulaanbaatar 23.95 15 P **P** **01 25 29.1 -0.8**
ULN IAmb IAmb 01 25 35.6
comp=Z,276nm,1.2s
BALP Baler 24.00 108 *e*P **P** **01 25 30.4 0.0**
BOM Bombay 24.03 260 *ex* **S** **01 29 38.2 -10**
SATY Saty 24.10 323 *e*P **P** **01 25 31.5 +0.1**
comp=Z,3µm,2.1s
SATY *e*S **S** **01 29 56.0 +6.9**
SATY *e*LR LR 01 35 00.6
SATY Saty 24.10 323 *e*P **P** **01 25 31.4 +0.1**
SATY pmax pmax
comp=Z,3µm,2.1s
PALP Palanan 24.19 104 *e*P **P** **01 25 36.3 +4.1**
TGY Tagaytay City 24.22 112 P **P** **01 25 32.3 -0.3**
comp=Z,129nm,0.3s,baz=183,slow=6.6,SNR=1.7
TGY LR LR 01 35 00.2
comp=Z,11µm,18.2s,baz=315,slow=37
DL2 Dalian 24.36 50 P **P** **01 25 33.5 -0.1**
DL2 S **S** **01 29 52.5 -0.4**
DL2 pmax pmax
comp=Z,170nm,1.0s
DL2 pmax pmax
comp=Z,2µm,3.7s
DL2 LR LR
comp=Z,21µm,15.3s
DL2 LR LR
comp=Z,20µm,12.4s
DL2 LR LR
comp=Z,34µm,12.5s
GOA Goa 24.45 252 *e*P **P** **01 25 34.8 +0.2**
GOA IAmb IAmb 01 25 40.0
comp=Z,241nm,1.0s
PGP Puerto Galera 24.54 113⇓ *e*P **P** **01 25 33.5 -1.9**
ENPP El Nido 24.58 120 *e*P **P** **01 25 35.3 -0.4**
ZSN Zaisan 24.69 339 *e*P **P** **01 25 36.7 +0.1**
comp=Z,3µm,3.2s
ZSN *e*S **S** **01 30 05.3 +7.1**
ZSN *e*LR LR 01 34 49.7
ZSN Zaisan 24.69 339 *e*P **P** **01 25 36.6 +0.1**
ZSN pmax pmax
comp=Z,3µm,3.2s
BKNI Bangkinang 24.71 172 P **P** **01 25 36.5 -0.4**
BKNI IAmb IAmb 01 25 41.4
comp=Z,364nm,1.0s
ULHL Ulahol 24.82 319 P **P** **01 25 38.6 +0.6**
SNR=73
TNSS Tian-Shan 24.90 321 *e*P **P** **01 25 38.6 -0.3**
TNSS Tian-Shan 24.90 321 *e*P **P** **01 25 38.6 -0.3**
MDOK Medeo 24.92 322 *e*P **P** **01 25 39.3 +0.4**
MDOK *e*S **S** **01 30 04.9 +2.5**
MDOK *e*LR LR 01 35 48.9
comp=Z,27µm,16.8s
MDOK Medeo 24.92 322 *e*P **P** **01 25 39.2 +0.4**
MDOK *e*S **S** **01 30 04.8 +2.5**
MDOK MLR MLR
comp=Z,27µm,17.0s
KNDC Almaty 25.00 322 P **P** **01 25 43.4 +3.9**
AAA Alma-Ata 25.03 322 *e*P **P** **01 25 40.2 +0.5**
AAA *e*S **S** **01 30 13.4 +10**
AAA *e*LR LR 01 35 52.5
comp=Z,25µm,17.6s
AAA Alma-Ata 25.03 322 *e*P **P** **01 25 40.2 +0.5**
AAA MLR MLR
comp=Z,25µm,18.0s
MK31 Makanchi Array 25.07 334 *i* P **P** **01 25 40.1 +0.1**
MK31 Makanchi Array 25.07 334 P **P** **01 25 40.2 +0.2**
MKAR Makanchi Array 25.07 334 P **P** **01 25 39.6 -0.4**
comp=Z,292nm,0.9s,baz=145,slow=9.4,SNR=78
MKAR PcP **PcP** **01 29 13.1 -1.3**
comp=Z,4.2nm,0.9s,baz=151,slow=3.3,SNR=1.0
MKAR S **S** **01 30 06.7 +2.3**
comp=Z,1.7nm,0.7s,baz=215,slow=5.9,SNR=1.1
BOOM Boomskoye usch 25.14 319 IAMs_20 IAMs_20 01 36 42.1
comp=Z,34µm,20.0s
MAKZ Makanchi 25.21 334 P **P** **01 25 41.6 +0.4**
MAKZ pmax pmax
comp=Z,1µm,1.2s
MAKZ MLR MLR
comp=Z,15µm,19.0s
MAKZ Makanchi 25.21 334 P **P** **01 25 41.6 +0.4**
MTBS Maitube 25.25 321 *e*P **P** **01 25 42.1 +0.3**
MTBS Maitube 25.25 321 *e*P **P** **01 25 42.0 +0.3**
KZA Kyzart 25.31 318 P **P** **01 25 43.4 +0.7**
SNR=83
TDK Taldyqorghan 25.45 327 *e*P **P** **01 25 43.3 -0.1**
comp=Z,2µm,1.3s
TDK *e*S **S** **01 30 16.6 +6.3**
TDK *e*LR LR 01 37 01.5
comp=Z,17µm,15.2s
TDK Taldyqorghan 25.45 327 *e*P **P** **01 25 43.3 -0.1**
TDK pmax pmax
comp=Z,2µm,1.3s
TDK MLR MLR
comp=Z,17µm,15.0s
TKM2 Tokmak 2 25.60 320 P **P** **01 25 45.1 0.0**
SNR=65
ZAK Zakamensk 25.69 8 *e*P **P** **01 25 46.5 +0.9**
ZAK pmax pmax
comp=Z,158nm,1.1s
KKM Kota Kinabalu 25.75 134 P **P** **01 25 46.3 -0.2**
KKM IAmb IAmb 01 25 53.8
comp=Z,185nm,1.0s
KKM IAMs_20 IAMs_20 01 36 53.1
comp=Z,26µm,18.0s
KUU Kurty 25.79 322 *e*P **P** **01 25 45.8 -0.7**
comp=Z,1µm,1.6s
KUU *e*S **S** **01 30 23.8 +8.1**
KUU *e*LR LR 01 37 08.7
KUU Kurty 25.79 322 *e*P **P** **01 25 45.8 -0.7**
KUU pmax pmax
comp=Z,1µm,1.6s
KBK Karagaybulak 25.83 319 P **P** **01 25 47.7 +0.6**
SNR=124
UCH Uchtor 25.85 317 P **P** **01 25 47.9 +0.3**
SNR=91
DGZ Jazzator, Alta 25.98 344 *i* P **P** **01 25 49.0 +0.6**
DGZ pmax pmax
comp=Z,404nm,1.2s
AAK Ala-Archa 26.09 318 P **P** **01 25 49.1 -0.4**
comp=Z,557nm,1.1s,baz=120,slow=7.0,SNR=101
AAK S **S** **01 30 22.8 +1.9**
comp=Z,6.0nm,0.8s,baz=218,slow=15,SNR=1.5
AAK Ala-Archa 26.09 318 P **P** **01 25 50.1 +0.6**
SNR=88
AAK Ala-Archa 26.09 318 *i* P **P** **01 25 49.7 +0.2**
SNR=512
AAK Ala-Archa 26.09 318 *ce*P **P** **01 25 49.9 +0.4**
AAK pmax pmax
comp=Z,1µm,2.5s
AAK Ala-Archa 26.09 318 P **P** **01 25 50.0 +0.5**
AAK Ala-Archa 26.09 318 IAMs_20 IAMs_20 01 37 22.6
comp=Z,29µm,19.0s
CHMS Chumysh 26.15 319 P **P** **01 25 50.2 +0.3**
SNR=61
KSM Kuching 26.27 151 P **P** **01 25 51.6 +0.5**
KSM IAmb IAmb 01 25 56.6
comp=Z,133nm,0.9s
KSM IAMs_20 IAMs_20 01 35 39.7
comp=Z,25µm,18.0s
KSM Kuching 26.27 151 P **P** **01 25 53.0 +1.9**
AML Almayashu 26.30 317 P **P** **01 25 52.0 +0.4**
SNR=222
SBUM Sibu 26.32 146 P **P** **01 25 49.0 -2.6**
SBUM PcP **PcP** **01 29 18.9 +1.2**
SBUM Sibu 26.32 146 P **P** **01 25 53.0 +1.5**
ARSB Arslanbob 26.33 314 IAmb IAmb 01 26 40.2
comp=Z,749nm,1.3s
USP Ospenovka 26.45 319 P **P** **01 25 53.0 +0.4**
SNR=52
EKS2 Erkin-Say 26.54 318 P **P** **01 25 54.0 +0.5**
SNR=135
KBL Kabul 26.72 298 P **P** **01 25 54.9 -0.4**
KBL pmax pmax
comp=Z,2µm,1.2s
KBL Kabul 26.72 298 P **P** **01 25 54.9 -0.4**
MOY Mondy 26.74 4 *e*P **P** **01 25 56.0 +0.8**
MOY pmax pmax
comp=Z,498nm,2.6s
TLY Talaya 27.01 8 P **P** **01 25 57.1 -0.4**
comp=Z,7.1nm,0.8s,baz=206,slow=7.2,SNR=15
TLY S **S** **01 30 36.7 +1.8**
comp=Z,1.0nm,0.3s,baz=282,slow=23,SNR=0.8
TLY LR LR 01 37 37.5
comp=Z,16µm,19.5s,baz=181,slow=39
TLY Talaya 27.01 8 *i* P **P** **01 25 58.7 +1.2**
TLY *e*S **S** **01 30 37.7 +2.8**
TLY pmax pmax
comp=Z,156nm,1.5s
TLY MLR MLR
comp=Z,48µm,12.0s
TLY Talaya 27.01 8 P **P** **01 25 57.3 -0.1**
TLY IAMs_20 IAMs_20 01 37 24.0
comp=Z,26µm,18.0s
SNY Shenyang 27.08 45⇓ P **P** **01 25 57.5 -0.7**
SNY S **S** **01 30 38.0 +1.9**
SNY pmax pmax
comp=Z,580nm,3.9s
SNY LR LR
comp=Z,16µm,11.2s
SNY LR LR
comp=Z,32µm,13.7s
GAR Garm 27.12 308 P **P** **01 25 57.8 -0.9**
PVCP Virac 27.19 110 *e*P **P** **01 26 01.8 +2.4**
JOW Kunigami 27.36 80 P **P** **01 26 00.5 -0.3**
comp=Z,0.8nm,0.4s,baz=84,slow=15,SNR=2.1
JOW LR LR 01 37 46.4
comp=Z,5µm,18.7s,baz=281,slow=38
INCN Inchon 27.43 56 IAMs_20 IAMs_20 01 38 15.8
comp=Z,22µm,18.0s
IRK Irkutsk 27.64 8 *e*P **P** **01 26 04.0 +0.9**
IRK pmax pmax
comp=Z,310nm,2.2s
TJN Taejon 27.66 59 *ce*P **P** **01 26 03.7 +0.3**
BTLS Baital 27.78 322 *e*P **P** **01 26 03.7 -0.8**
comp=Z,335nm,2.0s
BTLS *e*S **S** **01 30 53.6 +6.3**
BTLS *e*LR LR 01 37 30.5
BTLS Baital 27.78 322 *e*P **P** **01 26 03.6 -0.8**
BTLS *e*S **S** **01 30 53.5 +6.3**
BTLS pmax pmax
comp=Z,335nm,2.0s
DZA Taraz 28.19 316 *e*P **P** **01 26 07.4 -0.7**
DZA Taraz 28.19 316 *e*P **P** **01 26 07.4 -0.7**
KS19 Wonju Array Si 28.37 57 P **P** **01 26 08.0 -1.7**
KSRS Korea Array 28.40 57 P **P** **01 26 08.7 -1.3**
comp=Z,3.3nm,0.7s,baz=242,slow=8.9,SNR=11
KSRS S **S** **01 30 58.0 +1.0**
comp=Z,0.6nm,0.3s,baz=90,slow=40,SNR=1.3
KSRS ScP **ScP** **01 33 04.5 +0.9**
comp=Z,1.7nm,0.8s,baz=263,slow=5.6,SNR=2.4
KSRS LR LR 01 38 24.5
comp=Z,14µm,18.7s,baz=262,slow=38
PMBI Palembang 28.54 166 IAMs_20 IAMs_20 01 38 58.5
comp=Z,28µm,18.0s
IUG luzhnay 28.66 314 *e*P **P** **01 26 12.1 -0.4**
IUG *e*S **S** **01 31 03.5 +2.2**
IUG *e*LR LR 01 38 32.1
IUG luzhnay 28.66 314 *e*P **P** **01 26 12.0 -0.4**
IUG *e*S **S** **01 31 03.5 +2.2**
TAS Tashkent 28.79 312 P **P** **01 26 14.5 +1.0**
TAS pmax pmax
comp=Z,2µm,1.8s
TAS Tashkent 28.79 312 P **P** **01 26 14.5 +1.0**
KK31 Karatay Array 28.81 316 *i* P **P** **01 26 12.0 -1.7**
KK31 Karatay Array 28.81 316 IAmb IAmb 01 26 18.4
comp=Z,268nm,1.4s
SEM Semipalatinsk 28.81 336 *e*P **P** **01 26 16.7 +2.9**
comp=Z,334nm,2.5s
SEM *e*S **S** **01 31 06.7 +3.0**
SEM *e*LR LR 01 38 00.7
SEM Semipalatinsk 28.81 336 *e*P **P** **01 26 16.7 +2.9**
SEM *e*S **S** **01 31 06.7 +3.0**
SEM pmax pmax
comp=Z,334nm,2.5s
BRLS Borolday 29.21 315 *e*S **S** **01 31 12.7 +3.0**
CN2 Changchun 29.27 43 *e*P **P** **01 26 19.0 +1.3**
CN2 *e*S **S** **01 31 06.8 -3.8**
CN2 pmax pmax
comp=Z,460nm,4.0s
CN2 LR LR
comp=Z,28µm,12.0s
CN2 LR LR
comp=Z,33µm,12.0s
CN2 LR LR
comp=Z,23µm,13.0s
CIT Chita 29.51 20 *e*P **P** **01 26 20.9 +1.1**
CIT *e* 01 26 30.2
CIT *e* 01 27 16.6
CIT pmax pmax
comp=Z,294nm,1.6s
HIA Hailar 29.63 30 P **P** **01 26 20.7 -0.2**
HIA pmax pmax
comp=Z,125nm,1.7s
HIA MLR MLR
comp=Z,22µm,18.0s
HIA Hailar 29.63 30 P **P** **01 26 20.6 -0.2**
HIA IAMs_20 IAMs_20 01 38 12.7
comp=Z,22µm,18.0s
KURBB Kurchatov Arra 29.64 335 P **P** **01 26 20.2 -0.7**
comp=Z,42nm,1.0s,baz=153,slow=8.5,SNR=54
KURBB PcP **PcP** **01 29 24.9 -0.3**
comp=Z,13nm,0.8s,baz=138,slow=1.9,SNR=4.8
KURBB S **S** **01 31 18.4 +2.3**
comp=Z,3.0nm,1.1s,baz=151,slow=39,SNR=1.7
KURBB Kurchatov Arra 29.64 335 P **P** **01 26 20.5 -0.3**
KURK Kurchatov 29.68 335 P **P** **01 26 20.2 -1.0**
KURK 01 29 24.9
KURK S **S** **01 31 18.4 +1.6**
KURK Kurchatov 29.68 335 **PcP** **01 29 24.9 -0.4**
KURK **S** **01 31 18.4 +1.6**
KURK Kurchatov 29.68 335 P **P** **01 26 20.9 -0.3**
KURK IAmb IAmb 01 26 32.6
comp=Z,452nm,1.3s
KURK IAMs_20 IAMs_20 01 37 57.5
comp=Z,29µm,22.0s
JNU Nakatsue 29.85 67 P **P** **01 26 22.1 -0.9**
comp=Z,10nm,0.8s,baz=268,slow=23,SNR=3.9
JNU LR LR 01 37 19.7
comp=Z,19µm,20.9s,baz=260,slow=34
JNU Nakatsue 29.85 67 P **P** **01 26 22.2 -0.9**
ZALV Zalesovo Beam 30.53 345 P **P** **01 26 28.6 0.0**
comp=Z,193nm,0.8s,baz=169,slow=8.5,SNR=80
ZALV PcP **PcP** **01 29 27.3 -0.2**
comp=Z,3.9nm,0.7s,baz=181,slow=4.2,SNR=1.4
ZALV LR LR 01 39 41.7
comp=Z,8µm,19.1s,baz=173,slow=38
ZALV P3KPbc 01 58 20.1
comp=Z,0.5nm,0.4s,baz=347,slow=6.1,SNR=4.1
ZALV Zalesovo Beam 30.53 345 *i* P **P** **01 26 28.7 0.0**
ZALV pmax pmax
comp=Z,191nm,0.9s
OTUK Ortayu 30.72 326 P **P** **01 26 30.6 +0.1**
KCP Kidapawan 31.55 120⇓ *i* P **P** **01 26 40.0 +1.8**
BRZS Berezniki 31.70 328 *e*P **P** **01 26 39.0 -0.2**
comp=Z,611nm,1.4s
BRZS Berezniki 31.70 328 *e*P **P** **01 26 38.9 -0.2**
BRZS pmax pmax
comp=Z,611nm,1.4s
DAV Davao City (W) 31.90 119 P **P** **01 26 41.6 +0.4**
comp=Z,296nm,0.5s,baz=136,slow=1.0,SNR=1.6
DAV Davao City (W) 31.90 119⇑ *i* P **P** **01 26 42.1 +0.9**
HRA Herat 32.22 295 IAmb IAmb 01 26 48.1
comp=Z,163nm,1.2s
MDJ Mudanjiang 32.27 45 P **P** **01 26 43.8 -0.4**
MDJ PP **PnPn** **01 27 49.5 -0.9**
MDJ PcP **PcP** **01 29 31.8 -0.5**
MDJ S **S** **01 31 59.3 +1.7**
MDJ sS sS 01 32 05.8 +2.1
MDJ ScP **ScP** **01 33 15.8 -0.4**
MDJ PcS **PcS** **01 33 16.8 -0.3**
MDJ pmax pmax
comp=Z,420nm,5.3s
MDJ LR LR
comp=Z,11µm,16.4s
MDJ LR LR
comp=Z,22µm,15.7s
MDJ Mudanjiang 32.27 45 P **P** **01 26 43.7 -0.5**
MSHR Mys Shultsa 32.47 49 *ce*P **P** **01 26 46.9 +1.0**
MSHR pmax pmax
comp=Z,39nm,1.2s
MSHR MLR MLR
comp=Z,11µm,14.0s
LEM Lembang 33.01 162 P **P** **01 26 50.5 -0.6**
comp=Z,35nm,0.3s,baz=322,slow=19,SNR=2.7
VLA Vladivostok 33.17 48 *i* P **P** **01 26 51.7 -0.3**
VLA pmax pmax
comp=Z,319nm,1.1s
VLA MLR MLR
comp=Z,32µm,15.0s
USA0B Ussuriysk Arra 33.65 47 P **P** **01 26 55.7 -0.5**
USA0B pmax pmax
comp=Z,149nm,1.1s
USA0B MLR MLR
comp=Z,18µm,20.0s
USA0B Ussuriysk Arra 33.65 47 P **P** **01 26 55.7 -0.5**
USA0B IAmb IAmb 01 27 03.0
comp=Z,149nm,1.1s
USA0B IAMs_20 IAMs_20 01 41 55.8
comp=Z,18µm,20.0s
USRK Ussuriysk Ar. 33.65 47 P **P** **01 26 55.1 -1.2**
comp=Z,62nm,0.9s,baz=244,slow=8.3,SNR=51
USRK PcP **PcP** **01 29 37.1 +0.9**
comp=Z,6.7nm,1.0s,baz=245,slow=1.5,SNR=2.8
USRK LR LR 01 42 07.8
comp=Z,15µm,20.3s,baz=241,slow=39
CISI Cisompet, Garu 33.76 162 IAMs_20 IAMs_20 01 42 59.0
comp=Z,24µm,21.0s
SMRI Semarang 34.11 157 P **P** **01 26 58.8 -1.7**
SMRI IAmb IAmb 01 27 07.3
comp=Z,259nm,1.0s
BRVK Borovoye 34.88 331 *ce*P **P** **01 27 06.8 0.0**
BRVK pmax pmax
comp=Z,627nm,2.5s
BRVK Borovoye 34.88 331 P **P** **01 27 06.5 -0.3**
BRVK IAmb IAmb 01 27 12.0
comp=Z,371nm,1.3s
UGM Wanagama 34.94 158 IAMs_20 IAMs_20 01 43 23.3
comp=Z,17µm,18.0s
INU Inuyama 35.16 64 P **P** **01 27 08.3 -1.2**
INU IAMs_20 IAMs_20 01 40 02.2
comp=Z,22µm,21.0s
JLN Jalan Bani Buh 35.31 274 P **P** **01 27 14.7 +3.8**
SNR=7.8
LUWI Luwuk 35.36 133 P **P** **01 27 10.4 -0.9**
LUWI IAmb IAmb 01 27 25.7
comp=Z,352nm,1.0s
WBK Wadi Bani Khal 35.62 274 P **P** **01 27 17.2 +3.7**
SNR=12
WBK P **P** **01 27 17.2 +3.7**
SNR=12
KLR Kul'dur 35.78 39 LR LR 01 43 36.8
comp=Z,13µm,19.4s,baz=228,slow=39
KLR Kul'dur 35.78 39 *ce*P **P** **01 27 13.8 -0.8**
KLR pmax pmax
comp=Z,33nm,1.0s
KLR MLR MLR
comp=Z,19µm,16.0s
WSAR Wadi Sarin 35.80 276 LR LR 01 45 25.7
comp=Z,7µm,18.4s,baz=104,slow=42
WSAR Wadi Sarin 35.80 276 P **P** **01 27 18.7 +3.6**
SNR=9.2
GEYT Alibeck 36.04 301 P **P** **01 27 16.5 -0.5**
comp=Z,159nm,1.0s,baz=116,slow=5.1,SNR=58
GEYT PcP **PcP** **01 29 44.8 +1.5**
comp=Z,11nm,0.8s,baz=124,slow=1.9,SNR=6.2
GEYT LR LR 01 44 16.1
comp=Z,18µm,18.4s,baz=75,slow=40
ZEA Zeya 36.11 30 *e*P **P** **01 27 18.0 +0.6**
ZEA *e*PPP PPP 01 28 46.0
ZEA *e*S **S** **01 32 54.0 -2.7**
ZEA pmax pmax
comp=N,35nm,1.0s
ZEA pmax pmax
comp=E,35nm,1.0s
ZEA pmax pmax

	comp=Z,64nm,1.0s									
ZEA						smax	smax			
	comp=N,2μm,14.0s									
ZEA						smax	smax			
	comp=E,1μm,14.0s									
ZEA						MLR	MLR			
	comp=Z,25μm,11.0s									
ZEA						MLR	MLR			
	comp=E,15μm,16.0s									
ZEA						MLR	MLR			
	comp=N,26μm,9.0s									
BIDO	**Bidbid**	**36.20**	**276**			P	**P**	**01 27 21.2**	**+2.6**	
	SNR=20									
BIDO						P	**P**	**01 27 21.2**	**+2.6**	
	SNR=20									
MJB9	**Matsu-Tunnel**	**36.26**	**62**			P	**P**	**01 27 18.6**	**-0.3**	
MAJO	**Matsushiro**	**36.26**	**62**			P	**P**	**01 27 17.6**	**-1.3**	
MAJO						pmax	pmax			
	comp=Z,36nm,1.0s									
MAJO	**Matsushiro**	**36.26**	**62**			P	**P**	**01 27 17.6**	**-1.3**	
MAT	**Matsushiro**	**36.26**	**62**			P	**P**	**01 27 18.1**	**-0.8**	
MAT						S	S	01 32 49.1	-10	
MJAR	**Matsushiro Arr**	**36.26**	**62**			P	**P**	**01 27 17.8**	**-1.1**	
	comp=Z,18nm,1.0s,baz=267,slow=9.0,SNR=28									
MJAR						PcP	**PcP**	**01 29 45.7**	**+1.7**	
	comp=Z,10nm,1.0s,baz=286,slow=3.4,SNR=3.5									
MJAR						ScP	**ScP**	**01 33 30.9**	**+0.3**	
	comp=Z,4.1nm,0.9s,baz=255,slow=2.2,SNR=2.3									
MJAR						LR	LR	01 42 39.2		
	comp=Z,12μm,20.5s,baz=275,slow=37									
SMDO	**Samad**	**36.36**	**275**			P	**P**	**01 27 22.5**	**+2.5**	
	SNR=27									
SMDO						P	**P**	**01 27 22.5**	**+2.5**	
	SNR=27									
SMDO						P	**P**	**01 27 22.5**	**+2.5**	
	SNR=27									
JMDO	**Jabal Madar**	**36.45**	**274**			P	**P**	**01 27 24.3**	**+3.6**	
	SNR=8.8									
JMDO						P	**P**	**01 27 24.3**	**+3.6**	
	SNR=8.8									
KAPI	**Kappang**	**36.62**	**142**			P	**P**	**01 27 22.3**	**+0.2**	
	comp=Z,17nm,0.6s,baz=211,slow=11,SNR=2.4									
KAPI						LR	LR	01 45 17.3		
	comp=Z,10μm,19.3s,baz=320,slow=41									
KAPI	**Kappang**	**36.62**	**142**			P	**P**	**01 27 21.6**	**-0.5**	
JAGI	**Jajag, Banyuwa**	**36.84**	**152**			P	**P**	**01 27 22.0**	**-1.9**	
HOQ	**Hoqain**	**36.93**	**277**			P	**P**	**01 27 27.3**	**+2.6**	
	SNR=27									
HOQ						P	**P**	**01 27 27.3**	**+2.6**	
	SNR=27									
HOQ						P	**P**	**01 27 27.3**	**+2.6**	
	SNR=27									
TEY	**Ternei**	**37.02**	**47**	⇓	*e*	P	**P**	**01 27 24.7**	**-0.5**	
TEY					*e*	S	**S**	**01 33 12.1**	**+1.3**	
TEY						pmax	pmax			
	comp=N,10.0nm,1.1s									
TEY						pmax	pmax			
	comp=E,10.0nm,1.1s									
TEY						pmax	pmax			
	comp=E,500nm,4.4s									
TEY						pmax	pmax			
	comp=N,200nm,3.4s									
TEY						pmax	pmax			
	comp=Z,800nm,3.9s									
TEY						MLR	MLR			
	comp=E,18μm,15.0s									
TEY						MLR	MLR			
	comp=N,16μm,17.0s									
TEY						MLR	MLR			
	comp=Z,28μm,14.0s									
BSY	**Bisya**	**37.19**	**275**			P	**P**	**01 27 29.7**	**+2.7**	
	SNR=28									
BSY						P	**P**	**01 27 29.7**	**+2.7**	
	SNR=28									
BSY						P	**P**	**01 27 29.7**	**+2.7**	
	SNR=28									
JHJ	**Hachijo jima 2**	**37.30**	**68**			LR	LR	01 42 22.6		
	comp=Z,7μm,20.0s,baz=284,slow=36									
BANOM	**Banah**	**37.46**	**281**			P	**P**	**01 27 29.2**	**0.0**	
BANOM	**Banah**	**37.46**	**281**			P	**P**	**01 27 32.3**	**+3.0**	
BANOM						P	**P**	**01 27 32.3**	**+3.0**	
SOHO	**SOHO**	**37.53**	**278**			P	**P**	**01 27 32.6**	**+2.8**	
	SNR=17									
SOHO						P	**P**	**01 27 32.6**	**+2.8**	
	SNR=17									
SHME	**Shamm**	**37.58**	**281**			P	**P**	**01 27 31.6**	**+1.2**	
MSFE	**Esma-Masafi**	**37.67**	**280**			P	**P**	**01 27 31.5**	**+0.5**	
ARQ	**Araqi**	**37.69**	**276**			P	**P**	**01 27 33.6**	**+2.4**	
	SNR=13									
ARQ						P	**P**	**01 27 33.6**	**+2.4**	
	SNR=13									
UOSS	**Minazif**	**37.69**	**279**		*i*	P	**P**	**01 27 31.8**	**+0.6**	
	SNR=6.1									
UOSS	**Minazif**	**37.69**	**279**			P	**P**	**01 27 30.1**	**-1.0**	
HATD	**Hatta, Dubai**	**37.77**	**279**		*i*	P	**P**	**01 27 33.0**	**+1.1**	
	SNR=18									
HATD	**Hatta, Dubai**	**37.77**	**279**			P	**P**	**01 27 34.9**	**+3.0**	
	SNR=9.1									
HATD						P	**P**	**01 27 34.9**	**+3.0**	
	SNR=9.1									
HATD						P	**P**	**01 27 34.9**	**+3.0**	
	SNR=9.1									
ASHO	**Ashiyiah**	**37.86**	**279**		*i*	P	**P**	**01 27 33.4**	**+0.7**	
	SNR=61									
AB31	**Akbulak array**	**38.17**	**319**		*i*	P	**P**	**01 27 34.1**	**-0.8**	
NAZ	**Nazwa, Dubai**	**38.17**	**279**		*i*	P	**P**	**01 27 36.1**	**+0.8**	
	SNR=8.6									
NAZ	**Nazwa, Dubai**	**38.17**	**279**			P	**P**	**01 27 37.6**	**+2.4**	
	SNR=5.5									
NAZ						P	**P**	**01 27 37.6**	**+2.4**	
	SNR=5.5									
ALNE	**Al Ain**	**38.25**	**278**		*i*	P	**P**	**01 27 36.6**	**+0.7**	
	SNR=17									
GRNR	**Gornyy**	**39.16**	**39**	⇑	*i*	P	**P**	**01 27 44.0**	**+0.8**	
GRNR					*e*			01 29 18.9		
GRNR					*e*	S	**S**	**01 33 47.3**	**+4.2**	
GRNR						smax	smax			
	comp=N,6.0nm,0.6s									
GRNR						MLR	MLR			
	comp=Z,14μm,15.0s									
AKTO	**Aktyubinsk**	**39.80**	**320**			P	**P**	**01 27 48.0**	**-0.6**	
DGAR	**Diego Garcia**	**40.64**	**221**			P	**P**	**01 27 55.7**	**-0.2**	
DGAR						pmax	pmax			
	comp=Z,410nm,1.3s									
DGAR						MLR	MLR			
	comp=Z,8μm,20.0s									
DGAR	**Diego Garcia**	**40.64**	**221**			P	**P**	**01 27 55.7**	**-0.2**	
DGAR						IAmb	IAmb	01 28 01.1		
	comp=Z,410nm,1.2s									
ERM	**Erimo**	**40.87**	**54**			P	**P**	**01 27 57.0**	**-0.5**	
ERM						pmax	pmax			
	comp=Z,154nm,1.1s									
ERM						MLR	MLR			
	comp=Z,12μm,21.0s									
ERM	**Erimo**	**40.87**	**54**			P	**P**	**01 27 57.0**	**-0.5**	
ERM						IAmb	IAmb	01 28 08.1		
	comp=Z,154nm,1.1s									
ASAJ	**Asahikawa**	**40.88**	**51**			LR	LR	01 46 54.1		
	comp=Z,8μm,18.1s,baz=254,slow=39									
MMRI	**Maumere**	**40.98**	**142**			P	**P**	**01 27 57.0**	**-1.7**	
MMRI						IAmb	IAmb	01 28 07.9		
	comp=Z,126nm,0.8s									
MMRI						IAMs_20	IAMs_20	01 45 48.8		
	comp=Z,16μm,20.0s									
RBK	**Rabkut**	**41.26**	**268**			P	**P**	**01 28 03.7**	**+2.6**	
	SNR=12									
SIJI	**Sorong**	**41.28**	**124**			P	**P**	**01 28 01.0**	**-0.2**	
	comp=Z,73nm,0.8s,baz=323,slow=5.7,SNR=21									
WHFO	**Wadi Hawf**	**41.53**	**269**			P	**P**	**01 28 06.0**	**+2.7**	
	SNR=9.5									
WHFO						P	**P**	**01 28 06.0**	**+2.7**	
	SNR=9.5									
SVE	**Sverdlovsk**	**41.58**	**330**		*de*	P	**P**	**01 28 03.4**	**+0.2**	
SVE					*e*			01 29 40.7		
SVE					*e*	S	**S**	**01 34 20.2**	**+1.1**	
SVE					*e*			01 37 25.0		
SVE						pmax	pmax			
	comp=Z,913nm,1.5s									
SVE						MLR	MLR			
	comp=Z,11μm,15.0s									
YSS	**Yuzh-Sakhalins**	**41.69**	**47**		*e*	P	**P**	**01 28 03.8**	**-0.4**	
YSS					*e*	*SP	**pP**	**01 28 07.7**	**-0.3**	
YSS					*e*			01 29 39.4		
YSS					*e*	PPP	PPP	01 30 04.2		
YSS					*e*	S	**S**	**01 34 20.2**	**-0.7**	
YSS						pmax	pmax			
	comp=Z,600nm,3.4s									
YSS						pmax	pmax			
	comp=Z,70nm,1.3s									
YSS						MLR	MLR			
	comp=Z,24μm,14.0s									
YSS						MLR	MLR			
	comp=N,9μm,16.0s									
YSS						MLR	MLR			
	comp=E,13μm,14.0s									
YSS	**Yuzh-Sakhalins**	**41.69**	**47**			P	**P**	**01 28 03.6**	**-0.6**	
YSS						IAmb	IAmb	01 28 11.5		
	comp=Z,242nm,1.2s									
ABTO	**Aybut**	**42.13**	**269**			P	**P**	**01 28 10.9**	**+2.6**	
	SNR=9.2									
ABTO						P	**P**	**01 28 10.9**	**+2.6**	
	SNR=9.2									
ARU	**Arti**	**42.33**	**328**			LR	LR	01 46 25.8		
	comp=Z,13μm,20.3s,baz=112,slow=37									
ARU	**Arti**	**42.33**	**328**		*c*	P	**P**	**01 28 08.8**	**-0.5**	
ARU								01 29 44.5		
ARU								01 29 58.1		
ARU						PPP	PPP	01 30 19.2		
ARU						S	**S**	**01 34 31.5**	**+1.3**	
ARU						SS	**SS**	**01 37 38.5**	**-0.1**	
ARU						SSS	SSS	01 38 24.2		
ARU						pmax	pmax			
	comp=Z,458nm,2.2s									
ARU						MLR	MLR			
	comp=Z,11μm,15.0s									
ARU	**Arti**	**42.33**	**328**			P	**P**	**01 28 08.9**	**-0.4**	
ARU						IAMs_20	IAMs_20	01 46 13.2		
	comp=Z,13μm,19.0s									
NKL	**Nikolayevsk**	**42.56**	**37**		*e*	P	**P**	**01 28 09.9**	**-1.3**	
NKL					*e*			01 30 01.2		
NKL						pmax	pmax			
	comp=Z,34nm,1.2s									
NKL						pmax	pmax			
	comp=E,3.0nm,0.9s									
NKL						pmax	pmax			
	comp=N,3.0nm,1.1s									
NKL						pmax	pmax			
	comp=Z,140nm,3.7s									
YAK	**Yakutsk**	**42.76**	**21**			LR	LR	01 46 50.1		
	comp=Z,11μm,18.5s,baz=234,slow=37									
YAK	**Yakutsk**	**42.76**	**21**		*e*	P	**P**	**01 28 13.7**	**+1.0**	
YAK					*e*	*PP	**sP**	**01 28 20.0**	**+2.2**	
YAK					*e*			01 29 54.8		
YAK					*e*			01 30 00.5		
YAK					*e*	S	**S**	**01 34 39.5**	**+3.2**	
YAK					*e*	*SS	sS	01 34 53.6	+11	
YAK					*e*			01 38 15.1		
YAK						pmax	pmax			
	comp=Z,169nm,0.9s									
YAK						pmax	pmax			
	comp=E,123nm,1.4s									
YAK						pmax	pmax			
	comp=N,109nm,1.1s									
YAK						pmax	pmax			
	comp=Z,17nm,0.6s									
YAK						smax	smax			
	comp=N,473nm,3.8s									
YAK						smax	smax			
	comp=E,671nm,4.8s									
YAK						MLR	MLR			
	comp=Z,10μm,11.0s									
YAK						MLR	MLR			
	comp=E,9μm,14.0s									
YAK						MLR	MLR			
	comp=N,5μm,11.0s									
YAK	**Yakutsk**	**42.76**	**21**			P	**P**	**01 28 12.8**	**+0.1**	
YAK						IAmb	IAmb	01 28 17.6		
	comp=Z,176nm,0.8s									
YAK						IAMs_20	IAMs_20	01 47 39.0		
	comp=Z,11μm,18.0s									
TYV	**Tymovskoe**	**42.83**	**41**		*e*	P	**P**	**01 28 14.6**	**+1.2**	
TYV					*e*	S	**S**	**01 34 41.6**	**+3.9**	
TYV						pmax	pmax			
	comp=Z,800nm,3.8s									
TYV						pmax	pmax			
	comp=Z,63nm,1.3s									
TYV						smax	smax			
	comp=E,1μm,8.2s									
TYV						MLR	MLR			
	comp=Z,17μm,12.0s									
TYV						MLR	MLR			
	comp=E,14μm,12.0s									
SOEI	**Soe**	**43.05**	**140**			P	**P**	**01 28 15.7**	**0.0**	
SOEI						IAmb	IAmb	01 28 38.4		
	comp=Z,371nm,1.0s									
SOEI						IAMs_20	IAMs_20	01 46 22.6		
	comp=Z,23μm,22.0s									
YUK	**Yuzh-Kuril'sk**	**43.17**	**52**		*e*	P	P	01 28 10.9	-5.4	
YUK					*e*			01 29 52.1		
YUK					*e*	PPP	PPP	01 30 31.5		
YUK					*e*	SS	SS	01 37 52.9	-2.6	
YUK					*e*	SSS	SSS	01 38 31.7		
YUK						pmax	pmax			
	comp=Z,285nm,1.2s									
YUK						pmax	pmax			
	comp=N,102nm,0.4s									
YUK						pmax	pmax			
	comp=E,170nm,1.1s									
YUK						MLR	MLR			
	comp=Z,7μm,15.0s									
YUK						MLR	MLR			
	comp=N,7μm,16.0s									
YUK						MLR	MLR			
	comp=E,3μm,13.0s									
SOCY	**Socotra**	**43.34**	**261**			P	**P**	**01 28 13.9**	**-4.2**	
SOCY						IAmb	IAmb	01 28 20.9		
	comp=Z,178nm,1.2s									
FAKI	**Fak Fak**	**43.37**	**125**			P	**P**	**01 28 16.2**	**-1.9**	
AKT	**Akhty**	**44.44**	**305**		*e*	P	**P**	**01 28 26.2**	**-0.5**	
AKT					*e*			01 30 12.1		
AKT						pmax	pmax			
	comp=Z,362nm,1.3s									
MAK	**Makhachkala**	**44.77**	**307**		*e*	P	**P**	**01 28 29.1**	**0.0**	
MAK					*e*			01 30 13.3		
MAK					*e*	PPP	PPP	01 30 48.3		
MAK					*e*	S	**S**	**01 35 07.8**	**+1.7**	
MAK						pmax	pmax			
	comp=Z,308nm,1.4s									
MAK						MLR	MLR			
	comp=Z,19μm,15.0s									
KUR	**Kuril'sk**	**44.79**	**50**		*e*	P	**P**	**01 28 29.5**	**+0.3**	
KUR					*i*			01 30 08.4		
KUR					*e*	S	**S**	**01 35 05.5**	**-0.9**	
TBLG	**Delisi**	**46.70**	**305**			P	**P**	**01 28 44.4**	**-0.1**	
TBLG	**Delisi**	**46.70**	**305**			P	**P**	**01 28 44.4**	**-0.1**	
ZEI	**Tsey**	**47.39**	**306**		*e*	P	**P**	**01 28 47.4**	**-2.7**	
ZEI					*e*	S	**S**	**01 35 41.0**	**-3.3**	
ZEI						pmax	pmax			
	comp=Z,260nm,1.3s									
ZEI						pmax	pmax			
	comp=E,313nm,1.6s									
ZEI						pmax	pmax			
	comp=N,157nm,1.1s									
RAYN	**Ar Rayn**	**47.55**	**280**		*i*	P	**P**	**01 28 50.7**	**-0.6**	
	SNR=29									
RAYN	**Ar Rayn**	**47.55**	**280**			P	**P**	**01 28 50.0**	**-1.4**	
RAYN						pmax	pmax			
	comp=Z,101nm,1.1s									
RAYN	**Ar Rayn**	**47.55**	**280**			P	**P**	**01 28 50.0**	**-1.4**	
RAYN						IAmb	IAmb	01 28 57.5		
	comp=Z,101nm,1.1s									
AKH	**Akhalkalaki**	**47.61**	**304**	⇑		P	**P**	**01 28 53.2**	**+1.4**	
AKH	**Akhalkalaki**	**47.61**	**304**			IAMs_20	IAMs_20	01 51 13.9		
	comp=Z,12μm,22.0s									
KBZ	**Khabaz**	**48.19**	**307**			P	**P**	**01 28 55.8**	**-0.2**	
	comp=Z,46nm,1.2s,baz=95,slow=7.9,SNR=26									
KBZ						LR	LR	01 52 30.6		
	comp=Z,14μm,18.1s,baz=86,slow=40									
KBZ	**Khabaz**	**48.19**	**307**		*ce*	P	**P**	**01 28 56.3**	**+0.3**	
KBZ						pmax	pmax			
	comp=Z,157nm,1.5s									
GOF	**Gofitskoye**	**48.19**	**309**	⇓	*i*	P	**P**	**01 28 55.8**	**-0.2**	
GOF					*e*	S	**S**	**01 35 49.8**	**-5.4**	
GOF						pmax	pmax			
	comp=Z,243nm,0.9s									
GOF						smax	smax			
	comp=E,162nm,2.4s									
KVAR	**Kislovodsk Arr**	**48.35**	**307**			P	**P**	**01 28 57.5**	**+0.1**	
	comp=E,16nm,0.8s,baz=141,slow=13									
KIV	**Kislovodsk**	**48.35**	**307**	⇓		P	**P**	**01 28 58.6**	**+1.2**	
KIV	**Kislovodsk**	**48.35**	**307**		*i*	P	**P**	**01 28 56.6**	**-0.8**	
	SNR=115									
KIV	**Kislovodsk**	**48.35**	**307**		*de*	P	**P**	**01 28 57.1**	**-0.3**	
KIV					*i*			01 30 21.7		
KIV					*e*			01 30 51.4		
KIV					*e*	PPP	PPP	01 31 37.8		
KIV					*e*	S	**S**	**01 35 50.1**	**-7.7**	
KIV					*e*	SS	**SS**	**01 39 26.8**	**-0.4**	
KIV						pmax	pmax			
	comp=Z,597nm,1.5s									
KIV						MLR	MLR			
	comp=Z,11μm,16.0s									
KIV	**Kislovodsk**	**48.35**	**307**			P	**P**	**01 28 57.5**	**+0.1**	
KIV						IAMs_20	IAMs_20	01 52 23.6		
	comp=Z,12μm,18.0s									
BCA	**Borcka**	**49.02**	**304**	⇓		P	**P**	**01 29 03.8**	**+1.3**	
JAY	**Jayapura**	**49.70**	**117**			P	**P**	**01 29 07.5**	**-0.5**	
	comp=Z,17nm,0.9s,baz=6.9,slow=20,SNR=3.2									
TIXI	**Tiksi**	**49.84**	**12**		*de*	P	**P**	**01 29 07.5**	**-0.7**	
TIXI						pmax	pmax			
	comp=Z,239nm,1.3s									
TIXI						MLR	MLR			
	comp=Z,10μm,12.0s									
TIXI	**Tiksi**	**49.84**	**12**			P	**P**	**01 29 07.2**	**-1.0**	
TIXI						IAmb	IAmb	01 29 12.4		
	comp=Z,216nm,1.2s									
TIXI						IAMs_20	IAMs_20	01 51 46.3		
	comp=Z,12μm,22.0s									
VRH	**Novokhopyorsk**	**49.88**	**317**		*e*	P	**P**	**01 29 09.5**	**+0.7**	
VRH					*e*	S	**S**	**01 36 17.1**	**-1.7**	
VRH						pmax	pmax			
	comp=Z,810nm,1.1s									
VRH						pmax	pmax			
	comp=Z,580nm,1.1s									
VRH						smax	smax			
	comp=N,1μm,5.6s									
VRH						MLR	MLR			
	comp=Z,7μm,15.0s									
MA2	**Magadan**	**50.18**	**32**		*ce*	P	**P**	**01 29 12.4**	**+1.4**	
MA2						pmax	pmax			
	comp=Z,159nm,1.3s									
MA2	**Magadan**	**50.18**	**32**			P	**P**	**01 29 11.4**	**+0.4**	
MA2						IAmb	IAmb	01 29 16.2		
	comp=Z,113nm,0.9s									
MA2						IAMs_20	IAMs_20	01 50 55.5		
	comp=Z,8μm,18.0s									
KNRA	**Kununurra**	**50.39**	**140**			P	**P**	**01 29 11.7**	**-1.4**	
KNRA						IAmb	IAmb	01 29 18.2		
	comp=Z,65nm,0.9s									
KTUT	**Trabzon**	**50.42**	**303**	⇑		P	**P**	**01 29 14.8**	**+1.7**	
SOC	**Sochi**	**50.48**	**307**		*e*	P	**P**	**01 29 12.1**	**-1.5**	
SOC					*e*			01 31 13.1		
SOC					*e*	PPP	PPP	01 32 03.3		
SOC					*e*	S	**S**	**01 36 25.8**	**-1.6**	
SOC					*e*	SS	**SS**	**01 39 59.0**	**-2.2**	
SOC					*e*	SSS	SSS	01 41 27.2		
SOC						pmax	pmax			
	comp=Z,449nm,1.5s									
SOC						MLR	MLR			
	comp=Z,12μm,20.0s									
FITZ	**Fitzroy Crossi**	**50.64**	**145**			LR	LR	01 54 46.0		
	comp=Z,6μm,19.0s,baz=312,slow=41									
FITZ	**Fitzroy Crossi**	**50.64**	**145**			IAmb	IAmb	01 29 19.4		
	comp=Z,67nm,0.9s									
PSA00	**Pilbara Seismi**	**50.96**	**153**			P	**P**	**01 29 16.1**	**-1.1**	
PSA00						IAmb	IAmb	01 29 21.8		
	comp=Z,133nm,1.0s									
SKR	**Severo-Kuril's**	**51.08**	**44**		*e*	P	**P**	**01 29 13.4**	**-4.5**	
SKR					*e*	S	**S**	**01 36 27.4**	**-8.0**	
SKR						pmax	pmax			
	comp=Z,100nm,3.8s									
SKR						pmax	pmax			
	comp=Z,21nm,0.9s									
SKR						pmax	pmax			
	comp=Z,300nm,4.1s									
SKR						MLR	MLR			
	comp=Z,8μm,15.0s									
SKR						MLR	MLR			
	comp=Z,8μm,16.0s									
DAMY	**Dhamar**	**51.13**	**269**			P	**P**	**01 29 19.0**	**-0.1**	
VORD	**Divnogorie**	**51.36**	**316**		*e*	P	**P**	**01 29 19.3**	**-0.7**	
VORD						pmax	pmax			
	comp=Z,290nm,1.3s									
VORR	**Voronezh**	**51.51**	**317**		*e*	P	**P**	**01 29 21.0**	**-0.1**	
VORR						pmax	pmax			
	comp=Z,1μm,1.2s									
LPSR	**Galich'ya Gora**	**51.81**	**318**		*e*	P	**P**	**01 29 23.4**	**0.0**	
LPSR					*e*	S	**S**	**01 36 42.0**	**-3.5**	
LPSR						pmax	pmax			
	comp=Z,540nm,0.8s									
LPSR						pmax	pmax			
	comp=Z,580nm,1.0s									
LPSR						smax	smax			
	comp=N,760nm,3.5s									
LPSR						MLR	MLR			
	comp=Z,7μm,13.0s									
ANN	**Anapa**	**52.16**	**308**	⇓	*i*	P	**P**	**01 29 24.0**	**-2.1**	
ANN					*e*			01 31 22.5		
ANN					*e*	S	**S**	**01 36 48.8**	**-1.6**	
ANN						pmax	pmax			
	comp=Z,481nm,1.8s									
ANN						pmax	pmax			
	comp=Z,198nm,1.5s									
ANN						MLR	MLR			
	comp=Z,8μm,16.0s									
PEA0B	**Petropavlovsk-**	**52.38**	**41**		*ce*	P	**P**	**01 29 28.8**	**+1.2**	
PEA0B	**Petropavlovsk-**	**52.38**	**41**			P	**P**	**01 29 27.4**	**-0.2**	
PEA0B						IAMs_20	IAMs_20	01 51 15.1		
	comp=Z,8μm,20.0s									
PETK	**Petropavlovsk-**	**52.38**	**41**			P	**P**	**01 29 26.9**	**-0.8**	
	comp=Z,12nm,1.1s,baz=197,slow=3.1,SNR=14									
PETK						LR	LR	01 51 35.6		
	comp=Z,7μm,19.6s,baz=255,slow=36									
GAZ	**Gaziantep**	**52.58**	**299**			IAmb	IAmb	01 29 34.0		
	comp=Z,491nm,1.9s									
PET	**Petropavlovsk**	**52.94**	**41**		*d*	P	**P**	**01 29 31.2**	**-0.5**	
PET					*e*			01 30 42.9		
PET					*e*			01 31 30.9		
PET					*e*	S	**S**	**01 36 56.1**	**-4.8**	
PET					*e*			01 39 16.4		
PET					*e*	SS	**SS**	**01 40 35.6**	**-4.0**	
PET						pmax	pmax			
	comp=Z,300nm,14.7s									
PET						pmax	pmax			
	comp=Z,300nm,12.3s									
PET						pmax	pmax			
	comp=Z,56nm,1.3s									
PET						pmax	pmax			
	comp=Z,400nm,12.7s									
PET						smax	smax			
	comp=E,800nm,17.6s									
PET						MLR	MLR			
	comp=Z,11μm,15.0s									
PET						MLR	MLR			
	comp=Z,12μm,15.0s									
PET	**Petropavlovsk**	**52.94**	**41**			IAMs_20	IAMs_20	01 51 41.5		
	comp=Z,9μm,19.0s									
MOS	**Moscow**	**53.06**	**322**		*e*	P	**P**	**01 29 29.8**	**-2.8**	
MOS					*e*	PPP	PPP	01 32 36.5		
MOS					*e*	S	**S**	**01 37 01.0**	**-1.5**	
MOS						pmax	pmax			
	comp=Z,3μm,2.4s									
MOS						pmax	pmax			
	comp=Z,1μm,1.6s									
MOS

KLMR eSS SS 01 40 44.6 +1.4
KLMR eSS SS 01 40 44.6 +1.4
KLMR LQ LQ 01 48 24.5
KLMR LQ LQ 01 48 24.5
KLMR LR LR 01 51 39.1
KLMR AMP 01 53 46.2
comp=Z,9μm,16.4s
OBN Obninsk 53.56 321 ⇑P P **01 29 38.5 +2.2**
OBN Obninsk 53.56 321 deP P **01 29 35.7 -0.5**
OBN eS S **01 37 06.6 -2.6**
OBN eSS SKiKP **01 40 52.0 +0.1**
OBN pmax pmax
comp=Z,247nm,1.2s
OBN MLR MLR
comp=Z,10μm,18.0s
OBN Obninsk 53.56 321 P P **01 29 36.1 -0.1**
OBN IAMs_20 IAMs_20 01 54 26.1
comp=Z,9μm,18.0s
DIKM Dikmen 53.79 304 ⇑P P **01 29 38.9 +0.6**
HWQ Hawqa 53.92 295 eP P **01 29 39.6 +0.2**
BHL Bhannes 54.22 295 eP P **01 29 41.7 +0.1**
SHBL Chebaa 54.22 294 eP P **01 29 42.1 +0.4**
SIM Simferopol' 54.52 309 ceP P **01 29 43.2 -0.2**
SIM 01 31 41.7
SIM ePPP PPP 01 33 02.6
SIM eS S **01 37 19.0 -3.5**
SIM pmax pmax
comp=Z,85nm,1.1s
MMAI Mount Meron Ar 54.55 294 PcP PcP **01 30 47.6 +0.3**
comp=Z,8.9nm,0.9s,baz=79,slow=2.2,SNR=3.2
BZK Bozkurt 54.71 305 ⇓P P **01 29 44.9 0.0**
TMCR Tamitsa 54.74 332 eP P **01 29 42.7 -2.0**
TMCR eS S **01 37 26.5 +1.6**
TMCR pmax pmax
comp=Z,545nm,1.3s
BR131 Keskin Array S 55.15 302 IAmb IAmb 01 29 52.4
comp=Z,153nm,1.3s
BRTR Keskin Array B 55.15 302 P P **01 29 47.9 -0.4**
comp=Z,63nm,1.1s,baz=114,slow=7.4,SNR=30
BRTR PP PP **01 31 53.0 +1.4**
comp=Z,21nm,1.1s,baz=92,slow=6.2,SNR=5.5
BRTR LR LR 01 58 25.0
comp=Z,3μm,18.1s,baz=100,slow=42
BRTR Keskin Array B 55.15 302 *i* P P **01 29 50.7 +2.4**
BRTR pmax pmax
comp=Z,63nm,1.1s
ANTO Ankara 55.79 302 ⇓P P **01 29 52.7 -0.2**
ANTO Ankara 55.79 302 P P **01 29 52.3 -0.5**
ANTO pmax pmax
comp=Z,400nm,1.4s
ANTO Ankara 55.79 302 P P **01 29 52.3 -0.5**
CSS Mathiatis 55.96 296 IAmb IAmb 01 30 09.4
comp=Z,89nm,1.2s
LEF Lefka 56.30 297 ⇑P P **01 29 57.2 +0.8**
MORW Morawa 56.51 161 P P **01 29 58.0 +0.2**
MORW IAmb IAmb 01 30 03.3
comp=Z,194nm,1.2s
DESE Dese 56.70 267 eS S 01 38 03.0 +10
WB0 Warramunga Arr 56.92 138 IAmb IAmb 01 30 05.4
comp=Z,65nm,0.9s
WRA Warramunga Arr 57.02 138 P P **01 30 01.4 -0.3**
comp=Z,40nm,0.8s,baz=326,slow=7.3,SNR=50
WRA LR LR 01 56 59.5
comp=Z,4μm,19.1s,baz=305,slow=39
WRA PKP2bc 02 00 06.5
comp=Z,4.2nm,1.0s,baz=129,slow=1.8,SNR=6.1
WRAB Tennant Creek 57.02 138 ceP P **01 30 02.6 +0.9**
WRAB pmax pmax
comp=Z,78nm,1.0s
WRAB Tennant Creek 57.02 138 P P **01 30 02.3 +0.7**
WRAB IAmb IAmb 01 30 06.3
comp=Z,96nm,1.2s
WB2 Warramunga Arr 57.03 138 IAmb IAmb 01 30 06.4
comp=Z,133nm,1.4s
LVZ Lovozero 57.08 336 ceP P **01 30 01.4 -0.1**
LVZ pmax pmax
comp=Z,320nm,2.5s
LVZ MLR MLR
comp=Z,10μm,15.0s
LVZ Lovozero 57.08 336 P P **01 30 00.7 -0.9**
LVZ IAmb IAmb 01 30 07.0
comp=Z,133nm,1.3s
LVZ IAMs_20 IAMs_20 01 56 58.0
comp=Z,12μm,18.0s
WR0 Warramunga Arr 57.16 138 IAmb IAmb 01 30 28.5
comp=Z,70nm,1.1s
APA Apatity 57.46 336 ⇓*i*P P **01 30 02.7 -1.4**
APA *i* 01 32 12.0
APA *i* PPP PPP 01 33 39.0
APA *i* S S **01 37 58.0 -3.0**
APA *i* PS PKiKP 01 38 11.0 +48
APA *i* 01 39 55.0
APA pmax pmax
comp=Z,26nm,1.0s
APA MLR MLR
comp=Z,8μm,20.0s
PUL Pulkovo 57.48 326 eP P **01 30 04.5 +0.1**
PUL Pulkovo 57.48 326 ceP P **01 30 05.4 +1.0**
PUL pmax pmax
comp=Z,403nm,1.1s
PUL MLR MLR
comp=Z,7μm,16.0s
AKASG Malin Array Be 57.72 316 P P **01 30 04.8 -1.5**
comp=Z,99nm,0.9s,baz=75,slow=7.1,SNR=55
AKASG PP PP **01 32 13.2 -0.8**
comp=Z,9.8nm,0.9s,baz=76,slow=8.0,SNR=4.1
AKASG Malin Array Be 57.72 316 *i* P P **01 30 05.4 -0.8**
AKASG pmax pmax
comp=Z,99nm,0.9s
AKBB Malin Array Si 57.72 316 IAmb IAmb 01 30 09.7
comp=Z,237nm,1.1s
ISP Isparta 57.79 300 P P **01 30 06.7 -0.4**
ISP pmax pmax
comp=Z,80nm,1.2s
ISP MLR MLR
comp=Z,4μm,22.0s
ISP Isparta 57.79 300 P P **01 30 06.7 -0.4**
ISP IAmb IAmb 01 30 11.1
comp=Z,80nm,1.2s
KIS Kishinev 58.12 311 eP P **01 30 08.5 -0.7**
comp=Z,800nm,4.0s
KIS Kishinev 58.12 311 ePcP PcP **01 31 00.0 -0.8**
KIS ⇑*i*S S **01 38 10.0 -0.4**
comp=Z,1μm,6.0s
KIS Kishinev 58.12 311 eP P **01 30 08.5 -0.7**
KIS *e* 01 31 00.0
KIS *i* 01 33 40.0
KIS *i* S S **01 38 10.0 -0.4**
KIS pmax pmax
comp=Z,800nm,2.0s
KIS pmax pmax
comp=Z,800nm,4.0s
KIS pmax pmax
comp=N,200nm,2.0s
KIS smax smax
comp=N,1μm,6.0s
KIS MLR MLR
comp=Z,6μm,16.0s
KIS MLR MLR
comp=N,3μm,15.0s
MILM Milestii Mici 58.13 311 ⇑P P **01 30 09.7 +0.5**
JURR Jurilovca 58.24 309 ⇓P P **01 30 10.0 0.0**
TLCR 58.25 309 ⇓P P **01 30 10.9 +0.9**
TLCR 58.25 309 ⇑P P **01 30 14.8 +4.7**
SORM Soroca 58.38 313 ⇑P P **01 30 11.1 +0.3**
ISK Istanbul-Kandi 58.49 304 P P **01 30 11.4 -0.4**
MICGM Minsk 58.52 320 ⇑eP P **01 30 11.0 -0.8**
MICGM PM 01 30 14.0
comp=Z,1.4nm,1.8s
MICGM ePP PP 01 32 30.0 +8.9
MICGM ePPP PPP 01 33 40.0
MICGM eS S **01 38 13.0 -2.3**
MICGM eSS SS **01 42 18.0 +11**
MICGM eSSS SSS 01 44 40.0
MICGM eLQ LQ 01 51 15.0
MICGM LQM 01 52 25.0
comp=N,31nm,24.0s
MICGM eLR LR 01 54 05.0
MICGM LRM MLR 01 55 42.0
comp=Z,14nm,22.0s
MICGM LRM MLR 01 55 46.0
comp=E,6.2nm,20.0s
MICGM LRM MLR 01 55 50.0
comp=N,10nm,20.0s
MICGM LRM MLR 01 55 52.0
comp=Z,25nm,24.0s
MNK Minsk 58.52 320 ⇑eP P **01 30 11.0 -0.8**
MNK *e* 01 32 30.0
MNK ePPP PPP 01 33 40.0
MNK eS S **01 38 13.0 -2.3**
MNK pmax pmax
comp=Z,1μm,1.8s
MNK MLR MLR
comp=Z,14μm,22.0s
MNK MLR MLR
comp=E,6μm,20.0s
MNK MLR MLR
comp=N,10μm,20.0s
MNK MLR MLR
comp=Z,25μm,24.0s
LEOM Leova 58.55 311 ⇑P P **01 30 12.0 -0.1**
TIRR Tirgusor 58.60 308 ⇑P P **01 30 13.1 +0.5**
TIRR Tirgusor 58.60 308 ⇑P P **01 30 13.1 +0.5**
TIRR Tirgusor 58.60 308 IAMs_20 IAMs_20 01 59 43.4
comp=Z,9μm,19.0s
CFR Carcaliu 58.73 309 ⇑P P **01 30 12.9 -0.5**
VASR Vaslui 58.85 311 ⇑P P **01 30 14.7 +0.5**
TLBR Topalu 58.85 308 ⇑P P **01 30 14.7 +0.4**
VARL Varlezi 58.87 310 ⇑P P **01 30 14.5 +0.1**
SCHL Schela 58.92 309 ⇑P P **01 30 15.4 +0.7**
HARR Harsova 58.92 309 ⇓P P **01 30 15.0 +0.3**
HARR Harsova 58.92 309 P P **01 30 19.1 +4.3**
PMG Port Moresby 58.92 119 P P **01 30 14.8 -0.3**
comp=Z,124nm,0.8s,baz=337,slow=5.9,SNR=22
PMG Port Moresby 58.92 119 ceP P **01 30 18.2 +3.1**
PMG pmax pmax
comp=Z,578nm,1.0s
PMG Port Moresby 58.92 119 P P **01 30 16.0 +0.8**
PMG IAmb IAmb 01 30 19.8
comp=Z,108nm,0.8s
IAS Iasi 58.97 311 ⇓P P **01 30 14.9 -0.2**
BILL Bilibino 59.00 24 deP P **01 30 14.5 -0.4**
BILL *e* 01 31 02.5
BILL *e* 01 32 29.7
BILL eS S **01 38 24.7 +3.6**
BILL eSS SS **01 42 18.6 +4.2**
BILL pmax pmax
comp=Z,119nm,1.3s
BILL MLR MLR
comp=Z,12μm,17.0s
BILL Bilibino 59.00 24 P P **01 30 14.1 -0.8**
BILL IAmb IAmb 01 30 19.5
comp=Z,87nm,1.1s
ICOR Ion Corvin 59.07 308 ⇑P P **01 30 16.4 +0.6**
KULA Kula-Manisa 59.14 301 P P **01 30 15.5 -1.0**
NACGM Naroch 59.16 320 eP P **01 30 16.0 -0.2**
NACGM eP P **01 30 16.0 -0.2**
NACGM PM 01 30 20.0
comp=Z,0.6nm,1.0s
NACGM ePP PP 01 32 17.0 -10
NACGM ePPP PPP 01 33 41.0
NACGM eS S **01 38 16.0 -7.6**
NACGM ePS 01 38 48.0
NACGM eSS SS **01 42 18.0 +0.5**
NACGM eSSS SSS 01 44 40.0
NACGM eLQ LQ 01 50 20.0
NACGM eLR LR 01 52 50.0
NACGM LRM MLR 01 56 10.0
comp=Z,37nm,24.0s
VSU Vasula 59.24 325 eP P **01 30 16.8 +0.1**
PETR Petresti 59.32 310 ⇓P P **01 30 18.6 +1.2**
AMRR Amara 59.35 308 ⇓P P **01 30 19.0 +1.3**
PRD Provadia 59.46 307 P P **01 30 20.2 +1.7**
IIGN Ignalina 59.48 321 eP P **01 30 18.4 0.0**
GRER 59.53 309 ⇑P P **01 30 19.5 +0.5**
ISAL Salakas 59.54 321 eP P **01 30 18.8 0.0**
NEF NEVSHA 59.55 307 P P **01 30 22.1 +3.0**
PGOR Pogoanele 59.57 309 ⇓P P **01 30 20.3 +1.1**
AS31 Alice Springs 59.64 141 P P **01 30 20.8 +0.8**
ASAR Alice Springs 59.64 141 P P **01 30 19.9 0.0**
comp=Z,36nm,0.8s,baz=323,slow=6.7,SNR=40
ASAR PKPPKP **P'P'df** **01 59 48.5 +4.2**
comp=Z,1.4nm,1.0s,baz=129,slow=2.4,SNR=5.0
ASAR LR LR 02 01 17.9
comp=Z,4μm,18.1s,baz=308,slow=41
ASAR Alice Springs 59.64 141 P P **01 30 20.0 0.0**
TESR Tescani 59.65 311 ⇓P P **01 30 19.7 0.0**
VRI Vrincioaia 59.66 310 ⇑P P **01 30 20.1 +0.3**
YER Yerkesik 59.66 300 P P **01 30 19.4 -0.7**
FINES FINESS Array B 59.70 328 P P **01 30 19.7 -0.1**
comp=Z,84nm,0.9s,baz=99,slow=6.2,SNR=61
FINES FINESS Array B 59.70 328 *i* P P **01 30 20.0 +0.2**
FINES pmax pmax
comp=Z,84nm,0.9s
PLOR Plostina 59.71 310 ⇓P P **01 30 20.6 +0.3**
LEHL Lehliu 59.74 308 ⇓P P **01 30 20.5 +0.1**
PRAR RASCA 59.86 312 ⇓P P **01 30 21.1 -0.1**
BIZ Bicaz 59.98 311 ⇑P P **01 30 21.6 -0.4**
RAZG Razgrad 60.06 307 ⇓P P **01 30 23.2 +0.5**
SULR 60.11 309 ⇑P P **01 30 23.7 +0.7**
JMB Yambol 60.15 306 P P **01 30 25.2 +1.9**
KEV Kevo 60.18 338 P P **01 30 22.7 -0.3**
KEV pmax pmax
comp=Z,557nm,2.0s
KEV MLR MLR
comp=Z,8μm,18.0s
KEV Kevo 60.18 338 P P **01 30 22.7 -0.3**
KEV IAMs_20 IAMs_20 01 58 45.0
comp=Z,8μm,18.0s
MLR Muntele Rosu 60.24 310 PP PP 01 32 36.2 -0.5
comp=Z,26nm,1.1s,baz=82,slow=5.5,SNR=2.8
MLR Muntele Rosu 60.24 310 ⇓P P **01 30 23.9 -0.1**
MLR Muntele Rosu 60.24 310 P P **01 30 23.8 -0.2**
OZUR 60.28 310 ⇑P P **01 30 24.6 +0.4**
DAT Datca 60.29 299 P P **01 30 23.4 -1.1**
SGRR Singureni 60.37 308 ⇑P P **01 30 25.7 +1.0**
NWAO Narrogin (SRO) 60.47 161 P P **01 30 24.9 -0.4**
comp=Z,76nm,0.8s,baz=340,slow=7.8,SNR=22
NWAO Narrogin (SRO) 60.47 161 P P **01 30 25.0 -0.4**
NWAO pmax pmax
comp=Z,88nm,0.9s
NWAO Narrogin (SRO) 60.47 161 P P **01 30 25.0 -0.4**
NWAO IAmb IAmb 01 30 30.2
comp=Z,88nm,0.9s
NWAO IAMs_20 IAMs_20 01 55 41.6
comp=Z,8μm,20.0s
SZH Strazhica 60.52 307 P P **01 30 27.3 +1.5**
BURAR Bucovina Array 60.52 312 ⇓P P **01 30 25.5 -0.3**
BURAR Bucovina Array 60.52 312 P P 01 30 31.1 +5.2
BUR08 Bucovina Ar. S 60.53 312 IAmb IAmb 01 30 30.1
comp=Z,291nm,1.9s
DOPR Dopca 60.58 310 ⇑P P **01 30 26.3 +0.1**
ARCES ARCESS Array B 60.67 337 P P **01 30 25.3 -1.1**
comp=Z,8.4nm,0.7s,baz=80,slow=8.6,SNR=30
ARCES PP PP **01 32 38.8 -1.0**
comp=Z,24nm,1.1s,baz=101,slow=6.4,SNR=5.1
ARE0 ARCESS Array S 60.67 337 eP P **01 30 26.3 -0.1**
PABE Paberze 60.76 321 eP P **01 30 27.0 -0.8**
KARP Karpathos 60.84 298 P P **01 30 27.3 -0.8**
KARP Karpathos 60.84 298 P P **01 30 27.7 -0.4**
VOIR 60.87 310 ⇓P P **01 30 29.5 +1.3**
ZIMR 60.88 308 ⇑P P **01 30 28.9 +0.7**
ZIMR 60.88 308 P P **01 30 32.7 +4.5**
COPA Copaceanca 60.92 308 ⇓P P **01 30 28.8 +0.3**
HUMR Humele 61.03 309 ⇑P P **01 30 28.9 -0.4**
LVV L'vov 61.09 315 eP P **01 30 28.2 -1.4**
LVV *e* 01 31 10.5
LVV *e* 01 34 19.6
LVV eS S **01 38 44.1 -4.5**
LVV *e* 01 40 20.0
LVV pmax pmax
comp=N,100nm,2.2s
LVV pmax pmax
comp=E,500nm,2.2s
LVV pmax pmax
comp=Z,900nm,1.9s
LVV MLR MLR
comp=E,5μm,15.0s
LVV MLR MLR
comp=Z,5μm,15.0s
RDO Rodhopi 61.12 305 P P **01 30 30.1 +0.2**
KDZ Kurdzhali 61.13 305 P P **01 30 31.9 +1.9**
ARCR ARCALIA 61.16 312 ⇑P P **01 30 30.9 +0.8**
ARR Arges 61.17 310 ⇑P P **01 30 30.2 -0.1**
SUW Suwalki 61.29 320 eS S **01 38 53.6 +2.7**
SUW LMZ LR 01 57 25.2
comp=Z,12nm,23.7s
SUW Suwalki 61.29 320 IAMs_20 IAMs_20 01 58 16.7
comp=Z,8μm,22.0s
HAMF Hammerfest 61.42 339 eP P **01 30 31.2 -0.2**
KTK1 Kautokeino 61.42 337 eP P **01 30 30.9 -0.6**
PLVB Pleven 61.45 307 ⇓P P **01 30 32.3 +0.2**
VLAD Vladila 61.52 308 ⇑P P **01 30 32.9 +0.4**
PLD Plovdiv 61.58 306 P P **01 30 34.7 +1.7**
SLIT Slitere, Latvi 61.61 324 eP P **01 30 33.0 +0.1**
RZN Rozhen 61.64 305 P P **01 30 35.4 +1.7**
BMR Baia Mare 61.67 312 ⇓P P **01 30 33.3 -0.3**
CJR Cluj-Napoca 61.72 311 ⇑P P **01 30 34.6 +0.7**
LOT Lotru 61.77 310 ⇑P P **01 30 35.0 +0.6**
PBUR Paburge 61.89 322 eP P **01 30 34.8 0.0**
HOPEN Hopen 61.90 345 eP P **01 30 35.2 +0.6**
PGB Panagyurishte 61.91 306 P P **01 30 37.3 +2.0**
KWP Kalwaria Pacla 61.97 315 eP P **01 30 34.7 -0.8**
KWP epP sP 01 30 54.5 +14
KWP eS S **01 38 58.5 -1.2**
KWP eS S 01 38 59.7 0.0
KWP LMZ LR 01 57 34.8
comp=Z,8.3nm,27.9s
SANT Santorini 62.03 299 ⇓P P **01 30 36.0 -0.2**
SANT Santorini 62.03 299 P P **01 30 36.1 -0.2**
TRPA Tarpa 62.25 313 ⇑P P **01 30 37.7 +0.3**
BAIL Bailesti 62.27 308 ⇑P P **01 30 38.4 +0.8**
SMY Shemya 62.28 42 P P **01 30 37.8 +0.3**
SMY pmax pmax
comp=Z,114nm,1.0s
SMY MLR MLR
comp=Z,5μm,19.0s
SMY Shemya 62.28 42 P P **01 30 37.8 +0.3**
SMY IAmb IAmb 01 30 44.8
comp=Z,114nm,1.0s
DEV Deva 62.31 310 ⇑P P **01 30 38.6 +0.8**
DRGR 62.31 311 ⇑P P **01 30 38.2 +0.2**
KOLS Kolonicke sedl 62.33 314 eP P **01 30 37.7 -0.3**
KOLS pmax pmax
comp=Z,81nm,1.5s
KOLS Kolonicke sedl 62.33 314 eP P **01 30 37.7 -0.3**
UZH Uzhgorod 62.35 313 eP P **01 30 37.0 -1.1**
UZH *e* 01 31 21.4
UZH ePPP PPP 01 34 24.0
UZH *e* 01 38 59.2
UZH MLR MLR
comp=N,1μm,18.0s
UZH MLR MLR
comp=E,2μm,18.0s
UZH MLR MLR
comp=Z,600nm,18.0s
MMB Musomiste 62.39 305 P P **01 30 39.7 +1.2**
OUR Ouranopolis 62.42 304 P P **01 30 37.8 -0.8**
GZR Gura Zlata 62.47 310 ⇓P P **01 30 38.8 -0.2**
PUNG Punghina 62.52 309 ⇑P P **01 30 39.3 0.0**
FORT Forrest 62.53 151 P P **01 30 40.3 +0.9**
FORT IAmb IAmb 01 30 44.7
comp=Z,253nm,1.4s
FORT IAMs_20 IAMs_20 02 02 03.3
comp=Z,7μm,19.0s
SRS Serrai 62.57 305 P P **01 30 39.7 0.0**
VTS Vitosha 62.57 307 ⇑P P **01 30 39.9 +0.1**
VTS Vitosha 62.57 307 P P **01 30 41.9 +2.0**
VTS Vitosha 62.57 307 P P 01 30 45.2 +5.3
KYMI Kymi, Euboea I 62.64 302 P P **01 30 40.6 +0.4**
IDI Anoyia 62.71 298 P P **01 30 40.5 -0.3**
IDI IAmb IAmb 01 30 44.9
comp=Z,90nm,1.3s
PAIG Paliouri 62.72 304 P P **01 30 40.8 +0.1**
HERR Herculane 62.80 309 ⇑P P **01 30 41.4 +0.3**
PLG Polygyros 62.81 304 P P **01 30 41.7 +0.3**
KKB Krupnik 62.81 306 P P **01 30 42.4 +1.1**
BEL Belsk 62.93 317 eP P **01 30 42.2 +0.4**
BEL eS S **01 39 13.3 +1.6**
BEL LMZ LR 01 59 53.2
comp=Z,11nm,18.8s
TRO Tromso 62.98 337 eP P **01 30 41.4 -0.5**
MRKA Markates 63.02 302 P P **01 30 42.2 -0.6**
HORT Hortiatis 63.03 304 P P **01 30 42.5 -0.4**
KNT Kendrikon 63.08 305 P P **01 30 42.9 -0.2**
SIRR Siria 63.11 311 ⇓P P **01 30 44.2 +1.0**
THE Thessaloniki 63.12 305 P P **01 30 42.1 -1.3**
BJO1 Bjornoya 63.15 343 eP P **01 30 43.3 +0.3**
VAY Valandovo 63.29 305 *i* P P **01 30 43.9 -0.6**
VAY Valandovo 63.29 305 *j* P P **01 30 43.9 -0.6**
MDVR Moldovita 63.30 309 ⇑P P **01 30 44.8 +0.2**
IMMV Iera Moni Meta 63.39 299 P P **01 30 43.2 -2.1**
GRG Griva 63.48 305 P P **01 30 44.5 -1.3**
LKR Lokris 63.48 302 P P **01 30 44.1 -1.7**
KECS Kecovo 63.56 314 eP P **01 30 46.8 +0.6**
KECS pmax pmax
comp=Z,91nm,1.5s
KECS Kecovo 63.56 314 eP P **01 30 46.8 +0.6**
LIT Litokhoron 63.58 304 P P **01 30 45.1 -1.4**
BANR Banloc 63.61 310 ⇑P P **01 30 47.1 +0.6**
KNDR Palaiochora Ch 63.68 298 P P **01 30 46.4 -0.7**
AXAR Agios Charalam 63.72 303 P P **01 30 46.4 -1.0**
LODK Lodwar 63.73 261 P P **01 30 50.4 +2.6**
SNR=21
OJC Ojcow 63.76 316 eP P **01 30 47.6 +0.1**
OJC eS S **01 39 16.5 -5.7**
OJC LMZ LR 01 56 54.7
comp=Z,6.5nm,25.6s
OJC Ojcow 63.76 316 IAmb IAmb 01 30 51.1
comp=Z,146nm,1.1s
AGG Agios Georgios 63.92 303 P P **01 30 47.2 -1.5**
VLI Veliai 63.94 300 P P **01 30 45.2 -3.7**
SPA0 Spitsbergen Ar 63.98 347 eP P **01 30 48.1 -0.4**
SKO Skopje 64.00 306 *i* P P **01 30 48.5 -0.7**
SKO Skopje 64.00 306 *i* P P **01 30 48.5 -0.7**
KIBK Kibwezi 64.00 254 P P **01 30 52.2 +2.5**
SNR=9.9
PSZ Piszkesteto 64.04 313 ⇑P P **01 30 49.5 +0.1**
PSZ Piszkesteto 64.04 313 P P 01 30 54.7 +5.3
PSZ Piszkesteto 64.04 313 IAMs_20 IAMs_20 02 01 31.2
comp=Z,8μm,20.0s
THL Klokotos Trika 64.05 304 P P **01 30 48.6 -0.9**
MAKR Makrakomi, Fth 64.07 303 P P **01 30 47.5 -2.2**
KZN Kozani 64.08 304 P P **01 30 47.7 -2.1**
KMBO Kilima Mbogo 64.12 256 P P **01 30 50.5 -0.1**
comp=Z,25nm,1.1s,baz=49,slow=7.8,SNR=34
KMBO LR LR 01 58 21.3
comp=Z,4μm,21.0s,baz=59,slow=36
KMBO Kilima Mbogo 64.12 256 *i* P P **01 30 51.5 +0.9**
SNR=11
KMBO Kilima Mbogo 64.12 256 P P **01 30 49.1 -1.5**
KMBO IAmb IAmb 01 30 55.0
comp=Z,71nm,1.1s
HSPB Hornsund (broa 64.12 346 eP P **01 30 52.0 +2.6**
HSPB eS S **01 39 27.3 +1.5**
HSPB LMZ LR 01 59 30.5
comp=Z,6.0nm,23.5s
HSPB Hornsund (broa 64.12 346 eP P **01 30 49.2 -0.1**
LANS Liptovska Anna 64.13 314 eP P **01 30 50.7 +0.8**
LANS pmax pmax
comp=Z,31nm,1.2s
LANS Liptovska Anna 64.13 314 eP P **01 30 50.7 +0.8**
GUR Goura 64.14 302 P P **01 30 47.2 -3.1**
KLV Kalavryta, Ach 64.26 302 P P **01 30 50.3 -0.7**
FNA Florina 64.28 305 P P **01 30 49.1 -2.0**
ANX Ano Chora 64.32 302 P P **01 30 50.6 -0.9**
EVR Evrytania 64.34 303 P P **01 30 50.6 -1.0**
STEI Steigen 64.35 335 eP P **01 30 51.0 0.0**
FRGS Fruska Gora 64.57 310 eP P **01 30 52.6 -0.3**
ITM Ithomi 64.63 301 P P **01 30 51.9 -1.5**
DIVS Divibare 64.64 309 eP P **01 30 52.9 -0.5**
DIVS Divibare 64.64 309 IAmb IAmb 01 30 57.4
comp=Z,326nm,1.9s
OHR Ohrid 64.64 305 *i* P P **01 30 52.7 -0.8**
OHR Ohrid 64.64 305 *j* P P **01 30 52.7 -0.8**
VYHS Vyhne 64.64 314 eP P **01 30 52.7 -0.6**
VYHS pmax pmax
comp=Z,238nm,1.6s
VYHS Vyhne 64.64 314 eP P **01 30 52.7 -0.6**
VYHS ePP PP **01 33 16.7 +1.5**
PHP Peshkopia 64.79 306 P P **01 30 52.5 -1.9**
MOR8 Moi Rana 64.79 334 eP P **01 30 52.2 -1.7**
PYL PYLOS 64.84 301 P P **01 30 53.2 -1.5**
OKC Ostrava-Krasne 64.87 315 eP P **01 30 55.4 +0.7**
OKC eS S **01 39 36.2 +0.3**
OKC MLR MLR
comp=Z,6μm,16.2s
OKC Ostrava-Krasne 64.87 315 eP P **01 30 55.4 +0.7**
OKC eS S **01 39 36.2 +0.3**
OKC AMS AMS 02 00 50.0

comp=Z,6µm,16.2s
KBS Kingsbay 64.88 348 *ce* P **P 01 30 54.8 +0.5**
KBS pmax pmax
comp=Z,165nm,1.7s
KBS Kingsbay 64.88 348 P **P 01 30 54.0 -0.3**
KBS IAmb IAmb 01 30 58.4
comp=Z,102nm,1.1s
KBS Kingsbay 64.88 348 IAMs_20 IAMs_20 02 02 19.0
comp=Z,9µm,19.0s
KBS Kingsbay 64.88 348 *e*P **P 01 30 53.5 -0.8**
TEKS Tekeris 64.88 309 *e*P **P 01 30 54.7 -0.2**
GKP Gorka Klasztor 64.89 319 *e*P **P 01 30 55.2 +0.5**
GKP *e*S **S 01 39 33.0 -3.0**
GKP LMZ LR 01 59 41.9
comp=Z,11nm,24.1s
IVA Berane 64.95 307 ⇑ *i*P **P 01 30 55.6 +0.1**
CTA Charters Tower 64.95 129 P **P 01 30 55.1 -0.5**
comp=Z,14nm,0.8s,baz=305,slow=10.0,SNR=12
CTAO Charters Tower 64.95 129 P **P 01 30 54.4 -1.2**
CTAO pmax pmax
comp=Z,50nm,1.3s
CTAO MLR MLR
comp=Z,3µm,21.0s
CTAO Charters Tower 64.95 129 P **P 01 30 54.4 -1.2**
PVY Plav 64.96 307 ⇓ *i*P **P 01 30 54.5 -1.1**
LOF Lofoten 64.98 336 *e*P **P 01 30 54.2 -0.9**
SRO2 Moca 65.06 313 *e*P **P 01 30 55.7 -0.3**
SRO2 pmax pmax
comp=Z,180nm,1.3s
SRO2 Moca 65.06 313 *e*P **P 01 30 55.7 -0.3**
BBLS Lazići 65.10 309 *e*P **P 01 30 56.3 -0.1**
RUDO Rudo 65.17 308 *e*P **P 01 30 55.1 -1.7**
MORH Mrgy, Hungar 65.18 311 *e*P **P 01 30 55.2 -1.5**
PLE Pljevlja 65.22 308 ⇓ *i*P **P 01 30 58.1 +0.9**
KOME Kolasin 65.22 307 ⇑ *i*P **P 01 30 56.8 -0.5**
MORC Moravsky Berou 65.26 315 ⇑ *i*P **P 01 30 56.7 -0.6**
MORC *e*PP **PP 01 33 23.3 +2.6**
MORC *e*S **S 01 39 41.0 +0.1**
MORC Moravsky Berou 65.26 315 ⇑ P **P 01 30 57.7 +0.3**
MORC Moravsky Berou 65.26 315 P P 01 31 02.2 +4.9
MORC Moravsky Berou 65.26 315 IAmb IAmb 01 31 02.1
comp=Z,214nm,1.2s
MORC IAMs_20 IAMs_20 02 01 23.5
comp=Z,8µm,19.0s
TIR Tirane 65.28 306 ⇓ P **P 01 30 57.3 -0.2**
TIR Tirane 65.28 306 P **P 01 31 01.1 +3.6**
KONS Konsvik 65.29 334 *e*P **P 01 30 56.3 -0.8**
IGT Igoumenitsa 65.33 304 P **P 01 30 56.2 -1.7**
JAVC Velka Javorina 65.34 314 ⇑ *i*P **P 01 30 58.2 +0.3**
JAVC *e*PP **PP 01 33 25.3 +3.9**
JAVC *e*S **S 01 39 41.8 -0.1**
PDG Podgorica 65.50 307 ⇓ P **P 01 30 58.1 -0.8**
PDG Podgorica 65.50 307 *e*P **P 01 30 57.2 -1.7**
PDG Podgorica 65.50 307 IAmb IAmb 01 31 02.4
comp=Z,212nm,1.2s
TTG Podgorica 65.50 307 ⇑ *i*P **P 01 30 58.1 -0.8**
SMOL Smolenice 65.56 314 *e*PP PP 01 33 25.9 +2.7
UPM Unac-Piva 65.59 308 *e*P **P 01 31 00.3 +0.6**
UPM Unac-Piva 65.59 308 ⇑ *i*P **P 01 30 59.2 -0.5**
DRME Dracevica, Mon 65.60 307 *e*P **P 01 30 57.7 -1.9**
DRME Dracevica, Mon 65.60 307 ⇑ *i*P **P 01 30 58.4 -1.2**
ULC Ulcinj 65.61 307 ⇑ *i*P **P 01 31 00.5 +0.8**
NKY Niksic 65.61 308 ⇑ *i*P **P 01 30 58.9 -0.9**
NKME Niksic 65.65 308 ⇑ *i*P **P 01 30 59.2 -0.7**
MODS Modra-Piesok 65.69 314 *e*P **P 01 30 59.0 -1.1**
MODS pmax pmax
comp=Z,178nm,1.4s
MODS Modra-Piesok 65.69 314 *e*P **P 01 30 59.0 -1.1**
MODS *e*PP **PP 01 33 28.6 +4.2**
KRLC Kraliky 65.69 316 *e*P **P 01 30 59.7 -0.4**
KRLC *e* 01 33 25.2
KRLC MLR MLR
comp=Z,7µm,16.0s
KRLC Kraliky 65.69 316 *e*P **P 01 30 59.7 -0.4**
KRLC *e*PP **PP 01 33 25.2 +0.8**
KRLC AMS AMS 02 01 10.0
comp=Z,7µm,16.0s
CEME Cevo 65.72 307 ⇑ *i*P **P 01 30 59.6 -0.8**
BUM Brajici-Budva 65.79 307 ⇑ *i*P **P 01 31 00.2 -0.7**
ZST Bratislava 65.84 314 *e*P **P 01 31 00.2 -0.8**
ZST pmax pmax
comp=Z,119nm,1.2s
ZST Bratislava 65.84 314 *e*P **P 01 31 00.2 -0.8**
ZST *e*PP **PP 01 33 29.8 +4.2**
KSP Ksiaz 65.86 317 *e*P **P 01 31 01.2 0.0**
KSP *e*S **S 01 39 44.6 -3.5**
KSP LMZ LR 01 59 51.5
comp=Z,6.2nm,23.4s
BRY Bratogost 65.92 308 *e*P **P 01 31 00.5 -1.3**
BRY Bratogost 65.92 308 ⇓ *i*P **P 01 31 01.0 -0.8**
ABPO Ambohimpanom 65.92 233 P **P 01 31 02.7 +0.6**
ABPO pmax pmax
comp=Z,74nm,1.4s
ABPO Ambohimpanom 65.92 233 P **P 01 31 02.7 +0.6**
ABPO IAmb IAmb 01 31 05.2
comp=Z,74nm,1.4s
ABPO Ambohimpanom 65.92 233 IAMs_20 IAMs_20 01 57 50.3
comp=Z,8µm,20.0s
DPC Dobruska-Polom 65.94 316 *e*P **P 01 31 02.5 +0.8**
DPC *e*S **S 01 39 50.7 +1.6**
DPC MLR MLR
comp=Z,8µm,16.7s
DPC Dobruska-Polom 65.94 316 *e*P **P 01 31 02.5 +0.8**
DPC *e*S **S 01 39 50.7 +1.6**
DPC AMS AMS 02 01 50.0
comp=Z,8µm,16.7s
BSD Bornholm Skovb 65.95 321 *i* P **P 01 31 00.6 -1.0**
BSD pmax pmax
comp=Z,130nm,1.2s
BSD MLR MLR
comp=Z,11µm,21.0s
BSD Bornholm Skovb 65.95 321 *i* P **P 01 31 00.6 -1.0**
comp=Z,129nm,1.2s
comp=Z,11µm,21.0s
VRAC Vranov 65.96 315 ⇑ *i*P **P 01 31 01.3 -0.5**
VRAC *e*PP **PP 01 33 28.5 +1.8**
VRAC *e*S **S 01 39 50.4 +1.1**
VRAC Vranov 65.96 315 ⇓ P **P 01 31 03.1 +1.3**
VRAC Vranov 65.96 315 P P 01 31 07.0 +5.2
OSTC Ostas 65.97 316 *e*P **P 01 31 02.2 +0.4**
OSTC *e*PP **PP 01 33 30.0 +3.3**
OSTC AMS AMS 02 01 50.0
comp=Z,8µm,16.5s
NSS Namsos 66.00 332 *e*P **P 01 31 00.8 -1.0**
HCY Herceg Novi 66.05 307 *e*P **P 01 31 03.3 +0.8**
HCY Herceg Novi 66.05 307 ⇑ *i*P **P 01 31 01.8 -0.7**
CHVC Chvalec 66.06 316 *e*P **P 01 31 02.5 +0.1**
CHVC AMS AMS 02 01 40.0
comp=Z,8µm,16.4s
TREB Trebinje 66.09 308 *e*P **P 01 31 00.8 -1.9**
UPC Upice 66.10 316 *e*P **P 01 31 03.4 +0.7**
UPC *e* 01 33 28.5
UPC MLR MLR
comp=Z,8µm,16.8s
UPC Upice 66.10 316 *e*P **P 01 31 03.4 +0.7**
UPC *e*PP **PP 01 33 28.5 +0.6**
UPC AMS AMS 02 01 50.0
comp=Z,8µm,16.8s
KRUC Moravsky 66.13 315 ⇑ *i*P **P 01 31 02.2 -0.7**
KRUC *e*PP **PP 01 33 29.8 +1.6**
KRUC *e*S **S 01 39 51.7 +0.3**
DBRK Dubrovnik 66.25 308 *i* P **P 01 31 02.4 -1.4**
BEHE Becsehely 66.40 312 *e*P **P 01 31 07.3 +2.7**
BLY Banja Luka 66.48 310 *e*P **P 01 31 05.0 -0.2**
STON Ston 66.52 308 *e*P **P 01 31 03.9 -1.6**
STON Ston 66.52 308 *i* P **P 01 31 03.7 -1.8**
SCTE Santa Cesarea 66.60 305 P **P 01 31 06.1 0.0**
MGRS Mrkonjic Grad 66.62 310 *e*P **P 01 31 07.2 +1.1**
TREC Trest 66.67 315 *e*P **P 01 31 07.3 +0.9**
TREC *e*S **S 01 39 55.5 -2.5**
TREC MLR MLR
comp=Z,10µm,20.5s
TREC Trest 66.67 315 *e*P **P 01 31 07.3 +0.9**
TREC *e*S **S 01 39 55.5 -2.5**
TREC AMS AMS 02 03 50.0
comp=Z,10µm,20.5s
KALN Kalnik 66.68 312 *i* P **P 01 31 06.9 +0.4**
CONA Conrad Observa 66.70 314 *i* P **P 01 31 06.0 -0.7**
comp=Z,286nm,1.5s,SNR=164
CONA *i* PP **PP 01 33 33.4 0.0**
comp=Z,109nm,1.4s
NC602 NORSAR Array S 66.78 328 *e*P **P 01 31 05.9 -0.9**
RICI Ricice 66.79 309 P **P 01 31 05.0 -2.2**
NB2 NORSAR Subarra 66.89 328 P **P 01 31 06.5 -1.0**
comp=Z,98nm,1.4s,baz=79,slow=6.5
NB2 NORSAR Array B 66.89 328 P **P 01 31 06.5 -1.0**
baz=79,slow=6.5
NOA NORSAR Array B 66.89 328 P **P 01 31 06.5 -1.0**
comp=Z,26nm,1.1s,baz=81,slow=6.4,SNR=30
NOA PP **PP 01 33 33.8 -0.7**
comp=Z,20nm,1.1s,baz=81,slow=8.2,SNR=4.8
NOA LR LR 02 01 55.3
comp=Z,6µm,18.9s,baz=75,slow=37
MAKA Makarska 66.92 308 *i* P **P 01 31 06.3 -1.6**
TBLU Trondheim 66.95 331 *e*P **P 01 31 07.2 -0.6**
RGN Rugen 66.96 321 *e*P **P 01 31 10.7 +2.7**
RGN Rugen 66.96 321 *e*P **P 01 31 07.7 -0.3**
comp=Z,928nm,1.9s,baz=77,slow=6.2
RGN Rugen 66.96 321 IAMs_20 IAMs_20 02 00 59.4
comp=Z,10µm,21.0s
GOPC GO Pecny, Ondr 66.99 316 *e*P **P 01 31 09.2 +0.8**
GOPC *e*S **S 01 39 58.2 -3.6**
GOPC MLR MLR
comp=Z,7µm,16.6s
GOPC GO Pecny, Ondr 66.99 316 *e*P **P 01 31 09.2 +0.8**
GOPC *e*S **S 01 39 58.2 -3.6**
GOPC AMS AMS 02 02 00.0
comp=Z,7µm,16.6s
PVCC Panska Ves 67.00 316 *e*P **P 01 31 09.5 +1.1**
PVCC *e*S **S 01 39 56.4 -5.5**
PVCC MLR MLR
comp=Z,5µm,21.0s
PVCC Panska Ves 67.00 316 *e*P **P 01 31 09.5 +1.1**
PVCC *e*S **S 01 39 56.4 -5.5**
PVCC AMS AMS 02 01 00.0
comp=Z,5µm,21.0s
PTJ Puntijarka 67.06 311 P **P 01 31 08.4 -0.6**
ZAG Zagreb 67.07 311 *e*P **P 01 31 09.7 +0.8**
ARSA Arzberg 67.07 313 *i* P **P 01 31 08.7 -0.3**
comp=Z,135nm,2.0s,SNR=42
RUE Ruedersdorf 67.09 319 *e*P **P 01 31 09.5 +0.6**
RUE Ruedersdorf 67.09 319 *e*P **P 01 31 08.1 -0.8**
comp=Z,847nm,1.6s,baz=77,slow=6.2
PRU Pruhonice 67.13 316 *e*P **P 01 31 10.1 +0.9**
PRU *e*S **S 01 40 00.4 -3.1**
PRU MLR MLR
comp=Z,7µm,16.2s
PRU Pruhonice 67.13 316 *e*P **P 01 31 10.1 +0.9**
PRU *e*S **S 01 40 00.4 -3.1**
PRU AMS AMS 02 02 10.0
comp=Z,7µm,16.2s
PRA Prague 67.18 316 *e*P **P 01 31 10.6 +1.0**
PRA *e* 01 33 39.7
PRA *e*S **S 01 39 59.4 -4.6**
PRA MLR MLR
comp=Z,4µm,16.6s
PRA Prague 67.18 316 *e*P **P 01 31 10.6 +1.0**
PRA *e*PP **PP 01 33 39.7 +2.4**
PRA *e*S **S 01 39 59.4 -4.6**
PRA AMS AMS 02 02 30.0
comp=Z,4µm,16.6s
KIJV Kijevo 67.19 309 *i* P **P 01 31 08.0 -1.7**
BRG Berggiesshubel 67.32 317 *i* P **P 01 31 10.5 +0.1**
comp=Z,360nm,1.7s
BRG *i* PCP **PcP 01 31 41.4 +3.3**
comp=Z,40nm,1.1s
BRG *i* PP **PP 01 33 38.9 +0.4**
comp=Z,60nm,1.5s
BRG S **S 01 40 07.0 +1.3**
BRG SS **SS 01 44 32.0 +7.0**
BRG *e*PKPPKP **P'P'df 01 59 37.9 -3.2**
comp=Z,4.5nm,1.4s
comp=N,5µm,14.6s
comp=E,6µm,17.2s
comp=Z,8µm,17.2s
BRG Berggiesshubel 67.32 317 *e*P **P 01 31 09.8 -0.6**
comp=Z,360nm,1.7s,baz=77,slow=6.2
BRG Berggiesshubel 67.32 317 *i* P **P 01 31 10.5 +0.1**
BRG *i* 01 31 41.4
BRG *i* 01 33 38.9
BRG S **S 01 40 07.0 +1.3**
BRG pmax pmax
comp=Z,360nm,1.7s
BRG pmax pmax
comp=Z,60nm,1.5s
BRG MLR MLR
comp=N,5µm,14.6s
BRG MLR MLR
comp=E,6µm,17.2s
BRG MLR MLR
comp=Z,8µm,17.2s
OSL Oslo 67.33 327 *e*P **P 01 31 10.7 +0.5**
HVAR Hvar 67.35 308 *i* P **P 01 31 08.8 -2.0**
CRES Cresnjev 67.43 311 *e*P **P 01 31 10.4 -0.9**
OZLJ Ozalj 67.47 311 *i* P **P 01 31 11.0 -0.4**
PERS Pernice 67.48 312 *e*P **P 01 31 11.5 -0.1**
PERS *e*pP **pP 01 31 14.3 -1.1**
PERS *e*PP **PP 01 33 42.0 +1.9**
UDBI Udbina 67.52 310 *i* P **P 01 31 10.1 -1.8**
SOKA Soboth 67.53 312 *i* P **P 01 31 11.8 -0.2**
comp=Z,111nm,1.5s,SNR=84
SOKA *i* PP **PP 01 33 40.7 +0.1**
comp=Z,37nm,1.3s
PBCC Pribram 67.54 316 *e*P **P 01 31 12.7 +0.8**
BOJS Bojanci 67.64 311 *e*P **P 01 31 12.7 +0.1**
FBE Freiberg 67.67 317 *e*P **P 01 31 12.2 -0.5**
comp=Z,659nm,1.7s,baz=77,slow=6.2
MORI Morici 67.71 309 *i* P **P 01 31 10.4 -2.6**
DOMB Dombas 67.71 329 *e*P **P 01 31 12.7 -0.1**
MOA Molln 67.77 314 *i* P **P 01 31 13.1 -0.3**
comp=Z,125nm,1.2s,SNR=78
MOA *i* PP **PP 01 33 41.3 -1.2**
comp=Z,52nm,1.4s
ZIRJ Zirje 67.81 309 *i* P **P 01 31 11.8 -1.8**
CLL Collm 67.81 318 *e*P **P 01 31 14.0 +0.5**
comp=Z,336nm,1.8s
CLL *e*Pmax 01 31 18.0
CLL *e* 01 31 31.0
CLL *e*PP **PP 01 33 42.0 -0.7**
CLL *e*PPP PPP 01 35 18.0
CLL *e*S **S 01 40 11.0 -0.5**
CLL *e* 01 41 23.0
CLL *e*SS **SS 01 44 36.0 +3.5**
CLL *e* 01 45 30.0
CLL *e*SSS SSS 01 47 45.0
CLL *e*SSSS 01 48 42.0
CLL *e*PKPPKPdf 01 59 39.0
comp=Z,24nm,2.2s
CLL Lm MLR 02 04 00.0
comp=Z,7µm,18.9s
CLL Lmax 02 04 00.0
CLL Collm 67.81 318 *e*P **P 01 31 14.0 +0.5**
CLL *e*S **S 01 40 11.0 -0.5**
CLL pmax pmax
comp=Z,336nm,1.8s
CLL MLR MLR
comp=Z,7µm,18.9s
CLL Collm 67.81 318 IAMs_20 IAMs_20 02 04 15.8
comp=Z,7µm,18.0s
OBKA Obir 67.89 312 *i* P **P 01 31 13.5 -0.8**
comp=Z,68nm,1.2s,SNR=33
OBKA *i* PP **PP 01 33 40.2 -3.5**
comp=Z,32nm,1.2s
GEC2 GERESS Array S 67.91 315 *e*P **P 01 31 13.6 -0.8**
comp=Z,431nm,1.5s,baz=77,slow=6.2
GEC2 GERESS Array S 67.91 315 IAMs_20 IAMs_20 02 04 51.6
comp=Z,9µm,19.0s
GERES GERESS Array B 67.91 315 P **P 01 31 14.0 -0.4**
comp=Z,47nm,1.0s,baz=72,slow=4.8,SNR=89
GERES PP **PP 01 33 45.4 +1.6**
comp=Z,16nm,1.0s,baz=81,slow=8.2,SNR=6.4
GERES PKP2bc 01 59 36.8
comp=Z,0.7nm,1.0s,baz=259,slow=2.7,SNR=5.2
GERES LR LR 02 05 02.1
comp=Z,8µm,19.4s,baz=82,slow=40
GERES GERESS Array B 67.91 315 P **P 01 31 14.0 -0.4**
KHC Kasperske Hory 67.93 315 *e*P **P 01 31 14.1 -0.3**
KHC *e* 01 33 46.9
KHC *e*S **S 01 40 09.8 -3.4**
KHC MLR MLR
comp=Z,11µm,17.4s
KHC Kasperske Hory 67.93 315 *e*P **P 01 31 14.1 -0.3**
KHC *ex* x 01 31 25.5
KHC *ex* x 01 33 40.5
KHC *e*PP **PP 01 33 46.9 +3.0**
KHC *e*S **S 01 40 09.8 -3.4**
KHC AMS AMS 02 04 10.0
comp=Z,11µm,17.4s
KHC Kasperske Hory 67.93 315 IAmb IAmb 01 31 19.3
comp=Z,128nm,1.8s
KONO Kongsberg 67.94 327 *ce* P **P 01 31 14.7 +0.5**
KONO pmax pmax
comp=Z,234nm,1.7s
KONO Kongsberg 67.94 327 P **P 01 31 14.1 0.0**
KONO Kongsberg 67.94 327 IAMs_20 IAMs_20 02 03 02.2
comp=Z,7µm,19.0s
KONO Kongsberg 67.94 327 *e*P **P 01 31 13.4 -0.7**
LJU Ljubljana 68.01 312 *e*P **P 01 31 15.2 +0.3**
LJU *e*pP **pP 01 31 17.9 -0.9**
LJU *e*S **S 01 40 12.5 -1.7**
LJU Ljubljana 68.01 312 *e*P **P 01 31 14.6 -0.3**
BBOO Buckleboo 68.02 146 IAmb IAmb 01 31 19.8
comp=Z,100nm,1.1s
TIP Timpagrande 68.10 304 ⇑ P **P 01 31 16.1 +0.5**
TIP Timpagrande 68.10 304 IAmb IAmb 01 31 19.2
comp=Z,164nm,1.4s
NVLJ Novalja 68.13 310 *i* P **P 01 31 14.4 -1.2**
DUGI Dugi Otok 68.14 309 *i* P **P 01 31 13.1 -2.6**
CEY Cerknica 68.15 311 *e*P **P 01 31 14.8 -1.0**
CEY *e*pP **pP 01 31 18.4 -1.3**
CEY *e*S **S 01 40 14.9 -1.0**
CEY Cerknica 68.15 311 *e*P **P 01 31 14.7 -1.1**
RIY Rijeka 68.21 311 *e*P **P 01 31 15.2 -0.9**
MOL Molde 68.30 330 *e*P **P 01 31 16.8 +0.5**
TANN Tannenbergstha 68.34 317 *e*P **P 01 31 16.0 -0.9**
comp=Z,667nm,1.7s,baz=77,slow=6.2
SKAR Skarslia 68.35 328 *e*P **P 01 31 17.7 +0.9**
WET Wettzell 68.37 315 *e*P **P 01 31 16.6 -0.5**
comp=Z,420nm,1.8s,baz=77,slow=6.2
NKC Novy Kostel 68.39 316 *e*P **P 01 31 18.1 +0.9**
NKC *e* 01 33 51.8
NKC *e*S **S 01 40 21.1 +2.5**
NKC MLR MLR
comp=Z,7µm,16.4s
NKC Novy Kostel 68.39 316 *e*P **P 01 31 18.1 +0.9**
NKC *e*PP **PP 01 33 51.8 +3.9**
NKC *e*S **S 01 40 21.1 +2.5**
NKC AMS AMS 02 02 50.0
comp=Z,7µm,16.4s
WERN Wernitzgruen 68.42 317 *e*P **P 01 31 16.5 -1.0**
comp=Z,359nm,1.8s,baz=77,slow=6.2
GUNZ Gunzen 68.43 317 *e*P **P 01 31 16.9 -0.6**
comp=Z,503nm,1.9s,baz=77,slow=6.2
MYKA Terra Mystica 68.47 313 *i* P **P 01 31 17.6 -0.3**
comp=Z,43nm,1.1s,SNR=23
MYKA *i* PP **PP 01 33 47.6 -1.1**
comp=Z,37nm,1.6s
SKDS Skadanscina 68.48 311 *e*P **P 01 31 16.2 -1.7**
SKDS *e*pP **pP 01 31 19.8 -1.9**
SKDS *e*S **S 01 40 17.7 -2.1**
PLN Plauen 68.51 317 *e*P **P 01 31 17.2 -0.8**
comp=Z,332nm,1.8s,baz=77,slow=6.2
KBA Koelnbreinsper 68.56 313 *i* P **P 01 31 17.8 -0.7**
comp=Z,85nm,1.2s,SNR=43
KBA *i* PP **PP 01 33 48.2 -1.4**
comp=Z,53nm,1.6s
PRED Cave del Predi 68.56 312 P **P 01 31 17.6 -0.8**
PRED IAmb IAmb 01 31 22.1
comp=Z,205nm,1.5s
NEUB Neuenburg 68.58 318 *e*P **P 01 31 17.7 -0.7**
comp=Z,737nm,1.9s,baz=77,slow=6.2
AKN Aaknes 68.63 330 *e*P **P 01 31 19.6 +1.1**
ROTZ Rotzenmuhle 68.65 316 *e*P **P 01 31 18.6 -0.3**
comp=Z,464nm,1.5s,baz=77,slow=6.2
MANZ Manzenberg 68.66 316 *e*P **P 01 31 18.5 -0.5**
comp=Z,377nm,1.6s,baz=77,slow=6.2
GOET G??ttrup 68.70 324 *i* P **P 01 31 20.9 +2.0**
comp=Z,292nm,1.0s
RJOB Jochberg 68.76 314 *e*P **P 01 31 18.4 -1.2**
comp=Z,198nm,1.0s,baz=77,slow=6.2
HOMB Homborsund 68.79 325 *e*P **P 01 31 21.4 +1.9**
BSEG Bad Segeberg 68.81 321 *e*P **P 01 31 19.9 +0.2**
comp=Z,623nm,1.7s,baz=77,slow=6.2
MOX Moxa 68.81 317 *e*P **P 01 31 19.1 -0.7**
comp=Z,263nm,1.6s,baz=77,slow=6.2
MOX *e*L L 02 05 59.2
comp=Z,5µm,19.6s
BRJN Brijuni 68.82 311 *i* P **P 01 31 18.5 -1.4**
MUD Monsted U'grnd 68.86 323 *i* P **P 01 31 20.4 +0.4**
MUD pmax pmax
comp=Z,670nm,1.8s
MUD MLR MLR
comp=Z,12µm,18.0s
MUD Monsted U'grnd 68.86 323 *i* P **P 01 31 20.4 +0.4**
comp=Z,666nm,1.8s
comp=Z,12µm,18.0s
NOR Nord 68.90 352 *i* P **P 01 31 18.8 -1.0**
NOR pmax pmax
comp=Z,180nm,1.3s
NOR MLR MLR
comp=Z,7µm,20.0s
NOR Nord 68.90 352 *i* P **P 01 31 18.8 -1.0**
comp=Z,181nm,1.3s
comp=Z,7µm,20.0s
ZOU Zoufplan 68.93 313 IAmb IAmb 01 31 24.4
comp=Z,173nm,1.5s
ASSE Asse, Remlinge 69.03 319 *e*P **P 01 31 20.1 -0.9**
comp=Z,390nm,1.8s,baz=77,slow=6.2
SKMB Sankelmark Bun 69.12 322 *e*P **P 01 31 22.0 +0.4**
comp=Z,2µm,2.0s,baz=77,slow=6.2
ABTA Abfaltersbach 69.19 313 *i* P **P 01 31 20.9 -1.5**
comp=Z,85nm,1.0s,SNR=49
ABTA *i* PP **PP 01 33 52.1 -2.8**
comp=Z,26nm,1.3s
PAOL Paolisi 69.24 307 IAmb IAmb 01 31 25.7
comp=Z,117nm,1.7s
HYA Hoyanger 69.25 329 *e*P **P 01 31 22.5 +0.2**
NRDL Niedersach Rie 69.28 319 *e*P **P 01 31 22.6 +0.1**
comp=Z,926nm,1.7s,baz=77,slow=6.2
CLZ Clausthal 69.28 318 *e*P **P 01 31 22.5 -0.3**
comp=Z,485nm,1.5s,baz=77,slow=6.2
GRA1 Grafenberg Arr 69.29 316 IAMs_20 IAMs_20 02 05 01.3
comp=Z,7µm,18.0s
GRF Grafenberg Arr 69.29 316 *e*P **P 01 31 22.5 -0.3**
comp=Z,596nm,1.7s,baz=77,slow=6.2
GRF *e*PP **PP 01 33 54.5 -1.1**
baz=82,slow=8.0
GRF *e*PPP PPP 01 35 39.4
baz=71,slow=8.2
GRF *e*PxPxbc 01 59 33.8
baz=244,slow=3.5
GRF *e*L L 02 04 03.4
comp=Z,6µm,20.8s
CIMO Cimolais 69.35 312 IAMs_20 IAMs_20 02 04 13.0
comp=Z,6µm,22.0s
SNART Snartemo 69.44 326 *e*P **P 01 31 24.4 +0.9**
INTR Introdacqua 69.46 308 IAmb IAmb 01 31 35.3
comp=Z,213nm,1.5s
BLS5 Blasjo 69.55 327 *e*P **P 01 31 26.1 +1.8**
GTTG Gottingen 69.60 318 *e*P **P 01 31 24.3 -0.3**
comp=Z,378nm,1.7s,baz=77,slow=6.2
WTTA Wattenberg 69.64 314 *i* P **P 01 31 24.5 -0.7**
comp=Z,165nm,1.3s,SNR=58
WTTA *i* PP **PP 01 33 57.3 -1.6**
comp=Z,54nm,1.3s
FUR Furstenfeldbru 69.64 315 *e*P **P 01 31 24.6 -0.4**
comp=Z,947nm,1.8s,baz=77,slow=6.2
MBAR Mbarara 69.64 259 *ce* P **P 01 31 24.6 -1.1**
MBAR pmax pmax
comp=Z,100nm,1.0s
MBAR Mbarara 69.64 259 P **P 01 31 24.7 -1.1**
MBAR IAmb IAmb 01 31 29.8
comp=Z,89nm,1.0s
RETH Rethem/Aller, 69.66 320 *e*P **P 01 31 24.6 -0.4**
comp=Z,459nm,1.9s,baz=77,slow=6.2
WATA Walderalm 69.66 314 *i* P **P 01 31 24.3 -1.0**
comp=Z,100nm,1.2s,SNR=86
WATA *i* PP **PP 01 33 56.7 -2.3**
comp=Z,33nm,1.3s
FOO Floro 69.67 329 *e*P **P 01 31 27.4 +2.6**
AQU L'Aquila 69.73 308 *e*P **P 01 31 25.4 -0.3**
AQU L'Aquila 69.73 308 IAmb IAmb 01 31 29.9
comp=Z,255nm,1.3s
AQU IAMs_20 IAMs_20 02 05 16.1
comp=Z,6µm,20.0s
UBBA Unterbreizbach 69.76 317 *e*P **P 01 31 24.8 -0.8**
comp=Z,331nm,1.7s,baz=77,slow=6.2
NRCA Norcia 69.80 309 IAmb IAmb 01 31 30.3
comp=Z,179nm,1.3s
BER Bergen 69.85 328 *e*P **P 01 31 26.6 +0.5**
BER *e*P **pP 01 31 28.6 -1.2**
ASK Askoy 69.89 328 *e*P **P 01 31 27.0 +0.7**
SQTA Sankt Quirin 69.93 314 *i* P **P 01 31 25.5 -1.5**
comp=Z,124nm,1.1s,SNR=68

SQTA *i* PP **PP** **01 33 57.6 -3.8**
comp=Z,27nm,1.2s
SUE **Sulen** **69.94 329** *e*P **P** **01 31 28.6 +2.0**
CTI **Castel Tesino** **69.95 312** IAmb IAmb 01 31 29.9
comp=Z,64nm,1.1s
CTI IAMs_20 IAMs_20 02 04 32.9
comp=Z,6µm,22.0s
MOTA **Moosalm** **69.97 314** *i* P **P** **01 31 25.4 -1.8**
comp=Z,173nm,1.1s,SNR=109
MOTA *i* PP **PP** **01 33 59.7 -2.1**
comp=Z,40nm,1.2s
HLG **Helgoland** **70.14 321** *e*P **P** **01 31 27.8 -0.1**
comp=Z,613nm,1.6s,baz=77,slow=6.2
RETA **Reutte** **70.16 314** *i* P **P** **01 31 27.5 -0.8**
comp=Z,141nm,1.0s,SNR=81
RETA *i* PP **PP** **01 34 03.2 0.0**
comp=Z,29nm,1.3s
STKA **Stephens Creek** **70.28 141** P **P** **01 31 28.9 -0.2**
comp=Z,52nm,0.8s,baz=320,slow=7.6,SNR=25
STKA LR LR 02 05 10.7
comp=Z,4µm,20.6s,baz=310,slow=38
STKA **Stephens Creek** **70.28 141** P **P** **01 31 29.2 +0.2**
STKA pmax pmax
comp=Z,11nm,0.8s
STKA MLR MLR
comp=Z,1µm,21.0s
STKA **Stephens Creek** **70.28 141** P **P** **01 31 29.2 +0.2**
FETA **Feichten** **70.30 313** *i* P **P** **01 31 28.1 -1.2**
comp=Z,140nm,1.3s,SNR=71
FETA *i* PP **PP** **01 34 02.0 -2.6**
comp=Z,15nm,1.1s
SPIA **Saint Paul Isl** **70.34 35** IAMs_20 IAMs_20 02 03 31.4
comp=Z,6µm,18.0s
UBR **Ueberruh** **70.53 314** *e*P **P** **01 31 29.2 -1.3**
comp=Z,248nm,1.6s,baz=77,slow=6.2
ANM **Nome** **70.55 27** IAmb IAmb 01 31 35.4
comp=Z,67nm,1.3s
IBBN **Ibbenburen** **70.72 319** *e*P **P** **01 31 30.9 -0.6**
comp=Z,790nm,1.9s,baz=77,slow=6.2
FUORN **Ofenpass-Fuorn** **70.72 313** IAmb IAmb 01 31 37.2
comp=Z,43nm,0.9s
FUORN IAMs_20 IAMs_20 02 05 11.2
comp=Z,9µm,22.0s
DAVA **Damuels** **70.79 314** *i* P **P** **01 31 31.5 -0.7**
comp=Z,153nm,1.4s,SNR=67
LATE **Laterza** **70.79 309** IAmb IAmb 01 31 36.1
comp=Z,209nm,1.4s
ZCCA **Zocca** **70.88 311** IAmb IAmb 01 31 38.4
comp=Z,317nm,1.5s
ZCCA IAMs_20 IAMs_20 02 06 07.4
comp=Z,6µm,21.0s
TNS **Taunus Mts** **70.88 317** *e*P **P** **01 31 31.9 -0.7**
comp=Z,249nm,1.7s,baz=77,slow=6.2
OSSC **Osservatorio P** **70.92 310** IAmb IAmb 01 31 36.4
comp=Z,128nm,1.2s
CORL **Corleone** **71.06 304** IAmb IAmb 01 31 37.4
comp=Z,188nm,1.6s
PRMA **PARMA** **71.21 311** IAmb IAmb 01 31 39.8
comp=Z,206nm,1.3s
CLTB **Caltabellotta** **71.22 303** IAmb IAmb 01 31 38.0
comp=Z,69nm,1.2s
BUG **Bochum--Univer** **71.25 319** *e*P **P** **01 31 34.2 -0.6**
comp=Z,488nm,1.8s,baz=77,slow=6.2
VLC **Villacollemand** **71.34 311** IAmb IAmb 01 31 52.7
comp=Z,63nm,1.1s
VLC IAMs_20 IAMs_20 02 05 30.6
comp=Z,6µm,22.0s
TUE **Stuetta** **71.37 313** IAMs_20 IAMs_20 02 06 32.4
comp=Z,8µm,21.0s
CASP **Castiglione de** **71.40 309** IAmb IAmb 01 31 38.9
comp=Z,92nm,1.5s
BFO **Black Forest** **71.49 315** *e*P **P** **01 31 35.2 -1.1**
comp=Z,196nm,1.5s,baz=77,slow=6.2
BFO **Black Forest** **71.49 315** P **P** **01 31 35.5 -0.8**
BFO pmax pmax
comp=Z,254nm,1.7s
BFO MLR MLR
comp=Z,6µm,19.0s
BFO **Black Forest** **71.49 315** P **P** **01 31 35.5 -0.8**
BFO IAmb IAmb 01 31 40.8
comp=Z,254nm,1.7s
BFO IAMs_20 IAMs_20 02 05 10.5
comp=Z,6µm,19.0s
DAG **Danmarks Havn** **71.61 347** *i* P **P** **01 31 35.1 -1.4**
DAG *i* S **S** **01 40 52.4 -3.1**
DAG pmax pmax
comp=Z,180nm,1.1s
DAG MLR MLR
comp=Z,6µm,18.0s
DAG **Danmarks Havn** **71.61 347** *i* P **P** **01 31 35.1 -1.4**
comp=Z,175nm,1.1s
DAG *i* S **S** **01 40 52.4 -3.1**
comp=Z,6µm,18.0s
AHRW **Bad Neuenahr-A** **71.63 318** *e*P **P** **01 31 36.7 -0.3**
comp=Z,400nm,1.8s,baz=77,slow=6.2
JMIC **Jan Mayen** **71.76 341** *e*P **P** **01 31 38.4 +0.9**
MSSA **Maissana** **71.89 311** IAmb IAmb 01 31 42.5
comp=Z,240nm,1.6s
MEM **Membach** **72.26 318** P **P** **01 31 40.9 +0.1**
MEM sP **pP** **01 31 44.3 -0.4**
ECH **Echery** **72.27 315** IAMs_20 IAMs_20 02 05 42.2
comp=Z,6µm,19.0s
BHOU **Houvegnez** **72.34 318** ⇑P **P** **01 31 40.3 -1.0**
comp=Z,97nm,2.5s
BEBN **Eben Emael** **72.40 318** P **P** **01 31 41.2 -0.5**
BEBN sP **pP** **01 31 44.8 -0.8**
WLF **Walferdange** **72.46 317** P **P** **01 31 41.0 -1.0**
comp=Z,333nm,1.6s
WLF **Walferdange** **72.46 317** *e*P **P** **01 31 42.2 +0.1**
comp=Z,960nm,1.6s,baz=77,slow=6.2
BSTI **Sart Tilman** **72.53 318** ⇓P **P** **01 31 42.2 -0.3**
comp=Z,36nm,2.4s
BCLA **Clavier** **72.75 318** ⇓P **P** **01 31 42.0 -1.8**
comp=Z,108nm,2.2s
SENIN **Lac Senin/Sane** **72.75 314** IAmb IAmb 01 31 47.7
comp=Z,91nm,1.1s
SENIN IAMs_20 IAMs_20 02 07 27.0
comp=Z,7µm,21.0s
YEL1 **Yell** **72.83 329** *e*P **P** **01 31 44.4 +0.3**
BGES **Gesves** **72.89 318** ⇓P **P** **01 31 43.9 -0.7**
comp=Z,94nm,2.2s
BGES pP **pP** **01 31 46.9 -1.5**
BGES sP **sP** **01 31 48.1 -1.8**
BMRD **Maredsous** **73.11 318** ⇓P **P** **01 31 45.3 -0.6**
comp=Z,91nm,2.3s
BMRD sP **pP** **01 31 49.2 -0.6**
WAL1 **Walls** **73.18 329** *e*P **P** **01 31 46.2 +0.1**
UCC **Uccle** **73.19 319** P **P** **01 31 45.7 -0.7**
comp=Z,82nm,2.8s
UCC **Uccle** **73.19 319** IAmb IAmb 01 31 50.0
comp=Z,74nm,1.3s
UCC IAMs_20 IAMs_20 02 06 29.4
comp=Z,6µm,20.0s
SNF **Seneffe** **73.33 318** P **P** **01 31 46.2 -1.0**
comp=Z,100nm,2.2s
SNF sP **pP** **01 31 50.6 -0.5**
UNV **Unalaska Valle** **73.38 38** IAMs_20 IAMs_20 02 04 29.9
comp=Z,5µm,20.0s
VSL **Villasalto** **73.48 306** IAmb IAmb 01 31 52.4
comp=Z,380nm,1.9s
BNI **Bardonecchia** **73.58 312** IAmb IAmb 01 31 53.9
comp=Z,119nm,1.2s
BNI IAMs_20 IAMs_20 02 07 06.0
comp=Z,6µm,22.0s
WACR **West Acre** **74.72 321** *e*P **P** **01 31 56.1 +0.8**
WACR IAmb IAmb 01 31 59.9
comp=Z,337nm,1.2s
WACR IAMs_20 IAMs_20 02 07 23.2
comp=Z,9µm,16.9s
TOLK **Toolik Lake Re** **74.72 21** P **P** **01 31 55.1 0.0**
baz=300
TOLK **Toolik Lake Re** **74.72 21** IAmb IAmb 01 32 00.1
comp=Z,197nm,1.8s
KEST **Kesra** **74.76 303** P **P** **01 31 55.5 -0.5**
comp=Z,100nm,1.2s,baz=249,slow=0.7,SNR=14
KEST LR LR 02 11 11.7
comp=Z,2µm,20.9s,baz=8.0,slow=41
KEST **Kesra** **74.76 303** IAmb IAmb 01 32 01.2
comp=Z,239nm,1.4s
BIGH **Upper Bighouse** **74.93 328** *e*P **P** **01 31 57.3 +1.0**
BIGH IAMs_20 IAMs_20 02 07 59.5
comp=Z,8µm,16.2s
MCD **Coleburn Disti** **74.96 327** *e*P **P** **01 31 57.2 +0.6**
ESY **Stoneypath** **75.28 325** *e*P **P** **01 31 58.4 -0.1**
ARMA **Armidale** **75.40 134** P **P** **01 32 02.0 +2.4**
CLF **Chambon-Foret** **75.43 316** IAMs_20 IAMs_20 02 10 19.7
comp=Z,5µm,18.0s

HMNX **Herstmonceux** **75.56 320** IAMs_20 IAMs_20 02 08 48.2
comp=Z,13µm,16.5s
EBL **Broad Law** **75.56 325** *e*P **P** **01 32 00.6 +0.5**
EDI **Edinburgh** **75.58 325** *e*P **P** **01 32 00.9 +0.7**
EDI IAmb IAmb 01 32 04.7
comp=Z,671nm,1.8s
EDI IAMs_20 IAMs_20 02 05 57.5
comp=Z,7µm,20.2s
LBWR **Ladybower, Pea** **75.78 322** *e*P **P** **01 32 01.9 +0.5**
LBWR IAmb IAmb 01 32 06.0
comp=Z,689nm,1.9s
LBWR IAMs_20 IAMs_20 02 08 03.4
comp=Z,7µm,20.9s
ESK **Eskdalemuir** **75.83 325** *e*P **P** **01 32 02.3 +0.7**
ESK IAmb IAmb 01 32 06.2
comp=Z,701nm,2.0s
ESK IAMs_20 IAMs_20 02 04 34.0
comp=Z,8µm,20.8s
ESK **Eskdalemuir** **75.83 325** P **P** **01 32 01.4 -0.2**
ESK pmax pmax
comp=Z,609nm,1.9s
ESK **Eskdalemuir** **75.83 325** P **P** **01 32 01.4 -0.2**
ESK **Eskdalemuir** **75.83 325** IAMs_20 IAMs_20 02 04 38.9
comp=Z,8µm,21.0s
SCO **Scoresbysund** **75.88 343** *i* P **P** **01 32 02.1 +0.5**
SCO pmax pmax
comp=Z,130nm,1.4s
SCO MLR MLR
comp=Z,2µm,19.0s
SCO **Scoresbysund** **75.88 343** *i* P **P** **01 32 02.1 +0.5**
comp=Z,130nm,1.4s
comp=Z,2µm,19.0s
CMAH **Djebel Manchou** **75.91 304** P **P** **01 32 05.2 +2.6**
KAC **Achnashellach** **76.01 327** *e*P **P** **01 32 02.6 0.0**
EAB **Aberfoyle** **76.07 326** *e*P **P** **01 32 03.4 +0.4**
SDPT **Sand Point** **76.09 35** P **P** **01 32 02.7 -0.4**
SDPT IAmb IAmb 01 32 07.4
comp=Z,64nm,0.8s
SDPT IAMs_20 IAMs_20 02 08 31.3
comp=Z,5µm,19.0s
KPL **Plockton** **76.25 327** *e*P **P** **01 32 04.3 +0.4**
KPL IAmb IAmb 01 32 08.5
comp=Z,120nm,1.4s
KPL IAMs_20 IAMs_20 02 04 51.5
comp=Z,7µm,25.4s
CKFL **Kef-Lekhel** **76.52 304** P **P** **01 32 06.4 +0.3**
LAWE **Loch Awe, Argy** **76.58 326** *e*P **P** **01 32 06.5 +0.7**
LAWE IAmb IAmb 01 32 10.5
comp=Z,189nm,1.5s
LAWE IAMs_20 IAMs_20 02 09 09.8
comp=Z,6µm,16.6s
PPLA **Purkeypile** **76.59 26** IAmb IAmb 01 32 10.9
comp=Z,131nm,1.3s
PPLA IAMs_20 IAMs_20 02 07 39.9
comp=Z,7µm,21.0s
TOO **Toolangi** **76.63 143** IAmb IAmb 01 32 12.2
comp=Z,80nm,1.4s
TOO IAMs_20 IAMs_20 02 07 00.1
comp=Z,6µm,22.0s
STRD **Stroud** **76.66 321** *e*P **P** **01 32 06.9 +0.4**
STRD IAmb IAmb 01 32 10.9
comp=Z,1µm,2.0s
STRD IAMs_20 IAMs_20 02 07 53.0
comp=Z,6µm,17.3s
CASM **Ain Smara** **76.74 304** P **P** **01 32 06.7 -0.6**
CHGN **Chignik** **76.75 34** IAmb IAmb 01 32 14.3
comp=Z,47nm,0.9s
KTH **Kantishna Hill** **76.77 25** IAMs_20 IAMs_20 02 10 10.6
comp=Z,5µm,18.0s
CNBA **Chernabura Isl** **76.77 35** IAmb IAmb 01 32 10.7
comp=Z,348nm,2.0s
CNBA IAMs_20 IAMs_20 02 06 43.2
comp=Z,5µm,21.0s
HLM1 **Long Mynd** **76.77 322** *e*P **P** **01 32 07.9 +0.8**
HLM1 IAmb IAmb 01 32 11.9
comp=Z,545nm,1.7s
HLM1 IAMs_20 IAMs_20 02 08 35.0
comp=Z,9µm,19.3s
FOEL **Foel Wylfa** **76.80 322** *e*P **P** **01 32 08.0 +0.8**
FOEL IAmb IAmb 01 32 12.1
comp=Z,1µm,2.1s
FOEL IAMs_20 IAMs_20 02 09 18.3
comp=Z,9µm,17.7s
GAL1 **Galloway** **76.80 325** *e*P **P** **01 32 08.1 +0.9**
GAL1 IAmb IAmb 01 32 11.9
comp=Z,522nm,1.9s
GAL1 IAMs_20 IAMs_20 02 05 02.7
comp=Z,9µm,21.5s
OLDB **Oldbury-Upon-S** **76.93 321** *e*P **P** **01 32 08.5 +0.6**
OLDB IAmb IAmb 01 32 12.4
comp=Z,1µm,2.1s
OLDB IAMs_20 IAMs_20 02 08 00.9
comp=Z,5µm,18.5s
IOMK **Kirk Michael** **76.98 324** *e*P **P** **01 32 09.4 +1.2**
IOMK IAmb IAmb 01 32 13.1
comp=Z,1µm,1.8s
IOMK IAMs_20 IAMs_20 02 05 11.1
comp=Z,14µm,21.6s
MONM **Monmouth** **77.00 321** *e*P **P** **01 32 08.9 +0.6**
MONM IAmb IAmb 01 32 12.9
comp=Z,468nm,1.8s
MONM IAMs_20 IAMs_20 02 08 46.4
comp=Z,5µm,16.1s
CAN **Canberra** **77.05 139** P **P** **01 32 12.1 +3.3**
CAN pmax pmax
comp=Z,31nm,1.1s
CAN MLR MLR
comp=Z,4µm,22.0s
CAN **Canberra** **77.05 139** P **P** **01 32 12.1 +3.3**
MCH1 **Michaelchurch** **77.05 321** *e*P **P** **01 32 09.3 +0.7**
MCH1 IAmb IAmb 01 32 13.2
comp=Z,695nm,2.0s
MCH1 IAMs_20 IAMs_20 02 09 56.0
comp=Z,8µm,15.5s
MDM **Murphy Dome** **77.06 24** IAmb IAmb 01 32 13.2
comp=Z,138nm,1.3s
WIM **Isle of Man** **77.08 324** *e*P **P** **01 32 09.5 +0.7**
DFRA **Djebel Bou Aff** **77.10 304** P **P** **01 32 10.4 +1.0**
WME **Myndd Eilian** **77.20 323** *e*P **P** **01 32 08.8 -0.6**
FYU **Fort Yukon** **77.23 21** IAmb IAmb 01 32 14.9
comp=Z,163nm,1.5s
TCOL **CIGO, UAF Yank** **77.24 24** P **P** **01 32 09.0 -0.5**
baz=302
COLA **College** **77.25 24** P **P** **01 32 09.3 -0.1**
COLA pmax pmax
comp=Z,88nm,1.4s
COLA MLR MLR
comp=Z,5µm,19.0s
COLA **College** **77.25 24** P **P** **01 32 09.3 -0.1**
COLA IAmb IAmb 01 32 13.9
comp=Z,88nm,1.4s
COLA **College** **77.25 24** IAMs_20 IAMs_20 02 07 50.9
comp=Z,5µm,19.0s
POKR **Poker Flat Res** **77.27 23** P **P** **01 32 09.2 -0.4**
baz=302
WLF1 **Llynfaes** **77.29 323** *e*P **P** **01 32 11.1 +1.1**
WLF1 IAmb IAmb 01 32 14.8
comp=Z,2µm,2.0s
WLF1 IAMs_20 IAMs_20 02 09 07.6
comp=Z,16µm,19.8s
WPS **Cemaes, Angles** **77.30 323** *e*P **P** **01 32 07.8 -2.1**
WPS IAmb IAmb 01 32 14.8
comp=Z,718nm,2.0s
WPS IAMs_20 IAMs_20 02 08 57.0
comp=Z,7µm,18.2s
WRH **Wood River Hil** **77.37 24** IAMs_20 IAMs_20 02 06 08.4
comp=Z,6µm,18.0s
CCB **Clear Creek Bu** **77.38 24** IAMs_20 IAMs_20 02 07 45.5
comp=Z,5µm,18.0s
YRC **Rhoscolyn** **77.41 323** *e*P **P** **01 32 11.2 +0.7**
SET **Setif** **77.58 304** P P 01 32 28.0 +16
RND **Reindeer** **77.64 25** IAmb IAmb 01 32 15.7
comp=Z,87nm,1.4s
RND IAMs_20 IAMs_20 02 10 51.6
comp=Z,4µm,20.0s
ILAR **Eielson Array** **77.65 23** P **P** **01 32 10.3 -1.4**
comp=Z,6.5nm,1.1s,baz=284,slow=4.7,SNR=37
ILAR PP **PP** **01 35 07.9 +1.6**
comp=Z,4.9nm,0.8s,baz=298,slow=5.0,SNR=9.6
ILAR PKKPbc **PKKPbc** **01 51 14.6 -1.3**
comp=Z,0.4nm,0.7s,baz=157,slow=2.5,SNR=4.4
ILAR PKPPKP **P'P'df** **01 59 19.1 -3.8**
comp=Z,0.9nm,0.8s,baz=161,slow=1.8,SNR=6.3
ILAR LR LR 02 10 51.9
comp=Z,4µm,18.6s,baz=318,slow=39
JSA **Saint Aubin** **77.70 319** *e*P **P** **01 32 12.6 +0.3**

JSA IAmb IAmb 01 32 16.5
comp=Z,582nm,2.3s
JSA IAMs_20 IAMs_20 02 07 04.4
comp=Z,8µm,24.0s
PRP **Porcupine Dome** **77.72 22** IAmb IAmb 01 32 17.2
comp=Z,78nm,1.3s
PRP IAMs_20 IAMs_20 02 09 07.4
comp=Z,6µm,20.0s
GMM **Mts of Mourne** **77.72 324** *e*P **P** **01 32 12.6 +0.3**
HDA **Harding Lake** **77.82 24** P **P** **01 32 13.2 +0.5**
baz=303
HDA **Harding Lake** **77.82 24** IAMs_20 IAMs_20 02 07 58.3
comp=Z,5µm,18.0s
RSBS **Rosebush, Pemb** **78.05 322** *e*P **P** **01 32 15.0 +0.8**
RSBS IAmb IAmb 01 32 19.0
comp=Z,493nm,1.8s
RSBS IAMs_20 IAMs_20 02 09 56.8
comp=Z,8µm,17.6s
SUMG **Summit** **78.30 348** P **P** **01 32 15.0 -0.7**
SUMG pmax pmax
comp=Z,343nm,1.1s
SUMG MLR MLR
comp=Z,5µm,22.0s
SUMG **Summit** **78.30 348** P **P** **01 32 15.0 -0.7**
SUMG IAMs_20 IAMs_20 02 08 53.9
comp=Z,5µm,22.0s
SUMG **Summit** **78.30 348** *i* P **P** **01 32 14.0 -1.7**
comp=Z,885nm,1.1s
SUMG *i* 01 35 13.4
comp=Z,17µm,23.0s
TULEG **Thule** **78.38 357** IAMs_20 IAMs_20 02 08 20.9
comp=Z,5µm,20.0s
DSB **Dublin** **78.39 324** P **P** **01 32 18.1 +2.1**
DSB IAmb IAmb 01 32 21.5
comp=Z,440nm,1.9s
DSB IAMs_20 IAMs_20 02 08 20.5
comp=Z,5µm,20.0s
DHY **Denali Highway** **78.39 25** IAMs_20 IAMs_20 02 11 23.3
comp=Z,4µm,20.0s
HOM **Homer** **78.41 29** IAMs_20 IAMs_20 02 09 45.1
comp=Z,5µm,22.0s
GHO **Glory Hole Cre** **78.47 26** IAMs_20 IAMs_20 02 08 49.7
comp=Z,6µm,19.0s
PMR **Palmer** **78.49 27** IAmb IAmb 01 32 51.5
comp=Z,69nm,1.2s
PMR IAMs_20 IAMs_20 02 08 51.0
comp=Z,7µm,20.0s
BRLK **Bradley Lake** **78.69 29** IAMs_20 IAMs_20 02 06 55.4
comp=Z,6µm,18.0s
SML **Sawmill** **78.70 26** IAmb IAmb 01 32 22.1
comp=Z,176nm,1.4s
SML IAMs_20 IAMs_20 02 08 56.5
comp=Z,5µm,20.0s
LSZ **Lusaka** **78.83 247** *i* P **P** **01 32 17.5 -1.7**
LSZ **Lusaka** **78.83 247** *i* P **P** **01 32 17.5 -1.7**
LSZ **Lusaka** **78.83 247** P **P** **01 32 17.7 -1.5**
LSZ pmax pmax
comp=Z,136nm,1.2s
LSZ MLR MLR
comp=Z,9µm,19.0s
LSZ **Lusaka** **78.83 247** P **P** **01 32 17.7 -1.5**
LSZ IAmb IAmb 01 32 23.2
comp=Z,136nm,1.2s
OHAK **Old Harbor** **78.85 32** P **P** **01 32 19.1 +0.6**
OHAK IAmb IAmb 01 32 22.9
comp=Z,111nm,1.2s
KNK **Knik Glacier** **78.85 27** IAMs_20 IAMs_20 02 09 03.8
comp=Z,7µm,18.0s
A36M **Sachs Harbour** **78.86 13** P **P** **01 32 18.4 +0.1**
baz=321
KDAK **Kodiak Island** **78.91 31** P **P** **01 32 19.5 +0.7**
KDAK pmax pmax
comp=Z,260nm,1.9s
KDAK MLR MLR
comp=Z,8µm,19.0s
KDAK **Kodiak Island** **78.91 31** P **P** **01 32 19.5 +0.7**
KDAK IAmb IAmb 01 32 28.8
comp=Z,260nm,1.9s
RIDG **Independent Ri** **78.97 24** IAMs_20 IAMs_20 02 07 07.5
comp=Z,6µm,19.0s
BORG **Borgarnes** **79.08 338** P **P** **01 32 19.4 -0.2**
BORG pmax pmax
comp=Z,225nm,1.5s
BORG MLR MLR
comp=Z,4µm,19.0s
BORG **Borgarnes** **79.08 338** P **P** **01 32 19.4 -0.2**
BORG IAmb IAmb 01 32 26.3
comp=Z,224nm,1.5s
SCM **Sheep Creek Mo** **79.08 26** IAmb IAmb 01 32 49.0
comp=Z,102nm,1.4s
SCM IAMs_20 IAMs_20 02 04 02.7
comp=Z,6µm,21.0s
SEW **Seward** **79.13 28** IAMs_20 IAMs_20 02 08 27.2
comp=Z,6µm,19.0s
SCRK **Sand Creek** **79.14 23** IAMs_20 IAMs_20 02 08 28.1
comp=Z,7µm,20.0s
DOT **Dot Lake** **79.30 24** IAMs_20 IAMs_20 02 07 28.4
comp=Z,6µm,21.0s
KULLO **Kullorsuaq** **79.36 353** ⇓ *i* P **P** **01 32 20.7 -0.3**
KULLO pmax pmax
comp=Z,430nm,0.9s
KULLO MLR MLR
comp=Z,7µm,21.0s
KULLO **Kullorsuaq** **79.36 353** ⇓ *i* P **P** **01 32 20.7 -0.3**
comp=Z,431nm,0.9s
comp=Z,7µm,21.0s
INK **Inuvik** **79.65 17** IAmb IAmb 01 32 27.4
comp=Z,123nm,1.4s
GLI **Glacier Island** **79.70 27** P **P** **01 32 23.2 +0.1**
GLI IAMs_20 IAMs_20 02 07 44.1
comp=Z,6µm,18.0s
FID **Port Fidalgo** **80.02 27** IAMs_20 IAMs_20 02 11 51.7
comp=Z,6µm,19.0s
EPYK **Eagle Plains** **80.06 19** P **P** **01 32 24.4 -0.6**
baz=311
EPYK **Eagle Plains** **80.06 19** IAmb IAmb 01 32 29.2
comp=Z,172nm,1.9s
RES **Resolute Bay** **80.22 3** IAmb IAmb 01 32 30.5
comp=Z,142nm,1.1s
RES IAMs_20 IAMs_20 02 10 06.8
comp=Z,5µm,19.0s
EBNR **Beni Rached** **80.43 305** P **P** **01 32 28.8 +1.2**
ECHA **Ech Chlef** **80.61 305** P **P** **01 32 31.0 +2.5**
GLB **Gilahina Butte** **80.69 25** IAMs_20 IAMs_20 02 10 12.2
comp=Z,6µm,21.0s
EANR **'Ain N'Sour** **80.89 305** P **P** **01 32 33.5 +3.4**
VRDI **Verde Repeater** **80.96 25** IAMs_20 IAMs_20 02 08 38.2
comp=Z,6µm,18.0s
RAGM **Ragged Mountai** **80.96 27** IAMs_20 IAMs_20 02 10 31.5
comp=Z,8µm,21.0s
ETRT **Tiaret** **80.97 305** P **P** **01 32 35.0 +4.4**
MATP **Matopo** **81.16 243** *i* P **P** **01 32 30.0 -1.7**
MATP **Matopo** **81.16 243** *i* P **P** **01 32 30.0 -1.7**
C36M **Paulatuk** **81.17 14** P **P** **01 32 30.5 -0.4**
baz=322
C36M **Paulatuk** **81.17 14** IAmb IAmb 01 32 35.9
comp=Z,139nm,1.1s
DZM **Mont Dzumac** **81.32 119** *e*P **P** **01 32 35.1 +2.6**
comp=Z,37nm,1.2s
DZM **Mont Dzumac** **81.32 119** *e*S **S** **01 42 42.4 -1.3**
comp=Z,2µm,36.1s
DZM *e*SS **SS** **01 47 59.3 -0.7**
comp=Z,3µm,26.9s
DZM **Mont Dzumac** **81.32 119** *e*LR LR 01 57 59.5
comp=Z,5µm,35.4s
BALM **Baldy** **81.50 25** IAMs_20 IAMs_20 02 10 44.6
comp=Z,5µm,21.0s
WAX **Waxell Ridge** **81.66 26** P **P** **01 32 33.7 0.0**
CART **Cartagena** **81.74 308** ⇑ *i* P **P** **01 32 38.4 +3.9**
CART *i* S **S** **01 42 49.9 +2.3**
CART **Cartagena** **81.74 308** P **P** **01 32 30.7 -3.8**
CART IAmb IAmb 01 32 39.6
comp=Z,93nm,1.2s
BARN **Barnard Glacie** **81.75 25** IAmb IAmb 01 33 12.4
comp=Z,104nm,1.9s
BARN IAMs_20 IAMs_20 02 08 04.0
comp=Z,6µm,20.0s
UCM **Universidad Co** **82.15 311** ⇑ *i* P **P** **01 32 40.5 +3.8**
UCM *i* S **S** **01 42 53.3 +1.5**
MESA **MESA** **82.18 26** IAMs_20 IAMs_20 02 05 39.6
comp=Z,8µm,22.0s
SESP **Santiago Espad** **82.61 309** P **P** **01 32 40.1 +0.8**
SNR=12
TAM **Tamanrasset** **82.70 292** P **P** **01 32 39.3 -0.7**
TAM pmax pmax
comp=Z,135nm,1.7s
TAM **Tamanrasset** **82.70 292** P **P** **01 32 39.3 -0.7**

TAM					IAmb	IAmb	01 32 45.3		
	comp=Z,135nm,1.7s								
PCA	**Pinnacle**	**82.89**	**25**		IAMs_20	IAMs_20	02 07 36.6		
	comp=Z,6µm,20.0s								
ESDC	**Sonseca Array**	**82.92**	**310**		P	**P**	**01 32 40.1**	**-0.6**	
	comp=Z,38nm,1.2s,baz=48,slow=5.0,SNR=50								
ESDC					PP	**PP**	**01 35 50.2**	**-0.6**	
	comp=Z,12nm,1.2s,baz=58,slow=7.8,SNR=5.1								
ESDC					LR	LR	02 14 59.9		
	comp=Z,3µm,18.2s,baz=55,slow=40								
PAB	**San Pablo**	**83.25**	**310**		P	**P**	**01 32 42.8**	**+0.4**	
PAB					pmax	pmax			
	comp=Z,203nm,1.8s								
PAB					MLR	MLR			
	comp=Z,4µm,20.0s								
PAB	**San Pablo**	**83.25**	**310**		P	**P**	**01 32 42.8**	**+0.4**	
PAB					IAmb	IAmb	01 32 47.2		
	comp=Z,202nm,1.8s								
ILULI	**Ilulissat**	**83.41**	**349**	*i*	P	**P**	**01 32 41.5**	**-1.1**	
ILULI					pmax	pmax			
	comp=Z,210nm,1.2s								
ILULI					MLR	MLR			
	comp=Z,5µm,19.0s								
ILULI	**Ilulissat**	**83.41**	**349**		IAmb	IAmb	01 32 46.5		
	comp=Z,184nm,1.1s								
ILULI					IAMs_20	IAMs_20	02 11 56.9		
	comp=Z,6µm,21.0s								
ILULI	**Ilulissat**	**83.41**	**349**	*i*	P	**P**	**01 32 41.5**	**-1.1**	
	comp=Z,212nm,1.2s								
	comp=Z,5µm,19.0s								
PBRG	**Braganca**	**83.83**	**313**	*e*	P	**P**	**01 32 46.6**	**+1.3**	
	comp=Z,116nm,1.6s								
PBRG	**Braganca**	**83.83**	**313**	*e*	PP	PP	01 36 01.2	+3.1	
MVO	**Moncorvo**	**84.32**	**313**	*e*	P	**P**	**01 32 48.6**	**+0.7**	
	comp=Z,164nm,1.4s								
MVO	**Moncorvo**	**84.32**	**313**	*e*	PP	PP	01 36 05.3	+3.1	
MVO				*e*	S	**S**	**01 43 20.3**	**+6.5**	
MVO	**Moncorvo**	**84.32**	**313**	*e*	LR	LR	02 01 46.4		
	comp=Z,3µm,18.0s								
EMAL	**Malaga-Limoner**	**84.56**	**308**	⇑	*i*	P	**P**	**01 32 51.7**	**+2.6**
EMAL					*i*	S	**S**	**01 43 16.1**	**-0.1**
HORN	**Hornachuelos**	**84.65**	**309**			P	**P**	**01 32 50.8**	**+1.2**
	SNR=13								
PCAB	**Cabril**	**84.72**	**314**	*e*	P	**P**	**01 32 51.2**	**+1.4**	
	comp=Z,193nm,1.6s								
PCAB	**Cabril**	**84.72**	**314**	*e*	PP	PP	01 36 08.8	+3.4	
PVRL	**Vila Real**	**84.72**	**313**	*e*	P	**P**	**01 32 52.3**	**+2.4**	
	comp=Z,117nm,1.5s								
PGAV	**Gavieira, Arco**	**84.75**	**314**	*e*	P	**P**	**01 32 53.2**	**+3.1**	
	comp=Z,209nm,1.5s								
PGAV	**Gavieira, Arco**	**84.75**	**314**	*e*	PP	PP	01 36 08.8	+3.1	
PGAV				*e*	S	**S**	**01 43 22.7**	**+4.5**	
PGAV				*e*	SS	**SS**	**01 48 53.1**	**+3.9**	
PGAV	**Gavieira, Arco**	**84.75**	**314**	*e*	LR	LR	02 02 36.0		
MTE	**Manteigas**	**85.03**	**312**	*e*	P	**P**	**01 32 52.8**	**+1.3**	
	comp=Z,182nm,1.4s								
MTE	**Manteigas**	**85.03**	**312**	*e*	PP	PP	01 36 10.9	+2.9	
MTE				*e*	S	**S**	**01 43 22.2**	**+1.3**	
MTE				*e*	SS	SS	01 49 04.5	+11	
MTE	**Manteigas**	**85.03**	**312**	*e*	LR	LR	02 02 42.2		
	comp=Z,4µm,22.0s								
MTE	**Manteigas**	**85.03**	**312**		IAmb	IAmb	01 32 57.8		
	comp=Z,62nm,1.0s								
MTE					IAMs_20	IAMs_20	02 13 35.9		
	comp=Z,5µm,22.0s								
PVIS	**Viseu**	**85.11**	**313**	*e*	P	**P**	**01 32 52.9**	**+1.0**	
	comp=Z,192nm,1.6s								
PVIS	**Viseu**	**85.11**	**313**	*e*	PP	PP	01 36 11.9	+3.3	
AKLM	**AKL**	**85.17**	**306**		P	**P**	**01 32 56.0**	**+3.6**	
	SNR=8.2								
AKLM					P	**P**	**01 32 56.0**	**+3.6**	
	SNR=8.2								
SKAG	**Skagway**	**85.19**	**24**		IAmb	IAmb	01 32 59.8		
	comp=Z,52nm,1.0s								
SKAG					IAMs_20	IAMs_20	02 08 49.2		
	comp=Z,7µm,20.0s								
PCBR	**Castelo Branco**	**85.25**	**312**	*e*	P	**P**	**01 32 53.4**	**+0.9**	
	comp=Z,128nm,1.5s								
PCBR	**Castelo Branco**	**85.25**	**312**	*e*	PP	PP	01 36 11.9	+2.2	
SFJD	**Kangerlussuaq**	**85.29**	**348**		P	**P**	**01 32 51.4**	**-0.7**	
SFJD					pmax	pmax			
	comp=Z,163nm,1.0s								
SFJD					MLR	MLR			
	comp=Z,4µm,21.0s								
SFJD	**Kangerlussuaq**	**85.29**	**348**		P	**P**	**01 32 51.4**	**-0.7**	
SFJD					IAmb	IAmb	01 32 55.9		
	comp=Z,163nm,1.0s								
SFJD	**Kangerlussuaq**	**85.29**	**348**		IAMs_20	IAMs_20	02 13 35.5		
	comp=Z,4µm,21.0s								
SFJD	**Kangerlussuaq**	**85.29**	**348**	*i*	P	**P**	**01 32 50.6**	**-1.5**	
	comp=Z,7nm,1.1s								
SFJD	**Kangerlussuaq**	**85.29**	**348**	*i*	S	**S**	**01 43 16.3**	**-6.0**	
	comp=Z,330nm,23.0s								
PMRV	**Marv??o**	**85.39**	**311**	*e*	P	**P**	**01 32 53.9**	**+0.7**	
	comp=Z,130nm,1.4s								
PMRV	**Marv??o**	**85.39**	**311**	*e*	PP	PP	01 36 12.5	+1.6	
PMRV				*e*	S	**S**	**01 43 24.4**	**0.0**	
PMRV	**Marv??o**	**85.39**	**311**	*e*	LR	LR	02 02 59.5		
	comp=Z,3µm,22.0s								
COI	**Coimbra**	**85.70**	**313**	*e*	P	**P**	**01 32 56.0**	**+1.3**	
	comp=Z,214nm,1.4s								
COI	**Coimbra**	**85.70**	**313**	*e*	PP	PP	01 36 16.0	+2.7	
COI				*e*	S	**S**	**01 43 27.8**	**+0.4**	
COI				*e*	SS	**SS**	**01 49 09.3**	**+6.3**	
COI	**Coimbra**	**85.70**	**313**		IAmb	IAmb	01 32 59.8		
	comp=Z,152nm,1.2s								
COI					IAMs_20	IAMs_20	02 14 06.7		
	comp=Z,4µm,20.0s								
LBTB	**Lobatse**	**85.78**	**240**		P	**P**	**01 32 54.0**	**-1.4**	
LBTB					pmax	pmax			
	comp=Z,188nm,0.9s								
LBTB	**Lobatse**	**85.78**	**240**		P	**P**	**01 32 54.0**	**-1.4**	
PESTR	**Estremoz**	**85.79**	**311**	*e*	S	**S**	**01 43 29.0**	**+0.6**	
PESTR				*e*	SS	**SS**	**01 49 09.1**	**+4.6**	
PCAS	**Casmilo, Conde**	**85.83**	**312**	*e*	P	**P**	**01 32 56.7**	**+1.3**	
	comp=Z,112nm,1.6s								
PCAS	**Casmilo, Conde**	**85.83**	**312**	*e*	PP	PP	01 36 18.6	+4.2	
PCAS				*e*	S	**S**	**01 43 29.0**	**+0.2**	
PCAS				*e*	SS	**SS**	**01 49 11.3**	**+6.3**	
SFS	**San Fernando**	**85.97**	**308**	⇑	*i*	P	**P**	**01 32 59.8**	**+3.6**
SFS					*e*	S	**SKSac**	**01 43 13.4**	**-8.9**
CHEFC	**Chefchaouen**	**85.98**	**307**			P	**P**	**01 32 60.0**	**+3.6**
	SNR=13								
CHEFC						P	**P**	**01 32 60.0**	**+3.6**
	SNR=13								
PMTG	**Montargil**	**86.13**	**311**	*e*	P	**P**	**01 32 57.8**	**+0.9**	
	comp=Z,166nm,1.5s								
PMTG	**Montargil**	**86.13**	**311**	*e*	PP	PP	01 36 17.2	+0.4	
PMTG				*e*	S	**S**	**01 43 32.1**	**+0.5**	
PMTG				*e*	SS	**SS**	**01 49 17.1**	**+7.8**	
EVO	**Evora**	**86.24**	**311**	⇑	*i*	P	**P**	**01 33 01.6**	**+4.2**
EVO				*e*	S	**S**	**01 43 31.1**	**-1.7**	
EVO	**Evora**	**86.24**	**311**	*e*	P	**P**	**01 32 58.0**	**+0.5**	
	comp=Z,169nm,1.4s								
EVO	**Evora**	**86.24**	**311**	*e*	PP	PP	01 36 19.7	+1.9	
JIS	**Juneau Island**	**86.37**	**25**		IAMs_20	IAMs_20	02 09 36.2		
	comp=Z,5µm,19.0s								
PBEJ	**Beja**	**86.39**	**310**	*e*	P	**P**	**01 32 59.0**	**+0.8**	
	comp=Z,129nm,1.5s								
PBEJ	**Beja**	**86.39**	**310**	*e*	PP	PP	01 36 20.1	+1.1	
RSA	**Sarsar**	**86.43**	**307**		P	**P**	**01 33 02.0**	**+3.4**	
	SNR=12								
RSA					P	**P**	**01 33 02.0**	**+3.4**	
	SNR=12								
IFR	**Ifrane**	**86.56**	**305**	⇑	*i*	P	**P**	**01 33 03.3**	**+4.0**
IFR					*i*	S	**S**	**01 43 31.4**	**-5.0**
PVAQ	**Vaqueiros**	**86.58**	**310**			P	**P**	**01 33 02.9**	**+3.7**
	SNR=8.5								
PVAQ						P	**P**	**01 33 02.9**	**+3.7**
	SNR=8.5								
PVAQ	**Vaqueiros**	**86.58**	**310**	*e*	P	**P**	**01 33 01.3**	**+2.1**	
	comp=Z,208nm,1.4s								
PVAQ	**Vaqueiros**	**86.58**	**310**	*e*	PP	PP	01 36 22.9	+2.3	
PVAQ				*e*	S	**S**	**01 43 36.4**	**+0.2**	
PVAQ				*e*	SS	**SS**	**01 49 20.1**	**+4.0**	
PVAQ	**Vaqueiros**	**86.58**	**310**	*e*	LR	LR	02 03 05.5		
	comp=Z,3µm,22.0s								
PVAQ	**Vaqueiros**	**86.58**	**310**		IAMs_20	IAMs_20	02 12 55.2		
	comp=Z,4µm,22.0s								
PCVE	**Castro Verde**	**86.70**	**310**	*e*	P	**P**	**01 33 00.7**	**+1.0**	
	comp=Z,114nm,1.4s								
PCVE	**Castro Verde**	**86.70**	**310**	*e*	PP	PP	01 36 23.4	+1.9	
PCVE				*e*	S	**S**	**01 43 36.6**	**-0.7**	
PCVE				*e*	SS	**SS**	**01 49 23.5**	**+5.7**	
MESJ	**Messejana**	**86.72**	**310**	*e*	P	**P**	**01 32 59.4**	**-0.5**	
MESJ				*e*	PP	**PP**	**01 36 21.2**	**-0.4**	
MESJ				*e*	SKSac	**SKSac**	**01 43 25.4**	**-1.6**	
MESJ					AMS	AMS	02 10 19.2		
	comp=N,5µm,19.9s								
MESJ	**Messejana**	**86.72**	**310**	*e*	P	**P**	**01 32 59.3**	**-0.5**	
MESJ				*e*			01 36 21.2		
MESJ				*e*			01 43 25.4		
MESJ	**Messejana**	**86.72**	**310**	*e*	P	**P**	**01 33 00.4**	**+0.6**	
	comp=N,178nm,1.4s								
MESJ	**Messejana**	**86.72**	**310**	*e*	PP	PP	01 36 23.8	+2.1	
PNCL	**Nicolau / Gran**	**86.80**	**311**	*e*	P	**P**	**01 33 01.0**	**+0.8**	
	comp=N,173nm,1.4s								
PNCL	**Nicolau / Gran**	**86.80**	**311**	*e*	PP	PP	01 36 25.3	+3.0	
PNCL				*e*	S	**S**	**01 43 40.1**	**+1.9**	
PNCL				*e*	SS	**SS**	**01 49 25.4**	**+6.2**	
PBDV	**Barranco-do-Ve**	**86.81**	**310**	*e*	P	**P**	**01 33 00.9**	**+0.6**	
	comp=N,302nm,1.4s								
PBDV	**Barranco-do-Ve**	**86.81**	**310**	*e*	PP	PP	01 36 23.2	+0.8	
PBDV				*e*	S	**S**	**01 43 36.6**	**-1.8**	
PBDV				*e*	SS	**SS**	**01 49 25.4**	**+5.9**	
ARF	**Arif**	**86.84**	**303**		P	**P**	**01 33 05.0**	**+4.3**	
	SNR=8.7								
ARF					P	**P**	**01 33 05.0**	**+4.3**	
	SNR=8.7								
SIT	**Sitka**	**86.85**	**26**		IAMs_20	IAMs_20	02 08 36.0		
	comp=Z,5µm,20.0s								
PMAFR	**Mafra**	**86.90**	**312**	*e*	P	**P**	**01 33 01.6**	**+0.9**	
	comp=Z,341nm,1.4s								
PMAFR	**Mafra**	**86.90**	**312**	*e*	S	**S**	**01 43 32.0**	**-7.2**	
PMAFR				*e*	SS	**SS**	**01 49 27.7**	**+7.0**	
LIS	**Lisbon**	**86.93**	**311**	*e*	P	**P**	**01 33 00.3**	**-0.5**	
LIS				*e*	PP	**PP**	**01 36 22.8**	**-0.4**	
LIS					AMS	AMS	02 15 36.1		
	comp=Z,5µm,25.8s								
LIS	**Lisbon**	**86.93**	**311**	*e*	P	**P**	**01 33 00.3**	**-0.5**	
LIS				*e*			01 36 22.8		
LIS	**Lisbon**	**86.93**	**311**	*e*	P	**P**	**01 33 03.9**	**+3.1**	
	comp=Z,265nm,1.6s								
PTEO	**Sao Teotonio**	**87.21**	**310**	*e*	P	**P**	**01 33 02.4**	**+0.2**	
	comp=Z,244nm,1.5s								
PTEO	**Sao Teotonio**	**87.21**	**310**	*e*	PP	PP	01 36 27.9	+2.3	
GOLM	**Goulmima**	**87.27**	**304**		P	P	01 33 08.0	+5.2	
	SNR=5.8								
GOLM					P	P	01 33 08.0	+5.2	
	SNR=5.8								
MORF	**Marmelete**	**87.28**	**310**	*e*	P	**P**	**01 33 02.1**	**-0.6**	
MORF				*e*	PP	**PP**	**01 36 25.8**	**-0.5**	
MORF				*e*	SKSac	**SKSac**	**01 43 28.8**	**-1.8**	
MORF					AMS	AMS	02 10 46.7		
	comp=N,5µm,27.9s								
MORF	**Marmelete**	**87.28**	**310**	*e*	P	**P**	**01 33 02.0**	**-0.6**	
MORF				*e*			01 36 25.7		
MORF				*e*			01 43 28.7		
MORF	**Marmelete**	**87.28**	**310**	*e*	P	**P**	**01 33 03.6**	**+1.0**	
	comp=N,196nm,1.5s								
MORF	**Marmelete**	**87.28**	**310**	*e*	PP	PP	01 36 28.7	+2.4	
MORF				*e*	S	**S**	**01 43 46.1**	**+3.1**	
MORF				*e*	SS	**SS**	**01 49 30.6**	**+4.2**	
PFVI	**Vila Bisbo**	**87.49**	**310**	*e*	P	**P**	**01 33 04.5**	**+0.9**	
	comp=N,197nm,1.5s								
PFVI	**Vila Bisbo**	**87.49**	**310**	*e*	PP	PP	01 36 30.3	+2.4	
PFVI				*e*	S	**S**	**01 43 39.7**	**-5.2**	
PFVI				*e*	SS	**SS**	**01 49 33.7**	**+4.3**	
PFVI	**Vila Bisbo**	**87.49**	**310**		IAmb	IAmb	01 33 08.2		
	comp=Z,99nm,1.0s								
PFVI					IAMs_20	IAMs_20	02 15 53.0		
	comp=Z,4µm,21.0s								
RTC	**Rabat Centre**	**87.61**	**306**		P	**P**	**01 33 09.0**	**+4.8**	
	SNR=5.3								
RTC					P	**P**	**01 33 09.0**	**+4.8**	
	SNR=5.3								
BOSA	**Boshof**	**87.83**	**237**	*i*	P	**P**	**01 33 03.6**	**-1.7**	
BOSA	**Boshof**	**87.83**	**237**		P	**P**	**01 33 05.8**	**+0.5**	
	comp=Z,51nm,0.9s,baz=57,slow=3.2,SNR=44								
BOSA					LR	LR	02 12 45.2		
	comp=Z,4µm,18.9s,baz=64,slow=36								
BOSA	**Boshof**	**87.83**	**237**	*i*	P	**P**	**01 33 03.6**	**-1.7**	
BOSA	**Boshof**	**87.83**	**237**		P	**P**	**01 33 03.7**	**-1.7**	
BOSA					pmax	pmax			
	comp=Z,96nm,1.1s								
BOSA	**Boshof**	**87.83**	**237**		P	**P**	**01 33 03.6**	**-1.7**	
BOSA					IAmb	IAmb	01 33 08.9		
	comp=Z,96nm,1.1s								
DLBC	**Dease Lake**	**87.85**	**23**		IAmb	IAmb	01 33 36.4		
	comp=Z,75nm,1.6s								
DLBC					IAMs_20	IAMs_20	02 15 59.4		
	comp=Z,6µm,19.0s								
AVE	**Averroes**	**88.35**	**306**	*e*	P	**P**	**01 33 11.4**	**+3.6**	
AVE				*i*	S	**SKSac**	**01 43 37.2**	**+0.2**	
WRAK	**Wrangell Islan**	**88.46**	**25**		IAmb	IAmb	01 33 29.1		
	comp=Z,42nm,1.3s								
WRAK	**Wrangell Islan**	**88.46**	**25**		IAMs_20	IAMs_20	02 09 55.7		
	comp=Z,6µm,21.0s								
ZGR	**Zagora**	**88.51**	**303**		P	P	01 33 14.0	+5.2	
	SNR=5.5								
ZGR					P	P	01 33 14.0	+5.2	
	SNR=5.5								
CRAG	**Craig**	**88.84**	**26**		IAMs_20	IAMs_20	02 15 49.6		
	comp=Z,5µm,20.0s								
YKA	**Yellowknife Ar**	**89.04**	**14**		P	**P**	**01 33 09.4**	**-1.0**	
	comp=Z,10nm,1.0s,baz=329,slow=3.9,SNR=38								
YKA					PP	**PP**	**01 36 37.2**	**-2.2**	
	comp=Z,1.9nm,0.8s,baz=333,slow=7.6,SNR=4.1								
YKA					PKKPbc	**PKKPbc**	**01 50 48.6**	**-1.0**	
	comp=Z,1.5nm,0.7s,baz=152,slow=2.8,SNR=19								
YKA					PKPPKP		01 58 57.7		
	comp=Z,0.1nm,0.3s,baz=154,slow=2.9,SNR=4.6								
YKA					LR	LR	02 16 11.2		
	comp=Z,6µm,21.1s,baz=0.0,slow=38								
NRS	**Narsarsuaq**	**89.16**	**343**	*i*	P	**P**	**01 33 10.3**	**-0.7**	
NRS					pmax	pmax			
	comp=Z,72nm,1.0s								
NRS					MLR	MLR			
	comp=Z,4µm,18.0s								
NRS	**Narsarsuaq**	**89.16**	**343**	*i*	P	**P**	**01 33 10.3**	**-0.7**	
	comp=Z,72nm,1.0s								
	comp=Z,4µm,18.0s								
TSUM	**Tsumeb**	**89.60**	**249**		P	**P**	**01 33 13.7**	**-0.2**	
TSUM	**Tsumeb**	**89.60**	**249**		IAMs_20	IAMs_20	02 12 20.9		
	comp=Z,4µm,20.0s								
OUK	**Oukaimeden**	**89.69**	**304**		P	P	01 33 20.0	+5.4	
	SNR=5.7								
OUK					P	P	01 33 20.0	+5.4	
	SNR=5.7								
IVI	**Ivigtut**	**89.82**	**344**		IAmb	IAmb	01 33 17.8		
	comp=Z,222nm,1.5s								
IVI					IAMs_20	IAMs_20	02 16 47.4		
	comp=Z,6µm,20.0s								
TOA0	**Torodi Ar. Sit**	**90.03**	**284**		P	**P**	**01 33 14.9**	**-1.0**	
TORD	**Torodi Ar. Bea**	**90.03**	**284**		P	**P**	**01 33 14.8**	**-1.2**	
	comp=Z,16nm,1.0s,baz=58,slow=2.5,SNR=19								
TORD					PP	**PP**	**01 36 49.9**	**+0.9**	
	comp=Z,9.5nm,1.0s,baz=54,slow=6.6,SNR=5.1								
TORD					LR	LR	02 16 48.9		
	comp=Z,2µm,21.4s,baz=35,slow=38								
DIB	**Dawson Inlet,**	**90.72**	**28**		IAmb	IAmb	01 33 24.0		
	comp=Z,56nm,1.3s								
DIB					IAMs_20	IAMs_20	02 15 10.5		
	comp=Z,4µm,19.0s								
MOBC	**Moresby Island**	**90.97**	**27**		IAMs_20	IAMs_20	02 15 09.3		
	comp=Z,5µm,21.0s								
CASY	**Casey**	**91.49**	**175**		P	**P**	**01 33 21.7**	**+0.3**	
CASY					IAmb	IAmb	01 33 25.5		
	comp=Z,128nm,1.7s								
CASY	**Casey**	**91.49**	**175**		IAMs_20	IAMs_20	02 13 21.8		
	comp=Z,3µm,19.0s								
BBB	**Bella Bella**	**93.27**	**26**		IAMs_20	IAMs_20	02 18 10.8		
	comp=Z,4µm,19.0s								
OUZ	**Omahuta**	**93.31**	**127**		IAMs_20	IAMs_20	02 16 43.3		
	comp=Z,4µm,22.0s								
FOZ	**Fox Glacier**	**94.79**	**136**		IAMs_20	IAMs_20	02 18 25.9		
	comp=Z,5µm,21.0s								
WKZ	**Wanaka**	**94.94**	**137**		IAMs_20	IAMs_20	02 20 55.0		
	comp=Z,4µm,20.0s								
LBZ	**Lake Benmore**	**95.44**	**137**		IAMs_20	IAMs_20	02 19 16.3		
	comp=Z,5µm,20.0s								
PMOZ	**Porto Moniz, M**	**95.59**	**310**	*e*	S	**S**	**01 44 54.7**	**-4.2**	
PMOZ	**Porto Moniz, M**	**95.59**	**310**	*e*	LR	LR	02 07 16.9		
	comp=Z,1µm,18.0s								
RPZ	**Rata Peaks**	**95.66**	**136**		IAMs_20	IAMs_20	02 18 56.0		
	comp=Z,6µm,21.0s								
HIZ	**Hauiti**	**95.73**	**130**		IAMs_20	IAMs_20	02 24 59.3		
	comp=Z,5µm,20.0s								
MAW	**Mawson**	**95.93**	**193**		P	**P**	**01 33 40.6**	**-1.1**	
	comp=Z,3.2nm,1.0s,baz=37,slow=6.3,SNR=3.9								
MAW	**Mawson**	**95.93**	**193**		IAmb	IAmb	01 33 46.3		
	comp=Z,12nm,1.4s								
MAW					IAMs_20	IAMs_20	02 15 12.8		
	comp=Z,414nm,19.0s								
FCC	**Fort Churchill**	**95.97**	**6**		IAmb	IAmb	01 33 46.2		
	comp=Z,38nm,1.3s								
LTZ	**Lake Taylor**	**95.99**	**135**		IAMs_20	IAMs_20	02 23 12.8		
	comp=Z,5µm,20.0s								
ODZ	**Otahua Downs**	**96.06**	**137**		IAMs_20	IAMs_20	02 23 47.4		
	comp=Z,4µm,20.0s								
KHZ	**Kahutara**	**96.64**	**134**		IAMs_20	IAMs_20	02 16 09.2		
	comp=Z,4µm,21.0s								
MQZ	**McQueen's Vall**	**96.67**	**135**		IAMs_20	IAMs_20	02 19 42.9		
	comp=Z,3µm,21.0s								
SNZO	**South Karori**	**96.91**	**132**		IAMs_20	IAMs_20	02 25 19.2		
	comp=Z,4µm,18.0s								
BKZ	**Black Stump Fm**	**97.17**	**130**		IAMs_20	IAMs_20	02 21 04.3		
	comp=Z,4µm,20.0s								
URZ	**Urewera**	**97.20**	**129**		IAMs_20	IAMs_20	02 25 55.6		
	comp=Z,4µm,20.0s								
MXZ	**Matakaoa Point**	**97.75**	**128**		IAMs_20	IAMs_20	02 22 44.9		
	comp=Z,3µm,20.0s								
PGC	**Sidney**	**97.89**	**26**		IAMs_20	IAMs_20	02 16 34.2		
	comp=Z,3µm,19.0s								
CMLA	**Cha da Macela**	**98.04**	**318**		IAMs_20	IAMs_20	02 20 32.0		
	comp=Z,4µm,20.0s								
DBIC	**Dimbokro**	**98.66**	**281**		PP	**PP**	**01 37 55.5**	**-0.9**	
	comp=Z,11nm,1.1s,baz=67,slow=7.8,SNR=3.2								
DBIC					LR	LR	02 22 03.8		
	comp=Z,2µm,20.7s,baz=41,slow=38								
NLWA	**Neilton Lookou**	**98.72**	**27**		IAMs_20	IAMs_20	02 18 30.2		
	comp=Z,5µm,20.0s								
FFC	**Flin Flon**	**98.79**	**12**		P	**P**	**01 33 54.4**	**-0.9**	
FFC					pmax	pmax			
	comp=Z,10.0nm,1.2s								
FFC					MLR	MLR			
	comp=Z,5µm,19.0s								
FFC	**Flin Flon**	**98.79**	**12**			**P**	**01 33 54.4**	**-0.9**	
FFC	**Flin Flon**	**98.79**	**12**		IAMs_20	IAMs_20	02 21 42.1		
	comp=Z,5µm,19.0s								
ROSA	**Rosais**	**99.03**	**320**		IAMs_20	IAMs_20	02 18 18.0		
	comp=Z,4µm,22.0s								
SCHQ	**Schefferville**	**99.43**	**351**		P	**Pdif**	**01 33 57.2**	**-0.9**	
	comp=Z,18nm,0.8s,baz=37,slow=5.4,SNR=25								
SCHQ					LR	LR	02 21 12.3		
	comp=Z,3µm,19.5s,baz=14,slow=37								
SCHQ	**Schefferville**	**99.43**	**351**		IAmb	IAmb	01 34 01.9		
	comp=Z,26nm,0.9s								
SCHQ					IAMs_20	IAMs_20	02 20 51.3		
	comp=Z,5µm,20.0s								
E03A	**Lebam**	**99.52**	**28**		IAMs_20	IAMs_20	02 18 53.3		
	comp=Z,4µm,20.0s								
F03A	**Seaside**	**100.01**	**28**		IAMs_20	IAMs_20	02 18 42.3		
	comp=Z,4µm,20.0s								
LON	**Longmire**	**100.08**	**26**		IAMs_20	IAMs_20	02 17 12.0		
	comp=Z,4µm,20.0s								
LTY	**Liberty**	**100.12**	**26**		IAMs_20	IAMs_20	02 25 39.1		
	comp=Z,4µm,19.0s								
C09A	**Chrisman Ranch**	**100.58**	**24**		IAMs_20	IAMs_20	02 19 15.0		
	comp=Z,5µm,21.0s								
NEW	**Newport**	**100.60**	**23**		IAMs_20	IAMs_20	02 20 57.6		
	comp=Z,5µm,22.0s								
D08A	**Wollman Farm,**	**100.96**	**25**		IAMs_20	IAMs_20	02 18 58.2		
	comp=Z,4µm,19.0s								
WALA	**Waterton Lakes**	**101.00**	**21**		IAMs_20	IAMs_20	02 23 15.9		
	comp=Z,5µm,20.0s								
E07A	**Sunnyside**	**101.01**	**25**		IAMs_20	IAMs_20	02 21 10.7		
	comp=Z,4µm,19.0s								
COR	**Corvallis**	**101.18**	**29**		IAMs_20	IAMs_20	02 19 23.5		
	comp=Z,3µm,20.0s								
HAWA	**Hanford**	**101.28**	**25**		IAMs_20	IAMs_20	02 19 44.6		
	comp=Z,5µm,22.0s								
E08A	**Dider Farm, El**	**101.38**	**25**		IAMs_20	IAMs_20	02 17 37.3		
	comp=Z,3µm,20.0s								

D53A	**Lac Vacive, Po**	108.16	357	IAMs_20	IAMs_20	02 27 39.3			
	comp=Z,3µm,18.0s								
E38A	**The Farm, Brul**	108.23	7	IAMs_20	IAMs_20	02 26 39.5			
	comp=Z,4µm,20.0s								
HWUT	**Hardware Ranch**	108.34	23	IAMs_20	IAMs_20	02 27 49.2			
	comp=Z,3µm,19.0s								
RSSD	**Black Hills**	108.35	16	IAMs_20	IAMs_20	02 24 53.0			
	comp=Z,4µm,18.0s								
NVAR	**Mina Array Bea**	108.36	29	PKiKP	**PKiKP**	**01 38 44.4**	**-0.3**		
	comp=Z,0.7nm,0.7s,baz=307,slow=2.9,SNR=4.0								
NVAR				PP	**PP**	**01 39 08.6**	**+0.9**		
	comp=Z,5.3nm,1.1s,baz=347,slow=3.6,SNR=5.8								
NVAR				PKKPbc	**PKKPbc**	**01 49 56.4**	**+0.8**		
	comp=Z,1.0nm,0.7s,baz=139,slow=3.8,SNR=5.9								
NV11	**Mina Array Sit**	108.43	29	IAMs_20	IAMs_20	02 24 42.3			
	comp=Z,5µm,20.0s								
OMMB	**Old Mammoth Mi**	108.72	30	IAMs_20	IAMs_20	02 24 47.1			
	comp=Z,3µm,21.0s								
GGN	**Saint George**	108.85	349	IAMs_20	IAMs_20	02 30 46.6			
	comp=Z,3µm,18.0s								
VNDA	**Vanda**	108.87	168	PP	**PP**	**01 39 15.2**	**+3.8**		
	comp=Z,1.9nm,1.0s,baz=296,slow=11,SNR=3.1								
G65A	**Princeton**	108.90	349	IAMs_20	IAMs_20	02 32 44.9			
	comp=Z,3µm,19.0s								
COWI	**Conover**	108.96	5	IAMs_20	IAMs_20	02 29 01.8			
	comp=Z,3µm,20.0s								
K22A	**Casper**	109.03	19	IAMs_20	IAMs_20	02 29 21.1			
	comp=Z,4µm,19.0s								
PKME	**Peaks-Kenny Pk**	109.11	350	IAMs_20	IAMs_20	02 27 04.6			
	comp=Z,5µm,20.0s								
DUG	**Dugway, Tooele**	109.12	24	IAMs_20	IAMs_20	02 22 43.1			
	comp=Z,3µm,21.0s								
G62A	**West of Eustis**	109.34	351	IAMs_20	IAMs_20	02 29 38.4			
	comp=Z,3µm,20.0s								
EMMW	**East Machias**	109.36	349	IAMs_20	IAMs_20	02 27 08.9			
	comp=Z,3µm,20.0s								
SPMN	**Marine on St.**	109.45	8	IAMs_20	IAMs_20	02 23 17.8			
	comp=Z,4µm,22.0s								
R11A	**Troy Canyon, C**	109.60	27	IAMs_20	IAMs_20	02 26 49.2			
	comp=Z,4µm,22.0s								
G40A	**Rib Lake**	109.69	6	IAMs_20	IAMs_20	02 32 35.2			
	comp=Z,4µm,18.0s								
RWWY	**Rawlins**	109.70	20	IAMs_20	IAMs_20	02 29 51.0			
	comp=Z,4µm,20.0s								
WVL	**Waterville**	109.85	351	IAMs_20	IAMs_20	02 32 45.1			
	comp=Z,4µm,19.0s								
H62A	**Milan**	110.05	352	IAMs_20	IAMs_20	02 25 16.4			
	comp=Z,4µm,20.0s								
LONY	**Lake Ozonia**	110.39	354	IAMs_20	IAMs_20	02 27 40.3			
	comp=Z,3µm,20.0s								
LBNH	**Lisbon**	110.48	352	IAMs_20	IAMs_20	02 30 27.7			
	comp=Z,3µm,19.0s								
GLMI	**Grayling**	110.49	2	IAMs_20	IAMs_20	02 27 03.0			
	comp=Z,4µm,19.0s								
VT1	**Waterbury**	110.49	353	IAMs_20	IAMs_20	02 30 42.2			
	comp=Z,4µm,19.0s								
I63A	**Otisfield**	110.49	351	IAMs_20	IAMs_20	02 29 28.9			
	comp=Z,4µm,19.0s								
TPNV	**Topopah Spring**	110.50	29	IAMs_20	IAMs_20	02 28 54.0			
	comp=Z,3µm,20.0s								
SADO	**Sadowa**	110.53	358	IAMs_20	IAMs_20	02 27 39.0			
	comp=Z,5µm,22.0s								
I37A	**Lemond, Waseca**	110.56	9	IAMs_20	IAMs_20	02 32 33.2			
	comp=Z,4µm,20.0s								
ISA	**Isabella, Lake**	110.56	31	IAMs_20	IAMs_20	02 25 58.8			
	comp=Z,3µm,22.0s								
PHWY	**Pilot Hill**	110.58	19	IAMs_20	IAMs_20	02 26 21.1			
	comp=Z,4µm,20.0s								
DELO	**Deloro Mine**	110.71	357	IAMs_20	IAMs_20	02 28 57.8			
	comp=Z,3µm,20.0s								
I62A	**Tamworth**	110.77	352	IAMs_20	IAMs_20	02 25 47.1			
	comp=Z,3µm,21.0s								
O20A	**White River Ci**	110.78	21	IAMs_20	IAMs_20	02 32 17.8			
	comp=Z,3µm,19.0s								
NCB	**Newcomb**	111.00	354	IAMs_20	IAMs_20	02 26 09.3			
	comp=Z,3µm,22.0s								
HNH	**Hanover**	111.05	352	IAMs_20	IAMs_20	02 30 54.6			
	comp=Z,3µm,19.0s								
I42A	**Draeger Farm,**	111.17	5	IAMs_20	IAMs_20	02 27 50.4			
	comp=Z,4µm,21.0s								
PECO	**Prince Edward**	111.25	356	IAMs_20	IAMs_20	02 29 28.2			
	comp=Z,3µm,21.0s								
I47A	**Gladwin**	111.30	2	IAMs_20	IAMs_20	02 28 32.4			
	comp=Z,4µm,18.0s								
SHPR	**Sheep Range**	111.34	28	IAMs_20	IAMs_20	02 28 10.4			
	comp=Z,3µm,20.0s								
ACCN	**Adirondack Com**	111.52	353	IAMs_20	IAMs_20	02 26 56.3			
	comp=Z,4µm,21.0s								
J59A	**Piesco**	111.53	354	IAMs_20	IAMs_20	02 28 31.1			
	comp=Z,3µm,19.0s								
J58A	**Remsen**	111.70	355	IAMs_20	IAMs_20	02 30 18.0			
	comp=Z,4µm,19.0s								
J56A	**Wolcott**	111.90	356	IAMs_20	IAMs_20	02 29 58.3			
	comp=Z,3µm,20.0s								
ISCO	**Idaho Springs**	111.91	19	IAMs_20	IAMs_20	02 24 54.6			
	comp=Z,4µm,20.0s								
PV21	**Cone Mtn., Par**	111.95	22	IAMs_20	IAMs_20	02 31 42.3			
	comp=Z,3µm,19.0s								
J55A	**Hilton**	111.97	357	IAMs_20	IAMs_20	02 29 53.1			
	comp=Z,3µm,19.0s								
J54A	**Appleton**	112.00	357	IAMs_20	IAMs_20	02 26 08.0			
	comp=Z,3µm,21.0s								
JFWS	**Jewell Farm**	112.02	6	IAMs_20	IAMs_20	02 28 18.8			
	comp=Z,4µm,19.0s								
PV22	**Blue Mesa, Par**	112.04	22	IAMs_20	IAMs_20	02 32 18.1			
	comp=Z,4µm,21.0s								
J47A	**Sunmer**	112.06	2	IAMs_20	IAMs_20	02 27 46.8			
	comp=Z,4µm,19.0s								
K62A	**Royalston**	112.07	352	IAMs_20	IAMs_20	02 31 23.8			
	comp=Z,3µm,19.0s								
PV10	**Paradox Valley**	112.09	23	IAMs_20	IAMs_20	02 24 48.7			
	comp=Z,4µm,21.0s								
MEDO	**Medina**	112.10	357	IAMs_20	IAMs_20	02 26 21.6			
	comp=Z,3µm,20.0s								
PV04	**Paradox Valley**	112.12	22	IAMs_20	IAMs_20	02 32 22.5			
	comp=Z,4µm,19.0s								
HRV	**Adam Dziewonsk**	112.14	352	IAMs_20	IAMs_20	02 32 53.6			
	comp=Z,3µm,18.0s								
PV20	**West Nyswonger**	112.15	23	IAMs_20	IAMs_20	02 24 57.1			
	comp=Z,3µm,20.0s								
TRY	**Troy**	112.17	353	IAMs_20	IAMs_20	02 29 36.4			
	comp=Z,3µm,20.0s								
PV19	**Morning Glory**	112.17	23	IAMs_20	IAMs_20	02 24 56.7			
	comp=Z,3µm,20.0s								
PV07	**Paradox Valley**	112.17	22	IAMs_20	IAMs_20	02 26 21.5			
	comp=Z,3µm,22.0s								
PV11	**David Mesa, Pa**	112.22	23	IAMs_20	IAMs_20	02 31 50.0			
	comp=Z,4µm,19.0s								
WES	**Weston**	112.23	351	IAMs_20	IAMs_20	02 30 28.9			
	comp=Z,2µm,18.0s								
PV18	**Skein Mesa, Pa**	112.25	23	IAMs_20	IAMs_20	02 31 53.9			
	comp=Z,3µm,20.0s								
PV03	**Paradox Valley**	112.27	23	IAMs_20	IAMs_20	02 31 53.3			
	comp=Z,4µm,20.0s								
PV15	**Paradox Valley**	112.32	22	IAMs_20	IAMs_20	02 26 38.5			
	comp=Z,3µm,22.0s								
K58A	**Earlville**	112.32	355	IAMs_20	IAMs_20	02 28 20.5			
	comp=Z,4µm,21.0s								
PV05	**Paradox Valley**	112.34	23	IAMs_20	IAMs_20	02 25 01.7			
	comp=Z,3µm,20.0s								
PV13	**Radium Mtn., P**	112.36	23	IAMs_20	IAMs_20	02 31 56.8			
	comp=Z,4µm,21.0s								
K43A	**Burlington**	112.40	5	IAMs_20	IAMs_20	02 26 56.8			
	comp=Z,4µm,20.0s								
QUA2	**Belchertown**	112.47	352	IAMs_20	IAMs_20	02 31 44.2			
	comp=Z,3µm,19.0s								
PV01	**Paradox Valley**	112.47	22	IAMs_20	IAMs_20	02 32 09.7			
	comp=Z,4µm,20.0s								
MMNY	**Mt. Morris Dam**	112.51	357	IAMs_20	IAMs_20	02 30 18.3			
	comp=Z,3µm,18.0s								
U15A	**North Rim**	112.59	26	IAMs_20	IAMs_20	02 27 09.2			
	comp=Z,4µm,22.0s								
BRYW	**Bryant College**	112.72	351	IAMs_20	IAMs_20	02 33 27.9			
	comp=Z,3µm,18.0s								
L40A	**Anamosa**	112.75	7	IAMs_20	IAMs_20	02 29 39.3			
	comp=Z,5µm,21.0s								
L59A	**Walton**	112.84	354	IAMs_20	IAMs_20	02 27 39.1			
	comp=Z,3µm,21.0s								
WVNY	**West Valley, N**	112.86	357	IAMs_20	IAMs_20	02 29 23.8			
	comp=Z,3µm,20.0s								
BINY	**Binghamton**	112.91	355	IAMs_20	IAMs_20	02 28 38.0			
	comp=Z,4µm,22.0s								
M65A	**Busby, Falmout**	112.94	351	IAMs_20	IAMs_20	02 30 34.8			
	comp=Z,3µm,20.0s								
L56A	**Greenwood**	113.08	356	IAMs_20	IAMs_20	02 30 30.5			
	comp=Z,4µm,20.0s								
W13A	**Hualapai Mount**	113.08	28	IAMs_20	IAMs_20	02 27 14.3			
	comp=Z,3µm,20.0s								
PFO	**Pinyon Flats O**	113.18	31	IAMs_20	IAMs_20	02 26 05.4			
	comp=Z,3µm,21.0s								
XPFO	**Pion Flat**	113.19	31	IAMs_20	IAMs_20	02 26 05.4			
	comp=Z,3µm,21.0s								
MVCO	**Mesa Verde**	113.33	23	IAMs_20	IAMs_20	02 25 43.3			
	comp=Z,4µm,21.0s								
109C	**Camp Elliot, M**	113.48	32	IAMs_20	IAMs_20	02 34 52.2			
	comp=Z,2µm,19.0s								
YLE	**Yale**	113.49	352	IAMs_20	IAMs_20	02 31 19.2			
	comp=Z,3µm,19.0s								
KSPA	**Keystone Colle**	113.53	355	IAMs_20	IAMs_20	02 28 56.4			
	comp=Z,4µm,21.0s								
WSPT	**Westport, CT**	113.68	353	IAMs_20	IAMs_20	02 28 12.2			
	comp=Z,3µm,20.0s								
M44A	**Midewin, Midew**	113.73	5	IAMs_20	IAMs_20	02 32 14.0			
	comp=Z,3µm,20.0s								
WUAZ	**Wupatki**	113.75	26	IAMs_20	IAMs_20	02 27 20.9			
	comp=Z,4µm,22.0s								
M56A	**Emporium**	113.77	357	IAMs_20	IAMs_20	02 30 57.6			
	comp=Z,3µm,19.0s								
M55A	**Ridgway**	113.81	357	IAMs_20	IAMs_20	02 29 42.8			
	comp=Z,4µm,20.0s								
BAR	**Barrett**	113.85	32	IAMs_20	IAMs_20	02 29 17.7			
	comp=Z,2µm,20.0s								
ODNJ	**Ogdensburg**	113.90	354	IAMs_20	IAMs_20	02 31 47.1			
	comp=Z,4µm,20.0s								
PAL	**Palisades**	113.90	353	IAMs_20	IAMs_20	02 28 09.2			
	comp=Z,4µm,21.0s								
CPNY	**Central Park**	114.12	353	IAMs_20	IAMs_20	02 27 54.0			
	comp=Z,5µm,21.0s								
N59A	**State Game Lan**	114.17	355	IAMs_20	IAMs_20	02 28 09.3			
	comp=Z,4µm,21.0s								
BRNJ	**Basking Ridge**	114.29	354	IAMs_20	IAMs_20	02 28 25.5			
	comp=Z,4µm,21.0s								
N58A	**Sunbury**	114.32	356	IAMs_20	IAMs_20	02 33 20.2			
	comp=Z,3µm,20.0s								
CBKS	**Cedar Bluff**	114.42	15	IAMs_20	IAMs_20	02 28 43.5			
	comp=Z,4µm,19.0s								
HDIL	**Hopedale**	114.45	6	IAMs_20	IAMs_20	02 30 11.0			
	comp=Z,4µm,22.0s								
X16A	**Lo Mia Camp, P**	114.68	26	IAMs_20	IAMs_20	02 28 04.6			
	comp=Z,4µm,22.0s								
W18A	**Petrified Fore**	114.74	25	IAMs_20	IAMs_20	02 27 38.8			
	comp=Z,4µm,22.0s								
QSPA	**South Pole Qui**	114.79	180	IAMs_20	IAMs_20	02 23 49.3			
	comp=Z,4µm,21.0s								
SFIN	**Lafayette**	114.80	4	IAMs_20	IAMs_20	02 28 28.3			
	comp=Z,4µm,19.0s								
O44A	**Mansfield**	114.92	5	IAMs_20	IAMs_20	02 28 26.6			
	comp=Z,4µm,21.0s								
O56A	**Blue Knob Stat**	115.00	357	IAMs_20	IAMs_20	02 30 38.2			
	comp=Z,4µm,20.0s								
ACSO	**Alum Creek Sta**	115.11	1	IAMs_20	IAMs_20	02 29 43.3			
	comp=Z,4µm,20.0s								
113A	**Mohawk Valley,**	115.11	29	IAMs_20	IAMs_20	02 27 06.3			
	comp=Z,2µm,20.0s								
PSUB	**Penn St. - Bra**	115.12	354	IAMs_20	IAMs_20	02 32 29.5			
	comp=Z,3µm,18.0s								
X18A	**Snowflake**	115.17	25	IAMs_20	IAMs_20	02 26 49.3			
	comp=Z,2µm,20.0s								
P60A	**Greenville**	115.25	354	IAMs_20	IAMs_20	02 32 22.0			
	comp=Z,3µm,20.0s								
P61A	**Hammonton**	115.31	354	IAMs_20	IAMs_20	02 32 35.4			
	comp=Z,4µm,19.0s								
P43A	**Skaggs, Pawnee**	115.33	6	IAMs_20	IAMs_20	02 30 48.5			
	comp=Z,4µm,21.0s								
P46A	**Rosedale**	115.55	4	IAMs_20	IAMs_20	02 29 01.2			
	comp=Z,3µm,19.0s								
P48A	**Milroy**	115.81	3	IAMs_20	IAMs_20	02 31 10.9			
	comp=Z,4µm,21.0s								
P51A	**Williamsport**	115.86	1	IAMs_20	IAMs_20	02 37 10.1			
	comp=Z,4µm,20.0s								
BLO	**Blomington**	116.04	4	IAMs_20	IAMs_20	02 29 17.1			
	comp=Z,3µm,20.0s								
ANMO	**Albuquerque**	116.08	22	PKiKP	**PKiKP**	**01 38 59.3**	**-0.1**		
ANMO	**Albuquerque**	116.08	22	P	**PKPdf**	**01 39 00.4**	**+1.0**		
	baz=336								
ANMO	**Albuquerque**	116.08	22		**PKiKP**	**01 38 59.3**	**-0.1**		
ANMO	**Albuquerque**	116.08	22	IAMs_20	IAMs_20	02 34 16.0			
	comp=Z,3µm,19.0s								
214A	**Organ Pipe Nat**	116.23	29	IAMs_20	IAMs_20	02 27 48.7			
	comp=Z,3µm,19.0s								
SLM	**Saint Louis**	116.25	7	IAMs_20	IAMs_20	02 34 35.8			
	comp=Z,4µm,18.0s								
Q51A	**Peebles**	116.31	1	IAMs_20	IAMs_20	02 33 07.1			
	comp=Z,3µm,20.0s								
OLIL	**Olney**	116.36	5	IAMs_20	IAMs_20	02 29 21.4			
	comp=Z,4µm,20.0s								
R61A	**Willards**	116.69	354	IAMs_20	IAMs_20	02 39 07.2			
	comp=Z,4µm,19.0s								
Y22D	**IRIS PASSCAL I**	116.70	23	IAMs_20	IAMs_20	02 28 51.7			
	comp=Z,4µm,22.0s								
BNM	**Barren Site**	116.74	23	PKPdf	**PKPdf**	**01 39 00.3**	**-0.4**		
TUC	**Tucson**	116.78	27	P	**PKiKP**	**01 39 02.4**	**+1.7**		
	baz=331								
TUC	**Tucson**	116.78	27	IAMs_20	IAMs_20	02 29 24.3			
	comp=Z,3µm,22.0s								
SNAA	**Sanae**	116.87	200	PKPdf	**PKiKP**	**01 39 01.3**	**+1.8**		
SNAA	**Sanae**	116.87	200	PKiKP	**PKiKP**	**01 38 59.8**	**+0.3**		
SNAA				MLR	MLR				
	comp=Z,2µm,20.0s								
SNAA	**Sanae**	116.87	200	PKPdf	**PKiKP**	**01 38 59.8**	**+0.3**		
SNAA				IAMs_20	IAMs_20	02 27 22.2			
	comp=Z,2µm,20.0s								
CBN	**Corbin Frederi**	116.98	356	IAMs_20	IAMs_20	02 31 36.8			
	comp=Z,3µm,22.0s								
R49A	**Shelbyville**	116.99	3	IAMs_20	IAMs_20	02 28 39.1			
	comp=Z,3µm,21.0s								
WCI	**Wyandotte Cave**	116.99	4	IAMs_20	IAMs_20	02 29 46.3			
	comp=Z,4µm,20.0s								
USIN	**University of**	117.16	5	IAMs_20	IAMs_20	02 29 45.8			
	comp=Z,4µm,19.0s								
PPT2	**Papeete2**	117.24	98	*e*PS	PS	01 49 55.2	-1.6		
	comp=Z,679nm,27.5s								
PPT2				*e*SS	SS	01 56 16.8	-6.2		
	comp=Z,1µm,27.5s								
PPT2	**Papeete2**	117.24	98	*e*LQ	LQ	02 09 38.5			
	comp=Z,3µm,36.5s								
PPT2				*e*LR	LR	02 14 28.3			
	comp=Z,5µm,24.8s,baz=294								
R58B	**Mineral**	117.25	356	IAMs_20	IAMs_20	02 32 39.0			
	comp=Z,4µm,18.0s								
S58A	**Poland Farm, P**	117.61	356	IAMs_20	IAMs_20	02 30 24.5			
	comp=Z,3µm,21.0s								
AMTX	**Amarillo**	117.63	18	IAMs_20	IAMs_20	02 34 23.7			
	comp=Z,3µm,18.0s								
121A	**Cookes Peak, D**	117.77	24	IAMs_20	IAMs_20	02 33 38.2			
	comp=Z,3µm,20.0s								
T60A	**Surry**	118.00	355	IAMs_20	IAMs_20	02 33 38.6			
	comp=Z,3µm,18.0s								
U40A	**Yellville**	118.15	10	P	**PKPdf**	**01 39 02.5**	**-0.6**		
	baz=349								
U40A	**Yellville**	118.15	10	PKPdf	**PKPdf**	**01 39 02.2**	**-0.9**		
MSTX	**Muleshoe**	118.16	19	IAMs_20	IAMs_20	02 28 20.0			
	comp=Z,3µm,20.0s								
319A	**Douglas**	118.22	26	IAMs_20	IAMs_20	02 28 06.1			
	comp=Z,2µm,20.0s								
T59A	**Double "B" Far**	118.22	356	IAMs_20	IAMs_20	02 32 33.6			
	comp=Z,4µm,21.0s								
T50A	**Nancy**	118.27	2		**PKiKP**	**01 39 03.5**	**+0.2**		
T50A				IAMs_20	IAMs_20	02 29 29.0			
	comp=Z,3µm,20.0s								
VNA2	**Neumayer--Watz**	118.39	201	PKPdf	**PKiKP**	**01 39 04.7**	**+2.3**		
	baz=62,slow=2.0								
HICK	**Hickman**	118.43	7	IAMs_20	IAMs_20	02 36 57.5			
	comp=Z,4µm,20.0s								
LCAR	**Lake Charles**	118.67	8	IAMs_20	IAMs_20	02 31 30.0			
	comp=Z,4µm,20.0s								
VNA1	**Neumayer--Stat**	118.70	201	PKPdf	**PKiKP**	**01 39 05.2**	**+2.3**		
U49A	**Red Boiling Sp**	118.73	3		**PKiKP**	**01 39 04.4**	**+0.2**		
U61A	**Possum Corner**	118.78	355	IAMs_20	IAMs_20	02 34 11.2			
	comp=Z,4µm,19.0s								
PEBM	**Pemiscott Bayo**	118.79	7	IAMs_20	IAMs_20	02 33 50.9			
	comp=Z,4µm,20.0s								
U59A	**Littleton**	118.85	356	IAMs_20	IAMs_20	02 33 02.3			
	comp=Z,3µm,21.0s								
GNAR	**Gosnell**	118.92	7	IAMs_20	IAMs_20	02 32 59.3			
	comp=Z,4µm,19.0s								
EPT	**El Paso**	118.93	24	IAMs_20	IAMs_20	02 31 11.7			
	comp=Z,4µm,22.0s								
WVT	**Waverly**	118.97	5	PKiKP	**PKPdf**	**01 39 04.6**	**0.0**		
WVT	**Waverly**	118.97	5	P	**PKPdf**	**01 39 03.7**	**-0.9**		
	baz=354								
WVT	**Waverly**	118.97	5		**PKPdf**	**01 39 04.6**	**0.0**		
WVT	**Waverly**	118.97	5	IAMs_20	IAMs_20	02 33 01.7			
	comp=Z,3µm,20.0s								
VNA3	**Neumayer Olymp**	119.09	201	PKPdf	**PKiKP**	**01 39 05.5**	**+1.7**		
CLTN	**Cedars of Leba**	119.12	4	IAMs_20	IAMs_20	02 32 15.5			
	comp=Z,3µm,20.0s								
TBI	**Tubuai**	119.12	104	*e*PS	PS	01 50 13.1	-0.4		
	comp=Z,374nm,30.5s								
TBI				*e*SS	SS	01 56 42.2	-4.8		
	comp=Z,780nm,27.8s								
TBI	**Tubuai**	119.12	104	*e*LQ	LQ	02 10 27.7			
	comp=Z,2µm,34.0s								
TBI				*e*LR	LR	02 15 20.8			
	comp=Z,2µm,29.2s,baz=294								
LPAR	**Lepanto**	119.24	8	IAMs_20	IAMs_20	02 32 04.0			
	comp=Z,4µm,20.0s								
HBAR	**Harrisburg**	119.24	8	IAMs_20	IAMs_20	02 34 35.0			
	comp=Z,3µm,20.0s								
V61A	**Roper**	119.32	355	IAMs_20	IAMs_20	02 31 17.7			
	comp=Z,4µm,22.0s								
MNTX	**Cornudas Mount**	119.40	23	P	**PKPdf**	**01 39 05.5**	**-0.1**		
	baz=336								
MNTX	**Cornudas Mount**	119.40	23	PKPdf	**PKPdf**	**01 39 05.3**	**-0.3**		
MNTX				IAMs_20	IAMs_20	02 33 11.0			
	comp=Z,3µm,20.0s								
V60A	**Jim Taylor Roa**	119.40	355	IAMs_20	IAMs_20	02 34 10.8			
	comp=Z,3µm,20.0s								
V48A	**Smith Brothers**	119.44	4	IAMs_20	IAMs_20	02 31 05.0			
	comp=Z,3µm,19.0s								
V55A	**Taylorsville**	119.48	359	IAMs_20	IAMs_20	02 39 42.0			
	comp=Z,4µm,19.0s								
V51A	**Loudon**	119.50	2	IAMs_20	IAMs_20	02 33 56.6			
	comp=Z,3µm,20.0s								
HSIG		119.56	29	IAMs_20	IAMs_20	02 33 05.1			
	comp=Z,2µm,20.0s								
TKL	**Tuckaleechee C**	119.66	2	PKiKP	**PKiKP**	**01 39 06.2**	**+0.1**		
TKL				MLR	MLR				
	comp=Z,5µm,19.0s								
TKL	**Tuckaleechee C**	119.66	2	PKPdf	**PKiKP**	**01 39 06.2**	**+0.1**		
MIAR	**Mount Ida**	119.80	11	P	**PKiKP**	**01 39 06.7**	**+0.4**		
	baz=348								
CPCT	**Cooper Cave**	119.84	2	PKPdf	**PKPdf**	**01 39 06.2**	**-0.2**		
CPCT				IAMs_20	IAMs_20	02 36 11.7			
	comp=Z,3µm,18.0s								
CNNC	**Cliffs of the**	119.97	356	IAMs_20	IAMs_20	02 35 53.8			
	comp=Z,4µm,20.0s								
W50A	**Signal Mountai**	120.06	3	IAMs_20	IAMs_20	02 30 25.5			
	comp=Z,4µm,21.0s								
W57A	**Gilead**	120.15	358	P	**PKiKP**	**01 39 07.3**	**+0.3**		
	baz=2.3								
KMSC	**Kings Mountain**	120.19	359	P	**PKiKP**	**01 39 07.4**	**+0.3**		
	baz=0.9								
KMSC	**Kings Mountain**	120.19	359	IAMs_20	IAMs_20	02 32 25.8			
	comp=Z,4µm,20.0s								
W52A	**Murphy**	120.22	2	IAMs_20	IAMs_20	02 32 21.6			
	comp=Z,4µm,19.0s								
ABTX	**Abilene, Hawle**	120.31	17	P	**PKPdf**	**01 39 07.3**	**0.0**		
	baz=342								
OXF	**Oxford**	120.42	7	IAMs_20	IAMs_20	02 32 52.2			
	comp=Z,4µm,20.0s								
PAULI	**Pauline**	120.52	360		**PKPdf**	**01 39 06.8**	**-0.9**		
BBSR	**BB Station**	120.59	343	IAMs_20	IAMs_20	02 28 43.3			

EFI	**East Falkland**	**147.65**	**208**	PKPbc	**PKPbc**	**01**	**39**	**59.5 -0.3**
PTGA	**Pitinga**	**147.76**	**315**		**PKPbc**	**01**	**40**	**00.2 -1.1**
PTGA				IAMs_20	IAMs_20	02	45	13.5
	comp=Z,2µm,21.0s							
PTBC	**PUERTO BERRIO**	**147.79**	**346**	*eP*	**PKPbc**	**01**	**40**	**00.5 -0.9**
RUSC	**La Rusia**	**148.07**	**343**	*eP*	**PKPdf**	**01**	**40**	**00.5 +0.9**
HELC	**Santa Helena**	**148.35**	**347**	*eP*	**PKPbc**	**01**	**40**	**04.0 +0.6**
SPB	**Sao Paulo**	**148.42**	**265**	IAMs_20	IAMs_20	02	41	45.2
	comp=Z,2µm,20.0s							
CBOC	**Ciudad Bolivar**	**148.76**	**348**	*eP*	**PKPbc**	**01**	**40**	**04.0 -0.2**
NORC	**Norcasia**	**148.83**	**346**	*eP*	**PKPbc**	**01**	**40**	**02.9 -1.2**
GUY2C	**Guyana, Caldas**	**149.26**	**347**	*eP*	**PKPbc**	**01**	**40**	**05.1 -0.7**
ROSC	**El Rosal**	**149.40**	**345**	PKPbc	**PKPbc**	**01**	**40**	**06.2 +0.1**
	comp=Z,26nm,0.6s,baz=334,slow=3.5,SNR=7.2							
ROSC	**El Rosal**	**149.40**	**345**	*eP*	**PKiKP**	**01**	**40**	**07.4 +0.2**
ROSC	**El Rosal**	**149.40**	**345**	PKPbc	**PKPdf**	**01**	**40**	**03.4 +1.7**
ROSC				IAMs_20	IAMs_20	02	52	13.5
	comp=Z,2µm,20.0s							
CHIC	**Chingaza**	**149.45**	**343**	*eP*	**PKPbc**	**01**	**40**	**05.5 -0.7**
RREF	**El Recreo**	**149.57**	**347**	*eP*	**PKPab**	**01**	**40**	**09.8 -1.8**
PLMC	**San Jos del P**	**149.75**	**348**	*eP*	**PKPbc**	**01**	**40**	**05.1 -1.4**
ORTC	**Ortega, Tolima**	**150.51**	**346**	*eP*	**PKPbc**	**01**	**40**	**06.3 -2.0**
PRAC	**Prado**	**150.62**	**345**	*eP*	**PKPbc**	**01**	**40**	**07.4 -1.2**
GUVC	**San Jose del G**	**151.13**	**340**	*eP*	**PKPbc**	**01**	**40**	**07.4 -2.3**
GARC	**Garzon, Huila**	**152.24**	**346**	*eP*	**PKPbc**	**01**	**40**	**04.0 -1.9**
PCON	**Cinco Dias**	**152.29**	**348**	*eP*	**PKPbc**	**01**	**40**	**10.9 -2.2**
GCUF	**Volcan Galeras**	**153.53**	**349**	*eP*	**PKPbc**	**01**	**40**	**13.5 -2.3**
SAML	**Samuel**	**155.93**	**308**	PKIKP	**PKPdf**	**01**	**40**	**08.3 -2.4**
SAML						01	40	36.4
SAML	**Samuel**	**155.93**	**308**		**PKPdf**	**01**	**40**	**08.3 -2.4**
SAML				PKPab	**PKPab**	**01**	**40**	**36.4 -1.2**
SAML	**Samuel**	**155.93**	**308**	IAMs_20	IAMs_20	02	50	51.1
	comp=Z,3µm,22.0s							
PLCA	**Paso Flores**	**161.57**	**209**	PKP	**PKPdf**	**01**	**40**	**16.4 -0.4**
	comp=Z,6.7nm,1.2s,baz=290,slow=6.9,SNR=2.3							
PLCA				PKPab	**PKPab**	**01**	**41**	**01.4 -0.1**
	comp=Z,6.6nm,0.9s,baz=119,slow=5.2,SNR=6.3							
PLCA	**Paso Flores**	**161.57**	**209**	PKPab	**PKPab**	**01**	**41**	**02.1 +0.7**
LPAZ	**La Paz**	**164.33**	**301**	PKP	**PKPdf**	**01**	**40**	**19.4 -1.3**
	comp=Z,7.5nm,1.1s,baz=29,slow=7.3,SNR=14							
LPAZ				PKPab	**PKPab**	**01**	**41**	**13.8 -1.0**
	comp=Z,12nm,1.0s,baz=30,slow=12,SNR=5.2							
LPAZ	**La Paz**	**164.33**	**301**	PKIKP	**PKPdf**	**01**	**40**	**19.2 -1.6**
LPAZ	**La Paz**	**164.33**	**301**	PKPdf	**PKPdf**	**01**	**40**	**19.2 -1.6**
LPAZ	**La Paz**	**164.33**	**301**		**PKPdf**	**01**	**40**	**20.7 -0.1**
LPAZ					**PKPab**	**01**	**41**	**16.5 +1.6**
ZON	**Zonda**	**166.49**	**238**	PKP2	**PKPab**	**01**	**41**	**24.2 +0.7**
ZON	**Zonda**	**166.49**	**238**	PKPab	**PKPab**	**01**	**41**	**24.2 +0.7**
MNMC	**Minye Minye**	**167.03**	**294**		**PKPdf**	**01**	**40**	**21.9 -0.6**

*IDC **30** 01:31:11.3±1.7,24.°91N×97.°83E,h0km,mb3.4/4,*
mb1 3.4/4,mb1mx3.2/65,mbtmp3.4/4,Error ellipse:
s-maj=69.2km s-min=21.5km az=80.0
*BJI **30** 01:31:11.3±0.0,24.°96N×97.°84E,h8km,ML4.0/3*

ISC 30 01:31:21.8±1.2,25.°9N±0.°1×97.°5E±0.°3,h10km,n7,σ0s41/7,
mb3.3/4,Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
CMAR	**Chiang Mai Arr**	**7.50**	**170**	Pg	**Pn**	**01**	**33**	**11.4**	**0.0**
	1.8nm,0.3s,baz=345,slow=17,SNR=8.2								
CMAR				Lg	Lg	01	34	36.6	
	2.4nm,0.3s,baz=258,slow=34,SNR=6.2								
HHC	**Hu-ho-hao-te**	**18.93**	**35**	*eP*	**P**	**01**	**35**	**43.3**	**+0.3**
WMQ	**Urumqi**	**19.61**	**338**	*eP*	**P**	**01**	**35**	**50.5**	**+0.2**
SONM	**Songino Array**	**22.99**	**15**	P	**P**	**01**	**36**	**26.3**	**-0.5**
	0.4nm,0.7s,baz=185,slow=10,SNR=1.0								
MKAR	**Makanchi Array**	**24.13**	**334**	P	**P**	**01**	**36**	**37.5**	**-0.4**
	0.5nm,0.6s,baz=134,slow=8.3,SNR=2.8								
KURBB	**Kurchatov Arra**	**28.69**	**334**	P	**P**	**01**	**37**	**19.2**	**+0.2**
	0.4nm,0.9s,baz=153,slow=9.5,SNR=1.8								
ZALV	**Zalesovo Beam**	**29.59**	**345**	P	**P**	**01**	**37**	**26.6**	**-0.2**
	0.6nm,0.5s,baz=158,slow=9.1,SNR=1.7								

*NEIC **30** 01:32:48.6±3.0,41.°13N±0.°04×51.°63E±0.°09,h10km±5km,*
mb3.7/2,ML3.6(AZER),Error ellipse: s-maj=10.2km
s-min=4.3km az=115.0
*IDC **30** 01:32:50.5±3.3,40.°85N×51.°36E,h34km±30km,mb3.3/6,*
mb1 3.6/12,mb1mx3.3/52,mbtmp3.6/12,ML3.8/6,Error
ellipse: s-maj=26.3km s-min=12.6km az=168.0
*AZER **30** 01:32:54.9,40.°82N×51.°45E,h56km,ML3.6*
*NNC **30** 01:32:59.5±8.3,41.°40N×53.°16E,h0km,mb4.5,Error*
ellipse: s-maj=102.2km s-min=23.9km az=74.0

ISC 30 01:32:50.8±1.2,41.°04N±0.°04×51.°76E±0.°05,h39km±3km,
n56,σ2s53/91,mb3.4/5,1C-4D,Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
GALA	**Gala**	**1.38**	**243**	S	**Sn**	**01**	**33**	**31.2**	**+0.8**
NDR	**Nardaran**	**1.43**	**252**	P	**Pn**	**01**	**33**	**17.7**	**+3.6**
NDR				S	**Sn**	**01**	**33**	**34.7**	**+3.1**
NDR	**Nardaran**	**1.43**	**252**	Pn	**Pn**	**01**	**33**	**17.8**	**+3.6**
NDR				Sn	**Sn**	**01**	**33**	**33.2**	**+1.6**
GOBA	**Gobu**	**1.67**	**248**	P	**Pn**	**01**	**33**	**20.6**	**+3.1**
GOBA				S	**Sn**	**01**	**33**	**37.8**	**0.0**
GOBA	**Gobu**	**1.67**	**248**	Pn	**Pn**	**01**	**33**	**20.6**	**+3.1**
GOBA				Sn	**Sn**	**01**	**33**	**37.7**	**0.0**
ATGJ	**Altiaghaj**	**2.15**	**266**	Pn	**Pn**	**01**	**33**	**27.1**	**+2.9**
	SNR=5.1								
ATGJ				Sn	**Sn**	**01**	**33**	**52.1**	**+2.5**
SIZA	**Siyzn**	**2.17**	**272**	Pn	**Pn**	**01**	**33**	**28.0**	**+3.5**
	SNR=9.6								
SIZA				Sn	**Sn**	**01**	**33**	**53.7**	**+3.7**
SIZA	**Siyzn**	**2.17**	**272**		**Pn**	**01**	**33**	**27.9**	**+3.5**
GBS	**Qobustan**	**2.20**	**258**	Pn	**Pn**	**01**	**33**	**28.3**	**+3.5**
	SNR=3.2								
GBS				Sg	**Sn**	**01**	**33**	**56.9**	**+6.0**
ALIB	**Äli-Bayra**	**2.37**	**244**	Pn	**Pn**	**01**	**33**	**29.1**	**+2.1**
ALIB				Sg	**Sn**	**01**	**34**	**01.1**	**+6.3**
PQL	**Pirkuli**	**2.42**	**265**	Pn	**Pn**	**01**	**33**	**30.6**	**+2.7**
	SNR=3.9								
PQL				Sn	**Sn**	**01**	**33**	**57.7**	**+1.4**
QUBA	**Quba, Azerbaij**	**2.49**	**278**	Pn	**Pn**	**01**	**33**	**31.9**	**+3.2**
	SNR=18								
QUBA				Sn	**Sn**	**01**	**33**	**59.1**	**+1.2**
QUBA	**Quba, Azerbaij**	**2.49**	**278**	Pn	**Pn**	**01**	**33**	**31.9**	**+3.2**
QSAR	**Qusar**	**2.68**	**281**	Pn	**Pn**	**01**	**33**	**34.5**	**+3.0**
	SNR=24								
QSAR				Sn	**Sn**	**01**	**34**	**04.1**	**+1.5**
IML	**Ismayilli**	**2.73**	**266**	Pn	**Pn**	**01**	**33**	**34.0**	**+2.0**
	SNR=3.5								
IML				Sn	**Sn**	**01**	**34**	**04.7**	**+0.9**
XNQ	**Khinaliq**	**2.74**	**274**	Pn	**Pn**	**01**	**33**	**34.5**	**+2.1**
	SNR=122								
XNQ				Sn	**Sn**	**01**	**34**	**05.4**	**+1.0**
QBL	**Gabala**	**2.97**	**269**	Pn	**Pn**	**01**	**33**	**37.0**	**+1.6**
	SNR=3.2								
QBL				Sn	**Sn**	**01**	**34**	**10.0**	**+0.1**
GLBA	**Clilabad**	**3.15**	**236**	Pn	**Pn**	**01**	**33**	**38.8**	**+1.0**
GLBA				Sn	**Sn**	**01**	**34**	**12.5**	**-1.6**
ZRD	**Zardab**	**3.19**	**257**	Pn	**Pn**	**01**	**33**	**40.2**	**+1.8**
	SNR=5.6								
ZRD				Sn	**Sn**	**01**	**34**	**14.2**	**-1.0**
LKRN	**Lenkeran, Azer**	**3.27**	**226**	Pn	**Pn**	**01**	**33**	**40.0**	**+0.5**
LKRN				Sn	**Sn**	**01**	**34**	**14.5**	**-2.6**
ASTR	**Astara**	**3.38**	**224**	Pn	**Pn**	**01**	**33**	**41.5**	**+0.6**
ASTR				Sn	**Sn**	**01**	**34**	**16.4**	**-3.3**
YRD	**Yardimli**	**3.44**	**233**	Pn	**Pn**	**01**	**33**	**43.2**	**+1.2**
	SNR=16								
YRD				Sn	**Sn**	**01**	**34**	**18.2**	**-3.5**
SEKA	**Sheki**	**3.45**	**274**	Pn	**Pn**	**01**	**33**	**43.9**	**+1.8**
	SNR=11								
SEKA				Sn	**Sn**	**01**	**34**	**22.4**	**+0.6**
BLQ	**Beylaqan**	**3.47**	**249**	Pn	**Pn**	**01**	**33**	**44.0**	**+1.7**
	SNR=3.5								
BLQ				Sn	**Sn**	**01**	**34**	**19.9**	**-2.2**
MNGR	**Mingechevir, A**	**3.56**	**267**	Sn	**Sn**	**01**	**34**	**25.7**	**+1.6**
LRK	**Lerik**	**3.56**	**229**	Pn	**Pn**	**01**	**33**	**44.1**	**+0.4**
	SNR=2.8								
LRK				Sn	**Sn**	**01**	**34**	**21.2**	**-3.5**
BRDA	**Brd**	**3.57**	**259**	Sn	**Sn**	**01**	**34**	**25.1**	**+0.5**
AGDM	**Agdam**	**3.67**	**257**	Pn	**Pn**	**01**	**33**	**46.0**	**+1.0**
	SNR=15								
AGDM				Sn	**Sn**	**01**	**34**	**25.7**	**-1.2**
ZKTA	**Zakatala**	**3.92**	**280**	Pn	**Pn**	**01**	**33**	**50.5**	**+2.1**
	SNR=3.3								
ZKTA				Sn	**Sn**	**01**	**34**	**34.3**	**+1.2**
GANJ	**Ganja**	**4.15**	**266**	Pn	**Pn**	**01**	**33**	**51.8**	**+0.2**
	SNR=2.7								
GANJ				Sn	**Sn**	**01**	**34**	**35.3**	**-3.5**

GDB	**GEDABAY**	**4.57**	**268**	Pn	**Pn**	**01**	**33**	**57.4 -0.1**
	SNR=2.9							
GDB				Sn	**Sn**	**01**	**34**	**45.9 -3.5**
QZX	**Qazax, Azerbai**	**4.83**	**272**	Pn	**Pn**	**01**	**34**	**01.7 +0.7**
	SNR=19							
QZX				Sn	**Sn**	**01**	**34**	**52.7 -3.0**
ORD	**Ordubad**	**4.91**	**246**	Pn	**Pn**	**01**	**34**	**03.2 +1.1**
	SNR=3.1							
ORD				Sn	**Sn**	**01**	**34**	**54.5 -3.2**
SBZ	**Shahbuz**	**5.03**	**253**	Pn	**Pn**	**01**	**34**	**04.1 +0.3**
	SNR=4.6							
SBZ				Sn	**Sn**	**01**	**34**	**59.5 -1.2**
NAX	**Nakhchivan**	**5.16**	**251**	Pn	**Pn**	**01**	**34**	**08.0 +2.5**
	SNR=3.7							
NAX				Sn	**Sn**	**01**	**35**	**02.7 -1.0**
TBLG	**Delisi**	**5.33**	**280**	Pn	**Pn**	**01**	**34**	**06.7 -1.2**
GEYT	**Alibeck**	**5.82**	**120**	Pn	**Pn**	**01**	**34**	**16.8 +2.3**
	0.9nm,0.3s,baz=308,slow=16,SNR=18							
GEYT				Sn	**Sn**	**01**	**35**	**20.4 +0.4**
	0.5nm,0.3s,baz=166,slow=24,SNR=1.0							
GYA0B	**ALIBECK ARRAY**	**5.82**	**120**	⇓P	**Pn**	**01**	**34**	**17.0 +2.5**
GYA0B				⇓S	**Sn**	**01**	**35**	**20.4 +0.4**
GYA0B	**ALIBECK ARRAY**	**5.82**	**120**	Pn	**Pn**	**01**	**34**	**15.7 +1.2**
AKH	**Akhalkalaki**	**6.25**	**276**	Pn	**Pn**	**01**	**34**	**16.9 -3.6**
KBZ	**Khabaz**	**7.09**	**295**	Pn	**Pn**	**01**	**34**	**30.6 -1.3**
	0.5nm,0.3s,baz=102,slow=4.0,SNR=7.4							
KBZ				Sn	**Sn**	**01**	**35**	**44.6 -6.5**
	0.7nm,0.3s,baz=295,slow=16,SNR=2.2							
KVAR	**Kislovodsk Arr**	**7.30**	**296**	Pn	**Pn**	**01**	**34**	**33.7 -1.3**
	baz=311,slow=23,SNR=1.5							
KVAR				Sn	**Sn**	**01**	**35**	**50.2 -6.4**
	baz=195,slow=11,SNR=3.1							
AB31	**Akbulak array**	**10.03**	**32**	P	**Pn**	**01**	**35**	**13.9 +1.7**
	2.2nm,0.2s,baz=209,slow=13,SNR=50							
AB31				⇑S	**Sn**	**01**	**37**	**00.6 -2.8**
	5.0nm,0.2s,baz=208,slow=26,SNR=7.5							
AKTO	**Aktyubinsk**	**10.35**	**23**	Pn	**Pn**	**01**	**35**	**18.7 +2.0**
	2.2nm,0.3s,baz=200,slow=9.5,SNR=26							
AKTO				Sn	**Sn**	**01**	**37**	**08.6 -2.7**
	1.1nm,0.3s,baz=80,slow=21,SNR=12							
AKTO	**Aktyubinsk**	**10.35**	**23**	⇓P	**Pn**	**01**	**35**	**18.0 +1.4**
	3.4nm,0.4s							
AKTO				⇓S	**Sn**	**01**	**37**	**08.6 -2.7**
	9.4nm,0.7s							
BVAR	**Borovoye Array**	**17.39**	**40**	Pn	**Pn**	**01**	**36**	**51.0 +0.7**
	0.7nm,0.3s,baz=229,slow=12,SNR=6.2							
BVAR				Sn	**Sn**	**01**	**40**	**00.6 -2.1**
	0.3nm,0.3s,baz=236,slow=26,SNR=5.4							
RAYN	**Ar Rayn**	**18.25**	**199**		**Pn**	**01**	**37**	**01.3 +0.3**
RAYN				IAmb	IAmb	01	37	11.3
	comp=Z,7.6nm,1.4s							
AKASG	**Malin Array Be**	**18.36**	**309**	P	**P**	**01**	**37**	**00.7 -1.2**
	comp=Z,1.1nm,0.3s,baz=115,slow=13,SNR=3.3							
KURBB	**Kurchatov Arra**	**20.86**	**54**	P	Pn	01	37	33.2 +1.4
	comp=Z,0.6nm,0.8s,baz=253,slow=11,SNR=3.6							
KURK	**Kurchatov**	**20.95**	**53**	P	Pn	01	37	33.2 +0.5
KURK	**Kurchatov**	**20.95**	**53**	IAmb	IAmb	01	37	49.9
	comp=Z,5.9nm,1.2s							
MKAR	**Makanchi Array**	**22.64**	**65**	P	**P**	**01**	**37**	**50.9 +2.5**
	comp=Z,0.9nm,0.3s,baz=258,slow=8.9,SNR=2.0							
ZALV	**Zalesovo Beam**	**25.53**	**48**	P	**P**	**01**	**38**	**18.3 +2.8**
	comp=Z,0.5nm,0.4s,baz=246,slow=11,SNR=1.5							
FINES	**FINESS Array B**	**25.68**	**331**	P	**P**	**01**	**38**	**16.5 -0.3**
	comp=Z,1.0nm,0.7s,baz=140,slow=11,SNR=1.4							
ARCES	**ARCESS Array B**	**31.69**	**343**	P	**P**	**01**	**39**	**11.5 +1.3**
	comp=Z,0.2nm,0.4s,baz=141,slow=8.8,SNR=0.8							
TORD	**Torodi Ar. Bea**	**51.63**	**252**	P	**P**	**01**	**41**	**52.4 -1.2**
	comp=Z,0.6nm,0.8s,baz=31,slow=8.5,SNR=1.9							

*MAN **30** 01:33:21.6,4.°39N×126.°20E,h99km,mb5.2,ML4.2,MS4.3*
*DJA **30** 01:33:22.2±0.8,5.°N±7.°×12.°6E±.°,h46km±6km,M4.8/13,*
mb5.0/13,mB5.6/5,MLv4.8/13,MLv4.4/5,Mw(mB)5.0/5
*IDC **30** 01:33:23.0±1.6,4.°35N×125.°94E,h41km±15km,mb3.6/14,*
mb1 3.8/16,mb1mx3.6/53,mbtmp3.9/16,ML4.6/3,Error
ellipse: s-maj=27.1km s-min=8.5km az=74.0
*NEIC **30** 01:33:24.4±2.1,4.°37N±0.°06×126.°10E±0.°09,h58km±7km,*
mb4.3/16,Error ellipse: s-maj=13.2km s-min=8.6km
az=86.0

ISC 30 01:33:24.3±0.9,4.°35N±0.°04×126.°07E±0.°06,h55km±9km,
n72,σ1s35/81,mb4.2/24,1C-3D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
DDMP	**Don Marcelino,**	**1.78**	**349**	*eP*	Pn	01	33	48.5	-4.2
DDMP				*eS*	**Sn**	**01**	**34**	**14.2**	**0.0**
GSPH	**General Santos**	**2.05**	**327**	*i P*	**Pn**	**01**	**33**	**54.5**	**-2.0**
GSPH				*i S*	**Sn**	**01**	**34**	**18.9**	**-2.2**
MATI	**Mati**	**2.58**	**4**	*eP*	**Pn**	**01**	**34**	**01.0**	**-2.8**
MATI				*eS*	**Sn**	**01**	**34**	**33.0**	**-1.0**
SKMP	**Bagumbayan, Su**	**2.63**	**325**	*eP*	**Pn**	**01**	**34**	**03.6**	**-0.8**
SKMP				*eS*	**Sn**	**01**	**34**	**33.7**	**-1.4**
DAV	**Davao City (W)**	**2.74**	**350**	P	**Pn**	**01**	**34**	**03.2**	**-2.7**
	38nm,0.3s,baz=333,slow=8.0,SNR=1.4								
DAV				S	**Sn**	**01**	**34**	**36.5**	**-1.4**
	178nm,0.3s,baz=230,slow=20,SNR=5.8								
KCP	**Kidapawan**	**2.81**	**340**	*i P*	**Pn**	**01**	**34**	**06.7**	**-0.3**
KCP				*i S*	**Sn**	**01**	**34**	**39.5**	**-0.2**
CTBH	**Cotabato--PC H**	**3.38**	**328**	*i P*	**Pn**	**01**	**34**	**14.5**	**0.0**
CTBH				*i S*	**Sn**	**01**	**34**	**53.9**	**+0.5**
BUKP	**Musuan**	**3.64**	**344**	*eP*	**Pn**	**01**	**34**	**17.9**	**-0.4**
BUKP				*eS*	**Sn**	**01**	**34**	**58.9**	**-1.2**
TNTI	**Ternate**	**3.79**	**160**	P	**Pn**	**01**	**34**	**21.2**	**+1.0**
TNTI	**Ternate**	**3.79**	**160**	Pn	**Pn**	**01**	**34**	**20.6**	**+0.4**
KMSI	**Cibinong**	**4.29**	**209**	P	**Pn**	**01**	**34**	**27.6**	**+0.5**
CGP	**Cagayan de Oro**	**4.30**	**342**	*eP*	**Pn**	**01**	**34**	**28.5**	**+1.3**
LBMI	**Labuha**	**5.16**	**164**	P	**Pn**	**01**	**34**	**40.1**	**+1.0**
	0.4nm0.4nm2µm97nm,0.5s								
MRSI	**Marisa**	**5.64**	**227**	P	**Pn**	**01**	**34**	**45.5**	**-0.1**
	1.3nm1.3nm4µm213nm,0.5s								
MRSI				S	**Sn**	**01**	**35**	**44.6**	**-4.5**
	1.3nm1.3nm4µm213nm,0.5s								
LUWI	**Luwuk**	**6.29**	**212**	P	**Pn**	**01**	**34**	**58.2**	**+3.7**
	1.1nm7µm333nm,0.8s								
LUWI	**Luwuk**	**6.29**	**212**	Pn	**Pn**	**01**	**34**	**57.6**	**+3.0**
LUWI				Sn	**Sn**	**01**	**36**	**06.0**	**+0.9**
MPSI	**Mapaga**	**7.34**	**237**	P	**Pn**	**01**	**35**	**09.2**	**+0.3**
	0.4nm25nm,0.7s								
SIJI	**Sorong**	**7.34**	**135**	P	**Pn**	**01**	**35**	**09.1**	**+0.1**
	6.3nm,0.3s,baz=198,slow=22,SNR=6.9								
SIJI				S	**Sn**	**01**	**36**	**31.5**	**+0.5**
	1.5nm,0.3s,baz=284,slow=22,SNR=1.3								
NLAI	**Namlea**	**7.61**	**172**	P	**Pn**	**01**	**35**	**12.2**	**-0.5**
	4.4nm17µm711nm,0.4s								
FAKI	**Fak Fak**	**9.51**	**139**	Pn	**Pn**	**01**	**35**	**36.3**	**-2.3**
TTSI	**Tana Toraja**	**9.64**	**220**	P	**Pn**	**01**	**35**	**42.1**	**+1.6**
	38nm,0.9s								
KKM	**Kota Kinabalu**	**9.95**	**280**	Pn	**Pn**	**01**	**35**	**45.3**	**+0.5**
SOEI	**Soe**	**14.13**	**187**	Pn	**Pn**	**01**	**36**	**44.9**	**+3.1**
SZP	**Santa**	**14.22**	**338**		**Pn**	**01**	**36**	**44.2**	**+1.3**
BATI	**Baumata**	**14.66**	**189**	P	**Pn**	**01**	**36**	**47.2**	**-1.4**
	7.8nm,0.3s,baz=271,slow=20,SNR=2.3								
MTN	**Manton Dam**	**17.81**	**164**		**P**	**01**	**37**	**26.5**	**-2.0**
KNRA	**Kununurra**	**20.08**	**172**		**P**	**01**	**37**	**52.7**	**-0.7**
FITZ	**Fitzroy Crossi**	**22.31**	**181**	P	**P**	**01**	**38**	**16.6**	**-0.7**
	26nm,0.6s,baz=6.5,slow=8.2,SNR=50								
FITZ	**Fitzroy Crossi**	**22.31**	**181**	P	**P**	**01**	**38**	**16.8**	**-0.6**
COEN	**Coen**	**24.88**	**137**	P	**P**	**01**	**38**	**40.4**	**-1.8**
COEN				IAmb	IAmb	01	38	44.5	
	comp=Z,6.9nm,0.7s								
WB0	**Warramunga Arr**	**25.33**	**161**	P	**P**	**01**	**38**	**46.5**	**+0.4**
WRAB	**Tennant Creek**	**25.47**	**162**	P	**P**	**01**	**38**	**48.4**	**+1.0**
WRA	**Warramunga Arr**	**25.48**	**162**	P	**P**	**01**	**38**	**47.8**	**+0.3**
	comp=Z,42nm,0.8s,baz=343,slow=10,SNR=68								
WB2	**Warramunga Arr**	**25.48**	**162**	P	**P**	**01**	**38**	**48.0**	**+0.4**
WR0	**Warramunga Arr**	**25.56**	**161**	P	**P**	**01**	**38**	**49.9**	**+1.6**
PSA00	**Pilbara Seismi**	**26.48**	**193**	P	**P**	**01**	**38**	**56.1**	**-0.4**
PSA00				IAmb	IAmb	01	39	03.5	
	comp=Z,11nm,1.0s								
NJ2	**Nanjing**	**28.37**	**347**	*eP*	**P**	**01**	**39**	**13.5**	**+0.1**
NJ2				pmax	pmax				
	comp=Z,13nm,0.5s								
AS31	**Alice Springs**	**28.88**	**165**	P	**P**	**01**	**39**	**18.0**	**-0.1**
AS31				IAmb	IAmb	01	39	24.9	
	comp=Z,3.3nm,0.5s								
ASAR	**Alice Springs**	**28.88**	**165**	P	**P**	**01**	**39**	**18.1**	**+0.1**
	comp=Z,4.4nm,0.4s,baz=340,slow=7.1,SNR=49								
CMAR	**Chiang Mai Arr**	**29.99**	**300**	P	**P**	**01**	**39**	**28.0**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=122,slow=8.6,SNR=1.1								
KS19	**Wonju Array Si**	**33.03**	**3**	P	**P**	**01**	**39**	**52.6**	**-1.8**
KS19				IAmb	IAmb	01	39	54.2	
	comp=Z,8.4nm,1.1s								
CD2	**Chengdu**	**33.75**	**324**	P	**P**	**01**	**40**	**01.0**	**+0.1**
MJAR	**Matsushiro Arr**	**33.93**	**18**	P	**P**	**01**	**40**	**01.2**	**-1.1**
	comp=Z,0.8nm,0.3s,baz=202,slow=9.2,SNR=1.8								
FORT	**Forrest**	**34.98**	**177**	P	**P**	**01**	**40**	**11.3**	**-0.2**
LZH	**Lanzhou**	**37.63**	**330**	*eP*	**P**	**01**	**40**	**34.0**	**-0.2**
LZH				pP	sP	01	40	54.3	-0.3
LZH				sP	pP	01	41	04.5	+16
LZH				PP	**PnPn**	**01**	**42**	**04.0**	**+1.5**
LZH				pmax	pmax				
	comp=Z,16nm,1.1s								
LZH				pmax	pmax				
	comp=Z,3µm,5.0s								
LZH				LR	LR				
	comp=N,78nm,15.0s								
LZH				LR	LR				
	comp=E,83nm,14.9s								
LZH				LR	LR				
	comp=Z,100nm,17.6s								
NWAO	**Narrogin (SRO)**	**38.01**	**192**	P	**P**	**01**	**40**	**36.6**	**-0.6**
NWAO	**Narrogin (SRO)**	**38.01**	**192**	P	**P**	**01**	**40**	**37.1**	**-0.1**
BBOO	**Buckleboo**	**38.16**	**166**	P	**P**	**01**	**40**	**39.0**	**+0.6**
EIDS	**Eidsvold**	**38.25**	**142**	P	**P**	**01**	**40**	**39.5**	**+0.2**
HHC	**Hu-ho-hao-te**	**38.61**	**342**	*eP*	**P**	**01**	**40**	**42.3**	**0.0**
HHC				pmax	pmax				
	comp=Z,11nm,1.2s								
HHC				pmax	pmax				
	comp=Z,2µm,6.1s								
STKA	**Stephens Creek**	**38.94**	**159**	P	**P**	**01**	**40**	**45.9**	**+0.8**
	comp=Z,6.5nm,0.5s,baz=334,slow=8.2,SNR=18								
STKA	**Stephens Creek**	**38.94**	**159**	P	**P**	**01**	**40**	**46.4**	**+1.3**
STKA				IAmb	IAmb	01	40	46.9	
	comp=Z,1.6nm,0.8s								
USRK	**Ussuriysk Ar.**	**40.03**	**7**	P	**P**	**01**	**40**	**54.7**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=196,slow=7.2,SNR=3.4								
ARMA	**Armidale**	**42.35**	**146**	P	**P**	**01**	**41**	**14.5**	**+1.2**
H11N1	**WAKE ISLAND Hy**	**42.60**	**66**	T	T	02	27	00.3	
	baz=254,slow=75,SNR=11								
H11N2	**WAKE ISLAND Hy**	**42.61**	**65**	T	T	02	27	03.9	
	baz=254,slow=75,SNR=9.2								
**H11N

0.7nm,1.1s,baz=106,slow=1.4,SNR=2.0
YKA Yellowknife Ar 115.56 23 PKP **PKiKP 02 14 05.7 -0.6**
0.1nm,0.5s,baz=285,slow=1.8,SNR=2.0

BJI 30 01:59:59.7±0.0, 25°04'N×97°82'E, h12km, ML3.5/5, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**20.48**	**339**	*eP*	P	02 04 36.0	-1.4

*CNRM **30** 02:16:20.4±1.1,36°.49N×4°.75W,h86km±18km, Error ellipse: s-maj=8.0km s-min=6.8km az=85.0*
*LDG **30** 02:16:21.8±0.2,36°.76N×4°.62W,h63km,Ml3.3/18, Error ellipse: s-maj=4.4km s-min=3.8km az=179.0*
*MDD **30** 02:16:22.7±0.4,36°.59N×4°.65W,h63km±3km,mb4.0/40, Error ellipse: s-maj=3.9km s-min=2.4km az=171.0, PRXIMO*
*IGIL **30** 02:16:22.9,36°.58N×4°.66W,h63km,ML2.7*
*INMG **30** 02:16:22.6±1.4,36°.61N×4°.67W,h62km±3km,ML2.8, Error ellipse: s-maj=2.1km s-min=2.0km az=3.0*
*SFS **30** 02:16:22.0,36°.50N×4°.60W,h63km,ML3.9,MUAS (MALAGA)*

ISC 30 02:16:20.6±0.9, 36°.60N±0°.02×4°.64W±0°.02, h76km±6km, n152, σ1°92/274, 4C-5D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMIJ	**Mijas**	**0.12**	**253**	⇓*P*	**Pn**	**02 16 31.7**	**0.0**
	130nm,0.1s,SNR=18						
EMIJ				*S*	**Sn**	**02 16 38.4**	**-1.4**
	325nm,0.2s,SNR=5.0						
EMAL	**Malaga-Limoner**	**0.23**	**46**	*eP*	**Pn**	**02 16 32.6**	**+0.6**
EMAL				*i* S	**Sn**	**02 16 40.0**	**-0.5**
REAL	**Reales**	**0.47**	**256**	P	**Pn**	**02 16 35.0**	**+1.1**
REAL				S	**Sn**	**02 16 44.0**	**+0.3**
REAL	**Reales**	**0.47**	**256**	*i* P	**Pn**	**02 16 35.0**	**+1.1**
REAL				*eS*	**Sn**	**02 16 44.0**	**+0.3**
EGOR	**Sierra Gorda,**	**0.66**	**39**	⇑*P*	**Pn**	**02 16 37.0**	**+1.2**
	42nm,0.2s,SNR=18						
EGOR				S	**Sn**	**02 16 47.1**	**+0.2**
	23nm,0.1s,SNR=7.9						
ELGU	**Los Guajares,**	**0.85**	**71**	P	**Pn**	**02 16 38.4**	**+0.6**
	42nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**02 16 50.6**	**+0.1**
	97nm,0.1s,SNR=7.9						
CEU	**Ceuta**	**0.92**	**221**	P	**Pn**	**02 16 39.2**	**+0.8**
CEU				S	**Sn**	**02 16 52.1**	**+0.4**
CEU	**Ceuta**	**0.92**	**221**	*eP*	**Pn**	**02 16 39.2**	**+0.8**
CEU				*eS*	**Sn**	**02 16 52.1**	**+0.4**
ECEU	**Ceuta**	**0.92**	**221**	P	**Pn**	**02 16 37.9**	**-0.5**
	20nm,0.1s,SNR=36						
ECEU				S	**Sn**	**02 16 51.2**	**-0.5**
	12nm,0.1s,SNR=5.0						
ESPR	**Espera**	**1.02**	**286**	⇓*P*	**Pn**	**02 16 41.3**	**+1.7**
	12nm,0.1s,SNR=18						
ESPR				S	**Sn**	**02 16 53.5**	**-0.3**
	13nm,0.1s,SNR=5.0						
SMIR	**Smir Dam**	**1.10**	**214**	P	**Pn**	**02 16 41.2**	**+0.6**
SMIR				S	**Sn**	**02 16 53.9**	**-1.6**
EQUE	**Quentar**	**1.13**	**57**	P	**Pn**	**02 16 42.8**	**+1.6**
	12nm,0.1s,SNR=88						
EQUE				S	**Sn**	**02 16 57.4**	**+0.8**
	89nm,0.3s,SNR=21						
CNIL	**Conil**	**1.17**	**259**	P	**Pn**	**02 16 42.0**	**+0.6**
CNIL				S	**Sn**	**02 16 57.5**	**+0.5**
CNIL	**Conil**	**1.17**	**259**	*eP*	**Pn**	**02 16 42.0**	**+0.6**
CNIL				*eS*	**Sn**	**02 16 57.5**	**+0.5**
SFS	**San Fernando**	**1.27**	**264**	S	**Sn**	**02 17 02.7**	**+3.3**
SFS	**San Fernando**	**1.27**	**264**	*eS*	**Sn**	**02 17 02.7**	**+3.3**
HORN	**Hornachuelos**	**1.34**	**338**	P	**Pn**	**02 16 44.5**	**+0.8**
	SNR=93						
HORN				S	**Sn**	**02 17 03.2**	**+2.1**
EBER	**Berja**	**1.43**	**77**	P	**Pn**	**02 16 45.8**	**+0.7**
	13nm,0.2s,SNR=50						
EBER				S	**Sn**	**02 17 04.3**	**+0.8**
	14nm,0.2s,SNR=9.3						
PVLZ	**Peæn de**	**1.45**	**169**	P	**Pn**	**02 16 49.6**	**+4.5**
PVLZ				S	**Sn**	**02 17 03.1**	**-0.4**
PVLZ	**Peæn de**	**1.45**	**169**	*eP*	**Pn**	**02 16 49.6**	**+4.5**
PVLZ				*eS*	**Sn**	**02 17 03.1**	**-0.4**
EALB	**Alboran**	**1.45**	**116**	P	**Pn**	**02 16 47.0**	**+1.9**
	5.3nm,0.1s,SNR=7.9						
EALB				S	**Sn**	**02 17 02.8**	**-0.8**
	14nm,0.2s,SNR=7.9						
PALE	**Palemas**	**1.49**	**157**	P	**Pn**	**02 16 46.1**	**+0.4**
PALE				S	**Sn**	**02 17 03.0**	**-1.6**
GORA	**Gorafe**	**1.55**	**55**	P	**Pn**	**02 16 48.1**	**+1.6**
	20nm,0.2s,SNR=7.9						
GORA				S	**Sn**	**02 17 07.1**	**+1.1**
	94nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**1.57**	**2**	P	**Pn**	**02 16 47.8**	**+1.1**
	7.9nm,0.1s,SNR=74						
EADA				S	**Sn**	**02 17 06.6**	**+0.2**
	46nm,0.1s						
CHEFC	**Chefchaouen**	**1.59**	**201**	P	**Pn**	**02 16 49.1**	**+2.0**
CHEFC				S	**Sn**	**02 17 04.3**	**-2.8**
ECAB	**El Cabril**	**1.60**	**337**	P	**Pn**	**02 16 47.8**	**+0.7**
	1.6nm,0.0s,SNR=44						
ECAB				S	**Sn**	**02 17 07.1**	**-0.1**
	17nm,0.0s,SNR=60						
EQES	**Quesada**	**1.73**	**46**	P	**Pn**	**02 16 50.3**	**+1.4**
	7.3nm,0.1s,SNR=134						
EQES				S	**Sn**	**02 17 10.3**	**-0.1**
	40nm,0.1s,SNR=5.0						
EMEL	**Melilla**	**1.88**	**133**	P	**Pn**	**02 16 52.0**	**+1.3**
	55nm,0.1s,SNR=7.9						
EMEL				S	**Sn**	**02 17 13.1**	**-0.6**
	54nm,0.2s,SNR=7.9						
GOG	**Mont Gurugu**	**1.91**	**135**	P	**Pn**	**02 16 51.4**	**+0.1**
GOG				S	**Sn**	**02 17 15.0**	**+0.4**
RSA	**Sarsar**	**1.96**	**210**	P	**Pn**	**02 16 54.4**	**+2.4**
RSA				S	**Sn**	**02 17 12.8**	**-3.0**
ENIJ	**Nijar**	**1.99**	**78**	P	**Pn**	**02 16 53.7**	**+1.5**
	7.2nm,0.2s,SNR=7.9						
ENIJ				S	**Sn**	**02 17 16.6**	**+0.3**
	7.4nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.00**	**306**	⇓*P*	**Pn**	**02 16 53.2**	**+0.8**
	3.6nm,0.1s,SNR=18						
EMIN				S	**Sn**	**02 17 15.4**	**-1.2**
	12nm,0.1s,SNR=16						
AKLM	**AKL**	**2.18**	**163**	P	**Pn**	**02 16 57.0**	**+2.2**
AKLM				S	**Sn**	**02 17 17.1**	**-3.9**
SESP	**Santiago Espad**	**2.25**	**47**	P	**Pn**	**02 16 57.1**	**+1.2**
	5.3nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**02 17 21.5**	**-1.4**
	97nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**2.25**	**47**	P	**Pn**	**02 16 56.7**	**+0.8**
	SNR=7.2						
SESP				S	**Sn**	**02 17 23.6**	**+0.7**
EGRO	**El Granado**	**2.46**	**293**	P	**Pn**	**02 16 59.5**	**+0.9**
	4.7nm,0.1s,SNR=12						
EGRO				S	**Sn**	**02 17 26.4**	**-1.2**
	35nm,0.1s						
PBAR	**Barrancos**	**2.48**	**310**	P	**Pn**	**02 16 59.9**	**+1.1**
PBAR				S	**Sn**	**02 17 26.9**	**-1.1**
	29nm,0.1s						
PBAR	**Barrancos**	**2.48**	**310**	*eP*	**Pn**	**02 16 59.9**	**+1.1**
PBAR				*eS*	**Sn**	**02 17 26.9**	**-1.1**
PBAR				A	A	02 17 28.4	
	29nm,0.1s						
PVAQ	**Vaqueiros**	**2.59**	**289**	P	**Pn**	**02 17 01.1**	**+0.8**
PVAQ				S	**Sn**	**02 17 29.3**	**-1.6**
	44nm,0.2s						
PVAQ	**Vaqueiros**	**2.59**	**289**	P	**Pn**	**02 17 00.2**	**-0.2**
	SNR=24						
PVAQ				S	**Sn**	**02 17 28.9**	**-2.0**
PVAQ	**Vaqueiros**	**2.59**	**289**	⇓*eP*	**Pn**	**02 17 01.1**	**+0.8**
PVAQ				*eS*	**Sn**	**02 17 29.3**	**-1.6**
PVAQ				A	A	02 17 31.0	
	44nm,0.2s						
PBDV	**Barranco-do-Ve**	**2.72**	**285**	P	**Pn**	**02 17 03.2**	**+1.2**
PBDV				S	**Sn**	**02 17 33.2**	**-0.7**
	18nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.72**	**285**	*eP*	**Pn**	**02 17 03.2**	**+1.2**
PBDV				*eS*	**Sn**	**02 17 33.2**	**-0.7**
PBDV				A	A	02 17 35.1	
	18nm,0.3s						
JBK	**JBK**	**2.82**	**143**	P	**Pn**	**02 17 02.6**	**-1.1**
JBK				S	**Sn**	**02 17 35.8**	**-0.9**
EBAD	**Badajoz**	**2.86**	**320**	⇓*P*	**Pn**	**02 17 05.2**	**+1.2**
	22nm,0.1s,SNR=18						
EBAD				*S*	**Sn**	**02 17 36.0**	**-1.4**
	37nm,0.2s,SNR=15						
PCVE	**Castro Verde**	**2.91**	**292**	P	**Pn**	**02 17 05.5**	**+0.9**
PCVE				S	**Sn**	**02 17 37.3**	**-1.2**
	14nm,0.1s						
PCVE	**Castro Verde**	**2.91**	**292**	*eP*	**Pn**	**02 17 05.5**	**+0.9**
PCVE				*eS*	**Sn**	**02 17 37.3**	**-1.2**
PCVE				A	A	02 17 39.1	
	14nm,0.1s						
PBEJ	**Beja**	**2.94**	**300**	P	**Pn**	**02 17 06.4**	**+1.3**
PBEJ				S	**Sn**	**02 17 38.1**	**-1.2**
	7.6nm,0.1s						
PBEJ	**Beja**	**2.94**	**300**	*eP*	**Pn**	**02 17 06.4**	**+1.3**
PBEJ				*eS*	**Sn**	**02 17 38.1**	**-1.2**
PBEJ				A	A	02 17 40.3	
	15nm,0.1s						
PAB	**San Pablo**	**2.95**	**4**	P	**Pn**	**02 17 06.9**	**+1.6**
	1.8nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**02 17 39.3**	**-0.4**
	7.8nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**2.98**	**64**	P	**Pn**	**02 17 07.4**	**+1.7**
	4.0nm,0.5s,SNR=7.9						
EMUR				S	**Sn**	**02 17 39.8**	**-0.5**
	6.8nm,0.3s,SNR=8.0						
IFR	**Ifrane**	**3.10**	**188**	⇑*iP*	**Pn**	**02 17 08.6**	**+1.2**
IFR				*eS*	**Sn**	**02 17 41.7**	**-1.8**
ESDC	**Sonseca Array**	**3.12**	**10**	P	**Pn**	**02 17 08.8**	**+1.3**
	0.7nm,0.2s,baz=186,slow=12,SNR=25						
ESDC				S	**Sn**	**02 17 43.0**	**-0.7**
	7.8nm,0.2s,baz=185,slow=23,SNR=49						
MESJ	**Messejana**	**3.12**	**294**	*eP*	**Pn**	**02 17 08.3**	**+0.9**
MESJ				*eS*	**Sn**	**02 17 41.4**	**-2.2**
MESJ				AML	AML	02 17 43.8	
	comp=N,24nm,0.1s						
MESJ	**Messejana**	**3.12**	**294**	P	**Pn**	**02 17 08.3**	**+0.9**
MESJ				S	**Sn**	**02 17 42.8**	**-0.8**
	comp=N,12nm,0.1s						
MESJ	**Messejana**	**3.12**	**294**	*eP*	**Pn**	**02 17 08.6**	**+1.2**
MESJ				*eS*	**Sn**	**02 17 42.8**	**-0.8**
MESJ				A	A	02 17 44.2	
	comp=N,12nm,0.1s						
ETOB	**Tobarra**	**3.19**	**49**	P	**Pn**	**02 17 09.6**	**+1.1**
	comp=N,7.4nm,0.1s,SNR=57						
ETOB				S	**Sn**	**02 17 43.7**	**-1.8**
	comp=N,20nm,0.1s,SNR=11						
PESTR	**Estremoz**	**3.26**	**315**	*eP*	**Pn**	**02 17 10.9**	**+1.5**
PESTR				*eS*	**Sn**	**02 17 46.0**	**-1.0**
MORF	**Marmelete**	**3.29**	**284**	P	**Pn**	**02 17 11.5**	**+1.6**
MORF				S	**Sn**	**02 17 47.1**	**-0.8**
	comp=N,33nm,0.1s						
MORF	**Marmelete**	**3.29**	**284**	*eP*	**Pn**	**02 17 11.5**	**+1.6**
MORF				*eS*	**Sn**	**02 17 47.1**	**-0.8**
MORF				A	A	02 17 50.0	
	comp=N,33nm,0.1s						
EVO	**Evora**	**3.30**	**307**	P	**Pn**	**02 17 11.3**	**+1.4**
EVO				S	**Sn**	**02 17 46.4**	**-1.7**
EVO	**Evora**	**3.30**	**307**	*eP*	**Pn**	**02 17 11.3**	**+1.4**
EVO				*eS*	**Sn**	**02 17 46.4**	**-1.7**
EVO	**Evora**	**3.30**	**307**	*eP*	**Pn**	**02 17 11.5**	**+1.5**
EVO				*eS*	**Sn**	**02 17 46.8**	**-1.3**
EVO				A	A	02 17 48.9	
	comp=N,25nm,0.4s						
ETRV	**Los Montesinos**	**3.40**	**64**	S	**Sn**	**02 17 50.0**	**-0.5**
	comp=N,30nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.40**	**280**	P	**Pn**	**02 17 12.4**	**+1.1**
	comp=N,3.9nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**02 17 48.0**	**-2.5**
	comp=N,56nm,0.1s,SNR=6.2						
PFVI	**Vila Bisbo**	**3.40**	**280**	*eP*	**Pn**	**02 17 12.7**	**+1.4**
PFVI				*eS*	**Sn**	**02 17 48.6**	**-1.9**
PFVI				A	A	02 17 52.7	
	comp=N,32nm,0.2s						
PTEO	**Sao Teotonio**	**3.40**	**287**	P	**Pn**	**02 17 13.0**	**+1.7**
PTEO				S	**Sn**	**02 17 50.5**	**0.0**
	comp=N,7.2nm,0.4s						
PTEO	**Sao Teotonio**	**3.40**	**287**	*eP*	**Pn**	**02 17 13.0**	**+1.7**
PTEO				*eS*	**Sn**	**02 17 50.5**	**0.0**
PTEO				A	A	02 17 53.6	
	comp=N,14nm,0.4s						
PNCL	**Nicolau / Gran**	**3.45**	**297**	P	**Pn**	**02 17 13.2**	**+1.3**
PNCL				S	**Sn**	**02 17 51.0**	**-0.6**
	comp=N,13nm,0.3s						
PNCL	**Nicolau / Gran**	**3.45**	**297**	*eP*	**Pn**	**02 17 13.2**	**+1.3**
PNCL				*eS*	**Sn**	**02 17 51.0**	**-0.6**
PNCL				A	A	02 17 51.8	
	comp=N,13nm,0.3s						
PMRV	**Marv??o**	**3.56**	**323**	P	**Pn**	**02 17 14.9**	**+1.3**
PMRV				S	**Sn**	**02 17 52.9**	**-1.6**
	comp=N,12nm,0.5s						
PMRV	**Marv??o**	**3.56**	**323**	*eP*	**Pn**	**02 17 14.9**	**+1.3**
PMRV				*eS*	**Sn**	**02 17 52.9**	**-1.6**
PMRV				A	A	02 18 07.6	
	comp=N,12nm,0.5s						
CZD	**Col de Zad**	**3.57**	**185**	P	**Pn**	**02 17 14.7**	**+0.7**
CZD				S	**Sn**	**02 17 51.1**	**-4.1**
EPLA	**Plasencia**	**3.64**	**342**	P	**Pn**	**02 17 16.0**	**+1.4**
	comp=N,2.5nm,0.1s,SNR=19						
EPLA				S	**Sn**	**02 17 53.9**	**-2.5**
	comp=N,5.9nm,0.1s,SNR=9.7						
MD31	**MD31**	**3.73**	**182**	P	**Pn**	**02 17 17.4**	**+1.5**
MD31				S	**Sn**	**02 17 52.9**	**-5.7**
PMTG	**Montargil**	**3.76**	**312**	P	**Pn**	**02 17 17.7**	**+1.5**
PMTG				S	**Sn**	**02 17 57.5**	**-1.8**
	comp=N,6.1nm,0.3s						
PMTG	**Montargil**	**3.76**	**312**	*eP*	**Pn**	**02 17 17.7**	**+1.5**
PMTG				*eS*	**Sn**	**02 17 57.5**	**-1.8**
PMTG				A	A	02 18 00.3	
	comp=N,6.1nm,0.3s						
MDT	**Midelt**	**3.78**	**180**	P	**Pn**	**02 17 16.6**	**+0.1**
	SNR=39						
MDT				S	**Sn**	**02 17 57.3**	**-2.5**
AFON	**Font Roja**	**3.85**	**56**	P	**Pn**	**02 17 18.7**	**+1.2**
	comp=N,5.1nm,0.3s,SNR=5.7						
AFON				S	**Sn**	**02 18 00.1**	**-1.5**
	comp=N,4.3nm,0.1s,SNR=7.7						
UCM	**Universidad Co**	**3.86**	**16**	*eP*	Pn	02 17 49.6	+32
UCM				*eS*	**Sn**	**02 18 01.3**	**-0.5**
PCBR	**Castelo Branco**	**3.93**	**326**	P	**Pn**	**02 17 20.0**	**+1.5**
PCBR				S	**Sn**	**02 18 01.2**	**-2.3**
	comp=N,5.2nm,0.8s						
PCBR	**Castelo Branco**	**3.93**	**326**	*eP*	**Pn**	**02 17 20.0**	**+1.5**
PCBR				*eS*	**Sn**	**02 18 01.2**	**-2.3**
PCBR				A	A	02 18 04.1	
	comp=N,10nm,0.8s						
AVE	**Averroes**	**4.01**	**216**	P	**Pn**	**02 17 19.0**	**-0.6**
	SNR=14						
AVE				S	**Sn**	**02 18 01.5**	**-3.8**
AVE	**Averroes**	**4.01**	**216**	⇑*iP*	**Pn**	**02 17 20.8**	**+1.3**
AVE				*eS*	**Sn**	**02 18 03.7**	**-1.6**
GUD	**Guadarrama**	**4.06**	**5**	P	**Pn**	**02 17 21.6**	**+1.2**
	comp=N,1.6nm,0.1s,SNR=20						
GUD				S	**Sn**	**02 18 05.0**	**-1.6**
	comp=N,3.7nm,0.1s,SNR=11						
EBEN2	**Beniarda presa**	**4.09**	**58**	P	**Pn**	**02 17 22.4**	**+1.6**
	comp=N,3.6nm,0.1s,SNR=7.9						
EBEN2				S	**Sn**	**02 18 05.2**	**-2.2**
	comp=N,1.4nm,0.1s,SNR=7.9						
TDRA	**Tendrara**	**4.15**	**148**	S	**Sn**	**02 18 08.0**	**-1.1**
PMAFR	**Mafra**	**4.37**	**304**	P	**Pn**	**02 17 26.2**	**+1.8**
	comp=N,2.6nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**02 18 12.1**	**-2.0**
	comp=N,11nm,0.2s,SNR=8.5						
PMAFR	**Mafra**	**4.37**	**304**	*eP*	**Pn**	**02 17 26.4**	**+1.9**
PMAFR				*eS*	**Sn**	**02 18 12.4**	**-1.7**
PMAFR				A	A	02 18 14.7	
	comp=N,18nm,0.2s						
MTE	**Manteigas**	**4.43**	**330**	P	**Pn**	**02 17 27.0**	**+1.7**
MTE				S	**Sn**	**02 18 14.9**	**-0.7**
	comp=N,5.4nm,0.7s						
MTE	**Manteigas**	**4.43**	**330**	*eP*	**Pn**	**02 17 27.0**	**+1.7**
MTE				*eS*	**Sn**	**02 18 14.9**	**-0.7**
MTE				A	A	02 18 16.4	
	comp=N,11nm,0.7s						
PCAS	**Casmilo, Conde**	**4.59**	**320**	P	**Pn**	**02 17 29.4**	**+1.8**
PCAS				S	**Sn**	**02 18 18.6**	**-1.0**
	comp=N,6.2nm,0.5s						
PCAS	**Casmilo, Conde**	**4.59**	**320**	*eP*	**Pn**	**02 17 29.4**	**+1.8**
PCAS				*eS*	**Sn**	**02 18 18.6**	**-1.0**
PCAS				A	A	02 18 20.2	
	comp=N,6.2nm,0.5s						
COI	**Coimbra**	**4.67**	**322**	P	**Pn**	**02 17 30.5**	**+2.0**
COI				S	**Sn**	**02 18 19.7**	**-1.7**
	comp=N,6.3nm,0.2s						
COI	**Coimbra**	**4.67**	**322**	*eP*	**Pn**	**02 17 30.5**	**+2.0**
COI				*eS*	**Sn**	**02 18 19.7**	**-1.7**
COI				A	A	02 18 20.1	
	comp=N,13nm,0.2s						
ETOR	**Torete**	**4.67**	**25**	⇑*P*	**Pn**	**02 17 30.1**	**+1.4**
	comp=N,21nm,0.1s,SNR=18						
ETOR				S	**Sn**	**02 18 19.1**	**-2.5**
	comp=N,29nm,0.2s,SNR=7.8						
PVIS	**Viseu**	**4.84**	**329**	P	**Pn**	**02 17 32.8**	**+1.9**
PVIS				S	**Sn**	**02 18 24.3**	**-1.3**
	comp=N,5.8nm,0.7s						
PVIS	**Viseu**	**4.84**	**329**	*eP*	**Pn**	**02 17 32.8**	**+1.9**
PVIS				*eS*	**Sn**	**02 18 24.3**	**-1.3**
PVIS				A	A	02 18 26.7	
	comp=N,12nm,0.7s						
MVO	**Moncorvo**	**4.93**	**338**	P	**Pn**	**02 17 33.8**	**+1.7**
	comp=N,11nm,0.1s,SNR=44						
MVO				S	**Sn**	**02 18 25.1**	**-2.8**
	comp=N,2.0nm,0.1s,SNR=9.6						
MVO	**Moncorvo**	**4.93**	**338**	*eP*	**Pn**	**02 17 33.7**	**+1.6**
MVO				*eS*	**Sn**	**02 18 26.6**	**-1.2**
MVO				A	A	02 18 28.7	
	comp=N,13nm,0.4s						
EMOS	**Mosqueruela**	**4.98**	**40**	P	**Pn**	**02 17 35.0**	**+2.0**
	comp=N,2.4nm,0.2s,SNR=12						
EMOS				S	**Sn**	**02 18 26.5**	**-2.8**
	comp=N,4.8nm,0.2s,SNR=16						
PVRL	**Vila Real**	**5.25**	**334**	P	**Pn**	**02 17 38.3**	**+1.8**
PVRL				S	**Sn**	**02 18 33.1**	**-2.6**
	comp=N,15nm,0.2s						
PVRL	**Vila Real**	**5.25**	**334**	*eP*	**Pn**	**02 17 38.3**	**+1.8**
PVRL				*eS*	**Sn**	**02 18 33.1**	**-2.6**
PVRL				A	A	02 18 36.4	
	comp=N,29nm,0.2s						
EIBI	**Ibiza**	**5.32**	**61**	P	**Pn**	**02 17 38.5**	**+1.1**
	comp=N,1.1nm,0.2s,SNR=7.9						
EIBI				S	**Sn**	**02 18 33.6**	**-3.8**
	comp=N,5.4nm,0.3s,SNR=7.9						
PBRG	**Braganca**	**5.45**	**343**	P	**Pn**	**02 17 41.0**	**+1.7**
PBRG				S	**Sn**	**02 18 39.2**	**-1.4**
	comp=N,5.4nm,0.5s						
PBRG	**Braganca**	**5.45**	**343**	*eP*	**Pn**	**02 17 41.0**	**+1.7**
PBRG				*eS*	**Sn**	**02 18 39.2**	**-1.4**
PBRG				A	A	02 18 41.0	
	comp=N,11nm,0.5s						
ECAL	**Calabor**	**5.58**	**344**	P	**Pn**	**02 17 43.2**	**+2.2**
	comp=N,2.1nm,0.1s,SNR=17						
ECAL				S	**Sn**	**02 18 41.6**	**-2.2**
	comp=N,1.3nm,0.1s,SNR=11						
PCAB	**Cabril**	**5.74**	**334**	P	**Pn**	**02 17 45.1**	**+1.8**
PCAB				S	**Sn**	**02 18 46.4**	**-1.4**
	comp=N,3.6nm,0.3s						
PCAB	**Cabril**	**5.74**	**334**	*eP*	**Pn**	**02 17 45.1**	**+1.8**
PCAB				*eS*	**Sn**	**02 18 46.4**	**-1.4**
PCAB				A	A	02 18 49.6	
	comp=N,7.2nm,0.3s						
ERTA	**Horta de San J**	**5.83**	**40**	P	**Pn**	**02 17 46.3**	**+1.9**
	comp=N,0.5nm,0.2s,SNR=6.7						
ERTA				S	**Sn**	**02 18 46.7**	**-3.2**
	comp=N,1.3nm,0.1s,SNR=7.8						
TZRR	**Tazzarine**	**5.85**	**188**	P	**Pn**	**02 17 43.4**	**-1.4**
TZRR				S	**Sn**	**02 18 47.8**	**-2.7**
ELOB	**Lobios**	**5.89**	**334**	P	**Pn**	**02 17 47.1**	**+1.8**
	comp=N,1.4nm,0.2s,SNR=9.3						
ELOB				S	**Sn**	**02 18 48.0**	**-3.5**
	comp=N,4.7nm,0.2s,SNR=7.7						
OUZM	**OUZ**	**5.94**	**198**	P	**Pn**	**02 17 46.1**	**0.0**
OUK	**Oukaimeden**	**6.01**	**207**	P	**Pn**	**02 17 46.6**	**-0.7**
OUK				S	**Sn**	**02 18 50.7**	**-4.2**
ESAC	**San Caprasio**	**6.05**	**31**	P	**Pn**	**02 17 49.8**	**+2.2**
	comp=N,6.0nm,0.3s,SNR=7.9						
ESAC				S	**Sn**	**02 18 53.3**	**-2.1**
	comp=N,0.7nm,0.0s,SNR=9.5						
PGAV	**Gavieira, Arco**	**6.05**	**333**	P	**Pn**	**02 17 49.4**	**+1.8**
PGAV				S	**Sn**	**02 18 52.6**	**-2.9**
	comp=N,6.2nm,0.6s						
PGAV	**Gavieira, Arco**	**6.05**	**333**	*eP*	**Pn**	**02 17 49.4**	**+1.8**
PGAV				*eS*	**Sn**	**02 18 52.6**	**-2.9**
PGAV				A	A	02 18 57.7	
	comp=N,6.2nm,0.6s						
EPOB	**Poblet**	**6.51**	**41**	P	**Pn**	**02 17 55.0**	**+1.3**
	comp=N,1.0nm,0.2s,SNR=7.9						
EPOB				S	**Sn**	**02 19 02.3**	**-4.2**
	comp=N,0.7nm,0.1s,SNR=7.4						
EARA	**Aranguren**	**6.60**	**20**	P	**Pn**	**02 17 57.6**	**+2.6**
	comp=N,8.5nm,0.3s,SNR=7.9						
EARA				S	**Sn**	**02 19 05.0**	**-3.7**
	comp=N,2.0nm,0.1s,SNR=7.9						
ELAN	**Lanestosa**	**6.69**	**8**	P	**Pn**	**02 17 58.3**	**+2.1**
	comp=N,2.6nm,0.2s,SNR=24						
ELAN				S	**Sn**	**02 19 07.7**	**-3.2**
	comp=N,1.0nm,0.2s,SNR=6.2						
EARI	**Arriondas**	**6.71**	**356**	P	**Pn**	**02 17 58.2**	**+1.8**
	comp=N,0.8nm,0.2s,SNR=9.6						
EARI				S	**Sn**	**02 19 07.6**	**-3.8**
	comp=N,0.5nm,0.1s,SNR=8.2						
EAGO	**Agolada(Pontev**	**6.74**	**338**	P	**Pn**	**02 17 59.1**	**+2.2**
	comp=N,0.4nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**02 19 09.4**	**-2.8**
	comp=N,0.7nm,0.1s,SNR=7.9						
EORO	**Oroz-Betelu**	**6.79**	**21**	P	**Pn**	**02 17 59.4**	**+1.8**
	comp=N,2.1nm,0.2s,SNR=8.0						
EORO				S	**Sn**	**02 19 11.2**	**-2.1**
	comp=N,0.6nm,0.2s,SNR=6.9						
TTIG	**Tnine Tigouga,**	**6.82**	**209**	P	**P

MFF	**Saint Martin d**	**10.54**	**17**	*eP*		**Pn**	**02 18 50.1**	**+1.4**
MFF				*eSn*		Sn	02 20 34.1	-11
	comp=N,0.6nm,0.3s							
TCF	**Toulx Ste Croi**	**10.95**	**26**	*eP*		**Pn**	**02 18 57.0**	**+2.7**
TCF				*eSn*		Sn	02 20 44.0	-11
	comp=N,0.8nm,0.3s							
QUIF	**Quistinic**	**11.36**	**5**	*eP*		**Pn**	**02 19 02.0**	**+2.2**
QUIF				*eSn*		Sn	02 20 53.6	-11
	comp=N,0.6nm,0.2s							
BGF	**Bois d'Agland**	**11.41**	**27**	*eSn*		Sn	02 20 54.8	-11
	comp=N,2.8nm,0.5s							
SGMF	**Saint Gilles**	**11.75**	**7**	*eP*		**Pn**	**02 19 07.4**	**+2.3**
SGMF				*eSn*		Sn	02 21 02.8	-11
	comp=N,0.3nm,0.2s							
ROSF	**Rostrenen**	**11.77**	**4**	*eP*		**Pn**	**02 19 06.9**	**+1.5**
ROSF				*eSn*		Sn	02 21 05.1	-10
	comp=N,2.2nm,0.2s							
SSF	**Saint Saulge**	**12.08**	**28**	*eP*		**Pn**	**02 19 11.0**	**+1.4**
GRR	**Gorron**	**12.11**	**12**	*eP*		**Pn**	**02 19 11.4**	**+1.5**
GRR				*eSn*		Sn	02 21 12.9	-10
	comp=N,0.8nm,0.2s							
LDF	**La Druitiere**	**12.44**	**14**	*eP*		**Pn**	**02 19 15.8**	**+1.3**
LDF				*eSn*		Sn	02 21 20.9	-10
	comp=N,0.6nm,0.3s							

GCG ***30*** *02:28:26.0±1.3, 13°.30N×91°.48W, h34km, MD4.3*
SNET ***30*** *02:28:28.1±1.7, 13°.60N×91°.23W, h0km±12km, ML4.1*
UCR ***30*** *02:28:28.3±1.6, 13°.63N×91°.23W, h0km±12km, ML4.0, mb4.4(NEIC)*
MEX ***30*** *02:28:29.6±1.0, 13°.46N×91°.55W, h20km, MD4.4*
NEIC ***30*** *02:28:32.4±2.4, 13°.74N±0°.07×91°.24W±0°.07, h61km±7km, mb4.4/164, Md4.4/13(MEX), Error ellipse: s-maj=14.7km s-min=3.2km az=224.0*
IDC ***30*** *02:28:36.8±2.9, 13°.89N×90°.81W, h98km±26km, mb4.0/15, mb1 4.2/18, mb1mx3.9/45, mbtmp4.3/18, Error ellipse: s-maj=31.5km s-min=14.2km az=50.0*

ISC 30 02:28:27.9±0.6, **13°.51N**±0°.06×**91°.30W**±0°.04, **h29**km, **n303,** σ1.9**38**/256, **mb4.5**/73, **2D**, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time	Res
						ISC	h m s	ISC
ERG	**Entre ros, C**	**0.96**	**344**	*ep*		**Pb**	**02 28 46.3**	**+0.3**
FUG	**Fuego 3**	**1.04**	**25**	*eP*		**Pb**	**02 28 48.1**	**+0.7**
FUG				*eP*		**Pn**	**02 28 48.3**	**+1.7**
IXG	**Ixpaco**	**1.07**	**51**	*eP*		**Pb**	**02 28 48.2**	**+0.3**
PCG	**Pacaya**	**1.11**	**37**	*eP*		**Pb**	**02 28 49.3**	**+0.6**
STG3	**Santiaguito 3,**	**1.23**	**348**	*eP*		**Pn**	**02 28 49.1**	**-0.2**
NBG	**Las Nubes**	**1.42**	**41**	*eP*		**Pb**	**02 28 54.7**	**+0.8**
RTR	**El Retiro**	**1.66**	**76**	*eP*		**Pb**	**02 28 56.7**	**-1.1**
RTR	**El Retiro**	**1.66**	**76**	*eP*		**Pb**	**02 28 56.7**	**-1.1**
SBLS	**San Blas**	**1.66**	**78**	*eP*		**Pb**	**02 28 56.7**	**-1.3**
SBLS	**San Blas**	**1.66**	**78**	*eP*		**Pb**	**02 28 56.7**	**-1.3**
THIG		**1.68**	**326**	*eP*		**Pn**	**02 28 54.2**	**-1.1**
THIG				*eS*		**Sn**	**02 29 12.6**	**-3.3**
THIG		**1.68**	**326**			**Pn**	**02 28 54.2**	**-1.1**
THIG						**Sn**	**02 29 12.6**	**-3.3**
SNJE	**San Jose**	**1.69**	**77**	*eP*		**Pb**	**02 28 57.5**	**-0.9**
SNJE	**San Jose**	**1.69**	**77**	*eP*		**Pb**	**02 28 57.5**	**-0.9**
HUEH	**Huehuetenango**	**1.81**	**354**	*eP*		**Pb**	**02 28 59.9**	**-0.7**
HUEH				IAML			02 29 32.1	
	comp=Z,4µm,0.4s							
BQQS	**Boqueron**	**1.98**	**83**	*eP*		**Pb**	**02 29 01.9**	**-1.4**
BQQS	**Boqueron**	**1.98**	**83**	*eP*		**Pb**	**02 29 01.9**	**-1.4**
SNET	**Serv Nac Est T**	**2.02**	**85**	*eP*		**Pb**	**02 29 03.3**	**-0.7**
SNET				*eS*		**Sb**	**02 29 29.1**	**+0.3**
SNET				IAML			02 29 36.5	
	comp=Z,699nm,0.3s							
SNET	**Serv Nac Est T**	**2.02**	**85**			**Pb**	**02 29 02.5**	**-1.5**
SNET	**Serv Nac Est T**	**2.02**	**85**	*eP*		**Pb**	**02 29 03.3**	**-0.7**
SNET				*eS*		**Sb**	**02 29 29.1**	**+0.3**
SNET				IAML			02 29 36.5	
	comp=Z,699nm,0.3s							
MTO3	**Montecristo**	**2.08**	**65**	*eP*		**Pb**	**02 29 03.3**	**-1.8**
MTO3				*eS*		**Sb**	**02 29 32.1**	**+1.4**
MTO3	**Montecristo**	**2.08**	**65**	Pn		**Pb**	**02 29 03.0**	**-2.1**
MTO3	**Montecristo**	**2.08**	**65**	*eP*		**Pb**	**02 29 03.3**	**-1.8**
MTO3				*eS*		**Sb**	**02 29 32.1**	**+1.4**
LFRS	**El Faro**	**2.18**	**87**	*eP*		**Pb**	**02 29 05.2**	**-1.5**
LFRS	**El Faro**	**2.18**	**87**	*eP*		**Pb**	**02 29 05.2**	**-1.5**
LBRS	**Las Brisas**	**2.21**	**84**	*eP*		**Pb**	**02 29 05.9**	**-1.3**
LBRS	**Las Brisas**	**2.21**	**84**	*eP*		**Pb**	**02 29 05.9**	**-1.3**
MRL	**Marmol**	**2.22**	**45**	*eP*		**Pb**	**02 29 06.6**	**-0.8**
TECA	**Tecapa**	**2.72**	**90**	*eP*		**Pn**	**02 29 12.8**	**+2.9**
TECA	**Tecapa**	**2.72**	**90**	*eP*		**Pn**	**02 29 12.8**	**+2.9**
PCIG		**2.87**	**320**	*eP*		**Pn**	**02 29 10.2**	**-1.5**
PCIG		**2.87**	**320**			**Pn**	**02 29 10.2**	**-1.5**
CCIG	**Comitan**	**2.88**	**344**	*i* P		**Pn**	**02 29 14.5**	**+2.5**
CCIG	**Comitan**	**2.88**	**344**			**Pn**	**02 29 14.5**	**+2.5**
PACA	**Pacayal**	**2.90**	**90**	*eP*		**Pb**	**02 29 16.0**	**-2.9**
PACA	**Pacayal**	**2.90**	**90**	*eP*		**Pb**	**02 29 16.0**	**-2.9**
TGIG		**3.70**	**332**	*eP*		**Pn**	**02 29 23.3**	**+0.1**
TGIG		**3.70**	**332**			**Pn**	**02 29 23.3**	**+0.1**
CMIG	**Matias Romero**	**4.97**	**316**	P		**Pn**	**02 29 41.8**	**+1.2**
	comp=Z,6.8nm,0.3s,baz=132,slow=11,SNR=44							
CMIG				S		**Sn**	**02 30 36.8**	**-0.3**
	comp=Z,21nm,0.3s,baz=26,slow=7.3,SNR=6.3							
CMIG	**Matias Romero**	**4.97**	**316**	*eP*		**Pn**	**02 29 41.2**	**+0.6**
CMIG	**Matias Romero**	**4.97**	**316**			**Pn**	**02 29 41.2**	**+0.6**
MATN	**Matagalpa**	**5.26**	**96**	Pn		**Pn**	**02 29 46.6**	**+1.8**
ACON	**Acoyapa**	**6.17**	**104**			**Pn**	**02 30 00.4**	**+3.3**
ESPN	**Las Esperanzas**	**6.95**	**100**			**Pn**	**02 30 10.5**	**+2.7**
JTS	**Las Juntas de**	**6.99**	**117**	P		Pn	02 30 13.7	+5.3
	comp=Z,1.1nm,0.3s,baz=30,slow=15,SNR=5.4							
JTS				S		**Sn**	**02 31 25.8**	**-1.1**
	baz=253,slow=20,SNR=1.2							
JTS	**Las Juntas de**	**6.99**	**117**			Pn	02 30 14.6	+6.2
TEIG	**Tepich**	**7.28**	**23**	P		**Pn**	**02 30 14.0**	**+1.6**
	comp=Z,20nm,0.3s,baz=319,slow=0.5,SNR=68							
TEIG	**Tepich**	**7.28**	**23**	*eP*		**Pn**	**02 30 14.6**	**+2.2**
TEIG	**Tepich**	**7.28**	**23**			**Pn**	**02 30 14.6**	**+2.2**
TLIG	**Tlapa**	**8.08**	**301**	Pn		**Pn**	**02 30 26.8**	**+3.4**
MOIG	**Morelia**	**11.29**	**304**	Pn		**Pn**	**02 31 09.8**	**+2.2**
ZAIG	**Zacatecas**	**14.12**	**312**	Pn		**Pn**	**02 31 47.7**	**+1.4**
HKT	**Hockley**	**16.89**	**346**	P		**P**	**02 32 23.6**	**-0.4**
553A	**Crawfordville**	**17.78**	**20**	P		**Pn**	**02 32 30.6**	**-2.6**
344A	**Westbrook Farm**	**17.87**	**2**			**Pn**	**02 32 34.1**	**-0.3**
344A				IAmb		IAmb	02 32 53.2	
	comp=Z,26nm,0.8s							
346A	**Big Creek Wild**	**17.88**	**5**	Pn		**Pn**	**02 32 32.1**	**-2.4**
346A				IAmb		IAmb	02 32 41.4	
	comp=Z,63nm,0.8s							
435B	**Jarrell**	**18.15**	**342**	P		**P**	**02 32 39.3**	**+1.4**
	baz=160							
NATX	**Nacogdoches**	**18.43**	**351**			**P**	**02 32 39.1**	**-1.9**
NATX				IAmb		IAmb	02 32 43.7	
	comp=Z,17nm,0.7s							
JCT	**Junction City**	**18.63**	**336**	P		**Pn**	**02 32 45.1**	**+1.4**
	baz=153							
JCT	**Junction City**	**18.63**	**336**	P		**P**	**02 32 43.5**	**+0.2**
VBMS	**Vicksburg**	**18.64**	**2**	P		**P**	**02 32 41.1**	**-2.2**
VBMS				IAmb		IAmb	02 32 52.5	
	comp=Z,28nm,1.0s							
352A	**Blakely**	**18.82**	**17**	P		**P**	**02 32 43.0**	**-2.3**
352A				IAmb		IAmb	02 32 52.0	
	comp=Z,38nm,1.1s							
ROSC	**El Rosal**	**18.83**	**116**	P		**P**	**02 32 46.4**	**+0.4**
ROSC				IAmb		IAmb	02 32 55.7	
	comp=Z,22nm,1.1s							
HPIG		**18.95**	**317**	P		**P**	**02 32 47.3**	**+0.2**
TIGA	**Tifton**	**19.21**	**20**	P		**Pn**	**02 32 50.4**	**-0.2**
	baz=203,SNR=6.9							
WHTX	**Lake Whitney,**	**19.25**	**344**	P		**P**	**02 32 50.1**	**+0.1**
	baz=161							
WHTX	**Lake Whitney,**	**19.25**	**344**	P		**P**	**02 32 49.2**	**-0.8**
RUSC	**La Rusia**	**19.47**	**111**	P		**Pn**	**02 32 55.2**	**+0.8**
TX31	**Lajitas Ar. Si**	**19.48**	**326**	P		**P**	**02 32 52.9**	**+0.2**
TXAR	**Lajitas Array**	**19.48**	**326**	P		**Pn**	**02 32 55.1**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=153,slow=11,SNR=103							
Z41A	**Richland Creek**	**19.71**	**356**	P		**Pn**	**02 32 56.1**	**-0.6**
	baz=176							
Z47A	**Carrollton**	**19.82**	**8**	P		**P**	**02 32 56.6**	**+0.4**
Z47A				IAmb		IAmb	02 33 01.2	
	comp=Z,23nm,0.8s							
LRAL	**Lakeview Retre**	**19.83**	**11**	P		**Pn**	**02 32 57.7**	**-0.4**
	baz=192,SNR=7.3							
LRAL	**Lakeview Retre**	**19.83**	**11**	P		**P**	**02 32 54.5**	**-1.9**
LRAL				IAmb		IAmb	02 33 04.4	
	comp=Z,18nm,0.8s							
152A	**Waverly Hall**	**20.00**	**16**	IAmb		IAmb	02 33 05.7	
	comp=Z,18nm,0.7s							
WLAR	**White Oak Lake**	**20.16**	**356**	P		**P**	**02 32 57.1**	**-2.9**
WLAR				IAmb		IAmb	02 33 02.5	
	comp=Z,16nm,0.8s							
154A	**Montrose**	**20.44**	**20**	P		**P**	**02 33 02.2**	**-0.8**
ABTX	**Abilene, Hawle**	**20.50**	**340**	P		**P**	**02 33 04.7**	**+1.0**
	baz=156,SNR=24							
ABTX	**Abilene, Hawle**	**20.50**	**340**	IAmb		IAmb	02 33 06.2	
	comp=Z,34nm,0.8s							
SDV	**Santo Domingo**	**20.78**	**101**	P		**P**	**02 33 06.1**	**-1.0**
	comp=Z,1.8nm,0.3s,baz=270,slow=7.1,SNR=1.8							
X40A	**Basin Creek Fa**	**20.94**	**356**	P		**P**	**02 33 08.8**	**+0.5**
	baz=176							
OXF	**Oxford**	**20.98**	**4**	P		**P**	**02 33 09.5**	**+0.7**
	baz=185							
OXF	**Oxford**	**20.98**	**4**	P		**P**	**02 33 09.1**	**+0.3**
OXF				IAmb		IAmb	02 33 16.9	
	comp=Z,27nm,0.9s							
MIAR	**Mount Ida**	**21.05**	**355**	P		**P**	**02 33 10.0**	**+0.5**
	baz=174							
MIAR	**Mount Ida**	**21.05**	**355**	P		**P**	**02 33 09.7**	**+0.1**
GOGA	**Godfrey**	**21.06**	**18**	P		**P**	**02 33 10.4**	**+0.7**
	baz=202							
GOGA	**Godfrey**	**21.06**	**18**	P		**P**	**02 33 10.3**	**+0.7**
GOGA				IAmb		IAmb	02 33 25.0	
	comp=Z,16nm,0.9s							
UALR	**University of**	**21.20**	**358**	IAmb		IAmb	02 33 14.7	
	comp=Z,27nm,1.1s							
X37A	**Clayton**	**21.31**	**351**	IAmb		IAmb	02 33 21.1	
	comp=Z,16nm,0.9s							
FPAL	**Fort Paine**	**21.57**	**13**	P		**P**	**02 33 15.6**	**+0.4**
FPAL				IAmb		IAmb	02 33 23.9	
	comp=Z,21nm,1.2s							
W41B	**Gary Mavity, V**	**21.59**	**358**	P		**P**	**02 33 16.0**	**+0.6**
	baz=177							
WHAR	**Wooly Hollow**	**21.71**	**358**	IAmb		IAmb	02 33 18.7	
	comp=Z,15nm,0.9s							
W39A	**Magazine**	**21.71**	**354**	P		**P**	**02 33 17.0**	**+0.3**
	baz=173							
SWET	**Sewanee**	**22.15**	**12**	P		**P**	**02 33 21.1**	**-0.4**
WMOK	**Wichita Mounta**	**22.20**	**344**	P		**P**	**02 33 21.7**	**-0.2**
	baz=160,SNR=9.3							
HODGE	**Hodges**	**22.21**	**20**	IAmb		IAmb	02 33 38.8	
	comp=Z,12nm,0.9s							
MNTX	**Cornudas Mount**	**22.25**	**327**	P		**P**	**02 33 23.3**	**+0.8**
	baz=141,SNR=83							
MNTX	**Cornudas Mount**	**22.25**	**327**	P		**P**	**02 33 22.5**	**0.0**
W50A	**Signal Mountai**	**22.27**	**13**	IAmb		IAmb	02 33 35.0	
	comp=Z,11nm,0.8s							
FCAR	**Ozark Folk Cen**	**22.30**	**358**	IAmb		IAmb	02 33 24.3	
	comp=Z,14nm,0.8s							
X54A	**Belton**	**22.46**	**20**	P		**P**	**02 33 24.8**	**+0.1**
	baz=203							
LCAR	**Lake Charles**	**22.47**	**0**	IAmb		IAmb	02 33 26.9	
	comp=Z,11nm,0.6s							
W52A	**Murphy**	**22.50**	**16**	IAmb		IAmb	02 33 45.3	
	comp=Z,19nm,0.8s							
WVT	**Waverly**	**22.74**	**7**	P		**P**	**02 33 26.8**	**-1.0**
	baz=189							
WVT	**Waverly**	**22.74**	**7**	P		**P**	**02 33 26.7**	**-1.0**
U40A	**Yellville**	**22.80**	**357**	P		**P**	**02 33 27.3**	**-1.0**
	baz=176,SNR=12							
U40A	**Yellville**	**22.80**	**357**	IAmb		IAmb	02 33 30.5	
	comp=Z,8.8nm,0.7s							
X56A	**White Oak**	**22.87**	**22**	P		**P**	**02 33 28.9**	**-0.2**
	baz=206							
MSTX	**Muleshoe**	**22.89**	**335**	P		**P**	**02 33 29.5**	**+0.2**
	baz=150,SNR=9.1							
MSTX	**Muleshoe**	**22.89**	**335**	P		**P**	**02 33 28.7**	**-0.7**
MSTX				IAmb		IAmb	02 33 33.1	
	comp=Z,14nm,0.8s							
W54A	**Cherokee Point**	**23.01**	**19**	P		**P**	**02 33 30.9**	**+0.3**
	baz=203							
TKL	**Tuckaleechee C**	**23.08**	**16**	P		**P**	**02 33 30.2**	**-1.1**
	comp=Z,7.0nm,0.7s,baz=214,slow=13,SNR=13							
TKL	**Tuckaleechee C**	**23.08**	**16**	P		**P**	**02 33 30.1**	**-1.1**
AMTX	**Amarillo**	**23.26**	**338**	P		**P**	**02 33 33.0**	**-0.2**
	baz=153							
V52A	**Sevierville**	**23.30**	**16**	IAmb		IAmb	02 33 45.5	
	comp=Z,14nm,1.1s							
KMSC	**Kings Mountain**	**23.35**	**21**	P		**P**	**02 33 34.0**	**+0.1**
	baz=205							
KMSC	**Kings Mountain**	**23.35**	**21**	P		**P**	**02 33 33.2**	**-0.7**
KMSC				IAmb		IAmb	02 33 52.8	
	comp=Z,10.0nm,0.7s							
V53A	**Saluda**	**23.36**	**18**	IAmb		IAmb	02 33 37.2	
	comp=Z,5.3nm,0.7s							
U49A	**Red Boiling Sp**	**23.44**	**11**	IAmb		IAmb	02 33 49.2	
	comp=Z,16nm,1.1s							
MGMO	**Montain Grove**	**23.57**	**358**	IAmb		IAmb	02 33 36.0	
	comp=Z,26nm,1.1s							
W56A	**Indian Trail**	**23.61**	**22**	P		**P**	**02 33 36.0**	**-0.5**
	baz=207							
T47A	**Sharon Grove**	**23.68**	**8**	IAmb		IAmb	02 33 37.9	
	comp=Z,10.0nm,0.7s							
V54A	**Nebo**	**23.72**	**19**	P		**P**	**02 33 37.0**	**-0.5**
	baz=203							
TZTN	**Tazewell**	**23.97**	**16**	P		**P**	**02 33 39.2**	**-0.7**
	baz=199,SNR=5.6							
TZTN	**Tazewell**	**23.97**	**16**	IAmb		IAmb	02 33 40.6	
	comp=Z,12nm,0.8s							
V55A	**Taylorsville**	**24.03**	**20**	P		**P**	**02 33 40.2**	**-0.3**
	baz=205							
W58A	**Raeford**	**24.04**	**25**	P		**P**	**02 33 40.0**	**-0.5**
	baz=210							
121A	**Cookes Peak, D**	**24.20**	**324**	P		**P**	**02 33 43.1**	**+0.8**
	baz=137,SNR=12							
121A	**Cookes Peak, D**	**24.20**	**324**	IAmb		IAmb	02 33 48.2	
	comp=Z,24nm,1.1s							
V56A	**Mocksville**	**24.25**	**22**	P		**P**	**02 33 41.9**	**-0.5**
	baz=206							
319A	**Douglas**	**24.28**	**320**	P		**P**	**02 33 45.2**	**+2.3**
319A				IAmb		IAmb	02 33 59.1	
	comp=Z,15nm,1.1s							
U54A	**Nelsons Funny**	**24.45**	**19**	P		**P**	**02 33 43.5**	**-0.8**
	baz=203,SNR=6.3							
U54A	**Nelsons Funny**	**24.45**	**19**	IAmb		IAmb	02 33 45.9	
	comp=Z,16nm,0.8s							
CCM	**Cathedral Cave**	**24.45**	**0**	P		**P**	**02 33 43.6**	**-0.7**
	baz=180							
CCM	**Cathedral Cave**	**24.45**	**0**	P		**P**	**02 33 43.0**	**-1.2**
T53A	**Wise**	**24.66**	**17**	P		**P**	**02 33 45.5**	**-0.8**
	baz=201							
U55A	**TA2, Sparta**	**24.68**	**20**	P		**P**	**02 33 45.8**	**-0.7**
	baz=204							
R40A	**Maddies Statio**	**24.70**	**358**	IAmb		IAmb	02 33 47.0	
	comp=Z,18nm,0.8s							
V58A	**Windy Hill, Pi**	**24.76**	**24**	P		**P**	**02 33 46.3**	**-0.7**
	baz=209							
V58A	**Windy Hill, Pi**	**24.76**	**24**	IAmb		IAmb	02 33 47.4	
	comp=Z,10nm,0.9s							
T54A	**Tazewell**	**25.02**	**19**	P		**P**	**02 33 48.7**	**-0.7**
	baz=203							
WCI	**Wyandotte Cave**	**25.02**	**9**	P		**P**	**02 33 48.5**	**-0.9**
	baz=192							
WCI	**Wyandotte Cave**	**25.02**	**9**	P		**P**	**02 33 48.6**	**-0.9**
WCI				IAmb		IAmb	02 33 49.2	
	comp=Z,10nm,0.8s							
U57A	**Blanch**	**25.23**	**23**	P		**P**	**02 33 50.3**	**-1.0**
	baz=208							
ANMO	**Albuquerque**	**25.37**	**330**	P		**P**	**02 33 53.9**	**+1.1**
	comp=Z,3.7nm,0.6s,baz=144,slow=11,SNR=20							
ANMO	**Albuquerque**	**25.37**	**330**	P		**P**	**02 33 53.7**	**+0.9**
	baz=143							
ANMO	**Albuquerque**	**25.37**	**330**	P		**P**	**02 33 54.5**	**+1.6**
T57A	**Hurt**	**25.76**	**23**	P		**P**	**02 33 55.8**	**-0.3**
	baz=208							
TUC	**Tucson**	**25.85**	**320**	P		**P**	**02 33 59.3**	**+2.2**
TUC				IAmb		IAmb	02 34 03.8	
	comp=Z,10nm,0.9s							
P40A	**Paris**	**25.93**	**359**	IAmb		IAmb	02 33 59.0	
	comp=Z,15nm,1.1s							
P38A	**Dawn**	**26.09**	**356**	IAmb		IAmb	02 34 00.1	
	comp=Z,7.4nm,0.8s							
Q51A	**Peebles**	**26.38**	**14**	IAmb		IAmb	02 34 02.0	
	comp=Z,15nm,0.9s							
T59A	**Double "B" Far**	**26.41**	**25**	P		**P**	**02 34 00.8**	**-1.1**
	baz=211							
P49A	**Miami Univ. Ec**	**26.57**	**11**	P		**P**	**02 34 02.5**	**-0.9**
	baz=194							
Q52A	**Bidwell**	**26.59**	**16**	P		**P**	**02 34 02.7**	**-0.9**
	baz=200							
R55A	**Marlinton**	**26.60**	**20**	P		**P**	**02 34 03.0**	**-0.8**
	baz=205							
P51A	**Williamsport**	**26.88**	**14**	P		**P**	**02 34 05.5**	**-0.7**
	baz=198							
Q54A	**Coxs Mills**	**27.02**	**18**	P		**P**	**02 34 06.7**	**-0.7**
	baz=203							
SDCO	**Great Sand Dun**	**27.26**	**335**	P		**P**	**02 34 10.2**	**+0.2**
	baz=148							
P53A	**Whipple**	**27.32**	**17**	P		**P**	**02 34 10.2**	**+0.1**
	baz=201							
ACSO	**Alum Creek Sta**	**27.61**	**14**	P		**P**	**02 34 12.1**	**-0.7**
	baz=198							
O51A	**Pataskala**	**27.62**	**14**	P		**P**	**02 34 12.2**	**-0.7**
	baz=198							
P54A	**Burton**	**27.69**	**18**	P		**P**	**02 34 12.6**	**-1.0**
	baz=203							
O52A	**Adamsville**	**27.78**	**16**	P		**P**	**02 34 13.9**	**-0.5**
	baz=200							
N48A	**Decatur**	**27.80**	**10**	P		**P**	**02 34 13.2**	**-1.2**
	baz=193							
S22A	**4UR Ranch, Cre**	**27.82**	**333**	P		**P**	**02 34 15.3**	**+0.2**
	baz=146							
P56A	**Dayton Farm, R**	**28.13**	**21**	P		**P**	**02 34 17.7**	**+0.3**
	baz=206							
MVCO	**Mesa Verde**	**28.17**	**330**	P		**P**	**02 34 19.3**	**+1.3**
	baz=142,SNR=7.4							
MVCO	**Mesa Verde**	**28.17**	**330**	P		**P**	**02 34 18.4**	**+0.3**
MVCO				IAmb		IAmb	02 34 20.7	
	comp=Z,8.0nm,0.8s							
WUAZ	**Wupatki**	**28.42**	**324**	P		**P**	**02 34 22.2**	**+2.0**
	baz=135,SNR=7.8							
WUAZ	**Wupatki**	**28.42**	**324**	IAmb		IAmb	02 34 26.7	
	comp=Z,7.7nm,0.9s							
N52A	**McGinn's Farm,**	**28.48**	**15**	P		**P**	**02 34 20.2**	**-0.4**
	baz=200							
O56A	**Blue Knob Stat**	**28.91**	**20**	P		**P**	**02 34 23.2**	**-1.3**
	baz=206							
PV13	**Radium Mtn., P**	**29.07**	**331**	IAmb		IAmb	02 34 28.9	
	comp=Z,8.6nm,1.1s							
N54A	**Moraine State**	**29.09**	**18**	P		**P**	**02 34 25.0**	**-1.0**
	baz=203							
PV12	**Saucer Basin,**	**29.19**	**331**	IAmb		IAmb	02 34 29.9	
	comp=Z,8.4nm,0.7s							
PDMCI	**Parker Dam,Lak**	**29.28**	**319**	P		**P**	**02 34 29.2**	**+1.5**
	baz=129							
PV04	**Paradox Valley**	**29.30**	**331**	IAmb		IAmb	02 34 30.7	
	comp=Z,6.8nm,0.8s							
JFWS	**Jewell Farm**	**29.32**	**2**	P		**P**	**02 34 28.4**	**+0.4**
	baz=182							
M53A	**WI Miller and**	**29.33**	**16**	P		**P**	**02 34 27.8**	**-0.4**
	baz=201							
K47A	**Vermontville**	**29.57**	**9**	P		**P**	**02 34 29.1**	**-1.1**
	baz=192							
N56A	**West Decatur**	**29.58**	**20**	P		**P**	**02 34 30.1**	**-0.3**
	baz=206							
M54A	**Oil Creek Stat**	**29.68**	**18**	P		**P**	**02 34 31.3**	**0.0**
	baz=203							
K48A	**Perry**	**29.85**	**11**	P		**P**	**02 34 31.4**	**-1.2**
	baz=194							
M56A	**Emporium**	**30.13**	**20**	P		**P**	**02 34 33.9**	**-1.3**
	baz=206							
KNB	**Kanab**	**30.30**	**324**	P		**P**	**02 34 36.6**	**-0.4**
M57A	**Sunshine Farm,**	**30.36**	**21**	P		**P**	**02 34 37.5**	**+0.2**
	baz=208							
ECSD	**EROS Data Cent**	**30.47**	**352**	P		**P**	**02 34 38.6**	**+0.4**
	baz=170							
J49A	**Marlette**	**30.57**	**12**	P		**P**	**02 34 38.1**	**-0.9**
	baz=196							
J52A	**Paris**	**31.07**	**15**	P		**P**	**02 34 42.7**	**-0.7**
	baz=201							
I48A	**Sherman Twp**	**31.26**	**11**	P		**P**	**02 34 43.7**	**-1.4**
	baz=194							
I51A	**Listowel**	**31.46**	**14**	P		**P**	**02 34 45.7**	**-1.2**
	baz=199							
K56A	**Middlesex**	**31.50**	**20**	P		**P**	**02 34 46.5**	**-0.8**
	baz=207							
L59A	**Walton**	**31.87**	**23**	P		**P**	**02 34 50.5**	**-0.1**
	baz=211							
K58A	**Earlville**	**32.14**	**22**	P		**P**	**02 34 53.6**	**+0.7**
	baz=210							
J56A	**Wolcott**	**32.17**	**20**	P		**P**	**02 34 52.1**	**-1.0**
	baz=207							
F45A	**CMU Biological**	**32.45**	**8**	P		**P**	**02 34 53.9**	**-1.6**
	baz=190							
H52A	**Wyevale**	**32.53**	**15**	P		**P**	**02 34 55.3**	**-0.9**
	baz=201							
J57A	**Williamstown**	**32.58**	**21**	P		**P**	**02 34 55.7**	**-1.0**
	baz=208							
I55A	**Frankford**	**32.75**	**18**	P		**P**	**

	baz=205							
D55A	**Sainte-Anne-du**	**35.95**	**19**	P		**P**	**02 35 24.1**	**-1.8**
	baz=207							
D56A	**ZEC Mazanza, M**	**36.20**	**19**	P		**P**	**02 35 27.0**	**-1.1**
	baz=208							
F60A	**Warwick**	**36.26**	**23**	P		**P**	**02 35 27.4**	**-1.1**
	baz=213							
D57A	**Chemin Vers le**	**36.46**	**20**	P		**P**	**02 35 29.2**	**-1.1**
	baz=209							
MFID	**Camas Ranch**	**36.51**	**329**	IAmb		IAmb	02 35 38.4	
	comp=Z,6.9nm,1.1s							
DLMT	**Dillon**	**36.53**	**335**	IAmb		IAmb	02 35 34.1	
	comp=Z,5.8nm,1.0s							
BEKR	**Beckworth**	**36.62**	**321**	IAmb		IAmb	02 35 34.9	
	comp=Z,5.0nm,1.1s							
ULM	**Lac du Bonnet**	**36.83**	**355**	P		**P**	**02 35 31.5**	**-1.9**
	comp=Z,1.8nm,0.5s,baz=171,slow=10,SNR=3.9							
ULM	**Lac du Bonnet**	**36.83**	**355**	IAmb		IAmb	02 35 32.3	
	comp=Z,3.9nm,0.6s							
D58A	**Chemin du LacG**	**36.87**	**21**	P		**P**	**02 35 32.4**	**-1.4**
	baz=211							
LATQ	**La Tuque**	**37.15**	**21**	P		**P**	**02 35 35.1**	**-1.1**
	baz=211							
LSQQ	**Lebel-sur-Quev**	**37.37**	**16**	P		**P**	**02 35 36.7**	**-1.3**
	baz=203							
G65A	**Princeton**	**37.47**	**28**	P		**P**	**02 35 37.7**	**-1.2**
	baz=220							
MATQ	**Matagami**	**37.85**	**14**	P		**P**	**02 35 40.7**	**-1.3**
	baz=202							
MOD	**Modoc Plateau**	**37.86**	**324**	IAmb		IAmb	02 35 46.6	
	comp=Z,5.0nm,0.9s							
MSO	**Missoula**	**38.27**	**335**	P		**P**	**02 35 46.3**	**+0.6**
	baz=143							
MSO	**Missoula**	**38.27**	**335**	IAmb		IAmb	02 35 47.9	
	comp=Z,11nm,1.5s							
BMO	**Blue Mountains**	**38.29**	**330**	P		**P**	**02 35 45.9**	**0.0**
BMO				IAmb		IAmb	02 35 49.2	
	comp=Z,3.9nm,0.9s							
D63A	**Stockholm**	**38.66**	**26**	P		**P**	**02 35 47.7**	**-1.2**
	baz=218							
I07A	**Izee**	**38.86**	**327**	IAmb		IAmb	02 35 54.3	
	comp=Z,9.0nm,0.9s							
J04D	**Umpqua Nationa**	**39.74**	**324**	P		**P**	**02 36 01.6**	**+3.3**
	baz=129							
I05D	**Terrebonne, OR**	**40.02**	**326**	P		**P**	**02 36 02.1**	**+1.8**
	baz=131							
I04A	**Tendick Farm,**	**40.26**	**325**	P		**P**	**02 36 03.1**	**+0.8**
	baz=129							
G05D	**Wamic, OR**	**40.60**	**327**	P		**P**	**02 36 07.7**	**+2.6**
	baz=131							
H04A	**Detroit Lake**	**40.70**	**326**	P		**P**	**02 36 06.1**	**+0.1**
I03D	**Drain, OR**	**40.73**	**324**	P		**P**	**02 36 08.8**	**+2.6**
	baz=128							
NEW	**Newport**	**40.74**	**334**	P		**P**	**02 36 06.7**	**+0.4**
	comp=Z,3.5nm,0.7s,baz=133,slow=12							
NEW	**Newport**	**40.74**	**334**	P		**P**	**02 36 08.6**	**+2.4**
	baz=139							
NEW	**Newport**	**40.74**	**334**	IAmb		IAmb	02 36 11.6	
	comp=Z,3.8nm,0.8s							
C09A	**Chrisman Ranch**	**40.90**	**332**	P		**P**	**02 36 07.5**	**0.0**
F05D	**White Salmon**	**41.10**	**328**	P		**P**	**02 36 11.8**	**+2.6**
	baz=132							
G03D	**McMinnville, O**	**41.63**	**326**	P		**P**	**02 36 15.6**	**+2.1**
	baz=129							
LTY	**Liberty**	**41.64**	**330**	IAmb		IAmb	02 36 16.8	
	comp=Z,4.0nm,0.6s							
SIV	**San Ignacio**	**41.86**	**133**	P		**P**	**02 36 16.4**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=321,slow=9.1,SNR=8.7							
LON	**Longmire**	**41.86**	**328**	P		**P**	**02 36 16.9**	**+1.4**
LON				IAmb		IAmb	02 36 19.7	
	comp=Z,9.0nm,0.9s							
D03D	**Eldon**	**43.04**	**328**	P		**P**	**02 36 26.8**	**+1.9**
	baz=131							
A04D	**Lummi Island**	**43.64**	**330**	P		**P**	**02 36 31.4**	**+1.7**
	baz=133							
SCHQ	**Schefferville**	**45.45**	**20**	P		**P**	**02 36 41.8**	**-2.4**
	comp=Z,11nm,0.9s,baz=207,slow=5.3,SNR=14							
SCHQ	**Schefferville**	**45.45**	**20**	IAmb		IAmb	02 36 43.2	
	comp=Z,11nm,0.9s							
YKA	**Yellowknife Ar**	**51.66**	**346**	P		**P**	**02 37 30.9**	**-0.9**
	comp=Z,3.5nm,0.7s,baz=150,slow=7.8,SNR=76							
DLBC	**Dease Lake**	**53.38**	**336**	P		**P**	**02 37 46.1**	**+1.4**
	comp=Z,9.0nm,0.8s,baz=138,slow=4.2,SNR=21							
RAGM	**Ragged Mountai**	**60.69**	**333**	P		**P**	**02 38 38.0**	**+1.7**
EPYK	**Eagle Plains**	**60.82**	**341**	P		**P**	**02 38 36.9**	**-0.3**
	baz=127							
INK	**Inuvik**	**61.10**	**343**	P		**P**	**02 38 38.2**	**-0.8**
	comp=Z,3.3nm,0.7s,baz=129,slow=7.7,SNR=18							
INK	**Inuvik**	**61.10**	**343**	IAmb		IAmb	02 38 39.4	
	comp=Z,3.9nm,0.8s							
RES	**Resolute Bay**	**61.20**	**359**	P		**P**	**02 38 37.7**	**-1.9**
	comp=Z,2.5nm,0.7s,baz=264,slow=8.6,SNR=4.1							
DOT	**Dot Lake**	**61.94**	**336**	IAmb		IAmb	02 38 46.4	
	comp=Z,4.4nm,0.9s							
RIDG	**Independent Ri**	**62.30**	**336**	IAmb		IAmb	02 38 48.8	
	comp=Z,4.4nm,0.9s							
PRP	**Porcupine Dome**	**63.39**	**338**	IAmb		IAmb	02 38 56.0	
	comp=Z,3.1nm,0.8s							
HDA	**Harding Lake**	**63.42**	**336**	P		**P**	**02 38 54.3**	**-0.3**
	baz=116							
IL31		**63.56**	**337**	IAmb		IAmb	02 38 57.0	
	comp=Z,3.5nm,0.8s							
ILAR	**Eielson Array**	**63.56**	**337**	P		**P**	**02 38 55.2**	**-0.3**
	comp=Z,3.3nm,0.9s,baz=124,slow=4.8,SNR=27							
RND	**Reindeer**	**63.76**	**335**	P		**P**	**02 38 56.7**	**-0.3**
CCB	**Clear Creek Bu**	**63.86**	**336**	IAmb		IAmb	02 39 06.5	
	comp=Z,4.2nm,1.3s							
WRH	**Wood River Hil**	**63.90**	**336**	IAmb		IAmb	02 38 58.9	
	comp=Z,3.7nm,1.0s							
BPAW	**Bear Paw Mtn.**	**64.91**	**335**	P		**P**	**02 39 03.4**	**-1.0**
TOLK	**Toolik Lake Re**	**66.22**	**340**	P		**P**	**02 39 12.2**	**-0.6**
	baz=115							
TTA	**Tatalina**	**66.64**	**333**	P		**P**	**02 39 14.6**	**-1.1**
ARCES	**ARCESS Array B**	**86.39**	**18**	P		**P**	**02 41 04.5**	**-2.7**
	comp=Z,0.6nm,0.6s,baz=292,slow=5.6,SNR=2.6							
LZH	**Lanzhou**	**128.64**	**344**	*e*PKP		**PKiKP**	**02 47 36.3**	**+2.6**
LZH				pPKP		pPKPdf	02 47 44.5	+1.9
LZH				sPKP			02 47 48.3	
CMAR	**Chiang Mai Arr**	**146.67**	**342**	PKPbc		**PKPdf**	**02 48 07.3**	**+1.1**
	comp=Z,6.3nm,0.9s,baz=335,slow=5.1,SNR=23							

*IDC **30** 02:29:52.2±5.1, 13°.93N×90°.68W, h96km±42km, mb3.6/9, mb1 3.9/11, mb1mx3.6/44, mbtmp4.0/11, Error ellipse: s-maj=51.4km s-min=21.9km az=49.0*

ISC 30 02:29:49.1±1.2, 13°.7N±0°.2×90°.9W±0°.2, h73km, n13, σ0§90/13, mb4.0/9, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**5.12**	**311**	S	Sn	02 31 51.7	-9.4
	baz=20,slow=22,SNR=1.3						
TEIG	**Tepich**	**6.90**	**21**	P	**Pn**	**02 31 28.9**	**+1.2**
	2.4nm,0.3s,baz=138,slow=19,SNR=1.6						
TXAR	**Lajitas Array**	**19.54**	**325**	P	**P**	**02 34 10.9**	**-0.1**
	0.1nm,0.3s,baz=151,slow=11,SNR=4.9						
ANMO	**Albuquerque**	**25.38**	**329**	P	**P**	**02 35 09.8**	**-0.1**
	1.6nm,0.7s,baz=157,slow=12,SNR=2.0						
PDAR	**Pinedale Array**	**33.12**	**334**	P	**P**	**02 36 18.8**	**+0.3**
	0.5nm,0.6s,baz=147,slow=12,SNR=1.8						
NVAR	**Mina Array Bea**	**34.57**	**320**	P	**P**	**02 36 32.1**	**+0.9**
	2.3nm,0.8s,baz=134,slow=6.5,SNR=4.7						
NVAR				PcP	**PcP**	**02 39 04.7**	**+0.2**
	0.6nm,0.8s,baz=106,slow=3.2,SNR=2.4						
SIV	**San Ignacio**	**41.71**	**134**	P	**P**	**02 37 31.5**	**+0.3**
	0.9nm,0.6s,baz=324,slow=11,SNR=4.0						
SCHQ	**Schefferville**	**45.09**	**19**	P	**P**	**02 37 56.4**	**-1.4**
	3.2nm,0.9s,baz=261,slow=2.5,SNR=3.8						
YKA	**Yellowknife Ar**	**51.54**	**346**	P	**P**	**02 38 46.1**	**-1.2**
	1.2nm,0.7s,baz=149,slow=7.9,SNR=7.1						
DLBC	**Dease Lake**	**53.34**	**336**	P	**P**	**02 39 01.7**	**+0.8**
	4.7nm,0.8s,baz=130,slow=9.2,SNR=5.5						
INK	**Inuvik**	**61.00**	**343**	P	**P**	**02 39 53.6**	**-0.9**
	1.2nm,0.8s,baz=102,slow=10,SNR=3.3						
ILAR	**Eielson Array**	**63.52**	**337**	P	**P**	**02 40 10.9**	**-0.6**
	1.0nm,0.9s,baz=123,slow=6.6,SNR=4.1						
CMAR	**Chiang Mai Arr**	**146.58**	**343**	PKPbc	**PKPbc**	**02 49 23.7**	**+0.5**
	1.1nm,0.3s,baz=3.7,slow=3.0,SNR=4.7						

*IDC **30** 02:34:16.4±1.6, 10°.29N×126°.68E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/59, mbtmp3.7/7, MS3.9/1, Ms1 3.9/1, ms1mx3.1/39, Error ellipse: s-maj=169.9km s-min=21.2km az=70.0*

*MAN **30** 02:34:25.1, 10°.01N×126°.10E, h17km, mb4.7, ML3.6, MS3.4*

ISC 30 02:34:17.2±1.8, 9°.99N±0°.04×126°.27E±0°.07, h5km±11km, n24, σ1§62/25, mb3.8/7, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.79**	**255**	*i*P	**Pn**	**02 34 37.6**	**+2.6**
SCPH				*i* S	**Sn**	**02 34 46.0**	**-1.3**
MSLP	**Maasin**	**1.40**	**276**	*e*P	**Pg**	**02 34 47.0**	**+3.0**
MSLP				*e*S	**Sg**	**02 35 04.1**	**+2.0**
CGP	**Cagayan de Oro**	**2.17**	**226**	*e*P	**Pg**	**02 34 58.5**	**-0.4**
CGP				*e*S	**Sg**	**02 35 25.6**	**-1.6**
LLP	**Lapu-Lapu**	**2.29**	**278**	*e*P	**Pg**	**02 35 00.8**	**-0.4**
LLP				*e*S	**Sn**	**02 35 23.6**	**-0.6**
BUKP	**Musuan**	**2.41**	**210**	*e*P	**Pg**	**02 35 03.3**	**-0.1**
BUKP				*e*S	**Sb**	**02 35 32.0**	**+0.8**
CNP	**Catarman**	**2.96**	**328**	*e*P	**Pb**	**02 35 10.2**	**-0.3**
CNP				*e*S	**Sg**	**02 35 49.9**	**-2.6**
KCP	**Kidapawan**	**3.18**	**202**	*i*P	**Pb**	**02 35 14.4**	**+0.2**
KCP				*i* S	**Sb**	**02 35 52.0**	**-1.4**
PAGZ	**Pagadian**	**3.56**	**234**	*e*P	**Pb**	**02 35 18.8**	**-1.9**
RCP	**Roxas**	**3.80**	**295**	*e*P	**Pb**	**02 35 22.1**	**-2.7**
DDMP	**Don Marcelino,**	**3.90**	**188**	*e*P	**Pb**	**02 35 25.0**	**-1.5**
DDMP				*e*S	**Sb**	**02 36 13.5**	**-0.5**
BATI	**Baumata**	**20.23**	**187**	LR	LR	02 47 05.4	
	comp=Z,339nm,19.6s,baz=164,slow=37						
WRA	**Warramunga Arr**	**30.78**	**165**	P	**P**	**02 40 35.7**	**+1.7**
	0.7nm,0.9s,baz=344,slow=9.4,SNR=2.5						
ASAR	**Alice Springs**	**34.27**	**168**	P	**P**	**02 41 06.3**	**+1.8**
	0.3nm,0.3s,baz=345,slow=7.0,SNR=4.2						
H11S3	**WAKE ISLAND Hy**	**40.00**	**73**	T	T	03 24 51.3	
	baz=262,slow=75						
H11S1	**WAKE ISLAND Hy**	**40.02**	**73**	T	T	03 24 54.4	
	baz=262,slow=75						
H11S2	**WAKE ISLAND Hy**	**40.02**	**73**	T	T	03 24 55.6	
	baz=262,slow=75						
H11N1	**WAKE ISLAND Hy**	**40.35**	**71**	T	T	03 25 16.8	
	baz=265,slow=74						
H11N2	**WAKE ISLAND Hy**	**40.35**	**71**	T	T	03 25 19.6	
	baz=265,slow=74						
H11N3	**WAKE ISLAND Hy**	**40.37**	**71**	T	T	03 25 17.5	
	baz=265,slow=74						
SONM	**Songino Array**	**41.28**	**340**	P	**P**	**02 42 03.1**	**-0.6**
	0.3nm,0.6s,baz=148,slow=12,SNR=2.4						
MKAR	**Makanchi Array**	**52.25**	**323**	P	**P**	**02 43 29.5**	**0.0**
	0.9nm,0.7s,baz=119,slow=8.9,SNR=7.4						
KURBB	**Kurchatov Arra**	**56.30**	**325**	P	**P**	**02 43 58.6**	**-0.3**
	0.9nm,0.7s,baz=125,slow=6.8,SNR=9.3						
ARCES	**ARCESS Array B**	**84.46**	**340**	P	**P**	**02 46 49.5**	**-1.2**
	0.4nm,0.5s,baz=82,slow=6.5,SNR=5.2						
FINES	**FINESS Array B**	**86.14**	**332**	P	**P**	**02 46 59.0**	**-0.2**
	0.5nm,0.4s,baz=76,slow=5.9,SNR=10						

*IDC **30** 02:38:57.3±1.8, 5°.87S×151°.13E, h78km±13km, mb3.6/6, mb1 3.9/7, mb1mx3.5/40, mbtmp3.9/7, MS3.9/1, Ms1 3.9/1, ms1mx3.1/38, Error ellipse: s-maj=70.5km s-min=9.3km az=128.0*

*NEIC **30** 02:38:58.5±2.4, 6°.1S±0°.3×151°.3E±0°.3, h96km±12km, mb4.2/3, Error ellipse: s-maj=53.6km s-min=11.0km az=134.0*

ISC 30 02:38:58.9±1.1, 5°.8S±0°.2×151°.0E±0°.2, h100km, n17, σ1§55/16, mb3.7/9, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.77**	**36**	P	**Pn**	**02 39 26.0**	**-2.5**
	63nm,0.3s,baz=189,slow=4.0,SNR=19						
KRVT				S	**Sn**	**02 39 48.9**	**-2.1**
	69nm,0.3s,baz=250,slow=12,SNR=6.4						
RABL	**Rabaul**	**1.94**	**37**		**Pn**	**02 39 32.1**	**+1.3**
PMG	**Port Moresby**	**5.26**	**226**	P	**Pn**	**02 40 13.6**	**-1.5**
	5.2nm,0.3s,baz=36,slow=8.7,SNR=3.1						
PMG				S	**Sn**	**02 41 13.1**	**-1.4**
	5.3nm,0.3s,baz=9.3,slow=2.1,SNR=3.8						
PMG	**Port Moresby**	**5.26**	**226**		**Sn**	**02 41 13.8**	**-0.7**
WRA	**Warramunga Arr**	**21.48**	**227**	P	**P**	**02 43 39.6**	**0.0**
	1.6nm,0.5s,baz=52,slow=10,SNR=5.2						
AS31	**Alice Springs**	**24.25**	**221**	P	**P**	**02 44 06.7**	**-0.1**
AS31				IAmb	IAmb	02 44 09.3	
	comp=Z,1.3nm,0.5s						
ASAR	**Alice Springs**	**24.25**	**221**	P	**P**	**02 44 07.8**	**+1.1**
	comp=Z,2.5nm,0.5s,baz=54,slow=9.3,SNR=21						
FITZ	**Fitzroy Crossi**	**27.63**	**241**	P	**P**	**02 44 38.8**	**+1.6**
	comp=Z,2.5nm,0.5s,baz=47,slow=7.7,SNR=14						
FITZ	**Fitzroy Crossi**	**27.63**	**241**	IAmb	IAmb	02 45 06.7	
	comp=Z,18nm,1.6s						
NJ2	**Nanjing**	**48.48**	**323**	*e*P	**P**	**02 47 30.3**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLR	**Kul'dur**	**57.27**	**345**	LR	LR	03 10 32.3	
	comp=Z,102nm,21.8s,baz=305,slow=33						
KURK	**Kurchatov**	**83.42**	**322**	P	**P**	**02 51 17.1**	**+2.0**
KURK	**Kurchatov**	**83.42**	**322**	IAmb	IAmb	02 54 09.7	
	comp=Z,4.9nm,1.5s						
KURBB	**Kurchatov Arra**	**83.44**	**322**	P	**P**	**02 51 17.1**	**+1.8**
	comp=Z,0.2nm,0.6s,baz=76,slow=3.9,SNR=2.3						
ILAR	**Eielson Array**	**83.72**	**22**	P	**P**	**02 51 16.8**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=235,slow=4.9,SNR=5.7						
YKA	**Yellowknife Ar**	**97.10**	**28**	P	**P**	**02 52 19.1**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=264,slow=5.2,SNR=4.3						
TORD	**Torodi Ar. Bea**	**148.86**	**286**	PKPbc	**PKiKP**	**02 58 38.3**	**+0.9**
	comp=Z,2.1nm,0.6s,baz=85,slow=2.6,SNR=18						

*ISK **30** 02:46:20.9, 38°.93N×43°.69E, h4km, ML2.1/7*

*ATA **30** 02:46:21.4±1.2, 38°.96N×43°.62E, h2km±10km, ML1.6, MW2.7*

*DDA **30** 02:46:22.2, 38°.95N×43°.71E, h7km±3km, ML1.8*

ISC 30 02:46:21.6±0.9, 38°.93N±0°.02×43°.73E±0°.04, h12km±7km, n23, σ0§93/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMUR	**Van-Muradiye**	**0.14**	**298**	*i*P	**Pg**	**02 46 24.6**	**-0.5**
VMUR				*i* S	**Sg**	**02 46 28.0**	**+0.4**
VMUR				IAML		02 46 29.0	
	comp=E,1μm,0.3s						
VMUR				IAML		02 46 29.0	
	comp=N,978nm,0.2s						
CLDR	**Caldiran**	**0.26**	**34**	PG	**Pg**	**02 46 27.0**	**-0.2**
CLDR				SG	**Sg**	**02 46 31.6**	**+0.6**
CLDR	**Caldiran**	**0.26**	**34**	*i*P	**Pg**	**02 46 26.9**	**-0.3**
CLDR				*i* S	**Sg**	**02 46 31.7**	**+0.8**
CLDR				IAML		02 46 33.0	
	comp=E,128nm,0.4s						
VANB	**Van**	**0.42**	**219**	PG	**Pb**	**02 46 30.9**	**-0.2**
TVAN	**Van**	**0.47**	**212**	*e*P	**Pb**	**02 46 31.5**	**-0.5**
TVAN				*e*S	**Sg**	**02 46 39.2**	**+2.0**
TVAN				IAML		02 46 52.5	
	comp=Z,53nm,0.7s						
TVAN	**Van**	**0.47**	**212**	*i*P	**Pb**	**02 46 31.6**	**-0.3**
TVAN				*i* S	**Sb**	**02 46 40.1**	**+1.2**
TVAN				IAML		02 46 41.0	
	comp=N,97nm,0.5s						
TVAN				IAML		02 46 41.0	
	comp=E,111nm,0.4s						
DYDN	**Diyadin**	**0.62**	**357**	*e*P	**Pb**	**02 46 33.2**	**-1.3**
DYDN				*e*S	**Sb**	**02 46 43.1**	**-0.2**
DYDN				IAML		02 46 51.0	
	comp=Z,34nm,0.5s						
DYDN	**Diyadin**	**0.62**	**357**	*i*P	**Pb**	**02 46 33.6**	**-0.9**
DYDN				*i* S	**Sb**	**02 46 43.2**	**0.0**
DYDN				IAML		02 46 44.0	
	comp=E,40nm,0.2s						
DYDN				IAML		02 46 44.0	
	comp=N,54nm,0.2s						
GEVA	**Gevas**	**0.81**	**221**	*e*P	**Pg**	**02 46 36.9**	**-0.3**
GEVA				*e*S	**Sg**	**02 46 49.6**	**+1.9**
GEVA				IAML		02 47 01.4	
	comp=Z,14nm,0.9s						
AKDM	**Akdamar-Van**	**0.83**	**225**	PG	**Pg**	**02 46 36.4**	**-1.4**
TUTA	**Tutak**	**0.85**	**304**	*e*P	**Pg**	**02 46 37.6**	**-0.6**
TUTA				*e*S	**Sg**	**02 46 48.4**	**-1.0**
TUTA				IAML		02 46 52.8	
	comp=Z,30nm,0.2s						
TUTA	**Tutak**	**0.85**	**304**	*i*P	**Pg**	**02 46 37.8**	**-0.3**
TUTA				IAML		02 46 50.0	
	comp=N,44nm,0.3s						
TUTA				*i* S	**Sg**	**02 46 50.0**	**+0.7**
AGRB	**Hanur-Agry**	**0.86**	**319**	PG	**Pg**	**02 46 37.8**	**-0.5**
AGRB				SG	**Sg**	**02 46 49.8**	**+0.1**
IGDI	**IGDIR**	**0.98**	**16**	*e*P	**Pn**	**02 46 40.7**	**-0.6**
IGDI				*e*S	**Sn**	**02 46 55.8**	**+0.7**
IGDI				IAML		02 47 02.7	
	comp=Z,3.7nm,0.5s						
IGDI	**IGDIR**	**0.98**	**16**	*i* P	**Pn**	**02 46 42.1**	**+0.8**
TASB	**TASBURUN-IGDIR**	**1.13**	**20**	PN	**Pn**	**02 46 43.1**	**-0.2**
EATA	**Eleskirt**	**1.34**	**315**	*e*P	**Pn**	**02 46 46.4**	**-0.1**
EATA				*e*S	**Sg**	**02 47 06.5**	**+1.7**
BLIS	**Bitlis-Merkez**	**1.36**	**248**	*e*P	**Pn**	**02 46 46.4**	**-0.2**
BLIS	**Bitlis-Merkez**	**1.36**	**248**	*i* P	**Pn**	**02 46 46.8**	**+0.2**
GURO	**Guroymak-BITLI**	**1.38**	**255**	PN	**Pn**	**02 46 47.0**	**+0.2**
CUKT	**Cukurca**	**1.68**	**183**	PN	**Pg**	**02 46 51.8**	**-2.0**
EAK	**Akyaka**	**1.76**	**357**	*e*P	**Pg**	**02 46 56.4**	**+1.0**
HOMI	**Horasan**	**1.80**	**309**	*e*P	**Pg**	**02 46 55.5**	**-0.6**

*IDC **30** 02:52:21.6±2.1, 24°.94N×97°.83E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/49, mbtmp3.6/4, MS3.9/1, Ms1 3.9/1, ms1mx3.1/46, Error ellipse: s-maj=89.0km s-min=29.4km az=64.0*

*NEIC **30** 02:52:23.2±1.1, 24°.95N±0°.08×98°.1E±0°.3, h10km±1km, mb4.1/5, Error ellipse: s-maj=42.7km s-min=8.1km az=254.0*

*BJI **30** 02:52:24.2±0.0, 25°.05N×97°.84E, h11km, ML3.7/4*

ISC 30 02:52:23.2±1.0, 24°.9N±0°.1×98°.1E±0°.3, h10km, n14, σ1§26/12, mb3.9/7, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHTO	**Chiang Mai**	**6.14**	**172**		**Pn**	**02 53 52.4**	**-1.7**
CM31	**Chiang Mai Arr**	**6.50**	**173**	Pn	**Pn**	**02 53 59.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**6.50**	**173**	Lg	Lg	02 55 51.0	
	0.2nm,0.3s,baz=315,slow=55,SNR=1.6						
WMQ	**Urumqi**	**20.67**	**338**	*e*P	**P**	**02 57 00.8**	**-2.4**
PSI	**Prapat**	**22.02**	**178**	LR	LR	03 07 01.0	
	comp=Z,317nm,20.3s,baz=270,slow=40						
SONM	**Songino Array**	**23.79**	**14**	P	**P**	**02 57 36.4**	**+0.3**
	0.7nm,0.8s,baz=189,slow=8.0,SNR=3.9						
MK31	**Makanchi Array**	**25.20**	**334**	P	**P**	**02 57 48.7**	**-0.2**
MKAR	**Makanchi Array**	**25.20**	**334**	P	**P**	**02 57 48.6**	**-0.3**
	0.9nm,0.6s,baz=141,slow=8.4,SNR=5.7						
BOOM	**Boomskoye usch**	**25.29**	**319**	P	**P**	**02 57 50.3**	**+0.3**
BOOM				IAmb	IAmb	02 57 53.0	
	comp=Z,6.4nm,1.1s						
MAKZ	**Makanchi**	**25.33**	**334**	P	**P**	**02 57 49.7**	**-0.5**
MAKZ				IAmb	IAmb	02 57 53.6	
	comp=Z,3.9nm,1.1s						
AAK	**Ala-Archa**	**26.24**	**318**	P	**P**	**02 57 58.7**	**0.0**
AAK				IAmb	IAmb	02 58 01.0	
	comp=Z,3.8nm,1.1s						
KBL	**Kabul**	**26.89**	**298**	P	**P**	**02 58 05.5**	**+0.9**
ZALV	**Zalesovo Beam**	**30.63**	**345**	P	**P**	**02 58 35.6**	**-1.8**
	comp=Z,0.7nm,0.3s,baz=170,slow=8.8,SNR=2.5						
WRA	**Warramunga Arr**	**56.87**	**138**	P	**P**	**03 02 09.5**	**+1.1**
	comp=Z,0.8nm,1.0s,baz=313,slow=10.0,SNR=1.9						

*IDC **30** 03:05:13.9±1.3, 8°.19S×119°.03E, h0km, mb3.8/5, mb1 4.0/9, mb1mx3.8/42, mbtmp3.9/9, ML3.6/4, MS3.4/8, Ms1 3.5/8, ms1mx3.3/42, Error ellipse: s-maj=58.1km s-min=17.0km az=58.0*

*DJA **30** 03:05:16.6±0.3, 8°.3S±3°×11°.9E±°, h10km, M4.4/8, MLv4.4/8*

*NEIC **30** 03:05:20.0±2.0, 8°.08S±0°.07×119°.20E±0°.08, h45km±9km, mb4.2/7, Error ellipse: s-maj=12.7km s-min=8.1km az=58.0*

ISC 30 03:05:18.6±0.7, 8°.17S±0°.04×119°.09E±0°.05, h34km, n37, σ1§86/37, mb4.2/6, MS3.5/3, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**1.46**	**243**	P	**Pn**	**03 05 41.2**	**-1.4**
WBSI	**Waikabubak, Su**	**1.50**	**169**	P	**Pn**	**03 05 41.5**	**-1.6**
WBSI				S	**Sn**	**03 06 01.3**	**-0.2**
WSI	**Waingapu**	**1.91**	**142**	P	**Pn**	**03 05 48.5**	**-0.3**
BASI	**Baing, Sumba**	**2.51**	**144**	P	**Pn**	**03 05 59.6**	**+2.5**
EDFI	**Ende, Flores**	**2.63**	**103**	P	**Pn**	**03 05 58.6**	**-0.3**
MMRI	**Maumere**	**3.15**	**99**	P	**Pn**	**03 06 06.7**	**+0.9**
MMRI	**Maumere**	**3.15**	**99**		**Pn**	**03 06 09.2**	**+3.4**
KAPI	**Kappang**	**3.20**	**12**	Pn	**Pn**	**03 06 06.1**	**-0.5**
	3.0nm,0.3s,baz=186,slow=4.3,SNR=19						
KAPI				Sn	**Sn**	**03 06 42.3**	**-1.2**
	5.2nm,0.3s,baz=228,slow=20,SNR=8.6						
KAPI				LR	LR	03 07 24.8	
	comp=Z,125nm,21.2s,baz=84,slow=40						
KAPI	**Kappang**	**3.20**	**12**		**Pn**	**03 06 06.3**	**-0.2**
BNSI	**Bone**	**3

RTR	El Retiro	1.67	79	eP	Pn	03 05 52.5	0.0	
RTR	El Retiro	1.67	79	eP	Pn	03 05 52.5	0.0	
CEVE	Cerro Verde	1.68	82	eP	Pn	03 05 52.6	0.0	
CEVE				eS	Sb	03 06 15.2	-0.9	
CEVE				IAML		03 06 21.2		
	comp=Z,456nm,0.2s							
CEVE	Cerro Verde	1.68	82	eP	Pn	03 05 52.6	0.0	
CEVE				eS	Sb	03 06 15.2	-0.9	
CEVE				IAML		03 06 21.2		
	comp=Z,456nm,0.2s							
SNJE	San Jose	1.70	81	eP	Pn	03 05 52.7	-0.2	
SNJE	San Jose	1.70	81	eP	Pn	03 05 52.7	-0.2	
BOQS	Boqueron	2.00	86	eP	Pn	03 05 57.2	+0.1	
BOQS	Boqueron	2.00	86	eP	Pn	03 05 57.2	+0.1	
MTO3	Montecristo	2.07	67	eP	Pn	03 05 58.9	+0.8	
MTO3				eS	Sb	03 06 26.6	-0.9	
MTO3	Montecristo	2.07	67	eP	Pn	03 05 58.9	+0.8	
MTO3				eS	Sb	03 06 26.6	-0.9	
LFRS	El Faro	2.21	89	eP	Pn	03 06 00.2	+0.4	
LFRS	El Faro	2.21	89	eP	Pn	03 06 00.2	+0.4	

ISC 30 03:05:30.8±2.1, 44°52N±0°.05×17°.5E±0°.1, h10km, n7, σ0§78/13, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGRS	Mrkonjic Grad	0.29	250	ePg	Pg	03 05 36.7	-0.1
MGRS				eSg	Sg	03 05 39.9	-0.8
BLY	Banja Luka	0.31	318	ePg	Pg	03 05 37.1	+0.1
BLY				eSg	Sg	03 05 40.8	-0.3
KIJV	Kijevo	0.92	236	iPg	Pg	03 05 48.1	-0.4
KIJV				Sg	Sg	03 05 59.0	-1.6
RICI	Ricice	1.05	193	ePg	Pn	03 05 51.6	0.0
MORI	Morici	1.43	243	ePg	Pg	03 05 58.9	+0.7
MORI				Sg	Sg	03 06 16.9	+0.3
ZIRJ	Zirje	1.57	237	ePn	Pg	03 06 02.2	+1.2
ZIRJ				Sn	Sb	03 06 21.4	0.0
DUGI	Dugi Otok	1.81	254	ePn	Pb	03 06 03.8	-0.2
DUGI				Sn	Sb	03 06 27.6	+0.7

IDC 30 03:13:43.3±3.4, 4°21S×153°25E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/41, mbtmp3.7/3, Error ellipse: s-maj=149.3km s-min=45.6km az=124.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.17	228	P	P	03 19 02.0	+0.4
	0.6nm,0.3s,baz=53,slow=9.5,SNR=8.8						
ASAR	Alice Springs	26.89	222	P	P	03 19 25.6	-0.6
	0.2nm,0.4s,baz=51,slow=9.6,SNR=1.8						
FITZ	Fitzroy Crossi	30.34	241	P	P	03 19 57.1	+0.2
	1.0nm,0.5s,baz=56,slow=11,SNR=1.5						
TORD	Torodi Ar. Bea	150.55	289	PKPbc	PKPbc	03 33 37.9	-0.4
	0.5nm,0.5s,baz=74,slow=1.9,SNR=14						

IDC 30 03:20:54.2±2.0, 50°.19N×179°.40W, h0km, mb3.7/11, mb1 3.9/11, mb1mx3.7/52, mbtmp3.7/11, Error ellipse: s-maj=53.9km s-min=21.3km az=5.0
AEIC 30 03:20:59.6±1.5, 50°.24N±0°.07×179°.2W±0°.1, h35km±7km, ML3.4/21, Error ellipse: s-maj=12.4km s-min=7.2km az=217.0
NEIC 30 03:20:59.8±1.1, 50°.2N±0°.1×179°.2W±0°.1, h37km±9km, Error ellipse: s-maj=14.8km s-min=13.1km az=185.0
ISC 30 03:20:59.3±1.0, 50°.2N±0°.1×179°.23W±0°.08, h35km, n32, σ1§14/36, mb3.8/11, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALAA	Gareloi Lava P	1.61	10		Pn	03 21 25.5	+0.2
GAEA	Gareloi East	1.63	11		Pn	03 21 25.6	+0.1
GAEA					Sn	03 21 46.0	+0.6
TASE	Tanaga Southea	1.82	24		Pn	03 21 28.8	+0.7
TAPA	Tanaga Point A	1.87	28		Pn	03 21 29.0	+0.2
TAFP	Tanaga Falls P	1.89	24		Pn	03 21 29.6	+0.4
TAFP					Sn	03 21 53.1	+1.4
KIMD	Kanaga Island	2.02	38		Pn	03 21 30.9	0.0
KIMD					Sn	03 21 56.1	+1.1
KIKV	Kanaga Island	2.14	37		Pn	03 21 33.2	+0.6
ADK	Adak	2.34	42		Sn	03 21 59.5	-3.3
ADK	Adak	2.34	42		Pn	03 21 35.5	+0.2
ADAG	Mount Adagdak	2.45	42		Pn	03 21 37.3	+0.6
GSTD	Great Sitkin T	2.70	45		Pn	03 21 41.0	+0.6
GSTD					Sn	03 22 12.6	+0.7
GSMY	Great Sitkin M	2.73	46		Pn	03 21 41.4	+0.7
GSTR	Great Sitkin T	2.77	45		Pn	03 21 42.1	+0.9
ATKA	Atka Island	3.76	55		Pn	03 21 54.5	-0.3
KOWE	Korovin West	3.82	53		Pn	03 21 56.6	+1.0
KOKL	Mount Kliuchef	3.82	54		Pn	03 21 56.4	+0.8
KOFP	Korovin Flat P	3.85	55		Pn	03 21 57.1	+1.0
KDAK	Kodiak Island	17.33	54	P	Pn	03 24 54.2	-3.9
	0.3nm,0.3s,baz=238,slow=9.5,SNR=1.9						
ILAR	Eielson Array	22.36	37	P	P	03 25 53.0	-1.0
	0.3nm,0.5s,baz=242,slow=8.9,SNR=9.8						
EGAK	Eagle	24.64	39	P	P	03 26 16.3	+0.2
YKA	Yellowknife Ar	36.26	45	P	P	03 28 00.2	+1.5
	1.6nm,0.8s,baz=274,slow=7.4,SNR=18						
SONM	Songino Array	46.95	297	P	P	03 29 25.7	-0.8
	0.3nm,0.6s,baz=102,slow=6.1,SNR=1.9						
PDAR	Pinedale Array	46.95	71	P	P	03 29 27.6	+0.9
	0.3nm,0.4s,baz=322,slow=5.7,SNR=2.3						
TXAR	Lajitas Array	59.12	80	P	P	03 30 56.8	+0.4
	0.6nm,0.7s,baz=301,slow=5.3,SNR=9.0						
ARCES	ARCESS Array B	59.23	350	P	P	03 30 56.1	-0.2
	1.1nm,0.8s,baz=29,slow=7.7,SNR=8.8						
KURK	Kurchatov	59.65	314	P	P	03 31 00.2	+0.6
KURBB	Kurchatov Arra	59.76	314	P	P	03 31 00.2	-0.1
	0.6nm,0.6s,baz=39,slow=7.2,SNR=2.6						
MKAR	Makanchi Array	60.57	309	P	P	03 31 05.3	-0.7
	0.4nm,0.7s,baz=42,slow=7.1,SNR=3.5						
FINES	FINESS Array B	66.89	347	P	P	03 31 47.3	0.0
	1.1nm,0.7s,baz=34,slow=10,SNR=6.5						
NB2	NORSAR Subarra	68.81	355	P	P	03 31 59.9	+0.4
	comp=Z,0.5nm,0.7s,baz=5,2,slow=6.2						
NOA	NORSAR Array B	68.81	355	P	P	03 31 59.8	+0.4
	comp=Z,0.8nm,0.7s,baz=11,slow=2.3,SNR=4.1						
AKASG	Malin Array Be	76.60	342	P	P	03 32 45.8	0.0
	comp=Z,0.4nm,0.3s,baz=22,slow=6.1,SNR=5.5						

SJA 30 03:25:29.7±0.7, 40°.13S×73°.18W, h20km, ML4.3, MW4.6
NEIC 30 03:25:31.4±1.9, 40°.37S±0°.04×72°.5W±0°.2, h94km±6km, Error ellipse: s-maj=18.4km s-min=6.4km az=86.0
GUC 30 03:25:32.4±0.8, 40°.41S×72°.64W, h110km±13km, ML4.9
VAO 30 03:25:32.7±1.4, 40°.91S×72°.44W, h123km±6km, mb4.4
IDC 30 03:25:34.2±0.7, 40°.35S×72°.41W, h94km±5km, mb4.0/9, mb1 4.2/11, mb1mx4.0/22, mbtmp4.4/11, Error ellipse: s-maj=14.9km s-min=8.3km az=25.0
ISC 30 03:25:32.6±0.5, 40°.35S±0°.03×72°.67W±0°.06, h99km±4km, n128, σ1§82/145, mb4.5/19, 1C-3D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LC01	Cunco	1.57	23	⇓iP	Pn	03 26 00.7	+1.1
LC01				iS	Sn	03 26 21.7	+1.4
LC01	Cunco	1.57	23		Pn	03 26 00.8	+1.1
LC01					Sn	03 26 21.7	+1.4
PLCA	Paso Flores	1.66	104	P	Pn	03 26 00.1	-0.7
	142nm,0.3s,baz=279,slow=9.4,SNR=3468						
PLCA				S	Sn	03 26 19.4	-2.8
	91nm,0.3s,baz=176,slow=19,SNR=23						
PLCA				LR	LR	03 26 38.1	
	comp=Z,1μm,21.0s,baz=317,slow=44						
PLCA	Paso Flores	1.66	104	⇑iP	Pn	03 26 00.1	-0.7
PLCA				iS	Sn	03 26 20.0	-2.2
PLCA	Paso Flores	1.66	104	eP	Pn	03 26 00.2	-0.6
PLCA				eS	Sn	03 26 20.7	-1.5
LL01	San Ignacio de	2.04	175	iP	Pn	03 26 05.2	-0.3
LL01				iS	Sn	03 26 29.6	-1.0
LL01				IAML		03 26 31.5	
	comp=E,3μm,0.5s						
LL01	San Ignacio de	2.04	175		Pn	03 26 04.5	-0.9
LL01					Sn	03 26 28.3	-2.3
BI04	Isla Mocha	2.15	334	iP	Pn	03 26 09.0	+2.0
BI04				iS	Sn	03 26 34.4	+1.0
BI04				IAML		03 26 36.9	
	comp=E,6μm,0.4s						
CANA	Caviahue	2.76	27	eP	Pn	03 26 17.6	+2.3
CANA				eS	Sn	03 26 40.3	-7.7
CANA				IAML		03 26 43.0	
	comp=Z,585nm,1.2s						
GO07	Milladeo Hill,	2.86	195	⇓iP	Pn	03 26 15.4	-1.0
GO07				iS	Sn	03 26 45.1	-5.0
GO07				IAML		03 26 51.6	
	comp=E,10μm,0.4s						
GO07	Milladeo Hill,	2.86	195	Pn	Pn	03 26 15.0	-1.4
GO07					Sn	03 26 45.3	-4.8
BI03	Tigo	3.51	355	iP	Pn	03 26 26.2	+1.0
BI03	Tigo	3.51	355		Pn	03 26 25.8	+0.6
BI03					Sn	03 27 04.3	-1.5
CCSP	San Pedro de C	3.52	354	iP	Pn	03 26 26.0	+0.8
CCSP				eS	Sn	03 27 04.5	-1.4
BI02	San Fabin de	3.84	17	Pn	Pn	03 26 30.8	+1.2
GO05	Huala	5.36	6		Pn	03 26 50.1	-0.1
GO05	Huala	5.36	6	eP	Pn	03 26 50.4	+0.1
GO05				⇓eS	Sn	03 27 49.8	-0.9
PUMA	Malargue	5.47	29	iP	Pn	03 26 54.6	+2.9
BO02	Sierra Bellavi	5.75	16	Pn	Pn	03 26 55.9	+0.5
LAMA	Las Malvinas	6.06	28	iP	Pn	03 27 01.7	+2.0
MT01	Popeta	6.57	10	Pn	Pn	03 27 05.7	-0.9
MT05	Renca	7.12	13		Pn	03 27 12.8	-1.3
MT02	Curacav	7.18	10		Pn	03 27 12.9	-2.0
PEL	Peldehue	7.37	13		Pn	03 27 15.5	-2.0
PEL	Peldehue	7.37	13	eP	Pn	03 27 16.4	-1.0
ROC1	El Roble	7.48	11		Pn	03 27 17.5	-1.7
ROC1	El Roble	7.48	11	iP	Pn	03 27 18.0	-1.2
ROC1				eS	Sn	03 28 38.5	-4.1
VA03	San Esteban	7.76	13		Pn	03 27 21.8	-1.1
AAGR	Agrelo	7.88	24	iP	Pn	03 27 25.1	+0.6
AAGR				IAML		03 28 10.2	
	comp=Z,52nm,1.6s						
ARCO	CERRO ARCO	8.07	23	iP	Pn	03 27 28.5	+1.3
ARCO				IAML		03 30 23.5	
	comp=Z,30nm,1.5s						
H03S1	Juan Fernandez	8.18	321	T	T	03 34 52.4	
	baz=148,slow=75						
H03S2	Juan Fernandez	8.20	320	T	T	03 34 50.5	
	baz=148,slow=75						
H03S3	Juan Fernandez	8.20	321	T	T	03 34 51.8	
	baz=148,slow=75						
ASAL	Salagasta	8.34	23	eP	Pn	03 27 32.1	+1.5
RTLS	Leoncito	8.96	19	iP	Pn	03 27 38.7	-0.6
RTCV	Cerro Valdivia	9.10	23	iP	Pn	03 27 40.2	-0.9
CO02	Combarbal	9.23	9		Pn	03 27 40.7	-2.2
ZON	Zonda	9.36	21	Pn	Pn	03 27 43.7	-0.9
CO03	El Pedregal	9.63	10	Pn	Pn	03 27 46.5	-1.7
GO04	Tololo Observa	10.27	9		Pn	03 27 55.2	-2.0
CO01	Juntas del Tor	10.56	12		Pn	03 28 00.0	-1.1
AC05	El Transito	11.65	10	Pn	Pn	03 28 13.3	-2.4
AC04	Llanos de Chal	12.19	7	Pn	Pn	03 28 21.4	-1.4
AC02	Maricunga	13.80	13	Pn	Pn	03 28 42.6	-1.7
USHA	Ushuaia	14.76	170	P	Pn	03 28 57.1	+1.0
	comp=Z,3.4nm,0.3s,baz=166,slow=2.3,SNR=6.4						
USHA				S	Sn	03 31 41.0	+2.3
	comp=Z,2.6nm,0.3s,baz=297,slow=0.6,SNR=3.8						
MG01	Puerto William	14.97	169	Pn	Pn	03 28 56.4	-2.4
GO02	Mina Guanaco	15.36	11	Pn	Pn	03 29 03.7	-0.5
GO02				IAmb	IAmb	03 29 09.8	
	comp=E,18nm,0.6s						
PB10	IPOC Station P	16.88	7		Pn	03 29 21.6	-1.2
PB15	IPOC Station P	17.30	10	P	P	03 29 26.8	-1.3
PB06	IPOC Station P	17.79	9	P	P	03 29 32.3	-1.1
LVC	Limon Verde	17.97	11	P	Pn	03 29 37.0	+0.6
	comp=Z,1.1nm,0.3s,baz=247,slow=9.7,SNR=13						
LVC	Limon Verde	17.97	11		P	03 29 34.8	-0.8
LVC	Limon Verde	17.97	11	eP	Pn	03 29 38.6	+2.2
PB04	IPOC Station P	18.09	8	P	P	03 29 36.6	0.0
PB04				IAmb	IAmb	03 29 42.1	
	comp=Z,28nm,0.8s						
PB07	IPOC Station P	18.72	8	P	P	03 29 43.0	-0.6
PB07				IAmb	IAmb	03 29 48.5	
	comp=Z,20nm,0.7s						
PB09	IPOC Station P	18.72	10	P	Pn	03 29 45.1	0.0
PB01	IPOC Station P	19.44	9	P	P	03 29 51.1	-0.2
PB01				IAmb	IAmb	03 29 57.5	
	comp=Z,20nm,0.8s						
PB11	IPOC Station P	20.68	8	P	P	03 30 04.0	-0.9
PSGCX	Pisagua	20.80	7	P	P	03 30 05.0	-1.1
PSGCX				IAmb	IAmb	03 30 14.1	
	comp=Z,21nm,0.9s						
GO01	Chusmiza	20.83	9	P	P	03 30 06.1	-0.7
GO01				IAmb	IAmb	03 30 14.6	
	comp=Z,22nm,0.8s						
MNMC	Minye Minye	21.31	8	P	P	03 30 11.2	-0.5
MNMC				IAmb	IAmb	03 30 19.3	
	comp=Z,25nm,1.0s						
ITAB	Concordia	21.44	59	eP	P	03 30 13.7	+0.9
PB12	IPOC Station P	21.76	6	P	P	03 30 15.2	-1.1
PB12				IAmb	IAmb	03 30 30.0	
	comp=Z,27nm,1.4s						
PTGB	Pitanga	23.25	54	eP	P	03 30 30.6	-0.9
LPAZ	La Paz	24.30	11	P	P	03 30 44.4	+2.8
	comp=Z,14nm,1.0s,baz=173,slow=6.9,SNR=24						
LPAZ	La Paz	24.30	11	P	P	03 30 44.0	+2.5
LPAZ				IAmb	IAmb	03 30 47.8	
	comp=Z,24nm,1.1s						
LPAZ	La Paz	24.30	11	eP	P	03 30 44.2	+2.7
TRCB	Terra Rica	24.35	50	eP	P	03 30 41.6	+0.2
TIJ01	Guaruva-PR	24.79	60	eP	P	03 30 44.9	-0.5
PCMB	Pacaembu	26.07	51	eP	P	03 30 56.2	-0.7
SIV	San Ignacio	26.28	26	P	P	03 30 59.2	+0.3
	comp=Z,7.1nm,0.9s,baz=221,slow=10.0,SNR=17						
PTLB	Pontes e Lacer	27.47	29	eP	P	03 31 11.1	+1.6
ITRB	Iturama	28.08	49	eP	P	03 31 14.5	-0.4
SALV	Santo Antonio	28.49	36	eP	P	03 31 19.8	+1.3
VILB	Vilhena	29.41	25	eP	P	03 31 28.1	+1.4
ARAG	Araguaiana, MT	30.53	42	eP	P	03 31 37.5	+0.9
BSCB	Bom Sucesso	30.58	59	eP	P	03 31 36.5	-0.7
IPMB	Ipameri, GO	30.68	51	eP	P	03 31 37.4	-0.6
SAML	Samuel	32.39	18	P	P	03 31 52.1	-0.8
SAML				IAmb	IAmb	03 31 56.2	
	comp=Z,12nm,1.5s						
SAML	Samuel	32.39	18	eP	P	03 31 54.5	+1.6
BDFB	Brasilia	32.65	48	P	P	03 31 55.0	-0.4
	comp=Z,5.7nm,0.6s,baz=230,slow=5.3,SNR=11						
BDFB	Brasilia	32.65	48	P	P	03 31 52.8	-2.5
CLDB	Colider	32.94	32	eP	P	03 31 57.8	+0.1
MC01	Montes Claros	34.26	55	eP	P	03 32 08.0	-1.3
BSFB	Barra de Sao F	34.72	61	eP	P	03 32 12.3	-0.8
PEXB	Peixe	35.39	44	eP	P	03 32 19.0	+0.1
NPGB	Novo Progresso	36.60	30	eP	P	03 32 30.2	+0.9
SMTB	Santa Maria do	38.49	42	eP	P	03 32 45.2	0.0
MACA	Manacapuru-AM	38.58	19	eP	P	03 32 47.6	+1.8
PRPB	Parauapebas	39.73	37	eP	P	03 32 56.5	+1.0
PTGA	Pitinga	41.09	20	P	P	03 33 07.1	+0.4
PTGA				IAmb	IAmb	03 33 10.5	
	comp=Z,7.2nm,0.8s						
PTGA	Pitinga	41.09	20	eP	P	03 33 08.3	+1.6
MALB	Monte Alegre	41.80	28	eP	P	03 33 13.6	+1.2
VNA3	Neumayer Olymp	43.74	155	P	P	03 33 28.5	+0.9
VNA2	Neumayer--Watz	44.42	155	P	P	03 33 35.5	+2.4
	baz=272,slow=8.9						
SNAA	Sanae	45.96	156	P	P	03 33 46.3	+1.1
SNAA	Sanae	45.96	156	P	P	03 33 44.5	-0.7
SNAA				IAmb	IAmb	03 33 49.7	
	comp=Z,7.8nm,1.1s						
RUSC	La Rusia	46.02	359	P	P	03 33 46.9	+0.1
SDV	Santo Domingo	49.02	3	P	P	03 34 09.9	+0.2
SDV	Santo Domingo	49.02	3	eP	P	03 34 11.8	+2.1
QSPA	South Pole Qui	49.90	180	P	P	03 34 18.0	+2.2
	comp=Z,4.5nm,0.7s,baz=148,slow=1.5,SNR=34						
QSPA				pP	pP	03 34 39.6	+0.2
	comp=Z,4.8nm,0.9s,baz=224,slow=3.9,SNR=5.1						
QSPA	South Pole Qui	49.90	180	P	P	03 34 13.8	-1.9
QSPA				IAmb	IAmb	03 34 19.2	
	comp=Z,3.9nm,0.7s						
ACON	Acoyapa	53.33	345	P	P	03 34 40.0	-1.7
HPIG		73.64	330	P	P	03 36 54.6	-0.9
143A	Socs Landing,	74.73	344	P	P	03 37 00.9	-0.5
TXAR	Lajitas Array	75.07	332	P	P	03 37 06.4	+2.8
	comp=Z,3.2nm,1.1s,baz=153,slow=7.0,SNR=16						
TXAR				pP	pP	03 37 30.8	+1.9
	comp=Z,0.5nm,0.8s,baz=152,slow=8.1,SNR=3.3						
TXAR				sP	sP	03 37 41.5	+2.0
	comp=Z,1.6nm,1.1s,baz=155,slow=9.1,SNR=3.4						
BOSA	Boshof	77.61	117	P	P	03 37 17.8	-0.5
	comp=Z,1.7nm,1.0s,baz=164,slow=19,SNR=0.9						
BOSA	Boshof	77.61	117	IAmb	IAmb	03 37 24.8	
	comp=Z,7.9nm,1.2s						
MNTX	Cornudas Mount	77.83	332	P	P	03 37 18.4	-0.6
X34A	Smith Ranch, M	78.11	339	P	P	03 37 19.0	-1.5
TUL1	Leonard	78.82	341	IAmb	IAmb	03 37 27.4	
	comp=Z,6.1nm,0.8s						
CCM	Cathedral Cave	79.86	345	P	P	03 37 30.5	+0.5
CCM					PcP	03 37 32.1	-5.0
CCM				IAmb	IAmb	03 37 33.1	
	comp=Z,7.4nm,0.8s						
TUC	Tucson	80.44	328	P	P	03 37 29.2	-4.1
X16A	Lo Mia Camp, P	82.55	329	P	P	03 37 41.6	-2.9
SDCO	Great Sand Dun	83.34	334	P	P	03 37 47.8	-0.8
XPFO	Pion Flat	83.97	324	P	P	03 37 51.0	-0.7
XPFO					PcP	03 37 54.7	-0.8
XPFO				IAmb	IAmb	03 37 57.5	
	comp=Z,8.0nm,1.1s						
PFO	Pinyon Flats O	83.97	324	P	P	03 37 50.6	-1.1
PFO					PcP	03 37 54.5	-1.0
PFO				IAmb	IAmb	03 37 57.5	
	comp=Z,8.7nm,1.1s						
SCIA	State Center	83.97	345	P	P	03 37 51.0	-0.3
KNB	Kanab	85.36	329	P	P	03 37 56.9	-1.8
TORD	Torodi Ar. Bea	86.85	70	P	P	03 38 06.7	+0.4
	comp=Z,1.0nm,1.0s,baz=231,slow=4.1,SNR=2.9						
TORD				pP	pP	03 38 30.7	-1.6
	comp=Z,0.5nm,0.8s,baz=250,slow=4.4,SNR=2.0						
VLDQ	Val d'Or	88.18	357	IAmb	IAmb	03 38 15.7	
	comp=Z,5.6nm,1.1s						
NVAR	Mina Array Bea	88.83	326	P	P	03 38 19.6	+4.2
	comp=Z,0.6nm,0.9s,baz=152,slow=6.1,SNR=4.2						
PDAR	Pinedale Array	89.21	334	P	P	03 38 20.1	+3.0
	comp=Z,2.3nm,1.0s,baz=152,slow=4.1,SNR=11						
TIXI	Tiksi	146.81	348	PKPbc	PKPbc	03 45 01.8	-0.2
MJAR	Matsushiro Arr	155.59	271	PKPab	PKPab	03 45 43.9	+2.8
	comp=Z,1.0nm,0.6s,baz=120,slow=3.3,SNR=5.6						
KURBB	Kurchatov Arra	157.48	53	PKP	PKPdf	03 45 18.5	+2.1
	comp=Z,0.5nm,0.6s,baz=289,slow=1.7,SNR=4.4						
KURBB				pPKP	pPKPdf	03 45 42.3	-1.4
	comp=Z,1.3nm,0.9s,baz=272,slow=1.5,SNR=3.7						
SONM	Songino Array	172.49	5	PKPab	PKPab	03 46 57.5	+2.7
	comp=Z,1.3nm,1.0s,baz=334,slow=3.2,SNR=5.6						
LZH	Lanzhou	174.93	146	ePKP	PKPdf	03 45 39.5	+8.7
LZH				pPKP	pPKPdf	03 45 46.5	-12
LZH				sPKP		03 45 51.0	

IDC 30 03:26:46.4±2.2, 25°.11N×98°.78E, h0km, mb3.6/2, mb1 3.6/2, mb1mx3.2/55, mbtmp3.6/2, Error ellipse: s-maj=64.2km s-min=22.8km az=83.0
BJI 30 03:26:51.1±0.0, 25°.04N×97°.85E, h11km, ML3.4/5
ISC 30 03:26:50.8±2.7, 25°.2N±0°.3×97°.8E±°, h15km, n4, σ0§66/4, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.75	174	Pg	Pb	03 28 47.8	0.0
	0.5nm,0.3s,baz=351,slow=17,SNR=5.0						
CMAR				Lg	Lg	03 30 16.2	
	0.6nm,0.3s,baz=357,slow=30,SNR=1.8						
WMQ	Urumqi	20.47	338	eP	P	03 31 27.5	-0.5
MKAR	Makanchi Array	25.01	334	P	P	03 32 14.5	+0.4
	0.6nm,0.6s,baz=142,slow=11,SNR=5.7						
ZALV	Zalesovo Beam	30.41	344	P	P	03 33 02.5	+0.3
	0.5nm,0.4s,baz=156,slow=11,SNR=2.5						

IDC 30 03:30:38.5±2.1, 8°.23S×119°.09E, h0km, mb3.6/2, mb1 3.8/5, mb1mx3.5/45, mbtmp3.7/5, ML3.0/2, Error ellipse: s-maj=76.9km s-min=23.7km az=64.0
DJA 30 03:30:41.2±0.4, 8°.3S±3°×11°.9E±°, h10km, M3.7/7, MLv3.7/7
ISC 30 03:30:40.3±0.8, 8°.16S±0°.04×119°.13E±0°.04, h10km, n22, σ2§23/26, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	Plampang	1.49	243	P	Pn	03 31 06.5	-0.8
PLAI				S	Sg	03 31 29.0	+0.5
PLAI	Plampang	1.49	243	P	Pn	03 31 06.9	-0.4
PLAI				S	Sg	03 31 33.6	+5.1
PLAI	Plampang	1.49	243	P	Pg	03 31 10.1	+1.1
WBSI	Waikabubak, Su	1.50	170	P	Pn	03 31 07.0	-0.4
WBSI				S	Sn	03 31 25.7	-1.4
WBSI	Waikabubak, Su	1.50	170	P	Pn	03 31 06.7	-0.7
WBSI				S	Sn	03 31 26.8	-0.3
WBSI	Waikabubak, Su	1.50	170	P	Pg	03 31 09.8	+0.6
	12μm1μm,0.7s						
WSI	Waingapu	1.90	143	P	Pn	03 31 11.7	-1.1
BASI	Baing, Sumba	2.50	145	P	Pg	03 31 33.0	+4.6
BASI	Baing, Sumba	2.50	145	P	Pn	03 31 19.0	-2.1
BASI	Baing, Sumba	2.50	145	P	Pg	03 31 33.0	+4.6
EDFI	Ende, Flores	2.60	103	P	Pn	03 31 24.9	+2.3
EDFI	Ende, Flores	2.60	103	P	Pn	03 31 17.0	-5.6
EDFI	Ende, Flores	2.60	103	P	Pn	03 31 25.3	+2.7
BKSI	Bulukumba	2.98	19	P	Pn	03 31 27.5	-0.3
MMRI	Maumere	3.12	99	P	Pn	03 31 31.2	+1.6
MMRI	Maumere	3.12	99	P	Pn	03 31 22.3	-

JIKM	**Ikemajima**	1.75	85	P		Pn	03 32 00.3	+0.2
YHNB	**Yeheng**	1.77	267			Pn	03 32 00.3	-0.2
JMJ2	**Miyako jima3**	1.82	90	P		Pn	03 32 00.9	-0.1
JOGS	**Gusukube**	1.89	90	P		Pn	03 32 02.2	+0.2
YULB	**Yu-li**	2.30	234	Pn		Pn	03 32 07.0	-0.7
SSLB	**Suanglung**	2.37	246			Pn	03 32 08.7	+0.1
TWG	**Pinlang**	2.83	227			Pn	03 32 14.6	-0.3
TPUB	**Ta-pu**	2.86	240	Pn		Pn	03 32 16.6	+1.2
JAGN	**Aguni-jima**	3.97	62	P		Pn	03 32 33.3	+2.7
QZH	**Quanzhou**	4.30	273	*e*Pn		Pn	03 32 35.5	+0.4
QZH				Sn		Sn	03 33 23.5	-1.4
QZH				LR	LR			
	comp=N,9μm,10.7s							
QZH				LR	LR			
	comp=E,5μm,10.2s							
QZH				LR	LR			
	comp=Z,6μm,10.9s							
KNMB	**Chin-men Tao**	4.50	267	Pn		Pn	03 32 37.9	0.0
JIH	**Iheya**	4.75	61	P		Pn	03 32 44.1	+2.8
JOW	**Kunigami**	4.91	64	P		Pn	03 32 44.6	+1.1
	0.3nm,0.3s,baz=179,slow=14,SNR=9.1							
JOW	**Kunigami**	4.91	64	P		Pn	03 32 45.7	+2.2
JOW	**Kunigami**	4.91	64	Pn		Pn	03 32 43.7	+0.2
JYRO	**Yoronjima**	5.13	63	P		Pn	03 32 48.3	+1.7
JTK	**Tokunoshima**	5.88	58	P		Pn	03 32 58.0	+1.2
SSE	**Sheshan**	6.58	344	Pg		Pb	03 33 25.5	+1.1
SSE				LR	LR			
	comp=N,2μm,10.8s							
SSE				LR	LR			
	comp=E,3μm,9.0s							
SSE				LR	LR			
	comp=Z,2μm,12.5s							
SZP	**Santa**	7.67	201			Pn	03 33 20.7	-0.7
NJ2	**Nanjing**	8.25	333	*e*P		Pn	03 33 34.0	+4.6
NJ2				S		Sn	03 35 08.8	+6.5
NJ2				pmax	pmax			
	comp=Z,15nm,0.6s							
NJ2				smax	smax			
	comp=N,170nm,1.9s							
NJ2				smax	smax			
	comp=E,180nm,1.3s							
NJ2				LR	LR			
	comp=N,5μm,12.3s							
NJ2				LR	LR			
	comp=E,3μm,11.8s							
NJ2				LR	LR			
	comp=Z,4μm,11.8s							
WHN	**Wuhan**	9.81	308	P		Pn	03 34 02.0	+11
WHN				S		Sn	03 35 39.3	-1.3
WHN				LR	LR			
	comp=N,6μm,12.9s							
WHN				LR	LR			
	comp=E,10μm,10.3s							
WHN				LR	LR			
	comp=Z,12μm,12.3s							
JNU	**Nakatsue**	10.63	37	P		Pn	03 34 03.4	+1.4
	comp=Z,0.2nm,0.3s,baz=194,slow=4.2,SNR=4.1							
JNU				LR	LR		03 38 11.0	
	comp=Z,720nm,20.2s,baz=218,slow=38							
JNU	**Nakatsue**	10.63	37	Pn		Pn	03 34 00.9	-1.0
TGY	**Tagaytay City**	10.85	192	LR		LR	03 38 45.4	
	comp=Z,1μm,19.3s,baz=55,slow=39							
TIA	**Tai'an**	12.59	336	P		Pn	03 34 33.5	+4.7
TIA				pmax	pmax			
	comp=Z,7.0nm,0.9s							
TIA				pmax	pmax			
	comp=Z,130nm,9.0s							
TIA				LR	LR			
	comp=Z,2μm,13.5s							
TIA				LR	LR			
	comp=Z,2μm,13.1s							
TIA				LR	LR			
	comp=Z,3μm,12.7s							
KSRS	**Korea Array**	13.24	16	P		Pn	03 34 38.7	+1.1
	comp=Z,0.1nm,0.3s,baz=205,slow=13,SNR=4.0							
KS19	**Wonju Array Si**	13.27	16	Pn		Pn	03 34 34.8	-3.3
ENH	**Enshi**	13.44	297	Pn		Pn	03 34 39.5	-0.9
QIZ	**Qiongzhong**	13.75	248	P		Pn	03 34 43.0	-1.7
QIZ				S		Sn	03 37 16.5	-0.7
QIZ				LR	LR			
	comp=Z,1μm,15.2s							
QIZ				LR	LR			
	comp=Z,980nm,17.6s							
QIZ				LR	LR			
	comp=Z,870nm,14.2s							
GYA	**Guiyang**	15.12	280	*e*P		Pn	03 35 02.0	-1.5
GYA				PP		sP	03 35 14.3	-0.4
GYA				S		S	03 37 59.5	-8.4
GYA				SS		SnSn	03 38 11.0	+7.5
GYA				pmax	pmax			
	comp=Z,10.0nm,0.5s							
GYA				pmax	pmax			
	comp=Z,100nm,3.9s							
GYA				LR	LR			
	comp=Z,2μm,9.7s							
GYA				LR	LR			
	comp=Z,3μm,11.1s							
GYA				LR	LR			
	comp=Z,3μm,12.0s							
XAN	**Xi'an**	15.57	310	P		Pn	03 35 10.0	+0.8
XAN				pP		pwP	03 35 20.5	+0.6
XAN				S		Sn	03 37 56.0	-5.4
XAN				pmax	pmax			
	comp=Z,53nm,1.1s							
XAN				pmax	pmax			
	comp=Z,220nm,6.9s							
XAN				LR	LR			
	comp=Z,2μm,10.3s							
XAN				LR	LR			
	comp=Z,4μm,12.3s							
XAN				LR	LR			
	comp=Z,5μm,14.2s							
XAN	**Xi'an**	15.57	310	Pn		Pn	03 35 06.3	-2.9
XAN						P	03 35 11.8	-1.6
BJT	**Baijiatuau**	16.35	340	Pn		Pn	03 35 16.4	-2.8
BJT				IAmb		IAmb	03 35 33.1	
	comp=Z,27nm,1.3s							
BJI	**Beijing**	16.37	340	P		Pn	03 35 18.8	-0.6
BJI				S		Sn	03 38 23.5	+2.8
BJI				pmax	pmax			
	comp=Z,4.0nm,0.8s							
BJI				LR	LR			
	comp=Z,530nm,19.4s							
BJI				LR	LR			
	comp=Z,1μm,16.7s							
BJI				LR	LR			
	comp=Z,800nm,32.2s							
JHJ	**Hachijo jima 2**	16.62	56	LR		LR	03 41 11.1	
	comp=Z,527nm,20.8s,baz=86,slow=35							
MAJO	**Matsushiro**	17.34	44			P	03 35 34.3	+1.2
MJB9	**Matsu-Tunnel**	17.34	44	Pn		Pn	03 35 28.4	-3.3
MJAR	**Matsushiro Arr**	17.34	44	P		P	03 35 33.3	+0.2
	comp=Z,0.7nm,0.3s,baz=135,slow=16,SNR=21							
MJAR				LR		LR	03 42 30.8	
	comp=Z,333nm,21.6s,baz=245,slow=38							
DAV	**Davao City (W)**	17.73	173	LR		LR	03 42 38.8	
	comp=Z,748nm,20.1s,baz=346,slow=37							
CD2	**Chengdu**	18.34	294	P		P	03 35 44.5	+0.3
CD2				sP		sP	03 35 50.5	+0.3
CD2				S		S	03 39 14.0	+0.6
CD2				pmax	pmax			
	comp=Z,20nm,0.6s							
CD2				pmax	pmax			
	comp=Z,260nm,5.7s							
CD2				LR	LR			
	comp=Z,3μm,10.8s							
CD2				LR	LR			
	comp=Z,3μm,14.2s							
CD2				LR	LR			
	comp=Z,5μm,11.8s							
KMI	**Kunming**	18.67	275	P		Pn	03 35 56.5	+8.1
KMI				sS		sS	03 39 36.5	+10
KMI				SS			03 41 01.5	
KMI				pmax	pmax			
	comp=Z,23nm,0.6s							
KMI				pmax	pmax			
	comp=Z,280nm,5.3s							
KMI				LR	LR			
	comp=N,4μm,11.6s							
KMI				LR	LR			
	comp=E,3μm,13.7s							
KMI				LR	LR			
	comp=Z,3μm,12.9s							
HHC	**Hu-ho-hao-te**	18.80	331	*e*P		P	03 35 49.0	-0.3
HHC				S		Sn	03 39 14.3	-5.6
HHC				pmax	pmax			
	comp=Z,7.0nm,1.1s							
HHC				pmax	pmax			
	comp=Z,100nm,6.0s							
HHC				LR	LR			
	comp=Z,980nm,12.7s							
HHC				LR	LR			
	comp=Z,490nm,11.2s							
HHC				LR	LR			
	comp=Z,980nm,14.8s							
CN2	**Changchun**	19.07	5	*e*P		Pn	03 35 54.8	+2.0
CN2				*e*S		S	03 39 27.3	-0.4
CN2				pmax	pmax			
	comp=Z,10.0nm,0.9s							
CN2				pmax	pmax			
	comp=Z,150nm,4.0s							
CN2				LR	LR			
	comp=Z,2μm,14.0s							
CN2				LR	LR			
	comp=Z,3μm,14.0s							
CN2				LR	LR			
	comp=Z,2μm,14.0s							
BTO	**Baotou**	19.32	328	*e*P		Pn	03 36 00.3	+4.3
BTO				S		Sn	03 39 28.5	-3.8
KKM	**Kota Kinabalu**	19.83	201			Pn	03 36 01.9	-0.3
KKM				IAmb		IAmb	03 36 12.2	
	comp=Z,34nm,1.0s							
LZH	**Lanzhou**	20.19	309	⇑P		P	03 36 04.0	-0.5
LZH				sP		pwP	03 36 12.0	+1.0
LZH				S		S	03 39 50.0	-0.8
LZH				sS		sS	03 39 56.5	-0.9
LZH				SS		SnSn	03 40 14.0	+5.9
LZH				pmax	pmax			
	comp=Z,15nm,1.1s							
LZH				pmax	pmax			
	comp=Z,350nm,5.0s							
LZH				LR	LR			
	comp=Z,1μm,15.7s							
LZH				LR	LR			
	comp=Z,3μm,14.1s							
LZH				LR	LR			
	comp=Z,3μm,13.0s							
MDJ	**Mudanjiang**	20.45	13	P		Pn	03 36 10.8	+1.6
MDJ				pP		pwP	03 36 13.5	-0.1
MDJ				sP		sP	03 36 15.0	+2.0
MDJ				PP		PnPn	03 36 26.3	+1.9
MDJ				S		S	03 39 54.3	-1.0
MDJ				sS		sS	03 40 01.0	-0.9
MDJ				pmax	pmax			
	comp=Z,17nm,0.9s							
MDJ				pmax	pmax			
	comp=Z,200nm,4.8s							
MDJ				LR	LR			
	comp=Z,1μm,13.5s							
MDJ				LR	LR			
	comp=Z,6μm,15.7s							
MDJ				LR	LR			
	comp=Z,5μm,12.8s							
USRK	**Ussuriysk Ar.**	20.63	18	P		P	03 36 09.4	+0.3
	comp=Z,3.8nm,0.7s,baz=208,slow=10,SNR=8.4							
USRK				LR		LR	03 44 08.7	
	comp=Z,376nm,20.4s,baz=183,slow=37							
USA0B	**Ussuriysk Arra**	20.63	18	P		P	03 36 09.3	+0.3
CHTO	**Chiang Mai**	23.38	260	P		P	03 36 37.3	-1.2
CM31	**Chiang Mai Arr**	23.50	259	P		P	03 36 40.8	+1.1
CM31				IAmb		IAmb	03 36 47.8	
	comp=Z,11nm,0.8s							
CMAR	**Chiang Mai Arr**	23.50	259	P		P	03 36 42.0	+2.3
	comp=Z,6.5nm,0.8s,baz=61,slow=7.5,SNR=21							
TNTI	**Ternate**	24.18	170	P		P	03 36 47.2	+1.1
	comp=Z,32nm,1.1s							
TNTI	**Ternate**	24.18	170	P		P	03 36 46.3	+0.3
MRSI	**Marisa**	24.19	183	P		P	03 36 49.3	+3.1
	comp=Z,946nmcomp=Z,52nm,1.4s							
MPSI	**Mapaga**	24.51	188	P		P	03 36 47.2	-1.9
	comp=Z,850nmcomp=Z,18nm,1.1s							
GTA	**Gaotai**	24.60	312	⇑P		P	03 36 51.0	+1.1
GTA				pP		sP	03 36 56.0	-0.2
GTA				sP		pwP	03 36 59.0	+2.4
GTA				S		S	03 41 11.8	+1.3
GTA				sS		sS	03 41 22.5	+4.8
GTA				pmax	pmax			
	comp=Z,7.0nm,1.1s							
GTA				pmax	pmax			
	comp=Z,150nm,7.5s							
GTA				LR	LR			
	comp=Z,700nm,14.6s							
GTA				LR	LR			
	comp=Z,1μm,13.0s							
GTA				LR	LR			
	comp=Z,1μm,13.6s							
HIA	**Hailar**	24.61	354	P		P	03 36 49.5	-0.4
SBUM	**Sibu**	24.64	207	P		P	03 36 50.3	0.0
ASAJ	**Asahikawa**	24.89	34	P		P	03 36 51.1	-1.2
	comp=Z,4.9nm,0.7s,baz=192,slow=9.3,SNR=2.3							
JKA	**Kamikawa-asahi**	24.89	34	P		P	03 36 51.1	-1.2
KLR	**Kul'dur**	25.29	13	P		P	03 36 55.8	-0.1
	comp=Z,7.9nm,0.9s,baz=221,slow=6.7,SNR=24							
KLR				LR		LR	03 46 24.9	
	comp=Z,422nm,21.1s,baz=201,slow=35							
KSM	**Kuching**	26.36	210	P		P	03 37 04.1	-1.8
ULN	**Ulaanbaatar**	26.41	335	P		P	03 37 05.6	-0.6
SIJI	**Sorong**	26.62	162	LR		LR	03 46 52.4	
	comp=Z,452nm,21.1s,baz=236,slow=34							
SONM	**Songino Array**	26.64	334	P		P	03 37 08.8	+0.5
	comp=Z,5.9nm,0.8s,baz=152,slow=9.7,SNR=18							
SHL	**Shillong**	28.43	278	P		P	03 37 23.3	-1.4
TLY	**Talaya**	30.80	336	P		P	03 37 46.9	+1.7
	comp=Z,2.2nm,0.5s,baz=159,slow=8.1,SNR=9.2							
TLY	**Talaya**	30.80	336	P		P	03 37 43.4	-1.8
JAY	**Jayapura**	31.94	146	LR		LR	03 48 44.7	
	comp=Z,728nm,20.1s,baz=358,slow=32							
PSI	**Prapat**	32.10	231	P		P	03 38 00.3	+3.2
	comp=Z,3.1nm,0.4s,baz=0.5,slow=4.4,SNR=2.1							
RPSI	**Rantau Prapat**	32.17	231	P		P	03 38 00.3	+2.7
MNSI	**Mandailing Nat**	33.09	228	P		P	03 38 05.6	-0.1
WMQ	**Urumqi**	34.68	312	*e*P		P	03 38 21.3	+2.0
WMQ				pmax	pmax			
	comp=Z,32nm,0.7s							
WMQ				LR	LR			
	comp=Z,510nm,13.1s							
WMQ				LR	LR			
	comp=Z,470nm,14.1s							
WMQ				LR	LR			
	comp=Z,490nm,15.3s							
PETK	**Petropavlovsk-**	38.30	33	P		P	03 38 48.5	-1.5
	comp=Z,2.7nm,0.9s,baz=251,slow=4.5,SNR=3.6							
PETK				LR		LR	03 55 25.3	
	comp=Z,114nm,18.0s,baz=70,slow=38							
MK31	**Makanchi Array**	39.30	315	P		P	03 38 57.2	-1.2
MK31				IAmb		IAmb	03 39 16.6	
	comp=Z,6.0nm,1.0s							
MKAR	**Makanchi Array**	39.30	315	P		P	03 38 57.9	-0.5
	comp=Z,2.5nm,0.6s,baz=103,slow=10,SNR=14							
MKAR				LR		LR	03 56 23.3	
	comp=Z,712nm,18.6s,baz=80,slow=38							
MAKZ	**Makanchi**	39.50	314	P		P	03 38 59.1	-1.1
MAKZ				IAmb		IAmb	03 39 09.4	
	comp=Z,6.7nm,0.9s							
KRVT	**Keravat (AS076**	40.18	132	LR		LR	03 52 47.5	
	comp=Z,234nm,20.8s,baz=321,slow=32							
ZAA0	**Zalesovo Array**	40.84	326	P		P	03 39 09.8	-1.3
ZALV	**Zalesovo Beam**	40.84	326	P		P	03 39 10.2	-0.9
	comp=Z,3.3nm,0.5s,baz=117,slow=9.9,SNR=8.9							
ZALV				LR		LR	03 57 17.3	
	comp=Z,838nm,18.6s,baz=133,slow=38							
FITZ	**Fitzroy Crossi**	42.67	177	P		P	03 39 26.4	0.0
	comp=Z,2.1nm,0.9s,baz=336,slow=8.7,SNR=1.7							
FITZ	**Fitzroy Crossi**	42.67	177	IAmb		IAmb	03 39 43.4	
	comp=Z,7.4nm,0.9s							
KURK	**Kurchatov**	42.91	319	P		P	03 39 27.6	-0.5
KURK				IAmb		IAmb	03 39 30.1	
	comp=Z,10nm,1.1s							
KURBB	**Kurchatov Arra**	42.94	319	P		P	03 39 27.9	-0.4
	comp=Z,4.3nm,0.9s,baz=111,slow=8.4,SNR=20							
AAK	**Ala-Archa**	43.71	307	P		P	03 39 36.7	+1.7
	comp=Z,1.7nm,0.5s,baz=234,slow=3.2,SNR=5.6							
AAK	**Ala-Archa**	43.71	307	P		P	03 39 41.1	+6.2
WRAB	**Tennant Creek**	45.71	165	P		P	03 39 51.3	+0.5
WRA	**Warramunga Arr**	45.72	165	P		P	03 39 51.5	+0.6
	comp=Z,8.3nm,0.7s,baz=346,slow=8.5,SNR=35							
WB2	**Warramunga Arr**	45.72	165	P		P	03 39 52.2	+1.3
WR0	**Warramunga Arr**	45.78	165	P		P	03 39 52.3	+1.0
PSA00	**Pilbara Seismi**	46.19	184	P		P	03 39 55.1	+0.6
TIXI	**Tiksi**	47.02	2	P		P	03 40 00.2	-0.2
BVAR	**Borovoye Array**	48.47	320	P		P	03 40 12.4	+0.4
	comp=Z,1.2nm,0.5s,baz=114,slow=8.7,SNR=11							
ASAR	**Alice Springs**	49.23	167	P		P	03 40 19.7	+1.5
	comp=Z,2.4nm,0.6s,baz=350,slow=12,SNR=19							
ASAR				LR		LR	04 02 04.8	
	comp=Z,196nm,21.9s,baz=155,slow=37							
GEYT	**Alibeck**	56.19	300	P		P	03 41 10.6	+0.9
	comp=Z,1.2nm,0.5s,baz=17,slow=10,SNR=2.3							
NWAO	**Narrogin (SRO)**	57.67	186	P		P	03 41 21.2	+1.3
	comp=Z,8.0nm,0.6s,baz=30,slow=8.3,SNR=8.3							
STKA	**Stephens Creek**	58.97	162	P		P	03 41 29.9	+0.9
	comp=Z,5.6nm,0.7s,baz=354,slow=6.5,SNR=11							
STKA	**Stephens Creek**	58.97	162	P		P	03 41 30.0	+0.9
STKA				IAmb		IAmb	03 41 46.1	
	comp=Z,2.3nm,1.1s							
KLMR	**Klimovskoe**	65.71	328	*e*P		P	03 42 11.6	-2.3
KLMR				AMP			03 42 20.3	
	comp=Z,19nm,1.3s							
KLMR				*e*PP		PP	03 44 36.4	-1.8
KBZ	**Khabaz**	66.63	309	P		P	03 42 20.5	+0.4
	comp=Z,2.6nm,0.9s,baz=196,slow=5.6,SNR=4.1							
KBZ				LR		LR	04 14 43.1	
	comp=Z,297nm,18.8s,baz=61,slow=39							
ILAR	**Eielson Array**	67.80	28	P		P	03 42 26.6	-0.6
	comp=Z,0.3nm,0.5s,baz=272,slow=5.5,SNR=2.5							
OBN	**Obninsk**	68.25	322	LR		LR	04 15 04.3	
	comp=Z,61nm,18.6s,baz=27,slow=38							
ARCES	**ARCESS Array B**	69.72	338	P		P	03 42 37.9	-1.2
	comp=Z,0.6nm,0.7s,baz=57,slow=10,SNR=2.8							
ARCES				LR		LR	04 17 54.1	
	comp=Z,170nm,18.3s,baz=77,slow=40							
FINES	**FINESS Array B**	71.92	330	P		P	03 42 52.1	-0.4
	comp=Z,3.0nm,0.8s,baz=62,slow=5.7,SNR=17							
FINES				LR		LR	04 17 36.9	
	comp=Z,683nm,19.7s,baz=60,slow=38							
AKASG	**Malin Array Be**	73.72	319	P		P	03 43 03.6	+0.1
	comp=Z,0.8nm,0.4s,baz=66,slow=5.4,SNR=4.0							
AKASG				LR		LR	04 18 30.5	
	comp=Z,131nm,18.8s,baz=20,slow=38							
BRTR	**Keskin Array B**	74.39	307	P		P	03 43 09.1	+1.3
	comp=Z,0.3nm,0.4s,baz=92,slow=1.6,SNR=2.4							
MMAI	**Mount Meron Ar**	75.31	300	LR		LR	04 21 18.6	
	comp=Z,109nm,19.0s,baz=120,slow=40							
HFS	**Hagfors**	78.00	331	LR		LR	04 20 56.7	
	comp=Z,636nm,18.2s,baz=54,slow=38							
KWP	**Kalwaria Pacla**	78.02	319	P		P	03 43 27.8	-0.3
NB2	**NORSAR Subarra**	78.61	333	P		P	03 43 30.4	-0.8
	comp=Z,5.4nm,1.2s,baz=56,slow=5.6							
NOA	**NORSAR Array B**	78.61	333	P		P	03 43 30.3	-0.8
	comp=Z,0.6nm,0.8s,baz=59,slow=5.2,SNR=2.8							
NOA				LR		LR	04 21 46.2	
	comp=Z,425nm,19.2s,baz=70,slow=38							
MORC	**Moravsky Berou**	80.97	321	P		P	03 43 44.2	0.0
MORC				IAmb		IAmb	03 43 45.5	
	comp=Z,4.8nm,1.1s							
RPZ	**Rata Peaks**	81.00	147	LR		LR	04 20 59.7	
	comp=Z,109nm,18.5s,baz=10,slow=37							
YKA	**Yellowknife Ar**	81.67	23	P		P	03 43 47.3	-0.2
	comp=Z,2.8nm,0.8s,baz=307,slow=4.7,SNR=47							
YKA				LR		LR	04 22 44.0	
	comp=Z,108nm,20.8s,baz=0.0,slow=38							
SUMG	**Summit**	82.12	355	P		P	03 43 50.3	0.0
SUMG				IAmb		IAmb	03 44 00.6	
	comp=Z,6.2nm,1.1s							
CLL	**Collm**	82.75	324	*e*pP		pP	03 43 57.0	-1.3
CLL				LmV			04 25 00.0	
	comp=Z,300nm,18.0s							
GERES	**GERESS Array B**	83.62	321	P		P	03 43 57.5	-0.7
	comp=Z,0.3nm,0.5s,baz=95,slow=8.7,SNR=5.2							
GERES				LR		LR	04 25 19.0	
	comp=Z,135nm,18.6s,baz=90,slow=39							
OPO	**Ambohidratompo**	85.71	247	P		P	03 44 09.3	+0.1
	comp=Z,2.5nm,0.7s,baz=45,slow=7.1,SNR=1.9							
BORG	**Borgarnes**	86.66	346	LR		LR	04 27 09.6	
	comp=Z,185nm,19.1s,baz=18,slow=38							
B08A	**Colville Reser**	88.17	36	P		P	03 44 20.7	+0.1
BMO	**Blue Mountains**	91.39	38	P		P	03 44 36.0	+0.2
BMO				IAmb		IAmb	03 44 45.5	
	comp=Z,2.8nm,1.0s							
FFC	**Flin Flon**	91.81	24	P		P	03 44 37.5	+0.2
PPT	**Papeete**	94.65	107	LR		LR	04 21 57.4	
	comp=Z,35nm,19.3s,baz=276,slow=32							
NVAR	**Mina Array Bea**	94.67	44	P		P	03 44 50.6	-0.6
	comp=Z,0.8nm,0.7s,baz=307,slow=5.1,SNR=2.4							
NVAR				LR		LR	04 23 19.4	
	comp=Z,39nm,19.3s,baz=286,slow=33							
ULM	**Lac du Bonnet**	97.63	24	LR		LR	04 35 52.9	
	comp=Z,79nm,18.0s,baz=28,slow=40							
ESDC	**Sonseca Array**	99.21	322	LR		LR	04 35 04.4	
	comp=Z,138nm,19.7s,baz=295,slow=38							
TXAR	**Lajitas Array**	109.78	43	PKiKP		PKiKP	03 50 01.8	+0.5
	comp=Z,0.1nm,0.5s,baz=197,slow=0.9,SNR=1.7							

WEL 30 03:47:14.7,42°S±1°×17°4E±°,h42km±3km,M3.5/12, ML3.8/12,MLv3.5/12,Error ellipse: s-maj=0.0km s-min=0.0km az=86.5,South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSWZ	**Blackbirch Sta**	0.30	4	P	Pn	03 47 23.4	+0.3
BSWZ				S	Sn	03 47 29.1	+0.1
CMWZ	**Cape Campbell**	0.39	46	P	Pn	03 47 25.4	+1.3
KHZ	**Kahutara**	0.46	210	P	Pn	03 47 25.5	+0.6
KHZ				S	Sn	03 47 32.6	+0.5
TUWZ	**Tuamarina**	0.59	7	P	Pn	03 47 27.5	+0.8
TUWZ				S	Sn	03 47 36.2	+0.9
THZ	**Tophouse**	0.75	290	P	Pn	03 47 29.4	+0.6
THZ				S	Sn	03 47 40.7	+1.6
TCW	**Tory Channel**	0.87	22	P	Pn	03 47 31.5	+1.1
TCW				S	Sn	03 47 43.6	+1.7
NNZ	**Nelson**	0.87	336	P	Pn	03 47 31.4	+0.9
BHW	**Baring Head**	0.98	52	P	Pn	03 47 33.1	+1.1
BHW				S	Sn	03 47 46.2	+1.6
WEL	**Wellington**	1.01	44	P	Pn	03 47 33.8	+1.5
WEL				S	Sn	03 47 47.4	+2.1
GVZ	**Greta Valley S**	1.12	212	P	Pn	03 47 35.0	+1.1
PLWZ	**Palliser**	1.15	67	P	Pn	03 47 34.8	+0.5
MSWZ	**Moikau Station**	1.21	61	P	Pn	03 47 35.9	+0.7
DUWZ	**D'Urville Isla**	1.22	3	P	Pn	03 47 36.5	+1.3
CAW	**Cannon Point**	1.29	46	P	Pn	03 47 37.3	+1.1
LTZ	**Lake Taylor**	1.39	236	P	Pn	03 47 38.9	+1.3
KIW	**Kapiti Island**	1.41	35	P	Pn	03 47 39.3	+1.5
AMCZ	**Amberley**	1.46	217	P	Pn	03 47 39.2	+0.8
TRWZ	**Traveller**	1.51	66	P	Pn	03 47 39.4	+0.2
DSZ	**Denniston Nort**	1.55	279	P	Pn	03 47 42.3	+2.6
QRZ	**Quartz Range**	1.55	320	P	Pn	03 47 42.0	+2.3
OGWZ	**Otaki Gorge**	1.56	40	P	Pn	03 47 41.0	+1.1
HOWZ	**Holdsworth Sta

JCZ	**Jackson Bay**	**4.24**	**239**	P	Pn	03 48 18.2 +1.5
TOZ	**Tahuroa Road**	**4.47**	**17**	P	Pn	03 48 22.7 +2.9
RUGZ	**Raukumara Rang**	**5.00**	**37**	P	Pn	03 48 27.3 0.0
MKAZ	**Moumakai**	**5.01**	**12**	P	Pn	03 48 28.8 +1.5
WIAZ	**Waiheke Island**	**5.31**	**11**	P	Pn	03 48 35.6 +4.2
CTZ	**Chatham Island**	**7.21**	**107**	P	Pn	03 48 56.5 -1.0

*IDC **30** 03:54:54.1±5.5, 17.32S×179.10W, h538km±63km, mb3.3/11, mb1 3.6/12, mb1mx3.4/33, mbtmp4.2/12, Error ellipse: s-maj=41.6km s-min=21.9km az=141.0*

ISC 30 03:54:53.9±0.9, 17.4S±0.3×179.1W±0.2, h539km, n13, σ0.972/13, mb3.8/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.42**	**249**	P		**P**		**03 57 57.9**	**+0.2**
	0.7nm,0.3s,baz=121,slow=18,SNR=7.5								
STKA	**Stephens Creek**	**38.35**	**240**	P		**P**		**04 01 29.4**	**+0.4**
	4.1nm,0.4s,baz=88,slow=10,SNR=24								
WRA	**Warramunga Arr**	**44.11**	**259**	P		**P**		**04 02 13.8**	**-1.1**
	0.6nm,0.3s,baz=96,slow=7.8,SNR=18								
ASAR	**Alice Springs**	**44.33**	**254**	P		**P**		**04 02 16.4**	**-0.1**
	13nm,0.6s,baz=88,slow=8.1,SNR=103								
FITZ	**Fitzroy Crossi**	**52.49**	**260**	P		**P**		**04 03 17.9**	**+0.6**
	2.4nm,0.6s,baz=68,slow=7.9,SNR=8.4								
PETK	**Petropavlovsk-**	**72.98**	**346**	P		**P**		**04 05 29.3**	**+0.7**
	2.5nm,0.9s,baz=132,slow=6.0,SNR=3.1								
NVAR	**Mina Array Bea**	**79.47**	**44**	P		**P**		**04 06 05.3**	**+0.4**
	0.7nm,0.7s,baz=219,slow=5.6,SNR=5.4								
MAW	**Mawson**	**84.17**	**200**	P		**P**		**04 06 27.7**	**-0.3**
	1.7nm,0.5s,baz=125,slow=3.5,SNR=4.2								
ILAR	**Eielson Array**	**85.49**	**13**	P		**P**		**04 06 33.5**	**-0.9**
	0.4nm,0.4s,baz=224,slow=5.5,SNR=9.4								
TXAR	**Lajitas Array**	**86.24**	**58**	P		**P**		**04 06 40.0**	**+1.0**
	0.3nm,0.7s,baz=218,slow=5.5,SNR=5.1								
PDAR	**Pinedale Array**	**87.39**	**44**	P		**P**		**04 06 43.7**	**-0.5**
	0.6nm,0.5s,baz=204,slow=4.0,SNR=4.4								
YKA	**Yellowknife Ar**	**94.09**	**25**	P		**P**		**04 07 13.7**	**-0.7**
	0.5nm,0.7s,baz=237,slow=4.7,SNR=6.8								
GERES	**GERESS Array B**	**146.91**	**344**	PKPbc		**PKPbc**		**04 13 36.3**	**+0.2**
	0.4nm,0.5s,baz=344,slow=3.2,SNR=3.8								

*IDC **30** 04:04:14.4±1.5, 8.18S×119.02E, h0km, mb3.7/4, mb1 3.9/7, mb1mx3.6/51, mbtmp3.8/7, ML3.5/3, MS3.2/1, Ms1 3.2/1, ms1mx2.8/39, Error ellipse: s-maj=67.9km s-min=19.4km az=61.0*

*DJA **30** 04:04:15.5±0.4, 8˚S±4˚×11˚9E±˚, h10km, M3.9/7, MLv3.9/7*

*NEIC **30** 04:04:16.6±2.3, 8.16S±0.08×119.17E±0.03, h17km±8km, mb4.0/4, Error ellipse: s-maj=11.8km s-min=3.6km az=177.0*

ISC 30 04:04:18.3±0.8, 8.18S±0.05×119.10E±0.05, h34km, n22, σ1.929/24, mb3.9/3, Flores region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.46**	**244**	P		**Pn**		**04 04 41.5**	**-0.7**
PLAI				S		**Sn**		**04 05 00.2**	**0.0**
WBSI	**Waikabubak, Su**	**1.48**	**169**	P		**Pn**		**04 04 41.9**	**-0.6**
WBSI				S		**Sn**		**04 05 01.1**	**+0.4**
BASI	**Baing, Sumba**	**2.49**	**144**	P		**Pn**		**04 04 57.4**	**+0.9**
EDFI	**Ende, Flores**	**2.62**	**103**	P		**Pn**		**04 04 59.2**	**+0.9**
BKSI	**Bulukumba**	**3.02**	**20**	P		Pn		04 04 58.2	-5.5
MMRI	**Maumere**	**3.13**	**98**	P		**Pn**		**04 05 06.0**	**+0.7**
MMRI	**Maumere**	**3.13**	**98**	Pn		**Pn**		**04 05 04.5**	**-0.7**
KAPI	**Kappang**	**3.21**	**12**	Pn		**Pn**		**04 05 06.4**	**0.0**
	7.1nm,0.3s,baz=195,slow=9.3,SNR=7.4								
KAPI				Sn		**Sn**		**04 05 42.5**	**-1.0**
	0.8nm,0.3s,baz=190,slow=17,SNR=5.6								
KAPI				LR		LR		04 06 41.0	
	comp=Z,348nm,18.5s,baz=232,slow=45								
KAPI	**Kappang**	**3.21**	**12**			**Pn**		**04 05 05.3**	**-1.1**
JAGI	**Jajag, Banyuwa**	**4.91**	**266**	Pn		**Pn**		**04 05 30.6**	**+0.9**
SOEI	**Soe**	**5.34**	**107**	Pn		**Pn**		**04 05 35.0**	**-0.7**
FITZ	**Fitzroy Crossi**	**11.73**	**148**	Pn		**Pn**		**04 07 03.1**	**-0.2**
	0.2nm,0.3s,baz=329,slow=6.3,SNR=6.8								
FITZ				Sn		**Sn**		**04 09 10.1**	**-3.0**
	0.1nm,0.3s,baz=270,slow=3.5,SNR=2.7								
FITZ	**Fitzroy Crossi**	**11.73**	**148**			**Pn**		**04 07 01.3**	**-2.0**
WRA	**Warramunga Arr**	**18.82**	**130**	P		**Pn**		**04 08 36.5**	**+0.5**
	0.1nm,0.3s,baz=304,slow=13,SNR=2.9								
WB2	**Warramunga Arr**	**18.83**	**130**	P		**P**		**04 08 35.2**	**-0.2**
WR0	**Warramunga Arr**	**18.99**	**130**	P		**P**		**04 08 36.1**	**-1.0**
WR0				IAmb		IAmb		04 08 45.4	
	comp=Z,6.1nm,0.9s								
AS31	**Alice Springs**	**20.93**	**139**	P		**P**		**04 08 56.1**	**-2.1**
ASAR	**Alice Springs**	**20.93**	**139**	P		**P**		**04 09 00.3**	**+2.1**
	comp=Z,1.6nm,0.5s,baz=316,slow=10,SNR=14								
STKA	**Stephens Creek**	**31.52**	**141**	P		**P**		**04 10 38.5**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=308,slow=19,SNR=1.5								
STKA	**Stephens Creek**	**31.52**	**141**	IAmb		IAmb		04 11 46.8	
	comp=Z,6.0nm,1.8s								
MKAR	**Makanchi Array**	**63.78**	**333**	P		**P**		**04 14 48.5**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=148,slow=7.1,SNR=5.0								
ZALV	**Zalesovo Beam**	**68.32**	**339**	P		**P**		**04 15 16.4**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=161,slow=5.7,SNR=1.6								

*SOF **30** 04:06:10.0, 39.54N×25.79E, h2km, MD4.6*

*IDC **30** 04:06:19.8±0.8, 40.13N×25.55E, h0km, mb3.5/11, mb1 3.7/19, mb1mx3.7/54, mbtmp3.7/19, ML3.8/9, MS3.1/2, Ms1 3.1/2, ms1mx2.7/45, Error ellipse: s-maj=14.0km s-min=11.2km az=40.0*

*ATH **30** 04:06:21.0, 40.19N×25.55E, h28km±1km, ML3.9/10, Error ellipse: s-maj=1.6km s-min=0.9km az=78.0*

*ISK **30** 04:06:20.7, 40.19N×25.56E, h13km, ML4.2/40*

*NEIC **30** 04:06:21.2±1.6, 40.12N±0.05×25.51E±0.06, h10km±3km, Error ellipse: s-maj=7.5km s-min=7.0km az=161.0*

*DDA **30** 04:06:21.9, 40.18N×25.64E, h20km, MW4.1*

*THE **30** 04:06:21.5, 40.18N×25.56E, h9km, ML3.8/20, Error ellipse: s-maj=0.9km s-min=0.4km az=75.0*

*BEO **30** 04:06:23.3±0.7, 40.18N×25.48E, h23km±4km, ML3.8/18*

ISC 30 04:06:21.5±0.9, 40.18N±0.01×25.55E±0.01, h11km±6km, n341, σ0.996/410, mb3.6/13, 26C-32D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.27**	**88**	P		**Pg**		**04 06 26.9**	**-0.1**
GADA				S		**Sg**		**04 06 30.6**	**0.0**
	21µm,0.5s								
GADA	**Gvkgeada**	**0.27**	**88**	PG		**Pg**		**04 06 26.9**	**-0.1**
GADA				SG		**Sg**		**04 06 30.6**	**0.0**
GOKA	**anakkale-Gk**	**0.28**	**88**	⇓*i* P		**Pg**		**04 06 27.2**	**+0.1**
GOKA				*i* S		**Sg**		**04 06 31.2**	**+0.4**
GOKA				IAML				04 06 35.0	
	comp=E,33µm,0.3s								
GOKA				IAML				04 06 36.0	
	comp=N,35µm,0.4s								
SMTH	**Samothraki Isl**	**0.29**	**358**	P		**Pg**		**04 06 27.4**	**+0.1**
SMTH				S		**Sg**		**04 06 31.9**	**+0.6**
	comp=N,12µm,0.3s								
SMTH	**Samothraki Isl**	**0.29**	**358**	P		**Pg**		**04 06 27.4**	**+0.1**
SMTH				S		**Sb**		**04 06 33.0**	**-0.6**
LIA	**Limnos Island**	**0.40**	**225**	P		**Pg**		**04 06 29.7**	**+0.4**
LIA				S		**Sg**		**04 06 35.6**	**+1.0**
	comp=N,20µm,0.4s								
LIA	**Limnos Island**	**0.40**	**225**	P		**Pg**		**04 06 29.8**	**+0.4**
LIA				S		**Sb**		**04 06 35.9**	**-0.7**
LIA				AML		AML		04 06 38.0	
	comp=E,40507µm,0.4s								
LIA				AML		AML		04 06 38.5	
	comp=N,35012µm,0.5s								
BOZC	**Bozcaada**	**0.52**	**131**	PG		**Pg**		**04 06 31.6**	**+0.1**
BOZC	**Bozcaada**	**0.52**	**131**	⇑*i* P		**Pg**		**04 06 31.6**	**+0.1**
BOZC				*i* P		**Pg**		**04 06 31.6**	**+0.1**
BOZC				*i* S		**Sg**		**04 06 38.4**	**+0.1**
BOZC				IAML				04 06 44.0	
	comp=N,9µm,0.3s								
BOZC				IAML				04 06 44.0	
	comp=N,10µm,0.3s								
BOZC				IAML				04 06 45.0	
	comp=E,13µm,0.4s								
BOZC				IAML				04 06 45.0	
	comp=E,13µm,0.4s								
EZN	**Ezine**	**0.70**	**120**	P		**Pg**		**04 06 34.6**	**-0.4**
EZN				S		**Sg**		**04 06 43.3**	**-0.7**
	comp=E,23µm,0.5s								
EZN	**Ezine**	**0.70**	**120**	PG		**Pg**		**04 06 34.5**	**-0.4**
EZN				SG		**Sg**		**04 06 43.9**	**-0.1**
ENEZ	**Enez**	**0.72**	**40**	P		**Pg**		**04 06 35.1**	**-0.3**
ENEZ				S		**Sb**		**04 06 45.8**	**-0.2**
	comp=E,32µm,0.4s								
ENEZ	**Enez**	**0.72**	**40**	PG		**Pb**		**04 06 35.9**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.74**	**73**	PG		**Pg**		**04 06 35.3**	**-0.5**
THAS	**Thassos island**	**0.76**	**304**	P		**Pg**		**04 06 35.9**	**-0.3**
THAS				S		**Sb**		**04 06 47.9**	**+0.8**
	comp=E,8µm,0.4s								
THAS	**Thassos island**	**0.76**	**304**	P		**Pg**		**04 06 36.4**	**+0.2**
THAS				S		**Sb**		**04 06 47.8**	**+0.7**
THAS				AML		AML		04 06 48.3	
	comp=E,12162µm,0.4s								
THAS				AML		AML		04 06 49.2	
	comp=N,20487µm,0.3s								
EFSA	**Agios Efstrati**	**0.77**	**214**	P		**Pb**		**04 06 37.0**	**0.0**
EFSA				S		**Sb**		**04 06 48.0**	**+0.7**
EFSA				AML		AML		04 06 50.6	
	comp=N,14372µm,0.4s								
EFSA				AML		AML		04 06 51.0	
	comp=E,21357µm,0.7s								
ALN	**Alexandroupoli**	**0.81**	**28**	P		**Pg**		**04 06 36.8**	**-0.3**
ALN				S		**Sg**		**04 06 47.8**	**+0.2**
ALN	**Alexandroupoli**	**0.81**	**28**	P		**Pg**		**04 06 37.0**	**-0.1**
ALN				S		**Sg**		**04 06 47.9**	**+0.2**
ALN				AML		AML		04 06 49.4	
	comp=E,18114µm,0.4s								
ALN				AML		AML		04 06 49.6	
	comp=N,25055µm,0.6s								
ALN	**Alexandroupoli**	**0.81**	**28**	PG		**Pg**		**04 06 36.7**	**-0.3**
ERIK	**Erikli-Kesan**	**0.89**	**56**	PG		**Pg**		**04 06 37.7**	**-0.8**
BAYC	**CANAKKALE_Bayr**	**0.89**	**119**	⇓*i* P		**Pg**		**04 06 38.1**	**-0.4**
BAYC				*i* S		**Sg**		**04 06 49.7**	**-0.4**
BAYC				IAML				04 06 53.0	
	comp=N,3µm,0.4s								
BAYC				IAML				04 06 53.0	
	comp=E,3µm,0.2s								
LPK	**Lapseki**	**0.95**	**78**	PG		**Pg**		**04 06 39.1**	**-0.6**
LPK				SG		**Sb**		**04 06 53.1**	**+0.6**
RDO	**Rodhopi**	**0.96**	**360**	P		**Pg**		**04 06 39.5**	**-0.5**
RDO				S		**Sn**		**04 06 53.8**	**-0.9**
	comp=E,4µm,0.5s								
RDO	**Rodhopi**	**0.96**	**360**	P		**Pg**		**04 06 39.5**	**-0.5**
RDO				S		**Sb**		**04 06 53.0**	**0.0**
RDO				AML		AML		04 06 55.1	
	comp=N,8865µm,0.6s								
RDO				AML		AML		04 06 56.7	
	comp=E,8568µm,0.5s								
RDO	**Rodhopi**	**0.96**	**360**	PG		**Pg**		**04 06 39.6**	**-0.5**
SIGR	**SIGRI**	**1.00**	**166**	P		**Pg**		**04 06 40.1**	**-0.6**
SIGR				S		**Sg**		**04 06 53.6**	**0.0**
	comp=E,18µm,0.5s								
SIGR	**SIGRI**	**1.00**	**166**	P		**Pg**		**04 06 40.3**	**-0.3**
SIGR				S		**Sb**		**04 06 54.4**	**+0.4**
SIGR				AML		AML		04 06 56.0	
	comp=N,36416µm,0.5s								
SIGR				AML		AML		04 06 57.0	
	comp=E,33833µm,0.4s								
SIGR	**SIGRI**	**1.00**	**166**	PG		**Pg**		**04 06 40.1**	**-0.6**
KESN	**Edirne-Kesan**	**1.08**	**53**	*i* P		**Pg**		**04 06 41.5**	**-0.7**
KESN				*i* S		**Sg**		**04 06 55.9**	**-0.4**
KESN				IAML				04 06 58.0	
	comp=N,8µm,0.6s								
KESN				IAML				04 06 58.0	
	comp=E,10µm,0.3s								
PRK	**Paraskevi**	**1.09**	**149**	P		**Pn**		**04 06 43.0**	**+0.4**
PRK				S		**Sn**		**04 06 57.6**	**-0.2**
	comp=E,15µm,0.5s								
PRK	**Paraskevi**	**1.09**	**149**	P		**Pn**		**04 06 43.1**	**+0.4**
PRK				S		**Sn**		**04 06 57.5**	**-0.3**
PRK				AML		AML		04 06 59.2	
	comp=E,32394µm,0.5s								
PRK				AML		AML		04 07 00.5	
	comp=N,28477µm,0.4s								
KAVA	**Kavala**	**1.13**	**316**	P		**Pb**		**04 06 42.5**	**-0.6**
KAVA				S		**Sn**		**04 06 58.5**	**-0.4**
	comp=N,4µm,0.6s								
KAVA	**Kavala**	**1.13**	**316**	P		**Pb**		**04 06 42.5**	**-0.6**
KAVA				S		**Sb**		**04 06 57.5**	**-0.3**
KAVA				AML		AML		04 06 59.0	
	comp=E,5481µm,0.7s								
KAVA				AML		AML		04 06 59.1	
	comp=N,10098µm,0.4s								
KVLA	**Kavala**	**1.16**	**311**	P		**Pb**		**04 06 42.5**	**-1.0**
OUR	**Ouranopolis**	**1.21**	**278**	P		**Pn**		**04 06 43.6**	**-0.7**
OUR				S		**Sn**		**04 07 01.4**	**+0.7**
	comp=N,6µm,0.6s								
OUR	**Ouranopolis**	**1.21**	**278**	P		**Pn**		**04 06 43.4**	**-0.9**
OUR				S		**Sn**		**04 07 01.2**	**+0.5**
OUR				AML		AML		04 07 02.2	
	comp=N,10315µm,0.8s								
OUR				AML		AML		04 07 02.7	
	comp=E,11539µm,0.4s								
OUR	**Ouranopolis**	**1.21**	**278**	PN		**Pn**		**04 06 43.6**	**-0.7**
AYVA	**Ayvalik**	**1.24**	**134**	⇓*i* P		**Pn**		**04 06 44.7**	**-0.1**
AYVA				*i* S		**Sn**		**04 07 01.5**	**0.0**
AYVA				IAML				04 07 02.0	
	comp=E,8µm,0.6s								
UKOP	**Uzunkopru-Edir**	**1.26**	**41**	PN		**Pn**		**04 06 44.5**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.34**	**67**	PN		**Pn**		**04 06 45.5**	**-0.8**
SART	**Tekirdag**	**1.35**	**67**	⇓*i* P		**Pn**		**04 06 45.5**	**-0.9**
SART				*i* S		**Sb**		**04 07 03.2**	**-0.9**
KRBG	**Karabiga-Canak**	**1.36**	**80**	PN		**Pn**		**04 06 45.8**	**-0.6**
PAIG	**Paliouri**	**1.46**	**261**	P		**Pn**		**04 06 46.9**	**-0.8**
PAIG				S		**Sn**		**04 07 06.0**	**-0.8**
	comp=E,1µm,0.5s								
PAIG	**Paliouri**	**1.46**	**261**	P		**Pn**		**04 06 46.9**	**-0.8**
KDZ	**Kurdzhali**	**1.47**	**356**	PN		**Pn**		**04 06 47.2**	**-0.8**
SKY	**Skiros Island**	**1.51**	**211**	P		**Pn**		**04 06 47.7**	**-0.9**
SKY	**Skiros Island**	**1.51**	**211**	P		**Pn**		**04 06 47.6**	**-0.9**
KNL	**Balıkesir**	**1.52**	**86**	⇓*i* P		**Pn**		**04 06 48.8**	**+0.2**
KNL				*i* S		**Sg**		**04 07 10.0**	**-0.3**
KNL				IAML				04 07 11.0	
	comp=N,8µm,0.5s								
KNL				IAML				04 07 13.0	
	comp=E,8µm,0.5s								
DKL	**Dikili**	**1.53**	**136**	PN		**Pn**		**04 06 48.0**	**-0.7**
PLG	**Polygyros**	**1.62**	**277**	P		**Pn**		**04 06 49.5**	**-0.5**
PLG	**Polygyros**	**1.62**	**277**	P		**Pn**		**04 06 49.6**	**-0.5**
PLG				S		**Sn**		**04 07 10.6**	**-0.4**
PLG				AML		AML		04 07 16.3	
	comp=N,4816µm,0.5s								
PLG				AML		AML		04 07 17.1	
	comp=E,4317µm,0.5s								
MRMT	**Marmara Adasi**	**1.62**	**74**	PN		**Pn**		**04 06 49.5**	**-0.6**
RZN	**Rozhen**	**1.63**	**338**	*i* P		**Pn**		**04 06 50.1**	**-0.2**
PSRA	**Psara**	**1.64**	**180**	P		**Pn**		**04 06 50.6**	**+0.4**
GONE	**Gonen-Balikesi**	**1.65**	**94**	PN		**Pn**		**04 06 49.9**	**-0.5**
BALY	**Balya**	**1.65**	**105**	⇓*i* P		**Pn**		**04 06 50.7**	**+0.2**
BALY				*i* S		**Sb**		**04 07 13.2**	**+0.4**
BALY				IAML				04 07 14.0	
	comp=N,4µm,0.4s								
BALY				IAML				04 07 15.0	
	comp=E,5µm,0.5s								
ALNA	**Alonissos**	**1.66**	**232**	P		**Pn**		**04 06 50.9**	**+0.4**
ZEDA	**zmir-Bergama**	**1.69**	**135**	⇓*i* P		**Pn**		**04 06 51.1**	**0.0**
ZEDA				*i* S		**Sb**		**04 07 15.0**	**+1.0**
ZEDA				IAML				04 07 16.0	
	comp=E,3µm,0.4s								
ZEDA				IAML				04 07 17.0	
	comp=N,4µm,0.4s								
TKR	**Tekirdag**	**1.72**	**61**	PN		**Pn**		**04 06 50.5**	**-0.8**
SRS	**Serrai**	**1.76**	**303**	*e*Pn		**Pn**		**04 06 51.4**	**-0.5**
SRS				*e*Sg		**Sg**		**04 07 17.9**	**0.0**
SRS	**Serrai**	**1.76**	**303**	P		**Pn**		**04 06 51.3**	**-0.6**
SRS				S		**Sb**		**04 07 15.6**	**-0.2**
	comp=N,2µm,0.6s								
SRS	**Serrai**	**1.76**	**303**	P		**Pn**		**04 06 51.2**	**-0.7**
KRBN	**Karaburun**	**1.77**	**153**	PN		**Pn**		**04 06 51.6**	**-0.4**
EDC	**Edincik**	**1.78**	**84**	PN		**Pn**		**04 06 51.6**	**-0.6**
CHOS	**Chios island**	**1.84**	**167**	P		**Pn**		**04 06 52.7**	**-0.3**
CHOS				S		**Sn**		**04 07 16.6**	**+0.3**
	comp=N,4µm,0.5s								
CHOS	**Chios island**	**1.84**	**167**	P		**Pn**		**04 06 52.8**	**-0.3**
CHOS	**Chios island**	**1.84**	**167**	PN		**Pn**		**04 06 52.6**	**-0.4**
STEP	**BALIKESIR_Sava**	**1.86**	**115**	⇓*i* P		**Pn**		**04 06 53.6**	**+0.3**
STEP				*i* S		**Sg**		**04 07 20.8**	**-0.3**
STEP				IAML				04 07 24.0	
	comp=E,3µm,0.4s								
STEP				IAML				04 07 25.0	
	comp=N,3µm,0.7s								
BALB	**Balikesir**	**1.87**	**106**	PN		**Pn**		**04 06 52.8**	**-0.7**
EDRB	**Edirne**	**1.89**	**28**	P		**Pn**		**04 06 53.0**	**-0.8**
EDRB				S		**Sb**		**04 07 19.6**	**-0.2**
	comp=N,2µm,0.3s								
EDRB	**Edirne**	**1.89**	**28**	PN		**Pn**		**04 06 53.4**	**-0.4**
SKIA	**Skiathos**	**1.90**	**238**	P		**Pn**		**04 06 52.9**	**-1.0**
KYMI	**Kymi, Euboea I**	**1.91**	**216**	P		**Pn**		**04 06 53.0**	**-1.0**
KYMI				S		**Sn**		**04 07 17.3**	**-0.8**
	comp=N,1µm,0.6s								
CRLT	**Corlu**	**1.92**	**60**	PN		**Pn**		**04 06 53.7**	**-0.4**
HORT	**Hortiatis**	**1.92**	**283**	P		**Pn**		**04 06 53.6**	**-0.6**
HORT				S		**Sb**		**04 07 19.6**	**-0.8**
	comp=N,1µm,0.7s								
HORT	**Hortiatis**	**1.92**	**283**	P		**Pn**		**04 06 53.6**	**-0.6**
HORT	**Hortiatis**	**1.92**	**283**	PN		**Pn**		**04 06 53.4**	**-0.7**
CESE	**eme**	**1.94**	**162**	PN		**Pn**		**04 06 53.9**	**-0.5**
MMB	**Musomiste**	**1.97**	**316**	*i* P		**Pn**		**04 06 54.3**	**-0.6**
KIRK	**Kırklareli**	**1.98**	**36**	*e*P		**Pn**		**04 06 54.9**	**-0.1**
KIRK				*i* S		**Sb**		**04 07 22.4**	**0.0**
KIRK				IAML				04 07 30.0	
	comp=N,513nm,0.5s								
URLA	**Izmir**	**1.99**	**156**	PN		**Pn**		**04 06 55.0**	**-0.2**
URLA	**Izmir**	**1.99**	**156**	⇓*i* P		**Pn**		**04 06 54.9**	**-0.2**
URLA				*i* S		**Sn**		**04 07 19.5**	**-0.7**
URLA				IAML				04 07 26.0	
	comp=E,813nm,0.4s								
URLA				IAML				04 07 31.0	
	comp=N,850nm,0.7s								
BOTS	**Marmara Eregli**	**2.02**	**66**	PN		**Pn**		**04 06 55.3**	**-0.2**
THE	**Thessaloniki**	**2.02**	**284**	P		**Pn**		**04 06 56.0**	**+0.4**
PLD	**Plovdiv**	**2.02**	**342**	*e*Pn		**Pn**		**04 06 55.8**	**+0.2**
PLD				*e*Sg		**Sg**		**04 07 27.7**	**+1.2**
PLD	**Plovdiv**	**2.02**	**342**	*i* P		**Pn**		**04 06 55.9**	**+0.3**
PLD	**Plovdiv**	**2.02**	**342**	PN		**Pn**		**04 06 55.1**	**-0.5**
PHSR	**Pinarhisar**	**2.08**	**45**	PN		**Pn**		**04 06 56.4**	**0.0**
MRKA	**Markates**	**2.12**	**226**	P		**Pn**		**04 06 56.1**	**-0.7**
MRKA				S		**Sb**		**04 07 25.0**	**-1.1**
	comp=N,1µm,0.6s								
BLCB	**Balcova**	**2.14**	**147**	P		**Pn**		**04 06 57.3**	**+0.2**
BLCB				S		**Sn**		**04 07 23.8**	**+0.2**
BLCB	**Balcova**	**2.14**	**147**	PN		**Pn**		**04 06 57.1**	**0.0**
KCTX	**Karacabey (Bur**	**2.15**	**87**	PN		**Pn**		**04 06 57.0**	**-0.4**
AKHS	**Akhisar**	**2.18**	**126**	*i* P		**Pn**		**04 06 57.9**	**+0.1**
AKHS				*i* S		**Sn**		**04 07 26.0**	**+1.2**
AKHS				IAML				04 07 33.0	
	comp=E,557nm,0.5s								
AKS	**Akhisar**	**2.18**	**126**	PN		**Pn**		**04 06 57.8**	**0.0**
KNT	**Kendrikon**	**2.24**	**297**	P		**Pn**		**04 06 58.6**	**0.0**
KNT	**Kendrikon**	**2.24**	**297**	PN		**Pn**		**04 06 58.5**	**0.0**
SLVT	**Silivri**	**2.28**	**62**	PN		**Pn**		**04 06 58.3**	**-0.8**
KARY	**Karystos**	**2.31**	**202**	P		**Pn**		**04 06 58.6**	**-0.9**
KARY				S		**Sn**		**04 07 27.6**	**-0.4**
	comp=E,365nm,0.6s								
DURS	**Dursunbey**	**2.33**	**104**	*i* P		**Pn**		**04 07 00.0**	**+0.2**
DURS				IAML				04 07 36.0	
	comp=N,1µm,0.3s								
DURS				IAML				04 07 39.0	
	comp=E,1µm,0.5s								
LIT	**Litokhoron**	**2.34**	**269**	P		**Pn**		**04 06 59.5**	**-0.5**
LIT	**Litokhoron**	**2.34**	**269**	Pn		**Pn**		**04 06 59.5**	**-0.5**
GOMA	**Golmarmara-Man**	**2.35**	**128**	PN		**Pn**		**04 06 59.3**	**-0.8**
DGB	**zmir**	**2.37**	**154**	*i* P		**Pn**		**04 07 00.1**	**-0.1**
DGB				IAML				04 07 44.0	
	comp=E,376nm,1.2s								
DGB				IAML				04 07 46.0	
	comp=N,334nm,0.8s								
JMB	**Yambol**	**2.41**	**19**	*e*Pn		**Pb**		**04 07 03.5**	**-1.4**
JMB				*e*Sg		**Sg**		**04 07 40.0**	**+1.0**
JMB	**Yambol**	**2.41**	**19**	*i* P		**Pn**		**04 07 01.0**	**+0.1**
JMB	**Yambol**	**2.41**	**19**	PN		**Pn**		**04 07 01.1**	**+0.1**
DST	**Dursunbey**	**2.43**	**103**	PN		**Pn**		**04 07 01.1**	**-0.1**
DION	**Dionisos Attik**	**2.45**	**211**	P		**Pn**		**04 07 00.7**	**-0.7**
DION	**Dionisos Attik**	**2.45**	**211**	P		**Pn**		**04 07 00.7**	**-0.7**
CTYL	**Yalikoy Yolu**	**2.45**	**57**	PN		**Pn**		**

KHAL	**Karahalli**	**3.56**	**119**	*i* P		**Pn**	**04 07 17.7**	**+0.9**
KHAL				IAML			04 08 02.0	
	comp=E,138nm,0.8s							
KHAL				IAML			04 08 26.0	
	comp=N,103nm,0.6s							
SKO	**Skopje**	**3.58**	**301**	*i* Pn		**Pn**	**04 07 18.1**	**+1.1**
SKO	**Skopje**	**3.58**	**301**	*i* Pn		**Pn**	**04 07 18.1**	**+1.1**
GEYV	**SAKARYA_Geyve**	**3.64**	**84**	*i* P		**Pn**	**04 07 18.4**	**+0.6**
GEYV				IAML			04 08 25.0	
	comp=N,295nm,0.6s							
GEYV				IAML			04 08 32.0	
	comp=E,214nm,0.9s							
KAND	**Kocaeli-Kandir**	**3.65**	**74**	*i* P		**Pn**	**04 07 18.1**	**+0.2**
KAND				IAML			04 08 21.0	
	comp=N,257nm,0.7s							
KAND				IAML			04 08 21.0	
	comp=E,198nm,0.8s							
YER	**Yerkesik**	**3.72**	**144**	P		**Pn**	**04 07 19.5**	**+0.5**
OHR	**Ohrid**	**3.73**	**286**	*i* Pn		**Pb**	**04 07 28.9**	**+1.5**
OHR	**Ohrid**	**3.73**	**286**	*i* Pn		**Pb**	**04 07 28.9**	**+1.5**
PDO	**Prodromos**	**3.73**	**246**	P		**Pn**	**04 07 21.5**	**+2.5**
TAVA	**DENIZLI_Tavas**	**3.78**	**135**	*i* P		**Pn**	**04 07 20.7**	**+1.0**
TAVA				IAML			04 08 24.0	
	comp=N,86nm,1.2s							
ZAPS	**Zavoj**	**3.78**	**326**	*e*Pn		**Pn**	**04 07 21.4**	**+1.6**
ZAPS				*e*Sn		**Sn**	**04 08 03.9**	**-0.4**
DAT	**Datca**	**3.80**	**155**	P		**Pn**	**04 07 20.0**	**0.0**
DAT	**Datca**	**3.80**	**155**	*i* P		**Pn**	**04 07 20.1**	**0.0**
BARS	**Barje**	**3.84**	**314**	*e*Pn		**Pn**	**04 07 21.1**	**+0.5**
BARS	**Barje**	**3.84**	**314**	*e*Pn		**Pb**	**04 07 30.7**	**+1.4**
BARS				*e*Sn		**Sn**	**04 08 03.6**	**-2.2**
SRCK	**Saricakaya, Es**	**3.90**	**90**	*i* P		**Pn**	**04 07 21.9**	**+0.5**
SRCK				IAML			04 08 29.0	
	comp=N,312nm,0.7s							
SRCK				IAML			04 08 31.0	
	comp=E,171nm,0.5s							
VLAD	**Vladila**	**3.91**	**348**	⇓P		**Pn**	**04 07 21.7**	**+0.2**
VLAD	**Vladila**	**3.91**	**348**			**Pn**	**04 07 21.7**	**+0.2**
COPA	**Copaceanca**	**3.96**	**357**	⇓P		**Pn**	**04 07 22.4**	**+0.3**
COPA	**Copaceanca**	**3.96**	**357**			**Pn**	**04 07 22.4**	**+0.3**
AMT	**Artemida-Makis**	**4.00**	**230**	P		**Pn**	**04 07 23.8**	**+1.1**
IGT	**Igoumenitsa**	**4.07**	**262**	P		**Pn**	**04 07 26.8**	**+3.2**
TURN	**Turunc**	**4.08**	**143**	*i* P		**Pn**	**04 07 23.0**	**-0.8**
TURN				IAML			04 08 37.0	
	comp=N,68nm,0.7s							
TURN				IAML			04 08 37.0	
	comp=E,102nm,0.6s							
SAHE	**Sakarya_HENDEK**	**4.10**	**79**	*i* P		**Pn**	**04 07 24.5**	**+0.4**
SAHE				IAML			04 08 34.0	
	comp=E,106nm,0.6s							
ITM	**Ithomi**	**4.12**	**225**	Pn		**Pn**	**04 07 24.4**	**-0.1**
DALY	**Dalyan (Mula)**	**4.15**	**143**	*i* P		**Pn**	**04 07 23.4**	**-1.3**
DALY				IAML			04 08 46.0	
	comp=N,94nm,0.8s							
DALY				IAML			04 09 08.0	
	comp=E,213nm,0.1s							
ICOR	**Ion Corvin**	**4.27**	**22**	⇓P		**Pn**	**04 07 27.1**	**+0.6**
ICOR	**Ion Corvin**	**4.27**	**22**			**Pn**	**04 07 27.1**	**+0.6**
MDUB	**Mudurnu**	**4.33**	**84**	Pn		**Pn**	**04 07 27.3**	**-0.1**
HUMR	**Humele**	**4.36**	**355**	⇓P		**Pn**	**04 07 27.8**	**+0.1**
HUMR	**Humele**	**4.36**	**355**			**Pn**	**04 07 27.8**	**+0.1**
ZAGS	**Zajecar**	**4.39**	**327**	*e*Pn		**Pn**	**04 07 27.5**	**-0.6**
ZAGS				*e*Sn		**Sn**	**04 08 15.5**	**-3.7**
LEHL	**Lehliu**	**4.39**	**12**	⇑P		**Pn**	**04 07 29.0**	**+0.9**
LEHL	**Lehliu**	**4.39**	**12**			**Pn**	**04 07 28.9**	**+0.9**
TIR	**Tirane**	**4.47**	**287**	Pn		**Pn**	**04 07 29.9**	**+0.7**
BOVS	**Bovan**	**4.49**	**322**	*e*Pn		**Pn**	**04 07 29.8**	**+0.4**
SELS	**Selova**	**4.49**	**314**	*e*Pn		**Pn**	**04 07 28.4**	**-1.1**
SELS				*e*Sn		**Sn**	**04 08 18.7**	**-3.1**
FETY	**Fethiye**	**4.50**	**141**	P		**Pn**	**04 07 31.4**	**+1.8**
FETY	**Fethiye**	**4.50**	**141**	*i* P		**Pn**	**04 07 31.3**	**+1.6**
SULR		**4.52**	**6**	⇑P		**Pn**	**04 07 30.5**	**+0.6**
SULR		**4.52**	**6**			**Pn**	**04 07 30.6**	**+0.6**
MFTR	**Murfatlar**	**4.53**	**27**	⇑P		**Pn**	**04 07 29.7**	**-0.3**
MFTR	**Murfatlar**	**4.53**	**27**			**Pn**	**04 07 29.6**	**-0.3**
ISP	**Isparta**	**4.54**	**120**	Pn		**Pn**	**04 07 29.9**	**-0.3**
AUMIH	**MIHALICIK**	**4.57**	**92**	*i* P		**Pn**	**04 07 28.9**	**-1.8**
AUMIH				IAML			04 08 49.0	
	comp=E,142nm,0.5s							
AUMIH				IAML			04 08 50.0	
	comp=N,183nm,0.6s							
AMRR	**Amara**	**4.62**	**16**	⇓P		**Pn**	**04 07 32.5**	**+1.3**
AMRR	**Amara**	**4.62**	**16**			**Pn**	**04 07 32.5**	**+1.3**
TIRR	**Tirgusor**	**4.77**	**25**	⇓P		**Pn**	**04 07 33.2**	**-0.1**
TIRR	**Tirgusor**	**4.77**	**25**			**Pn**	**04 07 33.2**	**-0.1**
TIRR	**Tirgusor**	**4.77**	**25**	Pn		**Pn**	**04 07 32.3**	**-1.0**
KARP	**Karpathos**	**4.80**	**164**	Pn		**Pn**	**04 07 32.6**	**-1.1**
SRE	**Strehaia**	**4.80**	**340**	⇓P		**Pn**	**04 07 34.2**	**+0.4**
SRE	**Strehaia**	**4.80**	**340**			**Pn**	**04 07 34.2**	**+0.4**
HARR	**Harsova**	**4.84**	**21**	⇓P		**Pn**	**04 07 34.5**	**+0.3**
HARR	**Harsova**	**4.84**	**21**			**Pn**	**04 07 34.5**	**+0.3**
ELL	**Elmali**	**4.84**	**134**	Pn		**Pn**	**04 07 34.7**	**-0.2**
IDI	**Anoyia**	**4.91**	**186**	Pn		**Pn**	**04 07 34.7**	**-0.6**
IDI	comp=N,0.7nm,0.3s,baz=72,slow=16,SNR=1.9			Sn		**Sn**	**04 08 28.8**	**-3.4**
	comp=N,1.4nm,0.3s,baz=37,slow=20,SNR=1.4							
IDI				LR		LR	04 09 36.7	
	comp=N,147nm,20.1s,baz=42,slow=40							
MTUR	**Matau**	**5.05**	**356**	⇑P		**Pn**	**04 07 37.6**	**+0.3**
MTUR	**Matau**	**5.05**	**356**			**Pn**	**04 07 37.6**	**+0.3**
KUBS	**Kucevo**	**5.11**	**327**	*e*Pn		**Pn**	**04 07 37.1**	**-0.9**
GRUS	**Gruza**	**5.16**	**317**	*e*Pn		**Pn**	**04 07 38.7**	**0.0**
SJES	**Sjenica**	**5.18**	**308**	*e*Pn		**Pn**	**04 07 39.6**	**+0.5**
ARR	**Arges**	**5.23**	**353**	⇓P		**Pn**	**04 07 39.6**	**0.0**
ARR	**Arges**	**5.23**	**353**			**Pn**	**04 07 39.6**	**0.0**
HERR	**Herculane**	**5.23**	**335**	⇑P		**Pn**	**04 07 39.1**	**-0.5**
HERR	**Herculane**	**5.23**	**335**			**Pn**	**04 07 39.1**	**-0.5**
PDG	**Podgorica**	**5.24**	**297**	⇑P		**Pn**	**04 07 39.7**	**-0.1**
PDG	**Podgorica**	**5.24**	**297**			**Pn**	**04 07 39.7**	**-0.1**
IVAS	**Ivanjica**	**5.26**	**312**	*e*Pn		**Pn**	**04 07 39.6**	**-0.6**
VOIR		**5.26**	**356**	⇓P		**Pn**	**04 07 40.3**	**+0.1**
VOIR		**5.26**	**356**			**Pn**	**04 07 40.3**	**+0.1**
MLR	**Muntele Rosu**	**5.31**	**3**	Pn		**Pn**	**04 07 42.2**	**+1.3**
	comp=N,7.3nm,0.3s,baz=232,slow=3.9,SNR=39							
MLR				Lg		Lg	04 09 11.0	
	comp=N,6.3nm,0.3s,baz=153,slow=7.1,SNR=3.2							
MLR				LR		LR	04 10 19.7	
	comp=N,241nm,19.9s,baz=300,slow=45							
MLR	**Muntele Rosu**	**5.31**	**3**	⇑P		**Pn**	**04 07 42.1**	**+1.1**
MLR	**Muntele Rosu**	**5.31**	**3**			**Pn**	**04 07 42.1**	**+1.1**
CFR	**Carcaliu**	**5.34**	**20**	⇑P		**Pn**	**04 07 40.9**	**-0.3**
CFR	**Carcaliu**	**5.34**	**20**			**Pn**	**04 07 40.9**	**-0.3**
MDVR	**Moldovita**	**5.40**	**330**	⇑P		**Pn**	**04 07 41.9**	**-0.1**
MDVR	**Moldovita**	**5.40**	**330**			**Pn**	**04 07 41.9**	**-0.1**
LOT	**Lotru**	**5.42**	**347**	⇓P		**Pn**	**04 07 42.3**	**-0.1**
LOT	**Lotru**	**5.42**	**347**			**Pn**	**04 07 42.3**	**-0.1**
TLCR		**5.55**	**25**	⇑P		**Pn**	**04 07 44.4**	**+0.4**
TLCR		**5.55**	**25**			**Pn**	**04 07 44.4**	**+0.4**
TRUS	**Trudelj**	**5.56**	**318**	*e*Pn		**Pn**	**04 07 43.7**	**-0.4**
BR231	**Keskin MP Arra**	**5.56**	**91**			**Pn**	**04 07 43.6**	**-0.7**
ANTO	**Ankara**	**5.57**	**91**	⇓P		**Pn**	**04 07 42.2**	**-2.2**
ANTO	**Ankara**	**5.57**	**91**			**Pn**	**04 07 43.0**	**-1.4**
GZR	**Gura Zlata**	**5.59**	**340**	⇑P		**Pn**	**04 07 44.5**	**-0.2**
GZR	**Gura Zlata**	**5.59**	**340**			**Pn**	**04 07 44.5**	**-0.2**
TUDR		**5.63**	**15**	⇑P		**Pn**	**04 07 46.0**	**+1.0**
TUDR		**5.63**	**15**			**Pn**	**04 07 46.0**	**+1.0**
DIVS	**Divibare**	**5.69**	**315**	*e*Pn		**Pn**	**04 07 45.3**	**-0.7**
DIVS				*e*Sn		**Sn**	**04 08 47.5**	**-3.9**
DIVS	**Divibare**	**5.69**	**315**	Pn		**Pn**	**04 07 46.0**	**-0.1**
PLOR	**Plostina**	**5.72**	**8**	⇑P		**Pn**	**04 07 47.6**	**+1.2**
PLOR	**Plostina**	**5.72**	**8**			**Pn**	**04 07 47.6**	**+1.2**
VRI	**Vrincioaia**	**5.75**	**8**	⇓P		**Pn**	**04 07 48.1**	**+1.4**
VRI	**Vrincioaia**	**5.75**	**8**			**Pn**	**04 07 48.1**	**+1.4**
DOPR	**Dopca**	**5.78**	**359**	⇑P		**Pn**	**04 07 48.3**	**+1.0**
DOPR	**Dopca**	**5.78**	**359**			**Pn**	**04 07 48.3**	**+1.0**
BBLS	**Lazići**	**5.87**	**311**	*e*Pn		**Pn**	**04 07 48.9**	**+0.4**
OZUR		**5.91**	**2**	⇑P		**Pn**	**04 07 50.2**	**+1.2**
OZUR		**5.91**	**2**			**Pn**	**04 07 50.2**	**+1.2**
VARL	**Varlezi**	**5.96**	**16**	⇑P		**Pn**	**04 07 51.4**	**+1.8**
DEV	**Deva**	**6.02**	**342**	⇓P		**Pn**	**04 07 51.0**	**+0.6**
DEV	**Deva**	**6.02**	**342**			**Pn**	**04 07 51.0**	**+0.6**
BR131	**Keskin Array S**	**6.24**	**92**			**Pn**	**04 07 53.7**	**+0.1**
BRTR	**Keskin Array B**	**6.24**	**92**	Pn		**Pn**	**04 07 54.4**	**+0.8**
	comp=N,9.5nm,0.3s,baz=266,slow=12,SNR=152							
BRTR				Sn		**Sn**	**04 09 02.5**	**-2.5**
	comp=N,0.9nm,0.3s,baz=275,slow=20,SNR=0.9							
BRTR				Lg		Lg	04 09 38.9	
	baz=277,slow=26,SNR=1.3							
TEKS	**Tekeris**	**6.24**	**316**	*e*Pn		**Pn**	**04 07 53.0**	**-0.5**
TESR	**Tescani**	**6.38**	**7**	⇑P		**Pn**	**04 07 56.9**	**+1.5**
TESR	**Tescani**	**6.38**	**7**			**Pn**	**04 07 56.9**	**+1.5**
FRGS	**Fruska Gora**	**6.53**	**322**	*e*Pn		**Pn**	**04 07 55.4**	**-2.0**
VASR	**Vaslui**	**6.66**	**13**	⇑P		**Pn**	**04 07 59.4**	**+0.2**
CJR	**Cluj-Napoca**	**6.68**	**348**	⇑P		**Pn**	**04 08 00.3**	**+0.7**
CJR	**Cluj-Napoca**	**6.68**	**348**			**Pn**	**04 08 00.3**	**+0.7**
SIRR	**Siria**	**6.71**	**336**	⇓P		**Pn**	**04 07 59.9**	**-0.1**
SIRR	**Siria**	**6.71**	**336**			**Pn**	**04 07 59.9**	**-0.1**
BIZ	**Bicaz**	**6.77**	**3**	⇑P		**Pn**	**04 08 02.0**	**+1.2**
BIZ	**Bicaz**	**6.77**	**3**			**Pn**	**04 08 02.0**	**+1.2**
GIRR	**Girov**	**6.81**	**6**	⇓P		**Pn**	**04 08 02.3**	**+1.0**
GIRR	**Girov**	**6.81**	**6**			**Pn**	**04 08 02.3**	**+1.0**
TIP	**Timpagrande**	**6.85**	**264**	Pn		**Pn**	**04 08 03.0**	**+1.0**
DRGR		**6.92**	**344**	⇓P		**Pn**	**04 08 03.4**	**+0.5**
DRGR		**6.92**	**344**			**Pn**	**04 08 03.4**	**+0.5**
ARCR	**ARCALIA**	**6.96**	**353**	⇓P		**Pn**	**04 08 03.9**	**+0.6**
ARCR	**ARCALIA**	**6.96**	**353**			**Pn**	**04 08 03.9**	**+0.6**
KIS	**Kishinev**	**7.21**	**18**	*e*		Pn	04 08 13.0	+6.2
BURAR	**Bucovina Array**	**7.43**	**358**	⇓P		**Pn**	**04 08 11.9**	**+2.0**
BURAR	**Bucovina Array**	**7.43**	**358**			**Pn**	**04 08 11.9**	**+2.0**
BUR08	**Bucovina Ar. S**	**7.46**	**358**	Pn		**Pn**	**04 08 11.2**	**+0.8**
SORM	**Soroca**	**8.20**	**13**	⇑P		**Pn**	**04 08 19.6**	**-0.7**
SORM	**Soroca**	**8.20**	**13**			**Pn**	**04 08 19.6**	**-0.7**
PSZ	**Piszkesteto**	**8.74**	**334**			**Pn**	**04 08 27.4**	**-0.4**
VYHS	**Vyhne**	**9.60**	**332**	*e*PN		**Pn**	**04 08 38.5**	**-1.0**
KWP	**Kalwaria Pacla**	**9.66**	**349**	Pn		**Pn**	**04 08 40.0**	**-0.4**
SOKA	**Soboth**	**10.03**	**314**	*i* Pn		**Pn**	**04 08 47.0**	**+1.5**
	comp=N,0.7nm,0.2s							
MMAI	**Mount Meron Ar**	**10.67**	**129**	Pn		**Pn**	**04 08 52.9**	**-1.4**
	comp=N,1.6nm,0.3s,baz=328,slow=17,SNR=3.6							
AKASG	**Malin Array Be**	**10.83**	**13**	Pn		**Pn**	**04 08 54.9**	**-1.4**
	comp=N,2.3nm,0.3s,baz=201,slow=11,SNR=4.3							
AKBB	**Malin Array Si**	**10.83**	**13**	Pn		**Pn**	**04 08 55.5**	**-0.9**
VRAC	**Vranov**	**11.12**	**328**	Pn		**Pn**	**04 09 02.2**	**+1.9**
	comp=N,0.2nm,0.3s,baz=144,slow=12,SNR=1.7							
ZOU	**Zoufplan**	**11.14**	**309**	Pn		**Pn**	**04 09 01.7**	**+0.8**
KBA	**Koelnbreinsper**	**11.20**	**312**	*i* Pn		**Pn**	**04 09 02.9**	**+1.2**
	comp=N,0.9nm,0.5s							
ABTA	**Abfaltersbach**	**11.52**	**309**	*i* Pn		**Pn**	**04 09 07.1**	**+1.2**
	comp=N,1.6nm,0.7s							
CTI	**Castel Tesino**	**11.72**	**305**	Pn		**Pn**	**04 09 09.3**	**+0.6**
GERES	**GERESS Array B**	**12.09**	**320**	Pn		**Pn**	**04 09 15.3**	**+1.6**
	comp=N,0.1nm,0.3s,baz=129,slow=14,SNR=2.8							
WTTA	**Wattenberg**	**12.29**	**310**	*i* Pn		**Pn**	**04 09 16.9**	**+0.3**
	comp=N,6.1nm,0.6s							
WATA	**Walderalm**	**12.36**	**310**	*i* Pn		**Pn**	**04 09 19.7**	**+2.1**
	comp=N,2.6nm,0.4s							
SQTA	**Sankt Quirin**	**12.53**	**309**	*i* Pn		**Pn**	**04 09 21.6**	**+1.9**
	comp=N,4.4nm,0.5s							
MOTA	**Moosalm**	**12.65**	**309**	*i* Pn		**Pn**	**04 09 20.9**	**-0.5**
	comp=N,4.4nm,0.6s							
EIL	**Elat**	**13.01**	**141**	Pn		**Pn**	**04 09 25.2**	**-1.0**
	comp=N,0.3nm,0.3s,baz=0.0,slow=12,SNR=2.4							
DAVOX	**Davos/Dischmat**	**13.14**	**305**	Pn		**Pn**	**04 09 28.7**	**+0.5**
	comp=N,0.2nm,0.3s,baz=146,slow=11,SNR=6.5							
FINES	**FINESS Array B**	**21.29**	**1**	P		**P**	**04 11 07.9**	**+0.1**
	comp=N,1.5nm,0.5s,baz=161,slow=12,SNR=11							
FINES				PcP		**PcP**	**04 15 11.2**	**-0.7**
	comp=N,0.5nm,0.4s,baz=151,slow=3.2,SNR=5.0							
HFS	**Hagfors**	**21.30**	**344**	P		**P**	**04 11 06.6**	**-1.3**
	comp=N,2.5nm,0.8s,baz=162,slow=15,SNR=3.5							
KLMR	**Klimovskoe**	**22.43**	**18**	*e*		**P**	**04 11 20.9**	**+0.9**
KLMR				AMP			04 11 26.9	
	comp=Z,9.0nm,0.9s							
ESDC	**Sonseca Array**	**22.59**	**278**	P		**P**	**04 11 20.8**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=71,slow=10.0,SNR=2.4							
NB2	**NORSAR Subarra**	**22.68**	**342**	P		**P**	**04 11 20.5**	**-2.2**
	comp=Z,1.5nm,0.7s,baz=146,slow=10							
NOA	**NORSAR Array B**	**22.68**	**342**	P		**P**	**04 11 21.1**	**-1.6**
	comp=Z,0.6nm,0.5s,baz=146,slow=9.4,SNR=4.9							
RAYN	**Ar Rayn**	**23.65**	**129**	P		**P**	**04 11 32.8**	**-0.2**
RAYN				IAmb		IAmb	04 11 35.8	
	comp=Z,2.0nm,0.8s							
EKA	**Eskdalemuir Ar**	**24.30**	**318**	P		**P**	**04 11 38.3**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=118,slow=10,SNR=3.8							
ARCES	**ARCESS Array B**	**29.42**	**360**	P		**P**	**04 12 25.4**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=162,slow=9.8,SNR=3.6							
TORD	**Torodi Ar. Bea**	**34.12**	**225**	P		**P**	**04 13 06.5**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=38,slow=9.9,SNR=6.6							
MKAR	**Makanchi Array**	**40.92**	**61**	P		**P**	**04 14 04.5**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=280,slow=7.0,SNR=8.9							
ZALV	**Zalesovo Beam**	**41.43**	**50**	P		**P**	**04 14 07.8**	**0.0**
	comp=Z,1.5nm,0.6s,baz=278,slow=8.7,SNR=2.6							
SONM	**Songino Array**	**56.15**	**53**	P		**P**	**04 16 02.2**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=284,slow=7.5,SNR=5.3							
YKA	**Yellowknife Ar**	**72.78**	**342**	P		**P**	**04 17 50.0**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=28,slow=4.8,SNR=7.2							
ILAR	**Eielson Array**	**75.22**	**357**	P		**P**	**04 18 06.9**	**+3.2**
	comp=Z,0.2nm,0.6s,baz=357,slow=4.0,SNR=1.9							

*IDC **30** 04:11:47.8±2.8,23°.97S×179°.96W,h508km±26km, mb3.5/11,mb1 3.6/11,mb1mx3.3/51,mbtmp4.4/11,Error ellipse: s-maj=24.4km s-min=19.5km az=75.0*

ISC 30 04:11:48.8±0.9,24°.0S±0°.2×180°.0E±0°.2,h518km,n16, σ0s54/18,mb3.7/11,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**21.01**	**198**	P	**P**		**04 15 54.7**	**-0.7**
	9.3nm,0.8s,baz=347,slow=6.3,SNR=5.3							
CTA	**Charters Tower**	**31.46**	**270**	P	**P**		**04 17 28.8**	**+1.0**
	9.1nm,0.5s,baz=92,slow=11,SNR=15							
ASAR	**Alice Springs**	**42.01**	**261**	P	**P**		**04 18 54.9**	**+0.2**
	1.5nm,0.7s,baz=99,slow=7.4,SNR=13							
WRA	**Warramunga Arr**	**42.39**	**266**	P	**P**		**04 18 57.3**	**-0.4**
	4.4nm,0.6s,baz=102,slow=8.1,SNR=5.2							
JAY	**Jayapura**	**43.54**	**293**	P	**P**		**04 19 06.4**	**-0.3**
	5.7nm,0.5s,baz=51,slow=14,SNR=4.3							
SIJI	**Sorong**	**52.45**	**289**	P	**P**		**04 20 13.1**	**-0.3**
	8.6nm,0.4s,baz=56,slow=10,SNR=5.8							
MJAR	**Matsushiro Arr**	**71.96**	**326**	P	**P**		**04 22 18.9**	**-0.7**
	0.8nm,0.4s,baz=145,slow=6.2,SNR=4.3							
MAW	**Mawson**	**77.67**	**200**	P	**P**		**04 22 51.7**	**+0.5**
	1.7nm,0.5s,baz=144,slow=7.7,SNR=3.1							
KSRS	**Korea Array**	**78.30**	**320**	P	**P**		**04 22 55.6**	**+0.6**
	0.6nm,0.4s,baz=134,slow=5.2,SNR=2.0							
PETK	**Petropavlovsk-**	**79.18**	**347**	P	**P**		**04 22 59.1**	**-0.2**
	2.1nm,0.7s,baz=127,slow=6.7,SNR=5.9							
TXAR	**Lajitas Array**	**90.49**	**58**	P	**P**		**04 23 56.0**	**+0.5**
	0.3nm,0.7s,baz=212,slow=4.4,SNR=4.3							
ARCES	**ARCESS Array B**	**131.97**	**348**	PKP	**PKPdf**		**04 30 02.0**	**-0.4**
	0.4nm,0.8s,baz=57,slow=4.5,SNR=4.3							
FINES	**FINESS Array B**	**138.52**	**341**	PKP	**PKPdf**		**04 30 15.2**	**+0.5**
	0.7nm,0.8s,baz=131,slow=3.8,SNR=3.3							
AKASG	**Malin Array Be**	**145.03**	**327**	PKPbc	**PKPdf**		**04 30 26.4**	**-0.3**
	0.9nm,0.3s,baz=40,slow=4.5,SNR=8.2							
AKASG				SKPbc	**SKiKP**		**04 33 17.8**	**+0.2**
	1.0nm,0.6s,baz=49,slow=2.6,SNR=5.3							
BRTR	**Keskin Array B**	**147.62**	**307**	PKPbc	**PKPbc**		**04 30 34.5**	**-0.6**
	0.5nm,0.4s,baz=92,slow=3.8,SNR=1.8							
BRTR				PKPab	**PKPab**		**04 30 39.5**	**+0.3**
	1.2nm,0.6s,baz=108,slow=4.0,SNR=4.6							
TORD	**Torodi Ar. Bea**	**169.10**	**189**	PKPab	**PKPab**		**04 32 11.8**	**-0.4**
	0.2nm,0.6s,baz=200,slow=4.8,SNR=3.6							

*INET **30** 04:21:10.9, 11°.45N×87°.56W,h4km,ML3.6*
*IDC **30** 04:21:11.6±1.3, 11°.84N×87°.12W,h0km,mb3.9/6, mb1 4.1/7,mb1mx3.7/37,mbtmp3.9/7,ML3.4/2,Error ellipse: s-maj=47.3km s-min=17.1km az=46.0*
*UCR **30** 04:21:12.7±1.8, 11°.52N×87°.67W,h23km,MD4.4, mb4.2(NEIC)*
*NEIC **30** 04:21:17.1±1.0, 11°.66N±0°.09×87°.43W±0°.06,h45km±8km, mb4.2/40,Error ellipse: s-maj=13.1km s-min=6.8km az=203.0*

ISC 30 04:21:15.8±0.7,11°.56N±0°.07×87°.44W±0°.08,h37km,n64, σ1s29/52,mb4.2/24,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**1.20**	**19**	*e*P	**Pn**		**04 21 36.2**	**+0.1**
CRIN	**San Cristobal**	**1.20**	**19**	Pn	**Pn**		**04 21 36.1**	**0.0**
MASN	**Masaya**	**1.34**	**71**	*e*P	**Pn**		**04 21 40.0**	**+2.0**
MATN	**Matagalpa**	**2.02**	**47**	*e*P	**Pn**		**04 21 47.0**	**-0.3**
MATN	**Matagalpa**	**2.02**	**47**	Pn	**Pn**		**04 21 47.2**	**-0.2**
NY14	**Universidad de**	**2.08**	**116**	*i* P	**Pn**		**04 21 47.8**	**-0.3**
BUEV	**Buena Vista**	**2.14**	**110**	*e*P	**Pn**		**04 21 49.0**	**0.0**
GB1A	**Borinquen Arri**	**2.14**	**110**	*e*P	**Pn**		**04 21 49.6**	**+0.6**
ACON	**Acoyapa**	**2.26**	**79**	*e*P	**Pn**		**04 21 51.7**	**+1.1**
ACON	**Acoyapa**	**2.26**	**79**	Pn	**Pn**		**04 21 51.9**	**+1.3**
GUAI	**GUAI**	**2.29**	**124**	*i* P	**Pn**		**04 21 50.4**	**-0.6**
GUAI				*i* S	**Sn**		**04 22 15.8**	**-2.1**
LIM1	**Limonal**	**2.31**	**111**	*i* P	**Pn**		**04 21 51.2**	**-0.2**
PLVR	**Palo Verde**	**2.38**	**120**	*e*P	**Pn**		**04 21 52.6**	**+0.1**
CUI	**Cuipilapa**	**2.41**	**112**	*e*P	**Pn**		**04 21 53.3**	**+0.5**
TGUH	**Tegucigalpa,Un**	**2.49**	**4**	Pn	**Pn**		**04 21 54.1**	**+0.2**
JTS	**Las Juntas de**	**2.75**	**117**	Pn	**Pn**		**04 21 55.4**	**-2.0**
	2.6nm,0.3s,baz=14,slow=19,SNR=11							
JTS				Sn	**Sn**		**04 22 28.1**	**-1.3**
	8.7nm,0.3s,baz=297,slow=21,SNR=8.4							
JTS	**Las Juntas de**	**2.75**	**117**	*e*P	**Pn**		**04 21 57.7**	**+0.3**
JTS	**Las Juntas de**	**2.75**	**117**	Pn	**Pn**		**04 21 59.2**	**+1.8**
ARE1	**Arenal 1**	**2.89**	**112**	*e*P	**Pn**		**04 22 01.1**	**+1.8**
CEDE	**Laguna Cedeo**	**2.89**	**111**	*e*P	**Pn**		**04 22 00.9**	**+1.5**
ESPN	**Las Esperanzas**	**3.14**	**78**	*e*P	Pn		04 22 08.0	+5.3
ESPN	**Las Esperanzas**	**3.14**	**78**	Pn	Pn		**04 22 04.8**	**+2.0**
MTO3	**Montecristo**	**3.39**	**327**	Pn	**Pn**		**04 22 06.5**	**+0.1**
LSR2	**La Lucha 2**	**3.83**	**118**	*e*P	**Pn**		**04 22 14.2**	**+1.8**
CMIG	**Matias Romero**	**9.07**	**308**	Pn	**Pn**		**04 23 24.5**	**+0.3**
	1.0nm,0.3s,baz=127,slow=11,SNR=11							
TIGA	**Tifton**	**20.11**	**10**	P	**P**		**04 25 45.9**	**-0.5**
342A	**Flagon Creek P**	**20.23**	**348**	P	Pn		04 25 48.1	-1.7
152A	**Waverly H

comp=Z,7.9nm,0.9s
MK31 Makanchi Array 25.21 334 P **P** 04 30 28.9 -0.3
MKAR Makanchi Array 25.21 334 P **P** 04 30 28.2 -0.9
comp=Z,3.3nm,0.8s,baz=141,slow=9.2,SNR=16
BOOM Boomskoye usch 25.27 320 P **P** 04 30 29.7 -0.3
BOOM IAmb IAmb 04 30 34.4
comp=Z,4.6nm,0.7s
MAKZ Makanchi 25.35 334 P **P** 04 30 28.1 -2.3
MAKZ IAmb IAmb 04 30 35.7
comp=Z,3.6nm,0.8s
AAK Ala-Archa 26.22 318 P **P** 04 30 38.7 +0.2
comp=Z,2.9nm,0.8s,baz=162,slow=9.6,SNR=6.8
AAK Ala-Archa 26.22 318 P **P** 04 30 41.1 +2.6
AAK IAmb IAmb 04 30 44.4
comp=Z,3.8nm,0.8s
KBL Kabul 26.82 298 P **P** 04 30 45.0 +0.9
GAR Garm 27.24 308 P **P** 04 30 50.1 +2.4
BTK Batken 27.32 310 P **P** 04 30 50.9 +2.6
BTK IAmb IAmb 04 30 56.5
comp=Z,4.7nm,0.8s
CHGR Chuyangaron 27.95 306 P **P** 04 30 55.2 +1.2
KURBB Kurchatov Arra 29.77 335 P **P** 04 31 09.8 -0.2
comp=Z,0.2nm,0.4s,baz=146,slow=9.7,SNR=1.7
KURK Kurchatov 29.81 335 P **P** 04 31 09.8 -0.6
ZALV Zalesovo Beam 30.67 345 P **P** 04 31 17.0 -0.9
comp=Z,1.8nm,0.6s,baz=164,slow=10.0,SNR=5.9
BVAR Borovoye Array 34.95 331 P **P** 04 31 56.4 +1.1
comp=Z,0.9nm,0.6s,baz=242,slow=40,SNR=2.5
AKTO Aktyubinsk 39.93 320 P **P** 04 32 38.1 +0.5
comp=Z,0.6nm,0.3s,baz=111,slow=5.3,SNR=4.2
WRA Warramunga Arr 56.89 138 P **P** 04 34 49.0 +0.3
comp=Z,0.6nm,0.6s,baz=326,slow=7.5,SNR=2.8
WRAB Tennant Creek 56.89 138 P **P** 04 34 47.7 -0.9
AKASG Malin Array Be 57.84 316 P **P** 04 34 54.1 -1.0
comp=Z,0.6nm,0.6s,baz=82,slow=6.8,SNR=2.2
FINES FINESS Array B 59.84 328 P **P** 04 35 08.3 -0.4
comp=Z,0.9nm,0.8s,baz=109,slow=7.5,SNR=2.1
GERES GERESS Array B 68.04 315 P **P** 04 36 03.7 +0.7
comp=Z,0.7nm,0.7s,baz=69,slow=5.4,SNR=4.6

TAP 30 04:28:42.5, 24°.27N×121°.66E, h5km, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**0.11**	**209**	P	Pg	04 28 45.5	+0.6
	baz=208						
NACB				S	Sg	04 28 47.8	+1.3
	baz=208						
ETLH	**Xiulin Townshi**	**0.17**	**247**	P	Pg	04 28 47.2	+1.3
	baz=247						
ETLH				*e*S	Sg	04 28 50.9	+2.6
	baz=247						
ENA	**Nanau**	**0.17**	**27**	*e*P	Pg	04 28 46.0	0.0
	baz=29						
ENA				*e*S	Sg	04 28 49.9	+1.6
	baz=29						
TWD	**Chiawan**	**0.20**	**196**	*e*P	Pg	04 28 47.1	+0.7
	baz=193						
TWD				S	Sg	04 28 51.0	+1.9
	baz=193						
NNSH	**Datong**	**0.29**	**302**	*i* P	Pb	04 28 49.6	-0.7
	baz=301						
NNSH				S	Sb	04 28 54.1	-1.5
	baz=301						
NNSB	**Datong**	**0.29**	**302**	P	Pb	04 28 49.7	-0.6
	baz=301						
NNSB				S	Sb	04 28 54.0	-1.6
	baz=301						
NNS	**Nan Shan**	**0.31**	**303**	*e*S	Sb	04 28 54.8	-1.2
	baz=303						
NDT	**Datong Townshi**	**0.35**	**338**	*i* P	Pb	04 28 50.7	-0.6
	baz=338						
NDT				S	Sb	04 28 56.7	-0.5
	baz=338						
ENTT	**Nioudou**	**0.37**	**348**	P	Pb	04 28 51.1	-0.6
	baz=348						
ENTT				S	Sb	04 28 57.4	-0.5
	baz=348						
WHF	**Hehuan Shan**	**0.38**	**250**	P	Pb	04 28 51.1	-0.8
	baz=249						
WHF				S	Sb	04 28 57.7	-0.6
	baz=249						
YHNB	**Yeheng**	**0.47**	**327**	*e*P	Pb	04 28 53.1	-0.3
	baz=327						
YHNB				*e*S	Sb	04 29 00.3	-0.3
	baz=327						
CHGB	**Renai**	**0.49**	**244**	*e*P	Pb	04 28 53.6	-0.1
	baz=244						
CHGB				*e*S	Sb	04 29 00.8	-0.5
	baz=244						
NWLT	**Wulai**	**0.52**	**345**	P	Pb	04 28 54.3	+0.1
	baz=344						
NWLT				*e*S	Sb	04 29 01.9	-0.1
	baz=344						
WHP	**Taichung City**	**0.65**	**271**	*e*P	Pn	04 28 57.6	-0.9
	baz=270						
WHP				S	Sb	04 29 06.2	+0.4
	baz=270						
VWDT	**VWDT**	**0.70**	**222**	*e*P	Pb	04 28 56.7	-0.4
	baz=222						
VWDT				*e*S	Sb	04 29 07.0	-0.1
	baz=222						

JMA 30 04:29:26.0±0.2, 24°.83N×123°.20E, h22km, M1.9, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.41**	**205**	P	Pb	04 29 34.3	-0.2
JYNG	**Yonagunijimaku**	**0.44**	**212**	P	Pb	04 29 35.1	0.0
JYNG				*e*S	Sb	04 29 41.6	+0.3
IRIF	**Iriomote-Funau**	**0.69**	**136**	P	Pb	04 29 39.1	-0.3
IRIF				S	Sb	04 29 48.0	-0.5
JKRS	**Kuro-shima**	**0.94**	**129**	P	Pn	04 29 43.9	0.0
JKRS				*e*S	Sb	04 29 55.7	0.0
HATJ	**Hateruma jima**	**0.95**	**144**	P	Pb	04 29 42.8	-0.9
JIJ	**Ishigaki jima**	**0.98**	**118**	S	Sb	04 29 56.4	-0.3
JISG	**Ishigakijimahi**	**1.04**	**103**	P	Pn	04 29 44.8	-0.4
JISG				S	Sn	04 29 59.1	0.0

*JMA **30** 04:37:54.3±0.2, 24°.98N×123°.36E, h25km±4km, M3.0*
*IDC **30** 04:38:07.5±7.0, 24°.84N×122°.93E, h122km±68km, mb3.1/4, mb1 3.4/5, mb1mx3.1/35, mbtmp3.5/5, MS3.2/2, Ms1 3.2/2, ms1mx2.7/23, Error ellipse: s-maj=50.6km s-min=24.4km az=71.0*
ISC 30 04:37:54.1±1.8, 24°.88N±0°.06×123°.45E±0°.05, h10km±12km, n15, σ0°79/20, mb3.4/4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.57**	**224**	P	**Pb**	**04 38 05.8**	**-0.5**
YOJ				*e*S	**Sb**	**04 38 14.1**	**-0.3**
IRIF	**Iriomote-Funau**	**0.60**	**154**	P	**Pn**	**04 38 07.9**	**-0.8**
IRIF				S	**Sn**	**04 38 17.2**	**-1.2**
JYNG	**Yonagunijimaku**	**0.62**	**227**	P	**Pg**	**04 38 06.6**	**+0.4**
JIJ	**Ishigaki jima**	**0.81**	**129**	P	**Pn**	**04 38 11.2**	**-0.4**
JIJ				S	**Sn**	**04 38 23.0**	**-0.7**
JKRS	**Kuro-shima**	**0.82**	**141**	P	**Pn**	**04 38 11.9**	**+0.2**
JKRS				S	**Sn**	**04 38 24.1**	**+0.3**
JISG	**Ishigakijimahi**	**0.84**	**110**	P	**Pn**	**04 38 11.7**	**-0.2**
HATJ	**Hateruma jima**	**0.88**	**158**	P	**Pn**	**04 38 12.5**	**0.0**
HATJ				S	**Sn**	**04 38 25.3**	**-0.1**
JIRB	**Irabujima**	**1.57**	**91**	P	**Pb**	**04 38 22.6**	**-0.6**
JIRB				*e*S	**Sb**	**04 38 43.3**	**+0.2**
JIKM	**Ikemajima**	**1.64**	**88**	P	**Pn**	**04 38 22.5**	**-0.4**
KSRS	**Korea Array**	**13.11**	**16**	P	**P**	**04 41 10.9**	**+0.3**
	0.2nm,0.3s,baz=200,slow=12,SNR=2.2						
KSRS				LR	LR	04 46 53.2	
	comp=Z,66nm,18.3s,baz=200,slow=40						
SONM	**Songino Array**	**26.59**	**334**	P	**P**	**04 43 32.9**	**+0.3**
	0.4nm,0.4s,baz=146,slow=11,SNR=4.3						
JAY	**Jayapura**	**31.97**	**146**	LR	LR	04 56 39.2	
	comp=Z,48nm,18.7s,baz=12,slow=34						
MKAR	**Makanchi Array**	**39.30**	**314**	P	**P**	**04 45 21.6**	**-1.6**
	0.1nm,0.4s,baz=98,slow=9.3,SNR=1.7						
WRA	**Warramunga Arr**	**45.79**	**166**	P	**P**	**04 46 17.8**	**+1.6**
	1.4nm,0.8s,baz=350,slow=8.5,SNR=5.4						
YKA	**Yellowknife Ar**	**81.53**	**23**	P	**P**	**04 50 12.4**	**+0.9**
	0.3nm,0.8s,baz=307,slow=4.3,SNR=5.1						

*IDC **30** 04:50:42.6±2.0, 8°.08S×119°.03E, h0km, mb3.3/2, mb1 3.7/5, mb1mx3.5/32, mbtmp3.5/5, ML3.4/3, Error ellipse: s-maj=59.6km s-min=21.6km az=70.0*
*DJA **30** 04:50:44.6±0.3, 8°.3S×121°.9E±°, h10km, M3.8/7, MLv3.8/7*
ISC 30 04:50:47.1±0.9, 8°.13S±0°.04×119°.01E±0°.06, h34km, n11, σ0°77/16, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**1.41**	**240**	P	**Pn**	**04 51 10.8**	**+0.5**
PLAI				S	**Sb**	**04 51 30.4**	**-0.1**
WBSI	**Waikabubak, Su**	**1.55**	**166**	P	**Pn**	**04 51 11.6**	**-0.8**
WBSI				S	**Sn**	**04 51 31.4**	**0.0**
WSI	**Waingapu**	**1.99**	**140**	P	**Pn**	**04 51 19.1**	**+0.7**
BASI	**Baing, Sumba**	**2.59**	**143**	P	**Pn**	**04 51 28.0**	**+1.3**
BASI				S	**Sb**	**04 52 04.2**	**-0.2**
EDFI	**Ende, Flores**	**2.72**	**103**	P	**Pn**	**04 51 28.7**	**+0.2**
BKSI	**Bulukumba**	**3.00**	**22**	P	**Pn**	**04 51 32.8**	**+0.6**
BKSI				S	**Sn**	**04 52 07.4**	**+0.5**
KAPI	**Kappang**	**3.18**	**13**	Pn	**Pn**	**04 51 33.6**	**-1.1**
	2.0nm,0.3s,baz=224,slow=2.8,SNR=10						
KAPI				Sn	**Sn**	**04 52 11.9**	**+0.4**
	2.0nm,0.3s,baz=165,slow=20,SNR=11						
FITZ	**Fitzroy Crossi**	**11.83**	**148**	Pn	**Pn**	**04 53 32.4**	**-1.1**
	0.2nm,0.3s,baz=316,slow=7.7,SNR=1.7						
WRA	**Warramunga Arr**	**18.93**	**130**	P	**P**	**04 55 04.8**	**-0.5**
	0.2nm,0.3s,baz=306,slow=12,SNR=3.7						
ASAR	**Alice Springs**	**21.04**	**139**	P	**P**	**04 55 29.2**	**+1.0**
	1.2nm,0.7s,baz=318,slow=10,SNR=9.9						
MKAR	**Makanchi Array**	**63.69**	**333**	P	**P**	**05 01 15.5**	**+0.3**
	0.2nm,0.5s,baz=122,slow=7.4,SNR=2.5						

*TAP **30** 04:57:06.8, 24°.74N×122°.39E, h11km, ML3.1, C*
*JMA **30** 04:57:07.9, 24°.64N×122°.41E, h29km±1km, M2.6*
ISC 30 04:57:05.9±1.1, 24°.76N±0°.03×122°.43E±0°.02, h12km±9km, n66, σ0°79/119, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		**0.46**	**281**	*i* P	**Pb**	**04 57 15.9**	**-0.1**
	baz=284						
EGS				*e*S	**Sb**	**04 57 23.2**	**+0.5**
	baz=284						
TWB1	**Santiao Chiao**	**0.47**	**302**	*i* P	**Pb**	**04 57 16.3**	**+0.1**
	baz=307						
TWB1				*i* S	**Sb**	**04 57 22.3**	**-0.8**
	baz=307						
TWC	**Suao**	**0.55**	**254**	*i* P	**Pg**	**04 57 16.6**	**-0.1**
	baz=265						
TWC				S	**Sg**	**04 57 23.8**	**-0.2**
	baz=265						
NTC	**Toucheng**	**0.55**	**280**	*e*P	**Pb**	**04 57 18.0**	**+0.4**
	baz=282						
NTC				*e*S	**Sb**	**04 57 26.4**	**+0.9**
	baz=282						
JYNG	**Yonagunijimaku**	**0.56**	**123**	P	**Pb**	**04 57 18.4**	**+0.7**
JYNG				*e*S	**Sb**	**04 57 25.6**	**0.0**
TIPB	**Shuangxi**	**0.59**	**291**	*i* P	**Pb**	**04 57 18.5**	**+0.3**
	baz=294						
TIPB				S	**Sb**	**04 57 26.8**	**+0.2**
	baz=294						
YOJ	**Yonaguni jima**	**0.60**	**119**	P	**Pb**	**04 57 19.2**	**+0.7**
	baz=116						
YOJ				S	**Sb**	**04 57 27.8**	**+0.9**
	baz=116						
YOJ	**Yonaguni jima**	**0.60**	**119**	P	**Pb**	**04 57 19.2**	**+0.7**
YOJ				*e*S	**Sb**	**04 57 27.1**	**+0.2**
ILA	**Ilan**	**0.62**	**271**	*e*S	**Sb**	**04 57 28.4**	**+1.0**
	baz=272						
NWF	**Wu-fen Shan**	**0.67**	**298**	*i* P	**Pn**	**04 57 20.8**	**-0.5**
	baz=301						
NWF				S	**Sn**	**04 57 30.5**	**-1.2**
	baz=301						
WFSB	**Wu-fen Shan**	**0.67**	**298**	P	**Pn**	**04 57 20.9**	**-0.3**
	baz=301						
WFSB				*e*S	**Sb**	**04 57 29.9**	**+1.2**
	baz=301						
TWE	**Neicheng**	**0.70**	**267**	P	**Pg**	**04 57 19.6**	**+0.1**
	baz=260						
TWE				*e*S	**Sb**	**04 57 30.2**	**+0.6**
	baz=260						
ENA	**Nanau**	**0.71**	**242**	*i* P	**Pg**	**04 57 19.6**	**-0.1**
	baz=250						
ENA				S	**Sg**	**04 57 28.5**	**-0.6**
	baz=250						
ENTT	**Nioudou**	**0.80**	**262**	*i* P	**Pb**	**04 57 21.8**	**0.0**
	baz=261						
ENTT				S	**Sb**	**04 57 32.8**	**+0.4**
	baz=261						
NWLT	**Wulai**	**0.84**	**271**	*i* P	**Pn**	**04 57 23.6**	**-0.1**
	baz=272						
NWLT				S	**Sn**	**04 57 35.2**	**-0.8**
	baz=272						
NHDH	**Xindian Distri**	**0.85**	**284**	P	**Pn**	**04 57 23.9**	**+0.2**
	baz=276						
NHDH				S	**Sn**	**04 57 35.1**	**-0.9**
	baz=276						
NDT	**Datong Townshi**	**0.85**	**260**	*i* P	**Pb**	**04 57 23.0**	**+0.4**
	baz=259						
NDT				S	**Sb**	**04 57 34.1**	**+0.1**
	baz=259						
YM01	**YM01**	**0.87**	**296**	P	**Pn**	**04 57 24.6**	**+0.6**
	baz=298						
YM01				S	**Sn**	**04 57 36.0**	**-0.6**
	baz=298						
YM08	**YM08**	**0.88**	**299**	P	**Pb**	**04 57 23.3**	**+0.2**
	baz=301						
YM08				S	**Sn**	**04 57 35.8**	**-1.0**
	baz=301						
YM11	**YM11**	**0.88**	**298**	*i* P	**Pn**	**04 57 24.3**	**+0.2**
	baz=300						
YM11				S	**Sn**	**04 57 35.8**	**-1.1**
	baz=300						
TATO	**Taipei**	**0.88**	**284**	P	**Pn**	**04 57 24.5**	**+0.3**
	baz=285						
TATO				S	**Sn**	**04 57 35.9**	**-1.0**
	baz=285						
YM10	**YM10**	**0.88**	**297**	P	**Pn**	**04 57 24.6**	**+0.4**
	baz=299						
YM10				S	**Sn**	**04 57 36.5**	**-0.5**
	baz=299						
YM03	**YM03**	**0.91**	**297**	*e*P	**Pn**	**04 57 25.5**	**+0.9**
	baz=299						
YM03				*e*S	**Sn**	**04 57 36.7**	**-1.0**
	baz=299						
PCYT	**Pengchaiyu**	**0.93**	**339**	P	**Pn**	**04 57 24.1**	**-0.7**
	baz=343						
NACB	**Ninganchiao**	**0.96**	**233**	P	**Pg**	**04 57 24.1**	**-0.3**
	baz=231						
NACB				*e*S	**Sg**	**04 57 36.9**	**-0.1**
	baz=231						
YHNB	**Yeheng**	**0.96**	**265**	P	**Pn**	**04 57 25.4**	**0.0**
	baz=265						
YHNB				S	**Sb**	**04 57 38.0**	**+0.6**
	baz=265						
NTST	**Danshui**	**0.98**	**295**	S	**Sn**	**04 57 39.2**	**-0.1**
	baz=307						
TWS1	**Kuangyinshan**	**0.98**	**290**	S	**Sn**	**04 57 39.5**	**+0.2**
	baz=292						
NNSH	**Datong**	**1.01**	**251**	*i* P	**Pg**	**04 57 24.9**	**-0.5**
	baz=250						
NNSH				*i* S	**Sb**	**04 57 38.9**	**+0.1**
	baz=250						
NNSB	**Datong**	**1.01**	**251**	P	**Pb**	**04 57 25.6**	**+0.2**
	baz=250						
NNSB				S	**Sg**	**04 57 38.5**	**-0.1**
	baz=250						
NNS	**Nan Shan**	**1.01**	**252**	*i* P	**Pn**	**04 57 26.7**	**+0.6**
	baz=251						
NNS				S	**Sg**	**04 57 38.3**	**-0.5**
	baz=251						
TWD	**Chiawan**	**1.02**	**229**	P	**Pg**	**04 57 25.4**	**-0.2**
	baz=234						
TWD				*e*S	**Sb**	**04 57 39.7**	**+0.9**
	baz=234						
ETLH	**Xiulin Townshi**	**1.02**	**238**	P	**Pg**	**04 57 25.5**	**-0.2**
	baz=236						
ETLH				S	**Sn**	**04 57 40.2**	**-0.4**
	baz=236						
WHF	**Hehuan Shan**	**1.23**	**240**	*i* P	**Pg**	**04 57 29.7**	**+0.1**
	baz=250						
WHF				*e*S	**Sb**	**04 57 45.5**	**+0.3**
	baz=250						
IRIF	**Iriomote-Funau**	**1.26**	**109**	P	**Pb**	**04 57 29.5**	**-0.1**
IRIF				S	**Sb**	**04 57 44.8**	**-0.9**
TDCB	**Techi**	**1.26**	**247**	P	**Pn**	**04 57 29.7**	**+0.1**
	baz=245						
TDCB				S	**Sb**	**04 57 46.4**	**+0.4**
	baz=245						
NSTT	**Nanjuang**	**1.31**	**265**	P	**Pg**	**04 57 31.7**	**+0.6**
	baz=264						
NSTT				*e*S	**Sg**	**04 57 48.6**	**+0.5**
	baz=264						
ESL	**Shilin**	**1.31**	**224**	*e*S	**Sb**	**04 57 47.7**	**+0.5**
	baz=221						
CHGB	**Renai**	**1.34**	**239**	P	**Pg**	**04 57 31.6**	**-0.1**
	baz=247						
CHGB				S	**Sg**	**04 57 49.4**	**+0.2**
	baz=247						
EGFH	**Guangfu**	**1.42**	**220**	*e*P	**Pn**	**04 57 31.8**	**+0.2**
	baz=200						
EGFH				*e*S	**Sn**	**04 57 50.0**	**-0.2**
	baz=200						
HATJ	**Hateruma jima**	**1.44**	**119**	P	**Pn**	**04 57 32.0**	**+0.2**
WHP	**Taichung City**	**1.44**	**251**	*i* P	**Pg**	**04 57 34.0**	**+0.5**
	baz=249						
WHP				S	**Sg**	**04 57 52.5**	**+0.3**
	baz=249						
JKRS	**Kuro-shima**	**1.53**	**110**	P	**Pn**	**04 57 33.3**	**+0.3**
JKRS				*e*S	**Sn**	**04 57 52.8**	**0.0**
DPDB	**Guoxing**	**1.55**	**243**	*e*P	**Pb**	**04 57 34.9**	**+0.3**
	baz=249						
DPDB				S	**Sg**	**04 57 56.3**	**+0.4**
	baz=249						
HGSD	**Ruisui**	**1.56**	**216**	P	**Pn**	**04 57 33.0**	**-0.5**
	baz=198						
HGSD				S	**Sn**	**04 57 54.1**	**+0.5**
	baz=198						
EHY	**Hungye**	**1.61**	**219**	*i* P	**Pn**	**04 57 33.3**	**-0.9**
	baz=216						
EHY				*e*S	**Sn**	**04 57 55.1**	**+0.3**
	baz=216						
SMLT	**Sun Moon Lake**	**1.65**	**238**	P	**Pg**	**04 57 37.2**	**-0.4**
	baz=249						
SMLT				*e*S	**Sb**	**04 57 58.2**	**+1.1**
	baz=249						
SSLB	**Suanglung**	**1.66**	**235**	P	**Pn**	**04 57 35.6**	**+0.7**
	baz=216						
SSLB				*e*S	**Sb**	**04 57 57.1**	**-0.2**
	baz=216						
TYC	**Yuchr**	**1.67**	**240**	P	**Pb**	**04 57 36.8**	**+0.2**
	baz=245						
TYC				S	**Sg**	**04 57 59.7**	**0.0**
	baz=245						
YULB	**Yu-li**	**1.71**	**218**	P	**Pn**	**04 57 35.9**	**+0.3**
	baz=214						
YULB				*e*S	**Sn**	**04 57 56.3**	**-1.1**
	baz=214						
TWF1	**Yuli**	**1.74**	**217**	P	**Pn**	**04 57 36.2**	**+0.1**
	baz=213						
TWF1				*e*S	**Sn**	**04 57 57.9**	**-0.3**
	baz=213						
WHYT	**Xinyi Township**	**1.79**	**234**	P	**Pb**	**04 57 39.0**	**+0.3**
	baz=216						
WHYT				S	**Sb**	**04 58 02.2**	**+1.2**
	baz=216						
FULB	**Fuli**	**1.87**	**214**	*e*P	**Pn**	**04 57 37.7**	**-0.1**
	baz=197						
FULB				S	**Sn**	**04 58 02.2**	**+0.9**
	baz=197						
ALS	**Alishan**	**1.94**	**230**	P	**Pn**	**04 57 40.2**	**+1.2**
	baz=212						
ALS				*e*S	**Sb**	**04 58 05.0**	**-0.6**
	baz=212						
CHN5	**Tsauling**	**1.98**	**234**	*i* P	**Pb**	**04 57 42.2**	**+0.4**
	baz=214						
CHN5				S	**Sb**	**04 58 07.4**	**+0.9**
	baz=214						
TWH	**Lutao**	**2.22**	**203**	*e*P	**Pn**	**04 57 42.8**	**+0.2**
	baz=200						
WTP	**Ta-pu**	**2.24**	**228**	P	**Pb**	**04 57 45.2**	**-1.3**
	baz=208						
WTP				S	**Sb**	**04 58 13.1**	**-1.1**
	baz=208						
TWGBT	**Beinan**	**2.29**	**213**	*e*S	**Sn**	**04 58 10.2**	**-1.6**
	baz=209						
TWG	**Pinlang**	**2.30**	**213**	*e*S	**Sn**	**04 58 09.9**	**-1.9**
	baz=209						
CHN1	**Nanshi**	**2.34**	**228**	P	**Pb**	**04 57 46.6**	**-1.5**
	baz=209						
CHN1				S	**Sb**	**04 58 16.6**	**-0.4**
	baz=209						
SLGT	**Liugui**	**2.40**	**223**	P	**Pb**	**04 57 47.8**	**-1.3**
	baz=220						
SLGT				*e*S	**Sb**	**04 58 17.1**	**-1.5**
	baz=220						
PTTC	**Pingtan**	**2.52**	**288**	*e*S	**Sn**	**04 58 15.8**	**-1.5**
	baz=288						
MATB	**Ma-tsu**	**2.64**	**302**	*e*S	**Sn**	**04 58 19.3**	**-1.0**
	baz=301						
MASBT	**Mashibuluo**	**2.70**	**218**	*e*S	**Sb**	**04 58 25.4**	**-1.9**
	baz=214						
PHUB	**P'eng-hu**	**2.89**	**245**	S	**Sn**	**04 58 28.1**	**+1.6**
	baz=243						
WDGT	**Dungji**	**2.94**	**240**	*e*P	**Pn**	**04 57 53.8**	**+1.3**
	baz=237						
WDGT				*e*S	**Sn**	**04 58 31.3**	**+3.6**
	baz=237						

*DDA **30** 04:59:58.9, 38°.97N×35°.83E, h7km±2km, ML1.6*
ISK 30 04:59:59.3, 38°.97N×35°.89E, h6km, ML1.9/6, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNN	**Bunyan**	**0.13**	**196**	PG	Pg	05 00 02.4	+0.4
BNN				SG	Sg	05 00 04.8	+0.9
CUSAR	**Sarkisla-SIVAS**	**0.52**	**32**	*i* P	Pg	05 00 09.8	+0.4
CUSAR				*i* S	Sb	05 00 17.6	-1.3
CUSAR				IAML		05 00 18.0	
	comp=E,20nm,0.4s						
CUSAR				IAML		05 00 24.0	
	comp=N,30nm,0.3s						
SIRC	**Yozgat**	**0.68**	**302**	*i* P	Pg	05 00 11.7	-0.7
SIRC				*i* S	Sg	05 00 21.5	+0.2
SIRC				IAML		05 00 25.0	
	comp=N,49nm,0.2s						
SIRC				IAML		05 00 26.0	
	comp=E,22nm,0.4s						
SARI	**SarD1z-Kayseri**	**0.70**	**144**	PG	Pg	05 00 13.2	+0.4
SARI				SG	Sb	05 00 23.4	-0.6
YOZ	**Yozgat**	**0.80**	**327**	PG	Pg	05 00 14.3	-0.4
YAHY	**KAYSERI_Yahyal**	**0.97**	**205**	*i* P	Pg	05 00 17.8	-0.1
YAHY				*i* S	Sg	05 00 30.7	+0.2
YAHY				IAML		05 00 31.0	
	comp=E,18nm,0.2s						
YAHY				IAML		05 00 32.0	
	comp=N,12nm,0.3s						
YAHY	**KAYSERI_Yahyal**	**0.97**	**205**	*i* P	Pg	05 00 18.0	0.0
YAHY				*i* S	Sg	05 00 30.9	+0.4
YAHY				IAML		05 00 31.0	
	comp=E,18nm,0.2s						
YAHY				IAML		05 00 32.0	
	comp=N,15nm,0.5s						
SAIM	**ADANA**	**1.01**	**171**	*i* P	Pn	05 00 19.9	-0.2
SAIM				*i* S	Sb	05 00 32.9	+0.2
SAIM				IAML		05 00 34.0	
	comp=E,56nm,0.3s						
SAIM				IAML		05 00 35.0	
	comp=N,82nm,0.2s						
ELBS	**KAHRAMANMARAS**	**1.17**	**123**	*i* P	Pn	05 00 24.0	+1.7
ELBS				*i* S	Sn	05 00 40.5	+1.9
ELBS				IAML		05 00 42.0	
	comp=E,47nm,0.3s						
ELBS				IAML		05 00 44.0	
	comp=N,47nm,0.2s						
CUKAN	**kangal_SIVAS**	**1.27**	**74**	*i* P	Pb	05 00 25.3	+1.5
CUKAN				*i* S	Sn	05 00 43.1	+1.9
CUKAN				IAML		05 00 47.0	
	comp=N,25nm,0.6s						
CUKAN				IAML		05 00 47.0	
	comp=E,23nm,0.3s						
SVSK	**Karacayir**	**1.27**	**42**	PN	Pg	05 00 24.0	+0.3
DARE	**Darende-Malaty**	**1.31**	**107**	PN	Pg	05 00 24.7	+0.3
CDAG	**Cicekdag**	**1.34**	**299**	*i* P	Pg	05 00 25.3	+0.2
ANDN	**Andirin**	**1.44**	**165**	*i* P	Pg	05 00 30.2	+3.4
CMRD	**Camardi-Nigde**	**1.49**	**209**	PN	Pb	05 00 27.2	-0.2
KOZT	**Kozan**	**1.49**	**182**	PN	Pb	05 00 27.3	-0.1
CORM	**Corum**	**1.55

AKO				*i* S	Sg	05 00 49.4	+0.3
AKO				IAML		05 00 51.0	
	comp=E,9.4nm,0.4s						
AKO				IAML		05 00 52.0	
	comp=N,16nm,0.4s						
AKCD	**Akcadag**	**1.73**	**112**	*i* P	Pg	05 00 33.4	+0.9
AKCD				*i* S	Sg	05 00 59.1	+4.2
AKCD				IAML		05 01 02.0	
	comp=N,23nm,0.6s						
AKCD				IAML		05 01 02.0	
	comp=E,32nm,0.5s						
HCB	**Kahramanmara**	**1.81**	**153**	*i* P	Pg	05 00 35.3	+1.2
HCB	**Kahramanmara**	**1.81**	**153**	*i* P	Pg	05 00 35.2	+1.1
KAMA	**Osmaniye**	**1.89**	**161**	*i* P	Pg	05 00 36.2	+0.7
BRTR	**Keskin Array B**	**1.90**	**294**	PN	Pn	05 00 33.1	+0.7

*IDC **30** 05:11:45.2±3.1,54˚22N×87˚32E,h0km,mb1 2.7/2, mb1mx2.7/37,mbtmp2.7/2,ML2.3/2,Error ellipse: s-maj=24.2km s-min=16.8km az=61.0*
*KRAR **30** 05:11:47.6±0.1,54˚19N×87˚03E,M2.4, Industrial explosion (after The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
ISC 30 05:11:47.0±4.7,54˚2N±0˚2×87˚1E±0˚2,h0km,n4,σ0s64/5, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.39**	**261**	*i*		05 21 11.7	
	baz=78,slow=328,SNR=2.6						
ZALV	**Zalesovo Beam**	**1.39**	**261**	Pg	**Pn**	**05 12 13.3**	**-0.3**
	1.4nm,0.3s,baz=75,slow=14,SNR=13						
ZALV				Lg	Lg	05 12 32.7	
	1.9nm,0.3s,baz=74,slow=26,SNR=11						
KURBB	**Kurchatov Arra**	**6.36**	**239**	Pn	**Pn**	**05 13 22.2**	**+0.4**
	0.1nm,0.3s,baz=53,slow=13,SNR=4.8						
KURBB				Sn	**Sn**	**05 14 35.5**	**+0.3**
	0.0nm,0.3s,baz=54,slow=24,SNR=2.1						
KURBB				Lg	Lg	05 15 09.4	
	baz=59,slow=32,SNR=3.7						
MKAR	**Makanchi Array**	**8.02**	**205**	Pn	**Pn**	**05 13 45.0**	**+0.3**
	0.1nm,0.3s,baz=26,slow=14,SNR=2.4						
MKAR				Sn	**Sn**	**05 15 15.4**	**-0.7**
	0.1nm,0.3s,baz=22,slow=27,SNR=2.3						
MKAR				Lg	Lg	05 16 02.3	
	0.0nm,0.3s,baz=24,slow=31,SNR=2.2						

*SOF **30** 05:21:18.5,39˚89N×25˚76E,h2km,MD3.8*
*ISK **30** 05:21:25.2,40˚19N×25˚55E,h10km,ML3.7/27*
*ATH **30** 05:21:25.4,40˚20N×25˚53E,h27km±1km,ML3.4/8,Error ellipse: s-maj=2.1km s-min=1.0km az=80.0*
*THE **30** 05:21:25.7,40˚18N×25˚55E,h1km±1km,ML3.3/19,Error ellipse: s-maj=1.6km s-min=0.6km az=90.0*
*DDA **30** 05:21:26.7,40˚17N×25˚64E,h16km±1km,MW3.6*
ISC 30 05:21:25.7±0.9,40˚17N±0˚02×25˚54E±0˚02,h10km±7km, n121,σ0s57/170,17C-7D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.28**	**86**	P	**Pg**	**05 21 31.4**	**0.0**
GADA				S	**Sg**	**05 21 35.0**	**-0.1**
	8μm,0.3s						
GADA	**Gvkgeada**	**0.28**	**86**	PG	**Pg**	**05 21 30.9**	**-0.5**
GADA				SG	**Sg**	**05 21 35.0**	**-0.1**
GOKA	**anakkale-Gk**	**0.28**	**86**	*i* P	**Pg**	**05 21 31.5**	**0.0**
GOKA				IAML		05 21 35.0	
	comp=E,16μm,0.5s						
GOKA				IAML		05 21 40.0	
	comp=N,13μm,0.5s						
SMTH	**Samothraki Isl**	**0.30**	**359**	P	**Pg**	**05 21 31.9**	**+0.2**
SMTH				S	**Sg**	**05 21 36.2**	**+0.5**
	comp=N,5μm,0.1s						
SMTH	**Samothraki Isl**	**0.30**	**359**	P	**Pg**	**05 21 32.0**	**+0.2**
SMTH				S	**Sg**	**05 21 36.3**	**+0.5**
SMTH				AML	AML	05 21 36.9	
	comp=N,8158μm,0.2s						
LIA	**Limnos Island**	**0.39**	**225**	P	**Pb**	**05 21 34.1**	**-0.5**
LIA				S	**Sb**	**05 21 39.8**	**-0.8**
	comp=N,5μm,0.5s						
LIA	**Limnos Island**	**0.39**	**225**	P	**Pb**	**05 21 34.1**	**-0.5**
LIA				S	**Sb**	**05 21 40.1**	**-0.4**
LIA				AML	AML	05 21 44.5	
	comp=N,9088μm,0.6s						
LIA				AML	AML	05 21 44.8	
	comp=E,9040μm,0.5s						
BOZC	**Bozcaada**	**0.52**	**130**	PG	**Pg**	**05 21 35.8**	**0.0**
BOZC				SG	**Sb**	**05 21 43.4**	**-1.0**
BOZC	**Bozcaada**	**0.52**	**130**	*i* P	**Pg**	**05 21 36.1**	**+0.3**
BOZC				*i* S	**Sg**	**05 21 43.0**	**+0.4**
BOZC				IAML		05 21 48.0	
	comp=N,2μm,0.4s						
BOZC				IAML		05 21 49.0	
	comp=E,3μm,0.7s						
EZN	**Ezine**	**0.70**	**119**	P	**Pg**	**05 21 39.0**	**-0.2**
EZN				S	**Sg**	**05 21 48.4**	**+0.1**
	comp=E,5μm,0.4s						
EZN	**Ezine**	**0.70**	**119**	PG	**Pg**	**05 21 39.1**	**-0.2**
EZN				SG	**Sg**	**05 21 48.3**	**0.0**
ENEZ	**Enez**	**0.73**	**40**	P	**Pg**	**05 21 39.6**	**-0.3**
ENEZ				S	**Sb**	**05 21 50.1**	**-0.5**
	comp=E,11μm,0.3s						
ENEZ	**Enez**	**0.73**	**40**	PG	**Pg**	**05 21 39.4**	**-0.5**
ENEZ				SG	**Sg**	**05 21 49.9**	**+0.4**
GELI	**Tayfur-Gelibol**	**0.75**	**72**	PG	**Pg**	**05 21 39.8**	**-0.4**
GELI				SG	**Sb**	**05 21 50.5**	**-0.7**
EFSA	**Agios Efstrati**	**0.76**	**214**	P	**Pb**	**05 21 41.4**	**+0.5**
THAS	**Thassos island**	**0.76**	**305**	P	**Pg**	**05 21 40.4**	**0.0**
THAS				S	**Sb**	**05 21 52.3**	**+0.9**
	comp=E,3μm,0.2s						
THAS	**Thassos island**	**0.76**	**305**	P	**Pb**	**05 21 40.8**	**-0.2**
THAS				S	**Sb**	**05 21 51.4**	**0.0**
THAS				AML	AML	05 21 53.1	
	comp=N,5384μm,0.2s						
THAS				AML	AML	05 21 53.1	
	comp=E,6486μm,0.3s						
ALN	**Alexandroupoli**	**0.82**	**28**	P	**Pg**	**05 21 41.1**	**-0.5**
ALN				S	**Sg**	**05 21 52.3**	**0.0**
ALN	**Alexandroupoli**	**0.82**	**28**	P	**Pg**	**05 21 41.3**	**-0.3**
ALN				S	**Sg**	**05 21 52.2**	**0.0**
ALN				AML	AML	05 21 52.8	
	comp=N,7322μm,0.3s						
ALN				AML	AML	05 21 52.8	
	comp=E,8472μm,0.4s						
ALN	**Alexandroupoli**	**0.82**	**28**	PG	**Pg**	**05 21 41.3**	**-0.3**
ALN				SG	**Sg**	**05 21 52.3**	**0.0**
BAYC	**CANAKKALE_Bayr**	**0.89**	**119**	*i* P	**Pg**	**05 21 42.5**	**-0.3**
BAYC				IAML		05 21 54.0	
	comp=E,1μm,0.3s						
BAYC				*i* S	**Sg**	**05 21 54.3**	**-0.1**
BAYC				IAML		05 22 00.0	
	comp=N,780nm,0.3s						
ERIK	**Erikli-Kesan**	**0.90**	**56**	PG	**Pg**	**05 21 42.2**	**-0.8**
ERIK				SG	**Sb**	**05 21 55.1**	**-0.2**
LPK	**Lapseki**	**0.96**	**78**	PG	**Pg**	**05 21 43.6**	**-0.5**
LPK				SG	**Sb**	**05 21 57.2**	**+0.1**
RDO	**Rodhopi**	**0.97**	**0**	P	**Pg**	**05 21 44.0**	**-0.4**
RDO				S	**Sb**	**05 21 57.5**	**0.0**
	comp=N,1μm,0.2s						
RDO	**Rodhopi**	**0.97**	**0**	P	**Pg**	**05 21 44.1**	**-0.4**
RDO	**Rodhopi**	**0.97**	**0**	PG	**Pg**	**05 21 44.1**	**-0.4**
RDO				SG	**Sb**	**05 21 57.7**	**+0.2**
SIGR	**SIGRI**	**0.99**	**166**	P	**Pg**	**05 21 44.5**	**-0.3**
SIGR				S	**Sb**	**05 21 58.1**	**+0.1**
	comp=N,3μm,0.4s						
SIGR	**SIGRI**	**0.99**	**166**	P	**Pg**	**05 21 44.7**	**-0.1**
SIGR				S	**Sn**	**05 21 59.1**	**-0.5**
SIGR				AML	AML	05 22 00.4	
	comp=N,5748μm,0.4s						
SIGR				AML	AML	05 22 01.4	
	comp=E,5738μm,0.4s						
SIGR	**SIGRI**	**0.99**	**166**	PG	**Pb**	**05 21 44.9**	**0.0**
SIGR				SG	**Sn**	**05 21 59.2**	**-0.5**
PRK	**Paraskevi**	**1.08**	**148**	P	**Pn**	**05 21 47.5**	**+0.6**
PRK				S	**Sn**	**05 22 02.0**	**0.0**
	comp=E,3μm,0.6s						
PRK	**Paraskevi**	**1.08**	**148**	P	**Pn**	**05 21 47.6**	**+0.6**
PRK				S	**Sn**	**05 22 01.9**	**0.0**
PRK				AML	AML	05 22 03.6	
	comp=E,6875μm,0.6s						
PRK				AML	AML	05 22 04.0	
	comp=N,4319μm,0.3s						
KESN	**Edirne-Kesan**	**1.09**	**53**	*i* P	**Pg**	**05 21 46.0**	**-0.7**
KESN				*i* S	**Sg**	**05 22 00.6**	**-0.3**
KESN				IAML		05 22 02.0	
	comp=N,2μm,0.4s						
KAVA	**Kavala**	**1.13**	**317**	P	**Pb**	**05 21 46.9**	**-0.4**
KAVA				S	**Sn**	**05 22 03.1**	**-0.1**
	comp=N,1μm,0.4s						
KAVA	**Kavala**	**1.13**	**317**	P	**Pb**	**05 21 47.0**	**-0.4**
KAVA				S	**Sg**	**05 22 02.3**	**+0.1**
KAVA				AML	AML	05 22 03.9	
	comp=N,3028μm,0.4s						
KAVA				AML	AML	05 22 05.4	
	comp=E,1620μm,0.4s						
KVLA	**Kavala**	**1.16**	**311**	P	**Pb**	**05 21 47.5**	**-0.4**
OUR	**Ouranopolis**	**1.20**	**278**	P	**Pn**	**05 21 47.9**	**-0.6**
OUR				S	**Sn**	**05 22 04.8**	**0.0**
	comp=E,2μm,0.4s						
OUR	**Ouranopolis**	**1.20**	**278**	P	**Pn**	**05 21 47.9**	**-0.6**
OUR				S	**Sb**	**05 22 03.9**	**-0.1**
OUR				AML	AML	05 22 07.1	
	comp=E,3992μm,0.4s						
OUR				AML	AML	05 22 08.0	
	comp=N,2994μm,0.4s						
OUR	**Ouranopolis**	**1.20**	**278**	PN	**Pn**	**05 21 47.9**	**-0.6**
OUR				SN	**Sn**	**05 22 05.5**	**+0.7**
AYVA	**Ayvalik**	**1.24**	**134**	*i* P	**Pb**	**05 21 49.1**	**-0.1**
AYVA				*i* S	**Sn**	**05 22 06.1**	**+0.3**
AYVA				IAML		05 22 10.0	
	comp=E,1μm,0.4s						
UKOP	**Uzunkopru-Edir**	**1.27**	**41**	PN	**Pn**	**05 21 48.9**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.35**	**67**	PN	**Pn**	**05 21 49.9**	**-0.8**
SART	**Tekirdag**	**1.36**	**67**	*i* P	**Pn**	**05 21 49.8**	**-0.9**
SART				IAML		05 22 14.0	
	comp=E,258nm,0.3s						
KRBG	**Karabiga-Canak**	**1.37**	**80**	PN	**Pn**	**05 21 50.2**	**-0.6**
PAIG	**Paliouri**	**1.45**	**261**	P	**Pn**	**05 21 51.4**	**-0.5**
PAIG	**Paliouri**	**1.45**	**261**	P	**Pn**	**05 21 51.2**	**-0.7**
KDZ	**Kurdzhali**	**1.48**	**357**	*i* P	**Pn**	**05 21 51.6**	**-0.8**
KDZ	**Kurdzhali**	**1.48**	**357**	PN	**Pn**	**05 21 51.8**	**-0.6**
DKL	**Dikili**	**1.53**	**136**	PN	**Pn**	**05 21 52.9**	**-0.1**
KNL	**Balıkesir**	**1.53**	**86**	*i* P	**Pn**	**05 21 53.2**	**+0.2**
KNL				IAML		05 22 15.0	
	comp=N,2μm,0.4s						
KNL				*i* S	**Sg**	**05 22 15.3**	**+0.5**
PLG	**Polygyros**	**1.61**	**278**	P	**Pn**	**05 21 53.9**	**-0.3**
PLG	**Polygyros**	**1.61**	**278**	P	**Pn**	**05 21 54.0**	**-0.3**
MRMT	**Marmara Adasi**	**1.63**	**74**	PN	**Pn**	**05 21 53.9**	**-0.6**
RZN	**Rozhen**	**1.64**	**338**	*i* P	**Pn**	**05 21 54.5**	**-0.2**
GONE	**Gonen-Balikesi**	**1.65**	**94**	PN	**Pn**	**05 21 54.7**	**0.0**
BALY	**Balya**	**1.66**	**104**	*i* P	**Pn**	**05 21 55.1**	**+0.3**
BALY				*i* S	**Sg**	**05 22 18.7**	**-0.3**
BALY				IAML		05 22 19.0	
	comp=E,854nm,0.4s						
BALY				IAML		05 22 20.0	
	comp=N,787nm,0.7s						
ZEDA	**zmir-Bergama**	**1.69**	**135**	*i* P	**Pn**	**05 21 55.6**	**+0.3**
ZEDA				*i* S	**Sg**	**05 22 19.7**	**-0.5**
ZEDA				IAML		05 22 20.0	
	comp=E,577nm,0.6s						
ZEDA				IAML		05 22 21.0	
	comp=N,813nm,0.3s						
TKR	**Tekirdag**	**1.73**	**61**	PN	**Pn**	**05 21 55.6**	**-0.2**
SRS	**Serrai**	**1.75**	**303**	P	**Pn**	**05 21 55.3**	**-0.9**
SRS				S	**Sg**	**05 22 22.1**	**0.0**
	comp=N,440nm,0.5s						
SRS	**Serrai**	**1.75**	**303**	P	**Pn**	**05 21 55.6**	**-0.5**
EDC	**Edincik**	**1.79**	**84**	PN	**Pn**	**05 21 56.4**	**-0.2**
CHOS	**Chios island**	**1.83**	**167**	P	**Pn**	**05 21 57.2**	**0.0**
CHOS				S	**Sb**	**05 22 23.0**	**+0.8**
	comp=N,552nm,0.7s						
CHOS	**Chios island**	**1.83**	**167**	PN	**Pn**	**05 21 57.1**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.86**	**115**	*i* P	**Pn**	**05 21 58.0**	**+0.4**
STEP				*i* S	**Sg**	**05 22 25.5**	**0.0**
STEP				IAML		05 22 28.0	
	comp=E,581nm,0.6s						
STEP				IAML		05 22 29.0	
	comp=N,678nm,0.6s						
DIM	**Dimitrovgrad**	**1.88**	**360**	*i* P	**Pn**	**05 21 57.5**	**-0.3**
BALB	**Balikesir**	**1.88**	**106**	PN	**Pn**	**05 21 58.1**	**+0.3**
KYMI	**Kymi, Euboea I**	**1.90**	**216**	P	**Pn**	**05 21 58.2**	**+0.1**
KYMI				S	**Sb**	**05 22 23.3**	**-0.8**
	comp=N,192nm,0.6s						
EDRB	**Edirne**	**1.91**	**28**	P	**Pn**	**05 21 58.0**	**-0.2**
EDRB				S	**Sb**	**05 22 24.5**	**+0.1**
	comp=N,680nm,0.3s						
HORT	**Hortiatis**	**1.91**	**284**	P	**Pn**	**05 21 58.1**	**-0.2**
HORT				S	**Sg**	**05 22 26.7**	**-0.4**
	comp=N,242nm,0.5s						
HORT	**Hortiatis**	**1.91**	**284**	PN	**Pn**	**05 21 58.5**	**+0.2**
MMB	**Musomiste**	**1.97**	**316**	*i* P	**Pn**	**05 21 58.6**	**-0.6**
URLA	**Izmir**	**1.99**	**155**	PN	**Pn**	**05 21 59.4**	**0.0**
URLA	**Izmir**	**1.99**	**155**	*i* P	**Pn**	**05 21 59.4**	**0.0**
URLA				IAML		05 22 31.0	
	comp=E,134nm,0.4s						
URLA				IAML		05 22 38.0	
	comp=N,142nm,0.5s						
BLCB	**Balcova**	**2.13**	**146**	P	**Pn**	**05 22 01.8**	**+0.4**
BLCB	**Balcova**	**2.13**	**146**	PN	**Pn**	**05 22 01.7**	**+0.4**
KCTX	**Karacabey (Bur**	**2.16**	**87**	PN	**Pn**	**05 22 01.7**	**-0.1**
KNT	**Kendrikon**	**2.24**	**297**	P	**Pn**	**05 22 03.0**	**+0.2**
KNT				S	**Sn**	**05 22 32.0**	**+1.6**
	comp=N,478nm,0.5s						
SLVT	**Silivri**	**2.29**	**62**	PN	**Pn**	**05 22 03.8**	**+0.3**
KARY	**Karystos**	**2.30**	**202**	P	**Pn**	**05 22 04.0**	**+0.3**
LIT	**Litokhoron**	**2.34**	**269**	P	**Pn**	**05 22 03.6**	**-0.6**
DST	**Dursunbey**	**2.44**	**102**	PN	**Pn**	**05 22 05.8**	**+0.2**
CTYL	**Yalikoy Yolu**	**2.46**	**57**	PN	**Pn**	**05 22 05.9**	**+0.1**
CTKS	**Kestanelik-??a**	**2.50**	**64**	PN	**Pn**	**05 22 06.0**	**-0.3**
KKB	**Krupnik**	**2.51**	**313**	*i* P	**Pn**	**05 22 06.3**	**-0.3**
GRG	**Griva**	**2.51**	**289**	P	**Pn**	**05 22 07.1**	**+0.5**
GRG				S	**Sb**	**05 22 41.1**	**-0.8**
	comp=N,215nm,0.5s						
SMG	**Samos**	**2.66**	**157**	P	**Pn**	**05 22 08.4**	**-0.2**
SMG				S	**Sn**	**05 22 42.0**	**+1.1**
	comp=N,240nm,0.6s						
ELND	**Elena**	**2.77**	**5**	⇑P	**Pn**	**05 22 09.9**	**-0.1**
ELND				⇑S	**Sn**	**05 22 44.7**	**+1.2**
THL	**Klokotos Trika**	**2.78**	**259**	P	**Pn**	**05 22 10.3**	**+0.1**
IGD	**Bursa**	**2.81**	**87**	*i* P	**Pn**	**05 22 10.7**	**+0.1**
IGD				IAML		05 22 56.0	
	comp=E,67nm,0.4s						
IGD				IAML		05 22 58.0	
	comp=N,94nm,0.3s						
ISK	**Istanbul-Kandi**	**2.83**	**70**	P	**Pn**	**05 22 10.2**	**-0.7**
MAKR	**Makrakomi, Fth**	**2.87**	**247**	P	**Pn**	**05 22 12.0**	**+0.4**
KULA	**Kula-Manisa**	**2.93**	**123**	P	**Pn**	**05 22 13.3**	**+0.9**
VTS	**Vitosha**	**2.99**	**325**	⇑P	**Pn**	**05 22 13.9**	**+0.6**
VTS				⇑S	**Sn**	**05 22 50.1**	**+0.8**
VTS	**Vitosha**	**2.99**	**325**	*i* P	**Pn**	**05 22 13.8**	**+0.5**
APE	**Apeiranthos**	**3.10**	**180**	⇑S	**Sn**	**05 22 51.5**	**-0.3**
ANX	**Ano Chora**	**3.21**	**242**	P	**Pn**	**05 22 16.9**	**+0.6**
PLVB	**Pleven**	**3.28**	**348**	⇓P	**Pn**	**05 22 17.5**	**+0.4**
KLV	**Kalavryta, Ach**	**3.38**	**232**	P	**Pn**	**05 22 18.6**	**0.0**
BODT	**Bodrum**	**3.40**	**155**	P	**Pn**	**05 22 19.1**	**+0.3**
BDRM	**Kayabasi**	**3.44**	**154**	*i* P	**Pn**	**05 22 17.8**	**-1.6**
BDRM				IAML		05 23 19.0	
	comp=E,27nm,1.2s						
BDRM				IAML		05 23 21.0	
	comp=N,26nm,0.6s						
RAZG	**Razgrad**	**3.47**	**12**	⇑P	**Pn**	**05 22 19.7**	**0.0**
KHAL	**Karahalli**	**3.56**	**119**	*i* P	**Pn**	**05 22 22.0**	**+1.0**
KHAL				IAML		05 23 26.0	
	comp=E,28nm,0.6s						
GEYV	**SAKARYA_Geyve**	**3.65**	**84**	*i* P	**Pn**	**05 22 20.8**	**-1.4**
GEYV				IAML		05 23 26.0	
	comp=N,78nm,0.6s						
GEYV				IAML		05 23 37.0	
	comp=E,44nm,1.0s						
SRCK	**Saricakaya, Es**	**3.91**	**90**	*i* P	**Pn**	**05 22 26.5**	**+0.7**
SRCK				IAML		05 23 33.0	
	comp=N,78nm,0.8s						
SRCK				IAML		05 23 34.0	
	comp=E,43nm,0.5s						
VLAD	**Vladila**	**3.92**	**348**	⇑P	**Pn**	**05 22 24.9**	**-0.9**
AUMIH	**MIHALICIK**	**4.58**	**92**	*i* P	**Pn**	**05 22 35.9**	**+0.8**
AUMIH				IAML		05 23 53.0	
	comp=E,46nm,0.5s						
AUMIH				IAML		05 23 54.0	
	comp=N,48nm,0.5s						
TIRR	**Tirgusor**	**4.78**	**26**	⇓P	**Pn**	**05 22 37.6**	**-0.1**
HARR	**Harsova**	**4.85**	**21**	⇑P	**Pn**	**05 22 38.7**	**+0.1**
HERR	**Herculane**	**5.24**	**335**	⇓P	**Pn**	**05 22 43.7**	**-0.3**
VOIR		**5.27**	**356**	⇑P	**Pn**	**05 22 44.9**	**+0.3**
MLR	**Muntele Rosu**	**5.32**	**3**	⇓P	**Pn**	**05 22 46.6**	**+1.3**
CFR	**Carcaliu**	**5.36**	**20**	⇑P	**Pn**	**05 22 45.3**	**-0.3**
MDVR	**Moldovita**	**5.40**	**330**	⇓P	**Pn**	**05 22 46.1**	**-0.2**
LOT	**Lotru**	**5.43**	**347**	⇓P	**Pn**	**05 22 46.4**	**-0.4**
GZR	**Gura Zlata**	**5.60**	**340**	⇑P	**Pn**	**05 22 48.6**	**-0.4**
PLOR	**Plostina**	**5.73**	**8**	⇑P	**Pn**	**05 22 52.1**	**+1.2**
VRI	**Vrincioaia**	**5.76**	**8**	⇑P	**Pn**	**05 22 53.0**	**+1.8**
DOPR	**Dopca**	**5.79**	**359**	⇑P	**Pn**	**05 22 52.6**	**+1.0**
OZUR		**5.92**	**2**	⇑P	**Pn**	**05 22 54.5**	**+1.1**
TESR	**Tescani**	**6.39**	**7**	⇑P	**Pn**	**05 23 01.1**	**+1.3**
BIZ	**Bicaz**	**6.78**	**3**	⇑P	**Pn**	**05 23 06.6**	**+1.5**
BURAR	**Bucovina Array**	**7.44**	**358**	⇓P	**Pn**	**05 23 16.4**	**+2.0**

*IDC **30** 05:48:13.8±2.1,8˚34S×119˚30E,h0km,mb3.6/2, mb1 3.8/5,mb1mx3.6/37,mbtmp3.6/5,ML3.3/3,MS3.0/2, Ms1 3.0/2,ms1mx2.5/41,Error ellipse: s-maj=83.2km s-min=23.4km az=62.0*
*DJA **30** 05:48:14.8±0.5,8˚S±.5˚×119˚9E±˚,h10km,M4.0/6,MLv4.0/6*
ISC 30 05:48:14.1±1.0,8˚35S±0˚06×119˚16E±0˚06,h10km,n12, σ2s67/14,Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**1.30**	**170**	P	**Pn**	**05 48 39.0**	**+0.6**
WBSI				S	**Sb**	**05 48 58.8**	**+3.3**
PLAI	**Plampang**	**1.45**	**251**	P	**Pn**	**05 48 39.1**	**-1.3**
PLAI				S	**Sn**	**05 48 58.8**	**-0.7**
BASI	**Baing, Sumba**	**2.32**	**143**	P	**Pb**	**05 48 57.5**	**+1.4**
EDFI	**Ende, Flores**	**2.53**	**99**	P	**Pn**	**05 48 56.4**	**+1.0**
MMRI	**Maumere**	**3.05**	**95**	P	**Pn**	**05 49 01.4**	**-1.1**
BKSI	**Bulukumba**	**3.16**	**18**	P	Pg	05 49 20.8	+6.1
KAPI	**Kappang**	**3.37**	**10**	Pn	**Pn**	**05 49 06.9**	**0.0**
	1.2nm,0.3s,baz=89,slow=21,SNR=1.8						
LEM	**Lembang**	**11.54**	**277**	LR	LR	05 55 46.5	
	comp=Z,103nm,19.5s,baz=228,slow=39						
FITZ	**Fitzroy Crossi**	**11.55**	**148**	Pn	**Pn**	**05 50 57.9**	**-1.3**
	0.1nm,0.3s,baz=327,slow=17,SNR=1.3						
FITZ				Sn	**Sn**	**05 53 06.2**	**-2.3**
	0.1nm,0.3s,baz=253,slow=14,SNR=3.3						
WRA	**Warramunga Arr**	**18.67**	**130**	P	**P**	**05 52 32.2**	**-0.3**
	0.2nm,0.3s,baz=302,slow=12,SNR=7.2						
WRA				S	**Sn**	**05 55 54.8**	**-7.0**
	0.0nm,0.3s,baz=307,slow=24,SNR=2.1						
WRA				LR	LR	06 01 03.4	
	comp=Z,38nm,18.9s,baz=245,slow=41						
ASAR	**Alice Springs**	**20.77**	**139**	P	**P**	**05 52 56.6**	**+1.2**
	2.4nm,0.7s,baz=316,slow=9.9,SNR=13						
MKAR	**Makanchi Array**	**63.96**	**333**	P	**P**	**05 58 49.2**	**+1.7**
	0.5nm,0.8s,baz=130,slow=8.2,SNR=3.2						

*IDC **30** 06:27:31.9±0.4,67˚73N×162˚25W,h0km,mb4.5/40, mb1 4.6/43,mb1mx4.5/58,mbtmp4.5/43,ML4.6/3,MS3.6/32, Ms1 3.6/32,ms1mx3.4/62,Error ellipse: s-maj=12.7km s-min=8.6km az=17.0*
*MOS **30** 06:27:31.9±0.9,67˚75N×162˚11W,h13km,mb4.9/60, Error ellipse: s-maj=11.9km s-min=5.1km az=103.1*
*NEIC **30** 06:27:32.9±2.0,67˚64N±0˚06×162˚2W±0˚1,h9km±3km, Error ellipse: s-maj=9.2km s-min=5.7km az=159.0*
*AEIC **30** 06:27:32±2.0,67˚65N±0˚04×162˚3W±0˚1,h15km±3km, ML4.7/45,mb4.8/281(NEIC),Error ellipse: s-maj=6.6km s-min=5.6km az=152.0*
*BGR **30** 06:27:46.5±0.0,68˚83N×161˚47W,h33km,mb4.7*
ISC 30 06:27:33.0±0.3,67˚70N±0˚04×162˚08W±0˚03,h10km, n928,σ0s98/938,mb4.8/249,MS3.6/35,9C-16D,Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RDOG	**Red Dog Mine**	**0.48**	**319**		**Pg**	**06 27 41.9**	**-0.4**
RDOG					**Sg**	**06 27 48.4**	**-0.1**
ANM	**Nome**	**3.42**	**205**		**Pn**	**06 28 24.9**	**-1.3**
ANM				Sn	**Sn**	**06 29 04.2**	**-2.5**
IM03		**3.71**	**114**		**Pn**	**06 28 30.4**	**+0.1**
PS05	**TAPS Pump Stn5**	**4.52**	**96**		**Pn**	**06 28 41.2**	**-0.2**
COLD	**Coldfoot**	**4.60**	**90**	Pn	**Pn**	**06 28 43.5**	**+1.1**
TOLK	**Toolik Lake Re**	**4.76**	**73**	P	**Pn**	**06 28 46.0**	**+1.2**
	baz=264,SNR=491						
TOLK	**Toolik Lake Re**	**4.76**	**73**	Pn	**Pn**	**06 28 45.9**	**+1.2**
TOLK				Sn	**Sn**	**06 29 40.6**	**+0.6**
PS04	**TAPS Pump Stn4**	**4.83**	**75**		**Pn**	**06 28 46.9**	**+1.2**
PS06	**TAPS Pump Stn6**	**5.22**	**105**		**Pn**	**06 28 51.5**	**+0.5**
TTA	**Tatalina**	**5.42**	**149**	P	**Pn**	**06 28 53.8**	**0.0**
TTA	**Tatalina**	**5.42**	**149**	Pn	**Pn**	**06 28 53.8**	**0.0**
TT01	**Tatalina**	**5.44**	**149**		**Pn**	**06 28 54.0**	**+0.1**
PS01	**TAPS Pump Stn**	**5.48**	**56**		**Pn**	**06 28 55.8**	**+1.3**
GAMB	**Gambell**	**5.59**	**230**	Pn	**Pn**	**06 28 53.1**	**-2.9**
BPAW	**Bear Paw Mtn.**	**5.80**	**123**		**Pn**	**06 28 59.2**	**+0.3**
PS07	**TAPS Pump Stn7**	**6.01**	**107**		**Pn**	**06 29 02.2**	**+0.4**
KTH	**Kantishna H

WAX Waxell Ridge 11.07 122 Pn 06 30 13.1 +1.9
OHAK Old Harbor 11.26 155 Pn 06 30 15.7 +2.1
BILL Bilibino 11.87 286 P Pn 06 30 20.5 -1.4
BILL Bilibino 11.87 286 Pn 06 30 20.5 -1.4
PCA Pinnacle 12.19 118 Pn 06 30 29.0 +2.5
HYT Haines Junctio 12.63 111 Pn Pn 06 30 34.4 +1.9
A36M Sachs Harbour 13.23 55 P Pn 06 30 38.7 -1.8
baz=269,SNR=40
C36M Paulatuk 13.87 66 P Pn 06 30 45.3 -3.8
baz=281,SNR=47
C36M Paulatuk 13.87 66 Pn 06 30 45.3 -3.8
SKAG Skagway 14.36 112 Pn 06 30 58.4 +2.4
BESE Bessie Mountai 15.18 114 P 06 31 11.9 -0.3
JIS Juneau Island 15.57 114 Pn 06 31 11.4 -0.8
SIT Sitka 16.19 118 P P 06 31 23.1 -0.3
SIT pmax pmax
comp=Z,26nm,0.8s
SIT Sitka 16.19 118 P P 06 31 23.1 -0.3
DLBC Dease Lake 17.01 107 P P 06 31 32.7 +0.1
comp=Z,0.9nm,0.3s,baz=300,slow=9.4,SNR=14
DLBC LR LR 06 38 35.2
comp=Z,325nm,19.5s,baz=334,slow=39
DLBC Dease Lake 17.01 107 Pn 06 31 30.8 +0.1
WRAK Wrangell Islan 17.71 115 P Pn 06 31 39.4 +0.1
CRAG Craig 18.20 118 P P 06 31 47.5 +2.0
SEY Seymchan 19.23 278 P Pn 06 31 57.8 0.0
comp=Z,0.6nm,0.3s,baz=74,slow=10,SNR=17
SEY PcP PcP 06 36 19.5 +0.2
comp=Z,0.4nm,0.3s,baz=68,slow=4.6,SNR=4.2
YKA Yellowknife Ar 20.21 82 P P 06 32 08.3 +0.7
comp=Z,22nm,0.6s,baz=303,slow=10.0,SNR=256
YKA LR LR 06 41 01.8
comp=Z,68nm,19.6s,baz=0.0,slow=40
DIB Dawson Inlet, 20.28 121 P P 06 32 08.7 +0.3
RES Resolute Bay 21.50 42 P P 06 32 21.3 0.0
comp=Z,6.6nm,0.8s,baz=290,slow=14,SNR=12
RES S S 06 36 11.5 -7.8
comp=Z,4.5nm,0.6s,baz=275,slow=12,SNR=2.3
RES LR LR 06 43 29.3
comp=Z,80nm,18.8s,baz=222,slow=44
RES Resolute Bay 21.50 42 P P 06 32 21.4 0.0
RES pmax pmax
comp=Z,12nm,0.8s
RES Resolute Bay 21.50 42 P P 06 32 21.4 0.0
MA2 Magadan 21.91 271 P P 06 32 26.0 +0.1
comp=Z,9.2nm,0.8s,baz=35,slow=16,SNR=4.0
MA2 LR LR 06 41 16.6
comp=Z,133nm,18.2s,baz=54,slow=38
MA2 Magadan 21.91 271 P P 06 32 26.3 +0.4
MA2 pmax pmax
comp=Z,25nm,1.0s
MA2 Magadan 21.91 271 P P 06 32 26.3 +0.4
MA2 IAmb IAmb 06 32 41.3
comp=Z,25nm,1.0s
BBB Bella Bella 22.60 116 P P 06 32 33.9 +0.6
comp=Z,7.2nm,0.8s,baz=313,slow=14,SNR=7.0
BBB LR LR 06 42 10.1
comp=Z,151nm,18.6s,baz=354,slow=39
BBB Bella Bella 22.60 116 P P 06 32 33.2 0.0
TIXI Tiksi 23.09 311 P P 06 32 37.6 -0.6
comp=Z,4.2nm,0.7s,baz=78,slow=8.6,SNR=11
TIXI PcP PcP 06 36 26.2 -0.3
comp=Z,1.0nm,0.6s,baz=24,slow=3.5,SNR=4.0
TIXI Tiksi 23.09 311 eP P 06 32 38.2 0.0
TIXI pmax pmax
comp=Z,4.0nm,0.8s
TIXI Tiksi 23.09 311 P P 06 32 37.4 -0.8
PEA0B Petropavlovsk- 24.06 253 eP P 06 32 47.3 -0.6
PETK Petropavlovsk- 24.06 253 P P 06 32 47.9 0.0
comp=Z,2.9nm,0.7s,baz=56,slow=11,SNR=8.2
PETK LR LR 06 42 31.7
comp=Z,64nm,18.1s,baz=55,slow=38
LLLB Lillooet 26.09 111 P P 06 33 07.7 +1.3
D03D Eldon 28.27 116 P P 06 33 27.6 +1.6
baz=329
B08A Colville Reser 28.88 110 P P 06 33 32.8 +1.3
E04D Cinebar 29.29 116 P P 06 33 36.8 +1.7
baz=330
LTY Liberty 29.34 113 P P 06 33 36.0 +0.4
LON Longmire 29.38 115 P P 06 33 39.0 +3.0
LON pmax pmax
comp=Z,6.0nm,0.8s
LON Longmire 29.38 115 P P 06 33 39.0 +3.0
NEW Newport 29.76 108 LR LR 06 47 01.3
comp=Z,197nm,18.1s,baz=319,slow=39
F04A Amboy 29.88 117 P P 06 33 41.6 +1.3
F04A IAmb IAmb 06 33 42.9
comp=Z,9.5nm,0.7s
KULLO Kullorsuaq 30.18 31 i P P 06 33 43.8 +1.1
KULLO pmax pmax
comp=Z,14nm,0.6s
KULLO Kullorsuaq 30.18 31 i P P 06 33 43.8 +1.1
comp=Z,14nm,0.6s
F05D White Salmon 30.25 116 P P 06 33 45.0 +1.4
baz=330
FFC Flin Flon 30.32 85 P P 06 33 44.2 +0.1
FFC pmax pmax
comp=Z,4.0nm,0.9s
FFC Flin Flon 30.32 85 P P 06 33 44.1 +0.1
JTMT Jette 31.23 105 P P 06 33 51.9 -0.4
JTMT IAmb IAmb 06 33 54.6
comp=Z,14nm,0.9s
I05D Terrebonne, OR 31.65 117 P P 06 33 57.5 +1.5
baz=332,SNR=5.3
F10A Beach Ranch, E 31.66 110 P P 06 33 56.8 +0.7
I04A Tendick Farm, 31.77 119 P P 06 33 58.5 +1.5
baz=332
MSO Missoula 32.13 106 P P 06 34 00.9 +0.7
baz=328,SNR=5.6
MSO Missoula 32.13 106 P P 06 34 00.3 +0.1
PINE Pine Mountain 32.27 117 P P 06 34 03.3 +1.7
PINE IAmb IAmb 06 34 04.6
comp=Z,10nm,0.9s
K02D Willamette Mer 32.33 121 P P 06 34 03.1 +1.1
baz=334
I07A Izee 32.51 115 P P 06 34 05.4 +1.8
I07A IAmb IAmb 06 34 06.1
comp=Z,6.4nm,0.8s
BMO Blue Mountains 32.60 112 P P 06 34 05.2 +0.8
BMO pmax pmax
comp=Z,6.0nm,1.1s
BMO Blue Mountains 32.60 112 P P 06 34 05.2 +0.8
J05D Fort Rock, OR 32.62 118 P P 06 34 06.2 +1.7
baz=332
EGMT Eagleton 32.68 100 P P 06 34 05.5 +0.4
baz=326,SNR=6.6
EGMT Eagleton 32.68 100 P P 06 34 05.0 0.0
L04D Klamath Falls 33.21 120 P P 06 34 11.4 +1.6
baz=333
J08A Circle Bar Ran 33.50 114 P P 06 34 14.0 +1.7
KBS Kingsbay 33.54 2 ceP P 06 34 13.3 +1.2
KBS pmax pmax
comp=Z,11nm,1.3s
M04C Macdoel 33.75 120 P P 06 34 15.7 +1.2
baz=334
DLMT Dillon 33.87 106 P P 06 34 16.7 +1.2
GRNR Gornyy 33.93 272 i P P 06 34 15.4 -0.4
GRNR pmax pmax
comp=Z,5.0nm,0.8s
GRNR MLR MLR
comp=Z,130nm,16.0s
DAG Danmarks Havn 34.02 14 i P P 06 34 16.3 0.0
DAG pmax pmax
comp=Z,5.0nm,0.9s
DAG Danmarks Havn 34.02 14 i P P 06 34 16.3 0.0
comp=Z,4.6nm,0.9s
MOD Modoc Plateau 34.16 118 P P 06 34 18.7 +0.6
MCMT McKenzie Canyo 34.23 107 P P 06 34 19.9 +1.1
WVOR Wild Horse Val 34.26 115 P P 06 34 20.4 +1.5
WVOR pmax pmax
comp=Z,7.0nm,1.0s
WVOR Wild Horse Val 34.26 115 P P 06 34 20.4 +1.5
WVOR IAmb IAmb 06 34 21.7
comp=Z,7.1nm,1.0s
SPITS Spitsbergen Ar 34.34 1 P P 06 34 18.4 -0.7
comp=Z,1.4nm,0.5s,baz=34,slow=6.2,SNR=5.7
MFID Camas Ranch 34.38 111 P P 06 34 20.7 +0.8
DGMT Dagmar 34.42 94 P P 06 34 20.8 +0.7
baz=325,SNR=5.5
DGMT Dagmar 34.42 94 P P 06 34 20.5 +0.4
DGMT IAmb IAmb 06 34 21.3
comp=Z,12nm,0.7s
GCMT Greycliff 34.59 102 P P 06 34 22.8 +1.1
YSS Yuzh-Sakhalins 34.64 262 eP P 06 34 41.0 +19
YSS MLR MLR
comp=Z,200nm,16.0s
QLMT Earthquake Lak 34.75 105 P P 06 34 24.9 +1.7
YHB Horse Butte 34.91 105 P P 06 34 25.1 +0.6
YHH Holmes Hill 35.00 105 P P 06 34 27.1 +1.6
O03E Paynes Creek 35.10 121 P P 06 34 27.4 +1.2
baz=334
LAO LASA Array 35.13 98 P P 06 34 27.3 +1.1
baz=327,SNR=7.3
LAO LASA Array 35.13 98 P P 06 34 27.1 +0.9
LAO IAmb IAmb 06 34 28.5
comp=Z,15nm,1.1s
YNE Yellowstone No 35.13 103 P P 06 34 27.3 +0.8
SUMG Summit 35.15 26 P P 06 34 27.8 +1.2
SUMG pmax pmax
comp=Z,25nm,0.8s
SUMG Summit 35.15 26 P P 06 34 27.8 +1.2
SUMG Summit 35.15 26 i P P 06 34 27.8 +1.2
comp=Z,60nm,0.7s
YMP Mirror Lake Pl 35.30 104 P P 06 34 29.7 +1.6
RLMT Red Lodge 35.30 103 P P 06 34 29.0 +1.0
baz=328
RLMT Red Lodge 35.30 103 P P 06 34 29.2 +1.2
RLMT IAmb IAmb 06 34 30.3
comp=Z,6.3nm,0.8s
H17A Grant Village 35.44 105 P P 06 34 30.0 +0.8
H17A IAmb IAmb 06 34 41.8
comp=Z,11nm,1.2s
FLWY Flagg Ranch 35.66 105 P P 06 34 33.2 +2.1
IMW Indian Meadow 35.73 105 P P 06 34 33.5 +1.7
IMW IAmb IAmb 06 34 36.4
comp=Z,9.5nm,0.9s
ORV Oroville 35.87 121 P P 06 34 33.3 +0.7
ORV pmax pmax
comp=Z,4.0nm,0.8s
ORV Oroville 35.87 121 P P 06 34 33.3 +0.7
FXWY Fox Creek 35.92 106 P P 06 34 35.3 +1.9
TPAW Teton Pass 36.08 106 P P 06 34 36.3 +1.6
TPAW IAmb IAmb 06 34 38.6
comp=Z,7.4nm,0.9s
ULM Lac du Bonnet 36.14 85 P P 06 34 35.5 +0.6
comp=Z,2.8nm,0.4s,baz=316,slow=7.5,SNR=2.6
ULM PcP PcP 06 36 59.5 -0.7
comp=Z,5.2nm,0.7s,baz=330,slow=4.2,SNR=4.9
ULM Lac du Bonnet 36.14 85 P P 06 34 33.8 -1.0
SNOW Snow King Moun 36.17 106 P P 06 34 37.2 +1.6
SNOW IAmb IAmb 06 34 38.7
comp=Z,9.6nm,0.7s
PAHR Pah Rah Range 36.43 118 P P 06 34 38.8 +1.1
AHID Auburn Hatcher 36.65 107 P P 06 34 40.8 +1.3
VCNR Virginia City 36.71 119 P P 06 34 41.5 +1.4
VCNR IAmb IAmb 06 34 42.6
comp=Z,9.4nm,0.9s
PNTR Pine Nut 36.92 119 P P 06 34 42.9 +1.1
PNTR IAmb IAmb 06 34 48.9
comp=Z,10nm,0.8s
ELK Elko 36.94 113 P P 06 34 43.0 +1.0
comp=Z,4.9nm,0.8s,baz=324,slow=8.2,SNR=24
ELK Elko 36.94 113 P P 06 34 43.4 +1.4
ELK pmax pmax
comp=Z,5.0nm,0.8s
ELK Elko 36.94 113 P P 06 34 43.4 +1.4
KLR Kul'dur 36.96 274 P P 06 34 40.9 -0.9
baz=28,slow=10
KLR Kul'dur 36.96 274 eP P 06 34 40.6 -1.2
YERR Yerington 37.13 119 P P 06 34 44.9 +1.3
BW06 Boulder Array 37.22 105 P P 06 34 45.4 +1.1
baz=330,SNR=8.4
BW06 Boulder Array 37.22 105 P P 06 34 45.2 +0.8
BW06 IAmb IAmb 06 34 46.8
comp=Z,7.8nm,0.7s
PD31 Pinedale Array 37.22 105 P P 06 34 45.5 +1.1
PD31 IAmb IAmb 06 34 46.8
comp=Z,7.5nm,0.7s
PDAR Pinedale Array 37.22 105 P P 06 34 45.6 +1.2
comp=Z,8.2nm,0.6s,baz=328,slow=8.7,SNR=44
PDAR PcP PcP 06 37 03.8 -0.1
comp=Z,1.3nm,0.6s,baz=349,slow=2.0,SNR=4.7
PDAR LR LR 06 50 27.8
comp=Z,82nm,18.7s,baz=335,slow=37
KVN Kaiserville 37.46 117 P P 06 34 48.4 +2.0
KVN pmax pmax
comp=Z,6.0nm,0.8s
KVN Kaiserville 37.46 117 P P 06 34 48.4 +2.0
HWUT Hardware Ranch 37.49 108 P P 06 34 47.9 +1.3
WAKR Walker 37.50 119 P P 06 34 48.2 +1.4
WAKR IAmb IAmb 06 34 49.5
comp=Z,12nm,0.8s
RYN Ryan 37.69 118 P P 06 34 48.8 +0.5
AGMN Agassiz Nation 37.74 87 P P 06 34 48.9 +0.5
baz=325
NVAR Mina Array Bea 37.95 118 P P 06 34 52.4 +1.8
comp=Z,8.9nm,0.7s,baz=319,slow=7.1,SNR=91
NVAR PcP PcP 06 37 08.0 +1.9
comp=Z,1.3nm,0.7s,baz=297,slow=2.9,SNR=5.1
NVAR LR LR 06 51 27.3
comp=Z,61nm,18.5s,baz=342,slow=38
TCUT Toone Canyon 37.98 108 P P 06 34 52.3 +1.5
NV11 Mina Array Sit 37.99 118 P P 06 34 52.3 +1.4
NV11 IAmb IAmb 06 34 53.7
comp=Z,10nm,0.8s
RSSD Black Hills 38.12 98 P P 06 34 52.7 +0.7
RSSD pmax pmax
comp=Z,4.0nm,0.8s
RSSD Black Hills 38.12 98 P P 06 34 52.4 +0.4
baz=328
RSSD Black Hills 38.12 98 P P 06 34 52.7 +0.7
DUG Dugway, Tooele 38.28 110 P P 06 34 54.3 +1.0
DUG pmax pmax
comp=Z,6.0nm,0.7s
DUG Dugway, Tooele 38.28 110 P P 06 34 54.7 +1.4
baz=332,SNR=10.0
DUG Dugway, Tooele 38.28 110 P P 06 34 54.3 +1.0
MDPB Devils Postpil 38.41 119 P P 06 34 56.7 +2.2
MDPB IAmb IAmb 06 34 57.6
comp=Z,18nm,1.2s
JLU Jordanelle 38.41 109 P P 06 34 56.0 +1.5
K22A Casper 38.44 102 P P 06 34 55.2 +0.5
baz=330
K22A Casper 38.44 102 P P 06 34 54.9 +0.2
OMMB Old Mammoth Mi 38.45 119 P P 06 34 56.6 +1.7
OMMB IAmb IAmb 06 34 58.1
comp=Z,12nm,1.0s
MLAC Mammoth, Mammo 38.49 119 P P 06 34 57.3 +2.1
baz=335
B35A Bob, Littlefor 38.50 85 P P 06 34 54.9 +0.1
NLU North Lily Min 38.76 110 P P 06 34 58.0 +0.6
R11A Troy Canyon, C 38.95 115 P P 06 35 00.1 +1.2
baz=334,SNR=20
R11A Troy Canyon, C 38.95 115 P P 06 34 59.7 +0.7
RWWY Rawlins 39.02 103 P P 06 34 59.1 -0.5
RWWY IAmb IAmb 06 35 00.3
comp=Z,14nm,0.9s
RDMU Red Mountain 39.12 107 P P 06 35 01.5 +1.1
TIN Tinemaha, Big 39.22 119 P P 06 35 03.1 +2.0
baz=335
PSUT Pine Spring 39.39 113 P P 06 35 04.1 +1.4
SCO Scoresbysund 39.46 20 i P P 06 35 01.5 -1.1
SCO pmax pmax
comp=Z,9.0nm,1.2s
SCO Scoresbysund 39.46 20 i P P 06 35 01.5 -1.1
comp=Z,8.7nm,1.2s
GRAC Grapevine Rang 39.56 118 P P 06 35 05.8 +1.9
baz=335,SNR=5.5
F33A 5 Mile Ranch, 39.62 89 P P 06 35 04.5 +0.3
EYMN Ely 39.69 83 P P 06 35 05.3 +0.5
baz=326,SNR=19
EYMN Ely 39.69 83 P P 06 35 05.3 +0.5
EYMN IAmb IAmb 06 35 06.4
comp=Z,22nm,0.6s
TCRU Three Creeks R 39.82 111 P P 06 35 08.1 +1.8
CWC Cottonwood Cre 39.82 119 P P 06 35 07.8 +1.5
baz=336
TPNV Topopah Spring 39.98 117 P P 06 35 08.3 +0.8
TPNV pmax pmax
comp=Z,10.0nm,0.9s
TPNV Topopah Spring 39.98 117 P P 06 35 08.8 +1.3
baz=335,SNR=11
TPNV Topopah Spring 39.98 117 P P 06 35 08.3 +0.8
MSU Marysvale 40.00 111 P P 06 35 09.8 +2.0
MSU Marysvale 40.00 111 P P 06 35 09.8 +2.0
Q16A Castle Valley 40.00 110 P P 06 35 09.2 +1.5
SRU San Rafael Swe 40.06 109 P P 06 35 09.2 +1.0
SRU pmax pmax
comp=Z,8.0nm,0.8s
SRU San Rafael Swe 40.06 109 P P 06 35 09.2 +1.0
N23A Red Feather La 40.18 103 P P 06 35 10.0 +0.7
baz=331
FURC Furnace Creek, 40.21 118 P P 06 35 11.0 +1.8
baz=335,SNR=6.6
SMMC Simmler 40.22 122 P P 06 35 11.0 +1.6
baz=337
MPMC Manual Prospec 40.37 119 P P 06 35 12.2 +1.4
baz=336,SNR=7.7
ISA Isabella, Lake 40.40 120 P P 06 35 11.6 +0.7
ISA pmax pmax
comp=Z,8.0nm,0.9s
ISA Isabella, Lake 40.40 120 P P 06 35 12.0 +1.0
baz=336,SNR=6.4
ISA Isabella, Lake 40.40 120 P P 06 35 11.6 +0.7
MTPU Mount Pierson 40.42 111 P P 06 35 13.2 +1.8
CCUT Cedar City 40.44 113 P P 06 35 12.3 +0.8
SZCU Shurtz Canyon 40.50 113 P P 06 35 13.3 +1.4
F36A Milaca 40.65 87 P P 06 35 12.6 -0.2
F36A IAmb IAmb 06 35 14.6
comp=Z,9.7nm,0.7s
PKM Mcpherson Peak 40.67 122 P P 06 35 14.7 +1.4
baz=337,SNR=5.7
SHPR Sheep Range 40.75 116 P P 06 35 14.1 +0.2
E38A The Farm, Brul 40.78 84 P P 06 35 14.1 +0.2
LRMC Laurel Mtn Rad 40.83 119 P P 06 35 15.8 +1.3
baz=336
PKCU Pink Cliffs 40.91 112 P P 06 35 17.2 +1.9
SHOC Shoshone, Teco 40.92 117 P P 06 35 17.0 +1.9
baz=335,SNR=6.8
LCMT Little Creek M 40.96 113 P P 06 35 16.9 +1.2
USRK Ussuriysk Ar. 41.05 269 P P 06 35 15.4 -0.7
comp=Z,2.9nm,0.8s,baz=39,slow=12,SNR=4.5
USRK LR LR 06 52 35.8
comp=Z,97nm,18.6s,baz=209,slow=37
KNB Kanab 41.11 113 P P 06 35 18.2 +1.3
KNB pmax pmax
comp=Z,10.0nm,1.2s
KNB Kanab 41.11 113 P P 06 35 18.2 +1.3
PV09 Paradox Valley 41.11 108 P P 06 35 17.8 +0.8
PV21 Cone Mtn., Par 41.11 108 P P 06 35 17.6 +0.6
PV21 IAmb IAmb 06 35 19.7
comp=Z,9.0nm,0.7s
PV23 Carpenter Ridg 41.20 108 P P 06 35 18.7 +1.0
PV23 IAmb IAmb 06 35 23.6
comp=Z,22nm,1.5s
PV22 Blue Mesa, Par 41.20 107 P P 06 35 18.3 +0.7
PV22 IAmb IAmb 06 35 19.5
comp=Z,20nm,0.7s
ISCO Idaho Springs 41.26 103 P P 06 35 19.5 +1.3
ISCO pmax pmax
comp=Z,7.0nm,0.9s
ISCO Idaho Springs 41.26 103 P P 06 35 19.5 +1.3
baz=331,SNR=9.7
ISCO Idaho Springs 41.26 103 P P 06 35 19.5 +1.3
ECSD EROS Data Cent 41.27 91 P P 06 35 18.2 +0.2
baz=328,SNR=19
ECSD EROS Data Cent 41.27 91 P P 06 35 18.1 +0.2
ECSD IAmb IAmb 06 35 19.1
comp=Z,8.7nm,0.7s
EDW2 Edwards Air Fo 41.27 120 P P 06 35 19.2 +1.1
baz=336
GSC Goldstone, Bar 41.28 118 P P 06 35 19.7 +1.5
GSC pmax pmax
comp=Z,16nm,1.0s
GSC Goldstone, Bar 41.28 118 P P 06 35 19.8 +1.5
baz=336,SNR=10
GSC Goldstone, Bar 41.28 118 P P 06 35 19.7 +1.5
GSC IAmb IAmb 06 35 21.0
comp=Z,16nm,1.0s
PV04 Paradox Valley 41.28 108 P P 06 35 18.9 +0.6
PV04 IAmb IAmb 06 35 20.4
comp=Z,12nm,0.9s
PV20 West Nyswonger 41.31 108 P P 06 35 19.5 +0.9
PV07 Paradox Valley 41.34 107 P P 06 35 19.4 +0.6
PV07 IAmb IAmb 06 35 20.5
comp=Z,11nm,0.7s
PV17 East Wray Mesa 41.37 108 P P 06 35 19.9 +0.9
PV11 David Mesa, Pa 41.38 108 P P 06 35 20.2 +1.0
PV11 IAmb IAmb 06 35 21.2
comp=Z,29nm,1.3s
PV12 Saucer Basin, 41.39 108 P P 06 35 20.0 +0.8
PV12 IAmb IAmb 06 35 21.3
comp=Z,12nm,0.8s
PV18 Skein Mesa, Pa 41.41 108 P P 06 35 20.2 +0.8
PV03 Paradox Valley 41.43 108 P P 06 35 19.8 +0.2
PV03 IAmb IAmb 06 35 21.5
comp=Z,19nm,1.5s
TUQ Turquoise Moun 41.46 117 P P 06 35 21.5 +1.8
baz=335,SNR=10
SPMN Marine on St. 41.46 87 P P 06 35 20.2 +0.7
baz=327,SNR=9.8
SPMN Marine on St. 41.46 87 P P 06 35 20.1 +0.6
SPMN IAmb IAmb 06 35 21.2
comp=Z,17nm,0.7s
PV15 Paradox Valley 41.48 107 P P 06 35 20.5 +0.5
PV15 IAmb IAmb 06 35 21.9
comp=Z,15nm,0.8s
PV05 Paradox Valley 41.49 108 P P 06 35 21.2 +1.1
PV02 Paradox Valley 41.51 108 P P 06 35 20.5 +0.3
PV02 IAmb IAmb 06 35 22.3
comp=Z,15nm,0.8s
PV13 Radium Mtn., P 41.52 108 P P 06 35 20.8 +0.5
PV13 IAmb IAmb 06 35 22.5
comp=Z,19nm,1.0s
D41A Chassel 41.53 81 P P 06 35 20.4 +0.4
D41A IAmb IAmb 06 35 22.2
comp=Z,15nm,1.1s
PV01 Paradox Valley 41.64 107 P P 06 35 22.0 +0.8
PV01 IAmb IAmb 06 35 23.4
comp=Z,26nm,0.8s
U15A North Rim 41.82 113 P P 06 35 23.6 +0.8
MWC Mount Wilson 41.85 120 P P 06 35 24.6 +1.6
MWC pmax pmax
comp=Z,41nm,1.5s
MWC Mount Wilson 41.85 120 P P 06 35 24.6 +1.6
MWC IAmb IAmb 06 35 25.8
comp=Z,41nm,1.4s
BFSC Mount Baldy Ra 41.97 120 P P 06 35 25.5 +1.6
baz=336,SNR=7.6
COWI Conover 42.12 83 P P 06 35 25.1 +0.2
GMRC Granite Mounta 42.14 117 P P 06 35 26.8 +1.5
baz=336,SNR=7.2
BBRC Big Bear Solar 42.19 119 P P 06 35 27.1 +1.3
baz=336
I37A Lemond, Waseca 42.26 88 P P 06 35 26.8 +0.8
G40A Rib Lake 42.42 84 P P 06 35 27.6 +0.4
G40A IAmb IAmb 06 35 28.2
comp=Z,6.1nm,0.5s
W13A Hualapai Mount 42.46 115 P P 06 35 29.3 +1.2
S22A 4UR Ranch, Cre 42.62 106 P P 06 35 30.8 +1.5
baz=332,SNR=8.2
BGNE Belgrade 42.67 95 P P 06 35 30.0 +0.5
baz=330
E43A Lone Tree Farm 42.70 81 P P 06 35 29.6 +0.1
E43A IAmb IAmb 06 35 30.5
comp=Z,13nm,0.5s
MURC Murrieta 42.71 120 P P 06 35 31.5 +1.7
baz=337
BELC Belle Mtn. Jos 42.74 118 P P 06 35 31.1 +0.9
baz=336
SCHQ Schefferville 42.80 58 P P 06 35 30.4 +0.1
comp=Z,9.5nm,0.8s,baz=328,slow=8.3,SNR=13
SCHQ PcP PcP 06 37 20.8 -0.5
comp=Z,4.7nm,0.7s,baz=260,slow=6.1,SNR=4.6
SCHQ LR LR 06 54 24.6
comp=Z,118nm,18.8s,baz=358,slow=38
SCHQ Schefferville 42.80 58 P P 06 35 30.6 +0.3
SCHQ IAmb IAmb 06 35 31.8
comp=Z,12nm,0.8s
L34A Svendsen Farm, 42.87 92 P P 06 35 30.7 -0.3
IRM Iron Mountain 42.89 117 P P 06 35 32.8 +1.6
baz=336,SNR=7.4
ARCES ARCESS Array B 42.93 356 P P 06 35 31.2 0.0
comp=Z,0.9nm,0.5s,baz=14,slow=9.6,SNR=17
ARCES PcP PcP 06 37 21.5 0.0
comp=Z,7.6nm,0.6s,baz=350,slow=3.0,SNR=34
ARCES LR LR 06 53 43.9
comp=Z,51nm,18.4s,baz=346,slow=37
PFO Pinyon Flats O 42.94 119 P P 06 35 32.4 +0.6
PFO pmax pmax
comp=Z,9.0nm,1.1s
PFO Pinyon Flats O 42.94 119 P P 06 35 32.8 +1.0
baz=336,SNR=5.2
PFO Pinyon Flats O 42.94 119 P P 06 35 32.4 +0.6
XPFO Pion Flat 42.94 119 P P 06 35 32.7 +0.9
WUAZ Wupatki 42.97 112 P P 06 35 32.8 +0.8

baz=334,SNR=13
WUAZ Wupatki 42.97 112 P P 06 35 32.9 +0.9
WUAZ IAmb IAmb 06 35 34.6
comp=Z,17nm,1.1s
KSCO Kaye Shedlock' 43.06 101 P P 06 35 33.7 +1.0
KSCO IAmb IAmb 06 35 38.9
comp=Z,11nm,0.9s
PDMCI Parker Dam,Lak 43.10 116 P P 06 35 33.9 +1.0
baz=336
SDCO Great Sand Dun 43.11 104 P P 06 35 34.3 +1.0
baz=332,SNR=10
SDCO Great Sand Dun 43.11 104 P P 06 35 34.0 +0.7
BC3 Big Chuckawall 43.24 118 P P 06 35 35.1 +0.9
baz=336
MATQ Matagami 43.32 70 P P 06 35 34.3 -0.2
baz=326,SNR=5.7
D46A Sault St. Mari 43.37 78 P P 06 35 35.1 +0.1
baz=327,SNR=7.5
109C Camp Elliot, M 43.39 120 P P 06 35 36.2 +1.0
baz=337
I40A Norwalk 43.42 86 P P 06 35 35.7 +0.3
D47A Chapleau 43.58 77 P P 06 35 36.8 0.0
baz=327,SNR=12
MONP2 Monument Peak 43.61 119 P P 06 35 38.8 +1.5
baz=337,SNR=17
K38A Parkersburg 43.66 89 P P 06 35 37.6 +0.3
BAR Barrett 43.72 120 P P 06 35 38.3 +0.3
SWSC Sam W. Stewart 43.77 119 P P 06 35 39.4 +1.1
baz=336
Y14A Wickenburg 43.82 115 P P 06 35 40.1 +1.3
F45A CMU Biological 43.84 80 P P 06 35 38.8 +0.1
baz=328,SNR=5.7
W18A Petrified Fore 43.91 111 P P 06 35 40.3 +0.6
baz=334
W18A Petrified Fore 43.91 111 P P 06 35 40.8 +1.2
W18A IAmb IAmb 06 35 43.0
comp=Z,12nm,1.1s
X16A Lo Mia Camp, P 43.93 113 P P 06 35 41.3 +1.4
IKP In-Ko-Pah, Jac 43.94 119 P P 06 35 41.0 +1.3
baz=337
D48A Paudash Townsh 43.96 76 P P 06 35 39.8 0.0
baz=327
GLA Glamis 44.00 117 P P 06 35 41.7 +1.4
baz=336
H43A Windswept, Lux 44.01 83 P P 06 35 40.2 +0.1
H43A IAmb IAmb 06 35 41.5
comp=Z,9.8nm,0.7s
E47A Iron Bridge 44.02 77 P P 06 35 40.1 -0.2
baz=327,SNR=8.8
T25A Trinidad 44.05 104 P P 06 35 41.3 +0.5
baz=332
D49A Beulah Townshi 44.05 75 P P 06 35 40.8 +0.3
baz=327
I42A Draeger Farm, 44.07 84 P P 06 35 40.7 0.0
I42A IAmb IAmb 06 35 41.8
comp=Z,8.8nm,0.5s
N35A Tabor 44.10 93 P P 06 35 40.9 -0.1
SCIA State Center 44.13 90 P P 06 35 41.8 +0.6
baz=329
SCIA State Center 44.13 90 P P 06 35 41.4 +0.3
LSQQ Lebel-sur-Quev 44.14 70 P P 06 35 41.2 +0.1
baz=327
LVZ Lovozero 44.17 351⇑*i*P P 06 35 41.6 +0.4
LVZ pmax pmax
comp=Z,8.0nm,0.9s
CBKS Cedar Bluff 44.33 98 P P 06 35 42.9 +0.1
baz=331
G45A Suttons Bay 44.33 80 P P 06 35 42.9 +0.2
baz=328
G45A Suttons Bay 44.33 80 P P 06 35 43.0 +0.4
G45A IAmb IAmb 06 35 43.6
comp=Z,13nm,0.5s
CHGQ Chibougamau 44.35 68 P P 06 35 42.5 -0.3
baz=327
X18A Snowflake 44.36 111 P P 06 35 44.4 +1.2
X18A IAmb IAmb 06 35 46.0
comp=Z,13nm,1.1s
G46A Petoskey 44.39 80 P P 06 35 43.1 -0.1
baz=328
JFWS Jewell Farm 44.40 86 P P 06 35 43.3 0.0
JFWS pmax pmax
comp=Z,12nm,0.6s
JFWS Jewell Farm 44.40 86 P P 06 35 43.4 0.0
baz=329,SNR=8.2
JFWS Jewell Farm 44.40 86 P P 06 35 43.3 0.0
JFWS IAmb IAmb 06 35 43.9
comp=Z,12nm,0.6s
E48A Lockeyer 44.41 76 P P 06 35 43.2 -0.1
baz=328,SNR=9.0
113A Mohawk Valley, 44.62 116 P P 06 35 46.1 +0.9
D50A G1974 Best Tow 44.69 74 P P 06 35 45.7 +0.2
baz=328,SNR=7.4
L40A Anamosa 44.76 88 P P 06 35 45.8 -0.3
VLDQ Val d'Or 44.77 71 P P 06 35 44.6 -1.5
F48A Evansville 44.80 77 P P 06 35 46.2 -0.2
baz=328,SNR=7.5
G47A Hillman 44.89 79 P P 06 35 47.4 +0.3
baz=328
GLMI Grayling 44.90 80 P P 06 35 47.5 +0.3
baz=328
GLMI Grayling 44.90 80 P P 06 35 47.0 -0.2
H46A Fife Lake 44.92 80 P P 06 35 47.6 +0.2
baz=328
E50A Wahnapitae 44.99 75 P P 06 35 48.0 +0.1
baz=328
R32A Long Quarter, 45.05 97 P P 06 35 48.6 0.0
R32A IAmb IAmb 06 35 49.5
comp=Z,16nm,1.1s
F49A Sandfield 45.07 77 P P 06 35 48.7 +0.1
baz=328
TLY Talaya 45.12 299 LR LR 06 55 32.0
comp=Z,59nm,19.8s,baz=26,slow=37
TLY Talaya 45.12 299⇑*e*P P 06 35 49.6 +0.6
TLY pmax pmax
comp=Z,2.0nm,0.9s
ANMO Albuquerque 45.24 107 LR LR 06 56 29.0
comp=Z,67nm,18.9s,baz=324,slow=38
ANMO Albuquerque 45.24 107*d*/*i*P P 06 35 51.5 +1.2
ANMO pmax pmax
comp=Z,12nm,1.3s
ANMO Albuquerque 45.24 107 P P 06 35 51.5 +1.2
baz=334
ANMO Albuquerque 45.24 107 P P 06 35 51.7 +1.3
ANMO IAmb IAmb 06 35 52.8
comp=Z,9.0nm,0.9s
KSU1 Kansas State U 45.26 95 P P 06 35 50.1 -0.1
baz=331,SNR=11
KSU1 Kansas State U 45.26 95 P P 06 35 49.1 -1.1
K43A Burlington 45.30 85 P P 06 35 50.6 +0.2
K43A IAmb IAmb 06 35 57.0
comp=Z,26nm,1.1s
MAT Matsushiro 45.33 258 P P 06 35 51.3 +0.5
MJAR Matsushiro Arr 45.33 258 P P 06 35 51.3 +0.5
comp=Z,2.5nm,0.5s,baz=24,slow=8.0,SNR=6.3
MJAR LR LR 06 55 46.9
comp=Z,76nm,19.5s,baz=40,slow=37
E51A G1948 Merrick 45.36 74 P P 06 35 50.7 -0.2
baz=328,SNR=6.2
D52A ZEK Kipawa Sen 45.38 73 P P 06 35 51.1 0.0
baz=328,SNR=5.5
D53A Lac Vacive, Po 45.55 72 P P 06 35 52.4 0.0
baz=328
D53A Lac Vacive, Po 45.55 72 P P 06 35 51.9 -0.4
D53A IAmb IAmb 06 35 58.3
comp=Z,5.7nm,0.9s
I47A Gladwin 45.63 80 P P 06 35 53.2 +0.2
baz=329,SNR=6.5
I47A Gladwin 45.63 80 P P 06 35 53.4 +0.3
I47A IAmb IAmb 06 35 54.5
comp=Z,24nm,1.1s
214A Organ Pipe Nat 45.69 116 P P 06 35 54.6 +0.9
baz=336,SNR=6.1
214A Organ Pipe Nat 45.69 116 P P 06 35 54.8 +1.1
214A IAmb IAmb 06 35 56.2
comp=Z,11nm,1.1s
F51A Arnstein 45.72 75 P P 06 35 53.3 -0.4
baz=328
J46A Howard City 45.77 82 P P 06 35 54.4 +0.2
baz=329
I48A Sherman Twp 45.79 79 P P 06 35 54.2 -0.1
baz=329
D54A Lac Fusel, La 45.87 71 P P 06 35 55.0 +0.1
baz=328,SNR=5.4
E52A Mattawa 45.87 74 P P 06 35 54.9 0.0
baz=328,SNR=11
BNM Barren Site 45.89 108 P P 06 35 56.4 +0.9
L44A Lake County Fo 45.92 85 P P 06 35 55.2 -0.2
baz=329
P38A Dawn 45.98 91 P P 06 35 55.8 -0.1
F52A Sundridge 46.05 75 P P 06 35 56.2 -0.1
baz=328,SNR=8.0
TUC Tucson 46.07 113 P P 06 35 58.2 +1.4
TUC pmax pmax
comp=Z,5.0nm,1.3s
TUC Tucson 46.07 113 P P 06 35 57.9 +1.1
baz=336
TUC Tucson 46.07 113 P P 06 35 58.2 +1.4
E53A Dumoine, Ponti 46.16 73 P P 06 35 57.3 +0.1
baz=328,SNR=5.5
J47A Sunmer 46.18 81 P P 06 35 57.6 +0.2
baz=329
E54A Lac Daplat, Po 46.28 72 P P 06 35 58.1 -0.1
baz=328,SNR=7.7
I49A Point Hope 46.33 79 P P 06 35 58.7 +0.2
baz=329
ALGO Algonquin Park 46.38 73 P P 06 35 58.9 0.0
baz=328
D55A Sainte-Anne-du 46.41 71 P P 06 35 59.3 +0.2
baz=328
M44A Midewin, Midew 46.55 85 P P 06 36 00.7 +0.4
K47A Vermontville 46.60 82 P P 06 36 00.7 +0.1
baz=329,SNR=5.1
P40A Paris 46.63 90 P P 06 36 00.6 -0.3
D56A ZEC Mazanza, M 46.64 70 P P 06 36 00.5 -0.5
baz=328,SNR=6.7
HDIL Hopedale 46.79 87 P P 06 36 02.0 -0.2
baz=330,SNR=5.8
HDIL Hopedale 46.79 87 P P 06 36 01.9 -0.3
H52A Wyevale 46.82 76 P P 06 36 02.3 -0.1
baz=329
G54A Lake Saint Pet 46.84 74 P P 06 36 02.3 -0.2
baz=329,SNR=6.4
G53A Haliburton 46.88 75 P P 06 36 02.8 0.0
baz=329,SNR=9.6
121A Cookes Peak, D 46.93 110 P P 06 36 05.1 +1.5
baz=325
121A Cookes Peak, D 46.93 110 P P 06 36 04.9 +1.3
121A IAmb IAmb 06 36 06.4
comp=Z,9.9nm,0.9s
D57A Chemin Vers le 46.98 69 P P 06 36 03.7 0.0
baz=329,SNR=11
SADO Sadowa 46.99 75 LR LR 06 57 00.9
comp=Z,165nm,18.6s,baz=338,slow=38
LATQ La Tuque 47.06 68 P P 06 36 04.4 +0.2
baz=325,SNR=6.0
AMTX Amarillo 47.06 102 P P 06 36 04.8 +0.3
baz=333
AMTX Amarillo 47.06 102 P P 06 36 04.3 -0.2
AMTX IAmb IAmb 06 36 05.5
comp=Z,9.6nm,1.1s
I51A Listowel 47.12 77 P P 06 36 04.9 +0.2
baz=329,SNR=7.2
ULN Ulaanbaatar 47.20 293⇓*e*P P 06 36 06.8 +1.3
ULN pmax pmax
comp=Z,4.0nm,1.3s
T35A Sooner Cattle 47.21 96 P P 06 36 04.4 -1.1
D58A Chemin du LacG 47.27 68 P P 06 36 06.0 +0.1
baz=329,SNR=11
H53A Bobcaygeon 47.36 75 P P 06 36 06.4 -0.2
baz=329
E57A Chemin Saint G 47.40 70 P P 06 36 07.0 +0.1
baz=329
TRQ Mont Tremblant 47.42 70 P P 06 36 06.6 -0.5
L48A N Adams 47.44 82 P P 06 36 07.3 0.0
319A Douglas 47.45 112 P P 06 36 09.3 +1.8
319A IAmb IAmb 06 36 10.2
comp=Z,7.5nm,1.0s
O44A Mansfield 47.45 86 P P 06 36 06.7 -0.7
SONM Songino Array 47.45 294 P P 06 36 08.5 +1.0
comp=Z,1.6nm,0.6s,baz=30,slow=7.9,SNR=12
SONM PcP PcP 06 37 37.9 +0.3
comp=Z,0.6nm,0.7s,baz=100,slow=1.3,SNR=3.6
G55A Calabogie 47.46 73 P P 06 36 07.4 0.0
baz=329,SNR=9.4
MSTX Muleshoe 47.47 104 P P 06 36 07.8 +0.1
baz=334,SNR=9.0
MSTX Muleshoe 47.47 104 P P 06 36 08.1 +0.3
MSTX IAmb IAmb 06 36 09.0
comp=Z,14nm,0.8s
P43A Skaggs, Pawnee 47.49 88 P P 06 36 07.5 -0.3
R40A Maddies Statio 47.62 91 P P 06 36 08.4 -0.4
R40A IAmb IAmb 06 36 09.3
comp=Z,10nm,0.8s
ORIO Orleans, Innes 47.73 72 P P 06 36 09.3 -0.1
baz=329,SNR=6.0
ORIO Orleans, Innes 47.73 72 P P 06 36 09.0 -0.4
ORIO IAmb IAmb 06 36 10.2
comp=Z,4.5nm,0.7s
E58A La Victoria 47.75 69 P P 06 36 09.7 +0.1
baz=329,SNR=5.2
DELO Deloro Mine 47.76 74 P P 06 36 09.6 -0.2
DELO IAmb IAmb 06 36 11.4
comp=Z,7.5nm,0.6s
SFIN Lafayette 47.78 85 P P 06 36 10.1 +0.2
baz=330,SNR=9.0
SFIN Lafayette 47.78 85 P P 06 36 09.9 0.0
K51A Iona Station 47.87 79 P P 06 36 10.5 0.0
baz=330
N47A Urbana 47.88 84 P P 06 36 10.1 -0.6
H55A Tweed 47.90 74 P P 06 36 10.8 +0.1
baz=329,SNR=8.6
L50A Kingsville 47.96 80 P P 06 36 11.4 +0.1
baz=330
I55A Frankford 48.00 74 P P 06 36 11.3 -0.3
baz=329
N48A Decatur 48.15 83 P P 06 36 12.7 -0.1
baz=330,SNR=5.9
H56A Elgin 48.20 73 P P 06 36 13.2 +0.1
baz=329
CCM Cathedral Cave 48.22 90 P P 06 36 13.0 -0.4
CCM pmax pmax
comp=Z,11nm,0.6s
CCM Cathedral Cave 48.22 90 P P 06 36 13.0 -0.4
baz=331
CCM Cathedral Cave 48.22 90 P P 06 36 13.0 -0.4
G57A Newington 48.22 72 P P 06 36 13.3 +0.1
baz=329
WMOK Wichita Mounta 48.28 100 P P 06 36 13.5 -0.4
WMOK Wichita Mounta 48.28 100 P P 06 36 13.8 -0.1
baz=333,SNR=10
WMOK Wichita Mounta 48.28 100 P P 06 36 13.5 -0.4
Q44A Meyer Farm, Va 48.33 88 P P 06 36 13.4 -0.7
FNO Franklin 48.34 98 P P 06 36 14.1 -0.2
TUL1 Leonard 48.37 96 P P 06 36 14.0 -0.5
baz=332,SNR=7.9
TUL1 Leonard 48.37 96 P P 06 36 13.6 -1.0
P46A Rosedale 48.40 86 P P 06 36 14.0 -0.7
E60A Ste Agathe de 48.40 68 P P 06 36 14.9 +0.3
baz=329,SNR=8.7
KSRS Korea Array 48.42 268 P P 06 36 15.7 +0.7
comp=Z,6.2nm,0.7s,baz=21,slow=8.1,SNR=22
KSRS LR LR 06 56 44.3
comp=Z,62nm,18.9s,baz=316,slow=36
U38A Gravette 48.44 94 P P 06 36 13.0 -2.1
U38A IAmb IAmb 06 36 18.2
comp=Z,4.7nm,0.9s
G58A Ormstown 48.52 71 P P 06 36 15.6 +0.1
baz=329
MNTX Cornudas Mount 48.55 108 P P 06 36 17.4 +1.4
baz=335,SNR=20
MNTX Cornudas Mount 48.55 108 P P 06 36 16.8 +0.8
MNTX IAmb IAmb 06 36 18.3
comp=Z,11nm,0.8s
F60A Warwick 48.56 68 P P 06 36 15.7 -0.2
baz=329
MGMO Mountain Grove 48.62 92 P P 06 36 15.5 -1.0
O48A Farmland 48.62 83 P P 06 36 16.2 -0.2
baz=330,SNR=29
D62A Allapoint, All 48.62 65 P P 06 36 16.5 +0.2
baz=330
W35A Tecumseh 48.63 98 P P 06 36 15.8 -0.7
E61A Lac Etchemin 48.68 67 P P 06 36 16.8 -0.1
baz=330
LONY Lake Ozonia 48.78 72 P P 06 36 17.5 -0.1
baz=330
LONY Lake Ozonia 48.78 72 P P 06 36 17.3 -0.3
LONY IAmb IAmb 06 36 18.4
comp=Z,11nm,0.7s
M51A Elyria 48.81 80 P P 06 36 17.7 -0.2
baz=330
OLIL Olney 48.83 87 P P 06 36 17.7 -0.3
E62A Clayton Lake 48.86 66 P P 06 36 18.5 +0.3
baz=330,SNR=6.3
E62A Clayton Lake 48.86 66 P P 06 36 18.2 0.0
E62A IAmb IAmb 06 36 19.6
comp=Z,10.0nm,0.7s
G59A Clarenceville 48.89 70 P P 06 36 18.4 0.0
baz=330
F61A St Evariste 48.90 68 P P 06 36 18.7 +0.2
baz=330
ZAA0 Zalesovo Array 48.93 314 P P 06 36 17.8 -0.8
ZAA0 IAmb IAmb 06 36 18.8
comp=Z,12nm,0.7s
ZALV Zalesovo Beam 48.93 314 P P 06 36 18.2 -0.4
comp=Z,14nm,0.7s,baz=29,slow=7.1,SNR=46
ZALV PcP PcP 06 37 42.1 -0.5
comp=Z,1.1nm,0.4s,baz=12,slow=4.0,SNR=3.9
N50A Nevada 48.93 81 P P 06 36 19.0 +0.2
baz=330
M52A Chesterland 48.94 79 P P 06 36 18.9 0.0
baz=330
FRNY Flat Rock 48.96 71 P P 06 36 18.1 -0.8
FRNY IAmb IAmb 06 36 19.5
comp=Z,7.4nm,0.8s
I57A Carthage 48.98 73 P P 06 36 19.0 -0.2
baz=330
D63A Stockholm 48.99 65 P P 06 36 19.3 +0.1
baz=330
L53A Girard 48.99 78 P P 06 36 19.0 -0.2
baz=330
K54A Basiliko Farm, 49.01 76 P P 06 36 18.8 -0.6
baz=330
BLO Bloomington 49.05 85 P P 06 36 19.4 -0.3
BLO pmax pmax
comp=Z,11nm,0.7s
BLO Bloomington 49.05 85 P P 06 36 19.4 -0.3
BLO IAmb IAmb 06 36 20.0
comp=Z,11nm,0.7s
H59A Cadyville 49.08 71 P P 06 36 19.9 0.0
baz=330
U40A Yellville 49.09 93 P P 06 36 19.1 -1.0
baz=332,SNR=11
U40A Yellville 49.09 93 P P 06 36 18.7 -1.4
U40A IAmb IAmb 06 36 19.9
comp=Z,7.1nm,0.6s
N51A Ashland 49.10 81 P P 06 36 19.8 -0.3
baz=330
N51A Ashland 49.10 81 P P 06 36 19.8 -0.3
H58A Gabriels 49.10 71 P P 06 36 20.2 +0.1
baz=330,SNR=9.2
L54A Sinclairville 49.10 77 P P 06 36 19.6 -0.5
baz=330
J56A Wolcott 49.11 74 P P 06 36 19.6 -0.5
baz=330
K55A Perry 49.14 76 P P 06 36 19.8 -0.6
baz=330
T42A Van Buren 49.17 91 P P 06 36 20.1 -0.6
G60A Masonville 49.18 69 P P 06 36 21.0 +0.3
baz=330,SNR=6.4
M53A Wi Miller and 49.28 79 P P 06 36 21.1 -0.4
baz=330,SNR=6.3
SIUC Southern Illin 49.29 89 P P 06 36 21.2 -0.4
S44A Carbondale 49.29 89 P P 06 36 21.0 -0.6
O50A Cable 49.30 82 P P 06 36 21.5 -0.1
baz=330,SNR=5.4
ALLY Allegheny Colle 49.30 78 P P 06 36 21.6 0.0
G61A St-Isidore-de- 49.31 69 P P 06 36 21.7 +0.1
baz=330
J57A Williamstown 49.31 74 P P 06 36 21.2 -0.4
baz=330
P49A Miami Univ. Ec 49.41 84 P P 06 36 22.0 -0.5
baz=331,SNR=8.6
K56A Middlesex 49.44 75 P P 06 36 22.3 -0.4
baz=330
I58A Old Forge 49.44 72 P P 06 36 22.4 -0.3
baz=330
ACSO Alum Creek Sta 49.47 82 P P 06 36 22.6 -0.3
baz=330
ACSO Alum Creek Sta 49.47 82 P P 06 36 22.6 -0.3
ACSO IAmb IAmb 06 36 23.7
comp=Z,14nm,0.8s
L55A Hinsdale 49.48 76 P P 06 36 22.6 -0.4
baz=330
BATG Bathurst New B 49.48 63 P P 06 36 23.2 +0.3
BATG IAmb IAmb 06 36 24.4
comp=Z,8.1nm,0.7s
H60A Morristown 49.51 70 P P 06 36 23.6 +0.3
baz=330
TJN Taejon 49.58 268⇓*e*P P 06 36 24.3 +0.5
M54A Oil Creek Stat 49.60 78 P P 06 36 23.5 -0.4
baz=330,SNR=7.5
M54A Oil Creek Stat 49.60 78 P P 06 36 23.7 -0.3
M54A IAmb IAmb 06 36 24.5
comp=Z,14nm,0.8s
J58A Remsen 49.62 73 P P 06 36 23.6 -0.4
baz=330
E64A Bridgewater 49.62 65 P P 06 36 23.4 -0.6
baz=330
O51A Pataskala 49.68 81 P P 06 36 24.3 -0.3
baz=331,SNR=8.7
P50A Jamestown 49.70 83 P P 06 36 24.5 -0.2
baz=331,SNR=6.3
K57A Scipio Center 49.71 74 P P 06 36 24.1 -0.7
baz=330
I59A Olmsteadville 49.75 71 P P 06 36 25.1 0.0
baz=330,SNR=8.2
W39A Magazine 49.76 95 P P 06 36 24.5 -0.8
baz=332
W39A Magazine 49.76 95 P P 06 36 24.4 -0.8
W39A IAmb IAmb 06 36 25.5
comp=Z,19nm,1.5s
N53A Lisbon 49.77 79 P P 06 36 24.9 -0.3
baz=330,SNR=5.9
N53A Lisbon 49.77 79 P P 06 36 24.8 -0.4
N53A IAmb IAmb 06 36 25.9
comp=Z,16nm,0.8s
FCAR Ozark Folk Cen 49.78 93 P P 06 36 24.0 -1.4
F63A Nahmakanta, Br 49.80 66 P P 06 36 25.4 +0.1
baz=330
J59A Piesco 49.81 72 P P 06 36 24.8 -0.7
baz=330
H61A Lyndonville 49.81 69 P P 06 36 25.9 +0.4
baz=330
ABTX Abilene, Hawle 49.84 102 P P 06 36 25.3 -0.5
baz=334
L56A Greenwood 49.84 76 P P 06 36 25.2 -0.6
baz=330,SNR=6.7
L56A Greenwood 49.84 76 P P 06 36 25.1 -0.7
L56A IAmb IAmb 06 36 25.8
comp=Z,11nm,0.7s
I60A Shoreham 49.92 71 P P 06 36 25.9 -0.4
baz=330
F64A Sherman 49.92 66 P P 06 36 25.8 -0.4
baz=330
WCI Wyandotte Cave 49.95 86 P P 06 36 25.8 -0.8
WCI pmax pmax
comp=Z,15nm,0.7s
WCI Wyandotte Cave 49.95 86 P P 06 36 26.2 -0.4
baz=331
WCI Wyandotte Cave 49.95 86 P P 06 36 25.8 -0.8
N54A Moraine State 49.96 78 P P 06 36 26.3 -0.4
baz=330
M55A Ridgway 49.97 77 P P 06 36 26.2 -0.6
baz=330,SNR=5.2
M55A Ridgway 49.97 77 P P 06 36 26.5 -0.3
M55A IAmb IAmb 06 36 27.3
comp=Z,15nm,0.8s
LCAR Lake Charles 49.99 92 P P 06 36 25.4 -1.5
O52A Adamsville 50.00 81 P P 06 36 26.5 -0.5
baz=331,SNR=5.6
O52A Adamsville 50.00 81 P P 06 36 26.4 -0.6
K58A Earlville 50.00 74 P P 06 36 26.4 -0.6
baz=330
PARMO Parma 50.01 90 P P 06 36 25.6 -1.5
H62A Milan 50.05 69 P P 06 36 27.7 +0.3
baz=330
LBNH Lisbon 50.07 70 P P 06 36 27.6 +0.2
baz=330
P51A Williamsport 50.09 82 P P 06 36 27.0 -0.6
baz=331
P51A Williamsport 50.09 82 P P 06 36 27.2 -0.4
P51A IAmb IAmb 06 36 28.0
comp=Z,11nm,0.8s
PKME Peaks-Kenny Pk 50.11 67 P P 06 36 28.0 +0.3
baz=330
O53A New Philadelph 50.12 80 P P 06 36 27.3 -0.6
baz=331
G63A Kingsbury 50.13 67 P P 06 36 27.9 0.0
baz=330
M56A Emporium 50.18 77 P P 06 36 27.5 -0.8

baz=330,SNR=6.7
M56A Emporium 50.18 77 P P 06 36 26.6 -1.7
M56A IAmb IAmb 06 36 28.6
comp=Z,13nm,0.9s
L57A Andrews Acres 50.22 75 P P 06 36 28.4 -0.2
baz=330
I61A Oroboro, Fairl 50.23 70 P P 06 36 29.7 +1.0
baz=330
K59A Cooperstown 50.28 73 P P 06 36 29.2 +0.1
baz=330
P52A Corning 50.31 81 P P 06 36 29.3 0.0
baz=331
G64A Maxfield 50.31 66 P P 06 36 29.3 0.0
baz=330
BINY Binghamton 50.37 74 P P 06 36 29.5 -0.2
baz=330
BINY Binghamton 50.37 74 P P 06 36 29.2 -0.6
BINY IAmb IAmb 06 36 31.8
comp=Z,19nm,1.3s
W41B Gary Mavity, V 50.37 93 P P 06 36 29.3 -0.4
baz=332
H63A New Sharon 50.37 68 P P 06 36 30.0 +0.3
baz=330
Q51A Peebles 50.38 83 P P 06 36 29.7 -0.2
Q51A IAmb IAmb 06 36 30.5
comp=Z,10nm,0.9s
J60A Lant Hill Farm 50.39 71 P P 06 36 29.9 0.0
baz=330
MIAR Mount Ida 50.42 95 P P 06 36 29.8 -0.4
MIAR pmax pmax
comp=Z,11nm,0.7s
MIAR Mount Ida 50.42 95 P P 06 36 30.0 -0.2
baz=333,SNR=14
MIAR Mount Ida 50.42 95 P P 06 36 29.8 -0.4
MIAR IAmb IAmb 06 36 31.0
comp=Z,11nm,0.7s
N55A Marion Center 50.49 78 P P 06 36 30.1 -0.6
baz=331,SNR=10
O54A Avella 50.49 79 P P 06 36 30.2 -0.5
baz=331
O54A Avella 50.49 79 P P 06 36 30.0 -0.7
L58A Harry Jones Me 50.55 74 P P 06 36 30.8 -0.4
baz=330
J61A Chester 50.62 71 P P 06 36 31.2 -0.4
baz=330
N56A West Decatur 50.63 77 P P 06 36 31.2 -0.6
baz=331,SNR=6.3
R50A Paris 50.66 84 P P 06 36 31.6 -0.3
R50A IAmb IAmb 06 36 33.0
comp=Z,15nm,0.8s
UALR University of 50.68 93 P P 06 36 31.8 -0.4
UALR IAmb IAmb 06 36 32.6
comp=Z,7.6nm,0.7s
M57A Sunshine Farm, 50.69 76 P P 06 36 31.6 -0.6
baz=331
P53A Whipple 50.71 81 P P 06 36 31.6 -0.8
baz=331
P53A Whipple 50.71 81 P P 06 36 31.9 -0.4
P53A IAmb IAmb 06 36 32.9
comp=Z,7.6nm,0.8s
T47A Sharon Grove 50.73 87 P P 06 36 32.3 -0.2
X40A Basin Creek Fa 50.75 94 P P 06 36 32.2 -0.5
baz=333,SNR=8.7
X40A Basin Creek Fa 50.75 94 P P 06 36 31.0 -1.7
X40A IAmb IAmb 06 36 32.7
comp=Z,5.7nm,0.6s
KLMR Klimovskoe 50.78 347 *e*P P 06 36 31.8 -0.8
KLMR pmax pmax
comp=Z,10.0nm,0.6s
KLMR Klimovskoe 50.78 347 *e*P P 06 36 31.9 -0.7
KLMR AMP 06 36 33.4
comp=Z,10.0nm,0.6s
Q52A Bidwell 50.84 82 P P 06 36 32.7 -0.6
baz=331,SNR=6.7
O55A Ligonier 50.87 78 P P 06 36 33.0 -0.5
baz=331
M58A Price's Panora 50.91 75 P P 06 36 33.1 -0.7
baz=331
K61A Williamstown 50.95 72 P P 06 36 33.7 -0.4
baz=331
P54A Burton 50.96 80 P P 06 36 33.8 -0.4
baz=331,SNR=17
H65A Eastbrook 50.97 66 P P 06 36 33.9 -0.3
baz=331
J62A Henniker 50.99 70 P P 06 36 35.1 +0.7
baz=331
FINES FINESS Array B 51.02 355 P P 06 36 34.7 +0.4
comp=Z,4.6nm,0.5s,baz=21,slow=7.5,SNR=58
FINES PcP PcP 06 37 49.4 -0.8
comp=Z,1.3nm,0.6s,baz=44,slow=1.4,SNR=3.4
FINES LR LR 06 59 31.9
comp=Z,40nm,18.7s,baz=357,slow=38
N57A Milroy 51.04 77 P P 06 36 34.0 -0.8
baz=331
O56A Blue Knob Stat 51.09 78 P P 06 36 34.6 -0.7
baz=331,SNR=6.8
O56A Blue Knob Stat 51.09 78 P P 06 36 33.4 -1.9
O56A IAmb IAmb 06 36 40.2
comp=Z,11nm,0.9s
JNU Nakatsue 51.13 263 LR LR 06 59 42.2
comp=Z,59nm,18.1s,baz=37,slow=38
M59A Waymart 51.14 74 P P 06 36 35.0 -0.6
baz=331
MCWV Mont Chateau 51.15 79 P P 06 36 35.3 -0.3
baz=331
L60A Shokan 51.19 73 P P 06 36 35.8 -0.2
baz=331
WVT Waverly 51.21 88 P P 06 36 36.0 -0.1
WVT pmax pmax
comp=Z,10.0nm,0.7s
WVT Waverly 51.21 88 P P 06 36 36.2 +0.1
baz=332
WVT Waverly 51.21 88 P P 06 36 36.0 -0.1
WVT IAmb IAmb 06 36 37.1
comp=Z,9.8nm,0.7s
Q53A Leroy 51.21 81 P P 06 36 35.8 -0.3
baz=331,SNR=6.4
H66A Whiting 51.22 66 P P 06 36 35.8 -0.2
baz=331
L61A Hillsdale 1, H 51.26 72 P P 06 36 36.5 +0.1
baz=331
N58A Sunbury 51.28 76 P P 06 36 35.8 -0.8
baz=331,SNR=5.8
N58A Sunbury 51.28 76 P P 06 36 35.4 -1.2
N58A IAmb IAmb 06 36 36.7
comp=Z,13nm,0.7s
P55A Reedsville 51.28 79 P P 06 36 36.3 -0.4
baz=331
TX31 Lajitas Ar. Si 51.31 108 P P 06 36 37.9 +0.8
TX32 Lajitas Array 51.31 108 P P 06 36 37.8 +0.7
TXAR Lajitas Array 51.31 108 P P 06 36 38.3 +1.2
comp=Z,19nm,0.6s,baz=337,slow=5.7,SNR=319
TXAR PcP PcP 06 37 53.0 +1.1
comp=Z,0.9nm,0.5s,baz=12,slow=0.8,SNR=4.1
TXAR LR LR 07 00 13.1
comp=Z,73nm,21.2s,baz=0.0,slow=38
K62A Royalston 51.33 71 P P 06 36 37.2 +0.2
baz=331
WLAR White Oak Lake 51.35 95 P P 06 36 37.8 +0.6
Q54A Coxs Mills 51.36 80 P P 06 36 36.9 -0.4
baz=331
Q54A Coxs Mills 51.36 80 P P 06 36 36.5 -0.7
Q54A IAmb IAmb 06 36 37.6
comp=Z,8.8nm,0.7s
X43A Marvell 51.47 92 P P 06 36 37.9 -0.1
baz=332
NB2 NORSAR Subarra 51.47 4 P P 06 36 37.8 0.0
comp=Z,1.0nm,0.4s,baz=356,slow=7.9
NOA NORSAR Array B 51.47 4 P P 06 36 38.2 +0.4
comp=Z,1.1nm,0.5s,baz=1.8,slow=7.1,SNR=6.2
NOA PcP PcP 06 37 51.9 0.0
comp=Z,1.7nm,0.7s,baz=360,slow=4.4,SNR=7.6
NOA LR LR 06 59 47.9
comp=Z,18nm,18.2s,baz=320,slow=38
O57A Amberson 51.49 77 P P 06 36 37.7 -0.5
baz=331,SNR=8.4
S51A Beattyville 51.50 84 P P 06 36 38.2 -0.1
R53A Hurricane 51.51 82 P P 06 36 38.0 -0.4
baz=331,SNR=6.0
R53A Hurricane 51.51 82 P P 06 36 37.2 -1.2
R53A IAmb IAmb 06 36 39.1
comp=Z,16nm,0.8s
W45A Hickory Valley 51.55 90 P P 06 36 38.3 -0.4
K63A Dunstable 51.56 70 P P 06 36 39.4 +0.7
baz=331,SNR=5.2
N59A State Game Lan 51.56 75 P P 06 36 38.3 -0.4
baz=331

T50A Nancy 51.57 85 P P 06 36 38.2 -0.6
T50A IAmb IAmb 06 36 40.8
comp=Z,15nm,0.8s
M60A Port Jervis 51.62 74 P P 06 36 38.5 -0.7
baz=331
Q55A Buckhannon 51.64 80 P P 06 36 39.1 -0.3
baz=331
HHC Hu-ho-hao-te 51.64 285 *e*P P 06 36 44.0 +4.6
HHC pmax pmax
comp=Z,9.0nm,1.1s
HHC pmax pmax
comp=Z,31nm,5.6s
U49A Red Boiling Sp 51.66 86 P P 06 36 39.2 -0.2
U49A IAmb IAmb 06 36 40.4
comp=Z,14nm,0.7s
P56A Dayton Farm, R 51.66 78 P P 06 36 38.9 -0.6
baz=331
JCT Junction City 51.70 103 P P 06 36 39.9 0.0
JCT pmax pmax
comp=Z,19nm,0.6s
JCT Junction City 51.70 103 P P 06 36 40.1 +0.2
baz=334,SNR=22
JCT Junction City 51.70 103 P P 06 36 39.9 0.0
LRW Lerwick 51.70 12 *e*P P 06 36 40.1 +0.6
LRW IAmb IAmb 06 36 42.9
comp=Z,28nm,1.2s
HRV Adam Dziewonsk 51.71 70 P P 06 36 40.3 +0.6
baz=331
CLTN Cedars of Leba 51.82 87 P P 06 36 38.9 -1.8
CLTN IAmb IAmb 06 36 41.8
comp=Z,8.2nm,0.8s
O58A Lewisberry 51.83 76 P P 06 36 40.0 -0.7
baz=331,SNR=5.7
N60A Cedar Hill Far 51.85 74 P P 06 36 40.3 -0.5
baz=331
WES Weston 51.90 70 P P 06 36 40.3 -0.9
WES pmax pmax
comp=Z,23nm,0.6s
WES Weston 51.90 70 P P 06 36 40.3 -0.9
KIRV Kirov 51.91 340 LR LR 07 02 36.2
comp=Z,59nm,18.3s,baz=90,slow=41
Q56A Snyder Ridge, 51.93 79 P P 06 36 41.1 -0.4
baz=331
O59A Robesonia 51.94 76 P P 06 36 40.7 -0.8
baz=331
V48A Smith Brothers 51.94 88 P P 06 36 41.3 -0.3
V48A IAmb IAmb 06 36 42.4
comp=Z,9.1nm,0.8s
M61A Granite Spring 51.95 73 P P 06 36 41.2 -0.4
baz=331
DGZ Jazzator, Alta 51.96 309↓ *e*P P 06 36 41.9 +0.1
DGZ pmax pmax
comp=Z,4.0nm,0.8s
P57A Homestead Farm 51.98 78 P P 06 36 41.1 -0.8
baz=331
R54A Victor 52.01 81 P P 06 36 41.5 -0.6
baz=332
S53A Williamson 52.02 82 P P 06 36 41.9 -0.3
baz=332
OXF Oxford 52.03 91 P P 06 36 42.6 +0.3
OXF pmax pmax
comp=Z,124nm,1.4s
OXF Oxford 52.03 91 P P 06 36 42.7 +0.3
baz=332,SNR=14
OXF Oxford 52.03 91 P P 06 36 42.6 +0.3
PAL Palisades 52.17 73 P P 06 36 42.8 -0.4
baz=331
O60A Telford 52.22 75 P P 06 36 42.7 -0.9
baz=331
S54A Dingess, Beckl 52.22 82 P P 06 36 43.2 -0.5
baz=332
Q57A Strasburg 52.23 78 P P 06 36 42.8 -0.9
baz=331
P58A Pank, Wackersv 52.24 77 P P 06 36 43.5 -0.3
baz=331
R55A Marlinton 52.25 80 P P 06 36 43.9 -0.1
baz=332
R55A Marlinton 52.25 80 P P 06 36 43.5 -0.4
R55A IAmb IAmb 06 36 44.4
comp=Z,7.2nm,0.7s
N61A South Mountain 52.25 74 P P 06 36 43.3 -0.5
baz=331
HFS Hagfors 52.43 3 P P 06 36 45.0 +0.1
comp=Z,6.2nm,0.7s,baz=18,slow=5.3,SNR=14
P59A Jarrettsville 52.46 76 P P 06 36 44.8 -0.6
baz=331
L64A Middleborough 52.47 70 P P 06 36 45.6 +0.2
baz=331
T53A Wise 52.48 83 P P 06 36 45.5 -0.2
baz=332
TZTN Tazewell 52.48 84 P P 06 36 46.0 +0.4
baz=332,SNR=12
TZTN Tazewell 52.48 84 P P 06 36 45.8 +0.2
M63A Gales Ferry 52.50 71 P P 06 36 45.6 -0.1
baz=331
PUL Pulkovo 52.51 352↑ *e*P P 06 36 46.6 +1.1
PUL pmax pmax
comp=Z,41nm,0.5s
S55A Lewisburg 52.55 81 P P 06 36 45.9 -0.3
baz=332
ARU Arti 52.58 333 LR LR 07 01 44.3
comp=Z,63nm,20.2s,baz=312,slow=39
ARU Arti 52.58 333 *d* iP P 06 36 45.9 -0.2
ARU 06 37 54.9
ARU 06 38 42.0
ARU S S 06 44 13.8 +1.3
ARU SS SS 06 47 47.6 -2.2
ARU pmax pmax
comp=Z,6.0nm,0.6s
ARU Arti 52.58 333 P P 06 36 45.7 -0.3
ARU IAmb IAmb 06 36 46.8
comp=Z,7.5nm,0.6s
Q58A Fox Den Farm, 52.58 78 P P 06 36 45.9 -0.5
baz=332
O61A Allentown 52.73 74 P P 06 36 46.8 -0.6
baz=331
SWET Sewanee 52.74 87 P P 06 36 46.9 -0.7
SWET IAmb IAmb 06 36 47.9
comp=Z,8.0nm,0.6s
T54A Tazewell 52.77 82 P P 06 36 47.3 -0.6
baz=332
HPIG 52.77 111 P P 06 36 48.5 +0.3
HPIG IAmb IAmb 06 36 50.1
comp=Z,13nm,0.8s
KONO Kongsberg 52.81 5↑ *e*P P 06 36 47.5 -0.2
KONO pmax pmax
comp=Z,5.0nm,0.7s
V51A Loudon 52.82 85 P P 06 36 47.8 -0.4
V51A IAmb IAmb 06 36 48.9
comp=Z,10nm,0.6s
R57A Stanardsville 52.83 79 P P 06 36 47.7 -0.5
baz=332,SNR=5.5
S56A Natural Bridge 52.98 80 P P 06 36 49.1 -0.3
baz=332
X48A Hartselle 52.99 89 P P 06 36 49.0 -0.4
X48A IAmb IAmb 06 36 49.6
comp=Z,9.0nm,0.6s
T55A Pulaski 53.02 82 P P 06 36 48.7 -1.0
baz=332
R58A Rapidan 53.02 78 P P 06 36 49.2 -0.4
baz=332
BLA Blacksburg 53.07 81 P P 06 36 49.4 -0.6
baz=332
V52A Sevierville 53.08 85 P P 06 36 50.1 0.0
V52A IAmb IAmb 06 36 50.9
comp=Z,11nm,0.7s
LEWI Lewis, Hebride 53.14 16 *e*P P 06 36 50.2 0.0
LEWI IAmb IAmb 06 36 52.6
comp=Z,16nm,1.3s
S57A Dark Hollow, R 53.14 80 P P 06 36 49.9 -0.6
baz=332
U54A Nelsons Funny 53.15 83 P P 06 36 50.3 -0.4
baz=332
TKL Tuckaleechee C 53.17 85 LR LR 06 59 15.5
comp=Z,25nm,18.0s,baz=296,slow=36
TKL Tuckaleechee C 53.17 85 P P 06 36 50.5 -0.2
TKL pmax pmax
comp=Z,16nm,1.0s
TKL Tuckaleechee C 53.17 85 P P 06 36 50.5 -0.2
TKL IAmb IAmb 06 36 51.9
comp=Z,16nm,0.9s
M66A Nantucket 53.31 70 P P 06 36 50.8 -0.8
baz=332
CBN Corbin Frederi 53.34 78 P P 06 36 51.5 -0.5
baz=332,SNR=5.8
R58B Mineral 53.37 78 P P 06 36 51.6 -0.5
baz=332

T56A Rocky Mt 53.38 81 P P 06 36 51.8 -0.4
baz=332
BRVK Borovoye 53.40 323 *d* iP P 06 36 51.8 -0.4
BRVK pmax pmax
comp=Z,6.0nm,0.6s
BRVK Borovoye 53.40 323 P P 06 36 52.1 -0.1
BRVK IAmb IAmb 06 36 52.8
comp=Z,11nm,0.6s
R59A King George, V 53.44 78 P P 06 36 52.4 -0.3
baz=332
FPAL Fort Paine 53.46 87 P P 06 36 52.7 -0.2
U55A TA2, Sparta 53.46 82 P P 06 36 52.5 -0.4
baz=332
KURK Kurchatov 53.51 316 *d* iP P 06 36 52.4 -0.6
KURK pmax pmax
comp=Z,13nm,0.8s
KURK Kurchatov 53.51 316 P P 06 36 52.1 -0.8
KURK IAmb IAmb 06 36 53.4
comp=Z,16nm,0.9s
V53A Saluda 53.53 84 P P 06 36 53.5 +0.1
S58A Poland Farm, P 53.61 79 P P 06 36 53.7 -0.2
baz=332
S58A Poland Farm, P 53.61 79 P P 06 36 53.2 -0.7
S58A IAmb IAmb 06 36 54.4
comp=Z,12nm,0.7s
W52A Murphy 53.61 86 P P 06 36 54.4 +0.4
KURBB Kurchatov Arra 53.62 316 P P 06 36 53.3 -0.5
comp=Z,9.0nm,0.8s,baz=27,slow=6.4,SNR=4.1
KURBB PcP PcP 06 37 59.8 -0.3
comp=Z,2.2nm,0.7s,baz=28,slow=4.3,SNR=7.5
T57A Hurt 53.70 80 P P 06 36 54.0 -0.6
baz=332
Z47A Carrollton 53.71 90 P P 06 36 54.0 -0.7
Y49A Blount Mountai 53.76 88 P P 06 36 54.6 -0.4
Y49A IAmb IAmb 06 36 55.8
comp=Z,13nm,0.7s
LPIG La Paz 53.76 117 LR LR 07 02 01.3
comp=Z,42nm,20.3s,baz=10,slow=38
V54A Nebo 53.76 83 P P 06 36 54.7 -0.4
baz=332
S59A Mechanicsville 53.76 78 P P 06 36 54.5 -0.5
baz=332
U56A King 53.85 82 P P 06 36 55.5 -0.2
baz=332
KAC Achnashellach 53.94 15 *e*P P 06 36 56.7 +0.7
V55A Taylorsville 53.97 83 P P 06 36 56.2 -0.4
baz=332
VSU Vasula 53.98 354 *de*P P 06 36 56.4 +0.1
VSU pmax pmax
comp=Z,23nm,1.1s
T58A Grand View Acr 54.02 80 P P 06 36 56.5 -0.4
baz=332
MCD Coleburn Disti 54.05 14 *e*P P 06 36 57.7 +0.8
KPL Plockton 54.06 16 *e*P P 06 36 57.7 +0.8
KPL IAmb IAmb 06 36 58.8
comp=Z,13nm,1.0s
BG3 Lake Jocassee 54.08 85 P P 06 36 57.4 0.0
BG3 IAmb IAmb 06 36 59.6
comp=Z,8.4nm,0.8s
MDO Dochfour 54.09 15 *e*P P 06 36 57.8 +0.6
U57A Blanch 54.17 81 P P 06 36 57.5 -0.5
baz=332,SNR=12
LRAL Lakeview Retre 54.27 89 P P 06 36 57.9 -0.9
baz=333,SNR=5.5
V56A Mocksville 54.28 82 P P 06 36 58.5 -0.4
baz=332
W54A Cherokee Point 54.28 84 P P 06 36 59.0 +0.2
baz=332,SNR=5.7
T60A Surry 54.52 78 P P 06 37 00.1 -0.4
baz=332
KMSC Kings Mountain 54.55 83 P P 06 37 00.5 -0.3
baz=332
PAULI Pauline 54.66 84 P P 06 37 01.2 -0.4
X54A Belton 54.69 84 P P 06 37 02.2 +0.4
baz=333,SNR=15
V58A Windy Hill, Pi 54.82 81 P P 06 37 02.2 -0.5
baz=332
U59A Littleton 54.82 79 P P 06 37 02.4 -0.3
baz=332
W56A Indian Trail 54.84 83 P P 06 37 02.4 -0.5
baz=333
U60A Pendleton 54.95 79 P P 06 37 03.1 -0.6
baz=332
HODGE Hodges 55.01 85 P P 06 37 04.3 +0.2
X55A Gracelyn & Ava 55.03 84 P P 06 37 04.1 -0.2
baz=333,SNR=7.0
W57A Gilead 55.05 82 P P 06 37 03.9 -0.6
baz=333
INVG Invergeldie, C 55.12 15 *e*P P 06 37 04.7 0.0
V59A Middlesex 55.17 80 P P 06 37 04.9 -0.4
baz=332
X56A White Oak 55.24 83 P P 06 37 05.6 -0.2
baz=333,SNR=8.4
GOGA Godfrey 55.28 86 P P 06 37 05.8 -0.2
baz=333
EAB Aberfoyle 55.33 15 *e*P P 06 37 06.9 +0.8
JSC Jenkinsville 55.34 84 P P 06 37 06.5 -0.1
JSC pmax pmax
comp=Z,8.0nm,0.7s
JSC Jenkinsville 55.34 84 P P 06 37 06.5 -0.1
JSC IAmb IAmb 06 37 07.3
comp=Z,7.5nm,0.7s
Y55A Saluda 55.42 84 P P 06 37 07.2 +0.1
baz=333,SNR=18
W58A Raeford 55.45 81 P P 06 37 06.8 -0.5
baz=333
152A Waverly Hall 55.46 88 P P 06 37 06.8 -0.6
152A IAmb IAmb 06 37 07.8
comp=Z,10nm,0.7s
V60A Jim Taylor Roa 55.54 79 P P 06 37 07.5 -0.4
baz=333
ESY Stoneypath 55.76 14 *e*P P 06 37 09.6 +0.4
Y56A Pelion 55.76 84 P P 06 37 09.4 -0.2
baz=333
CNNC Cliffs of the 55.77 80 P P 06 37 09.1 -0.4
baz=333
X58A Rowland 55.83 82 P P 06 37 09.6 -0.4
baz=333
Y57A Sumter 55.91 83 P P 06 37 10.3 -0.3
baz=333
W60A Pink Hill 56.00 80 P P 06 37 10.8 -0.5
baz=333
MK31 Makanchi Array 56.07 312 P P 06 37 10.6 -1.1
MK31 pmax pmax
comp=Z,4.0nm,0.8s
MK31 Makanchi Array 56.07 312 P P 06 37 10.6 -1.1
MKAR Makanchi Array 56.07 312 P P 06 37 10.7 -1.0
comp=Z,3.5nm,0.5s,baz=43,slow=6.2,SNR=36
X59A McDuffie Farm, 56.09 81 P P 06 37 11.6 -0.3
baz=333
MAKZ Makanchi 56.15 312 P P 06 37 11.4 -0.8
MAKZ pmax pmax
comp=Z,4.0nm,0.7s
MAKZ Makanchi 56.15 312 P P 06 37 11.3 -0.8
Z56A Williston 56.15 84 P P 06 37 11.0 -1.4
Y58A Scranton 56.28 82 P P 06 37 12.6 -0.6
baz=333
ESK Eskdalemuir 56.30 14 *e*P P 06 37 13.8 +0.8
ESK IAmb IAmb 06 37 14.6
comp=Z,15nm,0.7s
ESK Eskdalemuir 56.30 14 P P 06 37 13.9 +0.8
ESK pmax pmax
comp=Z,16nm,0.7s
ESK Eskdalemuir 56.30 14 P P 06 37 13.9 +0.8
X60A Albert Glenn T 56.32 81 P P 06 37 13.2 -0.3
baz=333
Z57A Bowman 56.43 84 P P 06 37 14.7 +0.4
baz=333
Y59A Loris 56.51 82 P P 06 37 14.4 -0.4
baz=333
GAL1 Galloway 56.59 15 *e*P P 06 37 15.5 +0.3
OBN Obninsk 56.72 347 *de*P P 06 37 16.3 +0.2
OBN *e* 06 39 23.3
OBN pmax pmax
comp=Z,3.0nm,0.5s
NHSC New Hope 56.80 83 P P 06 37 16.9 0.0
baz=333
157A Early Branch 56.87 84 P P 06 37 17.6 +0.1
baz=333
255A Hazlehurst 56.98 86 P P 06 37 18.6 +0.4
Z59A Georgetown, SC 57.02 82 P P 06 37 18.3 -0.2
baz=333
158A Hollywood 57.12 83 P P 06 37 19.3 +0.1
baz=333
GTA Gaotai 57.13 294 *e*P P 06 37 20.0 +0.6
GTA pP sP 06 37 25.3 +1.3

GTA sP pP 06 37 28.0 +5.3
GTA S **S** **06 45 14.8 +0.5**
GTA sS sS 06 45 22.0 +2.4
GTA pmax pmax
comp=Z,9.0nm,1.0s
GTA pmax pmax
comp=Z,74nm,6.0s
GTA LR LR
comp=N,130nm,17.8s
GTA LR LR
comp=E,170nm,21.3s
GTA LR LR
comp=Z,190nm,16.5s
WMQ Urumqi 57.16 306 *e*P **P 06 37 20.0 +0.5**
WMQ pP sP 06 37 24.5 +0.4
WMQ sP pP 06 37 27.8 +5.0
WMQ pmax pmax
comp=Z,17nm,0.6s
WMQ LR LR
comp=N,38nm,22.3s
WMQ LR LR
comp=E,120nm,20.5s
WMQ LR LR
comp=Z,100nm,24.3s
ZAIG Zacatecas 57.70 110 P **P 06 37 24.1 +0.4**
ZAIG lAmb lAmb 06 37 25.2
comp=Z,6.0nm,0.7s
AKTO Aktyubinsk 58.41 331 LR LR 07 05 04.5
comp=Z,31nm,20.0s,baz=32,slow=39
BSEG Bad Segeberg 58.55 5 *e*P **P 06 37 30.3 +1.3**
comp=Z,5.9nm,0.6s,baz=357,slow=6.8
XAN Xi'an 58.63 283 P **P 06 37 33.0 +3.1**
XAN pP sP 06 37 40.8 +6.3
XAN pmax pmax
comp=Z,7.0nm,0.8s
XAN pmax pmax
comp=Z,78nm,4.9s
XAN LR LR
comp=N,290nm,17.3s
XAN LR LR
comp=E,470nm,17.3s
LZH Lanzhou 58.66 289 *e*P **P 06 37 31.0 +0.7**
LZH pP sP 06 37 34.8 -0.1
LZH sP pP 06 37 36.5 +2.9
LZH PP **PP** **06 39 41.0 +1.4**
LZH pmax pmax
comp=Z,28nm,1.1s
LZH pmax pmax
comp=Z,86nm,5.0s
LZH LR LR
comp=N,190nm,15.2s
LZH LR LR
comp=E,280nm,16.3s
LZH LR LR
comp=Z,260nm,15.2s
WHN Wuhan 59.72 277 P **P 06 37 37.0 -0.4**
NRDL Niedersach Rie 59.99 6 *e*P **P 06 37 39.9 +1.0**
comp=Z,9.4nm,1.1s,baz=357,slow=6.8
IBBN Ibbenburen 60.07 7 *e*P **P 06 37 40.8 +1.2**
comp=Z,13nm,0.6s,baz=357,slow=6.8
CLZ Clausthal 60.65 5 *e*P **P 06 37 44.8 +1.3**
comp=Z,12nm,0.6s,baz=357,slow=6.8
CLL Collm 61.26 4 *i* P **P 06 37 49.0 +1.4**
comp=Z,8.0nm,1.2s
CLL *e*pP **sP** **06 37 53.0 +0.7**
CLL *i* PKPPKPbc 07 07 16.4
comp=Z,10.0nm,1.5s
CLL Collm 61.26 4 *i* P **P 06 37 49.0 +1.4**
CLL *e* 06 37 53.0
CLL pmax pmax
comp=Z,8.0nm,1.2s
NEUB Neuenburg 61.33 4 *e*P **P 06 37 49.1 +1.0**
comp=Z,8.4nm,0.6s,baz=357,slow=6.8
USP Ospenovka 61.47 316 P **P 06 37 49.9 +0.6**
SNR=5.0
TKM2 Tokmak 2 61.49 315 P **P 06 37 50.1 +0.4**
SNR=7.7
AKASG Malin Array Be 61.62 352 P **P 06 37 50.3 +0.3**
comp=Z,4.2nm,0.4s,baz=5.5,slow=6.5,SNR=32
AKASG LR LR 07 07 44.3
comp=Z,35nm,18.6s,baz=30,slow=39
AKBB Malin Array Si 61.62 352 P **P 06 37 50.1 0.0**
AKBB pmax pmax
comp=Z,9.0nm,0.7s
AKBB Malin Array Si 61.62 352 P **P 06 37 50.1 0.0**
AKBB lAmb lAmb 06 37 51.1
comp=Z,9.0nm,0.7s
FBE Freiberg 61.66 3 *e*P **P 06 37 51.3 +1.0**
comp=Z,3.6nm,0.5s,baz=357,slow=6.8
UBBA Unterbreizbach 61.66 6 *e*P **P 06 37 51.1 +0.9**
comp=Z,4.2nm,0.6s,baz=357,slow=6.8
BSTI Sart Tilman 61.68 9 P **P 06 37 51.4 +0.9**
MEM Membach 61.68 9 P **P 06 37 51.3 +0.8**
comp=Z,13nm,0.8s
BRG Berggiesshubel 61.72 3 *i* P **P 06 37 51.5 +0.8**
comp=Z,5.8nm,0.8s
BRG Berggiesshubel 61.72 3 *e*P **P 06 37 51.5 +0.8**
comp=Z,5.8nm,0.8s,baz=357,slow=6.8
BRG Berggiesshubel 61.72 3 *i* P **P 06 37 51.5 +0.8**
BRG pmax pmax
comp=Z,6.0nm,0.8s
KDJ Kajisay 61.80 313 P **P 06 37 51.6 -0.1**
KDJ pmax pmax
comp=Z,5.0nm,0.6s
KDJ Kajisay 61.80 313 P **P 06 37 51.5 -0.1**
KDJ lAmb lAmb 06 37 52.3
comp=Z,5.3nm,0.6s
BOOM Boomskoye usch 61.80 315 P **P 06 37 51.3 -0.4**
BOOM pmax pmax
comp=Z,6.0nm,0.8s
BOOM Boomskoye usch 61.80 315 P **P 06 37 51.3 -0.4**
BOOM lAmb lAmb 06 37 52.9
comp=Z,5.7nm,0.8s
MOX Moxa 61.89 5 *e*P **P 06 37 52.9 +1.0**
comp=Z,5.2nm,0.5s,baz=357,slow=6.8
KBK Karagaybulak 61.91 315 P **P 06 37 53.2 +0.8**
SNR=6.8
TARG Taragay, Kyrgy 61.99 313 P **P 06 37 53.7 +0.5**
TARG lAmb lAmb 06 37 55.4
comp=Z,3.5nm,0.7s
CHVC Chvalec 62.03 1 *e*P **P 06 37 53.9 +1.0**
AAK Ala-Archa 62.05 316 P **P 06 37 54.0 +0.6**
comp=Z,6.2nm,0.8s,baz=334,slow=0.8,SNR=15
AAK Ala-Archa 62.05 316 P **P 06 37 54.0 +0.6**
SNR=6.0
AAK Ala-Archa 62.05 316 *d i*P **P 06 37 53.4 0.0**
AAK pmax pmax
comp=Z,6.0nm,0.7s
AAK Ala-Archa 62.05 316 P **P 06 37 53.9 +0.6**
AAK lAmb lAmb 06 37 54.8
comp=Z,7.9nm,0.9s
PLN Plauen 62.06 4 *e*P **P 06 37 54.2 +1.1**
comp=Z,6.1nm,0.5s,baz=357,slow=6.8
OSTC Ostas 62.06 1 *e*P **P 06 37 56.5 +3.4**
DOU Dourbes 62.10 10 P **P 06 37 54.0 +0.7**
UPC Upice 62.11 1 *e*P **P 06 37 54.9 +1.5**
TANN Tannenbergstha 62.14 4 *e*P **P 06 37 54.8 +1.1**
comp=Z,9.6nm,0.8s,baz=357,slow=6.8
GUNZ Gunzen 62.19 4 *e*P **P 06 37 55.1 +1.1**
comp=Z,3.5nm,0.7s,baz=357,slow=6.8
TNS Taunus Mts 62.19 7 *e*P **P 06 37 54.9 +0.9**
comp=Z,5.2nm,0.6s,baz=357,slow=6.8
EKS2 Erkin-Say 62.22 316 P **P 06 37 55.1 +0.7**
SNR=12
WERN Wernitzgruen 62.27 4 *e*P **P 06 37 55.7 +1.2**
comp=Z,5.1nm,0.6s,baz=357,slow=6.8
DPC Dobruska-Polom 62.27 1 *e*P **P 06 37 56.0 +1.5**
NKC Novy Kostel 62.32 4 *e*P **P 06 37 56.2 +1.3**
KRLC Kraliky 62.55 1 *e*P **P 06 37 57.4 +1.0**
PRU Pruhonice 62.61 2 *e*P **P 06 37 57.8 +1.0**
GOPC GO Pecny, Ondr 62.69 2 *e*P **P 06 37 58.4 +1.1**
AML Almayashu 62.74 316 P **P 06 37 59.0 +0.8**
SNR=5.2
ROTZ Rotzenmuhle 62.78 4 *e*P **P 06 37 59.1 +1.2**
comp=Z,2.3nm,0.6s,baz=357,slow=6.8
GRF Grafenberg Arr 62.83 5 *e*P **P 06 37 59.5 +1.3**
comp=Z,5.5nm,0.5s,baz=357,slow=6.8
MORC Moravsky Berou 62.85 0 *e*P **P 06 37 59.3 +0.9**
MORC Moravsky Berou 62.85 0 P **P 06 37 58.2 -0.2**
MORC pmax pmax
comp=Z,5.0nm,0.7s
MORC Moravsky Berou 62.85 0 P **P 06 37 58.2 -0.2**
MORC lAmb lAmb 06 38 00.1
comp=Z,4.7nm,0.7s
VRAC Vranov 63.32 1 P **P 06 38 02.6 +1.1**
comp=Z,3.2nm,0.5s,baz=135,slow=3.6,SNR=3.2

WET Wettzell 63.42 4 *e*P **P 06 38 03.5 +1.3**
comp=Z,3.1nm,0.7s,baz=357,slow=6.8
KHC Kasperske Hory 63.45 3 *d i*P **P 06 38 03.7 +1.3**
KHC pmax pmax
comp=Z,17nm,2.5s
KHC Kasperske Hory 63.45 3 *e*P **P 06 38 03.7 +1.3**
KHC Kasperske Hory 63.45 3 P **P 06 38 02.6 +0.2**
KRUC Moravsky 63.56 1 *e*P **P 06 38 04.1 +1.0**
GEC2 GERESS Array S 63.74 3 *e*P **P 06 38 05.6 +1.2**
comp=Z,5.5nm,0.9s,baz=357,slow=6.8
GEC2 GERESS Array S 63.74 3 P **P 06 38 05.2 +0.8**
GEC2 lAmb lAmb 06 38 06.4
comp=Z,5.4nm,0.9s
GERES GERESS Array B 63.74 3 P **P 06 38 05.5 +1.2**
comp=Z,3.4nm,0.7s,baz=5.7,slow=5.4,SNR=30
JAVC Velka Javorina 63.77 0 *e*P **P 06 38 06.6 +2.1**
TLIG Tlapa 63.92 108 P **P 06 38 05.9 -0.1**
VYHS Vyhne 64.13 359 *e*P **P 06 38 08.0 +1.1**
VYHS Vyhne 64.13 359 *e*P **P 06 38 08.0 +1.1**
CONA Conrad Observa 64.69 2 *i* pP **P 06 38 11.9 +1.3**
comp=Z,5.6nm,0.8s
MOA Molln 64.75 3 *i* pP **P 06 38 11.3 +0.4**
comp=Z,5.3nm,0.7s
UBR Ueberruh 64.80 6 *e*P **P 06 38 12.4 +1.1**
comp=Z,4.6nm,0.5s,baz=357,slow=6.8
RJOB Jochberg 64.83 4 *e*P **P 06 38 12.7 +1.2**
comp=Z,5.9nm,0.8s,baz=357,slow=6.8
BUR08 Bucovina Ar. S 64.85 355 P **P 06 38 12.1 +0.4**
BUR08 lAmb lAmb 06 38 13.2
comp=Z,2.6nm,0.5s
RETA Reutte 65.02 5 *i* pP **P 06 38 14.0 +1.3**
comp=Z,3.2nm,0.5s
MOTA Moosalm 65.17 5 *i* pP **P 06 38 15.0 +1.1**
comp=Z,2.4nm,0.6s
DAVA Damuels 65.18 6 *i* pP **P 06 38 14.6 +0.7**
comp=Z,0.6nm,0.4s
WTTA Wattenberg 65.27 5 *i* pP **P 06 38 15.1 +0.6**
comp=Z,2.4nm,0.4s
SQTA Sankt Quirin 65.30 5 *i* pP **P 06 38 16.2 +1.6**
comp=Z,3.7nm,0.5s
BTK Batken 65.43 318 P **P 06 38 15.7 +0.1**
BTK pmax pmax
comp=Z,7.0nm,1.0s
BTK Batken 65.43 318 P **P 06 38 15.7 +0.1**
BTK lAmb lAmb 06 38 18.8
comp=Z,7.0nm,0.9s
FETA Feichten 65.48 5 *i* pP **P 06 38 17.4 +1.6**
comp=Z,4.5nm,0.6s
KBA Koelnbreinsper 65.50 3 *i* pP **P 06 38 16.8 +0.8**
comp=Z,5.4nm,0.5s
ABTA Abfaltersbach 65.81 4 *i* pP **P 06 38 19.0 +1.1**
comp=Z,5.1nm,0.5s
FUORN Ofenpass-Fuorn 65.86 6 P **P 06 38 19.7 +1.2**
FUORN lAmb lAmb 06 38 24.2
comp=Z,6.5nm,0.6s
SOKA Soboth 65.93 2 *i* pP **P 06 38 20.7 +2.0**
comp=Z,1.9nm,0.6s
MYKA Terra Mystica 65.95 3 *i* pP **P 06 38 19.8 +1.0**
comp=Z,2.1nm,0.7s
TUE Stuetta 65.97 6 P **P 06 38 20.0 +0.9**
TUE lAmb lAmb 06 38 21.3
comp=Z,7.9nm,0.6s
ZOU Zoufplan 66.01 4 P **P 06 38 19.2 -0.2**
OBKA Obir 66.09 3 *i* pP **P 06 38 20.9 +1.1**
comp=Z,14nm,0.6s
GAR Garm 66.56 318 P **P 06 38 22.6 -0.2**
KIV Kislovodsk 67.11 341 *de*P **P 06 38 26.5 +0.3**
KIV *e* 06 38 58.5
KIV *e* 06 40 50.9
KIV pmax pmax
comp=Z,8.0nm,0.6s
CHGR Chuyangaron 67.18 319 P **P 06 38 26.1 -0.7**
KBZ Khabaz 67.30 341 P **P 06 38 27.9 +0.5**
comp=Z,2.8nm,0.6s,baz=266,slow=3.2,SNR=6.9
KBZ Khabaz 67.30 341 *e*P **P 06 38 28.4 +1.1**
KBZ pmax pmax
comp=Z,5.0nm,0.8s
DOMR Dombai 67.89 342 *e*P **P 06 38 32.3 +1.0**
ZEI Tsey 68.10 340 *e*P **P 06 38 31.2 -1.5**
ZEI pmax pmax
comp=Z,5.0nm,0.6s
PGAV Gavieira, Arco 68.88 21 *e*P **P 06 38 38.9 +1.5**
comp=Z,36nm,1.6s
NRCA Norcia 69.74 4 P **P 06 38 43.0 +0.4**
NRCA lAmb lAmb 06 38 51.4
comp=Z,15nm,1.3s
MVO Moncorvo 69.83 20 *e*P **P 06 38 43.6 +0.3**
comp=Z,21nm,1.2s
PVIS Viseu 70.16 21 *e*P **P 06 38 46.5 +1.2**
comp=Z,36nm,1.6s
GEYT Alibeck 70.41 327 P **P 06 38 47.7 +0.8**
comp=Z,1.9nm,0.7s,baz=290,slow=4.4,SNR=3.9
GEYT LR LR 07 15 15.0
comp=Z,55nm,18.8s,baz=15,slow=41
MTE Manteigas 70.52 20 *e*P **P 06 38 48.7 +1.2**
ESDC Sonseca Array 71.68 18 P **P 06 38 55.4 +0.9**
comp=Z,6.5nm,0.6s,baz=352,slow=6.4,SNR=54
BRTR Keskin Array B 72.24 347 P **P 06 38 58.0 0.0**
comp=Z,1.3nm,0.6s,baz=288,slow=0.4,SNR=5.0
BRTR LR LR 07 15 36.8
comp=Z,24nm,19.8s,baz=192,slow=40
BRTR Keskin Array B 72.24 347 *i* P **P 06 38 57.7 -0.3**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
PNCL Nicolau / Gran 72.63 22 *e*P **P 06 39 01.5 +1.3**
comp=Z,41nm,1.9s
SDDR Presa de Saban 72.91 82 P **P 06 39 01.7 -0.4**
CMAR Chiang Mai Arr 76.45 285 P **P 06 39 22.6 0.0**
comp=Z,6.9nm,0.6s,baz=1.5,slow=6.4,SNR=34
CMAR LR LR 07 16 48.4
comp=Z,101nm,19.2s,baz=226,slow=39
KEST Kesra 76.68 7 P **P 06 39 24.7 +0.8**
comp=Z,8.4nm,0.9s,baz=292,slow=4.9,SNR=4.9
KEST Kesra 76.68 7 P **P 06 39 24.7 +0.8**
KEST lAmb lAmb 06 39 30.2
comp=Z,14nm,1.1s
MMAI Mount Meron Ar 78.73 345 P **P 06 39 36.5 +1.2**
comp=Z,0.7nm,0.3s,baz=1.1,slow=7.2,SNR=1.5
ASF Jabal al Asfar 79.42 344 P **P 06 39 40.0 +0.9**
comp=Z,3.3nm,0.8s,baz=355,slow=5.7,SNR=6.5
ASF Jabal al Asfar 79.42 344 P **P 06 39 40.0 +0.9**
SDV Santo Domingo 82.40 85 P **P 06 39 55.0 -0.2**
SDV lAmb lAmb 06 39 56.8
comp=Z,15nm,1.0s
BARC Barichara 83.53 89 *e*P P 06 39 54.9 -6.3
NORC Norcasia 83.83 90 *e*P **P 06 40 02.1 -0.4**
GUY2C Guyana, Caldas 83.95 91 *e*P **P 06 40 03.1 -0.5**
RUSC La Rusia 84.21 89 *e*P **P 06 40 03.8 -1.1**
RUSC La Rusia 84.21 89 P **P 06 40 04.6 -0.4**
WSAR Wadi Sarin 84.46 323 P **P 06 40 05.4 -0.2**
comp=Z,2.9nm,0.6s,baz=296,slow=3.0,SNR=6.8
ROSC El Rosal 84.70 90 P **P 06 40 08.7 +1.3**
comp=Z,10nm,0.9s,baz=113,slow=3.3,SNR=6.0
ROSC El Rosal 84.70 90 P **P 06 40 08.2 +0.8**
CHIC Chingaza 85.12 90 *e*P **P 06 40 09.0 -0.5**
RAYN Ar Rayn 86.77 335 P **P 06 40 16.8 -0.4**
RAYN pmax pmax
comp=Z,10.0nm,0.8s
RAYN Ar Rayn 86.77 335 P **P 06 40 16.8 -0.4**
PSI Prapat 90.84 279 P **P 06 40 36.1 -0.4**
comp=Z,4.8nm,0.7s,baz=359,slow=1.7,SNR=5.4
RPSI Rantau Prapat 90.94 279 P **P 06 40 36.1 -0.7**
TORD Torodi Ar. Bea 98.52 16 P **P 06 41 11.1 -0.4**
comp=Z,0.4nm,0.6s,baz=331,slow=5.8,SNR=1.9
WRA Warramunga Arr 98.84 238 P **P 06 41 11.9 -0.8**
comp=Z,0.7nm,0.9s,baz=20,slow=5.3,SNR=6.3
NNA Nana 99.19 99 *ce*P **Pdif 06 41 15.8 +1.3**
NNA pmax pmax
comp=Z,89nm,2.5s
PLCA Paso Flores 127.48 107 PKP **PKiKP 06 46 37.3 -0.3**
comp=Z,1.9nm,0.7s,baz=274,slow=2.6,SNR=6.6
PLCA Paso Flores 127.48 107 PKPdf **PKiKP 06 46 37.8 +0.3**
BOSA Boshof 140.64 350 PKhKP PKPpre 06 46 55.4
comp=Z,1.9nm,0.6s,baz=11,slow=2.2,SNR=3.9
BOSA Boshof 140.64 350 PKHKP PKPpre 06 46 54.5
BOSA Boshof 140.64 350 PKPpre 06 46 54.5
SUR Sutherland 144.60 356 PKP PKPbc 06 47 08.3 +0.4
comp=Z,15nm,0.8s,baz=16,slow=0.5,SNR=11
SUR Sutherland 144.60 356 PKPdf **PKPdf 06 47 08.6 -0.5**
VNDA Vanda 146.62 193 PKPbc **PKPbc 06 47 12.8 +0.2**
comp=Z,1.7nm,0.8s,baz=305,slow=7.0,SNR=4.7
CASY Casey 146.95 228 **PKPbc 06 47 13.7 -0.1**
QSPA South Pole Qui 157.52 180 PKP **PKPdf 06 47 26.5 -0.9**
comp=Z,2.1nm,1.1s,baz=35,slow=3.2,SNR=3.6
QSPA PKPab **PKPab 06 47 59.6 +0.1**
comp=Z,1.5nm,0.7s,baz=49,slow=1.4,SNR=6.8
QSPA South Pole Qui 157.52 180 **PKPdf 06 47 26.6 -0.8**
QSPA **PKPab 06 47 58.3 -1.3**
SNAA Sanae 171.78 128 PKPab **PKPab 06 49 02.3 +0.1**
comp=Z,0.9nm,0.8s,baz=265,slow=2.7,SNR=4.6
SNAA Sanae 171.78 128 PKPab **PKPab 06 49 02.4 +0.2**

NEIC ***30*** *06:37:49.0±2.3,26.56N±0.06×90.23E±0.09,h10km±1km, mb4.0/16, Error ellipse: s-maj=15.0km s-min=7.8km az=246.0*
NDI ***30*** *06:37:51.3±1.6,26.61N×90.38E,h15km±6km, ML4.2, mb4.0(NEIC)*
DMN ***30*** *06:37:51.1±0.4,26.59N×90.60E,h60km, Ml4.8/5, Error ellipse: s-maj=30.5km s-min=8.3km az=17.0*
IDC ***30*** *06:37:53.2±2.4,26.56N×90.30E, h42km±28km, mb3.4/13, mb1 3.6/14,mb1mx3.5/40,mbtmp3.6/14, ML4.1/2, MS3.4/1, Ms1 3.4/1,ms1mx2.5/42,Error ellipse: s-maj=32.1km s-min=13.0km az=61.0*

ISC 30 06:37:52.6±0.5,26.54N±0.04×90.32E±0.03,h35km,n57,
σ1§30/71,mb3.8/17,Northeastern India

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DHUB	**DHUBRI**	**0.59**	**209**	*e*P		**Pn**	**06 38 04.8**	**+0.2**
DHUB				*e*S		**Sn**	**06 38 14.0**	**+0.9**
DHUB				lAML			06 38 15.1	
	comp=E,18μm,0.2s							
GUWA	**GUWAHATI**	**1.28**	**105**	*e*P		**Pn**	**06 38 14.1**	**0.0**
GUWA				*e*S		**Sn**	**06 38 30.5**	**+0.5**
GUWA				lAML			06 38 31.9	
	comp=N,10μm,0.3s							
GUWA				lAML			06 38 32.5	
	comp=E,5μm,0.1s							
SHL	**Shillong**	**1.71**	**124**	*e*S		**Sn**	**06 38 43.5**	**+2.6**
SHL	**Shillong**	**1.71**	**124**			**Pn**	**06 38 21.6**	**+1.4**
SHL				Sn		**Sn**	**06 38 43.5**	**+2.6**
GTK	**Tadong**	**1.71**	**297**	*e*P		**Pn**	**06 38 21.8**	**+1.6**
GTK				*e*P		**Pn**	**06 38 21.9**	**+1.8**
GTK				*e*S		**Sn**	**06 38 43.3**	**+2.4**
GTK				lAML			06 38 45.0	
	comp=N,2μm,0.3s							
GTK				lAML			06 38 45.6	
	comp=E,2μm,0.3s							
TAPN	**Taplejung**	**2.46**	**290**	*e*Pn		**Pn**	**06 38 32.5**	**+1.9**
ODAN	**Odare**	**2.64**	**278**	*e*Pn		**Pn**	**06 38 35.0**	**+2.1**
LSA	**Lhasa**	**3.23**	**13**	Pg		**Pn**	**06 38 43.0**	**+1.7**
LSA				Sg		Sn	06 39 29.5	+11
LSA				smax	smax			
	comp=N,1μm,0.7s							
LSA				smax	smax			
	comp=E,2μm,0.8s							
LSA	**Lhasa**	**3.23**	**13**	P		**Pn**	**06 38 42.6**	**+1.3**
LSA	**Lhasa**	**3.23**	**13**			**Pn**	**06 38 42.6**	**+1.3**
LSA				Sn		**Sn**	**06 39 20.0**	**+1.2**
RAMN	**Ramite**	**3.35**	**278**	*e*Pn		**Pn**	**06 38 44.8**	**+2.1**
KOHI	**KOHIMA**	**3.51**	**103**	*e*P		**Pn**	**06 38 45.2**	**+0.4**
KOHI				*e*S		**Sn**	**06 39 27.2**	**+2.1**
JIRN	**Jiri**	**3.84**	**288**	*e*Pn		**Pn**	**06 38 51.1**	**+1.5**
JIRN				*e*Sn		**Sn**	**06 39 35.4**	**+1.6**
	comp=E,484nm,0.3s							
BRDH	**Bariadhala**	**4.03**	**162**	P		**Pn**	**06 38 54.1**	**+2.2**
	comp=E,20nm,0.3s,baz=135,slow=1.0,SNR=4.5							
BRDH				S		**Sn**	**06 39 39.1**	**+1.2**
	comp=E,98nm,0.3s,baz=68,slow=21,SNR=12							
GUN	**Gumba**	**4.18**	**290**	*e*Pn		**Pn**	**06 38 55.6**	**+1.4**
GUN				*e*Sn		**Sn**	**06 39 43.5**	**+1.5**
	comp=E,301nm,0.3s							
DIBR	**DIBRUGARH**	**4.20**	**76**	*e*P		Pn	06 39 08.5	+14
DIBR				*e*S		Sn	06 40 01.8	+20
PKI	**Pulchoki**	**4.49**	**284**	*e*Pn		**Pn**	**06 38 59.5**	**+0.9**
PKIN	**Phulchoki**	**4.51**	**284**	*e*Pn		**Pn**	**06 38 59.7**	**+1.0**
KKN	**Kakani**	**4.66**	**287**	*e*Pn		**Pn**	**06 39 02.4**	**+1.7**
KKN				*e*Sn		**Sn**	**06 39 55.1**	**+1.5**
DMN	**Daman**	**4.76**	**284**	*e*Pn		**Pn**	**06 39 03.5**	**+1.3**
DMN				*e*Sn		**Sn**	**06 39 57.3**	**+0.9**
	comp=E,237nm,0.6s							
BOK	**Bokaro**	**4.86**	**237**	*e*P		**Pn**	**06 39 05.6**	**+2.3**
BOK				*e*S		**Sn**	**06 39 58.1**	**-0.2**
GKN	**Gorkha**	**5.26**	**287**	*e*Pn		**Pn**	**06 39 10.2**	**+1.3**
DANN	**Dangsing**	**6.10**	**289**	*e*Pn		**Pn**	**06 39 21.0**	**+0.4**
KOLN	**Koldanda**	**6.11**	**283**	*e*Pn		**Pn**	**06 39 20.8**	**+0.2**
KOLN				*e*Sn		**Sn**	**06 40 29.0**	**-0.4**
	comp=E,167nm,0.3s							
PYUN	**Piuthan**	**6.70**	**285**	*e*Pn		**Pn**	**06 39 28.8**	**0.0**
PYUN				*e*Sn		**Sn**	**06 40 42.2**	**-1.8**
	comp=E,302nm,0.4s							
CMAR	**Chiang Mai Arr**	**11.32**	**134**	P		**Pn**	**06 40 32.8**	**+0.8**
	comp=E,0.2nm,0.3s,baz=314,slow=13,SNR=1.9							
HYB	**Hyderabad**	**14.19**	**233**	*i* P		**Pn**	**06 41 09.0**	**-2.2**
HYB				*e*S		**Sn**	**06 43 50.0**	**+2.6**
ENH	**Enshi**	**17.27**	**73**	P		**Pn**	**06 41 51.0**	**-0.1**
ENH				lAmb	lAmb		06 41 53.1	
	comp=Z,15nm,0.8s							
WMQ	**Urumqi**	**17.37**	**354**	*e*P		**P**	**06 41 54.5**	**+1.1**
TARG	**Taragay, Kyrgy**	**18.32**	**329**	P		**P**	**06 42 02.7**	**-1.5**
PRZ	**Przheval'sk**	**18.66**	**331**	P		**Pn**	**06 42 08.4**	**+0.2**
PRZ				lAmb	lAmb		06 42 26.6	
	comp=Z,7.9nm,0.6s							
KDJ	**Kajisay**	**18.92**	**329**	P		**P**	**06 42 10.8**	**+0.2**
BOOM	**Boomskoye usch**	**19.79**	**327**	P		**Pn**	**06 42 21.2**	**-0.6**
BOOM				lAmb	lAmb		06 42 26.9	
	comp=Z,5.7nm,1.2s							
AAK	**Ala-Archa**	**20.62**	**325**	P		**P**	**06 42 28.4**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=180,slow=8.1,SNR=1.8							
AAK	**Ala-Archa**	**20.62**	**325**	P		**P**	**06 42 28.8**	**-0.3**
GAR	**Garm**	**20.85**	**312**	P		**P**	**06 42 30.6**	**-1.0**
BTK	**Batken**	**21.09**	**315**	P		**P**	**06 42 34.4**	**+0.3**
BTK				lAmb	lAmb		06 42 53.6	
	comp=Z,9.7nm,0.9s							
MK31	**Makanchi Array**	**21.19**	**345**	P		**P**	**06 42 34.0**	**-1.1**
MK31				lAmb	lAmb		06 42 38.9	
	comp=Z,3.4nm,0.7s							
MKAR	**Makanchi Array**	**21.19**	**345**	P		**P**	**06 42 34.4**	**-0.7**
	comp=Z,2.9nm,0.5s,baz=155,slow=12,SNR=16							
MAKZ	**Makanchi**	**21.28**	**344**	P		**P**	**06 42 34.0**	**-2.0**
MAKZ				lAmb	lAmb		06 42 36.9	
	comp=Z,7.8nm,1.4s							
SONM	**Songino Array**	**24.72**	**27**	P		**P**	**06 43 11.1**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=214,slow=8.6,SNR=2.4							
KURBB	**Kurchatov Arra**	**25.68**	**343**	P		**P**	**06 43 18.8**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=159,slow=9.4,SNR=15							
KURK	**Kurchatov**	**25.74**	**343**	P		**P**	**06 43 19.0**	**-0.8**
KURK				lAmb	lAmb		06 43 20.0	
	comp=Z,2.3nm,0.8s							
BVAR	**Borovoye Array**	**30.35**	**336**	P		**P**	**06 44 00.3**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=153,slow=13,SNR=2.0							
MJAR	**Matsushiro Arr**	**41.65**	**64**	P		**P**	**06 45 37.4**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=276,slow=9.3,SNR=6.8							
FINES	**FINESS Array B**	**54.77**	**328**	P		**P**	**06 47 17.9**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=97,slow=9.9,SNR=1.5							
JAY	**Jayapura**	**56.55**	**113**	LR		LR	07 16 38.8	
	comp=Z,30nm,18.4s,baz=31,slow=41							
ARCES	**ARCESS Array B**	**56.62**	**338**	P		**P**	**06 47 31.5**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=108,slow=7.8,SNR=5.2							
GERES	**GERESS Array B**	**61.92**	**313**	P		**P**	**06 48 08.7**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=108,slow=6.3,SNR=2.0							
WB0	**Warramunga Arr**	**62.83**	**133**	P		**P**	**06 48 15.5**	**+0.4**
WRA	**Warramunga Arr**	**62.92**	**133**	P		**P**	**06 48 15.4**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=326,slow=6.9,SNR=10.0							
WRAB	**Tennant Creek**	**62.92**	**133**	P		**P**	**06 48 15.8**	**+0.1**
WB2	**Warramunga Arr**	**62.92**	**133**	P		**P**	**06 48 14.9**	**-0.9**
AS31	**Alice Springs**	**65.32**	**136**	P		**P**	**06 48 31.2**	**-0.3**
AS31				lAmb	lAmb		06 48 31.8	
	comp=Z,2.2nm,1.5s							
ASAR	**Alice Springs**	**65.32**	**136**	P		**P**	**06 48 31.8**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=316,slow=6.4,SNR=2.8							
ILAR	**Eielson Array**	**78.84**	**22**	P		**P**	**06 49 51.8**	**0.0**
	comp=Z,0.2nm,0.5s,baz=310,slow=5.6,SNR=2.4							
YKA	**Yellowknife Ar**	**89.06**	**11**	P		**P**	**06 50 43.0**	**-0.8**
	comp=Z,0.2nm,0.9s,baz=332,slow=4.6,SNR=2.2							

IDC ***30*** *06:46:02.9±1.0,63.25S×161.28W,h0km,mb3.9/4, mb1 4.1/5,mb1mx3.9/30,mbtmp3.9/5,ML3.7/1,MS3.9/10, Ms1 3.8/10,ms1mx3.7/22,Error ellipse: s-maj=36.6km s-min=30.0km az=22.0*
NEIC ***30*** *06:46:08.7±1.4,63.1S±0.2×162.6W±0.3,h10km±2km, mb4.6/7, Error ellipse: s-maj=41.0km s-min=9.7km az=38.0*

ISC 30 06:46:05.9±0.8,63.0S±0.1×161.9W±0.2,h10km,n37,
σ2§37/17,mb4.3/7,MS4.0/13,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**18.47**	**204**	P	**Pn**	**06 50 19.7**	**-1.8**
	0.2nm,0.3s,baz=65,slow=7.7,SNR=2.7						
VNDA				LR	LR	06 55 49.8	
	comp=Z,293nm,20.7s,baz=42,slow=32						
VNDA	**Vanda**	**18.47**	**204**		**P**	**06 50 21.4**	**0.0**
QSPA	**South Pole Qui**	**27.12**	**180**	P	**P**	**06 51 43.3**	**-5.4**
	1.5nm,1.0s,baz=128,slow=19,SNR=2.9						
QSPA	**South Pole Qui**	**27.12**	**180**	P	**P**	**06 51 48.5**	**-0.3**
QSPA				IAmb	IAmb	06 51 49.8	
	comp=Z,5.2nm,1.1s						
PMSA	**Palmer Station**	**38.99**	**138**	P	**P**	**06 53 35.4**	**+3.7**
TBI	**Tubuai**	**40.50**	**18**	*e*LR	LR	07 04 22.2	
	comp=Z,247nm,28.8s						
TBI	**Tubuai**	**40.50**	**18**	*e*T	T	07 35 43.5	
	comp=Z,20nm,0.3s						
SNAA	**Sanae**	**44.84**	**171**	P	**P**	**06 54 21.3**	**+1.8**
SNAA				IAmb	IAmb	06 54 28.3	
	comp=Z,5.2nm,1.3s						
MAW	**Mawson**	**45.77**	**202**	LR	LR	07 11 45.7	
	comp=Z,86nm,20.0s,baz=132,slow=34						
TVO	**Taravao**	**46.01**	**17**	*e*T	T	07 42 35.6	
	comp=Z,1.5nm,0.3s						
MEH	**Mehetia**	**46.08**	**18**	*e*T	T	07 42 42.2	
	comp=Z,20nm,0.3s						
PAE	**Paea**	**46.09**	**16**	*e*T	T	07 42 40.5	
	comp=Z,1.5nm,0.3s						
DZM	**Mont Dzumac**	**46.15**	**318**	*e*LR	LR	07 07 25.0	
	comp=Z,192nm,22.9s						
PPT2	**Papeete2**	**46.16**	**16**	*e*LR	LR	07 06 58.9	
	comp=Z,268nm,25.2s						
PPT2	**Papeete2**	**46.16**	**16**	*e*T	T	07 42 46.0	
	comp=Z,3.5nm,0.3s						
PPT	**Papeete**	**46.18**	**16**	LR	LR	07 08 03.6	
	comp=Z,89nm,21.1s,baz=173,slow=28						
STKA	**Stephens Creek**	**47.02**	**284**	LR	LR	07 11 34.8	
	comp=Z,82nm,18.1s,baz=204,slow=32						
BBOO	**Buckleboo**	**48.70**	**278**	P	**P**	**06 54 51.3**	**+1.1**
BBOO				IAmb	IAmb	06 55 09.2	
	comp=Z,44nm,1.5s						
PLCA	**Paso Flores**	**55.23**	**112**	LR	LR	07 12 55.0	
	comp=Z,46nm,22.0s,baz=204,slow=29						
CTA	**Charters Tower**	**55.34**	**296**	LR	LR	07 14 28.5	
	comp=Z,168nm,20.0s,baz=231,slow=31						
TAOE	**Nuku Hiva Isla**	**56.28**	**26**	*e*LR	LR	07 11 38.5	
	comp=Z,1μm,29.3s						
H01W1	**Cape Leeuwin H**	**56.90**	**257**	T	T	07 58 36.7	
	baz=146,slow=76,SNR=9.2						
H01W2	**Cape Leeuwin H**	**56.90**	**257**	T	T	07 58 32.8	
	baz=146,slow=76,SNR=8.7						
H01W3	**Cape Leeuwin H**	**56.92**	**257**	T	T	07 58 31.6	
	baz=146,slow=76,SNR=8.1						
NWAO	**Narrogin (SRO)**	**57.17**	**261**	LR	LR	07 15 01.2	
	comp=Z,130nm,18.3s,baz=134,slow=30						
ASAR	**Alice Springs**	**57.51**	**282**	P	**P**	**06 55 57.3**	**+2.2**
	comp=Z,1.9nm,1.2s,baz=164,slow=7.3,SNR=3.8						
ASAR				LR	LR	07 17 09.5	
	comp=Z,92nm,20.7s,baz=150,slow=32						
WRA	**Warramunga Arr**	**60.57**	**284**	P	**P**	**06 56 16.2**	**-0.2**
	comp=Z,0.2nm,0.8s,baz=155,slow=6.1,SNR=3.1						
WRAB	**Tennant Creek**	**60.57**	**284**	P	**P**	**06 56 17.5**	**+1.2**
WRAB				IAmb	IAmb	06 56 30.9	
	comp=Z,8.4nm,1.2s						
LPAZ	**La Paz**	**77.33**	**101**	P	**P**	**06 57 59.5**	**-1.8**
	comp=Z,2.8nm,1.2s,baz=178,slow=6.0,SNR=6.8						
LPAZ	**La Paz**	**77.33**	**101**	P	**P**	**06 58 01.6**	**+0.3**
LPAZ				IAmb	IAmb	06 58 05.2	
	comp=Z,8.2nm,1.4s						
SUR	**Sutherland**	**84.93**	**182**	LR	LR	07 31 39.9	
	comp=Z,106nm,20.3s,baz=173,slow=32						
TSUM	**Tsumeb**	**98.08**	**179**	LR	LR	07 39 42.5	
	comp=Z,157nm,19.8s,baz=160,slow=33						
ILAR	**Eielson Array**	**127.94**	**8**	PKP	**PKPdf**	**07 05 07.2**	**-2.9**
	comp=Z,0.4nm,0.8s,baz=185,slow=2.0,SNR=3.1						
YKA	**Yellowknife Ar**	**130.10**	**26**	PKP	**PKPdf**	**07 05 11.2**	**-3.0**
	comp=Z,0.2nm,0.9s,baz=197,slow=2.7,SNR=4.2						
GYA0B	**ALIBECK ARRAY**	**145.20**	**243**	PKPdf	**PKiKP**	**07 05 46.0**	**-0.7**
KURBB	**Kurchatov Arra**	**146.04**	**277**	PKPbc	**PKPdf**	**07 05 44.1**	**+0.3**
	comp=Z,0.9nm,0.9s,baz=151,slow=2.2,SNR=5.3						
KURK	**Kurchatov**	**146.07**	**278**		**PKPab**	**07 05 46.2**	**+0.8**

TAP 30 06:47:03.0,24.15N×122.08E,h45km±2km,ML1.9,C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.41**	**312**	P	Pn	06 47 13.3	+0.4
	baz=312						
ENA				S	Sn	06 47 20.8	+0.9
	baz=312						
NACB	**Ninganchiao**	**0.44**	**273**	*e*P	Pn	06 47 13.6	+0.4
	baz=273						
NACB				*e*S	Sn	06 47 21.2	+0.7
	baz=273						
TWD	**Chiawan**	**0.45**	**261**	*e*P	Pn	06 47 13.8	+0.5
	baz=261						
TWD				*e*S	Sn	06 47 21.7	+1.2
	baz=261						
HWA	**Hwalien**	**0.47**	**248**	*e*P	Pn	06 47 13.9	+0.4
	baz=247						
TWC	**Suao**	**0.50**	**335**	*e*P	Pn	06 47 14.0	0.0
	baz=336						
ETLH	**Xiulin Townshi**	**0.55**	**276**	*e*P	Pn	06 47 15.1	+0.4
	baz=275						
ETLH				*e*S	Sn	06 47 23.8	+0.8
	baz=275						
TWE	**Neicheng**	**0.68**	**327**	*e*P	Pn	06 47 16.9	+0.6
	baz=327						
NNSB	**Datong**	**0.69**	**294**	*e*P	Pn	06 47 17.2	+0.6
	baz=293						
NNSB				*e*S	Sn	06 47 27.0	+0.6
	baz=293						
CHGB	**Renai**	**0.83**	**264**	*e*P	Pn	06 47 19.6	+1.0
	baz=263						
CHGB				*e*S	Sn	06 47 30.6	+0.8
	baz=263						
HGSD	**Ruisui**	**0.89**	**223**	*e*P	Pn	06 47 20.1	+1.0
	baz=222						
HGSD				*e*S	Sn	06 47 32.4	+1.5
	baz=222						
YOJ	**Yonaguni jima**	**0.91**	**70**	*e*S	Sn	06 47 32.1	+0.8
	baz=69						

JMA 30 06:47:13.1±0.2,24.91N×123.37E,h27km±5km,M2.9, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.55**	**216**	P	Pb	06 47 24.0	-0.3
YOJ				S	Sb	06 47 31.4	-0.5
JYNG	**Yonagunijimaku**	**0.60**	**220**	P	Pb	06 47 24.7	-0.3
JYNG				S	Sb	06 47 32.7	-0.4
IRIF	**Iriomote-Funau**	**0.66**	**150**	P	Pb	06 47 25.8	-0.3
IRIF				S	Sb	06 47 34.7	-0.2
JKRS	**Kuro-shima**	**0.89**	**139**	P	Pn	06 47 29.6	-0.2
JKRS				S	Sb	06 47 41.3	0.0
JIJ	**Ishigaki jima**	**0.89**	**128**	P	Pn	06 47 29.3	-0.5
JIJ				S	Sb	06 47 40.1	-1.3
JISG	**Ishigakijimahi**	**0.91**	**110**	P	Pn	06 47 29.6	-0.6
JISG				S	Sb	06 47 41.4	-0.7
HATJ	**Hateruma jima**	**0.94**	**155**	P	Pn	06 47 30.4	-0.1
HATJ				S	Sb	06 47 42.3	-0.5

*KRAR **30** 06:50:23.2±0.1,53.75N×88.15E,M1.9,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC 30 06:50:20.5±3.4,53.80N×88.09E,h0km,mb1 3.0/2, mb1mx2.9/53,mbtmp3.0/2,ML2.7/2,Error ellipse: s-maj=32.7km s-min=18.9km az=43.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.94**	**276**	*i*		07 03 00.0	
	baz=90,slow=315,SNR=1.2						
ZALV	**Zalesovo Beam**	**1.94**	**276**	Pg	Pb	06 50 56.0	-0.8
	1.4nm,0.3s,baz=97,slow=12,SNR=9.8						
ZALV				Lg	Lg	06 51 22.1	
	5.2nm,0.3s,baz=92,slow=24,SNR=19						
KURBB	**Kurchatov Arra**	**6.68**	**245**	Pn	Pn	06 52 00.7	+0.9
	0.1nm,0.3s,baz=63,slow=14,SNR=8.5						
KURBB				Lg	Lg	06 53 50.1	
	0.0nm,0.3s,baz=57,slow=32,SNR=3.6						
MKAR	**Makanchi Array**	**7.93**	**210**	Pn	Pn	06 52 17.7	+0.7
	0.1nm,0.3s,baz=30,slow=14,SNR=5.2						

*IDC **30** 06:56:35.2±1.7,5.83S×154.67E,h171km±14km,mb3.8/12, mb1 4.0/15,mb1mx3.8/36,mbtmp4.4/15,Error ellipse: s-maj=18.0km s-min=12.8km az=79.0*
*NEIC **30** 06:56:36.0±1.6,5.8S±0.1×154.7E±0.1,h176km±3km, mb4.5/23,Error ellipse: s-maj=18.1km s-min=14.3km az=48.0*

ISC 30 06:56:35.8±0.5,5.81S±0.08×154.66E±0.08,h176km,n51, σ0s82/47,mb4.3/24,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.96**	**303**		**Pn**	**06 57 23.6**	**-0.3**
KRVT	**Keravat (AS076**	**3.02**	**299**	P	**Pn**	**06 57 24.2**	**-0.3**
	61nm,0.3s,baz=134,slow=0.6,SNR=4.9						
KRVT				S	**Sn**	**06 58 01.9**	**-0.6**
	62nm,0.3s,baz=168,slow=18,SNR=6.0						
PMG	**Port Moresby**	**8.25**	**244**		Pn	06 58 40.1	+7.6
COEN	**Coen**	**13.91**	**234**	P	**P**	**06 59 51.0**	**+2.7**
JAY	**Jayapura**	**14.30**	**283**	P	**Pn**	**06 59 50.3**	**-0.3**
	0.9nm,0.3s,baz=146,slow=11,SNR=2.1						
EIDS	**Eidsvold**	**19.75**	**190**	P	**P**	**07 00 52.8**	**+0.5**
EIDS				IAmb	IAmb	07 01 06.8	
	comp=Z,27nm,1.5s						
DZM	**Mont Dzumac**	**19.78**	**146**	P	**P**	**07 00 51.8**	**-0.9**
	comp=Z,7.5nm,0.3s,baz=265,slow=7.5,SNR=84						
DZM	**Mont Dzumac**	**19.78**	**146**	P	**P**	**07 00 52.0**	**-0.7**
FAKI	**Fak Fak**	**22.53**	**276**	P	**P**	**07 01 21.4**	**+0.2**
FAKI				IAmb	IAmb	07 01 23.4	
	comp=Z,22nm,0.8s						
SIJI	**Sorong**	**23.86**	**281**	P	**P**	**07 01 33.4**	**+0.1**
	comp=Z,16nm,0.4s,baz=62,slow=16,SNR=6.9						
WR0	**Warramunga Arr**	**24.09**	**232**	P	**P**	**07 01 35.9**	**+0.5**
WR0				IAmb	IAmb	07 01 37.9	
	comp=Z,12nm,0.6s						
WB0	**Warramunga Arr**	**24.11**	**233**	P	**P**	**07 01 35.9**	**+0.4**
WB0				IAmb	IAmb	07 01 37.4	
	comp=Z,7.3nm,0.9s						
WRAB	**Tennant Creek**	**24.23**	**233**	P	**P**	**07 01 37.3**	**+0.6**
WRAB				IAmb	IAmb	07 01 39.5	
	comp=Z,7.4nm,0.5s						
WB2	**Warramunga Arr**	**24.23**	**233**	P	**P**	**07 01 37.3**	**+0.6**
WB2				IAmb	IAmb	07 01 39.2	
	comp=Z,24nm,1.4s						
WRA	**Warramunga Arr**	**24.24**	**233**	P	**P**	**07 01 37.4**	**+0.6**
	comp=Z,5.9nm,0.5s,baz=57,slow=10.0,SNR=80						
WRA				PcP	**PcP**	**07 05 12.2**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=56,slow=2.6,SNR=3.0						
ARMA	**Armidale**	**24.65**	**186**	P	**P**	**07 01 40.8**	**+0.4**
ARMA				IAmb	IAmb	07 01 53.2	
	comp=Z,19nm,1.4s						
AS31	**Alice Springs**	**26.73**	**226**	P	**P**	**07 01 59.0**	**-0.2**
ASAR	**Alice Springs**	**26.73**	**226**	P	**P**	**07 01 58.8**	**-0.4**
	comp=Z,1.6nm,0.3s,baz=57,slow=9.3,SNR=29						
ASAR				PcP	**PcP**	**07 05 17.8**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=63,slow=2.8,SNR=4.4						
H11S3	**WAKE ISLAND Hy**	**26.90**	**26**	T	T	07 30 37.6	
	baz=208,slow=76,SNR=7.3						
H11S2	**WAKE ISLAND Hy**	**26.91**	**26**	T	T	07 30 39.8	
	baz=208,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**26.92**	**26**	T	T	07 30 38.1	
	baz=208,slow=76,SNR=3.5						
KNRA	**Kununurra**	**27.24**	**247**	P	**P**	**07 02 05.5**	**+1.8**
KNRA				IAmb	IAmb	07 02 23.9	
	comp=Z,16nm,1.3s						
H11N1	**WAKE ISLAND Hy**	**28.07**	**25**	T	T	07 32 14.3	
	baz=205						
H11N3	**WAKE ISLAND Hy**	**28.08**	**25**	T	T	07 32 12.6	
	baz=205						
H11N2	**WAKE ISLAND Hy**	**28.09**	**25**	T	T	07 32 09.2	
	baz=205						
FITZ	**Fitzroy Crossi**	**30.85**	**244**	P	**P**	**07 02 35.4**	**-0.3**
	comp=Z,3.6nm,0.6s,baz=60,slow=8.8,SNR=4.1						
FITZ	**Fitzroy Crossi**	**30.85**	**244**	P	**P**	**07 02 35.2**	**-0.5**
OUZ	**Omahuta**	**34.08**	**152**	P	**P**	**07 03 04.5**	**+0.9**
BFZ	**Birch Farm**	**39.75**	**154**	P	**P**	**07 03 50.4**	**-1.0**
RPZ	**Rata Peaks**	**40.42**	**162**	P	**P**	**07 03 56.5**	**-0.3**
	comp=Z,8.8nm,0.6s,baz=300,slow=2.1,SNR=6.4						
RPZ	**Rata Peaks**	**40.42**	**162**	P	**P**	**07 03 56.5**	**-0.3**
MORW	**Morawa**	**43.19**	**233**	P	**P**	**07 04 19.0**	**-0.6**
MORW				IAmb	IAmb	07 04 29.2	
	comp=Z,28nm,1.5s						
TPUB	**Ta-pu**	**44.07**	**312**	P	**P**	**07 04 27.2**	**+0.6**
TPUB				IAmb	IAmb	07 04 30.2	
	comp=Z,13nm,1.0s						
SSLB	**Suanglung**	**44.12**	**313**	P	**P**	**07 04 28.2**	**+1.1**
SSLB				IAmb	IAmb	07 04 28.5	
	comp=Z,8.2nm,1.0s						
CISI	**Cisompet, Garu**	**46.55**	**265**	P	**P**	**07 04 45.6**	**-0.8**
SLVN	**Son La**	**56.60**	**300**	P	**P**	**07 05 59.2**	**-1.6**
SLVN				IAmb	IAmb	07 06 03.1	
	comp=Z,4.9nm,0.9s						
KLR	**Kul'dur**	**58.34**	**343**	P	**P**	**07 06 13.1**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=130,slow=2.6,SNR=3.9						
PETK	**Petropavlovsk-**	**58.75**	**2**	P	**P**	**07 06 15.6**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=180,slow=8.9,SNR=3.6						
MK31	**Makanchi Array**	**82.30**	**319**	P	**P**	**07 08 38.2**	**+0.4**
MKAR	**Makanchi Array**	**82.30**	**319**	P	**P**	**07 08 38.2**	**+0.4**
	comp=Z,3.0nm,0.6s,baz=99,slow=5.4,SNR=31						
ILAR	**Eielson Array**	**82.40**	**22**	P	**P**	**07 08 37.2**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=250,slow=4.8,SNR=5.1						
MAKZ	**Makanchi**	**82.51**	**319**	P	**P**	**07 08 39.4**	**+0.6**
MAKZ				IAmb	IAmb	07 08 40.4	
	comp=Z,5.3nm,0.8s						
ZALV	**Zalesovo Beam**	**83.02**	**326**	P	**P**	**07 08 40.8**	**-0.5**
	comp=Z,2.8nm,0.7s,baz=113,slow=6.0,SNR=11						
TOLK	**Toolik Lake Re**	**83.59**	**18**	P	**P**	**07 08 45.3**	**+1.3**
QSPA	**South Pole Qui**	**84.16**	**180**	P	**P**	**07 08 46.6**	**-0.4**
KURBB	**Kurchatov Arra**	**85.73**	**322**	P	**P**	**07 08 54.7**	**-0.3**
	baz=99,slow=4.7						
NVAR	**Mina Array Bea**	**91.25**	**52**	P	**P**	**07 09 22.5**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=255,slow=5.8,SNR=3.8						
YKA	**Yellowknife Ar**	**95.44**	**28**	P	**P**	**07 09 40.4**	**+0.2**
	comp=Z,0.3nm,0.9s,baz=263,slow=4.9,SNR=4.2						
G65A	**Princeton**	**126.30**	**36**	PKPdf	**PKPdf**	**07 15 16.8**	**-1.0**
TOA0	**Torodi Ar. Sit**	**152.38**	**287**	PKPbc	**PKPbc**	**07 16 11.3**	**-0.7**
TORD	**Torodi Ar. Bea**	**152.38**	**287**	PKPbc	**PKPbc**	**07 16 10.8**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=65,slow=1.9,SNR=7.7						

BJI 30 07:03:51.6±0.0,24.96N×97.87E,h5km,ML3.7/6, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**20.57**	**339**	*e*P	P	07 08 30.0	-1.3

*ROM **30** 07:04:23.4±0.2,38.91N±0.01×15.31E±0.02,h272km±1km, ML3.6/35,Error ellipse: s-maj=2.0km s-min=0.8km az=113.0*
*IDC **30** 07:04:24.9±0.7,39.13N×15.15E,h271km±9km,mb3.1/11, mb1 3.2/17,mb1mx3.2/40,mbtmp3.7/17,Error ellipse: s-maj=16.8km s-min=13.9km az=91.0*
*LDG **30** 07:04:24.2,39.16N×15.37E,h273km*

ISC 30 07:04:24.3±0.6,39.03N±0.05×15.24E±0.06,h266km±5km, n159,σ1s52/170,mb3.5/10,Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IST3	**Stromboli F**	**0.23**	**182**	P	**Pn**	**07 04 59.4**	**+0.8**
LLI	**Lipari**	**0.63**	**202**	P	**Pn**	**07 05 00.2**	**+0.7**
JOPP	**Joppolo**	**0.66**	**130**	P	**Pn**	**07 04 59.4**	**-0.2**
JOPP				S	**S**	**07 05 25.9**	**-1.5**
JOPP				AML	AML		
	comp=E,196μm,1.4s						
JOPP				AML	AML		
	comp=N,372μm,0.3s						
JOPP				AML	AML		
	comp=E,426μm,0.5s						
JOPP				AML	AML		
	comp=N,455μm,1.5s						
VPL	**Vulcano Piano**	**0.69**	**197**	P	**Pn**	**07 04 59.9**	**+0.2**
VPL				AML	AML		
	comp=N,2175μm,0.4s						
VPL				AML	AML		
	comp=E,1555μm,0.3s						
IFIL	**Filicudi I Eol**	**0.71**	**229**	P	**Pn**	**07 05 00.3**	**+0.6**
IFIL				AML	AML		
	comp=E,1855μm,0.4s						
IFIL				AML	AML		
	comp=N,686μm,1.0s						
CET2	**Cetraro**	**0.74**	**48**	P	**Pn**	**07 05 00.4**	**+0.6**
CET2				S	**S**	**07 05 26.9**	**-1.0**
CET2				AML	AML		
	comp=E,274μm,0.5s						
CET2				AML	AML		
	comp=N,322μm,0.2s						
CET2				AML	AML		
	comp=E,1077μm,0.8s						
CET2				AML	AML		
	comp=N,1252μm,0.3s						
CET2				AML	AML		
	comp=E,1078μm,0.8s						
MILZ	**Milazzo**	**0.76**	**181**	P	**Pn**	**07 04 59.7**	**-0.2**
MILZ				S	**S**	**07 05 27.2**	**-0.8**
MILZ				AML	AML		
	comp=E,420μm,0.4s						
MILZ				AML	AML		
	comp=N,257μm,1.0s						
MILZ				AML	AML		
	comp=E,1055μm,0.3s						
MILZ				AML	AML		
	comp=E,1054μm,0.3s						
MILZ				AML	AML		
	comp=N,660μm,0.4s						
CAR1	**CAROLEI**	**0.78**	**73**	P	**Pn**	**07 05 00.2**	**+0.2**
CAR1				AML	AML		
	comp=E,408μm,1.0s						
CAR1				AML	AML		
	comp=N,276μm,0.3s						
CAR1				AML	AML		
	comp=E,1460μm,1.0s						
CAR1				AML	AML		
	comp=N,1920μm,0.8s						
CAR1				AML	AML		
	comp=E,1605μm,0.9s						
CAR1				AML	AML		
	comp=E,1460μm,1.0s						
CAR1				AML	AML		
	comp=N,1915μm,0.8s						
CAR1				AML	AML		
	comp=N,1480μm,0.7s						
MSRU	**Castanea**	**0.80**	**165**	P	**Pn**	**07 04 59.4**	**-0.7**
MSRU				S	**S**	**07 05 26.4**	**-2.0**
IACL	**Alicudi**	**0.85**	**234**	P	**Pn**	**07 05 00.9**	**+0.6**
MPNC	**Port Mandanici**	**0.89**	**174**	P	**Pn**	**07 04 59.8**	**-0.7**
MPNC				S	**S**	**07 05 27.9**	**-1.3**
MPNC				AML	AML		
	comp=E,970μm,0.7s						
MPNC				AML	AML		
	comp=N,758μm,1.2s						
MSCL	**Scilla**	**0.91**	**152**	P	**Pn**	**07 05 00.0**	**-0.7**
MSCL				S	**S**	**07 05 27.7**	**-1.7**
MSCL				AML	AML		
	comp=E,816μm,0.4s						
MSCL				AML	AML		
	comp=N,1135μm,0.5s						
MSCL				AML	AML		
	comp=E,885μm,1.4s						
CEL	**Celeste**	**0.93**	**146**	P	**Pn**	**07 05 00.1**	**-0.6**
CEL				S	**S**	**07 05 27.6**	**-1.8**
CEL				AML	AML		
	comp=E,373μm,0.5s						
CEL				AML	AML		
	comp=E,469μm,0.5s						
CEL				AML	AML		
	comp=N,340μm,0.3s						
CEL				AML	AML		
	comp=E,494μm,0.5s						
CEL				AML	AML		
	comp=N,281μm,0.9s						
CEL				AML	AML		
	comp=N,340μm,0.3s						
CEL				AML	AML		
	comp=E,404μm,0.5s						
GRI	**Girifalco**	**0.94**	**103**	P	**Pn**	**07 05 01.2**	**+0.5**
GRI				S	**S**	**07 05 28.7**	**-0.8**
GRI				AML	AML		
	comp=N,970μm,0.4s						
GRI				AML	AML		
	comp=E,656μm,1.2s						
T0702	**Acquaformosa (**	**0.95**	**43**	P	**Pn**	**07 05 01.3**	**+0.6**
T0702				S	**S**	**07 05 28.8**	**-0.8**
T0702				AML	AML		
	comp=E,574μm,0.9s						
T0702				AML	AML		
	comp=N,640μm,1.4s						
MCSR	**Castroreale**	**0.97**	**180**	P	**Pn**	**07 05 00.8**	**-0.2**
MCSR				AML	AML		
	comp=N,1955μm,0.3s						
MCSR				AML	AML		
	comp=E,1845μm,0.4s						
GMB	**Gambarie**	**0.98**	**152**	P	**Pn**	**07 05 01.0**	**-0.1**
GMB				AML	AML		
	comp=E,2820μm,0.4s						
GMB				AML	AML		
	comp=N,2480μm,1.6s						
MCPD	**Capo d'Orlando**	**1.00**	**204**	P	**Pn**	**07 05 00.9**	**-0.1**
MCPD				AML	AML		
	comp=E,87μm,0.5s						
MCPD				AML	AML		
	comp=E,158μm,0.9s						
MCPD				AML	AML		
	comp=N,145μm,0.4s						
NOV	**Novara**	**1.01**	**185**	P	**Pn**	**07 05 01.3**	**+0.1**
NOV				AML	AML		
	comp=E,723μm,0.4s						
NOV				AML	AML		
	comp=N,1016μm,0.7s						
NOV				AML	AML		
	comp=E,852μm,1.6s						
NOV				AML	AML		
	comp=N,1041μm,0.7s						
MUCR	**Ucria**	**1.03**	**196**	P	**Pn**	**07 05 00.6**	**-0.8**
MUCR				AML	AML		
	comp=E,348μm,0.5s						
MUCR				AML	AML		
	comp=N,302μm,0.5s						
MUCR				AML	AML		
	comp=N,388μm,0.5s						
MUCR				AML	AML		
	comp=E,348μm,0.5s						
BULG	**Bulgheria - Ca**	**1.05**	**6**	P	**Pn**	**07 05 02.9**	**+1.6**
BULG				S	**S**	**07 05 32.1**	**+1.5**
BULG				AML	AML		
	comp=N,289μm,1.2s						
BULG				AML	AML		
	comp=E,234μm,1.3s						
CELI	**Celico**	**1.05**	**69**	P	**Pn**	**07 05 02.5**	**+1.1**
CELI				S	**S**	**07 05 31.3**	**+0.6**
CELI				AML	AML		
	comp=E,2080μm,1.3s						
CELI				AML	AML		
	comp=N,1850μm,0.6s						
TDS	**Terranova Siba**	**1.05**	**53**	P	**Pn**	**07 05 02.2**	**+1.0**
TDS				AML	AML		
	comp=N,259μm,0.4s						
TDS				AML	AML		
	comp=E,530μm,0.8s						
TDS				AML	AML		
	comp=N,260μm,0.4s						
CUC	**Castrocucco**	**1.05**	**25**	P	**Pn**	**07 05 02.2**	**+1.0**
CUC				S	**S**	**07 05 29.7**	**-0.9**
CUC				AML	AML		
	comp=N,145μm,0.7s						
CUC				AML	AML		
	comp=N,176μm,0.7s						
CUC				AML	AML		
	comp=E,177μm,0.6s						
CUC				AML	AML		
	comp=E,149μm,0.7s						
AIO	**Antillo**	**1.06**	**180**	P	**Pn**	**07 05 01.5**	**0.0**
PLAC	**Placanica**	**1.10**	**122**	P	**Pn**	**07 05 01.6**	**0.0**
PLAC				S	**S**	**07 05 29.5**	**-1.6**
PLAC				AML	AML		
	comp=E,446μm,1.0s						
PLAC				AML	AML		
	comp=N,530μm,0.3s						
PLAC				AML	AML		
	comp=E,548μm,0.2s						
PLAC				AML	AML		
	comp=N,442μm,1.0s						
MSFR	**San

MSFR					AML	AML			
	comp=E,85μm,1.5s								
SERS	**Sersale**	**1.13**	**89**	P	**Pn**	**07 05 02.4 +0.6**			
SERS				S	**S**	**07 05 30.2 -1.2**			
SERS				AML	AML				
	comp=E,759μm,0.4s								
SERS				AML	AML				
	comp=N,642μm,1.2s								
SERS				AML	AML				
	comp=E,620μm,1.2s								
SERS				AML	AML				
	comp=N,969μm,0.3s								
SERS				AML	AML				
	comp=N,970μm,0.3s								
MGR	**Morigerati**	**1.13**	**12**	P	**Pn**	**07 05 03.2 +1.6**			
SOI	**Samo**	**1.15**	**146**	P	**Pn**	**07 05 01.6 -0.3**			
SOI				AML	AML				
	comp=E,320μm,0.6s								
SOI				AML	AML				
	comp=N,314μm,0.3s								
SOI				AML	AML				
	comp=N,314μm,0.3s								
SOI				AML	AML				
	comp=E,320μm,0.6s								
TIP	**Timpagrande**	**1.19**	**83**	P	**Pn**	**07 05 02.8 +0.7**			
TIP				S	**S**	**07 05 31.0 -1.0**			
TIP				AML	AML				
	comp=N,426μm,0.8s								
TIP				AML	AML				
	comp=E,630μm,0.5s								
TIP				AML	AML				
	comp=N,552μm,0.9s								
TIP				AML	AML				
	comp=E,524μm,0.5s								
SALB	**San Lorenzo Be**	**1.20**	**45**	P	**Pn**	**07 05 03.6 +1.4**			
SALB				S	**S**	**07 05 32.5 +0.3**			
SALB				AML	AML				
	comp=E,636μm,0.3s								
SALB				AML	AML				
	comp=N,415μm,0.7s								
SALB				AML	AML				
	comp=E,1085μm,0.3s								
SALB				AML	AML				
	comp=N,574μm,0.8s								
MPAZ	**Palizzi**	**1.23**	**151**	P	**Pn**	**07 05 02.0 -0.4**			
MPAZ				AML	AML				
	comp=E,415μm,1.2s								
MPAZ				AML	AML				
	comp=N,438μm,0.3s								
SIRI	**Monte Sirino -**	**1.24**	**23**	P	**Pn**	**07 05 03.5 +1.1**			
SIRI				AML	AML				
	comp=E,183μm,0.8s								
SIRI				AML	AML				
	comp=N,164μm,0.4s								
SIRI				AML	AML				
	comp=E,183μm,0.4s								
SIRI				AML	AML				
	comp=N,162μm,1.5s								
SIRI				AML	AML				
	comp=E,234μm,1.1s								
SIRI				AML	AML				
	comp=N,210μm,0.4s								
SIRI				AML	AML				
	comp=E,226μm,1.1s								
SIRI				AML	AML				
	comp=N,196μm,0.4s								
EPZF	**Pizzo Felice**	**1.25**	**194**	AML	AML				
	comp=N,514μm,1.3s								
EPZF				AML	AML				
	comp=E,689μm,1.0s								
EPZF				AML	AML				
	comp=E,688μm,1.0s								
CMPR	**Campora**	**1.28**	**2**	P	**Pn**	**07 05 04.5 +1.8**			
CMPR				S	**S**	**07 05 34.7 +1.7**			
MTSN	**Montesano sull**	**1.29**	**18**	AML	AML				
	comp=N,167μm,1.2s								
MTSN				AML	AML				
	comp=E,210μm,0.8s								
PIPA	**Pietrapaola**	**1.30**	**69**	AML	AML				
	comp=E,591μm,1.3s								
PIPA				AML	AML				
	comp=E,570μm,1.3s								
PIPA				AML	AML				
	comp=N,506μm,0.5s								
PIPA				AML	AML				
	comp=E,698μm,1.0s								
PIPA				AML	AML				
	comp=E,681μm,1.0s								
PIPA				AML	AML				
	comp=N,516μm,1.2s								
PIPA				AML	AML				
	comp=N,571μm,0.4s								
SCHR	**S. Chirico Rap**	**1.33**	**29**	AML	AML				
	comp=N,292μm,0.9s								
SCHR				AML	AML				
	comp=E,466μm,0.7s								
MCEL	**Monticello**	**1.36**	**18**	P	**Pn**	**07 05 05.0 +1.9**			
MCEL				AML	AML				
	comp=E,279μm,0.8s								
MCEL				AML	AML				
	comp=N,356μm,0.9s								
LADO	**San Nicola del**	**1.37**	**79**	AML	AML				
	comp=E,395μm,0.7s								
LADO				AML	AML				
	comp=N,362μm,1.4s								
LADO				AML	AML				
	comp=N,363μm,1.4s								
LADO				AML	AML				
	comp=E,402μm,0.8s								
ORI	**Oriolo Calabro**	**1.39**	**42**	P	**Pn**	**07 05 04.7 +1.4**			
GIB	**Gibilmanna**	**1.41**	**223**	P	**Pn**	**07 05 03.8 +0.1**			
GIB				AML	AML				
	comp=E,570μm,1.6s								
GIB				AML	AML				
	comp=N,733μm,0.3s								
GALF	**Gagliano Caste**	**1.42**	**202**	AML	AML				
	comp=N,216μm,0.7s								
GALF				AML	AML				
	comp=E,206μm,0.6s								
GALF				AML	AML				
	comp=E,282μm,0.6s								
GALF				AML	AML				
	comp=N,302μm,0.7s								
CDRU	**Civita di Ruta**	**1.46**	**2**	P	**Pn**	**07 05 05.7 +1.9**			
CDRU				AML	AML				
	comp=N,74μm,1.1s								
CDRU				AML	AML				
	comp=E,110μm,0.7s								
CAGR	**Agira**	**1.53**	**203**	AML	AML				
	comp=E,620μm,0.8s								
CAGR				AML	AML				
	comp=N,638μm,0.6s								
CRAC	**Craco**	**1.62**	**34**	P	**Pn**	**07 05 06.5 +1.6**			
CRAC				AML	AML				
	comp=N,1820μm,1.4s								
CRAC				AML	AML				
	comp=E,2050μm,0.9s								
SOLUN	**Solunto**	**1.64**	**235**	P	**Pn**	**07 05 05.4 +0.2**			
VAE	**Valguarnera**	**1.69**	**203**	P	**Pn**	**07 05 06.3 +0.7**			
	comp=E,7.4nm,0.3s,baz=0.0,slow=9.1,SNR=3.1								
VAE				S	**S**	**07 05 41.4 +3.1**			
	comp=E,3.4nm,0.3s,baz=312,slow=22,SNR=1.8								
HLNI	**Lentini**	**1.71**	**190**	AML	AML				
	comp=E,249μm,0.9s								
HLNI				AML	AML				
	comp=N,233μm,1.6s								
MPG	**Monte Pellegri**	**1.71**	**240**	P	**Pn**	**07 05 06.0 +0.3**			
MRLC	**Muro Lucano**	**1.73**	**6**	P	**Pn**	**07 05 07.6 +1.8**			
MRLC				AML	AML				
	comp=E,92μm,1.2s								
MRLC				AML	AML				
	comp=N,70μm,1.2s								
ALJA	**Alia**	**1.74**	**223**	P	**Pn**	**07 05 06.7 +0.7**			
ALJA				AML	AML				
	comp=E,178μm,0.6s								
ALJA				AML	AML				
	comp=N,174μm,0.4s								
ALJA				AML	AML				
	comp=E,336μm,0.7s								
ALJA				AML	AML				
	comp=N,214μm,1.5s								
HCRL	**Carlentini**	**1.76**	**186**	AML	AML				
	comp=E,252μm,1.2s								
HCRL				AML	AML				
	comp=N,187μm,1.6s								
ACER	**Acerenza**	**1.83**	**17**	P	**Pn**	**07 05 07.8 +1.1**			
ACER				AML	AML				
	comp=N,272μm,0.9s								
ACER				AML	AML				
	comp=E,274μm,1.1s								
SSY	**Sortino**	**1.88**	**184**	AML	AML				
	comp=N,434μm,1.0s								
SSY				AML	AML				
	comp=E,282μm,1.1s								
MEU	**Monte Lauro**	**1.94**	**187**	AML	AML				
	comp=E,316μm,0.4s								
MEU				AML	AML				
	comp=N,409μm,0.4s								
HBSP	**Bosco Santo Pi**	**1.99**	**198**	P	**Pn**	**07 05 08.2 +0.1**			
HAVL	**Avola**	**2.07**	**183**	AML	AML				
	comp=E,209μm,0.8s								
HAVL				AML	AML				
	comp=N,561μm,0.3s								
AMUR	**Altamura**	**2.14**	**29**	P	**Pn**	**07 05 09.8 +0.5**			
AMUR				AML	AML				
	comp=N,204μm,1.0s								
AMUR				AML	AML				
	comp=E,254μm,0.3s								
NOCI	**Noci**	**2.24**	**38**	P	**Pn**	**07 05 10.2 0.0**			
NOCI				AML	AML				
	comp=E,168μm,1.3s								
NOCI				AML	AML				
	comp=N,246μm,1.0s								
BSSO	**Busso**	**2.56**	**349**	AML	AML				
	comp=E,40μm,1.2s								
BSSO				AML	AML				
	comp=N,73μm,0.5s								
SCTE	**Santa Cesarea**	**2.70**	**66**	AML	AML				
	comp=E,671μm,0.5s								
SCTE				AML	AML				
	comp=N,517μm,0.6s								
HCY	**Herceg Novi**	**4.21**	**35**	*e*Pn	**Pn**	**07 05 31.2 +0.1**			
HVAR	**Hvar**	**4.24**	**12**	*i* P	**Pn**	**07 05 32.3 +0.9**			
DBRK	**Dubrovnik**	**4.25**	**30**	*i* P	**Pn**	**07 05 32.8 +1.2**			
STON	**Ston**	**4.26**	**25**	*e*Pn	**Pn**	**07 05 32.1 +0.4**			
STON	**Ston**	**4.26**	**25**	*i* P	**Pn**	**07 05 32.5 +0.9**			
DRME	**Dracevica, Mon**	**4.35**	**42**	*e*Pn	**Pn**	**07 05 33.4 +0.7**			
PDG	**Podgorica**	**4.56**	**41**	*e*Pn	**Pn**	**07 05 36.5 +1.3**			
BRY	**Bratogost**	**4.60**	**32**	*e*Pn	**Pn**	**07 05 36.7 +0.9**			
ZIRJ	**Zirje**	**4.63**	**4**	*i* P	**Pn**	**07 05 36.4 +0.5**			
RICI	**Ricice**	**4.68**	**17**	P	**Pn**	**07 05 37.5 +0.9**			
MORI	**Morici**	**4.84**	**4**	*i* P	**Pn**	**07 05 39.2 +0.7**			
DUGI	**Dugi Otok**	**4.96**	**358**	*i* P	**Pn**	**07 05 40.5 +0.5**			
UPM	**Unac-Piva**	**5.00**	**32**	*e*Pn	**Pn**	**07 05 42.1 +1.5**			
KIJV	**Kijevo**	**5.04**	**10**	*i* P	**Pn**	**07 05 41.9 +0.9**			
NVLJ	**Novalja**	**5.53**	**357**	*i* P	**Pn**	**07 05 47.9 +1.1**			
MGRS	**Mrkonjic Grad**	**5.55**	**14**	*e*Pn	**Pn**	**07 05 48.5 +1.3**			
KEST	**Kesra**	**5.74**	**237**	P	**Pn**	**07 05 51.4 +1.8**			
	comp=N,0.3nm,0.3s,baz=30,slow=7.6,SNR=4.0								
BBLS	**Lazići**	**5.75**	**32**	*e*Pn	**Pn**	**07 05 50.7 +1.1**			
BLY	**Banja Luka**	**5.89**	**14**	*e*Pn	**Pn**	**07 05 52.4 +1.1**			
PGF	**Pioggiola**	**5.90**	**309**	*e*P	**Pn**	**07 05 52.5 +1.0**			
PGF				*e*Sn	**S**	**07 07 01.3 -0.1**			
BRJN	**Brijuni**	**5.97**	**350**	*i* P	**Pn**	**07 05 52.2 0.0**			
DIVS	**Divibare**	**6.19**	**34**	*e*Pn	**Pn**	**07 05 55.6 +0.6**			
CEY	**Cerknica**	**6.73**	**355**	*e*Pn	**Pn**	**07 06 02.4 +0.8**			
CRES	**Cresnjev**	**6.79**	**1**	*e*Pn	**Pn**	**07 06 03.2 +0.8**			
FRGS	**Fruska Gora**	**7.00**	**28**	*e*Pn	**Pn**	**07 06 06.5 +1.5**			
LJU	**Ljubljana**	**7.03**	**356**	*e*Pn	**Pn**	**07 06 06.5 +1.2**			
KALN	**Kalnik**	**7.15**	**7**	*i* P	**Pn**	**07 06 07.0 +0.1**			
OBKA	**Obir**	**7.49**	**356**	*i* Pn	**Pn**	**07 06 12.8 +1.6**			
	comp=N,3.3nm,0.5s								
SBF	**Sospel**	**7.59**	**312**	*e*P	**Pn**	**07 06 14.8 +2.3**			
MORH	**Mrgy, Hungar**	**7.60**	**18**	*e*Pn	**Pn**	**07 06 13.1 +0.6**			
SOKA	**Soboth**	**7.64**	**359**	*i* Pn	**Pn**	**07 06 13.9 +0.9**			
	comp=N,4.5nm,0.4s								
MYKA	**Terra Mystica**	**7.68**	**352**	*i* Pn	**Pn**	**07 06 16.2 +2.6**			
	comp=N,1.9nm,0.4s								
LMR	**La Mourre**	**7.86**	**306**	*e*P	**Pn**	**07 06 18.0 +2.2**			
FRF	**La Foret Royal**	**7.89**	**308**	*e*P	**Pn**	**07 06 17.2 +1.0**			
ABTA	**Abfaltersbach**	**7.96**	**346**	*i* Pn	**Pn**	**07 06 18.4 +1.3**			
	comp=N,9.6nm,0.5s								
KBA	**Koelnbreinsper**	**8.16**	**351**	*i* Pn	**Pn**	**07 06 21.4 +1.8**			
	comp=N,1.8nm,0.6s								
ARSA	**Arzberg**	**8.21**	**1**	*i* Pn	**Pn**	**07 06 22.9 +2.7**			
	comp=N,1.1nm,0.4s								
MBDF	**Montbardon**	**8.50**	**315**	*e*P	**Pn**	**07 06 26.3 +2.4**			
IDI	**Anoyia**	**8.56**	**113**	P	**Pn**	**07 06 27.0 +2.3**			
	comp=N,0.9nm,0.3s,baz=314,slow=16,SNR=1.8								
WTTA	**Wattenberg**	**8.64**	**343**	*i* Pn	**Pn**	**07 06 27.5 +1.8**			
	comp=N,2.1nm,0.5s								
FETA	**Feichten**	**8.64**	**339**	*i* Pn	**Pn**	**07 06 28.0 +2.3**			
	comp=N,3.6nm,0.6s								
DAVOX	**Davos/Dischmat**	**8.68**	**335**	P	**Pn**	**07 06 27.3 +1.1**			
	comp=N,0.5nm,0.3s,baz=168,slow=23,SNR=2.8								
SQTA	**Sankt Quirin**	**8.70**	**342**	*i* Pn	**Pn**	**07 06 30.1 +3.7**			
	comp=N,6.0nm,0.5s								
WATA	**Walderalm**	**8.72**	**343**	*i* Pn	**Pn**	**07 06 30.5 +3.9**			
	comp=N,5.1nm,0.5s								
SMRF	**Simiane la Rot**	**8.77**	**307**	*e*P	**Pn**	**07 06 28.8 +1.6**			
MOTA	**Moosalm**	**8.84**	**341**	*i* Pn	**Pn**	**07 06 30.4 +2.3**			
	comp=N,4.0nm,0.5s								
MOA	**Molln**	**8.84**	**356**	*i* Pn	**Pn**	**07 06 30.3 +2.3**			
	comp=N,3.9nm,0.8s								
CONA	**Conrad Observa**	**8.90**	**3**	*i* Pn	**Pn**	**07 06 29.4 +0.6**			
	comp=N,1.4nm,0.5s								
LPG	**La Plagne**	**9.02**	**318**	*e*P	**Pn**	**07 06 33.2 +2.7**			
LPL	**La Plagne**	**9.04**	**319**	*e*P	**Pn**	**07 06 33.2 +2.5**			
ORIF	**Oris-en-Rattie**	**9.12**	**313**	*e*P	**Pn**	**07 06 34.1 +2.5**			
DAVA	**Damuels**	**9.13**	**336**	*i* Pn	**Pn**	**07 06 33.7 +1.9**			
	comp=N,4.2nm,0.5s								
VIVF	**Saint-Julien-l**	**9.79**	**310**	*e*P	**P**	**07 06 44.5 -0.8**			
GERES	**GERESS Array B**	**9.87**	**354**	P	**Pn**	**07 06 41.5 +0.6**			
	comp=N,0.1nm,0.3s,baz=161,slow=14,SNR=4.5								
LASF	**Ste Croix**	**9.91**	**304**	*e*P	**Pn**	**07 06 43.7 +2.3**			
CABF	**La Chapelle**	**10.12**	**321**	*e*P	**Pn**	**07 06 44.5 +0.4**			
MLR	**Muntele Rosu**	**10.22**	**47**	P	**Pn**	**07 06 49.7 +4.3**			
	comp=N,9.9nm,0.3s,baz=261,slow=13,SNR=5.6								
MTLF	**Montolieu**	**10.72**	**298**	*e*P	**Pn**	**07 06 53.5 +2.0**			
CDF	**Champ du Feu**	**11.00**	**331**	*e*P	**Pn**	**07 06 55.1 +0.1**			
CDF				*e*Sn	**S**	**07 08 54.5 -3.6**			
	comp=N,0.3nm,0.2s								
HAU	**Haudompre**	**11.04**	**327**	*e*P	**Pn**	**07 06 55.9 +0.4**			
SMF	**Signal de Mont**	**11.30**	**316**	*e*P	**Pn**	**07 07 01.1 +2.4**			
AVF	**Avril sur Loir**	**11.66**	**316**	*e*P	**Pn**	**07 07 05.5 +2.4**			
LOR	**Lormes**	**11.69**	**318**	*e*P	**Pn**	**07 07 05.6 +2.1**			
LOR				*e*Sn	**S**	**07 09 10.9 -2.9**			
	comp=N,0.3nm,0.2s								
PAGF	**Fort de Pagny**	**11.73**	**327**	*e*P	**Pn**	**07 07 04.6 +0.6**			
PAGF				*e*Sn	**S**	**07 09 11.1 -3.7**			
	comp=N,0.8nm,0.2s								
SSF	**Saint Saulge**	**11.74**	**317**	*e*P	**Pn**	**07 07 05.0 +0.9**			
SSF				*e*Sn	**S**	**07 09 12.0 -3.0**			
	comp=N,0.3nm,0.2s								
SFTF	**Sexfontaines**	**11.77**	**324**	*e*P	**Pn**	**07 07 05.1 +0.6**			
BGF	**Bois d'Agland**	**11.80**	**314**	*e*P	**Pn**	**07 07 05.9 +1.0**			
EPF	**Esparros**	**11.94**	**294**	*e*P	**Pn**	**07 07 08.8 +2.1**			
RJF	**Les Rejaudoux**	**11.95**	**306**	*e*P	**Pn**	**07 07 08.8 +2.0**			
MEZF	**Maizieres J'vi**	**11.98**	**325**	*e*P	**Pn**	**07 07 07.7 +0.6**			
MEZF				*e*Sn	**S**	**07 09 16.8 -3.7**			
	comp=N,0.5nm,0.1s								
TCF	**Toulx Ste Croi**	**12.02**	**311**	*e*P	**Pn**	**07 07 08.6 +1.0**			
TCF				*e*Sn	**S**	**07 09 18.7 -2.7**			
	comp=N,0.2nm,0.2s								
HYF	**Humbligny**	**12.33**	**316**	*e*P	**Pn**	**07 07 12.4 +0.9**			
ETSF	**Etsaut**	**12.55**	**293**	*e*P	**Pn**	**07 07 16.4 +2.2**			
SJPF	**Ste Jean**	**13.07**	**293**	*e*P	**P**	**07 07 22.6 +0.8**			
GIVF	**Givet**	**13.31**	**330**	*e*P	**Pn**	**07 07 23.9 +0.6**			
BAIF	**Baives**	**13.53**	**328**	*e*P	**Pn**	**07 07 26.6 +0.7**			
MFF	**Saint Martin d**	**13.58**	**309**	*e*P	**Pn**	**07 07 27.9 +1.3**			
LDF	**La Druitiere**	**14.62**	**316**	*e*P	**P**	**07 07 40.0 +1.2**			
ESDC	**Sonseca Array**	**14.88**	**279**	P	**P**	**07 07 42.0 +0.2**			
	comp=N,0.2nm,0.3s,baz=77,slow=12,SNR=11								
GRR	**Gorron**	**14.91**	**314**	*e*P	**P**	**07 07 43.5 +1.5**			
FLN	**La Foliniere**	**14.91**	**316**	*e*P	**P**	**07 07 43.6 +1.6**			
AKASG	**Malin Array Be**	**15.28**	**36**	P	**P**	**07 07 47.3 +1.3**			
	comp=N,2.5nm,0.3s,baz=229,slow=10,SNR=7.3								
SGMF	**Saint Gilles**	**15.81**	**311**	*e*P	**P**	**07 07 54.1 +2.2**			
ROSF	**Rostrenen**	**16.27**	**311**	*e*P	**P**	**07 07 59.2 +2.3**			
EKA	**Eskdalemuir Ar**	**20.44**	**329**	P	**P**	**07 08 39.9 -1.8**			
	comp=N,0.7nm,0.3s,baz=144,slow=11,SNR=10								
HFS	**Hagfors**	**21.14**	**358**	P	**P**	**07 08 46.7 -2.0**			
	comp=N,0.9nm,0.4s,baz=177,slow=9.8,SNR=5.8								
NOA	**NORSAR Array B**	**22.17**	**355**	P	**P**	**07 08 56.9 -1.3**			
	comp=N,0.5nm,0.7s,baz=193,slow=10,SNR=2.8								
FINES	**FINESS Array B**	**23.42**	**13**	P	**P**	**07 09 09.1 -0.4**			
	comp=N,2.4nm,0.4s,baz=192,slow=8.5,SNR=31								
TORD	**Torodi Ar. Bea**	**28.44**	**209**	P	**P**	**07 09 54.4 -0.4**			
	comp=N,0.3nm,0.6s,baz=24,slow=8.8,SNR=1.9								
ARCES	**ARCESS Array B**	**31.05**	**7**	P	**P**	**07 10 15.8 -1.5**			
	comp=N,1.0nm,0.5s,baz=190,slow=9.5,SNR=14								
MKAR	**Makanchi Array**	**48.36**	**58**	P	**P**	**07 12 39.6 +0.2**			
	comp=N,1.1nm,0.4s,baz=287,slow=7.0,SNR=11								
SONM	**Songino Array**	**63.07**	**49**	P	**P**	**07 14 24.0 +0.5**			
	comp=N,0.4nm,0.4s,baz=275,slow=6.7,SNR=1.5								
YKA	**Yellowknife Ar**	**71.11**	**338**	P	**P**	**07 15 13.2 -0.2**			
	comp=N,1.1nm,0.6s,baz=44,slow=5.6,SNR=27								
ILAR	**Eielson Array**	**75.58**	**352**	P	**P**	**07 15 40.0 +0.6**			
	comp=N,0.3nm,0.7s,baz=358,slow=7.6,SNR=4.5								
TXAR	**Lajitas Array**	**91.32**	**310**	P	**P**	**07 17 00.8 +0.6**			
	comp=N,0.3nm,0.9s,baz=66,slow=3.1,SNR=2.8								
WRA	**Warramunga Arr**	**124.68**	**88**	PKP	**PKPdf**	**07 22 51.7 -0.8**			
	comp=N,0.4nm,0.7s,baz=321,slow=1.8,SNR=5.6								

DJA 30 07:04:48.2±1.0, 8°S±10°×11°9E±°, h62km±53km, M3.5/5, MLv3.5/5, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**1.36**	**168**	P	Pn	07 05 10.2	-1.0
WBSI				S	Sn	07 05 30.0	+1.6
WBSI	**Waikabubak, Su**	**1.36**	**168**	P	Pn	07 05 10.4	-0.8
	5μm492nm,0.7s						
PLAI	**Plampang**	**1.41**	**248**	P	Pn	07 05 11.0	-0.7
PLAI				S	Sn	07 05 29.9	+0.5
PLAI	**Plampang**	**1.41**	**248**	P	Pn	07 05 11.0	-0.7
BASI	**Baing, Sumba**	**2.40**	**143**	P	Pn	07 05 28.5	+3.3
BASI				S	Sn	07 05 51.7	-1.8
BASI	**Baing, Sumba**	**2.40**	**143**	P	Pn	07 05 36.7	+12
EDFI	**Ende, Flores**	**2.60**	**100**	P	Pn	07 05 28.6	+0.6
EDFI	**Ende, Flores**	**2.60**	**100**	P	Pn	07 05 33.0	+5.0
	510nm36nm,0.9s						
MMRI	**Maumere**	**3.12**	**96**	P	Pn	07 05 34.0	-1.0
MMRI	**Maumere**	**3.12**	**96**	P	Pn	07 05 42.3	+7.3
	69nm,1.0s						

JMA 30 07:10:57.4±0.3, 24°89N×123°22E, h14km, M1.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.47**	**204**	P	Pg	07 11 06.3	-0.4
YOJ				*e*S	Sg	07 11 13.2	+0.3
JYNG	**Yonagunijimaku**	**0.50**	**210**	P	Pg	07 11 07.3	0.0
JYNG				*e*S	Sg	07 11 14.0	-0.1
IRIF	**Iriomote-Funau**	**0.72**	**140**	P	Pg	07 11 11.2	-0.3
IRIF				*e*S	Sg	07 11 20.2	-0.8
JKRS	**Kuro-shima**	**0.97**	**132**	P	Pb	07 11 15.4	-0.6
JKRS				S	Sb	07 11 26.5	-2.1
HATJ	**Hateruma jima**	**0.99**	**147**	P	Pb	07 11 15.7	-0.6
HATJ				*e*S	Sb	07 11 27.6	-1.5

TAP 30 07:11:05.5, 24°56N×121°82E, h11km±1km, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.06**	**29**	P	Pg	07 11 08.6	+0.8
	baz=36						
TWC				*e*S	Sg	07 11 10.3	+0.8
	baz=36						
ENA	**Nanau**	**0.14**	**209**	*i* P	Pg	07 11 09.4	+0.5
	baz=205						
ENA				*e*S	Sg	07 11 12.3	+1.0
	baz=205						
NDT	**Datong Townshi**	**0.28**	**280**	*i* P	Pb	07 11 12.3	-0.3
	baz=279						
NDT				*e*S	Sb	07 11 17.4	+0.1
	baz=279						
TIPB	**Shuangxi**	**0.41**	**1**	*e*P	Pb	07 11 14.3	-0.6
	baz=1.0						
NNSB	**Datong**	**0.41**	**252**	P	Pb	07 11 14.4	-0.5
	baz=252						
NNSB				*e*S	Sb	07 11 21.3	0.0
	baz=252						
NNSH	**Datong**	**0.41**	**252**	P	Pg	07 11 14.1	+0.3
	baz=252						
NNSH				*e*S	Sb	07 11 21.1	-0.2
	baz=252						
YHNB	**Yeheng**	**0.42**	**286**	P	Pb	07 11 14.6	-0.4
	baz=285						
YHNB				*e*S	Sb	07 11 21.3	0.0
	baz=285						
NACB	**Ninganchiao**	**0.43**	**208**	P	Pb	07 11 15.8	+0.7
	baz=208						
NACB				S	Sb	07 11 21.9	+0.3
	baz=208						
ETLH	**Xiulin Townshi**	**0.46**	**221**	*e*P	Pb	07 11 15.2	-0.5
	baz=221						
ETLH				*e*S	Sb	07 11 22.9	+0.3
	baz=221						

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*IDC **30** 07:16:48.7±0.7, 62°.59S×160°.47W, h0km, mb4.3/7, mb1 4.4/8, mb1mx4.3/25, mbtmp4.3/8, ML4.2/1, MS4.6/23, Ms1 4.6/23, ms1mx4.5/30, Error ellipse: s-maj=28.7km s-min=19.4km az=28.0*

*NEIC **30** 07:16:51.0±1.3, 62°.6S±0°.2×160°.3W±0°.3, h10km±1km, mb4.9/19, Error ellipse: s-maj=26.6km s-min=19.4km az=26.0*

*GCMT **30** 07:16:55.0±0.2, 62°.76S±0°.01×160°.52W±0°.02, h12km, MW5.2/129, Moment Tensor Solution. s70,c98; s129,c203; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mr=0.11±.01; Mθθ=0.73±.01; Mφφ=-0.62±.01; Mrθ=-0.01±.04; Mrφ=0.19±.01; Mθφ=0.30±.03; Best double couple: M=0.76700×10^17 NP1:φs=125.00000°, δ72.00000°, λ=-16.00000°. NP2:φs=220.00000°, δ75.00000°, λ=-161.00000°. Principal axes: T 0.7560, Plg2.0000°, Azm352.0000°; N 0.0200, Plg66.0000°, Azm257.0000°; P -0.7770, Plg24.0000°, Azm83.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 07:16:50.9±0.4, 62°.58S±0°.08×160°.24W±0°.09, h10km, n92, σ1°38/59, mb4.8/16, MS4.7/29, 1C-1D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**19.16**	**204**	Pn	**Pn

comp=Z,269nm,25.8s
PPT2 eLQ LQ 07 35 52.4
comp=Z,2µm,29.8s
PPT2 eLR LR 07 37 55.9
comp=Z,2µm,25.2s,baz=191
PPT2 Papeete2 45.56 14 *e*T T 08 13 34.1
comp=Z,8.4nm,0.3s
PPT Papeete 45.58 14 LR LR 07 39 03.1
comp=Z,757nm,20.2s,baz=186,slow=29
VNA1 Neumayer--Stat 45.62 167 P **P** **07 25 10.8 +0.2**
DZM Mont Dzumac 46.37 315 *e*S **S** **07 32 04.4 -0.1**
comp=Z,439nm,26.9s
DZM eLQ LQ 07 36 20.2
comp=Z,2µm,34.0s
DZM eLR LR 07 38 17.9
comp=Z,1µm,22.8s
MAW Mawson 46.43 201 LR LR 07 43 04.8
comp=Z,423nm,18.2s,baz=152,slow=34
STKA Stephens Creek 47.66 282 P **P** **07 25 26.6 -0.4**
comp=Z,2.1nm,0.8s,baz=180,slow=5.5,SNR=3.3
STKA LR LR 07 41 48.7
comp=Z,486nm,19.7s,baz=147,slow=32
STKA Stephens Creek 47.66 282 P **P** **07 25 26.7 -0.4**
SYO Syowa Base 47.94 189⇑ *e*P **P** **07 25 26.1 -2.7**
SYO Syowa Base 47.94 189⇓ *e*pP **P** **07 25 28.2 -0.6**
RPN Rapa Nui 48.53 67 LR LR 07 41 07.5
comp=Z,1µm,21.5s,baz=197,slow=30
EFI East Falkland 50.74 128 P **P** **07 25 50.5 0.0**
PLCA Paso Flores 54.69 111 P **P** **07 26 20.2 +0.4**
comp=Z,3.4nm,1.0s,baz=228,slow=9.7,SNR=5.2
PLCA LR LR 07 44 04.8
comp=Z,501nm,21.0s,baz=213,slow=30
PLCA Paso Flores 54.69 111 P **P** **07 26 20.0 +0.1**
TAOE Nuku Hiva Isla 55.58 24 *e*S **S** **07 34 10.6 -1.5**
comp=Z,171nm,26.2s
TAOE eLR LR 07 42 33.6
comp=Z,1µm,26.5s,baz=214
LC01 Cunco 55.62 109 P **P** **07 26 27.7 +1.2**
LC01 lAmb lAmb 07 26 45.9
comp=Z,19nm,1.4s
H03S2 Juan Fernandez 56.67 100 T T 08 28 17.6
baz=211,slow=74,SNR=133
H03S1 Juan Fernandez 56.67 100 T T 08 28 13.0
baz=211,slow=74,SNR=98
H03S3 Juan Fernandez 56.69 100 T T 08 28 13.6
baz=211,slow=74,SNR=117
H03N3 Juan Fernandez 56.99 100 T T 08 28 37.1
baz=233,SNR=79
H03N2 Juan Fernandez 57.00 100 T T 08 28 37.6
baz=233,SNR=112
H03N1 Juan Fernandez 57.01 100 T T 08 28 35.7
baz=233,SNR=28
H01W1 Cape Leeuwin H 57.73 256 T T 08 29 26.4
baz=146,slow=76,SNR=34
H01W2 Cape Leeuwin H 57.73 256 T T 08 29 27.4
baz=146,slow=76,SNR=31
H01W3 Cape Leeuwin H 57.75 256 T T 08 29 27.8
baz=146,slow=76,SNR=28
ASAR Alice Springs 58.17 280 P **P** **07 26 43.1 -1.7**
comp=Z,5.5nm,1.0s,baz=149,slow=7.5,SNR=19
ASAR LR LR 07 47 58.6
comp=Z,832nm,21.2s,baz=146,slow=32
WR0 Warramunga Arr 61.10 283 P **P** **07 27 04.6 -0.4**
WR0 lAmb lAmb 07 27 09.9
comp=Z,10nm,1.1s
WRA Warramunga Arr 61.20 283 P **P** **07 27 04.7 -1.0**
comp=Z,2.2nm,0.9s,baz=158,slow=5.7,SNR=5.5
WRA LR LR 07 51 12.6
comp=Z,557nm,18.2s,baz=145,slow=34
WRAB Tennant Creek 61.21 283 P **P** **07 27 08.9 +3.2**
WRAB lAmb lAmb 07 27 10.5
comp=Z,14nm,1.2s
WB0 Warramunga Arr 61.33 283 P **P** **07 27 06.5 -0.1**
WB0 lAmb lAmb 07 27 11.3
comp=Z,15nm,1.2s
CO02 Combarbal 62.47 105 P **P** **07 27 15.2 +1.0**
AC05 El Transito 64.81 104 P **P** **07 27 30.9 +1.1**
AC05 lAmb lAmb 07 27 48.4
comp=Z,19nm,1.4s
FITZ Fitzroy Crossi 66.79 275 LR LR 07 53 15.1
comp=Z,237nm,20.6s,baz=142,slow=33
PB11 IPOC Station P 72.93 100 P **P** **07 28 21.7 +1.2**
PB11 lAmb lAmb 07 28 27.6
comp=Z,9.7nm,1.0s
MNMC Minye Minye 73.51 100 P **P** **07 28 24.7 +0.7**
MNMC lAmb lAmb 07 28 26.6
comp=Z,11nm,0.9s
JAY Jayapura 73.95 297 LR LR 08 01 34.7
comp=Z,285nm,18.0s,baz=181,slow=36
BATI Baumata 74.60 278 LR LR 07 57 51.1
comp=Z,834nm,21.5s,baz=198,slow=33
SOEI Soe 74.72 278 P **P** **07 28 30.7 -0.1**
LPAZ La Paz 76.66 99 P **P** **07 28 43.1 +0.5**
comp=Z,4.5nm,0.9s,baz=208,slow=5.3,SNR=14
LPAZ LR LR 07 55 23.0
comp=Z,197nm,19.8s,baz=191,slow=30
LPAZ La Paz 76.66 99 P **P** **07 28 43.0 +0.4**
LPAZ lAmb lAmb 07 28 45.4
comp=Z,12nm,1.1s
SIJI Sorong 79.45 289 LR LR 08 04 17.0
comp=Z,293nm,18.3s,baz=24,slow=36
LEM Lembang 84.98 265 LR LR 08 00 04.9
comp=Z,407nm,21.2s,baz=142,slow=31
SAML Samuel 85.37 100 P **P** **07 29 28.5 +0.2**
SAML lAmb lAmb 07 29 34.6
comp=Z,11nm,1.6s
BDFB Brasilia 86.06 117 LR LR 08 04 53.3
comp=Z,507nm,19.4s,baz=174,slow=34
BOSA Boshof 89.02 185 LR LR 08 06 52.6
comp=Z,688nm,18.9s,baz=170,slow=34
DAV Davao City (W) 89.03 287 LR LR 08 10 50.6
comp=Z,81nm,18.0s,baz=162,slow=36
ROSC El Rosal 92.38 84 LR LR 08 03 36.8
comp=Z,300nm,21.1s,baz=218,slow=30
PSI Prapat 97.47 262 LR LR 08 06 22.5
comp=Z,235nm,21.5s,baz=100,slow=31
NJ2 Nanjing 113.95 293 *e*P **PKiKP** **07 35 30.5 +1.2**
NJ2 pmax pmax
comp=Z,14nm,0.6s
GYA Guiyang 114.53 280 *e*PKP **PKiKP** **07 35 32.8 +2.0**
GYA PP PP 07 36 35.0 +7.0
GYA SKKS 07 43 28.0
GYA Guiyang 114.53 280 SS SS 07 52 24.0 +2.9
GYA AMB AMB
comp=Z,40nm,5.4s
GYA LR LR
comp=N,3µm,8.5s
GYA LR LR
comp=E,2µm,11.3s
GYA LR LR
comp=Z,2µm,11.3s
CD2 Chengdu 119.65 280 PKP **PKiKP** **07 35 41.5 +1.1**
BESE Bessie Mountai 122.41 15 PKPdf **PKiKP** **07 35 45.4 +0.5**
DLBC Dease Lake 122.92 18 PKPdf **PKiKP** **07 35 45.8 -0.2**
LZH Lanzhou 123.95 284 *e*PKP **PKPdf** **07 35 47.0 -1.6**
LZH pPKP sPKPdf 07 35 57.0 +5.1
LZH sPKP 07 35 59.3
LZH LR LR
comp=N,150nm,17.1s
LZH LR LR
comp=E,170nm,17.3s
LZH LR LR
comp=Z,250nm,20.0s
HHC Hu-ho-hao-te 124.50 293 *e*P **PKiKP** **07 35 52.5 +2.7**
HHC pmax pmax
comp=Z,15nm,1.2s
HHC pmax pmax
comp=Z,18nm,5.7s
CCB Clear Creek Bu 127.25 7 PKPdf **PKiKP** **07 35 53.9 -0.4**
DAWY Dawson 127.29 11 PKPdf **PKiKP** **07 35 54.5 0.0**
IL31 127.43 7 **PKPdf** **07 35 52.8 -1.2**
ILAR Eielson Array 127.43 7 PKP **PKPdf** **07 35 53.8 -0.3**
comp=Z,1.8nm,1.0s,baz=223,slow=2.4,SNR=9.5
GTA Gaotai 128.49 283 *e*PKP **PKiKP** **07 36 02.8 +5.0**
YKA Yellowknife Ar 129.40 25 PKP **PKPdf** **07 35 55.2 -2.7**
comp=Z,0.0nm,0.3s,baz=193,slow=2.7,SNR=1.6
WMQ Urumqi 137.52 277 *e*P **PKiKP** **07 36 15.3 -0.5**
WMQ LR LR
comp=N,470nm,10.9s
WMQ LR LR
comp=E,540nm,10.9s
WMQ LR LR
comp=Z,370nm,12.5s
MKAR Makanchi Array 142.26 275 PKhKP PKPpre 07 36 11.7
comp=Z,0.4nm,0.7s,baz=48,slow=8.7,SNR=3.1
GEYT Alibeck 146.06 242 PKPbc **PKPbc** **07 36 29.7 -0.5**
comp=Z,7.5nm,1.0s,baz=202,slow=3.2,SNR=10
GYA0B ALIBECK ARRAY 146.06 242 **PKPdf** **07 36 28.9 -0.4**
ZALV Zalesovo Beam 146.13 286 PKPbc **PKPdf** **07 36 27.2 -1.6**
comp=Z,0.8nm,0.6s,baz=54,slow=7.4,SNR=3.9
KURK Kurchatov 146.76 277 **PKPdf** **07 36 30.2 +0.2**
TULEG Thule 149.81 28 **PKPbc** **07 36 39.2 +0.1**
ESDC Sonseca Array 152.97 137 PKPbc **PKPbc** **07 36 47.1 -0.4**
comp=Z,0.7nm,0.7s,baz=255,slow=0.8,SNR=6.3
BRTR Keskin Array B 155.62 207 PKPab **PKPab** **07 37 07.4 -2.9**
comp=Z,1.2nm,0.7s,baz=239,slow=0.8,SNR=2.7
CLL Collm 168.12 159 *e*SKKSac SKKSac 07 48 48.0 +8.2
CLL *e*PPS PPS 07 55 42.0
CLL *e*PSPS 08 04 30.0
CLL *e*PSSrev 08 08 04.0
CLL *e*SSS SSS 08 08 58.0
CLL *e*SSSS 08 13 42.0

JMA ***30*** *07:41:52.7±0.3,24.2°N×123.2°E, h30km, M3.0*
IDC ***30*** *07:41:53.8±1.4,24.2°N×122.4°E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/58, mbtmp3.6/5, ML3.5/1, MS2.9/3, Ms1 2.9/3, ms1mx2.6/38, Error ellipse: s-maj=72.6km s-min=23.3km az=70.0*
ISC 30 07:41:52.5±0.9, 24°84N±0.0°07'×123°28E±0.0°04, h10km, n15, σ1s39/19, mb3.5/4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
YOJ	**Yonaguni jima**	**0.45**	**212**	P		**Pn**	**07 42 02.7**	**-2.3**
YOJ				*e*S		**Sb**	**07 42 09.6**	**+0.4**
JYNG	**Yonagunijimaku**	**0.49**	**218**	P		**Pn**	**07 42 03.5**	**-2.1**
JYNG				*e*S		**Sb**	**07 42 10.6**	**+0.1**
IRIF	**Iriomote-Funau**	**0.65**	**141**	P		**Pn**	**07 42 06.8**	**-1.0**
IRIF				*e*S		**Sb**	**07 42 16.1**	**+1.0**
JKRS	**Kuro-shima**	**0.90**	**132**	P		**Pn**	**07 42 10.0**	**-1.2**
JKRS				S		**Sb**	**07 42 22.4**	**+0.2**
HATJ	**Hateruma jima**	**0.92**	**148**	P		**Pn**	**07 42 10.7**	**-0.7**
HATJ				*e*S		**Sb**	**07 42 22.6**	**-0.2**
JIJ	**Ishigaki jima**	**0.92**	**121**	P		**Pb**	**07 42 09.8**	**-0.8**
JISG	**Ishigakijimahi**	**0.98**	**105**	P		**Pb**	**07 42 10.5**	**-0.9**
JISG				*e*S		**Sg**	**07 42 23.4**	**-0.5**
JTJ	**Tarama**	**1.31**	**99**	*e*S		**Sb**	**07 42 33.4**	**-0.7**
KSRS	**Korea Array**	**13.18**	**16**	Pn		**P**	**07 45 08.9**	**-0.9**
	0.2nm,0.3s,baz=198,slow=12,SNR=5.3							
KSRS				LR		LR	07 50 08.5	
	comp=Z,57nm,21.0s,baz=198,slow=36							
JHJ	**Hachijo jima 2**	**16.62**	**56**	LR		LR	07 51 00.5	
	comp=Z,30nm,21.7s,baz=354,slow=31							
MJAR	**Matsushiro Arr**	**17.32**	**44**	LR		LR	07 54 40.0	
	comp=Z,35nm,18.3s,baz=260,slow=42							
SONM	**Songino Array**	**26.56**	**334**	P		**P**	**07 47 32.9**	**+2.3**
	0.9nm,0.9s,baz=153,slow=10.0,SNR=6.0							
MKAR	**Makanchi Array**	**39.21**	**315**	P		**P**	**07 49 20.7**	**-0.1**
	0.4nm,0.8s,baz=111,slow=7.9,SNR=3.5							
WRA	**Warramunga Arr**	**45.80**	**165**	P		**P**	**07 50 16.5**	**+1.9**
	0.7nm,0.9s,baz=345,slow=8.8,SNR=2.7							
ASAR	**Alice Springs**	**49.31**	**167**	P		**P**	**07 50 44.2**	**+2.4**
	0.6nm,0.9s,baz=351,slow=8.1,SNR=1.9							

SOME ***30*** *07:42:08.1,44.3°N×74.4°E*
NNC ***30*** *07:42:08.1±0.4,44.4°N×74.3°E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=4.1km s-min=2.5km az=51.0, Suspected Mining explosion.*
KNET ***30*** *07:42:10.1±0.4,44.2°N×74.3°E, h6km±1km, ml2.5, Error ellipse: s-maj=4.3km s-min=2.3km az=79.0*
KRNET ***30*** *07:42:37.9±0.1,42.3°N×76.4°E, h20km, mb2.0*
ISC 30 07:42:08.5±0.9, 44°41N±0.0°03×74°39E±0.0°04, h0km, n27, σ0s88/36, 17C-12D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BTLS	**Baital**	**0.68**	**339**	P		**Pg**	**07 42 20.4**	**-1.1**
	13nm,0.2s							
BTLS				S		**Sg**	**07 42 30.3**	**0.0**
	59nm,0.4s							
USP	**Ospenovka**	**1.14**	**176**	⇑P		**Pg**	**07 42 29.5**	**-0.9**
	5.6nm,0.1s,SNR=17							
USP				⇑S		**Sg**	**07 42 44.7**	**-0.5**
	28nm,0.3s							
KRBS	**Karabastau**	**1.17**	**127**	P		**Pg**	**07 42 30.3**	**-0.5**
	5.9nm,0.3s							
KRBS				S		**Sb**	**07 42 47.3**	**0.0**
	8.3nm,0.5s							
CHMS	**Chumysh**	**1.43**	**169**	⇑P		**Pn**	**07 42 35.0**	**-0.8**
	5.4nm,0.1s,SNR=14							
DGS	**Degeres**	**1.54**	**139**	P		**Pn**	**07 42 37.1**	**-0.1**
	19nm,0.3s							
DGS				S		**Sn**	**07 42 59.6**	**+1.7**
	124nm,0.4s							
TKM2	**Tokmak 2**	**1.73**	**149**	⇓ *i*P		Pg	07 42 53.4	+12
	baz=10.0							
TKM2				⇓ *i*S		**Sg**	**07 43 04.5**	**+0.6**
	baz=10.0							
AAK	**Ala-Archa**	**1.77**	**178**	⇓P		**Pn**	**07 42 41.3**	**+0.8**
	13nm,0.3s,SNR=22							
AAK				⇓S		**Sb**	**07 43 04.8**	**0.0**
	37nm,0.4s							
KST	**Kastek**	**1.78**	**140**	Pg		**Pb**	**07 42 41.9**	**-0.1**
	11nm,0.2s							
KST				Lg		Lg	07 43 07.1	
	29nm,0.5s							
KBK	**Karagaybulak**	**1.80**	**167**	P		**Pn**	**07 42 41.8**	**+0.9**
	11nm,0.1s,SNR=14							
KBK				⇑S		**Sg**	**07 43 06.8**	**+0.6**
	78nm,0.3s							
EKS2	**Erkin-Say**	**1.80**	**195**	⇑P		**Pn**	**07 42 41.5**	**+0.6**
	12nm,0.2s,SNR=15							
EKS2				⇑S		**Sb**	**07 43 05.8**	**+0.2**
	22nm,0.2s							
MRKS	**Merke**	**1.87**	**207**	P		**Pn**	**07 42 41.1**	**-0.7**
	3.5nm,0.1s							
MRKS				S		**Sn**	**07 43 05.9**	**-0.2**
	31nm,0.4s							
MTBS	**Maitube**	**1.95**	**130**	Pg		**Pn**	**07 42 44.1**	**+1.1**
	19nm,0.4s							
MTBS				Lg		Lg	07 43 11.0	
	93nm,0.4s							
IZV	**Izvestkoviy**	**2.12**	**130**	Pg		**Pn**	**07 42 46.5**	**+1.2**
	14nm,0.5s							
IZV				Lg		Lg	07 43 16.5	
	25nm,0.4s							
UCH	**Uchtor**	**2.18**	**178**	⇓P		**Pb**	**07 42 48.3**	**-0.8**
	2.4nm,0.2s,SNR=10							
UCH				⇓S		**Sg**	**07 43 17.7**	**-0.8**
	12nm,0.4s							
BOOM	**Boomskoye usch**	**2.22**	**149**	⇓ *e*P		**Pn**	**07 42 45.8**	**-1.0**
	baz=85							
BOOM				⇓ *i*S		Sn	07 42 51.3	-24
	baz=85							
MDOK	**Medeo**	**2.29**	**122**	Pg		**Pb**	**07 42 50.4**	**-0.4**
	6.3nm,0.6s							
MDOK				Lg		Lg	07 43 19.5	
	9.6nm,0.5s							
MDOK	**Medeo**	**2.29**	**122**	Pg		**Pb**	**07 42 49.7**	**-1.0**
	8.1nm,0.4s							
MDOK				Lg		Lg	07 43 20.7	
	13nm,0.5s							
TNSS	**Tian-Shan**	**2.31**	**126**	Pg		**Pn**	**07 42 49.7**	**+1.7**
	4.7nm,0.4s							
TNSS				Lg		Lg	07 43 20.7	
	20nm,0.4s							
AML	**Almayashu**	**2.33**	**193**	P		**Pn**	**07 42 50.0**	**+1.6**
	SNR=18							
KZA	**Kyzart**	**2.41**	**165**	⇓P		**Pb**	**07 42 52.0**	**-1.0**
	7.7nm,0.4s,SNR=7.0							
KZA				⇑S		**Sb**	**07 43 24.2**	**+0.7**
	35nm,0.6s							
ARXS	**Arharly**	**2.47**	**93**	Pg		**Pb**	**07 42 52.7**	**-1.2**
	13nm,0.1s							
ARXS				Lg		Lg	07 43 25.5	
	59nm,0.2s							
ULHL	**Ulahol**	**2.55**	**147**	⇑ *i*P		Pn	07 42 43.0	-8.3
	baz=26							
ULHL				⇑ *i*S		Sn	07 42 46.4	-37
	baz=26							
ANVS	**Anan'yevo**	**2.88**	**123**	⇑ *i*P		**Pn**	**07 42 56.1**	**+0.3**
	baz=66							
ANVS				⇑ *i*S		Sn	07 43 09.7	-22
	baz=66							
KDJ	**Kajisay**	**3.06**	**137**	⇑ *i*P		Pn	07 42 49.8	-8.4
	baz=15							
KDJ				⇑ *i*S		Sn	07 42 58.2	-37
	baz=15							
KK31	**Karatay Array**	**3.10**	**246**	⇓Pg		**Pb**	**07 43 05.6**	**+1.1**
	0.8nm,0.3s,baz=66,slow=15,SNR=7.6							
KK31				⇑Lg		Lg	07 43 46.7	
	2.9nm,0.4s,baz=60,slow=28,SNR=8.0							
PDGK	**Podgornoye**	**3.84**	**105**	⇓Pg		**Pb**	**07 43 17.9**	**+0.7**
	3.8nm,0.6s							
PDGK				⇑Lg		Lg	07 44 10.9	
	5.6nm,0.7s							
MK31	**Makanchi Array**	**6.03**	**64**	⇑Pn		**Pn**	**07 43 39.5**	**+0.5**
	3.9nm,0.7s,baz=244,slow=13,SNR=30							
MK31				⇓Sn		**Sn**	**07 44 48.7**	**0.0**
	0.5nm,0.4s,baz=241,slow=27,SNR=2.8							
MK31				⇑Lg		Lg	07 45 19.2	
	1.5nm,0.7s,baz=246,slow=27,SNR=3.5							

DJA 30 07:47:25.0±1.1, 8°S±6'×12°3E±', h262km±12km, M3.6/7, mb3.7/1, MLv3.5/7, MLv3.8/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MMRI	**Maumere**	**1.42**	**236**	P		Pn	07 48 04.1	+0.2
EDFI	**Ende, Flores**	**1.94**	**242**	P		Pn	07 48 08.9	+0.8
SOEI	**Soe**	**2.07**	**156**	P		Pn	07 48 10.1	+0.9
BATI	**Baumata**	**2.35**	**174**	P		Pn	07 48 12.8	+1.0
WBSI	**Waikabubak, Su**	**4.37**	**246**	P		Pn	07 48 32.4	-1.3
BNSI	**Bone**	**4.76**	**316**	P		Pn	07 48 38.6	+0.3
SPSI	**Sidrap Palu**	**5.31**	**316**	P		Pn	07 48 44.7	-0.2

NEIC ***30*** *07:48:34.0±1.8,38.4°N×119.6°W±0.0°02, h1km±5km, Error ellipse: s-maj=1.8km s-min=1.7km az=87.0*
REN ***30*** *07:48:33.1,38.4°N×119.6°W, h5km*
NCEDC ***30*** *07:48:33.1±2.2,38.4°N±0.0°01×119.6°W±0.0°02, h11km±4km, Mwr4.0/9, mb4.0/8(NEIC), Error ellipse: s-maj=2.0km s-min=1.7km az=225.0*
NEIC ***30*** *07:48:33.1,38.4°N×119.6°W, h11km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr 0.03; Mθθ -1.28; Mϕϕ 1.26; Mrθ -0.23; Mθϕ 0.20; Mϕr 0.27; Fault plane solution: Mo 1.34000×10^15 NP1: ϕs 319.49000°, δ 89.53000°, λ 164.39000°. NP2: ϕs 49.63000°, δ 74.39000°, λ 0.49000°. Principal axes: T 1.3245, Plg 11.0000°, Azm 273.0000°; N 0.0215, Plg 74.0000°, Azm 138.0000°; P -1.3459, Plg 11.0000°, Azm 6.0000°;*
ANF ***30*** *07:48:34.8±0.9,38.4°N×119.6°W, h0km±7km, ML4.3/28 Error ellipse: s-maj=4.6km s-min=2.8km az=77.0*
IDC ***30*** *07:48:35.1±0.9,38.6°N×119.3°W, h0km, mb3.5/3, mb1 3.9/8, mb1mx3.6/49, mbtmp3.6/8, ML3.9/5, MS3.2/6, Ms1 3.2/6, ms1mx2.9/28, Error ellipse: s-maj=10.6km s-min=5.5km az=24.0*
ISC 30 07:48:33.9±0.5, 38°39N±0.0°02×119°39W±0.0°02, h10km, n324, σ1s65/344, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
WAKR	**Walker**	**0.12**	**342**			**Pg**	**07 48 35.6**	**-1.4**
WAKR					Sg	**Sg**	**07 48 37.3**	**-1.9**
LUL	**Lundy Lake**	**0.38**	**154**			**Pg**	**07 48 40.8**	**-0.7**
TVH1	**TV Hill, Hawth**	**0.49**	**82**			**Pg**	**07 48 42.0**	**-0.9**
TVH1						**Sg**	**07 48 49.7**	**-0.5**
YERR	**Yerington**	**0.60**	**11**			**Pg**	**07 48 44.3**	**-1.4**
YERR					Sg	**Sg**	**07 48 52.8**	**-0.9**
LHV	**Little Huntoon**	**0.71**	**101**			**Pg**	**07 48 46.9**	**-0.8**
LHV						**Sg**	**07 48 56.9**	**-0.1**
PNTR	**Pine Nut**	**0.71**	**347**			**Pg**	**07 48 46.6**	**-1.2**
RYN	**Ryan**	**0.72**	**71**			**Pg**	**07 48 46.8**	**-1.1**
RYN					Sg	**Sg**	**07 48 56.3**	**-1.0**
MDCM	**Deadman Creek**	**0.73**	**158**			**Pg**	**07 48 47.2**	**-0.9**
MINS	**Minaret Summit**	**0.78**	**160**			**Pg**	**07 48 48.1**	**-1.0**
MINS						**Sg**	**07 48 58.8**	**-0.4**
MDYM	**Dry Creek**	**0.79**	**158**			**Pg**	**07 48 48.5**	**-0.7**
MDYM						**Sg**	**07 48 59.8**	**+0.2**
MDPB	**Devils Postpil**	**0.80**	**162**		Pg	**Pg**	**07 48 48.3**	**-1.0**
MDPB					Sg	**Sg**	**07 48 59.0**	**-0.8**
MMLB	**Mammoth Lakes**	**0.80**	**156**			**Pg**	**07 48 48.8**	**-0.6**
MMLB						**Sg**	**07 49 00.1**	**+0.2**
MEMM	**East Mammoth H**	**0.81**	**154**			**Pg**	**07 48 48.9**	**-0.6**
MLIM	**Lincoln Peak**	**0.81**	**159**			**Pg**	**07 48 49.0**	**-0.6**
MLIM						**Sg**	**07 49 00.2**	**+0.1**
MMSM	**Mammoth Summit**	**0.81**	**159**			**Pg**	**07 48 48.8**	**-0.8**
MMPM	**Mammoth Pass**	**0.83**	**160**			**Pg**	**07 48 49.1**	**-0.9**
MRDM	**Red Cones**	**0.83**	**162**			**Pg**	**07 48 49.1**	**-0.9**
OMMB	**Old Mammoth Mi**	**0.84**	**158**			**Pg**	**07 48 49.2**	**-0.9**
OMMB					Sg	**Sg**	**07 49 00.2**	**-0.8**
MCBM	**Casa Benchmark**	**0.84**	**152**			**Pg**	**07 48 49.5**	**-0.6**
MLHM	**Little Hot Cre**	**0.84**	**147**			**Pg**	**07 48 49.6**	**-0.6**
NVAR	**Mina Array Bea**	**0.85**	**87**	Pg		**Pg**	**07 48 48.9**	**-1.6**
	179nm,0.3s,baz=264,slow=18,SNR=1813							
NVAR				Lg		Lg	07 49 01.1	
	715nm,0.3s,baz=208,slow=30,SNR=23							
MGPM	**Gravel Pit**	**0.86**	**153**			**Pg**	**07 48 49.9**	**-0.6**
CMB	**Columbia Colle**	**0.86**	**246**			**Pg**	**07 48 49.6**	**-0.9**
CMB					Sg	**Sg**	**07 49 01.1**	**-0.6**
MLCM	**Laurel Creek C**	**0.86**	**154**			**Pg**	**07 48 49.8**	**-0.8**
MDRNC	**Doe Ridge**	**0.87**	**150**			**Pg**	**07 48 50.0**	**-0.7**
MLAC	**Mammoth, Mammo**	**0.88**	**150**	P		**Pg**	**07 48 50.2**	**-0.7**
	baz=331							
MLAC				S		**Sb**	**07 49 02.6**	**-0.7**
	baz=331							
MLAC	**Mammoth, Mammo**	**0.88**	**150**			**Pg**	**07 48 50.1**	**-0.7**
MCMM	**Convict Lake**	**0.88**	**152**			**Pg**	**07 48 50.1**	**-0.8**
RUBR	**Rubicon Trail**	**0.89**	**318**			**Pg**	**07 48 50.4**	**-0.7**
RUBR					Sg	**Sg**	**07 49 02.4**	**-0.3**
MCVM	**Convict Lake**	**0.92**	**151**			**Pg**	**07 48 50.7**	**-0.9**
VCNR	**Virginia City**	**0.93**	**347**			**Pg**	**07 48 50.5**	**-1.3**
VCNR					Sg	**Sg**	**07 49 02.9**	**-1.0**
BENR	**Benton**	**0.93**	**136**			**Pg**	**07 48 50.9**	**-1.1**
ORC	**Owens River**	**0.95**	**142**			**Pg**	**07 48 51.2**	**-1.0**
TAHR	**Tahoe**	**0.97**	**322**			**Pg**	**07 48 51.8**	**-0.8**
NV11	**Mina Array Sit**	**0.97**	**87**	Pg		**Pg**	**07 48 51.1**	**-1.6**
MRCM	**Red Rock Canyo**	**1.00**	**135**			**Pg**	**07 48 52.2**	**-1.0**
MMIM	**Miami Mountain**	**1.01**	**196**			**Pg**	**07 48 52.3**	**-1.0**
MPK	**Martis Peak**	**1.03**	**331**			**Pg**	**07 48 52.8**	**-1.0**
RCCR	**Rock Creek Can**	**1.05**	**149**			**Pg**	**07 48 53.0**	**-1.1**
MCUB	**Copperopolis B**	**1.05**	**247**			**Pg**	**07 48 52.9**	**-1.3**
KCC	**Kaiser Creek**	**1.07**	**177**			**Pg**	**07 48 53.3**	**-1.2**
MCDM	**Chidago Canyon**	**1.13**	**138**			**Pb**	**07 48 54.7**	**-0.9**
MNHB	**New Hogan Dam**	**1.15**	**258**			**Pb**	**07 48 54.5**	**-1.3**
MLNR	**Milner Canyon**	**1.15**	**134**			**Pb**	**07 48 54.8**	**-1.1**
SCHCA	**Scheelite**	**1.17**	**151**			**Pb**	**07 48 55.3**	**-1.1**
VPK	**Verdi Peak**	**1.19**	**335**			**Pb**	**07 48 55.5**	**-1.3**
DONR	**Donner Summit**	**1.20**	**323**			**Pb**	**07 48 55.6**	**-1.3**
KVN	**Kaiserville**	**1.21**	**56**	Pn		**Pb**	**07 48 55.3**	**-1.7**
KVN						**Sb**	**07 49 11.2**	**-1.5**
MFBM	**Five Bridges**	**1.23**	**141**			**Pn**	**07 48 56.5**	**-0.7**
MTUM	**Tungsten Hills**	**1.23**	**147**			**Pn**	**07 48 56.4**	**-0.9**
IND	**Independence**	**1.26**	**326**			**Pn**	**07 48 56.9**	**-0.9**
KBF	**Kyburz Flat**	**1.28**	**330**			**Pn**	**07 48 57.3**	**-0.9**
PEAR	**Peavine Mounta**	**1.29**	**340**			**Pn**	**07 48 57.4**	**-0.9**
MYLM	**Yosemite Lake**	**1.29**	**219**			**Pn**	**07 48 57.8**	**-0.3**
PAHR	**Pah Rah Range**	**1.31**	**0**			**Pn**	**07 48 57.3**	**-1.1**
BABR	**Babbit Peak**	**1.33**	**335**			**Pn**	**07 48 58.1**	**-0.8**
MHDM	**Hidden Dam**	**1.33**	**198**			**Pn**	**07 48 58.1**	**-0.5**
AASM	**Arroyo Seco**	**1.35**	**272**			**Pn**	**07 48 58.6**	**-0.2**
POCCA	**Poleta Canyon**	**1.35**	**139**			**Pn**	**07 48 58.4**	**-0.7**
AFDM	**Forest Hills D**	**1.36**	**295**	Pn		**Pn**	**07 48 58.2**	**-0.7**
**

NADM	Allendale	2.03 273		Pb	Pb	07 49 10.6	-0.2
CDOM	Doolan Road	2.04 252		Pb	Pb	07 49 10.6	-0.4
CRPB	Russellman Par	2.04 257		Pb	Pb	07 49 09.7	-1.4
PACP	Pacheco Peak	2.04 228		Pb	Pb	07 49 09.8	-1.3
SUTB	Sutter Butte	2.05 295		Pb	Pb	07 49 10.5	-0.8
BMSM	Mercy Hot Spri	2.06 213		Pb	Pb	07 49 10.7	-0.7
PWMM	Westland Maint	2.06 199		Pb	Pb	07 49 11.3	-0.1
MHC	Mount Hamilton	2.07 240		Pb	Pb	07 49 10.5	-1.1
VOG	Valley Oaks Go	2.07 180	P	Pb	Pb	07 49 10.8	-0.7
	baz=0.1						
VOG			Sb	Sg	Sg	07 49 38.7	-1.6
	baz=0.1						
CVLM	Vallecito	2.08 249		Pb	Pb	07 49 10.7	-1.0
GHS	Gilroy Hot Spr	2.08 232		Pb	Pb	07 49 10.3	-1.4
RCTC	Rector, Farmer	2.09 177		Pb	Pb	07 49 10.9	-0.9
CTAM	Taylor	2.10 261		Pb	Pb	07 49 11.3	-0.8
HSPM	Sheep	2.11 234		Pb	Pb	07 49 10.9	-1.4
MRHM	Rocky Hill	2.12 173		Pb	Pb	07 49 10.8	-1.6
CRHM	Round Hill Res	2.12 256		Pb	Pb	07 49 11.2	-1.2
GRAC	Grapevine Rang	2.13 130	P	Pn	Pn	07 49 10.0	+0.5
	baz=312						
HFEM	San Felipe	2.13 229		Pb	Pb	07 49 11.1	-1.4
CCOB	Coe Ranch Numb	2.13 239		Pb	Pb	07 49 11.1	-1.5
HLTM	Lone Tree Road	2.14 226		Pn	Pb	07 49 10.8	+1.2
CMJM	Mission San Jo	2.15 247		Pb	Pb	07 49 11.3	-1.5
CADM	Anderson Res.	2.15 236		Pn	Pb	07 49 11.0	+1.2
BAVM	Antelope Valle	2.18 217		Pb	Pb	07 49 11.9	-1.5
CNIC	Niles Canyon	2.18 250		Pb	Pb	07 49 11.6	-1.9
BGC	Bolinger Road	2.18 256		Pb	Pb	07 49 12.3	-1.2
HJSM	John Smith Roa	2.18 225		Pb	Pb	07 49 11.8	-1.7
NLHM	Lake Herman	2.19 264		Pb	Pb	07 49 12.1	-1.4
BEMM	Emmet	2.20 219		Pb	Pb	07 49 12.3	-1.4
CLCB	Lake Chabot	2.21 254		Pb	Pb	07 49 12.3	-1.6
CWC	Cottonwood Cre	2.21 151	P	Pb	Pb	07 49 12.3	-1.7
	baz=333						
CWC			Sb	Sg	Sg	07 49 42.9	-2.0
	baz=333						
CWC	Cottonwood Cre	2.21 151		Pb	Pb	07 49 14.2	+0.1
NBPM	Berryessa Peak	2.21 278		Pb	Pb	07 49 12.9	-1.1
SMCB	Saint Mary's C	2.22 256		Pb	Pb	07 49 12.7	-1.3
BRIB	Briones	2.23 259		Pb	Pb	07 49 12.7	-1.5
BHRM	Hodges Ranch	2.23 222		Pb	Pb	07 49 12.6	-1.7
HLPM	Lions Peak	2.23 234		Pb	Pb	07 49 12.2	+1.3
JLAB	Laurel Hill	2.23 237		Pb	Pb	07 49 12.4	-1.9
BEHM	Elkhorn Ranch	2.23 220		Pb	Pb	07 49 12.8	-1.5
OCR	O'Connell Ranc	2.23 229		Pn	Pb	07 49 12.3	+1.3
BBGB	Big Mountain B	2.23 216		Pb	Pb	07 49 13.1	-1.3
BSLM	Silva Ranch	2.24 225		Pb	Pb	07 49 12.7	-1.8
JSTM	Santa Teresa H	2.24 239		Pn	Pb	07 49 12.2	+1.1
SPG2	Springville 2	2.24 167		Pb	Pb	07 49 13.3	-1.2
CSR	Chase Ranch	2.25 231		Pn	Pb	07 49 12.3	+1.1
CSLM	San Leandro Hi	2.25 254		Pb	Pb	07 49 12.7	-2.0
CPIM	Pinole Ridge	2.26 261		Pb	Pb	07 49 13.2	-1.6
PARM	Anticline Ridg	2.27 200		Pb	Pb	07 49 14.2	-0.8
CMCM	Mills College	2.28 255		Pb	Pb	07 49 13.2	-2.0
BLRM	Lewis Ranch	2.28 222		Pb	Pb	07 49 13.7	-1.5
BCGM	Cienega Road	2.29 223		Pb	Pb	07 49 13.4	-1.9
CVPM	Vollmer Peak	2.29 258		Pb	Pb	07 49 13.6	-1.7
BVYM	Vineyard	2.29 225		Pb	Pb	07 49 13.5	-1.9
BKS	Berkeley--Byer	2.30 258		Pb	Pb	07 49 13.6	-1.9
AMC	Almaden	2.30 238		Pn	Pb	07 49 13.3	+1.4
HBTM	San Juan Bauti	2.30 229		Pb	Pb	07 49 13.6	-1.9
SAO	San Andreas Ge	2.30 226		Pn	Pb	07 49 13.2	+1.3
ANZ	Anzar Road	2.31 230		Pb	Pb	07 49 13.6	-2.0
BBNM	San Benito	2.31 216		Pb	Pb	07 49 14.7	-1.0
BVL	Bear Valley	2.31 219		Pb	Pb	07 49 13.6	-2.1
VAK	Adit at Lawren	2.31 258		Pb	Pb	07 49 14.0	-1.7
PHRM	Hernandez Vall	2.31 210		Pb	Pb	07 49 13.7	-2.1
BL67	Building 67, L	2.32 258		Pb	Pb	07 49 13.8	-2.0
CBC	Chamberlain	2.32 232		Pn	Pb	07 49 13.5	+1.4
BRK	Berkeley--Havi	2.32 258		Pb	Pb	07 49 14.2	-1.7
JHLM	Holstrom Ranch	2.32 237		Pn	Pb	07 49 13.4	+1.2
BJOM	Mount Johnson	2.33 222		Pb	Pb	07 49 13.9	-2.1
FRP	Fremont Peak	2.33 226		Pn	Pb	07 49 13.6	+1.2
JUMM	Mount Umunhum	2.34 239		Pn	Pb	07 49 13.6	+1.2
CSPM	San Pablo Ridg	2.34 260		Pb	Pb	07 49 14.5	-1.7
HJGM	San Juan Grade	2.35 228		Pb	Pb	07 49 13.6	+1.0
LRV	Little Rabbit	2.35 214		Pb	Pb	07 49 15.0	-1.4
BPIM	Pinnacles	2.37 217		Pn	Pb	07 49 14.2	+1.4
HCOM	Corn Cob Canyo	2.37 231		Pn	Pb	07 49 14.0	+1.1
HTUM	Tustin Road	2.37 230		Pn	Pb	07 49 13.7	+0.8
JSGM	Saratoga Golf	2.38 243		Pb	Pb	07 49 14.6	-2.2
PKEM	Kettleman Hill	2.40 194		Pb	Pb	07 49 16.4	-0.7
SCZ	Santa Cruz	2.40 222		Pn	Pb	07 49 14.3	+1.1
PBWM	Bitterwater Cr	2.41 211		Pb	Pb	07 49 15.4	-1.9
LCMM	Colby Mountain	2.41 317		Pn	Pb	07 49 15.0	+1.4
CVS	Carmenet Viney	2.41 270		Pn	Pb	07 49 14.8	+1.4
CYBM	Yerba Buena Is	2.41 257		Pn	Pb	07 49 14.8	+1.4
BSRM	Salinas Radio	2.41 225		Pn	Pb	07 49 14.5	+1.0
JSFB	Stanford Teles	2.41 247		Pb	Pb	07 49 15.1	-2.3
CPMM	Point Molate	2.42 260		Pb	Pb	07 49 15.2	-2.3
JELB	Ellicott, Sant	2.42 234		Pn	Pb	07 49 14.8	+1.3
NMTM	Middletown	2.43 281		Pn	Pb	07 49 15.2	+1.5
BJCM	Johnson Can.	2.43 221		Pn	Pb	07 49 14.9	+1.2
HERM	Elkhorn Road	2.43 230		Pn	Pb	07 49 14.7	+0.9
MNRC	McLaughlin Min	2.44 282		Pb	Pb	07 49 15.9	-2.0
JFP	Foothills Park	2.44 246		Pn	Pb	07 49 15.1	+1.2
PMPB	Monarch Peak	2.45 208		Pn	Pb	07 49 13.2	-0.7
GFC	Funks Creek	2.45 293		Pb	Pb	07 49 15.6	-2.3
JRGM	Rodeo Gulch Ro	2.45 237		Pn	Pb	07 49 15.0	+1.1
JCPM	Coyote Point	2.45 252		Pn	Pb	07 49 15.5	+1.6
JJRM	Joaquin Road	2.46 246		Pn	Pb	07 49 15.6	+1.5
JRSC	Jasper Ridge	2.46 247		Pn	Pb	07 49 15.2	+1.2
BSGM	Shirttail Gulc	2.47 217		Pn	Pb	07 49 15.9	+1.7
JHPM	Huddart Park	2.49 249		Pb	Pb	07 49 16.4	-2.3
JPRM	Presidio of Sa	2.50 257		Pn	Pb	07 49 16.2	+1.5
PSMM	Smith Mountain	2.51 203		Pb	Pb	07 49 17.1	-2.0
GWKM	Walker Ridge	2.51 286		Pn	Pb	07 49 16.6	+1.7
LRC	Lone Oak Road	2.51 212		Pn	Pb	07 49 16.6	+1.8
JCHM	Cahill Ridge	2.52 251		Pn	Pb	07 49 16.5	+1.6
JBNB	Ben Lomond Mou	2.53 241		Pn	Pb	07 49 16.3	+1.2
GBMM	Baldy Mountain	2.54 288		Pn	Pb	07 49 17.0	+1.7
BPCNC	Pine Canyon	2.54 225		Pn	Pb	07 49 16.3	+1.1
NHSM	Mount Saint He	2.54 277		Pn	Pb	07 49 16.8	+1.5
BGH	Bear Gulch	2.56 247		Pn	Pb	07 49 16.7	+1.3
VES	Vestal, Richgr	2.56 174	P	Pb	Pb	07 49 17.7	-2.2
	baz=355						
VES			Sb	Sb	Sb	07 49 52.7	+1.3
	baz=355						
VES	Vestal, Richgr	2.56 174		Pb	Pb	07 49 18.4	-1.5
CTM	Castle Mountai	2.57 197		Pb	Pb	07 49 18.4	-1.7
NTYM	Taylor	2.57 271		Pn	Pb	07 49 17.1	+1.5
BSMM	Soledad Missio	2.58 220		Pn	Pb	07 49 17.4	+1.6
MFS	McCloud Flat S	2.58 151		Pb	Pb	07 49 20.9	+0.5
PHPM	Hope Ranch	2.59 202		Pb	Pb	07 49 18.4	-2.2
PKD	Bear Valley Ra	2.61 201		Pn	Pb	07 49 18.2	+2.0
GBGM	Boggs Mountain	2.61 280		Pb	Pb	07 49 18.3	-2.5
MAC	Mark West Spri	2.62 275		Pn	Pb	07 49 17.9	+1.6
GRTM	Round Top Moun	2.62 283		Pn	Pb	07 49 17.7	+1.4
PSRM	Scobie Ranch	2.63 196		Pb	Pb	07 49 18.8	-2.3
PVCM	Vineyard Canyo	2.63 201		Pn	Pb	07 49 18.5	+2.0
PHFM	Heflinger Ranc	2.63 198		Pb	Pb	07 49 19.6	-1.6
GCRM	Castle Rock Sp	2.63 279		Pn	Pb	07 49 18.2	+1.7
GCK	Clark Valley	2.64 297		Pb	Pb	07 49 18.6	-2.7
HAST	Hastings Reser	2.64 221		Pn	Pb	07 49 18.0	+1.4
GSGM	Seigler Mounta	2.64 281		Pb	Pb	07 49 18.6	-2.7
PSAM	San Ardo	2.65 207		Pb	Pb	07 49 19.1	-2.3
GAXM	Alexander Vall	2.66 278		Pn	Pb	07 49 18.3	+1.5
RVCM	Rose Valley Ce	2.66 153		Pb	Pb	07 49 22.2	+0.5
O03E	Paynes Creek	2.67 316	P	Pn	Pn	07 49 18.8	+1.9
	baz=134,SNR=470						
O03E			S	Sb	Sb	07 49 56.5	+1.9
	baz=134						
O03E	Paynes Creek	2.67 316		Pn	Pn	07 49 18.9	+1.9
GTSM	Trough Springs	2.67 291		Pb	Pb	07 49 19.1	-2.8
HMOM	Monterey	2.69 229		Pn	Pb	07 49 18.4	+1.2
WCSM	Coso Springs S	2.69 151		Pb	Pb	07 49 23.2	+1.0
PCCM	Crazy Canyon	2.70 212		Pb	Pb	07 49 19.6	-2.7
GDXM	Geysers	2.70 280		Pn	Pb	07 49 18.2	+0.7
BCWM	Chews Ridge	2.71 220		Pn	Pb	07 49 19.3	+1.7
JRC2	Joshua Ridge	2.72 152		Pb	Pb	07 49 23.3	+0.6
WCHM	Chimney Peak	2.72 157		Pb	Pb	07 49 22.9	+0.2
PWKM	Work Ranch	2.72 200		Pb	Pb	07 49 20.0	-2.7
PAGB	Antelope Grade	2.74 195		Pn	Pb	07 49 20.2	+2.2
MCCM	Marconi Confer	2.76 266		Pn	Pb	07 49 19.2	+1.1
NMCNC	Mill Creek, So	2.77 275		Pn	Pb	07 49 20.1	+1.7
MPMC	Manual Prospec	2.78 146	P	Pn	Pb	07 49 19.4	+0.7
	baz=328						
TRAM	Private Proper	2.80 195		Pb	Pb	07 49 21.5	-2.5
PTRM	Twissleman Ran	2.81 194		Pb	Pb	07 49 21.4	-2.8
ISA	Isabella, Lake	2.82 165		Pb	Pb	07 49 24.3	-0.2
	baz=346						
ISA				Sb	Sb	07 50 00.9	+1.9
	baz=346						
WORM	Onyx Ranch	2.84 161			Pb	07 49 24.9	+0.1
BAPM	Anderson Peak	2.85 220			Pn	07 49 20.9	+1.4
BPOM	Post Ranch	2.87 222			Pn	07 49 20.9	+1.1
TPNV	Topopah Spring	2.88 119	P		Pn	07 49 19.9	-0.1
	baz=301						
TPNV	Topopah Spring	2.88 119		Pn	Pn	07 49 20.0	0.0
TOW	Tower One	2.89 153			Pg	07 49 27.3	-1.9
PAPM	Alder Peak	2.93 213			Pn	07 49 22.8	+2.1
HOPS	Hopland Field	2.94 283			Pn	07 49 22.6	+1.9
TSCN	Private Proper	2.94 195			Pb	07 49 23.6	-2.8
FTR	Fort Ross	2.96 274			Pn	07 49 22.6	+1.5
R11A	Troy Canyon, C	2.99 90		P	Pn	07 49 21.1	-0.5
	baz=272						
R11A				Sb	Sb	07 50 06.1	+2.0
	baz=272						
R11A	Troy Canyon, C	2.99 90		Pn	Pn	07 49 21.4	-0.1
SMMC	Simmler	3.11 189		P	Pn	07 49 24.3	+1.2
	baz=8.9						
O02D	Mt. Diablo Mer	3.18 305		P	Pn	07 49 25.8	+1.7
	baz=123,SNR=12						
LRMC	Laurel Mtn Rad	3.21 154		Pb	Pb	07 49 31.4	+0.3
	baz=336						
LRMC				Sb	Sg	07 50 13.6	-3.5
	baz=336						
WDC	Whiskeytown Da	3.27 313			Pn	07 49 26.7	+1.4
ARVC	Arvin	3.29 172		P	Pn	07 49 28.3	+2.8
	baz=352						
ARVC				Sb	Sb	07 50 14.6	+2.1
	baz=352						
BCW	Bitter Crk WRg	3.44 180			Pn	07 49 30.4	+2.7
PKM	Mcpherson Peak	3.51 186		P	Pn	07 49 30.7	+1.9
	baz=5.6						
SHOC	Shoshone, Teco	3.52 134		P	Pn	07 49 29.4	+0.7
	baz=316						
PRN	Pahroc Range	3.57 105			Pn	07 49 30.1	+0.6
MOD	Modoc Plateau	3.58 349		Pn	Pn	07 49 30.5	+0.9
MOD	Modoc Plateau	3.58 349			Pb	07 49 37.8	+0.4
N02D	Trinity Center	3.63 316		P	Pn	07 49 31.2	+0.9
	baz=134						
EDW2	Edwards Air Fo	3.68 162		Pb	Pb	07 49 39.1	0.0
	baz=343						
GSC	Goldstone, Bar	3.72 145		Pb	Pb	07 49 40.7	+1.0
	baz=327						
GSC	Goldstone, Bar	3.72 145		Pn	Pn	07 49 32.7	+1.2
OSI	Osito Audit: C	3.81 172		Sb	Sb	07 50 30.3	+2.8
	baz=352						
SHPR	Sheep Range	3.86 118			Pn	07 49 34.4	+0.9
M04C	Macdoel	3.87 332		P	Pn	07 49 36.3	+2.7
	baz=150,SNR=9.8						
ELK	Elko	3.98 52		Pn	Pn	07 49 34.2	-0.9
	22nm,0.3s,baz=247,slow=10,SNR=445						
ELK				Sn	Sn	07 50 21.2	-0.8
	1.5nm,0.3s,baz=23,slow=22,SNR=1.3						
ELK				Lg	Lg	07 50 37.0	
	22nm,0.3s,baz=127,slow=10.0,SNR=16						
ELK				LR	LR	07 51 24.5	
	comp=Z,149nm,19.6s,baz=77,slow=44						
ELK	Elko	3.98 52			Pn	07 49 34.4	-0.7
M02C	Callahan	4.01 319		P	Pn	07 49 38.3	+2.8
	baz=137,SNR=6.9						
KHMM	Horse Mountain	4.17 308			Pn	07 49 37.3	-0.5
YBH	Yreka Blue Hor	4.20 324		Pn	Pn	07 49 40.4	+2.4
	1.5nm,0.3s,baz=130,slow=9.9,SNR=24						
YBH				Lg	Lg	07 50 45.8	
	1.4nm,0.3s,baz=273,slow=14,SNR=6.4						
YBH	Yreka Blue Hor	4.20 324		Pn	Pn	07 49 39.8	+1.7
PSUT	Pine Spring	4.35 86			Pn	07 49 42.0	+1.7
L04D	Klamath Falls	4.42 331		P	Pn	07 49 44.1	+2.9
	baz=149,SNR=21						
ICU	Indian Springs	4.51 104			Pn	07 49 43.3	+1.0
K04D	Chiloquin, OR	4.60 338		P	Pn	07 49 46.4	+2.8
	baz=156						
CCUT	Cedar City	4.84 98		Pn	Pn	07 49 48.9	+1.9
LCMT	Little Creek M	5.07 104			Pn	07 49 50.8	+0.7
LCMT				Pg	Pg	07 50 08.8	-2.1
J05D	Fort Rock, OR	5.08 345		P	Pn	07 49 53.7	+3.4
	baz=163,SNR=8.1						
J04D	Umpqua Nationa	5.26 338		P	Pn	07 49 56.3	+3.5
	baz=156						
PFO	Pinyon Flats O	5.33 153		Pn	Pn	07 49 59.2	+5.5
	0.9nm,0.3s,baz=333,slow=12,SNR=13						
PFO				Lg	Lg	07 51 22.0	
	3.5nm,0.3s,baz=100,slow=0.7,SNR=3.9						
PFO				LR	LR	07 52 18.2	
	comp=Z,300nm,20.4s,baz=324,slow=41						
KNB	Kanab	5.39 103			Pn	07 49 54.6	+0.1
KNB				Pg	Pg	07 50 13.2	-3.9
DUG	Dugway, Tooele	5.41 69		P	Pn	07 49 54.9	+0.1
	baz=253						
DUG	Dugway, Tooele	5.41 69			Pn	07 49 55.4	+0.6
W13A	Hualapai Mount	5.51 125			Pg	07 50 15.0	-4.4
BGU	Big Grassy Mou	5.52 61			Pn	07 49 56.3	-0.1
I04A	Tendick Farm,	5.86 338		P	Pn	07 50 04.6	+3.8
	baz=156,SNR=10						
NLU	North Lily Min	5.89 72			Pn	07 50 02.2	+0.7
U15A	North Rim	5.98 107		Pn	Pn	07 50 03.8	+1.0
MONP2	Monument Peak	6.00 155		P	Pn	07 50 05.6	+2.7
	baz=337						
I03D	Drain, OR	6.09 332		P	Pn	07 50 08.8	+4.9
	baz=149,SNR=11						
HVU	Hansel Valley	6.10 54			Pn	07 50 04.4	+0.2
I05D	Terrebonne, OR	6.12 347		P	Pn	07 50 08.4	+4.0
	baz=165,SNR=11						
CTU	Camp Tracy	6.34 66			Pn	07 50 08.7	+1.2
H04D	Lebanon	6.62 339		P	Pn	07 50 15.8	+4.6
	baz=156						
BMO	Blue Mountains	6.64 13			Pn	07 50 13.2	+1.6
HWUT	Hardware Ranch	6.81 59			Pn	07 50 15.6	+1.6
Y14A	Wickenburg	6.81 129			Pg	07 50 39.7	-4.7
P17A	Butcher Ranch,	6.83 78			Pn	07 50 15.5	+1.2
G05D	Wamic, OR	6.99 349		P	Pn	07 50 20.6	+4.2
	baz=167						
G03D	McMinnville, O	7.40 338		P	Pn	07 50 26.2	+4.3
	baz=156						
AHID	Auburn Hatcher	7.67 53		Pn	Pn	07 50 24.6	-1.3
PV23	Carpenter Ridg	8.15 86		Pn	Pn	07 50 35.8	+3.3
E04D	Cinebar	8.49 345		P	Pn	07 50 41.0	+4.1
	baz=163						
BW06	Boulder Array	8.66 57		P	Pn	07 50 41.5	+1.9
	baz=243						
PD31	Pinedale Array	8.66 57			Pn	07 50 41.6	+2.1
PDAR	Pinedale Array	8.66 57		Pn	Pn	07 50 42.0	+2.5
	0.6nm,0.3s,baz=237,slow=12,SNR=17						
PDAR				Lg	Lg	07 53 03.3	
	0.2nm,0.3s,baz=214,slow=23,SNR=2.2						
MSO	Missoula	9.34 24		P	Pn	07 50 51.3	+2.7
	baz=207						
MSO	Missoula	9.34 24			Pn	07 50 52.0	+3.4
NEW	Newport	10.01 9		LR	LR	07 55 16.1	
	comp=Z,157nm,18.9s,baz=198,slow=41						
K22A	Casper	10.68 62			Pn	07 51 09.1	+2.1
ANMO	Albuquerque	10.94 104		Pn	Pn	07 51 16.6	+5.9
	0.0nm,0.3s,baz=172,slow=19,SNR=1.0						
ANMO				Pg		07 51 56.9	
	0.1nm,0.3s,baz=283,slow=14,SNR=3.1						
ANMO				Lg	Lg	07 54 17.8	
	0.1nm,0.3s,baz=32,slow=13,SNR=2.2						
ANMO				LR	LR	07 56 11.9	
	comp=Z,68nm,18.5s,baz=308,slow=42						
TXAR	Lajitas Array	15.86 120		Pn	P	07 52 21.1	-0.1
	0.0nm,0.3s,baz=299,slow=13,SNR=5.8						
ECSD	EROS Data Cent	17.96 65		P	P	07 52 43.9	-0.4
ULM	Lac du Bonnet	20.48 47		P	Pn	07 53 12.6	-1.3
	2.2nm,0.5s,baz=256,slow=8.0,SNR=3.4						
ULM	Lac du Bonnet	20.48 47		P	P	07 53 11.7	-0.1
ULM				IAmb	IAmb	07 53 16.1	
	comp=Z,5.8nm,0.9s						
F36A	Milaca	20.53 60		P	P	07 53 12.2	-0.1
F36A				IAmb	IAmb	07 53 14.7	
	comp=Z,6.9nm,1.3s						
SPMN	Marine on St.	20.90 62		P	P	07 53 16.3	-0.1
SPMN				IAmb	IAmb	07 53 22.3	
	comp=Z,5.8nm,0.9s						
B35A	Bob, Littlefor	21.06 54		Pn	P	07 53 18.8	+0.8
DLBC	Dease Lake	21.21 344		LR	LR	08 01 51.9	
	comp=Z,127nm,20.9s,baz=142,slow=38						
NATX	Nacogdoches	21.26 101		P	P	07 53 16.2	-4.1
NATX				IAmb	IAmb	07 53 16.3	
	comp=Z,12nm,0.8s						
P43A	Skaggs, Pawnee	23.20 78		P	P	07 53 41.0	+0.2
Q44A	Meyer Farm, Va	23.68 79		P	P	07 53 45.8	+0.2
YKA	Yellowknife Ar	24.31 5		P	P	07 53 51.6	+0.3
	comp=Z,0.6nm,0.9s,baz=186,slow=9.8,SNR=7.5						
TKL	Tuckaleechee C	28.46 84		LR	LR	08 06 35.0	
	comp=Z,86nm,18.9s,baz=258,slow=38						
ILAR	Eielson Array	30.96 337		P	P	07 54 53.5	+2.7
	comp=Z,0.9nm,0.8s,baz=153,slow=8.1,SNR=10						
HHC	Hu-ho-hao-te	88.43 324		eP	P	08 01 26.8	+0.4
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,49nm,7.9s						
WMQ	Urumqi	94.57 341		eP	P	08 01 55.0	+0.2
LZH	Lanzhou	95.80 326		eP	P	08 01 56.3	-4.4
LZH				pP	PcP	08 02 01.3	+0.4
LZH				sP	pP	08 02 05.0	+0.1
LZH				PP	PP	08 05 57.3	+5.7
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				pmax	pmax		
	comp=Z,72nm,4.9s						

*KRSC **30** 07:50:14.5±2.0,51°.12N×159°.20E,h77km±30km,ML4.8*
*MOS **30** 07:50:16.8±0.8,51°.15N×159°.11E,h73km,mb4.8/25,Error ellipse: s-maj=9.1km s-min=3.2km az=90.4*
MOS Felt (II-III) at Severo-Kuril'sk.
*NEIC **30** 07:50:16.3±2.2,51°.09N±0°.08×159°.3E±0°.1,h51km±6km, mb4.5/53,Error ellipse: s-maj=11.9km s-min=11.2km az=142.0*
*IDC **30** 07:50:20.4±0.6,51°.26N×159°.11E,h85km±5km,mb3.8/21, mb1 4.0/24,mb1mx3.8/60,mbtmp4.1/24,MS3.4/7, Ms1 3.4/7,ms1mx3.0/36,Error ellipse: s-maj=10.8km s-min=10.5km az=103.0*

ISC 30 07:50:19.5±0.5,51°.15N±0°.04×159°.13E±0°.04,h80km±4km, n226,σ1§87/264,mb4.3/65,7C-6D,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUS	Russkaya	1.34	344	*i* P	Pn	07 50 39.9	-2.8
RUS				*e*S	Sn	07 50 57.2	-2.9
RUS	Russkaya	1.34	344	PN	Pn	07 50 39.9	-2.8
RUS				S	Sn	07 50 57.2	-2.9
ASAK	Asacha	1.45	329	*i* P	Pn	07 50 42.3	-1.9
ASAK				*e*S	Sn	07 51 01.5	-1.4
ASAK	Asacha	1.45	329	PN	Pn	07 50 42.3	-1.9
ASAK				S	Sn	07 51 01.5	-1.4
MTVR	Mutnovka	1.46	337	*e*P	Pn	07 50 41.9	-2.5
MTVR				*e*S	Sn	07 51 00.9	-2.2
MTVR	Mutnovka	1.46	337	PN	Pn	07 50 41.9	-2.5
MTVR				S	Sn	07 51 00.9	-2.2
PAU	Pauzhetka	1.49	283	*e*P	Pn	07 50 42.5	-2.1
PAU				*e*S	Sn	07 51 00.8	-2.8
PAU	Pauzhetka	1.49	283	PN	Pn	07 50 42.5	-2.1
PAU				S	Sn	07 51 00.8	-2.8
GRL	Gorelyy	1.55	335	*i* P	Pn	07 50 43.3	-2.2
GRL				*e*S	Sn	07 51 03.9	-1.3
GRL	Gorelyy	1.55	335	PN	Pn	07 50 43.3	-2.2
GRL				S	Sn	07 51 03.9	-1.3
KRMR	Karymshinskiy	1.79	340	*e*P	Pn	07 50 46.8	-1.8
KRMR				*e*S	Sn	07 51 08.3	-2.3
KRMR	Karymshinskiy	1.79	340	PN	Pn	07 50 46.8	-1.8
KRMR				S	Sn	07 51 08.3	-2.3
MIPR	Malaya Ipel'ka	1.86	308	*i* P	Pn	07 50 48.0	-1.5
MIPR				*e*S	Sn	07 51 11.7	-0.5
MIPR	Malaya Ipel'ka	1.86	308	PN	Pn	07 50 48.0	-1.5
MIPR				S	Sn	07 51 11.7	-0.5
DALK	Dalny	1.90	353	*e*P	Pn	07 50 47.5	-2.4
DALK				*e*S	Sn	07 51 10.2	-2.9
DALK	Dalny	1.90	353	PN	Pn	07 50 47.5	-2.4
DALK				S	Sn	07 51 10.2	-2.9
PET	Petropavlovsk	1.90	351⇑	*i*PN	Pn	07 50 47.4	-2.6
PET				*e*S	Sn	07 51 10.6	-2.5
PET				pmax	pmax		
	comp=Z,119nm,0.4s						
PET

KOZ	Kozyrevsk	4.94	5	*e*P		Pn	07 51 30.8	-0.3	
KOZ	Kozyrevsk	4.94	5	PN		Pn	07 51 30.8	-0.3	
ZLN	Zelenaya	4.97	11	*e*P		Pn	07 51 31.5	-0.2	
ZLN				*e*S		Sn	07 52 27.4	-0.5	
ZLN	Zelenaya	4.97	11	PN		Pn	07 51 31.5	-0.2	
ZLN				S		Sn	07 52 27.4	-0.5	
LGNR	Loginova	5.03	10	*i* P		Pn	07 51 33.0	+0.4	
LGNR	Loginova	5.03	10	PN		Pn	07 51 33.0	+0.4	
CIRR	Tsirk	5.07	10	*e*P		Pn	07 51 32.6	-0.4	
CIRR	Tsirk	5.07	10	PN		Pn	07 51 32.6	-0.4	
KRSR	Krestovskiy	5.15	9	*e*P		Pn	07 51 33.2	-0.8	
KRSR	Krestovskiy	5.15	9	PN		Pn	07 51 33.2	-0.8	
SRDR	Sredinnyy	5.19	4	*e*P		Pn	07 51 33.8	-0.7	
SRDR	Sredinnyy	5.19	4	PN		Pn	07 51 33.8	-0.7	
KLY	Klyuchi	5.25	9	*e*P		Pn	07 51 35.0	-0.3	
KLY	Klyuchi	5.25	9	PN		Pn	07 51 35.0	-0.3	
KBTR	Krutoberegovo	5.52	22	*e*P		Pn	07 51 36.8	-2.2	
KBTR				*e*S		Sn	07 52 37.2	-3.8	
KBTR	Krutoberegovo	5.52	22	PN		Pn	07 51 36.8	-2.2	
KBTR				S		Sn	07 52 37.2	-3.8	
KBG	Krutoberegovo	5.54	21	*e*P		Pn	07 51 37.4	-1.8	
KBG				*e*S		Sn	07 52 37.7	-3.7	
KBG	Krutoberegovo	5.54	21	PN		Pn	07 51 37.4	-1.8	
KBG				S		Sn	07 52 37.7	-3.7	
SMKR	Semkarok	5.61	13	*e*P		Pn	07 51 39.5	-0.9	
SMKR	Semkarok	5.61	13	PN		Pn	07 51 39.5	-0.9	
SRKR	Sorokina	5.64	12	*e*P		Pn	07 51 39.9	-0.9	
SRKR	Sorokina	5.64	12	PN		Pn	07 51 39.9	-0.9	
BKI	Bering	5.78	43	*e*P		Pn	07 51 38.8	-3.7	
BKI				*e*S		Sn	07 52 38.2	-9.1	
BKI	Bering	5.78	43	PN		Pn	07 51 38.8	-3.7	
SMY	Shemya	9.38	74	PN		Pn	07 52 26.4	-5.3	
SMY	Shemya	9.38	74			Pn	07 52 26.4	-5.3	
MA2	Magadan	9.68	334	LR		LR	07 57 30.6		
	comp=N,47nm,18.1s,baz=130,slow=45								
ERM	Erimo	14.26	236	P		Pn	07 53 31.9	-5.5	
ERM	Erimo	14.26	236	Pn		Pn	07 53 31.9	-5.6	
BILL	Bilibino	17.30	9	*e*P		P	07 54 15.5	-0.2	
BILL				pmax	pmax				
	comp=Z,2.0nm,0.9s								
BILL	Bilibino	17.30	9	P		P	07 54 16.5	+0.8	
KLR	Kul'dur	17.60	274	P		P	07 54 19.6	+0.3	
	comp=Z,0.9nm,0.3s,baz=83,slow=11,SNR=16								
KLR				LR		LR	08 01 38.0		
	comp=Z,84nm,18.0s,baz=100,slow=38								
YAK	Yakutsk	19.34	316	P		P	07 54 35.8	-2.3	
	comp=Z,0.4nm,0.3s,baz=91,slow=2.6,SNR=6.8								
YAK	Yakutsk	19.34	316	*e*P		P	07 54 35.8	-2.3	
YAK				pmax	pmax				
	comp=Z,27nm,0.8s								
YAK				pmax	pmax				
	comp=N,8.0nm,1.0s								
YAK				pmax	pmax				
	comp=E,15nm,1.1s								
YAK	Yakutsk	19.34	316	P		P	07 54 35.6	-2.5	
USRK	Ussuriysk Ar.	19.48	260	P		P	07 54 37.3	-2.6	
	baz=57,slow=13,SNR=4.1								
USRK				LR		LR	08 02 10.7		
	comp=E,55nm,20.2s,baz=22,slow=36								
MDJ	Mudanjiang	20.77	263	P		P	07 54 51.5	-2.2	
MDJ				pmax	pmax				
	comp=Z,17nm,0.7s								
MDJ				pmax	pmax				
	comp=Z,72nm,5.8s								
MJB9	Matsu-Tunnel	20.89	234	P		P	07 54 54.8	-0.4	
MJB9				IAmb	IAmb		07 54 56.0		
	comp=Z,9.7nm,0.8s								
MAJO	Matsushiro	20.89	234	P		P	07 54 54.0	-1.2	
MAJO				pmax	pmax				
	comp=Z,13nm,0.8s								
MAJO	Matsushiro	20.89	234	P		P	07 54 54.0	-1.2	
MAJO				IAmb	IAmb		07 54 55.8		
	comp=Z,13nm,0.8s								
MAT	Matsushiro	20.89	234	P		P	07 54 54.7	-0.5	
MJAR	Matsushiro Arr	20.89	234	P		P	07 54 54.9	-0.3	
	comp=Z,5.7nm,0.7s,baz=32,slow=11,SNR=16								
ANM	Nome	22.78	40	P		P	07 55 15.0	0.0	
ANM				pmax	pmax				
	comp=Z,11nm,0.9s								
ANM	Nome	22.78	40	P		P	07 55 14.9	0.0	
ANM				IAmb	IAmb		07 55 17.4		
	comp=Z,11nm,0.9s								
TIXI	Tiksi	24.62	337	P		P	07 55 31.5	-0.4	
	comp=Z,31nm,0.5s,baz=126,slow=9.6,SNR=74								
TIXI				sP		sP	07 55 57.7	-1.3	
	comp=Z,8.0nm,0.6s,baz=40,slow=2.2,SNR=2.9								
TIXI	Tiksi	24.62	337	*de*P		P	07 55 31.4	-0.5	
TIXI				pmax	pmax				
	comp=Z,45nm,1.0s								
TIXI	Tiksi	24.62	337	P		P	07 55 31.2	-0.7	
RDOG	Red Dog Mine	24.98	33	P		P	07 55 36.8	+1.5	
RDOG				IAmb	IAmb		07 55 37.6		
	comp=Z,14nm,0.7s								
HIA	Hailar	25.08	281	*de*P		P	07 55 34.9	-1.4	
HIA				pmax	pmax				
	comp=Z,10.0nm,0.7s								
HIA	Hailar	25.08	281	P		P	07 55 34.8	-1.6	
KSRS	Korea Array	25.97	250	P		P	07 55 45.4	+1.0	
	comp=Z,5.5nm,0.8s,baz=48,slow=9.6,SNR=14								
TTA	Tatalina	26.50	46	P		P	07 55 45.2	-3.9	
TTA				pmax	pmax				
	comp=Z,4.0nm,1.2s								
TTA	Tatalina	26.50	46	P		P	07 55 45.2	-3.9	
BOD	Bodaibo	26.63	302	*e*P		P	07 55 49.5	-0.7	
BOD				pmax	pmax				
	comp=Z,20nm,1.4s								
JNU	Nakatsue	27.38	240	P		P	07 56 00.0	+2.8	
	comp=Z,4.0nm,0.5s,baz=67,slow=7.4,SNR=4.7								
JNU	Nakatsue	27.38	240	P		P	07 55 59.8	+2.6	
JNU				IAmb	IAmb		07 56 09.5		
	comp=Z,8.0nm,0.8s								
KDAK	Kodiak Island	28.31	57	LR		LR	08 08 40.3		
	comp=Z,45nm,18.5s,baz=274,slow=39								
HOM	Homer	28.59	53	P		P	07 56 06.7	-1.0	
RND	Reindeer	29.76	46	P		P	07 56 17.2	-0.9	
RND				pmax	pmax				
	comp=Z,4.0nm,1.0s								
RND	Reindeer	29.76	46	P		P	07 56 17.2	-0.9	
TOLK	Toolik Lake Re	29.89	35	P		P	07 56 19.4	+0.3	
TOLK				IAmb	IAmb		07 56 20.0		
	comp=Z,3.8nm,0.6s								
SML	Sawmill	30.06	49	P		P	07 56 19.9	-0.8	
SML				IAmb	IAmb		07 56 20.5		
	comp=Z,6.1nm,0.6s								
COLA	College	30.21	43	P		P	07 56 22.3	+0.3	
COLA				pmax	pmax				
	comp=Z,5.0nm,0.9s								
COLA	College	30.21	43	P		P	07 56 22.3	+0.3	
COLA				IAmb	IAmb		07 56 22.6		
	comp=Z,4.6nm,0.8s								
CCB	Clear Creek Bu	30.23	43	P		P	07 56 21.8	-0.3	
DHY	Denali Highway	30.44	46	P		P	07 56 22.1	-2.1	
HDA	Harding Lake	30.60	44	P		P	07 56 25.1	-0.3	
IL31		30.62	43	P		P	07 56 24.5	-1.0	
ILAR	Eielson Array	30.62	43	P		P	07 56 24.6	-1.1	
	comp=Z,0.8nm,0.5s,baz=249,slow=8.0,SNR=13								
ILAR				pP		pP	07 56 44.1	+1.0	
	comp=Z,0.8nm,0.8s,baz=257,slow=8.4,SNR=5.4								
FYU	Fort Yukon	31.34	39	P		P	07 56 32.5	+0.6	
FYU				IAmb	IAmb		07 56 33.2		
	comp=Z,6.2nm,0.7s								
DOT	Dot Lake	31.90	45	P		P	07 56 35.4	-1.5	
H11N2	WAKE ISLAND Hy	31.95	166	T		T	08 30 46.2		
	baz=350,slow=76,SNR=84								
H11N3	WAKE ISLAND Hy	31.96	166	T		T	08 30 47.4		
	baz=350,slow=76,SNR=102								
H11N1	WAKE ISLAND Hy	31.96	166	T		T	08 30 46.5		
	baz=350,slow=76,SNR=59								
VRDI	Verde Repeater	32.45	49	P		P	07 56 41.9	0.0	
VRDI				IAmb	IAmb		07 56 52.5		
	comp=Z,6.6nm,1.4s								
EGAK	Eagle	33.08	43	P		P	07 56 46.3	-0.8	
EGAK				IAmb	IAmb		07 56 46.8		
	comp=Z,3.9nm,0.8s								
H11S1	WAKE ISLAND Hy	33.12	167	T		T	08 32 12.7		
	baz=350,slow=76,SNR=58								
H11S3	WAKE ISLAND Hy	33.13	167	T		T	08 32 13.1		
	baz=350,slow=76,SNR=41								
H11S2	WAKE ISLAND Hy	33.14	167	T		T	08 32 13.6		
	baz=350,slow=76,SNR=17								
BARN	Barnard Glacie	33.33	49	P		P	07 56 49.6	0.0	
BARN				IAmb	IAmb		07 57 01.7		
	comp=Z,7.1nm,1.4s								
SONM	Songino Array	33.81	285	P		P	07 56 52.8	-1.0	
	comp=Z,0.5nm,0.4s,baz=80,slow=8.6,SNR=4.7								
TLY	Talaya	33.90	293	*ce*P		P	07 56 54.5	0.0	
TLY				pmax	pmax				
	comp=Z,4.0nm,1.0s								
DAWY	Dawson	33.91	44	P		P	07 56 54.2	-0.3	
HHC	Hu-ho-hao-te	34.06	271	*e*P		P	07 56 58.5	+2.5	
HHC				pmax	pmax				
	comp=Z,10.0nm,0.8s								
HHC				pmax	pmax				
	comp=Z,15nm,5.5s								
NJ2	Nanjing	35.09	253	*e*P		P	07 57 05.0	+0.1	
NJ2				pmax	pmax				
	comp=Z,13nm,0.5s								
INK	Inuvik	35.78	36	P		P	07 57 09.8	-0.6	
	comp=Z,1.8nm,0.7s,baz=281,slow=6.1,SNR=7.3								
INK	Inuvik	35.78	36	P		P	07 57 11.0	+0.7	
INK				IAmb	IAmb		07 57 11.9		
	comp=Z,2.9nm,0.8s								
C36M	Paulatuk	38.99	33	P		P	07 57 38.2	+0.7	
C36M				IAmb	IAmb		07 57 39.4		
	comp=Z,6.7nm,0.9s								
LZH	Lanzhou	41.75	271	*e*P		P	07 57 59.5	-1.4	
LZH				PP		PP	07 59 36.8	-1.8	
LZH				pmax	pmax				
	comp=Z,29nm,1.2s								
LZH				pmax	pmax				
	comp=Z,100nm,4.9s								
LZH				LR	LR				
	comp=N,370nm,15.0s								
LZH				LR	LR				
	comp=E,370nm,15.3s								
LZH				LR	LR				
	comp=Z,560nm,17.6s								
GTA	Gaotai	42.26	278	*e*P		P	07 57 59.3	-5.6	
GTA				PcP		PcP	07 59 52.3	-5.0	
GTA				pmax	pmax				
	comp=Z,3.0nm,0.8s								
GTA				pmax	pmax				
	comp=Z,55nm,7.1s								
GTA				LR	LR				
	comp=N,61nm,17.8s								
GTA				LR	LR				
	comp=E,50nm,15.9s								
GTA				LR	LR				
	comp=Z,73nm,16.5s								
ZALV	Zalesovo Beam	43.35	304	P		P	07 58 11.4	-1.9	
	comp=Z,1.0nm,0.3s,baz=47,slow=8.2,SNR=6.2								
DGZ	Jazzator, Alta	44.02	297	*je*P		P	07 58 20.2	+1.2	
DGZ				pmax	pmax				
	comp=Z,3.0nm,0.8s								
YKA	Yellowknife Ar	45.01	41	P		P	07 58 26.2	-0.3	
	comp=Z,0.6nm,0.7s,baz=298,slow=7.7,SNR=8.2								
YKA				pP		pP	07 58 47.5	+2.7	
	comp=Z,0.4nm,0.7s,baz=297,slow=7.4,SNR=3.7								
RES	Resolute Bay	45.35	21	P		P	07 58 30.2	+1.2	
RES				pmax	pmax				
	comp=Z,11nm,1.2s								
RES	Resolute Bay	45.35	21	P		P	07 58 30.2	+1.2	
RES				IAmb	IAmb		07 58 45.7		
	comp=Z,11nm,1.2s								
WMQ	Urumqi	47.07	290	*e*P		P	07 58 45.0	+1.9	
WMQ				LR	LR				
	comp=N,250nm,16.1s								
WMQ				LR	LR				
	comp=E,91nm,20.3s								
WMQ				LR	LR				
	comp=Z,200nm,24.3s								
KURK	Kurchatov	48.27	303	*de*P		P	07 58 51.1	-1.0	
KURK				pmax	pmax				
	comp=Z,9.0nm,1.3s								
KURK	Kurchatov	48.27	303	P		P	07 58 51.3	-0.8	
MK31	Makanchi Array	48.48	297	P		P	07 58 52.1	-1.7	
MK31				pmax	pmax				
	comp=Z,6.0nm,0.5s								
MK31	Makanchi Array	48.48	297	P		P	07 58 52.1	-1.7	
MKAR	Makanchi Array	48.48	297	P		P	07 58 52.7	-1.1	
	comp=Z,6.0nm,0.5s,baz=57,slow=6.0,SNR=29								
MKAR				pP		pP	07 59 14.3	+1.3	
	comp=Z,1.9nm,0.5s,baz=60,slow=12,SNR=4.4								
MAKZ	Makanchi	48.65	297	P		P	07 58 53.8	-1.3	
MAKZ				pmax	pmax				
	comp=Z,4.0nm,0.7s								
MAKZ	Makanchi	48.65	297	P		P	07 58 53.8	-1.3	
MAKZ				IAmb	IAmb		07 58 54.5		
	comp=Z,4.2nm,0.7s								
SPA0	Spitsbergen Ar	48.95	350	P		P	07 58 57.8	+0.8	
BRVK	Borovoye	51.18	309	*de*P		P	07 59 12.9	-1.2	
BRVK				pmax	pmax				
	comp=Z,13nm,2.5s								
BRVK	Borovoye	51.18	309	P		P	07 59 14.1	-0.1	
BRVK				IAmb	IAmb		07 59 14.7		
	comp=Z,3.6nm,0.6s								
TARG	Taragay, Kyrgy	54.12	294	P		P	07 59 37.3	+0.9	
TARG				IAmb	IAmb		07 59 42.1		
	comp=Z,2.2nm,0.6s								
KDJ	Kajisay	54.22	295	P		P	07 59 36.6	-0.3	
KDJ				pmax	pmax				
	comp=Z,6.0nm,0.6s								
KDJ	Kajisay	54.22	295	P		P	07 59 36.6	-0.3	
KDJ				IAmb	IAmb		07 59 37.7		
	comp=Z,5.5nm,0.6s								
ARU	Arti	54.43	318	*di* P		P	07 59 37.5	-0.5	
ARU							08 01 39.0		
ARU				S		S	08 07 12.9	+2.7	
ARU				SS		SS	08 10 48.3	-4.4	
ARU				pmax	pmax				
	comp=Z,7.0nm,1.0s								
ARCES	ARCESS Array B	54.95	342	P		P	07 59 41.5	-0.1	
	comp=Z,1.5nm,0.6s,baz=44,slow=8.2,SNR=14								
ARE0	ARCESS Array S	54.95	342	P		P	07 59 41.4	-0.2	
FCC	Fort Churchill	55.38	37	P		P	07 59 45.6	+0.8	
FCC				pmax	pmax				
	comp=Z,6.0nm,0.8s								
FCC	Fort Churchill	55.38	37	P		P	07 59 45.6	+0.8	
FCC				IAmb	IAmb		07 59 45.9		
	comp=Z,5.6nm,0.8s								
AAK	Ala-Archa	55.41	297	*ie*P		P	07 59 44.8	-0.7	
AAK				pmax	pmax				
	comp=Z,6.0nm,1.7s								
AAK	Ala-Archa	55.41	297	P		P	07 59 45.8	+0.2	
AAK				IAmb	IAmb		07 59 46.2		
	comp=Z,3.4nm,0.4s								
SHL	Shillong	56.40	270	P		P	07 59 53.4	+0.6	
SHL				pmax	pmax				
	comp=Z,9.0nm,0.6s								
SHL	Shillong	56.40	270	P		P	07 59 53.4	+0.6	
NVAR	Mina Array Bea	56.99	68	P		P	07 59 57.2	+0.3	
	comp=Z,0.3nm,0.6s,baz=288,slow=6.5,SNR=1.9								
NVAR				pP		pP	08 00 18.5	+3.0	
	comp=Z,1.4nm,0.7s,baz=292,slow=7.8,SNR=7.6								
CMAR	Chiang Mai Arr	57.20	258	P		P	07 59 59.5	+1.2	
	comp=Z,1.3nm,0.4s,baz=24,slow=8.9,SNR=7.5								
CMAR	Chiang Mai Arr	57.20	258	*ce*P		P	08 00 01.5	+3.1	
CMAR				pmax	pmax				
	comp=Z,1.0nm,0.4s								
PDAR	Pinedale Array	59.01	59	pP		pP	08 00 33.5	+3.4	
	comp=Z,0.7nm,0.8s,baz=53,slow=0.7,SNR=2.9								
BTK	Batken	59.19	297	P		P	08 00 12.0	-0.1	
BTK				pmax	pmax				
	comp=Z,11nm,0.6s								
BTK	Batken	59.19	297	P		P	08 00 12.0	-0.1	
GAR	Garm	60.20	296	P		P	08 00 18.7	-0.4	
CHGR	Chuyangaron	61.09	297	P		P	08 00 24.2	-0.9	
FIA1	FINESS Array S	61.66	336	P		P	08 00 28.8	+0.4	
FIA1				IAmb	IAmb		08 00 29.2		
	comp=Z,6.0nm,0.9s								
FINES	FINESS Array B	61.67	336	P		P	08 00 28.4	-0.1	
	comp=Z,3.2nm,0.5s,baz=42,slow=8.2,SNR=23								
NIL	Nilore	62.22	290	P		P	08 00 33.9	+1.3	
NIL				pmax	pmax				
	comp=Z,8.0nm,0.8s								
NIL	Nilore	62.22	290	P		P	08 00 33.9	+1.3	
OBN	Obninsk	63.83	327	*e*P		P	08 00 41.5	-1.4	
OBN				pmax	pmax				
	comp=Z,4.0nm,1.1s								
LPSR	Galich'ya Gora	65.02	324	*e*P		P	08 00 51.3	+0.6	
LPSR				pmax	pmax				
	comp=Z,50nm,1.2s								
VRH	Novokhopyorsk	65.08	322	*e*P		P	08 00 49.6	-1.5	
VRH				pmax	pmax				
	comp=Z,10.0nm,0.6s								
NB201	NORSAR Array S	65.22	343	P		P	08 00 52.3	+0.4	
NB2	NORSAR Subarra	65.24	343	P		P	08 00 52.0	-0.1	
	comp=Z,0.5nm,0.4s,baz=31,slow=6.5								
NOA	NORSAR Array B	65.24	343	P		P	08 00 52.6	+0.5	
	comp=Z,0.7nm,0.6s,baz=21,slow=6.6,SNR=4.4								
VORD	Divnogorie	66.20	323	*e*P		P	08 00 57.1	-1.2	
VORD				pmax	pmax				
	comp=Z,8.0nm,1.0s								
GEYT	Alibeck	67.65	303	P		P	08 01 08.2	+0.4	
	comp=Z,2.2nm,0.5s,baz=172,slow=3.0,SNR=5.0								
GEYT				LR	LR		08 33 46.5		
	comp=Z,226nm,20.2s,baz=185,slow=39								
SCHQ	Schefferville	67.65	27	LR		LR	08 31 48.1		
	comp=Z,123nm,20.6s,baz=100,slow=37								
AKBB	Malin Array Si	69.97	329	*ce*P		P	08 01 22.5	+0.6	
KIV	Kislovodsk	70.45	317	*e*P		P	08 01 24.9	-0.2	
KIV				pmax	pmax				
	comp=Z,2.0nm,0.4s								
KBZ	Khabaz	70.54	316	P		P	08 01 26.2	+0.8	
	comp=Z,3.0nm,0.8s,baz=62,slow=2.6,SNR=6.3								
TX31	Lajitas Ar. Si	71.96	66	P		P	08 01 34.4	0.0	
TX32	Lajitas Array	71.96	66	P		P	08 01 34.7	+0.2	
TXAR	Lajitas Array	71.96	66	P		P	08 01 34.2	-0.2	
	comp=Z,0.4nm,0.5s,baz=307,slow=4.8,SNR=5.6								
TXAR				pP		pP	08 01 56.6	+2.6	
	comp=Z,1.1nm,0.5s,baz=302,slow=5.4,SNR=10								
KWP	Kalwaria Pacla	72.94	332	P		P	08 01 40.5	+0.7	
KWP				pmax	pmax				
	comp=Z,16nm,1.4s								
KWP	Kalwaria Pacla	72.94	332	P		P	08 01 40.5	+0.7	
FCAR	Ozark Folk Cen	73.20	53	P		P	08 01 40.3	-1.3	
WRA	Warramunga Arr	74.07	204	P		P	08 01 46.6	-0.1	
	comp=Z,0.6nm,0.6s,baz=13,slow=6.4,SNR=2.5								
WRA				pP		pP	08 02 10.2	+3.8	
	comp=Z,0.8nm,0.6s,baz=19,slow=6.0,SNR=3.1								
L56A	Greenwood	74.81	40	P		P	08 01 50.1	-0.9	
L56A				IAmb	IAmb		08 02 06.6		
	comp=Z,4.2nm,0.9s								
GERES	GERESS Array B	76.08	337	P		P	08 01 58.8	+0.6	
	comp=Z,1.1nm,0.4s,baz=40,slow=5.2,SNR=7.8								
TZTN	Tazewell	76.84	47	P		P	08 02 02.5	0.0	
TZTN				IAmb	IAmb		08 02 12.0		
	comp=Z,5.6nm,1.2s								
BRTR	Keskin Array B	77.73	320	P		P	08 02 08.7	+1.0	
	comp=Z,0.8nm,0.5s,baz=45,slow=2.6,SNR=2.2								
ASAR	Alice Springs	77.74	204	P		P	08 02 08.2	+0.7	
	comp=Z,0.5nm,0.6s,baz=20,slow=4.5,SNR=2.6								
ASAR				pP		pP	08 02 27.0	-0.3	
	comp=Z,0.7nm,0.6s,baz=17,slow=5.0,SNR=3.6								
PRED	Cave del Predi	78.35	336	P		P	08 02 12.5	+1.7	
PRED				IAmb	IAmb		08 02 22.2		
	comp=Z,5.1nm,1.1s								
NRCA	Norcia	81.84	335	P		P	08 02 33.1	+3.4	
NRCA				IAmb	IAmb		08 02 50.9		
	comp=Z,7.9nm,1.0s								
KEST	Kesra	89.50	336	LR		LR	08 47 28.8		
	comp=Z,244nm,18.6s,baz=166,slow=38								
NNA	Nana	120.34	70	*c i* PKIKP		PKiKP	08 09 04.4	+2.7	
NNA				pmax	pmax				
	comp=Z,53nm,1.7s								
H03N2	Juan Fernandez	134.80	90	T		T	10 40 10.0		
	baz=314,slow=77,SNR=57								
H03N1	Juan Fernandez	134.81	90	T		T	10 40 11.2		
	baz=314,slow=77,SNR=53								
H03N3	Juan Fernandez	134.81	90	T		T	10 40 11.0		
	baz=314,slow=77,SNR=98								
GO02	Mina Guanaco	134.83	74	PKPdf		PKPdf	08 09 29.1	-0.1	
PLCA	Paso Flores	144.54	93	PKIKP		PKPab	08 09 45.0	+0.2	
PLCA	Paso Flores	144.54	93	PKPdf		PKPab	08 09 45.0	+0.2	

IDC ***30*** *07:52:44.9±0.6,6°.58S×154°.37E,h0km,mb4.3/16, mb1 4.5/17,mb1mx4.3/37,mbtmp4.3/17,ML3.9/1,MS3.6/7, Ms1 3.6/7,ms1mx3.3/36,Error ellipse: s-maj=21.5km s-min=14.8km az=100.0*

NEIC ***30*** *07:52:50.5±2.2,6°.65S±0°.09×154°.46E±0°.09,h37km±5km, mb4.7/31,Error ellipse: s-maj=13.5km s-min=12.5km az=102.0*

ISC 30 07:52:51.8±0.4,**6°.65S**±0°.05×**154°.34E**±0°.06,**h48**km,**n69,** σ1**s39/73,mb4.6**/32,**MS3.6**/4,**2C-1D,**
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.27	318			Pn	Pn	07 53 41.0	+0.4
KRVT	Keravat (AS076	3.28	315	Pn		Pn	Pn	07 53 41.5	+0.8
	26nm,0.3s,baz=168,slow=3.0,SNR=12								
KRVT				Sn		Sn	Sn	07 54 21.1	+2.6
	65nm,0.3s,baz=248,slow=5.4,SNR=6.9								
HNR	Honiara	6.20	117	Pn		Pn	Pn	07 54 24.3	+3.4
	19nm,0.3s,baz=301,slow=14,SNR=1.6								
HNR				Sn		Sn	Sn	07 55 35.0	+4.5
	4.6nm,0.3s,baz=253,slow=23,SNR=1.5								
HNR				LR		LR	LR	07 56 39.3	
	comp=Z,422nm,20.7s,baz=269,slow=38								
PMG	Port Moresby	7.62	248	Pn		Pn	Pn	07 54 41.2	+0.8
	2.7nm,0.3s,baz=61,slow=10,SNR=4.7								
PMG				Sn		Sn	Sn	07 56 08.5	+3.0
	baz=76,slow=22,SNR=5.8								
PMG				LR		LR	LR	07 57 21.6	
	comp=Z,295nm,19.0s,baz=64,slow=36								
PMG	Port Moresby	7.62	248			Pn	Pn	07 54 41.5	+1.1
PATS	Pohnpei	13.97	17	Pn		Pn	Pn	07 56 07.3	+0.1
CTA	Charters Tower	15.50	210	Pn		P	P	07 56 29.2

PEA0B IAmb IAmb 08 02 56.4
comp=Z,11nm,1.1s
PETK Petropavlovsk- 59.59 2 P P 08 02 47.9 -2.7
comp=Z,1.0nm,0.7s,baz=199,slow=13,SNR=4.2
CMAR Chiang Mai Arr 60.05 296 P P 08 02 55.8 +1.3
comp=Z,1.3nm,0.3s,baz=90,slow=8.1,SNR=8.2
SONM Songino Array 68.70 328 P P 08 03 51.1 +0.5
comp=Z,1.6nm,0.7s,baz=124,slow=5.4,SNR=6.8
VNDA Vanda 70.94 178 P P 08 04 05.7 +1.9
comp=Z,0.8nm,1.0s,baz=298,slow=3.0,SNR=3.5
MK31 Makanchi Array 82.72 319 P P 08 05 11.7 +1.1
MK31 IAmb IAmb 08 05 12.8
comp=Z,5.5nm,0.8s
MKAR Makanchi Array 82.72 319 P P 08 05 11.4 +0.8
comp=Z,4.7nm,0.7s,baz=103,slow=5.2,SNR=28
MAKZ Makanchi 82.93 319 P P 08 05 11.7 0.0
MAKZ IAmb IAmb 08 05 13.3
comp=Z,10nm,1.0s
ILAR Eielson Array 83.29 22 P P 08 05 11.0 -2.2
comp=Z,1.4nm,0.9s,baz=259,slow=5.2,SNR=13
QSPA South Pole Qui 83.32 180 P P 08 05 13.3 -0.3
QSPA IAmb IAmb 08 05 27.1
comp=Z,7.2nm,1.1s
ZALV Zalesovo Beam 83.53 326 P P 08 05 13.9 -0.7
comp=Z,2.3nm,0.6s,baz=126,slow=6.0,SNR=4.9
TARG Taragay, Kyrgy 84.44 313 P P 08 05 21.2 +1.1
TARG IAmb IAmb 08 05 22.5
comp=Z,4.9nm,0.8s
KDJ Kajisay 84.99 313 P P 08 05 24.1 +1.5
EGAK Eagle 85.45 23 P P 08 05 24.3 +0.2
EGAK IAmb IAmb 08 05 25.8
comp=Z,4.4nm,1.1s
EPYK Eagle Plains 87.78 22 P P 08 05 34.9 -0.7
ARSB Arslanbob 87.89 312 P P 08 05 37.5 +0.7
RYN Ryan 91.87 52 P P 08 05 55.6 +0.2
RYN IAmb IAmb 08 05 56.7
comp=Z,5.4nm,1.1s
NVAR Mina Array Bea 92.02 52 P P 08 05 56.1 0.0
comp=Z,4.2nm,0.9s,baz=253,slow=6.7,SNR=23
NV11 Mina Array Sit 92.13 52 P P 08 05 56.1 -0.5
KVN Kaiserville 92.25 51 P P 08 05 56.8 -0.4
SYO Syowa Base 92.44 199⇑ *eP* **P 08 05 55.0 -2.2**
SYO Syowa Base 92.44 199⇑ *eX* P 08 06 06.0 +8.8
R11A Troy Canyon, C 94.13 52 P P 08 06 05.4 -0.5
R11A IAmb IAmb 08 06 06.7
comp=Z,3.5nm,1.1s
SHPR Sheep Range 94.31 54 P P 08 06 05.5 -1.2
SHPR IAmb IAmb 08 06 07.9
comp=Z,4.2nm,1.0s
W13A Hualapai Mount 95.22 55 P P 08 06 10.9 -0.1
W13A IAmb IAmb 08 06 12.4
comp=Z,3.2nm,1.0s
PSUT Pine Spring 95.50 52 P P 08 06 11.8 -0.4
YKA Yellowknife Ar 96.33 28 P P 08 06 14.0 -1.1
comp=Z,0.7nm,0.9s,baz=259,slow=4.4,SNR=7.4
U15A North Rim 96.61 54 P P 08 06 17.1 -0.3
U15A IAmb IAmb 08 06 29.9
comp=Z,4.7nm,1.4s
LPIG La Paz 97.55 67 LR LR 08 44 20.2
comp=Z,65nm,18.8s,baz=257,slow=32
R55A Marlinton 121.69 49 PKPdf 08 11 40.3 -0.7
GERES GERESS Array B 126.42 329 PKP PKiKP 08 11 50.0 -0.2
comp=Z,0.5nm,0.5s,baz=64,slow=3.1,SNR=8.3
LPAZ La Paz 132.19 119 PKP PKiKP 08 12 03.1 -0.2
comp=Z,0.6nm,0.6s,baz=230,slow=5.4,SNR=4.6
LPAZ La Paz 132.19 119 PKiKP 08 12 04.6 +1.3
BDFB Brasilia 148.68 135 PKPbc PKiKP 08 12 36.9 +0.4
comp=Z,4.7nm,0.7s,baz=216,slow=3.0,SNR=8.1
BDFB Brasilia 148.68 135 PKiKP 08 12 36.5 +0.1
TORD Torodi Ar. Bea 152.31 286 PKP PKPdf 08 12 36.7 0.0
comp=Z,0.6nm,0.7s,baz=63,slow=1.8,SNR=3.3
TORD PKPbc PKPbc 08 12 43.4 -0.1
comp=Z,2.1nm,0.7s,baz=61,slow=2.3,SNR=10
TORD PKPab pPKPbc 08 12 54.6 -1.2
comp=Z,4.3nm,0.7s,baz=55,slow=2.7,SNR=9.9

IDC 30 07:57:53.4±268.0, 7°84S×119°94E, h0km, Error ellipse: s-maj=137.4km s-min=109.1km az=96.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I07AU	**WARRAMUNGA INF**	**8.41**	**132**	*i*		09 38 55.7	
	baz=304,slow=313,SNR=42						
I39PW	**PALAU INFRASON**	**21.10**	**44**	*i*		10 10 00.0	
	baz=220,slow=289,SNR=7.2						
I04AU	**SHANNON INFRAS**	**26.84**	**187**	*i*		10 38 45.0	
	baz=7.5,slow=309,SNR=0.7						
I05AU	**HOBART INFRASO**	**42.29**	**149**	*i*		12 05 06.1	
I22FR	**PORTLAGUERRE I**	**47.29**	**113**	*i*		12 40 45.0	
	baz=275,slow=308,SNR=5.8						

NIED ***30*** *08:10:00,24.°90N×123.°30E,h8km,Mw4.8 Best double couple: M0 1.74000×10^16 NP1:φ=280.00000°,δ=84.00000°, λ=-117.00000°. NP2:φ=179.00000°,δ=28.00000°, λ=-13.00000°.*

IDC ***30*** *08:10:35.7±0.7,24.°73N×123.°01E,h0km,mb4.0/15, mb1 4.1/18,mb1mx4.0/40,mbtmp4.0/18,ML3.3/3,MS4.3/27, Ms1 4.3/27,ms1mx4.2/47, Error ellipse: s-maj=20.9km s-min=14.7km az=83.0*

JMA ***30*** *08:10:35.2±0.1,24.°94N×123.°28E,h11km±4km,M5.5*

BJI ***30*** *08:10:37.1±0.0,24.°65N×123.°30E,h22km,mB4.9/36, mb4.3/36,Ms4.9/45,Ms7 4.7/41*

NEIC ***30*** *08:10:38.5±3.0,24.°81N±0.°03×123.°07E±0.°07,h13km±4km, mb4.5/26, Error ellipse: s-maj=9.4km s-min=4.2km az=97.0*

GCMT ***30*** *08:10:39.5±0.2,24.°83N±0.°01×123.°22E±0.°03,h14km±1km, MW4.9/100,Moment Tensor Solution. s25,c30; s100,c139; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=2.68±.17; Mθθ2.48±.11; Mφφ0.20±.09; Mrθ0.84±.19; Mθφ=0.20±.06; Mφr=0.27±.26; Best double couple: M=2.73500×10^16 NP1:φ=91.00000°,δ36.00000°, λ=-96.00000°. NP2:φ=279.00000°,δ54.00000°, λ=-86.00000°. Principal axes: T 2.6370, Plg9.0000°, Azm6.0000°; N 0.1980, Plg4.0000°, Azm96.0000°; P -2.8330, Plg80.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 08:10:36.8±1.5, 24.°72N±0.°04×123.°30E±0.°03, h5km±9km, n105, σ2.9/11.1/95, mb4.2/26, MS4.3/31, 5C-1D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.37**	**226**	P	**Pb**	**08 10 45.4**	**-0.5**
YOJ				*eS*	**Sb**	**08 10 52.5**	**+0.5**
YOJ	**Yonaguni jima**	**0.37**	**226**		**Pb**	**08 10 45.4**	**-0.5**
JYNG	**Yonagunijimaku**	**0.42**	**231**	P	**Pb**	**08 10 46.2**	**-0.6**
JYNG				*eS*	**Sb**	**08 10 53.9**	**+0.4**
IRIF	**Iriomote-Funau**	**0.55**	**135**	P	**Pb**	**08 10 49.1**	**+0.2**
IRIF				*eS*	**Sn**	**08 10 58.3**	**-2.5**
JKRS	**Kuro-shima**	**0.80**	**127**	P	**Pb**	**08 10 53.2**	**-0.1**
JKRS				S	**Sn**	**08 11 06.9**	**-0.3**
HATJ	**Hateruma jima**	**0.80**	**145**	P	**Pn**	**08 10 53.7**	**-1.2**
HATJ				*eS*	**Sn**	**08 11 07.3**	**+0.1**
JIJ	**Ishigaki jima**	**0.84**	**115**	P	**Pg**	**08 10 53.2**	**+0.2**
JIJ				S	**Sn**	**08 11 06.8**	**-1.4**
JISG	**Ishigakijimahi**	**0.93**	**98**	P	**Pg**	**08 10 53.8**	**-0.8**
JISG				S	**Sb**	**08 11 07.6**	**-0.4**
JTJ	**Tarama**	**1.27**	**93**	P	**Pn**	**08 10 59.8**	**-1.5**
JTJ				*eS*	**Sb**	**08 11 17.4**	**-0.6**
NACB	**Ninganchiao**	**1.65**	**251**		**Pn**	**08 11 05.9**	**-0.6**
TATO	**Taipei**	**1.67**	**279**		**Pn**	**08 11 04.2**	**-2.6**
JIRB	**Irabujima**	**1.70**	**86**	*eS*	**Sn**	**08 11 26.8**	**-2.6**
YHNB	**Yeheng**	**1.75**	**269**		**Pn**	**08 11 07.2**	**-0.8**
YULB	**Yu-li**	**2.26**	**235**	Pn	**Pn**	**08 11 14.5**	**-0.5**
SSLB	**Suanglung**	**2.34**	**247**		**Pn**	**08 11 16.7**	**+0.7**
TWG	**Pinlang**	**2.79**	**228**		**Pn**	**08 11 21.3**	**-0.8**
TPUB	**Ta-pu**	**2.83**	**240**		**Pn**	**08 11 24.1**	**+1.4**
QZH	**Quanzhou**	**4.29**	**274**	Pn	**Pn**	**08 11 42.5**	**-0.3**
QZH				Sn	**Sn**	**08 12 31.5**	**-1.7**
QZH				LR	LR		
	comp=N,8μm,7.9s						
QZH				LR	LR		
	comp=E,3μm,7.8s						
QZH				LR	LR		
	comp=Z,5μm,11.0s						
JOW	**Kunigami**	**4.95**	**64**	Pn	Pn	08 11 56.2	+4.3
SSE	**Sheshan**	**6.62**	**344**	Pn	**Pn**	**08 12 14.0**	**-0.8**
SSE				Sn	**Sn**	**08 13 33.3**	**+2.6**
SSE				LR	LR		
	comp=N,3μm,10.2s						
SSE				LR	LR		
	comp=E,2μm,8.2s						
NJ2	**Nanjing**	**8.29**	**333**	*eP*	**Pn**	**08 12 37.3**	**-0.4**
NJ2				LR	LR		
	comp=N,5μm,12.3s						
NJ2				LR	LR		
	comp=E,4μm,11.8s						
NJ2				LR	LR		
	comp=Z,5μm,12.3s						
JNU	**Nakatsue**	**10.68**	**37**	Pn	**Pn**	**08 13 13.1**	**+2.6**
	0.2nm,0.3s,baz=229,slow=9.5,SNR=4.3						
JNU	**Nakatsue**	**10.68**	**37**	Pn	Pn	08 13 16.2	+5.6
TGY	**Tagaytay City**	**10.80**	**192**	LR	LR	08 17 29.9	
	comp=Z,2μm,20.1s,baz=9.0,slow=38						
KSRS	**Korea Array**	**13.29**	**16**	Pn	**Pn**	**08 13 47.6**	**+1.4**
	0.2nm,0.3s,baz=193,slow=12,SNR=2.0						
KS19	**Wonju Array Si**	**13.32**	**16**	Pn	**P**	**08 13 52.5**	**-4.0**
QIZ	**Qiongzhong**	**13.72**	**248**	P	**Pn**	**08 13 51.5**	**-0.6**
QIZ				S	**Sn**	**08 16 23.0**	**-2.0**
QIZ				LR	LR		
	comp=N,1μm,15.2s						
QIZ				LR	LR		
	comp=E,590nm,23.5s						
QIZ				LR	LR		
	comp=Z,870nm,8.6s						
XAN	**Xi'an**	**15.59**	**310**	P	**P**	**08 14 23.0**	**+1.3**
XAN				pmax	pmax		
	comp=Z,20nm,1.2s						
XAN				pmax	pmax		
	comp=Z,210nm,4.9s						
XAN				LR	LR		
	comp=N,3μm,7.4s						
XAN				LR	LR		
	comp=E,3μm,11.8s						
XAN				LR	LR		
	comp=Z,4μm,9.8s						
XAN	**Xi'an**	**15.59**	**310**	P	**P**	**08 14 20.1**	**-1.6**
XAN				IAmb	IAmb	08 14 30.1	
	comp=Z,19nm,1.1s						
TIY	**Taiyuan**	**15.93**	**327**	*eP*	**P**	**08 14 25.0**	**-0.5**
TIY				pmax	pmax		
	comp=Z,230nm,8.9s						
TIY				LR	LR		
	comp=Z,2μm,7.5s						
TIY				LR	LR		
	comp=Z,870nm,6.5s						
TIY				LR	LR		
	comp=Z,1μm,9.2s						
BJI	**Beijing**	**16.41**	**340**	P	**Pn**	**08 14 28.5**	**+0.6**
BJI				LR	LR		
	comp=Z,2μm,14.0s						
BJI				LR	LR		
	comp=Z,600nm,9.1s						
BJI				LR	LR		
	comp=Z,1μm,15.2s						
MJAR	**Matsushiro Arr**	**17.39**	**44**	P	**P**	**08 14 42.0**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=219,slow=10,SNR=1.4						
MJAR				LR	LR	08 21 45.6	
	comp=Z,801nm,19.3s,baz=220,slow=38						
DAV	**Davao City (W)**	**17.69**	**173⇑**	*eP*	**P**	**08 14 47.8**	**+2.7**
KMI	**Kunming**	**18.66**	**276**	P	**Pn**	**08 15 02.3**	**+6.1**
KMI				S	**S**	**08 18 26.5**	**-2.7**
KMI				sS	pS	08 18 41.3	-2.2
KMI				SS	SnSn	08 18 53.8	+15
KMI				pmax	pmax		
	comp=Z,15nm,0.6s						
KMI				pmax	pmax		
	comp=Z,440nm,6.4s						
KMI				LR	LR		
	comp=N,2μm,11.6s						
KMI				LR	LR		
	comp=E,2μm,11.8s						
KMI				LR	LR		
	comp=Z,2μm,13.0s						
HHC	**Hu-ho-hao-te**	**18.84**	**331**	*eP*	**Pn**	**08 14 59.3**	**+1.1**
HHC				pP	pwP	08 15 03.8	+5.0
HHC				sP	sP	08 15 07.5	+8.2
HHC				S	**Sn**	**08 18 25.0**	**-4.4**
HHC				SS	**SnSn**	**08 18 51.5**	**+8.0**
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,390nm,6.8s						
HHC				LR	LR		
	comp=Z,1μm,11.6s						
HHC				LR	LR		
	comp=Z,720nm,12.3s						
HHC				LR	LR		
	comp=Z,1μm,13.0s						
CN2	**Changchun**	**19.11**	**5**	*eP*	**Pn**	**08 15 01.5**	**+0.1**
CN2				*eS*	**S**	**08 18 41.3**	**+3.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,620nm,7.0s						
CN2				LR	LR		
	comp=Z,5μm,13.0s						
CN2				LR	LR		
	comp=Z,2μm,13.0s						
CN2				LR	LR		
	comp=Z,6μm,14.0s						
BTO	**Baotou**	**19.35**	**328**	*eP*	**Pn**	**08 15 04.3**	**-0.1**
KKM	**Kota Kinabalu**	**19.78**	**201**	P	**Pn**	**08 15 09.3**	**-0.4**
KKM				IAmb	IAmb	08 15 19.1	
	comp=Z,14nm,1.0s						
LZH	**Lanzhou**	**20.21**	**309**	⇑P	Pn	08 15 13.8	-0.9
LZH				sP	sP	08 15 22.3	+8.0
LZH				S	Sn	08 19 00.8	-1.8
LZH				pmax	pmax		
	comp=Z,22nm,1.4s						
LZH				pmax	pmax		
	comp=Z,370nm,4.9s						
LZH				LR	LR		
	comp=Z,2μm,14.3s						
LZH				LR	LR		
	comp=Z,2μm,13.6s						
LZH				LR	LR		
	comp=Z,3μm,14.1s						
USA0B	**Ussuriysk Arra**	**20.68**	**18**	P	Pn	08 15 18.8	-1.2
USA0B				IAmb	IAmb	08 15 35.6	
	comp=Z,1nm,1.3s						
USRK	**Ussuriysk Ar.**	**20.68**	**18**	P	Pn	08 15 19.1	-0.9
	comp=Z,2.1nm,0.8s,baz=215,slow=5.6,SNR=6.4						
CHTO	**Chiang Mai**	**23.36**	**260**	P	**P**	**08 15 46.3**	**-0.1**
CM31	**Chiang Mai Arr**	**23.48**	**259**	P	**P**	**08 15 48.8**	**+1.2**
CM31				IAmb	IAmb	08 15 57.4	
	comp=Z,4.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**23.48**	**259**	P	**P**	**08 15 44.7**	**-2.9**
	comp=Z,0.9nm,0.4s,baz=67,slow=6.9,SNR=1.6						
TNTI	**Ternate**	**24.13**	**170**	P	**P**	**08 15 56.7**	**+2.8**
MRSI	**Marisa**	**24.14**	**183**	P	P	08 16 02.3	+8.4
SBUM	**Sibu**	**24.59**	**207**	P	**P**	**08 15 58.1**	**0.0**
SBUM				IAmb	IAmb	08 16 04.0	
	comp=Z,14nm,1.5s						
GTA	**Gaotai**	**24.61**	**312**	⇑P	**P**	**08 15 57.5**	**-0.8**
GTA				pP	sP	08 16 02.0	+2.1
GTA				sP	pP	08 16 04.5	+5.1
GTA				S	**S**	**08 20 16.0**	**-4.1**
GTA				sS	sS	08 20 25.8	+4.1
GTA				SS	**SnSn**	**08 21 13.0**	**+8.0**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,280nm,7.6s						
GTA				LR	LR		
	comp=Z,1μm,14.9s						
GTA				LR	LR		
	comp=Z,960nm,13.7s						
GTA				LR	LR		
	comp=Z,1μm,14.6s						
ASAJ	**Asahikawa**	**24.94**	**34**	P	**P**	**08 16 01.9**	**+0.8**
	comp=Z,5.3nm,0.6s,baz=180,slow=3.0,SNR=5.7						
JKA	**Kamikawa-asahi**	**24.94**	**34**	P	**P**	**08 16 01.9**	**+0.8**
KLR	**Kul'dur**	**25.34**	**13**	P	**P**	**08 16 04.6**	**0.0**
	comp=Z,2.8nm,0.8s,baz=207,slow=10,SNR=15						
LUWI	**Luwuk**	**25.62**	**181**	P	**P**	**08 16 07.8**	**+0.5**
KSM	**Kuching**	**26.30**	**210**	P	**P**	**08 16 14.9**	**+1.3**
KSM				IAmb	IAmb	08 16 22.8	
	comp=Z,9.6nm,1.0s						
ULN	**Ulaanbaatar**	**26.44**	**335**	P	**P**	**08 16 14.2**	**-0.7**
ULN				IAmb	IAmb	08 16 17.0	
	comp=Z,18nm,1.5s						
SONM	**Songino Array**	**26.68**	**334**	P	**P**	**08 16 15.7**	**-1.2**
	comp=Z,3.6nm,0.8s,baz=142,slow=8.0,SNR=18						
SONM				LR	LR	08 27 41.8	
	comp=Z,1μm,20.2s,baz=120,slow=39						
SHL	**Shillong**	**28.42**	**278**	P	**P**	**08 16 31.8**	**-1.1**
SHL				IAmb	IAmb	08 16 42.6	
	comp=Z,17nm,1.3s						
TLY	**Talaya**	**30.83**	**336**	LR	LR	08 30 05.9	
	comp=Z,658nm,19.5s,baz=138,slow=38						
TLY	**Talaya**	**30.83**	**336**	P	**P**	**08 16 52.8**	**-1.0**
MDSI	**Maura Dua**	**34.48**	**215**	P	P	08 17 35.4	+9.4
WMQ	**Urumqi**	**34.70**	**312**	*eP*	**P**	**08 17 28.5**	**+0.8**
WMQ				LR	LR		
	comp=Z,410nm,10.7s						
WMQ				LR	LR		
	comp=Z,540nm,9.5s						
WMQ				LR	LR		
	comp=Z,380nm,13.1s						
YAK	**Yakutsk**	**37.55**	**5**	LR	LR	08 33 54.8	
	comp=Z,423nm,20.7s,baz=200,slow=37						
PETK	**Petropavlovsk-**	**38.35**	**33**	LR	LR	08 33 54.9	
	comp=Z,502nm,19.4s,baz=241,slow=36						
MK31	**Makanchi Array**	**39.32**	**315**	P	**P**	**08 18 05.7**	**-1.2**
MKAR	**Makanchi Array**	**39.32**	**315**	P	**P**	**08 18 04.4**	**-2.5**
	comp=Z,1.5nm,0.8s,baz=102,slow=11,SNR=13						
MKAR				LR	LR	08 34 06.2	
	comp=Z,331nm,21.3s,baz=104,slow=36						
MAKZ	**Makanchi**	**39.52**	**315**	P	**P**	**08 18 07.0**	**-1.6**
MAKZ				IAmb	IAmb	08 18 09.2	
	comp=Z,10nm,1.4s						
ZAA0	**Zalesovo Array**	**40.87**	**326**	P	**P**	**08 18 17.3**	**-2.3**
ZALV	**Zalesovo Beam**	**40.87**	**326**	P	**P**	**08 18 16.8**	**-2.8**
	comp=Z,0.5nm,0.3s,baz=110,slow=6.5,SNR=4.9						
ZALV				LR	LR	08 36 15.8	
	comp=Z,694nm,19.5s,baz=128,slow=38						
KURK	**Kurchatov**	**42.94**	**319⇓**	*eP*	**P**	**08 18 34.2**	**-2.4**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURK	**Kurchatov**	**42.94**	**319**	P	**P**	**08 18 34.7**	**-1.9**
KURK				IAmb	IAmb	08 18 52.6	
	comp=Z,14nm,1.5s						
KURBB	**Kurchatov Arr**	**42.96**	**319**	P	**P**	**08 18 35.1**	**-1.6**
	comp=Z,0.7nm,0.2s,baz=117,slow=7.5,SNR=13						
KURBB	**Kurchatov Arra**	**42.96**	**319⇑**	Pg	**P**	**08 18 38.0**	**+1.2**
	comp=Z,6.6nm,1.3s,baz=301,slow=18						
KURBB				⇑Lg	Lg	08 19 18.0	
	comp=Z,16nm,0.6s,baz=308,slow=30						
AAK	**Ala-Archa**	**43.73**	**307**	LR	LR	08 37 35.1	
	comp=Z,388nm,20.2s,baz=86,slow=37						
WB0	**Warramunga Arr**	**45.52**	**165**	P	**P**	**08 18 57.1**	**-0.5**
WRAB	**Tennant Creek**	**45.67**	**165**	P	**P**	**08 18 58.6**	**-0.2**
WRAB				IAmb	IAmb	08 19 09.3	
	comp=Z,13nm,1.1s						
WRA	**Warramunga Array**	**45.68**	**165**	P	**P**	**08 18 58.4**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=346,slow=8.7,SNR=13						
WRA				LR	LR	08 38 18.7	
	comp=Z,83nm,21.5s,baz=345,slow=36						
WB2	**Warramunga Arr**	**45.68**	**165**	P	**P**	**08 18 58.2**	**-0.6**
WB2				IAmb	IAmb	08 19 04.6	
	comp=Z,8.1nm,0.8s						
WR0	**Warramunga Arr**	**45.74**	**165**	P	**P**	**08 18 59.0**	**-0.3**
WR0				IAmb	IAmb	08 19 09.8	
	comp=Z,9.9nm,1.1s						
TIXI	**Tiksi**	**47.06**	**2**	LR	LR	08 40 56.6	
	comp=Z,1μm,19.0s,baz=192,slow=39						
TIXI	**Tiksi**	**47.06**	**2**	P	**P**	**08 19 07.8**	**-1.3**
TIXI				IAmb	IAmb	08 19 15.1	
	comp=Z,15nm,1.5s						
AS31	**Alice Springs**	**49.19**	**167**	P	**P**	**08 19 27.0**	**+0.9**
ASAR	**Alice Springs**	**49.19**	**167**	P	**P**	**08 19 26.4**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=351,slow=7.7,SNR=7.9						
ASAR				LR	LR	08 40 30.2	
	comp=Z,68nm,20.6s,baz=336,slow=36						
AKTO	**Aktyubinsk**	**55.74**	**315**	LR	LR	08 45 24.6	
	comp=Z,230nm,18.6s,baz=98,slow=38						
NWAO	**Narrogin (SRO)**	**57.62**	**186**	P	**P**	**08 20 29.2**	**+1.3**
STKA	**Stephens Creek**	**58.93**	**162**	P	**P**	**08 20 38.0**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=281,slow=5.2,SNR=4.0						
STKA				LR	LR	08 47 33.1	
	comp=Z,224nm,19.3s,baz=3.7,slow=38						
STKA	**Stephens Creek**	**58.93**	**162**	P	**P**	**08 20 40.2**	**+3.1**
DZM	**Mont Dzumac**	**62.60**	**134**	*eLR*	LR	08 39 50.6	
	comp=Z,490nm,25.9s						
KBZ	**Khabaz**	**66.65**	**309**	LR	LR	08 53 50.1	
	comp=Z,262nm,20.0s,baz=60,slow=39						
ILAR	**Eielson Array**	**67.85**	**28**	LR	LR	08 53 14.2	
	comp=Z,116nm,18.8s,baz=300,slow=38						
ARCES	**ARCESS Array B**	**69.76**	**338**	LR	LR	08 59 15.4	
	comp=Z,239nm,18.1s,baz=76,slow=42						
FINES	**FINESS Array B**	**71.95**	**330**	P	**P**	**08 21 59.8**	**-1.3**
	comp=Z,1.3nm,0.8s,baz=46,slow=5.5,SNR=4.0						
FINES				LR	LR	08 57 04.1	
	comp=Z,591nm,19.6s,baz=92,slow=39						
INK	**Inuvik**	**72.00**	**22**	P	**P**	**08 22 02.5**	**+1.3**
DHAK	**Deception Hill**	**73.33**	**32**	P	**P**	**08 22 12.5**	**+3.1**
HFS	**Hagfors**	**78.04**	**331**	LR	LR	09 00 24.3	
	comp=Z,869nm,19.9s,baz=50,slow=38						
NOA	**NORSAR Array B**	**78.65**	**333**	P	**P**	**08 22 39.8**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=53,slow=5.3,SNR=2.2						
NOA				LR	LR	09 00 54.3	
	comp=Z,369nm,18.4s,baz=350,slow=38						
RPZ	**Rata Peaks**	**80.97**	**147**	LR	LR	08 53 48.3	
	comp=Z,120nm,21.5s,baz=350,slow=32						
BBB	**Bella Bella**	**81.41**	**36**	LR	LR	08 58 04.9	
	comp=Z,41nm,20.5s,baz=335,slow=35						
YKA	**Yellowknife Ar**	**81.72**	**23**	P	**P**	**08 22 54.4**	**-1.8**
	comp=Z,1.2nm,0.9s,baz=306,slow=4.8,SNR=19						
YKA				LR	LR	09 03 22.4	
	comp=Z,130nm,19.0s,baz=0.0,slow=39						
RAR	**Rarotonga**	**87.57**	**115**	LR	LR	08 59 58.4	
	comp=Z,78nm,19.1s,baz=214,slow=34						
PPT	**Papeete**	**94.66**	**107**	LR	LR	08 56 49.9	
	comp=Z,46nm,20.5s,baz=283,slow=29						
PPT2	**Papeete2**	**94.67**	**107**	*eLR*	LR	08 54 30.6	
	comp=Z,83nm,24.5s						
NVAR	**Mina Array Bea**	**94.72**	**44**	P	**P**	**08 24 01.7**	**+1.9**
	comp=Z,0.4nm,0.7s,baz=298,slow=2.6,SNR=3.9						
PDAR	**Pinedale Array**	**97.06**	**36**	LR	LR	09 09 58.0	
	comp=Z,56nm,19.9s,baz=345,slow=37						
TBI	**Tubuai**	**97.10**	**112**	*eLR*	LR	08 55 55.5	
	comp=Z,68nm,24.8s						
ULM	**Lac du Bonnet**	**97.68**	**24**	LR	LR	09 14 60.0	
	comp=Z,170nm,18.4s,baz=326,slow=40						
RUSC	**La Rusia**	**145.64**	**30**		**PKPab**	**08 30 17.8**	**-0.6**

MOS ***30*** *08:13:25.6±0.0,41.°79N×47.°76E,h14km,MPVA4.4*

DRS ***30*** *08:13:27.4±0.0,41.°82N×47.°76E,h12km*

NSSP ***30*** *08:13:27.3,41.°83N×47.°73E,h10km,Ms3.2*

ISC 30 08:13:27.7±1.1, 41.°81N±0.°02×47.°77E±0.°03, h3km±10km, n44, σ1.9/02.2/72, 4C-5D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKT	**Akhty**	**0.33**	**185**	*i* Pg	**Pg**	**08 13 34.2**	**+0.1**
AKT				*e*Sg	**Sg**	**08 13 39.0**	**+0.6**
AKT	**Akhty**	**0.33**	**185⇓**	*i* PG	**Pg**	**08 13 34.1**	**0.0**
AKT				*e*		08 13 38.7	
AKT				pmax	pmax		
	comp=Z,3μm,0.2s						
AKT				smax	smax		
	comp=N,5μm,0.3s						
KSMR	**Kasumkent**	**0.34**	**127**	*i* Pg	**Pg**	**08 13 33.5**	**-0.8**
KSMR				*e*Sg	**Sg**	**08 13 39.5**	**+0.7**
KSMR	**Kasumkent**	**0.34**	**127**	*i* PG	**Pg**	**08 13 33.5**	**-0.8**
KS

SGKR	**Sergokala**	**0.66**	**353**	*i* Pg	**Pg**	**08 13 40.0**	**-0.3**
SGKR				*e*Sg	**Sb**	**08 13 50.0**	**-1.4**
SGKR	**Sergokala**	**0.66**	**353**	*i* Pg	**Pg**	**08 13 40.0**	**-0.3**
SGKR				*e*S	**Sb**	**08 13 50.0**	**-1.4**
SGKR				pmax	pmax		
	comp=Z,340nm,0.1s						
SEKA	**Sheki**	**0.73**	**216**	PG	**Pg**	**08 13 41.0**	**-0.8**
ARKR	**Arakani**	**0.98**	**324**	*e*Pg	**Pg**	**08 13 46.0**	**-0.5**
ARKR	**Arakani**	**0.98**	**324**	*e*PG	**Pg**	**08 13 46.0**	**-0.5**
ARKR						08 14 00.0	
ARKR				pmax	pmax		
	comp=Z,149nm,0.2s						
XNZR	**Khunzakh**	**1.08**	**313**	*e*Pg	**Pg**	**08 13 48.2**	**-0.2**
XNZR				*e*Sg	**Sb**	**08 14 03.2**	**-0.4**
BUJR	**Buynaksk**	**1.13**	**335**	*e*Pg	**Pg**	**08 13 49.4**	**+0.1**
BUJR				*e*Sg	**Sb**	**08 14 05.4**	**+0.5**
BUJR	**Buynaksk**	**1.13**	**335**	*e*PG	**Pg**	**08 13 49.4**	**+0.1**
BUJR				*e*S	**Sb**	**08 14 05.4**	**+0.5**
BUJR				pmax	pmax		
	comp=Z,74nm,0.3s						
LGD	**Lagodekhi**	**1.14**	**272**	*e*Pg	**Pg**	**08 13 48.6**	**-1.0**
UNCR	**Uncukul**	**1.16**	**322**	*e*Pg	**Pg**	**08 13 49.5**	**-0.4**
UNCR				*e*Sg	**Sb**	**08 14 06.0**	**+0.2**
UNCR	**Uncukul**	**1.16**	**322**	*e*PG	**Pg**	**08 13 49.5**	**-0.4**
UNCR				*e*S	**Sb**	**08 14 06.0**	**+0.2**
UNCR				pmax	pmax		
	comp=Z,98nm,0.7s						
MAK	**Makhachkala**	**1.17**	**351**	*e*Pg	**Pg**	**08 13 50.0**	**-0.1**
MAK				*e*Sg	**Sn**	**08 14 07.2**	**-0.1**
MAK	**Makhachkala**	**1.17**	**351**	*e*PG	**Pn**	**08 13 51.2**	**+0.3**
MAK				*e*		08 14 07.7	
MAK				pmax	pmax		
	comp=Z,130nm,0.2s						
MAK				smax	smax		
	comp=E,939nm,0.6s						
MAK				smax	smax		
	comp=E,1μm,0.4s						
DBC	**Dubki**	**1.39**	**331**	*i* Pg	**Pn**	**08 13 53.6**	**-0.5**
DBC				*e*Sg	**Sn**	**08 14 14.2**	**+1.1**
DBC	**Dubki**	**1.39**	**331**	⇓*i*PG	**Pn**	**08 13 53.6**	**-0.5**
DBC				*e*		08 14 14.0	
DBC				pmax	pmax		
	comp=Z,67nm,0.5s						
DBC				smax	smax		
	comp=N,326nm,0.7s						
BTLR	**Botlikh**	**1.43**	**307**	*e*Pg	**Pn**	**08 13 54.0**	**-0.6**
BTLR				*e*Sg	**Sn**	**08 14 14.8**	**+0.9**
BTLR	**Botlikh**	**1.43**	**307**	*de*PG	**Pn**	**08 13 54.2**	**-0.4**
BTLR				*e*S	**Sn**	**08 14 15.8**	**+1.9**
BTLR				pmax	pmax		
	comp=Z,94nm,0.5s						
BTLR				smax	smax		
	comp=N,185nm,0.3s						
GANJ	**Ganja**	**1.59**	**224**	PG	**Pn**	**08 13 55.8**	**-1.0**
DGRG	**David-gareji**	**1.83**	**260**	*e*Pg	**Pb**	**08 14 01.5**	**-0.3**
STKZ		**2.14**	**201**	*i* P	**Pb**	**08 14 06.2**	**-0.9**
STKZ				*i* S	**Sb**	**08 14 34.6**	**+0.6**
GRS	**Goris**	**2.55**	**206**	*e*P	**Pn**	**08 14 11.3**	**+1.2**
GRS				*e*S	**Sb**	**08 14 45.6**	**-0.4**
STE	**Stepanavan**	**2.68**	**254**	*e*P	**Pn**	**08 14 12.1**	**+0.3**
STE				*e*S	**Sn**	**08 14 45.3**	**+0.5**
KAPZ	**Kaputan**	**2.75**	**238**	*i* P	**Pb**	**08 14 16.2**	**-1.5**
KAPZ				*i* S	**Sb**	**08 14 51.0**	**-0.9**
LACR	**Lac**	**2.77**	**293**	*e*Pn	**Pn**	**08 14 14.7**	**+1.6**
LACR				*e*Sn	**Sn**	**08 14 48.2**	**+1.2**
NRKZ	**NAREK**	**2.97**	**234**	*i* P	**Pb**	**08 14 21.2**	**0.0**
NRKZ				*i* S	**Sb**	**08 14 59.3**	**+1.4**
STDR	**Stavd-Durt**	**3.15**	**301**	*e*Pn	**Pn**	**08 14 17.2**	**-1.0**
STDR				*e*Sn	**Sn**	**08 14 54.7**	**-1.5**
METS	**Metsamor**	**3.24**	**241**	*i* P	**Pb**	**08 14 25.1**	**-0.9**
METS				*i* S	**Sb**	**08 15 06.4**	**+0.5**
VNNZ	**Vanand**	**3.44**	**242**	*i* P	**Pb**	**08 14 30.9**	**+1.6**
VNNZ				*i* S	**Sg**	**08 15 16.2**	**-2.0**
NEY	**Neytrino**	**4.00**	**293**	⇑*e*PN	**Pn**	**08 14 32.0**	**+2.0**
KBZ	**Khabaz**	**4.06**	**300**	⇑*e*PN	**Pn**	**08 14 31.6**	**+0.9**
BEYR	**Belyy Ugol+**	**4.25**	**303**	*e*Pn	**Pn**	**08 14 33.8**	**+0.5**
BEYR				*e*Sn	**Sn**	**08 15 22.3**	**-1.1**
KIV0	**Kislovodsk Arr**	**4.30**	**302**	*e*Pn	**Pn**	**08 14 32.9**	**-1.2**
KIV	**Kislovodsk**	**4.30**	**302**	*e*PN	**Pn**	**08 14 34.1**	**0.0**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.4s						
GOF	**Gofitskoye**	**4.73**	**315**	⇑*e*PG	Pg	08 15 10.8	+12
GOF				*e*S	**Sg**	**08 16 03.3**	**+3.7**
GOF				pmax	pmax		
	comp=Z,23nm,0.6s						
GOF				smax	smax		
	comp=N,38nm,0.6s						
GOF				smax	smax		
	comp=E,43nm,0.9s						

*KRNET **30** 08:30:48.7±0.1, 41°.53N×70°.69E, h19km, mb2.6*
*SOME **30** 08:30:50.2, 41°.13N×71°.18E, h10km*
*NNC **30** 08:30:52.3±1.3, 41°.17N×71°.07E, h0km, mb3.0, mpv2.9,*
Error ellipse: s-maj=10.7km s-min=5.3km az=15.0
ISC 30 08:30:52.9±1.6, **41°.30N**±0°.05×**71°.08E**±0°.04, **h2**km±13km, **n14**, σ1§**37**/23, **8C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARK	**Arkit**	**0.83**	**53**	⇓*i* P	**Pg**	**08 31 07.5**	**-1.3**
ARK	baz=75			⇓*i* S	**Sg**	**08 31 20.8**	**+1.3**
IUG	**luzhnay** 1.7nm,0.2s	**1.15**	**317**	*e*P	**Pb**	**08 31 15.5**	**-0.1**
IUG	11nm,0.3s			*e*S	**Sn**	**08 31 33.6**	**+1.0**
IUG	**luzhnay** 1.7nm,0.2s	**1.15**	**317**	P	**Pb**	**08 31 15.5**	**-0.1**
IUG	11nm,0.3s			S	**Sn**	**08 31 33.6**	**+1.0**
BTK	**Batken** baz=76	**1.26**	**189**	⇓*e*P	**Pn**	**08 31 15.8**	**-1.9**
BTK	baz=76			⇓*i*S	**Sb**	**08 31 35.5**	**+1.3**
TAS	**Tashkent** baz=60	**1.34**	**271**	⇑*e*P	Pn	08 31 08.6	-10
TAS	baz=60			⇑*e*S	Sb	08 31 22.7	-14
ARSB	**Arslanbob** baz=96	**1.44**	**89**	⇑*i* P	**Pn**	**08 31 20.2**	**0.0**
ARSB	baz=96			⇑*i*S	**Sg**	**08 31 43.2**	**+4.2**
KK31	**Karatay Array** 3.2nm,0.5s,baz=158,slow=14,SNR=36	**1.85**	**347**	⇓Pn	**Pb**	**08 31 27.4**	**-0.1**
KK31	10nm,0.6s,baz=160,slow=31,SNR=15			⇓Lg	Lg	08 31 54.5	
BRLS	**Borolday** 25nm,0.2s	**1.96**	**332**	*e*P	**Pn**	**08 31 26.9**	**-0.3**
BRLS	17nm,0.6s			*e*S	**Sn**	**08 31 53.2**	**+0.8**
BRLS	**Borolday** 4.6nm,0.3s	**1.96**	**332**	Pg	**Pn**	**08 31 26.9**	**-0.3**
BRLS	16nm,0.5s			Lg	Lg	08 31 53.2	
AML	**Almayashu** baz=74	**2.13**	**66**	⇑*i* P	**Pn**	**08 31 28.6**	**-1.3**
AML	baz=74			⇑*i*S	**Sn**	**08 31 57.7**	**+0.6**
MRKS	**Merke** 2.5nm,0.2s	**2.15**	**47**	*e*P	**Pb**	**08 31 31.9**	**-0.8**
MRKS	4.0nm,0.2s			*e*S	**Sg**	**08 32 01.9**	**-0.2**
MRKS	**Merke** 1.8nm,0.2s	**2.15**	**47**	Pg	**Pb**	**08 31 33.2**	**+0.5**
MRKS	4.0nm,0.4s			Lg	Lg	08 32 04.4	
UCH	**Uchtor** baz=75	**2.73**	**69**	⇓*i* P	**Pn**	**08 31 37.2**	**-1.1**
UCH	baz=75			⇓*i*S	**Sn**	**08 32 12.4**	**+0.3**
AAK	**Ala-Archa** baz=67	**2.88**	**61**	⇑*e*P	**Pn**	**08 31 38.4**	**-1.6**
AAK	baz=67			⇑*i*S	**Sn**	**08 32 14.6**	**-0.6**

*MEX **30** 08:32:09.9±0.6, 14°.81N×92°.20W, h103km±4km, MD3.6*
*GCG **30** 08:32:10.3±0.6, 14°.98N×92°.39W, h70km±13km, MD3.5*
ISC 30 08:32:12.0±1.7, **14°.91N**±0°.10×**92°.33W**±0°.08, **h83**km±12km, **n8**, σ1§**00**/16, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.06**	**88**	*i* P	**Pn**	**08 32 23.1**	**-0.7**
THIG				*i* S	**Sn**	**08 32 33.4**	**+1.0**
STG3	**Santiaguito 3,**	**0.76**	**105**	*e*P	**Pn**	**08 32 27.6**	**-1.0**
STG3				*e*S	**Sn**	**08 32 40.9**	**-0.2**
PCIG		**1.17**	**313**	*e*P	**Pn**	**08 32 32.7**	**-0.6**
PCIG				*i* S	**Sn**	**08 32 50.9**	**+1.6**
CCIG	**Comitan**	**1.38**	**8**	*e*P	**Pn**	**08 32 35.4**	**-0.7**
CCIG				*i* S	**Sn**	**08 32 54.8**	**+0.5**
FUG	**Fuego 3**	**1.51**	**107**	*e*P	**Pn**	**08 32 36.7**	**-1.0**
FUG				*e*S	**Sn**	**08 32 58.3**	**+1.2**
IXG	**Ixpaco**	**1.96**	**112**	*e*P	**Pn**	**08 32 43.6**	**-0.1**
IXG				*e*S	**Sn**	**08 33 09.2**	**+1.4**
TGIG		**2.01**	**338**	*i* P	**Pn**	**08 32 44.0**	**-0.3**
TGIG				*i* S	**Sn**	**08 33 09.4**	**+0.6**
CMIG	**Matias Romero**	**3.28**	**312**	*e*P	**Pn**	**08 33 00.3**	**-1.0**
CMIG				*i* S	**Sn**	**08 33 39.6**	**+0.3**

IDC 30 08:47:08.4±3.2, **53°.52N×87°.64E, h0km, mb1 2.7**/2, **mb1mx2.7**/40, **mbtmp2.7**/2, **ML2.3**/2, **Error ellipse: s-maj=30.7km s-min=18.8km az=52.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=102,slow=314,SNR=0.7	**1.73**	**285**	*i*		08 57 30.0	
ZALV	**Zalesovo Beam** 0.7nm,0.3s,baz=107,slow=13,SNR=8.4	**1.73**	**285**	Pn	Pn	08 47 39.0	-0.6
ZALV	1.0nm,0.3s,baz=100,slow=20,SNR=5.7			Lg	Lg	08 48 03.5	
ZALV	0.8nm,0.3s,baz=120,slow=24,SNR=1.7			Rg	Rg	08 48 18.9	
KURBB	**Kurchatov Arra** 0.0nm,0.3s,baz=61,slow=14,SNR=4.1	**6.32**	**246**	Pn	Pn	08 48 43.6	+0.9
KURBB	0.0nm,0.3s,baz=64,slow=34,SNR=5.2			Lg	Lg	08 50 26.6	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=28,slow=15,SNR=2.1	**7.56**	**209**	Pn	Pn	08 49 00.9	+1.1
MKAR	0.0nm,0.3s,baz=99,slow=38,SNR=1.9			Lg	Lg	08 51 01.7	

*IDC **30** 08:47:29.3±6.5, 17°.65S×178°.93W, h554km±74km, mb3.1/6,*
mb1 3.3/7, mb1mx3.0/35, mbtmp4.0/7, Error ellipse:
s-maj=52.9km s-min=31.2km az=137.0
*NEIC **30** 08:47:29.5±2.1, 17°.7S±0°.1×178°.8W±0°.1, h569km±8km,*
mb4.2/19, Error ellipse: s-maj=22.7km s-min=16.6km
az=145.0
ISC 30 08:47:27.6±0.7, **17°.8S**±0°.2×**178°.7W**±0°.1, **h539**km, **n30**, σ1§**40**/30, **mb4.1**/15, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.09**	**270**	P	**P**	**08 48 45.9**	**+3.5**
AFI	**Afiamalu**	**7.68**	**61**	P	**P**	**08 49 23.8**	**+1.8**
DZM	**Mont Dzumac** 0.3nm,0.3s,baz=66,slow=20,SNR=2.5	**14.61**	**250**	P	**P**	**08 50 32.9**	**-0.4**
DZM	**Mont Dzumac**	**14.61**	**250**	P	**P**	**08 50 32.7**	**-0.6**
LTZ	**Lake Taylor**	**26.11**	**195**	P	**P**	**08 52 19.6**	**+1.1**
EIDS	**Eidsvold**	**29.05**	**250**	P	**P**	**08 52 44.0**	**-0.6**
EIDS	comp=Z,20nm,1.4s			IAmb	IAmb	08 53 00.5	
ARMA	**Armidale**	**29.77**	**239**	P	**P**	**08 52 51.7**	**+0.8**
ARMA	comp=Z,18nm,1.3s			IAmb	IAmb	08 52 56.5	
PYZ	**Puysegur Point**	**30.82**	**200**	P	**P**	**08 53 00.4**	**+0.9**
CAN	**Canberra**	**33.58**	**232**	P	**P**	**08 53 23.9**	**+0.7**
TOO	**Toolangi**	**37.05**	**230**	P	**P**	**08 53 53.4**	**+1.4**
TOO	comp=Z,18nm,1.4s			IAmb	IAmb	08 53 54.1	
STKA	**Stephens Creek** comp=Z,2.5nm,0.5s,baz=96,slow=11,SNR=6.6	**38.46**	**241**	P	**P**	**08 54 03.9**	**+0.3**
STKA	**Stephens Creek**	**38.46**	**241**	P	**P**	**08 54 03.8**	**+0.3**
BBOO	**Buckleboo**	**43.23**	**241**	P	**P**	**08 54 41.6**	**+0.1**
BBOO	comp=Z,20nm,1.3s			IAmb	IAmb	08 54 59.5	
WR0	**Warramunga Arr**	**44.19**	**259**	P	**P**	**08 54 48.5**	**-0.6**
WB0	**Warramunga Arr**	**44.35**	**260**	P	**P**	**08 54 50.0**	**-0.4**
WB0	comp=Z,7.0nm,1.3s			IAmb	IAmb	08 55 04.4	
WB2	**Warramunga Arr**	**44.37**	**259**	P	**P**	**08 54 49.6**	**-0.9**
WRAB	**Tennant Creek**	**44.37**	**259**	P	**P**	**08 54 49.2**	**-1.3**
WRAB	comp=Z,4.4nm,0.9s			IAmb	IAmb	08 54 49.9	
WRA	**Warramunga Arr** comp=Z,1.1nm,0.7s,baz=94,slow=6.9,SNR=9.8	**44.38**	**259**	P	**P**	**08 54 49.1**	**-1.5**
AS31	**Alice Springs**	**44.56**	**254**	P	**P**	**08 54 51.3**	**-0.7**
AS31	comp=Z,3.3nm,0.6s			IAmb	IAmb	08 54 51.8	
ASAR	**Alice Springs** comp=Z,9.5nm,0.5s,baz=88,slow=8.1,SNR=123	**44.56**	**254**	P	**P**	**08 54 51.0**	**-1.0**
FITZ	**Fitzroy Crossi**	**52.77**	**260**	P	**P**	**08 55 52.6**	**-0.3**
FITZ	comp=Z,12nm,1.4s			IAmb	IAmb	08 56 01.3	
CASY	**Casey**	**66.16**	**205**	P	**P**	**08 57 19.1**	**-2.3**
CASY	comp=Z,12nm,1.4s			IAmb	IAmb	08 57 19.6	
NVAR	**Mina Array Bea** comp=Z,0.2nm,0.6s,baz=226,slow=7.5,SNR=2.5	**79.51**	**44**	P	**P**	**08 58 40.1**	**+1.3**
BRLK	**Bradley Lake**	**80.49**	**14**	P	**P**	**08 58 41.3**	**-1.9**
GLB	**Gilahina Butte**	**83.69**	**16**	P	**P**	**08 58 59.4**	**0.0**
Q16A	**Castle Valley**	**84.58**	**46**	P	**P**	**08 59 00.9**	**-3.6**
ILAR	**Eielson Array** comp=Z,0.2nm,0.4s,baz=223,slow=5.4,SNR=4.9	**85.80**	**13**	P	**P**	**08 59 08.7**	**-0.8**
SNAA	**Sanae** comp=Z,0.5nm,1.0s,baz=198,slow=14,SNR=1.0	**90.76**	**179**	P	**P**	**08 59 32.7**	**-0.1**
SNAA	**Sanae**	**90.76**	**179**	P	**P**	**08 59 32.7**	**-0.1**
SNAA	comp=Z,2.6nm,1.3s			IAmb	IAmb	08 59 48.7	
GERES	**GERESS Array B** comp=Z,0.4nm,0.5s,baz=35,slow=3.6,SNR=3.7	**147.38**	**345**	PKPbc	**PKPbc**	**09 06 11.0**	**+0.1**

*IDC **30** 08:50:04.6±2.4, 24°.02S×67°.00W, h184km±22km, mb3.2/2,*
mb1 3.3/6, mb1mx3.1/37, mbtmp3.6/6, Error ellipse:
s-maj=35.6km s-min=22.1km az=159.0
ISC 30 08:50:04.5±1.5, **24°.1S**±0°.1×**67°.0W**±0°.1, **h181**km, **n6**, σ1§**61**/9, **Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde** 12nm,0.3s,baz=131,slow=10,SNR=209	**2.28**	**309**	P	**Pn**	**08 50 45.8**	**+0.8**
LVC	11nm,0.3s,baz=17,slow=20,SNR=15			S	**Sn**	**08 51 16.4**	**-0.1**
LPAZ	**La Paz** 0.5nm,0.3s,baz=123,slow=6.0,SNR=14	**7.81**	**352**	P	**Pn**	**08 51 57.1**	**+1.3**
LPAZ	0.0nm,0.3s,baz=46,slow=7.7,SNR=1.7			S	**Sn**	**08 53 21.1**	**-2.8**
SIV	**San Ignacio** 0.1nm,0.3s,baz=194,slow=12,SNR=9.1	**9.77**	**36**	P	**Pn**	**08 52 21.2**	**+0.1**
SIV	0.0nm,0.3s,baz=103,slow=21,SNR=1.6			S	**Sn**	**08 54 11.6**	**+1.7**
BDFB	**Brasilia** 0.4nm,0.3s,baz=236,slow=11,SNR=6.7	**19.70**	**68**	P	**P**	**08 54 19.8**	**-0.4**
TORD	**Torodi Ar. Bea** 0.2nm,0.4s,baz=236,slow=6.9,SNR=1.6	**76.59**	**69**	P	**P**	**09 01 34.0**	**-1.4**
YKA	**Yellowknife Ar** 0.1nm,0.3s,baz=131,slow=3.8,SNR=1.6	**94.18**	**340**	P	**P**	**09 03 02.9**	**+0.8**

*TAP **30** 09:09:01.0, 24°.74N×122°.38E, h16km, ML3.1, C*
*JMA **30** 09:09:01.8±0.1, 24°.62N×122°.37E, h9km±4km, M2.4*
ISC 30 09:09:01.1±1.0, **24°.70N**±0°.03×**122°.39E**±0°.02, **h14**km±8km, **n59**, σ0§**48**/89, **1C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.43**	**289**	P	**Pg**	**09 09 10.1**	**+0.3**
EGS	baz=284			*e*S	**Sb**	**09 09 16.7**	**-0.3**
TWB1	**Santiao Chiao** baz=306	**0.47**	**310**	⇑*i* P	**Pg**	**09 09 10.4**	**-0.1**
TWB1	baz=306			S	**Sg**	**09 09 16.3**	**-0.4**
TWC	**Suao** baz=262	**0.50**	**259**	P	**Pg**	**09 09 10.6**	**-0.3**
TWC	baz=262			*e*S	**Sb**	**09 09 18.9**	**+0.1**
NTC	**Toucheng** baz=282	**0.53**	**287**	P	**Pb**	**09 09 12.0**	**-0.2**

JYNG	**Yonagunijimaku**	**0.57**	**116**	P	**Pg**	**09 09 12.3**	**0.0**
JYNG				S	**Sg**	**09 09 19.8**	**0.0**
TIPB	**Shuangxi** baz=294	**0.57**	**298**	*e*P	**Pg**	**09 09 12.8**	**+0.4**
TIPB	baz=294			*e*S	**Sb**	**09 09 20.9**	**-0.1**
YOJ	**Yonaguni jima** baz=116	**0.62**	**113**	⇓*i*P	**Pb**	**09 09 13.6**	**-0.1**
YOJ	baz=116			*i* S	**Sb**	**09 09 22.7**	**+0.4**
YOJ	**Yonaguni jima**	**0.62**	**113**	P	**Pb**	**09 09 13.6**	**-0.1**
YOJ				*e*S	**Sg**	**09 09 21.4**	**0.0**
ENA	**Nanau** baz=248	**0.65**	**245**	*i* P	**Pg**	**09 09 13.7**	**0.0**
ENA	baz=248			*i* S	**Sb**	**09 09 22.9**	**-0.2**
TWE	**Neicheng** baz=268	**0.65**	**272**	*i* P	**Pg**	**09 09 13.7**	**-0.2**
TWE	baz=268			*e*S	**Sb**	**09 09 23.7**	**+0.4**
NWF	**Wu-fen Shan** baz=301	**0.66**	**304**	*e*P	**Pb**	**09 09 14.9**	**+0.5**
WFSB	**Wu-fen Shan** baz=301	**0.66**	**304**	*e*P	**Pb**	**09 09 14.9**	**+0.5**
TWA	**Mucha** baz=288	**0.78**	**291**	*e*P	**Pb**	**09 09 16.9**	**+0.5**
NDT	**Datong Townshi** baz=260	**0.80**	**263**	*i* P	**Pb**	**09 09 17.3**	**+0.5**
NDT	baz=260			S	**Sb**	**09 09 27.7**	**+0.2**
NWLT	**Wulai** baz=283	**0.81**	**275**	*e*P	**Pb**	**09 09 17.1**	**+0.2**
NWLT	baz=283			S	**Sb**	**09 09 27.9**	**+0.2**
NHDH	**Xindian Distri** baz=285	**0.82**	**288**	*e*P	**Pn**	**09 09 18.0**	**-0.3**
NHDH	baz=285			*e*S	**Sb**	**09 09 29.0**	**+0.9**
TATO	**Taipei** baz=285	**0.86**	**289**	*e*P	**Pg**	**09 09 17.7**	**0.0**
TATO	baz=285			S	**Sb**	**09 09 29.5**	**+0.3**
YM01	**YM01** baz=298	**0.86**	**301**	*e*P	**Pn**	**09 09 18.8**	**-0.1**
YM01	baz=298			*e*S	**Sb**	**09 09 29.8**	**+0.4**
YM08	**YM08** baz=301	**0.87**	**304**	*e*P	**Pb**	**09 09 18.3**	**+0.3**
YM08	baz=301			*e*S	**Sg**	**09 09 29.5**	**+0.1**
YM11	**YM11** baz=299	**0.87**	**302**	*e*P	**Pn**	**09 09 19.3**	**+0.3**
YM11	baz=299			*e*S	**Sg**	**09 09 29.4**	**0.0**
YM10	**YM10** baz=298	**0.87**	**301**	*e*P	**Pn**	**09 09 18.9**	**-0.1**
YM10	baz=298			*e*S	**Sg**	**09 09 29.5**	**0.0**
YM05	**YM05** baz=299	**0.87**	**302**	*e*P	**Pg**	**09 09 18.0**	**0.0**
YM05	baz=299			*e*S	**Sg**	**09 09 29.6**	**+0.1**
YM04	**YM04** baz=297	**0.89**	**300**	*e*P	**Pg**	**09 09 18.4**	**0.0**
YM04	baz=297			*e*S	**Sb**	**09 09 30.4**	**+0.2**
NACB	**Ninganchiao** baz=231	**0.89**	**234**	P	**Pg**	**09 09 17.8**	**-0.6**
NACB	baz=231			*e*S	**Sg**	**09 09 29.4**	**-0.7**
TWY	**Chenhua** baz=306	**0.91**	**309**	*e*P	**Pg**	**09 09 19.2**	**+0.4**
TWY	baz=306			*e*S	**Sb**	**09 09 31.4**	**+0.6**
YHNB	**Yeheng** baz=265	**0.92**	**268**	*e*P	**Pb**	**09 09 19.0**	**+0.2**
YHNB	baz=265			*e*S	**Sb**	**09 09 31.8**	**+0.8**
ANP	**Anpu** baz=299	**0.92**	**302**	*e*P	**Pb**	**09 09 19.4**	**+0.5**
TWD	**Chiawan** baz=233	**0.95**	**229**	*e*P	**Pn**	**09 09 20.4**	**+0.4**
NNSB	**Datong** baz=251	**0.95**	**253**	P	**Pb**	**09 09 19.3**	**-0.2**
NNSB	baz=251			*e*S	**Sb**	**09 09 32.2**	**+0.2**
NNSH	**Datong** baz=251	**0.95**	**253**	*i* P	**Pb**	**09 09 19.4**	**-0.1**
NNSH	baz=251			*e*S	**Sb**	**09 09 32.2**	**+0.2**
NNS	**Nan Shan** baz=251	**0.96**	**254**	P	**Pn**	**09 09 20.4**	**+0.1**
NNS	baz=251			*e*S	**Sb**	**09 09 32.5**	**+0.3**
ETLH	**Xiulin Townshi** baz=246	**0.96**	**239**	*e*P	**Pg**	**09 09 19.8**	**+0.1**
ETLH	baz=246			*e*S	**Sb**	**09 09 32.4**	**+0.2**
TWS1	**Kuangyinshan** baz=292	**0.96**	**294**	*e*S	**Sg**	**09 09 32.9**	**+0.6**
PCYT	**Pengchaiyu** baz=343	**0.96**	**343**	*e*P	**Pb**	**09 09 18.0**	**-1.6**
WHF	**Hehuan Shan** baz=249	**1.16**	**242**	*e*P	**Pb**	**09 09 23.3**	**0.0**
WHF	baz=249			*e*S	**Sb**	**09 09 38.2**	**-0.2**
TDCB	**Techi** baz=245	**1.20**	**248**	*e*P	**Pg**	**09 09 25.0**	**+0.6**
LIOB	**Emei** baz=265	**1.25**	**268**	*e*P	**Pg**	**09 09 25.3**	**+0.2**
NSTT	**Nanjuang** baz=282	**1.26**	**267**	*e*P	**Pg**	**09 09 26.3**	**+0.9**
CHGB	**Renai** baz=248	**1.28**	**240**	P	**Pg**	**09 09 25.5**	**-0.2**
CHGB	baz=248			*e*S	**Sn**	**09 09 41.7**	**-0.1**
IRIF	**Iriomote-Funau**	**1.28**	**106**	P	**Pb**	**09 09 25.4**	**+0.4**
IRIF				*e*S	**Sn**	**09 09 41.7**	**+0.2**
WHP	**Taichung City** baz=249	**1.38**	**252**	*e*P	**Pg**	**09 09 27.9**	**+0.3**
HATJ	**Hateruma jima**	**1.45**	**116**	S	**Sb**	**09 09 46.3**	**+0.2**
VWDT	**VWDT** baz=213	**1.48**	**230**	*e*P	**Pg**	**09 09 29.3**	**-0.2**
DPDB	**Guoxing** baz=241	**1.49**	**244**	*e*P	**Pn**	**09 09 30.0**	**+0.2**
HGSD	**Ruisui** baz=202	**1.49**	**216**	*e*P	**Pn**	**09 09 28.0**	**+0.5**
TWQ1	**Liyutan** baz=274	**1.51**	**257**	*e*P	**Pg**	**09 09 30.9**	**+0.8**
SMLT	**Sun Moon Lake** baz=224	**1.58**	**239**	*e*P	**Pg**	**09 09 32.0**	**+0.4**
SSLB	**Suanglung** baz=217	**1.59**	**235**	*e*P	**Pb**	**09 09 30.9**	**+0.6**
TYC	**Yuchr** baz=226	**1.60**	**241**	*e*P	**Pg**	**09 09 32.3**	**+0.3**
YULB	**Yu-li** baz=216	**1.64**	**218**	*e*P	**Pn**	**09 09 29.8**	**+0.2**
TWF1	**Yuli** baz=203	**1.67**	**217**	*e*P	**Pn**	**09 09 30.5**	**+0.5**
WHYT	**Xinyi Township** baz=219	**1.72**	**235**	*e*P	**Pg**	**09 09 33.9**	**-0.2**
FULB	**Fuli** baz=198	**1.80**	**214**	*e*P	**Pn**	**09 09 32.1**	**+0.3**
FULB	baz=198			*e*S	**Sn**	**09 09 54.7**	**+0.2**
CHN5	**Tsauling** baz=216	**1.91**	**235**	*e*P	**Pb**	**09 09 35.9**	**+0.1**
TPUB	**Ta-pu** baz=212	**2.13**	**229**	*e*P	**Pb**	**09 09 39.1**	**-0.3**
TWH	**Lutao** baz=201	**2.15**	**203**	*e*P	**Pn**	**09 09 36.5**	**-0.1**
TWK	**Hsinying** baz=213	**2.25**	**231**	*e*P	**Pb**	**09 09 40.6**	**-0.9**
SLGT	**Liugui** baz=222	**2.33**	**223**	*e*P	**Pb**	**09 09 41.5**	**-1.5**
MATB	**Ma-tsu** baz=301	**2.63**	**304**	*e*S	**Sn**	**09 10 13.0**	**-2.0**

*JMA **30** 09:25:18.2±0.1, 24°.90N×123°.38E, h25km±4km, M2.9*
*IDC **30** 09:25:39.9±6.0, 24°.83N×123°.39E, h61km±58km, mb3.3/4,*
mb1 3.5/5, mb1mx3.2/47, mbtmp3.5/5, ML3.1/1, MS2.8/1,
Ms1 2.8/1, ms1mx2.4/34, Error ellipse: s-maj=75.3km
s-min=23.5km az=80.0
ISC 30 09:25:17.9±2.4, **24°.9N**±0°.1×**123°.39E**±0°.05, **h23**km±20km, **n13**, σ0§**35**/16, **mb3.5**/4, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.56**	**218**	P	**Pb**	**09 25 29.1**	**0.0**
YOJ				*e*S	**Sb**	**09 25 36.7**	**0.0**
JYNG	**Yonagunijimaku**	**0.61**	**222**	P	**Pb**	**09 25 29.8**	**0.0**
JYNG				S	**Sb**	**09 25 38.0**	**0.0**
IRIF	**Iriomote-Funau**	**0.65**	**151**	P	**Pb**	**09 25 30.5**	**0.0**
IRIF				S	**Sb**	**09 25 39.5**	**+0.3**
JIJ	**Ishigaki jima**	**0.87**	**128**	P	**Pn**	**09 25 34.3**	**-0.4**
JIJ				S	**Sb**	**09 25 44.9**	**-0.7**
JKRS	**Kuro-shima**	**0.87**	**140**	P	**Pn**	**09 25 34.4**	**-0.3**
JKRS				S	**Sb**	**09 25 46.1**	**+0.5**
JISG	**Ishigakijimahi**	**0.90**	**111**	P	**Pn**	**09 25 34.9**	**-0.1**
JISG				*e*S	**Sb**	**09 25 46.2**	**-0.1**
HATJ	**Hateruma jima**	**0.93**	**156**	P	**Pn**	**09 25 35.3**	**-0.2**
HATJ				S	**Sb**	**09 25 47.4**	**+0.2**
JTJ	**Tarama**	**1.22**	**102**	P	**Pn**	**09 25 39.7**	**+0.2**
JTJ				*e*S	**Sn**	**09 25 55.7**	**+0.4**
KSRS	**Korea Array**	**13.09**	**16**	P	P	09 28 43.6	+11
	0.1nm,0.3s,baz=195,slow=13,SNR=1.4						
KSRS				LR	LR	09 34 33.0	
	comp=Z,36nm,18.9s,baz=195,slow=41						
SONM	**Songino Array**	**26.54**	**334**	P	P	09 31 12.6	+19
	0.8nm,0.7s,baz=152,slow=8.8,SNR=3.9						
WRA	**Warramunga Arr**	**45.84**	**166**	P	P	09 33 55.0	+17
	1.3nm,0.8s,baz=347,slow=8.8,SNR=6.6						
ASAR	**Alice Springs**	**49.35**	**167**	P	P	09 34 23.1	+18
	0.2nm,0.7s,baz=347,slow=6.5,SNR=2.0						
YKA	**Yellowknife Ar**	**81.52**	**23**	P	P	09 37 50.8	+18
	0.3nm,0.6s,baz=304,slow=4.5,SNR=5.3						

*IDC **30** 09:26:13.4±0.5,26.69N×53.95E,h0km,mb4.5/32, mb1 4.6/34,mb1mx4.5/51,mbtmp4.5/34,ML4.2/2,MS3.4/11, Ms1 3.4/11,ms1mx3.2/48,Error ellipse: s-maj=13.8km s-min=10.8km az=3.0*
*THR **30** 09:26:14.5±0.7,26.97N×54.23E,h14km±8km,ML4.8*
*OMAN **30** 09:26:14.6±1.6,27.09N×53.85E,h122km±9km,ml4.7/14, Error ellipse: s-maj=68.2km s-min=33.1km az=9.0*
*DSN **30** 09:26:14.4±1.3,26.94N×53.84E,h10km,ML4.8/11,Error ellipse: s-maj=17.3km s-min=5.7km az=178.0*
*MOS **30** 09:26:16.8±0.9,26.71N×53.93E,h33km,mb4.9/61,Error ellipse: s-maj=6.4km s-min=4.2km az=106.9*
*TEH **30** 09:26:16.2,26.76N×53.92E,h16km,ML4.6*
*NEIC **30** 09:26:18.6±1.6,26.76N±0.06×53.93E±0.07,h33km±2km, Error ellipse: s-maj=8.9km s-min=8.6km az=223.0*
*BGR **30** 09:26:36.4±0.0,27.69N×51.54E,h33km,mb4.5*
ISC 30 09:26:16.9±1.5,26.75N±0.03×53.93E±0.03,h20km±7km, n435,σ1§36/455,mb4.7/140,MS3.4/12,30C-12D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.90**	**311**	*e*Pg	**Pb**	**09 26 32.7**	**-1.2**
LMD1				*e*		09 26 56.0	
LAR1	**LAR**	**1.00**	**23**	*e*Pg	**Pb**	**09 26 35.6**	**+0.1**
LAR1				*e*		09 27 00.4	
JHRM	**Jahrom**	**1.78**	**350**	*e*Pn	**Pb**	**09 26 48.5**	**-0.3**
UMQ	**Umm Al-Quwin**	**1.98**	**128**	*e*P	**Pb**	**09 26 51.3**	**-0.9**
	SNR=9.3						
UMQ	**Umm Al-Quwin**	**1.98**	**128**	P	**Pb**	**09 26 52.9**	**+0.7**
	SNR=8.8						
UMQ				S	**Sg**	**09 27 22.0**	**+1.4**
UMQ	**Umm Al-Quwin**	**1.98**	**128**	*e*Pn	**Pb**	**09 26 51.5**	**-0.7**
JRN	**Qarnain Island**	**2.05**	**209**	*e*Pn	**Pb**	**09 26 52.7**	**-0.7**
BNDS	**Bandar-Abbas**	**2.10**	**72**	*e*Pg	**Pn**	**09 26 47.2**	**-3.9**
BNDS				*e*Sg	**Sn**	**09 27 10.9**	**-5.8**
BNDS	**Bandar-Abbas**	**2.10**	**72**	*e*Pn	**Pn**	**09 26 47.2**	**-3.9**
GENO	**Geno**	**2.10**	**72**	*e*Pn	**Pn**	**09 26 51.8**	**+0.7**
SHME	**Shamm**	**2.10**	**109**	*e*P	**Pn**	**09 26 51.3**	**+0.3**
	SNR=33						
SHME	**Shamm**	**2.10**	**109**	*e*Pn	**Pn**	**09 26 51.4**	**+0.3**
BANOM	**Banah**	**2.28**	**111**	*e*P	**Pn**	**09 26 54.1**	**+0.7**
	SNR=92						
BANOM				S	**Sb**	**09 27 24.4**	**-0.8**
BANOM	**Banah**	**2.28**	**111**	P	**Pn**	**09 26 54.2**	**+0.7**
	SNR=92						
BANOM				S	**Sb**	**09 27 23.6**	**-1.5**
BANOM	**Banah**	**2.28**	**111**	*e*Pn	**Pb**	**09 26 55.5**	**-1.9**
NAZ	**Nazwa, Dubai**	**2.35**	**138**	*e*P	**Pb**	**09 26 56.9**	**-1.6**
	SNR=58						
NAZ	**Nazwa, Dubai**	**2.35**	**138**	P	**Pb**	**09 26 57.1**	**-1.4**
	SNR=18						
AJN	**Ajban**	**2.38**	**156**	*e*P	**Pb**	**09 26 57.3**	**-1.8**
	SNR=20						
AJN	**Ajban**	**2.38**	**156**	P	**Pb**	**09 26 57.3**	**-1.8**
	SNR=20						
IBND	**Bandar-abas**	**2.43**	**73**	*e*Pn	**Pn**	**09 26 56.8**	**+1.4**
IBND				*e*		09 27 49.6	
MSFE	**Esma-Masafi**	**2.44**	**124**	*e*P	**Pn**	**09 26 56.9**	**+1.3**
	SNR=43						
MSFE	**Esma-Masafi**	**2.44**	**124**	*e*Pn	**Pn**	**09 26 57.4**	**+1.8**
FAQ	**Al Faqa, Dubai**	**2.50**	**143**	*e*P	**Pn**	**09 26 58.5**	**+2.1**
	SNR=17						
MDH	**Madha**	**2.57**	**124**	*e*P	**Pn**	**09 26 58.7**	**+1.2**
	SNR=20						
MDH	**Madha**	**2.57**	**124**	P	**Pn**	**09 26 59.0**	**+1.6**
	SNR=20						
MDH	**Madha**	**2.57**	**124**	*e*Pn	**Pn**	**09 26 58.8**	**+1.3**
UOSS	**Minazif**	**2.73**	**131**	*e*P	**Pn**	**09 27 00.9**	**+1.3**
	SNR=33						
UOSS	**Minazif**	**2.73**	**131**	P	**Pn**	**09 27 00.9**	**+1.3**
UOSS				S	**Sn**	**09 27 34.3**	**+2.3**
UOSS	**Minazif**	**2.73**	**131**	*e*Pn	**Pn**	**09 27 00.8**	**+1.2**
UOSS	**Minazif**	**2.73**	**131**	Pn	**Pn**	**09 27 00.5**	**+0.9**
HATD	**Hatta, Dubai**	**2.76**	**134**	*e*P	**Pn**	**09 27 01.5**	**+1.6**
	SNR=19						
HATD	**Hatta, Dubai**	**2.76**	**134**	P	**Pn**	**09 27 01.6**	**+1.6**
	SNR=19						
HATD	**Hatta, Dubai**	**2.76**	**134**	*e*Pn	**Pn**	**09 27 01.4**	**+1.4**
ASHO	**Ashiyiah**	**2.81**	**137**	*i* P	**Pn**	**09 27 02.6**	**+1.8**
	SNR=70						
ASHO	**Ashiyiah**	**2.81**	**137**	P	**Pn**	**09 27 02.6**	**+1.8**
	SNR=24						
ASHO	**Ashiyiah**	**2.81**	**137**	*e*Pn	**Pn**	**09 27 02.4**	**+1.6**
SHI	**Shiraz**	**3.14**	**337**	*e*Pn	**Pn**	**09 27 06.2**	**+0.8**
AHBU	**AHRAM**	**3.14**	**313**	*e*Pn	**Pn**	**09 27 06.2**	**+0.9**
ALNE	**Al Ain**	**3.15**	**148**	*i* P	**Pn**	**09 27 07.6**	**+2.2**
	SNR=80						
ALNE	**Al Ain**	**3.15**	**148**	*e*Pn	**Pn**	**09 27 06.8**	**+1.4**
SLWR	**Sila**	**3.35**	**218**	*e*Pn	**Pn**	**09 27 10.0**	**+1.8**
SOHO	**SOHO**	**3.51**	**137**	P	**Pn**	**09 27 11.7**	**+1.3**
	SNR=24						
SOHO	**SOHO**	**3.51**	**137**	*e*Pn	**Pn**	**09 27 11.7**	**+1.3**
KHNJ	**Kahnooj**	**3.56**	**70**	*e*Pn	**Pn**	**09 27 12.1**	**+1.0**
MZR	**Muzera**	**3.75**	**186**	*i* P	**Pn**	**09 27 15.0**	**+1.2**
	SNR=45						
MZR	**Muzera**	**3.75**	**186**	P	**Pn**	**09 27 14.8**	**+1.1**
	SNR=16						
MZR	**Muzera**	**3.75**	**186**	*e*Pn	**Pn**	**09 27 15.1**	**+1.4**
NGRK	**Negar Kerman**	**3.79**	**40**	*e*Pn	**Pn**	**09 27 16.0**	**+1.4**
NGRK				*e*		09 28 09.0	
KRBR	**Kerman**	**4.07**	**37**	*e*Pn	**Pn**	**09 27 14.5**	**-3.9**
KRBR				*e*Sg	**Sn**	**09 28 10.7**	**+5.1**
KRBR	**Kerman**	**4.07**	**37**	*e*Pn	**Pn**	**09 27 14.5**	**-3.9**
KRBR	**Kerman**	**4.07**	**37**	Pn	**Pn**	**09 27 14.0**	**-4.3**
TVBK	**TV Kerman**	**4.07**	**37**	*e*Pn	**Pn**	**09 27 21.1**	**+2.7**
TVBK				*e*		09 28 37.4	
ARQ	**Araqi**	**4.13**	**145**	P	**Pn**	**09 27 19.8**	**+0.9**
	SNR=82						
KHGB	**Koh Gabri**	**4.25**	**31**	*e*Pn	**Pn**	**09 27 23.1**	**+2.4**
KHGB				*e*		09 28 20.2	
CHMN	**Cheshme madani**	**4.44**	**45**	*e*Pn	**Pn**	**09 27 26.4**	**+2.9**
CHMN				*e*		09 27 28.5	
KLNJ	**Kolanjah**	**4.71**	**335**	*e*Pn	**Pn**	**09 27 28.5**	**+1.3**
BIDO	**Bidbid**	**4.98**	**129**	*e*Pn	**Pn**	**09 27 31.5**	**+0.9**
IRAM	**Rameshеh**	**5.22**	**345**	*e*Pn	**Pn**	**09 27 34.4**	**+0.3**
WSAR	**Wadi Sarin**	**5.51**	**128**	Pn	**Pn**	**09 27 38.9**	**+0.9**
	9.6nm,0.3s,baz=322,slow=9.2,SNR=108						
WSAR				Sn	**Sn**	**09 28 40.7**	**-0.1**
	18nm,0.3s,baz=111,slow=21,SNR=9.0						
WSAR				LR	LR	09 30 15.6	
	comp=Z,539nm,21.4s,baz=330,slow=44						
YZKH	**Yazd**	**5.65**	**6**	*e*Pn	**Pn**	**09 27 37.9**	**-1.9**
YZKH	**Yazd**	**5.65**	**6**	*e*Pn	**Pn**	**09 27 37.9**	**-1.9**
YZKH	**Yazd**	**5.65**	**6**	Pn	**Pn**	**09 27 37.0**	**-2.8**
IGAR	**Gharneh**	**5.87**	**344**	*e*Pn	**Pn**	**09 27 44.1**	**+1.1**
CHBR	**Chabahar**	**6.00**	**100**	*e*Pn	**Pn**	**09 27 42.1**	**-2.5**
CHBR	**Chabahar**	**6.00**	**100**	*e*Pn	**Pn**	**09 27 42.1**	**-2.5**
CHBR	**Chabahar**	**6.00**	**100**	Pn	**Pn**	**09 27 42.0**	**-2.5**
ROKH	**ROKH**	**6.12**	**336**	*e*Pn	**Pn**	**09 27 48.2**	**+1.8**
JHBN	**Jahan bin**	**6.16**	**333**	*e*Pn	**Pn**	**09 27 46.9**	**-0.1**
IZEF	**Zefreh**	**6.28**	**348**	*e*Pn	**Pn**	**09 27 48.5**	**-0.2**
ANAR	**Anarak**	**6.42**	**358**	*e*Pn	**Pn**	**09 27 50.6**	**+0.1**
IPIR	**Pirpir**	**6.48**	**337**	*e*Pn	**Pn**	**09 27 51.7**	**+0.3**
TPRV	**Parvadeh(Tabas**	**6.70**	**20**	*e*Pn	**Pn**	**09 27 54.6**	**+0.4**
IKLH	**Kolahrood**	**6.86**	**343**	*e*Pn	**Pn**	**09 27 56.8**	**+0.2**
BSRN	**Basiran**	**6.89**	**40**	*e*Pn	**Pn**	**09 27 53.0**	**-4.0**
BSRN	**Basiran**	**6.89**	**40**	*e*Pn	**Pn**	**09 27 53.0**	**-4.0**
BSRN	**Basiran**	**6.89**	**40**	Pn	Pn	09 27 52.0	-5.0
SHGR	**Shooshtar-Gavs**	**6.96**	**321**	*e*Pn	**Pn**	**09 27 58.1**	**+0.2**
SHGR				IAML		09 29 20.6	
	comp=E,186nm,0.7s						
SHGR	**Shooshtar-Gavs**	**6.96**	**321**	*e*Pn	**Pn**	**09 27 58.1**	**+0.2**
SHGR	**Shooshtar-Gavs**	**6.96**	**321**	Pn	**Pn**	**09 27 58.0**	**+0.2**
NHDN	**Nehbandan**	**7.07**	**48**	*e*Pn	**Pn**	**09 28 00.9**	**+1.4**
TKDS	**Koohdasht(Taba**	**7.38**	**21**	*e*Pn	**Pn**	**09 28 04.6**	**+1.0**
TABS	**Tabas**	**7.41**	**21**	*e*Pn	**Pn**	**09 28 00.5**	**-3.5**
TABS	**Tabas**	**7.41**	**21**	*e*Pn	**Pn**	**09 28 00.5**	**-3.5**
TABS	**Tabas**	**7.41**	**21**	Pn	**Pn**	**09 28 00.0**	**-4.0**
TNSJ	**Nastanj**	**7.55**	**17**	*e*Pn	**Pn**	**09 28 07.1**	**+1.1**
KHMZ	**Khomeyn**	**7.76**	**335**	IAML		09 29 40.6	
	comp=E,88nm,0.5s						
AFRZ	**Afriz**	**7.97**	**32**	*e*Pn	**Pn**	**09 28 13.8**	**+2.0**
GHVR	**GHOM**	**8.03**	**344**	IAML		09 29 48.1	
	comp=N,46nm,0.6s						
GHVR				IAML		09 29 50.0	
	comp=E,76nm,0.6s						
RAYN	**Ar Rayn**	**8.29**	**249**	*i* P	**Pn**	**09 28 14.3**	**-1.8**
	SNR=47						
RAYN	**Ar Rayn**	**8.29**	**249**	P	**Pn**	**09 28 15.7**	**-0.4**
RAYN	**Ar Rayn**	**8.29**	**249**	Pn	**Pn**	**09 28 15.7**	**-0.4**
IQOM	**Qom**	**8.43**	**344**	*e*Pn	**Pn**	**09 28 17.7**	**-0.5**
IVRN	**Varamin**	**8.43**	**348**	*e*Pn	**Pn**	**09 28 17.6**	**-0.4**
IANJ	**Anjilo**	**8.69**	**360**	*e*Pn	**Pn**	**09 28 22.3**	**+0.6**
HSAM	**Samen**	**8.74**	**330**	*e*Pn	**Pn**	**09 28 21.3**	**-1.1**
SHAO	**Shalim**	**8.83**	**169**	*i* P	**Pn**	**09 28 22.9**	**-0.5**
	SNR=17						
IDMV	**Damavand**	**8.95**	**350**	*e*Pn	**Pn**	**09 28 25.2**	**-0.1**
HAGD	**Aghdareh**	**9.04**	**334**	*e*Pn	**Pn**	**09 28 27.4**	**+0.9**
ISHM	**Shahmirzad**	**9.04**	**357**	*e*Pn	**Pn**	**09 28 27.9**	**+1.3**
IRAZ	**Razeghan**	**9.28**	**339**	*e*Pn	**Pn**	**09 28 29.2**	**-0.6**
IALA	**Alasht**	**9.35**	**354**	*e*Pn	**Pn**	**09 28 32.4**	**+1.5**
IPRN	**Peran**	**9.56**	**352**	*e*Pn	**Pn**	**09 28 33.8**	**+0.3**
QABG	**Abgarm-Qazvin**	**9.67**	**338**	*e*Pn	**Pn**	**09 28 34.8**	**-0.4**
IVIS	**Veis**	**9.86**	**324**	*e*Pn	**Pn**	**09 28 37.9**	**+0.3**
QALM	**Alamut, Qazvin**	**10.05**	**345**	*e*Pn	**Pn**	**09 28 40.4**	**0.0**
IDHR	**Dehrash**	**10.24**	**323**	*e*Pn	**Pn**	**09 28 41.5**	**-1.4**
HRA	**Herat**	**10.45**	**41**	Pn	**Pn**	**09 28 48.1**	**+2.3**
QSDN	**Sirdan**	**10.53**	**339**	*e*Pn	**Pn**	**09 28 47.2**	**+0.2**
ISFR	**Sfrayin**	**10.84**	**18**	*e*Pn	**Pn**	**09 28 52.7**	**+1.5**
GEYT	**Alibeck**	**11.69**	**17**	Pn	Pn	09 29 07.6	+5.0
	comp=E,0.1nm,0.3s,baz=220,slow=12,SNR=7.1						
GEYT				LR	LR	09 33 46.8	
	comp=E,184nm,19.3s,baz=175,slow=39						
ISHB	**Shabestar**	**13.46**	**331**	*e*Pn	**Pn**	**09 29 28.2**	**+1.2**
SOCY	**Socotra**	**14.49**	**180**	Pn	**Pn**	**09 29 36.8**	**-4.2**
KBL	**Kabul**	**15.14**	**56**	P	**Pn**	**09 29 50.1**	**+0.3**
KBL				pmax	pmax		
	comp=Z,19nm,1.0s						
KBL	**Kabul**	**15.14**	**56**	Pn	**Pn**	**09 29 50.1**	**+0.3**
KBL				IAmb	IAmb	09 29 57.4	
	comp=Z,19nm,1.0s						
AKT	**Akhty**	**15.56**	**342**	*e*P	**P**	**09 29 59.0**	**-0.4**
AKT				pmax	pmax		
	comp=Z,21nm,0.5s						
ASF	**Jabal al Asfar**	**15.79**	**294**	Pn	**Pn**	**09 29 58.9**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=47,slow=11,SNR=8.3						
ASF				Sn	Sn	09 32 40.1	-13
	comp=Z,0.4nm,0.3s,baz=252,slow=16,SNR=1.8						
GHAJ	**Ghor Haditha**	**16.69**	**290**	Pn	**S**	**09 33 22.9**	**-2.4**
TBLG	**Delisi**	**16.75**	**335**	P	**Pn**	**09 30 11.0**	**+0.7**
TBLG				pmax	pmax		
	comp=Z,17nm,1.0s						
TBLG	**Delisi**	**16.75**	**335**		**Pn**	**09 30 10.9**	**+0.7**
HMDT	**Nahal Hemdat**	**16.93**	**293**	Pn	S	09 33 12.2	-18
HRFI	**Mount Harif**	**16.95**	**286**	Pn	**S**	**09 33 30.1**	**-0.6**
AKH	**Akhalkalaki**	**16.97**	**332**	P	**Pn**	**09 30 13.9**	**+0.7**
AKH				pmax	pmax		
	comp=Z,12nm,1.1s						
AKH	**Akhalkalaki**	**16.97**	**332**		**Pn**	**09 30 13.9**	**+0.7**
EIL	**Elat**	**16.98**	**284**	Pn	**P**	**09 30 15.2**	**0.0**
	comp=Z,0.7nm,0.3s,baz=51,slow=5.9,SNR=9.3						
EIL				Sn	**Sn**	**09 33 23.2**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=74,slow=11,SNR=1.3						
EIL	**Elat**	**16.98**	**284**	Pn	**S**	**09 33 34.6**	**+3.2**
MMAI	**Mount Meron Ar**	**17.23**	**296**	P	**Pn**	**09 30 16.1**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=105,slow=15,SNR=9.5						
MMAI				S	**Sn**	**09 33 18.5**	**-9.2**
	comp=Z,1.6nm,0.3s,baz=337,slow=35,SNR=1.4						
GAZ	**Gaziantep**	**17.56**	**310**	Pn	**Pn**	**09 30 19.0**	**-1.6**
ZEI	**Tsey**	**17.97**	**335**	*e*P	**P**	**09 30 26.0**	**-0.2**
ZEI				pmax	pmax		
	comp=Z,16nm,0.6s						
NIL	**Nilore**	**18.05**	**63**	P	**P**	**09 30 28.1**	**+1.2**
NIL				pmax	pmax		
	comp=Z,22nm,1.0s						
NIL	**Nilore**	**18.05**	**63**	P	**P**	**09 30 28.1**	**+1.2**
ATD	**Arta Tunnel**	**18.39**	**217**	P	**Pn**	**09 30 35.5**	**+4.6**
	comp=Z,0.9nm,0.3s,baz=287,slow=3.0,SNR=3.6						
ATD	**Arta Tunnel**	**18.39**	**217**	P	**P**	**09 30 30.3**	**-0.5**
NCK	**Nalchik**	**18.70**	**336**	*e*P	**Pn**	**09 30 35.9**	**+1.5**
NEY	**Neytrino**	**18.82**	**334**	*e*P	**Pn**	**09 30 37.8**	**+1.8**
KBZ	**Khabaz**	**19.16**	**335**	P	**Pn**	**09 30 41.4**	**+1.5**
	comp=Z,0.6nm,0.3s,baz=146,slow=10.0,SNR=20						
KBZ				LR	LR	09 39 15.8	
	comp=Z,158nm,22.0s,baz=156,slow=41						
DOMR	**Dombai**	**19.30**	**332**	*e*P	**Pn**	**09 30 42.6**	**+0.8**
DOMR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BTK	**Batken**	**19.32**	**42**	P	**P**	**09 30 40.9**	**0.0**
BTK				pmax	pmax		
	comp=Z,15nm,0.6s						
BTK	**Batken**	**19.32**	**42**	P	**P**	**09 30 40.9**	**0.0**
BTK				IAmb	IAmb	09 30 45.8	
	comp=Z,15nm,0.6s						
KVAR	**Kislovodsk Arr**	**19.43**	**335**	P	**Pn**	**09 30 45.9**	**+2.6**
	baz=75,slow=20,SNR=4.0						
KIV	**Kislovodsk**	**19.43**	**335**	*de*P	**Pn**	**09 30 44.3**	**+1.0**
KIV				pmax	pmax		
	comp=Z,23nm,0.7s						
KIV	**Kislovodsk**	**19.43**	**335**	P	**P**	**09 30 42.5**	**+0.5**
KIV				IAmb	IAmb	09 30 54.3	
	comp=Z,32nm,0.9s						
CSS	**Mathiatis**	**19.46**	**300**	P	**P**	**09 30 42.8**	**+0.3**
GOF	**Gofitskoye**	**20.25**	**337**	*e*P	Pn	09 30 56.0	+3.1
SOC	**Sochi**	**20.37**	**329**	*e*P	**P**	**09 30 52.3**	**+0.1**
SOC				*e*		09 31 12.4	
SOC				*e*S	**S**	**09 34 39.4**	**-0.2**
SOC				*e*SSS	SSS	09 35 06.0	
SOC				pmax	pmax		
	comp=Z,13nm,0.5s						
SOC				MLR	MLR		
	comp=Z,127nm,11.0s						
KK31	**Karatay Array**	**21.17**	**35**	P	**P**	**09 31 00.8**	**-0.1**
KK31				pmax	pmax		
	comp=Z,11nm,0.8s						
KK31	**Karatay Array**	**21.17**	**35**	P	**P**	**09 31 00.8**	**-0.1**
BR131	**Keskin Array S**	**21.28**	**313**	P	**P**	**09 31 02.6**	**+0.3**
BR131				pmax	pmax		
	comp=Z,20nm,0.8s						
BR131	**Keskin Array S**	**21.28**	**313**	P	**P**	**09 31 02.6**	**+0.3**
BR131				IAmb	IAmb	09 31 08.7	
	comp=Z,20nm,0.8s						
BRTR	**Keskin Array B**	**21.28**	**313**	P	**P**	**09 31 03.0**	**+0.7**
	comp=Z,16nm,0.7s,baz=136,slow=12,SNR=32						
BRTR				ScP	**ScP**	**09 38 43.9**	**+1.3**
	comp=Z,1.5nm,0.7s,baz=122,slow=4.7,SNR=4.3						
BRTR				LR	LR	09 41 52.5	
	comp=Z,75nm,19.1s,baz=108,slow=44						
ARSB	**Arslanbob**	**21.39**	**42**	P	**P**	**09 31 03.4**	**0.0**
ARSB				pmax	pmax		
	comp=Z,50nm,0.7s						
ARSB	**Arslanbob**	**21.39**	**42**	P	**P**	**09 31 03.4**	**0.0**
BR231	**Keskin MP Arra**	**21.91**	**312**	P	**P**	**09 31 09.5**	**+0.4**
BR231				IAmb	IAmb	09 31 19.0	
	comp=Z,23nm,0.9s						
ANTO	**Ankara**	**21.91**	**312**	P	**P**	**09 31 08.5**	**-0.5**
ANTO				pmax	pmax		
	comp=Z,17nm,0.7s						
ANTO	**Ankara**	**21.91**	**312**	P	**P**	**09 31 08.5**	**-0.5**
ANTO				IAmb	IAmb	09 31 19.0	
	comp=Z,17nm,0.7s						
AML	**Almayashu**	**22.30**	**42**	P	**P**	**09 31 13.5**	**0.0**
	SNR=19						
ANN	**Anapa**	**22.36**	**328**	*e*P	**P**	**09 31 17.1**	**+3.4**
ANN				*e*S	**S**	**09 35 18.4**	**-0.1**
ANN				pmax	pmax		
	comp=Z,25nm,1.0s						
EKS2	**Erkin-Say**	**22.68**	**41**	P	**P**	**09 31 18.7**	**+1.5**
	SNR=5.8						
ELL	**Elmali**	**22.68**	**302**	P	**P**	**09 31 16.8**	**-0.4**
ELL				pmax	pmax		
	comp=Z,81nm,1.0s						
ELL	**Elmali**	**22.68**	**302**	P	**P**	**09 31 16.8**	**-0.4**
UCH	**Uchtor**	**22.85**	**42**	P	**P**	**09 31 19.2**	**-0.2**
	SNR=10.0						
AAK	**Ala-Archa**	**23.08**	**41**	P	**P**	**09 31 22.4**	**+1.0**
	comp=Z,5.8nm,0.7s,baz=199,slow=2.3,SNR=13						
AAK				PcP	**PcP**	**09 35 09.9**	**-0.3**
	comp=Z,1.9nm,0.6s,baz=198,slow=7.0,SNR=2.6						
AAK	**Ala-Archa**	**23.08**	**41**	P	**P**	**09 31 22.4**	**+1.0**
AAK						09 35 09.9	
AAK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
AAK	**Ala-Archa**	**23.08**	**41**	P	**P**	**09 31 22.4**	**+1.0**
AAK				IAmb	IAmb	09 31 39.3	
	comp=Z,9.1nm,0.7s						
KZA	**Kyzart**	**23.21**	**43**	P	**P**	**09 31 24.5**	**+1.5**
	SNR=14						
MDUB	**Mudurnu**	**23.28**	**312**	P	**P**	**09 31 23.6**	**+0.2**
KBK	**Karagaybulak**	**23.36**	**42**	P	**P**	**09 31 26.3**	**+2.0**
	SNR=6.1						
USP	**Ospenovka**	**23.47**	**40**	P	**P**	**09 31 26.7**	**+1.6**
	SNR=5.8						
AKTO	**Aktyubinsk**	**23.86**	**6**	P	**P**	**09 31 29.7**	**+0.9**
	comp=Z,12nm,0.6s,baz=169,slow=11,SNR=15						
SIM	**Simferopol'**	**24.13**	**324**	*de*P	**P**	**09 31 35.0**	**+3.5**
SIM				pmax	pmax		
	comp=Z,28nm,0.6s						
KDJ	**Kajisay**	**24.45**	**45**	P	**P**	**09 31 36.0**	**+1.4**
KDJ				pmax	pmax		
	comp=Z,13nm,1.5s						
KDJ	**Kajisay**	**24.45**	**45**	P	**P**	**09 31 36.0**	**+1.4**
TARG	**Taragay, Kyrgy**	**24.64**	**47**	P	**P**	**09 31 38.0**	**+1.3**
SANT	**Santorini**	**26.01**	**299**	P	**P**	**09 31 48.8**	**+0.2**
APE	**Apeiranthos**	**26.12**	**300**	↑P	**P**	**09 31 52.0**	**+2.3**
VRH	**Novokhopyorsk**	**26.13**	**342**	*e*P	**P**	**09 31 50.0**	**+0.6**
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
IDI	**Anoyia**	**26.23**	**296**	P	**P**	**09 31 51.8**	**+1.1**
	comp=Z,24nm,0.6s,baz=96,slow=9.2,SNR=15						
IDI	**Anoyia**	**26.23**	**296**	↑P	**P**	**09 31 52.2**	**+1.5**
IDI	**Anoyia**	**26.23**	**296**	P	**P**	**09 31 51.1**	**+0.4**
VORD	**Divnogorie**	**26.63**	**339**	*e*P	**P**	**09 31 55.5**	**+1.5**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LPSR	**Galich'ya Gora**	**28.17**	**340**	*e*P	**P**	**09 32 10.8**	**+3.0**
LPSR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
VRI	**Vrincioaia**	**28.84**	**319**	↑P	**P**	**09 32 14.1**	**+0.2**
PLOR	**Plostina**	**28.88**	**318**	↑P	**P**	**09 32 15.3**	**+1.1**
BRVK	**Borovoye**	**28.97**	**21**	↓*e*P	**P**	**09 32 15.7**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRVK	**Borovoye**	**28.97**	**21**	P	**P**	**09 32 14.1**	**-0.9**
BVAR	**Borovoye Array**	**28.98**	**21**	P	**P**	**09 32 15.2**	**+0.2**
	comp=Z,5.6nm,0.8s,baz=208,slow=7.7,SNR=20						
B

RICI Ricice 34.09 309 *i* P **P 09 33 04.4 +4.3**
DGZ Jazzator, Alta 34.45 39*c i* P **P 09 33 04.2 +0.9**
DGZ pmax pmax
comp=Z,11nm,0.7s
LANS Liptovska Anna 34.74 319 *eP* **P 09 33 06.9 +1.2**
LANS pmax pmax
comp=Z,13nm,0.6s
LANS Liptovska Anna 34.74 319 *eP* **P 09 33 06.9 +1.2**
KLJV Kijevo 34.75 310 *i* P **P 09 33 05.0 -0.8**
VYHS Vyhne 34.82 318 *eP* **P 09 33 06.9 +0.5**
VYHS Vyhne 34.82 318 *eP* **P 09 33 06.9 +0.5**
OJC Ojcow 35.06 321 P **P 09 33 08.6 +0.2**
OJC pmax pmax
comp=Z,28nm,0.6s
OJC Ojcow 35.06 321 P **P 09 33 08.6 +0.2**
MORI Morici 35.19 309 *i* P **P 09 33 09.4 -0.2**
MBAR Mbarara 35.20 223⇑ *eP* **P 09 33 10.9 +0.8**
MBAR pmax pmax
comp=Z,3.0nm,0.9s
ZAA0 Zalesovo Array 35.44 32 P **P 09 33 11.0 -0.6**
ZALV Zalesovo Beam 35.44 32 P **P 09 33 11.8 +0.2**
comp=Z,22nm,0.7s,baz=238,slow=9.3,SNR=74
ZALV PcP **PcP 09 35 41.1 +0.2**
comp=Z,1.4nm,0.5s,baz=235,slow=5.1,SNR=2.5
ZALV LR LR 09 51 15.8
comp=Z,39nm,18.6s,baz=170,slow=42
ZALV Zalesovo Beam 35.44 32 *i* P **P 09 33 11.8 +0.2**
ZALV pmax pmax
comp=Z,23nm,0.7s
KLMR Klimovskoe 35.48 348 *eP* **P 09 33 11.4 -0.4**
KLMR pmax pmax
comp=Z,14nm,0.7s
KLMR Klimovskoe 35.48 348 *eP* **P 09 33 11.4 -0.4**
KLMR AMP 09 33 13.4
comp=Z,14nm,0.7s
DUGI Dugi Otok 35.68 309 *i* P **P 09 33 13.8 0.0**
NVLJ Novalja 35.96 310 *i* P **P 09 33 15.8 -0.3**
MORC Moravsky Berou 36.15 319 *eP* **P 09 33 17.5 -0.3**
MORC Moravsky Berou 36.15 319 P **P 09 33 17.9 +0.1**
MORC pmax pmax
comp=Z,6.0nm,0.6s
MORC Moravsky Berou 36.15 319 P **P 09 33 17.9 +0.1**
MORC IAmb IAmb 09 33 20.2
comp=Z,6.2nm,0.6s
ARSA Arzberg 36.38 314 *i* P **P 09 33 18.6 -1.2**
comp=Z,1.9nm,0.5s
CONA Conrad Observa 36.41 316 *i* P **P 09 33 20.6 +0.5**
comp=Z,2.9nm,0.7s
SOKA Soboth 36.50 313 *i* P **P 09 33 21.8 +0.9**
comp=Z,1.9nm,0.6s
VRAC Vranov 36.51 318 *eP* **P 09 33 21.0 +0.2**
KRUC Moravsky 36.52 318 *eP* **P 09 33 20.6 -0.4**
KRLC Kraliky 36.72 319 *eP* **P 09 33 22.4 -0.3**
NRCA Norcia 36.77 307 P **P 09 33 24.0 +0.8**
NRCA IAmb IAmb 09 33 26.8
comp=Z,13nm,0.6s
BRJN Brijuni 36.83 310 *i* P **P 09 33 22.9 -0.6**
VSU Vasula 36.97 336*ce* P **P 09 33 25.9 +1.3**
VSU pmax pmax
comp=Z,18nm,0.8s
DPC Dobruska-Polom 37.10 320 *eP* **P 09 33 26.0 +0.1**
MURB Monte Urbino 37.28 307 P **P 09 33 26.4 -1.1**
MURB IAmb IAmb 09 33 38.6
comp=Z,9.2nm,0.8s
CHVC Chvalec 37.36 320 *eP* **P 09 33 28.2 +0.1**
MOA Molln 37.39 315 *i* P **P 09 33 28.3 -0.1**
comp=Z,3.5nm,0.6s
PRED Cave del Predi 37.39 312 P **P 09 33 28.3 -0.2**
PRED IAmb IAmb 09 33 31.9
comp=Z,4.9nm,0.6s
MYKA Terra Mystica 37.40 313 *i* P **P 09 33 28.7 +0.2**
comp=Z,8.4nm,0.8s
KBA Koelnbreinsper 37.73 313 *i* P **P 09 33 30.8 -0.6**
comp=Z,6.1nm,0.6s,SNR=9.1
ZOU Zoufplan 37.81 312 P **P 09 33 31.8 -0.4**
GOPC GO Pecny, Ondr 37.83 318 *eP* **P 09 33 33.0 +1.0**
STAL STALIGIAL 37.90 312 P **P 09 33 32.5 -0.2**
GEC2 GERESS Array S 38.09 316 P **P 09 33 33.1 -1.2**
GERES GERESS Array B 38.09 316 P **P 09 33 33.6 -0.7**
comp=Z,1.0nm,0.6s,baz=138,slow=12,SNR=4.8
GERES PcP **PcP 09 35 49.2 0.0**
comp=Z,1.3nm,0.6s,baz=128,slow=2.2,SNR=7.6
CIMO Cimolais 38.10 312 P **P 09 33 34.0 -0.4**
CIMO IAmb IAmb 09 33 38.6
comp=Z,7.5nm,0.7s
ABTA Abfaltersbach 38.17 313 *i* P **P 09 33 35.1 0.0**
comp=Z,7.6nm,0.7s
KHC Kasperske Hory 38.26 317⇓ *eP* **P 09 33 35.5 -0.2**
KHC pmax pmax
comp=Z,19nm,1.3s
KHC Kasperske Hory 38.26 317 *eP* **P 09 33 35.6 -0.2**
KHC Kasperske Hory 38.26 317 P **P 09 33 35.6 -0.2**
CTI Castel Tesino 38.55 311 P **P 09 33 38.3 0.0**
CTI pmax pmax
comp=Z,14nm,0.7s
CTI Castel Tesino 38.55 311 P **P 09 33 38.3 0.0**
CTI IAmb IAmb 09 33 40.7
comp=Z,14nm,0.7s
ZCCA Zocca 38.61 308 P **P 09 33 39.6 +0.9**
ZCCA IAmb IAmb 09 33 43.1
comp=Z,14nm,0.7s
BRG Berggiesshubel 38.70 319 *eP* **P 09 33 38.8 -0.6**
comp=Z,3.6nm,0.8s
BRG Berggiesshubel 38.70 319 *eP* **P 09 33 38.9 -0.4**
comp=Z,5.3nm,0.7s,baz=110,slow=8.4
BRG Berggiesshubel 38.70 319 *eP* **P 09 33 38.8 -0.6**
BRG pmax pmax
comp=Z,4.0nm,0.8s
KEST Kesra 38.88 295 P **P 09 33 42.8 +1.6**
comp=Z,5.2nm,0.8s,baz=254,slow=6.6,SNR=4.1
KEST Kesra 38.88 295 IAmb IAmb 09 33 43.6
comp=Z,10nm,1.0s
WTTA Wattenberg 38.90 313 *i* P **P 09 33 40.8 -0.5**
comp=Z,14nm,0.5s,SNR=12
WATA Walderalm 38.96 313 *i* P **P 09 33 41.2 -0.5**
comp=Z,7.0nm,0.4s,SNR=11
SQTA Sankt Quirin 39.16 313 *i* P **P 09 33 42.9 -0.6**
comp=Z,25nm,0.5s,SNR=18
MOTA Moosalm 39.27 313 *i* P **P 09 33 43.5 -0.9**
comp=Z,20nm,0.7s,SNR=11
ROTZ Rotzenmuhle 39.33 317 *eP* **P 09 33 44.4 -0.2**
comp=Z,17nm,1.6s,baz=110,slow=8.4
CLL Collm 39.41 320 *eP* **P 09 33 46.0 +0.7**
comp=Z,7.0nm,1.1s
CLL Collm 39.41 320 P **P 09 33 43.6 -1.7**
CLL pmax pmax
comp=Z,9.0nm,1.2s
CLL Collm 39.41 320 P **P 09 33 43.6 -1.7**
FIA1 FINESS Array S 39.42 339 P **P 09 33 45.1 -0.1**
FIA1 IAmb IAmb 09 33 47.1
comp=Z,11nm,0.6s
FINES FINESS Array B 39.42 339 P **P 09 33 44.9 -0.3**
comp=Z,9.8nm,0.6s,baz=144,slow=9.5,SNR=49
FINES PcP **PcP 09 35 52.5 -0.5**
comp=Z,1.5nm,0.7s,baz=138,slow=9.7,SNR=1.9
FINES LR LR 09 53 45.1
comp=Z,47nm,20.2s,baz=192,slow=42
FETA Feichten 39.42 312 *i* P **P 09 33 45.1 -0.6**
comp=Z,11nm,0.6s,SNR=14
GUNZ Gunzen 39.46 318 *eP* **P 09 33 45.3 -0.5**
comp=Z,1.6nm,0.9s,baz=110,slow=8.4
RETA Reutte 39.53 313 *i* P **P 09 33 45.7 -0.8**
comp=Z,14nm,0.5s,SNR=10
PLN Plauen 39.61 318 *eP* **P 09 33 47.2 +0.2**
comp=Z,3.2nm,1.0s,baz=110,slow=8.4
GRA1 Grafenberg Arr 39.90 317 P **P 09 33 49.3 -0.1**
GRF Grafenberg Arr 39.90 317 *eP* **P 09 33 49.2 -0.1**
comp=Z,19nm,0.7s,baz=110,slow=8.4
GRF Grafenberg Arr 39.90 317 P **P 09 33 49.3 -0.1**
GRF pmax pmax
comp=Z,20nm,0.6s
UBR Ueberruh 40.01 313 *eP* **P 09 33 49.8 -0.6**
comp=Z,19nm,0.6s,baz=110,slow=8.4
BSD Bornholm Skovb 40.04 326 *i* P **P 09 33 49.7 -0.7**
BSD pmax pmax
comp=Z,36nm,0.6s
BSD Bornholm Skovb 40.04 326 *i* P **P 09 33 49.7 -0.7**
comp=Z,36nm,0.6s
DAVA Damuels 40.05 313 *i* P **P 09 33 50.3 -0.6**
comp=Z,47nm,0.5s,SNR=28
GTA Gaotai 40.06 60 *eP* **P 09 33 52.3 +1.2**
GTA pP sP 09 34 03.0 +3.4
GTA sP pP 09 34 06.8 +10
GTA PcP **PcP 09 35 56.8 +1.1**
GTA pmax pmax
comp=Z,14nm,0.9s
GTA pmax pmax
comp=Z,91nm,7.6s
GTA LR LR
comp=N,87nm,15.2s
GTA LR LR
comp=E,79nm,18.4s
GTA LR LR
comp=Z,75nm,16.5s
TUE Stuetta 40.21 311 P **P 09 33 51.3 -1.0**
UBBA Unterbreizbach 41.01 318 *eP* **P 09 33 58.7 +0.2**
comp=Z,4.3nm,0.7s,baz=110,slow=8.4
ASSE Asse, Remlinge 41.07 320 *eP* **P 09 33 59.1 +0.2**
comp=Z,9.4nm,1.4s,baz=110,slow=8.4
CLZ Clausthal 41.14 319 *eP* **P 09 34 00.2 +0.5**
comp=Z,24nm,0.6s,baz=110,slow=8.4
BFO Black Forest 41.33 314 *eP* **P 09 34 01.2 0.0**
comp=Z,4.8nm,0.6s,baz=110,slow=8.4
BFO Black Forest 41.33 314 P **P 09 34 00.5 -0.8**
BFO pmax pmax
comp=Z,5.0nm,0.6s
BFO Black Forest 41.33 314 P **P 09 34 00.5 -0.8**
NRDL Niedersach Rie 41.52 320 *eP* **P 09 34 03.6 +1.0**
comp=Z,21nm,0.7s,baz=110,slow=8.4
SENIN Lac Senin/Sane 41.57 311 P **P 09 34 01.5 -1.9**
SENIN IAmb IAmb 09 34 05.5
comp=Z,5.6nm,0.7s
BNI Bardonecchia 41.75 309 P **P 09 34 04.0 -0.9**
BNI pmax pmax
comp=Z,9.0nm,0.9s
BNI Bardonecchia 41.75 309 P **P 09 34 04.0 -0.9**
BNI IAmb IAmb 09 34 06.6
comp=Z,8.7nm,0.9s
RETH Rethem/Aller, 42.03 320 *eP* **P 09 34 07.5 +0.6**
comp=Z,7.4nm,0.7s,baz=110,slow=8.4
ECH Echery 42.06 313 P **P 09 34 06.1 -1.1**
ECH pmax pmax
comp=Z,8.0nm,0.8s
ECH Echery 42.06 313 P **P 09 34 06.1 -1.1**
ECH IAmb IAmb 09 34 09.1
comp=Z,8.0nm,0.8s
CHTO Chiang Mai 42.07 91 P **P 09 34 06.0 -1.7**
CHTO pmax pmax
comp=Z,8.0nm,1.1s
CHTO Chiang Mai 42.07 91 P **P 09 34 06.0 -1.7**
CHTO IAmb IAmb 09 34 09.6
comp=Z,8.1nm,1.1s
CMAR Chiang Mai Arr 42.19 92 P **P 09 34 09.4 +0.7**
comp=Z,1.6nm,0.4s,baz=284,slow=9.6,SNR=6.0
CMAR PcP **PcP 09 36 03.4 +0.6**
comp=Z,1.5nm,0.3s,baz=295,slow=5.1,SNR=5.6
LVZ Lovozero 42.79 349*de* P **P 09 34 13.0 +0.1**
LVZ pmax pmax
comp=Z,10.0nm,0.7s
LVZ Lovozero 42.79 349 P **P 09 34 13.1 +0.1**
LVZ IAmb IAmb 09 34 15.5
comp=Z,11nm,0.8s
WLF Walferdange 43.05 315 *eP* **P 09 34 14.9 -0.4**
comp=Z,12nm,0.8s,baz=110,slow=8.4
WLF Walferdange 43.05 315 P **P 09 34 14.0 -1.2**
WLF pmax pmax
comp=Z,11nm,0.8s
WLF Walferdange 43.05 315 P **P 09 34 14.0 -1.2**
WLF IAmb IAmb 09 34 17.3
comp=Z,11nm,0.8s
LZH Lanzhou 43.20 65 *eP* **P 09 34 18.3 +1.5**
LZH pP sP 09 34 27.5 +2.1
LZH sP pP 09 34 30.5 +7.4
LZH PP **PP 09 35 57.8 +0.6**
LZH pmax pmax
comp=Z,16nm,1.2s
LZH pmax pmax
comp=Z,100nm,4.9s
LZH LR LR
comp=N,160nm,15.0s
LZH LR LR
comp=E,160nm,14.6s
LZH LR LR
comp=Z,230nm,17.5s
MUD Monsted U'grnd 43.54 325 *eP* **P 09 34 19.7 +0.7**
MUD pmax pmax
comp=Z,23nm,0.7s
MUD Monsted U'grnd 43.54 325 *i* P **P 09 34 19.7 +0.7**
comp=Z,23nm,0.7s
CD2 Chengdu 43.56 72 *eP* **P 09 34 19.0 -0.7**
TAM Tamanrasset 43.93 276 P **P 09 34 23.0 +0.2**
TAM pmax pmax
comp=Z,6.0nm,0.9s
TAM Tamanrasset 43.93 276 P **P 09 34 23.0 +0.2**
TAM IAmb IAmb 09 34 25.9
comp=Z,6.1nm,0.9s
DOU Dourbes 44.13 315 P **P 09 34 24.2 +0.3**
comp=Z,11nm,0.9s
NC405 NORSAR Array S 44.52 332 P **P 09 34 26.2 -0.7**
NB201 NORSAR Array S 44.67 332 P **P 09 34 27.3 -0.8**
NB201 IAmb IAmb 09 34 29.9
comp=Z,14nm,0.7s
NB2 NORSAR Subarra 44.70 332 P **P 09 34 27.4 -0.9**
comp=Z,4.2nm,0.5s,baz=121,slow=8.6
NB2 NORSAR Subarra 44.70 332 P **P 09 34 27.4 -0.9**
baz=121,slow=8.6
NOA NORSAR Array B 44.70 332 P **P 09 34 27.5 -0.9**
comp=Z,5.9nm,0.7s,baz=120,slow=8.0,SNR=32
NOA LR LR 09 55 02.6
comp=Z,52nm,21.2s,baz=200,slow=39
KONO Kongsberg 44.73 330 *eP* **P 09 34 28.3 -0.3**
NC303 NORSAR Array S 44.73 332 *eP* **P 09 34 29.3 +0.8**
NAO01 NORSAR Array S 44.74 332 P **P 09 34 27.6 -1.0**
NAO01 IAmb IAmb 09 34 30.4
comp=Z,12nm,0.8s
TLY Talaya 44.74 42 LR LR 09 53 02.6
comp=Z,33nm,19.1s,baz=254,slow=36
NBO00 NORSAR Array S 44.88 332 P **P 09 34 30.6 +0.8**
NBO00 IAmb IAmb 09 34 36.1
comp=Z,17nm,1.1s
NC204 NORSAR Array S 45.01 332 P **P 09 34 29.4 -1.5**
NC204 IAmb IAmb 09 34 32.5
comp=Z,8.4nm,0.8s
SONM Songino Array 45.74 48 P **P 09 34 37.5 +0.6**
comp=Z,3.2nm,0.7s,baz=258,slow=9.2,SNR=17
SKAR Skarslia 45.77 331 *eP* **P 09 34 37.1 +0.2**
KEV Kevo 45.80 347 P **P 09 34 36.7 -0.2**
KEV pmax pmax
comp=Z,27nm,0.8s
KEV Kevo 45.80 347 P **P 09 34 36.6 -0.2**
ARCES ARCESS Array B 45.92 347 P **P 09 34 38.1 +0.2**
comp=Z,7.4nm,0.7s,baz=143,slow=8.7,SNR=50
ARCES PcP **PcP 09 36 14.6 0.0**
comp=Z,2.7nm,0.7s,baz=104,slow=5.1,SNR=4.8
ARCES LR LR 09 55 09.0
comp=Z,52nm,21.6s,baz=100,slow=38
ARE0 ARCESS Array S 45.92 347 P **P 09 34 38.1 +0.2**
ARE0 ARCESS Array S 45.92 347 *eP* **P 09 34 38.2 +0.3**
KTK1 Kautokeino 46.00 345 *eP* **P 09 34 38.6 +0.1**
BLS5 Blasjo 46.07 328 *eP* **P 09 34 39.5 +0.3**
ULN Ulaanbaatar 46.18 48*ce* P **P 09 34 40.6 +0.1**
ULN pmax pmax
comp=Z,5.0nm,0.7s
ULN Ulaanbaatar 46.18 48 P **P 09 34 38.3 -2.2**
ULN IAmb IAmb 09 34 44.2
comp=Z,4.6nm,0.6s
MOR8 Moi Rana 46.41 339 *eP* **P 09 34 42.0 +0.2**
GYA Guiyang 46.86 78 *eP* **P 09 34 46.0 0.0**
GYA pmax pmax
comp=Z,10.0nm,0.8s
HAMF Hammerfest 47.18 347 *eP* **P 09 34 48.2 +0.5**
STEI Steigen 47.29 341 *eP* **P 09 34 48.1 -0.5**
TRO Tromso 47.48 344 *eP* **P 09 34 49.9 -0.1**
XAN Xi'an 47.51 67 P **P 09 34 49.5 -1.4**
XAN pP sP 09 35 18.0 +18
XAN pmax pmax
comp=Z,9.0nm,0.9s
LSZ Lusaka 48.69 214 P **P 09 35 01.0 +0.8**
LSZ pmax pmax
comp=Z,5.0nm,0.9s
LSZ Lusaka 48.69 214 P **P 09 35 00.9 +0.8**
LSZ IAmb IAmb 09 35 03.7
comp=Z,5.1nm,0.9s
HHC Hu-ho-hao-te 49.09 58 *eP* **P 09 35 05.0 +1.9**
HHC pmax pmax
comp=Z,12nm,0.9s
HHC pmax pmax
comp=Z,31nm,5.6s
PSI Prapat 49.20 111 P **P 09 35 04.6 +0.3**
comp=Z,8.9nm,0.9s,baz=360,slow=18,SNR=2.0
RPSI Rantau Prapat 49.26 111 P **P 09 35 04.6 0.0**
ESDC Sonseca Array 49.35 300 P **P 09 35 04.6 -0.4**
comp=Z,2.0nm,0.8s,baz=76,slow=7.3,SNR=10
PAB San Pablo 49.65 300 P **P 09 35 07.0 -0.4**
PAB pmax pmax
comp=Z,12nm,1.3s
PAB San Pablo 49.65 300 P **P 09 35 07.0 -0.4**
PAB IAmb IAmb 09 35 15.6
comp=Z,12nm,1.3s
ESK Eskdalemuir 49.86 321 P **P 09 35 07.9 -0.7**
ESK pmax pmax
comp=Z,14nm,1.2s
ESK Eskdalemuir 49.86 321 P **P 09 35 07.9 -0.7**
ESK IAmb IAmb 09 35 18.7
comp=Z,14nm,1.2s
TOA0 Torodi Ar. Sit 50.61 265 P **P 09 35 13.9 -1.0**
TORD Torodi Ar. Bea 50.61 265 P **P 09 35 13.9 -0.9**
comp=Z,6.3nm,0.5s,baz=58,slow=7.0,SNR=63
BJO1 Bjornoya 51.07 349 *eP* **P 09 35 18.0 +0.5**
BOD Bodaibo 51.91 36 *eP* **P 09 35 22.8 -1.1**
BOD pmax pmax
comp=Z,20nm,1.1s
WHN Wuhan 52.61 71 P **P 09 35 29.5 -0.1**
SPA0 Spitsbergen Ar 54.25 351 P **P 09 35 41.5 +0.5**
SPA0 IAmb IAmb 09 35 44.0
comp=Z,12nm,0.9s
SPA0 Spitsbergen Ar 54.25 351 *eP* **P 09 35 41.3 +0.4**
KBS Kingsbay 55.41 351⇓ *eP* **P 09 35 49.5 +0.2**
KBS pmax pmax
comp=Z,16nm,0.8s
KBS Kingsbay 55.41 351 P **P 09 35 49.7 +0.4**
KBS Kingsbay 55.41 351 *eP* **P 09 35 49.4 +0.1**
NJ2 Nanjing 56.06 68 *eP* **P 09 35 54.0 -0.7**
NJ2 pmax pmax
comp=Z,11nm,0.5s
LBTB Lobatse 58.28 210 P **P 09 36 11.1 +0.7**
LBTB pmax pmax
comp=Z,10.0nm,0.7s
LBTB Lobatse 58.28 210 P **P 09 36 11.1 +0.7**
DBIC Dimbokro 59.21 261 P **P 09 36 16.9 -0.2**
comp=Z,20nm,0.6s,baz=36,slow=6.9,SNR=28
DBIC Dimbokro 59.21 261 P **P 09 36 16.8 -0.2**
KIC Kosan Boka 59.25 261 *eP* **P 09 36 16.6 -0.8**
comp=Z,34nm,0.8s
TIC Toumodi 59.36 262 *eP* **P 09 36 17.5 -0.7**
comp=Z,37nm,0.7s
LIC Lamto 59.56 261 *eP* **P 09 36 18.7 -0.8**
comp=Z,92nm,0.7s
TIXI Tiksi 60.11 21⇓ *eP* **P 09 36 22.3 -0.1**
TIXI pmax pmax
comp=Z,5.0nm,1.3s
TIXI Tiksi 60.11 21 P **P 09 36 21.4 -1.0**
TIXI IAmb IAmb 09 36 33.0
comp=Z,3.1nm,0.8s
DAG Danmarks Havn 60.18 345⇑ *i* P **P 09 36 22.4 -0.4**
DAG pmax pmax
comp=Z,5.0nm,0.7s
DAG Danmarks Havn 60.18 345⇑ *i* P **P 09 36 22.4 -0.4**
comp=Z,4.8nm,0.7s
NOR Nord 60.89 351 *i* P **P 09 36 27.3 -0.3**
NOR pmax pmax
comp=Z,5.0nm,1.1s
NOR Nord 60.89 351 *i* P **P 09 36 27.3 -0.3**
comp=Z,4.8nm,1.1s
BOSA Boshof 61.55 209 P **P 09 36 32.7 -0.2**
comp=Z,4.7nm,0.8s,baz=25,slow=10,SNR=8.4
BOSA LR LR 10 02 46.2
comp=Z,73nm,18.3s,baz=359,slow=36
BOSA Boshof 61.55 209 P **P 09 36 32.7 -0.2**
BOSA pmax pmax
comp=Z,15nm,1.3s
BOSA Boshof 61.55 209 IAmb IAmb 09 36 40.7
comp=Z,14nm,1.3s
KSRS Korea Array 62.14 60 P **P 09 36 35.8 -0.9**
comp=Z,2.5nm,0.6s,baz=277,slow=6.7,SNR=16
KLR Kul'dur 62.50 46 P **P 09 36 38.4 -0.5**
comp=Z,3.6nm,0.8s,baz=284,slow=8.1,SNR=9.1
KLR Kul'dur 62.50 46*c i* P **P 09 36 38.1 -0.9**
KLR pmax pmax
comp=Z,5.0nm,1.0s
USRK Ussuriysk Ar. 63.63 52 P **P 09 36 45.5 -1.1**
comp=Z,1.7nm,0.7s,baz=271,slow=6.1,SNR=7.3
SUMG Summit 65.44 341 P **P 09 36 56.6 -1.8**
SUMG pmax pmax
comp=Z,13nm,0.9s
SUMG Summit 65.44 341 P **P 09 36 56.6 -1.8**
SUMG Summit 65.44 341 *i* P **P 09 36 59.0 +0.6**
comp=Z,29nm,0.8s
YSS Yuzh-Sakhalins 70.20 47 *eP* **P 09 37 27.8 -0.5**
MJAR Matsushiro Arr 70.29 58 P **P 09 37 28.4 -0.8**
comp=Z,1.9nm,0.7s,baz=288,slow=6.0,SNR=5.6
TULEG Thule 71.22 348 P **P 09 37 33.3 -0.7**
BILL Bilibino 73.32 21 *eP* **P 09 37 47.1 +0.4**
BILL *e* 09 38 03.0
BILL *e* 09 40 26.7
BILL *e*PPP PPP 09 42 12.1
BILL pmax pmax
comp=Z,6.0nm,1.0s
BILL Bilibino 73.32 21 P **P 09 37 47.3 +0.5**
BILL IAmb IAmb 09 37 48.6
comp=Z,6.4nm,1.0s
PETK Petropavlovsk- 76.77 37 P **P 09 38 05.1 -1.8**
comp=Z,2.6nm,0.8s,baz=250,slow=4.3,SNR=3.0
FITZ Fitzroy Crossi 82.61 114 P **P 09 38 39.1 0.0**
comp=Z,10nm,0.6s,baz=304,slow=3.3,SNR=17
FITZ Fitzroy Crossi 82.61 114 P **P 09 38 38.9 -0.2**
TOLK Toolik Lake Re 83.33 8 P **P 09 38 42.8 +0.7**
TOLK IAmb IAmb 09 38 43.4
comp=Z,4.0nm,0.8s
C36M Paulatuk 84.17 359 P **P 09 38 45.9 -0.5**
SCHQ Schefferville 84.23 330 P **P 09 38 46.9 -0.1**
comp=Z,4.8nm,0.6s,baz=43,slow=3.9,SNR=12
SCHQ Schefferville 84.23 330 P **P 09 38 46.3 -0.6**
SCHQ IAmb IAmb 09 38 47.5
comp=Z,6.9nm,0.8s
INK Inuvik 85.07 3 P **P 09 38 51.0 +0.1**
INK pmax pmax
comp=Z,3.0nm,0.8s
INK Inuvik 85.07 3 P **P 09 38 51.0 +0.1**
INK IAmb IAmb 09 38 53.2
comp=Z,2.5nm,0.8s
MLY Manley 86.53 10 P **P 09 38 58.1 -0.2**
MLY IAmb IAmb 09 38 59.5
comp=Z,5.9nm,1.0s
EPYK Eagle Plains 86.82 4 P **P 09 38 59.5 -0.2**
EPYK IAmb IAmb 09 39 00.3
comp=Z,5.8nm,0.8s
ILAR Eielson Array 87.35 9 P **P 09 39 01.4 -0.8**
comp=Z,0.9nm,0.7s,baz=325,slow=3.9,SNR=8.8
ILAR PKKPbc **PKKPbc 09 56 51.5 -2.0**
comp=Z,0.5nm,0.6s,baz=187,slow=1.7,SNR=6.0
BPAW Baer Paw Mtn. 87.36 11 P **P 09 39 01.8 -0.5**
EGAK Eagle 88.02 6 P **P 09 39 05.5 +0.1**
EGAK IAmb IAmb 09 39 06.5
comp=Z,5.1nm,1.1s
SCRK Sand Creek 88.48 8 P **P 09 39 08.1 +0.4**
SCRK IAmb IAmb 09 39 09.3
comp=Z,5.7nm,1.2s
DAWY Dawson 88.88 6 P **P 09 39 09.7 +0.1**
DAWY IAmb IAmb 09 39 10.6
comp=Z,2.8nm,0.9s
YKA Yellowknife Ar 90.59 355 P **P 09 39 17.8 +0.3**
comp=Z,2.3nm,0.6s,baz=6.9,slow=4.5,SNR=48
YKA PKKPbc **PKKPbc 09 56 44.2 -1.2**
comp=Z,0.1nm,0.4s,baz=184,slow=2.7,SNR=5.1
WRA Warramunga Arr 90.67 112 P **P 09 39 17.8 -0.8**
comp=Z,2.9nm,0.7s,baz=310,slow=4.0,SNR=10.0
WRAB Tennant Creek 90.67 112⇑ *eP* **P 09 39 18.8 +0.2**
WRAB pmax pmax
comp=Z,5.0nm,0.8s
ASAR Alice Springs 92.06 115 P **P 09 39 24.2 -0.8**
comp=Z,2.0nm,0.7s,baz=294,slow=4.8,SNR=4.6
NVAR Mina Array Bea 114.75 353 PKP PKPdf 09 44 57.1 +0.6
comp=Z,0.7nm,0.6s,baz=17,slow=1.3,SNR=7.1
QSPA South Pole Qui 116.60 180 PKP **PKPdf 09 44 57.6 -1.3**
comp=Z,2.5nm,0.8s,baz=265,slow=1.7,SNR=14
VNDA Vanda 119.79 166 PKP **PKPdf 09 45 04.5 -0.2**
comp=Z,0.8nm,0.6s,baz=292,slow=1.2,SNR=2.5
TXAR Lajitas Array 120.24 337 PKP **PKPdf 09 45 06.8 -0.4**
comp=Z,0.3nm,0.6s,baz=174,slow=2.5,SNR=4.9
LPAZ La Paz 125.50 269 PKP **PKPdf 09 45 16.8 -1.4**
comp=Z,0.9nm,0.7s,baz=145,slow=4.3,SNR=4.6

JMA 30 09:27:22.1±0.2, 24°.88N×123°.39E, h24km, M1.9,
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.54**	**220**	P	Pb	09 27 32.6	-0.4
YOJ				*e*S	Sb	09 27 39.8	-0.5
JYNG	**Yonagunijimaku**	**0.59**	**224**	P	Pb	09 27 33.4	-0.4
JYNG				*e*S	Sb	09 27 41.8	+0.1
IRIF	**Iriomote-Funau**	**0.62**	**150**	P	Pb	09 27 34.2	-0.2
IRIF				S	Sb	09 27 41.9	-0.8
JKRS	**Kuro-shima**	**0.85**	**138**	P	Pb	09 27 38.2	0.0
JKRS				S	Sb	09 27 49.4	+0.1
JIJ	**Ishigaki jima**	**0.86**	**127**	*e*S	Sb	09 27 48.4	-1.0
JISG	**Ishigakijimahi**	**0.89**	**109**	P	Pb	09 27 38.1	-0.7
HATJ	**Hateruma jima**	**0.90**	**155**	P	Pb	09 27 38.5	-0.6
HATJ				*e*S	Sb	09 27 50.5	-0.2

TAP 30 09:27:50.8, 24°.74N×122°.41E, h4km, ML3.1, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.45**	**284**	P	Pg	09 27 59.9	+0.4
	baz=284						
TWB1	**Santiao Chiao**	**0.47**	**306**	*i* P	Pg	09 27 59.3	-0.5
	baz=305						
TWB1				S	Sg	09 28 05.4	-0.6
	baz=305						
TWC	**Suao**	**0.53**	**256**	P	Pg	09 27 59.8	-1.1
	baz=255						
NTC	**Toucheng**	**0.54**	**283**	*e*P	Pg	09 28 01.4	+0.2
	baz=282						
NTC				*e*S	Sg	09 28 09.1	+0.9
	baz=282						
TIPB	**Shuangxi**	**0.58**	**294**	*e*P	Pg	09 28 02.5	+0.5
	baz=293						
TIPB				*e*S	Sg	09 28 10.8	+1.3
	baz=293						
YOJ	**Yonaguni jima**	**0.61**	**116**	*e*P	Pg	09 28 02.4	-0.2
	baz=116						
YOJ				*e*S	Sg	09 28 10.8	+0.3
	baz=116						
NWF	**Wu-fen Shan**	**0.66**	**301**	P	Pg	09 28 04.0	+0.5
	baz=300						
NWF				*e*S	Sb	09 28 13.7	-0.9
	baz=300						
WFSB	**Wu-fen Shan**	**0.66**	**300**	*e*P	Pg	09 28 04.0	+0.5
	baz=300						
WFSB				*e*S	Sb	09 28 13.4	-1.1
	baz=300						
TWE	**Neicheng**	**0.68**	**269**	P	Pg	09 28 03.0	-0.8
	baz=268						
TWE				*e*S	Sg	09 28 12.7	+0.1
	baz=268						
ENA	**Nanau**	**0.68**	**243**	P	Pg	09 28 04.0	+0.1
	baz=242						
ENA				*e*S	Sg	09 28 13.0	+0.3
	baz=242						
TWA	**Mucha**	**0.79**	**288**	*e*P	Pg	09 28 06.4	+0.4
	baz=288						
TWA				*e*S	Sb	09 28 17.5	-0.7
	baz=288						
NWLT	**Wulai**	**0.82**	**273**	*e*P	Pg	09 28 06.8	+0.1
	baz=272						
NWLT				*e*S	Sb	09 28 18.7	-0.6
	baz=272						
NDT	**Datong Townshi**	**0.83**	**261**	*i* P	Pg	09 28 06.3	-0.3
	baz=260						
NDT				*e*S	Sg	09 28 17.7	+0.3
	baz=260						
NHDH	**Xindian Distri**	**0.83**	**286**	*i* P	Pg	09 28 07.0	+0.1
	baz=285						
YM01	**YM01**	**0.86**	**298**	*e*P	Pg	09 28 07.8	+0.4
	baz=298						
YM01				*i* S	Sg	09 28 19.4	+0.8
	baz=298						
TATO	**Taipei**	**0.87**	**286**	P	Pg	09 28 07.5	0.0
	baz=285						
TATO				*e*S	Sg	09 28 19.0	+0.2
	baz=285						
YM08	**YM08**	**0.87**	**301**	P	Pg	09 28 07.5	0.0
	baz=301						
YM08				*i* S	Sg	09 28 19.4	+0.6
	baz=301						
YM11	**YM11**	**0.87**	**300**	*e*P	Pg	09 28 07.6	+0.1
	baz=299						
YM11				*e*S	Sb	09 28 19.9	-0.8
	baz=299						
YM10	**YM10**	**0.88**	**299**	*e*P	Pg	09 28 07.9	+0.3
	baz=298						
YM10				*i* S	Sg	09 28 19.8	+0.7
	baz=298						
YM05	**YM05**	**0.88**	**299**	*i* P	Pg	09 28 07.5	-0.2
	baz=299						
YM05				*e*S	Sg	09 28 19.7	+0.6
	baz=299						
YM04	**YM04**	**0.90**	**298**	*e*P	Pg	09 28 08.0	0.0
	baz=297						
YM04				*i* S	Sg	09 28 20.3	+0.7
	baz=297						
TWY	**Chenhua**	**0.91**	**306**	P	Pg	09 28 08.2	-0.1
	baz=306						
TWY				*e*S	Sg	09 28 20.4	+0.2
	baz=306						
NACB	**Ninganchiao**	**0.93**	**233**	*e*P	Pg	09 28 07.8	-0.9
	baz=233						
YHNB	**Yeheng**	**0.94**	**266**	*i* P	Pg	09 28 08.2	-0.7
	baz=266						
TWS1	**Kuangyinshan**	**0.97**	**292**	*i* S	Sg	09 28 22.6	+0.6
	baz=292						
NNSB	**Datong**	**0.98**	**252**	*e*P	Pg	09 28 09.1	-0.6
	baz=251						
NNSB				*e*S	Sg	09 28 22.9	+0.4
	baz=251						
NNSH	**Datong**	**0.98**	**252**	*e*P	Pg	09 28 09.1	-0.6
	baz=251						
NNSH				*e*S	Sg	09 28 22.2	-0.2
	baz=251						
TWD	**Chiawan**	**0.99**	**229**	*e*P	Pg	09 28 09.5	-0.3
	baz=228						
NNS	**Nan Shan**	**0.99**	**253**	*i* P	Pg	09 28 09.6	-0.2
	baz=252						
NNS				*e*S	Sg	09 28 22.7	+0.1
	baz=252						
ETLH	**Xiulin Townshi**	**0.99**	**238**	*e*P	Pg	09 28 09.2	-0.7
	baz=238						
WHF	**Hehuan Shan**	**1.20**	**241**	*e*P	Pg	09 28 13.5	-0.3
	baz=240						
WHF				*e*S	Sg	09 28 28.8	-0.6
	baz=240						
TDCB	**Techi**	**1.24**	**247**	*e*P	Pg	09 28 14.2	-0.3
	baz=247						
LIOB	**Emei**	**1.27**	**266**	*e*P	Pg	09 28 14.4	-0.8
	baz=266						
ESL	**Shilin**	**1.28**	**224**	*e*P	Pn	09 28 15.7	+0.2
	baz=223						
NSTT	**Nanjuang**	**1.28**	**266**	*e*P	Pg	09 28 14.8	-0.7
	baz=265						
CHGB	**Renai**	**1.31**	**239**	*e*P	Pg	09 28 15.1	-0.9
	baz=239						
CHGB				*e*S	Sg	09 28 32.6	-0.4
	baz=239						
EGFH	**Guangfu**	**1.39**	**220**	*e*P	Pn	09 28 16.6	-0.4
	baz=220						
WHP	**Taichung City**	**1.41**	**251**	*e*P	Pb	09 28 17.7	-0.1
	baz=251						
VWDT	**VWDT**	**1.51**	**230**	*e*P	Pn	09 28 18.5	-0.2
	baz=229						
DPDB	**Guoxing**	**1.52**	**243**	*e*P	Pn	09 28 18.3	-0.6
	baz=242						
SMLT	**Sun Moon Lake**	**1.62**	**239**	*e*P	Pb	09 28 21.1	-0.2
	baz=238						
SSLB	**Suanglung**	**1.63**	**235**	*e*P	Pn	09 28 20.5	+0.2
	baz=234						
TYC	**Yuchr**	**1.64**	**240**	*e*P	Pb	09 28 21.4	-0.2
	baz=239						
YULB	**Yu-li**	**1.68**	**217**	*e*P	Pn	09 28 20.5	-0.5
	baz=217						
WHYT	**Xinyi Township**	**1.76**	**234**	*e*P	Pb	09 28 23.1	-0.5
	baz=233						
FULB	**Fuli**	**1.84**	**214**	*e*P	Pn	09 28 22.6	-0.6
	baz=213						
CHN5	**Tsauling**	**1.94**	**235**	*e*P	Pn	09 28 25.8	+1.0
	baz=234						

*IDC **30** 09:33:15.0±1.5, 2°.87S×129°.56E, h0km, mb4.0/3, mb1 4.2/6, mb1mx3.7/40, mbtmp4.1/6, ML4.0/3, MS3.0/1,*

Ms1 3.0/1, ms1mx2.4/45, Error ellipse: s-maj=41.2km s-min=22.8km az=84.0
*DJA **30** 09:33:18.7±0.3, 3°.5S×3°×13°.0E±°, h10km, MJA 3.8/8, MLv3.8/8*
ISC 30 09:33:18.2±0.8, 2°.78S±0°.05×129°.89E±0°.06, h28km, n14, σ2§17/17, mb4.1/3, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.11**	**240**	P	Pn	**09 33 35.8**	**-2.1**
MSAI				S	Sb	**09 33 51.2**	**-1.7**
BNDI	**Bandanaira**	**1.73**	**179**	P	Pb	**09 33 52.2**	**+2.9**
AAI	**Ambon**	**1.92**	**242**	P	Pn	**09 33 48.5**	**-0.5**
SIJI	**Sorong**	**2.35**	**36**	Pn	Pb	**09 33 59.2**	**-0.7**
	36nm,0.3s,baz=202,slow=23,SNR=204						
SIJI				Sn	Sb	**09 34 29.1**	**+0.6**
	20nm,0.3s,baz=310,slow=22,SNR=4.5						
FAKI	**Fak Fak**	**2.36**	**93**	P	Pb	**09 34 00.8**	**+0.7**
NLAI	**Namlea**	**2.82**	**261**	P	Pn	**09 34 00.5**	**-1.0**
LBMI	**Labuha**	**3.20**	**312**	P	Pn	**09 34 06.2**	**-0.5**
KAPI	**Kappang**	**10.35**	**257**	LR	LR	09 40 08.6	
	comp=Z,84nm,18.8s,baz=316,slow=41						
FITZ	**Fitzroy Crossi**	**15.78**	**195**	Pn	Pn	**09 36 57.8**	**-0.8**
	0.2nm,0.3s,baz=23,slow=11,SNR=2.0						
FITZ				Sn	Sn	09 39 33.5	-19
	0.1nm,0.3s,baz=95,slow=12,SNR=0.9						
WRA	**Warramunga Arr**	**17.60**	**166**	P	Pn	**09 37 20.7**	**-0.9**
	0.8nm,0.3s,baz=348,slow=12,SNR=16						
WRA				S	Sn	**09 40 32.2**	**-4.7**
	0.2nm,0.3s,baz=317,slow=18,SNR=5.7						
ASAR	**Alice Springs**	**21.12**	**170**	P	P	**09 38 01.9**	**+0.9**
	3.5nm,0.4s,baz=348,slow=11,SNR=63						
ASAR				S	S	**09 41 52.0**	**-2.7**
	2.3nm,0.9s,baz=351,slow=22,SNR=9.6						
CTA	**Charters Tower**	**23.47**	**138**	P	P	**09 38 27.6**	**+1.9**
	5.9nm,0.8s,baz=137,slow=19,SNR=2.0						
MDSI	**Maura Dua**	**25.71**	**265**	P	P	**09 38 49.9**	**+3.5**
MKAR	**Makanchi Array**	**64.68**	**326**	P	P	**09 43 53.9**	**+0.2**
	0.5nm,0.6s,baz=117,slow=9.7,SNR=3.9						

*JMA **30** 09:39:06.4±0.2, 24°.90N×123°.36E, h19km, M3.3*
*IDC **30** 09:39:25.6±5.9, 24°.80N×123°.08E, h176km±59km, mb3.2/5, mb1 3.3/6, mb1mx3.0/48, mbtmp3.6/6, MS3.3/4, Ms1 3.3/4, ms1mx2.9/25, Error ellipse: s-maj=46.9km s-min=18.7km az=74.0*
ISC 30 09:39:07.4±1.7, 24°.83N±0°.08×123°.39E±0°.05, h10km±13km, n15, σ1§16/20, mb3.6/5, MS3.3/3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.50**	**224**	P	Pg	**09 39 16.9**	**-0.3**
YOJ				*e*S	Sg	**09 39 23.8**	**0.0**
JYNG	**Yonagunijimaku**	**0.55**	**227**	P	Pg	**09 39 17.8**	**-0.3**
JYNG				*e*S	Sg	**09 39 25.4**	**0.0**
IRIF	**Iriomote-Funau**	**0.58**	**148**	P	Pg	**09 39 18.9**	**+0.2**
IRIF				S	Sb	**09 39 28.3**	**+0.4**
JKRS	**Kuro-shima**	**0.81**	**136**	P	Pb	**09 39 22.9**	**-0.8**
JKRS				S	Sb	**09 39 34.5**	**-0.2**
JIJ	**Ishigaki jima**	**0.82**	**124**	P	Pb	**09 39 22.5**	**-1.4**
JIJ				S	Sb	**09 39 33.8**	**-1.3**
HATJ	**Hateruma jima**	**0.85**	**154**	P	Pb	**09 39 23.8**	**-0.6**
HATJ				*e*S	Sg	**09 39 36.7**	**+1.7**
JISG	**Ishigakijimahi**	**0.87**	**106**	P	Pb	**09 39 23.4**	**-1.3**
JISG				*e*S	Sb	**09 39 34.9**	**-1.5**
KSRS	**Korea Array**	**13.17**	**16**	P	P	**09 42 27.4**	**+2.7**
	baz=193,slow=14,SNR=5.2						
KSRS				LR	LR	09 48 02.0	
	comp=Z,56nm,18.2s,baz=195,slow=39						
KLR	**Kul'dur**	**25.23**	**13**	LR	LR	09 54 58.7	
	comp=Z,43nm,18.7s,baz=256,slow=37						
SONM	**Songino Array**	**26.62**	**334**	P	P	**09 44 46.2**	**-0.1**
	1.1nm,0.8s,baz=154,slow=8.7,SNR=7.1						
KAPI	**Kappang**	**29.87**	**187**	LR	LR	09 59 21.0	
	comp=Z,72nm,18.2s,baz=64,slow=40						
KURBB	**Kurchatov Arra**	**42.93**	**319**	P	P	**09 47 05.9**	**-0.5**
	0.8nm,0.3s,baz=110,slow=8.0,SNR=3.2						
WRA	**Warramunga Arr**	**45.76**	**166**	P	P	**09 47 29.1**	**-0.1**
	1.3nm,0.8s,baz=347,slow=8.1,SNR=4.9						
ASAR	**Alice Springs**	**49.27**	**167**	P	P	**09 47 57.7**	**+1.1**
	0.2nm,0.5s,baz=349,slow=7.8,SNR=1.9						
ASAR				LR	LR	10 13 00.9	
	comp=Z,46nm,18.9s,baz=338,slow=41						
YKA	**Yellowknife Ar**	**81.59**	**23**	P	P	**09 51 24.2**	**-1.1**
	0.5nm,0.8s,baz=308,slow=5.0,SNR=7.2						

*ISK **30** 09:49:33.5, 40°.19N×25°.53E, h10km, ML2.4/15*
*ATH **30** 09:49:34.8, 40°.21N×25°.52E, h18km±4km, ML1.9/4, Error ellipse: s-maj=4.6km s-min=1.3km az=14.0*
*DDA **30** 09:49:36.8, 40°.23N×25°.94E, h20km±2km, ML2.5*
ISC 30 09:49:34.4±1.0, 40°.20N±0°.03×25°.56E±0°.03, h14km±9km, n29, σ0§47/34, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.26**	**92**	PG	Pg	**09 49 39.7**	**-0.2**
GOKA	**anakkale-Gk**	**0.26**	**92**	*i* P	Pg	**09 49 39.6**	**-0.4**
GOKA				*i* S	Sg	**09 49 43.9**	**+0.1**
GOKA				IAML		09 49 44.0	
	comp=E,688nm,0.5s						
SMTH	**Samothraki Isl**	**0.27**	**355**	P	Pg	**09 49 40.5**	**+0.2**
SMTH				AML	AML	09 49 51.3	
	comp=N,450μm,0.2s						
SMTH				AML	AML	09 49 51.4	
	comp=E,428μm,0.2s						
LIA	**Limnos Island**	**0.42**	**224**	P	Pg	**09 49 43.0**	**+0.2**
LIA				S	Sg	**09 49 49.1**	**+0.6**
BOZC	**Bozcaada**	**0.52**	**133**	PG	Pg	**09 49 44.2**	**-0.4**
BOZC				SG	Sg	**09 49 52.1**	**+0.6**
BOZC	**Bozcaada**	**0.52**	**133**	*i* P	Pg	**09 49 43.9**	**-0.7**
BOZC				*i* S	Sg	**09 49 51.4**	**-0.1**
EZN	**Ezine**	**0.69**	**122**	PG	Pb	**09 49 47.4**	**-0.9**
ENEZ	**Enez**	**0.70**	**40**	PG	Pb	**09 49 47.9**	**-0.6**
GELI	**Tayfur-Gelibol**	**0.72**	**74**	PG	Pb	**09 49 48.4**	**-0.4**
THAS	**Thassos island**	**0.76**	**303**	P	Pg	**09 49 49.3**	**0.0**
THAS				AML	AML	09 50 02.2	
	comp=N,290μm,0.3s						
THAS				AML	AML	09 50 03.5	
	comp=E,150μm,0.2s						
ALN	**Alexandroupoli**	**0.79**	**28**	PG	Pb	**09 49 49.6**	**-0.4**
ERIK	**Erikli-Kesan**	**0.86**	**57**	PG	Pb	**09 49 51.1**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**0.88**	**121**	*i* P	Pb	**09 49 50.5**	**-1.1**
LPK	**Lapseki**	**0.93**	**79**	PG	Pb	**09 49 52.3**	**-0.1**
RDO	**Rodhopi**	**0.95**	**359**	P	Pb	**09 49 52.3**	**-0.4**
RDO				AML	AML	09 50 07.5	
	comp=E,109μm,0.3s						
RDO				AML	AML	09 50 08.0	
	comp=N,141μm,0.3s						
RDO	**Rodhopi**	**0.95**	**359**	PG	Pb	**09 49 52.4**	**-0.3**
SIGR	**SIGRI**	**1.01**	**167**	P	Pn	**09 49 54.4**	**+0.1**
SIGR				AML	AML	09 50 09.0	
	comp=N,322μm,0.5s						
SIGR				AML	AML	09 50 10.0	
	comp=E,261μm,0.2s						
SIGR	**SIGRI**	**1.01**	**167**	PG	Pb	**09 49 53.3**	**-0.4**
PRK	**Paraskevi**	**1.10**	**150**	P	Pg	**09 49 56.4**	**+0.9**
KAVA	**Kavala**	**1.13**	**315**	P	Pg	**09 49 55.9**	**-0.3**
OUR	**Ouranopolis**	**1.22**	**277**	PN	Pn	**09 49 56.6**	**-0.5**
UKOP	**Uzunkopru-Edir**	**1.23**	**41**	PN	Pb	**09 49 57.4**	**-0.2**
AYVA	**Ayvalik**	**1.24**	**135**	*i* P	Pb	**09 49 57.8**	**+0.2**
AYVA				*i* S	Sb	**09 50 13.9**	**+0.4**
AYVA				IAML		09 50 15.0	
	comp=N,242nm,0.5s						
KRBG	**Karabiga-Canak**	**1.34**	**81**	PN	Pn	**09 49 58.9**	**+0.2**
DKL	**Dikili**	**1.53**	**137**	PN	Pn	**09 50 01.4**	**+0.1**
MRMT	**Marmara Adasi**	**1.60**	**75**	PN	Pn	**09 50 02.7**	**+0.2**
PLG	**Polygyros**	**1.63**	**277**	P	Pb	**09 50 03.8**	**-0.6**
EDC	**Edincik**	**1.77**	**84**	PN	Pn	**09 50 04.9**	**+0.3**
EDRB	**Edirne**	**1.87**	**28**	PN	Pn	**09 50 06.5**	**+0.4**

*IDC **30** 09:49:51.6±2.4, 1°.07N×126°.41E, h36km±18km, mb4.3/32, mb1 4.3/34, mb1mx4.3/46, mbtmp4.5/34, ML4.0/2, MS3.5/6, Ms1 3.5/6, ms1mx3.1/33, Error ellipse: s-maj=17.7km s-min=8.2km az=74.0*
*NEIC **30** 09:49:51.8±1.7, 1°.10N±0°.07×126°.50E±0°.05, h38km±2km, mb4.7/45, Error ellipse: s-maj=10.1km s-min=7.7km az=185.0*
*DJA **30** 09:49:51.9±1.1, 1°.N±5°×12°.7E±°, h23km±10km, M4.7/12, mb4.7/12, mB5.0/3, MLv4.7/12, Mw(mB)4.4/3*
ISC 30 09:49:52.9±0.8, 1°.10N±0°.04×126°.53E±0°.06, h47km±8km,

n133, σ1§47/143, mb4.7/56, MS3.6/9, 1C-1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.89**	**111**	P	Pn	**09 50 08.4**	**-0.6**
TNTI	**Ternate**	**0.89**	**111**		Pn	**09 50 08.5**	**-0.6**
LBMI	**Labuha**	**1.98**	**151**	P	Pn	**09 50 24.6**	**+0.7**
KMSI	**Cibinong**	**2.60**	**259**	P	Pn	**09 50 33.9**	**+1.4**
LUWI	**Luwuk**	**4.32**	**241**	P	Pn	09 51 08.7	+13
LUWI	**Luwuk**	**4.32**	**241**	Pn	Pn	**09 50 55.4**	**-0.7**
NLAI	**Namlea**	**4.34**	**173**	P	Pn	09 51 04.5	+8.1
MRSI	**Marisa**	**4.63**	**262**	P	Pn	**09 51 02.4**	**+2.0**
MSAI	**Masohi**	**5.02**	**152**	P	Pn	09 51 22.9	+17
DDMP	**Don Marcelino,**	**5.04**	**351**	*e*P	Pn	**09 51 04.9**	**-1.1**
DDMP				*e*S	Sn	**09 52 04.4**	**+1.4**
SIJI	**Sorong**	**5.12**	**112**	Pn	Pn	**09 51 08.7**	**+1.6**
	2.6nm,0.3s,baz=328,slow=24,SNR=5.7						
SIJI				Sn	Sn	**09 52 04.8**	**-0.1**
	0.7nm,0.3s,baz=262,slow=22,SNR=1.3						
SIJI				LR	LR	09 53 43.3	
	comp=Z,1μm,18.0s,baz=234,slow=44						
SKMP	**Bagumbayan, Su**	**5.74**	**340**	*e*P	Pn	**09 51 13.2**	**-2.4**
SKMP				*e*S	Sn	**09 52 15.6**	**-4.6**
MATI	**Mati**	**5.82**	**357**	*e*P	Pn	**09 51 15.5**	**-1.1**
MATI				*e*S	Sn	**09 52 28.6**	**+6.5**
KCP	**Kidapawan**	**6.05**	**346**	*i* P	Pn	**09 51 20.6**	**+0.7**
CTBH	**Cotabato--PC H**	**6.50**	**340**	*i* P	Pn	**09 51 26.6**	**+0.7**
MPSI	**Mapaga**	**6.68**	**264**	P	Pn	**09 51 31.6**	**+3.2**
	0.2nm?07nm40nm,0.9s						
BUKP	**Musuan**	**6.89**	**348**	*e*P	Pn	**09 51 33.1**	**+1.6**
BUKP				*e*S	Sn	**09 52 52.0**	**+3.4**
FAKI	**Fak Fak**	**6.97**	**125**	P	Pn	09 51 36.5	+4.0
	0.3nm84nm,1.0s						
FAKI	**Fak Fak**	**6.97**	**125**	Pn	Pn	**09 51 30.7**	**-1.7**
PAGZ	**Pagadian**	**7.41**	**335**	*e*P	Pn	**09 51 37.1**	**-1.3**
TTSI	**Tana Toraja**	**7.87**	**238**	P	Pn	**09 51 46.6**	**+1.8**
	0.3nm2μm80nm,0.8s						
SPSI	**Sidrap Palu**	**8.43**	**233**	P	Pn	**09 51 55.1**	**+2.7**
	0.2nm822nm46nm,0.9s						
BNSI	**Bone**	**8.43**	**230**	P	Pn	**09 51 54.3**	**+1.8**
	0.2nm35nm,0.7s						
BKSI	**Bulukumba**	**9.04**	**225**	P	Pn	09 52 16.7	+16
KAPI	**Kappang**	**9.10**	**228**	Pn	Pn	**09 52 02.9**	**+1.3**
	2.4nm,0.3s,baz=120,slow=15,SNR=5.3						
KAPI	**Kappang**	**9.10**	**228**	Pn	Pn	**09 52 00.0**	**-1.6**
SOEI	**Soe**	**11.02**	**192**	Pn	Pn	**09 52 27.9**	**-0.1**
KKM	**Kota Kinabalu**	**11.41**	**296**	Pn	Pn	**09 52 34.8**	**+1.4**
PLAI	**Plampang**	**13.17**	**221**	P	P	**09 53 09.8**	**+3.6**
MTN	**Manton Dam**	**14.58**	**162**	Pn	Pn	**09 53 15.7**	**-0.7**
KSM	**Kuching**	**16.23**	**271**	Pn	Pn	**09 53 36.9**	**-0.9**
KNRA	**Kununurra**	**16.81**	**173**	Pn	Pn	**09 53 43.6**	**-1.4**
KNRA				IAmb	IAmb	09 53 50.7	
	comp=Z,52nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.10**	**183**	P	P	**09 54 11.1**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=12,slow=11,SNR=10						
FITZ	**Fitzroy Crossi**	**19.10**	**183**	P	P	**09 54 11.2**	**-0.7**
WB0	**Warramunga Arr**	**22.12**	**160**	P	P	**09 54 44.2**	**-0.4**
WB0				IAmb	IAmb	09 54 50.2	
	comp=Z,35nm,0.8s						
WRAB	**Tennant Creek**	**22.26**	**160**	P	P	**09 54 45.8**	**-0.3**
WRAB				IAmb	IAmb	09 54 50.1	
	comp=Z,38nm,1.0s						
WRA	**Warramunga Arr**	**22.27**	**160**	P	P	**09 54 45.6**	**-0.6**
	comp=Z,24nm,0.6s,baz=338,slow=11,SNR=86						
WRA				S	S	**09 58 47.8**	**-0.7**
	comp=Z,2.9nm,1.0s,baz=334,slow=16,SNR=5.2						
WB2	**Warramunga Arr**	**22.27**	**160**	P	P	**09 54 45.8**	**-0.4**
WR0	**Warramunga Arr**	**22.35**	**160**	P	P	**09 54 46.7**	**-0.4**
WR0				IAmb	IAmb	09 54 48.3	
	comp=Z,34nm,1.1s						
YULB	**Yu-li**	**22.74**	**347**	P	P	**09 54 47.3**	**-3.8**
TPUB	**Ta-pu**	**22.80**	**346**	P	P	**09 54 49.4**	**-2.4**
TPUB				IAmb	IAmb	09 54 52.1	
	comp=Z,26nm,0.8s						
SSLB	**Suanglung**	**23.20**	**347**	P	P	**09 54 54.9**	**-0.9**
PSA00	**Pilbara Seismi**	**23.46**	**196**	P	P	**09 54 58.5**	**+0.2**
PSA00				IAmb	IAmb	09 55 02.2	
	comp=Z,21nm,1.0s						
YHNB	**Yeheng**	**23.96**	**348**	P	P	**09 55 03.1**	**+0.1**
AS31	**Alice Springs**	**25.64**	**164**	P	P	**09 55 18.5**	**+0.2**
ASAR	**Alice Springs**	**25.64**	**164**	P	P	**09 55 18.3**	**0.0**
	comp=Z,6.7nm,0.8s,baz=346,slow=6.6,SNR=48						
ASAR				PcP	PcP	**09 58 48.9**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=352,slow=2.1,SNR=5.2						
ASAR				S	S	**09 59 44.7**	**+1.1**
	comp=Z,1.5nm,0.9s,baz=348,slow=16,SNR=5.7						
ASAR				ScP	ScP	**10 02 26.4**	**+2.3**
	comp=Z,1.0nm,0.9s,baz=342,slow=2.1,SNR=4.5						
JOW	**Kunigami**	**25.64**	**4**	P	P	**09 55 19.4**	**+1.2**
	comp=Z,2.2nm,0.7s,baz=104,slow=16,SNR=6.8						
JOW	**Kunigami**	**25.64**	**4**	IAmb	IAmb	09 55 19.8	
	comp=Z,15nm,0.7s						
RPSI	**Rantau Prapat**	**27.64**	**274**	P	P	**09 55 35.6**	**-0.8**
PSI	**Prapat**	**27.64**	**274**	P	P	**09 55 35.6**	**-1.0**
	comp=Z,10nm,0.8s,baz=179,slow=2.5,SNR=5.0						
CTA	**Charters Tower**	**28.58**	**138**	PcP	PcP	**09 58 56.4**	**+1.1**
	comp=Z,6.1nm,0.8s,baz=131,slow=17,SNR=3.9						
WHN	**Wuhan**	**31.49**	**340**	P	P	**09 56 11.5**	**+1.2**
NJ2	**Nanjing**	**31.63**	**348**	*e*P	P	**09 56 12.3**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MORW	**Morawa**	**31.63**	**198**	P	P	**09 56 11.5**	**-0.2**
MORW				IAmb	IAmb	09 56 12.4	
	comp=Z,14nm,1.1s						
GYA	**Guiyang**	**31.64**	**324**	*e*P	P	**09 56 11.5**	**-0.4**
GYA				PP	PP	**09 57 24.0**	**0.0**
GYA				S	S	**10 01 18.3**	**+0.2**
GYA				SS	SnSn	**10 03 09.3**	**+1.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,3.8s						
GYA				LR	LR		
	comp=N,90nm,6.6s						
GYA				LR	LR		
	comp=E,100nm,8.3s						
GYA				LR	LR		
	comp=Z,90nm,16.0s						
FORT	**

LZH LR LR
comp=N,160nm,14.0s
LZH LR LR
comp=E,170nm,14.3s
LZH LR LR
comp=Z,260nm,17.2s
HHC Hu-ho-hao-te 41.83 343 *e*P **P 09 57 39.5 +1.2**
HHC pmax pmax
comp=Z,20nm,0.9s
HHC pmax pmax
comp=Z,32nm,5.7s
USRK Ussuriysk Ar. 43.19 6 P **P 09 57 49.3 +0.1**
comp=Z,5.4nm,0.8s,baz=187,slow=8.0,SNR=16
USA0B Ussuriysk Arra 43.19 6 P **P 09 57 49.8 +0.6**
USA0B IAmb IAmb 09 57 50.6
comp=Z,19nm,1.2s
ASAJ Asahikawa 45.15 16 P **P 09 58 05.6 +0.7**
comp=Z,8.5nm,1.0s,baz=251,slow=28,SNR=4.4
JKA Kamikawa-asahi 45.15 16 P **P 09 58 05.6 +0.7**
GTA Gaotai 45.26 331 *e*P **P 09 58 07.0 +1.0**
GTA pP pP 09 58 16.5 -1.5
GTA sP pwP 09 58 20.5 -0.6
GTA PcP **PcP 09 59 46.8 +1.4**
GTA S **S 10 04 46.5 +3.3**
GTA pmax pmax
comp=Z,6.0nm,0.8s
GTA pmax pmax
comp=Z,73nm,7.3s
GTA LR LR
comp=N,60nm,17.5s
GTA LR LR
comp=E,250nm,19.0s
GTA LR LR
comp=Z,88nm,16.8s
KLR Kul'dur 48.16 5 P **P 09 58 28.3 0.0**
comp=Z,4.9nm,0.8s,baz=206,slow=4.4,SNR=13
KLR PcP **PcP 09 59 55.4 +0.2**
comp=Z,1.6nm,0.6s,baz=117,slow=2.6,SNR=2.8
SONM Songino Array 49.72 342 P **P 09 58 40.1 -0.4**
comp=Z,1.3nm,0.6s,baz=154,slow=9.3,SNR=6.3
SONM PcP **PcP 10 00 01.4 +0.3**
comp=Z,0.9nm,0.4s,baz=16,slow=42,SNR=2.4
WMQ Urumqi 54.77 326 *e*P **P 09 59 19.8 +1.8**
WMQ pP pP 09 59 30.8 +0.5
WMQ LR LR
comp=N,180nm,17.7s
WMQ LR LR
comp=E,160nm,20.9s
WMQ LR LR
comp=Z,240nm,26.9s
PETK Petropavlovsk- 57.93 22 P **P 09 59 40.6 +0.4**
comp=Z,3.4nm,0.7s,baz=185,slow=7.8,SNR=5.9
NIL Nilore 59.39 309 P **P 09 59 51.0 +0.1**
NIL IAmb IAmb 10 00 01.7
comp=Z,8.5nm,1.1s
TARG Taragay, Kyrgy 59.58 319 P **P 09 59 52.1 -0.4**
TARG IAmb IAmb 10 00 02.4
comp=Z,4.8nm,0.7s
MK31 Makanchi Array 59.61 326 P **P 09 59 51.3 -0.8**
MKAR Makanchi Array 59.61 326 P **P 09 59 51.2 -0.8**
comp=Z,3.3nm,0.5s,baz=122,slow=8.9,SNR=35
MKAR LR LR 10 25 52.6
comp=Z,52nm,20.7s,baz=110,slow=36
MAKZ Makanchi 59.79 326 P **P 09 59 52.5 -0.8**
MAKZ IAmb IAmb 09 59 53.0
comp=Z,4.4nm,0.7s
KDJ Kajisay 60.19 319 P **P 09 59 56.4 0.0**
TUWZ Tuamarina 60.25 140 P **P 09 59 57.3 +0.8**
YAK Yakutsk 60.83 2 P **P 09 59 60.0 0.0**
comp=Z,5.5nm,0.3s,baz=190,slow=1.1,SNR=4.2
YAK LR LR 10 25 49.3
comp=Z,28nm,21.8s,baz=90,slow=36
YAK Yakutsk 60.83 2 P **P 10 00 00.0 0.0**
YAK Yakutsk 60.83 2 IAmb IAmb 10 00 00.9
comp=Z,20nm,0.9s
MA2 Magadan 61.29 14 P **P 10 00 04.3 +1.0**
comp=Z,13nm,0.8s,baz=183,slow=9.4,SNR=5.7
MA2 Magadan 61.29 14 IAmb IAmb 10 00 09.9
comp=Z,59nm,1.5s
AAK Ala-Archa 62.18 319 P **P 10 00 09.6 -0.3**
comp=Z,1.2nm,0.3s,baz=160,slow=9.8,SNR=2.3
AAK Ala-Archa 62.18 319 IAmb IAmb 10 00 15.8
comp=Z,2.6nm,1.0s
ZALV Zalesovo Beam 62.84 334 P **P 10 00 12.8 -0.9**
comp=Z,1.5nm,0.4s,baz=122,slow=7.2,SNR=5.6
KBL Kabul 62.98 309 P **P 10 00 13.2 -2.2**
KBL IAmb IAmb 10 00 16.3
comp=Z,4.1nm,0.7s
BTK Batken 63.61 315 P **P 10 00 17.8 -1.5**
BTK IAmb IAmb 10 00 25.5
comp=Z,7.4nm,0.8s
KURBB Kurchatov Arra 63.85 328 P **P 10 00 19.6 -0.9**
comp=Z,4.9nm,0.5s,baz=128,slow=6.2,SNR=53
KURK Kurchatov 63.85 328 P **P 10 00 19.2 -1.3**
SEY Seymchan 64.62 13 P **P 10 00 25.8 +0.5**
comp=Z,5.9nm,0.9s,baz=208,slow=4.6,SNR=10
KK31 Karatay Array 65.03 318 P **P 10 00 27.3 -1.1**
BVAR Borovoye Array 69.41 328 P **P 10 00 55.7 -0.3**
comp=Z,4.4nm,0.8s,baz=126,slow=7.5,SNR=19
TIXI Tiksi 70.46 1 P **P 10 01 01.0 -1.0**
comp=Z,5.4nm,0.7s,baz=220,slow=3.4,SNR=16
TIXI Tiksi 70.46 1 P **P 10 01 00.8 -1.2**
TIXI IAmb IAmb 10 01 02.2
comp=Z,5.9nm,0.8s
GEYT Alibeck 72.39 310 P **P 10 01 13.3 -1.1**
comp=Z,2.0nm,0.6s,baz=132,slow=4.2,SNR=4.0
AKTO Aktyubinsk 75.59 322 P **P 10 01 32.8 -0.1**
comp=Z,5.8nm,0.7s,baz=99,slow=7.9,SNR=11
ARU Arti 77.05 328 P **P 10 01 39.3 -1.6**
comp=Z,1.6nm,0.4s,baz=108,slow=4.1,SNR=19
ARU Arti 77.05 328 P **P 10 01 39.5 -1.4**
VNDA Vanda 80.86 173 P **P 10 02 01.7 +0.3**
comp=Z,6.4nm,0.8s,baz=311,slow=6.1,SNR=20
VNDA Vanda 80.86 173 P **P 10 02 02.1 +0.7**
VNDA IAmb IAmb 10 02 02.9
comp=Z,6.8nm,0.8s
MAW Mawson 81.23 200 LR LR 10 38 03.6
comp=Z,52nm,18.2s,baz=237,slow=36
RAYN Ar Rayn 81.34 293 P **P 10 02 04.2 -1.0**
TTA Tatalina 83.32 27 P **P 10 02 16.2 +1.5**
TTA IAmb IAmb 10 02 33.1
comp=Z,10.0nm,1.1s
AKH Akhalkalaki 84.05 311 P **P 10 02 18.9 -0.1**
KDAK Kodiak Island 84.21 32 P **P 10 02 19.6 +0.4**
comp=Z,4.5nm,1.0s,baz=252,slow=18,SNR=1.9
KBZ Khabaz 84.64 314 P **P 10 02 21.9 +0.2**
comp=Z,3.0nm,0.7s,baz=60,slow=4.7,SNR=7.3
TOLK Toolik Lake Re 86.75 21 P **P 10 02 30.8 -1.0**
TOLK IAmb IAmb 10 02 40.0
comp=Z,4.5nm,1.1s
ILAR Eielson Array 87.55 25 P **P 10 02 34.9 -0.8**
comp=Z,0.3nm,0.4s,baz=253,slow=4.5,SNR=6.7
KLMR Klimovskoe 87.59 331 *e* **P 10 02 36.9 +1.0**
KLMR AMP 10 02 41.3
comp=Z,14nm,1.1s
DAWY Dawson 90.81 26 P **P 10 02 51.4 +0.4**
DAWY IAmb IAmb 10 02 52.1
comp=Z,6.5nm,1.4s
ARCES ARCESS Array B 92.83 340 P **P 10 02 59.1 -1.1**
comp=Z,3.2nm,0.8s,baz=56,slow=7.4,SNR=13
AKASG Malin Array Be 93.80 321 P **P 10 03 03.9 -1.1**
comp=Z,0.6nm,0.4s,baz=70,slow=4.7,SNR=2.1
FINES FINESS Array B 94.04 332 P **P 10 03 09.6 +3.7**
comp=Z,1.7nm,0.7s,baz=92,slow=5.7,SNR=5.2
BUR08 Bucovina Ar. S 96.83 318 P **P 10 03 16.9 -2.2**
BUR08 IAmb IAmb 10 03 21.6
comp=Z,2.7nm,0.9s
YKA Yellowknife Ar 101.96 25 P **Pdif 10 03 42.0 +0.4**
comp=Z,0.1nm,0.4s,baz=282,slow=10,SNR=3.9
YKA PP **PP 10 07 53.0 +0.2**
comp=Z,0.1nm,0.6s,baz=290,slow=2.9,SNR=3.6
MNTX Cornudas Mount 121.05 52 PKiKP 10 08 41.1 -0.1
SCHQ Schefferville 123.18 9 PKP **PKPdf**
comp=Z,1.3nm,0.7s,baz=243,slow=4.5,SNR=2.1
SCHQ Schefferville 123.18 9 PKPdf 10 08 43.9 -0.6
TXAR Lajitas Array 123.34 53 PKP **PKiKP 10 08 46.8 +0.9**
comp=Z,0.7nm,0.8s,baz=172,slow=1.5,SNR=7.2
TORD Torodi Ar. Bea 123.51 286 PKP **PKPdf 10 08 46.3 +0.1**
comp=Z,2.1nm,0.7s,baz=61,slow=2.2,SNR=11
JCT Junction City 125.90 50 PKPdf 10 08 48.8 -1.7
LPAZ La Paz 159.10 137 PKP **PKPdf 10 09 48.5 +0.8**
comp=Z,0.6nm,0.6s,baz=187,slow=2.3,SNR=2.9
LPAZ La Paz 159.10 137 PKPdf 10 09 44.3 -3.4

IDC 30 09:51:04.5±2.6, 53°.80N×86°.79E, h0km, mb1 2.9/2,
mb1mx2.8/46, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=23.2km s-min=14.0km az=66.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.18**	**278**	*i*			09 57 29.6	
	baz=95,slow=324,SNR=1.3							
ZALV	**Zalesovo Beam**	**1.18**	**278**	Pg	Pg	Pg	09 51 26.4	-0.6
	1.5nm,0.3s,baz=97,slow=16,SNR=16							
ZALV				Lg	Lg	Lg	09 51 43.5	
	1.1nm,0.3s,baz=102,slow=29,SNR=7.1							
ZALV				Rg	Rg	Rg	09 51 50.7	
	1.3nm,0.4s,baz=115,slow=25,SNR=5.2							
KURBB	**Kurchatov Arra**	**5.99**	**241**	Pn	Pn	Pn	09 52 34.7	+0.4
	0.1nm,0.3s,baz=58,slow=14,SNR=5.2							
KURBB				Lg	Lg	Lg	09 54 13.6	
	0.1nm,0.3s,baz=68,slow=37,SNR=1.7							
MKAR	**Makanchi Array**	**7.58**	**204**	Pn	Pn	Pn	09 52 57.5	+1.3
	0.2nm,0.3s,baz=25,slow=14,SNR=6.8							
MKAR				Lg	Lg	Lg	09 55 07.2	
	0.0nm,0.3s,baz=23,slow=38,SNR=4.2							

TAP 30 10:06:50.9, 24°.26N×121°.71E, h9km±1km, ML1.3, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.14**	**233**	P	Pg		10 06 53.9	0.0
	baz=232							
NACB				*e*S	Sg		10 06 56.4	+0.3
	baz=232							
TWD	**Chiawan**	**0.21**	**212**	*e*P	Pg		10 06 55.1	-0.1
	baz=209							
ETLH	**Xiulin Townshi**	**0.22**	**257**	*e*P	Pg		10 06 55.3	-0.1
	baz=256							
ETLH				*e*S	Sg		10 06 58.7	+0.2
	baz=256							
NNSB	**Datong**	**0.35**	**300**	*e*P	Pg		10 06 57.9	0.0
	baz=299							
NNSB				*e*S	Sg		10 07 02.7	+0.2
	baz=299							
NNSH	**Datong**	**0.35**	**300**	*e*P	Pg		10 06 57.8	0.0
	baz=299							
NNSH				*e*S	Sg		10 07 02.7	+0.2
	baz=299							
NNS	**Nan Shan**	**0.36**	**301**	*e*P	Pg		10 06 57.8	-0.3
	baz=300							
NNS				*e*S	Sg		10 07 03.1	+0.2
	baz=300							
TWC	**Suao**	**0.37**	**19**	*e*P	Pg		10 06 58.2	0.0
	baz=20							
NDT	**Datong Townshi**	**0.39**	**332**	*e*P	Pg		10 06 58.6	0.0
	baz=331							
NDT				*e*S	Sg		10 07 04.2	+0.4
	baz=331							
WHF	**Hehuan Shan**	**0.42**	**255**	*e*P	Pg		10 06 59.5	+0.2
	baz=254							
WHF				*e*S	Sg		10 07 05.1	+0.1
	baz=254							

JMA 30 10:06:59.2, 24°.83N×123°.25E, h22km±2km, M1.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.43**	**211**	P	Pb		10 07 07.7	-0.3
YOJ				*e*S	Sb		10 07 13.8	-0.2
JYNG	**Yonagunijimaku**	**0.47**	**216**	P	Pb		10 07 08.5	-0.3
JYNG				*e*S	Sb		10 07 15.0	-0.2
IRIF	**Iriomote-Funau**	**0.66**	**138**	P	Pb		10 07 11.7	-0.3
IRIF				*e*S	Sb		10 07 20.6	-0.2
JKRS	**Kuro-shima**	**0.91**	**130**	P	Pb		10 07 15.7	-0.6
JKRS				S	Sb		10 07 28.0	+0.1
HATJ	**Hateruma jima**	**0.92**	**147**	P	Pb		10 07 16.2	-0.3
HATJ				*e*S	Sb		10 07 28.1	-0.2
JIJ	**Ishigaki jima**	**0.94**	**120**	P	Pb		10 07 16.6	-0.1
JIJ				*e*S	Sb		10 07 28.4	-0.3
JISG	**Ishigakijimahi**	**0.99**	**104**	*e*S	Sb		10 07 30.2	-0.2

*NEIC **30** 10:08:02.3±1.1, 18°.93N±0°.03×66°.84W±0°.04, h32km±9km, Error ellipse: s-maj=6.2km s-min=2.9km az=133.0*
RSPR 30 10:08:02.5, 18°.99N×66°.83W, h21km±17km, MD2.6/7, 6C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.58**	**207**	↑*e*P	Pb		10 08 12.6	-1.5
AGPR	**Aguadilla, PR**	**0.58**	**207**	*e*S	Sb		10 08 20.8	-1.3
AGPR	**Aguadilla, PR**	**0.58**	**207**	Pg	Pb		10 08 13.2	-1.0
AGPR					Sb		10 08 21.2	-0.9
EMPR	**Esperanza - Ma**	**0.59**	**151**	↑*e*P	Pb		10 08 12.8	-1.3
EMPR	**Esperanza - Ma**	**0.59**	**151**	*e*S	Sb		10 08 21.1	-1.0
EMPR	**Esperanza - Ma**	**0.59**	**151**		Pn		10 08 16.3	+0.7
EMPR				Sg	Sn		10 08 24.8	+0.2
AOPR	**Arecibo Observ**	**0.65**	**173**	↑*e*P	Pb		10 08 13.3	-1.9
AOPR	**Arecibo Observ**	**0.65**	**173**	*e*S	Sb		10 08 22.2	-1.7
AOPR	**Arecibo Observ**	**0.65**	**173**	Pg	Pb		10 08 14.0	-1.2
AOPR					Sb		10 08 23.0	-0.8
CRPR	**Cabo Rojo, PR**	**1.01**	**195**	↓*e*P	Pb		10 08 19.2	-2.2
CRPR	**Cabo Rojo, PR**	**1.01**	**195**	*e*S	Sb		10 08 31.6	-2.7
CRPR	**Cabo Rojo, PR**	**1.01**	**195**		Pb		10 08 20.4	-1.0
CRPR					Sb		10 08 32.7	-1.6
MLPR	**Magueyes Islan**	**1.03**	**191**	↑*e*P	Pb		10 08 19.4	-2.3
MLPR	**Magueyes Islan**	**1.03**	**191**	*e*S	Sb		10 08 32.4	-2.5
MLPR	**Magueyes Islan**	**1.03**	**191**		Pb		10 08 20.9	-0.8
MLPR					Sb		10 08 32.3	-2.6
CBYP	**Canovanas**	**1.17**	**128**	↑*e*P	Pn		10 08 21.4	-2.3
CBYP	**Canovanas**	**1.17**	**128**	*e*S	Sb		10 08 35.4	-3.5
CBYP	**Canovanas**	**1.17**	**128**		Pn		10 08 22.1	-1.6
MTP	**Monte Pirata**	**1.50**	**126**	↑*e*P	Pn		10 08 25.6	-2.7
MTP	**Monte Pirata**	**1.50**	**126**	*e*S	Sn		10 08 44.1	-3.2
MTP	**Monte Pirata**	**1.50**	**126**		Pn		10 08 28.0	-0.3
MTP					Sn		10 08 44.5	-2.7

*NEIC **30** 10:09:00.0±0.8, 18°.9N±0°.1×66°.82W±0°.04, h30km±20km, Error ellipse: s-maj=20.3km s-min=2.0km az=167.0*
RSPR 30 10:09:00.7, 19°.00N×66°.80W, h20km±23km, MD2.5/8, 7C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.58**	**153**	↑*e*P	Pb		10 09 11.0	-1.2
EMPR	**Esperanza - Ma**	**0.58**	**153**	*e*S	Sb		10 09 18.8	-1.2
EMPR	**Esperanza - Ma**	**0.58**	**153**		Pn		10 09 13.6	-0.2
AGPR	**Aguadilla, PR**	**0.60**	**209**	↑*e*P	Pb		10 09 10.9	-1.7
AGPR	**Aguadilla, PR**	**0.60**	**209**	*e*S	Sb		10 09 19.4	-1.4
AGPR	**Aguadilla, PR**	**0.60**	**209**	Pg	Pb		10 09 10.8	-1.8
AGPR				Sg	Sb		10 09 19.3	-1.4
AOPR	**Arecibo Observ**	**0.65**	**176**	↑*e*P	Pb		10 09 12.4	-1.0
AOPR	**Arecibo Observ**	**0.65**	**176**	*e*S	Sb		10 09 20.5	-1.6
AOPR	**Arecibo Observ**	**0.65**	**176**	Pg	Pb		10 09 11.8	-1.6
AOPR					Sb		10 09 20.4	-1.6
MPR	**Mayaguez**	**0.84**	**202**		Pb		10 09 16.0	-0.7
LSP	**Las Mesas**	**0.86**	**198**	↑*e*P	Pb		10 09 14.7	-2.3
LSP	**Las Mesas**	**0.86**	**198**		Pb		10 09 14.7	-2.3
OBIP	**Obispado Ponce**	**0.97**	**169**		Pb		10 09 16.7	-2.1
CRPR	**Cabo Rojo, PR**	**1.03**	**197**	↑*e*P	Pb		10 09 16.9	-2.9
CRPR	**Cabo Rojo, PR**	**1.03**	**197**	*e*S	Sb		10 09 30.3	-2.6
CRPR	**Cabo Rojo, PR**	**1.03**	**197**		Pb		10 09 17.1	-2.7
CRPR					Sb		10 09 30.4	-2.5
MLPR	**Magueyes Islan**	**1.05**	**193**	↑*e*P	Pb		10 09 17.7	-2.5
MLPR	**Magueyes Islan**	**1.05**	**193**	*e*S	Sb		10 09 31.1	-2.4
MLPR	**Magueyes Islan**	**1.05**	**193**		Pb		10 09 17.5	-2.7
MLPR				Sg	Sb		10 09 31.1	-2.4
CBYP	**Canovanas**	**1.15**	**129**	↑*e*P	Pn		10 09 19.1	-2.6
CBYP	**Canovanas**	**1.15**	**129**	*e*S	Sb		10 09 32.9	-3.6
CBYP	**Canovanas**	**1.15**	**129**		Pn		10 09 19.1	-2.7
HUMP	**Col San Antoni**	**1.24**	**133**	Pn	Pn		10 09 20.9	-2.0
MTP	**Monte Pirata**	**1.49**	**127**	↓*e*P	Pn		10 09 24.0	-2.3
MTP	**Monte Pirata**	**1.49**	**127**	*e*S	Sn		10 09 41.7	-3.5
MTP	**Monte Pirata**	**1.49**	**127**		Pn		10 09 24.4	-2.0
MTP					Sn		10 09 43.5	-1.7

*IDC **30** 10:12:44.8±5.6, 52°.69N×173°.26W, h87km±50km, mb3.8/12, mb1 4.1/13, mb1mx3.6/57, mbtmp4.1/13, ML4.8/1, Error ellipse: s-maj=30.9km s-min=16.3km az=166.0*
*NEIC **30** 10:12:50.0±1.7, 52°.44N±0°.08×172°.97W±0°.09, h133km±5km, Error ellipse: s-maj=12.0km s-min=6.8km az=154.0*
*AEIC **30** 10:12:50.6±2.2, 52°.2N±0°.1×172°.87W±0°.08, h126km±5km, ML4.0/45, mb4.2/57(NEIC), Error ellipse: s-maj=16.3km s-min=6.7km az=167.0*
ISC 30 10:12:49.8±0.5, 52°.52N±0°.09×172°.97W±0°.04, h133km, n136, σ1♀33/138, mb4.1/40, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KOSE	**Korovin Southe**	**0.68**	**256**			**Pn**	**10 13 10.4**	**0.0**
KOSE						**Sn**	**10 13 26.0**	**+0.1**
KOFP	**Korovin Flat P**	**0.73**	**251**			**Pn**	**10 13 10.7**	**0.0**
KOWE	**Korovin West**	**0.80**	**260**			**Pn**	**10 13 11.4**	**+0.2**
ATKA	**Atka Island**	**0.81**	**248**	Pn		**Pn**	**10 13 10.9**	**-0.3**
ATKA	**Atka Island**	**0.81**	**248**			**Sn**	**10 13 26.6**	**-0.9**
GSTR	**Great Sitkin T**	**1.94**	**259**	Pn		**Pn**	**10 13 23.0**	**-0.2**
GSMY	**Great Sitkin M**	**1.95**	**257**			**Pn**	**10 13 22.8**	**-0.5**
GSTD	**Great Sitkin T**	**2.00**	**258**			**Pn**	**10 13 23.4**	**-0.5**
GSTD						**Sn**	**10 13 50.3**	**+0.2**
ADAG	**Mount Adagdak**	**2.29**	**258**			**Pn**	**10 13 27.7**	**+0.2**
ADK	**Adak**	**2.37**	**256**	Pn		**Pn**	**10 13 27.2**	**-1.2**
ADK						Sn	**10 13 56.9**	**-1.1**
NIKH	**Nikolski High**	**2.54**	**78**	Pn		**Pn**	**10 13 30.2**	**-0.3**
NIKH	**Nikolski High**	**2.54**	**78**			**Sn**	**10 13 59.9**	**-2.1**
KIKV	**Kanaga Island**	**2.66**	**258**			**Pn**	**10 13 31.9**	**-0.2**
KICM	**Kanaga Island**	**2.67**	**259**			**Pn**	**10 13 31.9**	**-0.3**
KIMD	**Kanaga Island**	**2.73**	**256**			**Pn**	**10 13 32.8**	**-0.2**
OKSP	**Okmok Steeple**	**2.93**	**74**			**Pn**	**10 13 35.9**	**+0.3**
OKCE	**Okmok Cone E**	**3.05**	**71**			**Pn**	**10 13 37.5**	**+0.5**
TAPA	**Tanaga Point A**	**3.06**	**259**			**Pn**	**10 13 37.1**	**-0.2**
TAFP	**Tanaga Falls P**	**3.14**	**261**			**Pn**	**10 13 38.2**	**-0.1**
OKFG	**Magazine Ridge**	**3.19**	**72**			**Pn**	**10 13 39.3**	**+0.4**
TASE	**Tanaga Southea**	**3.19**	**260**			**Pn**	**10 13 39.3**	**+0.3**
GAEA	**Gareloi East**	**3.63**	**261**			**Pn**	**10 13 44.7**	**0.0**
MREP	**Makushin Rep't**	**3.97**	**68**			**Pn**	**10 13 49.4**	**+0.3**
MSW	**Makushin Switc**	**3.98**	**67**			**Pn**	**10 13 49.3**	**+0.1**
MNAT	**Makushin Natee**	**4.02**	**68**			**Pn**	**10 13 50.1**	**+0.3**
UNV	**Unalaska Valle**	**4.11**	**69**	Pn		**Pn**	**10 13 51.3**	**+0.3**
AKRB	**Akutan Reef Bi**	**4.44**	**66**			**Pn**	**10 13 56.2**	**+0.8**
AKMO	**Akutan Morgan**	**4.46**	**67**			**Pn**	**10 13 56.0**	**+0.4**
AKGG	**Akutan Green G**	**4.51**	**65**			**Pn**	**10 13 57.2**	**+0.9**
AKBBA	**Akutan Broad B**	**4.51**	**67**			**Pn**	**10 13 55.9**	**-0.4**
AKLV	**Akutan Long Va**	**4.52**	**66**			**Pn**	**10 13 56.8**	**+0.4**
AKUT	**Akutan**	**4.61**	**67**	Pn		**Pn**	**10 13 59.2**	**+1.6**
AKUT						Sn	**10 14 52.5**	**+2.2**
AKSA	**Akutan Strait**	**4.65**	**67**			**Pn**	**10 13 59.3**	**+1.2**
SPIA	**Saint Paul Isl**	**4.93**	**18**			**Pn**	**10 14 03.6**	**+1.8**
WESP	**Westdahl Peak**	**5.31**	**65**			**Pn**	**10 14 07.6**	**+0.7**
SSBA	**Shishaldin**	**5.73**	**63**			**Pn**	**10 14 13.1**	**+0.5**
FALS	**False Pass**	**6.14**	**64**	Pn		**Pn**	**10 14 18.7**	**+0.7**
SMY	**Shemya**	**7.87**	**277**	Pn		**Pn**	**10 14 41.8**	**+0.4**
SDPT	**Sand Point**	**7.90**	**64**			**Pn**	**10 14 40.9**	**-0.8**
CNBA	**Chernabura Isl**	**8.28**	**69**	Pn		**Pn**	**10 14 44.6**	**-2.2**
VNWF	**Veniaminof 8**	**8.64**	**60**			**Pn**	**10 14 52.1**	**+0.3**
CHGN	**Chignik**	**9.29**	**60**			**Pn**	**10 14 58.4**	**-2.0**
OHAK	**Old Harbor**	**12.26**	**60**	Pn		Pn	10 15 35.3	-4.4
KDAK	**Kodiak Island**	**12.77**	**58**	P		Pn	10 15 42.2	-4.1
	4.9nm,0.3s,baz=191,slow=3.1,SNR=59							
KDAK				S		**Sn**	**10 18 04.5**	**-2.5**
	0.3nm,0.3s,baz=79,slow=23,SNR=2.3							
KDAK	**Kodiak Island**	**12.77**	**58**	Pn		**Pn**	**10 15 42.6**	**-3.8**
SVW2	**Sparrevohn**	**12.79**	**41**	Pn		**Pn**	**10 15 47.4**	**+0.7**
RSO	**Redoubt South**	**13.67**	**46**	Pn		**Pn**	**10 15 57.9**	**-0.1**
GHO	**Glory Hole Cre**	**15.91**	**45**	Pn		**Pn**	**10 16 25.6**	**-0.5**
IL31		**18.12**	**37**	P		**P**	**10 16 52.0**	**+0.8**
ILAR	**Eielson Array**	**18.12**	**37**	P		**P**	**10 16 45.6**	**-5.7**
	0.4nm,0.3s,baz=215,slow=12,SNR=22							
ILAR				S		**S**	**10 20 10.2**	**-1.6**
	0.1nm,0.3s,baz=231,slow=17,SNR=4.2							
BILL	**Bilibino**	**18.49**	**335**	P		**P**	**10 16 57.1**	**+1.9**
DOT	**Dot Lake**	**18.72**	**42**	P		**P**	**10 16 58.1**	**+0.3**
SCRK	**Sand Creek**	**18.88**	**41**	P		**P**	**10 16 59.2**	**-0.5**
TOLK	**Toolik Lake Re**	**19.61**	**26**	P		**P**	**10 17 08.5**	**+1.0**
TOLK				IAmb	IAmb	IAmb	10 17 09.1	
	comp=Z,14nm,0.8s							
EGAK	**Eagle**	**20.33**	**41**	P		**P**	**10 17 15.2**	**0.0**
DAWY	**Dawson**	**20.81**	**43**	P		**P**	**10 17 21.7**	**+1.4**
HYT	**Haines Junctio**	**20.95**	**53**	P		**P**	**10 17 23.0**	**+1.1**
SKAG	**Skagway**	**21.93**	**57**	P		**P**	**10 17 33.7**	**+1.5**
SKAG				IAmb	IAmb	IAmb	10 17 33.9	
	comp=Z,4.8nm,0.6s							
SIT	**Sitka**	**21.98**	**63**	P		**P**	**10 17 33.2**	**+0.5**
SIT				IAmb	IAmb	IAmb	10 17 41.8	
	comp=Z,14nm,1.1s							
BESE	**Bessie Mountai**	**22.16**	**59**	P		**P**	**10 17 35.1**	**+0.4**
BESE				IAmb	IAmb	IAmb	10 17 43.7	
	comp=Z,5.0nm,0.6s							
WRAK	**Wrangell Islan**	**23.68**	**64**	P		**P**	**10 17 50.6**	**+1.7**
DIB	**Dawson Inlet,**	**24.24**	**72**	P		**P**	**10 17 55.5**	**+1.5**
DIB				IAmb	IAmb	IAmb	10 17 56.9	
	comp=Z,5.2nm,0.8s							
INK	**Inuvik**	**24.46**	**35**	P		**P**	**10 17 55.3**	**-0.5**
	comp=Z,6.0nm,0.7s,baz=204,slow=11,SNR=21							
MOBC	**Moresby Island**	**24.55**	**72**	P		**P**	**10 17 57.6**	**+0.7**
DLBC	**Dease Lake**	**24.70**	**59**	P		**P**	**10 17 59.3**	**+1.1**
	comp=Z,2.0nm,0.7s,baz=295,slow=8.5,SNR=5.4							
DLBC	**Dease Lake**	**24.70**	**59**	P		**P**	**10 17 59.1**	**+0.8**
YKA	**Yellowknife Ar**	**31.80**	**49**	P		**P**	**10 19 00.1**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=270,slow=8.2,SNR=17							
NEW	**Newport**	**35.10**	**74**	P		**P**	**10 19 30.2**	**+0.2**
	comp=Z,1.5nm,0.4s,baz=290,slow=12,SNR=3.0							
NEW	**Newport**	**35.10**	**74**	P		**P**	**10 19 30.4**	**+0.4**
NEW				IAmb	IAmb	IAmb	10 19 41.3	
	comp=Z,4.2nm,1.1s							
H11N2	**WAKE ISLAND Hy**	**36.28**	**213**	T		T	10 58 08.4	
	baz=21,slow=76,SNR=12							
H11N3	**WAKE ISLAND Hy**	**36.29**	**213**	T		T	10 58 02.5	
	baz=21,slow=76,SNR=75							
H11N1	**WAKE ISLAND Hy**	**36.30**	**213**	T		T	10 58 05.2	
	baz=21,slow=76,SNR=11							
H11S1	**WAKE ISLAND Hy**	**37.48**	**213**	T		T	10 59 21.4

TMUT	**Trail Mountain**	**43.65**	**82**	P		**P**	**10 20 42.2**	**+0.9**
MTPU	**Mount Pierson**	**43.84**	**84**	P		**P**	**10 20 42.5**	**-0.4**
KNB	**Kanab**	**44.11**	**86**	P		**P**	**10 20 46.8**	**+1.9**
PKCU	**Pink Cliffs**	**44.15**	**85**	P		**P**	**10 20 47.1**	**+1.8**
PFO	**Pinyon Flats O**	**44.15**	**92**	P		**P**	**10 20 46.2**	**+1.1**
PFO				IAmb		IAmb	10 21 01.0	
	comp=Z,5.0nm,1.4s							
XPFO	**Pion Flat**	**44.15**	**92**	P		**P**	**10 20 46.1**	**+0.9**
XPFO				IAmb		IAmb	10 21 01.0	
	comp=Z,4.5nm,1.3s							
JNU	**Nakatsue**	**44.26**	**267**	P		**P**	**10 20 46.7**	**+0.7**
JNU				IAmb		IAmb	10 20 50.9	
	comp=Z,13nm,1.4s							
W13A	**Hualapai Mount**	**44.72**	**89**	P		**P**	**10 20 51.1**	**+1.3**
W13A				IAmb		IAmb	10 20 51.4	
	comp=Z,3.7nm,0.8s							
U15A	**North Rim**	**44.82**	**86**	P		**P**	**10 20 52.0**	**+1.3**
U15A				IAmb		IAmb	10 20 52.6	
	comp=Z,3.6nm,0.9s							
O20A	**White River Ci**	**44.91**	**79**	P		**P**	**10 20 51.4**	**+0.2**
O20A				IAmb		IAmb	10 20 51.6	
	comp=Z,2.7nm,0.6s							
PV04	**Paradox Valley**	**45.61**	**81**	P		**P**	**10 20 56.8**	**+0.1**
PV17	**East Wray Mesa**	**45.65**	**82**	P		**P**	**10 20 57.6**	**+0.6**
PV17				IAmb		IAmb	10 20 58.0	
	comp=Z,3.2nm,0.6s							
PV11	**David Mesa, Pa**	**45.69**	**82**	P		**P**	**10 20 56.7**	**-0.7**
PV11				IAmb		IAmb	10 21 00.9	
	comp=Z,4.6nm,0.6s							
PV13	**Radium Mtn., P**	**45.81**	**82**	P		**P**	**10 20 59.0**	**+0.6**
PV13				IAmb		IAmb	10 20 59.3	
	comp=Z,3.6nm,0.7s							
WUAZ	**Wupatki**	**45.98**	**86**	P		**P**	**10 21 00.8**	**+1.2**
WUAZ				IAmb		IAmb	10 21 02.0	
	comp=Z,5.7nm,1.2s							
214A	**Organ Pipe Nat**	**47.52**	**91**	P		**P**	**10 21 12.3**	**+0.9**
214A				IAmb		IAmb	10 21 12.5	
	comp=Z,1.9nm,0.6s							
SDCO	**Great Sand Dun**	**48.08**	**80**	P		**P**	**10 21 17.1**	**+1.0**
BNM	**Barren Site**	**49.79**	**84**	P		**P**	**10 21 30.3**	**+1.3**
HHC	**Hu-ho-hao-te**	**50.80**	**289**	*e*P		**P**	**10 21 35.3**	**-1.1**
HHC				pmax		pmax		
	comp=Z,12nm,1.0s							
HHC				pmax		pmax		
	comp=Z,41nm,5.3s							
MNTX	**Cornudas Mount**	**52.23**	**85**	P		**P**	**10 21 48.1**	**+1.1**
TX31	**Lajitas Ar. Si**	**54.94**	**86**	P		**P**	**10 22 07.5**	**+0.5**
TX32	**Lajitas Array**	**54.94**	**86**	P		**P**	**10 22 07.2**	**+0.3**
TX32				IAmb		IAmb	10 22 08.1	
	comp=Z,1.7nm,0.8s							
TXAR	**Lajitas Array**	**54.95**	**86**	P		**P**	**10 22 07.4**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=298,slow=5.1,SNR=22							
TXAR				PcP		**PcP**	**10 23 08.4**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=225,slow=2.9,SNR=5.6							
SLBS	**Sierra La Lagu**	**55.23**	**96**	P		**P**	**10 22 09.6**	**+0.6**
ARCES	**ARCESS Array B**	**57.51**	**352**	P		**P**	**10 22 21.7**	**-2.8**
	comp=Z,0.4nm,0.6s,baz=27,slow=5.0,SNR=4.1							
LZH	**Lanzhou**	**58.47**	**289**	*e*P		**P**	**10 22 32.8**	**+1.0**
LZH				pP		pP	10 23 00.3	-2.2
LZH				sP		pwP	10 23 10.8	+5.0
LZH				PP		**PP**	**10 24 36.5**	**-5.8**
LZH				pmax		pmax		
	comp=Z,20nm,1.1s							
LZH				pmax		pmax		
	comp=Z,130nm,5.5s							
WMQ	**Urumqi**	**61.68**	**306**	*e*P		**P**	**10 22 56.0**	**+2.5**
KSH	**Kashi**	**70.62**	**310**	P		**P**	**10 23 55.0**	**+4.3**
KSH				pmax		pmax		
	comp=Z,96nm,2.0s							
KSH				pmax		pmax		
	comp=Z,49nm,4.8s							
WR0	**Warramunga Arr**	**85.33**	**228**	P		**P**	**10 25 10.9**	**-0.9**
WR0				IAmb		IAmb	10 25 13.3	
	comp=Z,8.2nm,1.1s							
WRAB	**Tennant Creek**	**85.39**	**229**	P		**P**	**10 25 11.5**	**-0.6**
WRAB				pmax		pmax		
	comp=Z,12nm,1.4s							
WRAB	**Tennant Creek**	**85.39**	**229**	P		**P**	**10 25 11.5**	**-0.6**
WRAB				IAmb		IAmb	10 25 12.2	
	comp=Z,12nm,1.4s							
WB2	**Warramunga Arr**	**85.40**	**229**	P		**P**	**10 25 11.2**	**-0.9**
WRA	**Warramunga Arr**	**85.41**	**229**	P		**P**	**10 25 11.2**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=32,slow=5.6,SNR=11							
WRA	**Warramunga Arr**	**85.41**	**229**	P		**P**	**10 25 11.2**	**-0.9**
ASAR	**Alice Springs**	**88.84**	**227**	P		**P**	**10 25 28.5**	**-0.1**
	comp=Z,5.1nm,0.8s,baz=26,slow=4.8,SNR=64							
ASAR	**Alice Springs**	**88.84**	**227**	P		**P**	**10 25 28.5**	**-0.1**
STKA	**Stephens Creek**	**92.93**	**217**	P		**P**	**10 25 47.4**	**0.0**
	comp=Z,1.1nm,0.7s,baz=11,slow=9.3,SNR=3.5							
STKA	**Stephens Creek**	**92.93**	**217**	P		**P**	**10 25 47.6**	**+0.2**

*IDC **30** 10:13:32.1±1.0,52°.36N×160°.77E,h0km,mb3.9/19, mb1 4.1/22,mb1mx3.9/51,mbtmp4.0/22,ML3.6/3,MS2.8/3, Ms1 2.9/3,ms1mx2.5/56,Error ellipse: s-maj=24.5km s-min=15.2km az=149.0*

*MOS **30** 10:13:33.3±1.0,52°.01N×160°.89E,h43km,mb4.3/4,Error ellipse: s-maj=8.7km s-min=4.2km az=104.2*

*KRSC **30** 10:13:33.3±2.2,52°.23N×160°.92E,h40km±32km,ML4.3*

*NEIC **30** 10:13:34.8±2.3,51°.9N±0°.1×160°.59E±0°.04,h34km±5km, mb4.6/9,Error ellipse: s-maj=15.3km s-min=2.2km az=192.0*

ISC 30 10:13:33.2±3.1,52°.19N±0°.05×160°.84E±0°.04,h16km±19km, n120,σ1§59/137,mb4.1/22,1C,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.04**	**332**	*e*P		**Pb**	**10 13 52.3**	**-0.6**
SPN				*e*S		**Sb**	**10 14 04.8**	**-1.5**
SPN	**Mys Shipunski**	**1.04**	**332**	PN		**Pb**	**10 13 52.3**	**-0.6**
SPN				S		**Sb**	**10 14 04.8**	**-1.5**
RUS	**Russkaya**	**1.45**	**281**	*i* P		**Pn**	**10 13 58.9**	**+0.1**
RUS				*e*S		**Sn**	**10 14 16.5**	**-1.0**
RUS	**Russkaya**	**1.45**	**281**	PN		**Pn**	**10 13 58.9**	**+0.1**
RUS				S		**Sn**	**10 14 16.5**	**-1.0**
DALK	**Dalny**	**1.53**	**304**	*e*P		**Pn**	**10 14 00.0**	**+0.1**
DALK				*e*S		**Sb**	**10 14 21.2**	**+0.9**
DALK	**Dalny**	**1.53**	**304**	PN		**Pn**	**10 14 00.0**	**+0.1**
DALK				S		**Sb**	**10 14 21.2**	**+0.9**
PET	**Petropavlovsk**	**1.58**	**303**	⇑*i*PN		**Pn**	**10 14 00.7**	**+0.1**
PET				*e*S		**Sb**	**10 14 22.6**	**+0.9**
PET				pmax		pmax		
	comp=Z,344nm,0.5s							
PET				smax		smax		
	comp=E,1μm,0.7s							
PET				smax		smax		
	comp=N,856nm,0.6s							
PET	**Petropavlovsk**	**1.58**	**303**			**Pn**	**10 14 00.7**	**+0.1**
UGLR	**Uglovaya**	**1.60**	**311**	*e*P		**Pn**	**10 14 01.5**	**+0.5**
UGLR	**Uglovaya**	**1.60**	**311**	PN		**Pn**	**10 14 01.5**	**+0.5**
SDLR	**Sedlovina**	**1.62**	**313**	*e*P		**Pn**	**10 14 01.6**	**+0.4**
SDLR	**Sedlovina**	**1.62**	**313**	PN		**Pn**	**10 14 01.6**	**+0.4**
SMAR	**Somma**	**1.64**	**312**	*e*P		**Pn**	**10 14 01.9**	**+0.2**
SMAR	**Somma**	**1.64**	**312**	PN		**Pn**	**10 14 01.9**	**+0.2**
MTVR	**Mutnovka**	**1.66**	**281**	*e*P		**Pn**	**10 14 02.3**	**+0.5**
MTVR				*e*S		**Sn**	**10 14 21.7**	**-1.2**
MTVR	**Mutnovka**	**1.66**	**281**	PN		**Pn**	**10 14 02.3**	**+0.5**
MTVR				S		**Sn**	**10 14 21.7**	**-1.2**
AVH	**Avacha**	**1.67**	**311**	*e*P		**Pn**	**10 14 02.8**	**+0.8**
AVH	**Avacha**	**1.67**	**311**	PN		**Pn**	**10 14 02.8**	**+0.8**
KRER	**Koryakskii**	**1.69**	**312**	*i* P		**Pn**	**10 14 03.3**	**+0.9**
KRER	**Koryakskii**	**1.69**	**312**	PN		**Pn**	**10 14 03.3**	**+0.9**
GRL	**Gorelyy**	**1.74**	**283**	*e*P		**Pn**	**10 14 04.0**	**+1.1**
GRL	**Gorelyy**	**1.74**	**283**	PN		**Pn**	**10 14 04.0**	**+1.1**
KOK	**Koryaka**	**1.74**	**310**	*e*P		**Pn**	**10 14 03.5**	**+0.6**
KOK	**Koryaka**	**1.74**	**310**	PN		**Pn**	**10 14 03.5**	**+0.6**
KRX	**Arik**	**1.78**	**312**	*e*P		**Pn**	**10 14 03.9**	**+0.4**
KRX	**Arik**	**1.78**	**312**	PN		**Pn**	**10 14 03.9**	**+0.4**
KRMR	**Karymshinskiy**	**1.78**	**292**	*e*P		**Pn**	**10 14 03.1**	**-0.2**
KRMR				*e*S		**Sn**	**10 14 24.5**	**-1.1**
KRMR	**Karymshinskiy**	**1.78**	**292**	PN		**Pn**	**10 14 03.1**	**-0.2**
KRMR				S		**Sn**	**10 14 24.5**	**-1.1**
ASAK	**Asacha**	**1.82**	**277**	*i* P		**Pn**	**10 14 04.9**	**+0.9**
ASAK				*e*S		**Sn**	**10 14 26.6**	**-0.1**
ASAK	**Asacha**	**1.82**	**277**	PN		**Pn**	**10 14 04.9**	**+0.9**
ASAK				S		**Sn**	**10 14 26.6**	**-0.1**
KII	**Karymskiy**	**2.03**	**336**	*e*P		**Pn**	**10 14 07.6**	**+0.7**
KII	**Karymskiy**	**2.03**	**336**	PN		**Pn**	**10 14 07.6**	**+0.7**
PEA0B	**Petropavlovsk-**	**2.13**	**297**	PN		**Pn**	**10 14 09.0**	**+0.8**
PEA0B	**Petropavlovsk-**	**2.13**	**297**			**Pn**	**10 14 09.0**	**+0.8**
PETK	**Petropavlovsk-**	**2.13**	**297**	Pn		**Pn**	**10 14 09.1**	**+1.0**
	comp=N,55nm,0.3s,baz=109,slow=18,SNR=333							
PETK				Sn		**Sn**	**10 14 35.2**	**+1.0**
	comp=N,24nm,0.3s,baz=9.0,slow=20,SNR=6.5							
PETK				LR		LR	10 14 40.8	
	comp=N,91nm,18.8s,baz=59,slow=34							
PETK	**Petropavlovsk-**	**2.13**	**297**			**Pn**	**10 14 09.1**	**+1.0**
PETK						**Sn**	**10 14 35.2**	**+1.0**
MIPR	**Malaya Ipel'ka**	**2.51**	**274**	*e*P		**Pn**	**10 14 14.7**	**+1.2**
MIPR	**Malaya Ipel'ka**	**2.51**	**274**	PN		**Pn**	**10 14 14.7**	**+1.2**
KZV	**Kizimen**	**2.95**	**354**	*e*P		**Pn**	**10 14 20.8**	**+1.2**
KZV				*e*S		**Sn**	**10 14 53.7**	**-1.0**
KZV	**Kizimen**	**2.95**	**354**	PN		**Pn**	**10 14 20.8**	**+1.2**
TUMD	**Tumrok D**	**3.03**	**355**	*e*P		**Pn**	**10 14 21.5**	**+0.9**
TUMD				*e*S		**Sn**	**10 14 53.6**	**-3.0**
TUMR	**Tumrok**	**3.13**	**353**	*e*P		**Pn**	**10 14 23.7**	**+1.7**
TUMR	**Tumrok**	**3.13**	**353**	PN		**Pn**	**10 14 21.5**	**-0.5**
SKR	**Severo-Kuril's**	**3.32**	**245**	*e*PN		**Pn**	**10 14 24.5**	**0.0**
SKR				*e*S		**Sn**	**10 15 00.7**	**-2.9**
SKR				pmax		pmax		
	comp=Z,27nm,0.5s							
SKR				smax		smax		
	comp=N,182nm,0.7s							
SKR				smax		smax		
	comp=E,94nm,0.6s							
SKR				MLR		MLR		
	comp=Z,100nm,12.0s							
KMNR	**Kamenistaya**	**3.59**	**355**	*i* P		**Pn**	**10 14 31.0**	**+2.6**
KMNR	**Kamenistaya**	**3.59**	**355**	PN		**Pn**	**10 14 31.0**	**+2.6**
BZGR	**Bezymyannyi-Gr**	**3.76**	**359**	*e*P		**Pn**	**10 14 33.3**	**+2.6**
BZGR	**Bezymyannyi-Gr**	**3.76**	**359**	PN		**Pn**	**10 14 33.3**	**+2.6**
KIRR	**Kirishev**	**3.79**	**356**	*e*P		**Pn**	**10 14 33.1**	**+2.0**
KIRR	**Kirishev**	**3.79**	**356**	PN		**Pn**	**10 14 33.1**	**+2.0**
BZWR	**Bezymyannyi-We**	**3.79**	**357**	*e*P		**Pn**	**10 14 33.8**	**+2.7**
BZWR	**Bezymyannyi-We**	**3.79**	**357**	PN		**Pn**	**10 14 33.8**	**+2.7**
KPT	**Kopyto**	**3.80**	**355**	*e*P		**Pn**	**10 14 33.2**	**+1.9**
KPT	**Kopyto**	**3.80**	**355**	PN		**Pn**	**10 14 33.2**	**+1.9**
ZLN	**Zelenaya**	**3.84**	**360**	*e*P		**Pn**	**10 14 34.7**	**+3.0**
ZLN	**Zelenaya**	**3.84**	**360**	PN		**Pn**	**10 14 34.7**	**+3.0**
LGNR	**Loginova**	**3.90**	**359**	*e*P		**Pn**	**10 14 35.7**	**+2.9**
LGNR	**Loginova**	**3.90**	**359**	PN		**Pn**	**10 14 35.7**	**+2.9**
CIRR	**Tsirk**	**3.94**	**359**	*e*P		**Pn**	**10 14 36.4**	**+3.3**
CIRR	**Tsirk**	**3.94**	**359**	PN		**Pn**	**10 14 36.4**	**+3.3**
SRDR	**Sredinnyy**	**4.19**	**351**	*e*P		**Pn**	**10 14 38.0**	**+1.5**
SRDR	**Sredinnyy**	**4.19**	**351**	PN		**Pn**	**10 14 38.0**	**+1.5**
KBTR	**Krutoberegovo**	**4.19**	**15**	*i* P		**Pn**	**10 14 38.1**	**+1.6**
KBTR	**Krutoberegovo**	**4.19**	**15**	PN		**Pn**	**10 14 38.1**	**+1.6**
BKI	**Bering**	**4.29**	**43**	*e*P		**Pn**	**10 14 38.8**	**+1.0**
BKI				*e*S		**Sn**	**10 15 23.5**	**-4.0**
BKI	**Bering**	**4.29**	**43**	PN		**Pn**	**10 14 38.8**	**+1.0**
SRKR	**Sorokina**	**4.48**	**2**	*e*P		**Pn**	**10 14 43.0**	**+2.5**
SRKR	**Sorokina**	**4.48**	**2**	PN		**Pn**	**10 14 43.0**	**+2.5**
SMY	**Shemya**	**8.12**	**81**	PN		**Pn**	**10 15 32.9**	**+2.6**
SMY	**Shemya**	**8.12**	**81**	Pn		**Pn**	**10 15 32.9**	**+2.6**
MA2	**Magadan**	**9.31**	**327**	LR		LR	10 19 23.9	
	comp=Z,36nm,21.5s,baz=214,slow=38							
YSS	**Yuzh-Sakhalins**	**12.84**	**253**	*e*PN		Pn	10 16 28.0	-7.0
YSS				MLR		MLR		
	comp=Z,200nm,14.0s							
JKA	**Kamikawa-asahi**	**14.58**	**244**	P		**Pn**	**10 16 58.8**	**0.0**
ASAJ	**Asahikawa**	**14.58**	**244**	Pn		**Pn**	**10 16 58.8**	**0.0**
	comp=Z,0.6nm,0.3s,baz=73,slow=11,SNR=6.7							
ERM	**Erimo**	**15.72**	**237**	P		**Pn**	**10 17 09.7**	**-4.3**
ERM				pmax		pmax		
	comp=Z,12nm,1.1s							
ERM	**Erimo**	**15.72**	**237**	Pn		**Pn**	**10 17 09.7**	**-4.3**
KLR	**Kul'dur**	**18.60**	**272**	P		**P**	**10 17 49.0**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=61,slow=11,SNR=5.8							
KLR	**Kul'dur**	**18.60**	**272**	P		**P**	**10 17 49.0**	**-0.7**
USRK	**Ussuriysk Ar.**	**20.72**	**259**	P		**P**	**10 18 11.9**	**-0.9**
	comp=Z,2.0nm,0.8s,baz=61,slow=12,SNR=3.8							
USRK	**Ussuriysk Ar.**	**20.72**	**259**			**P**	**10 18 11.9**	**-0.9**
MJAR	**Matsushiro Arr**	**22.37**	**235**	P		**P**	**10 18 32.9**	**+2.3**
	comp=Z,1.9nm,0.8s,baz=31,slow=9.1,SNR=6.2							
MJAR	**Matsushiro Arr**	**22.37**	**235**	P		**P**	**10 18 32.9**	**+2.3**
TIXI	**Tiksi**	**24.10**	**336**	P		**P**	**10 18 46.5**	**-1.1**
	comp=Z,2.2nm,0.5s,baz=124,slow=11,SNR=9.3							
KSRS	**Korea Array**	**27.32**	**250**	P		**P**	**10 19 19.9**	**+2.7**
	comp=Z,0.8nm,0.7s,baz=35,slow=9.8,SNR=3.1							
KSRS	**Korea Array**	**27.32**	**250**	P		**P**	**10 19 19.9**	**+2.7**
JNU	**Nakatsue**	**28.82**	**240**	P		**P**	**10 19 31.7**	**+1.1**
	comp=Z,4.6nm,1.0s,baz=270,slow=20,SNR=2.2							
SPA0	**Spitsbergen Ar**	**48.10**	**351**	P		**P**	**10 22 11.5**	**-0.1**
SPITS	**Spitsbergen Ar**	**48.10**	**351**	P		**P**	**10 22 12.8**	**+1.2**
	comp=Z,1.7nm,0.4s,baz=56,slow=9.2,SNR=22							
KURK	**Kurchatov**	**48.60**	**303**	P		**P**	**10 22 14.5**	**-1.3**
KURK				pmax		pmax		
	comp=Z,6.0nm,0.9s							
KURK	**Kurchatov**	**48.60**	**303**	P		**P**	**10 22 14.5**	**-1.3**
KURK				IAmb		IAmb	10 22 16.2	
	comp=Z,5.6nm,0.9s							
MK31	**Makanchi Array**	**48.97**	**297**	P		**P**	**10 22 17.1**	**-1.6**
MK31				pmax		pmax		
	comp=Z,2.0nm,1.4s							
MK31	**Makanchi Array**	**48.97**	**297**	P		**P**	**10 22 17.1**	**-1.6**
MKAR	**Makanchi Array**	**48.97**	**297**	P		**P**	**10 22 17.3**	**-1.4**
	comp=Z,6.0nm,0.5s,baz=58,slow=8.2,SNR=6.0							
MKAR	**Makanchi Array**	**48.97**	**297**	P		**P**	**10 22 17.3**	**-1.4**
NEW	**Newport**	**49.96**	**60**	P		**P**	**10 22 25.6**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=252,slow=2.3,SNR=2.5							
ARCES	**ARCESS Array B**	**54.29**	**342**	P		**P**	**10 22 56.3**	**-1.8**
	comp=Z,1.0nm,0.7s,baz=43,slow=9.0,SNR=6.0							
ARCES	**ARCESS Array B**	**54.29**	**342**	P		**P**	**10 22 56.3**	**-1.8**
NVAR	**Mina Array Bea**	**55.62**	**70**	P		**P**	**10 23 09.4**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=305,slow=8.4,SNR=2.9							
NVAR	**Mina Array Bea**	**55.62**	**70**	P		**P**	**10 23 09.4**	**+1.0**
CHTO	**Chiang Mai**	**58.18**	**260**	P		**P**	**10 23 26.8**	**+0.3**
CHTO				pmax		pmax		
	comp=Z,4.0nm,0.9s							
CHTO	**Chiang Mai**	**58.18**	**260**	P		**P**	**10 23 26.8**	**+0.3**
CHTO				IAmb		IAmb	10 23 29.8	
	comp=Z,3.9nm,0.8s							
CMAR	**Chiang Mai Arr**	**58.45**	**259**	P		**P**	**10 23 30.5**	**+2.1**
	comp=Z,1.5nm,0.6s,baz=25,slow=7.2,SNR=7.6							
CMAR				LR		LR	10 51 14.0	
	comp=Z,21nm,18.1s,baz=220,slow=39							
CMAR	**Chiang Mai Arr**	**58.45**	**259**	P		**P**	**10 23 30.5**	**+2.1**
FIA1	**FINESS Array S**	**61.13**	**337**	P		**P**	**10 23 46.7**	**+0.5**
FIA1				IAmb		IAmb	10 24 04.8	
	comp=Z,3.0nm,0.8s							
FINES	**FINESS Array B**	**61.13**	**337**	P		**P**	**10 23 47.4**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=40,slow=5.9,SNR=11							
FINES	**FINESS Array B**	**61.13**	**337**	P		**P**	**10 23 47.4**	**+1.2**
NB2	**NORSAR Subarra**	**64.54**	**344**	P		**P**	**10 24 09.4**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=23,slow=6.9							
NOA	**NORSAR Array B**	**64.54**	**344**	P		**P**	**10 24 09.7**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=21,slow=6.6,SNR=5.1							
GEYT	**Alibeck**	**67.97**	**304**	P		**P**	**10 24 32.0**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=48,slow=2.1,SNR=2.3							
GEYT	**Alibeck**	**67.97**	**304**	P		**P**	**10 24 32.0**	**+0.7**
AKASG	**Malin Array Be**	**69.63**	**330**	P		**P**	**10 24 41.1**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=31,slow=6.7,SNR=2.4							
AKASG	**Malin Array Be**	**69.63**	**330**	P		**P**	**10 24 41.1**	**-0.2**
KBZ	**Khabaz**	**70.51**	**317**	P		**P**	**10 24 47.1**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=148,slow=7.8,SNR=2.7							
KBZ	**Khabaz**	**70.51**	**317**	P		**P**	**10 24 47.1**	**+0.2**
TXAR	**Lajitas Array**	**70.57**	**67**	P		**P**	**10 24 49.8**	**+2.1**
	comp=Z,0.4nm,0.6s,baz=296,slow=5.1,SNR=3.8							
TXAR	**Lajitas Array**	**70.57**	**67**	P		**P**	**10 24 49.8**	**+2.1**
GERES	**GERESS Array B**	**75.52**	**338**	P		**P**	**10 25 16.4**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=17,slow=10,SNR=2.1							
GERES	**GERESS Array B**	**75.52**	**338**	P		**P**	**10 25 16.4**	**-0.3**
BRTR	**Keskin Array B**	**77.61**	**321**	P		**P**	**10 25 29.4**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=30,slow=13,SNR=3.9							
BRTR	**Keskin Array B**	**77.61**	**321**	P		**P**	**10 25 29.4**	**+0.7**

*VAO **30** 10:18:19.3±2.5,22°.90S×72°.33W,h0km,mb4.5*

*IDC **30** 10:19:04.4±0.7,22°.33S×68°.54W,h109km±7km,mb3.5/4, mb1 3.6/6,mb1mx3.4/29,mbtmp3.8/6,Error ellipse: s-maj=27.0km s-min=18.6km az=140.0*

*SJA **30** 10:19:04.1±1.1,22°.10S×68°.79W,h118km±6km,ML3.7, MW3.8*

*GUC **30** 10:19:04.8±0.7,22°.10S×68°.76W,h120km±3km,ML4.0*

ISC 30 10:19:04.8±0.6,22°.11S±0°.03×68°.76W±0°.04,h113km±5km, n58,σ1§10/90,14C-1D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.52**	**195**	P		**Pn**	**10 19 22.4**	**-0.2**
	319nm,0.3s,baz=326,slow=7.1,SNR=5290							
LVC				S		**Sn**	**10 19 35.4**	**-0.5**
	1μm,0.3s,baz=262,slow=21,SNR=35							
LVC	**Limon Verde**	**0.52**	**195**	⇑*i*P		**Pn**	**10 19 22.6**	**0.0**
LVC				*i* S		**Sn**	**10 19 35.4**	**-0.5**
LVC	**Limon Verde**	**0.52**	**195**	*i* P		**Pn**	**10 19 22.5**	**0.0**
LVC				*i* S		**Sn**	**10 19 35.3**	**-0.5**
LVC				IAML			10 19 36.7	
	comp=Z,3μm,0.1s							
PB09	**IPOC Station P**	**0.54**	**305**	*i* P		**Pn**	**10 19 23.1**	**+0.5**
PB09				*i* S		**Sn**	**10 19 36.4**	**+0.6**
PB09				IAML			10 19 37.6	
	comp=N,5μm,0.6s							
PB09	**IPOC Station P**	**0.54**	**305**	*i* P		**Pn**	**10 19 23.2**	**+0.7**
PB09				*i* S		**Sn**	**10 19 36.4**	**+0.6**
PB09				IAML			10 19 37.5	
	comp=Z,4μm,0.4s							
PB03	**IPOC Station P**	**0.92**	**274**	⇑*i*P		**Pn**	**10 19 26.1**	**+0.4**
PB03				*i* S		**Sn**	**10 19 41.9**	**+0.5**
PB03				IAML			10 19 43.4	
	comp=N,5μm,0.2s							
PB03	**IPOC Station P**	**0.92**	**274**	*i* P		**Pn**	**10 19 26.1**	**+0.4**
PB03				*i* S		**Sn**	**10 19 41.9**	**+0.5**
PB03				IAML			10 19 43.3	
	comp=Z,3μm,0.2s							
PB06	**IPOC Station P**	**0.96**	**231**	⇑*i*P		**Pn**	**10 19 26.5**	**+0.5**
PB06				*i* S		**Sn**	**10 19 42.3**	**+0.3**
PB06				IAML			10 19 43.4	
	comp=N,8μm,0.3s							
PB06	**IPOC Station P**	**0.96**	**231**	*i* P		**Pn**	**10 19 26.5**	**+0.5**
PB06				*i* S		**Sn**	**10 19 42.4**	**+0.4**
PB06				IAML			10 19 44.9	
	comp=Z,3μm,0.4s							
PB07	**IPOC Station P**	**1.11**	**290**	⇑*i*P		**Pn**	**10 19 28.2**	**+0.6**
PB07				*i* S		**Sn**	**10 19 45.2**	**+0.4**
PB07				IAML			10 19 46.3	
	comp=E,5μm,0.2s							
PB07	**IPOC Station P**	**1.11**	**290**	*i* P		**Pn**	**10 19 28.2**	**+0.6**
PB07				*i* S		**Sn**	**10 19 45.1**	**+0.4**
PB07				IAML			10 19 46.5	
	comp=Z,3μm,0.4s							
PB01	**IPOC Station P**	**1.26**	**327**	⇑*i*P		**Pn**	**10 19 29.3**	**+0.1**
PB01				*i* S		**Sn**	**10 19 47.8**	**+0.2**
PB01				IAML			10 19 48.8	
	comp=N,2μm,0.3s							
PB15	**IPOC Station P**	**1.27**	**211**	⇑*i*P		**Pn**	**10 19 29.9**	**+0.5**
PB15				*i* S		**Sn**	**10 19 49.3**	**+1.2**
PB15	**IPOC Station P**	**1.27**	**211**	*i* P		**Pn**	**10 19 29.9**	**+0.5**
PB15				*i* S		**Sn**	**10 19 49.4**	**+1.3**
PB04	**IPOC Station P**	**1.30**	**260**	⇑*i*P		**Pn**	**10 19 30.1**	**+0.3**
PB04				*i* S		**Sn**	**10 19 48.9**	**+0.3**
PB04				IAML			10 19 51.8	
	comp=N,3μm,0.2s							
PB04	**IPOC Station P**	**1.30**	**260**	*i* P		**Pn**	**10 19 30.1**	**+0.3**
PB04				*i* S		**Sn**	**10 19 49.3**	**+0.7**
PB04				IAML			10 19 51.9	
	comp=Z,2μm,

ellipse: s-maj=8.1km s-min=5.9km az=89.2
MOS Felt (II) at Yuzhno-Kuril'sk, Golovnino, Lagunnoye.
*JMA **30** 11:21:58.1±0.1, 43˚.08N×145˚.00E, h62km±1km, M4.2 Broadband fault plane solution: P waves. NP1: φs246.00000°, δ42.00000°, λ129.00000°. NP2: φs18.00000°, δ59.00000°, λ60.00000°. Principal axes: T Plg63.0000°, Azm237.0000°; N Plg25.0000°, Azm35.0000°; P Plg9.0000°, Azm129.0000°;*
JMA Felt III J1.
*SKHL **30** 11:21:58.3±0.6, 43˚.06N×145˚.10E, h79km±5km, mb4.9/11*
SKHL Felt (II) at Golovnino, Lagunnoye, Yushno-Kuril'sk.
*IDC **30** 11:21:59.4±1.9, 43˚.14N×144˚.92E, h72km±17km, mb3.7/19, mb1 3.9/24, mb1mx3.8/35, mbtmp4.0/24, MS3.0/8, Ms1 3.0/8, ms1mx2.8/44, Error ellipse: s-maj=15.6km s-min=12.3km az=127.0*
*NEIC **30** 11:21:59.8±0.9, 43˚.15N±0˚.06×144˚.94E±0˚.06, h76km±6km, mb4.4/22, Error ellipse: s-maj=9.2km s-min=6.2km az=202.0*

ISC 30 11:21:58.0±0.6, 43˚.10N±0˚.04×145˚.00E±0˚.03, h62km±5km, n143, σ1§22/158, mb4.2/42, 14C-14D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKHN	**Kushirohamanak**	**0.12**	**100**	⇑P	**Pn**	**11 22 07.5**	**+0.1**
JKHN				*e*S	**Sn**	**11 22 14.2**	**+0.1**
JAK	**Akkeshi**	**0.25**	**245**	⇑P	**Pn**	**11 22 07.9**	**-0.1**
JAK				*e*S	**Sn**	**11 22 15.1**	**-0.1**
JNK	**Nakash**	**0.52**	**337**	⇓P	**Pn**	**11 22 10.2**	**-0.2**
JNK				*e*S	**Sn**	**11 22 18.9**	**-0.6**
NMR	**Nemuro--Hokkai**	**0.59**	**63**	*i* P	**Pn**	**11 22 11.1**	**-0.1**
NMR				*i* S	**Sn**	**11 22 20.5**	**-0.3**
NMR	**Nemuro--Hokkai**	**0.59**	**63**	⇑*i* PN	**Pn**	**11 22 11.1**	**-0.1**
NMR				*i* S	**Sn**	**11 22 20.2**	**-0.6**
NEM2	**Nemuro 2**	**0.60**	**64**	⇑P	**Pn**	**11 22 11.0**	**-0.2**
NEM2				*e*S	**Sn**	**11 22 20.2**	**-0.7**
JRA	**Rausu**	**0.84**	**6**	⇑P	**Pn**	**11 22 14.5**	**+0.4**
JRA				*e*S	**Sn**	**11 22 26.6**	**+0.7**
JOB	**Onbets**	**0.88**	**257**	⇓P	**Pn**	**11 22 14.7**	**+0.1**
JOB				*e*S	**Sn**	**11 22 26.7**	**-0.1**
JAR	**Ashorobuto**	**0.92**	**283**	⇓P	**Pn**	**11 22 15.3**	**+0.2**
JAR				*e*S	**Sn**	**11 22 28.1**	**+0.3**
RUSJ	**Misakicho**	**1.02**	**10**	⇓*i* PN	**Pn**	**11 22 17.1**	**+0.7**
RUSJ				*i* S	**Sn**	**11 22 31.8**	**+1.9**
GRPR	**Tuman**	**1.05**	**32**	*i* P	**Pn**	**11 22 17.2**	**+0.4**
GRPR	2μm,0.4s			AMB	AMB	11 22 19.0	
GRPR	3μm,0.4s			AMB	AMB	11 22 19.0	
GRPR	6μm,0.4s			AMB	AMB	11 22 19.0	
GRPR				*i* S	**Sn**	**11 22 31.2**	**+0.4**
GRPR	25μm,0.6s			A	A	11 22 32.0	
GRPR	18μm,0.6s			A	A	11 22 32.0	
GRPR	**Tuman**	**1.05**	**32**	*c i* PN	**Pn**	**11 22 17.2**	**+0.4**
GRPR				*i* S	**Sn**	**11 22 30.9**	**+0.1**
GRPR	comp=N,2μm,0.3s			pmax	pmax		
GRPR	comp=Z,6μm,0.3s			pmax	pmax		
GRPR	comp=E,3μm,0.2s			pmax	pmax		
GRPR	comp=N,25μm,0.4s			smax	smax		
GRPR	comp=E,18μm,0.3s			smax	smax		
YUK	**Yuzh-Kuril'sk**	**1.12**	**34**	*i* P	**Pn**	**11 22 18.2**	**+0.5**
YUK	comp=E,850nm,0.4s			AMB	AMB	11 22 18.6	
YUK	comp=E,600nm,0.4s			AMB	AMB	11 22 18.6	
YUK	comp=E,11μm,0.4s			AMB	AMB	11 22 18.6	
YUK				*i* S	**Sn**	**11 22 33.1**	**+0.7**
YUK	comp=E,17μm,0.6s			A	A	11 22 33.6	
YUK	comp=E,31μm,0.6s			A	A	11 22 33.6	
YUK	**Yuzh-Kuril'sk**	**1.12**	**34**	*c i* PN	**Pn**	**11 22 18.3**	**+0.5**
YUK				*i* S	**Sn**	**11 22 33.1**	**+0.7**
YUK	comp=N,851μm,0.2s			pmax	pmax		
YUK	comp=E,601μm,0.1s			pmax	pmax		
YUK	comp=N,17μm,0.4s			smax	smax		
YUK	comp=E,31μm,0.4s			smax	smax		
JTKR	**Abashiri--Toko**	**1.18**	**318**	P	**Pn**	**11 22 19.2**	**+0.8**
JTKR				*e*S	**Sn**	**11 22 34.9**	**+1.2**
JCH	**Churui**	**1.30**	**248**	⇓P	**Pn**	**11 22 19.7**	**-0.4**
JCH				*e*S	**Sn**	**11 22 35.7**	**-0.9**
JMP	**Maruseppu**	**1.50**	**308**	⇓P	**Pn**	**11 22 23.3**	**+0.6**
ERM	**Erimo**	**1.74**	**232**	PN	**Pn**	**11 22 28.2**	**+2.2**
ERM						11 22 50.3	
ERM	**Erimo**	**1.74**	**232**		**Pn**	**11 22 28.2**	**+2.2**
ERM				Sn	**Sn**	**11 22 50.3**	**+3.1**
JKA	**Kamikawa-asahi**	**2.02**	**301**	*e*P	**Pn**	**11 22 31.2**	**+1.5**
JKA	**Kamikawa-asahi**	**2.02**	**301**		**Pn**	**11 22 31.2**	**+1.5**
ASAJ	**Asahikawa**	**2.02**	**301**	P	**Pn**	**11 22 31.2**	**+1.4**
ASAJ	comp=E,67nm,0.3s,baz=140,slow=8.9,SNR=553			S	**Sn**	**11 22 58.7**	**+4.8**
KUR	comp=E,69nm,0.3s,baz=53,slow=25,SNR=7.2			AMB	AMB	11 22 46.0	
KUR	**Kuril'sk**	**2.96**	**43**	*i* P	**Pn**	**11 22 43.8**	**+1.2**
KUR	comp=E,80nm,0.3s			AMB	AMB	11 22 46.0	
KUR	comp=E,80nm,0.3s			AMB	AMB	11 22 46.0	
KUR	comp=E,430nm,0.3s			*i* S	**Sn**	**11 23 17.7**	**+0.7**
KUR	comp=E,1μm,0.3s			A	A	11 23 26.9	
KUR	comp=E,930nm,0.3s			A	A	11 23 26.9	
KUR	**Kuril'sk**	**2.96**	**43**	*c* PN	**Pn**	**11 22 44.4**	**+1.8**
KUR				*i* S	**Sn**	**11 23 19.1**	**+2.1**
KUR	comp=E,83nm,0.5s			pmax	pmax		
KUR	comp=Z,322nm,0.5s			pmax	pmax		
KUR	comp=N,81nm,0.4s			pmax	pmax		
KUR	comp=E,720μm,0.3s			smax	smax		
KUR	comp=N,581μm,0.4s			smax	smax		
YSS	**Yuzh-Sakhalins**	**4.17**	**338**	*i* P	**Pn**	**11 23 00.5**	**+1.4**
YSS	comp=N,20nm,0.2s			AMB	AMB	11 23 01.0	
YSS				*e*S	**Sn**	**11 23 48.2**	**+1.8**
YSS	comp=N,320nm,0.4s			A	A	11 23 50.0	
YSS	comp=N,270nm,0.4s			A	A	11 23 50.0	
YSS	**Yuzh-Sakhalins**	**4.17**	**338**	⇓*i* PN	**Pn**	**11 23 00.1**	**+1.1**
YSS				*e*S	**Sn**	**11 23 47.4**	**+1.0**
YSS	comp=Z,30nm,0.8s			pmax	pmax		
YSS	comp=Z,200nm,18.0s			MLR	MLR		
YSS	**Yuzh-Sakhalins**	**4.17**	**338**		**Pn**	**11 23 00.2**	**+1.2**
TYV	**Tymovskoe**	**7.93**	**349**	*e*P	**Pn**	**11 23 52.9**	**+2.4**
TYV	comp=Z,30nm,0.5s			AMB	AMB	11 23 54.3	
TYV				*e*S	**Sn**	**11 25 18.7**	**+0.1**
TYV	comp=Z,20nm,0.8s			A	A	11 25 19.5	
TYV	comp=Z,60nm,0.8s			A	A	11 25 19.5	
TYV	**Tymovskoe**	**7.93**	**349**	*e*PN	**Pn**	**11 23 52.9**	**+2.4**
TYV	comp=Z,14nm,0.5s			pmax	pmax		
MJB9	**Matsu-Tunnel**	**8.38**	**221**	Pn	**Pn**	**11 23 56.5**	**-0.3**
MAJO	**Matsushiro**	**8.38**	**221**	*de*PN	**Pn**	**11 23 55.8**	**-1.0**
MAJO	**Matsushiro**	**8.38**	**221**	Pn	**Pn**	**11 23 56.1**	**-0.7**
MAT	**Matsushiro**	**8.38**	**221**	P	**Pn**	**11 23 56.2**	**-0.6**
MAT				*e*S	**Sn**	**11 25 29.3**	**-0.6**
MJAR	**Matsushiro Arr**	**8.38**	**221**	P	**Pn**	**11 23 56.2**	**-0.5**
MJAR	comp=Z,0.2nm,0.3s,baz=30,slow=14,SNR=37			LR	LR	11 27 45.6	
MJAR	comp=Z,69nm,19.5s,baz=70,slow=41						
USRK	**Ussuriysk Ar.**	**9.50**	**281**	P	**Pn**	**11 24 13.1**	**+1.1**
USA0B	**Ussuriysk Arra**	**9.50**	**281**	PN	**Pn**	**11 24 14.4**	**+2.4**
USA0B	**Ussuriysk Arra**	**9.50**	**281**	Pn	**Pn**	**11 24 14.4**	**+2.4**
VLA	**Vladivostok**	**9.60**	**275**	*e*P	**Pn**	**11 24 11.9**	**-1.4**
VLA	**Vladivostok**	**9.60**	**275**	⇑*e*PN	**Pn**	**11 24 11.9**	**-1.4**
GRNR	**Gornyy**	**9.65**	**326**	*i* P	**Pn**	**11 24 16.9**	**+2.9**
GRNR	comp=Z,10.0nm,0.7s			AMB	AMB	11 24 18.0	
GRNR	**Gornyy**	**9.65**	**326**	⇑*i* PN	**Pn**	**11 24 16.9**	**+2.9**
GRNR	comp=Z,10.0nm,0.7s			pmax	pmax		
INU	**Inuyama**	**9.91**	**221**	Pn	**Pn**	**11 24 17.4**	**-0.3**
OKH	**Okha**	**10.54**	**353**	*e*P	**Pn**	**11 24 29.0**	**+2.8**
OKH	comp=Z,70nm,0.9s			AMB	AMB	11 24 29.8	
JHJ2	**Mitsune**	**10.78**	**204**	Pn	**Pn**	**11 24 30.9**	**+1.4**
JHJ	**Hachijo jima 2**	**10.78**	**204**	P	**Pn**	**11 24 31.8**	**+2.3**
JHJ	comp=Z,5.7nm,0.3s,baz=280,slow=13,SNR=1.4			S	Sn	11 26 18.6	-10
KLR	**Kul'dur**	**11.04**	**308**	P	**Pn**	**11 24 36.1**	**+3.2**
KLR	comp=Z,0.6nm,0.3s,baz=118,slow=13,SNR=18			LR	LR	11 29 13.3	
KLR	**Kul'dur**	**11.04**	**308**	*e*P	**Pn**	**11 24 35.8**	**+2.8**
KLR	**Kul'dur**	**11.04**	**308**	⇓*e*PN	**Pn**	**11 24 35.8**	**+2.8**
EKMR	**Ekimchan**	**12.80**	**325**	*e*P	**Pn**	**11 24 57.2**	**+0.2**
EKMR	comp=Z,10.0nm,0.8s			AMB	AMB	11 25 01.8	
PETK	**Petropavlovsk-**	**13.10**	**36**	P	**Pn**	**11 25 02.7**	**+1.6**
PETK	comp=Z,0.2nm,0.3s,baz=219,slow=16,SNR=1.7			LR	LR	11 30 04.1	
KSRS	**Korea Array**	**14.20**	**252**	P	**Pn**	**11 25 15.3**	**-0.5**
KSRS	comp=Z,0.2nm,0.3s,baz=60,slow=13,SNR=4.3			LR	LR	11 30 06.4	
KS19	**Wonju Array Si**	**14.21**	**253**	Pn	**P**	**11 25 18.1**	**-3.5**
BMKR	**Bomnak**	**15.69**	**323**	*e*P	**Pn**	**11 25 33.7**	**-1.4**
ZEA	**Zeya**	**15.83**	**318**	*e*P	**Pn**	**11 25 35.8**	**-1.0**
KROS	**Kirovskiy**	**16.37**	**320**	*e*P	**Pn**	**11 25 42.4**	**-1.2**
SEY	**Seymchan**	**20.33**	**10**	P	**P**	**11 26 28.6**	**-0.2**
ULN	**Ulaanbaatar**	**26.84**	**293**	*e*P	**P**	**11 27 32.4**	**-0.3**
ULN	**Ulaanbaatar**	**26.84**	**293**	⇑*e*P	**P**	**11 27 32.4**	**-0.3**
ULN	comp=Z,2.0nm,0.9s			pmax	pmax		
ULN	**Ulaanbaatar**	**26.84**	**293**	P	**P**	**11 27 32.2**	**-0.5**
SONM	**Songino Array**	**27.28**	**293**	P	**P**	**11 27 36.8**	**+0.2**
BILL	**Bilibino**	**27.43**	**17**	*e*P	**P**	**11 27 37.9**	**+0.4**
BILL	**Bilibino**	**27.43**	**17**	*e*P	**P**	**11 27 37.9**	**+0.4**
BILL	comp=Z,1.0nm,1.1s			pmax	pmax		
TLY	**Talaya**	**28.95**	**302**	⇑*e*P	**P**	**11 27 48.9**	**-2.3**
TLY	comp=Z,2.0nm,1.0s			pmax	pmax		
H11N2	**WAKE ISLAND Hy**	**29.70**	**135**	T	T	11 59 02.0	
	baz=328,slow=75,SNR=1401						
H11N1	**WAKE ISLAND Hy**	**29.71**	**135**	T	T	11 58 48.1	
	baz=328,slow=75,SNR=526						
H11N3	**WAKE ISLAND Hy**	**29.71**	**135**	T	T	11 58 52.5	
	baz=328,slow=75,SNR=1197						
H11S1	**WAKE ISLAND Hy**	**30.62**	**136**	T	T	12 00 07.2	
	baz=329,slow=76,SNR=1005						
H11S3	**WAKE ISLAND Hy**	**30.62**	**136**	T	T	12 00 10.8	
	baz=329,slow=76,SNR=955						
H11S2	**WAKE ISLAND Hy**	**30.64**	**136**	T	T	12 00 08.5	
	baz=329,slow=76,SNR=804						
ZALV	**Zalesovo Beam**	**40.14**	**307**	PcP	**PcP**	**11 31 30.8**	**0.0**
ZALV	comp=Z,1.4nm,0.4s,baz=73,slow=5.1,SNR=5.7			LR	LR	11 48 25.1	
	comp=Z,30nm,18.7s,baz=121,slow=40						
COLA	**College**	**42.51**	**36**	⇓*e*P	**P**	**11 29 46.6**	**-0.2**
COLA	comp=Z,3.0nm,0.9s			pmax	pmax		
ILAR	**Eielson Array**	**42.93**	**36**	P	**P**	**11 29 50.5**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=256,slow=5.5,SNR=15						
MK31	**Makanchi Array**	**43.50**	**297**	P	**P**	**11 29 54.7**	**-0.4**
MK31	comp=Z,4.0nm,0.8s			pmax	pmax		
MK31	**Makanchi Array**	**43.50**	**297**	P	**P**	**11 29 54.7**	**-0.4**
MK31				IAmb	IAmb	11 29 56.0	
	comp=Z,3.7nm,0.8s						
MKAR	**Makanchi Array**	**43.50**	**297**	P	**P**	**11 29 54.9**	**-0.2**
	comp=Z,4.1nm,0.7s,baz=82,slow=8.8,SNR=30						
MKAR				PcP	**PcP**	**11 31 42.1**	**0.0**
	comp=Z,0.5nm,0.7s,baz=45,slow=2.5,SNR=3.0						
MAKZ	**Makanchi**	**43.70**	**298**	P	**P**	**11 29 56.4**	**-0.3**
MAKZ	comp=Z,6.0nm,1.1s			pmax	pmax		
MAKZ	**Makanchi**	**43.70**	**298**	P	**P**	**11 29 56.4**	**-0.3**
MAKZ				IAmb	IAmb	11 29 57.3	
	comp=Z,6.3nm,1.1s						
SCRK	**Sand Creek**	**44.26**	**37**	P	**P**	**11 30 01.4**	**+0.3**
KURK	**Kurchatov**	**44.59**	**304**	*e*P	**P**	**11 30 03.6**	**-0.1**
KURK	**Kurchatov**	**44.59**	**304**	*de*P	**P**	**11 30 03.6**	**-0.1**
KURK	comp=Z,3.0nm,0.8s			pmax	pmax		
KURK	**Kurchatov**	**44.59**	**304**	P	**P**	**11 30 03.4**	**-0.3**
KURK				IAmb	IAmb	11 30 04.2	
	comp=Z,6.3nm,1.3s						
SIJI	**Sorong**	**45.48**	**199**	LR	LR	11 47 10.6	
	comp=Z,36nm,18.2s,baz=180,slow=33						
CHTO	**Chiang Mai**	**45.60**	**253**	P	**P**	**11 30 12.1**	**0.0**
CHTO	comp=Z,3.0nm,0.8s			pmax	pmax		
CHTO	**Chiang Mai**	**45.60**	**253**	P	**P**	**11 30 12.1**	**0.0**
CMAR	**Chiang Mai Arr**	**45.84**	**252**	P	**P**	**11 30 14.1**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=44,slow=7.8,SNR=1.9						
INK	**Inuvik**	**47.74**	**30**	P	**P**	**11 30 28.4**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=306,slow=9.7,SNR=12						
INK	**Inuvik**	**47.74**	**30**	P	**P**	**11 30 28.3**	**+0.1**
HYT	**Haines Junctio**	**47.84**	**40**	P	**P**	**11 30 30.4**	**+1.1**
HYT	comp=Z,5.5nm,0.8s			IAmb	IAmb	11 30 32.5	
KDJ	**Kajisay**	**48.65**	**293**	P	**P**	**11 30 35.6**	**-0.2**
KDJ	comp=Z,2.0nm,0.6s			pmax	pmax		
KDJ	**Kajisay**	**48.65**	**293**	P	**P**	**11 30 35.6**	**-0.2**
KDJ	comp=Z,1.9nm,0.6s			IAmb	IAmb	11 30 36.2	
AAK	**Ala-Archa**	**50.22**	**295**	*e*P	**P**	**11 30 47.7**	**-0.1**
AAK	**Ala-Archa**	**50.22**	**295**	P	**P**	**11 30 47.7**	**-0.1**
AAK	comp=Z,3.0nm,0.5s			pmax	pmax		
AAK	**Ala-Archa**	**50.22**	**295**	P	**P**	**11 30 47.7**	**-0.1**
AAK	comp=Z,2.7nm,0.5s			IAmb	IAmb	11 30 47.9	
ARSB	**Arslanbob**	**51.82**	**294**	P	**P**	**11 31 00.1**	**+0.3**
ARSB	comp=Z,18nm,1.4s			pmax	pmax		
ARSB	**Arslanbob**	**51.82**	**294**	P	**P**	**11 31 00.1**	**+0.3**
KK31	**Karatay Array**	**52.62**	**297**	P	**P**	**11 31 05.2**	**-0.4**
KK31	comp=Z,3.0nm,0.7s			pmax	pmax		
KK31	**Karatay Array**	**52.62**	**297**	P	**P**	**11 31 05.2**	**-0.4**
KK31	comp=Z,3.3nm,0.7s			IAmb	IAmb	11 31 05.8	
ARU	**Arti**	**53.74**	**317**	*i* P	**P**	**11 31 12.6**	**-0.9**
ARU	**Arti**	**53.74**	**317**	*di* P	**P**	**11 31 12.6**	**-0.9**
ARU				S	**S**	**11 38 41.8**	**-1.1**
ARU				SS	**SS**	**11 42 20.9**	**-2.8**
ARU	comp=Z,5.0nm,1.5s			pmax	pmax		
SPITS	**Spitsbergen Ar**	**55.11**	**349**	LR	LR	11 57 01.2	
	comp=Z,22nm,18.4s,baz=255,slow=38						
MTN	**Manton Dam**	**57.10**	**196**	P	**P**	**11 31 38.4**	**+0.4**
YKA	**Yellowknife Ar**	**57.20**	**33**	P	**P**	**11 31 37.4**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=302,slow=6.6,SNR=9.3						
ARCES	**ARCESS Array B**	**59.30**	**339**	P	**P**	**11 31 53.1**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=69,slow=13,SNR=1.9						
CTAO	**Charters Tower**	**62.89**	**179**	P	**P**	**11 32 18.5**	**+0.9**
CTAO	comp=Z,10.0nm,1.2s			pmax	pmax		
CTAO	**Charters Tower**	**62.89**	**179**	P	**P**	**11 32 18.4**	**+0.9**
WB0	**Warramunga Arr**	**63.31**	**191**	P	**P**	**11 32 20.8**	**+0.4**
WB0				IAmb	IAmb	11 32 30.4	
	comp=Z,4.6nm,1.3s						
GEYT	**Alibeck**	**63.37**	**298**	P	**P**	**11 32 20.9**	**+0.1**
	comp=Z,1.5nm,0.4s,baz=58,slow=8.7,SNR=3.1						
WRA	**Warramunga Arr**	**63.49**	**191**	P	**P**	**11 32 20.9**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=11,slow=6.9,SNR=7.0						
FIA1	**FINESS Array S**	**64.73**	**332**	P	**P**	**11 32 28.4**	**-0.8**
FIA1	comp=Z,6.6nm,1.1s			IAmb	IAmb	11 32 42.1	
FINES	**FINESS Array B**	**64.73**	**332**	P	**P**	**11 32 28.5**	**-0.8**
	comp=Z,1.1nm,0.3s,baz=40,slow=8.4,SNR=12						
FINES	**FINESS Array B**	**64.73**	**332**	*ce*P	**P**	**11 32 28.7**	**-0.5**
FINES	comp=Z,1.0nm,0.3s			pmax	pmax		
OBN	**Obninsk**	**64.90**	**323**	*e*P	**P**	**11 32 29.1**	**-1.3**
OBN	**Obninsk**	**64.90**	**323**	*e*P	**P**	**11 32 29.1**	**-1.3**
OBN	comp=Z,6.0nm,0.9s			pmax	pmax		
ASAR	**Alice Springs**	**67.22**	**191**	P	**P**	**11 32 46.4**	**+0.7**
	comp=Z,1.8nm,0.8s,baz=11,slow=5.9,SNR=15						
KBZ	**Khabaz**	**69.04**	**311**	P	**P**	**11 32 57.6**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=27,slow=5.4,SNR=5.1						
KBZ	**Khabaz**	**69.04**	**311**	*e*P	**P**	**11 32 57.4**	**+0.5**
KBZ	**Khabaz**	**69.04**	**311**	⇓*e*P	**P**	**11 32 57.4**	**+0.5**
NVAR	**Mina Array Bea**	**69.25**	**57**	P	**P**	**11 32 59.7**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=293,slow=6.5,SNR=11						
NB201	**NORSAR Array S**	**69.60**	**338**	P	**P**	**11 32 59.7**	**-0.5**
NB2	**NORSAR Subarra**	**69.63**	**338**	P	**P**	**11 32 59.6**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=34,slow=6.5						
NOA	**NORSAR Array B**	**69.63**	**338**	P	**P**	**11 32 59.9**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=34,slow=6.1,SNR=8.3						
AKASG	**Malin Array Be**	**71.16**	**323**	P	**P**	**11 33 08.6**	**-1.1**
	comp=Z,1.0nm,0.4s,baz=41,slow=6.1,SNR=4.3						
AKBB	**Malin Array Si**	**71.16**	**323**	*ce*P	**P**	**11 33 10.0**	**+0.2**
PDAR	**Pinedale Array**	**71.52**	**48**	P	**P**	**11 33 12.8**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=270,slow=3.0,SNR=6.8						
PFO	**Pinyon Flats O**	**73.48**	**59**	LR	LR	12 01 32.4	
	comp=Z,18nm,21.1s,baz=342,slow=32						
STKA	**Stephens Creek**	**74.68**	**183**	P	**P**	**11 33 31.7**	**+1.1**
STKA	comp=Z,1.0nm,1.1s			pmax	pmax		
STKA	**Stephens Creek**	**74.68**	**183**	P	**P**	**11 33 31.7**	**+1.1**
BUR08	**Bucovina Ar. S**	**75.20**	**323**	P	**P**	**11 33 33.8**	**0.0**
BUR08	comp=Z,1.9nm,0.6s			IAmb	IAmb	11 33 34.5	
OJC	**Ojcow**	**75.49**	**327**	P	**P**	**11 33 35.2**	**-0.1**
OJC	comp=Z,4.0nm,0.7s			pmax	pmax		
OJC	**Ojcow**	**75.49**	**327**	P	**P**	**11 33 35.2**	**-0.1**
OJC				IAmb	IAmb	11 33 36.8	
	comp=Z,3.7nm,0.7s						
BR131	**Keskin Array S**	**76.84**	**312**	P	**P**	**11 33 41.5**	**-1.8**
BR131	comp=Z,28nm,1.5s			pmax	pmax		
BR131	**Keskin Array S**	**76.84**	**312**	P	**P**	**11 33 41.5**	**-1.8**
CLL	**Collm**	**77.15**	**331**	*e*P	**P**	**11 33 45.0**	**+0.3**
	comp=Z,4.0nm,0.9s						
CLL	**Collm**	**77.15**	**331**	*e*P	**P**	**11 33 45.0**	**+0.3**
CLL	comp=Z,4.0nm,0.9s			pmax	pmax		
KHC	**Kasperske Hory**	**78.75**	**330**	*de*P	**P**	**11 33 54.1**	**+0.4**
KHC	comp=Z,6.0nm,1.7s			pmax	pmax		
GERES	**GERESS Array B**	**78.94**	**330**	P	**P**	**11 33 54.6**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=15,slow=5.5,SNR=5.0						
FUORN	**Ofenpass-Fuorn**	**82.07**	**330**	P	**P**	**11 34 12.5**	**+0.7**
FUORN	comp=Z,3.1nm,0.8s			IAmb	IAmb	11 34 14.3	
TXAR	**Lajitas Array**	**84.31**	**55**	P	**P**	**11 34 24.2**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=303,slow=3.7,SNR=11						
H03N2	**Juan Fernandez**	**144.53**	**89**	T	T	14 22 31.5	
	baz=302,slow=77,SNR=4.4						
H03N3	**Juan Fernandez**	**144.55**	**89**	T	T	14 22 34.8	
	baz=302,slow=77,SNR=8.1						
H03N1	**Juan Fernandez**	**144.55**	**89**	T	T	14 22 34.4	
	baz=302,slow=77,SNR=6.1						
SIV	**San Ignacio**	**145.00**	**47**	PKPbc	**PKPdf**	**11 41 28.1**	**-0.4**
	comp=Z,2.5nm,0.6s,baz=304,slow=3.4,SNR=14						
SNAA	**Sanae**	**147.36**	**198**	PKPbc	**PKPbc**	**11 41 33.2**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=175,slow=2.9,SNR=5.1						

*IDC **30** 11:33:08.2±0.4, 55˚.31S×128˚.78W, h0km, mb4.4/13, mb1 4.5/13, mb1mx4.4/29, mbtmp4.4/13, MS4.8/11, Ms1 4.7/11, ms1mx4.7/15, Error ellipse: s-maj=20.7km s-min=14.7km az=158.0*
*MOS **30** 11:33:08.7±1.1, 55˚.34S×128˚.61W, h10km, mb5.0/12, Error ellipse: s-maj=21.5km s-min=15.5km az=81.6*
*NEIC **30** 11:33:10.1±1.7, 55˚.35S±0˚.1×128˚.6W±0˚.2, h11km±3km, mb5.0/33, Ms_20 5.1/209, Mwc5.5(GCMT), Error ellipse: s-maj=18.2km s-min=15.1km az=158.0*
*GCMT **30** 11:33:14.1±0.1, 55˚.41S±0˚.01×128˚.80W±0˚.01, h16km, MW5.4/139, Moment Tensor Solution. s112,c193; s139,c261; Duration: 1§3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.34±.02; $M_{\theta\theta}$ 1.26±.03; $M_{\phi\phi}$-0.91±.02; $M_{r\theta}$-0.16±.06; $M_{r\phi}$ 1.42±.02; $M_{\theta\phi}$-0.07±.05; Best double couple: $M_0$1.79600×10^{17} NP1:φs199.00000°, δ87.00000°, λ177.00000°. NP2:φs289.00000°, δ87.00000°, λ3.00000°. Principal axes: T 1.9730, Plg4.0000°, Azm154.0000°; N -0.3560, Plg86.0000°, Azm327.0000°; P -1.6180, Plg1.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **30** 11:33:15, 55˚.35S×128˚.78W, h18km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.31; $M_{\theta\theta}$1.37; $M_{\phi\phi}$-1.06; $M_{r\theta}$0.11; $M_{r\phi}$1.54; $M_{\theta\phi}$0.17; Fault plane solution: $M_0$1.99000×10^{17} NP1:φs109.00000°, δ84.00000°, λ0.00000°. NP2:φs199.00000°, δ90.00000°, λ-174.00000°. Principal axes: T 2.1284, Plg4.0000°, Azm334.0000°; N -0.3142, Plg84.0000°, Azm200.0000°; P -1.8142, Plg4.0000°, Azm64.0000°;*

ISC 30 11:33:10.1±0.3, 55.13S±0˚.07×128˚.62W±0˚.07, h10km, n271, σ1§81/144, mb4.8/32, MS5.0/120, 9C-3D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**31.31**	**34**	LR	LR	11 49 04.3	
	comp=Z,1μm,19.4s,baz=204,slow=30						
PMSA	**Palmer Station**	**32.29**	**134**	P	P	11 39 45.0	+6.5
	32nm,0.9s,baz=223,slow=10,SNR=3.6						
VNDA	**Vanda**	**32.57**	**202**	P	**P**	**11 39 42.1**	**+1.2**
	3.6nm,0.9s,baz=88,slow=9.6,SNR=7.7						
VNDA	comp=Z,799nm,21.9s,baz=82,slow=28			LR	LR	11 48 30.4	
VNDA	**Vanda**	**32.57**	**202**	P	**P**	**11 39 40.8**	**-0.1**
VNDA	comp=Z,20nm,1.4s			pmax	pmax		
VNDA	**Vanda**	**32.57**	**202**	P	**P**	**11 39 40.8**	**-0.1**
VNDA				IAmb	IAmb	11 39 56.7	
	comp=Z,20nm,1.4s						
USHA	**Ushuaia**	**33.60**	**115**	LR	LR	11 49 39.7	
	comp=Z,2μm,18.9s,baz=232,slow=30						
QSPA

EFI East Falkland 40.57 115 IAMs_20 IAMs_20 11 54 31.4
comp=Z,2µm,20.0s
H03N1 Juan Fernandez 40.57 79 T T 12 24 04.1
baz=224,slow=72
PAE Paea 40.70 328 *e*T T 12 23 49.5
comp=Z,3.1nm,0.4s
TIAR Tiarei 40.73 329 *e*T T 12 23 51.0
comp=Z,5.4nm,0.3s
PPT2 Papeete2 40.77 328 *e*S **S** **11 46 57.3 -4.6**
comp=Z,651nm,26.0s
PPT2 *e*LQ LQ 11 50 15.9
comp=Z,624nm,21.7s
PPT2 *e*LR LR 11 51 59.2
comp=Z,5µm,26.8s,baz=168
PPT2 Papeete2 40.77 328 *e*T T 12 23 54.5
comp=Z,7.6nm,0.4s
PPT Papeete 40.78 329 LR LR 11 53 49.0
comp=Z,1µm,18.1s,baz=150,slow=30
RAO Raoul Island 43.51 286 P **P** **11 41 12.9 -0.7**
RAO pmax pmax
comp=Z,479nm,0.9s
RAO Raoul Island 43.51 286 P **P** **11 41 12.9 -0.7**
VA03 San Esteban 45.82 86 P **P** **11 41 32.4 +0.3**
VNA3 Neumayer Olymp 46.78 157 P **P** **11 41 37.6 -1.5**
TAOE Nuku Hiva Isla 47.06 344 *e*S **S** **11 48 28.2 -5.6**
comp=Z,701nm,24.7s
TAOE *e*LR LR 11 54 51.7
comp=Z,4µm,25.5s
TAOE Nuku Hiva Isla 47.06 344 *e*T T 12 31 43.4
comp=Z,21nm,0.2s
CO03 El Pedregal 47.17 84 P **P** **11 41 42.4 -0.2**
VNA2 Neumayer--Watz 47.52 158 P **P** **11 41 43.8 -1.1**
baz=218,slow=8.8
VNA1 Neumayer--Stat 47.54 157 P **P** **11 41 43.9 -0.9**
ZON Zonda 47.79 86 P **P** **11 41 46.5 -1.0**
ZON pmax pmax
comp=Z,29nm,1.4s
ZON Zonda 47.79 86 P **P** **11 41 46.5 -1.0**
ZON IAmb IAmb 11 41 56.7
comp=Z,29nm,1.4s
SNAA Sanae 47.90 160 P **P** **11 41 46.3 -1.6**
SNAA Sanae 47.90 160 P **P** **11 41 46.3 -1.6**
comp=Z,8.4nm,0.9s,baz=232,slow=7.8,SNR=21
SNAA Sanae 47.90 160⇑ *i*P **P** **11 41 46.1 -1.7**
SNAA Sanae 47.90 160 P **P** **11 41 46.1 -1.7**
SNAA IAmb IAmb 11 41 46.9
comp=Z,13nm,1.0s
AC05 El Transito 48.91 82 P **P** **11 41 55.6 -0.6**
AC05 IAmb IAmb 11 41 57.1
comp=Z,22nm,1.1s
HOPE Hope Point 49.41 130 P **P** **11 42 01.7 +2.2**
HOPE Hope Point 49.41 130 IAMs_20 IAMs_20 11 58 01.1
comp=Z,1µm,18.0s
CASY Casey 50.98 207 P **P** **11 42 11.1 -0.2**
CASY IAmb IAmb 11 42 15.1
comp=Z,15nm,1.1s
NVL N'lazarevskaya 51.27 164 *e*P **P** **11 42 10.9 -2.5**
NVL *e*S **S** **11 49 29.3 -2.2**
NVL pmax pmax
comp=Z,16nm,1.0s
MSVF Nonsavu 54.92 291⇓ *e*P **P** **11 42 43.6 +2.5**
MSVF pmax pmax
comp=Z,16nm,1.1s
SYO Syowa Base 55.87 175⇑ *e*P P 11 42 42.2 -4.9
SYO Syowa Base 55.87 175⇑ *i*X **P** **11 42 44.1 -3.0**
SYO Syowa Base 55.87 175⇑ *e*sP sP 11 42 48.8 -0.8
MAW Mawson 57.28 185 P **P** **11 42 55.4 -1.7**
comp=Z,6.5nm,1.1s,baz=213,slow=6.3,SNR=7.5
MAW LR LR 12 05 08.1
comp=Z,618nm,20.6s,baz=164,slow=34
MAW Mawson 57.28 185 P **P** **11 42 56.2 -0.9**
MAW pmax pmax
comp=Z,4.0nm,1.4s
MAW Mawson 57.28 185 P **P** **11 42 56.2 -0.9**
DZM Mont Dzumac 57.89 277 *e*S **S** **11 50 59.8 -2.2**
comp=Z,372nm,24.6s
DZM *e*LQ LQ 11 57 35.8
comp=Z,2µm,25.2s
DZM *e*LR LR 12 00 02.0
comp=Z,1µm,29.8s
TOO Toolangi 58.01 249 P **P** **11 43 03.2 +0.3**
TOO pmax pmax
comp=Z,25nm,1.3s
TOO Toolangi 58.01 249 P **P** **11 43 03.1 +0.3**
TOO IAmb IAmb 11 43 21.2
comp=Z,25nm,1.3s
ARMA Armidale 59.95 259 IAMs_20 IAMs_20 12 02 34.3
comp=Z,1µm,22.0s
LPAZ La Paz 60.01 75 P **P** **11 43 19.1 +1.5**
comp=Z,159nm,0.6s,baz=166,slow=13,SNR=10
ATAH Atahualpa 62.25 60 P **P** **11 43 34.2 +1.7**
comp=Z,5.5nm,0.9s,baz=239,slow=6.5,SNR=3.8
SIV San Ignacio 64.21 81 P **P** **11 43 44.3 -0.8**
comp=Z,5.3nm,0.9s,baz=222,slow=5.4,SNR=18
STKA Stephens Creek 64.40 251 P **P** **11 43 46.0 -0.2**
comp=Z,1.5nm,0.7s,baz=142,slow=12,SNR=3.1
STKA LR LR 12 05 56.5
comp=Z,755nm,21.9s,baz=155,slow=31
STKA Stephens Creek 64.40 251 P **P** **11 43 46.0 -0.2**
STKA pmax pmax
comp=Z,10.0nm,2.0s
STKA Stephens Creek 64.40 251 P **P** **11 43 46.0 -0.2**
BBOO Buckleboo 66.63 246 IAMs_20 IAMs_20 12 08 14.5
comp=Z,1µm,20.0s
SAML Samuel 68.75 75 P **P** **11 44 13.4 -0.7**
SAML pmax pmax
comp=Z,25nm,1.6s
SAML Samuel 68.75 75 P **P** **11 44 13.4 -0.7**
SAML IAmb IAmb 11 44 14.4
comp=Z,25nm,1.6s
CTA Charters Tower 71.01 262 P **P** **11 44 29.5 +1.5**
CTAO Charters Tower 71.01 262 P **P** **11 44 29.3 +1.3**
BDFB Brasilia 71.96 92 P **P** **11 44 33.6 -0.3**
comp=Z,1.4nm,0.3s,baz=162,slow=6.4,SNR=1.6
BDFB LR LR 12 13 53.8
comp=Z,620nm,18.3s,baz=214,slow=34
BDFB Brasilia 71.96 92 IAMs_20 IAMs_20 12 13 44.1
comp=Z,752nm,19.0s
TARA Tarawa 73.67 297 P **P** **11 44 45.6 +1.7**
ROSC El Rosal 74.61 57 LR LR 12 12 56.5
comp=Z,453nm,18.1s,baz=202,slow=32
ROSC El Rosal 74.61 57 P **P** **11 44 50.2 +0.4**
JTS Las Juntas de 74.72 45⇑ *e*P **P** **11 44 50.9 +1.0**
JTS pmax pmax
comp=Z,9.0nm,1.2s
AS31 Alice Springs 75.03 250 P **P** **11 44 51.9 +0.1**
ASAR Alice Springs 75.03 250 P **P** **11 44 50.2 -1.7**
comp=Z,4.7nm,0.8s,baz=140,slow=5.4,SNR=21
ASAR LR LR 12 13 42.9
comp=Z,855nm,19.2s,baz=141,slow=32
H01W1 Cape Leeuwin H 75.51 229 T T 13 08 23.0
baz=147,slow=76,SNR=392
H01W2 Cape Leeuwin H 75.51 229 T T 13 08 23.0
baz=147,slow=76,SNR=369
H01W3 Cape Leeuwin H 75.53 229 T T 13 08 24.4
baz=147,slow=76,SNR=377
NWAO Narrogin (SRO) 75.80 232 LR LR 12 10 20.3
comp=Z,592nm,20.3s,baz=136,slow=30
RUSC La Rusia 76.13 58 P **P** **11 44 57.7 -0.9**
PTGA Pitinga 77.33 73 P **P** **11 45 05.0 +0.2**
comp=Z,3.4nm,0.8s,baz=254,slow=12,SNR=4.8
PTGA Pitinga 77.33 73 P **P** **11 45 04.2 -0.7**
PTGA IAmb IAmb 11 45 06.0
comp=Z,32nm,1.9s
WR0 Warramunga Arr 77.67 253 P **P** **11 45 06.1 -0.7**
WR0 IAmb IAmb 11 45 16.1
comp=Z,13nm,1.1s
WR0 IAMs_20 IAMs_20 12 15 02.9
comp=Z,733nm,19.0s
WR8 Warramunga Arr 77.70 253 IAMs_20 IAMs_20 12 15 26.5
comp=Z,823nm,19.0s
WR3 Warramunga Arr 77.77 253 IAMs_20 IAMs_20 12 15 29.3
comp=Z,779nm,22.0s
WB1 Warramunga Ar. 77.78 253 IAMs_20 IAMs_20 12 12 34.7
comp=Z,862nm,22.0s
WC4 Warramunga Arr 77.78 253 IAMs_20 IAMs_20 12 25 03.7
comp=Z,894nm,19.0s
WB2 Warramunga Arr 77.79 253 P **P** **11 45 06.8 -0.7**
WB2 IAmb IAmb 11 45 19.0
comp=Z,22nm,1.2s
WRA Warramunga Arr 77.80 253 P **P** **11 45 06.0 -1.5**
comp=Z,2.2nm,0.7s,baz=141,slow=5.2,SNR=18
WRA LR LR 12 15 31.6
comp=Z,570nm,19.9s,baz=130,slow=33
WRAB Tennant Creek 77.80 253⇓ *e*P **P** **11 45 07.5 0.0**
WRAB pmax pmax
comp=Z,9.0nm,1.6s
WRAB Tennant Creek 77.80 253 P **P** **11 45 07.0 -0.6**
WRAB IAmb IAmb 11 45 16.7
comp=Z,17nm,1.1s
WB0 Warramunga Arr 77.91 253 P **P** **11 45 07.8 -0.3**
PMG Port Moresby 79.05 269⇓ *e*P **P** **11 45 13.2 -1.2**
PMG pmax pmax
comp=Z,95nm,1.1s
FITZ Fitzroy Crossi 84.00 247 P **P** **11 45 40.3 -0.3**
FITZ IAMs_20 IAMs_20 12 16 19.5
comp=Z,634nm,19.0s
HPIG 84.08 20 P **P** **11 45 41.4 +0.6**
TX31 Lajitas Ar. Si 86.81 22 P **P** **11 45 55.5 +1.2**
TX31 IAmb IAmb 11 46 07.3
comp=Z,14nm,1.1s
TX32 Lajitas Array 86.81 22 P **P** **11 45 55.3 +1.0**
TXAR Lajitas Array 86.81 22 P **P** **11 45 54.7 +0.3**
comp=Z,0.9nm,0.7s,baz=184,slow=8.5,SNR=8.7
214A Organ Pipe Nat 87.80 13 P **P** **11 46 00.6 +1.7**
214A IAmb IAmb 11 46 12.6
comp=Z,6.0nm,1.1s
TUC Tucson 88.43 15 P **P** **11 46 02.9 +0.9**
TUC pmax pmax
comp=Z,17nm,1.9s
TUC Tucson 88.43 15 P **P** **11 46 02.9 +0.9**
TUC IAmb IAmb 11 46 08.9
comp=Z,17nm,1.9s
TUC Tucson 88.43 15 IAMs_20 IAMs_20 12 17 14.8
comp=Z,545nm,20.0s
GLA Glamis 88.62 12 IAMs_20 IAMs_20 12 15 52.2
comp=Z,607nm,20.0s
MNTX Cornudas Mount 88.76 20 P **P** **11 46 04.7 +1.2**
HKT Hockley 89.29 28⇑ *e*P **P** **11 46 06.9 +1.0**
HKT pmax pmax
comp=Z,7.0nm,1.7s
MWC Mount Wilson 89.46 9 IAMs_20 IAMs_20 12 18 46.3
comp=Z,705nm,19.0s
Y14A Wickenburg 89.72 13 IAMs_20 IAMs_20 12 16 25.2
comp=Z,673nm,21.0s
X16A Lo Mia Camp, P 90.40 14 IAMs_20 IAMs_20 12 17 52.2
comp=Z,515nm,19.0s
GSC Goldstone, Bar 90.64 10 IAMs_20 IAMs_20 12 17 57.6
comp=Z,578nm,20.0s
ISA Isabella, Lake 90.85 8 IAMs_20 IAMs_20 12 17 10.2
comp=Z,684nm,20.0s
SEUS St. Eustatius 91.06 60 IAMs_20 IAMs_20 12 22 23.7
comp=Z,557nm,22.0s
H11S2 WAKE ISLAND Hy 91.43 301 T T 13 27 28.0
baz=148,slow=76,SNR=321
H11S3 WAKE ISLAND Hy 91.44 301 T T 13 27 29.0
baz=148,slow=76,SNR=186
H11S1 WAKE ISLAND Hy 91.45 301 T T 13 27 25.3
baz=148,slow=76,SNR=111
WUAZ Wupatki 91.49 14 IAMs_20 IAMs_20 12 18 28.0
comp=Z,587nm,21.0s
ANMO Albuquerque 91.72 18⇑ *e*P **P** **11 46 17.7 +0.3**
ANMO pmax pmax
comp=Z,2.0nm,1.0s
ANMO Albuquerque 91.72 18 P **P** **11 46 18.1 +0.7**
ANMO IAmb IAmb 11 46 23.4
comp=Z,6.9nm,1.4s
U15A North Rim 92.27 13 P **P** **11 46 21.5 +1.4**
U15A IAMs_20 IAMs_20 12 20 28.5
comp=Z,635nm,18.0s
H11N3 WAKE ISLAND Hy 92.38 302 T T 13 28 36.6
baz=148,slow=76,SNR=134
H11N1 WAKE ISLAND Hy 92.38 302 T T 13 28 36.1
baz=148,slow=76,SNR=96
H11N2 WAKE ISLAND Hy 92.39 302 T T 13 28 38.0
baz=148,slow=76,SNR=138
MDPB Devils Postpil 92.76 8 IAMs_20 IAMs_20 12 18 26.7
comp=Z,611nm,21.0s
FAKI Fak Fak 92.84 261 IAMs_20 IAMs_20 12 22 37.9
comp=Z,587nm,22.0s
WAKR Walker 93.60 7 IAMs_20 IAMs_20 12 19 20.0
comp=Z,719nm,21.0s
NVAR Mina Array Bea 93.61 8 P **P** **11 46 28.1 +2.0**
comp=Z,0.6nm,0.8s,baz=189,slow=8.0,SNR=2.8
NV11 Mina Array Sit 93.63 8 IAMs_20 IAMs_20 12 20 55.7
comp=Z,676nm,19.0s
RYN Ryan 93.79 8 IAMs_20 IAMs_20 12 18 31.1
comp=Z,588nm,22.0s
YERR Yerington 94.09 7 IAMs_20 IAMs_20 12 20 08.0
comp=Z,586nm,19.0s
RUBR Rubicon Trail 94.10 7 IAMs_20 IAMs_20 12 18 31.1
comp=Z,665nm,22.0s
PNTR Pine Nut 94.17 7 IAMs_20 IAMs_20 12 19 36.1
comp=Z,639nm,21.0s
KVN Kaiserville 94.25 8 IAMs_20 IAMs_20 12 19 32.0
comp=Z,621nm,20.0s
VCNR Virginia City 94.37 7 IAMs_20 IAMs_20 12 18 54.2
comp=Z,526nm,20.0s
PAHR Pah Rah Range 94.80 7 IAMs_20 IAMs_20 12 22 21.8
comp=Z,608nm,18.0s
BEKR Beckworth 94.89 6 IAMs_20 IAMs_20 12 18 53.2
comp=Z,534nm,22.0s
WDC Whiskeytown Da 95.48 5 IAMs_20 IAMs_20 12 19 47.9
comp=Z,639nm,20.0s
MOD Modoc Plateau 96.92 6 IAMs_20 IAMs_20 12 23 54.0
comp=Z,434nm,18.0s
WVOR Wild Horse Val 97.57 7 IAMs_20 IAMs_20 12 20 56.9
comp=Z,550nm,21.0s
KAPI Kappang 98.04 249 IAMs_20 IAMs_20 12 27 22.0
comp=Z,447nm,20.0s
J08A Circle Bar Ran 98.50 7 IAMs_20 IAMs_20 12 24 31.6
comp=Z,535nm,18.0s
MFID Camas Ranch 98.78 9 IAMs_20 IAMs_20 12 22 10.9
comp=Z,643nm,21.0s
BW06 Boulder Array 98.87 14 IAMs_20 IAMs_20 12 23 15.3
comp=Z,540nm,20.0s
SNOW Snow King Moun 99.39 13 IAMs_20 IAMs_20 12 22 46.1
comp=Z,505nm,21.0s
H04A Detroit Lake 99.59 5 IAMs_20 IAMs_20 12 23 30.6
comp=Z,480nm,18.0s
G06A Carlson Farm, 100.22 6 IAMs_20 IAMs_20 12 22 56.3
comp=Z,552nm,20.0s
RLMT Red Lodge 101.22 14 IAMs_20 IAMs_20 12 24 39.5
comp=Z,607nm,20.0s
HAWA Hanford 101.44 6 IAMs_20 IAMs_20 12 23 18.6
comp=Z,457nm,21.0s
E07A Sunnyside 101.59 6 IAMs_20 IAMs_20 12 23 59.4
comp=Z,421nm,18.0s
D05A Enumclaw 102.10 5 IAMs_20 IAMs_20 12 24 38.0
comp=Z,526nm,19.0s
LTY Liberty 102.24 6 IAMs_20 IAMs_20 12 24 06.5
comp=Z,520nm,20.0s
JTMT Jette 103.22 10 IAMs_20 IAMs_20 12 24 39.4
comp=Z,592nm,21.0s
NEW Newport 103.48 8 IAMs_20 IAMs_20 12 27 28.4
comp=Z,551nm,18.0s
WALA Waterton Lakes 104.55 10 IAMs_20 IAMs_20 12 26 05.7
comp=Z,525nm,20.0s
LLLB Lillooet 105.52 4 IAMs_20 IAMs_20 12 25 53.5
comp=Z,549nm,21.0s
H02S1 DAWSON INLET T 108.02 358 T T 13 48 13.9
H02N1 VAN INLET T-PH 108.07 358 T T 13 48 31.3
SNR=15
WRAK Wrangell Islan 111.24 358 IAMs_20 IAMs_20 12 27 22.7
comp=Z,541nm,20.0s
FFC Flin Flon 111.66 16 IAMs_20 IAMs_20 12 30 50.6
comp=Z,439nm,20.0s
JIS Juneau Island 113.15 357 IAMs_20 IAMs_20 12 29 26.4
comp=Z,492nm,19.0s
BESE Bessie Mountai 113.47 356 IAMs_20 IAMs_20 12 28 24.8
comp=Z,559nm,22.0s
CHGN Chignik 113.70 342 IAMs_20 IAMs_20 12 28 21.8
comp=Z,498nm,22.0s
MESA MESA 115.45 353 IAMs_20 IAMs_20 12 33 42.3
comp=Z,472nm,18.0s
WAX Waxell Ridge 115.79 352 IAMs_20 IAMs_20 12 28 32.1
comp=Z,493nm,22.0s
BALM Baldy 116.33 353 IAMs_20 IAMs_20 12 29 23.5
comp=Z,479nm,22.0s
VRDI Verde Repeater 116.61 352 IAMs_20 IAMs_20 12 29 06.8
comp=Z,434nm,21.0s
GLB Gilahina Butte 116.85 352 IAMs_20 IAMs_20 12 29 14.2
comp=Z,438nm,21.0s
KNK Knik Glacier 117.25 349 IAMs_20 IAMs_20 12 30 11.9
comp=Z,496nm,20.0s
PMR Palmer 117.50 349 IAMs_20 IAMs_20 12 30 34.4
comp=Z,458nm,20.0s
SCM Sheep Creek Mo 117.55 350 IAMs_20 IAMs_20 12 30 45.7
comp=Z,498nm,20.0s
YKA Yellowknife Ar 117.80 7 PKP **PKPdf** **11 51 55.0 -0.1**
comp=Z,0.1nm,0.3s,baz=224,slow=1.9,SNR=2.1
YKA Yellowknife Ar 117.80 7 PKIKP **PKPdf** **11 51 55.0 -0.1**
SVW2 Sparrevohn 117.83 346 IAMs_20 IAMs_20 12 34 51.6
comp=Z,476nm,19.0s
DHY Denali Highway 118.78 350 IAMs_20 IAMs_20 12 30 21.1
comp=Z,512nm,22.0s
DOT Dot Lake 119.05 352 IAMs_20 IAMs_20 12 30 27.4
comp=Z,490nm,22.0s
RIDG Independent Ri 119.20 352 IAMs_20 IAMs_20 12 31 04.4
comp=Z,515nm,21.0s
RND Reindeer 119.25 350 IAMs_20 IAMs_20 12 32 00.5
comp=Z,495nm,20.0s
SCRK Sand Creek 119.37 352 IAMs_20 IAMs_20 12 34 13.8
comp=Z,376nm,20.0s
TRF Thorofare Moun 119.44 349 IAMs_20 IAMs_20 12 31 42.7
comp=Z,544nm,22.0s
MCK McKinley 119.57 350 IAMs_20 IAMs_20 12 32 11.2
comp=Z,488nm,20.0s
BPAW Bear Paw Mtn. 120.15 349 IAMs_20 IAMs_20 12 31 57.4
comp=Z,459nm,22.0s
ILAR Eielson Array 120.40 351 PKP **PKPdf** **11 51 59.5 -0.5**
comp=Z,1.5nm,0.7s,baz=209,slow=2.3,SNR=6.5
PRP Porcupine Dome 121.01 352 IAMs_20 IAMs_20 12 31 58.2
comp=Z,434nm,22.0s
MLY Manley 121.03 349 IAMs_20 IAMs_20 12 32 44.6
comp=Z,369nm,21.0s
FYU Fort Yukon 122.02 352 IAMs_20 IAMs_20 12 32 31.9
comp=Z,444nm,22.0s
COLD Coldfoot 123.11 350 IAMs_20 IAMs_20 12 42 24.6
comp=Z,387nm,19.0s
TORD Torodi Ar. Bea 123.16 117 PKP **PKPdf** **11 52 06.5 -0.4**
comp=Z,0.4nm,0.5s,baz=266,slow=1.3,SNR=1.7
INK Inuvik 123.18 358 PKP **PKPdf** **11 52 05.5 +0.3**
comp=Z,0.5nm,0.6s,baz=270,slow=3.0,SNR=1.4
INK Inuvik 123.18 358 IAMs_20 IAMs_20 12 35 02.4
comp=Z,396nm,20.0s
PETK Petropavlovsk- 123.77 316 PKP **PKiKP** **11 52 07.3 +0.1**
comp=Z,2.6nm,0.8s,baz=180,slow=3.6,SNR=2.9
TOLK Toolik Lake Re 124.42 351 **PKiKP** **11 52 08.8 +0.7**
NJ2 Nanjing 128.26 273 *e*PKP **PKiKP** **11 52 17.8 +1.1**
CMAR Chiang Mai Arr 128.72 244 PKP **PKPdf** **11 52 16.1 -1.4**
comp=Z,0.7nm,0.3s,baz=222,slow=2.4,SNR=1.8
GYA Guiyang 131.00 257 *e*PKP **PKPdf** **11 52 21.5 -0.2**
GYA PP PP 11 54 48.5 +10
GYA SKKS 12 01 33.3
GYA SS **SS** **12 12 12.0 +2.4**
GYA AMB AMB
comp=Z,80nm,7.1s
GYA LR LR
comp=Z,260nm,8.3s
GYA LR LR
comp=Z,270nm,10.4s
GYA LR LR
comp=Z,260nm,11.8s
RES Resolute Bay 131.48 11 PKhKP PKPpre 11 52 16.6
comp=Z,9.3nm,1.0s,baz=93,slow=3.3,SNR=4.0
KLR Kul'dur 132.94 298 *i* PKIKP **PKiKP** **11 52 25.3 -0.3**
CD2 Chengdu 136.04 259 PKP **PKiKP** **11 52 32.0 -0.6**
ILULI Ilulissat 136.09 30 IAMs_20 IAMs_20 12 47 16.0
comp=Z,321nm,20.0s
HHC Hu-ho-hao-te 138.59 276 *e*PKP **PKiKP** **11 52 39.3 +1.7**
HHC LR LR
comp=Z,190nm,19.9s
HHC LR LR
comp=Z,130nm,19.4s
HHC LR LR
comp=Z,87nm,17.7s
LZH Lanzhou 139.77 264 *e*PKP **PKPdf** **11 52 34.5 -3.3**
LZH LR LR
comp=Z,52nm,17.8s
LZH LR LR
comp=Z,56nm,18.0s
LZH LR LR
comp=Z,83nm,20.1s
ESDC Sonseca Array 140.59 89 PKP **PKPdf** **11 52 39.6 +0.6**
comp=Z,0.7nm,0.8s,baz=258,slow=3.8,SNR=2.4
YAK Yakutsk 140.98 313⇑ *e*PKIKP **PKiKP** **11 52 44.4 +2.9**
BORG Borgarnes 144.37 45 IAMs_20 IAMs_20 13 00 53.3
comp=Z,263nm,19.0s
GTA Gaotai 144.38 264 ⇑PKP PKPbc 11 52 44.0 -0.3
GTA PP **PP** **11 56 05.0 +2.9**
GTA SKS **SKSdf** **11 59 50.8 -4.3**
GTA SKKS **SKKSac** **12 02 57.8 +3.8**
GTA SS **SS** **12 14 54.8 +6.5**
GTA AMB AMB
comp=Z,200nm,8.1s
GTA LR LR
comp=Z,100nm,20.6s
GTA LR LR
comp=Z,110nm,18.4s
GTA LR LR
comp=Z,110nm,19.7s
TIXI Tiksi 144.68 328 PKP **PKPab** **11 52 43.6 -0.4**
comp=Z,27nm,0.9s,baz=102,slow=3.0,SNR=48
TIXI Tiksi 144.68 328 PKIKP **PKPab** **11 52 43.7 -0.3**
TIXI Tiksi 144.68 328 **PKPab** **11 52 43.7 -0.3**
TIXI IAMs_20 IAMs_20 12 48 47.6
comp=Z,283nm,22.0s
KEST Kesra 145.39 106 PKPbc **PKPbc** **11 52 45.8 -1.8**
comp=Z,6.3nm,0.9s,baz=146,slow=3.6,SNR=4.4
KEST Kesra 145.39 106 **PKPbc** **11 52 47.1 -0.5**
ULN Ulaanbaatar 145.42 282 PKIKP **PKPdf** **11 52 46.8 -0.7**
ULN Ulaanbaatar 145.42 282 **PKPdf** **11 52 46.8 -0.7**
SONM Songino Array 145.77 281 PKPbc **PKPdf** **11 52 47.8 -0.2**
comp=Z,7.7nm,0.6s,baz=138,slow=3.5,SNR=26
BOD Bodaibo 146.40 301 *e*PKIKP **PKPdf** **11 52 47.1 -1.4**
BOD pmax pmax
comp=Z,16nm,1.4s
DAG Danmarks Havn 147.33 24 *i* PKP2 **PKPbc** **11 52 51.6 -0.5**
DAG Danmarks Havn 147.33 24 *i* P **PKPbc** **11 52 51.6 -0.5**
RAYN Ar Rayn 148.13 170 PKP2 **PKPbc** **11 52 54.8 -1.0**
RAYN Ar Rayn 148.13 170 **PKPbc** **11 52 54.8 -1.0**
TLY Talaya 149.26 286 PKPbc **PKPbc** **11 52 57.4 -0.4**
comp=Z,3.1nm,0.6s,baz=191,slow=2.5,SNR=9.5
TLY Talaya 149.26 286 *e*PKP2 **PKPbc** **11 52 56.4 -1.4**
TLY pmax pmax
comp=Z,34nm,1.2s
TLY Talaya 149.26 286 **PKPbc** **11 52 56.4 -1.4**
UOSS Minazif 149.64 189 IAMs_20 IAMs_20 12 56 59.0
comp=Z,298nm,20.0s
VLC Villacollemand 151.68 96 IAMs_20 IAMs_20 13 14 37.5
comp=Z,212nm,19.0s
ECH Echery 152.11 86 PKIKP **PKPbc** **11 53 03.8 -0.9**
ECH Echery 152.11 86 **PKPbc** **11 53 03.8 -0.9**
AQU L'Aquila 152.26 102 IAMs_20 IAMs_20 13 09 28.2
comp=Z,313nm,21.0s
KBS Kingsbay 152.74 16 IAMs_20 IAMs_20 12 54 20.4
comp=Z,341nm,22.0s
DAVA Damuels 153.18 90 *i* PKPbc **PKiKP** **11 53 07.6 +0.1**
comp=Z,4.9nm,1.3s
SCTE Santa Cesarea 153.49 111 IAMs_20 IAMs_20 13 05 59.9
comp=Z,303nm,20.0s
FETA Feichten 153.53 91 *i* PKPbc **PKiKP** **11 53 08.6 +0.5**
comp=Z,7.9nm,1.2s
NIL Nilore 153.65 224 IAMs_20 IAMs_20 13 07 12.1
comp=Z,247nm,20.0s
RETA Reutte 153.80 90 *i* PKPbc **PKiKP** **11 53 08.8 +0.2**
comp=Z,1.7nm,0.4s
SPITS Spitsbergen Ar 153.91 16 PKPbc **PKiKP** **11 53 09.4 +1.6**
comp=Z,24nm,1.3s,baz=134,slow=4.7,SNR=4.9
SQTA Sankt Quirin 153.91 91 *i* PKPbc **PKiKP** **11 53 09.4 +0.5**
comp=Z,6.5nm,1.1s
MOTA Moosalm 153.92 90 *i* sPKPdf **PKPbc** **11 53 07.3 -1.6**
comp=Z,7.7nm,1.3s
WMQ Urumqi 154.13 259 *e*PKPbc **PKPdf** **11 53 02.3 +1.1**
WMQ LR LR
comp=Z,94nm,27.1s
WMQ LR LR
comp=Z,200nm,27.3s
WMQ LR LR
comp=Z,230nm,28.9s
WMQ Urumqi 154.13 259 IAMs_20 IAMs_20 13 17 00.7
comp=Z,289nm,22.0s
WTTA Wattenberg 154.18 91 *i* PKiKP **PKiKP** **11 53 11.2 +1.7**
comp=Z,3.6nm,0.6s
WATA Walderalm 154.18 91 *i* sPKPdf **PKPbc** **11 53 07.8 -1.6**
comp=Z,7.2nm,1.0s
ABTA Abfaltersbach 154.40 93 *i* PKPab **PKPab** **11 53 23.8 -0.5**
comp=Z,8.3nm,1.1s
PRED Cave del Predi 154.84 94 IAMs_20 IAMs_20 13 11 21.1
comp=Z,226nm,20.0s
MYKA Terra Mystica 154.98 94 *i* sPKiKP **PKiKP** **11 53 18.2 +7.1**
comp=Z,2.0nm,0.5s
KBA Koelnbreinsper 155.06 93 *i* PKiKP PKPdf 11 53 13.1 +11
comp=Z,4.0nm,0.9s
GRF Grafenberg Arr 155.17 86 *e*PKPdf **PKPdf** **11 53 07.6 +5.2**
baz=241,slow=1.7
SOKA Soboth 155.81 95 *i* PKPdf **PKPdf** **11 53 05.1 +1.7**
comp=Z,5.4nm,1.3s
MOA Molln 156.00 92 *i* PKPab **PKPab** **11 53 32.2 +1.3**
comp=Z,8.1nm,1.3s

GEC2	**GERESS Array S**	**156.18**	**90**	IAMs_20	IAMs_20	13 05 09.2			
	comp=Z,220nm,21.0s								
GERES	**GERESS Array B**	**156.18**	**90**	PKP	**PKPdf**	**11 53 03.5**	**-0.3**		
	comp=Z,0.8nm,0.7s,baz=132,slow=1.5,SNR=2.2								
CSS	**Mathiatis**	**156.27**	**141**	IAMs_20	IAMs_20	13 09 59.2			
	comp=Z,238nm,20.0s								
CLL	**Collm**	**156.91**	**84**	*e*PKPdf	**PKPdf**	**11 53 08.0**	**+3.4**		
CLL				*i*		11 53 17.0			
	comp=Z,11nm,1.3s								
CLL				*e*SS	SS	12 16 48.0	-19		
CLL				*e*SSSS		12 27 06.0			
CLL	**Collm**	**156.91**	**84**	*e*PKIKP	**PKPdf**	**11 53 08.0**	**+3.4**		
CONA	**Conrad Observa**	**156.96**	**93**	*i* PKPdf	**PKPdf**	**11 53 06.5**	**+1.6**		
	comp=Z,4.3nm,1.0s								
DIVS	**Divibare**	**157.06**	**106**	IAMs_20	IAMs_20	13 12 14.9			
	comp=Z,225nm,21.0s								
BRG	**Berggiesshubel**	**157.26**	**85**	*e*PKP	**PKPdf**	**11 53 10.2**	**+5.2**		
	comp=Z,7.6nm,1.3s								
KONO	**Kongsberg**	**157.32**	**61**	IAMs_20	IAMs_20	13 00 34.3			
	comp=Z,243nm,22.0s								
VTS	**Vitosha**	**157.83**	**113**	IAMs_20	IAMs_20	13 19 26.5			
	comp=Z,248nm,20.0s								
HRA	**Herat**	**157.92**	**204**	IAMs_20	IAMs_20	13 04 50.4			
	comp=Z,316nm,22.0s								
TARG	**Taragay, Kyrgy**	**158.10**	**243**	IAMs_20	IAMs_20	13 03 31.3			
	comp=Z,207nm,20.0s								
MORC	**Moravsky Berou**	**158.84**	**91**	IAMs_20	IAMs_20	13 00 14.3			
	comp=Z,201nm,20.0s								
MK31	**Makanchi Array**	**158.97**	**260**	PKP2	**PKPab**	**11 53 43.6**	**-0.2**		
MK31	**Makanchi Array**	**158.97**	**260**		**PKPab**	**11 53 43.6**	**-0.2**		
MKAR	**Makanchi Array**	**158.97**	**260**	PKPab	**PKPab**	**11 53 42.2**	**-1.6**		
	comp=Z,1.7nm,0.7s,baz=111,slow=5.5,SNR=6.2								
PSZ	**Piszkesteto**	**159.26**	**97**	IAMs_20	IAMs_20	13 04 34.8			
	comp=Z,200nm,18.0s								
AAK	**Ala-Archa**	**160.44**	**240**	PKPab	**PKPab**	**11 53 49.3**	**-1.1**		
	comp=Z,1.9nm,0.6s,baz=182,slow=5.8,SNR=6.5								
AAK	**Ala-Archa**	**160.44**	**240**	PKP2	**PKPab**	**11 53 50.5**	**0.0**		
AAK	**Ala-Archa**	**160.44**	**240**		**PKPab**	**11 53 50.5**	**0.0**		
BRTR	**Keskin Array B**	**160.55**	**135**	PKPab	**PKPab**	**11 53 48.8**	**-2.2**		
	comp=Z,1.2nm,0.7s,baz=197,slow=4.5,SNR=2.3								
ZALV	**Zalesovo Beam**	**160.67**	**280**	PKPab	**PKPab**	**11 53 49.4**	**-1.5**		
	comp=Z,3.4nm,0.7s,baz=99,slow=4.4,SNR=9.1								
ARCES	**ARCESS Array B**	**161.46**	**29**	PKPab	**PKPab**	**11 53 54.5**	**+0.5**		
	comp=Z,1.5nm,0.8s,baz=26,slow=8.5,SNR=3.7								
AKASG	**Malin Array Be**	**165.94**	**99**	PKP	**PKPdf**	**11 53 14.5**	**+0.5**		
	comp=Z,0.5nm,0.4s,baz=264,slow=1.9,SNR=1.6								

*IDC **30** 11:38:08.6±1.6,24°.89N×98°.09E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.4/53, mbtmp3.7/4, ML4.2/1, MS4.3/1, Ms1 4.3/1, ms1mx2.8/39, Error ellipse: s-maj=57.7km s-min=20.9km az=82.0*

*BJI **30** 11:38:10.9±0.0, 24°.99N×97°.84E, h5km, ML3.6/6*

ISC 30 11:38:10.1±1.0, **25°.02N**±0°.08×**97°.89E**±0°.09, **h10**km, **n8,** σ3**°07**/9, **mb3.5**/3, **Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**4.40**	**88**	Pg	**Pg**	**11 39 34.0**	**-0.4**
KMI				Sg	**Sg**	**11 40 32.8**	**+1.3**
KMI				smax	smax		
	comp=N,95nm,0.7s						
KMI				smax	smax		
	comp=E,57nm,0.7s						
CMAR	**Chiang Mai Arr**	**6.60**	**171**	Pn	**Pn**	**11 39 42.9**	**-4.3**
	1.3nm,0.3s,baz=344,slow=12,SNR=7.5						
CMAR				Pg	**Pb**	**11 40 08.5**	**+3.4**
	0.7nm,0.3s,baz=348,slow=18,SNR=3.7						
CMAR				Lg	Lg	11 41 36.6	
	0.9nm,0.3s,baz=353,slow=30,SNR=1.6						
CMAR				LR	LR	11 41 44.4	
	comp=Z,13nm,21.6s,baz=300,slow=34						
LZH	**Lanzhou**	**12.16**	**24**	*e*P	**Pn**	**11 41 00.3**	**-3.3**
LZH				pP		11 41 04.5	
LZH				sP		11 41 08.0	
LZH				PP	**PnPn**	**11 41 14.0**	**+2.4**
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
LZH				pmax	pmax		
	comp=Z,99nm,4.9s						
LZH				LR	LR		
	comp=N,190nm,9.8s						
LZH				LR	LR		
	comp=E,150nm,9.3s						
LZH				LR	LR		
	comp=Z,140nm,9.8s						
WMQ	**Urumqi**	**20.53**	**339**	*e*P	Pn	11 42 49.8	-1.0
SONM	**Songino Array**	**23.75**	**14**	P	**P**	**11 43 24.7**	**+2.0**
	comp=Z,1.0nm,0.7s,baz=199,slow=9.6,SNR=4.9						
MKAR	**Makanchi Array**	**25.05**	**334**	P	**P**	**11 43 35.8**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=131,slow=11,SNR=5.5						
ZALV	**Zalesovo Beam**	**30.50**	**345**	P	**P**	**11 44 24.5**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=168,slow=8.6,SNR=3.9						
YKA	**Yellowknife Ar**	**89.01**	**14**	LR	LR	12 35 22.0	
	comp=Z,143nm,19.9s,baz=0.0,slow=38						

*JMA **30** 11:38:20.9±0.2, 22°.70N×145°.25E, h47km, M5.2*

*MOS **30** 11:38:20.0±0.9, 22°.00N×144°.30E, h66km, mb5.3/48, Error ellipse: s-maj=10.7km s-min=5.1km az=118.5*

*BJI **30** 11:38:21.6±0.0, 22°.19N×144°.18E, h64km, mB4.8/45, mb5.0/61, Ms4.1/23, Ms7 3.8/19*

*NEIC **30** 11:38:21.3±1.3, 22°.11N±0°.07×144°.3E±0°.1, h57km±6km, mb4.8/115, Error ellipse: s-maj=15.2km s-min=10.0km az=80.0*

*IDC **30** 11:38:23.5±2.1, 22°.12N×144°.28E, h75km±18km, mb4.2/35, mb1 4.3/38, mb1mx4.2/53, mbtmp4.5/38, MS3.5/13, Ms1 3.5/13, ms1mx3.4/43, Error ellipse: s-maj=13.5km s-min=9.8km az=98.0*

ISC 30 11:38:22.5±0.3, **22°.18N**±0°.04×**144°.41E**±0°.06, **h69**km, **n302,** σ1**°38**/312, **mb4.8**/135, **15C-10D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**4.88**	**336**	P	**Pn**	**11 39 32.9**	**-0.4**
JHH2				*e*S	**Sn**	**11 40 27.6**	**-0.8**
CBIJ	**Chichi jima**	**5.30**	**338**	P	**Pn**	**11 39 38.0**	**-1.0**
CBIJ				*e*S	**Sn**	**11 40 36.3**	**-2.4**
GUMO	**Guam**	**8.56**	**177**	P	**Pn**	**11 40 20.8**	**-2.8**
GUMO	**Guam**	**8.56**	**177**	Pn	**Pn**	**11 40 20.8**	**-2.8**
JHJ2	**Mitsune**	**11.62**	**341**	Pn	**Pn**	**11 41 02.8**	**-2.6**
JHJ	**Hachijo jima 2**	**11.64**	**340**	P	**Pn**	**11 41 06.6**	**+0.9**
	5.4nm,0.3s,baz=61,slow=19,SNR=1.4						
JHJ				S	**Sn**	**11 43 11.7**	**-2.2**
	3.8nm,0.3s,baz=85,slow=18,SNR=2.7						
JMZ	**Minamidaito 2**	**12.59**	**289**	P	**Pn**	**11 41 22.4**	**+3.8**
BSO1	**Boso 1**	**12.79**	**347**	*e*S	**Sn**	**11 43 36.6**	**-4.4**
BSO3	**Boso 3**	**13.03**	**346**	P	**Pn**	**11 41 22.1**	**-2.3**
JOD2	**Odawara 2**	**13.84**	**342**	P	**Pn**	**11 41 32.3**	**-3.1**
JHU	**Hanno**	**14.34**	**343**	P	**Pn**	**11 41 38.4**	**-3.5**
JHU				*e*S	Sn	11 44 09.5	-10
JRY	**Ryogami san**	**14.60**	**342**	P	**Pn**	**11 41 43.1**	**-2.2**
INU	**Inuyama**	**14.63**	**335**	Pn	**Pn**	**11 41 43.8**	**-1.9**
JAMN	**Amaminishikomi**	**15.05**	**297**	P	**P**	**11 41 56.5**	**+1.6**
MJAR	**Matsushiro Arr**	**15.29**	**341**	P	**Pn**	**11 41 53.9**	**-0.4**
	0.1nm,0.3s,baz=154,slow=10,SNR=19						
MJAR				S	**Sn**	**11 44 38.6**	**-4.1**
	0.0nm,0.3s,baz=130,slow=26,SNR=1.5						
MJAR				LR	LR	11 47 46.7	
	comp=Z,143nm,18.3s,baz=180,slow=37						
MAJO	**Matsushiro**	**15.29**	**341**	*de*P	**P**	**11 41 56.8**	**-0.9**
MAJO	**Matsushiro**	**15.29**	**341**	Pn	**Pn**	**11 41 53.6**	**-0.7**
MAT	**Matsushiro**	**15.29**	**341**	P	**Pn**	**11 41 54.1**	**-0.2**
MAT				*e*S	**Sn**	**11 44 37.9**	**-4.8**
MJB9	**Matsu-Tunnel**	**15.30**	**341**	Pn	**Pn**	**11 41 54.0**	**-0.3**
JOW	**Kunigami**	**15.40**	**291**	P	**P**	**11 41 57.4**	**-1.5**
JSJ	**Shimokoshiki**	**16.15**	**309**	P	**P**	**11 42 08.3**	**+1.1**
JNU	**Nakatsue**	**16.18**	**315**	P	**Pn**	**11 42 06.4**	**+0.8**
	0.1nm,0.3s,baz=107,slow=5.2,SNR=6.3						
JNU	**Nakatsue**	**16.18**	**315**	Pn	**Pn**	**11 42 05.3**	**-0.4**
YOJ	**Yonaguni jima**	**19.78**	**281**	P	**P**	**11 42 46.4**	**-0.8**
YOJ				pmax	pmax		
	comp=Z,96nm,0.8s						
YOJ	**Yonaguni jima**	**19.78**	**281**	P	**P**	**11 42 46.4**	**-0.8**
ERM	**Erimo**	**19.80**	**357**	↑*e*P	**P**	**11 42 46.5**	**-0.7**
ERM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ERM	**Erimo**	**19.80**	**357**	P	**Pn**	**11 42 48.7**	**-0.7**
KSRS	**Korea Array**	**20.84**	**321**	P	**P**	**11 42 57.8**	**-0.7**
	comp=Z,3.2nm,0.7s,baz=140,slow=9.9,SNR=29						
KSRS				LR	LR	11 50 56.9	
	comp=Z,54nm,19.9s,baz=134,slow=36						
KS19	**Wonju Array Si**	**20.90**	**321**	P	**P**	**11 42 57.7**	**-1.5**
KS19					IAmb	IAmb	11 43 04.5
	comp=Z,29nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**21.14**	**93**	T	T	12 05 05.8	
	baz=282						
H11N2	**WAKE ISLAND Hy**	**21.14**	**92**	T	T	12 05 20.5	
	baz=282						
H11N3	**WAKE ISLAND Hy**	**21.15**	**93**	T	T	12 05 08.9	
	baz=282						
H11S3	**WAKE ISLAND Hy**	**21.20**	**96**	T	T	12 05 04.8	
	baz=280						
H11S1	**WAKE ISLAND Hy**	**21.21**	**96**	T	T	12 05 34.5	
	baz=280						
H11S2	**WAKE ISLAND Hy**	**21.22**	**96**	T	T	12 05 06.8	
	baz=280						
YHNB	**Yeheng**	**21.28**	**281**	P	**P**	**11 43 02.9**	**-0.5**
YHNB					IAmb	IAmb	11 43 06.8
	comp=Z,54nm,0.7s						
YULB	**Yu-li**	**21.34**	**278**	P	**P**	**11 43 03.9**	**-0.2**
YULB					IAmb	IAmb	11 43 06.2
	comp=Z,33nm,0.7s						
TWG	**Pinlang**	**21.57**	**276**	P	**P**	**11 43 05.6**	**-0.9**
ASAJ	**Asahikawa**	**21.93**	**357**	P	**P**	**11 43 12.8**	**+2.7**
	comp=Z,3.4nm,0.7s,baz=277,slow=8.5,SNR=4.3						
TPUB	**Ta-pu**	**21.96**	**277**	P	**P**	**11 43 10.8**	**+0.1**
TPUB					IAmb	IAmb	11 43 12.6
	comp=Z,43nm,0.9s						
MSHR	**Mys Shultsa**	**23.16**	**334**	⇓*e*P	**P**	**11 43 24.3**	**+1.3**
VLA	**Vladivostok**	**23.34**	**336**	*c i*P	**P**	**11 43 26.1**	**+1.4**
VLA				pmax	pmax		
	comp=Z,69nm,1.0s						
TEY	**Ternei**	**23.68**	**346**	⇑*e*P	**P**	**11 43 29.4**	**+1.6**
TEY				pmax	pmax		
	comp=N,10.0nm,0.8s						
TEY				pmax	pmax		
	comp=Z,20nm,0.8s						
TGY	**Tagaytay City**	**23.69**	**254**	P	**P**	**11 43 29.2**	**+1.0**
	comp=Z,129nm,0.4s,baz=328,slow=12,SNR=5.6						
TGY				LR	LR	11 50 59.1	
	comp=Z,188nm,21.8s,baz=100,slow=32						
USA0B	**Ussuriysk Arra**	**24.24**	**338**	P	**P**	**11 43 34.0**	**+1.2**
USA0B				pmax	pmax		
	comp=Z,40nm,1.0s						
USA0B	**Ussuriysk Arra**	**24.24**	**338**	P	**P**	**11 43 34.0**	**+1.2**
USA0B					IAmb	IAmb	11 43 38.5
	comp=Z,40nm,0.9s						
USRK	**Ussuriysk Ar.**	**24.24**	**338**	P	**P**	**11 43 34.6**	**+1.8**
	comp=Z,30nm,0.8s,baz=133,slow=8.8,SNR=44						
USRK					LR	LR	11 52 17.8
	comp=Z,191nm,21.7s,baz=155,slow=34						
NJ2	**Nanjing**	**24.73**	**299**	*e*P	**P**	**11 43 37.8**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,19nm,0.6s						
YSS	**Yuzh-Sakhalins**	**24.75**	**357**	*e*P	**P**	**11 43 39.3**	**+1.9**
YSS				*e*		11 43 52.8	
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
JAY	**Jayapura**	**24.81**	**189**	P	**P**	**11 43 39.7**	**+1.4**
	comp=Z,13nm,0.8s,baz=0.0,slow=11,SNR=2.7						
MDJ	**Mudanjiang**	**25.49**	**335**	P	**P**	**11 43 45.8**	**+1.6**
MDJ				pmax	pmax		
	comp=Z,22nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,98nm,4.5s						
MDJ	**Mudanjiang**	**25.49**	**335**	P	**P**	**11 43 44.8**	**+0.6**
MDJ				IAmb	IAmb	11 43 50.9	
	comp=Z,22nm,0.9s						
SIJI	**Sorong**	**26.25**	**211**	P	**P**	**11 43 51.4**	**0.0**
	comp=Z,11nm,0.8s,baz=3.8,slow=21,SNR=4.8						
TIA	**Tai'an**	**27.51**	**307**	P	**P**	**11 44 02.5**	**0.0**
TIA				pmax	pmax		
	comp=Z,14nm,0.8s						
FAKI	**Fak Fak**	**27.63**	**207**	P	**P**	**11 44 02.7**	**-1.1**
FAKI				IAmb	IAmb	11 44 05.2	
	comp=Z,14nm,0.6s						
LBMI	**Labuha**	**28.04**	**218**	P	**P**	**11 44 09.8**	**+2.4**
	comp=Z,35nm,0.8s						
WHN	**Wuhan**	**28.13**	**294**	P	P	11 44 14.3	+6.2
KLR	**Kul'dur**	**28.80**	**343**	*c i*P	**P**	**11 44 15.2**	**+1.4**
	comp=Z,22nm,0.7s,baz=150,slow=7.9,SNR=96						
KLR	**Kul'dur**	**28.80**	**343**	*c i*P	**P**	**11 44 15.0**	**+1.2**
GRNR	**Gornyy**	**29.21**	**350**	⇑*i*P	**P**	**11 44 20.0**	**+2.5**
GRNR				pmax	pmax		
	comp=Z,20nm,0.7s						
GRNR				MLR	MLR		
	comp=Z,60nm,10.0s						
MRSI	**Marisa**	**30.73**	**228**	P	**P**	**11 44 32.8**	**+1.6**
	comp=Z,37nm,1.1s						
KKM	**Kota Kinabalu**	**31.61**	**244**	P	**P**	**11 44 38.4**	**-0.6**
KKM				IAmb	IAmb	11 44 40.8	
	comp=Z,11nm,0.8s						
ENH	**Enshi**	**32.25**	**292**	P	**P**	**11 44 43.0**	**-1.6**
ENH				IAmb	IAmb	11 44 44.5	
	comp=Z,14nm,0.9s						
MPSI	**Mapaga**	**32.27**	**231**	P	P	11 44 49.7	+4.9
	comp=Z,6.5nm,0.9s						
QIZ	**Qiongzhong**	**32.47**	**271**	P	**P**	**11 44 47.0**	**+0.5**
QIZ				S	**S**	**11 49 59.0**	**+2.4**
QIZ				LR	LR		
	comp=Z,130nm,8.8s						
QIZ				LR	LR		
	comp=Z,130nm,18.1s						
QIZ				LR	LR		
	comp=Z,140nm,19.1s						
PETK	**Petropavlovsk-**	**32.51**	**15**	LR	LR	11 56 53.7	
	comp=Z,47nm,20.8s,baz=239,slow=34						
PET	**Petropavlovsk**	**32.67**	**16**	P	**P**	**11 44 49.1**	**+1.3**
PET				pmax	pmax		
	comp=Z,26nm,1.1s						
PET	**Petropavlovsk**	**32.67**	**16**	P	**P**	**11 44 49.1**	**+1.3**
PET				IAmb	IAmb	11 45 05.9	
	comp=Z,26nm,1.1s						
XAN	**Xi'an**	**33.30**	**299**	P	**P**	**11 44 52.8**	**-0.9**
XAN				pmax	pmax		
	comp=Z,12nm,0.8s						
XAN	**Xi'an**	**33.30**	**299**	P	**P**	**11 44 52.8**	**-0.9**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN	**Xi'an**	**33.30**	**299**	P	**P**	**11 44 52.8**	**-0.9**
XAN				IAmb	IAmb	11 45 01.1	
	comp=Z,9.0nm,0.8s						
HIA	**Hailar**	**33.35**	**330**	⇓*e*P	**P**	**11 44 53.8**	**-0.1**
HIA				pmax	pmax		
	comp=Z,12nm,1.0s						
HIA	**Hailar**	**33.35**	**330**	P	**P**	**11 44 53.7**	**-0.2**
HIA				IAmb	IAmb	11 44 55.3	
	comp=Z,11nm,0.9s						
HHC	**Hu-ho-hao-te**	**33.35**	**312**	*e*P	**P**	**11 44 54.5**	**+0.3**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,45nm,7.3s						
ZEA	**Zeya**	**34.10**	**342**	*e*P	**P**	**11 45 00.5**	**+0.2**
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
GYA	**Guiyang**	**34.58**	**285**	⇓*i*P	**P**	**11 45 05.0**	**0.0**
GYA				pP	pwP	11 45 24.3	-0.7
GYA				PP	**PP**	**11 46 26.3**	**+1.9**
GYA				S	**S**	**11 50 28.5**	**-0.9**
GYA				pmax	pmax		
	comp=Z,20nm,0.7s						
GYA				pmax	pmax		
	comp=Z,80nm,3.5s						
GYA				LR	LR		
	comp=Z,90nm,5.5s						
GYA				LR	LR		
	comp=Z,60nm,5.7s						
GYA				LR	LR		
	comp=Z,70nm,7.6s						
TTSI	**Tana Toraja**	**34.73**	**227**	P	**P**	**11 45 08.0**	**+1.8**
	comp=Z,1μmcomp=Z,20nm,0.8s						
SPSI	**Sidrap Palu**	**35.44**	**226**	P	**P**	**11 45 13.8**	**+1.5**
	comp=Z,3μmcomp=Z,50nm,0.8s						
BNSI	**Bone**	**35.54**	**225**	P	**P**	**11 45 16.7**	**+3.5**
	comp=Z,32nm,1.1s						
DLV	**T Lat**	**35.73**	**259**	P	**P**	**11 45 14.1**	**-0.9**
DLV					IAmb	IAmb	11 45 17.4
	comp=Z,22nm,1.1s						
COEN	**Coen**	**35.94**	**182**	P	**P**	**11 45 15.6**	**-0.9**
COEN					IAmb	IAmb	11 45 16.8
	comp=Z,15nm,0.6s						
SBUM	**Sibu**	**36.91**	**242**	P	**P**	**11 45 24.5**	**-0.3**
SBUM					IAmb	IAmb	11 45 26.4
	comp=Z,11nm,1.4s						
SBUM	**Sibu**	**36.91**	**242**	P	**P**	**11 45 26.0**	**+1.2**
MTN	**Manton Dam**	**37.16**	**202**	P	**P**	**11 45 25.9**	**-1.0**
CD2	**Chengdu**	**37.23**	**292**	⇑P	**P**	**11 45 27.0**	**-0.5**
CD2				S	**S**	**11 51 08.5**	**-1.2**
CD2				pmax	pmax		
	comp=Z,50nm,0.6s						
CD2				pmax	pmax		
	comp=Z,130nm,7.4s						
CD2				LR	LR		
	comp=Z,360nm,17.2s						
CD2				LR	LR		
	comp=Z,310nm,15.2s						
SOEI	**Soe**	**37.38**	**214**	P	**P**	**11 45 28.0**	**-0.9**
SLVN	**Son La**	**37.55**	**277**	P	**P**	**11 45 29.6**	**-0.8**
SLVN				IAmb	IAmb	11 45 31.2	
	comp=Z,10nm,0.7s						
MA2	**Magadan**	**37.63**	**5**	LR	LR	11 59 32.3	
	comp=Z,35nm,21.6s,baz=258,slow=34						
LZH	**Lanzhou**	**37.77**	**301**	⇓P	**P**	**11 45 33.0**	**+0.8**
LZH				pP	pwP	11 45 50.8	-1.0
LZH				sP	sP	11 46 00.0	+4.1
LZH				pmax	pmax		
	comp=Z,33nm,1.1s						
LZH				pmax	pmax		
	comp=Z,150nm,5.1s						
LZH				LR	LR		
	comp=Z,150nm,16.5s						
LZH				LR	LR		
	comp=Z,160nm,16.8s						
LZH				LR	LR		
	comp=Z,220nm,16.8s						
KMI	**Kunming**	**38.18**	**283**	P	**P**	**11 45 37.3**	**+1.5**
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
KMI				pmax	pmax		
	comp=Z,53nm,3.6s						
KSM	**Kuching**	**39.03**	**243**	P	**P**	**11 45 41.0**	**-1.7**
KSM				IAmb	IAmb	11 45 43.5	
	comp=Z,10nm,1.1s						
KSM	**Kuching**	**39.03**	**243**	P	**P**	**11 45 43.0**	**+0.3**
ULN	**Ulaanbaatar**	**39.32**	**320**	*c i*P	**P**	**11 45 45.2**	**+0.2**
ULN				pmax	pmax		
	comp=Z,25nm,2.5s						
ULN	**Ulaanbaatar**	**39.32**	**320**	P	**P**	**11 45 44.3**	**-0.7**
ULN				IAmb	IAmb	11 45 46.3	
	comp=Z,7.0nm,0.7s						
SONM	**Songino Array**	**39.70**	**319**	P	**P**	**11 45 48.4**	**+0.3**
	comp=Z,3.4nm,0.6s,baz=128,slow=8.9,SNR=14						
SONM				ScP	**ScP**	**11 51 35.0**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=131,slow=4.0,SNR=3.9						
SONM				LR	LR	12 02 15.9	
	comp=Z,81nm,21.6s,baz=116,slow=36						
KNRA	**Kununurra**	**40.63**	**204**	P	**P**	**11 45 55.4**	**-0.5**
SEY	**Seymchan**	**41.09**	**6**	P	**P**	**11 46 00.5**	**+1.3**
	comp=Z,1.8nm,0.7s,baz=176,slow=5.8,SNR=6.6						
YAK	**Yakutsk**	**41.09**	**349**	*e*P	**P**	**11 45 59.7**	**+0.5**
YAK				pmax	pmax		
	comp=Z,35nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,10.0nm,0.9s						
YAK	**Yakutsk**	**41.09**	**349**	P	**P**	**11 45 59.6**	**+0.5**
GTA	**Gaotai**	**41.52**	**305**	*e*P	**P**	**11 46 03.3**	**0.0**
GTA				pP	pP	11 46 17.8	-1.6
GTA				sP	pwP	11 46 24.0	+0.7
GTA				S	**S**	**11 52 16.0**	**+1.8**
GTA				sS	sS	11 52 43.0	+1.7
GTA				pmax	pmax		
	comp=N,6.0nm,0.9s						
GTA				pmax	pmax		
	comp=N,35nm,5.9s						
GTA				LR	LR		
	comp=N,62nm,17.5s						
GTA				LR	LR		
	comp=N,71nm,19.7s						
GTA				LR	LR		
	comp=N,85nm,17.1s						
BOD	**Bodaibo**	**41.85**	**336**	*e*P	**P**	**11 46 05.7**	**+0.2**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CHTO	**Chiang Mai**	**42.60**	**274**	P	**P**	**11 46 11.0**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CHTO	**Chiang Mai**	**42.60**	**274**	P	**P**	**11 46 11.0**	**-1.1**
CM31	**Chiang Mai Arr**	**42.68**	**274**	P	**P**	**11 46 12.0**	**-0.8**
CM31				IAmb	IAmb	11 46 13.5	
	comp=Z,8.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**42.68**	**274**	P	**P**	**11 46 12.6**	**-0.2**
	comp=Z,5.9nm,0.6s,baz=66,slow=7.5,SNR=24						
CMAR				PcP	**PcP**	**11 48 04.7**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=146,slow=2.0,SNR=4.4						
CMAR				LR	LR	12 05 46.3	
	comp=Z,32nm,18.0s,baz=182,slow=39						
WRAB	**Tennant Creek**	**43.00**	**194**	*de*P	**P**	**11 46 14.0**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,15nm,1.3s						
WRAB	**Tennant Creek**	**43.00**	**194**	P	**P**	**11 46 13.8**	**-1.4**
WRAB				IAmb	IAmb	11 46 17.1	
	comp=Z,29nm,1.2s						
WB2	**Warramunga Arr**	**43.00**	**194**	P	**P**	**11 46 14.4**	**-0.8**
WB2				IAmb	IAmb	11 46 17.3	
	comp=Z,30nm,1.1s						
WRA	**Warramunga Arr**	**43.01**	**194**	P	**P**	**11 46 14.2**	**-1.1**
	comp=Z,5.5nm,0.4s,baz=14,slow=8.6,SNR=74						
WRA				ScP	**ScP**	**11 51 49.6**	**-0.1**
	comp=Z,3.0nm,1.1s,baz=9.7,slow=4.3,SNR=5.2						
FITZ	**Fitzroy Crossi**	**44.04**	**206**	P	**P**	**11 46 23.2**	**-0.4**
FITZ				IAmb	IAmb	11 46 26.0	
	comp=Z,16nm,0.7s						
MYKOM	**Kota Tinggi**	**44.32**	**248**	P	**P**	**11 46 26.2**	**+0.3**
MYKOM				IAmb	IAmb	11 46 27.8	
	comp=Z,11nm,0.6s						
MYKOM	**Kota Tinggi**	**44.32**	**248**	P	**P**	**11 46 27.0**	**+1.1**
KULM	**Kulim**	**45.49**	**255**	P	**P**	**11 46 35.6**	**+0.3**
KULM				IAmb	IAmb	11 46 38.4	
	comp=

WMQ LR LR
comp=Z,190nm,23.3s
WMQ LR LR
comp=Z,170nm,28.9s
WMQ Urumqi 51.16 309 P **P** **11 47 19.4 +0.8**
WMQ pmax pmax
comp=Z,53nm,1.4s
WMQ Urumqi 51.16 309 P **P** **11 47 19.4 +0.8**
TAPN Taplejung 51.38 288 *eP* **P** **11 47 20.6 -0.2**
comp=Z,44nm,0.7s
ODAN Odare 51.73 287 *eP* **P** **11 47 23.1 -0.2**
comp=Z,66nm,0.8s
DGZ Jazzator, Alta 52.16 316⇑ *i*P **P** **11 47 26.7 +0.6**
DGZ pmax pmax
comp=Z,24nm,0.9s
RAMN Ramite 52.41 288 *eP* **P** **11 47 28.0 -0.5**
comp=Z,32nm,0.7s
JIRN Jiri 52.68 289 *eP* **P** **11 47 30.6 +0.1**
comp=Z,103nm,0.6s
GUN Gumba 52.91 289 *eP* **P** **11 47 32.1 -0.2**
comp=Z,27nm,0.5s
PKI Pulchoki 53.38 289 *eP* **P** **11 47 35.1 -0.5**
comp=Z,26nm,0.5s
PKIN Phulchoki 53.38 289 *eP* **P** **11 47 35.2 -0.4**
comp=Z,30nm,0.6s
DMN Daman 53.64 289 *eP* **P** **11 47 37.3 -0.2**
comp=Z,18nm,0.5s
STKA Stephens Creek 53.82 183 P **P** **11 47 36.9 -1.3**
comp=Z,6.3nm,0.8s,baz=342,slow=9.3,SNR=9.8
STKA Stephens Creek 53.82 183 P **P** **11 47 37.1 -1.1**
STKA pmax pmax
comp=Z,2.0nm,0.9s
STKA Stephens Creek 53.82 183 P **P** **11 47 37.1 -1.1**
ZAA0 Zalesovo Array 54.54 321 P **P** **11 47 42.9 -0.4**
ZAA0 IAmb IAmb 11 47 48.3
comp=Z,8.3nm,0.8s
ZALV Zalesovo Beam 54.54 321 P **P** **11 47 42.9 -0.4**
comp=Z,6.4nm,0.6s,baz=102,slow=6.8,SNR=24
ZALV LR LR 12 10 58.3
comp=Z,70nm,21.1s,baz=102,slow=36
DANN Dangsing 54.71 290 *eP* **P** **11 47 45.4 +0.1**
comp=Z,365nm,0.6s
KOLN Koldanda 54.93 289 *eP* **P** **11 47 46.6 -0.2**
comp=Z,49nm,0.8s
MK31 Makanchi Array 55.21 312 P **P** **11 47 48.7 +0.4**
MK31 pmax pmax
comp=Z,15nm,0.8s
MK31 Makanchi Array 55.21 312 P **P** **11 47 48.7 +0.4**
MKAR Makanchi Array 55.21 312 P **P** **11 47 48.7 +0.4**
comp=Z,17nm,0.6s,baz=90,slow=9.0,SNR=137
MAKZ Makanchi 55.43 312 P **P** **11 47 50.3 +0.4**
MAKZ pmax pmax
comp=Z,28nm,0.9s
MAKZ Makanchi 55.43 312 P **P** **11 47 50.3 +0.4**
PDGK Podgornoye 57.09 308 P **P** **11 48 01.3 -0.6**
KDAK Kodiak Island 57.16 35 P **P** **11 48 04.4 +2.5**
comp=Z,3.3nm,0.8s,baz=278,slow=15,SNR=1.8
KDAK Kodiak Island 57.16 35 P **P** **11 48 02.6 +0.7**
KDAK pmax pmax
comp=Z,36nm,1.5s
KDAK Kodiak Island 57.16 35 P **P** **11 48 02.6 +0.7**
MORW Morawa 57.82 209 P **P** **11 48 07.4 +0.5**
MORW IAmb IAmb 11 48 08.9
comp=Z,8.8nm,1.1s
KURK Kurchatov 57.90 317 *c i*P **P** **11 48 06.8 -0.5**
KURK pmax pmax
comp=Z,26nm,0.7s
KURK Kurchatov 57.90 317 P **P** **11 48 07.0 -0.3**
PRZ Przheval'sk 57.90 307 P **P** **11 48 08.5 +0.8**
PRZ pmax pmax
comp=Z,34nm,0.7s
PRZ Przheval'sk 57.90 307 P **P** **11 48 08.5 +0.8**
KURBB Kurchatov Arra 57.95 317 P **P** **11 48 07.0 -0.6**
TARG Taragay, Kyrgy 58.37 306 P **P** **11 48 11.7 +0.4**
TARG IAmb IAmb 11 48 14.1
comp=Z,14nm,0.9s
KDJ Kajisay 58.82 307 P **P** **11 48 15.1 +1.0**
KDJ pmax pmax
comp=Z,18nm,1.2s
KDJ Kajisay 58.82 307 P **P** **11 48 15.1 +1.0**
KDJ IAmb IAmb 11 48 16.1
comp=Z,18nm,1.2s
BPAW Bear Paw Mtn. 59.22 28 P **P** **11 48 17.8 +1.5**
TRF Thorofare Moun 59.38 28 P **P** **11 48 18.4 +0.8**
TRF IAmb IAmb 11 48 20.9
comp=Z,7.6nm,0.9s
MLY Manley 59.53 26 P **P** **11 48 20.0 +1.6**
MLY IAmb IAmb 11 48 36.1
comp=Z,7.5nm,1.5s
KSH Kashi 59.91 304 P **P** **11 48 25.8 +4.2**
KSH sP sP 11 48 53.8 +7.8
KSH PcP **PcP** **11 49 09.8 +2.5**
KSH S **S** **11 56 30.8 +2.2**
KSH SS **SS** **12 00 27.5 +1.8**
KSH pmax pmax
comp=Z,19nm,0.6s
KSH pmax pmax
comp=Z,140nm,4.7s
KSH LR LR
comp=Z,190nm,9.9s
TKM2 Tokmak 2 59.95 308 P **P** **11 48 22.9 +1.0**
SNR=15
KZA Kyzart 60.26 307 P **P** **11 48 26.2 +1.9**
SNR=15
KBK Karagaybulak 60.44 307 P **P** **11 48 26.2 +1.0**
SNR=9.7
AAK Ala-Archa 60.78 307 P **P** **11 48 28.1 +0.6**
comp=Z,5.1nm,0.6s,baz=113,slow=3.0,SNR=10
AAK Ala-Archa 60.78 307 P **P** **11 48 28.1 +0.6**
SNR=6.5
AAK Ala-Archa 60.78 307 *ce*P **P** **11 48 27.9 +0.4**
AAK pmax pmax
comp=Z,15nm,1.3s
AAK Ala-Archa 60.78 307 P **P** **11 48 27.7 +0.2**
AAK IAmb IAmb 11 48 29.1
comp=Z,8.4nm,0.8s
UCH Uchtor 60.79 307 P **P** **11 48 29.3 +1.3**
SNR=27
TOLK Toolik Lake Re 60.84 23 P **P** **11 48 29.2 +1.9**
TOLK IAmb IAmb 11 48 30.3
comp=Z,7.1nm,1.2s
IL31 61.09 27 P **P** **11 48 28.9 -0.1**
ILAR Eielson Array 61.09 27 P **P** **11 48 28.9 -0.1**
comp=Z,1.1nm,0.8s,baz=257,slow=5.7,SNR=12
EKS2 Erkin-Say 61.30 308 P **P** **11 48 32.0 +1.0**
SNR=7.0
AML Almayashu 61.41 307 P **P** **11 48 33.3 +1.2**
SNR=23
OTUK Ortayu 61.97 314 P **P** **11 48 34.2 -1.1**
ARSB Arslanbob 62.01 306 P **P** **11 48 35.6 -0.2**
ARSB pmax pmax
comp=Z,20nm,0.7s
ARSB Arslanbob 62.01 306 P **P** **11 48 35.6 -0.2**
NIL Nilore 62.83 297 P **P** **11 48 40.7 -0.5**
NIL pmax pmax
comp=Z,39nm,0.9s
NIL Nilore 62.83 297 P **P** **11 48 40.7 -0.5**
BVAR Borovoye Array 63.05 319 P **P** **11 48 42.5 +0.2**
comp=Z,22nm,0.4s,baz=91,slow=7.7,SNR=117
BRVK Borovoye 63.11 319 P **P** **11 48 42.8 +0.1**
BRVK pmax pmax
comp=Z,27nm,0.9s
BRVK Borovoye 63.11 319 P **P** **11 48 42.8 +0.1**
KK31 Karatay Array 63.65 308 *i* P **P** **11 48 46.9 +0.4**
KK31 Karatay Array 63.65 308 P **P** **11 48 46.4 -0.2**
BTK Batken 63.80 305 P **P** **11 48 47.0 -0.6**
BTK pmax pmax
comp=Z,6.0nm,0.5s
BTK Batken 63.80 305 P **P** **11 48 47.0 -0.6**
BTK IAmb IAmb 11 48 48.8
comp=Z,6.3nm,0.5s
HYT Haines Junctio 65.10 32 P **P** **11 48 57.6 +1.8**
EPYK Eagle Plains 65.44 26 P **P** **11 48 58.9 +1.1**
KBL Kabul 66.10 299 P **P** **11 49 02.7 -0.1**
KBL pmax pmax
comp=Z,36nm,0.8s
KBL Kabul 66.10 299 P **P** **11 49 02.7 -0.1**
INK Inuvik 66.67 24 P **P** **11 49 06.7 +1.1**
comp=Z,4.7nm,1.1s,baz=162,slow=1.1,SNR=5.2
BKZ Black Stump Fm 68.01 154 P **P** **11 49 13.9 -0.6**
BKZ IAmb IAmb 11 49 18.1
comp=Z,15nm,1.0s
SVE Sverdlovsk 68.36 324 *eP* **P** **11 49 16.7 +0.3**
SVE pmax pmax
comp=Z,27nm,0.9s
NNZ Nelson 68.57 157 P **P** **11 49 17.8 0.0**
DLBC Dease Lake 69.09 34 P **P** **11 49 21.7 +0.7**
comp=Z,1.4nm,0.6s,baz=260,slow=11,SNR=3.4
RAR Rarotonga 69.46 124 LR LR 12 12 40.9
comp=Z,132nm,20.9s,baz=250,slow=30
ARU Arti 69.55 324 *c i*P **P** **11 49 23.2 -0.6**
ARU *PP **pP** **11 49 41.9 +0.6**
ARU 11 49 45.7
ARU 11 51 54.0
ARU S **S** **11 58 26.9 +0.6**
ARU SS **SS** **12 02 52.7 -1.9**
ARU pmax pmax
comp=Z,16nm,0.9s
ARU Arti 69.55 324 P **P** **11 49 23.6 -0.2**
AKTO Aktyubinsk 70.98 318 P **P** **11 49 31.9 -0.8**
comp=Z,5.3nm,0.7s,baz=93,slow=5.7,SNR=7.3
HRA Herat 71.61 300 P **P** **11 49 37.0 -0.1**
HRA IAmb IAmb 11 49 38.4
comp=Z,7.5nm,0.8s
KIRV Kirov 73.89 327 *i* P **P** **11 49 49.6 -0.2**
GEYT Alibeck 73.91 305 P **P** **11 49 50.6 +0.1**
comp=Z,6.3nm,0.9s,baz=169,slow=2.4,SNR=9.4
GEYT LR LR 12 27 50.7
comp=Z,35nm,18.0s,baz=165,slow=40
GYA0B ALIBECK ARRAY 73.91 305 P **P** **11 49 50.4 0.0**
GYA0B IAmb IAmb 11 49 52.0
comp=Z,12nm,1.1s
YKA Yellowknife Ar 75.50 28 P **P** **11 49 59.5 +0.5**
comp=Z,1.0nm,0.8s,baz=291,slow=5.1,SNR=8.9
SPA0 Spitsbergen Ar 75.55 350 P **P** **11 49 59.7 +0.6**
SPA0 IAmb IAmb 11 50 00.8
comp=Z,16nm,1.1s
SPA0 Spitsbergen Ar 75.55 350 *eP* **P** **11 50 00.2 +1.1**
SPITS Spitsbergen Ar 75.55 350 P **P** **11 49 60.0 +0.8**
comp=Z,5.9nm,0.8s,baz=91,slow=8.3,SNR=8.6
KBS Kingsbay 75.68 352 *eP* **P** **11 50 01.3 +1.4**
HSPB Hornsund (broa 76.47 350 *eP* **P** **11 50 05.7 +1.4**
LVZ Lovozero 76.77 339 *de*P **P** **11 50 06.4 +0.2**
LVZ pmax pmax
comp=Z,7.0nm,1.3s
TMCR Tamitsa 77.12 334 *eP* **P** **11 50 07.7 -0.5**
KLMR Klimovskoe 77.84 331 *eP* **P** **11 50 09.4 -2.8**
KLMR pmax pmax
comp=Z,15nm,1.1s
KLMR Klimovskoe 77.84 331 *eP* **P** **11 50 09.5 -2.8**
KLMR AMP 11 50 12.8
comp=Z,15nm,1.1s
KEV Kevo 78.26 342 P **P** **11 50 14.8 +0.4**
KEV pmax pmax
comp=Z,4.0nm,0.8s
KEV Kevo 78.26 342 P **P** **11 50 14.8 +0.4**
HAMF Hammerfest 78.70 343 *eP* **P** **11 50 17.5 +0.6**
ARCES ARCESS Array B 78.83 342 P **P** **11 50 18.0 +0.4**
comp=Z,4.6nm,0.5s,baz=68,slow=8.0,SNR=38
ARE0 ARCESS Array S 78.83 342 P **P** **11 50 17.9 +0.3**
ARE0 ARCESS Array S 78.83 342 *eP* **P** **11 50 18.2 +0.6**
UOSS Minazif 79.41 293 P **P** **11 50 21.8 +0.1**
UOSS IAmb IAmb 11 50 22.8
comp=Z,12nm,0.9s
KTK1 Kautokeino 79.79 342 *eP* **P** **11 50 23.1 +0.3**
J08A Circle Bar Ran 80.03 47 P **P** **11 50 26.3 +1.5**
AKT Akhty 80.41 311 *eP* **P** **11 50 26.1 -0.7**
AKT *eSP **pP** **11 50 45.5 +0.9**
AKT pmax pmax
comp=Z,15nm,0.7s
CMB Columbia Colle 80.56 53 P **P** **11 50 27.9 +0.2**
CMB pmax pmax
comp=Z,4.0nm,1.0s
CMB Columbia Colle 80.56 53 P **P** **11 50 27.9 +0.2**
VRH Novokhopyorsk 80.58 322 *eP* **P** **11 50 26.5 -0.9**
VRH pmax pmax
comp=Z,10.0nm,0.5s
TRO Tromso 80.60 343 *eP* **P** **11 50 28.0 +0.8**
LPSR Galich'ya Gora 81.57 324 *eP* **P** **11 50 31.4 -1.2**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
OBN Obninsk 81.72 326 LR LR 12 29 24.0
comp=Z,16nm,19.5s,baz=32,slow=38
OBN Obninsk 81.72 326 *eP* **P** **11 50 32.1 -1.2**
OBN *eSP **pP** **11 50 50.9 -0.1**
OBN *eSP **sP** **11 50 57.9 -0.2**
OBN *e* 11 53 39.9
OBN pmax pmax
comp=Z,4.0nm,0.8s
NVAR Mina Array Bea 81.95 52 P **P** **11 50 36.8 +1.5**
comp=Z,2.4nm,0.8s,baz=276,slow=6.2,SNR=16
VORD Divnogorie 82.07 322 *eP* **P** **11 50 31.8 -3.5**
VORD pmax pmax
comp=Z,10.0nm,0.4s
GOF Gofitskoye 82.22 315⇑ *eP* P 11 50 24.6 -12
TBLG Delisi 82.39 312 P **P** **11 50 37.3 0.0**
TBLG pmax pmax
comp=Z,10.0nm,0.7s
TBLG Delisi 82.39 312 P **P** **11 50 37.3 0.0**
TBLG IAmb IAmb 11 50 39.1
comp=Z,10nm,0.7s
ZEI Tsey 82.55 313 *eP* **P** **11 50 35.7 -2.6**
ZEI pmax pmax
comp=Z,23nm,1.0s
STEI Steigen 82.75 343 *eP* **P** **11 50 39.0 +0.5**
KBZ Khabaz 82.85 314 P **P** **11 50 40.3 +0.8**
comp=Z,25nm,0.8s,baz=86,slow=3.0,SNR=53
KBZ Khabaz 82.85 314 *c i*P **P** **11 50 39.6 +0.1**
KBZ pmax pmax
comp=Z,28nm,0.8s
KIV Kislovodsk 82.90 315 *d i*P **P** **11 50 40.5 +0.6**
KIV *eSP **pP** **11 50 57.7 0.0**
KIV *eSP **sP** **11 51 03.7 -1.2**
KIV *e* 11 53 50.2
KIV pmax pmax
comp=Z,20nm,1.0s
KIV Kislovodsk 82.90 315 P **P** **11 50 40.0 +0.1**
KIV IAmb IAmb 11 50 42.5
comp=Z,20nm,1.0s
LOF Lofoten 83.06 343 *eP* **P** **11 50 41.0 +0.9**
NEY Neytrino 83.16 314⇑ *eP* **P** **11 50 42.5 +1.1**
NEY pmax pmax
comp=Z,4.0nm,0.8s
FIA1 FINESS Array S 83.23 335 P **P** **11 50 40.7 -0.4**
FINES FINESS Array B 83.23 335 P **P** **11 50 40.5 -0.6**
comp=Z,11nm,0.6s,baz=71,slow=5.1,SNR=83
ELK Elko 83.25 49 P **P** **11 50 43.5 +1.5**
comp=Z,2.4nm,0.9s,baz=310,slow=3.8,SNR=11
AKH Akhalkalaki 83.38 312 P **P** **11 50 43.1 +0.5**
AKH pmax pmax
comp=Z,20nm,0.8s
AKH Akhalkalaki 83.38 312 P **P** **11 50 43.1 +0.5**
SHPR Sheep Range 85.00 53 P **P** **11 50 51.5 +0.7**
DUG Dugway, Tooele 85.17 49 IAmb IAmb 11 50 54.8
comp=Z,4.8nm,0.9s
RLMT Red Lodge 85.37 43 P **P** **11 50 53.7 +1.1**
RLMT IAmb IAmb 11 51 13.3
comp=Z,3.7nm,0.7s
HWUT Hardware Ranch 85.42 47 IAmb IAmb 11 50 56.1
comp=Z,5.2nm,1.0s
SUMG Summit 85.47 1 *i* P **P** **11 50 54.0 +1.3**
SUMG pmax pmax
comp=Z,36nm,0.9s
SUMG Summit 85.47 1 P **P** **11 50 53.5 +0.8**
SUMG IAmb IAmb 11 50 55.8
comp=Z,14nm,0.9s
SUMG Summit 85.47 1 *i* P **P** **11 50 54.0 +1.3**
comp=Z,36nm,0.9s
NSS Namsos 86.10 341 *eP* **P** **11 50 54.9 -0.6**
PDAR Pinedale Array 86.25 45 P **P** **11 50 58.7 +1.7**
comp=Z,0.3nm,0.5s,baz=234,slow=1.3,SNR=4.1
LAO LASA Array 86.52 41 IAmb IAmb 11 51 00.8
comp=Z,7.6nm,1.0s
Y14A Wickenburg 87.67 54 IAmb IAmb 11 51 07.2
comp=Z,4.2nm,0.9s
AKASG Malin Array Be 87.77 325 P **P** **11 51 02.5 -1.4**
comp=Z,2.2nm,0.5s,baz=54,slow=5.0,SNR=9.4
AKBB Malin Array Si 87.77 325 *ce*P **P** **11 51 03.4 -0.5**
WUAZ Wupatki 88.20 52 IAmb IAmb 11 51 25.8
comp=Z,6.8nm,1.2s
PV14 Lion Creek, Pa 88.61 49 IAmb IAmb 11 51 14.8
comp=Z,5.9nm,1.1s
DOMB Dombas 88.83 341 *eP* **P** **11 51 08.6 -0.2**
NB2 NORSAR Subarra 88.90 339 P **P** **11 51 07.8 -1.3**
comp=Z,1.2nm,0.6s,baz=54,slow=4.8
NB2 NORSAR Subarra 88.90 339 P **P** **11 51 07.8 -1.3**
baz=54,slow=4.8
NOA NORSAR Array B 88.90 339 P **P** **11 51 07.8 -1.3**
comp=Z,2.1nm,0.8s,baz=46,slow=4.5,SNR=8.9
NOA LR LR 12 34 23.0
comp=Z,28nm,20.4s,baz=335,slow=38
RAYN Ar Rayn 89.01 295 P **P** **11 51 09.8 -0.6**
RAYN pmax pmax
comp=Z,6.0nm,0.8s
RAYN Ar Rayn 89.01 295 P **P** **11 51 09.8 -0.6**
RAYN IAmb IAmb 11 51 12.9
comp=Z,5.8nm,0.8s
NC602 NORSAR Array S 89.02 339 *eP* **P** **11 51 09.8 +0.2**
BR131 Keskin Array S 90.83 314 P **P** **11 51 17.6 -1.1**
BR131 Keskin Array S 90.83 314 P **P** **11 51 17.6 -1.1**
BR131 IAmb IAmb 11 51 18.8
comp=Z,5.2nm,0.8s
BRTR Keskin Array B 90.83 314 P **P** **11 51 17.9 -0.8**
comp=Z,3.5nm,0.8s,baz=82,slow=4.4,SNR=10
KWP Kalwaria Pacla 91.81 326 P **P** **11 51 22.5 -0.3**
KWP pmax pmax
comp=Z,9.0nm,0.8s
KWP Kalwaria Pacla 91.81 326 P **P** **11 51 22.5 -0.3**
ANMO Albuquerque 92.04 51 P **P** **11 51 25.9 +1.5**
comp=Z,1.8nm,0.9s,baz=269,slow=2.9,SNR=5.9
ANMO Albuquerque 92.04 51⇓ *eP* **P** **11 51 26.5 +2.1**
ANMO pmax pmax
comp=Z,3.0nm,1.3s
CLL Collm 95.31 332 *i* P **P** **11 51 39.0 +0.1**
CLL *e*SKSac **SKSac** **12 02 06.0 -2.7**
CLL *e*S **S** **12 02 46.0 -3.0**
CLL *e*PS **PS** **12 04 06.0 -8.7**
CLL *e*SS **SS** **12 09 18.0 +2.1**
CLL *e*(SSS) 12 12 30.0
CLL *e* 12 14 48.0
CLL *e*SSSS 12 16 24.0
CLL *e* 12 19 42.0
CLL Collm 95.31 332 *i* P **P** **11 51 39.0 +0.1**
CLL *e*S **S** **12 02 46.0 -3.0**
GERES GERESS Array B 96.75 330 P **P** **11 51 44.4 -1.2**
comp=Z,0.3nm,0.2s,baz=90,slow=5.3,SNR=4.6
TXAR Lajitas Array 96.85 55 PKKPbc PKKPbc 12 08 28.0 +0.1
comp=Z,0.3nm,0.5s,baz=116,slow=6.1,SNR=4.0
SNAA Sanae 127.06 192 PKPdf **PKPdf** **11 57 17.6 -0.4**
VNA2 Neumayer--Watz 128.54 191 PKPdf **PKiKP** **11 57 21.4 0.0**
VNA1 Neumayer--Stat 128.93 191 PKPdf **PKPdf** **11 57 21.4 0.0**
TORD Torodi Ar. Bea 129.31 310 PKP **PKPdf** **11 57 24.3 +0.4**
comp=Z,1.5nm,0.7s,baz=46,slow=2.3,SNR=4.1
PLCA Paso Flores 145.21 130 PKPbc **PKPdf** **11 57 52.6 +0.2**
comp=Z,7.8nm,0.9s,baz=242,slow=4.0,SNR=12
LPAZ La Paz 148.76 85 PKPbc **PiKiKP** **11 58 04.8 -0.2**
comp=Z,5.2nm,0.9s,baz=189,slow=3.3,SNR=12
LPAZ La Paz 148.76 85 *eP* **PiKiKP** **11 58 05.0 0.0**
SAML Samuel 150.41 68 PKIKP **PKPdf** **11 58 02.5 +0.9**
SAML Samuel 150.41 68 **PKPdf** **11 58 02.5 +0.9**

MOS ***30*** *11:41:37.7±1.6,21°.28S×69°.97W,h63km,mb5.1/15, Error ellipse: s-maj=14.9km s-min=7.3km az=97.8*

SJA ***30*** *11:41:37.3±1.1,21°.33S×70°.04W,h34km±9km,ML4.9, MW5.0*

NEIC ***30*** *11:41:38.3±1.4,21°.30S±0°.03×69°.99W±0°.05,h61km±3km, Error ellipse: s-maj=7.0km s-min=4.0km az=75.0*

VAO ***30*** *11:41:38.3±0.8,21°.17S×69°.97W,h60km±6km,mb5.1*

NEIC ***30*** *11:41:38.8,21°.30S×69°.95W,h62km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=4.69; Mθθ=0.37; Mϕϕ=-4.32; Mrθ=-2.10; Mθϕ=4.27; Mϕr=2.71; Fault plane solution: M₀7.10000×10¹⁶ NP1:ϕs242.50000°, δ49.09000°,λ138.10000°. NP2:ϕs2.93000°,δ59.69000°, λ49.34000°. Principal axes: T 7.0168, Plg55.0000°, Azm219.0000°; N 0.1569, Plg34.0000°, Azm26.0000°; P -7.1736, Plg6.0000°, Azm121.0000°;*

IDC ***30*** *11:41:39.6±0.3,21°.12S×69°.76W,h62km±3km,mb4.3/22, mb1 4.5/25,mb1mx4.5/32,mbtmp4.7/25,MS4.1/8, Ms1 4.1/8,ms1mx3.8/27 Error ellipse: s-maj=14.2km s-min=5.3km az=63.0*

GUC ***30*** *11:41:39.1±0.8,21°.31S×69°.98W,h62km±2km,ML5.2*

BJI ***30*** *11:41:39.3±0.0,21°.30S×70°.00W,h52km,mB5.4/2, Ms5.2/9,Ms7 4.9/5*

NEIC ***30*** *11:41:42,21°.29S×70°.06W,h46km,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=4.49; Mθθ1.26; Mϕϕ-5.75; Mrθ-1.60; Mθϕ-4.91; Mϕr1.12; Fault plane solution: M₀7.43000×10¹⁶ NP1:ϕs240.00000°, δ56.00000°,λ140.00000°. NP2:ϕs355.00000°,δ58.00000°, λ41.00000°. Principal axes: T 6.1043, Plg50.0000°, Azm208.0000°; N 2.1738, Plg40.0000°, Azm26.0000°; P -8.2781, Plg1.0000°, Azm117.0000°;*

GCMT ***30*** *11:41:45.0±0.3,21°.31S±0°.02×70°.17W±0°.02,h73km±3km, MW5.1/81,Moment Tensor Solution. s33,c41; s81,c118; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=3.39±.27; Mθθ0.57±.21; Mϕϕ-3.96±.29; Mrθ-2.05±.14; Mθϕ-5.40±.19; Mϕr-0.92±.27; Best double couple: M₀6.50700×10¹⁶ NP1:ϕs353.00000°,δ56.00000°,λ23.00000°. NP2: ϕs250.00000°,δ71.00000°,λ143.00000°. Principal axes: T 5.1380, Plg39.0000°, Azm207.0000°; N 2.7380, Plg49.0000°, Azm46.0000°; P -7.8760, Plg10.0000°, Azm305.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 11:41:38.4±0.3,21°.29S±0°.02×70°.00W±0°.04,h59km±2km, n750,σ1ϕ33/704,mb5.0/135,22C-15D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC h m s	ISC
PB02	**IPOC Station P**	**0.10**	**110**⇑	*i*P	**Pn**	**11 41 47.8**	**+0.4**
PB02				*i* S	**Sn**	**11 41 54.5**	**+0.5**
PB07	**IPOC Station P**	**0.45**	**167**⇓	*i*P	**Pn**	**11 41 50.0**	**+0.1**
PB07				*i* S	**Sn**	**11 41 58.4**	**+0.1**
PB07				IAML		11 41 59.8	
	comp=E,161μm,0.5s						
PB07	**IPOC Station P**	**0.45**	**167**		**Pn**	**11 41 49.9**	**-0.1**
PB07					**Sn**	**11 41 58.3**	**-0.1**
PATCX	**Punta Patache**	**0.48**	**342**⇑	*i*P	**Pn**	**11 41 50.8**	**+0.6**
PATCX				*i* S	**Sn**	**11 42 00.0**	**+1.3**
PATCX				IAML		11 42 01.6	
	comp=N,199μm,0.4s						
PATCX	**Punta Patache**	**0.48**	**342**		**Pn**	**11 41 50.5**	**+0.2**
PATCX					**Sn**	**11 41 59.7**	**+0.9**
PB01	**IPOC Station P**	**0.53**	**63**⇑	*i*P	**Pn**	**11 41 51.1**	**+0.3**
PB01				*i* S	**Sn**	**11 42 00.1**	**+0.4**
PB01				IAML		11 42 00.6	
	comp=N,411μm,0.2s						
PB01	**IPOC Station P**	**0.53**	**63**		**Pn**	**11 41 50.9**	**+0.1**
PB01					**Sn**	**11 42 00.0**	**+0.4**
TA01	**Diego Aracena**	**0.74**	**346**⇑	*i*P	**Pn**	**11 41 53.4**	**+0.3**
TA01				*i* S	**Sn**	**11 42 04.9**	**+1.2**
TA01	**Diego Aracena**	**0.74**	**346**		**Pn**	**11 41 53.3**	**+0.3**
TA01				Sn	**Sn**	**11 42 04.0**	**+0.8**
PB03	**IPOC Station P**	**0.79**	**163**⇓	*i*P	**Pn**	**11 41 54.0**	**+0.1**
PB03				*i* S	**Sn**	**11 42 05.8**	**+0.5**
PB03				IAML		11 42 06.1	
	comp=E,210μm,0.2s						
PB09	**IPOC Station P**	**0.87**	**126**⇓	*i*P	**Pn**	**11 41 55.3**	**+0.4**
PB09				*i* S	**Sn**	**11 42 07.4**	**+0.5**
PB09				IAML		11 42 09.2	
	comp=E,101μm,0.6s						
PB09	**IPOC Station P**	**0.87**	**126**		**Pn**	**11 41 54.8**	**0.0**
PB09				Sn	**Sn**	**11 42 07.4**	**+0.5**
PB09	**IPOC Station P**	**0.87**	**126**	*i* P	**Pn**	**11 41 55.3**	**+0.4**
PB09				*e*S	**Sn**	**11 42 07.8**	**+0.8**
PB09				IAML		11 42 09.4	
	comp=Z,47μm,0.4s						
TA02	**Huaiquique**	**1.02**	**353**⇓	*i*P	**Pn**	**11 41 57.4**	**+0.7**
TA02				*i* S	**Sn**	**11 42 11.2**	**+1.1**
TA02				IAML		11 42 12.7	
	comp=N,238μm,0.1s						
PB04	**IPOC Station P**	**1.05**	**188**⇑	*i*P	**Pn**	**11 41 57.1**	**-0.1**
PB04				*i* S	**Sn**	**11 42 11.4**	**+0.2**
PB04				IAML		11 42 17.0	
	comp=N,77μm,0.2s						
PB04	**IPOC Station P**	**1.05**	**188**		**Pn**	**11 41 56.8**	**-0.5**
PB04				Sn	**Sn**	**11 42 11.9**	**+0.6**
PB04	**IPOC Station P**	**1.05**	**188**	*i* P	**Pn**	**11 41 57.2**	**-0.1**
PB04				⇓*e*S	**Sn**	**11 42 11.6**	**+0.3**
PB04				IAML		11 42 16.1	
	comp=Z,54μm,0.6s						
PB08	**IPOC Station P**	**1.39**	**35**⇑	*i*P	**Pn**	**11 42 03.0**	**+1.1**
PB08				*i* S	**Sn**	**11 42 21.3**	**+1.9**
PB08				IAML		11 42 23.3	
	comp=N,54μm,0.4s						
PB08	**IPOC Station P**	**1.39**	**35**		**Pn**	**11 42 02.7**	**+0.9**
PB06	**IPOC Station P**	**1.47**	**165**⇑	*i*P	**Pn**	**11 42 02.8**	**0.0**
PB06				IAML		11 42 26.6	

PB06 IPOC Station P 1.47 165 Pn 11 42 02.3 -0.4
PB11 IPOC Station P 1.55 12⇑ iP Pn 11 42 04.3 +0.4
PB11 i S Sn 11 42 24.1 +1.0
PB11 IPOC Station P 1.55 12 Pn 11 42 04.1 +0.2
PB05 IPOC Station P 1.57 187⇑ iP Pn 11 42 03.6 -0.6
PB05 i S Sn 11 42 23.3 -0.2
PB05 IPOC Station P 1.57 187 i P Pn 11 42 03.6 -0.6
PB05 IAML 11 42 30.3
comp=Z,16µm,0.6s
LVC Limon Verde 1.66 143 P Pn 11 42 06.8 +1.3
comp=Z,2µm,0.3s,baz=5.0,slow=7.6
LVC S Sn 11 42 28.2 +2.2
comp=Z,12µm,0.3s,baz=92,slow=18,SNR=65
LVC LR LR 11 42 55.1
comp=Z,8µm,18.2s,baz=283,slow=45
LVC Limon Verde 1.66 143⇓ iP Pn 11 42 06.8 +1.3
LVC eS Sn 11 42 27.3 +1.3
LVC Limon Verde 1.66 143 i P Pn 11 42 06.8 +1.3
LVC eS Sn 11 42 26.4 +0.3
LVC IAML 11 42 29.1
comp=Z,15µm,0.3s
LVC Limon Verde 1.66 143 eP Pn 11 42 06.9 +1.3
LVC eS Sn 11 42 27.4 +1.4
PSGC Pisagua 1.68 356⇓ iP Pn 11 42 05.8 +0.1
PSGC eS Sn 11 42 26.5 +0.3
PSGCX Pisagua 1.68 356 Pn 11 42 05.5 -0.1
GO01 Chusmiza 1.78 25⇑ iP Pn 11 42 08.1 +0.9
GO01 eS Sn 11 42 30.7 +1.7
GO01 Chusmiza 1.78 25 Pn Pn 11 42 08.2 +0.9
PB15 IPOC Station P 1.98 166⇑ iP Pn 11 42 09.6 -0.1
PB15 i S Sn 11 42 34.4 +0.9
PB15 IPOC Station P 1.98 166 Pn 11 42 09.4 -0.3
PB15 IPOC Station P 1.98 166 i P Pn 11 42 09.6 -0.1
PB15 eS Sn 11 42 37.2 +3.8
PB15 IAML 11 42 39.7
comp=Z,39µm,0.3s
MNMC Minye Minye 2.18 10⇑ iP Pn 11 42 13.3 +0.8
MNMC Minye Minye 2.18 10 Pn 11 42 13.1 +0.6
PB10 IPOC Station P 2.28 193⇑ iP Pn 11 42 12.2 -1.4
PB10 IPOC Station P 2.28 193 Pn Pn 11 42 11.9 -1.7
PB10 IPOC Station P 2.28 193 i P Pn 11 42 12.3 -1.3
PB10 IAML 11 42 56.2
comp=Z,6µm,0.4s
PB12 IPOC Station P 2.68 353⇓ iP Pn 11 42 19.3 +0.1
PB12 IAML 11 43 08.8
comp=N,12µm,0.6s
PB12 IPOC Station P 2.68 353 Pn Pn 11 42 19.3 +0.1
AP01 Chacalluta 2.92 354 eP Pn 11 42 23.4 +1.0
AP01 Chacalluta 2.92 354 Pn 11 42 23.3 +1.0
GO02 Mina Guanaco 3.88 175⇑ iP Pn 11 42 34.9 -0.9
GO02 i S Sn 11 43 20.4 +0.2
GO02 Mina Guanaco 3.88 175 Pn Pn 11 42 35.0 -0.9
YJA Yavi 4.26 103 i P Pn 11 42 44.4 +3.2
YJA IAML 11 43 55.9
comp=Z,160nm,1.2s
AC01 Pan de Azucar 4.87 186 Pn Pn 11 42 46.2 -2.9
LPAZ La Paz 5.28 20 P Pn 11 42 58.9 +3.6
comp=Z,10nm,0.3s,baz=198,slow=6.2,SNR=84
LPAZ S Sn 11 43 56.5 +1.4
comp=Z,6.1nm,0.3s,baz=188,slow=8.1,SNR=1.5
LPAZ LR LR 11 45 11.1
comp=Z,1µm,21.4s,baz=197,slow=42
LPAZ La Paz 5.28 20 P Pn 11 42 59.0 +3.7
LPAZ La Paz 5.28 20 Pn Pn 11 42 59.0 +3.7
LPAZ La Paz 5.28 20 i P Pn 11 42 58.9 +3.6
AZAP Zapla 5.41 124 i P Pn 11 42 58.4 +1.7
AZAP IAML 11 44 45.7
comp=Z,232nm,3.8s
AC02 Maricunga 5.58 172 Pn Pn 11 42 58.8 -0.5
AC05 El Transito 7.52 182 Pn Pn 11 43 22.1 -3.5
CO03 El Pedregal 9.54 184 Pn Pn 11 43 48.1 -4.9
SIV San Ignacio 9.96 60 P Pn 11 43 58.4 -0.5
comp=Z,14nm,0.3s,baz=262,slow=9.6,SNR=77
SIV S Sn 11 45 44.3 -5.0
baz=291,slow=8.9,SNR=1.1
SIV LR LR 11 48 48.3
comp=Z,971nm,20.6s,baz=256,slow=44
ZON Zonda 10.29 174 P Pn 11 44 03.2 -0.1
ZON Zonda 10.29 174 Pn 11 44 03.2 -0.1
RTLS Leoncito 10.49 177 i P Pn 11 44 03.2 -3.1
AUSP Uspallata 10.91 177 i P Pn 11 44 08.5 -3.5
TCA Tanti 11.12 155 i P Pn 11 44 11.5 -3.2
NNA Nana 11.33 324 P Pn 11 44 17.9 +0.2
comp=Z,1.3nm,0.3s,baz=145,slow=12,SNR=2.4
NNA S Sn 11 46 16.5 -6.4
comp=Z,4.9nm,0.3s,baz=187,slow=16,SNR=2.1
NNA LR LR 11 48 36.6
comp=Z,684nm,19.2s,baz=140,slow=37
ROC1 El Roble 11.68 184 Pn 11 44 21.6 -0.9
ROC1 El Roble 11.68 184 i P Pn 11 44 24.3 +1.8
MRA San Martin 11.73 162 i P Pn 11 44 18.8 -4.2
PEL Peldehue 11.83 183 P Pn 11 44 24.4 +0.1
PEL Peldehue 11.83 183 Pn Pn 11 44 24.4 +0.1
PTLB Pontes e Lacer 11.83 62 eP Pn 11 44 23.2 -1.2
MT02 Curacav 11.97 185 Pn 11 44 25.7 -0.6
VILB Vilhena 12.50 50 eP Pn 11 44 32.4 -1.1
MT01 Popeta 12.58 185 Pn 11 44 33.6 -0.9
BO02 Sierra Bellavi 13.47 183 Pn Pn 11 44 46.5 -0.3
SAML Samuel 13.91 29 eP Pn 11 44 48.5 -4.3
SAML Samuel 13.91 29 P Pn 11 44 52.3 -0.5
SAML Samuel 13.91 29 Pn 11 44 52.3 -0.5
H03N1 Juan Fernandez 14.46 211 P Pn 11 44 57.6 -2.0
H03N1 T T 11 59 23.8
baz=34,slow=74
H03N2 Juan Fernandez 14.47 211 P Pn 11 44 57.5 -2.1
H03N2 T T 11 59 51.9
baz=34
H03N3 Juan Fernandez 14.48 211 P Pn 11 44 57.4 -2.5
H03N3 T T 12 00 14.4
baz=34,slow=74
SALV Santo Antonio 14.57 71 eP Pn 11 45 00.2 -1.2
H03S3 Juan Fernandez 14.77 210 P Pn 11 45 00.9 -2.8
H03S3 T T 11 59 45.2
baz=20,slow=70,SNR=5.0
H03S1 Juan Fernandez 14.79 210 P Pn 11 45 00.7 -3.1
H03S1 T T 12 00 01.4
baz=20,slow=70,SNR=6.1
H03S2 Juan Fernandez 14.79 210 P Pn 11 45 01.0 -2.9
H03S2 T T 11 59 40.7
baz=20,slow=70,SNR=4.2
TRCB Terra Rica 16.17 99 eP Pn 11 45 21.1 -0.8
ATAH Atahualpa 16.24 329 P P 11 45 25.4 -0.1
comp=Z,0.2nm,0.3s,baz=177,slow=17,SNR=2.8
C2SB Chapadao do Su 16.32 84 eP Pn 11 45 23.7 0.0
PTGB Pitanga 16.86 105 eP Pn 11 45 31.0 +0.4
CLDB Colider 17.11 55 eP Pn 11 45 31.8 -1.9
ITAB Concordia 17.33 113 eP Pn 11 45 35.6 -0.7
PCMB Pacaembu 17.45 94 eP P 11 45 38.2 -0.1
LC01 Cunco 17.63 185 P Pn 11 45 38.3 -1.6
PLTB Pedras Altas 17.98 129 eP Pn 11 45 44.5 +0.2
ARAG Araguaiana, MT 18.11 75 eP Pn 11 45 46.0 +0.1
FRTB Fartura 19.02 100 eP P 11 45 54.7 -0.9
CNLB Canela 19.05 119 eP P 11 45 54.7 -1.2
PLCA Paso Flores 19.39 181 P P 11 45 59.9 +0.3
comp=Z,1.0nm,0.3s,baz=359,slow=12,SNR=23
PLCA Paso Flores 19.39 181 P P 11 45 58.5 -1.1
PLCA pmax pmax
comp=Z,25nm,1.0s
PLCA Paso Flores 19.39 181 P 11 45 58.5 -1.1
PLCA Paso Flores 19.39 181 eP P 11 46 00.3 +0.7
TlJ01 Guaruva-PR 19.69 106 eP Pn 11 46 05.0 +0.1
NPGB Novo Progresso 20.02 47 eP P 11 46 05.8 -0.8
MACA Manacapuru-AM 20.16 28 eP P 11 46 06.8 -1.3
IPMB Ipameri, GO 20.78 85 eP P 11 46 14.0 -0.8
SPB Sao Paulo 20.98 101 P 11 46 16.7 -0.2
SPB IAmb IAmb 11 46 37.8
comp=Z,231nm,1.9s
SPB Sao Paulo 20.98 101 eP P 11 46 18.0 +1.2
LL01 San Ignacio de 21.13 185 P P 11 46 17.9 -0.3
LL01 IAmb IAmb 11 46 39.7
comp=Z,102nm,1.2s
PET01 Itanhaem-SP 21.16 102 eP P 11 46 19.2 +0.4
VAO Valinhos 21.40 99 eP P 11 46 21.3 -0.2
BDFB Brasilia 21.58 79 P P 11 46 22.3 -1.2
comp=Z,5.7nm,0.6s,baz=279,slow=11,SNR=4.3
BDFB LR LR 11 55 41.9
comp=Z,337nm,20.5s,baz=265,slow=40
BDFB Brasilia 21.58 79 P P 11 46 22.4 -1.1
BDFB pmax pmax
comp=Z,27nm,0.7s
BDFB Brasilia 21.58 79 P P 11 46 22.4 -1.1
PTLC Puerto Leguiza 21.84 347 eP P 11 46 23.2 -2.9

CASC Dorado de Casc 22.47 340 eP P 11 46 36.8 +3.8
PUAC Puerto Asis, P 22.63 343 eP P 11 46 39.0 +4.4
PARB Paraibuna 22.64 100 eP P 11 46 33.2 -1.5
PTGA Pitinga 22.65 27 P P 11 46 32.4 -2.5
comp=Z,16nm,0.5s,baz=212,slow=20,SNR=28
PTGA Pitinga 22.65 27 P P 11 46 32.3 -2.5
PTGA Pitinga 22.65 27 eP P 11 46 32.1 -2.7
PEXB Peixe 22.67 70 eP P 11 46 33.2 -1.9
CUSE Cuicocha Este 22.98 338 eP P 11 46 58.8 +20
PAC1 Pacto, Paraso 23.08 337 eP P 11 46 39.8 +0.4
GCUF Volcan Galeras 23.50 341 eP P 11 46 49.5 +5.8
BSCB Bom Sucesso 23.52 94 eP P 11 46 42.5 -1.0
CRUC La Cruz 23.71 342 eP P 11 46 50.4 +4.9
GARC Garzon, Huila 23.94 346 eP P 11 46 50.4 +2.9
SOTA Rioblanco 24.16 344 eP P 11 46 53.0 +3.3
BBAC Balboa, Cauca 24.23 342 eP P 11 46 52.4 +2.4
PCON Cinco Dias 24.29 344 eP P 11 46 55.9 +4.8
BETC Betania 24.41 347 eP P 11 46 55.6 +4.0
PRPB Parauapebas 24.65 55 eP P 11 46 52.9 -0.8
MALB Monte Alegre 24.66 41 eP P 11 46 53.0 -0.8
SMTB Santa Maria do 24.87 64 eP P 11 46 54.5 -1.2
MC01 Montes Claros 25.04 84 eP P 11 46 56.2 -1.1
JANB Januaria 25.16 80 eP P 11 46 57.7 -0.7
PRAC Prado 25.30 349 eP P 11 47 01.9 +2.2
VILC Villavicencio, 25.50 351 eP P 11 46 58.8 -2.7
ORTC Ortega, Tolima 25.56 348 eP P 11 47 03.5 +1.5
YOTC Yotoco, Valle 25.87 345 eP P 11 47 05.2 +0.3
CHIC Chingaza 26.01 351 eP P 11 47 01.5 -5.0
ANIL Santa Ana 26.16 348 eP P 11 47 13.1 +5.4
TOLC Tolima 26.23 348 eP P 11 47 13.4 +5.0
ROSC El Rosal 26.31 350 P P 11 47 11.3 +2.2
comp=Z,9.5nm,0.5s,baz=90,slow=20,SNR=2.5
ROSC LR LR 11 58 27.5
comp=Z,869nm,20.1s,baz=194,slow=38
ROSC El Rosal 26.31 350 eP P 11 47 15.1 +6.0
ROSC El Rosal 26.31 350 P P 11 47 09.3 +0.2
ROSC IAmb IAmb 11 47 51.1
comp=Z,84nm,1.6s
RREF El Recreo 26.55 348 eP P 11 47 14.2 +2.6
GUY2C Guyana, Caldas 26.87 348 eP P 11 47 15.2 +0.9
SPBC San Pablo de B 27.07 351 eP P 11 47 15.1 -0.5
NORC Norcasia 27.11 349 eP P 11 47 15.9 -0.1
RUSC La Rusia 27.18 353 eP P 11 47 18.2 +1.1
RUSC La Rusia 27.18 353 P P 11 47 17.2 +0.1
TAMC Tame, Arauca 27.61 356 eP P 11 47 21.2 +0.7
CBOC Ciudad Bolivar 27.62 347 eP P 11 47 22.1 +1.4
HELC Santa Helena 27.84 348 eP P 11 47 24.7 +1.8
BARC Barichara 27.88 353 eP P 11 47 26.0 +2.9
PTBC PUERTO BERRIO, 28.00 351 eP P 11 47 21.2 -2.7
PAMC Pamplona, Colo 28.57 354 eP P 11 47 44.0 +15
ZARC Zaragoza, Cauc 28.99 350 eP P 11 47 32.5 -0.3
UREC San Jos de Ur 29.36 349 eP P 11 47 50.4 +14
GDU01 Guandu, BA 29.93 80 eP P 11 47 40.7 -0.5
SDV Santo Domingo 29.99 359 P P 11 47 41.1 -0.6
comp=Z,5.0nm,0.4s,baz=210,slow=8.5,SNR=5.3
SDV Santo Domingo 29.99 359 P P 11 47 40.5 -1.3
SDV Santo Domingo 29.99 359 eP P 11 47 40.9 -0.8
SMLC San Martn de 30.18 352 eP P 11 47 40.8 -2.3
ARGC Arigni, Magd 31.23 352 eP P 11 47 55.8 +3.4
SJCC San Jacinto, C 31.40 350 eP P 11 47 55.5 +1.4
EFI East Falkland 31.73 166 P P 11 47 56.3 -0.2
EFI pmax pmax
comp=Z,260nm,2.0s
EFI East Falkland 31.73 166 P P 11 47 56.3 -0.2
JTS Las Juntas de 34.65 333⇑ eP P 11 48 24.6 +2.2
JTS pmax pmax
comp=Z,8.0nm,0.8s
ACON Acoyapa 36.25 334 IAmb IAmb 11 48 38.8
comp=Z,19nm,0.9s
MATN Matagalpa 37.43 334 IAmb IAmb 11 48 50.2
comp=Z,18nm,0.7s
SJG San Juan 39.34 6 P P 11 49 00.1 -1.9
SJG pmax pmax
comp=Z,31nm,0.7s
SJG San Juan 39.34 6 P P 11 49 00.1 -1.9
MTP Monte Pirata 39.38 7 P P 11 48 60.0 -2.4
MTP IAmb IAmb 11 49 23.4
comp=Z,34nm,0.9s
CBYP Canovanas 39.52 6 P P 11 49 01.4 -2.3
STVI Saint Thomas 39.70 8 P P 11 49 03.3 -1.8
STVI IAmb IAmb 11 50 05.8
comp=Z,43nm,1.3s
PMSA Palmer Station 43.65 176 P P 11 49 36.3 -0.5
TEIG Tepich 44.96 335 P P 11 49 48.0 +0.2
ZAIG Zacatecas 54.09 322 P P 11 50 58.8 +1.1
ZAIG IAmb IAmb 11 51 01.0
comp=Z,19nm,0.9s
157A Early Branch 54.68 349 P P 11 51 02.4 +1.0
baz=167
Z58A St. Stephen 55.12 350 P P 11 51 05.3 +0.7
baz=169
Z56A Williston 55.38 348 P P 11 51 07.2 +0.7
baz=167
152A Waverly Hall 55.47 345 IAmb IAmb 11 51 07.5
comp=Z,15nm,0.9s
Y60A Bolivia 55.54 352 P P 11 51 08.1 +0.5
baz=171
Y58A Scranton 55.65 350 P P 11 51 08.7 +0.2
baz=169
GOGA Godfrey 55.89 346 P P 11 51 10.0 -0.1
baz=165
Y55A Saluda 56.07 348 P P 11 51 11.5 +0.1
baz=167
X60A Albert Glenn T 56.07 352 P P 11 51 11.6 +0.2
baz=171
X59A McDuffie Farm, 56.15 351 P P 11 51 12.1 +0.1
baz=170
X58A Rowland 56.24 351 P P 11 51 12.2 -0.4
baz=170
LRAL Lakeview Retre 56.40 343 P P 11 51 13.1 -0.7
baz=161
X56A White Oak 56.45 349 P P 11 51 14.0 -0.1
baz=168,SNR=5.3
W60A Pink Hill 56.51 352 P P 11 51 14.6 +0.1
baz=171
X55A Gracelyn & Ava 56.54 348 P P 11 51 14.7 -0.1
baz=167,SNR=7.2
W61A Ground Anchor 56.54 353 P P 11 51 15.1 +0.4
baz=172
W58A Raeford 56.68 351 P P 11 51 16.0 +0.3
baz=170,SNR=5.4
HKT Hockley 56.69 333 P P 11 51 16.2 +0.4
HKT pmax pmax
comp=Z,11nm,1.1s
HKT Hockley 56.69 333 P P 11 51 16.2 +0.4
X54A Belton 56.76 348 P P 11 51 16.4 +0.1
baz=166
833A Chaparral WMA, 56.91 329 P P 11 51 18.1 +0.5
baz=147
PAULI Pauline 56.92 348 IAmb IAmb 11 51 18.5
comp=Z,12nm,0.9s
W57A Gilead 56.92 350 P P 11 51 17.3 -0.1
baz=169,SNR=5.3
W57A Gilead 56.92 350 IAmb IAmb 11 51 18.6
comp=Z,14nm,0.9s
W56A Indian Trail 57.00 350 P P 11 51 18.0 0.0
baz=168,SNR=5.8
V61A Roper 57.11 354 P P 11 51 19.1 +0.4
baz=173
KMSC Kings Mountain 57.14 349 P P 11 51 18.9 -0.1
baz=167
KMSC Kings Mountain 57.14 349 IAmb IAmb 11 51 20.1
comp=Z,12nm,0.9s
V60A Jim Taylor Roa 57.16 353 P P 11 51 19.2 +0.1
baz=172
W54A Cherokee Point 57.24 348 P P 11 51 19.8 +0.1
baz=166
V59A Middlesex 57.27 352 P P 11 51 20.3 +0.4
baz=171,SNR=6.0
X51A Calhoun 57.31 345 IAmb IAmb 11 51 20.8
comp=Z,16nm,0.9s
V58A Windy Hill, Pi 57.42 351 P P 11 51 21.0 0.0
baz=170,SNR=6.9
FPAL Fort Paine 57.47 345 IAmb IAmb 11 51 22.1
comp=Z,17nm,1.2s
W52A Murphy 57.61 346 IAmb IAmb 11 51 23.1
comp=Z,13nm,1.0s
V57A Cotrane Farms 57.61 351 P P 11 51 22.2 -0.1
baz=169,SNR=6.1
U61A Possum Corner 57.63 354 P P 11 51 22.3 -0.1
baz=173
V56A Mocksville 57.65 350 P P 11 51 22.8 +0.2
baz=168,SNR=10.0
U59A Littleton 57.80 353 P P 11 51 24.1 +0.5
baz=171

U59A Littleton 57.80 353 IAmb IAmb 11 51 25.0
comp=Z,20nm,1.0s
NATX Nacogdoches 57.80 335 P P 11 51 24.6 +0.9
baz=153
V55A Taylorsville 57.81 349 P P 11 51 24.0 +0.2
baz=168,SNR=6.7
V55A Taylorsville 57.81 349 IAmb IAmb 11 51 25.1
comp=Z,17nm,0.9s
U60A Pendleton 57.84 353 P P 11 51 23.8 -0.1
baz=172
V54A Nebo 57.87 349 P P 11 51 24.2 0.0
baz=167,SNR=7.0
U58A Oxford 57.93 352 P P 11 51 24.8 +0.2
baz=171
W50A Signal Mountai 58.03 345 IAmb IAmb 11 51 25.9
comp=Z,15nm,0.8s
U57A Blanch 58.08 351 P P 11 51 25.7 +0.1
baz=170,SNR=8.0
CPCT Cooper Cave 58.08 346 IAmb IAmb 11 51 26.2
comp=Z,16nm,1.0s
TKL Tuckaleechee C 58.12 347 P P 11 51 25.4 -0.5
comp=Z,14nm,0.8s,baz=169,slow=8.8,SNR=21
TKL Tuckaleechee C 58.12 347 IAmb IAmb 11 51 26.3
comp=Z,17nm,0.9s
U56A King 58.16 350 P P 11 51 26.6 +0.5
baz=169
T59A Double "B" Far 58.38 353 P P 11 51 27.9 +0.2
baz=172,SNR=5.6
V51A Loudon 58.38 346 IAmb IAmb 11 51 28.2
comp=Z,11nm,0.8s
U55A TA2, Sparta 58.42 350 P P 11 51 28.0 -0.1
baz=168
Z41A Richland Creek 58.44 338 P P 11 51 28.5 +0.3
baz=155
T60A Surry 58.46 354 P P 11 51 28.6 +0.4
baz=173
T58A Grand View Acr 58.47 352 P P 11 51 28.5 +0.2
baz=171,SNR=14
OXF Oxford 58.48 341 P P 11 51 27.3 -1.1
baz=159
PLAL Pickwick Lake 58.53 343 IAmb IAmb 11 51 29.1
comp=Z,14nm,0.9s
U54A Nelsons Funny 58.57 349 P P 11 51 29.1 0.0
baz=167,SNR=6.6
T57A Hurt 58.62 351 P P 11 51 29.6 +0.2
baz=170,SNR=9.2
T56A Rocky Mt 58.77 351 P P 11 51 31.1 +0.7
baz=169,SNR=7.7
JCT Junction City 58.91 330 P P 11 51 31.8 +0.3
baz=147,SNR=6.3
JCT Junction City 58.91 330 IAmb IAmb 11 51 55.1
comp=Z,5nm,1.0s
TZTN Tazewell 58.92 347 P P 11 51 31.2 -0.3
baz=165
TZTN Tazewell 58.92 347 IAmb IAmb 11 51 35.2
comp=Z,12nm,1.1s
WLAR White Oak Lake 58.94 338 P P 11 51 32.1 +0.5
X43A Marvell 58.94 340 P P 11 51 31.8 +0.2
baz=157
T55A Pulaski 58.97 350 P P 11 51 32.2 +0.3
baz=168,SNR=9.5
BLA Blacksburg 59.01 350 P P 11 51 32.4 +0.4
baz=169
S60A Water View 59.01 354 P P 11 51 32.3 +0.3
baz=173
T54A Tazewell 59.05 349 P P 11 51 32.3 -0.2
baz=167,SNR=5.5
S58A Poland Farm, P 59.07 353 P P 11 51 32.6 +0.1
baz=171
S58A Poland Farm, P 59.07 353 P P 11 51 31.8 -0.7
S58A IAmb IAmb 11 51 33.8
comp=Z,11nm,0.9s
CLTN Cedars of Leba 59.12 345 IAmb IAmb 11 51 33.2
comp=Z,18nm,0.9s
WHTX Lake Whitney, 59.14 333 P P 11 51 33.2 +0.2
baz=150
WHTX Lake Whitney, 59.14 333 IAmb IAmb 11 51 34.5
comp=Z,18nm,0.9s
T53A Wise 59.15 348 P P 11 51 32.8 -0.3
baz=166,SNR=5.2
S57A Dark Hollow, R 59.33 352 P P 11 51 34.7 +0.4
baz=170,SNR=11
S56A Natural Bridge 59.34 351 P P 11 51 34.6 +0.2
baz=170
U49A Red Boiling Sp 59.39 345 IAmb IAmb 11 51 34.9
comp=Z,11nm,0.9s
R58B Mineral 59.40 353 P P 11 51 35.1 +0.4
baz=172,SNR=8.8
R61A Willards 59.51 355 P P 11 51 35.9 +0.4
baz=174
WVT Waverly 59.55 343 P P 11 51 34.6 -1.1
WVT pmax pmax
comp=Z,22nm,0.9s
WVT Waverly 59.55 343 P P 11 51 34.6 -1.1
baz=161
WVT Waverly 59.55 343 P P 11 51 34.6 -1.1
R59A King George, V 59.55 353 P P 11 51 36.1 +0.4
baz=172
S55A Lewisburg 59.57 350 P P 11 51 36.3 +0.3
baz=169,SNR=11
T50A Nancy 59.66 346 IAmb IAmb 11 51 36.8
comp=Z,8.7nm,0.8s
UALR University of 59.66 339 IAmb IAmb 11 51 37.4
comp=Z,19nm,1.1s
S54A Dingess, Beckl 59.73 350 P P 11 51 37.1 +0.1
baz=168
S54A Dingess, Beckl 59.73 350 IAmb IAmb 11 51 39.2
comp=Z,16nm,0.8s
R58A Rapidan 59.74 353 P P 11 51 37.7 +0.6
baz=171,SNR=5.7
R57A Stanardsville 59.80 352 P P 11 51 38.3 +0.8
baz=171,SNR=15
MIAR Mount Ida 59.88 338 P P 11 51 38.2 +0.1
baz=154,SNR=12
TXAR Lajitas Array 59.88 326 P P 11 51 39.0 +0.6
comp=Z,2.7nm,0.8s,baz=141,slow=8.1,SNR=20
TXAR pP pP 11 51 56.3 +1.9
comp=Z,0.6nm,0.6s,baz=131,slow=5.7,SNR=3.0
TXAR LR LR 12 16 56.7
comp=Z,125nm,19.9s,baz=0.0,slow=35
TX32 Lajitas Array 59.88 326 P P 11 51 38.0 -0.3
W41B Gary Mavity, V 59.99 339 P P 11 51 38.6 -0.2
baz=156,SNR=8.5
R55A Marlinton 60.01 351 P P 11 51 39.8 +0.8
baz=169,SNR=6.3
R54A Victor 60.05 350 P P 11 51 39.4 +0.2
baz=168,SNR=6.1
WHAR Wooly Hollow 60.11 339 IAmb IAmb 11 51 40.4
comp=Z,13nm,0.9s
Q58A Fox Den Farm, 60.34 353 P P 11 51 41.8 +0.6
baz=172
R53A Hurricane 60.35 349 P P 11 51 41.9 +0.6
baz=167
LCAR Lake Charles 60.46 340 IAmb IAmb 11 51 42.3
comp=Z,14nm,0.8s
Q57A Strasburg 60.52 352 P P 11 51 43.3 +0.9
baz=171,SNR=16
W39A Magazine 60.54 338 P P 11 51 43.1 +0.5
baz=154,SNR=18
FCAR Ozark Folk Cen 60.60 339 IAmb IAmb 11 51 43.4
comp=Z,9.5nm,0.8s
VNA3 Neumayer Olymp 60.60 161 P P 11 51 43.4 +0.7
ABTX Abilene, Hawle 60.64 331 P P 11 51 43.6 +0.3
baz=148,SNR=10
Q55A Buckhannon 60.70 351 P P 11 51 44.4 +0.7
baz=169,SNR=7.4
R50A Paris 60.76 347 IAmb IAmb 11 51 44.4
comp=Z,17nm,1.2s
Q53A Leroy 60.80 350 P P 11 51 44.2 -0.1
baz=168,SNR=5.7
Q54A Coxs Mills 60.81 350 P P 11 51 43.9 -0.4
baz=168
Q54A Coxs Mills 60.81 350 IAmb IAmb 11 51 45.2
comp=Z,25nm,1.4s
VNA1 Neumayer--Stat 60.83 160 P P 11 51 45.4 +1.3
P58A Pank, Wackersv 60.84 354 P P 11 51 44.7 +0.2
baz=172,SNR=5.7
P59A Jarrettsville 60.88 354 P P 11 51 45.3 +0.5
baz=173,SNR=8.1
P57A Homestead Farm 60.91 353 P P 11 51 45.8 +0.8
baz=171,SNR=8.5
P60A Greenville 61.01 355 P P 11 51 45.7 0.0
baz=174
Q52A Bidwell 61.02 349 P P 11 51 45.2 -0.6
baz=167
P56A Dayton Farm, R 61.03 352 P P 11 51 47.0 +1.1
baz=171,SNR=8.9
WCI Wyandotte Cave 61.15 345 P P 11 51 45.7 -1.0

WCI			pmax	pmax			
	comp=Z,19nm,0.9s						
WCI	**Wyandotte Cave**	**61.15 345**	P	**P**	**11 51 45.7**	**-1.0**	
	baz=163						
WCI	**Wyandotte Cave**	**61.15 345**	P	**P**	**11 51 45.7**	**-1.0**	
P55A	**Reedsville**	**61.17 351**	P	**P**	**11 51 47.2**	**+0.4**	
	baz=170,SNR=5.8						
VNA2	**Neumayer--Watz**	**61.19 161**	P	**P**	**11 51 47.4**	**+0.8**	
	baz=277,slow=8.8						
U40A	**Yellville**	**61.27 339**	P	**P**	**11 51 47.2**	**-0.4**	
	baz=156,SNR=17						
Q51A	**Peebles**	**61.28 348**	IAmb	IAmb	11 51 48.0		
	comp=Z,12nm,0.8s						
MCWV	**Mont Chateau**	**61.32 351**	P	**P**	**11 51 48.2**	**+0.4**	
	baz=170,SNR=6.0						
MCWV	**Mont Chateau**	**61.32 351**	IAmb	IAmb	11 51 49.4		
	comp=Z,13nm,0.9s						
T42A	**Van Buren**	**61.32 341**	IAmb	IAmb	11 51 48.4		
	comp=Z,11nm,1.1s						
P54A	**Burton**	**61.36 351**	P	**P**	**11 51 48.2**	**+0.1**	
	baz=169,SNR=11						
P53A	**Whipple**	**61.39 350**	P	**P**	**11 51 48.4**	**+0.1**	
	baz=168						
P53A	**Whipple**	**61.39 350**	IAmb	IAmb	11 51 49.4		
	comp=Z,21nm,1.1s						
O58A	**Lewisberry**	**61.43 354**	P	**P**	**11 51 49.2**	**+0.6**	
	baz=173						
O60A	**Telford**	**61.49 355**	P	**P**	**11 51 49.4**	**+0.5**	
	baz=174						
O59A	**Robesonia**	**61.55 355**	P	**P**	**11 51 50.0**	**+0.6**	
	baz=173						
X34A	**Smith Ranch, M**	**61.56 334**	P	**P**	**11 51 49.8**	**+0.2**	
HHAR	**Hobbs**	**61.57 338**	IAmb	IAmb	11 51 51.1		
	comp=Z,23nm,1.1s						
O57A	**Amberson**	**61.59 353**	P	**P**	**11 51 50.5**	**+0.8**	
	baz=172,SNR=5.9						
O56A	**Blue Knob Stat**	**61.75 353**	P	**P**	**11 51 51.7**	**+0.9**	
	baz=171,SNR=12						
O55A	**Ligonier**	**61.79 352**	P	**P**	**11 51 51.6**	**+0.6**	
	baz=170,SNR=8.2						
N61A	**South Mountain**	**61.85 356**	P	**P**	**11 51 52.0**	**+0.7**	
	baz=175						
U38A	**Gravette**	**61.87 338**	IAmb	IAmb	11 51 52.4		
	comp=Z,11nm,1.1s						
TUL1	**Leonard**	**61.91 336**	P	**P**	**11 51 51.8**	**0.0**	
	baz=153						
TUL1	**Leonard**	**61.91 336**	P	**P**	**11 51 51.4**	**-0.4**	
N62A	**Caumsett State**	**61.98 357**	P	**P**	**11 51 52.7**	**+0.5**	
	baz=176						
N60A	**Cedar Hill Far**	**62.02 356**	P	**P**	**11 51 52.7**	**+0.3**	
	baz=175						
SSPA	**Standing Stone**	**62.04 353**	P	**P**	**11 51 52.5**	**-0.1**	
SSPA			IAmb	IAmb	11 51 54.2		
	comp=Z,21nm,1.1s						
P49A	**Miami Univ. Ec**	**62.05 347**	P	**P**	**11 51 51.4**	**-1.3**	
	baz=164,SNR=5.1						
WMOK	**Wichita Mounta**	**62.07 333**	P	**P**	**11 51 52.5**	**-0.5**	
	baz=150						
O52A	**Adamsville**	**62.07 350**	P	**P**	**11 51 52.5**	**-0.3**	
	baz=168						
PAL	**Palisades**	**62.08 357**	P	**P**	**11 51 52.8**	**0.0**	
	baz=176						
O53A	**New Philadelph**	**62.10 350**	P	**P**	**11 51 52.7**	**-0.3**	
	baz=168						
N59A	**State Game Lan**	**62.12 355**	P	**P**	**11 51 53.5**	**+0.3**	
	baz=174						
N57A	**Milroy**	**62.12 354**	P	**P**	**11 51 53.3**	**+0.1**	
	baz=172,SNR=9.3						
N58A	**Sunbury**	**62.12 354**	P	**P**	**11 51 53.8**	**+0.6**	
	baz=173,SNR=8.9						
P48A	**Milroy**	**62.13 347**	IAmb	IAmb	11 51 52.9		
	comp=Z,9.7nm,0.7s						
M66A	**Nantucket**	**62.22 360**	P	**P**	**11 51 53.9**	**+0.1**	
	baz=180						
O51A	**Pataskala**	**62.23 349**	P	**P**	**11 51 53.4**	**-0.6**	
	baz=167						
N55A	**Marion Center**	**62.31 352**	P	**P**	**11 51 55.2**	**+0.7**	
	baz=170,SNR=18						
CCM	**Cathedral Cave**	**62.31 341**	P	**P**	**11 51 53.8**	**-0.7**	
CCM			pmax	pmax			
	comp=Z,22nm,1.0s						
CCM	**Cathedral Cave**	**62.31 341**	P	**P**	**11 51 54.2**	**-0.4**	
	baz=158						
CCM	**Cathedral Cave**	**62.31 341**	P	**P**	**11 51 53.8**	**-0.7**	
CCM			IAmb	IAmb	11 51 55.0		
	comp=Z,22nm,0.9s						
N56A	**West Decatur**	**62.36 353**	P	**P**	**11 51 55.5**	**+0.7**	
	baz=171						
M61A	**Granite Spring**	**62.37 357**	P	**P**	**11 51 54.4**	**-0.4**	
	baz=176						
ACSO	**Alum Creek Sta**	**62.38 349**	P	**P**	**11 51 54.5**	**-0.4**	
	baz=166						
M63A	**Gales Ferry**	**62.40 358**	P	**P**	**11 51 55.4**	**+0.4**	
	baz=178						
O50A	**Cable**	**62.42 348**	P	**P**	**11 51 54.5**	**-0.7**	
	baz=166						
M60A	**Port Jervis**	**62.44 356**	P	**P**	**11 51 55.4**	**+0.1**	
	baz=175						
M62A	**Hamden**	**62.47 358**	P	**P**	**11 51 56.0**	**+0.6**	
	baz=177						
M64A	**Tiverton**	**62.53 359**	P	**P**	**11 51 56.2**	**+0.4**	
	baz=179						
N53A	**Lisbon**	**62.59 351**	P	**P**	**11 51 56.2**	**-0.2**	
	baz=169						
N54A	**Moraine State**	**62.62 351**	P	**P**	**11 51 57.0**	**+0.5**	
	baz=170,SNR=5.8						
M58A	**Price's Panora**	**62.62 355**	P	**P**	**11 51 57.2**	**+0.6**	
	baz=173,SNR=10						
M57A	**Sunshine Farm,**	**62.65 354**	P	**P**	**11 51 57.4**	**+0.7**	
	baz=172,SNR=5.3						
MNTX	**Cornudas Mount**	**62.65 326**	P	**P**	**11 51 56.9**	**0.0**	
	baz=143,SNR=14						
MNTX	**Cornudas Mount**	**62.65 326**	IAmb	IAmb	11 51 58.1		
	comp=Z,12nm,0.9s						
M59A	**Waymart**	**62.71 355**	P	**P**	**11 51 57.7**	**+0.6**	
	baz=174,SNR=9.4						
KSPA	**Keystone Colle**	**62.75 355**	IAmb	IAmb	11 51 58.9		
	comp=Z,17nm,1.0s						
SNAA	**Sanae**	**62.81 161**	P	**P**	**11 51 58.3**	**+0.7**	
SNAA	**Sanae**	**62.81 161**	*ceP*	**P**	**11 51 57.2**	**-0.4**	
SNAA	**Sanae**	**62.81 161**	P	**P**	**11 51 57.1**	**-0.4**	
SNAA			IAmb	IAmb	11 52 14.7		
	comp=Z,16nm,0.9s						
O48A	**Farmland**	**62.83 347**	P	**P**	**11 51 56.9**	**-1.0**	
	baz=164						
L63A	**North Scituate**	**62.84 359**	P	**P**	**11 51 58.5**	**+0.6**	
	baz=178,SNR=11						
R40A	**Maddies Statio**	**62.84 340**	IAmb	IAmb	11 51 58.5		
	comp=Z,22nm,1.0s						
L64A	**Middleborough**	**62.91 359**	P	**P**	**11 51 58.8**	**+0.5**	
	baz=179						
M56A	**Emporium**	**62.91 353**	P	**P**	**11 51 58.7**	**+0.3**	
	baz=171,SNR=6.5						
M56A	**Emporium**	**62.91 353**	IAmb	IAmb	11 51 59.9		
	comp=Z,19nm,0.9s						
N50A	**Nevada**	**62.94 349**	P	**P**	**11 51 57.8**	**-0.8**	
	baz=166						
N51A	**Ashland**	**62.95 349**	P	**P**	**11 51 57.8**	**-0.9**	
	baz=167						
M55A	**Ridgway**	**62.96 353**	P	**P**	**11 51 59.2**	**+0.4**	
	baz=171,SNR=10.0						
T35A	**Sooner Cattle**	**63.07 336**	IAmb	IAmb	11 52 01.4		
	comp=Z,20nm,0.9s						
L60A	**Shokan**	**63.08 356**	P	**P**	**11 52 00.2**	**+0.7**	
	baz=176,SNR=6.9						
M54A	**Oil Creek Stat**	**63.11 352**	P	**P**	**11 51 60.0**	**+0.2**	
	baz=170,SNR=10						
M53A	**Wl Miller and**	**63.19 351**	P	**P**	**11 51 60.0**	**-0.3**	
	baz=169						
MSTX	**Muleshoe**	**63.20 330**	P	**P**	**11 52 00.8**	**+0.1**	
	baz=146,SNR=17						
L58A	**Harry Jones Me**	**63.24 355**	P	**P**	**11 51 01.4**	**+0.8**	
	baz=174,SNR=8.0						
L61A	**Hillsdale 1, H**	**63.24 357**	P	**P**	**11 51 01.1**	**+0.5**	
	baz=176						
L57A	**Andrews Acres**	**63.28 354**	P	**P**	**11 51 01.5**	**+0.6**	
	baz=173						
L59A	**Walton**	**63.33 356**	P	**P**	**11 51 01.8**	**+0.6**	
	baz=175,SNR=16						
N48A	**Decatur**	**63.39 347**	P	**P**	**11 51 01.2**	**-0.4**	
	baz=164						
BINY	**Binghamton**	**63.41 355**	P	**P**	**11 52 02.2**	**+0.5**	
	baz=174,SNR=7.8						
AMTX	**Amarillo**	**63.45 331**	P	**P**	**11 51 01.8**	**-0.4**	
	baz=147						
L61B	**Northampton**	**63.46 358**	P	**P**	**11 52 02.3**	**+0.3**	
	baz=177,SNR=8.1						
HRV	**Adam Dziewonsk**	**63.49 359**	P	**P**	**11 52 02.1**	**-0.1**	
HRV			pmax	pmax			
	comp=Z,24nm,0.9s						
HRV	**Adam Dziewonsk**	**63.49 359**	P	**P**	**11 52 02.8**	**+0.6**	
	baz=178						
HRV	**Adam Dziewonsk**	**63.49 359**	P	**P**	**11 52 02.1**	**-0.1**	
HRV			IAmb	IAmb	11 52 03.9		
	comp=Z,24nm,0.9s						
L56A	**Greenwood**	**63.49 354**	P	**P**	**11 52 02.6**	**+0.3**	
	baz=172						
L56A	**Greenwood**	**63.49 354**	IAmb	IAmb	11 52 27.0		
	comp=Z,15nm,0.8s						
N47A	**Urbana**	**63.55 347**	IAmb	IAmb	11 52 03.1		
	comp=Z,34nm,1.3s						
L55A	**Hinsdale**	**63.63 353**	P	**P**	**11 52 03.6**	**+0.3**	
	baz=171,SNR=5.3						
L53A	**Girard**	**63.63 351**	P	**P**	**11 52 03.1**	**-0.1**	
	baz=169						
K62A	**Royalston**	**63.66 358**	P	**P**	**11 52 03.7**	**+0.3**	
	baz=178						
K61A	**Williamstown**	**63.70 357**	P	**P**	**11 52 04.1**	**+0.4**	
	baz=177,SNR=7.2						
ERPA	**Erie**	**63.76 352**	P	**P**	**11 52 04.2**	**+0.2**	
	baz=170						
L54A	**Sinclairville**	**63.78 352**	P	**P**	**11 52 04.5**	**+0.3**	
	baz=170						
WVNY	**West Valley, N**	**63.87 353**	IAmb	IAmb	11 52 06.3		
	comp=Z,23nm,0.8s						
K59A	**Cooperstown**	**63.90 356**	P	**P**	**11 52 05.5**	**+0.6**	
	baz=175,SNR=19						
P40A	**Paris**	**63.91 341**	IAmb	IAmb	11 52 05.6		
	comp=Z,25nm,0.9s						
K58A	**Earlville**	**63.94 355**	P	**P**	**11 52 05.8**	**+0.6**	
	baz=174,SNR=10						
K58A	**Earlville**	**63.94 355**	IAmb	IAmb	11 52 06.8		
	comp=Z,28nm,0.9s						
K57A	**Scipio Center**	**63.98 355**	P	**P**	**11 52 05.7**	**+0.2**	
	baz=173						
K56A	**Middlesex**	**64.02 354**	P	**P**	**11 52 05.8**	**+0.1**	
	baz=172						
K54A	**Basiliko Farm,**	**64.08 353**	P	**P**	**11 52 06.4**	**+0.3**	
	baz=171						
HDIL	**Hopedale**	**64.09 344**	P	**P**	**11 52 05.4**	**-0.8**	
	baz=160						
HDIL	**Hopedale**	**64.09 344**	IAmb	IAmb	11 52 06.0		
	comp=Z,25nm,0.8s						
MMNY	**Mt. Morris Dam**	**64.11 354**	IAmb	IAmb	11 52 07.6		
	comp=Z,27nm,1.2s						
K55A	**Perry**	**64.13 353**	P	**P**	**11 52 06.7**	**+0.2**	
	baz=172						
J62A	**Henniker**	**64.21 359**	P	**P**	**11 52 07.5**	**+0.5**	
	baz=178						
J60A	**Lant Hill Farm**	**64.28 357**	P	**P**	**11 52 08.4**	**+1.0**	
	baz=176						
J61A	**Chester**	**64.35 358**	P	**P**	**11 52 08.6**	**+0.7**	
	baz=177						
P38A	**Dawn**	**64.46 340**	IAmb	IAmb	11 52 09.3		
	comp=Z,16nm,0.9s						
J58A	**Remsen**	**64.51 356**	P	**P**	**11 52 09.2**	**+0.2**	
	baz=174						
J56A	**Wolcott**	**64.55 354**	P	**P**	**11 52 09.3**	**+0.1**	
	baz=173,SNR=6.8						
J56A	**Wolcott**	**64.55 354**	IAmb	IAmb	11 52 10.1		
	comp=Z,19nm,0.9s						
J59A	**Piesco**	**64.56 356**	P	**P**	**11 52 09.8**	**+0.5**	
	baz=175,SNR=11						
J59A	**Piesco**	**64.56 356**	IAmb	IAmb	11 52 11.1		
	comp=Z,25nm,1.0s						
121A	**Cookes Peak, D**	**64.57 325**	P	**P**	**11 52 11.6**	**+1.8**	
	baz=141,SNR=8.3						
121A	**Cookes Peak, D**	**64.57 325**	P	**P**	**11 52 09.9**	**+0.1**	
121A			IAmb	IAmb	11 52 12.7		
	comp=Z,15nm,0.8s						
J57A	**Williamstown**	**64.61 355**	P	**P**	**11 52 09.6**	**+0.1**	
	baz=174,SNR=5.3						
N41A	**Harden Midland**	**64.66 343**	IAmb	IAmb	11 52 09.9		
	comp=Z,22nm,0.9s						
I58A	**Old Forge**	**64.81 356**	P	**P**	**11 52 11.2**	**+0.2**	
	baz=175,SNR=7.8						
I59A	**Olmsteadville**	**64.86 357**	P	**P**	**11 52 11.7**	**+0.5**	
	baz=176,SNR=6.4						
I60A	**Shoreham**	**64.88 357**	P	**P**	**11 52 11.9**	**+0.7**	
	baz=177,SNR=7.4						
J52A	**Paris**	**64.93 352**	P	**P**	**11 52 11.3**	**-0.3**	
	baz=169						
I61A	**Oroboro, Fairl**	**64.93 358**	P	**P**	**11 52 12.6**	**+1.0**	
	baz=178,SNR=6.8						
I63A	**Otisfield**	**65.02 360**	P	**P**	**11 52 12.7**	**+0.5**	
	baz=179						
KSU1	**Kansas State U**	**65.03 337**	P	**P**	**11 52 12.1**	**-0.3**	
	baz=153						
K48A	**Perry**	**65.08 349**	P	**P**	**11 52 12.2**	**-0.5**	
	baz=166						
I57A	**Carthage**	**65.11 355**	P	**P**	**11 52 13.1**	**+0.3**	
	baz=174,SNR=5.1						
K47A	**Vermontville**	**65.12 348**	P	**P**	**11 52 12.3**	**-0.6**	
	baz=165						
PECO	**Prince Edward**	**65.21 354**	IAmb	IAmb	11 52 14.6		
	comp=Z,18nm,1.1s						
R32A	**Long Quarter,**	**65.22 335**	IAmb	IAmb	11 52 15.0		
	comp=Z,22nm,0.9s						
LBNH	**Lisbon**	**65.23 358**	P	**P**	**11 52 14.4**	**+0.8**	
	baz=178						
N38A	**Joes South For**	**65.43 341**	IAmb	IAmb	11 52 15.5		
	comp=Z,35nm,1.1s						
J49A	**Marlette**	**65.45 349**	P	**P**	**11 52 15.0**	**0.0**	
	baz=167						
H58A	**Gabriels**	**65.49 357**	P	**P**	**11 52 15.6**	**+0.3**	
	baz=176,SNR=7.0						
H61A	**Lyndonville**	**65.52 358**	P	**P**	**11 52 16.5**	**+1.0**	
	baz=178						
H62A	**Milan**	**65.55 359**	P	**P**	**11 52 16.6**	**+1.0**	
	baz=179						
I51A	**Listowel**	**65.55 351**	P	**P**	**11 52 15.2**	**-0.5**	
	baz=169						
I55A	**Frankford**	**65.56 354**	P	**P**	**11 52 15.5**	**-0.2**	
	baz=172						
H64A	**Troy**	**65.61 1**	P	**P**	**11 52 16.6**	**+0.6**	
	baz=181						
H59A	**Cadyville**	**65.70 357**	P	**P**	**11 52 17.2**	**+0.6**	
	baz=176,SNR=7.1						
LONY	**Lake Ozonia**	**65.72 356**	P	**P**	**11 52 17.2**	**+0.5**	
	baz=175,SNR=5.8						
ANMO	**Albuquerque**	**65.77 328**	P	**P**	**11 52 18.8**	**+1.3**	
	comp=Z,5.7nm,0.8s,baz=139,slow=7.6,SNR=20						
ANMO			pP	**pP**	**11 52 35.1**	**+1.5**	
	comp=Z,2.0nm,0.7s,baz=78,slow=14,SNR=2.8						
ANMO	**Albuquerque**	**65.77 328**	*de*P	**P**	**11 52 18.3**	**+0.7**	
ANMO			pmax	pmax			
	comp=Z,7.0nm,0.9s						
ANMO	**Albuquerque**	**65.77 328**	P	**P**	**11 52 18.9**	**+1.3**	
	baz=143						
ANMO	**Albuquerque**	**65.77 328**	P	**P**	**11 52 17.8**	**+0.3**	
H66A	**Whiting**	**65.80 2**	P	**P**	**11 52 17.9**	**+0.7**	
	baz=183						
H56A	**Elgin**	**65.81 355**	P	**P**	**11 52 17.5**	**+0.2**	
	baz=174						
H55A	**Tweed**	**65.84 354**	P	**P**	**11 52 17.6**	**+0.1**	
	baz=173						
FRNY	**Flat Rock**	**65.88 357**	IAmb	IAmb	11 52 19.4		
	comp=Z,12nm,0.9s						
CBKS	**Cedar Bluff**	**65.96 335**	P	**P**	**11 52 19.0**	**+0.4**	
	baz=150,SNR=6.2						
I49A	**Point Hope**	**65.96 350**	P	**P**	**11 52 17.8**	**-0.5**	
	baz=167						
H53A	**Bobcaygeon**	**66.01 353**	P	**P**	**11 52 18.5**	**0.0**	
	baz=171						
L40A	**Anamosa**	**66.02 343**	IAmb	IAmb	11 52 19.6		
	comp=Z,21nm,1.0s						
TUC	**Tucson**	**66.05 323**	P	**P**	**11 52 19.5**	**+0.2**	
TUC			pmax	pmax			
	comp=Z,9.0nm,1.1s						
TUC	**Tucson**	**66.05 323**	P	**P**	**11 52 20.5**	**+1.2**	
	baz=138						
TUC	**Tucson**	**66.05 323**	P	**P**	**11 52 19.5**	**+0.2**	
G63A	**Kingsbury**	**66.08 0**	P	**P**	**11 52 19.7**	**+0.6**	
	baz=180						
G60A	**Masonville**	**66.09 358**	P	**P**	**11 52 20.2**	**+1.0**	
	baz=178						
G59A	**Clarenceville**	**66.11 358**	P	**P**	**11 52 20.0**	**+0.8**	
	baz=177						
G62A	**West of Eustis**	**66.18 360**	P	**P**	**11 52 20.7**	**+0.9**	
	baz=179,SNR=13						
G62A	**West of Eustis**	**66.18 360**	IAmb	IAmb	11 52 21.8		
	comp=Z,28nm,0.9s						
G65A	**Princeton**	**66.20 2**	P	**P**	**11 52 20.5**	**+0.7**	
	baz=182						
G58A	**Ormstown**	**66.22 357**	P	**P**	**11 52 20.3**	**+0.4**	
	baz=176						
G57A	**Newington**	**66.22 356**	P	**P**	**11 52 20.2**	**+0.3**	
	baz=175						
G64A	**Maxfield**	**66.22 1**	P	**P**	**11 52 20.4**	**+0.4**	
	baz=181						
PKME	**Peaks-Kenny Pk**	**66.23 1**	P	**P**	**11 52 20.7**	**+0.7**	
	baz=181						
G61A	**St-Isidore-de-**	**66.26 359**	P	**P**	**11 52 21.2**	**+1.0**	
	baz=178,SNR=6.2						
N35A	**Tabor**	**66.27 339**	IAmb	IAmb	11 52 20.9		
	comp=Z,29nm,0.9s						
I48A	**Sherman Twp**	**66.35 349**	P	**P**	**11 52 19.8**	**-0.9**	
	baz=166,SNR=8.2						
I46A	**Reed City**	**66.44 348**	P	**P**	**11 52 20.2**	**-1.2**	
	baz=164						
SCIA	**State Center**	**66.45 341**	P	**P**	**11 52 20.9**	**-0.6**	
	baz=156						
G55A	**Calabogie**	**66.50 355**	P	**P**	**11 52 21.9**	**+0.2**	
	baz=173,SNR=5.2						
JFWS	**Jewell Farm**	**66.55 344**	P	**P**	**11 52 21.5**	**-0.6**	
	baz=159,SNR=5.6						
JFWS	**Jewell Farm**	**66.55 344**	IAmb	IAmb	11 52 22.5		
	comp=Z,18nm,0.9s						
G53A	**Haliburton**	**66.55 353**	P	**P**	**11 52 21.9**	**-0.2**	
	baz=171,SNR=8.0						
T25A	**Trinidad**	**66.56 331**	P	**P**	**11 52 23.6**	**+1.0**	
	baz=145,SNR=7.0						
ORIO	**Orleans, Innes**	**66.60 356**	P	**P**	**11 52 22.4**	**+0.1**	
	baz=174						
F63A	**Nahmakanta, Br**	**66.67 1**	P	**P**	**11 52 23.1**	**+0.2**	
	baz=181						
G54A	**Lake Saint Pet**	**66.77 354**	P	**P**	**11 52 23.3**	**-0.1**	
	baz=172						
F64A	**Sherman**	**66.84 1**	P	**P**	**11 52 24.5**	**+0.6**	
	baz=182,SNR=5.5						
F64A	**Sherman**	**66.84 1**	IAmb	IAmb	11 52 25.6		
	comp=Z,19nm,1.1s						
F61A	**St Evariste**	**66.94 359**	P	**P**	**11 52 24.7**	**+0.2**	
	baz=179						
214A	**Organ Pipe Nat**	**66.96 321**	P	**P**	**11 52 27.0**	**+2.0**	
	baz=137,SNR=13						
F60A	**Warwick**	**66.96 359**	P	**P**	**11 52 24.8**	**+0.2**	
	baz=178						
K38A	**Parkersburg**	**67.00 342**	IAmb	IAmb	11 52 25.3		
	comp=Z,18nm,0.9s						
I42A	**Draeger Farm,**	**67.14 345**	IAmb	IAmb	11 52 26.3		
	comp=Z,13nm,0.9s						
F52A	**Sundridge**	**67.30 353**	P	**P**	**11 52 26.8**	**0.0**	
	baz=171						
ALGO	**Algonquin Park**	**67.32 354**	P	**P**	**11 52 26.4**	**-0.5**	
	baz=172						
G47A	**Hillman**	**67.33 349**	P	**P**	**11 52 26.3**	**-0.8**	
	baz=166						
E60A	**Ste Agathe de**	**67.34 359**	P	**P**	**11 52 26.3**	**-0.8**	
	baz=178						
NVL	**N'lazarevskaya**	**67.39 159**	*e*P	P	11 52 43.0	+16	
NVL			pmax	pmax			
	comp=Z,10.0nm,0.7s						
E61A	**Lac Etchemin**	**67.40 360**	P	**P**	**11 52 28.5**	**+1.1**	
	baz=180						
E63A	**Oxbow**	**67.40 1**	P	**P**	**11 52 28.1**	**+0.7**	
	baz=182,SNR=5.6						
E58A	**La Victoria**	**67.40 358**	P	**P**	**11 52 27.8**	**+0.4**	
	baz=177						
E64A	**Bridgewater**	**67.41 2**	P	**P**	**11 52 27.8**	**+0.4**	
	baz=182						
H43A	**Windswept, Lux**	**67.42 346**	IAmb	IAmb	11 52 27.9		
	comp=Z,18nm,0.9s						
E57A	**Chemin Saint G**	**67.48 357**	P	**P**	**11 52 28.1**	**+0.2**	
	baz=176						
F51A	**Arnstein**	**67.50 353**	P	**P**	**11 52 27.5**	**-0.5**	
	baz=170,SNR=5.1						
SDCO	**Great Sand Dun**	**67.55 330**	P	**P**	**11 52 30.3**	**+1.3**	
	baz=143,SNR=30						
E62A	**Clayton Lake**	**67.58 0**	P	**P**	**11 52 29.3**	**+0.7**	
	baz=180,SNR=7.1						
E62A	**Clayton Lake**	**67.58 0**	P	**P**	**11 52 29.0**	**+0.5**	
W18A	**Petrified Fore**	**67.59 325**	P	**P**	**11 52 30.6**	**+1.5**	
	baz=140,SNR=13						
F49A	**Sandfield**	**67.62 351**	P	**P**	**11 52 28.1**	**-0.7**	
	baz=168						
BGNE	**Belgrade**	**67.62 337**	P	**P**	**11 52 29.0**	**+0.1**	
	baz=152						
E56A	**St. Veronique**	**67.66 356**	P	**P**	**11 52 29.1**	**+0.1**	
	baz=175,SNR=6.6						
E53A	**Dumoine, Ponti**	**67.70 354**	P	**P**	**11 52 29.4**	**+0.1**	
	baz=172						
E52A	**Mattawa**	**67.71 354**	P	**P**	**11 52 28.7**	**-0.7**	
	baz=171						
E54A	**Lac Daplat, Po**	**67.71 355**	P	**P**	**11 52 29.2**	**-0.2**	
	baz=173,SNR=5.7						
D60A	**Saint Jean D'O**	**67.88 359**	P	**P**	**11 52 31.4**	**+1.0**	
	baz=179						
D63A	**Stockholm**	**68.02 1**	P	**P**	**11 52 31.9**	**+0.6**	
	baz=182,SNR=5.9						
E51A	**G1948 Merrick**	**68.04 353**	P	**P**	**11 52 31.4**	**-0.1**	
	baz=170						
D62A	**Allapoint, All**	**68.05 1**	P	**P**	**11 52 32.0**	**+0.5**	
	baz=181,SNR=10						
D62A	**Allapoint, All**	**68.05 1**	P	**P**	**11 52 31.7**	**+0.2**	
D62A			IAmb	IAmb	11 52 33.1		
	comp=Z,24nm,0.9s						
D57A	**Chemin Vers le**	**68.07 357**	P	**P**	**11 52 31.9**	**+0.3**	
	baz=176,SNR=5.8						
E50A	**Wahnapitae**	**68.09 352**	P	**P**	**11 52 31.3**	**-0.4**	
	baz=169						
D58A	**Chemin du LacG**	**68.11 358**	P	**P**	**11 52 32.4**	**+0.5**	
	baz=177,SNR=7.7						
D56A	**ZEC Mazanza, M**	**68.15 356**	P	**P**	**11 52 32.1**	**-0.1**	
	baz=175						
D55A	**Sainte-Anne-du**	**68.16 356**	P	**P**	**11 52 32.2**	**-0.1**	
	baz=174,SNR=7.5						
D61A	**St Aubert, Com**	**68.17 360**	P	**P**	**11 52 32.8**	**+0.6**	
	baz=180						
S22A	**4UR Ranch, Cre**	**68.18 329**	P	**P**	**11 52 34.2**	**+1.3**	
	baz=143						
BATG	**Bathurst New B**	**68.33 3**	P	**P**	**11 52 33.5**	**+0.3**	
BATG			IAmb	IAmb	11 52 34.8		
	comp=Z,34nm,1.3s						
E48A	**Lockeyer**	**68.34 351**	P	**P**	**11 52 33.1**	**-0.2**	
	baz=168						
D52A	**ZEK Kipawa Sen**	**68.36 354**	P	**P**	**11 52 33.5**	**+0.1**	
	baz=172,SNR=5.0						
D54A	**Lac Fusel, La**	**68.38 355**	P	**P**	**11 52 33.1**	**-0.5**	
	baz=173,SNR=5.6						
Q24A	**Divide**	**68.38 331**	P	**P**	**11 52 35.2**	**+1.1**	
	baz=145,SNR=9.7						
D53A	**Lac Vacive, Po**	**68.40 354**	P	**P**	**11 52 33.6**	**-0.1**	
	baz=172,SNR=7.8						
I37A	**Lemond, Waseca**	**68.43 342**	IAmb	IAmb	11 52 34.5		
	comp=Z,19nm,0.8s						
E47A	**Iron Brid

SWSC	**Sam W. Stewart** baz=135	69.43	320	P		P		11 52 41.9	+1.5
DBIC	**Dimbokro** comp=Z,6.6nm,0.7s,baz=211,slow=10,SNR=5.0	69.65	74	P		P		11 52 41.4	-0.8
DBIC				pP		pP		11 52 58.0	-0.6
	comp=Z,13nm,0.8s,baz=223,slow=8.5,SNR=4.6								
DBIC	**Dimbokro** comp=Z,19nm,0.8s	69.65	74	P		P		11 52 41.2	-0.9
DBIC				pmax		pmax			
DBIC	**Dimbokro** comp=Z,19nm,0.8s	69.65	74	P		P		11 52 41.2	-0.9
DBIC				IAmb		IAmb		11 53 10.7	
BC3	**Big Chuckawall** baz=135,SNR=10	69.72	321	P		P		11 52 44.5	+2.1
MONP2	**Monument Peak** baz=134,SNR=6.6	69.77	319	P		P		11 52 44.8	+2.0
BAR	**Barrett**	69.78	319	P		P		11 52 42.7	+0.1
BAR				IAmb		IAmb		11 52 45.7	
	comp=Z,17nm,1.0s								
IRM	**Iron Mountain** baz=135,SNR=19	69.90	321	P		P		11 52 45.3	+2.0
D41A	**Chassel** comp=Z,20nm,0.8s	70.06	347	IAmb		IAmb		11 52 44.8	
F36A	**Milaca** comp=Z,13nm,0.8s	70.16	343	IAmb		IAmb		11 52 45.0	
BELC	**Belle Mtn. Jos** baz=135,SNR=6.8	70.29	321	P		P		11 52 47.9	+2.0
XPFO	**Pion Flat**	70.29	320	P		P		11 52 46.4	+0.5
PFO	**Pinyon Flats O** comp=Z,12nm,1.1s,baz=107,slow=3.6,SNR=9.3	70.29	320	P		P		11 52 48.0	+2.2
PFO	**Pinyon Flats O** comp=Z,15nm,1.2s	70.29	320	P		P		11 52 46.8	+0.9
PFO				pmax		pmax			
PFO	**Pinyon Flats O** baz=134,SNR=8.9	70.29	320	P		P		11 52 48.1	+2.2
PFO	**Pinyon Flats O**	70.29	320	P		P		11 52 46.8	+0.9
LSQQ	**Lebel-sur-Quev** baz=173	70.30	355	P		P		11 52 45.3	-0.1
N23A	**Red Feather La** baz=144,SNR=8.0	70.31	332	P		P		11 52 47.1	+1.1
GMRC	**Granite Mounta** baz=135,SNR=20	70.64	321	P		P		11 52 50.2	+2.2
O20A	**White River Ci** baz=142,SNR=12	70.74	330	P		P		11 52 49.9	+1.3
CHGQ	**Chibougamau** baz=176	70.98	357	P		P		11 52 49.6	+0.1
BBRC	**Big Bear Solar** baz=134	71.02	320	P		P		11 52 52.1	+1.7
MATQ	**Matagami** baz=172	71.05	355	P		P		11 52 49.6	-0.3
HEC	**Hector,Ludlow** baz=135	71.07	321	P		P		11 52 52.6	+2.1
DRLN	**Deer Lake**	71.10	9	P		P		11 52 49.4	-0.8
DRLN				IAmb		IAmb		11 53 08.7	
	comp=Z,16nm,0.8s								
TUQ	**Turquoise Moun** baz=135,SNR=6.2	71.25	322	P		P		11 52 53.6	+1.9
BFSC	**Mount Baldy Ra** baz=134,SNR=7.9	71.44	320	P		P		11 52 54.5	+1.6
EYMN	**Ely** baz=159	71.57	345	P		P		11 52 52.6	-0.5
GSC	**Goldstone, Bar** baz=134,SNR=6.4	71.67	321	P		P		11 52 56.2	+2.1
SHOC	**Shoshone, Teco** baz=135	71.78	322	P		P		11 52 56.1	+1.4
K22A	**Casper** baz=144	71.99	332	P		P		11 52 57.1	+1.1
EDW2	**Edwards Air Fo** baz=133,SNR=7.6	72.08	320	P		P		11 52 58.1	+1.5
RSSD	**Black Hills**	72.17	335	P		P		11 52 57.5	+0.4
RSSD				pmax		pmax			
	comp=Z,9.0nm,0.9s								
RSSD	**Black Hills** baz=147	72.17	335	P		P		11 52 57.9	+0.8
RSSD	**Black Hills**	72.17	335	P		P		11 52 57.5	+0.4
LRMC	**Laurel Mtn Rad** baz=134	72.31	321	P		P		11 52 59.9	+1.9
TPNV	**Topopah Spring** baz=135,SNR=14	72.51	323	P		P		11 53 01.6	+2.4
B35A	**Bob, Littlefor** comp=Z,15nm,0.9s	72.51	344	IAmb		IAmb		11 52 59.1	
FURC	**Furnace Creek,** baz=135,SNR=12	72.52	322	P		P		11 53 01.1	+2.1
MPMC	**Manual Prospec** baz=134,SNR=8.1	72.60	321	P		P		11 53 01.5	+1.7
ISA	**Isabella, Lake** baz=133,SNR=13	72.91	320	P		P		11 53 03.7	+2.2
DUG	**Dugway, Tooele** baz=139,SNR=12	73.02	327	P		P		11 53 04.2	+2.0
DUG	**Dugway, Tooele** comp=Z,26nm,1.2s	73.02	327	IAmb		IAmb		11 53 27.8	
AGMN	**Agassiz Nation** baz=155	73.04	342	P		P		11 53 01.8	-0.1
R11A	**Troy Canyon, C** baz=136,SNR=20	73.13	324	P		P		11 53 05.2	+2.3
GRAC	**Grapevine Rang** baz=134	73.18	322	P		P		11 53 04.9	+1.9
PKM	**Mcpherson Peak** baz=132,SNR=5.1	73.19	319	P		P		11 53 05.5	+2.1
CWC	**Cottonwood Cre** baz=134	73.20	321	P		P		11 53 05.5	+2.1
VES	**Vestal, Richgr** baz=133,SNR=8.2	73.39	320	P		P		11 53 06.1	+1.9
BW06	**Boulder Array** baz=142	73.42	331	P		P		11 53 05.9	+1.3
PD31	**Pinedale Array**	73.42	331	P		P		11 53 04.5	-0.1
PDAR	**Pinedale Array** comp=Z,2.4nm,0.9s,baz=161,slow=6.3,SNR=11	73.42	331	P		P		11 53 05.2	+0.7
PDAR				pP		pP		11 53 22.9	+2.0
	comp=Z,1.5nm,0.7s,baz=119,slow=12,SNR=3.1								
HWUT	**Hardware Ranch**	73.47	329	P		P		11 53 04.9	+0.1
HWUT				IAmb		IAmb		11 53 08.7	
	comp=Z,14nm,0.8s								
SMMC	**Simmler** baz=132	73.59	319	P		P		11 53 07.4	+2.0
BGU	**Big Grassy Mou**	73.68	327	P		P		11 53 06.3	+0.3
TIN	**Tinemaha, Big** baz=134	73.72	322	P		P		11 53 08.6	+2.3
MDND	**Maddock** baz=151	73.78	340	P		P		11 53 07.3	+1.1
AHID	**Auburn Hatcher** comp=Z,26nm,0.9s	74.14	330	IAmb		IAmb		11 53 10.8	
MLAC	**Mammoth, Mammo** baz=133	74.46	322	P		P		11 53 12.6	+1.8
NV11	**Mina Array Sit**	74.62	323	P		P		11 53 11.5	0.0
ELK	**Elko** comp=Z,5.2nm,0.8s,baz=119,slow=2.5,SNR=17	74.68	326	P		P		11 53 13.3	+1.4
NVAR	**Mina Array Bea** comp=Z,5.5nm,0.8s,baz=152,slow=6.7,SNR=25	74.70	323	P		P		11 53 13.8	+1.7
NVAR				pP		pP		11 53 30.9	+2.4
	comp=Z,4.3nm,0.9s,baz=156,slow=11,SNR=5.4								
ULM	**Lac du Bonnet** comp=Z,8.3nm,0.8s,baz=158,slow=5.8,SNR=7.6	74.81	343	P		P		11 53 11.6	-0.6
FLWY	**Flagg Ranch** comp=Z,29nm,0.9s	74.97	331	IAmb		IAmb		11 53 16.3	
RLMT	**Red Lodge** baz=142,SNR=6.5	75.15	332	P		P		11 53 15.9	+1.3
LAO	**LASA Array** baz=145,SNR=8.1	75.16	335	P		P		11 53 15.4	+1.1
LAO	**LASA Array** comp=Z,25nm,1.1s	75.16	335	IAmb		IAmb		11 53 16.4	
GCMT	**Greycliff**	75.85	333	P		P		11 53 18.0	-0.5
SCHQ	**Schefferville** comp=Z,7.7nm,0.8s,baz=155,slow=4.5,SNR=11	75.86	2	P		P		11 53 17.6	-0.5
SCHQ				pP		pP		11 53 34.5	-0.2
	comp=Z,4.9nm,0.7s,baz=296,slow=3.3,SNR=5.1								
SCHQ	**Schefferville**	75.86	2	P		P		11 53 17.8	-0.3
SCHQ				IAmb		IAmb		11 53 42.7	
	comp=Z,64nm,1.9s								
DGMT	**Dagmar** baz=147	75.88	337	P		P		11 53 19.7	+1.3
DGMT	**Dagmar**	75.88	337	P		P		11 53 18.1	-0.3
AFDM	**Forest Hills D**	76.59	321	P		P		11 53 22.1	-0.6
VNDA	**Vanda** comp=Z,2.6nm,0.7s,baz=141,slow=4.2,SNR=8.7	76.88	190	P		P		11 53 26.1	+2.3
ORV	**Oroville** comp=Z,16nm,1.1s	77.30	322	IAmb		IAmb		11 53 29.6	
EGMT	**Eagleton** baz=142,SNR=8.9	77.66	334	P		P		11 53 29.3	+0.8
EGMT	**Eagleton** comp=Z,15nm,1.1s	77.66	334	IAmb		IAmb		11 53 30.3	
O03E	**Paynes Creek** baz=132	77.96	322	P		P		11 53 31.3	+0.9
J08A	**Circle Bar Ran**	78.23	326	P		P		11 53 33.5	+1.6
J08A				IAmb		IAmb		11 54 05.7	
	comp=Z,26nm,1.9s								
TOA0	**Torodi Ar. Sit**	78.24	71	P		P		11 53 31.2	-1.1
TOA0				IAmb		IAmb		11 54 01.8	
	comp=Z,14nm,0.8s								
TORD	**Torodi Ar. Bea** comp=Z,11nm,0.7s,baz=255,slow=4.9,SNR=40	78.24	71	P		P		11 53 31.3	-1.0
MSO	**Missoula** baz=139	78.54	331	P		P		11 53 35.6	+2.2
MSO	**Missoula**	78.54	331	P		P		11 53 32.7	-0.7
N02D	**Trinity Center** baz=131	78.92	322	P		P		11 53 36.8	+1.1
M04C	**Macdoel** baz=132	78.97	323	P		P		11 53 36.9	+0.9
M02C	**Callahan** baz=131	79.28	322	P		P		11 53 38.6	+1.0
YBH	**Yreka Blue Hor** comp=Z,3.4nm,0.8s,baz=88,slow=3.2,SNR=4.9	79.42	323	P		P		11 53 38.8	+0.4
YBH	**Yreka Blue Hor** comp=Z,31nm,1.8s	79.42	323	IAmb		IAmb		11 55 47.7	
K04D	**Chiloquin, OR** baz=132	79.48	324	P		P		11 53 40.2	+1.5
L04D	**Klamath Falls** baz=132	79.52	323	P		P		11 53 40.4	+1.5
J05D	**Fort Rock, OR** baz=132,SNR=6.1	79.64	325	P		P		11 53 41.3	+1.6
J04D	**Umpqua Nationa** baz=132	80.09	324	P		P		11 53 43.5	+1.4
WALA	**Waterton Lakes** comp=Z,15nm,1.0s	80.21	332	IAmb		IAmb		11 53 44.5	
I05D	**Terrebonne, OR** baz=132,SNR=14	80.41	325	P		P		11 53 45.2	+1.6
FFC	**Flin Flon**	80.51	342	P		P		11 53 43.7	-0.1
FFC				pmax		pmax			
	comp=Z,10.0nm,1.2s								
FFC	**Flin Flon**	80.51	342	P		P		11 53 43.7	-0.1
K02D	**Willamette Mer** baz=130	80.59	323	P		P		11 53 46.5	+1.8
I04A	**Tendick Farm,** baz=132	80.62	324	P		P		11 53 46.9	+2.1
G06A	**Carlson Farm,**	80.65	326	P		P		11 53 44.2	-0.6
G05D	**Wamic, OR** baz=133	81.00	326	P		P		11 53 48.6	+1.8
NEW	**Newport** comp=Z,2.5nm,0.8s,baz=150,slow=5.6,SNR=5.0	81.06	330	P		P		11 53 48.6	+1.6
NEW	**Newport** baz=136	81.06	330	P		P		11 53 48.4	+1.5
I03D	**Drain, OR** baz=131	81.07	324	P		P		11 53 48.9	+1.8
TSUM	**Tsumeb**	81.07	107	P		P		11 53 47.3	-0.6
H04A	**Detroit Lake** comp=Z,12nm,0.8s	81.09	325	IAmb		IAmb		11 53 49.0	
H04D	**Lebanon** baz=131	81.28	325	P		P		11 53 50.1	+2.0
F05D	**White Salmon** baz=133	81.51	326	P		P		11 53 50.9	+1.5
F04A	**Amboy** comp=Z,19nm,0.9s	82.04	326	IAmb		IAmb		11 54 17.2	
LTY	**Liberty** comp=Z,38nm,1.7s	82.05	328	IAmb		IAmb		11 54 17.4	
MDT	**Midelt** comp=Z,71nm,18.2s,baz=242,slow=37	82.39	51	LR		LR		12 31 50.5	
E04D	**Cinebar** baz=132	82.53	326	P		P		11 53 56.2	+1.6
D05A	**Enumclaw** comp=Z,20nm,1.0s	82.66	327	IAmb		IAmb		11 54 20.3	
B05A	**Bryant** baz=132	83.44	328	P		P		11 53 60.0	+0.7
BOSA	**Boshof** comp=Z,5.3nm,0.8s,baz=90,slow=22,SNR=5.8	84.44	118	P		P		11 54 05.0	-0.2
BOSA	**Boshof**	84.44	118	P		P		11 54 04.0	-1.2
BOSA				pmax		pmax			
	comp=Z,31nm,1.2s								
BOSA	**Boshof**	84.44	118	P		P		11 54 04.0	-1.2
BOSA				IAmb		IAmb		11 56 27.0	
	comp=Z,31nm,1.2s								
MTE	**Manteigas**	84.47	43	P		P		11 54 03.6	-1.3
MTE				IAmb		IAmb		11 54 06.0	
	comp=Z,19nm,1.1s								
FRB	**Frobisher Bay** comp=Z,2.8nm,0.5s,baz=196,slow=9.6,SNR=2.0	84.76	1	pP		pP		11 54 22.4	-0.1
MAW	**Mawson** comp=Z,9.0nm,0.7s,baz=204,slow=5.5,SNR=19	84.82	164	P		P		11 54 07.2	+1.0
MAW				pP		pP		11 54 23.3	+0.3
	comp=Z,9.8nm,0.8s,baz=225,slow=6.4,SNR=8.7								
MAW	**Mawson**	84.82	164	P		P		11 54 06.1	-0.1
MAW				pmax		pmax			
	comp=Z,3.0nm,0.9s								
MAW	**Mawson**	84.82	164	P		P		11 54 06.0	-0.1
LLLB	**Lillooet**	84.92	330	P		P		11 54 06.6	-0.2
LLLB				IAmb		IAmb		11 54 08.2	
	comp=Z,16nm,1.2s								
TAM	**Tamanrasset**	85.63	64	P		P		11 54 10.5	-0.7
TAM				pmax		pmax			
	comp=Z,11nm,1.1s								
TAM	**Tamanrasset**	85.63	64	P		P		11 54 10.5	-0.7
ESDC	**Sonseca Array** comp=Z,3.0nm,1.0s,baz=242,slow=5.7,SNR=10	86.39	45	P		P		11 54 14.7	+0.2
ESDC				pP		pP		11 54 31.5	+0.1
	comp=Z,6.2nm,1.1s,baz=247,slow=4.9,SNR=9.5								
BBB	**Bella Bella** comp=Z,3.1nm,0.9s,baz=59,slow=7.0,SNR=3.8	88.92	328	P		P		11 54 26.3	+0.2
BBB	**Bella Bella** comp=Z,21nm,1.6s	88.92	328	IAmb		IAmb		11 54 46.4	
YKA	**Yellowknife Ar** comp=Z,7.0nm,0.9s,baz=138,slow=5.0,SNR=75	90.65	341	P		P		11 54 34.0	0.0
YKA				pP		pP		11 54 50.7	-0.3
	comp=Z,4.8nm,0.9s,baz=139,slow=5.0,SNR=10								
CASY	**Casey**	92.71	180	P		P		11 54 44.2	+0.5
CASY				IAmb		IAmb		11 55 02.8	
	comp=Z,6.5nm,0.9s								
DLBC	**Dease Lake**	93.55	333	P		P		11 54 48.0	+0.4
DLBC				IAmb		IAmb		11 54 49.4	
	comp=Z,6.9nm,1.2s								
MBAR	**Mbarara** comp=Z,264nm,18.9s,baz=196,slow=35	99.78	94	LR		LR		12 39 19.9	
KHC	**Kasperske Hory**	101.75	42	*e*P		Pdif		11 55 23.9	-0.9
OBN	**Obninsk**	116.62	38	*e*PKIKP		PKPdf		12 00 14.4	-1.1
OBN				*e*				12 01 22.8	
OBN				pmax		pmax			
	comp=Z,4.0nm,0.8s								
STKA	**Stephens Creek** comp=Z,0.9nm,0.7s,baz=355,slow=11,SNR=1.6	119.09	211	PKP		PKiKP		12 00 21.7	+0.5
STKA	**Stephens Creek**	119.09	211	PKIKP		PKPdf		12 00 19.9	-1.3
STKA	**Stephens Creek**	119.09	211			PKPdf		12 00 19.9	-1.3
KIV	**Kislovodsk**	120.62	51	*c i*PKIKP		PKiKP		12 00 24.1	+0.3
KIV				*e*				12 01 52.6	
KIV				pmax		pmax			
	comp=Z,4.0nm,1.0s								
KBZ	**Khabaz** comp=Z,3.3nm,0.8s,baz=4.4,slow=2.4,SNR=7.2	120.77	51	PKP		PKiKP		12 00 24.1	+0.2
BILL	**Bilibino**	121.95	338	*i* PKIKP		PKiKP		12 00 28.2	+2.6
BILL				pmax		pmax			
	comp=Z,2.0nm,1.1s								
H11S2	**WAKE ISLAND Hyd** baz=103,slow=74,SNR=1265	126.85	278	T		T		14 20 03.7	
H11S1	**WAKE ISLAND Hyd** baz=103,slow=74,SNR=814	126.86	278	T		T		14 20 04.3	
H11S3	**WAKE ISLAND Hyd** baz=103,slow=74,SNR=913	126.86	278	T		T		14 20 05.3	
H11N3	**WAKE ISLAND Hyd** baz=102,slow=75,SNR=238	126.92	279	T		T		14 20 13.6	
H11N2	**WAKE ISLAND Hyd** baz=102,slow=75,SNR=208	126.94	279	T		T		14 20 02.9	
H11N1	**WAKE ISLAND Hyd** baz=102,slow=75,SNR=304	126.94	279	T		T		14 20 03.7	
TIXI	**Tiksi**	128.45	352	*i* PKIKP		PKPdf		12 00 37.6	-0.1
TIXI	**Tiksi**	128.45	352	PKPdf		PKPdf		12 00 36.9	-0.9
ARU	**Arti**	128.54	34	*i* PKIKP		PKPdf		12 00 38.7	+0.4
ARU								12 02 43.9	
ARU								12 07 44.1	
ARU				SS		SS		12 19 52.0	-4.4
ASAR	**Alice Springs** comp=Z,2.5nm,0.8s,baz=133,slow=1.9,SNR=30	129.62	209	PKP		PKPdf		12 00 41.4	-0.2
ASAR				pPKP		pPKPdf		12 00 58.8	-0.2
	comp=Z,2.3nm,0.9s,baz=132,slow=2.4,SNR=7.5								
WRA	**Warramunga Arr** comp=Z,3.0nm,0.6s,baz=158,slow=1.7,SNR=41	132.61	212	PKP		PKPdf		12 00 47.7	+0.4
WRA				pPKP		pPKPdf		12 01 04.6	-0.1
	comp=Z,1.7nm,0.7s,baz=154,slow=1.9,SNR=5.3								
BRVK	**Borovoye**	136.11	34	*i* PKIKP		PKiKP		12 00 53.8	-0.6
YAK	**Yakutsk**	137.08	347	*e*PKIKP		PKPdf		12 00 54.9	+0.7
KURK	**Kurchatov**	141.69	32	*e*PKIKP		PKPdf		12 01 03.6	+0.6
ZAA0	**Zalesovo Array**	142.18	24	PKPdf		PKPdf		12 01 02.4	-1.4
ZALV	**Zalesovo Beam** comp=Z,9.5nm,0.7s,baz=295,slow=4.1,SNR=6.5	142.18	24	PKhKP		PKPpre		12 01 00.2	
ZALV				PKP		PKPdf		12 01 03.5	-0.3
	comp=Z,9.2nm,0.7s,baz=292,slow=4.7,SNR=31								
ZALV				pPKP		pPKPdf		12 01 21.2	-0.2
	comp=Z,6.5nm,0.6s,baz=291,slow=2.7,SNR=6.3								
BOD	**Bodaibo**	143.39	356	*e*PKIKP		PKPab		12 01 01.8	-0.2
BOD				pmax		pmax			
	comp=Z,8.0nm,1.2s								
AAK	**Ala-Archa**	143.49	46	*ce*PKIKP		PKPbc		12 01 04.4	+0.3
AAK	**Ala-Archa**	143.49	46	PKPdf		PKPbc		12 01 05.0	+0.9
ZEA	**Zeya**	145.03	342	*e*PKIKP		PKPdf		12 01 08.8	0.0
ZEA				pmax		pmax			
	comp=Z,36nm,1.2s								
NIL	**Nilore**	145.32	61	PKIKP		PKPbc		12 01 09.4	-0.5
NIL	**Nilore**	145.32	61			PKPbc		12 01 09.4	-0.5
ERM	**Erimo**	145.34	314	*d i*PKIKP		PKPab		12 01 11.3	+1.5
ERM				pmax		pmax			
	comp=Z,98nm,1.3s								
KDJ	**Kajisay**	145.50	45	PKIKP		PKPab		12 01 10.8	+0.1
KDJ	**Kajisay**	145.50	45			PKPab		12 01 10.8	+0.1
KSH	**Kashi**	145.75	50	PKPbc		PKPab		12 01 12.0	+0.4
KSH				sPKP				12 01 28.5	
KSH				PP		PP		12 04 37.8	+5.3
KSH				PKS		PKSdf		12 04 50.3	+4.1
KSH				SKKS				12 11 21.8	
KSH				LR		LR			
	comp=Z,65nm,10.8s								
KSH				LR		LR			
	comp=Z,80nm,7.8s								
MAKZ	**Makanchi**	145.87	35	PKP2		PKPdf		12 01 10.5	0.0
MAKZ	**Makanchi**	145.87	35	PKPdf		PKPdf		12 01 10.5	0.0
MK31	**Makanchi Array**	146.05	35	PKIKP		PKPdf		12 01 09.6	-1.2
MK31	**Makanchi Array**	146.05	35	PKPdf		PKPdf		12 01 09.6	-1.2
MKAR	**Makanchi Array** comp=Z,15nm,0.7s,baz=323,slow=3.2,SNR=112	146.05	35	PKPbc		PKPbc		12 01 11.4	-0.3
MKAR				pPKPbc		pPKPab		12 01 29.5	-0.2
	comp=Z,14nm,0.8s,baz=319,slow=3.5,SNR=9.1								
MKAR	**Makanchi Array**	146.05	35	*ce*PKP2		PKPdf		12 01 11.3	+0.5
MKAR				pmax		pmax			
	comp=Z,15nm,0.7s								
TARG	**Taragay, Kyrgy**	146.10	46			PKPdf		12 01 09.0	-2.6
SOEI	**Soe**	146.12	206			PKPdf		12 01 10.0	-2.0
DGZ	**Jazzator, Alta**	146.47	27	*e*PKIKP		PKPdf		12 01 11.1	-0.5
KLR	**Kul'dur**	147.18	333	*de*PKP2		PKPbc		12 01 13.9	-1.0
FAKI	**Fak Fak**	147.55	225	PKPab		PKPbc		12 01 17.7	+0.8
MOY	**Mondy**	148.87	11	*e*PKP2		PKiKP		12 01 20.5	-0.3
MOY				pmax		pmax			
	comp=Z,40nm,1.5s								
TLY	**Talaya**	149.26	8	*e*PKP2		PKiKP		12 01 21.3	-0.2
TLY				pmax		pmax			
	comp=Z,20nm,0.9s								
TLY	**Talaya**	149.26	8			PKPdf		12 01 14.0	-1.9
ZAK	**Zakamensk**	150.48	9	*e*PKIKP		PKPbc		12 01 22.2	-1.2
ZAK				pmax		pmax			
	comp=Z,8.0nm,1.4s								
USA0B	**Ussuriysk Arra**	150.78	327	PKIKP		PKPbc		12 01 23.6	-0.6
USA0B	**Ussuriysk Arra**	150.78	327			PKPbc		12 01 23.6	-0.6
USRK	**Ussuriysk Ar.** comp=Z,8.1nm,0.8s,baz=22,slow=3.4,SNR=15	150.78	327	PKPbc		PKiKP		12 01 25.0	+0.2
USRK	**Ussuriysk Ar.**	150.78	327	PKIKP		PKiKP		12 01 25.0	+0.2
WMQ	**Urumqi**	150.87	34	*e*PKPbc		PKPdf		12 01 19.3	+0.5
WMQ				LR		LR			
	comp=Z,120nm,19.1s								
WMQ				LR		LR			
	comp=Z,250nm,17.7s								
WMQ				LR		LR			
	comp=Z,160nm,22.5s								
MJAR	**Matsushiro Arr** comp=Z,6.7nm,0.8s,baz=119,slow=1.1,SNR=21	151.14	308	PKPbc		PKiKP		12 01 25.8	0.0
MJAR				PKPab		PKPab		12 01 34.0	+0.8
	comp=Z,6.0nm,0.9s,baz=115,slow=2.2,SNR=8.9								
MJAR				pPKPbc		sPKPdf		12 01 43.9	+0.6
	comp=Z,5.1nm,0.3s,baz=33,slow=32,SNR=13								
MAJO	**Matsushiro**	151.14	308	PKIKP		PKPbc		12 01 25.0	-0.3
MAJO	**Matsushiro**	151.14	308			PKPbc		12 01 25.0	-0.3
MAT	**Matsushiro**	151.14	308	*e*PKP		PKPbc		12 01 25.3	0.0
MJB9	**Matsu-Tunnel**	151.15	308			PKPbc		12 01 25.5	+0.2
SONM	**Songino Array** comp=Z,2.1nm,0.8s,baz=299,slow=0.8,SNR=13	153.35	5	PKP		PKPdf		12 01 22.7	+0.2
SONM				PKPbc		PKiKP		12 01 30.4	+0.2
	comp=Z,3.4nm,0.8s,baz=328,slow=1.2,SNR=11								
SONM				pPKPbc		pPKPbc		12 01 49.9	+2.2
	comp=Z,1.0nm,0.4s,baz=359,slow=2.4,SNR=2.6								
ULN	**Ulaanbaatar**	153.38	4	*ce*PKIKP		PKPdf		12 01 24.1	+1.6
ULN				pmax		pmax			
	comp=Z,1.0nm,0.4s								
KSRS	**Korea Array** comp=Z,1.4nm,0.9s,baz=35,slow=0.9,SNR=10.0	157.63	320	PKP		PKPdf		12 01 28.9	+0.5
KSRS				pPKP		pPKPdf		12 01 48.2	+2.4
	comp=Z,0.8nm,0.8s,baz=72,slow=2.0,SNR=3.5								
KSRS				PKPab		PKPab		12 02 01.6	+0.9
	comp=Z,3.7nm,1.1s,baz=51,slow=4.0,SNR=8.0								
KSRS				pPKPab		sPKPab		12 02 21.3	-2.5
	comp=Z,0.9nm,0.7s,baz=54,slow=5.1,SNR=2.1								
GTA	**Gaotai**	159.94	24	*e*PKP		PKPdf		12 01 32.0	+0.8
GTA				pPKP		pPKPdf		12 01 44.0	-5.0
GTA				sPKP				12 01 49.5	
GTA				LR		LR			
	comp=Z,120nm,19.4s								
GTA				LR		LR			
	comp=Z,91nm,19.7s								
HHC	**Hu-ho-hao-te**	160.45	356	*e*PKP		PKPdf		12 01 34.0	+2.3
HHC				LR		LR			
	comp=Z,140nm,22.7s								
HHC				LR		LR			
	comp=Z,140nm,19.9s								
LZH	**Lanzhou**	164.30	19	*e*PKP		PKPdf		12 01 36.8	+1.0
LZH				pPKP		pPKPdf		12 01 48.5	-5.1
LZH				LR		LR			
	comp=Z,65nm,17.8s								
LZH				LR		LR			
	comp=Z,70nm,18.0s								
NJ2	**Nanjing**	166.68	325	*e*PKP		PKPdf		12 01 37.5	-0.1
CD2	**Chengdu**	168.90	29	PKP		PKPdf		12 01 38.0	-1.3
CMAR	**Chiang Mai Arr** comp=Z,0

PB01				*i* S		**Sn**	**11 58 00.3 +0.9**	
PB01				IAML			11 58 01.5	
	comp=E,98nm,0.3s							
GO02	**Mina Guanaco**	**2.61**	**199**	*e*P		**Pn**	**11 57 49.6 +3.1**	
MALB	**Monte Alegre**	**24.98**	**36**	*e*P		P	12 02 04.9 -14	
SJMB	**Sao Joao De Ma**	**25.99**	**86**	*e*P		**P**	**12 02 26.5 -1.2**	
BSFB	**Barra de Sao F**	**26.27**	**87**	*e*P		**P**	**12 02 27.2 -3.1**	
ROSB	**Rosrio**	**30.86**	**54**	*e*P		P	12 03 00.8 -10	

ROM 30 12:02:12.1±0.1, 43°.885N±0°.005×11°.94E±0°.01, h10km, ML1.4/4, Error ellipse: s-maj=0.9km s-min=0.5km az=241.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.07**	**286**	P	Pg	12 02 14.6	+0.2
SFI				S	Sg	12 02 16.5	+0.4
SFI				AML	AML		
	comp=E,86μm,0.2s						
SFI				AML	AML		
	comp=N,110μm,0.1s						
SFI				AML	AML		
	comp=N,110μm,0.1s						
SFI				AML	AML		
	comp=E,86μm,0.2s						
ASQU	**Asqua**	**0.14**	**232**	P	Pg	12 02 16.0	+0.5
ASQU				S	Sg	12 02 18.9	+1.2
ASQU				AML	AML		
	comp=N,236μm,0.2s						
ASQU				AML	AML		
	comp=E,213μm,0.4s						
LMD	**Lutirano**	**0.26**	**318**	P	Pg	12 02 17.8	+0.4
LMD				S	Sg	12 02 22.2	+1.2
LMD				AML	AML		
	comp=E,108μm,0.4s						
LMD				AML	AML		
	comp=N,92μm,0.7s						
CRE	**Caprese Michel**	**0.27**	**179**	P	Pg	12 02 18.0	+0.4
CRE				S	Sb	12 02 22.9	-0.8
CPGN	**Carpegna, Ital**	**0.28**	**107**	P	Pg	12 02 18.6	+0.6
CPGN				S	Sb	12 02 23.6	-0.7
PARC	**Parchiule**	**0.32**	**138**	P	Pg	12 02 18.7	+0.2
PARC				S	Sb	12 02 24.1	-1.1
BRIS	**BRISIGHELLA**	**0.41**	**310**	P	Pg	12 02 20.1	-0.1
BRIS				S	Sg	12 02 26.0	+0.4

*LJU **30** 12:02:45.3, 46°.29N×14°.18E, h0km, ML0.7 Artificial*
VIE 30 12:02:45.8±0.2, 46°.30N×14°.18E, h0km, mb0.8/1, ml1.2/4, Error ellipse: s-maj=1.4km s-min=1.2km az=1.0 15 km WNW of Kranj Suspected Mining explosion., Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GORS	**Gorjuse**	**0.13**	**277**	*i* Pg	Pg	12 02 47.5	-0.6
	comp=Z,43nm,0.2s						
MOZS	**Mozjanca**	**0.18**	**92**	*i* Pg	Pg	12 02 49.3	0.0
	comp=Z,6.0nm,0.1s						
CRNS	**Crni Vrh**	**0.23**	**165**	*i* Pg	Pg	12 02 49.8	-0.3
CADS	**Cadrg**	**0.31**	**257**	*i* Pg	Pg	12 02 51.1	-0.6
CADS				*e*Sg	Sg	12 02 56.6	+0.8
OBKA	**Obir**	**0.33**	**51**	*e*Pg	Pg	12 02 52.2	+0.1
	comp=Z,2.8nm,0.2s						
OBKA				*e*Sg	Sg	12 02 57.4	+1.0
	comp=Z,8.6nm,0.2s						
VOJS	**Vojsko**	**0.34**	**217**	*i* Pg	Pg	12 02 51.7	-0.5
DRE	**Drenchia**	**0.39**	**251**	*e*Pg	Pg	12 02 52.9	-0.3
DRE				*e*Sg	Sg	12 02 59.8	+1.5
PRED	**Cave del Predi**	**0.45**	**289**	*e*Pg	Pg	12 02 53.8	-0.5
PRED				*e*Sg	Sg	12 03 00.9	+0.8
MYKA	**Terra Mystica**	**0.49**	**312**	Pg	Pg	12 02 55.2	0.0
	comp=Z,0.7nm,0.1s						
MYKA				*e*Sg	Sg	12 03 02.5	+0.8
	comp=Z,2.0nm,0.1s						
ACOM	**Acomizza, Ital**	**0.52**	**298**	*e*Pg	Pg	12 02 55.2	-0.5
ACOM				*e*Sg	Sg	12 03 03.6	+1.1
ACOM	**Acomizza, Ital**	**0.52**	**298**	P	Pg	12 02 55.7	0.0
ACOM				AML	AML		
	comp=E,62μm,1.2s						
ACOM				AML	AML		
	comp=N,88μm,0.3s						
ACOM				AML	AML		
	comp=E,62μm,1.2s						
ACOM				AML	AML		
	comp=N,88μm,0.3s						
ACOM				AML	AML		
	comp=E,62μm,1.2s						
ACOM				AML	AML		
	comp=N,88μm,0.3s						
VINO	**Villanova**	**0.62**	**266**	*e*Pg	Pg	12 02 57.0	-0.7
VINO				*e*Sg	Sb	12 03 07.4	-1.5
SOKA	**Soboth**	**0.70**	**57**	*e*Sg	Sg	12 03 09.1	+0.8
	comp=N,0.5nm,0.2s						
KBA	**Koelnbreinsper**	**0.96**	**324**	Sg	Sg	12 03 17.6	+0.8
	comp=N,1.0nm,0.2s						
BRJN	**Brijuni**	**1.43**	**192**	*e*Pn	Pn	12 03 12.8	0.0
BRJN				Sn	Sn	12 03 33.1	+0.7

BEO 30 12:12:33.0±1.0, 42°.40N×24°.24E, h21km±6km, ML1.6/5, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTS	**Vitosha**	**0.78**	**287**	*e*Pg	Pb	12 12 46.5	-1.4
VTS				*e*Sg	Sn	12 12 59.4	-0.6
BOSS	**Bosilegrad**	**1.31**	**275**	*e*Pg	Pb	12 12 57.9	+1.0
BOSS				*e*Sg	Sb	12 13 15.2	+2.2
ZAPS	**Zavoj**	**1.47**	**307**	*e*Pg	Pb	12 12 59.9	+0.2
ZAPS				*e*Sg	Sb	12 13 20.8	+2.9
VAY	**Valandovo**	**1.65**	**230**	*e*Pn	Pn	12 13 01.2	+0.5
BARS	**Barje**	**1.84**	**284**	*e*Pg	Pb	12 13 05.6	-0.3
BARS				*e*Sg	Sb	12 13 30.4	+1.9
ZAGS	**Zajecar**	**2.04**	**314**	*e*Pn	Pn	12 13 05.4	-0.7
ZAGS				*e*Sg	Sb	12 13 37.8	+3.5
SELS	**Selova**	**2.44**	**291**	*e*Pn	Pn	12 13 11.2	-0.4
GRUS	**Gruza**	**2.98**	**301**	*e*Pn	Pn	12 13 19.0	0.0
DIVS	**Divibare**	**3.54**	**300**	*e*Pn	Pn	12 13 28.1	+1.3

SKO 30 12:13:27.8, 41°.64N×22°.33E, h15km, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.37**	**150**	*i* Pg	Pg	12 13 35.4	+0.2
VAY				*i* Sg	Sb	12 13 41.6	+0.1
VAY				*e*Lg	Lg	12 13 41.9	
	comp=E,36nm,0.5s						
VAY				*e*Lg	Lg	12 13 42.5	
	comp=N,22nm,0.3s						
VAY	**Valandovo**	**0.37**	**150**	*i* Pg	Pg	12 13 35.4	+0.2
VAY				*i* Sg	Sb	12 13 41.6	+0.1
VAY				*e*Lg	Lg	12 13 41.9	
	comp=E,36nm,0.5s						
VAY				*e*Lg	Lg	12 13 42.5	
	comp=N,22nm,0.3s						

TAP 30 12:13:32.1, 23°.83N×121°.59E, h27km, ML2.3, 1C-5D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESL	**Shilin**	**0.15**	**263**	⇓*i* P	Pb	12 13 37.5	+0.1
	baz=269						
ESL				*i* S	Sb	12 13 41.1	+0.1
	baz=269						
HWA	**Hwalien**	**0.15**	**5**	*i* P	Pb	12 13 37.9	+0.5
	baz=9.0						
EGFH	**Guangfu**	**0.22**	**223**	*i* P	Pb	12 13 38.2	0.0
	baz=233						
EGFH				*e*S	Sb	12 13 42.5	+0.1
	baz=233						
TWD	**Chiawan**	**0.25**	**1**	⇑*i* P	Pb	12 13 38.8	+0.2
	baz=353						
TWD				*e*S	Sb	12 13 44.1	+1.1
	baz=353						
NACB	**Ninganchiao**	**0.34**	**1**	⇓P	Pb	12 13 39.9	0.0
	baz=352						
NACB				S	Sb	12 13 45.5	+0.3
	baz=352						
HGSD	**Ruisui**	**0.37**	**204**	*e*P	Pb	12 13 40.9	+0.6
	baz=215						
HGSD				*e*S	Sn	12 13 47.1	-0.9
	baz=215						
ETLH	**Xiulin Townshi**	**0.39**	**345**	⇓*i* P	Pb	12 13 40.5	-0.2
	baz=337						
ETLH				*e*S	Sb	12 13 46.3	-0.2
	baz=337						
OWD	**Renai**	**0.40**	**288**	P	Pb	12 13 40.8	-0.1
	baz=290						
OWD				*e*S	Sb	12 13 47.2	+0.3
	baz=290						
EHY	**Hungye**	**0.41**	**217**	P	Pb	12 13 40.5	-0.4
	baz=224						
EHY				*e*S	Sb	12 13 46.5	-0.4
	baz=224						
VWDT	**VWDT**	**0.42**	**260**	P	Pb	12 13 41.3	+0.3
	baz=253						
VWDT				*e*S	Sb	12 13 47.5	+0.4
	baz=253						
WHF	**Hehuan Shan**	**0.43**	**316**	⇓*i* P	Pb	12 13 41.3	-0.3
	baz=316						
WHF				S	Sb	12 13 47.9	-0.2
	baz=316						
CHGB	**Renai**	**0.45**	**301**	⇓P	Pb	12 13 41.8	+0.2
	baz=306						
CHGB				*e*S	Sb	12 13 48.6	+0.4
	baz=306						
YULB	**Yu-li**	**0.51**	**212**	P	Pb	12 13 41.6	-1.0
	baz=223						
YULB				*e*S	Sb	12 13 49.5	-0.2
	baz=223						
TWF1	**Yuli**	**0.55**	**210**	P	Pb	12 13 42.2	-1.0
	baz=221						
TWT	**Tachien**	**0.57**	**318**	*e*P	Pb	12 13 43.7	+0.1
	baz=311						
TWT				*e*S	Sb	12 13 52.0	+0.6
	baz=311						
TDCB	**Techi**	**0.58**	**317**	*e*P	Pb	12 13 43.9	+0.1
	baz=311						
TDCB				*e*S	Sb	12 13 51.7	-0.1
	baz=311						
SSLB	**Suanglung**	**0.58**	**266**	*e*P	Pb	12 13 44.0	+0.1
	baz=266						
SSLB				*e*S	Sb	12 13 51.4	-0.4
	baz=266						
ENA	**Nanau**	**0.61**	**13**	P	Pb	12 13 44.0	-0.2
	baz=6.0						
NNSB	**Datong**	**0.62**	**342**	P	Pb	12 13 44.5	-0.1
	baz=342						
NNSB				*e*S	Sb	12 13 52.6	-0.5
	baz=342						
NNSH	**Datong**	**0.62**	**342**	P	Pb	12 13 44.3	-0.2
	baz=341						
NNSH				*e*S	Sb	12 13 52.3	-0.7
	baz=341						
SMLT	**Sun Moon Lake**	**0.64**	**275**	P	Pb	12 13 44.8	+0.1
	baz=274						
SMLT				*e*S	Sb	12 13 53.6	+0.4
	baz=274						
NNS	**Nan Shan**	**0.64**	**342**	*i* P	Pb	12 13 44.8	0.0
	baz=342						
NNS				S	Sb	12 13 53.4	-0.1
	baz=342						
DPDB	**Guoxing**	**0.64**	**288**	*e*P	Pb	12 13 45.1	+0.3
	baz=288						
DPDB				*e*S	Sb	12 13 54.0	+0.6
	baz=288						
TYC	**Yuchr**	**0.68**	**276**	*e*P	Pb	12 13 45.4	+0.1
	baz=282						
TYC				*e*S	Sb	12 13 54.5	+0.1
	baz=282						
FULB	**Fuli**	**0.69**	**203**	P	Pb	12 13 45.0	-0.5
	baz=216						
FULB				*e*S	Sb	12 13 55.2	+0.6
	baz=216						
WHYT	**Xinyi Township**	**0.69**	**259**	*e*P	Pn	12 13 46.0	-0.1
	baz=257						
WHYT				*e*S	Sb	12 13 54.9	+0.1
	baz=257						
WHP	**Taichung City**	**0.74**	**307**	P	Pn	12 13 46.9	0.0
	baz=302						
WHP				*e*S	Sb	12 13 56.5	+0.3
	baz=302						
CHKT	**Chengkung**	**0.76**	**196**	*e*P	Pb	12 13 46.7	0.0
	baz=209						
CHKT				*e*S	Sn	12 13 57.8	+0.2
	baz=209						
NDT	**Datong Townshi**	**0.77**	**355**	P	Pb	12 13 46.8	-0.1
	baz=353						
NDT				*e*S	Sb	12 13 57.1	0.0
	baz=353						
ALS	**Alishan**	**0.79**	**246**	*e*P	Pb	12 13 47.5	+0.1
	baz=246						
ALS				*e*S	Sb	12 13 58.1	+0.3
	baz=246						
WJS	**Zhushan**	**0.79**	**270**	*e*P	Pb	12 13 46.8	-0.5
	baz=269						
WJS				*e*S	Sn	12 13 58.3	-0.1
	baz=269						
TWC	**Suao**	**0.81**	**17**	*e*P	Pb	12 13 47.0	-0.6
	baz=27						
TWC				*e*S	Sn	12 13 59.1	+0.2
	baz=27						
ELDTW	**Lidau**	**0.83**	**220**	P	Pb	12 13 46.7	-1.3
	baz=215						
ELDTW				*e*S	Sb	12 13 58.3	-0.5
	baz=215						
YHNB	**Yeheng**	**0.86**	**347**	P	Pb	12 13 48.3	-0.2
	baz=345						
YHNB				*e*S	Sb	12 13 59.0	-0.6
	baz=345						
CHN5	**Tsauling**	**0.87**	**255**	*e*P	Pn	12 13 49.1	+0.4
	baz=247						
CHN5				*e*S	Sn	12 14 01.3	+0.8
	baz=247						
TWE	**Neicheng**	**0.89**	**4**	*e*P	Pn	12 13 48.6	-0.2
	baz=6.0						
TWQ1	**Liyutan**	**0.91**	**305**	*e*P	Pb	12 13 50.4	+1.2
	baz=304						
TWQ1				*e*S	Sn	12 14 02.4	+1.0
	baz=304						
NWLT	**Wulai**	**0.94**	**355**	*e*P	Pn	12 13 49.3	-0.4
	baz=355						
LIOB	**Emei**	**0.97**	**327**	*e*P	Pb	12 13 50.6	+0.4
	baz=327						
WDLH	**Douliu**	**0.97**	**262**	*e*P	Pb	12 13 51.0	+0.6
	baz=261						
STYT	**Tauyuan**	**1.01**	**229**	*e*P	Pb	12 13 50.9	-0.2
	baz=217						
TPUB	**Ta-pu**	**1.03**	**239**	*e*P	Pb	12 13 51.5	+0.3
	baz=239						
TPUB				*e*S	Sb	12 14 05.7	+1.3
	baz=239						
CHN4	**Tsaushan**	**1.03**	**243**	*e*P	Pb	12 13 51.9	+0.5
	baz=243						
CHN4				*e*S	Sb	12 14 06.3	+1.8
	baz=243						
TIPB	**Shuangxi**	**1.16**	**11**	*e*P	Pb	12 13 54.2	+0.8
	baz=1.0						
TWK	**Hsinying**	**1.16**	**241**	*e*P	Pb	12 13 53.7	+0.2
	baz=242						
TWK				*e*S	Sb	12 14 09.8	+1.7
	baz=242						
CHN1	**Nanshi**	**1.17**	**237**	*e*P	Pb	12 13 54.2	+0.5
	baz=238						
CHN1				*e*S	Sb	12 14 10.1	+1.7
	baz=238						
SLGT	**Liugui**	**1.20**	**226**	*e*P	Pb	12 13 54.1	-0.1
	baz=218						
MASBT	**Mashibuluo**	**1.50**	**216**	*e*P	Pn	12 13 57.4	+0.1
	baz=216						
WDGT	**Dungji**	**1.86**	**253**	*e*P	Pn	12 14 02.9	+0.7
	baz=251						
PHUB	**P'eng-hu**	**1.88**	**261**	*e*P	Pn	12 14 03.1	+0.7
	baz=246						
PHUB				*e*S	Sn	12 14 26.3	+1.0
	baz=246						

JMA 30 12:13:55.1±0.2, 24°.79N×123°.22E, h28km, M1.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.38**	**210**	P	Pb	12 14 03.3	-0.2
YOJ				S	Sb	12 14 08.9	-0.3
JYNG	**Yonagunijimaku**	**0.42**	**217**	P	Pb	12 14 04.0	-0.2
JYNG				S	Sb	12 14 10.5	+0.2
IRIF	**Iriomote-Funau**	**0.65**	**134**	P	Pb	12 14 07.9	0.0
IRIF				S	Sb	12 14 16.6	0.0
HATJ	**Hateruma jima**	**0.90**	**144**	P	Pn	12 14 11.9	0.0
JKRS	**Kuro-shima**	**0.91**	**127**	P	Pn	12 14 11.3	-0.7
JIJ	**Ishigaki jima**	**0.94**	**117**	P	Pn	12 14 11.8	-0.7
JISG	**Ishigakijimahi**	**1.01**	**101**	P	Pb	12 14 13.9	-0.1

*UCR **30** 12:16:21.7±1.1, 10°.95N×85°.18W, h200km±4km, MD4.1*
*INET **30** 12:16:21.6, 9°.98N×86°.23W, h1km, ML3.7*
ISC 30 12:16:20.7±4.2, 10°.9N±0°.2×85°.2W±0°.2, h210km±26km, n21, σ0s48/27, 8C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUAI	**Buenos Aires**	**0.14**	**261**	*i* P	**Pn**	**12 16 48.2**	**+0.1**
HORNC	**Hornillas**	**0.18**	**176**	*i* P	**Pn**	**12 16 48.6**	**+0.3**
HORNC				*i* S	**Sn**	**12 17 09.4**	**-0.4**
GUAB	**Guayabo de Bag**	**0.19**	**191**	*i* P	**Pn**	**12 16 48.4**	**+0.1**
GPS1	**Guardaparques**	**0.20**	**232**	*i* P	**Pn**	**12 16 48.3**	**0.0**
GPS1				*i* S	**Sn**	**12 17 09.8**	**+0.1**
LIM1	**Limonal**	**0.21**	**196**	*i* P	**Pn**	**12 16 48.4**	**+0.1**
GPS2	**Hotel Rincn d**	**0.21**	**227**	*i* P	**Pn**	**12 16 48.3**	**0.0**
GB1A	**Borinquen Arri**	**0.22**	**249**	⇑*e*P	**Pn**	**12 16 48.5**	**+0.2**
BUEV	**Buena Vista**	**0.23**	**245**	⇑*i* P	**Pn**	**12 16 48.4**	**+0.1**
BUEV				*e*S	**Sn**	**12 17 09.8**	**+0.1**
CUI	**Cuipilapa**	**0.24**	**173**	⇑*i* P	**Pn**	**12 16 48.7**	**+0.3**
LAPC	**Finca la Perla**	**0.27**	**241**	*i* P	**Pn**	**12 16 48.0**	**-0.3**
LAPC				*i* S	**Sn**	**12 17 08.7**	**-1.1**
PTEN	**Parque Tenorio**	**0.27**	**132**	*i* P	**Pn**	**12 16 48.9**	**+0.4**
GBS3	**Finca Las Img**	**0.28**	**246**	*i* P	**Pn**	**12 16 48.2**	**-0.2**
GBS3				*i* S	**Sn**	**12 17 09.2**	**-0.6**
ACAL	**Aguas Claras**	**0.30**	**149**	*i* P	**Pn**	**12 16 49.0**	**+0.5**
NY14	**Universidad de**	**0.42**	**234**	*i* P	**Pn**	**12 16 48.9**	**+0.3**
PLVR	**Palo Verde**	**0.57**	**196**	⇑*i* P	**Pn**	**12 16 50.0**	**+0.5**
PLVR				*e*S	**Sn**	**12 17 11.9**	**+0.1**
CEDE	**Laguna Cedeo**	**0.63**	**130**	⇑*i* P	**Pn**	**12 16 50.4**	**+0.8**
ARE1	**Arenal 1**	**0.64**	**133**	⇑*i* P	**Pn**	**12 16 50.4**	**+0.9**
FORC	**Fortuna**	**0.67**	**130**	*i* P	**Pn**	**12 16 50.3**	**+0.6**
ACON	**Acoyapa**	**1.06**	**1**	⇑*i* P	**Pn**	**12 16 52.2**	**+0.3**
SRA1	**San Ramn**	**1.07**	**139**	⇑*i* P	**Pn**	**12 16 52.4**	**+0.3**
CVTR	**Volcan Turrial**	**1.66**	**122**	*e*P	**Pn**	**12 16 56.5**	**-0.6**

JMA 30 12:16:20.4±0.3, 24°.84N×123°.24E, h29km, M1.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.43**	**209**	P	Pb	12 16 29.3	-0.4
YOJ				*e*S	Sb	12 16 35.2	-0.8
JYNG	**Yonagunijimaku**	**0.47**	**215**	P	Pb	12 16 30.1	-0.2
JYNG				S	Sb	12 16 36.7	-0.4
IRIF	**Iriomote-Funau**	**0.67**	**138**	P	Pb	12 16 33.5	-0.1
IRIF				S	Sb	12 16 43.0	+0.4
JKRS	**Kuro-shima**	**0.92**	**130**	P	Pn	12 16 37.4	0.0
JKRS				S	Sn	12 16 49.6	-0.1
JIJ	**Ishigaki jima**	**0.95**	**120**	P	Pn	12 16 36.7	-1.1
JIJ				S	Sn	12 16 49.4	-0.9
JISG	**Ishigakijimahi**	**1.01**	**104**	P	Pn	12 16 38.2	-0.3
JISG				*e*S	Sn	12 16 50.4	-1.3

TAP 30 12:17:08.0, 24°.63N×121°.89E, h62km, ML2.7, 4C-3D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.04**	**249**	⇑*i* P	Pn	12 17 17.8	+0.6
	baz=235						
TWC				*i* S	Sn	12 17 24.7	+0.8
	baz=235						
ILA	**Ilan**	**0.19**	**317**	*e*P	Pn	12 17 18.8	+1.1
	baz=318						
ILA				*e*S	Sn	12 17 26.8	+2.1
	baz=318						
EGS		**0.22**	**9**	P	Pn	12 17 19.2	+1.3
	baz=24						
EGS				*e*S	Sn	12 17 26.2	+1.2
	baz=24						
TWE	**Neicheng**	**0.23**	**295**	⇓*i* P	Pn	12 17 18.8	+0.9
	baz=296						
TWE				S	Sn	12 17 26.4	+1.3
	baz=296						
NTC	**Toucheng**	**0.24**	**346**	*i* P	Pn	12 17 18.8	+0.8
	baz=357						
NTC				S	Sn	12 17 25.6	+0.4
	baz=357						
ENA	**Nanau**	**0.24**	**215**	*i* P	Pn	12 17 18.6	+0.6
	baz=213						
ENA				*i* S	Sn	12 17 26.5	+1.3
	baz=213						
NDT	**Datong Townshi**	**0.35**	**266**	*i* P	Pn	12 17 19.5	+0.8
	baz=276						
NDT				*e*S	Sn	12 17 27.4	+0.9
	baz=276						
TIPB	**Shuangxi**	**0.35**	**350**	P	Pn	12 17 19.3	+0.5
	baz=351						
TIPB				S	Sn	12 17 26.9	+0.2
	baz=351						
NWLT	**Wulai**	**0.39**	**293**	⇓*i* P	Pn	12 17 19.6	+0.5
	baz=293						
NWLT				S	Sn	12 17 27.6	+0.3
	baz=293						
TWB1	**Santiao Chiao**	**0.39**	**13**	⇑*i* P	Pn	12 17 19.3	+0.2
	baz=21						
TWB1				*e*S	Sn	12 17 27.0	-0.2
	baz=21						
TWA	**Mucha**	**0.45**	**322**	*e*P	Pn	12 17 20.4	+0.7
	baz=330						
TWA				*e*S	Sn	12 17 29.2	+1.0
	baz=330						
NWF	**Wu-fen Shan**	**0.46**	**347**	*e*P	Pn	12 17 20.7	+0.8
	baz=356						
NWF				*e*S	Sn	12 17 28.8	+0.4
	baz=356						
WFSB	**Wu-fen Shan**	**0.46**	**347**	*e*P	Pn	12 17 20.7	+0.9
	baz=356						
WFSB				*e*S	Sn	12 17 28.8	+0.6
	baz=356						
YHNB	**Yeheng**	**0.47**	**275**	⇓P	Pn	12 17 20.6	+0.6
	baz=275						
YHNB				S	Sn	12 17 29.2	+0.5
	baz=275						
NHDH	**Xindian Distri**	**0.47**	**315**	P	Pn	12 17 20.5	+0.6
	baz=315						
NHDH				*e*S	Sn	12 17 29.3	+0.7
	baz=315						
NNSB	**Datong**	**0.51**	**247**	P	Pn	12 17 21.1	+0.7
	baz=247						
NNSB				S	Sn	12 17 30.1	+0.8
	baz=247						
NNSH	**Datong**	**0.51**	**247**	⇑*i* P	Pn	12 17 21.1	+0.7
	baz=247						
NNSH				S	Sn	12 17 30.2	+0.9
	baz=247						
TATO	**Taipei**	**0.51**	**313**	*e*P	Pn	12 17 20.7	+0.5
	baz=313						
NNS	**Nan Shan**	**0.51**	**249**	*i* P	Pn	12 17 21.2	+0.8
	baz=248						
NNS				S	Sn	12 17 30.3	+0.9
	baz=248						
NACB	**Ninganchiao**	**0.53**	**211**	P	Pn	12 17 20.5	0.0
	baz=220						
NACB				*e*S	Sn	12 17 30.2	+0.7
	baz=220						
ETLH	**Xiulin Townshi**	**0.56**	**222**	P	Pn	12 17 21.2	+0.3
	baz=228						
ETLH				*e*S	Sn	12 17 31.0	+0.7
	baz=228						
YM01	**YM01**	**0.60**	**331**	*e*P	Pn	12 17 21.8	+0.5
	baz=338						
YM01				*e*S	Sn	12 17 31.5	+0.5
	baz=338						
TWD	**Chiawan**	**0.61**	**207**	*e*P	Pn	12 17 21.6	+0.3
	baz=215						
TWD				*e*S	Sn	12 17 31.9	+0.8
	baz=215						
YM10	**YM10**	**0.61**	**330**	*e*P	Pn	12 17 22.0	+0.6
	baz=337						
YM10				*e*S	Sn	12 17 31.7	+0.5
	baz=337						
YM11	**YM11**	**0.61**	**332**	*e*P	Pn	12 17 20.8	-0.7
	baz=336						
WLTB	**Daxi**	**0.63**	**291**	*e*P	Pn	12 17 22.4	+0.9
	baz=283						
YM03	**YM03**	**0.64**	**330**	*e*P	Pn	12 17 22.2	+0.4

	baz=330							
TWS1	**Kuangyinshan**	**0.64**	**318**	P	Pn	12 17 22.4	+0.7	
	baz=323							
TWS1				S	Sn	12 17 33.4	+1.7	
	baz=323							
ANP	**Anpu**	**0.65**	**329**	*e*P	Pn	12 17 22.6	+0.6	
	baz=329							
NCU	**National Centr**	**0.73**	**298**	*e*P	Pn	12 17 23.5	+0.7	
	baz=297							
NCUH	**Zhongli**	**0.73**	**298**	*e*P	Pn	12 17 23.4	+0.7	
	baz=297							
WHF	**Hehuan Shan**	**0.75**	**230**	P	Pn	12 17 24.1	+0.7	
	baz=224							
WHF				S	Sn	12 17 36.2	+1.6	
	baz=224							
TWT	**Tachien**	**0.75**	**241**	*e*P	Pn	12 17 24.3	+1.1	
	baz=232							
TWT				*e*S	Sn	12 17 35.9	+1.6	
	baz=232							
TDCB	**Techi**	**0.77**	**241**	*e*P	Pn	12 17 24.7	+1.4	
	baz=233							
TDCB				*e*S	Sn	12 17 35.7	+1.1	
	baz=233							
LIOB	**Emei**	**0.80**	**272**	*e*P	Pn	12 17 24.4	+0.8	
	baz=271							
LIOB				*e*S	Sn	12 17 36.4	+1.2	
	baz=271							
NSTT	**Nanjuang**	**0.81**	**271**	P	Pn	12 17 24.5	+0.8	
	baz=269							
NSTT				*e*S	Sn	12 17 36.6	+1.2	
	baz=269							
CHGB	**Renai**	**0.86**	**230**	⇑P	Pn	12 17 25.6	+0.9	
	baz=228							
CHGB				*e*S	Sn	12 17 38.0	+1.2	
	baz=228							
ESL	**Shilin**	**0.91**	**208**	*e*P	Pn	12 17 24.4	-0.6	
	baz=212							
ESL				*e*S	Sn	12 17 37.9	+0.3	
	baz=212							
WHP	**Taichung City**	**0.93**	**248**	*i* P	Pn	12 17 27.1	+1.7	
	baz=247							
WHP				*e*S	Sn	12 17 40.1	+2.0	
	baz=247							
NMLH	**Miaoli**	**1.01**	**265**	*e*P	Pn	12 17 27.2	+1.0	
	baz=264							
NMLH				*e*S	Sn	12 17 40.9	+1.1	
	baz=264							
EGFH	**Guangfu**	**1.04**	**204**	*e*P	Pn	12 17 28.0	+1.3	
	baz=209							
EGFH				*e*S	Sn	12 17 39.8	-0.7	
	baz=209							
VWDT	**VWDT**	**1.11**	**219**	*e*P	Pn	12 17 28.6	+1.0	
	baz=209							
VWDT				*e*S	Sn	12 17 43.1	+1.0	
	baz=209							
SMLT	**Sun Moon Lake**	**1.17**	**231**	P	Pn	12 17 30.6	+2.2	
	baz=229							
SMLT				*e*S	Sn	12 17 46.2	+2.5	
	baz=229							
TYC	**Yuchr**	**1.19**	**233**	*e*P	Pn	12 17 30.4	+1.8	
	baz=225							
TYC				*e*S	Sn	12 17 47.2	+3.2	
	baz=225							
SSLB	**Suanglung**	**1.20**	**226**	*e*P	Pn	12 17 30.0	+1.3	
	baz=230							
SSLB				*e*S	Sn	12 17 47.4	+3.2	
	baz=230							
HGSD	**Ruisui**	**1.21**	**201**	*e*P	Pn	12 17 29.4	+0.5	
	baz=209							
EHY	**Hungye**	**1.23**	**205**	*e*P	Pn	12 17 29.6	+0.5	
	baz=204							
WHYT	**Xinyi Township**	**1.33**	**226**	P	Pn	12 17 32.6	+2.2	
	baz=233							
WHYT				*e*S	Sn	12 17 50.9	+3.5	
	baz=233							
WJS	**Zhushan**	**1.33**	**233**	*e*P	Pn	12 17 32.8	+2.3	
	baz=243							
YULB	**Yu-li**	**1.34**	**204**	*e*P	Pn	12 17 29.9	-0.8	
	baz=202							
YULB				*e*S	Sn	12 17 46.8	-0.9	
	baz=202							
TWF1	**Yuli**	**1.38**	**203**	*e*P	Pn	12 17 31.6	+0.5	
	baz=208							
ALS	**Alishan**	**1.49**	**222**	*e*P	Pn	12 17 34.9	+2.0	
	baz=229							
ALS				*e*S	Sn	12 17 55.4	+3.8	
	baz=229							
CHN5	**Tsauling**	**1.51**	**228**	*e*P	Pn	12 17 34.7	+1.7	
	baz=236							
CHN5				*e*S	Sn	12 17 54.8	+3.0	
	baz=236							
FULB	**Fuli**	**1.52**	**201**	*e*P	Pn	12 17 33.8	+0.7	
	baz=207							
FULB				*e*S	Sn	12 17 53.8	+1.8	
	baz=207							
ELDTW	**Lidau**	**1.64**	**209**	*e*P	Pn	12 17 34.8	+0.1	
	baz=198							
ELDTW				*e*S	Sn	12 17 57.1	+2.2	
	baz=198							
CHN4	**Tsaushan**	**1.74**	**223**	*e*P	Pn	12 17 38.3	+2.3	
	baz=234							
CHN4				*e*S	Sn	12 18 01.3	+4.1	
	baz=234							
TPUB	**Ta-pu**	**1.75**	**222**	*e*P	Pn	12 17 38.2	+2.0	
	baz=232							
TPUB				*e*S	Sn	12 18 01.2	+3.7	
	baz=232							
STYT	**Tauyuan**	**1.79**	**216**	*e*P	Pn	12 17 39.1	+2.4	
	baz=207							
WTP	**Ta-pu**	**1.80**	**221**	*e*P	Pn	12 17 39.5	+2.6	
	baz=230							
TWK	**Hsinying**	**1.87**	**224**	*e*P	Pn	12 17 40.0	+2.3	
	baz=235							
TWK				*e*S	Sn	12 18 03.9	+3.6	
	baz=235							

ASRS 30 12:36:36.5±0.2, 52°N±2°×98°4E±0°9, h5km, MLh3.6/12, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ORL	**Orlik**	**1.05**	**56**	Pg	Pg	12 36 56.7	0.0
ORL				Sg	Sg	12 37 09.9	-0.5
TDJR	**Todzha**	**1.47**	**288**	Pg	Pg	12 37 06.1	+1.4
TDJR				Sg	Sg	12 37 26.8	+3.1
MOY	**Mondy**	**1.65**	**99**	Pg	Pb	12 37 07.2	-0.3
MOY				Sg	Sb	12 37 28.6	0.0
KZLR	**Kyzyl**	**2.45**	**265**	Pg	Pg	12 37 23.5	+0.1
KZLR				Sg	Sg	12 37 57.1	+1.9
ARDR	**Aradan**	**3.10**	**283**	Pg	Pb	12 37 33.8	+1.6
ARDR				Sg	Sg	12 38 14.4	-1.7
TLY	**Talaya**	**3.28**	**93**	Pg	Pb	12 37 36.0	+0.8
TLY				Sg	Sb	12 38 18.6	+3.2
ZAK	**Zakamensk**	**3.47**	**115**	Pg	Pb	12 37 40.0	+1.5
ZAK				Sg	Sg	12 38 24.6	-3.2
ORY	**Orie**	**3.62**	**329**	Pg	Pb	12 37 43.3	+2.4
ORY				Sg	Sg	12 38 33.1	+0.5
IRK	**Irkutsk**	**3.65**	**83**	Sg	Sb	12 38 27.4	+1.6
MINR	**Mina**	**3.86**	**321**	Pg	Pg	12 37 48.4	-2.0
MINR				Sg	Sg	12 38 40.3	0.0
CERR	**Cheremushki**	**4.36**	**285**	Pg	Pg	12 37 58.5	-1.4
CERR				Sg	Sg	12 38 53.4	-2.9
DJOS	**Djoyskaya Sosn**	**4.36**	**284**	Pg	Pg	12 38 00.5	+0.5
DJOS				Sg	Sg	12 38 55.0	-1.3
DJO	**Djoy, Khakassi**	**4.46**	**283**	Pg	Pb	12 37 57.7	+2.4
DJO				Sg	Sg	12 38 57.0	-2.7
ABNR	**Abakan**	**4.56**	**295**	Pg	Pg	12 38 00.6	-3.3
ABNR				Sg	Sg	12 39 00.8	-2.2
TRG	**Tyrgan**	**4.95**	**78**	Pg	Pg	12 38 12.6	+1.3
TRG				Sg	Sb	12 39 07.9	+4.5
VEH	**Verkhnyaya Baz**	**5.08**	**288**	Pg	Pb	12 38 08.9	+3.0
VEH				Sg	Sg	12 39 15.1	-4.4
SHTK	**Zheleznogorsk-**	**5.20**	**329**	Pg	Pb	12 38 07.2	-0.6
SHTK				Sg	Sg	12 39 17.9	-5.4
LUZB	**Luzhba, Kemero**	**5.99**	**290**	Pg	Pb	12 38 25.7	+4.3
LUZB				Sg	Sg	12 39 44.8	-4.0
TASR	**Tashtagol**	**6.48**	**281**	Sg	Sg	12 39 59.4	-5.0
CUR	**Chagan-Uzun**	**6.59**	**258**	Sg	Sg	12 40 03.5	-4.6
ULN	**Ulaanbaatar**	**6.94**	**123**	Sg	Sg	12 40 14.6	-4.7
AKAR	**Aktash**	**6.97**	**261**	Sg	Sg	12 40 16.3	-3.7
CHBI	**Chibit, Altay**	**7.04**	**261**	Sg	Sg	12 40 18.4	-4.0
ELT	**Eltsovka**	**7.51**	**285**	Sg	Sg	12 40 33.8	-3.5
TUNR	**Tungur**	**7.80**	**261**	Sg	Sg	12 40 45.0	-1.9
SALR	**Pechorkino, Sa**	**8.00**	**293**	Sg	Sg	12 40 48.9	-4.2
UKR	**Ust'-Kan**	**8.56**	**268**	Sg	Sg	12 41 09.1	-2.0

*IDC **30** 12:38:52.8±1.3, 24°.83N×123°.26E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.4/53, mbtmp3.5/4, MS2.8/1, Ms1 2.8/1, ms1mx2.4/45, Error ellipse: s-maj=94.6km s-min=24.9km az=78.0*
*JMA **30** 12:38:53.9±0.2, 24°.91N×123°.32E, h23km, M3.3*
*NEIC **30** 12:38:57.0±0.9, 24°.78N±0°.07×123°.2E±0°.1, h30km±2km, mb4.0/5, Error ellipse: s-maj=15.4km s-min=10.3km az=75.0*

ISC 30 12:38:54.0±1.7, 24°.82N±0°.07×123°.32E±0°.03, h13km±11km, n28, σ0°96/35, mb3.9/7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.46**	**218**	P	**Pb**	**12 39 04.2**	**+0.3**
YOJ				*e*S	**Sb**	**12 39 10.9**	**+0.3**
YOJ	**Yonaguni jima**	**0.46**	**218**	Pg	**Pn**	**12 39 04.7**	**-1.5**
YOJ				Sg	**Sb**	**12 39 10.0**	**-0.6**
JYNG	**Yonagunijimaku**	**0.50**	**223**	P	**Pb**	**12 39 05.0**	**+0.3**
JYNG				S	**Sn**	**12 39 12.8**	**-2.6**
IRIF	**Iriomote-Funau**	**0.61**	**142**	P	**Pb**	**12 39 06.8**	**+0.3**
IRIF				*e*S	**Sb**	**12 39 16.3**	**+1.3**
JKRS	**Kuro-shima**	**0.86**	**133**	P	**Pg**	**12 39 10.8**	**+0.2**
JKRS				*e*S	**Sb**	**12 39 23.1**	**+1.0**
JIJ	**Ishigaki jima**	**0.88**	**121**	P	**Pb**	**12 39 10.4**	**-0.7**
JIJ				S	**Sg**	**12 39 22.0**	**-0.5**
HATJ	**Hateruma jima**	**0.88**	**150**	P	**Pg**	**12 39 11.3**	**+0.2**
JISG	**Ishigakijimahi**	**0.93**	**104**	P	**Pb**	**12 39 11.1**	**-0.9**
JISG				*e*S	**Sb**	**12 39 23.6**	**-0.6**
JTJ	**Tarama**	**1.27**	**98**	P	**Pn**	**12 39 17.0**	**-0.4**
JTJ				*e*S	**Sb**	**12 39 32.2**	**-1.8**
TATO	**Taipei**	**1.67**	**276**	Pn	**Pn**	**12 39 21.9**	**-1.0**
JIRB	**Irabujima**	**1.68**	**89**	P	**Pn**	**12 39 23.4**	**+0.3**
NACB	**Ninganchiao**	**1.70**	**248**		**Pn**	**12 39 22.9**	**-0.4**
YHNB	**Yeheng**	**1.77**	**265**		**Pn**	**12 39 24.1**	**-0.3**
JMJ2	**Miyako jima3**	**1.83**	**92**	P	**Pn**	**12 39 25.5**	**+0.4**
YULB	**Yu-li**	**2.33**	**233**	Pn	**Pn**	**12 39 31.0**	**-1.1**
SSLB	**Suanglung**	**2.39**	**245**	Pn	**Pn**	**12 39 32.7**	**-0.2**
TWG	**Pinlang**	**2.87**	**226**	Pn	**Pn**	**12 39 39.0**	**-0.4**
TPUB	**Ta-pu**	**2.89**	**239**		**Pn**	**12 39 41.8**	**+2.1**
DAV	**Davao City (W)**	**17.79**	**173**	LR	LR	12 50 12.2	
	comp=Z,31nm,19.8s,baz=316,slow=38						
SBUM	**Sibu**	**24.69**	**207**	P	**P**	**12 44 14.3**	**-0.5**
SONM	**Songino Array**	**26.59**	**334**	P	**P**	**12 44 32.8**	**+0.8**
	0.3nm,0.4s,baz=139,slow=9.5,SNR=2.1						
AAK	**Ala-Archa**	**43.68**	**306**	P	**P**	**12 46 58.5**	**-0.3**
AAK				IAmb	IAmb	12 47 08.1	
	comp=Z,2.1nm,0.9s						
WB0	**Warramunga Arr**	**45.61**	**165**	P	**P**	**12 47 14.5**	**+0.4**
WB0				IAmb	IAmb	12 47 20.0	
	comp=Z,3.1nm,1.0s						
WRA	**Warramunga Arr**	**45.77**	**165**	P	**P**	**12 47 16.2**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=347,slow=8.7,SNR=8.6						
WB2	**Warramunga Arr**	**45.77**	**165**	P	**P**	**12 47 15.9**	**+0.5**
KK31	**Karatay Array**	**46.64**	**307**	P	**P**	**12 47 22.3**	**+0.1**
KK31				IAmb	IAmb	12 47 29.2	
	comp=Z,1.1nm,0.8s						
ASAR	**Alice Springs**	**49.28**	**167**	P	**P**	**12 47 43.8**	**+1.2**
	comp=Z,1.0nm,1.0s,baz=352,slow=14,SNR=8.7						
YKA	**Yellowknife Ar**	**81.62**	**23**	P	**P**	**12 51 12.2**	**+0.7**
	comp=Z,0.1nm,0.6s,baz=309,slow=4.5,SNR=5.1						

UCR 30 12:39:01.9±0.7, 10°.67N×85°.11W, h157km±2km, MD3.7, 1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CUI	**Cuipilapa**	**0.05**	**262**	*i* P	Pn	12 39 23.0	+0.1
CUI				*i* S	Sn	12 39 39.0	+0.2
ACAL	**Aguas Claras**	**0.08**	**112**	*i* P	Pn	12 39 23.1	+0.2
HORNC	**Hornillas**	**0.08**	**306**	*i* P	Pn	12 39 23.2	+0.2
COLC	**Colonia**	**0.09**	**270**	*i* P	Pn	12 39 22.9	0.0
PTEN	**Parque Tenorio**	**0.13**	**68**	*i* P	Pn	12 39 23.4	+0.4
LIM1	**Limonal**	**0.14**	**283**	*i* P	Pn	12 39 23.0	0.0
GPS2	**Hotel Rincn d**	**0.25**	**290**	*i* P	Pn	12 39 23.3	+0.1
GPS2				*i* S	Sn	12 39 40.1	+0.7
GPS1	**Guardaparques**	**0.26**	**295**	*i* P	Pn	12 39 23.3	0.0
GPS1				*i* S	Sn	12 39 40.3	+0.8
GPS3	**Bodega del ICE**	**0.27**	**290**	*i* P	Pn	12 39 23.3	+0.1
BUEV	**Buena Vista**	**0.32**	**294**	*e*P	Pn	12 39 23.5	0.0
GB1A	**Borinquen Arri**	**0.32**	**298**	*i* P	Pn	12 39 23.6	+0.1
GB1A				*e*S	Sn	12 39 40.7	+0.8
LAPC	**Finca la Perla**	**0.33**	**288**	*i* P	Pn	12 39 23.1	-0.3
LAPC				*i* S	Sn	12 39 39.9	+0.1
GBS3	**Finca Las Img**	**0.36**	**289**	*i* P	Pn	12 39 23.3	-0.2
GBS3				*i* S	Sn	12 39 40.3	+0.4
PLVR	**Palo Verde**	**0.39**	**217**	*e*P	Pn	12 39 24.1	+0.3
JTS	**Las Juntas de**	**0.40**	**157**	*e*P	Pn	12 39 23.5	-0.2
NY14	**Universidad de**	**0.42**	**268**	*i* P	Pn	12 39 23.9	+0.2
ARE1	**Arenal 1**	**0.44**	**118**	⇓*i*P	Pn	12 39 24.2	+0.4
ARE1				*e*S	Sn	12 39 41.6	+1.1
CASO	**Castillo**	**0.44**	**122**	*i* P	Pn	12 39 24.0	+0.2
CEDE	**Laguna Cedeo**	**0.44**	**114**	*i* P	Pn	12 39 24.2	+0.4
CEDE				*e*S	Sn	12 39 41.1	+0.6
FORC	**Fortuna**	**0.48**	**114**	*i* P	Pn	12 39 24.3	+0.4
GUAI	**GUAI**	**0.56**	**225**	*i* P	Pn	12 39 24.5	+0.2
LCR2	**La Lucha 2**	**1.43**	**130**	*e*P	Pn	12 39 31.4	-0.1

*SOME **30** 12:39:31.3, 44°.62N×82°.35E, h25km*
*NNC **30** 12:39:34.7±1.4, 44°.80N×81°.93E, h0km, mb3.7, mpv3.2, Error ellipse: s-maj=24.7km s-min=5.8km az=121.0*

ISC 30 12:39:29.4±2.0, 44°.5N±0°.1×82°.8E±0°.1, h17km, n11, σ1°18/19, 2C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.01**	**241**	*e*P	**Pb**	**12 40 04.8**	**-0.7**
	1.1nm,0.1s						
KTMS				*e*S	**Sn**	**12 40 29.0**	**+1.6**
	87nm,0.5s						
DJR	**Jarkent**	**2.13**	**268**	*e*P	**Pn**	**12 40 05.0**	**+0.8**
	18nm,0.3s						
DJR				*e*S	**Sn**	**12 40 29.7**	**-0.6**
	16nm,0.4s						
MK31	**Makanchi Array**	**2.37**	**352**	⇑Pn	**Pb**	**12 40 10.3**	**-1.2**
	6.2nm,0.2s,baz=183,slow=13,SNR=292						
MK31				⇑Lg	Lg	12 40 38.0	
	5.1nm,0.2s,baz=186,slow=28,SNR=27						
PDGK	**Podgornoye**	**2.61**	**246**	⇓Pn	**Pb**	**12 40 13.9**	**-1.9**
	3.7nm,0.3s						
PDGK				⇓Lg	Lg	12 40 46.4	
	46nm,0.6s						
UZB	**Uzynbulak**	**3.00**	**246**	*e*P	**Pb**	**12 40 21.2**	**-1.2**
	11nm,0.2s						
UZB				*e*S	**Sb**	**12 40 57.1**	**-1.8**
	11nm,0.2s						
ZSN	**Zaisan**	**3.34**	**25**	*e*P	**Pb**	**12 40 27.9**	**-0.2**
	4.5nm,0.2s						
ZSN				*e*S	**Sb**	**12 41 08.5**	**+0.1**
	7.3nm,0.5s						
SATY	**Saty**	**3.44**	**248**	*e*P	**Pb**	**12 40 29.1**	**-0.9**
	4.4nm,0.1s						
SATY				*e*S	**Sb**	**12 41 10.3**	**-1.3**
	27nm,0.3s						
KOTS	**Kotyrbulak**	**4.26**	**255**	*e*P	**Pb**	**12 40 43.5**	**-0.3**
	20nm,0.4s						
KOTS				*e*S	**Sb**	**12 41 34.8**	**-0.3**
	16nm,0.3s						
MDOK	**Medeo**	**4.33**	**255**	*e*P	**Pb**	**12 40 44.7**	**-0.3**
	5.5nm,0.4s						
MDOK				*e*S	**Sb**	**12 41 37.0**	**+0.1**
	3.2nm,0.5s						
MDOK	**Medeo**	**4.33**	**255**	⇓Pg	**Pb**	**12 40 45.4**	**+0.4**
	3.8nm,0.5s						
MDOK				⇓Lg	Lg	12 41 40.2	
	3.3nm,0.6s						
IZV	**Izvestkoviy**	**4.67**	**254**	*e*P	**Pb**	**12 40 51.6**	**+0.7**
	2.4nm,0.3s						
IZV				*e*S	**Sb**	**12 41 49.2**	**+2.3**
	4.2nm,0.4s						

*IDC **30** 12:41:56.5±1.4, 24°.83N×123°.43E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/44, mbtmp3.5/4, Error ellipse: s-maj=66.4km s-min=29.9km az=66.0*
*JMA **30** 12:41:57.1±0.2, 24°.91N×123°.25E, h19km, M2.8*

ISC 30 12:41:57.4±1.8, 24°.83N±0°.07×123°.37E±0°.07, h6km±13km, n12, σ0°68/19, mb3.5/4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.49**	**222**	P	**Pg**	**12 42 06.9**	**0.0**
YOJ				S	**Sg**	**12 42 13.4**	**+0.2**
JYNG	**Yonagunijimaku**	**0.54**	**226**	P	**Pg**	**12 42 07.7**	**-0.1**
JYNG				S	**Sg**	**12 42 14.6**	**-0.2**
IRIF	**Iriomote-Funau**	**0.59**	**146**	P	**Pb**	**12 42 10.8**	**+0.7**
IRIF				S	**Sn**	**12 42 21.0**	**-1.2**
JKRS	**Kuro-shima**	**0.82**	**135**	P	**Pb**	**12 42 14.6**	**+0.5**
JKRS				S	**Sn**	**12 42 27.3**	**-0.7**
JIJ	**Ishigaki jima**	**0.84**	**123**	P	**Pb**	**12 42 14.8**	**+0.4**
JIJ				*e*S	**Sn**	**12 42 29.1**	**+0.7**
HATJ	**Hateruma jima**	**0.86**	**153**	P	**Pb**	**12 42 15.2**	**+0.4**
HATJ				S	**Sn**	**12 42 29.4**	**+0.5**
JISG	**Ishigakijimahi**	**0.89**	**105**	P	**Pb**	**12 42 15.6**	**-0.8**
JTJ	**Tarama**	**1.22**	**98**	P	**Pb**	**12 42 20.7**	**-0.2**
JTJ				*e*S	**Sn**	**12 42 39.2**	**+1.3**
SONM	**Songino Array**	**26.61**	**334**	P	**P**	**12 47 37.4**	**+0.8**
	0.8nm,0.8s,baz=143,slow=12,SNR=3.5						
MKAR	**Makanchi Array**	**39.29**	**315**	P	**P**	**12 49 26.9**	**-0.1**
	0.4nm,0.6s,baz=94,slow=10,SNR=4.2						
WRA	**Warramunga Arr**	**45.76**	**166**	P	**P**	**12 50 19.8**	**0.0**
	0.7nm,1.0s,baz=347,slow=8.7,SNR=3.2						
YKA	**Yellowknife Ar**	**81.60**	**23**	P	**P**	**12 54 15.7**	**-0.2**
	0.4nm,0.8s,baz=309,slow=4.8,SNR=6.0						

IDC 30 13:00:03.4±7.2, 19°.27S×176°.86W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.7/33, mbtmp3.7/3, Error ellipse: s-maj=309.2km s-min=38.7km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.85**	**261**	P	P	13 08 27.4	-0.3
	0.3nm,0.3s,baz=97,slow=7.7,SNR=23						
ASAR	**Alice Springs**	**45.86**	**255**	P	P	13 08 27.9	+0.1
	1.3nm,0.7s,baz=95,slow=8.1,SNR=9.6						
ILAR	**Eielson Array**	**86.89**	**12**	P	P	13 12 49.5	0.0
	0.3nm,0.6s,baz=211,slow=6.2,SNR=4.9						

DJA 30 13:18:56.8±1.1, 0°S±2°×12°5E±°, h29km±10km, M3.7/10, mB4.9/1, mb3.8/1, MLv3.7/10, Mw(mB)4.2/1, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.01**	**321**	P	Pn	13 19 13.2	-1.8
KMSI				S	Sn	13 19 28.1	-0.1
LUWI	**Luwuk**	**2.02**	**246**	P	Pn	13 19 28.9	-0.1
LUWI				S	Sn	13 19 55.0	+1.7
SANI	**Sanana**	**2.28**	**143**	P	Pb	13 19 36.9	-0.5
MRSI	**Marisa**	**2.77**	**284**	P	Pn	13 19 36.1	-3.1
MRSI				S	Sn	13 20 12.4	+0.8
LBMI	**Labuha**	**2.91**	**98**	P	Pn	13 19 38.8	-2.4
LBMI				S	Sn	13 20 15.7	+0.4
NLAI	**Namlea**	**3.90**	**141**	S	Sn	13 20 38.0	-1.6
MPSI	**Mapaga**	**4.75**	**277**	P	Pn	13 20 09.4	+2.9
TTSI	**Tana Toraja**	**5.56**	**240**	P	Pn	13 20 17.4	-0.3
SPSI	**Sidrap Palu**	**6.12**	**232**	P	Pn	13 20 25.3	0.0

*NEIC **30** 13:22:29.3±1.7, 22°.1N±0°.1×144°.6E±0°.1, h81km±10km, mb4.2/12, Error ellipse: s-maj=19.6km s-min=13.4km az=142.0*
*IDC **30** 13:22:37.2±10.0, 22°.10N×144°.57E, h149km±94km, mb3.4/8, mb1 3.5/8, mb1mx3.2/48, mbtmp3.8/8, MS2.9/1, Ms1 2.9/1, ms1mx2.4/19, Error ellipse: s-maj=73.9km s-min=15.2km az=78.0*

ISC 30 13:22:27.6±1.3, 22°.0N±0°.1×144°.7E±0°.2, h69km, n21, σ1°83/20, mb4.0/13, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**21.09**	**320**	P	**P**	**13 27 09.0**	**+2.6**
	0.9nm,0.7s,baz=146,slow=9.2,SNR=6.5						
YHNB	**Yeheng**	**21.54**	**282**	P	**P**	**13 27 08.4**	**-2.9**
SSLB	**Suanglung**	**21.90**	**279**	P	**P**	**13 27 14.7**	**-0.5**
SSLB				IAmb	IAmb	13 27 17.1	
	comp=Z,9.9nm,0.7s						
JKA	**Kamikawa-asahi**	**22.08**	**356**	P	**P**	**13 27 15.2**	**-1.7**
TPUB	**Ta-pu**	**22.21**	**278**	P	**P**	**13 27 16.7**	**-1.8**
TPUB				IAmb	IAmb	13 27 26.5	
	comp=Z,7.4nm,1.0s						
DAV	**Davao City (W)**	**23.68**	**234**	LR	LR	13 36 38.8	
	comp=Z,28nm,21.1s,baz=316,slow=36						
COEN	**Coen**	**35.81**	**182**	P	**P**	**13 29 18.6**	**-1.9**
MTN	**Manton Dam**	**37.12**	**202**	P	**P**	**13 29 33.6**	**+1.9**
MTN				IAmb	IAmb	13 29 34.0	
	comp=Z,4.4nm,0.8s						
KNRA	**Kununurra**	**40.60**	**204**	P	**P**	**13 30 02.9**	**+2.1**
WB0	**Warramunga Arr**	**42.75**	**194**	P	**P**	**13 30 19.9**	**+1.6**
WR0	**Warramunga Arr**	**42.90**	**194**	P	**P**	**13 30 20.5**	**+1.0**
WRAB	**Tennant Creek**	**42.92**	**194**	P	**P**	**13 30 20.6**	**+0.9**
WRAB				IAmb	IAmb	13 30 33.5	
	comp=Z,3.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**42.92**	**274**	P	**P**	**13 30 19.6**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=69,slow=7.8,SNR=1.6						
WB2	**Warramunga Arr**	**42.93**	**194**	P	**P**	**13 30 20.8**	**+1.0**
WB2				IAmb	IAmb	13 30 27.5	
	comp=Z,2.8nm,0.9s						
WRA	**Warramunga Arr**	**42.93**	**194**	P	**P**	**13 30 21.0**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=16,slow=8.7,SNR=27						
FITZ	**Fitzroy Crossi**	**44.02**	**206**	P	**P**	**13 30 31.4**	**+2.8**
	comp=Z,2.5nm,0.9s,baz=27,slow=9.0,SNR=8.6						
FITZ	**Fitzroy Crossi**	**44.02**	**206**	P	**P**	**13 30 30.1**	**+1.5**
FITZ				IAmb	IAmb

CTA	**Charters Tower**	**17.50**	**238**	P	**P**	**13**	**57**	**19.4 +1.5**
	0.5nm,0.3s,baz=62,slow=12,SNR=9.9							
WB0	**Warramunga Arr**	**27.86**	**249**	P	**P**	**13**	**59**	**02.9 +0.7**
WB0				IAmb	IAmb	13	59	09.1
	comp=Z,15nm,1.5s							
STKA	**Stephens Creek**	**27.87**	**219**	P	**P**	**13**	**59**	**02.8 +0.8**
	comp=Z,1.9nm,0.7s,baz=42,slow=10,SNR=4.5							
STKA				LR	LR	14	09	37.1
	comp=Z,232nm,19.5s,baz=26,slow=35							
STKA	**Stephens Creek**	**27.87**	**219**	IAmb	IAmb	13	59	09.9
	comp=Z,2.0nm,1.2s							
WRA	**Warramunga Arr**	**27.95**	**248**	P	**P**	**13**	**59**	**02.9 -0.1**
	comp=Z,0.9nm,0.8s,baz=76,slow=10,SNR=3.7							
AS31	**Alice Springs**	**29.43**	**241**	P	**P**	**13**	**59**	**14.9 -1.2**
ASAR	**Alice Springs**	**29.43**	**241**	P	**P**	**13**	**59**	**15.4 -0.7**
	comp=Z,1.3nm,0.7s,baz=68,slow=9.9,SNR=21							
ASAR				LR	LR	14	10	43.4
	comp=Z,125nm,18.4s,baz=55,slow=36							
SIJI	**Sorong**	**32.16**	**286**	LR	LR	14	11	42.0
	comp=Z,30nm,21.7s,baz=359,slow=35							
KNRA	**Kununurra**	**32.57**	**258**	P	**P**	**13**	**59**	**44.5 +0.7**
FITZ	**Fitzroy Crossi**	**35.75**	**255**	P	**P**	**14**	**00**	**11.3 -0.1**
	comp=Z,2.8nm,0.9s,baz=54,slow=9.5,SNR=6.3							
FITZ				LR	LR	14	14	20.8
	comp=Z,128nm,19.8s,baz=76,slow=36							
FITZ	**Fitzroy Crossi**	**35.75**	**255**	IAmb	IAmb	14	00	26.1
	comp=Z,9.2nm,1.4s							
KSRS	**Korea Array**	**57.98**	**328**	LR	LR	14	26	18.2
	comp=Z,30nm,19.9s,baz=205,slow=34							
SONM	**Songino Array**	**76.63**	**325**	P	**P**	**14**	**05**	**02.9 +0.1**
	comp=Z,1.0nm,0.6s,baz=142,slow=5.3,SNR=4.6							
ILAR	**Eielson Array**	**84.87**	**20**	P	**P**	**14**	**05**	**46.0 -0.3**
	comp=Z,0.2nm,0.6s,baz=246,slow=4.7,SNR=2.3							
NVAR	**Mina Array Bea**	**88.98**	**51**	P	**P**	**14**	**06**	**07.8 +0.7**
	comp=Z,0.2nm,0.6s,baz=261,slow=4.5,SNR=2.0							
NVAR				LR	LR	14	40	33.4
	comp=Z,42nm,18.3s,baz=295,slow=32							
MKAR	**Makanchi Array**	**91.10**	**317**	P	**P**	**14**	**06**	**16.5 -0.1**
	comp=Z,0.3nm,0.6s,baz=91,slow=5.6,SNR=3.0							
TXAR	**Lajitas Array**	**99.17**	**62**	LR	LR	14	42	55.1
	comp=Z,26nm,21.1s,baz=0.0,slow=30							

*UPA **30** 13:55:10.6±0.6,9.°05N×83.°42W, h34km±8km, MD3.2*
*UCR **30** 13:55:11.1±2.0,8.°94N×83.°44W, h34km±3km, MD3.8*
ISC 30 13:55:11.5±0.9,8.°99N±0.°04×83.°41W±0.°04, h25km, n23,
σ1°96/34, 5C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDPN	**Palmar Norte**	**0.05**	**242**	*eP*	**Pb**	**13 55 17.4**	**+1.6**
EDPN				*eS*	**Sb**	**13 55 23.3**	**+4.5**
EDBA	**Buenos Aires**	**0.22**	**37**	*eP*	**Pn**	**13 55 18.6**	**-0.6**
EDBA				*eS*	**Sb**	**13 55 24.9**	**+3.5**
DRK0	**Durika**	**0.32**	**31**	*eP*	**Pn**	**13 55 20.0**	**-0.8**
DRK0				*eS*	**Sn**	**13 55 25.7**	**-0.9**
DRK0	**Durika**	**0.32**	**31**	*eP*	**Pn**	**13 55 19.9**	**-0.8**
DRK0				*eS*	**Sn**	**13 55 27.1**	**+0.5**
EDLM	**Las Mercedes**	**0.34**	**329**	*eP*	**Pn**	**13 55 19.4**	**-1.5**
PTJ1	**Puerto Jimnez**	**0.46**	**167**	*eP*	**Pn**	**13 55 21.0**	**-1.5**
PTJ1				*eS*	**Sn**	**13 55 29.1**	**-0.8**
EDDO	**Dominical**	**0.52**	**300**	*eP*	**Pn**	**13 55 21.5**	**-1.8**
BRU2	**Volcan**	**0.73**	**105**	⇑*iP*	**Pn**	**13 55 25.1**	**-1.3**
BRU2				*eS*	**Sn**	**13 55 36.5**	**-0.4**
BRU2	**Volcan**	**0.73**	**105**	*eP*	**Pn**	**13 55 25.0**	**-1.4**
BRU2				*eS*	**Sn**	**13 55 36.1**	**-0.8**
BC3P	**Paso Ancho**	**0.81**	**102**	*eP*	**Pn**	**13 55 26.2**	**-1.2**
BC3P				*eS*	**Sn**	**13 55 37.7**	**-1.1**
SBAR3	**San Bartolo, C**	**0.84**	**142**	*eS*	**Sn**	**13 55 44.2**	**+4.9**
BCO2	**Palmira**	**0.91**	**107**	⇑*eP*	**Pb**	**13 55 27.5**	**-1.2**
BCO2				*eS*	**Sn**	**13 55 40.5**	**-0.8**
LCR2	**La Lucha 2**	**0.95**	**322**	⇑*iP*	**Pb**	**13 55 27.5**	**-1.9**
RGM0	**Gandoca**	**0.99**	**53**	*eS*	**Sn**	**13 55 48.0**	**+5.0**
CVTR	**Volcan Turrial**	**1.08**	**341**	⇑*eP*	**Pb**	**13 55 30.3**	**-1.5**
DVD	**David**	**1.09**	**120**	*eS*	**Sn**	**13 55 43.4**	**-2.1**
CHIR3	**Chiriqui UPA,**	**1.22**	**119**	*eP*	**Pb**	**13 55 32.9**	**-1.0**
CHIR3				*eS*	**Sb**	**13 55 50.0**	**+0.9**
FORC	**Fortuna**	**1.93**	**320**	*iP*	**Pn**	**13 55 41.9**	**-0.8**
ARE1	**Arenal 1**	**1.95**	**319**	⇑*iP*	**Pn**	**13 55 42.8**	**-0.3**
ARE1				*eS*	**Sb**	**13 55 59.4**	**-1.0**
CEDE	**Laguna Cedeo**	**1.96**	**320**	*iP*	**Pn**	**13 55 43.1**	**-0.1**
ACAL	**Aguas Claras**	**2.29**	**316**	*iP*	**Pn**	**13 55 47.7**	**-0.1**
PTEN	**Parque Tenorio**	**2.32**	**318**	*iP*	**Pn**	**13 55 48.5**	**+0.4**
CUI	**Cuipilapa**	**2.40**	**314**	*eP*	**Pn**	**13 55 48.2**	**-1.0**

*BJI **30** 13:56:49.6±0.0,24.°98N×97.°87E, h5km, ML3.5/6*
*IDC **30** 13:56:58.1±1.9,25.°78N×97.°95E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.2/34, mbtmp3.4/3, ML4.0/1, Error ellipse: s-maj=68.7km s-min=25.8km az=83.0*
ISC 30 13:57:00.4±1.2,25.°98N±0.°09×98.°2E±0.°3, h10km, n13,
σ1°97/14, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYA	**Payao**	**6.77**	**166**	Pg	**Pn**	**13 58 39.9**	**+0.1**
PAYA				Sg	**Sn**	**13 59 55.4**	**-1.7**
CM34	**Chiang Mai Arr**	**7.15**	**173**	Sg	**Sn**	**14 00 04.1**	**-2.3**
CMMT	**Chiang Mai**	**7.17**	**174**	Pg	**Pn**	**13 58 44.5**	**-0.9**
CM36	**Chiang Mai Arr**	**7.47**	**173**	Pg	**Pn**	**13 58 50.6**	**+1.1**
CMAR	**Chiang Mai Arr**	**7.52**	**175**	Pn	Pn	13 58 46.9	-3.3
	0.7nm,0.3s,baz=347,slow=12,SNR=5.0						
CMAR				Pg	**Pb**	**13 59 11.8**	**+0.8**
	1.5nm,0.3s,baz=348,slow=16,SNR=5.5						
CMAR				Lg	Lg	14 00 42.0	
	1.9nm,0.3s,baz=354,slow=29,SNR=5.8						
CM09	**Chiang Mai Arr**	**7.54**	**174**	Pg	**Pn**	**13 58 51.3**	**+0.8**
LAMP	**Lampang**	**7.54**	**170**	Pg	**Pn**	**13 58 52.1**	**+1.7**
CM01	**Chiang Mai Arr**	**7.56**	**174**	Pg	**Pn**	**13 58 51.6**	**+0.9**
CM05	**Chiang Mai Arr**	**7.58**	**175**	Pg	**Pn**	**13 58 50.1**	**-0.9**
MHMT	**Maesarieng**	**7.77**	**182**	Pg	**Pn**	**13 58 56.8**	**+3.2**
WMQ	**Urumqi**	**19.74**	**337**	*eP*	**P**	**14 01 26.8**	**-3.5**
SONM	**Songino Array**	**22.75**	**14**	P	**P**	**14 02 04.9**	**+2.0**
	0.4nm,0.4s,baz=206,slow=9.6,SNR=1.7						
MKAR	**Makanchi Array**	**24.31**	**333**	P	**P**	**14 02 17.8**	**-0.3**
	0.5nm,0.7s,baz=144,slow=10.0,SNR=5.2						

*IDC **30** 14:29:51.4±0.9,24.°94N×97.°92E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.6/36, mbtmp3.7/9, ML4.1/1, MS3.1/3, Ms1 3.2/3, ms1mx2.8/30, Error ellipse: s-maj=45.3km s-min=14.3km az=69.0*
*BJI **30** 14:29:52.0±0.0,25.°00N×97.°82E, h12km, mb3.9/2, ML3.8/11, Ms3.6/6, Ms7 3.6/3*
ISC 30 14:29:51.9±0.6,24.°86N±0.°04×97.°88E±0.°05, h10km, n24,
σ2°17/32, mb3.7/8, 1D, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**4.42**	**86**	Pn	Pn	14 31 04.3	+5.0
KMI				Pg	**Pg**	**14 31 16.0**	**-0.7**
KMI				Sg	**Sg**	**14 32 14.0**	**0.0**
KMI				smax	smax		
	comp=N,160nm,1.0s						
KMI				smax	smax		
	comp=E,100nm,1.1s						
CRAI	**Chiangrai**	**5.15**	**153**	Pg	**Pg**	**14 31 28.9**	**-1.7**
PAYA	**Payao**	**5.77**	**161**	Pg	**Pg**	**14 31 43.7**	**+1.2**
PAYA				Sg	**Sg**	**14 32 56.5**	**-0.9**
CMMT	**Chiang Mai**	**6.09**	**170**	Pg	**Pg**	**14 31 45.9**	**-2.9**
CMMT				Sg	**Sg**	**14 33 06.1**	**-1.6**
CMAR	**Chiang Mai Arr**	**6.44**	**171**	Pn	**Pn**	**14 31 29.2**	**+2.2**
	1.1nm,0.3s,baz=345,slow=13,SNR=5.6						
CMAR				Pg	**Pg**	**14 31 51.1**	**-4.3**
	1.0nm,0.3s,baz=346,slow=18,SNR=12						
CMAR				Lg	Lg	14 33 17.8	
	4.0nm,0.3s,baz=352,slow=31,SNR=6.1						
CMAR				LR	LR	14 33 52.9	
	comp=Z,66nm,19.4s,baz=355,slow=37						
CM02	**Chiang Mai Arr**	**6.47**	**171**	Pg	**Pg**	**14 31 54.4**	**-1.4**
LAMP	**Lampang**	**6.51**	**165**	Pg	**Pg**	**14 31 55.7**	**-0.9**
LAMP				Sg	**Sg**	**14 33 19.1**	**-1.9**
MHMT	**Maesarieng**	**6.65**	**180**	Pg	**Pg**	**14 32 00.5**	**+1.2**
MHMT				Sg	**Sg**	**14 33 25.1**	**-0.3**
GYA	**Guiyang**	**8.09**	**77**	⇓*iP*	**Pn**	**14 31 50.5**	**+0.9**
GYA				S	**Sn**	**14 33 25.3**	**+4.1**
GYA				smax	smax		
	comp=N,10.0nm,1.1s						
GYA				smax	smax		
	comp=E,10.0nm,0.7s						
GYA				LR	LR		
	comp=E,290nm,7.6s						
GYA				LR	LR		
	comp=Z,400nm,9.9s						
LZH	**Lanzhou**	**12.32**	**23**	*eP*	**Pn**	**14 32 45.5**	**-2.0**
LZH				pP		14 32 49.3	
LZH				PP	**PnPn**	**14 32 55.3**	**-0.2**
LZH				LR	LR		
	comp=E,220nm,10.8s						
LZH				LR	LR		
	comp=Z,250nm,8.7s						
WHN	**Wuhan**	**15.65**	**65**	P	**P**	**14 33 39.0**	**+2.3**
WHN				S	**S**	**14 36 35.0**	**-6.3**
WHN				LR	LR		
	comp=E,320nm,7.4s						
BHPL	**Bhopal**	**18.75**	**269**	*eP*	**Pn**	**14 34 12.6**	**+1.0**
BHPL				IAmb	IAmb	14 34 15.7	
	comp=Z,20nm,1.1s						
HHC	**Hu-ho-hao-te**	**19.62**	**32**	*eP*	**P**	**14 34 17.3**	**-3.4**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,29nm,5.1s						
HHC				LR	LR		
	comp=N,120nm,10.2s						
HHC				LR	LR		
	comp=E,110nm,9.0s						
HHC				LR	LR		
	comp=Z,100nm,9.6s						
DHRM	**DHARAMSHALA**	**20.31**	**296**	*eP*	**P**	**14 34 28.1**	**-0.3**
WMQ	**Urumqi**	**20.67**	**339**	*eP*	**P**	**14 34 30.0**	**-2.0**
SONM	**Songino Array**	**23.91**	**14**	P	**P**	**14 35 06.4**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=193,slow=9.7,SNR=3.6						
SONM				LR	LR	14 45 15.4	
	comp=Z,80nm,18.3s,baz=210,slow=39						
MKAR	**Makanchi Array**	**25.19**	**334**	P	**P**	**14 35 18.0**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=147,slow=9.3,SNR=13						
AAK	**Ala-Archa**	**26.18**	**318**	P	**P**	**14 35 28.0**	**+1.2**
	comp=Z,0.8nm,0.3s,baz=117,slow=11,SNR=5.8						
KURBB	**Kurchatov Arra**	**29.75**	**335**	P	**P**	**14 35 59.3**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=143,slow=9.5,SNR=3.3						
ZALV	**Zalesovo Beam**	**30.65**	**345**	P	**P**	**14 36 06.5**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=170,slow=9.0,SNR=5.5						
WRA	**Warramunga Arr**	**56.93**	**138**	P	**P**	**14 39 38.7**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=317,slow=5.9,SNR=5.3						
ASAR	**Alice Springs**	**59.55**	**141**	P	**P**	**14 39 57.2**	**+1.3**
	comp=Z,0.3nm,0.8s,baz=321,slow=6.6,SNR=4.9						
NOA	**NORSAR Array B**	**66.99**	**328**	LR	LR	15 09 43.0	
	comp=Z,15nm,20.4s,baz=200,slow=36						
GERES	**GERESS Array B**	**67.99**	**315**	P	**P**	**14 40 51.7**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=73,slow=4.6,SNR=4.7						

*TUL **30** 14:32:16.1±0.8,36.°813N±0.°009×97.°76W±0.°04, h3km±5km, ML3.4, Error ellipse: s-maj=4.8km s-min=1.2km az=95.0*
*NEIC **30** 14:32:16.7±0.6,36.°82N±0.°02×97.°78W±0.°02, h7km±12km, Error ellipse: s-maj=3.3km s-min=2.1km az=197.0*
*ANF **30** 14:32:17.9±0.9,36.°80N×97.°85W, h16km±5km, ML4.3/17, ML4.3/17, Error ellipse: s-maj=2.2km s-min=1.7km az=25.0*
ISC 30 14:32:16.1±0.8,36.°81N±0.°03×97.°78W±0.°03, h10km, n55,
σ1°37/63, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	**1.03**	**84**		**Pg**	**14 32 35.2**	**-0.7**
U32A	**Winter Ranch,**	**1.07**	**247**		**Pg**	**14 32 36.4**	**-0.3**
ADOK	**Arcadia Dam**	**1.20**	**164**	Pg	**Pb**	**14 32 38.8**	**-0.3**
OKCFA	**Oklahoma City**	**1.42**	**169**		**Pb**	**14 32 42.6**	**-0.1**
OKCSW	**OKLAHOMA CITY**	**1.43**	**169**		**Pb**	**14 32 42.8**	**-0.1**
FNO	**Franklin**	**1.58**	**169**		**Pb**	**14 32 45.3**	**-0.1**
R32A	**Long Quarter,**	**1.77**	**336**		**Pb**	**14 32 48.2**	**-0.5**
W35A	**Tecumseh**	**1.81**	**156**		**Pn**	**14 32 48.4**	**+1.0**
TUL1	**Leonard**	**1.84**	**119**	P	**Pb**	**14 32 49.1**	**-0.9**
	baz=300						
TUL1				S	**Sb**	**14 33 14.0**	**+1.0**
	baz=300						
TUL1	**Leonard**	**1.84**	**119**		**Pb**	**14 32 49.0**	**-0.9**
X34A	**Smith Ranch, M**	**2.21**	**181**	Pn	**Pb**	**14 32 54.6**	**-1.5**
WMOK	**Wichita Mounta**	**2.22**	**202**	P	**Pn**	**14 32 53.9**	**+0.9**
	baz=22						
WMOK	**Wichita Mounta**	**2.22**	**202**	Pn	**Pn**	**14 32 54.0**	**+0.9**
KSU1	**Kansas State U**	**2.47**	**22**	P	**Pn**	**14 32 57.6**	**+1.2**
	baz=202,SNR=8.0						
KSU1				S	**Sn**	**14 33 29.0**	**+2.4**
	baz=202						
KSU1	**Kansas State U**	**2.47**	**22**		**Pn**	**14 32 57.6**	**+1.2**
CBKS	**Cedar Bluff**	**2.53**	**323**	Sb	**Sb**	**14 33 34.8**	**+2.0**
	baz=142						
CBKS	**Cedar Bluff**	**2.53**	**323**		**Pn**	**14 32 57.6**	**+0.3**
U38A	**Gravette**	**2.76**	**97**		**Pn**	**14 33 02.9**	**+2.5**
X37A	**Clayton**	**2.96**	**138**		**Pn**	**14 33 05.3**	**+2.1**
HHAR	**Hobbs**	**3.14**	**99**	Pn	**Pn**	**14 33 07.1**	**+1.5**
Z35A	**Perchaven, San**	**3.50**	**173**	Pn	**Pn**	**14 33 12.1**	**+1.5**
W39A	**Magazine**	**3.62**	**115**	P	**Pn**	**14 33 13.6**	**+1.4**
	baz=268						
AMTX	**Amarillo**	**3.70**	**240**	P	**Pn**	**14 33 14.5**	**+1.0**
	baz=58						
AMTX	**Amarillo**	**3.70**	**240**	Pn	**Pn**	**14 33 15.6**	**+2.1**
U40A	**Yellville**	**3.99**	**95**	P	**Pn**	**14 33 18.8**	**+1.4**
	baz=278,SNR=9.6						
U40A				Sb	**Sg**	**14 34 20.6**	**-3.8**
	baz=278						
U40A	**Yellville**	**3.99**	**95**	Pn	**Pn**	**14 33 18.9**	**+1.4**
MIAR	**Mount Ida**	**4.10**	**122**	P	**Pn**	**14 33 20.7**	**+1.8**
	baz=305						
MIAR				S	**Sn**	**14 34 07.8**	**+0.9**
	baz=305						
MIAR	**Mount Ida**	**4.10**	**122**	Pn	**Pn**	**14 33 22.3**	**+3.4**
P38A	**Dawn**	**4.37**	**49**	Pn	**Pn**	**14 33 24.7**	**+2.2**
N35A	**Tabor**	**4.38**	**22**	Pn	**Pn**	**14 33 24.0**	**+1.4**
KSCO	**Kaye Shedlock'**	**4.42**	**301**	S	**Sn**	**14 34 15.0**	**+0.2**
	baz=118						
MGMO	**Mountain Grove**	**4.43**	**84**	Pn	**Pn**	**14 33 25.3**	**+1.9**
ABTX	**Abilene, Hawle**	**4.45**	**201**	P	**Pn**	**14 33 24.6**	**+1.0**
	baz=20						
ABTX				S	**Sn**	**14 34 16.5**	**+0.9**
	baz=20						
BGNE	**Belgrade**	**4.60**	**357**	P	**Pn**	**14 33 26.6**	**+0.8**
	baz=176						
BGNE				S	**Sn**	**14 34 19.9**	**+0.6**
	baz=176						
BGNE	**Belgrade**	**4.60**	**357**	Pn	**Pn**	**14 33 26.8**	**+1.0**
R40A	**Maddies Statio**	**4.62**	**70**	Pn	**Pn**	**14 33 27.0**	**+0.9**
X40A	**Basin Creek Fa**	**4.65**	**118**	P	**Pn**	**14 33 28.3**	**+1.9**
	baz=301,SNR=5.4						
X40A				S	**Sn**	**14 34 21.4**	**+1.0**
	baz=301						
W41B	**Gary Mavity, V**	**4.78**	**108**	P	**Pn**	**14 33 30.2**	**+2.1**
	baz=292						
WHTX	**Lake Whitney,**	**4.81**	**177**	P	**Pn**	**14 33 29.4**	**+0.8**
	baz=357						
WHTX	**Lake Whitney,**	**4.81**	**177**	Pn	**Pn**	**14 33 29.5**	**+0.8**
P40A	**Paris**	**5.27**	**57**	Pn	**Pn**	**14 33 35.1**	**+0.1**
OGNE	**Ogallala**	**5.29**	**323**	P	**Pn**	**14 33 35.7**	**+0.3**
	baz=140,SNR=7.9						
OGNE				S	**Sn**	**14 34 37.7**	**+1.2**
	baz=140						
T25A	**Trinidad**	**5.32**	**276**	P	**Pn**	**14 33 36.4**	**+0.6**
	baz=92						
N38A	**Joes South For**	**5.33**	**40**	Pn	**Pn**	**14 33 36.1**	**+0.4**
CCM	**Cathedral Cave**	**5.35**	**75**	P	**Pn**	**14 33 37.1**	**+1.1**
	baz=258						
CCM	**Cathedral Cave**	**5.35**	**75**	Pn	**Pn**	**14 33 36.9**	**+0.9**
T42A	**Van Buren**	**5.37**	**86**	Pn	**Pn**	**14 33 38.4**	**+2.2**
JCT	**Junction City**	**6.54**	**195**	Pn	**Pn**	**14 33 52.6**	**+0.3**
N41A	**Harden Midland**	**6.67**	**52**	Pn	**Pn**	**14 33 55.4**	**+1.3**
ECSD	**EROS Data Cent**	**6.97**	**7**	Pn	**Pn**	**14 33 58.0**	**-0.3**
L40A	**Anamosa**	**7.30**	**42**	Pn	**Pn**	**14 34 03.0**	**+0.2**
HDIL	**Hopedale**	**7.62**	**58**	Pn	**Pn**	**14 34 08.0**	**+0.8**
L42A	**Oliver, Polo**	**8.14**	**48**	Pn	**Pn**	**14 34 14.6**	**+0.2**
JFWS	**Jewell Farm**	**8.41**	**41**	Pn	**Pn**	**14 34 17.3**	**-0.7**
TX32	**Lajitas Array**	**8.94**	**215**	Pn	**Pn**	**14 34 25.4**	**-0.1**

*SOME **30** 14:57:13.8, 40.°03N×74.°33E, h5km*
*KRNET **30** 14:57:16.2±0.1, 39.°99N×74.°09E, mb3.0*
*NNC **30** 14:57:18.6±1.0, 40.°18N×74.°35E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=7.5km s-min=4.0km az=168.0*
ISC 30 14:57:15.5±1.4,40.°08N±0.°07×74.°30E±0.°03, h10km, n45,
σ1°69/68, 15C-9D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**1.60**	**321**	⇓*iP*	**Pg**	**14 57 45.7**	**-0.4**
	baz=28						
ARSB				⇓*iS*	**Sg**	**14 58 07.0**	**+0.2**
	baz=28						
AML	**Almayashu**	**2.10**	**348**	⇓*iP*	**Pg**	**14 57 55.2**	**-0.5**
	baz=52						
AML				⇓*iS*	**Sg**	**14 58 23.8**	**+0.9**
	baz=52						
AML	**Almayashu**	**2.10**	**348**	P	**Pg**	**14 57 57.2**	**+1.5**
	SNR=14						
KZA	**Kyzart**	**2.12**	**19**	P	**Pg**	**14 57 55.3**	**-0.8**
	SNR=6.3						
UCH	**Uchtor**	**2.15**	**4**	⇓*iP*	**Pg**	**14 57 56.5**	**-0.2**
	baz=8.0						
UCH				⇓*iS*	**Sg**	**14 58 26.2**	**+1.6**
	baz=8.0						
UCH	**Uchtor**	**2.15**	**4**	P	**Pg**	**14 57 56.5**	**-0.2**
	SNR=15						
ARK	**Arkit**	**2.46**	**315**	⇑*iP*	**Pb**	**14 57 58.6**	**-1.3**
	baz=19						
ARK				⇑*eS*	**Sb**	**14 58 29.2**	**-1.2**
	baz=19						
AAK	**Ala-Archa**	**2.56**	**3**	⇑*eP*	**Pb**	**14 58 02.1**	**+0.6**
	baz=6.0						
AAK				⇑*iS*	**Sg**	**14 58 35.6**	**-2.0**
	baz=6.0						
AAK	**Ala-Archa**	**2.56**	**3**	P	**Pg**	**14 58 04.5**	**0.0**
	SNR=6.7						
EKS2	**Erkin-Say**	**2.61**	**351**	⇑*iP*	**Pb**	**14 58 02.4**	**0.0**
	baz=55						
EKS2				⇑*iS*	**Sb**	**14 58 35.9**	**+1.4**
	baz=55						
EKS2	**Erkin-Say**	**2.61**	**351**	P	**Sg**	**14 58 42.0**	**+2.8**
	SNR=5.4						
ULHL	**Ulahol**	**2.61**	**33**	⇓*iP*	**Pb**	**14 58 03.6**	**+1.1**
	baz=35						
ULHL				⇓*iS*	**Sg**	**14 58 38.4**	**-1.0**
	baz=35						
ULHL	**Ulahol**	**2.61**	**33**	P	**Pg**	**14 58 04.7**	**-0.9**
	SNR=10						
BTK	**Batken**	**2.67**	**271**	⇑*iP*	**Pn**	**14 58 00.1**	**+1.5**
	baz=73						
BTK				⇑*iS*	**Sn**	**14 58 31.8**	**+0.7**
	baz=73						
BOOM	**Boomskoye usch**	**2.70**	**27**	⇑*iP*	**Pb**	**14 58 04.8**	**+0.8**
	baz=29						
BOOM				⇑*iS*	**Sg**	**14 58 40.6**	**-1.7**
	baz=29						
MRKS	**Merke**	**2.78**	**343**	*eP*	**Pb**	**14 58 06.5**	**+1.2**
	3.5nm,0.2s						
MRKS				*eS*	**Sg**	**14 58 44.6**	**-0.2**
	13nm,0.3s						
MRKS	**Merke**	**2.78**	**343**	Pg	**Pg**	**14 58 07.6**	**-1.2**
	3.0nm,0.3s						
MRKS				Lg	Lg	14 58 44.5	
	13nm,0.3s						
USP	**Ospenovka**	**3.19**	**3**	⇑*iP*	**Pb**	**14 58 10.8**	**-1.4**
	baz=5.0						
USP				⇑*iS*	**Sb**	**14 58 50.6**	**-0.5**
	baz=5.0						
USP	**Ospenovka**	**3.19**	**3**	P	**Sg**	**14 58 58.5**	**+0.7**
	SNR=5.1						
KST	**Kastek**	**3.21**	**22**	*eP*	**Pb**	**14 58 14.0**	**+1.3**
	3.6nm,0.3s						
KST				*eS*	**Sg**	**14 58 57.4**	**-1.2**
	3.6nm,0.4s						
KST	**Kastek**	**3.21**	**22**	Pg	**Pg**	**14 58 15.1**	**-1.9**
	3.4nm,0.3s						
KST				Lg	Lg	14 58 57.9	
	10nm,0.4s						
DGS	**Degeres**	**3.34**	**19**	*eP*	**Pb**	**14 58 16.5**	**+1.6**
	4.7nm,0.3s						
DGS				*eS*	**Sg**	**14 59 02.1**	**-0.8**
	12nm,0.5s						
DGS	**Degeres**	**3.34**	**19**	Pg	**Pg**	**14 58 17.6**	**-2.0**
	2.0nm,0.3s						
DGS				Lg	Lg	14 59 02.1	
	12nm,0.7s						
IZV	**Izvestkoviy**	**3.42**	**30**	*eP*	**Pg**	**14 58 18.6**	**-2.4**
	5.1nm,0.6s						
IZV				*eS*	**Sg**	**14 59 05.1**	**-0.3**
	9.6nm,0.6s						
IZV	**Izvestkoviy**	**3.42**	**30**	Pg	**Pg**	**14 58 19.1**	**-1.9**
	5.1nm,0.6s						
IZV				Lg	Lg	14 59 05.1	
	9.6nm,0.6s						
MTBS	**Maitube**	**3.44**	**27**	*eP*	**Pb**	**14 58 18.4**	**+1.9**
	3.3nm,0.1s						
MTBS				*eS*	**Sg**	**14 59 05.1**	**-0.8**
	18nm,0.5s						
MTBS	**Maitube**	**3.44**	**27**	Pg	**Pg**	**14 58 19.6**	**-1.7**
	2.6nm,0.1s						
MTBS				Lg	Lg	14 59 05.1	
	18nm,0.5s						
TNSS	**Tian-Shan**	**3.56**	**33**	*eP*	**Pb**	**14 58 20.8**	**+2.1**
	4.6nm,0.2s						
TNSS				*eS*	**Sg**	**14 59 08.9**	**-0.8**
	5.4nm,0.5

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.22**	**264**	*i* P	Pn	15 16 34.3	+0.3
	baz=264						
TWD				S	Sn	15 16 40.7	+0.8
	baz=264						
NACB	**Ninganchiao**	**0.23**	**288**	*i* P	Pn	15 16 34.4	+0.2
	baz=288						
NACB				*i* S	Sn	15 16 40.8	+0.8
	baz=288						
HWA	**Hwalien**	**0.24**	**239**	*e*P	Pn	15 16 34.8	+0.6
	baz=237						
ENA	**Nanau**	**0.33**	**346**	*i* P	Pn	15 16 35.3	+0.2
	baz=346						
ENA				S	Sn	15 16 42.6	+0.9
	baz=346						
ETLH	**Xiulin Townshi**	**0.34**	**288**	*i* P	Pn	15 16 35.6	+0.3
	baz=287						
ETLH				S	Sn	15 16 42.2	+0.4
	baz=287						
ESL	**Shilin**	**0.47**	**232**	*e*P	Pn	15 16 36.7	+0.1
	baz=230						
ESL				*e*S	Sn	15 16 44.8	+0.7
	baz=230						
TWC	**Suao**	**0.50**	**2⇓**	*i*P	Pn	15 16 37.5	+0.5
	baz=2.0						
TWC				S	Sn	15 16 45.9	+0.9
	baz=2.0						
WHF	**Hehuan Shan**	**0.52**	**275**	*e*S	Sn	15 16 46.8	+0.7
	baz=274						
NNSH	**Datong**	**0.52**	**308**	*i* P	Pn	15 16 37.8	+0.4
	baz=308						
NNSH				S	Sn	15 16 46.4	+0.8
	baz=308						
NNSB	**Datong**	**0.52**	**308**	*i* P	Pn	15 16 37.8	+0.4
	baz=308						
NNSB				*i* S	Sn	15 16 46.4	+0.8
	baz=308						
NNS	**Nan Shan**	**0.54**	**309**	*i* P	Pn	15 16 37.9	+0.3
	baz=309						
NNS				S	Sn	15 16 46.5	+0.6
	baz=309						
EGFH	**Guangfu**	**0.57**	**221**	*e*P	Pn	15 16 38.0	+0.2
	baz=220						
EGFH				*e*S	Sn	15 16 46.8	+0.3
	baz=220						
NDT	**Datong Townshi**	**0.58**	**330**	P	Pn	15 16 38.6	+0.6
	baz=329						
NDT				*i* S	Sn	15 16 47.7	+1.0
	baz=329						
CHGB	**Renai**	**0.60**	**266**	P	Pn	15 16 39.0	+0.5
	baz=265						
CHGB				*e*S	Sn	15 16 48.5	+1.0
	baz=265						
TWE	**Neicheng**	**0.63**	**346**	P	Pn	15 16 39.3	+0.6
	baz=347						
TWE				*e*S	Sn	15 16 49.2	+1.4
	baz=347						
YHNB	**Yeheng**	**0.70**	**324**	P	Pn	15 16 40.3	+0.7
	baz=323						
YHNB				*e*S	Sn	15 16 50.2	+0.6
	baz=323						
HGSD	**Ruisui**	**0.71**	**212**	*e*P	Pn	15 16 40.1	+0.4
	baz=211						
HGSD				S	Sn	15 16 51.0	+1.3
	baz=211						
VWDT	**VWDT**	**0.72**	**241**	*e*P	Pn	15 16 40.7	+0.9
	baz=241						
VWDT				S	Sn	15 16 51.1	+1.2
	baz=241						
NWLT	**Wulai**	**0.73**	**336**	*e*S	Sn	15 16 50.7	+0.4
	baz=335						
NTC	**Toucheng**	**0.75**	**360**	*i* S	Sn	15 16 51.7	+1.2
	baz=359						
EHY	**Hungye**	**0.76**	**218**	*e*P	Pn	15 16 40.0	-0.3
	baz=217						
EHY				*e*S	Sn	15 16 50.1	-0.6
	baz=217						
WHP	**Taichung City**	**0.83**	**282**	*e*P	Pn	15 16 43.4	+2.1
	baz=282						
WHP				*e*S	Sn	15 16 54.5	+1.9
	baz=282						
YULB	**Yu-li**	**0.86**	**215**	*e*P	Pn	15 16 41.3	-0.4
	baz=214						
YULB				*e*S	Sn	15 16 52.3	-0.9
	baz=214						
SSLB	**Suanglung**	**0.86**	**249**	S	Sn	15 16 54.6	+1.3
	baz=248						
TIPB	**Shuangxi**	**0.86**	**360**	P	Pn	15 16 42.7	+0.9
	baz=359						
TIPB				*e*S	Sn	15 16 55.1	+1.7
	baz=359						
TWF1	**Yuli**	**0.89**	**213**	*e*P	Pn	15 16 42.7	+0.6
	baz=212						
LIOB	**Emei**	**0.92**	**306**	*e*P	Pn	15 16 44.0	+1.5
	baz=306						
WHYT	**Xinyi Township**	**0.98**	**246**	*e*P	Pn	15 16 45.1	+1.7
	baz=245						
CHN5	**Tsauling**	**1.17**	**245**	*e*P	Pn	15 16 47.2	+1.2
	baz=244						
ELDTW	**Lidau**	**1.18**	**220**	*e*P	Pn	15 16 46.6	+0.5
	baz=219						
WTP	**Ta-pu**	**1.41**	**233**	*e*P	Pn	15 16 50.0	+0.9
	baz=232						
SLGT	**Liugui**	**1.55**	**225**	*e*P	Pn	15 16 53.8	+2.7
	baz=224						

JMA 30 15:17:12.8±0.1, 24°.85N×123°.24E, h23km±3km, M2.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.44**	**208**	P	Pb	15 17 21.7	-0.2
YOJ				*e*S	Sb	15 17 28.0	-0.1
JYNG	**Yonagunijimaku**	**0.48**	**214**	P	Pb	15 17 22.4	-0.2
JYNG				S	Sb	15 17 28.9	-0.3
IRIF	**Iriomote-Funau**	**0.68**	**139**	P	Pb	15 17 25.7	-0.3
IRIF				*e*S	Sb	15 17 35.2	+0.2
JKRS	**Kuro-shima**	**0.93**	**131**	P	Pb	15 17 29.7	-0.5
JKRS				S	Sb	15 17 41.9	-0.2
HATJ	**Hateruma jima**	**0.94**	**147**	P	Pb	15 17 30.0	-0.5
HATJ				*e*S	Sb	15 17 42.2	-0.3
JIJ	**Ishigaki jima**	**0.95**	**120**	P	Pb	15 17 29.9	-0.8
JIJ				*e*S	Sb	15 17 42.7	-0.2
JISG	**Ishigakijimahi**	**1.01**	**105**	P	Pn	15 17 30.9	-0.6
JTJ	**Tarama**	**1.35**	**99**	P	Pb	15 17 36.8	-0.5
JTJ				S	Sb	15 17 53.8	-0.3

*MAN **30** 15:26:10.9, 9°.36N×126°.91E, h1km, MS5.6*

MAN Intensity IV - Surigao City & General Luna Surigao del Norte; Intensity III - Tandag, Surigao del Sur; Intensity II - San Jose, Dinagat Island, Surigao del Norte; Bayabas & Tago, Surigao del Sur.

*BJI **30** 15:26:10.7±0.0, 9°.21N×126°.71E, h10km, mB5.2/74, mb5.2/69, Ms5.4/90, Ms7 5.3/83*

*MOS **30** 15:26:12.7±1.0, 9°.28N×126°.36E, h18km, mb5.5/52, MS5.1/32, Error ellipse: s-maj=9.2km s-min=4.7km az=110.0*

*IDC **30** 15:26:12.1±0.3, 9°.28N×126°.41E, h0km, mb5.0/42, mb1 5.0/44, mb1mx5.0/48, mbtmp5.0/44, ML4.3/2, MS4.9/45, Ms1 4.9/45, ms1mx4.9/62, Error ellipse: s-maj=13.7km s-min=8.7km az=80.0*

*NEIC **30** 15:26:14.2, 9°.39N×126°.47E, h17km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr1.74; Mθθ0.37; Mϕϕ -2.11; Mrθ -0.31; Mrϕ 0.98; Mθϕ 0.83; Fault plane solution: M0 2.36000×10^17 NP1:ϕs162.10000°, δ33.59000°, λ91.93000°. NP2:ϕs339.79000°, δ56.43000°, λ88.72000°. Principal axes: T 1.9207, Plg79.0000°, Azm245.0000°; N 0.7122, Plg1.0000°, Azm340.0000°; P -2.6330, Plg11.0000°, Azm71.0000°;*

*NEIC **30** 15:26:14.2±2.3, 9°.39N±0°.06×126°.47E±0°.08, h15km±3km, mb5.3/105, Ms_20 5.2/449, Mwb5.5/45, Mww5.7, Mwc5.7(GCMT) Error ellipse: s-maj=12.7km s-min=7.9km az=67.0*

*DJA **30** 15:26:19.1±0.3, 10°.2°×12°.7E±°, h57km±3km, M5.2/98, mb5.4/98, mB5.6/66, MLv5.1/2, Mw(mB)5.1/66, Mwp5.5/38*

*GCMT **30** 15:26:20.2±0.1, 9°.36N±0°.01×126°.73E±0°.01, h22km, MW5.7/151, Moment Tensor Solution. s142,c249; s151,c283; Duration: 1ŝ7 Moment tensor: Scale 10^17 Nm; Mrr3.34±.05; Mθθ0.17±.03; Mϕϕ -3.51±.04;*

Mrθ-0.97±.07; Mθϕ0.96±.03; Mϕr1.87±.07; Best double couple: M0 4.12700×10^17 NP1:ϕs175.00000°, δ31.00000°, λ104.00000°. NP2:ϕs339.00000°, δ60.00000°, λ82.00000°. Principal axes: T 3.9530, Plg73.0000°, Azm229.0000°; N 0.3410, Plg7.0000°, Azm343.0000°; P -4.3000, Plg15.0000°, Azm75.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*NEIC **30** 15:26:21, 9°.34N×126°.75E, h22km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr3.40; Mθθ0.22; Mϕϕ -3.61; Mrθ -0.80; Mθϕ 1.00; Mϕr2.19; Fault plane solution: M0 4.33000×10^17 NP1:ϕs171.00000°, δ29.00000°, λ97.00000°. NP2:ϕs342.00000°, δ61.00000°, λ86.00000°. Principal axes: T 4.0914, Plg73.0000°, Azm243.0000°; N 0.4451, Plg3.0000°, Azm344.0000°; P -4.5366, Plg16.0000°, Azm75.0000°;*

*KLM **30** 15:26:22.0, 9°.36N×126°.75E, h82km, mb5.5*

*NEIC **30** 15:26:25, 9°.45N×126°.77E, h14km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr2.90; Mθθ-0.19; Mϕϕ -2.71; Mrθ -1.30; Mθϕ 0.92; Mϕr2.47; Fault plane solution: M0 4.06000×10^17 NP1:ϕs169.00000°, δ24.00000°, λ102.00000°. NP2:ϕs335.00000°, δ67.00000°, λ84.00000°. Principal axes: T 4.0238, Plg68.0000°, Azm235.0000°; N 0.0713, Plg5.0000°, Azm337.0000°; P -4.0951, Plg22.0000°, Azm69.0000°;*

ISC 30 15:26:16.3±0.4, 9°.31N±0°.02×126°.58E±0°.03, h27km±2km, h28km:pP-P, n817, σ2=05/632, mb5.2/176, MS5.2/318, 41C-23D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.14**	**191**	⇓*i*P	Pb	15 26 46.7	+9.3
BIPH				*i* S	Sb	15 27 02.1	+10
SCPH	**Surigao**	**1.17**	**294**	⇓*i*P	**Pb**	**15 26 37.5**	**-0.4**
SCPH				*i* S	**Sn**	**15 26 50.2**	**-1.8**
MSLP	**Maasin**	**1.88**	**296**	*e*P	**Pb**	**15 26 48.9**	**-1.1**
MSLP				*e*S	**Sb**	**15 27 17.0**	**+3.9**
CGP	**Cagayan de Oro**	**2.05**	**246**	⇑*i*P	**Pb**	**15 26 51.4**	**-1.4**
CGP				*i* S	**Sb**	**15 27 22.0**	**+4.1**
BUKP	**Musuan**	**2.07**	**227**	*e*P	**Pb**	**15 26 52.2**	**-1.0**
BUKP				*e*S	**Sb**	**15 27 21.9**	**+3.4**
MATI	**Mati**	**2.37**	**188**	*e*P	**Pn**	**15 26 53.7**	**+0.3**
MATI				*e*S	**Sb**	**15 27 29.1**	**+1.9**
DAV	**Davao City (W)**	**2.44**	**204**	Pn	**Pb**	**15 26 58.4**	**-1.1**
	238nm,0.3s,baz=56,slow=2.8,SNR=27						
DAV				Sn	**Sn**	**15 27 21.7**	**-1.5**
	614nm,0.3s,baz=140,slow=24,SNR=5.0						
DAV				LR	LR	15 27 56.3	
	comp=Z,68μm,18.8s,baz=37,slow=44						
DAV	**Davao City (W)**	**2.44**	**204**	P	**Pn**	**15 26 55.6**	**+1.2**
DAV	**Davao City (W)**	**2.44**	**204**		**Pb**	**15 26 57.1**	**-2.4**
DMPH	**Davao City--Mi**	**2.46**	**206**	⇓*e*P	**Pb**	**15 26 58.3**	**-1.5**
DMPH				*i* S	**Sb**	**15 27 28.6**	**-1.1**
KCP	**Kidapawan**	**2.72**	**213**	⇑*e*P	**Pn**	**15 27 00.3**	**+2.0**
KCP				*i* S	**Sb**	**15 27 35.3**	**-2.1**
CTBH	**Cotabato--PC H**	**3.11**	**228**	⇑*i*P	**Pn**	**15 27 07.0**	**+3.5**
DDMP	**Don Marcelino,**	**3.30**	**195**	*e*P	**Pn**	**15 27 07.4**	**+1.2**
DDMP				*e*S	**Sb**	**15 27 53.3**	**-0.6**
SKMP	**Bagumbayan, Su**	**3.43**	**216**	*e*P	**Pn**	**15 27 10.1**	**+2.1**
PAGZ	**Pagadian**	**3.48**	**246**	*e*P	**Pn**	**15 27 10.6**	**+1.9**
GSPH	**General Santos**	**3.59**	**207**	⇑*i*P	**Pn**	**15 27 13.0**	**+2.7**
GSPH				*i* S	**Sb**	**15 28 03.6**	**+1.3**
CNP	**Catarman**	**3.69**	**330**	*e*P	**Pn**	**15 27 12.0**	**+0.4**
CNP				*e*S	**Sb**	**15 28 11.1**	**+5.9**
CNOP	**Candoni, Negro**	**3.92**	**278**	*e*P	**Pn**	**15 27 17.1**	**+2.4**
GUIM	**Jordan**	**4.14**	**289**	*e*P	**Pn**	**15 27 20.2**	**+2.4**
GUIM				*e*S	**Sn**	**15 28 10.0**	**+4.7**
RCP	**Roxas**	**4.38**	**301**	⇑*e*P	**Pn**	**15 27 24.8**	**+3.7**
JAP	**San Jose, Anti**	**4.78**	**288**	⇓*e*P	Pn	15 27 31.6	+5.1
PVCP	**Virac**	**4.88**	**331**	*e*P	**Pn**	**15 27 30.2**	**+2.3**
ZCP	**Zamboanga City**	**5.05**	**242**	⇓*e*P	**Pn**	**15 27 29.5**	**-0.7**
OTRP	**Odiongan**	**5.41**	**305**	*e*P	**Pn**	**15 27 38.4**	**+3.3**
CUYO	**Cuyo Island**	**5.69**	**286**	*e*P	**Pn**	**15 27 42.4**	**+3.4**
GQP	**Guinayangan**	**6.10**	**319**	⇓*e*P	**Pn**	**15 27 46.7**	**+2.0**
BOAC	**Boac**	**6.21**	**312**	*e*P	**Pn**	**15 27 49.2**	**+3.1**
SJMP	**San Jose**	**6.21**	**301**	*e*P	**Pn**	**15 27 50.9**	**+4.7**
BUSP	**Coron**	**6.82**	**294**	*e*P	**Pn**	**15 27 57.6**	**+3.1**
LQP	**Lukban**	**6.86**	**315**	*e*P	**Pn**	**15 27 56.4**	**+1.0**
PGP	**Puerto Galera**	**6.91**	**308**	⇓*e*P	**Pn**	**15 27 54.6**	**-1.3**
POLP	**Polilio Island**	**7.04**	**320**	*e*P	**Pn**	**15 28 00.2**	**+2.5**
TGY	**Tagaytay City**	**7.29**	**311**	Pn	Pn	15 28 06.1	+5.0
	30nm,0.3s,baz=168,slow=2.2,SNR=11						
TGY				Sn	Sn	15 29 10.3	-13
	69nm,0.3s,baz=156,slow=6.8,SNR=1.4						
TGY				LR	LR	15 31 08.5	
	comp=Z,20μm,20.5s,baz=123,slow=41						
BALP	**Baler**	**8.04**	**323**	*e*P	**Pn**	**15 28 11.4**	**0.0**
TNTI	**Ternate**	**8.52**	**175**	P	**Pn**	**15 28 22.3**	**+4.3**
	3μm5μm351nm,0.9s						
TNTI	**Ternate**	**8.52**	**175**	Pn	**Pn**	**15 28 19.4**	**+1.5**
PALP	**Palanan**	**8.70**	**333**	*e*P	**Pn**	**15 28 20.5**	**+0.1**
CAUP	**Cauayan**	**8.89**	**329**	*e*P	**Pn**	**15 28 21.9**	**-1.1**
KMSI	**Cibinong**	**9.06**	**197**	P	Pn	15 28 30.3	+5.0
	5μm480nm,0.8s						
SCZP	**Santa Cruz**	**9.14**	**315**	*e*P	Pn	15 28 31.6	+5.1
BOLP	**Bolinao**	**9.57**	**318**	*e*P	**Pn**	**15 28 34.1**	**+1.8**
MRSI	**Marisa**	**9.92**	**208**	P	**Pn**	**15 28 39.1**	**+2.0**
	18μm2μm300nm,1.2s						
LBMI	**Labuha**	**9.93**	**175**	P	**Pn**	**15 28 41.9**	**+4.6**
	4μm324nm,1.0s						
APYP	**Conner**	**9.96**	**329**	*e*P	**Pn**	**15 28 37.2**	**-0.4**
APYP				*e*S	**Sn**	**15 30 27.3**	**-1.2**
ABRA	**Dolores**	**10.06**	**326**	*e*P	**Pn**	**15 28 40.1**	**+1.1**
SZP	**Santa**	**10.12**	**325**		**Pn**	**15 28 40.3**	**+0.3**
KKM	**Kota Kinabalu**	**10.77**	**253**		Pn	15 28 54.6	+5.6
LUWI	**Luwuk**	**10.96**	**200**	P	Pn	15 28 58.6	+7.2
	11μm6μm532nm,1.0s						
LUWI	**Luwuk**	**10.96**	**200**	Pn	Pn	15 28 56.6	+5.2
SPMM	**Sapulut**	**11.03**	**246**	P	Pn	15 28 59.0	+6.6
MPSI	**Mapaga**	**11.12**	**217**	P	Pn	15 29 01.3	+7.7
	17μm910nm33nm,1.2s						
SIJI	**Sorong**	**11.14**	**155**	Pn	**Pn**	**15 28 54.3**	**+0.4**
	4.7nm,0.3s,baz=347,slow=11,SNR=29						
SIJI				Sn	**Sn**	**15 30 51.3**	**-6.3**
	3.6nm,0.3s,baz=182,slow=23,SNR=1.9						
NLAI	**Namlea**	**12.48**	**178**	P	**Pn**	**15 29 11.9**	**-0.3**
	2μm160nm,0.9s						
AAI	**Ambon**	**13.01**	**173**	P	Pn	15 29 24.3	+4.8
	2μm131nm,0.9s						
RKPI	**Ransiki, Papua**	**13.15**	**144**	P	**Pn**	**15 29 23.3**	**+1.9**
	7μm290nm,1.7s						
FAKI	**Fak Fak**	**13.40**	**155**	P	**Pn**	**15 29 27.0**	**+2.2**
	6μm3μm114nm,1.2s						
FAKI	**Fak Fak**	**13.40**	**155**	Pn	**Pn**	**15 29 25.0**	**+0.2**
TTSI	**Tana Toraja**	**14.00**	**209**	P	**P**	**15 29 39.6**	**-1.0**
	8μm3μm230nm,1.0s						
BKB	**Balikpapan**	**14.26**	**223**	P	P	15 29 52.1	+8.6
TWG	**Pinlang**	**14.43**	**339**	P	**P**	**15 29 44.1**	**-1.3**
SPSI	**Sidrap Palu**	**14.83**	**208**	P	**P**	**15 29 50.7**	**+0.8**
	10μm2μm149nm,1.0s						
YULB	**Yu-li**	**14.89**	**341**		**P**	**15 29 48.8**	**-1.6**
TPUB	**Ta-pu**	**15.03**	**338**		**P**	**15 29 51.7**	**-0.4**
BNSI	**Bone**	**15.07**	**206**	P	**P**	**15 29 54.0**	**+1.5**
	16μm5μm461nm,1.1s						
BBSI	**Bau Bau**	**15.23**	**195**	P	**P**	**15 29 55.0**	**+0.6**
	106nm8.6nm,0.7s						
SSLB	**Suanglung**	**15.37**	**340**		**P**	**15 29 55.5**	**-0.3**
NACB	**Ninganchiao**	**15.53**	**343**	P	**P**	**15 29 55.5**	**-2.1**
KAPI	**Kappang**	**15.78**	**206**	Pn	**Pn**	**15 29 58.1**	**+1.4**
	baz=23,slow=8.9,SNR=1.7						
KAPI				LR	LR	15 36 35.3	
	comp=Z,5μm,19.9s,baz=32,slow=40						
SBUM	**Sibu**	**15.82**	**245**	P	**P**	**15 30 04.0**	**+3.1**
BKSI	**Bulukumba**	**15.90**	**204**	P	**P**	**15 30 03.4**	**+1.7**
	8μm2μm112nm,1.0s						
KBKI	**Kotabaru**	**16.27**	**220**	P	**P**	**15 30 10.2**	**+4.4**
	1μm182nm,0.9s						
SMPI	**Sarmi**	**16.50**	**132**	P	**Pn**	**15 30 06.4**	**+0.5**
	6μm2μm91nm,1.5s						
QZH	**Quanzhou**	**17.31**	**335**	P	**P**	**15 30 19.0**	**+1.7**
QZH				S	**S**	**15 33 35.5**	**-0.6**
QZH				LR	LR		
	comp=N,7μm,16.7s						
QZH				LR	LR		
	comp=E,1μm,12.6s						
QZH				LR	LR		
	comp=Z,9μm,16.8s						
JOW	**Kunigami**	**17.50**	**5**	P	**P**	**15 30 21.4**	**+2.0**
	0.1nm,0.3s,baz=185,slow=15,SNR=7.0						
KSM	**Kuching**	**17.96**	**245**	P	**P**	**15 30 28.0**	**+3.4**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**17.98**	**130**	P	**Pn**	**15 30 24.2**	**-0.2**
	15μm5μm136nm,0.8s						
JAY	**Jayapura**	**18.34**	**129**	P	**Pn**	**15 30 30.4**	**+1.6**
	0.4nm,0.3s,baz=234,slow=7.2,SNR=8.5						
JAY				LR	LR	15 37 26.4	
	comp=Z,8μm,18.4s,baz=316,slow=37						
JAY	**Jayapura**	**18.34**	**129**	P	**P**	**15 30 28.1**	**-0.7**
	6μm2μm45nm,1.1s						
MMRI	**Maumere**	**18.35**	**194**	P	**Pn**	**15 30 33.5**	**+4.6**
	7μm3μm180nm,1.0s						
EDFI	**Ende, Flores**	**18.59**	**195**	P	**Pn**	**15 30 35.4**	**+3.4**
	4μm877nm63nm,0.8s						
GZH	**Guangzhou**	**18.66**	**319**	P	**Pn**	**15 30 36.3**	**+3.6**
GZH				S	**S**	**15 34 07.3**	**+3.9**
GZH				LR	LR		
	comp=N,12μm,18.8s						
GZH				LR	LR		
	comp=E,10μm,17.7s						
QIZ	**Qiongzhong**	**18.87**	**303**	P	**Pn**	**15 30 35.8**	**+0.5**
QIZ				S	**S**	**15 34 07.0**	**-0.6**
QIZ				sS	**sS**	**15 34 15.5**	**-3.1**
QIZ				pmax	pmax		
	comp=Z,15nm,0.7s						
QIZ				pmax	pmax		
	comp=Z,1μm,9.4s						
QIZ				LR	LR		
	comp=N,4μm,15.7s						
QIZ				LR	LR		
	comp=E,6μm,17.7s						
QIZ				LR	LR		
	comp=Z,8μm,16.7s						
QIZ	**Qiongzhong**	**18.87**	**303**	P	**P**	**15 30 34.6**	**+0.1**
SOEI	**Soe**	**19.08**	**187**	P	**Pn**	**15 30 40.2**	**+2.3**
	10μm4μm441nm,0.9s						
SOEI	**Soe**	**19.08**	**187**	P	**Pn**	**15 30 38.9**	**+0.9**
BATI	**Baumata**	**19.61**	**189**	P	**Pn**	**15 30 44.8**	**+0.6**
	58nm,0.3s,baz=39,slow=2.3,SNR=48						
BATI				LR	LR	15 40 20.1	
	comp=Z,4μm,18.6s,baz=10,slow=43						
BATI	**Baumata**	**19.61**	**189**	P	**Pn**	**15 30 43.9**	**-0.2**
	3μm340nm,0.9s						
PLAI	**Plampang**	**20.04**	**206**	P	Pn	15 30 52.8	+3.5
	7μm3μm277nm,0.9s						
WBSI	**Waikabubak, Su**	**20.14**	**201**	P	Pn	15 30 53.1	+2.6
	2μm250nm,1.0s						
KMMI	**Kalianget**	**20.55**	**218**	P	Pn	15 30 57.8	+2.6
	220nm,1.0s						
DNP	**Denpasar**	**21.16**	**213**	P	**P**	**15 31 04.8**	**+5.3**
	20μm384nm,1.1s						
GRJI	**Gresik**	**21.38**	**222**	P	**P**	**15 31 08.5**	**+6.6**
	1μm136nm,1.0s						
JAGI	**Jajag, Banyuwa**	**21.57**	**215**	P	**P**	**15 31 07.5**	**+3.6**
	5μm120nm,0.9s						
JAGI	**Jajag, Banyuwa**	**21.57**	**215**	P	**P**	**15 31 01.5**	**-2.5**
JAGI				IAmb	IAmb	15 31 14.4	
	comp=Z,103nm,0.9s						
SSE	**Sheshan**	**22.25**	**348**	P	**P**	**15 31 11.3**	**+0.2**
SSE				S	**S**	**15 35 16.5**	**+2.0**
SSE				pmax	pmax		
	comp=Z,25nm,0.7s						
SSE				pmax	pmax		
	comp=Z,540nm,5.3s						
SSE				LR	LR		
	comp=Z,3μm,16.5s						
SSE				LR	LR		
	comp=Z,1μm,14.8s						
TPI	**Tanjungpandan**	**22.35**	**238**	P	**P**	**15 31 15.4**	**+3.1**
	comp=Z,1μmcomp=Z,80nm,0.8s						
MTN	**Manton Dam**	**22.47**	**168**	P	**P**	**15 31 13.3**	**-0.3**
	baz=23,SNR=56						
MTN	**Manton Dam**	**22.47**	**168**	IAmb	IAmb	15 31 38.2	
	comp=Z,84nm,0.7s						
KDU	**Kakadu**	**22.63**	**165**	P	**P**	**15 31 14.3**	**-0.9**
	baz=23,SNR=65						
SMRI	**Semarang**	**22.86**	**225**	P	**P**	**15 31 23.9**	**+6.1**
	comp=Z,9μmcomp=Z,316nm,1.1s						
WOJI	**Wonogiri, Jawa**	**23.10**	**223**	P	**P**	**15 31 25.3**	**+5.1**
	comp=Z,3μmcomp=Z,69nm,1.0s						
UGM	**Wanagama**	**23.42**	**224**	P	**P**	**15 31 27.6**	**+4.1**
	comp=Z,5μmcomp=Z,232nm,1.2s						
TPRI	**Tanjung Pinang**	**23.48**	**250**	P	**P**	**15 31 28.9**	**+4.9**
	comp=Z,2μmcomp=Z,44nm,0.9s						
NJ2	**Nanjing**	**23.73**	**344**	*e*P	**P**	**15 31 27.0**	**+0.7**
NJ2				sP	**pP**	**15 31 31.8**	**-0.9**
NJ2				S	**S**	**15 35 40.0**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,44nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,650nm,3.5s						
NJ2				LR	LR		
	comp=Z,5μm,16.6s						
NJ2				LR	LR		
	comp=Z,3μm,15.6s						
NJ2				LR	LR		
	comp=Z,6μm,16.6s						
MYKOM	**Kota Tinggi**	**23.81**	**253**	IAmb	IAmb	15 31 34.1	
	comp=Z,53nm,0.8s						
MYKOM	**Kota Tinggi**	**23.81**	**253**	P	**P**	**15 31 29.0**	**+1.8**
WHN	**Wuhan**	**24.01**	**333**	⇑P	**P**	**15 31 27.8**	**-1.1**
WHN				S	**S**	**15 35 44.0**	**-0.3**
WHN				pmax	pmax		
	comp=Z,49nm,0.5s						
WHN				pmax	pmax		
	comp=Z,1μm,6.2s						
WHN				LR	LR		
	comp=Z,7μm,15.9s						
WHN				LR	LR		
	comp=Z,5μm,15.2s						
WHN				LR	LR		
	comp=Z,14μm,17.3s						
JNU	**Nakatsue**	**24.02**	**9**	P	**P**	**15 31 28.7**	**-0.4**
	comp=Z,33nm,0.8s,baz=152,slow=3.0,SNR=22						
JNU				LR	LR	15 42 24.7	
	comp=Z,2μm,18.1s,baz=176,slow=40						
JNU	**Nakatsue**	**24.02**	**9**	P	**P**	**15 31 27.3**	**-1.7**
JNU				IAmb	IAmb	15 31 36.0	
	comp=Z,80nm,0.9s						
LEM	**Lembang**	**24.78**	**230**	P	**P**	**15 31 39.1**	**+2.8**
	comp=Z,156nm,1.0s,baz=340,slow=17,SNR=3.6						
SLVN	**Son La**	**24.88**	**301**	IAMs_20	IAMs_20	15 42 18.0	
	comp=Z,7μm,19.0s						
PMBI	**Palembang**	**24.90**	**242**	P	P	15 31 45.3	+8.1
KNRA	**Kununurra**	**24.92**	**175**	P	**P**	**15 31 36.5**	**-0.7**
	baz=25,SNR=176						
KNRA	**Kununurra**	**24.92**	**175**	P	**P**	**15 31 36.4**	**-0.9**
CISI	**Cisompet, Garu**	**25.11**	**229**	P	**P**	**15 31 43.8**	**+4.7**
	comp=Z,

comp=Z,32nm,1.1s
FITZ Fitzroy Crossi 27.25 182 P **P** **15 31 57.8 -0.5**
baz=27,SNR=128
FITZ Fitzroy Crossi 27.25 182 P **P** **15 31 57.8 -0.5**
comp=Z,44nm,0.7s,baz=12,slow=9.9,SNR=66
FITZ LR LR 15 44 18.4
comp=Z,862nm,18.1s,baz=1.5,slow=40
FITZ Fitzroy Crossi 27.25 182 P **P** **15 31 58.0 -0.3**
KRJI Kerinci 27.47 247 P **P** **15 32 05.8 +5.2**
comp=Z,4μmcomp=Z,3μmcomp=Z,159nm,1.0s
KMI Kunming 27.59 308 P **P** **15 32 06.5 +4.8**
KMI pmax pmax
comp=Z,17nm,0.5s
KMI pmax pmax
comp=Z,360nm,6.7s
KMI LR LR
comp=Z,3μm,18.6s
KMI LR LR
comp=Z,4μm,19.1s
KMI LR LR
comp=Z,5μm,19.5s
KMI Kunming 27.59 308 IAMs_20 IAMs_20 15 43 16.3
comp=Z,6μm,20.0s
INU Inuyama 27.61 19 P **P** **15 31 59.5 -2.0**
PMG Port Moresby 27.67 132 P **P** **15 32 02.4 +0.2**
comp=Z,25nm,1.0s,baz=264,slow=21,SNR=3.1
PMG Port Moresby 27.67 132⇓ *e*P **P** **15 32 01.5 -0.7**
PMG pmax pmax
comp=Z,169nm,1.3s
PMG Port Moresby 27.67 132 IAmb IAmb 15 33 01.4
comp=Z,44nm,1.0s
KSRS Korea Array 28.04 2 P **P** **15 32 05.7 +0.4**
comp=Z,5.6nm,0.7s,baz=181,slow=9.8,SNR=30
KSRS ScP **ScP** **15 39 00.4 +1.5**
comp=Z,1.5nm,0.8s,baz=178,slow=3.7,SNR=4.8
KSRS LR LR 15 45 11.4
comp=Z,4μm,18.8s,baz=176,slow=41
KS19 Wonju Array Si 28.09 2 P **P** **15 32 05.1 -0.6**
TIA Tai'an 28.12 344 P **P** **15 32 05.8 -0.3**
TIA S **S** **15 36 51.0 +1.4**
TIA pmax pmax
comp=Z,7.0nm,0.9s
TIA pmax pmax
comp=Z,460nm,9.3s
TIA LR LR
comp=Z,3μm,20.6s
TIA LR LR
comp=Z,1μm,14.2s
TIA LR LR
comp=Z,3μm,21.5s
MNSI Mandailing Nat 28.17 254 P **P** **15 32 08.2 +1.5**
comp=Z,1μmcomp=Z,52nm,0.5s
PSI Prapat 28.24 259 P **P** **15 32 07.5 0.0**
comp=Z,24nm,0.7s,baz=0.5,slow=4.5,SNR=22
PSI PcP **PcP** **15 35 22.1 +1.3**
comp=Z,11nm,0.8s,baz=359,slow=1.0,SNR=4.0
PSI Prapat 28.24 259 P **P** **15 32 06.5 -0.9**
PSI pmax pmax
comp=Z,65nm,0.9s
RPSI Rantau Prapat 28.26 258 P **P** **15 32 06.5 -1.1**
RPSI IAmb IAmb 15 32 20.5
comp=Z,65nm,0.9s
RPSI Rantau Prapat 28.26 258 **PcP** **15 35 22.1 +1.4**
CMAR Chiang Mai Arr 28.29 292 P **P** **15 32 07.7 -0.1**
comp=Z,5.0nm,0.8s,baz=101,slow=7.5,SNR=18
CMAR PcP **PcP** **15 35 23.1 +2.4**
comp=Z,5.0nm,0.8s,baz=54,slow=0.7,SNR=6.6
CMAR ScP **ScP** **15 39 00.8 +0.7**
comp=Z,2.5nm,0.8s,baz=71,slow=1.7,SNR=7.1
CMAR LR LR 15 43 56.9
comp=Z,3μm,18.6s,baz=172,slow=38
CHTO Chiang Mai 28.38 292 P **P** **15 32 06.2 -2.4**
CHTO pmax pmax
comp=Z,15nm,1.0s
CHTO Chiang Mai 28.38 292 P **P** **15 32 06.2 -2.4**
COEN Coen 28.38 144 P **P** **15 32 09.2 +0.7**
baz=28,SNR=12
COEN Coen 28.38 144 P **P** **15 32 07.9 -0.6**
COEN IAmb IAmb 15 32 15.6
comp=Z,143nm,1.8s
TSI Tuntungan 28.42 260 P **P** **15 32 13.0 +4.1**
comp=Z,4μmcomp=Z,3μmcomp=Z,100nm,1.1s
KRVT Keravat (AS076 28.75 117 P **P** **15 32 14.5 +2.6**
comp=Z,10nm,0.5s,baz=319,slow=7.9,SNR=2.4
KRVT LR LR 15 43 42.8
comp=Z,2μm,18.1s,baz=290,slow=36
MAJO Matsushiro 29.09 20⇑ *e*P **P** **15 32 12.2 -2.5**
MAJO pmax pmax
comp=Z,12nm,1.2s
MAJO Matsushiro 29.09 20 P **P** **15 32 13.0 -1.7**
MAT Matsushiro 29.09 20 P **P** **15 32 13.6 -1.1**
MAT S **S** **15 37 03.5 -1.4**
MJAR Matsushiro Arr 29.09 20 P **P** **15 32 13.9 -0.7**
comp=Z,3.4nm,0.7s,baz=191,slow=9.3,SNR=2.6
MJAR PcP **PcP** **15 35 23.3 +0.9**
comp=Z,4.0nm,0.9s,baz=177,slow=2.2,SNR=3.9
MJAR LR LR 15 44 05.1
comp=Z,3μm,18.4s,baz=205,slow=37
MJB9 Matsu-Tunnel 29.09 19 P **P** **15 32 13.0 -1.7**
KCSI Kotacane, Aceh 29.19 261 P **P** **15 32 16.7 +0.9**
comp=Z,67nm,0.6s
SISI Saibi 29.35 250 P **P** **15 32 17.7 +0.5**
comp=Z,41nm,0.6s
XAN Xi'an 29.48 329 P **P** **15 32 16.5 -1.7**
XAN PcP **PcP** **15 35 23.8 +0.4**
XAN sS sS 15 37 26.5 +4.8
XAN pmax pmax
comp=Z,39nm,0.7s
XAN pmax pmax
comp=Z,290nm,8.3s
XAN LR LR
comp=Z,4μm,16.7s
XAN LR LR
comp=Z,3μm,17.3s
XAN LR LR
comp=Z,6μm,16.7s
XAN Xi'an 29.48 329 P **P** **15 32 15.5 -2.7**
XAN pmax pmax
comp=Z,25nm,0.7s
XAN MLR MLR
comp=Z,2μm,20.0s
XAN Xi'an 29.48 329 P **P** **15 32 15.5 -2.7**
DL2 Dalian 29.80 352 P **P** **15 32 20.8 -0.1**
DL2 S **S** **15 37 15.5 -0.3**
DL2 pmax pmax
comp=Z,61nm,0.9s
DL2 pmax pmax
comp=Z,550nm,9.4s
DL2 LR LR
comp=Z,2μm,15.9s
DL2 LR LR
comp=Z,1μm,11.4s
DL2 LR LR
comp=Z,3μm,12.9s
WB0 Warramunga Arr 29.90 165 IAmb IAmb 15 33 04.0
comp=Z,29nm,0.7s
GSI Gunungsitoli 29.93 256 P **P** **15 32 22.1 -0.3**
comp=Z,508nm,0.7s
WRAB Tennant Creek 30.05 165*d* *i*P **P** **15 32 21.8 -1.5**
WRAB pmax pmax
comp=Z,17nm,0.6s
WRAB MLR MLR
comp=Z,2μm,17.0s
WRAB Tennant Creek 30.05 165 P **P** **15 32 22.1 -1.2**
WRAB IAmb IAmb 15 32 59.4
comp=Z,28nm,0.8s
WRA Warramunga Arr 30.06 165 P **P** **15 32 21.7 -1.6**
comp=Z,11nm,0.6s,baz=346,slow=9.5,SNR=75
WB2 Warramunga Arr 30.06 165 P **P** **15 32 22.2 -1.2**
WB2 IAmb IAmb 15 32 59.5
comp=Z,26nm,0.8s
WR0 Warramunga Arr 30.12 165 P **P** **15 32 22.4 -1.6**
WR0 IAmb IAmb 15 32 53.6
comp=Z,65nm,1.3s
CD2 Chengdu 30.22 319 P **P** **15 32 24.5 -0.3**
CD2 sP sP 15 32 33.3 -1.0
CD2 S **S** **15 37 23.3 +0.5**
CD2 sS sS 15 37 33.3 -1.0
CD2 pmax pmax
comp=Z,30nm,0.6s
CD2 pmax pmax
comp=Z,380nm,7.1s
CD2 LR LR
comp=Z,10μm,17.7s
CD2 LR LR
comp=Z,12μm,17.3s
CD2 LR LR
comp=Z,16μm,17.5s
TIY Taiyuan 31.02 338 *e*P **P** **15 32 32.8 +1.0**
TIY S **S** **15 37 38.8 +3.5**
TIY pmax pmax
comp=Z,270nm,5.3s
TIY LR LR
comp=Z,1μm,13.9s
TIY LR LR
comp=Z,2μm,13.5s
TIY LR LR
comp=Z,2μm,13.9s
PATS Pohnpei 31.51 92 IAMs_20 IAMs_20 15 42 40.2
comp=Z,5μm,21.0s
BJI Beijing 31.98 345 P **P** **15 32 41.0 +1.0**
BJI S **S** **15 37 52.0 +2.2**
BJI pmax pmax
comp=Z,21nm,0.8s
BJI pmax pmax
comp=Z,180nm,9.1s
BJI LR LR
comp=Z,1μm,14.2s
BJI LR LR
comp=Z,2μm,19.9s
BJI LR LR
comp=Z,1μm,24.6s
QIS Mount Isa 32.33 157 P **P** **15 32 43.0 -0.4**
baz=32,SNR=37
MTSU Mount Surprise 32.41 147 P **P** **15 32 44.4 +0.3**
baz=32,SNR=14
SNY Shenyang 32.49 356 ⇓P **P** **15 32 45.3 +0.7**
SNY S **S** **15 37 59.0 +1.1**
SNY pmax pmax
comp=Z,16nm,0.6s
SNY pmax pmax
comp=Z,420nm,7.9s
SNY LR LR
comp=Z,2μm,19.4s
SNY LR LR
comp=Z,2μm,15.7s
SNY LR LR
comp=Z,5μm,19.0s
MSHR Mys Shultsa 33.38 6⇑ *e*P **P** **15 32 51.4 -0.9**
ASAR Alice Springs 33.55 168 P **P** **15 32 53.0 -1.0**
comp=Z,12nm,0.6s,baz=350,slow=7.2,SNR=176
ASAR PcP **PcP** **15 35 34.0 -0.5**
comp=Z,4.0nm,0.6s,baz=350,slow=3.3,SNR=2.5
ASAR LR LR 15 47 52.4
comp=Z,1μm,20.5s,baz=339,slow=39
LZH Lanzhou 33.73 326 ⇑P **P** **15 32 58.5 +2.8**
LZH sP sP 15 33 03.8 -1.4
LZH S **S** **15 38 17.3 -0.4**
LZH SS **SnSn** **15 40 24.5 +1.3**
LZH pmax pmax
comp=Z,37nm,1.1s
LZH pmax pmax
comp=Z,300nm,5.0s
LZH LR LR
comp=Z,6μm,18.6s
LZH LR LR
comp=Z,4μm,18.4s
LZH LR LR
comp=Z,5μm,19.5s
GIRL Giralia 33.98 201 P **P** **15 32 59.6 +1.9**
baz=34,SNR=9.7
HHC Hu-ho-hao-te 34.12 339 *e*P **P** **15 32 58.5 -0.4**
HHC S **S** **15 38 24.0 +0.6**
HHC ScS **ScS** **15 43 20.0 -1.4**
HHC pmax pmax
comp=Z,6.0nm,1.0s
HHC pmax pmax
comp=Z,250nm,6.7s
HHC LR LR
comp=Z,2μm,17.8s
HHC LR LR
comp=Z,890nm,15.8s
HHC LR LR
comp=Z,2μm,16.5s
WRKA Warakurna 34.18 177 P **P** **15 32 59.3 -0.3**
baz=34,SNR=15
CN2 Changchun 34.37 359 *e*P **P** **15 33 02.3 +1.4**
CN2 *e*S **S** **15 38 27.8 +0.8**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,390nm,7.0s
CN2 LR LR
comp=Z,2μm,14.0s
CN2 LR LR
comp=Z,2μm,14.0s
CN2 LR LR
comp=Z,2μm,15.0s
BTO Baotou 34.46 337 *e*P **P** **15 33 01.0 -0.9**
BTO S **S** **15 38 24.0 -4.7**
CTA Charters Tower 35.05 147 P **P** **15 33 07.4 +0.3**
comp=Z,17nm,0.6s,baz=323,slow=10,SNR=28
CTAO Charters Tower 35.05 147 P **P** **15 33 08.0 +0.9**
CTAO pmax pmax
comp=Z,71nm,1.5s
CTAO MLR MLR
comp=Z,3μm,19.0s
CTAO Charters Tower 35.05 147 P **P** **15 33 08.0 +0.9**
CTAO IAmb IAmb 15 33 15.1
comp=Z,71nm,1.4s
USA0B Ussuriysk Arra 35.07 7 P **P** **15 33 07.6 +0.6**
USA0B pmax pmax
comp=Z,41nm,0.8s
USA0B MLR MLR
comp=Z,2μm,19.0s
USA0B Ussuriysk Arra 35.07 7 P **P** **15 33 07.6 +0.6**
USA0B IAmb IAmb 15 33 18.5
comp=Z,41nm,0.8s
USRK Ussuriysk Ar. 35.07 7 P **P** **15 33 08.3 +1.3**
comp=Z,15nm,0.8s,baz=191,slow=8.0,SNR=73
USRK LR LR 15 46 55.3
comp=Z,2μm,21.1s,baz=176,slow=35
MDJ Mudanjiang 35.27 4 P **P** **15 33 09.3 +0.6**
MDJ sP pP 15 33 13.5 -1.4
MDJ S **S** **15 38 43.0 +2.2**
MDJ sS sS 15 38 52.0 +0.8
MDJ pmax pmax
comp=Z,18nm,0.9s
MDJ pmax pmax
comp=Z,530nm,3.3s
MDJ LR LR
comp=Z,3μm,17.8s
MDJ LR LR
comp=Z,1μm,14.2s
MDJ LR LR
comp=Z,4μm,18.5s
MDJ Mudanjiang 35.27 4 IAmb IAmb 15 33 21.6
comp=Z,72nm,1.0s
ZIRO ZIRO 35.78 305 *e*P **P** **15 33 12.9 -0.7**
ZIRO IAmb IAmb 15 33 17.8
comp=Z,23nm,0.7s
MEEK Meekatharra 36.56 192 P **P** **15 33 19.7 -0.3**
baz=37,SNR=57
TEY Ternei 36.63 12⇓ *e*P **P** **15 33 20.0 -0.3**
TEY pmax pmax
comp=Z,10.0nm,1.0s
TEY pmax pmax
comp=E,10.0nm,0.7s
TEY MLR MLR
comp=Z,100nm,22.0s
SHL Shillong 36.68 301 *e*P **P** **15 33 19.8 -1.5**
SHL IAmb IAmb 15 33 25.9
comp=Z,39nm,0.6s
SHL Shillong 36.68 301 IAmb IAmb 15 33 31.1
comp=Z,66nm,0.8s
ASAJ Asahikawa 37.36 19 P **P** **15 33 28.0 +1.5**
comp=Z,28nm,0.7s,baz=236,slow=13,SNR=19
GTA Gaotai 38.34 326 ⇑P **P** **15 33 33.8 -1.3**
GTA pP pP 15 33 39.5 -2.3
GTA sP sP 15 33 42.3 -2.3
GTA PP **PnPn** **15 35 05.5 +0.6**
GTA PcP **PcP** **15 35 46.3 -2.3**
GTA S **S** **15 39 27.0 -1.1**
GTA ScP **ScP** **15 39 34.5 -0.3**
GTA sS sS 15 39 42.5 +2.6
GTA SS **SnSn** **15 42 09.0 -5.5**
GTA pmax pmax
comp=Z,250nm,7.5s
GTA LR LR
comp=Z,3μm,18.1s
GTA LR LR
comp=Z,3μm,19.0s
GTA LR LR
comp=Z,6μm,18.7s
YUK Yuzh-Kuril'sk 38.44 23 *i* P **P** **15 33 31.5 -4.1**
YUK *i* S **S** **15 39 25.9 -3.2**
YUK pmax pmax
comp=Z,245nm,1.3s
YUK pmax pmax
comp=N,150nm,0.7s
YUK pmax pmax
comp=E,193nm,1.1s
LSA Lhasa 38.83 306 P **P** **15 33 40.6 +0.9**
MORW Morawa 39.49 195 P **P** **15 33 44.8 +0.2**
baz=40,SNR=47
QLP Quilpie 39.59 155 P **P** **15 33 44.5 -1.0**
baz=40,SNR=8.5
FORT Forrest 39.89 178 P **P** **15 33 47.8 -0.1**
baz=40,SNR=45
H11S3 WAKE ISLAND Hy 39.91 72 T T 16 16 50.5
baz=262,slow=75,SNR=395
H11S1 WAKE ISLAND Hy 39.92 72 T T 16 16 51.6
baz=262,slow=75,SNR=323
H11S2 WAKE ISLAND Hy 39.93 72 T T 16 16 55.1
baz=262,slow=75,SNR=191
YSS Yuzh-Sakhalins 39.96 17⇓ *e*P **P** **15 33 49.3 +1.0**
YSS *e* 15 33 52.4
YSS *e**SP **sP** **15 33 59.4 +2.0**
YSS *e* 15 35 28.6
YSS *e*S **S** **15 39 54.1 +2.1**
YSS *e*SS **SS** **15 42 51.5 +2.1**
YSS pmax pmax
comp=Z,20nm,0.8s
YSS MLR MLR
comp=Z,2μm,15.0s
YSS MLR MLR
comp=N,1μm,21.0s
YSS MLR MLR
comp=E,800nm,16.0s
YSS Yuzh-Sakhalins 39.96 17 P **P** **15 33 49.5 +1.2**
KLR Kul'dur 40.02 5 P **P** **15 33 49.4 +0.5**
comp=E,9.0nm,0.6s,baz=182,slow=5.5,SNR=25
KLR Kul'dur 40.02 5*c* *e*P **P** **15 33 49.6 +0.8**
KLR pmax pmax
comp=Z,12nm,0.7s
KLR MLR MLR
comp=Z,2μm,18.0s
GTK Tadong 40.04 302 *e*P **P** **15 33 49.6 +0.1**
GTK IAmb IAmb 15 33 55.0
comp=Z,48nm,1.0s
KUR Kuril'sk 40.22 23 P **P** **15 33 50.0 -0.5**
KUR *e* 15 35 53.6
KUR *e*S **S** **15 39 55.9 +0.1**
KUR pmax pmax
comp=Z,770nm,19.0s
H11N1 WAKE ISLAND Hy 40.27 71 T T 16 17 20.2
baz=265,slow=74,SNR=378
H11N2 WAKE ISLAND Hy 40.28 71 T T 16 17 20.7
baz=265,slow=74,SNR=228
H11N3 WAKE ISLAND Hy 40.29 71 T T 16 17 27.3
baz=265,slow=74,SNR=344
KMBL Kambalda 40.70 186 P **P** **15 33 54.6 0.0**
baz=41,SNR=33
TAPN Taplejung 40.80 301 *e*P **P** **15 33 55.0 -1.0**
comp=Z,82nm,0.6s
BLDU Ballidu 40.81 193 P **P** **15 33 55.6 0.0**
baz=41,SNR=53
ODAN Odare 40.92 300 *e*P **P** **15 33 56.0 -0.9**
comp=Z,236nm,0.6s
BOK Bokaro 41.41 295 *e*P **P** **15 34 00.9 +0.2**
BOK IAmb IAmb 15 34 06.0
comp=Z,20nm,0.8s
KLBR Kellerberrin 41.54 191 P **P** **15 34 01.3 -0.2**
baz=42,SNR=44
RMQ Roma 41.60 149 P **P** **15 34 01.5 -0.6**
baz=42,SNR=4.7
RAMN Ramite 41.62 300 *e*P **P** **15 34 02.1 -0.6**
comp=Z,95nm,0.6s
ULN Ulaanbaatar 41.82 340*c* *e*P **P** **15 34 03.5 -0.4**
ULN pmax pmax
comp=Z,21nm,0.6s
ULN Ulaanbaatar 41.82 340 P **P** **15 34 03.8 -0.1**
ULN IAmb IAmb 15 34 08.2
comp=Z,26nm,0.6s
ULN Ulaanbaatar 41.82 340 IAMs_20 IAMs_20 15 54 04.1
comp=Z,3μm,18.0s
EIDS Eidsvold 41.93 146 P **P** **15 34 04.9 +0.1**
baz=42,SNR=6.8
EIDS Eidsvold 41.93 146 P **P** **15 34 05.5 +0.7**
EIDS IAMs_20 IAMs_20 15 52 10.4
comp=Z,3μm,19.0s
SONM Songino Array 42.02 340 P **P** **15 34 05.1 -0.4**
comp=Z,6.1nm,0.5s,baz=156,slow=9.4,SNR=20
SONM PcP **PcP** **15 36 00.2 0.0**
comp=Z,2.9nm,0.6s,baz=145,slow=5.3,SNR=2.1
SONM ScP **ScP** **15 39 51.5 +2.5**
comp=Z,1.0nm,0.6s,baz=162,slow=6.1,SNR=3.7
SONM LR LR 15 53 28.2
comp=Z,2μm,20.0s,baz=155,slow=39
GRNR Gornyy 42.12 9⇓ *i* P **P** **15 34 07.6 +1.5**
GRNR *e*S **S** **15 40 30.6 +6.5**
GRNR *e*SS **SS** **15 43 30.1 -2.2**
GRNR pmax pmax
comp=Z,6.0nm,0.8s
GRNR smax smax
comp=N,1.0nm,1.0s
GRNR MLR MLR
comp=Z,2μm,19.0s
JIRN Jiri 42.18 301 *e*P **P** **15 34 06.1 -1.3**
comp=Z,178nm,0.5s
MUN Mundaring 42.24 193 P **P** **15 34 07.3 +0.1**
baz=42,SNR=73
GUN Gumba 42.52 301 *e*P **P** **15 34 09.2 -0.9**
comp=Z,179nm,0.7s
PKI Pulchoki 42.81 301 *e*P **P** **15 34 10.7 -1.8**
comp=Z,51nm,0.5s
PKIN Phulchoki 42.83 301 *e*P **P** **15 34 10.8 -1.7**
comp=Z,68nm,0.5s
BBOO Buckleboo 42.85 168 P **P** **15 34 11.8 -0.4**
baz=43,SNR=66
BBOO Buckleboo 42.85 168 P **P** **15 34 12.1 -0.1**
BBOO IAmb IAmb 15 34 30.4
comp=Z,64nm,0.7s
NWAO Narrogin (SRO) 42.94 192 P **P** **15 34 13.2 +0.2**
baz=43,SNR=60
NWAO Narrogin (SRO) 42.94 192 P **P** **15 34 13.1 +0.2**
NWAO pmax pmax
comp=Z,95nm,0.7s
NWAO Narrogin (SRO) 42.94 192 P **P** **15 34 13.1 +0.2**
NWAO Narrogin (SRO) 42.94 192 P **P** **15 34 13.2 +0.2**
NWAO IAmb IAmb 15 34 17.4
comp=Z,76nm,0.7s
DMN Daman 43.08 301 *e*P **P** **15 34 13.1 -1.5**
STKA Stephens Creek 43.40 161 P **P** **15 34 16.2 -0.5**
baz=44,SNR=26
STKA Stephens Creek 43.40 161 P **P** **15 34 16.2 -0.5**
comp=Z,9.8nm,0.4s,baz=343,slow=7.9,SNR=28
STKA LR LR 15 54 10.9
comp=Z,1μm,20.7s,baz=335,slow=39
STKA Stephens Creek 43.40 161 P **P** **15 34 16.1 -0.5**
STKA pmax pmax
comp=Z,5.0nm,0.8s
STKA Stephens Creek 43.40 161 P **P** **15 34 16.1 -0.5**
TYV Tymovskoe 43.50 15 *e*P **P** **15 34 21.4 +4.2**
TYV *e*S S 15 40 54.6 +10
TYV pmax pmax
comp=Z,500nm,4.5s
TYV pmax pmax
comp=Z,18nm,1.0s
TYV smax smax
comp=E,600nm,6.1s
TYV MLR MLR
comp=Z,2μm,16.0s
GKN Gorkha 43.59 301 *e*P **P** **15 34 17.1 -1.5**
comp=Z,49nm,0.6s
CIT Chita 43.90 348 *e*P **P** **15 34 21.4 +0.9**
CIT pmax pmax
comp=Z,104nm,1.1s
HTT Hallett 44.10 165 P **P** **15 34 22.5 +0.2**
baz=44,SNR=24
ZEA Zeya 44.31 1 *e*P **P** **15 34 23.6 -0.1**
ZEA pmax pmax
comp=Z,400nm,10.0s
ZEA pmax pmax
comp=Z,29nm,1.0s
ZEA pmax pmax
comp=N,300nm,10.0s
ZEA pmax pmax
comp=Z,600nm,10.0s
ZEA MLR MLR

comp=Z,5µm,18.0s
ZEA MLR MLR
comp=E,800nm,14.0s
ZEA MLR MLR
comp=N,3µm,19.0s
KOLN Koldanda 44.41 300 *e*P **P 15 34 24.2 -1.0**
comp=N,118nm,0.7s
DANN Dangsing 44.44 301 *e*P **P 15 34 24.0 -1.5**
comp=N,127nm,0.6s
CMSA Cobar Meteorol 44.55 157 P **P 15 34 25.5 -0.4**
baz=45,SNR=11
NKL Nikolayevsk 45.18 12 *e*P **P 15 34 30.5 -0.1**
NKL *e* 15 36 13.4
NKL *e*S **S 15 41 05.8 -2.8**
NKL pmax pmax
comp=Z,27nm,1.2s
NKL pmax pmax
comp=N,2.0nm,0.7s
NKL pmax pmax
comp=E,1.0nm,1.2s
NKL pmax pmax
comp=Z,106nm,8.9s
ZAK Zakamensk 45.26 339 *e*P **P 15 34 31.3 -0.2**
ZAK pmax pmax
comp=Z,8.0nm,1.3s
H01W3 Cape Leeuwin H 45.51 194 P P 15 34 38.3 +5.1
baz=20,slow=5.6,SNR=4.7
H01W1 Cape Leeuwin H 45.51 194 P **P 15 34 35.1 +1.9**
baz=20,slow=5.6,SNR=5.2
H01W2 Cape Leeuwin H 45.52 194 P **P 15 34 37.8 +4.5**
baz=20,slow=5.6,SNR=5.7
TLY Talaya 46.23 340 P **P 15 34 39.2 +0.2**
comp=Z,15nm,0.6s,baz=209,slow=3.3,SNR=12
TLY Talaya 46.23 340 *e*P **P 15 34 38.9 -0.1**
TLY *e* 15 36 29.9
TLY *e*S **S 15 41 25.1 +1.2**
TLY *e*SSS SSS 15 45 44.4
TLY pmax pmax
comp=Z,46nm,0.7s
TLY MLR MLR
comp=Z,4µm,16.0s
TLY Talaya 46.23 340 P **P 15 34 38.5 -0.5**
TLY IAmb IAmb 15 34 51.9
comp=Z,20nm,0.8s
ARMA Armidale 46.26 150 P **P 15 34 38.9 -0.7**
baz=46,SNR=4.3
ARMA Armidale 46.26 150 IAMs_20 IAMs_20 15 57 27.9
comp=Z,3µm,19.0s
TARA Tarawa 46.77 97 IAMs_20 IAMs_20 15 48 59.5
comp=Z,2µm,20.0s
MOY Mondy 47.14 338 *e*P **P 15 34 46.6 +0.3**
MOY pmax pmax
comp=Z,47nm,3.1s
NGP Nagpur 47.18 290 *e*P **P 15 34 46.5 -0.4**
NGP IAmb IAmb 15 34 51.0
comp=Z,17nm,0.7s
HYB Hyderabad 47.31 285 *i*P **P 15 34 47.0 -1.0**
HYB *e*S **S 15 41 44.0 +3.7**
HYB Hyderabad 47.31 285 *e*P **P 15 34 47.8 -0.3**
HYB IAmb IAmb 15 34 52.4
comp=Z,23nm,0.8s
SKR Severo-Kuril's 47.91 25 *e*P **P 15 34 51.2 -0.9**
SKR *e* 15 36 27.5
SKR *e*S **S 15 41 52.2 +4.5**
SKR pmax pmax
comp=Z,33nm,1.7s
SKR pmax pmax
comp=Z,100nm,5.8s
SKR pmax pmax
comp=Z,200nm,4.0s
SKR MLR MLR
comp=Z,800nm,17.0s
SKR MLR MLR
comp=Z,800nm,17.0s
ARPS Mount Arapiles 48.03 163 P **P 15 34 53.6 +0.4**
baz=48,SNR=24
YNG Young 48.05 156 P **P 15 34 53.5 +0.1**
baz=48,SNR=6.1
WMQ Urumqi 48.16 322 *e*P **P 15 34 54.8 +0.5**
WMQ pP pP 15 34 59.8 -1.3
WMQ sP sP 15 35 02.3 -1.7
WMQ S **S 15 41 54.3 +2.5**
WMQ sS pS 15 42 01.0 +0.4
WMQ ScS **ScS 15 44 47.5 +1.8**
WMQ SS **SS 15 45 16.8 -4.4**
WMQ pmax pmax
comp=Z,26nm,0.6s
WMQ LR LR
comp=Z,4µm,22.5s
WMQ LR LR
comp=Z,3µm,18.1s
WMQ LR LR
comp=Z,5µm,16.5s
BHPL Bhopal 48.94 293 *e*P **P 15 34 59.5 -1.1**
BHPL IAmb IAmb 15 35 04.2
comp=Z,21nm,0.6s
CNB Canberra Magne 49.33 155 P **P 15 35 04.2 +0.9**
baz=50,SNR=6.8
DDI Dehra Dun 49.76 302 *e*P **P 15 35 07.0 +0.2**
DDI IAmb IAmb 15 35 22.2
TOO Toolangi 49.89 160 P **P 15 35 08.6 +1.1**
baz=50,SNR=15
TOO Toolangi 49.89 160 IAmb IAmb 15 35 35.8
comp=Z,56nm,1.4s
DZM Mont Dzumac 50.01 129 *e*P **P 15 35 10.6 +1.9**
comp=Z,49nm,1.1s
DZM *e*S **S 15 42 20.2 +1.9**
comp=Z,3µm,26.2s
DZM *e*LQ LQ 15 47 20.5
comp=Z,3µm,33.5s
DZM *e*LR LR 15 49 28.8
comp=Z,2µm,25.9s
DZM Mont Dzumac 50.01 129 P **P 15 35 10.2 +1.4**
DZM IAmb IAmb 15 35 49.0
comp=Z,43nm,1.4s
PEA0B Petropavlovsk- 50.38 24‖ *e*P **P 15 35 12.2 +1.2**
PEA0B Petropavlovsk- 50.38 24 P **P 15 35 12.8 +1.8**
PEA0B IAmb IAmb 15 35 45.1
comp=Z,42nm,0.9s
PETK Petropavlovsk- 50.38 24 P **P 15 35 12.4 +1.4**
comp=Z,13nm,0.7s,baz=201,slow=6.4,SNR=17
PETK LR LR 15 58 46.7
comp=Z,1µm,18.2s,baz=215,slow=39
PET Petropavlovsk 50.70 24 *e*P **P 15 35 15.5 +2.1**
PET *e*S **S 15 42 27.4 +0.5**
PET *e*SS **SS 15 46 00.9 -0.6**
PET pmax pmax
comp=Z,300nm,10.1s
PET pmax pmax
comp=Z,300nm,11.5s
PET pmax pmax
comp=Z,45nm,1.3s
PET MLR MLR
comp=Z,1µm,20.0s
DHRM DHARAMSHALA 51.70 304 *e*P **P 15 35 19.9 -1.6**
DGZ Jazzator, Alta 51.74 329‖ *e*P **P 15 35 20.2 -1.3**
DGZ pmax pmax
comp=Z,2.0nm,0.7s
THN Thein Dam 52.22 304 *e*P **P 15 35 26.0 +0.9**
YAK Yakutsk 52.67 2 P **P 15 35 27.5 -0.4**
comp=Z,5.6nm,0.3s,baz=170,slow=4.0,SNR=11
YAK LR LR 15 59 48.1
comp=Z,1µm,19.4s,baz=196,slow=38
YAK Yakutsk 52.67 2 *e*P **P 15 35 28.3 +0.4**
YAK *e**PP **sP 15 35 37.5 -0.4**
YAK *e* 15 36 33.1
YAK *e* 15 37 26.5
YAK *e*S **S 15 42 54.3 +0.7**
YAK *e**SS **sS 15 43 02.6 -1.7**
YAK *e* 15 45 17.0
YAK pmax pmax
comp=Z,24nm,1.0s
YAK pmax pmax
comp=E,2.0nm,1.1s
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK pmax pmax
comp=Z,17nm,1.0s
YAK smax smax
comp=N,52nm,1.9s
YAK smax smax
comp=E,96nm,2.8s
YAK MLR MLR
comp=Z,1µm,18.0s
YAK MLR MLR
comp=N,1µm,18.0s
YAK MLR MLR
comp=E,1µm,16.0s
YAK Yakutsk 52.67 2 P **P 15 35 28.4 +0.4**
MK31 Makanchi Array 52.97 323 *e*P **P 15 35 29.1 -1.4**
MK31 Makanchi Array 52.97 323 P **P 15 35 29.3 -1.2**
MK31 IAmb IAmb 15 35 34.5
comp=Z,20nm,0.7s
MKAR Makanchi Array 52.97 323 P **P 15 35 29.7 -0.8**
comp=Z,32nm,0.6s,baz=127,slow=6.7,SNR=128
MKAR LR LR 15 57 15.0
comp=Z,2µm,20.5s,baz=120,slow=35
PDGK Podgornoye 53.11 318 P **P 15 35 29.9 -1.8**
MAKZ Makanchi 53.16 323 P **P 15 35 30.7 -1.2**
MAKZ pmax pmax
comp=Z,21nm,0.7s
MAKZ Makanchi 53.16 323 P **P 15 35 30.7 -1.2**
MAKZ IAmb IAmb 15 35 35.5
comp=Z,21nm,0.7s
MAKZ IAMs_20 IAMs_20 15 56 58.8
comp=Z,3µm,20.0s
MA2 Magadan 53.37 15 P **P 15 35 33.4 +0.2**
comp=Z,9.8nm,0.7s,baz=204,slow=21,SNR=2.7
MA2 Magadan 53.37 15‖ *e*P **P 15 35 34.2 +1.0**
MA2 pmax pmax
comp=Z,21nm,1.4s
MA2 MLR MLR
comp=Z,1µm,18.0s
TARG Taragay, Kyrgy 53.60 316 P **P 15 35 35.7 0.0**
TARG IAmb IAmb 15 36 00.4
comp=Z,19nm,0.8s
KSH Kashi 54.10 312 P **P 15 35 38.3 -0.7**
KSH sP pP 15 35 46.3 +0.4
KSH PP **PP 15 37 43.0 +2.3**
KSH S **S 15 43 09.8 -4.3**
KSH pmax pmax
comp=Z,18nm,0.6s
KSH pmax pmax
comp=Z,230nm,6.1s
KSH LR LR
comp=Z,630nm,6.2s
KSH LR LR
comp=Z,440nm,9.7s
KSH LR LR
comp=Z,2µm,14.2s
KDJ Kajisay 54.18 316 P **P 15 35 38.7 -0.9**
KDJ pmax pmax
comp=Z,26nm,0.7s
KDJ MLR MLR
comp=Z,5µm,22.0s
KDJ Kajisay 54.18 316 P **P 15 35 38.7 -0.9**
KDJ IAmb IAmb 15 35 43.8
comp=Z,26nm,0.7s
NIL Nilore 54.52 305 P **P 15 35 41.3 -0.8**
NIL pmax pmax
comp=Z,85nm,0.8s
NIL Nilore 54.52 305 P **P 15 35 41.3 -0.8**
KZA Kyzart 55.50 315 P **P 15 35 49.3 -0.2**
SNR=28
ZAA0 Zalesovo Array 55.61 332 IAMs_20 IAMs_20 16 02 06.9
comp=Z,2µm,18.0s
ZALV Zalesovo Beam 55.61 332 P **P 15 35 47.6 -1.9**
comp=Z,14nm,0.6s,baz=126,slow=6.7,SNR=36
MIDW Midway 55.80 62 IAMs_20 IAMs_20 15 59 37.4
comp=Z,2µm,21.0s
KBK Karagaybulak 55.91 316 P **P 15 35 52.1 0.0**
SNR=8.9
UCH Uchtor 56.06 315 P **P 15 35 53.4 -0.2**
SNR=71
CHMS Chumysh 56.17 316 P **P 15 35 53.0 -0.8**
SNR=9.3
AAK Ala-Archa 56.22 316 LR LR 16 01 40.7
comp=Z,3µm,21.5s,baz=76,slow=38
AAK Ala-Archa 56.22 316 P **P 15 35 54.0 -0.4**
SNR=9.0
AAK Ala-Archa 56.22 316 *i*P **P 15 35 53.8 -0.5**
SNR=14
AAK Ala-Archa 56.22 316*c i*P **P 15 35 53.4 -0.9**
AAK pmax pmax
comp=Z,7.0nm,0.7s
AAK Ala-Archa 56.22 316 P **P 15 35 53.4 -0.9**
USP Ospenovka 56.44 316 P **P 15 35 55.1 -0.6**
SNR=18
AML Almayashu 56.60 315 P **P 15 35 56.9 -0.5**
SNR=45
SEY Seymchan 56.67 14 P **P 15 35 58.8 +1.9**
comp=Z,8.1nm,0.7s,baz=194,slow=4.2,SNR=15
EKS2 Erkin-Say 56.72 315 P **P 15 35 57.4 -0.5**
SNR=31
KURK Kurchatov 57.02 326*ce*P **P 15 35 58.5 -1.2**
KURK pmax pmax
comp=Z,26nm,0.8s
KURK Kurchatov 57.02 326 P **P 15 35 58.6 -1.0**
KURK Kurchatov 57.02 326 IAMs_20 IAMs_20 16 02 03.3
comp=Z,2µm,20.0s
KURBB Kurchatov Arra 57.03 326 P **P 15 35 57.9 -1.8**
MSVF Nonsavu 57.50 118‖ *e*P **P 15 36 04.8 +1.2**
MSVF pmax pmax
comp=Z,54nm,1.1s
MSVF Nonsavu 57.50 118 P **P 15 36 05.1 +1.5**
MSVF IAmb IAmb 15 36 19.6
comp=Z,43nm,1.0s
KBL Kabul 58.12 305 P **P 15 36 06.7 -1.3**
KBL pmax pmax
comp=Z,24nm,0.8s
KBL MLR MLR
comp=Z,2µm,20.0s
KBL Kabul 58.12 305 P **P 15 36 06.7 -1.3**
KBL IAmb IAmb 15 36 21.5
comp=Z,24nm,0.8s
KBL IAMs_20 IAMs_20 16 04 52.4
comp=Z,2µm,20.0s
KK31 Karatay Array 59.14 315 *i*P **P 15 36 13.6 -1.1**
KK31 Karatay Array 59.14 315 IAmb IAmb 15 36 18.2
comp=Z,23nm,0.6s
TAS Tashkent 59.50 313 IAMs_20 IAMs_20 16 04 47.8
comp=Z,2µm,20.0s
OTUK Ortayu 59.66 321 P **P 15 36 16.1 -2.1**
TIXI Tiksi 62.30 1 P **P 15 36 35.7 0.0**
comp=Z,17nm,0.8s,baz=171,slow=3.9,SNR=57
TIXI Tiksi 62.30 1*de*P **P 15 36 35.3 -0.3**
TIXI pmax pmax
comp=Z,17nm,0.8s
TIXI MLR MLR
comp=Z,2µm,18.0s
TIXI Tiksi 62.30 1 P **P 15 36 36.0 +0.3**
BRVK Borovoye 62.69 326*ce*P **P 15 36 37.2 -1.4**
BRVK pmax pmax
comp=Z,30nm,0.7s
BRVK MLR MLR
comp=Z,1µm,18.0s
BRVK Borovoye 62.69 326 P **P 15 36 38.1 -0.5**
BRVK Borovoye 62.69 326 IAMs_20 IAMs_20 16 06 17.3
comp=Z,1µm,19.0s
HRA Herat 63.65 304 P **P 15 36 43.5 -2.1**
HRA IAmb IAmb 15 36 50.6
comp=Z,14nm,0.7s
ATKA Atka Island 64.06 36 P **P 15 36 47.9 +0.3**
BILL Bilibino 64.24 15 *e*P **P 15 36 48.7 +0.1**
BILL *e* 15 37 00.1
BILL *i* 15 37 24.9
BILL *i* 15 39 13.4
BILL *i* PPP PPP 15 40 38.7
BILL *e*S **S 15 45 27.5 +3.3**
BILL *e*SS **SS 15 49 38.8 +5.0**
BILL pmax pmax
comp=Z,27nm,1.7s
BILL MLR MLR
comp=Z,1µm,19.0s
BILL Bilibino 64.24 15 P **P 15 36 49.3 +0.7**
BILL IAmb IAmb 15 37 12.9
comp=Z,20nm,0.9s
RAO Raoul Island 65.77 128 LR LR 16 01 18.5
comp=Z,388nm,21.9s,baz=316,slow=32
WBK Wadi Bani Khal 65.87 291 P **P 15 36 59.0 -1.0**
WSAR Wadi Sarin 66.18 291 P **P 15 37 01.2 -0.7**
THZ Tophouse 66.22 144 P **P 15 37 02.1 +0.3**
LBZ Lake Benmore 66.40 147 P **P 15 37 02.8 -0.2**
RPZ Rata Peaks 66.42 146 P **P 15 37 03.8 +0.7**
LTZ Lake Taylor 66.50 145 P **P 15 37 04.8 +1.2**
BIDO Bidbid 66.64 292 P **P 15 37 04.3 -0.6**
JMDO Jabal Madar 66.67 290 P **P 15 37 04.5 -0.7**
SMDO Samad 66.71 291 P **P 15 37 04.7 -0.8**
OXZ Oxford 66.72 146 IAmb IAmb 15 37 15.7
comp=Z,28nm,0.7s
MHTO MHTO 66.82 289 P **P 15 37 04.9 -1.2**
SNR=9.6
BKZ Black Stump Fm 66.86 140 P **P 15 37 05.8 -0.3**
GEYT Alibeck 67.36 307 P **P 15 37 09.2 -0.2**
comp=Z,9.1nm,0.6s,baz=158,slow=4.8,SNR=12
GEYT LR LR 16 11 31.0
comp=Z,2µm,19.2s,baz=110,slow=40
GYA0B ALIBECK ARRAY 67.36 307 P **P 15 37 05.7 -3.6**
HOQ Hoqain 67.39 292 P **P 15 37 08.7 -1.0**
BSY Bisya 67.50 291 P **P 15 37 09.7 -0.8**
ARQ Araqi 68.11 291 P **P 15 37 13.1 -1.2**
BANOM Banah 68.30 294 P **P 15 37 14.4 -1.1**
BANOM Banah 68.30 294 P **P 15 37 15.8 +0.4**
MDH Madha 68.30 293 P **P 15 37 14.0 -1.4**
MDH Madha 68.30 293 P **P 15 37 14.9 -0.6**
UOSS Minazif 68.39 293 P **P 15 37 14.4 -1.5**
UOSS Minazif 68.39 293 P **P 15 37 14.7 -1.2**
UOSS Minazif 68.39 293 P **P 15 37 14.3 -1.7**
UOSS IAmb IAmb 15 37 23.6
comp=Z,18nm,0.7s
MSFE Esma-Masafi 68.42 294 P **P 15 37 14.9 -1.3**
SHME Shamm 68.44 294 P **P 15 37 17.2 +0.9**
HATD Hatta, Dubai 68.45 293 *i*P **P 15 37 15.7 -0.7**
SNR=8.9
HATD Hatta, Dubai 68.45 293 P **P 15 37 16.0 -0.4**
ASHO Ashiyiah 68.52 293 *i*P **P 15 37 15.6 -1.3**
SNR=15
ASHO Ashiyiah 68.52 293 P **P 15 37 15.9 -0.9**
ALNE Al Ain 68.81 292 *i*P **P 15 37 17.6 -1.0**
SNR=23
UNV Unalaska Valle 68.97 36 IAMs_20 IAMs_20 16 02 30.3
comp=Z,2µm,21.0s
SVE Sverdlovsk 69.18 328 *e*P **P 15 37 19.4 -0.9**
SVE *e*S **S 15 46 26.2 +1.9**
SVE pmax pmax
comp=Z,65nm,0.9s
SVE MLR MLR
comp=Z,2µm,18.0s
AKTO Aktyubinsk 69.25 320 LR LR 16 10 57.6
comp=Z,3µm,19.6s,baz=106,slow=39
ARU Arti 70.19 327 LR LR 16 08 01.8
comp=Z,1µm,21.6s,baz=106,slow=36
ARU Arti 70.19 327*d i*P **P 15 37 24.9 -1.6**
ARU 15 37 44.8
ARU 15 39 59.4
ARU S **S 15 46 36.8 +0.6**
ARU 15 47 22.4
ARU SS **SS 15 51 02.0 -4.3**
ARU pmax pmax
comp=Z,42nm,0.6s
ARU MLR MLR
comp=Z,1µm,20.0s
ARU Arti 70.19 327 P **P 15 37 24.9 -1.6**
WHFO Wadi Hawf 70.92 286 P **P 15 37 30.4 -1.4**
SNR=9.1
SOCY Socotra 71.19 280 P **P 15 37 31.4 -2.1**
SNR=12
SOCY Socotra 71.19 280 P **P 15 37 31.3 -2.2**
SOCY IAmb IAmb 15 37 38.9
comp=Z,27nm,0.8s
SOCY IAMs_20 IAMs_20 16 06 35.9
comp=Z,1µm,20.0s
ABTO Aybut 71.41 285 P **P 15 37 34.0 -0.7**
SDPT Sand Point 72.70 35 IAMs_20 IAMs_20 16 03 50.8
comp=Z,2µm,22.0s
AKT Akhty 75.55 310 *e*P **P 15 37 57.8 -1.0**
AKT *e* 15 38 11.2
AKT pmax pmax
comp=Z,13nm,0.6s
MAK Makhachkala 75.73 312 *e*P **P 15 37 54.9 -4.7**
MAK *e*S **S 15 47 33.4 -6.3**
MAK pmax pmax
comp=Z,141nm,1.1s
SVW2 Sparrevohn 76.02 29 IAmb IAmb 15 38 15.4
comp=Z,46nm,1.5s
TTA Tatalina 76.03 27 P **P 15 38 01.8 +0.7**
TTA Tatalina 76.03 27 P **P 15 38 01.8 +0.7**
CASY Casey 76.31 187 P **P 15 38 02.4 +0.1**
CASY IAmb IAmb 15 38 17.5
comp=Z,46nm,0.9s
OHAK Old Harbor 76.89 33 IAmb IAmb 15 38 19.8
comp=Z,24nm,0.9s
GROC Groznyy 76.98 312 *e*P **P 15 38 06.0 -0.7**
GROC *e* 15 38 16.9
GROC *e* 15 41 00.6
GROC pmax pmax
comp=Z,24nm,0.6s
KDAK Kodiak Island 77.30 33 P **P 15 38 09.0 +0.8**
comp=Z,16nm,0.6s,baz=217,slow=9.6,SNR=11
KDAK Kodiak Island 77.30 33 P **P 15 38 08.9 +0.8**
KDAK pmax pmax
comp=Z,218nm,1.9s
KDAK Kodiak Island 77.30 33 P **P 15 38 08.8 +0.7**
KDAK Kodiak Island 77.30 33 IAMs_20 IAMs_20 16 10 02.0
comp=Z,1µm,20.0s
RAYN Ar Rayn 78.21 292 *i*P **P 15 38 12.5 -1.6**
SNR=70
RAYN Ar Rayn 78.21 292 P **P 15 38 12.9 -1.1**
RAYN pmax pmax
comp=Z,30nm,0.7s
RAYN MLR MLR
comp=Z,500nm,20.0s
RAYN Ar Rayn 78.21 292 P **P 15 38 12.9 -1.1**
RAYN IAmb IAmb 15 38 16.2
comp=Z,30nm,0.7s
RAR Rarotonga 78.38 114 LR LR 16 07 17.1
comp=Z,389nm,21.8s,baz=278,slow=31
ZEI Tsey 78.38 312 *e*P **P 15 38 13.4 -1.4**
ZEI pmax pmax
comp=Z,34nm,0.7s
NCK Nalchik 78.58 313‖ *e*P **P 15 38 15.5 -0.2**
NCK pmax pmax
comp=Z,10.0nm,0.7s
GOF Gofitskoye 78.92 314‖ *e*P **P 15 38 19.1 +1.6**
KBZ Khabaz 79.08 313 P **P 15 38 17.6 -0.7**
comp=Z,7.3nm,0.7s,baz=88,slow=8.1,SNR=9.0
KBZ LR LR 16 17 46.1
comp=Z,1µm,18.1s,baz=74,slow=39
KBZ Khabaz 79.08 313‖ *e*P **P 15 38 17.2 -1.1**
KBZ pmax pmax
comp=Z,8.0nm,0.8s
TOLK Toolik Lake Re 79.14 22 P **P 15 38 20.4 +2.1**
baz=268
TOLK Toolik Lake Re 79.14 22 IAmb IAmb 15 38 32.5
comp=Z,18nm,0.8s
KIV Kislovodsk 79.22 313 *i*P **P 15 38 19.3 +0.1**
SNR=6.8
KIV Kislovodsk 79.22 313 *e*P **P 15 38 19.1 -0.2**
KIV *e* 15 38 26.2
KIV *e* 15 41 13.7
KIV *e*PPP PPP 15 43 07.1
KIV *e*S **S 15 48 17.3 -0.5**
KIV *e*SS **SS 15 53 24.4 +0.1**
KIV pmax pmax
comp=Z,29nm,0.7s
NEY Neytrino 79.23 312‖ *e*P **P 15 38 19.3 -0.1**
NEY pmax pmax
comp=Z,3.0nm,0.7s
RND Reindeer 79.30 27 P **P 15 38 18.7 -0.6**
RND pmax pmax
comp=Z,21nm,1.0s
RND Reindeer 79.30 27 P **P 15 38 18.7 -0.6**
KNK Knik Glacier 79.48 29 P **P 15 38 20.0 -0.2**
KNK IAmb IAmb 15 38 48.3
comp=Z,52nm,1.2s
MDM Murphy Dome 79.59 26 IAMs_20 IAMs_20 16 10 33.0
comp=Z,1µm,21.0s
VRH Novokhopyorsk 79.59 320 *e*P **P 15 38 19.0 -2.0**
VRH pmax pmax
comp=Z,110nm,1.7s
COLA College 79.75 26‖ *e*P **P 15 38 22.8 +1.3**
COLA pmax pmax
comp=Z,3.0nm,0.8s
POKR Poker Flat Res 79.93 25 P **P 15 38 24.7 +2.2**
baz=270
HDA Harding Lake 80.14 26 P **P 15 38 23.4 -0.3**
baz=271
HDA Harding Lake 80.14 26 IAmb IAmb 15 38 40.2
comp=Z,15nm,0.6s
ILAR Eielson Array 80.17 26 P **P 15 38 23.8 -0.1**
comp=Z,3.5nm,0.6s,baz=240,slow=5.0,SNR=32
ILAR LR LR 16 13 34.0
comp=Z,102nm,21.1s,baz=278,slow=35
KLMR Klimovskoe 80.51 330*c i*P **P 15 38 24.7 -1.0**
KLMR *e*S **S 15 48 28.3 -2.1**
KLMR pmax pmax
comp=Z,40nm,0.7s

KLMR **Klimovskoe** 80.51 330⇑ *i*P **P** 15 38 24.7 -1.0
KLMR *i* P **P** **15 38 24.7 -1.0**
KLMR *i* P **P** **15 38 24.7 -1.0**
KLMR AMP 15 38 35.8
comp=Z,40nm,0.7s
KLMR *e*S **S** **15 48 28.4 -2.0**
KLMR *e*S **S** **15 48 28.4 -2.0**
KLMR LQ LQ 16 08 13.7
KLMR LQ LQ 16 08 13.7
KLMR LR LR 16 13 02.0
KLMR AMP 16 19 11.6
comp=Z,935nm,14.5s
EYAK Cordova Ski Ar 80.82 30 IAMs_20 IAMs_20 16 11 18.8
comp=Z,975nm,21.0s
TMCR Tamitsa 81.06 334 *e*P **P** **15 38 26.0 -2.6**
TMCR pmax pmax
comp=Z,43nm,0.6s
RIDG Independent Ri 81.09 27 IAmb IAmb 15 38 44.3
comp=Z,39nm,1.1s
VORD Divnogorie 81.14 320 *e*P **P** **15 38 27.6 -1.7**
VORD pmax pmax
comp=Z,20nm,0.6s
LPSR Galich'ya Gora 81.25 322 *e*P **P** **15 38 28.4 -1.5**
LPSR pmax pmax
comp=Z,30nm,0.7s
SOC Sochi 81.39 313 *e*P **P** **15 38 27.9 -2.9**
SOC *e*PPP PPP 15 43 30.8
SOC *e*S **S** **15 48 37.9 -2.5**
SOC *e*SS **SS** **15 53 52.0 -4.6**
SOC *e*SSS SSS 15 57 20.2
SOC pmax pmax
comp=Z,16nm,0.7s
DOT Dot Lake 81.44 27 IAmb IAmb 15 38 46.8
comp=Z,30nm,1.3s
MENT Mentasta 81.64 28 IAMs_20 IAMs_20 16 12 07.5
comp=Z,906nm,21.0s
MOS Moscow 81.79 325 *e*P **P** **15 38 32.0 -0.6**
MOS *e* 15 38 39.1
MOS MLR MLR
comp=Z,2µm,19.0s
ATD Arta Tunnel 82.09 280 P **P** **15 38 35.2 +0.1**
comp=Z,13nm,0.6s,baz=231,slow=2.4,SNR=6.6
LVZ Lovozero 82.17 338⇑ *e*P **P** **15 38 35.1 +0.6**
LVZ pmax pmax
comp=Z,32nm,1.0s
LVZ MLR MLR
comp=Z,1µm,18.0s
LVZ Lovozero 82.17 338 P **P** **15 38 34.1 -0.4**
LVZ IAmb IAmb 15 38 39.4
comp=Z,24nm,0.8s
OBN Obninsk 82.44 325 LR LR 16 17 38.7
comp=Z,273nm,18.7s,baz=74,slow=38
OBN Obninsk 82.44 325 *e*P **P** **15 38 36.3 +0.2**
OBN *e* 15 38 42.7
OBN *e* 15 41 42.5
OBN *e*PPP PPP 15 43 40.5
OBN *e*S **S** **15 48 51.3 +0.6**
OBN pmax pmax
comp=Z,11nm,0.6s
OBN MLR MLR
comp=Z,2µm,18.0s
EGAK Eagle 82.61 26 IAmb IAmb 15 38 53.8
comp=Z,23nm,1.2s
APA Apatity 82.68 337⇓ *i*P **P** **15 38 35.9 -1.2**
APA *i* 15 38 43.7
APA *i* 15 41 53.0
APA *e* 15 48 52.0
APA *i* PS **PnS** **15 49 43.0 -1.8**
APA pmax pmax
comp=Z,26nm,0.6s
APA MLR MLR
comp=Z,2µm,19.0s
ANN Anapa 82.91 314 *e*P **P** **15 38 36.8 -1.9**
ANN *e* 15 41 44.1
ANN *e*S **S** **15 48 56.5 +0.6**
ANN pmax pmax
comp=Z,56nm,0.9s
ANN MLR MLR
comp=E,612nm,17.0s
ANN MLR MLR
comp=N,1µm,20.0s
ANN MLR MLR
comp=Z,2µm,22.0s
OPO Ambohidratompo 83.02 250 P **P** **15 38 38.7 -1.3**
comp=Z,6.2nm,0.4s,baz=88,slow=4.8,SNR=23
ABPO Ambohimpanom 83.08 249 P **P** **15 38 38.3 -2.0**
ABPO pmax pmax
comp=Z,13nm,1.0s
ABPO Ambohimpanom 83.08 249 P **P** **15 38 38.2 -2.0**
HOPEN Hopen 83.70 347 *e*P **P** **15 38 41.5 -0.7**
EPYK Eagle Plains 84.22 24 P **P** **15 38 46.6 +1.5**
baz=280
EPYK Eagle Plains 84.22 24 IAmb IAmb 15 38 58.9
comp=Z,34nm,1.0s
KEV Kevo 84.63 340 P **P** **15 38 46.7 -0.3**
KEV pmax pmax
comp=Z,13nm,0.6s
KEV Kevo 84.63 340 P **P** **15 38 46.7 -0.3**
KEV IAmb IAmb 15 38 49.9
comp=Z,13nm,0.6s
KEV IAMs_20 IAMs_20 16 22 02.8
comp=Z,881nm,20.0s
HYT Haines Junctio 84.82 29 IAMs_20 IAMs_20 16 13 09.7
comp=Z,914nm,22.0s
SPA0 Spitsbergen Ar 85.01 349 *e*P **P** **15 38 48.4 -0.4**
SPITS Spitsbergen Ar 85.01 349 LR LR 16 23 27.7
comp=Z,1µm,18.5s,baz=0.0,slow=40
INK Inuvik 85.06 22 LR LR 16 18 16.7
comp=Z,200nm,20.9s,baz=282,slow=37
INK Inuvik 85.06 22 IAmb IAmb 15 39 04.1
comp=Z,29nm,1.2s
ARCES ARCESS Array B 85.19 340 P **P** **15 38 49.1 -0.8**
comp=Z,27nm,0.7s,baz=81,slow=5.8,SNR=109
ARCES LR LR 16 22 03.6
comp=Z,1µm,18.2s,baz=72,slow=39
ARE0 ARCESS Array S 85.19 340 *e*P **P** **15 38 49.5 -0.4**
SIM Simferopol' 85.23 315 *e*P **P** **15 38 50.1 -0.5**
SIM S **SKSac** **15 49 14.1 +0.2**
SIM pmax pmax
comp=Z,28nm,0.7s
KBS Kingsbay 85.52 350 *e*P **P** **15 38 51.5 +0.2**
HAMF Hammerfest 85.52 341 *e*P **P** **15 38 50.7 -0.8**
HSPB Hornsund (broa 85.62 348 *e*P **P** **15 38 51.2 -0.7**
BJO1 Bjornoya 85.72 345 *e*P **P** **15 38 49.0 -3.4**
MMAI Mount Meron Ar 85.98 303 LR LR 16 23 45.3
comp=Z,320nm,18.2s,baz=160,slow=40
KTK1 Kautokeino 86.11 339 *e*P **P** **15 38 53.0 -1.4**
BRTR Keskin Array B 86.37 309 P **P** **15 38 54.8 -1.7**
comp=Z,2.9nm,0.7s,baz=154,slow=3.8,SNR=6.2
BRTR LR LR 16 23 30.2
comp=Z,479nm,18.9s,baz=44,slow=40
FURI Furi 86.54 278 IAMs_20 IAMs_20 16 18 54.5
comp=Z,1µm,19.0s
A36M Sachs Harbour 86.73 17 P **P** **15 38 59.1 +1.6**
baz=290
EIL Elat 86.86 299 LR LR 16 26 27.1
comp=Z,534nm,18.1s,baz=81,slow=42
FIA1 FINESS Array S 86.87 332 IAmb IAmb 15 39 08.9
comp=Z,32nm,1.2s
JIS Juneau Island 86.87 32 IAMs_20 IAMs_20 16 15 43.0
comp=Z,807nm,20.0s
FINES FINESS Array B 86.87 332 P **P** **15 38 57.6 -0.7**
comp=Z,12nm,0.6s,baz=80,slow=4.9,SNR=50
FINES LR LR 16 21 59.1
comp=Z,1µm,19.5s,baz=86,slow=38
PPT Papeete 86.98 108 LR LR 16 10 47.7
comp=Z,477nm,21.5s,baz=282,slow=31
PPT2 Papeete2 86.98 108 *e*S **S** **15 49 37.8 +0.4**
comp=Z,1µm,29.0s
PPT2 Papeete2 86.98 108 *e*LQ LQ 16 02 30.4
comp=Z,1µm,29.0s
PPT2 *e*LR LR 16 06 28.4
comp=Z,892nm,22.2s,baz=289
TRO Tromso 87.38 340 *e*P **P** **15 38 59.0 -1.6**
AKASG Malin Array Be 87.49 321 P **P** **15 38 59.6 -1.9**
comp=Z,4.1nm,0.6s,baz=67,slow=4.5,SNR=12
AKASG LR LR 16 21 30.5
comp=Z,657nm,18.4s,baz=75,slow=38
AKBB Malin Array Si 87.49 321 IAMs_20 IAMs_20 16 23 44.6
comp=Z,886nm,18.0s
MICGM Minsk 87.50 325 *e* **P** **15 39 06.0 +4.5**
MICGM *e*LR LR 16 17 34.0
MNK Minsk 87.50 325 *e*P **P** **15 39 06.0 +4.5**
NOR Nord 87.55 355 *i*P **P** **15 39 01.6 +0.3**
NOR Nord 87.55 355 *i*P **P** **15 39 01.6 +0.3**

C36M Paulatuk 88.04 20 P **P** **15 39 03.9 +0.2**
baz=291
NACGM Naroch 88.04 325 *e*P **P** **15 39 05.0 +0.9**
NACGM *e*SKS **SKSac** **15 49 32.0 +1.3**
NACGM *e*S **ScS** **15 49 52.0 -0.3**
NACGM *e*SS **SS** **15 55 36.0 +2.2**
NACGM *e*LQ LQ 16 12 36.0
NACGM *e*LR LR 16 17 38.0
NACGM LRM MLR 16 21 35.0
comp=Z,5.9nm,18.0s
TBI Tubuai 88.16 114 *e*S **S** **15 49 48.5 +0.2**
comp=Z,2µm,27.0s
TBI Tubuai 88.16 114 *e*LQ LQ 16 03 20.0
comp=Z,983nm,33.0s
TBI *e*LR LR 16 06 55.0
comp=Z,1µm,23.5s,baz=296
ALE Alert 88.21 1 IAMs_20 IAMs_20 16 15 49.2
comp=Z,851nm,22.0s
KIS Kishinev 88.51 317 *e*P **P** **15 39 08.0 +1.5**
KIS Kishinev 88.51 317 *e*PP PP 15 42 42.0 +7.5
KIS *e*S **S** **15 49 50.0 -0.9**
KIS Kishinev 88.51 317 *e*PS PS 15 50 51.0 -6.5
KIS Kishinev 88.51 317 *e*PPS PPS 15 51 20.0
KIS *e*SS SS 15 55 38.0 -3.2
KIS *e*LQ LQ 16 10 26.0
KIS LRM MLR 16 22 20.0
comp=Z,2µm,22.0s
KIS Kishinev 88.51 317 *e*P **P** **15 39 08.0 +1.5**
KIS *e* 15 42 42.0
KIS *e*S **S** **15 49 50.0 -0.9**
KIS *e*PS PS 15 50 51.0 -6.5
KIS *e*PPS PPS 15 51 20.0
KIS *e*SS **SS** **15 55 38.0 -3.2**
KIS MLR MLR
comp=Z,2µm,22.0s
SORM Soroca 88.58 318 ⇑P **P** **15 39 05.1 -1.7**
SORM Soroca 88.58 318 ⇑P **P** **15 39 05.1 -1.7**
TLCR 88.89 316 ⇑P **P** **15 39 11.5 +3.2**
TLCR 88.89 316 ⇑P **P** **15 39 11.5 +3.2**
MAW Mawson 88.91 200 P **P** **15 39 07.8 0.0**
baz=89,SNR=4.7
MAW Mawson 88.91 200 P **P** **15 39 07.4 -0.3**
comp=Z,1.7nm,0.5s,baz=81,slow=6.6,SNR=4.0
MAW LR LR 16 15 16.0
comp=Z,364nm,20.6s,baz=58,slow=33
MAW Mawson 88.91 200 P **P** **15 39 07.7 0.0**
MAW pmax pmax
comp=Z,5.0nm,1.3s
MAW Mawson 88.91 200 P **P** **15 39 07.7 0.0**
VNDA Vanda 88.95 173 P **P** **15 39 07.8 0.0**
comp=Z,4.6nm,0.6s,baz=310,slow=6.1,SNR=19
VNDA LR LR 16 20 48.4
comp=Z,841nm,18.0s,baz=348,slow=37
VNDA Vanda 88.95 173 P **P** **15 39 07.8 0.0**
VNDA pmax pmax
comp=Z,11nm,0.8s
VNDA Vanda 88.95 173 P **P** **15 39 07.8 0.0**
VNDA IAmb IAmb 15 39 20.6
comp=Z,11nm,0.8s
ISP Isparta 89.10 308 IAMs_20 IAMs_20 16 24 05.8
comp=Z,802nm,21.0s
STEI Steigen 89.25 339 *e*P **P** **15 39 07.8 -1.7**
KMBO Kilima Mbogo 89.52 269 P **P** **15 39 13.4 +1.2**
comp=Z,5.2nm,0.9s,baz=39,slow=2.8,SNR=5.5
KMBO Kilima Mbogo 89.52 269 IAMs_20 IAMs_20 16 20 31.0
comp=Z,754nm,20.0s
LOF Lofoten 89.75 340 *e*P **P** **15 39 10.7 -1.1**
TESR Tescani 90.07 317 ⇑P **P** **15 39 14.1 +0.2**
VRI Vrincioaia 90.17 316 ⇑P **P** **15 39 16.2 +1.8**
VRI Vrincioaia 90.17 316 ⇑P **P** **15 39 16.2 +1.8**
PLOR Plostina 90.23 316 ⇓P **P** **15 39 17.0 +2.4**
PLOR Plostina 90.23 316 ⇓P **P** **15 39 17.0 +2.4**
MOR8 Moi Rana 90.24 338 *e*P **P** **15 39 12.9 -1.4**
BURAR Bucovina Array 90.76 318 ⇑P **P** **15 39 15.6 -1.5**
BURAR Bucovina Array 90.76 318 ⇑P **P** **15 39 15.6 -1.5**
MLR Muntele Rosu 90.79 316 ⇓P **P** **15 39 19.7 +2.3**
MLR Muntele Rosu 90.79 316 ⇓P **P** **15 39 19.7 +2.3**
DOPR Dopca 91.05 317 ⇓P **P** **15 39 19.4 +1.0**
VOIR 91.42 316 ⇑P **P** **15 39 21.7 +1.5**
VOIR 91.42 316 ⇑P **P** **15 39 21.7 +1.5**
ARR Arges 91.72 316 ⇑P **P** **15 39 23.9 +2.3**
DAG Danmarks Havn 91.74 352 *i*P **P** **15 39 19.9 -1.0**
DAG Danmarks Havn 91.74 352 *i*P **P** **15 39 19.9 -1.0**
NSS Namsos 91.88 337 *e*P **P** **15 39 19.6 -2.2**
TRPA Tarpa 92.35 319 ⇑P **P** **15 39 20.5 -3.9**
UZH Uzhgorod 92.37 320 *e*P **P** **15 39 20.6 -3.8**
UZH *e* 15 39 31.6
RES Resolute Bay 92.38 10 P **P** **15 39 24.6 +0.7**
comp=Z,20nm,0.7s,baz=297,slow=5.2,SNR=22
HFS Hagfors 93.03 332 LR LR 16 25 48.0
comp=Z,1µm,18.4s,baz=64,slow=38
TBLU Trondheim 93.13 336 *e*P **P** **15 39 24.9 -2.7**
VTS Vitosha 93.42 314 IAMs_20 IAMs_20 16 27 47.7
comp=Z,930nm,19.0s
NC405 NORSAR Array S 93.50 334 IAmb IAmb 15 39 47.8
comp=Z,17nm,0.9s
NC602 NORSAR Array S 93.74 334 *e*P **P** **15 39 28.7 -1.8**
NB2 NORSAR Subarra 93.75 334 P **P** **15 39 28.7 -1.9**
comp=Z,5.2nm,0.8s,baz=66,slow=4.6
NB2 NORSAR Subarra 93.75 334 P **P** **15 39 28.7 -1.9**
baz=66,slow=4.6
NOA NORSAR Array B 93.75 334 P **P** **15 39 28.7 -1.9**
comp=Z,2.9nm,0.6s,baz=65,slow=4.6,SNR=16
NOA LR LR 16 24 42.7
comp=Z,1µm,21.3s,baz=50,slow=38
TULEG Thule 93.82 4 IAMs_20 IAMs_20 16 25 54.8
comp=Z,836nm,19.0s
NC204 NORSAR Array S 93.83 334 IAmb IAmb 15 39 38.5
comp=Z,16nm,0.8s
MDVR Moldovita 93.87 316 ⇓P **P** **15 39 31.3 -0.2**
IDI Anoyia 94.08 307 LR LR 16 28 29.3
comp=Z,511nm,19.1s,baz=90,slow=40
DOMB Dombas 94.19 335 *e*P **P** **15 39 30.9 -1.7**
JMIC Jan Mayen 94.43 347 *e*P **P** **15 39 32.2 -1.2**
YKA Yellowknife Ar 94.50 24 P **P** **15 39 34.6 +0.7**
comp=Z,4.3nm,0.6s,baz=298,slow=4.3,SNR=56
YKA PKKPbc **PKKPdf** **15 56 33.4 -0.2**
comp=Z,0.3nm,0.6s,baz=131,slow=3.1,SNR=2.8
YKA LR LR 16 22 28.8
comp=Z,301nm,21.3s,baz=0.0,slow=36
MOL Molde 94.55 336 *e*P **P** **15 39 35.1 +0.9**
OKC Ostrava-Krasne 94.56 322 *e*SKS **S** **15 50 49.4 +3.8**
OKC AMS AMS 16 25 20.0
comp=Z,900nm,19.5s
VYHS Vyhne 94.59 321 *e*P **P** **15 39 34.4 -0.3**
VYHS Vyhne 94.59 321 *e*P **P** **15 39 34.4 -0.3**
TAOE Nuku Hiva Isla 94.60 98 *e*S **S** **15 50 46.8 -0.6**
comp=Z,960nm,28.5s
TAOE Nuku Hiva Isla 94.60 98 *e*LR LR 16 09 45.6
comp=Z,2µm,34.0s,baz=286
MORC Moravsky Berou 94.95 322 IAMs_20 IAMs_20 16 28 24.9
comp=Z,918nm,20.0s
AKN Aaknes 94.97 336 *e*P **P** **15 39 37.0 +0.8**
KONO Kongsberg 95.10 333 *e*P **P** **15 39 35.3 -1.5**
SKAR Skarslia 95.17 334 *e*P **P** **15 39 35.2 -1.9**
DIVS Divibare 95.25 316 IAMs_20 IAMs_20 16 30 15.0
comp=Z,789nm,19.0s
KRLC Kraliky 95.31 322 *e*P **P** **15 39 38.7 +0.7**
KRLC MLR MLR
comp=Z,900nm,19.0s
KRLC Kraliky 95.31 322 *e*P **P** **15 39 38.7 +0.7**
KRLC AMS AMS 16 27 10.0
comp=Z,900nm,19.0s
OSTC Ostas 95.47 323 *e*P **P** **15 39 41.6 +2.9**
OSTC AMS AMS 16 26 10.0
comp=Z,900nm,17.2s
DPC Dobruska-Polom 95.48 323 *e*P **P** **15 39 42.2 +3.4**
DPC *e* 15 50 50.4
DPC MLR MLR
comp=Z,1µm,18.2s
DPC Dobruska-Polom 95.48 323 *e*P **P** **15 39 42.2 +3.4**
DPC *e*SKS **S** **15 50 50.4 -3.2**
DPC AMS AMS 16 29 50.0
comp=Z,1µm,18.2s
RGN Rugen 95.53 327 IAMs_20 IAMs_20 16 25 57.1
comp=Z,797nm,19.0s
CHVC Chvalec 95.55 323 AMS AMS 16 25 30.0
comp=Z,1µm,18.4s
UPC Upice 95.61 323 *e*P **P** **15 39 36.8 -2.5**
UPC MLR MLR
comp=Z,1µm,18.4s
UPC Upice 95.61 323 *e*P **P** **15 39 36.8 -2.5**
UPC AMS AMS 16 26 20.0
comp=Z,1µm,18.4s

VRAC Vranov 95.70 322 LR LR 16 23 49.1
comp=Z,474nm,21.9s,baz=79,slow=36
MBAR Mbarara 95.86 270 IAMs_20 IAMs_20 16 22 45.1
comp=Z,957nm,20.0s
PGC Sidney 95.92 39 IAMs_20 IAMs_20 16 13 23.4
comp=Z,960nm,22.0s
FOO Floro 96.06 336 *e*P **P** **15 39 40.6 -0.5**
NLWA Neilton Lookou 96.11 40 IAMs_20 IAMs_20 16 14 12.6
comp=Z,902nm,22.0s
KULLO Kullorsuaq 96.23 1 *i*P **P** **15 39 41.3 -0.3**
KULLO pmax pmax
comp=Z,8.0nm,0.8s
KULLO Kullorsuaq 96.23 1 *i*P **P** **15 39 41.3 -0.3**
comp=Z,8.0nm,0.8s
HOMB Homborsund 96.26 332 *e*P **P** **15 39 38.5 -3.5**
PVCC Panska Ves 96.45 323 AMS AMS 16 26 00.0
comp=Z,1µm,19.1s
BER Bergen 96.59 335 *e*P **P** **15 39 42.0 -1.5**
ASK Askoy 96.60 335 *e*P **P** **15 39 42.1 -1.4**
BLS5 Blasjo 96.61 334 *e*P **P** **15 39 41.1 -2.5**
PRU Pruhonice 96.68 323 *e*SKS **S** **15 50 57.9 -6.0**
PRU AMS AMS 16 28 10.0
comp=Z,1µm,19.8s
BRG Berggiesshubel 96.68 324 *e*P P 15 39 50.0 +5.9
comp=Z,2.8nm,0.9s
BRG Berggiesshubel 96.68 324 S **S** **15 51 03.0 -0.9**
BRG Berggiesshubel 96.68 324 *e*P P 15 39 50.0 +5.9
BRG S **S** **15 51 03.0 -0.9**
BRG pmax pmax
comp=Z,3.0nm,0.9s
PRA Prague 96.71 323 AMS AMS 16 26 10.0
comp=Z,600nm,19.0s
F03A Seaside 96.83 41 IAMs_20 IAMs_20 16 24 39.7
comp=Z,770nm,18.0s
CLL Collm 97.05 325 *e*pP **pP** **15 39 50.0 -3.2**
CLL *e*(PP) 15 43 54.0
CLL *e*SKSac **SKSac** **15 50 16.0 -5.2**
CLL *e*S **S** **15 51 03.0 -4.0**
CLL *e*PS **PS** **15 52 24.0 -7.4**
CLL *e*PPS PPS 15 53 12.0
CLL *e*SS **SS** **15 57 36.0 -7.1**
CLL *e*SSS SSS 16 01 30.0
CLL *e* 16 05 36.0
CLL Lm MLR 16 29 00.0
comp=N,800nm,19.0s
CLL Lm MLR 16 29 00.0
comp=E,700nm,20.1s
CLL Lm MLR 16 29 00.0
comp=Z,2µm,18.7s
CLL Collm 97.05 325 *e*P Pdif 15 39 50.0 +4.1
CLL *e* 15 50 16.0
CLL *e*S **S** **15 51 03.0 -4.0**
CLL MLR MLR
comp=Z,2µm,18.7s
D05A Enumclaw 97.38 40 IAMs_20 IAMs_20 16 21 49.0
comp=Z,768nm,21.0s
COR Corvallis 97.48 43 IAMs_20 IAMs_20 16 14 27.0
comp=Z,811nm,20.0s
SYO Syowa Base 97.54 201⇑ *e*X **P** **15 39 45.4 -2.1**
KHC Kasperske Hory 97.59 322 *e*P **P** **15 39 47.4 -1.0**
KHC *e* 15 51 04.4
KHC MLR MLR
comp=Z,1µm,18.6s
KHC Kasperske Hory 97.59 322 *e*P **P** **15 39 47.4 -1.0**
KHC *e*SKS **S** **15 51 04.4 -7.5**
KHC AMS AMS 16 30 30.0
comp=Z,1µm,18.6s
GERES GERESS Array B 97.63 322 P **P** **15 39 48.1 -0.6**
comp=Z,1.0nm,0.7s,baz=64,slow=3.4,SNR=8.4
GERES LR LR 16 28 45.3
comp=Z,865nm,19.2s,baz=79,slow=38
LON Longmire 97.66 40 IAMs_20 IAMs_20 16 21 28.5
comp=Z,650nm,20.0s
SUMG Summit 97.70 355 IAMs_20 IAMs_20 16 29 01.7
comp=Z,724nm,20.0s
NKC Novy Kostel 97.81 324 AMS AMS 16 27 20.0
comp=Z,1µm,19.2s
MOX Moxa 98.12 324 *e*L L 16 28 04.7
comp=Z,985nm,18.7s
LTY Liberty 98.18 39 IAMs_20 IAMs_20 16 22 15.3
comp=Z,926nm,19.0s
PRED Cave del Predi 98.67 320 IAMs_20 IAMs_20 16 32 37.3
comp=Z,861nm,18.0s
GRF Grafenberg Arr 98.76 324 *e*Pdiff Pdif 15 40 00.1 +6.5
comp=Z,4.6nm,1.0s
GRF *e*L L 16 28 34.3
comp=Z,1µm,19.0s
YBH Yreka Blue Hor 98.90 45 IAMs_20 IAMs_20 16 16 28.0
comp=Z,658nm,19.0s
G06A Carlson Farm, 98.99 41 IAMs_20 IAMs_20 16 28 18.0
comp=Z,617nm,18.0s
TIP Timpagrande 99.15 312 IAMs_20 IAMs_20 16 32 14.3
comp=Z,896nm,20.0s
F07A Phinny Hill Vi 99.19 40 IAMs_20 IAMs_20 16 22 41.1
comp=Z,671nm,20.0s
HAWA Hanford 99.24 40 IAMs_20 IAMs_20 16 22 02.4
comp=Z,941nm,20.0s
PINE Pine Mountain 99.35 43 IAMs_20 IAMs_20 16 20 05.6
comp=Z,782nm,20.0s
D08A Wollman Farm, 99.35 39 IAMs_20 IAMs_20 16 19 33.2
comp=Z,709nm,21.0s
K05A Summer Lake 99.79 44 IAMs_20 IAMs_20 16 17 21.3
comp=Z,696nm,20.0s
PAOL Paolisi 100.06 315 IAMs_20 IAMs_20 16 32 18.5
comp=Z,778nm,21.0s
E09A Wood Farm, Sta 100.06 39 IAMs_20 IAMs_20 16 17 24.1
comp=Z,807nm,22.0s
AQU L'Aquila 100.37 316 IAMs_20 IAMs_20 16 30 20.5
comp=Z,750nm,20.0s
MOD Modoc Plateau 100.50 44 IAMs_20 IAMs_20 16 21 51.4
comp=Z,710nm,20.0s
MATP Matopo 100.71 251 P **Pdif** **15 39 59.9 -3.1**
comp=Z,2.1nm,0.8s,baz=180,slow=7.6,SNR=4.7
F10A Beach Ranch, E 100.87 40 IAMs_20 IAMs_20 16 17 49.4
comp=Z,901nm,21.0s
SALO Salr 100.94 320 IAMs_20 IAMs_20 16 32 18.3
comp=Z,803nm,19.0s
AFDM Forest Hills D 101.14 47 IAMs_20 IAMs_20 16 20 06.8
comp=Z,726nm,20.0s
BMO Blue Mountains 101.31 41 IAMs_20 IAMs_20 16 17 18.0
comp=Z,597nm,20.0s
ILULI Ilulissat 101.65 359 IAMs_20 IAMs_20 16 33 12.2
comp=Z,740nm,19.0s
RUBR Rubicon Trail 101.69 47 IAMs_20 IAMs_20 16 20 27.3
comp=Z,764nm,20.0s
CMB Columbia Colle 101.91 48 IAMs_20 IAMs_20 16 23 36.1
comp=Z,645nm,20.0s
VCNR Virginia City 101.97 47 IAMs_20 IAMs_20 16 23 05.4
comp=Z,746nm,19.0s
PNTR Pine Nut 102.08 47 IAMs_20 IAMs_20 16 23 05.5
comp=Z,876nm,20.0s
MSSA Maissana 102.15 319 IAMs_20 IAMs_20 16 30 53.4
comp=Z,826nm,21.0s
CLTB Caltabellotta 102.32 312 IAMs_20 IAMs_20 16 34 35.3
comp=Z,857nm,22.0s
BORG Borgarnes 102.33 347 IAMs_20 IAMs_20 16 35 48.6
comp=Z,668nm,18.0s
WAKR Walker 102.42 47 IAMs_20 IAMs_20 16 21 07.6
comp=Z,853nm,20.0s
MDPB Devils Postpil 103.02 48 IAMs_20 IAMs_20 16 23 32.5
comp=Z,786nm,20.0s
RYN Ryan 103.03 47 IAMs_20 IAMs_20 16 20 38.8
comp=Z,665nm,20.0s
OMMB Old Mammoth Mi 103.08 48 IAMs_20 IAMs_20 16 23 35.2
comp=Z,817nm,20.0s
EKA Eskdalemuir Ar 103.22 333 Pdiff **Pdif** **15 40 15.7 +2.4**
comp=Z,0.1nm,0.3s,baz=40,slow=5.6,SNR=1.7
NVAR Mina Array Bea 103.27 47 Pdiff **Pdif** **15 40 15.6 +1.4**
comp=Z,0.4nm,0.6s,baz=290,slow=4.3,SNR=4.4
SFJD Kangerlussuaq 103.86 359 IAMs_20 IAMs_20 16 34 46.8
comp=Z,629nm,20.0s
MWC Mount Wilson 105.09 51 IAMs_20 IAMs_20 16 18 18.8
comp=Z,828nm,20.0s
GSC Goldstone, Bar 105.62 49 IAMs_20 IAMs_20 16 23 09.5
comp=Z,745nm,21.0s
H17A Grant Village 105.76 39 IAMs_20 IAMs_20 16 21 20.7
comp=Z,821nm,21.0s
IMW Indian Meadow 105.79 39 IAMs_20 IAMs_20 16 26 55.5
comp=Z,783nm,20.0s
FLWY Flagg Ranch 105.85 39 IAMs_20 IAMs_20 16 27 17.0
comp=Z,740nm,20.0s
AHID Auburn Hatcher 106.25 40 IAMs_20 IAMs_20 16 26 37.9
comp=Z,583nm,21.0s
SHPR Sheep Range 106.34 48 IAMs_20 IAMs_20 16 25 17.4
comp=Z,882nm,22.0s
PDAR Pinedale Array 107.23 40 PKKP 15 56 09.8
comp=Z,1.3nm,0.7s,baz=120,slow=4.1,SNR=7.2

W13A	**Hualapai Mount**	**107.88**	**49**	IAMs_20	IAMs_20	16 24 13.2		
	comp=Z,628nm,20.0s							
Y14A	**Wickenburg**	**109.03**	**49**	IAMs_20	IAMs_20	16 26 37.9		
	comp=Z,765nm,19.0s							
K22A	**Casper**	**109.19**	**39**	IAMs_20	IAMs_20	16 29 46.3		
	comp=Z,641nm,19.0s							
WUAZ	**Wupatki**	**109.53**	**47**	IAMs_20	IAMs_20	16 27 49.7		
	comp=Z,653nm,20.0s							
PV14	**Lion Creek, Pa**	**109.81**	**44**	IAMs_20	IAMs_20	16 29 53.6		
	comp=Z,574nm,20.0s							
214A	**Organ Pipe Nat**	**110.03**	**51**	IAMs_20	IAMs_20	16 36 46.7		
	comp=Z,515nm,19.0s							
W18A	**Petrified Fore**	**110.90**	**47**	IAMs_20	IAMs_20	16 28 05.9		
	comp=Z,726nm,20.0s							
X18A	**Snowflake**	**111.02**	**48**	IAMs_20	IAMs_20	16 26 09.3		
	comp=Z,654nm,20.0s							
ISCO	**Idaho Springs**	**111.32**	**41**	IAMs_20	IAMs_20	16 24 09.2		
	comp=Z,710nm,22.0s							
HSIG		**112.74**	**53**	IAMs_20	IAMs_20	16 41 12.7		
	comp=Z,570nm,18.0s							
PAB	**San Pablo**	**113.45**	**320**	IAMs_20	IAMs_20	16 39 31.6		
	comp=Z,607nm,18.0s							
F36A	**Milaca**	**114.37**	**30**	IAMs_20	IAMs_20	16 41 33.9		
	comp=Z,574nm,19.0s							
BGNE	**Belgrade**	**114.93**	**36**	IAMs_20	IAMs_20	16 32 46.9		
	comp=Z,482nm,18.0s							
SCHQ	**Schefferville**	**115.11**	**9**	IAMs_20	IAMs_20	16 32 39.9		
	comp=Z,646nm,22.0s							
L34A	**Svendsen Farm,**	**115.57**	**34**	IAMs_20	IAMs_20	16 44 19.5		
	comp=Z,508nm,20.0s							
I37A	**Lemond, Waseca**	**115.74**	**31**	IAMs_20	IAMs_20	16 38 08.6		
	comp=Z,654nm,20.0s							
COWI	**Conover**	**116.24**	**27**	IAMs_20	IAMs_20	16 45 03.3		
	comp=Z,680nm,19.0s							
MSTX	**Muleshoe**	**116.42**	**45**	IAMs_20	IAMs_20	16 32 25.7		
	comp=Z,493nm,20.0s							
SFS	**San Fernando**	**116.44**	**319**	IAMs_20	IAMs_20	16 43 39.8		
	comp=Z,461nm,18.0s							
R32A	**Long Quarter,**	**116.48**	**39**	IAMs_20	IAMs_20	16 36 23.4		
	comp=Z,561nm,20.0s							
AMTX	**Amarillo**	**116.66**	**43**	IAMs_20	IAMs_20	16 25 40.9		
	comp=Z,654nm,22.0s							
KSU1	**Kansas State U**	**117.32**	**37**	IAMs_20	IAMs_20	16 34 29.3		
	comp=Z,604nm,21.0s							
SCIA	**State Center**	**117.33**	**33**	IAMs_20	IAMs_20	16 30 38.8		
	comp=Z,518nm,22.0s							
U32A	**Winter Ranch,**	**117.55**	**41**	IAMs_20	IAMs_20	16 26 58.0		
	comp=Z,517nm,22.0s							
TXAR	**Lajitas Array**	**118.22**	**50**	PKP	**PKiKP**	**15 45 02.6**	**+0.8**	
	comp=Z,1.5nm,0.6s,baz=21,slow=2.3,SNR=6.0							
G45A	**Suttons Bay**	**118.59**	**26**	IAMs_20	IAMs_20	16 36 21.5		
	comp=Z,587nm,20.0s							
WMOK	**Wichita Mounta**	**118.68**	**42**	IAMs_20	IAMs_20	16 26 33.2		
	comp=Z,540nm,22.0s							
VLDQ	**Val d'Or**	**119.00**	**18**	IAMs_20	IAMs_20	16 40 35.6		
	comp=Z,702nm,20.0s							
TUL1	**Leonard**	**119.87**	**39**	IAMs_20	IAMs_20	16 28 20.2		
	comp=Z,668nm,22.0s							
U38A	**Gravette**	**120.39**	**38**	IAMs_20	IAMs_20	16 34 49.8		
	comp=Z,642nm,22.0s							
JCT	**Junction City**	**120.44**	**46**	IAMs_20	IAMs_20	16 39 12.6		
	comp=Z,546nm,19.0s							
Z35A	**Perchaven, San**	**120.54**	**42**	IAMs_20	IAMs_20	16 31 20.5		
	comp=Z,594nm,20.0s							
I49A	**Point Hope**	**120.66**	**24**	IAMs_20	IAMs_20	16 43 38.8		
	comp=Z,597nm,20.0s							
O44A	**Mansfield**	**121.07**	**31**	IAMs_20	IAMs_20	16 42 58.5		
	comp=Z,572nm,19.0s							
CCM	**Cathedral Cave**	**121.12**	**34**	IAMs_20	IAMs_20	16 36 52.3		
	comp=Z,601nm,20.0s							
WHTX	**Lake Whitney,**	**121.21**	**44**	IAMs_20	IAMs_20	16 29 42.4		
	comp=Z,631nm,22.0s							
L48A	**N Adams**	**121.60**	**27**	IAMs_20	IAMs_20	16 41 30.1		
	comp=Z,665nm,20.0s							
AAM	**Ann Arbor**	**121.66**	**26**	IAMs_20	IAMs_20	16 39 16.4		
	comp=Z,573nm,22.0s							
N47A	**Urbana**	**121.87**	**28**	IAMs_20	IAMs_20	16 40 43.4		
	comp=Z,532nm,20.0s							
FCAR	**Ozark Folk Cen**	**122.11**	**37**	IAMs_20	IAMs_20	16 43 10.2		
	comp=Z,472nm,20.0s							
237A	**Washetta, Mont**	**122.32**	**43**	IAMs_20	IAMs_20	16 41 00.6		
	comp=Z,677nm,20.0s							
WHAR	**Wooly Hollow**	**122.42**	**37**	IAMs_20	IAMs_20	16 36 09.5		
	comp=Z,510nm,20.0s							
S44A	**Carbondale**	**122.47**	**33**	IAMs_20	IAMs_20	16 41 48.0		
	comp=Z,543nm,20.0s							
SIUC	**Southern Illin**	**122.48**	**33**	IAMs_20	IAMs_20	16 41 48.0		
	comp=Z,527nm,20.0s							
N49A	**Columbus Grove**	**122.53**	**27**	IAMs_20	IAMs_20	16 41 36.9		
	comp=Z,601nm,20.0s							
E63A	**Oxbow**	**122.92**	**12**	IAMs_20	IAMs_20	16 42 14.8		
	comp=Z,574nm,20.0s							
PARMO	**Parma**	**122.94**	**35**	IAMs_20	IAMs_20	16 42 01.7		
	comp=Z,544nm,20.0s							
WLAR	**White Oak Lake**	**122.99**	**39**	IAMs_20	IAMs_20	16 37 06.8		
	comp=Z,682nm,20.0s							
LONY	**Lake Ozonia**	**123.01**	**18**	IAMs_20	IAMs_20	16 46 53.0		
	comp=Z,618nm,19.0s							
O49A	**Covington**	**123.05**	**28**	IAMs_20	IAMs_20	16 41 12.6		
	comp=Z,642nm,20.0s							
P48A	**Milroy**	**123.11**	**29**	IAMs_20	IAMs_20	16 49 04.3		
	comp=Z,484nm,19.0s							
FRNY	**Flat Rock**	**123.11**	**17**	IAMs_20	IAMs_20	16 44 40.5		
	comp=Z,553nm,19.0s							
PVMO	**Portageville**	**123.15**	**35**	IAMs_20	IAMs_20	16 50 19.2		
	comp=Z,572nm,20.0s							
HBAR	**Harrisburg**	**123.21**	**36**	IAMs_20	IAMs_20	16 46 00.0		
	comp=Z,497nm,19.0s							
M52A	**Chesterland**	**123.26**	**25**	IAMs_20	IAMs_20	16 44 57.6		
	comp=Z,575nm,19.0s							
T45A	**Paducah**	**123.30**	**34**	IAMs_20	IAMs_20	16 39 44.9		
	comp=Z,594nm,20.0s							
LPAR	**Lepanto**	**123.38**	**36**	IAMs_20	IAMs_20	16 38 06.6		
	comp=Z,474nm,21.0s							
J56A	**Wolcott**	**123.47**	**20**	IAMs_20	IAMs_20	16 41 21.7		
	comp=Z,449nm,20.0s							
LNXT	**Lenox**	**123.49**	**35**	IAMs_20	IAMs_20	16 42 08.3		
	comp=Z,545nm,19.0s							
HKT	**Hockley**	**123.55**	**45**	IAMs_20	IAMs_20	16 49 52.2		
	comp=Z,433nm,19.0s							
WCI	**Wyandotte Cave**	**123.63**	**31**	IAMs_20	IAMs_20	16 43 41.2		
	comp=Z,549nm,19.0s							
ACSO	**Alum Creek Sta**	**123.63**	**27**	IAMs_20	IAMs_20	16 42 39.8		
	comp=Z,605nm,20.0s							
ALLY	**Alegheny Colle**	**123.66**	**24**	IAMs_20	IAMs_20	16 42 34.1		
	comp=Z,481nm,20.0s							
CCAR	**Cane Creek**	**123.67**	**38**	IAMs_20	IAMs_20	16 30 15.6		
	comp=Z,681nm,21.0s							
NCB	**Newcomb**	**123.71**	**18**	IAMs_20	IAMs_20	16 47 21.4		
	comp=Z,415nm,19.0s							
HALT	**Halls**	**123.71**	**35**	IAMs_20	IAMs_20	16 42 14.1		
	comp=Z,523nm,20.0s							
VT1	**Waterbury**	**123.81**	**17**	IAMs_20	IAMs_20	16 45 43.3		
	comp=Z,603nm,20.0s							
MET	**Memphis--Engin**	**123.93**	**36**	IAMs_20	IAMs_20	16 51 05.2		
	comp=Z,657nm,20.0s							
M54A	**Oil Creek Stat**	**123.97**	**24**	IAMs_20	IAMs_20	16 44 26.3		
	comp=Z,463nm,19.0s							
N53A	**Lisbon**	**124.08**	**25**	IAMs_20	IAMs_20	16 45 11.5		
	comp=Z,606nm,20.0s							
R49A	**Shelbyville**	**124.14**	**30**	IAMs_20	IAMs_20	16 40 02.7		
	comp=Z,653nm,21.0s							
T47A	**Sharon Grove**	**124.14**	**32**	IAMs_20	IAMs_20	16 39 04.2		
	comp=Z,456nm,21.0s							
P51A	**Williamsport**	**124.20**	**28**	IAMs_20	IAMs_20	16 42 16.0		
	comp=Z,640nm,20.0s							
W45A	**Hickory Valley**	**124.34**	**35**	IAMs_20	IAMs_20	16 51 17.8		
	comp=Z,534nm,18.0s							
K58A	**Earlville**	**124.34**	**20**	IAMs_20	IAMs_20	16 48 30.5		
	comp=Z,523nm,19.0s							
WVT	**Waverly**	**124.39**	**34**	IAMs_20	IAMs_20	16 40 48.9		
	comp=Z,467nm,20.0s							
Q51A	**Peebles**	**124.44**	**28**	IAMs_20	IAMs_20	16 43 35.3		
	comp=Z,527nm,21.0s							
R50A	**Paris**	**124.56**	**29**	IAMs_20	IAMs_20	16 39 41.9		
	comp=Z,569nm,20.0s							
OXF	**Oxford**	**124.67**	**36**	IAMs_20	IAMs_20	16 41 39.7		
	comp=Z,468nm,20.0s							
BINY	**Binghamton**	**124.73**	**20**	IAMs_20	IAMs_20	16 43 49.8		
	comp=Z,560nm,21.0s							
EMMW	**East Machias**	**124.75**	**12**	IAMs_20	IAMs_20	16 40 08.4		
	comp=Z,640nm,21.0s							
O54A	**Avella**	**124.80**	**25**	IAMs_20	IAMs_20	16 45 23.4		
	comp=Z,654nm,20.0s							
P53A	**Whipple**	**124.94**	**26**	IAMs_20	IAMs_20	16 42 12.5		
	comp=Z,522nm,20.0s							
TRY	**Troy**	**125.00**	**18**	IAMs_20	IAMs_20	16 46 20.8		
	comp=Z,580nm,20.0s							

342A	**Flagon Creek P**	**125.01**	**41**	IAMs_20	IAMs_20	16 36 47.5		
	comp=Z,640nm,20.0s							
U49A	**Red Boiling Sp**	**125.20**	**32**	IAMs_20	IAMs_20	16 48 22.0		
	comp=Z,576nm,18.0s							
T50A	**Nancy**	**125.29**	**31**	IAMs_20	IAMs_20	16 45 02.3		
	comp=Z,480nm,20.0s							
SSPA	**Standing Stone**	**125.41**	**23**	IAMs_20	IAMs_20	16 49 36.2		
	comp=Z,680nm,20.0s							
S51A	**Beattyville**	**125.42**	**29**	IAMs_20	IAMs_20	16 44 05.7		
	comp=Z,526nm,20.0s							
O56A	**Blue Knob Stat**	**125.46**	**24**	IAMs_20	IAMs_20	16 36 44.7		
	comp=Z,500nm,22.0s							
QUA2	**Belchertown**	**125.81**	**17**	IAMs_20	IAMs_20	16 46 54.0		
	comp=Z,527nm,20.0s							
HRV	**Adam Dziewonsk**	**125.83**	**16**	IAMs_20	IAMs_20	16 50 38.4		
	comp=Z,590nm,19.0s							
WES	**Weston**	**126.01**	**16**	IAMs_20	IAMs_20	16 51 26.1		
	comp=Z,591nm,19.0s							
X48A	**Hartselle**	**126.06**	**34**	IAMs_20	IAMs_20	16 45 41.2		
	comp=Z,510nm,20.0s							
SWET	**Sewanee**	**126.10**	**33**	IAMs_20	IAMs_20	16 42 19.1		
	comp=Z,483nm,21.0s							
Q56A	**Snyder Ridge,**	**126.25**	**25**	IAMs_20	IAMs_20	16 46 03.9		
	comp=Z,437nm,20.0s							
TZTN	**Tazewell**	**126.31**	**30**	IAMs_20	IAMs_20	16 45 00.1		
	comp=Z,478nm,20.0s							
P57A	**Homestead Farm**	**126.35**	**24**	IAMs_20	IAMs_20	16 48 51.3		
	comp=Z,531nm,19.0s							
S54A	**Dingess, Beckl**	**126.36**	**27**	IAMs_20	IAMs_20	16 42 17.2		
	comp=Z,504nm,20.0s							
Z47A	**Carrollton**	**126.38**	**36**	IAMs_20	IAMs_20	16 38 37.1		
	comp=Z,628nm,20.0s							
W50A	**Signal Mountai**	**126.44**	**33**	IAMs_20	IAMs_20	16 40 53.1		
	comp=Z,486nm,21.0s							
V51A	**Loudon**	**126.48**	**31**	IAMs_20	IAMs_20	16 44 18.9		
	comp=Z,587nm,20.0s							
WSPT	**Westport, CT**	**126.53**	**19**	IAMs_20	IAMs_20	16 47 11.1		
	comp=Z,616nm,21.0s							
CPNY	**Central Park**	**126.67**	**19**	IAMs_20	IAMs_20	16 28 12.9		
	comp=Z,642nm,20.0s							
CPCT	**Cooper Cave**	**126.67**	**32**	IAMs_20	IAMs_20	16 51 41.9		
	comp=Z,521nm,19.0s							
V52A	**Sevierville**	**126.84**	**31**	IAMs_20	IAMs_20	16 52 09.2		
	comp=Z,516nm,19.0s							
Y49A	**Blount Mountai**	**126.85**	**34**	IAMs_20	IAMs_20	16 40 09.9		
	comp=Z,470nm,20.0s							
TKL	**Tuckaleechee C**	**126.89**	**31**	IAMs_20	IAMs_20	16 51 19.6		
	comp=Z,562nm,19.0s							
LRAL	**Lakeview Retre**	**127.12**	**36**	IAMs_20	IAMs_20	16 51 49.6		
	comp=Z,565nm,18.0s							
U54A	**Nelsons Funny**	**127.17**	**29**	IAMs_20	IAMs_20	16 45 42.7		
	comp=Z,469nm,20.0s							
X51A	**Calhoun**	**127.17**	**33**	IAMs_20	IAMs_20	16 42 06.3		
	comp=Z,474nm,21.0s							
BLA	**Blacksburg**	**127.25**	**27**	IAMs_20	IAMs_20	16 34 24.6		
	comp=Z,573nm,22.0s							
W52A	**Murphy**	**127.25**	**32**	IAMs_20	IAMs_20	16 40 13.0		
	comp=Z,544nm,22.0s							
V53A	**Saluda**	**127.36**	**30**	IAMs_20	IAMs_20	16 42 46.1		
	comp=Z,574nm,20.0s							
S57A	**Dark Hollow, R**	**127.43**	**25**	IAMs_20	IAMs_20	16 44 38.2		
	comp=Z,645nm,20.0s							
BG3	**Lake Jocassee**	**127.84**	**31**	IAMs_20	IAMs_20	16 45 48.7		
	comp=Z,412nm,20.0s							
S58A	**Poland Farm, P**	**127.94**	**25**	IAMs_20	IAMs_20	16 44 09.5		
	comp=Z,637nm,20.0s							
V55A	**Taylorsville**	**128.00**	**29**	IAMs_20	IAMs_20	16 48 04.6		
	comp=Z,550nm,20.0s							
250A	**Grady**	**128.31**	**36**	IAMs_20	IAMs_20	16 37 29.2		
	comp=Z,597nm,21.0s							
KMSC	**Kings Mountain**	**128.51**	**29**	IAMs_20	IAMs_20	16 34 09.4		
	comp=Z,608nm,21.0s							
152A	**Waverly Hall**	**128.68**	**34**	IAMs_20	IAMs_20	16 41 26.6		
	comp=Z,521nm,19.0s							
T59A	**Double "B" Far**	**128.69**	**25**	IAMs_20	IAMs_20	16 48 12.4		
	comp=Z,523nm,19.0s							
HODGE	**Hodges**	**128.78**	**31**	IAMs_20	IAMs_20	16 54 06.6		
	comp=Z,498nm,20.0s							
T60A	**Surry**	**128.88**	**24**	IAMs_20	IAMs_20	16 46 53.3		
	comp=Z,578nm,20.0s							
W57A	**Gilead**	**129.14**	**28**	IAMs_20	IAMs_20	16 48 17.8		
	comp=Z,488nm,19.0s							
352A	**Blakely**	**129.45**	**35**	IAMs_20	IAMs_20	16 36 18.2		
	comp=Z,466nm,20.0s							
V60A	**Jim Taylor Roa**	**129.84**	**25**	IAMs_20	IAMs_20	16 47 54.0		
	comp=Z,621nm,20.0s							
Y57A	**Sumter**	**129.88**	**29**	IAMs_20	IAMs_20	16 49 11.6		
	comp=Z,593nm,19.0s							
X58A	**Rowland**	**129.94**	**28**	IAMs_20	IAMs_20	16 48 56.9		
	comp=Z,584nm,19.0s							
Z56A	**Williston**	**129.95**	**31**	IAMs_20	IAMs_20	16 51 46.5		
	comp=Z,447nm,20.0s							
CNNC	**Cliffs of the**	**130.02**	**26**	IAMs_20	IAMs_20	16 42 26.8		
	comp=Z,545nm,21.0s							
TIGA	**Tifton**	**130.24**	**34**	IAMs_20	IAMs_20	16 50 17.7		
	comp=Z,528nm,19.0s							
Y58A	**Scranton**	**130.31**	**29**	IAMs_20	IAMs_20	16 49 59.1		
	comp=Z,536nm,19.0s							
Y59A	**Loris**	**130.62**	**28**	IAMs_20	IAMs_20	16 45 43.0		
	comp=Z,590nm,20.0s							
NHSC	**New Hope**	**130.72**	**30**	IAMs_20	IAMs_20	16 49 50.8		
	comp=Z,516nm,20.0s							
257A	**Skidaway Islan**	**131.19**	**32**	IAMs_20	IAMs_20	16 46 16.7		
	comp=Z,532nm,19.0s							
456A	**Hilliard**	**131.64**	**33**	IAMs_20	IAMs_20	16 43 05.9		
	comp=Z,648nm,22.0s							
060A	**Indiantown**	**135.41**	**35**	IAMs_20	IAMs_20	16 50 15.9		
	comp=Z,533nm,21.0s							
061Z	**Ocloppi**	**135.98**	**37**	IAMs_20	IAMs_20	16 47 15.4		
	comp=Z,503nm,20.0s							
MTO3	**Montecristo**	**137.27**	**57**	IAMs_20	IAMs_20	16 38 56.3		
	comp=Z,492nm,18.0s							
PLCA	**Paso Flores**	**145.21**	**157**	PKPbc	**PKPdf**	**15 45 51.8**	**-0.1**	
	comp=Z,5.8nm,0.6s,baz=266,slow=2.8,SNR=16							
PLCA	**Paso Flores**	**145.21**	**157**	PKiKP	**PKPdf**	**15 45 52.1**	**+0.2**	
PLCA	**Paso Flores**	**145.21**	**157**		**PKPdf**	**15 45 52.1**	**+0.2**	
LC01	**Cunco**	**146.21**	**154**	PKPdf	**PKPab**	**15 45 55.1**	**-0.2**	
SDDR	**Presa de Saban**	**146.82**	**32**		**PKPab**	**15 45 58.0**	**-0.2**	
SDDR				IAMs_20	IAMs_20	16 56 15.7		
	comp=Z,433nm,20.0s							
BCIP	**Isla Barro Col**	**147.93**	**56**	*eP*	**PKPbc**	**15 45 59.6**	**-0.5**	
AZU	**Azuero**	**148.31**	**58**	*eP*	**PKPbc**	**15 45 59.6**	**-1.5**	
SJG	**San Juan**	**149.99**	**25**	PKPbc	**PKiKP**	**15 46 06.1**	**-0.1**	
	comp=Z,29nm,0.6s,baz=356,slow=15,SNR=2.3							
SJG	**San Juan**	**149.99**	**25**	*eP*	**PKiKP**	**15 46 06.0**	**-0.1**	
CAPC	**Capurgana**	**150.24**	**54**	*eP*	**PKPbc**	**15 46 06.2**	**+0.3**	
SMRC	**Santa Marta, M**	**150.99**	**46**	*eP*	**PKiKP**	**15 46 08.8**	**+0.5**	
SJCC	**San Jacinto, C**	**151.13**	**49**	*eP*	**PKPbc**	**15 46 06.9**	**-1.3**	
SMRT	**St. Maarten**	**151.19**	**19**	IAMs_20	IAMs_20	16 52 35.4		
	comp=Z,359nm,20.0s							
URIC	**Uribia, Colomb**	**152.13**	**42**	*eP*	**PKiKP**	**15 46 11.3**	**+0.7**	
UREC	**San Jos de Ur**	**152.20**	**53**	*eP*	**PKPbc**	**15 46 10.6**	**0.0**	
SMLC	**San Martn de**	**152.67**	**49**	*eP*	**PKPbc**	**15 46 08.6**	**-3.0**	
MALC	**Bahia Malaga**	**152.74**	**62**	*eP*	**PKiKP**	**15 46 13.3**	**+1.3**	
YOTC	**Yotoco, Valle**	**153.61**	**61**	*eP*	**PKPbc**	**15 46 13.6**	**-0.2**	
BBAC	**Balboa, Cauca**	**153.73**	**66**	*eP*	**PKiKP**	**15 46 14.4**	**+0.1**	
PTBC	**PUERTO BERRIO**	**153.78**	**54**	*eP*	**PKPbc**	**15 46 12.7**	**-1.4**	
GUY2C	**Guyana, Caldas**	**153.79**	**57**	*eP*	**PKPdf**	**15 46 08.9**	**+2.1**	
GCUF	**Volcan Galeras**	**153.97**	**68**	*eP*	**PKiKP**	**15 46 15.6**	**+0.4**	
RREF	**El Recreo**	**153.98**	**58**	*eP*	**PKiKP**	**15 46 16.5**	**+1.2**	
ANIL	**Santa Ana**	**154.15**	**59**	*eP*	**PKPdf**	**15 46 10.3**	**+3.2**	
TOLC	**Tolima**	**154.17**	**59**	*eP*	**PKPdf**	**15 46 08.7**	**+1.6**	
CRUC	**La Cruz**	**154.19**	**66**	*eP*	**PKPbc**	**15 46 14.8**	**-0.5**	
SOTA	**Rioblanco**	**154.25**	**65**	*eP*	**PKPbc**	**15 46 12.3**	**-3.3**	
ORTC	**Ortega, Tolima**	**154.59**	**60**	*eP*	**PKPbc**	**15 46 15.2**	**-0.6**	
SPBC	**San Pablo de B**	**154.61**	**55**	*eP*	**PKPbc**	**15 46 15.6**	**-0.4**	
BARC	**Barichara**	**154.75**	**52**	*eP*	**PKPdf**	**15 46 10.8**	**+2.9**	
PRAC	**Prado**	**155.00**	**60**	*eP*	**PKPbc**	**15 46 16.5**	**-0.2**	
SDV	**Santo Domingo**	**155.09**	**44**	*eP*	PKPdf	15 46 17.5	+9.3	
RUSC	**La Rusia**	**155.26**	**53**	*eP*	PKPdf	15 46 17.5	+8.7	
SOCV	**Socopa**	**155.36**	**45**	*eP*	PKPdf	15 46 16.7	+8.3	
CHIC	**Chingaza**	**155.47**	**56**	*eP*	PKPdf	15 46 18.0	+8.9	
LPAZ	**La Paz**	**164.07**	**117**	PKP	**PKPdf**	**15 46 19.4**	**+0.5**	
	comp=Z,4.2nm,0.8s,baz=61,slow=2.6,SNR=4.6							
SIV	**San Ignacio**	**170.01**	**132**	PKP	**PKPdf**	**15 46 24.5**	**+1.9**	
	comp=Z,2.6nm,0.9s,baz=233,slow=18,SNR=1.7							

*NEIC **30** 15:30:12.4±1.8, 9.21N±0.09×126.2E±0.1, h10km±1km, mb4.7/9, Error ellipse: s-maj=22.5km s-min=11.6km az=57.0*

*IDC **30** 15:30:17.6±3.9, 9.23N×126.34E, h49km±39km, mb4.1/20, mb1 4.1/21,mb1mx4.0/50,mbtmp4.3/21,ML4.0/1,MS5.1/1, Ms1 5.1/1,ms1mx3.9/56,Error ellipse: s-maj=31.6km s-min=13.2km az=85.0*

*MAN **30** 15:30:20.8, 9.36N×126.31E, h129km, mb4.7, ML3.6, MS3.5*

ISC 30 15:30:18.1±0.5, 9.31N±0.05×126.75E±0.07, h54km, n49, σ1ŝ79/45, mb4.5/23, 1C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**1.18**	**199**	*eP*	Pn	15 30 46.1	+7.6
BIPH				*eS*	Sn	15 31 04.4	+11
SCPH	**Surigao**	**1.33**	**291**	*iP*	**Pn**	**15 30 37.4**	**-3.0**
SCPH				*i* S	**Sn**	**15 30 53.8**	**-3.3**
MSLP	**Maasin**	**2.04**	**294**	*eP*	**Pn**	**15 30 50.3**	**+0.2**
MSLP				*eS*	**Sn**	**15 31 16.8**	**+2.4**
BUKP	**Musuan**	**2.19**	**230**	*eP*	**Pn**	**15 30 52.8**	**+0.6**
BUKP				*eS*	**Sn**	**15 31 20.4**	**+2.1**
LLP	**Lapu-Lapu**	**2.92**	**290**	*eP*	**Pn**	**15 31 01.6**	**-0.5**
LLP				*eS*	**Sn**	**15 31 38.3**	**+2.2**
PAGZ	**Pagadian**	**3.63**	**247**	*eP*	**Pn**	**15 31 11.8**	**-0.1**
CNP	**Catarman**	**3.79**	**327**	*eP*	**Pn**	**15 31 11.6**	**-2.4**
GUIM	**Jordan**	**4.30**	**288**	*eP*	**Pn**	**15 31 20.4**	**-0.7**
RCP	**Roxas**	**4.53**	**300**	*eP*	**Pn**	**15 31 24.1**	**-0.1**
SIJI	**Sorong**	**11.06**	**156**	P	**Pn**	**15 32 55.2**	**+1.4**
	1.1nm,0.3s,baz=359,slow=23,SNR=1.2						
SIJI				S	**Sn**	**15 34 51.4**	**-4.7**
	0.4nm,0.3s,baz=350,slow=23,SNR=1.6						
YULB	**Yu-li**	**14.95**	**340**	P	**Pn**	**15 33 49.1**	**+2.9**
TPUB	**Ta-pu**	**15.10**	**338**	P	**Pn**	**15 33 49.4**	**+1.2**
NACB	**Ninganchiao**	**15.58**	**342**	Pn	**Pn**	**15 33 51.1**	**-3.3**
SOEI	**Soe**	**19.10**	**188**	P	P	15 34 27.5	-9.2
KNRA	**Kununurra**	**24.90**	**175**	P	**P**	**15 35 36.3**	**+0.1**
FITZ	**Fitzroy Crossi**	**27.25**	**182**	P	**P**	**15 35 57.5**	**+0.1**
	6.0nm,0.5s,baz=60,slow=2.5,SNR=1.8						
KSRS	**Korea Array**	**28.04**	**2**	P	**P**	**15 36 05.4**	**+1.1**
	1.3nm,0.5s,baz=186,slow=10,SNR=5.2						
COEN	**Coen**	**28.28**	**145**	P	**P**	**15 36 04.8**	**-1.9**
COEN				IAmb	IAmb	15 36 11.4	
	comp=Z,17nm,1.1s						
MJAR	**Matsushiro Arr**	**29.04**	**19**	P	**P**	**15 36 13.2**	**0.0**
	comp=Z,1.5nm,0.8s,baz=200,slow=11,SNR=1.9						
MJAR				PcP	**PcP**	**15 39 21.0**	**+0.4**
	comp=Z,4.5nm,1.0s,baz=208,slow=4.3,SNR=5.6						
WB0	**Warramunga Arr**	**29.86**	**165**	P	**P**	**15 36 19.6**	**-1.0**
WB0				IAmb	IAmb	15 36 21.5	
	comp=Z,13nm,1.1s						
WRA	**Warramunga Arr**	**30.01**	**166**	P	**P**	**15 36 21.1**	**-0.9**
	comp=Z,2.0nm,0.6s,baz=346,slow=9.2,SNR=1.5						
ASAR	**Alice Springs**	**33.51**	**

λ4.00000°. NP2:φ272.00000°, δ86.00000°, λ175.00000°. Principal axes: T 3.1260, Plg7.0000°, Azm227.0000°; N 0.3300, Plg83.0000°, Azm53.0000°; P -3.4560, Plg1.0000°, Azm317.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 30 15:32:27.2±0.4, 21°29S±0.02×70°00W±0.04, h58km±3km, n743, σ1‡30/717, mb5.4/96, 22C-31D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PB02	**IPOC Station P**	**0.10**	**109**	*iP*		**Pn**	**15 32 37.0**	**+0.9**
PB02				*eS*		**Sn**	**15 32 43.4**	**+0.9**
PB02				IAML			15 32 45.2	
	comp=N,547μm,0.4s							
PB02	**IPOC Station M**	**0.10**	**109**	*i*	P	**Pn**	**15 32 37.0**	**+0.9**
PB02				*i*	S	**Sn**	**15 32 43.5**	**+0.9**
PB02				IAML			15 32 46.6	
	comp=Z,357μm,0.4s							
PB07	**IPOC Station P**	**0.45**	**167**	⇑*iP*		**Pn**	**15 32 39.3**	**+0.6**
PB07				*i*	S	**Sn**	**15 32 47.6**	**+0.7**
PB07	**IPOC Station P**	**0.45**	**167**			**Pn**	**15 32 39.6**	**+0.8**
PB07						**Sn**	**15 32 47.7**	**+0.7**
PB07	**IPOC Station P**	**0.45**	**167**	*i*	P	**Pn**	**15 32 39.4**	**+0.6**
PB07				*i*	S	**Sn**	**15 32 47.7**	**+0.7**
PB07				IAML			15 32 50.5	
	comp=Z,130μm,0.3s							
PATCX	**Punta Patache**	**0.49**	**343**	⇓*iP*		**Pn**	**15 32 39.9**	**+0.9**
PATCX				*eS*		**Sn**	**15 32 49.0**	**+1.5**
PATCX				IAML			15 32 50.5	
	comp=N,397μm,0.6s							
PATCX	**Punta Patache**	**0.49**	**343**			**Pn**	**15 32 40.0**	**+0.9**
PB01	**IPOC Station P**	**0.54**	**63**	⇑*iP*		**Pn**	**15 32 40.2**	**+0.7**
PB01				*i*	S	**Sn**	**15 32 49.3**	**+0.9**
PB01				IAML			15 32 50.2	
	comp=N,654μm,0.5s							
PB01	**IPOC Station P**	**0.54**	**63**	Pn		**Pn**	**15 32 40.5**	**+0.9**
TA01	**Diego Aracena**	**0.74**	**347**	⇓*iP*		**Pn**	**15 32 42.5**	**+0.7**
TA01				*eS*		**Sn**	**15 32 53.6**	**+1.1**
TA01	**Diego Aracena**	**0.74**	**347**			**Pn**	**15 32 42.5**	**+0.7**
TA01						**Sn**	**15 32 53.7**	**+1.2**
PB03	**IPOC Station P**	**0.79**	**163**	⇑*iP*		**Pn**	**15 32 43.3**	**+0.6**
PB03				*i*	S	**Sn**	**15 32 54.9**	**+0.9**
PB03				IAML			15 32 55.4	
	comp=E,302μm,0.3s							
PB03	**IPOC Station P**	**0.79**	**163**	*i*	P	**Pn**	**15 32 43.4**	**+0.6**
PB03				*i*	S	**Sn**	**15 32 54.9**	**+0.9**
PB03				IAML			15 32 58.1	
	comp=Z,95μm,0.4s							
PB09	**IPOC Station P**	**0.87**	**126**	*i*	P	**Pn**	**15 32 44.5**	**+0.9**
PB09				*i*	S	**Sn**	**15 32 57.4**	**+1.7**
PB09	**IPOC Station P**	**0.87**	**126**			**Pn**	**15 32 44.3**	**+0.6**
PB09	**IPOC Station P**	**0.87**	**126**	*i*	P	**Pn**	**15 32 44.6**	**+0.9**
PB09				*i*	S	**Sn**	**15 32 56.2**	**+0.5**
PB09				IAML			15 32 59.2	
	comp=Z,153μm,0.7s							
TA02	**Huaiquique**	**1.02**	**353**	*eP*		**Pn**	**15 32 46.4**	**+0.9**
TA02				*i*	S	**Sn**	**15 33 00.1**	**+1.2**
TA02				IAML			15 33 01.1	
	comp=N,327μm,0.1s							
PB04	**IPOC Station P**	**1.05**	**188**	⇑*iP*		**Pn**	**15 32 46.4**	**+0.3**
PB04				*eS*		**Sn**	**15 33 00.8**	**+0.8**
PB04				IAML			15 33 04.0	
	comp=N,156μm,0.5s							
PB04				IAML			15 33 07.5	
	comp=E,159μm,0.4s							
PB04	**IPOC Station P**	**1.05**	**188**			**Pn**	**15 32 46.3**	**+0.3**
PB04						**Sn**	**15 33 00.6**	**+0.6**
PB04	**IPOC Station P**	**1.05**	**188**	*i*	P	**Pn**	**15 32 46.5**	**+0.4**
PB04				*i*	S	**Sn**	**15 33 00.3**	**+0.4**
PB04				IAML			15 33 07.0	
	comp=Z,181μm,0.9s							
PB08	**IPOC Station P**	**1.39**	**35**	⇑*iP*		**Pn**	**15 32 52.1**	**+1.3**
PB08				*i*	S	**Sn**	**15 33 10.2**	**+1.9**
PB08	**IPOC Station P**	**1.39**	**35**	Pn		**Pn**	**15 32 51.9**	**+1.2**
PB08						**Sn**	**15 33 10.1**	**+1.9**
PB06	**IPOC Station P**	**1.47**	**164**	⇑*iP*		**Pn**	**15 32 52.0**	**+0.4**
PB06				*i*	S	**Sn**	**15 33 10.5**	**+0.6**
PB06	**IPOC Station P**	**1.47**	**164**			**Pn**	**15 32 52.0**	**+0.4**
PB06	**IPOC Station P**	**1.47**	**164**	*i*	P	**Pn**	**15 32 52.1**	**+0.4**
PB06				*i*	S	**Sn**	**15 33 09.8**	**-0.1**
PB06				IAML			15 33 12.9	
	comp=Z,127μm,1.1s							
PB11	**IPOC Station P**	**1.55**	**12**	⇑*iP*		**Pn**	**15 32 53.4**	**+0.6**
PB11				*i*	S	**Sn**	**15 33 12.7**	**+0.7**
PB11	**IPOC Station P**	**1.55**	**12**	Pn		**Pn**	**15 32 53.7**	**+1.0**
PB05	**IPOC Station P**	**1.57**	**187**	*eP*		**Pn**	**15 32 52.9**	**-0.1**
PB05	**IPOC Station P**	**1.57**	**187**	*i*	P	**Pn**	**15 32 52.8**	**-0.1**
PB05				*i*	S	**Sn**	**15 33 11.3**	**-1.0**
PB05				IAML			15 33 26.1	
	comp=Z,60μm,1.1s							
LVC	**Limon Verde**	**1.66**	**143**	P		**Pn**	**15 32 56.0**	**+1.6**
	comp=Z,4μm,0.3s,baz=317,slow=11,SNR=8909							
LVC				S		**Sn**	**15 33 14.7**	**-0.1**
	comp=Z,6μm,0.3s,baz=108,slow=19,SNR=7.2							
LVC				LR		LR	15 33 53.4	
	comp=Z,13μm,19.9s,baz=282,slow=52							
LVC	**Limon Verde**	**1.66**	**143**	*eP*		**Pn**	**15 32 56.0**	**+1.6**
LVC				*eS*		**Sn**	**15 33 16.6**	**+1.8**
LVC	**Limon Verde**	**1.66**	**143**	P		**Pn**	**15 32 56.0**	**+1.6**
PSGC	**Pisagua**	**1.69**	**356**	⇑*iP*		**Pn**	**15 32 54.8**	**+0.3**
PSGC				*i*	S	**Sn**	**15 33 15.3**	**+0.2**
PSGCX	**Pisagua**	**1.69**	**356**			**Pn**	**15 32 54.7**	**+0.2**
GO01	**Chusmiza**	**1.78**	**25**	⇑*iP*		**Pn**	**15 32 57.3**	**+1.1**
GO01				*i*	S	**Sn**	**15 33 19.8**	**+1.9**
GO01	**Chusmiza**	**1.78**	**25**	Pn		**Pn**	**15 32 57.3**	**+1.1**
PB15	**IPOC Station P**	**1.97**	**166**			**Pn**	**15 32 59.1**	**+0.6**
PB15	**IPOC Station P**	**1.97**	**166**	*i*	P	**Pn**	**15 32 59.4**	**+0.9**
PB15				*i*	S	**Sn**	**15 33 23.1**	**+0.8**
PB15				IAML			15 33 27.0	
	comp=Z,97μm,0.6s							
MNMC	**Minye Minye**	**2.18**	**10**	⇑*iP*		**Pn**	**15 33 02.4**	**+1.0**
MNMC	**Minye Minye**	**2.18**	**10**	Pn		**Pn**	**15 33 02.4**	**+1.0**
PB10	**IPOC Station P**	**2.27**	**193**			**Pn**	**15 33 01.6**	**-0.8**
PB10	**IPOC Station P**	**2.27**	**193**	*i*	P	**Pn**	**15 33 01.7**	**-0.7**
PB10				*i*	S	**Sn**	**15 33 26.7**	**-2.7**
PB10				IAML			15 33 42.5	
	comp=Z,12μm,0.7s							
PB12	**IPOC Station P**	**2.68**	**353**	⇑*iP*		**Pn**	**15 33 08.2**	**+0.1**
PB12	**IPOC Station P**	**2.68**	**353**	Pn		**Pn**	**15 33 08.4**	**+0.4**
AP01	**Chacalluta**	**2.92**	**354**			**Pn**	**15 33 11.8**	**+0.5**
GO02	**Mina Guanaco**	**3.88**	**175**	Pn		**Pn**	**15 33 24.3**	**-0.3**
AC01	**Pan de Azucar**	**4.87**	**186**			**Pn**	**15 33 35.8**	**-2.2**
LPAZ	**La Paz**	**5.28**	**20**	P		**Pn**	**15 33 47.0**	**+2.9**
	comp=Z,16nm,0.3s,baz=201,slow=8.8,SNR=142							
LPAZ				S		**Sn**	**15 34 45.0**	**+1.1**
	comp=Z,15nm,0.3s,baz=76,slow=17,SNR=1.2							
LPAZ	**La Paz**	**5.28**	**20**	P		**Pn**	**15 33 47.4**	**+3.2**
LPAZ	**La Paz**	**5.28**	**20**	Pn		**Pn**	**15 33 47.4**	**+3.2**
AC02	**Maricunga**	**5.58**	**172**			**Pn**	**15 33 48.5**	**+0.3**
GO03	**Copiap**	**6.28**	**182**			**Pn**	**15 33 54.8**	**-2.6**
VCA	**Vinchina**	**7.59**	**168**	*i*	P	**Pn**	**15 34 15.5**	**+0.1**
VCA				IAML			15 36 52.8	
	comp=Z,3μm,1.8s							
GO04	**Tololo Observa**	**8.88**	**185**			**Pn**	**15 34 29.3**	**-3.8**
CO03	**El Pedregal**	**9.53**	**184**	Pn		Pn	15 34 37.6	-4.3
CO02	**Combarbal**	**9.92**	**185**			Pn	15 34 42.4	-4.8
SIV	**San Ignacio**	**9.96**	**60**	P		**Pn**	**15 34 46.2**	**-1.6**
	comp=Z,29nm,0.3s,baz=264,slow=9.4,SNR=249							
SIV				S		**Sn**	**15 36 34.2**	**-4.0**
	comp=Z,2.7nm,0.3s,baz=274,slow=11,SNR=1.3							
ZON	**Zonda**	**10.28**	**174**	P		**Pn**	**15 34 50.8**	**-1.3**
ZON	**Zonda**	**10.28**	**174**	Pn		**Pn**	**15 34 50.8**	**-1.3**
RTLS	**Leoncito**	**10.49**	**177**	*iP*		**Pn**	**15 34 52.9**	**-2.3**
NNA	**Nana**	**11.33**	**324**	P		**Pn**	**15 35 05.8**	**-0.7**
	comp=Z,5.1nm,0.3s,baz=174,slow=15,SNR=14							
NNA				S		**Sn**	**15 37 05.4**	**-6.3**
	comp=Z,21nm,0.3s,baz=116,slow=9.5,SNR=4.6							
NNA	**Nana**	**11.33**	**324**	*ePe*		**Pn**	**15 35 06.3**	**-0.3**
NNA				pmax		pmax		
	comp=Z,233nm,1.1s							
PTLB	**Pontes e Lacer**	**11.83**	**62**	*eP*		**Pn**	**15 35 10.4**	**-2.8**
VILB	**Vilhena**	**12.50**	**50**	*eP*		**Pn**	**15 35 20.1**	**-2.4**
MT01	**Popeta**	**12.58**	**185**	Pn		**Pn**	**15 35 21.6**	**-1.8**
BO02	**Sierra Bellavi**	**13.47**	**183**	Pn		**Pn**	**15 35 35.3**	**-0.4**
SAML	**Samuel**	**13.91**	**29**	*eP*		**Pn**	**15 35 39.2**	**-2.5**
SAML	**Samuel**	**13.91**	**29**	*eP*		**Pn**	**15 35 38.2**	**-3.4**
SALV	**Santo Antonio**	**14.58**	**71**	*eP*		**Pn**	**15 35 47.6**	**-2.8**
BI02	**San Fabin de**	**15.36**	**184**	Pn		**Pn**	**15 35 59.4**	**-1.1**
TRCB	**Terra Rica**	**16.17**	**99**	*eP*		**Pn**	**15 36 08.6**	**-2.3**
ATAH	**Atahualpa**	**16.24**	**329**	P		**Pn**	**15 36 12.5**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=145,slow=11,SNR=20							
PTGB	**Pitanga**	**16.86**	**105**	*eP*		**Pn**	**15 36 18.8**	**-0.8**
CLDB	**Colider**	**17.11**	**55**	*eP*		**Pn**	**15 36 21.2**	**-1.5**
ITAB	**Concordia**	**17.33**	**113**	*eP*		**Pn**	**15 36 23.1**	**-2.1**
CPSB	**Cacapava Do Su**	**17.43**	**125**	*eP*		**Pn**	**15 36 23.2**	**-3.3**
PCMB	**Pacaembu**	**17.45**	**94**	*eP*		**Pn**	**15 36 24.7**	**-2.1**
LC01	**Cunco**	**17.63**	**185**	IAmb		IAmb	15 36 44.6	
	comp=Z,208nm,1.1s							
PLTB	**Pedras Altas**	**17.98**	**129**	*eP*		**P**	**15 36 29.1**	**-4.0**
ARAG	**Araguaiana, MT**	**18.11**	**75**	*eP*		**P**	**15 36 33.2**	**-1.4**
FRTB	**Fartura**	**19.02**	**100**	*eP*		**P**	**15 36 43.8**	**-0.8**
CNLB	**Canela**	**19.05**	**119**	*eP*		**P**	**15 36 43.0**	**-1.9**
PLCA	**Paso Flores**	**19.39**	**181**	P		**P**	**15 36 49.3**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=2.2,slow=12,SNR=35							
PLCA				LR		LR	15 45 04.3	
	comp=Z,2μm,19.2s,baz=354,slow=39							
PLCA	**Paso Flores**	**19.39**	**181**	P		**P**	**15 36 49.3**	**+0.8**
PLCA				pmax		pmax		
	comp=Z,133nm,1.1s							
PLCA	**Paso Flores**	**19.39**	**181**	P		**P**	**15 36 49.3**	**+0.8**
TIJ01	**Guaruva-PR**	**19.69**	**106**	*eP*		**P**	**15 36 50.7**	**-1.3**
MACA	**Manacapuru-AM**	**20.17**	**28**	*eP*		**P**	**15 36 55.6**	**-1.5**
IPMB	**Ipameri, GO**	**20.78**	**85**	*eP*		**P**	**15 37 01.6**	**-2.1**
SPB	**Sao Paulo**	**20.98**	**101**	P		**P**	**15 37 07.3**	**+1.4**
SPB				IAmb		IAmb	15 37 09.3	
	comp=Z,262nm,1.0s							
SPB	**Sao Paulo**	**20.98**	**101**	*eP*		**P**	**15 37 03.9**	**-1.9**
LL01	**San Ignacio de**	**21.13**	**185**	P		**P**	**15 37 07.4**	**+0.2**
PET01	**Itanhaem-SP**	**21.16**	**102**	*eP*		**P**	**15 37 06.3**	**-1.4**
PET01				*eS*		**S**	**15 41 01.6**	**+1.6**
BDFB	**Brasilia**	**21.59**	**79**	P		**P**	**15 37 11.6**	**-0.9**
	comp=Z,13nm,0.5s,baz=258,slow=11,SNR=15							
BDFB				LR		LR	15 45 53.9	
	comp=Z,1μm,21.2s,baz=257,slow=38							
BDFB	**Brasilia**	**21.59**	**79**	P		**P**	**15 37 10.7**	**-1.8**
ITTB	**Itaituba**	**21.79**	**41**	*eP*		**P**	**15 37 12.7**	**-1.8**
PTLC	**Puerto Leguiza**	**21.84**	**347**	*eP*		**P**	**15 37 11.7**	**-3.3**
CASC	**Dorado de Casc**	**22.47**	**340**	*eP*		**P**	**15 37 25.7**	**+1.8**
PARB	**Paraibuna**	**22.64**	**100**	*eP*		**P**	**15 37 20.8**	**-2.9**
PTGA	**Pitinga**	**22.66**	**27**	P		**P**	**15 37 21.6**	**-2.2**
	comp=Z,108nm,0.6s,baz=208,slow=15,SNR=115							
PTGA	**Pitinga**	**22.66**	**27**	P		**P**	**15 37 21.6**	**-2.2**
PTGA	**Pitinga**	**22.66**	**27**	*eP*		**P**	**15 37 21.9**	**-1.9**
PEXB	**Peixe**	**22.68**	**70**	*eP*		**P**	**15 37 22.4**	**-1.6**
CUSE	**Cuicocha Este**	**22.98**	**338**	*eP*		**P**	**15 37 28.8**	**+1.2**
PAC1	**Pacto, Paraso**	**23.08**	**337**	*eP*		**P**	**15 37 29.3**	**+0.9**
CMBC	**Cumbal**	**23.38**	**340**	*eP*		**P**	**15 37 28.6**	**-2.9**
GCUF	**Volcan Galeras**	**23.50**	**341**	*eP*		**P**	**15 37 35.0**	**+2.2**
BSCB	**Bom Sucesso**	**23.52**	**94**	*eP*		**P**	**15 37 31.3**	**-1.2**
BSCB				*eS*		**S**	**15 41 45.8**	**+3.5**
MACC	**Macarena, Meta**	**23.59**	**350**	*eP*		**P**	**15 37 36.6**	**+3.6**
CRUC	**La Cruz**	**23.71**	**342**	*eP*		**P**	**15 37 37.0**	**+2.5**
GUVC	**San Jose del G**	**23.82**	**353**	*eP*		**P**	**15 37 34.2**	**-1.0**
GARC	**Garzon, Huila**	**23.94**	**346**	*eP*		**P**	**15 37 37.9**	**+1.4**
SOTA	**Riosucio**	**24.16**	**344**	*eP*		**P**	**15 37 41.5**	**+2.7**
MAN01	**Angra dos Reis**	**24.17**	**99**	*eP*		**P**	**15 37 36.7**	**-1.6**
MAN01				*eS*		**S**	**15 41 56.8**	**+4.1**
BBAC	**Balboa, Cauca**	**24.23**	**342**	*eP*		**P**	**15 37 40.4**	**+1.3**
PCON	**Cinco Dias**	**24.29**	**344**	*eP*		**P**	**15 37 42.1**	**+2.0**
BETC	**Betania**	**24.41**	**347**	*eP*		**P**	**15 37 42.3**	**+1.8**
PRPB	**Paraupebas**	**24.65**	**55**	*eP*		**P**	**15 37 40.9**	**-1.9**
MALB	**Monte Alegre**	**24.66**	**41**	*eP*		**P**	**15 37 41.2**	**-1.5**
SMTB	**Santa Maria do**	**24.87**	**64**	*eP*		**P**	**15 37 43.6**	**-1.2**
JANB	**Januaria**	**25.16**	**80**	*eP*		**P**	**15 37 46.1**	**-1.3**
PRAC	**Prado**	**25.30**	**349**	*eP*		**P**	**15 37 49.6**	**+1.0**
PTGC	**Puerto Gaitan,**	**25.41**	**355**	*eP*		**P**	**15 37 49.7**	**+0.1**
GR1C	**Gorgona, Isla**	**25.43**	**341**	*eP*		**P**	**15 37 54.6**	**+4.9**
VILC	**Villavicencio,**	**25.50**	**351**	*eP*		**P**	**15 37 51.4**	**+0.8**
ORTC	**Ortega, Tolima**	**25.56**	**348**	*eP*		**P**	**15 37 52.2**	**+1.2**
YOTC	**Yotoco, Valle**	**25.87**	**345**	*eP*		**P**	**15 37 54.4**	**+0.5**
CHIC	**Chingaza**	**26.02**	**351**	*eP*		**P**	**15 37 55.7**	**+0.2**
MALC	**Bahia Malaga**	**26.15**	**343**	*eP*		**P**	**15 37 58.2**	**+1.9**
ROSC	**El Rosal**	**26.31**	**350**	LR		LR	15 49 08.4	
	comp=Z,2μm,19.6s,baz=199,slow=38							
ROSC	**El Rosal**	**26.31**	**350**	*eP*		P	15 38 12.1	+14
ROSC	**El Rosal**	**26.31**	**350**	P		**P**	**15 37 58.5**	**+0.4**
ROSC				IAmb		IAmb	15 38 18.0	
	comp=Z,129nm,1.1s							
CTAB	**Cerro Tablazo,**	**26.46**	**351**	*eP*		**P**	**15 38 00.9**	**+1.4**
PLMC	**San Jos del P**	**26.75**	**346**	*eP*		**P**	**15 38 02.1**	**+0.3**
GUY2C	**Guyana, Caldas**	**26.87**	**348**	*eP*		**P**	**15 38 04.2**	**+0.9**
SPBC	**San Pablo de B**	**27.07**	**351**	*eP*		**P**	**15 38 04.4**	**-0.2**
PIZC	**Pizarro, Choco**	**27.07**	**344**	*eP*		**P**	**15 38 05.7**	**+1.2**
NORC	**Norcasia**	**27.11**	**349**	*eP*		**P**	**15 38 04.6**	**-0.3**
RUSC	**La Rusia**	**27.18**	**353**	*eP*		**P**	**15 38 05.4**	**-0.7**
RUSC	**La Rusia**	**27.18**	**353**	P		**P**	**15 38 06.6**	**+0.6**
TAMC	**Tame, Arauca**	**27.61**	**356**	*eP*		**P**	**15 38 09.2**	**-0.2**
CBOC	**Ciudad Bolivar**	**27.62**	**347**	*eP*		**P**	**15 38 09.9**	**+0.3**
HELC	**Santa Helena**	**27.84**	**348**	*eP*		**P**	**15 38 11.5**	**-0.3**
BARC	**Barichara**	**27.88**	**353**	*eP*		**P**	**15 38 11.8**	**-0.2**
PTBC	**PUERTO BERRIO,**	**28.00**	**351**	*eP*		**P**	**15 38 11.2**	**-1.7**
ELOV	**Elorza**	**28.12**	**1**	*eP*		**P**	**15 38 14.9**	**+1.0**
PAMC	**Pamplona, Colo**	**28.57**	**354**	*eP*		**P**	**15 38 17.8**	**-0.7**
ZARC	**Zaragoza, Cauc**	**29.00**	**350**	*eP*		**P**	**15 38 20.0**	**-1.7**
UREC	**San Jos de Ur**	**29.37**	**349**	*eP*		**P**	**15 38 23.9**	**-1.1**
SOCV	**Socops**	**29.40**	**358**	*eP*		**P**	**15 38 24.1**	**-1.2**
OCAC	**Ocana**	**29.52**	**353**	*eP*		P	15 38 17.5	-9.1
GDU01	**Guandu, BA**	**29.93**	**80**	*eP*		**P**	**15 38 28.7**	**-1.4**
SDV	**Santo Domingo**	**29.99**	**359**	P		**P**	**15 38 29.5**	**-1.2**
	comp=Z,15nm,0.9s,baz=179,slow=7.1,SNR=9.3							
SDV	**Santo Domingo**	**29.99**	**359**	*eP*		**P**	**15 38 30.8**	**+0.1**
SDV	**Santo Domingo**	**29.99**	**359**	*eP*		**P**	**15 38 29.6**	**-1.2**
SMLC	**San Martn de**	**30.17**	**352**	*eP*		**P**	**15 38 29.6**	**-2.5**
CAPC	**Capurgana**	**30.60**	**346**	*eP*		**P**	**15 38 33.7**	**-2.2**
LCBC	**Los crdobas,**	**30.60**	**348**	*eP*		P	15 38 50.2	+14
ROSB	**Rosrio**	**31.11**	**58**	*eP*		**P**	**15 38 39.5**	**-1.0**
ARGC	**Ariguani, Magd**	**31.23**	**352**	*eP*		P	15 38 50.1	+8.6
SJCC	**San Jacinto, C**	**31.41**	**350**	*eP*		**P**	**15 38 42.1**	**-1.0**
EFI	**East Falkland**	**31.73**	**166**	*deP*		**P**	**15 38 45.6**	**+0.1**
EFI				pmax		pmax		
	comp=Z,99nm,0.8s							
EFI	**East Falkland**	**31.73**	**166**	P		**P**	**15 38 45.2**	**-0.3**
TOSP	**Speyside**	**33.69**	**17**	P		**P**	**15 39 02.4**	**-0.6**
JTS	**Las Juntas de**	**34.65**	**333**	*eP*		**P**	**15 39 12.5**	**+1.1**
JTS				pmax		pmax		
	comp=Z,20nm,0.7s							
RCBR	**Riachuelo**	**36.41**	**70**	P		**P**	**15 39 26.3**	**-0.3**
RCBR				pmax		pmax		
	comp=Z,41nm,0.7s							
RCBR	**Riachuelo**	**36.41**	**70**	P		**P**	**15 39 26.3**	**-0.3**
RCBR				IAmb		IAmb	15 39 29.9	
	comp=Z,41nm,0.7s							
RCBR	**Riachuelo**	**36.41**	**70**	*eP*		**P**	**15 39 26.6**	**0.0**
ICMP	**Isla Caja de M**	**39.08**	**5**	P		**P**	**15 39 48.9**	**0.0**
MLPR	**Magueyes Islan**	**39.12**	**4**	P		**P**	**15 39 46.7**	**-2.5**
CRPR	**Cabo Rojo, PR**	**39.15**	**4**	P		**P**	**15 39 47.4**	**-2.1**
OBIP	**Obispado Ponce**	**39.23**	**5**	P		**P**	**15 39 47.6**	**-2.5**
SJG	**San Juan**	**39.34**	**6**	*eP*		**P**	**15 39 48.2**	**-2.8**
MTP	**Monte Pirata**	**39.38**	**7**	P		**P**	**15 39 48.9**	**-2.6**
MTP				IAmb		IAmb	15 40 05.2	
	comp=Z,70nm,1.1s							
HOPE	**Hope Point**	**41.55**	**151**	P		**P**	**15 40 10.2**	**+1.2**
HOPE				pmax		pmax		
	comp=Z,245nm,0.9s							
HOPE	**Hope Point**	**41.55**	**151**	P		**P**	**15 40 10.2**	**+1.2**
PMSA	**Palmer Station**	**43.65**	**176**	P		**P**	**15 40 27.4**	**+1.6**
	comp=Z,23nm,0.9s,baz=29,slow=10,SNR=3.1							
TEIG	**Tepich**	**44.97**	**335**	P		**P**	**15 40 36.6**	**-0.3**
DWPF	**Disney Wildern**	**50.34**	**347**	P		**P**	**15 41 16.8**	**-1.6**
	baz=166							
TIGA	**Tifton**	**54.02**	**346**	P		**P**	**15 41 45.5**	**-0.2**
	baz=164							
158A	**Hollywood**	**54.60**	**349**	P		**P**	**15 41 50.3**	**+0.5**
	baz=168							
157A	**Early Branch**	**54.68**	**349**	P		**P**	**15 41 51.0**	**+0.6**
	baz=167							
Z59A	**Georgetown, SC**	**54.94**	**350**	P		**P**	**15 41 52.6**	**+0.3**
	baz=169							
NHSC	**New Hope**	**54.96**	**350**	P		**P**	**15 41 52.8**	**+0.4**
	baz=168							
Z58A	**St. Stephen**	**55.12**	**350**	P		**P**	**15 41 53.1**	**-0.5**
	baz=169							
Z56A	**Williston**	**55.38**	**348**	P		**P**	**15 41 55.3**	**-0.2**
	baz=167							
Y60A	**Bolivia**	**55.54**	**352**	P		**P**	**15 41 56.1**	**-0.5**
	baz=171,SNR=5.9							
Y59A	**Loris**	**55.62**	**351**	P		**P**	**15 41 57.1**	**0.0**
	baz=170							
Y58A	**Scranton**	**55.65**	**350**	P		**P**	**15 41 56.9**	**-0.5**
	baz=169							
Y56A	**Pelion**	**55.82**	**349**	P		**P**	**15 41 58.3**	**-0.3**
	baz=167							
Y57A	**Sumter**	**55.88**	**350**	P		**P**	**15 41 57.8**	**-1.2**
	baz=168							
GOGA	**Godfrey**	**55.89**	**346**	P		**P**	**15 41 58.4**	**-0.7**
	baz=165							
Y55A	**Saluda**	**56.07**	**348**	P		**P**	**15 42 00.2**	**-0.2**
	baz=167,SNR=8.0							
X60A	**Albert Glenn T**	**56.07**	**352**	P		**P**	**15 42 00.2**	**-0.1**
	baz=171							
X59A	**McDuffie Farm,**	**56.15**	**351**	P		**P**	**15 42 01.1**	**+0.2**
	baz=170							
X58A	**Rowland**	**56.24**	**351**	P		**P**	**15 42 01.5**	**0.0**
	baz=170							
X57A	**Johnson Farm,**	**56.27**	**350**	P		**P**	**15 42 01.6**	**-0.2**
	baz=169							
LRAL	**Lakeview Retre**	**56.41**	**343**	P		**P**	**15 42 01.8**	**-1.0**
	baz=161							
X56A	**White Oak**	**56.45**	**349**	P		**P**	**15 42 03.2**	**+0.1**
	baz=168,SNR=6.9							
BIRD	**Birdtown, Kers**	**56.51**	**350**	IAmb		IAmb	15 42 38.3	
	comp=Z,39nm,1.0s							
W60A	**Pink Hill**	**56.51**	**352**	P		**P**	**15 42 03.9**	**+0.4**
	baz=171							
X55A	**Gracelyn & Ava**	**56.54**	**348**	P		**P**	**15 42 03.8**	**+0.1**
	baz=167,SNR=8.1							
W61A	**Ground Anchor**	**56.55**	**353**	P		**P**	**15 42 03.6**	**-0.1**
	baz=172							
W58A	**Raeford**	**56.68**	**351**	P		**P**	**15 42 05.0**	**+0.2**
	baz=170,SNR=6.3							
CNNC	**Cliffs of the**	**56.71**	**352**	P		**P**	**15 42 05.0**	**+0.1**
	baz=171							
VBMS	**Vicksburg**	**56.71**	**339**	P		**P**	**15 42 05.1**	**+0.1**
	baz=157							
W59A	**Clinton**	**56.71**	**352**	P		**P**	**15 42 05.4**	**+0.4**
	baz=171							
X54A	**Belton**	**56.76**	**348**	P		**P**	**15 42 05.3**	**0.0**
	baz=166,SNR=6.2							
V62A	**Hyde County Ai**	**56.82**	**354**	P		**P**	**15 42 06.5**	**+0.8**
	baz=173							
833A	**Chaparral WMA,**	**56.91**	**329**	P		**P**	**15 42 07.1**	**+0.6**
	baz=147,SNR=7.4							
W57A	**Gilead**	**56.93**	**350**	P		**P**	**15 42 06.5**	**0.0**
	baz=169,SNR=8.0							
W57A	**Gilead**	**56.93**	**350**	IAmb		IAmb	15 42 31.1

baz=171,SNR=13
S53A **Williamson** 59.76 349 P P 15 42 25.5 -0.7
baz=167
R57A **Stanardsville** 59.81 352 P P 15 42 27.3 +0.8
baz=171,SNR=14
MIAR **Mount Ida** 59.88 338 P P 15 42 27.2 +0.1
baz=154,SNR=26
TXAR **Lajitas Array** 59.88 326 P P 15 42 27.9 +0.6
comp=Z,4.6nm,0.6s,baz=147,slow=8.5,SNR=38
W41B **Gary Mavity, V** 59.99 339 P P 15 42 27.5 -0.3
baz=156,SNR=11
R55A **Marlinton** 60.01 351 P P 15 42 28.9 +0.9
baz=169,SNR=11
R54A **Victor** 60.05 350 P P 15 42 28.4 +0.2
baz=168,SNR=8.9
Q61A **Milford** 60.06 355 P P 15 42 29.1 +1.0
baz=174
Q59A **Harwood** 60.16 354 P P 15 42 29.6 +0.7
baz=173
Q60A **Greensboro** 60.22 355 P P 15 42 29.6 +0.3
baz=174
Q58A **Fox Den Farm,** 60.34 353 P P 15 42 30.9 +0.7
baz=172
R53A **Hurricane** 60.36 349 P P 15 42 29.8 -0.5
baz=167
LCAR **Lake Charles** 60.46 340 IAmb IAmb 15 42 31.4
comp=Z,59nm,1.5s
Q57A **Strasburg** 60.52 352 P P 15 42 32.3 +0.9
baz=171,SNR=23
W39A **Magazine** 60.54 338 P P 15 42 32.0 +0.4
baz=154,SNR=20
W39A **Magazine** 60.54 338 IAmb IAmb 15 42 50.4
comp=Z,35nm,0.8s
VNA3 **Neumayer Olymp** 60.60 161 P P 15 42 32.3 +0.6
ABTX **Abilene, Hawle** 60.64 331 P P 15 42 32.5 +0.1
baz=148,SNR=12
Q55A **Buckhannon** 60.70 351 P P 15 42 33.4 +0.7
baz=169,SNR=15
Q53A **Leroy** 60.80 350 P P 15 42 33.1 -0.2
baz=168,SNR=11
Q54A **Coxs Mills** 60.81 350 P P 15 42 33.2 -0.2
baz=168,SNR=7.4
Q54A **Coxs Mills** 60.81 350 IAmb IAmb 15 43 01.3
comp=Z,19nm,0.7s
VNA1 **Neumayer--Stat** 60.82 160 P P 15 42 32.9 -0.2
P58A **Pank, Wackersv** 60.84 354 P P 15 42 34.1 +0.6
baz=172
P59A **Jarrettsville** 60.88 354 P P 15 42 34.3 +0.5
baz=173,SNR=10.0
P57A **Homestead Farm** 60.92 353 P P 15 42 34.9 +0.8
baz=171,SNR=12
P60A **Greenville** 61.01 355 P P 15 42 36.3 +1.6
baz=174
Q52A **Bidwell** 61.03 349 P P 15 42 33.6 -1.2
baz=167
P56A **Dayton Farm, R** 61.04 352 P P 15 42 35.9 +1.1
baz=171,SNR=13
WCI **Wyandotte Cave** 61.15 345 P P 15 42 33.7 -1.9
WCI pmax pmax
comp=Z,27nm,1.0s
WCI **Wyandotte Cave** 61.15 345 P P 15 42 34.4 -1.2
baz=163
WCI **Wyandotte Cave** 61.15 345 P P 15 42 33.7 -1.9
WCI IAmb IAmb 15 42 37.4
comp=Z,27nm,1.0s
P55A **Reedsville** 61.17 351 P P 15 42 36.4 +0.6
baz=170,SNR=7.4
VNA2 **Neumayer--Watz** 61.19 161 P P 15 42 36.2 +0.6
baz=279,slow=8.1
U40A **Yellville** 61.27 339 P P 15 42 36.2 -0.3
baz=156,SNR=18
U40A **Yellville** 61.27 339 IAmb IAmb 15 44 23.5
comp=Z,38nm,1.1s
MCWV **Mont Chateau** 61.32 351 P P 15 42 37.0 +0.2
baz=170
T42A **Van Buren** 61.32 341 IAmb IAmb 15 42 37.0
comp=Z,34nm,1.4s
P54A **Burton** 61.36 351 P P 15 42 37.3 +0.2
baz=169,SNR=14
P53A **Whipple** 61.39 350 P P 15 42 37.1 -0.2
baz=168,SNR=7.7
O58A **Lewisberry** 61.43 354 P P 15 42 37.1 -0.4
baz=173
O60A **Telford** 61.49 355 P P 15 42 38.4 +0.5
baz=174
O59A **Robesonia** 61.55 355 P P 15 42 38.9 +0.6
baz=173,SNR=5.8
O57A **Amberson** 61.59 353 P P 15 42 39.1 +0.5
baz=172,SNR=12
P52A **Corning** 61.66 349 P P 15 42 38.4 -0.7
baz=167
P51A **Williamsport** 61.67 349 P P 15 42 38.7 -0.5
baz=166
O56A **Blue Knob Stat** 61.76 353 P P 15 42 40.5 +0.7
baz=171,SNR=7.9
O56A **Blue Knob Stat** 61.76 353 IAmb IAmb 15 42 43.6
comp=Z,47nm,1.1s
O55A **Ligonier** 61.79 352 P P 15 42 40.3 +0.3
baz=170
N61A **South Mountain** 61.85 356 P P 15 42 42.2 +1.9
baz=175
TUL1 **Leonard** 61.91 336 P P 15 42 40.5 -0.3
baz=153
O54A **Avella** 61.91 351 P P 15 42 40.9 +0.1
baz=169
N62A **Caumsett State** 61.98 357 P P 15 42 40.6 -0.6
baz=176
N63A **Mattituck** 62.00 358 P P 15 42 41.0 -0.3
baz=177
N60A **Cedar Hill Far** 62.02 356 P P 15 42 41.7 +0.3
baz=175
SSPA **Standing Stone** 62.04 353 P P 15 42 41.2 -0.4
SSPA IAmb IAmb 15 42 44.6
comp=Z,58nm,1.4s
P49A **Miami Univ. Ec** 62.05 347 P P 15 42 40.2 -1.5
baz=164
WMOK **Wichita Mounta** 62.07 333 P P 15 42 41.7 -0.3
baz=150
O52A **Adamsville** 62.08 350 P P 15 42 40.7 -1.2
baz=168
PAL **Palisades** 62.08 357 P P 15 42 41.0 -0.8
baz=176
O53A **New Philadelph** 62.10 350 P P 15 42 41.7 -0.4
baz=168
N59A **State Game Lan** 62.12 355 P P 15 42 42.8 +0.7
baz=174
N57A **Milroy** 62.12 354 P P 15 42 42.6 +0.5
baz=172,SNR=6.5
N58A **Sunbury** 62.12 354 P P 15 42 42.9 +0.7
baz=173,SNR=7.2
N58A **Sunbury** 62.12 354 IAmb IAmb 15 43 06.5
comp=Z,35nm,0.9s
O51A **Pataskala** 62.24 349 P P 15 42 42.4 -0.6
baz=167
N55A **Marion Center** 62.31 352 P P 15 42 44.2 +0.7
baz=170,SNR=21
CCM **Cathedral Cave** 62.32 341 P P 15 42 43.1 -0.4
CCM pmax pmax
comp=Z,29nm,1.1s
CCM **Cathedral Cave** 62.32 341 P P 15 42 42.9 -0.6
baz=158
CCM **Cathedral Cave** 62.32 341 P P 15 42 43.1 -0.4
CCM IAmb IAmb 15 42 45.9
comp=Z,29nm,1.1s
N56A **West Decatur** 62.36 353 P P 15 42 44.3 +0.4
baz=171
M61A **Granite Spring** 62.38 357 P P 15 42 43.3 -0.5
baz=176
ACSO **Alum Creek Sta** 62.39 349 P P 15 42 43.2 -0.7
baz=166
M63A **Gales Ferry** 62.40 358 P P 15 42 43.3 -0.7
baz=178
O50A **Cable** 62.42 348 P P 15 42 43.7 -0.5
baz=166
M60A **Port Jervis** 62.44 356 P P 15 42 44.6 +0.3
baz=175,SNR=6.1
M62A **Hamden** 62.47 358 P P 15 42 43.9 -0.5
baz=177
M64A **Tiverton** 62.53 359 P P 15 42 44.5 -0.4
baz=179
N53A **Lisbon** 62.59 351 P P 15 42 42.9 -2.4
baz=169
N54A **Moraine State** 62.62 351 P P 15 42 46.0 +0.5
baz=170,SNR=7.3
M58A **Price's Panora** 62.63 355 P P 15 42 46.4 +0.8
baz=173,SNR=9.5
MNTX **Cornudas Mount** 62.65 326 P P 15 42 45.9 0.0
baz=143,SNR=37
MNTX **Cornudas Mount** 62.65 326 IAmb IAmb 15 43 04.0
comp=Z,49nm,1.1s
M57A **Sunshine Farm,** 62.66 354 P P 15 42 46.2 +0.5
baz=172
M59A **Waymart** 62.71 355 P P 15 42 46.8 +0.7
baz=174,SNR=5.8
N52A **McGinn's Farm,** 62.73 350 P P 15 42 46.0 -0.2
baz=168
SNAA **Sanae** 62.81 161 P P 15 42 47.1 +0.5
SNAA **Sanae** 62.81 161 *d* P P 15 42 46.9 +0.4
SNAA **Sanae** 62.81 161 P P 15 42 47.2 +0.7
SNAA IAmb IAmb 15 42 47.8
comp=Z,29nm,0.7s
O48A **Farmland** 62.84 347 P P 15 42 45.8 -1.2
baz=164,SNR=8.9
L63A **North Scituate** 62.85 359 P P 15 42 47.7 +0.7
baz=178,SNR=12
L64A **Middleborough** 62.91 359 P P 15 42 47.6 +0.3
baz=179,SNR=5.6
M56A **Emporium** 62.91 353 P P 15 42 47.9 +0.5
baz=171,SNR=11
M56A **Emporium** 62.91 353 IAmb IAmb 15 43 15.3
comp=Z,54nm,1.1s
N50A **Nevada** 62.94 349 P P 15 42 46.8 -0.8
baz=166
N51A **Ashland** 62.95 349 P P 15 42 46.7 -0.9
baz=167
M55A **Ridgway** 62.96 353 P P 15 42 48.1 +0.3
baz=171,SNR=13
M55A **Ridgway** 62.96 353 IAmb IAmb 15 42 51.1
comp=Z,45nm,1.0s
L60A **Shokan** 63.08 356 P P 15 42 49.0 +0.5
baz=176
M54A **Oil Creek Stat** 63.12 352 P P 15 42 49.0 +0.2
baz=170,SNR=8.5
M53A **Wt Miller and** 63.19 351 P P 15 42 49.2 -0.1
baz=169
MSTX **Muleshoe** 63.20 330 P P 15 42 49.7 0.0
baz=146,SNR=14
L58A **Harry Jones Me** 63.24 355 P P 15 42 50.5 +0.8
baz=174,SNR=7.1
L61A **Hillsdale 1, H** 63.25 357 P P 15 42 50.1 +0.5
baz=176
L57A **Andrews Acres** 63.29 354 P P 15 42 50.0 +0.1
baz=173
M51A **Elyria** 63.32 350 P P 15 42 49.8 -0.3
baz=167
L59A **Walton** 63.33 356 P P 15 42 51.0 +0.8
baz=175,SNR=17
SFIN **Lafayette** 63.38 345 P P 15 42 49.0 -1.5
baz=162,SNR=8.8
N48A **Decatur** 63.39 347 P P 15 42 49.5 -1.1
baz=164,SNR=7.6
M52A **Chesterland** 63.39 350 P P 15 42 50.4 -0.2
baz=168
BINY **Binghamton** 63.41 355 P P 15 42 51.4 +0.6
baz=174,SNR=9.1
AMTX **Amarillo** 63.45 331 P P 15 42 50.7 -0.6
baz=147
AMTX **Amarillo** 63.45 331 IAmb IAmb 15 43 08.0
comp=Z,49nm,1.4s
HRV **Adam Dziewonsk** 63.49 359 P P 15 42 52.5 +1.3
HRV pmax pmax
comp=Z,54nm,1.0s
HRV **Adam Dziewonsk** 63.49 359 P P 15 42 52.0 +0.8
baz=178
HRV **Adam Dziewonsk** 63.49 359 P P 15 42 52.5 +1.3
HRV IAmb IAmb 15 43 08.9
comp=Z,54nm,1.0s
L56A **Greenwood** 63.49 354 P P 15 42 51.7 +0.4
baz=172,SNR=9.6
L56A **Greenwood** 63.49 354 IAmb IAmb 15 43 24.2
comp=Z,68nm,1.4s
L55A **Hinsdale** 63.63 353 P P 15 42 52.5 +0.3
baz=171,SNR=7.5
L53A **Girard** 63.63 351 P P 15 42 52.4 +0.2
baz=169
K62A **Royalston** 63.66 358 P P 15 42 52.9 +0.5
baz=178
K63A **Dunstable** 63.67 359 P P 15 42 53.6 +1.2
baz=178
K60A **Five Rivers En** 63.69 357 P P 15 42 53.1 +0.7
baz=176
K61A **Williamstown** 63.71 357 P P 15 42 53.2 +0.6
baz=177,SNR=6.2
ERPA **Erie** 63.76 352 P P 15 42 53.1 +0.1
baz=170
L54A **Sinclairville** 63.79 352 P P 15 42 53.6 +0.4
baz=170,SNR=7.7
K59A **Cooperstown** 63.90 356 P P 15 42 54.7 +0.8
baz=175,SNR=16
P40A **Paris** 63.92 341 IAmb IAmb 15 42 56.4
comp=Z,38nm,0.9s
K58A **Earlville** 63.94 355 P P 15 42 54.8 +0.5
baz=174,SNR=11
K58A **Earlville** 63.94 355 IAmb IAmb 15 43 18.6
comp=Z,39nm,0.9s
K57A **Scipio Center** 63.98 355 P P 15 42 53.7 -0.8
baz=173
M47A **Cromwell** 63.99 347 P P 15 42 53.0 -1.5
baz=164
K56A **Middlesex** 64.02 354 P P 15 42 54.7 0.0
baz=172,SNR=5.8
K54A **Basiliko Farm,** 64.08 353 P P 15 42 54.3 -0.8
baz=171
HDIL **Hopedale** 64.09 344 P P 15 42 53.8 -1.5
baz=160
L50A **Kingsville** 64.12 349 P P 15 42 54.0 -1.4
baz=167
K55A **Perry** 64.13 353 P P 15 42 55.3 -0.1
baz=172
J62A **Henniker** 64.21 359 P P 15 42 56.5 +0.6
baz=178,SNR=5.9
J63A **Strafford** 64.25 359 P P 15 42 57.0 +0.8
baz=179
J60A **Lant Hill Farm** 64.29 357 P P 15 42 57.0 +0.5
baz=176
J61A **Chester** 64.36 358 P P 15 42 57.7 +0.9
baz=177
K52A **Tillsonburg** 64.51 351 P P 15 42 57.9 0.0
baz=169
J58A **Remsen** 64.51 356 P P 15 42 58.1 +0.1
baz=174
AAM **Ann Arbor** 64.52 349 P P 15 42 57.5 -0.4
baz=166
J56A **Wolcott** 64.55 354 P P 15 42 58.2 +0.1
baz=173
J56A **Wolcott** 64.55 354 IAmb IAmb 15 43 22.1
comp=Z,32nm,0.8s
J59A **Pisco** 64.56 356 P P 15 42 59.0 +0.7
baz=175,SNR=18
K51A **Iona Station** 64.57 351 P P 15 42 57.9 -0.4
baz=168
121A **Cookes Peak, D** 64.57 325 P P 15 42 59.6 +0.8
baz=141,SNR=10
J57A **Williamstown** 64.61 355 P P 15 42 58.6 +0.1
baz=174
J55A **Hilton** 64.63 354 P P 15 42 58.8 +0.1
baz=172
J54A **Appleton** 64.73 353 P P 15 42 59.1 -0.2
baz=171
K50A **Casco** 64.80 350 P P 15 42 59.0 -0.8
baz=167
I58A **Old Forge** 64.82 356 P P 15 43 00.2 +0.3
baz=175,SNR=8.0
I62A **Tamworth** 64.85 359 P P 15 43 00.7 +0.6
baz=179
I59A **Olmsteadville** 64.86 357 P P 15 42 59.0 -1.2
baz=176
I60A **Shoreham** 64.88 357 P P 15 43 00.4 +0.1
baz=177
I64A **Boothbay** 64.89 0 P P 15 42 59.4 -0.9
baz=180
J52A **Paris** 64.93 352 P P 15 43 00.1 -0.5
baz=169
I61A **Oroboro, Fairl** 64.93 358 P P 15 43 01.1 +0.5
baz=178,SNR=10.0
K49A **Clarkson** 64.95 349 P P 15 43 00.1 -0.7
baz=166
I63A **Otisfield** 65.02 360 P P 15 43 01.4 +0.2
baz=179
KSU1 **Kansas State U** 65.03 337 P P 15 43 00.4 -1.1
baz=153
K48A **Perry** 65.09 349 P P 15 43 00.6 -1.1
baz=166,SNR=7.1
I57A **Carthage** 65.11 355 P P 15 43 01.5 -0.3
baz=174
K47A **Vermontville** 65.13 348 P P 15 43 02.0 +0.1
baz=165
LBNH **Lisbon** 65.23 358 P P 15 43 02.7 +0.1
baz=178,SNR=6.9
J49A **Marlette** 65.45 349 P P 15 43 03.5 -0.6
baz=166
H58A **Gabriels** 65.50 357 P P 15 43 04.8 +0.5
baz=176,SNR=5.8
J48A **Bridge Port** 65.51 349 P P 15 43 03.3 -1.0
baz=166
H61A **Lyndonville** 65.52 358 P P 15 43 04.9 +0.4
baz=178
H62A **Milan** 65.55 359 P P 15 43 04.5 -0.2
baz=179
I51A **Listowel** 65.56 351 P P 15 43 04.0 -0.7
baz=169
I55A **Frankford** 65.56 354 P P 15 43 04.7 +0.1
baz=172,SNR=6.5
H60A **Morristown** 65.57 358 P P 15 43 04.4 -0.4
baz=177
H64A **Troy** 65.61 1 P P 15 43 04.6 -0.4
baz=181
J47A **Sunmer** 65.64 348 P P 15 43 05.3 +0.1
baz=165
H65A **Eastbrook** 65.68 1 P P 15 43 05.9 +0.4
baz=182
H59A **Cadyville** 65.70 357 P P 15 43 05.4 -0.2
baz=176
LONY **Lake Ozonia** 65.72 356 P P 15 43 05.3 -0.4
baz=175
ANMO **Albuquerque** 65.77 328 *de* P P 15 43 07.7 +1.2
ANMO pmax pmax
comp=Z,38nm,1.7s
ANMO **Albuquerque** 65.77 328 P P 15 43 05.7 -0.8
baz=143
ANMO **Albuquerque** 65.77 328 P P 15 43 08.0 +1.4
H66A **Whiting** 65.80 2 P P 15 43 05.7 -0.5
baz=183
H56A **Elgin** 65.81 355 P P 15 43 05.7 -0.6
baz=174
H55A **Tweed** 65.84 354 P P 15 43 06.7 +0.2
baz=173,SNR=6.6
FRNY **Flat Rock** 65.88 357 IAmb IAmb 15 43 30.8
comp=Z,37nm,1.1s
J46A **Howard City** 65.91 348 P P 15 43 07.0 +0.1
baz=164
CBKS **Cedar Bluff** 65.97 335 P P 15 43 07.7 +0.2
baz=150
I49A **Point Hope** 65.97 350 IAmb IAmb 15 43 24.6
comp=Z,29nm,0.8s
H53A **Bobcaygeon** 66.01 353 P P 15 43 07.3 -0.3
baz=171
TUC **Tucson** 66.05 323 P P 15 43 08.7 +0.5
baz=138
G63A **Kingsbury** 66.08 0 P P 15 43 08.2 +0.2
baz=180
G60A **Masonville** 66.10 358 P P 15 43 08.4 +0.3
baz=178
G59A **Clarenceville** 66.11 358 P P 15 43 08.6 +0.4
baz=177
G62A **West of Eustis** 66.19 360 P P 15 43 09.2 +0.5
baz=179,SNR=8.0
G62A **West of Eustis** 66.19 360 IAmb IAmb 15 43 41.5
comp=Z,67nm,1.1s
G65A **Princeton** 66.20 2 P P 15 43 08.8 0.0
baz=182
G65A **Princeton** 66.20 2 P P 15 43 09.5 +0.7
G58A **Ormstown** 66.22 357 P P 15 43 09.0 +0.1
baz=176
G57A **Newington** 66.23 356 P P 15 43 09.5 +0.5
baz=175
G64A **Maxfield** 66.23 1 P P 15 43 09.5 +0.5
baz=181
H52A **Wyevale** 66.23 352 P P 15 43 08.9 -0.1
baz=170
PKME **Peaks-Kenny Pk** 66.23 1 P P 15 43 09.7 +0.8
baz=181
G61A **St-Isidore-de-** 66.26 359 P P 15 43 09.6 +0.4
baz=178
I48A **Sherman Twp** 66.35 349 P P 15 43 08.7 -1.1
baz=166
SCIA **State Center** 66.45 341 P P 15 43 09.5 -0.9
baz=156
SCIA **State Center** 66.45 341 IAmb IAmb 15 43 28.8
comp=Z,49nm,0.9s
G55A **Calabogie** 66.50 355 P P 15 43 10.2 -0.5
baz=173
JFWS **Jewell Farm** 66.55 344 P P 15 43 10.7 -0.4
baz=159,SNR=8.6
JFWS **Jewell Farm** 66.55 344 IAmb IAmb 15 43 13.4
comp=Z,27nm,0.8s
G53A **Haliburton** 66.56 353 P P 15 43 11.1 0.0
baz=171
T25A **Trinidad** 66.56 331 P P 15 43 12.3 +0.7
baz=145,SNR=6.7
F63A **Nahmakanta, Br** 66.67 1 P P 15 43 11.5 -0.3
baz=181
G54A **Lake Saint Pet** 66.77 354 P P 15 43 12.5 0.0
baz=172
F64A **Sherman** 66.85 1 P P 15 43 13.4 +0.5
baz=182,SNR=9.2
F64A **Sherman** 66.85 1 P P 15 43 13.2 +0.4
F61A **St Evariste** 66.95 359 P P 15 43 14.5 +1.0
baz=179
214A **Organ Pipe Nat** 66.96 321 P P 15 43 14.7 +0.7
baz=137,SNR=25
F60A **Warwick** 66.96 359 P P 15 43 14.4 +0.8
baz=178
H46A **Fife Lake** 66.97 348 P P 15 43 13.7 0.0
baz=165
F52A **Sundridge** 67.30 353 P P 15 43 15.0 -0.8
baz=171
KSCO **Kaye Shedlock'** 67.32 333 P P 15 43 15.3 -0.9
baz=147
ALGO **Algonquin Park** 67.32 354 P P 15 43 15.9 +0.1
baz=172
G47A **Hillman** 67.34 349 P P 15 43 15.2 -0.8
baz=166
E60A **Ste Agathe de** 67.35 359 P P 15 43 16.6 +0.5
baz=178
NVL **N'lazarevskaya** 67.39 159 *e* P P 15 43 16.1 0.0
NVL pmax pmax
comp=Z,71nm,1.4s
E61A **Lac Etchemin** 67.40 360 P P 15 43 17.0 +0.6
baz=180
E58A **La Victoria** 67.40 358 P P 15 43 16.8 +0.4
baz=177
E63A **Oxbow** 67.40 1 P P 15 43 15.9 -0.5
baz=182
E64A **Bridgewater** 67.41 2 P P 15 43 16.5 +0.1
baz=182,SNR=6.4
E57A **Chemin Saint G** 67.48 357 P P 15 43 17.1 +0.1
baz=176
F51A **Arnstein** 67.50 353 P P 15 43 17.1 0.0
baz=170
G45A **Suttons Bay** 67.54 348 P P 15 43 16.4 -0.9
baz=164
SDCO **Great Sand Dun** 67.55 330 P P 15 43 19.2 +1.2
baz=144,SNR=36
SDCO **Great Sand Dun** 67.55 330 IAmb IAmb 15 43 36.9
comp=Z,67nm,1.1s
E62A **Clayton Lake** 67.59 0 P P 15 43 18.3 +0.7
baz=180,SNR=12
W18A **Petrified Fore** 67.59 325 P P 15 43 19.4 +1.3
baz=140
F49A **Sandfield** 67.62 351 P P 15 43 16.8 -1.0
baz=168
BGNE **Belgrade** 67.62 337 P P 15 43 18.1 +0.1
baz=152,SNR=5.5
E56A **St. Veronique** 67.66 356 P P 15 43 18.2 +0.2
baz=175,SNR=7.1
E53A **Dumoine, Ponti** 67.70 354 P P 15 43 18.0 -0.3
baz=172
E52A **Mattawa** 67.71 354 P P 15 43 17.6 -0.7
baz=171
E54A **Lac Daplat, Po** 67.71 355 P P 15 43 18.0 -0.4
baz=173
F48A **Evansville** 67.77 350 P P 15 43 18.2 -0.5
baz=167
D60A **Saint Jean D'O** 67.89 359 P P 15 43 19.8 +0.4
baz=179
D63A **Stockholm** 68.02 1 P P 15 43 20.9 +0.6
baz=182,SNR=5.6
E51A **G1948 Merrick** 68.05 353 P P 15 43 20.2 -0.3
baz=170
D62A **Allapoint, All** 68.05 1 P P 15 43 21.3 +0.8
baz=181,SNR=14
D62A **Allapoint, All** 68.05 1 IAmb IAmb 15 43 38.4
comp=Z,32nm,0.9s

D57A **Chemin Vers le** 68.07 357 P P 15 43 20.8 +0.2
baz=176
E50A **Wahnapitae** 68.09 352 P P 15 43 20.8 0.0
baz=169
D58A **Chemin du LacG** 68.11 358 P P 15 43 20.9 0.0
baz=177
F45A **CMU Biological** 68.13 348 P P 15 43 20.5 -0.4
baz=164
D55A **Sainte-Anne-du** 68.17 356 P P 15 43 21.2 0.0
baz=174,SNR=8.4
D61A **St Aubert, Com** 68.17 360 P P 15 43 22.1 +0.9
baz=180
S22A **4UR Ranch, Cre** 68.18 329 P P 15 43 22.8 +0.9
baz=143,SNR=12
E48A **Lockeyer** 68.34 351 P P 15 43 22.1 -0.2
baz=168
D52A **ZEK Kipawa Sen** 68.37 354 P P 15 43 22.7 +0.2
baz=172,SNR=7.7
D54A **Lac Fusel, La** 68.38 355 P P 15 43 21.6 -1.0
baz=173
Q24A **Divide** 68.38 331 P P 15 43 24.1 +1.0
baz=145,SNR=11
D53A **Lac Vacive, Po** 68.40 354 P P 15 43 22.7 0.0
baz=172,SNR=9.6
E47A **Iron Bridge** 68.49 350 P P 15 43 23.3 +0.1
baz=167
MVCO **Mesa Verde** 68.57 328 P P 15 43 24.5 +0.3
baz=142,SNR=8.7
D51A **Lot 18 Range I** 68.58 353 P P 15 43 25.4 +1.6
baz=171
OGNE **Ogallala** 68.70 334 P P 15 43 25.7 +0.9
baz=148
D50A **G1974 Best Tow** 68.71 353 P P 15 43 24.6 0.0
baz=170,SNR=6.7
WUAZ **Wupatki** 68.77 325 P P 15 43 27.5 +2.1
baz=139,SNR=23
QSPA **South Pole Qui** 68.90 180 P P 15 43 27.4 +1.5
GLA **Glamis** 68.93 321 P P 15 43 25.9 -0.5
baz=135
D48A **Paudash Townsh** 68.97 351 P P 15 43 25.5 -0.7
baz=168,SNR=5.2
D49A **Beulah Townshi** 69.00 352 P P 15 43 25.7 -0.8
baz=169
D46A **Sault St. Mari** 69.03 350 P P 15 43 25.9 -0.7
baz=166
D47A **Chapleau** 69.04 350 P P 15 43 25.8 -0.9
baz=167
ECSD **EROS Data Cent** 69.16 340 P P 15 43 27.3 -0.2
baz=154
ISCO **Idaho Springs** 69.27 331 P P 15 43 29.6 +0.9
baz=145,SNR=11
IKP **In-Ko-Pah, Jac** 69.41 319 P P 15 43 31.6 +2.2
baz=134,SNR=8.7
PDMCI **Parker Dam,Lak** 69.42 322 P P 15 43 30.9 +1.6
baz=136
SWSC **Sam W. Stewart** 69.43 320 P P 15 43 31.1 +1.7
baz=134
PV02 **Paradox Valley** 69.47 328 IAmb IAmb 15 43 49.2
comp=Z,71nm,1.4s
PV13 **Radium Mtn., P** 69.47 328 IAmb IAmb 15 43 49.0
comp=Z,60nm,1.1s
PV18 **Skein Mesa, Pa** 69.58 328 IAmb IAmb 15 43 48.9
comp=Z,55nm,1.4s
DBIC **Dimbokro** 69.65 74 P P 15 43 30.6 -0.5
comp=Z,11nm,0.7s,baz=222,slow=8.0,SNR=9.8
DBIC pP pP 15 43 47.7 +0.4
comp=Z,24nm,0.8s,baz=216,slow=7.4,SNR=6.3
DBIC LR LR 16 13 34.8
comp=Z,312nm,18.3s,baz=214,slow=36
DBIC **Dimbokro** 69.65 74 P P 15 43 31.1 -0.1
DBIC pmax pmax
comp=Z,81nm,1.1s
DBIC **Dimbokro** 69.65 74 P P 15 43 31.1 -0.1
DBIC IAmb IAmb 15 43 57.2
comp=Z,81nm,1.1s
BC3 **Big Chuckawall** 69.72 321 P P 15 43 33.3 +2.0
baz=135,SNR=20
MONP2 **Monument Peak** 69.77 319 P P 15 43 33.7 +1.9
baz=134,SNR=9.8
W13A **Hualapai Mount** 69.85 323 IAmb IAmb 15 43 57.5
comp=Z,71nm,1.8s
IRM **Iron Mountain** 69.90 321 P P 15 43 34.5 +2.1
baz=135,SNR=31
D41A **Chassel** 70.06 347 IAmb IAmb 15 43 51.2
comp=Z,50nm,1.0s
BELC **Belle Mtn. Jos** 70.29 321 P P 15 43 36.8 +2.0
baz=135,SNR=12
XPFO **Pion Flat** 70.29 320 P P 15 43 37.0 +2.2
XPFO IAmb IAmb 15 44 02.7
comp=Z,52nm,1.1s
PFO **Pinyon Flats O** 70.29 320 P P 15 43 37.2 +2.3
PFO pmax pmax
comp=Z,52nm,1.2s
PFO **Pinyon Flats O** 70.29 320 P P 15 43 36.9 +2.0
baz=134,SNR=10
PFO **Pinyon Flats O** 70.29 320 P P 15 43 37.1 +2.3
PFO IAmb IAmb 15 44 02.7
comp=Z,52nm,1.1s
LSQQ **Lebel-sur-Quev** 70.30 355 P P 15 43 34.2 -0.2
baz=173
N23A **Red Feather La** 70.31 332 P P 15 43 36.3 +1.4
baz=144
SUSD **Miller** 70.57 338 P P 15 43 36.1 0.0
baz=151
GMRC **Granite Mounta** 70.64 321 P P 15 43 39.2 +2.3
baz=135,SNR=29
MURC **Murrieta** 70.73 320 P P 15 43 38.5 +1.1
baz=134
O20A **White River Ci** 70.74 330 P P 15 43 39.0 +1.5
baz=142,SNR=9.1
CHGQ **Chibougamau** 70.98 357 P P 15 43 38.6 0.0
baz=176
MATQ **Matagami** 71.05 355 P P 15 43 39.3 +0.4
baz=172
HEC **Hector,Ludlow** 71.07 321 P P 15 43 41.7 +2.2
baz=135,SNR=18
DRLN **Deer Lake** 71.10 9 P P 15 43 39.4 +0.2
DRLN IAmb IAmb 15 43 56.4
comp=Z,32nm,0.8s
TUQ **Turquoise Moun** 71.25 322 P P 15 43 42.6 +2.0
baz=135,SNR=11
BFSC **Mount Baldy Ra** 71.44 320 P P 15 43 43.6 +1.7
baz=134,SNR=7.3
EYMN **Ely** 71.57 345 P P 15 43 41.5 -0.6
baz=159,SNR=8.6
GSC **Goldstone, Bar** 71.67 321 P P 15 43 44.9 +1.8
baz=134,SNR=9.7
SHOC **Shoshone, Teco** 71.78 322 P P 15 43 45.6 +1.9
baz=135
DECC **Green Verdugo** 71.86 319 P P 15 43 46.2 +2.0
baz=133
K22A **Casper** 71.99 332 P P 15 43 46.0 +1.0
baz=144,SNR=6.7
EDW2 **Edwards Air Fo** 72.09 320 P P 15 43 47.0 +1.4
baz=133,SNR=8.2
RSSD **Black Hills** 72.17 335 P P 15 43 47.0 +0.9
RSSD pmax pmax
comp=Z,21nm,0.9s
RSSD **Black Hills** 72.17 335 P P 15 43 47.0 +0.9
baz=147
RSSD **Black Hills** 72.17 335 P P 15 43 47.0 +0.9
LRMC **Laurel Mtn Rad** 72.31 321 P P 15 43 48.9 +1.9
baz=134,SNR=6.4
OSI **Osito Audit: C** 72.34 319 P P 15 43 49.1 +2.0
baz=133
TPNV **Topopah Spring** 72.51 323 P P 15 43 50.4 +2.2
baz=135,SNR=18
TPNV **Topopah Spring** 72.51 323 IAmb IAmb 15 44 07.9
comp=Z,52nm,1.1s
B35A **Bob, Littlefor** 72.52 344 IAmb IAmb 15 44 04.3
comp=Z,30nm,0.7s
FURC **Furnace Creek,** 72.52 322 P P 15 43 50.1 +2.1
baz=135,SNR=11
MPMC **Manual Prospec** 72.60 321 P P 15 43 50.4 +1.6
baz=134,SNR=12
ISA **Isabella, Lake** 72.91 320 P P 15 43 52.5 +2.0
baz=133,SNR=15
ISA **Isabella, Lake** 72.91 320 IAmb IAmb 15 44 09.9
comp=Z,47nm,1.1s
DUG **Dugway, Tooele** 73.02 327 P P 15 43 52.8 +1.6
baz=139,SNR=14
DUG **Dugway, Tooele** 73.02 327 IAmb IAmb 15 44 11.0
comp=Z,71nm,1.1s
AGMN **Agassiz Nation** 73.04 342 P P 15 43 50.5 -0.4
baz=155
R11A **Troy Canyon, C** 73.13 324 P P 15 43 54.0 +2.1
baz=136,SNR=22
GRAC **Grapevine Rang** 73.18 322 P P 15 43 54.1 +2.1
baz=134,SNR=6.7
PKM **Mcpherson Peak** 73.19 319 P P 15 43 54.3 +2.0
baz=132,SNR=6.1
CWC **Cottonwood Cre** 73.21 321 P P 15 43 53.3 +1.0
baz=134
BW06 **Boulder Array** 73.43 331 P P 15 43 53.9 +0.3
baz=142
PDAR **Pinedale Array** 73.43 331 P P 15 43 54.2 +0.6
comp=Z,2.6nm,0.6s,baz=142,slow=7.5,SNR=19
PDAR pP pP 15 44 11.3 +1.7
comp=Z,7.6nm,0.9s,baz=163,slow=5.7,SNR=7.7
MDND **Maddock** 73.78 340 P P 15 43 55.3 +0.1
baz=151
VOG **Valley Oaks Go** 73.89 320 P P 15 43 57.3 +1.2
baz=133
MLAC **Mammoth, Mammo** 74.46 322 P P 15 44 01.1 +1.4
baz=133
REDW **Red Top Meadow** 74.48 330 IAmb IAmb 15 44 18.3
comp=Z,51nm,1.1s
OMMB **Old Mammoth Mi** 74.55 322 IAmb IAmb 15 44 20.1
comp=Z,47nm,1.1s
TPAW **Teton Pass** 74.63 330 IAmb IAmb 15 44 20.6
comp=Z,65nm,1.2s
NVAR **Mina Array Bea** 74.71 323 P P 15 44 02.9 +1.8
comp=Z,4.5nm,0.7s,baz=153,slow=5.9,SNR=34
NVAR pP pP 15 44 18.8 +1.6
comp=Z,8.2nm,0.9s,baz=135,slow=1.7,SNR=13
ULM **Lac du Bonnet** 74.81 343 P P 15 44 00.6 -0.6
comp=Z,4.7nm,0.5s,baz=170,slow=5.6,SNR=6.7
IMW **Indian Meadow** 74.94 331 IAmb IAmb 15 44 21.2
comp=Z,72nm,1.4s
FLWY **Flagg Ranch** 74.97 331 IAmb IAmb 15 44 21.7
comp=Z,70nm,1.0s
KVN **Kaiserville** 75.02 323 IAmb IAmb 15 44 22.3
comp=Z,38nm,1.0s
RLMT **Red Lodge** 75.15 332 P P 15 44 04.8 +1.2
baz=142,SNR=11
RLMT **Red Lodge** 75.15 332 IAmb IAmb 15 44 22.3
comp=Z,64nm,1.2s
H17A **Grant Village** 75.16 331 P P 15 44 04.8 +1.1
baz=141
LAO **LASA Array** 75.16 335 P P 15 44 04.2 +0.8
baz=145
WAKR **Walker** 75.40 322 IAmb IAmb 15 44 31.9
comp=Z,46nm,1.3s
SCHQ **Schefferville** 75.86 2 P P 15 44 07.1 0.0
comp=Z,4.1nm,0.6s,baz=149,slow=4.4,SNR=6.2
DGMT **Dagmar** 75.88 337 P P 15 44 08.3 +0.9
baz=147
PNTR **Pine Nut** 75.89 322 IAmb IAmb 15 44 27.5
comp=Z,41nm,1.0s
PAHR **Pah Rah Range** 76.19 323 IAmb IAmb 15 44 29.6
comp=Z,59nm,1.0s
VNDA **Vanda** 76.88 190 P P 15 44 14.5 +1.7
comp=Z,5.7nm,0.8s,baz=115,slow=3.7,SNR=7.6
SYO **Syowa Base** 77.05 160⇑ *e*P P 15 44 09.8 -4.0
SYO **Syowa Base** 77.05 160‖ *i*X P 15 44 19.0 +5.2
SYO **Syowa Base** 77.05 160‖ *i*pP pP 15 44 25.8 -4.3
EGMT **Eagleton** 77.66 334 P P 15 44 18.3 +0.9
baz=142,SNR=5.8
O03E **Paynes Creek** 77.96 322 P P 15 44 19.2 -0.2
baz=132
MOD **Modoc Plateau** 78.20 324 IAmb IAmb 15 44 39.9
comp=Z,43nm,1.1s
TOA0 **Torodi Ar. Sit** 78.24 71 IAmb IAmb 15 44 31.1
comp=Z,32nm,0.6s
TORD **Torodi Ar. Bea** 78.24 71 P P 15 44 20.4 -0.9
comp=Z,13nm,0.7s,baz=254,slow=5.2,SNR=54
TORD LR LR 16 20 34.5
comp=Z,355nm,18.2s,baz=80,slow=37
MSO **Missoula** 78.54 331 P P 15 44 22.9 +0.4
baz=139
BMO **Blue Mountains** 78.69 328 IAmb IAmb 15 44 42.8
comp=Z,39nm,1.1s
N02D **Trinity Center** 78.93 322 P P 15 44 24.8 +0.2
baz=131
M04C **Macdoel** 78.97 323 P P 15 44 25.0 0.0
baz=132
K05A **Summer Lake** 79.08 324 IAmb IAmb 15 44 45.2
comp=Z,61nm,1.1s
M02C **Callahan** 79.28 322 P P 15 44 27.3 +0.7
baz=131
L04D **Klamath Falls** 79.52 323 P P 15 44 28.7 +0.8
baz=131
SUR **Sutherland** 79.56 121 P P 15 44 30.2 +1.5
SUR IAmb IAmb 15 44 30.8
comp=Z,50nm,0.9s
J05D **Fort Rock, OR** 79.64 325 P P 15 44 29.7 +1.1
baz=132
PINE **Pine Mountain** 79.83 325 IAmb IAmb 15 44 49.2
comp=Z,57nm,1.1s
J04D **Umpqua Nationa** 80.09 324 P P 15 44 31.5 +0.4
baz=132
I05D **Terrebonne, OR** 80.41 325 P P 15 44 33.0 +0.4
baz=132,SNR=13
K02D **Willamette Mer** 80.59 323 P P 15 44 34.1 +0.5
baz=130
I04A **Tendick Farm,** 80.62 324 P P 15 44 34.2 +0.5
baz=132
G05D **Wamic, OR** 81.01 326 P P 15 44 36.6 +0.9
baz=133
J01E **Myrtle Point** 81.04 323 P P 15 44 37.3 +1.4
baz=130
NEW **Newport** 81.06 330 P P 15 44 37.0 +1.0
baz=136
I03D **Drain, OR** 81.07 324 P P 15 44 37.5 +1.5
baz=131
TSUM **Tsumeb** 81.07 107 P P 15 44 37.5 +0.6
comp=Z,24nm,0.8s,baz=245,slow=5.2,SNR=37
TSUM pP pP 15 44 54.5 +1.1
comp=Z,10nm,0.8s,baz=259,slow=6.4,SNR=4.4
TSUM **Tsumeb** 81.07 107 P P 15 44 36.4 -0.5
TSUM IAmb IAmb 15 44 38.4
comp=Z,33nm,0.9s
H04D **Lebanon** 81.28 325 P P 15 44 38.4 +1.2
baz=131
F05D **White Salmon** 81.51 326 P P 15 44 39.0 +0.6
baz=132
I02D **Swisshome** 81.61 324 P P 15 44 40.8 +1.9
baz=130
G03D **McMinnville, O** 82.01 325 P P 15 44 41.9 +0.9
baz=131
LTY **Liberty** 82.05 328 IAmb IAmb 15 45 00.0
comp=Z,57nm,1.4s
MDT **Midelt** 82.39 51 P P 15 44 44.5 +1.0
comp=Z,19nm,1.0s,baz=259,slow=4.8,SNR=9.2
MDT pP pP 15 45 00.2 +0.2
comp=Z,10.0nm,0.9s,baz=250,slow=7.5,SNR=4.2
D03D **Eldon** 83.45 327 P P 15 44 49.4 +1.0
baz=131
A04D **Lummi Island** 84.05 328 P P 15 44 52.8 +1.4
baz=132
MAW **Mawson** 84.82 164 P P 15 44 56.2 +1.0
comp=Z,19nm,0.9s,baz=220,slow=6.8,SNR=22
LBTB **Lobatse** 86.03 115 P P 15 45 02.5 +0.3
LBTB pmax pmax
comp=Z,28nm,0.9s
LBTB **Lobatse** 86.03 115 P P 15 45 02.5 +0.3
LBTB IAmb IAmb 15 45 03.4
comp=Z,28nm,0.9s
PAB **San Pablo** 86.08 45 P P 15 45 02.4 +0.5
PAB pmax pmax
comp=Z,42nm,1.6s
PAB **San Pablo** 86.08 45 P P 15 45 02.4 +0.5
PAB IAmb IAmb 15 45 20.1
comp=Z,42nm,1.6s
ESDC **Sonseca Array** 86.40 45 P P 15 45 03.8 +0.3
comp=Z,5.6nm,1.1s,baz=245,slow=5.4,SNR=16
ESDC pP pP 15 45 18.5 -1.6
comp=Z,5.3nm,1.0s,baz=242,slow=5.5,SNR=6.7
MATP **Matopo** 90.23 112 P P 15 45 22.9 +0.5
comp=Z,18nm,1.1s,baz=241,slow=4.2,SNR=10
YKA **Yellowknife Ar** 90.65 341 P P 15 45 23.1 +0.1
comp=Z,3.4nm,0.7s,baz=141,slow=4.9,SNR=22
YKA pP pP 15 45 40.3 +0.6
comp=Z,23nm,0.9s,baz=140,slow=5.0,SNR=24
KIP **Kipapa** 95.80 291‖ *e*P P 15 45 47.2 -0.5
KIP pmax pmax
comp=Z,42nm,1.1s
DAVOX **Davos/Dischmat** 98.60 43 LR LR 16 31 38.2
comp=Z,728nm,18.0s,baz=71,slow=36
MBAR **Mbarara** 99.78 94⇑ *e*P Pdif 15 46 01.5 -4.6
MBAR pmax pmax
comp=Z,2.0nm,1.1s
EPYK **Eagle Plains** 100.47 338 P Pdif 15 46 08.7 +1.0
baz=119
GRF **Grafenberg Arr** 100.49 41 *e*PP PKiKP 15 50 27.6 -6.9
CLL **Collm** 102.10 40 *e*(Pdif) Pdif 15 46 20.0 +4.8
CLL *e*PP PP 15 50 23.0 -4.8
CLL *e*pPP 15 50 46.0
CLL **Collm** 102.10 40 *e*P Pdif 15 46 20.0 +4.8
HDA **Harding Lake** 103.51 334 P Pdif 15 46 22.0 +0.8
baz=111
POKR **Poker Plat Res** 103.96 335 P Pdif 15 46 23.9 +0.7
baz=110
TOLK **Toolik Lake Re** 105.90 338 P PKiKP 15 50 45.2 +1.3
baz=108
OBN **Obninsk** 116.63 38 *e*PKIKP PKPdf 15 51 03.2 -1.3
OBN pmax pmax
comp=Z,3.0nm,0.8s
KLMR **Klimovskoe** 117.86 31 *e*PKIKP PKPdf 15 51 05.8 -0.9
KLMR pmax pmax
comp=Z,8.0nm,1.4s
KLMR **Klimovskoe** 117.86 31 *e*PKPdf PKPdf 15 51 05.8 -0.9
KLMR AMP 15 51 23.4
comp=Z,8.0nm,1.4s
KIV **Kislovodsk** 120.62 51 *e*PKIKP PKPdf 15 51 08.7 -4.0
KIV pmax pmax
comp=Z,3.0nm,0.9s
KBZ **Khabaz** 120.77 51 PKP PKiKP 15 51 13.7 +0.7
comp=Z,2.3nm,0.8s,baz=62,slow=1.9,SNR=5.0
KBZ **Khabaz** 120.77 51⇑ *i*PKIKP PKPdf 15 51 12.9 +0.1
BILL **Bilibino** 121.95 338 *e*PKIKP PKPdf 15 51 13.0 -1.4
BILL *e* 15 52 46.5
BILL pmax pmax
comp=Z,2.0nm,1.2s
H11S2 **WAKE ISLAND Hyl** 26.84 278 T T 18 10 57.2
baz=103,slow=74,SNR=1906
H11S1 **WAKE ISLAND Hyl** 26.85 278 T T 18 10 58.0
baz=103,slow=74,SNR=1638
H11S3 **WAKE ISLAND Hyl** 26.86 278 T T 18 10 58.9
baz=103,slow=74,SNR=1425
H11N3 **WAKE ISLAND Hyl** 26.92 279 T T 18 11 01.9
baz=103,slow=75,SNR=511
H11N2 **WAKE ISLAND Hyl** 26.94 279 T T 18 11 02.1
baz=103,slow=75,SNR=497
H11N1 **WAKE ISLAND Hyl** 26.94 279 T T 18 10 54.8
baz=103,slow=75,SNR=318
TIXI **Tiksi** 128.45 352‖ *i*PKIKP PKPdf 15 51 26.3 -0.4
TIXI pmax pmax
comp=Z,2.0nm,0.7s
ARU **Arti** 128.54 34 *i* PKIKP PKPdf 15 51 27.0 -0.3
ARU 15 53 32.9
ARU 15 58 32.5
ARU SS SS 16 10 50.2 +4.7
SEY **Seymchan** 129.50 336 PKP PKiKP 15 51 30.3 +0.6
comp=Z,5.9nm,0.9s,baz=63,slow=1.6,SNR=8.5
ASAR **Alice Springs** 129.62 209 PKP PKPdf 15 51 30.6 0.0
comp=Z,3.3nm,0.8s,baz=139,slow=2.3,SNR=24
ASAR pPKP pPKPdf 15 51 50.4 +2.7
comp=Z,2.5nm,0.7s,baz=145,slow=2.2,SNR=7.2
WRA **Warramunga Arr** 132.61 212 PKP PKPdf 15 51 36.8 +0.5
comp=Z,3.6nm,0.7s,baz=162,slow=1.7,SNR=27
WRA pPKP pPKPdf 15 51 55.1 +1.7
comp=Z,2.6nm,0.6s,baz=152,slow=1.7,SNR=6.5
WRAB **Tennant Creek** 132.61 212⇑ *i*PKIKP PKiKP 15 51 37.7 +0.3
WRAB pmax pmax
comp=Z,13nm,1.7s
BRVK **Borovoye** 136.12 34⇑ *i*PKIKP PKPdf 15 51 40.3 -1.4
YAK **Yakutsk** 137.08 347⇑ *i*PKIKP PKPdf 15 51 44.2 +1.0
KURK **Kurchatov** 141.70 32⇑ *i*PKIKP PKPdf 15 51 52.9 +0.9
ZALV **Zalesovo Beam** 142.19 24 PKP PKPdf 15 51 53.3 +0.5
comp=Z,5.4nm,0.6s,baz=316,slow=4.1,SNR=26
ZALV pPKP pPKPdf 15 52 10.1 0.0
comp=Z,3.5nm,0.6s,baz=288,slow=3.0,SNR=4.0
AAK **Ala-Archa** 143.49 46‖ *i*PKIKP PKPbc 15 51 54.1 +1.0
AAK pmax pmax
comp=Z,8.0nm,1.7s
ERM **Erimo** 145.34 314 *d i*PKIKP PKPab 15 52 00.7 +1.9
ERM pmax pmax
comp=Z,48nm,1.3s
KSH **Kashi** 145.75 50 PKPbc PKPbc 15 52 01.0 +0.8
KSH sPKP 15 52 18.0
KSH PP PP 15 55 25.5 +4.0
KSH PKS 15 55 36.0
KSH SS SS 16 14 15.5 +4.3
KSH AMB AMB
comp=Z,430nm,9.5s
KSH LR LR
comp=Z,130nm,9.0s
KSH LR LR
comp=Z,240nm,12.2s
KSH LR LR
comp=Z,470nm,11.7s
MAKZ **Makanchi** 145.87 35 PKP2 PKPbc 15 52 00.9 +0.7
MAKZ **Makanchi** 145.87 35 PKPab PKPbc 15 52 00.9 +0.7
BATI **Baumata** 145.95 205 PKPbc PKPab 15 52 03.0 +1.1
comp=Z,26nm,0.8s,baz=72,slow=2.7,SNR=3.3
MK31 **Makanchi Array** 146.05 35 PKP2 PKPdf 15 52 00.9 +1.1
MK31 **Makanchi Array** 146.05 35 PKPdf 15 52 00.9 +1.1
MKAR **Makanchi Array** 146.05 35 PKPbc PKPdf 15 52 01.0 +1.2
comp=Z,8.4nm,0.7s,baz=324,slow=4.1,SNR=49
MKAR pPKPbc pPKPdf 15 52 18.9 +1.7
comp=Z,13nm,0.8s,baz=342,slow=3.3,SNR=9.3
MKAR **Makanchi Array** 146.05 35 PKP2 PKPdf 15 52 01.0 +1.2
DGZ **Jazzator, Alta** 146.48 27*c i*PKP2 PKPbc 15 52 02.9 +0.8
KLR **Kul'dur** 147.18 333‖ *e*PKIKP PKPdf 15 52 02.5 +0.9
FAKI **Fak Fak** 147.54 225 PKPab PKPbc 15 52 07.3 +1.4
MOY **Mondy** 148.88 11 *e*PKP2 PKiKP 15 52 10.1 +0.3
MOY pmax pmax
comp=Z,55nm,2.4s
TLY **Talaya** 149.26 8 *e*PKP2 PKPab 15 52 21.9 +8.0
TLY pmax pmax
comp=Z,87nm,1.4s
SIJI **Sorong** 149.72 226 PKPbc PKPbc 15 52 12.7 +1.1
comp=Z,28nm,0.8s,baz=215,slow=23,SNR=16
ZAK **Zakamensk** 150.48 9 *e*PKIKP PKPbc 15 52 12.4 0.0
ZAK pmax pmax
comp=Z,14nm,1.4s
USRK **Ussuriysk Ar.** 150.78 327 PKPbc PKPbc 15 52 14.0 +0.8
comp=Z,6.6nm,0.7s,baz=243,slow=0.4,SNR=5.9
USRK **Ussuriysk Ar.** 150.78 327 PKIKP PKPbc 15 52 14.0 +0.8
WMQ **Urumqi** 150.87 34 *e*PKPbc PKPdf 15 52 08.3 +0.5
WMQ LR LR
comp=Z,330nm,16.9s
WMQ LR LR
comp=Z,200nm,15.9s
WMQ LR LR
comp=Z,230nm,15.9s
MJAR **Matsushiro Arr** 151.14 308 PKPbc PKPbc 15 52 14.8 +0.5
comp=Z,7.3nm,0.8s,baz=90,slow=1.0,SNR=20
MDJ **Mudanjiang** 151.66 330 P PKPab 15 52 22.0 -2.0
MDJ pmax pmax
comp=Z,7.0nm,1.3s
MDJ pmax pmax
comp=Z,830nm,16.8s
LEM **Lembang** 151.96 175 PKPbc PKiKP 15 52 18.2 +0.9
comp=Z,29nm,0.7s,baz=34,slow=3.0,SNR=7.7
KAPI **Kappang** 152.17 201 PKPbc PKiKP 15 52 18.6 +1.1
comp=Z,12nm,0.6s,baz=224,slow=2.7,SNR=5.3
SONM **Songino Array** 153.35 5 PKP PKPdf 15 52 12.6 +1.1
comp=Z,1.3nm,0.7s,baz=287,slow=0.8,SNR=6.6
KSRS **Korea Array** 157.63 320 PKP PKPdf 15 52 18.4 +1.1
comp=Z,1.0nm,0.8s,baz=49,slow=1.7,SNR=4.9
KSRS PKPab PKPab 15 52 50.4 +0.8
comp=Z,1.4nm,0.6s,baz=52,slow=4.6,SNR=7.4
RPSI **Rantau Prapat** 158.60 148 PKPab 15 52 55.1 +0.7
PSI **Prapat** 158.69 148 PKPab PKPab 15 52 55.1 +0.1
comp=Z,4.4nm,0.5s,baz=181,slow=3.1,SNR=6.7
GTA **Gaotai** 159.94 24 *e*PKP PKPdf 15 52 21.3 +1.1
GTA pPKP pPKPdf 15 52 34.8 -2.9
GTA sPKP 15 52 39.5
GTA LR LR
comp=Z,860nm,21.9s
GTA LR LR
comp=Z,750nm,20.6s
GTA LR LR
comp=Z,750nm,21.6s
HHC **Hu-ho-hao-te** 160.45 356 *e*PKP PKPdf 15 52 23.0 +2.3
HHC LR LR
comp=Z,670nm,18.0s
HHC LR LR
comp=Z,410nm,16.2s
HHC LR LR
comp=Z,800nm,17.5s
LZH **Lanzhou** 164.30 19 *e*PKP PKPdf 15 52 25.5 +0.7
LZH pPKP pPKPdf 15 52 37.3 -5.0
LZH sPKP 15 52 41.0
LZH LR LR
comp=Z,300nm,18.1s
LZH LR LR
comp=Z,310nm,17.9s
LZH LR LR
comp=Z,390nm,20.0s

NJ2	Nanjing	166.68	325	*e*PKP	PKPdf	15 52 26.5	-0.1
XAN	Xi'an	167.26	4	PKP	PKPdf	15 52 32.0	+4.9
CD2	Chengdu	168.90	29	PKP	PKPdf	15 52 27.0	-1.3
CMAR	Chiang Mai Arr	169.22	103	PKP	PKPdf	15 52 30.3	+1.5
	comp=Z,0.5nm,0.8s,baz=247,slow=1.7,SNR=4.8						
CMAR				PKPab	PKPab	15 53 41.2	+0.1
	comp=Z,1.2nm,0.7s,baz=246,slow=7.6,SNR=7.7						
WHN	Wuhan	169.99	338	PKPbc	PKPbc	15 52 40.3	
GYA	Guiyang	174.01	30	*e*PKP	PKPdf	15 52 26.0	-5.0
GYA				PP	PP	15 57 56.3	+2.9

IDC 30 15:36:03.9±2.5, 60°05N×17°92E, h0km, mb1 2.9/2, mb1mx2.8/41, mbtmp2.8/2, ML2.0/2, Error ellipse: s-maj=37.9km s-min=8.8km az=179.0, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOA	**NORSAR Array B**	**3.46**	**290**	Pg	Pb	15 37 04.6	-1.3
	0.0nm,0.3s,baz=108,slow=14,SNR=1.6						
NOA				Lg	Lg	15 37 50.0	
	0.0nm,0.3s,baz=69,slow=15,SNR=1.8						
FINES	**FINESS Array B**	**4.24**	**67**	Pn	Pn	15 37 10.3	+0.7
	0.1nm,0.3s,baz=250,slow=12,SNR=6.7						
FINES				Sn	Sn	15 37 59.2	-0.6
	0.2nm,0.3s,baz=252,slow=22,SNR=5.9						
FINES				Lg	Lg	15 38 13.8	
	0.4nm,0.3s,baz=257,slow=27,SNR=6.7						
ARCES	**ARCESS Array B**	**10.04**	**15**	Pn	Pn	15 38 26.6	-2.6
	0.1nm,0.3s,baz=195,slow=14,SNR=1.2						

*MAN **30** 15:38:05.8, 9°37N×126°75E, h21km, mb2.9, ML3.2, MS4.3*
*IDC **30** 15:38:12.8±2.4, 7°92N×126°33E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.3/42, mbtmp3.6/3, Error ellipse: s-maj=251.0km s-min=33.4km az=69.0*
ISC 30 15:38:06.9±1.8, 9°38N±0°07×126°8E±0°1, h35km, n10, σ1§13/11, mb3.7/3, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.36**	**287**	*e*P	**Pn**	**15 38 28.1**	**-1.4**
SCPH				*e*S	**Sn**	**15 38 46.2**	**-0.1**
MSLP	**Maasin**	**2.06**	**292**	*e*P	**Pn**	**15 38 39.3**	**+0.2**
MSLP				*e*S	**Sn**	**15 39 02.3**	**-1.3**
BUKP	**Musuan**	**2.28**	**229**	*e*P	**Pn**	**15 38 42.4**	**+0.3**
BUKP				*e*S	**Sn**	**15 39 09.9**	**+0.9**
CTBH	**Cotabato--PC H**	**3.32**	**230**	*i*P	**Pn**	**15 38 56.5**	**+0.2**
CNP	**Catarman**	**3.76**	**326**	*e*P	**Pn**	**15 39 03.1**	**+0.7**
CNP				*e*S	Sn	15 40 01.1	+16
GUIM	**Jordan**	**4.34**	**287**	*e*P	**Pn**	**15 39 11.9**	**+1.5**
RCP	**Roxas**	**4.55**	**299**	*e*P	**Pn**	**15 39 14.8**	**+1.6**
ASAR	**Alice Springs**	**33.56**	**168**	P	**P**	**15 44 43.1**	**-0.6**
	0.3nm,0.8s,baz=348,slow=7.1,SNR=1.5						
MKAR	**Makanchi Array**	**53.06**	**323**	P	P	15 47 38.1	+17
	0.6nm,0.7s,baz=131,slow=5.6,SNR=4.2						
ARCES	**ARCESS Array B**	**85.21**	**340**	P	P	15 50 56.9	+17
	0.4nm,0.6s,baz=80,slow=7.4,SNR=1.4						

*IDC **30** 15:51:10.0±0.5, 9°24N×126°35E, h0km, mb4.4/28, mb1 4.5/30, mb1mx4.3/57, mbtmp4.4/30, ML3.8/2, MS4.1/4, Ms1 4.1/4, ms1mx3.5/47, Error ellipse: s-maj=21.0km s-min=10.3km az=73.0*
*NEIC **30** 15:51:11.6±2.8, 9°30N±0°06×126°5E±0°1, h10km±1km, mb4.6/22, Error ellipse: s-maj=17.0km s-min=10.5km az=78.0*
*MAN **30** 15:51:12.7, 9°41N×126°91E, h29km, mb5.6, ML4.6, MS4.9*
ISC 30 15:51:15.7±1.1, 9°38N±0°04×126°73E±0°06, h41km±11km, n115, σ2§06/112, mb4.5/40, MS4.5/3, 8C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**1.25**	**197**	*i*P	Pn	15 51 45.3	+8.7
BIPH				*i* S	**Sn**	**15 52 00.4**	**+8.2**
SCPH	**Surigao**	**1.29**	**288**	*i*P	**Pn**	**15 51 32.6**	**-4.6**
SCPH				*i* S	**Sn**	**15 51 50.7**	**-2.5**
MSLP	**Maasin**	**1.99**	**292**	*e*P	**Pn**	**15 51 47.8**	**+1.0**
MSLP				*e*S	**Sn**	**15 52 14.2**	**+3.6**
CGP	**Cagayan de Oro**	**2.21**	**246**	*e*P	**Pn**	**15 51 51.2**	**+1.4**
BUKP	**Musuan**	**2.23**	**228**	*e*P	**Pn**	**15 51 50.7**	**+0.6**
BUKP				*e*S	**Sn**	**15 52 18.9**	**+2.5**
MATI	**Mati**	**2.46**	**191**	*e*P	**Pn**	**15 51 52.1**	**-1.3**
DAV	**Davao City (W)**	**2.56**	**206**	Pn	**Pn**	**15 51 54.9**	**+0.2**
	85nm,0.3s,baz=94,slow=6.5,SNR=9.2						
DAV				Sn	**Sn**	**15 52 20.3**	**-4.5**
	172nm,0.3s,baz=63,slow=22,SNR=9.0						
DAV	**Davao City (W)**	**2.56**	**206**	*e*P	**Pn**	**15 51 53.2**	**-1.6**
DAV	**Davao City (W)**	**2.56**	**206**		**Pn**	**15 51 52.6**	**-2.1**
TBP	**Tagbilaran**	**2.84**	**276**	*i* p	**Pn**	**15 52 35.2**	**+3.5**
KCP	**Kidapawan**	**2.86**	**215**	*i*P	**Pn**	**15 52 00.5**	**+1.6**
KCP				*i* S	**Sn**	**15 52 35.2**	**+3.1**
LLP	**Lapu-Lapu**	**2.88**	**289**	*e*P	**Pn**	**15 52 00.6**	**+1.5**
LLP				*e*S	**Sn**	**15 52 39.3**	**+6.8**
CTBH	**Cotabato--PC H**	**3.26**	**229**	*e*P	**Pn**	**15 52 05.2**	**+0.8**
DDMP	**Don Marcelino,**	**3.41**	**197**	*e*P	**Pn**	**15 52 06.5**	**+0.1**
DDMP				*e*S	Sn	15 52 57.6	+12
SKMP	**Bagumbayan, Su**	**3.58**	**217**	*e*P	**Pn**	**15 52 08.2**	**-0.5**
PAGZ	**Pagadian**	**3.64**	**246**	*e*P	**Pn**	**15 52 11.2**	**+1.7**
PAGZ				*e*S	**Sn**	**15 52 54.5**	**+3.2**
CNP	**Catarman**	**3.71**	**327**	*e*P	**Pn**	**15 52 10.8**	**+0.3**
CNP				*e*S	**Sn**	**15 52 54.1**	**+1.1**
GSPH	**General Santos**	**3.72**	**208**	*i*P	**Pn**	**15 52 11.8**	**+1.1**
CNOP	**Candoni, Negro**	**4.06**	**277**	*e*P	**Pn**	**15 52 15.5**	**+0.3**
GUIM	**Jordan**	**4.26**	**287**	*e*P	**Pn**	**15 52 18.5**	**+0.5**
RCP	**Roxas**	**4.48**	**299**	*e*P	**Pn**	**15 52 22.4**	**+1.3**
PVCP	**Virac**	**4.89**	**329**	*e*P	**Pn**	**15 52 28.0**	**+1.3**
ZCP	**Zamboanga City**	**5.21**	**242**	*e*P	Pn	15 52 25.1	-6.0
LQP	**Lukban**	**6.92**	**313**	*e*P	**Pn**	**15 52 56.6**	**+1.8**
BUSP	**Coron**	**6.93**	**295**	*e*P	**Pn**	**15 52 56.0**	**+1.3**
TGY	**Tagaytay City**	**7.36**	**310**	Pn	**Pn**	**15 53 01.2**	**+0.5**
	75nm,0.3s,baz=170,slow=6.3,SNR=2.2						
TGY				LR	LR	15 55 55.7	
	comp=Z,2μm,19.4s,baz=132,slow=40						
BALP	**Baler**	**8.08**	**322**	*e*P	**Pn**	**15 53 11.3**	**+0.8**
TNTI	**Ternate**	**8.58**	**176**	P	Pn	15 53 12.5	-4.9
TNTI	**Ternate**	**8.58**	**176**	Pn	**Pn**	**15 53 17.5**	**+0.1**
CAUP	**Cauayan**	**8.90**	**328**	*e*P	**Pn**	**15 53 20.6**	**-1.2**
KMSI	**Cibinong**	**9.17**	**198**	P	Pn	15 53 34.4	+9.0
	0.4nm2μm72nm,0.8s						
KMSI				S	Sn	15 54 47.3	-20
	0.4nm2μm72nm,0.8s						
APYP	**Conner**	**9.97**	**328**	*e*P	**Pn**	**15 53 36.8**	**+0.3**
LBMI	**Labuha**	**9.98**	**176**	P	Pn	15 53 32.2	-4.4
	0.3nm51nm,1.5s						
MRSI	**Marisa**	**10.05**	**209**	P	Pn	15 53 55.9	+18
	0.2nm32nm,0.8s						
LUWI	**Luwuk**	**11.08**	**201**	Pn	**Pn**	**15 53 48.7**	**-3.0**
SIJI	**Sorong**	**11.14**	**156**	Pn	**Pn**	**15 53 53.2**	**+0.7**
	2.3nm,0.3s,baz=224,slow=23,SNR=8.6						
SIJI				LR	LR	15 58 05.3	
	comp=Z,849nm,21.1s,baz=325,slow=37						
BNSI	**Bone**	**15.20**	**206**	P	**P**	**15 54 53.4**	**+1.4**
SSLB	**Suanglung**	**15.35**	**340**	Pn	**Pn**	**15 54 46.8**	**-2.8**
SSLB				IAmb	IAmb	15 54 55.3	
	comp=Z,8.7nm,0.9s						
YOJ	**Yonaguni jima**	**15.41**	**347**	Pn	**Pn**	**15 54 46.7**	**-3.6**
YOJ				IAmb	IAmb	15 54 55.4	
	comp=Z,62nm,1.1s						
SBUM	**Sibu**	**15.98**	**245**		**Pn**	**15 54 56.6**	**-1.2**
YHNB	**Yeheng**	**16.04**	**342**	Pn	**Pn**	**15 54 58.6**	**+0.2**
SMPI	**Sarmi**	**16.43**	**133**	P	**Pn**	**15 55 01.5**	**-2.0**
	comp=Z,45nm,1.3s						
GENI	**Genyem**	**17.91**	**131**	P	**Pn**	**15 55 21.0**	**-0.8**
	comp=Z,48nm,1.6s						
KSM	**Kuching**	**18.13**	**245**		**P**	**15 55 23.7**	**-0.8**
JAY	**Jayapura**	**18.26**	**130**	P	**Pn**	**15 55 27.9**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=335,slow=15,SNR=3.3						
JAY				LR	LR	16 01 43.7	
	comp=Z,572nm,18.9s,baz=326,slow=34						
JAY	**Jayapura**	**18.26**	**130**	P	**P**	**15 55 25.2**	**-0.8**
	comp=Z,15nm,1.1s						
MMRI	**Maumere**	**18.45**	**194**	P	**Pn**	**15 55 32.0**	**+3.6**
	comp=Z,51nm,0.9s						
EDFI	**Ende, Flores**	**18.70**	**196**	P	Pn	**15 55 34.7**	**+3.2**
	comp=Z,12nm,0.7s						
SOEI	**Soe**	**19.17**	**187**	P	**P**	**15 55 36.6**	**+0.6**
	comp=Z,80nm,1.2s						
SOEI	**Soe**	**19.17**	**187**	P	**P**	**15 55 36.4**	**+0.4**
SOEI				IAmb	IAmb	15 55 44.5	
	comp=Z,19nm,0.9s						
BATI	**Baumata**	**19.70**	**189**	P	**P**	**15 55 42.3**	**+0.6**
	comp=Z,10.0nm,0.3s,baz=263,slow=2.5,SNR=8.8						
BATI	**Baumata**	**19.70**	**189**	P	**Pn**	**15 55 43.5**	**+0.1**
MTN	**Manton Dam**	**22.51**	**169**	P	**P**	**15 56 11.4**	**-0.6**
MTN				IAmb	IAmb	15 56 20.0	
	comp=Z,15nm,0.6s						
NJ2	**Nanjing**	**23.71**	**343**	*e*P	**P**	**15 56 21.8**	**-2.1**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
JNU	**Nakatsue**	**23.93**	**9**	P	**P**	**15 56 28.2**	**+2.1**
	comp=Z,7.0nm,0.7s,baz=50,slow=4.4,SNR=6.0						
JNU	**Nakatsue**	**23.93**	**9**	IAmb	IAmb	15 56 29.7	
	comp=Z,10nm,0.9s						
MYKOM	**Kota Tinggi**	**23.97**	**253**	P	**P**	**15 56 24.9**	**-1.7**
MYKOM				IAmb	IAmb	15 56 28.5	
	comp=Z,19nm,0.9s						
KNRA	**Kununurra**	**24.98**	**175**	P	**P**	**15 56 35.0**	**-0.6**
IPM	**Ipoh**	**25.97**	**261**	P	**P**	**15 56 42.1**	**-2.7**
IPM				IAmb	IAmb	15 56 46.5	
	comp=Z,16nm,0.9s						
FITZ	**Fitzroy Crossi**	**27.33**	**182**	P	**P**	**15 56 55.9**	**-0.9**
	comp=Z,17nm,1.0s,baz=10,slow=8.1,SNR=11						
FITZ	**Fitzroy Crossi**	**27.33**	**182**	P	**P**	**15 56 56.7**	**-0.1**
FITZ				IAmb	IAmb	15 57 00.5	
	comp=Z,21nm,1.1s						
KSRS	**Korea Array**	**27.97**	**2**	P	**P**	**15 57 04.7**	**+2.2**
	comp=Z,2.2nm,0.8s,baz=181,slow=9.5,SNR=8.7						
PSI	**Prapat**	**28.39**	**258**	P	**P**	**15 57 04.9**	**-1.8**
	comp=Z,9.2nm,0.9s,baz=0.5,slow=7.6,SNR=5.1						
PSI				LR	LR	16 09 30.9	
	comp=Z,448nm,19.3s,baz=89,slow=39						
RPSI	**Rantau Prapat**	**28.42**	**258**	P	**P**	**15 57 04.9**	**-1.9**
KCSI	**Kotacane, Aceh**	**29.34**	**260**	P	P	15 57 07.9	-7.1
WRA	**Warramunga Arr**	**30.09**	**166**	P	**P**	**15 57 19.8**	**-1.6**
	comp=Z,2.9nm,0.6s,baz=347,slow=9.5,SNR=18						
CD2	**Chengdu**	**30.27**	**318**	*e*P	**P**	**15 57 21.0**	**-2.0**
PSA00	**Pilbara Seismi**	**31.50**	**192**	P	**P**	**15 57 33.0**	**-0.8**
BJI	**Beijing**	**31.95**	**345**	P	**P**	**15 57 38.3**	**+0.7**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
AS31	**Alice Springs**	**33.59**	**168**	P	**P**	**15 57 51.4**	**-0.8**
ASAR	**Alice Springs**	**33.59**	**168**	P	**P**	**15 57 51.1**	**-1.1**
	comp=Z,2.0nm,0.7s,baz=348,slow=7.3,SNR=39						
LZH	**Lanzhou**	**33.76**	**325**	*e*P	**P**	**15 57 52.5**	**-1.3**
LZH				pP	pP	15 57 56.0	-7.1
LZH				sP	sP	15 57 58.5	-8.8
LZH				PP	**PnPn**	**15 59 02.5**	**-4.4**
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
LZH				pmax	pmax		
	comp=Z,130nm,4.8s						
LZH				LR	LR		
	comp=N,610nm,15.7s						
LZH				LR	LR		
	comp=E,560nm,15.2s						
LZH				LR	LR		
	comp=Z,620nm,17.3s						
HHC	**Hu-ho-hao-te**	**34.10**	**339**	*e*P	**P**	**15 57 55.3**	**-1.3**
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,7.5s						
USRK	**Ussuriysk Ar.**	**34.99**	**7**	P	**P**	**15 58 05.9**	**+1.9**
	comp=Z,1.1nm,0.6s,baz=200,slow=6.8,SNR=6.1						
ASAJ	**Asahikawa**	**37.25**	**19**	P	**P**	**15 58 25.9**	**+2.5**
	comp=Z,5.4nm,1.0s,baz=219,slow=12,SNR=6.5						
GTA	**Gaotai**	**38.37**	**326**	*e*P	**P**	**15 58 30.3**	**-2.8**
GTA				pP	pP	15 58 37.0	-5.6
GTA				sP	sP	15 58 40.0	-6.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**39.75**	**72**	T	T	16 41 46.0	
	baz=252,slow=75						
H11S1	**WAKE ISLAND Hy**	**39.76**	**72**	T	T	16 41 58.6	
	baz=252,slow=75						
H11S2	**WAKE ISLAND Hy**	**39.76**	**72**	T	T	16 41 44.4	
	baz=252,slow=75						
KLR	**Kul'dur**	**39.94**	**5**	P	**P**	**15 58 47.6**	**+1.7**
	comp=Z,1.4nm,0.5s,baz=185,slow=7.3,SNR=6.6						
H11N1	**WAKE ISLAND Hy**	**40.11**	**71**	T	T	16 42 16.4	
	baz=268,slow=74						
H11N2	**WAKE ISLAND Hy**	**40.12**	**71**	T	T	16 42 20.3	
	baz=268,slow=74						
H11N3	**WAKE ISLAND Hy**	**40.13**	**71**	T	T	16 42 18.5	
	baz=268,slow=74						
STKA	**Stephens Creek**	**43.42**	**161**	P	**P**	**15 59 14.4**	**-0.2**
	comp=Z,2.3nm,0.5s,baz=349,slow=8.8,SNR=11						
STKA	**Stephens Creek**	**43.42**	**161**	P	**P**	**15 59 13.6**	**-1.0**
WMQ	**Urumqi**	**48.20**	**322**	*e*P	**P**	**15 59 52.8**	**+0.5**
WMQ				LR	LR		
	comp=N,310nm,13.7s						
WMQ				LR	LR		
	comp=E,250nm,15.1s						
WMQ				LR	LR		
	comp=Z,250nm,13.7s						
DZM	**Mont Dzumac**	**49.94**	**129**	P	**P**	**16 00 07.7**	**+1.8**
	comp=Z,2.3nm,0.6s,baz=337,slow=13,SNR=1.3						
DZM	**Mont Dzumac**	**49.94**	**129**	P	**P**	**16 00 05.4**	**-0.5**
DZM				IAmb	IAmb	16 00 12.3	
	comp=Z,6.2nm,1.0s						
PETK	**Petropavlovsk-**	**50.26**	**24**	P	**P**	**16 00 10.3**	**+2.5**
	comp=Z,3.1nm,0.9s,baz=215,slow=9.6,SNR=2.1						
MKAR	**Makanchi Array**	**53.00**	**323**	P	**P**	**16 00 28.1**	**-0.3**
	comp=Z,5.1nm,0.6s,baz=130,slow=7.8,SNR=9.2						
KSH	**Kashi**	**54.16**	**312**	P	**P**	**16 00 38.3**	**+1.1**
KSH				pmax	pmax		
	comp=Z,880nm,6.9s						
KSH				pmax	pmax		
	comp=Z,110nm,1.8s						
ZALV	**Zalesovo Beam**	**55.62**	**331**	P	**P**	**16 00 46.1**	**-1.1**
	comp=Z,1.8nm,0.6s,baz=124,slow=6.3,SNR=3.8						
KURK	**Kurchatov**	**57.05**	**326**	P	**P**	**16 00 55.3**	**-2.2**
KURBB	**Kurchatov Arra**	**57.06**	**326**	P	**P**	**16 00 56.9**	**-0.7**
	comp=Z,4.0nm,0.6s,baz=126,slow=6.9,SNR=26						
KK31	**Karatay Array**	**59.19**	**315**	P	**P**	**16 01 12.2**	**-0.5**
KK31				IAmb	IAmb	16 01 12.7	
	comp=Z,5.1nm,0.7s						
TIXI	**Tiksi**	**62.23**	**1**	P	**P**	**16 01 34.1**	**+1.3**
TIXI				IAmb	IAmb	16 01 36.1	
	comp=Z,3.5nm,0.7s						
BVAR	**Borovoye Array**	**62.65**	**326**	P	**P**	**16 01 36.0**	**0.0**
	comp=Z,4.2nm,0.8s,baz=126,slow=9.1,SNR=11						
BRVK	**Borovoye**	**62.72**	**326**	P	**P**	**16 01 35.0**	**-1.5**
RPZ	**Rata Peaks**	**66.40**	**146**	P	**P**	**16 02 01.7**	**+1.1**
	comp=Z,9.2nm,0.6s,baz=5.6,slow=6.9						
RPZ	**Rata Peaks**	**66.40**	**146**	P	**P**	**16 02 00.7**	**+0.1**
AKTO	**Aktyubinsk**	**69.29**	**320**	P	**P**	**16 02 18.2**	**-0.6**
	comp=Z,2.7nm,0.9s,baz=96,slow=10,SNR=4.1						
ARU	**Arti**	**70.21**	**327**	P	**P**	**16 02 23.6**	**-0.7**
	comp=Z,3.2nm,0.6s,baz=94,slow=3.7,SNR=9.6						
KIRV	**Kirov**	**75.44**	**328**	P	**P**	**16 02 55.0**	**-0.2**
	comp=Z,11nm,0.7s,baz=63,slow=6.1,SNR=5.4						
RAYN	**Ar Rayn**	**78.32**	**292**	P	**P**	**16 03 10.9**	**-1.3**
RAYN				IAmb	IAmb	16 03 12.1	
	comp=Z,5.8nm,0.7s						
KBZ	**Khabaz**	**79.14**	**313**	P	**P**	**16 03 15.8**	**-0.4**
	comp=Z,2.7nm,0.9s,baz=117,slow=2.8,SNR=3.8						
ILAR	**Eielson Array**	**80.04**	**26**	P	**P**	**16 03 22.6**	**+1.9**
	comp=Z,0.8nm,0.7s,baz=242,slow=5.1,SNR=6.2						
KLMR	**Klimovskoe**	**80.52**	**330**	*e*S	**P**	**16 03 22.0**	**-1.4**
SPITS	**Spitsbergen Ar**	**84.97**	**349**	P	**P**	**16 03 47.2**	**+0.9**
	comp=Z,3.1nm,0.7s,baz=90,slow=8.6,SNR=6.8						
ARCES	**ARCESS Array B**	**85.18**	**340**	P	**P**	**16 03 47.5**	**0.0**
	comp=Z,3.9nm,0.6s,baz=90,slow=7.0,SNR=22						
FINES	**FINESS Array B**	**86.88**	**332**	P	**P**	**16 03 56.4**	**+0.5**
	comp=Z,2.5nm,0.7s,baz=79,slow=7.2,SNR=7.6						
EIL	**Elat**	**86.96**	**299**	P	**P**	**16 03 55.8**	**-1.2**
	comp=Z,2.5nm,0.7s,baz=306,slow=8.7,SNR=2.9						
NOA	**NORSAR Array B**	**93.75**	**334**	P	**P**	**16 04 30.0**	**+1.8**
	comp=Z,0.6nm,0.6s,baz=63,slow=4.6,SNR=3.0						
YKA	**Yellowknife Ar**	**94.38**	**24**	P	**P**	**16 04 32.1**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=297,slow=4.2,SNR=10						
TORD	**Torodi Ar. Bea**	**121.01**	**291**	PKP	**PKiKP**	**16 10 05.6**	**+0.6**
	comp=Z,3.9nm,0.4s,baz=18,slow=5.2,SNR=2.1						
PLCA	**Paso Flores**	**145.22**	**157**	PKPbc	**PKPbc**	**16 10 48.8**	**-0.2**
	comp=Z,3.5nm,0.9s,baz=314,slow=15,SNR=3.1						

*IDC **30** 15:52:00.1±0.8, 9°36N×126°66E, h0km, mb4.5/17, mb1 4.6/18, mb1mx4.2/55, mbtmp4.5/18, ML4.8/1, Error ellipse: s-maj=35.1km s-min=14.7km az=76.0*
*DJA **30** 15:52:02.2±0.9, 6°N×72°8E±°, h131km±9km, M4.5/14, mb4.6/14, mB5.4/2, MLv4.5/8, Mw(mB)4.8/2*
*NEIC **30** 15:52:05.8±2.2, 9°31N±0°08×126°8E±0°1, h43km±7km, mb4.9/28, Error ellipse: s-maj=16.1km s-min=11.4km az=85.0*
ISC 30 15:52:06.1±0.5, 9°34N±0°06×126°65E±0°08, h43km, n73, σ1§17/66, mb4.7/30, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.22**	**291**	*i*P	**Pn**	**15 52 23.0**	**-3.7**
SCPH				*i* S	**Sn**	**15 52 41.6**	**-0.5**
DAV	**Davao City (W)**	**2.49**	**205**	Pn	**Pn**	**15 52 44.5**	**+0.3**
KKM	**Kota Kinabalu**	**10.85**	**253**	Pn	**Pn**	**15 54 41.0**	**+2.1**
LUWI	**Luwuk**	**11.01**	**201**	Pn	**Pn**	**15 54 41.0**	**-0.1**
TPUB	**Ta-pu**	**15.03**	**338**	P	**P**	**15 55 40.7**	**+0.3**
TPUB				IAmb	IAmb	15 55 51.4	
	comp=Z,62nm,1.5s						
SSLB	**Suanglung**	**15.36**	**340**	Pn	**Pn**	**15 55 41.5**	**+1.5**
YHNB	**Yeheng**	**16.05**	**342**		**P**	**15 55 51.0**	**-0.7**
KSM	**Kuching**	**18.04**	**245**	P	**P**	**15 56 14.7**	**+1.0**
BATI	**Baumata**	**19.64**	**189**	P	**Pn**	**15 56 32.1**	**-0.9**
	comp=Z,3.0nm,0.3s,baz=253,slow=6.7,SNR=2.7						
BATI	**Baumata**	**19.64**	**189**	P	**Pn**	**15 56 32.1**	**-0.9**
MYKOM	**Kota Tinggi**	**23.88**	**253**	P	**P**	**15 57 16.7**	**+0.7**
MYKOM				IAmb	IAmb	15 57 19.5	
	comp=Z,39nm,1.0s						
KNRA	**Kununurra**	**24.95**	**175**	P	**P**	**15 57 26.6**	**+1.0**
KNRA				IAmb	IAmb	15 57 29.5	
	comp=Z,28nm,0.8s						
IPM	**Ipoh**	**25.88**	**261**	P	**P**	**15 57 35.3**	**+1.2**
IPM				IAmb	IAmb	15 57 37.5	
	comp=Z,29nm,0.9s						
KULM	**Kulim**	**26.09**	**263**	P	**P**	**15 57 37.1**	**+1.0**
JHJ2	**Mitsune**	**26.59**	**25**	P	**P**	**15 57 37.9**	**-2.5**
FITZ	**Fitzroy Crossi**	**27.28**	**182**	P	**P**	**15 57 47.4**	**+0.8**
	comp=Z,19nm,1.1s,baz=118,slow=3.8,SNR=3.6						
TIA	**Tai'an**	**28.12**	**344**	P	**P**	**15 57 54.8**	**+0.8**
TIA				pmax	pmax		
	comp=Z,13nm,0.9s						
PSI	**Prapat**	**28.31**	**258**	P	**P**	**15 57 57.0**	**+0.9**
	comp=Z,20nm,1.1s,baz=360,slow=1.4,SNR=5.3						
RPSI	**Rantau Prapat**	**28.34**	**258**	P	**P**	**15 57 56.8**	**+0.6**
RPSI				IAmb	IAmb	15 58 01.3	
	comp=Z,45nm,1.3s						
RPSI	**Rantau Prapat**	**28.34**	**258**	P	**P**	**15 57 57.0**	**+0.8**
COEN	**Coen**	**28.37**	**144**	P	**P**	**15 57 54.3**	**-2.1**
GSI	**Gunungsitoli**	**30.00**	**256**	P	**P**	**15 58 12.4**	**+1.4**
GSI	**Gunungsitoli**	**30.00**	**256**	P	**P**	**15 58 10.8**	**-0.2**
WRA	**Warramunga Arr**	**30.07**	**165**	P	**P**	**15 58 10.0**	**-1.4**
	comp=Z,2.6nm,0.6s,baz=343,slow=9.0,SNR=4.8						
WRA	**Warramunga Arr**	**30.07**	**165**	P	**P**	**15 58 10.1**	**-1.4**
WB2	**Warramunga Arr**	**30.07**	**165**	P	P	15 58 06.4	-5.1
WB2				IAmb	IAmb	15 58 15.6	
	comp=Z,15nm,1.1s						
PSA00	**Pilbara Seismi**	**31.44**	**192**	P	**P**	**15 58 23.5**	**0.0**
PSA00				IAmb	IAmb	15 58 37.7	
	comp=Z,29nm,1.2s						
AS31	**Alice Springs**	**33.56**	**168**	P	P	15 58 37.1	-5.1
ASAR	**Alice Springs**	**33.56**	**168**	P	**P**	**15 58 41.5**	**-0.7**
	comp=Z,2.8nm,0.8s,baz=349,slow=8.9,SNR=2.5						
ASAR	**Alice Springs**	**33.56**	**168**	P	**P**	**15 58 41.5**	**-0.7**
USRK	**Ussuriysk Ar.**	**35.04**	**7**	P	**P**	**15 58 56.2**	**+1.5**
	comp=Z,6.0nm,1.0s,baz=183,slow=5.8,SNR=2.5						
USRK	**Ussuriysk Ar.**	**35.04**	**7**	P	**P**	**15 58 56.2**	**+1.5**
CTAO	**Charters Tower**	**35.04**	**147**	P	**P**	**15 58 53.2**	**-1.8**
CTAO				IAmb	IAmb	15 59 00.9	
	comp=Z,19nm,1.2s						
MORW	**Morawa**	**39.53**	**195**	P	**P**	**15 59 29.9**	**-3.0**
MORW				IAmb	IAmb	15 59 34.4	
	comp=Z,25nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**39.84**	**72**	T	T	16 42 34.2	
	baz=268						
H11S1	**WAKE ISLAND Hy**	**39.85**	**72**	T	T	16 42 33.1	
	baz=268						
H11S2	**WAKE ISLAND Hy**	**39.85**	**72**	T	T	16 42 33.8	
	baz=268						
FORT	**Forrest**	**39.91**	**178**	P	**P**	**15 59 35.3**	**-0.8**
H11N1	**WAKE ISLAND Hy**	**40.20**	**71**	T	T	16 43 14.8	
	baz=272						
H11N2	**WAKE ISLAND Hy**	**40.21**	**71**	T	T	16 43 16.3	
	baz=272						
H11N3	**WAKE ISLAND Hy**	**40.22**	**71**	T	T	16 43 18.5	
	baz=272						
NWAO	**Narrogin (SRO)**	**42.98**	**192**	P	**P

KMI					LR	LR			
	comp=Z,4μm,10.6s								
KMI	**Kunming**	**4.36**	**88**	P	**Pn**	**Pn**	**15 54 44.4**	**-1.5**	
KMI	**Kunming**	**4.36**	**88**		**Pn**	**Pn**	**15 54 44.4**	**-1.5**	
ZIRO	**ZIRO**	**4.43**	**305**	*ex*	**Pn**	**Pn**	**15 54 45.9**	**-0.8**	
ZIRO					IAmb	IAmb	15 54 52.8		
	comp=Z,65nm,1.0s								
CRAI	**Chiangrai**	**5.28**	**154**	P	**Pn**	**Pn**	**15 54 57.7**	**-0.6**	
SHL	**Shillong**	**5.50**	**277**	*ex*	**Pn**	**Pn**	**15 55 00.8**	**-0.6**	
SHL					IAmb	IAmb	15 55 11.0		
	comp=Z,30nm,0.5s								
PAYA	**Payao**	**5.92**	**162**	P	**Pn**	**Pn**	**15 55 06.3**	**-0.7**	
PAYA					S	**Sb**	**15 56 35.5**	**+2.0**	
CM34	**Chiang Mai Arr**	**6.25**	**169**	P	**Pn**	**Pn**	**15 55 11.5**	**0.0**	
CHTO	**Chiang Mai**	**6.25**	**171**	P	**Pn**	**Pn**	**15 55 11.1**	**-0.6**	
CHTO	**Chiang Mai**	**6.25**	**171**	Pn	**Pn**	**Pn**	**15 55 11.1**	**-0.6**	
CMMT	**Chiang Mai**	**6.25**	**171**	P	**Pn**	**Pn**	**15 55 11.1**	**-0.5**	
CMMT					S	**Sb**	**15 56 44.3**	**+1.1**	
CM31	**Chiang Mai Arr**	**6.60**	**172**			**Pn**	**15 55 16.3**	**-0.2**	
CMAR	**Chiang Mai Arr**	**6.60**	**172**	Pn		**Pn**	**15 55 16.1**	**-0.3**	
	comp=Z,3.9nm,0.3s,baz=346,slow=13,SNR=89								
CMAR					Pg	Pb	15 55 39.4	+5.2	
	comp=Z,3.3nm,0.3s,baz=343,slow=18,SNR=24								
CMAR					Lg	Lg	15 57 05.4		
	comp=Z,3.8nm,0.3s,baz=340,slow=18,SNR=4.8								
CMAR					LR	LR	15 57 34.0		
	comp=Z,267nm,21.1s,baz=74,slow=36								
CMAR	**Chiang Mai Arr**	**6.60**	**172**	*i* P		**Pn**	**15 55 16.2**	**-0.3**	
CMAR					pmax	pmax			
	comp=Z,9.0nm,0.4s								
SLVN	**Son La**	**6.61**	**123**	Pn		**Pn**	**15 55 16.9**	**+0.2**	
LAMP	**Lampang**	**6.66**	**166**	P		**Pn**	**15 55 17.2**	**0.0**	
MHMT	**Maesarieng**	**6.81**	**180**	P		**Pn**	**15 55 19.2**	**-0.1**	
LSA	**Lhasa**	**7.62**	**309**	Pn		**Pn**	**15 55 31.3**	**+0.5**	
LSA	**Lhasa**	**7.62**	**309**	P		**Pn**	**15 55 31.7**	**+0.9**	
LSA	**Lhasa**	**7.62**	**309**	Pn		**Pn**	**15 55 31.7**	**+0.9**	
UTTA	**Uttaradit**	**7.64**	**161**	P		**Pn**	**15 55 30.9**	**+0.1**	
CD2	**Chengdu**	**7.80**	**40**	Pg		Pb	15 56 01.3	+6.6	
CD2					Sg	**Sg**	**15 57 46.3**	**-3.5**	
CD2					smax	smax			
	comp=N,110nm,1.6s								
CD2					smax	smax			
	comp=E,150nm,1.8s								
CD2					LR	LR			
	comp=N,3μm,7.9s								
CD2					LR	LR			
	comp=E,3μm,12.8s								
CD2					LR	LR			
	comp=Z,5μm,12.3s								
GYA	**Guiyang**	**8.00**	**78**⇑	*i* P		**Pn**	**15 55 37.3**	**+1.5**	
GYA					S	**Sn**	**15 57 07.0**	**+0.5**	
GYA					smax	smax			
	comp=Z,50nm,1.5s								
GYA					smax	smax			
	comp=Z,40nm,1.5s								
GYA					LR	LR			
	comp=Z,5μm,7.3s								
GYA					LR	LR			
	comp=Z,2μm,6.5s								
GYA					LR	LR			
	comp=Z,2μm,10.9s								
UMPA	**Umpang Tak**	**8.82**	**174**	P		**Pn**	**15 55 49.8**	**+2.9**	
TAPN	**Taplejung**	**9.47**	**286**	*eP*		**Pn**	**15 55 54.4**	**-1.6**	
	comp=Z,103nm,0.8s								
ODAN	**Odare**	**9.66**	**283**	*eP*		**Pn**	**15 55 56.1**	**-2.5**	
	comp=Z,140nm,1.0s								
RAMN	**Ramite**	**10.37**	**283**	*eP*		**Pn**	**15 56 07.0**	**-1.4**	
	comp=Z,71nm,0.8s								
JIRN	**Jiri**	**10.85**	**287**	*eP*		**Pn**	**15 56 13.5**	**-1.6**	
BOK	**Bokaro**	**11.04**	**266**	*ex*		**Pn**	**15 56 15.7**	**-1.7**	
GUN	**Gumba**	**11.17**	**288**	*eP*		**Pn**	**15 56 16.9**	**-2.5**	
	comp=Z,263nm,1.0s								
ENH	**Enshi**	**11.50**	**60**	Pn		**Pn**	**15 56 25.0**	**+1.4**	
PKI	**Pulchoki**	**11.52**	**285**	*eP*		**Pn**	**15 56 21.3**	**-2.8**	
PKIN	**Phulchoki**	**11.53**	**285**	*eP*		**Pn**	**15 56 21.6**	**-2.6**	
DMN	**Daman**	**11.79**	**285**	*eP*		**Pn**	**15 56 25.4**	**-2.4**	
LZH	**Lanzhou**	**12.14**	**23**	*eP*		**Pn**	**15 56 35.0**	**+2.5**	
LZH					pP		15 56 38.3		
LZH					sP		15 56 42.0		
LZH					PP	**PnPn**	**15 56 47.5**	**+7.0**	
LZH					pmax	pmax			
	comp=Z,12nm,1.0s								
LZH					pmax	pmax			
	comp=Z,190nm,4.9s								
LZH					LR	LR			
	comp=Z,2μm,10.8s								
LZH					LR	LR			
	comp=Z,1μm,10.8s								
LZH					LR	LR			
	comp=Z,1μm,9.2s								
GKN	**Gorkha**	**12.27**	**287**	*eP*		**Pn**	**15 56 31.2**	**-3.1**	
	comp=Z,100nm,1.1s								
QIZ	**Qiongzhong**	**12.55**	**116**	P		**Pn**	**15 56 36.0**	**-2.0**	
QIZ					S	**Sn**	**15 59 00.0**	**+2.0**	
QIZ					pmax	pmax			
	comp=Z,18nm,1.4s								
DANN	**Dangsing**	**13.09**	**288**	*eP*		**Pn**	**15 56 43.2**	**-2.5**	
XAN	**Xi'an**	**13.12**	**44**	P		**P**	**15 56 56.5**	**+0.5**	
XAN					pP	Pn	15 57 02.5	+17	
XAN					pmax	pmax			
	comp=Z,8.0nm,1.1s								
XAN					LR	LR			
	comp=N,3μm,16.9s								
XAN					LR	LR			
	comp=E,2μm,17.6s								
XAN					LR	LR			
	comp=Z,2μm,13.7s								
KOLN	**Koldanda**	**13.13**	**285**	*eP*		**Pn**	**15 56 42.6**	**-3.5**	
GTA	**Gaotai**	**14.43**	**6**	*eP*		**P**	**15 57 08.8**	**-1.9**	
GTA					pP	Pn	15 57 15.0	+11	
GTA					sP		15 57 18.3		
WHN	**Wuhan**	**15.53**	**66**	P		**Pn**	**15 57 18.5**	**+0.1**	
WHN					LR	LR			
	comp=Z,2μm,9.1s								
WHN					LR	LR			
	comp=Z,3μm,10.1s								
BTO	**Baotou**	**18.54**	**30**	*eP*		**P**	**15 57 56.0**	**-0.1**	
BHPL	**Bhopal**	**18.80**	**269**	*ex*		**P**	**15 57 59.2**	**+0.2**	
BHPL					IAmb	IAmb	15 58 02.9		
	comp=Z,90nm,1.0s								
HHC	**Hu-ho-hao-te**	**19.45**	**32**	*eP*		**P**	**15 58 05.8**	**-0.4**	
HHC					pmax	pmax			
	comp=Z,10.0nm,0.9s								
HHC					pmax	pmax			
	comp=Z,170nm,5.8s								
HHC					LR	LR			
	comp=Z,630nm,11.8s								
HHC					LR	LR			
	comp=Z,520nm,10.2s								
HHC					LR	LR			
	comp=Z,570nm,10.7s								
HYB	**Hyderabad**	**19.57**	**251**	*i* P		**P**	**15 58 08.0**	**+0.5**	
NJ2	**Nanjing**	**19.66**	**64**	*eP*		**P**	**15 58 06.5**	**-1.8**	
NJ2					pmax	pmax			
	comp=Z,22nm,0.5s								
KULM	**Kulim**	**19.80**	**172**			**P**	**15 58 08.9**	**-1.0**	
KULM					IAmb	IAmb	15 58 12.6		
	comp=Z,31nm,1.1s								
BHK	**Bhakra**	**19.98**	**293**	*ex*		**P**	**15 58 14.0**	**+2.1**	
DHRM	**DHARAMSHALA**	**20.28**	**296**	*ex*		**P**	**15 58 15.4**	**-0.1**	
DHRM					IAmb	IAmb	15 58 18.2		
	comp=Z,58nm,0.9s								
WMQ	**Urumqi**	**20.53**	**338**	*eP*		Pn	15 58 21.0	+0.9	
WMQ					LR	LR			
	comp=Z,480nm,8.9s								
WMQ					LR	LR			
	comp=Z,630nm,11.3s								
WMQ					LR	LR			
	comp=Z,430nm,10.5s								
BJI	**Beijing**	**21.41**	**41**	P		**P**	**15 58 29.0**	**+1.8**	
BJI					pmax	pmax			
	comp=Z,22nm,0.9s								
NIL	**Nilore**	**23.12**	**298**	P		**P**	**15 58 44.7**	**-1.0**	
NIL					pmax	pmax			
	comp=Z,37nm,1.1s								
NIL	**Nilore**	**23.12**	**298**	P		**P**	**15 58 44.7**	**-1.0**	
KSH	**Kashi**	**23.44**	**313**	P		**P**	**15 58 50.5**	**+1.6**	
KSH					pP	sP	15 58 53.5	-0.3	
KSH					PP	**PnPn**	**15 59 21.3**	**+6.1**	
KSH					S	**S**	**16 03 01.3**	**-1.1**	
KSH					SS	Sn	16 03 49.8	+28	
KSH					pmax	pmax			
	comp=Z,50nm,1.0s								
KSH					pmax	pmax			
	comp=Z,310nm,4.3s								
KSH					LR	LR			
	comp=Z,230nm,12.0s								
KSH					LR	LR			
	comp=Z,640nm,8.0s								
KSH					LR	LR			
	comp=Z,1μm,13.6s								
TARG	**Taragay, Kyrgy**	**23.57**	**320**	P		**P**	**15 58 49.4**	**-1.2**	
TARG					IAmb	IAmb	15 58 59.3		
	comp=Z,20nm,1.0s								
SONM	**Songino Array**	**23.73**	**14**	P		**P**	**15 58 53.9**	**+2.3**	
	comp=Z,2.0nm,0.6s,baz=199,slow=10,SNR=5.7								
ULN	**Ulaanbaatar**	**23.91**	**15**	*i* P		**P**	**15 58 55.8**	**+2.4**	
MK31	**Makanchi Array**	**25.06**	**334**	P		**P**	**15 59 03.6**	**-0.2**	
MK31					pmax	pmax			
	comp=Z,12nm,1.2s								
MK31	**Makanchi Array**	**25.06**	**334**	P		**P**	**15 59 03.6**	**-0.2**	
MKAR	**Makanchi Array**	**25.06**	**334**	P		**P**	**15 59 04.9**	**+1.1**	
	comp=Z,5.7nm,0.7s,baz=145,slow=9.0,SNR=24								
MKAR	**Makanchi Array**	**25.06**	**334**	*i* P		**P**	**15 59 04.5**	**+0.8**	
MKAR					pmax	pmax			
	comp=Z,6.0nm,0.7s								
MAKZ	**Makanchi**	**25.19**	**334**	P		**P**	**15 59 05.7**	**+0.7**	
MAKZ					pmax	pmax			
	comp=Z,8.0nm,1.0s								
MAKZ	**Makanchi**	**25.19**	**334**	P		**P**	**15 59 05.7**	**+0.7**	
KZA	**Kyzart**	**25.31**	**318**	P		**P**	**15 59 08.2**	**+1.7**	
	SNR=7.5								
ZAK	**Zakamensk**	**25.65**	**8**	*eP*		**P**	**15 59 07.8**	**-1.4**	
ZAK					pmax	pmax			
	comp=Z,6.0nm,1.2s								
KBK	**Karagaybulak**	**25.82**	**319**	P		**P**	**15 59 13.7**	**+2.7**	
	SNR=8.1								
UCH	**Uchtor**	**25.84**	**317**	P		**P**	**15 59 13.3**	**+1.9**	
	SNR=8.9								
AAK	**Ala-Archa**	**26.09**	**318**	P		**P**	**15 59 15.2**	**+1.9**	
	comp=Z,12nm,1.0s,baz=120,slow=7.6,SNR=14								
AAK	**Ala-Archa**	**26.09**	**318**	P		**P**	**15 59 15.7**	**+2.4**	
	SNR=11								
AAK	**Ala-Archa**	**26.09**	**318**⇑	*eP*		**P**	**15 59 13.9**	**+0.6**	
AAK					pmax	pmax			
	comp=Z,23nm,1.2s								
AAK	**Ala-Archa**	**26.09**	**318**	P		**P**	**15 59 12.6**	**-0.7**	
AAK					IAmb	IAmb	15 59 18.4		
	comp=Z,17nm,1.1s								
AML	**Almayashu**	**26.30**	**316**	P		**P**	**15 59 16.7**	**+1.2**	
	SNR=13								
EKS2	**Erkin-Say**	**26.54**	**318**	P		**P**	**15 59 18.7**	**+1.4**	
	SNR=8.0								
KBL	**Kabul**	**26.73**	**298**	P		**P**	**15 59 18.4**	**-0.9**	
KBL					pmax	pmax			
	comp=Z,40nm,1.1s								
KBL	**Kabul**	**26.73**	**298**	P		**P**	**15 59 18.4**	**-0.9**	
GAR	**Garm**	**27.12**	**308**	P		**P**	**15 59 21.9**	**-0.7**	
CHGR	**Chuyangaron**	**27.83**	**306**	P		**P**	**15 59 28.0**	**-1.0**	
KSRS	**Korea Array**	**28.36**	**57**	P		P	15 59 38.4	+4.9	
	comp=Z,1.0nm,1.0s,baz=260,slow=9.9,SNR=4.2								
KURBB	**Kurchatov Arra**	**29.62**	**335**	P		**P**	**15 59 46.1**	**+1.5**	
	comp=Z,0.6nm,0.7s,baz=148,slow=8.7,SNR=5.3								
KURK	**Kurchatov**	**29.66**	**335**	P		**P**	**15 59 46.1**	**+1.2**	
KURK					pmax	pmax			
	comp=Z,3.0nm,1.0s								
KURK	**Kurchatov**	**29.66**	**335**	P		**P**	**15 59 46.1**	**+1.2**	
ZAA0	**Zalesovo Array**	**30.50**	**345**	P		**P**	**15 59 52.0**	**-0.4**	
ZALV	**Zalesovo Beam**	**30.50**	**345**	P		**P**	**15 59 53.1**	**+0.7**	
	comp=Z,4.9nm,0.6s,baz=171,slow=9.3,SNR=18								
ZALV	**Zalesovo Beam**	**30.50**	**345**	*i* P		**P**	**15 59 53.9**	**+1.5**	
ZALV					pmax	pmax			
	comp=Z,5.0nm,0.6s								
USRK	**Ussuriysk Ar.**	**33.61**	**47**	P		**P**	**16 00 20.2**	**+0.4**	
	comp=Z,4.2nm,0.9s,baz=230,slow=8.6,SNR=4.9								
BVAR	**Borovoye Array**	**34.80**	**331**	P		**P**	**16 00 31.2**	**+1.2**	
	comp=Z,1.1nm,0.6s,baz=134,slow=9.0,SNR=7.0								
BRVK	**Borovoye**	**34.87**	**331**⇑	*eP*		**P**	**16 00 31.3**	**+0.7**	
BRVK					pmax	pmax			
	comp=Z,2.0nm,0.9s								
GEYT	**Alibeck**	**36.05**	**301**	P		**P**	**16 00 41.7**	**+0.8**	
	comp=Z,3.8nm,0.8s,baz=109,slow=8.0,SNR=7.1								
AKTO	**Aktyubinsk**	**39.79**	**320**	P		**P**	**16 01 12.6**	**+0.2**	
	comp=Z,2.0nm,0.8s,baz=112,slow=7.0,SNR=3.9								
SVE	**Sverdlovsk**	**41.57**	**330**	*eP*		**P**	**16 01 28.3**	**+1.3**	
SVE					pmax	pmax			
	comp=Z,13nm,1.0s								
ARU	**Arti**	**42.32**	**328**	*c i* P		**P**	**16 01 34.3**	**+1.2**	
ARU							16 03 11.5		
ARU					PPP	PPP	16 03 42.3		
ARU					S	**S**	**16 07 59.4**	**+5.5**	
ARU					SS	**SS**	**16 10 57.7**	**-4.6**	
ARU					pmax	pmax			
	comp=Z,8.0nm,1.4s								
KIRV	**Kirov**	**47.69**	**328**⇑	*eP*		**P**	**16 02 14.9**	**-0.9**	
KBZ	**Khabaz**	**48.19**	**307**⇑	*eP*		**P**	**16 02 18.6**	**-1.3**	
KBZ					pmax	pmax			
	comp=Z,5.0nm,1.7s								
NEY	**Neytrino**	**48.28**	**306**⇑	*eP*		**P**	**16 02 20.8**	**-0.1**	
NEY					pmax	pmax			
	comp=Z,1.0nm,0.8s								
KIV	**Kislovodsk**	**48.36**	**307**	*eP*		**P**	**16 02 21.4**	**+0.1**	
KIV					*e*		16 03 44.3		
KIV					*e*		16 04 07.2		
KIV					pmax	pmax			
	comp=Z,3.0nm,1.1s								
TIXI	**Tiksi**	**49.80**	**12**⇑	*eP*		**P**	**16 02 33.4**	**+1.6**	
TIXI					pmax	pmax			
	comp=Z,15nm,1.2s								
KLMR	**Klimovskoe**	**53.17**	**329**	*eP*		**P**	**16 02 56.8**	**-0.4**	
KLMR					pmax	pmax			
	comp=Z,10.0nm,1.0s								
KLMR	**Klimovskoe**	**53.17**	**329**	*eP*		**P**	**16 02 56.9**	**-0.3**	
KLMR					AMP		16 02 59.3		
	comp=Z,10.0nm,1.0s								
OBN	**Obninsk**	**53.55**	**321**	*eP*		**P**	**16 02 57.6**	**-2.5**	
OBN					*e*		16 04 07.1		
OBN					*e*		16 04 59.2		
OBN					pmax	pmax			
	comp=Z,5.0nm,1.0s								
BRTR	**Keskin Array B**	**55.16**	**302**	P		**P**	**16 03 11.5**	**-0.8**	
	comp=Z,1.1nm,0.7s,baz=133,slow=4.6,SNR=2.9								
WRAB	**Tennant Creek**	**57.03**	**136**⇓	*eP*		**P**	**16 03 23.1**	**-2.5**	
WRAB					pmax	pmax			
	comp=Z,5.0nm,0.9s								
WRA	**Warramunga Arr**	**57.03**	**138**	P		**P**	**16 03 24.9**	**-0.7**	
	comp=Z,1.6nm,0.8s,baz=327,slow=7.5,SNR=5.3								
LVZ	**Lovozero**	**57.06**	**336**⇑	*eP*		**P**	**16 03 25.6**	**+0.3**	
LVZ					pmax	pmax			
	comp=Z,9.0nm,1.2s								
AKASG	**Malin Array Be**	**57.71**	**316**	P		**P**	**16 03 29.2**	**-0.8**	
	comp=Z,0.5nm,0.4s,baz=78,slow=6.9,SNR=5.0								
BILL	**Bilibino**	**58.95**	**24**	*eP*		**P**	**16 03 37.5**	**-1.0**	
BILL					*e*		16 04 23.6		
BILL					*e*		16 05 44.1		
BILL					pmax	pmax			
	comp=Z,3.0nm,1.2s								
VSU	**Vasula**	**59.23**	**325**	*de* P		**P**	**16 03 40.1**	**-0.4**	
VSU					pmax	pmax			
	comp=Z,30nm,1.0s								
ASAR	**Alice Springs**	**59.65**	**141**	P		**P**	**16 03 44.1**	**+0.1**	
	comp=Z,1.2nm,0.8s,baz=323,slow=6.0,SNR=6.4								
FINES	**FINESS Array B**	**59.69**	**328**	P		**P**	**16 03 44.2**	**+0.5**	
	comp=Z,2.9nm,0.9s,baz=93,slow=12,SNR=9.4								
MLR	**Muntele Rosu**	**60.24**	**310**	P		**P**	**16 03 48.0**	**+0.1**	
	comp=Z,4.1nm,0.7s,baz=247,slow=23,SNR=4.7								
MLR	**Muntele Rosu**	**60.24**	**310**	P		**P**	**16 03 48.0**	**+0.1**	
MLR	**Muntele Rosu**	**60.24**	**310**	IAmb		IAmb	16 03 49.3		
	comp=Z,6.1nm,0.8s								
MORC	**Moravsky Berou**	**65.26**	**315**	P		**P**	**16 04 19.6**	**-1.6**	
MORC					pmax	pmax			
	comp=Z,4.0nm,1.0s								
MORC	**Moravsky Berou**	**65.26**	**315**	P		**P**	**16 04 19.6**	**-1.6**	
MORC					IAmb	IAmb	16 04 23.6		
	comp=Z,3.9nm,1.0s								
VRAC	**Vranov**	**65.95**	**315**	P		**P**	**16 04 26.2**	**+0.5**	
	comp=Z,5.0nm,0.6s,baz=76,slow=6.7,SNR=7.2								
CONA	**Conrad Observa**	**66.70**	**314**	*eP*		**P**	**16 04 31.0**	**+0.4**	
	comp=Z,5.9nm,1.1s								
NB2	**NORSAR Subarra**	**66.87**	**328**	P		**P**	**16 04 30.9**	**-0.5**	
	comp=Z,2.5nm,0.9s,baz=82,slow=6.5								
BRG	**Berggiesshubel**	**67.31**	**317**	*eP*		**P**	**16 04 34.8**	**+0.5**	
	comp=Z,2.3nm,0.7s								
BRG	**Berggiesshubel**	**67.31**	**317**	*eP*		**P**	**16 04 35.2**	**+0.9**	
	comp=Z,2.3nm,0.7s,baz=76,slow=6.2								
BRG	**Berggiesshubel**	**67.31**	**317**	*eP*		**P**	**16 04 34.8**	**+0.5**	
BRG					pmax	pmax			
	comp=Z,2.0nm,0.7s								
FBE	**Freiberg**	**67.67**	**317**	*eP*		**P**	**16 04 37.7**	**+1.2**	
	comp=Z,5.7nm,1.1s,baz=76,slow=6.2								
MOA	**Molln**	**67.77**	**314**	*eP*		**P**	**16 04 37.3**	**+0.1**	
	comp=Z,1.9nm,0.6s								
CLL	**Collm**	**67.80**	**318**	*i* P		**P**	**16 04 34.7**	**-2.7**	
CLL				*i*	pP	**pP**	**16 04 38.5**	**-2.6**	
	comp=Z,5.0nm,1.2s								
CLL	**Collm**	**67.80**	**318**	*i* P		**P**	**16 04 34.7**	**-2.7**	
GEC2	**GERESS Array S**	**67.91**	**315**	*eP*		**P**	**16 04 39.0**	**+0.8**	
	comp=Z,4.6nm,1.2s,baz=76,slow=6.2								
GEC2	**GERESS Array S**	**67.91**	**315**	P		**P**	**16 04 36.1**	**-2.2**	
GEC2					IAmb	IAmb	16 04 40.1		
	comp=Z,4.6nm,1.1s								
GERES	**GERESS Array B**	**67.91**	**315**	P		**P**	**16 04 38.2**	**-0.1**	
	comp=Z,2.3nm,0.9s,baz=77,slow=6.0,SNR=15								
KHC	**Kasperske Hory**	**67.92**	**315**⇓	*eP*		**P**	**16 04 38.3**	**+0.1**	
KHC					pmax	pmax			
	comp=Z,3.0nm,0.9s								
TANN	**Tannenbergstha**	**68.34**	**317**	*eP*		**P**	**16 04 41.5**	**+0.7**	
	comp=Z,6.8nm,1.0s,baz=76,slow=6.2								
WET	**Wettzell**	**68.37**	**315**	*eP*		**P**	**16 04 42.0**	**+1.0**	
	comp=Z,2.6nm,0.8s,baz=76,slow=6.2								
WERN	**Wernitzgruen**	**68.42**	**317**	*eP*		**P**	**16 04 42.3**	**+1.0**	
	comp=Z,3.1nm,1.1s,baz=76,slow=6.2								
ROTZ	**Rotzenmuhle**	**68.65**	**316**	*eP*		**P**	**16 04 44.0**	**+1.3**	
	comp=Z,5.5nm,1.0s,baz=76,slow=6.2								
MOX	**Moxa**	**68.81**	**317**	*eP*		**P**	**16 04 44.5**	**+0.8**	
	comp=Z,2.6nm,1.1s,baz=76,slow=6.2								
NRDL	**Niedersach Rie**	**69.27**	**319**	*eP*		**P**	**16 04 47.7**	**+1.2**	
	comp=Z,7.8nm,1.1s,baz=76,slow=6.2								
CLZ	**Clausthal**	**69.27**	**319**	*eP*		**P**	**16 04 47.8**	**+1.1**	
	comp=Z,5.0nm,0.9s,baz=76,slow=6.2								
GRF	**Grafenberg Arr**	**69.28**	**316**	*eP*		**P**	**16 04 47.9**	**+1.2**	
	comp=Z,4.4nm,0.6s,baz=76,slow=6.2								
CIMO	**Cimolais**	**69.35**	**312**	P		**P**	**16 04 44.8**	**-2.4**	
CIMO					IAmb	IAmb	16 04 47.8		
	comp=Z,6.9nm,1.1s								
WTTA	**Wattenberg**	**69.64**	**314**	*eP*		**P**	**16 04 48.8**	**-0.4**	
	comp=Z,4.0nm,0.7s								
FUR	**Furstenfeldbru**	**69.64**	**315**	*eP*		**P**	**16 04 49.9**	**+1.0**	
	comp=Z,15nm,0.8s,baz=76,slow=6.2								
MBAR	**Mbarara**	**69.68**	**259**⇑	*eP*		**P**	**16 04 49.6**	**-0.3**	
MBAR					pmax	pmax			
	comp=Z,2.0nm,1.0s								
SQTA	**Sankt Quirin**	**69.93**	**314**	*eP*		**P**	**16 04 50.7**	**-0.2**	
	comp=Z,3.0nm,0.7s								
MOTA	**Moosalm**	**69.97**	**314**	*eP*		**P**	**16 04 51.2**	**+0.1**	
	comp=Z,7.0nm,1.1s								
RETA	**Reutte**	**70.15**	**314**	*eP*		**P**	**16 04 52.3**	**+0.2**	
	comp=Z,4.4nm,0.7s								
FETA	**Feichten**	**70.30**	**313**	*eP*		**P**	**16 04 52.7**	**-0.5**	
	comp=Z,5.2nm,1.0s								
UBR	**Ueberruh**	**70.53**	**314**	*eP*		**P**	**16 04 54.6**	**+0.2**	
	comp=Z,7.0nm,1.3s,baz=76,slow=6.2								
DAVOX	**Davos/Dischmat**	**70.92**	**313**	P		**P**	**16 04 56.8**	**-0.2**	
	comp=Z,3.5nm,0.8s,baz=91,slow=4.9,SNR=6.7								
WLF	**Walferdange**	**72.45**	**317**	*eP*		**P**	**16 05 07.5**	**+1.5**	
	comp=Z,8.5nm,0.9s,baz=76,slow=6.2								
EKA	**Eskdalemuir Ar**	**75.79**	**325**	P		**P**	**16 05 26.4**	**+1.1**	
	comp=Z,1.0nm,0.7s,baz=56,slow=7.9,SNR=4.7								
SUMG	**Summit**	**78.27**	**348**	P		**P**	**16 05 38.0**	**-1.5**	
SUMG					pmax	pmax			
	comp=Z,9.0nm,1.4s								
SUMG	**Summit**	**78.27**	**348**	P		**P**	**16 05 38.0**	**-1.5**	
SUMG					IAmb	IAmb	16 05 40.7		
	comp=Z,8.9nm,1.4s								
ESDC	**Sonseca Array**	**82.92**	**310**	P		**P**	**16 06 04.9**	**+0.3**	
	comp=Z,1.5nm,1.0s,baz=45,slow=5.1,SNR=5.6								
R58B	**Mineral**	**117.22**	**356**			**PKPdf**	**16 12 23.6**	**-1.5**	

*IDC **30** 15:56:09.0±3.4, 9.°40N×127.°02E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/57, mbtmp3.6/4, Error ellipse: s-maj=282.4km s-min=25.2km az=67.0*
*MAN **30** 15:56:13.9, 9.°39N×126.°88E, h29km, mb4.5, ML3.4, MS3.2*
ISC 30 15:56:15.1±1.3, 9.°36N±0.°06×126.°9E±0.°1, h41km, n9, σ0s97/12, mb3.6/4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSLP	**Maasin**			**2.18 291**	*eP*		**Pn**	**15 56 46.6**	**-2.3**
MSLP					*eS*		**Sn**	**15 57 16.1**	**+1.3**
BUKP	**Musuan**			**2.36 232**	*eP*		**Pn**	**15 56 51.5**	**+0.1**
BUKP					*eS*		**Sn**	**15 57 19.4**	**+0.2**
DDMP	**Don Marcelino,**			**3

RCP	Roxas	4.20	301⇑	*eP*	Pn	16 02 11.7	-0.3
JAP	San Jose, Anti	4.60	287⇓	*eP*	Pn	16 02 15.1	-2.4
PVCP	Virac	4.72	332	*eP*	Pn	16 02 17.3	-1.8
SJMP	San Jose	6.03	301	*eP*	Pn	16 02 38.0	+1.1
LQP	Lukban	6.69	315	*eP*	Pn	16 02 44.3	-1.8
TGY	Tagaytay City	7.12	312	LR	LR	16 06 13.6	
	comp=Z,740nm,19.5s,baz=152,slow=44						
TNTI	Ternate	8.63	174	P	Pn	16 03 16.3	+3.9
	30nm,1.0s						
KMSI	Cibinong	9.10	196	P	Pn	16 03 21.6	+2.8
	45nm,0.9s						
MRSI	Marisa	9.93	207	P	Pn	16 03 35.6	+5.5
	20nm,0.9s						
MRSI				S	Sn	16 05 23.1	+3.3
	20nm,0.9s						
LBMI	Labuha	10.03	174	P	Pn	16 03 33.6	+2.0
	2µm30nm,1.0s						
LUWI	Luwuk	11.00	199	P	Pn	16 03 48.9	+4.2
	2µm43nm,0.9s						
SIJI	Sorong	11.29	154	Pn	Pn	16 03 43.7	-5.0
	0.8nm,0.3s,baz=140,slow=23,SNR=2.1						
NLAI	Namlea	12.58	177	P	Pn	16 04 05.7	-0.4
BNSI	Bone	15.09	205	P	P	16 04 40.7	-1.4
	26nm,1.1s						
SBUM	Sibu	15.72	245		P	16 04 48.5	-0.6
SBUM				IAmb	IAmb	16 05 01.4	
	comp=Z,18nm,1.0s						
SMPI	Sarmi	16.67	132	P	Pn	16 04 58.2	-0.5
	comp=Z,14nm,1.5s						
KSM	Kuching	17.86	245	P	P	16 05 08.2	-4.5
BATI	Baumata	19.68	188	P	P	16 05 32.7	+0.1
	comp=Z,3.9nm,0.3s,baz=124,slow=22,SNR=4.9						
BATI	Baumata	19.68	188	P	Pn	16 05 35.0	+0.2
FITZ	Fitzroy Crossi	27.34	182	P	P	16 06 45.9	-1.4
	comp=Z,5.9nm,0.9s,baz=19,slow=11,SNR=6.3						
FITZ	Fitzroy Crossi	27.34	182	IAmb	IAmb	16 07 00.9	
	comp=Z,19nm,1.4s						
KSRS	Korea Array	27.96	3	P	P	16 06 51.2	-1.4
	comp=Z,0.7nm,0.7s,baz=175,slow=7.6,SNR=7.4						
CMAR	Chiang Mai Arr	28.11	292	P	P	16 06 51.7	-2.6
	comp=Z,0.8nm,0.8s,baz=96,slow=8.3,SNR=2.7						
WRA	Warramunga Arr	30.19	165	P	P	16 07 10.1	-2.5
	comp=Z,1.4nm,1.0s,baz=348,slow=9.2,SNR=3.6						
ASAR	Alice Springs	33.67	168	P	P	16 07 41.4	-1.8
	comp=Z,0.5nm,0.5s,baz=344,slow=7.3,SNR=12						
USRK	Ussuriysk Ar.	35.00	7	P	P	16 07 55.2	+0.8
	comp=Z,1.6nm,0.7s,baz=189,slow=7.5,SNR=5.8						
KLR	Kul'dur	39.95	5	P	P	16 08 36.6	+0.5
	comp=Z,0.7nm,0.4s,baz=214,slow=3.8,SNR=3.8						
H11S3	WAKE ISLAND Hy	40.03	72	T	T	16 51 33.1	
	baz=262,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	40.04	72	T	T	16 51 33.5	
	baz=262,slow=75,SNR=15						
H11S2	WAKE ISLAND Hy	40.05	72	T	T	16 51 34.1	
	baz=262,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy	40.39	71	T	T	16 52 15.9	
	baz=265,slow=74,SNR=14						
H11N2	WAKE ISLAND Hy	40.40	71	T	T	16 52 17.4	
	baz=265,slow=74,SNR=8.4						
H11N3	WAKE ISLAND Hy	40.41	71	T	T	16 52 07.4	
	baz=265,slow=74,SNR=10						
TAPN	Taplejung	40.62	301	*eP*	P	16 08 42.7	+0.4
	comp=Z,25nm,1.0s						
ODAN	Odare	40.74	300	*eP*	P	16 08 43.4	+0.1
	comp=Z,31nm,0.7s						
SONM	Songino Array	41.88	340	P	P	16 08 52.6	+0.5
	comp=Z,0.5nm,0.4s,baz=35,slow=45,SNR=3.4						
JIRN	Jiri	42.00	301	*eP*	P	16 08 54.1	+0.4
GUN	Gumba	42.34	301	*eP*	P	16 08 56.7	+0.3
	comp=Z,32nm,0.8s						
PKI	Pulchoki	42.63	301	*eP*	P	16 08 58.8	0.0
	comp=Z,6.8nm,0.5s						
PKIN	Phulchoki	42.65	301	*eP*	P	16 08 58.7	-0.2
STKA	Stephens Creek	43.54	161	P	P	16 09 05.5	-0.1
	comp=Z,1.6nm,0.7s,baz=321,slow=13,SNR=3.4						
KOLN	Koldanda	44.23	300	*eP*	P	16 09 11.9	+0.4
	comp=Z,29nm,0.8s						
DANN	Dangsing	44.26	301	*eP*	P	16 09 11.7	-0.1
	comp=Z,22nm,0.6s						
PETK	Petropavlovsk-	50.36	24	P	P	16 09 59.6	+1.1
	comp=Z,1.4nm,0.8s,baz=210,slow=5.0,SNR=1.4						
MK31	Makanchi Array	52.80	323	P	P	16 10 16.8	0.0
MK31				IAmb	IAmb	16 10 18.3	
	comp=Z,3.4nm,0.8s						
MKAR	Makanchi Array	52.80	323	P	P	16 10 17.5	+0.7
	comp=Z,3.8nm,0.7s,baz=124,slow=8.4,SNR=26						
NIL	Nilore	54.34	305	P	P	16 10 26.7	-1.6
ZALV	Zalesovo Beam	55.45	332	P	P	16 10 35.8	-0.1
	comp=Z,1.2nm,0.5s,baz=126,slow=7.5,SNR=6.6						
AAK	Ala-Archa	56.04	316	P	P	16 10 40.7	+0.2
	comp=Z,1.9nm,0.7s,baz=168,slow=13,SNR=4.5						
AAK	Ala-Archa	56.04	316	P	P	16 10 39.7	-0.9
KURK	Kurchatov	56.86	326	P	P	16 10 44.5	-1.5
KURK				IAmb	IAmb	16 10 47.3	
	comp=Z,10nm,0.9s						
KURBB	Kurchatov Arra	56.87	326	P	P	16 10 46.0	0.0
	comp=Z,3.8nm,0.8s,baz=126,slow=6.5,SNR=24						
GAR	Garm	57.96	310	P	P	16 10 53.6	-0.5
TIXI	Tiksi	62.21	1	P	P	16 11 23.4	+1.0
	comp=Z,2.0nm,0.6s,baz=192,slow=5.2,SNR=8.9						
TIXI	Tiksi	62.21	1	P	P	16 11 23.2	+0.8
TIXI				IAmb	IAmb	16 11 37.7	
	comp=Z,7.2nm,0.9s						
BVAR	Borovoye Array	62.46	326	P	P	16 11 25.1	+0.7
	comp=Z,3.5nm,0.8s,baz=118,slow=8.6,SNR=23						
AKTO	Aktyubinsk	69.08	320	P	P	16 12 07.0	0.0
	comp=Z,2.2nm,0.8s,baz=91,slow=5.2,SNR=6.8						
ARU	Arti	70.03	327	P	P	16 12 13.0	+0.3
	comp=Z,1.3nm,0.5s,baz=118,slow=4.8,SNR=7.9						
ARU	Arti	70.03	327	P	P	16 12 12.8	+0.1
KIRV	Kirov	75.26	328	P	P	16 12 44.0	+0.4
	comp=Z,11nm,0.7s,baz=11,slow=3.5,SNR=6.1						
RAYN	Ar Rayn	78.03	292	P	P	16 13 00.7	+0.6
RAYN				IAmb	IAmb	16 13 01.5	
	comp=Z,5.3nm,0.8s						
ILAR	Eielson Array	80.15	26	P	P	16 13 11.7	+0.9
	comp=Z,0.5nm,0.7s,baz=260,slow=4.7,SNR=4.6						
SPITS	Spitsbergen Ar	84.89	310	P	P	16 13 35.9	+0.7
	comp=Z,2.0nm,0.8s,baz=145,slow=18,SNR=1.3						
ARCES	ARCESS Array B	85.05	340	P	P	16 13 36.8	+0.6
	comp=Z,2.6nm,0.7s,baz=72,slow=7.8,SNR=9.5						
FINES	FINESS Array B	86.72	332	P	P	16 13 44.7	+0.2
	comp=Z,2.1nm,0.9s,baz=48,slow=6.2,SNR=7.8						
AKASG	Malin Array Be	87.33	321	P	P	16 13 47.1	-0.5
	comp=Z,0.2nm,0.3s,baz=75,slow=4.9,SNR=2.2						
YKA	Yellowknife Ar	94.48	24	P	P	16 14 21.8	+1.1
	comp=Z,0.7nm,0.8s,baz=291,slow=4.5,SNR=7.0						
TORD	Torodi Ar. Bea	120.72	291	PKP	PKiKP	16 19 53.8	+0.4
	comp=Z,0.5nm,0.8s,baz=45,slow=0.7,SNR=2.4						

*NEIC **30** 16:02:21.1±3.0, 16°.71N±0°.07×94°.78W±0°.05, h110km±7km, Error ellipse: s-maj=9.9km s-min=6.9km az=167.0*
*MEX **30** 16:02:23.3±0.6, 16°.74N×94°.83W, h106km±6km, MD4.0*
ISC 30 16:02:21.2±0.8, **16.76N**±0°.07×**94.81W**±0°.04, **h107**km±8km, **n30**, σ1⁰**22**/39, **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.34	348	*i*	P	Pn	16 02 37.7	+0.8
CMIG				*i*	S	Sn	16 02 48.9	+0.2
CMIG	Matias Romero	0.34	348			Pn	16 02 37.7	+0.8
CMIG						Sn	16 02 48.9	+0.2
HUIG	Huatulco	1.59	232	*eP*		Pn	16 02 48.6	-0.4
HUIG				*i*	S	Sn	16 03 09.9	-0.2
HUIG	Huatulco	1.59	232			Pn	16 02 48.6	-0.4
HUIG						Sn	16 03 10.8	+0.7
TGIG		1.62	89	*eP*		Pn	16 02 50.6	+1.2
TGIG				*eS*		Sn	16 03 11.2	+0.4
TGIG		1.62	89			Pn	16 02 50.6	+1.2
TGIG						Sn	16 03 11.2	+0.4
VHO	Vista Hermosa	1.87	280	*eP*		Pn	16 02 53.7	+1.1
VHO				*eS*		Sn	16 03 16.5	-0.1
TOIG	Toxpalan	2.53	302	*eP*		Pn	16 03 01.6	+0.5
TOIG				*eS*		Sn	16 03 31.8	+0.2
CCIG	Comitan	2.61	100			Pn	16 03 04.6	+2.4
YOIG	Yosondua	2.62	272	*eP*		Pn	16 03 02.9	+0.5
YOIG				*i*	S	Sn	16 03 34.0	-0.1
TXIG	Tlaxiaco	2.87	280	*eP*		Pn	16 03 07.1	+1.4
TXIG				*i*	S	Sn	16 03 40.1	+0.2
FTIG	Fresnillo de T	3.37	290	*eP*		Pn	16 03 13.9	+1.6
FTIG				*eS*		Sn	16 03 49.4	-2.3
TLIG	Tlapa	3.68	283	Pn		Pn	16 03 17.8	+1.5
TEIG	Tepich	7.09	60	Pn		Pn	16 04 01.2	-1.3
CRIN	San Cristobal	8.52	117	Pn		Pn	16 04 19.4	-2.6
ACON	Acoyapa	10.48	116			Pn	16 04 40.4	-8.1
342A	Flagon Creek P	14.72	8	Pn		Pn	16 05 43.5	-0.6
TX31	Lajitas Ar. Si	14.93	329	Pn		P	16 05 48.6	-1.1
TX32	Lajitas Array	14.93	329	Pn		Pn	16 05 46.7	-0.1
ETX02	Prairie Street	15.09	1	P		P	16 05 51.6	+0.2
CCAR	Cane Creek	17.30	9	P		Pn	16 06 15.7	-0.4
GTBY	Guantanamo Bay	18.96	77	P		P	16 06 32.4	-1.8
GTBY				IAmb		IAmb	16 06 40.5	
	comp=Z,31nm,0.9s							
W45A	Hickory Valley	19.00	14	P		P	16 06 34.8	+0.4
W45A				IAmb		IAmb	16 06 44.9	
	comp=Z,14nm,0.5s							
GOGA	Godfrey	19.48	30	P		Pn	16 06 41.4	-0.6
W50A	Signal Mountai	20.23	23	P		Pn	16 06 49.8	-0.9
W50A				IAmb		IAmb	16 06 51.4	
	comp=Z,2.7nm,0.6s							
LENM	Lemitar	20.48	330	P		P	16 06 51.2	+0.4
CLTN	Cedars of Leba	20.68	20	P		P	16 06 53.0	+0.4
BG3	Lake Jocassee	21.04	28	P		P	16 06 58.2	+1.8
V51A	Loudon	21.13	24	P		P	16 07 00.5	+3.1
V51A				IAmb		IAmb	16 07 05.4	
	comp=Z,16nm,0.6s							
PAULI	Pauline	21.42	30	P		P	16 06 59.7	-0.8
PAULI				IAmb		IAmb	16 07 04.8	
	comp=Z,13nm,0.6s							

*IDC **30** 16:06:22.8±2.1, 9°.35N×126°.69E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.5/60, mbtmp3.9/6, Error ellipse: s-maj=152.6km s-min=21.7km az=73.0*
*MAN **30** 16:06:24.9, 9°.33N×127°.06E, h48km, mb4.8, ML3.8, MS3.7*
ISC 30 16:06:28.3±1.0, **9°.33N**±0°.05×**126°.89E**±0°.10, **h41**km, **n20**, σ1⁰**29**/19, **mb4.1/5**, **1C-1D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SCPH	Surigao	1.45	288	*eP*		Pn	16 06 49.9	-2.2
SCPH				*eS*		Sn	16 07 07.3	-2.7
MSLP	Maasin	2.16	292	*eP*		Pn	16 07 01.4	-0.4
MSLP				*eS*		Sn	16 07 29.5	+2.2
BUKP	Musuan	2.31	232	*eP*		Pn	16 07 04.1	+0.1
BUKP				*eS*		Sn	16 07 32.2	+1.0
MATI	Mati	2.45	195	*eP*		Sn	16 07 34.4	-0.1
DAV	Davao City (W)	2.59	210	Sn		Sn	16 07 38.2	+0.1
	24nm,0.3s,baz=253,slow=23,SNR=1.3							
KCP	Kidapawan	2.91	218	*eP*		Pn	16 07 24.1	+12
LLP	Lapu-Lapu	3.04	289	*eP*		Pn	16 07 14.6	+0.5
LLP				*eS*		Sn	16 07 51.7	+2.4
CTBH	Cotabato--PC H	3.35	232	*i*	*P*	Pn	16 07 17.3	-0.9
CNP	Catarman	3.85	326	*eP*		Pn	16 07 25.3	+0.3
CNP				*eS*		Sn	16 08 08.9	-0.1
GUIM	Jordan	4.43	287	*eP*		Pn	16 07 24.5	-8.5
LQP	Lukban	7.08	313	*eP*		Pn	16 08 15.9	+6.3
FITZ	Fitzroy Crossi	27.28	183	P		P	16 12 09.3	+0.3
	4.6nm,1.0s,baz=356,slow=6.6,SNR=4.1							
ASAR	Alice Springs	33.50	168	P		P	16 13 04.5	+0.4
	0.4nm,0.8s,baz=351,slow=6.4,SNR=4.6							
H11S3	WAKE ISLAND Hy	39.61	72	T		T	16 56 54.4	
	baz=262,slow=75,SNR=5.0							
H11S1	WAKE ISLAND Hy	39.63	72	T		T	16 56 55.1	
	baz=262,slow=75,SNR=4.8							
H11S2	WAKE ISLAND Hy	39.63	72	T		T	16 56 55.1	
	baz=262,slow=75,SNR=6.8							
MKAR	Makanchi Array	53.14	323	P		P	16 15 41.9	-0.3
	0.2nm,100.0s,baz=127,slow=7.5,SNR=5.4							
KURBB	Kurchatov Arra	57.19	326	P		P	16 16 10.2	-1.0
	0.7nm,0.4s,baz=125,slow=6.9,SNR=7.9							
BVAR	Borovoye Array	62.78	325	P		P	16 16 49.1	-0.5
	0.8nm,0.8s,baz=153,slow=9.7,SNR=4.8							
ARCES	ARCESS Array B	85.28	340	P		P	16 19 00.9	+0.3
	1.1nm,0.7s,baz=74,slow=6.7,SNR=4.8							

*MAN **30** 16:07:27.3, 9°.94N×126°.49E, h255km, mb4.5, ML3.3, MS3.1*
*IDC **30** 16:07:36.4±1.9, 9°.01N×125°.98E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.4/60, mbtmp3.6/6, Error ellipse: s-maj=200.8km s-min=23.2km az=67.0*
ISC 30 16:07:40.4±1.1, **9°.37N**±0°.09×**126°.9E**±0°.1, **h35**km, **n10**, σ1⁰**78**/12, **mb3.7/6**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SCPH	Surigao	1.49	286	*eP*		Pn	16 08 02.8	-1.8
SCPH				*eS*		Sn	16 08 20.5	-2.4
MSLP	Maasin	2.19	291	*eP*		Pn	16 08 14.5	+0.2
MSLP				*eS*		Sn	16 08 43.6	+3.4
BUKP	Musuan	2.38	232	*eP*		Pn	16 08 15.6	-1.3
BUKP				*eS*		Sn	16 08 46.7	+1.8
CNP	Catarman	3.84	325	*eP*		Pn	16 08 25.5	-12
WRA	Warramunga Arr	30.02	166	P		P	16 13 46.7	+0.5
	0.4nm,0.6s,baz=342,slow=9.4,SNR=1.3							
ASAR	Alice Springs	33.53	168	P		P	16 14 16.5	-0.4
	0.4nm,0.8s,baz=347,slow=6.7,SNR=1.5							
MKAR	Makanchi Array	53.14	323	P		P	16 16 54.8	0.0
	0.4nm,0.5s,baz=128,slow=8.1,SNR=2.8							
KURBB	Kurchatov Arra	57.19	325	P		P	16 17 22.7	-1.1
	0.4nm,0.5s,baz=124,slow=6.8,SNR=2.6							
BVAR	Borovoye Array	62.78	325	P		P	16 18 02.3	+0.1
	0.5nm,0.6s,baz=142,slow=7.3,SNR=2.3							
ARCES	ARCESS Array B	85.26	340	P		P	16 20 14.3	+1.0
	0.7nm,0.6s,baz=96,slow=7.3,SNR=3.8							

*IDC **30** 16:10:47.0±0.6, 9°.29N×126°.51E, h0km, mb4.0/19, mb1 4.1/20, mb1mx3.9/57, mbtmp4.0/20, ML4.0/1, Error ellipse: s-maj=30.9km s-min=13.1km az=75.0*
*NEIC **30** 16:10:48.6±1.8, 9°.38N±0°.10×126°.6E±0°.1, h10km±1km, mb4.4/12, Error ellipse: s-maj=22.5km s-min=16.0km az=69.0*
*MAN **30** 16:10:49.9, 9°.35N×126°.92E, h19km, mb5.4, ML4.4, MS4.7*
MAN Internity I - Tandag; Bayaybas; Tago Surigao del Sur.
ISC 30 16:10:56.3±1.0, **9°.36N**±0°.04×**126°.74E**±0°.08, **h77**km±9km, **n52**, σ1⁰**83**/52, **mb4.1**/23, **4C-1D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BIPH	Bislig	1.23	198	*eP*		Pn	16 11 22.4	+4.3
BIPH				*eS*		Sn	16 11 37.1	+2.8
SCPH	Surigao	1.30	289	*eP*		Pn	16 11 14.3	-4.7
SCPH				*eS*		Sn	16 11 33.2	-2.8
MSLP	Maasin	2.01	293	*eP*		Pn	16 11 25.6	-2.6
MSLP				*eS*		Sn	16 11 52.8	+0.2
BUKP	Musuan	2.22	229	*eP*		Pn	16 11 28.1	-3.0
BUKP				*eS*		Sn	16 11 56.1	-1.7
MATI	Mati	2.45	191	*eP*		Pn	16 11 23.6	-11
MATI				*eS*		Sn	16 12 00.2	-3.0
LLP	Lapu-Lapu	2.90	289	*eP*		Pn	16 11 38.5	-1.6
LLP				*eS*		Sn	16 12 16.2	+2.2
CTBH	Cotabato--PC H	3.26	229	*i*	*P*	Pn	16 11 43.0	-2.2
DDMP	Don Marcelino,	3.39	198	*eP*		Pn	16 11 44.0	-3.0
DDMP				*eS*		Sn	16 12 27.9	+1.8
PAGZ	Pagadian	3.65	246	*eP*		Pn	16 11 48.5	-1.9
PAGZ				*eS*		Sn	16 12 33.5	+1.1
GSPH	General Santos	3.71	209	*i*	*P*	Pn	16 11 55.6	+4.3
CNP	Catarman	3.74	327	*eP*		Pn	16 11 49.0	-2.6
CNP				*eS*		Sn	16 12 34.2	-0.2
CNOP	Candoni, Negro	4.07	277	*eP*		Pn	16 11 53.9	-2.3
GUIM	Jordan	4.28	287	*eP*		Pn	16 11 58.7	-0.3
RCP	Roxas	4.50	299	*eP*		Pn	16 12 00.3	-1.7
PVCP	Virac	4.91	329	*eP*		Pn	16 12 06.2	-1.4
JAP	San Jose, Anti	4.92	287	*eP*		Pn	16 12 07.7	-0.1
SIJI	Sorong	11.12	156	Pn		Pn	16 13 29.7	-2.7
	1.1nm,0.3s,baz=326,slow=23,SNR=2.4							
SBUM	Sibu	15.99	245			Pn	16 14 33.6	-3.1
BATI	Baumata	19.68	189	P		P	16 15 20.4	+1.0
	4.6nm,0.3s,baz=319,slow=3.2,SNR=5.0							
JNU	Nakatsue	23.95	9	P		P	16 16 02.2	-1.3
	7.0nm,0.9s,baz=103,slow=3.5,SNR=4.1							
JNU	Nakatsue	23.95	9	IAmb		IAmb	16 16 06.0	
	comp=Z,8.5nm,1.0s							
KNRA	Kununurra	24.96	175	P		P	16 16 12.5	-0.3
IPM	Ipoh	25.98	261	P		P	16 16 22.6	+0.4
IPM				IAmb		IAmb	16 16 26.6	
	comp=Z,12nm,0.9s							
FITZ	Fitzroy Crossi	27.31	182	P		P	16 16 33.3	-0.6
	comp=Z,3.8nm,0.6s,baz=22,slow=20,SNR=2.7							
FITZ	Fitzroy Crossi	27.31	182	IAmb		IAmb	16 16 38.7	
	comp=Z,11nm,1.2s							
KSRS	Korea Array	27.99	2	P		P	16 16 40.0	+0.2
	comp=Z,1.4nm,0.8s,baz=182,slow=9.8,SNR=8.4							
CMAR	Chiang Mai Arr	28.42	292	P		P	16 16 42.9	-1.0
	comp=Z,0.2nm,0.4s,baz=112,slow=6.9,SNR=2.3							
WRA	Warramunga Arr	30.07	166	P		P	16 16 56.7	-1.8
	comp=Z,0.9nm,0.6s,baz=346,slow=9.4,SNR=5.1							
ASAR	Alice Springs	33.56	168	P		P	16 17 28.6	-0.6
	comp=Z,0.6nm,0.5s,baz=351,slow=6.9,SNR=19							
USRK	Ussuriysk Ar.	35.01	7	P		P	16 17 43.5	+2.1
	comp=Z,1.9nm,0.8s,baz=204,slow=9.8,SNR=4.9							
H11S3	WAKE ISLAND Hy	39.74	72	T		T	17 01 24.1	
	baz=262,slow=75,SNR=24							
H11S1	WAKE ISLAND Hy	39.75	72	T		T	17 01 25.1	
	baz=262,slow=75,SNR=12							
H11S2	WAKE ISLAND Hy	39.76	72	T		T	17 01 25.2	
	baz=262,slow=75,SNR=18							
SONM	Songino Array	42.03	340	P		P	16 18 40.5	+0.1
	comp=Z,0.4nm,0.4s,baz=165,slow=7.2,SNR=2.1							
STKA	Stephens Creek	43.40	161	P		P	16 18 51.7	+0.2
	comp=Z,1.8nm,0.7s,baz=8,slow=6.6,SNR=3.0							
STKA	Stephens Creek	43.40	161	IAmb		IAmb	16 18 52.5	
	comp=Z,0.9nm,1.1s							
MK31	Makanchi Array	53.03	323	P		P	16 20 04.7	-0.8
MKAR	Makanchi Array	53.03	323	P		P	16 20 05.2	-0.3
	comp=Z,1.9nm,0.7s,baz=119,slow=8.1,SNR=12							
ZALV	Zalesovo Beam	55.64	331	P		P	16 20 23.8	-0.4
	comp=Z,0.6nm,0.4s,baz=108,slow=4.7,SNR=4.5							
KURK	Kurchatov	57.08	326			P	16 20 33.8	-0.7
KURK				IAmb		IAmb	16 20 37.5	
	comp=Z,3.8nm,0.9s							
KURBB	Kurchatov Arra	57.08	326	P		P	16 20 34.2	-0.4
	comp=Z,1.5nm,0.6s,baz=126,slow=6.8,SNR=15							
GAR	Garm	58.23	310	P		P	16 20 40.6	-2.4
TIXI	Tiksi	62.25	1	P		P	16 21 11.1	+1.5
	comp=Z,1.0nm,0.3s,baz=145,slow=4.9,SNR=7.0							
TIXI	Tiksi	62.25	1	P		P	16 21 08.9	-0.8
BVAR	Borovoye Array	62.67	326	P		P	16 21 13.1	+0.3
	comp=Z,1.5nm,0.7s,baz=120,slow=8.7,SNR=11							
BRVK	Borovoye	62.74	326	P		P	16 21 13.8	+0.5
BRVK				IAmb		IAmb	16 21 14.7	
	comp=Z,3.1nm,0.8s							
ARU	Arti	70.24	327	P		P	16 22 00.6	-0.4
	comp=Z,1.3nm,0.5s,baz=125,slow=12,SNR=6.1							
RAYN	Ar Rayn	78.34	292	P		P	16 22 48.6	-0.3
RAYN				IAmb		IAmb	16 22 49.4	
	comp=Z,2.2nm,0.7s							
ILAR	Eielson Array	80.05	26	P		P	16 22 59.3	+1.9
	comp=Z,0.8nm,0.8s,baz=230,slow=5.9,SNR=6.6							
ARCES	ARCESS Array B	85.20	340	P		P	16 23 25.2	+1.3
	comp=Z,1.7nm,0.6s,baz=84,slow=6.7,SNR=14							
FINES	FINESS Array B	86.91	332	P		P	16 23 33.1	+0.6
	comp=Z,1.2nm,0.7s,baz=86,slow=7.7,SNR=5.0							
YKA	Yellowknife Ar	94.39	24	P		P	16 24 09.5	+2.1
	comp=Z,0.7nm,0.7s,baz=298,slow=4.2,SNR=7.0							

WEL 30 16:15:34.7±0.9, **35°S**±11°×**17°9E**±1°0, **h178**km±26km, **M4.0**/15, **MLv4.0**/15, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	3.24	194		P	Pn	16 16 27.2	+1.0
WMGZ					S	Sn	16 17 04.0	-2.5
HAZ	Te Kaha	3.35	203		P	Pn	16 16 27.7	+0.2
HAZ					S	Sn	16 17 11.1	+2.2
PKGZ	Pakihiroa	3.39	198		P	Pn	16 16 28.9	+0.8
PUZ	Puketiti	3.52	195		P	Pn	16 16 29.6	-0.1
PUZ					S	Sn	16 17 13.0	+0.3
RUGZ	Raukumara Rang	3.58	203		P	Pn	16 16 30.7	+0.3
KUZ	Kuaotunu	3.66	235		P	Pn	16 16 32.2	+0.8
OPRZ	Ohinepanea	3.93	215		P	Pn	16 16 35.0	+0.3
CNGZ	Carnagh Statio	3.93	194		P	Pn	16 16 35.4	+0.6
MWZ	Matawai	3.96	202		P	Pn	16 16 35.4	+0.2
MWZ					S	Sn	16 17 22.7	0.0
TKGZ	Te Karaka	3.97	198		P	Pn	16 16 34.8	-0.5
TKGZ					S	Sn	16 17 23.4	+0.7
URZ	Urewera	4.04	207		P	Pn	16 16 36.1	-0.1
URZ

az=72.0

ISC 30 16:24:44.3±1.0, 9°4N±0°1×127°1E±0°1, h41km, n14, σ1§04/14, mb3.7/7, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	3.18	288	*eP*		Pn	Pn	16 25 32.4	+0.5
LLP				*eS*		Sn	Sn	16 26 08.3	-0.3
TNTI	Ternate	8.54	178	Pn		Pn	Pn	16 26 45.3	-0.3
FAKI	Fak Fak	13.26	157	Pn		Pn	Pn	16 27 50.4	+0.2
YOJ	Yonaguni jima	15.50	346	Pn		Pn	Pn	16 28 19.7	-0.5
SOEI	Soe	19.19	188	P		P	P	16 29 03.5	-1.4
SOEI	comp=Z,23nm,1.2s			IAmb		IAmb	IAmb	16 29 14.6	
FITZ	Fitzroy Crossi	27.32	183	P		P	P	16 30 27.6	+2.2
	comp=Z,1.3nm,0.8s,baz=351,slow=10,SNR=6.6								
FITZ	Fitzroy Crossi	27.32	183	IAmb		IAmb	IAmb	16 30 40.1	
	comp=Z,5.9nm,1.1s								
WB0	Warramunga Arr	29.84	166	P		P	P	16 30 47.2	-0.7
WB0				IAmb		IAmb	IAmb	16 30 49.6	
	comp=Z,8.6nm,1.2s								
WRA	Warramunga Arr	29.99	166	P		P	P	16 30 49.6	+0.3
	comp=Z,0.6nm,0.9s,baz=349,slow=9.3,SNR=1.4								
WB2	Warramunga Arr	30.00	166	P		P	P	16 30 50.9	+1.6
WB2				IAmb		IAmb	IAmb	16 30 56.5	
	comp=Z,12nm,1.5s								
AS31	Alice Springs	33.50	169	P		P	P	16 31 19.4	-0.8
ASAR	Alice Springs	33.51	169	P		P	P	16 31 20.9	+0.7
	comp=Z,0.4nm,0.8s,baz=352,slow=6.7,SNR=6.7								
MKAR	Makanchi Array	53.21	323	P		P	P	16 33 58.6	0.0
	comp=Z,0.7nm,0.8s,baz=110,slow=8.8,SNR=4.1								
ARCES	ARCESS Array B	85.30	340	P		P	P	16 37 16.6	-0.1
	comp=Z,0.4nm,0.7s,baz=56,slow=6.6,SNR=4.1								

*CMWS **30** 16:26:57.5±0.9, 44°.03N×42°.01E, M2.4, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NORS 30 16:26:59.0±0.0, 43°.91N×42°.08E, h0km, MPVA3.6, Explosion, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SHA1	Shidzhatmaz	0.45	112	*e*Pg		Pb	Pb	16 27 09.3	-0.7
SHA1				*e*Sg		Sb	Sb	16 27 17.1	-0.3
NEY	Neytrino	0.81	144	*e*Pg		Pb	Pb	16 27 16.3	+0.3
NEY				*e*Sg		Sn	Sn	16 27 29.4	-1.3
NCK	Nalchik	1.18	110	*e*Pg		Pn	Pn	16 27 23.6	+0.9
NCK				*e*Sg		Sn	Sn	16 27 40.8	+1.3
DIGR	Digorskoe uzhe	1.49	132	*e*Pg		Pg	Pg	16 27 27.5	-0.1
DIGR				*e*Sg		Sn	Sn	16 27 50.0	+2.5
LACR	Lac	1.95	123	*e*Pg		Pg	Pg	16 27 35.9	-0.4
LACR				*e*Sg		Sg	Sg	16 28 02.8	+1.2

MAN 30 16:27:50.6, 9°.22N×126°.69E, h155km, mb4.4, ML3.2, MS3.0, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSLP	Maasin	2.02	297	*e*P		Pn	Pn	16 28 24.7	-1.5
BUKP	Musuan	2.09	230	*e*P		Pn	Pn	16 28 27.5	+0.3
BUKP				*e*S		Sn	Sn	16 28 55.8	+0.5
KCP	Kidapawan	2.71	216	↓*e*P		Pn	Pn	16 28 37.5	+2.8
KCP				*i* S		Sn	Sn	16 29 44.8	+36
LLP	Lapu-Lapu	2.90	292	*e*P		Pn	Pn	16 28 36.8	-0.1
LLP				*e*S		Sn	Sn	16 29 14.0	+1.3
CTBH	Cotabato--PC H	3.13	231	↑*i*P		Pn	Pn	16 28 41.2	+1.4
CNOP	Candoni, Negro	4.04	279	*e*P		Pn	Pn	16 28 51.8	+0.3
RCP	Roxas	4.52	301	↓*e*P		Pn	Pn	16 28 59.2	+1.4

*IDC **30** 16:28:32.0±0.6, 9°.35N×126°.57E, h0km, mb4.2/22, mb1 4.3/24, mb1mx4.2/45, mbtmp4.2/24, ML4.2/2, Error ellipse: s-maj=23.2km s-min=11.2km az=83.0*

*MAN **30** 16:28:32.3, 9°.39N×127°.09E, h10km, mb5.1, ML4.1, MS4.1*

*NEIC **30** 16:28:33.6±2.5, 9°.43N±0°.07×126°.6E±0°.1, h10km±1km, mb4.8/26, Error ellipse: s-maj=18.2km s-min=12.0km az=87.0*

*DJA **30** 16:28:42.0±0.6, 10°.N±5°.×12°.7E±°, h71km±7km, M4.1/19, mb4.5/19, mB4.6/4, MLv4.0/2, Mw(mB)3.8/4*

ISC 30 16:28:39.0±1.0, 9°.43N±0°.04×126°.72E±0°.06, h53km±10km, n113, σ1§88/114, mb4.5/39, MS4.4/4, 3C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SCPH	Surigao	1.26	286	↓*i*P		Pn	Pn	16 28 58.3	-2.0
SCPH				*i* S		Sn	Sn	16 29 16.9	+0.7
BIPH	Bislig	1.29	196	↑*e*P		Pn	Pn	16 29 07.5	+6.8
BIPH				*e*S		Sn	Sn	16 29 22.4	+5.5
MSLP	Maasin	1.96	291	*e*P		Pn	Pn	16 29 10.0	+0.1
MSLP				*e*S		Sn	Sn	16 29 37.8	+4.5
CGP	Cagayan de Oro	2.23	244	↓*e*P		Pn	Pn	16 29 14.9	+1.4
CGP				*e*S		Sn	Sn	16 29 38.9	-0.9
BUKP	Musuan	2.25	227	*e*P		Pn	Pn	16 29 12.4	-1.5
BUKP				*e*S		Sn	Sn	16 29 41.8	+1.3
MATI	Mati	2.51	191	*e*P		Pn	Pn	16 29 13.7	-3.7
DAV	Davao City (W)	2.61	206	Pn		Pn	Pn	16 29 18.4	-0.3
	18nm,0.3s,baz=37,slow=23,SNR=4.6								
DAV				Sn		Sn	Sn	16 29 45.4	-3.8
	47nm,0.3s,baz=242,slow=15,SNR=8.3								
DAV	Davao City (W)	2.61	206			Pn	Pn	16 29 16.7	-2.0
LLP	Lapu-Lapu	2.85	288	*e*P		Pn	Pn	16 29 22.7	+0.6
LLP				*e*S		Sn	Sn	16 30 00.2	+5.0
DDMP	Don Marcelino,	3.46	197	*e*P		Pn	Pn	16 29 30.8	+0.5
DDMP				*e*S		Sn	Sn	16 30 17.8	+7.7
SKMP	Bagumbayan, Su	3.61	217	*e*P		Pn	Pn	16 29 32.7	+0.2
PAGZ	Pagadian	3.66	245	*e*P		Pn	Pn	16 29 31.8	-1.3
CNP	Cataman	3.67	327	*e*P		Pn	Pn	16 29 31.6	-1.6
CNP				*e*S		Sn	Sn	16 30 16.2	+1.0
GSPH	General Santos	3.76	208	↑*i*P		Pn	Pn	16 29 39.0	+4.4
GSPH				*i* S		Sn	Sn	16 30 22.7	+5.0
CNOP	Candoni, Negro	4.04	276	*e*P		Pn	Pn	16 29 37.9	-0.5
GUIM	Jordan	4.24	287	*e*P		Pn	Pn	16 29 40.5	-0.5
GUIM				*e*S		Sn	Sn	16 30 31.7	+2.4
RCP	Roxas	4.44	299	↑*e*P		Pn	Pn	16 29 44.0	+0.1
PVCP	Virac	4.84	329	*e*P		Pn	Pn	16 29 50.2	+0.9
JAP	San Jose, Anti	4.88	286	↓*e*P		Pn	Pn	16 29 52.2	+2.3
TNTI	Ternate	8.63	176	P		Pn	Pn	16 30 47.3	+6.0
	674nm57nm,0.9s								
TNTI	Ternate	8.63	176	Pn		Pn	Pn	16 30 41.5	+0.2
KMSI	Cibinong	9.21	197	P		Pn	Pn	16 30 54.8	+5.5
	42nm,1.0s								
LBMI	Labuha	10.04	176	P		Pn	Pn	16 31 07.4	+6.8
	817nm37nm,1.1s								
MRSI	Marisa	10.09	208	P		Pn	Pn	16 31 06.7	+5.4
	25nm,0.7s								
SIJI	Sorong	11.19	156	Pn		Pn	Pn	16 31 15.2	-1.2
	0.5nm,0.3s,baz=313,slow=23,SNR=2.6								
FAKI	Fak Fak	13.45	156	Pn		Pn	Pn	16 31 46.6	-0.7
TTSI	Tana Toraja	14.18	209	P		P	P	16 32 01.8	-1.3
	16nm,1.0s								
TPUB	Ta-pu	14.97	338	Pn		Pn	Pn	16 32 05.0	-2.4
SPSI	Sidrap Palu	15.00	208	P		P	P	16 32 14.1	+1.8
	17nm,1.1s								
BNSI	Bone	15.24	206	P		P	P	16 32 14.9	0.0
	36nm,1.1s								
SMPI	Sarmi	16.48	133	P		P	P	16 32 28.8	+0.2
	23nm,1.4s								
SOEI	Soe	19.22	187	P		Pn	Pn	16 33 03.8	+3.4
	34nm,1.0s								
BATI	Baumata	19.75	189	P		P	P	16 33 03.4	-1.3
	3.2nm,0.3s,baz=6.2,slow=3.9,SNR=5.5								
BATI	Baumata	19.75	189	P		Pn	Pn	16 33 09.6	+3.1
	41nm,1.1s								
NJ2	Nanjing	23.66	343	*e*P		P	P	16 33 47.5	+1.8
NJ2				pmax		pmax	pmax		
	comp=Z,27nm,0.5s								
JNU	Nakatsue	23.89	9	P		P	P	16 33 47.9	+0.1
	comp=Z,5.7nm,0.9s,baz=175,slow=8.6,SNR=3.9								
JNU	Nakatsue	23.89	9	IAmb		IAmb	IAmb	16 33 50.3	
	comp=Z,9.0nm,1.0s								
SLVN	Son La	24.93	301			P	P	16 33 57.1	-0.5
KNRA	Kununurra	25.03	175	P		P	P	16 33 57.9	-0.4
KNRA				IAmb		IAmb	IAmb	16 34 10.9	
	comp=Z,12nm,0.8s								
IPM	Ipoh	25.97	261			P	P	16 34 04.4	-2.5
IPM				IAmb		IAmb	IAmb	16 34 08.5	
	comp=Z,18nm,0.8s								
KULM	Kulim	26.17	263	P		P	P	16 34 05.7	-3.1
KULM				IAmb		IAmb	IAmb	16 34 22.9	
	comp=Z,27nm,1.5s								
FITZ	Fitzroy Crossi	27.38	182	P		P	P	16 34 18.8	-0.7
	comp=Z,7.3nm,0.7s,baz=17,slow=11,SNR=12								
FITZ	Fitzroy Crossi	27.38	182	P		P	P	16 34 19.3	-0.1
FITZ				IAmb		IAmb	IAmb	16 34 26.4	
	comp=Z,22nm,1.4s								
KSRS	Korea Array	27.92	2	P		P	P	16 34 25.7	+1.6
	comp=Z,1.7nm,0.9s,baz=181,slow=10,SNR=11								
TIA	Tai'an	28.05	343	P		P	P	16 34 26.0	+0.6
TIA				pmax		pmax	pmax		
	comp=Z,10.0nm,0.9s								
MNSI	Mandailing Nat	28.34	254	P		P	P	16 34 29.5	+1.3
CM31	Chiang Mai Arr	28.38	291	P		P	P	16 34 26.3	-2.2
CMAR	Chiang Mai Arr	28.38	291	P		P	P	16 34 28.3	-0.2
	comp=Z,1.0nm,0.7s,baz=101,slow=7.4,SNR=9.1								
PSI	Prapat	28.40	258	P		P	P	16 34 28.6	-0.2
	comp=Z,11nm,1.0s,baz=5.5,slow=0.2,SNR=8.0								
RPSI	Rantau Prapat	28.42	258	P		P	P	16 34 28.6	-0.3
XAN	Xi'an	29.45	329	P		P	P	16 34 36.3	-1.6
XAN				pP		sP	sP	16 34 50.5	-5.0
XAN				sP		pwP	pwP	16 34 58.3	+1.8
XAN				pmax		pmax	pmax		
	comp=Z,6.0nm,0.7s								
XAN				LR		LR	LR		
	comp=N,500nm,17.3s								
XAN				LR		LR	LR		
	comp=E,520nm,18.4s								
XAN				LR		LR	LR		
	comp=Z,530nm,15.2s								
WRA	Warramunga Arr	30.14	166	P		P	P	16 34 42.3	-1.8
	comp=Z,1.2nm,0.6s,baz=347,slow=9.0,SNR=6.2								
CD2	Chengdu	30.23	318	P		P	P	16 34 44.0	-0.8
BJI	Beijing	31.89	345	P		P	P	16 35 00.3	+1.0
BJI				pmax		pmax	pmax		
	comp=Z,11nm,1.1s								
ASAR	Alice Springs	33.64	168	P		P	P	16 35 13.7	-1.1
	comp=Z,0.9nm,0.5s,baz=360,slow=7.8,SNR=11								
ASAR				PcP		PcP	PcP	16 37 54.0	0.0
	comp=Z,0.5nm,0.7s,baz=346,slow=2.4,SNR=4.2								
LZH	Lanzhou	33.71	325	*e*P		P	P	16 35 19.5	+4.0
LZH				pP		pP		16 35 22.3	-5.2
LZH				sP		sP		16 35 24.8	-8.3
LZH				PP		PnPn		16 36 25.3	-3.7
LZH				pmax		pmax			
	comp=Z,26nm,1.1s								
LZH				pmax		pmax			
	comp=Z,120nm,4.9s								
LZH				LR		LR			
	comp=N,390nm,14.6s								
LZH				LR		LR			
	comp=E,460nm,13.6s								
LZH				LR		LR			
	comp=Z,4μm,15.0s								
HHC	Hu-ho-hao-te	34.05	339	*e*P		P	P	16 35 19.3	+1.0
HHC				*e*S		S	S	16 40 43.0	+2.7
HHC				sS		sS		16 40 53.0	-7.0
HHC				pmax		pmax			
	comp=Z,12nm,1.1s								
HHC				pmax		pmax			
	comp=Z,60nm,6.8s								
HHC				LR		LR			
	comp=N,710nm,16.3s								
HHC				LR		LR			
	comp=E,420nm,17.5s								
HHC				LR		LR			
	comp=Z,790nm,17.3s								
USRK	Ussuriysk Ar.	34.94	7	P		P	P	16 35 26.7	+1.0
	comp=Z,2.0nm,0.7s,baz=199,slow=8.0,SNR=5.5								
MDJ	Mudanjiang	35.14	4	P		P	P	16 35 29.7	+2.2
MDJ				IAmb		IAmb	IAmb	16 35 42.8	
	comp=Z,12nm,1.1s								
MORW	Morawa	39.64	195	P		P	P	16 36 05.0	-0.7
MORW				IAmb		IAmb	IAmb	16 36 05.6	
	comp=Z,33nm,1.4s								
H11S3	WAKE ISLAND Hy	39.74	72	T		T	T	17 19 02.9	
	baz=262,slow=75,SNR=20								
H11S1	WAKE ISLAND Hy	39.75	72	T		T	T	17 19 10.9	
	baz=262,slow=75,SNR=19								
H11S2	WAKE ISLAND Hy	39.76	72	T		T	T	17 19 05.5	
	baz=262,slow=75,SNR=24								
KLR	Kul'dur	39.89	5	P		P	P	16 36 09.0	+1.4
	comp=Z,0.9nm,0.5s,baz=191,slow=8.8,SNR=5.8								
FORT	Forrest	40.00	178	P		P	P	16 36 07.8	-0.9
H11N1	WAKE ISLAND Hy	40.10	71	T		T	T	17 19 48.8	
	baz=265,slow=74,SNR=16								
H11N2	WAKE ISLAND Hy	40.11	71	T		T	T	17 19 48.9	
	baz=265,slow=74,SNR=13								
H11N3	WAKE ISLAND Hy	40.12	71	T		T	T	17 19 50.2	
	baz=265,slow=74,SNR=15								
TAPN	Taplejung	40.86	301	*e*P		P	P	16 36 15.4	-0.9
	comp=Z,15nm,0.5s								
ODAN	Odare	40.98	300	*e*P		P	P	16 36 16.2	-1.0
	comp=Z,45nm,0.7s								
RAMN	Ramite	41.68	300	*e*P		P	P	16 36 22.4	-0.6
	comp=Z,21nm,0.7s								
SONM	Songino Array	41.95	340	P		P	P	16 36 25.2	+0.5
	comp=Z,0.8nm,0.6s,baz=163,slow=12,SNR=4.7								
JIRN	Jiri	42.24	301	*e*P		P	P	16 36 26.9	-0.8
	comp=Z,64nm,0.6s								
GUN	Gumba	42.57	301	*e*P		P	P	16 36 29.3	-1.1
	comp=Z,39nm,0.8s								
PKI	Pulchoki	42.87	301	*e*P		P	P	16 36 31.2	-1.6
	comp=Z,8.5nm,0.6s								
PKIN	Phulchoki	42.88	301	*e*P		P	P	16 36 31.0	-1.8
	comp=Z,11nm,0.6s								
BBOO	Buckleboo	42.94	168	P		P	P	16 36 33.5	+0.7
BBOO				IAmb		IAmb	IAmb	16 36 39.0	
	comp=Z,29nm,1.2s								
NWAO	Narrogin (SRO)	43.08	192	P		P	P	16 36 33.9	-0.1
	comp=Z,15nm,0.8s,baz=23,slow=7.9,SNR=7.4								
NWAO	Narrogin (SRO)	43.08	192	P		P	P	16 36 33.6	-0.3
NWAO				IAmb		IAmb	IAmb	16 36 34.5	
	comp=Z,12nm,0.8s								
NWAO	Narrogin (SRO)	43.08	192	P		P	P	16 36 33.6	-0.3
NWAO				IAmb		IAmb	IAmb	16 36 34.5	
	comp=Z,16nm,0.8s								
STKA	Stephens Creek	43.47	161	P		P	P	16 36 36.4	-0.6
	comp=Z,1.1nm,0.5s,baz=323,slow=9.9,SNR=3.8								
STKA	Stephens Creek	43.47	161	P		P	P	16 36 36.0	-1.1
DANN	Dangsing	44.49	301	*e*P		P	P	16 36 44.1	-1.7
	comp=Z,30nm,0.6s								
WMQ	Urumqi	48.15	322	*e*P		P	P	16 37 15.0	+1.0
WMQ				LR		LR			
	comp=N,130nm,16.9s								
WMQ				LR		LR			
	comp=E,300nm,17.1s								
WMQ				LR		LR			
	comp=Z,170nm,17.1s								
MK31	Makanchi Array	52.96	323	P		P	P	16 37 49.7	-0.4
MKAR	Makanchi Array	52.96	323	P		P	P	16 37 50.1	-0.1
	comp=Z,5.7nm,0.7s,baz=124,slow=8.1,SNR=33								
KZA	Kyzart	55.51	315	P		P	P	16 38 10.0	+0.7
	SNR=7.1								
ZALV	Zalesovo Beam	55.57	331	P		P	P	16 38 08.1	-0.9
	comp=Z,2.8nm,0.7s,baz=130,slow=6.0,SNR=11								
KBK	Karagaybulak	55.92	316	P		P	P	16 38 12.0	0.0
	SNR=6.0								
UCH	Uchtor	56.08	315	P		P	P	16 38 14.0	+0.6
	SNR=16								
AML	Almayashu	56.62	315	P		P	P	16 38 17.2	0.0
	SNR=11								
EKS2	Erkin-Say	56.73	315	P		P	P	16 38 17.9	+0.3
	SNR=6.3								
KURK	Kurchatov	57.00	326	P		P	P	16 38 18.3	-0.9
KURK				IAmb		IAmb	IAmb	16 38 19.8	
	comp=Z,11nm,0.8s								
GAR	Garm	58.16	310	P		P	P	16 38 26.0	-1.8
CHGR	Chuyangaron	58.96	310	P		P	P	16 38 32.8	-0.5
KK31	Karatay Array	59.15	315	P		P	P	16 38 34.5	0.0
KK31				IAmb		IAmb	IAmb	16 38 34.6	
	comp=Z,6.4nm,0.8s								
TIXI	Tiksi	62.18	1	P		P	P	16 38 56.1	+1.7
TIXI				IAmb		IAmb	IAmb	16 39 08.1	
	comp=Z,7.1nm,0.7s								
JOHN	Johnston Islan	62.31	76	P		P	P	16 38 56.0	-0.3
ADK	Adak	62.33	36	P		P	P	16 38 57.0	+1.2
BRVK	Borovoye	62.67	326	P		P	P	16 38 58.2	+0.1
BRVK				IAmb		IAmb	IAmb	16 38 58.8	
	comp=Z,9.6nm,0.8s								
GEYT	Alibeck	67.40	307	P		P	P	16 39 28.3	-0.9
	comp=Z,1.5nm,0.6s,baz=140,slow=7.8,SNR=4.0								
ARU	Arti	70.16	327	P		P	P	16 39 45.3	-0.6
RAYN	Ar Rayn	78.29	292	P		P	P	16 40 33.0	-1.0
RAYN				IAmb		IAmb	IAmb	16 40 34.0	
	comp=Z,8.3nm,0.7s								
ILAR	Eielson Array	80.00	26	P		P	P	16 40 44.3	+1.9
	comp=Z,0.5nm,0.8s,baz=254,slow=5.3,SNR=4.9								
KLMR	Klimovskoe	80.47	330	*e*P		P	P	16 40 43.7	-1.3
KLMR				AMP				16 40 45.7	
	comp=Z,12nm,0.7s								
OPO	Ambohidratompo	83.19	250	P		P	P	16 40 58.5	-1.9
	comp=Z,2.1nm,0.6s,baz=45,slow=1.4,SNR=1.9								
ARCES	ARCESS Array B	85.13	340	P		P	P	16 41 09.7	+0.6
	comp=Z,3.7nm,0.6s,baz=77,slow=6.4,SNR=17								
FINES	FINESS Array B	86.83	332	P		P	P	16 41 18.8	+1.2
	comp=Z,1.3nm,0.5s,baz=72,slow=5.7,SNR=15								
AKASG	Malin Array Be	87.49	321	P		P	P	16 41 20.7	-0.3
	comp=Z,0.8nm,0.5s,baz=71,slow=4.3,SNR=4.2								
HFS	Hagfors	92.99	333	P		P	P	16 41 46.3	-0.3
	comp=Z,0.9nm,0.6s,baz=67,slow=13,SNR=1.8								
YKA	Yellowknife Ar	94.34	24	P		P	P	16 41 54.3	+1.7
	comp=Z,0.4nm,0.6s,baz=289,slow=4.5,SNR=3.6								
CLL	Collm	97.03	325	*e*PP		PP	PP	16 46 00.0	-1.0
TORD	Torodi Ar. Bea	120.98	291	PKP		PKPdf	PKPdf	16 47 25.8	-0.8
	comp=Z,0.6nm,0.8s,baz=28,slow=3.2,SNR=2.4								

IDC 30 16:29:07.2±3.7, 9°.03S×113°.11E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.4/40, mbtmp3.7/4, Error ellipse: s-maj=223.4km s-min=22.3km az=48.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.21	120	P		P	P	16 34 15.7	-0.4
	0.6nm,0.8s,baz=301,slow=11,SNR=7.5								
ASAR	Alice Springs	24.65	129	P		P	P	16 34 30.2	+0.4
	0.3nm,0.4s,baz=301,slow=8.8,SNR=12								
H08S2	Diego Garcia H	40.19	269	T		T	T	17 19 29.4	
	baz=95,slow=75,SNR=11								
H08S3	Diego Garcia H	40.20	269	T		T	T	17 19 24.5	
	baz=95,slow=75,SNR=13								
H08S1	Diego Carcia H	40.21	269	T		T	T	17 19 28.8	
	baz=95,slow=75,SNR=10								
MKAR	Makanchi Array	52.00	337	P		P	P	16 39 29.4	+0.2
	1.5nm,0.4s,baz=149,slow=7.0,SNR=9.7								
ZALV	Zalesovo Beam	67.15	342	P		P	P	16 40 02.3	-0.3
	1.4nm,0.6s,baz=143,slow=6.8,SNR=4.9								

*IDC **30** 16:36:20.4±0.3, 9°.37N×126°.53E, h0km, mb4.8/35, mb1 4.9/37, mb1mx4.9/40, mbtmp4.8/37, ML4.8/3, MS4.5/33, Ms1 4.5/33, ms1mx4.4/42, Error ellipse: s-maj=14.5km s-min=8.5km az=79.0*

*NEIC **30** 16:36:21.8±2.7, 9°.44N±0°.06×126°.61E±0°.08, h10km±1km, mb5.1/85, Error ellipse: s-maj=13.5km s-min=8.9km az=72.0*

*BJI **30** 16:36:21.0±0.0, 9°.60N×126°.70E, h10km, mB5.0/60, mb4.9/75, Ms4.9/76, Ms7 4.8/72*

*MAN **30** 16:36:22.2, 9°.42N×126°.93E, h31km, mb5.7, ML4.7, MS5.1*

*MOS **30** 16:36:23.5±1.1, 9°.35N×126°.44E, h36km, mb5.4/31, MS4.6/7, Error ellipse: s-maj=10.6km s-min=4.9km az=112.2*

*GCMT **30** 16:36:26.8±0.2, 9°.40N±0°.01×126°.72E±0°.01, h20km, MW5.3/127, Moment Tension Solution. s76,c99; s127,c205; Duration: 1§0 Moment tensor: Scale 10^17 Nm; Mrr0.80±.03; Mθθ0.04±.02; Mϕϕ-0.84±.02; Mrθ-0.03±.03; Mθϕ0.02±.01; Mϕr0.52±.03; Best double couple: M₀0.97200×10^17 NP1:ϕs179.00000°, δ29.00000°, λ92.00000°. NP2:ϕs358.00000°, δ61.00000°, λ89.00000°. Principal axes: T 0.9510, Plg74.0000°, Azm266.0000°; N 0.0420, Plg1.0000°, Azm358.0000°; P -0.9930, Plg16.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **30** 16:36:29.1±0.3, 9°.N±2°.×12°.7E±°, h68km±3km, M4.8/90, mB5.4/54, mb5.1/90, MLv4.5/2, Mw(mB)4.8/54, Mwp5.5/1*

*KLM **30** 16:36:32.0, 9°.38N×126°.80E, h114km, mb5.0*

ISC 30 16:36:25.2±0.8, 9°.43N±0°.03×126°.66E±0°.04, h30km±5km, n511, σ1§66/522, mb5.1/150, MS4.6/57, 35C-11D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SCPH	Surigao	1.21	287	↑*i*P		Pn	Pn	16 36 46.6	+0.5
SCPH				*i* S		Sb	Sb	16 37 03.4	+0.7
BIPH	Bislig	1.27	194	↓*e*P		Pb	Pb	16 36 55.7	+7.1
BIPH				*e*S		Sb	Sb	16 37 10.2	+5.6
MSLP	Maasin	1.91	292	*e*P		Pn	Pn	16 36 57.9	+2.2
MSLP				*e*S		Sb	Sb	16 37 26.1	+3.3
CGP	Cagayan de Oro	2.17	244	↓*e*P		Pn	Pn	16 37 00.8	+1.5
CGP				*e*S		Sn	Sn	16 37 28.6	+3.3
BUKP	Musuan	2.21	226	*e*P		Pn	Pn	16 37 00.9	+1.0
BUKP				*e*S		Sb	Sb	16 37 30.4	-1.1
MATI	Mati	2.50	189	*e*P		Pn	Pn	16 37 02.1	-1.8
DAV	Davao City (W)	2.58	205	Pn		Pn	Pn	16 37 06.3	+1.3
	174nm,0.3s,baz=105,slow=4.6,SNR=12								
DAV				Sn		Sn	Sn	16 37 37.3	+2.0
	355nm,0.3s,baz=87,slow=20,SNR=5.5								
DAV				L

1µm69nm,1.1s
NLAI Namlea 12.59 178 P **Pn** **16 39 25.1 +2.7**
843nm67nm,0.9s
MSAI Masohi 12.89 170 P **Pn** **16 39 29.3 +2.8**
317nm22nm,0.9s
AAI Ambon 13.12 173 P **Pn** **16 39 33.2 +3.6**
52nm,1.2s
RKPI Ransiki, Papua 13.20 145 P **Pn** **16 39 33.1 +2.4**
8µm118nm,0.8s
FAKI Fak Fak 13.47 155 P **Pn** **16 39 34.9 +0.4**
2µm101nm,1.4s
FAKI Fak Fak 13.47 155 Pn **Pn** **16 39 33.6 -0.8**
TTSI Tana Toraja 14.15 209 P **Pn** **16 39 45.5 +1.8**
1µm81nm,0.9s
YULB Yu-li 14.80 340 Pn **Pn** **16 39 50.5 -2.1**
TPUB Ta-pu 14.95 338 P **Pn** **16 39 51.8 -2.8**
SPSI Sidrap Palu 14.98 208 P **P** **16 40 00.5 +0.4**
2µm58nm,1.0s
BNSI Bone 15.21 206 P **P** **16 40 01.3 -1.4**
2µm120nm,1.1s
SSLB Suanglung 15.28 340 Pn **Pn** **16 39 56.6 -2.3**
BBSI Bau Bau 15.37 196 P **P** **16 40 05.4 +0.9**
61nm7.0nm,0.8s
KAPI Kappang 15.92 206 Pn **Pn** **16 40 08.5 +1.3**
0.3nm,0.3s,baz=29,slow=11,SNR=1.9
KAPI LR LR 16 46 43.9
comp=Z,2µm,19.7s,baz=34,slow=40
KAPI Kappang 15.92 206 P **Pn** **16 40 08.5 +1.3**
KAPI pmax pmax
comp=Z,51nm,1.1s
SBUM Sibu 15.95 245 **Pn** **16 40 05.8 -1.7**
SBUM IAmb IAmb 16 40 22.1
comp=Z,116nm,1.2s
SBUM Sibu 15.95 245 P **P** **16 40 11.0 +0.1**
YHNB Yeheng 15.97 342 Pn **Pn** **16 40 06.0 -1.9**
BKSI Bulukumba 16.04 204 P **P** **16 40 12.1 +0.2**
comp=Z,1µmcomp=Z,44nm,0.9s
KBKI Kotabaru 16.41 220 P **P** **16 40 18.0 +2.0**
comp=Z,612nmcomp=Z,51nm,1.0s
SMPI Sarmi 16.52 133 P **Pn** **16 40 14.8 0.0**
comp=Z,2µmcomp=Z,102nm,1.6s
QZH Quanzhou 17.23 335 P **P** **16 40 30.3 +5.2**
QZH S **S** **16 43 47.5 +4.4**
QZH LR LR
comp=N,3µm,17.1s
QZH LR LR
comp=E,1µm,18.4s
QZH LR LR
comp=Z,3µm,16.9s
JOW Kunigami 17.38 5 P **P** **16 40 28.9 +2.2**
comp=Z,0.1nm,0.3s,baz=170,slow=12,SNR=6.8
GENI Genyem 17.99 131 P **P** **16 40 36.2 +2.7**
comp=Z,5µmcomp=Z,2µmcomp=Z,114nm,0.8s
DLV T Lat 18.04 280 P **P** **16 40 35.7 +1.4**
KSM Kuching 18.09 245 P **P** **16 40 35.6 +1.0**
KSM IAmb IAmb 16 40 39.4
comp=Z,101nm,0.9s
KSM Kuching 18.09 245 P **P** **16 40 38.0 +3.4**
JAY Jayapura 18.35 130 P **Pn** **16 40 38.1 +0.5**
comp=Z,0.5nm,0.3s,baz=292,slow=5.2,SNR=11
JAY LR LR 16 47 21.6
comp=Z,3µm,19.2s,baz=316,slow=36
JAY Jayapura 18.35 130 P **Pn** **16 40 37.9 +0.3**
comp=Z,651nmcomp=Z,29nm,1.2s
MMRI Maumere 18.48 194 P **Pn** **16 40 42.1 +2.9**
comp=Z,2µmcomp=Z,126nm,0.9s
MMRI Maumere 18.48 194 Pn **Pn** **16 40 41.8 +2.6**
MMRI IAmb IAmb 16 40 51.8
comp=Z,139nm,1.1s
EDFI Ende, Flores 18.73 195 P **Pn** **16 40 43.6 +1.3**
comp=Z,398nmcomp=Z,36nm,1.2s
QIZ Qiongzhong 18.87 302 P **P** **16 40 42.5 -0.7**
QIZ S **S** **16 44 17.0 +0.8**
QIZ pmax pmax
comp=Z,15nm,0.8s
QIZ pmax pmax
comp=Z,1µm,8.8s
QIZ LR LR
comp=Z,1µm,18.6s
QIZ LR LR
comp=Z,2µm,16.9s
QIZ LR LR
comp=Z,2µm,17.2s
QIZ Qiongzhong 18.87 302 P **P** **16 40 42.2 -1.0**
SOEI Soe 19.21 187 P **Pn** **16 40 49.8 +1.7**
comp=Z,3µmcomp=Z,226nm,0.9s
SOEI Soe 19.21 187 P **P** **16 40 47.6 +0.5**
SOEI IAmb IAmb 16 41 10.5
comp=Z,163nm,0.8s
BATI Baumata 19.74 189 P **P** **16 40 52.8 +0.1**
comp=Z,29nm,0.3s,baz=344,slow=2.1,SNR=40
BATI LR LR 16 49 41.0
comp=Z,712nm,19.1s,baz=10.0,slow=41
BATI Baumata 19.74 189 P **P** **16 40 52.8 +0.1**
comp=Z,2µmcomp=Z,213nm,0.9s
PLAI Plampang 20.18 206 P Pn 16 41 02.0 +2.4
comp=Z,1µmcomp=Z,134nm,0.9s
WBSI Waikabubak, Su 20.28 201 P Pn 16 41 01.1 +0.3
comp=Z,80nm,1.0s
JAGI Jajag, Banyuwa 21.71 215 P **P** **16 41 16.3 +2.2**
comp=Z,55nm,0.8s
SSE Sheshan 22.15 347 P **P** **16 41 19.3 +0.7**
SSE S **S** **16 45 22.5 +1.4**
SSE pmax pmax
comp=Z,27nm,1.4s
SSE pmax pmax
comp=Z,320nm,5.9s
SSE LR LR
comp=Z,700nm,14.3s
SSE LR LR
comp=Z,310nm,15.5s
TPI Tanjungpandan 22.48 238 P **P** **16 41 23.0 +0.7**
comp=Z,878nmcomp=Z,37nm,1.2s
MTN Manton Dam 22.57 169 P **P** **16 41 22.1 -1.2**
baz=22,SNR=46
MTN Manton Dam 22.57 169 P **P** **16 41 21.9 -1.3**
MTN IAmb IAmb 16 41 54.0
comp=Z,62nm,0.9s
KDU Kakadu 22.72 165 P **P** **16 41 22.8 -2.0**
baz=23,SNR=43
SMRI Semarang 23.01 225 P **P** **16 41 28.4 +0.5**
comp=Z,103nm,1.2s
WOJI Wonogiri, Jawa 23.24 223 P **P** **16 41 32.4 +2.2**
comp=Z,54nm,2.4s
UGM Wanagama 23.57 224 P **P** **16 41 35.0 +1.6**
comp=Z,97nm,1.4s
TPRI Tanjung Pinang 23.59 250 P **P** **16 41 34.7 +1.0**
comp=Z,7µmcomp=Z,31nm,0.9s
NJ2 Nanjing 23.64 343 *e*P **P** **16 41 34.5 +0.5**
NJ2 sP **pP** **16 41 39.3 -1.3**
NJ2 pmax pmax
comp=Z,82nm,1.0s
NJ2 pmax pmax
comp=Z,430nm,3.5s
NJ2 LR LR
comp=Z,2µm,14.2s
NJ2 LR LR
comp=Z,940nm,11.4s
NJ2 LR LR
comp=Z,2µm,19.0s
JNU Nakatsue 23.89 9 P **P** **16 41 36.7 +0.3**
comp=Z,24nm,0.9s,baz=159,slow=4.3,SNR=17
JNU LR LR 16 51 05.7
comp=Z,693nm,20.1s,baz=191,slow=37
JNU Nakatsue 23.89 9 P **P** **16 41 37.1 +0.6**
MYKOM Kota Tinggi 23.92 253 P **P** **16 41 37.0 +0.1**
MYKOM IAmb IAmb 16 41 39.2
comp=Z,101nm,1.0s
MYKOM Kota Tinggi 23.92 253 P **P** **16 41 38.0 +1.2**
WHN Wuhan 23.94 333 P **P** **16 41 37.5 +0.7**
WHN pmax pmax
comp=Z,91nm,1.0s
WHN pmax pmax
comp=Z,830nm,9.3s
WHN LR LR
comp=Z,2µm,11.9s
WHN LR LR
comp=Z,4µm,21.6s
WHN LR LR
comp=Z,5µm,17.3s
KGM Kluang 24.35 254 P **P** **16 41 42.0 +1.2**
SLVN Son La 24.89 301 P **P** **16 41 44.8 -0.9**
LEM Lembang 24.92 230 P **P** **16 41 46.1 0.0**
comp=Z,41nm,0.9s,baz=30,slow=9.6,SNR=7.1
LEM Lembang 24.92 230 P **P** **16 41 47.2 +1.1**
comp=Z,52nm,0.9s
PMBI Palembang 25.03 242 P **P** **16 41 50.3 +3.4**
comp=Z,247nm,0.4s
KNRA Kununurra 25.03 175 P **P** **16 41 45.4 -1.4**
baz=25,SNR=32
KNRA Kununurra 25.03 175 P **P** **16 41 45.5 -1.4**
KNRA IAmb IAmb 16 41 50.4
comp=Z,61nm,0.7s
CISI Cisompet, Garu 25.25 229 P **P** **16 41 50.1 +1.2**
comp=Z,1µmcomp=Z,84nm,1.4s
CBJI Citeko 25.25 232 P **P** **16 41 51.2 +2.3**
comp=Z,202nm,1.2s
TNG Tangerang 25.26 233 P **P** **16 41 50.2 +1.2**
comp=Z,17µmcomp=Z,1µm,0.5s
GYA Guiyang 25.41 314 *e*P **P** **16 41 51.3 +0.9**
GYA PP **PnPn** **16 42 31.0 +4.9**
GYA S **S** **16 46 11.5 -4.0**
GYA SS **SnSn** **16 47 13.0 +4.0**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,200nm,8.7s
GYA LR LR
comp=Z,1µm,14.2s
GYA LR LR
comp=Z,1µm,17.7s
GYA LR LR
comp=Z,2µm,16.0s
DBJI Dramaga 25.41 232 P P 16 42 03.5 +13
CNJI Cibinong 25.60 230 P P 16 42 04.5 +12
IPM Ipoh 25.91 261 P **P** **16 41 55.0 0.0**
IPM IAmb IAmb 16 41 57.2
comp=Z,88nm,0.9s
IPM Ipoh 25.91 261 P **P** **16 41 55.0 0.0**
RGRI Rengat 26.10 249 P **P** **16 41 58.2 +1.5**
comp=Z,81µmcomp=Z,74nm,0.4s
KULM Kulim 26.12 263 P **P** **16 41 56.9 +0.1**
KULM IAmb IAmb 16 42 11.2
comp=Z,56nm,1.3s
KULM Kulim 26.12 263 P **P** **16 41 58.0 +1.2**
JHJ Hachijo jima 2 26.50 25 LR LR 16 52 46.7
comp=Z,918nm,18.9s,baz=240,slow=37
LHSI Lahat 26.56 241 P P 16 42 15.7 +15
KASI Kota Agung 26.62 237 P **P** **16 42 00.7 -0.7**
comp=Z,54nm,1.3s
LWLI Liwa 26.71 238 P **P** **16 42 02.2 -0.1**
comp=Z,2µmcomp=Z,131nm,0.8s
TJN Taejon 26.83 1‖ *e*P **P** **16 42 02.8 -0.2**
BKNI Bangkinang 27.06 252 P **P** **16 42 07.4 +2.1**
comp=Z,1µmcomp=Z,60nm,0.6s
FITZ Fitzroy Crossi 27.37 182 P **P** **16 42 06.4 -1.6**
baz=27,SNR=55
FITZ Fitzroy Crossi 27.37 182 P **P** **16 42 06.5 -1.6**
comp=Z,48nm,0.8s,baz=15,slow=9.5,SNR=32
FITZ LR LR 16 55 20.8
comp=Z,364nm,18.1s,baz=75,slow=42
FITZ Fitzroy Crossi 27.37 182 P **P** **16 42 06.6 -1.4**
FITZ IAmb IAmb 16 42 10.9
comp=Z,48nm,0.8s
KMI Kunming 27.59 307 P **P** **16 42 07.8 -2.4**
KMI pmax pmax
comp=Z,26nm,0.5s
KMI pmax pmax
comp=Z,110nm,4.3s
KMI LR LR
comp=Z,990nm,17.1s
KMI LR LR
comp=Z,1µm,20.5s
KMI LR LR
comp=Z,2µm,18.3s
KRJI Kerinci 27.59 247 P **P** **16 42 09.8 -0.4**
comp=Z,2µmcomp=Z,97nm,0.8s
PMG Port Moresby 27.69 132 P **P** **16 42 09.9 -1.0**
comp=Z,34nm,1.0s,baz=344,slow=11,SNR=6.4
PMG LR LR 16 54 53.2
comp=Z,879nm,18.2s,baz=320,slow=40
PMG Port Moresby 27.69 132‖ *e*P **P** **16 42 10.0 -0.9**
PMG pmax pmax
comp=Z,170nm,1.0s
PMG Port Moresby 27.69 132 P **P** **16 42 09.6 -1.3**
PMG IAmb IAmb 16 42 14.0
comp=Z,42nm,0.9s
KSRS Korea Array 27.92 2 P **P** **16 42 13.8 +1.0**
comp=Z,5.6nm,0.8s,baz=179,slow=10,SNR=38
KSRS PcP **PcP** **16 45 29.2 +1.3**
comp=Z,1.3nm,1.0s,baz=199,slow=2.4,SNR=4.7
KSRS LR LR 16 54 57.5
comp=Z,1µm,19.2s,baz=180,slow=40
TIA Tai'an 28.04 343 P **P** **16 42 14.0 +0.2**
TIA S **S** **16 47 01.3 +4.7**
TIA pmax pmax
comp=Z,45nm,1.1s
TIA pmax pmax
comp=Z,510nm,9.7s
TIA LR LR
comp=Z,840nm,19.2s
TIA LR LR
comp=Z,620nm,12.0s
TIA LR LR
comp=Z,1µm,20.5s
MNSI Mandailing Nat 28.28 254 P **P** **16 42 17.8 +1.5**
comp=Z,1µmcomp=Z,38nm,0.6s
CMAR Chiang Mai Arr 28.32 291 P **P** **16 42 16.1 -0.5**
comp=Z,6.4nm,1.0s,baz=101,slow=6.8,SNR=23
CMAR PcP **PcP** **16 45 29.7 +0.4**
comp=Z,1.9nm,0.9s,baz=57,slow=1.4,SNR=6.3
CMAR LR LR 16 54 05.3
comp=Z,1µm,18.2s,baz=192,slow=38
PSI Prapat 28.34 258 P **P** **16 42 16.9 -0.1**
comp=Z,54nm,1.1s,baz=0.9,slow=1.6,SNR=29
PSI LR LR 16 56 10.4
comp=Z,777nm,19.1s,baz=90,slow=42
PSI Prapat 28.34 258 P **P** **16 42 13.8 -3.1**
PSI pmax pmax
comp=Z,116nm,1.2s
RPSI Rantau Prapat 28.37 258 P **P** **16 42 13.8 -3.2**
COEN Coen 28.43 145 P **P** **16 42 18.6 +1.1**
COEN IAmb IAmb 16 42 24.2
comp=Z,33nm,1.1s
TSI Tuntungan 28.52 260 P P 16 42 23.1 +4.7
comp=Z,92nm,1.2s
KRVT Keravat (AS076 28.73 117 P **P** **16 42 21.9 +1.7**
comp=Z,37nm,1.1s,baz=180,slow=14,SNR=4.3
MAJO Matsushiro 28.95 19‖ *e*P **P** **16 42 20.6 -1.4**
MAJO pmax pmax
comp=Z,2.0nm,1.0s
MAT Matsushiro 28.95 19 P **P** **16 42 20.4 -1.6**
MAT S S 16 47 19.3 +8.3
MJAR Matsushiro Arr 28.95 19 P **P** **16 42 21.2 -0.9**
comp=Z,3.1nm,0.8s,baz=194,slow=8.6,SNR=7.3
MJAR PcP **PcP** **16 45 31.0 +0.5**
comp=Z,3.9nm,0.9s,baz=195,slow=3.2,SNR=7.0
MJAR LR LR 16 53 47.6
comp=Z,777nm,20.1s,baz=170,slow=36
KCSI Kotacane, Aceh 29.29 260 P **P** **16 42 24.4 -0.8**
comp=Z,69nm,0.8s
XAN Xi'an 29.42 329 P **P** **16 42 24.0 -2.3**
XAN PcP **PcP** **16 45 30.8 -1.0**
XAN pmax pmax
comp=Z,17nm,0.9s
XAN LR LR
comp=Z,1µm,17.4s
XAN LR LR
comp=Z,1µm,16.3s
XAN LR LR
comp=Z,2µm,16.2s
XAN Xi'an 29.42 329 P **P** **16 42 23.9 -2.3**
XAN pmax pmax
comp=Z,13nm,0.8s
XAN Xi'an 29.42 329 P **P** **16 42 23.9 -2.3**
SISI Saibi 29.47 250 P **P** **16 42 26.2 -0.6**
WB0 Warramunga Arr 30.00 165 P **P** **16 42 29.7 -1.7**
WB0 IAmb IAmb 16 43 27.4
comp=Z,20nm,0.8s
GSI Gunungsitoli 30.04 256 P **P** **16 42 30.4 -1.5**
comp=Z,624nm,1.0s
GSI Gunungsitoli 30.04 256 P **P** **16 42 30.2 -1.7**
WRAB Tennant Creek 30.14 165⇑ *e*P **P** **16 42 32.1 -0.6**
WRAB pmax pmax
comp=Z,25nm,1.3s
WRAB Tennant Creek 30.14 165 P **P** **16 42 30.3 -2.4**
WRAB IAmb IAmb 16 43 12.5
comp=Z,20nm,0.8s
WRA Warramunga Arr 30.15 166 P **P** **16 42 30.3 -2.4**
comp=Z,16nm,1.1s,baz=334,slow=11,SNR=26
WRA S S 16 47 20.3 -10
comp=Z,1.4nm,0.7s,baz=340,slow=14,SNR=2.4
WRA LR LR 16 56 55.3
comp=Z,383nm,18.7s,baz=10.0,slow=41
WB2 Warramunga Arr 30.16 165 IAmb IAmb 16 43 12.6
comp=Z,21nm,0.8s
CD2 Chengdu 30.19 318 P **P** **16 42 32.8 -0.3**
CD2 S **S** **16 47 33.0 +2.3**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 LR LR
comp=Z,3µm,17.7s
CD2 LR LR
comp=Z,3µm,16.2s
CD2 LR LR
comp=Z,4µm,17.2s
WR0 Warramunga Arr 30.22 165 P **P** **16 42 31.3 -2.0**
WR0 IAmb IAmb 16 42 37.2
comp=Z,32nm,1.1s
TIY Taiyuan 30.95 338 *e*P **P** **16 42 36.5 -3.2**
TIY S **S** **16 47 44.3 +1.9**
TIY pmax pmax
comp=Z,17nm,0.7s
TIY pmax pmax
comp=Z,180nm,7.1s
TIY LR LR
comp=Z,1µm,17.3s
TIY LR LR
comp=Z,250nm,12.4s
TIY LR LR
comp=Z,790nm,15.5s
BJI Beijing 31.88 345 P **P** **16 42 48.0 +0.2**
BJI S **S** **16 47 59.5 +2.7**
BJI pmax pmax
comp=Z,44nm,1.2s
BJI LR LR
comp=Z,350nm,17.4s
BJI LR LR
comp=Z,560nm,15.2s
BJI LR LR
comp=Z,650nm,22.7s
SNY Shenyang 32.38 356⇑ P **P** **16 42 53.3 +1.1**
SNY S S 16 48 13.3 +8.8
SNY pmax pmax
comp=Z,24nm,1.1s
SNY pmax pmax
comp=Z,210nm,5.4s
SNY LR LR
comp=Z,1µm,16.3s
SNY LR LR
comp=Z,850nm,18.8s
SNY LR LR
comp=Z,2µm,17.2s
QIS Mount Isa 32.41 157 P **P** **16 42 51.4 -1.2**
baz=32,SNR=24
MTSU Mount Surprise 32.47 148 P **P** **16 42 53.5 +0.3**
baz=32,SNR=11
AS31 Alice Springs 33.65 168 P **P** **16 43 02.6 -0.9**
ASAR Alice Springs 33.65 168 P **P** **16 43 01.6 -1.9**
comp=Z,8.4nm,0.8s,baz=354,slow=6.8,SNR=74
ASAR PcP **PcP** **16 45 42.6 -0.7**
comp=Z,2.2nm,0.8s,baz=351,slow=2.9,SNR=4.7
ASAR S **S** **16 48 17.6 -7.0**
comp=Z,1.9nm,0.9s,baz=358,slow=22,SNR=4.7
ASAR ScP **ScP** **16 49 30.8 +4.8**
comp=Z,0.9nm,0.9s,baz=347,slow=3.8,SNR=2.9
ASAR LR LR 16 58 37.1
comp=Z,528nm,18.5s,baz=326,slow=40
LZH Lanzhou 33.68 325 *e*P **P** **16 43 05.0 +1.1**
LZH pP pP 16 43 09.0 -2.2
LZH sP sP 16 43 12.0 -1.5
LZH PP **PnPn** **16 44 15.8 -0.5**
LZH pmax pmax
comp=Z,22nm,1.0s
LZH pmax pmax
comp=Z,240nm,4.8s
LZH LR LR
comp=Z,1µm,16.5s
LZH LR LR
comp=Z,1µm,16.0s
LZH LR LR
comp=Z,1µm,16.8s
VLA Vladivostok 33.87 7⇑ *e*P **P** **16 43 03.5 -1.6**
VLA pmax pmax
comp=Z,4.0nm,0.9s
HHC Hu-ho-hao-te 34.03 339 *e*P **P** **16 43 07.3 +0.5**
HHC sP pP 16 43 15.5 +1.8
HHC S **S** **16 48 26.0 -4.5**
HHC sS pS 16 48 35.8 -2.2
HHC ScS **ScS** **16 53 32.3 +3.1**
HHC pmax pmax
comp=Z,14nm,0.8s
HHC pmax pmax
comp=Z,150nm,5.2s
HHC LR LR
comp=Z,710nm,16.3s
HHC LR LR
comp=Z,420nm,16.1s
HHC LR LR
comp=Z,800nm,18.6s
GIRL Giralia 34.12 201 P **P** **16 43 07.7 +0.2**
baz=34,SNR=3.7
GIRL Giralia 34.12 201 P **P** **16 43 05.3 -2.2**
WRKA Warakurna 34.30 177 P **P** **16 43 07.3 -1.7**
baz=34,SNR=32
BTO Baotou 34.38 337 *e*P **P** **16 43 10.8 +1.0**
BTO S **S** **16 48 33.0 -2.9**
USA0B Ussuriysk Arra 34.95 7 P **P** **16 43 15.1 +0.7**
USA0B pmax pmax
comp=Z,18nm,0.9s
USA0B Ussuriysk Arra 34.95 7 P **P** **16 43 15.1 +0.7**
USA0B IAmb IAmb 16 43 29.6
comp=Z,18nm,0.8s
USRK Ussuriysk Ar. 34.95 7 P **P** **16 43 15.8 +1.4**
comp=Z,21nm,1.0s,baz=190,slow=8.1,SNR=22
CTA Charters Tower 35.10 147 P **P** **16 43 16.0 -0.1**
comp=Z,13nm,0.7s,baz=323,slow=11,SNR=20
CTAO Charters Tower 35.10 147 P **P** **16 43 15.9 -0.2**
CTAO pmax pmax
comp=Z,30nm,1.1s
CTAO Charters Tower 35.10 147 P **P** **16 43 15.9 -0.2**
CTAO IAmb IAmb 16 43 21.1
comp=Z,30nm,1.1s
MDJ Mudanjiang 35.15 4 P **P** **16 43 17.3 +1.1**
MDJ pP pP 16 43 22.3 -0.4
MDJ sP sP 16 43 26.0 +0.5
MDJ S **S** **16 48 51.0 +3.7**
MDJ pmax pmax
comp=Z,25nm,1.1s
MDJ pmax pmax
comp=Z,290nm,5.3s
MDJ LR LR
comp=Z,430nm,17.8s
MDJ LR LR
comp=Z,640nm,14.2s
MDJ LR LR
comp=Z,890nm,14.9s
TEY Ternei 36.50 12⇑ *e*P **P** **16 43 28.9 +1.2**
TEY pmax pmax
comp=E,10.0nm,0.9s
TEY pmax pmax
comp=N,10.0nm,0.8s
TEY pmax pmax
comp=Z,10.0nm,1.0s
MEEK Meekatharra 36.70 192 P **P** **16 43 28.6 -1.1**
baz=37,SNR=36
ASAJ Asahikawa 37.22 19 P **P** **16 43 35.5 +1.5**
comp=Z,17nm,0.9s,baz=243,slow=12,SNR=15
GTA Gaotai 38.29 326⇑ P **P** **16 43 42.0 -1.2**
GTA pP pP 16 43 46.8 -3.3
GTA sP sP 16 43 49.0 -3.9
GTA PcP **PcP** **16 45 57.0 0.0**
GTA S **S** **16 49 36.8 +1.1**
GTA ScP **ScP** **16 49 46.8 +3.9**
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,170nm,9.1s
GTA LR LR
comp=Z,880nm,17.8s
GTA LR LR
comp=Z,1µm,17.5s
GTA LR LR
comp=Z,2µm,17.5s
LSA Lhasa 38.83 306 P **P** **16 43 48.9 +0.6**
LSA Lhasa 38.83 306 P **P** **16 43 49.1 +0.8**
LSA pmax pmax
comp=Z,25nm,1.2s
LSA Lhasa 38.83 306 P **P** **16 43 49.1 +0.8**
MORW Morawa 39.62 195 P **P** **16 43 53.3 -1.0**

baz=40,SNR=18
MORW Morawa 39.62 195 P **P** **16 43 53.4 -0.9**
QLP Quilpie 39.66 155 P **P** **16 43 54.5 -0.1**
baz=40,SNR=6.6
H11S3 WAKE ISLAND Hy 39.79 72 T T 17 27 05.2
baz=262,slow=75,SNR=173
H11S1 WAKE ISLAND Hy 39.81 72 T T 17 27 07.6
baz=262,slow=75,SNR=124
H11S2 WAKE ISLAND Hy 39.81 72 T T 17 27 02.5
baz=262,slow=75,SNR=88
YSS Yuzh-Sakhalins 39.82 17⇓ *e*P **P** **16 43 57.0 +1.3**
YSS *e* 16 45 35.1
YSS *e*S **S** **16 50 00.0 +1.8**
YSS pmax pmax
comp=Z,10.0nm,0.9s
YSS MLR MLR
comp=Z,500nm,17.0s
YSS MLR MLR
comp=N,300nm,19.0s
YSS MLR MLR
comp=E,400nm,17.0s
YSS Yuzh-Sakhalins 39.82 17 P **P** **16 43 57.3 +1.5**
YSS IAmb IAmb 16 44 01.7
comp=Z,30nm,0.9s
KLR Kul'dur 39.90 5 P **P** **16 43 57.2 +0.8**
comp=Z,4.3nm,0.5s,baz=171,slow=5.0,SNR=24
KLR Kul'dur 39.90 5 *ce*P **P** **16 43 57.0 +0.7**
KLR pmax pmax
comp=Z,19nm,1.8s
FORT Forrest 40.00 178 P **P** **16 43 56.4 -1.0**
baz=40,SNR=15
FORT Forrest 40.00 178 P **P** **16 43 54.9 -2.5**
H11N1 WAKE ISLAND Hy 40.16 71 T T 17 27 37.3
baz=265,slow=74,SNR=101
H11N2 WAKE ISLAND Hy 40.16 71 T T 17 27 37.8
baz=265,slow=74,SNR=80
H11N3 WAKE ISLAND Hy 40.18 71 T T 17 27 44.8
baz=265,slow=74,SNR=101
TAPN Taplejung 40.81 301 *e*P **P** **16 44 03.0 -1.6**
comp=Z,71nm,0.8s
ODAN Odare 40.93 300 *e*P **P** **16 44 04.2 -1.3**
comp=Z,104nm,0.7s
BLDU Ballidu 40.95 193 P **P** **16 44 04.1 -1.1**
baz=41,SNR=23
RAMN Ramite 41.63 300 *e*P **P** **16 44 10.3 -1.0**
comp=Z,64nm,0.7s
KLBR Kellerberrin 41.67 191 P **P** **16 44 10.2 -0.9**
baz=42,SNR=29
ULN Ulaanbaatar 41.74 340 *ce*P **P** **16 44 11.8 0.0**
ULN pmax pmax
comp=Z,11nm,1.3s
ULN Ulaanbaatar 41.74 340 P **P** **16 44 11.6 -0.2**
SONM Songino Array 41.94 340 P **P** **16 44 13.1 -0.2**
comp=Z,2.5nm,0.7s,baz=159,slow=10,SNR=16
SONM LR LR 17 03 35.2
comp=Z,930nm,18.8s,baz=152,slow=39
EIDS Eidsvold 41.98 146 P **P** **16 44 13.9 +0.1**
baz=42,SNR=5.0
EIDS Eidsvold 41.98 146 P **P** **16 44 13.2 -0.6**
EIDS IAmb IAmb 16 44 17.7
comp=Z,38nm,0.9s
GRNR Gornyy 41.99 9⇑ *i*P P 16 44 08.0 -5.6
GRNR pmax pmax
comp=Z,4.0nm,0.8s
JIRN Jiri 42.19 301 *e*P **P** **16 44 14.7 -1.3**
MUN Mundaring 42.37 193 P **P** **16 44 16.0 -0.9**
baz=42,SNR=24
GUN Gumba 42.53 301 *e*P **P** **16 44 17.3 -1.4**
comp=Z,147nm,0.8s
PKI Pulchoki 42.83 301 *e*P **P** **16 44 19.0 -2.1**
comp=Z,39nm,0.8s
PKIN Phulchoki 42.84 301 *e*P **P** **16 44 19.0 -2.2**
comp=Z,33nm,0.7s
BBOO Buckleboo 42.95 168 P **P** **16 44 20.4 -1.2**
baz=43,SNR=23
BBOO Buckleboo 42.95 168 P **P** **16 44 20.5 -1.0**
BBOO IAmb IAmb 16 44 25.1
comp=Z,71nm,1.0s
NWAO Narrogin (SRO) 43.07 192 P **P** **16 44 22.0 -0.5**
baz=43,SNR=12
NWAO Narrogin (SRO) 43.07 192 P **P** **16 44 22.1 -0.5**
comp=Z,78nm,0.8s,baz=20,slow=8.6,SNR=35
NWAO Narrogin (SRO) 43.07 192 P **P** **16 44 22.2 -0.4**
NWAO Narrogin (SRO) 43.07 192 IAmb IAmb 16 44 22.8
comp=Z,57nm,0.8s
DMN Daman 43.09 300 *e*P **P** **16 44 21.8 -1.4**
comp=Z,53nm,0.9s
STKA Stephens Creek 43.49 161 P **P** **16 44 24.8 -1.1**
baz=44,SNR=8.2
STKA Stephens Creek 43.49 161 P **P** **16 44 24.6 -1.4**
comp=Z,6.2nm,0.7s,baz=346,slow=8.8,SNR=13
STKA LR LR 17 04 36.5
comp=Z,259nm,21.0s,baz=334,slow=39
STKA Stephens Creek 43.49 161 P **P** **16 44 25.3 -0.6**
GKN Gorkha 43.60 301 *e*P **P** **16 44 25.4 -1.8**
CIT Chita 43.80 348 *e*P **P** **16 44 29.4 +1.1**
CIT *e* 16 44 41.4
CIT *e* 16 44 46.1
CIT pmax pmax
comp=Z,119nm,1.2s
ZEA Zeya 44.19 0 *e*P **P** **16 44 31.4 +0.1**
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=Z,36nm,1.2s
DANN Dangsing 44.45 301 *e*P **P** **16 44 32.3 -1.8**
comp=Z,88nm,0.7s
CMSA Cobar Meteorol 44.63 157 P **P** **16 44 34.3 -0.8**
baz=45,SNR=6.6
PYUN Piuthan 45.03 300 *e*P **P** **16 44 37.9 -0.8**
ZAK Zakamensk 45.18 339 *e*P **P** **16 44 37.4 -2.0**
ZAK pmax pmax
comp=Z,4.0nm,1.1s
TLY Talaya 46.15 340 P **P** **16 44 47.5 +0.5**
comp=Z,6.7nm,0.7s,baz=261,slow=3.5,SNR=6.7
TLY Talaya 46.15 340 *e*P **P** **16 44 46.6 -0.3**
TLY pmax pmax
comp=Z,57nm,1.8s
TLY MLR MLR
comp=Z,959nm,14.0s
ARMA Armidale 46.32 150 P **P** **16 44 48.4 -0.2**
baz=46,SNR=5.0
ARMA Armidale 46.32 150 P **P** **16 44 49.5 +0.9**
ARMA IAmb IAmb 16 44 59.4
comp=Z,21nm,1.1s
MOY Mondy 47.06 338 *e*P **P** **16 44 54.4 +0.2**
MOY pmax pmax
comp=Z,35nm,2.4s
HYB Hyderabad 47.36 285 *i*P **P** **16 44 56.0 -1.0**
SKR Severo-Kuril's 47.77 25 *e*P P 16 44 48.8 -11
SKR *e*S **S** **16 51 51.1 -2.9**
SKR pmax pmax
comp=Z,100nm,7.3s
SKR MLR MLR
comp=Z,300nm,16.0s
SKR MLR MLR
comp=Z,400nm,16.0s
ARPS Mount Arapiles 48.12 164 P **P** **16 45 01.9 -0.5**
baz=48,SNR=8.3
WMQ Urumqi 48.12 322 *e*P **P** **16 45 03.0 +0.5**
WMQ pP pP 16 45 07.3 -2.2
WMQ sP sP 16 45 10.0 -2.3
WMQ pmax pmax
comp=Z,33nm,0.7s
WMQ LR LR
comp=Z,1μm,19.5s
WMQ LR LR
comp=Z,550nm,19.5s
WMQ LR LR
comp=Z,780nm,19.5s
CAN Canberra 49.26 156 P **P** **16 45 10.6 -0.7**
CAN pmax pmax
comp=Z,36nm,1.2s
CAN Canberra 49.26 156 P **P** **16 45 10.6 -0.7**
CAN IAmb IAmb 16 45 21.2
comp=Z,36nm,1.2s
TOO Toolangi 49.97 160 P **P** **16 45 16.3 -0.4**
baz=50,SNR=6.9
TOO Toolangi 49.97 160 P **P** **16 45 17.0 +0.3**
TOO pmax pmax
comp=Z,78nm,2.0s
TOO Toolangi 49.97 160 P **P** **16 45 16.9 +0.3**
DZM Mont Dzumac 50.02 129 *e*P P 16 45 21.3 +3.9
comp=Z,34nm,1.2s
DZM *e*S **S** **16 52 31.6 +4.9**
comp=Z,728nm,25.9s
DZM *e*LR LR 16 59 39.3
comp=Z,740nm,26.9s
DZM Mont Dzumac 50.02 129 LR LR 17 05 45.2
comp=Z,128nm,18.4s,baz=308,slow=35
PETK Petropavlovsk- 50.24 24 P **P** **16 45 19.9 +1.5**
comp=Z,4.4nm,0.8s,baz=210,slow=3.4,SNR=9.4
PETK LR LR 17 06 41.8
comp=Z,431nm,19.4s,baz=233,slow=36
DGZ Jazzator, Alta 51.68 328⇓ *e*P **P** **16 45 29.1 -0.5**
DGZ pmax pmax
comp=Z,5.0nm,0.9s
YAK Yakutsk 52.55 2 *e*P **P** **16 45 35.7 +0.1**
YAK pmax pmax
comp=Z,28nm,1.0s
YAK pmax pmax
comp=N,18nm,1.3s
YAK Yakutsk 52.55 2 P **P** **16 45 37.0 +1.4**
MK31 Makanchi Array 52.92 323 P **P** **16 45 38.1 -0.6**
MK31 pmax pmax
comp=Z,17nm,0.9s
MK31 Makanchi Array 52.92 323 P **P** **16 45 38.1 -0.6**
MK31 IAmb IAmb 16 45 39.4
comp=Z,17nm,0.8s
MKAR Makanchi Array 52.92 323 P **P** **16 45 37.8 -1.0**
comp=Z,16nm,0.8s,baz=121,slow=7.6,SNR=89
MAKZ Makanchi 53.12 323 P **P** **16 45 39.5 -0.6**
MAKZ pmax pmax
comp=Z,30nm,1.1s
MAKZ Makanchi 53.12 323 P **P** **16 45 39.5 -0.6**
MAKZ IAmb IAmb 16 45 40.9
comp=Z,30nm,1.1s
TARG Taragay, Kyrgy 53.57 316 P **P** **16 45 44.2 +0.2**
TARG IAmb IAmb 16 45 52.1
comp=Z,12nm,0.9s
KSH Kashi 54.08 312 P **P** **16 45 48.5 +1.1**
KSH sP sP 16 45 58.0 0.0
KSH PP **PP** **16 47 54.3 +5.2**
KSH S **S** **16 53 21.8 -0.4**
KSH SS **SS** **16 57 05.8 +1.8**
KSH pmax pmax
comp=Z,65nm,1.2s
KSH pmax pmax
comp=Z,430nm,4.6s
KSH LR LR
comp=Z,150nm,5.4s
KSH LR LR
comp=Z,240nm,7.2s
KSH LR LR
comp=Z,460nm,11.7s
KDJ Kajisay 54.15 316 P **P** **16 45 46.6 -1.4**
KDJ pmax pmax
comp=Z,35nm,1.1s
KDJ Kajisay 54.15 316 P **P** **16 45 46.6 -1.4**
KDJ IAmb IAmb 16 45 50.3
comp=Z,34nm,1.1s
NIL Nilore 54.52 305 P **P** **16 45 48.6 -2.1**
NIL pmax pmax
comp=Z,92nm,0.8s
NIL Nilore 54.52 305 P **P** **16 45 48.6 -2.1**
BOOM Boomskoye usch 55.14 316 P **P** **16 45 55.9 +0.7**
BOOM Boomskoye usch 55.14 316 P **P** **16 45 55.9 +0.7**
KZA Kyzart 55.47 315 P **P** **16 45 57.6 -0.2**
SNR=25
TKM2 Tokmak 2 55.53 316 P **P** **16 45 57.1 -0.9**
SNR=12
ZALV Zalesovo Beam 55.54 331 P **P** **16 45 56.1 -1.5**
comp=Z,6.2nm,0.7s,baz=121,slow=6.6,SNR=28
KBK Karagaybulak 55.88 316 P **P** **16 45 59.9 -0.6**
SNR=16
UCH Uchtor 56.04 315 P **P** **16 46 01.6 -0.4**
SNR=54
CHMS Chimysh 56.14 316 P **P** **16 46 01.0 -1.1**
SNR=14
AAK Ala-Archa 56.19 315 P **P** **16 46 02.4 -0.3**
SNR=7.8
AAK Ala-Archa 56.19 315 *i*P **P** **16 46 01.6 -1.1**
SNR=9.1
AAK Ala-Archa 56.19 315 *c i*P **P** **16 46 01.8 -0.9**
AAK pmax pmax
comp=Z,13nm,1.3s
AAK Ala-Archa 56.19 315 P **P** **16 46 00.2 -2.5**
USP Ospenovka 56.41 316 P **P** **16 46 03.1 -1.0**
SNR=15
AML Almayashu 56.58 315 P **P** **16 46 05.2 -0.5**
SNR=27
EKS2 Erkin-Say 56.70 315 P **P** **16 46 05.7 -0.5**
SNR=24
KURK Kurchatov 56.97 326 *c i*P **P** **16 46 06.8 -1.1**
KURK pmax pmax
comp=Z,69nm,1.3s
KURK Kurchatov 56.97 326 P **P** **16 46 07.0 -0.8**
MSVF Nonsavu 57.48 118⇑ *e*P **P** **16 46 13.2 +1.1**
MSVF pmax pmax
comp=Z,43nm,1.4s
GAR Garm 58.12 310 P **P** **16 46 15.3 -1.1**
KBL Kabul 58.12 305 P **P** **16 46 13.7 -2.9**
KBL pmax pmax
comp=Z,24nm,0.8s
KBL Kabul 58.12 305 P **P** **16 46 13.7 -2.9**
KBL IAmb IAmb 16 46 17.3
comp=Z,24nm,0.8s
CHGR Chuyangaron 58.92 310 P **P** **16 46 20.9 -1.0**
KK31 Karatay Array 59.11 315 P **P** **16 46 22.4 -0.7**
KK31 pmax pmax
comp=Z,24nm,0.9s
KK31 Karatay Array 59.11 315 P **P** **16 46 22.4 -0.7**
KK31 IAmb IAmb 16 46 22.8
comp=Z,24nm,0.9s
TIXI Tiksi 62.18 1 *ce*P **P** **16 46 43.2 -0.2**
TIXI pmax pmax
comp=Z,24nm,1.0s
TIXI Tiksi 62.18 1 P **P** **16 46 43.8 +0.5**
BRVK Borovoye 62.64 326 *c i*P **P** **16 46 45.8 -1.0**
BRVK pmax pmax
comp=Z,56nm,1.3s
BRVK Borovoye 62.64 326 P **P** **16 46 46.1 -0.8**
BILL Bilibino 64.10 15 *ce*P **P** **16 46 57.0 +0.8**
BILL *e* 16 47 31.0
BILL *e* 16 49 18.9
BILL pmax pmax
comp=Z,25nm,1.7s
BILL MLR MLR
comp=Z,281nm,20.0s
RAO Raoul Island 65.78 128 LR LR 17 12 28.5
comp=Z,155nm,21.0s,baz=317,slow=33
RPZ Rata Peaks 66.48 146 LR LR 17 13 00.5
comp=Z,429nm,20.1s,baz=300,slow=33
BKZ Black Stump Fm 66.90 140 P **P** **16 47 15.0 +0.2**
GEYT Alibeck 67.36 307 P **P** **16 47 17.2 -0.6**
comp=Z,5.5nm,0.8s,baz=142,slow=3.4,SNR=12
GEYT LR LR 17 21 38.6
comp=Z,616nm,18.5s,baz=120,slow=40
BANOM Banah 68.32 294 P **P** **16 47 22.7 -1.4**
UOSS Minazif 68.42 293 P **P** **16 47 22.1 -2.6**
UOSS Minazif 68.42 293 P **P** **16 47 21.9 -2.8**
UOSS IAmb IAmb 16 47 34.4
comp=Z,12nm,0.8s
MSFE Esma-Masafi 68.45 294 P **P** **16 47 24.6 -0.4**
SHME Shamm 68.47 294 P **P** **16 47 23.7 -1.3**
HATD Hatta, Dubai 68.48 293 *i*P **P** **16 47 23.3 -1.8**
SNR=9.0
ASHO Ashiyiah 68.55 293 *i*P **P** **16 47 23.9 -1.7**
SNR=9.1
ALNE Al Ain 68.84 292 *i*P **P** **16 47 26.3 -1.1**
SNR=11
SVE Sverdlovsk 69.12 327 *de*P **P** **16 47 27.8 -0.7**
SVE *e*S **S** **16 56 30.7 -1.3**
SVE pmax pmax
comp=Z,53nm,1.0s
SVE MLR MLR
comp=Z,608nm,18.0s
SHAO Shalim 69.20 286 P **P** **16 47 28.5 -1.2**
ARU Arti 70.14 327 *c i*P **P** **16 47 33.3 -1.4**
ARU 16 47 49.3
ARU PPP PPP 16 51 45.1
ARU S **S** **16 56 45.6 +1.7**
ARU pmax pmax
comp=Z,29nm,0.9s
ARU MLR MLR
comp=Z,333nm,16.0s
ARU Arti 70.14 327 P **P** **16 47 33.1 -1.6**
ARU IAmb IAmb 16 47 34.3
comp=Z,25nm,0.8s
KIRV Kirov 75.36 328 *i*P **P** **16 48 04.4 -1.3**
AKT Akhty 75.54 310 *e*P **P** **16 48 05.7 -1.6**
AKT *e* 16 48 17.5
AKT pmax pmax
comp=Z,17nm,1.1s
CASY Casey 76.43 187 P **P** **16 48 11.3 -0.3**
CASY IAmb IAmb 16 48 23.0
comp=Z,18nm,0.7s
GROC Groznyy 76.96 312 *e*P **P** **16 48 14.3 -0.9**
GROC *e* 16 48 25.6
GROC *e* 16 51 05.8
GROC pmax pmax
comp=Z,2.0nm,0.3s
BPAW Bear Paw Mtn. 78.23 26 IAmb IAmb 16 48 28.1
comp=Z,18nm,0.9s
RAYN Ar Rayn 78.24 292 *i*P **P** **16 48 21.2 -1.5**
SNR=5.0
RAYN Ar Rayn 78.24 292 P **P** **16 48 21.4 -1.4**
RAYN pmax pmax
comp=Z,30nm,0.8s
RAYN Ar Rayn 78.24 292 P **P** **16 48 21.4 -1.4**
RAR Rarotonga 78.35 114 LR LR 17 15 30.6
comp=Z,207nm,21.6s,baz=288,slow=30
ZEI Tsey 78.36 312 *e*P **P** **16 48 19.3 -4.0**
ZEI pmax pmax
comp=Z,19nm,0.6s
NCK Nalchik 78.56 313⇓ *i*P **P** **16 48 23.3 -0.8**
NCK pmax pmax
comp=Z,11nm,0.8s
GOF Gofitskoye 78.90 314⇑ *e*P **P** **16 48 26.4 +0.5**
TOLK Toolik Lake Re 79.00 22 P **P** **16 48 27.5 +1.5**
baz=268
KBZ Khabaz 79.06 313 P **P** **16 48 25.7 -1.1**
comp=Z,8.5nm,1.0s,baz=77,slow=5.3,SNR=14
KBZ LR LR 17 27 54.4
comp=Z,348nm,18.0s,baz=83,slow=39
KBZ Khabaz 79.06 313 *ce*P **P** **16 48 25.3 -1.4**
KBZ pmax pmax
comp=Z,15nm,1.1s
KIV Kislovodsk 79.20 313 P **P** **16 48 27.0 -0.7**
KIV Kislovodsk 79.20 313 *d i*P **P** **16 48 25.8 -1.9**
KIV *e* 16 48 36.5
KIV *e* 16 51 22.7
KIV *e*PPP PPP 16 53 14.9
KIV pmax pmax
comp=Z,17nm,0.7s
KIV MLR MLR
comp=Z,521nm,17.0s
NEY Neytrino 79.21 312⇑ *e*P **P** **16 48 26.9 -1.0**
NEY pmax pmax
comp=Z,2.0nm,1.0s
VRH Novokhopyorsk 79.56 320 *e*P **P** **16 48 27.2 -2.1**
VRH pmax pmax
comp=Z,30nm,1.2s
HDA Harding Lake 80.00 26 P **P** **16 48 31.1 -0.4**
baz=271
ILAR Eielson Array 80.02 26 P **P** **16 48 31.9 +0.4**
comp=Z,1.8nm,0.6s,baz=240,slow=4.3,SNR=17
ILAR LR LR 17 23 60.0
comp=Z,108nm,20.4s,baz=292,slow=36
ILAR Eielson Array 80.02 26 P **P** **16 48 32.0 +0.4**
KLMR Klimovskoe 80.44 330 *e*P **P** **16 48 30.7 -3.2**
KLMR pmax pmax
comp=Z,74nm,1.2s
KLMR Klimovskoe 80.44 330 *e*P **P** **16 48 30.7 -3.2**
KLMR AMP 16 48 34.1
comp=Z,74nm,1.2s
PAX Paxson 80.70 28 IAmb IAmb 16 48 41.6
comp=Z,39nm,1.7s
TMCR Tamitsa 80.98 334 *e*P **P** **16 48 33.8 -2.9**
TMCR pmax pmax
comp=Z,37nm,1.0s
LPSR Galich'ya Gora 81.21 322 *e*P **P** **16 48 36.5 -1.7**
LPSR pmax pmax
comp=Z,30nm,0.8s
SOC Sochi 81.37 313 *e*P **P** **16 48 36.2 -3.0**
SOC *e* 16 51 43.3
SOC *e*S **S** **16 58 48.0 -0.5**
SOC *e*SS **SS** **17 04 01.6 -3.0**
SOC *e*SSS SSS 17 07 27.2
SOC pmax pmax
comp=Z,15nm,0.9s
MOS Moscow 81.74 325 *e*P **P** **16 48 37.4 -3.5**
MOS *e* 16 48 50.1
MOS *e* 16 58 53.7
MOS pmax pmax
comp=Z,51nm,0.9s
LVZ Lovozero 82.09 338 *ce*P **P** **16 48 42.0 -0.6**
LVZ pmax pmax
comp=Z,32nm,1.2s
LVZ Lovozero 82.09 338 P **P** **16 48 42.5 -0.1**
OBN Obninsk 82.40 325 *ce*P **P** **16 48 42.6 -1.7**
OBN *e* 16 48 53.3
OBN *e* 16 51 46.8
OBN *e*PPP PPP 16 53 40.1
OBN pmax pmax
comp=Z,27nm,1.3s
OBN MLR MLR
comp=Z,391nm,17.0s
APA Apatity 82.60 337⇓ *i*P **P** **16 48 43.5 -1.7**
APA pmax pmax
comp=Z,27nm,0.9s
APA MLR MLR
comp=Z,500nm,16.0s
ANN Anapa 82.89 314 *e*P **P** **16 48 44.4 -2.8**
ANN *e* 16 51 54.9
ANN *e*S **S** **16 59 03.6 -0.4**
ANN pmax pmax
comp=Z,40nm,0.9s
ABPO Ambohimpanom 83.20 249 P **P** **16 48 47.6 -1.9**
ABPO pmax pmax
comp=Z,20nm,1.3s
ABPO Ambohimpanom 83.20 249 P **P** **16 48 47.6 -1.9**
ABPO IAmb IAmb 16 48 53.5
comp=Z,20nm,1.2s
DAWY Dawson 83.32 26 IAmb IAmb 16 48 55.9
comp=Z,53nm,1.8s
HOPEN Hopen 83.60 347 *e*P **P** **16 48 50.0 -0.2**
EPYK Eagle Plains 84.08 24 P **P** **16 48 53.9 +1.0**
baz=280
KEV Kevo 84.55 340 P **P** **16 48 54.1 -1.0**
KEV pmax pmax
comp=Z,12nm,0.9s
KEV Kevo 84.55 340 P **P** **16 48 54.1 -1.0**
KEV IAmb IAmb 16 48 55.8
comp=Z,12nm,0.9s
SPA0 Spitsbergen Ar 84.91 349 *e*P **P** **16 48 56.6 -0.3**
INK Inuvik 84.92 22 IAmb IAmb 16 49 03.0
comp=Z,21nm,1.2s
ARCES ARCESS Array B 85.11 340 P **P** **16 48 57.5 -0.5**
comp=Z,11nm,0.7s,baz=69,slow=6.6,SNR=44
ARCES LR LR 17 31 10.2
comp=Z,168nm,18.1s,baz=68,slow=39
ARE0 ARCESS Array S 85.11 340 *e*P **P** **16 48 57.4 -0.6**
SIM Simferopol' 85.21 315 *e*P **P** **16 48 57.6 -1.4**
SIM S **S** **16 59 22.0 -5.3**
SIM pmax pmax
comp=Z,26nm,1.3s
KBS Kingsbay 85.41 350 *e*P **P** **16 48 59.8 +0.4**
HAMF Hammerfest 85.44 341 *e*P **P** **16 48 59.5 -0.1**
HSPB Hornsund (broa 85.52 348 *e*P **P** **16 48 59.5 -0.4**
BJO1 Bjornoya 85.62 345 *e*P **P** **16 48 59.6 -0.8**
KTK1 Kautokeino 86.03 339 *e*P **P** **16 49 01.9 -0.7**
BRTR Keskin Array B 86.36 309 P **P** **16 49 03.7 -1.4**
comp=Z,2.1nm,0.7s,baz=110,slow=5.4,SNR=6.5
BRTR LR LR 17 33 08.8
comp=Z,175nm,19.4s,baz=51,slow=40
FIA1 FINESS Array S 86.81 332 IAmb IAmb 16 49 06.6
comp=Z,18nm,0.9s
FINES FINESS Array B 86.81 332 P **P** **16 49 05.8 -0.8**
comp=Z,9.0nm,0.8s,baz=104,slow=6.1,SNR=32
FINES LR LR 17 32 07.6
comp=Z,560nm,18.9s,baz=76,slow=39
PPT2 Papeete2 86.94 108 *e*S **S** **16 59 48.0 +2.7**
comp=Z,217nm,25.5s
PPT2 Papeete2 86.94 108 *e*LR LR 17 16 47.9
comp=Z,385nm,22.8s,baz=290
VSU Vasula 87.19 329 *ce*P **P** **16 49 07.3 -1.1**
VSU pmax pmax
comp=Z,27nm,0.9s
TRO Tromso 87.29 340 *e*P **P** **16 49 08.6 -0.1**
NOR Nord 87.44 355 *i*P **P** **16 49 09.5 +0.2**
NOR pmax pmax
comp=Z,13nm,1.1s
NOR Nord 87.44 355 *i*P **P** **16 49 09.5 +0.2**
comp=Z,13nm,1.1s
AKASG Malin Array Be 87.45 321 P **P** **16 49 08.1 -1.8**

comp=Z,4.9nm,0.8s,baz=68,slow=4.3,SNR=12
C36M Paulatuk 87.90 20 P **P** 16 49 12.2 +0.6
baz=291
C36M Paulatuk 87.90 20 IAmb IAmb 16 49 24.9
comp=Z,16nm,0.9s
TBI Tubuai 88.13 114 *e*S **S** 17 00 00.2 +3.9
comp=Z,471nm,24.8s
TBI Tubuai 88.13 114 *e*LR LR 17 17 14.0
comp=Z,509nm,23.5s,baz=294
MAW Mawson 89.05 200 P **P** 16 49 15.6 -1.3
baz=89,SNR=4.2
MAW Mawson 89.05 200 P **P** 16 49 16.3 -0.6
comp=Z,2.1nm,0.7s,baz=29,slow=6.3,SNR=5.3
MAW Mawson 89.05 200 P **P** 16 49 15.7 -1.3
MAW pmax pmax
comp=Z,5.0nm,1.4s
MAW Mawson 89.05 200 P **P** 16 49 15.7 -1.3
VNDA Vanda 89.05 173 P **P** 16 49 15.7 -1.1
comp=Z,2.7nm,0.7s,baz=328,slow=4.9,SNR=8.5
VNDA LR LR 17 30 36.1
comp=Z,288nm,18.7s,baz=350,slow=37
VNDA Vanda 89.05 173 P **P** 16 49 16.3 -0.5
VNDA IAmb IAmb 16 49 28.4
comp=Z,7.7nm,0.9s
STEI Steigen 89.17 339 *e*P **P** 16 49 15.9 -1.7
KMBO Kilima Mbogo 89.60 269 P **P** 16 49 21.6 +0.4
comp=Z,7.1nm,1.0s,baz=50,slow=6.7,SNR=12
KMBO Kilima Mbogo 89.60 269 *i* P **P** 16 49 20.4 -0.7
SNR=7.2
LOF Lofoten 89.67 340 *e*P **P** 16 49 19.4 -0.5
DAG Danmarks Havn 91.63 352‖ *i*P **P** 16 49 28.0 -1.0
DAG pmax pmax
comp=Z,18nm,1.0s
DAG Danmarks Havn 91.63 352‖ *i*P **P** 16 49 28.0 -1.0
comp=Z,18nm,1.0s
NSS Namsos 91.80 337 *e*P **P** 16 49 27.9 -2.1
UZH Uzhgorod 92.33 320 *e*P **P** 16 49 31.8 -1.0
UZH *e* 16 49 44.0
NB2 NORSAR Subarra 93.68 334 P **P** 16 49 36.7 -2.1
comp=Z,6.0nm,1.1s,baz=65,slow=4.6
NB2 NORSAR Subarra 93.68 334 P **P** 16 49 36.7 -2.1
baz=65,slow=4.6
NOA NORSAR Array B 93.68 334 P **P** 16 49 36.8 -2.0
comp=Z,1.6nm,0.8s,baz=65,slow=4.5,SNR=5.9
NOA LR LR 17 38 19.3
comp=Z,233nm,18.9s,baz=65,slow=40
YKA Yellowknife Ar 94.36 24 P **P** 16 49 42.7 +0.9
comp=Z,2.9nm,0.7s,baz=298,slow=4.2,SNR=25
YKA LR LR 17 32 23.5
comp=Z,112nm,21.0s,baz=0.0,slow=36
MOL Molde 94.48 336 *e*P **P** 16 49 42.0 -0.3
TAOE Nuku Hiva Isla 94.54 98 *e*LR LR 17 20 09.0
comp=Z,724nm,31.3s
KULLO Kullorsuaq 96.11 1 *i* P **P** 16 49 49.3 -0.3
KULLO pmax pmax
comp=Z,13nm,1.0s
KULLO Kullorsuaq 96.11 1 *i* P **P** 16 49 49.3 -0.3
comp=Z,13nm,1.0s
BRG Berggiesshubel 96.63 324 *e*P **P** 16 49 51.0 -1.4
comp=Z,3.6nm,1.1s
BRG Berggiesshubel 96.63 324 *e*Pdiff **P** 16 49 51.4 -1.0
baz=65,slow=4.4
BRG Berggiesshubel 96.63 324 *e*P **P** 16 49 51.0 -1.4
BRG pmax pmax
comp=Z,4.0nm,1.2s
CLL Collm 97.00 325 *e*P **P** 16 49 54.0 -0.1
CLL *i* 16 50 02.7
comp=Z,38nm,2.6s
CLL Lm MLR 17 39 00.0
comp=Z,400nm,18.1s
CLL Collm 97.00 325 *e*P **P** 16 49 54.0 -0.1
CLL *i* 16 50 02.7
CLL MLR MLR
comp=Z,400nm,18.1s
KHC Kasperske Hory 97.55 322‖ *e*P **P** 16 49 55.5 -1.2
KHC pmax pmax
comp=Z,8.0nm,1.3s
GERES GERESS Array B 97.59 322 P **P** 16 49 55.7 -1.2
comp=Z,0.9nm,0.8s,baz=73,slow=3.3,SNR=9.1
GERES LR LR 17 38 09.9
comp=Z,236nm,18.4s,baz=86,slow=38
SUMG Summit 97.59 356 *e*P Pdif 16 49 57.2 +0.3
SUMG Summit 97.59 356 *i* P Pdif 16 49 57.2 +0.3
GUNZ Gunzen 97.78 324 *e*Pdiff **P** 16 49 56.8 -0.9
baz=65,slow=4.4
MOX Moxa 98.07 324 *e*Pdiff **P** 16 49 57.7 -1.3
baz=65,slow=4.4
MOX *e*L L 17 39 52.8
comp=Z,285nm,19.4s
ROTZ Rotzenmuhle 98.10 323 *e*Pdiff **P** 16 49 58.5 -0.6
baz=65,slow=4.4
CLZ Clausthal 98.25 326 *e*Pdiff **P** 16 49 59.0 -0.8
baz=65,slow=4.4
GRF Grafenberg Arr 98.71 324 *e*Pdiff **P** 16 50 00.9 -1.0
baz=65,slow=4.4
GRF *e*L L 17 41 52.7
comp=Z,331nm,18.4s
BFO Black Forest 101.03 323 *e*Pdiff **Pdif** 16 50 10.7 -1.5
baz=65,slow=4.4
NVAR Mina Array Bea 103.13 47 Pdiff **Pdif** 16 50 24.8 +2.7
comp=Z,0.2nm,0.5s,baz=337,slow=4.2,SNR=2.5
D47A Chapleau 117.83 23 P **PKPdf** 16 55 08.7 -0.3
baz=326
JFWS Jewell Farm 117.98 30 P **PKPdf** 16 55 08.4 -1.0
baz=318
TXAR Lajitas Array 118.07 50 PKP **PKiKP** 16 55 10.9 +0.9
comp=Z,1.5nm,0.9s,baz=286,slow=0.9,SNR=9.1
TXAR Lajitas Array 118.07 50 PKiKP **PKiKP** 16 55 11.0 +0.9
E48A Lockeyer 118.66 22 P **PKiKP** 16 55 10.8 +0.2
baz=327
D50A G1974 Best Tow 118.91 20 P **PKPdf** 16 55 10.7 -0.3
baz=330
E50A Wahnapitae 119.23 21 P **PKiKP** 16 55 11.8 +0.1
baz=329
F49A Sandfield 119.31 23 P **PKiKP** 16 55 12.0 +0.1
baz=327
D52A ZEK Kipawa Sen 119.56 19 P **PKPdf** 16 55 11.8 -0.4
baz=331
E51A G1948 Merrick 119.58 20 P **PKPdf** 16 55 12.1 -0.2
baz=330
JCT Junction City 120.30 46 P **PKiKP** 16 55 14.7 +0.4
baz=304
E53A Dumoine, Ponti 120.33 19 P **PKPdf** 16 55 13.4 -0.4
baz=332
TORD Torodi Ar. Bea 120.93 291 PKP **PKPdf** 16 55 14.8 -1.0
comp=Z,2.5nm,0.9s,baz=45,slow=1.9,SNR=7.7
U40A Yellvile 121.22 37 P **PKiKP** 16 55 15.8 -0.1
baz=313
E57A Chemin Saint G 121.37 17 P **PKiKP** 16 55 15.8 -0.1
baz=336
W39A Magazine 121.44 39 P **PKPdf** 16 55 16.1 -0.1
baz=312
MIAR Mount Ida 121.99 39 P **PKiKP** 16 55 17.5 0.0
baz=312
E61A Lac Etchemin 122.31 14 P **PKiKP** 16 55 18.3 +0.5
baz=340
N50A Nevada 122.98 27 P **PKiKP** 16 55 19.4 +0.1
baz=324
I57A Carthage 123.15 19 P **PKPdf** 16 55 19.2 -0.1
baz=334
WCI Wyandotte Cave 123.48 31 P **PKiKP** 16 55 20.2 -0.1
baz=320
J58A Remsen 123.78 19 P **PKiKP** 16 55 20.6 -0.2
baz=334
M54A Oil Creek Stat 123.83 24 P **PKPdf** 16 55 20.6 -0.1
baz=328
K57A Scipio Center 123.93 20 P **PKiKP** 16 55 21.0 -0.1
baz=332
J59A Piesco 123.94 18 P **PKiKP** 16 55 21.0 -0.1
baz=335
N53A Lisbon 123.94 25 P **PKiKP** 16 55 21.4 +0.2
baz=327
I60A Shoreham 123.96 17 P **PKiKP** 16 55 21.1 0.0
baz=336
LBNH Lisbon 123.99 16 P **PKPdf** 16 55 20.7 -0.2
baz=338
L56A Greenwood 124.09 22 P **PKPdf** 16 55 21.2 0.0
baz=331
K58A Earlville 124.20 20 P **PKiKP** 16 55 21.5 -0.1
baz=333
M55A Ridgway 124.21 23 P **PKiKP** 16 55 21.9 +0.2
baz=329
O53A New Philadelph 124.25 26 P **PKiKP** 16 55 22.2 +0.4
baz=326
WVT Waverly 124.25 34 PKiKP **PKiKP** 16 55 22.1 +0.2
WVT Waverly 124.25 34 P **PKiKP** 16 55 21.7 -0.2
baz=318
WVT Waverly 124.25 34 PKPdf **PKiKP** 16 55 22.1 +0.2
P52A Corning 124.35 27 P **PKiKP** 16 55 21.9 -0.1
baz=325
M56A Emporium 124.42 23 P **PKiKP** 16 55 22.0 -0.1
baz=330
L57A Andrews Acres 124.46 21 P **PKiKP** 16 55 22.0 -0.2
baz=332
OXF Oxford 124.52 36 P **PKiKP** 16 55 22.3 -0.2
baz=315
BINY Binghamton 124.59 20 P **PKiKP** 16 55 22.4 -0.1
baz=333
Q52A Bidwell 124.84 27 P **PKPdf** 16 55 22.6 0.0
baz=325
L59A Walton 124.91 20 P **PKiKP** 16 55 23.4 +0.3
baz=334
Q53A Leroy 125.26 27 P **PKiKP** 16 55 23.6 -0.2
baz=325
SSPA Standing Stone 125.27 23 P **PKiKP** 16 55 23.5 -0.3
baz=330
SSPA Standing Stone 125.27 23 **PKiKP** 16 55 24.4 +0.6
Q54A Coxs Mills 125.46 26 P **PKiKP** 16 55 24.2 0.0
baz=326
N58A Sunbury 125.53 22 P **PKiKP** 16 55 24.3 0.0
baz=331
Q55A Buckhannon 125.77 26 P **PKiKP** 16 55 25.0 +0.1
baz=327
P56A Dayton Farm, R 125.86 24 P **PKiKP** 16 55 25.1 +0.1
baz=329
Q56A Snyder Ridge, 126.11 25 P **PKiKP** 16 55 25.7 +0.1
baz=328
Q58A Fox Den Farm, 126.81 24 P **PKPdf** 16 55 26.3 -0.1
baz=330
LRAL Lakeview Retre 126.98 36 P **PKPdf** 16 55 26.8 -0.1
baz=317
R57A Stanardsville 127.02 25 P **PKiKP** 16 55 27.6 +0.3
baz=328
R58B Mineral 127.57 24 P **PKPdf** 16 55 28.1 +0.2
baz=329
KMSC Kings Mountain 128.37 29 P **PKiKP** 16 55 29.9 -0.2
baz=324
T59A Double "B" Far 128.55 25 P **PKiKP** 16 55 30.7 +0.3
baz=329
GOGA Godfrey 128.65 33 P **PKiKP** 16 55 31.4 +0.7
baz=321
PLCA Paso Flores 145.29 157 PKPbc **PKPdf** 16 56 00.5 0.0
comp=Z,7.6nm,0.7s,baz=237,slow=3.2,SNR=15
PLCA Paso Flores 145.29 157 **PKPdf** 16 56 00.7 +0.1
LC01 Cunco 146.28 153 PKPdf **PKPbc** 16 56 03.5 +0.2
AZU Azuero 148.18 58 *e*P **PKPbc** 16 56 07.8 -1.5
UPD2 Meteti 149.62 55 *e*P **PKiKP** 16 56 13.5 -0.5
PDPR Patillas Dam, 149.99 25 **PKPbc** 16 56 13.8 +0.1
CAPC Capurgana 150.10 54 *e*P **PKPdf** 16 56 09.8 +0.6
MTP Monte Pirata 150.10 24 **PKiKP** 16 56 15.6 +0.8
STVI Saint Thomas 150.11 23 **PKiKP** 16 56 15.3 +0.4
SMRC Santa Marta, M 150.84 46 *e*P **PKPbc** 16 56 15.2 -0.7
SJCC San Jacinto, C 151.00 49 *e*P **PKPdf** 16 56 12.6 +2.0
ARGC Ariguani, Magd 151.71 48 *e*P **PKPbc** 16 56 17.4 -0.6
URIC Uribia, Colomb 151.99 42 *e*P **PKiKP** 16 56 19.8 +0.9
UREC San Jos de Ur 152.07 53 *e*P **PKPbc** 16 56 17.6 -1.1
SMLC San Martn de 152.53 49 *e*P **PKPdf** 16 56 12.6 -0.2
ZARC Zaragoza, Cauc 152.75 53 *e*P **PKPdf** 16 56 11.8 -1.4
CBOC Ciudad Bolivar 152.77 57 *e*P **PKPdf** 16 56 15.2 +1.8
YOTC Yoco, Valle 153.48 61 *e*P **PKPdf** 16 56 14.9 +0.5
BBAC Balboa, Cauca 153.60 66 *e*P **PKPdf** 16 56 15.3 +0.6
GUY2C Guyana, Caldas 153.66 57 *e*P **PKPdf** 16 56 15.1 0.0
RREF El Recreo 153.85 58 *e*P **PKPdf** 16 56 17.6 +2.1
BRRC Barranca, Sant 153.88 52 *e*P **PKPdf** 16 56 15.3 +0.5
TOLC Tolima 154.04 58 *e*P **PKPdf** 16 56 16.7 +1.3
SOTA Rioblanco 154.12 65 *e*P **PKPdf** 16 56 19.2 +3.4
ORTC Ortega, Tolima 154.46 60 *e*P **PKPdf** 16 56 16.0 +0.3
PAMC Pamplona, Colo 154.51 50 *e*P **PKPdf** 16 56 16.0 -0.3
BARC Barichara 154.61 52 *e*P **PKPdf** 16 56 15.6 -0.5
RUSC La Rusia 155.12 53 *e*P PKPdf 16 56 23.9 +6.8
CHIC Chingaza 155.34 56 *e*P **PKPdf** 16 56 17.5 +0.1
VILC Villavicencio, 155.66 57 *e*P **PKPdf** 16 56 17.8 +0.4
LPAZ La Paz 164.05 117 PKP **PKPdf** 16 56 28.0 +0.6
comp=Z,2.1nm,0.7s,baz=23,slow=4.1,SNR=7.6

*IDC **30** 16:45:16.1±3.7, 9.53N×127.44E, h0km, mb3.5/3,*
mb1 3.7/3, mb1mx3.4/33, mbtmp3.5/3, Error ellipse:
s-maj=263.4km s-min=30.7km az=66.0
*MAN **30** 16:45:19.6, 9.32N×127.13E, h33km, mb5.0, ML4.0, MS4.0*
ISC 30 16:45:22.3±1.4, 9.39N±0.07×127.0E±0.1, h35km, n8,
σ1§40/10, mb3.4/3, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**2.23**	**290**	*e*P	**Pn**	**16 45 57.0**	**+0.2**
MSLP				*e*S	**Sn**	**16 46 22.9**	**-0.2**
BUKP	**Musuan**	**2.42**	**232**	*e*P	**Pn**	**16 45 58.3**	**-1.2**
BUKP				*e*S	**Sn**	**16 46 28.2**	**+0.2**
KCP	**Kidapawan**	**3.02**	**219**‖	*e*P	**Pn**	**16 46 10.4**	**+2.7**
CTBH	**Cotabato--PC H**	**3.46**	**232**‖	*i*P	**Pn**	**16 46 13.9**	**+0.1**
CNP	**Catarman**	**3.86**	**324**	*e*P	**Pn**	**16 46 19.9**	**+0.8**
WRA	**Warramunga Arr**	**30.03**	**166**	P	**P**	**16 51 26.1**	**-2.0**
	0.3nm,0.5s,baz=348,slow=9.3,SNR=1.3						
ASAR	**Alice Springs**	**33.54**	**168**	P	**P**	**16 51 59.1**	**+0.2**
	0.3nm,0.6s,baz=354,slow=7.2,SNR=5.1						
MKAR	**Makanchi Array**	**53.16**	**323**	P	**P**	**16 54 37.0**	**+0.2**
	0.5nm,0.7s,baz=127,slow=9.2,SNR=2.9						

*IDC **30** 16:46:40.5±1.9, 9.61N×127.15E, h0km, mb3.8/5,*
mb1 3.9/5, mb1mx3.5/34, mbtmp3.8/5, Error ellipse:
s-maj=137.6km s-min=24.0km az=72.0
*MAN **30** 16:46:45.1, 9.40N×126.85E, h32km, mb4.7, ML3.6, MS3.5*
ISC 30 16:46:46.6±1.1, 9.38N±0.08×126.9E±0.1, h41km, n11,
σ2§01/15, mb3.8/5, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.48**	**286**	*e*P	**Pn**	**16 47 08.1**	**-2.6**
SCPH				*e*S	**Sn**	**16 47 26.3**	**-2.6**
MSLP	**Maasin**	**2.18**	**290**	*e*P	**Pn**	**16 47 20.4**	**+0.1**
MSLP				*e*S	**Sn**	**16 47 50.4**	**+4.3**
BUKP	**Musuan**	**2.38**	**231**	*e*P	**Pn**	**16 47 21.5**	**-1.6**
LLP	**Lapu-Lapu**	**3.07**	**288**	*e*P	**Pn**	**16 47 31.8**	**-0.8**
LLP				*e*S	**Sn**	**16 48 10.4**	**+2.3**
CNP	**Catarman**	**3.83**	**325**	*e*P	**Pn**	**16 47 42.7**	**-0.3**
CNP				*e*S	**Sn**	**16 48 25.7**	**-1.1**
RCP	**Roxas**	**4.65**	**298**‖	*e*P	**Pn**	**16 47 54.1**	**-0.2**
FITZ	**Fitzroy Crossi**	**27.34**	**183**	P	**P**	**16 52 29.8**	**+1.9**
	2.3nm,0.9s,baz=8.1,slow=7.1,SNR=2.3						
WRA	**Warramunga Arr**	**30.04**	**166**	P	**P**	**16 52 53.3**	**+1.4**
	0.5nm,0.7s,baz=348,slow=9.3,SNR=2.2						
ASAR	**Alice Springs**	**33.55**	**168**	P	**P**	**16 53 22.9**	**+0.2**
	0.2nm,0.4s,baz=348,slow=7.0,SNR=3.0						
MKAR	**Makanchi Array**	**53.12**	**323**	P	**P**	**16 55 59.4**	**-0.9**
	0.5nm,0.5s,baz=127,slow=7.1,SNR=5.4						
ARCES	**ARCESS Array B**	**85.25**	**340**	P	**P**	**16 59 18.5**	**-0.2**
	1.1nm,0.8s,baz=80,slow=6.6,SNR=2.1						

*TAP **30** 16:48:05.6, 24.02N×121.70E, h33km, ML2.9, B*
*JMA **30** 16:48:05.2, 23.98N×121.66E, h35km±1km, M2.1*
ISC 30 16:48:05.3±0.9, 23.98N±0.02×121.75E±0.02, h33km±4km,
n112, σ0§83/206, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.13**	**268**	*i* P	**Pb**	**16 48 11.8**	**+0.7**
HWA				*e*S	**Sb**	**16 48 16.5**	**+1.3**
TWD	**Chiawan**	**0.17**	**305**	*i* P	**Pn**	**16 48 11.6**	**+0.2**
TWD				*i* S	**Sb**	**16 48 15.8**	**0.0**
NACB	**Ninganchiao**	**0.23**	**324**	P	**Pb**	**16 48 11.9**	**-0.3**
NACB				S	**Sb**	**16 48 16.8**	**-0.1**
ETLH	**Xiulin Townshi**	**0.33**	**313**	P	**Pb**	**16 48 13.1**	**-0.3**
ETLH				S	**Sb**	**16 48 18.6**	**-0.4**
ESL	**Shilin**	**0.33**	**240**	*i* P	**Pb**	**16 48 13.3**	**0.0**
ESL				S	**Sn**	**16 48 19.2**	**-0.2**
EGFH	**Guangfu**	**0.43**	**223**	P	**Pn**	**16 48 14.8**	**-0.3**
EGFH				S	**Sn**	**16 48 21.6**	**-0.2**
ENA	**Nanau**	**0.44**	**360**	*i* P	**Pb**	**16 48 14.6**	**-0.4**
ENA				S	**Sb**	**16 48 21.4**	**-0.2**
WHF	**Hehuan Shan**	**0.47**	**290**	*i* P	**Pb**	**16 48 15.1**	**-0.6**
WHF				*i* S	**Sb**	**16 48 21.7**	**-1.1**
OWD	**Renai**	**0.52**	**267**	P	**Pb**	**16 48 16.0**	**-0.3**
OWD				S	**Sb**	**16 48 23.1**	**-0.8**
CHGB	**Renai**	**0.53**	**279**	P	**Pb**	**16 48 16.1**	**-0.3**
CHGB				S	**Sb**	**16 48 23.3**	**-0.8**
NNSH	**Datong**	**0.55**	**323**	*i* P	**Pb**	**16 48 16.3**	**-0.5**
NNSH				S	**Sb**	**16 48 23.8**	**-0.9**
NNSB	**Datong**	**0.55**	**323**	P	**Pb**	**16 48 16.3**	**-0.5**
NNSB				S	**Sb**	**16 48 23.7**	**-1.0**
NNS	**Nan Shan**	**0.57**	**323**	*i* P	**Pb**	**16 48 16.5**	**-0.5**
NNS				*i* S	**Sb**	**16 48 24.1**	**-1.0**
HGSD	**Ruisui**	**0.57**	**211**	P	**Pn**	**16 48 17.9**	**+0.8**
HGSD				S	**Sn**	**16 48 27.8**	**+2.4**
TWT	**Tachien**	**0.59**	**298**	P	**Pb**	**16 48 17.2**	**-0.1**
TWT				S	**Sb**	**16 48 25.1**	**-0.5**
VWDT	**VWDT**	**0.60**	**248**	P	**Pn**	**16 48 17.5**	**+0.1**
VWDT				S	**Sb**	**16 48 25.2**	**-0.5**
TDCB	**Techi**	**0.60**	**297**	P	**Pb**	**16 48 17.4**	**-0.2**
TDCB				S	**Sb**	**16 48 24.5**	**-1.5**
EHY	**Hungye**	**0.61**	**219**	*i* P	**Pb**	**16 48 17.0**	**-0.7**
EHY				S	**Sn**	**16 48 26.9**	**+0.5**
TWC	**Suao**	**0.63**	**9**	*i* P	**Pn**	**16 48 17.9**	**0.0**
TWC				*i* S	**Sb**	**16 48 26.6**	**0.0**
NDT	**Datong Townshi**	**0.65**	**341**	P	**Pn**	**16 48 17.9**	**-0.3**
NDT				S	**Sb**	**16 48 26.2**	**-1.1**
YULB	**Yu-li**	**0.72**	**215**	P	**Pn**	**16 48 18.3**	**-0.8**
YULB				S	**Sb**	**16 48 28.3**	**-0.7**
TWE	**Neicheng**	**0.74**	**354**	*i* P	**Pn**	**16 48 19.3**	**-0.1**
TWE				*i* S	**Sn**	**16 48 29.3**	**-0.2**
DPDB	**Guoxing**	**0.75**	**274**	*i* P	**Pn**	**16 48 19.6**	**0.0**
DPDB				S	**Sn**	**16 48 29.4**	**-0.5**
SSLB	**Suanglung**	**0.75**	**255**	P	**Pn**	**16 48 19.6**	**0.0**
SSLB				S	**Sn**	**16 48 29.5**	**-0.4**
TWF1	**Yuli**	**0.75**	**213**	*i* P	**Pn**	**16 48 19.0**	**-0.6**
TWF1				S	**Sn**	**16 48 29.1**	**-0.8**
YHNB	**Yeheng**	**0.76**	**334**	P	**Pn**	**16 48 19.6**	**-0.3**
YHNB				S	**Sn**	**16 48 29.0**	**-1.3**
SMLT	**Sun Moon Lake**	**0.78**	**263**	*i* P	**Pn**	**16 48 20.1**	**+0.1**
SMLT				*i* S	**Sn**	**16 48 30.2**	**-0.5**
WHP	**Taichung City**	**0.79**	**292**	*i* P	**Pn**	**16 48 20.5**	**+0.3**
WHP				S	**Sn**	**16 48 30.5**	**-0.4**
TYC	**Yuchr**	**0.82**	**265**	*i* P	**Pn**	**16 48 20.5**	**0.0**
TYC				*i* S	**Sn**	**16 48 30.5**	**-0.9**
NWLT	**Wulai**	**0.82**	**344**	*i* P	**Pn**	**16 48 20.3**	**-0.3**
NWLT				*i* S	**Sn**	**16 48 31.1**	**-0.6**
WHYT	**Xinyi Township**	**0.86**	**251**	*i* P	**Pb**	**16 48 21.9**	**+0.1**
WHYT				S	**Sn**	**16 48 33.0**	**+0.3**
NTC	**Toucheng**	**0.87**	**5**	*i* P	**Pn**	**16 48 22.0**	**+0.7**
NTC				*e*S	**Sb**	**16 48 34.9**	**+1.5**
LIOB	**Emei**	**0.94**	**315**	*i* P	**Pb**	**16 48 23.2**	**+0.2**
LIOB				S	**Sn**	**16 48 35.1**	**+0.6**
NSTT	**Nanjuang**	**0.94**	**314**	*i* P	**Pb**	**16 48 23.1**	**+0.1**
NSTT				*i* S	**Sn**	**16 48 34.5**	**0.0**
WJS	**Zhushan**	**0.94**	**260**	*i* P	**Pb**	**16 48 23.6**	**+0.5**
WJS				*i* S	**Sb**	**16 48 35.7**	**+0.3**
CHKT	**Chengkung**	**0.95**	**202**	*i* P	**Pb**	**16 48 23.1**	**-0.1**
CHKT				*i* S	**Sb**	**16 48 36.4**	**+0.9**
WLTB	**Daxi**	**0.98**	**333**	*i* P	**Pb**	**16 48 23.9**	**+0.2**
WLTB				S	**Sn**	**16 48 35.8**	**+0.4**
WNT	**Mingjian**	**0.98**	**264**	*i* P	**Pb**	**16 48 23.8**	**+0.1**
WNT				*i* S	**Sb**	**16 48 36.8**	**+0.5**
ALS	**Alishan**	**0.98**	**242**	*i* P	**Pb**	**16 48 23.9**	**-0.1**
ALS				S	**Sb**	**16 48 36.8**	**0.0**
TIPB	**Shuangxi**	**0.99**	**4**	*i* P	**Pn**	**16 48 23.7**	**+0.8**
TIPB				*e*S	**Sn**	**16 48 36.2**	**+0.5**
TCU	**Taichung**	**0.99**	**280**	P	**Pb**	**16 48 24.4**	**+0.5**
TCU				S	**Sb**	**16 48 37.8**	**+1.0**
NHDH	**Xindian Distri**	**1.00**	**348**	*i* P	**Pn**	**16 48 23.6**	**+0.6**
NHDH				*i* S	**Sn**	**16 48 36.4**	**+0.5**
NSY	**Sanyi**	**1.00**	**296**	*i* P	**Pb**	**16 48 24.4**	**+0.4**
NSY				*e*S	**Sb**	**16 48 37.5**	**+0.6**
TWA	**Mucha**	**1.00**	**352**	P	**Pn**	**16 48 23.7**	**+0.6**
TATO	**Taipei**	**1.02**	**347**	P	**Pn**	**16 48 23.7**	**+0.4**
TATO				S	**Sn**	**16 48 36.9**	**+0.5**
NMLH	**Miaoli**	**1.03**	**303**	P	**Pn**	**16 48 24.4**	**+1.0**
NMLH				S	**Sb**	**16 48 38.5**	**+0.7**
ELDTW	**Lidau**	**1.03**	**220**	*i* P	**Pn**	**16 48 23.3**	**-0.3**
ELDTW				S	**Sn**	**16 48 36.5**	**-0.5**
TWB1	**Santiao Chiao**	**1.04**	**12**	P	**Pb**	**16 48 25.6**	**+0.7**
TWB1				S	**Sb**	**16 48 38.6**	**+0.4**
CHN5	**Tsauling**	**1.05**	**249**	*i* P	**Pb**	**16 48 25.1**	**+0.1**

CHN5				*i* S		**Sb**	**16 48 39.4**	**+0.9**
	baz=233							
PTSB	**Yuanli**	**1.06**	**296**	P		**Pb**	**16 48 25.2**	**+0.2**
	baz=295							
PTSB				S		**Sn**	**16 48 38.3**	**+0.9**
	baz=295							
SBCB	**Hsinchu**	**1.06**	**319**	*e*S		**Sb**	**16 48 39.7**	**+0.9**
	baz=320							
WDJ	**Dajia District**	**1.07**	**290**	*e*P		**Pb**	**16 48 25.4**	**0.0**
	baz=289							
NWF	**Wu-fen Shan**	**1.08**	**2**	*i* P		**Pb**	**16 48 25.6**	**0.0**
	baz=353							
NWF				*e*S		**Sn**	**16 48 39.4**	**+1.1**
	baz=353							
WFSB	**Wu-fen Shan**	**1.08**	**2**	P		**Pb**	**16 48 25.4**	**-0.1**
	baz=352							
WFSB				*e*S		**Sn**	**16 48 38.8**	**+0.7**
	baz=352							
WCHH	**Zhanghua**	**1.09**	**275**	P		**Pb**	**16 48 26.1**	**+0.5**
	baz=273							
WCHH				*e*S		**Sb**	**16 48 39.9**	**+0.4**
	baz=273							
NCUH	**Zhongli**	**1.11**	**333**	P		**Pn**	**16 48 25.4**	**+0.9**
	baz=335							
NCUH				S		**Sb**	**16 48 40.5**	**+0.5**
	baz=335							
NCU	**National Centr**	**1.11**	**333**	*e*P		**Pn**	**16 48 25.6**	**+1.1**
	baz=335							
NCU				S		**Sb**	**16 48 40.6**	**+0.6**
	baz=335							
WGK	**Gukeng**	**1.12**	**255**	P		**Pb**	**16 48 26.3**	**+0.2**
	baz=252							
WGK				S		**Sb**	**16 48 41.6**	**+1.2**
	baz=252							
WDLH	**Douliu**	**1.14**	**255**	P		**Pb**	**16 48 26.4**	**-0.1**
	baz=252							
WDLH				S		**Sb**	**16 48 41.8**	**+0.8**
	baz=252							
TWS1	**Kuangyinshan**	**1.15**	**345**	*i* P		**Pn**	**16 48 26.2**	**+1.1**
	baz=357							
TWS1				S		**Sn**	**16 48 41.3**	**+1.5**
	baz=357							
YM01	**YM01**	**1.17**	**352**	P		**Pn**	**16 48 25.9**	**+0.5**
	baz=345							
YM01				S		**Sn**	**16 48 41.0**	**+0.7**
	baz=345							
YM10	**YM10**	**1.18**	**352**	*i* P		**Pn**	**16 48 25.8**	**+0.3**
	baz=345							
YM10				*e*S		**Sn**	**16 48 40.9**	**+0.4**
	baz=345							
YM11	**YM11**	**1.19**	**353**	P		**Pn**	**16 48 26.1**	**+0.4**
	baz=356							
JYNG	**Yonagunijimaku**	**1.19**	**67**	P		**Pb**	**16 48 27.2**	**-0.1**
JYNG				S		**Sb**	**16 48 42.5**	**+0.1**
YM03	**YM03**	**1.21**	**351**	P		**Pn**	**16 48 26.5**	**+0.5**
	baz=354							
YM03				*e*S		**Sn**	**16 48 41.4**	**+0.2**
	baz=354							
NTST	**Danshui**	**1.21**	**347**	*e*P		**Pn**	**16 48 26.6**	**+0.7**
	baz=359							
NTST				*e*S		**Sb**	**16 48 43.4**	**+0.5**
	baz=359							
YM08	**YM08**	**1.21**	**353**	*e*P		**Pn**	**16 48 26.1**	**+0.2**
	baz=342							
ANP	**Anpu**	**1.22**	**350**	P		**Pn**	**16 48 26.4**	**+0.3**
	baz=354							
STYT	**Tauyuan**	**1.22**	**228**	*i* P		**Pb**	**16 48 27.4**	**-0.4**
	baz=218							
STYT				*i* S		**Sb**	**16 48 43.5**	**+0.3**
	baz=218							
TPUB	**Ta-pu**	**1.23**	**237**	P		**Pb**	**16 48 28.0**	**0.0**
	baz=226							
TPUB				S		**Sb**	**16 48 44.6**	**+1.1**
	baz=226							
CHN2	**Minshiung**	**1.25**	**249**	*e*P		**Pb**	**16 48 28.7**	**+0.4**
	baz=246							
CHN2				S		**Sb**	**16 48 45.0**	**+0.9**
	baz=246							
YOJ	**Yonaguni jima**	**1.25**	**67**	P		**Pb**	**16 48 27.9**	**-0.5**
	baz=69							
YOJ				S		**Sb**	**16 48 44.7**	**+0.6**
	baz=69							
YOJ	**Yonaguni jima**	**1.25**	**67**	P		**Pb**	**16 48 27.8**	**-0.5**
YOJ				S		**Sb**	**16 48 43.9**	**-0.2**
WTP	**Ta-pu**	**1.27**	**235**	*i* P		**Pb**	**16 48 28.7**	**0.0**
	baz=232							
WTP				*i* S		**Sb**	**16 48 45.4**	**+0.7**
	baz=232							
RLNB	**Erlin**	**1.27**	**266**	P		**Pb**	**16 48 28.0**	**-0.6**
	baz=276							
RLNB				S		**Sb**	**16 48 45.1**	**+0.4**
	baz=276							
TWH	**Lutao**	**1.29**	**191**	*e*P		**Pn**	**16 48 27.2**	**+0.2**
	baz=179							
TWH				S		**Sb**	**16 48 43.8**	**-1.4**
	baz=179							
CHY	**Chiayi**	**1.30**	**249**	P		**Pb**	**16 48 29.6**	**+0.4**
	baz=245							
CHY				S		**Sb**	**16 48 46.0**	**+0.4**
	baz=245							
TWG	**Pinlang**	**1.31**	**208**	P		**Pn**	**16 48 26.4**	**-0.9**
	baz=193							
TWGBT	**Beinan**	**1.31**	**208**	P		**Pn**	**16 48 26.8**	**-0.6**
	baz=193							
CHN1	**Nanshi**	**1.37**	**235**	*i* P		**Pb**	**16 48 30.3**	**0.0**
	baz=232							
CHN1				*i* S		**Sb**	**16 48 48.3**	**+0.8**
	baz=232							
SNST	**Tainan City**	**1.37**	**237**	*i* P		**Pb**	**16 48 30.3**	**-0.1**
	baz=234							
SNST				*i* S		**Sb**	**16 48 48.0**	**+0.3**
	baz=234							
SGST	**Jiashian**	**1.39**	**230**	*i* P		**Pb**	**16 48 30.0**	**-0.7**
	baz=227							
SGST				*i* S		**Sb**	**16 48 48.2**	**0.0**
	baz=227							
SLGT	**Liugui**	**1.41**	**226**	*i* P		**Pb**	**16 48 31.0**	**0.0**
	baz=223							
SLGT				S		**Sb**	**16 48 49.7**	**+1.1**
	baz=223							
WLGB	**Puzi**	**1.42**	**250**	*i* P		**Pb**	**16 48 30.9**	**-0.2**
	baz=233							
WLGB				S		**Sb**	**16 48 50.2**	**+1.4**
	baz=233							
WSF	**Szhu**	**1.44**	**256**	S		**Sb**	**16 48 50.0**	**+0.6**
	baz=254							
CHN8	**Yiju**	**1.54**	**246**	*i* P		**Pb**	**16 48 32.1**	**-1.2**
	baz=243							
CHN8				*i* S		**Sb**	**16 48 52.5**	**+0.1**
	baz=243							
ECL	**Taimali**	**1.56**	**208**	*i* P		**Pb**	**16 48 32.1**	**-1.5**
	baz=196							
SSD	**Sandimen**	**1.60**	**220**	*i* P		**Pb**	**16 48 33.6**	**-0.6**
	baz=218							
SSD				*i* S		**Sb**	**16 48 54.0**	**-0.1**
	baz=218							
TWM1	**Shoushan**	**1.68**	**227**	P		**Pb**	**16 48 36.3**	**+0.8**
	baz=225							
TWM1				S		**Sb**	**16 48 57.9**	**+1.6**
	baz=225							
MASBT	**Mashibuluo**	**1.71**	**217**	P		**Pb**	**16 48 35.1**	**-0.9**
	baz=216							
MASBT				S		**Sb**	**16 48 57.0**	**-0.1**
	baz=216							
EAST	**Anshuo**	**1.79**	**208**	P		**Pn**	**16 48 34.8**	**+0.8**
	baz=198							
EAST				*e*S		**Sn**	**16 48 56.5**	**+0.9**
	baz=198							
IRIF	**Iriomote-Funau**	**1.85**	**79**	P		**Pb**	**16 48 36.6**	**-1.8**
HATJ	**Hateruma jima**	**1.89**	**87**	P		**Pb**	**16 48 37.6**	**-1.4**
SCZT	**Fangliau**	**1.91**	**213**	P		**Pb**	**16 48 38.3**	**-1.1**
	baz=222							
SCZT				S		**Sb**	**16 49 01.8**	**-1.1**
	baz=222							
WDGT	**Dungji**	**2.04**	**250**	*i* P		**Pn**	**16 48 38.5**	**+1.2**
	baz=248							
WDGT				S		**Sn**	**16 49 02.3**	**+0.6**
	baz=248							
PHUB	**P'eng-hu**	**2.04**	**257**	P		**Pn**	**16 48 38.4**	**+1.0**
	baz=256							
PHUB				S		**Sn**	**16 49 02.4**	**+0.6**
	baz=256							
PNG	**Penghu**	**2.05**	**259**	*i* P		**Pn**	**16 48 38.2**	**+0.8**
	baz=257							
PNG				*i* S		**Sn**	**16 49 03.5**	**+1.6**
	baz=257							
WLCH	**Liuqiu**	**2.05**	**218**	*e*P		**Pb**	**16 48 42.1**	**+0.1**
	baz=218							
WLCH				*e*S		**Sb**	**16 49 07.7**	**+0.6**
	baz=218							
JKRS	**Kuro-shima**	**2.08**	**83**	P		**Pb**	**16 48 40.4**	**-2.0**
TWKBT	**Hengchun**	**2.21**	**203**	*e*P		**Pb**	**16 48 41.8**	**-2.7**
	baz=191							
TWKBT				*e*S		**Sn**	**16 49 08.0**	**+2.2**
	baz=191							
JIJ	**Ishigaki jima**	**2.22**	**80**	P		**Pn**	**16 48 41.2**	**+1.4**
VCHM	**Qimei**	**2.26**	**251**	P		**Pn**	**16 48 41.4**	**+1.1**
	baz=237							
VCHM				S		**Sn**	**16 49 08.1**	**+1.0**
	baz=237							
VWUC	**VWUC**	**2.32**	**296**	*e*P		**Pn**	**16 48 40.8**	**-0.3**
	baz=295							
VWUC				*e*S		**Sn**	**16 49 06.5**	**-2.0**
	baz=295							
PTTC	**Pingtan**	**2.35**	**310**	*e*P		**Pn**	**16 48 41.8**	**+0.3**
	baz=310							
PTTC				*e*S		**Sn**	**16 49 07.4**	**-1.9**
	baz=310							
JISG	**Ishigakijimahi**	**2.42**	**75**	P		**Pn**	**16 48 44.0**	**+1.5**
PTMZ	**Houxiangcun**	**2.61**	**294**	*e*P		**Pn**	**16 48 45.3**	**+0.1**
	baz=293							
PTMZ				*e*S		**Sn**	**16 49 13.6**	**-2.2**
	baz=293							
MATB	**Ma-tsu**	**2.71**	**323**	*e*P		**Pn**	**16 48 46.1**	**-0.4**
	baz=334							
MATB				S		**Sn**	**16 49 16.8**	**-1.4**
	baz=334							
JTJ	**Tarama**	**2.78**	**76**	P		**Pn**	**16 48 49.4**	**+2.0**
KNMB	**Chin-men Tao**	**3.10**	**280**	*e*P		**Pn**	**16 48 52.0**	**0.0**
	baz=278							
MHZQ	**Yeshan**	**3.24**	**311**	*e*S		**Sn**	**16 49 29.6**	**-1.7**
	baz=310							
XPSS	**Dashiqiu**	**3.25**	**335**	*e*P		**Pn**	**16 48 53.6**	**-0.4**
	baz=333							
XPSS				*e*S		**Sn**	**16 49 29.6**	**-2.0**
	baz=333							
AXDP	**Jialang**	**3.56**	**286**	*e*P		**Pn**	**16 48 58.4**	**+0.2**
	baz=284							
AXDP				*e*S		**Sn**	**16 49 38.2**	**-1.0**
	baz=284							

*IDC **30** 16:53:04.4±1.1, 9.°27N×126.°62E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/37, mbtmp3.8/7, Error ellipse: s-maj=83.2km s-min=20.9km az=75.0*
*NEIC **30** 16:53:05.9±2.6, 9.°3N±0.°2×126.°6E±0.°3, h10km±1km, mb4.2/9, Error ellipse: s-maj=59.3km s-min=22.8km az=77.0*
*MAN **30** 16:53:05.6, 9.°36N×126.°96E, h8km, mb4.6, ML3.5, MS3.4*

ISC 30 16:53:09.9±0.8, 9.°37N±0.°05×126.°90E±0.°08, h43km, n32, σ1§69/31, mb4.0/11, 3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
SCPH	**Surigao**	**1.45**	**286**	*e*P			**Pn**	**16 53 31.0**	**-2.6**
SCPH				*e*S			**Sn**	**16 53 47.7**	**-3.7**
MSLP	**Maasin**	**2.15**	**291**	*e*P			**Pn**	**16 53 42.9**	**-0.3**
MSLP				*e*S			**Sn**	**16 54 11.2**	**+2.6**
BUKP	**Musuan**	**2.34**	**231**	*e*P			**Pn**	**16 53 45.5**	**-0.5**
BUKP				*e*S			**Sn**	**16 54 14.5**	**+1.0**
KCP	**Kidapawan**	**2.95**	**217**	ǁ *i* P			**Pn**	**16 53 56.3**	**+2.0**
LLP	**Lapu-Lapu**	**3.04**	**288**	*e*P			**Pn**	**16 53 56.4**	**+0.9**
LLP				*e*S			**Sn**	**16 54 34.0**	**+3.4**
CTBH	**Cotabato--PC H**	**3.38**	**231**	ǁ *i* P			**Pn**	**16 53 59.8**	**-0.4**
DDMP	**Don Marcelino,**	**3.45**	**200**	*e*P			**Pn**	**16 54 01.8**	**+0.6**
PAGZ	**Pagadian**	**3.79**	**247**	*e*P			**Pn**	**16 54 06.4**	**+0.6**
CNP	**Catarman**	**3.81**	**325**	*e*P			**Pn**	**16 54 05.6**	**-0.5**
CNP				*e*S			**Sn**	**16 54 50.3**	**+0.6**
RCP	**Roxas**	**4.63**	**298**	ǁ *e*P			**Pn**	**16 54 18.1**	**+0.9**
MTN	**Manton Dam**	**22.47**	**169**	P			**P**	**16 58 07.0**	**+1.4**
KNRA	**Kununurra**	**24.96**	**176**	P			**P**	**16 58 31.2**	**+1.8**
KNRA					IAmb		IAmb	16 58 40.9	
	comp=Z,8.8nm,1.0s								
FITZ	**Fitzroy Crossi**	**27.32**	**183**	P			**P**	**16 58 50.3**	**-0.6**
	comp=Z,2.2nm,0.8s,baz=5.2,slow=11,SNR=1.6								
FITZ	**Fitzroy Crossi**	**27.32**	**183**	P			**P**	**16 58 51.0**	**+0.2**
FITZ					IAmb		IAmb	16 59 02.9	
	comp=Z,5.1nm,1.1s								
WB0	**Warramunga Arr**	**29.88**	**166**	P			**P**	**16 59 13.5**	**-0.1**
WB0					IAmb		IAmb	16 59 17.4	
	comp=Z,3.2nm,1.1s								
WRA	**Warramunga Arr**	**30.04**	**166**	P			**P**	**16 59 14.6**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=346,slow=9.6,SNR=1.8								
WR0	**Warramunga Arr**	**30.10**	**166**	P			**P**	**16 59 13.1**	**-2.5**
WR0					IAmb		IAmb	16 59 23.6	
	comp=Z,3.6nm,1.1s								
ASAR	**Alice Springs**	**33.54**	**168**	P			**P**	**16 59 46.0**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=350,slow=7.0,SNR=8.2								
H11S3	**WAKE ISLAND Hy**	**39.59**	**72**	T			T	17 43 41.4	
	baz=262,slow=70,SNR=8.7								
H11S1	**WAKE ISLAND Hy**	**39.60**	**72**	T			T	17 43 36.5	
	baz=262,slow=70,SNR=5.8								
H11S2	**WAKE ISLAND Hy**	**39.61**	**72**	T			T	17 43 38.2	
	baz=262,slow=70,SNR=7.2								
MORW	**Morawa**	**39.63**	**195**	P			**P**	**17 00 34.2**	**-3.3**
MORW					IAmb		IAmb	17 00 38.4	
	comp=Z,7.4nm,1.1s								
FORT	**Forrest**	**39.94**	**178**	P			**P**	**17 00 38.6**	**-1.4**
H11N1	**WAKE ISLAND Hy**	**39.96**	**71**	T			T	17 44 23.4	
	baz=265,slow=74,SNR=7.7								
H11N2	**WAKE ISLAND Hy**	**39.97**	**70**	T			T	17 44 21.7	
	baz=265,slow=74,SNR=6.2								
H11N3	**WAKE ISLAND Hy**	**39.98**	**71**	T			T	17 44 22.8	
	baz=265,slow=74,SNR=7.6								
BBOO	**Buckleboo**	**42.85**	**169**	P			**P**	**17 01 02.7**	**-1.3**
STKA	**Stephens Creek**	**43.36**	**162**	P			**P**	**17 01 07.4**	**-0.6**
MKAR	**Makanchi Array**	**53.11**	**323**	P			**P**	**17 02 23.2**	**0.0**
	comp=Z,0.5nm,0.5s,baz=131,slow=7.5,SNR=7.7								
ARCES	**ARCESS Array B**	**85.24**	**340**	P			**P**	**17 05 42.6**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=91,slow=8.1,SNR=2.6								
FINES	**FINESS Array B**	**86.97**	**332**	P			**P**	**17 05 51.2**	**+0.9**
	comp=Z,0.9nm,0.9s,baz=48,slow=4.1,SNR=1.6								
YKA	**Yellowknife Ar**	**94.32**	**24**	P			**P**	**17 06 26.7**	**+2.1**
	comp=Z,0.3nm,0.7s,baz=291,slow=4.5,SNR=3.9								

IDC 30 16:57:28.7±940.0, 10.°03S×120.°14E, h0km, Error ellipse: s-maj=449.8km s-min=210.2km az=86.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
I07AU	**WARRAMUNGA INF**	**6.86**	**127**	*i*				18 35 17.9	
	baz=305,slow=317,SNR=10								
I39PW	**PALAU INFRASON**	**22.59**	**40**	*i*				19 16 30.0	
	baz=223,slow=298,SNR=3.1								
I22FR	**PORTLAGUERRE I**	**46.29**	**111**	*i*				21 42 37.6	
	baz=283,slow=270,SNR=0.8								

*IDC **30** 16:58:32.6±1.2, 9.°25N×126.°63E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/39, mbtmp3.7/5, Error ellipse: s-maj=85.2km s-min=24.8km az=77.0*
*MAN **30** 16:58:32.8, 9.°35N×126.°93E, h4km, mb3.9, ML2.6, MS2.2*

ISC 30 16:58:38.5±1.0, 9.°39N±0.°06×126.°86E±0.°09, h41km, n17, σ1§62/21, mb3.8/5, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
SCPH	**Surigao**	**1.41**	**286**	*e*P			**Pn**	**16 58 59.4**	**-2.2**
SCPH				*e*S			**Sn**	**16 59 16.7**	**-2.3**
MSLP	**Maasin**	**2.11**	**291**	*e*P			**Pn**	**16 59 10.2**	**-1.1**
MSLP				*e*S			**Sn**	**16 59 37.8**	**+1.6**
BUKP	**Musuan**	**2.32**	**230**	*e*P			**Pn**	**16 59 13.0**	**-1.3**
BUKP				*e*S			**Sn**	**16 59 42.6**	**+0.9**
MATI	**Mati**	**2.50**	**194**	*e*P			**Pn**	**16 59 14.6**	**-2.1**
KCP	**Kidapawan**	**2.94**	**217**	ǁ *e*P			**Pn**	**16 59 25.0**	**+2.2**
LLP	**Lapu-Lapu**	**3.00**	**288**	*e*P			**Pn**	**16 59 23.3**	**-0.2**
LLP				*e*S			**Sn**	**17 00 01.1**	**+2.9**
CTBH	**Cotabato--PC H**	**3.36**	**230**	ǁ *e*P			**Pn**	**16 59 26.8**	**-1.7**
DDMP	**Don Marcelino,**	**3.45**	**199**	*e*P			**Pn**	**16 59 31.4**	**+1.6**
PAGZ	**Pagadian**	**3.76**	**246**	*e*P			**Pn**	**16 59 34.5**	**+0.5**
CNOP	**Candoni, Negro**	**4.18**	**276**	*e*P			**Pn**	**16 59 39.0**	**-0.9**
GUIM	**Jordan**	**4.38**	**287**	*e*P			**Pn**	**16 59 43.5**	**+1.0**
RCP	**Roxas**	**4.59**	**298**	ǁ *e*P			**Pn**	**16 59 45.4**	**0.0**
FITZ	**Fitzroy Crossi**	**27.34**	**183**	P			**P**	**17 04 18.5**	**-1.2**
	2.6nm,1.0s,baz=12,slow=12,SNR=2.2								
ASAR	**Alice Springs**	**33.56**	**168**	P			**P**	**17 05 13.5**	**-1.3**
	0.1nm,0.5s,baz=351,slow=6.5,SNR=5.8								
MKAR	**Makanchi Array**	**53.08**	**323**	P			**P**	**17 07 51.7**	**-0.1**
	0.4nm,0.5s,baz=125,slow=6.8,SNR=5.5								
ARCES	**ARCESS Array B**	**85.22**	**340**	P			**P**	**17 11 10.7**	**+0.3**
	0.4nm,0.5s,baz=76,slow=7.5,SNR=4.5								
YKA	**Yellowknife Ar**	**94.32**	**24**	P			**P**	**17 11 55.1**	**+1.6**
	0.4nm,0.6s,baz=297,slow=4.3,SNR=3.9								

*IDC **30** 16:59:50.5±0.5, 9.°27N×126.°54E, h0km, mb4.3/24, mb1 4.3/25, mb1mx4.3/40, mbtmp4.2/25, ML4.1/1, MS3.7/1, Ms1 3.7/1, ms1mx2.9/51, Error ellipse: s-maj=21.2km s-min=10.6km az=73.0*
*MAN **30** 16:59:52.1, 9.°31N×127.°02E, h35km, mb5.4, ML4.4, MS4.6*
*NEIC **30** 16:59:54.0±2.7, 9.°28N±0.°06×126.°57E±0.°08, h24km±4km, mb4.7/31, Error ellipse: s-maj=11.2km s-min=9.3km az=81.0*
*DJA **30** 17:00:00.0±0.6, 10°N±4°×12°7E±°, h83km±6km, M4.8/18, mb4.6/18, mB5.6/4, Mw(mB)5.1/4, Mwp6.3/2*

ISC 30 16:59:53.1±1.4, 9.°38N±0.°03×126.°56E±0.°05, h17km±8km, n124, σ1§84/123, mb4.5/45, MS4.2/3, 2C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
SCPH	**Surigao**	**1.13**	**291**	*e*P			**Pn**	**17 00 16.9**	**+2.7**
SCPH				*e*S			**Sn**	**17 00 33.9**	**+4.6**
BIPH	**Bislig**	**1.20**	**189**	ǁ *e*P			**Pg**	**17 00 25.2**	**+8.8**
BIPH				*e*S			**Sn**	**17 00 39.3**	**+8.2**
MSLP	**Maasin**	**1.83**	**294**	*e*P			**Pg**	**17 00 29.1**	**+0.6**
MSLP				*e*S			**Sg**	**17 00 55.6**	**+3.3**
BUKP	**Musuan**	**2.10**	**225**	*e*P			**Pb**	**17 00 30.8**	**0.0**
BUKP				*e*S			**Sg**	**17 00 58.7**	**-2.0**
MATI	**Mati**	**2.43**	**187**	*e*P			**Pn**	**17 00 30.3**	**-1.9**
DAV	**Davao City (W)**	**2.49**	**203**	Pn			**Pb**	**17 00 37.3**	**-0.1**
	28nm,0.3s,baz=335,slow=19,SNR=3.7								
DAV					Sn		**Sn**	**17 01 01.3**	**-1.7**
	76nm,0.3s,baz=49,slow=22,SNR=2.5								
DAV	**Davao City (W)**	**2.49**	**203**	ǁ *e*P			**Pn**	**17 00 34.3**	**+1.4**
DAV	**Davao City (W)**	**2.49**	**203**	Pn			**Pn**	**17 00 31.9**	**-1.0**
LLP	**Lapu-Lapu**	**2.72**	**290**	*e*P			**Pb**	**17 00 41.0**	**-0.4**
LLP				*e*S			**Sg**	**17 01 17.4**	**-3.2**
KCP	**Kidapawan**	**2.77**	**212**	*i* S			**Pg**	**17 00 49.4**	**+3.2**
CTBH	**Cotabato--PC H**	**3.13**	**227**	ǁ *e*P			**Pb**	**17 00 45.1**	**-3.3**
DDMP	**Don Marcelino,**	**3.36**	**195**	*e*P			**Pn**	**17 00 44.6**	**-0.3**
DDMP				*e*S			**Sn**	**17 01 23.9**	**-0.5**
SKMP	**Bagumbayan, Su**	**3.47**	**215**	*e*P			**Pn**	**17 00 45.8**	**-0.6**
PAGZ	**Pagadian**	**3.49**	**244**	*e*P			**Pb**	**17 00 51.7**	**-2.8**
PAGZ				*e*S			**Sb**	**17 01 35.4**	**-1.3**
CNP	**Catarman**	**3.63**	**329**	*e*P			**Pn**	**17 00 51.7**	**+3.1**
CNP				*e*S			**Sn**	**17 01 34.6**	**+3.6**
GSPH	**General Santos**	**3.64**	**206**	ǁ *i* P			**Pb**	**17 00 55.3**	**-1.8**
GSPH				*i* S			**Sg**	**17 01 49.7**	**-0.4**
CNOP	**Candoni, Negro**	**3.89**	**277**	*e*P			**Pb**	**17 00 56.6**	**-4.7**
GUIM	**Jordan**	**4.10**	**288**	*e*P			**Pb**	**17 01 00.9**	**-4.0**
RCP	**Roxas**	**4.33**	**300**	ǁ *e*P			Pb	17 01 03.6	-5.3
JAP	**San Jose, Anti**	**4.74**	**287**	ǁ *e*P			**Pn**	**17 01 05.1**	**+1.2**
PVCP	**Virac**	**4.81**	**331**	*e*P			**Pn**	**17 01 05.7**	**+0.8**
PVCP				*e*S			**Sg**	**17 02 23.1**	**-4.5**
SJMP	**San Jose**	**6.16**	**300**	*e*P			Pn	17 01 30.2	+6.8
TGY	**Tagaytay City**	**7.23**	**311**	Pn			Pn	17 01 45.0	+6.7
	9.1nm,0.3s,baz=139,slow=19,SNR=1.3								
TGY	**Tagaytay City**	**7.23**	**311**				Pn	17 01 45.0	+6.7
TNTI	**Ternate**	**8.59**	**175**	P			Pn	17 02 07.0	+10
	54nm,1.1s								
MRSI	**Marisa**	**9.96**	**208**	P			Pn	17 02 22.0	+6.3
	2µm26nm,0.6s								
LBMI	**Labuha**	**9.99**	**175**	P			Pn	17 02 24.2	+8.1
	42nm,1.1s								
LBMI				S			Sn	17 04 17.7	+10
	42nm,1.1s								
KKM	**Kota Kinabalu**	**10.77**	**253**	Pn			**Pn**	**17 02 28.2**	**+1.3**
SIJI	**Sorong**	**11.21**	**155**	Pn			**Pn**	**17 02 32.9**	**+0.2**
	1.5nm,0.3s,baz=0.9,slow=15,SNR=7.6								
SIJI					Sn		Sn	17 04 27.0	-11
	0.4nm,0.3s,baz=172,slow=23,SNR=1.7								
NLAI	**Namlea**	**12.54**	**178**	P			Pn	17 02 57.1	+6.1
	716µm10µm18nm,0.6s								
FAKI	**Fak Fak**	**13.47**	**155**	Pn			**Pn**	**17 03 05.1**	**+1.4**
TTSI	**Tana Toraja**	**14.05**	**209**	P			**P**	**17 03 21.1**	**+1.8**
	16nm,1.5s								
TPUB	**Ta-pu**	**14.96**	**338**				**Pn**	**17 03 23.3**	**-0.7**
BNSI	**Bone**	**15.12**	**205**	P			**P**	**17 03 33.9**	**+2.6**
	22µm17nm,0.8s								
SMPI	**Sarmi**	**16.56**	**132**	P			**P**	**17 03 48.5**	**+1.3**
	17nm,1.3s								
HKPS	**Hong Kong Po S**	**17.51**	**319**	Pn			**Pn**	**17 03 56.3**	**-0.4**
HKPS					IAmb		IAmb	17 04 09.8	
	comp=Z,49nm,1.4s								
GENI	**Genyem**	**18.04**	**131**	P			**P**	**17 04 06.9**	**+3.3**
	comp=Z,28nm,1.2s								
QIZ	**Qiongzhong**	**18.81**	**302**	P			**Pn**	**17 04 12.8**	**+0.1**
QIZ				S			**S**	**17 07 45.3**	**-0.5**
SOEI	**Soe**	**19.14**	**187**	P			**Pn**	**17 04 20.0**	**+3.2**
	comp=Z,47nm,0.7s								
BATI	**Baumata**	**19.67**	**188**	P			**Pn**	**17 04 22.6**	**-0.4**
	comp=Z,4.8nm,0.3s,baz=350,slow=3.6,SNR=10								
BATI					LR		LR	17 13 29.3	

	comp=E,360nm,15.2s									
LZH					LR	LR				
	comp=Z,210nm,17.3s									
HHC	**Hu-ho-hao-te**	**34.05**	**339**		*eP*	**P**	**17 06 35.3**	**-1.4**		
HHC					pmax	pmax				
	comp=Z,10.0nm,0.9s									
HHC					pmax	pmax				
	comp=Z,280nm,6.3s									
USRK	**Ussuriysk Ar.**	**35.01**	**7**		P	**P**	**17 06 46.7**	**+1.9**		
	comp=Z,3.3nm,0.7s,baz=184,slow=7.5,SNR=11									
CTA	**Charters Tower**	**35.12**	**147**		P	**P**	**17 06 45.4**	**-0.6**		
	comp=Z,3.1nm,0.6s,baz=336,slow=9.6,SNR=5.0									
CTAO	**Charters Tower**	**35.12**	**147**		P	**P**	**17 06 43.7**	**-2.3**		
GTA	**Gaotai**	**38.27**	**326**		*eP*	**P**	**17 07 12.5**	**-0.4**		
GTA					pP	sP	17 07 17.3	-0.6		
GTA					sP	pwP	17 07 19.8	-3.4		
GTA					pmax	pmax				
	comp=Z,4.0nm,1.0s									
GTA					pmax	pmax				
	comp=Z,170nm,7.0s									
GTA					LR	LR				
	comp=N,150nm,18.1s									
GTA					LR	LR				
	comp=E,260nm,16.5s									
GTA					LR	LR				
	comp=Z,270nm,16.5s									
MORW	**Morawa**	**39.55**	**195**		P	**P**	**17 07 23.2**	**-0.3**		
MORW					IAmb	IAmb	17 07 24.1			
	comp=Z,13nm,0.7s									
H11S3	**WAKE ISLAND Hy**	**39.91**	**72**		T	T	17 50 27.5			
	baz=262,slow=75,SNR=45									
H11S1	**WAKE ISLAND Hy**	**39.92**	**72**		T	T	17 50 28.7			
	baz=262,slow=75,SNR=38									
H11S2	**WAKE ISLAND Hy**	**39.93**	**72**		T	T	17 50 30.9			
	baz=262,slow=75,SNR=38									
H11N1	**WAKE ISLAND Hy**	**40.27**	**71**		T	T	17 51 08.0			
	baz=265,slow=74,SNR=28									
H11N2	**WAKE ISLAND Hy**	**40.28**	**71**		T	T	17 51 06.1			
	baz=265,slow=74,SNR=23									
H11N3	**WAKE ISLAND Hy**	**40.29**	**71**		T	T	17 51 09.4			
	baz=265,slow=74,SNR=28									
TAPN	**Taplejung**	**40.75**	**301**		*eP*	**P**	**17 07 34.0**	**+0.1**		
	comp=Z,14nm,0.6s									
ODAN	**Odare**	**40.87**	**300**		*eP*	**P**	**17 07 35.0**	**+0.2**		
	comp=Z,44nm,0.6s									
RAMN	**Ramite**	**41.57**	**300**		*eP*	**P**	**17 07 41.1**	**+0.5**		
	comp=Z,19nm,0.6s									
SONM	**Songino Array**	**41.95**	**340**		P	**P**	**17 07 44.0**	**+0.8**		
	comp=Z,0.8nm,0.5s,baz=158,slow=9.6,SNR=6.3									
JIRN	**Jiri**	**42.13**	**301**		*eP*	**P**	**17 07 45.6**	**+0.3**		
	comp=Z,45nm,0.6s									
GUN	**Gumba**	**42.47**	**301**		*eP*	**P**	**17 07 48.0**	**0.0**		
	comp=Z,34nm,0.7s									
PKI	**Pulchoki**	**42.76**	**301**		*eP*	**P**	**17 07 49.8**	**-0.6**		
	comp=Z,10nm,0.6s									
PKIN	**Phulchoki**	**42.77**	**301**		*eP*	**P**	**17 07 50.0**	**-0.5**		
	comp=Z,12nm,0.6s									
NWAO	**Narrogin (SRO)**	**43.00**	**192**		P	**P**	**17 07 51.5**	**-0.3**		
NWAO					IAmb	IAmb	17 07 52.6			
	comp=Z,18nm,0.7s									
NWAO	**Narrogin (SRO)**	**43.00**	**192**		P	**P**	**17 07 51.0**	**-0.7**		
NWAO					IAmb	IAmb	17 07 52.6			
	comp=Z,14nm,0.7s									
STKA	**Stephens Creek**	**43.47**	**161**		P	**P**	**17 07 54.5**	**-1.2**		
	comp=Z,3.2nm,0.8s,baz=326,slow=8.3,SNR=5.7									
STKA	**Stephens Creek**	**43.47**	**161**		P	**P**	**17 07 54.4**	**-1.2**		
GKN	**Gorkha**	**43.54**	**301**		*eP*	**P**	**17 07 56.2**	**-0.3**		
DANN	**Dangsing**	**44.38**	**301**		*eP*	**P**	**17 08 03.3**	**-0.2**		
	comp=Z,32nm,0.6s									
PYUN	**Piuthan**	**44.97**	**301**		*eP*	**P**	**17 08 08.2**	**+0.2**		
	comp=Z,37nm,0.6s									
WMQ	**Urumqi**	**48.10**	**322**		*eP*	**P**	**17 08 33.5**	**+1.3**		
WMQ					sP	pwP	17 08 40.5	-2.1		
WMQ					LR	LR				
	comp=N,110nm,14.5s									
WMQ					LR	LR				
	comp=E,91nm,17.3s									
WMQ					LR	LR				
	comp=Z,150nm,13.3s									
DZM	**Mont Dzumac**	**50.07**	**129**		P	**P**	**17 08 48.3**	**+0.8**		
	comp=Z,3.5nm,0.9s,baz=72,slow=18,SNR=1.4									
DZM	**Mont Dzumac**	**50.07**	**129**		IAmb	IAmb	17 08 53.0			
	comp=Z,9.7nm,1.2s									
PETK	**Petropavlovsk-**	**50.33**	**24**		P	**P**	**17 08 50.4**	**+1.4**		
	comp=Z,3.8nm,0.7s,baz=206,slow=6.4,SNR=5.6									
MK31	**Makanchi Array**	**52.91**	**323**		P	**P**	**17 09 07.2**	**-1.2**		
MK31					IAmb	IAmb	17 09 09.9			
	comp=Z,3.6nm,0.7s									
MKAR	**Makanchi Array**	**52.91**	**323**		P	**P**	**17 09 09.2**	**+0.8**		
	comp=Z,4.9nm,0.7s,baz=123,slow=8.2,SNR=27									
NIL	**Nilore**	**54.47**	**305**		P	**P**	**17 09 19.4**	**-0.8**		
ZALV	**Zalesovo Beam**	**55.54**	**331**		P	**P**	**17 09 26.7**	**-0.7**		
	comp=Z,1.3nm,0.5s,baz=138,slow=9.5,SNR=6.2									
KURK	**Kurchatov**	**56.96**	**326**		P	**P**	**17 09 36.0**	**-1.6**		
KURK					IAmb	IAmb	17 09 38.4			
	comp=Z,6.1nm,0.8s									
GAR	**Garm**	**58.08**	**310**		P	**P**	**17 09 44.9**	**-1.0**		
KK31	**Karatay Array**	**59.08**	**315**		P	**P**	**17 09 52.1**	**-0.5**		
KK31					IAmb	IAmb	17 09 53.2			
	comp=Z,3.3nm,0.8s									
TIXI	**Tiksi**	**62.23**	**1**		P	**P**	**17 10 12.5**	**-1.1**		
TIXI					IAmb	IAmb	17 10 26.3			
	comp=Z,5.2nm,0.8s									
BRVK	**Borovoye**	**62.63**	**326**		P	**P**	**17 10 15.9**	**-0.8**		
BRVK					IAmb	IAmb	17 10 17.7			
	comp=Z,5.4nm,0.7s									
RPZ	**Rata Peaks**	**66.49**	**146**		P	**P**	**17 10 40.7**	**-1.2**		
	comp=Z,4.7nm,0.5s,baz=318,slow=2.6,SNR=5.1									
GEYT	**Ailbeck**	**67.30**	**307**		P	**P**	**17 10 47.7**	**+0.3**		
	comp=Z,1.2nm,0.6s,baz=190,slow=4.4,SNR=2.5									
ARU	**Arti**	**70.12**	**327**		P	**P**	**17 11 03.6**	**-0.9**		
ARU					IAmb	IAmb	17 11 04.7			
	comp=Z,6.2nm,0.6s									
CASY	**Casey**	**76.37**	**187**		P	**P**	**17 11 41.0**	**-0.1**		
CASY					IAmb	IAmb	17 11 52.7			
	comp=Z,6.7nm,0.9s									
RAYN	**Ar Rayn**	**78.17**	**292**		P	**P**	**17 11 51.9**	**-0.4**		
RAYN					IAmb	IAmb	17 11 52.9			
	comp=Z,6.7nm,0.7s									
ILAR	**Eielson Array**	**80.12**	**26**		P	**P**	**17 12 02.2**	**+0.1**		
	comp=Z,0.5nm,0.6s,baz=236,slow=5.3,SNR=6.1									
ARCES	**ARCESS Array B**	**85.12**	**340**		P	**P**	**17 12 28.6**	**+0.5**		
	comp=Z,3.3nm,0.6s,baz=81,slow=6.3,SNR=18									
FINES	**FINESS Array B**	**86.81**	**332**		P	**P**	**17 12 36.1**	**-0.4**		
	comp=Z,0.9nm,0.5s,baz=52,slow=5.5,SNR=10									
AKASG	**Malin Array Be**	**87.43**	**321**		P	**P**	**17 12 38.6**	**-1.2**		
	comp=Z,1.1nm,0.6s,baz=64,slow=6.5,SNR=1.9									
VNDA	**Vanda**	**89.01**	**173**		P	**P**	**17 12 45.4**	**-1.2**		
	comp=Z,0.9nm,0.6s,baz=350,slow=1.4,SNR=3.9									
NOA	**NORSAR Array B**	**93.68**	**334**		P	**P**	**17 13 09.1**	**+0.3**		
	comp=Z,0.4nm,0.6s,baz=70,slow=7.2,SNR=1.6									
YKA	**Yellowknife Ar**	**94.45**	**24**		P	**P**	**17 13 13.0**	**+0.7**		
	comp=Z,0.8nm,0.6s,baz=297,slow=4.4,SNR=10									
TXAR	**Lajitas Array**	**118.19**	**50**		PKP		**PKiKP**	**17 18 40.8**	**+0.5**	
	comp=Z,0.2nm,0.6s,baz=101,slow=0.9,SNR=1.9									
TORD	**Torodi Ar. Bea**	**120.86**	**291**		PKP		**PKPdf**	**17 18 44.8**	**-0.8**	
	comp=Z,0.9nm,0.8s,baz=74,slow=0.4,SNR=3.1									
PLCA	**Paso Flores**	**145.28**	**157**		PKPbc		**PKPbc**	**17 19 30.2**	**0.0**	
	comp=Z,3.5nm,0.9s,baz=248,slow=1.3,SNR=5.5									

UPP ***30*** *17:00:48.1±0.1,67.06°N×20.96°E, h0km, ML2.4, Explosion*
HEL ***30*** *17:00:48.9±0.1, 67.05°N×20.90°E, h0km, ML2.3, ML2.3(UPP), Explosion*
NAO ***30*** *17:00:49.8±1.0, 67.08°N×21.27°E, ML2.5*
IDC ***30*** *17:00:49.6±1.1, 67.03°N×21.35°E, h0km, mb1 2.8/3, mb1mx2.7/41, mbtmp2.7/3, ML2.2/3, Error ellipse: s-maj=17.2km s-min=8.5km az=104.0*
BER ***30*** *17:00:51.6±3.9, 67.05°N×21.04°E, h0km, ML1.7, ML2.5(NAO), Suspected explosion*
KOLA ***30*** *17:00:56.0, 65.76°N×23.42E, h0km*

ISC 30 17:00:48.1±0.7, 67.07N±0.02×20.95E±0.03, h0km, n58, σ1s46/86, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERTU	**Ertsjaerv**	**0.71**	**136**	*eP*	**Pg**	**17 01 01.4**	**-0.3**
	baz=306						
HARU	**Harads**	**0.91**	**179**	P	**Pg**	**17 01 05.1**	**-0.4**
HARU				S	**Sg**	**17 01 15.9**	**-1.3**
HARU	**Harads**	**0.91**	**179**	*eP*	**Pg**	**17 01 05.1**	**-0.4**
HARU				*eS*	**Sg**	**17 01 15.9**	**-1.3**
KUA	**Kurravaara**	**0.92**	**345**	P	**Pg**	**17 01 05.4**	**-0.4**
KUA				S	**Sb**	**17 01 18.6**	**-1.1**
KUA	**Kurravaara**	**0.92**	**345**	*eP*	**Pg**	**17 01 05.4**	**-0.4**
KUA				*eS*	**Sb**	**17 01 18.6**	**-1.1**
SALU	**Saltoluokta**	**1.00**	**289**	*eP*	**Pn**	**17 01 11.5**	**+2.1**
LANU	**Lannavaara**	**1.06**	**22**	P	**Pg**	**17 01 07.9**	**-0.6**
LANU	**Lannavaara**	**1.06**	**22**	*eP*	**Pg**	**17 01 07.9**	**-0.6**
LANU				*eSB*	**Sb**	**17 01 24.1**	**+0.2**
NIKU	**Nikkaluokta**	**1.09**	**318**	P	**Pg**	**17 01 08.6**	**-0.4**
NIKU	**Nikkaluokta**	**1.09**	**318**	*eP*	**Pg**	**17 01 08.6**	**-0.4**
KOVU	**Salmi**	**1.20**	**346**	P	**Pg**	**17 01 10.6**	**-0.5**
KOVU	**Salmi**	**1.20**	**346**	*eP*	**Pg**	**17 01 10.6**	**-0.5**
SJUU	**Sjulsmark**	**1.59**	**170**	P	**Pn**	**17 01 17.3**	**-0.1**
SJUU	**Sjulsmark**	**1.59**	**170**	*eP*	**Pn**	**17 01 17.3**	**-0.1**
TOF	**Tornio**	**1.67**	**125**	*eP*	**Pn**	**17 01 18.7**	**+0.1**
TOF				MSG		17 01 40.0	
	comp=Z,21nm,0.2s						
TOF				*eSN*	**Sg**	**17 01 43.0**	**+1.2**
HEF	**Hetta**	**1.70**	**36**	Pn	**Pn**	**17 01 19.3**	**+0.4**
HEF				Sn	**Sb**	**17 01 41.8**	**-0.3**
HEF	**Hetta**	**1.70**	**36**	*eP*	**Pn**	**17 01 19.0**	**0.0**
HEF				*eS*	**Sb**	**17 01 41.5**	**-0.5**
HEF				MSG		17 01 41.8	
	comp=Z,28nm,0.2s						
HEF	**Hetta**	**1.70**	**36**	*eP*	**Pn**	**17 01 19.1**	**+0.2**
HEF				Sn	**Sb**	**17 01 41.8**	**-0.3**
KIF	**Kilpisjarvi**	**1.95**	**358**	Pn	**Pb**	**17 01 24.1**	**-0.3**
KIF				Sn	**Sg**	**17 01 51.5**	**+0.9**
KIF	**Kilpisjarvi**	**1.95**	**358**	*ePB*	**Pb**	**17 01 24.4**	**0.0**
KIF				MSG		17 01 48.0	
	comp=Z,51nm,0.2s						
KIF				*eSG*	**Sg**	**17 01 51.5**	**+0.9**
KIF	**Kilpisjarvi**	**1.95**	**358**	*eP*	**Pb**	**17 01 24.5**	**+0.1**
KIF				Sn	**Sg**	**17 01 51.5**	**+0.9**
RNF	**Rovaniemi**	**2.05**	**101**	*eP*	**Pn**	**17 01 24.8**	**+1.0**
RNF				*eSG*	**Sg**	**17 01 54.3**	**+0.3**
KTK1	**Kautokeino**	**2.13**	**23**	Pn	**Pb**	**17 01 26.7**	**-0.9**
KTK1				Sn	**Sb**	**17 01 53.9**	**-0.7**
KTK1	**Kautokeino**	**2.13**	**23**	*eP*	**Pb**	**17 01 26.8**	**-0.9**
KTK1				*eS*	**Sb**	**17 01 54.4**	**-0.3**
I37NO	**I37NO**	**2.20**	**338**	*i*		17 14 30.0	
	baz=159,slow=321,SNR=8.6						
SGF	**Sodankyl**	**2.20**	**78**	*eP*	**Pn**	**17 01 27.2**	**+1.3**
SGF				*eSG*	**Sb**	**17 01 57.4**	**+0.9**
STEI	**Steigen**	**2.36**	**294**	*eP*	**Pn**	**17 01 29.0**	**+0.9**
BURU	**Burvik**	**2.50**	**176**	*eP*	**Pn**	**17 01 31.2**	**+1.2**
OUL	**Oulu**	**2.83**	**132**	*ePB*	**Pn**	**17 01 36.8**	**+2.3**
OBF0	**Syolatti, Pyha**	**2.91**	**151**	*ePB*	**Pn**	**17 01 38.1**	**+2.4**
OBF0				*eSB*	**Sb**	**17 02 16.2**	**-0.7**
ARA0	**ARCESS Array S**	**3.00**	**32**	Pn	**Pn**	**17 01 37.5**	**+0.6**
	baz=218,slow=14						
ARA0				Sn	**Sn**	**17 02 15.2**	**+1.7**
	baz=220,slow=22						
ARA0	**ARCESS Array S**	**3.00**	**32**	Pn	**Pn**	**17 01 37.5**	**+0.6**
	baz=218,slow=14						
ARA0				Sn	**Sn**	**17 02 15.2**	**+1.7**
	baz=220,slow=22						
ARCES	**ARCESS Array B**	**3.00**	**32**	Pn	**Pn**	**17 01 37.5**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=209,slow=14,SNR=21						
ARCES				Sn	**Sn**	**17 02 15.0**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=210,slow=22,SNR=10						
ARE0	**ARCESS Array S**	**3.00**	**32**	*eP*	**Pn**	**17 01 37.8**	**+0.9**
	baz=220						
ARE0				*eSB*	**Sb**	**17 02 17.7**	**-1.8**
ARE0	**ARCESS Array S**	**3.00**	**32**	*eP*	**Pn**	**17 01 37.9**	**+0.9**
ARE0				IAML		17 02 19.3	
	comp=Z,5.5nm,0.1s						
LOF	**Lofoten**	**3.03**	**294**	*eP*	**Pn**	**17 01 37.8**	**+0.6**
OUF	**Merijarvi**	**3.13**	**148**	*eP*	**Pn**	**17 01 39.6**	**+1.0**
OUF				MSG		17 02 20.2	
	comp=Z,3.9nm,0.2s						
KONS	**Konsvik**	**3.15**	**263**	*eP*	**Pn**	**17 01 40.3**	**+1.3**
UMAU	**Umeaa**	**3.20**	**182**	*eP*	**Pn**	**17 01 40.3**	**+0.8**
VRF	**Varrio**	**3.41**	**74**	*eP*	**Pn**	**17 01 44.0**	**+1.5**
MSF	**Maaselka**	**3.44**	**106**	*eP*	**Pn**	**17 01 44.6**	**+1.7**
KU6	**Riekki**	**3.73**	**102**	*eP*	**Pn**	**17 01 47.4**	**+0.6**
	baz=287						
HUSU	**Husum**	**3.81**	**192**	*eP*	**Pn**	**17 01 48.9**	**+0.9**
	baz=8.0						
VAF	**Ylistaro**	**4.11**	**169**	*eP*	**Pn**	**17 01 53.7**	**+1.7**
NOD	**Norderasen**	**4.45**	**218**	*eP*	**Pn**	**17 01 57.8**	**+1.1**
NSS	**Namsos**	**4.49**	**240**	*eP*	**Pn**	**17 01 59.0**	**+1.8**
APA0	**Apatity Array**	**4.69**	**78**	Pn	**Pn**	**17 02 00.1**	**+0.1**
	baz=265,slow=12						
APA0				Sn	**Sn**	**17 02 55.2**	**+0.1**
APA0				Lg	Lg	17 03 12.3	
	baz=281,slow=28						
APA0	**Apatity Array**	**4.69**	**78**	P	**Pn**	**17 02 00.7**	**+0.7**
APA0				S	**Sn**	**17 02 49.3**	**-5.8**
APA0	**Apatity Array**	**4.69**	**78**	Pn	**Pn**	**17 02 00.1**	**+0.1**
	baz=265,slow=12						
APA0				Sn	**Sn**	**17 02 55.2**	**+0.1**
APA0				Sg	**Sb**	**17 03 12.3**	**+4.2**
	baz=281,slow=28						
APA	**Apatity**	**4.85**	**78**	S	**Sn**	**17 02 52.5**	**-6.4**
FIA0	**FINESS Array S**	**6.07**	**156**	Pn	**Pn**	**17 02 20.2**	**+1.3**
	baz=347,slow=16						
FIA0				Sn	**Sn**	**17 03 30.2**	**+1.2**
	baz=342,slow=28						
FIA0	**FINESS Array S**	**6.07**	**156**	Pn	**Pn**	**17 02 20.2**	**+1.3**
	baz=347,slow=16						
FIA0				Sn	**Sn**	**17 03 30.2**	**+1.2**
	baz=342,slow=28						
FINES	**FINESS Array B**	**6.07**	**156**	Pn	**Pn**	**17 02 20.1**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=348,slow=14,SNR=19						
FINES				Sn	**Sn**	**17 03 28.5**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=342,slow=23,SNR=5.2						
FINES				Lg	Lg	17 03 56.6	
	comp=Z,0.1nm,0.3s,baz=355,slow=28,SNR=2.5						
NOA	**NORSAR Array B**	**7.40**	**220**	Pn	**Pn**	**17 02 37.2**	**0.0**
	comp=Z,0.0nm,0.3s,baz=12,slow=18,SNR=1.4						
NOA				Sn	**Sn**	**17 04 01.6**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=39,slow=23,SNR=1.3						
NRA0	**NORESS Array S**	**7.58**	**218**	Pn	**Pn**	**17 02 41.2**	**+1.5**
	baz=30,slow=14						
NRA0	**NORESS Array S**	**7.58**	**218**	Pn	**Pn**	**17 02 41.2**	**+1.5**
	baz=30,slow=14						
HFS	**Hagfors**	**7.67**	**208**	Pn	**Pn**	**17 02 42.3**	**+1.4**
	baz=27,slow=16						
HFS	**Hagfors**	**7.67**	**208**	Pn	**Pn**	**17 02 42.3**	**+1.4**
	baz=27,slow=16						

IDC 30 17:02:46.6±20.0, 16.94S×177.87W, h300km±192km, mb3.2/3, mb1 3.5/3, mb1mx3.0/43, mbtmp3.8/3, Error ellipse: s-maj=290.9km s-min=47.3km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.32**	**259**	P	P	17 10 34.1	-1.7
	0.5nm,0.8s,baz=96,slow=8.3,SNR=1.8						
ASAR	**Alice Springs**	**45.56**	**253**	P	P	17 10 38.2	+0.6
	2.8nm,0.3s,baz=85,slow=8.6,SNR=73						
ASAR				PcP	PcP	17 12 10.3	-0.4
	0.2nm,0.4s,baz=100,slow=3.9,SNR=1.8						
TXAR	**Lajitas Array**	**85.04**	**57**	P	P	17 14 49.4	0.0
	0.2nm,0.5s,baz=221,slow=9.5,SNR=2.6						

IDC ***30*** *17:06:08.8±1.0, 9.63N×127.10E, h0km, mb3.9/11, mb1 4.1/13, mb1mx3.8/48, mbtmp4.0/13, ML4.3/2, Error ellipse: s-maj=42.3km s-min=14.7km az=75.0*
NEIC ***30*** *17:06:09.3±2.9, 9.56N±0.08×126.77E±0.05, h8km±4km, mb4.5/37, Error ellipse: s-maj=11.7km s-min=6.1km az=198.0*
MAN ***30*** *17:06:15.2, 9.38N×126.66E, h89km, mb5.4, ML4.4, MS4.6*
ISC 30 17:06:14.3±0.5, 9.45N±0.04×126.80E±0.07, h41km, n75, σ1s92/76, mb4.3/25, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**1.33**	**199**	*eP*	Pn	17 06 46.6	+10
BIPH				*eS*	**Sn**	**17 07 00.9**	**+7.9**
SCPH	**Surigao**	**1.34**	**284**	*eP*	**Pn**	**17 06 36.8**	**+0.2**
SCPH				*eS*	**Sn**	**17 06 55.9**	**+2.7**
MSLP	**Maasin**	**2.03**	**290**	*eP*	**Pn**	**17 06 46.7**	**+0.6**
BUKP				*eS*	**Sn**	**17 07 15.6**	**+5.3**
BUKP	**Musuan**	**2.32**	**228**	*eP*	**Pn**	**17 06 50.8**	**+0.7**
BUKP				*eS*	**Sn**	**17 07 16.5**	**-1.0**
MATI	**Mati**	**2.54**	**192**	*eP*	**Pn**	**17 06 54.7**	**+1.5**
DAV	**Davao City (W)**	**2.66**	**207**	Pn	**Pn**	**17 06 58.6**	**+4.0**
	9.6nm,0.3s,baz=61,slow=6.1,SNR=1.5						
DAV				Sn	**Sn**	**17 07 29.0**	**+3.4**
	111nm,0.3s,baz=234,slow=20,SNR=3.6						
DAV				Lg	Lg	17 07 42.6	
	10nm,0.3s,baz=55,slow=22,SNR=8.4						
DAV	**Davao City (W)**	**2.66**	**207**		**Pn**	**17 06 55.9**	**+1.3**
LLP	**Lapu-Lapu**	**2.93**	**287**	*eP*	**Pn**	**17 07 00.9**	**+2.5**
LLP				*eS*	**Pn**	**17 07 03.1**	**+4.7**
KCP	**Kidapawan**	**2.96**	**215**	*iP*	**Pn**	**17 06 59.9**	**+1.0**
KCP				*i S*	Sn	17 07 20.0	-13
CTBH	**Cotabato--PC H**	**3.36**	**229**	*eP*	**Pn**	**17 07 04.8**	**+0.4**
DDMP	**Don Marcelino,**	**3.49**	**198**	*eP*	**Pn**	**17 07 06.9**	**+0.7**
SKMP	**Bagumbayan, Su**	**3.67**	**218**	*eP*	**Pn**	**17 07 06.6**	**-2.1**
CNP	**Catarman**	**3.70**	**326**	*eP*	**Pn**	**17 07 10.6**	**+1.6**
CNP				*eS*	**Sn**	**17 07 54.0**	**+2.6**
PAGZ	**Pagadian**	**3.74**	**245**	*eP*	**Pn**	**17 07 11.8**	**+2.3**
CNOP	**Candoni, Negro**	**4.12**	**276**	*eP*	**Pn**	**17 07 13.7**	**-1.1**
GUIM	**Jordan**	**4.31**	**266**	*eP*	**Pn**	**17 07 15.5**	**-1.9**
RCP	**Roxas**	**4.51**	**298**	*eP*	**Pn**	**17 07 22.1**	**+1.9**
PVCP	**Virac**	**4.87**	**328**	*eP*	**Pn**	**17 07 27.6**	**+2.5**
JAP	**San Jose, Anti**	**4.95**	**286**	*eP*	**Pn**	**17 07 27.1**	**+0.9**
LQP	**Lukban**	**6.93**	**312**	*eP*	Pn	17 07 47.8	-5.8
TNTI	**Ternate**	**8.64**	**176**	Pn	**Pn**	**17 08 18.8**	**+1.9**
KKM	**Kota Kinabalu**	**11.02**	**253**	Pn	**Pn**	**17 08 49.6**	**-0.1**
FAKI	**Fak Fak**	**13.43**	**156**	Pn	**Pn**	**17 09 24.6**	**+2.1**
TPUB	**Ta-pu**	**14.99**	**338**		**Pn**	**17 09 43.6**	**+0.1**
YHNB	**Yeheng**	**16.00**	**342**	Pn	**Pn**	**17 09 55.1**	**-1.5**
YHNB				IAmb	IAmb	17 10 09.8	
	comp=Z,62nm,1.5s						
SBUM	**Sibu**	**16.08**	**245**	P	**P**	**17 09 59.7**	**-0.7**
KSM	**Kuching**	**18.22**	**245**	P	**P**	**17 10 23.7**	**-0.4**
SOEI	**Soe**	**19.24**	**188**	P	**P**	**17 10 35.2**	**-0.3**
SOEI				IAmb	IAmb	17 10 42.4	
	comp=Z,47nm,1.3s						
BATI	**Baumata**	**19.77**	**189**	P	**Pn**	**17 10 43.4**	**+0.4**
	comp=Z,3.1nm,0.3s,baz=352,slow=3.5,SNR=4.5						
JAGI	**Jajag, Banyuwa**	**21.81**	**216**	P	**P**	**17 11 01.7**	**-1.5**
JAGI				IAmb	IAmb	17 11 04.8	
	comp=Z,44nm,1.2s						
MTN	**Manton Dam**	**22.56**	**169**	P	**P**	**17 11 11.1**	**-0.1**
MYKOM	**Kota Tinggi**	**24.06**	**253**	P	**P**	**17 11 26.8**	**+0.8**
MYKOM				IAmb	IAmb	17 11 28.8	
	comp=Z,9.2nm,0.8s						
KNRA	**Kununurra**	**25.04**	**176**	P	**P**	**17 11 35.9**	**+1.0**
KNRA				IAmb	IAmb	17 11 43.6	
	comp=Z,23nm,1.5s						
PMBI	**Palembang**	**25.16**	**242**	P	**P**	**17 11 38.3**	**+2.2**
IPM	**Ipoh**	**26.05**	**261**	P	**P**	**17 11 43.1**	**-1.1**
IPM				IAmb	IAmb	17 11 46.8	
	comp=Z,8.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**27.39**	**182**	P	**P**	**17 11 58.3**	**+2.2**
	comp=Z,3.3nm,0.7s,baz=2.3,slow=11,SNR=7.9						
FITZ	**Fitzroy Crossi**	**27.39**	**182**	P	**P**	**17 11 55.4**	**-0.7**
FITZ				IAmb	IAmb	17 12 11.6	
	comp=Z,6.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**28.45**	**291**	P	**P**	**17 12 06.9**	**+1.3**
	comp=Z,0.6nm,0.9s,baz=110,slow=8.1,SNR=5.4						
WB0	**Warramunga Arr**	**29.98**	**166**	P	**P**	**17 12 17.9**	**-1.2**
WB0				IAmb	IAmb	17 12 25.5	
	comp=Z,9.2nm,1.3s						
WRAB	**Tennant Creek**	**30.13**	**166**	P	**P**	**17 12 19.7**	**-0.7**
WRAB				IAmb	IAmb	17 12 23.8	
	comp=Z,9.9nm,1.5s						
WRA	**Warramunga Arr**	**30.13**	**166**	P	**P**	**17 12 20.1**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=348,slow=9.4,SNR=5.6						
WB2	**Warramunga Arr**	**30.14**	**166**	P	**P**	**17 12 18.6**	**-1.9**
GSI	**Gunungsitoli**	**30.18**	**256**	P	**P**	**17 12 20.3**	**-0.7**
WR0	**

MTN	**Manton Dam**	**22.43**	**168**	P	**P**	**17 11 33.9**	**-2.7**
MTN				IAmb	IAmb	17 11 53.2	
	comp=Z,14nm,0.6s						
UGM	**Wanagama**	**23.15**	**223**	P	**P**	**17 11 43.0**	**-1.1**
JNU	**Nakatsue**	**24.17**	**9**	P	**P**	**17 11 53.6**	**+0.2**
KNRA	**Kununurra**	**24.85**	**174**	P	**P**	**17 11 58.7**	**-0.9**
KNRA				IAmb	IAmb	17 12 10.5	
	comp=Z,11nm,0.7s						
MNAI	**Manna**	**26.88**	**241**	P	**P**	**17 12 16.6**	**-1.6**
FITZ	**Fitzroy Crossi**	**27.14**	**181**	P	**P**	**17 12 23.3**	**+2.9**
	comp=Z,6.2nm,0.7s,baz=18,slow=12,SNR=6.3						
FITZ	**Fitzroy Crossi**	**27.14**	**181**	P	**P**	**17 12 21.0**	**+0.6**
FITZ				IAmb	IAmb	17 12 25.3	
	comp=Z,9.8nm,0.9s						
KSRS	**Korea Array**	**28.16**	**3**	P	**P**	**17 12 30.2**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=192,slow=9.9,SNR=5.3						
WB0	**Warramunga Arr**	**29.88**	**165**	P	**P**	**17 12 41.0**	**-3.8**
WB0				IAmb	IAmb	17 12 56.1	
	comp=Z,13nm,1.4s						
WRAB	**Tennant Creek**	**30.03**	**165**	P	**P**	**17 12 43.5**	**-2.6**
WRAB				IAmb	IAmb	17 12 58.5	
	comp=Z,10nm,1.2s						
WB2	**Warramunga Arr**	**30.04**	**165**		**P**	**17 12 45.2**	**-1.0**
WB2				IAmb	IAmb	17 13 08.9	
	comp=Z,14nm,1.4s						
WR0	**Warramunga Arr**	**30.11**	**164**	P	**P**	**17 12 45.6**	**-1.1**
WR0				IAmb	IAmb	17 13 00.5	
	comp=Z,8.4nm,1.2s						
PSA00	**Pilbara Seismi**	**31.24**	**192**	P	**P**	**17 12 58.7**	**+1.9**
ASAR	**Alice Springs**	**33.52**	**167**	P	**P**	**17 13 16.1**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=350,slow=6.7,SNR=7.0						
MDJ	**Mudanjiang**	**35.39**	**4**	P	**P**	**17 13 32.2**	**-0.4**
MDJ				IAmb	IAmb	17 13 34.6	
	comp=Z,8.2nm,1.2s						
MORW	**Morawa**	**39.32**	**194**	P	**P**	**17 14 06.1**	**0.0**
FORT	**Forrest**	**39.80**	**178**	P	**P**	**17 14 10.8**	**+0.8**
EIDS	**Eidsvold**	**42.01**	**145**	P	**P**	**17 14 27.6**	**-0.8**
EIDS				IAmb	IAmb	17 14 32.4	
	comp=Z,13nm,1.2s						
NWAO	**Narrogin (SRO)**	**42.78**	**191**	P	**P**	**17 14 34.6**	**+0.1**
NWAO				IAmb	IAmb	17 14 39.2	
	comp=Z,13nm,0.9s						
NWAO	**Narrogin (SRO)**	**42.78**	**191**	P	**P**	**17 14 34.4**	**-0.1**
NWAO				IAmb	IAmb	17 14 39.3	
	comp=Z,12nm,0.9s						
BBOO	**Buckleboo**	**42.81**	**168**	P	**P**	**17 14 35.2**	**+0.4**
STKA	**Stephens Creek**	**43.40**	**161**	P	**P**	**17 14 39.7**	**+0.1**
DZM	**Mont Dzumac**	**50.17**	**129**	P	**P**	**17 15 33.1**	**+0.4**
DZM				IAmb	IAmb	17 16 02.2	
	comp=Z,9.1nm,1.0s						
PETK	**Petropavlovsk-**	**50.59**	**24**	P	**P**	**17 15 36.5**	**+1.1**
	comp=Z,3.3nm,0.8s,baz=240,slow=8.1,SNR=2.7						
MK31	**Makanchi Array**	**52.88**	**323**	P	**P**	**17 15 52.9**	**+0.4**
MKAR	**Makanchi Array**	**52.88**	**323**	P	**P**	**17 15 53.6**	**+1.1**
	comp=Z,2.3nm,0.7s,baz=131,slow=8.4,SNR=8.0						
MAKZ	**Makanchi**	**53.07**	**323**	P	**P**	**17 15 56.0**	**+2.0**
NIL	**Nilore**	**54.34**	**305**	P	**P**	**17 16 05.0**	**+1.5**
KURK	**Kurchatov**	**56.95**	**326**	P	**P**	**17 16 21.1**	**-0.7**
KURK				IAmb	IAmb	17 16 23.8	
	comp=Z,4.6nm,0.9s						
KURBB	**Kurchatov Arra**	**56.95**	**326**	P	**P**	**17 16 22.6**	**+0.7**
	comp=Z,2.3nm,0.8s,baz=124,slow=6.6,SNR=9.7						
TIXI	**Tiksi**	**62.40**	**1**	P	**P**	**17 16 58.1**	**-0.9**
TIXI				IAmb	IAmb	17 17 01.2	
	comp=Z,5.2nm,1.1s						
BVAR	**Borovoye Array**	**62.54**	**326**	P	**P**	**17 17 00.6**	**+0.3**
	comp=Z,2.3nm,0.9s,baz=101,slow=7.7,SNR=8.6						
BRVK	**Borovoye**	**62.61**	**326**	P	**P**	**17 17 01.2**	**+0.4**
BRVK				IAmb	IAmb	17 17 02.3	
	comp=Z,4.5nm,0.9s						
ARU	**Arti**	**70.11**	**327**	P	**P**	**17 17 48.6**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=56,slow=3.6,SNR=4.9						
ARU	**Arti**	**70.11**	**327**	P	**P**	**17 17 48.4**	**-0.3**
ARU				IAmb	IAmb	17 17 49.6	
	comp=Z,3.8nm,0.8s						
RAYN	**Ar Rayn**	**77.98**	**292**	P	**P**	**17 18 36.4**	**+1.1**
ILAR	**Eielson Array**	**80.38**	**26**	P	**P**	**17 18 47.4**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=253,slow=5.4,SNR=3.2						
YKA	**Yellowknife Ar**	**94.71**	**24**	P	**P**	**17 19 58.0**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=292,slow=4.2,SNR=4.5						

*IDC **30** 17:12:26.7±1.0,24.2′87N×97.2′80E,h0km,mb3.5/7, mb1 3.7/8,mb1mx3.4/55,mbtmp3.6/8,ML4.2/1,MS2.9/1, Ms1 3.1/1,ms1mx2.7/43,Error ellipse: s-maj=48.2km s-min=15.3km az=70.0*

*BJI **30** 17:12:27.1±0.0,24.2′98N×97.2′84E,h11km,ML3.8/8*

ISC 30 17:12:27.2±0.7,24.2′81N±0.04×97.2′89E±0.07,h10km,n20, σ2.8s18/22,mb3.7/7,Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**4.41**	**85**	Pg	**Pg**	**17 13 50.5**	**-1.3**
KMI				Sg	**Sg**	**17 14 47.5**	**-1.5**
KMI				smax	smax		
	comp=N,82nm,0.8s						
KMI				smax	smax		
	comp=E,48nm,1.1s						
PAYA	**Payao**	**5.73**	**161**	Sg	**Sg**	**17 15 30.6**	**-0.7**
CMMT	**Chiang Mai**	**6.05**	**170**	Pg	**Pg**	**17 14 21.0**	**-2.2**
CMMT				Sg	**Sg**	**17 15 39.2**	**-2.5**
CMAR	**Chiang Mai Arr**	**6.40**	**171**	Pn	**Pn**	**17 14 03.9**	**+2.2**
	1.2nm,0.3s,baz=346,slow=13,SNR=21						
CMAR				Pg	**Pg**	**17 14 25.8**	**-4.1**
	0.9nm,0.3s,baz=345,slow=17,SNR=9.9						
CMAR				Lg	Lg	17 15 51.9	
	1.4nm,0.3s,baz=356,slow=26,SNR=4.9						
CMAR				LR	LR	17 16 26.9	
	comp=Z,91nm,19.8s,baz=130,slow=37						
CM15	**Chiang Mai Arr**	**6.40**	**171**	Sg	**Sg**	**17 15 54.2**	**+1.3**
CM02	**Chiang Mai Arr**	**6.42**	**171**	Sg	**Sg**	**17 15 53.4**	**-0.1**
CM05	**Chiang Mai Arr**	**6.46**	**171**	Sg	**Sg**	**17 15 57.9**	**+3.3**
MHMT	**Maesarieng**	**6.61**	**180**	Sg	**Sg**	**17 15 59.0**	**-0.4**
UTTA	**Uttaradit**	**7.46**	**160**	Sg	**Sg**	**17 16 25.0**	**-1.7**
UMPA	**Umpang Tak**	**8.61**	**174**	Sg	**Sg**	**17 17 08.5**	**+4.7**
XAN	**Xi'an**	**13.29**	**44**	P	**Pn**	**17 15 35.8**	**-0.3**
WHN	**Wuhan**	**15.65**	**65**	P	P	17 16 21.0	+8.9
WMQ	**Urumqi**	**20.72**	**339**	*e*P	**P**	**17 17 05.0**	**-2.8**
SONM	**Songino Array**	**23.95**	**14**	P	**P**	**17 17 42.4**	**+0.7**
	0.3nm,0.5s,baz=191,slow=12,SNR=2.3						
MKAR	**Makanchi Array**	**25.23**	**334**	P	**P**	**17 17 54.0**	**+0.7**
	1.7nm,0.8s,baz=135,slow=8.8,SNR=5.0						
AAK	**Ala-Archa**	**26.22**	**318**	P	**P**	**17 18 03.5**	**+1.1**
	0.9nm,0.4s,baz=124,slow=9.1,SNR=3.7						
ZALV	**Zalesovo Beam**	**30.70**	**345**	P	**P**	**17 18 42.2**	**+0.2**
	1.0nm,0.6s,baz=164,slow=8.2,SNR=4.6						
WRA	**Warramunga Arr**	**56.89**	**138**	P	**P**	**17 22 14.2**	**+1.6**
	0.4nm,0.8s,baz=327,slow=7.4,SNR=1.8						
ASAR	**Alice Springs**	**59.51**	**141**	P	**P**	**17 22 32.5**	**+1.6**
	0.2nm,0.7s,baz=324,slow=6.8,SNR=2.1						
GERES	**GERESS Array B**	**68.03**	**315**	P	**P**	**17 23 26.3**	**-0.7**
	0.4nm,0.7s,baz=59,slow=8.1,SNR=4.7						

*TAP **30** 17:22:09.4,23.2′95N×122.2′91E,h19km±1km,ML2.5,D*

*JMA **30** 17:22:10.2±0.2,24.2′00N×122.2′91E,h30km±5km,M2.3*

ISC 30 17:22:06.0±1.3,23.2′91N±0.03×122.2′95E±0.02,h1km±10km, n68,σ0.9s91/120,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.54**	**359**	P	**Pn**	**17 22 19.6**	**-1.3**
JYNG				*e*S	**Sb**	**17 22 25.9**	**-0.8**
YOJ	**Yonaguni jima**	**0.56**	**6**	P	**Pn**	**17 22 20.2**	**-0.8**
	baz=10.0						
YOJ				S	**Sb**	**17 22 26.9**	**-0.1**
	baz=10.0						
YOJ	**Yonaguni jima**	**0.56**	**6**	P	**Pn**	**17 22 20.1**	**-1.0**
YOJ				*e*S	**Sb**	**17 22 26.5**	**-0.5**
HATJ	**Hateruma jima**	**0.80**	**79**	P	**Pn**	**17 22 25.1**	**+0.8**
HATJ				*e*S	**Sn**	**17 22 37.0**	**+0.2**
IRIF	**Iriomote-Funau**	**0.83**	**59**	P	**Pn**	**17 22 25.1**	**+0.3**
IRIF				S	**Sn**	**17 22 36.2**	**-1.5**
JKRS	**Kuro-shima**	**1.02**	**71**	P	**Pn**	**17 22 28.9**	**+1.4**
JKRS				*e*S	**Sn**	**17 22 43.2**	**+0.8**
JIJ	**Ishigaki jima**	**1.18**	**67**	P	**Pn**	**17 22 31.2**	**+1.5**
JIJ				S	**Sn**	**17 22 46.4**	**0.0**
ENA	**Nanau**	**1.22**	**295**	*i* P	**Pn**	**17 22 31.0**	**+0.8**
	baz=305						
ENA				S	**Sn**	**17 22 47.0**	**-0.4**
	baz=305						
TWC	**Suao**	**1.23**	**305**	*i* P	**Pn**	**17 22 30.9**	**+0.7**
	baz=304						
TWC				S	**Sb**	**17 22 46.1**	**-0.2**
	baz=304						
TWD	**Chiawan**	**1.25**	**278**	*e*P	**Pn**	**17 22 31.1**	**+0.4**
	baz=275						
TWD				*e*S	**Sb**	**17 22 47.1**	**+0.1**
	baz=275						
NACB	**Ninganchiao**	**1.27**	**282**	P	**Pn**	**17 22 31.1**	**+0.2**
	baz=262						
NACB				*e*S	**Sb**	**17 22 47.6**	**+0.1**
	baz=262						
ETLH	**Xiulin Townshi**	**1.38**	**283**	P	**Pb**	**17 22 32.6**	**0.0**
	baz=265						
ETLH				*e*S	**Sn**	**17 22 51.0**	**-0.4**
	baz=265						
NTC	**Toucheng**	**1.39**	**313**	*e*P	**Pb**	**17 22 33.2**	**+0.4**
	baz=311						
ESL	**Shilin**	**1.39**	**267**	P	**Pn**	**17 22 32.5**	**-0.1**
	baz=248						
ESL				*e*S	**Sb**	**17 22 51.2**	**+0.1**
	baz=248						
TWB1	**Santiao Chiao**	**1.41**	**322**	*e*P	**Pb**	**17 22 34.3**	**+1.2**
	baz=337						
TWB1				S	**Sn**	**17 22 50.9**	**-1.0**
	baz=337						
JISG	**Ishigakijimahi**	**1.41**	**61**	P	**Pb**	**17 22 33.9**	**+0.7**
JISG				S	**Sn**	**17 22 51.9**	**-0.2**
EGFH	**Guangfu**	**1.42**	**261**	*e*P	**Pg**	**17 22 33.4**	**+0.2**
	baz=257						
TWE	**Neicheng**	**1.43**	**305**	*i* P	**Pb**	**17 22 34.7**	**+1.3**
	baz=304						
TWE				S	**Sn**	**17 22 51.8**	**-0.7**
	baz=304						
HGSD	**Ruisui**	**1.46**	**254**	P	**Pn**	**17 22 33.4**	**-0.1**
	baz=250						
HGSD				S	**Sg**	**17 22 52.2**	**-0.7**
	baz=250						
TIPB	**Shuangxi**	**1.48**	**316**	P	**Pb**	**17 22 34.7**	**+0.5**
	baz=315						
TIPB				S	**Sn**	**17 22 53.2**	**-0.5**
	baz=315						
NDT	**Datong Townshi**	**1.48**	**298**	P	**Pb**	**17 22 36.0**	**+1.6**
	baz=280						
NDT				*e*S	**Sn**	**17 22 54.2**	**+0.3**
	baz=280						
NNSB	**Datong**	**1.52**	**290**	P	**Pg**	**17 22 35.5**	**+0.3**
	baz=287						
NNSH	**Datong**	**1.52**	**290**	P	**Pg**	**17 22 35.4**	**+0.2**
	baz=274						
NNSH				S	**Sn**	**17 22 55.2**	**+0.2**
	baz=274						
NNS	**Nan Shan**	**1.54**	**291**	P	**Pg**	**17 22 36.4**	**+0.9**
	baz=287						
WHF	**Hehuan Shan**	**1.56**	**279**	*e*P	**Pn**	**17 22 35.2**	**-0.1**
	baz=276						
WHF				*e*S	**Sb**	**17 22 56.1**	**-0.2**
	baz=276						
NWLT	**Wulai**	**1.58**	**304**	P	**Pg**	**17 22 37.3**	**+1.0**
	baz=318						
NWLT				*e*S	**Sg**	**17 22 56.6**	**-0.2**
	baz=318						
YULB	**Yu-li**	**1.60**	**252**	P	**Pn**	**17 22 36.0**	**+0.5**
	baz=248						
YULB				*e*S	**Sn**	**17 22 55.1**	**-1.7**
	baz=248						
TWF1	**Yuli**	**1.61**	**250**	*i* P	**Pn**	**17 22 36.1**	**+0.4**
	baz=234						
YHNB	**Yeheng**	**1.63**	**298**	P	**Pg**	**17 22 37.8**	**+0.6**
	baz=296						
YHNB				S	**Sg**	**17 22 57.9**	**-0.4**
	baz=296						
CHGB	**Renai**	**1.63**	**276**	P	**Pb**	**17 22 36.8**	**-0.3**
	baz=272						
TWA	**Mucha**	**1.64**	**311**	*e*P	**Pg**	**17 22 37.0**	**-0.6**
	baz=310						
TWA				*e*S	**Sg**	**17 22 57.9**	**-0.9**
	baz=310						
CHKT	**Chengkung**	**1.66**	**241**	*e*P	**Pn**	**17 22 36.4**	**+0.1**
	baz=238						
CHKT				*e*S	**Sn**	**17 22 55.1**	**-3.1**
	baz=238						
VWDT	**VWDT**	**1.66**	**265**	P	**Pb**	**17 22 37.1**	**-0.3**
	baz=249						
NHDH	**Xindian Distri**	**1.67**	**309**	*e*P	**Pg**	**17 22 38.4**	**+0.3**
	baz=325						
NHDH				*e*S	**Sg**	**17 22 59.2**	**-0.6**
	baz=325						
JTJ	**Tarama**	**1.76**	**65**	P	**Pg**	**17 22 39.6**	**-0.1**
YM01	**YM01**	**1.76**	**315**	*e*P	**Pb**	**17 22 38.4**	**-0.8**
	baz=313						
YM10	**YM10**	**1.77**	**315**	*e*P	**Pg**	**17 22 39.6**	**-0.5**
	baz=313						
TWH	**Lutao**	**1.80**	**229**	P	**Pn**	**17 22 38.5**	**+0.3**
	baz=225						
TWH				S	**Sn**	**17 22 59.7**	**-2.0**
	baz=225						
SSLB	**Suanglung**	**1.83**	**267**	P	**Pb**	**17 22 40.5**	**+0.2**
	baz=264						
SSLB				*e*S	**Sn**	**17 23 01.8**	**-0.7**
	baz=264						
DPDB	**Guoxing**	**1.86**	**274**	P	**Pn**	**17 22 39.7**	**+0.7**
	baz=272						
DPDB				*e*S	**Sn**	**17 23 02.9**	**-0.3**
	baz=272						
WHP	**Taichung City**	**1.87**	**282**	P	**Pg**	**17 22 42.4**	**+0.5**
	baz=266						
WHP				*e*S	**Sn**	**17 23 03.6**	**0.0**
	baz=266						
SMLT	**Sun Moon Lake**	**1.88**	**270**	*e*P	**Pb**	**17 22 41.0**	**-0.2**
	baz=267						
SMLT				*e*S	**Sn**	**17 23 03.1**	**-0.7**
	baz=267						
ELDTW	**Lidau**	**1.91**	**248**	*i* P	**Pn**	**17 22 40.0**	**+0.2**
	baz=245						
LIOB	**Emei**	**1.91**	**293**	*e*P	**Pb**	**17 22 41.2**	**-0.5**
	baz=289						
TYC	**Yuchr**	**1.92**	**270**	*e*P	**Pb**	**17 22 41.8**	**+0.1**
	baz=267						
TYC				*e*S	**Sn**	**17 23 04.7**	**+0.2**
	baz=267						
WHYT	**Xinyi Township**	**1.93**	**264**	P	**Pb**	**17 22 41.5**	**-0.6**
	baz=248						
WHYT				*e*S	**Sn**	**17 23 04.9**	**-0.2**
	baz=248						
ALS	**Alishan**	**2.01**	**259**	*i* P	**Pb**	**17 22 42.9**	**-0.6**
	baz=256						
ALS				*e*S	**Sn**	**17 23 06.9**	**-0.3**
	baz=256						
TWGBT	**Beinan**	**2.03**	**238**	P	**Pn**	**17 22 41.7**	**+0.3**
	baz=223						
TWGBT				*e*S	**Sn**	**17 23 06.9**	**-0.5**
	baz=223						
TWG	**Pinlang**	**2.04**	**238**	P	**Pn**	**17 22 41.8**	**+0.4**
	baz=223						
TWG				*e*S	**Sn**	**17 23 06.3**	**-1.2**
	baz=223						
CHN5	**Tsauling**	**2.10**	**262**	P	**Pb**	**17 22 44.5**	**-0.5**
	baz=259						
CHN5				S	**Sn**	**17 23 10.2**	**+0.8**
	baz=259						
STYT	**Tauyuan**	**2.15**	**250**	*e*P	**Pb**	**17 22 45.0**	**-0.7**
	baz=236						
TPUB	**Ta-pu**	**2.21**	**255**	P	**Pn**	**17 22 45.6**	**+1.7**
	baz=243						
TPUB				*e*S	**Sn**	**17 23 12.9**	**+1.0**
	baz=243						
JIRB	**Irabujima**	**2.22**	**65**	P	**Pb**	**17 22 46.9**	**-0.1**
WTP	**Ta-pu**	**2.24**	**253**	P	**Pb**	**17 22 46.5**	**-0.8**
	baz=250						
WTP				*e*S	**Sn**	**17 23 13.2**	**+0.6**
	baz=250						
ECL	**Taimali**	**2.25**	**235**	*e*P	**Pn**	**17 22 45.1**	**+0.8**
	baz=246						
ECL				*e*S	**Sn**	**17 23 11.6**	**-1.2**
	baz=246						
LAY	**Lan-yu**	**2.26**	**215**	*e*P	**Pn**	**17 22 45.2**	**+0.7**
	baz=212						
LAY				*e*S	**Sn**	**17 23 11.4**	**-1.8**
	baz=212						
SLGT	**Liugui**	**2.30**	**247**	P	**Pn**	**17 22 47.1**	**+2.0**
	baz=235						
SLGT				*e*S	**Sn**	**17 23 14.0**	**-0.2**
	baz=235						
JMJ2	**Miyako jima3**	**2.32**	**69**	P	**Pb**	**17 22 48.2**	**-0.5**
CHN1	**Nanshi**	**2.34**	**253**	P	**Pb**	**17 22 48.9**	**0.0**
	baz=242						
CHN1				S	**Sn**	**17 23 16.8**	**+1.8**
	baz=242						
TWK	**Hsinying**	**2.35**	**255**	P	**Pb**	**17 22 48.3**	**-0.8**
	baz=252						
TWK				*e*S	**Sn**	**17 23 17.1**	**+1.8**
	baz=252						
SNST	**Tainan City**	**2.35**	**254**	*e*P	**Pb**	**17 22 48.5**	**-0.7**
	baz=251						
SNST				*e*S	**Sn**	**17 23 16.4**	**+1.0**
	baz=251						
SSD	**Sandimen**	**2.42**	**242**	P	**Pn**	**17 22 48.8**	**+2.0**
	baz=232						
SSD				*e*S	**Sn**	**17 23 15.6**	**-1.5**
	baz=232						
EAST	**Anshuo**	**2.46**	**232**	P	**Pn**	**17 22 48.4**	**+1.1**
	baz=240						
EAST				S	**Sn**	**17 23 16.6**	**-1.4**
	baz=240						
MASBT	**Mashibuluo**	**2.49**	**239**	P	**Pn**	**17 22 48.7**	**+1.0**
	baz=236						
MASBT				*e*S	**Sn**	**17 23 18.9**	**+0.2**
	baz=236						
WDGT	**Dungji**	**3.09**	**259**	P	**Pn**	**17 22 57.7**	**+1.9**
	baz=254						
PHUB	**P'eng-hu**	**3.12**	**263**	*e*P	**Pn**	**17 22 57.9**	**+1.5**
	baz=276						
PHUB				*e*S	**Sn**	**17 23 34.5**	**+0.2**
	baz=276						
VCHM	**Qimei**	**3.31**	**259**	P	**Pn**	**17 23 00.7**	**+1.8**
	baz=256						
VCHM				*e*S	**Sn**	**17 23 39.4**	**+0.6**
	baz=256						
VWUC	**VWUC**	**3.37**	**289**	*e*P	**Pn**	**17 23 00.7**	**+1.0**
	baz=286						
VWUC				*e*S	**Sn**	**17 23 39.5**	**-0.9**
	baz=286						

IDC 30 17:24:50.9±3.2,32.2′31N×141.2′65E,h0km,mb3.3/2, mb1 3.5/3,mb1mx3.2/31,mbtmp3.2/3,ML2.3/1,Error ellipse: s-maj=83.3km s-min=22.2km az=54.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.77**	**298**	Pn	Pn	17 25 23.0	+0.3
	baz=65,slow=18						
JHJ				Sn	Sn	17 25 46.3	+0.4
	5.9nm,0.3s,baz=62,slow=23,SNR=1.4						
MJAR	**Matsushiro Arr**	**5.09**	**327**	Pn	Pn	17 26 07.0	-1.4
	0.1nm,0.3s,baz=148,slow=12,SNR=8.2						
WRA	**Warramunga Arr**	**52.43**	**189**	P	P	17 34 04.8	-0.5
	0.2nm,0.4s,baz=5.2,slow=7.7,SNR=6.6						
ASAR	**Alice Springs**	**56.16**	**189**	P	P	17 34 32.7	+0.3
	0.4nm,1.1s,baz=7.0,slow=8.4,SNR=1.6						

*IDC **30** 17:30:02.2±2.2,29.2′97N×138.2′44E,h360km±43km,mb3.0/2, mb1 3.0/5,mb1mx2.7/35,mbtmp3.6/5,Error ellipse: s-maj=129.3km s-min=21.5km az=81.0*

*JMA **30** 17:30:05.3±0.2,30.2′50N×139.2′50E,h415km,M3.3*

ISC 30 17:30:03.6±1.0,30.2′31N±0.08×139.2′5E±0.2,h400km,n15, σ1.9s90/22,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.81**	**6**	*e*S	**S**	**17 31 55.6**	**+0.5**
JHJ	**Hachijo jima 2**	**2.82**	**5**	P	**Pn**	**17 31 07.0**	**+1.8**
	5.1nm,0.3s,baz=270,slow=20,SNR=20						
JHJ				S	**S**	**17 31 56.0**	**+0.8**
	16nm,0.3s,baz=72,slow=19,SNR=16						
CBIJ	**Chichi jima**	**3.99**	**143**	S	**S**	**17 32 10.6**	**-3.5**
BSO3	**Boso 3**	**4.57**	**11**	*e*S	**S**	**17 32 23.4**	**-0.2**
JOD2	**Odawara 2**	**4.95**	**356**	P	**Pn**	**17 31 26.7**	**+1.7**
JOD2				*e*S	**S**	**17 32 30.4**	**-0.9**
JNY	**Yasuok**	**5.21**	**345**	P	**Pn**	**17 31 28.9**	**+1.1**
JHU	**Hanno**	**5.53**	**358**	P	**Pn**	**17 31 32.0**	**+0.9**
JHU				*e*S	**S**	**17 32 40.3**	**-2.0**
JRY	**Ryogami san**	**5.71**	**355**	P	**Pn**	**17 31 34.4**	**+1.4**
JRY				*e*S	**S**	**17 32 44.6**	**-1.3**
JYT	**Yasato**	**5.94**	**6**	*e*S	**S**	**17 32 47.1**	**-3.1**
JAG	**Ashikaga**	**6.10**	**360**	P	**Pn**	**17 31 37.6**	**+0.4**
MJAR	**Matsushiro Arr**	**6.31**	**351**	P	**Pn**	**17 31 40.1**	**+0.6**
	0.2nm,0.3s,baz=169,slow=11,SNR=15						
MJAR				S	**S**	**17 32 53.8**	**-3.9**
	0.1nm,0.3s,baz=175,slow=24,SNR=4.1						
JHO	**Hitachi**	**6.35**	**8**	P	**Pn**	**17 31 41.2**	**+1.3**
JHO				S	**S**	**17 32 56.7**	**-1.9**
KLR	**Kul'dur**	**19.79**	**345**	P	**P**	**17 34 08.1**	**+2.2**
	0.1nm,0.3s,baz=159,slow=8.6,SNR=4.1						
WRA	**Warramunga Arr**	**50.20**	**186**	P	**P**	**17 38 19.4**	**-1.4**
	0.5nm,0.3s,baz=0.3,slow=7.7,SNR=32						
WRA				PcP	**PcP**	**17 39 33.7**	**+0.5**
	0.2nm,0.4s,baz=358,slow=3.9,SNR=1.3						
ASAR	**Alice Springs**	**53.93**	**186**	P	**P**	**17 38 46.9**	**-1.0**
	0.3nm,0.5s,baz=358,slow=6.3,SNR=14						

*IDC **30** 17:30:57.2±3.5,8.2′83N×125.2′56E,h0km,mb3.5/3, mb1 3.7/3,mb1mx3.3/35,mbtmp3.5/3,MS4.0/1,Ms1 4.0/1, ms1mx2.9/32,Error ellipse: s-maj=305.6km s-min=30.9km az=65.0*

*MAN **30** 17:30:59.5,9.2′39N×126.2′68E,h6km,mb4.1,ML2.9,MS2.6*

ISC 30 17:31:00.7±1.5,9.2′47N±0.10×126.2′9E±0.1,h43km,n8, σ1.9s20/9,mb3.4/3,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.40**	**283**	*e*P	**Pn**	**17 31 22.2**	**-1.5**
SCPH				*e*S	**Sn**	**17 31 40.6**	**-0.4**
BUKP	**Musuan**	**2.38**	**229**	*e*P	**Pn**	**17 31 36.4**	**-0.9**
BUKP				*e*S	**Sn**	**17 32 05.0**	**-0.4**
PAGZ	**Pagadian**	**3.81**	**245**	*e*P	**Pn**	**17 31 58.7**	**+1.9**
GUIM	**Jordan**	**4.37**	**286**	*e*P	**Pn**	**17 32 05.3**	**+0.8**
WRA	**Warramunga Arr**	**30.14**	**166**	P	**P**	**17 37 07.0**	**+0.3**
	0.8nm,1.1s,baz=344,slow=8.8,SNR=2.7						
ASAR	**Alice Springs**	**33.64**	**168**	P	**P**	**17 37 36.6**	**-0.9**
	0.3nm,1.0s,baz=339,slow=7.0,SNR=2.2						
MKAR	**Makanchi Array**	**53.02**	**323**	P	**P**	**17 40 14.0**	**+0.6**
	0.6nm,0.8s,baz=114,slow=6.5,SNR=2.4						
AAK	**Ala-Archa**	**56.31**	**315**	LR	LR	18 04 38.4	
	comp=Z,146nm,20.8s,baz=323,slow=36						

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Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.19**	**287**	⇑*i*P	**Pg**	**17 41 50.5**	**+0.2**
SCPH				*i* S	**Sg**	**17 42 09.9**	**+4.0**
MSLP	**Maasin**	**1.89**	**292**	*e*P	**Pb**	**17 42 02.1**	**+0.9**
MSLP				*e*S	**Sg**	**17 42 30.2**	**+1.9**
CGP	**Cagayan de Oro**	**2.15**	**243**	‖*e*P	**Pb**	**17 42 05.9**	**+0.2**
CGP				*e*S	**Sb**	**17 42 33.7**	**+1.7**
BUKP	**Musuan**	**2.19**	**225**	*e*P	**Pb**	**17 42 05.0**	**-1.5**
BUKP				*e*S	**Sb**	**17 42 35.2**	**+2.0**
MATI	**Mati**	**2.50**	**189**	*e*P	**Pn**	**17 42 06.3**	**-0.7**
DAV	**Davao City (W)**	**2.57**	**204**	P	**Pn**	**17 42 06.2**	**-1.8**
DMPH	**Davao City--Mi**	**2.59**	**206**	‖*e*P	**Pb**	**17 42 10.9**	**-2.3**
DMPH				*i* S	**Sg**	**17 42 50.3**	**-0.3**
LLP	**Lapu-Lapu**	**2.78**	**289**	⇑*e*P	**Pb**	**17 42 14.0**	**-2.4**
LLP				*e*S	**Sg**	**17 42 54.1**	**-2.6**
KCP	**Kidapawan**	**2.85**	**213**	⇑*i*P	**Pn**	**17 42 13.1**	**+1.2**
KCP				*i* S	**Sn**	**17 42 47.5**	**+1.7**
CTBH	**Cotabato--PC H**	**3.23**	**227**	‖*e*P	**Pn**	**17 42 19.1**	**+2.1**
DDMP	**Don Marcelino,**	**3.43**	**196**	*e*P	**Pn**	**17 42 19.4**	**-0.5**
DDMP				*e*S	**Sn**	**17 43 03.2**	**+3.2**
SKMP	**Bagumbayan, Su**	**3.56**	**216**	*e*P	**Pn**	**17 42 22.7**	**+1.1**
PAGZ	**Pagadian**	**3.58**	**244**	*e*P	**Pn**	**17 42 23.9**	**+2.0**
CNP	**Catarman**	**3.62**	**328**	*e*P	**Pn**	**17 42 23.1**	**+0.7**
CNP				*e*S	**Sn**	**17 43 03.1**	**-1.6**
GSPH	**General Santos**	**3.72**	**207**	‖*i*P	**Pb**	**17 42 28.4**	**-4.2**
GSPH				*i* S	**Sn**	**17 43 10.2**	**+2.9**
CNOP	**Candoni, Negro**	**3.96**	**276**	*e*P	**Pn**	**17 42 29.8**	**+2.7**
GUIM	**Jordan**	**4.16**	**287**	*e*P	**Pn**	**17 42 32.6**	**+2.8**
RCP	**Roxas**	**4.37**	**299**	‖*e*P	**Pn**	**17 42 36.1**	**+3.3**
JAP	**San Jose, Anti**	**4.80**	**286**	‖*e*P	**Pn**	**17 42 42.9**	**+4.2**
PVCP	**Virac**	**4.80**	**330**	*e*P	**Pn**	**17 42 39.3**	**+0.6**
ZCP	**Zamboanga City**	**5.16**	**242**	‖*e*P	**Pb**	17 42 51.2	-5.8
CUYO	**Cuyo Island**	**5.71**	**285**	*e*P	**Pn**	**17 42 55.0**	**+3.8**
BOAC	**Boac**	**6.17**	**311**	*e*P	**Pn**	**17 43 01.1**	**+3.6**
SJMP	**San Jose**	**6.20**	**300**	*e*P	**Pn**	**17 43 01.4**	**+3.5**
LQP	**Lukban**	**6.82**	**313**	*e*P	**Pn**	**17 43 08.0**	**+1.4**
BUSP	**Coron**	**6.82**	**293**	*e*P	**Pn**	**17 43 10.5**	**+4.0**
PGP	**Puerto Galera**	**6.88**	**307**	⇑*e*P	**Pn**	**17 43 04.0**	**-3.4**
POLP	**Polilio Island**	**6.99**	**319**	*e*P	**Pn**	**17 43 11.9**	**+3.2**
TGY	**Tagaytay City**	**7.26**	**310**	Pn	**Pn**	**17 43 16.2**	**+3.7**
	66nm,0.3s,baz=176,slow=3.5,SNR=14						
TGY				LR	LR	17 46 21.6	
	comp=Z,12μm,19.8s,baz=129,slow=42						
ENPP	**El Nido**	**7.31**	**285**	*e*P	**Pn**	**17 43 16.0**	**+2.8**
LUBP	**Lubang**	**7.58**	**305**	*e*P	**Pn**	**17 43 20.6**	**+3.7**
BALP	**Baler**	**7.98**	**322**	*e*P	**Pn**	**17 43 25.1**	**+2.7**
PALP	**Palanan**	**8.62**	**332**	*e*P	**Pn**	**17 43 31.0**	**-0.1**
TNTI	**Ternate**	**8.63**	**175**	P	**Pn**	**17 43 34.3**	**+3.0**
	3μm228nm,1.0s						
TNTI	**Ternate**	**8.63**	**175**	Pn	**Pn**	**17 43 30.4**	**-1.0**
BATP	**Bataraza**	**8.75**	**267**	*e*P	**Pn**	**17 43 36.4**	**+3.4**
CAUP	**Cauayan**	**8.82**	**328**	*e*P	**Pn**	**17 43 34.8**	**+1.0**
SMPP	**San Manuel, Pa**	**8.85**	**320**	*e*P	**Pn**	**17 43 33.1**	**-1.2**
SCZP	**Santa Cruz**	**9.10**	**315**	*e*P	Pn	17 43 43.1	+5.4
KMSI	**Cibinong**	**9.19**	**197**	P	Pn	17 43 45.2	+6.3
	2μm206nm,1.0s						
BOLP	**Bolinao**	**9.52**	**317**	*e*P	**Pn**	**17 43 47.6**	**+4.1**
APYP	**Conner**	**9.88**	**329**	*e*P	**Pn**	**17 43 49.6**	**+1.1**
ABRA	**Dolores**	**9.99**	**325**	*e*P	**Pn**	**17 43 54.0**	**+4.0**
LBMI	**Labuha**	**10.04**	**175**	P	**Pn**	**17 43 54.4**	**+3.8**
	2μm154nm,1.3s						
MRSI	**Marisa**	**10.05**	**208**	P	**Pn**	**17 43 52.6**	**+1.8**
	4μm1μm152nm,1.1s						
SZP	**Santa**	**10.06**	**324**		**Pn**	**17 43 49.0**	**-1.9**
KKM	**Kota Kinabalu**	**10.86**	**253**	Pn	**Pn**	**17 44 00.9**	**-1.1**
LUWI	**Luwuk**	**11.09**	**201**	P	Pn	17 44 09.9	+4.8
	3μm225nm,1.3s						
LUWI	**Luwuk**	**11.09**	**201**	Pn	**Pn**	**17 44 03.6**	**-1.5**
SPMM	**Sapulut**	**11.13**	**246**	P	Pn	17 44 12.0	+6.4
SIJI	**Sorong**	**11.22**	**156**	Pn	**Pn**	**17 44 06.3**	**-0.6**
	5.3nm,0.3s,baz=343,slow=12,SNR=30						
SIJI				Sn	Sn	17 46 01.2	-11
	1.2nm,0.3s,baz=126,slow=19,SNR=1.4						
SIJI				LR	LR	17 48 59.1	
	comp=Z,3μm,18.6s,baz=327,slow=40						
MPSI	**Mapaga**	**11.25**	**217**	P	Pn	17 44 15.3	+8.0
	5μm16nm,1.2s						
SANI	**Sanana**	**11.42**	**183**	P	**Pn**	**17 44 10.3**	**+0.7**
	1μm78nm,0.8s						
MSAI	**Masohi**	**12.90**	**170**	P	**Pn**	**17 44 30.3**	**+0.5**
	346nm32nm,0.9s						
RKPI	**Ransiki, Papua**	**13.21**	**145**	P	**P**	**17 44 46.2**	**+2.3**
	11μm163nm,1.3s						
FAKI	**Fak Fak**	**13.48**	**155**	P	**Pn**	**17 44 39.0**	**+1.2**
	2μm93nm,1.5s						
FAKI	**Fak Fak**	**13.48**	**155**	Pn	**Pn**	**17 44 38.1**	**+0.4**
SMKI	**Samarinda**	**13.58**	**224**	P	**P**	**17 44 48.2**	**+0.2**
	7μm123nm,1.4s						
TTSI	**Tana Toraja**	**14.13**	**209**	P	**Pn**	**17 44 50.2**	**+3.5**
	2μm90nm,0.9s						
TWG	**Pinlang**	**14.34**	**339**	P	**P**	**17 44 55.3**	**-1.2**
BKB	**Balikpapan**	**14.39**	**223**		**Pn**	**17 44 53.1**	**+2.9**
YULB	**Yu-li**	**14.79**	**340**		**P**	**17 45 00.4**	**-1.1**
TPUB	**Ta-pu**	**14.94**	**338**	P	**P**	**17 45 01.7**	**-1.4**
SPSI	**Sidrap Palu**	**14.96**	**208**	P	**Pn**	**17 45 00.4**	**+2.4**
	2μm82nm,1.0s						
SSLB	**Suanglung**	**15.28**	**340**		**P**	**17 45 06.1**	**-0.7**
YOJ	**Yonaguni jima**	**15.34**	**347**	P	**P**	**17 45 06.8**	**-0.8**
YOJ				pmax	pmax		
	comp=Z,130nm,1.1s						
YOJ	**Yonaguni jima**	**15.34**	**347**		**P**	**17 45 06.8**	**-0.8**
YOJ				IAmb	IAmb	17 45 43.0	
	comp=Z,130nm,1.1s						
NACB	**Ninganchiao**	**15.43**	**342**		**P**	**17 45 06.8**	**-1.7**
KAPI	**Kappang**	**15.91**	**206**	LR	LR	17 51 57.1	
	comp=Z,2μm,18.8s,baz=34,slow=40						
KAPI	**Kappang**	**15.91**	**206**	P	**Pn**	**17 45 10.7**	**+0.4**
KAPI				pmax	pmax		
	comp=Z,48nm,1.0s						
KAPI	**Kappang**	**15.91**	**206**	P	**Pn**	**17 45 10.7**	**+0.4**
SBUM	**Sibu**	**15.92**	**245**		**Pn**	**17 45 12.2**	**+1.7**
SBUM	**Sibu**	**15.92**	**245**	P	**P**	**17 45 15.0**	**+1.0**
YHNB	**Yeheng**	**15.96**	**342**		**P**	**17 45 15.3**	**+0.7**
TATO	**Taipei**	**16.22**	**343**	P	**P**	**17 45 17.4**	**+0.2**
KBKI	**Kotabaru**	**16.40**	**220**	P	**P**	**17 45 23.1**	**+3.8**
	comp=Z,712nmcomp=Z,87nm,0.9s						
QZH	**Quanzhou**	**17.22**	**335**	P	**Pn**	**17 45 27.5**	**+0.5**
QZH				S	**S**	**17 48 44.0**	**-3.0**
QZH				LR	LR		
	comp=Z,4μm,17.3s						
QZH				LR	LR		
	comp=Z,1μm,17.3s						
QZH				LR	LR		
	comp=Z,5μm,16.8s						
JOW	**Kunigami**	**17.38**	**5**	P	**P**	**17 45 34.6**	**+4.5**
	comp=Z,0.2nm,0.3s,baz=171,slow=12,SNR=15						
JOW	**Kunigami**	**17.38**	**5**	P	**P**	**17 45 29.7**	**-0.4**
HKPS	**Hong Kong Po S**	**17.52**	**318**	P	**P**	**17 45 33.0**	**+1.2**
DLV	**T Lat**	**18.01**	**280**	P	**P**	**17 45 40.2**	**+2.8**
KSM	**Kuching**	**18.07**	**245**	P	**Pn**	**17 45 35.5**	**-2.0**
KSM	**Kuching**	**18.07**	**245**	P	**P**	**17 45 40.0**	**+2.2**
JAY	**Jayapura**	**18.36**	**130**	P	**Pn**	**17 45 41.6**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=304,slow=8.7,SNR=8.4						
JAY				LR	LR	17 52 26.5	
	comp=Z,4μm,19.2s,baz=310,slow=36						
MMRI	**Maumere**	**18.48**	**194**		**P**	**17 45 41.9**	**-0.4**
MMRI				IAmb	IAmb	17 45 56.0	
	comp=Z,144nm,0.7s						
EDFI	**Ende, Flores**	**18.72**	**195**	P	**Pn**	**17 45 48.5**	**+2.9**
	comp=Z,551nmcomp=Z,36nm,0.8s						
QIZ	**Qiongzhong**	**18.85**	**302**	P	**Pn**	**17 45 48.3**	**+1.2**
QIZ				PP	**PnPn**	**17 46 05.0**	**+5.5**
QIZ				S	**S**	**17 49 21.0**	**+0.8**
QIZ				pmax	pmax		
	comp=Z,40nm,1.3s						
QIZ				LR	LR		
	comp=Z,2μm,19.6s						
QIZ				LR	LR		
	comp=Z,2μm,18.6s						
QIZ				LR	LR		
	comp=Z,3μm,16.7s						
QIZ	**Qiongzhong**	**18.85**	**302**	P	**Pn**	**17 45 47.2**	**+0.2**
SOEI	**Soe**	**19.21**	**187**	P	**Pn**	**17 45 54.6**	**+3.2**
	comp=Z,3μmcomp=Z,338nm,1.1s						
SOEI	**Soe**	**19.21**	**187**		**Pn**	**17 45 51.9**	**+0.5**
BATI	**Baumata**	**19.73**	**189**	P	**Pn**	**17 45 57.0**	**-0.6**
	comp=Z,26nm,0.3s,baz=358,slow=2.6,SNR=20						
BATI	**Baumata**	**19.73**	**189**	P	**P**	**17 45 55.9**	**-0.2**
	comp=Z,3μmcomp=Z,299nm,0.8s						
PLAI	**Plampang**	**20.17**	**206**	P	Pn	17 46 04.0	+1.2
	comp=Z,2μmcomp=Z,1μmcomp=Z,110nm,0.9s						
WBSI	**Waikabubak, Su**	**20.27**	**201**	P	Pn	17 46 06.1	+2.0
	comp=Z,109nm,0.7s						
JAGI	**Jajag, Banyuwa**	**21.70**	**215**	P	**P**	**17 46 21.6**	**+4.2**
	comp=Z,51nm,1.0s						
JAGI	**Jajag, Banyuwa**	**21.70**	**215**	P	**P**	**17 46 18.6**	**+1.2**
JAGI				IAmb	IAmb	17 47 02.8	
	comp=Z,71nm,1.1s						
SSE	**Sheshan**	**22.15**	**348**	P	**P**	**17 46 23.3**	**+1.3**
SSE				pP	**pP**	**17 46 26.3**	**+0.5**
SSE				S	**S**	**17 50 25.5**	**+0.2**
SSE				pmax	pmax		
	comp=Z,24nm,1.2s						
SSE				pmax	pmax		
	comp=Z,440nm,7.7s						
SSE				LR	LR		
	comp=Z,990nm,15.9s						
SSE	**Sheshan**	**22.15**	**348**	P	**P**	**17 46 21.6**	**-0.4**
SSE				IAmb	IAmb	17 46 38.8	
	comp=Z,125nm,1.0s						
TPI	**Tanjungpandan**	**22.46**	**238**	P	**P**	**17 46 26.8**	**+1.2**
	comp=Z,865nmcomp=Z,35nm,0.9s						
MTN	**Manton Dam**	**22.58**	**169**	P	**P**	**17 46 26.7**	**-0.1**
	baz=23,SNR=16						
MTN	**Manton Dam**	**22.58**	**169**	P	**P**	**17 46 25.5**	**-1.2**
MTN				IAmb	IAmb	17 46 32.9	
	comp=Z,70nm,0.7s						
KDU	**Kakadu**	**22.73**	**165**	P	**P**	**17 46 27.0**	**-1.3**
	baz=23,SNR=23						
SMRI	**Semarang**	**22.99**	**225**	P	**P**	**17 46 32.8**	**+1.6**
	comp=Z,126nm,1.5s						
SMRI	**Semarang**	**22.99**	**225**	P	**P**	**17 46 29.2**	**-1.9**
TPRI	**Tanjung Pinang**	**23.57**	**250**	P	**P**	**17 46 39.7**	**+2.7**
	comp=Z,2μmcomp=Z,56nm,1.7s						
NJ2	**Nanjing**	**23.64**	**343**	*e*P	**P**	**17 46 38.0**	**+0.5**
NJ2				sP	**sP**	**17 46 43.5**	**+0.6**
NJ2				S	**S**	**17 50 52.8**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,130nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,790nm,3.5s						
NJ2				LR	LR		
	comp=Z,1μm,11.8s						
NJ2				LR	LR		
	comp=Z,1μm,11.8s						
NJ2				LR	LR		
	comp=Z,3μm,17.1s						
JNU	**Nakatsue**	**23.90**	**9**	P	**P**	**17 46 40.5**	**+0.5**
	comp=Z,54nm,0.8s,baz=214,slow=2.5,SNR=44						
JNU				LR	LR	17 55 31.3	
	comp=Z,878nm,21.2s,baz=189,slow=35						
JNU	**Nakatsue**	**23.90**	**9**	P	**P**	**17 46 39.9**	**-0.1**
JNU				IAmb	IAmb	17 46 48.5	
	comp=Z,56nm,0.9s						
MYKOM	**Kota Tinggi**	**23.90**	**253**	P	**P**	**17 46 39.7**	**-0.5**
MYKOM				IAmb	IAmb	17 46 43.8	
	comp=Z,139nm,1.1s						
MYKOM	**Kota Tinggi**	**23.90**	**253**	P	**P**	**17 46 41.0**	**+0.8**
WHN	**Wuhan**	**23.93**	**333**	⇑P	**P**	**17 46 40.8**	**+0.5**
WHN				S	**S**	**17 50 57.5**	**+1.6**
WHN				pmax	pmax		
	comp=Z,110nm,0.9s						
WHN				pmax	pmax		
	comp=Z,880nm,4.4s						
WHN				LR	LR		
	comp=Z,2μm,14.5s						
WHN				LR	LR		
	comp=Z,5μm,17.9s						
WHN				LR	LR		
	comp=Z,7μm,17.3s						
SLVN	**Son La**	**24.87**	**301**	P	**P**	**17 46 49.6**	**+0.6**
SLVN				IAMs_20	IAMs_20	17 57 27.2	
	comp=Z,4μm,19.0s						
LEM	**Lembang**	**24.90**	**230**	P	**P**	**17 46 50.7**	**+1.2**
	comp=Z,46nm,1.0s,baz=315,slow=19,SNR=12						
PMBI	**Palembang**	**25.01**	**242**	P	**P**	**17 46 53.5**	**+3.2**
	comp=Z,4μmcomp=Z,301nm,1.2s						
PMBI	**Palembang**	**25.01**	**242**	P	**P**	**17 46 51.6**	**+1.3**
KNRA	**Kununurra**	**25.04**	**175**	P	**P**	**17 46 49.5**	**-0.9**
	baz=25,SNR=85						
KNRA	**Kununurra**	**25.04**	**175**	P	**P**	**17 46 49.1**	**-1.3**
CISI	**Cisompet, Garu**	**25.23**	**229**	P	**P**	**17 46 51.9**	**-0.4**
GYA	**Guiyang**	**25.39**	**314**	⇑*i*P	**P**	**17 46 54.5**	**+0.7**
GYA				PP	**PnPn**	**17 47 33.5**	**+4.5**
GYA				S	**S**	**17 51 16.3**	**-3.4**
GYA				SS	**SnSn**	**17 52 19.0**	**+6.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA				pmax	pmax		
	comp=Z,400nm,9.9s						
GYA				LR	LR		
	comp=Z,2μm,14.4s						
GYA				LR	LR		
	comp=Z,2μm,17.5s						
GYA				LR	LR		
	comp=Z,4μm,15.8s						
IPM	**Ipoh**	**25.89**	**261**	P	**P**	**17 46 57.2**	**-1.1**
IPM				IAmb	IAmb	17 47 01.9	
	comp=Z,73nm,0.9s						
IPM	**Ipoh**	**25.89**	**261**	P	**P**	**17 47 00.0**	**+1.7**
BLSI	**Bandar Lampung**	**25.90**	**236**	P	**P**	**17 46 59.5**	**+1.1**
	comp=Z,2μmcomp=Z,74nm,0.4s						
KULM	**Kulim**	**26.09**	**263**	P	**P**	**17 46 59.9**	**-0.3**
KULM				IAmb	IAmb	17 47 16.3	
	comp=Z,56nm,1.3s						
KULM	**Kulim**	**26.09**	**263**	P	**P**	**17 47 01.0**	**+0.8**
ENH	**Enshi**	**26.20**	**325**	P	**P**	**17 46 59.7**	**-1.3**
ENH				IAMs_20	IAMs_20	17 58 18.5	
	comp=Z,4μm,18.0s						
JHJ	**Hachijo jima 2**	**26.51**	**25**	LR	LR	17 57 42.1	
	comp=Z,1μm,18.9s,baz=238,slow=37						
JHJ2	**Mitsune**	**26.52**	**25**	P	**P**	**17 47 03.9**	**+0.1**
LHSI	**Lahat**	**26.54**	**241**	P	**P**	**17 47 06.3**	**+2.1**
	comp=Z,34nm,1.3s						
KASI	**Kota Agung**	**26.60**	**237**	P	**P**	**17 47 05.0**	**+0.3**
	comp=Z,46nm,1.1s						
LWLI	**Liwa**	**26.69**	**238**	P	**P**	**17 47 06.3**	**+0.6**
	comp=Z,2μmcomp=Z,134nm,0.9s						
TJN	**Taejon**	**26.83**	**1**	‖*e*P	**P**	**17 47 08.4**	**+1.8**
BKNI	**Bangkinang**	**27.04**	**252**	P	**P**	**17 47 08.6**	**-0.1**
BKNI				IAmb	IAmb	17 47 49.8	
	comp=Z,75nm,1.1s						
MNAI	**Manna**	**27.29**	**241**	P	**P**	**17 47 10.2**	**-0.8**
FITZ	**Fitzroy Crossi**	**27.37**	**182**	P	**P**	**17 47 10.7**	**-0.8**
	baz=28,SNR=48						
FITZ	**Fitzroy Crossi**	**27.37**	**182**	P	**P**	**17 47 10.3**	**-1.3**
	comp=Z,58nm,0.9s,baz=20,slow=8.8,SNR=37						
FITZ	**Fitzroy Crossi**	**27.37**	**182**	P	**P**	**17 47 09.9**	**-1.7**
FITZ				IAmb	IAmb	17 47 16.1	
	comp=Z,64nm,0.9s						
INU	**Inuyama**	**27.48**	**19**	P	**P**	**17 47 12.9**	**+0.5**
KMI	**Kunming**	**27.57**	**307**	P	**P**	**17 47 18.5**	**+4.9**
KMI				S	**S**	**17 51 45.8**	**-8.6**
KMI				pmax	pmax		
	comp=Z,28nm,0.5s						
KMI				pmax	pmax		
	comp=Z,280nm,9.6s						
KMI				LR	LR		
	comp=Z,1μm,19.0s						
KMI				LR	LR		
	comp=Z,2μm,21.3s						
KMI				LR	LR		
	comp=Z,2μm,19.4s						
KMI	**Kunming**	**27.57**	**307**	IAMs_20	IAMs_20	17 58 08.9	
	comp=Z,3μm,20.0s						
KRJI	**Kerinci**	**27.57**	**247**	P	**P**	**17 47 14.0**	**+0.4**
	comp=Z,109nm,1.2s						
PMG	**Port Moresby**	**27.70**	**132**	P	**P**	**17 47 14.3**	**-0.4**
	comp=Z,18nm,0.7s,baz=317,slow=8.6,SNR=6.4						
PMG				LR	LR	18 00 06.8	
	comp=Z,1μm,18.1s,baz=338,slow=40						
PMG	**Port Moresby**	**27.70**	**132**	*ce*P	**P**	**17 47 15.0**	**+0.3**
PMG				pmax	pmax		
	comp=Z,128nm,1.0s						
PMG	**Port Moresby**	**27.70**	**132**	P	**P**	**17 47 14.5**	**-0.2**
PMG				IAmb	IAmb	17 48 00.5	
	comp=Z,43nm,1.0s						
KSRS	**Korea Array**	**27.92**	**2**	P	**P**	**17 47 17.1**	**+0.8**
	comp=Z,9.8nm,0.8s,baz=176,slow=10,SNR=53						
KSRS				PcP	**PcP**	**17 50 32.8**	**+1.1**
	comp=Z,1.6nm,0.9s,baz=186,slow=3.8,SNR=5.4						
KSRS				ScP	**ScP**	**17 54 13.1**	**+1.3**
	comp=Z,1.1nm,0.9s,baz=184,slow=3.6,SNR=4.1						
KSRS				LR	LR	18 00 02.7	
	comp=Z,2μm,19.3s,baz=178,slow=40						
INCN	**Inchon**	**27.93**	**360**	P	**P**	**17 47 17.2**	**+0.7**
INCN				pmax	pmax		
	comp=Z,12nm,0.7s						
INCN				MLR	MLR		
	comp=Z,19.0s						
INCN	**Inchon**	**27.93**	**360**	P	**P**	**17 47 17.1**	**+0.7**
KS19	**Wonju Array Si**	**27.97**	**2**	P	**P**	**17 47 17.3**	**+0.5**
TIA	**Tai'an**	**28.03**	**343**	P	**P**	**17 47 18.0**	**+0.7**
TIA				S	**S**	**17 52 00.0**	**-1.0**
TIA				pmax	pmax		
	comp=Z,49nm,1.1s						
TIA				pmax	pmax		
	comp=Z,390nm,9.9s						
TIA				LR	LR		
	comp=Z,1μm,17.7s						
TIA				LR	LR		
	comp=Z,500nm,10.7s						
TIA				LR	LR		
	comp=Z,2μm,20.7s						
MNSI	**Mandailing Nat**	**28.26**	**254**	P	**P**	**17 47 20.2**	**+0.6**
	comp=Z,970nmcomp=Z,33nm,0.9s						
CM31	**Chiang Mai Arr**	**28.30**	**291**	P	**P**	**17 47 20.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**28.30**	**291**	P	**P**	**17 47 19.5**	**-0.5**
	comp=Z,8.2nm,0.9s,baz=105,slow=7.5,SNR=41						
CMAR				PcP	**PcP**	**17 50 33.2**	**+0.2**
	comp=Z,2.2nm,0.9s,baz=44,slow=1.6,SNR=4.9						
CMAR				ScP	**ScP**	**17 54 14.0**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=90,slow=1.0,SNR=3.3						
CMAR				LR	LR	17 59 09.3	
	comp=Z,2μm,18.5s,baz=187,slow=38						
CMAR	**Chiang Mai Arr**	**28.30**	**291**	*i* P	**P**	**17 47 20.0**	**0.0**
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PSI	**Prapat**	**28.32**	**258**	P	**P**	**17 47 19.7**	**-0.6**
	comp=Z,42nm,0.9s,baz=0.7,slow=2.9,SNR=27						
PSI				PcP	**PcP**	**17 50 32.5**	**-0.8**
	comp=Z,5.1nm,0.7s,baz=359,slow=3.0,SNR=2.5						
PSI				LR	LR	18 01 05.7	
	comp=Z,1μm,19.0s,baz=270,slow=42						
PSI	**Prapat**	**28.32**	**258**	P	**P**	**17 47 20.3**	**0.0**
PSI				pmax	pmax		
	comp=Z,117nm,1.2s						
RPSI	**Rantau Prapat**	**28.34**	**258**	P	**P**	**17 47 20.3**	**-0.1**
RPSI	**Rantau Prapat**	**28.34**	**258**		**PcP**	**17 50 32.5**	**-0.6**
CHTO	**Chiang Mai**	**28.39**	**292**	P	**P**	**17 47 20.1**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,19nm,1.2s						
CHTO	**Chiang Mai**	**28.39**	**292**	P	**P**	**17 47 20.1**	**-0.7**
COEN	**Coen**	**28.45**	**145**	P	**P**	**17 47 19.7**	**-1.6**
	baz=28,SNR=6.6						
COEN	**Coen**	**28.45**	**145**	P	**P**	**17 47 21.5**	**+0.2**
KRVT	**Keravat (AS076**	**28.75**	**117**	P	**P**	**17 47 27.1**	**+3.0**
	comp=Z,28nm,1.1s,baz=225,slow=1.4,SNR=3.8						
KRVT				LR	LR	17 58 51.4	
	comp=Z,805nm,18.0s,baz=294,slow=36						
XMIS	**Christmas Isla**	**28.76**	**227**	P	**P**	**17 47 25.0**	**+0.9**
RABL	**Rabaul**	**28.81**	**117**	P	**P**	**17 47 25.3**	**+0.7**
RABL				IAmb	IAmb	17 47 32.3	
	comp=Z,45nm,0.8s						
MAJO	**Matsushiro**	**28.96**	**19**	P	**P**	**17 47 25.1**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,13nm,0.9s						
MAJO				MLR	MLR		
	comp=Z,800nm,18.0s						
MAJO	**Matsushiro**	**28.96**	**19**	P	**P**	**17 47 25.1**	**-0.6**
MAT	**Matsushiro**	**28.96**	**19**	P	**P**	**17 47 25.9**	**+0.2**
MAT				S	**S**	**17 52 14.8**	**-0.9**
MJAR	**Matsushiro Arr**	**28.96**	**19**	P	**P**	**17 47 25.4**	**-0.3**
	comp=Z,7.8nm,0.8s,baz=192,slow=9.2,SNR=20						
MJAR				PcP	**PcP**	**17 50 35.5**	**+1.2**
	comp=Z,4.1nm,0.8s,baz=192,slow=3.1,SNR=8.8						
MJAR				LR	LR	17 59 02.2	
	comp=Z,912nm,19.4s,baz=205,slow=36						
MJB9	**Matsu-Tunnel**	**28.96**	**19**	P	**P**	**17 47 25.5**	**-0.2**
MJB9					**PcP**	**17 50 33.9**	**-0.5**
KCSI	**Kotacane, Aceh**	**29.26**	**260**	P	**P**	**17 47 28.3**	**-0.3**
	comp=Z,54nm,1.0s						
XAN	**Xi'an**	**29.41**	**329**	P	**P**	**17 47 27.3**	**-2.4**
XAN				S	**S**	**17 52 16.0**	**-6.8**
XAN				pmax	pmax		
	comp=Z,20nm,0.8s						
XAN				pmax	pmax		
	comp=Z,270nm,11.8s						
XAN				LR	LR		
	comp=Z,2μm,16.3s						
XAN				LR	LR		
	comp=Z,2μm,16.7s						
XAN				LR	LR		
	comp=Z,3μm,15.7s						
XAN	**Xi'an**	**29.41**	**329**	P	**P**	**17 47 27.2**	**-2.4**
XAN				pmax	pmax		
	comp=Z,17nm,0.9s						
XAN				MLR	MLR		
	comp=Z,1μm,19.0s						
XAN	**Xi'an**	**29.41**	**329**	P	**P**	**17 47 27.2**	**-2.5**
SISI	**Saibi**	**29.45**	**250**	P	**P**	**17 47 29.8**	**-0.4**
	comp=Z,36nm,1.0s						
DL2	**Dalian**	**29.69**	**352**	P	**P**	**17 47 33.0**	**+0.9**
DL2				S	**S**	**17 52 25.5**	**-1.5**

BJI LR LR
comp=Z,840nm,17.7s
BJI LR LR
comp=Z,550nm,18.4s
BJI LR LR
comp=Z,860nm,21.8s
SNY Shenyang 32.38 356 ⇑P **P 17 47 57.0 +1.3**
SNY S **S 17 53 13.3 +4.3**
SNY pmax pmax
comp=Z,17nm,1.0s
SNY pmax pmax
comp=Z,350nm,6.8s
SNY LR LR
comp=Z,2µm,15.5s
SNY LR LR
comp=Z,1µm,17.8s
SNY LR LR
comp=Z,2µm,18.6s
QIS Mount Isa 32.42 157 P **P 17 47 55.7 -0.6**
baz=32,SNR=26
MTSU Mount Surprise 32.48 147 P **P 17 47 57.0 +0.1**
baz=32,SNR=10
AS31 Alice Springs 33.65 168 P **P 17 48 05.4 -1.7**
ASAR Alice Springs 33.65 168 P **P 17 48 05.2 -1.9**
comp=Z,6.4nm,1.0s,baz=355,slow=6.7,SNR=35
ASAR PcP **PcP 17 50 46.6 -0.4**
comp=Z,2.6nm,0.8s,baz=341,slow=2.1,SNR=2.4
ASAR ScP **ScP 17 54 31.0 +0.1**
comp=Z,1.0nm,0.8s,baz=343,slow=2.9,SNR=3.1
ASAR LR LR 18 03 51.1
comp=Z,680nm,18.1s,baz=337,slow=40
LZH Lanzhou 33.67 326 *e*P **P 17 48 09.0 +1.7**
LZH pP sP 17 48 12.5 -0.4
LZH sP pP 17 48 15.0 +3.7
LZH sS sS 17 53 46.5 +10
LZH pmax pmax
comp=Z,18nm,1.1s
LZH pmax pmax
comp=Z,130nm,4.9s
LZH LR LR
comp=Z,2µm,18.6s
LZH LR LR
comp=Z,2µm,18.4s
LZH LR LR
comp=Z,2µm,19.0s
HHC Hu-ho-hao-te 34.02 339 *e*P **P 17 48 11.5 +1.2**
HHC sP pwP 17 48 20.3 -2.1
HHC S **S 17 53 31.3 -3.6**
HHC sS sS 17 53 43.8 +1.8
HHC ScS **ScS 17 58 36.0 +1.9**
HHC pmax pmax
comp=Z,16nm,1.0s
HHC pmax pmax
comp=Z,180nm,5.1s
HHC LR LR
comp=Z,900nm,16.3s
HHC LR LR
comp=Z,460nm,15.5s
HHC LR LR
comp=Z,980nm,17.9s
CN2 Changchun 34.26 358 *e*P **P 17 48 10.8 -1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,260nm,7.0s
CN2 LR LR
comp=Z,1µm,16.0s
CN2 LR LR
comp=Z,760nm,16.0s
CN2 LR LR
comp=Z,1µm,17.0s
WRKA Warakurna 34.30 177 P **P 17 48 11.8 -0.9**
baz=34,SNR=36
BTO Baotou 34.37 357 *e*P **P 17 48 13.0 -0.3**
BTO S **S 17 53 35.5 -4.8**
USA0B Ussuriysk Arra 34.95 7 P **P 17 48 17.9 -0.2**
USA0B pmax pmax
comp=Z,26nm,0.9s
USA0B MLR MLR
comp=Z,800nm,21.0s
USA0B Ussuriysk Arra 34.95 7 P **P 17 48 17.9 -0.2**
USA0B lAmb lAmb 17 48 21.6
comp=Z,26nm,0.8s
USRK Ussuriysk Ar. 34.95 7 P **P 17 48 19.2 +1.1**
comp=Z,26nm,0.8s,baz=196,slow=8.2,SNR=41
USRK LR LR 18 02 03.8
comp=Z,715nm,20.1s,baz=175,slow=35
CTA Charters Tower 35.12 147 LR LR 18 04 28.4
comp=Z,895nm,18.6s,baz=328,slow=39
CTAO Charters Tower 35.12 147 P **P 17 48 20.0 +0.2**
CTAO pmax pmax
comp=Z,21nm,0.9s
CTAO MLR MLR
comp=Z,2µm,19.0s
CTAO Charters Tower 35.12 147 P **P 17 48 20.0 +0.2**
CTAO lAmb lAmb 17 48 25.7
comp=Z,21nm,0.8s
MDJ Mudanjiang 35.15 4 P **P 17 48 21.3 +1.5**
MDJ pP sP 17 48 26.8 +0.9
MDJ sP pwP 17 48 28.5 -3.1
MDJ PP **PP 17 49 40.8 +1.1**
MDJ S **S 17 53 55.3 +3.4**
MDJ sS sS 17 54 04.5 +5.0
MDJ pmax pmax
comp=Z,33nm,1.0s
MDJ pmax pmax
comp=Z,430nm,9.7s
MDJ LR LR
comp=Z,1µm,17.1s
MDJ LR LR
comp=Z,850nm,14.9s
MDJ LR LR
comp=Z,1µm,15.7s
MDJ Mudanjiang 35.15 4 P **P 17 48 20.1 +0.3**
MDJ lAmb lAmb 17 48 36.2
comp=Z,29nm,1.0s
ERM Erimo 35.56 21 P **P 17 48 22.8 -0.6**
ERM pmax pmax
comp=Z,119nm,1.8s
ERM MLR MLR
comp=Z,1µm,18.0s
ERM Erimo 35.56 21 P **P 17 48 22.8 -0.6**
TEY Ternei 36.50 12 *e*P **P 17 48 32.0 +0.6**
SHL Shillong 36.67 300 P **P 17 48 31.6 -1.8**
SHL pmax pmax
comp=Z,60nm,0.9s
SHL Shillong 36.67 300 P **P 17 48 31.6 -1.8**
SHL lAmb lAmb 17 48 46.4
comp=Z,60nm,0.9s
MEEK Meekatharra 36.69 192 P **P 17 48 32.5 -0.8**
baz=37,SNR=28
GTA Gaotai 38.27 326 *e*P **P 17 48 46.0 -0.7**
GTA pP pP 17 48 50.5 -0.2
GTA sP sP 17 48 53.3 +1.0
GTA PP **PnPn 17 50 19.0 +2.9**
GTA PcP **PcP 17 51 02.0 +1.3**
GTA S **S 17 54 42.5 +2.5**
GTA sS ScP 17 54 52.5 +4.7
GTA SS **SnSn 17 57 23.5 -1.7**
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,110nm,7.3s
GTA LR LR
comp=Z,1µm,17.8s
GTA LR LR
comp=Z,2µm,17.1s
GTA LR LR
comp=Z,3µm,17.5s
YUK Yuzh-Kuril'sk 38.31 23 *e*P **P 17 48 43.7 -3.0**
YUK *i* S **S 17 54 37.6 -2.4**
YUK pmax pmax
comp=Z,251nm,1.4s
YUK pmax pmax
comp=N,194nm,1.1s
YUK pmax pmax
comp=Z,258nm,1.1s
YUK pmax pmax
comp=E,153nm,1.0s
LSA Lhasa 38.81 306 P **P 17 48 51.0 -0.7**
LSA pmax pmax
comp=E,17nm,1.1s
LSA Lhasa 38.81 306 P **P 17 48 54.2 +2.4**
LSA Lhasa 38.81 306 P **P 17 48 50.6 -1.1**
LSA pmax pmax
comp=Z,16nm,1.1s

LSA MLR MLR
comp=Z,1µm,20.0s
LSA Lhasa 38.81 306 P **P 17 48 50.6 -1.1**
MORW Morawa 39.62 195 P **P 17 48 57.6 -0.2**
baz=40,SNR=28
MORW Morawa 39.62 195 P **P 17 48 57.2 -0.7**
MORW lAmb lAmb 17 48 59.0
comp=Z,54nm,1.0s
QLP Quilpie 39.67 155 P **P 17 48 57.4 -1.0**
baz=40,SNR=5.8
H11S3 WAKE ISLAND Hy 39.82 72 T T 18 32 09.0
baz=262,slow=75,SNR=47
H11S1 WAKE ISLAND Hy 39.83 72 T T 18 31 56.9
baz=262,slow=75,SNR=41
YSS Yuzh-Sakhalins 39.83 17 ⇑*e*P **P 17 49 00.8 +1.4**
YSS *e* 17 50 38.9
YSS *e*S **S 17 55 03.9 +1.0**
YSS pmax pmax
comp=Z,30nm,0.8s
YSS MLR MLR
comp=Z,500nm,16.0s
YSS MLR MLR
comp=N,400nm,13.0s
YSS MLR MLR
comp=E,500nm,16.0s
YSS Yuzh-Sakhalins 39.83 17 P **P 17 49 00.1 +0.7**
YSS lAmb lAmb 17 49 06.2
comp=Z,40nm,1.0s
H11S2 WAKE ISLAND Hy 39.83 72 T T 18 32 01.6
baz=262,slow=75,SNR=40
WAKE Wake Island 39.90 71 lAMs_20 lAMs_20 18 03 32.3
comp=Z,2µm,21.0s
KLR Kul'dur 39.90 5⇓*e*P **P 17 49 01.6 +1.6**
KLR pmax pmax
comp=Z,21nm,0.9s
FORT Forrest 40.00 178 P **P 17 49 00.6 -0.4**
baz=40,SNR=13
FORT Forrest 40.00 178 P **P 17 48 59.4 -1.7**
FORT lAmb lAmb 17 49 14.8
comp=Z,64nm,0.7s
KUR Kuril'sk 40.09 23 P P 17 49 06.8 +5.2
KUR *e* 17 50 43.1
KUR *e*PPP PPP 17 51 07.2
KUR S **S 17 55 12.5 +5.7**
KUR pmax pmax
comp=Z,141nm,1.4s
KUR pmax pmax
comp=N,89nm,1.5s
KUR pmax pmax
comp=E,78nm,1.4s
KUR smax smax
comp=Z,460nm,19.0s
HIA Hailar 40.12 353 P **P 17 49 02.2 +0.3**
HIA pmax pmax
comp=Z,36nm,1.1s
HIA MLR MLR
comp=Z,1µm,19.0s
HIA Hailar 40.12 353 P **P 17 49 02.2 +0.3**
HIA lAmb lAmb 17 49 16.1
comp=Z,36nm,1.1s
HIA Hailar 40.12 353 lAMs_20 lAMs_20 18 08 12.1
comp=Z,1µm,19.0s
KWAJ Kwajalein Atol 40.45 87 P **P 17 49 05.9 +0.9**
KWAJ pmax pmax
comp=Z,646nm,1.5s
KWAJ Kwajalein Atol 40.45 87 P **P 17 49 05.9 +0.9**
TAPN Taplejung 40.79 301 *e*P **P 17 49 07.2 -0.9**
ODAN Odare 40.91 300 *e*P **P 17 49 08.5 -0.5**
comp=Z,127nm,0.8s
BLDU Ballidu 40.94 193 P **P 17 49 08.1 -0.7**
baz=41,SNR=16
RAMN Ramite 41.61 300 *e*P **P 17 49 14.1 -0.7**
comp=Z,40nm,0.6s
KLBR Kellerberrin 41.67 191 P **P 17 49 14.3 -0.4**
baz=42,SNR=20
RMQ Roma 41.67 149 P **P 17 49 14.6 -0.3**
baz=42,SNR=4.6
ULN Ulaanbaatar 41.73 340⇓*e*P **P 17 49 16.1 +0.8**
ULN pmax pmax
comp=Z,7.0nm,0.7s
ULN Ulaanbaatar 41.73 340 P **P 17 49 14.0 -1.3**
ULN Ulaanbaatar 41.73 340 lAMs_20 lAMs_20 18 09 15.0
comp=Z,1µm,19.0s
SONM Songino Array 41.93 340 P **P 17 49 16.9 0.0**
comp=Z,2.8nm,0.6s,baz=158,slow=9.1,SNR=14
SONM LR LR 18 08 39.5
comp=Z,1µm,19.2s,baz=154,slow=39
EIDS Eidsvold 41.99 146 P **P 17 49 16.2 -1.3**
baz=42,SNR=9.7
EIDS Eidsvold 41.99 146 P **P 17 49 17.0 -0.6**
EIDS lAmb lAmb 17 49 22.2
comp=Z,26nm,0.8s
EIDS lAMs_20 lAMs_20 18 09 11.8
comp=Z,1µm,19.0s
GRNR Gornyy 42.00 9⇑*i*P **P 17 49 19.2 +1.9**
GRNR pmax pmax
comp=Z,10.0nm,0.9s
GRNR MLR MLR
comp=Z,560nm,19.0s
JIRN Jiri 42.17 301 *e*P **P 17 49 18.5 -1.0**
comp=Z,85nm,0.5s
MUN Mundaring 42.37 193 P **P 17 49 20.1 -0.3**
baz=43,SNR=30
GUN Gumba 42.51 301 *e*P **P 17 49 21.2 -1.0**
comp=Z,148nm,0.9s
PKI Pulchoki 42.80 301 *e*P **P 17 49 23.0 -1.6**
comp=Z,28nm,0.7s
PKIN Phulchoki 42.82 301 *e*P **P 17 49 23.0 -1.6**
BBOO Buckleboo 42.95 168 P **P 17 49 24.3 -0.9**
baz=43,SNR=20
BBOO Buckleboo 42.95 168 P **P 17 49 24.4 -0.9**
BBOO lAmb lAmb 17 49 36.3
comp=Z,49nm,0.9s
NWAO Narrogin (SRO) 43.06 192 P **P 17 49 26.1 0.0**
baz=43,SNR=19
NWAO Narrogin (SRO) 43.06 192 P **P 17 49 25.5 -0.7**
NWAO pmax pmax
comp=Z,80nm,1.0s
NWAO Narrogin (SRO) 43.06 192 P **P 17 49 25.4 -0.7**
NWAO lAmb lAmb 17 49 28.0
comp=Z,80nm,1.0s
NWAO Narrogin (SRO) 43.06 192 P **P 17 49 24.6 -1.5**
NWAO lAmb lAmb 17 49 28.0
comp=Z,64nm,1.0s
DMN Daman 43.07 301 *e*P **P 17 49 25.1 -1.6**
comp=Z,50nm,0.9s
TYV Tymovskoe 43.37 15 *e*P P 17 49 41.2 +13
TYV pmax pmax
comp=Z,400nm,4.6s
TYV pmax pmax
comp=Z,19nm,1.2s
STKA Stephens Creek 43.50 161 P **P 17 49 28.7 -0.9**
baz=44,SNR=12
STKA Stephens Creek 43.50 161 P **P 17 49 28.3 -1.3**
comp=Z,7.7nm,0.8s,baz=336,slow=8.7,SNR=18
STKA LR LR 18 13 40.6
comp=Z,534nm,18.2s,baz=330,slow=44
STKA Stephens Creek 43.50 161 P **P 17 49 28.3 -1.3**
STKA pmax pmax
comp=Z,4.0nm,0.9s
STKA Stephens Creek 43.50 161 P **P 17 49 28.2 -1.3**
GKN Gorkha 43.58 301 *e*P **P 17 49 29.4 -1.3**
comp=Z,38nm,0.7s
CIT Chita 43.79 348 *e*P **P 17 49 33.9 +2.1**
CIT *e* 17 49 40.7
CIT pmax pmax
comp=Z,132nm,1.8s
ZEA Zeya 44.19 1 *e*P **P 17 49 35.0 +0.1**
ZEA *e* 17 51 24.0
ZEA *e*S **S 17 56 08.0 +0.9**
ZEA *e*SSS SSS 17 59 33.0
ZEA pmax pmax
comp=Z,300nm,10.0s
ZEA pmax pmax
comp=N,14nm,1.2s
ZEA pmax pmax
comp=Z,28nm,1.2s
ZEA pmax pmax
comp=Z,400nm,9.0s
ZEA pmax pmax
comp=N,300nm,10.0s
ZEA smax smax
comp=E,200nm,10.0s
ZEA MLR MLR
comp=E,500nm,18.0s
ZEA MLR MLR
comp=Z,2µm,18.0s
ZEA MLR MLR
comp=N,2µm,17.0s
HTT Hallett 44.20 165 P **P 17 49 35.3 0.0**
baz=44,SNR=6.6
DANN Dangsing 44.42 301 *e*P **P 17 49 36.3 -1.3**
comp=N,121nm,0.9s
CMSA Cobar Meteorol 44.64 157 P **P 17 49 38.6 -0.2**
baz=45,SNR=9.0
PYUN Piuthan 45.01 300 *e*P **P 17 49 41.3 -0.9**
comp=N,211nm,0.9s
ZAK Zakamensk 45.17 339 *e*P **P 17 49 45.9 +2.9**
ZAK pmax pmax
comp=Z,7.0nm,1.2s
TLY Talaya 46.14 340 P **P 17 49 50.9 +0.4**
comp=Z,11nm,0.7s,baz=177,slow=8.4,SNR=12
TLY Talaya 46.14 340*c i*P **P 17 49 52.1 +1.6**
TLY *e* 17 51 41.0
TLY *e*S **S 17 56 36.4 +0.9**
TLY *e*SS **ScS 17 59 51.4 +6.2**
TLY pmax pmax
comp=Z,31nm,0.7s
TLY MLR MLR
comp=Z,2µm,17.0s
TLY Talaya 46.14 340 P **P 17 49 50.2 -0.3**
TLY lAmb lAmb 17 50 13.2
comp=Z,20nm,0.9s
ARMA Armidale 46.33 150 P **P 17 49 51.6 -0.8**
baz=46,SNR=8.1
ARMA Armidale 46.33 150 P **P 17 49 52.2 -0.2**
ARMA lAmb lAmb 17 50 03.2
comp=Z,24nm,1.1s
TARA Tarawa 46.73 97 P **P 17 49 55.0 -0.7**
MOY Mondy 47.05 338 *e*P **P 17 49 57.9 +0.1**
MOY pmax pmax
comp=Z,44nm,2.4s
HYB Hyderabad 47.34 285 *i* P **P 17 49 59.0 -1.4**
SKR Severo-Kuril's 47.78 25 *e*P **P 17 50 04.9 +1.7**
SKR *e*S **S 17 57 03.5 +4.7**
SKR pmax pmax
comp=Z,100nm,5.0s
SKR MLR MLR
comp=Z,300nm,16.0s
SKR MLR MLR
comp=Z,400nm,19.0s
WMQ Urumqi 48.10 322 *e*P **P 17 50 07.5 +1.5**
WMQ pP sP 17 50 11.5 -0.2
WMQ sP pwP 17 50 14.5 -3.4
WMQ pmax pmax
comp=Z,20nm,0.9s
WMQ pmax pmax
comp=Z,130nm,6.5s
WMQ LR LR
comp=Z,1µm,20.3s
WMQ LR LR
comp=Z,1µm,18.5s
WMQ LR LR
comp=Z,2µm,18.5s
ARPS Mount Arapiles 48.12 164 P **P 17 50 06.9 +0.8**
baz=48,SNR=9.0
CAN Canberra 49.27 156 P **P 17 50 15.4 +0.3**
CAN pmax pmax
comp=Z,73nm,1.6s
CAN Canberra 49.27 156 P **P 17 50 15.3 +0.3**
CAN lAmb lAmb 17 51 09.6
comp=Z,73nm,1.6s
TOO Toolangi 49.98 160 P **P 17 50 20.6 +0.2**
baz=50,SNR=8.3
TOO Toolangi 49.98 160 P **P 17 50 20.3 -0.1**
TOO pmax pmax
comp=Z,60nm,1.7s
TOO Toolangi 49.98 160 P **P 17 50 20.3 -0.1**
TOO lAmb lAmb 17 50 33.5
comp=Z,60nm,1.6s
DZM Mont Dzumac 50.04 129 *e*P **P 17 50 21.5 +0.3**
comp=Z,35nm,1.0s
DZM *e*S **S 17 57 36.2 +4.6**
comp=Z,916nm,25.8s
DZM *e*LR LR 18 04 45.2
comp=Z,1µm,26.5s
DZM Mont Dzumac 50.04 129 P **P 17 50 20.9 -0.3**
DZM lAmb lAmb 17 50 49.1
comp=Z,15nm,0.9s
PEA0B Petropavlovsk- 50.25 24⇓*e*P **P 17 50 24.2 +2.0**
PEA0B Petropavlovsk- 50.25 24 P **P 17 50 22.2 0.0**
PEA0B lAmb lAmb 17 50 51.9
comp=Z,39nm,1.1s
PEA0B lAMs_20 lAMs_20 18 15 28.7
comp=Z,988nm,19.0s
PETK Petropavlovsk- 50.25 24 P **P 17 50 24.8 +2.6**
comp=Z,10nm,0.7s,baz=200,slow=6.8,SNR=9.0
PETK LR LR 18 15 03.4
comp=Z,498nm,18.1s,baz=224,slow=40
PET Petropavlovsk 50.57 24 *e*P **P 17 50 26.4 +1.8**
PET *e*S **S 17 57 38.2 +0.2**
PET pmax pmax
comp=Z,200nm,13.5s
PET pmax pmax
comp=Z,300nm,14.4s
PET pmax pmax
comp=Z,28nm,1.1s
PET MLR MLR
comp=Z,800nm,16.0s
PET MLR MLR
comp=Z,700nm,14.0s
PET Petropavlovsk 50.57 24 P **P 17 50 26.4 +1.8**
BHK Bhakra 51.38 303 *ex* P **17 50 31.0 -0.1**
DGZ Jazzator, Alta 51.67 328⇑*e*P **P 17 50 32.9 -0.2**
DGZ pmax pmax
comp=Z,4.0nm,0.7s
YAK Yakutsk 52.55 2 *e*P **P 17 50 40.5 +1.3**
YAK *e**PP **pwP 17 50 54.6 +3.3**
YAK *e* 17 51 51.1
YAK *e*S **S 17 58 05.1 +0.1**
YAK *e**SS **sS 17 58 11.2 -1.4**
YAK *e* 18 00 24.4
YAK *e*SS **SS 18 01 44.6 +1.4**
YAK *e*SSS SSS 18 03 25.1
YAK pmax pmax
comp=Z,35nm,1.0s
YAK pmax pmax
comp=E,2.0nm,0.8s
YAK pmax pmax
comp=N,17nm,1.0s
YAK pmax pmax
comp=Z,14nm,0.9s
YAK smax smax
comp=N,30nm,2.0s
YAK smax smax
comp=E,25nm,2.1s
YAK MLR MLR
comp=Z,574nm,17.0s
YAK MLR MLR
comp=N,654nm,16.0s
YAK MLR MLR
comp=E,140nm,14.0s
YAK Yakutsk 52.55 2 P **P 17 50 38.1 -1.2**
YAK lAmb lAmb 17 50 43.5
comp=Z,44nm,0.9s
MK31 Makanchi Array 52.91 323 P **P 17 50 41.2 -1.1**
MK31 pmax pmax
comp=Z,16nm,0.9s
MK31 Makanchi Array 52.91 323 P **P 17 50 41.2 -1.1**
MKAR Makanchi Array 52.91 323 P **P 17 50 41.4 -0.9**
comp=Z,19nm,0.9s,baz=119,slow=7.1,SNR=50
MKAR LR LR 18 15 05.9
comp=Z,751nm,18.4s,baz=122,slow=38
MKAR Makanchi Array 52.91 323 *i* P **P 17 50 42.0 -0.3**
MKAR pmax pmax
comp=Z,19nm,0.9s
PDGK Podgornoye 53.06 318 P **P 17 50 42.3 -1.3**
MAKZ Makanchi 53.10 323 P **P 17 50 43.5 -0.2**
MAKZ pmax pmax
comp=Z,38nm,1.1s
MAKZ MLR MLR
comp=Z,1µm,21.0s
MAKZ Makanchi 53.10 323 P **P 17 50 43.5 -0.2**
MAKZ lAmb lAmb 17 50 45.4
comp=Z,38nm,1.1s
MAKZ lAMs_20 lAMs_20 18 12 08.6
comp=Z,982nm,21.0s
MA2 Magadan 53.24 15 P **P 17 50 45.1 +0.6**
MA2 pmax pmax
comp=Z,97nm,1.5s
MA2 Magadan 53.24 15 P **P 17 50 45.1 +0.6**
PRZ Przheval'sk 53.44 317 lAMs_20 lAMs_20 18 15 19.3

comp=Z,1µm,22.0s
TARG Taragay, Kyrgy 53.55 316 P **P** **17 50 47.0 -0.6**
TARG IAmb IAmb 17 51 03.4
comp=Z,13nm,0.8s
KSH Kashi 54.06 312 P **P** **17 50 52.0 +1.0**
KSH sP sP 17 50 58.5 +1.8
KSH PP **PP** **17 52 54.0 +1.5**
KSH S **S** **17 58 27.5 +0.9**
KSH SS **SS** **18 02 10.3 +2.1**
KSH pmax pmax
comp=Z,42nm,1.0s
KSH pmax pmax
comp=Z,100nm,4.0s
KSH LR LR
comp=Z,150nm,5.4s
KSH LR LR
comp=Z,310nm,6.3s
KSH LR LR
comp=Z,1µm,12.6s
NIL Nilore 54.50 305 P **P** **17 50 52.8 -1.4**
NIL pmax pmax
comp=Z,115nm,0.9s
NIL Nilore 54.50 305 P **P** **17 50 52.8 -1.4**
KZA Kyzart 55.45 315 P **P** **17 51 01.0 -0.4**
SNR=17
TKM2 Tokmak 2 55.52 316 P **P** **17 51 01.0 -0.6**
SNR=13
ZAA0 Zalesovo Array 55.53 331 P **P** **17 50 59.2 -2.0**
ZALV Zalesovo Beam 55.53 331 P **P** **17 50 59.7 -1.5**
comp=Z,9.3nm,0.8s,baz=124,slow=5.8,SNR=35
ZALV LR LR 18 16 39.7
comp=Z,682nm,18.0s,baz=136,slow=38
ZALV Zalesovo Beam 55.53 331 *i* P **P** **17 51 00.0 -1.2**
ZALV pmax pmax
comp=Z,9.0nm,0.8s
MIDW Midway 55.70 62 P **P** **17 51 01.8 -1.0**
KBK Karagaybulak 55.87 316 P **P** **17 51 03.5 -0.5**
SNR=15
UCH Uchtor 56.02 315 P **P** **17 51 05.5 0.0**
SNR=64
CHMS Chumnysh 56.12 316 P **P** **17 51 05.0 -0.7**
SNR=22
AAK Ala-Archa 56.17 315 P **P** **17 51 07.2 +1.0**
AAK Ala-Archa 56.17 315 *de*P **P** **17 51 06.4 +0.2**
AAK pmax pmax
comp=Z,14nm,1.3s
AAK Ala-Archa 56.17 315 P **P** **17 51 04.8 -1.4**
AAK IAmb IAmb 17 51 17.6
comp=Z,43nm,1.7s
USP Ospenovka 56.39 316 P **P** **17 51 07.3 -0.4**
SNR=20
DGAR Diego Garcia 56.51 255 P **P** **17 51 07.6 -1.2**
DGAR pmax pmax
comp=Z,813nm,1.9s
DGAR Diego Garcia 56.51 255 P **P** **17 51 07.6 -1.2**
AML Almayashu 56.56 315 P **P** **17 51 09.2 -0.1**
SNR=40
EKS2 Erkin-Say 56.68 315 P **P** **17 51 09.6 -0.2**
SNR=29
KURK Kurchatov 56.96 326 *ce*P **P** **17 51 10.6 -0.8**
KURK pmax pmax
comp=Z,80nm,1.3s
KURK Kurchatov 56.96 326 P **P** **17 51 10.2 -1.2**
KURK Kurchatov 56.96 326 IAMs_20 IAMs_20 18 17 59.7
comp=Z,784nm,18.0s
KURBB Kurchatov Arra 56.97 326 P **P** **17 51 10.2 -1.3**
MSVF Nonsavu 57.51 118 ⇑ *e*P **P** **17 51 16.8 +0.9**
MSVF pmax pmax
comp=Z,37nm,1.1s
MSVF Nonsavu 57.51 118 P **P** **17 51 14.0 -1.9**
BTK Batken 58.01 312 P **P** **17 51 17.8 -1.4**
BTK pmax pmax
comp=Z,22nm,1.0s
BTK MLR MLR
comp=Z,1µm,18.0s
BTK Batken 58.01 312 P **P** **17 51 17.8 -1.4**
BTK IAmb IAmb 17 51 20.7
comp=Z,22nm,0.9s
GAR Garm 58.10 310 P **P** **17 51 18.2 -1.8**
KBL Kabul 58.10 305 P **P** **17 51 18.1 -2.0**
KBL pmax pmax
comp=Z,30nm,0.9s
KBL MLR MLR
comp=Z,900nm,21.0s
KBL Kabul 58.10 305 P **P** **17 51 18.1 -2.0**
KBL IAmb IAmb 17 51 21.1
comp=Z,30nm,0.9s
KBL IAMs_20 IAMs_20 18 18 18.6
comp=Z,875nm,21.0s
CHGR Chuyangaron 58.90 310 P **P** **17 51 22.7 -2.7**
KK31 Karatay Array 59.09 315 *i* P **P** **17 51 25.5 -1.1**
KK31 Karatay Array 59.09 315 P **P** **17 51 25.1 -1.5**
KK31 IAmb IAmb 17 51 27.8
comp=Z,36nm,1.1s
TAS Tashkent 59.46 313 IAMs_20 IAMs_20 18 19 50.9
comp=Z,982nm,20.0s
OTUK Ortayu 59.61 321 P **P** **17 51 28.2 -1.9**
TIXI Tiksi 62.18 1 P **P** **17 51 47.1 0.0**
comp=Z,18nm,0.8s,baz=167,slow=4.5,SNR=88
TIXI Tiksi 62.18 1 *ce*P **P** **17 51 47.5 +0.4**
TIXI pmax pmax
comp=Z,28nm,1.0s
TIXI MLR MLR
comp=Z,867nm,18.0s
TIXI Tiksi 62.18 1 P **P** **17 51 46.4 -0.7**
TIXI IAmb IAmb 17 51 53.5
comp=Z,24nm,0.9s
TIXI IAMs_20 IAMs_20 18 19 08.0
comp=Z,982nm,19.0s
ADK Adak 62.37 36 P **P** **17 51 50.2 +1.5**
ADK pmax pmax
comp=Z,39nm,1.0s
ADK Adak 62.37 36 P **P** **17 51 50.2 +1.5**
BVAR Borovoye Array 62.56 326 P **P** **17 51 49.0 -1.0**
comp=Z,20nm,0.9s,baz=116,slow=6.8,SNR=89
BRVK Borovoye 62.63 326 *ce*P **P** **17 51 49.6 -0.8**
BRVK pmax pmax
comp=Z,63nm,1.3s
BRVK Borovoye 62.63 326 P **P** **17 51 49.4 -1.0**
GSTR Great Sitkin T 62.81 36 P **P** **17 51 51.6 -0.1**
HRA Herat 63.63 304 P **P** **17 51 55.9 -1.8**
HRA IAmb IAmb 17 51 59.9
comp=Z,9.6nm,0.8s
ATKA Atka Island 63.92 36 P **P** **17 51 59.1 +0.1**
BILL Bilibino 64.11 15 ⇓ *e*P **P** **17 52 00.4 +0.4**
BILL *e* 17 52 33.8
BILL *e* 17 54 23.7
BILL *e*PPP PPP 17 55 52.8
BILL pmax pmax
comp=Z,21nm,1.7s
BILL MLR MLR
comp=Z,426nm,20.0s
BILL Bilibino 64.11 15 P **P** **17 52 00.3 +0.3**
BILL IAmb IAmb 17 52 36.4
comp=Z,22nm,1.1s
THZ Tophouse 66.28 144 P **P** **17 52 14.9 +0.4**
LBZ Lake Benmore 66.47 147 P **P** **17 52 15.9 +0.3**
RPZ Rata Peaks 66.49 146 P **P** **17 52 16.3 +0.5**
LTZ Lake Taylor 66.56 145 P **P** **17 52 17.5 +1.2**
BKZ Black Stump Fm 66.91 140 P **P** **17 52 18.6 -0.1**
NIKH Nikolski High 67.27 36 IAMs_20 IAMs_20 18 16 26.6
comp=Z,714nm,20.0s
GEYT Alibeck 67.33 307 P **P** **17 52 20.7 -0.8**
comp=Z,7.2nm,0.7s,baz=145,slow=5.4,SNR=12
GEYT LR LR 18 26 43.2
comp=Z,885nm,18.5s,baz=110,slow=40
GYA0B ALIBECK ARRAY 67.33 307 P **P** **17 52 21.0 -0.4**
GYA0B IAmb IAmb 17 52 34.8
comp=Z,17nm,1.1s
GYA0B IAMs_20 IAMs_20 18 26 12.9
comp=Z,940nm,20.0s
BANOM Banah 68.30 294 P **P** **17 52 27.6 -0.1**
UOSS Minazif 68.39 293 P **P** **17 52 28.1 -0.2**
UOSS Minazif 68.39 293 P **P** **17 52 27.8 -0.5**
UOSS IAmb IAmb 17 52 54.1
comp=Z,10.0nm,0.9s
MSFE Esma-Masafi 68.43 294 P **P** **17 52 28.2 -0.4**
HATD Hatta, Dubai 68.46 293 *i* P **P** **17 52 27.8 -0.9**
SNR=8.0
ASHO Ashiyiah 68.53 293 *i* P **P** **17 52 28.7 -0.4**
SNR=5.9
SVE Sverdlovsk 69.11 327 *de*P **P** **17 52 31.7 -0.4**
SVE *e*S **S** **18 01 34.4 -2.1**
SVE pmax pmax
comp=Z,58nm,1.0s
SVE MLR MLR
comp=Z,781nm,17.0s
SHAO Shalim 69.17 286 P **P** **17 52 32.6 -0.6**
AKTO Aktyubinsk 69.20 320 P **P** **17 52 31.3 -1.5**
comp=Z,13nm,1.0s,baz=107,slow=6.0,SNR=26
ARU Arti 70.12 327 P **P** **17 52 37.0 -1.3**
comp=Z,6.6nm,0.6s,baz=102,slow=3.6,SNR=33
ARU Arti 70.12 327 *c i*P **P** **17 52 37.1 -1.3**
ARU 17 53 00.3
ARU 17 55 10.0
ARU S **S** **18 01 46.9 -1.6**
ARU 18 02 35.9
ARU pmax pmax
comp=Z,29nm,0.8s
ARU Arti 70.12 327 P **P** **17 52 36.3 -2.0**
CHGN Chignik 73.86 34 IAMs_20 IAMs_20 18 21 25.8
comp=Z,526nm,20.0s
KIRV Kirov 75.35 328 P **P** **17 53 08.0 -1.3**
comp=Z,47nm,0.7s,baz=120,slow=1.2,SNR=31
KIRV LR LR 18 29 44.6
comp=Z,888nm,18.1s,baz=132,slow=38
AKT Akhty 75.52 310 *e*P **P** **17 53 09.8 -1.1**
AKT *e* 17 53 23.0
AKT pmax pmax
comp=Z,17nm,1.2s
SVW2 Sparrevohn 75.89 29 P **P** **17 53 11.6 -0.8**
SVW2 IAmb IAmb 17 53 19.9
comp=Z,14nm,0.8s
TTA Tatalina 75.90 27 P **P** **17 53 13.6 +1.0**
TTA pmax pmax
comp=Z,10.0nm,1.1s
TTA Tatalina 75.90 27 P **P** **17 53 13.6 +1.0**
CASY Casey 76.43 187 P **P** **17 53 14.6 -0.7**
CASY IAmb IAmb 17 53 28.1
comp=Z,18nm,0.8s
GROC Groznyy 76.94 312 *e*P **P** **17 53 18.2 -0.6**
GROC *e* 17 53 30.2
GROC pmax pmax
comp=Z,46nm,1.0s
KDAK Kodiak Island 77.16 33 LR LR 18 23 29.7
comp=Z,434nm,20.9s,baz=257,slow=33
KDAK Kodiak Island 77.16 33 IAMs_20 IAMs_20 18 22 57.1
comp=Z,622nm,20.0s
TBLG Delisi 77.76 311 P **P** **17 53 21.8 -1.6**
TBLG pmax pmax
comp=Z,22nm,0.7s
TBLG Delisi 77.76 311 P **P** **17 53 21.8 -1.6**
TBLG IAmb IAmb 17 53 26.1
comp=Z,22nm,0.7s
RAYN Ar Rayn 78.22 292 *i* P **P** **17 53 25.1 -1.2**
SNR=56
RAYN Ar Rayn 78.22 292 P **P** **17 53 24.0 -2.4**
RAYN pmax pmax
comp=Z,36nm,1.0s
RAYN MLR MLR
comp=Z,400nm,20.0s
RAYN Ar Rayn 78.22 292 P **P** **17 53 24.0 -2.4**
RAYN IAmb IAmb 17 53 27.3
comp=Z,36nm,0.9s
BPAW Bear Paw Mtn. 78.24 26 P **P** **17 53 25.5 -0.2**
BPAW IAmb IAmb 17 53 33.1
comp=Z,73nm,1.7s
ZEI Tsey 78.34 312 *e*P **P** **17 53 24.3 -2.6**
ZEI pmax pmax
comp=Z,15nm,0.6s
MLY Manley 78.39 25 P **P** **17 53 26.7 +0.2**
MLY IAmb IAmb 17 53 34.4
comp=Z,60nm,2.0s
NCK Nalchik 78.54 313 *ce*P **P** **17 53 27.0 -0.7**
NCK pmax pmax
comp=Z,11nm,0.4s
AKH Akhalkalaki 78.70 310 P **P** **17 53 28.3 -0.6**
AKH pmax pmax
comp=Z,24nm,1.0s
AKH MLR MLR
comp=Z,800nm,22.0s
AKH Akhalkalaki 78.70 310 P **P** **17 53 28.3 -0.6**
AKH IAmb IAmb 17 53 30.7
comp=Z,24nm,1.0s
AKH IAMs_20 IAMs_20 18 32 17.7
comp=Z,850nm,22.0s
TOLK Toolik Lake Re 79.01 22 P **P** **17 53 31.6 +1.8**
baz=268
TOLK Toolik Lake Re 79.01 22 P **P** **17 53 29.8 0.0**
TOLK IAmb IAmb 17 53 34.0
comp=Z,13nm,0.7s
KBZ Khabaz 79.04 313 P **P** **17 53 28.9 -1.5**
comp=Z,8.5nm,1.0s,baz=100,slow=3.6,SNR=14
KBZ LR LR 18 32 50.4
comp=Z,533nm,18.4s,baz=79,slow=39
KBZ Khabaz 79.04 313 ⇓ *e*P **P** **17 53 29.8 -0.6**
KBZ pmax pmax
comp=Z,18nm,1.2s
MCK McKinley 79.14 27 P **P** **17 53 30.6 0.0**
MCK pmax pmax
comp=Z,120nm,1.8s
MCK McKinley 79.14 27 P **P** **17 53 30.6 0.0**
RND Reindeer 79.17 27 P **P** **17 53 30.3 -0.5**
RND pmax pmax
comp=Z,35nm,1.4s
RND Reindeer 79.17 27 P **P** **17 53 30.3 -0.5**
RND IAmb IAmb 17 53 38.8
comp=Z,35nm,1.4s
KVAR Kislovodsk Arr 79.18 313 P **P** **17 53 32.3 +1.0**
comp=Z,7.7nm,0.8s,baz=108,slow=20,SNR=5.7
KIV Kislovodsk 79.18 313 *i* P **P** **17 53 31.2 -0.1**
SNR=6.8
KIV Kislovodsk 79.18 313 *de*P **P** **17 53 31.1 -0.2**
KIV *e* 17 56 28.8
KIV *e*PPP PPP 17 58 20.0
KIV pmax pmax
comp=Z,14nm,0.7s
KIV MLR MLR
comp=Z,839nm,17.0s
KIV Kislovodsk 79.18 313 P **P** **17 53 29.7 -1.7**
KIV IAmb IAmb 17 54 05.5
comp=Z,22nm,1.1s
NEY Neytrino 79.19 312 ⇑ *e*P **P** **17 53 33.0 +1.5**
NEY pmax pmax
comp=Z,2.0nm,0.8s
KNK Knik Glacier 79.34 29 P **P** **17 53 32.1 +0.3**
KNK IAmb IAmb 17 53 38.3
comp=Z,27nm,0.9s
SML Sawmill 79.41 29 P **P** **17 53 32.3 +0.2**
SML IAmb IAmb 17 53 39.9
comp=Z,36nm,1.0s
WRH Wood River Hil 79.52 26 P **P** **17 53 32.9 +0.3**
VRH Novokhopyorsk 79.54 320 *e*P **P** **17 53 31.4 -1.6**
VRH pmax pmax
comp=Z,50nm,1.8s
COLA College 79.62 26 *de*P **P** **17 53 33.6 +0.5**
COLA pmax pmax
comp=Z,5.0nm,0.4s
CCB Clear Creek Bu 79.64 26 P **P** **17 53 34.4 +1.1**
CCB IAmb IAmb 17 53 39.3
comp=Z,33nm,1.8s
SCM Sheep Creek Mo 79.88 29 P **P** **17 53 36.0 +1.2**
SCM pmax pmax
comp=Z,28nm,0.9s
SCM Sheep Creek Mo 79.88 29 P **P** **17 53 36.0 +1.2**
SCM IAmb IAmb 17 53 41.4
comp=Z,28nm,0.9s
HDA Harding Lake 80.01 26 P **P** **17 53 35.7 +0.4**
baz=271
HDA Harding Lake 80.01 26 P **P** **17 53 35.2 -0.1**
IL31 80.03 26 P **P** **17 53 36.1 +0.8**
ILAR Eielson Array 80.03 26 P **P** **17 53 36.2 +0.8**
comp=Z,2.9nm,0.6s,baz=240,slow=6.3,SNR=24
ILAR LR LR 18 29 15.6
comp=Z,164nm,20.4s,baz=294,slow=36
KLMR Klimovskoe 80.43 330 *e*P **P** **17 53 35.7 -1.9**
KLMR pmax pmax
comp=Z,74nm,1.0s
KLMR Klimovskoe 80.43 330 *e*P **P** **17 53 35.7 -1.9**
KLMR AMP 17 53 38.6
comp=Z,74nm,1.0s
PRP Porcupine Dome 80.59 25 P **P** **17 53 38.3 -0.3**
EYAK Cordova Ski Ar 80.69 30 IAMs_20 IAMs_20 18 36 16.0
comp=Z,431nm,19.0s
RIDG Independent Ri 80.96 27 P **P** **17 53 40.8 +0.3**
TMCR Tamitsa 80.97 334 *e*P **P** **17 53 39.1 -1.3**
TMCR pmax pmax
comp=Z,52nm,1.1s
VORD Divnogorie 81.08 320 *e*P **P** **17 53 40.2 -1.1**
VORD pmax pmax
comp=Z,7.0nm,0.7s
LPSR Galich'ya Gora 81.20 322 *e*P **P** **17 53 40.7 -1.1**
LPSR pmax pmax
comp=Z,30nm,1.0s
DOT Dot Lake 81.31 27 P **P** **17 53 42.8 +0.5**
SCRK Sand Creek 81.32 26 P **P** **17 53 43.0 +0.5**
SOC Sochi 81.35 313 *e*P **P** **17 53 38.5 -4.4**
SOC *e*PPP PPP 17 58 35.1
SOC *e*S S 18 03 40.5 -13
SOC *e*SS **SS** **18 09 04.1 -4.8**
SOC *e*SSS SSS 18 12 33.2
SOC pmax pmax
comp=Z,11nm,0.9s
MENT Mentasta 81.51 28 P **P** **17 53 43.5 +0.1**
MENT IAmb IAmb 17 53 51.9
comp=Z,16nm,1.0s
GLB Gilahina Butte 81.58 29 P **P** **17 53 44.5 +0.7**
GLB IAmb IAmb 17 53 52.1
comp=Z,24nm,1.0s
MOS Moscow 81.73 325 *e*P **P** **17 53 42.5 -2.1**
MOS *e* 17 53 53.9
MOS *e* 17 56 51.9
MOS *e*S **S** **18 03 51.8 -4.6**
MOS pmax pmax
comp=Z,36nm,0.8s
MOS MLR MLR
comp=Z,600nm,18.0s
LVZ Lovozero 82.08 338 *de*P **P** **17 53 46.3 0.0**
LVZ pmax pmax
comp=Z,44nm,1.3s
LVZ Lovozero 82.08 338 P **P** **17 53 45.9 -0.4**
LVZ IAmb IAmb 17 53 48.6
comp=Z,44nm,1.2s
WAX Waxell Ridge 82.12 30 IAMs_20 IAMs_20 18 37 24.0
comp=Z,441nm,19.0s
ATD Arta Tunnel 82.13 280 P **P** **17 53 47.2 -0.5**
ATD IAmb IAmb 17 53 49.6
comp=Z,22nm,1.1s
OBN Obninsk 82.38 325 P **P** **17 53 46.8 -1.2**
comp=Z,2.7nm,0.5s,baz=93,slow=4.7,SNR=5.5
OBN LR LR 18 33 44.1
comp=Z,111nm,18.3s,baz=78,slow=38
OBN Obninsk 82.38 325 ⇓ *e*P **P** **17 53 47.2 -0.8**
OBN *e* 17 56 55.2
OBN *e*PPP PPP 17 58 46.1
OBN pmax pmax
comp=Z,30nm,1.3s
OBN MLR MLR
comp=Z,559nm,18.0s
OBN Obninsk 82.38 325 P **P** **17 53 46.4 -1.6**
OBN IAmb IAmb 17 53 48.6
comp=Z,20nm,0.8s
OBN IAMs_20 IAMs_20 18 33 14.0
comp=Z,605nm,18.0s
EGAK Eagle 82.48 26 P **P** **17 53 49.5 +1.1**
EGAK IAmb IAmb 17 53 53.0
comp=Z,10.0nm,0.9s
APA Apatity 82.59 337 ⇓ *i*P **P** **17 53 47.3 -1.6**
APA pmax pmax
comp=Z,28nm,1.0s
APA MLR MLR
comp=Z,800nm,20.0s
BARN Barnard Glacie 82.65 29 P **P** **17 53 50.5 +0.9**
BARN IAmb IAmb 17 53 54.4
comp=Z,19nm,0.8s
ANN Anapa 82.87 314 *e*P **P** **17 53 48.3 -2.5**
ANN *e**PP **pwP** **17 54 01.4 -1.5**
ANN *e*S **S** **18 03 59.8 -8.8**
ANN pmax pmax
comp=Z,44nm,1.1s
ABPO Ambohimpanom 83.18 249 P **P** **17 53 50.6 -2.5**
ABPO pmax pmax
comp=Z,10.0nm,1.0s
ABPO Ambohimpanom 83.18 249 P **P** **17 53 50.6 -2.5**
ABPO IAmb IAmb 17 54 09.3
comp=Z,10nm,0.9s
DAWY Dawson 83.33 26 P **P** **17 53 53.5 +0.6**
GAZ Gaziantep 83.92 307 P **P** **17 53 56.1 -0.4**
GAZ IAmb IAmb 17 53 58.0
comp=Z,30nm,1.1s
EPYK Eagle Plains 84.09 24 P **P** **17 53 58.2 +1.5**
baz=280
EPYK Eagle Plains 84.09 24 P **P** **17 53 57.8 +1.1**
EPYK IAmb IAmb 17 54 11.0
comp=Z,22nm,1.1s
KEV Kevo 84.54 340 P **P** **17 53 58.0 -0.8**
KEV pmax pmax
comp=Z,16nm,1.0s
KEV MLR MLR
comp=Z,500nm,20.0s
KEV Kevo 84.54 340 P **P** **17 53 58.0 -0.8**
KEV IAmb IAmb 17 54 00.9
comp=Z,16nm,1.0s
KEV IAMs_20 IAMs_20 18 36 22.9
comp=Z,489nm,20.0s
DHAK Deception Hill 84.62 31 IAMs_20 IAMs_20 18 29 41.8
comp=Z,355nm,18.0s
HYT Haines Junctio 84.69 29 P **P** **17 54 01.1 +1.1**
HYT IAmb IAmb 17 54 04.0
comp=Z,16nm,0.8s
SPA0 Spitsbergen Ar 84.90 349 P **P** **17 54 00.2 -0.4**
SPA0 Spitsbergen Ar 84.90 349 *e*P **P** **17 54 01.1 +0.5**
INK Inuvik 84.92 22 P **P** **17 54 01.6 +0.9**
comp=Z,8.6nm,0.9s,baz=268,slow=4.9,SNR=24
INK Inuvik 84.92 22 P **P** **17 54 01.7 +0.9**
INK pmax pmax
comp=Z,16nm,1.1s
INK MLR MLR
comp=Z,300nm,20.0s
INK Inuvik 84.92 22 P **P** **17 54 01.7 +0.9**
INK IAmb IAmb 17 54 22.1
comp=Z,16nm,1.1s
ARCES ARCESS Array B 85.10 340 P **P** **17 54 01.4 -0.3**
comp=Z,15nm,0.8s,baz=74,slow=2.3,SNR=6.0
ARE0 ARCESS Array S 85.10 340 P **P** **17 54 01.9 +0.2**
ARE0 ARCESS Array S 85.10 340 *e*P **P** **17 54 02.7 +1.0**
SIM Simferopol' 85.19 315 *de*P **P** **17 54 01.9 -0.8**
SIM S **S** **18 04 28.2 -3.7**
SIM pmax pmax
comp=Z,22nm,1.1s
HAMF Hammerfest 85.43 341 *e*P **P** **17 54 02.3 -1.0**
BJO1 Bjornoya 85.62 345 *e*P **P** **17 54 03.9 -0.3**
KTK1 Kautokeino 86.02 339 *e*P **P** **17 54 06.7 +0.4**
ILGA Ilgaz 86.07 311 IAMs_20 IAMs_20 18 38 52.7
comp=Z,532nm,20.0s
BR131 Keskin Array S 86.34 309 P **P** **17 54 07.7 -1.0**
BR131 pmax pmax
comp=Z,5.0nm,1.0s
BR131 Keskin Array S 86.34 309 P **P** **17 54 07.7 -1.0**
BRTR Keskin Array B 86.34 309 P **P** **17 54 07.3 -1.4**
comp=Z,2.4nm,0.8s,baz=92,slow=4.0,SNR=7.6
BRTR LR LR 18 38 02.8
comp=Z,258nm,20.1s,baz=46,slow=39
A36M Sachs Harbour 86.60 17 P **P** **17 54 10.8 +1.7**
baz=290
FIA1 FINESS Array S 86.80 332 P **P** **17 54 09.5 -0.7**
FIA1 IAmb IAmb 17 54 11.1
comp=Z,26nm,1.1s
FINES FINESS Array B 86.80 332 P **P** **17 54 09.3 -1.0**
comp=Z,9.5nm,0.9s,baz=72,slow=6.2,SNR=27
FINES LR LR 18 37 11.9
comp=Z,832nm,18.7s,baz=82,slow=39
PPT Papeete 86.96 108 LR LR 18 29 08.4
comp=Z,260nm,18.4s,baz=278,slow=33
PPT2 Papeete2 86.96 108 *e*S **S** **18 04 51.3 +1.0**
comp=Z,296nm,24.8s
PPT2 Papeete2 86.96 108 *e*LR LR 18 21 48.4
comp=Z,568nm,23.2s,baz=293
VSU Vasula 87.17 329 ⇑ *e*P **P** **17 54 11.8 -0.3**
VSU pmax pmax
comp=Z,42nm,0.9s
TRO Tromso 87.28 340 *e*P **P** **17 54 12.2 -0.2**
CSS Mathiatis 87.36 305 P **P** **17 54 11.8 -1.8**
CSS IAmb IAmb 17 54 26.7
comp=Z,19nm,0.8s
AKASG Malin Array Be 87.44 321 P **P** **17 54 12.3 -1.3**
comp=Z,4.4nm,0.7s,baz=68,slow=4.4,SNR=17
AKASG LR LR 18 36 42.5
comp=Z,344nm,18.6s,baz=80,slow=38
AKBB Malin Array Si 87.44 321 P **P** **17 54 11.7 -1.9**
AKBB pmax pmax
comp=Z,10.0nm,1.1s
AKBB MLR MLR
comp=Z,400nm,19.0s
AKBB Malin Array Si 87.44 321 P **P** **17 54 11.7 -1.9**

AKBB IAmb IAmb 17 54 14.5
comp=Z,10nm,1.1s
AKBB IAMs_20 IAMs_20 18 36 31.8
comp=Z,420nm,19.0s
NOR Nord 87.44 355 *i* P **P** **17 54 13.5 +0.5**
NOR pmax pmax
comp=Z,15nm,1.2s
NOR Nord 87.44 355 *i* P **P** **17 54 13.5 +0.5**
comp=Z,15nm,1.2s
C36M Paulatuk 87.91 20 P **P** **17 54 16.4 +1.0**
baz=291
C36M Paulatuk 87.91 20 P **P** **17 54 15.4 0.0**
TBI Tubuai 88.16 114 *e*S **S** **18 05 05.5 +4.1**
comp=Z,696nm,25.0s
TBI Tubuai 88.16 114 *e*LR LR 18 22 19.8
comp=Z,704nm,23.5s,baz=292
DLBC Dease Lake 88.92 31 P **P** **17 54 21.9 +1.3**
comp=Z,2.3nm,0.9s,baz=283,slow=12,SNR=3.4
DLBC Dease Lake 88.92 31 P **P** **17 54 21.5 +0.9**
MAW Mawson 89.04 200 P **P** **17 54 20.1 -0.5**
comp=Z,4.6nm,0.9s,baz=34,slow=7.1,SNR=6.0
MAW LR LR 18 31 07.3
comp=Z,157nm,19.8s,baz=56,slow=34
MAW Mawson 89.04 200 P **P** **17 54 19.4 -1.3**
MAW pmax pmax
comp=Z,2.0nm,1.0s
MAW Mawson 89.04 200 P **P** **17 54 19.4 -1.3**
VNDA Vanda 89.06 173 P **P** **17 54 20.2 -0.5**
comp=Z,3.5nm,0.7s,baz=323,slow=5.3,SNR=16
VNDA LR LR 18 35 50.4
comp=Z,437nm,18.4s,baz=345,slow=37
VNDA Vanda 89.06 173 P **P** **17 54 19.9 -0.7**
VNDA pmax pmax
comp=Z,8.0nm,1.0s
VNDA Vanda 89.06 173 P **P** **17 54 19.9 -0.7**
VNDA IAmb IAmb 17 54 35.5
comp=Z,8.5nm,0.9s
STEI Steigen 89.16 339 *e*P **P** **17 54 21.0 -0.3**
MOBC Moresby Island 89.28 36 IAMs_20 IAMs_20 18 33 36.8
comp=Z,571nm,22.0s
KMBO Kilima Mbogo 89.58 269 P **P** **17 54 25.1 +0.3**
comp=Z,6.4nm,1.0s,baz=43,slow=8.0,SNR=7.2
KMBO Kilima Mbogo 89.58 269 P **P** **17 54 24.3 -0.5**
KMBO Kilima Mbogo 89.58 269 P **P** **17 54 23.4 -1.4**
KMBO pmax pmax
comp=Z,12nm,1.2s
KMBO MLR MLR
comp=Z,500nm,19.0s
KMBO Kilima Mbogo 89.58 269 P **P** **17 54 23.4 -1.4**
KMBO IAmb IAmb 17 54 38.3
comp=Z,12nm,1.2s
KMBO Kilima Mbogo 89.58 269 IAMs_20 IAMs_20 18 35 37.2
comp=Z,472nm,19.0s
LOF Lofoten 89.66 340 *e*P **P** **17 54 22.4 -1.3**
KONS Konsvik 90.50 338 *e*P **P** **17 54 27.6 0.0**
BUR08 Bucovina Ar. S 90.71 318 P **P** **17 54 29.0 -0.2**
MLR Muntele Rosu 90.75 316 LR LR 18 39 46.3
comp=Z,585nm,20.8s,baz=72,slow=39
DAG Danmarks Havn 91.63 352 *i* P **P** **17 54 31.8 -0.9**
DAG pmax pmax
comp=Z,26nm,1.0s
DAG Danmarks Havn 91.63 352 *i* P **P** **17 54 31.8 -0.9**
comp=Z,26nm,1.0s
NSS Namsos 91.79 337 *e*P **P** **17 54 33.5 -0.2**
RES Resolute Bay 92.25 10 P **P** **17 54 36.9 +1.3**
comp=Z,13nm,0.8s,baz=329,slow=4.5,SNR=8.8
RES LR LR 18 37 34.7
comp=Z,109nm,19.2s,baz=330,slow=36
RES Resolute Bay 92.25 10 P **P** **17 54 36.3 +0.6**
RES pmax pmax
comp=Z,18nm,0.8s
RES MLR MLR
comp=Z,200nm,18.0s
RES Resolute Bay 92.25 10 P **P** **17 54 36.3 +0.6**
UZH Uzhgorod 92.31 320 *e*P **P** **17 54 36.0 -0.5**
UZH *e* 17 54 43.2
UZH *e* 17 54 47.8
HFS Hagfors 92.96 333 P **P** **17 54 38.5 -0.7**
comp=Z,4.7nm,0.8s,baz=116,slow=3.4,SNR=9.4
TBLU Trondheim 93.05 336 *e*P **P** **17 54 37.4 -2.2**
VTS Vitosha 93.38 314 IAMs_20 IAMs_20 18 43 09.4
comp=Z,406nm,20.0s
NC405 NORSAR Array S 93.42 334 P **P** **17 54 40.0 -1.3**
NC405 IAmb IAmb 17 54 53.2
comp=Z,17nm,0.9s
NC602 NORSAR Array S 93.66 334 *e*P **P** **17 54 40.5 -1.9**
NB2 NORSAR Subarra 93.67 334 P **P** **17 54 40.7 -1.8**
comp=Z,5.5nm,0.9s,baz=66,slow=4.4
NB2 NORSAR Subarra 93.67 334 P **P** **17 54 40.7 -1.8**
baz=66,slow=4.4
NOA NORSAR Array B 93.67 334 P **P** **17 54 40.8 -1.8**
comp=Z,1.4nm,0.7s,baz=64,slow=4.6,SNR=6.9
NOA LR LR 18 43 23.6
comp=Z,351nm,18.6s,baz=75,slow=40
PSZ Piszkesteto 94.06 320 IAMs_20 IAMs_20 18 42 51.9
comp=Z,512nm,18.0s
YKA Yellowknife Ar 94.37 24 P **P** **17 54 46.2 +0.5**
comp=Z,5.4nm,0.7s,baz=298,slow=4.3,SNR=52
YKA PKiKP **PKiKP** **17 59 30.0 +1.1**
comp=Z,0.2nm,0.5s,baz=301,slow=2.0,SNR=4.4
YKA LR LR 18 35 58.4
comp=Z,116nm,21.9s,baz=0.0,slow=35
OKC Ostrava-Krasne 94.50 322 AMS AMS 18 42 50.0
comp=Z,400nm,18.0s
TAOE Nuku Hiva Isla 94.56 98 *e*LR LR 18 25 14.0
comp=Z,1μm,31.4s
MORC Moravsky Berou 94.89 322 *e*P **P** **17 54 51.1 +2.7**
MORC Moravsky Berou 94.89 322 IAMs_20 IAMs_20 18 43 18.0
comp=Z,446nm,18.0s
KONO Kongsberg 95.02 333 IAMs_20 IAMs_20 18 40 34.0
comp=Z,500nm,20.0s
JAVC Velka Javorina 95.14 321 *e*P **P** **17 54 50.4 +0.8**
OSTC Ostas 95.41 323 AMS AMS 18 44 30.0
comp=Z,400nm,17.8s
DPC Dobruska-Polom 95.42 323 AMS AMS 18 48 50.0
comp=Z,500nm,17.4s
CHVC Chvalec 95.49 323 AMS AMS 18 44 50.0
comp=Z,400nm,14.8s
UPC Upice 95.55 323 AMS AMS 18 44 30.0
comp=Z,400nm,15.6s
VRAC Vranov 95.64 322 P **P** **17 54 52.4 +0.6**
comp=Z,2.7nm,0.3s,baz=80,slow=6.1,SNR=4.5
KRUC Moravsky 95.85 322 *e*P **P** **17 54 52.6 -0.1**
MBAR Mbarara 95.92 270 *ce*P **P** **17 54 53.9 -0.1**
MBAR pmax pmax
comp=Z,7.0nm,2.5s
NLWA Neilton Lookou 95.98 40 IAMs_20 IAMs_20 18 27 47.5
comp=Z,454nm,22.0s
KULLO Kullorsuaq 96.11 1 *i* P **P** **17 54 52.9 -0.5**
KULLO pmax pmax
comp=Z,14nm,0.9s
KULLO Kullorsuaq 96.11 1 *i* P **P** **17 54 52.9 -0.5**
comp=Z,14nm,0.9s
TREC Trest 96.32 322 AMS AMS 18 44 20.0
comp=Z,600nm,15.7s
PVCC Panska Ves 96.39 323 AMS AMS 18 49 00.0
comp=Z,300nm,18.2s
PRU Pruhonice 96.62 323 AMS AMS 18 45 30.0
comp=Z,500nm,18.3s
PRA Prague 96.65 323 AMS AMS 18 45 30.0
comp=Z,200nm,16.0s
CLL Collm 96.98 325 *e*P **P** **17 54 59.0 +1.2**
CLL *e*SKKSac **SKKSac** **18 06 00.0 -0.6**
CLL *e*S **ScS** **18 06 24.0 +4.1**
CLL Lm MLR 18 44 00.0
comp=N,400nm,18.9s
CLL Lm MLR 18 44 00.0
comp=E,300nm,18.7s
CLL Lm MLR 18 44 00.0
comp=Z,700nm,18.1s
CLL Collm 96.98 325 *e*P **P** **17 54 59.0 +1.2**
CLL MLR MLR
comp=Z,700nm,18.1s
D05A Enumclaw 97.25 40 IAMs_20 IAMs_20 18 36 12.9
comp=Z,349nm,20.0s
LON Longmire 97.53 40 IAMs_20 IAMs_20 18 40 53.4
comp=Z,373nm,20.0s
KHC Kasperske Hory 97.53 322 *e*P Pdif 17 55 00.6 +0.1
KHC pmax pmax
comp=Z,6.0nm,1.3s
KHC Kasperske Hory 97.53 322 AMS AMS 18 45 30.0
comp=Z,600nm,19.0s
GEC2 GERESS Array S 97.57 322 IAMs_20 IAMs_20 18 43 02.9
comp=Z,490nm,19.0s
GERES GERESS Array B 97.57 322 P **P** **17 54 59.6 -1.1**
comp=Z,1.2nm,0.9s,baz=66,slow=5.0,SNR=10
GERES LR LR 18 43 13.8
comp=Z,388nm,18.2s,baz=82,slow=38
SUMG Summit 97.59 356 P **P** **17 55 00.4 -0.2**
SUMG pmax pmax
comp=Z,8.0nm,1.2s
SUMG Summit 97.59 356 P **P** **17 55 00.4 -0.2**
SUMG IAmb IAmb 17 55 02.5
comp=Z,8.1nm,1.2s
SUMG Summit 97.59 356 *i* P Pdif 17 55 01.6 +0.9
comp=Z,17nm,1.1s
SYO Syowa Base 97.67 201 ‖ *e*P Pdif 17 55 01.8 +1.3
SYO Syowa Base 97.67 201 ‖ *es*P sP 17 55 06.6 -0.1
NKC Novy Kostel 97.75 324 AMS AMS 18 45 50.0
comp=Z,400nm,16.4s
LTY Liberty 98.05 39 IAMs_20 IAMs_20 18 36 39.2
comp=Z,412nm,20.0s
YBH Yreka Blue Hor 98.77 45 LR LR 18 31 27.3
comp=Z,141nm,21.6s,baz=298,slow=30
E07A Sunnyside 98.84 40 IAMs_20 IAMs_20 18 41 36.1
comp=Z,416nm,19.0s
ZOU Zoufplan 98.94 320 IAMs_20 IAMs_20 18 46 01.2
comp=Z,486nm,19.0s
HAWA Hanford 99.11 40 IAMs_20 IAMs_20 18 41 44.3
comp=Z,415nm,20.0s
PINE Pine Mountain 99.22 43 IAMs_20 IAMs_20 18 35 07.4
comp=Z,364nm,20.0s
D08A Wollman Farm, 99.22 39 IAMs_20 IAMs_20 18 37 44.6
comp=Z,366nm,20.0s
E08A Dider Farm, El 99.37 40 IAMs_20 IAMs_20 18 37 39.1
comp=Z,417nm,19.0s
E09A Wood Farm, Sta 99.94 39 IAMs_20 IAMs_20 18 35 44.0
comp=Z,325nm,20.0s
CTI Castel Tesino 99.99 320 IAMs_20 IAMs_20 18 45 59.9
comp=Z,320nm,18.0s
AQU L'Aquila 100.33 316 IAMs_20 IAMs_20 18 49 19.0
comp=Z,421nm,18.0s
F10A Beach Ranch, E 100.74 40 IAMs_20 IAMs_20 18 42 46.4
comp=Z,517nm,20.0s
SALO Salr 100.88 320 IAMs_20 IAMs_20 18 50 14.6
comp=Z,381nm,22.0s
WALA Waterton Lakes 101.33 36 IAMs_20 IAMs_20 18 48 55.5
comp=Z,284nm,19.0s
RUBR Rubicon Trail 101.57 47 IAMs_20 IAMs_20 18 38 01.0
comp=Z,394nm,20.0s
ECH Echery 101.75 324 IAMs_20 IAMs_20 18 48 08.4
comp=Z,341nm,19.0s
CMB Columbia Colle 101.78 48 IAMs_20 IAMs_20 18 36 22.8
comp=Z,415nm,20.0s
VCNR Virginia City 101.84 47 IAMs_20 IAMs_20 18 46 49.1
comp=Z,404nm,19.0s
PNTR Pine Nut 101.96 47 IAMs_20 IAMs_20 18 35 58.2
comp=Z,384nm,19.0s
MSSA Maissana 102.09 319 IAMs_20 IAMs_20 18 48 02.6
comp=Z,291nm,19.0s
YERR Yerington 102.25 47 IAMs_20 IAMs_20 18 35 49.1
comp=Z,419nm,20.0s
WAKR Walker 102.30 47 IAMs_20 IAMs_20 18 37 14.7
comp=Z,489nm,20.0s
MSO Missoula 102.38 38 IAMs_20 IAMs_20 18 40 31.5
comp=Z,274nm,19.0s
MDPB Devils Postpil 102.89 48 IAMs_20 IAMs_20 18 37 06.2
comp=Z,429nm,20.0s
RYN Ryan 102.91 47 IAMs_20 IAMs_20 18 36 10.5
comp=Z,394nm,19.0s
KVN Kaiserville 103.05 46 IAMs_20 IAMs_20 18 31 40.0
comp=Z,337nm,19.0s
NVAR Mina Array Bea 103.15 47 PP PP 17 59 48.5 +7.9
comp=Z,0.2nm,0.3s,baz=260,slow=5.4,SNR=2.1
ESK Eskdalemuir 103.17 333 IAMs_20 IAMs_20 18 45 44.3
comp=Z,423nm,20.0s
SFJD Kangerlussuaq 103.75 359 IAMs_20 IAMs_20 18 50 09.5
comp=Z,422nm,20.0s
TPNV Topopah Spring 105.23 48 IAMs_20 IAMs_20 18 40 00.1
comp=Z,390nm,21.0s
H17A Grant Village 105.64 39 IAMs_20 IAMs_20 18 34 47.7
comp=Z,353nm,20.0s
IMW Indian Meadow 105.66 39 IAMs_20 IAMs_20 18 45 44.4
comp=Z,374nm,20.0s
FLWY Flagg Ranch 105.72 39 IAMs_20 IAMs_20 18 41 26.9
comp=Z,273nm,20.0s
REDW Red Top Meadow 105.98 40 IAMs_20 IAMs_20 18 45 53.0
comp=Z,428nm,19.0s
AHID Auburn Hatcher 106.12 40 IAMs_20 IAMs_20 18 41 28.8
comp=Z,396nm,18.0s
BW06 Boulder Array 107.10 40 IAMs_20 IAMs_20 18 39 06.6
comp=Z,359nm,19.0s
PDAR Pinedale Array 107.10 40 PKKP **PKKPdf** **18 11 21.6 -1.5**
comp=Z,1.0nm,0.7s,baz=150,slow=3.8,SNR=7.6
Y14A Wickenburg 108.91 49 IAMs_20 IAMs_20 18 41 37.6
comp=Z,372nm,19.0s
K22A Casper 109.06 39 IAMs_20 IAMs_20 18 48 05.3
comp=Z,358nm,20.0s
WUAZ Wupatki 109.40 47 IAMs_20 IAMs_20 18 35 55.5
comp=Z,429nm,22.0s
PV22 Blue Mesa, Par 109.76 43 IAMs_20 IAMs_20 18 32 56.4
comp=Z,380nm,22.0s
PV05 Paradox Valley 109.78 44 IAMs_20 IAMs_20 18 36 03.4
comp=Z,299nm,20.0s
ULM Lac du Bonnet 110.00 27 IAMs_20 IAMs_20 18 53 55.0
comp=Z,362nm,18.0s
PV01 Paradox Valley 110.11 44 IAMs_20 IAMs_20 18 30 12.7
comp=Z,337nm,22.0s
X18A Snowflake 110.90 48 IAMs_20 IAMs_20 18 49 20.0
comp=Z,374nm,20.0s
ISCO Idaho Springs 111.19 41 IAMs_20 IAMs_20 18 49 18.1
comp=Z,354nm,20.0s
AGMN Agassiz Nation 111.38 29 IAMs_20 IAMs_20 18 48 09.6
comp=Z,271nm,20.0s
SDCO Great Sand Dun 112.38 43 IAMs_20 IAMs_20 18 44 18.7
comp=Z,324nm,20.0s
OGNE Ogallala 112.79 38 IAMs_20 IAMs_20 18 46 58.9
comp=Z,306nm,22.0s
ANMO Albuquerque 113.20 46 IAMs_20 IAMs_20 18 43 48.6
comp=Z,324nm,21.0s
ECSD EROS Data Cent 114.13 33 IAMs_20 IAMs_20 18 50 24.8
comp=Z,253nm,21.0s
SCHQ Schefferville 114.98 9 IAMs_20 IAMs_20 18 47 43.9
comp=Z,365nm,21.0s
MNTX Cornudas Mount 115.62 48 **PKPdf** **18 00 09.5 +0.5**
COWI Conover 116.11 27 IAMs_20 IAMs_20 18 52 15.5
comp=Z,364nm,20.0s
G40A Rib Lake 116.25 28 IAMs_20 IAMs_20 18 55 00.5
comp=Z,235nm,19.0s
KSU1 Kansas State U 117.19 37 IAMs_20 IAMs_20 18 51 10.3
comp=Z,321nm,22.0s
E46A Sault Ste Mari 117.94 24 PKPdf **PKPdf** **18 00 12.3 -0.7**
H43A Windswept, Lux 117.98 27 IAMs_20 IAMs_20 19 01 20.0
comp=Z,262nm,20.0s
TXAR Lajitas Array 118.09 50 PKP **PKiKP** **18 00 14.8 +0.9**
comp=Z,2.7nm,1.0s,baz=253,slow=1.3,SNR=11
WMOK Wichita Mounta 118.56 42 IAMs_20 IAMs_20 18 41 31.1
comp=Z,373nm,22.0s
T35A Sooner Cattle 118.66 39 IAMs_20 IAMs_20 18 51 53.3
comp=Z,317nm,20.0s
E48A Lockeyer 118.67 22 P **PKiKP** **18 00 15.4 +0.9**
baz=327
D50A G1974 Best Tow 118.92 20 P **PKiKP** **18 00 15.0 +0.1**
baz=330
E50A Wahnapitae 119.24 21 P **PKiKP** **18 00 16.2 +0.6**
baz=329
D53A Lac Vacive, Po 119.71 19 P **PKiKP** **18 00 17.1 +0.7**
baz=332
TUL1 Leonard 119.75 39 IAMs_20 IAMs_20 18 58 53.2
comp=Z,330nm,20.0s
D54A Lac Fusel, La 119.97 18 P **PKiKP** **18 00 17.4 +0.4**
baz=333
E52A Mattawa 120.09 20 P **PKiKP** **18 00 17.6 +0.4**
baz=331
R40A Maddies Statio 120.25 35 **PKPdf** **18 00 17.3 -0.4**
R40A IAMs_20 IAMs_20 18 55 15.9
comp=Z,252nm,20.0s
U38A Gravette 120.26 38 IAMs_20 IAMs_20 18 54 04.7
comp=Z,293nm,21.0s
JCT Junction City 120.32 46 PKiKP **PKPdf** **18 00 18.1 0.0**
JCT Junction City 120.32 46 P **PKiKP** **18 00 19.2 +1.1**
baz=304
JCT Junction City 120.32 46 PKPdf **PKPdf** **18 00 18.1 0.0**
E53A Dumoine, Ponti 120.34 19 P **PKiKP** **18 00 17.7 0.0**
baz=332
Z35A Perchaven, San 120.42 42 IAMs_20 IAMs_20 18 44 00.3
comp=Z,414nm,22.0s
ALGO Algonquin Park 120.58 20 P **PKiKP** **18 00 18.4 +0.3**
baz=332
D56A ZEC Mazanza, M 120.63 17 P **PKiKP** **18 00 19.3 +1.0**
baz=335
D57A Chemin Vers le 120.90 16 P **PKiKP** **18 00 19.5 +0.7**
baz=336
TORD Torodi Ar. Bea 120.91 291 PKP **PKPdf** **18 00 18.3 -1.2**
comp=Z,1.4nm,0.7s,baz=36,slow=1.6,SNR=6.0
TORD PKKPab **PKKPab** **18 10 24.4 -0.1**
comp=Z,0.8nm,0.7s,baz=289,slow=3.2,SNR=3.8
CCM Cathedral Cave 120.98 34 PKiKP **PKPdf** **18 00 18.6 -0.5**
CCM MLR MLR
comp=Z,300nm,19.0s
CCM Cathedral Cave 120.98 34 P **PKiKP** **18 00 19.5 +0.3**
baz=315
CCM Cathedral Cave 120.98 34 PKPdf **PKPdf** **18 00 18.6 -0.5**
CCM Cathedral Cave 120.98 34 IAMs_20 IAMs_20 18 52 11.4
comp=Z,267nm,19.0s
E56A St. Veronique 121.00 17 P **PKiKP** **18 00 19.3 +0.3**
baz=335
G54A Lake Saint Pet 121.06 20 P **PKiKP** **18 00 19.5 +0.4**
baz=331
G53A Haliburton 121.11 21 P **PKiKP** **18 00 19.6 +0.3**
baz=331
SLM Saint Louis 121.12 33 IAMs_20 IAMs_20 18 54 27.0
comp=Z,238nm,20.0s
U40A Yellville 121.24 37 P **PKPdf** **18 00 19.4 -0.3**
baz=313
SADO Sadowa 121.24 21 PKP **PKPdf** **18 00 18.9 -0.5**
comp=Z,1.9nm,0.4s,baz=324,slow=7.2,SNR=3.6
SADO Sadowa 121.24 21 **PKPdf** **18 00 18.5 -0.9**
W39A Magazine 121.45 38 IAMs_20 IAMs_20 18 52 43.3
comp=Z,373nm,20.0s
L48A N Adams 121.47 27 **PKiKP** **18 00 20.2 +0.1**
Q44A Meyer Farm, Va 121.58 32 IAMs_20 IAMs_20 19 01 60.0
comp=Z,239nm,20.0s
N47A Urbana 121.74 28 IAMs_20 IAMs_20 18 53 22.6
comp=Z,305nm,20.0s
Z38A Mt. Pleasant 121.95 41 IAMs_20 IAMs_20 18 49 08.7
comp=Z,377nm,20.0s
DELO Deloro Mine 121.99 20 IAMs_20 IAMs_20 18 57 17.1
comp=Z,291nm,22.0s
MIAR Mount Ida 122.01 39 P **PKiKP** **18 00 22.1 +0.8**
baz=312
237A Washetta, Mont 122.19 43 IAMs_20 IAMs_20 18 53 38.4
comp=Z,352nm,20.0s
WHAR Wooly Hollow 122.30 37 IAMs_20 IAMs_20 18 51 09.5
comp=Z,303nm,18.0s
E61A Lac Etchemin 122.32 14 P **PKPdf** **18 00 21.2 -0.2**
baz=340
G57A Newington 122.32 18 P **PKiKP** **18 00 21.9 +0.3**
baz=335
N49A Columbus Grove 122.40 27 **PKiKP** **18 00 22.0 +0.1**
N49A IAMs_20 IAMs_20 19 04 56.1
comp=Z,316nm,19.0s
M50A Fremont 122.52 26 IAMs_20 IAMs_20 18 59 41.1
comp=Z,317nm,20.0s
PQI Presque Isle 122.64 12 IAMs_20 IAMs_20 18 53 41.5
comp=Z,341nm,20.0s
BLO Bloomington 122.66 30 IAMs_20 IAMs_20 19 01 09.2
comp=Z,340nm,20.0s
PARMO Parma 122.81 35 IAMs_20 IAMs_20 19 05 09.7
comp=Z,256nm,19.0s
MEDO Medina 122.88 22 IAMs_20 IAMs_20 18 56 27.0
comp=Z,370nm,21.0s
Q49A Covington 122.92 28 **PKPdf** **18 00 22.6 -0.2**
P48A Milroy 122.97 29 IAMs_20 IAMs_20 18 57 53.5
comp=Z,255nm,20.0s
FRNY Flat Rock 122.98 17 IAMs_20 IAMs_20 19 04 02.3
comp=Z,258nm,19.0s
N50A Nevada 122.99 27 P **PKiKP** **18 00 23.0 -0.1**
baz=324
J55A Hilton 123.02 21 IAMs_20 IAMs_20 18 58 33.7
comp=Z,361nm,20.0s
HBAR Harrisburg 123.08 36 IAMs_20 IAMs_20 19 05 31.0
comp=Z,371nm,22.0s
NATX Nacogdoches 123.10 42 IAMs_20 IAMs_20 18 46 15.5
comp=Z,367nm,20.0s
M52A Chesterland 123.12 25 IAMs_20 IAMs_20 18 57 10.9
comp=Z,260nm,20.0s
I57A Carthage 123.16 19 P **PKiKP** **18 00 23.7 +0.3**
baz=334
H58A Gabriels 123.18 18 P **PKiKP** **18 00 23.9 +0.5**
baz=335
K54A Basiliko Farm, 123.27 22 P **PKiKP** **18 00 24.2 +0.6**
baz=330
F63A Nahmakanta, Br 123.32 13 P **PKiKP** **18 00 24.6 +1.0**
baz=342
F64A Sherman 123.34 12 P **PKiKP** **18 00 24.8 +1.2**
baz=342
HKT Hockley 123.42 45 IAMs_20 IAMs_20 19 02 57.9
comp=Z,350nm,19.0s
M53A WI Miller and 123.49 24 P **PKiKP** **18 00 24.0 0.0**
baz=327
WCI Wyandotte Cave 123.50 31 P **PKiKP** **18 00 25.3 +1.2**
baz=320
ACSO Alum Creek Sta 123.50 27 IAMs_20 IAMs_20 18 57 38.1
comp=Z,240nm,19.0s
ALLY Alegheny Colle 123.53 24 IAMs_20 IAMs_20 18 57 53.5
comp=Z,333nm,22.0s
NCB Newcomb 123.58 18 **PKPdf** **18 00 23.9 0.0**
I58A Old Forge 123.60 19 P **PKiKP** **18 00 24.3 0.0**
baz=334
PKME Peaks-Kenny Pk 123.69 13 IAMs_20 IAMs_20 18 59 26.7
comp=Z,245nm,19.0s
L55A Hinsdale 123.73 22 P **PKiKP** **18 00 24.7 +0.2**
baz=330
O51A Pataskala 123.73 27 P **PKiKP** **18 00 25.1 +0.5**
baz=325
G63A Kingsbury 123.76 14 P **PKiKP** **18 00 25.2 +0.7**
baz=341
J58A Remsen 123.79 19 P **PKiKP** **18 00 25.3 +0.6**
baz=334
J58A Remsen 123.79 19 **PKPdf** **18 00 24.2 -0.2**
G64A Maxfield 123.83 13 P **PKiKP** **18 00 25.3 +0.8**
baz=342
M54A Oil Creek Stat 123.84 24 P **PKiKP** **18 00 25.2 +0.5**
baz=328
M54A Oil Creek Stat 123.84 24 **PKPdf** **18 00 24.0 -0.5**
K57A Scipio Center 123.94 20 P **PKiKP** **18 00 25.4 +0.5**
baz=332
J59A Piesco 123.95 18 P **PKiKP** **18 00 24.9 0.0**
baz=335
J59A Piesco 123.95 18 **PKPdf** **18 00 24.4 -0.3**
LBNH Lisbon 123.99 16 P **PKiKP** **18 00 25.5 +0.5**
baz=338
P51A Williamsport 124.07 28 P **PKiKP** **18 00 25.5 +0.2**
baz=324
P51A Williamsport 124.07 28 **PKPdf** **18 00 24.1 -0.9**
P51A IAMs_20 IAMs_20 18 57 36.2
comp=Z,373nm,21.0s
L56A Greenwood 124.09 22 P **PKiKP** **18 00 25.7 +0.4**
baz=331
L56A Greenwood 124.09 22 **PKiKP** **18 00 25.2 -0.1**
G65A Princeton 124.13 12 P **PKiKP** **18 00 26.6 +1.4**
baz=343
M55A Ridgway 124.22 23 P **PKiKP** **18 00 25.7 +0.2**
baz=329
WVT Waverly 124.26 34 PKiKP **PKPdf** **18 00 25.3 -0.1**
WVT Waverly 124.26 34 P **PKiKP** **18 00 25.6 -0.1**
baz=318
WVT Waverly 124.26 34 PKPdf **PKPdf** **18 00 25.3 -0.1**
Q51A Peebles 124.30 28 **PKPdf** **18 00 23.7 -1.8**
Q51A IAMs_20 IAMs_20 18 58 11.5
comp=Z,310nm,20.0s
GGN Saint George 124.36 12 IAMs_20 IAMs_20 18 59 45.2
comp=Z,312nm,19.0s
R50A Paris 124.43 29 **PKPdf** **18 00 24.9 -0.8**
M56A Emporium 124.43 22 P **PKiKP** **18 00 26.4 +0.5**
baz=330
M56A Emporium 124.43 22 **PKPdf** **18 00 24.9 -0.8**
H65A Eastbrook 124.47 13 P **PKiKP** **18 00 26.1 +0.3**
baz=342
L57A Andrews Acres 124.47 21 P **PKiKP** **18 00 27.1 +1.0**
baz=332
H66A Whiting 124.58 12 P **PKiKP** **18 00 27.1 +1.0**
baz=343
BINY Binghamton 124.59 20 P **PKiKP** **18 00 27.3 +1.0**
baz=333
BINY Binghamton 124.59 20 **PKPdf** **18 00 26.0 +0.1**
BINY IAMs_20 IAMs_20 18 59 04.4
comp=Z,276nm,20.0s
EMMW East Machias 124.62 12 IAMs_20 IAMs_20 18 56 46.3
comp=Z,340nm,19.0s
L58A Harry Jones Me 124.78 20 P **PKiKP** **18 00 27.3 +0.7**
baz=333
P53A Whipple 124.81 26 P **PKiKP** **18 00 26.7 0.0**
baz=326
P53A Whipple 124.81 26 PKPdf **PKPdf** **18 00 25.6 -0.8**
M57A Sunshine Farm, 124.95 22 P **PKiKP** **18 00 27.5 +0.6**
baz=331
PLAL Pickwick Lake 124.96 35 PKPdf **PKPdf** **18 00 25.8 -1.0**
K61A Williamstown 125.05 18 P **PKiKP** **18 00 27.4 +0.3**
baz=336

U49A	Red Boiling Sp	125.07	32			PKPdf	18 00 25.7	-1.3
CLTN	Cedars of Leba	125.10	33			PKPdf	18 00 26.3	-0.7
P54A	Burton	125.11	25	P		PKiKP	18 00 27.9	+0.5
	baz=327							
T50A	Nancy	125.16	31			PKPdf	18 00 27.0	-0.2
Q53A	Leroy	125.27	27	P		PKiKP	18 00 28.1	+0.4
	baz=325							
SSPA	Standing Stone	125.28	23	P		PKiKP	18 00 27.8	+0.2
	baz=330							
S51A	Beattyville	125.29	29	PKPdf		PKPdf	18 00 25.1	-2.3
N57A	Milroy	125.30	22	P		PKiKP	18 00 28.0	+0.4
	baz=330							
K62A	Royalston	125.36	17	P		PKiKP	18 00 28.8	+1.1
	baz=337							
M59A	Waymart	125.37	20	P		PKiKP	18 00 28.6	+0.8
	baz=333							
Q54A	Coxs Mills	125.47	26	P		PKiKP	18 00 29.2	+1.1
	baz=326							
Q54A	Coxs Mills	125.47	26			PKPdf	18 00 26.9	-0.8
N58A	Sunbury	125.54	22	P		PKiKP	18 00 28.2	+0.1
	baz=332							
QUA2	Belchertown	125.68	17	IAMs_20		IAMs_20	19 00 03.5	
	comp=Z,235nm,20.0s							
Q55A	Buckhannon	125.78	26	P		PKiKP	18 00 28.8	0.0
	baz=327							
M60A	Port Jervis	125.83	20	P		PKiKP	18 00 29.6	+0.9
	baz=334							
P56A	Dayton Farm, R	125.87	24	P		PKiKP	18 00 29.2	+0.4
	baz=329							
SWET	Sewanee	125.97	33	PKPdf		PKPdf	18 00 28.0	-0.8
R54A	Victor	126.06	27	P		PKiKP	18 00 29.3	0.0
	baz=326							
Q56A	Snyder Ridge,	126.12	25	P		PKiKP	18 00 29.7	+0.3
	baz=328							
TZTN	Tazewell	126.18	30	P		PKiKP	18 00 29.8	+0.3
	baz=322							
TZTN	Tazewell	126.18	30	PKPdf		PKPdf	18 00 27.9	-1.3
V51A	Loudon	126.35	31			PKPdf	18 00 29.6	+0.1
V51A				IAMs_20		IAMs_20	19 00 20.0	
	comp=Z,258nm,19.0s							
R55A	Marlinton	126.36	26			PKiKP	18 00 30.0	0.0
MVL	Millersville	126.41	22	IAMs_20		IAMs_20	18 58 10.5	
	comp=Z,304nm,20.0s							
CPCT	Cooper Cave	126.54	32	PKPdf		PKPdf	18 00 29.5	-0.3
CPCT				IAMs_20		IAMs_20	19 03 44.1	
	comp=Z,322nm,19.0s							
346A	Big Creek Wild	126.68	39			PKPdf	18 00 30.1	-0.1
V52A	Seiverville	126.71	31			PKPdf	18 00 30.0	-0.2
T54A	Tazewell	126.71	28	P		PKiKP	18 00 30.9	+0.2
	baz=325							
Y49A	Blount Mountai	126.72	34			PKPdf	18 00 30.1	-0.1
TKL	Tuckaleechee C	126.76	31	PKP		PKiKP	18 00 30.5	-0.2
	comp=Z,11nm,0.8s,baz=315,slow=7.1,SNR=16							
TKL	Tuckaleechee C	126.76	31	PKIKP		PKiKP	18 00 30.5	-0.2
TKL				MLR		MLR		
	comp=Z,300nm,22.0s							
TKL	Tuckaleechee C	126.76	31	PKPdf		PKiKP	18 00 30.5	-0.2
TKL				IAMs_20		IAMs_20	18 55 10.5	
	comp=Z,296nm,22.0s							
Q58A	Fox Den Farm,	126.82	24	P		PKiKP	18 00 31.2	+0.5
	baz=330							
P60A	Greenville	126.83	21	IAMs_20		IAMs_20	19 00 48.7	
	comp=Z,348nm,20.0s							
R57A	Stanardsville	127.03	25	P		PKiKP	18 00 31.9	+0.8
	baz=328							
V53A	Saluda	127.23	30			PKPdf	18 00 31.4	+0.2
V53A				IAMs_20		IAMs_20	19 00 29.3	
	comp=Z,335nm,22.0s							
U55A	TA2, Sparta	127.41	28	P		PKiKP	18 00 31.8	-0.3
	baz=325							
R58B	Mineral	127.58	24	IAMs_20		IAMs_20	18 59 26.7	
	comp=Z,315nm,20.0s							
BG3	Lake Jocassee	127.71	31	IAMs_20		IAMs_20	19 00 39.9	
	comp=Z,209nm,20.0s							
T57A	Hurt	127.81	26	P		PKiKP	18 00 33.5	+0.7
	baz=327							
T58A	Grand View Acr	128.17	26	P		PKiKP	18 00 33.8	+0.3
	baz=328							
250A	Grady	128.18	36	IAMs_20		IAMs_20	18 54 49.2	
	comp=Z,300nm,20.0s							
V56A	Mocksville	128.24	28	P		PKiKP	18 00 34.0	+0.3
	baz=325							
U57A	Blanch	128.25	27	P		PKiKP	18 00 34.5	+0.9
	baz=327							
KMSC	Kings Mountain	128.38	29	P		PKiKP	18 00 34.5	+0.6
	baz=324							
KMSC	Kings Mountain	128.38	29	PKPdf		PKPdf	18 00 33.3	0.0
PAULI	Pauline	128.40	30	PKPdf		PKPdf	18 00 33.4	0.0
V57A	Coltrane Farms	128.50	27	P		PKiKP	18 00 34.6	+0.4
	baz=326							
T59A	Double "B" Far	128.56	25			PKiKP	18 00 34.3	0.0
HODGE	Hodges	128.65	31	IAMs_20		IAMs_20	19 01 26.8	
	comp=Z,300nm,21.0s							
GOGA	Godfrey	128.66	32	IAMs_20		IAMs_20	19 08 52.4	
	comp=Z,283nm,18.0s							
X55A	Gracelyn & Ava	128.77	30	P		PKiKP	18 00 35.3	+0.5
	baz=323							
V58A	Windy Hill, Pi	128.88	27	IAMs_20		IAMs_20	19 03 12.5	
	comp=Z,313nm,19.0s							
W57A	Gilead	129.01	28	P		PKiKP	18 00 35.5	+0.3
	baz=326							
W57A	Gilead	129.01	28			PKPdf	18 00 34.8	+0.2
BIRD	Birdtown, Kers	129.20	29	IAMs_20		IAMs_20	19 03 56.2	
	comp=Z,329nm,19.0s							
V59A	Middlesex	129.29	26	P		PKiKP	18 00 36.6	+0.9
	baz=328							
X58A	Rowland	129.80	28	IAMs_20		IAMs_20	19 04 17.1	
	comp=Z,301nm,20.0s							
CMIG	Matias Romero	131.22	57	PKP		PKiKP	18 00 40.4	+0.3
	comp=Z,1.7nm,0.5s,baz=245,slow=3.8,SNR=5.2							
PLCA	Paso Flores	145.30	157	PKPbc		PKPbc	18 01 04.0	-0.1
	comp=Z,7.7nm,0.9s,baz=199,slow=4.2,SNR=14							
PLCA	Paso Flores	145.30	157	PKIKP		PKPdf	18 01 04.3	-0.1
PLCA	Paso Flores	145.30	157			PKPdf	18 01 04.3	-0.1
LC01	Cunco	146.29	153	PKPdf		PKPdf	18 01 06.5	+0.5
SDDR	Presa de Saban	146.69	32			PKPab	18 01 09.7	-0.3
BCIP	Isla Barro Col	147.81	56	*eP*		PKPbc	18 01 10.9	-1.2
BCIP	Isla Barro Col	147.81	56	PKP2		PKiKP	18 01 13.2	-0.9
BCIP	Isla Barro Col	147.81	56			PKiKP	18 01 13.2	-0.9
DR12	Loma Pena Alta	147.81	29			PKPbc	18 01 12.9	+0.8
BI02	San Fabin de	148.40	152			PKPbc	18 01 13.8	+0.6
GCPR	Guaynabo City	149.71	25			PKPbc	18 01 15.9	-0.9
OBIP	Obispado Ponce	149.73	26	PKPdf		PKPdf	18 01 09.3	-2.9
OBIP						PKiKP	18 01 17.6	-0.3
SJG	San Juan	149.86	25	PKPbc		PKiKP	18 01 18.6	+0.5
	comp=Z,20nm,0.7s,baz=272,slow=2.7,SNR=6.5							
SJG	San Juan	149.86	25	PKIKP		PKiKP	18 01 19.4	+1.2
SJG	San Juan	149.86	25			PKiKP	18 01 19.4	+1.2
ICMP	Isla Caja de M	149.90	26	PKPdf		PKPdf	18 01 09.4	-3.1
ICMP						pPKPdf	18 01 17.1	-0.1
HUMP	Col San Antoni	149.96	24	PKPdf		PKPdf	18 01 09.1	-3.5
HUMP						PKPbc	18 01 17.6	+0.1
PDPR	Patillas Dam,	150.00	25	PKPdf		PKPdf	18 01 08.8	-3.9
PDPR						pPKPdf	18 01 17.2	-0.1
MTP	Monte Pirata	150.12	24	PKPdf		PKPdf	18 01 10.2	-2.7
MTP						PKPbc	18 01 18.2	+0.4
STVI	Saint Thomas	150.12	23	PKPdf		PKPdf	18 01 11.5	-1.3
STVI						PKiKP	18 01 18.5	-0.2
CAPC	Capurgana	150.12	54	*eP*		PKPbc	18 01 17.7	-0.3
BO02	Sierra Bellavi	150.14	150			PKPdf	18 01 11.2	-1.3
SMRC	Santa Marta, M	150.86	46	*eP*		PKPbc	18 01 19.3	-0.4
SJCC	San Jacinto, C	151.01	49	*eP*		PKPdf	18 01 16.3	+1.8
SKI	Saint Kitts	151.84	19	IAMs_20		IAMs_20	19 21 38.7	
	comp=Z,169nm,19.0s							
URIC	Uribia, Colomb	152.00	42	*eP*		PKiKP	18 01 23.0	+0.3
URIC	Uribia, Colomb	152.00	42	PKPdf		PKPbc	18 01 19.5	-2.9
UREC	San Jos de Ur	152.09	53	*eP*		PKPbc	18 01 22.6	-0.1
SMLC	San Martn de	152.55	49	*eP*		PKPdf	18 01 17.5	+0.8
MALC	Bahia Malaga	152.63	62	*eP*		PKiKP	18 01 25.8	+1.7
ZARC	Zaragoza, Cauc	152.77	53	*eP*		PKPdf	18 01 18.5	+1.4
CBOC	Ciudad Bolivar	152.79	57	*eP*		PKPbc	18 01 23.5	-1.0
DABV	Dabajuro	153.47	41	*eP*		PKPbc	18 01 21.9	-3.8
OCAC	Ocana	153.48	49	*eP*		PKiKP	18 01 26.0	0.0
YOTC	Yotoco, Valle	153.50	61	*eP*		PKPdf	18 01 19.1	+0.9
BBAC	Balboa, Cauca	153.62	66	*eP*		PKPdf	18 01 18.9	+0.3
GUY2C	Guyana, Caldas	153.68	57	*eP*		PKPdf	18 01 20.3	+1.3
RREF	El Recreo	153.87	58	*eP*		PKPbc	18 01 24.9	-2.5
NORC	Norcasia	153.90	56	*eP*		PKiKP	18 01 27.2	+0.5
TOLC	Tolima	154.06	58	*eP*		PKPdf	18 01 19.8	+0.5
SOTA	Rioblanco	154.15	65	*eP*		PKPdf	18 01 23.0	+3.4
ORTC	Ortega, Tolima	154.48	60	*eP*		PKiKP	18 01 29.7	+1.8
SPBC	San Pablo de B	154.50	55	*eP*		PKPdf	18 01 20.9	+1.3
PAMC	Pamplona, Colo	154.53	50	*eP*		PKPdf	18 01 21.6	+1.5
BARC	Barichara	154.63	52	*eP*		PKiKP	18 01 28.5	0.0
SDV	Santo Domingo	154.96	44	*eP*		PKPbc	18 01 28.1	-1.0
AC05	El Transito	155.00	143				18 01 27.3	
RUSC	La Rusia	155.14	53	*eP*		PKPdf	18 01 21.6	+0.6
RUSC	La Rusia	155.14	53			PKPdf	18 01 20.7	-0.3
SOCV	Socops	155.24	45	*eP*		PKPdf	18 01 21.6	+1.1
CHIC	Chingaza	155.36	56	*eP*		PKPdf	18 01 23.5	+2.3
LPAZ	La Paz	164.08	117	PKP		PKPdf	18 01 31.9	+0.7
	comp=Z,3.5nm,1.0s,baz=340,slow=6.3,SNR=7.5							
LPAZ	La Paz	164.08	117	PKIKP		PKPdf	18 01 29.5	-1.8
LPAZ	La Paz	164.08	117			PKPdf	18 01 29.5	-1.8

IDC ***30*** *17:50:23.7±1.7, 9°.39N×126°.81E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.6/48, mbtmp3.8/7, Error ellipse: s-maj=149.6km s-min=20.0km az=73.0*

NEIC ***30*** *17:50:24.5±2.8, 9°.33N±0°.04×126°.4E±0°.2, h10km±1km, mb4.3/7, Error ellipse: s-maj=32.7km s-min=5.4km az=99.0*

MAN ***30*** *17:50:25.2, 9°.21N×125°.85E, h174km, mb4.5, ML3.4, MS3.2*

ISC 30 17:50:24.0±0.8, 9°.35N±0°.03×126°.53E±0°.06, h10km, n31, σ2§40/33, mb4.0/10, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	1.11	293	*eP*		Pn	17 50 51.3	+5.7
SCPH				*i*	S	Sn	17 51 01.4	+0.5
MSLP	Maasin	1.82	295	*eP*		Pn	17 50 55.3	0.0
MSLP				*eS*		Sg	17 51 28.3	+5.9
BUKP	Musuan	2.06	225	*eP*		Pg	17 51 05.4	+1.9
BUKP				*eS*		Sg	17 51 34.5	+4.3
MATI	Mati	2.41	186	*eP*		Pb	17 51 05.7	-1.7
DAV	Davao City (W)	2.45	203	Lg		Lg	17 51 47.6	
	116nm,0.3s,baz=233,slow=23,SNR=6.9							
DAV	Davao City (W)	2.45	203	Pn		Pn	17 51 03.0	-1.1
DMPH	Davao City--Mi	2.47	204	*eP*		Pg	17 51 12.0	+0.6
DMPH				*i*	S	Sg	17 51 44.5	+1.1
LLP	Lapu-Lapu	2.70	291	*eP*		Pg	17 51 15.6	-0.1
LLP				*eS*		Sg	17 51 53.6	+2.9
KCP	Kidapawan	2.73	212	*eS*		Sg	17 51 49.7	-2.0
CTBH	Cotabato--PC H	3.09	227	*iP*		Pn	17 51 07.0	-5.9
DDMP	Don Marcelino,	3.33	194	*eS*		Sb	17 52 02.2	-1.4
PAGZ	Pagadian	3.45	245	*eP*		Pn	17 51 11.8	-6.0
CNP	Catarman	3.63	330	*eP*		Pb	17 51 25.9	-2.5
CNP				*eS*		Sb	17 52 10.2	-2.3
CNOP	Candoni, Negro	3.86	277	*eP*		Pn	17 51 19.3	-4.2
GUIM	Jordan	4.08	288	*eP*		Pn	17 51 23.3	-3.1
RCP	Roxas	4.32	301	*eP*		Pn	17 51 26.6	-3.1
ZCP	Zamboanga City	5.02	242	*iP*		Pb	17 51 49.2	-2.8
ZCP				*i*	S	Sn	17 52 22.7	-15
NACB	Ninganchiao	15.47	343	Pn		Pn	17 53 59.2	-3.3
NACB				IAmb		IAmb	17 54 26.6	
	comp=Z,18nm,0.9s							
SBUM	Sibu	15.79	245	P		P	17 54 08.3	-2.2
KNRA	Kununurra	24.97	175	P		P	17 55 47.3	-0.5
KNRA				IAmb		IAmb	17 56 00.2	
	comp=Z,7.3nm,0.8s							
FITZ	Fitzroy Crossi	27.29	182	P		P	17 56 11.1	+2.2
	comp=Z,4.3nm,1.1s,baz=0.0,slow=9.1,SNR=1.7							
FITZ	Fitzroy Crossi	27.29	182	P		P	17 56 09.0	+0.2
FITZ				IAmb		IAmb	17 56 28.6	
	comp=Z,10nm,1.4s							
WRA	Warramunga Arr	30.11	165	P		P	17 56 34.2	+0.2
	comp=Z,1.0nm,1.0s,baz=343,slow=8.0,SNR=2.5							
ASAR	Alice Springs	33.60	168	P		P	17 57 05.7	+1.0
	comp=Z,0.3nm,0.5s,baz=349,slow=6.8,SNR=6.3							
MK31	Makanchi Array	52.91	323	P		P	17 59 40.7	+0.4
MK31				IAmb		IAmb	17 59 46.2	
	comp=Z,4.3nm,1.1s							
MKAR	Makanchi Array	52.91	323	P		P	17 59 42.5	+2.1
	comp=Z,0.6nm,0.6s,baz=118,slow=6.1,SNR=5.0							
ZALV	Zalesovo Beam	55.55	332	P		P	18 00 00.7	+1.3
	comp=Z,0.3nm,0.3s,baz=123,slow=5.3,SNR=2.2							
RAYN	Ar Rayn	78.14	292	P		P	18 02 25.3	+1.2
RAYN				IAmb		IAmb	18 02 28.1	
	comp=Z,1.4nm,0.7s							
DOT	Dot Lake	81.43	27	P		P	18 02 41.8	+0.7
ARCES	ARCESS Array B	85.14	340	P		P	18 03 02.4	+2.3
	comp=Z,1.0nm,0.7s,baz=86,slow=6.2,SNR=6.2							
FINES	FINESS Array B	86.81	332	P		P	18 03 10.7	+2.3
	comp=Z,0.3nm,0.3s,baz=69,slow=7.6,SNR=3.6							

MAN ***30*** *17:53:05.2, 9°.41N×126°.79E, h1km, mb5.4, ML4.4, MS4.7*

IDC ***30*** *17:53:05.1±0.5, 9°.29N×126°.41E, h0km, mb4.4/27, mb1 4.5/29, mb1mx4.4/47, mbtmp4.4/29, ML3.8/2, MS4.3/9, Ms1 4.3/9, ms1mx3.9/46, Error ellipse: s-maj=19.9km s-min=10.7km az=86.0*

MOS ***30*** *17:53:05.9±1.0, 9°.22N×126°.23E, h22km, mb5.2/23, Error ellipse: s-maj=11.6km s-min=5.9km az=102.2*

NEIC ***30*** *17:53:07.5±1.8, 9°.30N±0°.07×126°.33E±0°.10, h18km±3km, mb5.0/103, Error ellipse: s-maj=14.1km s-min=10.3km az=73.0*

GCMT ***30*** *17:53:12.6±0.3, 9°.34N±0°.02×126°.84E±0°.02, h30km, MW5.1/97, Moment Tensor Solution. s37,c40; s97,c143; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=4.84±.27; Mθθ=0.24±.14; Mφφ=4.60±.17; Mrθ=-0.14±.18; Mθφ=-0.00±.08; Mφr=3.54±.20; Best double couple: M₀5.90100×10¹⁶ NP1:φs181.00000°, δ27.00000°, λ92.00000°. NP2: φs359.00000°, δ63.00000°, λ89.00000°. Principal axes: T 6.0230, Plg72.0000°, Azm266.0000°; N -0.2420, Plg1.0000°, Azm359.0000°; P -5.7800, Plg18.0000°, Azm90.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 17:53:10.7±0.3, 9°.27N±0°.03×126°.47E±0°.05, h63km, n249, σ1§84/247, mb4.9/108, MS4.3/12, 14C-11D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	1.09	298	*iP*		Pn	17 53 30.9	+1.3
SCPH				*i*	S	Sn	17 53 46.0	+2.5
MSLP	Maasin	1.81	298	*eP*		Pn	17 53 42.3	+3.4
MSLP				*eS*		Sn	17 54 06.5	+5.4
BUKP	Musuan	1.96	225	*eP*		Pn	17 53 43.8	+2.2
BUKP				*eS*		Sn	17 54 14.4	+9.3
MATI	Mati	2.32	185	*eP*		Pn	17 53 47.2	+0.7
MATI				*eS*		Sn	17 54 24.4	+11
DAV	Davao City (W)	2.36	202	Lg		Lg	17 54 20.8	
	95nm,0.3s,baz=63,slow=23,SNR=7.6							
DAV				LR		LR	17 54 56.6	
	comp=Z,14μm,18.4s,baz=34,slow=47							
DMPH	Davao City--Mi	2.37	204	*eP*		Pn	17 53 50.7	+3.5
DMPH				*i*	S	Sn	17 54 25.8	+11
KCP	Kidapawan	2.63	211	*iP*		Pn	17 53 54.6	+3.8
KCP				*i*	S	Sn	17 54 21.7	+0.2
LLP	Lapu-Lapu	2.68	293	*eP*		Pn	17 53 54.9	+3.5
LLP				*eS*		Sn	17 54 32.9	+10
CTBH	Cotabato--PC H	3.00	227	*iP*		Pn	17 53 59.2	+3.4
DDMP	Don Marcelino,	3.23	193	*eP*		Pn	17 54 01.5	+2.5
DDMP				*eS*		Sn	17 54 46.0	+10
SKMP	Bagumbayan, Su	3.33	215	*eP*		Pn	17 54 04.7	+4.2
PAGZ	Pagadian	3.37	245	*eP*		Pn	17 54 03.9	+3.1
GSPH	General Santos	3.50	206	*iP*		Pn	17 54 10.2	+7.3
CNP	Catarman	3.68	331	*eP*		Pn	17 54 05.3	+0.3
CNP				*eS*		Sn	17 54 47.7	+0.5
CNOP	Candoni, Negro	3.82	279	*eP*		Pn	17 54 08.8	+1.8
GUIM	Jordan	4.05	290	*eP*		Pn	17 54 13.1	+2.8
RCP	Roxas	4.31	302	*eP*		Pn	17 54 17.0	+3.1
JAP	San Jose, Anti	4.69	289	*eP*		Pn	17 54 24.9	+5.8
PVCP	Virac	4.86	332	*eP*		Pn	17 54 23.6	+2.2
PVCP				*eS*		Sn	17 55 30.1	+14
ZCP	Zamboanga City	4.93	242	*eP*		Pn	17 54 23.4	+1.0
CUYO	Cuyo Island	5.59	287	*eP*		Pn	17 54 34.7	+3.2
SJMP	San Jose	6.14	302	*eP*		Pn	17 54 42.0	+3.1
BOAC	Boac	6.16	313	*eP*		Pn	17 54 42.1	+3.0
LQP	Lukban	6.82	315	*eP*		Pn	17 54 52.1	+3.7
TGY	Tagaytay City	7.24	312	Pn		Pn	17 54 57.3	+3.2
	baz=147,slow=9.0,SNR=5.6							
TGY				LR		LR	17 57 51.1	
	comp=Z,3μm,21.6s,baz=130,slow=40							
BALP	Baler	8.01	324	*eP*		Pn	17 55 04.9	+0.3
TNTI	Ternate	8.49	174	Pn		Pn	17 55 12.4	+1.2
CAUP	Cauayan	8.87	330	*eP*		Pn	17 55 16.8	+0.4
SCZP	Santa Cruz	9.10	316	*eP*		Pn	17 55 27.3	+7.7
APYP	Conner	9.94	330	*eP*		Pn	17 55 31.7	+0.7
SZP	Santa	10.10	325	Pn		Pn	17 55 35.5	+2.4
KKM	Kota Kinabalu	10.66	253			Pn	17 55 46.5	+5.4
LUWI	Luwuk	10.89	200	Pn		Pn	17 55 47.3	+3.2
SIJI	Sorong	11.15	154	Pn		Pn	17 55 48.0	+0.4
	1.3nm,0.3s,baz=334,slow=16,SNR=4.8							
SIJI				Sn		Sn	17 57 45.1	-5.9
	1.0nm,0.3s,baz=270,slow=20,SNR=1.5							
FAKI	Fak Fak	13.41	154	Pn		Pn	17 56 20.4	+1.8
TPUB	Ta-pu	15.03	339	P		Pn	17 56 40.3	0.0
KAPI	Kappang	15.69	206	LR		LR	18 03 36.5	
	comp=Z,743nm,19.9s,baz=47,slow=40							
KAPI	Kappang	15.69	206	P		Pn	17 56 49.5	+0.5
KAPI				pmax		pmax		
	comp=Z,57nm,1.2s							
KAPI	Kappang	15.69	206	P		Pn	17 56 49.5	+0.5
SBUM	Sibu	15.71	245			Pn	17 56 47.1	-2.0
YHNB	Yeheng	16.07	343	P		Pn	17 56 54.5	+0.8
JOW	Kunigami	17.55	5			Pn	17 57 11.6	-0.6
KSM	Kuching	17.85	245			Pn	17 57 14.8	-1.2
DLV	T Lat	17.87	280	P		Pn	17 57 16.1	-0.4
JAY	Jayapura	18.39	129	P		Pn	17 57 24.3	+1.6
	comp=Z,0.2nm,0.3s,baz=300,slow=10,SNR=7.2							
JAY				LR		LR	18 02 40.6	
	comp=Z,1μm,21.7s,baz=318,slow=31							
QIZ	Qiongzhong	18.80	303	P		Pn	17 57 28.8	+1.2
QIZ				S		Sn	18 00 56.3	-0.8
QIZ				pmax		pmax		
	comp=Z,17nm,1.3s							
SSE	Sheshan	22.27	348	P		P	17 58 03.5	-0.6
SSE				IAmb		IAmb	17 58 21.2	
	comp=Z,50nm,0.8s							
MTN	Manton Dam	22.45	168	P		P	17 58 06.2	-0.1
MTN				IAmb		IAmb	17 58 34.6	
	comp=Z,68nm,1.2s							
UGM	Wanagama	23.32	223	P		P	17 58 14.8	-0.5
MYKOM	Kota Tinggi	23.69	253	P		P	17 58 16.3	-2.6
MYKOM				IAmb		IAmb	17 58 42.4	
	comp=Z,41nm,1.1s							
NJ2	Nanjing	23.74	344	*eP*		P	17 58 20.3	+1.2
NJ2				pmax		pmax		
	comp=Z,15nm,0.5s							
WHN	Wuhan	24.00	334	P		P	17 58 21.5	0.0
JNU	Nakatsue	24.08	9	P		P	17 58 22.4	+0.1
	comp=Z,15nm,1.0s,baz=235,slow=5.8,SNR=7.7							
JNU				LR		LR	18 07 54.0	
	comp=Z,362nm,20.4s,baz=196,slow=37							
JNU	Nakatsue	24.08	9	P		P	17 58 21.2	-1.0
SLVN	Son La	24.81	301	P		P	17 58 28.4	-0.6
SLVN				IAmb		IAmb	17 58 46.0	
	comp=Z,35nm,1.3s							
GYA	Guiyang	25.38	315	*iP*		P	17 58 36.0	+1.7
GYA				S		S	18 02 49.0	-9.2
GYA				SS		SnSn	18 03 52.0	-1.0
GYA				pmax		pmax		
	comp=Z,10.0nm,0.5s							
GYA				LR		LR		
	comp=N,570nm,16.0s							
GYA				LR		LR		
	comp=E,940nm,14.9s							
GYA				LR		LR		
	comp=Z,2μm,15.6s							
JHJ	Hachijo jima 2	26.73	25	LR		LR	18 07 43.0	
	comp=Z,413nm,22.0s,baz=238,slow=33							
TJN	Taejon	27.00	2	*eP*		P	17 58 50.0	+1.4
FITZ	Fitzroy Crossi	27.21	182	P		P	17 58 52.2	+1.6
	comp=Z,28nm,1.0s,baz=6.3,slow=9.6,SNR=7.5							
FITZ	Fitzroy Crossi	27.21	182	P		P	17 58 51.2	+0.5
FITZ				IAmb		IAmb	17 59 05.6	
	comp=Z,62nm,1.2s							
INU	Inuyama	27.69	19	P		P	17 58 55.2	+0.4
INU				IAmb		IAmb	17 59 07.1	
	comp=Z,43nm,1.6s							
PMG	Port Moresby	27.72	131	*eP*		P	17 58 57.2	+1.9
PMG				pmax		pmax		
	comp=Z,107nm,1.1s							
KSRS	Korea Array	28.09	2	P		P	17 58 59.2	+0.9
	comp=Z,5.0nm,0.8s,baz=180,slow=10,SNR=16							
PSI	Prapat	28.12	259	P		P	17 59 01.0	+1.9
	comp=Z,19nm,0.9s,baz=1.2,slow=2.6,SNR=11							
PSI	Prapat	28.12	259	P		P	17 58 59.3	+0.2
PSI				pmax		pmax		
	comp=Z,81nm,1.6s							
TIA	Tai'an	28.

LZH pmax pmax
comp=Z,17nm,1.1s
LZH pmax pmax
comp=Z,210nm,4.9s
LZH LR LR
comp=N,930nm,15.7s
LZH LR LR
comp=E,740nm,17.0s
LZH LR LR
comp=Z,770nm,18.1s
HHC Hu-ho-hao-te 34.12 340 *e*P **P 17 59 52.5 +0.9**
HHC pmax pmax
comp=Z,10.0nm,1.1s
HHC pmax pmax
comp=Z,190nm,6.2s
HHC LR LR
comp=N,380nm,16.3s
HHC LR LR
comp=E,260nm,15.7s
HHC LR LR
comp=Z,470nm,15.9s
CTA Charters Tower 35.08 146 P **P 18 00 00.6 +0.6**
comp=Z,4.3nm,0.8s,baz=318,slow=14,SNR=2.1
USA0B Ussuriysk Arra 35.13 7 P **P 18 00 00.7 +0.6**
USA0B pmax pmax
comp=Z,20nm,1.2s
USA0B Ussuriysk Arra 35.13 7 P **P 18 00 00.7 +0.6**
USA0B IAmb IAmb 18 00 13.2
comp=Z,20nm,1.1s
USRK Ussuriysk Ar. 35.13 7 P **P 18 00 01.2 +1.1**
comp=Z,4.0nm,0.7s,baz=190,slow=7.9,SNR=13
MDJ Mudanjiang 35.32 4 P **P 18 00 02.2 +0.4**
MDJ IAmb IAmb 18 00 15.2
comp=Z,56nm,1.5s
TEY Ternei 36.69 12 *e*P **P 18 00 15.7 +2.2**
ASAJ Asahikawa 37.44 19 P **P 18 00 21.5 +1.7**
comp=Z,16nm,1.0s,baz=215,slow=11,SNR=9.5
GTA Gaotai 38.31 326 *e*P P 18 00 38.0 +11
GTA pP sP 18 00 43.5 +0.5
GTA sP pwP 18 00 46.8 +4.4
GTA pmax pmax
comp=Z,4.0nm,1.0s
LSA Lhasa 38.77 307 P **P 18 00 30.9 -1.0**
LSA pmax pmax
comp=Z,12nm,0.8s
LSA Lhasa 38.77 307 P **P 18 00 30.9 -1.0**
MORW Morawa 39.42 194 P **P 18 00 37.5 +0.8**
MORW IAmb IAmb 18 00 49.5
comp=Z,60nm,1.4s
FORT Forrest 39.85 178 P **P 18 00 40.4 +0.2**
H11S3 WAKE ISLAND Hy 40.02 72 T T 18 43 43.5
baz=262,slow=75,SNR=43
YSS Yuzh-Sakhalins 40.03 17 *e*P **P 18 00 43.8 +2.3**
YSS *e* 18 00 48.4
H11S1 WAKE ISLAND Hy 40.04 72 T T 18 43 36.5
baz=262,slow=75,SNR=42
H11S2 WAKE ISLAND Hy 40.04 72 T T 18 43 37.1
baz=262,slow=75,SNR=51
KLR Kul'dur 40.07 5 P **P 18 00 42.5 +0.6**
comp=Z,3.2nm,0.6s,baz=187,slow=4.7,SNR=18
KLR Kul'dur 40.07 5*c e*P **P 18 00 42.3 +0.4**
KLR pmax pmax
comp=Z,5.0nm,0.9s
HIA Hailar 40.26 353 P **P 18 00 43.2 -0.3**
HIA pmax pmax
comp=Z,13nm,1.1s
HIA Hailar 40.26 353 P **P 18 00 43.2 -0.3**
ULN Ulaanbaatar 41.82 340*‖ e*P **P 18 00 56.7 +0.2**
ULN pmax pmax
comp=Z,2.0nm,0.7s
ULN Ulaanbaatar 41.82 340 P **P 18 00 54.5 -2.0**
SONM Songino Array 42.02 340 P **P 18 00 58.3 +0.2**
comp=Z,0.9nm,0.7s,baz=159,slow=9.5,SNR=4.9
GRNR Gornyy 42.18 9*‖ P* **P 18 01 00.2 +1.0**
GRNR pmax pmax
comp=Z,6.0nm,0.8s
GRNR MLR MLR
comp=Z,160nm,16.0s
BBOO Buckleboo 42.83 168 P **P 18 01 05.0 +0.4**
BBOO IAmb IAmb 18 01 11.3
comp=Z,31nm,1.1s
NWAO Narrogin (SRO) 42.88 191 P **P 18 01 05.8 +0.8**
comp=Z,30nm,0.9s,baz=21,slow=6.5,SNR=8.4
NWAO Narrogin (SRO) 42.88 191 P **P 18 01 05.3 +0.3**
NWAO pmax pmax
comp=Z,88nm,1.4s
NWAO Narrogin (SRO) 42.88 191 P **P 18 01 05.8 +0.8**
NWAO IAmb IAmb 18 01 17.9
comp=Z,71nm,1.4s
NWAO Narrogin (SRO) 42.88 191 P **P 18 01 05.3 +0.3**
NWAO IAmb IAmb 18 01 17.9
comp=Z,88nm,1.4s
ZEA Zeya 44.35 1 *e*P **P 18 01 16.2 -0.4**
ZEA pmax pmax
comp=Z,36nm,1.6s
TLY Talaya 46.23 340 *e*P P 18 01 41.0 +9.4
TLY pmax pmax
comp=Z,2.0nm,0.3s
ARMA Armidale 46.28 149 P **P 18 01 35.0 +2.7**
ARMA IAmb IAmb 18 01 40.7
comp=Z,27nm,1.2s
WMQ Urumqi 48.13 322 *e*P **P 18 01 47.0 +0.4**
WMQ pP sP 18 02 04.5 +2.1
WMQ sP pwP 18 02 12.5 +11
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ LR LR
comp=N,530nm,16.5s
WMQ LR LR
comp=E,470nm,18.1s
WMQ LR LR
comp=Z,400nm,19.5s
TOO Toolangi 49.89 160 P **P 18 01 59.7 -0.3**
TOO pmax pmax
comp=Z,39nm,1.8s
TOO Toolangi 49.89 160 P **P 18 01 59.7 -0.3**
TOO IAmb IAmb 18 02 11.4
comp=Z,39nm,1.8s
PEA0B Petropavlovsk- 50.46 24 P **P 18 02 04.6 +0.4**
PEA0B pmax pmax
comp=Z,36nm,1.3s
PEA0B Petropavlovsk- 50.46 24 P **P 18 02 04.6 +0.4**
PEA0B IAmb IAmb 18 02 16.9
comp=Z,36nm,1.2s
PETK Petropavlovsk- 50.46 24 P **P 18 02 05.0 +0.8**
comp=Z,4.1nm,0.7s,baz=198,slow=8.9,SNR=5.2
PETK Petropavlovsk- 50.46 24 P **P 18 02 05.0 +0.8**
LHI Lord Howe Isla 51.17 144 P **P 18 02 10.8 +1.0**
YAK Yakutsk 52.71 2 *e*P **P 18 02 20.5 -0.3**
YAK pmax pmax
comp=Z,16nm,1.1s
YAK pmax pmax
comp=N,15nm,1.2s
YAK pmax pmax
comp=E,4.0nm,1.3s
YAK Yakutsk 52.71 2 P **P 18 02 20.3 -0.4**
YAK IAmb IAmb 18 02 35.5
comp=Z,15nm,0.8s
MK31 Makanchi Array 52.94 323 P **P 18 02 21.9 -0.9**
MK31 pmax pmax
comp=Z,5.0nm,0.9s
MK31 Makanchi Array 52.94 323 P **P 18 02 21.9 -0.9**
MKAR Makanchi Array 52.94 323 P **P 18 02 22.8 0.0**
comp=Z,3.4nm,0.5s,baz=123,slow=6.7,SNR=24
MAKZ Makanchi 53.13 323 P **P 18 02 23.6 -0.6**
MAKZ pmax pmax
comp=Z,41nm,1.8s
MAKZ Makanchi 53.13 323 **P 18 02 23.6 -0.6**
MAKZ IAmb IAmb 18 02 25.8
comp=Z,41nm,1.8s
KSH Kashi 54.05 312 P **P 18 02 33.0 +1.8**
KSH sP sP 18 03 02.3 +14
KSH PP **PP 18 04 37.5 +4.6**
KSH S **S 18 10 01.3 -3.3**
KSH Kashi 54.05 312 SS **SKiKP 18 13 45.8 +5.5**
KSH pmax pmax
comp=Z,27nm,1.3s
KSH pmax pmax
comp=Z,120nm,4.4s
KSH LR LR
comp=N,100nm,5.1s
KSH LR LR
comp=E,200nm,4.0s
KSH LR LR
comp=Z,540nm,13.0s
NIL Nilore 54.46 305 P **P 18 02 30.9 -3.3**
NIL pmax pmax
comp=Z,27nm,0.8s
NIL Nilore 54.46 305 P **P 18 02 30.9 -3.3**
ZAA0 Zalesovo Array 55.59 332 P **P 18 02 40.5 -1.4**
ZALV Zalesovo Beam 55.59 332 P **P 18 02 41.0 -0.9**
comp=Z,2.0nm,0.5s,baz=121,slow=6.2,SNR=10
FRU1 Bishkek 56.14 316 P **P 18 02 43.7 -2.5**
FRU1 pmax pmax
comp=Z,11nm,1.0s
FRU1 Bishkek 56.14 316 P **P 18 02 43.7 -2.5**
FRU1 IAmb IAmb 18 03 03.8
comp=Z,11nm,0.9s
AAK Ala-Archa 56.17 316 P **P 18 02 47.4 +0.9**
comp=Z,1.1nm,0.3s,baz=130,slow=5.7,SNR=3.9
AAK Ala-Archa 56.17 316*‖ e*P **P 18 02 47.2 +0.7**
AAK pmax pmax
comp=Z,3.0nm,1.0s
AAK Ala-Archa 56.17 316 P **P 18 02 43.9 -2.6**
KURK Kurchatov 57.00 326*c i*P **P 18 02 51.3 -0.7**
KURK pmax pmax
comp=Z,13nm,1.0s
KURK Kurchatov 57.00 326 P **P 18 02 51.3 -0.7**
KURK IAmb IAmb 18 02 52.8
comp=Z,13nm,0.8s
MSVF Nonsavu 57.58 118*‖ e*P **P 18 02 58.6 +1.9**
MSVF pmax pmax
comp=Z,32nm,1.4s
MSVF Nonsavu 57.58 118 P **P 18 02 58.1 +1.4**
MSVF IAmb IAmb 18 03 04.9
comp=Z,25nm,0.9s
BTK Batken 57.99 312 P **P 18 02 58.1 -1.2**
BTK pmax pmax
comp=Z,11nm,0.7s
BTK Batken 57.99 312 P **P 18 02 58.1 -1.2**
BTK IAmb IAmb 18 03 02.3
comp=Z,11nm,0.7s
KK31 Karatay Array 59.09 315 P **P 18 03 05.5 -1.4**
KK31 pmax pmax
comp=Z,7.0nm,1.0s
KK31 Karatay Array 59.09 315 P **P 18 03 05.5 -1.4**
TAS Tashkent 59.45 313 P **P 18 03 08.6 -0.8**
TAS pmax pmax
comp=Z,44nm,0.9s
TAS Tashkent 59.45 313 P **P 18 03 08.6 -0.8**
TIXI Tiksi 62.34 1 P **P 18 03 28.2 -0.2**
comp=Z,6.2nm,0.8s,baz=153,slow=5.7,SNR=17
TIXI Tiksi 62.34 1*de*P **P 18 03 28.9 +0.5**
TIXI pmax pmax
comp=Z,13nm,1.2s
TIXI Tiksi 62.34 1 P **P 18 03 27.8 -0.6**
TIXI IAmb IAmb 18 03 29.8
comp=Z,16nm,1.1s
BRVK Borovoye 62.67 326*c i*P **P 18 03 29.9 -1.0**
BRVK pmax pmax
comp=Z,10.0nm,1.0s
BRVK Borovoye 62.67 326 P **P 18 03 29.9 -1.0**
BRVK IAmb IAmb 18 03 31.7
comp=Z,9.8nm,0.8s
BILL Bilibino 64.31 15*‖ e*P **P 18 03 42.3 +0.8**
BILL pmax pmax
comp=Z,5.0nm,1.0s
BILL Bilibino 64.31 15 P **P 18 03 42.3 +0.8**
BILL IAmb IAmb 18 03 54.9
comp=Z,17nm,1.1s
RPZ Rata Peaks 66.45 146 P **P 18 03 58.0 +2.3**
LTZ Lake Taylor 66.53 145 P **P 18 03 57.3 +1.1**
BKZ Black Stump Fm 66.90 140 P **P 18 04 00.6 +1.9**
ARU Arti 70.16 327*c i*P **P 18 04 17.8 -1.0**
ARU 18 04 40.6
ARU 18 06 50.1
ARU S **S 18 13 25.7 -1.3**
ARU SS **SS 18 17 59.7 +2.4**
ARU pmax pmax
comp=Z,9.0nm,0.9s
ARU Arti 70.16 327 P **P 18 04 17.9 -1.0**
SOCY Socotra 71.09 280 P **P 18 04 22.9 -2.5**
CHGN Chignik 74.08 34 P **P 18 04 44.6 +2.4**
SVW2 Sparrevohn 76.11 29 P **P 18 04 55.5 +1.6**
SVW2 IAmb IAmb 18 05 08.5
comp=Z,26nm,1.4s
TTA Tatalina 76.12 27 P **P 18 04 54.4 +0.4**
TTA pmax pmax
comp=Z,7.0nm,1.1s
TTA Tatalina 76.12 27 P **P 18 04 54.4 +0.4**
CASY Casey 76.25 187 P **P 18 04 54.3 -0.1**
CASY IAmb IAmb 18 05 08.0
comp=Z,13nm,0.9s
OHAK Old Harbor 76.98 33 P **P 18 04 59.8 +1.0**
KDAK Kodiak Island 77.39 33 P **P 18 05 02.2 +1.1**
KDAK pmax pmax
comp=Z,90nm,1.6s
KDAK Kodiak Island 77.39 33 P **P 18 05 02.2 +1.1**
RAYN Ar Rayn 78.12 292 P **P 18 05 05.0 -1.0**
RAYN pmax pmax
comp=Z,15nm,1.1s
RAYN Ar Rayn 78.12 292 P **P 18 05 05.0 -1.0**
RAYN IAmb IAmb 18 05 23.2
comp=Z,15nm,1.1s
CNPM China Poot 78.16 31 P **P 18 05 07.5 +2.1**
BPAW Bear Paw Mtn. 78.46 26 P **P 18 05 08.1 +1.1**
BPAW IAmb IAmb 18 05 21.8
comp=Z,29nm,1.3s
KTH Kantishna Hill 78.46 27 P **P 18 05 08.5 +1.4**
KTH IAmb IAmb 18 05 17.4
comp=Z,16nm,1.4s
MLY Manley 78.61 25 P **P 18 05 08.3 +0.5**
MLY IAmb IAmb 18 05 21.9
comp=Z,25nm,1.6s
TOLK Toolik Lake Re 79.22 22 P **P 18 05 12.1 +1.0**
TOLK IAmb IAmb 18 05 30.0
comp=Z,24nm,1.5s
MCK McKinley 79.36 27 P **P 18 05 12.2 +0.3**
MCK pmax pmax
comp=Z,71nm,1.6s
MCK McKinley 79.36 27 P **P 18 05 12.2 +0.3**
RND Reindeer 79.39 27 P **P 18 05 12.3 +0.2**
RND pmax pmax
comp=Z,29nm,1.5s
RND Reindeer 79.39 27 P **P 18 05 12.3 +0.2**
RND IAmb IAmb 18 05 26.0
comp=Z,29nm,1.5s
SML Sawmill 79.62 29 P **P 18 05 14.5 +1.0**
WRH Wood River Hil 79.73 26 P **P 18 05 14.7 +0.8**
WRH IAmb IAmb 18 05 28.0
comp=Z,26nm,1.6s
CCB Clear Creek Bu 79.86 26 P **P 18 05 14.6 0.0**
DHY Denali Highway 80.06 27 P **P 18 05 15.7 -0.2**
SCM Sheep Creek Mo 80.10 29 P **P 18 05 15.2 -0.9**
SCM pmax pmax
comp=Z,63nm,1.5s
SCM Sheep Creek Mo 80.10 29 P **P 18 05 15.2 -0.9**
HDA Harding Lake 80.23 26 P **P 18 05 16.7 +0.1**
HDA IAmb IAmb 18 05 29.1
comp=Z,32nm,1.6s
ILAR Eielson Array 80.25 26 P **P 18 05 17.1 +0.4**
comp=Z,1.0nm,0.7s,baz=243,slow=5.5,SNR=10
KLMR Klimovskoe 80.49 330 *e*P **P 18 05 16.6 -1.4**
KLMR pmax pmax
comp=Z,36nm,1.5s
KLMR Klimovskoe 80.49 330 *e*P **P 18 05 16.7 -1.3**
KLMR AMP 18 05 18.9
comp=Z,36nm,1.5s
FYU Fort Yukon 80.88 24 P **P 18 05 21.1 +1.1**
PAX Paxson 80.93 28 P **P 18 05 20.4 -0.1**
PAX pmax pmax
comp=Z,26nm,1.6s
PAX Paxson 80.93 28 P **P 18 05 20.4 -0.1**
PAX IAmb IAmb 18 05 34.5
comp=Z,26nm,1.6s
RIDG Independent Ri 81.17 27 P **P 18 05 21.9 +0.2**
RIDG IAmb IAmb 18 05 36.7
comp=Z,34nm,1.3s
DOT Dot Lake 81.53 27 P **P 18 05 23.7 +0.2**
SCRK Sand Creek 81.54 26 P **P 18 05 23.6 -0.2**
SCRK IAmb IAmb 18 05 38.3
comp=Z,20nm,1.4s
MOS Moscow 81.76 325 *e*P **P 18 05 21.0 -3.9**
GLB Gilahina Butte 81.80 29 P **P 18 05 26.1 +1.0**
GLB IAmb IAmb 18 05 40.0
comp=Z,22nm,1.2s
LVZ Lovozero 82.17 338*de*P **P 18 05 27.4 +0.5**
LVZ pmax pmax
comp=Z,8.0nm,1.1s
OBN Obninsk 82.42 325 *e*P **P 18 05 27.6 -0.7**
OBN pmax pmax
comp=Z,22nm,1.3s
EGAK Eagle 82.70 26 P **P 18 05 30.1 +0.5**
BARN Barnard Glacie 82.87 29 P **P 18 05 31.6 +0.8**
BARN IAmb IAmb 18 05 48.7
comp=Z,18nm,1.1s
OPO Ambohidratompo 82.91 250 P **P 18 05 31.7 -0.1**
comp=Z,1.7nm,0.6s,baz=85,slow=5.7,SNR=1.9
DAWY Dawson 83.55 26 P **P 18 05 35.1 +1.0**
EPYK Eagle Plains 84.30 24 P **P 18 05 39.3 +1.4**
HYT Haines Junctio 84.91 29 P **P 18 05 42.0 +0.8**
HYT IAmb IAmb 18 05 58.7
comp=Z,11nm,1.0s
INK Inuvik 85.13 22 P **P 18 05 43.0 +1.0**
comp=Z,4.3nm,0.9s,baz=272,slow=5.8,SNR=8.7
INK Inuvik 85.13 22 P **P 18 05 42.5 +0.5**
INK pmax pmax
comp=Z,25nm,1.2s
INK Inuvik 85.13 22 P **P 18 05 42.5 +0.5**
ARCES ARCESS Array B 85.19 340 P **P 18 05 42.3 0.0**
comp=Z,3.4nm,0.6s,baz=79,slow=6.5,SNR=17
FINES FINESS Array B 86.86 332 P **P 18 05 50.5 -0.2**
comp=Z,1.5nm,0.6s,baz=88,slow=5.3,SNR=12
KIF Kilpisjarvi 86.95 340 *e*P **P 18 05 49.8 -1.1**
VSU Vasula 87.22 329*‖ e*P **P 18 05 52.2 -0.2**
VSU pmax pmax
comp=Z,21nm,1.1s
AKASG Malin Array Be 87.46 321 P **P 18 05 53.1 -0.7**
comp=Z,1.5nm,0.7s,baz=78,slow=4.4,SNR=8.2
C36M Paulatuk 88.11 20 **P 18 05 55.3 -1.2**
C36M IAmb IAmb 18 06 12.0
comp=Z,8.8nm,0.8s
MAW Mawson 88.83 200 P **P 18 05 59.7 -0.1**
MAW pmax pmax
comp=Z,4.0nm,1.4s
MAW Mawson 88.83 200 **P 18 05 59.7 -0.1**
DAG Danmarks Havn 91.76 352 *i* P **P 18 06 09.4 -4.0**
DAG pmax pmax
comp=Z,9.0nm,1.3s
DAG Danmarks Havn 91.76 352 *i* P **P 18 06 09.4 -4.0**
comp=Z,8.7nm,1.3s
RES Resolute Bay 92.44 10 P **P 18 06 17.8 +1.2**
RES pmax pmax
comp=Z,21nm,1.2s
RES Resolute Bay 92.44 10 P **P 18 06 17.8 +1.2**
NB2 NORSAR Subarra 93.73 334 P **P 18 06 22.4 -0.5**
comp=Z,4.9nm,1.2s,baz=63,slow=4.6
NB2 NORSAR Subarra 93.73 334 P **P 18 06 22.4 -0.5**
baz=63,slow=4.6
NOA NORSAR Array B 93.73 334 P **P 18 06 25.1 +2.2**
comp=Z,0.7nm,0.8s,baz=60,slow=4.5,SNR=2.6
YKA Yellowknife Ar 94.58 24 P **P 18 06 27.8 +1.1**
comp=Z,1.9nm,0.7s,baz=297,slow=4.3,SNR=17
SYO Syowa Base 97.47 201*‖ e*P **P 18 06 38.4 -1.1**
GERES GERESS Array B 97.60 322 P **P 18 06 40.7 -0.2**
comp=Z,0.4nm,0.7s,baz=0.0,slow=5.3,SNR=3.5
TORD Torodi Ar. Bea 120.81 291 PKP **PKPdf 18 11 58.9 -0.4**
comp=Z,0.9nm,0.8s,baz=61,slow=2.4,SNR=2.9
PLCA Paso Flores 145.22 157 PKPbc **PKPdf 18 12 44.5 +0.4**
comp=Z,3.9nm,0.9s,baz=282,slow=6.2,SNR=3.0
PLCA Paso Flores 145.22 157 PKIKP **PKPbc 18 12 43.0 -0.8**
PLCA Paso Flores 145.22 157 **PKPbc 18 12 43.0 -0.8**

BJI ***30*** *17:53:17.5±0.0, 7°.30S×106°.10E, h55km, mB5.2/15, mb4.9/26, Ms4.9/10, Ms7 4.6/10*
KLM ***30*** *17:53:19.0, 7°.51S×105°.92E, h65km, mb4.8*
NEIC ***30*** *17:53:19.1±1.9, 7°.29S±0°.06×106°.01E±0°.05, h54km±4km, mb4.9/66, Error ellipse: s-maj=8.7km s-min=7.6km az=203.0*
DJA ***30*** *17:53:20.2±0.3, 7°.S±3°×10°6E±°, h58km±3km, M4.9/37, mb4.9/37, mB5.4/9, MLv5.2/18, Mw(mB)4.8/9*
IDC ***30*** *17:53:22.4±1.6, 6°.92S×106°.24E, h67km±13km, mb4.3/25, mb1 4.4/27, mb1mx4.2/45, mbtmp4.6/27, Error ellipse: s-maj=16.3km s-min=9.8km az=46.0*
ISC 30 17:53:19.3±0.8, 7°.32S±0°.05×106°.01E±0°.04, h53km±7km, n520, σ1s14/530, mb4.9/68, 17C-8D, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBJI	**Dramaga**	**1.05**	**44**	P	**Pn**	**17 53 38.6**	**+0.8**
DBJI				S	**Sn**	**17 53 52.8**	**+1.3**
CNJI	**Cibinong**	**1.11**	**90**	P	**Pn**	**17 53 38.0**	**-0.5**
CNJI				S	**Sn**	**17 53 51.1**	**-1.7**
CBJI	**Citeko**	**1.22**	**43**	P	**Pn**	**17 53 39.0**	**-1.0**
CBJI				S	**Sn**	**17 53 55.6**	**+0.1**
LEM	**Lembang**	**1.67**	**73**	P	**Pn**	**17 53 47.4**	**+1.2**
	502nm,0.3s,baz=233,slow=3.7,SNR=258						
LEM				S	**Sn**	**17 54 02.5**	**-4.1**
	728nm,0.3s,baz=343,slow=19,SNR=8.0						
LEM	**Lembang**	**1.67**	**73**	P	**Pn**	**17 53 47.2**	**+1.0**
CISI	**Cisompet, Garu**	**1.80**	**98**	P	**Pn**	**17 53 48.1**	**+0.1**
CISI	**Cisompet, Garu**	**1.80**	**98**	Pn	**Pn**	**17 53 48.1**	**+0.1**
BLSI	**Bandar Lampung**	**2.08**	**338**	P	**Pn**	**17 53 53.8**	**+2.0**
KASI	**Kota Agung**	**2.33**	**320**	P	**Pn**	**17 53 58.1**	**+2.9**
LWLI	**Liwa**	**3.00**	**320**	P	**Pn**	**17 54 07.5**	**+3.0**
XMIS	**Christmas Isla**	**3.16**	**186**	Pn	**Pn**	**17 54 05.6**	**-1.0**
MNAI	**Manna**	**4.23**	**314**	P	**Pn**	**17 54 24.4**	**+3.2**
MNAI	**Manna**	**4.23**	**314**	Pn	**Pn**	**17 54 23.5**	**+2.3**
LHSI	**Lahat**	**4.26**	**324**	P	**Pn**	**17 54 25.2**	**+3.5**
SMRI	**Semarang**	**4.40**	**87**	P	Pn	17 54 29.1	+5.5
SMRI	**Semarang**	**4.40**	**87**		**Pn**	**17 54 24.6**	**+1.0**
UGM	**Wanagama**	**4.51**	**98**	P	**Pn**	**17 54 26.2**	**+1.1**
UGM	**Wanagama**	**4.51**	**98**	Pn	**Pn**	**17 54 25.6**	**+0.5**
PMBI	**Palembang**	**4.53**	**344**	P	**Pn**	**17 54 29.2**	**+3.8**
PMBI	**Palembang**	**4.53**	**344**		**Pn**	**17 54 29.3**	**+3.9**
TPI	**Tanjungpandan**	**4.82**	**20**	P	**Pn**	**17 54 29.4**	**+0.1**
WOJI	**Wonogiri, Jawa**	**4.89**	**96**	P	Pn	17 54 42.6	+12
MASI	**Maura Aman, Be**	**5.60**	**318**	P	Pn	17 54 45.1	+5.1
	3.4nm6µm707nm,0.9s						
GRJI	**Gresik**	**6.43**	**87**	P	**Pn**	**17 54 56.1**	**+4.7**
	0.2nm61nm,1.0s						
KRJI	**Kerinci**	**6.89**	**319**	P	**Pn**	**17 55 00.9**	**+3.0**
	1.9nm6µm301nm,0.8s						
SDSI	**Sungai Dareh**	**7.82**	**324**	P	Pn	17 55 26.1	+16
JAGI	**Jajag, Banyuwa**	**8.14**	**99**	P	**Pn**	**17 55 16.5**	**+1.6**
	64nm,0.6s						
JAGI	**Jajag, Banyuwa**	**8.14**	**99**	Pn	**Pn**	**17 55 17.8**	**+2.8**
TPRI	**Tanjung Pinang**	**8.31**	**350**	P	**Pn**	**17 55 21.4**	**+4.1**
	104nm,1.0s						
BKNI	**Bangkinang**	**9.07**	**327**	Pn	Pn	17 55 22.7	-5.0
SISI	**Saibi**	**9.11**	**310**	P	**Pn**	**17 55 28.0**	**-0.2**
	1µm84nm,0.9s						
MYKOM	**Kota Tinggi**	**9.30**	**346**	Pn	**Pn**	**17 55 33.4**	**+2.6**
MYKOM	**Kota Tinggi**	**9.30**	**346**	P	**Pn**	**17 55 34.0**	**+3.2**
KSM	**Kuching**	**9.73**	**26**	Pn	**Pn**	**17 55 37.4**	**+0.8**
KSM	**Kuching**	**9.73**	**26**	P	**Pn**	**17 55 41.0**	**+4.4**
COCO	**West Island**	**10.26**	**241**	Pn	**Pn**	**17 55 41.1**	**-2.7**
MNSI	**Mandailing Nat**	**10.30**	**321**	P	**Pn**	**17 55 44.1**	**-0.4**
	30nm,0.6s						
PBSI	**Pulau Batu**	**10.56**	**313**	P	**Pn**	**17 55 46.8**	**-1.2**
	130nm,0.9s						
SBUM	**Sibu**	**11.51**	**33**	Pn	**Pn**	**17 56 02.8**	**+1.8**
SBUM	**Sibu**	**11.51**	**33**	P	**Pn**	**17 56 04.0**	**+3.0**
PLAI	**Plampang**	**11.74**	**98**	P	**Pn**	**17 56 04.4**	**+0.2**
	35nm,1.3s						
GSI	**Gunungsitoli**	**12.01**	**315**	P	**Pn**	**17 56 06.4**	**-1.4**
	776nm,0.6s						
GSI	**Gunungsitoli**	**12.01**	**315**	Pn	**Pn**	**17 56 04.9**	**-2.9**
RPSI	**Rantau Prapat**	**12.21**	**324**	Pn	**Pn**	**17 56 11.0**	**+0.5**
PSI	**Prapat**	**12.29**	**325**	P	**Pn**	**17 56 11.9**	**+0.1**
	1.0nm,0.3s,baz=180,slow=7.5,SNR=3.9						
IPM	**Ipoh**	**12.73**	**337**		**Pn**	**17 56 18.6**	**+0.9**
IPM					**Sn**	**17 58 36.8**	**-1.2**
KCSI	**Kotacane, Aceh**	**13.55**	**322**	P	**Pn**	**17 56 26.8**	**-2.1**
	12nm,0.7s						
KULM	**Kulim**	**13.62**	**337**	Pn	**Pn**	**17 56 28.7**	**-1.1**
SPSI	**Sidrap Palu**	**14.09**	**77**	P	**P**	**17 56 40.6**	**-1.8**
	29nm,1.8s						
BNSI	**Bone**	**14.31**	**79**	P	**P**	**17 56 44.1**	**-0.8**
	111nm,1.1s						
TTSI	**Tana Toraja**	**14.39**	**74**	P	**Pn**	**17 56 40.7**	**+0.6**
	40nm,1.1s						
EDFI	**Ende, Flores**	**15.59**	**96**	P	**Pn**	**17 56 55.3**	**-0.5**
	12nm,0.5s						
MPSI	**Mapaga**	**15.80**	**62**	P	**P**	**17 57 04.6**	**+3.2**
	23nm,1.0s						
SPMM	**Sapulut**	**15.86**	**41**	P	**P**	**17 57 02.0**	**-0.1**
MMRI	**Maumere**	**16.12**	**96**	Pn	**Pn**	**17 57 01.8**	**-0.7**
MMRI				IAmb	IAmb	17 57 26.3	
	comp=Z,96nm,1.1s						
KKM	**Kota Kinabalu**	**16.73**	**38**		**P**	**17 57 12.3**	**+0.5**
GIRL	**Giralia**	**17.17**	**153**	Pn	**Pn**	**17 57 15.0**	**-0.5**

GIRL IAmb IAmb 17 57 30.2
comp=Z,275nm,1.6s
BATI Baumata 17.68 101 P **P** **17 57 22.9 +0.7**
comp=Z,17nm,0.3s,baz=315,slow=4.7,SNR=9.7
BATI S **Sn** **18 00 40.0 +1.8**
comp=Z,4.8nm,0.3s,baz=319,slow=20,SNR=2.3
BATI Baumata 17.68 101 P **P** **17 57 22.7 +0.5**
comp=Z,71nm,0.9s
SOEI Soe 18.21 99 P **Pn** **17 57 29.6 +1.0**
comp=Z,86nm,0.7s
SOEI Soe 18.21 99 **P** **17 57 28.2 -0.1**
SOEI IAmb IAmb 17 57 43.5
comp=Z,91nm,1.0s
SOEI **Sn** **18 00 49.7 -1.6**
DLV T Lat 19.29 7 **P** **17 57 40.4 +0.3**
PSA00 Pilbara Seismi 19.48 138 **P** **17 57 40.3 -1.6**
FITZ Fitzroy Crossi 21.91 121 P **P** **17 58 10.0 +1.7**
comp=Z,5.0nm,0.8s,baz=308,slow=8.0,SNR=5.4
FITZ Fitzroy Crossi 21.91 121 P **P** **17 58 09.4 +1.2**
TNTI Ternate 22.77 70 P **P** **17 58 16.3 -1.1**
TNTI IAmb IAmb 17 58 19.3
comp=Z,56nm,0.9s
PBA Port Blair 23.01 325 P P 17 58 18.5 -1.4
PBA IAmb IAmb 17 58 45.9
comp=Z,42nm,1.1s
KNRA Kununurra 23.77 112 P **P** **17 58 27.7 +0.5**
KNRA IAmb IAmb 17 58 47.9
comp=Z,80nm,1.2s
MTN Manton Dam 25.32 105 P **P** **17 58 40.2 -1.1**
MTN IAmb IAmb 17 59 09.2
comp=Z,37nm,1.1s
SIJI Sorong 25.98 77 P **P** **17 58 46.5 -0.7**
comp=Z,40nm,0.8s,baz=304,slow=6.3,SNR=14
FAKI Fak Fak 26.49 82 P **P** **17 58 51.1 -0.8**
FAKI IAmb IAmb 17 59 07.1
comp=Z,35nm,1.0s
CM31 Chiang Mai Arr 26.55 345 P **P** **17 58 50.9 -1.4**
CMAR Chiang Mai Arr 26.55 345 P **P** **17 58 50.3 -2.0**
comp=Z,2.6nm,0.7s,baz=179,slow=8.7,SNR=25
CMAR PcP **PcP** **18 02 17.9 +1.8**
comp=Z,2.4nm,0.8s,baz=198,slow=2.7,SNR=8.9
CMAR ScP **ScP** **18 05 52.1 +0.4**
comp=Z,0.4nm,0.6s,baz=169,slow=2.7,SNR=2.9
CHTO Chiang Mai 26.89 345 P **P** **17 58 53.8 -1.6**
H01W3 Cape Leeuwin H 28.43 166 T T 18 29 49.1
baz=344,slow=76,SNR=153
H01W1 Cape Leeuwin H 28.45 166 T T 18 29 44.5
baz=344,slow=76,SNR=123
H01W2 Cape Leeuwin H 28.45 166 T T 18 29 50.2
baz=344,slow=76,SNR=142
WB0 Warramunga Arr 30.18 117 P **P** **17 59 23.7 -1.1**
WB0 IAmb IAmb 17 59 37.7
comp=Z,13nm,0.8s
WRA Warramunga Arr 30.19 117 P **P** **17 59 26.2 +1.3**
comp=Z,5.4nm,0.7s,baz=304,slow=9.3,SNR=17
WRA PcP **PcP** **18 02 26.2 +1.1**
comp=Z,1.0nm,0.5s,baz=311,slow=1.9,SNR=6.6
WRAB Tennant Creek 30.20 117 P **P** **17 59 23.7 -1.2**
WRAB IAmb IAmb 17 59 26.7
comp=Z,29nm,1.4s
WB2 Warramunga Arr 30.20 117 P **P** **17 59 23.6 -1.3**
WB2 IAmb IAmb 17 59 39.4
comp=Z,14nm,0.9s
WR0 Warramunga Arr 30.37 117 P **P** **17 59 25.7 -0.8**
WR0 IAmb IAmb 17 59 48.6
comp=Z,21nm,1.1s
ASAR Alice Springs 31.31 124 P **P** **17 59 36.1 +1.4**
comp=Z,2.6nm,0.9s,baz=300,slow=7.9,SNR=33
ASAR PcP **PcP** **18 02 29.6 +1.5**
comp=Z,2.1nm,0.8s,baz=305,slow=2.3,SNR=3.8
ASAR ScP **ScP** **18 06 07.4 +0.6**
comp=Z,1.6nm,1.0s,baz=316,slow=2.6,SNR=4.8
AS31 Alice Springs 31.31 124 P **P** **17 59 35.1 +0.3**
H08S2 Diego Garcia H 33.23 267 T T 18 35 13.7
baz=91,slow=76,SNR=129
H08S3 Diego Garcia H 33.24 267 T T 18 35 32.5
baz=91,slow=76,SNR=122
H08S1 Diego Carcia H 33.25 267 T T 18 35 20.4
baz=91,slow=76,SNR=50
TWG Pinlang 33.38 26 P **P** **17 59 53.7 +0.9**
GYA Guiyang 33.58 1⇑*i*P **P** **17 59 57.0 +2.4**
GYA SS SS 18 07 21.5 -19
GYA pmax pmax
comp=Z,10.0nm,0.5s
GYA LR LR
comp=Z,470nm,13.2s
GYA LR LR
comp=Z,520nm,13.7s
GYA LR LR
comp=Z,1μm,16.7s
NACB Ninganchiao 34.80 25 P **P** **18 00 05.9 +0.9**
NACB IAmb IAmb 18 00 19.8
comp=Z,23nm,0.9s
JAY Jayapura 34.88 84 P **P** **18 00 04.1 -1.9**
comp=Z,6.4nm,0.4s,baz=232,slow=9.8,SNR=19
SHL Shillong 35.46 338 P **P** **18 00 08.4 -2.5**
SHL IAmb IAmb 18 00 24.9
comp=Z,23nm,1.1s
COEN Coen 37.08 103 P **P** **18 00 24.7 -0.1**
COEN IAmb IAmb 18 00 32.7
comp=Z,28nm,1.4s
CD2 Chengdu 38.07 357 *e*P **P** **18 00 34.0 +1.1**
ODAN Odare 38.47 333 *e*P **P** **18 00 35.0 -1.6**
comp=Z,33nm,0.7s
TAPN Taplejung 38.75 333 *e*P **P** **18 00 37.7 -1.3**
comp=Z,31nm,0.6s
RAMN Ramite 38.92 332 *e*P **P** **18 00 38.6 -1.7**
JIRN Jiri 39.71 332 *e*P **P** **18 00 46.0 -1.1**
comp=Z,54nm,0.6s
PKI Pulchoki 40.01 331 *e*P **P** **18 00 48.0 -1.5**
comp=Z,5.5nm,0.3s
PKIN Phulchoki 40.02 331 *e*P **P** **18 00 49.4 -0.1**
comp=Z,8.3nm,0.4s
GUN Gumba 40.07 332 *e*P **P** **18 00 49.0 -1.0**
comp=Z,43nm,0.6s
GKN Gorkha 40.74 330 *e*P **P** **18 00 54.0 -1.4**
comp=Z,40nm,0.3s
PMG Port Moresby 40.74 96 P **P** **18 00 56.4 +0.9**
comp=Z,28nm,0.9s,baz=245,slow=8.9,SNR=6.1
PMG Port Moresby 40.74 96 P **P** **18 00 54.7 -0.7**
PMG IAmb IAmb 18 00 57.9
comp=Z,56nm,1.2s
NJ2 Nanjing 41.02 17 *e*P **P** **18 00 58.8 +1.4**
NJ2 pmax pmax
comp=Z,12nm,0.5s
STKA Stephens Creek 41.16 131 P **P** **18 01 00.8 +2.2**
comp=Z,2.6nm,0.4s,baz=313,slow=7.1,SNR=9.7
STKA Stephens Creek 41.16 131 P **P** **18 01 00.8 +2.2**
DANN Dangsing 41.46 330 *e*P **P** **18 01 00.0 -1.4**
comp=Z,28nm,0.4s
PYUN Piuthan 41.65 329 *e*P **P** **18 01 02.8 -0.1**
comp=Z,23nm,0.3s
LZH Lanzhou 43.22 357 *e*P **P** **18 01 18.0 +2.5**
LZH pP pP 18 01 31.8 +2.7
LZH sP sP 18 01 37.0 +1.9
LZH PP **PcP** **18 03 02.5 -1.6**
LZH pmax pmax
comp=Z,23nm,1.0s
LZH pmax pmax
comp=Z,150nm,4.8s
LZH LR LR
comp=Z,530nm,14.1s
LZH LR LR
comp=Z,540nm,15.2s
LZH LR LR
comp=Z,400nm,14.6s
JNU Nakatsue 46.65 29 P **P** **18 01 42.1 -0.5**
JNU IAmb IAmb 18 02 05.1
comp=Z,17nm,1.2s
GTA Gaotai 46.84 353 ⇑P **P** **18 01 43.3 -0.9**
GTA pP pP 18 01 54.5 -3.5
GTA sP sP 18 01 59.5 -4.5
GTA PcP **PcP** **18 03 18.3 +1.8**
GTA pmax pmax
comp=Z,8.0nm,1.0s
GTA pmax pmax
comp=Z,200nm,7.1s
GTA LR LR
comp=Z,750nm,17.8s
GTA LR LR
comp=Z,1μm,17.8s
BJI Beijing 48.05 10 P **P** **18 01 54.3 +1.0**
BJI pmax pmax
comp=Z,13nm,0.6s
KSRS Korea Array 49.02 23 P **P** **18 01 59.9 -0.9**
comp=Z,1.8nm,0.8s,baz=221,slow=8.5,SNR=7.2

KSRS PcP **PcP** **18 03 24.2 +0.1**
comp=Z,3.8nm,0.9s,baz=206,slow=3.4,SNR=13
NIL Nilore 51.24 325 P **P** **18 02 17.3 -0.5**
MJAR Matsushiro Arr 53.06 32 P **P** **18 02 28.4 -2.9**
comp=Z,0.8nm,0.5s,baz=220,slow=9.1,SNR=4.4
MJAR PcP **PcP** **18 03 38.4 -0.8**
comp=Z,2.0nm,0.9s,baz=206,slow=5.4,SNR=4.1
WMQ Urumqi 53.54 344 *e*P **P** **18 02 36.3 +1.6**
WMQ pP pP 18 02 50.5 +1.7
WMQ pmax pmax
comp=Z,18nm,0.9s
WMQ LR LR
comp=Z,400nm,16.1s
WMQ LR LR
comp=Z,460nm,18.3s
KBL Kabul 54.35 322 P **P** **18 02 39.7 -1.3**
SONM Songino Array 54.91 0 P **P** **18 02 43.8 -0.9**
comp=Z,3.8nm,0.7s,baz=174,slow=7.8,SNR=8.0
SONM PcP **PcP** **18 03 45.9 -0.2**
comp=Z,14nm,0.8s,baz=176,slow=3.8,SNR=19
SONM ScP **ScP** **18 07 38.5 -2.0**
comp=Z,0.5nm,0.4s,baz=191,slow=2.1,SNR=3.0
ULN Ulaanbaatar 54.95 1 P **P** **18 02 44.1 -0.9**
WSAR Wadi Sarin 55.38 305 P **P** **18 02 51.0 +2.6**
comp=Z,9.3nm,0.7s,baz=143,slow=9.1,SNR=8.4
USA0B Ussuriysk Arra 56.39 22 P **P** **18 02 56.0 +0.8**
USA0B IAmb IAmb 18 03 18.0
comp=Z,6.4nm,0.8s
USRK Ussuriysk Ar. 56.39 22 P **P** **18 02 53.6 -1.6**
comp=Z,2.0nm,0.7s,baz=178,slow=4.9,SNR=5.5
USRK PcP **PcP** **18 03 52.2 +0.4**
comp=Z,2.0nm,0.8s,baz=188,slow=4.3,SNR=2.4
GAR Garm 56.74 327 P **P** **18 02 56.3 -1.7**
CHGR Chuyangaron 57.13 326 P **P** **18 02 58.7 -2.0**
AAK Ala-Archa 57.41 333 PcP **PcP** **18 03 57.8 +1.8**
comp=Z,6.3nm,0.8s,baz=155,slow=4.6,SNR=5.4
AAK Ala-Archa 57.41 333 **PcP** **18 03 58.3 +2.3**
MK31 Makanchi Array 57.86 341 P **P** **18 03 04.1 -1.5**
MK31 IAmb IAmb 18 03 05.0
comp=Z,14nm,1.4s
MKAR Makanchi Array 57.86 341 P **P** **18 03 04.2 -1.3**
comp=Z,5.5nm,0.5s,baz=152,slow=9.0,SNR=21
UOSS Minazif 58.13 305 P **P** **18 03 08.9 +1.0**
UOSS Minazif 58.13 305 P **P** **18 03 08.9 +1.0**
UOSS IAmb IAmb 18 03 16.1
comp=Z,9.8nm,0.9s
ASHO Ashiyiah 58.13 305 P **P** **18 03 09.5 +1.6**
HATD Hatta, Dubai 58.13 305 *i*P **P** **18 03 09.5 +1.6**
SNR=5.6
MDH Madha 58.21 306 P **P** **18 03 09.1 +0.7**
MSFE Esma-Masafi 58.35 306 P **P** **18 03 11.6 +2.2**
BANOM Banah 58.49 306 P **P** **18 03 11.3 +0.9**
FAQ Al Faqa, Dubai 58.53 305 P **P** **18 03 12.5 +1.8**
FAQ P **P** **18 03 12.9 +2.2**
HRA Herat 58.58 318 P **P** **18 03 09.7 -1.4**
NAZ Nazwa, Dubai 58.59 305 P **P** **18 03 13.2 +2.2**
SHME Shamm 58.68 306 P **P** **18 03 14.7 +3.0**
KK31 Karatay Array 59.65 330 P **P** **18 03 15.9 -2.1**
KK31 IAmb IAmb 18 03 18.5
comp=Z,5.3nm,0.8s
ERM Erimo 59.68 31 P **P** **18 03 16.8 -1.4**
KLR Kul'dur 60.65 19 P **P** **18 03 22.2 -2.5**
comp=Z,2.5nm,0.7s,baz=236,slow=6.8,SNR=4.1
KLR PcP **PcP** **18 04 07.8 -0.7**
comp=Z,2.6nm,0.6s,baz=214,slow=1.8,SNR=4.8
ASAJ Asahikawa 60.93 29 P **P** **18 03 24.8 -1.9**
comp=Z,2.6nm,0.5s,baz=281,slow=14,SNR=5.6
GEYT Alibeck 63.35 319 P **P** **18 03 43.7 +0.5**
comp=Z,14nm,0.7s,baz=134,slow=6.4,SNR=29
GYA0B ALIBECK ARRAY 63.35 319 P **P** **18 03 42.6 -0.6**
ZAA0 Zalesovo Array 63.60 346 P **P** **18 03 42.4 -2.1**
ZALV Zalesovo Beam 63.60 346 P **P** **18 03 42.5 -1.9**
comp=Z,1.9nm,0.3s,baz=154,slow=6.1,SNR=10
DAMY Dhamar 64.86 290 P **P** **18 03 53.4 -0.4**
DAMY IAmb IAmb 18 03 58.9
comp=Z,33nm,1.3s
RAYN Ar Rayn 66.55 299 *i*P **P** **18 04 05.8 +1.6**
SNR=13
RAYN Ar Rayn 66.55 299 P **P** **18 04 05.1 +0.9**
RAYN IAmb IAmb 18 04 07.1
comp=Z,16nm,1.1s
MAW Mawson 66.78 197 P **P** **18 04 08.5 +3.7**
comp=Z,2.4nm,0.6s,baz=58,slow=5.7,SNR=9.0
MAW Mawson 66.78 197 P **P** **18 04 08.0 +3.1**
BRVK Borovoye 67.35 338 **P** **18 04 07.7 -1.0**
BRVK IAmb IAmb 18 04 09.3
comp=Z,16nm,0.7s
BKZ Black Stump Fm 70.29 129 P **P** **18 04 28.6 +1.2**
AKT Akhty 72.04 318 *e*P **P** **18 04 38.7 +0.7**
AKT pmax pmax
comp=Z,18nm,0.8s
TBLG Delisi 74.16 317 P **P** **18 04 50.7 +0.3**
TBLG IAmb IAmb 18 04 52.7
comp=Z,38nm,1.2s
ARU Arti 74.49 335 P **P** **18 04 51.7 -0.2**
ARU IAmb IAmb 18 04 53.1
comp=Z,32nm,1.0s
SYO Syowa Base 74.87 200‖*e*P **P** **18 04 53.4 -0.5**
SYO Syowa Base 74.87 200‖*e*pP pP 18 05 10.4 +2.2
AKH Akhalkalaki 74.88 316 ⇑P **P** **18 04 56.8 +2.1**
AKH Akhalkalaki 74.88 316 P **P** **18 04 54.2 -0.6**
ZEI Tsey 75.17 318 *e*P **P** **18 04 57.0 +0.6**
ZEI pmax pmax
comp=Z,22nm,0.6s
NCK Nalchik 75.67 318‖*e*P **P** **18 04 59.9 +0.8**
NCK pmax pmax
comp=Z,21nm,0.9s
VNDA Vanda 75.84 169 P **P** **18 05 02.1 +2.8**
comp=Z,0.9nm,0.6s,baz=316,slow=7.5,SNR=3.5
NEY Neytrino 76.15 318⇑*e*P **P** **18 05 03.3 +1.3**
NEY pmax pmax
comp=Z,5.0nm,0.9s
KBZ Khabaz 76.23 318 P **P** **18 05 03.1 +1.0**
comp=Z,25nm,0.9s,baz=117,slow=6.1,SNR=38
KBZ Khabaz 76.23 318*cei*P **P** **18 05 02.9 +0.7**
KBZ pmax pmax
comp=Z,25nm,0.9s
KIV Kislovodsk 76.46 318‖*e*P **P** **18 05 05.0 +1.4**
KIV Kislovodsk 76.46 318 *i*P **P** **18 05 04.7 +1.1**
SNR=6.1
KIV Kislovodsk 76.46 318 *e*P **P** **18 05 04.0 +0.4**
KIV pmax pmax
comp=Z,14nm,1.0s
KIV Kislovodsk 76.46 318 P **P** **18 05 03.8 +0.1**
KIV IAmb IAmb 18 05 06.5
comp=Z,13nm,0.9s
GAZ Gaziantep 77.86 310 P **P** **18 05 12.3 +0.7**
GAZ IAmb IAmb 18 05 14.3
comp=Z,16nm,0.8s
SOC Sochi 78.30 317 *e*P **P** **18 05 12.9 -0.9**
SOC pmax pmax
comp=Z,18nm,0.6s
VRH Novokhopyorsk 80.08 325 *e*P **P** **18 05 23.3 0.0**
VRH pmax pmax
comp=Z,40nm,0.6s
CSS Mathiatis 80.19 307 P **P** **18 05 24.9 +0.5**
TIXI Tiksi 80.24 7 P **P** **18 05 21.7 -2.1**
LEF Lefka 80.58 307‖P **P** **18 05 28.6 +2.2**
BRTR Keskin Array B 81.31 312 P **P** **18 05 31.1 +0.7**
comp=Z,12nm,0.7s,baz=132,slow=7.1,SNR=47
BR131 Keskin Array S 81.31 312 P **P** **18 05 30.5 +0.1**
BR131 IAmb IAmb 18 05 32.1
comp=Z,16nm,0.8s
VORD Divnogorie 81.38 324 *e*P **P** **18 05 29.7 -0.6**
VORD pmax pmax
comp=Z,10.0nm,0.6s
BZK Bozkurt 81.71 314 ⇑P **P** **18 05 34.1 +1.9**
LPSR Galich'ya Gora 82.22 325 *e*P **P** **18 05 34.5 -0.2**
LPSR pmax pmax
comp=Z,30nm,0.7s
SIM Simferopol' 82.54 317*de*P **P** **18 05 35.2 -1.3**
SIM pmax pmax
comp=Z,15nm,0.6s
QSPA South Pole Qui 82.67 180 P **P** **18 05 32.9 -4.1**
MDUB Mudurnu 83.32 312 P **P** **18 05 41.5 +0.7**
ELL Elmali 83.34 308 P **P** **18 05 41.6 +0.6**
KLMR Klimovskoe 85.22 333 *e*P **P** **18 05 49.6 -0.2**
KLMR AMP 18 05 51.9
comp=Z,58nm,1.3s
KARP Karpathos 85.23 307 P **P** **18 05 52.4 +1.9**
MILM Milestii Mici 86.65 318 ⇑P **P** **18 05 58.3 +1.1**
CFR Carcaliu 86.68 316 ⇑P **P** **18 05 58.6 +1.2**
HARR Harsova 86.71 316 ⇑P **P** **18 05 58.4 +0.9**
IDI Anoyia 86.99 306 P **P** **18 06 00.5 +1.2**
SORM Soroca 87.25 319 ⇑P **P** **18 06 00.9 +0.8**

AKASG Malin Array Be 87.33 322 P **P** **18 06 00.6 +0.1**
comp=Z,5.7nm,0.8s,baz=86,slow=4.7,SNR=14
AKASG PP **PP** **18 09 22.9 -2.5**
comp=Z,1.9nm,0.7s,baz=93,slow=6.4,SNR=5.7
AKBB Malin Array Si 87.33 322 P **P** **18 06 00.1 -0.3**
AKBB IAmb IAmb 18 06 01.1
comp=Z,5.1nm,0.8s
VRI Vrincioaia 87.80 317⇓P **P** **18 06 03.7 +0.8**
PLOR Plostina 87.85 317⇑P **P** **18 06 04.0 +0.8**
TESR Tescani 88.00 317⇑P **P** **18 06 04.8 +1.0**
MLR Muntele Rosu 88.26 316⇓P **P** **18 06 06.7 +1.5**
MLR Muntele Rosu 88.26 316 P **P** **18 06 06.4 +1.2**
MLR pmax pmax
comp=Z,34nm,1.3s
MLR Muntele Rosu 88.26 316 P **P** **18 06 06.4 +1.2**
PRAR RASCA 88.47 318⇑P **P** **18 06 07.3 +1.4**
PLVB Pleven 88.76 314⇑P **P** **18 06 08.8 +1.4**
SNAA Sanae 88.93 197 **P** **18 06 11.4 +3.6**
SNAA IAmb IAmb 18 06 35.5
comp=Z,14nm,1.7s
BURAR Bucovina Array 89.19 318⇑P **P** **18 06 11.1 +1.6**
BUR08 Bucovina Ar. S 89.20 318 P **P** **18 06 10.3 +0.8**
BUR08 IAmb IAmb 18 06 12.5
comp=Z,3.6nm,0.8s
VTS Vitosha 89.62 313⇓P **P** **18 06 13.2 +1.5**
VTS Vitosha 89.62 313 P **P** **18 06 13.6 +1.9**
VTS Vitosha 89.62 313 P **P** **18 06 12.1 +0.4**
VTS IAmb IAmb 18 06 14.1
comp=Z,6.5nm,1.1s
AGG Agios Georgios 89.67 309 P **P** **18 06 11.9 0.0**
AGG IAmb IAmb 18 06 13.7
comp=Z,14nm,1.1s
ITM Ithomi 89.69 307 P **P** **18 06 12.5 +0.6**
LIT Litokhoron 89.73 310 P **P** **18 06 12.6 +0.5**
BZS Buzias 91.27 316⇑P **P** **18 06 19.9 +0.8**
KOLS Kolonicke sedl 91.36 319 *e*P **P** **18 06 21.1 +1.6**
KOLS Kolonicke sedl 91.36 319 *e*P **P** **18 06 21.1 +1.6**
FIA1 FINESS Array S 91.58 332 P **P** **18 06 20.8 +0.6**
FINES FINESS Array B 91.59 332 P **P** **18 06 21.1 +1.0**
comp=Z,8.8nm,0.7s,baz=98,slow=6.8,SNR=12
ARCES ARCESS Array B 93.49 340 P **P** **18 06 28.8 -0.1**
comp=Z,8.3nm,0.9s,baz=88,slow=4.2,SNR=6.5
HEF Hetta 93.94 338 *e*P **P** **18 06 29.9 -1.1**
GERES GERESS Array B 96.97 318 PP **PP** **18 10 40.3 -1.2**
comp=Z,0.6nm,0.7s,baz=81,slow=6.1,SNR=4.8
YKA Yellowknife Ar 117.49 20 PKP **PKPdf** **18 11 58.5 -0.4**
comp=Z,0.5nm,0.7s,baz=313,slow=1.3,SNR=4.9
NVAR Mina Array Bea 129.47 45 PKP **PKiKP** **18 12 23.9 +0.3**
comp=Z,1.0nm,0.9s,baz=214,slow=1.1,SNR=5.1
PDAR Pinedale Array 132.82 36 PKP **PKiKP** **18 12 30.5 +0.3**
comp=Z,0.4nm,0.4s,baz=7.8,slow=2.0,SNR=2.3
LBNH Lisbon 143.18 358 P PKPbc 18 12 44.4 -0.3
baz=3.5
J49A Marlette 143.21 11 P PKPbc 18 12 44.5 -0.3
baz=345
PECO Prince Edward 143.43 4 PKPbc 18 12 45.6 +0.2
NCB Newcomb 143.49 0 PKPab 18 12 44.8 +0.2
I58A Old Forge 143.76 1 P PKPab 18 12 45.7 0.0
baz=358
J59A Piesco 143.99 1 P PKPab 18 12 46.8 +0.2
baz=359
J57A Williamstown 144.01 2 P PKPab 18 12 46.5 0.0
baz=357
J57A Williamstown 144.01 2 PKPab 18 12 46.6 0.0
J55A Hilton 144.04 5 P **PKPab** **18 12 46.7 +0.1**
baz=354
P40A Paris 144.06 24 **PKPab** **18 12 47.0 +0.1**
ACCN Adirondack Com 144.08 360 **PKPab** **18 12 46.7 -0.2**
J58A Remsen 144.08 2 P **PKPab** **18 12 46.9 0.0**
baz=358
J63A Strafford 144.09 356 P PKPbc 18 12 47.4 +0.1
baz=5.0
J61A Chester 144.09 358 P **PKPab** **18 12 46.9 0.0**
baz=2.5
J56A Wolcott 144.10 4 P **PKPab** **18 12 47.0 +0.1**
baz=355
T35A Sooner Cattle 144.10 32 **PKPab** **18 12 47.3 +0.1**
J62A Henniker 144.18 357 P **PKPab** **18 12 47.4 +0.1**
baz=3.7
HDIL Hopedale 144.19 20 P **PKPab** **18 12 47.5 +0.1**
baz=334
J60A Lant Hill Farm 144.21 359 P **PKPab** **18 12 47.1 -0.2**
baz=1.0
WMOK Wichita Mounta 144.43 36 P **PKPab** **18 12 48.3 -0.2**
baz=314
WMOK Wichita Mounta 144.43 36 **PKPab** **18 12 48.4 -0.1**
TX31 Lajitas Ar. Si 144.51 48 PKPbc 18 12 49.8 +0.5
TX32 Lajitas Array 144.51 48 **PKPdf** **18 12 50.5 -0.2**
TXAR Lajitas Array 144.51 48 PKP **PKPdf** **18 12 50.5 -0.1**
comp=Z,3.3nm,0.6s,baz=290,slow=1.0,SNR=22
L50A Kingsville 144.54 11 P **PKPab** **18 12 48.3 -0.3**
baz=345
K55A Perry 144.55 5 P **PKPab** **18 12 48.1 -0.6**
baz=353
MMNY Mt. Morris Dam 144.56 5 **PKPab** **18 12 47.8 -0.8**
K54A Basiliko Farm, 144.61 6 P **PKPab** **18 12 48.2 -0.7**
baz=352
K56A Middlesex 144.64 4 P **PKPab** **18 12 48.3 -0.7**
baz=354
K57A Scipio Center 144.66 3 P **PKPab** **18 12 48.8 -0.2**
baz=356,SNR=6.0
K58A Earlville 144.67 2 P **PKPab** **18 12 48.6 -0.5**
baz=357
K59A Cooperstown 144.68 1 P **PKPab** **18 12 48.3 -0.9**
baz=359
K63A Dunstable 144.71 357 P **PKPab** **18 12 46.8 -2.3**
baz=4.3
K62A Royalston 144.76 358 P **PKPab** **18 12 48.6 -0.8**
baz=3.1,SNR=6.4
K62A Royalston 144.76 358 PKPbc 18 12 49.5 0.0
K61A Williamstown 144.79 359 P **PKPab** **18 12 48.8 -0.7**
baz=1.3,SNR=5.1
WVNY West Valley, N 144.82 6 **PKPab** **18 12 48.9 -0.8**
HRV Adam Dziewonsk 144.89 357 P **PKPab** **18 12 49.0 -0.8**
baz=4.2
L54A Sinclairville 144.91 7 P **PKPab** **18 12 49.4 -0.5**
baz=351
P43A Skaggs, Pawnee 144.92 21 **PKPab** **18 12 49.5 -0.5**
ERPA Erie 144.94 8 P **PKPab** **18 12 49.6 -0.5**
baz=350
ERPA Erie 144.94 8 **PKPab** **18 12 49.6 -0.5**
N47A Urbana 144.99 16 **PKPab** **18 12 49.7 -0.5**
L61B Northampton 144.99 358 P **PKPab** **18 12 49.7 -0.6**
baz=2.3
R40A Maddies Statio 145.01 25 **PKPab** **18 12 49.8 -0.6**
SFIN Lafayette 145.05 18 P **PKPbc** **18 12 50.2 -0.3**
baz=337,SNR=15
SFIN Lafayette 145.05 18 **PKPbc** **18 12 50.1 -0.4**
L55A Hinsdale 145.05 6 P **PKPbc** **18 12 49.9 -0.6**
baz=352,SNR=7.0
L53A Girard 145.06 8 P **PKPbc** **18 12 49.9 -0.6**
baz=349
M50A Fremont 145.11 12 **PKPbc** **18 12 49.9 -0.8**
QUA2 Belchertown 145.15 358 **PKPbc** **18 12 50.4 -0.4**
N48A Decatur 145.18 15 P **PKPbc** **18 12 50.4 -0.6**
baz=341,SNR=12
L56A Greenwood 145.18 5 P **PKPbc** **18 12 50.3 -0.6**
baz=354,SNR=8.3
L56A Greenwood 145.18 5 **PKPbc** **18 12 50.5 -0.5**
BINY Binghamton 145.22 3 P **PKPbc** **18 12 51.0 -0.1**
baz=357,SNR=9.4
BINY Binghamton 145.22 3 **PKPbc** **18 12 50.7 -0.3**
W35A Tecumseh 145.22 34 **PKPbc** **18 12 51.0 -0.3**
TUL1 Leonard 145.24 32 P **PKPbc** **18 12 51.1 -0.2**
baz=320
TUL1 Leonard 145.24 32 **PKPbc** **18 12 51.0 -0.2**
L59A Walton 145.26 1 P **PKPbc** **18 12 51.0 -0.2**
baz=358,SNR=7.5
L59A Walton 145.26 1 **PKPbc** **18 12 50.7 -0.5**
L61A Hillsdale 1, H 145.26 359 P **PKPbc** **18 12 51.0 -0.1**
baz=0.8,SNR=6.7
M52A Chesterland 145.29 10 P **PKPbc** **18 12 51.1 -0.2**
baz=347,SNR=8.1
M52A Chesterland 145.29 10 **PKPbc** **18 12 51.1 -0.2**
N49A Columbus Grove 145.32 14 **PKPbc** **18 12 51.3 -0.1**
ABTX Abilene, Hawle 145.33 40 P **PKPdf** **18 12 52.0 +0.1**
baz=311
ABTX Abilene, Hawle 145.33 40 **PKPdf** **18 12 52.2 +0.4**
M51A Elyria 145.35 11 P **PKPbc** **18 12 50.8 -0.6**
baz=346
L57A Andrews Acres 145.37 4 P **PKPbc** **18 12 51.1 -0.4**
baz=355,SNR=11
ALLY Alegheny Colle 145.38 8 **PKPbc** **18 12 51.2 -0.3**
L58A Harry Jones Me 145.38 2 P **PKPbc** **18 12 51.6 0.0**
baz=357,SNR=13

L64A	Middleborough	145.41	356	P		PKPbc	18 12 51.3	-0.2
	baz=5.5							
L60A	Shokan	145.47	0	P		PKPdf	18 12 51.3	-0.4
	baz=360							
M53A	WI Miller and	145.50	9	P		PKPdf	18 12 51.6	-0.3
	baz=348,SNR=14							
L63A	North Scituate	145.53	357	P		PKPdf	18 12 51.7	-0.1
	baz=4.2							
U38A	Gravette	145.54	30			PKPdf	18 12 51.4	-0.7
M54A	Oil Creek Stat	145.58	8	P		PKPdf	18 12 51.8	-0.2
	baz=350,SNR=22							
M54A	Oil Creek Stat	145.58	8			PKPdf	18 12 52.0	0.0
BDFB	Brasilia	145.62	228	PKPbc		PKiKP	18 12 55.9	-1.0
	comp=Z,4.2nm,0.4s,baz=141,slow=6.0,SNR=8.5							
BDFB	Brasilia	145.62	228			PKiKP	18 12 56.6	-0.3
CCM	Cathedral Cave	145.64	25	P		PKPab	18 12 52.7	-0.1
	baz=329							
CCM	Cathedral Cave	145.64	25			PKPdf	18 12 52.0	-0.2
N50A	Nevada	145.70	12	P		PKPdf	18 12 52.3	+0.1
	baz=344,SNR=12							
O48A	Farmland	145.71	15	P		PKPdf	18 12 52.1	-0.1
	baz=340,SNR=8.4							
N51A	Ashland	145.71	11	P		PKPdf	18 12 52.1	-0.1
	baz=345							
N51A	Ashland	145.71	11			PKPdf	18 12 51.6	-0.7
P46A	Rosedale	145.72	18			PKPbc	18 12 52.5	-0.1
M55A	Ridgway	145.73	6	P		PKPdf	18 12 52.4	0.0
	baz=352,SNR=10							
M55A	Ridgway	145.73	6			PKPdf	18 12 52.3	0.0
KSCT	Kent School, K	145.73	359			PKPbc	18 12 52.5	-0.1
Q44A	Meyer Farm, Va	145.76	21			PKPdf	18 12 52.5	+0.1
M56A	Emporium	145.77	6	P		PKPdf	18 12 52.3	0.0
	baz=353,SNR=18							
M56A	Emporium	145.77	6			PKPdf	18 12 52.2	-0.1
M64A	Tiverton	145.82	356	P		PKPbc	18 12 52.7	-0.2
	baz=5.0							
KSPA	Keystone Colle	145.87	2			PKPbc	18 12 52.9	-0.2
HHAR	Hobbs	145.89	29			PKPdf	18 12 52.8	+0.1
M59A	Waymart	145.89	2	P		PKPbc	18 12 53.2	0.0
	baz=358,SNR=10.0							
N52A	McGinn's Farm,	145.95	10	P		PKPdf	18 12 52.7	+0.1
	baz=346							
MGMO	Mountain Grove	145.96	27			PKPdf	18 12 52.8	0.0
O49A	Covington	145.98	14			PKPdf	18 12 53.0	+0.3
M62A	Hamden	146.00	359	P		PKPbc	18 12 53.1	-0.3
	baz=2.0							
M57A	Sunshine Farm,	146.01	4	P		PKPbc	18 12 53.7	+0.2
	baz=354,SNR=12							
M57A	Sunshine Farm,	146.01	4			PKPbc	18 12 53.4	-0.1
M63A	Gales Ferry	146.01	357	P		PKPab	18 12 54.3	+0.3
	baz=3.5							
M58A	Price's Panora	146.02	3	P		PKPbc	18 12 53.5	-0.1
	baz=356,SNR=19							
N54A	Moraine State	146.07	8	P		PKPbc	18 12 53.5	-0.2
	baz=349,SNR=14							
N54A	Moraine State	146.07	8			PKPbc	18 12 53.7	-0.1
N53A	Lisbon	146.10	9	P		PKPbc	18 12 53.7	-0.1
	baz=348,SNR=17							
N53A	Lisbon	146.10	9			PKPbc	18 12 53.6	-0.2
M60A	Port Jervis	146.13	1	P		PKPbc	18 12 53.8	-0.1
	baz=359,SNR=9.0							
M61A	Granite Spring	146.15	360	P		PKPbc	18 12 54.0	+0.1
	baz=0.4							
O50A	Cable	146.19	13	P		PKPbc	18 12 53.9	-0.2
	baz=343							
OLIL	Olney	146.23	20			PKPbc	18 12 54.2	-0.1
ACSO	Alum Creek Sta	146.25	12	P		PKPbc	18 12 54.3	+0.1
	baz=344,SNR=14							
ACSO	Alum Creek Sta	146.25	12			PKPbc	18 12 53.8	-0.4
N56A	West Decatur	146.32	6	P		PKPbc	18 12 54.6	+0.1
	baz=352,SNR=7.1							
BLO	Bloomington	146.34	18			PKPab	18 12 54.9	-0.4
U40A	Yellville	146.35	28	P		PKPab	18 12 55.2	-0.3
	baz=325,SNR=23							
U40A	Yellville	146.35	28			PKPdf	18 12 54.0	+0.5
ODNJ	Ogdensburg	146.37	1			PKPbc	18 12 54.2	-0.4
N55A	Marion Center	146.38	7	P		PKPbc	18 12 54.4	-0.3
	baz=351,SNR=31							
P48A	Milroy	146.38	16			PKPbc	18 12 54.2	-0.5
O51A	Pataskala	146.41	12	P		PKPbc	18 12 54.4	-0.3
	baz=344,SNR=17							
PAL	Palisades	146.45	360	P		PKPab	18 12 55.4	-0.4
	baz=0.2,SNR=6.4							
PAL	Palisades	146.45	360			PKPbc	18 12 54.7	-0.1
X37A	Clayton	146.47	33			PKPbc	18 12 54.5	-0.6
P49A	Miami Univ. Ec	146.50	15	P		PKPbc	18 12 54.9	-0.1
	baz=340,SNR=16							
N59A	State Game Lan	146.50	2	P		PKPbc	18 12 55.1	+0.1
	baz=357,SNR=31							
N59A	State Game Lan	146.50	2			PKPbc	18 12 54.8	-0.2
N58A	Sunbury	146.53	4	P		PKPbc	18 12 55.0	-0.1
	baz=355,SNR=29							
N58A	Sunbury	146.53	4			PKPbc	18 12 54.6	-0.5
N57A	Milroy	146.55	5	P		PKPbc	18 12 54.9	-0.2
	baz=354,SNR=26							
T42A	Van Buren	146.57	25			PKPbc	18 12 54.9	-0.4
N60A	Cedar Hill Far	146.57	2	P		PKPbc	18 12 55.2	+0.1
	baz=358,SNR=7.9							
O53A	New Philadelph	146.58	10	P		PKPbc	18 12 55.1	-0.1
	baz=347,SNR=9.3							
JCT	Junction City	146.59	43	P		PKPbc	18 12 55.3	-0.4
	baz=308							
JCT	Junction City	146.59	43			PKPdf	18 12 54.8	+0.7
O52A	Adamsville	146.59	11	P		PKPbc	18 12 55.0	-0.2
	baz=346,SNR=8.5							
O52A	Adamsville	146.59	11			PKPdf	18 12 53.7	0.0
SSPA	Standing Stone	146.64	5			PKPbc	18 12 54.9	-0.5
P50A	Jamestown	146.66	14	P		PKPbc	18 12 55.2	-0.3
	baz=342,SNR=12							
N61A	South Mountain	146.71	0	P		PKPbc	18 12 55.5	-0.1
	baz=360							
SIUC	Southern Illin	146.73	22			PKPbc	18 12 55.3	-0.4
S44A	Carbondale	146.74	22			PKPdf	18 12 54.6	+0.6
BRNJ	Basking Ridge	146.77	1			PKPbc	18 12 55.5	-0.3
O54A	Avella	146.78	9	P		PKPbc	18 12 55.8	0.0
	baz=348,SNR=12							
O54A	Avella	146.78	9			PKPbc	18 12 55.6	-0.2
W39A	Magazine	146.82	30	P		PKPbc	18 12 55.7	-0.4
	baz=322							
W39A	Magazine	146.82	30			PKPbc	18 12 55.5	-0.6
LUPA	Lehigh Univers	146.84	2			PKPbc	18 12 56.2	+0.2
O55A	Ligonier	146.91	7	P		PKPbc	18 12 56.8	+0.6
	baz=350,SNR=6.6							
O56A	Blue Knob Stat	146.94	6	P		PKPbc	18 12 56.3	-0.1
	baz=352,SNR=35							
O56A	Blue Knob Stat	146.94	6			PKPbc	18 12 56.1	-0.2
P51A	Williamsport	146.95	13	P		PKPbc	18 12 55.8	-0.5
	baz=343,SNR=5.8							
P51A	Williamsport	146.95	13			PKPbc	18 12 55.4	-0.9
P52A	Corning	147.00	12	P		PKPbc	18 12 56.0	-0.5
	baz=345,SNR=8.9							
FCAR	Ozark Folk Cen	147.07	28			PKPbc	18 12 56.4	-0.3
O57A	Amberson	147.09	5	P		PKPbc	18 12 56.5	-0.2
	baz=353,SNR=11							
O59A	Robesonia	147.09	3	P		PKPbc	18 12 56.5	-0.2
	baz=356,SNR=8.4							
O60A	Telford	147.12	2	P		PKPbc	18 12 56.8	+0.1
	baz=358							
WHTX	Lake Whitney,	147.13	39	P		PKPbc	18 12 57.4	+0.4
	baz=313							
WHTX	Lake Whitney,	147.13	39			PKPbc	18 12 57.8	+0.7
O58A	Lewisberry	147.23	4	P		PKPbc	18 12 57.1	0.0
	baz=355,SNR=12							
WCI	Wyandotte Cave	147.27	18	P		PKPbc	18 12 57.3	0.0
	baz=337							
WCI	Wyandotte Cave	147.27	18			PKPbc	18 12 56.8	-0.5
P53A	Whipple	147.29	11	P		PKPbc	18 12 57.0	-0.2
	baz=346,SNR=7.2							
P53A	Whipple	147.29	11			PKPbc	18 12 56.5	-0.7
Q51A	Peebles	147.32	14			PKPbc	18 12 56.9	-0.5
P54A	Burton	147.33	9	P		PKPbc	18 12 57.4	0.0
	baz=348,SNR=14							
LCAR	Lake Charles	147.35	26			PKPbc	18 12 56.6	-0.9
MCWV	Mont Chateau	147.37	8	P		PKPbc	18 12 57.6	+0.1
	baz=349							
MCWV	Mont Chateau	147.37	8			PKPbc	18 12 57.0	-0.5
MVL	Millersville	147.39	3			PKPbc	18 12 57.5	0.0
MIAR	Mount Ida	147.44	31	P		PKPbc	18 12 58.0	+0.2
	baz=322							
MIAR	Mount Ida	147.44	31			PKPbc	18 12 57.9	0.0
WHAR	Wooly Hollow	147.48	29			PKPbc	18 12 58.2	+0.3
PSUB	Penn St. - Bra	147.50	2			PKPbc	18 12 57.7	-0.1
P55A	Reedsville	147.52	8	P		PKPbc	18 12 57.8	-0.1
	baz=349,SNR=10							
R49A	Shelbyville	147.54	17			PKPbc	18 12 57.6	-0.4
W41B	Gary Mavity, V	147.59	29	P		PKPbc	18 12 57.9	-0.3
	baz=325,SNR=7.4							
P60A	Greenville	147.61	2	P		PKPbc	18 12 58.0	-0.1
	baz=357,SNR=7.2							
P60A	Greenville	147.61	2			PKPbc	18 12 57.5	-0.7
Q52A	Bidwell	147.62	12	P		PKPbc	18 12 57.7	-0.5
	baz=345,SNR=14							
P56A	Dayton Farm, R	147.66	7	P		PKPbc	18 12 58.3	+0.1
	baz=351,SNR=17							
P57A	Homestead Farm	147.77	6	P		PKPbc	18 12 58.4	-0.2
	baz=353,SNR=12							
P57A	Homestead Farm	147.77	6			PKPbc	18 12 58.1	-0.4
P59A	Jarrettsville	147.77	4	P		PKPbc	18 12 59.3	+0.7
	baz=356,SNR=7.9							
R50A	Paris	147.78	15			PKPbc	18 12 58.1	-0.6
P58A	Pank, Wackersv	147.83	5	P		PKPbc	18 12 58.7	0.0
	baz=354,SNR=8.8							
X40A	Basin Creek Fa	147.86	30	P		PKPbc	18 12 58.8	-0.2
	baz=329							
X40A	Basin Creek Fa	147.86	30			PKPbc	18 12 58.5	-0.5
Q53A	Leroy	147.87	11	P		PKPbc	18 12 58.8	-0.1
	baz=346,SNR=13							
Q54A	Coxs Mills	147.87	10	P		PKPbc	18 12 58.8	0.0
	baz=347,SNR=22							
Q54A	Coxs Mills	147.87	10			PKPbc	18 12 58.2	-0.7
SDMD	Soldier's Deli	147.94	4			PKPbc	18 12 58.9	-0.2
Q55A	Buckhannon	147.99	9	P		PKPbc	18 12 59.0	-0.2
	baz=349,SNR=8.1							
T47A	Sharon Grove	148.14	20			PKPbc	18 12 59.3	-0.3
Q57A	Strasburg	148.17	7	P		PKPbc	18 12 59.9	+0.2
	baz=352,SNR=11							
R53A	Hurricane	148.29	12	P		PKPbc	18 12 60.0	0.0
	baz=345,SNR=11							
R53A	Hurricane	148.29	12			PKPbc	18 13 00.1	+0.1
Q58A	Fox Den Farm,	148.34	5	P		PKPbc	18 12 59.8	-0.3
	baz=353							
S51A	Beattyville	148.58	15			PKPbc	18 12 59.5	-1.3
R54A	Victor	148.63	11	P		PKPbc	18 13 00.6	-0.3
	baz=347,SNR=5.4							
WVT	Waverly	148.65	22	P		PKPbc	18 13 00.9	-0.1
	baz=333							
WVT	Waverly	148.65	22			PKPbc	18 13 00.8	-0.1
R55A	Marlinton	148.68	9	P		PKPbc	18 13 01.1	0.0
	baz=348,SNR=6.7							
R55A	Marlinton	148.68	9			PKPbc	18 13 00.9	-0.2
T50A	Nancy	148.82	17			PKPbc	18 13 00.7	-0.7
S53A	Williamson	148.88	13	P		PKPbc	18 13 01.7	+0.1
	baz=344							
R57A	Stanardsville	148.89	7	P		PKPbc	18 13 01.8	+0.2
	baz=351							
S54A	Dingess, Beckl	148.94	11	P		PKPbc	18 13 02.1	+0.3
	baz=346							
S54A	Dingess, Beckl	148.94	11			PKPbc	18 13 01.2	-0.6
R58A	Rapidan	148.94	6	P		PKPbc	18 13 01.7	0.0
	baz=352,SNR=5.9							
U49A	Red Boiling Sp	149.01	19			PKPbc	18 13 01.4	-0.5
S55A	Lewisburg	149.11	10	P		PKPbc	18 13 02.4	+0.2
	baz=347							
CLTN	Cedars of Leba	149.21	20			PKPbc	18 13 02.4	0.0
CLTN					PKPab	PKPab	18 13 06.1	-0.8
R58B	Mineral	149.29	6	P		PKPbc	18 13 02.7	+0.2
	baz=352							
R58B	Mineral	149.29	6			PKPbc	18 13 02.1	-0.4
R58B					PKPab	PKPab	18 13 06.9	-0.2
S56A	Natural Bridge	149.36	9	P		PKPbc	18 13 02.8	0.0
	baz=349							
S57A	Dark Hollow, R	149.36	8	P		PKPbc	18 13 03.0	+0.2
	baz=350							
S57A	Dark Hollow, R	149.36	8			PKPbc	18 13 02.5	-0.2
S57A					PKPab	PKPab	18 13 07.0	-0.4
V48A	Smith Brothers	149.36	21			PKPbc	18 13 02.4	-0.4
V48A					PKPab	PKPab	18 13 07.0	-0.5
OXF	Oxford	149.43	26	P		PKPbc	18 13 03.1	+0.1
	baz=329							
T53A	Wise	149.46	14	P		PKPbc	18 13 03.3	+0.1
	baz=343							
S59A	Mechanicsville	149.54	5	P		PKPbc	18 13 03.1	0.0
	baz=354							
PLAL	Pickwick Lake	149.57	23			PKPbc	18 13 02.6	-0.8
PLAL					PKPab	PKPab	18 13 07.6	-0.7
T54A	Tazewell	149.60	12	P		PKPbc	18 13 03.4	-0.1
	baz=345,SNR=6.6							
S58A	Poland Farm, P	149.62	6	P		PKPbc	18 13 03.6	+0.3
	baz=352,SNR=5.9							
S58A	Poland Farm, P	149.62	6			PKPbc	18 13 03.1	-0.3
TZTN	Tazewell	149.63	15	P		PKPbc	18 13 03.3	-0.2
	baz=341							
TZTN	Tazewell	149.63	15			PKPbc	18 13 02.7	-0.8
TZTN					PKPab	PKPab	18 13 08.3	-0.3
BLA	Blacksburg	149.67	10	P		PKPbc	18 13 03.7	+0.1
	baz=347							
T55A	Pulaski	149.70	11	P		PKPbc	18 13 03.8	+0.1
	baz=347,SNR=6.0							
S61A	Accomac	149.74	3	P		PKPbc	18 13 03.7	0.0
	baz=357							
T56A	Rocky Mt	149.92	10	P		PKPbc	18 13 04.2	0.0
	baz=348,SNR=5.3							
Y45A	Yeager Farm, C	149.92	26			PKPab	18 13 10.5	+0.7
U54A	Nelsons Funny	150.06	13	P		PKPbc	18 13 04.5	-0.1
	baz=344							
U54A	Nelsons Funny	150.06	13			PKPab	18 13 09.1	-1.3
T57A	Hurt	150.07	8	P	PKPab	PKPab	18 13 09.8	-0.5
V51A	Loudon	150.10	17			PKPbc	18 13 04.4	-0.2
SWET	Sewanee	150.14	20			PKPbc	18 13 04.0	-0.8
T58A	Grand View Acr	150.22	7	P		PKPbc	18 13 05.1	+0.2
	baz=351,SNR=5.1							
U55A	TA2, Sparta	150.24	12	P		PKPbc	18 13 05.1	+0.1
	baz=346							
V52A	Sevierville	150.28	16			PKPbc	18 13 04.7	-0.4
T59A	Double "B" Far	150.30	6	P		PKiKP	18 13 05.6	-0.2
	baz=353,SNR=6.1							
T59A	Double "B" Far	150.30	6			PKPbc	18 13 04.7	-0.4
W50A	Signal Mountai	150.36	19			PKPbc	18 13 05.2	-0.1
CPCT	Cooper Cave	150.38	18			PKPbc	18 13 05.2	-0.1
CPCT					PKPab	PKPab	18 13 10.9	-0.7
TKL	Tuckaleechee C	150.40	16			PKPbc	18 13 05.1	-0.3
X48A	Hartselle	150.43	22			PKPbc	18 13 03.9	-1.5
X48A					PKPab	PKPab	18 13 11.3	-0.6
U56A	King	150.52	11	PKPbc		PKPab	18 13 04.8	-0.9
U56A						PKPab	18 13 10.9	-1.3
U57A	Blanch	150.61	9	P		PKPbc	18 13 06.0	+0.1
	baz=349							
V53A	Saluda	150.64	15			PKPbc	18 13 05.8	-0.2
V54A	Nebo	150.75	13	P		PKPbc	18 13 06.5	+0.3
	baz=344							
U58A	Oxford	150.76	8	P		PKPbc	18 13 06.4	+0.3
	baz=351							
V55A	Taylorsville	150.84	12	P		PKPbc	18 13 06.6	+0.2
	baz=345							
V55A	Taylorsville	150.84	12			PKPbc	18 13 06.2	-0.2
FPAL	Fort Paine	150.87	20			PKPbc	18 13 05.8	-0.7
FPAL					PKPab	PKPab	18 13 12.8	-1.0
U59A	Littleton	150.89	6	P		PKiKP	18 13 06.8	-0.2
	baz=352							
U59A	Littleton	150.89	6			PKPbc	18 13 06.4	0.0
U61A	Possum Corner	151.03	4	P		PKPbc	18 13 06.8	0.0
	baz=355							
V57A	Coltrane Farms	151.07	10	P		PKPbc	18 13 07.1	+0.1
	baz=348							
Z47A	Carrollton	151.12	25			PKPbc	18 13 06.8	-0.3
Y49A	Blount Mountai	151.20	22			PKPbc	18 13 06.9	-0.4
V58A	Windy Hill, Pi	151.27	9	P		PKPbc	18 13 07.5	+0.1
	baz=349							
V58A	Windy Hill, Pi	151.27	9	P	PKPbc	PKPbc	18 13 06.9	-0.5
V58A						PKPab	18 13 14.5	-0.8
W54A	Cherokee Point	151.35	14	P		PKiKP	18 13 07.9	-0.2
	baz=343							
V59A	Middlesex	151.42	7	P		PKiKP	18 13 08.2	0.0
	baz=351							
KMSC	Kings Mountain	151.50	13	P		PKPbc	18 13 08.0	+0.1
	baz=345							
KMSC	Kings Mountain	151.50	13			PKPbc	18 13 07.6	-0.3
V60A	Jim Taylor Roa	151.53	6	P		PKPbc	18 13 08.1	+0.1
	baz=353							
V61A	Roper	151.56	4	P		PKiKP	18 13 08.6	+0.1
	baz=355							
W56A	Indian Trail	151.66	11	P		PKPbc	18 13 08.5	+0.2
	baz=346							
PAULI	Pauline	151.69	14			PKPbc	18 13 08.5	+0.1
PAULI					PKPab	PKPab	18 13 16.4	-0.7
LRAL	Lakeview Retre	151.70	24	P		PKPbc	18 13 08.4	-0.1
	baz=332							
LRAL	Lakeview Retre	151.70	24			PKPbc	18 13 06.8	-1.6
W57A	Gilead	151.75	10	P		PKiKP	18 13 08.8	-0.1
	baz=347							
W57A	Gilead	151.75	10			PKPbc	18 13 08.1	-0.4
X54A	Belton	151.82	15	P		PKiKP	18 13 09.0	-0.1
	baz=342							
CNNC	Cliffs of the	151.98	7	P		PKPbc	18 13 09.0	0.0
	baz=352							
W58A	Raeford	152.01	9	P		PKPbc	18 13 09.1	+0.1
	baz=349							
346A	Big Creek Wild	152.02	29			PKPbc	18 13 07.3	-1.9
X55A	Gracelyn & Ava	152.07	14	P		PKPbc	18 13 09.3	+0.1
	baz=344							
W61A	Ground Anchor	152.14	5	P		PKiKP	18 13 09.7	0.0
	baz=354							
HODGE	Hodges	152.15	15			PKPbc	18 13 09.1	-0.3
W60A	Pink Hill	152.19	7	P		PKiKP	18 13 09.8	0.0
	baz=352							
X56A	White Oak	152.19	13	P		PKiKP	18 13 09.9	0.0
	baz=345							
Y55A	Saluda	152.53	14	P		PKPbc	18 13 10.3	0.0
	baz=343							
GOGA	Godfrey	152.59	17	P		PKiKP	18 13 10.6	-0.1
	baz=339							
X60A	Albert Glenn T	152.62	7	P		PKiKP	18 13 10.6	-0.1
	baz=351							
152A	Waverly Hall	152.87	20			PKPbc	18 13 09.4	-1.7
Y58A	Scranton	153.03	10	P		PKPbc	18 13 11.3	-0.1
	baz=348							
Y60A	Bolivia	153.16	8	P		PKPbc	18 13 11.5	-0.1
	baz=351							
Z57A	Bowman	153.41	13	P		PKiKP	18 13 12.3	0.0
	baz=345							
157A	Early Branch	153.94	14	P		PKPbc	18 13 12.8	-0.6
	baz=344							
158A	Hollywood	154.06	12	P		PKPbc	18 13 12.9	-0.8
	baz=346							

NEIC ***30*** *18:04:49.6±2.9, 9.°55N±0.°07×127.°0E±0.°2, h10km±1km, mb4.7/20, Error ellipse: s-maj=30.2km s-min=3.4km az=68.0*

IDC ***30*** *18:04:50.4±2.8, 9.°44N×127.°09E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.4/41, mbtmp3.7/4, MS3.6/1, Ms1 3.6/1, ms1mx3.0/45, Error ellipse: s-maj=159.2km s-min=28.1km az=69.0*

MAN ***30*** *18:04:56.5, 9.°35N×126.°77E, h32km, mb4.8, ML3.7, MS3.6*

ISC 30 18:04:53.9±0.7, 9.°49N±0.°05×126.°95E±0.°07, h41km, n39, σ2s24/40, mb4.5/10, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SCPH	Surigao	1.47	281	eP		Pn	18 05 18.4	+0.4
SCPH				eS		Sn	18 05 36.0	+0.1
BUKP	Musuan	2.46	229	eP		Pn	18 05 32.2	+0.6
BUKP				eS		Sn	18 06 01.8	+1.4
MATI	Mati	2.62	195	eP		Sn	18 06 05.0	+0.6
DAV	Davao City (W)	2.76	209	Lg		Lg	18 06 12.1	
	39nm,0.3s,baz=238,slow=14,SNR=4.4							
LLP	Lapu-Lapu	3.05	286	eP		Pn	18 05 42.0	+2.3
LLP				eS		Sn	18 06 05.5	-9.5
KCP	Kidapawan	3.08	217	eP		Pn	18 05 41.3	+1.2
KCP				i S		Sn	18 06 14.0	-1.7
CTBH	Cotabato--PC H	3.50	230	eP		Pn	18 05 46.9	+1.1
DDMP	Don Marcelino,	3.58	200	eP		Pn	18 05 51.4	+4.4
CNP	Catarman	3.75	323	eP		Pn	18 05 53.1	+3.9
PAGZ	Pagadian	3.89	245	eP		Pn	18 05 52.2	+1.0
CNOP	Candoni, Negro	4.26	275	eP		Pn	18 05 58.6	+2.3
GUIM	Jordan	4.44	285	eP		Pn	18 06 01.3	+2.6
RCP	Roxas	4.62	297	eP		Pn	18 06 05.0	+3.8
FAKI	Fak Fak	13.41	157	Pn		Pn	18 08 00.2	-1.7
NACB	Ninganchiao	15.47	341	Pn		Pn	18 08 25.2	-4.1
YHNB	Yeheng	16.00	341	Pn		Pn	18 08 30.9	-5.3
YHNB					IAmb	IAmb	18 08 48.6	
	comp=Z,98nm,1.7s							
SBUM	Sibu	16.23	245	P		Pn	18 08 35.3	-3.8
MTN	Manton Dam	22.57	169	P		P	18 09 48.7	-2.3
MTN					IAmb	IAmb	18 10 26.2	
	comp=Z,35nm,1.6s							
JCJ	Chichijima	22.67	37	P		P	18 09 48.9	-2.9
KNRA	Kununurra	25.07	176	P		P	18 10 14.2	-0.5
FITZ	Fitzroy Crossi	27.44	183	P		P	18 10 37.8	+1.6
	comp=Z,1.7nm,0.6s,baz=6.3,slow=9.2,SNR=2.1							
FITZ	Fitzroy Crossi	27.44	183	P		P	18 10 37.4	+1.2
FITZ					IAmb	IAmb	18 11 33.5	
	comp=Z,21nm,1.7s							
KSRS	Korea Array	27.85	2	LR		LR	18 20 42.1	
	comp=Z,135nm,21.7s,baz=175,slow=34							
WB0	Warramunga Arr	29.98	166	P		P	18 10 60.0	+1.2
WB0					IAmb	IAmb	18 11 33.2	
	comp=Z,15nm,1.4s							
WRAB	Tennant Creek	30.13	166	P		P	18 10 58.1	-2.0
WRAB					IAmb	IAmb	18 11 06.0	
	comp=Z,15nm,1.6s							
WRA	Warramunga Arr	30.14	166	P		P	18 11 01.2	+1.1
	comp=Z,0.3nm,0.6s,baz=347,slow=9.3,SNR=2.2							
WB2	Warramunga Arr	30.14

RCP	Roxas	4.45 300	⇑	*e*P		Pn	18 11 30.0	+2.5
JAP	San Jose, Anti	4.87 287	⇑	*e*P		Pn	18 11 38.0	+4.8
PVCP	Virac	4.88 330		*e*P		Pn	18 11 35.8	+2.4
OTRP	Odiongan	5.47 303		*e*P		Pn	18 11 47.0	+5.6
SJMP	San Jose	6.28 300		*e*P		Pn	18 11 56.1	+3.6
LQP	Lukban	6.90 313		*e*P		Pn	18 12 04.2	+2.8
TNTI	Ternate	8.57 176		P		Pn	18 12 30.3	+6.2
	44nm,0.9s							
TNTI	Ternate	8.57 176		Pn		Pn	18 12 20.9	-3.2
KMSI	Cibinong	9.15 197		P		Pn	18 12 41.1	+9.1
	57nm,0.8s							
APYP	Conner	9.96 328		*e*P		Sn	18 14 27.9	-5.8
LBMI	Labuha	9.98 175		P		Pn	18 12 50.5	+7.1
	33nm,1.3s							
MRSI	Marisa	10.03 208		P		Pn	18 12 50.1	+6.1
SZP	Santa	10.14 324		Pn		Pn	18 12 43.1	-2.4
KKM	Kota Kinabalu	10.90 253		Pn		Pn	18 12 52.6	-3.5
LUWI	Luwuk	11.06 201		Pn		Pn	18 12 56.3	-1.9
SIJI	Sorong	11.15 156		Pn		Pn	18 13 01.4	+2.0
	1.0nm,0.3s,baz=312,slow=13,SNR=5.8							
SIJI					Sn		Sn	18 14 59.6	-3.2
	0.3nm,0.3s,baz=198,slow=20,SNR=1.2							
SANI	Sanana	11.37 184		P		Pn	18 13 08.2	+5.8
	20nm,0.9s							
FAKI	Fak Fak	13.41 155		Pn		Pn	18 13 28.9	-1.4
TTSI	Tana Toraja	14.11 209		P		P	18 13 47.2	+0.3
	19nm,0.9s							
YULB	Yu-li	14.87 340		Pn		Pn	18 13 50.5	+0.5
SPSI	Sidrap Palu	14.94 208		P		P	18 14 00.3	+4.2
	24nm,1.2s							
TPUB	Ta-pu	15.02 338		Pn		Pn	18 13 51.8	-0.2
BNSI	Bone	15.18 206		P		P	18 13 58.7	0.0
	43nm,1.1s							
SSLB	Suanglung	15.35 340				Pn	18 13 58.1	+1.8
SBUM	Sibu	15.95 245				Pn	18 14 03.6	-0.6
BKSI	Bulukumba	16.00 204		P		P	18 14 10.5	+2.6
	9.1nm,1.0s							
SMPI	Sarmi	16.45 133		P		P	18 14 12.9	0.0
	13nm,0.9s							
KSM	Kuching	18.09 245		P		Pn	18 14 27.9	-3.1
MMRI	Maumere	18.43 194		P		Pn	18 14 40.0	+4.9
	24nm,1.0s							
EDFI	Ende, Flores	18.68 196		P		Pn	18 14 45.5	+7.3
	7.6nm,1.2s							
SOEI	Soe	19.16 187		P		Pn	18 14 48.7	+4.8
	40nm,0.8s							
SOEI	Soe	19.16 187		P		P	18 14 41.9	-0.9
SOEI					IAmb	IAmb	18 15 15.1	
	comp=Z,26nm,0.8s							
BATI	Baumata	19.69 189		P		Pn	18 14 50.1	-0.1
	comp=Z,8.3nm,0.3s,baz=26,slow=1.8,SNR=9.5							
BATI	Baumata	19.69 189		P		Pn	18 14 53.2	+3.0
	comp=Z,55nm,0.9s							
PLAI	Plampang	20.15 206		P		Pn	18 14 59.1	+3.5
	comp=Z,50nm,0.9s							
KMMI	Kalianget	20.67 218		P		Pn	18 15 05.4	+3.8
	comp=Z,72nm,1.9s							
MTN	Manton Dam	22.51 169		P		P	18 15 17.5	-1.4
MTN					IAmb	IAmb	18 15 31.9	
	comp=Z,20nm,1.1s							
NJ2	Nanjing	23.71 343		*e*P		P	18 15 30.8	0.0
NJ2					pmax	pmax		
	comp=Z,19nm,0.5s							
MYKOM	Kota Tinggi	23.94 253		P		P	18 15 29.6	-3.6
JNU	Nakatsue	23.95 9		P		P	18 15 33.7	+0.6
	comp=Z,7.6nm,0.8s,baz=121,slow=0.9,SNR=6.1							
JNU	Nakatsue	23.95 9		P		P	18 15 33.2	+0.1
JNU					IAmb	IAmb	18 15 46.8	
	comp=Z,18nm,1.0s							
LEM	Lembang	24.91 230		P		P	18 15 47.4	+5.2
	comp=Z,15nm,0.9s							
KNRA	Kununurra	24.97 175		P		P	18 15 42.1	-0.4
KNRA					IAmb	IAmb	18 15 56.2	
	comp=Z,14nm,0.7s							
PMBI	Palembang	25.03 242		P		P	18 15 48.5	+5.3
	comp=Z,234nm,0.4s							
CISI	Cisompet, Garu	25.23 229		P		P	18 15 42.7	-2.3
TNG	Tangerang	25.25 233		P		P	18 15 36.1	-9.1
GYA	Guiyang	25.47 314		*e*P		P	18 15 47.0	-0.2
GYA					pmax	pmax		
	comp=Z,10.0nm,0.5s							
IPM	Ipoh	25.94 261		P		P	18 15 49.5	-1.9
IPM					IAmb	IAmb	18 15 56.1	
	comp=Z,17nm,1.0s							
KULM	Kulim	26.14 263		P		P	18 15 51.6	-1.7
KULM					IAmb	IAmb	18 15 58.5	
	comp=Z,29nm,1.4s							
ENH	Enshi	26.28 325		P		P	18 15 54.1	-0.2
FITZ	Fitzroy Crossi	27.32 182		P		P	18 16 03.1	-0.6
	comp=Z,2.8nm,0.6s,baz=23,slow=7.4,SNR=4.5							
FITZ	Fitzroy Crossi	27.32 182		P		P	18 16 02.4	-1.4
KSRS	Korea Array	27.98 2		P		P	18 16 10.5	+1.1
	comp=Z,1.7nm,0.8s,baz=182,slow=9.4,SNR=11							
KS19	Wonju Array Si	28.02 2		P		P	18 16 10.7	+0.8
KS19					IAmb	IAmb	18 16 36.6	
	comp=Z,6.2nm,0.8s							
KS19						PcP	18 19 22.6	-1.6
TIA	Tai'an	28.10 343		P		P	18 16 11.8	+1.2
TIA					pmax	pmax		
	comp=Z,6.0nm,0.9s							
CMAR	Chiang Mai Arr	28.38 292		P		P	18 16 13.8	+0.6
	comp=Z,1.0nm,0.9s,baz=99,slow=7.9,SNR=7.7							
CMAR					PcP	PcP	18 19 28.0	+2.6
	comp=Z,0.4nm,0.6s,baz=90,slow=0.9,SNR=2.3							
RPSI	Rantau Prapat	28.39 258		P		P	18 16 11.8	-1.7
RPSI					IAmb	IAmb	18 16 19.2	
	comp=Z,19nm,1.2s							
MJAR	Matsushiro Arr	28.99 19		P		P	18 16 17.6	-1.0
	comp=Z,1.1nm,0.8s,baz=206,slow=11,SNR=3.1							
WB0	Warramunga Arr	29.93 165		P		P	18 16 25.5	-1.5
WB0					IAmb	IAmb	18 16 52.5	
	comp=Z,17nm,1.6s							
GSI	Gunungsitoli	30.06 256		P		P	18 16 27.4	-0.9
WRAB	Tennant Creek	30.08 166		P		P	18 16 26.0	-2.3
WRA	Warramunga Arr	30.09 166		P		P	18 16 26.4	-2.0
	comp=Z,1.1nm,0.6s,baz=347,slow=9.1,SNR=6.9							
WB2	Warramunga Arr	30.09 166		P		P	18 16 26.5	-2.0
WB2					IAmb	IAmb	18 16 45.8	
	comp=Z,16nm,1.5s							
WR0	Warramunga Arr	30.16 165		P		P	18 16 26.5	-2.5
CD2	Chengdu	30.25 318		*e*P		P	18 16 29.0	-0.9
PSA00	Pilbara Seismi	31.48 192		P		P	18 16 39.2	-1.4
BJI	Beijing	31.95 345		P		P	18 16 46.0	+1.5
BJI					pmax	pmax		
	comp=Z,8.0nm,1.0s							
AS31	Alice Springs	33.59 168		P		P	18 16 58.4	-0.7
ASAR	Alice Springs	33.59 168		P		P	18 16 58.0	-1.1
	comp=Z,0.4nm,0.3s,baz=347,slow=7.4,SNR=17							
LZH	Lanzhou	33.75 326		*e*P		P	18 17 01.0	+0.4
LZH					pP	pP	18 17 06.5	-3.6
LZH					sP	pwP	18 17 09.0	-7.3
LZH					PP	PnPn	18 18 05.3	-8.3
LZH					pmax	pmax		
	comp=Z,12nm,1.1s							
LZH					pmax	pmax		
	comp=Z,83nm,4.3s							
LZH					LR	LR		
	comp=N,460nm,17.3s							
LZH					LR	LR		
	comp=E,360nm,15.2s							
LZH					LR	LR		
	comp=Z,210nm,17.3s							
HHC	Hu-ho-hao-te	34.10 339		*e*P		P	18 17 03.3	-0.2
HHC					pmax	pmax		
	comp=Z,19nm,1.0s							
HHC					pmax	pmax		
	comp=Z,110nm,6.0s							
USRK	Ussuriysk Ar.	35.00 7		P		P	18 17 12.0	+0.9
	comp=Z,4.2nm,0.8s,baz=186,slow=6.6,SNR=9.7							
CTAO	Charters Tower	35.04 147		P		P	18 17 12.8	+1.1
CTAO					IAmb	IAmb	18 17 39.0	
	comp=Z,24nm,1.4s							
MDJ	Mudanjiang	35.20 4		P		P	18 17 12.0	-0.8
MDJ					IAmb	IAmb	18 17 27.7	
	comp=Z,15nm,1.2s							
SHL	Shillong	36.75 300		P		P	18 17 24.5	-2.1
SHL					IAmb	IAmb	18 17 37.8	
	comp=Z,8.9nm,1.0s							
ASAJ	Asahikawa	37.27 19		P		P	18 17 32.5	+2.0
	comp=Z,6.9nm,1.1s,baz=238,slow=7.1,SNR=5.2							
MORW	Morawa	39.58 195		P		P	18 17 48.8	-1.3
MORW					IAmb	IAmb	18 18 11.3	
	comp=Z,18nm,1.4s							
H11S3	WAKE ISLAND Hy	39.78 72		T		T	19 01 01.6	
	baz=262,slow=75,SNR=28							

H11S1	WAKE ISLAND Hy	39.79 72		T		T	19 00 59.5	
	baz=262,slow=75,SNR=21							
H11S2	WAKE ISLAND Hy	39.80 72		T		T	19 00 57.6	
	baz=262,slow=75,SNR=21							
FORT	Forrest	39.95 178		P		P	18 17 52.0	-1.1
KLR	Kul'dur	39.95 5		P		P	18 17 53.4	+0.4
	comp=Z,1.3nm,0.7s,baz=160,slow=4.3,SNR=6.1							
SONM	Songino Array	42.00 340		P		P	18 18 08.7	-1.4
	comp=Z,0.5nm,0.5s,baz=151,slow=10.0,SNR=4.1							
BBOO	Buckleboo	42.89 168		P		P	18 18 16.9	-0.3
BBOO					IAmb	IAmb	18 18 32.6	
	comp=Z,20nm,1.1s							
NWAO	Narrogin (SRO)	43.02 192		P		P	18 18 18.2	-0.1
NWAO	Narrogin (SRO)	43.02 192		P		P	18 18 17.9	-0.4
NWAO					IAmb	IAmb	18 18 27.8	
	comp=Z,50nm,1.6s							
STKA	Stephens Creek	43.42 161		P		P	18 18 21.3	-0.2
	comp=Z,2.0nm,0.8s,baz=347,slow=3.6,SNR=4.7							
STKA	Stephens Creek	43.42 161		P		P	18 18 21.4	-0.2
WMQ	Urumqi	48.18 322		*e*P		P	18 19 00.8	+1.6
WMQ					pP	pP	18 19 05.0	-4.0
WMQ					pmax	pmax		
	comp=Z,22nm,0.7s							
WMQ					LR	LR		
	comp=N,190nm,11.9s							
WMQ					LR	LR		
	comp=E,250nm,13.9s							
WMQ					LR	LR		
	comp=Z,140nm,15.1s							
TOO	Toolangi	49.91 160		P		P	18 19 12.2	-0.1
TOO					IAmb	IAmb	18 19 26.6	
	comp=Z,22nm,1.6s							
PETK	Petropavlovsk-	50.28 24		P		P	18 19 17.6	+2.7
	comp=Z,3.1nm,0.8s,baz=218,slow=4.5,SNR=2.5							
YAK	Yakutsk	52.60 2		P		P	18 19 33.9	+1.8
YAK					IAmb	IAmb	18 19 46.6	
	comp=Z,11nm,0.9s							
MK31	Makanchi Array	52.99 323		P		P	18 19 34.5	-0.9
MKAR	Makanchi Array	52.99 323		P		P	18 19 35.6	+0.3
	comp=Z,3.0nm,0.8s,baz=121,slow=7.4,SNR=12							
MAKZ	Makanchi	53.18 323		P		P	18 19 36.8	+0.1
MAKZ					IAmb	IAmb	18 20 02.2	
	comp=Z,17nm,1.6s							
NIL	Nilore	54.58 305		P		P	18 19 46.2	-1.1
NIL					IAmb	IAmb	18 19 50.0	
	comp=Z,17nm,1.2s							
ZALV	Zalesovo Beam	55.61 331		P		P	18 19 53.0	-1.1
	comp=Z,1.0nm,0.5s,baz=126,slow=7.5,SNR=6.5							
KURK	Kurchatov	57.04 326		P		P	18 20 03.6	-0.8
KURK					IAmb	IAmb	18 20 07.0	
	comp=Z,6.6nm,0.9s							
BTK	Batken	58.09 312		P		P	18 20 11.6	-0.6
GAR	Garm	58.19 310		P		P	18 20 11.7	-1.3
GAR					IAmb	IAmb	18 20 27.8	
	comp=Z,7.6nm,0.9s							
KK31	Karatay Array	59.18 315		P		P	18 20 19.0	-0.6
TIXI	Tiksi	62.23 1		P		P	18 20 40.0	+0.2
TIXI					IAmb	IAmb	18 20 53.5	
	comp=Z,7.1nm,0.8s							
BRVK	Borovoye	62.71 326				P	18 20 43.0	-0.3
BRVK					IAmb	IAmb	18 20 45.4	
	comp=Z,5.4nm,0.9s							
THZ	Tophouse	66.20 144		P		P	18 21 07.3	+0.9
RPZ	Rata Peaks	66.41 146		P		P	18 21 08.9	+1.2
LTZ	Lake Taylor	66.48 145				P	18 21 10.3	+2.2
BKZ	Black Stump Fm	66.83 140		P		P	18 21 11.3	+0.8
ARU	Arti	70.20 327		P		P	18 21 30.5	-0.7
	comp=Z,1.1nm,0.5s,baz=99,slow=13							
ARU	Arti	70.20 327		P		P	18 21 30.0	-1.2
ARU					IAmb	IAmb	18 21 32.8	
	comp=Z,6.1nm,1.1s							
CHGN	Chignik	73.87 34		P		P	18 21 53.8	+0.7
SVW2	Sparrevohn	75.91 29		P		P	18 22 07.9	+3.0
TTA	Tatalina	75.92 27		P		P	18 22 07.2	+2.2
TTA					IAmb	IAmb	18 22 45.0	
	comp=Z,8.0nm,1.4s							
KDAK	Kodiak Island	77.18 33		P		P	18 22 13.8	+1.7
BPAW	Bear Paw Mtn.	78.27 26		P		P	18 22 20.3	+2.2
BPAW					IAmb	IAmb	18 22 21.1	
	comp=Z,5.8nm,1.0s							
RAYN	Ar Rayn	78.29 292		P		P	18 22 17.7	-1.4
RAYN					IAmb	IAmb	18 22 20.5	
	comp=Z,3.2nm,0.8s							
TOLK	Toolik Lake Re	79.04 22		P		P	18 22 24.0	+1.6
TOLK					IAmb	IAmb	18 22 25.7	
	comp=Z,4.4nm,0.8s							
ILAR	Eielson Array	80.06 26		P		P	18 22 29.1	+1.2
	comp=Z,1.0nm,0.7s,baz=240,slow=6.2,SNR=7.5							
KLMR	Klimovskoe	80.51 330		*e*		P	18 22 27.0	-3.3
KLMR					AMP		18 22 31.9	
	comp=Z,6.0nm,0.8s							
EPYK	Eagle Plains	84.12 24				P	18 22 50.8	+1.7
HYT	Haines Junctio	84.71 29		P		P	18 22 54.8	+2.5
HYT					IAmb	IAmb	18 22 56.1	
	comp=Z,4.8nm,0.9s							
INK	Inuvik	84.96 22		P		P	18 22 54.8	+1.5
	comp=Z,2.7nm,0.9s,baz=284,slow=6.2,SNR=6.3							
INK	Inuvik	84.96 22		P		P	18 22 54.8	+1.5
INK					IAmb	IAmb	18 23 07.7	
	comp=Z,8.2nm,1.4s							
SPITS	Spitsbergen Ar	84.97 349		P		P	18 22 53.6	+0.3
	comp=Z,0.7nm,0.5s,baz=85,slow=7.1,SNR=0.9							
ARCES	ARCESS Array B	85.17 340		P		P	18 22 55.0	+0.7
	comp=Z,2.0nm,0.6s,baz=80,slow=6.6,SNR=16							
FINES	FINESS Array B	86.87 332		P		P	18 23 01.8	-1.1
	comp=Z,0.8nm,0.6s,baz=84,slow=4.7,SNR=6.4							
RES	Resolute Bay	92.30 10		P		P	18 23 29.4	+1.3
	comp=Z,5.9nm,0.9s,baz=302,slow=6.3,SNR=5.3							
RES	Resolute Bay	92.30 10		P		P	18 23 29.8	+1.7
YKA	Yellowknife Ar	94.40 24		P		P	18 23 39.6	+1.5
	comp=Z,1.1nm,0.7s,baz=297,slow=4.3,SNR=11							
TORD	Torodi Ar. Bea	120.99 291		PKP		PKiKP	18 29 14.6	+2.7
	comp=Z,1.1nm,0.7s,baz=83,slow=2.8,SNR=4.7							
PLCA	Paso Flores	145.22 157		PKPbc		PKPdf	18 29 56.9	+0.4
	comp=Z,4.2nm,1.1s,baz=232,slow=9.2,SNR=4.5							
PLCA	Paso Flores	145.22 157				PKPbc	18 29 55.6	-0.5

MAN ***30*** *18:12:29.3,9.°22N×126.°92E,h1km,mb4.7,ML3.6,MS3.5*
IDC ***30*** *18:12:31.2±0.7,9.°30N×126.°50E,h0km,mb4.1/14, mb1 4.2/14,mb1mx3.9/52,mbtmp4.1/14,Error ellipse: s-maj=50.0km s-min=14.5km az=79.0*
NEIC ***30*** *18:12:31.3±2.2,9.°49N±0.°08×127.°0E±0.°1,h10km±1km, mb4.5/24,Error ellipse: s-maj=17.8km s-min=14.0km az=77.0*
ISC 30 18:12:36.1±0.5,9.°32N±0.°04×126.°90E±0.°07,h41km,n61,σ1§64/63,mb4.3/21,3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SCPH	Surigao	1.47	288	*e*P		Pn	18 12 57.4	-2.7
SCPH				*e*S		Sn	18 13 15.8	-2.2
MSLP	Maasin	2.17	292	*e*P		Pn	18 13 07.3	-2.5
MSLP				*e*S		Sn	18 13 36.8	+1.3
BUKP	Musuan	2.32	232	*e*P		Pn	18 13 12.3	+0.5
BUKP				*e*S		Sn	18 13 40.0	+0.9
MATI	Mati	2.45	195	*e*P		Pn	18 13 10.0	-3.6
DAV	Davao City (W)	2.59	210	Pn		Pn	18 13 16.8	+1.1
DMPH	Davao City--Mi	2.62	212	⇓*e*P		Pn	18 13 17.6	+1.7
DMPH				*i* S		Sn	18 13 49.0	+2.4
LLP	Lapu-Lapu	3.06	289	*e*P		Pn	18 13 21.9	0.0
LLP				*e*S		Sn	18 13 59.4	+2.0
CTBH	Cotabato--PC H	3.36	232	⇓*e*P		Pn	18 13 25.8	-0.3
DDMP	Don Marcelino,	3.41	200	*e*P		Pn	18 13 23.6	-3.2
PAGZ	Pagadian	3.78	247	*e*P		Pn	18 13 31.7	-0.1
CNP	Catarman	3.85	325	*e*P		Pn	18 13 32.9	0.0
CNOP	Candoni, Negro	4.23	277	*e*P		Pn	18 13 36.5	-1.7
GUIM	Jordan	4.44	287	*e*P		Pn	18 13 38.0	-3.0
RCP	Roxas	4.65	299	⇓*e*P		Pn	18 13 44.9	+0.9
PVCP	Virac	5.03	328	*e*P		Pn	18 13 50.5	+1.4
BALP	Baler	8.23	321	*e*P		Pn	18 14 33.5	+0.5
FAKI	Fak Fak	13.28	156	Pn		Pn	18 15 42.8	+0.6
YULB	Yu-li	14.98	340			Pn	18 16 05.3	+0.1
TPUB	Ta-pu	15.14	337			Pn	18 16 08.6	+1.3
TPUB					IAmb	IAmb	18 16 31.1	
	comp=Z,17nm,1.2s							
SBUM	Sibu	16.11	246	Pn		Pn	18 16 20.4	+0.5
GUMO	Guam	18.11	75	P		Pn	18 16 40.4	-4.4
SOEI	Soe	19.13	188	P		P	18 16 53.9	-2.2
SOEI					IAmb	IAmb	18 17 06.5	
	comp=Z,17nm,0.8s							
BATI	Baumata	19.67	190	P		Pn	18 17 03.7	+0.2
	comp=Z,3.1nm,0.3s,baz=75,slow=3.3,SNR=3.2							
KNRA	Kununurra	24.91	176	P		P	18 17 53.1	-2.3
KNRA					IAmb	IAmb	18 18 07.6	
	comp=Z,22nm,1.4s							
IPM	Ipoh	26.13	261	P		P	18 18 05.2	-1.4
FITZ	Fitzroy Crossi	27.27	183	P		P	18 18 17.6	+0.8
	comp=Z,4.1nm,0.6s,baz=353,slow=9.2,SNR=6.9							
FITZ	Fitzroy Crossi	27.27	183	P		P	18 18 17.2	+0.4
FITZ					IAmb	IAmb	18 18 23.4	
	comp=Z,11nm,1.3s							
KSRS	Korea Array	28.02	2	P		P	18 18 25.2	+1.8
	comp=Z,0.7nm,0.6s,baz=188,slow=10,SNR=3.6							
WRAB	Tennant Creek	29.98	166	P		P	18 18 40.1	-0.9
WRA	Warramunga Arr	29.99	166	P		P	18 18 41.3	+0.3
	comp=Z,0.7nm,0.6s,baz=346,slow=9.3,SNR=2.4							
WB2	Warramunga Arr	29.99	166	P		P	18 18 40.0	-1.0
WB2					IAmb	IAmb	18 18 59.2	
	comp=Z,16nm,1.6s							
WR0	Warramunga Arr	30.05	166	P		P	18 18 41.4	-0.2
WR0					IAmb	IAmb	18 19 08.9	
	comp=Z,9.8nm,1.6s							
PSA00	Pilbara Seismi	31.48	193	P		P	18 18 52.0	-2.0
AS31	Alice Springs	33.49	168	P		P	18 19 11.2	-0.6
ASAR	Alice Springs	33.49	168	P		P	18 19 12.7	+0.8
	comp=Z,0.4nm,0.3s,baz=341,slow=7.2,SNR=5.1							
MORW	Morawa	39.58	195	P		P	18 20 04.0	+0.4
MORW					IAmb	IAmb	18 20 21.9	
	comp=Z,24nm,1.6s							
H11S3	WAKE ISLAND Hy	39.60	72	T		T	19 03 02.8	
	baz=262,slow=75,SNR=13							
H11S1	WAKE ISLAND Hy	39.62	72	T		T	19 03 02.1	
	baz=262,slow=75,SNR=9.4							
H11S2	WAKE ISLAND Hy	39.62	72	T		T	19 03 03.1	
	baz=262,slow=75,SNR=15							
FORT	Forrest	39.89	178	P		P	18 20 06.8	+0.8
BBOO	Buckleboo	42.80	169	P		P	18 20 31.2	+1.2
NWAO	Narrogin (SRO)	43.01	192	P		P	18 20 32.5	+0.8
	comp=Z,5.7nm,0.5s,baz=28,slow=8.2,SNR=9.8							
NWAO	Narrogin (SRO)	43.01	192	P		P	18 20 32.5	+0.8
NWAO					IAmb	IAmb	18 21 00.5	
	comp=Z,16nm,1.2s							
NWAO	Narrogin (SRO)	43.01	192	P		P	18 20 32.7	+1.0
NWAO					IAmb	IAmb	18 21 00.5	
	comp=Z,20nm,1.2s							
STKA	Stephens Creek	43.31	162	P		P	18 20 35.5	+1.3
	comp=Z,1.2nm,0.5s,baz=339,slow=12,SNR=3.5							
STKA	Stephens Creek	43.31	162	P		P	18 20 35.0	+0.9
MK31	Makanchi Array	53.15	323	P		P	18 21 47.8	-2.1
MKAR	Makanchi Array	53.15	323	P		P	18 21 49.7	-0.3
	comp=Z,1.8nm,0.6s,baz=124,slow=7.1,SNR=9.6							
ZALV	Zalesovo Beam	55.75	331	P		P	18 22 07.7	-1.0
	comp=Z,0.7nm,0.3s,baz=130,slow=7.4,SNR=4.3							
KURK	Kurchatov	57.20	326	P		P	18 22 18.6	-0.5
KURK					IAmb	IAmb	18 22 19.1	
	comp=Z,3.3nm,0.8s							
TIXI	Tiksi	62.28	1	P		P	18 22 54.5	+0.8
TIXI					IAmb	IAmb	18 22 56.2	
	comp=Z,2.8nm,1.0s							
ARU	Arti	70.35	327	P		P	18 23 44.6	-1.0
	comp=Z,0.8nm,0.4s,baz=77,slow=6.8,SNR=4.2							
ARU	Arti	70.35	327	P		P	18 23 44.7	-0.8
ARU					IAmb	IAmb	18 23 45.4	
	comp=Z,2.5nm,0.8s							
RSO	Redoubt South	77.18	30	P		P	18 24 23.1	-2.7
RAYN	Ar Rayn	78.50	292	P		P	18 24 31.8	-1.9
RAYN					IAmb	IAmb	18 24 33.2	
	comp=Z,2.6nm,0.7s							
INK	Inuvik	84.93	22	P		P	18 25 08.3	+1.8
	comp=Z,1.2nm,0.9s,baz=285,slow=3.4,SNR=2.9							
INK	Inuvik	84.93	22	P		P	18 25 07.6	+1.0
SPITS	Spitsbergen Ar	85.06	349	P		P	18 25 08.3	+1.2
	comp=Z,2.9nm,0.8s,baz=81,slow=5.3,SNR=4.6							
ARCES	ARCESS Array B	85.29	340	P		P	18 25 09.2	+0.8
	comp=Z,1.6nm,0.6s,baz=83,slow=6.1,SNR=6.7							
FINES	FINESS Array B	87.01	332	P		P	18 25 17.6	+0.6
	comp=Z,0.5nm,0.4s,baz=105,slow=4.9,SNR=2.1							
YKA	Yellowknife Ar	94.36	24	P		P	18 25 54.4	+3.1
	comp=Z,0.4nm,0.6s,baz=288,slow=4.0,SNR=3.1							

MAN ***30*** *18:15:51.4,9.°42N×126.°93E,h7km,mb5.6,ML4.6,MS5.0*
NEIC ***30*** *18:15:53.0±1.9,9.°42N±0.°06×126.°61E±0.°04,h13km±3km, mb4.9/119,Error ellipse: s-maj=8.6km s-min=5.6km az=188.0*
IDC ***30*** *18:15:54.0±3.1,9.°32N×126.°47E,h18km±19km,mb4.4/34, mb1 4.5/36,mb1mx4.4/53,mbtmp4.5/36,ML4.1/2,MS3.9/13, Ms1 3.9/13,ms1mx3.6/44,Error ellipse: s-maj=17.0km s-min=9.2km az=80.0*
DJA ***30*** *18:15:58.7±0.6,10.°N±4.°×12.°7E±.°,h62km±5km,M4.6/43, mb5.0/43,mB5.2/14,MLv4.6/2,Mw(mB)4.5/14*
KLM ***30*** *18:16:00.0,9.°28N×126.°84E,h75km,mb5.0*
**ISC 30 18:15:53.2±1.2,9.°36N±0.°03×126.°68E±0.°04,h14km±7km, n280,σ1§67/285,mb4.8/98,MS4.0/15,8C,Mindan

FAKI	**Fak Fak**	**13.40**	**155**	Pn	**Pn**	**18 19 03.1**	**0.0**
TTSI	**Tana Toraja**	**14.10**	**209**	P	**P**	**18 19 18.6**	**-1.7**
	592nm70nm,0.8s						
YULB	**Yu-li**	**14.87**	**340**	Pn	**Pn**	**18 19 22.4**	**-0.8**
SPSI	**Sidrap Palu**	**14.93**	**208**	P	**P**	**18 19 29.2**	**-0.3**
	445nm50nm,0.8s						
TPUB	**Ta-pu**	**15.02**	**338**	Pn	**Pn**	**18 19 25.4**	**+0.2**
BBSI	**Bau Bau**	**15.31**	**196**	P	**P**	**18 19 36.5**	**+2.7**
	4.5nm,1.0s						
SSLB	**Suanglung**	**15.35**	**340**		**P**	**18 19 32.7**	**-1.5**
KAPI	**Kappang**	**15.87**	**206**	Pn	**P**	**18 19 40.2**	**+0.3**
	0.4nm,0.3s,baz=59,slow=11,SNR=3.7						
KAPI				LR	LR	18 26 22.0	
	comp=Z,296nm,18.6s,baz=35,slow=40						
KAPI	**Kappang**	**15.87**	**206**		**P**	**18 19 40.0**	**0.0**
SBUM	**Sibu**	**15.93**	**245**		**P**	**18 19 39.5**	**-1.2**
BKSI	**Bulukumba**	**15.99**	**204**	P	**P**	**18 19 40.1**	**-1.2**
	385nm46nm,0.8s						
YHNB	**Yeheng**	**16.04**	**342**	Pn	**Pn**	**18 19 39.0**	**+0.4**
YHNB				IAmb	IAmb	18 19 51.6	
	comp=Z,114nm,1.6s						
KBKI	**Kotabaru**	**16.37**	**220**	P	**P**	**18 19 48.9**	**+3.3**
	comp=Z,610nmcomp=Z,75nm,0.8s						
SMPI	**Sarmi**	**16.46**	**133**	P	**P**	**18 19 45.1**	**-1.4**
	comp=Z,40nm,1.2s						
JOW	**Kunigami**	**17.44**	**5**		**P**	**18 19 57.6**	**+0.2**
GENI	**Genyem**	**17.94**	**131**	P	**P**	**18 20 06.2**	**+3.3**
	comp=Z,45nm,1.1s						
DLV	**T Lat**	**18.06**	**280**	P	**P**	**18 20 05.7**	**+1.2**
KSM	**Kuching**	**18.07**	**245**		**P**	**18 20 06.4**	**+1.9**
JAY	**Jayapura**	**18.29**	**130**	P	**P**	**18 20 09.2**	**+2.3**
	comp=Z,0.2nm,0.3s,baz=305,slow=5.9,SNR=4.2						
JAY				LR	LR	18 26 51.8	
	comp=Z,359nm,18.8s,baz=314,slow=36						
MMRI	**Maumere**	**18.42**	**194**	P	**Pn**	**18 20 09.1**	**+0.8**
MMRI				IAmb	IAmb	18 20 23.0	
	comp=Z,102nm,1.0s						
QIZ	**Qiongzhong**	**18.93**	**302**	P	**P**	**18 20 10.8**	**-3.0**
QIZ				S	**S**	**18 23 48.3**	**-0.3**
QIZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
QIZ				LR	LR		
	comp=N,470nm,14.2s						
QIZ				LR	LR		
	comp=E,470nm,16.2s						
QIZ				LR	LR		
	comp=Z,740nm,14.7s						
QIZ	**Qiongzhong**	**18.93**	**302**	P	**Pn**	**18 20 14.3**	**-0.2**
SOEI	**Soe**	**19.14**	**187**	P	**Pn**	**18 20 21.4**	**+4.2**
	comp=Z,2µmcomp=Z,112nm,0.8s						
SOEI	**Soe**	**19.14**	**187**	P	**Pn**	**18 20 18.6**	**+1.3**
SOEI				IAmb	IAmb	18 20 52.1	
	comp=Z,115nm,1.0s						
BATI	**Baumata**	**19.67**	**189**	P	**Pn**	**18 20 24.1**	**+0.6**
	comp=Z,14nm,0.3s,baz=323,slow=1.4,SNR=13						
JAGI	**Jajag, Banyuwa**	**21.67**	**216**	P	**P**	**18 20 43.4**	**-0.2**
JAGI				IAmb	IAmb	18 20 51.1	
	comp=Z,30nm,0.9s						
MTN	**Manton Dam**	**22.50**	**169**	P	**P**	**18 20 53.0**	**+0.4**
MTN				IAmb	IAmb	18 21 24.8	
	comp=Z,28nm,0.8s						
SMRI	**Semarang**	**22.97**	**225**	P	**P**	**18 20 56.3**	**-1.2**
UGM	**Wanagama**	**23.53**	**224**	P	**P**	**18 21 05.0**	**+1.8**
NJ2	**Nanjing**	**23.71**	**343**	*e*P	**P**	**18 21 03.5**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
MYKOM	**Kota Tinggi**	**23.92**	**253**	P	**P**	**18 21 07.4**	**+0.4**
MYKOM				IAmb	IAmb	18 21 11.9	
	comp=Z,79nm,1.6s						
MYKOM	**Kota Tinggi**	**23.92**	**253**	P	**P**	**18 21 09.0**	**+2.0**
JNU	**Nakatsue**	**23.96**	**9**	P	**P**	**18 21 07.6**	**+0.4**
	comp=Z,10.0nm,0.9s,baz=177,slow=11,SNR=5.8						
JNU	**Nakatsue**	**23.96**	**9**	P	**P**	**18 21 07.0**	**-0.1**
LEM	**Lembang**	**24.89**	**230**	P	**P**	**18 21 20.4**	**+4.4**
	comp=Z,51nm,0.9s,baz=325,slow=4.5,SNR=6.8						
SLVN	**Son La**	**24.94**	**301**		**P**	**18 21 15.6**	**-0.7**
KNRA	**Kununurra**	**24.96**	**175**	P	**P**	**18 21 16.6**	**+0.2**
KNRA				IAmb	IAmb	18 21 49.7	
	comp=Z,44nm,0.8s						
GYA	**Guiyang**	**25.46**	**314**	*e*P	**P**	**18 21 23.0**	**+1.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
IPM	**Ipoh**	**25.92**	**261**	P	**P**	**18 21 24.9**	**-0.3**
IPM				IAmb	IAmb	18 21 29.1	
	comp=Z,31nm,0.7s						
IPM	**Ipoh**	**25.92**	**261**	P	**P**	**18 21 26.0**	**+0.8**
KULM	**Kulim**	**26.13**	**263**	P	**P**	**18 21 25.7**	**-1.4**
ENH	**Enshi**	**26.28**	**325**	P	**P**	**18 21 27.7**	**-0.6**
JHJ	**Hachijo jima 2**	**26.55**	**25**	LR	LR	18 31 34.8	
	comp=Z,103nm,19.9s,baz=254,slow=35						
FITZ	**Fitzroy Crossi**	**27.31**	**182**	P	**P**	**18 21 37.0**	**-0.6**
	comp=Z,27nm,0.8s,baz=18,slow=8.1,SNR=30						
FITZ	**Fitzroy Crossi**	**27.31**	**182**	P	**P**	**18 21 38.2**	**+0.6**
FITZ				IAmb	IAmb	18 21 42.3	
	comp=Z,26nm,0.8s						
INU	**Inuyama**	**27.53**	**18**	P	**P**	**18 21 39.6**	**+0.1**
PMG	**Port Moresby**	**27.63**	**132**	P	**P**	**18 21 41.1**	**+0.6**
PMG				IAmb	IAmb	18 21 41.4	
	comp=Z,23nm,0.9s						
KSRS	**Korea Array**	**27.99**	**2**	P	**P**	**18 21 44.8**	**+1.3**
	comp=Z,2.3nm,0.9s,baz=178,slow=11,SNR=13						
KSRS				ScP	**ScP**	**18 28 39.6**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=194,slow=4.2,SNR=5.4						
KSRS				LR	LR	18 34 12.0	
	comp=Z,169nm,19.6s,baz=180,slow=39						
KS19	**Wonju Array Si**	**28.03**	**2**	P	**P**	**18 21 44.3**	**+0.3**
TIA	**Tai'an**	**28.10**	**343**	P	**P**	**18 21 45.5**	**+0.9**
TIA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MNSI	**Mandailing Nat**	**28.28**	**254**	P	**P**	**18 21 47.3**	**+0.9**
	comp=Z,26nm,0.6s						
PSI	**Prapat**	**28.34**	**258**	P	**P**	**18 21 47.7**	**+0.6**
	comp=Z,9.3nm,0.7s,baz=1.4,slow=1.5,SNR=8.8						
PSI				LR	LR	18 35 09.8	
	comp=Z,324nm,18.4s,baz=82,slow=41						
CM31	**Chiang Mai Arr**	**28.36**	**292**	P	**P**	**18 21 45.9**	**-1.3**
CMAR	**Chiang Mai Arr**	**28.36**	**292**	P	**P**	**18 21 46.4**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=96,slow=7.3,SNR=13						
CMAR				PcP	**PcP**	**18 25 00.8**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=93,slow=3.6,SNR=2.7						
CMAR				ScP	**ScP**	**18 28 39.5**	**-1.3**
	comp=Z,1.4nm,1.1s,baz=132,slow=1.3,SNR=5.7						
CMAR				LR	LR	18 33 35.1	
	comp=Z,327nm,18.2s,baz=167,slow=38						
COEN	**Coen**	**28.37**	**145**	P	**P**	**18 21 47.8**	**+0.6**
COEN				IAmb	IAmb	18 22 00.2	
	comp=Z,50nm,1.6s						
RPSI	**Rantau Prapat**	**28.37**	**258**	P	**P**	**18 21 46.2**	**-1.1**
RPSI				IAmb	IAmb	18 21 49.3	
	comp=Z,83nm,1.8s						
CHTO	**Chiang Mai**	**28.46**	**292**	P	**P**	**18 21 48.9**	**+0.9**
KRVT	**Keravat (AS076**	**28.68**	**117**	LR	LR	18 31 51.7	
	comp=Z,136nm,18.8s,baz=292,slow=33						
MJAR	**Matsushiro Arr**	**29.01**	**19**	P	**P**	**18 21 52.3**	**-0.4**
	comp=Z,2.7nm,1.1s,baz=196,slow=9.7,SNR=5.8						
MJAR				LR	LR	18 33 31.5	
	comp=Z,180nm,18.3s,baz=215,slow=36						
XAN	**Xi'an**	**29.48**	**329**	P	**P**	**18 21 55.5**	**-1.5**
XAN				pP	pwP	18 22 08.0	+1.0
XAN				sP	sP	18 22 14.8	+14
XAN				pmax	pmax		
	comp=Z,11nm,0.6s						
XAN				LR	LR		
	comp=N,420nm,17.3s						
XAN				LR	LR		
	comp=E,240nm,18.4s						
XAN				LR	LR		
	comp=Z,670nm,16.3s						
XAN	**Xi'an**	**29.48**	**329**	P	**P**	**18 21 55.2**	**-1.8**
LHMI	**Lhok Sumawe**	**29.77**	**264**	P	**P**	**18 21 57.7**	**-2.0**
GSI	**Gunungsitoli**	**30.04**	**256**	P	**P**	**18 22 00.7**	**-1.4**
WRAB	**Tennant Creek**	**30.08**	**165**	P	**P**	**18 22 00.8**	**-1.5**
WRAB				IAmb	IAmb	18 22 24.3	
	comp=Z,9.3nm,0.7s						
WRA	**Warramunga Arr**	**30.08**	**166**	P	**P**	**18 22 01.0**	**-1.4**
	comp=Z,2.5nm,0.6s,baz=346,slow=9.1,SNR=4.8						
WB2	**Warramunga Arr**	**30.09**	**165**	P	**P**	**18 22 01.1**	**-1.3**
WB2				IAmb	IAmb	18 22 24.4	
	comp=Z,10nm,0.8s						
WR0	**Warramunga Arr**	**30.15**	**165**	P	**P**	**18 22 01.4**	**-1.5**
WR0				IAmb	IAmb	18 22 29.7	
	comp=Z,15nm,1.1s						
CD2	**Chengdu**	**30.25**	**318**	*e*P	**P**	**18 22 03.0**	**-0.8**
PSA00	**Pilbara Seismi**	**31.47**	**192**	P	**P**	**18 22 14.6**	**+0.1**
PSA00				IAmb	IAmb	18 22 20.2	
	comp=Z,19nm,0.8s						
AS31	**Alice Springs**	**33.58**	**168**	P	**P**	**18 22 32.1**	**-1.0**
ASAR	**Alice Springs**	**33.58**	**168**	P	**P**	**18 22 32.4**	**-0.7**
	comp=Z,2.8nm,0.6s,baz=17,slow=10.0,SNR=20						
ASAR				PcP	**PcP**	**18 25 13.0**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=358,slow=3.1,SNR=2.2						
LZH	**Lanzhou**	**33.75**	**326**	*e*P	**P**	**18 22 35.5**	**+0.9**
LZH				pP	sP	18 22 39.8	+1.2
LZH				sP	pwP	18 22 42.0	-2.2
LZH				PP	**PP**	**18 23 42.5**	**-8.6**
LZH				pmax	pmax		
	comp=Z,13nm,1.1s						
LZH				pmax	pmax		
	comp=Z,130nm,4.9s						
LZH				LR	LR		
	comp=N,480nm,13.6s						
LZH				LR	LR		
	comp=E,450nm,15.2s						
LZH				LR	LR		
	comp=Z,520nm,15.7s						
HHC	**Hu-ho-hao-te**	**34.10**	**339**	*e*P	**P**	**18 22 37.3**	**-0.3**
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,59nm,5.7s						
USA0B	**Ussuriysk Arra**	**35.01**	**7**	P	**P**	**18 22 44.0**	**-1.2**
USA0B				IAmb	IAmb	18 22 56.6	
	comp=Z,11nm,0.8s						
USRK	**Ussuriysk Ar.**	**35.01**	**7**	P	**P**	**18 22 46.7**	**+1.5**
	comp=Z,4.3nm,0.8s,baz=166,slow=3.9,SNR=10						
CTA	**Charters Tower**	**35.04**	**147**	P	**P**	**18 22 46.9**	**+1.1**
	comp=Z,6.7nm,0.6s,baz=323,slow=11,SNR=11						
CTAO	**Charters Tower**	**35.04**	**147**	P	**P**	**18 22 46.6**	**+0.8**
CTAO				IAmb	IAmb	18 22 54.9	
	comp=Z,65nm,1.8s						
MDJ	**Mudanjiang**	**35.21**	**4**	P	**P**	**18 22 47.8**	**+0.8**
MDJ				IAmb	IAmb	18 22 58.2	
	comp=Z,17nm,1.0s						
SHL	**Shillong**	**36.74**	**301**	P	**P**	**18 22 58.7**	**-1.9**
SHL				IAmb	IAmb	18 23 02.5	
	comp=Z,22nm,0.8s						
ASAJ	**Asahikawa**	**37.28**	**19**	P	**P**	**18 23 07.2**	**+2.6**
	comp=Z,7.0nm,0.6s,baz=220,slow=14,SNR=12						
GTA	**Gaotai**	**38.35**	**326**	⇑P	**P**	**18 23 13.3**	**-0.7**
GTA				pP	pwP	18 23 24.3	+0.7
GTA				sP	sP	18 23 28.3	+10
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,90nm,7.0s						
GTA				LR	LR		
	comp=N,190nm,15.2s						
GTA				LR	LR		
	comp=E,250nm,16.8s						
GTA				LR	LR		
	comp=Z,340nm,16.5s						
LSA	**Lhasa**	**38.88**	**306**	*i* P	**P**	**18 23 20.3**	**+1.3**
	SNR=10						
LSA	**Lhasa**	**38.88**	**306**	P	**P**	**18 23 18.5**	**-0.5**
MORW	**Morawa**	**39.56**	**195**	P	**P**	**18 23 24.1**	**+0.1**
MORW				IAmb	IAmb	18 23 39.0	
	comp=Z,23nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**39.80**	**72**	T	T	19 06 31.3	
	baz=262,slow=75,SNR=45						
H11S1	**WAKE ISLAND Hy**	**39.81**	**72**	T	T	19 06 23.7	
	baz=262,slow=75,SNR=30						
H11S2	**WAKE ISLAND Hy**	**39.81**	**72**	T	T	19 06 24.1	
	baz=262,slow=75,SNR=41						
FORT	**Forrest**	**39.94**	**178**	P	**P**	**18 23 27.2**	**+0.1**
KLR	**Kul'dur**	**39.96**	**5**	P	**P**	**18 23 28.0**	**+0.9**
	comp=Z,3.6nm,0.6s,baz=175,slow=5.3,SNR=19						
TAPN	**Taplejung**	**40.86**	**301**	*e*P	**P**	**18 23 34.4**	**-0.9**
	comp=Z,32nm,0.7s						
ODAN	**Odare**	**40.98**	**300**	*e*P	**P**	**18 23 35.4**	**-0.8**
	comp=Z,82nm,0.6s						
RAMN	**Ramite**	**41.68**	**300**	*e*P	**P**	**18 23 41.6**	**-0.4**
	comp=Z,55nm,0.7s						
ULN	**Ulaanbaatar**	**41.81**	**340**	P	**P**	**18 23 42.3**	**-0.2**
EIDS	**Eidsvold**	**41.91**	**146**	P	**P**	**18 23 43.9**	**+0.4**
EIDS				IAmb	IAmb	18 23 57.0	
	comp=Z,49nm,1.8s						
SONM	**Songino Array**	**42.00**	**340**	P	**P**	**18 23 44.5**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=159,slow=8.7,SNR=8.4						
SONM				LR	LR	18 42 06.3	
	comp=Z,154nm,19.0s,baz=133,slow=38						
JIRN	**Jiri**	**42.24**	**301**	*e*P	**P**	**18 23 45.3**	**-1.4**
GUN	**Gumba**	**42.58**	**301**	*e*P	**P**	**18 23 48.4**	**-1.0**
	comp=Z,60nm,0.7s						
PKI	**Pulchoki**	**42.88**	**301**	*e*P	**P**	**18 23 50.3**	**-1.5**
	comp=Z,20nm,0.6s						
BBOO	**Buckleboo**	**42.88**	**168**	P	**P**	**18 23 51.3**	**0.0**
BBOO				IAmb	IAmb	18 24 09.1	
	comp=Z,25nm,0.8s						
PKIN	**Phulchoki**	**42.89**	**301**	*e*P	**P**	**18 23 50.3**	**-1.5**
	comp=Z,25nm,0.6s						
NWAO	**Narrogin (SRO)**	**43.01**	**192**	P	**P**	**18 23 52.9**	**+0.6**
	comp=Z,24nm,0.7s,baz=10,slow=8.0,SNR=15						
NWAO	**Narrogin (SRO)**	**43.01**	**192**	P	**P**	**18 23 52.7**	**+0.4**
NWAO				IAmb	IAmb	18 23 55.2	
	comp=Z,33nm,0.9s						
NWAO	**Narrogin (SRO)**	**43.01**	**192**	P	**P**	**18 23 52.4**	**+0.1**
NWAO				IAmb	IAmb	18 23 53.9	
	comp=Z,21nm,0.8s						
DMN	**Daman**	**43.14**	**301**	*e*P	**P**	**18 23 52.7**	**-1.2**
	comp=Z,23nm,0.7s						
STKA	**Stephens Creek**	**43.42**	**161**	P	**P**	**18 23 55.6**	**0.0**
	comp=Z,7.0nm,0.8s,baz=341,slow=9.1,SNR=7.3						
STKA	**Stephens Creek**	**43.42**	**161**	P	**P**	**18 23 55.6**	**0.0**
DANN	**Dangsing**	**44.49**	**301**	*e*P	**P**	**18 24 03.6**	**-1.2**
	comp=Z,65nm,0.6s						
PYUN	**Piuthan**	**45.08**	**300**	*e*P	**P**	**18 24 08.5**	**-0.9**
	comp=Z,89nm,0.9s						
TLY	**Talaya**	**46.22**	**340**	P	**P**	**18 24 17.6**	**-0.1**
TLY				IAmb	IAmb	18 24 20.1	
	comp=Z,6.6nm,0.6s						
ARMA	**Armidale**	**46.25**	**150**	P	**P**	**18 24 18.6**	**+0.3**
ARMA				IAmb	IAmb	18 24 54.6	
	comp=Z,29nm,1.4s						
HYB	**Hyderabad**	**47.39**	**285**	*i* P	**P**	**18 24 26.0**	**-1.5**
WMQ	**Urumqi**	**48.18**	**322**	*e*P	**P**	**18 24 33.8**	**+0.5**
WMQ				pP	sP	18 24 37.5	+0.2
WMQ				sP	pwP	18 24 40.8	-2.1
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				LR	LR		
	comp=N,150nm,17.3s						
WMQ				LR	LR		
	comp=E,260nm,18.9s						
WMQ				LR	LR		
	comp=Z,140nm,17.3s						
CAN	**Canberra**	**49.19**	**156**	P	**P**	**18 24 41.2**	**+0.2**
TOO	**Toolangi**	**49.90**	**160**	P	**P**	**18 24 47.3**	**+0.9**
TOO				IAmb	IAmb	18 25 00.1	
	comp=Z,50nm,1.8s						
DZM	**Mont Dzumac**	**49.96**	**129**	P	**P**	**18 24 48.1**	**+0.9**
DZM				IAmb	IAmb	18 25 01.4	
	comp=Z,13nm,0.8s						
PEA0B	**Petropavlovsk-**	**50.29**	**24**	P	**P**	**18 24 48.4**	**-0.7**
PETK	**Petropavlovsk-**	**50.29**	**24**	P	**P**	**18 24 51.3**	**+2.1**
	comp=Z,3.0nm,0.7s,baz=204,slow=4.6,SNR=5.0						
LHI	**Lord Howe Isla**	**51.12**	**144**	P	**P**	**18 24 55.2**	**-0.5**
MK31	**Makanchi Array**	**52.99**	**323**	P	**P**	**18 25 09.0**	**-0.5**
MK31				IAmb	IAmb	18 25 10.3	
	comp=Z,6.8nm,0.7s						
MKAR	**Makanchi Array**	**52.99**	**323**	P	**P**	**18 25 08.9**	**-0.6**
	comp=Z,8.2nm,0.6s,baz=125,slow=7.2,SNR=44						
MKAR				LR	LR	18 49 13.4	
	comp=Z,181nm,18.8s,baz=115,slow=38						
MAKZ	**Makanchi**	**53.18**	**323**	P	**P**	**18 25 10.2**	**-0.7**
MAKZ				IAmb	IAmb	18 25 13.0	
	comp=Z,14nm,1.2s						
MA2	**Magadan**	**53.30**	**15**	P	**P**	**18 25 13.3**	**+1.8**
PRZ	**Przheval'sk**	**53.52**	**317**	P	**P**	**18 25 13.6**	**-0.1**
TARG	**Taragay, Kyrgy**	**53.63**	**316**	P	**P**	**18 25 14.7**	**0.0**
TARG				IAmb	IAmb	18 25 23.1	
	comp=Z,25nm,1.6s						
KSH	**Kashi**	**54.14**	**312**	P	**P**	**18 25 21.0**	**+2.8**
KSH				sP	pwP	18 25 28.0	+0.1
KSH				PP	**PP**	**18 27 24.5**	**+4.7**
KSH				S	**S**	**18 32 56.0**	**+1.2**
KSH	**Kashi**	**54.14**	**312**	SS	**SKiKP**	**18 36 35.5**	**+5.3**
KSH				pmax	pmax		
	comp=Z,28nm,1.0s						
KSH				pmax	pmax		
	comp=Z,290nm,5.4s						
KSH				LR	LR		
	comp=N,130nm,10.0s						
KSH				LR	LR		
	comp=E,280nm,14.1s						
KSH				LR	LR		
	comp=Z,280nm,9.3s						
KDJ	**Kajisay**	**54.21**	**316**	P	**P**	**18 25 18.4**	**-0.3**
KDJ				IAmb	IAmb	18 25 37.2	
	comp=Z,16nm,0.9s						
NIL	**Nilore**	**54.58**	**305**	P	**P**	**18 25 20.4**	**-1.0**
BOOM	**Boomskoye usch**	**55.20**	**316**	P	**P**	**18 25 25.6**	**-0.3**
TAU	**Tasmania Unive**	**55.33**	**162**	P	**P**	**18 25 27.3**	**+0.8**
TAU				IAmb	IAmb	18 26 05.1	
	comp=Z,15nm,0.9s						
KZA	**Kyzart**	**55.53**	**315**	P	**P**	**18 25 28.9**	**+0.3**
	SNR=7.3						
TKM2	**Tokmak 2**	**55.59**	**316**	P	**P**	**18 25 28.6**	**-0.2**
	SNR=5.9						
ZAA0	**Zalesovo Array**	**55.61**	**331**	P	**P**	**18 25 27.1**	**-1.3**
ZALV	**Zalesovo Beam**	**55.61**	**331**	P	**P**	**18 25 27.3**	**-1.1**
	comp=Z,3.6nm,0.6s,baz=130,slow=6.7,SNR=15						
MIDW	**Midway**	**55.69**	**62**	P	**P**	**18 25 28.3**	**-1.1**
KBK	**Karagaybulak**	**55.94**	**316**	P	**P**	**18 25 31.1**	**-0.1**
	SNR=9.2						
UCH	**Uchtor**	**56.10**	**315**	P	**P**	**18 25 32.6**	**-0.1**
	SNR=22						
CHMS	**Chumysh**	**56.20**	**316**	P	**P**	**18 25 32.1**	**-0.8**
	SNR=6.8						
FRU1	**Bishkek**	**56.22**	**316**	P	**P**	**18 25 32.4**	**-0.7**
FRU1				IAmb	IAmb	18 25 35.1	
	comp=Z,13nm,1.1s						
AAK	**Ala-Archa**	**56.25**	**315**	P	**P**	**18 25 32.2**	**-1.2**
USP	**Ospenovka**	**56.47**	**316**	P	**P**	**18 25 34.5**	**-0.3**
	SNR=7.9						
SEY	**Seymchan**	**56.60**	**14**	P	**P**	**18 25 37.6**	**+2.3**
	comp=Z,2.9nm,0.6s,baz=174,slow=4.7,SNR=6.4						
AML	**Almayashu**	**56.64**	**315**	P	**P**	**18 25 36.5**	**0.0**
	SNR=15						
EKS2	**Erkin-Say**	**56.76**	**315**	P	**P**	**18 25 37.1**	**+0.2**
	SNR=11						
KURK	**Kurchatov**	**57.04**	**326**	P	**P**	**18 25 37.8**	**-0.9**
KURK				IAmb	IAmb	18 25 40.7	
	comp=Z,14nm,0.8s						
KURBB	**Kurchatov Arra**	**57.04**	**326**	P	**P**	**18 25 38.0**	**-0.7**
	comp=Z,6.6nm,0.6s,baz=125,slow=7.0,SNR=70						
MSVF	**Nonsavu**	**57.44**	**118**	P	**P**	**18 25 41.1**	**-1.0**
BTK	**Batken**	**58.09**	**312**	P	**P**	**18 25 44.9**	**-1.5**
BTK				IAmb	IAmb	18 25 54.5	
	comp=Z,8.1nm,0.8s						
KBL	**Kabul**	**58.18**	**305**	P	**P**	**18 25 45.6**	**-1.7**
KBL				IAmb	IAmb	18 25 48.1	
	comp=Z,12nm,0.9s						
GAR	**Garm**	**58.18**	**310**	P	**P**	**18 25 45.6**	**-1.5**
CHGR	**Chuyangaron**	**58.97**	**310**	P	**P**	**18 25 51.4**	**-1.2**
KK31	**Karatay Array**	**59.17**	**315**	P	**P**	**18 25 52.4**	**-1.4**
KK31				IAmb	IAmb	18 25 54.9	
	comp=Z,9.8nm,0.9s						
TIXI	**Tiksi**	**62.25**	**1**	P	**P**	**18 26 14.8**	**+0.6**
TIXI				IAmb	IAmb	18 26 27.6	
	comp=Z,14nm,1.0s						
ADK	**Adak**	**62.40**	**36**	P	**P**	**18 26 16.7**	**+1.1**
OUZ	**Omahuta**	**62.67**	**138**	P	**P**	**18 26 18.7**	**+1.1**
BRVK	**Borovoye**	**62.71**	**326**	P	**P**	**18 26 16.9**	**-0.7**
BRVK				IAmb	IAmb	18 26 19.1	
	comp=Z,13nm,0.7s						
HRA	**Herat**	**63.70**	**304**	P	**P**	**18 26 23.7**	**-1.1**
HRA				IAmb	IAmb	18 27 00.5	
	comp=Z,7.0nm,0.7s						
ATKA	**Atka Island**	**63.95**	**36**	P	**P**	**18 26 26.6**	**+0.7**
BILL	**Bilibino**	**64.16**	**15**	P	**P**	**18 26 27.6**	**+0.6**
BILL				IAmb	IAmb	18 26 52.6	
	comp=Z,5.9nm,0.7s						
HIZ	**Hauiti**	**65.42**	**140**	P	**P**	**18 26 36.8**	**+1.2**
WKZ	**Wanaka**	**66.08**	**148**	P	**P**	**18 26 41.2**	**+1.4**
NNZ	**Nelson**	**66.14**	**143**	P	**P**	**18 26 40.7**	**+0.5**
THZ	**Tophouse**	**66.20**	**144**	P	**P**	**18 26 38.9**	**-1.8**
LBZ	**Lake Benmore**	**66.39**	**147**	P	**P**	**18 26 41.8**	**+0.1**
RPZ	**Rata Peaks**	**66.41**	**146**	P	**P**	**18 26 42.4**	**+0.5**
GEYT	**Alibeck**	**67.41**	**307**	P	**P**	**18 26 48.0**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=144,slow=3.3,SNR=6.3						
GEYT				LR	LR	19 01 01.1	
	comp=Z,218nm,18.1s,baz=150,slow=40						
BFZ	**Birch Farm**	**67.56**	**141**	P	**P**	**18 26 49.8**	**+0.5**
BANOM	**Banah**	**68.37**	**294**	P	**P**	**18 26 54.5**	**-0.3**
UOSS	**Minazif**	**68.46**	**293**	P	**P**	**18 26 54.0**	**-1.3**
UOSS	**Minazif**	**68.46**	**293**	P	**P**	**18 26 52.9**	**-2.5**
UOSS				IAmb	IAmb	18 26 57.4	
	comp=Z,5.4nm,0.7s						
HATD	**Hatta, Dubai**	**68.53**	**293**	P	**P**	**18 26 54.3**	**-1.5**
ASHO	**Ashiyiah**	**68.59**	**293**	P	**P**	**18 26 55.1**	**-1.1**
ALNE	**Al Ain**	**68.88**	**292**	*i* P	**P**	**18 26 57.1**	**-0.9**
	SNR=6.4						
ARU	**Arti**	**70.20**	**327**	P	**P**	**18 27 04.3**	**-1.2**
	comp=Z,4.9nm,0.5s,baz=119,slow=4.1,SNR=37						
ARU	**Arti**	**70.20**	**327**	P	**P**	**18 27 04.2**	**-1.2**
SOCY	**

BRTR	**Keskin Array B**	**86.42**	**309**	P	**P**	**18 28 36.8**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=100,slow=6.8,SNR=3.6						
FIA1	**FINESS Array S**	**86.87**	**332**	P	**P**	**18 28 36.3**	**-1.0**
FIA1				IAmb	IAmb	18 28 44.1	
	comp=Z,14nm,1.2s						
FINES	**FINESS Array B**	**86.88**	**332**	P	**P**	**18 28 36.5**	**-0.8**
	comp=Z,3.5nm,0.6s,baz=63,slow=4.7,SNR=18						
PPT	**Papeete**	**86.90**	**108**	LR	LR	18 59 50.0	
	comp=Z,48nm,22.0s,baz=282,slow=30						
TRO	**Tromso**	**87.36**	**341**	*e*P	**P**	**18 28 39.7**	**+0.2**
AKASG	**Malin Array Be**	**87.52**	**321**	P	**P**	**18 28 38.8**	**-1.8**
	comp=Z,0.9nm,0.6s,baz=64,slow=5.1,SNR=4.4						
C36M	**Paulatuk**	**87.95**	**20**	P	**P**	**18 28 42.5**	**+0.2**
C36M				IAmb	IAmb	18 28 55.8	
	comp=Z,6.9nm,0.8s						
NACGM	**Naroch**	**88.05**	**325**	*e*LQ	LQ	18 27 46.0	
NACGM				*e*LR	LR	18 35 34.0	
VNDA	**Vanda**	**88.99**	**173**	P	**P**	**18 28 46.9**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=1.1,slow=4.4,SNR=6.8						
VNDA	**Vanda**	**88.99**	**173**	P	**P**	**18 28 46.9**	**-0.1**
VNDA				IAmb	IAmb	18 28 59.2	
	comp=Z,4.5nm,0.7s						
STEI	**Steigen**	**89.23**	**339**	*e*P	**P**	**18 28 47.1**	**-1.3**
LOF	**Lofoten**	**89.74**	**340**	*e*P	**P**	**18 28 50.2**	**-0.5**
BUR08	**Bucovina Ar. S**	**90.79**	**318**	P	**P**	**18 28 55.7**	**-0.6**
NSS	**Namsos**	**91.87**	**337**	*e*P	**P**	**18 28 58.6**	**-2.2**
HFS	**Hagfors**	**93.03**	**333**	P	**P**	**18 29 04.7**	**-1.6**
	comp=Z,2.1nm,0.7s,baz=104,slow=3.1,SNR=3.5						
TBLU	**Trondheim**	**93.13**	**336**	*e*P	**P**	**18 29 06.7**	**+0.1**
NB2	**NORSAR Subarra**	**93.74**	**334**	P	**P**	**18 29 09.1**	**-0.5**
	comp=Z,1.6nm,0.9s,baz=67,slow=4.8						
NOA	**NORSAR Array B**	**93.74**	**334**	P	**P**	**18 29 07.8**	**-1.7**
	comp=Z,0.6nm,0.7s,baz=62,slow=4.7,SNR=2.5						
YKA	**Yellowknife Ar**	**94.41**	**24**	P	**P**	**18 29 14.0**	**+1.5**
	comp=Z,1.1nm,0.6s,baz=291,slow=4.2,SNR=13						
TORD	**Torodi Ar. Bea**	**120.97**	**291**	PKP	**PKPdf**	**18 34 45.0**	**-1.3**
	comp=Z,1.5nm,0.8s,baz=30,slow=1.0,SNR=4.9						
PLCA	**Paso Flores**	**145.22**	**157**	PKPbc	**PKPdf**	**18 35 31.5**	**+0.6**
	comp=Z,2.6nm,0.6s,baz=240,slow=1.3,SNR=8.5						
PLCA	**Paso Flores**	**145.22**	**157**		**PKPdf**	**18 35 31.2**	**+0.2**
LC01	**Cunco**	**146.21**	**153**		**PKPab**	**18 35 33.7**	**-0.6**

VAO 30 18:16:49.0±0.3,**1°01S×59°64W, h0**km**, mbR3.7, Brazil**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTGA	**Pitinga**	**0.43**	**310**	*e*P	Pg	18 16 52.9	-4.3
PTGA				*e*S	Sg	18 16 58.6	-4.2
MACA	**Manacapuru-AM**	**2.38**	**206**	*e*P	Pn	18 17 27.2	-2.2
ITTB	**Itaituba**	**5.13**	**131**	*e*P	Pn	18 18 06.0	-1.2
ITTB				*e*S	Sn	18 19 07.8	+0.6
NPGB	**Novo Progresso**	**7.36**	**145**	*e*P	Pn	18 18 38.0	+0.1
NPGB				*e*S	Sn	18 20 03.7	+1.5
SAML	**Samuel**	**8.64**	**204**	*e*P	Pn	18 18 52.0	-3.4
CLDB	**Colider**	**10.52**	**159**	*e*P	Pn	18 19 20.1	-1.1
CLDB				*e*S	Sn	18 21 19.3	-0.5
PRPB	**Parauapebas**	**11.06**	**118**	*e*P	Pn	18 19 27.2	-1.4
PRPB				*e*S	Sn	18 21 34.0	+0.8
VILB	**Vilhena**	**11.88**	**183**	*e*P	Pn	18 19 38.2	-1.7
VILB				*e*S	Sn	18 21 52.7	-0.7
SMTB	**Santa Maria do**	**14.31**	**123**	*e*P	Pn	18 20 12.0	-1.1
SMTB				*e*S	Sn	18 22 53.8	+1.1
PTLB	**Pontes e Lacer**	**14.36**	**178**	*e*P	Pn	18 20 11.8	-1.9
PTLB				*e*S	Sn	18 22 53.7	-0.1
SDV	**Santo Domingo**	**14.72**	**312**	*e*P	Pn	18 20 15.7	-3.1
SDV				*e*S	Sn	18 23 19.1	-3.1
SALV	**Santo Antonio**	**15.30**	**165**	*e*P	Pn	18 20 25.9	-0.6
SALV				*e*S	S	18 23 33.4	-0.4
PEXB	**Peixe**	**15.75**	**135**	*e*P	Pn	18 20 31.6	-0.8
ARAG	**Araguaiana, MT**	**16.52**	**153**	*e*P	Pn	18 20 40.9	-1.4
LPAZ	**La Paz**	**17.34**	**208**	*e*P	Pn	18 20 50.1	-3.1
AQDB	**Aquidauana**	**19.73**	**169**	*e*P	P	18 21 19.0	-1.4
AQDB				*e*S	S	18 25 03.0	-0.8

MAN 30 18:27:40.0, 9°54N×126°90E, h12km**, mb4.4, ML3.3, MS3.1, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.42**	**280**	*e*P	Pn	18 28 03.6	-1.9
SCPH				*e*S	Sn	18 28 21.6	-2.5
MSLP	**Maasin**	**2.10**	**286**	*e*P	Pn	18 28 15.0	0.0
MSLP				*e*S	Sn	18 28 42.2	+1.2
BUKP	**Musuan**	**2.46**	**228**	*e*P	Pn	18 28 11.8	-8.1
BUKP				*e*S	Sn	18 28 47.7	-2.3
MATI	**Mati**	**2.66**	**194**	*e*P	Pg	18 28 39.7	+8.7
MATI	**Mati**	**2.66**	**194**	*e*P	Pg	18 28 39.7	+8.7
LLP	**Lapu-Lapu**	**3.00**	**285**	*e*P	Pn	18 28 28.6	+1.2
LLP				*e*S	Sn	18 29 04.6	+1.4
CNP	**Catarman**	**3.68**	**324**	*e*P	Pn	18 28 38.0	+1.2
CNP				*e*S	Sn	18 29 21.9	+1.8
RCP	**Roxas**	**4.55**	**297**↑	*e*P	Pn	18 28 50.8	+2.0

IDC 30 18:32:23.5±1.9,**3°59N×123°96E, h0**km**, mb3.5**/3**, mb1 3.6**/3**, mb1mx3.3**/33**, mbtmp3.5**/3**, Error ellipse: s-maj=219.0km s-min=25.6km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.52**	**157**	P	P	18 37 53.6	-0.3
	0.7nm,1.0s,baz=335,slow=10,SNR=6.9						
ASAR	**Alice Springs**	**28.78**	**161**	P	P	18 38 23.7	+0.4
	0.4nm,0.8s,baz=341,slow=7.0,SNR=2.9						
MKAR	**Makanchi Array**	**56.12**	**327**	P	P	18 42 04.8	-0.1
	0.3nm,0.3s,baz=118,slow=7.2,SNR=10.0						

*JMA **30** 18:42:41.4±0.3, 42°.00N×142°.53E, h31*km*±3*km*, M3.2*
*IDC **30** 18:42:45.2±2.5, 42°.00N×142°.48E, h62*km*±25*km*, mb3.3/4, mb1 3.6/6, mb1mx3.2/37, mbtmp3.5/6, ML3.0/2, Error ellipse: s-maj=50.9km s-min=15.8km az=105.0*

ISC 30 18:42:40.9±1.4,**42°01N**±0°.06×**142°52E**±0°.04,**h28**km±11km, **n26,** σ0**80/25, mb3.8/4, 2C-7D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.32**	**32**	⇑P	**Pb**	**18 42 48.6**	**+0.1**
JSHD	**Hidakashinhida**	**0.41**	**354**	⇑P	**Pn**	**18 42 50.5**	**-0.5**
JEM	**Erimo**	**0.47**	**88**	⇓P	**Pn**	**18 42 50.9**	**-1.0**
JTHR	**Tokachihiroo**	**0.65**	**63**	⇓P	**Pn**	**18 42 53.8**	**-0.4**
JTHR				*e*S	**Sn**	**18 43 03.8**	**+0.3**
JIAM	**Iburiatsuma**	**0.76**	**324**	⇓P	**Pb**	**18 42 57.1**	**+1.5**
JBT2	**Biratori 2**	**0.78**	**351**	P	**Pb**	**18 42 56.0**	**0.0**
JCH	**Churui**	**0.87**	**45**	⇓P	**Pb**	**18 42 57.5**	**0.0**
JKB	**Kayabe**	**1.12**	**264**	⇓P	**Pn**	**18 43 00.5**	**-0.2**
JKB				*e*S	**Sn**	**18 43 14.7**	**-0.4**
JEW	**Eniwo**	**1.15**	**317**	P	**Pb**	**18 43 01.8**	**-0.4**
JFR	**Furan**	**1.16**	**3**	P	**Pb**	**18 43 01.9**	**-0.4**
JNB	**Noboribetsu**	**1.20**	**293**	⇓P	**Pn**	**18 43 01.4**	**-0.4**
JNB				*e*S	**Sn**	**18 43 16.9**	**-0.2**
JOT	**Ohata**	**1.27**	**241**	⇓P	**Pn**	**18 43 02.3**	**-0.5**
JOT				*e*S	**Sn**	**18 43 18.3**	**-0.5**
JISS	**Ishikarishitsu**	**1.51**	**328**	P	**Pb**	**18 43 07.2**	**-1.0**
JISS				*e*S	**Sb**	**18 43 26.8**	**-0.1**
JAB	**Ashibetsu**	**1.52**	**352**	P	**Pb**	**18 43 07.8**	**-0.6**
ASAJ	**Asahikawa**	**2.11**	**1**	P	**Pb**	**18 43 16.6**	**-1.9**
	5.8nm,0.3s,baz=204,slow=13,SNR=49						
ASAJ				S	**Sb**	**18 43 44.5**	**+0.2**
	7.1nm,0.3s,baz=359,slow=32,SNR=8.1						
MJAR	**Matsushiro Arr**	**6.40**	**213**	P	Pn	18 44 18.4	+5.1
	0.1nm,0.3s,baz=23,slow=16,SNR=5.0						
H11N2	**WAKE ISLAND Hy 30.32**	**130**		T	T	19 20 24.1	
	baz=324,slow=75,SNR=9.3						
H11N1	**WAKE ISLAND Hy 30.33**	**130**		T	T	19 20 26.3	
	baz=324,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy 30.33**	**130**		T	T	19 20 26.8	
	baz=324,slow=75,SNR=8.8						
H11S1	**WAKE ISLAND Hy 31.18**	**131**		T	T	19 21 30.3	
	baz=325,slow=76,SNR=8.0						
H11S3	**WAKE ISLAND Hy 31.18**	**131**		T	T	19 21 29.4	
	baz=325,slow=76,SNR=6.2						
H11S2	**WAKE ISLAND Hy 31.20**	**131**		T	T	19 21 31.6	
	baz=325,slow=76,SNR=8.7						
ILAR	**Eielson Array**	**44.88**	**35**	P	**P**	**18 50 52.5**	**-0.1**
	0.3nm,0.8s,baz=285,slow=8.3,SNR=4.7						
WRA	**Warramunga Arr**	**62.10**	**189**	P	**P**	**18 52 58.5**	**-0.6**
	1.4nm,1.1s,baz=5.4,slow=6.9,SNR=6.2						
FINES	**FINESS Array B**	**64.84**	**332**	P	**P**	**18 53 17.5**	**+0.6**
	0.5nm,0.5s,baz=36,slow=10,SNR=2.0						
NVAR	**Mina Array Bea**	**71.38**	**55**	P	**P**	**18 54 00.3**	**+1.7**
	0.5nm,0.7s,baz=290,slow=6.6,SNR=3.4						

*IDC **30** 19:08:54.8±3.9, 21°.12S×178°.57W, h547*km*±41*km*, mb3.2/11, mb1 3.5/12, mb1mx3.3/28, mbtmp4.2/12, Error ellipse: s-maj=28.2km s-min=20.7km az=130.0*
*NEIC **30** 19:08:54.6±1.8, 21°.25S±0°.1×178°.6W±0°.1, h551*km*±3*km*, mb4.4/31, Error ellipse: s-maj=19.3km s-min=14.2km az=125.0*

ISC 30 19:08:57.3±0.5,**21°.17S**±0°.08×**178°.72W**±0°.09,**h579**km, **n104,** σ1**9**23**/104, mb4.2/25, 15C-3D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.58**	**318**	P	**P**	**19 10 22.6**	**-3.2**
AFI	**Afiamalu**	**9.79**	**44**	P	P	19 11 05.8	-8.1
DZM	**Mont Dzumac**	**13.83**	**264**	P	**P**	**19 11 53.5**	**-1.4**
	0.8nm,0.3s,baz=89,slow=18,SNR=11						
OUZ	**Omahuta**	**15.54**	**204**	P	**P**	**19 12 10.3**	**-0.9**
OUZ				IAmb	IAmb	19 12 13.5	
	comp=Z,34nm,1.2s						
MXZ	**Matakaoa Point**	**16.54**	**188**	P	**P**	**19 12 18.6**	**-1.8**
HAZ	**Te Kaha**	**16.81**	**190**	P	**P**	**19 12 22.1**	**-0.7**
PKGZ	**Pakihiroa**	**16.89**	**189**	P	**P**	**19 12 26.6**	**+2.9**
RUGZ	**Raukumara Rang**	**17.03**	**190**	P	**P**	**19 12 23.1**	**-1.8**
PUZ	**Puketiti**	**17.05**	**188**	P	**P**	**19 12 23.9**	**-1.1**
KMRZ	**Kaimai**	**17.25**	**194**	P	P	19 12 35.8	+8.9
URZ	**Urewera**	**17.41**	**191**	P	**P**	**19 12 25.7**	**-2.5**
MWZ	**Matawai**	**17.41**	**190**	P	**P**	**19 12 26.3**	**-2.0**
MUGZ	**Murupara**	**17.68**	**192**	P	**P**	**19 12 28.4**	**-2.5**
RIGZ	**Rimutau**	**17.74**	**189**	P	**P**	**19 12 29.9**	**-1.5**
TLZ	**Tolley Road**	**17.81**	**195**	P	**P**	**19 12 32.5**	**+0.5**
RAHZ	**Arahi**	**18.05**	**191**	P	**P**	**19 12 31.8**	**-2.4**
HIZ	**Hauiti**	**18.15**	**196**	P	**P**	**19 12 36.1**	**+1.0**
NMHZ	**Naumai**	**18.28**	**191**	P	**P**	**19 12 34.6**	**-1.8**
BKZ	**Black Stump Fm**	**18.41**	**192**	P	**P**	**19 12 33.9**	**-3.5**
BKZ	**Black Stump Fm**	**18.41**	**192**	P	**P**	**19 12 33.8**	**-3.6**
BKZ				IAmb	IAmb	19 12 40.0	
	comp=Z,36nm,1.3s						
KRHZ	**Kereru**	**18.89**	**192**	P	**P**	**19 12 37.9**	**-3.9**
BFZ	**Birch Farm**	**19.92**	**191**	P	**P**	**19 12 48.7**	**-2.4**
MSWZ	**Moikau Station**	**20.82**	**193**	P	**P**	**19 12 57.0**	**-2.2**
SNZO	**South Karori**	**20.84**	**194**	P	**P**	**19 12 58.0**	**-1.4**
TUWZ	**Tuamarina**	**21.13**	**195**	P	**P**	**19 13 01.7**	**-0.3**
EIDS	**Eidsvold**	**28.03**	**256**	P	**P**	**19 14 03.9**	**+0.7**
EIDS				IAmb	IAmb	19 14 21.5	
	comp=Z,5.1nm,1.0s						
ARMA	**Armidale**	**28.18**	**245**	P	**P**	**19 14 05.0**	**+0.5**
ARMA				IAmb	IAmb	19 14 07.1	
	comp=Z,29nm,1.6s						
CTA	**Charters Tower**	**32.76**	**266**	P	**P**	**19 14 44.7**	**+0.8**
	comp=Z,3.4nm,0.8s,baz=97,slow=5.3						
CTAO	**Charters Tower**	**32.76**	**266**	P	**P**	**19 14 43.7**	**-0.2**
CTAO				IAmb	IAmb	19 14 44.0	
	comp=Z,22nm,1.4s						
STKA	**Stephens Creek**	**36.90**	**245**	P	**P**	**19 15 17.0**	**-1.1**
COEN	**Coen**	**36.96**	**275**	P	**P**	**19 15 18.6**	**-0.2**
COEN				IAmb	IAmb	19 15 36.0	
	comp=Z,23nm,1.2s						
MCQ	**Macquarie Isla**	**37.33**	**201**	P	**P**	**19 15 21.8**	**+0.6**
BBOO	**Buckleboo**	**41.65**	**244**	P	**P**	**19 15 56.6**	**+0.4**
BBOO				IAmb	IAmb	19 16 00.9	
	comp=Z,23nm,1.4s						
WR0	**Warramunga Arr**	**43.66**	**263**	P	**P**	**19 16 11.9**	**-0.1**
WR0				IAmb	IAmb	19 16 14.9	
	comp=Z,7.2nm,1.2s						
AS31	**Alice Springs**	**43.72**	**257**	P	**P**	**19 16 12.9**	**+0.4**
ASAR	**Alice Springs**	**43.72**	**257**	P	**P**	**19 16 12.9**	**+0.4**
	comp=Z,2.1nm,0.5s,baz=94,slow=7.9,SNR=58						
ASAR				PcP	**PcP**	**19 17 47.4**	**+0.9**
	comp=Z,1.9nm,0.7s,baz=104,slow=3.9,SNR=18						
ASAR				S	**S**	**19 22 02.5**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=91,slow=15,SNR=8.4						
WB0	**Warramunga Arr**	**43.83**	**263**	P	**P**	**19 16 13.3**	**-0.1**
WB2	**Warramunga Arr**	**43.84**	**263**	P	**P**	**19 16 13.3**	**-0.1**
WB2				IAmb	IAmb	19 16 15.8	
	comp=Z,16nm,1.6s						
WRAB	**Tennant Creek**	**43.84**	**263**	P	**P**	**19 16 13.3**	**-0.1**
WRAB				IAmb	IAmb	19 16 22.0	
	comp=Z,13nm,1.6s						
WRA	**Warramunga Arr**	**43.85**	**263**	P	**P**	**19 16 13.5**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=97,slow=7.4,SNR=30						
WRA				PcP	**PcP**	**19 17 48.0**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=96,slow=3.0,SNR=3.2						
WRA				S	**S**	**19 22 02.7**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=98,slow=14,SNR=2.4						
AIN	**Ainahou**	**46.28**	**31**	P	**P**	**19 16 31.0**	**-1.2**
MTN	**Manton Dam**	**48.50**	**271**	P	**P**	**19 16 48.7**	**0.0**
MTN				IAmb	IAmb	19 17 03.7	
	comp=Z,15nm,1.2s						
KNRA	**Kununurra**	**49.95**	**267**	P	**P**	**19 16 59.6**	**+0.3**
KNRA				IAmb	IAmb	19 17 16.9	
	comp=Z,10.0nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.28**	**263**	P	**P**	**19 17 17.3**	**+1.2**
VNDA	**Vanda**	**57.19**	**185**	P	**P**	**19 17 50.3**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=40,slow=6.3,SNR=2.4						
NWAO	**Narrogin (SRO)**	**57.47**	**244**	P	**P**	**19 17 50.6**	**-1.6**
NWAO				IAmb	IAmb	19 17 54.2	
	comp=Z,27nm,1.3s						
CASY	**Casey**	**63.08**	**205**	P	**P**	**19 18 29.1**	**+0.6**
QSPA	**South Pole Qui**	**68.90**	**180**	P	**P**	**19 19 05.6**	**+0.8**
KKM	**Kota Kinabalu**	**69.28**	**285**	P	**P**	**19 19 09.2**	**+1.2**
MJAR	**Matsushiro Arr**	**70.35**	**324**	P	**P**	**19 19 13.7**	**0.0**
	comp=Z,1.3nm,0.6s,baz=136,slow=5.6,SNR=4.6						
YOJ	**Yonaguni jima**	**72.58**	**306**	P	**P**	**19 19 28.0**	**+1.2**
ADK	**Adak**	**72.76**	**1**	P	**P**	**19 19 26.8**	**-0.5**
ADK				IAmb	IAmb	19 19 41.8	
	comp=Z,48nm,1.2s						
TPUB	**Ta-pu**	**73.78**	**303**	P	**P**	**19 19 33.1**	**-0.7**
TPUB				IAmb	IAmb	19 19 34.3	
	comp=Z,11nm,0.8s						
SSLB	**Suanglung**	**73.78**	**304**	P	**P**	**19 19 33.9**	**+0.1**
SSLB				IAmb	IAmb	19 19 44.8	
	comp=Z,7.4nm,1.0s						
PEA0B	**Petropavlovsk-**	**76.75**	**346**	P	**P**	**19 19 50.1**	**+0.5**
PEA0B				IAmb	IAmb	19 20 07.6	
	comp=Z,15nm,1.1s						
PETK	**Petropavlovsk-**	**76.75**	**346**	P	**P**	**19 19 49.3**	**-0.2**
	comp=Z,3.8nm,0.6s,baz=133,slow=8.3,SNR=8.7						
USRK	**Ussuriysk Ar.**	**79.14**	**326**	P	**P**	**19 20 04.6**	**+2.0**
	comp=Z,2.2nm,0.7s,baz=91,slow=0.6,SNR=4.9						
NVAR	**Mina Array Bea**	**81.97**	**44**	P	**P**	**19 20 18.0**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=225,slow=8.6,SNR=5.5						
SNAA	**Sanae**	**87.36**	**179**	P	**P**	**19 20 42.5**	**-0.7**
VNA3	**Neumayer Olymp**	**87.52**	**176**	P	**P**	**19 20 43.5**	**-0.4**
VNA2	**Neumayer--Watz**	**87.95**	**177**	P	**P**	**19 20 45.7**	**-0.2**
	baz=183,slow=3.1						
ILAR	**Eielson Array**	**89.11**	**13**	P	**P**	**19 20 50.5**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=230,slow=4.8,SNR=5.9						
CMAR	**Chiang Mai Arr**	**89.71**	**290**	P	**P**	**19 20 57.6**	**+2.6**
	comp=Z,1.9nm,0.9s,baz=119,slow=3.4,SNR=12						
PDAR	**Pinedale Array**	**89.91**	**43**	P	**P**	**19 20 55.5**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=298,slow=3.2,SNR=4.2						
MKAR	**Makanchi Array**	**111.17**	**313**	PKiKP	**PKiKP**	**19 26 25.2**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=136,slow=3.0,SNR=5.6						
KURBB	**Kurchatov Arra**	**114.08**	**317**	PKP	PKPdf	19 26 30.7	-0.5
	comp=Z,0.4nm,0.6s,baz=107,slow=1.2,SNR=4.8						
ARCES	**ARCESS Array B**	**129.45**	**349**	PKP	**PKPdf**	**19 27 00.0**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=14,slow=1.5,SNR=11						
FINES	**FINESS Array B**	**136.22**	**343**	PKhKP	PKPpre	19 27 02.4	
	comp=Z,1.0nm,0.9s,baz=90,slow=1.9,SNR=4.6						
FINES				PKP	**PKPdf**	**19 27 12.3**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=37,slow=4.8,SNR=6.2						
AKASG	**Malin Array Be**	**143.26**	**330**	PKP	PKPab	19 27 24.2	-0.1
AKBB	**Malin Array Si**	**143.26**	**330**		PKPab	19 27 24.0	-0.3
SORM	**Soroca**	**145.41**	**328**	⇑P	**PKPbc**	**19 27 31.7**	**+0.5**
BR131	**Keskin Array S**	**146.78**	**311**		**PKPbc**	**19 27 35.1**	**-0.4**
BRTR	**Keskin Array B**	**146.78**	**311**	PKPbc	**PKPbc**	**19 27 36.0**	**+0.5**
	comp=Z,2.2nm,0.5s,baz=137,slow=4.6,SNR=8.4						
TLCR		**147.05**	**323**	⇑P	**PKiKP**	**19 27 36.9**	**-0.7**
BUR08	**Bucovina Ar. S**	**147.29**	**330**		**PKiKP**	**19 27 37.7**	**-0.5**
BURAR	**Bucovina Array**	**147.30**	**329**	⇑P	**PKiKP**	**19 27 38.0**	**-0.2**
ANTO	**Ankara**	**147.31**	**312**	⇑P	**PKPbc**	**19 27 37.4**	**+0.5**
BIZ	**Bicaz**	**147.34**	**328**	⇑P	**PKiKP**	**19 27 38.4**	**+0.2**
TOPG	**Topolog**	**147.48**	**323**	⇑P	**PKiKP**	**19 27 39.0**	**+0.4**
VRI	**Vrincioaia**	**147.75**	**326**	⇑P	**PKPbc**	**19 27 38.0**	**+0.4**
PLOR	**Plostina**	**147.80**	**326**	⇑P	**PKPbc**	**19 27 38.5**	**+0.7**
OZUR		**148.08**	**327**	⇑P	**PKiKP**	**19 27 39.8**	**0.0**
DOPR	**Dopca**	**148.37**	**327**	⇓P	**PKiKP**	**19 27 40.4**	**+0.1**
MLR	**Muntele Rosu**	**148.41**	**326**	⇑P	**PKPbc**	**19 27 40.0**	**+0.6**
MLR	**Muntele Rosu**	**148.41**	**326**		**PKPbc**	**19 27 39.8**	**+0.4**
CLL	**Collm**	**148.55**	**346**	⇓*i* PKPbc	**PKiKP**	**19 27 40.9**	**+0.4**
	comp=Z,6.0nm,0.6s						
CLL				*i* PKPab	**PKPab**	**19 27 46.3**	**+1.1**
	comp=Z,4.0nm,0.7s						
CLL				Lm	MLR	23 11 00.0	
	comp=Z,200nm,19.4s						
CSS	**Mathiatis**	**148.71**	**303**		**PKPbc**	**19 27 40.6**	**+0.2**
BRG	**Berggiesshubel**	**148.73**	**344**	*i* PKP	**PKPbc**	**19 27 40.4**	**+0.5**
	comp=Z,3.3nm,0.6s						
BRG				*e*		19 27 46.4	
	comp=Z,3.8nm,0.9s						
VOIR		**148.91**	**327**	⇑P	**PKiKP**	**19 27 41.4**	**-0.2**
ARR	**Arges**	**149.17**	**327**	⇑P	**PKiKP**	**19 27 43.3**	**+1.2**
GZR	**Gura Zlata**	**150.07**	**329**	⇑P	**PKiKP**	**19 27 44.0**	**0.0**
VLAD	**Vladila**	**150.22**	**325**	⇑P	**PKiKP**	**19 27 45.2**	**+1.1**
KHC	**Kasperske Hory**	**150.42**	**344**		**PKPbc**	**19 27 44.1**	**+0.1**
BZS	**Buzias**	**150.45**	**330**	⇓P	**PKiKP**	**19 27 44.9**	**+0.3**
HERR	**Herculane**	**150.62**	**329**	⇑P	**PKiKP**	**19 27 44.9**	**-0.1**
GERES	**GERESS Array B**	**150.65**	**343**	PKPbc	**PKPbc**	**19 27 44.8**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=49,slow=2.5,SNR=18						
CONA	**Conrad Observa**	**150.83**	**340**	*e*PKiKP	**PKiKP**	**19 27 46.1**	**+0.7**
	comp=Z,3.8nm,0.6s						
MOA	**Molln**	**151.39**	**342**	*e*PKiKP	**PKiKP**	**19 27 46.7**	**+0.1**
	comp=Z,2.0nm,0.6s						
ARSA	**Arzberg**	**151.53**	**339**	*e*PKiKP	**PKiKP**	**19 27 47.9**	**+1.0**
	comp=Z,1.7nm,0.6s						
WATA	**Walderalm**	**152.59**	**345**	*i* PKiKP	**PKiKP**	**19 27 49.2**	**0.0**
	comp=Z,2.4nm,0.8s						
RETA	**Reutte**	**152.64**	**346**	*e*PKiKP	**PKiKP**	**19 27 50.1**	**+0.9**
	comp=Z,0.5nm,0.4s						
WTTA	**Wattenberg**	**152.65**	**345**	*e*PKiKP	**PKPbc**	**19 27 49.2**	**0.0**
	comp=Z,1.5nm,0.4s						
ABTA	**Abfaltersbach**	**152.89**	**343**	*e*PKPbc	**PKPbc**	**19 27 49.6**	**-0.1**
	comp=Z,3.4nm,0.8s						
FETA	**Feichten**	**153.09**	**346**	*i* PKiKP	**PKiKP**	**19 27 50.7**	**+0.5**
	comp=Z,2.8nm,0.9s						

*IDC **30** 19:19:39.9±1.1, 24°.96N×97°.90E, h0*km*, mb3.6/6, mb1 3.7/7, mb1mx3.4/52, mbtmp3.6/7, ML4.1/1, MS3.0/2, Ms1 3.1/2, ms1mx2.7/35, Error ellipse: s-maj=55.3km s-min=17.7km az=69.0*
*BJI **30** 19:19:40.0±0.0, 25°.00N×97°.81E, h11*km*, mb3.7/5, ML3.8/9, Ms3.6/6, Ms7 3.6/5*
*NEIC **30** 19:19:41.0±1.3, 24°.91N±0°.08×97°.74E±0°.08, h10*km*±1*km*, mb4.4/9, Error ellipse: s-maj=14.1km s-min=11.7km az=219.0*

ISC 30 19:19:40.4±0.6,**24°84N**±0°.04×**97°83E**±0°.05,**h10**km**, n40,** σ1**9**59**/44, mb3.8/10, Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOHI	**KOHIMA**	**3.48**	**285**	*e*P	**Pn**	**19 20 37.1**	**+2.4**
KMI	**Kunming**	**4.46**	**85**	Pg	**Pg**	**19 21 04.5**	**-1.4**
KMI				Sg	**Sg**	**19 22 01.0**	**-2.8**
KMI				smax	smax		
	com

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.34**	**222**	*e*PG	Pg	19 25 54.4	-0.2
OKC				*e*SG	Sg	19 25 59.0	0.0
	comp=Z,3.1nm,0.4s						
KRLC	**Kraliky**	**1.11**	**270**	*e*PG	Pg	19 26 08.2	-1.1
KRLC				*e*SG	Sg	19 26 22.8	-0.8
	comp=Z,1.2nm,0.3s						
DPC	**Dobruska-Polom**	**1.42**	**281**	*e*SG	Sg	19 26 33.1	-0.7

BJI ***30*** *19:26:57.0±0.0,2˚.40S×102˚.10E,h195km,mB4.6/26, mb4.6/47*
IDC ***30*** *19:26:58.9±1.3,2˚.31S×102˚.26E,h191km±11km,mb4.1/28, mb1 4.2/30,mb1mx4.1/39,mbtmp4.6/30,Error ellipse: s-maj=12.2km s-min=6.9km az=58.0*
NEIC ***30*** *19:26:58.8±1.6,2˚.33S±0˚.05×102˚.17E±0˚.06,h195km±5km, mb4.7/110,Error ellipse: s-maj=9.7km s-min=7.5km az=63.0*
KLM ***30*** *19:26:58.0,2˚.49S×101˚.97E,h200km,mb4.7*
DJA ***30*** *19:26:58.4±0.1,2˚S±1˚×10˚2E±˚,h178km±1km,M4.3/68, mb4.6/68,mB4.9/25,MLv4.7/29,Mw(mB)4.2/25*
ISC 30 19:26:58.6±0.6,2˚.35S±0˚.04×102˚.21E±0˚.04,h191km±4km, n241,σ1§39/266,mb4.7/91,1C-1D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASI	**Maura Aman, Be**	**0.79**	**178**	P	**Pn**	**19 27 26.0**	**-0.1**
MASI				S	**Sn**	**19 27 45.0**	**-2.5**
KRJI	**Kerinci**	**0.79**	**289**	P	**Pn**	**19 27 25.5**	**-0.7**
SDSI	**Sungai Dareh**	**1.61**	**331**	P	**Pn**	**19 27 31.4**	**-1.1**
SDSI				S	**Sn**	**19 27 56.6**	**-2.3**
LHSI	**Lahat**	**1.97**	**138**	P	**Pn**	**19 27 36.1**	**0.0**
LHSI				S	**Sn**	**19 28 04.5**	**-0.8**
RGRI	**Rengat**	**1.99**	**4**	P	**Pn**	**19 27 35.9**	**-0.5**
RGRI				S	**Sn**	**19 28 04.9**	**-1.0**
MNAI	**Manna**	**2.13**	**160**	P	**Pn**	**19 27 38.0**	**+0.1**
MNAI				S	**Sn**	**19 28 07.8**	**-0.7**
MNAI	**Manna**	**2.13**	**160**	Pn	**Pn**	**19 27 38.0**	**+0.1**
PMBI	**Palembang**	**2.62**	**103**	P	**Pn**	**19 27 43.2**	**-0.1**
PMBI	**Palembang**	**2.62**	**103**		**Pn**	**19 27 43.3**	**-0.1**
BKNI	**Bangkinang**	**2.90**	**336**	P	**Pn**	**19 27 46.5**	**-0.1**
BKNI				S	**Sn**	**19 28 23.3**	**-0.9**
BKNI	**Bangkinang**	**2.90**	**336**	Pn	**Pn**	**19 27 46.6**	**-0.1**
LWLI	**Liwa**	**3.23**	**145**	P	**Pn**	**19 27 50.3**	**-0.4**
SISI	**Saibi**	**3.28**	**288**	P	**Pn**	**19 27 50.8**	**-0.3**
SISI				S	**Sn**	**19 28 29.7**	**-2.5**
KASI	**Kota Agung**	**3.89**	**144**	P	**Pn**	**19 27 57.6**	**-1.1**
KASI				S	**Sn**	**19 28 45.0**	**-0.9**
TPRI	**Tanjung Pinang**	**3.99**	**36**	P	**Pn**	**19 28 00.3**	**+0.3**
MNSI	**Mandailing Nat**	**4.08**	**320**	P	**Pn**	**19 28 00.5**	**-0.6**
BLSI	**Bandar Lampung**	**4.26**	**135**	P	**Pn**	**19 28 03.8**	**+0.4**
MYKOM	**Kota Tinggi**	**4.43**	**22**	Pn	**Pn**	**19 28 05.8**	**+0.3**
MYKOM	**Kota Tinggi**	**4.43**	**22**	P	**Pn**	**19 28 06.0**	**+0.5**
PBSI	**Pulau Batu**	**4.54**	**300**	P	**Pn**	**19 28 06.2**	**-0.7**
TPI	**Tanjungpandan** 0.5nm1µm157nm,1.0s	**5.46**	**94**	P	**Pn**	**19 28 19.9**	**+1.2**
GSI	**Gunungsitoli** 12nm41µm3µm,0.6s	**5.88**	**308**	P	**Pn**	**19 28 23.0**	**-1.3**
GSI	**Gunungsitoli**	**5.88**	**308**	Pn	**Pn**	**19 28 22.9**	**-1.4**
RPSI	**Rantau Prapat**	**5.99**	**327**		**Pn**	**19 28 24.7**	**-1.0**
RPSI	**Rantau Prapat**	**5.99**	**327**		**Pn**	**19 28 25.4**	**-0.3**
RPSI					**Sn**	**19 29 32.0**	**-2.4**
PSI	**Prapat** 6.7nm,0.3s,baz=180,slow=8.7,SNR=46	**6.08**	**327**	P	**Pn**	**19 28 25.4**	**-1.5**
PSI				S	**Sn**	**19 29 32.0**	**-4.7**
	1.7nm,0.3s,baz=180,slow=20,SNR=1.1						
DBJI	**Dramaga** 0.2nm2µm48nm,0.7s	**6.16**	**133**	P	**Pn**	**19 28 27.1**	**-0.8**
TSI	**Tuntungan** 0.7nm112nm,0.5s	**6.86**	**328**	P	**Pn**	**19 28 38.4**	**+1.4**
IPM	**Ipoh**	**6.89**	**350**	Pn	**Pn**	**19 28 37.9**	**+0.6**
IPM	**Ipoh**	**6.89**	**350**	P	**Pn**	**19 28 38.0**	**+0.6**
CNJI	**Cibinong** 0.5nm3µm49nm,0.7s	**6.95**	**135**	P	**Pn**	**19 28 35.2**	**-3.0**
LEM	**Lembang** 6.8nm,0.3s,baz=350,slow=6.1,SNR=8.8	**6.99**	**130**	P	**Pn**	**19 28 39.1**	**+0.3**
LEM				S	**Sn**	**19 29 57.0**	**-1.2**
	2.3nm,0.3s,baz=204,slow=20,SNR=1.3						
LEM	**Lembang** 0.1nm25nm,0.8s	**6.99**	**130**	P	**Pn**	**19 28 39.0**	**+0.2**
KCSI	**Kotacane, Aceh** 0.5nm2µm98nm,0.7s	**7.33**	**323**	P	**Pn**	**19 28 40.7**	**-2.4**
SNSI	**Sinabang, Aceh** 1.9nm6µm388nm,0.8s	**7.54**	**309**	P	**Pn**	**19 28 45.1**	**-0.8**
CISI	**Cisompet, Garu**	**7.61**	**133**	P	**Pn**	**19 28 44.4**	**-2.5**
CISI	**Cisompet, Garu**	**7.61**	**133**	Pn	**Pn**	**19 28 44.4**	**-2.5**
KULM	**Kulim**	**7.75**	**348**	Pn	**Pn**	**19 28 48.1**	**-0.5**
KULM	**Kulim**	**7.75**	**348**	P	**Pn**	**19 28 49.0**	**+0.4**
MLSI	**Meulaboh, Aceh** 5µm319nm,0.6s	**8.77**	**319**	P	**Pn**	**19 28 59.8**	**-2.1**
XMIS	**Christmas Isla**	**8.77**	**157**	Pn	Pn	19 28 55.3	-6.8
KSM	**Kuching**	**8.95**	**65**	Pn	**Pn**	**19 29 04.0**	**-0.3**
LHMI	**Lhok Sumawe**	**9.18**	**325**		**Pn**	**19 29 05.0**	**-2.4**
SMRI	**Semarang**	**9.44**	**120**		**Pn**	**19 29 10.4**	**-0.3**
UGM	**Wanagama**	**9.95**	**124**	P	**Pn**	**19 29 16.9**	**-0.6**
UGM	**Wanagama**	**9.95**	**124**		**Pn**	**19 29 16.5**	**-1.0**
WOJI	**Wonogiri, Jawa** 30nm,0.8s	**10.25**	**122**	P	**Pn**	**19 29 20.7**	**-0.5**
SBUM	**Sibu**	**11.09**	**65**	Pn	**Pn**	**19 29 34.5**	**+2.4**
SBUM	**Sibu**	**11.09**	**65**	P	**Pn**	**19 29 35.0**	**+2.9**
JAGI	**Jajag, Banyuwa** 29nm,0.8s	**13.35**	**118**	P	**Pn**	**19 29 58.9**	**-2.0**
JAGI	**Jajag, Banyuwa**	**13.35**	**118**	Pn	**Pn**	**19 29 59.5**	**-1.4**
DLV	**T Lat**	**15.51**	**24**	P	**P**	**19 30 28.6**	**+0.6**
DLV				IAmb	IAmb	19 30 32.6	
	comp=Z,22nm,0.9s						
SPMM	**Sapulut**	**15.88**	**64**	P	**Pn**	**19 30 35.0**	**+3.0**
KKM	**Kota Kinabalu**	**16.29**	**59**		**Pn**	**19 30 37.9**	**+0.9**
KKM				IAmb	IAmb	19 30 41.0	
	comp=Z,59nm,1.4s						
PLAI	**Plampang** comp=Z,1µmcomp=Z,42nm,0.5s	**16.77**	**113**	P	**P**	**19 30 41.4**	**-0.3**
PBA	**Port Blair**	**16.80**	**326**		P	19 30 40.1	-1.8
PBA				IAmb	IAmb	19 31 17.4	
	comp=Z,57nm,1.2s						
TTSI	**Tana Toraja** comp=Z,461nmcomp=Z,43nm,0.8s	**17.61**	**93**	P	**Pn**	**19 30 53.6**	**+1.0**
SPSI	**Sidrap Palu** comp=Z,15nm,0.8s	**17.61**	**96**	P	**Pn**	**19 30 53.1**	**+0.5**
KAPI	**Kappang** comp=Z,8.0nm,0.3s,baz=276,slow=8.1,SNR=20	**17.71**	**99**	P	**Pn**	**19 30 54.1**	**+0.4**
KAPI	**Kappang**	**17.71**	**99**	P	**Pn**	**19 30 53.5**	**-0.3**
MPSI	**Mapaga** comp=Z,828nmcomp=Z,80nm,1.0s	**17.89**	**82**	P	**Pn**	**19 30 56.7**	**+0.8**
BNSI	**Bone** comp=Z,2µmcomp=Z,231nm,0.9s	**17.98**	**97**	P	**Pn**	**19 30 57.6**	**+0.6**
BKSI	**Bulukumba** comp=Z,2µmcomp=Z,310nm,0.8s	**18.11**	**100**	P	**Pn**	**19 30 58.4**	**-0.2**
WBSI	**Waikabubak, Su** comp=Z,75nm,0.6s	**18.55**	**114**	P	**P**	**19 30 59.8**	**-1.4**
MRSI	**Marisa** comp=Z,1µmcomp=Z,123nm,1.0s	**19.93**	**82**	P	**P**	**19 31 17.1**	**+1.1**
EDFI	**Ende, Flores** comp=Z,5.1nm,0.8s	**20.40**	**109**	P	**P**	**19 31 19.8**	**-1.3**
BBSI	**Bau Bau** comp=Z,81nmcomp=Z,9.0nm,0.7s	**20.55**	**99**	P	Pn	19 31 25.7	-2.1
LUWI	**Luwuk** comp=Z,112nm,0.8s	**20.60**	**87**	P	**P**	**19 31 25.5**	**+2.4**
LUWI	**Luwuk**	**20.60**	**87**	P	Pn	19 31 26.0	-2.4
MMRI	**Maumere** comp=Z,2µmcomp=Z,19nm,1.0s	**20.88**	**108**	P	**P**	**19 31 26.2**	**0.0**
MMRI	**Maumere**	**20.88**	**108**	P	**P**	**19 31 25.1**	**-1.1**
MMRI				IAmb	IAmb	19 31 57.2	
	comp=Z,58nm,1.4s						
CM31	**Chiang Mai Arr**	**20.93**	**351**	P	**P**	**19 31 26.6**	**0.0**
CMAR	**Chiang Mai Arr** comp=Z,2.2nm,0.5s,baz=184,slow=9.8,SNR=24	**20.93**	**351**	P	**P**	**19 31 25.9**	**-0.7**
CMAR				PcP	**PcP**	**19 35 27.5**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=210,slow=3.9,SNR=4.7						
CMAR				ScP	**ScP**	**19 38 44.3**	**-1.0**
	comp=Z,1.0nm,0.9s,baz=207,slow=2.8,SNR=7.0						
CHTO	**Chiang Mai**	**21.27**	**351**	P	**P**	**19 31 27.9**	**-2.3**
KMSI	**Cibinong** comp=Z,95nm,0.6s	**21.96**	**83**	P	**P**	**19 31 38.9**	**+1.6**
QIZ	**Qiongzhong**	**22.53**	**19**	P	**P**	**19 31 42.0**	**-0.6**
QIZ				IAmb	IAmb	19 31 49.2	
	comp=Z,34nm,1.2s						
BATI	**Baumata** comp=Z,16nm,0.5s,baz=296,slow=4.6,SNR=7.3	**22.70**	**111**	P	**P**	**19 31 43.2**	**-1.0**
BATI	**Baumata** comp=Z,22nm,1.0s	**22.70**	**111**	P	**P**	**19 31 43.6**	**-0.6**
SOEI	**Soe**	**23.12**	**109**	P	**P**	**19 31 46.2**	**-1.9**
SOEI				IAmb	IAmb	19 31 54.2	
	comp=Z,29nm,1.0s						
GIRL	**Giralia**	**23.31**	**151**	P	**P**	**19 31 51.9**	**+2.3**
SLVN	**Son La**	**23.60**	**4**	P	**P**	**19 31 53.8**	**+1.5**
SANI	**Sanana** comp=Z,30nm,0.7s	**23.77**	**90**	P	**P**	**19 31 55.0**	**+1.1**
KCP	**Kidapawan**	**24.66**	**68**	µ*i*P	**P**	**19 32 04.4**	**+2.3**
NLAI	**Namlea** comp=Z,19nm,0.7s	**24.88**	**93**	P	**P**	**19 32 06.9**	**+2.9**
LBMI	**Labuha** comp=Z,887nmcomp=Z,70nm,1.0s	**25.34**	**87**	P	**P**	**19 32 09.1**	**+0.9**
TNTI	**Ternate**	**25.34**	**83**	P	**P**	**19 32 11.5**	**+3.3**
TNTI				IAmb	IAmb	19 32 12.7	
	comp=Z,15nm,0.5s						
PSAD1	**Pilbara Seismi**	**25.59**	**139**	P	**P**	**19 32 11.0**	**+0.6**
PSAC1	**Pilbara Seismi**	**25.63**	**139**	P	**P**	**19 32 10.5**	**-0.2**
PSAC1				IAmb	IAmb	19 32 22.0	
	comp=Z,26nm,1.2s						
PSAB1	**Pilbara Seismi**	**25.67**	**139**	P	**P**	**19 32 10.5**	**-0.5**
PSAB1				IAmb	IAmb	19 32 12.0	
	comp=Z,50nm,1.6s						
PSAA2	**Pilbara Seismi**	**25.68**	**139**	P	**P**	**19 32 11.4**	**+0.3**
PSAA2				IAmb	IAmb	19 32 19.1	
	comp=Z,29nm,1.4s						
PSAA1	**Pilbara Seismi**	**25.68**	**139**	P	**P**	**19 32 11.7**	**+0.5**
PSAA1				IAmb	IAmb	19 32 12.2	
	comp=Z,12nm,0.8s						
PSA00	**Pilbara Seismi**	**25.69**	**139**	P	**P**	**19 32 11.8**	**+0.6**
PSA00				IAmb	IAmb	19 32 12.7	
	comp=Z,13nm,0.9s						
PSAA3	**Pilbara Seismi**	**25.70**	**139**	P	**P**	**19 32 11.5**	**+0.2**
PSAA3				IAmb	IAmb	19 32 29.8	
	comp=Z,20nm,1.1s						
PSAB3	**Pilbara Seismi**	**25.71**	**139**	P	**P**	**19 32 11.9**	**+0.5**
PSAB3				IAmb	IAmb	19 32 43.0	
	comp=Z,41nm,1.4s						
PSAC3	**Pilbara Seismi**	**25.71**	**140**	P	**P**	**19 32 12.0**	**+0.6**
PSAC3				IAmb	IAmb	19 32 35.6	
	comp=Z,22nm,1.1s						
PSAC2	**Pilbara Seismi**	**25.71**	**139**	P	**P**	**19 32 11.7**	**+0.3**
PSAC2				IAmb	IAmb	19 32 30.3	
	comp=Z,34nm,1.4s						
PSAD2	**Pilbara Seismi**	**25.79**	**139**	P	**P**	**19 32 12.9**	**+0.7**
PSAD2				IAmb	IAmb	19 32 50.5	
	comp=Z,38nm,1.4s						
FITZ	**Fitzroy Crossi** comp=Z,5.2nm,0.7s,baz=328,slow=9.4,SNR=15	**27.80**	**126**	P	**P**	**19 32 29.3**	**-0.8**
FITZ				PcP	**PcP**	**19 35 42.1**	**+0.5**
	comp=Z,4.1nm,0.9s,baz=330,slow=3.0,SNR=3.3						
FITZ	**Fitzroy Crossi**	**27.80**	**126**	P	**P**	**19 32 30.0**	**-0.1**
FITZ					**PcP**	**19 35 41.9**	**+0.3**
GYA	**Guiyang**	**28.96**	**8**	µ*i*P	**P**	**19 32 41.8**	**+1.4**
GYA				pP	pP	19 33 22.3	+2.7
GYA				PP	**PnPn**	**19 33 45.0**	**+2.2**
GYA				S	**S**	**19 37 17.3**	**0.0**
GYA				SS	**ScP**	**19 39 08.5**	**+0.5**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,60nm,3.5s						
GYA				LR	LR		
	comp=Z,50nm,4.9s						
GYA				LR	LR		
	comp=Z,100nm,7.0s						
GYA				LR	LR		
	comp=Z,80nm,5.8s						
SIJI	**Sorong** comp=Z,42nm,0.7s,baz=284,slow=5.8,SNR=55	**29.08**	**88**	P	**P**	**19 32 42.1**	**+0.5**
KNRA	**Kununurra**	**29.32**	**118**	P	**P**	**19 32 42.7**	**-0.9**
KNRA				IAmb	IAmb	19 32 43.5	
	comp=Z,12nm,0.6s						
SHL	**Shillong**	**29.50**	**341**	P	**P**	**19 32 43.8**	**-1.5**
SHL				IAmb	IAmb	19 33 00.1	
	comp=Z,5.1nm,0.5s						
MORW	**Morawa**	**29.66**	**155**	P	**P**	**19 32 46.2**	**-0.2**
MORW				IAmb	IAmb	19 33 19.7	
	comp=Z,37nm,1.6s						
FAKI	**Fak Fak** comp=Z,49nm,1.1s	**30.02**	**92**	P	**P**	**19 32 50.2**	**+0.4**
FAKI	**Fak Fak**	**30.02**	**92**	P	**P**	**19 32 49.9**	**+0.1**
MTN	**Manton Dam**	**30.47**	**112**	P	**P**	**19 32 53.3**	**-0.5**
MTN				IAmb	IAmb	19 32 54.9	
	comp=Z,7.4nm,0.7s						
TPUB	**Ta-pu**	**31.18**	**34**	P	**P**	**19 32 59.6**	**-0.3**
TPUB				IAmb	IAmb	19 33 02.1	
	comp=Z,27nm,1.3s						
YULB	**Yu-li**	**31.63**	**35**	P	**P**	**19 33 03.6**	**-0.2**
YULB				IAmb	IAmb	19 33 27.3	
	comp=Z,14nm,1.1s						
SSLB	**Suanglung**	**31.75**	**34**	P	**P**	**19 33 04.4**	**-0.4**
ODAN	**Odare** comp=Z,10nm,0.5s	**32.37**	**335**	*e*P	**P**	**19 33 10.0**	**-0.5**
NACB	**Ninganchiao**	**32.41**	**34**	P	**P**	**19 33 11.8**	**+1.1**
NACB				IAmb	IAmb	19 33 19.3	
	comp=Z,20nm,0.9s						
TAPN	**Taplejung** comp=Z,12nm,0.5s	**32.67**	**336**	*e*P	**P**	**19 33 13.1**	**-0.1**
YHNB	**Yeheng**	**32.68**	**34**	P	**P**	**19 33 13.2**	**+0.1**
YHNB				IAmb	IAmb	19 33 49.3	
	comp=Z,47nm,1.5s						
CD2	**Chengdu**	**33.11**	**2**	*e*P	**P**	**19 33 18.0**	**+1.4**
ENH	**Enshi**	**33.18**	**12**	P	**P**	**19 33 16.8**	**-0.4**
ENH				IAmb	IAmb	19 33 18.4	
	comp=Z,17nm,0.5s						
NWAO	**Narrogin (SRO)** comp=Z,5.1nm,0.5s,baz=318,slow=2.9,SNR=8.8	**33.53**	**157**	P	**P**	**19 33 21.9**	**+1.6**
NWAO	**Narrogin (SRO)**	**33.53**	**157**	P	**P**	**19 33 22.1**	**+1.9**
NWAO				IAmb	IAmb	19 33 33.3	
	comp=Z,33nm,1.4s						
NWAO	**Narrogin (SRO)**	**33.53**	**157**	P	**P**	**19 33 21.9**	**+1.6**
NWAO				IAmb	IAmb	19 33 33.4	
	comp=Z,37nm,1.4s						
JIRN	**Jiri**	**33.59**	**334**	*e*P	**P**	**19 33 21.0**	**-0.2**
GUN	**Gumba** comp=Z,26nm,0.5s	**33.94**	**334**	*e*P	**P**	**19 33 24.2**	**0.0**
GKN	**Gorkha** comp=Z,12nm,0.2s	**34.59**	**332**	*e*P	**P**	**19 33 29.2**	**-0.4**
WHN	**Wuhan**	**34.70**	**19**	P	**P**	**19 33 32.0**	**+1.7**
WHN				pmax	pmax		
	comp=Z,32nm,0.6s						
KOLN	**Koldanda** comp=Z,18nm,0.7s	**34.89**	**330**	*e*P	**P**	**19 33 32.1**	**-0.2**
DANN	**Dangsing** comp=Z,25nm,0.5s	**35.30**	**331**	*e*P	**P**	**19 33 35.5**	**-0.3**
PYUN	**Piuthan** comp=Z,13nm,0.3s	**35.47**	**330**	*e*P	**P**	**19 33 37.2**	**0.0**
WB0	**Warramunga Arr**	**35.90**	**121**	P	**P**	**19 33 39.7**	**-1.0**
WRA	**Warramunga Arr** comp=Z,7.0nm,0.3s,baz=291,slow=8.9,SNR=106	**35.92**	**121**	P	**P**	**19 33 40.0**	**-1.0**
WRA				PcP	**PcP**	**19 36 03.8**	**0.0**
	comp=Z,3.0nm,0.7s,baz=307,slow=2.3,SNR=7.2						
WRA				S	**S**	**19 38 56.4**	**-8.7**
	comp=Z,1.3nm,0.8s,baz=295,slow=16,SNR=5.3						
WRA				ScP	**ScP**	**19 39 31.3**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=311,slow=2.8,SNR=6.6						
WRAB	**Tennant Creek**	**35.93**	**121**	P	**P**	**19 33 40.2**	**-0.8**
WRAB				IAmb	IAmb	19 33 42.3	
	comp=Z,19nm,0.6s						
WB2	**Warramunga Arr**	**35.93**	**121**	P	**P**	**19 33 39.8**	**-1.3**
WB2				IAmb	IAmb	19 33 42.3	
	comp=Z,18nm,0.6s						
WR0	**Warramunga Arr**	**36.10**	**121**	P	**P**	**19 33 42.0**	**-0.5**
WR0				IAmb	IAmb	19 33 43.8	
	comp=Z,23nm,0.7s						
SMPI	**Sarmi** comp=Z,9.3nm,0.6s	**36.48**	**90**	P	**P**	**19 33 47.0**	**+1.3**
XAN	**Xi'an**	**36.74**	**9**	P	**P**	**19 33 47.8**	**+0.1**
XAN				pmax	pmax		
	comp=Z,31nm,0.8s						
XAN	**Xi'an**	**36.74**	**9**	P	**P**	**19 33 46.9**	**-0.8**
XAN				IAmb	IAmb	19 33 48.8	
	comp=Z,23nm,0.9s						
ASAR	**Alice Springs** comp=Z,16nm,0.6s,baz=300,slow=7.1,SNR=108	**37.27**	**127**	P	**P**	**19 33 51.6**	**-0.7**
ASAR				PcP	**PcP**	**19 36 08.3**	**+0.5**
	comp=Z,5.3nm,0.6s,baz=313,slow=2.5,SNR=18						
ASAR				S	**S**	**19 39 19.4**	**-6.2**
	comp=Z,0.6nm,0.8s,baz=303,slow=15,SNR=4.2						
ASAR				ScP	**ScP**	**19 39 36.1**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=298,slow=3.7,SNR=11						
AS31	**Alice Springs**	**37.28**	**127**	P	**P**	**19 33 51.5**	**-0.9**
AS31				IAmb	IAmb	19 33 54.3	
	comp=Z,6.7nm,0.6s						
FORT	**Forrest**	**37.38**	**142**	P	**P**	**19 33 53.7**	**+0.6**
NJ2	**Nanjing**	**37.69**	**23**	*e*P	**P**	**19 33 56.0**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
LZH	**Lanzhou**	**38.27**	**2**	*e*P	**P**	**19 34 01.8**	**+1.2**
LZH				pP	pP	19 34 44.5	+3.4
LZH				sP	sP	19 35 04.0	+1.1
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,70nm,4.9s						
JOW	**Kunigami**	**38.40**	**39**	P	**P**	**19 34 02.6**	**+0.9**
JOW				IAmb	IAmb	19 34 04.0	
	comp=Z,12nm,0.6s						
JAY	**Jayapura** comp=Z,3.7nm,0.4s,baz=220,slow=9.9,SNR=10.0	**38.46**	**91**	P	**P**	**19 34 01.6**	**-0.9**
GTA	**Gaotai**	**41.62**	**357**	*e*P	**P**	**19 34 29.3**	**+1.2**
GTA				pP	pP	19 35 14.8	+5.7
GTA				sP	sP	19 35 36.5	+5.8
GTA				PcP	**PcP**	**19 36 22.3**	**+0.9**
GTA				S	**S**	**19 40 35.3**	**+5.3**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,82nm,7.8s						
GTA				LR	LR		
	comp=Z,61nm,16.5s						
GTA				LR	LR		
	comp=Z,72nm,15.9s						
GTA				LR	LR		
	comp=Z,66nm,15.9s						
HHC	**Hu-ho-hao-te**	**43.84**	**10**	*e*P	**P**	**19 34 46.5**	**+0.6**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,35nm,6.2s						
BBOO	**Buckleboo**	**43.88**	**137**	P	**P**	**19 34 46.7**	**+0.4**
BBOO				IAmb	IAmb	19 34 47.7	
	comp=Z,24nm,1.2s						
JNU	**Nakatsue** comp=Z,17nm,0.7s,baz=143,slow=6.8,SNR=18	**44.48**	**35**	P	**P**	**19 34 51.0**	**0.0**
JNU	**Nakatsue**	**44.48**	**35**	P	**P**	**19 34 51.2**	**+0.2**
JNU				IAmb	IAmb	19 34 53.5	
	comp=Z,33nm,1.0s						
NIL	**Nilore**	**45.02**	**325**	P	**P**	**19 34 54.2**	**-1.1**
NIL				IAmb	IAmb	19 34 60.0	
	comp=Z,13nm,0.7s						
GUMO	**Guam**	**45.17**	**68**	P	**P**	**19 34 54.1**	**-2.7**
PMG	**Port Moresby**	**45.22**	**101**	P	**P**	**19 34 56.8**	**-0.3**
PMG				IAmb	IAmb	19 35 22.0	
	comp=Z,21nm,1.0s						
KSRS	**Korea Array** comp=Z,5.5nm,0.9s,baz=213,slow=8.5,SNR=31	**46.23**	**29**	P	**P**	**19 35 05.5**	**+0.8**
CTAO	**Charters Tower**	**46.45**	**116**	P	**P**	**19 35 06.5**	**-0.3**
CTAO				IAmb	IAmb	19 35 35.5	
	comp=Z,28nm,1.3s						
STKA	**Stephens Creek** comp=Z,12nm,0.6s,baz=314,slow=7.6,SNR=36	**47.28**	**133**	P	**P**	**19 35 12.9**	**-0.1**
STKA	**Stephens Creek**	**47.28**	**133**	P	**P**	**19 35 13.0**	**0.0**
WMQ	**Urumqi**	**47.77**	**346**	*e*P	**P**	**19 35 17.8**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,23nm,0.6s						
WMQ				LR	LR		
	comp=Z,47nm,16.5s						
WMQ				LR	LR		
	comp=Z,72nm,26.9s						
WMQ				LR	LR		
	comp=Z,210nm,23.9s						
INU	**Inuyama**	**49.67**	**38**	P	**P**	**19 35 30.1**	**-1.0**
KDJ	**Kajisay**	**49.74**	**336**	P	**P**	**19 35 31.8**	**0.0**
KDJ				IAmb	IAmb	19 35 43.6	
	comp=Z,14nm,0.8s						
SOCY	**Socotra**	**50.03**	**288**	P	**P**	**19 35 33.7**	**-0.6**
SOCY				IAmb	IAmb	19 35 54.9	
	comp=Z,37nm,1.3s						
SONM	**Songino Array** comp=Z,20nm,0.6s,baz=184,slow=9.7,SNR=168	**50.11**	**4**	P	**P**	**19 35 35.8**	**+1.5**
SONM				PcP	**PcP**	**19 36 50.7**	**-0.3**
	comp=Z,1.4nm,0.4s,baz=184,slow=4.2,SNR=5.8						
SONM				ScP	**ScP**	**19 40 27.1**	**-1.6**
	comp=Z,1.1nm,0.9s,baz=191,slow=4.4,SNR=4.8						
ULN	**Ulaanbaatar**	**50.19**	**4**	P	**P**	**19 35 35.2**	**+0.3**
CN2	**Changchun**	**50.46**	**22**	*e*P	**P**	**19 35 37.3**	**+0.4**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
GAR	**Garm**	**50.54**	**328**	P	**P**	**19 35 38.7**	**+1.0**
BTK	**Batken**	**51.06**	**329**	P	**P**	**19 35 41.8**	**+0.3**
MAT	**Matsushiro**	**51.18**	**37**	P	**P**	**19 35 42.2**	**-0.3**
MAJO	**Matsushiro**	**51.18**	**37**	P	**P**	**19 35 42.4**	**-0.1**
MJAR	**Matsushiro Arr** comp=Z,9.3nm,0.8s,baz=208,slow=6.4,SNR=32	**51.18**	**37**	P	**P**	**19 35 42.3**	**-0.1**
MJB9	**Matsu-Tunnel**	**51.18**	**37**	P	**P**	**19 35 42.1**	**-0.3**
MK31	**Makanchi Array**	**51.99**	**343**	P	**P**	**19 35 47.9**	**-0.4**
MKAR	**Makanchi Array** comp=Z,2.5nm,0.4s,baz=157,slow=8.7,SNR=42	**51.99**	**343**	P	**P**	**19 35 48.0**	**-0.2**
MAKZ	**Makanchi**	**52.09**	**342**	P	**P**	**19 35 47.6**	**-1.4**
EIDS	**Eidsvold**	**52.27**	**121**	P	**P**	**19 35 50.3**	**-0.4**
EIDS				IAmb	IAmb	19 36 28.4	
	comp=Z,14nm,1.1s						
TOO	**Toolangi**	**52.94**	**137**	P	**P**	**19 35 55.3**	**-0.1**
**USA0

NNZ	**Nelson**	**74.34**	**132**	P	**P**	**19 38 15.2 -0.1**
KHZ	**Kahutara**	**74.68**	**133**	P	**P**	**19 38 16.6 -0.7**
TUWZ	**Tuamarina**	**74.79**	**132**	P	**P**	**19 38 17.6 -0.3**
BR131	**Keskin Array S**	**75.19**	**312**	P	**P**	**19 38 20.2 -0.2**
BRTR	**Keskin Array B**	**75.19**	**312**	P	**P**	**19 38 20.1 -0.3**
	comp=Z,2.8nm,0.7s,baz=142,slow=6.3,SNR=9.4					
MSWZ	**Moikau Station**	**75.76**	**132**	P	**P**	**19 38 23.5 0.0**
PLWZ	**Palliser**	**75.79**	**132**	P	**P**	**19 38 23.4 -0.3**
TIXI	**Tiksi**	**75.86**	**8**	P	**P**	**19 38 22.4 -1.0**
LBTB	**Lobatse**	**76.88**	**245**	P	**P**	**19 38 30.2 -0.1**
LBTB				IAmb	IAmb	19 38 32.5
	comp=Z,22nm,1.4s					
ELL	**Elmali**	**77.31**	**308**	P	**P**	**19 38 30.2 -2.2**
BOSA	**Boshof**	**77.42**	**241**	P	**P**	**19 38 34.9 +1.7**
	comp=Z,2.0nm,0.4s,baz=104,slow=3.5,SNR=9.1					
BOSA	**Boshof**	**77.42**	**241**	P	**P**	**19 38 30.9 -2.4**
BOSA				IAmb	IAmb	19 38 33.8
	comp=Z,43nm,1.6s					
MXZ	**Matakaoa Point**	**77.56**	**128**	P	**P**	**19 38 32.0 -1.6**
IDI	**Anoyia**	**81.02**	**306**	P	**P**	**19 38 53.3 +0.8**
AKASG	**Malin Array Be**	**81.11**	**322**	P	**P**	**19 38 51.9 -0.6**
	comp=Z,0.4nm,0.3s,baz=86,slow=4.8,SNR=4.1					
VNDA	**Vanda**	**81.40**	**169**	P	**P**	**19 38 54.6 +1.0**
	comp=Z,2.4nm,0.6s,baz=307,slow=6.9,SNR=16					
VNDA	**Vanda**	**81.40**	**169**	P	**P**	**19 38 54.5 +1.0**
VTS	**Vitosha**	**83.48**	**313**	P	**P**	**19 39 04.0 -1.2**
AGG	**Agios Georgios**	**83.61**	**310**	P	**P**	**19 39 03.4 -2.4**
AGG				IAmb	IAmb	19 39 22.9
	comp=Z,18nm,1.3s					
LIT	**Litokhoron**	**83.65**	**311**	P	**P**	**19 39 05.5 -0.5**
LIT				IAmb	IAmb	19 39 33.8
	comp=Z,12nm,1.2s					
FINES	**FINESS Array B**	**85.45**	**332**	P	**P**	**19 39 14.0 -0.4**
	comp=Z,0.8nm,0.5s,baz=98,slow=7.9,SNR=10					
KEV	**Kevo**	**87.10**	**340**	P	**P**	**19 39 22.5 +0.2**
KEV				IAmb	IAmb	19 39 39.7
	comp=Z,9.5nm,1.3s					
ARCES	**ARCESS Array B**	**87.55**	**340**	P	**P**	**19 39 24.4 -0.1**
	comp=Z,3.2nm,0.8s,baz=100,slow=4.0,SNR=12					
ARE0	**ARCESS Array S**	**87.55**	**340**	P	**P**	**19 39 24.5 -0.1**
QSPA	**South Pole Qui**	**87.61**	**180**	P	**P**	**19 39 26.4 +1.4**
QSPA				IAmb	IAmb	19 39 28.0
	comp=Z,14nm,1.6s					
ATKA	**Atka Island**	**87.91**	**38**	P	**P**	**19 39 26.3 -0.2**
NVAR	**Mina Array Bea**	**128.45**	**41**	PKP	**PKPdf**	**19 45 43.0 -0.4**
	comp=Z,0.3nm,0.5s,baz=267,slow=1.5,SNR=3.5					
NVAR				SKPbc	SKPbc	19 48 44.2
	comp=Z,0.6nm,0.7s,baz=278,slow=2.6,SNR=4.4					
PDAR	**Pinedale Array**	**130.78**	**31**	SKPbc	**SKPbc**	**19 48 51.6 -2.3**
	comp=Z,2.2nm,0.7s,baz=334,slow=1.1,SNR=13					
PLCA	**Paso Flores**	**136.62**	**188**	SKPbc	**SKPbc**	**19 49 12.9 -0.3**
	comp=Z,1.3nm,0.6s,baz=227,slow=1.9,SNR=4.9					
PLCA	**Paso Flores**	**136.62**	**188**		**SKPbc**	**19 49 12.4 -0.8**
TXAR	**Lajitas Array**	**143.60**	**40**	PKP	PKPbc	19 46 09.5 +0.1
	comp=Z,1.9nm,0.4s,baz=196,slow=0.1,SNR=29					
BDFB	**Brasilia**	**145.55**	**238**	PKPbc	**PKPab**	**19 46 17.1 +1.0**
	comp=Z,3.1nm,0.6s,baz=199,slow=16,SNR=3.9					

*IDC **30** 19:45:47.6±2.1,4.26N×123.80E,h0km,mb3.9/4, mb1 4.0/4,mb1mx3.5/36,mbtmp3.9/4,Error ellipse: s-maj=313.0km s-min=21.7km az=64.0*

*NEIC **30** 19:46:38.4±1.4,3.1N±0.2×122.7E±0.2,h539km±14km, mb4.3/10,Error ellipse: s-maj=31.0km s-min=17.9km az=53.0*

ISC 30 19:46:38.5±0.8,3.17N±0.09×122.8E±0.1,h550km,n22, σ1§66/24,1C,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**4.09**	**45**	*eP*	**P**	**19 48 00.8**	**-0.4**
LUWI	**Luwuk**	**4.18**	**181**	P	**P**	**19 48 00.5**	**-1.4**
LUWI					**S**	**19 49 04.7**	**-5.0**
KCP	**Kidapawan**	**4.43**	**311⇑**	*eP*	**P**	**19 48 06.5**	**+2.7**
KCP				*i* S	S	19 48 55.9	-17
MATI	**Mati**	**5.08**	**42**	*eP*	**P**	**19 48 08.5**	**-0.5**
TNTI	**Ternate**	**5.13**	**118**	P	**P**	**19 48 09.8**	**+0.4**
TNTI					**S**	**19 49 21.4**	**-2.3**
BUKP	**Musuan**	**5.18**	**25**	*eP*	**P**	**19 48 07.1**	**-2.9**
KKM	**Kota Kinabalu**	**7.18**	**294**	P	**P**	**19 48 27.1**	**-1.3**
FAKI	**Fak Fak**	**11.20**	**123**	P	**P**	**19 49 10.5**	**+1.7**
MTN	**Manton Dam**	**17.92**	**153**	P	**P**	**19 50 17.4**	**+1.6**
MTN				IAmb	IAmb	19 50 38.7	
	comp=Z,24nm,1.4s						
KNRA	**Kununurra**	**19.63**	**163**	P	**P**	**19 50 32.1**	**+0.8**
FITZ	**Fitzroy Crossi**	**21.32**	**173**	P	**P**	**19 50 46.9**	**+0.4**
FITZ				IAmb	IAmb	19 51 20.8	
	comp=Z,17nm,1.6s						
WRAB	**Tennant Creek**	**25.60**	**154**	P	**P**	**19 51 24.7**	**0.0**
WRAB				IAmb	IAmb	19 51 59.8	
	comp=Z,7.8nm,1.3s						
WRA	**Warramunga Arr**	**25.60**	**154**	P	**P**	**19 51 24.5**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=336,slow=9.7,SNR=1.9						
WB2	**Warramunga Arr**	**25.61**	**154**	P	**P**	**19 51 25.0**	**+0.2**
WB2				IAmb	IAmb	19 51 27.0	
	comp=Z,17nm,1.6s						
WR0	**Warramunga Arr**	**25.71**	**154**	P	**P**	**19 51 25.6**	**-0.1**
WR0				IAmb	IAmb	19 51 34.5	
	comp=Z,12nm,1.5s						
ASAR	**Alice Springs**	**28.78**	**159**	P	**P**	**19 51 53.1**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=336,slow=7.2,SNR=9.4						
BBOO	**Buckleboo**	**37.92**	**162**	P	**P**	**19 53 09.3**	**0.0**
MK31	**Makanchi Array**	**55.85**	**327**	P	**P**	**19 55 24.9**	**+0.7**
MKAR	**Makanchi Array**	**55.85**	**327**	P	**P**	**19 55 24.8**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=125,slow=8.3,SNR=13						
MAKZ	**Makanchi**	**56.03**	**327**	P	**P**	**19 55 25.9**	**+0.5**
MAKZ				IAmb	IAmb	19 55 53.7	
	comp=Z,13nm,1.4s						
KURBB	**Kurchatov Arra**	**60.16**	**329**	P	**P**	**19 55 53.4**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=132,slow=6.8,SNR=6.7						
KURK	**Kurchatov**	**60.17**	**329**	P	**P**	**19 55 53.3**	**0.0**

*IDC **30** 20:02:36.3±2.2,7.37S×128.86E,h164km±22km,mb3.3/5, mb1 3.4/8,mb1mx3.2/33,mbtmp3.9/8,Error ellipse: s-maj=32.0km s-min=18.9km az=82.0*

*NEIC **30** 20:02:36.3±2.5,7.47S±0.09×128.80E±0.05,h169km±10km, mb4.1/8,Error ellipse: s-maj=12.5km s-min=7.6km az=171.0*

ISC 30 20:02:34.2±0.6,7.53S±0.05×128.86E±0.06,h150km,n28, σ2§54/37,mb3.6/6,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.46**	**101**	Pn	**Pn**	**20 03 19.6**	**+4.7**
SOEI	**Soe**	**5.05**	**244**	Pn	**Pn**	**20 03 50.3**	**+1.9**
SOEI					**Sn**	**20 04 46.1**	**-0.2**
FAKI	**Fak Fak**	**5.69**	**37**	Pn	**Pn**	**20 03 56.5**	**-0.4**
MTN	**Manton Dam**	**5.74**	**157**		**Pn**	**20 04 00.2**	**+2.8**
MTN				Sn	**Sn**	**20 05 02.4**	**-0.1**
BATI	**Baumata**	**5.78**	**242**	P	**Pn**	**20 04 01.4**	**+3.4**
	5.2nm,0.3s,baz=146,slow=2.6,SNR=5.5						
BATI				S	**Sn**	**20 05 03.7**	**+0.1**
	9.3nm,0.3s,baz=55,slow=22,SNR=10						
SIJI	**Sorong**	**7.04**	**20**	P	**Pn**	**20 04 14.8**	**0.0**
	0.4nm,0.3s,baz=87,slow=5.2,SNR=17						
SIJI				S	**Sn**	**20 05 28.3**	**-5.5**
	2.2nm,0.3s,baz=84,slow=13,SNR=9.7						
KNRA	**Kununurra**	**8.10**	**181**		**Pn**	**20 04 30.4**	**+1.5**
KNRA					**Sn**	**20 05 55.5**	**-3.6**
FITZ	**Fitzroy Crossi**	**10.96**	**196**	P	**Pn**	**20 05 06.7**	**-0.3**
	0.3nm,0.3s,baz=25,slow=11,SNR=22						
FITZ				S	**Sn**	**20 07 04.3**	**-3.9**
	1.5nm,0.3s,baz=227,slow=14,SNR=8.1						
FITZ	**Fitzroy Crossi**	**10.96**	**196**		**Pn**	**20 05 07.3**	**+0.4**
FITZ					**Sn**	**20 07 02.5**	**-5.8**
WB0	**Warramunga Arr**	**13.30**	**157**	Pn	**Pn**	**20 05 36.7**	**-0.6**
WRAB	**Tennant Creek**	**13.43**	**157**	Pn	**Pn**	**20 05 38.3**	**-0.7**
WRA	**Warramunga Arr**	**13.44**	**157**	P	**Pn**	**20 05 38.6**	**-0.4**
	0.4nm,0.3s,baz=334,slow=13,SNR=39						
WRA				S	**Sn**	**20 08 02.9**	**-4.9**
	1.7nm,0.3s,baz=332,slow=24,SNR=10						
WB2	**Warramunga Arr**	**13.44**	**157**	Pn	**Pn**	**20 05 38.9**	**-0.2**
WR0	**Warramunga Arr**	**13.53**	**157**	Pn	**Pn**	**20 05 39.6**	**-0.6**
COEN	**Coen**	**15.44**	**116**	P	**P**	**20 06 08.7**	**+3.2**
COEN					IAmb	IAmb	20 06 25.9
	comp=Z,19nm,1.4s						
PSA00	**Pilbara Seismi**	**16.45**	**211**	P	**P**	**20 06 17.1**	**+0.6**
PSA00					IAmb	IAmb	20 06 36.2
	comp=Z,42nm,1.4s						
AS31	**Alice Springs**	**16.76**	**164**	P	**P**	**20 06 22.8**	**+2.8**
AS31					IAmb	IAmb	20 06 24.2
	comp=Z,1.7nm,0.6s						

ASAR	**Alice Springs**	**16.76**	**164**	P	**P**	**20 06 22.1 +2.2**
	comp=Z,0.6nm,0.3s,baz=339,slow=10,SNR=82					
ASAR				S	**S**	**20 09 22.4 -4.3**
	comp=Z,0.4nm,0.3s,baz=350,slow=26,SNR=6.3					
SBUM	**Sibu**	**19.33**	**300**	P	**P**	**20 06 48.7 +0.6**
BBOO	**Buckleboo**	**26.03**	**166**	P	**P**	**20 07 54.2 +0.8**
STKA	**Stephens Creek**	**26.98**	**156**	P	**P**	**20 08 04.3 +2.3**
	comp=Z,0.9nm,0.4s,baz=333,slow=8.3,SNR=3.4					
STKA	**Stephens Creek**	**26.98**	**156**	P	**P**	**20 08 04.1 +2.1**
MCQ	**Macquarie Isla**	**52.69**	**158**	P	**P**	**20 11 32.9 -0.2**
SONM	**Songino Array**	**58.59**	**342**	P	**P**	**20 12 15.1 -0.3**
	comp=Z,0.2nm,0.4s,baz=145,slow=5.3,SNR=1.9					
MKAR	**Makanchi Array**	**68.05**	**327**	P	**P**	**20 13 17.1 -0.4**
	comp=Z,0.5nm,0.4s,baz=117,slow=8.1,SNR=13					
ZALV	**Zalesovo Beam**	**71.56**	**334**	P	**P**	**20 13 38.8 0.0**
	comp=Z,0.4nm,0.5s,baz=133,slow=8.3,SNR=2.4					
KURBB	**Kurchatov Arra**	**72.37**	**329**	P	**P**	**20 13 43.2 -0.5**
	comp=Z,0.6nm,0.5s,baz=127,slow=5.0,SNR=11					
KURK	**Kurchatov**	**72.38**	**329**	P	**P**	**20 13 43.2 -0.5**
KURK				IAmb	IAmb	20 13 44.5
	comp=Z,1.4nm,0.9s					

*MEX **30** 20:06:28.3±0.3,13.99N×91.53W,h46km±34km,MD3.9*
*GCG **30** 20:06:29.5±0.3,14.02N×91.34W,h33km±4km,MD3.8*

ISC 30 20:06:27.1±3.2,14.0N±0.3×91.5W±0.1,h61km,n8,σ0§71/9, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERG	**Entre ros, C**	**0.41**	**354**	*eP*	**Pn**	**20 06 39.4**	**+1.1**
STG3	**Santiaguito 3,**	**0.68**	**357**	*eP*	**Pn**	**20 06 41.8**	**+0.4**
FUG	**Fuego 3**	**0.79**	**58**	*eP*	**Pn**	**20 06 42.6**	**0.0**
PCG	**Pacaya**	**0.96**	**68**	*eP*	**Pn**	**20 06 45.2**	**+0.2**
IXG	**Ixpaco**	**1.06**	**82**	*eP*	**Pn**	**20 06 46.2**	**0.0**
THIG		**1.13**	**321**	*eS*	**Sn**	**20 07 00.7**	**-0.9**
NBG	**Las Nubes**	**1.27**	**64**	*eP*	**Pn**	**20 06 49.8**	**+0.7**
PCIG		**2.33**	**316**	*eP*	**Pn**	**20 07 03.4**	**+0.2**
PCIG				*eS*	**Sn**	**20 07 30.2**	**-0.6**

*NEIC **30** 20:08:47.5±2.0,24.9S±0.1×179.98E±0.10,h518km±10km, mb4.4/25,Error ellipse: s-maj=18.3km s-min=12.4km az=166.0*

*IDC **30** 20:08:55.3±12.0,25.04S×179.52E,h590km±154km, mb3.2/6,mb1 3.4/6,mb1mx3.0/34,mbtmp4.2/6,Error ellipse: s-maj=59.7km s-min=31.3km az=83.0*

ISC 30 20:08:46.9±0.7,25.05S±0.1×180.0E±0.1,h501km,n39, σ1§24/39,mb4.2/18,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.63**	**156**	P	**P**	**20 10 12.9**	**+2.3**
MSVF	**Nonsavu**	**7.45**	**346**	P	**P**	**20 10 39.0**	**+1.1**
MXZ	**Matakaoa Point**	**12.60**	**186**	P	**P**	**20 11 33.6**	**+2.0**
DZM	**Mont Dzumac**	**12.73**	**280**	P	**P**	**20 11 35.7**	**+2.2**
QRZ	**Quartz Range**	**16.95**	**200**	P	**P**	**20 12 16.9**	**-0.3**
NNZ	**Nelson**	**17.07**	**197**	P	**P**	**20 12 19.0**	**+0.6**
KHZ	**Kahutara**	**18.16**	**195**	P	**P**	**20 12 28.4**	**0.0**
LTZ	**Lake Taylor**	**18.83**	**198**	P	**P**	**20 12 34.3**	**-0.4**
ARMA	**Armidale**	**25.62**	**251**	P	**P**	**20 13 37.2**	**+1.2**
ARMA				IAmb	IAmb	20 13 48.5	
	comp=Z,32nm,1.6s						
EIDS	**Eidsvold**	**26.11**	**263**	P	**P**	**20 13 40.6**	**+0.3**
EIDS				IAmb	IAmb	20 14 08.4	
	comp=Z,28nm,1.6s						
CTA	**Charters Tower**	**31.46**	**272**	P	**P**	**20 14 27.3**	**+0.3**
	comp=Z,10nm,0.6s,baz=94,slow=11,SNR=14						
CTAO	**Charters Tower**	**31.46**	**272**	P	**P**	**20 14 27.2**	**+0.3**
CTAO				IAmb	IAmb	20 14 27.8	
	comp=Z,13nm,0.8s						
STKA	**Stephens Creek**	**34.29**	**250**	P	**P**	**20 14 50.0**	**-0.8**
	comp=Z,1.6nm,0.9s,baz=100,slow=10,SNR=4.4						
STKA	**Stephens Creek**	**34.29**	**250**	P	**P**	**20 14 50.2**	**-0.6**
PMG	**Port Moresby**	**34.83**	**291**	P	**P**	**20 14 55.9**	**+0.3**
COEN	**Coen**	**36.27**	**281**	P	**P**	**20 15 08.1**	**+0.6**
COEN				IAmb	IAmb	20 15 30.7	
	comp=Z,21nm,1.4s						
AS31	**Alice Springs**	**41.83**	**262**	P	**P**	**20 15 52.2**	**-0.4**
ASAR	**Alice Springs**	**41.83**	**262**	P	**P**	**20 15 52.0**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=82,slow=8.8,SNR=20						
WR0	**Warramunga Arr**	**42.12**	**267**	P	**P**	**20 15 53.6**	**-1.2**
WR0				IAmb	IAmb	20 15 53.9	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**42.29**	**267**	P	**P**	**20 15 55.2**	**-1.0**
WB2				IAmb	IAmb	20 15 55.4	
	comp=Z,12nm,1.3s						
WRAB	**Tennant Creek**	**42.30**	**267**	P	**P**	**20 15 55.1**	**-1.1**
WRAB				IAmb	IAmb	20 15 56.6	
	comp=Z,3.9nm,0.6s						
WB0	**Warramunga Arr**	**42.30**	**268**	P	**P**	**20 15 55.1**	**-1.2**
WB0				IAmb	IAmb	20 15 57.0	
	comp=Z,5.7nm,0.7s						
WRA	**Warramunga Arr**	**42.30**	**267**	P	**P**	**20 15 55.1**	**-1.2**
	comp=Z,3.3nm,0.5s,baz=99,slow=7.3,SNR=45						
MTN	**Manton Dam**	**47.51**	**275**	P	**P**	**20 16 35.4**	**-1.1**
MTN				IAmb	IAmb	20 16 43.6	
	comp=Z,18nm,1.4s						
KNRA	**Kununurra**	**48.65**	**271**	P	**P**	**20 16 44.5**	**-0.4**
KNRA				IAmb	IAmb	20 17 06.9	
	comp=Z,14nm,1.1s						
FITZ	**Fitzroy Crossi**	**50.71**	**267**	P	**P**	**20 16 59.4**	**-0.7**
MORW	**Morawa**	**56.47**	**251**	P	**P**	**20 17 40.0**	**-0.9**
MORW				IAmb	IAmb	20 17 42.0	
	comp=Z,36nm,1.6s						
CASY	**Casey**	**59.11**	**206**	P	**P**	**20 17 56.5**	**-1.7**
QSPA	**South Pole Qui**	**65.08**	**180**	P	**P**	**20 18 38.1**	**+0.8**
	comp=Z,3.0nm,0.8s,baz=24,slow=1.2,SNR=17						
QSPA	**South Pole Qui**	**65.08**	**180**	P	**P**	**20 18 38.4**	**+1.1**
KKM	**Kota Kinabalu**	**69.19**	**287**	P	**P**	**20 19 02.7**	**-0.7**
KKM				IAmb	IAmb	20 19 05.4	
	comp=Z,5.4nm,0.8s						
SNAA	**Sanae**	**83.57**	**179**	P	**P**	**20 20 21.2**	**-0.4**
SNAA	**Sanae**	**83.57**	**179**	P	**P**	**20 20 21.3**	**-0.3**
VNA3	**Neumayer Olymp**	**83.78**	**177**	P	**P**	**20 20 22.6**	**+0.1**
VNA2	**Neumayer--Watz**	**84.20**	**178**	P	**P**	**20 20 24.9**	**+0.3**
	baz=189,slow=5.0						
NVAR	**Mina Array Bea**	**85.57**	**44**	P	**P**	**20 20 34.1**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=236,slow=6.4,SNR=3.7						
TX31	**Lajitas Ar. Si**	**91.05**	**58**	P	**P**	**20 20 55.1**	**-2.6**
TX32	**Lajitas Array**	**91.05**	**58**	P	**P**	**20 20 54.7**	**-3.1**
TX32				IAmb	IAmb	20 20 56.8	
	comp=Z,3.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**168.09**	**188**	PKPab	**PKPab**	**20 29 07.1**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=167,slow=6.3,SNR=2.3						

*IDC **30** 20:10:37.1±1.2,15.82S×173.14W,h0km,mb4.2/5, mb1 4.4/6,mb1mx3.9/42,mbtmp4.3/6,ML3.4/1,MS3.0/2, Ms1 3.0/2,ms1mx2.6/41,Error ellipse: s-maj=37.6km s-min=29.4km az=161.0*

*NEIC **30** 20:10:40.7±2.2,15.87S±0.05×173.0W±0.1,h27km±5km, mb5.1/25,Error ellipse: s-maj=14.3km s-min=7.8km az=94.0*

ISC 30 20:10:40.3±0.5,15.89S±0.06×172.95W±0.07,h26km,n45, σ1§83/38,mb5.0/17,1C-1D,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.27**	**30**		**Pn**	**20 11 16.9**	**+0.7**
AFI				Sn	**Sn**	**20 11 40.1**	**-3.4**
NIUE	**Niue**	**4.29**	**138**		**Pn**	**20 11 45.2**	**+1.3**
NIUE				Sn	**Sn**	**20 12 29.0**	**-4.1**
RAR	**Rarotonga**	**13.57**	**115**	Pn	**Pn**	**20 13 53.6**	**+2.4**
	1.9nm,0.3s,baz=284,slow=11,SNR=4.2						
RAR				Sn	Sn	20 16 08.2	-13
	0.4nm,0.3s,baz=123,slow=18,SNR=1.3						
RAR	**Rarotonga**	**13.57**	**115**		**Pn**	**20 13 50.8**	**-0.4**
DZM	**Mont Dzumac**	**20.42**	**249**	P	Pn	20 15 19.7	+1.7
	12nm,0.9s,baz=89,slow=17,SNR=5.6						
DZM				LR	LR	20 21 06.5	
	comp=Z,33nm,19.4s,baz=91,slow=31						
DZM	**Mont Dzumac**	**20.42**	**249**	P	Pn	20 15 20.4	+2.3
PPT	**Papeete**	**22.45**	**98**	LR	LR	20 23 58.0	
	comp=Z,40nm,18.0s,baz=300,slow=35						
PPTF	**Pamatai, Papee**	**22.46**	**98**	P	**P**	**20 15 36.3**	**-1.5**
BKZ	**Black Stump Fm**	**24.97**	**200**	P	**P**	**20 16 04.5**	**+2.6**
BKZ				IAmb	IAmb	20 16 22.0	
	comp=Z,81nm,1.7s						
QRZ	**Quartz Range**	**27.86**	**204**	P	**P**	**20 16 29.4**	**+1.6**
LTZ	**Lake Taylor**	**29.64**	**202**	P	**P**	**20 16 45.3**	**+1.6**
LTZ				IAmb	IAmb	20 17 03.1	
	comp=Z,89nm,1.7s						

ARMA	**Armidale**	**35.47**	**240**	P	**P**	**20 17 35.5 +0.6**
ARMA					**pP**	**20 17 35.7 -6.4**
ARMA				IAmb	IAmb	20 17 58.7
	comp=Z,31nm,1.4s					
KHU	**Kahuku**	**38.86**	**27**	P	**P**	**20 18 06.3 +2.4**
CAN	**Canberra**	**39.08**	**233**	P	**P**	**20 18 07.4 +1.9**
CAN				IAmb	IAmb	20 18 52.2
	comp=Z,42nm,1.5s					
H11S2	**WAKE ISLAND Hy**	**39.60**	**329**	T	T	20 59 07.9
	baz=146,slow=75,SNR=11					
H11S3	**WAKE ISLAND Hy**	**39.62**	**329**	T	T	20 59 06.9
	baz=146,slow=75,SNR=11					
H11S1	**WAKE ISLAND Hy**	**39.62**	**329**	T	T	20 59 10.8
	baz=146,slow=75,SNR=10					
H11N3	**WAKE ISLAND Hy**	**40.55**	**330**	T	T	21 00 14.1
	baz=148,slow=75,SNR=7.7					
H11N1	**WAKE ISLAND Hy**	**40.55**	**330**	T	T	21 00 14.2
	baz=148					
H11N2	**WAKE ISLAND Hy**	**40.57**	**330**	T	T	21 00 14.4
	baz=148,slow=75,SNR=7.8					
TOO	**Toolangi**	**42.49**	**231**	P	**P**	**20 18 33.9 +0.3**
TAU	**Tasmania Unive**	**43.26**	**223**	P	**P**	**20 18 40.1 +0.5**
TAU				IAmb	IAmb	20 19 35.5
	comp=Z,53nm,1.6s					
MIDW	**Midway**	**44.05**	**354**	P	**P**	**20 18 45.4 -0.7**
STKA	**Stephens Creek**	**44.17**	**240**	P	**P**	**20 18 47.5 +0.3**
	comp=Z,7.0nm,0.9s,baz=85,slow=8.9,SNR=13					
STKA	**Stephens Creek**	**44.17**	**240**	P	**P**	**20 18 47.6 +0.4**
BBOO	**Buckleboo**	**48.94**	**240**	P	**P**	**20 19 24.2 -0.4**
BBOO				IAmb	IAmb	20 19 27.4
	comp=Z,32nm,1.3s					
WR0	**Warramunga Arr**	**49.97**	**257**	P	**P**	**20 19 32.4 -0.2**
WR0				IAmb	IAmb	20 21 15.1
	comp=Z,15nm,1.4s					
WB0	**Warramunga Arr**	**50.12**	**257**	P	**P**	**20 19 33.4 -0.4**
WB2	**Warramunga Arr**	**50.14**	**257**	P	**P**	**20 19 33.7 -0.3**
WRAB	**Tennant Creek**	**50.15**	**257**	P	**P**	**20 19 33.5 -0.4**
WRAB				IAmb	IAmb	20 19 38.6
	comp=Z,35nm,2.0s					
WRA	**Warramunga Arr**	**50.16**	**257**	P	**P**	**20 19 32.8 -1.2**
	comp=Z,3.0nm,1.0s,baz=95,slow=7.4,SNR=13					
AS31	**Alice Springs**	**50.37**	**252**	P	**P**	**20 19 35.4 -0.3**
ASAR	**Alice Springs**	**50.37**	**252**	P	**P**	**20 19 35.1 -0.5**
	comp=Z,9.5nm,0.7s,baz=84,slow=8.6,SNR=62					
MTN	**Manton Dam**	**54.12**	**265**	P	**P**	**20 20 02.5 -1.1**
MTN				IAmb	IAmb	20 20 31.9
	comp=Z,34nm,1.5s					
FAKI	**Fak Fak**	**55.41**	**278**	P	**P**	**20 20 13.5 +0.5**
KNRA	**Kununurra**	**55.92**	**262**	P	**P**	**20 20 16.4 -0.1**
KNRA				IAmb	IAmb	20 21 12.2
	comp=Z,24nm,1.4s					
PSA00	**Pilbara Seismi**	**63.48**	**254**	P	**P**	**20 21 08.8 +0.2**
NWAO	**Narrogin (SRO)**	**64.76**	**241**	P	**P**	**20 21 17.4 +0.6**
NWAO				IAmb	IAmb	20 23 19.8
	comp=Z,54nm,1.6s					
QSPA	**South Pole Qui**	**74.16**	**180**	P	**P**	**20 22 15.6 +1.1**
	comp=Z,1.5nm,0.9s,baz=313,slow=1.2,SNR=6.6					
QSPA	**South Pole Qui**	**74.16**	**180**	P	**P**	**20 22 15.8 +1.3**
QSPA				IAmb	IAmb	20 23 41.0
	comp=Z,23nm,1.9s					
MOBC	**Moresby Island**	**77.27**	**24**	P	**P**	**20 22 33.4 +1.2**
MOBC				IAmb	IAmb	20 25 02.6
	comp=Z,60nm,1.9s					
ILAR	**Eielson Array**	**82.84**	**11**	P	**P**	**20 23 02.4 +0.3**
	comp=Z,0.3nm,0.6s,baz=222,slow=5.1,SNR=4.1					
SYO	**Syowa Base**	**92.20**	**191‖**	*eP*	**P**	**20 23 45.0 -2.4**
SYO	**Syowa Base**	**92.20**	**191‖**	*epP*	pP	**20 23 55.3 +0.1**
BRTR	**Keskin Array B**	**146.81**	**321**	PKPbc	**PKPab**	**20 30 21.3 -0.6**
	comp=Z,0.7nm,0.7s,baz=108,slow=3.1,SNR=5.7					

IDC 30 20:26:21.6±78.0,18.49S×167.77E,h0km,mb3.7/3, mb1 3.9/3,mb1mx3.5/23,mbtmp3.7/3,Error ellipse: s-maj=1305.0km s-min=115.8km az=72.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**27.10**	**235**	P	P	20 32 05.9	-0.4
	2.2nm,0.

WR0	Warramunga Arr	30.24	166	P	P	20 43 54.3	+0.3
GSI	Gunungsitoli	30.35	256	P	P	20 43 57.7	+2.6
ASAR	Alice Springs	33.68	168	P	P	20 44 23.1	-1.1
	comp=Z,0.3nm,0.6s,baz=346,slow=7.0,SNR=5.8						
ASAR	Alice Springs	33.68	168	P	P	20 44 23.1	-1.1
FORT	Forrest	40.09	179	P	P	20 45 18.6	0.0
FORT				IAmb	IAmb	20 45 28.1	
	comp=Z,15nm,0.9s						
EIDS	Eidsvold	41.90	146	P	P	20 45 31.4	-2.2
EIDS				IAmb	IAmb	20 45 39.6	
	comp=Z,9.8nm,1.2s						
BBOO	Buckleboo	42.99	169	P	P	20 45 42.1	-0.2
NWAO	Narrogin (SRO)	43.22	192	P	P	20 45 43.7	-0.6
NWAO				IAmb	IAmb	20 45 46.9	
	comp=Z,13nm,1.1s						
NWAO	Narrogin (SRO)	43.22	192	P	P	20 45 44.0	-0.3
NWAO				IAmb	IAmb	20 45 46.9	
	comp=Z,10nm,1.1s						
STKA	Stephens Creek	43.49	162	P	P	20 45 45.6	-0.9
ARMA	Armidale	46.26	150	P	P	20 46 09.8	+1.1
TOO	Toolangi	49.96	161	P	P	20 46 39.2	+2.0
TOO				IAmb	IAmb	20 46 45.3	
	comp=Z,7.2nm,1.1s						
MK31	Makanchi Array	53.02	323	P	P	20 47 01.4	+1.4
MK31				IAmb	IAmb	20 47 09.0	
	comp=Z,4.4nm,1.2s						
MKAR	Makanchi Array	53.02	323	P	P	20 47 00.6	+0.5
	comp=Z,0.5nm,0.6s,baz=114,slow=7.9,SNR=4.9						
MKAR	Makanchi Array	53.02	323	P	P	20 47 00.6	+0.5
TARG	Taragay, Kyrgy	53.71	315	P	P	20 47 03.7	-2.0
TARG				IAmb	IAmb	20 47 10.9	
	comp=Z,2.6nm,0.8s						
MIDW	Midway	55.37	62	P	P	20 47 16.0	-1.4
RPZ	Rata Peaks	66.39	147	P	P	20 48 33.6	+1.5

MAN ***30*** *20:37:52.6,9.˚76N×126.˚55E,h20km,mb5.5,ML4.4,MS4.7*
BJI ***30*** *20:37:52.2±0.0,9.˚11N×126.˚69E,h5km,mB4.8/37, mb4.6/48,Ms4.5/45,Ms7 4.3/41*
NEIC ***30*** *20:37:55.7±2.1,9.˚33N±0.˚06×126.˚55E±0.˚05,h10km±1km, mb5.0/156,Error ellipse: s-maj=10.5km s-min=7.3km az=325.0*
MOS ***30*** *20:37:56.2±1.1,9.˚31N×126.˚52E,h24km,mb5.1/25,Error ellipse: s-maj=8.6km s-min=4.9km az=107.8*
IDC ***30*** *20:37:56.7±2.3,9.˚33N×126.˚59E,h13km±13km,mb4.4/30, mb1 4.6/32,mb1mx4.5/40,mbtmp4.5/32,ML4.5/3,MS3.8/8, Ms1 3.8/8,ms1mx3.7/20,Error ellipse: s-maj=16.4km s-min=8.9km az=79.0*
DJA ***30*** *20:37:59.9±0.5,10˚N±2˚×12˚7E±˚,h38km±4km,M4.5/85, mb5.0/85,mB5.1/29,MLv4.4/2,Mw(mB)4.4/29*
GCMT ***30*** *20:38:01.7±0.4,9.˚41N±0.˚03×126.˚75E±0.˚03,h22km±2km, MW4.9/69,Moment Tensor Solution. s19,c25; s69,c89; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.01±.22; Mθθ-0.15±.11; Mϕϕ-1.86±.14; Mrθ-0.42±.17; Mθϕ-0.07±.06; Mϕr2.13±.25; Best double couple: Mo2.90600×10^16 NP1:ϕs190.00000°,δ22.00000°,λ.106.00000°. NP2: ϕs353.00000°,δ69.00000°,λ.84.00000°. Principal axes: T 3.0050, Plg65.0000°, Azm252.0000°; N -0.2000, Plg6.0000°, Azm355.0000°; P -2.8070, Plg24.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
KLM ***30*** *20:38:05.0,9.˚54N×126.˚74E,h75km,mb4.8*

ISC 30 20:37:58.4±0.7,9.˚33N±0.˚03×126.˚63E±0.˚04,h25km±4km, n442,σ1§83/460,mb4.9/144,MS4.2/26,16C-9D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SCPH	Surigao	1.21	292	i↑eP		Pb		20 38 21.6	+0.8
SCPH				i S		Sb		20 38 39.6	+3.6
CGP	Cagayan de Oro	2.10	246	i↓eP		Pb		20 38 35.4	-0.5
CGP				eS		Sb		20 39 03.8	+2.2
DAV	Davao City (W)	2.48	205	Pn		Pb		20 38 41.6	-0.6
	119nm,0.3s,baz=323,slow=4.1,SNR=9.3								
DAV				Sn		Sb		20 39 13.6	+1.3
	161nm,0.3s,baz=113,slow=18,SNR=5.1								
DAV	Davao City (W)	2.48	205			Pn		20 38 36.8	-0.3
DMPH	Davao City--Mi	2.49	207	i↑eP		Pb		20 38 43.2	+0.7
DMPH				i S		Sb		20 39 14.2	+1.3
KCP	Kidapawan	2.77	214	i↓iP		Pn		20 38 44.3	+3.0
KCP				i S		Sn		20 39 17.3	+3.4
LLP	Lapu-Lapu	2.81	291	ePg		Pb		20 38 45.9	-1.9
LLP				eS		Sb		20 39 24.0	+2.2
CTBH	Cotabato--PC H	3.16	229	i↓eP		Pn		20 38 50.0	+3.4
GSPH	General Santos	3.63	207	i↑iP		Pb		20 39 06.2	+4.2
PVCP	Virac	4.89	330	ePg		Pn		20 39 07.1	-3.3
PVCP				eS		Sb		20 40 27.0	+5.3
ZCP	Zamboanga City	5.10	243	i↑eP		Pb		20 39 23.1	-3.9
BOAC	Boac	6.24	312	ePg		Pn		20 39 30.3	+1.4
LQP	Lukban	6.89	314	ePg		Pn		20 39 39.7	+1.6
POLP	Polilio Island	7.06	320	ePg		Pn		20 39 36.2	-4.1
TGY	Tagaytay City	7.32	311	Pn		Pn		20 39 47.9	+4.0
	26nm,0.3s,baz=101,slow=4.6,SNR=4.6								
ENPP	El Nido	7.33	285	ePg		Pn		20 39 46.7	+2.7
BALP	Baler	8.06	323	ePg		Pn		20 39 51.9	-2.1
TNTI	Ternate	8.53	175	P		Pn		20 40 05.2	+4.7
	1μm128nm,0.8s								
TNTI	Ternate	8.53	175	Pn		Pn		20 39 58.1	-2.3
PALP	Palanan	8.71	332	ePg		Pn		20 40 00.6	-2.2
SMPP	San Manuel, Pa	8.92	320	ePg		Pn		20 40 07.6	+1.7
KMSI	Cibinong	9.09	197	P		Pn		20 40 15.7	+7.6
	2μm132nm,0.7s								
LBMI	Labuha	9.94	175	P		Pn		20 40 23.9	+4.1
	1μm119nm,1.1s								
MRSI	Marisa	9.96	208	P		Pn		20 40 22.1	+2.1
	598nm62nm,0.9s								
SZP	Santa	10.14	324			Pn		20 40 14.9	-7.6
KKM	Kota Kinabalu	10.83	253	Pn		Pn		20 40 28.1	-3.9
LUWI	Luwuk	11.00	201	P		Pn		20 40 38.8	+4.5
	4μm137nm,1.1s								
LUWI	Luwuk	11.00	201			Pn		20 40 29.9	-4.4
SIJI	Sorong	11.13	155	Pn		Pn		20 40 36.8	+0.7
	2.5nm,0.3s,baz=311,slow=4.3,SNR=16								
SIJI				Sn		Sn		20 42 33.0	-6.9
	0.7nm,0.3s,baz=17,slow=23,SNR=1.3								
MPSI	Mapaga	11.17	217	P		Pn		20 40 45.6	+9.0
	11nm,1.2s								
SANI	Sanana	11.32	183	P		Pn		20 40 41.2	+2.5
	564nm46nm,0.8s								
NLAI	Namlea	12.49	178	P		Pn		20 40 57.5	+2.8
	551nm42nm,0.7s								
FAKI	Fak Fak	13.39	155	P		Pn		20 41 09.9	+2.8
	61nm,1.0s								
FAKI	Fak Fak	13.39	155	Pn		Pn		20 41 03.8	-3.3
TTSI	Tana Toraja	14.04	209	P		P		20 41 21.3	-2.2
	644nm58nm,0.8s								
BKB	Balikpapan	14.31	223	P		P		20 41 23.2	-3.3
	142nm,1.4s								
SPSI	Sidrap Palu	14.87	208	P		P		20 41 33.0	+0.3
	620nm56nm,1.2s								
YULB	Yu-li	14.89	341	Pn		Pn		20 41 27.3	-0.1
TPUB	Ta-pu	15.03	338	P		P		20 41 34.1	-0.4
BNSI	Bone	15.11	206	P		P		20 41 35.0	-0.4
	955nm123nm,1.1s								
BBSI	Bau Bau	15.27	196	P		P		20 41 39.0	+1.9
	50nm6.0nm,1.0s								
SSLB	Suanglung	15.37	340	Pn		Pn		20 41 32.6	-1.2
YOJ	Yonaguni jima	15.44	348	P		Pn		20 41 36.6	+1.9
YOJ				pmax		pmax			
	comp=Z,72nm,0.9s								
YOJ	Yonaguni jima	15.44	348			Pn		20 41 36.6	+1.9
YOJ				IAmb		IAmb		20 41 53.4	
	comp=Z,72nm,0.9s								
KAPI	Kappang	15.81	206	Pn		P		20 41 41.6	-1.5
	comp=Z,0.4nm,0.3s,baz=359,slow=2.4,SNR=5.7								
KAPI	Kappang	15.81	206	P		Pn		20 41 37.4	-2.2
KAPI				pmax		pmax			
	comp=Z,32nm,1.0s								
KAPI	Kappang	15.81	206			Pn		20 41 37.4	-2.2
SBUM	Sibu	15.87	245			Pn		20 41 35.1	-5.3
SBUM	Sibu	15.87	245	P		P		20 41 46.0	+2.1
BKSI	Bulukumba	15.94	204	P		P		20 41 44.9	+0.4
	comp=Z,385nmcomp=Z,32nm,1.0s								
YHNB	Yeheng	16.06	342	P		Pn		20 41 43.0	+0.3
YHNB				IAmb		IAmb		20 41 56.8	
	comp=Z,150nm,1.7s								
KBKI	Kotabaru	16.31	220	P		P		20 41 53.4	+4.6
	comp=Z,693nmcomp=Z,67nm,0.8s								
SMPI	Sarmi	16.47	132	P		Pn		20 41 48.7	+0.7
	comp=Z,663nmcomp=Z,56nm,1.4s								
QZH	Quanzhou	17.31	335	P		Pn		20 41 58.0	-0.5
QZH						S	Sn	20 45 13.3	+2.8
QZH						LR	LR		
	comp=Z,820nm,17.3s								
QZH						LR	LR		
	comp=Z,190nm,16.4s								
QZH						LR	LR		
	comp=Z,970nm,16.9s								
JOW	Kunigami	17.48	5	P		P		20 42 03.3	+1.7
	comp=Z,0.1nm,0.3s,baz=180,slow=14,SNR=7.3								
JOW	Kunigami	17.48	5	P		Pn		20 42 01.0	+0.5
SAUI	Saumlaki	17.82	165	P		P		20 42 05.9	+0.5
GENI	Genyem	17.95	131	P		P		20 42 06.7	-0.2
	comp=Z,1μmcomp=Z,101nm,1.2s								
KSM	Kuching	18.02	245	P		P		20 42 08.6	+1.0
KSM	Kuching	18.02	245	P		P		20 42 12.0	+4.4
DLV	T Lat	18.02	280	P		Pn		20 42 05.4	-2.2
JAY	Jayapura	18.30	129	P		Pn		20 42 11.9	+1.0
	comp=Z,0.4nm,0.3s,baz=280,slow=7.5,SNR=8.6								
JAY	Jayapura	18.30	129	P		Pn		20 42 10.9	0.0
	comp=Z,341nmcomp=Z,26nm,1.0s								
GUMO	Guam	18.36	75	P		Pn		20 42 12.6	+1.1
GUMO				pmax		pmax			
	comp=Z,192nm,1.4s								
GUMO	Guam	18.36	75	P		Pn		20 42 12.6	+1.1
GUMO				IAmb		IAmb		20 43 00.4	
	comp=Z,192nm,1.4s								
MMRI	Maumere	18.38	194	P		Pn		20 42 16.5	+4.8
	comp=Z,98nm,0.8s								
MMRI	Maumere	18.38	194	P		P		20 42 08.1	-3.4
MMRI				IAmb		IAmb		20 42 25.0	
	comp=Z,57nm,0.7s								
EDFI	Ende, Flores	18.62	195	P		Pn		20 42 18.6	+3.8
	comp=Z,21nm,0.7s								
QIZ	Qiongzhong	18.90	302	P		P		20 42 15.8	-1.6
QIZ				sP		pP		20 42 21.8	-1.4
QIZ				S		Sn		20 45 49.5	+0.4
QIZ				pmax		pmax			
	comp=Z,16nm,1.7s								
QIZ				LR		LR			
	comp=Z,510nm,18.6s								
QIZ				LR		LR			
	comp=Z,740nm,17.2s								
QIZ				LR		LR			
	comp=Z,930nm,16.1s								
QIZ	Qiongzhong	18.90	302	P		P		20 42 15.5	-1.8
SOEI	Soe	19.11	187	P		Pn		20 42 25.3	+4.7
	comp=Z,139nm,0.9s								
SOEI	Soe	19.11	187			Pn		20 42 21.4	+0.8
SOEI				IAmb		IAmb		20 42 44.4	
	comp=Z,118nm,0.9s								
BATI	Baumata	19.63	189	P		Pn		20 42 26.9	+0.1
	comp=Z,9.1nm,0.3s,baz=296,slow=0.8,SNR=19								
BATI				S		Sn		20 46 14.7	+8.0
	comp=Z,1.7nm,0.3s,baz=152,slow=1.8,SNR=3.2								
BATI	Baumata	19.63	189	P		Pn		20 42 26.8	0.0
	comp=Z,863nmcomp=Z,125nm,0.9s								
PLAI	Plampang	20.08	206	P		Pn		20 42 35.2	+3.1
	comp=Z,928nmcomp=Z,129nm,0.8s								
WBSI	Waikabubak, Su	20.18	201	P		Pn		20 42 35.7	+2.4
	comp=Z,90nm,0.8s								
KMMI	Kalianget	20.59	218	P		Pn		20 42 41.9	+3.8
	comp=Z,101nm,1.1s								
DNP	Denpasar	21.20	213	P		P		20 42 47.1	+4.8
	comp=Z,154nm,0.6s								
GRJI	Gresik	21.43	222	P		P		20 42 49.5	+4.7
	comp=Z,63nm,1.5s								
JAGI	Jajag, Banyuwa	21.61	215	P		P		20 42 50.3	+3.5
	comp=Z,39nm,0.9s								
JAGI	Jajag, Banyuwa	21.61	215	P		P		20 42 48.4	+1.5
JAGI				IAmb		IAmb		20 43 18.4	
	comp=Z,56nm,1.3s								
SSE	Sheshan	22.24	348	P		P		20 42 55.0	+1.6
SSE				sP		pwP		20 43 05.5	-0.8
SSE				S		S		20 46 57.3	+0.3
SSE				pmax		pmax			
	comp=Z,14nm,0.7s								
SSE				pmax		pmax			
	comp=Z,70nm,3.5s								
SSE				LR		LR			
	comp=Z,160nm,12.6s								
TPI	Tanjungpandan	22.40	238	P		P		20 42 57.2	+1.9
	comp=Z,21nm,1.0s								
MTN	Manton Dam	22.48	168	P		P		20 42 55.8	-0.2
	baz=22,SNR=11								
MTN	Manton Dam	22.48	168	P		P		20 42 56.5	+0.4
MTN				IAmb		IAmb		20 43 02.9	
	comp=Z,30nm,0.8s								
KDU	Kakadu	22.63	165	P		P		20 42 57.0	-0.7
	baz=23,SNR=14								
NJ2	Nanjing	23.73	343	eP		P		20 43 10.0	+1.3
NJ2				S		S		20 47 29.3	+6.8
NJ2				pmax		pmax			
	comp=Z,14nm,0.6s								
NJ2				pmax		pmax			
	comp=Z,200nm,3.5s								
NJ2				LR		LR			
	comp=Z,360nm,13.7s								
NJ2				LR		LR			
	comp=Z,240nm,9.9s								
NJ2				LR		LR			
	comp=Z,480nm,15.6s								
MYKOM	Kota Tinggi	23.86	253	P		P		20 43 09.4	-0.8
MYKOM				IAmb		IAmb		20 43 15.0	
	comp=Z,26nm,1.0s								
MYKOM	Kota Tinggi	23.86	253	P		P		20 43 13.0	+2.9
JNU	Nakatsue	24.00	9	P		P		20 43 11.2	-0.1
	comp=Z,22nm,0.9s,baz=171,slow=4.5,SNR=18								
JNU	Nakatsue	24.00	9	P		P		20 43 11.0	-0.3
JNU				IAmb		IAmb		20 43 13.2	
	comp=Z,35nm,1.0s								
WHN	Wuhan	24.02	333	P		P		20 43 23.0	+12
WHN				S		S		20 47 35.5	+8.4
WHN				LR		LR			
	comp=N,330nm,11.5s								
WHN				LR		LR			
	comp=E,650nm,12.4s								
WHN				LR		LR			
	comp=Z,1μm,17.3s								
LEM	Lembang	24.83	230	P		P		20 43 23.0	+3.8
	comp=Z,82nm,1.0s,baz=183,slow=3.1,SNR=13								
LEM	Lembang	24.83	230	P		P		20 43 23.6	+4.4
	comp=Z,42nm,1.0s								
KNRA	Kununurra	24.93	175	P		P		20 43 19.8	0.0
	baz=25,SNR=19								
KNRA	Kununurra	24.93	175	P		P		20 43 19.3	-0.5
GYA	Guiyang	25.45	315	eP		P		20 43 25.5	+0.8
GYA				PP		PnPn		20 44 06.0	+5.5
GYA				S		S		20 47 50.5	0.0
GYA				SS		SnSn		20 48 51.3	+7.2
GYA				pmax		pmax			
	comp=Z,10.0nm,0.8s								
GYA				pmax		pmax			
	comp=Z,80nm,3.5s								
GYA				LR		LR			
	comp=Z,380nm,15.1s								
GYA				LR		LR			
	comp=Z,350nm,17.0s								
GYA				LR		LR			
	comp=Z,500nm,15.3s								
IPM	Ipoh	25.86	261	P		P		20 43 28.9	+0.5
IPM				IAmb		IAmb		20 43 33.8	
	comp=Z,31nm,0.8s								
IPM	Ipoh	25.86	261	P		P		20 43 31.0	+2.6
KULM	Kulim	26.07	263	P		P		20 43 32.5	+2.2
KULM	Kulim	26.07	263	P		P		20 43 33.0	+2.7
LHSI	Lahat	26.48	241	P		P		20 43 37.7	+3.7
	comp=Z,30nm,0.8s								
KASI	Kota Agung	26.54	237	P		P		20 43 37.6	+3.1
	comp=Z,33nm,1.3s								
LWLI	Liwa	26.63	239	P		P		20 43 38.5	+3.0
	comp=Z,72nm,0.8s								
TJN	Taejon	26.93	1	i↑eP		P		20 43 36.1	-1.7
MNAI	Manna	27.24	241	P		P		20 43 41.1	+0.3
FITZ	Fitzroy Crossi	27.27	182	P		P		20 43 40.0	-0.9
	baz=27,SNR=26								
FITZ	Fitzroy Crossi	27.27	182	P		P		20 43 40.9	-0.1
	comp=Z,20nm,0.8s,baz=19,slow=5.8,SNR=26								
FITZ				LR		LR		20 56 34.3	
	comp=Z,113nm,18.6s,baz=42,slow=41								
FITZ	Fitzroy Crossi	27.27	182	P		P		20 43 40.8	-0.1
FITZ				IAmb		IAmb		20 43 55.0	
	comp=Z,22nm,0.8s								
MASI	Maura Aman, Be	27.28	244	P		P		20 43 49.3	+8.1
KRJI	Kerinci	27.52	247	P		P		20 43 48.2	+4.7
INU	Inuyama	27.58	19	P		P		20 43 43.2	-0.5
PMG	Port Moresby	27.64	132	P		P		20 43 44.2	-0.1
	comp=Z,25nm,0.7s,baz=340,slow=21,SNR=5.5								
PMG	Port Moresby	27.64	132	ceP		P		20 43 44.1	-0.3
PMG				pmax		pmax			
	comp=Z,109nm,1.0s								
PMG	Port Moresby	27.64	132	P		P		20 43 44.0	-0.4
PMG				IAmb		IAmb		20 43 44.8	
	comp=Z,36nm,0.9s								
KSRS	Korea Array	28.02	2	P		P		20 43 47.6	+0.1
	comp=Z,6.1nm,1.0s,baz=179,slow=10,SNR=21								
KSRS				ScP		ScP		20 50 43.2	+1.7
	comp=Z,1.3nm,0.8s,baz=183,slow=2.7,SNR=7.1								
KS19	Wonju Array Si	28.07	2	P		P		20 43 48.0	0.0
TIA	Tai'an	28.12	344	P		P		20 43 49.5	+1.0
TIA				pmax		pmax			
	comp=Z,9.0nm,0.8s								
PSI	Prapat	28.29	258	P		P		20 43 51.2	+0.8
	comp=Z,39nm,1.1s,baz=176,slow=0.4,SNR=8.7								
PSI	Prapat	28.29	258	P		P		20 43 50.4	0.0
PSI				pmax		pmax			
	comp=Z,43nm,1.1s								
RPSI	Rantau Prapat	28.32	258	P		P		20 43 50.4	0.0
RPSI				IAmb		IAmb		20 43 55.8	
	comp=Z,43nm,1.1s								
CM31	Chiang Mai Arr	28.33	292	P		P		20 43 49.0	-1.6
CMAR	Chiang Mai Arr	28.33	292	P		P		20 43 49.8	-0.8
	comp=Z,5.5nm,1.1s,baz=107,slow=6.2,SNR=9.7								
CMAR				PcP		PcP		20 47 04.5	+1.2
	comp=Z,1.3nm,0.9s,baz=106,slow=2.0,SNR=4.8								
CMAR				ScP		ScP		20 50 43.4	+0.4
	comp=Z,1.8nm,1.0s,baz=68,slow=0.8,SNR=9.2								
COEN	Coen	28.37	144	P		P		20 43 50.4	-0.5
CHTO	Chiang Mai	28.43	292	P		P		20 43 50.0	-1.4
CHTO				pmax		pmax			
	comp=Z,8.0nm,1.2s								
CHTO	Chiang Mai	28.43	292	P		P		20 43 50.0	-1.4
MAJO	Matsushiro	29.06	19	P		P		20 43 55.3	-1.5
MAJO				pmax		pmax			
	comp=Z,8.0nm,1.1s								
MAJO	Matsushiro	29.06	19	P		P		20 43 55.3	-1.5
MAT	Matsushiro	29.06	19	P		P		20 43 55.0	-1.8
MJAR	Matsushiro Arr	29.06	19	P		P		20 43 55.8	-1.0
	comp=Z,3.6nm,0.9s,baz=201,slow=9.0,SNR=8.9								
MJAR				PcP		PcP		20 47 05.9	+1.1
	comp=Z,1.9nm,0.7s,baz=174,slow=3.0,SNR=5.1								
MJB9	Matsu-Tunnel	29.06	19	P		P		20 43 55.2	-1.6
KCSI	Kotacane, Aceh	29.24	261	P		P		20 43 59.1	+0.4
	comp=Z,24nm,0.8s								
SISI	Saibi	29.41	250	P		P		20 44 00.9	+0.8
	comp=Z,20nm,1.2s								
XAN	Xi'an	29.49	329	P		P		20 44 02.5	+1.8
XAN				pmax		pmax			
	comp=Z,6.0nm,0.7s								
XAN				LR		LR			
	comp=Z,550nm,17.3s								
XAN				LR		LR			
	comp=Z,380nm,17.4s								
XAN				LR		LR			
	comp=Z,830nm,16.3s								
XAN	Xi'an	29.49	329	P		P		20 43 58.4	-2.3
XAN				pmax		pmax			
	comp=Z,7.0nm,0.7s								
XAN	Xi'an	29.49	329	P		P		20 43 58.4	-2.3
LHMI	Lhok Sumawe	29.72	264	P		P		20 44 01.1	-1.8
WB0	Warramunga Arr	29.91	165	P		P		20 44 03.1	-1.3
WB0				IAmb		IAmb		20 44 15.0	
	comp=Z,11nm,0.8s								
GSI	Gunungsitoli	29.99	256	P		P		20 44 19.4	+14
GSI	Gunungsitoli	29.99	256	P		P		20 44 04.1	-1.2
GSI				IAmb		IAmb		20 44 19.1	
	comp=Z,45nm,1.0s								
WRAB	Tennant Creek	30.05	165	eP		P		20 44 04.1	-1.7
WRAB				pmax		pmax			
	comp=Z,25nm,2.5s								
WRAB	Tennant Creek	30.05	165	P		P		20 44 04.5	-1.3
WRAB				IAmb		IAmb		20 44 33.2	
	comp=Z,85nm,1.9s								
WRA	Warramunga Arr	30.06	165	P		P		20 44 04.5	-1.4
	comp=Z,5.4nm,0.8s,baz=346,slow=9.5,SNR=6.6								
WB2	Warramunga Arr	30.06	165	P		P		20 44 04.1	-1.7
WR0	Warramunga Arr	30.13	165	P		P		20 44 04.8	-1.6
CD2	Chengdu	30.24	318	P		P		20 44 06.0	-1.4
CD2				S		S		20 49 06.8	+1.0
CD2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
CD2				LR		LR			
	comp=Z,860nm,14.1s								
CD2				LR		LR			
	comp=Z,880nm,14.1s								
CD2				LR		LR			
	comp=Z,1μm,15.1s								
MBWA	Marble Bar	31.05	193	P		P		20 44 13.4	-1.1
PSAD1	Pilbara Seismi	31.31	192	P		P		20 44 16.7	-0.1
PSAC1	Pilbara Seismi	31.39	192	P		P		20 44 17.7	+0.1
PSAC2	Pilbara Seismi	31.40	192	P		P		20 44 17.8	+0.1
PSAB2	Pilbara Seismi	31.40	192	P		P		20 44 17.8	+0.1
PSAB2				IAmb		IAmb		20 44 19.7	
	comp=Z,25nm,0.8s								
PSAA2	Pilbara Seismi	31.41	192	P		P		20 44 17.6	-0.1
PSAA2				IAmb		IAmb		20 44 19.4	
	comp=Z,30nm,0.8s								
PSA00	Pilbara Seismi	31.42	192	P		P		20 44 18.1	+0.3
PSA00				IAmb		IAmb		20 44 19.5	
	comp=Z,34nm,0.9s								
PSAB1	Pilbara Seismi	31.43	192	P		P		20 44 18.1	+0.3
PSAB1				IAmb		IAmb		20 44 20.0	
	comp=Z,28nm,0.8s								
PSAB3	Pilbara Seismi	31.44	192	P		P		20 44 18.1	+0.1
PSAB3				IAmb		IAmb		20 44 19.7	
	comp=Z,28nm,0.8s								
PSAD2	Pilbara Seismi	31.44	192	P		P		20

HHC LR LR
comp=Z,200nm,17.5s
WRKA Warakurna 34.20 177 P **P** **20 44 42.6 +0.5**
baz=34,SNR=7.8
CTA Charters Tower 35.04 147 P **P** **20 44 50.1 +0.7**
comp=Z,16nm,0.7s,baz=330,slow=10,SNR=16
CTAO Charters Tower 35.04 147 P **P** **20 44 50.1 +0.7**
CTAO pmax pmax
comp=Z,18nm,0.8s
CTAO Charters Tower 35.04 147 P **P** **20 44 50.1 +0.7**
CTAO lAmb lAmb 20 44 51.1
comp=Z,18nm,0.8s
USA0B Ussuriysk Arra 35.05 7 P **P** **20 44 47.6 -1.6**
USA0B pmax pmax
comp=Z,14nm,1.0s
USA0B Ussuriysk Arra 35.05 7 P **P** **20 44 47.6 -1.6**
USA0B lAmb lAmb 20 44 51.5
comp=Z,14nm,0.9s
USRK Ussuriysk Ar. 35.05 7 P **P** **20 44 47.5 -1.8**
comp=Z,8.7nm,0.8s,baz=190,slow=8.2,SNR=25
MDJ Mudanjiang 35.25 4 P **P** **20 44 52.2 +1.2**
MDJ lAmb lAmb 20 45 05.4
comp=Z,21nm,0.9s
MEEK Meekatharra 36.59 192 P **P** **20 45 03.0 +0.4**
baz=37,SNR=11
TEY Ternei 36.60 12⇑ *i*P **P** **20 45 04.0 +1.5**
TEY *e* 20 45 11.1
TEY pmax pmax
comp=N,10.0nm,1.1s
TEY pmax pmax
comp=Z,20nm,1.2s
SHL Shillong 36.72 301 P **P** **20 45 02.7 -1.4**
SHL pmax pmax
comp=Z,17nm,0.7s
SHL Shillong 36.72 301 P **P** **20 45 02.7 -1.4**
SHL lAmb lAmb 20 45 15.8
comp=Z,16nm,0.7s
ASAJ Asahikawa 37.33 19 P **P** **20 45 09.3 +0.6**
comp=Z,18nm,1.0s,baz=215,slow=15,SNR=11
GTA Gaotai 38.35 326 *e*P **P** **20 45 17.0 -0.6**
GTA pP pP 20 45 21.3 -2.5
GTA sP sP 20 45 24.3 -2.0
GTA S **S** **20 51 07.8 -3.2**
GTA pmax pmax
comp=Z,3.0nm,0.7s
GTA pmax pmax
comp=Z,36nm,6.5s
GTA LR LR
comp=Z,300nm,18.7s
GTA LR LR
comp=Z,440nm,17.1s
GTA LR LR
comp=Z,500nm,17.5s
YUK Yuzh-Kuril'sk 38.40 22 *e*P **P** **20 45 18.2 +0.4**
YUK *i* S **S** **20 51 12.8 +1.6**
YUK pmax pmax
comp=Z,257nm,1.7s
YUK pmax pmax
comp=Z,206nm,1.3s
YUK pmax pmax
comp=N,115nm,1.2s
LSA Lhasa 38.87 306 P **P** **20 45 25.5 +3.0**
LSA pmax pmax
comp=N,20nm,0.7s
LSA Lhasa 38.87 306 P **P** **20 45 22.4 -0.1**
LSA pmax pmax
comp=Z,6.0nm,0.6s
LSA Lhasa 38.87 306 P **P** **20 45 22.4 -0.1**
MORW Morawa 39.52 195 P **P** **20 45 27.9 +0.6**
baz=40,SNR=6.5
MORW Morawa 39.52 195 P **P** **20 45 28.0 +0.7**
MORW lAmb lAmb 20 45 29.4
comp=Z,30nm,1.0s
H11S3 WAKE ISLAND Hy 39.85 72 T T 21 28 36.6
baz=262,slow=75,SNR=55
H11S1 WAKE ISLAND Hy 39.87 72 T T 21 28 27.7
baz=262,slow=75,SNR=36
H11S2 WAKE ISLAND Hy 39.87 72 T T 21 28 27.9
baz=262,slow=75,SNR=29
FORT Forrest 39.90 178 P **P** **20 45 30.0 -0.5**
FORT lAmb lAmb 20 45 43.5
comp=Z,38nm,0.7s
YSS Yuzh-Sakhalins 39.93 17 *e*P **P** **20 45 31.9 +1.4**
YSS *e* 20 45 41.0
YSS pmax pmax
comp=Z,20nm,0.7s
YSS MLR MLR
comp=Z,200nm,19.0s
YSS MLR MLR
comp=N,100nm,14.0s
YSS MLR MLR
comp=E,200nm,19.0s
YSS Yuzh-Sakhalins 39.93 17 P **P** **20 45 31.8 +1.3**
WAKE Wake Island 39.93 71 P **P** **20 45 30.9 0.0**
KLR Kul'dur 40.00 5 P **P** **20 45 32.0 +0.8**
comp=E,2.5nm,0.7s,baz=204,slow=7.0,SNR=11
KLR Kul'dur 40.00 5*de*P **P** **20 45 31.9 +0.8**
KLR pmax pmax
comp=Z,15nm,1.4s
H11N1 WAKE ISLAND Hy 40.22 71 T T 21 29 13.2
baz=265,slow=74,SNR=64
H11N2 WAKE ISLAND Hy 40.23 71 T T 21 29 18.5
baz=265,slow=74,SNR=46
H11N3 WAKE ISLAND Hy 40.24 71 T T 21 29 19.4
baz=265,slow=74,SNR=53
TAPN Taplejung 40.84 301 *e*P **P** **20 45 38.6 -0.1**
comp=Z,13nm,0.4s
BLDU Ballidu 40.84 193 P **P** **20 45 39.1 +0.9**
baz=41,SNR=9.2
ODAN Odare 40.96 300 *e*P **P** **20 45 39.2 -0.4**
comp=Z,41nm,0.6s
KLBR Kellerberrin 41.57 191 P **P** **20 45 44.7 +0.5**
baz=42,SNR=7.7
RAMN Ramite 41.66 300 *e*P **P** **20 45 45.3 -0.1**
comp=Z,24nm,0.6s
ULN Ulaanbaatar 41.82 340⇑ *e*P **P** **20 45 46.7 +0.4**
ULN pmax pmax
comp=Z,10.0nm,2.5s
ULN Ulaanbaatar 41.82 340 P **P** **20 45 45.8 -0.6**
EIDS Eidsvold 41.91 146 P **P** **20 45 47.1 0.0**
baz=42,SNR=5.4
EIDS Eidsvold 41.91 146 P **P** **20 45 46.8 -0.3**
EIDS lAmb lAmb 20 45 48.3
comp=Z,16nm,0.8s
SONM Songino Array 42.02 340 P **P** **20 45 48.1 +0.2**
comp=Z,1.1nm,0.7s,baz=142,slow=7.4,SNR=7.7
SONM ScP **ScP** **20 51 32.5 +0.8**
comp=Z,0.5nm,0.7s,baz=151,slow=3.4,SNR=4.1
GRNR Gornyy 42.10 9⇓ *i*P **P** **20 45 50.1 +1.7**
GRNR pmax pmax
comp=Z,9.0nm,1.0s
GRNR MLR MLR
comp=Z,160nm,20.0s
JIRN Jiri 42.22 301 *e*P **P** **20 45 49.7 -0.4**
comp=Z,48nm,0.7s
MUN Mundaring 42.27 193 P **P** **20 45 50.8 +0.9**
baz=42,SNR=6.8
GUN Gumba 42.55 301 *e*P **P** **20 45 52.2 -0.6**
comp=Z,65nm,0.8s
BBOO Buckleboo 42.86 168 P **P** **20 45 54.8 +0.1**
baz=43,SNR=7.4
BBOO Buckleboo 42.86 168 P **P** **20 45 54.6 -0.1**
BBOO lAmb lAmb 20 46 10.9
comp=Z,18nm,0.7s
PKIN Phulchoki 42.86 301 *e*P **P** **20 45 54.5 -0.8**
comp=Z,18nm,0.6s
NWAO Narrogin (SRO) 42.97 192 P **P** **20 45 56.5 +1.0**
baz=43,SNR=6.5
NWAO Narrogin (SRO) 42.97 192 P **P** **20 45 55.7 +0.2**
comp=Z,27nm,0.8s,baz=7.1,slow=9.1,SNR=10
NWAO Narrogin (SRO) 42.97 192 P **P** **20 45 55.8 +0.2**
NWAO lAmb lAmb 20 45 58.3
comp=Z,37nm,0.9s
NWAO Narrogin (SRO) 42.97 192 P **P** **20 45 55.2 -0.3**
NWAO lAmb lAmb 20 45 58.4
comp=Z,29nm,0.9s
DMN Daman 43.12 301 *e*P **P** **20 45 56.6 -0.7**
comp=Z,18nm,0.7s
STKA Stephens Creek 43.40 161 P **P** **20 45 59.1 0.0**
baz=44,SNR=7.7
STKA Stephens Creek 43.40 161 P **P** **20 45 58.8 -0.3**
comp=Z,6.4nm,0.8s,baz=351,slow=9.3,SNR=12
STKA PP **PP** **20 47 40.4 0.0**
comp=Z,6.1nm,0.9s,baz=305,slow=13,SNR=2.9
STKA Stephens Creek 43.40 161 P **P** **20 45 58.9 -0.3**
HTT Hallett 44.10 165 P **P** **20 46 04.8 0.0**
baz=44,SNR=4.5

ZEA Zeya 44.29 1 *e*P **P** **20 46 06.8 +0.8**
ZEA *e* 20 56 04.0
ZEA pmax pmax
comp=Z,24nm,1.6s
ZEA MLR MLR
comp=Z,300nm,20.0s
KOLN Koldanda 44.45 300 *e*P **P** **20 46 07.8 -0.1**
comp=Z,35nm,0.7s
DANN Dangsing 44.47 301 *e*P **P** **20 46 07.8 -0.4**
comp=Z,41nm,0.7s
CMSA Cobar Meteorol 44.55 157 P **P** **20 46 09.1 +0.8**
baz=45,SNR=5.1
PYUN Piuthan 45.05 301 *e*P **P** **20 46 12.4 -0.4**
comp=Z,60nm,0.9s
ARPS Mount Arapiles 48.03 164 P **P** **20 46 36.6 +1.0**
baz=48,SNR=7.3
WMQ Urumqi 48.18 322 *e*P **P** **20 46 37.8 +0.9**
WMQ sP sP 20 46 45.0 -0.8
WMQ pmax pmax
comp=Z,17nm,0.7s
WMQ LR LR
comp=Z,280nm,17.7s
WMQ LR LR
comp=Z,130nm,21.9s
WMQ LR LR
comp=Z,200nm,20.5s
CAN Canberra 49.18 156 P **P** **20 46 45.9 +1.3**
CAN pmax pmax
comp=Z,52nm,1.6s
CAN Canberra 49.18 156 P **P** **20 46 45.9 +1.3**
CAN lAmb lAmb 20 48 38.1
comp=Z,52nm,1.6s
TOO Toolangi 49.89 160 P **P** **20 46 50.5 +0.6**
TOO pmax pmax
comp=Z,39nm,1.7s
TOO Toolangi 49.89 160 P **P** **20 46 50.5 +0.6**
TOO lAmb lAmb 20 46 59.2
comp=Z,39nm,1.6s
DZM Mont Dzumac 49.98 129 *e*LR LR 21 01 15.0
comp=Z,220nm,24.9s
DZM Mont Dzumac 49.98 129 P **P** **20 46 51.3 +0.3**
DZM lAmb lAmb 20 47 05.8
comp=Z,12nm,1.0s
PETK Petropavlovsk- 50.34 24 P **P** **20 46 55.0 +1.8**
comp=Z,4.1nm,0.7s,baz=184,slow=4.1,SNR=5.0
YAK Yakutsk 52.65 2 *e*P **P** **20 47 11.0 +0.8**
YAK pmax pmax
comp=Z,22nm,1.1s
YAK pmax pmax
comp=N,14nm,1.0s
YAK pmax pmax
comp=E,5.0nm,1.2s
YAK Yakutsk 52.65 2 P **P** **20 47 10.3 +0.1**
YAK lAmb lAmb 20 47 23.7
comp=Z,16nm,0.7s
MK31 Makanchi Array 52.99 323 P **P** **20 47 13.0 -0.1**
MK31 pmax pmax
comp=Z,8.0nm,1.0s
MK31 Makanchi Array 52.99 323 P **P** **20 47 13.0 -0.1**
MKAR Makanchi Array 52.99 323 P **P** **20 47 13.3 +0.2**
comp=Z,4.7nm,0.6s,baz=121,slow=8.6,SNR=23
MAKZ Makanchi 53.18 323 P **P** **20 47 14.4 -0.1**
MAKZ pmax pmax
comp=Z,21nm,1.3s
MAKZ Makanchi 53.18 323 P **P** **20 47 14.4 -0.1**
MAKZ lAmb lAmb 20 47 22.7
comp=Z,21nm,1.2s
PRZ Przheval'sk 53.51 317 P **P** **20 47 15.5 -1.7**
PRZ pmax pmax
comp=Z,38nm,1.1s
PRZ Przheval'sk 53.51 317 P **P** **20 47 15.5 -1.7**
PRZ lAmb lAmb 20 47 32.5
comp=Z,38nm,1.1s
TARG Taragay, Kyrgy 53.62 316 P **P** **20 47 16.5 -1.8**
KSH Kashi 54.12 312 P **P** **20 47 24.0 +2.3**
KSH sP sP 20 47 29.8 -0.8
KSH PP **PP** **20 49 24.8 +1.4**
KSH S **S** **20 54 59.8 +2.7**
KSH pmax pmax
comp=Z,19nm,1.1s
KSH pmax pmax
comp=Z,190nm,4.3s
KSH LR LR
comp=Z,140nm,6.2s
KSH LR LR
comp=Z,160nm,7.4s
KSH LR LR
comp=Z,170nm,11.0s
NIL Nilore 54.56 305 P **P** **20 47 24.3 -0.5**
NIL pmax pmax
comp=Z,22nm,0.8s
NIL Nilore 54.56 305 P **P** **20 47 24.3 -0.5**
NIL lAmb lAmb 20 47 27.8
comp=Z,22nm,0.8s
TAU Tasmania Unive 55.31 162 P **P** **20 47 30.7 +0.7**
TAU pmax pmax
comp=Z,41nm,1.4s
TAU Tasmania Unive 55.31 162 P **P** **20 47 30.6 +0.7**
TAU lAmb lAmb 20 48 46.5
comp=Z,41nm,1.4s
ZAA0 Zalesovo Array 55.62 331 P **P** **20 47 31.2 -0.9**
ZALV Zalesovo Beam 55.62 331 P **P** **20 47 31.2 -0.9**
comp=Z,1.7nm,0.5s,baz=112,slow=6.1,SNR=10.0
AAK Ala-Archa 56.24 316⇑ *e*P **P** **20 47 37.7 +0.7**
AAK pmax pmax
comp=Z,1.0nm,1.0s
AAK Ala-Archa 56.24 316 P **P** **20 47 36.0 -0.9**
KURK Kurchatov 57.04 326*c i*P **P** **20 47 41.8 -0.4**
KURK pmax pmax
comp=Z,20nm,1.3s
KURK Kurchatov 57.04 326 P **P** **20 47 41.6 -0.6**
KURK lAmb lAmb 20 47 50.0
comp=Z,14nm,0.9s
MSVF Nonsavu 57.46 118⇓ *e*P **P** **20 47 47.3 +1.5**
MSVF pmax pmax
comp=Z,47nm,1.0s
MSVF Nonsavu 57.46 118 P **P** **20 47 47.0 +1.2**
BTK Batken 58.07 312 P **P** **20 47 48.6 -1.3**
BTK pmax pmax
comp=Z,5.0nm,0.8s
BTK Batken 58.07 312 P **P** **20 47 48.6 -1.3**
KBL Kabul 58.16 305 P **P** **20 47 49.2 -1.5**
KBL pmax pmax
comp=Z,15nm,1.4s
KBL Kabul 58.16 305 P **P** **20 47 49.2 -1.5**
KBL lAmb lAmb 20 48 03.7
comp=Z,15nm,1.4s
GAR Garm 58.17 310 P **P** **20 47 49.8 -0.8**
GAR lAmb lAmb 20 48 05.5
comp=Z,18nm,0.8s
CHGR Chuyangaron 58.96 310 P **P** **20 47 55.3 -0.8**
CHGR lAmb lAmb 20 48 03.3
comp=Z,16nm,0.7s
KK31 Karatay Array 59.16 315 P **P** **20 47 56.4 -0.9**
KK31 pmax pmax
comp=Z,6.0nm,0.8s
KK31 Karatay Array 59.16 315 P **P** **20 47 56.4 -0.9**
TIXI Tiksi 62.28 1*ce*P **P** **20 48 18.5 +0.5**
TIXI pmax pmax
comp=Z,18nm,1.0s
TIXI Tiksi 62.28 1 P **P** **20 48 17.4 -0.5**
TIXI lAmb lAmb 20 48 31.2
comp=Z,23nm,1.0s
BRVK Borovoye 62.71 326*c i*P **P** **20 48 20.6 -0.6**
BRVK pmax pmax
comp=Z,15nm,1.3s
BRVK Borovoye 62.71 326 P **P** **20 48 20.8 -0.4**
BRVK lAmb lAmb 20 48 23.1
comp=Z,10.0nm,0.9s
ATKA Atka Island 64.01 36 P **P** **20 48 29.9 +0.1**
BILL Bilibino 64.21 15 *e*P **P** **20 48 31.9 +1.1**
BILL *e* 20 49 06.2
BILL *e* 20 50 52.0
BILL *e*PPP PPP 20 52 22.5
BILL pmax pmax
comp=Z,30nm,2.5s
BILL Bilibino 64.21 15 P **P** **20 48 31.4 +0.6**
BILL lAmb lAmb 20 48 32.8
comp=Z,30nm,1.6s
QRZ Quartz Range 65.39 143 P **P** **20 48 36.9 -2.1**
HIZ Hauiti 65.42 140 P **P** **20 48 40.3 +1.1**
DCZ Deep Cove 65.57 150 P **P** **20 48 39.5 -0.5**
MLZ Mavora Lakes 65.98 149 P **P** **20 48 42.0 -0.8**
NNZ Nelson 66.14 143 P **P** **20 48 44.1 +0.3**
THZ Tophouse 66.20 144 P **P** **20 48 44.1 -0.2**

LBZ Lake Benmore 66.39 147 P **P** **20 48 45.4 +0.1**
RPZ Rata Peaks 66.41 146 P **P** **20 48 45.8 +0.4**
LTZ Lake Taylor 66.48 145 P **P** **20 48 46.0 0.0**
TUWZ Tuamarina 66.61 143 P **P** **20 48 45.3 -1.4**
OXZ Oxford 66.70 146 P **P** **20 48 46.5 -0.9**
BKZ Black Stump Fm 66.84 140 P **P** **20 48 48.9 +0.5**
KHZ Kahutara 66.98 144 P **P** **20 48 48.8 -0.3**
SNZO South Karori 66.99 142 P **P** **20 48 48.8 -0.3**
ODZ Otahua Downs 67.07 148 P **P** **20 48 50.1 +0.4**
MQZ McQueen's Vall 67.29 146 P **P** **20 48 51.7 +0.7**
MSWZ Moikau Station 67.38 142 P **P** **20 48 52.9 +1.1**
GEYT Alibeck 67.39 307 P **P** **20 48 52.1 +0.1**
comp=Z,0.9nm,0.5s,baz=90,slow=1.9,SNR=2.5
PLWZ Palliser 67.48 142 P **P** **20 48 53.0 +0.7**
BFZ Birch Farm 67.56 141 P **P** **20 48 55.1 +2.2**
UOSS Minazif 68.43 293 P **P** **20 48 56.6 -2.1**
UOSS lAmb lAmb 20 49 08.5
comp=Z,6.1nm,0.8s
UNV Unalaska Valle 68.93 36 P **P** **20 49 02.8 +1.6**
SVE Sverdlovsk 69.19 328 *e*P **P** **20 49 02.0 -0.8**
SVE pmax pmax
comp=Z,15nm,1.1s
AKUT Akutan 69.42 36 P **P** **20 49 05.2 +1.0**
ARU Arti 70.20 327*c i*P **P** **20 49 08.2 -0.9**
ARU 20 49 30.5
ARU S **S** **20 58 20.2 +1.1**
ARU SS **SS** **21 02 43.9 -5.3**
ARU pmax pmax
comp=Z,12nm,1.2s
ARU Arti 70.20 327 P **P** **20 49 08.1 -0.9**
ARU lAmb lAmb 20 49 23.4
comp=Z,10.0nm,0.6s
SOCY Socotra 71.24 280 P **P** **20 49 12.3 -3.9**
SDPT Sand Point 72.66 35 P **P** **20 49 22.7 -1.1**
CHGN Chignik 73.95 34 P **P** **20 49 31.3 -0.2**
CHGN lAmb lAmb 20 49 44.0
comp=Z,32nm,1.0s
RDOG Red Dog Mine 74.14 22 P **P** **20 49 33.4 +1.0**
RDOG lAmb lAmb 20 49 48.6
comp=Z,14nm,1.1s
HUH Hualalai 75.24 72 P **P** **20 49 38.5 -1.5**
AKT Akhty 75.58 310 *e*P **P** **20 49 42.5 +1.1**
AKT *e* 20 49 54.4
AKT pmax pmax
comp=Z,8.0nm,1.1s
MAK Makhachkala 75.76 312 *e*P **P** **20 49 40.4 -1.8**
MAK *e*S **S** **20 59 21.0 -1.7**
MAK pmax pmax
comp=Z,147nm,1.1s
PUH Pauahi 75.85 72 P **P** **20 49 42.3 -1.0**
TTA Tatalina 75.99 27 P **P** **20 49 44.0 +0.7**
TTA pmax pmax
comp=Z,14nm,1.5s
TTA Tatalina 75.99 27 P **P** **20 49 44.0 +0.7**
TTA lAmb lAmb 20 49 51.9
comp=Z,14nm,1.5s
CASY Casey 76.33 187 P **P** **20 49 44.8 -0.1**
CASY lAmb lAmb 20 49 57.7
comp=Z,16nm,0.8s
OHAK Old Harbor 76.84 33 P **P** **20 49 47.9 -0.2**
KDAK Kodiak Island 77.25 33 P **P** **20 49 49.5 -0.9**
KDAK pmax pmax
comp=Z,75nm,1.4s
KDAK Kodiak Island 77.25 33 P **P** **20 49 49.5 -0.9**
PPLA Purkeypile 77.73 28 P **P** **20 49 52.5 -0.7**
PPLA lAmb lAmb 20 50 05.6
comp=Z,36nm,1.6s
CNPM China Poot 78.03 31 P **P** **20 49 54.8 0.0**
RAYN Ar Rayn 78.25 292 P **P** **20 49 55.1 -1.7**
RAYN Ar Rayn 78.25 292 P **P** **20 49 55.1 -1.7**
RAYN lAmb lAmb 20 49 58.2
comp=Z,7.2nm,0.8s
BPAW Bear Paw Mtn. 78.34 26 P **P** **20 49 56.9 +0.6**
BPAW lAmb lAmb 20 49 58.8
comp=Z,21nm,1.1s
ZEI Tsey 78.41 312 *e*P **P** **20 49 56.1 -1.3**
ZEI pmax pmax
comp=Z,10.0nm,0.8s
MLY Manley 78.49 25 P **P** **20 49 57.8 +0.5**
KBZ Khabaz 79.11 313 P **P** **20 50 00.7 -0.3**
comp=Z,3.0nm,0.9s,baz=147,slow=8.7,SNR=4.1
KBZ Khabaz 79.11 313*de*P **P** **20 50 01.7 +0.8**
KBZ pmax pmax
comp=Z,6.0nm,1.2s
TOLK Toolik Lake Re 79.11 22 P **P** **20 50 02.2 +1.6**
baz=268
TOLK Toolik Lake Re 79.11 22 P **P** **20 50 01.6 +1.0**
TOLK lAmb lAmb 20 50 15.1
comp=Z,12nm,0.8s
MCK McKinley 79.23 27 P **P** **20 50 01.0 -0.3**
MCK pmax pmax
comp=Z,14nm,0.9s
MCK McKinley 79.23 27 P **P** **20 50 01.0 -0.3**
MCK lAmb lAmb 20 50 15.3
comp=Z,14nm,0.9s
KIV Kislovodsk 79.25 313 *e*P **P** **20 50 02.0 +0.1**
KIV *e* 20 50 09.8
KIV *e*PPP PPP 20 54 48.4
KIV pmax pmax
comp=Z,7.0nm,1.0s
RND Reindeer 79.27 27 P **P** **20 50 01.6 0.0**
RND pmax pmax
comp=Z,20nm,1.2s
RND Reindeer 79.27 27 P **P** **20 50 01.6 0.0**
RND lAmb lAmb 20 50 15.4
comp=Z,20nm,1.2s
KNK Knik Glacier 79.44 29 P **P** **20 50 02.9 +0.5**
SML Sawmill 79.50 29 P **P** **20 50 03.0 +0.2**
SML lAmb lAmb 20 50 17.1
comp=Z,33nm,1.2s
WRH Wood River Hil 79.61 26 P **P** **20 50 02.5 -0.8**
VRH Novokhopyorsk 79.61 320 *e*P **P** **20 50 02.2 -1.4**
VRH pmax pmax
comp=Z,10.0nm,0.6s
COLA College 79.71 26⇑ *e*P **P** **20 50 04.6 +0.8**
COLA pmax pmax
comp=Z,4.0nm,0.9s
CCB Clear Creek Bu 79.73 26 P **P** **20 50 03.3 -0.6**
DHY Denali Highway 79.93 27 P **P** **20 50 05.5 +0.2**
DHY lAmb lAmb 20 50 26.7
comp=Z,36nm,1.9s
SCM Sheep Creek Mo 79.97 29 P **P** **20 50 03.5 -1.9**
SCM pmax pmax
comp=Z,31nm,1.2s
SCM Sheep Creek Mo 79.97 29 P **P** **20 50 03.5 -1.9**
SCM lAmb lAmb 20 50 07.7
comp=Z,31nm,1.2s
HDA Harding Lake 80.11 26 P **P** **20 50 05.9 -0.1**
baz=271
HDA Harding Lake 80.11 26 P **P** **20 50 05.2 -0.8**
IL31 80.13 26 P **P** **20 50 05.1 -0.9**
ILAR Eielson Array 80.13 26 P **P** **20 50 06.0 -0.1**
comp=Z,2.5nm,0.7s,baz=244,slow=5.8,SNR=16
ILAR Eielson Array 80.13 26 P **P** **20 50 06.0 -0.1**
KLMR Klimovskoe 80.52 330 *e*P **P** **20 50 06.9 -1.3**
KLMR pmax pmax
comp=Z,28nm,1.3s
KLMR Klimovskoe 80.52 330 *e*P **P** **20 50 07.0 -1.3**
KLMR AMP 20 50 10.1
comp=Z,28nm,1.3s
PRP Porcupine Dome 80.68 25 P **P** **20 50 08.6 -0.6**
FYU Fort Yukon 80.77 24 P **P** **20 50 09.0 -0.4**
FYU lAmb lAmb 20 50 47.8
comp=Z,29nm,1.6s
RIDG Independent Ri 81.05 27 P **P** **20 50 11.4 +0.2**
RIDG lAmb lAmb 20 50 14.3
comp=Z,22nm,1.3s
VORD Divnogorie 81.16 320 *e*P **P** **20 50 13.3 +1.4**
VORD pmax pmax
comp=Z,5.0nm,0.8s
LPSR Galich'ya Gora 81.27 322 *e*P **P** **20 50 10.9 -1.5**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
RAGM Ragged Mountai 81.32 30 P **P** **20 50 10.3 -2.3**
DOT Dot Lake 81.40 27 P **P** **20 50 12.1 -0.9**
DOT lAmb lAmb 20 50 27.4
comp=Z,12nm,1.2s
SCRK Sand Creek 81.42 26 P **P** **20 50 13.2 0.0**
GLB Gilahina Butte 81.67 29 P **P** **20 50 13.0 -1.5**
GLB lAmb lAmb 20 50 18.3
comp=Z,14nm,1.0s
LVZ Lovozero 82.17 338 P **P** **20 50 15.2 -1.8**
LVZ pmax pmax
comp=Z,23nm,1.3s

LVZ Lovozero 82.17 338 P P 20 50 15.2 -1.8
LVZ IAmb IAmb 20 50 24.8
comp=Z,23nm,1.3s
OBN Obninsk 82.46 325 *de*P P 20 50 17.9 -0.7
OBN *e* 20 50 21.6
OBN *e* 20 53 26.1
OBN *e*PPP PPP 20 55 19.6
OBN pmax pmax
comp=Z,4.0nm,0.5s
EGAK Eagle 82.58 26 P P 20 50 17.5 -1.6
EGAK IAmb IAmb 20 50 42.0
comp=Z,7.1nm,0.9s
BARN Barnard Glacie 82.74 29 P P 20 50 17.9 -2.4
BARN IAmb IAmb 20 50 23.4
comp=Z,14nm,0.9s
ANN Anapa 82.94 314 *e*P P 20 50 19.8 -1.6
ANN *e*S S 21 00 40.8 +1.9
ANN pmax pmax
comp=Z,17nm,1.2s
DAWY Dawson 83.42 26 P P 20 50 22.7 -0.9
DAWY IAmb IAmb 20 50 38.3
comp=Z,18nm,1.2s
GAZ Gaziantep 83.98 307 P P 20 50 25.5 -1.5
GAZ IAmb IAmb 20 50 32.6
comp=Z,15nm,1.2s
EPYK Eagle Plains 84.19 24 P P 20 50 28.5 +1.1
baz=280
EPYK Eagle Plains 84.19 24 P P 20 50 27.4 0.0
HYT Haines Junctio 84.78 29 P P 20 50 30.0 -0.6
HYT IAmb IAmb 20 50 33.7
comp=Z,11nm,0.9s
INK Inuvik 85.02 22 P P 20 50 30.8 -0.7
INK pmax pmax
comp=Z,15nm,1.1s
INK Inuvik 85.02 22 P P 20 50 30.8 -0.7
INK IAmb IAmb 20 50 45.3
comp=Z,15nm,1.1s
ARCES ARCESS Array B 85.19 340 P P 20 50 32.4 0.0
comp=Z,4.4nm,0.6s,baz=78,slow=6.3,SNR=24
ARE0 ARCESS Array S 85.19 340 P P 20 50 32.0 -0.3
BRTR Keskin Array B 86.40 309 P P 20 50 40.2 +1.0
comp=Z,1.0nm,0.7s,baz=145,slow=3.0,SNR=3.7
BRTR LR LR 21 34 35.6
comp=Z,44nm,19.4s,baz=74,slow=39
FIA1 FINESS Array S 86.88 332 P P 20 50 39.6 -1.3
FIA1 IAmb IAmb 20 50 43.1
comp=Z,5.6nm,0.9s
FINES FINESS Array B 86.88 332 P P 20 50 40.2 -0.6
comp=Z,4.1nm,0.8s,baz=100,slow=4.5,SNR=12
PPT Papeete 86.93 108 LR LR 21 21 50.8
comp=Z,73nm,21.1s,baz=330,slow=30
PPT2 Papeete2 86.94 108 *e*LR LR 21 18 15.1
comp=Z,148nm,22.8s
AKASG Malin Array Be 87.51 321 P P 20 50 43.8 -0.3
comp=Z,0.6nm,0.5s,baz=64,slow=4.3,SNR=2.2
C36M Paulatuk 88.00 20 P P 20 50 46.6 +0.5
baz=291
C36M Paulatuk 88.00 20 P P 20 50 46.1 0.0
C36M IAmb IAmb 20 50 59.3
comp=Z,11nm,0.9s
TBI Tubuai 88.12 114 *e*LR LR 21 18 41.0
comp=Z,168nm,24.2s
MAW Mawson 88.94 200 P P 20 50 47.6 -2.8
baz=89,SNR=9.7
VNDA Vanda 88.96 173 P P 20 50 49.9 -0.5
comp=Z,1.9nm,0.9s,baz=302,slow=6.5,SNR=6.8
VNDA LR LR 21 31 49.0
comp=Z,78nm,18.1s,baz=5.0,slow=36
VNDA Vanda 88.96 173 P P 20 50 50.2 -0.1
VNDA IAmb IAmb 20 51 02.6
comp=Z,5.4nm,1.0s
KMBO Kilima Mbogo 89.57 269 P P 20 50 56.1 +1.2
comp=Z,2.3nm,0.8s,baz=25,slow=7.9,SNR=5.0
KMBO LR LR 21 30 48.6
comp=Z,85nm,18.7s,baz=104,slow=35
KMBO Kilima Mbogo 89.57 269 P P 20 50 55.1 +0.2
KMBO pmax pmax
comp=Z,8.0nm,1.4s
KMBO Kilima Mbogo 89.57 269 P P 20 50 55.1 +0.2
KMBO IAmb IAmb 20 51 07.2
comp=Z,8.4nm,1.4s
DAG Danmarks Havn 91.73 352 *i*P P 20 51 03.0 -0.4
DAG pmax pmax
comp=Z,11nm,1.2s
DAG Danmarks Havn 91.73 352 *i*P P 20 51 03.0 -0.4
comp=Z,11nm,1.2s
NB2 NORSAR Subarra 93.75 334 P P 20 51 11.8 -1.3
comp=Z,1.5nm,0.7s,baz=68,slow=4.6
NOA NORSAR Array B 93.75 334 P P 20 51 12.3 -0.8
comp=Z,0.8nm,0.7s,baz=66,slow=4.6,SNR=4.0
YKA Yellowknife Ar 94.47 24 P P 20 51 17.2 +1.0
comp=Z,2.7nm,0.7s,baz=298,slow=4.3,SNR=23
YKA LR LR 21 33 56.8
comp=Z,22nm,20.9s,baz=0.0,slow=36
SYO Syowa Base 97.58 201⇑*ep*P pP 20 51 35.0 -1.6
SYO Syowa Base 97.58 201⇑*e*X Pdif 20 51 39.9 +10
GERES GERESS Array B 97.65 322 LR LR 21 37 19.4
comp=Z,80nm,18.2s,baz=120,slow=36
SUMG Summit 97.69 356 *i*P Pdif 20 51 33.8 +2.5
SUMG Summit 97.69 356 *i*P Pdif 20 51 33.8 +2.5
PDAR Pinedale Array 107.19 40 PKKPbc PKKPbc 21 07 50.5 +10
comp=Z,0.7nm,0.8s,baz=130,slow=6.0,SNR=4.1
D47A Chapleau 117.93 23 P PKiKP 20 56 43.6 +0.4
baz=326
TXAR Lajitas Array 118.16 50 PKP PKiKP 20 56 45.5 +1.3
comp=Z,0.9nm,0.8s,baz=257,slow=1.3,SNR=5.8
D50A G1974 Best Tow 119.02 20 P PKiKP 20 56 45.5 +0.2
baz=330
JCT Junction City 120.39 46 PKIKP PKPdf 20 56 48.2 -0.2
JCT Junction City 120.39 46 PKPdf 20 56 48.2 -0.2
TORD Torodi Ar. Bea 120.94 291 PKP PKPdf 20 56 48.7 -1.0
comp=Z,1.4nm,0.8s,baz=352,slow=0.6,SNR=4.8
TORD PKKPbc **PKKPab 21 06 56.0 +1.5**
comp=Z,0.7nm,0.8s,baz=261,slow=5.1,SNR=3.7
U40A Yellville 121.32 37 P PKPdf 20 56 50.0 0.0
baz=313
U40A Yellville 121.32 37 PKPdf 20 56 49.0 -1.0
M54A Oil Creek Stat 123.93 24 P PKiKP 20 56 55.4 +0.3
baz=328
M55A Ridgway 124.32 23 P PKiKP 20 56 56.1 +0.3
baz=329
WVT Waverly 124.35 34 PKIKP PKPdf 20 56 55.0 -0.8
WVT Waverly 124.35 34 P PKiKP 20 56 56.4 +0.3
baz=318
WVT Waverly 124.35 34 PKPdf 20 56 55.0 -0.8
P53A Whipple 124.91 26 P PKiKP 20 56 57.5 +0.4
baz=326
PLAL Pickwick Lake 125.05 35 PKPdf 20 56 55.5 -1.6
T50A Nancy 125.25 31 PKPdf 20 56 57.0 -0.5
SSPA Standing Stone 125.37 23 P PKiKP 20 56 58.2 +0.2
baz=330
Q55A Buckhannon 125.88 26 P PKiKP 20 56 59.9 +0.8
baz=327
PLCA Paso Flores 145.21 157 PKPbc PKPbc 20 57 33.6 -0.4
comp=Z,12nm,1.1s,baz=228,slow=5.2,SNR=7.8
PLCA Paso Flores 145.21 157 PKPdf 20 57 34.5 +0.2
LC01 Cunco 146.20 154 PKPdf 20 57 35.6 -0.5
SDDR Presa de Saban 146.78 32 PKPbc 20 57 39.7 +0.3
BCIP Isla Barro Col 147.87 56 PKHKP PKPdf 20 57 36.1 -3.4
BCIP 20 57 42.1
BCIP Isla Barro Col 147.87 56 PKPdf 20 57 36.1 -3.4
BCIP PKPbc **PKPbc 20 57 42.1 -0.3**
BI02 San Fabin de 148.31 152 PKPbc 20 57 43.7 +0.6
PDPR Patillas Dam, 150.09 25 PKPbc 20 57 48.3 +0.4
CAPC Capurgana 150.18 54 *e*P **PKiKP 20 57 49.7 +0.6**
STVI Saint Thomas 150.21 23 PKPbc 20 57 48.0 -0.3
SMRC Santa Marta, M 150.94 46 *e*P **PKiKP 20 57 50.4 -0.3**
SJCC San Jacinto, C 151.09 49 *e*P **PKiKP 20 57 52.0 +0.9**
URIC Uribia, Colomb 152.08 42 *e*P **PKPdf 20 57 44.9 -1.2**
UREC San Jos de Ur 152.15 53 *e*P **PKiKP 20 57 53.8 +0.6**
SMLC San Martn de 152.62 49 *e*P **PKPbc 20 57 53.9 0.0**
CBOC Ciudad Bolivar 152.85 57 *e*P **PKiKP 20 57 55.5 +0.5**
YOTC Yotoco, Valle 153.56 61 *e*P **PKiKP 20 57 57.1 +0.8**
BBAC Balboa, Cauca 153.67 66 *e*P **PKPdf 20 57 51.5 +2.7**
GUY2C Guyana, Caldas 153.74 57 *e*P **PKiKP 20 57 58.1 +0.9**
RREF El Recreo 153.93 58 *e*P **PKiKP 20 58 02.8 +5.0**
TOLC Tolima 154.12 59 *e*P **PKiKP 20 57 59.5 +1.8**
SOTA Rioblanco 154.20 65 *e*P **PKiKP 20 57 59.8 +1.7**
ORTC Ortega, Tolima 154.54 60 *e*P **PKPdf 20 57 52.6 +2.8**
BARC Barichara 154.70 52 *e*P **PKPbc 20 57 58.3 -0.5**
RUSC La Rusia 155.21 53 *e*P **PKPdf 20 57 50.3 -1.0**
LPAZ La Paz 164.04 117 PKP PKPdf 20 58 02.6 +1.2
comp=Z,1.3nm,0.8s,baz=339,slow=4.9,SNR=5.0
LPAZ PKPab **PKPab 20 58 56.4 +1.9**
comp=Z,2.7nm,0.8s,baz=235,slow=2.9,SNR=6.3
LPAZ La Paz 164.04 117 PKPdf 20 58 01.5 +0.1
LPAZ PKPab **PKPab 20 58 56.6 +2.1**

*ROM **30** 20:44:43.9±0.2, 40.°23N±0.°01×19.°85E±0.°03, h30km±1km, ML2.4/8, Error ellipse: s-maj=2.2km s-min=1.1km az=92.0*
TIR 30 20:44:44.4, 40.°23N×20.°01E, h32km, Md2.8/5, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPE	**Tepelena**	**0.07**	**1**	*i* PG	Pb	20 44 48.4	-1.5
TPE				*i* SG	Sb	20 44 53.2	-0.4
TPE	**Tepelena**	**0.07**	**1**	P	Pb	20 44 49.0	-0.8
TPE	**Tepelena**	**0.07**	**1**	P	Pb	20 44 49.0	-0.8
TPE				S	Sb	20 44 53.6	0.0
SRN	**Sarande**	**0.35**	**181**	*i* PG	Pb	20 44 52.1	-0.5
SRN				*i* SG	Sb	20 44 58.6	+0.3
SRN	**Sarande**	**0.35**	**181**	P	Pb	20 44 52.4	-0.3
SRN	**Sarande**	**0.35**	**181**	P	Pb	20 44 52.4	-0.3
SRN				S	Sb	20 44 58.6	+0.4
SRN				AML	AML		
	comp=E,290μm,0.9s						
SRN				AML	AML		
	comp=N,352μm,0.7s						
SRN				AML	AML		
	comp=E,290μm,0.9s						
VLO	**Vlora**	**0.46**	**301**	*i* PG	Pb	20 44 52.9	-1.4
VLO				*i* SG	Sn	20 45 01.5	-0.3
VLO	**Vlora**	**0.46**	**301**	P	Pb	20 44 53.2	-1.1
VLO				AML	AML		
	comp=N,1325μm,1.3s						
VLO				AML	AML		
	comp=E,1755μm,0.5s						
KEK	**Kerkira**	**0.54**	**198**	P	Pb	20 44 54.8	-0.8
KEK	**Kerkira**	**0.54**	**198**	P	Pb	20 44 54.8	-0.8
KEK				S	Sb	20 45 03.1	-0.1
KEK				AML	AML		
	comp=E,78μm,0.8s						
KEK				AML	AML		
	comp=N,45μm,0.3s						
KEK				AML	AML		
	comp=N,45μm,0.3s						
IGT	**Igoumenitsa**	**0.74**	**160**	*i* PG	Pb	20 44 59.1	+0.2
IGT				*i* SG	Sn	20 45 10.1	+1.4
TIR	**Tirane**	**1.12**	**354**	*i* PG	Pn	20 45 04.2	+0.4
TIR				*i* SG	Sb	20 45 19.0	-0.5
TIR	**Tirane**	**1.12**	**354**	P	Pb	20 45 05.0	-0.3
SCTE	**Santa Cesarea**	**1.19**	**263**	P	Pn	20 45 03.1	-1.7
SCTE				AML	AML		
	comp=N,304μm,0.7s						
SCTE				AML	AML		
	comp=E,404μm,0.4s						
THL	**Klokotos Trika**	**1.68**	**113**	P	Pb	20 45 13.8	-0.9
PUK	**Puka**	**1.81**	**357**	P	Pn	20 45 13.7	+0.3
PUK				AML	AML		
	comp=N,29μm,1.6s						
PUK				AML	AML		
	comp=E,32μm,0.4s						
NOCI	**Noci**	**2.31**	**285**	P	Pn	20 45 18.1	-2.1
NOCI				AML	AML		
	comp=N,99μm,1.4s						
NOCI				AML	AML		
	comp=E,90μm,0.2s						
AMUR	**Altamura**	**2.68**	**286**	P	Pn	20 45 23.2	-2.1
AMUR				AML	AML		
	comp=E,42μm,1.2s						
AMUR				AML	AML		
	comp=N,65μm,0.3s						
DBRK	**Dubrovnik**	**2.81**	**331**	*e*Pn	Pn	20 45 25.4	-1.7
DBRK				Sn	Sn	20 45 56.2	-3.7
SALB	**San Lorenzo Be**	**2.83**	**264**	P	Pn	20 45 25.3	-2.2
SALB				AML	AML		
	comp=N,20μm,0.3s						
SALB				AML	AML		
	comp=E,29μm,1.1s						
SALB	**San Lorenzo Be**	**2.83**	**264**	P	Pn	20 45 25.3	-2.2
STON	**Ston**	**3.16**	**327**	*e*Pn	Pn	20 45 28.2	-3.6
STON				Sn	Sn	20 46 04.1	-4.2
MTSN	**Montesano sull**	**3.26**	**272**	P	Pn	20 45 32.2	-1.2
MTSN	**Montesano sull**	**3.26**	**272**	P	Pn	20 45 32.2	-1.2
SLCN	**Sala Consilina**	**3.35**	**274**	P	Pn	20 45 33.6	-1.0
SLCN	**Sala Consilina**	**3.35**	**274**	P	Pn	20 45 33.6	-1.0
MSAG	**Monte S. Angel**	**3.44**	**297**	P	Pn	20 45 33.8	-1.9
MSAG	**Monte S. Angel**	**3.44**	**297**	P	Pn	20 45 33.8	-1.9
SGRT	**San Giovanni R**	**3.57**	**297**	S	Sn	20 46 15.0	-3.7
SGRT	**San Giovanni R**	**3.57**	**297**	S	Sn	20 46 15.0	-3.7
JOPP	**Joppolo**	**3.58**	**244**	P	Pn	20 45 36.0	-1.7
JOPP	**Joppolo**	**3.58**	**244**	P	Pn	20 45 36.0	-1.7
MCRV	**Calabrutti - M**	**3.73**	**280**	S	Sn	20 46 19.0	-3.8
MCRV	**Calabrutti - M**	**3.73**	**280**	S	Sn	20 46 19.0	-3.8
RICI	**Ricice**	**3.91**	**328**	*e*Pn	Pn	20 45 39.4	-2.7
RICI				Sn	Sn	20 46 21.5	-5.4
HVAR	**Hvar**	**3.97**	**319**	*i* Pn	Pn	20 45 40.9	-2.1
HVAR				Sn	Sn	20 46 21.9	-6.6
MELA	**Melanico ??? S**	**3.98**	**293**	P	Pn	20 45 42.0	-1.1
MELA	**Melanico ??? S**	**3.98**	**293**	P	Pn	20 45 42.0	-1.1
ZIRJ	**Zirje**	**4.72**	**318**	*e*Pn	Pn	20 45 52.1	-1.2
MORI	**Morici**	**4.84**	**320**	*e*Pn	Pn	20 45 53.6	-1.4
MORI				Sn	Sn	20 46 45.3	-4.6
DUGI	**Dugi Otok**	**5.26**	**317**	*e*Pn	Pn	20 45 59.8	-0.9
DUGI				Sn	Sn	20 46 55.7	-4.6
LAV9	**Lanuvio**	**5.72**	**287**	P	Pb	20 46 24.2	+0.8
LAV9	**Lanuvio**	**5.72**	**287**	P	Pb	20 46 24.2	+0.8
LMD	**Lutirano**	**7.27**	**305**	P	Pn	20 46 29.4	+1.1
LMD	**Lutirano**	**7.27**	**305**	P	Pn	20 46 29.4	+1.1

*IDC **30** 20:45:44.4±1.5, 9.°36N×126.°60E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.6/36, mbtmp3.9/6, Error ellipse: s-maj=127.8km s-min=21.5km az=73.0*
*NEIC **30** 20:45:45.4±1.1, 9.°5N±0.°1×126.°9E±0.°2, h10km±6km, mb4.6/13, Error ellipse: s-maj=30.1km s-min=15.8km az=93.0*
*MAN **30** 20:45:47.8, 9.°40N×126.°64E, h1km, mb4.8, ML3.7, MS3.7*
ISC 30 20:45:50.7±0.8, 9.°45N±0.°05×126.°79E±0.°08, h43km, n40, σ2s 03/39, mb4.2/10, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.32**	**284**	*e*P	Pn	**20 46 11.3**	**-1.4**
SCPH				*e*S	Sn	**20 46 29.6**	**+0.4**
MSLP	**Maasin**	**2.02**	**290**	*e*P	Pn	**20 46 22.6**	**+0.3**
BUKP	**Musuan**	**2.32**	**228**	*e*P	Pn	**20 46 25.2**	**-1.2**
BUKP				*e*S	Sn	**20 46 56.0**	**+2.3**
MATI	**Mati**	**2.55**	**192**	*e*P	Pn	**20 46 30.9**	**+1.4**
MATI				*e*S	Sn	20 47 09.8	+10
DAV	**Davao City (W)**	**2.65**	**207**	Pn	Pn	**20 46 34.0**	**+3.0**
	58nm,0.3s,baz=261,slow=19,SNR=1.9						
DAV	**Davao City (W)**	**2.65**	**207**		Pn	**20 46 29.9**	**-1.1**
LLP	**Lapu-Lapu**	**2.91**	**287**	*e*P	Pn	**20 46 33.8**	**-0.8**
LLP				*e*S	Sn	**20 47 14.2**	**+5.8**
CTBH	**Cotabato--PC H**	**3.35**	**229**⇓	*i* P	Pn	**20 46 39.8**	**-0.9**
DDMP	**Don Marcelino,**	**3.50**	**198**	*e*P	Pn	**20 46 43.6**	**+1.1**
DDMP				*e*S	Sn	**20 47 29.8**	**+7.1**
CNP	**Catarman**	**3.69**	**326**	*e*P	Pn	**20 46 46.3**	**+1.1**
CNP				*e*S	Sn	**20 47 31.8**	**+4.4**
PAGZ	**Pagadian**	**3.73**	**245**	*e*P	Pn	**20 46 45.8**	**0.0**
PAGZ				*e*S	Sn	**20 47 28.9**	**+0.5**
CNOP	**Candoni, Negro**	**4.11**	**276**	*e*P	Pn	**20 46 51.4**	**+0.3**
GUIM	**Jordan**	**4.30**	**286**	*e*P	Pn	**20 46 53.8**	**+0.2**
RCP	**Roxas**	**4.50**	**298**⇑	*e*P	Pn	**20 46 57.1**	**+0.8**
PVCP	**Virac**	**4.86**	**328**	*e*P	Pn	20 47 09.6	+8.3
SBUM	**Sibu**	**16.07**	**245**	P	P	**20 49 37.2**	**+0.6**
SOEI	**Soe**	**19.25**	**188**	P	P	**20 50 10.8**	**-1.0**
SOEI				IAmb	IAmb	20 50 15.9	
	comp=Z,31nm,1.2s						
MTN	**Manton Dam**	**22.57**	**169**	P	P	**20 50 46.1**	**-1.4**
MTN				IAmb	IAmb	20 51 05.5	
	comp=Z,29nm,1.4s						
KNRA	**Kununurra**	**25.04**	**176**	P	P	**20 51 09.8**	**-1.3**
FITZ	**Fitzroy Crossi**	**27.40**	**182**	P	P	**20 51 30.9**	**-1.4**
	comp=Z,2.9nm,0.8s,baz=360,slow=12,SNR=2.1						
FITZ	**Fitzroy Crossi**	**27.40**	**182**	P	P	**20 51 31.0**	**-1.4**
FITZ				IAmb	IAmb	20 51 57.0	
	comp=Z,13nm,1.4s						
WB0	**Warramunga Arr**	**29.99**	**166**	P	P	**20 51 54.4**	**-1.0**
WRA	**Warramunga Arr**	**30.14**	**166**	P	P	**20 51 56.7**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=347,slow=9.3,SNR=2.3						
WB2	**Warramunga Arr**	**30.14**	**166**	P	P	**20 51 56.0**	**-0.7**
WR0	**Warramunga Arr**	**30.21**	**165**	P	P	**20 51 56.5**	**-0.9**
WR0				IAmb	IAmb	20 51 58.2	
	comp=Z,15nm,1.6s						
PSA00	**Pilbara Seismi**	**31.58**	**192**	P	P	**20 52 07.8**	**-1.5**
ASAR	**Alice Springs**	**33.64**	**168**	P	P	**20 52 26.0**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=350,slow=7.0,SNR=8.9						
H11S3	**WAKE ISLAND Hy**	**39.67**	**72**	T	T	21 36 22.1	
	baz=262,slow=75,SNR=7.6						
MORW	**Morawa**	**39.68**	**195**	P	P	**20 53 17.6**	**-1.1**
MORW				IAmb	IAmb	20 53 44.7	
	comp=Z,22nm,1.4s						
H11S1	**WAKE ISLAND Hy**	**39.68**	**72**	T	T	21 36 18.3	
	baz=262,slow=75,SNR=5.6						
H11S2	**WAKE ISLAND Hy**	**39.69**	**72**	T	T	21 36 18.5	
	baz=262,slow=75,SNR=8.2						
H11N1	**WAKE ISLAND Hy**	**40.03**	**71**	T	T	21 36 58.9	
	baz=268,slow=74,SNR=5.2						
H11N2	**WAKE ISLAND Hy**	**40.04**	**71**	T	T	21 37 00.7	
	baz=269						
H11N3	**WAKE ISLAND Hy**	**40.05**	**71**	T	T	21 36 54.4	
	baz=268,slow=74,SNR=5.4						
BBOO	**Buckleboo**	**42.95**	**169**	P	P	**20 53 44.5**	**-1.0**
NWAO	**Narrogin (SRO)**	**43.12**	**192**	P	P	**20 53 46.0**	**-0.9**
NWAO				IAmb	IAmb	20 54 12.0	
	comp=Z,20nm,1.3s						
NWAO	**Narrogin (SRO)**	**43.12**	**192**	P	P	**20 53 46.3**	**-0.6**
NWAO				IAmb	IAmb	20 54 11.9	
	comp=Z,15nm,1.2s						
MKAR	**Makanchi Array**	**52.98**	**323**	P	P	**20 55 02.8**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=119,slow=8.6,SNR=3.7						
ARCES	**ARCESS Array B**	**85.13**	**340**	P	P	**20 58 22.6**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=79,slow=6.4,SNR=5.6						
FINES	**FINESS Array B**	**86.85**	**332**	P	P	**20 58 30.0**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=48,slow=2.8,SNR=4.6						

LJU 30 20:46:28.0, 45.°92N×14.°39E, h17km, ML0.5, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBAS	**Gorenja Brezov**	**0.04**	**64**⇑	*i* Pg	Pg	20 46 31.3	+0.2
GBAS				*i* Sg	Sg	20 46 33.4	+0.2
	comp=Z,3.0nm,0.1s						
LJU	**Ljubljana**	**0.16**	**38**	*i* Pg	Pb	20 46 32.6	0.0
LJU				*i* Sg	Sb	20 46 35.5	-0.1
CEY	**Cerknica**	**0.18**	**171**	*i* Pg	Pb	20 46 32.8	-0.1
CEY				*i* Sg	Sb	20 46 36.0	-0.2
	comp=Z,2.0nm,0.1s						
CRNS	**Crni Vrh**	**0.19**	**332**	*i* Pg	Pg	20 46 32.8	+0.1
CRNS				*i* Sg	Sg	20 46 36.0	+0.2
JAVS	**Javornik**	**0.23**	**264**⇑	*i* Pg	Pg	20 46 33.0	-0.2
JAVS				*i* Sg	Sg	20 46 37.0	+0.2
	comp=Z,2.0nm,0.1s						
VNDS	**Vrh nad Dolski**	**0.29**	**50**	*i* Pg	Pb	20 46 34.6	-0.2
VNDS				*i* Sg	Sg	20 46 38.7	+0.2
	comp=Z,4.0nm,0.1s						
VISS	**Visnje**	**0.34**	**109**	*i* Pg	Pg	20 46 35.3	+0.2
VISS				*i* Sg	Sg	20 46 40.1	+0.3
	comp=Z,0.0nm,0.0s						
PDKS	**Podkum**	**0.45**	**71**	*i* Pg	Pb	20 46 37.4	-0.2
PDKS				*i* Sg	Sg	20 46 43.5	+0.2

TAP 30 20:50:53.9, 24.°08N×121.°77E, h21km±1km, ML1.3, 1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.16**	**269**	*i* P	Pb	20 50 58.9	-1.0
	baz=268						
TWD				*i* S	Sb	20 51 02.8	-1.3
	baz=268						
NACB	**Ninganchiao**	**0.18**	**299**⇓	P	Pb	20 50 59.1	-0.7
	baz=298						
NACB				S	Sb	20 51 03.2	-0.7
	baz=298						
HWA	**Hwalien**	**0.19**	**235**	*e*P	Pb	20 50 58.7	-1.1
	baz=233						
HWA				*e*S	Sb	20 51 03.4	-0.6
	baz=233						
ETLH	**Xiulin Townshi**	**0.29**	**295**	P	Pb	20 51 00.4	-0.2
	baz=294						
ETLH				S	Sb	20 51 06.5	+1.3
	baz=294						
ESL	**Shilin**	**0.41**	**229**	S	Sb	20 51 09.6	+1.5
	baz=228						
WHF	**Hehuan Shan**	**0.47**	**278**	*i* P	Pb	20 51 04.0	+0.4
	baz=277						
WHF				*i* S	Sb	20 51 11.5	+1.2
	baz=277						
NNSB	**Datong**	**0.49**	**314**	P	Pb	20 51 04.9	+0.9
	baz=314						
NNSB				S	Sb	20 51 12.0	+1.2
	baz=314						
NNSH	**Datong**	**0.49**	**314**	*e*P	Pb	20 51 04.4	+0.5
	baz=314						
NNSH				*e*S	Sb	20 51 11.8	+1.0
	baz=314						
TWC	**Suao**	**0.53**	**8**	P	Pb	20 51 05.3	+0.7
	baz=8.0						
TWC				*e*S	Sn	20 51 13.5	-1.1
	baz=8.0						
CHGB	**Renai**	**0.55**	**268**	*e*P	Pb	20 51 05.2	+0.2
	baz=267						
CHGB				S	Sb	20 51 13.2	+0.6
	baz=267						
YHNB	**Yeheng**	**0.69**	**328**	*e*S	Sn	20 51 17.8	-0.8
	baz=328						

JMA 30 20:51:29.6±0.3, 24.°81N×123.°23E, h28km, M1.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.40**	**210**	P	Pb	20 51 38.1	-0.3
YOJ				*e*S	Sb	20 51 43.4	-0.9
JYNG	**Yonagunijimaku**	**0.44**	**216**	P	Pb	20 51 38.8	-0.2
JYNG				S	Sb	20 51 45.2	-0.2
IRIF	**Iriomote-Funau**	**0.66**	**136**	P	Pb	20 51 42.6	+0.1
IRIF				*e*S	Sb	20 51 51.4	+0.1
JKRS	**Kuro-shima**	**0.91**	**129**	P	Pn	20 51 46.1	-0.4
JKRS				*e*S	Sb	20 51 58.2	-0.3
HATJ	**Hateruma jima**	**0.92**	**145**	P	Pn	20 51 46.4	-0.2
HATJ				*e*S	Sb	20 51 58.3	-0.4
JIJ	**Ishigaki jima**	**0.94**	**118**	P	Pn	20 51 45.6	-1.4
JIJ				*e*S	Sb	20 51 59.0	-0.5
JISG	**Ishigakijimahi**	**1.01**	**103**	P	Pn	20 51 47.3	-0.6

MAN 30 20:54:18.7, 9.°45N×126.°99E, h33km, mb4.6, ML3.5, MS3.3, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**2.21**	**288**	*e*P	Pn	20 54 54.1	+1.0
MSLP				*e*S	Sb	20 55 23.4	-1.7
BUKP	**Musuan**	**2.47**	**231**	*e*P	Pn	20 54 57.0	+0.4
BUKP				*e*S	Sn	20 55 26.5	+0.7
KCP	**Kidapawan**	**3.07**	**218**⇓	*e*P	Pb	20 55 17.9	+5.1
KCP				*i* S	Sb	20 55 46.0	-4.0
CNP	**Catarman**	**3.80**	**323**	*e*P	Pn	20 55 16.0	+1.0
CNP				*e*S	Sn	20 56 00.2	+1.5
RCP	**Roxas**	**4.67**	**297**⇓	*e*P	Pn	20 55 29.7	+2.7

*IDC **30** 20:58:49.4±2.5, 24.°41N×122.°31E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/34, mbtmp3.4/3, Error ellipse: s-maj=400.0km s-min=29.2km az=70.0*
*JMA **30** 20:58:49.6±0.2, 24.°89N×123.°25E, h24km, M2.8*
ISC 30 20:58:50.2±1.8, 24.°78N±0.°10×123.°37E±0.°08, h12km±13km, n11, σ0s 39/18, mb3.5/3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**

JISG	**Ishigakijimahi**	**0.88**	**102**	P		**Pb**	**20 59 07.7**	**+0.2**
JISG				*e*S		**Sn**	**20 59 20.9**	**-0.3**
JTJ	**Tarama**	**1.22**	**96**	P		**Pb**	**20 59 13.6**	**+0.3**
SONM	**Songino Array**	**26.65**	**334**	P		**P**	**21 04 29.2**	**+0.2**
	0.8nm,0.8s,baz=140,slow=11,SNR=3.5							
WRA	**Warramunga Arr**	**45.72**	**166**	P		**P**	**21 07 11.7**	**+0.3**
	0.4nm,0.7s,baz=346,slow=8.8,SNR=2.8							
ASAR	**Alice Springs**	**49.23**	**167**	P		**P**	**21 07 38.6**	**-0.1**
	0.1nm,0.5s,baz=348,slow=8.0,SNR=4.7							

MAN 30 21:06:59.1,9°.00N×122°.99E,h43km,mb4.2,ML3.0,MS2.7, 1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**2.16**	**58**	*e*P	Pn	21 07 33.2	+0.6
MSLP				*e*S	Sn	21 07 59.6	+1.3
ZCP	**Zamboanga City**	**2.24**	**204**	⇑*i*P	Pn	21 07 35.5	+1.7
ZCP				*i* S	Sn	21 08 01.3	+1.0
BUKP	**Musuan**	**2.33**	**118**	*e*P	Pn	21 07 35.3	+0.3
BUKP				*e*S	Sn	21 08 04.0	+1.5
KCP	**Kidapawan**	**2.87**	**133**	⇓*e*P	Pn	21 07 52.0	+10
KCP				*i* S	Sn	21 08 23.0	+7.2
CNP	**Catarman**	**3.86**	**25**	*e*P	Pn	21 07 57.2	+1.2
CNP				*e*S	Sn	21 08 14.4	-26
DDMP	**Don Marcelino,**	**3.94**	**137**	*e*P	Pn	21 07 51.5	-5.7

*IDC **30** 21:14:32.5±0.6,9°.29N×126°.74E,h0km,mb4.1/22, mb1 4.2/22,mb1mx4.1/40,mbtmp4.1/22,MS3.6/8, Ms1 3.6/8,ms1mx3.2/36,Error ellipse: s-maj=24.8km s-min=12.2km az=84.0*
*NEIC **30** 21:14:32.8±1.9,9°.48N±0°.07×126°.8E±0°.1,h10km±1km, mb4.5/22,Error ellipse: s-maj=19.6km s-min=10.3km az=67.0*
*MAN **30** 21:14:32.7,9°.30N×126°.87E,h1km,mb5.0,ML4.0,MS4.0*
*DJA **30** 21:14:35.6±1.4,10°N±10°×12°.7E±1°.0,h68km±24km, M3.6/9,mb4.6/9,mB4.8/5,MLv2.9/1,Mw(mB)4.0/5*
ISC 30 21:14:37.4±1.5,9.32N±0°.03×126.76E±0°.06,h32km±10km, n93,σ1§81/97,mb4.3/38,MS3.9/11,4C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.34**	**290**	*e*P	**Pn**	**21 14 59.1**	**-0.8**
SCPH				*e*S	**Sn**	**21 15 16.6**	**+0.1**
MSLP	**Maasin**	**2.04**	**293**	*e*P	**Pn**	**21 15 10.5**	**+0.9**
MSLP				*e*S	**Sb**	**21 15 38.7**	**-0.2**
BUKP	**Musuan**	**2.21**	**230**	*e*P	**Pn**	**21 15 12.4**	**+0.5**
BUKP				*e*S	**Sn**	**21 15 40.8**	**+2.5**
MATI	**Mati**	**2.42**	**192**	*e*P	**Pn**	**21 15 14.5**	**-0.3**
MATI				*e*S	**Sb**	**21 15 50.0**	**+0.3**
DAV	**Davao City (W)**	**2.53**	**208**	Pn	**Pb**	**21 15 20.2**	**-2.0**
	130nm,0.3s,baz=10,slow=5.4,SNR=13						
DAV				Sn	**Sb**	**21 15 53.0**	**+0.1**
	148nm,0.3s,baz=241,slow=19,SNR=10						
DAV				LR	LR	21 16 26.5	
	comp=Z,3µm,20.6s,baz=42,slow=46						
DAV	**Davao City (W)**	**2.53**	**208**	P	**Pn**	**21 15 16.2**	**-0.1**
DAV	**Davao City (W)**	**2.53**	**208**		**Pn**	**21 15 16.8**	**+0.5**
KCP	**Kidapawan**	**2.83**	**216**	⇑*i*P	**Pn**	**21 15 21.5**	**+0.9**
KCP				*i* S	**Sn**	**21 15 54.2**	**+0.5**
LLP	**Lapu-Lapu**	**2.93**	**290**	*e*P	**Pn**	**21 15 23.3**	**+1.6**
LLP				*e*S	**Sb**	**21 16 02.1**	**-2.3**
CTBH	**Cotabato--PC H**	**3.25**	**230**	⇑*i*P	**Pn**	**21 15 27.8**	**+1.6**
DDMP	**Don Marcelino,**	**3.37**	**198**	*e*P	**Pn**	**21 15 27.9**	**+0.1**
DDMP				*e*S	**Sb**	**21 16 17.0**	**+0.1**
SKMP	**Bagumbayan, Su**	**3.55**	**218**	*e*P	**Pn**	**21 15 29.6**	**-0.7**
PAGZ	**Pagadian**	**3.65**	**247**	*e*P	**Pn**	**21 15 33.4**	**+1.6**
GSPH	**General Santos**	**3.69**	**209**	⇑*i*P	**Pb**	**21 15 39.7**	**-2.3**
CNP	**Catarman**	**3.78**	**327**	*e*P	**Pn**	**21 15 32.8**	**-0.6**
CNOP	**Candoni, Negro**	**4.10**	**277**	*e*P	**Pn**	**21 15 38.4**	**+0.5**
GUIM	**Jordan**	**4.31**	**288**	*e*P	**Pn**	**21 15 41.8**	**+1.0**
GUIM				*e*S	**Sn**	**21 16 32.7**	**+2.7**
RCP	**Roxas**	**4.53**	**300**	⇑*e*P	**Pn**	**21 15 45.5**	**+1.6**
PVCP	**Virac**	**4.96**	**329**	*e*P	**Pn**	**21 15 51.2**	**+1.6**
PVCP				*e*S	**Sb**	**21 17 04.5**	**+1.8**
SJMP	**San Jose**	**6.36**	**300**	*e*P	**Pn**	**21 16 12.8**	**+3.8**
TNTI	**Ternate**	**8.52**	**176**	Pn	**Pn**	**21 16 39.0**	**+0.4**
LBMI	**Labuha**	**9.92**	**176**	P	Pn	21 17 07.0	+9.1
	840nm33nm,0.9s						
MRSI	**Marisa**	**10.02**	**209**	P	Pn	21 17 07.0	+7.9
	31nm,0.7s						
KKM	**Kota Kinabalu**	**10.95**	**253**	Pn	**Pn**	**21 17 11.1**	**-1.0**
SIJI	**Sorong**	**11.07**	**156**	Pn	**Pn**	**21 17 16.6**	**+2.8**
	1.4nm,0.3s,baz=336,slow=18,SNR=5.2						
NLAI	**Namlea**	**12.48**	**178**	P	**P**	**21 17 42.4**	**-1.9**
	20nm,0.5s						
TTSI	**Tana Toraja**	**14.10**	**210**	P	**P**	**21 18 05.3**	**+3.0**
	21nm,1.1s						
BNSI	**Bone**	**15.16**	**206**	P	**P**	**21 18 15.2**	**+1.1**
KAPI	**Kappang**	**15.87**	**206**	Pn	**P**	**21 18 22.9**	**+0.9**
	0.3nm,0.3s,baz=283,slow=0.8,SNR=2.8						
KAPI				LR	LR	21 25 06.5	
	comp=Z,128nm,18.9s,baz=13,slow=40						
SBUM	**Sibu**	**15.99**	**246**	Pn	**Pn**	**21 18 19.4**	**-0.7**
SMPI	**Sarmi**	**16.37**	**133**	P	**P**	**21 18 28.9**	**+1.3**
KSM	**Kuching**	**18.13**	**245**		**Pn**	**21 18 46.4**	**-0.5**
QIZ	**Qiongzhong**	**19.01**	**302**	P	**P**	**21 18 56.0**	**-0.7**
QIZ				S	**Sn**	**21 22 27.8**	**-2.0**
QIZ				LR	LR		
	comp=N,290nm,20.1s						
QIZ				LR	LR		
	comp=E,180nm,21.1s						
QIZ				LR	LR		
	comp=Z,210nm,20.1s						
BATI	**Baumata**	**19.65**	**189**	P	**Pn**	**21 19 05.1**	**-0.1**
	comp=Z,7.8nm,0.3s,baz=57,slow=1.1,SNR=10						
BATI	**Baumata**	**19.65**	**189**	P	**Pn**	**21 19 09.1**	**+3.9**
MTN	**Manton Dam**	**22.45**	**169**	P	**P**	**21 19 36.2**	**+2.3**
MTN				IAmb	IAmb	21 19 48.2	
	comp=Z,15nm,0.8s						
JNU	**Nakatsue**	**23.98**	**9**	P	**P**	**21 19 49.3**	**+0.1**
	comp=Z,7.7nm,0.9s,baz=204,slow=6.3,SNR=5.8						
KNRA	**Kununurra**	**24.92**	**175**	P	**P**	**21 19 57.3**	**-0.5**
LEM	**Lembang**	**24.93**	**231**	P	**P**	**21 20 03.0**	**+4.9**
	comp=Z,24nm,1.0s,baz=125,slow=19,SNR=3.6						
LEM				LR	LR	21 30 51.1	
	comp=Z,186nm,18.7s,baz=106,slow=39						
GYA	**Guiyang**	**25.55**	**314**	*e*P	**P**	**21 20 07.8**	**+4.2**
GYA				PP	**PnPn**	**21 20 42.8**	**+2.7**
GYA				S	**S**	**21 24 28.5**	**-1.0**
GYA				SS	**SnSn**	**21 25 19.3**	**-5.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA				pmax	pmax		
	comp=Z,70nm,3.6s						
GYA				LR	LR		
	comp=N,130nm,12.5s						
GYA				LR	LR		
	comp=E,120nm,7.3s						
GYA				LR	LR		
	comp=Z,240nm,12.0s						
IPM	**Ipoh**	**25.99**	**261**	P	**P**	**21 20 06.0**	**-1.7**
FITZ	**Fitzroy Crossi**	**27.27**	**182**	P	**P**	**21 20 18.4**	**-0.6**
	comp=Z,4.5nm,0.8s,baz=23,slow=6.6,SNR=11						
FITZ	**Fitzroy Crossi**	**27.27**	**182**	P	**P**	**21 20 18.9**	**-0.1**
FITZ				IAmb	IAmb	21 20 33.3	
	comp=Z,14nm,0.9s						
KSRS	**Korea Array**	**28.02**	**2**	P	**P**	**21 20 25.9**	**+0.3**
	comp=Z,2.1nm,0.9s,baz=180,slow=11,SNR=10.0						
KSRS				LR	LR	21 33 54.8	
	comp=Z,78nm,18.1s,baz=205,slow=41						
PSI	**Prapat**	**28.42**	**259**	P	**P**	**21 20 30.6**	**+1.0**
	comp=Z,4.5nm,0.8s,baz=360,slow=7.8,SNR=2.6						
CMAR	**Chiang Mai Arr**	**28.45**	**292**	P	**P**	**21 20 31.2**	**+1.5**
	comp=Z,0.6nm,0.9s,baz=96,slow=5.5,SNR=3.1						
KRVT	**Keravat (AS076**	**28.59**	**117**	LR	LR	21 30 23.0	
	comp=Z,57nm,18.5s,baz=290,slow=33						
MJAR	**Matsushiro Arr**	**29.02**	**19**	P	**P**	**21 20 34.7**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=205,slow=9.6,SNR=4.8						
MJAR				LR	LR	21 32 01.8	
	comp=Z,59nm,19.5s,baz=210,slow=36						
WB0	**Warramunga Arr**	**29.87**	**165**	P	**P**	**21 20 40.7**	**-1.5**
WB0				IAmb	IAmb	21 20 55.3	
	comp=Z,4.7nm,0.8s						
WRAB	**Tennant Creek**	**30.02**	**166**	P	**P**	**21 20 43.0**	**-0.5**
WRAB				IAmb	IAmb	21 20 59.7	
	comp=Z,5.8nm,0.8s						
WRA	**Warramunga Arr**	**30.02**	**166**	P	**P**	**21 20 42.1**	**-1.4**
	comp=Z,1.2nm,0.5s,baz=348,slow=9.3,SNR=9.5						
WB2	**Warramunga Arr**	**30.03**	**166**	P	**P**	**21 20 43.5**	**-0.1**
WB2				IAmb	IAmb	21 20 59.9	
	comp=Z,4.4nm,0.7s						
WR0	**Warramunga Arr**	**30.09**	**165**	P	**P**	**21 20 42.9**	**-1.2**
WR0				IAmb	IAmb	21 20 56.1	
	comp=Z,4.8nm,0.8s						
PSAD1	**Pilbara Seismi**	**31.34**	**192**	P	**P**	**21 20 53.3**	**-1.8**
ASAR	**Alice Springs**	**33.52**	**168**	P	**P**	**21 21 13.4**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=343,slow=7.1,SNR=5.1						
LZH	**Lanzhou**	**33.83**	**325**	*e*P	**P**	**21 21 17.3**	**+0.3**
LZH				pP	pP	21 21 20.5	-3.8
LZH				sP	sP	21 21 22.0	-5.7
LZH				PP	**PP**	**21 22 40.3**	**+6.4**
LZH				pmax	pmax		
	comp=Z,31nm,1.1s						
LZH				pmax	pmax		
	comp=Z,84nm,5.0s						
LZH				LR	LR		
	comp=N,250nm,14.1s						
LZH				LR	LR		
	comp=E,250nm,14.1s						
LZH				LR	LR		
	comp=Z,330nm,12.5s						
HHC	**Hu-ho-hao-te**	**34.17**	**339**	*e*P	**P**	**21 21 18.5**	**-1.4**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,69nm,5.2s						
HHC				LR	LR		
	comp=N,220nm,15.7s						
HHC				LR	LR		
	comp=E,140nm,14.7s						
HHC				LR	LR		
	comp=Z,130nm,14.7s						
USRK	**Ussuriysk Ar.**	**35.04**	**7**	P	**P**	**21 21 28.6**	**+1.4**
	comp=Z,2.9nm,0.8s,baz=183,slow=7.2,SNR=15						
SHL	**Shillong**	**36.83**	**301**	P	**P**	**21 21 41.2**	**-1.9**
GTA	**Gaotai**	**38.43**	**326**	*e*P	**P**	**21 21 54.8**	**-1.5**
GTA				pP	pP	21 21 58.5	-5.2
GTA				sP	sP	21 22 01.8	-5.3
GTA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,56nm,6.8s						
GTA				LR	LR		
	comp=N,96nm,14.9s						
GTA				LR	LR		
	comp=E,100nm,16.8s						
GTA				LR	LR		
	comp=Z,130nm,15.9s						
H11S3	**WAKE ISLAND Hy**	**39.73**	**72**	T	T	22 05 17.4	
	baz=262,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**39.75**	**72**	T	T	22 05 06.6	
	baz=262,slow=75,SNR=16						
H11S2	**WAKE ISLAND Hy**	**39.75**	**72**	T	T	22 05 11.1	
	baz=262,slow=75,SNR=17						
KLR	**Kul'dur**	**39.99**	**5**	P	**P**	**21 22 10.0**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=207,slow=7.3,SNR=3.5						
H11N1	**WAKE ISLAND Hy**	**40.10**	**71**	T	T	22 05 45.6	
	baz=265,slow=74,SNR=18						
H11N2	**WAKE ISLAND Hy**	**40.11**	**70**	T	T	22 05 45.6	
	baz=265,slow=74,SNR=13						
H11N3	**WAKE ISLAND Hy**	**40.12**	**70**	T	T	22 05 48.0	
	baz=265,slow=74,SNR=15						
SONM	**Songino Array**	**42.07**	**340**	P	**P**	**21 22 26.0**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=165,slow=11,SNR=3.9						
STKA	**Stephens Creek**	**43.36**	**162**	P	**P**	**21 22 35.9**	**-0.9**
	comp=Z,1.3nm,0.5s,baz=341,slow=10,SNR=6.3						
STKA	**Stephens Creek**	**43.36**	**162**	P	**P**	**21 22 36.6**	**-0.1**
WMQ	**Urumqi**	**48.26**	**322**	*e*P	**P**	**21 23 14.8**	**-0.7**
WMQ				pP	pP	21 23 19.0	-4.0
WMQ				LR	LR		
	comp=N,67nm,12.3s						
WMQ				LR	LR		
	comp=E,220nm,13.3s						
WMQ				LR	LR		
	comp=Z,59nm,14.1s						
PETK	**Petropavlovsk-**	**50.30**	**24**	LR	LR	21 46 08.5	
	comp=Z,45nm,18.9s,baz=239,slow=38						
MKAR	**Makanchi Array**	**53.07**	**323**	P	**P**	**21 23 51.0**	**-0.7**
	comp=Z,0.1nm,1.0s,baz=117,slow=7.0,SNR=7.7						
MAKZ	**Makanchi**	**53.26**	**323**	P	**P**	**21 23 52.2**	**-0.9**
MAKZ				IAmb	IAmb	21 23 54.5	
	comp=Z,5.6nm,1.0s						
NIL	**Nilore**	**54.66**	**305**	P	**P**	**21 24 02.1**	**-1.5**
ZALV	**Zalesovo Beam**	**55.68**	**331**	P	**P**	**21 24 08.6**	**-1.9**
	comp=Z,0.6nm,0.3s,baz=118,slow=7.3,SNR=5.5						
KURK	**Kurchatov**	**57.12**	**326**	P	**P**	**21 24 19.7**	**-1.1**
KURK				IAmb	IAmb	21 24 22.5	
	comp=Z,4.8nm,0.9s						
KURBB	**Kurchatov Arra**	**57.12**	**326**	P	**P**	**21 24 19.8**	**-1.0**
	comp=Z,1.6nm,0.6s,baz=124,slow=6.9,SNR=20						
TIXI	**Tiksi**	**62.28**	**1**	P	**P**	**21 24 54.9**	**-1.0**
BRVK	**Borovoye**	**62.79**	**326**	P	**P**	**21 24 58.1**	**-1.6**
BRVK				IAmb	IAmb	21 25 01.3	
	comp=Z,3.9nm,0.8s						
CASY	**Casey**	**76.34**	**187**	P	**P**	**21 26 21.8**	**-1.1**
CASY				IAmb	IAmb	21 26 35.2	
	comp=Z,5.4nm,0.8s						
RAYN	**Ar Rayn**	**78.37**	**292**	P	**P**	**21 26 33.2**	**-2.2**
RAYN				IAmb	IAmb	21 26 36.4	
	comp=Z,3.4nm,0.9s						
ILAR	**Eielson Array**	**80.08**	**26**	P	**P**	**21 26 44.4**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=235,slow=6.1,SNR=6.2						
KLMR	**Klimovskoe**	**80.58**	**330**	*e*	**P**	**21 26 45.7**	**-0.9**
KLMR				AMP		21 26 47.8	
	comp=Z,10.0nm,1.1s						
DOT	**Dot Lake**	**81.35**	**27**	P	**P**	**21 26 47.1**	**-3.5**
DOT				IAmb	IAmb	21 26 52.8	
	comp=Z,4.6nm,1.1s						
SCRK	**Sand Creek**	**81.36**	**26**	P	**P**	**21 26 48.6**	**-2.2**
INK	**Inuvik**	**84.98**	**22**	P	**P**	**21 27 10.3**	**+1.1**
	comp=Z,2.2nm,0.9s,baz=224,slow=1.0,SNR=6.0						
ARCES	**ARCESS Array B**	**85.24**	**340**	P	**P**	**21 27 10.6**	**0.0**
	comp=Z,1.3nm,0.5s,baz=80,slow=7.1,SNR=14						
FINES	**FINESS Array B**	**86.95**	**332**	P	**P**	**21 27 18.6**	**-0.5**
	comp=Z,1.6nm,0.9s,baz=98,slow=3.9,SNR=9.8						
VNDA	**Vanda**	**88.94**	**173**	P	**P**	**21 27 29.6**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=2.5,slow=3.1,SNR=2.9						
MAW	**Mawson**	**88.98**	**200**	P	**P**	**21 27 30.2**	**+1.6**
	comp=Z,1.8nm,1.0s,baz=18,slow=6.4,SNR=2.2						
YKA	**Yellowknife Ar**	**94.42**	**24**	P	**P**	**21 27 53.9**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=302,slow=4.5,SNR=6.7						
GERES	**GERESS Array B**	**97.73**	**322**	LR	LR	22 18 03.4	
	comp=Z,52nm,18.0s,baz=217,slow=39						

*IDC **30** 21:16:41.1±2.0,9°.62N×126°.89E,h0km,mb3.8/7, mb1 3.9/7,mb1mx3.6/40,mbtmp3.8/7,Error ellipse: s-maj=219.2km s-min=22.6km az=69.0*
*MAN **30** 21:16:41.9,9°.36N×126°.86E,h1km,mb4.7,ML3.5,MS3.4*
ISC 30 21:16:47.2±1.1,9°.47N±0°.06×126°.9E±0°.1,h41km,n19, σ1§72/18,mb3.8/7,1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**2.10**	**289**	*e*P	**Pn**	**21 17 18.8**	**-1.1**
MSLP				*e*S	**Sn**	**21 17 46.5**	**+1.8**
BUKP	**Musuan**	**2.39**	**229**	*e*P	**Pn**	**21 17 21.0**	**-3.0**
BUKP				*e*S	**Sn**	**21 17 51.5**	**-0.6**
MATI	**Mati**	**2.58**	**194**	*e*P	**Pn**	**21 17 24.9**	**-1.6**
MATI				*e*S	**Sn**	**21 17 59.7**	**+3.0**
LLP	**Lapu-Lapu**	**2.99**	**287**	*e*P	**Pn**	**21 17 31.7**	**-0.4**
LLP				*e*S	**Sn**	**21 18 09.3**	**+2.5**
DDMP	**Don Marcelino,**	**3.54**	**199**	*e*P	**Pn**	**21 17 40.8**	**+1.1**
DDMP				*e*S	**Sn**	**21 18 21.7**	**+1.5**
RCP	**Roxas**	**4.57**	**297**	⇓*e*P	**Pn**	**21 17 54.5**	**+0.7**
WRA	**Warramunga Arr**	**30.14**	**166**	P	**P**	**21 22 53.1**	**-0.3**
	0.7nm,0.7s,baz=344,slow=9.5,SNR=1.9						
ASAR	**Alice Springs**	**33.64**	**168**	P	**P**	**21 23 25.9**	**+1.8**
	0.7nm,0.8s,baz=354,slow=7.2,SNR=1.4						
H11S3	**WAKE ISLAND Hy**	**39.58**	**72**	T	T	22 07 12.8	
	baz=262,slow=77,SNR=7.6						
H11S1	**WAKE ISLAND Hy**	**39.59**	**72**	T	T	22 07 23.6	
	baz=262,slow=77,SNR=6.9						
H11S2	**WAKE ISLAND Hy**	**39.59**	**72**	T	T	22 07 12.3	
	baz=262,slow=77,SNR=10						
H11N1	**WAKE ISLAND Hy**	**39.94**	**71**	T	T	22 07 52.5	
	baz=265,slow=74,SNR=8.2						
H11N2	**WAKE ISLAND Hy**	**39.95**	**71**	T	T	22 07 46.5	
	baz=265,slow=74,SNR=8.6						
H11N3	**WAKE ISLAND Hy**	**39.96**	**71**	T	T	22 07 56.7	
	baz=265,slow=74,SNR=11						
MKAR	**Makanchi Array**	**53.02**	**323**	P	**P**	**21 25 59.1**	**-1.0**
	0.7nm,0.6s,baz=134,slow=7.7,SNR=2.1						
ZALV	**Zalesovo Beam**	**55.61**	**331**	P	**P**	**21 26 16.7**	**-2.0**
	0.4nm,0.4s,baz=104,slow=6.3,SNR=1.8						
KURBB	**Kurchatov Arra**	**57.07**	**325**	P	**P**	**21 26 28.2**	**-0.9**
	0.7nm,0.5s,baz=125,slow=7.4,SNR=5.5						
ARCES	**ARCESS Array B**	**85.15**	**340**	P	**P**	**21 29 18.4**	**-0.3**
	0.7nm,0.6s,baz=81,slow=7.5,SNR=3.5						
FINES	**FINESS Array B**	**86.88**	**332**	P	**P**	**21 29 27.7**	**+0.3**
	0.4nm,0.4s,baz=84,slow=4.3,SNR=1.9						

*IDC **30** 21:19:03.9±0.8,22°.70N×121°.30E,h0km,mb3.8/14, mb1 4.0/15,mb1mx3.9/42,mbtmp3.9/15,ML3.0/2,MS3.6/3, Ms1 3.6/3,ms1mx3.1/32,Error ellipse: s-maj=25.2km s-min=15.8km az=73.0*
*NEIC **30** 21:19:05.7±1.8,22°.84N±0°.07×121°.47E±0°.06,h14km±4km, mb4.2/18,Error ellipse: s-maj=9.6km s-min=7.4km az=193.0*
*JMA **30** 21:19:05.0±0.1,22°.82N×121°.47E,h5km±3km,M4.5*
*ASIES **30** 21:19:07.0,22°.86N×121°.29E,h19km,MW3.9*
*BJI **30** 21:19:07.1±0.0,22°.87N×121°.39E,h15km,mB4.4/12, mb3.9/16,ML4.3/5,Ms4.0/9,Ms7 3.9/10*
*TAP **30** 21:19:07.5,22°.88N×121°.28E,h18km,ML4.4,C*
ISC 30 21:19:07.9±0.7,22°.85N±0°.02×121°.35E±0°.02,h23km±5km, n189,σ1§29/273,mb4.0/26,MS3.6/3,5C-22D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWH	**Lutao**	**0.18**	**140**	⇓*i*P	**Pb**	**21 19 14.0**	**+0.9**
	baz=128						
TWH				*i* S	**Sb**	**21 19 18.9**	**+2.3**
	baz=128						
TTN	**Taitung**	**0.21**	**244**	⇑*i*P	**Pb**	**21 19 12.7**	**-0.9**
	baz=219						
TTN				*i* S	**Sb**	**21 19 16.5**	**-0.9**
	baz=219						
CHKT	**Chengkung**	**0.25**	**3**	⇑*i*P	**Pb**	**21 19 13.4**	**-0.7**
	baz=26						
CHKT				S	**Sb**	**21 19 17.7**	**-0.6**
	baz=26						
TWGBT	**Beinan**	**0.25**	**264**	*i* P	**Pb**	**21 19 12.5**	**-1.6**
	baz=250						
TWGBT				*i* S	**Sb**	**21 19 17.1**	**-1.3**
	baz=250						
TWG	**Pinlang**	**0.26**	**264**	P	**Pb**	**21 19 12.7**	**-1.6**
	baz=251						
TWG				*i* S	**Sb**	**21 19 17.1**	**-1.4**
	baz=251						
TWG	**Pinlang**	**0.26**	**264**		**Pb**	**21 19 12.7**	**-1.6**
ECL	**Taimali**	**0.44**	**236**	*i* P	**Pb**	**21 19 15.7**	**-1.4**
	baz=239						
ECL				*i* S	**Sb**	**21 19 21.8**	**-1.6**
	baz=239						
ELDTW	**Lidau**	**0.46**	**318**	⇓*i*P	**Pb**	**21 19 15.6**	**-1.9**
	baz=323						
ELDTW				*e*S	**Sb**	**21 19 21.4**	**-2.6**
	baz=323						
TWF1	**Yuli**	**0.51**	**354**	⇓*i*P	**Pb**	**21 19 16.8**	**-1.4**
	baz=351						
TWF1				*e*S	**Sb**	**21 19 24.7**	**-0.5**
	baz=351						
YULB	**Yu-li**	**0.55**	**355**	⇓*i*P	**Pb**	**21 19 17.2**	**-1.7**
	baz=353						
YULB				S	**Sb**	**21 19 24.4**	**-2.0**
	baz=353						
YULB	**Yu-li**	**0.55**	**355**	Pg	**Pb**	**21 19 17.2**	**-1.7**
STYT	**Tauyuan**	**0.63**	**300**	⇓*i*P	**Pb**	**21 19 18.7**	**-1.7**
	baz=293						
STYT				S	**Sb**	**21 19 26.9**	**-2.0**
	baz=293						
TAW	**Tawu**	**0.64**	**221**	⇑*i*P	**Pb**	**21 19 19.4**	**-1.1**
	baz=212						
TAW				S	**Sb**	**21 19 28.1**	**-1.0**
	baz=212						
HGSD	**Ruisui**	**0.65**	**6**	P	**Pb**	**21 19 19.6**	**-0.9**
	baz=31						
HGSD				S	**Sb**	**21 19 29.9**	**+0.7**
	baz=31						
EAST	**Anshuo**	**0.66**	**225**	⇑*i*P	**Pb**	**21 19 19.5**	**-1.3**
	baz=226						
EAST				*e*S	**Sb**	**21 19 28.4**	**-1.1**
	baz=226						
EHY	**Hungye**	**0.66**	**358**	P	**Pb**	**21 19 19.0**	**-1.7**
	baz=355						
EHY				*e*S	**Sb**	**21 19 27.9**	**-1.7**
	baz=355						
SLGT	**Liugui**	**0.67**	**283**	⇓*i*P	**Pb**	**21 19 19.4**	**-1.6**
	baz=278						
SLGT				S	**Sb**	**21 19 27.4**	**-2.5**
	baz=278						
SSD	**Sandimen**	**0.67**	**262**	⇓*i*P	**Pb**	**21 19 19.2**	**-1.8**
	baz=260						
SSD				S	**Sb**	**21 19 26.7**	**-3.2**
	baz=260						
MASBT	**Mashibuluo**	**0.70**	**251**	⇓*i*P	**Pb**	**21 19 20.0**	**-1.6**
	baz=240						
MASBT				*e*S	**Sb**	**21 19 29.9**	**-1.0**
	baz=240						
YUS	**Yu-Shan**	**0.74**	**330**	*e*P	**Pb**	**21 19 21.2**	**-1.2**
	baz=335						
YUS				*e*S	**Sb**	**21 19 29.9**	**-2.5**
	baz=335						
SGST	**Jiashian**	**0.75**	**288**	⇓*i*P	**Pb**	**21 19 20.3**	**-2.0**
	baz=288						
SGST				S	**Sb**	**21 19 30.3**	**-1.8**
	baz=288						
WTP	**Ta-pu**	**0.79**	**300**	⇓*i*P	**Pb**	**21 19 22.0**	**-1.1**
	baz=301						
WTP				S	**Sb**	**21 19 33.0**	**-0

WHYT eS Sb 21 19 36.9 -1.4
baz=334
ESL Shilin 0.97 4 eP Pb 21 19 24.4 -1.7
baz=2.0
ESL eS Sb 21 19 37.6 -0.8
baz=2.0
CHN5 Tsauling 0.97 320⇓iP Pb 21 19 25.4 -0.8
baz=327
CHN5 eS Sb 21 19 37.3 -1.3
baz=327
KAU Kaohsiung 1.00 254 eP Pn 21 19 28.4 +1.8
baz=248
KAU eS Sn 21 19 43.0 +3.0
baz=248
SSLB Suanglung 1.01 339⇓iP Pb 21 19 25.3 -1.4
baz=351
SSLB eS Sb 21 19 38.7 -0.9
baz=351
SSLB Suanglung 1.01 339 Pb 21 19 25.3 -1.4
HEN Hengchun 1.01 214 eP Pb 21 19 26.4 -0.4
baz=198
HEN eS Sb 21 19 38.7 -1.0
baz=198
WLCH Liuqiu 1.03 241 P Pb 21 19 29.4 +2.4
baz=234
TSEB Hengchuen, Pin 1.03 204 eP Pn 21 19 26.2 -0.8
baz=188
TSEB eS Sb 21 19 40.6 +0.4
baz=188
TWKBT Hengchun 1.03 209⇑iP Pn 21 19 25.6 -1.4
baz=190
TWKBT S Sb 21 19 37.9 -2.3
baz=190
TWK1 Hengchun 1.03 210 iP Pn 21 19 25.5 -1.5
baz=190
TWK1 eS Sn 21 19 41.1 +0.3
baz=190
TAI1 Yung-k'ang 1.05 281 eP Pb 21 19 27.6 +0.1
baz=280
CHN2 Minshiung 1.06 310 eP Pn 21 19 27.5 +0.1
baz=311
CHN2 eS Sn 21 19 42.9 +1.5
baz=311
CHY Chiayi 1.07 307⇓iP Pn 21 19 27.4 -0.2
baz=308
CHY iS Sn 21 19 41.9 +0.1
baz=308
WGK Gukeng 1.11 319 eP Pn 21 19 28.3 +0.2
baz=320
WGK eS Sn 21 19 43.9 +1.3
baz=320
SMLT Sun Moon Lake 1.11 338 P Pn 21 19 27.7 -0.6
baz=348
SMLT eS Sb 21 19 42.0 -0.7
baz=348
OWD Renai 1.11 352 eP Pn 21 19 27.6 -0.6
baz=7.0
SCLT Jiali 1.12 287 eS Sn 21 19 45.1 +2.2
baz=298
WDLH Douliu 1.12 318⇓P Pn 21 19 28.4 +0.1
baz=319
WDLH eS Sn 21 19 43.7 +0.7
baz=319
WJS Zhushan 1.13 329⇓iP Pb 21 19 28.8 0.0
baz=332
WJS eS Sn 21 19 44.3 +1.1
baz=332
TYC Yuchr 1.15 337 P Pn 21 19 28.4 -0.2
baz=352
TYC eS Sb 21 19 43.5 -0.1
baz=352
HWA Hwalien 1.15 12 eP Pn 21 19 28.0 -0.6
baz=17
WLGB Puzi 1.16 303⇓P Pn 21 19 28.9 +0.2
baz=303
WLGB S Sn 21 19 45.4 +1.6
baz=303
CHN8 Yiju 1.16 296 eP Pn 21 19 28.7 -0.1
baz=296
CHN8 eS Sn 21 19 45.5 +1.5
baz=296
WNT Mingjian 1.20 329⇓iP Pb 21 19 30.0 +0.1
baz=331
WNT eS Sb 21 19 46.7 +1.7
baz=331
CHGB Renai 1.22 352 eP Pn 21 19 29.0 -0.8
baz=9.0
CHGB eS Sn 21 19 44.2 -1.5
baz=9.0
DPDB Guoxing 1.25 342 eP Pn 21 19 30.3 +0.3
baz=355
DPDB eS Sb 21 19 46.6 +0.2
baz=355
TWD Chiawan 1.25 10 eP Pn 21 19 28.7 -1.3
baz=6.0
TWD eS Sn 21 19 43.5 -2.6
baz=6.0
WHF Hehuan Shan 1.29 356 eP Pn 21 19 30.0 -1.0
baz=15
WHF eS Sn 21 19 46.9 -0.9
baz=15
WSF Szhu 1.30 307 eP Pn 21 19 31.1 +0.4
baz=308
WSF eS Sb 21 19 48.6 +0.5
baz=308
NACB Ninganchiao 1.34 9 P Pn 21 19 29.3 -1.9
baz=16
NACB eS Sn 21 19 45.9 -2.5
baz=16
NACB Ninganchiao 1.34 9 Pn 21 19 28.7 -2.5
ETLH Xiulin Townshi 1.36 5 eP Pn 21 19 30.2 -1.4
baz=23
RLNB Erlin 1.38 319 eP Pn 21 19 32.2 +0.4
baz=309
RLNB eS Sb 21 19 50.7 +0.3
baz=309
WMLT Mailiao 1.41 313 eS Sb 21 19 51.8 +0.7
baz=313
TDCB Techi 1.41 353 eP Pn 21 19 31.8 -0.6
baz=10.0
TDCB eS Sn 21 19 49.5 -0.9
baz=10.0
WTCT Ta-ch'eng 1.41 316 eP Pn 21 19 32.0 -0.2
baz=317
WTCT eS Sb 21 19 52.1 +0.9
baz=317
WCHH Zhanghua 1.43 329 eP Pb 21 19 33.8 -0.1
baz=345
WCHH eS Sb 21 19 53.2 +1.5
baz=345
TCU Taichung 1.44 334 P Pb 21 19 33.8 -0.3
baz=336
TCU eS Sb 21 19 53.7 +1.8
baz=336
WHP Taichung City 1.47 345 eP Pb 21 19 34.8 0.0
NNSB Datong 1.57 1 eP Pn 21 19 34.0 -0.6
baz=19
NNSB eS Sn 21 19 53.4 -0.9
baz=19
NNSH Datong 1.57 1 eP Pn 21 19 34.2 -0.4
baz=18
NNSH eS Sn 21 19 53.1 -1.2
baz=18
NNS Nan Shan 1.59 1 eP Pn 21 19 35.1 +0.4
baz=19
NNS eS Sn 21 19 53.8 -0.8
baz=19
WDGT Dungji 1.61 285 eP Pn 21 19 34.2 -0.7
baz=284
WDGT eS Sn 21 19 54.1 -1.0
baz=284
ENA Nanau 1.61 13 eP Pn 21 19 34.0 -1.0
baz=17
WDJ Dajia District 1.63 337 eP Pb 21 19 36.9 -0.5
baz=337
WDJ eS Sb 21 19 59.1 +1.6
baz=337
NSY Sanyi 1.65 341 eP Pb 21 19 37.6 -0.2
baz=342
NSY eS Sb 21 19 59.2 +1.0
baz=342
PTSB Yuanli 1.70 340 eP Pb 21 19 38.0 -0.6
baz=340
PTSB eS Sb 21 20 01.6 +2.1
baz=340
NDT Datong Townshi 1.75 5 eP Pn 21 19 37.1 +0.1
baz=22
NMLH Miaoli 1.76 343 eP Pb 21 19 38.7 -0.8
baz=344
NMLH eS Sb 21 20 02.0 +0.8
baz=344
PHUB P'eng-hu 1.77 292 eP Pn 21 19 36.3 -0.8
baz=292
PHUB S Sn 21 19 58.3 -0.6
baz=292
PNG Penghu 1.80 294 P Pn 21 19 37.2 -0.4
baz=293
PNG S Sn 21 19 59.1 -0.7
baz=293
NSTT Nanjuang 1.81 350 P Pn 21 19 38.6 +1.0
baz=4.0
NSTT eS Sb 21 20 03.5 +0.9
baz=4.0
VCHM Qimei 1.81 282 P Pn 21 19 36.9 -0.7
baz=281
TWC Suao 1.81 14 eP Pn 21 19 38.0 +0.3
baz=8.0
TWC eS Sn 21 19 59.4 -0.6
baz=8.0
YHNB Yeheng 1.81 1 P Pn 21 19 38.3 +0.4
baz=21
YHNB eS Sn 21 19 59.2 -1.0
baz=21
YHNB Yeheng 1.81 1 Pn 21 19 36.5 -1.4
LIOB Emei 1.82 350 P Pn 21 19 39.1 +1.2
baz=4.0
NWLT Wulai 1.93 4 P Pn 21 19 39.6 +0.3
baz=21
WLTB Daxi 2.00 357 eP Pb 21 19 43.5 -0.2
baz=16
NTC Toucheng 2.05 12 eP Pn 21 19 42.2 +1.2
baz=15
TATO Taipei 2.12 3 Pn 21 19 40.5 -1.5
TIPB Shuangxi 2.16 11 eP Pn 21 19 43.2 +0.6
baz=15
JYNG Yonagunijimaku 2.16 42 P Pn 21 19 42.0 -0.6
JYNG S Sb 21 20 10.5 -2.3
YOJ Yonaguni jima 2.21 43 eP Pn 21 19 44.4 +1.1
baz=46
YOJ Yonaguni jima 2.21 43 P Pn 21 19 43.1 -0.1
YOJ S Sn 21 20 11.7 +1.8
YOJ Yonaguni jima 2.21 43 Pn Pn 21 19 38.0 -5.2
TWB1 Santiao Chiao 2.23 15 eP Pn 21 19 44.9 +1.5
baz=17
NWF Wu-fen Shan 2.25 10 eP Pn 21 19 44.5 +0.6
baz=12
WFSB Wu-fen Shan 2.25 10 eP Pn 21 19 43.9 +0.2
baz=12
YM01 YM01 2.30 5 eP Pn 21 19 45.2 +0.7
baz=22
YM10 YM10 2.31 5 eP Pn 21 19 44.2 -0.4
baz=22
NTST Danshui 2.31 2 eP Pn 21 19 45.0 +0.4
baz=19
YM11 YM11 2.32 5 eP Pn 21 19 45.2 +0.5
baz=22
ANP Anpu 2.33 4 eP Pn 21 19 45.5 +0.4
baz=21
HATJ Hateruma jima 2.55 61 P Pn 21 19 48.4 +0.5
HATJ S Sn 21 20 19.7 +1.4
IRIF Iriomote-Funau 2.64 55 P Pn 21 19 48.5 -0.6
IRIF eS Sn 21 20 22.8 +2.5
VWUC VWUC 2.76 321 eP Pn 21 19 50.6 -0.1
baz=320
JKRS Kuro-shima 2.80 60 P Pn 21 19 52.8 +1.4
JKRS eS Sn 21 20 26.2 +1.7
PCYT Pengchaiyu 2.85 13 eP Pn 21 19 50.9 -1.0
baz=15
JIJ Ishigaki jima 2.97 59 P Pn 21 19 53.7 0.0
JIJ eS Sn 21 20 30.1 +1.5
PTMZ Houxiangcun 2.99 317 eP Pn 21 19 53.8 -0.2
baz=316
PTMZ eS Sn 21 20 28.0 -1.1
baz=316
PTTC Pingtan 3.01 332 eP Pn 21 19 54.2 0.0
baz=329
KNM Kinmen 3.10 301 eP Pn 21 19 56.3 +0.9
baz=298
KNMB Chin-men Tao 3.16 301 eP Pn 21 19 55.8 -0.5
baz=300
KNMB Chin-men Tao 3.16 301 Pn 21 19 55.4 -0.9
JISG Ishigakijimahi 3.22 57 P Pn 21 19 57.0 -0.1
JISG S Sn 21 20 35.6 +0.9
QZH Quanzhou 3.28 310 Pn Pn 21 19 57.5 -0.4
QZH Sn Sn 21 20 33.0 -3.2
QZH smax smax
comp=N,150nm,0.7s
QZH smax smax
comp=E,170nm,0.8s
ZPLA Ao Xicun 3.48 289 eP Pn 21 20 00.4 -0.3
baz=287
MATB Ma-tsu 3.53 339 eP Pn 21 20 00.8 -0.6
baz=337
JTJ Tarama 3.55 59 P Pn 21 20 02.1 +0.5
JTJ S Sn 21 20 43.7 +0.8
ZZJH Jiuhuzhen 3.78 296 eP Pn 21 20 04.4 -0.3
baz=295
MHZQ Yeshan 3.87 327 eP Pn 21 20 05.7 -0.4
baz=327
LYJJ Jianjiangzhen 3.96 339 eP Pn 21 20 06.7 -0.6
baz=337
JIRB Irabujima 4.01 60 P Pn 21 20 08.1 +0.1
JIRB S Sn 21 20 54.9 +0.5
JMJ2 Miyako jima3 4.10 62 P Pn 21 20 09.9 +0.7
JMJ2 eS Sn 21 20 57.6 +1.1
JMJ Miyako jima 2 4.11 61 eP Pn 21 20 09.2 -0.1
baz=63
JIKM Ikemajima 4.12 59 P Pn 21 20 11.2 +1.7
JIKM eS Sn 21 20 58.0 +1.0
JOGS Gusukube 4.17 62 P Pn 21 20 11.5 +1.3
JOGS eS Sn 21 21 00.1 +1.8
XPSS Dashiqiu 4.20 346 eP Pn 21 20 09.9 -0.7
baz=344
VDOS Pratas Island 4.80 244 eP Pn 21 20 19.8 +1.0
baz=244
HKPS Hong Kong Po S 6.69 267 Pn 21 20 45.7 +0.9
JOW Kunigami 7.43 56 Pn Pn 21 20 54.5 -0.6
0.2nm,0.3s,baz=17,slow=12,SNR=6.7
JOW Sn Sn 21 22 16.8 -1.8
0.5nm,0.3s,baz=88,slow=19,SNR=4.7
JOW Kunigami 7.43 56 Pn 21 20 52.6 -2.4
WHN Wuhan 9.89 322 P Pn 21 21 33.8 +5.0
WHN S Sn 21 23 19.3 +0.2
WHN LR LR
comp=N,680nm,5.2s
WHN LR LR
comp=E,840nm,5.3s
WHN LR LR
comp=Z,1μm,14.9s
XAN Xi'an 15.60 318 P P 21 22 50.3 -0.2
XAN LR LR
comp=N,360nm,15.2s
XAN LR LR
comp=E,300nm,14.1s
XAN LR LR
comp=Z,520nm,16.3s
KSRS Korea Array 15.62 20 Pn Pn 21 22 48.1 +1.5
0.4nm,0.3s,baz=189,slow=11,SNR=4.7
KMI Kunming 17.16 281 P P 21 23 12.5 +4.4
KMI pP pP 21 23 14.8 +0.4
KMI sP sP 21 23 16.0 -1.2
KMI pmax pmax
comp=Z,17nm,0.5s
KMI pmax pmax
comp=Z,110nm,6.5s
KMI LR LR
comp=N,170nm,12.9s
KMI LR LR
comp=E,200nm,13.8s
KMI LR LR
comp=Z,270nm,14.9s
JHJ Hachijo jima 2 19.20 54 P Pn 21 23 34.3 +3.1
1.1nm,0.3s,baz=273,slow=11,SNR=4.1
HHC Hu-ho-hao-te 19.76 338 eP Pn 21 23 40.5 +2.6
HHC pmax pmax
comp=Z,6.0nm,0.9s
HHC pmax pmax
comp=Z,35nm,5.7s
HHC LR LR
comp=N,220nm,17.1s
HHC LR LR
comp=E,100nm,18.9s
HHC LR LR
comp=Z,140nm,16.7s
MAJO Matsushiro 19.97 43 P P 21 23 37.7 -1.0
MJAR Matsushiro Arr 19.98 43 P Pn 21 23 40.4 -0.1
4.3nm,0.9s,baz=236,slow=11,SNR=9.6
CHTO Chiang Mai 21.32 263 P P 21 23 53.7 +0.3
CMAR Chiang Mai Arr 21.41 262 P P 21 23 56.2 +1.8
2.7nm,0.9s,baz=69,slow=8.8,SNR=17
SBUM Sibu 22.13 205 P P 21 24 00.6 -1.4
USRK Ussuriysk Ar. 23.03 20 P P 21 24 12.2 +0.9
0.7nm,0.7s,baz=204,slow=6.3,SNR=2.2
GTA Gaotai 24.65 317 eP P 21 24 28.5 +1.4
GTA pP pP 21 24 33.0 -1.0
GTA sP sP 21 24 35.5 -1.1
GTA pmax pmax
comp=Z,3.0nm,1.0s
SONM Songino Array 27.66 338 P P 21 24 54.1 0.0
2.1nm,0.8s,baz=154,slow=9.9,SNR=8.9
SONM LR LR 21 37 21.4
comp=Z,159nm,18.1s,baz=158,slow=40
LSA Lhasa 27.88 291 P P 21 24 57.2 +0.5
LSA IAmb IAmb 21 25 03.3
comp=Z,5.6nm,0.7s
WMQ Urumqi 34.70 315 eP P 21 25 58.5 +2.4
MK31 Makanchi Array 39.41 317 P P 21 26 35.8 -0.2
MK31 IAmb IAmb 21 26 49.8
comp=Z,5.6nm,1.1s
MKAR Makanchi Array 39.41 317 P P 21 26 37.3 +1.3
comp=Z,3.6nm,0.8s,baz=110,slow=10,SNR=9.8
FITZ Fitzroy Crossi 40.91 174 P P 21 26 46.0 -2.6
comp=Z,1.0nm,0.8s,baz=342,slow=20,SNR=1.0
FITZ Fitzroy Crossi 40.91 174 IAmb IAmb 21 26 52.4
comp=Z,3.0nm,1.0s
ZAA0 Zalesovo Array 41.45 328 P P 21 26 52.9 +0.2
ZAA0 IAmb IAmb 21 26 53.5
comp=Z,6.7nm,0.9s
ZALV Zalesovo Beam 41.45 328 P P 21 26 52.9 +0.1
comp=Z,5.4nm,0.8s,baz=111,slow=8.1,SNR=17
COEN Coen 42.36 148 P P 21 26 58.6 -2.0
H11N1 WAKE ISLAND Hy 42.42 85 T T 22 12 18.6
baz=282,slow=75,SNR=133
H11N2 WAKE ISLAND Hy 42.42 85 T T 22 12 14.7
baz=282,slow=75,SNR=181
H11N3 WAKE ISLAND Hy 42.44 85 T T 22 12 20.5
baz=282,slow=75,SNR=135
H11S3 WAKE ISLAND Hy 42.51 87 T T 22 12 22.4
baz=284,slow=75,SNR=188
H11S1 WAKE ISLAND Hy 42.52 87 T T 22 12 22.2
baz=284,slow=75,SNR=185
H11S2 WAKE ISLAND Hy 42.53 87 T T 22 12 23.8
baz=284,slow=75,SNR=190
KURK Kurchatov 43.22 321 P P 21 27 06.8 -0.3
KURK IAmb IAmb 21 27 08.3
comp=Z,2.6nm,0.9s
KURBB Kurchatov Arra 43.23 321 P P 21 27 08.2 +0.9
comp=Z,1.9nm,0.8s,baz=148,slow=7.0,SNR=11
NIL Nilore 43.38 295 P P 21 27 08.2 -0.6
NIL IAmb IAmb 21 27 14.1
comp=Z,4.7nm,0.8s
WB0 Warramunga Arr 44.23 162 P P 21 27 14.6 -1.0
WB0 IAmb IAmb 21 27 25.2
comp=Z,5.8nm,1.1s
WRAB Tennant Creek 44.37 162 P P 21 27 16.1 -0.7
WRAB IAmb IAmb 21 27 19.6
comp=Z,4.4nm,1.1s
WRA Warramunga Arr 44.38 162 P P 21 27 14.8 -2.0
comp=Z,1.2nm,0.8s,baz=344,slow=8.3,SNR=5.4
WB2 Warramunga Arr 44.38 162 P P 21 27 16.3 -0.6
WB2 IAmb IAmb 21 27 17.0
comp=Z,2.0nm,0.8s
WR0 Warramunga Arr 44.45 162 P P 21 27 16.0 -1.4
WR0 IAmb IAmb 21 27 17.6
comp=Z,4.9nm,1.1s
ASAR Alice Springs 47.82 164 P P 21 27 43.6 -0.3
comp=Z,0.5nm,0.6s,baz=343,slow=7.2,SNR=7.3
BRVK Borovoye 48.88 321 P P 21 27 51.3 -0.5
BRVK IAmb IAmb 21 27 53.5
comp=Z,2.4nm,0.9s
FORT Forrest 53.71 173 P P 21 28 24.7 -3.4
ARU Arti 56.27 324 P P 21 28 46.1 -0.3
TOO Toolangi 64.25 159 P P 21 29 39.5 -1.7
KBZ Khabaz 66.44 309 P P 21 29 58.9 +3.5
comp=Z,1.9nm,0.8s,baz=136,slow=7.8,SNR=3.8
ILAR Eielson Array 70.33 27 P P 21 30 19.7 +0.3
comp=Z,0.2nm,0.5s,baz=284,slow=7.3,SNR=2.0
FINES FINESS Array B 72.67 330 P P 21 30 33.2 -0.4
comp=Z,1.6nm,0.8s,baz=65,slow=11,SNR=5.9
NOA NORSAR Array B 79.47 332 P P 21 31 11.6 -0.8
comp=Z,0.4nm,0.6s,baz=55,slow=5.9,SNR=3.5
NOA LR LR 22 10 31.7
comp=Z,40nm,19.1s,baz=90,slow=39
GERES GERESS Array B 83.97 321 P P 21 31 35.5 -1.0
comp=Z,0.4nm,0.6s,baz=75,slow=5.7,SNR=5.0
YKA Owlsnife Ar 84.14 23 P P 21 31 37.8 +0.9
comp=Z,0.4nm,0.6s,baz=311,slow=4.7,SNR=3.0
YKA LR LR 22 13 03.9
comp=Z,15nm,18.5s,baz=0.0,slow=38

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*DDA **30** 21:38:23.3, 35.09N×35.67E, h22km±3km, ML2.6*
*ISK **30** 21:38:25.9, 35.25N×35.69E, h6km, ML2.6/24*
*GRAL **30** 21:38:25.4±0.4, 35.47N×35.77E, h0km±4km, MD3.5*
ISC 30 21:38:28.7±1.0, **35.30N**±0.03×**35.69E**±0.04, **h22km, n56, σ1s09/58, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
YAYL	**Yayladag**	**0.81**	**25**	PG	**Pb**		**21 38 42.8**	**-1.4**
YAYL	**Yayladag**	**0.81**	**25**	*i* P	**Pb**		**21 38 42.2**	**-2.0**
YAYL				IAML			21 38 51.0	
	comp=E,116nm,0.4s							
YAYL				IAML			21 38 53.0	
	comp=N,157nm,0.7s							
HWQ	**Hawqa**	**1.04**	**168**	*e*P	**Pb**		**21 38 46.5**	**-1.7**
HWQ				eS	**Sn**		**21 39 02.7**	**+0.6**
TAHT	**Tahtakopru-Hat**	**1.15**	**20**	PN	**Pn**		**21 38 48.8**	**-0.7**
EREN	**Erenkoy**	**1.26**	**281**	PN	**Pn**		**21 38 50.6**	**-0.4**
EREN	**Erenkoy**	**1.26**	**281**	*i* P	**Pb**		**21 38 51.9**	**+0.1**
KRTS	**Karatas**	**1.29**	**349**	PN	**Pn**		**21 38 51.8**	**+0.3**
BHL	**Bhannes**	**1.40**	**181**	*e*P	**Pn**		**21 38 52.8**	**-0.2**
BHL				eS	**Sb**		**21 39 13.1**	**+1.6**
BEYL	**Beirut**	**1.44**	**187**	*e*P	**Pn**		**21 38 53.4**	**0.0**
YURE	**YUREGIR**	**1.52**	**358**	PN	**Pb**		**21 38 55.8**	**-0.5**
YURE	**YUREGIR**	**1.52**	**358**	*i* P	**Pb**		**21 38 56.3**	**0.0**
DQRL	**Deir Qamar**	**1.59**	**184**	*e*P	**Pn**		**21 38 55.8**	**+0.1**
CEYT	**Ceyhan**	**1.71**	**2**	PN	**Pn**		**21 38 57.8**	**+0.6**
QRWL	**Qaraoun**	**1.75**	**180**	*e*P	**Pn**		**21 38 58.1**	**+0.3**
LFK	**Lefkose**	**1.76**	**270**	PN	**Pn**		**21 38 57.8**	**-0.2**
RCY	**Rachaya**	**1.81**	**176**	*e*P	**Pn**		**21 38 58.8**	**+0.1**
DED	**Mersin**	**1.81**	**337**	*i* P	**Pn**		**21 38 57.9**	**-0.7**
MERS	**Mersin**	**1.83**	**329**	PN	**Pn**		**21 38 59.3**	**+0.4**
IKL	**Isikli**	**1.88**	**300**	PN	**Pn**		**21 38 59.8**	**+0.3**
AKKU	**Akkuyu-Mersin**	**1.94**	**297**	PN	**Pn**		**21 39 00.6**	**+0.2**
SHBL	**Chebaa**	**1.95**	**179**	*e*P	**Pn**		**21 39 00.9**	**+0.2**
GULN	**MERSIN_Gulnar**	**1.96**	**297**	*i* P	**Pn**		**21 38 59.4**	**-1.2**
CSS	**Mathiatis**	**1.96**	**261**	PN	**Pn**		**21 39 00.7**	**0.0**
KEBE	**Keben-Mersin**	**1.97**	**306**	PN	**Pn**		**21 39 01.1**	**+0.2**
NATI	**Neve Ativ**	**2.04**	**179**	P	**Pb**		**21 39 03.3**	**-1.7**
KAMA	**Osmaniye**	**2.04**	**23**	*i* P	**Pn**		**21 39 01.4**	**-0.5**
KAMA				IAML			21 39 11.0	
	comp=N,45nm,0.7s							
GEM	**Giv'at Ha'Em**	**2.09**	**181**	P	**Pn**		**21 39 03.3**	**+0.9**
KSDI	**Kefar Szold**	**2.10**	**181**	P	**Pb**		**21 39 05.4**	**-0.8**
AKO	**Adana**	**2.16**	**355**	*i* P	**Pn**		**21 39 03.3**	**-0.2**
KOZT	**Kozan**	**2.18**	**3**	PN	**Pn**		**21 39 04.2**	**+0.5**
GAZ	**Gaziantep**	**2.24**	**33**	PN	**Pn**		**21 39 05.0**	**+0.5**
TEKE	**Tekeli-Mersin**	**2.26**	**293**	PN	**Pn**		**21 39 05.0**	**+0.3**
BERE	**Bereket-Mersin**	**2.26**	**298**	PN	**Pn**		**21 39 05.2**	**+0.3**
HCB	**Kahramanmara**	**2.26**	**25**	*i* P	**Pn**		**21 39 06.0**	**+1.1**
ANDN	**Andirin**	**2.33**	**13**	*i* P	**Pn**		**21 39 06.0**	**+0.1**
ANDN				IAML			21 39 23.0	
	comp=N,22nm,0.3s							
ANDN				IAML			21 39 26.0	
	comp=E,28nm,0.2s							
KMRS	**Kahramanmaras**	**2.41**	**24**	PN	**Pn**		**21 39 07.7**	**+0.9**
CMRD	**Camardi-Nigde**	**2.42**	**347**	PN	**Pn**		**21 39 07.9**	**+0.8**
GZT	**Gaziantep**	**2.55**	**36**	*i* P	**Pn**		**21 39 07.4**	**-1.5**
SAIM	**ADANA**	**2.69**	**7**	*i* P	**Pn**		**21 39 12.2**	**+1.5**
YAHY	**KAYSERI_Yahyal**	**2.80**	**355**	*i* P	**Pb**		**21 39 15.4**	**-2.7**
SURC	**SANLIURFA_SURC**	**2.84**	**56**	*i* P	**Pb**		**21 39 17.3**	**-1.5**
MMLI	**Mount Malkishu**	**2.87**	**185**	PN	**Pn**		**21 39 12.8**	**-0.4**
ATAB	**Bozova**	**3.02**	**43**	*i* P	**Pn**		**21 39 16.6**	**+1.4**
ATAB				IAML			21 40 10.0	
	comp=E,15nm,0.4s							
SARI	**SarD1z-Kayseri**	**3.15**	**10**	PN	**Pn**		**21 39 18.2**	**+0.9**
SANL	**SANLIURFA_Merk**	**3.25**	**54**	*i* P	**Pn**		**21 39 17.0**	**-1.5**

SANL				IAML		21 40 16.0		
	comp=N,33nm,0.6s							
SANL				IAML		21 40 16.0		
	comp=E,24nm,0.4s							
ASF	**Jabal al Asfar**	**3.28**	**162**	P	**Pn**	**21 39 20.4**	**+1.5**	
URFA	**Urfa**	**3.31**	**49**	PN	**Pn**	**21 39 20.1**	**+0.8**	
AKCD	**Akcadag**	**3.48**	**30**	*i* P	**Pn**	**21 39 23.6**	**+1.8**	
BNN	**Bunyan**	**3.55**	**2**	PN	**Pn**	**21 39 23.9**	**+1.3**	
DARE	**Darende-Malaty**	**3.57**	**23**	PN	**Pn**	**21 39 24.1**	**+1.3**	
MALT	**Malatya**	**3.72**	**35**	PN	**Pn**	**21 39 26.2**	**+1.2**	
ELZG	**Elazig**	**4.14**	**39**	*i* P	**Pn**	**21 39 31.3**	**+0.4**	
SVRC	**Sivrice-ELAZID**	**4.22**	**42**	PN	**Pn**	**21 39 33.4**	**+1.4**	
CUKAN	**kangal_SIVAS**	**4.25**	**19**	*i* P	**Pn**	**21 39 34.6**	**+2.3**	
MAZI	**Mazidag**	**4.40**	**59**	PN	**Pn**	**21 39 35.8**	**+1.5**	
PTK	**Pertek**	**4.65**	**38**	PN	**Pn**	**21 39 39.3**	**+1.5**	

*ANF **30** 21:42:02.9±0.6, 36.°50N×98.°41W, h0km, ML4.5/10, Error ellipse: s-maj=5.8km s-min=5.1km az=93.0*
*TUL **30** 21:42:02.2±0.6, 36.°60N±0.°01×98.°38W±0.°03, h6km±4km, ML3.6, Mwr3.3/18(NEIC), Error ellipse: s-maj=3.1km s-min=1.8km az=99.0*
*NEIC **30** 21:42:02.8, 36.°59N×98.°32W, h3km, Moment Tension Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.22; $M_{\theta\theta}$=0.87; $M_{\phi\phi}$=-0.64; $M_{r\theta}$=-0.24; $M_{\theta\phi}$=0.77; $M_{r\phi}$=0.34; Fault plane solution: M_0=1.17000×10^{14} NP1:ϕ_s=204.65000°, δ=70.64000°, λ=-165.33000°. NP2:ϕ_s=109.69000°, δ=76.18000°, λ=-19.96000°. Principal axes: T 1.1932, Plg4.0000°, Azm158.0000°; N -0.0525, Plg66.0000°, Azm256.0000°; P -1.1407, Plg24.0000°, Azm66.0000°;*
*NEIC **30** 21:42:03.0±0.3, 36.°59N±0.°01×98.°37W±0.°02, h2km±5km Error ellipse: s-maj=2.2km s-min=1.6km az=125.0*

ISC 30 21:42:03.1±0.9, 36.°60N±0.°04×98.°39W±0.°04, h10km, n46, σ0^{s}60/52, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.54**	**246**	Pg	**Pg**	**21 42 13.0**	**-0.5**
U32A				Sg	**Sg**	**21 42 21.1**	**+0.5**
OK005	**Luther M Schoo**	**1.35**	**134**		**Pn**	**21 42 27.1**	**-0.8**
OKCFA	**Oklahoma City**	**1.40**	**147**		**Pn**	**21 42 27.8**	**-0.9**
OKCSW	**OKLAHOMA CITY**	**1.42**	**147**		**Pn**	**21 42 27.9**	**-1.0**
T35A	**Sooner Cattle**	**1.54**	**77**		**Pn**	**21 42 30.4**	**-0.2**
FNO	**Franklin**	**1.56**	**149**		**Pn**	**21 42 30.9**	**+0.1**
R32A	**Long Quarter,**	**1.84**	**352**		**Pn**	**21 42 35.5**	**+0.8**
WMOK	**Wichita Mounta** baz=9.8	**1.88**	**190**	P	**Pn**	**21 42 35.7**	**+0.4**
WMOK				S	**Sb**	**21 43 01.3**	**+0.2**
WMOK	**Wichita Mounta** baz=9.8	**1.88**	**190**	Pn	**Pn**	**21 42 35.8**	**+0.4**
W35A	**Tecumseh**	**1.90**	**139**		**Pn**	**21 42 35.4**	**0.0**
X34A	**Smith Ranch, M**	**2.04**	**167**		**Pn**	**21 42 38.1**	**+0.6**
TUL1	**Leonard** baz=289	**2.21**	**107**	P	**Pn**	**21 42 40.7**	**+0.9**
TUL1				S	**Sb**	**21 43 10.6**	**+0.1**
TUL1	**Leonard** baz=289	**2.21**	**107**		**Pn**	**21 42 40.0**	**+0.2**
CBKS	**Cedar Bluff** baz=154	**2.46**	**335**	S	**Sb**	**21 43 18.1**	**+0.4**
CBKS	**Cedar Bluff**	**2.46**	**335**	Pn	**Pn**	**21 42 43.7**	**+0.4**
KSU1	**Kansas State U** baz=210	**2.87**	**29**	P	**Pn**	**21 42 49.7**	**+0.8**
KSU1				S	**Sb**	**21 43 30.2**	**+0.7**
KSU1	**Kansas State U**	**2.87**	**29**	Pn	**Pn**	**21 42 49.2**	**+0.4**
U38A	**Gravette**	**3.23**	**92**	Pn	**Pn**	**21 42 54.9**	**+1.0**
Z35A	**Perchaven, San**	**3.39**	**164**		**Pn**	**21 42 56.2**	**+0.2**
W39A	**Magazine** baz=292	**3.99**	**109**	P	**Pn**	**21 43 04.9**	**+0.6**
W39A				S	**Sn**	**21 43 51.5**	**+0.4**
W39A	**Magazine** baz=292	**3.99**	**109**	Pn	**Pn**	**21 43 05.0**	**+0.6**
ABTX	**Abilene, Hawle** baz=14	**4.09**	**195**	P	**Pn**	**21 43 05.8**	**+0.1**
ABTX	**Abilene, Hawle**	**4.09**	**195**	Pn	**Pn**	**21 43 06.0**	**+0.2**
N33A	**J Bar K, Exete**	**4.20**	**10**	Pn	**Pn**	**21 43 06.6**	**-0.6**
Z38A	**Mt. Pleasant**	**4.35**	**139**	Pn	**Pn**	**21 43 08.8**	**-0.4**
MIAR	**Mount Ida** baz=299	**4.42**	**116**	P	**Pn**	**21 43 10.9**	**+0.6**
MIAR				S	**Sn**	**21 44 02.8**	**+0.9**
MIAR	**Mount Ida** baz=299	**4.42**	**116**	Pn	**Pn**	**21 43 10.5**	**+0.3**
U40A	**Yellville**	**4.47**	**91**	Pn	**Pn**	**21 43 11.0**	**+0.1**
WHTX	**Lake Whitney,** baz=351	**4.66**	**170**	P	**Pn**	**21 43 13.3**	**-0.1**
BGNE	**Belgrade** baz=182	**4.81**	**2**	P	**Pn**	**21 43 15.5**	**0.0**
BGNE	**Belgrade**	**4.81**	**2**	Pn	**Pn**	**21 43 15.6**	**0.0**
T25A	**Trinidad** baz=94	**4.86**	**278**	S	**Sn**	**21 44 12.6**	**-0.2**
X40A	**Basin Creek Fa**	**5.00**	**113**	Pn	**Pn**	**21 43 18.4**	**+0.4**
237A	**Washetta, Mont**	**5.06**	**154**	Pn	**Pn**	**21 43 18.1**	**-0.8**
WHAR	**Wooly Hollow**	**5.12**	**103**	Pn	**Pn**	**21 43 20.3**	**+0.5**
OGNE	**Ogallala**	**5.19**	**328**		**Pn**	**21 43 22.1**	**+1.2**
L34A	**Svendsen Farm,**	**5.59**	**16**	Pn	**Pn**	**21 43 25.7**	**-0.5**
P40A	**Paris**	**5.80**	**58**	Pn	**Pn**	**21 43 29.4**	**+0.3**
LCAR	**Lake Charles**	**5.87**	**93**	Pn	**Pn**	**21 43 29.4**	**-0.7**
T42A	**Van Buren**	**5.87**	**84**	Pn	**Pn**	**21 43 30.2**	**+0.1**
K31A	**O'Neill**	**6.03**	**357**	Pn	**Pn**	**21 43 32.5**	**+0.3**
ECSD	**EROS Data Cent**	**7.26**	**10**	Pn	**Pn**	**21 43 47.5**	**-1.6**
MNTX	**Cornudas Mount**	**7.58**	**232**		**Pn**	**21 43 53.8**	**+0.2**
OXF	**Oxford**	**7.61**	**103**	Pn	**Pn**	**21 43 54.0**	**+0.1**
TX31	**Lajitas Ar. Si**	**8.49**	**213**	Pn	**Pn**	**21 44 05.8**	**-0.4**
TX32	**Lajitas Array**	**8.49**	**213**	Pn	**Pn**	**21 44 05.7**	**-0.5**

*JMA **30** 21:42:25.3±0.2, 24.°87N×123.°27E, h23km±5km, M3.4*
*IDC **30** 21:42:37.1±6.7, 24.°90N×123.°27E, h107km±65km, mb3.4/8, mb1 3.4/9, mb1mx3.2/43, mbtmp3.7/9, MS3.1/7, Ms1 3.1/7, ms1mx2.9/24, Error ellipse: s-maj=33.8km s-min=19.6km az=68.0*

ISC 30 21:42:24.5±1.8, 24.°90N±0.°07×123.°31E±0.°04, h3km±13km, n22, σ0^{s}79/25, mb3.6/8, MS3.3/4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.52**	**212**	P	**Pg**	**21 42 34.6**	**+0.1**
YOJ				*e*S	**Sg**	**21 42 40.8**	**-0.4**
JYNG	**Yonagunijimaku**	**0.56**	**217**	P	**Pg**	**21 42 35.5**	**+0.2**
JYNG				S	**Sg**	**21 42 42.5**	**-0.1**
IRIF	**Iriomote-Funau**	**0.68**	**146**	P	**Pg**	**21 42 38.2**	**+0.6**
IRIF				S	**Sb**	**21 42 48.1**	**-0.8**
JKRS	**Kuro-shima**	**0.92**	**136**	P	**Pg**	**21 42 42.2**	**+0.1**
JKRS				S	**Sg**	**21 42 54.7**	**+0.7**
JIJ	**Ishigaki jima**	**0.93**	**125**	P	**Pg**	**21 42 42.2**	**-0.1**
JIJ				*e*S	**Sg**	**21 42 55.2**	**+0.9**
HATJ	**Hateruma jima**	**0.95**	**152**	P	**Pg**	**21 42 42.7**	**-0.1**
HATJ				S	**Sg**	**21 42 54.5**	**-0.7**
JISG	**Ishigakijimahi**	**0.96**	**109**	P	**Pg**	**21 42 42.9**	**-0.1**
JISG				*e*S	**Sg**	**21 42 55.8**	**+0.4**
JTJ	**Tarama**	**1.29**	**101**	P	**Pn**	**21 42 48.8**	**-0.6**
JMJ2	**Miyako jima3**	**1.84**	**95**	P	**Pn**	**21 42 57.2**	**+0.2**
JNU	**Nakatsue** comp=Z,37nm,20.2s,baz=10,slow=37	**10.53**	**37**	LR	LR	21 49 04.6	
KSRS	**Korea Array** 0.1nm,0.3s,baz=197,slow=13,SNR=4.6	**13.12**	**16**	P	**P**	**21 45 39.9**	**-2.3**
KSRS				LR	LR	21 51 44.3	
DAV	**Davao City (W)** comp=Z,64nm,19.3s,baz=336,slow=33	**17.87**	**173**	LR	LR	21 52 25.8	
ASAJ	**Asahikawa** 4.8nm,0.8s,baz=147,slow=9.6,SNR=3.8	**24.79**	**35**	P	**P**	**21 47 48.6**	**+1.0**
ASAJ				LR	LR	21 57 48.0	
KLR	**Kul'dur** comp=Z,58nm,18.1s,baz=204,slow=39	**25.17**	**13**	LR	LR	21 59 03.9	
SONM	**Songino Array** 1.6nm,0.8s,baz=149,slow=9.1,SNR=6.0	**26.52**	**334**	P	**P**	**21 48 04.9**	**+1.5**
MKAR	**Makanchi Array** 0.9nm,0.9s,baz=103,slow=10,SNR=2.5	**39.20**	**314**	P	**P**	**21 49 54.4**	**+0.6**
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=139,slow=9.0,SNR=2.5	**40.72**	**326**	P	**P**	**21 50 07.0**	**+0.7**
ZALV				LR	LR	22 08 30.5	
KURBB	**Kurchatov Arra** 0.4nm,0.6s,baz=104,slow=7.7,SNR=3.5	**42.83**	**319**	P	**P**	**21 50 23.5**	**-0.2**
WRA	**Warramunga Arr** 0.9nm,0.8s,baz=346,slow=8.7,SNR=3.5	**45.85**	**165**	P	**P**	**21 50 48.5**	**+0.3**
ASAR	**Alice Springs** 0.3nm,0.6s,baz=356,slow=12,SNR=1.9	**49.36**	**167**	P	**P**	**21 51 15.9**	**+0.5**
DZM	**Mont Dzumac** comp=Z,70nm,19.1s,baz=52,slow=33	**62.72**	**134**	LR	LR	22 17 12.9	
YKA	**Yellowknife Ar** 1.1nm,1.0s,baz=308,slow=5.2,SNR=5.6	**81.55**	**23**	P	**P**	**21 54 43.1**	**-0.2**

*IDC **30** 22:06:16.6±0.4, 33.°48S×72.°05W, h0km, mb4.9/25, mb1 4.9/27, mb1mx4.8/35, mbtmp4.9/27, ML4.7/2, MS4.3/13, Ms1 4.3/13, ms1mx4.1/22, Error ellipse: s-maj=17.5km s-min=11.2km az=82.0*
*SJA **30** 22:06:17.0±1.2, 33.°55S×72.°22W, h10km±13km, ML4.9, MW4.8*
*GUC **30** 22:06:18.6±0.8, 33.°54S×72.°25W, h39km±3km, ML5.1*
*NEIC **30** 22:06:19.4, 33.°54S×72.°14W, h19km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}=0.89; $M_{\theta\theta}$=0.20; $M_{\phi\phi}$=-0.69; $M_{r\theta}$=0.19; $M_{\theta\phi}$=-0.14; $M_{r\phi}$=-1.56; Fault plane solution: M_0=1.77000×10^{16} NP1:ϕ_s=175.73000°, δ=76.70000°, λ=83.91000°. NP2:ϕ_s=20.61000°, δ=14.60000°, λ=114.17000°. Principal axes: T 1.8735, Plg58.0000°, Azm78.0000°; N -0.2262, Plg6.0000°, Azm177.0000°; P -1.6473, Plg31.0000°, Azm271.0000°;*
*VAO **30** 22:06:19.1±1.7, 33.°40S×72.°07W, h16km±11km, mb5.1*
*NEIC **30** 22:06:19.4±1.7, 33.°54S±0.°04×72.°14W±0.°06, h19km±3km, mb5.0/218, Mwr4.8/37, ML5.1(GUC), Error ellipse: s-maj=7.8km s-min=5.5km az=95.0*
*GCMT **30** 22:06:20.4±0.3, 33.°47S±0.°03×72.°42W±0.°03, h31km±1km, MW5.0/67, Moment Tensor Solution. s25,c28; s67,c78; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=4.26±.26; $M_{\theta\theta}$=0.24±.17; $M_{\phi\phi}$=-4.02±.17; $M_{r\theta}$=-0.41±.19; $M_{\theta\phi}$=-0.16±.11; $M_{r\phi}$=-2.32±.20; Best double couple: M=4.76600×10^{16} NP1:ϕ_s=359.00000°, δ=30.00000°, λ=84.00000°. NP2: ϕ_s=186.00000°, δ=60.00000°, λ=93.00000°. Principal axes: T 4.8910, Plg75.0000°, Azm106.0000°; N -0.2480, Plg3.0000°, Azm4.0000°; P -4.6410, Plg15.0000°, Azm273.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **30** 22:06:21.0±1.2, 33.°50S×72.°06W, h37km, mb5.1/12, MS4.5/4 Error ellipse: s-maj=14.7km s-min=8.4km az=93.8*

ISC 30 22:06:19.9±1.3, 33.°53S±0.°03×72.°19W±0.°05, h22km±9km, n660, σ1^{s}03/580, mb5.0/128, MS4.5/19, 17C-8D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MT01	**Popeta**	**0.85**	**113**	⇑*i* P	**Pb**	**22 06 34.9**	**-1.1**
MT01				*i* S	**Sb**	**22 06 46.8**	**-0.3**
MT01	**Popeta**	**0.85**	**113**		**Pn**	**22 06 34.1**	**-1.1**
MT01				Sn	**Sb**	**22 06 46.7**	**-0.3**
MT02	**Curacav**	**0.92**	**73**		**Pb**	**22 06 36.1**	**-1.1**
ROC1	**El Roble**	**1.13**	**61**		**Pn**	**22 06 39.6**	**-1.0**
ROC1	**El Roble**	**1.13**	**61**	*i* P	**Pn**	**22 06 39.9**	**-0.7**
ROC1				*e*S	**Sb**	**22 06 55.0**	**-0.2**
ROCH	**El Roble**	**1.14**	**61**	⇓*i* P	**Pn**	**22 06 39.7**	**-0.9**
ROCH				*i* S	**Sb**	**22 06 55.3**	**-0.1**
RCDM	**Rinconada Maip**	**1.16**	**88**	⇓*i* P	**Pn**	**22 06 40.6**	**-0.1**
RCDM				*i* S	**Sb**	**22 06 55.9**	**+0.1**
MT05	**Renca**	**1.22**	**84**		**Pn**	**22 06 41.3**	**-0.4**
PEL	**Peldehue**	**1.32**	**73**	*e*P	**Pn**	**22 06 42.7**	**-0.3**
PEL				*i* S	**Sb**	**22 07 00.8**	**+0.3**
PEL				IAML		22 07 10.7	
	comp=N,42μm,0.5s						
PEL	**Peldehue**	**1.32**	**73**	P	**Pn**	**22 06 42.5**	**-0.5**
PEL	**Peldehue**	**1.32**	**73**		**Pn**	**22 06 42.5**	**-0.5**
PEL	**Peldehue**	**1.32**	**73**	*i* P	**Pn**	**22 06 43.2**	**+0.2**
CLCH	**Cerro Calan**	**1.39**	**85**	*e*P	**Pn**	**22 06 43.9**	**-0.1**
CLCH				*i* S	**Sb**	**22 07 02.5**	**-0.1**
CLCH				IAML		22 07 13.4	
	comp=E,48μm,0.7s						
MT03	**Universidad Ad**	**1.41**	**89**	*e*P	**Pn**	**22 06 43.9**	**-0.3**
MT03				*i* S	**Sn**	**22 07 02.7**	**+0.5**
MT03				IAML		22 07 13.5	
	comp=N,39μm,0.7s						
GO05	**Huala**	**1.49**	**172**	⇑*i* P	**Pn**	**22 06 44.1**	**-1.2**
GO05				*i* S	**Sn**	**22 07 03.5**	**-0.7**
GO05	**Huala**	**1.49**	**172**		**Pn**	**22 06 44.1**	**-1.2**
GO05	**Huala**	**1.49**	**172**	*i* P	**Pn**	**22 06 44.2**	**-1.2**
GO05				*e*S	**Sb**	**22 07 05.3**	**-0.1**
VA03	**San Esteban**	**1.58**	**61**	⇑*i* P	**Pn**	**22 06 46.4**	**-0.1**
VA03				*i* S	**Sb**	**22 07 07.2**	**-0.7**
VA03				IAML		22 07 14.1	
	comp=E,44μm,0.5s						
VA03	**San Esteban**	**1.58**	**61**		**Pn**	**22 06 46.3**	**-0.3**
LMEL	**Las Melosas**	**1.69**	**101**	⇑*i* P	**Pn**	**22 06 48.1**	**0.0**
LMEL				*i* S	**Sb**	**22 07 10.5**	**-0.7**
BO02	**Sierra Bellavi**	**1.72**	**137**	*e*P	**Pn**	**22 06 48.1**	**-0.4**
BO02				*e*S	**Sn**	**22 07 10.8**	**+0.9**
BO02	**Sierra Bellavi**	**1.72**	**137**	Pn	**Pn**	**22 06 48.4**	**-0.1**
CO02	**Combarbal**	**2.53**	**24**	⇑*i* P	**Pn**	**22 06 59.1**	**-0.6**
CO02				*i* S	**Sn**	**22 07 30.0**	**+0.1**
CO02	**Combarbal**	**2.53**	**24**		**Pn**	**22 06 59.1**	**-0.6**
COIS	**El Sosneado**	**2.67**	**127**	*i* P	**Pb**	**22 07 06.1**	**-0.8**
AUSP	**Uspallata**	**2.70**	**62**	*i* P	**Pn**	**22 07 04.5**	**+2.3**
LAMA	**Las Malvinas**	**2.84**	**120**	*i* P	**Pn**	**22 07 08.9**	**-1.0**
CO03	**El Pedregal**	**2.97**	**26**	⇑*i* P	**Pn**	**22 07 05.4**	**-0.4**
CO03				*i* S	**Sn**	**22 07 40.6**	**-0.1**
CO03				IAML		22 08 01.5	
	comp=E,5μm,0.5s						
CO03	**El Pedregal**	**2.97**	**26**	Pn	**Pn**	**22 07 05.4**	**-0.4**
RTLS	**Leoncito**	**2.99**	**56**	*i* P	**Pn**	**22 07 08.3**	**+2.1**
RTLS				IAML		22 08 05.4	
	comp=Z,1μm,0.7s						
PUMA	**Malargue**	**3.00**	**132**	*i* P	**Pb**	**22 07 11.8**	**-0.7**
MORA	**Malargue**	**3.16**	**125**	*i* P	**Pb**	**22 07 13.6**	**-1.8**
BI02	**San Fabin de**	**3.22**	**167**	*e*P	**Pn**	**22 07 08.6**	**-0.5**
BI02				*i* S	**Sn**	**22 07 46.2**	**-0.5**
BI02	**San Fabin de**	**3.22**	**167**	Pn	**Pn**	**22 07 08.9**	**-0.2**
BI03	**Tigo**	**3.38**	**191**	⇓*i* P	**Pn**	**22 07 10.0**	**-1.2**
RTCV	**Cerro Valdivia**	**3.50**	**63**	*i* P	**Pn**	**22 07 15.1**	**+2.1**
RTCV				IAML		22 08 12.3	
	comp=Z,2μm,2.0s						
GO04	**Tololo Observa**	**3.55**	**20**	⇑*i* P	**Pn**	**22 07 12.8**	**-1.1**
GO04				*i* S	**Sn**	**22 07 55.0**	**-0.3**
GO04	**Tololo Observa**	**3.55**	**20**		**Pn**	**22 07 12.8**	**-1.1**
ZON	**Zonda**	**3.57**	**57**	*i* P	**Pn**	**22 07 16.7**	**+2.8**
ZON				IAML		22 08 18.7	
	comp=Z,3μm,1.5s						
RTLL	**Cerro Villicun**	**3.83**	**56**	*i* P	**Pn**	**22 07 20.2**	**+2.6**
RTLL				IAML		22 08 31.1	
	comp=Z,2μm,0.6s						
ACCO	**Cerro Coronel**	**3.96**	**43**	*i* P	**Pn**	**22 07 21.6**	**+2.0**
ACCO				IAML		22 08 34.1	
	comp=Z,2μm,1.6s						
CO01	**Juntas del Tor**	**3.97**	**27**		**Pn**	**22 07 19.7**	**+0.1**
AMOG	**MOGNA**	**4.06**	**52**	*i* P	**Pn**	**22 07 22.4**	**+1.7**
AMOG				IAML		22 08 42.6	
	comp=Z,1μm,0.8s						
AROD	**Rodeo**	**4.07**	**35**	*i* P	**Pn**	**22 07 23.5**	**+2.4**
ACDV	**Cuesta del Vie**	**4.25**	**39**	*i* P	**Pn**	**22 07 25.9**	**+2.5**
ACDV				IAML		22 08 35.7	
	comp=Z,2μm,1.5s						
ACAN	**Cantantal**	**4.39**	**75**	*i* P	**Pn**	**22 07 27.0**	**+1.7**
ACAN				IAML		22 08 47.1	
	comp=Z,1μm,0.9s						
AC05	**El Transito**	**4.96**	**20**	⇑*i* P	**Pn**	**22 07 32.5**	**-0.6**
AC05				*i* S	**Sn**	**22 08 28.4**	**-1.5**
AC05	**El Transito**	**4.96**	**20**	Pn	**Pn**	**22 07 32.6**	**-0.6**
LC01	**Cunco**	**5.36**	**177**	Pn	**Pn**	**22 07 37.3**	**-1.2**
AC04	**Llanos de Chal**	**5.39**	**11**	Pn	**Pn**	**22 07 36.9**	**-2.1**
MRA	**San Martin**	**5.55**	**80**	*i* P	**Pn**	**22 07 41.9**	**+0.7**
MRA				IAML		22 09 25.2	
	comp=Z,341nm,0.9s						
H03S1	**Juan Fernandez** baz=54,slow=16,SNR=15	**5.61**	**265**	Pn	**Pn**	**22 07 40.3**	**-1.3**
H03S1				T	T	22 13 35.0	
	baz=87,slow=74,SNR=4100						
H03S3	**Juan Fernandez** baz=54,slow=16,SNR=14	**5.61**	**265**	Pn	**Pn**	**22 07 40.5**	**-1.2**
H03S3				T	T	22 13 47.0	
	baz=87,slow=74,SNR=4083						
H03N1	**Juan Fernandez** baz=128,slow=24,SNR=48	**5.62**	**269**	Pn	**Pn**	**22 07 41.9**	**+0.1**
H03N1				T	T	22 15 08.9	
	baz=86,slow=73,SNR=48						
H03S2	**Juan Fernandez** baz=54,slow=16,SNR=12	**5.62**	**265**	Pn	**Pn**	**22 07 40.0**	**-1.8**
H03S2				T	T	22 13 41.3	
	baz=87,slow=74,SNR=3824						
H03N3	**Juan Fernandez** baz=128,slow=24,SNR=33	**5.62**	**269**	Pn	**Pn**	**22 07 41.8**	**-0.2**
H03N3				T	T	22 14 54.8	
	baz=86,slow=73,SNR=118						
H03N2	**Juan Fernandez** baz=128,slow=24,SNR=28	**5.63**	**269**	Pn	**Pn**	**22 07 42.1**	**+0.2**
H03N2				T	T	22 14 50.5	
	baz=86,slow=73,SNR=120						
GO03	**Copiap**	**6.15**	**16**		**Pn**	**22 07 47.7**	**-1.8**
AC02	**Maricunga**	**7.18**	**22**	Pn	**Pn**	**22 08 01.4**	**-2.6**
PLCA	**Paso Flores** comp=Z,1.8nm,0.3s,baz=334,slow=13,SNR=25	**7.31**	**170**	Pn	**Pn**	**22 08 05.7**	**+0.4**
PLCA				Lg	Lg	22 10 04.9	
	comp=Z,1.3nm,0.3s,baz=52,slow=20,SNR=4.2						
PLCA				LR	LR	22 11 22.1	
	comp=Z,2μm,18.1s,baz=346,slow=42						
PLCA	**Paso Flores**	**7.31**	**170**	P	**Pn**	**22 08 05.5**	**+0.2**
PLCA	**Paso Flores**	**7.31**	**170**	Pn	**Pn**	**22 08 05.5**	**+0.2**
PLCA	**Paso Flores**	**7.31**	**170**	*e*P	**Pn**	**22 08 06.6**	**+1.3**
CYA	**Choya**	**7.47**	**49**	*i* P	**Pn**	**22 08 05.5**	**-2.0**
PB15	**IPOC Station P**	**10.56**	**14**		**Pn**	**22 08 44.6**	**-5.4**
LVC	**Limon Verde** comp=Z,1.3nm,0.3s,baz=185,slow=9.0,SNR=8.6	**11.26**	**16**	Pn	**Pn**	**22 08 53.7**	**-6.1**
LVC				Sn	**Sn**	**22 11 04.8**	**-0.3**
	comp=Z,1.3nm,0.3s,baz=168,slow=20,SNR=1.6						
LVC				LR	LR	22 13 25.2	
	comp=Z,2μm,21.9s,baz=207,slow=38						
LVC	**Limon Verde**	**11.26**	**16**	P	**Pn**	**22 08 53.8**	**-6.0**
LVC	**Limon Verde**	**11.26**	**16**	*e*P	**Pn**	**22 08 54.5**	**-5.3**
PB01	**IPOC Station P**	**12.67**	**12**	Pn	**Pn**	**22 09 20.4**	**+1.6**
PB12	**IPOC Station P**	**14.95**	**7**		**Pn**	**22 09 44.4**	**-5.5**
PLTB	**Pedras Altas**	**15.76**	**89**	*e*P	**Pn**	**22 09 58.9**	**-1.6**
LPAZ	**La Paz** comp=Z,2.1nm,0.3s,baz=181,slow=8.0,SNR=107	**17.56**	**13**	P	**Pn**	**22 10 23.1**	**-0.7**
LPAZ	**La Paz**	**17.56**	**13**	P	**Pn**	**22 10 23.6**	**-0.2**
LPAZ				IAmb	IAmb	22 10 40.2	
	comp=Z,95nm,1.0s						
LPAZ	**La Paz**	**17.56**	**13**	*e*P	**Pn**	**22 10 23.6**	**-0.2**
ITAB	**Concordia**	**18.40**	**75**	*e*P	**P**	**22 10 33.2**	**-0.2**
CNLB	**Canela**	**18.68**	**83**	*e*P	**P**	**22 10 36.8**	**+0.1**
AQDB	**Aquidauana**	**19.59**	**53**	*e*P	**P**	**22 10 45.5**	**-1.0**
PTGB	**Pitanga**	**19.63**	**69**	*e*P	**P**	**22 10 46.3**	**-0.7**
SIV	**San Ignacio** comp=Z,36nm,0.8s,baz=224,slow=11,SNR=66	**20.14**	**33**	P	**P**	**22 10 51.5**	**-1.2**
SIV				LR	LR	22 20 03.2	
	comp=Z,2μm,18.6s,baz=228,slow=41						
EFI	**East Falkland**	**20.84**	**155**	P	**P**	**22 10 59.4**	**-0.4**
EFI				pmax	pmax		
	comp=Z,93nm,0.7s						
EFI	**East Falkland**	**20.84**	**155**	P	**P**	**22 10 59.4**	**-0.4**
USHA	**Ushuaia** comp=Z,21nm,0.5s,baz=345,slow=0.7,SNR=5.6	**21.46**	**174**	P	**P**	**22 11 07.5**	**+1.1**
PTLB	**Pontes e Lacer**	**21.53**	**36**	*e*P	**P**	**22 11 06.3**	**-1.2**
NNA	**Nana**	**21.86**	**348**	*e*P	**P**	**22 11 19.3**	**+8.2**
NNA				pmax	pmax		
	comp=Z,151nm,1.7s						
PCMB	**Pacaembu**	**21.98**	**63**	*e*P	**P**	**22 11 10.2**	**-2.2**
FRTB	**Fartura**	**22.30**	**69**	*e*P	**P**	**22 11 14.3**	**-1.5**
C2SB	**Chapadao do Su**	**22.70**	**54**	*e*P	**P**	**22 11 18.9**	**-1.2**
SALV	**Santo Antonio**	**23.02**	**44**	*e*P	**P**	**22 11 21.4**	**-2.1**
VILB	**Vilhena**	**23.22**	**31**	*e*P	**P**	**22 11 24.1**	**-1.4**
PET01	**Itanhaem-SP**	**23.63**	**74**	*e*P	**P**	**22 11 27.6**	**-1.8**
SPB	**Sao Paulo**	**23.84**	**72**	P	**P**	**22 11 30.0**	**-1.5**
SPB	**Sao Paulo**	**23.84**	**72**	*e*P	**P**	**22 11 29.8**	**-1.7**
VAO	**Valinhos**	**24.51**	**71**	*e*P	**P**	**22 11 36.6**	**-1.2**
PARB	**Paraibuna**	**25.41**	**73**	*e*P	**P**	**22 11 45.1**	**-0.8**
ARAG	**Araguaiana, MT**	**25.57**	**51**	*e*P	**P**	**22 11 45.8**	**-1.5**
SAML	**Samuel**	**25.84**	**21**	P	**P**	**22 11 49.2**	**-0.5**
SAML				pmax	pmax		
	comp=Z,52nm,0.8s						
SAML	**Samuel**	**25.84**	**21**	P	**P**	**22 11 49.2**	**-0.5**
IPMB	**Ipameri, GO**	**26.48**	**60**	*e*P	**P**	**22 11 53.4**	**-2.2**
MAN01	**Ângra dos Reis**	**26.97**	**74**	*e*P	**P**	**22 11 58.5**	**-1.6**
CLDB	**Colider**	**27.11**	**37**	*e*P	**P**	**22 11 58.7**	**-2.5**
BSCB	**Bom Sucesso**	**27.29**	**70**	*e*P	**P**	**22 12 01.9**	**-1.1**
BDFB	**Brasilia** comp=Z,28nm,0.6s,baz=232,slow=8.5,SNR=49	**28.18**	**57**	P	**P**	**22 12 09.3**	**-1.6

TAOE	Nuku Hiva Isla	66.80	275	eLR	LR	22 37 09.0		
	comp=Z,305nm,24.3s							
Z58A	St. Stephen	66.90	353	P	P	22 17 10.9	+0.8	
	baz=173							
HKT	Hockley	66.98	338	eP	P	22 17 11.1	+0.4	
HKT				pmax	pmax			
	comp=Z,4.0nm,1.9s							
TBI	Tubuai	67.30	256	eS	S	22 25 54.0	-13	
	comp=Z,96nm,25.2s							
TBI	Tubuai	67.30	256	eLR	LR	22 37 24.0		
	comp=Z,445nm,26.8s,baz=118							
TBI	Tubuai	67.30	256	eT	T	23 30 28.8		
	comp=Z,6.9nm,0.3s							
GOGA	Godfrey	67.43	350	P	P	22 17 13.2	-0.2	
	baz=170							
GOGA	Godfrey	67.43	350	IAmb	IAmb	22 17 21.0		
	comp=Z,12nm,1.3s							
LRAL	Lakeview Retre	67.66	347	P	P	22 17 14.9	-0.1	
	baz=167							
LRAL	Lakeview Retre	67.66	347	IAmb	IAmb	22 17 22.1		
	comp=Z,13nm,1.4s							
Y55A	Saluda	67.72	351	P	P	22 17 15.1	-0.2	
	baz=171							
X56A	White Oak	68.17	352	P	P	22 17 18.0	-0.2	
	baz=172							
X55A	Gracelyn & Ava	68.22	352	P	P	22 17 18.5	0.0	
	baz=172							
X54A	Belton	68.39	351	P	P	22 17 19.8	+0.2	
	baz=171							
W60A	Pink Hill	68.42	355	P	P	22 17 20.3	+0.6	
	baz=175							
W61A	Ground Anchor	68.50	356	P	P	22 17 20.6	+0.4	
	baz=176							
W58A	Raeford	68.51	354	P	P	22 17 20.3	0.0	
	baz=174							
W57A	Gilead	68.72	353	P	P	22 17 21.0	-0.5	
	baz=173							
W57A	Gilead	68.72	353	IAmb	IAmb	22 17 30.1		
	comp=Z,7.9nm,0.9s							
W56A	Indian Trail	68.76	353	P	P	22 17 21.3	-0.6	
	baz=172							
JCT	Junction City	68.81	335	P	P	22 17 23.1	+0.7	
	baz=156							
KMSC	Kings Mountain	68.85	352	P	P	22 17 22.2	-0.2	
	baz=172							
KMSC	Kings Mountain	68.85	352	IAmb	IAmb	22 17 23.0		
	comp=Z,9.5nm,0.9s							
FPAL	Fort Paine	68.88	348	IAmb	IAmb	22 17 30.1		
	comp=Z,18nm,1.4s							
W54A	Cherokee Point	68.90	351	P	P	22 17 22.4	-0.3	
	baz=171,SNR=5.7							
BG3	Lake Jocassee	68.91	351	IAmb	IAmb	22 17 23.7		
	comp=Z,8.2nm,1.0s							
X48A	Hartselle	69.05	347	IAmb	IAmb	22 17 24.7		
	comp=Z,12nm,0.9s							
W52A	Murphy	69.15	350	IAmb	IAmb	22 17 25.2		
	comp=Z,12nm,1.0s							
V59A	Middlesex	69.17	355	P	P	22 17 24.7	+0.4	
	baz=175							
TX32	Lajitas Array	69.26	331	IAmb	IAmb	22 17 45.6		
	comp=Z,24nm,1.9s							
TXAR	Lajitas Array	69.26	331	P	P	22 17 26.1	+0.9	
	comp=Z,1.3nm,0.9s,baz=150,slow=7.4,SNR=10							
TXAR				LR	LR	22 43 39.9		
	comp=Z,256nm,18.1s,baz=0.0,slow=32							
V58A	Windy Hill, Pi	69.27	354	P	P	22 17 25.0	0.0	
	baz=174							
V58A	Windy Hill, Pi	69.27	354	IAmb	IAmb	22 17 33.0		
	comp=Z,11nm,0.9s							
WHTX	Lake Whitney,	69.39	337	P	P	22 17 26.3	+0.4	
	baz=158							
V56A	Mocksville	69.42	353	P	P	22 17 25.4	-0.6	
	baz=173,SNR=6.8							
V57A	Coltrane Farms	69.42	353	P	P	22 17 25.5	-0.4	
	baz=173							
W50A	Signal Mountai	69.47	349	IAmb	IAmb	22 17 27.2		
	comp=Z,17nm,1.0s							
V55A	Taylorsville	69.54	352	P	P	22 17 26.2	-0.5	
	baz=172,SNR=5.1							
V55A	Taylorsville	69.54	352	IAmb	IAmb	22 17 27.4		
	comp=Z,10nm,0.8s							
V54A	Nebo	69.55	352	P	P	22 17 26.1	-0.7	
	baz=171,SNR=6.9							
V53A	Saluda	69.56	351	IAmb	IAmb	22 17 27.4		
	comp=Z,12nm,0.9s							
CPCT	Cooper Cave	69.59	349	IAmb	IAmb	22 17 27.7		
	comp=Z,13nm,1.0s							
SWET	Sewanee	69.59	348	IAmb	IAmb	22 17 27.9		
	comp=Z,20nm,1.0s							
U61A	Possum Corner	69.61	356	P	P	22 17 26.7	-0.4	
	baz=176							
TKL	Tuckaleechee C	69.68	350	IAmb	IAmb	22 17 27.9		
	comp=Z,12nm,0.9s							
U59A	Littleton	69.72	355	P	P	22 17 28.0	+0.3	
	baz=175							
PLAL	Pickwick Lake	69.76	346	IAmb	IAmb	22 17 28.7		
	comp=Z,11nm,0.9s							
U60A	Pendleton	69.80	356	P	P	22 17 28.3	+0.1	
	baz=176							
U58A	Oxford	69.82	355	P	P	22 17 28.6	+0.3	
	baz=174							
V52A	Sevierville	69.83	350	IAmb	IAmb	22 17 28.8		
	comp=Z,10nm,0.8s							
V51A	Loudon	69.91	349	IAmb	IAmb	22 17 29.4		
	comp=Z,8.3nm,0.9s							
U57A	Blanch	69.92	354	P	P	22 17 28.7	-0.3	
	baz=174							
U56A	King	69.94	353	P	P	22 17 29.4	+0.2	
	baz=173							
U55A	TA2, Sparta	70.16	352	P	P	22 17 30.2	-0.4	
	baz=172							
PPT2	Papeete2	70.17	262	eS	S	22 26 29.1	-13	
	comp=Z,134nm,23.0s							
PPT2	Papeete2	70.17	262	eLR	LR	22 38 41.7		
	comp=Z,252nm,28.0s							
U54A	Nelsons Funny	70.27	352	P	P	22 17 30.9	-0.3	
	baz=172							
U54A	Nelsons Funny	70.27	352	IAmb	IAmb	22 17 31.7		
	comp=Z,17nm,0.9s							
T59A	Double "B" Far	70.32	355	P	P	22 17 31.6	+0.2	
	baz=175							
T59A	Double "B" Far	70.32	355	IAmb	IAmb	22 17 32.6		
	comp=Z,17nm,0.9s							
T58A	Grand View Acr	70.36	355	P	P	22 17 32.0	+0.3	
	baz=174							
X40A	Basin Creek Fa	70.38	342	P	P	22 17 32.0	+0.1	
	baz=162							
T57A	Hurt	70.47	354	P	P	22 17 32.5	+0.2	
	baz=174							
CLTN	Cedars of Leba	70.51	348	IAmb	IAmb	22 17 33.6		
	comp=Z,16nm,0.9s							
TZTN	Tazewell	70.52	350	P	P	22 17 32.7	0.0	
	baz=170							
T56A	Rocky Mt	70.58	353	P	P	22 17 32.8	-0.2	
	baz=173,SNR=5.9							
MIAR	Mount Ida	70.63	341	P	P	22 17 33.1	-0.3	
	baz=161							
ABTX	Abilene, Hawle	70.70	336	P	P	22 17 33.7	-0.2	
	baz=156							
ABTX	Abilene, Hawle	70.70	336	IAmb	IAmb	22 17 43.8		
	comp=Z,22nm,1.2s							
T55A	Pulaski	70.74	353	P	P	22 17 33.9	-0.1	
	baz=172							
T54A	Tazewell	70.77	352	P	P	22 17 33.4	-0.9	
	baz=172,SNR=5.7							
BLA	Blacksburg	70.80	353	P	P	22 17 34.1	-0.3	
	baz=173							
T53A	Wise	70.81	351	P	P	22 17 33.8	-0.8	
	baz=171							
WVT	Waverly	70.83	347	P	P	22 17 34.2	-0.3	
WVT				pmax	pmax			
	comp=Z,38nm,0.8s							
WVT	Waverly	70.83	347	P	P	22 17 34.3	-0.3	
	baz=166							
WVT	Waverly	70.83	347	P	P	22 17 34.2	-0.3	
U49A	Red Boiling Sp	70.83	348	IAmb	IAmb	22 17 35.1		
	comp=Z,30nm,1.6s							
W41B	Gary Mavity, V	70.88	343	P	P	22 17 34.8	-0.1	
	baz=162							
S58A	Poland Farm, P	70.99	355	P	P	22 17 35.4	0.0	
	baz=175							
S58A	Poland Farm, P	70.99	355	IAmb	IAmb	22 17 36.8		
	comp=Z,8.3nm,0.8s							
S60A	Water View	70.99	356	P	P	22 17 34.9	-0.6	
	baz=176							
S59A	Mechanicsville	71.09	356	P	P	22 17 35.8	-0.3	
	baz=176							
T50A	Nancy	71.17	349	IAmb	IAmb	22 18 26.4		
	comp=Z,22nm,1.8s							
S56A	Natural Bridge	71.18	354	P	P	22 17 36.1	-0.6	
	baz=174,SNR=5.1							
S57A	Dark Hollow, R	71.21	354	P	P	22 17 36.5	-0.3	
	baz=174,SNR=7.3							
S57A	Dark Hollow, R	71.21	354	IAmb	IAmb	22 17 37.8		
	comp=Z,13nm,0.8s							
W39A	Magazine	71.30	341	P	P	22 17 38.0	+0.6	
	baz=161							
W39A	Magazine	71.30	341	IAmb	IAmb	22 17 39.1		
	comp=Z,18nm,0.9s							
R58B	Mineral	71.33	355	P	P	22 17 38.2	+0.6	
	baz=175							
R58B	Mineral	71.33	355	IAmb	IAmb	22 17 39.1		
	comp=Z,25nm,1.4s							
S55A	Lewisburg	71.36	353	P	P	22 17 37.6	-0.3	
	baz=173,SNR=5.2							
S53A	Williamson	71.45	352	P	P	22 17 38.0	-0.4	
	baz=171							
S54A	Dingess, Beckl	71.47	352	P	P	22 17 38.2	-0.3	
	baz=172							
T47A	Sharon Grove	71.52	347	IAmb	IAmb	22 17 39.3		
	comp=Z,14nm,0.8s							
S51A	Beattyville	71.60	350	IAmb	IAmb	22 17 39.7		
	comp=Z,11nm,0.8s							
R58A	Rapidan	71.67	355	P	P	22 17 39.8	+0.2	
	baz=175							
R57A	Stanardsville	71.70	355	P	P	22 17 39.9	+0.1	
	baz=174,SNR=7.5							
R54A	Victor	71.81	353	P	P	22 17 40.1	-0.4	
	baz=172							
R55A	Marlinton	71.83	353	P	P	22 17 40.5	-0.2	
	baz=173,SNR=8.6							
R55A	Marlinton	71.83	353	IAmb	IAmb	22 17 41.9		
	comp=Z,16nm,0.8s							
MNTX	Corrudas Mount	72.04	331	P	P	22 17 42.4	+0.3	
	baz=151							
U40A	Yellville	72.16	343	P	P	22 17 42.5	-0.1	
	baz=162							
U40A	Yellville	72.16	343	IAmb	IAmb	22 17 43.4		
	comp=Z,13nm,0.9s							
Q60A	Greensboro	72.25	357	P	P	22 17 43.3	+0.3	
	baz=177							
Q58A	Fox Den Farm,	72.29	356	P	P	22 17 43.6	+0.3	
	baz=175							
WMOK	Wichita Mounta	72.34	337	P	P	22 17 43.6	-0.2	
	baz=157							
T42A	Van Buren	72.38	344	IAmb	IAmb	22 17 56.0		
	comp=Z,24nm,1.8s							
Q57A	Strasburg	72.43	355	P	P	22 17 44.5	+0.4	
	baz=174,SNR=5.2							
Q56A	Snyder Ridge,	72.50	354	P	P	22 17 45.1	+0.5	
	baz=174							
TUL1	Leonard	72.52	340	P	P	22 17 44.5	-0.3	
	baz=160							
Q55A	Buckhannon	72.53	354	P	P	22 17 45.0	+0.2	
	baz=173							
Q53A	Leroy	72.54	352	P	P	22 17 44.8	-0.1	
	baz=172							
WCI	Wyandotte Cave	72.59	348	P	P	22 17 44.2	-0.9	
	baz=168							
Q54A	Coxs Mills	72.59	353	P	P	22 17 44.0	-1.1	
	baz=172							
Q52A	Bidwell	72.73	352	P	P	22 17 45.7	-0.2	
	baz=171							
MGMO	Mountain Grove	72.77	343	IAmb	IAmb	22 17 47.2		
	comp=Z,11nm,1.1s							
P58A	Pank, Wackersv	72.81	356	P	P	22 17 46.8	+0.4	
	baz=176,SNR=7.1							
P57A	Homestead Farm	72.85	355	P	P	22 17 46.5	-0.2	
	baz=175,SNR=6.1							
P57A	Homestead Farm	72.85	355	IAmb	IAmb	22 17 48.3		
	comp=Z,16nm,0.9s							
P59A	Jarrettsville	72.88	357	P	P	22 17 47.4	+0.7	
	baz=176							
P56A	Dayton Farm, R	72.93	355	P	P	22 17 47.5	+0.4	
	baz=174							
Q51A	Peebles	72.93	351	IAmb	IAmb	22 17 47.6		
	comp=Z,15nm,0.9s							
P55A	Reedsville	73.02	354	P	P	22 17 47.7	0.0	
	baz=173							
MSTX	Muleshoe	73.03	334	P	P	22 17 47.4	-0.6	
	baz=154							
MSTX	Muleshoe	73.03	334	IAmb	IAmb	22 17 57.6		
	comp=Z,12nm,0.9s							
P60A	Greenville	73.05	357	P	P	22 17 47.8	+0.1	
	baz=177							
P53A	Whipple	73.15	353	P	P	22 17 48.2	-0.2	
	baz=172							
MCWV	Mont Chateau	73.17	354	P	P	22 17 48.3	-0.2	
	baz=173							
P54A	Burton	73.17	353	P	P	22 17 47.9	-0.7	
	baz=173,SNR=7.0							
P52A	Corning	73.38	352	P	P	22 17 49.0	-0.8	
	baz=171							
CCM	Cathedral Cave	73.39	344	P	P	22 17 49.9	0.0	
CCM				pmax	pmax			
	comp=Z,22nm,0.9s							
CCM	Cathedral Cave	73.39	344	P	P	22 17 49.8	0.0	
	baz=164							
CCM	Cathedral Cave	73.39	344	P	P	22 17 49.9	0.0	
O58A	Lewisberry	73.42	356	P	P	22 17 50.4	+0.4	
	baz=176							
AMTX	Amarillo	73.46	335	P	P	22 17 50.9	+0.4	
	baz=155							
AMTX	Amarillo	73.46	335	IAmb	IAmb	22 17 52.7		
	comp=Z,15nm,1.1s							
O60A	Telford	73.54	357	P	P	22 17 50.9	+0.2	
	baz=177							
O57A	Amberson	73.55	356	P	P	22 17 50.6	-0.2	
	baz=175,SNR=5.6							
P50A	Jamestown	73.56	351	P	P	22 17 50.3	-0.5	
	baz=170							
O59A	Robesonia	73.57	357	P	P	22 17 51.3	+0.4	
	baz=176							
P49A	Miami Univ. Ec	73.62	350	P	P	22 17 50.9	-0.3	
	baz=169							
P48A	Milroy	73.65	349	IAmb	IAmb	22 17 58.4		
	comp=Z,30nm,1.3s							
MAW	Mawson	73.67	164	P	P	22 17 51.7	+0.5	
	comp=Z,8.7nm,0.8s,baz=209,slow=7.0,SNR=20							
MAW				LR	LR	22 53 02.5		
	comp=Z,211nm,18.4s,baz=234,slow=38							
MAW	Mawson	73.67	164	P	P	22 17 51.7	+0.5	
MAW				pmax	pmax			
	comp=Z,4.0nm,0.9s							
MAW	Mawson	73.67	164	P	P	22 17 51.7	+0.5	
O55A	Ligonier	73.67	354	P	P	22 17 51.5	0.0	
	baz=174							
T35A	Sooner Cattle	73.67	340	IAmb	IAmb	22 17 53.3		
	comp=Z,15nm,1.1s							
O56A	Blue Knob Stat	73.67	355	P	P	22 17 51.8	+0.3	
	baz=174							
O52A	Adamsville	73.82	352	P	P	22 17 51.9	-0.4	
	baz=172							
R40A	Maddies Statio	73.86	344	IAmb	IAmb	22 17 53.4		
	comp=Z,18nm,0.8s							
O53A	New Philadelph	73.89	353	P	P	22 17 53.1	+0.4	
	baz=172							
O51A	Pataskala	73.94	352	P	P	22 17 52.3	-0.8	
	baz=171							
N61A	South Mountain	73.94	358	P	P	22 17 53.3	+0.3	
	baz=178							
SSPA	Standing Stone	73.99	355	P	P	22 17 53.7	+0.4	
O50A	Cable	74.07	351	P	P	22 17 53.0	-0.8	
	baz=170							
ACSO	Alum Creek Sta	74.07	351	P	P	22 17 53.7	-0.1	
	baz=171							
N60A	Cedar Hill Far	74.08	358	P	P	22 17 53.9	+0.1	
	baz=177							
N57A	Milroy	74.08	356	P	P	22 17 53.7	-0.2	
	baz=175,SNR=6.2							
P46A	Rosedale	74.10	348	IAmb	IAmb	22 18 18.3		
	comp=Z,12nm,0.8s							
N58A	Sunbury	74.12	356	P	P	22 17 54.1	+0.1	
	baz=176							
N59A	State Game Lan	74.15	357	P	P	22 17 54.8	+0.5	
	baz=177							
O49A	Covington	74.21	350	IAmb	IAmb	22 18 04.5		
	comp=Z,28nm,1.2s							
N55A	Marion Center	74.21	355	P	P	22 17 54.2	-0.4	
	baz=174,SNR=9.3							
N56A	West Decatur	74.29	355	P	P	22 17 55.0	-0.1	
	baz=175							
O48A	Farmland	74.39	350	P	P	22 17 54.7	-1.0	
	baz=169							
N54A	Moraine State	74.47	354	P	P	22 17 56.1	-0.1	
	baz=173							
N54A	Moraine State	74.47	354	IAmb	IAmb	22 17 56.9		
	comp=Z,10nm,0.8s							
M60A	Port Jervis	74.52	358	P	P	22 17 56.9	+0.5	
	baz=178							
M62A	Hamden	74.61	359	P	P	22 17 57.8	+0.9	
	baz=179							
N50A	Nevada	74.62	351	P	P	22 17 56.5	-0.5	
	baz=170							
M57A	Sunshine Farm,	74.64	356	P	P	22 17 57.4	+0.3	
	baz=176							
M58A	Price's Panora	74.64	357	P	P	22 17 57.2	0.0	
	baz=176							
N51A	Ashland	74.67	352	P	P	22 17 57.0	-0.3	
	baz=171							
BNM	Barren Site	74.69	331	P	P	22 17 57.5	-0.3	
M64A	Tiverton	74.72	1	P	P	22 17 58.8	+1.3	
	baz=181							
LIC	Lamto	74.75	72	eP	P	22 17 58.0	-0.4	
	comp=Z,88nm,1.2s							
M59A	Waymart	74.76	357	P	P	22 17 58.0	+0.2	
	baz=177							
SFIN	Lafayette	74.82	348	P	P	22 17 57.1	-1.0	
	baz=167							
M56A	Emporium	74.85	355	P	P	22 17 58.0	-0.3	
	baz=175,SNR=5.0							
M56A	Emporium	74.85	355	IAmb	IAmb	22 18 07.2		
	comp=Z,12nm,0.8s							
M55A	Ridgway	74.88	355	P	P	22 17 58.3	-0.2	
	baz=174,SNR=5.9							
M55A	Ridgway	74.88	355	IAmb	IAmb	22 17 59.3		
	comp=Z,12nm,0.8s							
N49A	Columbus Grove	74.91	351	IAmb	IAmb	22 17 59.1		
	comp=Z,20nm,0.8s							
N48A	Decatur	74.96	350	P	P	22 17 58.2	-0.8	
	baz=169							
M54A	Oil Creek Stat	74.99	354	P	P	22 17 58.7	-0.4	
	baz=174							
TIC	Toumodi	75.01	71	eP	P	22 17 59.6	-0.3	
M53A	WI Miller and	75.01	353	P	P	22 17 58.5	-0.7	
	baz=173							
L63A	North Scituate	75.03	0	P	P	22 17 59.7	+0.4	
	baz=180							
KIC	Kosan Boka	75.06	72	eP	P	22 17 59.6	-0.6	
	comp=Z,62nm,1.1s							
N47A	Urbana	75.08	349	IAmb	IAmb	22 17 59.5		
	comp=Z,19nm,0.8s							
DBIC	Dimbokro	75.15	71	P	P	22 17 60.0	-0.7	
	comp=Z,111nm,0.7s,baz=227,slow=4.7,SNR=9.1							
DBIC				LR	LR	22 51 41.3		
	comp=Z,183nm,18.1s,baz=169,slow=36							
DBIC	Dimbokro	75.15	71	P	P	22 18 00.0	-0.7	
SUR	Sutherland	75.17	119	P	P	22 18 01.6	+0.7	
	comp=Z,11nm,0.8s,baz=231,slow=4.5,SNR=6.5							
L60A	Shokan	75.17	358	P	P	22 18 00.6	+0.4	
	baz=178							
M52A	Chesterland	75.18	353	P	P	22 18 00.1	-0.1	
	baz=172							
L58A	Harry Jones Me	75.28	357	P	P	22 18 01.1	+0.3	
	baz=177							
L57A	Andrews Acres	75.28	356	P	P	22 18 01.2	+0.4	
	baz=176							
ANMO	Albuquerque	75.31	331	ceP	P	22 18 02.4	+1.0	
ANMO				pmax	pmax			
	comp=Z,6.0nm,1.3s							
ANMO	Albuquerque	75.31	331	P	P	22 18 01.5	+0.2	
	baz=151							
ANMO	Albuquerque	75.31	331	P	P	22 18 01.4	0.0	
HDIL	Hopedale	75.39	347	P	P	22 18 01.2	-0.2	
	baz=165							
L59A	Walton	75.40	358	P	P	22 18 01.9	+0.4	
	baz=178							
P38A	Dawn	75.42	343	P	P	22 18 01.3	-0.3	
P38A				IAmb	IAmb	22 18 02.3		
	comp=Z,14nm,0.8s							
BINY	Binghamton	75.44	357	P	P	22 18 01.9	+0.2	
	baz=177							
L56A	Greenwood	75.46	356	P	P	22 18 02.1	+0.2	
	baz=175							
L56A	Greenwood	75.46	356	IAmb	IAmb	22 18 02.9		
	comp=Z,16nm,0.8s							
L53A	Girard	75.48	354	P	P	22 18 01.5	-0.4	
	baz=173							
L55A	Hinsdale	75.56	355	P	P	22 18 02.6	+0.1	
	baz=175							
ERPA	Erie	75.62	354	P	P	22 18 02.4	-0.3	
	baz=173							
HRV	Adam Dziewonsk	75.67	0	P	P	22 18 02.7	-0.3	
	baz=180							
L54A	Sinclairville	75.68	355	P	P	22 18 02.8	-0.3	
	baz=174							
WVNY	West Valley, N	75.80	355	IAmb	IAmb	22 18 04.9		
	comp=Z,18nm,0.8s							
K62A	Royalston	75.83	360	P	P	22 18 04.7	+0.8	
	baz=180							
K61A	Williamstown	75.84	359	P	P	22 18 04.5	+0.5	
	baz=179							
K63A	Dunstable	75.85	1	P	P	22 18 04.6	+0.6	
	baz=180							
TRY	Troy	75.91	359	P	P	22 18 05.8	+1.5	
TRY				IAmb	IAmb	22 18 14.0		
	comp=Z,15nm,0.9s							
K59A	Cooperstown	75.98	358	P	P	22 18 04.8	0.0	
	baz=178							
K58A	Earlville	75.99	357	P	P	22 18 04.8	-0.1	
	baz=177							
K58A	Earlville	75.99	357	IAmb	IAmb	22 18 05.9		
	comp=Z,13nm,0.8s							
K57A	Scipio Center	76.00	357	P	P	22 18 05.2	+0.3	
	baz=176							
K54A	Basiliko Farm,	76.00	355	P	P	22 18 04.8	-0.2	
	baz=174							
K56A	Middlesex	76.01	356	P	P	22 18 04.8	-0.2	
	baz=176							
MMNY	Mt. Morris Dam	76.07	356	IAmb	IAmb	22 18 14.2		
	comp=Z,12nm,0.8s							
K55A	Perry	76.08	356	P	P	22 18 05.0	-0.4	
	baz=175							
CBKS	Cedar Bluff	76.39	338	P	P	22 18 07.1	-0.1	
	baz=157							
J62A	Henniker	76.39	0	P	P	22 18 07.6	+0.5	
	baz=180							
T25A	Trinidad	76.45	334	P	P	22 18 09.1	+1.2	
	baz=153							
J56A	Wolcott	76.56	356	P	P	22 18 07.5	-0.5	
	baz=176							
J56A	Wolcott	76.56	356	IAmb	IAmb	22 18 08.6		
	comp=Z,13nm,0.8s							
J55A	Hilton	76.60	356	P	P	22 18 07.8	-0.5	
	baz=175							
J57A	Williamstown	76.65	357	P	P	22 18 08.5	0.0	
	baz=177							
J57A	Williamstown	76.65	357	IAmb	IAmb	22 18 09.4		
	comp=Z,11nm,0.8s							
J59A	Piesco	76.66	358	P	P	22 18 08.8	+0.1	
	baz=178							
K47A	Vermontville	76.74	350	P	P	22 18 08.2	-0.9	
	baz=169							
K48A	Perry	76.75	351	P	P	22 18 08.1	-1.0	
	baz=170							
J52A	Paris	76.78	354	P	P	22 18 08.5	-0.7	
	baz=173							
L42A	Oliver, Polo	76.86	347	IAmb	IAmb	22 18 10.2		
	comp=Z,18nm,0.9s							
I58A	Old Forge	76.89	358	P	P	22 18 09.7	-0.3	
	baz=178,SNR=6.6							
I59A	Olmsteadville	76.97	359	P	P	22 18 10.3	-0.1	
	baz=178							
I60A	Shoreham	77.01	359	P	P	22 18 11.3	+0.8	
	baz=179							
I62A	Tamworth	77.04	1	P	P	22 18 11.7	+1.0	
	baz=181							
I61A	Oroboro, Fairl	77.09	360	P	P	22 18 11.9	+0.9	
	baz=180							
I64A	Boothbay	77.12	2	P	P	22 18 11.6	+0.5	
	baz=182							
I57A	Carthage	77.16	357	P	P	22 18 11.7	+0.3	
	baz=177							
J49A	Marlette	77.17	352	P	P	22 18 11.1	-0.4	
	baz=171							

baz=152
SDCO Great Sand Dun 77.39 334 IAmb IAmb 22 18 26.0
comp=Z,22nm,2.0s
LBNH Lisbon 77.40 0 P P 22 18 13.8 +1.0
LBNH pmax pmax
comp=Z,13nm,1.0s
LBNH Lisbon 77.40 0 P P 22 18 13.5 +0.7
baz=180
LBNH Lisbon 77.40 0 P P 22 18 13.8 +1.0
LBNH IAmb IAmb 22 18 14.5
comp=Z,12nm,0.9s
SCIA State Center 77.52 344 P P 22 18 13.2 -0.3
baz=162
I55A Frankford 77.54 356 P P 22 18 13.1 -0.4
baz=175,SNR=5.5
H58A Gabriels 77.60 359 P P 22 18 13.6 -0.3
baz=178,SNR=7.0
H61A Lyndonville 77.69 0 P P 22 18 15.1 +0.7
baz=180,SNR=7.5
H60A Morristown 77.72 360 P P 22 18 14.7 +0.2
baz=180
LONY Lake Ozonia 77.81 358 P P 22 18 14.9 -0.2
baz=178,SNR=6.4
H59A Cadyville 77.82 359 P P 22 18 15.3 +0.2
baz=179
H56A Elgin 77.84 357 P P 22 18 15.2 0.0
baz=176
H55A Tweed 77.84 356 P P 22 18 15.1 -0.1
baz=176
H63A New Sharon 77.85 2 P P 22 18 15.8 +0.6
baz=182
JFWS Jewell Farm 77.85 347 P P 22 18 14.6 -0.7
JFWS pmax pmax
comp=Z,13nm,0.9s
JFWS Jewell Farm 77.85 347 P P 22 18 14.8 -0.5
baz=165
JFWS Jewell Farm 77.85 347 P P 22 18 14.6 -0.7
JFWS IAmb IAmb 22 18 25.8
comp=Z,13nm,0.8s
WUAZ Wupatki 77.86 328 P P 22 18 15.8 0.0
S22A 4UR Ranch, Cre 77.90 333 P P 22 18 16.9 +0.9
baz=151
H65A Eastbrook 77.94 3 P P 22 18 15.7 0.0
baz=183
H53A Bobcaygeon 77.95 355 P P 22 18 15.5 -0.3
baz=174
EMMW East Machias 77.99 3 P P 22 18 17.4 +1.4
I47A Gladwin 77.99 351 P P 22 18 15.8 -0.3
baz=170
FRNY Flat Rock 78.01 359 IAmb IAmb 22 18 17.3
comp=Z,10nm,0.8s
H66A Whiting 78.07 4 P P 22 18 17.5 +1.0
baz=184
MVCO Mesa Verde 78.09 331 IAmb IAmb 22 18 19.8
comp=Z,22nm,1.6s
SADO Sadowa 78.19 355 IAmb IAmb 22 18 17.7
comp=Z,10nm,0.8s
G57A Newington 78.31 358 P P 22 18 18.0 +0.2
baz=178
G63A Kingsbury 78.31 2 P P 22 18 18.3 +0.5
baz=182,SNR=5.6
PLVO Plevna 78.33 356 IAmb IAmb 22 18 18.3
comp=Z,24nm,1.5s
G62A West of Eustis 78.39 1 P P 22 18 18.8 +0.5
baz=181,SNR=9.4
GGN Saint George 78.43 4 IAmb IAmb 22 18 20.3
comp=Z,17nm,0.8s
G61A St-Isidore-de- 78.45 0 P P 22 18 19.3 +0.7
baz=180,SNR=5.3
PKME Peaks-Kenny Pk 78.47 2 P P 22 18 19.2 +0.5
baz=182
PKME Peaks-Kenny Pk 78.47 2 P P 22 18 19.7 +1.1
PKME IAmb IAmb 22 18 20.3
comp=Z,12nm,0.8s
G65A Princeton 78.47 3 P P 22 18 18.2 -0.5
baz=184
G64A Maxfield 78.48 2 P P 22 18 18.8 +0.1
baz=183
IRM Iron Mountain 78.48 325 P P 22 18 19.8 +0.7
baz=145
G53A Haliburton 78.50 355 P P 22 18 18.7 -0.2
baz=174
G55A Calabogie 78.52 357 P P 22 18 19.0 +0.1
baz=176
I42A Draeger Farm, 78.55 348 IAmb IAmb 22 18 19.8
comp=Z,12nm,0.8s
XPFO Pion Flat 78.68 324 P P 22 18 22.5 +2.2
PFO Pinyon Flats O 78.68 324 P P 22 18 21.7 +1.4
comp=Z,3.3nm,0.8s,baz=145,slow=3.3,SNR=5.2
PFO Pinyon Flats O 78.68 324 P P 22 18 21.3 +1.0
baz=144
PFO Pinyon Flats O 78.68 324 P P 22 18 22.5 +2.2
G54A Lake Saint Pet 78.74 356 P P 22 18 20.0 -0.2
baz=175
F63A Nahmakanta, Br 78.91 2 P P 22 18 21.6 +0.5
baz=183,SNR=5.3
F63A Nahmakanta, Br 78.91 2 IAmb IAmb 22 18 22.9
comp=Z,16nm,0.8s
H43A Windswept, Lux 78.92 349 IAmb IAmb 22 18 21.8
comp=Z,12nm,0.8s
G47A Hillman 79.05 352 P P 22 18 21.5 -0.3
baz=170
F64A Sherman 79.10 3 P P 22 18 22.7 +0.6
baz=183
F64A Sherman 79.10 3 IAmb IAmb 22 18 24.0
comp=Z,13nm,0.8s
F60A Warwick 79.13 0 P P 22 18 22.1 -0.2
baz=180
F61A St Evariste 79.14 1 P P 22 18 22.1 -0.3
baz=181
PV12 Saucer Basin, 79.17 331 IAmb IAmb 22 19 22.5
comp=Z,27nm,1.7s
PV17 East Wray Mesa 79.20 331 IAmb IAmb 22 18 36.7
comp=Z,30nm,1.8s
F52A Sundridge 79.22 355 P P 22 18 22.2 -0.6
baz=174
GMRC Granite Mounta 79.24 325 P P 22 18 24.9 +1.6
baz=144
ISCO Idaho Springs 79.25 334 P P 22 18 24.2 +0.7
baz=152
LMN Caledonia Moun 79.30 5 IAmb IAmb 22 18 24.6
comp=Z,19nm,0.7s
F51A Arnstein 79.40 355 P P 22 18 23.1 -0.6
baz=173
TRQ Mont Tremblant 79.41 358 P P 22 18 23.7 -0.2
F49A Sandfield 79.43 353 P P 22 18 23.3 -0.6
baz=172
PV09 Paradox Valley 79.45 331 P P 22 18 25.0 +0.4
TSUM Tsumeb 79.47 106 P P 22 18 25.3 +0.2
comp=Z,10nm,0.8s,baz=238,slow=4.6,SNR=16
TSUM Tsumeb 79.47 106 P P 22 18 25.0 -0.1
TSUM IAmb IAmb 22 18 26.4
comp=Z,16nm,0.9s
E60A Ste Agathe de 79.53 1 P P 22 18 24.3 -0.2
baz=181,SNR=6.6
E58A La Victoria 79.54 359 P P 22 18 24.5 0.0
baz=179
F48A Evansville 79.55 353 P P 22 18 23.7 -0.9
baz=171
E57A Chemin Saint G 79.59 359 P P 22 18 24.7 -0.1
baz=178,SNR=5.2
E63A Oxbow 79.66 3 P P 22 18 25.6 +0.5
baz=183
E64A Bridgewater 79.68 3 P P 22 18 25.9 +0.6
baz=184
E53A Dumoine, Ponti 79.69 356 P P 22 18 24.8 -0.5
baz=175
E54A Lac Daplat, Po 79.72 356 P P 22 18 25.2 -0.3
baz=176
E56A St. Veronique 79.75 358 P P 22 18 25.2 -0.4
baz=178,SNR=7.8
F45A CMU Biological 79.76 351 P P 22 18 25.2 -0.5
baz=169
E62A Clayton Lake 79.82 2 P P 22 18 26.6 +0.6
baz=182,SNR=6.4
E62A Clayton Lake 79.82 2 IAmb IAmb 22 18 27.8
comp=Z,10nm,0.8s
E50A Wahnapitae 79.96 354 P P 22 18 26.5 -0.3
baz=173
E51A G1948 Merrick 79.97 355 P P 22 18 26.3 -0.5
baz=174
ECSD EROS Data Cent 80.06 342 P P 22 18 27.3 -0.1
baz=160
ECSD EROS Data Cent 80.06 342 IAmb IAmb 22 18 28.4
comp=Z,15nm,0.8s
D60A Saint Jean D'O 80.08 1 P P 22 18 27.9 +0.5
baz=181
E48A Lockeyer 80.15 353 P P 22 18 27.6 -0.2
baz=172
D57A Chemin Vers le 80.19 359 P P 22 18 28.1 0.0
baz=178,SNR=8.0
D55A Sainte-Anne-du 80.23 358 P P 22 18 27.7 -0.5
baz=177
D56A ZEC Mazanza, M 80.24 358 P P 22 18 28.0 -0.3
baz=178
E47A Iron Bridge 80.24 352 P P 22 18 27.7 -0.7
baz=171
D58A Chemin du LacG 80.26 360 P P 22 18 28.4 0.0
baz=179,SNR=11
E46A Sault Ste Mari 80.28 352 IAmb IAmb 22 18 41.1
comp=Z,29nm,1.2s
D63A Stockholm 80.28 3 P P 22 18 28.9 +0.4
baz=183
D62A Allapoint, All 80.29 2 P P 22 18 28.7 +0.2
baz=183,SNR=5.8
D62A Allapoint, All 80.29 2 IAmb IAmb 22 18 30.0
comp=Z,14nm,0.8s
D52A ZEK Kipawa Sen 80.33 356 P P 22 18 28.8 0.0
baz=175
D61A St Aubert, Com 80.38 1 P P 22 18 29.3 +0.3
baz=182
D53A Lac Vacive, Po 80.39 356 P P 22 18 28.8 -0.3
baz=175
BOSA Boshof 80.40 118 P P 22 18 29.8 -0.3
comp=Z,8.9nm,0.8s,baz=251,slow=3.7,SNR=16
BOSA LR LR 22 49 22.3
comp=Z,121nm,19.9s,baz=252,slow=32
BOSA Boshof 80.40 118 P P 22 18 30.2 +0.2
D54A Lac Fusel, La 80.41 357 P P 22 18 28.6 -0.7
baz=176
CASY Casey 80.49 181 P P 22 18 30.6 +1.0
SPMN Marine on St. 80.59 345 P P 22 18 29.5 -0.8
baz=163
D50A G1974 Best Tow 80.62 355 P P 22 18 29.9 -0.4
baz=174
E43A Lone Tree Farm 80.65 350 IAmb IAmb 22 18 31.4
comp=Z,10nm,0.8s
D48A Paudash Townsh 80.80 353 P P 22 18 30.6 -0.7
baz=172
D47A Chapleau 80.82 352 P P 22 18 30.6 -0.8
baz=171
D49A Beulah Townshi 80.86 354 P P 22 18 30.7 -0.9
baz=172
MPMC Manual Prospec 81.15 324 P P 22 18 34.9 +1.2
baz=143
FURC Furnace Creek, 81.17 325 P P 22 18 35.1 +1.6
baz=144
TPNV Topopah Spring 81.27 326 P P 22 18 35.4 +1.1
baz=144
ISA Isabella, Lake 81.32 323 P P 22 18 35.5 +1.0
baz=142
SUSD Miller 81.34 341 P P 22 18 36.0 +1.7
baz=158
F36A Milaca 81.35 345 IAmb IAmb 22 18 34.5
comp=Z,10nm,0.8s
PKM Mcpherson Peak 81.39 322 P P 22 18 35.9 +0.9
baz=142
VLDQ Val d'Or 81.41 356 IAmb IAmb 22 18 35.9
comp=Z,13nm,0.8s
R11A Troy Canyon, C 82.09 327 P P 22 18 40.0 +1.3
baz=145
DUG Duuay, Tooele 82.40 330 P P 22 18 41.1 +0.9
baz=147
RSSD Black Hills 82.55 337 P P 22 18 41.6 +0.7
RSSD pmax pmax
comp=Z,5.0nm,0.8s
RSSD Black Hills 82.55 337 P P 22 18 41.6 +0.7
baz=154
RSSD Black Hills 82.55 337 P P 22 18 41.6 +0.7
LBTB Lobatse 82.62 115 P P 22 18 41.5 -0.3
LBTB pmax pmax
comp=Z,32nm,1.1s
LBTB Lobatse 82.62 115 P P 22 18 41.5 -0.3
EYMN Ely 82.93 347 P P 22 18 42.7 +0.1
baz=164
EYMN Ely 82.93 347 IAmb IAmb 22 18 42.9
comp=Z,9.3nm,1.1s
EYMN pP 22 18 48.4 -1.0
HWUT Hardware Ranch 83.08 331 IAmb IAmb 22 18 56.8
comp=Z,9.7nm,0.9s
BW06 Boulder Array 83.29 333 P P 22 18 45.6 +0.8
baz=149
PDAR Pinedale Array 83.29 333 P P 22 18 45.6 +0.9
comp=Z,2.6nm,0.9s,baz=149,slow=6.3,SNR=10
NVAR Mina Array Bea 83.43 325 P P 22 18 47.1 +1.5
comp=Z,1.8nm,0.7s,baz=153,slow=6.7,SNR=10
B35A Bob, Littlefor 83.77 346 IAmb IAmb 22 18 47.2
comp=Z,8.6nm,0.7s
AGMN Agassiz Nation 84.17 344 P P 22 18 48.7 -0.2
baz=160
TOA0 Torodi Ar. Sit 84.17 70 P P 22 18 49.5 -0.2
TORD Torodi Ar. Bea 84.17 70 P P 22 18 49.3 -0.4
comp=Z,13nm,0.8s,baz=278,slow=4.4,SNR=55
TORD LR LR 22 55 03.7
comp=Z,199nm,18.7s,baz=200,slow=35
FLWY Flagg Ranch 84.84 333 IAmb IAmb 22 18 54.3
comp=Z,8.2nm,0.8s
PAHR Pah Rah Range 84.95 325 IAmb IAmb 22 19 02.9
comp=Z,20nm,1.7s
RLMT Red Lodge 85.21 335 P P 22 18 54.8 +0.3
baz=150
RLMT Red Lodge 85.21 335 IAmb IAmb 22 18 56.5
comp=Z,25nm,1.6s
ORV Oroville 85.85 324 IAmb IAmb 22 19 00.7
comp=Z,12nm,1.2s
ULM Lac du Bonnet 86.01 345 P P 22 18 56.6 -1.5
comp=Z,7.3nm,0.8s,baz=147,slow=3.8,SNR=6.4
ULM Lac du Bonnet 86.01 345 P P 22 18 56.9 -1.2
ULM IAmb IAmb 22 18 58.4
comp=Z,8.6nm,0.9s
RAO Raoul Island 86.02 237 LR LR 22 48 53.8
comp=Z,9µm,20.8s,baz=120,slow=30
DGMT Dagmar 86.50 339 P P 22 19 00.8 +0.2
baz=154
DLMT Dillon 86.64 333 IAmb IAmb 22 19 12.5
comp=Z,19nm,1.6s
O02D Mt. Diablo Mer 86.96 324 P P 22 19 03.8 +0.7
baz=140
WDC Whiskeytown Da 87.15 324 IAmb IAmb 22 19 11.2
comp=Z,8.4nm,1.1s
MATP Matopo 87.40 113 P P 22 19 05.7 -0.2
comp=Z,7.1nm,0.8s,baz=232,slow=5.0,SNR=12
M04C Macdoel 87.73 325 P P 22 19 08.2 +1.3
baz=140
M02C Callahan 87.92 324 P P 22 19 08.2 +0.5
baz=140
YBH Yreka Blue Hor 88.11 325 P P 22 19 09.0 +0.4
comp=Z,4.3nm,0.8s,baz=55,slow=4.8,SNR=8.4
YBH Yreka Blue Hor 88.11 325 IAmb IAmb 22 19 15.9
comp=Z,7.8nm,1.0s
SCHQ Schefferville 88.12 3 P P 22 19 07.9 -0.3
comp=Z,3.6nm,0.8s,baz=185,slow=5.6,SNR=4.5
SCHQ LR LR 22 59 22.5
comp=Z,70nm,20.8s,baz=128,slow=36
J05D Fort Rock, OR 88.61 327 P P 22 19 12.3 +1.4
baz=141
LSZ Lusaka 90.08 108 P P 22 19 19.9 +1.3
comp=Z,2.0nm,0.3s,baz=193,slow=5.4,SNR=3.9
LSZ Lusaka 90.08 108 P P 22 19 20.3 +1.7
LSZ IAmb IAmb 22 19 21.1
comp=Z,13nm,1.1s
WALA Waterton Lakes 90.23 334 P P 22 19 18.2 -0.2
WALA IAmb IAmb 22 20 17.4
comp=Z,9.2nm,0.9s
TAM Tamanrasset 92.74 65 P P 22 19 30.3 -0.4
TAM pmax pmax
comp=Z,8.0nm,1.3s
TAM Tamanrasset 92.74 65 P P 22 19 30.3 -0.4
TAM IAmb IAmb 22 19 39.7
comp=Z,8.2nm,1.3s
ESDC Sonseca Array 96.34 46 P P 22 19 47.1 +0.4
comp=Z,1.5nm,0.9s,baz=251,slow=4.2,SNR=7.4
ESDC LR LR 23 02 14.1
comp=Z,132nm,18.9s,baz=250,slow=35
BBB Bella Bella 98.34 329 LR LR 23 01 59.2
comp=Z,49nm,19.0s,baz=142,slow=34
YKA Yellowknife Ar 101.57 341 P Pdif 22 20 07.9 -1.6
comp=Z,0.6nm,0.7s,baz=147,slow=4.4,SNR=5.8
GERES GERES Array B 111.92 45 PKiKP PKiKP 22 24 52.5 -0.3
comp=Z,0.3nm,0.5s,baz=264,slow=1.3,SNR=4.4
ILAR Eielson Array 113.72 333 PKiKP PKiKP 22 24 55.6 0.0
comp=Z,0.4nm,0.7s,baz=43,slow=0.5,SNR=3.0
TOLK Toolik Lake Re 116.41 336 P PKiKP 22 25 01.4 +0.6
baz=114
ASAR Alice Springs 117.93 207 PKP PKPdf 22 25 04.2 -1.0
comp=Z,0.9nm,0.8s,baz=138,slow=1.7,SNR=8.1
BUR08 Bucovina Ar. S 118.54 50 PKPdf PKiKP 22 25 06.6 +1.0
MMAI Mount Meron Ar 120.69 69 PKP PKPdf 22 25 09.5 -0.7
comp=Z,1.4nm,0.6s,baz=259,slow=1.5,SNR=3.0
WRA Warramunga Arr 121.11 209 PKP PKPdf 22 25 10.8 -0.6
comp=Z,1.9nm,0.8s,baz=196,slow=1.7,SNR=9.1
BRTR Keskin Array B 121.72 61 PKP PKPdf 22 25 11.3 -0.7
comp=Z,1.2nm,0.7s,baz=203,slow=3.0,SNR=5.1
AKASG Malin Array Be 121.97 47 PKP PKPdf 22 25 10.5 -1.4
comp=Z,2.1nm,0.6s,baz=261,slow=2.6,SNR=8.4
AKASG PP PP 22 26 52.6 +5.9
comp=Z,0.3nm,0.3s,baz=251,slow=8.0,SNR=4.2
AKBB Malin Array Si 121.97 47 *c i* PKiKP PKPdf 22 25 11.2 -0.7
FINES FINESS Array B 122.68 34 PKP PKPdf 22 25 12.7 -0.2
comp=Z,1.8nm,0.8s,baz=116,slow=4.4,SNR=7.3
ARCES ARCESS Array B 123.64 25 PKP PKPdf 22 25 12.8 -1.9
comp=Z,0.9nm,0.6s,baz=240,slow=4.1,SNR=5.6
RAYN Ar Rayn 125.07 83 PKiKP PKiKP 22 25 19.4 +0.3
RAYN Ar Rayn 125.07 83 PKPdf PKiKP 22 25 19.4 +0.3
H11S2 WAKE ISLAND Hyd 125.65 270 T T 00 44 15.2
baz=118,slow=74,SNR=82
H11S1 WAKE ISLAND Hyd 125.66 270 T T 00 44 16.0
baz=118,slow=74,SNR=97
H11S3 WAKE ISLAND Hyd 125.67 270 T T 00 44 17.4
baz=118,slow=74,SNR=47
H11N3 WAKE ISLAND Hyd 126.05 271 T T 00 44 48.1
baz=115,slow=77,SNR=2.5
H11N1 WAKE ISLAND Hyd 126.06 271 T T 00 44 45.8
baz=115,slow=77,SNR=3.3
H11N2 WAKE ISLAND Hyd 126.07 271 T T 00 44 50.6
baz=115,slow=77,SNR=15
LVZ Lovozero 126.91 27 *i* PKiKP PKPdf 22 25 20.5 -0.4
LVZ pmax pmax
comp=Z,11nm,1.0s
OBN Obninsk 127.18 43 *i* PKiKP PKPdf 22 25 21.3 -0.4
OBN pmax pmax
comp=Z,17nm,1.7s
OBN MLR MLR
comp=Z,97nm,20.0s
MOS Moscow 127.85 42 *e* PKiKP PKPdf 22 25 19.3 -3.7
MOS *e* 22 27 28.0
KLMR Klimovskoe 129.10 36 *e* PKiKP PKPdf 22 25 23.8 -1.4
KLMR pmax pmax
comp=Z,25nm,1.4s
KLMR Klimovskoe 129.10 36 *e* PKPdf PKPdf 22 25 23.9 -1.3
KLMR AMP 22 25 26.8
comp=Z,25nm,1.4s
KIV Kislovodsk 129.35 58 *c i* PKiKP PKPdf 22 25 25.8 -0.6
KIV pmax pmax
comp=Z,4.0nm,1.0s
KIV MLR MLR
comp=Z,56nm,20.0s
KBZ Khabaz 129.46 58 *i* PKiKP PKiKP 22 25 27.0 -0.2
BILL Bilibino 132.36 334 *i* PKiKP PKPdf 22 25 31.6 +0.4
BILL *e* 22 27 55.3
BILL pmax pmax
comp=Z,15nm,2.5s
BILL MLR MLR
comp=Z,142nm,19.0s
AKT Akhty 132.52 62 *e* PKiKP PKiKP 22 25 34.1 +0.5
AKT *e* 22 27 59.5
AKT pmax pmax
comp=Z,8.0nm,1.2s
KIRV Kirov 134.24 39 *e* PKiKP PKPdf 22 25 35.5 +0.5
ARU Arti 139.47 40 *i* PKiKP PKPdf 22 25 45.3 +0.5
ARU 22 28 38.0
ARU SS SS 22 46 52.2 -5.3
ARU MLR MLR
comp=Z,111nm,17.0s
ARU Arti 139.47 40 PKPpre 22 25 37.2
GEYT Alibeck 139.81 69 PKP PKPdf 22 25 44.8 -1.2
comp=Z,3.5nm,0.8s,baz=278,slow=4.2,SNR=8.7
GYA0B ALIBECK ARRAY 139.81 69 PKiKP 22 25 48.0 -0.4
AKTO Aktyubinsk 140.13 50 PKP PKPdf 22 25 46.8 +0.6
comp=Z,2.1nm,0.7s,baz=199,slow=5.1,SNR=7.9
TIXI Tiksi 140.21 350 PKiKP PKPdf 22 25 44.7 -1.0
TIXI Tiksi 140.21 350 PKPdf PKPdf 22 25 44.7 -1.0
HRA Herat 142.44 76 PKPdf 22 25 52.3 +1.2
GSI Gunungsitoli 146.54 161 PKPbc 22 26 00.6 +0.5
BRVK Borovoye 146.95 42 *de* PKP2 PKPdf 22 25 58.9 +0.8
BRVK Borovoye 146.95 42 PKPbc 22 26 00.8 +0.7
BVAR Borovoye Array 147.02 42 PKP PKPdf 22 25 58.6 +0.4
comp=Z,13nm,0.6s,baz=259,slow=3.0,SNR=40
BVAR PKPbc PKPbc 22 26 00.9 +0.7
comp=Z,13nm,0.6s,baz=297,slow=2.7,SNR=36
KBL Kabul 147.99 77 PKiKP PKPdf 22 26 01.4 +0.7
KBL Kabul 147.99 77 PKPdf PKPdf 22 26 01.4 +0.7
YAK Yakutsk 148.25 341 *e* PKP2 PKPbc 22 26 03.3 0.0
YAK pmax pmax
comp=Z,32nm,1.0s
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.1s
PSI Prapat 148.32 163 PKPbc PKPbc 22 26 04.2 -0.9
comp=E,25nm,0.9s,baz=180,slow=3.1,SNR=17
KCP Kidapawan 149.13 215 µ *eP* PKPdf 22 26 03.5 +0.6
HYB Hyderabad 149.24 114 *i* PKP PKPbc 22 26 07.0 -0.2
YSS Yuzh-Sakhalins 150.41 307 *e* PKiKP PKPbc 22 26 09.4 +0.3
IPM Ipoh 150.41 166 PKPbc 22 26 08.7 -1.5
KULM Kulim 151.12 165 PKPbc 22 26 11.4 -0.4
NIL Nilore 151.29 80 PKiKP PKPbc 22 26 11.3 -0.4
NIL Nilore 151.29 80 PKPbc 22 26 11.3 -0.4
EKS2 Erkin-Say 151.87 61 P PKiKP 22 26 13.5 +0.3
SNR=8.8
AML Almayashu 151.87 62 P PKiKP 22 26 13.6 0.0
SNR=7.8
USP Ospenovka 152.30 60 P PKiKP 22 26 14.2 +0.1
SNR=7.8
AAK Ala-Archa 152.39 61 PKP PKPdf 22 26 06.9 -0.4
comp=E,2.2nm,0.7s,baz=51,slow=2.6,SNR=4.8
AAK PKPbc PKPbc 22 26 14.8 +0.5
comp=E,13nm,0.8s,baz=202,slow=2.5,SNR=28
AAK Ala-Archa 152.39 61 P PKiKP 22 26 14.9 +0.5
SNR=9.8
AAK Ala-Archa 152.39 61 ⇑ *e* PKiKP PKPdf 22 26 07.5 +0.2
AAK Ala-Archa 152.39 61 PKPdf PKPdf 22 26 08.3 +1.0
AAK PKiKP 22 26 14.9 +0.5
UCH Uchtor 152.46 62 P PKiKP 22 26 15.4 +0.4
SNR=9.2
CHMS Chumysh 152.53 60 P PKiKP 22 26 14.5 0.0
SNR=7.6
KURK Kurchatov 152.62 42 PKiKP PKPdf 22 26 07.5 +0.4
KURK Kurchatov 152.62 42 PKPdf PKPdf 22 26 07.5 +0.4
TKM2 Tokmak 2 153.15 60 P PKiKP 22 26 16.1 +0.1
SNR=5.1
KSH Kashi 153.82 68 PKPbc PKiKP 22 26 17.5 +0.1
KSH PP PP 22 29 58.0 -7.3
ZAA0 Zalesovo Array 153.90 32 PKPdf PKPdf 22 26 08.7 -0.2
ZALV Zalesovo Beam 153.90 32 PKP PKPdf 22 26 08.6 -0.3
comp=E,3.1nm,0.8s,baz=279,slow=2.9,SNR=16
ZALV PKPbc PKPbc 22 26 16.9 +0.1
comp=E,18nm,0.7s,baz=297,slow=3.2,SNR=53
BOD Bodaibo 155.35 352 *e* PKP2 PKPab 22 26 35.5 -0.6
BOD pmax pmax
comp=Z,11nm,1.2s
ZEA Zeya 155.53 331 *e* PKP2 PKPab 22 26 37.6 +0.6
MKAR Makanchi Array 156.55 48 PKP PKPdf 22 26 12.6 -0.2
comp=Z,1.9nm,0.8s,baz=149,slow=0.7,SNR=6.4
MKAR PKPab PKPab 22 26 41.7 0.0
comp=Z,11nm,0.7s,baz=276,slow=3.0,SNR=35
WMQ Urumqi 161.28 51 *eP* PKPdf 22 26 18.5 0.0
WMQ LR LR
comp=N,580nm,29.1s
WMQ LR LR
comp=E,470nm,29.1s
WMQ LR LR
comp=Z,160nm,25.9s
TLY Talaya 161.61 8 *e* PKP2 PKPab 22 27 04.5 +1.1
TLY pmax pmax
comp=Z,17nm,1.3s
ZAK Zakamensk 162.83 10 *e* PKP2 PKPab 22 27 09.0 +0.1
ZAK pmax pmax
comp=Z,4.0nm,1.3s
CMAR Chiang Mai Arr 163.02 150 PKP PKPdf 22 26 21.1 +0.2
comp=Z,0.6nm,0.3s,baz=240,slow=2.8,SNR=10
CMAR PKPab PKPab 22 27 10.2 -0.2
comp=Z,0.4nm,0.3s,baz=220,slow=6.5,SNR=4.5
KSRS Korea Array 163.16 289 PKP PKPdf 22 26 19.8 -0.6
comp=Z,0.6nm,0.6s,baz=183,slow=0.4,SNR=7.4
KSRS PKPab PKPab 22 27 15.7 +5.0
comp=Z,1.7nm,0.9s,baz=98,slow=4.2,SNR=5.6
SHL Shillong 164.04 116 PKiKP PKPdf 22 26 22.1 +0.2
SHL Shillong 164.04 116 PKPdf PKPdf 22 26 22.1 +0.2
LSA Lhasa 165.30 101 PKP2 PKPab 22 27 21.8 +0.7
LSA Lhasa 165.30 101 PKPab 22 27 21.8 +0.7

ULN	**Ulaanbaatar**	**165.67**	**2**	PKP2	**PKPab**	**22 27 22.9**	**+1.4**
ULN	**Ulaanbaatar**	**165.67**	**2**		**PKPab**	**22 27 22.9**	**+1.4**
SONM	**Songino Array**	**165.67**	**4**	PKPab	**PKPab**	**22 27 22.4**	**+1.0**
	comp=Z,2.0nm,0.9s,baz=336,slow=3.3,SNR=7.5						
SONM				PP	PP	22 31 17.9	+10
	comp=Z,0.3nm,0.5s,baz=328,slow=5.3,SNR=3.6						
NJ2	**Nanjing**	**170.58**	**264**	*e*P	**PKPdf**	**22 26 25.8**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
GTA	**Gaotai**	**171.29**	**45**	*e*PKP	**PKPdf**	**22 26 27.0**	**+0.5**
GTA				PKPab	**PKPab**	**22 27 47.0**	**+0.3**
GTA				PP	**PP**	**22 31 41.5**	**+4.0**
HHC	**Hu-ho-hao-te**	**172.10**	**339**	*e*P	**PKPdf**	**22 26 28.5**	**+1.7**
HHC				LR	LR		
	comp=N,240nm,19.2s						
HHC				LR	LR		
	comp=E,130nm,19.2s						
HHC				LR	LR		
	comp=Z,93nm,19.0s						
GYA	**Guiyang**	**172.88**	**172**	*e*PKP	**PKPdf**	**22 26 28.0**	**+0.4**
GYA				PKPab	**PKPab**	**22 27 52.0**	**-1.9**
GYA				PP	**PP**	**22 31 45.5**	**+1.1**
GYA				SKS	**SKSdf**	**22 33 22.5**	**-7.3**
WHN	**Wuhan**	**173.70**	**244**	PKPbc	**PKPdf**	**22 26 25.8**	**-1.8**
CD2	**Chengdu**	**175.69**	**126**	PKP	**PKPdf**	**22 26 27.0**	**-1.3**
LZH	**Lanzhou**	**175.86**	**51**	*e*PKP	**PKPdf**	**22 26 25.3**	**-3.1**
LZH				pPKP	pPKPdf	22 26 34.3	-1.3
LZH				sPKP		22 26 37.0	
LZH				LR	LR		
	comp=N,56nm,18.1s						
LZH				LR	LR		
	comp=E,60nm,18.2s						
LZH				LR	LR		
	comp=Z,79nm,20.0s						
XAN	**Xi'an**	**178.94**	**299**	PKP	**PKPdf**	**22 26 28.5**	**-0.2**
XAN				LR	LR		
	comp=E,170nm,20.6s						
XAN				LR	LR		
	comp=Z,340nm,20.6s						

*IDC **30** 22:10:53.6±1.3, 48.76S×31.24E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.7/49, mbtmp4.0/5, ML4.2/1, MS3.4/3, Ms1 3.4/3, ms1mx3.1/24, Error ellipse: s-maj=77.4km s-min=24.2km az=58.0*

ISC 30 22:10:55.2±1.3, 48.8S±0.3×31.1E±0.5, h10km, n8, σ1°58/6, mb3.9/3, MS3.3/3, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	**Sutherland**	**18.17**	**331**	P	**Pn**	**22 15 08.1**	**+0.4**
	0.9nm,0.3s,baz=145,slow=15,SNR=28						
BOSA	**Boshof**	**20.69**	**345**	P	**P**	**22 15 36.1**	**+0.7**
	2.4nm,0.8s,baz=165,slow=12,SNR=3.8						
BOSA				LR	LR	22 23 26.6	
	comp=Z,80nm,18.2s,baz=223,slow=36						
MAW	**Mawson**	**24.69**	**151**	P	**P**	**22 16 17.6**	**+1.7**
	2.3nm,0.7s,baz=307,slow=7.7,SNR=8.5						
MATP	**Matopo**	**28.42**	**355**	LR	LR	22 26 36.8	
	comp=Z,79nm,20.9s,baz=307,slow=33						
LSZ	**Lusaka**	**33.55**	**355**	LR	LR	22 30 32.3	
	comp=Z,73nm,19.2s,baz=273,slow=35						
ASAR	**Alice Springs**	**80.47**	**115**	P	**P**	**22 23 07.5**	**0.0**
	0.8nm,0.7s,baz=222,slow=4.6,SNR=10						
WRA	**Warramunga Arr**	**83.55**	**113**	P	**P**	**22 23 22.2**	**-1.4**
	0.9nm,0.9s,baz=220,slow=4.8,SNR=4.9						
PDAR	**Pinedale Array**	**152.16**	**272**	PKPbc	**PKPbc**	**22 30 49.2**	**-1.5**
	0.3nm,0.4s,baz=138,slow=6.1,SNR=2.3						

*NNC **30** 22:28:33.0±1.2, 42.53N×79.62E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=7.8km s-min=4.1km az=136.0*
*KRNET **30** 22:28:34.0±0.1, 42.56N×79.65E, h16km, mb2.7*
*SOME **30** 22:28:34.0, 42.52N×79.62E, h15km*

ISC 30 22:28:34.1±1.4, 42.57N±0.04×79.63E±0.04, h0km±11km, n44, σ0°75/77, 17C-16D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UZB	**Uzynbulak**	**0.73**	**323**	⇓*i*P	**Pg**	**22 28 48.4**	**+0.1**
UZB	baz=22			⇓*i*S	**Sg**	**22 28 58.8**	**+1.0**
UZB	**Uzynbulak**	**0.73**	**323**	⇓*i*P	**Pg**	**22 28 48.4**	**+0.1**
UZB	14nm,0.2s			⇓*i*S	**Sg**	**22 28 58.7**	**+1.0**
UZB	**Uzynbulak**	**0.73**	**323**	P	**Pg**	**22 28 48.4**	**+0.1**
UZB	14nm,0.2s			S	**Sg**	**22 28 58.7**	**+1.0**
PDGK	**Podgornoye**	**0.77**	**352**	⇓P	**Pg**	**22 28 48.3**	**-0.6**
PDGK	1.6nm,0.2s			⇓S	**Sg**	**22 28 59.7**	**+0.7**
PRZ	**Przheval'sk**	**0.91**	**265**	⇑*e*P	**Pg**	**22 28 51.1**	**-0.6**
PRZ	8.5nm,0.4s baz=66			⇑*i*S	**Sg**	**22 29 03.9**	**+0.4**
KTMS	**Ketmen**	**1.03**	**31**	⇑*e*P	**Pg**	**22 28 53.7**	**-0.1**
KTMS	baz=29			⇑*e*S	**Sg**	**22 29 07.7**	**+0.6**
KTMS	**Ketmen**	**1.03**	**31**	⇑*e*P	**Pg**	**22 28 53.7**	**-0.1**
KTMS	2.2nm,0.1s baz=29			⇑*e*S	**Sg**	**22 29 07.6**	**+0.6**
KTMS	**Ketmen**	**1.03**	**31**	P	**Pg**	**22 28 53.7**	**-0.1**
KTMS	1.9nm,0.1s			S	**Sg**	**22 29 07.8**	**+0.6**
SATY	**Saty**	**1.03**	**299**	⇑*e*P	**Pg**	**22 28 53.6**	**-0.3**
SATY	1.0nm,0.1s baz=40			⇑*i*S	**Sg**	**22 29 07.7**	**+0.5**
SATY	**Saty**	**1.03**	**299**	P	**Pg**	**22 28 53.5**	**-0.3**
SATY	1.0nm,0.2s			S	**Sg**	**22 29 07.6**	**+0.4**
KURS	**Kuram**	**1.41**	**311**	*e*P	**Pn**	**22 29 00.5**	**-0.7**
KURS	baz=11			⇑*e*S	**Sn**	**22 29 19.5**	**-1.0**
KURS	**Kuram**	**1.41**	**311**	*e*P	**Pn**	**22 29 00.5**	**-0.7**
KURS	1.0nm,0.1s			⇑*e*S	**Sn**	**22 29 19.5**	**-1.0**
ANVS	**Anan'yevo**	**1.47**	**279**	⇓*i*P	**Pn**	**22 29 01.4**	**-0.6**
ANVS	2.6nm,0.4s baz=80			⇓*i*S	**Sb**	**22 29 21.4**	**-0.2**
TARG	**Taragay, Kyrgy**	**1.59**	**239**	⇑*e*P	**Pn**	**22 29 03.5**	**-0.5**
TARG	baz=40			⇑*i*S	**Sg**	**22 29 25.6**	**+0.2**
DJR	**Jarkent**	**1.77**	**4**	⇑*e*P	**Pb**	**22 29 07.5**	**0.0**
DJR	1.9nm,0.1s			⇓*i*S	**Sg**	**22 29 31.3**	**+0.3**
DJR	**Jarkent**	**1.77**	**4**	P	**Pb**	**22 29 07.4**	**0.0**
DJR	1.9nm,0.1s			S	**Sg**	**22 29 31.3**	**+0.3**
KOTS	**Kotyrbulak**	**1.97**	**291**	*e*P	**Pb**	**22 29 10.9**	**0.0**
KOTS	4.4nm,0.2s			*e*S	**Sg**	**22 29 37.3**	**-0.1**
KOTS	**Kotyrbulak**	**1.97**	**291**	Pg	**Pb**	**22 29 11.0**	**0.0**
KOTS	4.4nm,0.2s			Lg	Lg	22 29 37.4	
MDOK	**Medeo**	**1.99**	**288**	*e*P	**Pb**	**22 29 10.7**	**-0.6**
MDOK	baz=88			*e*S	**Sb**	**22 29 37.2**	**+0.5**
MDOK	**Medeo**	**1.99**	**288**	*e*P	**Pb**	**22 29 10.7**	**-0.6**
MDOK	1.3nm,0.2s			*e*S	**Sb**	**22 29 37.1**	**+0.5**
MDOK	**Medeo**	**1.99**	**288**	Pg	**Pn**	**22 29 06.9**	**-2.3**
MDOK	7.4nm,1.2s			Lg	Lg	22 29 35.7	
MDOK	**Medeo**	**1.99**	**288**	Pg	**Pb**	**22 29 10.8**	**-0.6**
MDOK	7.1nm,0.6s 1.3nm,0.2s			Lg	Lg	22 29 37.2	
TNSS	**Tian-Shan**	**2.03**	**284**	⇓*i*P	**Pb**	**22 29 11.0**	**-1.1**
TNSS	5.6nm,0.4s baz=84			⇓*e*S	**Sb**	**22 29 37.8**	**-0.3**
TNSS	**Tian-Shan**	**2.03**	**284**	⇓*i*P	**Pb**	**22 29 11.0**	**-1.1**
TNSS	1.8nm,0.3s 5.1nm,0.2s			*e*S	**Sb**	**22 29 37.8**	**-0.3**
TNSS	**Tian-Shan**	**2.03**	**284**	Pg	**Pb**	**22 29 11.0**	**-1.1**
TNSS	1.8nm,0.3s 5.1nm,0.2s			Lg	Lg	22 29 37.8	
KNDC	**Almaty**	**2.06**	**289**	⇑Pg	**Pn**	**22 29 08.0**	**-2.1**
KNDC	3.6nm,0.4s 13nm,0.5s			⇓Lg	Lg	22 29 39.4	
ARXS	**Arharly**	**2.11**	**322**	*e*P	**Pb**	**22 29 12.4**	**-0.9**
ARXS	3.1nm,0.2s 3.0nm,0.2s			*e*S	**Sb**	**22 29 40.1**	**+0.1**
IZV	**Izvestkoviy**	**2.27**	**283**	*e*P	**Pb**	**22 29 15.3**	**-0.8**
IZV	3.1nm,0.1s 17nm,0.2s			*e*S	**Sb**	**22 29 44.9**	**+0.1**
IZV	**Izvestkoviy**	**2.27**	**283**	Pg	**Pb**	**22 29 15.3**	**-0.8**
IZV	2.9nm,0.1s 9.6nm,0.2s			Lg	Lg	22 29 44.8	
CHKK	**Chushkaly**	**2.32**	**305**	*e*P	**Pb**	**22 29 16.4**	**-0.5**
CHKK	0.5nm,0.1s 9.1nm,0.3s			*e*S	**Sb**	**22 29 46.5**	**+0.4**
MTBS	**Maitube**	**2.42**	**285**	*e*P	**Pb**	**22 29 18.1**	**-0.5**
MTBS	2.2nm,0.1s 7.5nm,0.2s			*e*S	**Sb**	**22 29 49.8**	**+0.8**
MTBS	**Maitube**	**2.42**	**285**	Pg	**Pb**	**22 29 18.2**	**-0.5**
MTBS	2.0nm,0.1s 7.5nm,0.2s			Lg	Lg	22 29 49.8	
KTBS	**Karatobe**	**2.44**	**299**	*e*P	**Pb**	**22 29 18.5**	**-0.5**
KTBS	1.2nm,0.2s 24nm,0.2s			*e*S	**Sb**	**22 29 50.5**	**+0.9**
KTBS	**Karatobe**	**2.44**	**299**	Pg	**Pb**	**22 29 18.7**	**-0.3**
KTBS	1.2nm,0.2s 24nm,0.2s			Lg	Lg	22 29 50.5	
ULHL	**Ulahol**	**2.53**	**264**	⇓*i*P	**Pn**	**22 29 17.7**	**+1.0**
ULHL	baz=64 baz=64			⇓*i*S	**Sn**	**22 29 49.3**	**+1.0**
BOOM	**Boomskoye usch**	**2.73**	**270**	⇑*i*P	**Pn**	**22 29 20.1**	**+0.8**
BOOM	baz=70 baz=70			⇑*i*S	**Sn**	**22 29 54.1**	**+1.0**
KST	**Kastek**	**2.74**	**281**	*e*P	**Pb**	**22 29 23.9**	**-0.1**
KST	2.3nm,0.2s 5.2nm,0.5s			*e*S	**Sb**	**22 29 59.4**	**+1.1**
KST	**Kastek**	**2.74**	**281**	Pg	**Pb**	**22 29 23.8**	**-0.2**
KST	2.3nm,0.2s 3.5nm,0.4s			Lg	Lg	22 29 59.4	
KUU	**Kurty**	**2.75**	**300**	*e*P	**Pb**	**22 29 23.8**	**-0.3**
KUU	1.2nm,0.3s 5.7nm,0.2s			*e*S	**Sb**	**22 29 59.1**	**+0.7**
KUU	**Kurty**	**2.75**	**300**	Pg	**Pb**	**22 29 23.5**	**-0.6**
KUU	1.2nm,0.4s 7.0nm,0.3s			Lg	Lg	22 29 59.0	
DGS	**Degeres**	**2.92**	**285**	*e*P	**Pb**	**22 29 26.5**	**-0.6**
DGS	1.4nm,0.2s 15nm,0.6s			*e*S	**Sb**	**22 30 03.9**	**+0.6**
TKM2	**Tokmak 2**	**2.99**	**278**	⇑*i*P	**Pn**	**22 29 23.8**	**+0.8**
TKM2	baz=78 baz=78			⇑*i*S	**Sn**	**22 30 00.6**	**+0.9**
KRBS	**Karabastau**	**3.11**	**293**	*e*P	**Pb**	**22 29 30.4**	**+0.1**
KRBS	0.5nm,0.2s 2.0nm,0.3s			*e*S	**Sb**	**22 30 10.5**	**+1.7**
KRBS	**Karabastau**	**3.11**	**293**	Pg	**Pb**	**22 29 29.3**	**-1.0**
KRBS				Lg	Lg	22 30 08.8	

*IDC **30** 22:32:00.3±2.6, 43.41N×105.38W, h0km, mb3.8/1, mb1 3.8/3, mb1mx3.4/43, mbtmp3.6/3, ML3.2/2, MS3.6/3, Ms1 3.5/3, ms1mx2.9/39, Error ellipse: s-maj=61.7km s-min=9.7km az=154.0*
*NEIC **30** 22:32:02.2±1.3, 43.58N±0.05×105.27W±0.07, h0km±2km, ML3.3/64, Error ellipse: s-maj=9.5km s-min=8.1km az=143.0*

ISC 30 22:32:01.6±0.8, 43.54N±0.05×105.28W±0.04, h0km, n91, σ1°40/93, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.07**	**57**		**Pg**	**22 32 22.0**	**-0.2**
K22A	**Casper**	**1.27**	**226**		**Pg**	**22 32 25.0**	**-0.9**
K22A	comp=E,553nm,0.5s			IAML		22 32 48.4	
K22A	comp=N,419nm,0.3s			IAML		22 32 48.7	
PHWY	**Pilot Hill**	**2.24**	**183**		**Pn**	**22 32 41.3**	**+1.1**
PHWY	comp=N,121nm,0.5s			IAML		22 33 15.1	
RWWY	**Rawlins**	**2.33**	**218**		**Pn**	**22 32 42.5**	**+1.1**
RWWY	comp=N,264nm,0.9s			IAML		22 33 16.8	
BW06	**Boulder Array**	**3.22**	**258**	Pn	**Pn**	**22 32 55.9**	**+2.3**
BW06	comp=N,59nm,0.5s			IAML		22 33 42.2	
PD31	**Pinedale Array**	**3.22**	**258**		**Pn**	**22 32 54.7**	**+1.1**
PDAR	**Pinedale Array**	**3.22**	**258**	Pn	**Pn**	**22 32 53.8**	**+0.1**
PDAR	comp=N,2.1nm,0.3s,baz=79,slow=18,SNR=15 comp=N,21nm,0.3s,baz=66,slow=33,SNR=12			Lg	Lg	22 33 38.5	
LAO	**LASA Array**	**3.22**	**348**	Pn	**Pn**	**22 32 53.2**	**-0.4**
LAO	comp=N,129nm,0.8s			IAML		22 33 39.7	
RLMT	**Red Lodge**	**3.27**	**300**	Pn	**Pn**	**22 32 54.4**	**+0.1**
RLMT	comp=N,74nm,0.4s			IAML		22 33 52.8	
RLMT	comp=N,50nm,0.5s			IAML		22 33 54.8	
OGNE	**Ogallala**	**3.54**	**136**		**Pn**	**22 32 59.8**	**+1.9**
YNE	**Yellowstone No**	**3.70**	**295**		**Pn**	**22 33 00.5**	**+0.3**
YMP	**Mirror Lake Pl**	**3.71**	**291**		**Pn**	**22 33 01.7**	**+1.3**
ISCO	**Idaho Springs**	**3.74**	**184**		**Pn**	**22 33 01.0**	**+0.1**
LKWY	**Lake**	**3.83**	**287**	Pn	**Pn**	**22 33 03.2**	**+1.2**
LKWY	comp=N,61nm,0.8s			IAML		22 34 09.6	
LKWY	comp=N,36nm,5.0s			IAML		22 35 28.8	
GCMT	**Greycliff**	**3.86**	**307**		**Pn**	**22 33 02.4**	**+0.1**
H17A	**Grant Village**	**3.92**	**285**		**Pn**	**22 33 03.4**	**+0.1**
H17A	comp=E,33nm,0.9s			IAML		22 34 09.1	
FLWY	**Flagg Ranch**	**3.96**	**280**		**Pn**	**22 33 07.2**	**+3.4**
FLWY	comp=E,42nm,1.2s			IAML		22 34 12.9	
SNOW	**Snow King Moun**	**3.98**	**271**		**Pb**	**22 33 13.4**	**+0.6**
SNOW	comp=E,45nm,1.0s			IAML		22 34 15.7	
SNOW	comp=E,47nm,1.5s			IAML		22 34 25.6	
O20A	**White River Ci**	**4.05**	**214**		**Pn**	**22 33 06.5**	**+1.4**
O20A	comp=E,46nm,1.0s			IAML		22 34 17.0	
O20A	comp=N,48nm,1.3s			IAML		22 34 22.1	
REDW	**Red Top Meadow**	**4.06**	**269**	Pn	**Pn**	**22 33 06.0**	**+0.8**
REDW	comp=N,57nm,1.1s			IAML		22 34 22.9	
IMW	**Indian Meadow**	**4.12**	**277**		**Pn**	**22 33 07.3**	**+1.2**
IMW	comp=N,32nm,0.5s			IAML		22 34 17.3	
IMW	comp=N,51nm,0.5s			IAML		22 34 20.8	
TPAW	**Teton Pass**	**4.12**	**271**		**Pn**	**22 33 07.3**	**+1.2**
TPAW	comp=N,44nm,0.9s			IAML		22 34 28.6	

FXWY	**Fox Creek**	**4.17**	**273**		**Pn**	**22 33 08.3**	**+1.5**
YHH	**Holmes Hill**	**4.20**	**289**		**Pn**	**22 33 06.2**	**-0.9**
YMR	**Madison River**	**4.25**	**287**		**Pn**	**22 33 07.9**	**+0.1**
AHID	**Auburn Hatcher**	**4.33**	**262**	Pn	**Pn**	**22 33 09.3**	**+0.5**
RDMU	**Red Mountain**	**4.35**	**229**	Pn	**Pn**	**22 33 10.0**	**+0.7**
YHB	**Horse Butte**	**4.43**	**288**		**Pn**	**22 33 10.0**	**-0.2**
YHB					**Pb**	**22 33 20.7**	**+0.3**
E28A	**Huff**	**4.45**	**45**	Pn	**Pn**	**22 33 11.0**	**+0.7**
E28A				Pg	**Pb**	**22 33 22.3**	**+1.7**
SMCO	**Snowmass**	**4.54**	**197**	Pn	**Pn**	**22 33 12.1**	**+0.2**
QLMT	**Earthquake Lak**	**4.61**	**288**	Pn	**Pn**	**22 33 12.7**	**0.0**
QLMT					**Pb**	**22 33 26.2**	**+2.8**
KSCO	**Kaye Shedlock'**	**4.94**	**155**		**Pn**	**22 33 18.4**	**+1.2**
BOZ	**Bozeman (W)**	**4.98**	**297**	Pn	**Pn**	**22 33 18.9**	**+1.1**
BOZ	comp=N,15nm,1.1s			IAML		22 34 42.6	
BOZ	comp=N,18nm,4.7s			IAML		22 36 17.5	
DGMT	**Dagmar**	**4.99**	**8**	Pb	**Pb**	**22 33 31.1**	**+1.2**
HWUT	**Hardware Ranch**	**5.02**	**250**	IAML		22 34 57.8	
HWUT	comp=N,29nm,1.1s comp=N,24nm,1.4s			IAML		22 34 58.8	
TCUT	**Toone Canyon**	**5.14**	**244**		**Pn**	**22 33 21.3**	**+1.2**
JLU	**Jordanelle**	**5.45**	**240**	Pn	**Pn**	**22 33 25.2**	**+1.0**
EGMT	**Eagleton**	**5.47**	**327**	Pn	**Pn**	**22 33 24.3**	**-0.1**
CTU	**Camp Tracy**	**5.59**	**242**	Pn	**Pn**	**22 33 27.6**	**+1.5**
PV22	**Blue Mesa, Par**	**5.65**	**209**		**Pn**	**22 33 28.7**	**+1.6**
BGNE	**Belgrade**	**5.69**	**110**	Pn	**Pn**	**22 33 28.3**	**+1.0**
PV07	**Paradox Valley**	**5.69**	**208**	Pn	**Pn**	**22 33 29.3**	**+1.7**
PV15	**Paradox Valley**	**5.72**	**206**	Pn	**Pn**	**22 33 29.3**	**+1.2**
SPUT	**South Promonto**	**5.75**	**250**		**Pn**	**22 33 29.3**	**+0.9**
P17A	**Butcher Ranch,**	**5.77**	**227**	Pn	**Pn**	**22 33 29.2**	**+0.6**
SDCO	**Great Sand Dun**	**5.79**	**182**	Pn	**Pn**	**22 33 30.6**	**+1.7**
HVU	**Hansel Valley**	**5.80**	**255**	Pn	**Pn**	**22 33 29.7**	**+0.7**
PV23	**Carpenter Ridg**	**5.81**	**210**		**Pn**	**22 33 30.8**	**+1.5**
PV04	**Paradox Valley**	**5.82**	**209**		**Pn**	**22 33 30.5**	**+1.2**
PV12	**Saucer Basin,**	**5.85**	**208**	Pn	**Pn**	**22 33 31.6**	**+1.7**
MDND	**Maddock**	**5.87**	**41**	Pn	**Pn**	**22 33 29.7**	**-0.1**
PV14	**Lion Creek, Pa**	**5.88**	**210**	Pn	**Pn**	**22 33 31.8**	**+1.5**
PV10	**Paradox Valley**	**5.88**	**210**	Pn	**Pn**	**22 33 33.7**	**+3.4**
PV20	**West Nyswonger**	**5.89**	**210**	Pn	**Pn**	**22 33 31.9**	**+1.6**
PV11	**David Mesa, Pa**	**5.89**	**209**		**Pn**	**22 33 31.3**	**+1.0**
MPU	**Maple Canyon**	**5.91**	**236**	Pn	**Pn**	**22 33 31.2**	**+0.7**
PV19	**Morning Glory**	**5.92**	**209**	Pn	**Pn**	**22 33 32.2**	**+1.4**
SRU	**San Rafael Swe**	**5.92**	**224**		**Pn**	**22 33 31.5**	**+0.7**
PV03	**Paradox Valley**	**5.93**	**208**	Pn	**Pn**	**22 33 31.9**	**+1.1**
PV02	**Paradox Valley**	**5.93**	**207**		**Pn**	**22 33 31.8**	**+0.9**
PV17	**East Wray Mesa**	**5.94**	**209**	Pn	**Pn**	**22 33 27.8**	**-3.3**
PV01	**Paradox Valley**	**5.94**	**206**	Pn	**Pn**	**22 33 32.3**	**+1.2**
PV18	**Skein Mesa, Pa**	**5.96**	**209**		**Pn**	**22 33 32.0**	**+0.8**
PV13	**Radium Mtn., P**	**6.00**	**208**		**Pn**	**22 33 33.1**	**+1.2**
PV13					**Pg**	**22 33 54.6**	**-2.0**
TMUT	**Trail Mountain**	**6.14**	**228**		**Pn**	**22 33 35.0**	**+1.1**
PV05	**Paradox Valley**	**6.17**	**209**	Pn	**Pn**	**22 33 34.0**	**-0.2**
NLU	**North Lily Min**	**6.21**	**237**	Pn	**Pn**	**22 33 36.2**	**+1.4**
ECSD	**EROS Data Cent**	**6.29**	**85**	Pg	**Pg**	**22 33 57.9**	**-4.3**
CBKS	**Cedar Bluff**	**6.30**	**137**	Pn	**Pn**	**22 33 37.6**	**+1.7**
Q16A	**Castle Valley**	**6.40**	**226**	Pn	**Pn**	**22 33 38.7**	**+1.4**
DUG	**Dugway, Tooele**	**6.54**	**242**	Pn	**Pn**	**22 33 40.5**	**+1.3**
MVCO	**Mesa Verde**	**6.78**	**202**	Pn	**Pn**	**22 33 44.3**	**+1.8**
MSO	**Missoula**	**6.95**	**301**	Pn	**Pn**	**22 33 45.1**	**+0.4**
R32A	**Long Quarter,**	**7.12**	**134**	Pn	**Pn**	**22 33 47.3**	**+0.2**
MSU	**Marysvale**	**7.23**	**228**	Pn	**Pn**	**22 33 51.2**	**+2.5**
MSU				Pg	**Pg**	**22 34 16.9**	**-3.2**
TCRU	**Three Creeks R**	**7.31**	**230**	Pn	**Pn**	**22 33 50.3**	**+0.4**
TCRU				Pg	**Pg**	**22 34 20.7**	**-1.0**
JTMT	**Jette**	**7.58**	**307**	Pn	**Pn**	**22 33 52.7**	**-0.8**
MTPU	**Mount Pierson**	**7.58**	**226**	Pn	**Pn**	**22 33 54.6**	**+0.9**
MFID	**Camas Ranch**	**7.67**	**273**	Pn	**Pn**	**22 33 55.7**	**+1.0**
KSU1	**Kansas State U**	**7.89**	**121**	Pn	**Pn**	**22 33 58.1**	**+0.6**
ELK	**Elko**	**7.91**	**253**	Pn	**Pn**	**22 33 59.0**	**+1.0**
PKCU	**Pink Cliffs**	**8.10**	**224**	Pn	**Pn**	**22 34 01.5**	**+0.7**
WALA	**Waterton Lakes**	**8.13**	**316**	Pn	**Pn**	**22 34 01.0**	**0.0**
PSUT	**Pine Spring**	**8.18**	**235**	Pn	**Pn**	**22 34 03.1**	**+1.4**
WUAZ	**Wupatki**	**9.29**	**212**	Pn	**Pn**	**22 34 18.1**	**+1.2**
ULM	**Lac du Bonnet**	**9.30**	**40**	Pn	**Pn**	**22 34 16.2**	**-0.6**
	comp=N,0.7nm,0.3s,baz=230,slow=13,SNR=2.1						
ULM				Lg	Lg	22 36 49.4	
	comp=N,0.3nm,0.3s,baz=120,slow=13,SNR=1.8						
ULM	comp=N,45nm,18.1s,baz=88,slow=42			LR	LR	22 38 33.8	
B35A	**Bob, Littlefor**	**9.38**	**55**	Pn	**Pn**	**22 34 17.7**	**-0.3**
I56US	**NEWPORT INFRAS**	**9.51**	**304**	*i*		23 25 00.0	
	baz=118,slow=317,SNR=11						
ARCES	**ARCESS Array B**	**61.51**	**18**	P	**P**	**22 42 19.9**	**-0.5**
	comp=N,1.2nm,0.9s,baz=330,slow=7.0,SNR=4.1						
RPN	**Rapa Nui**	**70.41**	**184**	LR	LR	23 10 43.1	
	comp=N,107nm,20.0s,baz=44,slow=33						
AKASG	**Malin Array Be**	**78.14**	**28**	LR	LR	23 18 55.4	
	comp=N,64nm,18.5s,baz=230,slow=36						

*MDD **30** 22:40:45.5±0.4, 43.02N×0.21W, h10km±1km, mbLg1.4/15, Error ellipse: s-maj=4.3km s-min=2.3km az=16.0, PRXIMO*
*LDG **30** 22:40:45.0±0.1, 43.03N×0.20W, h4km, Ml1.8/7, Error ellipse: s-maj=1.5km s-min=1.2km az=22.0*
*MRB **30** 22:40:45.2±0.3, 43.06N×0.21W, h4km±6km, ML1.1/13, Error ellipse: s-maj=1.9km s-min=1.4km az=200.0*

STR 30 22:40:45.7±2.0, 43°N±21°×°±2°1, h10km±29km, MLv0.8/2, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/pyrenees_taup-2.11 preliminary, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYLO	**Lourdes**	**0.07**	**38**	P	Pg	22 40 47.8	-0.3
PYLO	33nm,0.2s			S	Sg	22 40 49.9	+0.1
PYLO	**Lourdes**	**0.07**	**38**	Pg	Pg	22 40 47.8	-0.2
PYLO				Sg	Sg	22 40 49.9	+0.2
EPF	**Esparros**	**0.33**	**92**	*e*Pg	Pg	22 40 52.6	+0.3
EPF	9.9nm,0.2s			*e*Sg	Sb	22 40 58.0	-1.0
EPF	**Esparros**	**0.33**	**92**	Pg	Pg	22 40 52.6	+0.3
EPF	4.9nm,0.2s			Lg	Lg	22 40 58.0	
ETSF	**Etsaut**	**0.36**	**247**	*e*Pg	Pg	22 40 50.7	-2.1
ETSF	30nm,0.3s			*e*Sg	Sg	22 40 54.8	-2.8
ETSF	**Etsaut**	**0.36**	**247**	Pg	Pg	22 40 50.7	-2.1
ETSF	15nm,0.3s			Lg	Lg	22 40 54.8	
ATE	**Arette**	**0.43**	**276**	Pg	Pg	22 40 51.9	-2.3
ATE	3.8nm,0.0s,SNR=7.9 14nm,0.1s,SNR=7.9			Lg	Lg	22 40 57.5	
ATE	**Arette**	**0.43**	**276**	P	Pg	22 40 52.1	-2.1
ATE	8.1nm,0.1s			S	Sg	22 40 57.5	-2.4
ECHI	**Chisagues Biel**	**0.44**	**149**	Pg	Pg	22 40 53.8	-0.5
ECHI	0.6nm,0.0s,SNR=7.9 10nm,0.1s,SNR=7.9			Lg	Lg	22 40 59.8	
ECHI	**Chisagues Biel**	**0.44**	**149**	P	Pg	22 40 54.2	-0.1
ECHI	8.8nm,0.1s			S	Sb	22 41 01.6	-0.6
ECHI	**Chisagues Biel**	**0.44**	**149**	Pg	Pg	22 40 54.2	-0.1
ECHI				Sg	Sg	22 41 00.1	0.0
CARA	**Val d'Aran**	**0.76**	**116**	P	Pb	22 41 01.0	0.0
CARA	6.2nm,0.2s			S	Sb	22 41 12.8	+1.3
SJPF	**Ste Jean**	**0.82**	**275**	*e*Pg	Pg	22 40 59.7	-1.8
SJPF	1.7nm,0.2s			*e*Sg	Sg	22 41 09.4	-2.8
SJPF	**Ste Jean**	**0.82**

EALK	**Alkurruntz**	**1.04**	**280**	Pg		Pg		22 41 04.4	-1.2
CEST	**Esterri de Car**	**1.10**	**113**	Pg		Pg		22 41 06.7	0.0
CEST				Lg		Lg		22 41 23.0	
	1.8nm,0.2s								
CEST	**Esterri de Car**	**1.10**	**113**	P		Pg		22 41 06.7	0.0
CEST				S		Sn		22 41 23.0	+0.6
	1.8nm,0.2s								
CSOR	**Sort**	**1.13**	**126**	Pg		Pb		22 41 07.1	-0.2
	0.2nm,0.1s,SNR=7.9								
CSOR				Lg		Lg		22 41 22.1	
	2.2nm,0.3s,SNR=7.9								
CAVN	**Les Avellanes**	**1.32**	**151**	Pg		Pn		22 41 09.8	-0.4
CAVN				Lg		Lg		22 41 28.6	
	3.0nm,0.2s								
CAVN	**Les Avellanes**	**1.32**	**151**	P		Pn		22 41 09.9	-0.3
CAVN				S		Sg		22 41 28.6	+0.5
	6.0nm,0.2s								
CORG	**Organya**	**1.33**	**127**	Pg		Pn		22 41 10.4	+0.1
CORG				Lg		Lg		22 41 29.5	
	0.3nm,0.1s								
CORG	**Organya**	**1.33**	**127**	P		Pb		22 41 10.5	-0.2
CORG				S		Sg		22 41 29.5	+1.1
	0.7nm,0.1s								
ESAC	**San Caprasio**	**1.34**	**192**	Pg		Pn		22 41 09.5	-1.0
	2.0nm,0.1s,SNR=7.9								
ESAC				Lg		Lg		22 41 27.3	
	12nm,0.2s,SNR=7.9								
ESAC	**San Caprasio**	**1.34**	**192**	Pg		Pn		22 41 10.3	-0.1
ARBS	**La Rabassa**	**1.36**	**115**	P		Pb		22 41 11.2	-0.1
ARBS				S		Sg		22 41 31.1	+1.7
	2.8nm,0.4s								
CLLI	**Llivia**	**1.63**	**109**	Lg		Lg		22 41 39.5	
	1.2nm,0.3s,SNR=5.8								
CLLI	**Llivia**	**1.63**	**109**	S		Sg		22 41 38.4	+0.2
	1.3nm,0.6s								
MTLF	**Montolieu**	**1.73**	**79**	*e*Pg		Pg		22 41 18.5	-0.3
MTLF				*e*Sg		Sg		22 41 41.2	0.0
	1.0nm,0.2s								
MTLF	**Montolieu**	**1.73**	**79**	Pg		Pg		22 41 18.5	-0.3
MTLF				Lg		Lg		22 41 41.2	
	0.5nm,0.2s								
CBRU	**Bruguera**	**1.85**	**113**	Pn		Pn		22 41 18.5	+1.0
CBRU				Lg		Lg		22 41 44.2	
	1.1nm,0.7s								
CBRU	**Bruguera**	**1.85**	**113**	P		Pb		22 41 18.6	-1.0
CBRU				S		Sb		22 41 43.1	+0.3
	2.1nm,0.7s								
EPOB	**Poblet**	**1.90**	**152**	Lg		Lg		22 41 46.1	
	1.1nm,0.2s,SNR=7.9								
CORI	**Orista**	**1.92**	**123**	Pn		Pn		22 41 19.3	+0.9
CORI				Lg		Lg		22 41 45.3	
	2.3nm,0.2s								
CORI	**Orista**	**1.92**	**123**	P		Pn		22 41 19.3	+1.0
CORI				S		Sb		22 41 44.9	+0.2
	2.3nm,0.2s								
LFF	**La Frestale**	**2.00**	**18**	*e*Pg		Pg		22 41 23.0	-0.9
LFF				*e*Sg		Sg		22 41 49.6	-0.2
	3.2nm,0.4s								
LFF	**La Frestale**	**2.00**	**18**	Pg		Pg		22 41 23.0	-0.9
LFF				Lg		Lg		22 41 49.6	
	1.6nm,0.4s								
CBEU	**Beuda**	**2.20**	**110**	Pn		Pn		22 41 23.7	+1.4
CBEU				Sn		Sb		22 41 52.0	-0.8
	3.6nm,0.6s								
CBEU	**Beuda**	**2.20**	**110**	P		Pn		22 41 23.7	+1.4
CBEU				S		Sb		22 41 52.0	-0.8
	3.6nm,0.6s								
CFON	**Fontmartina**	**2.28**	**123**	Lg		Lg		22 41 58.8	
	3.9nm,0.2s,SNR=7.9								
CAF	**Calviac**	**2.45**	**39**	*e*Pg		Pg		22 41 31.5	-1.2
CAF				*e*Sg		Sg		22 42 04.2	-0.2
	0.4nm,0.2s								
CAF	**Calviac**	**2.45**	**39**	Pg		Pg		22 41 31.5	-1.2
CAF				Lg		Lg		22 42 04.2	
	0.2nm,0.2s								
RJF	**Les Rejaudoux**	**2.55**	**27**	*e*Pg		Pb		22 41 32.9	+1.5
RJF				*e*Sg		Sg		22 42 06.9	-0.6
	0.9nm,0.2s								
RJF	**Les Rejaudoux**	**2.55**	**27**	Pg		Pb		22 41 32.9	+1.5
RJF				Lg		Lg		22 42 06.9	
	0.4nm,0.2s								
MFF	**Saint Martin d**	**3.56**	**360**	*e*Pg		Pb		22 41 51.1	+2.4
MFF				*e*Sg		Sg		22 42 37.2	-2.8
	0.3nm,0.2s								
MFF	**Saint Martin d**	**3.56**	**360**	Pg		Pb		22 41 51.1	+2.4
MFF				Lg		Lg		22 42 37.2	
	0.2nm,0.2s								
BGF	**Bois d'Agland**	**4.10**	**30**	*e*Pg		Pg		22 42 01.4	-2.7
BGF	**Bois d'Agland**	**4.10**	**30**	Pg		Pg		22 42 01.4	-2.7

*LDG **30** 22:41:00.7±0.0,43°.01N×0°.20W,h3km,Md1.7/2,Ml1.8/9, Error ellipse: s-maj=0.9km s-min=0.6km az=165.0*

MDD 30 22:41:01.2±0.4,43°.01N×0°.19W,h0km,mbLg1.2/5,Error ellipse: s-maj=5.5km s-min=2.6km az=174.0,PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETSF	**Etsaut**	**0.29**	**248**	*e*Pg	Pg	22 41 06.4	-0.4
ETSF				*e*Sg	Sg	22 41 10.5	-0.1
	24nm,0.2s						
ETSF	**Etsaut**	**0.29**	**248**	Pg	Pg	22 41 06.4	-0.4
ETSF				Lg	Lg	22 41 10.5	
	12nm,0.2s						
ATE	**Arette**	**0.38**	**282**	Lg	Lg	22 41 12.8	
	SNR=7.9						
EPF	**Esparros**	**0.39**	**87**	*e*Pg	Pg	22 41 08.4	-0.3
EPF				*e*Sg	Sg	22 41 13.6	-0.1
	11nm,0.2s						
EPF	**Esparros**	**0.39**	**87**	Pg	Pg	22 41 08.4	-0.3
EPF				Lg	Lg	22 41 13.6	
	5.4nm,0.2s						
ECHI	**Chisagues Biel**	**0.45**	**140**	Lg	Lg	22 41 15.0	
	SNR=7.9						
SJPF	**Ste Jean**	**0.77**	**278**	*e*Pg	Pg	22 41 15.3	-0.6
SJPF				*e*Sg	Sg	22 41 25.4	-0.4
	3.9nm,0.3s						
SJPF	**Ste Jean**	**0.77**	**278**	Pg	Pg	22 41 15.3	-0.6
SJPF				Lg	Lg	22 41 25.4	
	1.9nm,0.3s						
EORO	**Oroz-Betelu**	**0.83**	**262**	Lg	Lg	22 41 28.6	
	SNR=7.9						
EALK	**Alkurruntz**	**0.99**	**283**	Lg	Lg	22 41 34.0	
	SNR=7.9						
CSOR	**Sort**	**1.16**	**122**	Lg	Lg	22 41 41.0	
	9.8nm,1.0s,SNR=5.0						
ESAC	**San Caprasio**	**1.30**	**189**	Lg	Lg	22 41 45.5	
	7.0nm,0.3s,SNR=4.6						
CLLI	**Llivia**	**1.68**	**108**	Lg	Lg	22 41 56.5	
	SNR=7.9						
MTLF	**Montolieu**	**1.79**	**78**	*e*Pg	Pn	22 41 34.1	+0.7
MTLF				*e*Sg	Sb	22 41 57.7	-0.2
	1.2nm,0.2s						
MTLF	**Montolieu**	**1.79**	**78**	Pg	Pn	22 41 34.1	+0.7
MTLF				Lg	Lg	22 41 57.7	
	0.6nm,0.2s						
LFF	**La Frestale**	**2.04**	**19**	*e*Pg	Pb	22 41 38.7	-0.5
LFF				*e*Sg	Sb	22 42 05.2	0.0
	1.9nm,0.2s						
LFF	**La Frestale**	**2.04**	**19**	Pg	Pb	22 41 38.7	-0.5
LFF				Lg	Lg	22 42 05.2	
	0.9nm,0.2s						
CAF	**Calviac**	**2.52**	**40**	*e*Pg	Pb	22 41 47.6	+0.4
CAF				*e*Sg	Sb	22 42 19.9	+1.1
	0.8nm,0.3s						
CAF	**Calviac**	**2.52**	**40**	Pg	Pb	22 41 47.6	+0.4
CAF				Lg	Lg	22 42 19.9	
	0.4nm,0.3s						
RJF	**Les Rejaudoux**	**2.60**	**28**	*e*Pg	Pb	22 41 49.0	+0.3
RJF				*e*Sg	Sb	22 42 22.6	+1.3
	0.9nm,0.2s						
RJF	**Les Rejaudoux**	**2.60**	**28**	Pg	Pb	22 41 49.0	+0.3
RJF				Lg	Lg	22 42 22.6	
	0.4nm,0.2s						
LASF	**Ste Croix**	**3.13**	**69**	*e*Pg	Pb	22 41 58.7	+1.0
LASF				*e*Sg	Sb	22 42 39.1	+2.6
	0.3nm,0.2s						
LASF	**Ste Croix**	**3.13**	**69**	Pg	Pb	22 41 58.7	+1.0
LASF				Lg	Lg	22 42 39.1	
	0.2nm,0.2s						
MFF	**Saint Martin d**	**3.59**	**0**	*e*Pg	Pb	22 42 07.0	+1.4
MFF				*e*Sg	Sg	22 42 53.5	-3.1
	0.2nm,0.2s						
MFF	**Saint Martin d**	**3.59**	**0**	Pg	Pb	22 42 07.0	+1.4
MFF				Lg	Lg	22 42 53.5	
	0.1nm,0.2s						
TCF	**Toulx Ste Croi**	**3.70**	**27**	*e*Sn	Sn	22 42 38.3	-5.6
TCF				*e*Sg	Sg	22 42 56.9	-3.1
	0.7nm,0.3s						
TCF	**Toulx Ste Croi**	**3.70**	**27**	Lg	Sn	22 42 38.3	-5.6
TCF	**Toulx Ste Croi**	**3.70**	**27**	Lg	Lg	22 42 56.9	
	0.3nm,0.3s						

*TUL **30** 22:44:56.7±1.2,36°.48N±0°.02×97°.97W±0°.05,h4km±2km, ML3.1,Error ellipse: s-maj=6.0km s-min=2.5km az=81.0*
*ANF **30** 22:44:56.7±0.8,36°.49N×97°.99W,h2km±5km,ML4.0/8, Error ellipse: s-maj=3.0km s-min=2.2km az=139.0*
*NEIC **30** 22:44:57.1±1.2,36°.482N±0°.010×97°.93W±0°.06,h3km±7km, Error ellipse: s-maj=7.0km s-min=1.3km az=85.0*

ISC 30 22:44:57.2±0.8,36°.49N±0°.03×97°.97W±0°.04,h10km,n68, σ1§41/72,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.84**	**263**	Pg	**Pg**	**22 45 12.6**	**-0.8**
ADOK	**Arcadia Dam**	**0.97**	**150**	Pg	**Pg**	**22 45 14.9**	**-0.9**
OKCFA	**Oklahoma City**	**1.15**	**158**	Pg	**Pb**	**22 45 18.2**	**-1.0**
OKCSW	**OKLAHOMA CITY**	**1.17**	**158**		**Pb**	**22 45 18.3**	**-1.2**
T35A	**Sooner Cattle**	**1.25**	**70**		**Pn**	**22 45 20.1**	**-0.6**
FNO	**Franklin**	**1.32**	**159**		**Pn**	**22 45 21.2**	**-0.5**
W35A	**Tecumseh**	**1.61**	**146**		**Pn**	**22 45 25.6**	**-0.1**
TUL1	**Leonard**	**1.86**	**108**	P	**Pn**	**22 45 29.6**	**+0.6**
	baz=289						
TUL1				S	**Sb**	**22 45 54.9**	**+0.4**
	baz=289						
TUL1	**Leonard**	**1.86**	**108**	Pn	**Pn**	**22 45 29.4**	**+0.3**
WMOK	**Wichita Mounta**	**1.87**	**201**	P	**Pn**	**22 45 29.5**	**+0.3**
	baz=21						
WMOK				S	**Sb**	**22 45 55.1**	**+0.2**
	baz=21						
WMOK	**Wichita Mounta**	**1.87**	**201**		**Pn**	**22 45 29.5**	**+0.3**
X34A	**Smith Ranch, M**	**1.89**	**177**		**Pb**	**22 45 30.9**	**-0.9**
R32A	**Long Quarter,**	**2.02**	**343**		**Pn**	**22 45 32.6**	**+1.3**
CBKS	**Cedar Bluff**	**2.71**	**329**	Pn	**Pn**	**22 45 41.9**	**+1.0**
KSU1	**Kansas State U**	**2.82**	**22**	P	**Pn**	**22 45 43.3**	**+1.0**
	baz=203						
KSU1	**Kansas State U**	**2.82**	**22**	Pn	**Pn**	**22 45 43.0**	**+0.6**
X37A	**Clayton**	**2.85**	**131**		**Pn**	**22 45 43.2**	**+0.6**
U38A	**Gravette**	**2.89**	**90**		**Pn**	**22 45 43.6**	**+0.3**
Z35A	**Perchaven, San**	**3.21**	**169**		**Pn**	**22 45 47.9**	**+0.3**
HHAR	**Hobbs**	**3.26**	**92**		**Pn**	**22 45 48.5**	**+0.1**
AMTX	**Amarillo**	**3.42**	**243**		**Pn**	**22 45 52.3**	**+1.6**
Z38A	**Mt. Pleasant**	**4.05**	**142**		**Pb**	**22 46 09.2**	**+0.6**
MIAR	**Mount Ida**	**4.08**	**117**	P	**Pn**	**22 46 00.4**	**+0.8**
	baz=300						
MIAR				S	**Sn**	**22 46 49.4**	**+2.0**
	baz=300						
MIAR	**Mount Ida**	**4.08**	**117**	Pn	**Pn**	**22 46 00.2**	**+0.6**
ABTX	**Abilene, Hawle**	**4.10**	**200**	Pn	**Pn**	**22 45 59.9**	**0.0**
U40A	**Yellville**	**4.13**	**90**	P	**Pn**	**22 46 01.1**	**+0.8**
	baz=273						
N33A	**J Bar K, Exete**	**4.26**	**5**	Pn	**Pn**	**22 46 02.5**	**+0.3**
KSCO	**Kaye Shedlock'**	**4.46**	**306**	Pn	**Pn**	**22 46 06.5**	**+1.5**
WHTX	**Lake Whitney,**	**4.51**	**174**	P	**Pn**	**22 46 05.9**	**+0.3**
	baz=355						
WHTX	**Lake Whitney,**	**4.51**	**174**	Pn	**Pn**	**22 46 05.7**	**+0.2**
MGMO	**Mountain Grove**	**4.62**	**80**		**Pn**	**22 46 07.9**	**+0.8**
X40A	**Basin Creek Fa**	**4.64**	**114**	P	**Pn**	**22 46 08.2**	**+0.8**
	baz=297						
P38A	**Dawn**	**4.70**	**47**		**Pb**	**22 46 22.0**	**+2.4**
N35A	**Tabor**	**4.73**	**22**		**Pn**	**22 46 08.8**	**+0.3**
FCAR	**Ozark Folk Cen**	**4.77**	**96**		**Pn**	**22 46 09.5**	**+0.4**
237A	**Washetta, Mont**	**4.82**	**158**	Pn	**Pn**	**22 46 09.5**	**-0.4**
WLAR	**White Oak Lake**	**4.87**	**124**	Pn	**Pn**	**22 46 10.8**	**+0.3**
R40A	**Maddies Statio**	**4.88**	**67**		**Pn**	**22 46 10.8**	**+0.1**
BGNE	**Belgrade**	**4.91**	**358**	P	**Pn**	**22 46 11.4**	**+0.3**
	baz=178						
BGNE	**Belgrade**	**4.91**	**358**	Pn	**Pn**	**22 46 11.3**	**+0.2**
NATX	**Nacogdoches**	**5.46**	**149**	Pg	**Pg**	**22 46 39.1**	**-2.7**
OGNE	**Ogallala**	**5.46**	**326**		**Pn**	**22 46 20.6**	**+1.9**
OGNE				Pg	**Pg**	**22 46 38.8**	**-3.0**
LCAR	**Lake Charles**	**5.52**	**92**	Pn	**Pn**	**22 46 20.5**	**+1.0**
T42A	**Van Buren**	**5.55**	**82**	Pn	**Pn**	**22 46 21.2**	**+1.4**
P40A	**Paris**	**5.57**	**55**		**Pn**	**22 46 21.1**	**+0.9**
CCM	**Cathedral Cave**	**5.59**	**72**		**Pn**	**22 46 19.8**	**-0.6**
L34A	**Svendsen Farm,**	**5.61**	**12**		**Pb**	**22 46 39.4**	**+4.3**
SDCO	**Great Sand Dun**	**6.14**	**284**		**Pn**	**22 46 29.9**	**+1.6**
K31A	**O'Neill**	**6.15**	**355**	Pn	**Pn**	**22 46 28.4**	**+0.3**
JCT	**Junction City**	**6.19**	**195**	Pg	**Pb**	**22 46 49.3**	**+4.2**
SCIA	**State Center**	**6.55**	**33**		**Pg**	**22 47 00.2**	**-2.3**
ISCO	**Idaho Springs**	**6.87**	**301**	Pn	**Pn**	**22 46 37.3**	**-0.9**
342A	**Flagon Creek P**	**6.93**	**136**	Pn	**Pn**	**22 46 37.6**	**-1.2**
HICK	**Hickman**	**7.04**	**87**	Pn	**Pn**	**22 46 40.8**	**+0.4**
S44A	**Carbondale**	**7.07**	**78**	Pn	**Pn**	**22 46 41.2**	**+0.5**
ANMO	**Albuquerque**	**7.07**	**260**		**Pg**	**22 47 10.4**	**-2.2**
SIUC	**Southern Illin**	**7.10**	**77**	Pn	**Pn**	**22 46 41.5**	**+0.4**
OXF	**Oxford**	**7.26**	**103**	Pn	**Pn**	**22 46 44.0**	**+0.7**
W45A	**Hickory Valley**	**7.26**	**98**	Pn	**Pn**	**22 46 43.1**	**-0.2**
ECSD	**EROS Data Cent**	**7.31**	**8**	Pn	**Pn**	**22 46 43.1**	**-0.8**
K38A	**Parkersburg**	**7.34**	**32**		**Pg**	**22 47 14.7**	**-3.0**
P43A	**Skaggs, Pawnee**	**7.37**	**62**	Pn	**Pn**	**22 46 45.5**	**+0.7**
Y45A	**Yeager Farm, C**	**7.38**	**108**	Pn	**Pn**	**22 46 43.8**	**-1.2**
Q44A	**Meyer Farm, Va**	**7.50**	**69**	Pn	**Pn**	**22 46 47.5**	**+0.9**
PHWY	**Pilot Hill**	**7.56**	**312**		**Pg**	**22 47 19.1**	**-2.8**
MNTX	**Cornudas Mount**	**7.79**	**234**		**Pn**	**22 46 51.6**	**+1.0**
HDIL	**Hopedale**	**7.92**	**57**	Pn	**Pn**	**22 46 50.0**	**-2.4**
RSSD	**Black Hills**	**8.91**	**331**	Pn	**Pn**	**22 47 08.1**	**+1.8**

*BJI **30** 22:48:09.9±0.0,30°.71S×177°.51W,h22km,mB5.5/19, mb5.2/26,Ms4.9/13,Ms7 4.6/14*
*IDC **30** 22:48:09.6±0.5,30°.24S×177°.76W,h0km,mb4.7/15, mb1 4.8/16,mb1mx4.6/28,mbtmp4.6/16,ML4.8/1,MS4.6/28, Ms1 4.6/28,ms1mx4.4/34,Error ellipse: s-maj=22.6km s-min=13.2km az=89.0*
*MOS **30** 22:48:13.9±0.9,30°.27S×177°.78W,h35km,mb5.2/11, MS4.7/11,Error ellipse: s-maj=12.5km s-min=9.6km az=84.5*
*NEIC **30** 22:48:14.1±1.6,30°.27S±0°.05×177°.8W±0°.1,h29km±4km, mb5.1/92,ML5.3(WEL),Error ellipse: s-maj=13.8km s-min=7.1km az=99.0*
*GCMT **30** 22:48:17.1±0.2,30°.17S±0°.01×177°.36W±0°.01,h30km, MW5.3/111,Moment Tensor Solution. s108,c181; s111,c172; Duration: 1§1 Moment tensor: Scale 10¹⁷ Nm; Mrr0.89±.02; Mθθ-0.01±.02; Mφφ-0.87±.02; Mrθ0.18±.03; Mθφ-0.29±.01; Mφr0.77±.03; Best double couple: Mo1.21700×10¹⁷ NP1:φs200.00000°,δ25.00000°, λ95.00000°. NP2:φs15.00000°,δ65.00000°,λ88.00000°. Principal axes: T 1.1770, Plg70.0000°, Azm280.0000°; N 0.0800, Plg2.0000°, Azm16.0000°; P -1.2570, Plg20.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 22:48:11.5±0.7,30°.38S±0°.04×177°.45W±0°.06,h17km±3km, h18km:pP-P,n472,σ1§74/462,mb5.1/94,MS4.7/53,12C-7D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.19**	**340**	P	**Pn**	**22 48 32.8**	**-0.4**
GLKZ				S	**Sb**	**22 48 46.6**	**-1.9**
RAO	**Raoul Island**	**1.19**	**340**	Pn	**Pn**	**22 48 32.0**	**-1.4**
	4μm,0.3s,baz=134,slow=6.3,SNR=485						
RAO				Sn	**Sb**	**22 48 45.9**	**-2.9**
	11μm,0.3s,baz=83,slow=12,SNR=11						
RAO	**Raoul Island**	**1.19**	**340**	Pn	**Pn**	**22 48 32.3**	**-1.0**
RAO				Sn	**Sb**	**22 48 45.8**	**-2.9**
RIZ	**Raoul Island**	**1.20**	**340**	P	**Pn**	**22 48 32.4**	**-1.1**
RIZ				S	**Sb**	**22 48 45.8**	**-3.3**
MXZ	**Matakaoa Point**	**7.98**	**205**	Pn	**Pn**	**22 50 06.3**	**-0.4**
WMGZ	**Waiomatatini S**	**8.17**	**204**	P	**Pn**	**22 50 08.8**	**-0.5**
WMGZ				S	**Sn**	**22 51 38.5**	**-2.7**
HAZ	**Te Kaha**	**8.35**	**207**	P	**Pn**	**22 50 09.9**	**-1.8**
HAZ				S	**Sn**	**22 51 45.1**	**-0.6**
PUZ	**Puketiti**	**8.46**	**204**	P	**Pn**	**22 50 10.5**	**-2.7**
PUZ				S	**Sn**	**22 51 45.8**	**-2.5**
KUZ	**Kuaotunu**	**8.53**	**220**	P	Pn	22 50 22.2	+8.0
RUGZ	**Raukumara Rang**	**8.57**	**207**	P	**Pn**	**22 50 12.3**	**-2.6**
RUGZ				S	**Sn**	**22 51 48.4**	**-2.9**
WCZ	**Waipu Caves**	**8.83**	**229**	P	Pn	22 50 26.3	+8.0
TKGZ	**Te Karaka**	**8.93**	**204**	P	**Pn**	**22 50 17.5**	**-2.1**
TKGZ				S	**Sn**	**22 51 55.8**	**-3.9**

OUZ	**Omahuta**	**8.95**	**235**	P		Pn		22 50 27.1	+7.2
OUZ	**Omahuta**	**8.95**	**235**	Pn		**Pn**		**22 50 19.8**	**-0.1**
MWZ	**Matawai**	**8.95**	**206**	P		Pn		**22 50 17.5**	**-2.5**
MWZ				S		**Sn**		**22 51 57.4**	**-3.1**
URZ	**Urewera**	**9.05**	**208**	P		**Pn**		**22 50 18.0**	**-3.4**
URZ				S		**Sn**		**22 51 58.1**	**-4.7**
RIGZ	**Rimuhau**	**9.20**	**204**	P		**Pn**		**22 50 19.7**	**-3.7**
RIGZ				S		**Sn**		**22 52 02.7**	**-3.7**
TOZ	**Tahuroa Road**	**9.38**	**217**	P		**Pn**		**22 50 27.4**	**+1.7**
MUGZ	**Murupara**	**9.38**	**209**	P		**Pn**		**22 50 22.9**	**-2.9**
MUGZ				S		**Sn**		**22 52 06.7**	**-4.2**
SNGZ	**Shannon Statio**	**9.42**	**206**	P		**Pn**		**22 50 22.6**	**-3.8**
SNGZ				S		**Sn**		**22 52 08.6**	**-3.2**
MHGZ	**Mahia Peninsul**	**9.55**	**202**	P		**Pn**		**22 50 24.8**	**-3.4**
MTHZ	**Maungataniwha**	**9.67**	**208**	P		**Pn**		**22 50 27.0**	**-2.8**
TLZ	**Tolley Road**	**9.82**	**214**	P		Pn		22 50 38.7	+6.8
BKZ	**Black Stump Fm**	**10.08**	**208**	P		**Pn**		**22 50 31.5**	**-4.0**
BKZ	**Black Stump Fm**	**10.08**	**208**			**Pn**		**22 50 31.8**	**-3.7**
MCHZ	**McNeill Hill**	**10.24**	**206**	P		**Pn**		**22 50 35.6**	**-2.0**
HIZ	**Hauiti**	**10.30**	**216**	P		**Pn**		**22 50 42.1**	**+3.7**
HIZ	**Hauiti**	**10.30**	**216**	Pn		**Pn**		**22 50 39.4**	**+0.9**
KWHZ	**Kaweka Forest**	**10.33**	**207**	P		**Pn**		**22 50 35.9**	**-3.0**
NGZ	**Ngauruhoe**	**10.47**	**211**	P		**Pn**		**22 50 43.3**	**+2.4**
KAHZ	**Kahuranaki**	**10.48**	**205**	P		**Pn**		**22 50 36.7**	**-4.2**
BHHZ	**Black Hill Sta**	**10.53**	**209**	P		**Pn**		**22 50 38.8**	**-2.9**
KRHZ	**Kereru**	**10.54**	**207**	P		**Pn**		**22 50 38.0**	**-3.7**
FWVZ	**Far West T-bar**	**10.55**	**211**	P		**Pn**		**22 50 41.2**	**-1.0**
PRHZ	**Porangahau**	**10.98**	**204**	P		**Pn**		**22 50 44.1**	**-3.6**
TSZ	**Takapari Road**	**11.05**	**207**	P		**Pn**		**22 50 46.9**	**-1.9**
DVHZ	**Dannevirke**	**11.18**	**206**	P		**Pn**		**22 50 52.7**	**+2.2**
BFZ	**Birch Farm**	**11.49**	**205**	Pn		**Pn**		**22 50 51.8**	**-2.9**
MRZ	**Mangatainoka R**	**11.72**	**207**	P		Pn		22 50 52.8	-5.0
HOWZ	**Holdsworth Sta**	**11.95**	**207**	P		Pn		22 50 56.1	-4.9
TMWZ	**Te Maipa**	**11.99**	**205**	P		**Pn**		**22 50 57.2**	**-4.4**
OGWZ	**Otaki Gorge**	**12.02**	**208**	P		**Pn**		**22 51 01.1**	**-0.8**
KIW	**Kapiti Island**	**12.16**	**209**	P		Pn		22 50 58.5	-5.4
MSWZ	**Moikau Station**	**12.50**	**206**	Pn		**Pn**		**22 51 09.6**	**+1.1**
SNZO	**South Karori**	**12.62**	**208**	Pn		**Pn**		**22 51 09.4**	**-0.7**
PLWZ	**Palliser**	**12.63**	**206**	P		**Pn**		**22 51 09.5**	**-0.8**
PLWZ	**Palliser**	**12.63**	**206**	Pn		**Pn**		**22 51 09.9**	**-0.4**
BHW	**Baring Head**	**12.64**	**207**	Pn		**Pn**		**22 51 12.0**	**+1.6**
TUWZ	**Tuamarina**	**13.04**	**210**	P		**Pn**		**22 51 13.0**	**-2.9**
TUWZ	**Tuamarina**	**13.04**	**210**			**Pn**		**22 51 13.7**	**-2.2**
NNZ	**Nelson**	**13.12**	**212**	P		**Pn**		**22 51 17.1**	**+0.2**
NNZ	**Nelson**	**13.12**	**212**	Pn		**Pn**		**22 51 18.4**	**+1.4**
NIUE	**Niue**	**13.16**	**33**	Pn		**Pn**		**22 51 20.5**	**+2.8**
CMWZ	**Cape Campbell**	**13.19**	**208**	Pn		**Pn**		**22 51 19.7**	**+1.8**
QRZ	**Quartz Range**	**13.22**	**215**	P		**Pn**		**22 51 20.0**	**+1.6**
QRZ	**Quartz Range**	**13.22**	**215**	Pn		**Pn**		**22 51 20.0**	**+1.6**
BSWZ	**Blackbirch Sta**	**13.30**	**209**	Pn		**Pn**		**22 51 22.8**	**+3.3**
THZ	**Tophouse**	**13.77**	**212**	P		**Pn**		**22 51 23.3**	**-2.6**
THZ	**Tophouse**	**13.77**	**212**	Pn		**Pn**		**22 51 27.2**	**+1.3**
KHZ	**Kahutara**	**14.02**	**209**	P		**Pn**		**22 51 24.8**	**-4.5**
KHZ	**Kahutara**	**14.02**	**209**	Pn		**Pn**		**22 51 27.4**	**-1.8**
DSZ	**Denniston Nort**	**14.27**	**214**	P		**Pn**		**22 51 31.2**	**-1.6**
LTZ	**Lake Taylor**	**14.86**	**211**	P		**Pn**		**22 51 38.0**	**-2.9**
LTZ	**Lake Taylor**	**14.86**	**211**	Pn		**Pn**		**22 51 39.3**	**-1.5**
AMCZ	**Amberley**	**15.02**	**209**	P		**Pn**		**22 51 40.9**	**-2.0**
INZ	**Inchbonnie**	**15.20**	**213**	P		**Pn**		**22 51 45.9**	**+0.7**
OKCZ	**Okains Bay**	**15.31**	**207**	P		**Pn**		**22 51 47.1**	**+0.4**
OXZ	**Oxford**	**15.40**	**210**	P		**Pn**		**22 51 44.7**	**-3.3**
OXZ	**Oxford**	**15.40**	**210**			**Pn**		**22 51 45.0**	**-3.0**
OXZ					IAmb

ARPS Mount Arapiles 34.32 248 P **P** **22 54 59.1 +2.0**
baz=35,SNR=7.2
STKA Stephens Creek 34.94 257 P **P** **22 55 04.7 +2.1**
baz=36,SNR=22
STKA Stephens Creek 34.94 257 P **P** **22 55 04.4 +1.8**
comp=Z,39nm,0.9s,baz=89,slow=9.5,SNR=49
STKA LR LR 23 08 16.6
comp=Z,2µm,18.6s,baz=91,slow=35
STKA Stephens Creek 34.94 257 P **P** **22 55 03.2 +0.6**
STKA pmax pmax
comp=Z,14nm,1.2s
STKA Stephens Creek 34.94 257 P **P** **22 55 03.2 +0.6**
MTSU Mount Surprise 36.76 280 P **P** **22 55 19.7 +1.4**
baz=37,SNR=8.5
HTT Hallett 36.96 254 P **P** **22 55 21.7 +1.8**
baz=38,SNR=16
RABL Rabaul 38.73 306 P **P** **22 55 32.9 -2.1**
KRVT Keravat (AS076 38.75 306 P **P** **22 55 33.5 -1.6**
comp=Z,24nm,0.6s,baz=72,slow=20,SNR=3.6
PMG Port Moresby 39.03 295 LR LR 23 09 07.6
comp=Z,1µm,20.8s,baz=170,slow=32
BBOO Buckleboo 39.43 254 P **P** **22 55 41.0 +0.4**
baz=40,SNR=25
BBOO Buckleboo 39.43 254 **P** **22 55 39.8 -0.9**
BBOO IAmb IAmb 22 55 42.1
comp=Z,25nm,0.7s
COEN Coen 39.72 285 P **P** **22 55 44.4 +1.2**
baz=40,SNR=6.3
COEN Coen 39.72 285 **P** **22 55 40.8 -2.5**
QIS Mount Isa 39.78 274 P **P** **22 55 44.3 +0.5**
baz=40,SNR=5.7
TAOE Nuku Hiva Isla 40.86 66 *e*S **S** **23 01 55.7 -8.0**
comp=Z,371nm,24.8s
TAOE *e*LR LR 23 07 03.9
comp=Z,2µm,26.4s
AS31 Alice Springs 43.58 267 **P** **22 56 14.3 -0.6**
ASAR Alice Springs 43.58 267 P **P** **22 56 13.8 -1.1**
comp=Z,7.7nm,0.4s,baz=106,slow=7.0,SNR=78
ASAR ScP **ScP** **23 01 53.2 +0.1**
comp=Z,2.1nm,0.8s,baz=123,slow=4.4,SNR=8.3
ASAR LR LR 23 14 08.1
comp=Z,3µm,18.2s,baz=106,slow=36
WR0 Warramunga Arr 44.39 272 **P** **22 56 20.3 -1.0**
WR0 IAmb IAmb 22 56 23.7
comp=Z,47nm,1.4s
WB2 Warramunga Arr 44.56 272 **P** **22 56 21.8 -0.9**
WB2 IAmb IAmb 22 56 25.7
comp=Z,60nm,1.4s
WRAB Tennant Creek 44.56 272 P **P** **22 56 21.7 -1.1**
WRAB pmax pmax
comp=Z,119nm,1.9s
WRAB Tennant Creek 44.56 272 **P** **22 56 21.7 -1.1**
WRA Warramunga Arr 44.57 272 P **P** **22 56 21.6 -1.2**
comp=Z,9.1nm,0.3s,baz=111,slow=8.1,SNR=77
WRA LR LR 23 14 08.6
comp=Z,1µm,18.1s,baz=105,slow=35
WB0 Warramunga Arr 44.59 272 P **P** **22 56 22.0 -1.0**
WB0 IAmb IAmb 22 56 25.3
comp=Z,32nm,0.8s
MMPI Merauke 44.99 290 P **P** **22 56 26.0 -0.1**
comp=Z,353nm,0.5s
JOHN Johnston Islan 47.45 10 P **P** **22 56 43.3 -2.0**
VNDA Vanda 48.16 186 P **P** **22 56 51.5 +1.3**
comp=Z,0.7nm,0.6s,baz=342,slow=3.2,SNR=1.8
VNDA LR LR 23 13 00.2
comp=Z,122nm,21.6s,baz=32,slow=31
VNDA Vanda 48.16 186 P **P** **22 56 53.3 +3.1**
JAY Jayapura 48.31 297 P **P** **22 56 54.3 +2.1**
comp=Z,6.4nm,1.9s
GENI Genyem 48.68 296 P **P** **22 56 56.7 +1.7**
comp=Z,61nm,0.6s
KDU Kakadu 49.38 280 P **P** **22 56 59.7 -0.7**
baz=50,SNR=3.9
SMPI Sarmi 50.19 296 P **P** **22 57 08.3 +1.8**
comp=Z,13nm,1.3s
MTN Manton Dam 50.45 279 P **P** **22 57 07.0 -1.5**
MTN IAmb IAmb 22 57 24.8
comp=Z,24nm,1.3s
KNRA Kununurra 51.18 274 P **P** **22 57 15.3 +1.3**
baz=52,SNR=6.4
KNRA Kununurra 51.18 274 P **P** **22 57 12.7 -1.4**
KNRA IAmb IAmb 22 57 28.3
comp=Z,22nm,1.1s
SRPI Serui, Papua 52.20 294 P **P** **22 57 21.4 -0.3**
SAUI Saumlaki 52.76 284 P **P** **22 57 27.5 +1.7**
comp=Z,493nm,1.1s
FITZ Fitzroy Crossi 52.83 270 P **P** **22 57 26.0 -0.4**
baz=53,SNR=10.0
FITZ Fitzroy Crossi 52.83 270 P **P** **22 57 26.0 -0.4**
FITZ IAmb IAmb 22 57 27.5
comp=Z,16nm,0.9s
RKPI Ransiki, Papua 54.05 293 P **P** **22 57 37.6 +2.3**
comp=Z,9µmcomp=Z,143nm,1.3s
FAKI Fak Fak 54.78 290 P **P** **22 57 40.8 +0.2**
comp=Z,23nm,1.7s
FAKI Fak Fak 54.78 290 P **P** **22 57 38.8 -1.8**
FAKI IAmb IAmb 22 57 41.3
comp=Z,27nm,1.1s
KLBR Kellerberrin 54.80 251 P **P** **22 57 39.3 -1.3**
baz=55,SNR=8.4
CASY Casey 55.38 208 **P** **22 57 44.9 +0.7**
MEEK Meekatharra 55.65 257 P **P** **22 57 46.1 -0.8**
baz=56,SNR=4.1
BNDI Bandanaira 55.80 287 P **P** **22 57 48.6 +0.6**
comp=Z,96nm,1.4s
PSAD2 Pilbara Seismi 56.32 263 P **P** **22 57 50.7 -1.0**
PSAD2 IAmb IAmb 22 57 54.8
comp=Z,22nm,1.1s
PSAC2 Pilbara Seismi 56.40 263 P **P** **22 57 50.7 -1.5**
PSAA3 Pilbara Seismi 56.43 263 P **P** **22 57 50.4 -2.1**
PSAA3 IAmb IAmb 22 58 03.5
comp=Z,21nm,1.2s
PSAC3 Pilbara Seismi 56.44 263 P **P** **22 57 50.3 -2.2**
PSAC3 IAmb IAmb 22 57 52.8
comp=Z,48nm,1.6s
PSA00 Pilbara Seismi 56.44 263 P **P** **22 57 50.8 -1.7**
PSAA1 Pilbara Seismi 56.45 263 P **P** **22 57 49.8 -2.8**
PSAA1 IAmb IAmb 22 58 04.2
comp=Z,39nm,1.6s
PSAB1 Pilbara Seismi 56.46 263 P **P** **22 57 51.0 -1.7**
PSAD3 Pilbara Seismi 56.47 263 P **P** **22 57 51.0 -1.7**
PSAD3 IAmb IAmb 22 57 51.4
comp=Z,52nm,1.7s
PSAD1 Pilbara Seismi 56.50 263 P **P** **22 57 51.1 -1.9**
MORW Morawa 56.99 253 P **P** **22 57 55.7 -0.6**
baz=58,SNR=4.2
MORW Morawa 56.99 253 P **P** **22 57 55.0 -1.4**
MORW IAmb IAmb 22 58 08.9
comp=Z,38nm,1.5s
MSAI Masohi 57.26 287 P **P** **22 57 59.0 +0.6**
SOEI Soe 57.82 278 P **P** **22 58 03.1 +0.6**
comp=Z,30nm,0.9s
BATI Baumata 58.12 277 P **P** **22 58 05.2 +0.7**
comp=Z,12nm,0.9s
NLAI Namlea 58.83 286 P **P** **22 58 10.1 +0.7**
comp=Z,24nm,0.7s
QSPA South Pole Qui 59.73 180 P **P** **22 58 18.0 +2.8**
comp=Z,15nm,1.1s,baz=4.3,slow=0.8,SNR=23
QSPA LR LR 23 22 08.0
comp=Z,418nm,18.7s,baz=42,slow=34
QSPA South Pole Qui 59.73 180 **P** **22 58 17.9 +2.8**
LBMI Labuha 59.96 289 P **P** **22 58 17.1 -0.1**
comp=Z,2µmcomp=Z,22nm,0.8s
MMRI Maumere 60.11 278 P **P** **22 58 20.3 +2.0**
comp=Z,7µmcomp=Z,35nm,1.2s
SANI Sanana 60.41 286 P **P** **22 58 21.5 +1.2**
comp=Z,661nmcomp=Z,17nm,0.7s
EDFI Ende, Flores 60.52 277 P **P** **22 58 22.4 +1.2**
comp=Z,5.9nm,1.1s
BASI Baing, Sumba 60.76 275 P **P** **22 58 24.0 +1.3**
comp=Z,98nm,1.2s
WSI Waingapu 61.27 276 P **P** **22 58 28.0 +1.8**
comp=Z,34µmcomp=Z,220nm,0.6s
BBSI Bau Bau 61.43 281 P **P** **22 58 27.8 +0.5**
comp=Z,4.1nm,1.0s
WBSI Waikabubak, Su 62.06 275 P **P** **22 58 32.1 +0.5**
comp=Z,33nm,1.4s
KAPI Kappang 64.07 280 LR LR 23 27 21.5
comp=Z,494nm,18.5s,baz=152,slow=37
KCP Kidapawan 66.39 294‖ *e*P **P** **22 58 58.4 -1.6**
MAW Mawson 72.49 200 P **P** **22 59 38.2 +1.5**
comp=Z,7.6nm,0.8s,baz=135,slow=6.6,SNR=16
MAW LR LR 23 30 25.8
comp=Z,456nm,19.3s,baz=88,slow=35
MAW Mawson 72.49 200 P **P** **22 59 38.2 +1.5**
KKM Kota Kinabalu 73.00 288 P **P** **22 59 39.7 -1.1**

KKM IAmb IAmb 22 59 41.1
comp=Z,17nm,0.9s
LEM Lembang 73.59 272 LR LR 23 34 11.3
comp=Z,625nm,18.4s,baz=118,slow=38
TGY Tagaytay City 73.93 297 LR LR 23 30 58.7
comp=Z,116nm,19.9s,baz=186,slow=35
SBUM Sibu 74.38 282 P **P** **22 59 47.0 -1.7**
SYO Syowa Base 77.24 193‖ *e*P **P** **23 00 04.0 -0.2**
SYO Syowa Base 77.24 193‖ pP pP 23 00 13.8 +5.3
SYO Syowa Base 77.24 193‖ *i*PcP **PcP** **23 00 15.1 +0.3**
SNAA Sanae 78.16 178 P **P** **23 00 11.2 +1.7**
SNAA Sanae 78.16 178‖ *e*P **P** **23 00 11.1 +1.7**
SNAA Sanae 78.16 178 P **P** **23 00 11.8 +2.3**
INU Inuyama 78.17 323 P **P** **23 00 08.7 -1.1**
VNA3 Neumayer Olymp 78.29 176 P **P** **23 00 11.4 +1.3**
MJAR Matsushiro Arr 78.50 325 P **P** **23 00 10.5 -1.1**
comp=Z,3.2nm,0.7s,baz=151,slow=5.9,SNR=15
MJAR LR LR 23 29 32.8
comp=Z,168nm,22.0s,baz=170,slow=32
MAJO Matsushiro 78.50 325 P **P** **23 00 10.6 -1.0**
MAJO pmax pmax
comp=Z,9.0nm,1.0s
MAJO Matsushiro 78.50 325 P **P** **23 00 10.6 -1.0**
MAT Matsushiro 78.50 325 P **P** **23 00 11.0 -0.6**
MAT S **S** **23 10 15.0 +7.9**
VNA2 Neumayer--Watz 78.73 177 P **P** **23 00 14.2 +1.7**
baz=166,slow=4.1
VNA1 Neumayer--Stat 78.96 176 P **P** **23 00 15.3 +1.5**
H03S2 Juan Fernandez 80.08 123 T T 00 29 44.7
baz=238,slow=74,SNR=48
H03S1 Juan Fernandez 80.09 123 T T 00 29 45.9
baz=238,slow=74,SNR=47
H03S3 Juan Fernandez 80.10 123 T T 00 29 44.7
baz=238,slow=74,SNR=58
H03N3 Juan Fernandez 80.27 123 T T 00 29 59.3
baz=267,slow=72,SNR=14
H03N2 Juan Fernandez 80.27 123 T T 00 29 55.4
baz=267,slow=72,SNR=14
H03N1 Juan Fernandez 80.29 123 T T 00 29 51.1
baz=267,slow=72,SNR=18
ADK Adak 81.91 0 P **P** **23 00 29.8 +0.2**
ADK pmax pmax
comp=Z,105nm,1.5s
ADK Adak 81.91 0 P **P** **23 00 29.8 +0.2**
PLCA Paso Flores 82.17 133 LR LR 23 28 38.7
comp=Z,457nm,21.4s,baz=239,slow=30
ATKA Atka Island 82.28 2 P **P** **23 00 32.0 +0.6**
EFI East Falkland 82.55 147‖ *e*P **P** **23 00 35.4 +2.1**
EFI pmax pmax
comp=Z,71nm,1.2s
ASAJ Asahikawa 82.64 332 LR LR 23 32 52.8
comp=Z,472nm,21.2s,baz=134,slow=33
SKR Severo-Kuril's 84.03 343 *e*P **P** **23 00 38.0 -2.5**
SKR pmax pmax
comp=Z,100nm,4.9s
SKR MLR MLR
comp=Z,200nm,16.0s
SKR MLR MLR
comp=Z,200nm,17.0s
TJN Taejon 84.20 318‖ *e*P **P** **23 00 42.4 +0.6**
KSRS Korea Array 84.64 319 P **P** **23 00 44.1 +0.1**
comp=Z,2.1nm,0.9s,baz=146,slow=5.9,SNR=9.9
KSRS LR LR 23 34 13.1
comp=Z,174nm,20.9s,baz=130,slow=33
YSS Yuzh-Sakhalins 84.94 334 *e*P **P** **23 00 45.9 +0.7**
YSS *e* 23 00 59.6
YSS pmax pmax
comp=Z,50nm,0.9s
YSS Yuzh-Sakhalins 84.94 334 P **P** **23 00 46.1 +0.9**
QIZ Qiongzhong 85.41 295 P **P** **23 00 48.8 +0.4**
QIZ S **S** **23 11 18.5 -0.5**
QIZ LR LR
comp=Z,230nm,20.6s
QIZ LR LR
comp=Z,190nm,18.6s
QIZ LR LR
comp=Z,190nm,22.1s
PET Petropavlovsk 85.63 346 *e*P **P** **23 00 48.5 0.0**
PET *e* 23 11 06.3
PET *e*S **S** **23 11 16.6 -2.9**
PET pmax pmax
comp=Z,100nm,11.3s
PET MLR MLR
comp=Z,200nm,17.0s
PET MLR MLR
comp=Z,200nm,17.0s
PSI Prapat 85.90 276 LR LR 23 40 30.5
comp=Z,482nm,20.0s,baz=93,slow=37
PEA0B Petropavlovsk- 85.91 345‖ *e*P **P** **23 00 49.2 -0.8**
PETK Petropavlovsk- 85.91 345 P **P** **23 00 50.1 +0.1**
comp=Z,22nm,0.8s,baz=146,slow=7.7,SNR=26
PETK LR LR 23 36 58.8
comp=Z,267nm,19.3s,baz=201,slow=34
ISA Isabella, Lake 85.95 44 P **P** **23 00 52.4 +1.6**
ISA pmax pmax
comp=Z,20nm,1.4s
ISA Isabella, Lake 85.95 44 P **P** **23 00 52.4 +1.6**
ISA IAmb IAmb 23 00 54.5
comp=Z,20nm,1.4s
BELC Belle Mtn. Jos 86.39 47 P **P** **23 00 55.6 +2.5**
baz=230
CMB Columbia Colle 86.43 42 P **P** **23 00 54.7 +1.7**
CMB pmax pmax
comp=Z,25nm,2.0s
CMB Columbia Colle 86.43 42 P **P** **23 00 54.7 +1.7**
CMB IAmb IAmb 23 01 08.6
comp=Z,25nm,1.9s
BC3 Big Chuckawall 86.51 48 P **P** **23 00 57.1 +3.5**
baz=230
O02D Mt. Diablo Mer 86.58 39 P **P** **23 00 57.8 +4.1**
baz=225
NJ2 Nanjing 86.59 310 *e*P **P** **23 00 54.5 +0.6**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
HEC Hector,Ludlow 86.71 46 P **P** **23 00 56.7 +2.2**
baz=229
GSC Goldstone, Bar 86.73 46 P **P** **23 00 56.1 +1.5**
GSC pmax pmax
comp=Z,9.0nm,1.3s
GSC Goldstone, Bar 86.73 46 P **P** **23 00 56.1 +1.5**
IRM Iron Mountain 87.03 47 P **P** **23 00 58.5 +2.5**
baz=230
WAKR Walker 87.30 42 P **P** **23 00 58.8 +1.3**
WAKR IAmb IAmb 23 01 13.7
comp=Z,20nm,1.4s
USA0B Ussuriysk Arra 87.41 326 P **P** **23 00 56.3 -1.2**
USA0B pmax pmax
comp=Z,9.0nm,0.9s
USA0B Ussuriysk Arra 87.41 326 P **P** **23 00 56.3 -1.2**
USA0B IAmb IAmb 23 00 59.6
comp=Z,8.5nm,0.9s
USRK Ussuriysk Ar. 87.41 326 P **P** **23 00 58.2 +0.7**
comp=Z,6.4nm,1.0s,baz=155,slow=3.7,SNR=12
USRK LR LR 23 34 52.3
comp=Z,230nm,20.9s,baz=119,slow=32
PNTR Pine Nut 87.60 41 P **P** **23 00 59.7 +0.8**
PNTR IAmb IAmb 23 01 11.0
comp=Z,22nm,1.4s
NVAR Mina Array Bea 87.90 42 P **P** **23 01 02.1 +1.7**
comp=Z,0.5nm,0.3s,baz=232,slow=7.3,SNR=5.7
NVAR LR LR 23 37 07.4
comp=Z,366nm,18.1s,baz=258,slow=33
NV11 Mina Array Sit 87.99 43 P **P** **23 01 01.9 +1.2**
NV11 IAmb IAmb 23 01 17.1
comp=Z,7.8nm,1.2s
TYV Tymovskoe 88.23 336 *e*P **P** **23 01 02.9 +1.6**
TYV pmax pmax
comp=Z,300nm,2.8s
TYV pmax pmax
comp=Z,32nm,1.1s
KVN Kaiserville 88.44 42 P **P** **23 01 03.9 +1.1**
KVN pmax pmax
comp=Z,10.0nm,1.4s
KVN Kaiserville 88.44 42 P **P** **23 01 03.9 +1.1**
KVN IAmb IAmb 23 01 05.9
comp=Z,9.7nm,1.4s
SHPR Sheep Range 88.53 46 P **P** **23 01 06.0 +2.7**
TUC Tucson 88.73 51 P **P** **23 01 06.3 +2.0**
TUC pmax pmax
comp=Z,15nm,1.5s
TUC Tucson 88.73 51 P **P** **23 01 06.3 +2.0**
TUC IAmb IAmb 23 01 09.5
comp=Z,15nm,1.5s
MDJ Mudanjiang 88.88 325 P **P** **23 01 05.8 +1.3**
MDJ pmax pmax
comp=Z,10.0nm,1.2s

MDJ pmax pmax
comp=Z,170nm,9.0s
K05A Summer Lake 89.38 38 P **P** **23 01 09.0 +1.8**
K05A IAmb IAmb 23 01 21.1
comp=Z,15nm,1.3s
X16A Lo Mia Camp, P 89.58 49 P **P** **23 01 10.0 +1.7**
X16A IAmb IAmb 23 01 12.7
comp=Z,9.7nm,1.1s
J05D Fort Rock, OR 89.59 37 P **P** **23 01 11.0 +2.9**
baz=226
LCMT Little Creek M 90.04 46 P **P** **23 01 12.6 +2.2**
H04A Detroit Lake 90.08 36 P **P** **23 01 11.8 +1.6**
H04A IAmb IAmb 23 01 25.9
comp=Z,7.6nm,0.9s
PINE Pine Mountain 90.10 37 P **P** **23 01 12.3 +1.7**
AC01 Pan de Azucar 90.27 121 P **P** **23 01 12.1 +0.4**
U15A North Rim 90.27 47 P **P** **23 01 13.2 +1.6**
U15A IAmb IAmb 23 01 28.3
comp=Z,30nm,1.8s
WUAZ Wupatki 90.30 48 P **P** **23 01 14.8 +3.2**
baz=232
WUAZ Wupatki 90.30 48 P **P** **23 01 13.2 +1.6**
WUAZ IAmb IAmb 23 01 16.3
comp=Z,12nm,1.1s
CCUT Cedar City 90.30 46 P **P** **23 01 13.3 +1.6**
KNB Kanab 90.30 46 P **P** **23 01 14.4 +2.8**
KNB pmax pmax
comp=Z,11nm,1.2s
KNB Kanab 90.30 46 P **P** **23 01 14.4 +2.8**
TIA Tai'an 90.30 313 P **P** **23 01 13.0 +1.6**
TIA pmax pmax
comp=Z,8.0nm,1.0s
WVOR Wild Horse Val 90.40 39 P **P** **23 01 12.7 +0.8**
WVOR pmax pmax
comp=Z,9.0nm,1.3s
WVOR Wild Horse Val 90.40 39 P **P** **23 01 12.7 +0.8**
WVOR IAmb IAmb 23 01 28.6
comp=Z,9.4nm,1.3s
CN2 Changchun 90.41 323 *e*P **P** **23 01 12.5 +0.8**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
GRNR Gornyy 90.48 333‖ *i*P **P** **23 01 13.6 +1.7**
GRNR pmax pmax
comp=Z,8.0nm,1.2s
GRNR MLR MLR
comp=Z,130nm,18.0s
SZCU Shurtz Canyon 90.50 46 P **P** **23 01 14.6 +2.0**
X18A Snowflake 90.62 50 P **P** **23 01 15.1 +1.9**
X18A IAmb IAmb 23 01 17.4
comp=Z,18nm,1.5s
E03A Lebam 90.72 34 P **P** **23 01 12.3 -0.8**
PKCU Pink Cliffs 90.89 46 P **P** **23 01 14.5 -0.1**
J08A Circle Bar Ran 91.11 39 P **P** **23 01 16.5 +1.3**
J08A IAmb IAmb 23 01 31.7
comp=Z,13nm,1.5s
W18A Petrified Fore 91.12 49 P **P** **23 01 18.3 +2.8**
baz=233
W18A Petrified Fore 91.12 49 P **P** **23 01 17.2 +1.7**
W18A IAmb IAmb 23 01 20.1
comp=Z,7.2nm,1.1s
NLWA Neilton Lookou 91.18 33 P **P** **23 01 14.9 -0.3**
ELK Elko 91.21 42 P **P** **23 01 17.5 +1.7**
comp=Z,1.2nm,0.8s,baz=222,slow=1.8,SNR=5.1
ELK Elko 91.21 42 P **P** **23 01 17.6 +1.7**
ELK IAmb IAmb 23 01 32.2
comp=Z,17nm,1.9s
G06A Carlson Farm, 91.25 36 P **P** **23 01 17.3 +1.6**
KLR Kul'dur 91.26 329 LR LR 23 37 02.3
comp=Z,222nm,21.5s,baz=176,slow=32
KLR Kul'dur 91.26 329‖ *e*P **P** **23 01 15.8 +0.3**
KLR pmax pmax
comp=Z,8.0nm,1.2s
MTPU Mount Pierson 91.33 46 P **P** **23 01 17.8 +1.2**
MSU Marysvale 91.63 45 P **P** **23 01 19.3 +1.5**
MSU Marysvale 91.63 45 P **P** **23 01 19.3 +1.5**
GYA Guiyang 91.95 300 *e*P **P** **23 01 21.0 +1.5**
GYA PP **PP** **23 05 03.3 +3.9**
GYA SKS **SKSac** **23 11 53.3 +1.3**
GYA S **S** **23 12 18.0 -2.7**
GYA pmax pmax
comp=Z,10.0nm,0.5s
GYA pmax pmax
comp=Z,60nm,3.5s
GYA LR LR
comp=Z,80nm,7.6s
GYA LR LR
comp=Z,80nm,3.9s
GYA LR LR
comp=Z,190nm,18.2s
TXAR Lajitas Array 91.98 57 P **P** **23 01 21.7 +2.2**
comp=Z,1.0nm,1.0s,baz=218,slow=7.9,SNR=4.1
TXAR LR LR 23 33 23.7
comp=Z,251nm,22.0s,baz=0.0,slow=30
ENH Enshi 91.98 304 P **P** **23 01 18.3 -1.1**
ENH IAmb IAmb 23 01 21.6
comp=Z,13nm,1.0s
G08A Pilot Rock 92.16 37 P **P** **23 01 21.0 +1.1**
G08A IAmb IAmb 23 01 23.6
comp=Z,6.5nm,0.9s
DUG Dugway, Tooele 92.29 44 P **P** **23 01 21.4 +0.7**
DUG pmax pmax
comp=Z,14nm,1.9s
DUG Dugway, Tooele 92.29 44 P **P** **23 01 21.4 +0.7**
DUG IAmb IAmb 23 01 22.9
comp=Z,14nm,1.9s
ANMO Albuquerque 93.19 51‖ *e*P **P** **23 01 24.1 -1.0**
ANMO pmax pmax
comp=Z,1.0nm,0.6s
SPUT South Promonto 93.20 43 P **P** **23 01 26.0 +1.1**
BJI Beijing 93.24 315 P **P** **23 01 26.0 +1.1**
BJI S **S** **23 12 33.0 +1.7**
BJI pmax pmax
comp=Z,4.0nm,0.7s
BJI LR LR
comp=Z,87nm,20.7s
BJI LR LR
comp=Z,150nm,18.3s
BJI LR LR
comp=Z,540nm,86.2s
CMAR Chiang Mai Arr 93.84 289 P **P** **23 01 28.6 +0.4**
comp=Z,0.6nm,0.5s,baz=127,slow=4.4,SNR=5.4
CMAR LR LR 23 46 18.2
comp=Z,67nm,19.0s,baz=140,slow=37
KMI Kunming 94.24 297 P **P** **23 01 30.0 -0.2**
KMI pmax pmax
comp=Z,9.0nm,0.9s
KMI pmax pmax
comp=Z,92nm,5.9s
KMI LR LR
comp=Z,120nm,16.4s
KMI LR LR
comp=Z,190nm,19.1s
KMI LR LR
comp=Z,240nm,19.9s
PDAR Pinedale Array 95.79 43 LR LR 23 39 28.7
comp=Z,241nm,18.9s,baz=254,slow=32
SEY Seymchan 96.06 347 P **P** **23 01 37.5 +0.2**
comp=Z,2.6nm,0.2s,baz=11,slow=23,SNR=10
CD2 Chengdu 96.48 302 *e*P **P** **23 01 40.0 -0.1**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
HHC Hu-ho-hao-te 96.56 314 *e*P **P** **23 01 40.0 -0.3**
HHC pmax pmax
comp=Z,10.0nm,1.0s
HHC pmax pmax
comp=Z,52nm,5.6s
HHC LR LR
comp=Z,150nm,22.1s
HHC LR LR
comp=Z,140nm,20.6s
HHC LR LR
comp=Z,160nm,22.6s
LPAZ La Paz 97.72 114 LR LR 23 37 13.5
comp=Z,148nm,21.2s,baz=202,slow=30
ILAR Eielson Array 97.80 13 LR LR 23 39 48.5
comp=Z,104nm,21.5s,baz=195,slow=32
HKT Hockley 98.08 60‖ *e*P **P** **23 01 45.5 -1.7**
HKT pmax pmax
comp=Z,3.0nm,1.1s
BILL Bilibino 98.87 354 *e*P **P** **23 01 48.3 -1.6**
BILL *e* 23 02 04.4
BILL pmax pmax
comp=Z,2.0nm,0.9s
BILL MLR MLR
comp=Z,493nm,19.0s
LZH Lanzhou 99.09 306 *e*P **Pdif** **23 01 52.3 +0.4**

LZH				pP	pwP	23 02 00.0	-1.9	
LZH				sP	sP	23 02 03.8	+6.0	
LZH				PP	**PP**	**23 05 58.0**	**+3.3**	
LZH				pmax	pmax			
	comp=Z,11nm,1.2s							
LZH				pmax	pmax			
	comp=Z,69nm,4.9s							
LZH				LR	LR			
	comp=Z,130nm,16.3s							
LZH				LR	LR			
	comp=Z,230nm,19.5s							
LZH				LR	LR			
	comp=Z,160nm,17.4s							
YKA	**Yellowknife Ar**	**105.22**	**25**	PKKPbc	PKKPbc	23 18 08.4	+8.0	
	comp=Z,0.7nm,0.8s,baz=54,slow=2.9,SNR=4.4							
WMQ	**Urumqi**	**113.58 308**		*e*PKP	**PKiKP**	**23 06 49.8**	**+1.1**	
WMQ				LR	LR			
	comp=Z,380nm,18.5s							
WMQ				LR	LR			
	comp=Z,450nm,21.1s							
WMQ				LR	LR			
	comp=Z,130nm,25.7s							
MKAR	**Makanchi Array**	**118.12 310**		PKP	**PKPdf**	**23 06 56.3**	**-1.0**	
	comp=Z,2.0nm,0.8s,baz=61,slow=1.3,SNR=8.5							
ZALV	**Zalesovo Beam**	**118.33 318**		PKP	**PKiKP**	**23 06 58.5**	**+1.0**	
	comp=Z,0.6nm,0.5s,baz=46,slow=4.3,SNR=4.6							
KSH	**Kashi**	**120.64 300**		PKP	**PKiKP**	**23 07 03.0**	**+0.4**	
KURK	**Kurchatov**	**121.38 314**		PKIKP	**PKPdf**	**23 07 02.5**	**-0.8**	
KURK	**Kurchatov**	**121.38 314**			**PKPdf**	**23 07 02.6**	**-0.7**	
KURBB	**Kurchatov Arra**	**121.42 314**		PKP	**PKPdf**	**23 07 02.5**	**-0.9**	
	comp=Z,4.2nm,0.8s,baz=102,slow=2.0,SNR=19							
TKM2	**Tokmak 2**	**121.77 304**		P	**PKPdf**	**23 07 04.2**	**-0.5**	
	SNR=5.6							
KZA	**Kyzart**	**121.82 303**		P	**PKiKP**	**23 07 05.4**	**+0.2**	
	SNR=6.7							
UCH	**Uchtor**	**122.39 303**		P	**PKiKP**	**23 07 06.5**	**+0.2**	
	SNR=15							
CHMS	**Chumysh**	**122.39 304**		P	**PKPdf**	**23 07 05.4**	**-0.3**	
	SNR=7.3							
AAK	**Ala-Archa**	**122.50 304**	*c*	*i*PKIKP	**PKPdf**	**23 07 05.6**	**-0.4**	
AAK	**Ala-Archa**	**122.50 304**			**PKPdf**	**23 07 05.9**	**-0.1**	
AML	**Almayashu**	**122.96 303**		P	**PKPdf**	**23 07 07.4**	**+0.2**	
	SNR=12							
EKS2	**Erkin-Say**	**123.02 304**		P	**PKPdf**	**23 07 05.7**	**-1.3**	
	SNR=5.6							
MATP	**Matopo**	**123.66 210**		PKP	**PKiKP**	**23 07 10.4**	**+1.2**	
	comp=Z,1.6nm,0.7s,baz=94,slow=1.7,SNR=4.1							
KBL	**Kabul**	**124.65 293**		PKIKP	**PKiKP**	**23 07 10.9**	**+0.1**	
KBL	**Kabul**	**124.65 293**			**PKiKP**	**23 07 10.9**	**+0.1**	
SCHQ	**Scheefferville**	**125.91 42**		PKP	**PKPdf**	**23 07 11.4**	**-0.5**	
	comp=Z,3.6nm,0.9s,baz=28,slow=4.3,SNR=3.7							
BVAR	**Borovoye Array**	**126.72 316**		PKP	**PKPdf**	**23 07 13.2**	**-0.3**	
	comp=Z,5.6nm,0.8s,baz=107,slow=1.7,SNR=36							
BRVK	**Borovoye**	**126.79 316**	*c*	*i*PKIKP	**PKPdf**	**23 07 12.9**	**-0.8**	
BRVK				pmax	pmax			
	comp=Z,11nm,1.0s							
BRVK	**Borovoye**	**126.79 316**			**PKPdf**	**23 07 13.6**	**-0.1**	
KBS	**Kingsbay**	**131.19 358**		*e*PKPdf	**PKPdf**	**23 07 19.7**	**-1.6**	
SPA0	**Spitsbergen Ar**	**131.71 356**		*e*PKPdf	**PKiKP**	**23 07 23.7**	**+0.3**	
ARU	**Arti**	**133.37 321**		PKP	**PKPdf**	**23 07 26.7**	**+0.7**	
	comp=Z,1.0nm,0.5s,baz=154,slow=4.0,SNR=8.1							
ARU				SKPbc	**SKPbc**	**23 10 54.1**	**+0.6**	
	comp=Z,0.3nm,0.4s,baz=186,slow=18,SNR=6.2							
ARU	**Arti**	**133.37 321**		*i* PKIKP	**PKPdf**	**23 07 26.6**	**+0.6**	
ARU						23 09 51.5		
ARU				PPP	PPP	23 12 44.5		
ARU				SS	SS	23 27 32.3	-5.4	
ARU				MLR	MLR			
	comp=Z,256nm,22.0s							
GEYT	**Alibeck**	**133.98 295**		PKP	**PKPdf**	**23 07 28.4**	**+0.6**	
	comp=Z,6.9nm,0.9s,baz=299,slow=1.5,SNR=13							
GEYT				SKPbc	**SKPbc**	**23 10 58.1**	**-0.9**	
	comp=Z,4.6nm,0.9s,baz=150,slow=3.3,SNR=6.9							
AKTO	**Aktyubinsk**	**134.44 312**		SKPbc	**SKPbc**	**23 10 58.0**	**+0.8**	
	comp=Z,0.6nm,0.5s,baz=171,slow=17,SNR=6.7							
KMBO	**Kilima Mbogo**	**134.47 233**		SKPbc	**SKPbc**	**23 11 00.6**	**+1.7**	
	comp=Z,3.3nm,1.0s,baz=147,slow=2.3,SNR=5.4							
H10S3	**ASCENSION HYDR**	**137.54 154**		T	T	01 43 11.0		
	baz=204,slow=74,SNR=30							
H10S2	**ASCENSION HYDR**	**137.54 154**		T	T	01 43 17.2		
	baz=16,slow=74,SNR=3.4							
HAMF	**Hammerfest**	**138.00 350**		*e*PKPdf	**PKiKP**	**23 07 36.0**	**-0.3**	
H10N3	**ASCENSION HYDR**	**138.62 154**		T	T	01 44 17.7		
	baz=203,slow=76,SNR=50							
H10N1	**ASCENSION HYDR**	**138.63 154**		T	T	01 44 17.6		
	baz=203,slow=76,SNR=36							
H10N2	**ASCENSION HYDR**	**138.64 154**		T	T	01 44 18.6		
	baz=203,slow=76,SNR=52							
ARCES	**ARCESS Array B**	**138.67 348**		PKhKP	**PKPdf**	**23 07 30.8**	**-4.7**	
	comp=Z,1.2nm,0.7s,baz=33,slow=2.2,SNR=5.0							
ARE0	**ARCESS Array S**	**138.67 348**		*e*PKPdf	**PKPdf**	**23 07 34.5**	**-1.0**	
MBAR	**Mbarara**	**139.15 226**		SKPbc	**SKPbc**	**23 11 14.6**	**+1.8**	
	comp=Z,1.8nm,0.2s,baz=154,slow=6.4,SNR=3.8							
MBAR	**Mbarara**	**139.15 226**	*i*	*i*PKIKP	**PKPdf**	**23 07 39.2**	**+0.8**	
TRO	**Tromso**	**139.61 351**		*e*PKPdf	**PKiKP**	**23 07 39.0**	**-0.6**	
TRO				*e*		23 07 56.6		
KLMR	**Klimovskoe**	**140.97 332**		*e*PKIKP	**PKPdf**	**23 07 36.6**	**-3.3**	
KLMR				pmax	pmax			
	comp=Z,12nm,1.2s							
KLMR	**Klimovskoe**	**140.97 332**		*e*PKPdf	**PKPdf**	**23 07 36.6**	**-3.3**	
KLMR				AMP		23 07 44.9		
	comp=Z,12nm,1.2s							
RAYN	**Ar Rayn**	**141.28 270**		PKIKP	**PKPdf**	**23 07 40.2**	**-1.6**	
RAYN	**Ar Rayn**	**141.28 270**			**PKPdf**	**23 07 40.2**	**-1.6**	
AKT	**Akhty**	**142.16 300**		*e*PKIKP	**PKiKP**	**23 07 45.7**	**-0.2**	
AKT				*e*		23 10 52.0		
AKT				pmax	pmax			
	comp=Z,9.0nm,0.9s							
TBLG	**Delisi**	**144.38 300**		PKIKP	**PKPdf**	**23 07 46.4**	**-0.2**	
TBLG	**Delisi**	**144.38 300**			**PKPdf**	**23 07 46.4**	**-0.2**	
MOS	**Moscow**	**144.58 326**		*e*PKHKP	**PKPab**	**23 07 42.2**	**-2.8**	
MOS				pmax	pmax			
	comp=Z,40nm,1.2s							
ZEI	**Tsey**	**144.90 302**		*i* PKIKP	**PKPab**	**23 07 47.0**	**+0.1**	
ZEI				pmax	pmax			
	comp=Z,20nm,1.0s							
NCK	**Nalchik**	**145.03 304**	‖	*e*PKIKP	**PKPbc**	**23 07 46.6**	**-0.5**	
FINES	**FINESS Array B**	**145.29 340**		PKPbc	**PKPbc**	**23 07 46.5**	**-0.8**	
	comp=Z,64nm,0.9s,baz=64,slow=4.4,SNR=171							
NSS	**Namsos**	**145.32 353**		*e*PKPbc	**PKPbc**	**23 07 46.7**	**-0.6**	
OBN	**Obninsk**	**145.42 326**		*e*PKP2	**PKPbc**	**23 07 46.9**	**-1.0**	
OBN	**Obninsk**	**145.42 326**			**PKPbc**	**23 07 47.5**	**-0.4**	
KBZ	**Khabaz**	**145.49 304**		PKPbc	**PKPdf**	**23 07 48.1**	**-0.3**	
	comp=Z,10.0nm,0.9s,baz=145,slow=3.0,SNR=11							
KBZ	**Khabaz**	**145.49 304**	*de*	PKIKP	**PKPab**	**23 07 49.0**	**+0.2**	
KIV	**Kislovodsk**	**145.61 304**		*e*PKIKP	**PKPab**	**23 07 49.4**	**0.0**	
KIV				*e*PPP	PPP	23 14 49.5		
KIV				pmax	pmax			
	comp=Z,17nm,1.0s							
KIV	**Kislovodsk**	**145.61 304**			**PKPdf**	**23 07 48.9**	**+0.1**	
VSU	**Vasula**	**147.40 336**		*e*P	**PKPbc**	**23 07 53.6**	**0.0**	
MOL	**Molde**	**147.63 356**		*e*PKPbc	**PKPdf**	**23 07 52.8**	**+1.3**	
MOL				*e*		23 07 55.9		
SOC	**Sochi**	**147.79 305**		*e*PKHKP	**PKPdf**	**23 07 46.3**	**-6.0**	
SOC				*e*PPP	PPP	23 14 38.5		
SOC				MLR	MLR			
	comp=Z,138nm,18.0s							
DOMB	**Dombas**	**148.04 354**		*e*PKPdf	**PKPdf**	**23 07 53.4**	**+1.2**	
AKN	**Aaknes**	**148.06 356**		*e*PKPdf	**PKPdf**	**23 07 53.7**	**+1.5**	
NC303	**NORSAR Array S**	**148.60 352**			**PKPbc**	**23 07 56.5**	**-0.3**	
NC405	**NORSAR Array S**	**148.66 351**			**PKiKP**	**23 07 58.0**	**-0.5**	
NB201	**NORSAR Array S**	**148.78 352**			**PKPbc**	**23 07 57.2**	**-0.1**	
NB2	**NORSAR Subarra**	**148.80 352**		PKP	**PKPbc**	**23 07 56.5**	**-0.9**	
	comp=Z,33nm,1.1s,baz=12,slow=2.9							
NOA	**NORSAR Array B**	**148.80 352**		PKPbc	**PKPbc**	**23 07 56.9**	**-0.5**	
	comp=Z,8.6nm,0.8s,baz=14,slow=4.3,SNR=36							
NC602	**NORSAR Array S**	**149.05 351**			**PKPbc**	**23 07 57.6**	**-0.3**	
NC602	**NORSAR Array S**	**149.05 351**	*e*	PKPdf		23 07 43.9	-10	
NC602				*e*PKPdf	**PKPbc**	**23 07 56.9**	**-1.1**	
ANN	**Anapa**	**149.10 308**	*c*	*i*PKP2	**PKPbc**	**23 07 58.0**	**-0.6**	
ANN				pmax	pmax			
	comp=Z,62nm,1.0s							
SUE	**Sulen**	**149.28 358**		*e*PKPdf	**PKPdf**	**23 07 54.5**	**+0.3**	
SKAR	**Skarsila**	**149.45 354**		*e*PKPdf	**PKPdf**	**23 07 56.5**	**+1.9**	
ISAL	**Salakas**	**149.77 333**		*e*P	**PKiKP**	**23 08 00.9**	**0.0**	
MICGM	**Minsk**	**149.80 330**		*e*	**PKiKP**	**23 08 01.0**	**0.0**	
MNK	**Minsk**	**149.80 330**		*e*PKP2	**PKiKP**	**23 08 01.0**	**0.0**	
IIGN	**Ignalina**	**149.89 333**		*e*P	**PKPbc**	**23 08 00.1**	**-0.1**	
OSL	**Oslo**	**149.93 352**		*e*PKPbc	**PKPbc**	**23 08 00.4**	**+0.3**	
BER	**Bergen**	**149.93 357**		*e*PKPdf	**PKPdf**	**23 07 57.2**	**+2.0**	
NACGM	**Naroch**	**149.99 332**		*e*	**PKiKP**	**23 08 01.0**	**-0.3**	
NACGM				*e*LR	LR	00 11 14.0		
KONO	**Kongsberg**	**150.34 353**		PKIKP	**PKPbc**	**23 08 01.1**	**0.0**	
KONO	**Kongsberg**	**150.34 353**			**PKPbc**	**23 08 01.1**	**0.0**	
KONO	**Kongsberg**	**150.34 353**		*e*PKPbc	**PKPbc**	**23 08 01.4**	**+0.2**	
PABE	**Paberze**	**150.63 335**		*e*P	**PKPbc**	**23 08 02.1**	**+0.1**	
BLS5	**Blasjo**	**150.84 356**		*e*PKPdf	**PKPdf**	**23 07 56.7**	**-0.1**	
PBUR	**Paburge**	**150.94 337**		*e*P	**PKPbc**	**23 08 02.2**	**-0.5**	
SIM	**Simferopol'**	**151.30 309**	*ce*	PKIKP	**PKPbc**	**23 08 04.0**	**+0.1**	
SIM				pmax	pmax			
	comp=Z,29nm,0.8s							
AKASG	**Malin Array Be**	**151.57 323**		PKPbc	**PKPbc**	**23 08 03.7**	**-0.6**	
	comp=Z,20nm,0.8s,baz=50,slow=2.5,SNR=38							
QRWL	**Qaraoun**	**151.78 286**		*e*P	**PKiKP**	**23 08 05.8**	**0.0**	
BHL	**Bhannes**	**151.82 286**		*e*P	**PKPbc**	**23 08 05.6**	**0.0**	
DQRL	**Deir Qamar**	**151.88 285**		*e*P	**PKiKP**	**23 08 06.2**	**+0.1**	
BRTR	**Keskin Array B**	**153.00 299**		PKPbc	**PKPbc**	**23 08 07.4**	**-0.7**	
	comp=Z,7.4nm,0.8s,baz=117,slow=3.5,SNR=25							
ANTO	**Ankara**	**153.62 299**		PKIKP	**PKiKP**	**23 08 09.7**	**+0.2**	
ANTO	**Ankara**	**153.62 299**			**PKiKP**	**23 08 09.7**	**+0.2**	
KOLS	**Kolonicke sedl**	**156.16 327**		*e*PKP2	**PKPab**	**23 08 32.5**	**+0.1**	
KOLS	**Kolonicke sedl**	**156.16 327**		*e*PKP	**PKPab**	**23 08 32.5**	**+0.1**	
RETH	**Rethem/Aller,**	**157.11 349**		*e*PKPab	**PKPab**	**23 08 36.2**	**0.0**	
	baz=19,slow=4.4							
KSP	**Ksiaz**	**157.12 337**		*e*PKP	**PKPab**	**23 08 35.9**	**-0.5**	
NRDL	**Niedersach Rie**	**157.21 348**		*e*PKPab	**PKPab**	**23 08 36.5**	**-0.1**	
	baz=19,slow=4.4							
OKC	**Ostrava-Krasne**	**157.28 333**		AMS	AMS	00 21 10.0		
	comp=Z,200nm,21.4s							
OSTC	**Ostas**	**157.39 337**		*e*PKPAB	**PKPab**	**23 08 38.6**	**+0.9**	
OSTC				*ex*	x	23 08 44.5		
OSTC				AMS	AMS	00 17 20.0		
	comp=Z,300nm,20.6s							
CHVC	**Chvalec**	**157.42 337**		*e*PKPAB	**PKPab**	**23 08 36.9**	**-0.9**	
CHVC				AMS	AMS	00 17 20.0		
	comp=Z,200nm,20.8s							
ASSE	**Asse, Remlinge**	**157.45 347**		*e*PKPab	**PKPab**	**23 08 37.7**	**0.0**	
	baz=19,slow=4.4							
UPC	**Upice**	**157.50 337**		*e*PKP2	**PKPab**	**23 08 38.3**	**+0.2**	
UPC				MLR	MLR			
	comp=Z,300nm,20.9s							
UPC	**Upice**	**157.50 337**		*e*PKPAB	**PKPab**	**23 08 38.3**	**+0.2**	
UPC				*ep*PKP	**sPKPab**	**23 08 44.2**	**+0.1**	
UPC				AMS	AMS	00 20 20.0		
	comp=Z,300nm,20.9s							
DPC	**Dobruska-Polom**	**157.53 336**		*e*PKP2	**PKPab**	**23 08 38.6**	**+0.3**	
DPC				MLR	MLR			
	comp=Z,300nm,24.5s							
DPC	**Dobruska-Polom**	**157.53 336**		*e*PKPAB	**PKPab**	**23 08 38.6**	**+0.3**	
DPC				AMS	AMS	00 19 40.0		
	comp=Z,300nm,24.5s							
MORC	**Moravsky Berou**	**157.56 334**		*e*PKP	**PKPab**	**23 08 39.1**	**+0.6**	
KRLC	**Kraliky**	**157.60 335**		*e*PKP2	**PKPab**	**23 08 37.7**	**-0.9**	
KRLC	**Kraliky**	**157.60 335**		*e*PKPAB	**PKPab**	**23 08 37.7**	**-0.9**	
KRLC				*ep*PKP	**sPKPab**	**23 08 44.4**	**-0.1**	
CLL	**Collm**	**157.69 343**		*e*PKPdf	**PKPdf**	**23 08 08.0**	**+1.4**	
CLL				*i* PKPab	**PKPab**	**23 08 39.4**	**+0.5**	
	comp=Z,20nm,1.2s							
CLL				*i* pPKPab	**sPKPab**	**23 08 46.0**	**+1.2**	
CLL				*i*		23 08 58.1		
CLL				*e*PSKS		23 22 48.0		
CLL				*e*PPS	PPS	23 25 54.0		
CLL				*e*SS	SS	23 32 12.0	-1.6	
CLL				*e*SSS	SSS	23 38 12.0		
CLL				*e*SSSS		23 42 18.0		
CLL	**Collm**	**157.69 343**		*e*PKIKP	**PKPdf**	**23 08 08.0**	**+1.4**	
CLL				pmax	pmax			
	comp=Z,20nm,1.2s							
CLZ	**Clausthal**	**157.79 347**		*e*PKPab	**PKPab**	**23 08 39.4**	**+0.1**	
	baz=19,slow=4.4							
BRG	**Berggiesshubel**	**157.83 341**		*i* PKP	**PKPab**	**23 08 39.0**	**-0.4**	
	comp=Z,13nm,1.2s							
BRG	**Berggiesshubel**	**157.83 341**		*e*PKPab	**PKPab**	**23 08 39.5**	**+0.1**	
	baz=19,slow=4.4							
BRG	**Berggiesshubel**	**157.83 341**		*i* PKP2	**PKPab**	**23 08 39.0**	**-0.4**	
BRG				pmax	pmax			
	comp=Z,13nm,1.2s							
PVCC	**Panska Ves**	**157.95 339**		*e*PKP2	**PKPab**	**23 08 40.4**	**+0.4**	
PVCC				MLR	MLR			
	comp=Z,200nm,23.4s							
PVCC	**Panska Ves**	**157.95 339**		*e*PKPAB	**PKPab**	**23 08 40.4**	**+0.4**	
PVCC				AMS	AMS	00 14 20.0		
	comp=Z,200nm,23.4s							
FBE	**Freiberg**	**157.95 342**		*e*PKPab	**PKPab**	**23 08 40.3**	**+0.4**	
	baz=19,slow=4.4							
VYHS	**Vyhne**	**158.05 330**		*e*PKP2	**PKPab**	**23 08 40.6**	**0.0**	
VYHS	**Vyhne**	**158.05 330**		*e*PKP	**PKPab**	**23 08 40.6**	**0.0**	
NEUB	**Neuenburg**	**158.08 344**		*e*PKPab	**PKPab**	**23 08 40.5**	**0.0**	
	baz=19,slow=4.4							
GTTG	**Gottingen**	**158.15 347**		*e*PKPab	**PKPab**	**23 08 41.0**	**+0.2**	
	baz=19,slow=4.4							
JAVC	**Velka Javorina**	**158.25 332**		*e*PKP	**PKPab**	**23 08 43.3**	**+1.8**	
VRAC	**Vranov**	**158.30 335**		*e*PKP	**PKPab**	**23 08 42.6**	**+1.0**	
PRA	**Prague**	**158.39 339**		AMS	AMS	00 27 20.0		
	comp=Z,100nm,16.5s							
PRU	**Pruhonice**	**158.43 339**		*e*PKP2	**PKPab**	**23 08 43.0**	**+0.9**	
PRU				MLR	MLR			
	comp=Z,200nm,18.9s							
PRU	**Pruhonice**	**158.43 339**		*e*PKP	**PKPab**	**23 08 43.0**	**+0.9**	
PRU				AMS	AMS	00 27 30.0		
	comp=Z,200nm,18.9s							
KRUC	**Moravsky**	**158.58 334**		*e*PKP	**PKPab**	**23 08 43.7**	**+0.9**	
MOX	**Moxa**	**158.65 344**		*e*PKPab	**PKPab**	**23 08 43.0**	**0.0**	
	baz=19,slow=4.4							
MOX				*e*L	L	00 28 59.7		
	comp=Z,160nm,21.8s							
TANN	**Tannenbergstha**	**158.65 342**		*e*PKPab	**PKPab**	**23 08 43.2**	**0.0**	
	baz=19,slow=4.4							
PLN	**Plauen**	**158.66 343**		*e*PKPab	**PKPab**	**23 08 43.2**	**+0.1**	
	baz=19,slow=4.4							
TREC	**Trest**	**158.71 336**		AMS	AMS	00 17 20.0		
	comp=Z,300nm,21.8s							
GUNZ	**Gunzen**	**158.73 343**		*e*PKPab	**PKPab**	**23 08 43.7**	**+0.3**	
	baz=19,slow=4.4							
WERN	**Wernitzgruen**	**158.78 342**		*e*PKPab	**PKPab**	**23 08 44.0**	**+0.3**	
	baz=19,slow=4.4							
NKC	**Novy Kostel**	**158.82 342**		*e*PKPAB	**PKPab**	**23 08 43.8**	**0.0**	
NKC				*ep*PKP	**sPKPab**	**23 08 50.0**	**+0.2**	
NKC				AMS	AMS	00 17 50.0		
	comp=Z,200nm,22.7s							
PBCC	**Pribram**	**158.86 339**		*e*PKPAB	**PKPab**	**23 08 44.3**	**+0.3**	
ROTZ	**Rotzenmuhle**	**159.31 342**		*e*PKPab	**PKPab**	**23 08 46.3**	**+0.4**	
	baz=19,slow=4.4							
KHC	**Kasperske Hory**	**159.48 339**		*e*PKP2	**PKPab**	**23 08 46.7**	**-0.1**	
KHC				MLR	MLR			
	comp=Z,200nm,22.8s							
KHC	**Kasperske Hory**	**159.48 339**		*e*PKPAB	**PKPab**	**23 08 46.7**	**-0.1**	
KHC				*ep*PKP	**sPKPab**	**23 08 52.3**	**-0.4**	
KHC				AMS	AMS	00 20 40.0		
	comp=Z,200nm,22.8s							
AHRW	**Bad Neuenahr-A**	**159.57 352**		*e*PKPab	**PKPab**	**23 08 47.1**	**+0.1**	
	baz=19,slow=4.4							
GRF	**Grafenberg Arr**	**159.62 344**		*e*PKPab	**PKPab**	**23 08 47.7**	**+0.4**	
	baz=19,slow=4.4							
GRF				*e*L	L	00 31 03.5		
	comp=Z,250nm,19.3s							
WET	**Wettzell**	**159.68 340**		*e*PKPab	**PKPab**	**23 08 48.1**	**+0.4**	
	baz=19,slow=4.4							
GEC2	**GERESS Array S**	**159.69 338**		*e*PKPab	**PKPab**	**23 08 47.7**	**-0.1**	
	baz=19,slow=4.4							
GERES	**GERESS Array B**	**159.69 338**		PKP	**PKPdf**	**23 08 08.8**	**-0.3**	
	comp=Z,0.7nm,0.9s,baz=228,slow=1.6,SNR=4.7							
GERES				PKPab	**PKPab**	**23 08 47.5**	**-0.3**	
	comp=Z,2.5nm,0.8s,baz=31,slow=3.9,SNR=11							
CONA	**Conrad Observa**	**159.71 333**		PKPab	**PKPab**	**23 08 47.8**	**-0.1**	
	comp=Z,12nm,1.5s,SNR=5.0							
MOA	**Molln**	**160.37 336**		*e*PKPab	**PKPab**	**23 08 51.9**	**+1.2**	
	comp=Z,5.4nm,1.3s							
ARSA	**Arzberg**	**160.40 333**		*e*PKPab	**PKPab**	**23 08 51.5**	**+0.7**	
	comp=Z,5.7nm,1.2s							
RJOB	**Jochberg**	**160.96 338**		*e*PKPab	**PKPab**	**23 08 53.8**	**+0.5**	
	baz=19,slow=4.4							
FUR	**Furstenfeldbru**	**161.02 342**		*e*PKPab	**PKPab**	**23 08 53.8**	**+0.4**	
	baz=19,slow=4.4							
SOKA	**Soboth**	**161.06 333**		*e*PKPab	**PKPab**	**23 08 54.3**	**+0.5**	
	comp=Z,6.8nm,1.1s							
KBA	**Koelnbreinsper**	**161.35 336**		*e*PKPab	**PKPab**	**23 08 55.7**	**+0.6**	
	comp=Z,3.8nm,0.8s							
BFO	**Black Forest**	**161.53 348**		*e*PKPab	**PKPab**	**23 08 55.2**	**-0.5**	
	baz=19,slow=4.4							
BFO	**Black Forest**	**161.53 348**		PKP2	**PKPab**	**23 08 55.0**	**-0.7**	
BFO	**Black Forest**	**161.53 348**			**PKPab**	**23 08 55.0**	**-0.7**	
WATA	**Walderalm**	**161.69 340**		*e*PKPab	**PKPab**	**23 08 57.8**	**+1.2**	
	comp=Z,19nm,1.3s							
WTTA	**Wattenberg**	**161.74 340**		*e*PKPab	**PKPab**	**23 08 57.4**	**+0.6**	
	comp=Z,12nm,0.9s,SNR=5.2							
RETA	**Reutte**	**161.78 342**		*e*PKPab	**PKPab**	**23 08 57.4**	**+0.5**	
	comp=Z,13nm,1.2s,SNR=6.2							
MOTA	**Moosalm**	**161.82 341**		*e*PKPab	**PKPab**	**23 08 58.5**	**+1.3**	
	comp=Z,19nm,1.1s,SNR=5.8							
SQTA	**Sankt Quirin**	**161.90 341**		*e*PKPab	**PKPab**	**23 08 58.0**	**+0.5**	
	comp=Z,15nm,1.1s							
ABTA	**Abfaltersbach**	**161.92 337**		*e*PKPab	**PKPab**	**23 08 57.0**	**-0.6**	
	comp=Z,6.0nm,0.9s							
DAVA	**Damuels**	**162.19 343**		*e*PKPab	**PKPab**	**23 08 59.2**	**+0.4**	
	comp=Z,11nm,1.1s							
FETA	**Feichten**	**162.22 341**		*e*PKPab	**PKPab**	**23 08 58.2**	**-0.7**	
	comp=Z,9.6nm,1.3s							
TORD	**Torodi Ar. Bea**	**162.83 177**		PKP	**PKPdf**	**23 08 13.8**	**+0.5**	
	comp=Z,1.6nm,1.1s,baz=234,slow=5.0,SNR=3.6							
TORD				PKPab	**PKPab**	**23 09 04.5**	**+2.4**	
	comp=Z,3.2nm,0.8s,baz=162,slow=4.3,SNR=7.1							

JMA 30 22:48:36.2±0.1, 24°.89N×123°.37E, h29km, M1.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.54**	**218**	P	Pb	22 48 46.8	-0.4
YOJ				*e*S	Sb	22 48 54.3	-0.4
JYNG	**Yonagunijimaku**	**0.58**	**222**	P	Pb	22 48 47.6	-0.3
JYNG				*e*S	Sb	22 48 55.6	-0.3
IRIF	**Iriomote-Funau**	**0.64**	**149**	P	Pb	22 48 48.4	-0.5
IRIF				*e*S	Sb	22 48 57.6	0.0
JKRS	**Kuro-shima**	**0.87**	**138**	P	Pn	22 48 52.3	-0.2
JKRS				S	Sb	22 49 03.9	-0.2
JIJ	**Ishigaki jima**	**0.88**	**127**	*e*S	Sb	22 49 02.8	-1.4
JISG	**Ishigakijimahi**	**0.91**	**109**	*e*S	Sb	22 49 04.4	-0.7

TAP 30 22:48:36.8, 25°.08N×122°.33E, h20km±1km, ML2.4, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.32**	**257**	*e*P	Pg	22 48 43.8	-0.1
	baz=256						
TWB1				*e*S	Sb	22 48 49.9	+1.1
	baz=256						
TIPB	**Shuangxi**	**0.47**	**257**	*e*P	Pb	22 48 47.0	+0.5
	baz=256						
TIPB				*e*S	Sb	22 48 54.6	+1.4
	baz=256						
NWF	**Wu-fen Shan**	**0.50**	**269**	*e*P	Pg	22 48 48.0	+0.9
	baz=269						
NWF				*e*S	Sb	22 48 55.4	+1.4
	baz=269						
WFSB	**Wu-fen Shan**	**0.50**	**269**	*e*P	Pg	22 48 47.4	+0.4
	baz=269						
WFSB				*e*S	Sb	22 48 54.3	+0.4
	baz=269						
TWC	**Suao**	**0.64**	**223**	*e*P

MXZ	**Matakaoa Point**	**8.21**	**206**	Pn	**Pn**	**23 00 26.3**	**+1.2**
OUZ	**Omahuta**	**9.26**	**235**	Pn	**Pn**	**23 00 40.1**	**+0.7**
BKZ	**Black Stump Fm**	**10.32**	**209**	Pn	**Pn**	**23 00 54.5**	**+0.5**
HIZ	**Hauiti**	**10.57**	**217**	Pn	**Pn**	**23 00 58.2**	**+0.9**
MSWZ	**Moikau Station**	**12.73**	**207**	Pn	**Pn**	**23 01 26.6**	**-0.3**
PLWZ	**Palliser**	**12.86**	**207**	Pn	**Pn**	**23 01 30.3**	**+1.6**
SNZO	**South Karori**	**12.86**	**209**	Pn	**Pn**	**23 01 29.9**	**+1.2**
BHW	**Baring Head**	**12.88**	**208**	Pn	**Pn**	**23 01 28.5**	**-0.3**
NIUE	**Niue**	**12.90**	**32**	Pn	**Pn**	**23 01 29.5**	**+0.1**
MSVF	**Nonsavu**	**13.24**	**339**	Pn	**Pn**	**23 01 34.2**	**+0.2**
TUWZ	**Tuamarina**	**13.29**	**211**	Pn	**Pn**	**23 01 34.2**	**-0.3**
NNZ	**Nelson**	**13.37**	**213**	Pn	**Pn**	**23 01 34.2**	**-1.5**
CMWZ	**Cape Campbell**	**13.43**	**209**		**Pn**	**23 01 35.0**	**-1.4**
QRZ	**Quartz Range**	**13.49**	**216**	Pn	**Pn**	**23 01 37.1**	**-0.1**
THZ	**Tophouse**	**14.02**	**212**	Pn	**Pn**	**23 01 45.8**	**+1.2**
KHZ	**Kahutara**	**14.27**	**209**	Pn	**Pn**	**23 01 49.3**	**+1.5**
LTZ	**Lake Taylor**	**15.11**	**211**	Pn	**Pn**	**23 02 00.7**	**+1.3**
OXZ	**Oxford**	**15.65**	**211**	Pn	**Pn**	**23 02 05.9**	**-0.5**
OXZ				IAmb	IAmb	23 02 14.8	
	comp=Z,28nm,1.2s						
MQZ	**McQueen's Vall**	**15.69**	**208**	Pn	**Pn**	**23 02 06.3**	**-0.6**
ODZ	**Otahua Downs**	**17.62**	**210**	Pn	**Pn**	**23 02 28.8**	**-2.5**
ODZ				IAmb	IAmb	23 02 37.2	
	comp=Z,28nm,1.2s						
TOO	**Toolangi**	**31.73**	**247**	P	**P**	**23 04 50.6**	**+1.1**
TOO				IAmb	IAmb	23 05 00.3	
	comp=Z,4.5nm,1.1s						
CTAO	**Charters Tower**	**34.54**	**278**	P	**P**	**23 05 14.7**	**+0.5**
CTAO				IAmb	IAmb	23 05 28.6	
	comp=Z,8.8nm,1.1s						
STKA	**Stephens Creek**	**35.26**	**257**	P	**P**	**23 05 22.6**	**+2.2**
	comp=Z,1.5nm,0.4s,baz=96,slow=12,SNR=5.8						
STKA	**Stephens Creek**	**35.26**	**257**	IAmb	IAmb	23 05 25.8	
	comp=Z,1.0nm,1.0s						
BBOO	**Buckleboo**	**39.75**	**254**	P	**P**	**23 05 58.9**	**+0.6**
BBOO				IAmb	IAmb	23 06 00.3	
	comp=Z,4.9nm,0.8s						
COEN	**Coen**	**39.98**	**285**	P	**P**	**23 05 59.5**	**-0.9**
COEN				IAmb	IAmb	23 06 12.6	
	comp=Z,9.2nm,1.1s						
ASAR	**Alice Springs**	**43.89**	**266**	P	**P**	**23 06 33.5**	**+1.2**
	comp=Z,1.1nm,0.5s,baz=105,slow=6.9,SNR=15						
WR0	**Warramunga Arr**	**44.69**	**272**	P	**P**	**23 06 39.4**	**+0.7**
WB2	**Warramunga Arr**	**44.86**	**272**	P	**P**	**23 06 39.9**	**-0.2**
WB2				IAmb	IAmb	23 06 42.3	
	comp=Z,3.8nm,0.7s						
WRAB	**Tennant Creek**	**44.86**	**272**	P	**P**	**23 06 40.3**	**+0.2**
WRAB				IAmb	IAmb	23 06 42.3	
	comp=Z,3.2nm,0.7s						
WRA	**Warramunga Arr**	**44.87**	**272**	P	**P**	**23 06 41.5**	**+1.4**
	comp=Z,2.4nm,0.3s,baz=110,slow=8.2,SNR=16						
FORT	**Forrest**	**46.83**	**255**	P	**P**	**23 06 55.5**	**0.0**
FORT				IAmb	IAmb	23 06 56.2	
	comp=Z,20nm,0.9s						
VNDA	**Vanda**	**48.31**	**186**	P	**P**	**23 07 03.9**	**-2.5**
CASY	**Casey**	**55.62**	**208**	P	**P**	**23 08 02.3**	**+1.4**
CASY				IAmb	IAmb	23 08 04.2	
	comp=Z,4.5nm,0.8s						
MORW	**Morawa**	**57.31**	**253**	P	**P**	**23 08 11.2**	**-2.4**
MORW				IAmb	IAmb	23 08 21.2	
	comp=Z,7.7nm,1.1s						
SOEI	**Soe**	**58.10**	**278**	P	**P**	**23 08 18.3**	**-1.1**
KAPI	**Kappang**	**64.35**	**280**	P	**P**	**23 09 00.6**	**-1.0**
KAPI				IAmb	IAmb	23 09 16.3	
	comp=Z,9.0nm,0.5s						
H03S2	**Juan Fernandez**	**79.89**	**123**	T	T	00 39 59.2	
	baz=239						
H03S1	**Juan Fernandez**	**79.90**	**123**	T	T	00 40 11.6	
	baz=239						
H03S3	**Juan Fernandez**	**79.91**	**123**	T	T	00 40 01.8	
	baz=239,SNR=3.8						
GLA	**Glamis**	**86.23**	**48**	P	**P**	**23 11 06.3**	**-0.7**
GLA				IAmb	IAmb	23 11 07.6	
	comp=Z,6.8nm,0.8s						
FXWY	**Fox Creek**	**95.17**	**42**	P	**P**	**23 11 47.6**	**-1.4**
SNOW	**Snow King Moun**	**95.22**	**42**	P	**P**	**23 11 51.2**	**+1.9**
FINES	**FINESS Array B**	**145.28**	**341**	PKPbc	**PKiKP**	**23 18 05.2**	**-1.1**
	comp=Z,2.9nm,0.6s,baz=57,slow=3.5,SNR=24						
NB2	**NORSAR Subarra**	**148.73**	**352**	PKP	**PKPab**	**23 18 15.6**	**-0.2**
	comp=Z,1.0nm,0.9s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**148.73**	**352**	PKPbc	**PKiKP**	**23 18 14.4**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=14,slow=4.4,SNR=4.0						
AKASG	**Malin Array Be**	**151.66**	**324**	PKPbc	**PKiKP**	**23 18 21.5**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=39,slow=2.2,SNR=4.5						
BRTR	**Keskin Array B**	**153.22**	**299**	PKPbc	**PKiKP**	**23 18 26.3**	**+2.7**
	comp=Z,0.7nm,0.6s,baz=274,slow=39,SNR=3.6						

IDC 30 23:00:39.4±3.1, 30°.24S×177°.50W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.4/38, mbtmp3.5/2, Error ellipse: s-maj=66.7km s-min=27.6km az=92.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.05**	**340**	Pn	Pn	23 01 02.5	+1.1
	269nm,0.3s,baz=72,slow=24,SNR=4.5						
RAO				Sn	Sn	23 01 16.4	-0.3
	788nm,0.3s,baz=7.2,slow=23,SNR=7.8						
ASAR	**Alice Springs**	**43.55**	**267**	P	P	23 08 44.5	-0.8
	0.3nm,0.6s,baz=103,slow=6.7,SNR=1.7						
WRA	**Warramunga Arr**	**44.53**	**272**	P	P	23 08 53.4	+0.3
	0.5nm,0.3s,baz=110,slow=8.0,SNR=1.0						
FINES	**FINESS Array B**	**145.14**	**340**	PKPbc	PKPbc	23 20 16.4	-1.3
	2.4nm,1.1s,baz=67,slow=2.5,SNR=4.2						

*IDC **30** 23:07:42.0±0.8, 22°.83S×39°.92E, h0km, mb4.0/10, mb1 4.1/12, mb1mx3.9/43, mbtmp4.1/12, ML4.0/2, MS3.6/6, Ms1 3.6/6, ms1mx3.3/47, Error ellipse: s-maj=24.6km s-min=21.3km az=46.0*

*NEIC **30** 23:07:42.9±3.0, 22°.64S±0°.10×39°.88E±0°.07, h15km±3km, mb4.6/26, Error ellipse: s-maj=14.3km s-min=9.1km az=163.0*

ISC 30 23:07:41.9±0.5, 22°.62S±0°.07×39°.80E±0°.05, h10km, n57, σ2°.57/64, mb4.3/22, Mozambique Channel

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABPO	**Ambohimpanom**	**7.82**	**64**	*i* P	**Pn**	**23 09 37.2**	**+1.3**
ABPO				*i* S	**Sn**	**23 11 02.2**	**-2.5**
ABPO	**Ambohimpanom**	**7.82**	**64**	*i* P	**Pn**	**23 09 37.2**	**+1.3**
ABPO				*i* S	**Sn**	**23 11 02.2**	**-2.6**
ABPO	**Ambohimpanom**	**7.82**	**64**		**Pn**	**23 09 37.2**	**+1.3**
ABPO				Sn	**Sn**	**23 11 02.1**	**-2.6**
OPO	**Ambohidratompo**	**8.01**	**61**	Pn	**Pn**	**23 09 39.9**	**+1.4**
	8.2nm,0.3s,baz=229,slow=13,SNR=56						
OPO				Sn	**Sn**	**23 11 02.8**	**-6.5**
	7.0nm,0.3s,baz=210,slow=9.3,SNR=3.4						
OPO				LR	LR	23 12 45.3	
	comp=Z,357nm,18.8s,baz=342,slow=38						
MATP	**Matopo**	**10.74**	**280**	*i* P	**Pn**	**23 10 15.2**	**-0.7**
MATP				*i* S	Sn	23 12 01.3	-15
MATP	**Matopo**	**10.74**	**280**	Pn	**Pn**	**23 10 15.2**	**-0.7**
	10nm,0.3s,baz=102,slow=13,SNR=108						
MATP				Sn	Sn	23 12 05.9	-10
	7.4nm,0.3s,baz=197,slow=21,SNR=3.1						
MATP				LR	LR	23 14 09.5	
	comp=Z,197nm,20.6s,baz=112,slow=36						
MATP	**Matopo**	**10.74**	**280**	*i* P	**Pn**	**23 10 15.2**	**-0.7**
MATP				*i* S	Sn	23 12 01.3	-15
LSZ	**Lusaka**	**13.18**	**302**	*i* P	**Pn**	**23 10 50.3**	**+1.0**
LSZ	**Lusaka**	**13.18**	**302**	Pn	**Pn**	**23 10 50.6**	**+1.3**
	5.0nm,0.3s,baz=138,slow=15,SNR=18						
LSZ				Sn	**Sn**	**23 13 09.2**	**-6.9**
	6.4nm,0.3s,baz=46,slow=23,SNR=6.2						
LSZ				LR	LR	23 16 06.2	
	comp=Z,221nm,18.4s,baz=136,slow=38						
LSZ	**Lusaka**	**13.18**	**302**	*i* P	**Pn**	**23 10 50.3**	**+1.0**
LSZ	**Lusaka**	**13.18**	**302**		**Pn**	**23 10 51.2**	**+1.9**
LBTB	**Lobatse**	**13.21**	**257**	Pn	**Pn**	**23 10 50.9**	**+1.1**
BOSA	**Boshof**	**14.41**	**243**	*i* P	**Pn**	**23 11 02.6**	**-3.4**
BOSA	**Boshof**	**14.41**	**243**	Pn	**Pn**	**23 11 08.7**	**+2.6**
	0.3nm,0.3s,baz=78,slow=12,SNR=5.7						
BOSA	**Boshof**	**14.41**	**243**	*i* P	**Pn**	**23 11 02.6**	**-3.4**
BOSA	**Boshof**	**14.41**	**243**		**Pn**	**23 11 07.7**	**+1.7**
SUR	**Sutherland**	**19.42**	**236**	P	**Pn**	**23 12 13.8**	**+4.1**
	0.1nm,0.3s,baz=37,slow=17,SNR=2.1						
SUR				LR	LR	23 19 12.6	
	comp=Z,132nm,18.3s,baz=47,slow=36						
TSUM	**Tsumeb**	**21.02**	**275**	*i* P	**P**	**23 12 24.1**	**-1.9**
TSUM	**Tsumeb**	**21.02**	**275**	P	**P**	**23 12 28.6**	**+2.6**
	7.3nm,0.8s,baz=148,slow=3.9,SNR=5.2						
TSUM				S	**S**	**23 16 11.7**	**-8.6**
	2.3nm,0.6s,baz=274,slow=23,SNR=1.7						
TSUM				LR	LR	23 19 56.2	
	comp=Z,153nm,19.2s,baz=140,slow=35						
TSUM	**Tsumeb**	**21.02**	**275**	*i* P	**P**	**23 12 24.1**	**-1.9**
TSUM	**Tsumeb**	**21.02**	**275**	P	**P**	**23 12 27.3**	**+1.3**
TSUM				IAmb	IAmb	23 12 41.6	
	comp=Z,23nm,1.1s						
KMBO	**Kilima Mbogo**	**21.50**	**353**	P	**P**	**23 12 37.0**	**+5.7**
	comp=Z,6.0nm,0.7s,baz=164,slow=6.6,SNR=7.1						
KMBO				S	**S**	**23 16 31.9**	**+1.9**
	comp=Z,1.1nm,0.8s,baz=58,slow=11,SNR=3.0						
KMBO	**Kilima Mbogo**	**21.50**	**353**	P	**P**	**23 12 32.1**	**+0.8**
MBAR	**Mbarara**	**23.59**	**337**	P	**P**	**23 12 58.2**	**+5.1**
	comp=Z,1.3nm,0.2s,baz=175,slow=12,SNR=4.3						
MBAR	**Mbarara**	**23.59**	**337**	P	**P**	**23 12 53.9**	**+0.8**
ATD	**Arta Tunnel**	**34.07**	**5**	P	**P**	**23 14 26.4**	**-0.2**
ATD				IAmb	IAmb	23 14 38.1	
	comp=Z,5.4nm,0.9s						
RAYN	**Ar Rayn**	**46.20**	**7**	P	**P**	**23 16 07.7**	**+0.6**
MAW	**Mawson**	**47.24**	**168**	P	**P**	**23 16 15.3**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=301,slow=11,SNR=3.9						
MAW	**Mawson**	**47.24**	**168**	P	**P**	**23 16 14.3**	**-0.4**
TOA0	**Torodi Ar. Sit**	**51.55**	**310**	P	**P**	**23 16 49.8**	**+1.5**
TOA0				IAmb	IAmb	23 16 51.5	
	comp=Z,3.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**51.55**	**310**	P	**P**	**23 16 50.5**	**+2.2**
	comp=Z,3.4nm,0.8s,baz=125,slow=7.4,SNR=13						
DBIC	**Dimbokro**	**52.49**	**298**	P	**P**	**23 16 53.0**	**-2.4**
DBIC				IAmb	IAmb	23 17 11.2	
	comp=Z,5.1nm,0.8s						
SNAA	**Sanae**	**54.70**	**195**	P	**P**	**23 17 11.8**	**+0.9**
SNAA				IAmb	IAmb	23 17 23.3	
	comp=Z,3.9nm,1.1s						
TAM	**Tamanrasset**	**56.12**	**321**	P	**P**	**23 17 23.3**	**+1.4**
CSS	**Mathiatis**	**57.59**	**354**	P	**P**	**23 17 32.3**	**+0.4**
CSS				IAmb	IAmb	23 17 42.0	
	comp=Z,7.0nm,1.0s						
PBA	**Port Blair**	**62.05**	**62**	P	P	23 18 00.7	-2.3
LHMI	**Lhok Sumawe**	**62.32**	**71**	P	**P**	**23 18 04.5**	**-0.3**
MNAI	**Manna**	**63.59**	**83**	P	**P**	**23 18 10.4**	**-3.0**
TIRR	**Tirgusor**	**67.56**	**351**	P	**P**	**23 18 37.7**	**-0.6**
NWAO	**Narrogin (SRO)**	**67.92**	**118**	P	**P**	**23 18 41.0**	**-0.1**
NWAO				IAmb	IAmb	23 18 49.9	
	comp=Z,9.2nm,1.1s						
NWAO	**Narrogin (SRO)**	**67.92**	**118**	P	**P**	**23 18 41.5**	**+0.4**
NWAO				IAmb	IAmb	23 18 49.9	
	comp=Z,12nm,1.1s						
INTR	**Introdacqua**	**68.62**	**340**	P	**P**	**23 18 43.5**	**-1.7**
INTR				IAmb	IAmb	23 18 48.1	
	comp=Z,6.3nm,1.1s						
MACI	**Morro de la Ar**	**74.20**	**310**	P	**P**	**23 19 19.7**	**+0.3**
ESDC	**Sonseca Array**	**74.22**	**326**	P	**P**	**23 19 22.6**	**+3.6**
	comp=Z,1.5nm,0.8s,baz=148,slow=5.4,SNR=8.8						
GERES	**GERESS Array B**	**74.86**	**342**	P	**P**	**23 19 25.3**	**+2.7**
	comp=Z,0.3nm,0.7s,baz=187,slow=1.6,SNR=2.3						
PFVI	**Vila Bisbo**	**75.03**	**322**	P	**P**	**23 19 22.6**	**-1.1**
DLV	**T Lat**	**75.52**	**70**	P	**P**	**23 19 24.9**	**-2.3**
DLV				IAmb	IAmb	23 19 35.0	
	comp=Z,8.1nm,1.1s						
GRA1	**Grafenberg Arr**	**76.34**	**341**	P	**P**	**23 19 30.0**	**-0.9**
GRA1				IAmb	IAmb	23 19 35.2	
	comp=Z,5.3nm,1.1s						
MKAR	**Makanchi Array**	**79.03**	**28**	P	**P**	**23 19 47.8**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=207,slow=6.7,SNR=1.5						
MKAR				LR	LR	23 54 04.4	
	comp=Z,85nm,21.8s,baz=72,slow=35						
ARU	**Arti**	**80.32**	**10**	P	**P**	**23 19 53.6**	**+0.8**
SOEI	**Soe**	**81.25**	**97**	P	**P**	**23 19 57.2**	**-1.8**
SOEI				IAmb	IAmb	23 20 12.6	
	comp=Z,10nm,0.7s						
ASAR	**Alice Springs**	**84.73**	**113**	P	**P**	**23 20 17.6**	**+0.8**
	comp=Z,1.9nm,0.9s,baz=249,slow=4.3,SNR=10						
ZAA0	**Zalesovo Array**	**85.55**	**25**	P	**P**	**23 20 20.1**	**+0.1**
ZAA0				IAmb	IAmb	23 20 22.7	
	comp=Z,2.1nm,0.9s						
ZALV	**Zalesovo Beam**	**85.55**	**25**	P	**P**	**23 20 21.9**	**+2.0**
	comp=Z,0.8nm,0.5s,baz=199,slow=7.4,SNR=5.0						
TOO	**Toolangi**	**88.08**	**130**	P	**P**	**23 20 32.3**	**-0.6**
TOO				IAmb	IAmb	23 20 47.0	
	comp=Z,10nm,1.1s						
TXAR	**Lajitas Array**	**146.58**	**289**	PKP	**PKPdf**	**23 27 23.0**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=126,slow=3.0,SNR=7.0						
TXAR				PKPbc	**PKPbc**	**23 27 26.5**	**+2.3**
	comp=Z,0.9nm,0.9s,baz=111,slow=3.2,SNR=5.7						
PDAR	**Pinedale Array**	**147.57**	**316**	PKPbc	**PKiKP**	**23 27 28.4**	**-0.6**
	comp=Z,1.9nm,1.0s,baz=79,slow=4.7,SNR=4.7						

JMA 30 23:10:14.1±0.2, 24°.87N×123°.38E, h25km±5km, M2.0, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.53**	**220**	P	Pb	23 10 24.5	-0.3
YOJ				*e*S	Sb	23 10 31.8	-0.2
YOJ	**Yonaguni jima**	**0.53**	**220**	P	Pb	23 10 24.8	0.0
JYNG	**Yonagunijimaku**	**0.57**	**224**	P	Pb	23 10 25.4	-0.2
JYNG				*e*S	Sb	23 10 32.8	-0.6
IRIF	**Iriomote-Funau**	**0.62**	**149**	P	Pb	23 10 25.9	-0.4
IRIF				S	Sb	23 10 34.9	+0.2
JKRS	**Kuro-shima**	**0.85**	**138**	P	Pb	23 10 30.0	-0.2
JIJ	**Ishigaki jima**	**0.86**	**126**	P	Pb	23 10 30.2	-0.2
JIJ				S	Sb	23 10 41.3	-0.1
JISG	**Ishigakijimahi**	**0.89**	**108**	P	Pb	23 10 30.4	-0.5
JISG				S	Sb	23 10 41.6	-0.8
HATJ	**Hateruma jima**	**0.90**	**154**	P	Pb	23 10 30.5	-0.5
HATJ				*e*S	Sb	23 10 42.2	-0.4
JTJ	**Tarama**	**1.22**	**100**	P	Pn	23 10 35.3	-0.3

*DJA **30** 23:21:39.6±0.2, 3°.S±2°×12°.8E±°, h10km, M3.5/8, MLv3.5/8*
*IDC **30** 23:21:44.8±2.2, 3°.05S×128°.59E, h76km±27km, mb3.3/3, mb1 3.7/7, mb1mx3.3/37, mbtmp3.8/7, Error ellipse: s-maj=25.3km s-min=15.3km az=119.0*

ISC 30 23:21:42.1±0.9, 3°.07S±0°.06×128°.50E±0°.05, h51km, n12, σ1°.49/18, mb3.6/3, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.51**	**123**	P	**Pn**	**23 21 52.8**	**-0.8**
MSAI				Pg	**Pn**	**23 21 53.2**	**-0.4**
MSAI				Sg	**Sn**	**23 22 01.0**	**-0.8**
MSAI				S	**Sn**	**23 22 01.9**	**+0.1**
NLAI	**Namlea**	**1.41**	**263**	P	**Pn**	**23 22 04.6**	**-0.7**
NLAI				S	**Sn**	**23 22 23.0**	**+0.2**
LBMI	**Labuha**	**2.61**	**338**	P	**Pn**	**23 22 19.8**	**-2.1**
LBMI				S	**Sn**	**23 22 50.7**	**-1.7**
SANI	**Sanana**	**2.70**	**292**	P	**Pn**	**23 22 20.3**	**-2.8**
SIJI	**Sorong**	**3.52**	**52**	P	**Pn**	**23 22 35.1**	**+0.7**
	17nm,0.3s,baz=262,slow=23,SNR=49						
SIJI				S	**Sn**	**23 23 16.4**	**+1.5**
	5.4nm,0.3s,baz=192,slow=24,SNR=15						
FAKI	**Fak Fak**	**3.75**	**88**	P	**Pn**	**23 22 38.7**	**+1.2**
KAPI	**Kappang**	**8.94**	**257**	P	**Pn**	**23 23 51.8**	**+3.2**
	1.3nm,0.3s,baz=110,slow=5.7,SNR=9.2						
FITZ	**Fitzroy Crossi**	**15.20**	**190**	P	**P**	**23 25 17.3**	**-0.4**
	0.2nm,0.3s,baz=350,slow=4.5,SNR=7.6						
WRA	**Warramunga Arr**	**17.71**	**162**	P	**Pn**	**23 25 44.8**	**-0.5**
	0.2nm,0.3s,baz=341,slow=12,SNR=12						
ASAR	**Alice Springs**	**21.14**	**166**	P	**P**	**23 26 23.8**	**+0.8**
	3.6nm,0.8s,baz=346,slow=12,SNR=27						
MKAR	**Makanchi Array**	**64.14**	**327**	P	**P**	**23 32 12.1**	**+0.8**
	0.2nm,0.6s,baz=112,slow=13,SNR=1.4						
KURBB	**Kurchatov Arra**	**68.40**	**328**	P	**P**	**23 32 38.5**	**0.0**
	0.4nm,0.6s,baz=134,slow=5.4,SNR=5.0						

MAN 30 23:31:23.2, 13°.29N×120°.52E, h15km, mb3.9, ML2.7, MS2.3, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.47**	**63**	*e*P	Pg	23 31 32.8	+0.1
PGP				*i* S	Sn	23 31 44.5	+0.9
LUBP	**Lubang**	**0.52**	**329**	*e*P	Pb	23 31 34.1	+0.1
LUBP				*e*S	Sn	23 31 45.2	+0.6
SJMP	**San Jose**	**1.01**	**145**	*e*P	Pb	23 31 41.9	-0.6
SJMP				*e*S	Sn	23 31 58.9	+2.1
BUSP	**Coron**	**1.32**	**194**	*e*P	Pn	23 31 45.8	-1.3
OTRP	**Odiongan**	**1.73**	**122**	*e*P	Pn	23 31 48.1	-4.6
OTRP				*e*S	Sn	23 32 11.0	-3.7
ENPP	**El Nido**	**2.33**	**207**	*e*P	Pn	23 31 58.8	-2.3

*IDC **30** 23:32:12.6±1.1, 2°.12S×121°.08E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.6/36, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=39.1km s-min=17.6km az=69.0*

*DJA **30** 23:32:15.8±0.2, 2°.S±2°×12°.1E±°, h10km, M4.0/8, MLv4.0/8*

ISC 30 23:32:14.4±2.5, 2°.13S±0°.04×120°.72E±0°.06, h7km±16km, n15, σ1°.87/24, mb3.7/6, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTSI	**Tana Toraja**	**1.28**	**225**	P	**Pn**	**23 32 38.0**	**-0.7**
TTSI				Pg	**Pb**	**23 32 38.2**	**-0.6**
TTSI				Sg	**Sg**	**23 32 56.2**	**+0.7**
TTSI				S	**Sn**	**23 32 57.1**	**+1.0**
SPSI	**Sidrap Palu**	**2.05**	**208**	P	**Pn**	**23 32 50.6**	**+1.2**
SPSI				S	**Sn**	**23 33 16.5**	**+1.2**
LUWI	**Luwuk**	**2.32**	**62**	P	**Pn**	**23 32 55.1**	**+2.0**
LUWI				S	**Sn**	**23 33 24.6**	**+2.7**
BNSI	**Bone**	**2.33**	**195**	P	**Pn**	**23 32 54.5**	**+1.2**
BNSI				S	**Sn**	**23 33 23.7**	**+1.4**
MPSI	**Mapaga**	**2.59**	**341**	P	**Pn**	**23 32 58.4**	**+1.6**
MRSI	**Marisa**	**2.87**	**25**	P	**Pn**	**23 33 00.5**	**-0.1**
MRSI				S	**Sn**	**23 33 35.5**	**+0.1**
KAPI	**Kappang**	**3.02**	**199**	Pn	**Pn**	**23 33 04.7**	**+1.9**
	10nm,0.3s,baz=16,slow=3.5,SNR=23						
KAPI				Sn	**Sn**	**23 33 42.3**	**+3.1**
	9.6nm,0.3s,baz=173,slow=18,SNR=8.3						
BKSI	**Bulukumba**	**3.22**	**191**	P	**Pn**	**23 33 06.7**	**+1.2**
BKSI				S	**Sn**	**23 33 46.1**	**+1.9**
BBSI	**Bau Bau**	**3.81**	**151**	P	**Pn**	**23 33 14.6**	**+1.0**
WRA	**Warramunga Arr**	**22.15**	**144**	P	**P**	**23 37 09.3**	**-1.7**
	1.2nm,0.7s,baz=322,slow=9.9,SNR=13						
ASAR	**Alice Springs**	**24.92**	**150**	P	**P**	**23 37 34.4**	**-4.1**
	0.5nm,0.7s,baz=332,slow=7.8,SNR=2.6						
CMAR	**Chiang Mai Arr**	**29.63**	**315**	P	**P**	**23 38 22.0**	**+1.2**
	0.5nm,0.4s,baz=144,slow=7.8,SNR=4.2						
STKA	**Stephens Creek**	**35.53**	**149**	P	**P**	**23 39 09.8**	**-2.5**
	1.4nm,0.6s,baz=312,slow=14,SNR=2.9						
SONM	**Songino Array**	**51.32**	**348**	P	**P**	**23 41 19.7**	**+0.2**
	0.5nm,0.6s,baz=184,slow=6.0,SNR=3.8						
MKAR	**Makanchi Array**	**59.27**	**330**	P	**P**	**23 42 17.0**	**+0.2**
	1.4nm,0.7s,baz=134,slow=6.9,SNR=7.2						

IDC 30 23:39:42.8±2.0, 1°.11N×125°.08E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/45, mbtmp3.5/3, Error ellipse: s-maj=209.2km s-min=26.1km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.81**	**157**	P	P	23 44 47.2	-0.2
	0.4nm,0.3s,baz=335,slow=11,SNR=17						
ASAR	**Alice Springs**	**26.08**	**161**	P	P	23 45 18.6	+0.3
	0.3nm,0.5s,baz=345,slow=8.0,SNR=2.3						
MKAR	**Makanchi Array**	**58.79**	**327**	P	P	23 49 42.9	-0.1
	0.4nm,0.4s,baz=115,slow=7.5,SNR=5.4						

*NEIC **30** 23:43:24.8±2.3, 11°.93N±0°.09×142°.40E±0°.10, h117km±7km, mb4.6/34, Error ellipse: s-maj=14.4km s-min=13.2km az=130.0*

*IDC **30** 23:43:28.6±7.4, 11°.94N×142°.59E, h153km±68km, mb3.5/12, mb1 3.6/12, mb1mx3.4/49, mbtmp3.9/12, MS3.0/1, Ms1 3.0/1, ms1mx2.7/27, Error ellipse: s-maj=29.4km s-min=15.9km az=82.0*

ISC 30 23:43:23.2±0.5, 11°.92N±0°.07×142°.33E±0°.08, h100km, n50, σ1°.42/51, mb4.4/29, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.98**	**56**	Pn	**Pn**	**23 44 10.3**	**+1.6**
GUMO					**Sn**	**23 44 45.9**	**+2.1**
PATS	**Pohnpei**	**16.55**	**106**		**Pn**	**23 47 09.2**	**-0.3**
PATS				IAmb	IAmb	23 47 28.2	
	comp=Z,52nm,1.1s						
FAKI	**Fak Fak**	**17.83**	**215**	P	**P**	**23 47 25.2**	**+0.8**
TWG	**Pinlang**

comp=Z,3.2nm,0.9s
PAHR Pah Rah Range 88.75 50 P P 23 56 06.4 +0.2
BMO Blue Mountains 88.91 44 P P 23 56 08.2 +1.4
FINES FINESS Array B 91.60 334 P P 23 56 17.9 -0.9
comp=Z,0.9nm,0.7s,baz=59,slow=5.2,SNR=5.9
LPAZ La Paz 150.16 102 PKPbc PKPdf 00 03 01.4 +2.3
comp=Z,0.4nm,0.5s,baz=270,slow=4.0,SNR=1.4
LPAZ PKPab PKiKP 00 03 07.5 +2.4
comp=Z,1.1nm,0.6s,baz=45,slow=2.9,SNR=4.5

*DDA **30** 23:47:22.0,37°.29N×30°.72E,h118km±7km,ML3.1*
*HLW **30** 23:47:22.9,37°.01N×30°.72E,h31km±37km,Md4.6,Ml4.3*
*IDC **30** 23:47:22.2±3.2,37°.25N×30°.73E,h124km±26km,mb3.3/2,*
mb1 3.3/5,mb1mx2.9/45,mbtmp3.7/5,Error ellipse:
s-maj=43.4km s-min=14.7km az=95.0
*ISK **30** 23:47:23.1,37°.31N×30°.74E,h112km,ML3.0/46*
*NIC **30** 23:47:24.1±0.0,36°.96N×30°.92E,h133km±3km,Ml3.8/8*
*GII **30** 23:47:26.1±0.2,36°.98N×30°.99E,h80km,MD2.9/4,*
Mm3.2/14

ISC 30 23:47:22.3±0.8,**37°.21N**±0°.03×**30°.78E**±0°.03,**h129**km±6km,
n143,σ1§**66**/189,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCK	**Bucak**	**0.29**	**328**	PG	**Pn**	**23 47 39.3**	**-1.1**
ANTB	**Antalya**	**0.33**	**198**	PG	**Pn**	**23 47 40.3**	**-0.1**
KORT	**Korkueli**	**0.40**	**239**	PG	**Pn**	**23 47 40.3**	**-0.7**
KORT	**Korkueli**	**0.40**	**239**	*i* P	**Pn**	**23 47 42.7**	**+1.8**
KORT				*i* S	**Sn**	**23 47 57.2**	**+2.2**
ISP	**Isparta**	**0.64**	**341**	PG	**Pn**	**23 47 41.3**	**-1.0**
KEPZ	**Antalya-Kepez**	**0.73**	**115**	*i* P	**Pn**	**23 47 43.4**	**+0.6**
KEPZ				*i* S	**Sn**	**23 47 58.4**	**0.0**
KEPZ				IAML		23 47 59.0	
	comp=E,523nm,0.5s						
KEPZ				IAML		23 48 00.0	
	comp=N,435nm,0.5s						
BRDR	**BURDUR-Merkez**	**0.75**	**310**	*i* P	**Pn**	**23 47 42.4**	**-0.6**
BRDR				*i* S	**Sn**	**23 47 55.4**	**-3.4**
BRDR				IAML		23 47 57.0	
	comp=E,203nm,0.6s						
BRDR				IAML		23 47 58.0	
	comp=N,166nm,0.5s						
BAGO	**Egridir - ISPA**	**0.78**	**0**	*i* P	**Pn**	**23 47 42.8**	**-0.5**
BAGO				*i* S	**Sn**	**23 47 55.8**	**-3.5**
ELL	**Elmali**	**0.84**	**237**	PG	**Pn**	**23 47 44.4**	**+0.6**
ELL	**Elmali**	**0.84**	**237**	P	**Pn**	**23 47 45.7**	**+1.8**
ELL				S	**Sn**	**23 48 03.6**	**+3.4**
SEYD	**Seydisehir-KON**	**0.86**	**77**	PG	**Pn**	**23 47 44.3**	**+0.3**
BASM	**Basmaki-Afyon**	**0.91**	**321**	PG	**Pn**	**23 47 43.5**	**-0.9**
AKUM	**Antalya-Kumluc**	**0.95**	**202**	*i* P	**Pn**	**23 47 45.8**	**+1.1**
AKUM				*i* S	**Sn**	**23 48 02.3**	**+0.6**
AKUM				IAML		23 48 06.0	
	comp=E,141nm,0.2s						
AKUM				IAML		23 48 06.0	
	comp=N,212nm,0.2s						
GOLH	**Golhisar**	**0.97**	**272**	*i* P	**Pn**	**23 47 45.3**	**+0.3**
GOLH				*i* S	**Sn**	**23 47 59.7**	**-2.5**
GOLH				IAML		23 48 04.0	
	comp=N,388nm,0.3s						
DOGA	**KONYA_Doganhis**	**1.14**	**38**	*i* P	**Pn**	**23 47 46.5**	**-0.1**
DOGA				*i* S	**Sn**	**23 48 03.5**	**-1.6**
DOGA				IAML		23 48 04.0	
	comp=N,200nm,0.4s						
DOGA				IAML		23 48 05.0	
	comp=E,118nm,0.3s						
KZIL	**AFYON_Kizioren**	**1.16**	**334**	*i* P	**Pn**	**23 47 46.0**	**-0.9**
KZIL				*i* S	**Sn**	**23 48 03.4**	**-2.0**
DEMR	**Demre-Antalya**	**1.20**	**216**	PN	**Pn**	**23 47 48.2**	**+1.1**
SHUT	**Suhut-Afyon**	**1.35**	**352**	PN	**Pn**	**23 47 47.8**	**-1.0**
AKAS	**Kas**	**1.36**	**224**	PN	**Pn**	**23 47 49.7**	**+0.8**
AKAS	**Kas**	**1.36**	**224**	*i* P	**Pn**	**23 47 49.9**	**+0.9**
AKAS				*i* S	**Sn**	**23 48 09.2**	**+0.1**
AKAS				IAML		23 48 12.0	
	comp=E,130nm,0.2s						
AKAS				IAML		23 48 14.0	
	comp=N,202nm,0.4s						
KMER	**Konya-Meram**	**1.38**	**66**	*i* P	**Pn**	**23 47 49.3**	**+0.2**
KMER				*i* S	**Sn**	**23 48 08.0**	**-1.5**
KONT	**Konya--Tatoy**	**1.45**	**59**	PN	**Pn**	**23 47 50.1**	**+0.3**
KONT	**Konya--Tatoy**	**1.45**	**59**	*i* P	**Pn**	**23 47 50.0**	**+0.3**
FETY	**Fethiye**	**1.48**	**248**	PN	**Pn**	**23 47 50.5**	**+0.4**
FETY	**Fethiye**	**1.48**	**248**	*i* P	**Pn**	**23 47 50.6**	**+0.4**
FETY				*i* S	**Sn**	**23 48 10.6**	**-0.6**
FETY				IAML		23 48 11.0	
	comp=E,314nm,0.3s						
FETY				IAML		23 48 11.0	
	comp=N,149nm,0.2s						
BOLV	**Bolvadin**	**1.51**	**5**	*i* P	**Pn**	**23 47 49.9**	**-0.7**
BOLV				*i* S	**Sn**	**23 48 09.9**	**-2.2**
TAVA	**DENIZLI_Tavas**	**1.51**	**280**	*i* P	**Pn**	**23 47 50.6**	**+0.1**
TAVA				*i* S	**Sn**	**23 48 09.4**	**-2.6**
TAVA				IAML		23 48 12.0	
	comp=E,230nm,0.4s						
KHAL	**Karahalli**	**1.54**	**319**	*i* P	**Pn**	**23 47 50.3**	**-0.6**
KHAL				*i* S	**Sn**	**23 48 10.5**	**-2.2**
GAZI	**Gazipasa**	**1.57**	**128**	PN	**Pn**	**23 47 52.8**	**+1.6**
GAZI	**Gazipasa**	**1.57**	**128**	*i* P	**Pn**	**23 47 52.6**	**+1.5**
GAZI				*i* S	**Sn**	**23 48 14.2**	**+1.0**
GAZI				IAML		23 48 17.0	
	comp=E,87nm,0.1s						
GAZI				IAML		23 48 17.0	
	comp=N,474nm,0.9s						
LADK	**Ladik-KONYA**	**1.60**	**51**	PN	**Pn**	**23 47 51.6**	**+0.1**
AFYO	**Afyonkarahisar**	**1.62**	**347**	*i* P	**Pn**	**23 47 48.4**	**-3.3**
AFYO				*i* S	**Sn**	**23 48 13.1**	**-1.2**
KDHN	**Kadinhani**	**1.68**	**39**	*i* P	**Pn**	**23 47 51.0**	**-1.4**
DALY	**Dalyan (Mula)**	**1.75**	**258**	PN	**Pn**	**23 47 53.7**	**+0.6**
DALY	**Dalyan (Mula)**	**1.75**	**258**	*i* P	**Pn**	**23 47 53.4**	**+0.3**
DALY				*i* S	**Sn**	**23 48 15.1**	**-1.6**
DALY				IAML		23 48 16.0	
	comp=E,169nm,0.5s						
DALY				IAML		23 48 17.0	
	comp=N,434nm,0.3s						
TURN	**Turunc**	**1.78**	**260**	PN	Pn	23 47 57.9	+4.4
TURN	**Turunc**	**1.78**	**260**	*i* P	**Pn**	**23 47 57.8**	**+4.3**
TURN				*i* S	**Sn**	**23 48 22.6**	**+5.3**
TURN				IAML		23 48 23.0	
	comp=N,224nm,0.3s						
TURN				IAML		23 48 24.0	
	comp=E,155nm,0.2s						
ERMK	**Ermenek**	**1.80**	**108**	*i* P	**Pn**	**23 47 55.4**	**+1.4**
ERMK				*i* S	**Sn**	**23 48 17.8**	**-0.4**
ERMK				IAML		23 48 21.0	
	comp=E,255nm,0.3s						
ERMK				IAML		23 48 23.0	
	comp=N,440nm,0.9s						
KIZT	**Kizilcal**	**1.88**	**27**	PN	**Pn**	**23 47 54.5**	**-0.3**
KRMN	**Karaman**	**1.98**	**90**	PN	**Pn**	**23 47 57.2**	**+1.1**
YER	**Yerkesik**	**2.00**	**269**	PN	**Pn**	**23 47 56.7**	**+0.5**
KULA	**Kula-Manisa**	**2.12**	**308**	PN	**Pn**	**23 47 57.5**	**-0.3**
GEDZ	**Gediz**	**2.12**	**330**	PN	**Pn**	**23 47 57.3**	**-0.5**
MRSB	**Marmaris-Mugla**	**2.13**	**257**	PN	**Pn**	**23 47 58.5**	**+0.7**
GDZ	**Gediz**	**2.14**	**332**	*i* P	**Pn**	**23 47 57.5**	**-0.5**
BERE	**Bereket-Mersin**	**2.14**	**113**	PN	**Pn**	**23 47 59.7**	**+1.6**
CIFT	**Cifteler, Eski**	**2.16**	**6**	PN	**Pn**	**23 47 57.5**	**-0.7**
CIFT	**Cifteler, Eski**	**2.16**	**6**	*i* P	**Pn**	**23 47 56.4**	**-1.8**
CIFT				*i* S	**Sn**	**23 48 24.7**	**-1.1**
TEKE	**Tekeli-Mersin**	**2.16**	**119**	PN	**Pn**	**23 47 59.6**	**+1.5**
MANT	**Manisa**	**2.17**	**307**	*i* P	**Pn**	**23 47 58.1**	**-0.5**
MANT				*i* S	**Sn**	**23 48 24.4**	**-1.9**
TEVE	**Tevekalti-Mers**	**2.27**	**109**	PN	**Pn**	**23 48 01.2**	**+1.6**
AUSIV	**SIVRIHISAR**	**2.30**	**15**	PN	**Pn**	**23 47 59.6**	**-0.4**
SVRH	**Sivrihisar-ESK**	**2.31**	**14**	PN	**Pn**	**23 47 59.6**	**-0.5**
SIMA	**Simav-Kutahya**	**2.34**	**323**	PN	**Pn**	**23 48 00.2**	**-0.4**
ARG	**Arkhangelos**	**2.35**	**246**	PN	**Pn**	**23 48 00.8**	**+0.2**
YORU	**Yoruktepe-Mers**	**2.36**	**116**	PN	**Pn**	**23 48 02.6**	**+1.9**
OREN	**Orenkoy-Mersin**	**2.37**	**114**	PN	**Pn**	**23 48 02.7**	**+1.9**
SULT	**Sultanhani-AKS**	**2.38**	**65**	PN	**Pn**	**23 48 01.8**	**+0.8**
AYDB	**Zeytinkoy-Aydi**	**2.41**	**289**	PN	**Pn**	**23 48 02.6**	**+0.2**
YESY	**Yesilyurt**	**2.42**	**76**	PN	**Pn**	**23 48 02.5**	**+0.9**
TEPK	**Tepekoy-MERSIN**	**2.43**	**113**	PN	**Pn**	**23 48 03.5**	**+1.9**
GULN	**MERSIN_Gulnar**	**2.45**	**114**	*i* P	**Pn**	**23 48 03.2**	**+1.5**
GULN				*i* S	**Sn**	**23 48 33.6**	**+1.6**
GULN				IAML		23 48 36.0	
	comp=E,71nm,0.4s						
GULN				IAML		23 48 38.0	
	comp=N,83nm,0.5s						
DEMI	**Demirci**	**2.45**	**319**	*i* P	**Pn**	**23 48 01.4**	**-0.4**
AKK1	**Akkuyu-Mersin**	**2.46**	**115**	PN	**Pn**	**23 48 03.8**	**+1.9**
AKKU	**Akkuyu-Mersin**	**2.46**	**114**	PN	**Pn**	**23 48 03.8**	**+1.9**
TVSB	**Tavsanli**	**2.46**	**335**	PN	**Pn**	**23 48 01.7**	**-0.3**
AKK2	**Akkuyu-Mersin**	**2.47**	**115**	PN	**Pn**	**23 48 03.8**	**+1.8**
KEBE	**Keben-Mersin**	**2.47**	**107**	PN	**Pn**	**23 48 03.8**	**+1.6**
YESI	**Yesilovacik-Me**	**2.51**	**113**	PN	**Pn**	**23 48 04.5**	**+1.9**
ALFC	**Alefka**	**2.52**	**144**	P	**Pn**	**23 48 02.0**	**-0.8**
ALFC				S	**Sn**	**23 48 31.9**	**-2.0**
ALFC				AML	AML	23 48 34.2	
	comp=N,2.2nm,0.2s						
ALFC				AML	AML	23 48 34.2	
	comp=N,2.2nm,0.2s						
ALFC				AML	AML	23 48 35.0	
	comp=N,2.3nm,0.2s						
ALFC				AML	AML	23 48 35.0	
	comp=N,2.3nm,0.2s						
AKMS	**Akamas**	**2.52**	**150**	P	**Pn**	**23 48 02.5**	**-0.3**
AKMS				S	**Sn**	**23 48 32.0**	**-2.0**
AKMS				AML	AML	23 48 34.2	
	comp=N,2.2nm,0.2s						
AKMS				AML	AML	23 48 34.2	
	comp=N,2.2nm,0.2s						
IKL	**Isikli**	**2.53**	**112**	PN	**Pn**	**23 48 04.5**	**+1.7**
KULU	**Kulu**	**2.53**	**43**	PN	**Pn**	**23 48 03.1**	**+0.2**
DATC	**Datca-Mugla**	**2.54**	**261**	PN	**Pn**	**23 48 03.8**	**+0.9**
TISA	**Tisan-Mersin**	**2.55**	**113**	PN	**Pn**	**23 48 04.9**	**+1.8**
AKDN	**Akdeniz- Kıbrı**	**2.60**	**137**	PN	**Pn**	**23 48 05.9**	**+2.2**
DAT	**Datca**	**2.61**	**260**	PN	**Pn**	**23 48 04.7**	**+0.8**
DAT	**Datca**	**2.61**	**260**	*i* P	**Pn**	**23 48 02.7**	**-1.2**
DAT				*i* S	**Sn**	**23 48 34.0**	**-2.0**
SILI	**Silifke-Mersin**	**2.66**	**108**	PN	**Pn**	**23 48 06.3**	**+1.8**
SLFK	**Silifke-Mersin**	**2.67**	**107**	PN	**Pn**	**23 48 06.4**	**+1.8**
BORA	**Eskisehir**	**2.68**	**355**	PN	**Pn**	**23 48 04.4**	**-0.3**
BORA	**Eskisehir**	**2.68**	**355**	*i* P	**Pn**	**23 48 03.9**	**-0.8**
LEF	**Lefka**	**2.70**	**140**	*i* P	**Pn**	**23 48 03.9**	**-1.1**
LEF				*i* S	**Sn**	**23 48 33.7**	**-4.1**
LEF				IAML		23 48 38.0	
	comp=E,103nm,0.2s						
LEF				IAML		23 48 39.0	
	comp=N,99nm,0.3s						
AUMIH	**MIHALICIK**	**2.71**	**12**	PN	**Pn**	**23 48 05.1**	**-0.1**
AUMIH	**MIHALICIK**	**2.71**	**12**	*i* P	**Pn**	**23 48 04.7**	**-0.5**
AUBOZ	**BOZOYUK**	**2.76**	**348**	PN	**Pn**	**23 48 05.5**	**-0.3**
AUBOZ	**BOZOYUK**	**2.76**	**348**	*i* P	**Pn**	**23 48 03.7**	**-2.1**
BODT	**Bodrum**	**2.78**	**268**	PN	**Pn**	**23 48 06.7**	**+0.7**
SRCK	**Saricakaya, Es**	**2.83**	**358**	PN	**Pn**	**23 48 06.3**	**-0.3**
SRCK	**Saricakaya, Es**	**2.83**	**358**	*i* P	**Pn**	**23 48 06.6**	**-0.1**
GCAM	**G?zelcaml?**	**2.87**	**281**	PN	**Pn**	**23 48 06.9**	**-0.2**
GCAM	**G?zelcaml?**	**2.87**	**281**	*i* P	**Pn**	**23 48 06.3**	**-0.7**
AFSR	**Afar-Bala (An**	**2.87**	**38**	PN	**Pn**	**23 48 07.5**	**+0.3**
ATHAL	**Athalassa**	**2.96**	**134**	P	**Pn**	**23 48 08.2**	**-0.1**
ATHAL				S	**Sn**	**23 48 41.9**	**-1.9**
ATHAL				AML	AML	23 48 47.1	
	comp=N,1.2nm,0.4s						
ATHAL				AML	AML	23 48 47.1	
	comp=N,1.2nm,0.4s						
ATHAL				AML	AML	23 48 48.7	
	comp=N,1.3nm,0.7s						
ATHAL				AML	AML	23 48 48.7	
	comp=N,1.3nm,0.7s						
DURS	**Dursunbey**	**3.00**	**323**	*i* P	**Pn**	**23 48 08.3**	**-0.5**
CSS	**Mathiatis**	**3.05**	**137**	Pn	**Pn**	**23 48 08.8**	**-0.8**
CSS	**Mathiatis**	**3.05**	**137**	P	**Pn**	**23 48 08.7**	**-0.8**
CSS				S	**Sn**	**23 48 44.0**	**-2.0**
CSS				AML	AML	23 48 54.8	
	comp=N,0.2nm,0.5s						
CSS				AML	AML	23 48 54.8	
	comp=N,0.2nm,0.5s						
CSS				AML	AML	23 48 55.1	
	comp=N,0.2nm,0.3s						
CSS				AML	AML	23 48 55.1	
	comp=N,0.2nm,0.3s						
MVOU	**Marvovouni**	**3.18**	**133**	P	**Pn**	**23 48 10.5**	**-0.8**
MVOU				AML	AML	23 48 54.5	
	comp=N,0.7nm,0.4s						
MVOU				AML	AML	23 48 55.0	
	comp=N,0.6nm,0.2s						
BLCB	**Balcova**	**3.19**	**293**	PN	**Pn**	**23 48 11.6**	**+0.4**
GULE	**Gulek**	**3.19**	**88**	*i* P	**Pn**	**23 48 13.6**	**+2.1**
DGB	**zmir**	**3.21**	**286**	*i* P	**Pn**	**23 48 10.5**	**-1.0**
DGB				*i* S	**Sn**	**23 48 46.3**	**-3.3**
EREN	**Erenkoy**	**3.21**	**121**	*i* P	**Pn**	**23 48 12.3**	**+0.7**
EREN				*i* S	**Sn**	**23 48 48.0**	**-1.6**
EREN				IAML		23 48 52.0	
	comp=E,89nm,0.5s						
EREN				IAML		23 48 54.0	
	comp=N,67nm,0.5s						
DED	**Mersin**	**3.22**	**93**	*i* P	**Pn**	**23 48 12.5**	**+0.7**
STEP	**BALIKESIR_Sava**	**3.24**	**313**	*i* P	**Pn**	**23 48 11.0**	**-0.9**
BRTR	**Keskin Array B**	**3.37**	**41**	P	**Pn**	**23 48 14.2**	**+0.5**
	comp=N,0.3nm,0.3s,baz=227,slow=16,SNR=12						
BRTR				S	**Sn**	**23 48 53.5**	**0.0**
	comp=N,0.4nm,0.3s,baz=213,slow=25,SNR=12						
PARAL	**Paralimni**	**3.44**	**129**	P	**Pn**	**23 48 16.1**	**+1.5**
PARAL				S	**Sn**	**23 48 55.3**	**+0.1**
PARAL				AML	AML	23 49 12.5	
	comp=N,0.5nm,0.8s						
PARAL				AML	AML	23 49 12.5	
	comp=N,0.5nm,0.8s						
PARAL				AML	AML	23 49 16.3	
	comp=N,0.3nm,0.7s						
PARAL				AML	AML	23 49 16.3	
	comp=N,0.3nm,0.7s						
CMDR	**Camlidere-ANKA**	**3.53**	**21**	*i* P	**Pn**	**23 48 16.4**	**+0.5**
OSC1	**CSNet OBS 1**	**3.73**	**174**	P	**Pn**	**23 48 18.7**	**+0.3**
OSC1				S	**Sn**	**23 48 59.5**	**-2.3**
HWQ	**Hawqa**	**5.12**	**123**	*e*P	**Pn**	**23 48 37.1**	**0.0**
BHL	**Bhannes**	**5.16**	**128**	*e*P	**Pn**	**23 48 37.0**	**-0.6**
DQRL	**Deir Qamar**	**5.25**	**130**	*e*P	**Pn**	**23 48 37.8**	**-0.9**
QRWL	**Qaraoun**	**5.42**	**131**	*e*P	**Pn**	**23 48 40.9**	**-0.2**
RCY	**Rachaya**	**5.55**	**130**	*e*P	**Pn**	**23 48 42.9**	**+0.1**
SHBL	**Chebaa**	**5.60**	**132**	*e*P	**Pn**	**23 48 43.4**	**-0.1**
MMA0B	**Mount Meron ar**	**5.64**	**137**	Pn	**Pn**	**23 48 43.8**	**-0.3**
MMAI	**Mount Meron Ar**	**5.64**	**137**	P	**Pn**	**23 48 43.9**	**-0.2**
	comp=N,19nm,0.3s,baz=329,slow=13,SNR=191						
MMAI				S	**Sn**	**23 49 46.3**	**-1.5**
	comp=N,22nm,0.3s,baz=229,slow=19,SNR=5.0						
GEM	**Giv'at Ha'Em**	**5.65**	**134**	Pn	**Pn**	**23 48 44.0**	**-0.1**
GEM				Sn	**Sn**	**23 49 44.6**	**-3.2**
NATI	**Neve Ativ**	**5.65**	**133**	Pn	**Pn**	**23 48 43.9**	**-0.2**
NATI				Sn	**Sn**	**23 49 44.5**	**-3.4**
KSDI	**Kefar Szold**	**5.66**	**134**	Pn	**Pn**	**23 48 44.1**	**-0.1**
KSDI				Sn	**Sn**	**23 49 45.2**	**-2.9**
OFRI	**`Ofer**	**5.74**	**142**	Pn	**Pn**	**23 48 44.8**	**-0.5**
OFRI				Sn	**Sn**	**23 49 46.1**	**-3.9**
BLGI	**Bet Lehem HaGe**	**5.75**	**140**	Pn	**Pn**	**23 48 45.5**	**+0.1**
SLTI	**Sal'it**	**6.07**	**143**	Pn	**Pn**	**23 48 49.2**	**-0.6**
SLTI				Sn	**Sn**	**23 49 55.2**	**-2.9**
MMLI	**Mount Malkishu**	**6.10**	**140**	Pn	**Pn**	**23 48 50.3**	**+0.1**
HMDT	**Nahal Hemdat**	**6.30**	**140**	Pn	**Pn**	**23 48 52.9**	**+0.1**
MATC	**Matruh**	**6.55**	**208**	P	**Pn**	**23 48 56.5**	**+0.4**
	baz=209						
AMAZ	**Amatzia**	**6.62**	**148**	Pn	**Pn**	**23 48 57.0**	**-0.1**
DSI	**Dead Sea**	**6.79**	**145**	Pn	**Pn**	**23 48 59.2**	**-0.2**
DSI				Sn	**Sn**	**23 50 12.8**	**-2.6**
YTIR	**Yattir**	**6.85**	**147**	Pn	**Pn**	**23 49 00.3**	**0.0**
YTIR				Sn	**Sn**	**23 50 14.7**	**-2.2**
KZIT	**Kziot**	**6.97**	**153**	Pn	**Pn**	**23 49 01.5**	**-0.3**
KZIT				Sn	**Sn**	**23 50 17.3**	**-2.4**
GHAJ	**Ghor Haditha**	**7.10**	**145**	Pn	**Pn**	**23 49 04.0**	**+0.4**
ASF	**Jabal al Asfar**	**7.12**	**133**	P	**Pn**	**23 49 06.5**	**+2.6**
	comp=N,0.6nm,0.3s,baz=213,slow=5.2,SNR=14						
ASF				S	**Sn**	**23 50 26.6**	**+3.3**
	comp=N,0.6nm,0.3s,baz=291,slow=11,SNR=3.6						
DAMI2	**DAM2**	**7.16**	**146**	Pn	**Pn**	**23 49 04.9**	**+0.6**
KOT	**Kottamia**	**7.32**	**173**	P	**Pn**	**23 49 05.1**	**-1.5**
	baz=172						
KOT				AMP		23 50 00.0	
	baz=172						
SLUM	**Salum**	**7.33**	**221**	P	**Pn**	**23 49 05.0**	**-1.7**
	baz=222						
SLUM				S	**Sn**	**23 50 21.1**	**-7.4**
	baz=222						
HSAF	**As Saff**	**7.60**	**175**	P	**Pn**	**23 49 09.8**	**-0.5**
	baz=174						
GLL	**Jalalah**	**7.65**	**174**	P	**Pn**	**23 49 10.0**	**-1.1**
	baz=173						
EIL	**Elat**	**8.29**	**154**	P	**Pn**	**23 49 19.2**	**-0.4**
	comp=N,0.8nm,0.3s,baz=307,slow=2.7,SNR=12						
EIL				S	**Sn**	**23 50 47.5**	**-4.2**
	comp=N,2.7nm,0.3s,baz=128,slow=14,SNR=11						
EIL	**Elat**	**8.29**	**154**	Pn	**Pn**	**23 49 19.9**	**+0.3**
EIL				Sn	**Sn**	**23 50 48.6**	**-3.0**
HBST	**Basata**	**8.63**	**156**	P	**Pn**	**23 49 24.4**	**+0.1**
	baz=155						
HBST				S	Sn	23 50 52.0	-7.9
	baz=155						
HFRF	**Wahat Farafira**	**10.25**	**192**	P	**Pn**	**23 49 45.5**	**-0.4**
	baz=193						
AKASG	**Malin Array Be**	**13.53**	**356**	P	**Pn**	**23 50 32.1**	**+3.3**
	comp=N,0.5nm,0.3s,baz=171,slow=8.9,SNR=4.2						
FINES	**FINESS Array B**	**24.43**	**355**	P	**P**	**23 52 28.0**	**-0.5**
	comp=N,0.9nm,0.7s,baz=150,slow=11,SNR=4.1						
MKAR	**Makanchi Array**	**38.84**	**59**	P	**P**	**23 54 35.4**	**+0.8**
	comp=N,0.7nm,0.6s,baz=292,slow=6.4,SNR=5.2						

*IDC **30** 23:56:47.6±4.6,36°.03N×71°.60E,h94km±29km,mb3.5/9,*
mb1 3.5/15,mb1mx3.3/59,mbtmp3.8/15,Error ellipse:
s-maj=50.1km s-min=21.6km az=152.0

ISC 30 23:56:51.7±0.8,**36°.36N**±0°.08×**71°.46E**±0°.08,**h119**km,**n31,**
σ0§**86**/32,**mb3.6**/8,**Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.01**	**16**	P	**Pn**	**23 58 18.6**	**0.0**
	SNR=52						
UCH	**Uchtor**	**6.32**	**21**	P	**Pn**	**23 58 23.1**	**+0.4**
	SNR=24						
KZA	**Kyzart**	**6.42**	**26**	P	**Pn**	**23 58 24.5**	**+0.4**
	SNR=6.5						
EKS2	**Erkin-Say**	**6.54**	**15**	P	**Pn**	**23 58 25.3**	**-0.1**
	SNR=5.5						
AAK	**Ala-Archa**	**6.69**	**20**	P	**Pn**	**23 58 28.1**	**+0.7**
	1.6nm,0.3s,baz=197,slow=6.7,SNR=9.4						
AAK				S	**Sn**	**23 59 39.9**	**-2.4**
	1.5nm,0.3s,baz=136,slow=23,SNR=13						
CHMS	**Chumysh**	**7.09**	**20**	P	**Pn**	**23 58 33.4**	**+0.5**
	SNR=10						
USP	**Ospenovka**	**7.28**	**18**	P	**Pn**	**23 58 35.6**	**+0.2**
	SNR=6.0						
TKM2	**Tokmak 2**	**7.28**	**25**	P	**Pn**	**23 58 36.4**	**+0.8**
	SNR=6.3						
GEYT	**Alibeck**	**10.77**	**282**	P	**Pn**	**23 59 20.8**	**-1.8**
	0.9nm,0.3s,baz=84,slow=7.7,SNR=7.1						
GEYT				S	Sn	00 01 13.5	-7.6
	0.8nm,0.3s,baz=108,slow=17,SNR=3.4						
PYUN	**Piuthan**	**12.76**	**127**	*e*P	**Pn**	**23 59 48.2**	**-0.8**
	12nm,0.2s						
DANN	**Dangsing**	**13.10**	**124**	*e*P	**Pn**	**23 59 53.2**	**-0.3**
	12nm,0.5s						
MKAR	**Makanchi Array**	**13.19**	**34**	P	**Pn**	**23 59 54.7**	**+0.5**
	0.1nm,0.3s,baz=207,slow=9.8,SNR=2.0						
DMN	**Daman**	**14.48**	**123**	*e*P	**Pn**	**00 00 10.9**	**-0.4**
	6.1nm,0.3s						
PKIN	**Phulchoki**	**14.70**	**123**	*e*P	**Pn**	**00 00 13.9**	**-0.2**
PKI	**Pulchoki**	**14.71**	**123**	*e*P	**Pn**	**00 00 13.9**	**-0.4**
	7.9nm,0.4s						
KURBB	**Kurchatov Arra**	**15.14**	**17**	P	**P**	**00 00 20.6**	**-0.7**
	0.1nm,0.3s,baz=203,slow=11,SNR=6.5						
JIRN	**Jiri**	**15.20**	**121**	*e*P	**Pn**	**00 00 20.4**	**0.0**
	21nm,0.4s						
RAMN	**Ramite**	**15.93**	**122**	*e*P	**P**	**00 00 30.3**	**-0.3**
	15nm,0.5s						
TAPN	**Taplejung**	**16.45**	**119**	*e*P	**P**	**00 00 36.8**	**+0.4**
	19nm,0.6s						
BVAR	**Borovoye Array**	**16.68**	**358**	P	**Pn**	**00 00 37.6**	**-0.5**
	0.4nm,0.3s,baz=166,slow=11,SNR=8.8						
AKTO	**Aktyubinsk**	**17.09**	**330**	P	**P**	**00 00 43.8**	**+0.9**
	0.7nm,0.3s,baz=138,slow=10,SNR=7.2						
AKTO				S	Sn	00 00 36.9	-16
	0.1nm,0.3s,baz=72,slow=19,SNR=1.7						
ZALV	**Zalesovo Beam**	**19.89**	**24**	P	**P**	**00 01 13.5**	**+0.1**
	3.7nm,0.4s,baz=205,slow=10,SNR=22						
FINES	**FINESS Array B**	**37.80**	**326**	P	**P**	**00 03 57.2**	**+1.2**
	0.4nm,0.4s,baz=116,slow=8.7,SNR=8.6						
ARCES	**ARCESS Array B**	**41.41**	**338**	P	**P**	**00 04 27.3**	**+1.4**
	0.8nm,0.7s,baz=116,slow=8.5,SNR=4.3						
HFS	**Hagfors**	**43.41**	**322**	P	**P**	**00 04 43.5**	**+1.4**
	3.1nm,0.5

comp=Z,125nm,20.6s,baz=26,slow=34
PTGA Pitinga 22.56 218 IAmb IAmb 01 29 07.0
comp=Z,11nm,1.1s
RCBR Riachuelo 25.51 155 LR LR 01 36 47.2
comp=Z,114nm,19.6s,baz=326,slow=30
RUSC La Rusia 28.50 249 P **P** **01 29 54.7 -0.5**
ROSC El Rosal 30.07 248 LR LR 01 45 01.8
comp=Z,65nm,18.1s,baz=104,slow=42
LPAZ La Paz 39.88 214 P **P** **01 31 32.7 -1.0**
comp=Z,1.2nm,0.9s,baz=40,slow=21,SNR=2.8
LPAZ LR LR 01 47 48.0
comp=Z,108nm,18.6s,baz=62,slow=36
H10N3 ASCENSION HYDR 40.44 126 T T 02 14 34.1
baz=308,slow=75,SNR=36
H10N2 ASCENSION HYDR 40.45 126 T T 02 14 34.4
baz=308,slow=75,SNR=37
H10N1 ASCENSION HYDR 40.46 126 T T 02 14 35.6
baz=308,slow=75,SNR=29
PLAL Pickwick Lake 40.80 303 P **P** **01 31 41.2 +0.7**
DBIC Dimbokro 42.00 100 LR LR 01 48 21.9
comp=Z,117nm,18.6s,baz=182,slow=35
SIUC Southern Illin 42.41 307 P **P** **01 31 55.9 +2.2**
S44A Carbondale 42.43 307 P **P** **01 31 54.9 +1.1**
S44A IAmb IAmb 01 32 01.6
comp=Z,6.8nm,1.1s
ESDC Sonseca Array 42.78 50 LR LR 01 47 39.7
comp=Z,72nm,18.8s,baz=170,slow=33
TORD Torodi Ar. Bea 46.54 88 P **P** **01 32 26.4 -0.7**
comp=Z,0.6nm,0.7s,baz=291,slow=6.0,SNR=3.0
TORD LR LR 01 48 39.3
comp=Z,119nm,20.8s,baz=190,slow=32
TAM Tamanrasset 48.86 75 P **P** **01 32 46.1 +0.9**
WMOK Wichita Mounta 49.42 301 P **P** **01 32 48.8 -0.4**
WMOK IAmb IAmb 01 32 55.8
comp=Z,4.6nm,1.2s
ABTX Abilene, Hawle 49.95 298 P **P** **01 32 53.5 +0.3**
ULM Lac du Bonnet 51.04 321 LR LR 01 52 09.9
comp=Z,34nm,20.1s,baz=158,slow=33
TXAR Lajitas Array 53.31 294 P **P** **01 33 17.1 -1.4**
comp=Z,0.2nm,0.7s,baz=125,slow=13,SNR=2.5
TXAR LR LR 01 56 20.9
comp=Z,16nm,19.0s,baz=0.0,slow=36
TX32 Lajitas Array 53.31 294 P **P** **01 33 18.4 -0.1**
TX32 IAmb IAmb 01 33 36.6
comp=Z,4.8nm,1.4s
DAVOX Davos/Dischmat 54.43 45 P **P** **01 33 27.5 +0.9**
comp=Z,2.1nm,0.7s,baz=158,slow=6.6,SNR=4.9
MNTX Cornudas Mount 54.78 297 P **P** **01 33 28.9 -0.2**
MNTX IAmb IAmb 01 33 46.7
comp=Z,7.2nm,1.4s
HPIG 55.16 291 P **P** **01 33 32.1 0.0**
HPIG IAmb IAmb 01 33 39.0
comp=Z,4.3nm,0.9s
CTI Castel Tesino 55.48 46 P **P** **01 33 33.9 -0.2**
VAE Valguarnera 56.53 56 P **P** **01 33 43.2 +1.6**
comp=Z,5.9nm,0.8s,baz=354,slow=23,SNR=1.9
GERES GERESS Array B 57.37 43 P **P** **01 33 46.3 -1.2**
comp=Z,0.4nm,0.7s,baz=258,slow=5.3,SNR=4.7
PDAR Pinedale Array 58.60 310 P **P** **01 33 57.0 +0.6**
comp=Z,0.2nm,0.3s,baz=32,slow=47,SNR=1.8
PDAR LR LR 01 57 25.7
comp=Z,28nm,20.2s,baz=102,slow=34
NOA NORSAR Array B 59.28 29 LR LR 01 55 40.2
comp=Z,23nm,18.4s,baz=200,slow=32
TUC Tucson 59.35 297 P **P** **01 34 01.5 -0.1**
TUC IAmb IAmb 01 34 09.3
comp=Z,4.4nm,1.1s
BGU Big Grassy Mou 61.09 307 P **P** **01 34 13.9 +0.4**
SZCU Shurtz Canyon 61.12 304 P **P** **01 34 14.9 +1.1**
ELK Elko 62.77 307 P **P** **01 34 24.8 -0.1**
MFID Camas Ranch 63.21 310 P **P** **01 34 28.3 +0.6**
YKA Yellowknife Ar 64.47 331 P **P** **01 34 33.9 -1.5**
comp=Z,0.7nm,0.8s,baz=108,slow=7.8,SNR=6.5
NVAR Mina Array Bea 65.20 305 LR LR 02 03 10.6
comp=Z,42nm,19.0s,baz=296,slow=36
MLR Muntele Rosu 65.39 48 LR LR 02 02 28.0
comp=Z,41nm,18.6s,baz=308,slow=35
FINES FINESS Array B 66.35 30 P **P** **01 34 47.2 -0.4**
comp=Z,1.6nm,1.0s,baz=293,slow=9.9,SNR=5.1
ARCES ARCESS Array B 67.34 21 P **P** **01 34 52.7 -1.0**
comp=Z,1.6nm,0.9s,baz=260,slow=7.0,SNR=4.1
BRTR Keskin Array B 71.47 53 P **P** **01 35 20.4 +0.4**
comp=Z,1.0nm,0.8s,baz=265,slow=3.6,SNR=5.2
INK Inuvik 72.72 337 P **P** **01 35 26.1 -0.6**
INK IAmb IAmb 01 35 33.5
comp=Z,4.3nm,1.0s
KIRV Kirov 78.17 32 LR LR 02 07 00.2
comp=Z,36nm,18.5s,baz=210,slow=33
IL31 78.61 335 P **P** **01 36 00.8 +0.2**
ILAR Eielson Array 78.61 335 P **P** **01 36 00.3 -0.2**
comp=Z,2.0nm,0.9s,baz=80,slow=5.0,SNR=11
ILAR LR LR 02 11 45.6
comp=Z,24nm,18.8s,baz=159,slow=36
ARU Arti 83.53 33 LR LR 02 09 34.4
comp=Z,28nm,19.5s,baz=281,slow=33

*IDC **31** 01:57:03.8±2.4, 47.°94S×165.°28E, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.9/21, mbtmp4.0/5, ML3.8/1, Error ellipse: s-maj=63.3km s-min=28.2km az=169.0*
*WEL **31** 01:57:09.4±0.8, 48.°5±6.°×16.°5E±.°, h33km, M4.5/9, ML4.7/9, MLv4.5/9*
ISC 31 01:57:05.2±0.9, **48.°03S**±0.°08×**165.°31E**±0.°07, **h10**km, **n31,** σ**2.°55/40, mb4.0/4, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**2.09**	**27**	P	**Pb**	**01 57 42.0**	**-1.1**
PYZ				S	**Sb**	01 58 06.7	**-2.4**
APZ	**The Paps**	**2.18**	**58**	P	**Pb**	**01 57 45.0**	**+0.3**
APZ				S	**Sg**	01 58 13.4	**-1.8**
WHZ	**Wether Hill Ro**	**2.80**	**41**	P	**Pn**	**01 57 52.2**	**+2.1**
WHZ				S	**Sb**	01 58 27.0	**-2.6**
DCZ	**Deep Cove**	**2.86**	**27**	P	**Pn**	**01 57 52.1**	**+1.2**
DCZ				S	**Sn**	01 58 25.0	**-0.4**
SYZ	**Scrubby Hill**	**3.00**	**62**	P	**Pb**	**01 57 57.3**	**-1.5**
SYZ				S	**Sb**	01 58 34.6	**-0.9**
MLZ	**Mavora Lakes**	**3.29**	**37**	P	**Pn**	**01 57 59.8**	**+2.9**
MLZ				S	**Sb**	01 58 40.0	**-3.9**
TUZ	**Tuapeka**	**3.61**	**57**	P	**Pn**	**01 58 03.0**	**+1.7**
MSZ	**Milford Sound**	**3.82**	**29**	P	**Pn**	**01 58 07.7**	**+3.7**
EAZ	**Earnscleugh**	**3.93**	**46**	P	**Pn**	**01 58 09.1**	**+3.5**
WKZ	**Wanaka**	**4.10**	**40**	P	**Pn**	**01 58 12.4**	**+4.4**
WKZ				S	**Sn**	01 59 00.2	**+4.2**
JCZ	**Jackson Bay**	**4.64**	**33**	P	**Pn**	**01 58 19.2**	**+3.8**
JCZ				S	**Sn**	01 59 13.3	**+3.9**
LBZ	**Lake Benmore**	**4.97**	**45**	P	**Pn**	**01 58 22.4**	**+2.5**
FOZ	**Fox Glacier**	**5.49**	**37**	P	**Pn**	**01 58 30.0**	**+3.0**
FOZ				S	**Sn**	01 59 31.8	**+1.6**
RPZ	**Rata Peaks**	**5.89**	**45**	Pn	**Pn**	**01 58 32.1**	**-0.4**
	2.8nm,0.3s,baz=220,slow=5.7,SNR=12						
RPZ				Sn	**Sn**	**01 59 40.5**	**+0.4**
	2.5nm,0.3s,baz=10,slow=19,SNR=6.4						
RPZ	**Rata Peaks**	**5.89**	**45**	P	**Pn**	**01 58 34.1**	**+1.5**
RPZ				S	**Sn**	**01 59 40.3**	**+0.2**
OXZ	**Oxford**	**6.66**	**48**	P	**Pn**	**01 58 46.9**	**+3.8**
MQZ	**McQueen's Vall**	**6.71**	**53**	P	**Pn**	**01 58 46.4**	**+2.7**
INZ	**Inchbonnie**	**6.84**	**41**	P	**Pn**	**01 58 47.6**	**+2.1**
LTZ	**Lake Taylor**	**7.18**	**46**	P	**Pn**	**01 58 53.0**	**+2.8**
GVZ	**Greta Valley S**	**7.42**	**50**	P	Pn	01 58 58.4	+4.8
DSZ	**Denniston Nort**	**7.79**	**39**	P	**Pn**	**01 59 02.2**	**+3.5**
KHZ	**Kahutara**	**8.07**	**49**	P	Pn	01 59 08.0	+5.6
THZ	**Tophouse**	**8.26**	**43**	P	**Pn**	**01 59 08.5**	**+3.3**
STKA	**Stephens Creek**	**24.16**	**303**	P	**P**	**02 02 21.2**	**-0.3**
	2.1nm,0.7s,baz=133,slow=14,SNR=4.9						
ASAR	**Alice Springs**	**34.80**	**303**	P	**P**	**02 03 56.2**	**+0.1**
	1.8nm,0.7s,baz=134,slow=8.4,SNR=17						
WRA	**Warramunga Arr**	**37.56**	**307**	P	**P**	**02 04 17.9**	**-1.7**
	1.9nm,0.6s,baz=140,slow=8.0,SNR=19						
FITZ	**Fitzroy Crossi**	**43.92**	**299**	P	**P**	**02 05 12.5**	**+0.3**
	2.4nm,0.9s,baz=158,slow=5.4,SNR=2.1						
VNA3	**Neumayer Olymp**	**60.98**	**182**	P	**P**	**02 07 19.7**	**+1.7**
VNA1	**Neumayer--Stat**	**61.54**	**182**	P	**P**	**02 07 18.5**	**-3.3**
ARCES	**ARCESS Array B**	**150.95**	**332**	PKPbc	**PKPbc**	**02 16 56.4**	**-0.3**
	2.6nm,0.8s,baz=66,slow=2.9,SNR=10						
FINES	**FINESS Array B**	**153.43**	**315**	PKPbc	**PKPbc**	**02 17 02.4**	**-0.1**
	1.1nm,0.7s,baz=101,slow=3.9,SNR=5.3						

MAN 31 02:05:54.9, 9.°41N×126.°67E, h11km, mb4.9, ML3.9, MS3.9, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.22**	**288**	⇑*eP*	Pn	02 06 17.2	-0.7
SCPH				*eS*	Sn	02 06 34.5	+0.1
BUKP	**Musuan**	**2.20**	**226**	*eP*	Pn	02 06 31.7	+0.3
BUKP				*eS*	Sn	02 06 59.7	+1.1
KCP	**Kidapawan**	**2.85**	**213**	⇑*iP*	Pn	02 06 39.1	-1.3
DDMP	**Don Marcelino,**	**3.42**	**196**	*eP*	Pn	02 06 48.8	+0.7
DDMP				*eS*	Sg	02 07 41.0	-3.7
RCP	**Roxas**	**4.41**	**299**	⇑*eP*	Pn	02 07 05.8	+3.9

*VIE **31** 02:06:33.1±0.4, 49.°86N×18.°54E, h0km, mb2.5/4, ml2.7/4, Error ellipse: s-maj=5.0km s-min=3.3km az=162.0 21 km E of Ostrava Suspected Mining induced.*
*PRU **31** 02:06:33.9±0.0, 49.°83N×18.°53E, h0km, Mining Induced Event Darkov, E=1.9e+06*
*IPEC **31** 02:06:33.9±0.2, 49.°85N×18.°56E, h0km±3km, ML2.3/3, Error ellipse: s-maj=1.7km s-min=1.1km az=165.0*
ISC 31 02:06:33.7±0.9, **49.°82N**±0.°04×**18.°49E**±0.°03, **h0**km, **n44,** σ**1.°40/73, 6C-5D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.22**	**274**	*eP*G	**Pg**	**02 06 38.9**	**+0.9**
OKC				*eS*G	**Sg**	**02 06 42.3**	**+1.4**
	comp=Z,526nm,0.9s						
MORC	**Moravsky Berou**	**0.62**	**266**	*eP*G	**Pg**	**02 06 46.3**	**+0.7**
MORC				*eS*G	**Sg**	**02 06 54.6**	**+1.1**
MORC	**Moravsky Berou**	**0.62**	**266**	⇓*iP*	**Pg**	**02 06 46.0**	**+0.5**
MORC				⇑*iS*	**Sg**	**02 06 54.6**	**+1.1**
MORC	**Moravsky Berou**	**0.62**	**266**	*eP*g	**Pg**	**02 06 46.2**	**+0.7**
	baz=83						
MORC				*eS*g	**Sg**	**02 06 54.5**	**+1.1**
	68nm,0.3s,baz=83						
LANS	**Liptovska Anna**	**0.93**	**136**	*eP*G	**Pb**	**02 06 52.4**	**-0.3**
LANS				*eS*G	**Sn**	**02 07 07.1**	**-1.0**
LANS				*eL*G	Lg	02 07 12.9	
JAVC	**Velka Javorina**	**1.10**	**209**	*eP*G	**Pb**	**02 06 56.1**	**+0.4**
JAVC	**Velka Javorina**	**1.10**	**209**	*eP*g	**Pb**	**02 06 56.1**	**+0.4**
	baz=30						
KRLC	**Kraliky**	**1.13**	**283**	*eP*G	**Pg**	**02 06 54.7**	**-0.7**
KRLC				*eS*G	**Sb**	**02 07 11.5**	**0.0**
	comp=Z,102nm,0.4s						
VRAC	**Vranov**	**1.34**	**248**	*eP*G	**Pg**	**02 06 59.7**	**+0.3**
VRAC				*eS*G	**Sg**	**02 07 17.3**	**+0.6**
VRAC	**Vranov**	**1.34**	**248**	⇑*iP*	**Pg**	**02 06 59.2**	**-0.1**
VRAC				⇓*iS*	**Sb**	**02 07 18.2**	**+0.8**
VRAC	**Vranov**	**1.34**	**248**	*eP*g	**Pg**	**02 06 59.7**	**+0.3**
	baz=66						
VRAC				*eS*g	**Sg**	**02 07 17.3**	**+0.6**
	32nm,0.4s,baz=66						
VYHS	**Vyhne**	**1.35**	**170**	*eP*G	**Pn**	**02 06 59.8**	**0.0**
DPC	**Dobruska-Polom**	**1.49**	**291**	*eP*G	**Pn**	**02 07 01.4**	**-0.4**
DPC				*eS*G	**Sg**	**02 07 21.8**	**+0.1**
	comp=Z,52nm,0.4s						
KRUC	**Moravsky**	**1.57**	**242**	*eP*G	**Pn**	**02 07 03.2**	**+0.4**
KRUC				*eS*G	**Sn**	**02 07 24.5**	**+0.7**
KRUC	**Moravsky**	**1.57**	**242**	*eP*g	**Pn**	**02 07 03.1**	**+0.3**
	baz=60						
KRUC				*eS*g	**Sn**	**02 07 24.4**	**+0.7**
	24nm,0.3s,baz=60						
OSTC	**Ostas**	**1.64**	**297**	*eP*G	**Pn**	**02 07 02.8**	**-1.0**
OSTC				*eS*G	**Sg**	**02 07 27.0**	**+0.7**
	comp=Z,97nm,1.1s						
MODS	**Modra-Piesok**	**1.66**	**209**	*eP*G	**Pn**	**02 07 03.7**	**-0.3**
MODS				*eL*G	Lg	02 07 30.7	
UPC	**Upice**	**1.73**	**294**	*eP*G	**Pn**	**02 07 05.6**	**+0.5**
UPC				*eS*G	**Sg**	**02 07 30.2**	**+0.8**
	comp=Z,40nm,0.7s						
CHVC	**Chvalec**	**1.74**	**297**	*eP*G	**Pb**	**02 07 06.2**	**-0.4**
CHVC				*eS*G	**Sg**	**02 07 30.4**	**+0.7**
	comp=Z,56nm,0.9s						
ZST	**Bratislava**	**1.87**	**210**	*eP*G	**Pn**	**02 07 06.4**	**-0.5**
ZST				*eS*G	**Sn**	**02 07 31.7**	**+0.5**
ZST				*eL*G	Lg	02 07 32.4	
KECS	**Kecovo**	**1.88**	**135**	*eP*N	**Pb**	**02 07 08.4**	**-0.4**
KECS				*eS*N	**Sb**	**02 07 32.9**	**+0.1**
KECS				*eL*G	Lg	02 07 37.5	
TREC	**Trest**	**2.03**	**256**	*eP*G	**Pn**	**02 07 10.5**	**+1.4**
TREC				*eS*G	**Sb**	**02 07 38.5**	**+1.3**
	comp=Z,21nm,0.3s						
PSZ	**Piszkesteto**	**2.12**	**154**	⇑*iP*	**Pg**	**02 07 15.2**	**+0.8**
GOPC	**GO Pecny, Ondr**	**2.40**	**274**	*eP*G	**Pb**	**02 07 16.3**	**-1.5**
GOPC				*eS*G	**Sg**	**02 07 50.4**	**-0.3**
	comp=Z,33nm,1.0s						
PRU	**Pruhonice**	**2.56**	**275**	*eP*G	**Pb**	**02 07 19.7**	**-0.8**
PRU				*eS*G	**Sg**	**02 07 55.2**	**-0.7**
	comp=Z,25nm,1.0s						
CONA	**Conrad Observa**	**2.57**	**223**	*e*Pn	**Pn**	**02 07 16.2**	**-0.5**
	3.3nm,0.3s,SNR=9.7						
CONA				Sn	**Sn**	**02 07 48.9**	**+0.2**
	5.8nm,0.3s						
PVCC	**Panska Ves**	**2.62**	**287**	*eP*G	**Pb**	**02 07 20.3**	**-1.2**
PVCC				*eS*G	**Sg**	**02 07 57.5**	**-0.3**
	comp=Z,43nm,0.5s						
PRA	**Prague**	**2.63**	**277**	*eP*G	**Pb**	**02 07 22.5**	**+0.8**
PRA				*eS*G	**Sg**	**02 07 57.7**	**-0.6**
	comp=Z,12nm,0.6s						
PBCC	**Pribram**	**2.92**	**269**	*eP*G	**Pb**	**02 07 27.0**	**+0.4**
PBCC				*eS*G	**Sg**	**02 08 07.4**	**0.0**
BRG	**Berggiesshubel**	**3.10**	**292**	PG	**Pb**	**02 07 30.9**	**+1.3**
BRG				SG	**Sg**	**02 08 11.8**	**-1.4**
	9.3nm,0.5s						
TRPA	**Tarpa**	**3.16**	**121**	⇑*iP*	**Pn**	**02 07 25.2**	**+0.5**
KHC	**Kasperske Hory**	**3.28**	**260**	*eP*N	**Pn**	**02 07 26.3**	**-0.1**
KHC				*eP*G	**Pb**	**02 07 33.2**	**+0.4**
KHC				*eS*G	**Sg**	**02 08 18.5**	**-0.5**
	comp=Z,15nm,0.4s						
MOA	**Molln**	**3.42**	**236**	*i* Pn	**Pn**	**02 07 27.5**	**-0.8**
	0.8nm,0.2s						
MOA				Sn	**Sn**	**02 08 11.0**	**+1.4**
	4.3nm,0.5s						
CLL	**Collm**	**3.80**	**295**	*e*Pn	**Pn**	**02 07 34.0**	**+0.5**
CLL				*e*Pg	**Pg**	**02 07 45.0**	**-1.5**
CLL				*e*		02 07 49.0	
CLL				*eS*g	**Sg**	**02 08 35.0**	**-0.8**
	comp=Z,31nm,1.4s						
NKC	**Novy Kostel**	**3.92**	**278**	*eP*G	**Pb**	**02 07 44.8**	**+1.2**
NKC				*eS*G	**Sg**	**02 08 39.9**	**+0.4**
	comp=Z,10nm,0.4s						
DRGR		**4.14**	**136**	⇓*iP*	**Pn**	**02 07 38.5**	**+0.2**
BZS	**Buzias**	**4.71**	**152**	⇓*iP*	**Pn**	**02 07 46.0**	**0.0**
BURAR	**Bucovina Array**	**4.97**	**114**	⇑*iP*	**Pn**	**02 07 50.1**	**+0.4**
WTTA	**Wattenberg**	**5.22**	**243**	Sn	**Sn**	**02 08 58.8**	**+4.6**
	comp=Z,2.4nm,0.5s						
MOTA	**Moosalm**	**5.49**	**246**	*e*Sn	**Sb**	**02 09 09.7**	**-7.3**
	comp=Z,3.0nm,0.5s						
RETA	**Reutte**	**5.63**	**248**	*e*Sn	**Sb**	**02 09 16.2**	**-4.6**
	comp=Z,3.5nm,0.5s						
FETA	**Feichten**	**5.88**	**244**	*e*Sn	Sn	02 09 19.6	+9.3
	comp=Z,0.8nm,0.4s						
PDG	**Podgorica**	**7.42**	**176**	⇓*iP*	**Pg**	**02 08 54.7**	**-1.0**
ELND	**Elena**	**8.58**	**141**	⇑*iP*	Pn	02 08 30.1	-8.9

IDC 31 02:26:57.6±13.0, **15.°14S×165.°67E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.7/23, mbtmp3.8/4, ML4.2/1, Error ellipse: s-maj=229.0km s-min=36.8km az=55.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.94**	**174**	Pn	Pn	02 28 40.6	-0.1
	4.9nm,0.3s,baz=350,slow=4.2,SNR=148						
DZM				Sn	Sn	02 29 59.8	-0.5
	2.2nm,0.3s,baz=336,slow=20,SNR=9.3						
STKA	**Stephens Creek**	**27.56**	**229**	P	P	02 32 47.1	+0.7
	0.4nm,0.3s,baz=47,slow=9.7,SNR=4.3						
WRA	**Warramunga Arr**	**30.22**	**256**	P	P	02 33 09.9	-0.4
	0.4nm,1.0s,baz=86,slow=9.3,SNR=1.3						
ASAR	**Alice Springs**	**31.08**	**249**	P	P	02 33 17.6	-0.3
	0.3nm,0.3s,baz=78,slow=9.0,SNR=5.4						

*IDC **31** 02:38:19.2±7.8, 16.°42S×179.°68W, h481km±85km, mb3.3/10, mb1 3.6/10, mb1mx3.3/24, mbtmp4.0/10, Error ellipse: s-maj=38.3km s-min=23.6km az=124.0*
ISC 31 02:38:20.5±0.7, **16.°4S**±0.°2×**179.°7W**±0.°2, **h500**km, **n17,** σ**0.°81/17, mb3.5/10, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**43.69**	**258**	P	**P**	**02 45 40.7**	**-0.1**
	0.3nm,0.3s,baz=92,slow=8.0,SNR=10						
ASAR	**Alice Springs**	**44.01**	**253**	P	**P**	**02 45 43.6**	**+0.3**
	2.2nm,0.3s,baz=84,slow=8.7,SNR=59						

MJAR Matsushiro Arr 65.95 324 P **P** **02 48 17.5 +0.7**
1.4nm,0.5s,baz=147,slow=5.3,SNR=5.4
PETK Petropavlovsk- 71.92 346 P **P** **02 48 53.1 +0.8**
1.4nm,0.8s,baz=125,slow=9.8,SNR=3.6
NVAR Mina Array Bea 79.23 45 P **P** **02 49 34.0 +0.3**
1.0nm,0.6s,baz=224,slow=9.2,SNR=4.1
ILAR Eielson Array 84.72 13 P **P** **02 50 00.4 -0.4**
1.1nm,0.7s,baz=231,slow=5.9,SNR=9.9
MAW Mawson 84.84 200 P **P** **02 50 02.1 +0.6**
1.7nm,0.6s,baz=140,slow=8.7,SNR=7.5
TXAR Lajitas Array 86.27 58 P **P** **02 50 10.4 +1.1**
0.2nm,0.7s,baz=224,slow=7.0,SNR=4.6
PDAR Pinedale Array 87.14 44 P **P** **02 50 13.3 0.0**
0.5nm,0.5s,baz=318,slow=2.0,SNR=3.6
SNAA Sanae 92.12 179 P **P** **02 50 35.2 -0.5**
VNA3 Neumayer Olymp 92.31 177 P **P** **02 50 36.8 +0.3**
VNA2 Neumayer--Watz 92.73 177 P **P** **02 50 38.4 0.0**
baz=202,slow=3.0
YKA Yellowknife Ar 93.50 25 P **P** **02 50 41.2 -0.7**
0.2nm,0.6s,baz=246,slow=4.8,SNR=3.7
ARCES ARCESS Array B 124.62 350 PKP **PKiKP** **02 56 22.2 -0.3**
2.1nm,1.0s,baz=346,slow=2.5,SNR=4.8
FINES FINESS Array B 131.40 344 PKP **PKiKP** **02 56 35.7 -0.6**
2.4nm,1.1s,baz=70,slow=8.0,SNR=3.1
BRTR Keskin Array B 142.83 315 PKP **PKPdf** **02 56 56.2 -0.9**
1.1nm,0.9s,baz=306,slow=3.4,SNR=3.9
GERES GERESS Array B 145.83 344 PKPbc **PKiKP** **02 57 04.3 -2.0**
0.3nm,0.6s,baz=17,slow=9.8,SNR=4.9

*BJI **31** 02:51:52.8±0.0, 24.°71N×121.°14E, h8km, mB4.4/4, mb4.3/5, ML3.9/5, Ms3.8/3, Ms7.3.5/3*
*TAP **31** 02:51:53.0, 24.°70N×121.°11E, h9km, ML4.2, C*
*ASIES **31** 02:51:53.0, 24.°68N×121.°14E, h14km, MW3.5*
*JMA **31** 02:51:54.6±0.2, 24.°65N×121.°24E, h2km±2km, M3.7*
*NEIC **31** 02:51:54.6±2.1, 24.°64N±0.°06×121.°28E±0.°06, h21km±4km, mb4.1/3, ML4.1(TAP), Error ellipse: s-maj=9.1km s-min=6.8km az=139.0*
*IDC **31** 02:51:59.9±5.0, 24.°57N×121.°37E, h65km±47km, mb3.5/14, mb1 3.7/15, mb1mx3.5/40, mbtmp3.8/15, ML3.5/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/26, Error ellipse: s-maj=29.0km s-min=13.5km az=66.0*
ISC 31 02:51:53.4±0.7, **24.°67N**±0.°01×**121.°16E**±0.°01, **h11**km±4km, **n151,** σ**1.°07/238, mb3.9/16, 12C-25D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NSTT	**Nanjuang**	**0.15**	**254**	⇑*iP*	**Pg**	**02 51 56.4**	**-0.5**
	baz=235						
NSTT				*i* S	**Sg**	**02 51 58.8**	**-0.5**
	baz=235						
NSK	**Sanguang**	**0.18**	**89**	⇓*iP*	**Pb**	**02 51 58.3**	**-0.5**
	baz=107						
NSK				*i* S	**Sb**	**02 52 01.8**	**+1.6**
	baz=107						
SBCB	**Hsinchu**	**0.20**	**307**	⇓*iP*	**Pg**	**02 51 57.3**	**-0.4**
	baz=309						
SBCB				*i* S	**Sg**	**02 52 00.7**	**+0.1**
	baz=309						
YHNB	**Yeheng**	**0.20**	**91**	⇓*iP*	**Pb**	**02 51 58.5**	**-0.6**
	baz=108						
YHNB				*i* S	**Sb**	**02 52 02.1**	**+1.4**
	baz=108						
YHNB	**Yeheng**	**0.20**	**91**		**Pg**	**02 51 58.0**	**+0.2**
HSN	**Hsinchu**	**0.21**	**307**	⇓*iP*	**Pg**	**02 51 57.5**	**-0.5**
	baz=325						
HSN				*i* S	**Sg**	**02 52 01.1**	**+0.1**
	baz=325						
NCUH	**Zhongli**	**0.29**	**5**	⇓*iP*	**Pg**	**02 52 00.0**	**+0.6**
	baz=14						
NCUH				*i* S	**Sb**	**02 52 04.9**	**-0.8**
	baz=14						
NCU	**National Centr**	**0.30**	**5**	⇓*iP*	**Pg**	**02 52 00.1**	**+0.6**
	baz=15						
NCU				*i* S	**Sb**	**02 52 05.2**	**-0.5**
	baz=15						
NNS	**Nan Shan**	**0.30**	**140**	⇓*iP*	**Pb**	**02 52 00.9**	**0.0**
	baz=136						
NNS				*i* S	**Sb**	**02 52 05.6**	**-0.4**
	baz=136						
NNSB	**Datong**	**0.32**	**140**	⇓*iP*	**Pb**	**02 52 01.1**	**-0.1**
	baz=137						
NNSB				*i* S	**Sb**	**02 52 05.9**	**-0.5**
	baz=137						
NNSH	**Datong**	**0.32**	**140**	⇓*iP*	**Pb**	**02 52 01.0**	**-0.2**
	baz=138						
NNSH				*i* S	**Sb**	**02 52 05.8**	**-0.6**
	baz=138						
NDT	**Datong Townshi**	**0.33**	**102**	⇓*iP*	**Pb**	**02 52 01.2**	**-0.1**
	baz=116						
NDT				*i* S	**Sb**	**02 52 06.1**	**-0.6**
	baz=116						
NWLT	**Wulai**	**0.33**	**72**	*i* P	**Pb**	**02 52 00.8**	**-0.5**
	baz=87						
NWLT				*i* S	**Sb**	**02 52 05.6**	**-1.0**
	baz=87						
NMLH	**Miaoli**	**0.36**	**248**	⇑*iP*	**Pb**	**02 52 01.4**	**-0.5**
	baz=241						
NMLH				S	**Sb**	**02 52 07.0**	**-0.5**
	baz=241						
TDCB	**Techi**	**0.42**	**180**	⇓*iP*	**Pb**	**02 52 02.2**	**-0.7**
	baz=164						
TDCB				*i* S	**Sg**	**02 52 08.0**	**+0.7**
	baz=164						
TATO	**Taipei**	**0.42**	**45**	⇑*iP*	**Pb**	**02 52 02.8**	**-0.1**
	baz=59						
TATO				*i* S	**Sb**	**02 52 09.2**	**-0.1**
	baz=59						
TATO	**Taipei**	**0.42**	**45**	Pg	**Pb**	**02 52 02.4**	**-0.6**
WHP	**Taichung City**	**0.44**	**206**	⇓*iP*	**Pb**	**02 52 02.7**	**-0.5**
	baz=200						
WHP				*i* S	**Sg**	**02 52 08.7**	**+0.8**
	baz=200						
TWE	**Neicheng**	**0.47**	**84**	⇓*iP*	**Pb**	**02 52 03.8**	**+0.2**
	baz=96						
TWE				S	**Sb**	**02 52 10.5**	**0.0**
	baz=96						
PTSB	**Yuanli**	**0.47**	**241**	*i* P	**Pb**	**02 52 03.6**	**-0.1**
	baz=236						
PTSB				*e*S	**Sb**	**02 52 10.7**	**0.0**
	baz=236						
TAP	**Taipei**	**0.48**	**41**	*e*P	**

baz=175
CHGB S Sb 02 52 14.2 -0.7
baz=175
YM11 YM11 0.62 38⇑*i*P Pb 02 52 06.5 +0.3
baz=28
YM11 S Sb 02 52 15.7 +0.7
baz=28
TWC Suao 0.63 96⇓*i*P Pb 02 52 06.6 +0.2
baz=108
TWC S Sb 02 52 14.6 -0.7
baz=108
NTC Toucheng 0.64 73⇑*i*P Pb 02 52 06.6 +0.1
baz=78
NTC S Sb 02 52 15.4 0.0
baz=78
NACB Ninganchiao 0.64 141⇓*i*P Pb 02 52 07.0 +0.4
baz=140
NACB S Sb 02 52 16.1 +0.7
baz=140
NACB Ninganchiao 0.64 141 Pb 02 52 07.0 +0.4
DPDB Guoxing 0.67 198⇓*i*P Pb 02 52 07.0 -0.1
baz=185
DPDB S Sb 02 52 16.2 -0.3
baz=185
TIPB Shuangxi 0.68 64 P Pb 02 52 07.6 +0.4
baz=86
TIPB *e*S Sb 02 52 17.3 +0.7
baz=86
TCU Taichung 0.68 220 P Pn 02 52 08.0 -1.0
baz=206
TCU S Sn 02 52 18.4 -1.3
baz=206
NWF Wu-fen Shan 0.69 55⇑*i*P Pn 02 52 08.1 -1.1
baz=69
NWF S Sn 02 52 18.3 -1.6
baz=69
WFSB Wu-fen Shan 0.69 55⇑*i*P Pn 02 52 08.1 -1.0
baz=69
WFSB S Sn 02 52 18.2 -1.6
baz=69
TWD Chiawan 0.71 146⇓*i*P Pn 02 52 08.3 -1.1
baz=144
TWD S Sb 02 52 17.9 +0.3
baz=144
OWD Renai 0.72 179 *e*P Pb 02 52 07.7 -0.3
baz=168
OWD *e*S Sg 02 52 16.9 +0.2
baz=168
TWY Chenhua 0.72 34 *e*P Pb 02 52 08.4 +0.4
baz=38
TWY *e*S Sn 02 52 19.1 -1.5
baz=38
EGS 0.72 76 *e*P Pn 02 52 08.9 -0.7
baz=81
EGS *e*S Sn 02 52 21.4 +0.8
baz=81
HWA Hwalien 0.80 149 *e*P Pn 02 52 10.6 -0.1
baz=147
HWA *e*S Sn 02 52 22.4 -0.2
baz=147
WCHH Zhanghua 0.81 223 *e*P Pn 02 52 10.2 -0.5
baz=206
WCHH S Sn 02 52 22.7 +0.1
baz=206
TYC Yuchr 0.81 200 *e*P Pb 02 52 09.6 0.0
baz=188
TYC *e*S Sn 02 52 22.2 -0.6
baz=188
SMLT Sun Moon Lake 0.82 197 *e*P Pb 02 52 09.8 0.0
baz=183
SMLT *e*S Sb 02 52 21.2 +0.3
baz=183
TWB1 Santiao Chiao 0.82 66 P Pn 02 52 10.3 -0.6
baz=81
TWB1 S Sn 02 52 22.3 -0.8
baz=81
ESL Shilin 0.89 164⇓*i*P Pn 02 52 11.4 -0.5
baz=168
ESL *e*S Sb 02 52 22.6 -0.1
baz=168
SSLB Suanglung 0.90 192⇓*i*P Pg 02 52 10.6 -0.2
baz=180
SSLB *e*S Sb 02 52 22.8 -0.3
baz=180
SSLB Suanglung 0.90 192 Pn Pg 02 52 10.5 -0.4
WNT Mingjian 0.90 209 *e*P Pn 02 52 11.9 -0.1
baz=206
WNT *e*S Sn 02 52 25.1 +0.1
baz=206
VWDT VWDT 0.92 181⇓*i*P Pg 02 52 11.1 0.0
baz=168
WJS Zhushan 0.93 205 *e*P Pn 02 52 12.3 -0.2
baz=203
WJS *e*S Sn 02 52 25.9 +0.1
baz=203
WHYT Xinyi Township 1.01 196 *e*P Pn 02 52 13.7 +0.1
baz=194
WHYT *e*S Sn 02 52 28.9 +1.1
baz=194
EGFH Guangfu 1.03 166 *e*P Pn 02 52 13.8 0.0
baz=163
EGFH *e*S Sb 02 52 26.2 -0.5
baz=163
RLNB Erlin 1.07 223 *e*P Pb 02 52 13.7 -0.2
baz=221
RLNB S Sn 02 52 29.3 +0.3
baz=221
WGK Gukeng 1.12 209 *e*P Pg 02 52 15.2 +0.2
baz=207
WGK *e*S Sn 02 52 31.6 +1.1
baz=207
WDLH Douliu 1.13 210 *e*P Pg 02 52 15.2 0.0
baz=208
WDLH *e*S Sn 02 52 30.9 +0.2
baz=208
WTCT Ta-ch'eng 1.14 225 *e*P Pb 02 52 14.5 -0.5
baz=222
WTCT *e*S Sn 02 52 30.5 -0.3
baz=222
CHN5 Tsauling 1.16 202 P Pg 02 52 15.7 0.0
baz=201
CHN5 *e*S Sn 02 52 31.7 +0.2
baz=201
EHY Hungye 1.17 173⇓*i*P Pg 02 52 16.1 +0.1
baz=169
EHY *e*S Sn 02 52 33.5 +1.8
baz=169
YUS Yu-Shan 1.19 189 P Pg 02 52 16.7 +0.2
baz=179
YUS *e*S Sg 02 52 31.8 -0.2
baz=179
HGSD Ruisui 1.20 168 *e*P Pg 02 52 17.0 +0.4
baz=160
HGSD *e*S Sg 02 52 33.6 +1.5
baz=160
ALS Alishan 1.20 196 *e*P Pg 02 52 16.9 +0.4
baz=210
ALS *e*S Sn 02 52 34.2 +1.4
baz=210
WMLT Mailiao 1.22 225 *e*P Pn 02 52 15.3 -1.0
baz=222
WMLT *e*S Sg 02 52 32.5 -0.1
baz=222
PCYT Pengchaiyu 1.26 41 *e*P Pn 02 52 14.3 -2.7
baz=44
PCYT *e*S Sb 02 52 33.0 -0.5
baz=44
YULB Yu-li 1.28 174 *e*P Pg 02 52 17.9 -0.1
baz=171
YULB *e*S Sg 02 52 34.6 -0.1
baz=171
YULB Yu-li 1.28 174 Pn Pg 02 52 17.9 -0.1
TWF1 Yuli 1.32 174 P Pg 02 52 18.6 -0.2
baz=171
TWF1 *e*S Sg 02 52 37.0 +1.1
baz=171
WSF Szhu 1.34 220 *e*P Pn 02 52 17.6 -0.4
baz=217
WSF *e*S Sg 02 52 36.2 -0.4
baz=217
CHY Chiayi 1.35 210 *e*P Pb 02 52 18.6 -0.1
baz=208
CHY *e*S Sg 02 52 37.7 +0.9
baz=208
TPUB Ta-pu 1.45 200 P Pb 02 52 20.1 -0.4
baz=198
TPUB *e*S Sg 02 52 39.6 -0.5
baz=198

TPUB Ta-pu 1.45 200 Pn 02 52 19.5 -0.1
FULB Fuli 1.47 175 *e*P Pg 02 52 21.7 0.0
baz=171
FULB *e*S Sg 02 52 43.4 +2.5
baz=171
ELDTW Lidau 1.48 185 P Pb 02 52 20.9 -0.2
baz=182
ELDTW *e*S Sg 02 52 41.9 +0.7
baz=182
PTTC Pingtan 1.50 303 *e*P Pn 02 52 18.3 -2.0
baz=301
WTP Ta-pu 1.51 199 *e*P Pb 02 52 20.9 -0.5
baz=215
WTP *e*S Sb 02 52 40.8 +0.2
baz=215
SNST Tainan City 1.57 203 *e*P Pb 02 52 22.0 -0.5
baz=221
CHN8 Yiju 1.58 213 P Pn 02 52 21.3 -0.1
baz=211
CHN8 S Sg 02 52 43.5 -0.8
baz=211
VWUC VWUC 1.58 282 P Pn 02 52 19.8 -1.6
baz=281
CHN1 Nanshi 1.59 201 P Pb 02 52 22.3 -0.5
baz=200
CHN1 *e*S Sb 02 52 43.4 +0.5
baz=200
JYNG Yonagunijimaku 1.64 97 P Pb 02 52 23.4 -0.3
JYNG *e*S Sb 02 52 44.7 +0.3
SGST Jiashian 1.67 199 P Pn 02 52 22.8 +0.2
baz=213
SGST *e*S Sb 02 52 45.4 +0.2
baz=213
YOJ Yonaguni jima 1.70 97 *e*P Pb 02 52 23.5 -1.1
baz=83
YOJ Yonaguni jima 1.70 97 P Pb 02 52 24.2 -0.5
YOJ *e*S Sb 02 52 46.6 +0.5
YOJ Yonaguni jima 1.70 97 Pn 02 52 22.8 -0.2
SCLT Jiali 1.73 211 *e*S Sg 02 52 48.1 -1.0
baz=208
SLGT Liugui 1.74 196 *e*P Pb 02 52 25.0 -0.4
baz=196
SLGT *e*S Sg 02 52 49.8 +0.5
baz=196
PNG Penghu 1.83 233 *e*P Pn 02 52 23.9 -0.9
baz=234
MATB Ma-tsu 1.83 324 *e*P Pn 02 52 23.4 -1.4
baz=320
TWG Pinlang 1.85 182 *e*P Pb 02 52 27.3 +0.1
baz=170
TWG *e*S Sg 02 52 51.9 -1.0
baz=170
TWG Pinlang 1.85 182 Pb 02 52 26.2 -1.0
TWGBT Beinan 1.85 182 *e*P Pb 02 52 27.0 -0.2
baz=177
PHUB P'eng-hu 1.85 232 *e*P Pn 02 52 23.7 -1.4
baz=229
PHUB *e*S Sb 02 52 51.2 +0.7
baz=229
PTMZ Houxiangcun 1.89 282 *e*P Pn 02 52 23.9 -1.6
baz=280
TTN Taitung 1.91 180 *e*P Pb 02 52 28.6 +0.3
baz=175
TWM1 Shoushan 1.96 200 *e*P Pb 02 52 29.0 -0.1
baz=205
WDGT Dungji 1.96 225 *e*P Pn 02 52 25.9 -0.8
baz=227
TWH Lutao 1.98 171 *e*P Pb 02 52 28.4 -1.0
baz=154
SSD Sandimen 1.98 194 *e*P Pb 02 52 28.5 -0.9
baz=215
ECL Taimali 2.08 185 *e*P Pb 02 52 30.1 -1.0
baz=183
MASBT Mashibuluo 2.11 193 *e*P Pb 02 52 30.1 -1.5
baz=216
VCHM Qimei 2.15 228 *e*P Pn 02 52 28.3 -0.9
baz=231
LYJJ Jianjiangzhen 2.25 326 *e*P Pn 02 52 29.0 -1.6
baz=323
EAST Anshuo 2.30 187 *e*P Pb 02 52 32.9 -2.0
baz=210
TAW Tawu 2.32 186 *e*P Pb 02 52 33.1 -2.1
baz=181
SCZT Fangliau 2.34 192 *e*P Pb 02 52 33.5 -2.2
baz=191
QZH Quanzhou 2.35 277 Pn Pn 02 52 31.0 -0.9
QZH Sn Sn 02 52 58.0 -2.7
QZH smax smax
comp=N,810nm,0.6s
QZH smax smax
comp=E,310nm,0.6s
IRIF Iriomote-Funau 2.37 98 P Pn 02 52 33.5 +1.3
IRIF *e*S Sb 02 53 03.1 -2.2
MHZQ Yeshan 2.39 307 *e*P Pn 02 52 34.0 +1.5
baz=304
XPSS Dashiqiu 2.41 339 *e*P Pn 02 52 31.2 -1.6
baz=334
WLCH Liuqiu 2.42 197 *e*P Pb 02 52 37.2 +0.2
baz=217
HATJ Hateruma jima 2.49 104 P Pn 02 52 35.6 +1.7
HATJ *e*S Sb 02 53 06.2 -2.6
KNM Kinmen 2.50 265 *e*P Pn 02 52 34.6 +0.7
baz=267
KNMB Chin-men Tao 2.53 266 *e*P Pn 02 52 33.0 -1.4
baz=268
KNMB Chin-men Tao 2.53 266 Pn 02 52 33.2 -1.2
JKRS Kuro-shima 2.63 99 P Pn 02 52 37.8 +2.0
JKRS *e*S Sn 02 53 09.7 +1.9
JJJ Ishigaki jima 2.74 96 P Pn 02 52 38.8 +1.5
JJJ *e*S Sb 02 53 13.2 -2.7
JISG Ishigakijimahi 2.87 91 P Pn 02 52 40.9 +1.8
ZPLA Ao Xicun 3.20 257 *e*P Pn 02 52 41.7 -1.9
baz=259
ZZJH Jiuhuzhen 3.22 267 *e*P Pn 02 52 42.7 -1.2
baz=268
VDOS Pratas Island 5.69 227 *e*P Pn 02 53 18.4 +0.5
baz=236
WHN Wuhan 8.40 316 P Pn 02 53 56.3 +1.2
WHN S Sn 02 55 34.0 +4.0
WHN LR LR
comp=E,830nm,8.3s
KSRS Korea Array 13.99 23 P P 02 55 16.2 -3.4
0.2nm,0.3s,baz=210,slow=12,SNR=2.5
KMI Kunming 16.72 275 P P 02 55 52.5 +2.3
KMI pP sP 02 55 58.0 +3.0
KMI pmax pmax
comp=Z,9.0nm,0.7s
KMI pmax pmax
comp=Z,97nm,4.3s
KMI LR LR
comp=E,210nm,9.5s
KMI LR LR
comp=Z,110nm,9.0s
HHC Hu-ho-hao-te 18.02 336 *e*P P 02 56 04.3 0.0
HHC pmax pmax
comp=Z,15nm,0.9s
HHC pmax pmax
comp=Z,45nm,4.5s
MJAR Matsushiro Arr 18.82 47 LR LR 03 03 27.0
comp=Z,28nm,20.0s,baz=75,slow=37
CMAR Chiang Mai Arr 21.55 258 P P 02 56 46.5 +3.5
1.2nm,0.3s,baz=57,slow=9.8,SNR=1.2
SONM Songino Array 25.91 337 P P 02 57 28.1 +2.6
1.2nm,0.5s,baz=146,slow=11,SNR=4.6
WMQ Urumqi 33.30 313 *e*P P 02 58 33.0 +1.8
MKAR Makanchi Array 37.97 316 P P 02 59 11.7 +0.5
1.4nm,0.9s,baz=108,slow=12,SNR=5.7
MKAR PcP PcP 03 01 27.4 +0.5
0.2nm,0.4s,baz=70,slow=4.7,SNR=3.2
PETK Petropavlovsk- 39.48 34 P P 02 59 23.6 -0.1
1.2nm,0.7s,baz=263,slow=12,SNR=1.3
ZAA0 Zalesovo Array 39.82 327 P P 02 59 25.4 -1.1
ZAA0 lAmb lAmb 03 00 19.2
comp=Z,1.9nm,0.9s
ZALV Zalesovo Beam 39.82 327 P P 02 59 27.7 +1.1
comp=Z,0.6nm,0.5s,baz=108,slow=9.3,SNR=1.9
KURK Kurchatov 41.70 320 P P 02 59 45.1 +3.0
KURK Kurchatov 41.70 320 lAmb lAmb 03 00 59.4
comp=Z,7.7nm,1.8s
KURBB Kurchatov Arra 41.72 320 P P 02 59 45.1 +2.8
comp=Z,0.5nm,0.8s,baz=166,slow=3.3,SNR=2.3
WRA Warramunga Arr 46.17 163 P P 03 00 16.3 -2.0
comp=Z,1.3nm,0.5s,baz=344,slow=8.7,SNR=30
WRA PcP PcP 03 01 53.4 -0.7
comp=Z,0.2nm,0.5s,baz=348,slow=3.7,SNR=1.5
ASAR Alice Springs 49.62 165 P P 03 00 44.1 -0.8
comp=Z,0.8nm,0.6s,baz=343,slow=7.2,SNR=14

ASAR PcP PcP 03 02 05.7 -0.8
comp=Z,0.4nm,0.7s,baz=345,slow=3.3,SNR=2.1
STKA Stephens Creek 59.53 160 P P 03 01 54.5 -2.3
comp=Z,1.2nm,0.5s,baz=335,slow=6.9,SNR=5.6
STKA Stephens Creek 59.53 160 lAmb lAmb 03 02 25.9
comp=Z,6.6nm,2.0s
FINES FINESS Array B 71.01 330 P P 03 03 11.6 +0.6
comp=Z,1.0nm,0.7s,baz=43,slow=8.6,SNR=6.0
FINES LR LR 03 37 16.5
comp=Z,48nm,18.6s,baz=134,slow=38
AKASG Malin Array Be 72.49 318 P P 03 03 20.8 +0.7
comp=Z,0.8nm,0.4s,baz=59,slow=5.6,SNR=1.9
BRTR Keskin Array B 72.86 306 P P 03 03 24.2 +1.4
comp=Z,0.4nm,0.4s,baz=334,slow=13,SNR=2.4
NB2 NORSAR Subarra 77.78 332 P P 03 03 50.2 -0.3
comp=Z,0.7nm,0.6s,baz=57,slow=5.3
NOA NORSAR Array B 77.78 332 P P 03 03 50.2 -0.3
comp=Z,1.4nm,0.8s,baz=59,slow=5.6,SNR=6.1
NOA LR LR 03 41 24.0
comp=Z,21nm,18.5s,baz=220,slow=38
GERES GERESS Array B 82.45 321 P P 03 04 16.1 +0.1
comp=Z,0.5nm,0.6s,baz=46,slow=5.8,SNR=4.5

TAP 31 02:55:27.5, 24.69N×121.12E, h7km, ML1.7, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NSTT	**Nanjuang**	**0.12**	**241**	⇑*i*P		Pg	02 55 30.7	+0.6
	baz=228							
NSTT				*i* S		Sg	02 55 33.4	+1.5
	baz=228							
SBCB	**Hsinchu**	**0.16**	**310**	*e*P		Pg	02 55 32.1	+1.4
	baz=318							
SBCB				*e*S		Sg	02 55 36.3	+3.4
	baz=318							
HSN	**Hsinchu**	**0.17**	**310**	P		Pg	02 55 32.1	+1.1
	baz=326							
HSN				S		Sg	02 55 35.6	+2.1
	baz=326							
NSK	**Sanguang**	**0.22**	**94**	P		Pg	02 55 33.1	+1.3
	baz=95							
NSK				*i* S		Sg	02 55 36.2	+1.3
	baz=95							
YHNB	**Yeheng**	**0.24**	**95**	P		Pg	02 55 32.9	+0.7
	baz=96							
YHNB				S		Sg	02 55 36.3	+1.0
	baz=96							
NCUH	**Zhongli**	**0.28**	**13**	P		Pb	02 55 34.5	-0.4
	baz=13							
NCUH				*e*S		Sb	02 55 40.2	+0.3
	baz=13							
NCU	**National Centr**	**0.28**	**13**	*e*P		Pb	02 55 34.8	-0.2
	baz=15							
NCU				S		Sb	02 55 40.0	+0.1
	baz=15							
NMLH	**Miaoli**	**0.33**	**243**	P		Pb	02 55 35.9	+0.1
	baz=241							
NMLH				S		Sb	02 55 41.5	+0.2
	baz=241							
NNS	**Nan Shan**	**0.34**	**137**	P		Pb	02 55 35.3	-0.7
	baz=136							
NNS				S		Sb	02 55 40.2	-1.4
	baz=136							
NNSB	**Datong**	**0.36**	**137**	P		Pb	02 55 35.4	-0.8
	baz=137							
NNSB				S		Sg	02 55 40.4	+1.2
	baz=137							
NNSH	**Datong**	**0.36**	**137**	P		Pg	02 55 35.0	+0.5
	baz=137							
NNSH				S		Sg	02 55 40.4	+1.2
	baz=137							
NWLT	**Wulai**	**0.36**	**76**	P		Pb	02 55 35.6	-0.6
	baz=86							
NWLT				*e*S		Sg	02 55 40.5	+1.2
	baz=86							
NDT	**Datong Townshi**	**0.37**	**104**	P		Pb	02 55 35.7	-0.7
	baz=105							
NDT				*e*S		Sg	02 55 40.8	+1.2
	baz=105							
NSY	**Sanyi**	**0.42**	**230**	*e*S		Sb	02 55 43.8	-0.1
	baz=227							
TDCB	**Techi**	**0.44**	**175**	*e*P		Pg	02 55 36.8	+0.8
	baz=175							
WHP	**Taichung City**	**0.44**	**201**	*e*P		Pg	02 55 36.8	+0.8
	baz=200							
WHP				S		Sb	02 55 43.7	-0.7
	baz=200							
TWQ1	**Liyutan**	**0.46**	**223**	*e*P		Pb	02 55 37.6	-0.4
	baz=209							
TWQ1				*e*S		Sb	02 55 45.3	+0.3
	baz=209							
TWS1	**Kuangyinshan**	**0.49**	**34**	*e*P		Pb	02 55 38.0	-0.4
	baz=38							
TWS1				S		Sb	02 55 46.8	+1.0
	baz=38							

JMA 31 02:55:53.5±0.2, 24.85N×123.30E, h28km, M1.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.47**	**214**	P		Pb	02 56 03.0	-0.3
YOJ				S		Sb	02 56 09.4	-0.6
JYNG	**Yonagunijimaku**	**0.51**	**219**	P		Pb	02 56 03.9	-0.1
JYNG				S		Sb	02 56 11.1	-0.1
IRIF	**Iriomote-Funau**	**0.65**	**143**	P		Pb	02 56 05.9	-0.3
IRIF				*e*S		Sn	02 56 15.5	-0.6
JKRS	**Kuro-shima**	**0.89**	**133**	P		Pn	02 56 09.9	-0.2
JKRS				*e*S		Sb	02 56 21.9	+0.1
JJJ	**Ishigaki jima**	**0.91**	**122**	P		Pn	02 56 10.2	-0.2
JJJ				*e*S		Sb	02 56 21.3	-1.1
HATJ	**Hateruma jima**	**0.91**	**150**	P		Pn	02 56 10.0	-0.5
JISG	**Ishigakijimahi**	**0.96**	**106**	P		Pn	02 56 10.6	-0.4
JISG				S		Sb	02 56 23.3	-0.4

*ANF **31** 02:59:28.6±0.2, 33.59N×118.35W, h15km±1km, ML3.8/35, Error ellipse: s-maj=1.8km s-min=1.5km az=113.0*
*NEIC **31** 02:59:29.1±1.5, 33.58N±0.03×118.39W±0.04, h15km±3km, Error ellipse: s-maj=5.8km s-min=3.8km az=121.0*
*PAS **31** 02:59:29.3±2.0, 33.59N±0.04×118.37W±0.03, h9km±7km, ML3.8/249, Error ellipse: s-maj=5.9km s-min=3.6km az=170.0*
*SCEDC **31** 02:59:29.3, 33.59N×118.37W, h9km*
ISC 31 02:59:28.9±0.9, 33.57N±0.02×118.37W±0.02, h18km±3km, n176, g69/90/226, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FMP	**Fort Macarthur**	**0.16**	**24**	P		**Pb**	**02 59 32.2**	**-0.3**
	baz=207,SNR=1000							
FMP				S		**Pg**	**02 59 34.4**	**+1.2**
	baz=207							
FMP	**Fort Macarthur**	**0.16**	**24**			**Pg**	**02 59 34.5**	**+1.2**
CIAC	**Catalina I. Ai**	**0.17**	**192**			**Pg**	**02 59 33.4**	**-0.1**
CIAC						**Sg**	**02 59 36.6**	**0.0**
CIS	**Catalina Islan**	**0.17**	**193**	P		**Pg**	**02 59 33.4**	**-0.1**
	baz=11,SNR=927							
CIS				S		**Sg**	**02 59 36.6**	**0.0**
	baz=11							
RPV	**Rancho Palos V**	**0.17**	**351**			**Pg**	**02 59 35.2**	**+1.7**
DLAC	**Del Amo**	**0.36**	**39**			**Pb**	**02 59 36.8**	**0.0**
WTT2	**Watts, South G**	**0.39**	**14**			**Pg**	**02 59 37.1**	**+0.1**
WTT2						**Sg**	**02 59 41.7**	**-0.8**
BREC	**Barre Substati**	**0.40**	**54**			**Pb**	**02 59 37.5**	**0.0**
SANC	**Santa Ana**	**0.43**	**71**			**Pg**	**02 59 37.7**	**0.0**
LCGC	**La Cienega, Cu**	**0.43**	**359**			**Pg**	**02 59 37.7**	**-0.1**
USC	**University of**	**0.45**	**9**			**Pg**	**02 59 38.2**	**0.0**
FULC	**Fullerton**	**0.48**	**51**			**Pg**	**02 59 38.7**	**+0.1**
GVRC	**Garvey Reservo**	**0.52**	**23**			**Pb**	**02 59 39.6**	**0.0**
RHC	**Rose Hills Cem**	**0.52**	**35**			**Pg**	**02 59 38.9**	**-0.6**
DJJ	**Donna J Jenkin**	**0.54**	**352**			**Pg**	**02 59 39.0**	**-0.8**
GR2C	**Griffith Obs.**	**0.55**	**6**			**Pg**	**02 59 39.3**	**-0.7**
SBI	**Santa Barbara**	**0.56**	**261**			**Pg**	**02 59 39.9**	**-0.1**
SBI						**Sb**	**02 59 48.0**	**+0.3**
PT2	**Point Dume**	**0.56**	**320**			**Pg**	**02 59 39.5**	**-0.8**
PT2						**Sg**	**02 59 47.5**	**-0.4**
CACC	**Caltech Cellar**	**0.60**	**20**			**Pb**	**02 59 40.3**	**-0.6**
HLLC	**North Hollywoo**	**0.60**	**1**			**Pb**	**02 59 40.3**	**-0.6**
SCI2	**San Clemente I**	**0.61**	**194**	P		**Pg**	**02 59 41.6**	**+0.6**
	baz=14,SNR=132							
SCI2				S		**Sn**	**02 59 51.4**	**-0.5**
	baz=14							

SCI2	San Clemente I	0.61	194			Pg	02 59 41.6	+0.6
PASC	Pasadena Art C	0.62	14			Pb	02 59 40.2	-1.0
PASC	Pasadena Art C	0.62	14			Pb	02 59 40.8	-0.4
PASC	Pasadena Art C	0.62	14			Sb	02 59 49.2	-0.3
AGOC	Agoura	0.66	330			Pb	02 59 41.2	-0.7
DECC	Green Verdugo	0.68	3	P		Pb	02 59 41.5	-0.8
	baz=183,SNR=140							
DECC				S		Sb	02 59 51.5	+0.1
	baz=183							
PSRC	Puddingstone R	0.70	42			Sb	02 59 51.8	-0.1
MWC	Mount Wilson	0.70	22			Pb	02 59 41.9	-0.8
MWC	Mount Wilson	0.70	22			Sb	02 59 51.5	-0.6
CHNC	Chino	0.72	53			Pb	02 59 42.4	-0.4
CRNC	Corona	0.74	65			Pb	02 59 42.7	-0.6
MLSC	Mira Loma	0.80	57			Pb	02 59 43.6	-0.7
MLSC						Sb	02 59 54.6	-0.2
CHFC	Chilao Flat St	0.81	20			Sb	02 59 55.2	-0.1
SME	Santa Rosa Min	0.88	73			Pb	02 59 44.9	-0.9
BFSC	Mount Baldy Ra	0.89	41	P		Pb	02 59 45.1	-0.9
	baz=222,SNR=712							
BFSC				S		Sb	02 59 57.6	0.0
	baz=222							
BFSC	Mount Baldy Ra	0.89	41			Pb	02 59 45.1	-0.9
BFSC						Sb	02 59 57.2	-0.4
RVR	Riverside	0.93	63			Pb	02 59 45.7	-0.8
RVR						Sb	02 59 58.2	-0.4
FON	Fontana	0.94	55			Pb	02 59 46.1	-0.6
JNH	Juniper Hills	0.94	21			Pb	02 59 45.9	-0.9
JNH						Sb	02 59 58.6	-0.4
RSBC	Riverside Bore	0.96	65			Pb	02 59 46.6	-0.4
RSBC						Sb	02 59 59.1	-0.2
SS2	San Sevaine	0.96	48			Pb	02 59 46.5	-0.5
CJV	Casa Juvan	0.98	11			Sb	02 59 60.0	-0.1
MURC	Murrieta	0.98	88	P		Pb	02 59 46.6	-0.8
	baz=270,SNR=133							
MURC				S		Sb	03 00 00.4	+0.3
	baz=270							
MURC	Murrieta	0.98	88			Pb	02 59 46.4	-1.0
MURC						Sb	03 00 00.4	+0.3
HOLC	Holcomb Ridge	0.99	26			Pb	02 59 46.6	-1.0
LRRC	Littlerock Res	0.99	16			Pb	02 59 46.6	-1.0
STCC	Santa Clara	1.00	317			Pb	02 59 47.6	-0.1
SNCC	San Nicolas Is	1.02	252	P		Pb	02 59 47.5	-0.5
	baz=70,SNR=24							
SNCC				S		Sb	03 00 01.4	+0.4
	baz=70							
SNCC	San Nicolas Is	1.02	252			Pb	03 00 01.2	+0.1
SNCC	San Nicolas Is	1.02	252	Pg		Pb	02 59 46.7	-1.3
SNCC						Pn	02 59 47.3	-1.0
GORC	Green Oak Ranc	1.04	113			Pb	02 59 47.1	-1.3
GORC						Sn	03 00 02.3	-0.4
PYR	Pyramid	1.04	343			Pb	02 59 48.0	-0.5
CFSC	Central Fire S	1.05	59			Pb	02 59 48.2	-0.3
PEC	Perris	1.06	72			Pb	02 59 47.9	-0.8
PEC						Sb	03 00 02.0	-0.3
LEOC	Leona Valley	1.06	3			Pb	02 59 48.0	-0.9
OSI	Osito Audit: C	1.08	344	P		Pb	02 59 48.5	-0.7
	baz=164,SNR=37							
OSI				S		Sg	03 00 04.3	+0.2
	baz=164							
OSI	Osito Audit: C	1.08	344			Pb	02 59 48.5	-0.7
OSI	Osito Audit: C	1.08	344	Pg		Pb	02 59 48.0	-1.2
HLNC	Highland	1.10	60			Pn	02 59 49.1	-0.4
BACC	Bachelor Mtn.	1.11	87			Pn	02 59 48.5	-1.1
CSP	Cedar Springs	1.11	49			Pb	02 59 49.0	-0.7
ALPC	Antelope	1.12	3			Pn	02 59 49.0	-0.7
ALPC						Sb	03 00 02.6	-1.4
BTPC	Burnt Peak	1.12	351			Pn	02 59 49.3	-0.7
BTPC						Sn	03 00 05.0	0.0
SCZ2	Santa Cruz Isl	1.14	292	P		Pn	02 59 50.1	+0.1
	baz=111,SNR=20							
SCZ2				S		Sg	03 00 06.2	+0.4
	baz=111							
SCZ2	Santa Cruz Isl	1.14	292			Pn	02 59 50.0	+0.1
DGR	Domenigoni Val	1.14	86			Pn	02 59 49.0	-1.0
DGR						Sb	03 00 04.1	-0.5
CFT	Crafton Hills	1.15	66			Pn	02 59 49.8	-0.3
HMTC	Hemet	1.15	83			Pn	02 59 49.3	-0.8
HMTC						Sb	03 00 04.8	0.0
FOXC	Fox Airport	1.18	6			Pn	02 59 50.0	-0.5
SVD	Seven Oaks Dam	1.19	63			Pn	02 59 50.3	-0.4
SVD						Sn	03 00 06.7	+0.3
SBB	Saddle Back Bu	1.20	22			Pn	02 59 50.5	-0.5
SBB						Sb	03 00 06.5	0.0
BBSC	Beaumont Base	1.21	73			Pn	02 59 51.2	+0.1
POB	Polly Butte	1.21	84			Pn	02 59 50.5	-0.6
POB						Sb	03 00 06.6	-0.2
ADO	Adelanto Recei	1.25	38			Pn	02 59 51.8	+0.2
109C	Camp Elliot, M	1.26	122	P		Pn	02 59 50.4	-1.2
	baz=304,SNR=59							
109C				S		Sn	03 00 08.5	+0.5
	baz=304							
109C	Camp Elliot, M	1.26	122	Pn		Pn	02 59 50.2	-1.4
CPE	Camp Elliot	1.26	122			Pn	02 59 50.4	-1.2
PLM	Palomar	1.28	99			Pn	02 59 51.1	-0.9
HWB	Hans Werner Br	1.30	114			Pn	02 59 51.0	-1.2
TPO	Tropico Hills	1.31	5			Pn	02 59 52.5	+0.1
VTV	Victorville	1.31	41			Pn	02 59 52.6	+0.2
BTL	Butler Peak	1.33	59			Pn	02 59 52.8	-0.1
EDW2	Edwards Air Fo	1.34	13	P		Pn	02 59 53.2	+0.3
	baz=194,SNR=229							
EDW2				S		Sb	03 00 11.2	+0.7
	baz=194							
EDW2	Edwards Air Fo	1.34	13			Pn	02 59 53.1	+0.3
RYS	Reyes Peak	1.34	323			Pn	02 59 52.5	-0.5
THC	Tehachapi Micr	1.36	350			Pn	02 59 52.7	-0.4
CRY	Cary Ranch	1.36	90			Pn	02 59 52.7	-0.4
BBRC	Big Bear Solar	1.39	60	P		Pn	02 59 53.9	+0.2
	baz=241,SNR=35							
BBRC				S		Sb	03 00 12.6	+0.7
	baz=241							
BBRC	Big Bear Solar	1.39	60			Pn	02 59 53.5	-0.1
MPI	Mount Pinos, F	1.40	333			Pn	02 59 53.2	-0.6
SBC	Santa Barbara	1.42	308	P		Pn	02 59 53.2	-0.5
	baz=127,SNR=6.4							
SBC				S		Sb	03 00 13.4	+0.9
	baz=127							
BZNA	Buzz No.'s Pla	1.43	93			Pn	02 59 54.1	+0.1
DNR	Dunn Ranch,Anz	1.45	90			Pn	02 59 54.5	+0.1
SDRC	San Diego Road	1.46	124			Pn	02 59 53.2	-1.2
ABL	Mount Abel	1.46	331			Pn	02 59 54.0	-0.6
SNDA	J Saunders Pla	1.47	90			Pn	02 59 54.6	0.0
FRD	Ford Ranch, An	1.48	92			Pn	02 59 54.6	-0.1
FRD	Ford Ranch, An	1.48	92			Pn	02 59 54.4	-0.3
SIL	Silver Peak	1.50	58			Pn	02 59 55.7	+0.6
OLP	Otay Lakes Par	1.54	128			Pn	02 59 55.4	-0.1
PFO	Pinyon Flats O	1.59	88	P		Pn	02 59 56.3	-0.1
	baz=270,SNR=187							
PFO				S		Sb	03 00 17.9	0.0
	baz=270							
PFO	Pinyon Flats O	1.59	88	Pn		Pn	02 59 56.3	-0.1
PFO	Pinyon Flats O	1.59	88			Pn	02 59 56.3	-0.1
ARVC	Arvin	1.60	346	P		Pn	02 59 56.6	+0.3
	baz=166,SNR=78							
XPFO	Pion Flat	1.60	88	Pn		Pn	02 59 56.2	-0.2
XPFO	Pion Flat	1.60	88			Pn	02 59 56.2	-0.2
SYP	Santa Ynez Pea	1.64	306			Pn	02 59 56.7	-0.3
BAR	Barrett	1.68	121			Pn	02 59 56.4	-1.0
RRX	Edison Barstow	1.73	41	Pg		Pb	03 00 00.7	+0.5
	baz=222,SNR=7.6							
RRX				Sg		Sg	03 00 23.6	-1.1
	baz=222							
MONP2	Monument Peak	1.77	112	P		Pn	02 59 58.3	-0.5
	baz=294,SNR=54							
MONP2				S		Sn	03 00 20.8	-0.1
	baz=294							
PKM	Mcpherson Peak	1.78	318	P		Pn	02 59 58.9	0.0
	baz=137,SNR=21							
PKM				S		Sn	03 00 22.3	+1.1
	baz=137							
LRMC	Laurel Mtn Rad	1.99	16	P		Pn	03 00 02.2	+0.4
	baz=197,SNR=96							
LRMC				S		Sn	03 00 26.2	-0.1
	baz=197							
BELC	Belle Mtn. Jos	2.02	77	Pn		Pn	03 00 03.3	+1.0
	baz=259,SNR=123							
BELC				Pb		Pb	03 00 05.3	+0.1
	baz=259							
BELC				Sb		Sb	03 00 31.3	+1.1
	baz=259							
ISA	Isabella, Lake	2.09	358	P		Pn	03 00 03.3	+0.2
	baz=178,SNR=67							
ISA	Isabella, Lake	2.09	358	Pn		Pn	03 00 03.5	+0.4
HEC	Hector,Ludlow	2.10	53	P		Pn	03 00 03.4	0.0
	baz=234,SNR=65							
IKP	In-Ko-Pah, Jac	2.11	115	P		Pn	03 00 03.8	+0.4
	baz=297,SNR=51							
IKP				S		Sn	03 00 30.0	+0.8
	baz=297							
IKP	In-Ko-Pah, Jac	2.11	115			Pn	03 00 03.8	+0.4
BCH	Branch Mountai	2.15	319			Pn	03 00 04.6	+0.7
GSC	Goldstone, Bar	2.16	36	P		Pn	03 00 04.8	+0.7
	baz=217,SNR=96							
GSC				S		Sn	03 00 31.9	+1.4
	baz=217							
GSC	Goldstone, Bar	2.16	36	Pn		Pn	03 00 04.7	+0.6
SMMC	Simmler	2.20	323	P		Pn	03 00 05.2	+0.6
	baz=142							
SWSC	Sam W. Stewart	2.24	105	Pb		Pb	03 00 08.2	-0.7
	baz=287							
CLC	China Lake	2.33	16			Pn	03 00 06.8	+0.4
VES	Vestal, Richgr	2.34	346	P		Pn	03 00 06.6	+0.1
	baz=165,SNR=20							
VES				S		Sn	03 00 36.6	+1.9
	baz=165							
BC3	Big Chuckawall	2.44	87	Pb		Pb	03 00 12.2	-0.1
	baz=269,SNR=50							
BC3				Sb		Sb	03 00 44.3	+2.3
	baz=269							
GMRC	Granite Mounta	2.55	61	Pn		Pn	03 00 09.6	+0.1
	baz=243							
GMRC				Pb		Pb	03 00 14.9	+0.6
	baz=243,SNR=43							
GMRC				Sb		Sb	03 00 48.2	+2.9
	baz=243							
MPMC	Manual Prospec	2.59	16	Pn		Pn	03 00 10.4	+0.4
	baz=197,SNR=16							
MPMC				Pg		Pg	03 00 17.4	-1.2
	baz=197							
MPMC				Sb		Sg	03 00 49.5	-2.6
	baz=197							
PAGB	Antelope Grade	2.66	325	Pn		Pn	03 00 12.2	+1.4
IRM	Iron Mountain	2.75	77	P		Pn	03 00 12.8	+0.7
	baz=259,SNR=47							
IRM				Sb		Sb	03 00 53.8	+2.9
	baz=259							
TUQ	Turquoise Moun	2.75	47	P		Pn	03 00 12.4	+0.2
	baz=228,SNR=14							
TUQ				Sb		Sg	03 00 55.3	-2.0
	baz=228							
SHOC	Shoshone, Teco	2.89	36	Sb		Sg	03 00 59.6	-2.4
	baz=217							
GLA	Glamis	3.01	99	Pn		Pn	03 00 17.1	+1.3
PMPB	Monarch Peak	3.31	324	Pn		Pn	03 00 19.4	-0.5
TPNV	Topopah Spring	3.79	27	P		Pn	03 00 28.3	+1.7
	baz=208,SNR=11							
TPNV	Topopah Spring	3.79	27	Pn		Pn	03 00 28.4	+1.8
SHPR	Sheep Range	3.94	41	Pn		Pn	03 00 30.4	+1.7
SAO	San Andreas Ge	4.06	323	Pn		Pn	03 00 29.5	-0.7
OMMB	Old Mammoth Mi	4.07	353	Pn		Pn	03 00 31.0	+0.5
MLAC	Mammoth, Mammo	4.07	355	P		Pn	03 00 33.5	+3.0
	baz=174							
MDPB	Devils Postpil	4.09	352	Pn		Pn	03 00 32.2	+1.3
Y14A	Wickenburg	4.49	84	Pn		Pn	03 00 36.5	+0.5
CMB	Columbia Colle	4.75	340	Pn		Pn	03 00 39.6	0.0
NV11	Mina Array Sit	4.86	2	Pn		Pn	03 00 40.6	-0.6
214A	Organ Pipe Nat	4.95	107	Pn		Pn	03 00 43.0	+0.6
WAKR	Walker	5.00	350	Pn		Pn	03 00 43.6	+0.4
RYN	Ryan	5.05	359	Pn		Pn	03 00 43.0	-0.9
R11A	Troy Canyon, C	5.28	25	Pn		Pn	03 00 45.6	-1.4
LCMT	Little Creek M	5.42	49			Pn	03 00 49.7	+0.8
YERR	Yerington	5.45	353	Pn		Pn	03 00 50.8	+1.4
KVN	Kaiserville	5.47	2	Pn		Pn	03 00 50.6	+0.9
PNTR	Pine Nut	5.60	350	Pn		Pn	03 00 52.1	+0.6
KNB	Kanab	5.69	51			Pn	03 00 54.8	+2.1
U15A	North Rim	5.75	59	Pn		Pn	03 00 55.3	+1.7
AFDM	Forest Hills D	5.76	339	Pn		Pn	03 00 55.4	+1.8
X16A	Lo Mia Camp, P	5.82	80	Pn		Pn	03 00 55.3	+0.8
WUAZ	Wupatki	6.09	69	Pn		Pn	03 00 58.0	-0.2
PSUT	Pine Spring	6.16	35	Pn		Pn	03 00 59.5	+0.4
PAHR	Pah Rah Range	6.18	353	Pn		Pn	03 01 01.7	+2.3
PKCU	Pink Cliffs	6.27	50	Pn		Pn	03 01 00.9	+0.1
BEKR	Beckworth	6.48	346	Pn		Pn	03 01 05.3	+1.7
TUC	Tucson	6.50	99	Pn		Pn	03 01 05.3	+1.5
MTPU	Mount Pierson	6.72	47	Pn		Pn	03 01 09.1	+2.1
MSU	Marysvale	7.03	44	Pn		Pn	03 01 12.4	+1.2
ELK	Elko	7.58	18	Pn		Pn	03 01 18.9	+0.1
DUG	Dugway, Tooele	7.97	32	Pn		Pn	03 01 24.9	+1.0
BGU	Big Grassy Mou	8.48	29	Pn		Pn	03 01 31.7	+0.6
PV19	Morning Glory	8.96	55	Pn		Pn	03 01 38.6	+1.0
PV17	East Wray Mesa	8.96	56	Pn		Pn	03 01 37.8	+0.2
PV14	Lion Creek, Pa	8.96	55	Pn		Pn	03 01 38.9	+1.2
PV18	Skein Mesa, Pa	8.98	56	Pn		Pn	03 01 38.9	+1.0
PV20	West Nyswonger	8.99	55	Pn		Pn	03 01 38.7	+0.7
PV13	Radium Mtn., P	9.00	57	Pn		Pn	03 01 39.2	+1.0
PV23	Carpenter Ridg	9.01	55	Pn		Pn	03 01 39.5	+1.2
PV03	Paradox Valley	9.03	56	Pn		Pn	03 01 39.2	+0.7

IDC ***31*** *03:03:36.5±1.1, 9°.42N×126°.70E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/40, mbtmp3.7/7, Error ellipse: s-maj=58.9km s-min=22.5km az=75.0*

MAN ***31*** *03:03:39.1, 9°.38N×126°.76E, h3km, mb5.1, ML4.1, MS4.2*

ISC 31 03:03:42.6±0.9, 9°.44N±0°.07×126°.9E±0°.1, h43km, n12, σ1s34/14, mb3.8/7, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SCPH	Surigao	1.39	284	⇓	eP		Pn	03 04 03.4	-2.2
MSLP	Maasin	2.09	290		eP		Pn	03 04 14.7	-0.4
MSLP					eS		Sn	03 04 40.6	+0.7
BUKP	Musuan	2.36	229		eP		Pn	03 04 17.8	-1.1
BUKP					eS		Sn	03 04 46.7	+0.1
KCP	Kidapawan	2.98	216	⇑	iP		Pn	03 04 31.9	+4.4
KCP					i S		Sn	03 05 04.5	+2.4
RCP	Roxas	4.56	298	⇑	eP		Pn	03 04 50.2	+1.1
WRA	Warramunga Arr	30.11	166	P			P	03 09 47.3	-1.1
	0.3nm,0.5s,baz=346,slow=9.4,SNR=1.4								
ASAR	Alice Springs	33.62	168	P			P	03 10 20.1	+0.9
	0.1nm,0.3s,baz=340,slow=6.7,SNR=1.5								
PETK	Petropavlovsk-	50.16	24	P			P	03 12 33.3	-0.4
	2.2nm,0.8s,baz=260,slow=8.3,SNR=2.5								
MKAR	Makanchi Array	53.03	323	P			P	03 12 54.8	-0.6
	0.6nm,0.7s,baz=108,slow=9.3,SNR=3.7								
KURBB	Kurchatov Arra	57.08	325	P			P	03 13 24.1	-0.4
	0.6nm,0.6s,baz=127,slow=6.6,SNR=6.7								
TIXI	Tiksi	62.17	1	P			P	03 14 00.9	+1.7
	0.5nm,0.3s,baz=108,slow=13,SNR=1.7								
ARCES	ARCESS Array B	85.17	340	P			P	03 16 13.3	-0.7
	0.8nm,0.6s,baz=73,slow=6.0,SNR=5.1								

VIE ***31*** *03:12:49.3±0.7, 50°.04N×18°.46E, h0km, mb2.5/6, ml3.1/6, Error ellipse: s-maj=10.0km s-min=5.5km az=145.0 27 km NNE of Ostrava Suspected Mining induced.*

IPEC ***31*** *03:12:49.7±0.2, 50°.08N×18°.46E, h0km, 3km, ML2.9/3, Error ellipse: s-maj=1.9km s-min=1.1km az=163.0*

LDG ***31*** *03:12:50.7±0.3, 50°.08N×18°.36E, h1km, Error ellipse: s-maj=8.0km s-min=5.0km az=15.0, Suspected Mining induced.*

BGR ***31*** *03:12:50.7±0.3, 50°.07N×18°.41E, h1km, ML3.3/25, Error ellipse: s-maj=4.4km s-min=3.3km az=161.0*

PRU ***31*** *03:12:50.3±0.0, 50°.01N×18°.39E, h0km*

IDC ***31*** *03:12:53.0±1.0, 50°.22N×18°.01E, h0km, mb1 3.4/4, mb1mx3.2/30, mbtmp3.2/4, ML2.9/4, Error ellipse: s-maj=20.5km s-min=8.2km az=144.0*

ISC 31 03:12:47.8±0.7, 50.07N±0.02×18.43E±0.02, h0km, n85, σ1s72/148, 3C-5D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.29	218		ePg		Pb	03 12 56.2	+0.2
OKC					eSg		Sb	03 13 01.1	-0.3
OKC	Ostrava-Krasne	0.29	218		ePG		Pb	03 12 56.1	+0.1
OKC					eSG		Sg	03 12 59.6	+2.3
	comp=Z,1μm,0.9s								
MORC	Moravsky Berou	0.64	243		ePG		Pb	03 13 02.3	+0.3
MORC					eSG		Sb	03 13 10.6	-0.9
MORC	Moravsky Berou	0.64	243		ePg		Pb	03 13 02.3	+0.3
MORC					eSg		Sb	03 13 11.9	+0.4
MORC	Moravsky Berou	0.64	243	⇓	P		Pb	03 13 02.3	+0.3
MORC				⇑	S		Sb	03 13 11.5	0.0
MORC	Moravsky Berou	0.64	243		ePg		Pb	03 13 02.2	+0.3
	baz=62								
MORC					eSg		Sb	03 13 10.5	-0.9
	214nm,0.2s,baz=62								
OJC	Ojcow	0.90	80		ePg		Pb	03 13 06.6	+0.3
OJC					eSg		Sn	03 13 20.7	-0.6
KRLC	Kraliky	1.06	271		ePG		Pb	03 13 09.5	+0.4
KRLC					eSG		Sb	03 13 23.7	+0.2
	comp=Z,439nm,0.6s								
LANS	Liptovska Anna	1.14	143		ePG		Pn	03 13 11.8	+0.7
LANS					eSG		Sg	03 13 24.6	+0.1
LANS					eLG		Lg	03 13 31.7	
JAVC	Velka Javorina	1.31	202		ePG		Pn	03 13 15.0	+1.6
JAVC	Velka Javorina	1.31	202		ePg		Pn	03 13 15.3	+1.9
JAVC					eSg		Sn	03 13 33.2	+1.6
JAVC	Velka Javorina	1.31	202		ePg		Pn	03 13 15.0	+1.6
	baz=22								
DPC	Dobruska-Polom	1.38	282		ePn		Pb	03 13 15.7	+1.2
DPC					eSg		Sn	03 13 35.0	+1.6
DPC	Dobruska-Polom	1.38	282		ePG		Pb	03 13 15.9	+1.4
DPC					eSG		Sn	03 13 34.1	+0.7
	comp=Z,300nm,0.5s								
VRAC	Vranov	1.41	238		ePG		Pb	03 13 16.3	+1.2
VRAC					eSG		Sn	03 13 34.8	+0.7
VRAC	Vranov	1.41	238		ePn		Pb	03 13 16.0	+0.9
VRAC					eSg		Sn	03 13 35.3	+1.2
VRAC	Vranov	1.41	238	⇑	P		Pb	03 13 16.4	+1.2
VRAC				⇓	S		Sn	03 13 35.2	+1.0
VRAC	Vranov	1.41	238		ePg		Pb	03 13 16.3	+1.2
	baz=57								
VRAC					eSg		Sn	03 13 34.8	+0.7
	136nm,0.3s,baz=57								
OSTC	Ostas	1.50	290		ePG		Pb	03 13 17.1	+0.6
OSTC					eSG		Sn	03 13 38.4	+2.2
	comp=Z,180nm,0.6s								
KSP	Ksiaz	1.57	300		ePn		Pb	03 13 18.0	+0.4
KSP					eSg		Sg	03 13 40.7	+2.6
VYHS	Vyhne	1.60	170		ePG		Pb	03 13 18.7	+0.4
CHVC	Chvalec	1.60	290		ePG		Pb	03 13 18.8	+0.4
CHVC					eSG		Sg	03 13 41.6	+2.2
	comp=Z,180nm,0.9s								
UPC	Upice	1.61	287		ePG		Pg	03 13 19.3	+0.7
UPC					eSG		Sg	03 13 41.5	+2.0
	comp=Z,113nm,0.7s								
KRUC	Moravsky	1.66	233		ePG		Pg	03 13 20.2	+0.5
KRUC					eSG		Sg	03 13 42.5	+1.3
KRUC	Moravsky	1.66	233		ePn		Pn	03 13 19.0	+0.7
KRUC					eSg		Sg	03 13 42.7	+1.5
KRUC	Moravsky	1.66	233		ePg		Pg	03 13 20.1	+0.4
	baz=52								
KRUC					eSg		Sg	03 13 42.5	+1.3
	133nm,0.3s,baz=52								
MODS	Modra-Piesok	1.86	204		ePG		Pn	03 13 21.4	+0.5
MODS					eSG		Sn	03 13 45.8	+0.7
MODS					eLG		Lg	03 13 55.3	
STHS	Stebnicka Huta	1.94	109		ePN		Pg	03 13 26.4	+1.4
STHS					eSG		Sg	03 13 54.8	+4.6
TREC	Trest	2.06	249		ePn		Pn	03 13 25.2	+1.5
TREC					eSg		Sg	03 13 54.8	+0.8
TREC	Trest	2.06	249		ePG		Pb	03 13 27.0	+0.9
TREC					eSG		Sg	03 13 54.8	+0.8
	comp=Z,74nm,0.3s								
ZST	Bratislava	2.07	205		ePN		Pn	03 13 24.2	+0.4
ZST					eSG		Sn	03 13 50.7	+0.5
ZST					eLG		Lg	03 13 51.3	
KECS	Kecovo	2.08	139		ePN		Pn	03 13 25.4	+1.4
KECS					e			03 13 30.2	
KECS	Kecovo	2.08	139		eSN		Sn	03 13 51.0	+0.3
CRVS	Cervenica-Dubn	2.30	119		ePN		Pg	03 13 32.3	+0.4
BEL	Belsk	2.31	39		ePn		Pn	03 13 29.3	+2.2
GOPC	GO Pecny, Ondr	2.35	268		ePG		Pb	03 13 32.1	+1.0
GOPC					eSG		Sg	03 14 03.9	+0.5
PSZ	Piszkesteto	2.36	155		ePn		Pn	03 13 29.4	+1.5
PRU	Pruhonice	2.51	270		ePn		Pn	03 13 30.3	+0.5
PRU					eSg		Sg	03 14 08.2	-0.1
PRU	Pruhonice	2.51	270		ePG		Pb	03 13 34.5	+0.8
PRU					eSG		Sg	03 14 08.8	+0.5
	comp=Z,116nm,1.0s								
PVCC	Panska Ves	2.52	282		ePg		Pg	03 13 37.7	+1.7
PVCC					eSg		Sg	03 14 10.0	+1.4
PVCC	Panska Ves	2.52	282		ePG		Pg	03 13 36.4	+0.4
PVCC					eSG		Sg	03 14 09.6	+1.0
	comp=Z,131nm,0.5s								
PRA	Prague	2.57	272		ePN		Pn	03 13 32.8	+2.1
PRA					ePG		Pg	03 13 37.1	0.0
PRA					eSG		Sg	03 14 10.9	+0.5
	comp=Z,59nm,1.0s								
BUD	Budapest	2.62	171		ePn		Pn	03 13 33.5	+2.1
BUD					eSg		Sg	03 14 14.9	+2.9
CONA	Conrad Observa	2.73	219		ePn		Pn	03 13 34.0	+1.1
	1.3nm,0.2s								
CONA	

MOTA				Sg	**Sg**	**03 15 46.3**	**-0.1**
	comp=Z,32nm,0.7s							
SQTA	**Sankt Quirin**	**5.57**	**242**	Sg	**Sg**	**03 15 48.7**	**+2.0**
	comp=Z,9.5nm,0.4s							
RETA	**Reutte**	**5.69**	**246**	Sg	**Sg**	**03 15 49.9**	**-0.5**
	comp=Z,24nm,0.7s							
FETA	**Feichten**	**5.95**	**242**	Sg	**Sg**	**03 15 59.7**	**+0.8**
	comp=Z,4.2nm,0.4s							
DAVA	**Damuels**	**6.31**	**247**	Sg	**Sg**	**03 16 09.9**	**-0.5**
	comp=Z,11nm,0.6s							
AKASG	**Malin Array Be**	**6.94**	**81**	Pn	Pn	03 14 35.7	+5.1
	comp=Z,0.8nm,0.3s,baz=258,slow=14,SNR=2.3							
AKASG				Pg	**Pg**	**03 14 57.8**	**-2.8**
	comp=Z,1.2nm,0.3s,baz=268,slow=15,SNR=4.5							
NACGM	**Naroch**	**7.03**	**43**	*e*	**Pg**	**03 15 01.0**	**-1.4**
CDF	**Champ du Feu**	**7.49**	**261**	*e*Pn	**Sb**	**03 16 22.6**	**-5.7**
CDF	**Champ du Feu**	**7.49**	**261**	*e*Pg	**Sb**	**03 16 23.9**	**-4.4**
CDF				*e*Sg	**Sg**	**03 16 42.5**	**-5.6**
HINF	**Hinteralfeld**	**7.95**	**258**	*e*Pg	**Sb**	**03 16 36.4**	**-5.1**
HINF				*e*Sg	**Sg**	**03 17 02.4**	**-0.5**
HAU	**Haudompre**	**8.20**	**260**	*e*Pg	Sb	03 16 32.9	-16
HAU				*e*Sg	Sg	03 16 58.0	-13
FINES	**FINESS Array B**	**12.17**	**18**	Pn	**Pn**	**03 15 40.6**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=201,slow=10,SNR=12							
FINES				Sn	**Sn**	**03 17 52.0**	**-6.6**
	comp=Z,0.2nm,0.3s,baz=204,slow=20,SNR=2.1							
ARCES	**ARCESS Array B**	**19.82**	**7**	Pn	**P**	**03 17 20.2**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=195,slow=13,SNR=5.0							

TAP 31 03:13:14.9,24.68N×121.13E,h9km±1km,ML2.3,3D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NSTT	**Nanjuang**	**0.13**	**247**	*i* P	Pg	03 13 18.5	+0.6
	baz=244						
NSTT				*i* S	Sg	03 13 21.1	+1.2
	baz=244						
SBCB	**Hsinchu**	**0.17**	**309**	*e*P	Pg	03 13 19.5	+0.9
	baz=309						
HSN	**Hsinchu**	**0.19**	**309**	P	Pg	03 13 19.6	+0.7
	baz=323						
HSN				S	Sg	03 13 23.2	+1.7
	baz=323						
NSK	**Sanguang**	**0.20**	**92**	⇓*i*P	Pg	03 13 20.4	+1.3
	baz=92						
NSK				*i* S	Sg	03 13 23.9	+1.9
	baz=92						
YHNB	**Yeheng**	**0.22**	**93**	⇓P	Pg	03 13 20.6	+1.2
	baz=93						
YHNB				S	Sg	03 13 24.3	+1.7
	baz=93						
NCUH	**Zhongli**	**0.29**	**9**	*e*P	Pb	03 13 22.0	-0.3
	baz=9.0						
NCUH				*e*S	Sb	03 13 26.1	-1.0
	baz=9.0						
NNS	**Nan Shan**	**0.33**	**138**	*e*P	Pb	03 13 22.8	-0.1
	baz=137						
NNS				*e*S	Sb	03 13 27.9	-0.4
	baz=137						
NHW	**Xinwu Township**	**0.33**	**346**	S	Sb	03 13 27.5	-0.9
	baz=346						
NNSB	**Datong**	**0.34**	**138**	⇓P	Pb	03 13 23.1	0.0
	baz=138						
NNSB				S	Sb	03 13 28.2	-0.5
	baz=138						
NNSH	**Datong**	**0.34**	**138**	*e*P	Pb	03 13 23.1	0.0
	baz=138						
NNSH				*e*S	Sb	03 13 28.2	-0.6
	baz=138						
NMLH	**Miaoli**	**0.34**	**245**	*e*P	Pg	03 13 22.2	+0.6
	baz=244						
NMLH				*e*S	Sb	03 13 28.4	-0.3
	baz=244						
NWLT	**Wulai**	**0.35**	**74**	*e*P	Pb	03 13 22.8	-0.4
	baz=74						
NWLT				*e*S	Sb	03 13 27.9	-1.0
	baz=74						
NDT	**Datong Townshi**	**0.35**	**103**	*e*P	Pb	03 13 22.8	-0.5
	baz=103						
NDT				S	Sb	03 13 28.3	-0.7
	baz=103						
TWT	**Tachien**	**0.43**	**175**	*e*S	Sb	03 13 31.2	-0.2
	baz=176						
WHP	**Taichung City**	**0.44**	**203**	*e*P	Pb	03 13 24.9	+0.1
	baz=202						
WHP				S	Sb	03 13 30.6	-0.9
	baz=202						
PTSB	**Yuanli**	**0.46**	**239**	*e*P	Pg	03 13 24.3	+0.5
	baz=238						
PTSB				*e*S	Sb	03 13 31.6	-0.3
	baz=238						
TWQ1	**Liyutan**	**0.47**	**225**	*e*P	Pb	03 13 25.9	+0.6
	baz=224						
WHF	**Hehuan Shan**	**0.55**	**167**	P	Pb	03 13 27.9	+1.0
	baz=166						
WHF				S	Sb	03 13 35.8	+0.8
	baz=166						
WDJ	**Dajia District**	**0.56**	**233**	*e*P	Pb	03 13 27.3	+0.5
	baz=233						
WDJ				*e*S	Sb	03 13 35.5	+0.5
	baz=233						
ETLH	**Xiulin Townshi**	**0.57**	**146**	*e*P	Pb	03 13 27.3	+0.2
	baz=146						
ETLH				*e*S	Sb	03 13 35.2	-0.1
	baz=146						
ENA	**Nanau**	**0.61**	**115**	*e*P	Pb	03 13 27.9	+0.2
	baz=114						
ENA				*e*S	Sb	03 13 36.9	+0.5
	baz=114						
YM10	**YM10**	**0.61**	**39**	*e*S	Sb	03 13 36.9	+0.4
	baz=39						
CHGB	**Renai**	**0.62**	**177**	*e*P	Pb	03 13 27.7	-0.3
	baz=176						
CHGB				*e*S	Sb	03 13 36.5	-0.5
	baz=176						
YM11	**YM11**	**0.63**	**40**	*e*P	Pb	03 13 27.7	-0.3
	baz=39						
NACB	**Ninganchiao**	**0.66**	**140**	*e*P	Pb	03 13 28.3	-0.2
	baz=140						
NACB				*e*S	Sb	03 13 38.3	+0.5
	baz=140						
TCU	**Taichung**	**0.68**	**218**	*e*S	Sb	03 13 38.7	+0.4
	baz=217						
TIPB	**Shuangxi**	**0.69**	**65**	*e*P	Pb	03 13 28.9	-0.2
	baz=65						
TIPB				*e*S	Sb	03 13 39.3	+0.5
	baz=65						
NWF	**Wu-fen Shan**	**0.70**	**57**	*e*P	Pb	03 13 29.9	+0.6
	baz=56						
WFSB	**Wu-fen Shan**	**0.70**	**57**	*e*P	Pb	03 13 29.8	+0.5
	baz=56						

*NIED **31** 03:14:00,24.90N×123.30E,h5km,Mw4.0 Best double couple: M₀9.63000×10¹⁴ NP1:φ₈281.00000°,δ52.00000°, λ-80.00000°. NP2:φ₈85.00000°,δ39.00000°, λ-103.00000°.*
*JMA **31** 03:14:54.1±0.2,24.89N×123.29E,h22km±4km,M3.6*
*IDC **31** 03:15:04.6±6.5,24.85N×123.27E,h96km±64km,mb3.4/8, mb1 3.6/9,mb1mx3.3/32,mbtmp3.7/9,ML3.5/1,MS3.2/4, Ms1 3.2/4,ms1mx2.8/30,Error ellipse: s-maj=29.5km s-min=17.0km az=77.0*

ISC 31 03:14:53.1±1.8,24.89N±0.06×123.32E±0.04,h2km±13km, n19,σ1s01/24,mb3.8/8,MS3.1/3,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.51**	**214**	P	**Pb**	**03 15 03.9**	**-0.8**
YOJ				*e*S	**Sg**	**03 15 14.3**	**+0.9**
JYNG	**Yonagunijimaku**	**0.55**	**218**	P	**Pb**	**03 15 04.6**	**-0.8**
JYNG				*e*S	**Sb**	**03 15 12.2**	**-1.5**
IRIF	**Iriomote-Funau**	**0.67**	**146**	P	**Pb**	**03 15 07.0**	**-0.3**
IRIF				S	**Sb**	**03 15 16.6**	**-0.4**
JKRS	**Kuro-shima**	**0.90**	**136**	P	**Pb**	**03 15 11.0**	**-0.4**
JKRS				S	**Sb**	**03 15 23.3**	**-0.5**
JIJ	**Ishigaki jima**	**0.91**	**125**	P	**Pg**	**03 15 11.0**	**+0.4**
JIJ				S	**Sg**	**03 15 22.8**	**+0.4**
HATJ	**Hateruma jima**	**0.94**	**152**	P	**Pb**	**03 15 11.6**	**-0.4**
HATJ				*e*S	**Sg**	**03 15 23.6**	**+0.4**
JISG	**Ishigakijimahi**	**0.95**	**108**	P	**Pg**	**03 15 11.7**	**+0.4**
JTJ	**Tarama**	**1.28**	**101**	P	**Pg**	**03 15 17.4**	**-0.2**
JTJ				S	**Sg**	**03 15 34.0**	**-0.2**
KSRS	**Korea Array**	**13.13**	**16**	P	**P**	**03 18 08.6**	**-2.3**
	0.3nm,0.3s,baz=196,slow=13,SNR=6.3						
KSRS				LR	LR	03 23 08.0	
	comp=Z,64nm,18.9s,baz=202,slow=37						
USRK	**Ussuriysk Ar.**	**20.52**	**18**	LR	LR	03 28 18.6	
	comp=Z,66nm,18.2s,baz=231,slow=39						
CMAR	**Chiang Mai Arr**	**23.52**	**259**	P	**P**	**03 20 04.9**	**+0.3**
	0.6nm,0.3s,baz=58,slow=7.3,SNR=4.3						
KLR	**Kul'dur**	**25.18**	**13**	P	**P**	**03 20 20.1**	**+0.4**
	2.1nm,1.0s,baz=231,slow=7.4,SNR=4.2						
SONM	**Songino Array**	**26.54**	**334**	P	**P**	**03 20 33.7**	**+1.5**
	0.7nm,0.3s,baz=144,slow=12,SNR=5.0						
SONM				LR	LR	03 31 58.8	
	comp=Z,69nm,19.2s,baz=122,slow=38						
PETK	**Petropavlovsk-**	**38.21**	**33**	LR	LR	03 41 01.3	
	comp=Z,27nm,18.1s,baz=65,slow=41						
MKAR	**Makanchi Array**	**39.21**	**314**	P	**P**	**03 22 22.7**	**0.0**
	0.9nm,0.9s,baz=123,slow=5.3,SNR=3.7						
ZALV	**Zalesovo Beam**	**40.74**	**326**	P	**P**	**03 22 37.6**	**+2.5**
	0.6nm,0.3s,baz=126,slow=14,SNR=1.8						
WRA	**Warramunga Arr**	**45.83**	**165**	P	**P**	**03 23 16.8**	**+0.2**
	1.7nm,0.8s,baz=347,slow=8.7,SNR=11						
ASAR	**Alice Springs**	**49.34**	**167**	P	**P**	**03 23 44.4**	**+0.5**
	0.5nm,0.6s,baz=352,slow=13,SNR=9.5						
YKA	**Yellowknife Ar**	**81.56**	**23**	P	**P**	**03 27 11.6**	**-0.4**
	0.5nm,0.8s,baz=306,slow=4.7,SNR=5.9						

KRSC 31 03:21:39.5±1.4,49.71N×156.93E,h16km±28km,ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.10**	**332**	P	Pb	03 21 58.9	-1.3
SKR				S	Sb	03 22 13.3	-1.0
PAU	**Pauzhetka**	**1.76**	**358**	P	Pb	03 22 10.6	-0.7
PAU				S	Sb	03 22 33.2	+0.1
MIPR	**Malaya Ipel'ka**	**2.57**	**358**	P	Pn	03 22 21.9	+1.5
ASAK	**Asacha**	**2.74**	**13**	P	Pb	03 22 25.8	-2.4
MTVR	**Mutnovka**	**2.88**	**15**	P	Pn	03 22 27.7	+2.8
MTVR				S	Sb	03 23 03.5	-2.2
RUS	**Russkaya**	**2.90**	**20**	P	Pn	03 22 27.1	+2.1
RUS				S	Sb	03 23 02.8	-3.2
GRL	**Gorelyy**	**2.93**	**14**	P	Pn	03 22 28.4	+2.9
GRL				S	Sb	03 23 04.5	-2.6
DALK	**Dalny**	**3.52**	**18**	P	Pn	03 22 35.9	+2.5
DALK				S	Sn	03 23 17.8	+3.2
UGLR	**Uglovaya**	**3.70**	**18**	P	Pn	03 22 39.5	+3.5
AVH	**Avacha**	**3.73**	**17**	P	Pn	03 22 40.7	+4.2
KOK	**Koryaka**	**3.74**	**16**	P	Pn	03 22 40.8	+4.2
SMAR	**Somma**	**3.74**	**18**	P	Pb	03 22 41.2	-4.1
KRER	**Koryakskii**	**3.77**	**17**	P	Pn	03 22 41.1	+4.0
SDLR	**Sedlovina**	**3.77**	**18**	P	Pn	03 22 40.1	+3.0
KRX	**Arik**	**3.81**	**16**	P	Pn	03 22 41.9	+4.4
SPN	**Mys Shipunski**	**3.91**	**29**	P	Pn	03 22 41.8	+3.1
SPN				S	Sn	03 23 28.2	+4.0
TUMR	**Tumrok**	**5.92**	**18**	P	Pn	03 23 11.1	+4.6

IDC 31 03:29:51.6±8.4,3.08N×128.41E,h150km±84km,mb3.4/6, mb1 3.6/6,mb1mx3.2/33,mbtmp3.8/6,Error ellipse: s-maj=51.2km s-min=17.8km az=81.0,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.22**	**187**	P	P	03 34 25.7	0.0
	2.1nm,0.9s,baz=360,slow=12,SNR=1.4						
WRA	**Warramunga Arr**	**23.61**	**166**	P	P	03 34 48.7	-0.3
	0.8nm,0.3s,baz=343,slow=10.0,SNR=28						
ASAR	**Alice Springs**	**27.12**	**169**	P	P	03 35 20.8	+0.1
	0.9nm,0.5s,baz=354,slow=7.8,SNR=22						
ASAR				PcP	PcP	03 38 36.8	-1.0
	0.2nm,0.4s,baz=347,slow=2.9,SNR=2.4						
MJAR	**Matsushiro Arr**	**34.51**	**14**	P	P	03 36 24.8	-0.7
	0.6nm,0.4s,baz=181,slow=9.5,SNR=5.3						
STKA	**Stephens Creek**	**36.95**	**161**	P	P	03 36 46.8	+0.4
	0.7nm,0.3s,baz=324,slow=17,SNR=3.7						
MKAR	**Makanchi Array**	**59.05**	**325**	P	P	03 39 36.5	+0.6
	0.6nm,0.5s,baz=113,slow=8.5,SNR=6.0						

IDC 31 03:35:34.5±2.8,7.52S×123.85E,h257km±29km,mb2.8/1, mb1 3.2/5,mb1mx2.9/33,mbtmp3.7/5,Error ellipse: s-maj=91.4km s-min=16.8km az=60.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.67**	**184**	P	Pn	03 36 22.8	-1.2
	49nm,0.3s,baz=357,slow=4.5,SNR=14						
BATI				S	S	03 37 00.7	-2.7
	68nm,0.3s,baz=104,slow=4.2,SNR=17						
FITZ	**Fitzroy Crossi**	**10.65**	**171**	P	Pn	03 38 03.0	+1.8
	0.3nm,0.3s,baz=6.0,slow=11,SNR=14						
FITZ				S	S	03 39 57.0	-3.7
	0.1nm,0.3s,baz=307,slow=20,SNR=1.4						
WRA	**Warramunga Arr**	**15.99**	**142**	P	Pn	03 39 05.9	-0.4
	0.9nm,0.3s,baz=315,slow=12,SNR=37						
WRA				S	S	03 41 57.9	-1.9
	0.2nm,0.3s,baz=320,slow=23,SNR=4.8						
ASAR	**Alice Springs**	**18.73**	**150**	P	P	03 39 35.5	+0.9
	0.3nm,0.3s,baz=340,slow=15,SNR=14						
ASAR				S	S	03 42 53.8	-0.2
	baz=324,slow=20,SNR=4.8						
MKAR	**Makanchi Array**	**65.47**	**330**	P	P	03 45 49.9	-0.3
	0.2nm,0.4s,baz=132,slow=5.6,SNR=1.5						

*ATH **31** 03:49:48.8,38.40N×20.50E,h14km±1km,ML3.0/16,Error ellipse: s-maj=1.4km s-min=0.6km az=247.0*
*THE **31** 03:49:49.0,38.40N×20.44E,h10km,ML3.1/14,Error ellipse: s-maj=0.8km s-min=0.5km az=100.0*

ISC 31 03:49:48.7±0.8,38.40N±0.02×20.47E±0.02,h13km±4km, n75,σ0s64/121,1D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VSK1	**VASILIKIADES**	**0.08**	**84**	P	**Pg**	**03 49 51.2**	**-0.3**
VSK1				S	**Sg**	**03 49 52.9**	**-0.6**
	79μm,0.2s						
FSK	**Fiskardo**	**0.10**	**52**	P	**Pg**	**03 49 51.5**	**-0.2**
FSK				S	**Sg**	**03 49 53.5**	**-0.3**
	11μm,0.3s						
FSK	**Fiskardo**	**0.10**	**52**	P	**Pg**	**03 49 51.5**	**-0.2**
FSK				AML	AML	03 49 52.8	
	comp=N,13498μm,0.3s						
FSK				S	**Sg**	**03 49 53.4**	**-0.3**
FSK				AML	AML	03 49 56.5	
	comp=E,25720μm,0.3s						
KEF4	**Livadi, Kephal**	**0.15**	**193**	P	**Pg**	**03 49 52.5**	**+0.1**
KEF4				S	**Sg**	**03 49 54.9**	**0.0**
AGT1	**Agia Thekli**	**0.16**	**203**	P	**Pg**	**03 49 52.7**	**+0.1**
AGT1				S	**Sg**	**03 49 55.3**	**+0.1**
LXRA	**Lixouri, Kepha**	**0.20**	**186**	P	**Pg**	**03 49 53.5**	**+0.3**
LXRA				S	**Sg**	**03 49 57.1**	**+0.9**
KEF3	**Kipouria, Keph**	**0.22**	**205**	P	**Pg**	**03 49 53.6**	**+0.2**
KEF3				S	**Sg**	**03 49 57.1**	**+0.4**
ARG2	**Argostoli**	**0.22**	**175**	P	**Pg**	**03 49 53.6**	**+0.1**
ARG2				S	**Sg**	**03 49 57.3**	**+0.5**
	comp=E,39μm,0.2s						
ARGA	**Argostoli. Kep**	**0.22**	**177**	P	**Pg**	**03 49 53.6**	**+0.1**
ARGA				S	**Sg**	**03 49 56.9**	**+0.1**
VLS	**Valsamata**	**0.24**	**156**	P	**Pg**	**03 49 53.9**	**0.0**
VLS				S	**Sg**	**03 49 57.9**	**+0.5**
VLS	**Valsamata**	**0.24**	**156**	P	**Pg**	**03 49 53.7**	**-0.2**
VLS				S	**Sg**	**03 49 57.4**	**-0.1**
VLS				AML	AML	03 49 58.0	
	comp=N,9020μm,0.1s						
VLS				AML	AML	03 49 58.0	
	comp=E,12715μm,0.1s						
EVGI	**Lefkada island**	**0.27**	**34**	P	**Pg**	**03 49 54.6**	**+0.2**
EVGI				S	**Sg**	**03 49 59.0**	**+0.9**
EVGI	**Lefkada island**	**0.27**	**34**	P	**Pg**	**03 49 54.5**	**+0.2**
EVGI				S	**Sg**	**03 49 58.6**	**+0.5**
MGNA	**Meganis**	**0.36**	**45**	P	**Pg**	**03 49 56.0**	**0.0**
MGNA				S	**Sg**	**03 50 01.0**	**+0.1**
KFL	**Anninata**	**0.39**	**139**	P	**Pg**	**03 49 56.4**	**0.0**
KFL				S	**Sb**	**03 50 02.6**	**-0.6**
	comp=E,6μm,0.3s						
KFL	**Anninata**	**0.39**	**139**	P	**Pg**	**03 49 56.4**	**0.0**
KFL				S	**Sg**	**03 50 02.0**	**+0.3**
KFL				AML	AML	03 50 03.5	
	comp=E,14573μm,0.5s						
KFL				AML	AML	03 50 08.3	
	comp=N,9574μm,0.3s						
LKD2	**Lefkada island**	**0.42**	**21**	P	**Pg**	**03 49 57.2**	**+0.2**
LKD2				S	**Sb**	**03 50 04.0**	**-0.1**
	comp=N,2μm,0.6s						
LKD2	**Lefkada island**	**0.42**	**21**	P	**Pg**	**03 49 57.1**	**+0.1**
LKD2				S	**Sg**	**03 50 03.4**	**+0.8**
LKD2				AML	AML	03 50 04.4	
	comp=N,3681μm,0.7s						
LKD2				AML	AML	03 50 05.2	
	comp=E,3565μm,0.4s						
TSLK	**Tsoukalades, L**	**0.45**	**19**	P	**Pg**	**03 49 58.0**	**+0.4**
TSLK				S	**Sg**	**03 50 03.9**	**+0.3**
	comp=E,2μm,0.7s						
TSLK	**Tsoukalades, L**	**0.45**	**19**	P	**Pg**	**03 49 58.0**	**+0.4**
TSLK				S	**Sg**	**03 50 03.3**	**-0.3**
TSLK				AML	AML	03 50 06.9	
	comp=E,2680μm,0.5s						
TSLK				AML	AML	03 50 07.1	
	comp=N,4633μm,0.3s						
AST1	**Astakos**	**0.51**	**74**	P	**Pg**	**03 49 59.0**	**+0.3**
AST1				S	**Sb**	**03 50 07.5**	**+0.8**
	comp=N,5μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.55**	**163**	P	**Pg**	**03 49 59.1**	**-0.3**
VLMS				S	**Sb**	**03 50 07.5**	**-0.3**
VLMS				AML	AML	03 50 08.5	
	comp=N,13779μm,0.3s						
VLMS				AML	AML	03 50 09.2	
	comp=E,9537μm,0.2s						
PDO	**Prodromos**	**0.60**	**70**	P	**Pg**	**03 50 00.3**	**-0.1**
PDO				S	**Sb**	**03 50 10.3**	**+1.0**
	comp=E,2μm,0.4s						
PDO	**Prodromos**	**0.60**	**70**	P	**Pg**	**03 49 59.8**	**-0.5**
PDO				S	**Sg**	**03 50 07.6**	**-0.6**
KRI1	**kERI**	**0.79**	**159**	P	**Pg**	**03 50 03.5**	**-0.5**
KRI1				S	**Sb**	**03 50 15.9**	**+1.2**
	comp=E,4μm,0.4s						
PVO	**Paravola**	**0.86**	**75**	P	**Pg**	**03 50 05.4**	**+0.1**
PVO				S	**Sb**	**03 50 17.9**	**+1.1**
	comp=E,1μm,0.8s						
PVO	**Paravola**	**0.86**	**75**	P	**Pg**	**03 50 05.5**	**+0.2**
PVO				S	**Sg**	**03 50 16.0**	**-0.6**
PVO				AML	AML	03 50 24.4	
	comp=E,2523μm,0.7s						
PVO				AML	AML	03 50 24.7	
	comp=N,2867μm,0.6s						
RLS	**Riolos of Patr**	**0.86**	**113**	P	**Pg**	**03 50 05.0**	**-0.4**
RLS				S	**Sn**	**03 50 19.1**	**+0.3**
RLS	**Riolos of Patr**	**0.86**	**113**	P	**Pg**	**03 50 04.9**	**-0.4**
RLS				S	**Sg**	**03 50 15.9**	**-0.7**
RLS				AML	AML	03 50 23.7	
	comp=N,1372μm,0.4s						
RLS				AML	AML	03 50 28.4	
	comp=E,1154μm,0.9s						
DRO	**Drossia**	**1.08**	**114**	P	**Pb**	**03 50 08.7**	**-0.5**
DRO	**Drossia**	**1.08**	**114**	P	**Pb**	**03 50 08.8**	**-0.3**
DRO				S	**Sg**	**03 50 23.6**	**+0.1**
DRO				AML	AML	03 50 35.8	
	comp=N,1989μm,0.6s						
DRO				AML	AML	03 50 35.9	
	comp=E,2772μm,0.5s						
EFP	**Efpalio**	**1.13**	**88**	P	**Pb**	**03 50 09.6**	**-0.5**
EFP	**Efpalio**	**1.13**	**88**	P	**Pb**	**03 50 09.5**	**-0.5**
EFP				S	**Sn**	**03 50 26.2**	**+0.6**
EFP				AML	AML	03 50 33.1	
	comp=E,2267μm,0.5s						
EFP				AML	AML	03 50 36.4	
	comp=N,2609μm,0.7s						
IGT	**Igoumenitsa**	**1.14**	**355**	P	**Pb**	**03 50 09.9**	**-0.2**
IGT				S	**Sn**	**03 50 26.3**	**+0.6**
IGT	**Igoumenitsa**	**1.14**	**355**	P	**Pb**	**03 50 10.1**	**0.0**
IGT				S	**Sn**	**03 50 26.5**	**+0.8**
IGT				AML	AML	03 50 30.2	
	comp=E,875μm,0.7s						
IGT				AML	AML	03 50 31.2	
	comp=N,686μm,0.4s						
ANX	**Ano Chora**	**1.16**	**80**	P	**Pb**	**03 50 10.2**	**-0.3**
ANX	**Ano Chora**	**1.16**	**80**	P	**Pb**	**03 50 10.3**	**-0.3**
ANX				S	**Sn**	**03 50 26.5**	**+0.2**
ANX				AML	AML	03 50 35.9	
	comp=N,1978μm,0.5s						
ANX				AML	AML	03 50 38.5	
	comp=E,1962μm,0.5s						
EVR	**Evrytania**	**1.17**	**63**	P	**Pb**	**03 50 10.7**	**-0.1**
EVR				S	**Sn**	**03 50 28.3**	**+1.6**
	comp=E,285nm,0.8s						
EVR	**Evrytania**	**1.17**	**63**	P	**Pb**	**03 50 10.2**	**-0.6**
LAKA	**Lakka**	**1.20**	**97**	P	**Pn**	**03 50 10.8**	**-0.4**
LAKA	**Lakka**	**1.20**	**97**	P	**Pn**	**03 50 10.7**	**-0.4**
SERG	**Sergoula**	**1.25**	**89**	P	**Pn**	**03 50 11.7**	**-0.2**
SERG				S	**Sg**	**03 50 29.5**	**+0.5**
	comp=E,715nm,0.7s						
SERG	**Sergoula**	**1.25**	**89**	P	**Pn**	**03 50 11.6**	**-0.2**
SERG				S	**Sb**	**03 50 28.1**	**0.0**
SERG				AML	AML	03 50 35.4	
	comp=E,1259μm,0.7s						
SERG				AML	AML	03 50 35.8	
	comp=N,1609μm,0.7s						
TRIZ	**Trizonia**	**1.26**	**91**	P	**Pn**	**03 50 11.8**	**-0.2**
TRIZ	**Trizonia**	**1.26**	**91**	P	**Pn**	**03 50 11.6**	**-0.4**
JAN	**Janina**	**1.29**	**13**	P	**Pg**	**03 50 13.5**	**0.0**
ALIK	**Aliki, Aigiali**	**1.30**	**96**	P	**Pn**	**03 50 12.6**	**+0.1**
AMT	**Artemida-Makis**	**1.31**	**131**	P	**Pb**	**03 50 13.4**	**+0.2**
AMT	**Artemida-Makis**	**1.31**	**131**	P	**Pb**	**03 50 13.3**	**+0.2**
AMT				S	**Sb**	**03 50 29.5**	**-0.3**
AMT				AML	AML	03 50 41.8	
	comp=N,1174μm,0.6s						
AMT				AML	AML	03 50 42.3	
	comp=E,1322μm,0.7s						
KALE	**Kalithea**	**1.32**	**90**	P	**Pn**	**03 50 12.6**	**-0.2**
KALE	**Kalithea**	**1.32**	**90**	P	**Pn**	**03 50 12.5**	**-0.3**
KLV	**Kalavryta, Ach**	**1.37**	**105**	P	**Pn**	**03 50 13.5**	**0.0**
KLV				S	**Sg**	**03 50 33.5**	**+0.5**
	comp=E,182nm,0.7s						
KLV	**Kalavryta, Ach**	**1.37**	**105**	P	**Pn**	**03 50 13.6**	**0.0**
KEK	**Kerkira**	**1.41**	**339**	P	**Pn**	**03 50 14.8**	**+0.8**
KEK	**Kerkira**	**1.41**	**339**	P	**Pb**	**03 50 15.0**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.44**	**64**	P	**Pb**	**03 50 15.5**	**+0.2**
MAKR				S	**Sg**	**03 50 35.0**	**-0.1**
	comp=E,490nm,0.6s						
MAKR	**Makrakomi, Fth**	**1.44**	**64**	P	**Pb**	**03 50 15.6**	**+0.3**
GUR	**Goura**	**1.55**	**107**	P	**Pn**	**03 50 16.5**	**+0.5**
GUR				S	**Sg**	**03 50 38.0**	**-0.7**
AGG	**Agios Georgios**	**1.58**	**66**	P

RICI				Sg	**Sb**	**04 56 02.9**	**0.0**
MORI	**Morici**	**1.21**	**240**	*i* Pg	**Pb**	**04 55 51.8**	**-1.5**
MORI				Sg	**Sg**	**04 56 08.9**	**0.0**
ZIRJ	**Zirje**	**1.37**	**233**	*e*Pn	**Pn**	**04 55 54.9**	**-0.7**
ZIRJ				Sn	**Sg**	**04 56 15.1**	**+1.2**
DUGI	**Dugi Otok**	**1.59**	**253**	*e*Pn	**Pn**	**04 55 59.1**	**+0.5**
DUGI				Sn	**Sg**	**04 56 21.9**	**+0.9**
NVLJ	**Novalja**	**1.64**	**274**	*i* Pn	**Pn**	**04 56 00.6**	**+1.4**
NVLJ				Sn	**Sg**	**04 56 23.1**	**+0.6**

JMA ***31*** *05:05:08.9±0.2,24.95N×123.35E,h26km±5km,M3.0*
IDC ***31*** *05:05:27.1±6.4,24.78N×122.82E,h170km±62km,mb3.2/5, mb1 3.4/6,mb1mx3.0/40,mbtmp3.7/6,MS2.7/3,Ms1 2.8/3, ms1mx2.5/22,Error ellipse: s-maj=63.0km s-min=19.4km az=76.0*

ISC 31 05:05:10.4±1.6,24.85N±0.08×123.37E±0.05,h16km±11km, n16,σ1§36/20,mb3.5/5,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.51**	**220**	P	**Pg**	**05 05 20.0**	**-0.5**
YOJ				*e*S	**Sg**	**05 05 28.2**	**+0.8**
JYNG	**Yonagunijimaku**	**0.56**	**224**	P	**Pg**	**05 05 20.7**	**-0.7**
JYNG				*e*S	**Sg**	**05 05 29.4**	**+0.5**
IRIF	**Iriomote-Funau**	**0.61**	**148**	P	**Pg**	**05 05 22.2**	**-0.2**
IRIF				*e*S	**Sg**	**05 05 31.4**	**+0.9**
JKRS	**Kuro-shima**	**0.84**	**136**	P	**Pb**	**05 05 26.0**	**-0.6**
JKRS				S	**Sb**	**05 05 38.3**	**+0.7**
JIJ	**Ishigaki jima**	**0.85**	**125**	P	**Pb**	**05 05 25.7**	**-1.1**
JIJ				S	**Sb**	**05 05 37.2**	**-0.7**
HATJ	**Hateruma jima**	**0.88**	**154**	P	**Pb**	**05 05 26.7**	**-0.6**
HATJ				*e*S	**Sb**	**05 05 39.1**	**+0.3**
JISG	**Ishigakijimahi**	**0.89**	**107**	P	**Pb**	**05 05 26.4**	**-1.0**
JISG				S	**Sb**	**05 05 38.1**	**-1.0**
KSRS	**Korea Array**	**13.15**	**16**	P	**P**	**05 08 29.0**	**+2.5**
	0.3nm,0.3s,baz=198,slow=11,SNR=5.6						
DAV	**Davao City (W)**	**17.81**	**173**	LR	LR	05 15 45.7	
	comp=Z,16nm,21.0s,baz=340,slow=35						
CMAR	**Chiang Mai Arr**	**23.56**	**259**	LR	LR	05 19 00.1	
	comp=Z,15nm,21.2s,baz=190,slow=35						
SONM	**Songino Array**	**26.59**	**334**	P	**P**	**05 10 49.4**	**+1.5**
	0.3nm,0.3s,baz=141,slow=9.3,SNR=3.7						
TLY	**Talaya**	**30.74**	**336**	LR	LR	05 24 02.7	
	comp=Z,27nm,18.7s,baz=127,slow=36						
WRA	**Warramunga Arr**	**45.79**	**166**	P	**P**	**05 13 31.9**	**+0.6**
	1.7nm,0.7s,baz=347,slow=8.5,SNR=3.4						
ASAR	**Alice Springs**	**49.30**	**167**	P	**P**	**05 13 59.5**	**+0.8**
	0.2nm,0.5s,baz=350,slow=11,SNR=4.9						
FINES	**FINESS Array B**	**71.87**	**330**	P	**P**	**05 16 28.8**	**-3.5**
	0.8nm,0.9s,baz=79,slow=7.4,SNR=3.6						
YKA	**Yellowknife Ar**	**81.57**	**23**	P	**P**	**05 17 27.3**	**+0.3**
	0.3nm,0.8s,baz=302,slow=5.0,SNR=4.1						

IDC 31 05:34:12.7±3.2,30.25S×177.60W,h0km,mb3.4/2, mb1 3.7/2,mb1mx3.5/20,mbtmp3.4/2,Error ellipse: s-maj=66.6km s-min=24.8km az=98.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.03**	**344**	Pn	Pn	05 34 35.2	+0.7
	193nm,0.3s,baz=101,slow=11,SNR=30						
RAO				Sn	Sn	05 34 49.2	-0.4
	346nm,0.3s,baz=172,slow=23,SNR=11						
ASAR	**Alice Springs**	**43.47**	**267**	P	P	05 42 17.3	-0.6
	0.1nm,0.4s,baz=98,slow=6.8,SNR=1.5						
WRA	**Warramunga Arr**	**44.44**	**272**	P	P	05 42 25.9	+0.1
	0.4nm,0.3s,baz=109,slow=8.0,SNR=8.3						
FINES	**FINESS Array B**	**145.12**	**340**	PKPbc	PKPbc	05 53 49.7	-1.2
	0.4nm,0.5s,baz=57,slow=5.3,SNR=4.8						

JMA 31 05:42:17.6±0.2,24.81N×123.23E,h27km,M2.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.40**	**210**	P	Pb	05 42 26.0	-0.3
YOJ				S	Sb	05 42 31.9	-0.3
JYNG	**Yonagunijimaku**	**0.44**	**216**	P	Pb	05 42 26.7	-0.2
JYNG				*e*S	Sb	05 42 33.0	-0.3
IRIF	**Iriomote-Funau**	**0.66**	**136**	P	Pb	05 42 30.4	-0.1
JKRS	**Kuro-shima**	**0.91**	**129**	P	Pn	05 42 34.4	-0.2
HATJ	**Hateruma jima**	**0.92**	**145**	P	Pn	05 42 34.6	-0.1
JIJ	**Ishigaki jima**	**0.94**	**118**	P	Pn	05 42 34.4	-0.7
JIJ				*e*S	Sb	05 42 47.0	-0.4
JISG	**Ishigakijimahi**	**1.01**	**103**	P	Pn	05 42 35.8	-0.2

TAP 31 05:42:42.2,24.29N×121.68E,h6km±1km,ML1.4,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**0.14**	**215**	P	Pg	05 42 46.0	+0.8
	baz=215						
NACB				S	Sg	05 42 48.5	+1.4
	baz=215						
ENA	**Nanau**	**0.15**	**21**	P	Pg	05 42 46.0	+0.7
	baz=23						
ENA				*e*S	Sg	05 42 48.8	+1.5
	baz=23						
ETLH	**Xiulin Townshi**	**0.20**	**246**	*e*P	Pg	05 42 48.3	+2.0
	baz=246						
ETLH				*e*S	Sg	05 42 50.7	+1.7
	baz=246						
TWD	**Chiawan**	**0.22**	**201**	P	Pg	05 42 47.5	+0.9
	baz=199						
TWD				*i* S	Sg	05 42 51.6	+2.0
	baz=199						
NNSB	**Datong**	**0.31**	**297**	*e*P	Pb	05 42 49.6	-0.6
	baz=296						
NNSB				S	Sb	05 42 54.9	-0.6
	baz=296						
NNSH	**Datong**	**0.31**	**297**	S	Sb	05 42 54.7	-0.9
	baz=296						
NDT	**Datong Townshi**	**0.35**	**333**	*e*P	Pb	05 42 50.5	-0.4
	baz=333						
NDT				*e*S	Sb	05 42 55.9	-0.8
	baz=333						
WHF	**Hehuan Shan**	**0.41**	**250**	P	Pb	05 42 52.0	-0.1
	baz=248						
WHF				S	Sb	05 42 57.4	-1.3
	baz=248						
CHGB	**Renai**	**0.52**	**244**	*e*P	Pb	05 42 54.4	+0.5
	baz=243						
CHGB				S	Sb	05 43 01.8	+0.1
	baz=243						

BJI ***31*** *06:16:52.0±0.0,55.10N×165.70E,h5km,mB5.4/71, mb5.0/73,Ms5.5/87,Ms7 5.3/82*
NEIC ***31*** *06:16:53.7±2.1,54.97N±0.06×165.65E±0.08,h6km±1km, mb5.6/634,Ms_20 5.1/658,Mwb5.4/51,Mwc5.5(GCMT), Error ellipse: s-maj=11.5km s-min=5.4km az=147.0*
KRSC ***31*** *06:16:53.3±1.9,54.98N×165.55E,h40km±15km,ML5.8, FELT [III-IV] at Nikolskoe.*
NEIC ***31*** *06:16:53.7,54.99N×165.60E,h6km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.18; Mθθ=1.20; Mφφ 1.38; Mrθ=0.94; Mθφ=-0.06; Mφr=0.30; Fault plane solution: M₀1.63000×10¹⁷ NP1:φs218.84000°, δ57.87000°,λ-13.59000°. NP2:φs316.16000°,δ78.52000°, λ-147.14000°. Principal axes: T 1.4586, Plg14.0000°, Azm84.0000°; N 0.3061, Plg55.0000°, Azm333.0000°; P -1.7647, Plg31.0000°, Azm182.0000°;*
IDC ***31*** *06:16:54.9±2.9,55.06N×165.66E,h12km±17km,mb4.9/50, mb1 5.0/55,mb1mx4.9/65,mbtmp4.9/55,ML5.2/4,MS4.9/38, Ms1 4.9/38,ms1mx4.8/46 Error ellipse: s-maj=10.5km s-min=8.1km az=143.0*
GCMT ***31*** *06:16:56.7±0.1,55.10N±0.01×165.65E±0.01,h18km, MW5.5/157,Moment Tensor Solution. s130,c226; s157,c326; Duration: 1§3 Moment tensor: Scale 10¹⁷ Nm; Mrr=0.45±.02; Mθθ-1.38±.02; Mφφ 1.83±.02; Mrθ 0.77±.05; Mθφ-0.26±.02; Mφr 0.68±.05; Best double couple: M₀1.95900×10¹⁷ NP1:φs313.00000°,δ57.00000°, λ-167.00000°. NP2:φs216.00000°,δ79.00000°, λ-34.00000°. Principal axes: T 2.0170, Plg15.0000°, Azm269.0000°; N -0.1190, Plg55.0000°, Azm21.0000°; P -1.9010, Plg31.0000°, Azm170.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***31*** *06:16:57,55.12N×165.69E,h19km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-0.53; Mθθ-1.47; Mφφ 2.00; Mrθ=0.90; Mθφ-0.31; Mφr0.46; Fault plane solution: M₀2.08000×10¹⁷ NP1:φs314.00000°, δ61.00000°,λ-163.00000°. NP2:φs216.00000°, δ75.00000°,λ-30.00000°. Principal axes: T 2.0883, Plg9.0000°, Azm267.0000°; N -0.0107, Plg57.0000°, Azm11.0000°; P -2.0777, Plg32.0000°, Azm172.0000°;*
MOS ***31*** *06:16:57.2±1.1,55.01N×165.49E,h44km,mb5.5/76, MS5.0/62 Error ellipse: s-maj=4.4km s-min=3.5km az=102.3*
BGR ***31*** *06:17:07.4±0.0,56.26N×165.48E,h33km,mb5.4,Ms5.1*

ISC 31 06:16:56.1±0.3,54.99N±0.03×165.69E±0.03,h20km±2km, n1586,σ1§67/1270,mb5.5/484,MS5.1/422,49C-22D, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.27**	**37**	*e*P	**Pb**	**06 17 01.6**	**-0.7**
BKI				*e*S	**Sb**	**06 17 06.2**	**-0.3**
BKI	**Bering**	**0.27**	**37**	PN	**Pb**	**06 17 01.6**	**-0.7**
KBTR	**Krutoberegovo**	**2.04**	**308**	*i* P	**Pn**	**06 17 25.9**	**-3.2**
KBTR				*e*S	**Sn**	**06 17 48.9**	**-5.0**
KBTR	**Krutoberegovo**	**2.04**	**308**	PN	**Pn**	**06 17 25.9**	**-3.2**
KBTR				S	**Sn**	**06 17 48.9**	**-5.0**
KBG	**Krutoberegovo**	**2.11**	**308**	*e*P	**Pn**	**06 17 27.4**	**-2.8**
KBG				*e*S	**Sn**	**06 17 52.5**	**-3.3**
KBG	**Krutoberegovo**	**2.11**	**308**	PN	**Pn**	**06 17 27.4**	**-2.8**
KBG				S	**Sn**	**06 17 52.5**	**-3.3**
SMKR	**Semkarok**	**2.87**	**305**	*e*P	**Pn**	**06 17 39.3**	**-1.3**
SMKR	**Semkarok**	**2.87**	**305**	PN	**Pn**	**06 17 39.3**	**-1.3**
ZLN	**Zelenaya**	**2.96**	**292**	*e*P	**Pn**	**06 17 41.5**	**-0.5**
ZLN	**Zelenaya**	**2.96**	**292**	PN	**Pn**	**06 17 41.5**	**-0.5**
BDR	**Baidarnaya**	**2.98**	**304**	*e*P	**Pn**	**06 17 41.9**	**-0.3**
BDR	**Baidarnaya**	**2.98**	**304**	PN	**Pn**	**06 17 41.9**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**3.00**	**290**	*e*P	**Pn**	**06 17 41.5**	**-0.9**
BZGR				*e*S	**Sn**	**06 18 16.9**	**-0.9**
BZGR	**Bezymyannyi-Gr**	**3.00**	**290**	PN	**Pn**	**06 17 41.5**	**-0.9**
BZGR				S	**Sn**	**06 18 16.9**	**-0.9**
CIRR	**Tsirk**	**3.02**	**294**	*e*P	**Pn**	**06 17 42.7**	**-0.1**
CIRR	**Tsirk**	**3.02**	**294**	PN	**Pn**	**06 17 42.7**	**-0.1**
LGNR	**Loginova**	**3.04**	**293**	*e*P	**Pn**	**06 17 42.7**	**-0.5**
LGNR	**Loginova**	**3.04**	**293**	PN	**Pn**	**06 17 42.7**	**-0.5**
SRKR	**Sorokina**	**3.05**	**305**	*e*P	**Pn**	**06 17 41.7**	**-1.4**
SRKR	**Sorokina**	**3.05**	**305**	PN	**Pn**	**06 17 41.7**	**-1.4**
TUMD	**Tumrok D**	**3.05**	**276**	*e*P	**Pn**	**06 17 42.0**	**-1.1**
TUMD				*e*S	**Sn**	**06 18 15.8**	**-3.1**
KZV	**Kizimen**	**3.11**	**274**	*e*P	**Pn**	**06 17 42.9**	**-1.1**
KZV				*e*S	**Sn**	**06 18 19.5**	**-1.0**
KZV	**Kizimen**	**3.11**	**274**	PN	**Pn**	**06 17 42.9**	**-1.1**
KZV				S	**Sn**	**06 18 19.5**	**-1.0**
BZMR	**Bezymyannaya**	**3.11**	**290**	*e*P	**Pn**	**06 17 43.8**	**-0.2**
BZMR	**Bezymyannaya**	**3.11**	**290**	PN	**Pn**	**06 17 43.8**	**-0.2**
BZWR	**Bezymyannyi-We**	**3.11**	**290**	*e*P	**Pn**	**06 17 43.6**	**-0.5**
BZWR				*e*S	**Sn**	**06 18 20.2**	**-0.5**
BZWR	**Bezymyannyi-We**	**3.11**	**290**	PN	**Pn**	**06 17 43.6**	**-0.5**
BZWR				S	**Sn**	**06 18 20.2**	**-0.5**
KLY	**Klyuchi**	**3.15**	**297**	*e*P	**Pn**	**06 17 42.4**	**-2.0**
KLY				*e*S	**Sn**	**06 18 16.8**	**-4.5**
KLY	**Klyuchi**	**3.15**	**297**	PN	**Pn**	**06 17 42.4**	**-2.0**
KLY				S	**Sn**	**06 18 16.8**	**-4.5**
KRSR	**Krestovskiy**	**3.16**	**295**	*e*P	**Pn**	**06 17 43.4**	**-1.2**
KRSR				*e*S	**Sn**	**06 18 18.2**	**-3.5**
KRSR	**Krestovskiy**	**3.16**	**295**	PN	**Pn**	**06 17 43.4**	**-1.2**
KRSR				S	**Sn**	**06 18 18.2**	**-3.5**
KIRR	**Kirishev**	**3.19**	**290**	*e*P	**Pn**	**06 17 44.8**	**-0.4**
KIRR				*e*S	**Sn**	**06 18 21.3**	**-1.4**
KIRR	**Kirishev**	**3.19**	**290**	PN	**Pn**	**06 17 44.8**	**-0.4**
KIRR				S	**Sn**	**06 18 21.3**	**-1.4**
TUMR	**Tumrok**	**3.20**	**277**	*i* P	**Pn**	**06 17 44.6**	**-0.6**
TUMR				*e*S	**Sn**	**06 18 21.6**	**-1.1**
TUMR	**Tumrok**	**3.20**	**277**	PN	**Pn**	**06 17 44.6**	**-0.6**
TUMR				S	**Sn**	**06 18 21.6**	**-1.1**
KMNR	**Kamenistaya**	**3.21**	**286**	*i* P	**Pn**	**06 17 44.9**	**-0.4**
KMNR	**Kamenistaya**	**3.21**	**286**	PN	**Pn**	**06 17 44.9**	**-0.4**
KPT	**Kopyto**	**3.26**	**290**	*e*P	**Pn**	**06 17 45.7**	**-0.3**
KPT	**Kopyto**	**3.26**	**290**	PN	**Pn**	**06 17 45.7**	**-0.3**
KOZ	**Kozyrevsk**	**3.48**	**290**	*e*P	**Pn**	**06 17 48.8**	**-0.1**
KOZ	**Kozyrevsk**	**3.48**	**290**	PN	**Pn**	**06 17 48.8**	**-0.1**
SRDR	**Sredinnyy**	**3.63**	**294**	*e*P	**Pn**	**06 17 51.2**	**+0.1**
SRDR				*e*S	**Sn**	**06 18 34.1**	**+0.7**
SRDR	**Sredinnyy**	**3.63**	**294**	PN	**Pn**	**06 17 51.2**	**+0.1**
SRDR				S	**Sn**	**06 18 34.1**	**+0.7**
KII	**Karymskiy**	**3.76**	**258**	*e*P	**Pn**	**06 17 52.7**	**-0.2**
KII				*e*S	**Sn**	**06 18 33.9**	**-2.7**
KII	**Karymskiy**	**3.76**	**258**	PN	**Pn**	**06 17 52.7**	**-0.2**
KII				S	**Sn**	**06 18 33.9**	**-2.7**
SPN	**Mys Shipunski**	**3.84**	**243**	*e*P	**Pn**	**06 17 52.5**	**-1.4**
SPN				*e*S	**Sn**	**06 18 31.8**	**-6.6**
SPN	**Mys Shipunski**	**3.84**	**243**	PN	**Pn**	**06 17 52.5**	**-1.4**
ESO	**Esso**	**4.09**	**286**	*e*P	**Pn**	**06 17 56.9**	**-0.4**
ESO				*e*S	**Sn**	**06 18 41.8**	**-2.7**
ESO	**Esso**	**4.09**	**286**	PN	**Pn**	**06 17 56.9**	**-0.4**
ESO				S	**Sn**	**06 18 41.8**	**-2.7**
NLC	**Nalytchevo**	**4.16**	**247**	*e*P	**Pn**	**06 17 57.6**	**-0.7**
NLC				*e*S	**Sn**	**06 18 42.5**	**-3.7**
NLC	**Nalytchevo**	**4.16**	**247**	PN	**Pn**	**06 17 57.6**	**-0.7**
SDLR	**Sedlovina**	**4.36**	**250**	*i* P	**Pn**	**06 18 00.4**	**-0.7**
SDLR				*e*S	**Sn**	**06 18 49.0**	**-2.3**
SDLR	**Sedlovina**	**4.36**	**250**	PN	**Pn**	**06 18 00.4**	**-0.7**
SDLR				S	**Sn**	**06 18 49.0**	**-2.3**
SMAR	**Somma**	**4.41**	**250**	*e*P	**Pn**	**06 18 01.8**	**-0.1**
SMAR				*e*S	**Sn**	**06 18 49.8**	**-2.9**
SMAR	**Somma**	**4.41**	**250**	PN	**Pn**	**06 18 01.8**	**-0.1**
SMAR				S	**Sn**	**06 18 49.8**	**-2.9**
KRER	**Koryakskii**	**4.42**	**250**	*i* P	**Pn**	**06 18 01.8**	**-0.2**
KRER				*e*S	**Sn**	**06 18 47.3**	**-5.6**
KRER	**Koryakskii**	**4.42**	**250**	PN	**Pn**	**06 18 01.8**	**-0.2**
UGLR	**Uglovaya**	**4.42**	**249**	*i* P	**Pn**	**06 18 01.5**	**-0.5**
UGLR				*e*S	**Sn**	**06 18 50.1**	**-2.7**
UGLR	**Uglovaya**	**4.42**	**249**	PN	**Pn**	**06 18 01.5**	**-0.5**
UGLR				S	**Sn**	**06 18 50.1**	**-2.7**
AVH	**Avacha**	**4.44**	**250**	*i* P	**Pn**	**06 18 02.0**	**-0.2**
AVH				*e*S	**Sn**	**06 18 49.9**	**-3.4**
AVH	**Avacha**	**4.44**	**250**	PN	**Pn**	**06 18 02.0**	**-0.2**
KRX	**Arik**	**4.45**	**251**	*i* P	**Pn**	**06 18 02.0**	**-0.4**
KRX				*e*S	**Sn**	**06 18 50.1**	**-3.5**
KRX	**Arik**	**4.45**	**251**	PN	**Pn**	**06 18 02.0**	**-0.4**
KOK	**Koryaka**	**4.49**	**251**	*i* P	**Pn**	**06 18 02.5**	**-0.4**
KOK				*e*S	**Sn**	**06 18 50.4**	**-4.0**
KOK	**Koryaka**	**4.49**	**251**	PN	**Pn**	**06 18 02.5**	**-0.4**
OSSR	**Ossora**	**4.50**	**343**	*e*P	**Pn**	**06 18 01.3**	**-1.6**
OSSR				*e*S	**Sn**	**06 18 51.2**	**-3.4**
OSSR	**Ossora**	**4.50**	**343**	PN	**Pn**	**06 18 01.3**	**-1.6**
DALK	**Dalny**	**4.54**	**247**	*e*P	**Pn**	**06 18 02.9**	**-0.6**
DALK				*e*S	**Sn**	**06 18 51.6**	**-4.0**
DALK	**Dalny**	**4.54**	**247**	PN	**Pn**	**06 18 02.9**	**-0.6**
PET	**Petropavlovsk**	**4.60**	**247**	⇑ *i*PN	**Pn**	**06 18 03.5**	**-0.8**
PET				pmax	pmax		
	comp=Z,2μm,0.5s						
PET				MLR	MLR		
	comp=Z,21μm,16.0s						
PET				MLR	MLR		
	comp=Z,20μm,15.0s						
PET	**Petropavlovsk**	**4.60**	**247**	Pn	**Pn**	**06 18 03.9**	**-0.4**
PET				Sn	**Sn**	**06 18 52.2**	**-4.8**
KRMR	**Karymshinskiy**	**4.97**	**247**	*e*P	**Pn**	**06 18 09.1**	**-0.3**
KRMR				*e*S	**Sn**	**06 19 02.4**	**-3.7**
KRMR	**Karymshinskiy**	**4.97**	**247**	PN	**Pn**	**06 18 09.1**	**-0.3**
RUS	**Russkaya**	**4.97**	**242**	*i* P	**Pn**	**06 18 08.5**	**-1.0**
RUS				*e*S	**Sn**	**06 19 01.0**	**-5.3**
RUS	**Russkaya**	**4.97**	**242**	PN	**Pn**	**06 18 08.5**	**-1.0**
PEA0B	**Petropavlovsk-**	**5.07**	**251**	*ce*PN	**Pn**	**06 18 10.7**	**-0.1**
PEA0B	**Petropavlovsk-**	**5.07**	**251**	Pn	**Pn**	**06 18 10.8**	**-0.1**
PEA0B				Sn	**Sn**	**06 19 06.8**	**-2.0**
PETK	**Petropavlovsk-**	**5.07**	**251**	Pn	**Pn**	**06 18 10.7**	**-0.2**
	comp=Z,235nm,0.3s,baz=73,slow=16,SNR=741						
PETK				Sn	**Sn**	**06 19 08.4**	**-0.4**
	comp=Z,137nm,0.3s,baz=77,slow=40,SNR=2.0						
PETK				LR	LR	06 20 23.6	
	comp=Z,16μm,18.6s,baz=339,slow=41						
MTVR	**Mutnovka**	**5.12**	**244**	*e*P	**Pn**	**06 18 11.4**	**-0.2**
MTVR				*e*S	**Sn**	**06 19 05.1**	**-5.0**
MTVR	**Mutnovka**	**5.12**	**244**	PN	**Pn**	**06 18 11.4**	**-0.2**
GRL	**Gorelyy**	**5.14**	**245**	*i* P	**Pn**	**06 18 11.8**	**0.0**
GRL				*e*S	**Sn**	**06 19 08.8**	**-1.7**
GRL	**Gorelyy**	**5.14**	**245**	PN	**Pn**	**06 18 11.8**	**0.0**
GRL				S	**Sn**	**06 19 08.8**	**-1.7**
PALN	**Palana**	**5.16**	**325**	*e*P	**Pn**	**06 18 12.1**	**+0.1**
PALN				*e*S	**Sn**	**06 19 12.6**	**+1.8**
PALN	**Palana**	**5.16**	**325**	PN	**Pn**	**06 18 12.1**	**+0.1**
PALN				S	**Sn**	**06 19 12.6**	**+1.8**
ASAK	**Asacha**	**5.32**	**244**	*i* P	**Pn**	**06 18 14.2**	**-0.1**
ASAK				*e*S	**Sn**	**06 19 11.1**	**-3.8**
ASAK	**Asacha**	**5.32**	**244**	PN	**Pn**	**06 18 14.2**	**-0.1**
SMY	**Shemya**	**5.47**	**111**	PN	**Pn**	**06 18 18.4**	**+2.2**
SMY	**Shemya**	**5.47**	**111**	Pn	**Pn**	**06 18 18.4**	**+2.2**
SMY				Sn	**Sn**	**06 19 16.6**	**-1.9**
TILK	**Tilichiki**	**5.47**	**2**	*e*P	**Pn**	**06 18 16.5**	**+0.2**
TILK	**Tilichiki**	**5.47**	**2**	PN	**Pn**	**06 18 16.5**	**+0.2**
MIPR	**Malaya Ipel'ka**	**5.97**	**247**	*i* P	**Pn**	**06 18 24.1**	**+0.9**
MIPR	**Malaya Ipel'ka**	**5.97**	**247**	PN	**Pn**	**06 18 24.1**	**+0.9**
PAU	**Pauzhetka**	**6.39**	**240**	*e*P	**Pn**	**06 18 29.7**	**+0.7**
PAU	**Pauzhetka**	**6.39**	**240**	PN	**Pn**	**06 18 29.7**	**+0.7**
SKR	**Severo-Kuril's**	**7.23**	**237**	*e*P	**Pn**	**06 18 40.2**	**-0.2**
SKR	**Severo-Kuril's**	**7.23**	**237**	*e*PN	**Pn**	**06 18 39.7**	**-0.7**
SKR				pmax	pmax		
	comp=Z,407nm,0.6s						
SKR				pmax	pmax		
	comp=Z,600nm,14.4s						
SKR				MLR	MLR		
	comp=Z,5μm,19.0s						
SKR				MLR	MLR		
	comp=Z,5μm,17.0s						
ALID	**Alaid**	**7.39**	**240**	*e*P	**Pn**	**06 18 42.9**	**+0.1**
ALID	**Alaid**	**7.39**	**240**	PN	**Pn**	**06 18 42.9**	**+0.1**
KMSK	**Kamenskaya**	**7.50**	**2**	*e*P	**Pn**	**06 18 44.3**	**+0.2**
KMSK				*e*S	**Sn**	**06 20 06.8**	**-1.6**
KMSK	**Kamenskaya**	**7.50**	**2**	PN	**Pn**	**06 18 44.3**	**+0.2**
MA2	**Magadan**	**9.29**	**306**	Pn	**Pn**	**06 19 10.0**	**+1.4**
	comp=Z,2.4nm,0.3s,baz=119,slow=12,SNR=5.5						
MA2				LR	LR	06 23 01.6	
	comp=Z,7μm,18.9s,baz=110,slow=40						
MA2	**Magadan**	**9.29**	**306**	*ce*PN	**Pn**	**06 19 09.5**	**+0.9**
MA2				pmax	pmax		
	comp=Z,76nm,1.7s						
MA2	**Magadan**	**9.29**	**306**	Pn	**Pn**	**06 19 09.8**	**+1.3**
SEY	**Seymchan**	**10.49**	**325**	Pn	**Pn**	**06 19 25.7**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=146,slow=12,SNR=22						
ADK	**Adak**	**10.96**	**99**	PN	**Pn**	**06 19 33.1**	**+1.6**
ADK	**Adak**	**10.96**	**99**	Pn	**Pn**	**06 19 33.0**	**+1.6**
GSTR	**Great Sitkin T**	**11.24**	**97**	Pn	**Pn**	**06 19 37.8**	**+2.5**
ATKA	**Atka Island**	**12.26**	**95**	Pn	**Pn**	**06 19 49.8**	**+0.5**
BILL	**Bilibino**	**13.10**	**1**	*ce*PN	**Pn**	**06 20 02.5**	**+1.9**
BILL				pmax	pmax		
	comp=Z,197nm,2.5s						
BILL	**Bilibino**	**13.10**	**1**	Pn	**Pn**	**06 20 03.3**	**+2.7**
OKH	**Okha**	**13.37**	**273**	*c i*PN	**Pn**	**06 20 05.7**	**+1.4**
OKH				pmax	pmax		
	comp=Z,1μm,10.4s						
OKH				MLR	MLR		
	comp=N,6μm,13.0s						
OKH				MLR	MLR		
	comp=E,8μm,12.0s						
OKH				MLR	MLR		
	comp=Z,5μm,14.0s						
TYV	**Tymovskoe**	**14.47**	**263**	*e*P	**Pn**	**06 20 22.7**	**+3.2**
TYV				*e*S	**Sn**	**06 23 05.8**	**+6.7**
TYV				pmax	pmax		
	comp=Z,1μm,4.9s						
TYV				pmax	pmax		
	comp=Z,90nm,1.2s						
TYV				smax	smax		
	comp=E,700nm,8.8s						
TYV				MLR	MLR		
	comp=Z,5μm,15.0s						
TYV				MLR	MLR		
	comp=E,6μm,15.0s						
NKL	**Nikolayevsk**	**14.78**	**273**	*e*P	**P**	**06 20 27.4**	**-2.0**
NKL				*e*S	**Sn**	**06 23 01.8**	**-4.6**
NKL				pmax	pmax		
	comp=Z,105nm,1.3s						
NKL				pmax	pmax		
	comp=N,4.0nm,0.9s						
NKL				pmax	pmax		
	comp=E,4.0nm,1.1s						
KUR	**Kuril'sk**	**15.00**	**237**	*e*P	**Pn**	**06 20 25.6**	**-1.0**
KUR				*e*S	**Sn**	**06 23 07.3**	**-4.6**
KUR				pmax	pmax		
	comp=E,69nm,0.9s						
KUR				pmax	pmax		
	comp=Z,267nm,0.9s						
KUR				pmax	pmax		
	comp=N,49nm,0.6s						
KUR				pmax	pmax		
	comp=Z,2μm,2.0s						
KUR				MLR	MLR		
	comp=Z,7μm,14.0s						
KUR				MLR	MLR		
	comp=E,8μm,12.0s						
KUR				MLR	MLR		
	comp=N,3μm,15.0s

comp=Z,0.4nm,0.3s,baz=101,slow=5.0,SNR=18
YAK LR LR 06 29 11.9
comp=Z,3µm,18.5s,baz=97,slow=37
YAK Yakutsk 19.86 305 *e*P **P 06 21 23.7 -1.7**
YAK *e*S **S 06 25 04.6 -3.3**
YAK pmax pmax
comp=Z,72nm,1.3s
YAK pmax pmax
comp=N,25nm,1.3s
YAK pmax pmax
comp=E,61nm,1.5s
YAK pmax pmax
comp=Z,500nm,1.5s
YAK pmax pmax
comp=E,427nm,1.2s
YAK pmax pmax
comp=N,304nm,1.5s
YAK smax smax
comp=E,102nm,1.9s
YAK smax smax
comp=N,294nm,2.0s
YAK MLR MLR
comp=Z,3µm,12.0s
YAK MLR MLR
comp=E,3µm,13.0s
YAK MLR MLR
comp=N,2µm,15.0s
YAK Yakutsk 19.86 305 P **P 06 21 23.5 -1.9**
YAK IAmb IAmb 06 21 39.6
comp=Z,225nm,1.0s
CHGN Chignik 20.16 71 P **P 06 21 29.3 +0.6**
CHGN IAmb IAmb 06 21 48.4
comp=Z,333nm,1.0s
TTA Tatalina 20.99 52 P **P 06 21 38.6 +0.8**
TTA pmax pmax
comp=Z,280nm,1.6s
TTA MLR MLR
comp=Z,2µm,21.0s
TTA Tatalina 20.99 52 P **P 06 21 38.6 +0.8**
TEY Ternei 21.03 254⇑ *e*P **P 06 21 41.4 +3.1**
TEY *e* 06 22 03.5
TEY pmax pmax
comp=E,50nm,1.5s
TEY pmax pmax
comp=N,40nm,1.0s
TEY pmax pmax
comp=Z,80nm,1.2s
TEY pmax pmax
comp=E,200nm,3.8s
TEY pmax pmax
comp=Z,200nm,3.9s
TEY MLR MLR
comp=Z,200nm,15.0s
KLR Kul'dur 21.48 269 P **P 06 21 43.1 +0.1**
comp=Z,16nm,0.7s,baz=57,slow=9.8,SNR=27
KLR LR LR 06 30 08.4
comp=Z,3µm,21.7s,baz=65,slow=37
KLR Kul'dur 21.48 269 *i*P **P 06 21 42.1 -0.9**
KLR pmax pmax
comp=Z,47nm,1.2s
KLR MLR MLR
comp=Z,3µm,18.0s
ZEA Zeya 22.25 283 *e*P **P 06 21 50.4 -0.8**
ZEA *e* 06 22 26.0
ZEA pmax pmax
comp=Z,43nm,1.2s
ZEA pmax pmax
comp=E,400nm,10.0s
ZEA pmax pmax
comp=Z,900nm,10.0s
ZEA MLR MLR
comp=N,3µm,13.0s
ZEA MLR MLR
comp=Z,6µm,13.0s
ZEA MLR MLR
comp=E,4µm,12.0s
PPLA Purkeypile 22.74 53 P **P 06 21 57.3 +0.7**
TIXI Tiksi 22.88 331 P **P 06 21 57.2 -0.6**
comp=E,4.3nm,0.5s,baz=116,slow=13,SNR=16
TIXI LR LR 06 32 29.7
comp=E,1µm,19.2s,baz=106,slow=41
TIXI Tiksi 22.88 331 *c i*P **P 06 21 57.3 -0.5**
TIXI pmax pmax
comp=Z,35nm,0.9s
TIXI MLR MLR
comp=Z,4µm,15.0s
TIXI Tiksi 22.88 331 P **P 06 21 56.9 -1.0**
TIXI IAmb IAmb 06 22 21.8
comp=Z,387nm,1.9s
KDAK Kodiak Island 23.00 66 P **P 06 21 58.7 -0.5**
comp=Z,74nm,0.5s,baz=264,slow=5.3,SNR=64
KDAK LR LR 06 31 04.4
comp=Z,3µm,19.6s,baz=265,slow=37
KDAK Kodiak Island 23.00 66 P **P 06 21 58.6 -0.5**
KDAK pmax pmax
comp=Z,200nm,1.3s
KDAK MLR MLR
comp=Z,4µm,19.0s
KDAK Kodiak Island 23.00 66 P **P 06 21 58.6 -0.5**
KDAK IAmb IAmb 06 22 00.5
comp=Z,200nm,1.3s
KTH Kantishna Hill 23.32 51 IAmb IAmb 06 22 04.8
comp=Z,340nm,1.4s
CNPM China Poot 23.41 61 IAmb IAmb 06 22 05.1
comp=Z,273nm,1.3s
MLY Manley 23.48 47 IAmb IAmb 06 22 06.1
comp=Z,257nm,1.4s
BRLK Bradley Lake 23.55 61 IAmb IAmb 06 22 34.1
comp=Z,335nm,1.7s
TRF Thorofare Moun 23.61 51 IAmb IAmb 06 22 08.3
comp=Z,322nm,1.3s
TRF IAMs_20 IAMs_20 06 32 27.8
comp=Z,5µm,18.0s
USA0B Ussuriysk Arra 24.13 257 P **P 06 22 10.7 +0.4**
USA0B pmax pmax
comp=Z,26nm,1.0s
USA0B MLR MLR
comp=Z,4µm,20.0s
USA0B Ussuriysk Arra 24.13 257 P **P 06 22 10.7 +0.4**
USRK Ussuriysk Ar. 24.13 257 P **P 06 22 09.1 -1.2**
comp=Z,7.3nm,0.9s,baz=64,slow=7.7,SNR=11
USRK LR LR 06 31 49.5
comp=Z,4µm,19.2s,baz=53,slow=37
MCK McKinley 24.21 51 IAmb IAmb 06 22 13.6
comp=Z,157nm,1.1s
RND Reindeer 24.25 51 IAmb IAmb 06 22 40.1
comp=Z,113nm,0.9s
RND IAMs_20 IAMs_20 06 33 12.8
comp=Z,4µm,18.0s
GHO Glory Hole Cre 24.30 55 IAmb IAmb 06 22 52.4
comp=Z,100nm,1.0s
TOLK Toolik Lake Re 24.44 39 P **P 06 22 12.8 -0.1**
baz=259,SNR=112
TOLK Toolik Lake Re 24.44 39 P **P 06 22 12.9 -0.1**
TOLK IAMs_20 IAMs_20 06 32 56.5
comp=Z,4µm,18.0s
MDM Murphy Dome 24.54 48 IAmb IAmb 06 22 17.0
comp=Z,160nm,1.2s
KNK Knik Glacier 24.55 56 IAmb IAmb 06 22 17.3
comp=Z,119nm,0.8s
TCOL CIGO, UAF Yank 24.69 48 P **P 06 22 15.1 -0.1**
baz=269,SNR=15
COLA College 24.70 48 *c i*P **P 06 22 14.7 -0.5**
COLA pmax pmax
comp=Z,148nm,1.2s
COLA College 24.70 48 P **P 06 22 14.8 -0.5**
COLA IAmb IAmb 06 22 19.0
comp=Z,107nm,0.8s
POKR Poker Plat Res 24.88 47 P **P 06 22 17.1 +0.1**
baz=268,SNR=27
DHY Denali Highway 24.93 52 IAmb IAmb 06 22 20.2
comp=Z,101nm,0.9s
HDA Harding Lake 25.08 49 P **P 06 22 17.7 -1.0**
baz=270,SNR=29
HDA Harding Lake 25.08 49 IAmb IAmb 06 22 56.8
comp=Z,91nm,1.0s
IL31 25.11 48 IAmb IAmb 06 22 33.0
comp=Z,90nm,0.8s
ILAR Eielson Array 25.11 48 P **P 06 22 18.1 -0.8**
comp=Z,40nm,0.8s,baz=252,slow=6.9,SNR=302
ILAR LR LR 06 32 52.6
comp=Z,2µm,19.6s,baz=270,slow=38
MDJ Mudanjiang 25.23 261 P **P 06 22 20.8 +0.5**
MDJ pP pP 06 22 25.0 +0.6
MDJ sP sP 06 22 27.0 +0.8
MDJ S **S 06 26 49.3 +4.8**
MDJ sS sS 06 26 57.8 +5.5
MDJ SS **SnSn 06 27 43.8 +8.4**
MDJ pmax pmax
comp=Z,52nm,1.3s
MDJ pmax pmax
comp=Z,740nm,10.0s
MDJ LR LR
comp=Z,3µm,15.1s
MDJ LR LR
comp=Z,6µm,15.1s
MDJ LR LR
comp=Z,9µm,15.1s
MDJ Mudanjiang 25.23 261 IAMs_20 IAMs_20 06 33 29.8
comp=Z,5µm,18.0s
GLI Glacier Island 25.27 57 IAmb IAmb 06 22 23.3
comp=Z,155nm,1.0s
FID Port Fidalgo 25.59 57 IAmb IAmb 06 22 49.8
comp=Z,131nm,1.0s
MSHR Mys Shultsa 25.63 255 *ce*P **P 06 22 25.4 +1.5**
MSHR pmax pmax
comp=Z,23nm,1.5s
PRP Porcupine Dome 25.69 46 IAmb IAmb 06 22 26.6
comp=Z,142nm,1.0s
PRP IAMs_20 IAMs_20 06 33 15.8
comp=Z,5µm,18.0s
EYAK Cordova Ski Ar 25.98 58 IAMs_20 IAMs_20 06 32 52.6
comp=Z,5µm,19.0s
RIDG Independent Ri 26.03 50 IAmb IAmb 06 22 28.5
comp=Z,201nm,1.4s
MJB9 Matsu-Tunnel 26.34 237 P **P 06 22 31.3 +0.9**
MJB9 IAmb IAmb 06 22 48.3
comp=Z,158nm,1.0s
MAJO Matsushiro 26.34 237 *c i*P **P 06 22 31.0 +0.7**
MAJO pmax pmax
comp=Z,27nm,1.1s
MAJO Matsushiro 26.34 237 P **P 06 22 31.1 +0.7**
MAT Matsushiro 26.34 237 P **P 06 22 30.7 +0.3**
MAT S **S 06 27 04.0 +1.9**
MJAR Matsushiro Arr 26.34 237 P **P 06 22 30.9 +0.5**
comp=Z,15nm,0.6s,baz=24,slow=8.2,SNR=70
MJAR LR LR 06 34 20.0
comp=Z,1µm,18.1s,baz=45,slow=40
DOT Dot Lake 26.39 51 IAmb IAmb 06 22 43.3
comp=Z,115nm,1.2s
SCRK Sand Creek 26.39 50 IAmb IAmb 06 22 31.9
comp=Z,107nm,1.2s
RAGM Ragged Mountai 26.53 58 IAMs_20 IAMs_20 06 33 12.2
comp=Z,5µm,20.0s
WAX Waxell Ridge 27.40 57 IAmb IAmb 06 22 42.7
comp=Z,250nm,1.6s
WAX IAMs_20 IAMs_20 06 33 50.3
comp=Z,5µm,20.0s
EGAK Eagle 27.56 48 IAmb IAmb 06 22 42.2
comp=Z,73nm,0.9s
INU Inuyama 27.87 237 P **P 06 22 44.4 +0.3**
INU IAmb IAmb 06 23 03.8
comp=Z,201nm,1.4s
MESA MESA 27.90 58 IAMs_20 IAMs_20 06 35 32.5
comp=Z,4µm,18.0s
YAH Yahtse 27.96 57 IAmb IAmb 06 22 47.1
comp=Z,87nm,0.8s
YAH IAMs_20 IAMs_20 06 34 08.0
comp=Z,5µm,19.0s
CN2 Changchun 28.09 263 *e*P **P 06 22 46.0 -0.1**
CN2 *ep*P pP 06 22 49.8 -0.4
CN2 *e*S **S 06 27 28.0 -1.7**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,400nm,6.0s
CN2 LR LR
comp=Z,4µm,15.0s
CN2 LR LR
comp=Z,3µm,15.0s
CN2 LR LR
comp=Z,3µm,16.0s
BOD Bodaibo 28.17 297 *e*P **P 06 22 45.0 -1.6**
BOD pmax pmax
comp=Z,47nm,1.7s
DAWY Dawson 28.40 49 IAmb IAmb 06 23 10.8
comp=Z,80nm,1.1s
JHJ Hachijo jima 2 28.43 230 LR LR 06 32 39.5
comp=Z,443nm,21.1s,baz=74,slow=33
PCA Pinnacle 28.74 58 IAmb IAmb 06 22 55.4
comp=Z,81nm,0.9s
PCA IAMs_20 IAMs_20 06 34 42.8
comp=Z,5µm,20.0s
EPYK Eagle Plains 29.26 44 P **P 06 22 56.6 +0.3**
baz=276,SNR=84
EPYK Eagle Plains 29.26 44 IAmb IAmb 06 22 58.9
comp=Z,172nm,1.1s
EPYK IAMs_20 IAMs_20 06 35 30.0
comp=Z,3µm,19.0s
HYT Haines Junctio 29.89 55 IAmb IAmb 06 23 04.8
comp=Z,103nm,1.2s
DHAK Deception Hill 30.02 59 IAMs_20 IAMs_20 06 36 05.4
comp=Z,3µm,20.0s
INK Inuvik 30.32 40 P **P 06 23 05.6 +0.1**
comp=Z,30nm,0.5s,baz=275,slow=6.3,SNR=142
INK Inuvik 30.32 40 P **P 06 23 05.2 -0.3**
INK pmax pmax
comp=Z,66nm,1.0s
INK MLR MLR
comp=Z,1µm,20.0s
INK Inuvik 30.32 40 P **P 06 23 05.2 -0.3**
INK IAmb IAmb 06 23 07.4
comp=Z,66nm,0.9s
SNY Shenyang 30.40 262 ⇓P **P 06 23 06.3 -0.2**
SNY S **S 06 28 05.8 -0.1**
SNY pmax pmax
comp=Z,39nm,1.7s
SNY pmax pmax
comp=Z,440nm,3.2s
SNY LR LR
comp=Z,4µm,13.2s
SNY LR LR
comp=Z,5µm,15.2s
SNY LR LR
comp=Z,8µm,14.5s
CIT Chita 30.56 286 *e*P **P 06 23 09.1 +1.2**
CIT pmax pmax
comp=Z,128nm,1.9s
KS19 Wonju Array Si 30.97 251 P **P 06 23 13.2 +1.6**
KS19 IAmb IAmb 06 23 30.9
comp=Z,143nm,1.2s
KSRS Korea Array 30.97 251 P **P 06 23 13.2 +1.6**
comp=Z,11nm,0.6s,baz=42,slow=9.0,SNR=38
KSRS ScP **ScP 06 29 50.0 +1.4**
comp=Z,1.3nm,0.7s,baz=50,slow=3.4,SNR=6.4
KSRS LR LR 06 35 16.9
comp=Z,3µm,19.6s,baz=48,slow=36
SKAG Skagway 31.32 57 IAmb IAmb 06 23 19.7
comp=Z,70nm,1.2s
SKAG IAMs_20 IAMs_20 06 36 23.7
comp=Z,4µm,21.0s
TJN Taejon 32.07 251 *i*P **P 06 23 18.3 -2.9**
SIT Sitka 32.14 62 IAmb IAmb 06 23 24.9
comp=Z,75nm,1.1s
JIS Juneau Island 32.17 59 IAmb IAmb 06 23 24.9
comp=Z,72nm,0.8s
JNU Nakatsue 32.70 242 P **P 06 23 27.8 +0.9**
comp=Z,14nm,0.6s,baz=29,slow=8.9,SNR=8.8
JNU Nakatsue 32.70 242 P **P 06 23 28.1 +1.2**
JNU IAmb IAmb 06 24 03.5
comp=Z,71nm,1.1s
A36M Sachs Harbour 32.78 32 P **P 06 23 26.1 -1.0**
baz=276
DL2 Dalian 33.46 260 P **P 06 23 37.5 +4.1**
DL2 pmax pmax
comp=Z,63nm,0.9s
DL2 pmax pmax
comp=Z,410nm,3.9s
DL2 LR LR
comp=Z,4µm,20.2s
DL2 LR LR
comp=Z,5µm,20.7s
DL2 LR LR
comp=Z,4µm,18.7s
C36M Paulatuk 33.57 37 P **P 06 23 33.9 -0.1**
baz=281,SNR=64
C36M Paulatuk 33.57 37 P **P 06 23 34.1 +0.1**
WRAK Wrangell Islan 33.90 62 IAmb IAmb 06 23 40.6
comp=Z,48nm,0.9s
CRAG Craig 33.90 63 IAmb IAmb 06 23 41.5
comp=Z,135nm,1.7s
DLBC Dease Lake 34.25 57 IAmb IAmb 06 23 43.7
comp=Z,68nm,0.9s
DLBC IAMs_20 IAMs_20 06 38 32.3
comp=Z,4µm,20.0s
H02N1 VAN INLET T-PH 35.21 67 P **P 06 23 50.8 +2.3**
SNR=13
H11N2 WAKE ISLAND Hy 35.22 178 T T 07 01 16.0
baz=359,slow=76,SNR=6502
H11N3 WAKE ISLAND Hy 35.23 178 T T 07 01 31.1
baz=359,slow=76
H11N1 WAKE ISLAND Hy 35.23 178 T T 07 01 31.3
baz=359,slow=76
DIB Dawson Inlet, 35.26 67 IAMs_20 IAMs_20 06 40 40.4
comp=Z,2µm,18.0s
H02S1 DAWSON INLET T 35.26 67 P **P 06 23 50.5 +1.6**
IRK Irkutsk 35.51 292 *e*P **P 06 23 50.6 -0.4**
IRK pmax pmax
comp=Z,118nm,1.6s
MOBC Moresby Island 35.56 67 IAMs_20 IAMs_20 06 40 40.2
comp=Z,3µm,18.0s
BJI Beijing 35.81 266 P **P 06 23 55.0 +1.3**
BJI S **S 06 29 27.5 -2.4**
BJI pmax pmax
comp=Z,8.0nm,1.2s
BJI pmax pmax
comp=Z,340nm,9.0s
BJI LR LR
comp=Z,5µm,14.0s
BJI LR LR
comp=Z,4µm,13.0s
BJI LR LR
comp=Z,2µm,19.9s
BJT Baijiatuau 35.83 266 IAMs_20 IAMs_20 06 39 26.4
comp=Z,3µm,19.0s
TLY Talaya 36.13 291 *c i*P **P 06 23 56.2 -0.2**
TLY *e* 06 25 19.1
TLY *e*PPP PPP 06 25 32.2
TLY pmax pmax
comp=Z,106nm,1.9s
TLY MLR MLR
comp=Z,11µm,17.0s
TLY Talaya 36.13 291 P **P 06 23 57.1 +0.7**
ULN Ulaanbaatar 36.28 284 *d i*P **P 06 23 58.5 +0.7**
ULN pmax pmax
comp=Z,29nm,1.2s
ULN Ulaanbaatar 36.28 284 P **P 06 23 58.4 +0.5**
ULN Ulaanbaatar 36.28 284 IAMs_20 IAMs_20 06 39 10.8
comp=Z,3µm,19.0s
NRIK Noril'sk 36.28 324 P **P 06 23 57.0 -0.4**
comp=Z,19nm,1.1s,baz=85,slow=6.2,SNR=16
NRIK LR LR 06 39 07.2
comp=Z,2µm,18.8s,baz=76,slow=37
NRIK Noril'sk 36.28 324 P **P 06 23 57.0 -0.4**
H11S1 WAKE ISLAND Hy 36.43 178 T T 07 02 56.7
baz=360,slow=76,SNR=307
H11S3 WAKE ISLAND Hy 36.44 178 T T 07 03 00.9
baz=360,slow=76,SNR=96
H11S2 WAKE ISLAND Hy 36.45 178 T T 07 03 01.6
baz=360,slow=76,SNR=437
SONM Songino Array 36.66 284 P **P 06 24 01.8 +0.7**
comp=Z,22nm,0.7s,baz=58,slow=8.5,SNR=95
SONM LR LR 06 40 15.8
comp=Z,2µm,18.0s,baz=58,slow=38
ZAK Zakamensk 36.99 289 *e*P **P 06 24 04.4 +0.5**
ZAK pmax pmax
comp=Z,27nm,1.1s
MOY Mondy 37.55 293 *e*P **P 06 24 09.3 +0.7**
MOY pmax pmax
comp=Z,150nm,2.4s
TIA Tai'an 37.90 261 P **P 06 24 12.0 +0.5**
TIA PP **PnPn 06 25 48.0 +8.6**
TIA S **S 06 30 07.3 +5.5**
TIA pmax pmax
comp=Z,17nm,1.3s
TIA pmax pmax
comp=Z,310nm,4.9s
TIA LR LR
comp=Z,3µm,14.3s
TIA LR LR
comp=Z,3µm,14.5s
TIA LR LR
comp=Z,5µm,15.5s
HHC Hu-ho-hao-te 37.94 271 *e*P **P 06 24 13.5 +1.5**
HHC S **S 06 30 04.5 +1.9**
HHC pmax pmax
comp=Z,17nm,0.9s
HHC pmax pmax
comp=Z,210nm,5.3s
HHC LR LR
comp=Z,2µm,12.2s
HHC LR LR
comp=Z,1µm,13.1s
HHC LR LR
comp=Z,2µm,14.5s
BBB Bella Bella 38.08 66 P **P 06 24 13.8 +1.0**
BTO Baotou 38.99 272 *e*P **P 06 24 19.5 -1.3**
JOW Kunigami 39.11 239 P **P 06 24 22.8 +1.0**
comp=Z,0.9nm,0.5s,baz=124,slow=11,SNR=6.4
SSE Sheshan 39.41 251 P **P 06 23 23.5 -0.8**
SSE S **S 06 30 27.8 +3.1**
SSE pmax pmax
comp=Z,20nm,0.7s
SSE pmax pmax
comp=Z,250nm,4.7s
SSE LR LR
comp=Z,520nm,12.9s
SSE LR LR
comp=Z,640nm,12.2s
YKA Yellowknife Ar 39.50 46 P **P 06 24 24.7 +0.1**
comp=Z,27nm,0.7s,baz=294,slow=8.0,SNR=259
YKA PcP **PcP 06 26 32.4 +0.5**
comp=Z,1.2nm,0.6s,baz=282,slow=3.1,SNR=2.4
YKA ScP **ScP 06 30 20.3 +1.3**
comp=Z,3.3nm,1.1s,baz=302,slow=3.4,SNR=4.7
TIY Taiyuan 39.54 267 *e*P **P 06 24 27.0 +1.7**
TIY S **S 06 30 29.8 +3.2**
TIY pmax pmax
comp=Z,320nm,6.4s
TIY LR LR
comp=Z,2µm,13.1s
TIY LR LR
comp=Z,3µm,13.9s
TIY LR LR
comp=Z,2µm,14.2s
NJ2 Nanjing 39.97 255 *e*P **P 06 24 30.0 +1.1**
NJ2 S **S 06 30 34.3 +1.3**
NJ2 pmax pmax
comp=Z,30nm,0.7s
NJ2 pmax pmax
comp=Z,630nm,5.7s
NJ2 LR LR
comp=Z,3µm,15.6s
NJ2 LR LR
comp=Z,3µm,15.2s
NJ2 LR LR
comp=Z,3µm,15.6s
RES Resolute Bay 40.28 24 P **P 06 24 31.2 +0.2**
RES pmax pmax
comp=Z,42nm,1.2s
RES MLR MLR
comp=Z,900nm,20.0s
RES Resolute Bay 40.28 24 P **P 06 24 31.2 +0.2**
ALE Alert 40.57 9 IAMs_20 IAMs_20 06 43 39.0
comp=Z,3µm,18.0s
LLLB Lillooet 42.20 65 IAMs_20 IAMs_20 06 43 47.9
comp=Z,2µm,18.0s
A04D Lummi Island 42.88 67 P **P 06 24 53.7 +1.1**
baz=307,SNR=15
NLWA Neilton Lookou 43.05 70 P **P 06 24 56.5 +2.5**
NLWA IAMs_20 IAMs_20 06 45 29.4
comp=Z,2µm,18.0s
D03D Eldon 43.38 69 P **P 06 24 57.9 +1.2**
baz=308,SNR=24
B05A Bryant 43.48 68 P **P 06 24 58.2 +0.8**
baz=307,SNR=31
WHN Wuhan 43.63 258 ⇑P **P 06 24 59.8 +1.0**
WHN sP **pwP 06 25 12.3 +0.4**
WHN S **S 06 31 27.5 +0.4**
WHN ScS **ScS 06 34 55.8 -1.1**
WHN LR LR
comp=Z,4µm,13.1s
WHN LR LR
comp=Z,5µm,13.8s
WHN LR LR
comp=Z,5µm,14.9s
B06A Marblemount 43.65 67 P **P 06 24 59.4 +0.6**
B06A IAmb IAmb 06 25 01.0
comp=Z,52nm,0.7s
B06A IAMs_20 IAMs_20 06 42 44.1
comp=Z,2µm,18.0s

E03A Lebam 43.73 70 P **P** **06 25 01.9 +2.4**
E03A IAmb IAmb 06 25 03.0
comp=Z,111nm,1.0s
D04E Lakebay 43.77 69 P **P** **06 25 02.2 +2.4**
baz=308,SNR=9.4
F03A Seaside 44.12 71 IAmb IAmb 06 25 05.6
comp=Z,68nm,0.9s
XAN Xi'an 44.14 266 P **P** **06 25 02.3 -0.7**
XAN pP sP 06 25 10.5 +1.5
XAN sP pwP 06 25 14.3 -1.9
XAN PP **PcP** **06 26 48.0 +0.3**
XAN S **S** **06 31 31.0 -3.8**
XAN sS sS 06 31 45.0 +2.2
XAN ScS **SS** **06 34 54.8 +2.5**
XAN pmax pmax
comp=Z,28nm,1.7s
XAN pmax pmax
comp=Z,500nm,5.5s
XAN LR LR
comp=Z,5µm,19.6s
XAN LR LR
comp=Z,5µm,20.1s
XAN LR LR
comp=Z,6µm,16.2s
XAN Xi'an 44.14 266 IAmb IAmb 06 25 18.5
comp=Z,89nm,1.3s
XAN Xi'an 44.14 266 IAMs_20 IAMs_20 06 45 42.5
comp=Z,3µm,19.0s
D05A Enumclaw 44.19 69 IAmb IAmb 06 25 06.2
comp=Z,84nm,0.8s
TULEG Thule 44.26 16 IAMs_20 IAMs_20 06 44 59.7
comp=Z,2µm,20.0s
E04D Cinebar 44.27 70 P **P** **06 25 05.5 +1.7**
baz=308,SNR=17
C06D Leavenworth 44.32 67 P **P** **06 25 06.1 +1.9**
baz=308
F04D Rainier, OR 44.32 71 P **P** **06 25 05.9 +1.6**
baz=309
ZAA0 Zalesovo Array 44.50 304 P **P** **06 25 04.9 -0.6**
ZAA0 IAMs_20 IAMs_20 06 45 32.2
comp=Z,2µm,18.0s
ZALV Zalesovo Beam 44.50 304 P **P** **06 25 05.2 -0.4**
comp=Z,3.7nm,0.6s,baz=54,slow=6.4,SNR=14
ZALV LR LR 06 45 42.9
comp=Z,2µm,18.0s,baz=48,slow=39
G03D McMinnville, O 44.73 72 P **P** **06 25 08.7 +1.2**
baz=309
F04A Amboy 44.74 70 IAmb IAmb 06 25 09.9
comp=Z,54nm,0.9s
B08A Colville Reser 44.88 66 IAmb IAmb 06 25 10.9
comp=Z,58nm,0.8s
COR Corvallis 45.11 72 P **P** **06 25 11.8 +1.3**
COR pmax pmax
comp=Z,61nm,0.9s
COR MLR MLR
comp=Z,2µm,18.0s
COR Corvallis 45.11 72 P **P** **06 25 11.8 +1.3**
COR IAmb IAmb 06 25 13.6
comp=Z,61nm,0.8s
COR Corvallis 45.11 72 IAMs_20 IAMs_20 06 44 40.9
comp=Z,2µm,18.0s
I02D Swisshome 45.12 73 P **P** **06 25 12.2 +1.6**
baz=310
F05D White Salmon 45.29 70 P **P** **06 25 13.8 +1.8**
baz=309
KBS Kingsbay 45.42 353 P **P** **06 25 11.6 -1.0**
KBS pmax pmax
comp=Z,38nm,1.1s
KBS MLR MLR
comp=Z,600nm,20.0s
KBS Kingsbay 45.42 353 P **P** **06 25 11.6 -1.0**
KBS Kingsbay 45.42 353 *e*P **P** **06 25 12.9 +0.4**
H04D Lebanon 45.46 72 P **P** **06 25 14.9 +1.6**
baz=310,SNR=6.8
YULB Yu-li 45.50 244 P **P** **06 25 16.5 +2.6**
LZH Lanzhou 45.61 272 ⇑P **P** **06 25 17.5 +2.7**
LZH sP sP 06 25 24.0 +3.2
LZH S **S** **06 31 57.5 +1.3**
LZH sS sS 06 32 06.8 +2.8
LZH SS **ScS** **06 35 12.5 +2.6**
LZH pmax pmax
comp=Z,41nm,1.2s
LZH pmax pmax
comp=Z,670nm,5.4s
LZH LR LR
comp=Z,4µm,14.6s
LZH LR LR
comp=Z,4µm,15.7s
LZH LR LR
comp=Z,4µm,15.2s
GTA Gaotai 45.63 278 *e*P **P** **06 25 15.5 +0.6**
GTA pP pP 06 25 19.5 -0.3
GTA sP sP 06 25 22.8 +1.5
GTA PcP **PcP** **06 26 53.0 +0.1**
GTA S **S** **06 31 58.5 +2.1**
GTA sS sS 06 32 06.0 +1.6
GTA ScS **ScS** **06 35 09.8 0.0**
GTA SS **SS** **06 35 16.0 -4.1**
GTA pmax pmax
comp=Z,7.0nm,1.1s
GTA pmax pmax
comp=Z,560nm,8.7s
GTA LR LR
comp=Z,4µm,15.6s
GTA LR LR
comp=Z,3µm,15.5s
GTA LR LR
comp=Z,4µm,14.6s
I03D Drain, OR 45.66 73 P **P** **06 25 16.7 +1.9**
baz=310
H04A Detroit Lake 45.66 72 IAmb IAmb 06 25 18.0
comp=Z,105nm,1.4s
QZH Quanzhou 45.66 248 P **P** **06 25 14.5 -0.6**
QZH S **S** **06 32 00.0 +3.2**
QZH LR LR
comp=Z,480nm,12.8s
QZH LR LR
comp=Z,2µm,14.7s
QZH LR LR
comp=Z,1µm,13.7s
J01E Myrtle Point 45.68 74 P **P** **06 25 17.1 +2.1**
baz=311
E07A Sunnyside 45.73 68 IAmb IAmb 06 25 17.8
comp=Z,57nm,1.0s
DGZ Jazzator, Alta 45.76 297 *i*P **P** **06 25 15.9 +0.1**
DGZ pmax pmax
comp=Z,68nm,1.2s
SPA0 Spitsbergen Ar 45.77 352 P **P** **06 25 14.6 -0.8**
SPA0 Spitsbergen Ar 45.77 352 *e*P **P** **06 25 14.6 -0.8**
SPITS Spitsbergen Ar 45.77 352 P **P** **06 25 14.6 -0.8**
comp=Z,32nm,0.8s,baz=57,slow=8.0,SNR=22
G05D Wamic, OR 45.77 71 P **P** **06 25 17.1 +1.2**
baz=310,SNR=11
C09A Chrisman Ranch 45.78 66 IAmb IAmb 06 25 17.8
comp=Z,50nm,0.8s
C09A IAMs_20 IAMs_20 06 44 20.6
comp=Z,2µm,18.0s
D08A Wollman Farm, 45.91 67 IAmb IAmb 06 25 18.7
comp=Z,100nm,1.6s
TPUB Ta-pu 45.92 245 P **P** **06 25 17.3 +0.2**
TPUB IAmb IAmb 06 25 33.3
comp=Z,101nm,1.1s
HAWA Hanford 46.00 68 IAmb IAmb 06 25 19.8
comp=Z,56nm,1.1s
HAWA IAMs_20 IAMs_20 06 44 12.5
comp=Z,1µm,18.0s
NEW Newport 46.10 65 P **P** **06 25 19.2 +0.8**
baz=309,SNR=26
NEW Newport 46.10 65 IAMs_20 IAMs_20 06 46 14.9
comp=Z,2µm,19.0s
I04A Tendick Farm, 46.11 73 P **P** **06 25 19.9 +1.4**
baz=311
K02D Willamette Mer 46.13 75 P **P** **06 25 20.4 +1.6**
baz=311
I05D Terrebonne, OR 46.34 71 P **P** **06 25 21.3 +0.9**
baz=310,SNR=13
ENH Enshi 46.59 262 IAMs_20 IAMs_20 06 46 37.0
comp=Z,3µm,19.0s
J04D Umpqua Nationa 46.64 73 P **P** **06 25 24.4 +1.5**
baz=311,SNR=22
E09A Wood Farm, Sta 46.67 67 P **P** **06 25 23.4 +0.6**
E09A IAmb IAmb 06 25 24.7
comp=Z,64nm,0.8s
PINE Pine Mountain 46.92 72 IAmb IAmb 06 25 27.8
comp=Z,50nm,1.0s
PINE IAMs_20 IAMs_20 06 44 37.8
comp=Z,2µm,20.0s
HSPB Hornsund (broa 46.93 351 *e*P **P** **06 25 23.9 -0.6**
J05D Fort Rock, OR 47.09 73 P **P** **06 25 27.8 +1.4**
baz=311,SNR=37
L04D Klamath Falls 47.20 74 P **P** **06 25 28.4 +1.2**
baz=312,SNR=18
K04D Chiloquin, OR 47.24 74 P **P** **06 25 29.1 +1.6**
baz=312
WALA Waterton Lakes 47.25 62 IAMs_20 IAMs_20 06 45 17.3
comp=Z,3µm,20.0s
YBH Yreka Blue Hor 47.30 75 IAmb IAmb 06 25 31.1
comp=Z,31nm,0.8s
KHMM Horse Mountain 47.31 77 IAmb IAmb 06 25 32.1
comp=Z,85nm,1.2s
KHMM IAMs_20 IAMs_20 06 43 18.2
comp=Z,2µm,19.0s
M02C Callahan 47.45 76 P **P** **06 25 31.2 +2.1**
baz=312,SNR=6.8
KULLO Kullorsuaq 47.58 14 *i*P **P** **06 25 28.8 -0.7**
KULLO pmax pmax
comp=Z,61nm,0.9s
KULLO Kullorsuaq 47.58 14 *i*P **P** **06 25 28.8 -0.7**
comp=Z,61nm,0.9s
K05A Summer Lake 47.65 73 P **P** **06 25 32.1 +1.4**
K05A IAmb IAmb 06 25 33.7
comp=Z,62nm,1.0s
K05A IAMs_20 IAMs_20 06 46 15.1
comp=Z,2µm,19.0s
M04C Macdoel 47.75 74 P **P** **06 25 33.0 +1.5**
baz=312,SNR=13
KMRM Mail Ridge 47.76 77 IAmb IAmb 06 25 34.9
comp=Z,54nm,0.9s
N02D Trinity Center 47.81 76 P **P** **06 25 33.6 +1.7**
baz=312,SNR=9.6
JTMT Jette 47.90 64 IAMs_20 IAMs_20 06 44 40.5
comp=Z,2µm,21.0s
BMO Blue Mountains 48.19 68 IAmb IAmb 06 25 37.0
comp=Z,45nm,1.1s
BMO IAMs_20 IAMs_20 06 45 48.4
comp=Z,2µm,19.0s
O02D Mt. Diablo Mer 48.31 77 P **P** **06 25 37.5 +1.7**
baz=313
DAG Danmarks Havn 48.47 1 *i*P **P** **06 25 35.5 -0.9**
DAG pmax pmax
comp=Z,22nm,0.9s
DAG Danmarks Havn 48.47 1 *i*P **P** **06 25 35.5 -0.9**
comp=Z,22nm,0.9s
ZSN Zaisan 48.50 297 *e*P **P** **06 25 37.9 +0.8**
comp=Z,100nm,3.2s
ZSN *e*S **S** **06 32 36.5 -0.4**
ZSN *e*LR LR 06 47 37.8
comp=Z,359nm,11.1s
ZSN Zaisan 48.50 297 *e*P **P** **06 25 37.8 +0.8**
ZSN *e*S **S** **06 32 36.5 -0.4**
ZSN pmax pmax
comp=Z,100nm,3.2s
ZSN MLR MLR
comp=Z,359nm,11.0s
MOD Modoc Plateau 48.52 73 IAmb IAmb 06 25 40.1
comp=Z,59nm,0.8s
MOD IAMs_20 IAMs_20 06 46 33.3
comp=Z,1µm,18.0s
MSO Missoula 48.67 64 P **P** **06 25 39.0 +0.5**
baz=311,SNR=39
MSO Missoula 48.67 64 P **P** **06 25 38.2 -0.3**
MSO IAmb IAmb 06 25 41.2
comp=Z,139nm,1.6s
MSO IAMs_20 IAMs_20 06 48 08.0
comp=Z,2µm,20.0s
O03E Paynes Creek 48.78 76 P **P** **06 25 39.9 +0.5**
baz=313,SNR=28
SEM Semipalatinsk 48.90 302 *e*P **P** **06 25 39.6 -0.7**
SEM Semipalatinsk 48.90 302 *e*P **P** **06 25 39.6 -0.7**
WVOR Wild Horse Val 49.08 72 IAMs_20 IAMs_20 06 47 15.0
comp=Z,1µm,18.0s
GDXM Geysers 49.24 78 IAmb IAmb 06 25 46.7
comp=Z,145nm,1.9s
GDXM IAMs_20 IAMs_20 06 47 15.5
comp=Z,2µm,18.0s
FFC Flin Flon 49.30 50 P **P** **06 25 43.5 +0.5**
FFC pmax pmax
comp=Z,57nm,1.1s
FFC MLR MLR
comp=Z,3µm,19.0s
FFC Flin Flon 49.30 50 P **P** **06 25 43.5 +0.5**
FFC IAmb IAmb 06 25 44.7
comp=Z,57nm,1.1s
FFC Flin Flon 49.30 50 IAMs_20 IAMs_20 06 49 03.0
comp=Z,3µm,19.0s
CD2 Chengdu 49.40 267 P **P** **06 25 44.8 +0.6**
CD2 sP pP 06 25 49.3 +0.8
CD2 PP **PP** **06 27 35.0 -3.1**
CD2 S **S** **06 32 46.0 -3.9**
CD2 sS sS 06 33 00.0 +2.0
CD2 pmax pmax
comp=Z,60nm,0.7s
CD2 pmax pmax
comp=Z,800nm,5.5s
CD2 LR LR
comp=Z,6µm,22.1s
CD2 LR LR
comp=Z,5µm,18.6s
CD2 LR LR
comp=Z,4µm,16.7s
WMQ Urumqi 49.41 291 *e*P **P** **06 25 45.5 +1.4**
WMQ pP sP 06 25 51.5 +1.0
WMQ S **S** **06 32 50.0 +0.2**
WMQ sS sS 06 32 59.3 +1.4
WMQ pmax pmax
comp=Z,30nm,0.7s
WMQ pmax pmax
comp=Z,85nm,4.3s
WMQ LR LR
comp=Z,6µm,18.9s
WMQ LR LR
comp=Z,4µm,21.3s
WMQ LR LR
comp=Z,3µm,21.3s
WMQ Urumqi 49.41 291 IAMs_20 IAMs_20 06 45 46.5
comp=Z,3µm,18.0s
KURK Kurchatov 49.49 303 *i*P **P** **06 25 43.9 -0.6**
KURK pmax pmax
comp=Z,161nm,1.2s
KURK Kurchatov 49.49 303 P **P** **06 25 44.1 -0.5**
KURBB Kurchatov Arra 49.59 303 P **P** **06 25 44.3 -1.0**
EGMT Eagleton 50.02 61 P **P** **06 25 49.4 +0.6**
baz=312,SNR=17
EGMT Eagleton 50.02 61 IAmb IAmb 06 25 50.3
comp=Z,54nm,0.8s
EGMT IAMs_20 IAMs_20 06 46 40.6
comp=Z,2µm,20.0s
LRM Limekiln Ridge 50.11 64 P **P** **06 25 49.8 +0.1**
HKPS Hong Kong Po S 50.21 251 IAMs_20 IAMs_20 06 47 06.3
comp=Z,2µm,19.0s
MK31 Makanchi Array 50.26 297 *i*P **P** **06 25 49.3 -1.2**
MKAR Makanchi Array 50.26 297 P **P** **06 25 49.5 -1.0**
comp=Z,4.3nm,0.5s,baz=48,slow=6.4,SNR=34
MKAR LR LR 06 48 03.4
comp=Z,1µm,18.6s,baz=32,slow=37
DLMT Dillon 50.34 65 IAmb IAmb 06 25 54.1
comp=Z,92nm,1.6s
MAKZ Makanchi 50.41 298 P **P** **06 25 51.3 -0.3**
MAKZ pmax pmax
comp=Z,113nm,1.5s
MAKZ MLR MLR
comp=Z,1µm,22.0s
MAKZ Makanchi 50.41 298 P **P** **06 25 51.3 -0.3**
MAKZ IAmb IAmb 06 26 07.1
comp=Z,113nm,1.5s
VCNR Virginia City 50.67 75 IAmb IAmb 06 25 56.7
comp=Z,44nm,0.8s
PNTR Pine Nut 50.84 76 IAmb IAmb 06 25 58.1
comp=Z,79nm,0.7s
GYA Guiyang 51.10 261 ⇑*i*P **P** **06 25 58.0 +0.9**
GYA PP **PP** **06 27 58.5 +4.8**
GYA S **S** **06 33 14.5 +0.7**
GYA SS **SS** **06 36 43.3 -5.4**
GYA pmax pmax
comp=Z,30nm,1.2s
GYA pmax pmax
comp=Z,270nm,4.2s
GYA LR LR
comp=Z,2µm,19.4s
GYA LR LR
comp=Z,2µm,20.1s
GYA LR LR
comp=Z,2µm,22.9s
WAKR Walker 51.34 76 IAmb IAmb 06 26 01.9
comp=Z,58nm,0.7s
WAKR IAMs_20 IAMs_20 06 48 44.9
comp=Z,1µm,18.0s
SUMG Summit 51.62 9 ⇑*i*P **P** **06 26 00.4 -0.4**
SUMG pmax pmax
comp=Z,180nm,1.2s
SUMG Summit 51.62 9 P **P** **06 26 00.1 -0.8**
SUMG IAmb IAmb 06 26 24.6
comp=Z,78nm,1.2s
SUMG IAMs_20 IAMs_20 06 50 25.0
comp=Z,1µm,19.0s
SUMG Summit 51.62 9 ⇑*i*P **P** **06 26 00.4 -0.4**
comp=Z,180nm,1.2s
KVN Kaiserville 51.70 74 IAmb IAmb 06 26 04.4
comp=Z,47nm,0.7s
BRVK Borovoye 51.77 310 *c i*P **P** **06 26 01.5 -0.2**
BRVK pmax pmax
comp=Z,40nm,1.0s
BRVK Borovoye 51.77 310 P **P** **06 26 01.6 -0.2**
BRVK IAmb IAmb 06 26 15.0
comp=Z,84nm,1.0s
BRVK Borovoye 51.77 310 IAMs_20 IAMs_20 06 50 33.3
comp=Z,2µm,19.0s
KEV Kevo 52.01 343 P **P** **06 26 01.9 -1.4**
KEV pmax pmax
comp=Z,31nm,1.3s
KEV MLR MLR
comp=Z,1µm,18.0s
KEV Kevo 52.01 343 P **P** **06 26 01.9 -1.4**
KEV IAMs_20 IAMs_20 06 52 06.7
comp=Z,1µm,18.0s
NVAR Mina Array Bea 52.02 75 P **P** **06 26 05.0 +0.9**
comp=Z,25nm,0.6s,baz=303,slow=7.6,SNR=106
NVAR LR LR 06 46 33.6
comp=Z,795nm,19.9s,baz=310,slow=34
LKWY Lake 52.03 64 IAmb IAmb 06 26 08.2
comp=Z,50nm,0.9s
H17A Grant Village 52.05 65 P **P** **06 26 06.5 +2.2**
baz=314,SNR=52
H17A Grant Village 52.05 65 IAmb IAmb 06 26 08.7
comp=Z,151nm,1.4s
H17A IAMs_20 IAMs_20 06 47 01.5
comp=Z,2µm,22.0s
ELK Elko 52.09 71 IAMs_20 IAMs_20 06 47 36.7
comp=Z,2µm,21.0s
LVZ Lovozero 52.17 339 *i*P **P** **06 26 02.6 -1.9**
LVZ pmax pmax
comp=Z,1nm,1.1s
LVZ Lovozero 52.17 339 P **P** **06 26 02.8 -1.8**
FLWY Flagg Ranch 52.21 65 IAmb IAmb 06 26 08.4
comp=Z,60nm,0.8s
IMW Indian Meadow 52.21 65 IAmb IAmb 06 26 08.8
comp=Z,73nm,1.1s
OMMB Old Mammoth Mi 52.21 76 IAmb IAmb 06 26 08.6
comp=Z,99nm,1.7s
RLMT Red Lodge 52.23 63 P **P** **06 26 06.5 +1.0**
baz=314,SNR=61
RLMT Red Lodge 52.23 63 IAMs_20 IAMs_20 06 48 26.2
comp=Z,1µm,21.0s
MLAC Mammoth, Mammo 52.29 76 P **P** **06 26 09.2 +3.1**
baz=315
ARCES ARCESS Array B 52.45 344 P **P** **06 26 05.8 -0.8**
comp=Z,8.0nm,0.7s,baz=30,slow=7.4,SNR=28
ARCES LR LR 06 51 52.1
comp=Z,1µm,18.4s,baz=26,slow=40
ARE0 ARCESS Array S 52.45 344 *e*P **P** **06 26 05.8 -0.8**
DGMT Dagmar 52.46 57 P **P** **06 26 07.8 +0.8**
baz=314,SNR=20
DGMT Dagmar 52.46 57 IAmb IAmb 06 26 08.8
comp=Z,58nm,0.8s
DGMT Dagmar 52.46 57 IAMs_20 IAMs_20 06 49 59.0
comp=Z,2µm,21.0s
LAO LASA Array 52.70 60 P **P** **06 26 09.7 +0.9**
baz=314,SNR=65
LAO LASA Array 52.70 60 IAMs_20 IAMs_20 06 50 50.3
comp=Z,1µm,18.0s
HVU Hansel Valley 52.70 68 P **P** **06 26 10.3 +1.3**
HVU pmax pmax
comp=Z,36nm,0.9s
HVU Hansel Valley 52.70 68 P **P** **06 26 10.3 +1.3**
APA Apatity 52.71 339 ⇓*i*P **P** **06 26 06.5 -1.9**
APA pmax pmax
comp=Z,11nm,1.1s
APA MLR MLR
comp=Z,900nm,18.0s
BRZS Berezniki 52.80 306 ⇓*e*P **P** **06 26 08.8 -0.7**
comp=Z,25nm,0.7s
BRZS *e*LR LR 06 49 02.1
comp=Z,994nm,14.5s
BRZS Berezniki 52.80 306 *de*P **P** **06 26 08.7 -0.7**
BRZS pmax pmax
comp=Z,25nm,0.7s
BRZS MLR MLR
comp=Z,994nm,15.0s
PAGB Antelope Grade 52.85 79 IAmb IAmb 06 26 12.8
comp=Z,133nm,1.7s
AHID Auburn Hatcher 52.91 66 IAMs_20 IAMs_20 06 48 55.1
comp=Z,2µm,19.0s
TIN Tinemaha, Big 53.04 76 P **P** **06 26 13.5 +2.0**
baz=316,SNR=11
SVE Sverdlovsk 53.10 318 ⇓*e*P **P** **06 26 12.7 +1.2**
SVE *e*S **S** **06 33 44.6 +4.3**
SVE *e* 06 37 21.5
SVE pmax pmax
comp=Z,69nm,1.2s
SVE MLR MLR
comp=Z,2µm,15.0s
ILULI Ilulissat 53.22 15 IAMs_20 IAMs_20 06 49 52.5
comp=Z,1µm,22.0s
KTK1 Kautokeino 53.29 344 *e*P **P** **06 26 12.2 -0.6**
TRO Tromso 53.36 346 *e*P **P** **06 26 12.9 -0.3**
VES Vestal, Richgr 53.43 78 P **P** **06 26 14.6 +0.4**
baz=316,SNR=16
TDK Taldyqorghan 53.46 298 *e*P **P** **06 26 13.9 -0.5**
TDK *e*LR LR 06 49 16.0
comp=Z,1µm,13.5s
TDK Taldyqorghan 53.46 298 *e*P **P** **06 26 13.9 -0.5**
TDK MLR MLR
comp=Z,1µm,14.0s
HWUT Hardware Ranch 53.47 68 IAmb IAmb 06 26 17.4
comp=Z,45nm,0.9s
CWC Cottonwood Cre 53.56 77 P **P** **06 26 16.2 +0.8**
baz=316
GRAC Grapevine Rang 53.56 76 P **P** **06 26 17.1 +1.8**
baz=316,SNR=6.6
R11A Troy Canyon, C 53.59 73 P **P** **06 26 16.8 +1.2**
baz=316,SNR=50
R11A Troy Canyon, C 53.59 73 IAmb IAmb 06 26 18.2
comp=Z,65nm,1.4s
R11A IAMs_20 IAMs_20 06 47 17.4
comp=Z,1µm,20.0s
PKM Mcpherson Peak 53.70 79 P **P** **06 26 17.8 +1.3**
baz=317
BW06 Boulder Array 53.72 65 P **P** **06 26 17.8 +1.2**
baz=315,SNR=50
BW06 Boulder Array 53.72 65 P **P** **06 26 16.7 +0.2**
BW06 IAmb IAmb 06 26 19.5
comp=Z,68nm,1.1s
BW06 IAMs_20 IAMs_20 06 49 53.6
comp=Z,1µm,21.0s
PD31 Pinedale Array 53.72 65 IAmb IAmb 06 26 19.5
comp=Z,63nm,1.1s
PDAR Pinedale Array 53.72 65 P **P** **06 26 16.8 +0.2**
comp=Z,32nm,0.8s,baz=315,slow=3.1,SNR=146
DUG Dugway, Tooele 53.80 70 P **P** **06 26 18.3 +1.3**
baz=315,SNR=39
DUG Dugway, Tooele 53.80 70 IAmb IAmb 06 26 20.5
comp=Z,67nm,1.2s
DUG IAMs_20 IAMs_20 06 52 58.8
comp=Z,1µm,18.0s
ISA Isabella, Lake 53.90 78 P **P** **06 26 17.7 -0.1**
baz=316,SNR=10.0
MPMC Manual Prospec 54.17 77 P **P** **06 26 20.6 +0.7**
baz=316,SNR=22
OTUK Ortayu 54.17 305 P **P** **06 26 18.0 -1.6**
ARU Arti 54.18 319 P **P** **06 26 19.3 -0.1**
comp=Z,5.6nm,0.5s,baz=22,slow=5.3,SNR=28
ARU LR LR 06 52 42.8
comp=Z,2µm,18.1s,baz=41,slow=40
ARU Arti 54.18 319 *c i*P **P** **06 26 19.2 -0.2**
ARU 06 27 28.0
ARU PPP PPP 06 29 34.9
ARU S **S** **06 33 54.9 0.0**
ARU 06 36 03.1
ARU SS **SS** **06 37 34.1 -1.8**
ARU pmax pmax

comp=Z,25nm,0.7s
ARU MLR MLR
comp=Z,2µm,17.0s
ARU Arti 54.18 319 P **P 06 26 18.9 -0.5**
ARU IAmb IAmb 06 26 43.2
comp=Z,80nm,1.0s
TPNV Topopah Spring 54.22 75 P **P 06 26 21.5 +1.3**
baz=316,SNR=71
TPNV Topopah Spring 54.22 75 IAMs_20 IAMs_20 06 49 46.2
comp=Z,1µm,19.0s
FURC Furnace Creek, 54.22 76 P **P 06 26 21.4 +1.4**
baz=316,SNR=92
KMI Kunming 54.37 263 P P 06 26 29.3 +7.8
KMI pP pwP 06 26 31.8 -3.0
KMI sP sP 06 26 35.0 +7.5
KMI PP **PP 06 28 25.0 +1.7**
KMI S **S 06 33 57.5 -1.1**
KMI sS pS 06 34 01.3 -2.6
KMI Kunming 54.37 263 SS **SKiKP 06 37 34.5 +4.1**
KMI pmax pmax
comp=Z,36nm,0.7s
KMI pmax pmax
comp=Z,420nm,4.1s
KMI LR LR
comp=N,2µm,14.7s
KMI LR LR
comp=E,2µm,15.9s
KMI LR LR
comp=Z,2µm,17.2s
KMI Kunming 54.37 263 IAMs_20 IAMs_20 06 52 58.1
comp=Z,2µm,18.0s
UZB Uzynbulak 54.45 296 *e*P **P 06 26 21.4 -0.5**
comp=Z,13nm,1.3s
UZB *e*S **S 06 33 58.8 -0.5**
UZB Uzynbulak 54.45 296 *e*P **P 06 26 21.3 -0.5**
UZB *e*S **S 06 33 58.7 -0.5**
UZB pmax pmax
comp=Z,13nm,1.3s
LRMC Laurel Mtn Rad 54.48 77 P **P 06 26 23.4 +1.3**
baz=317,SNR=6.7
OSI Osito Audit: C 54.52 79 P **P 06 26 23.3 +1.1**
baz=317
OSI Osito Audit: C 54.52 79 IAmb IAmb 06 26 25.0
comp=Z,34nm,0.7s
TMCR Tamitsa 54.52 335 *e*P **P 06 26 20.8 -1.0**
TMCR pmax pmax
comp=Z,88nm,1.1s
SCO Scoresbysund 54.70 3 *i* P **P 06 26 23.0 0.0**
SCO Scoresbysund 54.70 3 *i* P **P 06 26 23.0 0.0**
EDW2 Edwards Air Fo 54.73 78 P **P 06 26 24.5 +0.7**
baz=317,SNR=15
SATY Saty 54.83 296 *e*P **P 06 26 24.5 -0.1**
comp=Z,12nm,0.9s
SATY *e*S **S 06 34 03.0 -1.4**
SATY Saty 54.83 296 *e*P **P 06 26 24.4 -0.1**
SATY *e*S **S 06 34 02.9 -1.4**
SATY pmax pmax
comp=Z,12nm,0.9s
SHOC Shoshone, Teco 54.96 76 P **P 06 26 27.0 +1.5**
baz=317,SNR=23
CHKK Chushkaly 54.99 298 *e*P **P 06 26 23.9 -1.6**
CHKK Chushkaly 54.99 298 *e*P **P 06 26 23.9 -1.6**
DECC Green Verdugo 55.00 79 P **P 06 26 26.9 +1.1**
baz=317,SNR=5.6
ULM Lac du Bonnet 55.09 51 P **P 06 26 26.0 -0.1**
comp=Z,52nm,0.8s,baz=314,slow=7.6,SNR=46
ULM LR LR 06 51 10.3
comp=Z,2µm,18.8s,baz=323,slow=37
ULM Lac du Bonnet 55.09 51 IAmb IAmb 06 26 27.9
comp=Z,73nm,0.9s
ULM IAMs_20 IAMs_20 06 50 41.1
comp=Z,2µm,19.0s
MDND Maddock 55.09 55 P **P 06 26 27.1 +0.9**
baz=316,SNR=63
MDND Maddock 55.09 55 IAMs_20 IAMs_20 06 52 33.5
comp=Z,2µm,19.0s
GSC Goldstone, Bar 55.10 77 P **P 06 26 27.4 +0.9**
baz=317,SNR=43
GSC Goldstone, Bar 55.10 77 IAmb IAmb 06 26 29.2
comp=Z,56nm,0.9s
PASC Pasadena Art C 55.14 79 IAmb IAmb 06 26 29.1
comp=Z,40nm,0.8s
SHPR Sheep Range 55.15 75 IAmb IAmb 06 26 29.8
comp=Z,104nm,1.9s
MWC Mount Wilson 55.18 79 IAmb IAmb 06 26 30.5
comp=Z,115nm,1.4s
QIZ Qiongzhong 55.19 252 P **P 06 26 26.3 -0.9**
QIZ S **S 06 34 13.8 +4.5**
QIZ pmax pmax
comp=Z,390nm,10.0s
QIZ LR LR
comp=Z,1µm,14.7s
QIZ LR LR
comp=Z,1µm,16.2s
QIZ LR LR
comp=Z,1µm,15.2s
PRZ Przheval'sk 55.24 296 IAMs_20 IAMs_20 06 51 47.1
comp=Z,2µm,18.0s
KUU Kurty 55.30 298 *e*P **P 06 26 26.9 -0.9**
comp=Z,48nm,1.8s
KUU *e*S **S 06 34 08.5 -1.9**
KUU *e*LR LR 06 51 23.1
comp=Z,655nm,12.4s
KUU Kurty 55.30 298 *e*P **P 06 26 26.8 -0.9**
KUU *e*S **S 06 34 08.4 -1.9**
KUU pmax pmax
comp=Z,48nm,1.8s
KUU MLR MLR
comp=Z,655nm,12.0s
RRX Edison Barstow 55.30 77 P **P 06 26 30.4 +2.5**
baz=317
SFJD Kangerlussuaq 55.32 16 P **P 06 26 27.1 -0.5**
comp=Z,8.3nm,0.4s,baz=330,slow=4.5,SNR=7.1
SFJD Kangerlussuaq 55.32 16 P **P 06 26 26.8 -0.7**
SFJD pmax pmax
comp=Z,52nm,1.4s
SFJD MLR MLR
comp=Z,1µm,20.0s
SFJD Kangerlussuaq 55.32 16 P **P 06 26 26.8 -0.7**
SFJD Kangerlussuaq 55.32 16 IAMs_20 IAMs_20 06 53 02.9
comp=Z,1µm,20.0s
SFJD Kangerlussuaq 55.32 16 *i* P **P 06 26 27.0 -0.5**
K22A Casper 55.38 64 P **P 06 26 30.2 +1.6**
baz=316,SNR=38
K22A Casper 55.38 64 IAmb IAmb 06 26 31.4
comp=Z,78nm,1.1s
K22A IAMs_20 IAMs_20 06 50 15.4
comp=Z,1µm,20.0s
BFSC Mount Baldy Ra 55.39 78 P **P 06 26 29.9 +1.2**
baz=317,SNR=14
MDOK Medeo 55.45 297 *e*P **P 06 26 28.8 -0.3**
MDOK *e*S **S 06 34 11.8 -0.9**
MDOK *e*LR LR 06 51 24.5
comp=Z,1µm,15.1s
MDOK Medeo 55.45 297 *e*P **P 06 26 28.8 -0.3**
MDOK *e*S **S 06 34 11.8 -0.9**
MDOK MLR MLR
comp=Z,1µm,15.0s
LOF Lofoten 55.47 348 *e*P **P 06 26 27.9 -0.6**
E28A Huff 55.49 57 IAMs_20 IAMs_20 06 49 53.0
comp=Z,1µm,22.0s
AAA Alma-Ata 55.49 297 *e*P **P 06 26 28.9 -0.3**
AAA *e*LR LR 06 50 50.7
comp=Z,1µm,14.5s
AAA Alma-Ata 55.49 297 *e*P **P 06 26 28.9 -0.3**
AAA MLR MLR
comp=Z,1µm,15.0s
TUQ Turquoise Moun 55.49 76 P **P 06 26 30.7 +1.3**
baz=317,SNR=14
CIS Catalina Islan 55.58 80 P **P 06 26 30.7 +0.8**
baz=318
RSSD Black Hills 55.60 61 P **P 06 26 30.1 0.0**
RSSD pmax pmax
comp=Z,61nm,0.9s
RSSD MLR MLR
comp=Z,2µm,20.0s
RSSD Black Hills 55.60 61 P **P 06 26 30.7 +0.5**
baz=316
RSSD Black Hills 55.60 61 P **P 06 26 30.1 0.0**
RSSD IAmb IAmb 06 26 32.1
comp=Z,61nm,0.8s
RSSD Black Hills 55.60 61 IAMs_20 IAMs_20 06 50 13.1
comp=Z,2µm,20.0s
TNSS Tian-Shan 55.60 297 *e*P **P 06 26 29.7 -0.8**
TNSS Tian-Shan 55.60 297 *e*P **P 06 26 29.6 -0.8**
BTLS Baital 55.62 301 *e*P **P 06 26 29.3 -0.8**

comp=Z,25nm,1.8s
BTLS *e*S **S 06 34 11.2 -3.4**
BTLS *e*LR LR 06 50 41.4
comp=Z,484nm,13.9s
BTLS Baital 55.62 301 *e*P **P 06 26 29.2 -0.8**
BTLS *e*S **S 06 34 11.1 -3.5**
BTLS pmax pmax
comp=Z,25nm,1.8s
BTLS MLR MLR
comp=Z,484nm,14.0s
HEC Hector,Ludlow 55.71 77 P **P 06 26 31.9 +1.0**
baz=317,SNR=8.2
RWWY Rawlins 55.71 65 IAmb IAmb 06 26 32.7
comp=Z,109nm,1.2s
RWWY IAMs_20 IAMs_20 06 52 22.3
comp=Z,1µm,20.0s
KIRV Kirov 55.77 325 P **P 06 26 30.9 +0.2**
comp=Z,14nm,0.6s,baz=41,slow=7.1,SNR=12
KIRV LR LR 06 51 43.4
comp=Z,1µm,20.0s,baz=40,slow=38
KIRV Kirov 55.77 325 P **P 06 26 31.0 +0.2**
BBRC Big Bear Solar 55.79 78 P **P 06 26 33.1 +1.5**
baz=317,SNR=7.8
TARG Taragay, Kyrgy 56.09 296 IAMs_20 IAMs_20 06 51 29.9
comp=Z,2µm,18.0s
GMRC Granite Mounta 56.12 76 P **P 06 26 35.0 +1.1**
baz=317,SNR=48
MURC Murrieta 56.12 79 P **P 06 26 34.6 +0.8**
baz=318,SNR=11
KDJ Kajisay 56.13 296 IAMs_20 IAMs_20 06 51 54.4
comp=Z,2µm,18.0s
O20A White River Ci 56.29 67 P **P 06 26 35.9 +0.8**
baz=316,SNR=129
O20A White River Ci 56.29 67 IAMs_20 IAMs_20 06 51 02.0
comp=Z,1µm,20.0s
TKM2 Tokmak 2 56.37 298 P **P 06 26 35.8 +0.1**
SNR=9.5
SGDS Sogindy 56.48 299 *e*P **P 06 26 36.4 +0.1**
comp=Z,15nm,1.0s
SGDS *e*S **S 06 34 25.0 -1.1**
SGDS *e*LR LR 06 52 10.8
comp=Z,435nm,11.8s
BELC Belle Mtn. Jos 56.50 77 P **P 06 26 37.1 +0.5**
baz=318,SNR=22
AGMN Agassiz Nation 56.51 52 P **P 06 26 36.4 +0.1**
baz=317,SNR=68
AGMN Agassiz Nation 56.51 52 IAmb IAmb 06 26 38.1
comp=Z,66nm,0.9s
AGMN IAMs_20 IAMs_20 06 55 20.8
comp=Z,2µm,18.0s
PFO Pinyon Flats O 56.53 78 P **P 06 26 37.6 +0.8**
PFO pmax pmax
comp=Z,22nm,0.9s
PFO Pinyon Flats O 56.53 78 P **P 06 26 37.4 +0.6**
baz=318,SNR=14
PFO Pinyon Flats O 56.53 78 P **P 06 26 37.6 +0.8**
PFO Pinyon Flats O 56.53 78 IAMs_20 IAMs_20 06 46 14.5
comp=Z,1µm,22.0s
XPFO Pion Flat 56.53 78 P **P 06 26 37.8 +0.9**
XPFO Pion Flat 56.53 78 IAMs_20 IAMs_20 06 46 14.5
comp=Z,1µm,22.0s
TPFO Pinon Flats 56.53 78 P **P 06 26 37.5 +0.6**
baz=318,SNR=14
LKP Lekhapani 56.64 271 *e*P **P 06 26 37.1 -0.4**
SLVN Son La 56.66 260 P **P 06 26 38.7 +0.9**
SLVN IAmb IAmb 06 26 54.8
comp=Z,114nm,1.4s
SLVN IAMs_20 IAMs_20 06 52 49.1
comp=Z,1µm,18.0s
USP Ospenovka 56.67 299 P **P 06 26 37.8 +0.1**
SNR=18
109C Camp Elliot, M 56.70 79 P **P 06 26 39.2 +1.4**
baz=318
U15A North Rim 56.79 73 IAMs_20 IAMs_20 06 49 24.0
comp=Z,1µm,20.0s
D32A Dogwood Acres, 56.82 54 IAMs_20 IAMs_20 06 52 45.2
comp=Z,2µm,21.0s
IRM Iron Mountain 56.87 77 P **P 06 26 40.3 +1.2**
baz=318,SNR=33
KBK Karagaybulak 56.89 298 P **P 06 26 39.4 0.0**
SNR=9.0
KLMR Klimovskoe 56.90 332 *e*P **P 06 26 37.2 -1.6**
KLMR *e*S **S 06 34 31.0 0.0**
KLMR pmax pmax
comp=Z,68nm,1.0s
KLMR MLR MLR
comp=Z,2µm,16.0s
KLMR Klimovskoe 56.90 332 *e*P **P 06 26 37.3 -1.6**
KLMR AMP 06 26 51.8
comp=Z,68nm,1.0s
KLMR *e*S **S 06 34 31.0 0.0**
KLMR *e*S **S 06 34 31.0 0.0**
KLMR LQ LQ 06 47 12.4
KLMR LQ LQ 06 47 12.4
KLMR LR LR 06 51 10.3
KLMR AMP 06 54 11.5
comp=Z,2µm,15.6s
PHWY Pilot Hill 56.90 64 IAmb IAmb 06 26 41.4
comp=Z,84nm,1.9s
FRU1 Bishkek 56.94 299 IAMs_20 IAMs_20 06 51 35.6
comp=Z,1µm,18.0s
N23A Red Feather La 56.94 65 P **P 06 26 41.0 +1.2**
baz=317,SNR=60
PV21 Cone Mtn., Par 57.04 69 IAmb IAmb 06 26 43.1
comp=Z,53nm,0.8s
PV21 IAMs_20 IAMs_20 06 51 06.5
comp=Z,1µm,20.0s
BC3 Big Chuckawall 57.06 77 P **P 06 26 41.2 +0.6**
baz=318,SNR=19
MONP2 Monument Peak 57.08 79 P **P 06 26 42.0 +1.2**
baz=318,SNR=5.9
AAK Ala-Archa 57.13 299 P **P 06 26 43.3 +2.3**
SNR=12
AAK Ala-Archa 57.13 299 *i* P **P 06 26 40.6 -0.5**
AAK pmax pmax
comp=Z,28nm,1.0s
AAK Ala-Archa 57.13 299 P **P 06 26 40.5 -0.5**
AAK IAmb IAmb 06 26 56.3
comp=Z,48nm,0.9s
AAK Ala-Archa 57.13 299 IAMs_20 IAMs_20 06 51 40.4
comp=Z,2µm,18.0s
KZA Kyzart 57.16 298 P **P 06 26 46.2 +4.7**
SNR=7.8
PV22 Blue Mesa, Par 57.16 69 IAMs_20 IAMs_20 06 51 17.7
comp=Z,1µm,19.0s
PV04 Paradox Valley 57.20 69 IAMs_20 IAMs_20 06 51 36.2
comp=Z,1µm,20.0s
PV19 Morning Glory 57.22 69 IAMs_20 IAMs_20 06 51 11.2
comp=Z,1µm,22.0s
PV17 East Wray Mesa 57.25 69 P **P 06 26 42.9 +0.9**
PV11 David Mesa, Pa 57.28 69 IAMs_20 IAMs_20 06 52 14.0
comp=Z,1µm,21.0s
PV07 Paradox Valley 57.30 69 IAMs_20 IAMs_20 06 51 20.5
comp=Z,2µm,21.0s
PV12 Saucer Basin, 57.31 69 IAMs_20 IAMs_20 06 51 23.7
comp=Z,2µm,21.0s
PDMCI Parker Dam,Lak 57.32 76 P **P 06 26 43.5 +1.2**
baz=318,SNR=28
PV03 Paradox Valley 57.33 69 IAMs_20 IAMs_20 06 51 18.2
comp=Z,1µm,19.0s
SWSC Sam W. Stewart 57.39 78 P **P 06 26 44.1 +1.3**
baz=318,SNR=7.3
PV13 Radium Mtn., P 57.41 69 IAMs_20 IAMs_20 06 51 15.5
comp=Z,1µm,20.0s
PV02 Paradox Valley 57.42 69 IAmb IAmb 06 26 46.6
comp=Z,91nm,1.2s
UCH Uchtor 57.42 298 P **P 06 26 44.5 +1.0**
SNR=8.3
B35A Bob, Littlefor 57.43 51 IAmb IAmb 06 26 44.4
comp=Z,44nm,0.8s
B35A IAMs_20 IAMs_20 06 52 47.1
comp=Z,2µm,19.0s
IKP In-Ko-Pah, Jac 57.44 78 P **P 06 26 44.7 +1.5**
baz=318,SNR=5.9
PV15 Paradox Valley 57.46 68 IAMs_20 IAMs_20 06 51 18.8
comp=Z,2µm,21.0s
EKS2 Erkin-Say 57.48 299 P **P 06 26 43.3 -0.1**
SNR=14
LSA Lhasa 57.55 276 P **P 06 26 46.3 +1.8**
LSA S **S 06 34 39.0 -2.4**
LSA LR LR
comp=Z,7µm,16.4s
LSA LR LR
comp=Z,5µm,18.5s
LSA Lhasa 57.55 276 IAmb IAmb 06 27 02.6
comp=Z,119nm,1.4s
LSA IAMs_20 IAMs_20 06 53 51.6

comp=Z,1µm,18.0s
KCP Kidapawan 57.77 230⇑*i*P **P 06 26 47.4 +1.7**
GLA Glamis 57.86 77 P **P 06 26 47.3 +1.1**
baz=318,SNR=18
GLA Glamis 57.86 77 IAmb IAmb 06 26 48.9
comp=Z,48nm,0.9s
SUSD Miller 57.87 57 P **P 06 26 46.7 +0.6**
baz=317,SNR=5.2
SUSD Miller 57.87 57 IAmb IAmb 06 27 00.6
comp=Z,47nm,0.7s
SUSD IAMs_20 IAMs_20 06 51 15.2
comp=Z,1µm,22.0s
AML Almayashu 57.91 299 P **P 06 26 47.0 +0.3**
SNR=12
ISCO Idaho Springs 57.91 65 P **P 06 26 48.5 +1.7**
baz=317,SNR=74
ISCO Idaho Springs 57.91 65 IAMs_20 IAMs_20 06 52 12.6
comp=Z,1µm,20.0s
WUAZ Wupatki 57.96 73 P **P 06 26 48.4 +1.4**
baz=318,SNR=29
WUAZ Wupatki 57.96 73 IAmb IAmb 06 26 50.0
comp=Z,73nm,1.3s
WUAZ IAMs_20 IAMs_20 06 50 11.1
comp=Z,1µm,21.0s
ITAN ITANAGAR 58.01 272 *e*P **P 06 26 47.2 0.0**
ITAN IAmb IAmb 06 27 00.0
comp=Z,244nm,1.3s
F33A 5 Mile Ranch, 58.12 55 IAmb IAmb 06 26 49.4
comp=Z,45nm,1.0s
F33A IAMs_20 IAMs_20 06 54 45.4
comp=Z,2µm,18.0s
MVCO Mesa Verde 58.28 69 P **P 06 26 50.0 +0.8**
baz=318,SNR=24
DZA Taraz 58.53 301 *e*P **P 06 26 50.5 -0.3**
DZA *e*LR LR 06 53 40.8
comp=Z,252nm,11.1s
DZA Taraz 58.53 301 *e*P **P 06 26 50.4 -0.3**
DZA MLR MLR
comp=Z,252nm,11.0s
KSH Kashi 58.66 295 P **P 06 26 55.3 +3.6**
KSH PcP **PcP 06 27 43.0 +1.4**
KSH PP PP 06 29 09.5 +8.3
KSH S **S 06 34 59.5 +4.5**
KSH SS **SS 06 38 55.8 +8.5**
KSH pmax pmax
comp=Z,85nm,1.3s
KSH pmax pmax
comp=Z,370nm,5.9s
KSH LR LR
comp=Z,250nm,7.8s
KSH LR LR
comp=Z,320nm,4.9s
KSH LR LR
comp=Z,590nm,14.5s
EYMN Ely 58.73 50 P **P 06 26 52.0 0.0**
baz=319,SNR=41
EYMN Ely 58.73 50 IAmb IAmb 06 26 53.6
comp=Z,60nm,0.8s
EYMN Ely 58.73 50 IAMs_20 IAMs_20 06 53 10.5
comp=Z,2µm,19.0s
Q24A Divide 58.77 66 P **P 06 26 54.4 +1.6**
baz=318,SNR=16
KK31 Karatay Array 58.78 301 P **P 06 26 51.4 -1.0**
KK31 Karatay Array 58.78 301 IAmb IAmb 06 26 59.4
comp=Z,43nm,0.8s
S22A 4UR Ranch, Cre 58.78 68 P **P 06 26 54.3 +1.5**
baz=318,SNR=66
AKTO Aktyubinsk 58.91 315 P **P 06 26 52.6 -0.5**
comp=Z,13nm,0.9s,baz=41,slow=8.1,SNR=30
AKTO LR LR 06 54 28.1
comp=Z,1µm,18.2s,baz=38,slow=38
OGNE Ogallala 58.92 62 P **P 06 26 54.8 +1.3**
baz=318
AB31 Akbulak array 59.01 313 P **P 06 26 53.0 -0.8**
NSS Namsos 59.10 347 *e*P **P 06 26 53.8 -0.4**
W18A Petrified Fore 59.16 72 P **P 06 26 57.1 +1.8**
baz=318,SNR=7.9
W18A Petrified Fore 59.16 72 IAmb IAmb 06 26 58.3
comp=Z,32nm,0.9s
W18A IAMs_20 IAMs_20 06 51 01.7
comp=Z,2µm,21.0s
K31A O'Neill 59.32 59 IAmb IAmb 06 27 14.2
comp=Z,53nm,1.0s
K31A IAMs_20 IAMs_20 06 56 14.5
comp=Z,2µm,20.0s
F36A Milaca 59.38 53 IAMs_20 IAMs_20 06 56 24.0
comp=Z,2µm,20.0s
X18A Snowflake 59.48 73 IAmb IAmb 06 27 00.7
comp=Z,41nm,0.8s
X18A IAMs_20 IAMs_20 06 50 59.2
comp=Z,1µm,21.0s
SDCO Great Sand Dun 59.49 67 P **P 06 26 59.2 +1.5**
baz=318,SNR=63
SDCO Great Sand Dun 59.49 67 IAmb IAmb 06 27 00.6
comp=Z,40nm,1.1s
SDCO IAMs_20 IAMs_20 06 53 18.3
comp=Z,1µm,19.0s
ECSD EROS Data Cent 59.53 56 P **P 06 26 57.9 +0.3**
baz=319,SNR=36
ECSD EROS Data Cent 59.53 56 IAmb IAmb 06 26 58.9
comp=Z,44nm,1.1s
ECSD EROS Data Cent 59.53 56 IAMs_20 IAMs_20 06 52 47.0
comp=Z,1µm,20.0s
FIA1 FINESS Array S 59.61 339 IAmb IAmb 06 27 09.3
comp=Z,46nm,1.1s
FINES FINESS Array B 59.61 339 P **P 06 26 57.3 -0.6**
comp=Z,9.8nm,0.7s,baz=38,slow=9.6,SNR=58
FINES LR LR 06 56 00.1
comp=Z,890nm,18.1s,baz=38,slow=39
E38A The Farm, Brul 59.72 51 IAMs_20 IAMs_20 06 55 06.9
comp=Z,2µm,18.0s
214A Organ Pipe Nat 59.81 77 P **P 06 27 01.1 +1.4**
baz=319,SNR=19
CHM Chimkent 59.81 301 *e*P **P 06 26 58.9 -0.7**
CHM Chimkent 59.81 301 *e*P **P 06 26 58.8 -0.7**
KSCO Kaye Shedlock' 60.05 64 P **P 06 27 02.9 +1.5**
baz=318,SNR=10
KSCO Kaye Shedlock' 60.05 64 IAMs_20 IAMs_20 06 56 12.2
comp=Z,1µm,18.0s
SPMN Marine on St. 60.20 53 P **P 06 27 03.1 +1.0**
baz=320,SNR=19
SPMN Marine on St. 60.20 53 IAmb IAmb 06 27 03.8
comp=Z,41nm,0.8s
SHL Shillong 60.27 273 *e*P **P 06 27 03.6 +0.5**
SHL IAmb IAmb 06 27 08.1
comp=Z,25nm,0.6s
SHL Shillong 60.27 273 P **P 06 27 02.2 -0.9**
SHL pmax pmax
comp=Z,68nm,1.1s
SHL MLR MLR
comp=Z,2µm,18.0s
SHL Shillong 60.27 273 P **P 06 27 02.2 -0.9**
SHL IAmb IAmb 06 27 15.2
comp=Z,68nm,1.1s
T25A Trinidad 60.52 67 P **P 06 27 06.2 +1.5**
baz=319,SNR=35
BGNE Belgrade 60.53 59 P **P 06 27 05.2 +0.7**
baz=319,SNR=16
BGNE Belgrade 60.53 59 IAMs_20 IAMs_20 06 52 56.6
comp=Z,2µm,20.0s
TUC Tucson 60.67 75 P **P 06 27 05.9 +0.2**
TUC pmax pmax
comp=Z,25nm,1.2s
TUC Tucson 60.67 75 P **P 06 27 06.9 +1.3**
baz=319
TUC Tucson 60.67 75 P **P 06 27 05.9 +0.2**
D41A Chassel 60.69 49 IAMs_20 IAMs_20 06 54 20.5
comp=Z,1µm,21.0s
GTK Tadong 60.81 277 *ex* **P 06 27 08.5 +1.7**
GTK IAmb IAmb 06 27 20.2
comp=Z,35nm,0.6s
JAY Jayapura 60.91 209 P **P 06 27 07.5 +0.2**
comp=Z,8.1nm,0.9s,baz=106,slow=3.2,SNR=5.1
JAY Jayapura 60.91 209 P **P 06 27 07.5 +0.2**
comp=Z,238nmcomp=Z,12nm,1.3s
L34A Svendsen Farm, 60.98 58 IAmb IAmb 06 27 25.6
comp=Z,57nm,0.9s
SMPI Sarmi 60.98 211 P **P 06 27 08.9 +1.2**
comp=Z,2µmcomp=Z,29nm,1.6s
ANMO Albuquerque 61.07 70*c i*P **P 06 27 08.6 +0.1**
ANMO pmax pmax
comp=Z,21nm,1.1s
ANMO Albuquerque 61.07 70 P **P 06 27 09.5 +1.1**
baz=319
ANMO Albuquerque 61.07 70 P **P 06 27 09.0 +0.6**
ANMO Albuquerque 61.07 70 IAMs_20 IAMs_20 06 55 08.3
comp=Z,994nm,20.0s

IVI Ivigtut 61.09 18 IAmb IAmb 06 27 32.2
comp=Z,46nm,1.0s
IVI IAMs_20 IAMs_20 06 55 21.0
comp=Z,1μm,20.0s
COWI Conover 61.18 50 P **P** **06 27 08.8 -0.1**
COWI IAmb IAmb 06 27 10.0
comp=Z,37nm,0.9s
COWI IAMs_20 IAMs_20 06 54 35.6
comp=Z,2μm,19.0s
TAPN Taplejung 61.30 277 *e*P **P** **06 27 09.6 -0.6**
comp=Z,180nm,0.8s
G40A Rib Lake 61.35 51 IAmb IAmb 06 27 12.0
comp=Z,51nm,1.3s
G40A IAMs_20 IAMs_20 06 56 08.1
comp=Z,2μm,18.0s
N33A J Bar K, Exete 61.38 59 IAMs_20 IAMs_20 06 53 22.2
comp=Z,2μm,19.0s
Y22D IRIS PASSCAL I 61.47 71 IAMs_20 IAMs_20 06 56 00.0
comp=Z,1μm,19.0s
CHTO Chiang Mai 61.48 262 P **P** **06 27 11.5 +0.3**
CHTO pmax pmax
comp=Z,60nm,1.1s
CHTO MLR MLR
comp=Z,1μm,20.0s
CHTO Chiang Mai 61.48 262 P **P** **06 27 11.5 +0.3**
CHTO IAmb IAmb 06 27 29.2
comp=Z,60nm,1.1s
CHTO Chiang Mai 61.48 262 IAMs_20 IAMs_20 06 56 24.8
comp=Z,1μm,20.0s
MOL Molde 61.53 349 *e*P **P** **06 27 11.0 +0.1**
CBKS Cedar Bluff 61.69 62 P **P** **06 27 12.3 -0.1**
CBKS pmax pmax
comp=Z,39nm,0.9s
CBKS Cedar Bluff 61.69 62 P **P** **06 27 11.7 -0.7**
baz=319,SNR=7.8
CBKS Cedar Bluff 61.69 62 P **P** **06 27 12.3 -0.1**
CBKS IAmb IAmb 06 27 13.8
comp=Z,39nm,0.9s
CMAR Chiang Mai Arr 61.76 262 P **P** **06 27 13.3 +0.2**
comp=Z,10.0nm,0.7s,baz=22,slow=7.1,SNR=26
CMAR LR LR 06 56 16.5
comp=Z,1μm,18.2s,baz=88,slow=38
MOS Moscow 61.77 330 *e*P **P** **06 27 12.6 0.0**
MOS *e* 06 27 23.7
MOS *e* 06 29 31.2
MOS *e*PPP PPP 06 31 00.6
MOS *e*S **S** **06 35 40.4 +6.3**
MOS pmax pmax
comp=Z,51nm,1.0s
MOS MLR MLR
comp=Z,2μm,20.0s
ODAN Odare 61.86 277 *e*P **P** **06 27 13.1 -0.8**
comp=Z,136nm,0.9s
DOMB Dombas 61.87 348 *e*P **P** **06 27 12.8 -0.4**
E43A Lone Tree Farm 61.90 49 IAmb IAmb 06 27 14.7
comp=Z,22nm,0.7s
GUN Gumba 61.92 279 *e*P **P** **06 27 13.5 -1.0**
comp=Z,178nm,0.8s
JIRN Jiri 61.93 279 *e*P **P** **06 27 13.9 -0.7**
comp=Z,149nm,0.9s
AKN Aaknes 61.98 349 *e*P **P** **06 27 14.1 +0.1**
121A Cookes Peak, D 62.16 72 P **P** **06 27 18.2 +2.3**
baz=320,SNR=17
121A Cookes Peak, D 62.16 72 IAmb IAmb 06 27 18.9
comp=Z,50nm,1.4s
121A IAMs_20 IAMs_20 06 52 56.4
comp=Z,1μm,20.0s
VSU Vasula 62.17 337 *i* P **P** **06 27 14.8 -0.4**
VSU pmax pmax
comp=Z,84nm,1.2s
K38A Parkersburg 62.18 55 IAmb IAmb 06 27 16.9
comp=Z,34nm,1.0s
K38A IAMs_20 IAMs_20 06 55 50.3
comp=Z,1μm,18.0s
319A Douglas 62.22 74 IAmb IAmb 06 27 31.2
comp=Z,62nm,1.1s
I40A Norwalk 62.22 53 IAmb IAmb 06 27 17.1
comp=Z,39nm,0.8s
RAMN Ramite 62.24 278 *e*P **P** **06 27 15.9 -0.6**
comp=Z,233nm,0.7s
SCHQ Schefferville 62.37 31 P **P** **06 27 16.1 -0.6**
comp=Z,32nm,0.8s,baz=341,slow=6.2,SNR=54
SCHQ LR LR 06 59 10.2
comp=Z,876nm,18.3s,baz=326,slow=41
SCHQ Schefferville 62.37 31 IAmb IAmb 06 27 17.4
comp=Z,35nm,0.8s
SCHQ IAMs_20 IAMs_20 06 58 59.8
comp=Z,1μm,19.0s
SIJI Sorong 62.42 220 P **P** **06 27 17.8 +0.4**
comp=Z,45nm,0.8s,baz=9.1,slow=7.4,SNR=36
PKI Pulchoki 62.44 279 *e*P **P** **06 27 17.3 -0.7**
comp=Z,230nm,1.0s
PKIN Phulchoki 62.45 279 *e*P **P** **06 27 17.5 -0.4**
comp=Z,193nm,0.9s
R32A Long Quarter, 62.51 62 IAmb IAmb 06 27 18.6
comp=Z,44nm,1.4s
R32A IAMs_20 IAMs_20 06 57 35.1
comp=Z,927nm,18.0s
NB201 NORSAR Array S 62.54 346 *e*P **P** **06 27 17.1 -0.6**
SCIA State Center 62.54 56 P **P** **06 27 18.2 +0.2**
baz=320,SNR=10.0
SCIA State Center 62.54 56 IAMs_20 IAMs_20 06 55 46.8
comp=Z,2μm,20.0s
NB2 NORSAR Subarra 62.56 346 P **P** **06 27 17.5 -0.4**
comp=Z,112nm,2.0s,baz=17,slow=6.9
NB2 NORSAR Subarra 62.56 346 P **P** **06 27 17.5 -0.4**
baz=17,slow=6.9
NOA NORSAR Array B 62.56 346 P **P** **06 27 16.6 -1.2**
comp=Z,12nm,0.8s,baz=18,slow=6.7,SNR=55
NOA LR LR 06 56 40.4
comp=Z,331nm,20.6s,baz=15,slow=38
DMN Daman 62.59 280 *e*P **P** **06 27 18.5 -0.3**
comp=Z,175nm,0.9s
OBN Obninsk 62.61 330 P **P** **06 27 18.1 -0.1**
comp=Z,5.3nm,0.4s,baz=30,slow=6.4,SNR=7.9
OBN LR LR 06 59 13.9
comp=Z,356nm,18.0s,baz=28,slow=41
OBN Obninsk 62.61 330 *i* P **P** **06 27 18.6 +0.4**
OBN *e* 06 29 36.8
OBN *e*PPP PPP 06 31 02.9
OBN *e*S **S** **06 35 47.8 +3.1**
OBN pmax pmax
comp=Z,27nm,1.3s
OBN MLR MLR
comp=Z,1μm,17.0s
OBN Obninsk 62.61 330 IAmb IAmb 06 27 30.9
comp=Z,52nm,1.1s
OBN IAMs_20 IAMs_20 06 59 01.6
comp=Z,1μm,18.0s
NBO00 NORSAR Array S 62.62 347 IAmb IAmb 06 27 30.0
comp=Z,44nm,1.0s
KKM Kota Kinabalu 62.75 238 P **P** **06 27 21.2 +1.4**
KKM IAmb IAmb 06 27 34.6
comp=Z,40nm,1.1s
D46A Sault St. Mari 62.75 46 P **P** **06 27 18.5 -0.9**
baz=323,SNR=19
DANN Dangsing 62.78 281 *e*P **P** **06 27 20.0 -0.2**
comp=Z,313nm,0.8s
CHGR Chuyangaron 62.80 299 P **P** **06 27 18.5 -1.5**
NC602 NORSAR Array S 62.81 346 IAmb IAmb 06 27 31.6
comp=Z,99nm,1.6s
MATQ Matagami 62.98 41 P **P** **06 27 20.3 -0.5**
baz=325,SNR=20
I42A Draeger Farm, 63.00 51 IAmb IAmb 06 27 22.1
comp=Z,30nm,0.9s
I42A IAMs_20 IAMs_20 06 56 20.1
comp=Z,2μm,20.0s
D47A Chapleau 63.01 46 P **P** **06 27 20.2 -0.8**
baz=323,SNR=27
KSU1 Kansas State U 63.05 60 P **P** **06 27 20.7 -0.7**
baz=320,SNR=6.7
KSU1 Kansas State U 63.05 60 IAmb IAmb 06 27 21.9
comp=Z,33nm,0.8s
KSU1 Kansas State U 63.05 60 IAMs_20 IAMs_20 06 56 30.3
comp=Z,2μm,19.0s
HYA Hoyanger 63.05 349 *e*P **P** **06 27 21.2 +0.2**
E46A Sault Ste Mari 63.06 47 IAmb IAmb 06 27 21.8
comp=Z,38nm,0.8s
E46A IAMs_20 IAMs_20 06 58 26.0
comp=Z,1μm,19.0s
H43A Windswept, Lux 63.06 50 IAmb IAmb 06 27 22.6
comp=Z,45nm,0.9s
H43A IAMs_20 IAMs_20 06 55 33.6
comp=Z,2μm,20.0s
HFS Hagfors 63.07 345 P **P** **06 27 20.1 -1.2**
comp=Z,8.3nm,0.6s,baz=46,slow=4.3,SNR=24
F45A CMU Biological 63.08 48 P **P** **06 27 21.4 -0.2**
baz=322,SNR=40
JFWS Jewell Farm 63.15 53 P **P** **06 27 21.7 -0.4**
baz=321,SNR=15
JFWS Jewell Farm 63.15 53 IAmb IAmb 06 27 22.6
comp=Z,27nm,0.8s
SKAR Skarslia 63.28 348 *e*P **P** **06 27 22.7 0.0**
KOLN Koldanda 63.32 281 *e*P **P** **06 27 23.0 -0.6**
comp=Z,154nm,0.8s
L40A Anamosa 63.36 54 IAmb IAmb 06 27 24.2
comp=Z,34nm,0.8s
L40A IAMs_20 IAMs_20 06 59 49.9
comp=Z,2μm,19.0s
N38A Joes South For 63.39 56 IAmb IAmb 06 27 24.8
comp=Z,53nm,0.9s
N38A IAMs_20 IAMs_20 06 54 45.8
comp=Z,1μm,20.0s
PYUN Piuthan 63.41 282 *e*P **P** **06 27 24.4 +0.2**
comp=Z,488nm,1.1s
E47A Iron Bridge 63.41 46 P **P** **06 27 23.2 -0.5**
baz=323,SNR=39
D48A Paudash Townsh 63.44 45 P **P** **06 27 22.6 -1.3**
baz=324,SNR=9.3
EPT El Paso 63.45 72 IAMs_20 IAMs_20 06 53 49.7
comp=Z,1μm,21.0s
G45A Suttons Bay 63.53 49 P **P** **06 27 24.5 -0.1**
baz=322,SNR=19
D49A Beulah Townshi 63.55 44 P **P** **06 27 24.4 -0.2**
baz=324
G46A Petoskey 63.65 48 P **P** **06 27 25.5 +0.2**
baz=323,SNR=15
AMTX Amarillo 63.67 66 P **P** **06 27 26.3 +0.6**
baz=320
AMTX Amarillo 63.67 66 IAmb IAmb 06 27 27.6
comp=Z,41nm,1.3s
H45A Beulah 63.69 49 P **P** **06 27 25.7 0.0**
baz=322,SNR=10.0
SPMM Sapulut 63.79 237 P **P** **06 27 29.0 +2.4**
MSTX Muleshoe 63.79 68 P **P** **06 27 26.9 +0.3**
baz=320,SNR=21
MSTX Muleshoe 63.79 68 IAMs_20 IAMs_20 06 55 15.6
comp=Z,1μm,20.0s
LSQQ Lebel-sur-Quev 63.80 41 P **P** **06 27 25.3 -0.9**
baz=325
ASK Askoy 63.83 349 *e*P **P** **06 27 26.2 0.0**
E48A Lockeyer 63.85 45 P **P** **06 27 25.6 -1.1**
baz=324,SNR=29
BER Bergen 63.91 349 *e*P **P** **06 27 27.1 +0.4**
U32A Winter Ranch, 63.92 63 IAmb IAmb 06 27 28.4
comp=Z,25nm,0.8s
U32A IAMs_20 IAMs_20 06 57 27.9
comp=Z,1μm,20.0s
DHRM DHARAMSHALA 63.95 289 *e*P **P** **06 27 27.0 -0.8**
DHRM IAmb IAmb 06 27 35.5
comp=Z,120nm,0.9s
FAKI Fak Fak 63.97 218 P **P** **06 27 27.5 -0.2**
comp=Z,761nmcomp=Z,49nm,1.3s
FAKI Fak Fak 63.97 218 P **P** **06 27 28.6 +0.9**
FAKI IAmb IAmb 06 27 41.4
comp=Z,37nm,0.9s
CHGQ Chibougamau 64.05 39 P **P** **06 27 27.1 -0.8**
baz=326,SNR=21
LPSR Galich'ya Gora 64.07 327 *e*P **P** **06 27 27.4 -0.5**
LPSR pmax pmax
comp=Z,30nm,1.0s
LPSR MLR MLR
comp=Z,1μm,19.0s
I45A Fountain 64.08 50 P **P** **06 27 28.8 +0.7**
baz=323,SNR=8.6
MNTX Cornudas Mount 64.12 71 P **P** **06 27 29.4 +0.8**
baz=320,SNR=74
MNTX Cornudas Mount 64.12 71 IAmb IAmb 06 27 31.3
comp=Z,44nm,1.0s
KONO Kongsberg 64.12 347 *i* P **P** **06 27 27.3 -0.8**
KONO pmax pmax
comp=Z,23nm,1.2s
KONO Kongsberg 64.12 347 *e*P **P** **06 27 28.2 +0.1**
H46A Fife Lake 64.13 49 P **P** **06 27 28.9 +0.5**
baz=323,SNR=33
L42A Oliver, Polo 64.13 53 IAmb IAmb 06 27 29.0
comp=Z,39nm,0.7s
GLMI Grayling 64.15 48 P **P** **06 27 29.3 +0.7**
baz=323,SNR=6.8
P38A Dawn 64.16 57 IAmb IAmb 06 27 29.7
comp=Z,37nm,0.8s
P38A IAMs_20 IAMs_20 06 57 05.0
comp=Z,2μm,20.0s
F48A Evansville 64.19 46 P **P** **06 27 28.4 -0.5**
baz=324,SNR=32
K43A Burlington 64.19 52 IAmb IAmb 06 27 29.6
comp=Z,41nm,0.9s
G47A Hillman 64.20 47 P **P** **06 27 29.0 +0.1**
baz=323,SNR=20
ODD1 Odda 64.23 348 *e*P **P** **06 27 28.6 -0.4**
D50A G1974 Best Tow 64.24 44 P **P** **06 27 28.4 -0.7**
baz=324,SNR=24
SMLA Simla 64.33 288 *e*P **P** **06 27 29.0 -0.9**
SMLA IAmb IAmb 06 27 37.7
comp=Z,234nm,0.2s
VRH Novokhopyorsk 64.36 325 *e*P **P** **06 27 28.4 -1.5**
VRH pmax pmax
comp=Z,70nm,1.9s
VRH MLR MLR
comp=Z,1μm,16.0s
HNR Honiara 64.36 186 IAMs_20 IAMs_20 06 50 33.5
comp=Z,2μm,21.0s
E50A Wahnapitae 64.48 45 P **P** **06 27 30.4 -0.4**
baz=324,SNR=12
F49A Sandfield 64.48 46 P **P** **06 27 29.7 -1.1**
baz=324,SNR=35
J45A Montague 64.48 50 IAMs_20 IAMs_20 06 56 36.4
comp=Z,2μm,20.0s
D51A Lot 18 Range I 64.49 43 P **P** **06 27 30.2 -0.5**
baz=325,SNR=7.3
I46A Reed City 64.50 49 P **P** **06 27 31.5 +0.5**
baz=323,SNR=16
H47A Mio 64.51 48 P **P** **06 27 31.7 +0.7**
baz=323,SNR=9.1
NIL Nilore 64.51 293 P **P** **06 27 30.7 -0.5**
NIL pmax pmax
comp=Z,92nm,0.8s
NIL MLR MLR
comp=Z,2μm,19.0s
NIL Nilore 64.51 293 P **P** **06 27 30.7 -0.5**
NIL Nilore 64.51 293 IAMs_20 IAMs_20 06 55 59.0
comp=Z,2μm,19.0s
BHK Bhakra 64.52 289 *ex* P 06 27 38.2 +6.9
N41A Harden Midland 64.59 55 IAMs_20 IAMs_20 06 56 19.4
comp=Z,1μm,20.0s
WAL1 Walls 64.65 353 *e*P **P** **06 27 31.1 -0.6**
WAL1 IAmb IAmb 06 27 32.6
comp=Z,120nm,1.9s
BLS5 Blasjo 64.73 348 *e*P **P** **06 27 32.8 +0.6**
LRW Lerwick 64.74 353 *e*P **P** **06 27 32.1 -0.1**
T35A Sooner Cattle 64.78 61 IAMs_20 IAMs_20 06 58 12.6
comp=Z,2μm,19.0s
L44A Lake County Fo 64.80 52 P **P** **06 27 33.0 +0.1**
baz=322,SNR=7.1
H48A Harrisville 64.80 47 P **P** **06 27 33.3 +0.4**
baz=324,SNR=9.2
I47A Gladwin 64.84 49 P **P** **06 27 33.9 +0.7**
baz=323,SNR=8.0
I47A Gladwin 64.84 49 IAmb IAmb 06 27 34.4
comp=Z,51nm,1.2s
I47A IAMs_20 IAMs_20 06 58 27.8
comp=Z,1μm,19.0s
J46A Howard City 64.88 50 P **P** **06 27 33.9 +0.5**
baz=323,SNR=10.0
E51A G1948 Merrick 64.89 44 P **P** **06 27 32.1 -1.4**
baz=325,SNR=30
D52A ZEK Kipawa Sen 64.96 43 P **P** **06 27 32.9 -0.9**
baz=325,SNR=30
MRSI Marisa 64.98 230 P **P** **06 27 33.7 -0.6**
comp=Z,1μmcomp=Z,54nm,1.6s
I48A Sherman Twp 65.05 48 P **P** **06 27 34.8 +0.3**
baz=324,SNR=8.9
BOK Bokaro 65.08 276 *e*P **P** **06 27 36.5 +1.4**
BOK IAmb IAmb 06 27 47.9
comp=Z,44nm,1.0s
D53A Lac Vacive, Po 65.15 42 P **P** **06 27 34.6 -0.5**
baz=326,SNR=36
D53A Lac Vacive, Po 65.15 42 IAmb IAmb 06 27 35.9
comp=Z,55nm,0.9s
F51A Arnstein 65.22 44 P **P** **06 27 34.3 -1.3**
baz=325,SNR=8.3
WMOK Wichita Mounta 65.30 64 P **P** **06 27 36.8 +0.5**
baz=321,SNR=45
WMOK Wichita Mounta 65.30 64 IAmb IAmb 06 27 38.0
comp=Z,38nm,0.8s
WMOK Wichita Mounta 65.30 64 IAMs_20 IAMs_20 06 56 43.5
comp=Z,1μm,20.0s
J47A Sunmer 65.33 49 P **P** **06 27 36.7 +0.4**
baz=323,SNR=16
J47A Sunmer 65.33 49 IAMs_20 IAMs_20 06 57 12.8
comp=Z,2μm,20.0s
M44A Midewin, Midew 65.36 53 IAmb IAmb 06 27 37.3
comp=Z,37nm,0.8s
M44A IAMs_20 IAMs_20 06 58 02.7
comp=Z,2μm,19.0s
NACGM Naroch 65.39 335 *e*P **P** **06 27 35.0 -1.5**
NACGM *e*S **S** **06 36 20.0 +0.8**
NACGM *e*SS **SS** **06 40 24.0 -7.4**
NACGM *e*SSS SSS 06 43 24.0
NACGM *e*LQ LQ 06 52 10.0
NACGM *e*LR LR 06 56 12.0
NACGM LRM MLR 06 59 22.0
comp=Z,7.1nm,15.0s
E52A Mattawa 65.43 43 P **P** **06 27 36.0 -0.9**
baz=325,SNR=10
HDIL Hopedale 65.44 54 P **P** **06 27 36.6 -0.5**
baz=322,SNR=55
MICGM Minsk 65.49 334 *e*P **P** **06 27 37.0 -0.2**
MICGM *e*LR LR 06 57 10.0
MNK Minsk 65.49 334 *e*P **P** **06 27 37.0 -0.2**
D54A Lac Fusel, La 65.49 42 P **P** **06 27 36.2 -1.2**
baz=326,SNR=25
F52A Sundridge 65.57 44 P **P** **06 27 37.1 -0.7**
baz=325,SNR=34
I49A Point Hope 65.63 48 P **P** **06 27 38.5 +0.3**
baz=324,SNR=8.1
I49A Point Hope 65.63 48 IAmb IAmb 06 27 39.1
comp=Z,49nm,0.9s
SNART Snartemo 65.70 348 *e*P **P** **06 27 38.7 +0.2**
K47A Vermontville 65.71 50 P **P** **06 27 38.7 -0.1**
baz=324,SNR=12
J48A Bridge Port 65.73 49 P **P** **06 27 39.3 +0.4**
baz=324,SNR=7.5
J48A Bridge Port 65.73 49 IAMs_20 IAMs_20 06 59 04.4
comp=Z,1μm,18.0s
E53A Dumoine, Ponti 65.74 43 P **P** **06 27 38.2 -0.8**
baz=326,SNR=25
E54A Lac Daplat, Po 65.88 42 P **P** **06 27 39.0 -0.9**
baz=326,SNR=26
TUL1 Leonard 65.92 62 P **P** **06 27 40.0 -0.3**
baz=322,SNR=9.0
TUL1 Leonard 65.92 62 IAMs_20 IAMs_20 06 58 57.9
comp=Z,2μm,19.0s
ALGO Algonquin Park 65.94 43 P **P** **06 27 39.2 -1.1**
baz=326,SNR=17
J49A Marlette 65.96 48 P **P** **06 27 40.6 +0.2**
baz=324,SNR=5.5
K48A Perry 65.99 49 P **P** **06 27 41.4 +0.8**
baz=324,SNR=14
MPSI Mapaga 66.01 232 P **P** **06 27 40.5 -0.5**
comp=Z,5μmcomp=Z,37nm,0.4s
KBL Kabul 66.03 296 P **P** **06 27 39.4 -1.9**
KBL pmax pmax
comp=Z,38nm,0.8s
KBL MLR MLR
comp=Z,1μm,21.0s
KBL Kabul 66.03 296 P **P** **06 27 39.4 -1.9**
KBL IAmb IAmb 06 27 47.1
comp=Z,38nm,0.8s
KBL IAMs_20 IAMs_20 06 56 52.4
comp=Z,1μm,21.0s
D55A Sainte-Anne-du 66.05 41 P **P** **06 27 40.8 -0.1**
baz=327,SNR=28
P43A Skaggs, Pawnee 66.06 55 IAMs_20 IAMs_20 06 57 24.3
comp=Z,1μm,20.0s
O44A Mansfield 66.15 54 IAmb IAmb 06 27 42.4
comp=Z,40nm,0.8s
U38A Gravette 66.22 60 IAMs_20 IAMs_20 06 58 18.0
comp=Z,1μm,19.0s
H52A Wyevale 66.28 45 P **P** **06 27 41.8 -0.7**
baz=325,SNR=20
K49A Clarkson 66.29 49 P **P** **06 27 43.1 +0.6**
baz=324,SNR=24
D56A ZEC Mazanza, M 66.30 41 P **P** **06 27 42.1 -0.4**
baz=327,SNR=28
E55A Montcerf-Lytto 66.30 42 P **P** **06 27 42.3 -0.2**
baz=326,SNR=6.0
G54A Lake Saint Pet 66.39 44 P **P** **06 27 42.1 -1.0**
baz=326,SNR=20
G53A Haliburton 66.40 44 P **P** **06 27 41.9 -1.3**
baz=326,SNR=40
SADO Sadowa 66.48 45 IAMs_20 IAMs_20 06 59 38.0
comp=Z,2μm,19.0s
ABTX Abilene, Hawle 66.49 67 P **P** **06 27 44.1 +0.1**
baz=321,SNR=19
ABTX Abilene, Hawle 66.49 67 IAmb IAmb 06 27 45.7
comp=Z,53nm,1.1s
ABTX IAMs_20 IAMs_20 06 56 47.0
comp=Z,928nm,21.0s
CCM Cathedral Cave 66.49 57 P **P** **06 27 42.7 -1.2**
CCM pmax pmax
comp=Z,34nm,0.9s
CCM MLR MLR
comp=Z,1μm,20.0s
CCM Cathedral Cave 66.49 57 P **P** **06 27 43.6 -0.2**
baz=322
CCM Cathedral Cave 66.49 57 P **P** **06 27 42.7 -1.2**
CCM IAmb IAmb 06 27 44.8
comp=Z,34nm,0.9s
CCM Cathedral Cave 66.49 57 IAMs_20 IAMs_20 06 58 58.8
comp=Z,1μm,20.0s
I51A Listowel 66.50 46 P **P** **06 27 44.3 +0.4**
baz=325,SNR=21
L48A N Adams 66.54 50 IAmb IAmb 06 27 45.2
comp=Z,46nm,0.9s
L48A IAMs_20 IAMs_20 06 57 49.8
comp=Z,2μm,19.0s
HHAR Hobbs 66.56 60 IAmb IAmb 06 27 44.9
comp=Z,30nm,1.0s
HHAR IAMs_20 IAMs_20 06 58 28.8
comp=Z,1μm,18.0s
AAM Ann Arbor 66.59 49 P **P** **06 27 45.1 +0.6**
baz=324,SNR=8.2
AAM Ann Arbor 66.59 49 IAmb IAmb 06 27 46.3
comp=Z,58nm,1.0s
SFIN Lafayette 66.60 53 P **P** **06 27 44.1 -0.4**
baz=323,SNR=9.3
SFIN Lafayette 66.60 53 IAmb IAmb 06 27 45.2
comp=Z,25nm,0.8s
E56A St. Veronique 66.62 41 P **P** **06 27 44.1 -0.4**
baz=327,SNR=24
D57A Chemin Vers le 66.65 40 P **P** **06 27 44.6 -0.2**
baz=327,SNR=44
K50A Casco 66.66 48 P **P** **06 27 45.3 +0.4**
baz=324
K50A Casco 66.66 48 IAmb IAmb 06 27 45.7
comp=Z,28nm,0.9s
K50A IAMs_20 IAMs_20 06 58 39.8
comp=Z,2μm,18.0s
F55A Otter Lake 66.71 42 P **P** **06 27 44.2 -0.9**
baz=326,SNR=10
MGMO Mountain Grove 66.71 58 IAmb IAmb 06 27 45.6
comp=Z,28nm,0.8s
LATQ La Tuque 66.75 39 P **P** **06 27 45.5 +0.2**
baz=328,SNR=9.7
N47A Urbana 66.84 51 IAmb IAmb 06 27 46.3
comp=Z,30nm,0.8s
H53A Bobcaygeon 66.87 44 P **P** **06 27 45.5 -0.7**
baz=326,SNR=15
TX32 Lajitas Array 66.88 72 IAmb IAmb 06 27 48.9
comp=Z,36nm,0.9s
TXAR Lajitas Array 66.88 72 P **P** **06 27 47.0 +0.4**
comp=Z,18nm,0.6s,baz=301,slow=4.3,SNR=239
Q44A Meyer Farm, Va 66.89 55 IAMs_20 IAMs_20 06 58 03.1
comp=Z,1μm,18.0s
D58A Chemin du LacG 66.95 39 P **P** **06 27 46.5 -0.2**
baz=328,SNR=19
G55A Calabogie 67.05 43 P **P** **06 27 46.4 -0.9**
baz=326,SNR=33
U40A Yellville 67.05 59 P **P** **06 27 46.7 -0.8**
baz=322,SNR=32
U40A Yellville 67.05 59 IAmb IAmb 06 27 48.0
comp=Z,33nm,0.9s
U40A IAMs_20 IAMs_20 06 56 37.5
comp=Z,1μm,20.0s
E57A Chemin Saint G 67.06 41 P **P** **06 27 46.5 -0.9**
baz=327,SNR=32
I53A Kortright Cn E 67.08 46 P **P** **06 27 47.1 -0.4**
baz=326
PLVO Plevna 67.08 43 IAmb IAmb 06 27 47.6
comp=Z,28nm,0.9s
N48A Decatur 67.15 51 P **P** **06 27 47.1 -0.9**

	baz=324,SNR=33							
L50A	**Kingsville**	67.17	49	P	P	06 27 48.4	+0.3	
	baz=324,SNR=14							
X37A	**Clayton**	67.17	62	IAMs_20	IAMs_20	06 59 51.0		
	comp=Z,1µm,20.0s							
K51A	**Iona Station**	67.18	47	P	P	06 27 48.8	+0.6	
	baz=325							
J52A	**Paris**	67.19	46	P	P	06 27 48.2	0.0	
	baz=325,SNR=11							
Z35A	**Perchaven, San**	67.19	64	IAmb	IAmb	06 27 49.3		
	comp=Z,25nm,0.8s							
Z35A				IAMs_20	IAMs_20	06 59 42.5		
	comp=Z,1µm,20.0s							
DELO	**Deloro Mine**	67.30	44	IAmb	IAmb	06 27 49.0		
	comp=Z,32nm,0.8s							
ORIO	**Orleans, Innes**	67.35	42	P	P	06 27 48.3	-0.9	
	baz=327,SNR=16							
D59A	**Saint-Raymond**	67.41	39	P	P	06 27 49.7	+0.1	
	baz=328,SNR=8.0							
E58A	**La Victoria**	67.42	40	P	P	06 27 49.4	-0.3	
	baz=328,SNR=27							
MCD	**Coleburn Disti**	67.42	354	eP	P	06 27 49.4	0.0	
H55A	**Tweed**	67.45	44	P	P	06 27 49.2	-0.6	
	baz=326,SNR=30							
OLIL	**Olney**	67.45	54	IAmb	IAmb	06 27 51.0		
	comp=Z,39nm,0.9s							
K52A	**Tillsonburg**	67.46	47	P	P	06 27 50.1	+0.1	
	baz=325,SNR=6.4							
N49A	**Columbus Grove**	67.48	50	IAmb	IAmb	06 27 50.9		
	comp=Z,37nm,0.9s							
N49A				IAMs_20	IAMs_20	06 58 27.6		
	comp=Z,2µm,20.0s							
W39A	**Magazine**	67.50	61	P	P	06 27 50.1	-0.2	
	baz=322,SNR=19							
W39A	**Magazine**	67.50	61	IAmb	IAmb	06 27 51.5		
	comp=Z,86nm,1.6s							
W39A				IAMs_20	IAMs_20	06 58 49.5		
	comp=Z,993nm,20.0s							
I55A	**Frankford**	67.53	44	P	P	06 27 49.9	-0.4	
	baz=326,SNR=17							
O48A	**Farmland**	67.58	51	P	P	06 27 49.8	-1.0	
	baz=324,SNR=18							
M50A	**Fremont**	67.59	49	IAmb	IAmb	06 27 52.1		
	comp=Z,30nm,0.9s							
KAC	**Achnashellach**	67.62	355	eP	P	06 27 50.1	-0.7	
MDO	**Dochfour**	67.63	354	eP	P	06 27 50.6	-0.2	
HPIG		67.64	75	IAmb	IAmb	06 27 54.6		
	comp=Z,65nm,1.8s							
FCAR	**Ozark Folk Cen**	67.78	59	IAMs_20	IAMs_20	06 59 57.8		
	comp=Z,1µm,18.0s							
H56A	**Elgin**	67.78	43	P	P	06 27 51.0	-0.9	
	baz=327,SNR=17							
KPL	**Plockton**	67.80	355	eP	P	06 27 51.8	-0.1	
KPL				IAmb	IAmb	06 27 53.0		
	comp=Z,18nm,1.1s							
D61A	**St Aubert, Com**	67.83	38	P	P	06 27 52.3	+0.1	
	baz=329,SNR=6.1							
SBUM	**Sibu**	67.83	240	P	P	06 27 53.4	+0.8	
SBUM	**Sibu**	67.83	240	P	P	06 27 55.0	+2.4	
BLO	**Bloomington**	67.83	53	IAmb	IAmb	06 27 53.0		
	comp=Z,32nm,0.9s							
G57A	**Newington**	67.84	42	P	P	06 27 51.5	-0.8	
	baz=327,SNR=16							
J54A	**Appleton**	67.92	45	P	P	06 27 53.0	+0.1	
	baz=326,SNR=8.9							
J54A	**Appleton**	67.92	45	IAMs_20	IAMs_20	06 58 33.1		
	comp=Z,1µm,20.0s							
O49A	**Covington**	68.00	51	IAmb	IAmb	06 27 54.1		
	comp=Z,52nm,0.9s							
O49A				IAMs_20	IAMs_20	06 58 54.6		
	comp=Z,1µm,19.0s							
M51A	**Elyria**	68.02	49	P	P	06 27 53.7	+0.1	
	baz=325,SNR=9.8							
PECO	**Prince Edward**	68.04	44	IAmb	IAmb	06 27 54.2		
	comp=Z,58nm,1.0s							
F59A	**Saint Guilaume**	68.04	40	P	P	06 27 53.7	+0.2	
	baz=328,SNR=28							
N50A	**Nevada**	68.06	50	P	P	06 27 54.2	+0.4	
	baz=325,SNR=14							
JCT	**Junction City**	68.08	68	P	P	06 27 55.3	+1.2	
	baz=322,SNR=8.6							
JCT	**Junction City**	68.08	68	IAmb	IAmb	06 27 55.7		
	comp=Z,38nm,1.0s							
JCT				IAMs_20	IAMs_20	06 58 10.1		
	comp=Z,1µm,19.0s							
MEDO	**Medina**	68.08	45	IAMs_20	IAMs_20	06 58 37.5		
	comp=Z,1µm,20.0s							
E60A	**Ste Agathe de**	68.09	39	P	P	06 27 53.9	0.0	
	baz=329,SNR=22							
MIAR	**Mount Ida**	68.11	61	P	P	06 27 54.6	+0.4	
	baz=322,SNR=31							
MIAR	**Mount Ida**	68.11	61	IAmb	IAmb	06 27 55.6		
	comp=Z,32nm,0.8s							
MIAR				IAMs_20	IAMs_20	06 59 09.9		
	comp=Z,1µm,20.0s							
WHTX	**Lake Whitney,**	68.13	65	P	P	06 27 54.4	0.0	
	baz=322,SNR=12							
WHTX	**Lake Whitney,**	68.13	65	IAmb	IAmb	06 27 55.6		
	comp=Z,43nm,1.2s							
WHTX				IAMs_20	IAMs_20	06 58 07.5		
	comp=Z,984nm,21.0s							
G58A	**Ormstown**	68.16	41	P	P	06 27 54.0	-0.3	
	baz=328,SNR=8.3							
WHAR	**Wooly Hollow**	68.17	60	IAMs_20	IAMs_20	06 57 10.3		
	comp=Z,1µm,21.0s							
M52A	**Chesterland**	68.21	48	P	P	06 27 54.9	+0.2	
	baz=325,SNR=16							
F60A	**Warwick**	68.25	39	P	P	06 27 54.2	-0.6	
	baz=328,SNR=7.6							
J55A	**Hilton**	68.26	45	P	P	06 27 54.8	-0.2	
	baz=326,SNR=24							
J55A	**Hilton**	68.26	45	IAMs_20	IAMs_20	07 01 13.1		
	comp=Z,1µm,20.0s							
N51A	**Ashland**	68.28	49	P	P	06 27 54.9	-0.2	
	baz=325,SNR=20							
W41B	**Gary Mavity, V**	68.28	60	P	P	06 27 54.9	-0.4	
	baz=323,SNR=22							
ERPA	**Erie**	68.31	47	P	P	06 27 55.1	-0.2	
	baz=326,SNR=22							
ERPA	**Erie**	68.31	47	IAMs_20	IAMs_20	07 00 42.6		
	comp=Z,1µm,21.0s							
PARMO	**Parma**	68.32	57	IAMs_20	IAMs_20	06 57 47.1		
	comp=Z,1µm,20.0s							
D62A	**Allapoint, All**	68.33	37	P	P	06 27 55.1	-0.2	
	baz=330,SNR=21							
D62A	**Allapoint, All**	68.33	37	IAmb	IAmb	06 27 56.2		
	comp=Z,44nm,0.8s							
D62A				IAMs_20	IAMs_20	06 59 12.5		
	comp=Z,2µm,20.0s							
L53A	**Girard**	68.33	47	P	P	06 27 55.8	+0.3	
	baz=326,SNR=25							
O50A	**Cable**	68.36	50	P	P	06 27 55.8	+0.1	
	baz=325,SNR=31							
P49A	**Miami Univ. Ec**	68.36	52	P	P	06 27 54.8	-0.9	
	baz=324,SNR=21							
E61A	**Lac Etchemin**	68.38	38	P	P	06 27 55.7	0.0	
	baz=329,SNR=5.6							
LONY	**Lake Ozonia**	68.41	42	P	P	06 27 54.8	-1.1	
	baz=328,SNR=11							
HENM	**Henderson Moun**	68.41	57	IAMs_20	IAMs_20	06 58 00.6		
	comp=Z,1µm,20.0s							
Z38A	**Mt. Pleasant**	68.41	63	IAmb	IAmb	06 27 57.3		
	comp=Z,36nm,0.9s							
K54A	**Basiliko Farm,**	68.45	46	P	P	06 27 56.0	-0.2	
	baz=326,SNR=13							
RGN	**Rugen**	68.48	343	IAMs_20	IAMs_20	07 01 44.5		
	comp=Z,874nm,19.0s							
L54A	**Sinclairville**	68.50	46	P	P	06 27 56.3	-0.2	
	baz=326,SNR=20							
X40A	**Basin Creek Fa**	68.53	60	IAMs_20	IAMs_20	06 59 41.0		
	comp=Z,1µm,18.0s							
PVMO	**Portageville**	68.54	57	IAMs_20	IAMs_20	07 00 20.1		
	comp=Z,1µm,20.0s							
G59A	**Clarenceville**	68.55	41	P	P	06 27 56.0	-0.7	
	baz=328,SNR=14							
PENMO	**Penman**	68.55	57	IAMs_20	IAMs_20	07 00 21.2		
	comp=Z,1µm,20.0s							
UALR	**University of**	68.55	60	IAMs_20	IAMs_20	06 57 11.4		
	comp=Z,1µm,22.0s							
ELO	**Logie Almond**	68.56	354	eP	P	06 27 56.1	-0.6	
E62A	**Clayton Lake**	68.56	37	P	P	06 27 56.9	+0.1	
	baz=330,SNR=27							
E62A	**Clayton Lake**	68.56	37	IAMs_20	IAMs_20	06 59 27.7		
	comp=Z,1µm,20.0s							
I57A	**Carthage**	68.56	43	P	P	06 27 56.2	-0.7	
	baz=327,SNR=14							
ACSO	**Alum Creek Sta**	68.57	50	P	P	06 27 57.4	+0.4	
	baz=325,SNR=19							
M53A	**WI Miller and**	68.58	48	P	P	06 27 56.9	-0.2	
	baz=326,SNR=33							
AKASG	**Malin Array Be**	68.59	332	P	P	06 27 55.9	-1.0	
	comp=Z,5.5nm,0.6s,baz=28,slow=6.7,SNR=24							
AKASG				LR	LR	07 01 43.3		
	comp=Z,1µm,18.1s,baz=30,slow=39							
F61A	**St Evariste**	68.59	39	P	P	06 27 57.1	0.0	
	baz=329,SNR=19							
FRNY	**Flat Rock**	68.60	41	IAMs_20	IAMs_20	06 59 54.0		
	comp=Z,1µm,20.0s							
K55A	**Perry**	68.61	45	P	P	06 27 56.7	-0.5	
	baz=326,SNR=28							
INVG	**Invergeldie, C**	68.62	354	eP	P	06 27 56.6	-0.4	
INVG				IAmb	IAmb	06 27 58.3		
	comp=Z,20nm,1.2s							
ALLY	**Alegheny Colle**	68.64	47	IAMs_20	IAMs_20	06 59 48.1		
	comp=Z,1µm,19.0s							
J56A	**Wolcott**	68.64	44	P	P	06 27 56.6	-0.8	
	baz=327,SNR=18							
J56A	**Wolcott**	68.64	44	IAmb	IAmb	06 27 57.8		
	comp=Z,46nm,0.9s							
J56A				IAMs_20	IAMs_20	06 59 19.1		
	comp=Z,2µm,20.0s							
WVNY	**West Valley, N**	68.65	46	IAMs_20	IAMs_20	06 59 43.5		
	comp=Z,1µm,20.0s							
N52A	**McGinn's Farm,**	68.66	49	P	P	06 27 57.5	-0.1	
	baz=325,SNR=11							
MMNY	**Mt. Morris Dam**	68.67	45	IAMs_20	IAMs_20	06 58 54.9		
	comp=Z,1µm,20.0s							
HICK	**Hickman**	68.67	57	IAMs_20	IAMs_20	06 58 17.4		
	comp=Z,1µm,19.0s							
D63A	**Stockholm**	68.69	36	P	P	06 27 57.6	0.0	
	baz=330,SNR=12							
WCI	**Wyandotte Cave**	68.70	54	P	P	06 27 57.6	-0.2	
WCI				pmax	pmax			
	comp=Z,41nm,0.9s							
WCI				MLR	MLR			
	comp=Z,2µm,19.0s							
WCI	**Wyandotte Cave**	68.70	54	P	P	06 27 57.9	0.0	
	baz=324							
WCI	**Wyandotte Cave**	68.70	54	P	P	06 27 57.6	-0.2	
WCI				IAmb	IAmb	06 27 58.9		
	comp=Z,41nm,0.8s							
PEBM	**Pemiscott Bayo**	68.70	57	IAMs_20	IAMs_20	06 59 53.4		
	comp=Z,2µm,21.0s							
P50A	**Jamestown**	68.72	51	P	P	06 27 57.8	-0.1	
	baz=325,SNR=30							
H59A	**Cadyville**	68.72	41	P	P	06 27 57.2	-0.7	
	baz=328,SNR=6.6							
H58A	**Gabriels**	68.73	42	P	P	06 27 57.1	-0.9	
	baz=328,SNR=14							
GEYT	**Alibeck**	68.73	306	P	P	06 27 57.7	-0.4	
	comp=Z,11nm,0.8s,baz=355,slow=3.1,SNR=11							
GEYT				LR	LR	06 58 52.9		
	comp=Z,883nm,21.1s,baz=50,slow=37							
GYA0	**ALIBECK ARRAY**	68.73	306	P	P	06 27 58.6	+0.5	
GYA0B	**ALIBECK ARRAY**	68.73	306	P	P	06 27 58.9	+0.7	
GYA0B				IAmb	IAmb	06 28 18.9		
	comp=Z,57nm,1.1s							
GYA0B				IAMs_20	IAMs_20	06 59 31.7		
	comp=Z,1µm,18.0s							
O51A	**Pataskala**	68.81	50	P	P	06 27 58.1	-0.4	
	baz=325,SNR=34							
G60A	**Masonville**	68.85	40	P	P	06 27 58.8	+0.1	
	baz=328,SNR=8.9							
GLAT	**Glass**	68.86	57	IAMs_20	IAMs_20	06 58 13.4		
	comp=Z,1µm,20.0s							
LAWE	**Loch Awe, Argy**	68.87	355	eP	P	06 27 58.0	-0.5	
J57A	**Williamstown**	68.87	43	P	P	06 27 58.1	-0.7	
	baz=327,SNR=16							
EAB	**Aberfoyle**	68.88	354	eP	P	06 27 57.5	-1.1	
LNXT	**Lenox**	68.89	57	IAMs_20	IAMs_20	07 00 31.4		
	comp=Z,1µm,20.0s							
L55A	**Hinsdale**	68.91	46	P	P	06 27 59.2	+0.1	
	baz=326,SNR=24							
K56A	**Middlesex**	68.93	45	P	P	06 27 58.9	-0.3	
	baz=327,SNR=26							
M54A	**Oil Creek Stat**	68.95	47	P	P	06 27 59.3	-0.1	
	baz=326,SNR=31							
M54A	**Oil Creek Stat**	68.95	47	IAMs_20	IAMs_20	07 01 55.5		
	comp=Z,1µm,18.0s							
237A	**Washetta, Mont**	68.98	64	IAMs_20	IAMs_20	07 00 57.0		
	comp=Z,1µm,20.0s							
G61A	**St-Isidore-de-**	68.99	39	P	P	06 27 59.6	+0.1	
	baz=329,SNR=14							
435B	**Jarrell**	69.02	66	P	P	06 28 00.5	+0.6	
	baz=322							
WLAR	**White Oak Lake**	69.03	61	IAmb	IAmb	06 28 01.9		
	comp=Z,45nm,1.0s							
WLAR				IAMs_20	IAMs_20	07 01 45.1		
	comp=Z,1µm,18.0s							
N53A	**Lisbon**	69.03	48	P	P	06 27 59.7	-0.1	
	baz=326,SNR=23							
N53A	**Lisbon**	69.03	48	IAMs_20	IAMs_20	06 56 42.7		
	comp=Z,1µm,21.0s							
ESY	**Stoneypath**	69.04	353	eP	P	06 27 59.6	-0.1	
I58A	**Old Forge**	69.04	43	P	P	06 27 58.8	-1.1	
	baz=328,SNR=14							
PQI	**Presque Isle**	69.04	36	IAmb	IAmb	06 28 00.1		
	comp=Z,24nm,0.8s							
PQI				IAMs_20	IAMs_20	06 59 36.3		
	comp=Z,1µm,20.0s							
TTSI	**Tana Toraja**	69.05	230	P	P	06 27 58.6	-1.6	
	comp=Z,1.1nmcomp=Z,16nm,0.8s							
NCB	**Newcomb**	69.09	42	IAMs_20	IAMs_20	07 00 51.9		
	comp=Z,1µm,18.0s							
E63A	**Oxbow**	69.11	37	P	P	06 27 59.7	-0.5	
	baz=330,SNR=9.5							
E63A	**Oxbow**	69.11	37	P	P	06 27 59.3	-1.0	
E63A				IAmb	IAmb	06 28 00.5		
	comp=Z,33nm,0.9s							
E63A				IAMs_20	IAMs_20	06 59 37.4		
	comp=Z,2µm,21.0s							
HALT	**Halls**	69.12	57	IAMs_20	IAMs_20	07 00 27.4		
	comp=Z,1µm,21.0s							
GOF	**Gofitskoye**	69.13	320⇑	eP	P	06 28 01.7	+1.3	
GOF				pmax	pmax			
	comp=Z,87nm,1.4s							
P51A	**Williamsport**	69.15	51	P	P	06 28 00.7	+0.1	
	baz=325,SNR=8.7							
P51A	**Williamsport**	69.15	51	IAmb	IAmb	06 28 01.0		
	comp=Z,24nm,0.8s							
P51A				IAMs_20	IAMs_20	07 01 24.8		
	comp=Z,1µm,18.0s							
R49A	**Shelbyville**	69.17	53	IAmb	IAmb	06 28 01.9		
	comp=Z,48nm,1.2s							
BATG	**Bathurst New B**	69.17	35	IAmb	IAmb	06 28 01.5		
	comp=Z,31nm,0.8s							
O52A	**Adamsville**	69.17	49	P	P	06 28 00.1	-0.6	
	baz=325,SNR=41							
H60A	**Morristown**	69.17	41	P	P	06 28 00.5	-0.2	
	baz=328,SNR=7.5							
J58A	**Remsen**	69.19	43	P	P	06 28 00.3	-0.5	
	baz=328,SNR=24							
J58A	**Remsen**	69.19	43	IAmb	IAmb	06 28 01.4		
	comp=Z,52nm,1.0s							
MAK	**Makhachkala**	69.20	316	eP	P	06 27 58.4	-2.4	
MAK				e		06 30 30.9		
MAK				eS	S	06 37 03.2	-2.1	
MAK				pmax	pmax			
	comp=Z,135nm,1.1s							
MAK				MLR	MLR			
	comp=Z,1µm,15.0s							
K57A	**Scipio Center**	69.23	44	P	P	06 28 00.4	-0.7	
	baz=327,SNR=13							
N54A	**Moraine State**	69.27	48	P	P	06 28 01.3	0.0	
	baz=326,SNR=20							
N54A	**Moraine State**	69.27	48	IAmb	IAmb	06 28 02.1		
	comp=Z,50nm,0.9s							
N54A				IAMs_20	IAMs_20	07 00 08.9		
	comp=Z,1µm,20.0s							
L56A	**Greenwood**	69.31	45	P	P	06 28 00.7	-0.9	
	baz=327,SNR=42							
L56A	**Greenwood**	69.31	45	IAMs_20	IAMs_20	06 59 15.8		
	comp=Z,2µm,21.0s							
T47A	**Sharon Grove**	69.32	55	IAMs_20	IAMs_20	07 02 11.6		
	comp=Z,1µm,18.0s							
E64A	**Bridgewater**	69.32	36	P	P	06 28 01.0	-0.5	
	baz=330,SNR=22							
O53A	**New Philadelph**	69.33	49	P	P	06 28 01.6	-0.1	
	baz=326,SNR=16							
VT1	**Waterbury**	69.34	41	IAmb	IAmb	06 28 02.3		
	comp=Z,44nm,1.3s							
VT1				IAMs_20	IAMs_20	06 58 50.9		
	comp=Z,1µm,22.0s							
M55A	**Ridgway**	69.36	46	P	P	06 28 01.7	-0.2	
	baz=326,SNR=32							
I59A	**Olmsteadville**	69.37	42	P	P	06 28 01.2	-0.7	
	baz=328,SNR=14							
Q51A	**Peebles**	69.39	51	IAmb	IAmb	06 28 03.0		
	comp=Z,33nm,0.7s							
Q51A				IAMs_20	IAMs_20	06 59 38.4		
	comp=Z,1µm,20.0s							
G62A	**West of Eustis**	69.41	39	P	P	06 28 02.5	+0.3	
	baz=329,SNR=16							
G62A	**West of Eustis**	69.41	39	IAmb	IAmb	06 28 03.2		
	comp=Z,46nm,0.9s							
J59A	**Piesco**	69.41	42	P	P	06 28 01.1	-1.1	
	baz=328,SNR=16							
DGPR	**DIGLIPUR**	69.42	264	eP	P	06 28 02.4	-0.1	
P52A	**Corning**	69.44	50	P	P	06 28 02.0	-0.4	
	baz=325,SNR=11							
X43A	**Marvell**	69.48	59	P	P	06 28 02.4	-0.3	
	baz=323,SNR=8.4							
H61A	**Lyndonville**	69.48	40	P	P	06 28 02.8	+0.2	
	baz=329,SNR=14							
F63A	**Nahmakanta, Br**	69.50	38	P	P	06 28 02.9	+0.2	
	baz=330,SNR=12							
F63A	**Nahmakanta, Br**	69.50	38	IAmb	IAmb	06 28 03.5		
	comp=Z,34nm,0.9s							
F63A				IAMs_20	IAMs_20	07 00 04.6		
	comp=Z,1µm,20.0s							
CCAR	**Cane Creek**	69.52	60	IAMs_20	IAMs_20	07 00 12.0		
	comp=Z,1µm,19.0s							
Z41A	**Richland Creek**	69.53	61	P	P	06 28 03.7	+0.7	
	baz=323							
BSEG	**Bad Segeberg**	69.55	345	eP	P	06 28 03.7	+0.9	
	comp=Z,49nm,1.1s,baz=15,slow=6.0							
K58A	**Earlville**	69.55	44	P	P	06 28 02.2	-0.9	
	baz=327,SNR=12							
K58A	**Earlville**	69.55	44	IAmb	IAmb	06 28 03.3		
	comp=Z,38nm,1.1s							
I60A	**Shoreham**	69.56	41	P	P	06 28 02.8	-0.2	
	baz=328,SNR=5.7							
R50A	**Paris**	69.56	52	IAmb	IAmb	06 28 04.3		
	comp=Z,37nm,0.9s							
M56A	**Emporium**	69.59	46	P	P	06 28 02.7	-0.7	
	baz=327,SNR=22							
HRA	**Herat**	69.60	301	IAmb	IAmb	06 28 21.0		
	comp=Z,76nm,1.3s							
F64A	**Sherman**	69.62	37	P	P	06 28 03.1	-0.3	
	baz=330,SNR=23							
F64A	**Sherman**	69.62	37	P	P	06 28 02.8	-0.6	
F64A				IAmb	IAmb	06 28 04.5		
	comp=Z,45nm,0.8s							
F64A				IAMs_20	IAMs_20	07 00 02.0		
	comp=Z,2µm,21.0s							
KSM	**Kuching**	69.63	241	P	P	06 28 03.8	0.0	
KSM				IAmb	IAmb	06 28 29.2		
	comp=Z,33nm,0.8s							
KSM	**Kuching**	69.63	241	P	P	06 28 06.0	+2.2	
EKA	**Eskdalemuir Ar**	69.66	353	P	P	06 28 03.4	-0.1	
	comp=Z,14nm,0.8s,baz=19,slow=5.6,SNR=58							
GROC	**Groznyy**	69.67	317	eP	P	06 28 02.2	-1.5	
GROC				e		06 28 26.2		
GROC				pmax	pmax			
	comp=Z,19nm,0.5s							
WVT	**Waverly**	69.67	56	P	P	06 28 03.8	0.0	
WVT				pmax	pmax			
	comp=Z,49nm,0.7s							
WVT				MLR	MLR			
	comp=Z,2µm,19.0s							
WVT	**Waverly**	69.67	56	P	P	06 28 03.9	0.0	
	baz=324							
WVT	**Waverly**	69.67	56	P	P	06 28 03.8	0.0	
ESK	**Eskdalemuir**	69.67	353	eP	P	06 28 03.5	0.0	
ESK				IAmb	IAmb	06 28 04.4		
	comp=Z,37nm,1.0s							
ESK	**Eskdalemuir**	69.67	353	P	P	06 28 03.6	0.0	
ESK				pmax	pmax			
	comp=Z,58nm,1.0s							
ESK	**Eskdalemuir**	69.67	353	P	P	06 28 03.6	0.0	
ESK				IAmb	IAmb	06 28 16.4		
	comp=Z,58nm,0.9s							
L57A	**Andrews Acres**	69.71	45	P	P	06 28 03.9	-0.1	
	baz=327,SNR=21							
H62A	**Milan**	69.73	40	P	P	06 28 04.6	+0.5	
	baz=329,SNR=11							
H62A	**Milan**	69.73	40	IAmb	IAmb	06 28 05.7		
	comp=Z,54nm,0.9s							
LBNH	**Lisbon**	69.73	40	P	P	06 28 04.2	+0.1	
	baz=329,SNR=10							
LBNH	**Lisbon**	69.73	40	IAmb	IAmb	06 28 05.1		
	comp=Z,40nm,1.1s							
LBNH				IAMs_20	IAMs_20	07 01 30.9		
	comp=Z,1µm,18.0s							
O54A	**Avella**	69.75	48	P	P	06 28 04.5	+0.2	
	baz=326,SNR=15							
O54A	**Avella**	69.75	48	IAmb	IAmb	06 28 05.2		
	comp=Z,60nm,1.1s							
NATX	**Nacogdoches**	69.77	64	P	P	06 28 05.2	+0.6	
	baz=323							
NATX	**Nacogdoches**	69.77	64	IAmb	IAmb	06 28 06.2		
	comp=Z,43nm,0.7s							
NATX				IAMs_20	IAMs_20	06 58 57.8		
	comp=Z,1µm,21.0s							
W45A	**Hickory Valley**	69.80	57	IAMs_20	IAMs_20	07 00 28.4		
	comp=Z,1µm,19.0s							
ACCN	**Adirondack Com**	69.80	42	IAmb	IAmb	06 28 04.8		
	comp=Z,35nm,0.9s							
PKME	**Peaks-Kenny Pk**	69.81	38	P	P	06 28 04.6	+0.1	
	baz=330,SNR=7.2							
PKME	**Peaks-Kenny Pk**	69.81	38	IAMs_20	IAMs_20	07 00 11.9		
	comp=Z,2µm,21.0s							
G63A	**Kingsbury**	69.83	38	P	P	06 28 04.7	0.0	
	baz=330,SNR=8.5							
N55A	**Marion Center**	69.84	47	P	P	06 28 04.1	-0.8	
	baz=326,SNR=27							
K59A	**Cooperstown**	69.86	43	P	P	06 28 04.1	-0.9	
	baz=328,SNR=19							
P53A	**Whipple**	69.88	49	P	P	06 28 05.3	+0.2	
	baz=326,SNR=15							
P53A	**Whipple**	69.88	49	IAmb	IAmb	06 28 06.5		
	comp=Z,58nm,1.2s							
I61A	**Oroboro, Fairl**	69.89	41	P	P	06 28 05.0	-0.1	
	baz=329,SNR=12							
BINY	**Binghamton**	69.89	44	P	P	06 28

GAL1 **Galloway** 70.22 354 eP P 06 28 06.7 -0.2
GAL1 lAmb lAmb 06 28 08.0
comp=Z,86nm,1.7s
J61A Chester 70.26 41 P P 06 28 07.4 +0.1
baz=329,SNR=10
I62A Tamworth 70.27 40 P P 06 28 07.8 +0.4
baz=329,SNR=5.2
I62A Tamworth 70.27 40 lAmb lAmb 06 28 08.9
comp=Z,106nm,1.9s
L59A Walton 70.28 44 P P 06 28 06.5 -1.0
baz=328,SNR=14
L59A Walton 70.28 44 lAmb lAmb 06 28 07.8
comp=Z,47nm,0.9s
WVL Waterville 70.29 39 lAmb lAmb 06 28 09.0
comp=Z,46nm,1.1s
BHPL Bhopal 70.32 282 eP P 06 28 08.9 +0.8
BHPL lAmb lAmb 06 28 14.4
comp=Z,49nm,0.7s
KBZ Khabaz 70.33 320 P P 06 28 08.5 +0.7
comp=Z,10nm,0.9s,baz=15,slow=4.4,SNR=14
KBZ LR LR 07 03 01.4
comp=Z,2μm,19.8s,baz=27,slow=39
KBZ Khabaz 70.33 320 *i* P P 06 28 07.6 -0.1
KBZ pmax pmax
comp=Z,14nm,0.9s
U49A Red Boiling Sp 70.33 54 lAmb lAmb 06 28 09.1
comp=Z,38nm,0.9s
U49A lAMs_20 lAMs_20 07 01 45.2
comp=Z,1μm,19.0s
Q53A Leroy 70.34 50 P P 06 28 07.5 -0.5
baz=326,SNR=27
AKT Akhty 70.35 315 eP P 06 28 08.0 -0.1
AKT *e* 06 28 28.5
AKT pmax pmax
comp=Z,70nm,1.3s
T50A Nancy 70.35 53 lAmb lAmb 06 28 09.2
comp=Z,42nm,1.0s
TRY Troy 70.36 42 lAMs_20 lAMs_20 07 02 25.5
comp=Z,1μm,19.0s
K60A Five Rivers En 70.37 43 P P 06 28 07.8 -0.3
baz=328
H64A Troy 70.38 38 P P 06 28 08.2 +0.1
baz=330,SNR=9.4
RUE Ruedersdorf 70.39 342 eP P 06 28 08.5 +0.6
comp=Z,63nm,1.2s,baz=15,slow=6.0
I63A Otisfield 70.39 40 P P 06 28 08.3 +0.1
baz=330,SNR=12
I63A Otisfield 70.39 40 lAmb lAmb 06 28 09.5
comp=Z,52nm,1.1s
M58A Price's Panora 70.39 45 P P 06 28 07.4 -0.9
baz=327,SNR=16
MCWV Mont Chateau 70.41 48 P P 06 28 08.4 0.0
baz=326,SNR=24
MCWV Mont Chateau 70.41 48 lAMs_20 lAMs_20 07 00 55.1
comp=Z,808nm,18.0s
735A Kenedy 70.42 68 lAMs_20 lAMs_20 06 59 24.2
comp=Z,1μm,20.0s
SSPA Standing Stone 70.42 46 P P 06 28 07.8 -0.6
baz=327
SSPA Standing Stone 70.42 46 P P 06 28 07.8 -0.6
SSPA lAmb lAmb 06 28 09.0
comp=Z,48nm,1.1s
O56A Blue Knob Stat 70.45 47 P P 06 28 08.4 -0.2
baz=327,SNR=14
N57A Milroy 70.46 46 P P 06 28 08.5 -0.2
baz=327,SNR=22
V48A Smith Brothers 70.46 55 lAmb lAmb 06 28 10.1
comp=Z,63nm,0.9s
V48A lAMs_20 lAMs_20 07 00 47.7
comp=Z,1μm,19.0s
G65A Princeton 70.47 37 P P 06 28 08.4 -0.2
baz=331,SNR=15
G65A Princeton 70.47 37 lAmb lAmb 06 28 09.5
comp=Z,47nm,0.8s
G65A lAMs_20 lAMs_20 07 00 38.3
comp=Z,1μm,20.0s
PLAL Pickwick Lake 70.48 57 lAmb lAmb 06 28 09.9
comp=Z,55nm,0.8s
PLAL lAMs_20 lAMs_20 06 58 19.3
comp=Z,1μm,22.0s
KSPA Keystone Colle 70.52 44 lAmb lAmb 06 28 09.1
comp=Z,33nm,1.0s
KSPA lAMs_20 lAMs_20 07 01 13.9
comp=Z,1μm,20.0s
Q54A Coxs Mills 70.54 49 P P 06 28 08.8 -0.4
baz=326,SNR=14
P55A Reedsville 70.54 48 P P 06 28 09.5 +0.3
baz=326,SNR=30
K61A Williamstown 70.56 42 P P 06 28 09.1 -0.2
baz=328,SNR=11
R53A Hurricane 70.59 50 P P 06 28 09.2 -0.3
baz=326,SNR=18
R53A Hurricane 70.59 50 lAmb lAmb 06 28 10.6
comp=Z,62nm,0.8s
HKT Hockley 70.59 66 P P 06 28 08.3 -1.2
HKT pmax pmax
comp=Z,48nm,1.6s
HKT MLR MLR
comp=Z,1μm,20.0s
HKT Hockley 70.59 66 P P 06 28 08.3 -1.2
HKT Hockley 70.59 66 lAMs_20 lAMs_20 06 59 09.4
comp=Z,1μm,20.0s
J62A Henniker 70.64 41 P P 06 28 09.7 0.0
baz=329,SNR=7.9
Y45A Yeager Farm, C 70.66 59 lAMs_20 lAMs_20 07 00 57.3
comp=Z,1μm,18.0s
M59A Waymart 70.67 44 P P 06 28 09.1 -0.8
baz=328,SNR=8.8
143A Socs Landing, 70.67 61 lAmb lAmb 06 28 11.8
comp=Z,58nm,1.2s
143A lAMs_20 lAMs_20 07 00 59.6
comp=Z,1μm,20.0s
H65A Eastbrook 70.67 38 P P 06 28 09.8 -0.1
baz=330,SNR=10
LVV L'vov 70.74 335 eP P 06 28 10.2 0.0
LVV *e* 06 28 36.9
LVV *eS* **S** **06 37 22.9 -0.3**
LVV *e* 06 41 56.4
LVV pmax pmax
comp=Z,50nm,1.4s
LVV MLR MLR
comp=N,700nm,18.0s
LVV MLR MLR
comp=E,900nm,18.0s
LVV MLR MLR
comp=Z,800nm,18.0s
N58A Sunbury 70.74 45 P P 06 28 09.6 -0.7
baz=327,SNR=15
N58A Sunbury 70.74 45 lAmb lAmb 06 28 11.2
comp=Z,50nm,1.1s
N58A lAMs_20 lAMs_20 07 00 11.7
comp=Z,1μm,21.0s
ZEI Tsey 70.75 318 eP P 06 28 09.3 -1.4
ZEI pmax pmax
comp=Z,40nm,1.1s
PBA Port Blair 70.76 263 lAMs_20 lAMs_20 06 59 37.4
comp=Z,1μm,22.0s
L60A Shokan 70.77 43 P P 06 28 10.0 -0.5
baz=328,SNR=9.2
GGN Saint George 70.79 37 lAmb lAmb 06 28 11.3
comp=Z,48nm,0.8s
GGN lAMs_20 lAMs_20 07 00 40.0
comp=Z,1μm,20.0s
NEY Neytrino 70.80 320 *i* P P 06 28 10.0 -0.9
NEY pmax pmax
comp=Z,4.0nm,1.4s
IOMK Kirk Michael 70.81 354 eP P 06 28 10.3 -0.3
IOMK lAmb lAmb 06 28 11.7
comp=Z,147nm,1.5s
LMN Caledonia Moun 70.83 35 lAMs_20 lAMs_20 07 02 14.8
comp=Z,1μm,20.0s
I64A Boothbay 70.85 39 P P 06 28 11.1 +0.1
baz=330,SNR=5.8
RETH Rethem/Aller, 70.86 345 eP P 06 28 11.3 +0.5
comp=Z,46nm,1.3s,baz=15,slow=6.0
L61A Hillsdale 1, H 70.86 43 P P 06 28 10.9 -0.2
baz=328,SNR=8.0
Q55A Buckhannon 70.86 49 P P 06 28 12.1 +0.9
baz=326,SNR=38
J63A Strafford 70.87 40 P P 06 28 10.5 -0.6
baz=329
O57A Amberson 70.89 46 P P 06 28 11.3 0.0
baz=327,SNR=23
HPK Haverah Park 70.91 352 eP P 06 28 11.4 +0.2
HPK lAmb lAmb 06 28 12.1
comp=Z,41nm,1.0s
H66A Whiting 70.92 37 P P 06 28 11.5 +0.1
baz=331,SNR=12

WIM Isle of Man 70.93 354 eP P 06 28 10.9 -0.4
EMMW East Machias 70.94 37 P P 06 28 11.6 +0.1
EMMW lAmb lAmb 06 28 12.3
comp=Z,39nm,0.8s
K62A Royalston 70.96 41 P P 06 28 11.7 0.0
baz=329,SNR=7.4
K62A Royalston 70.96 41 lAmb lAmb 06 28 13.1
comp=Z,100nm,1.7s
P56A Dayton Farm, R 70.97 48 P P 06 28 11.7 -0.1
baz=327,SNR=27
L61B Northampton 70.98 42 P P 06 28 11.1 -0.7
baz=329
NRDL Niedersach Rie 70.98 344 eP P 06 28 12.0 +0.5
comp=Z,21nm,1.0s,baz=15,slow=6.0
S53A Williamson 71.04 51 P P 06 28 12.7 +0.4
baz=326
N59A State Game Lan 71.06 45 P P 06 28 11.4 -0.9
baz=328,SNR=12
N59A State Game Lan 71.06 45 lAmb lAmb 06 28 12.6
comp=Z,36nm,0.9s
N59A lAMs_20 lAMs_20 07 01 31.2
comp=Z,1μm,19.0s
R54A Victor 71.14 50 P P 06 28 13.1 +0.3
baz=326,SNR=18
M60A Port Jervis 71.17 44 P P 06 28 12.1 -0.8
baz=328,SNR=10
Q56A Snyder Ridge, 71.20 48 P P 06 28 13.4 +0.2
baz=327,SNR=10
Q56A Snyder Ridge, 71.20 48 lAMs_20 lAMs_20 07 01 20.2
comp=Z,1μm,18.0s
K63A Dunstable 71.21 41 P P 06 28 13.2 +0.1
baz=329,SNR=7.8
KWP Kalwaria Pacla 71.23 336 eP P 06 28 14.1 +0.9
KWP Kalwaria Pacla 71.23 336 lAMs_20 lAMs_20 07 04 01.2
comp=Z,2μm,19.0s
ASSE Asse, Remlinge 71.24 344 eP P 06 28 13.7 +0.6
comp=Z,38nm,1.3s,baz=15,slow=6.0
O58A Lewisberry 71.25 46 P P 06 28 13.4 -0.1
baz=327,SNR=9.8
342A Flagon Creek P 71.27 62 lAmb lAmb 06 28 15.6
comp=Z,45nm,1.2s
342A lAMs_20 lAMs_20 07 00 28.5
comp=Z,1μm,19.0s
COEN Coen 71.28 203 P P 06 28 14.4 +0.6
COEN lAmb lAmb 06 28 41.5
comp=Z,56nm,1.2s
COEN lAMs_20 lAMs_20 06 56 54.1
comp=Z,958nm,20.0s
S54A Dingess, Beckl 71.31 50 P P 06 28 14.2 +0.3
baz=326,SNR=6.9
SWET Sewanee 71.31 55 lAMs_20 lAMs_20 07 00 25.3
comp=Z,1μm,21.0s
441A DeRidder 71.33 63 lAmb lAmb 06 28 16.2
comp=Z,48nm,1.0s
441A lAMs_20 lAMs_20 07 02 54.1
comp=Z,1μm,18.0s
TZTN Tazewell 71.33 53 P P 06 28 13.9 -0.2
baz=325,SNR=16
TZTN Tazewell 71.33 53 lAmb lAmb 06 28 15.4
comp=Z,37nm,0.8s
P57A Homestead Farm 71.34 47 P P 06 28 14.1 +0.1
baz=327,SNR=6.0
P57A Homestead Farm 71.34 47 lAMs_20 lAMs_20 07 02 36.6
comp=Z,2μm,20.0s
ANN Anapa 71.34 324 eP P 06 28 09.9 -4.0
ANN pmax pmax
comp=Z,47nm,1.2s
ANN MLR MLR
comp=Z,2μm,17.0s
OJC Ojcow 71.35 338 eP P 06 28 14.3 +0.4
OJC Ojcow 71.35 338 lAmb lAmb 06 28 27.0
comp=Z,70nm,1.2s
HRV Adam Dziewonsk 71.36 41 P P 06 28 13.0 -1.1
HRV pmax pmax
comp=Z,39nm,1.0s
HRV MLR MLR
comp=Z,2μm,18.0s
HRV Adam Dziewonsk 71.36 41 P P 06 28 13.7 -0.4
baz=329
HRV Adam Dziewonsk 71.36 41 P P 06 28 13.0 -1.1
HRV lAmb lAmb 06 28 14.8
comp=Z,39nm,1.0s
N60A Cedar Hill Far 71.37 44 P P 06 28 13.6 -0.6
baz=328,SNR=6.5
O59A Robesonia 71.40 45 P P 06 28 14.1 -0.3
baz=328,SNR=13
X48A Hartselle 71.40 56 lAmb lAmb 06 28 15.9
comp=Z,47nm,1.1s
X48A lAMs_20 lAMs_20 06 59 50.8
comp=Z,1μm,19.0s
KVTX Kingsville 71.41 69 lAMs_20 lAMs_20 06 58 26.5
comp=Z,956nm,20.0s
R55A Marlinton 71.43 49 P P 06 28 14.8 +0.1
baz=326,SNR=14
R55A Marlinton 71.43 49 lAmb lAmb 06 28 15.8
comp=Z,37nm,0.9s
T53A Wise 71.44 52 P P 06 28 14.6 -0.1
baz=326,SNR=28
LBWR Ladybower, Pea 71.47 352 eP P 06 28 14.7 +0.1
LBWR lAmb lAmb 06 28 15.8
comp=Z,190nm,1.9s
KSP Ksiaz 71.48 340 eP P 06 28 15.0 +0.3
VBMS Vicksburg 71.51 60 P P 06 28 15.8 +0.7
baz=324
VBMS Vicksburg 71.51 60 lAmb lAmb 06 28 16.8
comp=Z,40nm,0.8s
VBMS lAMs_20 lAMs_20 07 01 34.7
comp=Z,1μm,20.0s
IBBN Ibbenburen 71.51 346 eP P 06 28 15.5 +0.8
comp=Z,48nm,1.1s,baz=15,slow=6.0
KULM Kulim 71.52 252 lAMs_20 lAMs_20 07 01 19.9
comp=Z,806nm,18.0s
KULM Kulim 71.52 252 P P 06 28 17.0 +1.6
M61A Granite Spring 71.53 43 P P 06 28 14.3 -0.7
baz=329,SNR=5.8
Q57A Strasburg 71.54 48 P P 06 28 15.3 +0.1
baz=327,SNR=9.7
WES Weston 71.55 41 lAmb lAmb 06 28 14.9
comp=Z,38nm,0.9s
WES lAMs_20 lAMs_20 07 00 40.0
comp=Z,1μm,22.0s
CLZ Clausthal 71.57 344 eP P 06 28 16.1 +0.9
comp=Z,66nm,1.2s,baz=15,slow=6.0
V51A London 71.57 54 lAmb lAmb 06 28 16.6
comp=Z,48nm,0.9s
SOC Sochi 71.61 322 eP P 06 28 13.2 -2.4
SOC *e* 06 30 55.4
SOC *eS* **S** **06 37 32.8 -0.7**
SOC *eSS* **SS** **06 42 03.5 -4.3**
SOC *eSSS* SSS 06 45 19.6
SOC MLR MLR
comp=Z,1μm,14.0s
W50A Signal Mountai 71.62 55 lAmb lAmb 06 28 16.9
comp=Z,64nm,0.8s
P58A Pank, Wackersv 71.63 47 P P 06 28 15.4 -0.3
baz=327,SNR=11
CLL Collm 71.65 342 *i* P P 06 28 16.4 +0.7
comp=Z,40nm,1.4s
CLL *i* 06 28 21.9
CLL *i* 06 28 27.6
comp=Z,48nm,1.1s
CLL *e* 06 28 43.0
CLL *eS* **S** **06 37 34.0 +0.3**
CLL *eSS* **SS** **06 42 06.0 -2.0**
CLL *eSSS* SSS 06 45 30.0
CLL *eSSSS* 06 47 00.0
CLL LmH 07 00 00.0
comp=N,500nm,20.0s
CLL LmH 07 00 00.0
comp=E,1μm,21.0s
CLL Collm 71.65 342 eP P 06 28 16.8 +1.1
comp=E,48nm,1.1s,baz=15,slow=6.0
CLL Collm 71.65 342 *i* P P 06 28 16.4 +0.7
CLL *i* 06 28 27.6
CLL *eS* **S** **06 37 34.0 +0.3**
CLL pmax pmax
comp=Z,40nm,1.4s
CLL Collm 71.65 342 lAmb lAmb 06 28 29.8
comp=Z,36nm,1.0s
CLL lAMs_20 lAMs_20 07 03 30.3
comp=Z,1μm,18.0s
WPS Cemaes, Angles 71.67 354 eP P 06 28 15.2 -0.5
WPS lAmb lAmb 06 28 16.4
comp=Z,136nm,2.3s
S55A Lewisburg 71.69 50 P P 06 28 16.3 +0.1
baz=326,SNR=12
PAL Palisades 71.73 43 P P 06 28 15.7 -0.6
baz=328,SNR=5.3
PAL Palisades 71.73 43 lAmb lAmb 06 28 17.1
comp=Z,65nm,1.1s
M62A Hamden 71.76 42 P P 06 28 15.9 -0.5
baz=329
OSTC Ostas 71.77 340 eP P 06 28 17.2 +0.7
OSTC AMS AMS 07 02 20.0
comp=Z,1μm,17.0s
WLF1 Llynfaes 71.77 354 eP P 06 28 16.0 -0.3
CHVC Chvalec 71.77 340 eP P 06 28 16.7 +0.2
CHVC AMS AMS 07 02 20.0
comp=Z,1μm,18.1s
CPCT Cooper Cave 71.78 54 lAmb lAmb 06 28 17.8
comp=Z,46nm,0.9s
T54A Tazewell 71.80 51 P P 06 28 17.2 +0.2
baz=326,SNR=27
YLE Yale 71.85 43 lAMs_20 lAMs_20 07 01 16.0
comp=Z,2μm,21.0s
UPC Upice 71.86 340 eP P 06 28 17.5 +0.5
UPC *e* 06 28 28.6
UPC *eS* **S** **06 37 32.6 -3.6**
UPC MLR MLR
comp=Z,1μm,16.9s
UPC Upice 71.86 340 eP P 06 28 17.5 +0.5
UPC *ex* x 06 28 28.6
UPC *eS* **S** **06 37 32.6 -3.6**
UPC AMS AMS 07 02 30.0
comp=Z,1μm,16.9s
SDMD Soldier's Deli 71.89 46 lAMs_20 lAMs_20 07 02 42.2
comp=Z,966nm,19.0s
L63A North Scituate 71.89 41 P P 06 28 17.1 -0.2
baz=329
P59A Jarrettsville 71.89 46 P P 06 28 17.0 -0.3
baz=328,SNR=14
CPNY Central Park 71.89 44 lAmb lAmb 06 28 18.1
comp=Z,49nm,0.9s
146A Union 71.89 59 lAMs_20 lAMs_20 07 01 48.9
comp=Z,1μm,19.0s
BRG Berggiesshubel 71.90 342 eP P 06 28 17.1 -0.1
comp=Z,27nm,1.5s
BRG S **S** **06 37 37.0 +0.4**
BRG SS **SS** **06 42 04.0 -7.8**
comp=N,864nm,12.9s
comp=E,831nm,14.6s
comp=Z,1μm,14.5s
BRG Berggiesshubel 71.90 342 eP P 06 28 17.4 +0.2
comp=Z,27nm,1.1s,baz=15,slow=6.0
BRG Berggiesshubel 71.90 342 eP P 06 28 17.1 -0.1
BRG S **S** **06 37 37.0 +0.4**
BRG pmax pmax
comp=Z,27nm,1.5s
BRG MLR MLR
comp=N,864nm,12.9s
BRG MLR MLR
comp=E,831nm,14.6s
BRG MLR MLR
comp=Z,1μm,14.5s
GTTG Gottingen 71.92 344 eP P 06 28 18.1 +0.8
comp=Z,37nm,1.2s,baz=15,slow=6.0
DSB Dublin 71.93 355 P P 06 28 16.9 -0.4
DSB lAmb lAmb 06 28 30.2
comp=Z,72nm,1.0s
Q58A Fox Den Farm, 71.93 47 P P 06 28 17.7 +0.1
baz=327,SNR=26
DPC Dobruska-Polom 71.95 340 eP P 06 28 18.2 +0.6
DPC *e* 06 28 28.5
DPC *eS* **S** **06 37 38.7 +1.4**
DPC MLR MLR
comp=Z,1μm,14.4s
DPC Dobruska-Polom 71.95 340 eP P 06 28 18.2 +0.6
DPC *ex* x 06 28 28.5
DPC *eS* **S** **06 37 38.7 +1.4**
DPC AMS AMS 07 05 30.0
comp=Z,1μm,14.4s
NEUB Neuenburg 71.96 343 eP P 06 28 17.9 +0.4
comp=Z,64nm,1.6s,baz=15,slow=6.0
FBE Freiberg 71.96 342 eP P 06 28 18.1 +0.6
comp=Z,46nm,1.1s,baz=15,slow=6.0
IPM Ipoh 71.99 251 lAMs_20 lAMs_20 07 00 34.3
comp=Z,834nm,19.0s
IPM Ipoh 71.99 251 P P 06 28 20.0 +1.8
KOLS Kolonicke sedl 71.99 336 eP P 06 28 18.1 +0.3
KOLS pmax pmax
comp=Z,18nm,1.1s
KOLS Kolonicke sedl 71.99 336 eP P 06 28 18.1 +0.3
FPAL Fort Paine 72.01 55 lAMs_20 lAMs_20 07 01 44.9
comp=Z,1μm,20.0s
344A Westbrook Farm 72.02 61 lAmb lAmb 06 28 20.3
comp=Z,40nm,0.8s
344A lAMs_20 lAMs_20 07 02 00.2
comp=Z,1μm,19.0s
PSUB Penn St. - Bra 72.03 45 lAMs_20 lAMs_20 07 01 07.7
comp=Z,1μm,20.0s
P60A Greenville 72.05 45 P P 06 28 17.7 -0.6
baz=328
P60A Greenville 72.05 45 lAMs_20 lAMs_20 07 01 09.4
comp=Z,1μm,20.0s
OKC Ostrava-Krasne 72.06 339 eP P 06 28 19.3 +1.1
OKC *e* 06 28 29.4
OKC *eS* **S** **06 37 32.3 -6.2**
OKC MLR MLR
comp=Z,1μm,15.7s
OKC Ostrava-Krasne 72.06 339 eP P 06 28 19.3 +1.1
OKC *ex* x 06 28 29.4
OKC *eS* **S** **06 37 32.3 -6.2**
OKC AMS AMS 07 05 50.0
comp=Z,1μm,15.7s
KIS Kishinev 72.06 331 eP P 06 28 20.0 +1.8
KIS Kishinev 72.06 331 ePP PP 06 30 06.0 -52
KIS *eS* **S** **06 37 38.0 -0.6**
KIS Kishinev 72.06 331 eP P 06 28 20.0 +1.8
KIS *eS* **S** **06 37 38.0 -0.6**
KIS MLR MLR
comp=Z,2μm,16.0s
KIS MLR MLR
comp=N,2μm,16.0s
AKH Akhalkalaki 72.09 318 lAMs_20 lAMs_20 07 04 54.7
comp=Z,2μm,20.0s
FOEL Foel Wylfa 72.09 353 eP P 06 28 18.6 +0.2
FOEL lAmb lAmb 06 28 19.6
comp=Z,139nm,1.8s
T55A Pulaski 72.11 50 P P 06 28 19.0 +0.3
baz=326,SNR=10
R57A Stanardsville 72.11 48 P P 06 28 19.1 +0.4
baz=327,SNR=26
PVCC Panska Ves 72.11 341 AMS AMS 07 04 20.0
comp=Z,2μm,16.4s
M63A Gales Ferry 72.12 42 P P 06 28 18.3 -0.3
baz=329,SNR=6.1
KRLC Kraliky 72.12 340 eP P 06 28 18.5 -0.1
KRLC *e* 06 28 29.7
KRLC MLR MLR
comp=Z,1μm,15.5s
KRLC Kraliky 72.12 340 eP P 06 28 18.5 -0.1
KRLC *ex* x 06 28 29.7
KRLC AMS AMS 07 04 00.0
comp=Z,1μm,15.5s
L64A Middleborough 72.12 41 P P 06 28 18.7 +0.1
baz=330,SNR=6.8
U54A Nelsons Funny 72.14 51 P P 06 28 18.7 -0.3
baz=326,SNR=20
U54A Nelsons Funny 72.14 51 lAmb lAmb 06 28 20.2
comp=Z,49nm,0.8s
S56A Natural Bridge 72.18 49 P P 06 28 19.4 +0.3
baz=327,SNR=9.1
Y49A Blount Mountai 72.19 56 lAmb lAmb 06 28 20.1
comp=Z,48nm,1.0s
Y49A lAMs_20 lAMs_20 07 00 06.6
comp=Z,1μm,20.0s
BLA Blacksburg 72.19 50 P P 06 28 19.5 +0.2
baz=326,SNR=14
BLA Blacksburg 72.19 50 lAmb lAmb 06 28 20.3
comp=Z,52nm,1.1s
MORC Moravsky Berou 72.25 339 eP P 06 28 19.4 0.0
MORC Moravsky Berou 72.25 339 ⇑P P 06 28 20.7 +1.3
MORC Moravsky Berou 72.25 339 ⇑P P 06 28 20.7 +1.3
MORC Moravsky Berou 72.25 339 lAmb lAmb 06 28 33.2
comp=Z,60nm,1.3s
MORC lAMs_20 lAMs_20 07 02 43.0
comp=Z,879nm,19.0s
O61A Allentown 72.25 44 P P 06 28 18.9 -0.5
baz=328
UZH Uzhgorod 72.26 335 eP P 06 28 17.0 -2.4
UZH *e* 06 28 29.6
UZH *e* 06 28 37.4
UZH *i* S **S** **06 37 35.0 -5.8**

UZH eSP SPn 06 38 07.0 -1.8
UZH MLR MLR
comp=N,500nm,16.5s
UZH MLR MLR
comp=E,240nm,16.5s
UZH MLR MLR
comp=Z,170nm,16.5s
HAL Halifax 72.31 35 IAmb IAmb 06 28 20.5
comp=Z,33nm,0.8s
SIM Simferopol' 72.31 326 eP P 06 28 27.9 +8.2
SIM eSSS SSS 06 45 34.6
SIM pmax pmax
comp=Z,47nm,8.7s
SIM MLR MLR
comp=Z,822nm,13.4s
R58A Rapidan 72.33 48 P P 06 28 20.2 +0.2
baz=327,SNR=14
X51A Calhoun 72.35 55 IAmb IAmb 06 28 21.9
comp=Z,78nm,1.1s
W52A Murphy 72.35 54 IAmb IAmb 06 28 21.4
comp=Z,43nm,0.8s
S57A Dark Hollow, R 72.38 49 P P 06 28 20.8 +0.5
baz=327,SNR=24
S57A Dark Hollow, R 72.38 49 IAmb IAmb 06 28 21.6
comp=Z,49nm,0.9s
S57A IAMs_20 IAMs_20 07 01 50.2
comp=Z,1µm,19.0s
BUG Bochum-Univer 72.42 346 eP P 06 28 20.6 +0.4
comp=Z,30nm,1.1s,baz=15,slow=6.0
LANS Liptovska Anna 72.43 337 eP P 06 28 21.9 +1.5
LANS pmax pmax
comp=Z,36nm,1.1s
LANS Liptovska Anna 72.43 337 eP P 06 28 21.9 +1.5
HLM1 Long Mynd 72.44 353 eP P 06 28 20.3 -0.1
HLM1 IAmb IAmb 06 28 21.8
comp=Z,73nm,1.5s
BURAR Bucovina Array 72.48 333 ⇓P P 06 28 21.0 +0.2
BURAR Bucovina Array 72.48 333 ⇓P P 06 28 21.0 +0.2
U55A TA2, Sparta 72.50 51 P P 06 28 21.1 -0.1
baz=326,SNR=22
P61A Hammonton 72.51 45 IAMs_20 IAMs_20 07 02 25.5
comp=Z,1µm,19.0s
M65A Busby, Falmout 72.52 41 IAMs_20 IAMs_20 07 02 12.5
comp=Z,1µm,20.0s
T56A Rocky Mt 72.52 50 P P 06 28 21.3 +0.2
baz=327,SNR=7.4
MOX Moxa 72.53 343 eP P 06 28 21.5 +0.5
comp=Z,30nm,1.1s,baz=15,slow=6.0
MOX eL L 07 04 09.0
comp=Z,987nm,18.6s
LRAL Lakeview Retre 72.58 57 P P 06 28 20.7 -0.8
baz=325,SNR=27
LRAL Lakeview Retre 72.58 57 IAmb IAmb 06 28 22.1
comp=Z,32nm,0.7s
LRAL IAMs_20 IAMs_20 06 59 34.9
comp=Z,854nm,22.0s
PRA Prague 72.58 341 eS S 06 37 37.3 -7.1
PRA AMS AMS 07 04 20.0
comp=Z,900nm,15.5s
PLN Plauen 72.59 343 eP P 06 28 21.9 +0.6
comp=Z,27nm,1.0s,baz=15,slow=6.0
TANN Tannenbergstha 72.60 342 eP P 06 28 22.1 +0.6
comp=Z,56nm,1.1s,baz=15,slow=6.0
UBBA Unterbreizbach 72.62 344 eP P 06 28 21.9 +0.5
comp=Z,42nm,1.6s,baz=15,slow=6.0
PRU Pruhonice 72.64 341 eP P 06 28 22.6 +1.0
PRU e 06 28 32.7
PRU eS S 06 37 37.4 -7.7
PRU MLR MLR
comp=Z,2µm,15.7s
PRU Pruhonice 72.64 341 eP P 06 28 22.6 +1.0
PRU ex x 06 28 32.7
PRU eS S 06 37 37.4 -7.7
PRU AMS AMS 07 04 40.0
comp=Z,2µm,15.7s
ZAIG Zacatecas 72.64 75 IAMs_20 IAMs_20 07 01 53.4
comp=Z,778nm,19.0s
GOPC GO Pecny, Ondr 72.66 341 eP P 06 28 21.6 -0.2
GOPC eS S 06 37 44.4 -1.0
GOPC MLR MLR
comp=Z,1µm,15.5s
GOPC GO Pecny, Ondr 72.66 341 eP P 06 28 21.6 -0.2
GOPC eS S 06 37 44.4 -1.0
GOPC AMS AMS 07 04 30.0
comp=Z,1µm,15.5s
R58B Mineral 72.67 48 P P 06 28 21.8 -0.1
baz=327,SNR=13
R58B Mineral 72.67 48 IAmb IAmb 06 28 23.9
comp=Z,96nm,1.6s
TRPA Tarpa 72.67 335 ⇑P P 06 28 22.7 +0.9
GUNZ Gunzen 72.68 342 eP P 06 28 22.6 +0.7
comp=Z,45nm,1.2s,baz=15,slow=6.0
CBN Corbin Frederi 72.68 47 P P 06 28 22.2 +0.2
baz=328
V54A Nebo 72.70 52 P P 06 28 22.3 +0.1
baz=326,SNR=24
346A Big Creek Wild 72.70 60 IAmb IAmb 06 28 24.2
comp=Z,48nm,0.8s
346A IAMs_20 IAMs_20 07 02 30.4
comp=Z,1µm,18.0s
MYKOM Kota Tinggi 72.71 247 IAMs_20 IAMs_20 07 06 25.6
comp=Z,733nm,18.0s
WERN Wernitzgruen 72.74 342 eP P 06 28 23.1 +0.8
comp=Z,42nm,1.2s,baz=15,slow=6.0
NKC Novy Kostel 72.78 342 eP P 06 28 23.2 +0.7
NKC e 06 28 34.1
NKC eS S 06 37 35.5 -11
NKC MLR MLR
comp=Z,1µm,17.2s
NKC Novy Kostel 72.78 342 eP P 06 28 23.2 +0.7
NKC ex x 06 28 34.1
NKC eS S 06 37 35.5 -11
NKC AMS AMS 07 03 50.0
comp=Z,1µm,17.2s
R59A King George, V 72.79 47 P P 06 28 23.1 +0.4
baz=328,SNR=7.2
BIZ Bicaz 72.87 332 ⇑P P 06 28 24.9 +1.9
T57A Hurt 72.88 49 P P 06 28 23.1 -0.2
baz=327,SNR=14
VRAC Vranov 72.89 339 P P 06 28 23.6 +0.5
comp=Z,14nm,1.0s,baz=16,slow=7.2,SNR=20
VRAC Vranov 72.89 339 eP P 06 28 23.6 +0.5
VRAC Vranov 72.89 339 ⇓P P 06 28 24.7 +1.6
VRAC Vranov 72.89 339 ⇓P P 06 28 24.7 +1.6
S58A Poland Farm, P 72.89 48 P P 06 28 23.1 -0.2
baz=327,SNR=5.4
S58A Poland Farm, P 72.89 48 IAMs_20 IAMs_20 06 59 14.7
comp=Z,1µm,22.0s
BG3 Lake Jocassee 72.89 53 IAmb IAmb 06 28 24.8
comp=Z,35nm,0.9s
BG3 IAMs_20 IAMs_20 07 02 56.1
comp=Z,1µm,18.0s
U56A King 72.93 51 P P 06 28 23.6 0.0
baz=327,SNR=14
U56A King 72.93 51 IAmb IAmb 06 28 24.7
comp=Z,36nm,0.8s
U56A IAMs_20 IAMs_20 07 01 48.9
comp=Z,1µm,20.0s
MCH1 Michaelchurch 72.96 353 eP P 06 28 23.5 0.0
MCH1 IAmb IAmb 06 28 24.1
comp=Z,28nm,0.9s
V55A Taylorsville 72.97 51 P P 06 28 23.6 -0.2
baz=326,SNR=19
V55A Taylorsville 72.97 51 IAmb IAmb 06 28 24.9
comp=Z,29nm,0.8s
PBCC Pribram 73.03 341 eP P 06 28 24.4 +0.4
PBCC ex x 06 28 34.9
MANZ Manzenberg 73.08 343 eP P 06 28 24.9 +0.6
comp=Z,28nm,1.1s,baz=15,slow=6.0
S59A Mechanicsville 73.09 48 P P 06 28 23.8 -0.6
baz=328,SNR=12
JAVC Velka Javorina 73.09 339 eP P 06 28 25.7 +1.3
MONM Monmouth 73.11 353 eP P 06 28 24.5 +0.2
MONM IAmb IAmb 06 28 25.2
comp=Z,50nm,1.0s
STRD Stroud 73.12 352 eP P 06 28 24.4 0.0
STRD IAmb IAmb 06 28 26.6
comp=Z,106nm,1.3s
TREC Trest 73.12 340 eP P 06 28 26.2 +1.7
TREC e 06 28 35.5
TREC MLR MLR
comp=Z,1µm,15.1s
TREC Trest 73.12 340 eP P 06 28 26.2 +1.7
TREC ex x 06 28 35.5
TREC AMS AMS 07 06 20.0
comp=Z,1µm,15.1s

RSBS Rosebush, Pemb 73.12 354 eP P 06 28 23.4 -1.0
RSBS IAmb IAmb 06 28 25.7
comp=Z,52nm,1.5s
KRUC Moravsky 73.16 339 eP P 06 28 25.3 +0.6
W54A Cherokee Point 73.16 53 P P 06 28 24.6 -0.4
baz=326,SNR=18
VYHS Vyhne 73.19 338 eP P 06 28 25.6 +0.7
VYHS pmax pmax
comp=Z,30nm,1.2s
VYHS Vyhne 73.19 338 eP P 06 28 25.6 +0.7
T58A Grand View Acr 73.24 49 P P 06 28 25.0 -0.3
baz=327,SNR=13
ROTZ Rotzenmuhle 73.27 342 eP P 06 28 26.3 +0.9
comp=Z,25nm,1.3s,baz=15,slow=6.0
U57A Blanch 73.32 50 P P 06 28 26.0 +0.2
baz=327,SNR=25
V56A Mocksville 73.32 51 P P 06 28 25.8 -0.1
baz=327,SNR=25
AHRW Bad Neuenahr-A 73.33 346 eP P 06 28 26.1 +0.4
comp=Z,31nm,1.5s,baz=15,slow=6.0
EDFI Ende, Flores 73.37 226 P P 06 28 24.2 -2.2
comp=Z,20nm,1.2s
S60A Water View 73.41 47 P P 06 28 26.6 +0.2
baz=328
UCC Uccle 73.43 348 IAMs_20 IAMs_20 07 06 14.4
comp=Z,934nm,18.0s
TNS Taunus Mts 73.44 345 eP P 06 28 26.8 +0.4
comp=Z,38nm,1.7s,baz=15,slow=6.0
PSZ Piszkesteto 73.49 337 ⇓P P 06 28 30.3 +3.5
PSZ Piszkesteto 73.49 337 ⇓P P 06 28 30.3 +3.5
KMSC Kings Mountain 73.50 52 P P 06 28 26.4 -0.6
baz=326,SNR=20
KMSC Kings Mountain 73.50 52 IAmb IAmb 06 28 27.9
comp=Z,44nm,0.9s
GRA1 Grafenberg Arr 73.51 343 IAmb IAmb 06 28 37.3
comp=Z,99nm,1.6s
GRA1 IAMs_20 IAMs_20 07 04 56.6
comp=Z,988nm,18.0s
GRF Grafenberg Arr 73.51 343 eP P 06 28 27.7 +0.9
comp=Z,48nm,1.3s,baz=15,slow=6.0
GRF eL L 07 04 57.9
comp=Z,1µm,18.2s
X54A Belton 73.52 53 P P 06 28 26.8 -0.3
baz=326,SNR=25
V57A Coltrane Farms 73.58 50 P P 06 28 27.6 +0.1
baz=327,SNR=17
MODS Modra-Piesok 73.63 339 eP P 06 28 27.0 -0.6
MODS pmax pmax
comp=Z,41nm,1.2s
MODS Modra-Piesok 73.63 339 eP P 06 28 27.0 -0.6
KHC Kasperske Hory 73.64 341 eP P 06 28 28.4 +0.8
KHC e 06 28 37.7
KHC eS SKiKP 06 37 51.7 -4.1
KHC MLR MLR
comp=Z,2µm,16.9s
KHC Kasperske Hory 73.64 341 eP P 06 28 28.4 +0.8
KHC ex x 06 28 37.7
KHC ex x 06 28 57.8
KHC eS SKiKP 06 37 51.7 -4.1
KHC AMS AMS 07 05 10.0
comp=Z,2µm,16.9s
T59A Double "B" Far 73.64 48 P P 06 28 27.7 0.0
baz=328,SNR=8.7
T59A Double "B" Far 73.64 48 IAmb IAmb 06 28 29.7
comp=Z,106nm,1.6s
T59A IAMs_20 IAMs_20 06 59 36.6
comp=Z,1µm,21.0s
U58A Oxford 73.69 49 P P 06 28 28.2 +0.1
baz=327,SNR=16
PLOR Plostina 73.72 331 ⇑P P 06 28 29.0 +0.9
PLOR Plostina 73.72 331 ⇑P P 06 28 29.0 +0.9
OZUR 73.73 332 ⇑P P 06 28 27.8 -0.4
WET Wettzell 73.75 342 eP P 06 28 29.2 +1.0
comp=Z,48nm,1.2s,baz=15,slow=6.0
250A Grady 73.80 57 IAMs_20 IAMs_20 07 00 23.2
comp=Z,962nm,20.0s
HODGE Hodges 73.83 53 IAmb IAmb 06 28 30.2
comp=Z,45nm,0.8s
W56A Indian Trail 73.85 51 P P 06 28 28.8 -0.2
baz=327,SNR=11
T60A Surry 73.85 48 IAMs_20 IAMs_20 07 04 57.1
comp=Z,1µm,18.0s
DRGR 73.88 334 ⇓P P 06 28 29.5 +0.4
DRGR 73.88 334 ⇓P P 06 28 29.5 +0.4
GEC2 GERESS Array S 73.89 341 eP P 06 28 29.7 +0.6
comp=Z,41nm,1.3s,baz=15,slow=6.0
GEC2 GERESS Array S 73.89 341 IAMs_20 IAMs_20 07 04 12.5
comp=Z,1µm,20.0s
GERES GERESS Array B 73.89 341 P P 06 28 29.4 +0.2
comp=Z,5.7nm,0.9s,baz=35,slow=4.9,SNR=22
GERES LR LR 07 04 32.6
comp=Z,1µm,19.3s,baz=29,slow=39
CFR Carcaliu 73.92 330 ⇑P P 06 28 30.6 +1.4
CFR Carcaliu 73.92 330 ⇑P P 06 28 30.6 +1.4
X55A Gracelyn & Ava 73.92 52 P P 06 28 29.0 -0.4
baz=326,SNR=14
V58A Windy Hill, Pi 73.95 50 P P 06 28 29.9 +0.3
baz=327,SNR=30
V58A Windy Hill, Pi 73.95 50 IAmb IAmb 06 28 30.9
comp=Z,51nm,0.8s
GOGA Godfrey 73.95 54 P P 06 28 28.7 -0.9
baz=326,SNR=11
152A Waverly Hall 73.97 56 IAmb IAmb 06 28 30.6
comp=Z,47nm,0.9s
U59A Littleton 74.06 49 P P 06 28 30.3 +0.1
baz=328,SNR=12
JURR Jurilovca 74.08 330 ⇓P P 06 28 26.2 -3.9
W57A Gilead 74.10 51 P P 06 28 29.9 -0.5
baz=327,SNR=20
W57A Gilead 74.10 51 IAmb IAmb 06 28 31.4
comp=Z,40nm,0.8s
X56A White Oak 74.18 52 P P 06 28 30.4 -0.5
baz=327,SNR=16
U60A Pendleton 74.23 48 P P 06 28 30.9 -0.3
baz=328,SNR=12
MLR Muntele Rosu 74.24 332 P P 06 28 32.3 +1.0
comp=Z,5.4nm,0.6s,baz=149,slow=3.9,SNR=10.0
MLR Muntele Rosu 74.24 332 ⇓P P 06 28 32.8 +1.5
JSC Jenkinsville 74.25 52 IAMs_20 IAMs_20 07 03 28.0
comp=Z,1µm,19.0s
Y55A Saluda 74.26 53 P P 06 28 31.3 -0.2
baz=326,SNR=23
HYB Hyderabad 74.30 278 *i* P P 06 28 35.0 +3.1
HYB eS S 06 38 04.0 -0.8
HYB Hyderabad 74.30 278 eP P 06 28 33.1 +1.2
HYB IAmb IAmb 06 28 50.4
comp=Z,23nm,0.9s
WLF Walferdange 74.31 346 eP P 06 28 32.3 +0.8
comp=Z,30nm,1.3s,baz=15,slow=6.0
WLF Walferdange 74.31 346 IAMs_20 IAMs_20 07 05 13.7
comp=Z,949nm,18.0s
CONA Conrad Observa 74.35 339 *i* sP P 06 28 32.7 +0.9
comp=Z,46nm,1.5s,SNR=15
V59A Middlesex 74.36 49 P P 06 28 31.8 -0.2
baz=328,SNR=24
ISR Istrita 74.42 331 ⇑P P 06 28 34.9 +2.6
ISR Istrita 74.42 331 ⇑P P 06 28 34.9 +2.6
PSI Prapat 74.53 252 LR LR 07 05 02.7
comp=Z,539nm,18.3s,baz=281,slow=39
VOIR 74.53 332 ⇑P P 06 28 34.7 +1.8
VOIR 74.53 332 ⇑P P 06 28 34.7 +1.8
W58A Raeford 74.55 50 P P 06 28 33.0 -0.1
baz=327,SNR=31
X57A Johnson Farm, 74.63 51 P P 06 28 34.0 +0.4
baz=327,SNR=6.6
Y56A Pelion 74.64 53 P P 06 28 34.4 +0.8
baz=327
U61A Possum Corner 74.66 48 P P 06 28 34.0 +0.3
baz=328,SNR=10.0
U61A Possum Corner 74.66 48 IAMs_20 IAMs_20 07 05 29.5
comp=Z,1µm,18.0s
ARR Arges 74.71 333 ⇓P P 06 28 35.5 +1.6
MOA Molln 74.74 340 *i* sP P 06 28 35.0 +1.0
comp=Z,14nm,1.0s,SNR=7.6
W59A Clinton 74.77 50 P P 06 28 34.5 +0.1
baz=328,SNR=7.3
V60A Jim Taylor Roa 74.78 49 P P 06 28 34.3 -0.1
baz=328,SNR=14
352A Blakely 74.85 57 IAmb IAmb 06 28 36.0
comp=Z,41nm,0.8s
352A IAMs_20 IAMs_20 07 03 14.1
comp=Z,927nm,18.0s
PPBI Pangkal Pinang 74.86 243 P P 06 28 37.0 +1.9
Y57A Sumter 74.87 52 P P 06 28 34.9 0.0
baz=327
X58A Rowland 74.89 51 P P 06 28 35.1 0.0
baz=327,SNR=8.1

X58A Rowland 74.89 51 IAmb IAmb 06 28 36.3
comp=Z,55nm,0.9s
LEHL Lehliu 74.94 331 ⇑P P 06 28 38.1 +3.0
CNNC Cliffs of the 74.95 49 P P 06 28 35.9 +0.5
baz=328,SNR=10
FUR Furstenfeldbru 74.98 343 eP P 06 28 36.2 +0.8
comp=Z,83nm,1.7s,baz=15,slow=6.0
Z56A Williston 75.00 53 P P 06 28 36.7 +1.0
baz=327
Z56A Williston 75.00 53 IAmb IAmb 06 28 37.6
comp=Z,76nm,1.1s
V61A Roper 75.06 48 P P 06 28 37.0 +1.0
baz=328,SNR=7.1
V61A Roper 75.06 48 IAMs_20 IAMs_20 07 00 18.1
comp=Z,1µm,21.0s
ARSA Arzberg 75.06 339 *i* pP P 06 28 36.7 +0.7
comp=Z,18nm,1.2s,SNR=5.6
RJOB Jochberg 75.12 341 eP P 06 28 37.3 +1.0
comp=Z,36nm,1.1s,baz=15,slow=6.0
451A Vernon 75.17 58 IAMs_20 IAMs_20 07 03 54.5
comp=Z,1µm,19.0s
GZR Gura Zlata 75.17 334 ⇑P P 06 28 38.4 +1.8
GZR Gura Zlata 75.17 334 ⇑P P 06 28 38.4 +1.8
W60A Pink Hill 75.19 49 P P 06 28 37.2 +0.4
baz=328,SNR=10
X59A McDuffie Farm, 75.20 50 P P 06 28 37.4 +0.6
baz=328,SNR=6.4
BZS Buzias 75.25 335 ⇑P P 06 28 37.4 +0.5
BZS Buzias 75.25 335 ⇑P P 06 28 37.4 +0.5
Y58A Scranton 75.29 51 P P 06 28 37.8 +0.5
baz=327,SNR=7.0
Y58A Scranton 75.29 51 IAmb IAmb 06 28 50.6
comp=Z,66nm,0.8s
BFO Black Forest 75.30 345 eP P 06 28 37.7 +0.4
comp=Z,38nm,1.6s,baz=15,slow=6.0
BFO Black Forest 75.30 345 P P 06 28 36.9 -0.3
BFO pmax pmax
comp=Z,39nm,1.3s
BFO MLR MLR
comp=Z,500nm,20.0s
BFO Black Forest 75.30 345 P P 06 28 36.9 -0.3
Z57A Bowman 75.33 52 P P 06 28 38.1 +0.5
baz=327,SNR=5.6
W61A Ground Anchor 75.40 49 P P 06 28 39.0 +1.0
baz=328
BKNI Bangkinang 75.44 249 IAMs_20 IAMs_20 07 05 52.0
comp=Z,668nm,19.0s
X60A Albert Glenn T 75.48 50 P P 06 28 38.6 +0.2
baz=328,SNR=14
V62A Hyde County Ai 75.52 48 IAMs_20 IAMs_20 07 05 56.3
comp=Z,1µm,19.0s
TIGA Tifton 75.53 56 P P 06 28 38.9 +0.1
baz=326,SNR=9.7
Y59A Loris 75.57 51 P P 06 28 39.6 +0.6
baz=328,SNR=5.8
Y59A Loris 75.57 51 IAmb IAmb 06 28 40.7
comp=Z,65nm,0.9s
UBR Ueberruh 75.65 343 eP P 06 28 40.0 +0.6
comp=Z,37nm,1.3s,baz=15,slow=6.0
KBA Koelnbreinsper 75.66 341 *i* sP P 06 28 40.5 +1.0
comp=Z,113nm,1.1s,SNR=18
Z58A St. Stephen 75.70 52 P P 06 28 39.9 +0.2
baz=327,SNR=7.5
157A Early Branch 75.71 53 P P 06 28 41.0 +1.3
baz=327
SOKA Soboth 75.71 340 *i* pP P 06 28 40.2 +0.5
comp=Z,26nm,1.2s,SNR=8.6
RETA Reutte 75.72 343 *i* sP P 06 28 40.7 +0.9
comp=Z,16nm,1.1s,SNR=6.7
NHSC New Hope 75.73 52 P P 06 28 40.3 +0.4
baz=327,SNR=9.2
WATA Walderalm 75.73 342 *i* pP P 06 28 40.4 +0.5
comp=Z,43nm,1.4s,SNR=12
HERR Herculane 75.74 334 ⇓P P 06 28 39.9 +0.2
WTTA Wattenberg 75.79 342 *i* sP P 06 28 41.7 +1.4
comp=Z,58nm,1.6s,SNR=13
MOTA Moosalm 75.80 342 *i* pP P 06 28 40.5 +0.2
comp=Z,34nm,1.1s,SNR=13
GROS Grobnik 75.82 339 eP P 06 28 40.8 +0.5
MNSI Mandailing Nat 75.84 251 P P 06 28 41.0 +0.3
comp=Z,16nm,0.9s
Y60A Bolivia 75.85 50 P P 06 28 40.9 +0.3
baz=328
SQTA Sankt Quirin 75.91 342 *i* pP P 06 28 41.3 +0.5
comp=Z,55nm,1.7s,SNR=16
ILGA Ilgaz 75.92 325 IAmb IAmb 06 28 55.2
comp=Z,44nm,1.1s
OBKA Obir 75.97 340 *i* pP P 06 28 41.1 -0.1
comp=Z,54nm,1.4s,SNR=12
MDVR Moldovita 76.01 334 ⇓P P 06 28 42.3 +0.9
Z59A Georgetown, SC 76.02 51 P P 06 28 41.9 +0.3
baz=328
158A Hollywood 76.03 52 P P 06 28 43.2 +1.6
baz=327
MYKA Terra Mystica 76.03 341 *i* sP P 06 28 42.4 +0.9
comp=Z,15nm,1.0s,SNR=7.8
DAVA Damuels 76.07 343 *i* P P 06 28 40.8 -1.1
comp=Z,16nm,1.4s
ABTA Abfaltersbach 76.13 341 *i* pP P 06 28 42.2 +0.1
comp=Z,37nm,1.3s,SNR=8.5
553A Crawfordville 76.16 57 IAMs_20 IAMs_20 07 01 36.7
comp=Z,930nm,21.0s
FETA Feichten 76.18 343 *i* pP P 06 28 43.0 +0.5
comp=Z,29nm,1.3s,SNR=16
PRED Cave del Predi 76.22 341 IAmb IAmb 06 28 55.4
comp=Z,64nm,1.4s
PRED IAMs_20 IAMs_20 07 06 36.3
comp=Z,1µm,19.0s
ZOU Zoufplan 76.23 341 IAmb IAmb 06 28 56.4
comp=Z,60nm,1.5s
ZOU IAMs_20 IAMs_20 07 07 13.3
comp=Z,1µm,19.0s
CLF Chambon-Foret 76.41 349 IAMs_20 IAMs_20 07 06 08.1
comp=Z,835nm,19.0s
LJU Ljubljana 76.42 340 eP P 06 28 49.1 +5.4
KDZE Karadeniz Ereo 76.43 326 ⇑P P 06 28 50.3 +6.4
CRNS Crni Vrh 76.44 340 eP P 06 28 44.2 +0.5
CRES Cresnjev 76.44 339 eP P 06 28 43.0 -0.8
GSI Gunungsitoli 76.51 253 P P 06 28 43.1 -1.5
comp=Z,12µmcomp=Z,263nm,0.9s
PLVB Pleven 76.55 332 ⇓P P 06 28 42.2 -2.2
DAVOX Davos/Dischmat 76.56 343 P P 06 28 45.4 +0.8
comp=Z,10nm,0.8s,baz=330,slow=3.8,SNR=14
CIMO Cimolais 76.56 341 IAMs_20 IAMs_20 07 07 33.2
comp=Z,1µm,18.0s
CTA Charters Tower 76.60 199 P P 06 28 45.5 +0.7
comp=Z,9.0nm,0.8s,baz=27,slow=6.7,SNR=8.2
CTAO Charters Tower 76.60 199 P P 06 28 44.4 -0.4
CTAO pmax pmax
comp=Z,58nm,1.2s
CTAO Charters Tower 76.60 199 P P 06 28 44.4 -0.4
CTAO IAmb IAmb 06 29 12.6
comp=Z,58nm,1.2s
ELND Elena 76.63 331 ⇑P P 06 28 45.0 +0.1
DZM Mont Dzumac 76.75 179 eP P 06 28 47.9 +2.2
comp=Z,124nm,1.4s
DZM eS S 06 38 23.9 -7.6
comp=Z,152nm,27.6s
DZM Mont Dzumac 76.75 179 eLR LR 06 51 53.6
comp=Z,709nm,29.5s
456A Hilliard 76.86 55 IAmb IAmb 06 28 48.2
comp=Z,50nm,0.7s
CTI Castel Tesino 76.96 342 P P 06 28 46.1 -0.7
CTI pmax pmax
comp=Z,27nm,0.9s
CTI Castel Tesino 76.96 342 P P 06 28 46.1 -0.7
KNRA Kununurra 77.04 216 IAmb IAmb 06 29 14.7
comp=Z,59nm,1.2s
BRTR Keskin Array B 77.14 324 P P 06 28 47.8 -0.2
comp=Z,4.3nm,0.8s,baz=65,slow=3.6,SNR=14
BRTR LR LR 07 07 37.2
comp=Z,518nm,18.4s,baz=26,slow=40
KRJI Kerinci 77.25 247 P P 06 28 53.2 +4.4
ANTO Ankara 77.30 325 IAMs_20 IAMs_20 07 08 03.8
comp=Z,1µm,19.0s
SALO Salr 77.58 342 P P 06 28 49.7 -0.5
SALO IAmb IAmb 06 29 02.9
comp=Z,98nm,1.3s
VTS Vitosha 77.64 333 ⇑P P 06 28 49.7 -1.1
VTS Vitosha 77.64 333 ⇑P P 06 28 49.7 -1.1
VTS Vitosha 77.64 333 IAMs_20 IAMs_20 07 03 03.7
comp=Z,1µm,22.0s
656A Willston 77.75 56 IAmb IAmb 06 28 53.4
comp=Z,59nm,1.0s
TAOE Nuku Hiva Isla 77.97 125 eLR LR 06 52 40.3
comp=Z,559nm,29.6s
GAZ Gaziantep 78.15 320 IAMs_20 IAMs_20 07 03 57.7

comp=Z,968nm,20.0s
PRMA PARMA 78.44 342 IAMs_20 IAMs_20 07 04 39.9
comp=Z,698nm,20.0s
BNI Bardonecchia 78.75 345 IAMs_20 IAMs_20 07 10 08.1
comp=Z,912nm,18.0s
PDG Podgorica 78.82 335 ⇑P **P** **06 28 57.3 +0.3**
PDG Podgorica 78.82 335 IAMs_20 IAMs_20 07 06 24.0
comp=Z,743nm,21.0s
MSSA Maissana 79.01 343 IAMs_20 IAMs_20 07 08 45.0
comp=Z,1μm,19.0s
VLC Villacollemand 79.01 342 IAmb IAmb 06 29 25.4
VLC comp=Z,69nm,1.3s
IAMs_20 IAMs_20 07 08 27.1
comp=Z,1μm,18.0s
TLIG Tlapa 79.04 75 IAMs_20 IAMs_20 06 57 38.6
comp=Z,795nm,19.0s
WB0 Warramunga Arr 79.11 210 IAmb IAmb 06 29 26.1
comp=Z,63nm,1.1s
WB6 Warramunga Arr 79.20 210 IAMs_20 IAMs_20 06 59 55.1
comp=Z,770nm,22.0s
WRAB Tennant Creek 79.28 210 *i* P **P** **06 28 59.0 -0.7**
WRAB pmax pmax
comp=Z,16nm,0.9s
WRAB Tennant Creek 79.28 210 P **P** **06 28 59.5 -0.2**
WRAB IAmb IAmb 06 29 27.1
comp=Z,70nm,1.1s
WB2 Warramunga Arr 79.28 210 IAmb IAmb 06 29 27.2
comp=Z,71nm,1.1s
WRA Warramunga Arr 79.29 210 P **P** **06 28 59.2 -0.6**
comp=Z,12nm,0.8s,baz=24,slow=5.9,SNR=59
WRA LR LR 07 00 26.8
comp=Z,456nm,21.9s,baz=20,slow=33
WRA Warramunga Arr 79.29 210 *i* P **P** **06 28 58.7 -1.1**
WRA pmax pmax
comp=Z,13nm,0.9s
DWPF Disney Wildern 79.33 56 P **P** **06 29 01.6 +1.5**
baz=327
OSSC Osservatorio P 79.47 341 IAMs_20 IAMs_20 07 05 46.3
comp=Z,940nm,19.0s
ISP Isparta 79.90 325 IAMs_20 IAMs_20 07 10 30.3
comp=Z,637nm,18.0s
AQU L'Aquila 80.19 340 IAMs_20 IAMs_20 07 09 56.1
comp=Z,675nm,20.0s
LIT Litokhoron 80.19 332 IAMs_20 IAMs_20 07 09 21.3
comp=Z,1μm,18.0s
LATE Laterza 80.25 341 IAmb IAmb 06 29 18.5
comp=Z,103nm,1.3s
UOSS Minazif 80.31 300 P **P** **06 29 04.3 -1.2**
UOSS IAmb IAmb 06 29 24.9
comp=Z,86nm,1.6s
UOSS Minazif 80.31 300 IAMs_20 IAMs_20 07 06 25.5
comp=Z,939nm,21.0s
PAOL Paolisi 81.22 338 IAMs_20 IAMs_20 07 07 41.4
comp=Z,1μm,22.0s
CSS Mathiatis 81.53 322 IAMs_20 IAMs_20 07 06 52.0
comp=Z,675nm,19.0s
PPT Papeete 81.64 137 LR LR 07 02 23.0
comp=Z,478nm,18.4s,baz=332,slow=33
PPT2 Papeete2 81.66 137 *e*S **S** **06 39 17.0 -6.9**
comp=Z,327nm,25.5s
PPT2 Papeete2 81.66 137 *e*LQ LQ 06 50 50.4
comp=Z,2μm,29.0s
PPT2 *e*LR LR 06 54 17.2
comp=Z,1μm,23.8s,baz=336
TIP Timpagrande 82.50 336 ⇓P **P** **06 29 16.2 -0.7**
TIP Timpagrande 82.50 336 IAmb IAmb 06 29 30.8
comp=Z,43nm,1.2s
TIP IAMs_20 IAMs_20 07 11 02.3
comp=Z,823nm,20.0s
MMAI Mount Meron Ar 82.52 320 P **P** **06 29 16.4 -0.8**
comp=Z,2.7nm,0.5s,baz=64,slow=7.7,SNR=4.9
ASF Jabal al Asfar 82.71 318 P **P** **06 29 18.0 -0.1**
comp=Z,2.6nm,0.7s,baz=314,slow=4.9,SNR=3.2
BBSR BB Station 82.84 41 IAMs_20 IAMs_20 07 06 34.0
comp=Z,1μm,22.0s
ASAR Alice Springs 82.94 209 P **P** **06 29 19.2 +0.1**
comp=Z,15nm,0.8s,baz=16,slow=5.1,SNR=101
ASAR LR LR 07 02 28.0
comp=Z,498nm,21.9s,baz=12,slow=33
ITM Ithomi 83.08 332 IAMs_20 IAMs_20 07 11 22.8
comp=Z,847nm,18.0s
PGAV Gavieira, Arco 83.28 355 *e*S **S** **06 39 44.9 +4.7**
PGAV *e*SS **SS** **06 45 12.2 +8.8**
PGAV Gavieira, Arco 83.28 355 *e*LR LR 06 57 32.4
comp=Z,452nm,18.0s
PBRG Braganca 83.36 354 *e*P **P** **06 29 22.6 +1.3**
comp=Z,38nm,1.7s
CEL Celeste 83.58 337 IAMs_20 IAMs_20 07 11 10.8
comp=Z,693nm,18.0s
PVRL Vila Real 83.94 355 *e*P **P** **06 29 25.8 +1.5**
MVO Moncorvo 84.01 354 *e*P **P** **06 29 25.3 +0.6**
comp=Z,62nm,1.7s
MVO Moncorvo 84.01 354 *e*S **S** **06 39 55.0 +7.4**
MVO *e*SS SS 06 45 27.0 +13
MVO Moncorvo 84.01 354 *e*LR LR 06 57 34.9
comp=Z,444nm,18.0s
CORL Corleone 84.50 338 IAMs_20 IAMs_20 07 10 47.2
comp=Z,695nm,19.0s
PVIS Viseu 84.50 355 *e*P **P** **06 29 28.0 +0.8**
comp=Z,47nm,1.1s
MTE Manteigas 84.80 355 *e*P **P** **06 29 29.6 +0.9**
comp=Z,80nm,1.2s
MTE Manteigas 84.80 355 *e*S **S** **06 40 00.8 +5.3**
MTE *e*SS SS 06 45 38.9 +13
MTE Manteigas 84.80 355 *e*LR LR 06 57 44.3
comp=Z,485nm,18.0s
COI Coimbra 85.03 355 *e*S **S** **06 39 58.4 +0.8**
COI Coimbra 85.03 355 IAMs_20 IAMs_20 07 07 45.4
comp=Z,746nm,19.0s
PCAS Casmilo, Conde 85.19 356 *e*P **P** **06 29 31.5 +0.9**
comp=Z,146nm,1.3s
PCAS Casmilo, Conde 85.19 356 *e*S **S** **06 40 03.8 +4.6**
PCAS *e*SS SS 06 45 51.5 +20
ESDC Sonseca Array 85.29 352 P **P** **06 29 31.6 +0.4**
comp=Z,43nm,1.2s,baz=358,slow=4.6,SNR=50
PCBR Castelo Branco 85.36 355 *e*P **P** **06 29 32.2 +0.8**
comp=Z,96nm,1.3s
PAB San Pablo 85.44 352 P **P** **06 29 32.2 +0.2**
PAB pmax pmax
comp=Z,55nm,1.3s
PAB San Pablo 85.44 352 P **P** **06 29 32.2 +0.2**
PAB IAmb IAmb 06 29 46.0
comp=Z,55nm,1.3s
PAB San Pablo 85.44 352 IAMs_20 IAMs_20 07 14 59.3
comp=Z,707nm,18.0s
EIL Elat 85.69 319 P **P** **06 29 33.3 +0.1**
comp=Z,6.1nm,1.0s,baz=41,slow=6.1,SNR=3.2
PMRV Marv??o 85.76 355 *e*P **P** **06 29 36.0 +2.5**
comp=Z,56nm,1.6s
PMRV Marv??o 85.76 355 *e*S **S** **06 40 10.0 +5.1**
PMRV Marv??o 85.76 355 *e*LR LR 06 58 24.3
comp=Z,472nm,18.0s
ARMA Armidale 85.92 192 IAMs_20 IAMs_20 07 02 49.3
comp=Z,943nm,21.0s
PESTR Estremoz 86.33 355 *e*S **S** **06 40 15.3 +4.8**
RAYN Ar Rayn 86.65 307 P **P** **06 29 37.2 -1.0**
RAYN pmax pmax
comp=Z,32nm,1.1s
RAYN Ar Rayn 86.65 307 P **P** **06 29 37.2 -1.0**
RAYN IAmb IAmb 06 29 57.7
comp=Z,32nm,1.1s
RAYN IAMs_20 IAMs_20 07 12 52.2
comp=Z,929nm,19.0s
MTO3 Montecristo 86.68 70 IAMs_20 IAMs_20 07 12 50.0
comp=Z,598nm,21.0s
TBI Tubuai 86.94 140 *e*S **S** **06 40 12.0 -4.2**
comp=Z,362nm,31.5s
TBI Tubuai 86.94 140 *e*LQ LQ 06 53 08.0
comp=Z,336nm,29.5s
TBI *e*LR LR 06 56 47.3
comp=Z,617nm,24.5s,baz=334
PNCL Nicolau / Gran 87.13 355 *e*S **S** **06 40 24.2 +6.0**
KEST Kesra 87.38 341 LR LR 07 12 49.9
comp=Z,340nm,18.2s,baz=331,slow=38
KEST Kesra 87.38 341 IAMs_20 IAMs_20 07 09 02.5
comp=Z,728nm,20.0s
PVAQ Vaqueiros 87.80 355 *e*S **S** **06 40 32.4 +7.8**
PVAQ Vaqueiros 87.80 355 *e*LR LR 06 59 25.8
comp=Z,412nm,16.0s
MORF Marmelete 87.94 355 *e*S **S** **06 40 34.5 +8.4**
PBDV Barranco-do-Ve 87.97 355 *e*S **S** **06 40 30.7 +4.4**
PBDV *e*SS SS 06 46 34.0 +22
PFVI Vila Bisbo 88.12 356 IAMs_20 IAMs_20 07 15 03.1
comp=Z,917nm,18.0s
STKA Stephens Creek 88.97 200 P **P** **06 29 49.4 +0.7**
comp=Z,6.1nm,0.8s,baz=341,slow=7.1,SNR=15
STKA LR LR 07 07 34.7
comp=Z,443nm,19.1s,baz=12,slow=34
CRIN San Cristobal 89.33 69 IAMs_20 IAMs_20 07 13 50.6
comp=Z,541nm,20.0s
MTDJ Mount Denham 89.58 58 IAMs_20 IAMs_20 07 14 31.3
comp=Z,796nm,19.0s
GRTK Grand Turk 89.75 51 IAMs_20 IAMs_20 07 10 25.5
comp=Z,1μm,21.0s
SDDR Presa de Saban 91.89 53 IAMs_20 IAMs_20 07 13 29.1
comp=Z,870nm,20.0s
MDT Midelt 92.15 352 P **P** **06 30 04.5 +0.5**
comp=Z,5.3nm,0.9s,baz=3.8,slow=8.3,SNR=5.7
DAMY Dhamar 94.91 304 IAMs_20 IAMs_20 07 13 29.9
comp=Z,853nm,21.0s
SJG San Juan 94.94 49 IAMs_20 IAMs_20 07 18 24.8
comp=Z,617nm,20.0s
SABA Saba 96.61 46 IAMs_20 IAMs_20 07 13 18.9
comp=Z,522nm,19.0s
SEUS St. Eustatius 96.83 46 IAMs_20 IAMs_20 07 15 57.8
comp=Z,943nm,22.0s
SKI Saint Kitts 97.08 46 IAMs_20 IAMs_20 07 15 26.3
comp=Z,884nm,20.0s
ANWB Willy Bob 97.17 45 IAMs_20 IAMs_20 07 20 16.6
comp=Z,890nm,19.0s
ATD Arta Tunnel 98.28 304 IAMs_20 IAMs_20 07 20 39.3
comp=Z,727nm,20.0s
SDV Santo Domingo 100.97 57 IAMs_20 IAMs_20 07 20 17.2
comp=Z,523nm,19.0s
FURI Furi 102.55 306 IAMs_20 IAMs_20 07 22 46.3
comp=Z,524nm,21.0s
TORD Torodi Ar. Bea 110.79 343 PKiKP **PKiKP** **06 35 26.7 -0.8**
comp=Z,0.7nm,0.8s,baz=7.9,slow=2.8,SNR=2.7
KMBO Kilima Mbogo 111.97 302 IAMs_20 IAMs_20 07 24 11.3
comp=Z,509nm,22.0s
LPAZ La Paz 123.67 69 PKP **PKPdf** **06 35 52.6 -0.2**
comp=Z,0.8nm,0.7s,baz=268,slow=7.2,SNR=5.3
NBMO Morrinhos-CE 124.41 32 *e*P **PKiKP** **06 35 55.4 +1.4**
VILB Vilhena 124.96 59 *e*P **PKPdf** **06 35 54.5 -0.1**
SIV San Ignacio 127.11 61 PKP **PKPdf** **06 35 58.5 -0.2**
comp=Z,2.2nm,1.0s,baz=75,slow=2.0,SNR=7.3
SIV PP **PP** **06 37 55.5 -1.7**
comp=Z,3.4nm,0.9s,baz=337,slow=7.2,SNR=5.5
PTLB Pontes e Lacer 127.62 59 *e*P **PKiKP** **06 35 59.9 -0.2**
RCBR Riachuelo 127.99 28 *e*P **PKiKP** **06 36 02.4 +1.3**
VNDA Vanda 132.27 181 PKP **PKPdf** **06 36 06.8 +0.2**
comp=Z,0.9nm,0.7s,baz=121,slow=1.6,SNR=3.8
AC05 El Transito 132.46 80 **PKiKP** **06 36 09.5 -0.2**
BDFB Brasilia 132.91 47 PKP **PKPdf** **06 36 10.2 +0.4**
comp=Z,2.5nm,0.9s,baz=124,slow=5.3,SNR=3.6
CO01 Juntas del Tor 133.43 81 PKPdf **PKiKP** **06 36 11.4 -0.4**
MT01 Popeta 135.63 86 PKPdf **PKPdf** **06 36 14.7 +0.5**
LBTB Lobatse 138.14 299 PKIKP **PKPdf** **06 36 20.2 +0.9**
LBTB Lobatse 138.14 299 PKPdf **PKPdf** **06 36 20.1 +0.9**
LC01 Cunco 138.79 92 PKPdf **PKiKP** **06 36 21.4 -0.7**
VAO Valinhos 139.87 50 *e*P **PKPdf** **06 36 23.4 +1.0**
SPB Sao Paulo 140.17 52 PKPdf **PKiKP** **06 36 24.7 -0.6**
PLCA Paso Flores 140.77 93 PKHKP **PKPdf** **06 36 17.3 -6.3**
PLCA Paso Flores 140.77 93 PKPpre **PKPdf** **06 36 17.3 -6.3**
BOSA Boshof 141.26 297 PKP **PKPdf** **06 36 23.2 -1.7**
comp=Z,2.2nm,0.8s,baz=32,slow=6.2,SNR=3.8
BOSA Boshof 141.26 297 PKIKP **PKPdf** **06 36 19.2 -5.7**
BOSA Boshof 141.26 297 PKPpre **PKPdf** **06 36 19.2 -5.7**
MAW Mawson 143.50 219 PKP PKPbc 06 36 26.0 +1.2
comp=Z,4.6nm,1.0s,baz=343,slow=4.8,SNR=6.9
MAW Mawson 143.50 219 PKIKP PKPab 06 36 23.8 0.0
MAW Mawson 143.50 219 PKPab 06 36 23.8 0.0
GO10 Punta Arenas 147.43 111 **PKPbc** **06 36 37.5 +0.2**
SYO Syowa Base 152.22 219 ⇓*e*P **PKPbc** **06 36 47.5 -0.9**
SYO Syowa Base 152.22 219 ⇑*i*P **PKPab** **06 36 55.9 -2.5**
SNAA Sanae 162.55 192 PKPab **PKPab** **06 37 45.0 +2.0**
SNAA Sanae 162.55 192 PKP2 **PKPab** **06 37 42.8 -0.2**
SNAA 07 36 53.7
SNAA Sanae 162.55 192 PKPdf **PKPdf** **06 36 53.7 -1.0**
SNAA **PKPab** **06 37 42.8 -0.2**
VNA3 Neumayer Olymp 163.56 185 PKPab **PKPab** **06 37 47.2 -0.3**
VNA2 Neumayer--Watz 163.72 188 PKPab **PKPab** **06 37 48.9 +0.8**
baz=187,slow=2.9
VNA1 Neumayer--Stat 164.06 187 PKPab **PKPab** **06 37 49.1 -0.4**

*PRU **31** 06:24:33.9±0.0,51.52N×16.10E,h0km*
*VIE **31** 06:24:35.0±1.2,51.42N×15.93E,h0km,mb2.0/3,ml2.5/4,*
Error ellipse: s-maj=14.3km s-min=7.2km az=50.0 84 km
WNW of Wroclaw Suspected Mining induced.
ISC 31 06:24:32.0±1.2,51.59N±0.05×16.16E±0.04,h0km,n21,
σ0.64/44,Poland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CHVC	**Chvalec**	**1.00**	**184**	*e*PG		**Pg**	**06 24 51.7**	**+0.5**
CHVC				*e*SG		**Sg**	**06 25 03.8**	**-0.3**
	comp=Z,26nm,0.4s							
OSTC	**Ostas**	**1.03**	**178**	*e*PG		**Pg**	**06 24 52.1**	**+0.3**
OSTC				*e*SG		**Sg**	**06 25 05.0**	**-0.1**
	comp=Z,18nm,0.4s							
UPC	**Upice**	**1.08**	**185**	*e*PG		**Pg**	**06 24 52.9**	**+0.1**
UPC				*e*SG		**Sg**	**06 25 06.9**	**+0.1**
	comp=Z,31nm,0.2s							
DPC	**Dobruska-Polom**	**1.24**	**175**	*e*PG		**Pg**	**06 24 56.0**	**+0.2**
DPC				*e*SG		**Sg**	**06 25 11.5**	**-0.4**
	comp=Z,15nm,0.5s							
PVCC	**Panska Ves**	**1.46**	**224**	*e*PG		**Pn**	**06 24 59.7**	**+0.1**
PVCC				*e*SG		**Sn**	**06 25 19.4**	**0.0**
	comp=Z,100nm,0.3s							
KRLC	**Kraliky**	**1.56**	**165**	*e*PG		**Pn**	**06 25 01.0**	**-0.1**
KRLC				*e*SG		**Sn**	**06 25 21.5**	**-0.5**
	comp=Z,12nm,0.7s							
BRG	**Berggiesshubel**	**1.57**	**244**	PG		**Pb**	**06 25 01.9**	**0.0**
BRG				SG		**Sg**	**06 25 22.2**	**-0.1**
	33nm,0.5s							
PRA	**Prague**	**1.87**	**217**	*e*SG		**Sb**	**06 25 30.9**	**-0.1**
	comp=Z,7.4nm,0.6s							
GOPC	**GO Pecny, Ondr**	**1.89**	**208**	*e*PN		**Pn**	**06 25 05.5**	**0.0**
GOPC				*e*PG		**Pb**	**06 25 07.1**	**-0.2**
GOPC				*e*SG		**Sb**	**06 25 31.5**	**0.0**
	comp=Z,10nm,0.7s							
PRU	**Pruhonice**	**1.90**	**213**	*e*PG		**Pb**	**06 25 07.6**	**0.0**
PRU				*e*SG		**Sb**	**06 25 31.8**	**0.0**
	comp=Z,22nm,0.8s							
CLL	**Collm**	**2.00**	**263**	*e*Pn		**Pn**	**06 25 07.0**	**0.0**
CLL				*e*Pg		**Pg**	**06 25 10.0**	**-0.2**
CLL				*e*			06 25 15.0	
CLL				*e*Sg		**Sg**	**06 25 36.0**	**-0.1**
	comp=Z,8.0nm,0.4s							
MORC	**Moravsky Berou**	**2.01**	**154**	*e*PN		**Pn**	**06 25 07.4**	**+0.1**
MORC				*e*SG		**Sg**	**06 25 36.2**	**-0.4**
OKC	**Ostrava-Krasne**	**2.16**	**143**	*e*PN		**Pn**	**06 25 10.2**	**+1.0**
OKC				*e*SG		**Sg**	**06 25 40.9**	**-0.4**
	comp=Z,9.7nm,0.5s							
VRAC	**Vranov**	**2.30**	**173**	*e*PN		**Pn**	**06 25 12.0**	**+0.9**
VRAC				*e*SG		**Sg**	**06 25 44.5**	**-1.3**
PBCC	**Pribram**	**2.35**	**217**	*e*PG		**Pb**	**06 25 15.9**	**+0.7**
PBCC				*e*SG		**Sg**	**06 25 46.7**	**-0.8**
KRUC	**Moravsky**	**2.53**	**177**	*e*PN		**Pn**	**06 25 14.8**	**+0.5**
KRUC				*e*SG		**Sg**	**06 25 51.9**	**-1.4**
NKC	**Novy Kostel**	**2.71**	**241**	*e*PN		**Pn**	**06 25 17.6**	**+0.7**
NKC				*e*PG		**Pb**	**06 25 22.4**	**+1.0**
NKC				*e*SG		**Sg**	**06 25 59.3**	**+0.2**
	comp=Z,20nm,0.4s							
KHC	**Kasperske Hory**	**2.96**	**215**	*e*PN		**Pn**	**06 25 20.8**	**+0.5**
KHC				*e*PG		**Pb**	**06 25 25.7**	**0.0**
KHC				*e*SG		**Sg**	**06 26 05.3**	**-1.8**
	comp=Z,4.7nm,0.3s							
BSD	**Bornholm Skovb**	**3.61**	**349**	*i* P		**Pn**	**06 25 28.8**	**-0.4**
BSD				*e*			06 26 08.4	
CONA	**Conrad Observa**	**3.67**	**183**	*i* Pn		**Pn**	**06 25 30.6**	**+0.6**
	comp=Z,0.4nm,0.1s							
CONA				Sg		**Sg**	**06 26 28.2**	**-1.6**
	comp=Z,3.8nm,0.4s							
MOA	**Molln**	**3.94**	**199**	*i* Pn		**Pn**	**06 25 34.2**	**+0.5**
	comp=Z,1.4nm,0.2s							
MOA				Sg		**Sg**	**06 26 38.2**	**-0.2**
	comp=Z,2.9nm,0.3s							

*NNC **31** 06:41:45.9±0.5,44.77N×79.77E,h4km±3km,mb3.5,*
mpv3.5,Error ellipse: s-maj=3.7km s-min=3.1km az=90.0
*SOME **31** 06:41:46.6,44.78N×79.88E,h30km*
ISC 31 06:41:45.6±1.3,44.81N±0.04×79.87E±0.04,h10km±12km,
n32,σ0.72/51,4C-1D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**0.48**	**186**	*e*P		**Pg**	**06 41 55.1**	**+0.2**
	74nm,0.1s							
DJR				*e*S		**Sg**	**06 42 01.3**	**0.0**
	517nm,0.3s							
DJR	**Jarkent**	**0.48**	**186**	P		**Pg**	**06 41 55.1**	**+0.2**
	74nm,0.1s							
DJR				S		**Sg**	**06 42 01.3**	**0.0**
	517nm,0.3s							
TDK	**Taldyqorghan**	**1.05**	**281**	*e*P		**Pn**	**06 42 05.9**	**-0.5**
	59nm,0.1s							
TDK				*e*S		**Sg**	**06 42 19.5**	**-0.1**
	78nm,0.2s							
TDK	**Taldyqorghan**	**1.05**	**281**	P		**Pn**	**06 42 05.9**	**-0.5**
	59nm,0.1s							
TDK				S		**Sg**	**06 42 19.5**	**-0.1**
	78nm,0.2s							
PDGK	**Podgornoye**	**1.50**	**190**	⇑P		**Pb**	**06 42 13.0**	**-0.6**
	2.7nm,0.3s							
PDGK				⇓S		**Sb**	**06 42 32.2**	**-0.5**
	40nm,0.5s							
ARXS	**Arharly**	**1.57**	**249**	*e*P		**Pb**	**06 42 14.4**	**-0.5**
	58nm,0.3s							
ARXS				*e*S		**Sb**	**06 42 34.2**	**-0.6**
	29nm,0.2s							
ARXS	**Arharly**	**1.57**	**249**	P		**Pb**	**06 42 14.4**	**-0.5**
	58nm,0.3s							
ARXS				S		**Sb**	**06 42 34.2**	**-0.6**
	29nm,0.2s							
UZB	**Uzynbulak**	**1.77**	**200**	*e*P		**Pb**	**06 42 17.7**	**-0.5**
	7.6nm,0.2s							
UZB				*e*S		**Sb**	**06 42 40.0**	**-0.4**
	51nm,0.2s							
UZB	**Uzynbulak**	**1.77**	**200**	P		**Pb**	**06 42 17.7**	**-0.5**
	7.6nm,0.2s							
UZB				S		**Sb**	**06 42 40.0**	**-0.4**
	51nm,0.2s							
KURS	**Kuram**	**1.80**	**223**	*e*P		**Pb**	**06 42 18.4**	**-0.2**
	26nm,0.4s							
KURS				*e*S		**Sb**	**06 42 40.9**	**-0.3**
	9.1nm,0.2s							
KURS	**Kuram**	**1.80**	**223**	P		**Pb**	**06 42 18.4**	**-0.2**
	26nm,0.4s							
KURS				S		**Sb**	**06 42 40.9**	**-0.3**
	9.1nm,0.2s							
SATY	**Saty**	**2.04**	**212**	*e*P		**Pb**	**06 42 23.0**	**+0.2**
	12nm,0.1s							
SATY				*e*S		**Sb**	**06 42 48.8**	**+0.5**
	58nm,0.2s							
SATY	**Saty**	**2.04**	**212**	Pg		**Pb**	**06 42 23.0**	**+0.2**
	12nm,0.1s							
SATY				Lg		Lg	06 42 48.8	
	58nm,0.2s							
CHKK	**Chushkaly**	**2.27**	**246**	*e*P		**Pb**	**06 42 26.2**	**-0.5**
	5.0nm,0.2s							
CHKK				*e*S		**Sb**	**06 42 54.3**	**-0.5**
	26nm,0.2s							
CHKK	**Chushkaly**	**2.27**	**246**	Pg		**Pb**	**06 42 26.2**	**-0.5**
	5.0nm,0.2s							
CHKK				Lg		Lg	06 42 54.3	
	26nm,0.2s							
KTBS	**Karatobe**	**2.54**	**246**	*e*P		**Pb**	**06 42 30.5**	**-0.7**
	3.6nm,0.2s							
KTBS				*e*S		**Sb**	**06 43 01.9**	**-0.5**
	17nm,0.3s							
KTBS	**Karatobe**	**2.54**	**246**	Pg		**Pb**	**06 42 30.5**	**-0.7**
	3.6nm,0.2s							
KTBS				Lg		Lg	06 43 01.9	
	17nm,0.3s							
MK31	**Makanchi Array**	**2.61**	**40**	Pn		**Pn**	**06 42 29.3**	**+1.5**
	0.4nm,0.2s,baz=231,slow=15,SNR=46							
MK31				⇑Sn		**Sb**	**06 43 03.2**	**-1.5**
	0.7nm,0.2s,baz=218,slow=27,SNR=13							
MDOK	**Medeo**	**2.62**	**232**	*e*P		**Pb**	**06 42 31.8**	**-0.8**
	6.5nm,0.2s							
MDOK				*e*S		**Sb**	**06 43 04.2**	**-0.6**
	9.7nm,0.5s							
MDOK	**Medeo**	**2.62**	**232**	Pg		**Pb**	**06 42 31.8**	**-0.8**
	6.5nm,0.2s							
MDOK				Lg		Lg	06 43 04.2	
	9.7nm,0.5s							
KUU	**Kurty**	**2.69**	**251**	*e*P		**Pb**	**06 42 33.7**	**-0.1**
	2.2nm,0.3s							
KUU				*e*S		**Sb**	**06 43 07.4**	**+0.5**
	21nm,0.3s							
KUU	**Kurty**	**2.69**	**251**	Pg		**Pb**	**06 42 33.7**	**-0.1**
	2.2nm,0.3s							
KUU				Lg		Lg	06 43 07.4	
	21nm,0.3s							
TNSS	**Tian-Shan**	**2.75**	**231**	*e*P		**Pb**	**06 42 34.3**	**-0.8**
	4.6nm,0.2s							
TNSS				*e*S		**Sb**	**06 43 08.4**	**-0.7**
	9.5nm,0.3s							
TNSS	**Tian-Shan**	**2.75**	**231**	Pg		**Pb**	**06 42 34.3**	**-0.8**
	4.6nm,0.2s							
TNSS				Lg		Lg	06 43 08.4	
	9.5nm,0.3s							
MTBS	**Maitube**	**2.99**	**237**	*e*P		**Pb**	**06 42 39.5**	**+0.4**
	4.5nm,0.1s							
MTBS				*e*S		**Sb**	**06 43 17.2**	**+1.6**
	17nm,0.4s							
MTBS	**Maitube**	**2.99**	**237**	Pg		**Pb**	**06 42 39.5**	**+0.4**
	4.5nm,0.1s							
MTBS				Lg		Lg	06 43 17.2	
	17nm,0.4s							
KST	**Kastek**	**3.33**	**239**	*e*P		**Pb**	**06 42 45.1**	**+0.4**
	1.8nm,0.3s							
KST				*e*S		**Sb**	**06 43 27.3**	**+2.0**
	4.3nm,0.3s							
KST	**Kastek**	**3.33**	**239**	Pg		**Pb**	**06 42 45.2**	**+0.4**
	1.8nm,0.3s							
KST				Lg		Lg	06 43 27.3	
	4.3nm,0.3s							
DGS	**Degeres**	**3.34**	**243**	*e*P		**Pb**	**06 42 45.4**	**+0.4**
	6.3nm,0.6s							
DGS				*e*S		**Sb**	**06 43 27.4**	**+1.7**
	5.9nm,0.5s							
DGS	**Degeres**	**3.34**	**243**	Pg		**Pb**	**06 42 45.4**	**+0.4**
	6.3nm,0.6s							
DGS				Lg		Lg	06 43 27.4	
	5.9nm,0.5s							
KURBB	**Kurchatov Arra**	**5.89**	**352**	⇑Lg		Lg	06 44 53.5	
	4.6nm,0.5s							
OTUK	**Ortayu**	**6.23**	**306**	⇑Lg		Lg	06 45 03.3	
	3.2nm,0.8s							

KRSC 31 06:42:57.1±1.7,54.95N×165.46E,h30km±11km,ML3.5,
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.39**	**49**	*e*P		Pb	06 43 05.7	-0.1
BKI				*e*S		Sb	06 43 10.3	-1.4
KBTR	**Krutoberegovo**	**1.96**	**311**	*e*P		Pn	06 43 29.7	+1.4
KBTR				*e*S		Sn	06 43 53.1	+1.2
KZV	**Kizimen**	**2.98**	**275**	*e*S		Sb	06 44 22.9	-2.6
TUMR	**Tumrok**	**3.07**	**278**	*e*P		Pb	06 43 48.3	-2.8
KMNR	**Kamenistaya**	**3.09**	**287**	*e*P		Pb	06 43 49.0	-2.4
SPN	**Mys Shipunski**	**3.70**	**242**	*e*P		Pn	06 43 56.7	+4.5
SPN				*e*S		Sn	06 44 37.5	+2.7
NLC	**Nalytchevo**	**4.02**	**246**	*e*S		Sn	06 44 45.8	+3.2
SDLR	**Sedlovina**	**4.22**	**249**	*e*P		Pb	06 44 05.1	-5.5
SDLR				*e*S		Sn	06 44 50.8	+3.2
SMAR	**Somma**	**4.27**	**249**	*e*P		Pn	06 44 04.8	+4.6
SMAR				*e*S		Sn	06 44 53.0	+4.0
KRER	**Koryakskii**	**4.28**	**250**	*e*P		Pb	06 44 06.2	-5.5
KRER				*e*S		Sn	06 44 53.9	+4.6
UGLR	**Uglovaya**	**4.28**	**249**	*e*P		Pb	06 44 06.1	-5.5
AVH	**Avacha**	**4.30**	**250**	*e*P		Pn	06 44 06.1	+5.6
AVH				*e*S		Sn	06 44 54.6	+4.9
KRX	**Arik**	**4.31**	**251**	*e*P		Pn	06 44 06.2	+5.5
KRX				*e*S		Sn	06 44 54.0	+4.0
KOK	**Koryaka**	**4.34**	**250**	*e*P		Pn	06 44 06.7	+5.6
DALK	**Dalny**	**4.40**	**247**	*e*S		Sn	06 44 55.2	+3.3
KRMR	**Karymshinskiy**	**4.83**	**247**	*e*S		Sn	06 45 07.2	+4.7
RUS	**Russkaya**	**4.84**	**241**	*e*P		Pn	06 44 13.0	+5.2
RUS				*e*S		Sn	06 45 05.1	+2.4
MTVR	**Mutnovka**	**4.98**	**243**	*e*P		Pn	06 44 15.2	+5.3
MTVR				*e*S		Sn	06 45 09.6	+3.2
GRL	**Gorelyy**	**5.

*THE **31** 06:56:03.0,41.57N×19.38E,h0km±3km,ML2.3/3,Error ellipse: s-maj=4.1km s-min=1.4km az=325.0*
*BEO **31** 06:56:04.5±0.5,41.62N×19.40E,h6km±2km,ML2.5/14*
*PDG **31** 06:56:05.8±0.1,41.80N×19.46E,h9km,MD3.0/2, ML2.5/13,Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*

ISC 31 06:56:02.4±1.1,**41.63N**±0.02×**19.39E**±0.02,**h3**km±9km, **n63**,σ0**9**94/118,**8C-7D,Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ULC	**Ulcinj**	**0.35**	**342**	⇑	*i*Pg	**Sg**	**06 56 10.2**	**-1.1**
ULC					*i* Sg	**Sg**	**06 56 14.1**	**+0.3**
TIR	**Tirane**	**0.45**	**128**		*e*Pg	**Pg**	**06 56 11.8**	**+0.7**
TIR					*e*Sg	**Sb**	**06 56 19.8**	**-0.3**
TIR	**Tirane**	**0.45**	**128**		P	**Pg**	**06 56 11.6**	**+0.5**
TIR					S	**Sg**	**06 56 16.9**	**-0.1**
TIR	**Tirane**	**0.45**	**128**	*i*	PG	**Pg**	**06 56 11.6**	**+0.5**
TIR					*i* SG	**Sg**	**06 56 16.7**	**-0.3**
PUK	**Puka**	**0.56**	**42**	*i*	PG	**Pg**	**06 56 13.3**	**+0.1**
PUK					*i* SG	**Sg**	**06 56 21.1**	**+0.8**
DRME	**Dracevica, Mon**	**0.58**	**345**	*e*	Pg	**Pg**	**06 56 13.8**	**+0.3**
DRME					*e*Sg	**Sb**	**06 56 24.0**	**+0.2**
DRME	**Dracevica, Mon**	**0.58**	**345**	⇑	*i*Pg	**Pg**	**06 56 14.1**	**+0.6**
DRME					*i* Sg	**Sg**	**06 56 21.3**	**+0.3**
BUM	**Brajici-Budva**	**0.77**	**331**	⇑	*i*Pg	**Pb**	**06 56 18.0**	**-0.4**
BUM					*i* Sg	**Sb**	**06 56 28.4**	**-0.9**
PHP	**Peshkopia**	**0.79**	**86**		P	**Pg**	**06 56 17.7**	**+0.2**
PHP					S	**Sb**	**06 56 30.4**	**+0.5**
PHP	**Peshkopia**	**0.79**	**86**	*i*	PG	**Pg**	**06 56 16.4**	**-1.2**
PHP					*i* SG	**Sb**	**06 56 29.7**	**-0.1**
PDG	**Podgorica**	**0.81**	**353**		*e*Pg	**Pg**	**06 56 17.9**	**0.0**
PDG					*e*Sg	**Sn**	**06 56 31.3**	**-1.8**
PDG	**Podgorica**	**0.81**	**353**	⇑	*i*Pg	**Pg**	**06 56 17.8**	**-0.1**
PDG					*e*Sg	**Sn**	**06 56 31.7**	**-1.4**
TTG	**Podgorica**	**0.81**	**353**	⇑	*i*Pg	**Pg**	**06 56 17.9**	**0.0**
TTG					*i* Sg	**Sg**	**06 56 28.3**	**0.0**
BCI	**Bajram Curri**	**0.89**	**34**	*i*	PG	**Pg**	**06 56 19.0**	**-0.5**
BCI					*i* SG	**Sb**	**06 56 33.4**	**+0.5**
CEME	**Cevo**	**0.98**	**339**	⇓	*i*Pg	**Pb**	**06 56 21.6**	**-0.5**
CEME					*i* Sg	**Sb**	**06 56 35.0**	**-0.5**
PVY	**Plav**	**1.05**	**23**	⇓	*i*Pg	**Pg**	**06 56 22.2**	**-0.4**
PVY					*i* Sg	**Sg**	**06 56 36.2**	**-0.1**
HCY	**Herceg Novi**	**1.06**	**321**		*e*Pg	**Pb**	**06 56 23.1**	**-0.2**
HCY					*e*Sg	**Sn**	**06 56 39.1**	**-0.2**
HCY	**Herceg Novi**	**1.06**	**321**	⇓	*i*Pg	**Pn**	**06 56 23.7**	**-0.4**
HCY					*i* Sg	**Sn**	**06 56 39.1**	**-0.2**
OHR	**Ohrid**	**1.18**	**116**		*i* Pg	**Pn**	**06 56 25.8**	**0.0**
OHR					*i* Sg	**Sn**	**06 56 43.3**	**+0.9**
OHR	**Ohrid**	**1.18**	**116**		*i* Pg	**Pn**	**06 56 25.8**	**0.0**
OHR					*i* Sg	**Sn**	**06 56 43.3**	**+0.9**
NKME	**Niksic**	**1.18**	**344**	⇓	*i*Pg	**Pb**	**06 56 25.3**	**-0.2**
NKME					*i* Sg	**Sn**	**06 56 41.4**	**-1.1**
NKY	**Niksic**	**1.22**	**346**	⇑	*i*Pg	**Pg**	**06 56 25.6**	**-0.2**
NKY					*i* Sg	**Sn**	**06 56 42.7**	**-0.8**
KOME	**Kolasin**	**1.22**	**4**	⇑	*i*Pg	**Pg**	**06 56 25.3**	**-0.6**
KOME					*i* Sg	**Sb**	**06 56 41.7**	**-0.7**
IVA	**Berane**	**1.30**	**17**	⇓	*i*Pg	**Pg**	**06 56 26.4**	**-0.9**
IVA					*i* Sg	**Sb**	**06 56 44.1**	**-0.4**
TREB	**Trebinje**	**1.33**	**325**		*e*Pg	**Pb**	**06 56 28.4**	**+0.4**
TREB					*e*Sg	**Sn**	**06 56 47.5**	**+1.3**
TREB	**Trebinje**	**1.33**	**325**		*e*Pg	**Pb**	**06 56 28.2**	**+0.2**
TREB					*e*Sg	**Sn**	**06 56 48.3**	**+2.1**
DBRK	**Dubrovnik**	**1.39**	**319**		*e*Pn	**Pg**	**06 56 29.6**	**+0.5**
DBRK					Sn	**Sn**	**06 56 50.7**	**+3.2**
BRY	**Bratogost**	**1.42**	**334**		*e*Pn	**Pb**	**06 56 30.6**	**+1.0**
BRY					*e*Sn	**Sn**	**06 56 50.9**	**+2.4**
BRY	**Bratogost**	**1.42**	**334**	⇑	*i*Pg	**Pg**	**06 56 29.7**	**+0.1**
BRY					*i* Sg	**Sn**	**06 56 49.9**	**+1.4**
SKO	**Skopje**	**1.57**	**77**		*e*Pg	**Pg**	**06 56 33.2**	**+0.7**
SKO					*e*Sg	**Sg**	**06 56 53.7**	**+0.9**
UPM	**Unac-Piva**	**1.61**	**347**		*e*Pn	**Pg**	**06 56 33.3**	**0.0**
UPM					*e*Sn	**Sg**	**06 56 55.6**	**+1.3**
UPM	**Unac-Piva**	**1.61**	**347**	⇓	*i*Pg	**Pb**	**06 56 32.7**	**-0.2**
UPM					*i* Sg	**Sg**	**06 56 55.3**	**+1.0**
SJES	**Sjenica**	**1.69**	**15**		*e*Pn	**Pg**	**06 56 34.3**	**-0.4**
SJES					*e*Sn	**Sg**	**06 56 57.1**	**+0.5**
PLE	**Pljevlja**	**1.70**	**360**	⇓	*i*Pg	**Pb**	**06 56 33.9**	**-0.4**
PLE					*i* Sg	**Sg**	**06 56 56.8**	**-0.2**
FNA	**Florina**	**1.72**	**119**		P	**Pb**	**06 56 34.3**	**-0.3**
FNA					S	**Sb**	**06 56 57.0**	**+0.4**
	102nm,0.6s							
STON	**Ston**	**1.77**	**315**		*e*Pn	**Pb**	**06 56 34.8**	**-0.6**
STON					*e*Sn	**Sg**	**06 56 58.4**	**-0.7**
STON	**Ston**	**1.77**	**315**		*e*Pn	**Pb**	**06 56 35.2**	**-0.2**
STON					Sn	**Sb**	**06 56 57.6**	**-0.3**
KEK	**Kerkira**	**1.94**	**171**		P	**Pn**	**06 56 35.0**	**-1.2**
KEK					S	**Sn**	**06 57 02.0**	**+0.9**
	60nm,0.5s							
RUDO	**Rudo**	**1.99**	**360**		*e*Pn	**Pb**	**06 56 38.3**	**-0.9**
RUDO					*e*Sn	**Sb**	**06 57 04.3**	**0.0**
IVAS	**Ivanjica**	**2.03**	**16**		*e*Pn	**Pb**	**06 56 39.1**	**-0.8**
IVAS					*e*Sn	**Sb**	**06 57 05.3**	**-0.2**
SELS	**Selova**	**2.04**	**38**		*e*Pn	**Pb**	**06 56 38.8**	**-1.3**
SELS					*e*Sn	**Sb**	**06 57 04.8**	**-1.1**
BARS	**Barje**	**2.16**	**56**		*e*Pn	**Pb**	**06 56 41.1**	**-1.0**
BARS					*e*Sn	**Sb**	**06 57 08.4**	**-0.8**
IGT	**Igoumenitsa**	**2.21**	**161**		P	**Pn**	**06 56 39.1**	**-0.9**
IGT					S	**Sn**	**06 57 08.6**	**+0.8**
	45nm,0.7s							
BBLS	**Lazići**	**2.24**	**0**		*e*Pn	**Pb**	**06 56 42.7**	**-0.7**
BBLS					*e*Sn	**Sb**	**06 57 10.4**	**-1.1**
BBLS	**Lazići**	**2.24**	**0**		*e*Pn	**Pb**	**06 56 42.4**	**-1.0**
BBLS					*e*Sn	**Sb**	**06 57 11.6**	**+0.1**
MAKA	**Makarska**	**2.41**	**314**		*e*Pn	**Pn**	**06 56 42.5**	**-0.3**
MAKA					Sn	**Sn**	**06 57 11.8**	**-1.0**
GRUS	**Gruza**	**2.46**	**23**		*e*Pn	**Pb**	**06 56 45.8**	**-1.4**
GRUS					*e*Sn	**Sb**	**06 57 15.8**	**-2.1**
RICI	**Ricice**	**2.50**	**319**		*e*Pn	**Pn**	**06 56 44.7**	**+0.7**
RICI					Sn	**Sn**	**06 57 14.9**	**-0.1**
DIVS	**Divibare**	**2.51**	**10**		*e*Pn	**Pn**	**06 56 45.5**	**+1.4**
DIVS					*e*Sn	**Sb**	**06 57 16.9**	**-2.5**
DIVS	**Divibare**	**2.51**	**10**		*e*Pn	**Pn**	**06 56 45.2**	**+1.1**
DIVS					*e*Sn	**Sb**	**06 57 17.8**	**-1.6**
HVAR	**Hvar**	**2.67**	**306**		*e*Pn	**Pn**	**06 56 46.1**	**-0.2**
ZAPS	**Zavoj**	**2.91**	**55**		*e*Pn	**Pn**	**06 56 51.4**	**+1.8**
ZAPS					*e*Sn	**Sn**	**06 57 25.1**	**+0.1**
TSLK	**Tsoukalades, L**	**2.96**	**161**		P	**Pn**	**06 56 49.3**	**-1.0**
LKD2	**Lefkada island**	**3.00**	**161**		P	**Pn**	**06 56 50.1**	**-0.7**
ZAGS	**Zajecar**	**3.02**	**43**		*e*Pn	**Pn**	**06 56 53.6**	**+2.5**
ZAGS					*e*Sn	**Sn**	**06 57 29.0**	**+1.2**
KIJV	**Kijevo**	**3.23**	**318**		*e*Pn	**Pn**	**06 56 54.9**	**+0.9**
PDO	**Prodromos**	**3.32**	**155**		P	**Pn**	**06 56 55.0**	**-0.2**
ZIRJ	**Zirje**	**3.43**	**307**		*e*Pn	**Pn**	**06 56 56.9**	**+0.3**
ZIRJ					Sn	**Sn**	**06 57 37.9**	**+0.2**
MORI	**Morici**	**3.52**	**311**		*e*Pn	**Pn**	**06 56 59.0**	**+1.1**
DUGI	**Dugi Otok**	**3.97**	**308**		*e*Pn	**Pn**	**06 57 04.6**	**+0.5**
MORH	**Mrgy, Hungar**	**4.62**	**354**		*e*Pn	**Pn**	**06 57 14.8**	**+1.8**
MORH					*e*Sn	**Sn**	**06 58 07.4**	**+0.4**
CRES	**Cresnjev**	**5.07**	**327**		*e*Pn	**Pn**	**06 57 19.4**	**+0.3**
CRES					*e*Sn	**Sn**	**06 58 18.3**	**0.0**
CEY	**Cerknica**	**5.46**	**320**		*e*Pn	**Pn**	**06 57 24.6**	**0.0**

ATH 31 06:56:44.1,38.17N×20.37E,h8km±5km,ML1.5/1,Error ellipse: s-maj=6.4km s-min=1.8km az=312.0,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.04**	**336**		P	Pg	06 56 45.8	0.0
KEF3					S	Sg	06 56 46.9	-0.1
KEF4	**Livadi, Kephal**	**0.10**	**25**		P	Pg	06 56 46.6	+0.1
KEF4					S	Sg	06 56 48.2	0.0
VLS	**Valsamata**	**0.17**	**86**		P	Pg	06 56 47.7	-0.1
VLS					S	Sg	06 56 50.7	+0.5
VLS					AML	AML	06 56 51.5	
	comp=E,745μm,0.1s							
VLS					AML	AML	06 56 51.6	
	comp=N,346μm,0.1s							

KRSC 31 07:07:37.2±1.8,**54.91N**×**165.51E**,**h30**km±12km,**ML3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.40**	**43**		*e*P	Pb	07 07 45.8	-0.2
BKI					*e*S	Sb	07 07 50.4	-1.6
KBTR	**Krutoberegovo**	**2.00**	**311**		*e*P	Pn	07 08 09.7	+0.8
KBTR					*e*S	Sn	07 08 33.3	+0.4
KZV	**Kizimen**	**3.01**	**276**		P	Pb	07 08 26.8	-3.3
BZWR	**Bezymyannyi-We**	**3.04**	**292**		P	Pb	07 08 27.9	-2.7
TUMR	**Tumrok**	**3.10**	**279**		*e*P	Pb	07 08 28.7	-2.9
KIRR	**Kirishev**	**3.12**	**292**		S	Sb	07 09 07.1	-2.5
KMNR	**Kamenistaya**	**3.12**	**288**		*e*P	Pb	07 08 29.1	-2.9
KPT	**Kopyto**	**3.19**	**291**		P	Pb	07 08 29.7	-3.4
SRDR	**Sredinnyy**	**3.57**	**296**		P	Pb	07 08 35.4	-4.2
KII	**Karymskiy**	**3.64**	**258**		P	Pb	07 08 36.2	-4.6
SPN	**Mys Shipunski**	**3.71**	**243**		*e*P	Pn	07 08 36.2	+3.9
SPN					*e*S	Sn	07 09 17.2	+2.2
SDLR	**Sedlovina**	**4.23**	**250**		*e*P	Pn	07 08 44.9	+5.3
SMAR	**Somma**	**4.28**	**250**		*e*P	Pn	07 08 45.9	+5.5
SMAR					*e*S	Sn	07 09 33.7	+4.4
KRER	**Koryakskii**	**4.29**	**251**		*e*P	Pn	07 08 46.2	+5.7
KRER					*e*S	Sn	07 09 33.6	+4.0
UGLR	**Uglovaya**	**4.29**	**249**		*e*P	Pn	07 08 45.5	+5.1
AVH	**Avacha**	**4.31**	**250**		*e*P	Pn	07 08 46.4	+5.7
AVH					*e*S	Sn	07 09 34.6	+4.6
KRX	**Arik**	**4.32**	**252**		*e*P	Pn	07 08 46.0	+5.1
KRX					*e*S	Sn	07 09 34.2	+3.9
KOK	**Koryaka**	**4.36**	**251**		*e*P	Pn	07 08 46.9	+5.6
KOK					*e*S	Sn	07 09 35.1	+4.0
KRMR	**Karymshinskiy**	**4.84**	**247**		*e*S	Sn	07 09 45.9	+3.2
RUS	**Russkaya**	**4.84**	**242**		*e*P	Pn	07 08 52.7	+4.8
RUS					*e*S	Sn	07 09 45.1	+2.2
MTVR	**Mutnovka**	**4.99**	**244**		*e*P	Pn	07 08 55.2	+5.2
MTVR					*e*S	Sn	07 09 50.6	+4.0
GRL	**Gorelyy**	**5.01**	**245**		*e*P	Pn	07 08 56.1	+5.8
GRL					S	Sn	07 09 51.5	+4.4
ASAK	**Asacha**	**5.19**	**244**		*e*P	Pn	07 08 58.8	+6.1
ASAK					*e*S	Sn	07 09 56.1	+4.6

*IDC **31** 07:30:18.4±0.8,36.27N×144.21E,h0km,mb3.7/9, mb1 4.0/13,mb1mx3.8/44,mbtmp3.8/13,ML4.4/2,Error ellipse: s-maj=22.8km s-min=17.6km az=109.0*
*NEIC **31** 07:30:23.5±1.2,36.26N±0.08×144.2E±0.1,h34km±3km, mb4.5/8,Error ellipse: s-maj=15.2km s-min=10.6km az=115.0*
*JMA **31** 07:30:23.8±0.2,36.50N×143.92E,h55km,M4.3*

ISC 31 07:30:24.0±0.7,**36.46N**±0.05×**144.03E**±0.07,**h35**km,**n49**, σ1**5**58/62,**mb3.8**/13,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**2.67**	**285**		P	**Pn**	**07 31 04.0**	**-0.6**
ONAJ					*e*S	**Sn**	**07 31 34.6**	**-1.2**
CHOJ	**Chosi**	**2.68**	**255**		P	**Pn**	**07 31 05.0**	**+0.4**
CHOJ					*e*S	**Sn**	**07 31 35.6**	**-0.2**
JFK	**Kawauchi**	**2.69**	**291**		P	**Pn**	**07 31 04.3**	**-0.4**
JFK					S	**Sn**	**07 31 34.5**	**-1.6**
JIKH	**Ishinomakikobu**	**2.76**	**313**		P	**Pn**	**07 31 05.2**	**-0.4**
JIKH					S	**Sn**	**07 31 36.2**	**-1.5**
JHYU	**Hitachinakayam**	**2.78**	**269**		S	**Sn**	**07 31 36.5**	**-1.8**
BSO1	**Boso 1**	**3.07**	**235**		P	**Pn**	**07 31 09.2**	**-0.3**
BSO1					*e*S	**Sn**	**07 31 45.1**	**+0.4**
JFT	**Otama**	**3.14**	**291**		P	**Pn**	**07 31 11.6**	**+0.6**
JFT					S	**Sn**	**07 31 46.5**	**-0.7**
JMK	**Ichinoseki**	**3.34**	**319**		P	**Pn**	**07 31 13.5**	**-0.2**
JMK					S	**Sn**	**07 31 50.6**	**-1.5**
JAG	**Ashikaga**	**3.69**	**271**		P	**Pn**	**07 31 18.6**	**+0.1**
JAG					S	**Sn**	**07 31 58.7**	**-2.1**
JRY	**Ryogami san**	**4.17**	**265**		P	**Pn**	**07 31 25.1**	**0.0**
JRY					S	**Sn**	**07 32 10.4**	**-2.2**
JOD2	**Odawara 2**	**4.19**	**255**		P	**Pn**	**07 31 25.7**	**+0.3**
JOD2					*e*S	**Sn**	**07 32 11.1**	**-2.0**
MJAR	**Matsushiro Arr**	**4.69**	**273**		Pn	**Pn**	**07 31 32.9**	**+0.6**
	0.6nm,0.3s,baz=98,slow=12,SNR=19							
MAJO	**Matsushiro**	**4.69**	**273**			**Pn**	**07 31 34.0**	**+1.7**
MAJO					Sn	**Sn**	**07 32 27.8**	**+2.3**
MAT	**Matsushiro**	**4.69**	**273**		P	**Pn**	**07 31 33.7**	**+1.0**
MAT					*e*S	**Sn**	**07 32 24.7**	**-0.8**
MJB9	**Matsu-Tunnel**	**4.70**	**273**			**Pn**	**07 31 34.0**	**+1.6**
MJB9					Sn	**Sn**	**07 32 28.2**	**+2.6**
JHJ2	**Mitsune**	**4.81**	**227**		P	**Pn**	**07 31 33.1**	**-0.8**
JHJ2	**Mitsune**	**4.81**	**227**		Pn	**Pn**	**07 31 32.1**	**-1.8**
JHJ2					Sn	**Sn**	**07 32 25.2**	**-3.2**
JHJ	**Hachijo jima 2**	**4.83**	**228**		Pn	**Pn**	**07 31 32.0**	**-2.1**
	26nm,0.3s,baz=337,slow=21,SNR=43							
JHJ					Sn	**Sn**	**07 32 24.5**	**-4.3**
	159nm,0.3s,baz=220,slow=23,SNR=17							
JOT	**Ohata**	**5.44**	**336**		P	**Pn**	**07 31 42.2**	**-0.3**
ERM	**Erimo**	**5.59**	**353**			**Pn**	**07 31 43.1**	**-1.5**
ERM						**Sn**	**07 32 43.9**	**-3.7**
INU	**Inuyama**	**5.80**	**261**		Pn	**Pn**	**07 31 49.7**	**+2.2**
JKB	**Kayabe**	**5.90**	**338**		P	**Pn**	**07 31 48.5**	**-0.3**
JKB					*e*S	**Sn**	**07 32 52.7**	**-2.5**
JCH	**Churui**	**6.17**	**355**		P	**Pn**	**07 31 50.9**	**-1.6**
JCH					S	Sn	07 32 56.7	-5.1
NEM2	**Nemuro 2**	**7.02**	**10**		P	Pn	07 32 00.6	-3.6
NEM2					*e*S	Sn	07 33 14.8	-8.0
JKA	**Kamikawa-asahi**	**7.73**	**352**			**Pn**	**07 32 13.3**	**-0.6**
ASAJ	**Asahikawa**	**7.73**	**352**		Pn	**Pn**	**07 32 13.3**	**-0.6**
	8.3nm,0.3s,baz=212,slow=11,SNR=27							
USRK	**Ussuriysk Ar.**	**12.00**	**314**		Pn	**Pn**	**07 33 13.5**	**+1.1**
	baz=105,slow=14,SNR=4.6							
H11N2	**WAKE ISLAND Hy**	**26.06**	**124**		T	T	08 03 01.7	
	baz=315,slow=75,SNR=5.1							
H11N1	**WAKE ISLAND Hy**	**26.07**	**124**		T	T	08 03 02.3	
	baz=315,slow=75,SNR=5.8							
H11N3	**WAKE ISLAND Hy**	**26.08**	**124**		T	T	08 03 02.1	
	baz=315,slow=75,SNR=6.9							
GSTR	**Great Sitkin T**	**32.10**	**48**		P	**P**	**07 36 47.7**	**+0.1**
ZALV	**Zalesovo Beam**	**43.85**	**313**		P	**P**	**07 38 28.3**	**+1.7**
	0.5nm,0.4s,baz=94,slow=6.5,SNR=2.3							
ZALV					PcP	**PcP**	**07 40 12.5**	**+0.2**
	0.9nm,0.5s,baz=56,slow=5.6,SNR=3.8							
MK31	**Makanchi Array**	**46.20**	**303**		P	**P**	**07 38 46.8**	**+1.5**
MKAR	**Makanchi Array**	**46.20**	**303**		P	**P**	**07 38 47.0**	**+1.7**
	0.5nm,0.6s,baz=83,slow=10.0,SNR=5.6							
SML	**Sawmill**	**48.22**	**36**		P	**P**	**07 39 01.9**	**+1.1**
ILAR	**Eielson Array**	**48.86**	**32**		P	**P**	**07 39 05.7**	**0.0**
	0.5nm,0.6s,baz=258,slow=6.4,SNR=9.4							
SCRK	**Sand Creek**	**50.14**	**33**		P	**P**	**07 39 16.3**	**+0.7**
SCRK					IAmb	IAmb	07 39 21.9	
	comp=Z,7.0nm,1.5s							
INK	**Inuvik**	**53.94**	**27**		P	**P**	**07 39 44.4**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=310,slow=5.7,SNR=4.1							
INK	**Inuvik**	**53.94**	**27**		P	**P**	**07 39 44.5**	**+0.9**
WB0	**Warramunga Arr**	**56.66**	**191**		P	**P**	**07 40 01.7**	**-2.1**
WB0					IAmb	IAmb	07 40 17.1	
	comp=Z,8.4nm,1.4s							
WR0	**Warramunga Arr**	**56.82**	**191**		P	**P**	**07 40 03.2**	**-1.7**
WRAB	**Tennant Creek**	**56.83**	**191**		P	**P**	**07 40 03.2**	**-1.7**
WRAB					IAmb	IAmb	07 40 07.0	
	comp=Z,6.0nm,1.2s							
WB2	**Warramunga Arr**	**56.84**	**191**		P	**P**	**07 40 03.1**	**-1.9**
WB2					IAmb	IAmb	07 40 04.8	
	comp=Z,8.4nm,1.4s							
WRA	**Warramunga Arr**	**56.84**	**191**		P	**P**	**07 40 03.3**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=9.2,slow=6.8,SNR=13							
ASAR	**Alice Springs**	**60.56**	**191**		P	**P**	**07 40 29.3**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=3.1,slow=6.3,SNR=8.7							
FINES	**FINESS Array B**	**70.29**	**333**		P	**P**	**07 41 34.5**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=27,slow=13,SNR=4.6							
NVAR	**Mina Array Bea**	**73.64**	**54**		P	**P**	**07 41 55.0**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=286,slow=7.6,SNR=3.8							
U32A	**Winter Ranch,**	**86.88**	**46**			pP	07 43 14.0	-0.5
TXAR	**Lajitas Array**	**88.78**	**54**		P	**P**	**07 43 14.3**	**-0.3**
	comp=Z,0.1nm,0.6s,baz=313,slow=2.6,SNR=4.7							

*KRSC **31** 07:32:55.1±1.7,50.58N×158.03E,h39km±24km,ML4.5, FELT [II] at Severo-Kurilsk.*
*MOS **31** 07:32:56.8±0.8,50.57N×157.85E,h49km,mb4.0/5,Error ellipse: s-maj=13.7km s-min=3.6km az=84.1*
MOS Felt (II) at Severo-Kuril'sk.
*IDC **31** 07:33:03.4±4.4,51.00N×157.59E,h77km±32km,mb3.5/11, mb1 3.7/12,mb1mx3.5/49,mbtmp3.7/12,MS2.9/1, Ms1 2.9/1,ms1mx2.5/42,Error ellipse: s-maj=44.1km s-min=16.7km az=167.0*

ISC 31 07:32:54.9±1.6,**50.61N**±0.06×**157.85E**±0.05,**h16**km±8km, **n102**,σ2**9**10/132,**mb3.9**/15,**2D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**1.08**	**323**		*e*P	**Pn**	**07 33 16.5**	**+1.1**
PAU					*e*S	**Sg**	**07 33 30.2**	**+0.3**
PAU	**Pauzhetka**	**1.08**	**323**	PN		**Pn**	**07 33 16.5**	**+1.1**
PAU					S	**Sg**	**07 33 30.2**	**+0.3**
SKR	**Severo-Kuril's**	**1.10**	**275**		*e*P	**Pg**	**07 33 17.3**	**+1.0**
SKR					*e*S	**Sn**	**07 33 31.6**	**+1.1**
SKR	**Severo-Kuril's**	**1.10**	**275**	⇓	*i*PN	**Pg**	**07 33 17.2**	**+1.0**
SKR					*e*S	**Sn**	**07 33 31.6**	**+1.1**
SKR					pmax	pmax		
	comp=Z,814nm,0.5s							
SKR					smax	smax		
	comp=E,4μm,0.4s							
SKR					smax	smax		
	comp=N,5μm,0.2s							
ALID	**Alaid**	**1.48**	**281**		*e*P	**Pg**	**07 33 23.6**	**+0.1**
ALID					*e*S	**Sg**	**07 33 43.0**	**+0.2**
ALID	**Alaid**	**1.48**	**281**		PN	**Pg**	**07 33 23.6**	**+0.1**
ALID					S	**Sg**	**07 33 43.0**	**+0.2**
ASAK	**Asacha**	**1.78**	**1**		*e*P	**Pn**	**07 33 25.9**	**+0.9**
ASAK					*e*S	**Sn**	**07 33 47.2**	**-0.1**
ASAK	**Asacha**	**1.78**	**1**		PN	**Pn**	**07 33 25.9**	**+0.9**
ASAK					S	**Sn**	**07 33 47.2**	**-0.1**
MIPR	**Malaya Ipel'ka**	**1.81**	**338**		*e*P	**Pb**	**07 33 27.3**	**-0.3**
MIPR					*e*S	**Sb**	**07 33 51.3**	**+1.4**
MIPR	**Malaya Ipel'ka**	**1.81**	**338**		PN	**Pb**	**07 33 27.3**	**-0.3**
MIPR					S	**Sb**	**07 33 51.3**	**+1.4**
RUS	**Russkaya**	**1.88**	**13**		*e*P	**Pn**	**07 33 26.4**	**+0.1**
RUS					*e*S	**Sn**	**07 33 50.1**	**+0.5**
RUS	**Russkaya**	**1.88**	**13**		PN	**Pn**	**07 33 26.4**	**+0.1**
RUS					S	**Sn**	**07 33 50.1**	**+0.5**
MTVR	**Mutnovka**	**1.89**	**6**		*e*P	**Pn**	**07 33 27.5**	**+0.9**
MTVR					*e*S	**Sn**	**07 33 50.4**	**+0.2**
MTVR	**Mutnovka**	**1.89**	**6**		PN	**Pn**	**07 33 27.5**	**+0.9**
MTVR					S	**Sn**	**07 33 50.4**	**+0.2**
GRL	**Gorelyy**	**1.95**	**4**		*e*P	**Pn**	**07 33 28.7**	**+1.2**
GRL					*e*S	**Sn**	**07 33 52.2**	**+0.5**
GRL	**Gorelyy**	**1.95**	**4**		PN	**Pn**	**07 33 28.7**	**+1.2**
GRL					S	**Sn**	**07 33 52.2**	**+0.5**
KRMR	**Karymshinskiy**	**2.23**	**4**		*e*P	**Pn**	**07 33 32.4**	**+1.2**
KRMR	**Karymshinskiy**	**2.23**	**4**		PN	**Pn**	**07 33 32.4**	**+1.2**
PET	**Petropavlovsk**	**2.47**	**11**		*e*P	**Pn**	**07 33 35.6**	**+1.1**
PET					*e*S	**Sn**	**07 34 03.9**	**-0.4**
PET	**Petropavlovsk**	**2.47**	**11**		*e*PN	**Pn**	**07 33 35.5**	**+1.1**
PET					*e*S	**Sn**	**07 34 03.8**	**-0.5**
PET					pmax	pmax		
	comp=Z,162nm,0.4s							
PET					smax	smax		
	comp=N,939nm,0.5s							
DALK	**Dalny**	**2.49**	**13**		*e*P	**Pn**	**07 33 35.9**	**+1.2**
DALK					*e*S	**Sn**	**07 34 04.2**	**-0.6**
DALK	**Dalny**	**2.49**	**13**		PN	**Pn**	**07 33 35.9**	**+1.2**
DALK					S	**Sn**	**07 34 04.2**	**-0.6**
PEA0B	**Petropavlovsk-**	**2.51**	**358**	*i*	PN	**Pn**	**07 33 36.6**	**+1.6**
PETK	**Petropavlovsk-**	**2.51**	**358**		P	**Pn**	**07 33 36.9**	**+1.9**
	comp=N,29nm,0.3s,ba

PDAR	**Pinedale Array**	**59.99**	**58**	P		**P**	**07 43 01.4**	**+0.8**	
	comp=Z,0.6nm,0.6s,baz=352,slow=3.0,SNR=5.3								
FINES	**FINESS Array B**	**61.84**	**336**	P		**P**	**07 43 11.1**	**-1.5**	
	comp=Z,0.5nm,0.3s,baz=18,slow=6.6,SNR=8.7								
NB2	**NORSAR Subarra**	**65.53**	**343**	P		**P**	**07 43 35.2**	**-1.8**	
	comp=Z,0.7nm,0.4s,baz=31,slow=6.5								
NOA	**NORSAR Array B**	**65.53**	**343**	P		**P**	**07 43 35.4**	**-1.6**	
	comp=Z,0.4nm,0.4s,baz=32,slow=6.5,SNR=5.5								
TXAR	**Lajitas Array**	**72.93**	**65**	P		**P**	**07 44 23.8**	**+0.4**	
	comp=Z,0.3nm,0.7s,baz=298,slow=4.3,SNR=6.1								
CLL	**Collm**	**74.16**	**338**	*e*P		**P**	**07 44 30.0**	**-0.2**	
GERES	**GERESS Array B**	**76.26**	**337**	P		**P**	**07 44 41.4**	**-1.1**	
	comp=Z,0.6nm,0.9s,baz=45,slow=4.7,SNR=4.4								
H03N2	**Juan Fernandez**	**135.61**	**90**	T		T	10 23 09.3		
	baz=313,slow=77,SNR=26								
H03N1	**Juan Fernandez**	**135.63**	**90**	T		T	10 23 10.9		
	baz=313,slow=77,SNR=24								
H03N3	**Juan Fernandez**	**135.63**	**90**	T		T	10 23 08.6		
	baz=313,slow=77,SNR=31								

*IDC **31** 07:39:11.2±1.7, 15.05S×174.73W, h0km, mb4.1/7, mb1 4.4/7, mb1mx3.9/38, mbtmp4.1/7, Error ellipse: s-maj=82.5km s-min=21.3km az=142.0*

ISC 31 07:39:16.6±1.8, 15.1S±0.4×174.7W±0.4, h35km, n7, σ0.88/7, mb4.1/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**43.07**	**239**	P		**P**	**07 47 13.6**	**+0.2**
	1.0nm,0.5s,baz=89,slow=10,SNR=5.4							
WRA	**Warramunga Arr**	**48.66**	**257**	P		**P**	**07 47 57.4**	**-0.2**
	1.2nm,0.6s,baz=90,slow=7.6,SNR=15							
ASAR	**Alice Springs**	**48.98**	**252**	P		**P**	**07 47 60.0**	**-0.1**
	13nm,0.6s,baz=86,slow=8.0,SNR=140							
PETK	**Petropavlovsk-**	**71.98**	**343**	P		**P**	**07 50 37.0**	**+0.6**
	1.7nm,0.6s,baz=147,slow=8.2,SNR=2.8							
NVAR	**Mina Array Bea**	**74.99**	**43**	P		**P**	**07 50 55.9**	**+1.1**
	0.7nm,0.9s,baz=212,slow=8.5,SNR=0.9							
ILAR	**Eielson Array**	**82.42**	**12**	P		**P**	**07 51 33.8**	**-1.0**
	0.5nm,0.5s,baz=223,slow=5.5,SNR=14							
PDAR	**Pinedale Array**	**82.92**	**42**	P		**P**	**07 51 37.6**	**-0.6**
	1.0nm,0.6s,baz=237,slow=3.4,SNR=6.7							

*KRNET **31** 07:41:52.9±0.1, 40.21N×76.07E, mb3.1*
*SOME **31** 07:41:54.3, 40.27N×76.15E, h5km*
*NNC **31** 07:41:55.9±0.7, 40.30N×76.15E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=4.8km s-min=4.4km az=159.0*

ISC 31 07:41:57.0±1.7, 40.39N±0.08×76.15E±0.03, h10km, n59, σ1867/91, 23C-11D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KZA	**Kyzart**	**1.82**	**338**	⇓*i*	P	**Pb**	**07 42 29.2**	**-1.4**
	baz=42							
KZA				⇓	*i* S	**Sg**	**07 42 56.0**	**+0.4**
	baz=42							
KZA	**Kyzart**	**1.82**	**338**	P		**Pb**	**07 42 29.5**	**-1.1**
	SNR=32							
TARG	**Taragay, Kyrgy**	**1.84**	**43**	⇓*i*	P	**Pb**	**07 42 29.9**	**-1.0**
	baz=40							
TARG				⇓	*i* S	**Sg**	**07 42 56.8**	**+0.7**
	baz=40							
ULHL	**Ulahol**	**1.86**	**2**	⇑*i*	P	**Pb**	**07 42 30.2**	**-1.0**
	baz=4.0							
ULHL				⇑	*i* S	**Sg**	**07 42 57.4**	**+0.6**
	baz=4.0							
ULHL	**Ulahol**	**1.86**	**2**	P		**Pb**	**07 42 31.5**	**+0.3**
	SNR=6.0							
KDJ	**Kajisay**	**1.91**	**24**	⇓*i*	P	**Pb**	**07 42 31.0**	**-1.0**
	baz=23							
KDJ				⇓	*i* S	**Sg**	**07 42 58.8**	**+0.4**
	baz=23							
BOOM	**Boomskoye usch**	**2.11**	**356**	⇑*e*	P	**Pb**	**07 42 33.5**	**-1.9**
	baz=58							
BOOM				⇑	*i* S	**Sb**	**07 43 03.2**	**+1.5**
	baz=58							
UCH	**Uchtor**	**2.21**	**327**	⇑*i*	P	**Pn**	**07 42 34.3**	**+0.1**
	baz=30							
UCH				⇑	*i* S	**Sb**	**07 43 04.7**	**-0.3**
	baz=30							
UCH	**Uchtor**	**2.21**	**327**	P		**Pb**	**07 42 35.1**	**-2.2**
	SNR=11							
KBK	**Karagaybulak**	**2.44**	**339**	⇑*i*	P	**Pn**	**07 42 37.7**	**+0.6**
	baz=41							
KBK				⇑	*i* S	**Sb**	**07 43 10.5**	**-0.8**
	baz=41							
KBK	**Karagaybulak**	**2.44**	**339**	P		**Pb**	**07 42 38.9**	**-2.1**
	SNR=11							
AML	**Almayashu**	**2.54**	**314**	⇑*i*	P	**Pn**	**07 42 38.4**	**-0.2**
	baz=18							
AML				⇑	*i* S	**Sn**	**07 43 11.8**	**+2.0**
	baz=18							
AML	**Almayashu**	**2.54**	**314**	P		**Pg**	**07 42 45.7**	**0.0**
	SNR=6.1							
TKM2	**Tokmak 2**	**2.57**	**351**	⇑*i*	P	**Pn**	**07 42 39.8**	**+1.0**
	baz=53							
TKM2				⇑	*i* S	**Sb**	**07 43 14.1**	**-0.8**
	baz=53							
TKM2	**Tokmak 2**	**2.57**	**351**	P		**Pb**	**07 42 40.5**	**-2.7**
	SNR=14							
AAK	**Ala-Archa**	**2.57**	**332**	⇓*i*	P	**Pn**	**07 42 39.4**	**+0.6**
	baz=34							
AAK				⇓	*i* S	**Sb**	**07 43 13.1**	**-1.9**
	baz=34							
AAK	**Ala-Archa**	**2.57**	**332**	P		**Pg**	**07 42 47.5**	**+1.3**
	SNR=5.3							
ANVS	**Anan'yevo**	**2.65**	**25**	⇑*i*	P	**Pn**	**07 42 41.3**	**+1.3**
	baz=24							
ANVS				⇑	*i* S	**Sb**	**07 43 16.6**	**-0.8**
	baz=24							
KST	**Kastek**	**2.66**	**357**	*e*	P	**Pg**	**07 42 46.4**	**-1.5**
	8.0nm,0.3s							
KST				*e*	S	**Sg**	**07 43 24.1**	**+1.7**
	28nm,0.6s							
KST	**Kastek**	**2.66**	**357**	Pg		**Pg**	**07 42 46.4**	**-1.5**
	8.0nm,0.3s							
KST				Lg		Lg	07 43 24.1	
	28nm,0.6s							
IZV	**Izvestkoviy**	**2.67**	**7**	*e*	P	**Pg**	**07 42 47.1**	**-1.1**
	7.6nm,0.5s							
IZV				*e*	S	**Sg**	**07 43 24.7**	**+1.9**
	25nm,0.3s							
IZV	**Izvestkoviy**	**2.67**	**7**	Pg		**Pg**	**07 42 47.1**	**-1.1**
	11nm,0.6s							
IZV				Lg		Lg	07 43 24.7	
	25nm,0.3s							
PRZ	**Przheval'sk**	**2.69**	**38**	⇑*i*	P	**Pn**	**07 42 41.6**	**+1.0**
	baz=37							
PRZ				⇑	*i* S	**Sb**	**07 43 17.6**	**-1.0**
	baz=37							
TNSS	**Tian-Shan**	**2.72**	**12**	*e*	P	**Pg**	**07 42 47.5**	**-1.6**
	9.5nm,0.3s							
TNSS				*e*	S	**Sg**	**07 43 25.8**	**+1.5**
	22nm,0.5s							
TNSS	**Tian-Shan**	**2.72**	**12**	Pg		**Pg**	**07 42 47.5**	**-1.6**
	9.5nm,0.3s							
TNSS				Lg		Lg	07 43 25.8	
	22nm,0.5s							
MTBS	**Maitube**	**2.75**	**4**	*e*	P	**Pg**	**07 42 48.0**	**-1.6**
	4.6nm,0.3s							
MTBS				*e*	S	**Sg**	**07 43 26.9**	**+1.6**
	29nm,0.4s							
MTBS	**Maitube**	**2.75**	**4**	Pg		**Pg**	**07 42 48.0**	**-1.6**
	4.6nm,0.3s							
MTBS				Lg		Lg	07 43 26.9	
	29nm,0.4s							
CHMS	**Chumysh**	**2.81**	**339**	⇑*i*	P	**Pn**	**07 42 42.7**	**+0.7**
	baz=41							
CHMS				⇑	*i* S	**Sb**	**07 43 19.2**	**-2.6**
	baz=41							
CHMS	**Chumysh**	**2.81**	**339**	P		**Sg**	**07 43 28.0**	**+0.7**
	SNR=6.5							
MDOK	**Medeo**	**2.86**	**13**	*e*	P	**Pg**	**07 42 49.6**	**-2.1**
	6.1nm,0.4s							
MDOK				*e*	S	**Sg**	**07 43 29.3**	**+0.6**
	55nm,0.5s							
MDOK	**Medeo**	**2.86**	**13**	⇑Pn		**Pn**	**07 42 43.8**	**+1.1**
	7.8nm,0.6s							
MDOK				⇓Lg		Lg	07 43 29.3	
	45nm,0.6s							
MDOK	**Medeo**	**2.86**	**13**	Pg		**Pg**	**07 42 49.6**	**-2.1**
	6.1nm,0.4s							
MDOK				Lg		Lg	07 43 29.3	
	55nm,0.5s							
DGS	**Degeres**	**2.87**	**355**	*e*	P	**Pg**	**07 42 49.9**	**-2.1**
	5.2nm,0.3s							
DGS				*e*	S	**Sg**	**07 43 30.2**	**+1.1**
	29nm,0.6s							
DGS	**Degeres**	**2.87**	**355**	Pg		**Pg**	**07 42 49.9**	**-2.1**
	5.2nm,0.3s							
DGS				Lg		Lg	07 43 30.2	
	29nm,0.6s							
EKS2	**Erkin-Say**	**2.89**	**323**	⇑*i*	P	**Pn**	**07 42 43.2**	**+0.1**
	baz=26							
EKS2				⇑	*i* S	**Sn**	**07 43 20.4**	**+2.4**
	baz=26							
KOTS	**Kotyrbulak**	**2.94**	**14**	*e*	P	**Pg**	**07 42 51.2**	**-2.0**
	16nm,0.4s							
KOTS				*e*	S	**Sg**	**07 43 32.1**	**+0.8**
	64nm,0.4s							
KOTS	**Kotyrbulak**	**2.94**	**14**	Pg		**Pg**	**07 42 51.5**	**-1.7**
	16nm,0.4s							
KOTS				Lg		Lg	07 43 32.1	
	64nm,0.4s							
USP	**Ospenovka**	**3.13**	**337**	⇑*i*	P	**Pn**	**07 42 47.1**	**+0.7**
	baz=39							
USP				⇑	*i* S	**Sn**	**07 43 26.8**	**+2.9**
	baz=39							
SATY	**Saty**	**3.16**	**32**	*e*	P	**Pg**	**07 42 54.8**	**-2.7**
	9.4nm,0.6s							
SATY				*e*	S	**Sg**	**07 43 38.5**	**0.0**
	34nm,0.4s							
SATY	**Saty**	**3.16**	**32**	Pg		**Pg**	**07 42 54.8**	**-2.7**
	9.4nm,0.6s							
SATY				Lg		Lg	07 43 38.5	
	34nm,0.4s							
MRKS	**Merke**	**3.22**	**318**	*e*	P	**Pb**	**07 42 54.8**	**+0.5**
	5.0nm,0.4s							
MRKS				*e*	S	**Sg**	**07 43 38.1**	**-2.3**
	13nm,0.3s							
MRKS	**Merke**	**3.22**	**318**	Pg		**Pb**	**07 42 55.4**	**+1.1**
	7.5nm,0.5s							
MRKS				Lg		Lg	07 43 38.6	
	13nm,0.3s							
KRBS	**Karabastau**	**3.33**	**354**	*e*	P	**Pg**	**07 42 58.3**	**-2.4**
	6.6nm,0.3s							
KRBS				*e*	S	**Sg**	**07 43 43.9**	**+0.1**
	13nm,0.6s							
KRBS	**Karabastau**	**3.33**	**354**	Pg		**Pg**	**07 42 58.3**	**-2.4**
	6.6nm,0.3s							
KRBS				Lg		Lg	07 43 43.9	
	13nm,0.6s							
KTBS	**Karatobe**	**3.35**	**7**	*e*	P	**Pb**	**07 42 57.8**	**+1.4**
	4.9nm,0.4s							
KTBS				*e*	S	**Sg**	**07 43 43.6**	**-0.9**
	38nm,0.5s							
KTBS	**Karatobe**	**3.35**	**7**	Pg		**Pb**	**07 42 57.8**	**+1.4**
	4.9nm,0.4s							
KTBS				Lg		Lg	07 43 43.6	
	38nm,0.5s							
KURS	**Kuram**	**3.45**	**25**	*e*	P	**Pb**	**07 42 59.3**	**+1.1**
	5.7nm,0.6s							
KURS				*e*	S	**Sg**	**07 43 46.4**	**-1.3**
	13nm,0.9s							
KURS	**Kuram**	**3.45**	**25**	Pg		**Pb**	**07 42 59.3**	**+1.1**
	5.7nm,0.6s							
KURS				Lg		Lg	07 43 46.4	
	13nm,0.9s							
UZB	**Uzynbulak**	**3.50**	**37**	*e*	P	**Pg**	**07 43 01.1**	**-2.9**
	5.3nm,0.3s							
UZB				*e*	S	**Sg**	**07 43 49.2**	**-0.2**
	11nm,0.7s							
UZB	**Uzynbulak**	**3.50**	**37**	Pg		**Pg**	**07 43 01.1**	**-2.9**
	5.3nm,0.3s							
UZB				Lg		Lg	07 43 49.2	
	11nm,0.7s							
KUU	**Kurty**	**3.51**	**2**	*e*	P	**Pg**	**07 43 01.3**	**-2.9**
	6.3nm,0.4s							
KUU				*e*	S	**Sg**	**07 43 49.7**	**+0.1**
	45nm,0.6s							
KUU	**Kurty**	**3.51**	**2**	Pg		**Pg**	**07 43 01.3**	**-2.9**
	6.3nm,0.4s							
KUU				Lg		Lg	07 43 49.7	
	45nm,0.6s							
CHKK	**Chushkaly**	**3.52**	**10**	*e*	P	**Pb**	**07 43 01.4**	**+2.0**
	3.5nm,0.2s							
CHKK				*e*	S	**Sg**	**07 43 49.6**	**-0.4**
	18nm,0.3s							
CHKK	**Chushkaly**	**3.52**	**10**	Pg		**Pb**	**07 43 01.4**	**+2.0**
	3.5nm,0.2s							
CHKK				Lg		Lg	07 43 49.6	
	18nm,0.3s							
PDGK	**Podgornoye**	**3.86**	**39**	⇓Pg		**Pg**	**07 43 08.3**	**-2.5**
	5.3nm,0.6s							
PDGK				⇓Lg		Lg	07 44 00.0	
	32nm,0.9s							
ARXS	**Arharly**	**4.02**	**17**	*e*	P	**Pb**	**07 43 10.2**	**+2.2**
	10nm,0.6s							
ARXS				*e*	S	**Sg**	**07 44 04.5**	**-1.6**
	21nm,0.4s							
ARXS	**Arharly**	**4.02**	**17**	Pg		**Pb**	**07 43 10.2**	**+2.2**
	10nm,0.6s							
ARXS				Lg		Lg	07 44 04.5	
	21nm,0.4s							
KTMS	**Ketmen**	**4.38**	**44**	*e*	P	**Pb**	**07 43 16.6**	**+2.5**
	1.9nm,0.4s							
KTMS				*e*	S	**Sg**	**07 44 16.0**	**-1.6**
	6.5nm,0.3s							
KTMS	**Ketmen**	**4.38**	**44**	Pg		**Pb**	**07 43 16.6**	**+2.5**
	1.9nm,0.4s							
KTMS				Lg		Lg	07 44 16.0	
	6.5nm,0.3s							

*TAP **31** 07:54:08.1, 24.75N×122.40E, h14km, ML3.5, C*
*JMA **31** 07:54:08.6±0.2, 24.65N×122.37E, h4km±4km, M3.1*

ISC 31 07:54:08.3±1.0, 24.71N±0.02×122.40E±0.02, h11km±8km, n75, σ0.979/146, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EGS		**0.44**	**287**	*e*	P	**Pg**	**07 54 17.2**	**+0.2**
	baz=281							
EGS				*e*	S	**Sg**	**07 54 23.5**	**+0.6**
	baz=281							
TWB1	**Santiao Chiao**	**0.47**	**308**	*i*	P	**Pg**	**07 54 17.7**	**+0.1**
	baz=304							
TWB1				*i*	S	**Sg**	**07 54 23.7**	**-0.2**
	baz=304							
TWC	**Suao**	**0.51**	**258**	*i*	P	**Pg**	**07 54 17.9**	**-0.4**
	baz=261							
TWC					S	**Sb**	**07 54 26.3**	**-0.4**
	baz=261							
NTC	**Toucheng**	**0.54**	**285**	*e*	P	**Pb**	**07 54 20.2**	**+0.4**
	baz=280							
NTC				*e*	S	**Sb**	**07 54 28.6**	**+1.1**
	baz=280							
JYNG	**Yonagunijimaku**	**0.56**	**118**	P		**Pg**	**07 54 19.6**	**+0.3**
JYNG				S		**Sg**	**07 54 27.1**	**+0.4**
TIPB	**Shuangxi**	**0.58**	**296**	*i*	P	**Pg**	**07 54 19.9**	**+0.3**
	baz=292							
TIPB					S	**Sg**	**07 54 27.5**	**+0.2**
	baz=292							
ILA	**Ilan**	**0.59**	**275**	*e*	P	**Pb**	**07 54 21.0**	**+0.3**
	baz=270							
ILA				*e*	S	**Sb**	**07 54 29.6**	**+0.5**
	baz=270							
YOJ	**Yonaguni jima**	**0.61**	**114**	*i*	P	**Pg**	**07 54 20.4**	**+0.2**
	baz=110							
YOJ					S	**Sg**	**07 54 28.6**	**+0.3**
	baz=110							
YOJ	**Yonaguni jima**	**0.61**	**114**	P		**Pg**	**07 54 20.4**	**+0.2**
YOJ				*e*S		**Sg**	**07 54 28.8**	**+0.5**
ENA	**Nanau**	**0.66**	**245**	P		**Pg**	**07 54 20.7**	**-0.5**
	baz=250							
ENA				*e*	S	**Sb**	**07 54 30.7**	**-0.4**
	baz=250							
NWF	**Wu-fen Shan**	**0.66**	**303**	P		**Pb**	**07 54 22.2**	**+0.2**
	baz=299							
NWF					S	**Sb**	**07 54 31.2**	**0.0**
	baz=299							
WFSB	**Wu-fen Shan**	**0.66**	**303**	P		**Pb**	**07 54 22.2**	**+0.2**
	baz=299							
WFSB					S	**Sb**	**07 54 31.2**	**0.0**
	baz=299							
TWE	**Neicheng**	**0.66**	**271**	P		**Pg**	**07 54 20.9**	**-0.3**
	baz=266							
TWE					S	**Sb**	**07 54 31.2**	**+0.1**
	baz=266							
TWA	**Mucha**	**0.79**	**290**	P		**Pb**	**07 54 24.2**	**+0.2**
	baz=286							
TWA					S	**Sb**	**07 54 34.7**	**0.0**
	baz=286							
NDT	**Datong Townshi**	**0.81**	**262**	*e*	P	**Pg**	**07 54 24.0**	**0.0**
	baz=259							
NDT				*e*	S	**Sb**	**07 54 36.0**	**+0.5**
	baz=259							
NWLT	**Wulai**	**0.82**	**275**	*e*	P	**Pn**	**07 54 25.8**	**0.0**
	baz=280							
NWLT				*e*	S	**Sb**	**07 54 35.2**	**-0.4**
	baz=280							
NHDH	**Xindian Distri**	**0.83**	**288**	*e*	P	**Pb**	**07 54 25.3**	**+0.6**
	baz=284							
NHDH				*e*	S	**Sb**	**07 54 36.3**	**+0.3**
	baz=284							
TAP1	**Taipei**	**0.86**	**292**	*e*	P	**Pb**	**07 54 25.5**	**+0.3**
	baz=289							
TAP1				*e*	S	**Sb**	**07 54 37.3**	**+0.6**
	baz=289							
TATO	**Taipei**	**0.87**	**288**	P		**Pb**	**07 54 25.7**	**+0.3**
	baz=284							
TATO				S		**Sb**	**07 54 36.8**	**-0.2**
	baz=284							
YM01	**YM01**	**0.87**	**300**	P		**Pg**	**07 54 25.3**	**+0.2**
	baz=297							
YM01					S	**Sb**	**07 54 36.8**	**-0.3**
	baz=297							
TAP	**Taipei**	**0.87**	**292**	*e*	P	**Pb**	**07 54 26.0**	**+0.5**
	baz=289							
TAP				*e*	S	**Sb**	**07 54 37.6**	**+0.5**
	baz=289							
YM11	**YM11**	**0.87**	**301**	*e*	P	**Pb**	**07 54 26.1**	**+0.6**
	baz=298							
YM11				*e*	S	**Sg**	**07 54 36.7**	**+0.2**
	baz=298							
YM10	**YM10**	**0.88**	**300**	*e*	P	**Pg**	**07 54 25.5**	**+0.2**
	baz=297							
YM10				*e*	S	**Sb**	**07 54 37.3**	**-0.1**
	baz=297							
NACB	**Ninganchiao**	**0.91**	**234**	*e*	P	**Pg**	**07 54 25.2**	**-0.6**
	baz=231							
NACB				*e*	S	**Sb**	**07 54 37.7**	**-0.5**
	baz=231							
TWY	**Chenhua**	**0.92**	**308**	*e*	P	**Pg**	**07 54 26.0**	**0.0**
	baz=305							
TWY				*e*	S	**Sb**	**07 54 38.5**	**+0.1**
	baz=305							
YHNB	**Yeheng**	**0.93**	**267**	*e*	P	**Pg**	**07 54 26.1**	**-0.2**
	baz=264							
YHNB				*e*	S	**Sg**	**07 54 38.1**	**-0.3**
	baz=264							
NSK	**Sanguang**	**0.95**	**268**	*e*	P	**Pg**	**07 54 26.3**	**-0.2**
	baz=264							
NSK				*e*	S	**Sg**	**07 54 38.0**	**-0.9**
	baz=264							
PCYT	**Pengchaiyu**	**0.96**	**342**	*e*	P	**Pg**	**07 54 24.0**	**-2.8**
	baz=341							
TWD	**Chiawan**	**0.97**	**229**	*e*	P	**Pg**	**07 54 26.6**	**-0.3**
	baz=234							
TWD				*e*	S	**Sn**	**07 54 41.9**	**+0.4**
	baz=234							
NNSB	**Datong**	**0.97**	**253**	*e*	P	**Pg**	**07 54 26.2**	**-0.7**
	baz=250							
NNSB				*e*	S	**Sb**	**07 54 39.7**	**-0.3**
	baz=250							
NNSH	**Datong**	**0.97**	**253**	*e*	P	**Pb**	**07 54 27.1**	**-0.1**
	baz=250							
NNSH				*e*	S	**Sb**	**07 54 40.7**	**+0.7**
	baz=250							
TWS1	**Kuangyinshan**	**0.97**	**294**	*e*	P	**Pn**	**07 54 27.9**	**+0.1**
	baz=291							
TWS1					S	**Sb**	**07 54 40.2**	**+0.3**
	baz=291							
NNS	**Nan Shan**	**0.97**	**254**	*e*	P	**Pg**	**07 54 26.5**	**-0.5**
	baz=250							
NNS				*e*	S	**Sb**	**07 54 40.3**	**+0.1**
	baz=250							
ETLH	**Xiulin Townshi**	**0.98**	**239**	*e*	P	**Pg**	**07 54 26.6**	**-0.5**
	baz=245							
ETLH				*e*	S	**Sn**	**07 54 41.1**	**-0.9**
	baz=245							
WHF	**Hehuan Shan**	**1.18**	**241**	P		**Pg**	**07 54 30.3**	**-0.7**
	baz=250							
WHF				*e*	S	**Sn**	**07 54 47.5**	**+0.1**
	baz=250							
TDCB	**Techi**	**1.22**	**248**	*e*	P	**Pn**	**07 54 31.6**	**+0.2**
	baz=245							
TDCB				*e*	S	**Sn**	**07 54 48.2**	**+0.2**
	baz=245							
ESL	**Shilin**	**1.26**	**225**	*e*	P	**Pn**	**07 54 31.8**	**0.0**
	baz=222							
ESL				*e*	S	**Sn**	**07 54 49.5**	**+0.8**
	baz=222							
IRIF	**Iriomote-Funau**	**1.27**	**107**	P		**Pg**	**07 54 32.8**	**+0.1**
IRIF				*e*S		**Sb**	**07 54 49.0**	**+0.4**
NSTT	**Nanjuang**	**1.27**	**267**	P		**Pg**	**07 54 33.1**	**+0.3**
	baz=264							
NSTT					S	**Sn**	**07 54 49.8**	**+0.6**
	baz=264							
SBCB	**Hsinchu**	**1.29**	**274**	*e*	P	**Pb**	**07 54 32.6**	**+0.1**
	baz=271							
SBCB				*e*	S	**Sn**	**07 54 49.7**	**+0.2**
	baz=271							
CHGB	**Renai**	**1.29**	**240**	*e*	P	**Pb**	**07 54 32.8**	**0.0**
	baz=247							
CHGB				*e*	S	**Sn**	**07 54 51.2**	**+1.2**
	baz=247							
WHP	**Taichung City**	**1.39**	**252**	*e*	P	**Pg**	**07 54 34.9**	**-0.2**
	baz=249							
WHP				*e*	S	**Sg**	**07 54 53.8**	**+0.6**
	baz=249							
HATJ	**Hateruma jima**	**1.44**	**117**	P		**Pn**	**07 54 34.8**	**+0.4**
HATJ				*e*S		**Sg**	**07 54 54.6**	**-0.1**
NMLH	**Miaoli**	**1.47**	**263**	*e*	P	**Pg**	**07 54 36.6**	**0.0**
	baz=261							
NMLH				*e*	S	**Sg**	**07 54 57.6**	**+1.8**
	baz=261							
VWDT	**VWDT**	**1.49**	**230**	*e*	P	**Pb**	**07 54 35.9**	**-0.2**
	baz=211							
VWDT				*e*	S	**Sg**	**07 54 56.2**	**-0.2**
	baz=211							
DPDB	**Guoxing**	**1.50**	**243**	*e*	P	**Pg**	**07 54 37.1**	**0.0**
	baz=241							
HGSD	**Ruisui**	**1.51**	**216**	*e*	P	**Pn**	**07 54 35.1**	**-0.2**
	baz=200							
HGSD				*e*	S	**Sb**	**07 54 55.5**	**+0.1**
	baz=200							
NSY	**Sanyi**	**1.52**	**259**	*e*	P	**Pg**	**07 54 37.5**	**0.0**
	baz=256							
NSY				*e*	S	**Sg**	**07 54 58.2**	**+0.9**
	baz=256							
TWQ1	**Liyutan**	**1.52**	**256**	*e*	P	**Pg**	**07 54 37.6**	**0.0**
	baz=254							
TWQ1				*e*	S	**Sg**	**07 54 58.7**	**+1.4**
	baz=254							
JKRS	**Kuro-shima**	**1.54**	**108**	P		**Pg**	**07 54 38.1**	**+0.2**
PTSB	**Yuanli**	**1.56**	**261**	*e*	P	**Pg**	**07 54 37.9**	**-0.4**
	baz=258							
PTSB				*e*	S	**Sg**	**07 54 58.2**	**-0.4**
	baz=258							
SMLT	**Sun Moon Lake**	**1.60**	**239**	*e*	P	**Pb**	**07 54 38.1**	**+0.2**
	baz=243							
SMLT				*e*	S	**Sg**	**07 55 00.5**	**+0.7**
	baz=243							
SSLB	**Suanglung**	**1.61**	**235**	*e*	P	**Pb**	**07 54 37.7**	**-0.4**
	ba

ALS	**Alishan**	**1.89**	**231**	*eP*		**Pb**	**07 54 42.5**	**-0.4**
	baz=214								
ALS				*eS*		**Sg**	**07 55 08.1**	**-0.9**
	baz=214								
CHN5	**Tsauling**	**1.93**	**235**	*eP*		**Pb**	**07 54 44.2**	**+0.7**
	baz=216								
CHN5				*eS*		**Sg**	**07 55 10.2**	**-0.1**
	baz=216								
ELDTW	**Lidau**	**1.98**	**220**	*eP*		**Pn**	**07 54 41.7**	**-0.1**
	baz=204								
ELDTW				*eS*		**Sn**	**07 55 07.5**	**+0.9**
	baz=204								
CHN4	**Tsaushan**	**2.14**	**231**	*eP*		**Pb**	**07 54 46.2**	**-0.8**
	baz=213								
CHN4				*eS*		**Sb**	**07 55 14.2**	**+0.6**
	baz=213								
TPUB	**Ta-pu**	**2.14**	**229**	*eP*		**Pb**	**07 54 46.2**	**-1.0**
	baz=213								
TPUB				*eS*		**Sb**	**07 55 14.0**	**+0.1**
	baz=213								
TWH	**Lutao**	**2.17**	**203**	*eP*		**Pn**	**07 54 43.7**	**-0.6**
	baz=200								
TWH				*eS*		**Sn**	**07 55 09.5**	**-1.7**
	baz=200								
WTP	**Ta-pu**	**2.19**	**229**	*eP*		**Pb**	**07 54 46.7**	**-1.3**
	baz=210								
WTP				*eS*		**Sb**	**07 55 15.2**	**0.0**
	baz=210								
TWK	**Hsinying**	**2.26**	**231**	*eP*		**Pb**	**07 54 48.1**	**-1.2**
	baz=214								
TWK				*eS*		**Sb**	**07 55 18.1**	**+0.8**
	baz=214								
CHN1	**Nanshi**	**2.29**	**229**	*eP*		**Pb**	**07 54 48.4**	**-1.3**
	baz=211								
CHN1				*eS*		**Sb**	**07 55 19.2**	**+1.2**
	baz=211								
MATB	**Ma-tsu**	**2.64**	**303**	*eP*		**Pn**	**07 54 49.6**	**-1.2**
	baz=301								
MASBT	**Mashibuluo**	**2.65**	**218**	*eP*		**Pb**	**07 54 54.0**	**-1.7**
	baz=204								
MASBT				*eS*		**Sb**	**07 55 25.7**	**-2.5**
	baz=204								
VWUC	**VWUC**	**2.69**	**276**	*eP*		**Pn**	**07 54 50.4**	**-1.1**
	baz=274								
VWUC				*eS*		**Sn**	**07 55 21.6**	**-2.6**
	baz=274								
EAST	**Anshuo**	**2.72**	**212**	*eP*		**Pn**	**07 54 51.7**	**-0.3**
	baz=209								
EAST				*eS*		**Sn**	**07 55 25.2**	**+0.2**
	baz=209								
PHUB	**P'eng-hu**	**2.84**	**246**	*eP*		**Pn**	**07 54 54.1**	**+0.4**
	baz=244								
PHUB				*eS*		**Sn**	**07 55 29.0**	**+1.0**
	baz=244								
SCZT	**Fangliau**	**2.84**	**215**	*eP*		**Pn**	**07 54 55.8**	**+2.1**
	baz=199								
SCZT				*eS*		**Sn**	**07 55 30.4**	**+2.4**
	baz=199								
WDGT	**Dungji**	**2.89**	**241**	*eP*		**Pn**	**07 54 55.4**	**+1.0**
	baz=239								
WDGT				*eS*		**Sn**	**07 55 31.4**	**+2.2**
	baz=239								

MOS ***31*** *08:12:39.1±1.5,47.°92N×83.°25E,h11km,mb4.2/3,Error ellipse: s-maj=10.7km s-min=7.2km az=78.2*
IDC ***31*** *08:12:41.0±1.0,47.°79N×83.°61E,h32km±6km,mb3.3/4, mb1 3.6/7,mb1mx3.3/42,mbtmp3.6/7,ML3.6/4,MS2.8/3, Ms1 2.8/3,ms1mx2.5/32,Error ellipse: s-maj=14.8km s-min=8.8km az=115.0*
SOME ***31*** *08:12:41.2,47.°85N×83.°05E,h5km,MS3.2*
NNC ***31*** *08:12:41.2±0.5,47.°96N×83.°23E,h10km±5km,mb4.5, mpv4.3,Error ellipse: s-maj=3.4km s-min=2.6km az=111.0*
ASRS ***31*** *08:12:42.5±0.2,48.°N±1.°×8.°4E±.°,h10km,MLh4.8/11, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*
BJI ***31*** *08:12:44.7±0.0,47.°59N×83.°98E,h30km,mb4.1/2,ML4.0/7*
ISC 31 08:12:40.9±0.4,**47.°90N**±0.°02×**83.°59E**±0.°02,**h10**km,**n91,**
σ**2**s**79**/131,**mb3.8**/**8,MS2.9**/**3,15C-9D,**
Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZSN	**Zaisan**	**0.97**	**117**	*eP*	**Pg**	**08 12 59.1**	**-0.4**
	374nm,0.5s						
ZSN				*eS*	**Sg**	**08 13 12.9**	**+0.7**
	2μm,0.8s						
ZSN	**Zaisan**	**0.97**	**117**	P	**Pg**	**08 12 59.1**	**-0.4**
	393nm,0.3s						
ZSN				S	**Sg**	**08 13 12.9**	**+0.7**
	3μm,0.3s						
ZSN	**Zaisan**	**0.97**	**117**	*e*PG	**Pg**	**08 12 59.1**	**-0.4**
MK31	**Makanchi Array**	**1.42**	**219**	⇑P	**Pn**	**08 13 05.7**	**-1.0**
	35nm,0.3s,baz=4.2,slow=11,SNR=2024						
MK31				⇑S	**Sb**	**08 13 23.6**	**-2.0**
	1μm,0.5s,baz=37,slow=27,SNR=8.3						
MK31	**Makanchi Array**	**1.42**	**219**	PG	**Pn**	**08 13 05.7**	**-1.0**
MK31				S	**Sb**	**08 13 23.5**	**-2.0**
MKAR	**Makanchi Array**	**1.42**	**219**	Pg	**Pn**	**08 13 05.7**	**-1.1**
	72nm,0.3s,baz=46,slow=21,SNR=982						
MKAR				Lg	Lg	08 13 24.1	
	554nm,0.3s,baz=39,slow=31,SNR=25						
MAKZ	**Makanchi**	**1.55**	**226**	Pg	**Pn**	**08 13 07.6**	**-0.9**
MAKZ				Sg	**Sn**	**08 13 27.4**	**-1.3**
DGZ	**Jazzator, Alta**	**3.11**	**53**	Pn	**Pn**	**08 13 32.2**	**+2.0**
DGZ				Pg	**Pb**	**08 13 39.1**	**+2.7**
DGZ				Sg	**Sb**	**08 14 16.7**	**+2.2**
DGZ	**Jazzator, Alta**	**3.11**	**53**	*c i*PN	**Pn**	**08 13 32.2**	**+2.0**
UKR	**Ust'-Kan**	**3.14**	**14**	Pn	**Pn**	**08 13 32.2**	**+1.8**
UKR				Pg	**Pb**	**08 13 38.1**	**+1.3**
UKR				Sg	**Sg**	**08 14 20.5**	**-1.1**
UKR	**Ust'-Kan**	**3.14**	**14**	PN	**Pn**	**08 13 32.1**	**+1.7**
UKR						08 14 11.8	
SEM	**Semipalatinsk**	**3.33**	**320**	*eP*	**Pb**	**08 13 39.1**	**-1.1**
	44nm,0.4s						
SEM				*eS*	**Sb**	**08 14 21.3**	**+0.4**
	732nm,0.6s						
SEM	**Semipalatinsk**	**3.33**	**320**	Pg	**Pb**	**08 13 39.1**	**-1.1**
	44nm,0.4s						
SEM				Lg	Lg	08 14 21.3	
	990nm,0.5s						
CHBI	**Chibit, Altay**	**3.53**	**45**	Pn	**Pn**	**08 13 38.2**	**+2.4**
CHBI				Pg	**Pg**	**08 13 48.5**	**+0.1**
CHBI				Sg	**Sb**	**08 14 31.5**	**+5.2**
CHBI	**Chibit, Altay**	**3.53**	**45**	PN	**Pn**	**08 13 39.6**	**+3.8**
CHBI						08 14 30.7	
AKAR	**Aktash**	**3.59**	**46**	Pn	**Pn**	**08 13 39.2**	**+2.5**
AKAR				Pg	**Pb**	**08 13 48.5**	**+4.1**
AKAR				Sg	**Sb**	**08 14 34.2**	**+6.1**
AKAR	**Aktash**	**3.59**	**46**	PN	**Pn**	**08 13 40.6**	**+3.9**
AKAR						08 14 32.0	
SLNR	**Muhor-Tarhata,**	**3.73**	**58**	Pn	**Pn**	**08 13 41.1**	**+2.4**
SLNR				Pg	**Pg**	**08 13 51.8**	**-0.5**
SLNR				Sg	**Sg**	**08 14 41.2**	**+0.6**
CUR	**Chagan-Uzun**	**3.83**	**53**	Pn	**Pn**	**08 13 42.4**	**+2.4**
CUR				Pg	**Pb**	**08 13 51.6**	**+3.1**
CUR				Sg	**Sb**	**08 14 40.8**	**+5.7**
KURBB	**Kurchatov Arra**	**4.29**	**311**	Pn	**Pn**	**08 13 45.1**	**-1.1**
	1.8nm,0.3s,baz=120,slow=14,SNR=108						
KURBB				Sn	**Sn**	**08 14 35.3**	**-1.0**
	8.3nm,0.3s,baz=147,slow=17,SNR=4.9						
KURBB				Lg	Lg	08 14 52.0	
	18nm,0.3s,baz=134,slow=31,SNR=6.0						
KURBB	**Kurchatov Arra**	**4.29**	**311**	⇓Pn	**Pn**	**08 13 43.4**	**-2.8**
	26nm,0.6s						
KURBB				⇓Lg	Lg	08 14 52.0	
	2μm,0.7s						
KURK	**Kurchatov**	**4.30**	**313**	Pn	**Pn**	**08 13 45.0**	**-1.3**
KURK				Pg	**Pg**	**08 14 01.3**	**-2.0**
KURK				Sg	**Sb**	**08 14 52.4**	**+3.9**
KURK	**Kurchatov**	**4.30**	**313**	*ce*PN	**Pn**	**08 13 44.9**	**-1.5**
KURK				pmax	pmax		
	comp=Z,16nm,0.6s						
GALT	**Gorno-Altaysk,**	**4.34**	**20**	Pn	**Pn**	**08 13 49.5**	**+2.7**
GALT				Pg	**Pb**	**08 14 00.2**	**+3.0**
GALT				Sg	**Sg**	**08 14 58.8**	**-1.3**
DJR	**Jarkent**	**4.44**	**218**	*eP*	**Pb**	**08 13 59.2**	**+0.2**
	comp=Z,31nm,0.4s						
DJR				*eS*	**Sb**	**08 14 55.5**	**+2.9**
	comp=Z,128nm,0.7s						
DJR	**Jarkent**	**4.44**	**218**	Pg	**Pb**	**08 13 59.2**	**+0.2**
	comp=Z,31nm,0.4s						
DJR				Lg	Lg	08 14 55.5	
	comp=Z,208nm,0.4s						

TDK	**Taldyqorghan**	**4.61**	**233**	*eP*		**Pb**	**08 14 02.2**	**+0.4**
	comp=Z,107nm,0.5s								
TDK				*eS*		**Sb**	**08 14 59.9**	**+2.6**
	comp=Z,1μm,0.4s								
WMQ	**Urumqi**	**4.98**	**143**	Pn		Pn	08 13 51.8	-4.0
WMQ				Sn		**Sn**	**08 14 52.3**	**-1.2**
WMQ				smax		smax			
	comp=Z,220nm,0.7s								
WMQ				smax		smax			
	comp=Z,280nm,0.8s								
KTMS	**Ketmen**	**5.00**	**208**	*eP*		**Pb**	**08 14 08.0**	**-0.5**
	comp=Z,4.2nm,0.1s								
KTMS				*eS*		**Sb**	**08 15 10.3**	**+1.6**
	comp=Z,111nm,0.6s								
PDGK	**Podgornoye**	**5.40**	**214**	⇓Pn		**Pn**	**08 14 01.7**	**+0.1**
	comp=Z,14nm,0.4s								
PDGK				⇑Lg		Lg	08 15 31.8		
	comp=Z,188nm,0.7s								
PDGK	**Podgornoye**	**5.40**	**214**	PN		**Pn**	**08 14 01.6**	**+0.1**
TASR	**Tashtagol**	**5.59**	**28**	Pn		**Pn**	**08 14 02.5**	**-1.5**
TASR				Pg		Pb	08 14 23.1	+4.7
TASR				Sg		Sb	08 15 34.1	+8.7
ELT	**Eltsovka**	**5.63**	**16**	Pn		**Pn**	**08 14 04.9**	**+0.4**
ELT				Pg		Pb	08 14 24.6	+5.6
ELT				Sg		**Sg**	**08 15 38.4**	**-3.0**
UZB	**Uzynbulak**	**5.74**	**216**	*eP*		**Pb**	**08 14 22.8**	**+1.7**
	comp=Z,18nm,0.4s								
UZB				*eS*		**Sb**	**08 15 35.8**	**+5.9**
	comp=Z,91nm,0.6s								
UZB	**Uzynbulak**	**5.74**	**216**	Pg		**Pb**	**08 14 23.0**	**+1.9**
	comp=Z,16nm,0.4s								
UZB				Lg		Lg	08 15 35.8		
	comp=Z,132nm,0.7s								
KURS	**Kuram**	**5.82**	**223**	*eP*		**Pb**	**08 14 25.8**	**+3.4**
	comp=Z,9.5nm,0.3s								
KURS				*eS*		**Sg**	**08 15 40.7**	**-7.0**
	comp=Z,87nm,0.9s								
KURS	**Kuram**	**5.82**	**223**	Pg		**Pb**	**08 14 26.0**	**+3.6**
	comp=Z,19nm,0.3s								
KURS				Lg		Lg	08 15 41.0		
	comp=Z,146nm,0.6s								
SATY	**Saty**	**6.06**	**219**	*eP*		**Pb**	**08 14 28.9**	**+2.3**
	comp=Z,10nm,0.3s								
SATY				*eS*		**Sb**	**08 15 45.8**	**+6.6**
	comp=Z,72nm,0.6s								
SATY	**Saty**	**6.06**	**219**	Pg		**Pb**	**08 14 28.9**	**+2.3**
	comp=Z,15nm,0.4s								
SATY				Lg		Lg	08 15 45.8		
	comp=Z,167nm,0.5s								
ZAA0	**Zalesovo Array**	**6.11**	**7**	⇑Pn		**Pn**	**08 14 10.5**	**-0.6**
	comp=Z,3.3nm,0.6s								
ZAA0				⇓Sn		**Sn**	**08 15 20.1**	**-0.9**
	comp=Z,4.5nm,0.4s								
ZAA0				⇑Lg		Lg	08 15 55.0		
	comp=Z,15nm,0.7s								
ZALV	**Zalesovo Beam**	**6.11**	**7**	Pn		**Pn**	**08 14 10.8**	**-0.2**
	comp=Z,9.9nm,0.3s,baz=192,slow=14,SNR=136								
ZALV				Sn		**Sn**	**08 15 20.4**	**-0.6**
	comp=Z,13nm,0.3s,baz=202,slow=26,SNR=8.3								
ZALV				Lg		Lg	08 15 52.7		
	comp=Z,12nm,0.3s,baz=190,slow=28,SNR=7.0								
CHKK	**Chushkaly**	**6.13**	**231**	Pg		**Pb**	**08 14 30.0**	**+2.3**
	comp=Z,12nm,0.4s								
CHKK				Lg		Lg	08 15 47.7		
	comp=Z,130nm,0.4s								
KUU	**Kurty**	**6.45**	**234**	Pg		**Pb**	**08 14 34.8**	**+1.5**
	comp=Z,14nm,0.4s								
KUU				Lg		Lg	08 15 56.7		
	comp=Z,124nm,0.3s								
MDOK	**Medeo**	**6.60**	**227**	⇓Pn		**Pn**	**08 14 16.7**	**-1.3**
	comp=Z,17nm,0.6s								
MDOK				Lg		Lg	08 16 08.6		
	comp=Z,168nm,0.8s								
MDOK	**Medeo**	**6.60**	**227**	PN		**Pn**	**08 14 16.0**	**-2.1**
AAA	**Alma-Ata**	**6.63**	**227**	*e*PG		**Pg**	**08 14 47.8**	**0.0**
SALR	**Pechorkino, Sa**	**6.66**	**11**	Pn		**Pn**	**08 14 17.9**	**-0.8**
SALR				Pg		Pb	08 14 42.3	+5.6
SALR				Sg		**Sg**	**08 16 13.3**	**-1.1**
BSTK	**Bystrovka, Nov**	**6.70**	**355**	Pn		**Pn**	**08 14 18.3**	**-1.0**
BSTK				Pg		Pg	08 14 45.7	-3.5
BSTK				Sg		**Sg**	**08 16 14.1**	**-1.8**
KHAR	**Kharino, NSO,**	**6.72**	**360**	Pn		**Pn**	**08 14 18.3**	**-1.2**
KHAR				Sg		**Sg**	**08 16 14.9**	**-1.6**
TNSS	**Tian-Shan**	**6.74**	**226**	Pg		**Pb**	**08 14 42.0**	**+3.6**
	comp=Z,12nm,0.3s								
TNSS				Lg		Lg	08 16 08.3		
	comp=Z,112nm,0.8s								
POMOR	**Pomortsevo, Ku**	**6.77**	**15**	Pn		**Pn**	**08 14 20.8**	**+0.6**
POMOR				Pg		Pb	08 14 45.6	+7.0
POMOR				Sg		**Sg**	**08 16 16.2**	**-1.9**
VEH	**Verkhnyaya Baz**	**6.86**	**36**	Pn		**Pn**	**08 14 22.5**	**+1.0**
VEH				Pg		Pb	08 14 45.6	+5.5
VEH				Sg		**Sg**	**08 16 14.9**	**-6.0**
DJO	**Djoy, Khakassi**	**6.91**	**42**	Pg		Pb	08 14 46.5	+5.6
DJO				Sg		**Sg**	**08 16 17.1**	**-5.3**
NVS	**Novosibirsk**	**6.96**	**358**	Pn		**Pn**	**08 14 21.3**	**-1.5**
NVS				Pg		Pb	08 14 47.9	+6.2
NVS				Sg		**Sg**	**08 16 24.7**	**+0.7**
NVSII	**Novosibirsk**	**6.96**	**358**	Pn		**Pn**	**08 14 20.8**	**-2.0**
NVSII				Pg		Pb	08 14 47.5	+5.8
NVSII				Sg		**Sg**	**08 16 26.2**	**+2.2**
NHES	**Novosibirsk, N**	**6.98**	**357**	Sg		**Sg**	**08 16 31.1**	**+6.3**
DJOS	**Djoyskaya Sosn**	**7.00**	**43**	Sg		**Sg**	**08 16 18.9**	**-6.3**
CERR	**Cheremushki**	**7.04**	**42**	Pg		Pb	08 14 51.3	+8.1
CERR				Sg		Sg	08 16 20.0	-6.7
BRZS	**Berezniki**	**7.48**	**290**	Pg		**Pb**	**08 14 54.7**	**+3.9**
	comp=Z,17nm,0.4s								
BRZS				Lg		Lg	08 16 30.6		
	comp=Z,155nm,0.8s								
OTUK	**Ortayu**	**7.55**	**277**	⇓Pn		**Pn**	**08 14 28.9**	**-2.1**
	comp=Z,6.4nm,0.4s								
OTUK				⇑Lg		Lg	08 16 35.7		
	comp=Z,109nm,0.8s								
OTUK	**Ortayu**	**7.55**	**277**	P		**Pn**	**08 14 28.8**	**-2.1**
KEM	**Kemerovo**	**7.61**	**11**	Sg		**Sg**	**08 16 41.7**	**-3.3**
ABNR	**Abakan**	**7.66**	**37**	Sg		Sg	08 16 39.0	-7.4
ARDR	**Aradan**	**7.85**	**50**	Pn		Pn	08 14 45.0	+10
ARDR				Pg		Pb	08 15 05.9	+8.8
ARDR				Sg		**Sg**	**08 16 49.7**	**-3.1**
KZLR	**Kyzyl**	**7.99**	**58**	Sg		**Sg**	**08 16 53.4**	**-3.8**
AAK	**Ala-Archa**	**8.29**	**234**	Pn		**Pn**	**08 14 40.1**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=13,slow=19,SNR=2.6								
AAK	**Ala-Archa**	**8.29**	**234**	*i* P		**Pn**	**08 14 38.4**	**-2.9**
TDJR	**Todzha**	**9.21**	**56**	Pn		**Pn**	**08 14 52.3**	**-1.3**
TDJR				Pg			08 15 28.9		
TDJR				Sg		Sn	08 17 32.0	+55
MINR	**Mina**	**9.64**	**39**	Pn		**Pn**	**08 14 58.0**	**-1.6**
MINR				Pg			08 15 32.2		
MINR				Sg		Sn	08 17 47.3	+59
BVA1	**Borovoye Array**	**9.85**	**306**	⇑Pn		**Pn**	**08 15 00.5**	**-2.0**
	comp=Z,3.4nm,0.4s								
BVA1				Sn		**Sn**	**08 16 48.6**	**-4.5**
BVAR	**Borovoye Array**	**9.85**	**306**	Pn		**Pn**	**08 15 00.4**	**-2.1**
	comp=Z,0.6nm,0.3s,baz=104,slow=13,SNR=13								
BVAR				Sn		**Sn**	**08 16 45.4**	**-7.7**
	comp=Z,6.9nm,0.3s,baz=107,slow=24,SNR=9.5								
BVAR				Lg		Lg	08 17 50.6		
	comp=Z,3.6nm,0.3s,baz=119,slow=27,SNR=4.2								
BRVK	**Borovoye**	**9.93**	**306**	*ce*P		**Pn**	**08 15 01.4**	**-2.1**
BRVK				pmax		pmax			
	comp=Z,4.0nm,0.7s								
KK31	**Karatay Array**	**10.36**	**247**	⇓Pn		**Pn**	**08 15 06.8**	**-2.7**
	comp=Z,2.0nm,0.4s,baz=52,slow=14,SNR=40								
KK31				⇓Sn		**Sn**	**08 17 02.2**	**-3.3**
	comp=Z,15nm,0.8s								
KK31				⇓Lg		Lg	08 18 06.1		
	comp=Z,32nm,0.7s,baz=57,slow=28,SNR=6.7								
KK31	**Karatay Array**	**10.36**	**247**	*i* P		**Pn**	**08 15 05.9**	**-3.5**
SONM	**Songino Array**	**15.30**	**82**	Lg		Lg	08 20 42.0		
	comp=Z,0.1nm,0.3s,baz=282,slow=28,SNR=3.5								
AB31	**Akbulak array**	**15.70**	**284**	Pn		**Pn**	**08 16 17.7**	**-4.3**
	comp=Z,0.5nm,0.4s,baz=96,slow=16,SNR=36								
AKTO	**Aktyubinsk**	**16.89**	**288**	Pn		**Pn**	**08 16 33.5**	**-3.8**
	comp=Z,0.3nm,0.3s,baz=93,slow=13,SNR=4.2								
AKTO				Lg		Lg	08 21 26.9		
	comp=Z,0.2nm,0.3s,baz=182,slow=17,SNR=2.0								
AKTO				LR		LR	08 23 39.0		
	comp=Z,26nm,18.2s,baz=87,slow=39								
AKTO	**Aktyubinsk**	**16.89**	**288**	⇑Pn		**Pn**	**08 16 33.4**	**-3.8**
	comp=Z,2.1nm,0.6s								
ARU	**Arti**	**17.48**	**309**	*c i*P		**Pn**	**08 16 43.5**	**-1.1**
ARU				S		**Sn**	**08 19 59.8**	**+0.7**
ARU				pmax		pmax			
	comp=Z,2.0nm,0.5s								
NRIK	**Noril'sk**	**21.59**	**4**	P		**P**	**08 17 32.1**	**+1.6**
	comp=Z,10nm,0.7s,baz=183,slow=9.4,SNR=20								
NRIK	**Noril'sk**	**21.59**	**4**	⇑*e*P		**P**	**08 17 28.1**	**-2.3**
NRIK				pmax		pmax			
	comp=Z,9.0nm,0.9s								
KVAR	**Kislovodsk Arr**	**28.48**	**277**	LR		LR	08 30 22.8		
	comp=Z,80nm,21.6s,baz=83,slow=37								
KIV	**Kislovodsk**	**28.48**	**277**	⇑*e*P		**P**	**08 18 34.6**	**-1.6**
KIV				*e*			08 19 25.4		
KIV				*e*S		S	08 23 11.6	-12	
KIV				pmax		pmax			
	comp=Z,3.0nm,1.0s								
KIV				MLR		MLR			
	comp=Z,27nm,17.0s								
OBN	**Obninsk**	**29.66**	**302**	LR		LR	08 30 56.5		
	comp=Z,7.0nm,20.1s,baz=32,slow=37								
OBN	**Obninsk**	**29.66**	**302**	⇑*e*P		**P**	**08 18 43.6**	**-2.7**
OBN				*e*			08 19 41.5		
OBN				*e*S		**S**	**08 23 44.2**	**+2.6**
OBN				pmax		pmax			
	comp=Z,6.0nm,0.7s								
OBN				MLR		MLR			
	comp=Z,44nm,17.0s								
ARCES	**ARCESS Array B**	**35.16**	**329**	P		**P**	**08 19 32.7**	**-1.6**
	comp=Z,0.7nm,0.6s,baz=88,slow=10,SNR=6.2								
ARCES				pP		**sP**	**08 19 41.6**	**+2.8**
	comp=Z,1.1nm,0.8s,baz=90,slow=8.5,SNR=1.6								
NB2	**NORSAR Subarra**	**41.81**	**316**	P		P	08 20 35.1	+4.8	
	comp=Z,0.2nm,0.3s,baz=75,slow=8.6								
NOA	**NORSAR Array B**	**41.81**	**316**	pP		pP	08 20 35.6	+2.1	
	comp=Z,0.4nm,0.5s,baz=73,slow=7.7,SNR=3.3								
ILAR	**Eielson Array**	**61.00**	**22**	P		**P**	**08 22 50.7**	**-3.2**
	comp=Z,0.2nm,0.7s,baz=321,slow=5.9,SNR=2.6								
ILAR				pP		**sP**	**08 23 00.9**	**+2.4**
	comp=Z,0.6nm,0.6s,baz=321,slow=5.0,SNR=6.6								
YKA	**Yellowknife Ar**	**69.00**	**9**	P		**P**	**08 23 43.3**	**-2.6**
	comp=Z,0.1nm,0.6s,baz=350,slow=5.9,SNR=2.8								
YKA				pP		**sP**	**08 23 53.2**	**+2.6**
	comp=Z,0.3nm,0.6s,baz=343,slow=6.1,SNR=4.5								
TORD	**Torodi Ar. Bea**	**74.95**	**273**	P		**P**	**08 24 18.8**	**-3.6**
	comp=Z,0.2nm,0.3s,baz=39,slow=4.9,SNR=6.5								

IDC ***31*** *08:17:51.8±2.5,7.°01S×154.°82E,h0km,mb3.6/4, mb1 3.8/4,mb1mx3.5/27,mbtmp3.6/4,MS2.6/1,Ms1 2.6/1, ms1mx2.3/32,Error ellipse: s-maj=108.0km s-min=32.1km az=127.0*
NEIC ***31*** *08:17:57.1±1.2,6.°96S±0.°10×154.°8E±0.°1,h35km±2km, mb4.2/9,Error ellipse: s-maj=24.0km s-min=16.5km az=78.0*
ISC 31 08:17:57.6±0.9,**7.°0S**±0.°1×**154.°8E**±0.°2,**h41**km,**n18,**
σ**0**s**69**/14,**mb3.8**/**8,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.85**	**316**	Pn	**Pn**	**08 18 55.2**	**+0.7**
HNR	**Honiara**	**5.61**	**116**	LR	LR	08 20 41.2	
	comp=Z,60nm,20.0s,baz=216,slow=30						
DZM	**Mont Dzumac**	**18.71**	**144**	P	**P**	**08 22 13.1**	**+0.2**
DZM				IAmb	IAmb	08 22 14.1	
	comp=Z,11nm,1.0s						
WR0	**Warramunga Arr**	**23.52**	**235**	P	**P**	**08 23 04.5**	**+0.2**
WR0				IAmb	IAmb	08 23 19.4	
	comp=Z,5.3nm,1.2s						
WB0	**Warramunga Arr**	**23.55**	**235**	P	**P**	**08 23 05.1**	**+0.6**
WRAB	**Tennant Creek**	**23.67**	**235**	P	**P**	**08 23 06.4**	**+0.8**
WB2	**Warramunga Arr**	**23.67**	**235**	P	**P**	**08 23 06.3**	**+0.6**
WB2				IAmb	IAmb	08 23 08.5	
	comp=Z,9.0nm,1.4s						
WRA	**Warramunga Arr**	**23.68**	**235**	P	**P**	**08 23 05.3**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=59,slow=9.7,SNR=6.2						
ASAR	**Alice Springs**	**26.05**	**228**	P	**P**	**08 23 26.8**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=63,slow=7.8,SNR=8.1						
H11S3	**WAKE ISLAND Hy 27.90**	**25**		T	T	08 52 09.4	
	baz=203,slow=75,SNR=9.2						
H11S2	**WAKE ISLAND Hy 27.91**	**25**		T	T	08 52 09.5	
	baz=203,slow=75,SNR=9.4						
H11S1	**WAKE ISLAND Hy 27.92**	**25**		T	T	08 52 10.5	
	baz=203,slow=75,SNR=7.3						
FITZ	**Fitzroy Crossi**	**30.50**	**246**	P	**P**	**08 24 07.0**	**-0.1**
FITZ				IAmb	IAmb	08 24 15.8	
	comp=Z,9.3nm,1.4s						
ERM	**Erimo**	**49.93**	**349**	P	**P**	**08 26 46.7**	**-0.7**
CHTO	**Chiang Mai**	**60.76**	**296**	P	**P**	**08 28 04.4**	**-1.4**
CHTO				IAmb	IAmb	08 28 12.9	
	comp=Z,7.6nm,1.1s						
MCK	**McKinley**	**82.12**	**22**	P	**P**	**08 30 13.8**	**+0.1**
MKAR	**Makanchi Array**	**83.30**	**319**	P	**P**	**08 30 20.8**	**+0

	comp=E,3798µm,0.5s							
AOS	**Alonnisos**	**0.92**	**203**	PG	**Pg**	08 21 36.9	**0.0**
KVLA	**Kavala**	**0.92**	**2**	P	**Pb**	08 21 37.3	**+0.4**
KVLA				S	**Sb**	08 21 49.0	**0.0**
KVLA				AML	AML	08 21 51.0	
	comp=E,24354µm,0.3s						
KVLA				AML	AML	08 21 51.0	
	comp=N,12768µm,0.6s						
ALNA	**Alonissos**	**0.94**	**203**	P	**Pg**	08 21 37.2	**-0.1**
ALNA				S	**Sb**	08 21 50.4	**+0.6**
KAVA	**Kavala**	**0.99**	**7**	P	**Pb**	08 21 38.2	**+0.1**
KAVA	**Kavala**	**0.99**	**7**	P	**Pb**	08 21 38.2	**+0.1**
KAVA				S	**Sg**	08 21 50.6	**-0.4**
KAVA				AML	AML	08 21 52.8	
	comp=E,8473µm,0.3s						
KAVA				AML	AML	08 21 53.6	
	comp=N,5360µm,0.4s						
SMTH	**Samothraki Isl**	**1.01**	**63**	P	**Pg**	08 21 38.1	**-0.5**
SMTH	**Samothraki Isl**	**1.01**	**63**	P	**Pg**	08 21 37.9	**-0.7**
SMTH				S	**Sg**	08 21 51.5	**-0.3**
SMTH				AML	AML	08 21 54.4	
	comp=N,2652µm,0.4s						
SMTH				AML	AML	08 21 54.7	
	comp=E,2302µm,0.2s						
SKIA	**Skiathos**	**1.09**	**219**	P	**Pg**	08 21 39.6	**-0.5**
SKIA				S	**Sg**	08 21 54.3	**0.0**
	comp=E,3µm,0.4s						
SKIA	**Skiathos**	**1.09**	**219**	P	**Pg**	08 21 39.5	**-0.5**
SKIA				S	**Sg**	08 21 54.3	**0.0**
SKIA				AML	AML	08 22 00.7	
	comp=E,5940µm,0.4s						
SKIA				AML	AML	08 22 01.1	
	comp=N,4764µm,0.4s						
XOR	**Xorichti**	**1.10**	**234**	P	**Pg**	08 21 40.1	**-0.3**
XOR				S	**Sg**	08 21 54.5	**-0.3**
XOR	**Xorichti**	**1.10**	**234**	P	**Pg**	08 21 39.9	**-0.5**
XOR				S	**Sg**	08 21 54.3	**-0.4**
XOR				AML	AML	08 21 58.6	
	comp=E,3220µm,0.6s						
XOR				AML	AML	08 22 00.9	
	comp=N,3053µm,0.4s						
HORT	**Hortiatis**	**1.12**	**302**	P	**Pg**	08 21 40.3	**-0.4**
HORT				S	**Sb**	08 21 55.2	**+0.3**
	comp=N,1µm,0.3s						
HORT	**Hortiatis**	**1.12**	**302**	P	**Pg**	08 21 40.4	**-0.2**
HORT				S	**Sg**	08 21 54.3	**-0.9**
HORT				AML	AML	08 21 58.5	
	comp=E,2449µm,0.4s						
HORT				AML	AML	08 21 59.3	
	comp=N,2250µm,0.2s						
HORT	**Hortiatis**	**1.12**	**302**	PN	**Pg**	08 21 40.5	**-0.2**
HORT				SN	**Sn**	08 21 56.1	**+0.2**
NEO	**Neokhori**	**1.12**	**231**	P	**Pg**	08 21 39.9	**-0.8**
NEO	**Neokhori**	**1.12**	**231**	P	**Pg**	08 21 40.0	**-0.8**
NEO				S	**Sg**	08 21 54.5	**-0.8**
NEO				AML	AML	08 21 58.8	
	comp=E,5131µm,0.5s						
NEO				AML	AML	08 21 58.8	
	comp=N,3859µm,0.4s						
SKY	**Skiros Island**	**1.15**	**172**	P	**Pg**	08 21 41.2	**0.0**
SKY	**Skiros Island**	**1.15**	**172**	P	**Pg**	08 21 41.3	**0.0**
SKY				S	**Sg**	08 21 54.5	**-1.6**
GADA	**Gvkgeada**	**1.20**	**81**	P	**Pb**	08 21 41.3	**-0.4**
GADA				S	**Sn**	08 21 59.0	**+1.3**
	comp=N,2µm,0.6s						
GADA	**Gvkgeada**	**1.20**	**81**	PN	**Pb**	08 21 41.2	**-0.4**
THE	**Thessaloniki**	**1.22**	**301**	P	**Pb**	08 21 42.2	**+0.1**
THE	**Thessaloniki**	**1.22**	**301**	P	**Pb**	08 21 42.3	**+0.1**
SRS	**Serrai**	**1.24**	**333**	P	**Pb**	08 21 42.2	**-0.4**
SRS	**Serrai**	**1.24**	**333**	P	**Pb**	08 21 42.1	**-0.3**
BOZC	**Bozcaada**	**1.32**	**97**	PN	**Pn**	08 21 43.2	**0.0**
KYMI	**Kymi, Euboea I**	**1.40**	**188**	P	**Pn**	08 21 44.0	**-0.3**
KYMI	**Kymi, Euboea I**	**1.40**	**188**	P	**Pn**	08 21 44.1	**-0.1**
KYMI				S	**Sb**	08 22 01.6	**-1.2**
KYMI				AML	AML	08 22 08.5	
	comp=N,1898µm,0.5s						
KYMI				AML	AML	08 22 09.5	
	comp=E,2201µm,0.3s						
SIGR	**SIGRI**	**1.41**	**124**	P	**Pn**	08 21 44.8	**+0.3**
SIGR				S	**Sg**	08 22 05.3	**+0.7**
	comp=E,572nm,0.5s						
SIGR	**SIGRI**	**1.41**	**124**	P	**Pn**	08 21 44.9	**+0.3**
SIGR	**SIGRI**	**1.41**	**124**	PN	**Pn**	08 21 44.9	**+0.3**
LIT	**Litokhoron**	**1.43**	**274**	P	**Pn**	08 21 45.2	**+0.4**
LIT	**Litokhoron**	**1.43**	**274**	P	**Pn**	08 21 45.5	**+0.7**
MRKA	**Markates**	**1.44**	**205**	P	**Pn**	08 21 44.6	**-0.2**
MRKA	**Markates**	**1.44**	**205**	P	**Pn**	08 21 44.5	**-0.4**
RDO	**Rodhopi**	**1.45**	**38**	P	**Pn**	08 21 44.4	**-0.5**
RDO	**Rodhopi**	**1.45**	**38**	P	**Pn**	08 21 44.5	**-0.5**
RDO	**Rodhopi**	**1.45**	**38**	PN	**Pn**	08 21 44.7	**-0.3**
EZN	**Ezine**	**1.53**	**97**	P	**Pn**	08 21 46.4	**+0.3**
EZN	**Ezine**	**1.53**	**97**	PN	**Pn**	08 21 46.2	**+0.1**
ENEZ	**Enez**	**1.55**	**62**	P	**Pn**	08 21 46.1	**-0.3**
ENEZ	**Enez**	**1.55**	**62**	PN	**Pn**	08 21 46.3	**-0.1**
ALN	**Alexandroupoli**	**1.56**	**55**	P	**Pn**	08 21 46.1	**-0.5**
ALN	**Alexandroupoli**	**1.56**	**55**	PN	**Pn**	08 21 46.3	**-0.3**
KNT	**Kendrikon**	**1.59**	**316**	P	**Pn**	08 21 48.0	**+1.0**
KNT				S	**Sb**	08 22 09.4	**+1.0**
KNT	**Kendrikon**	**1.59**	**316**	P	**Pn**	08 21 47.6	**+0.7**
KNT	**Kendrikon**	**1.59**	**316**	PN	**Pn**	08 21 47.8	**+0.8**
KNT				SN	**Sb**	08 22 09.2	**+0.8**
MMB	**Musomiste**	**1.64**	**343**	P	**Pn**	08 21 47.4	**-0.3**
GELI	**Tayfur-Gelibol**	**1.67**	**76**	PN	**Pn**	08 21 47.9	**-0.1**
PRK	**Paraskevi**	**1.67**	**117**	P	**Pn**	08 21 49.5	**+1.4**
PRK				S	**Sb**	08 22 11.1	**+0.4**
	comp=E,1µm,0.5s						
PRK	**Paraskevi**	**1.67**	**117**	P	**Pn**	08 21 48.4	**+0.4**
RZN	**Rozhen**	**1.69**	**9**	P	**Pn**	08 21 49.0	**+0.5**
LKR	**Lokris**	**1.72**	**218**	P	**Pn**	08 21 48.4	**-0.3**
LKR	**Lokris**	**1.72**	**218**	P	**Pn**	08 21 48.4	**-0.3**
KTI	**Kastanea**	**1.75**	**283**	P	**Pn**	08 21 50.3	**+1.0**
GRG	**Griva**	**1.76**	**303**	P	**Pn**	08 21 50.2	**+0.9**
GRG	**Griva**	**1.76**	**303**	P	**Pn**	08 21 50.0	**+0.7**
GRG	**Griva**	**1.76**	**303**	PN	**Pn**	08 21 50.4	**+1.1**
ERIK	**Erikli-Kesan**	**1.78**	**68**	PN	**Pn**	08 21 49.1	**-0.4**
AXAR	**Agios Charalam**	**1.81**	**227**	P	**Pn**	08 21 50.5	**+0.5**
AXAR	**Agios Charalam**	**1.81**	**227**	P	**Pn**	08 21 49.8	**-0.2**
KDZ	**Kurdzhali**	**1.82**	**26**	P	**Pn**	08 21 49.4	**-0.8**
KDZ	**Kurdzhali**	**1.82**	**26**	PN	**Pn**	08 21 49.4	**-0.8**
AGG	**Agios Georgios**	**1.85**	**238**	P	**Pn**	08 21 50.8	**+0.2**
AGG	**Agios Georgios**	**1.85**	**238**	P	**Pn**	08 21 50.7	**+0.2**
AGG	**Agios Georgios**	**1.85**	**238**	PN	**Pn**	08 21 51.1	**+0.5**
THL	**Klokotos Trika**	**1.85**	**257**	P	**Pn**	08 21 50.9	**+0.3**
THL	**Klokotos Trika**	**1.85**	**257**	P	**Pn**	08 21 50.9	**+0.3**
VAY	**Valandovo**	**1.88**	**314**	*e*Pn	**Pn**	08 21 52.4	**+1.5**
VAY				*e*Sn	**Sn**	08 22 13.0	**-1.5**
VAY	**Valandovo**	**1.88**	**314**	*e*Pn	**Pn**	08 21 52.0	**+1.1**
VAY	**Valandovo**	**1.88**	**314**	*e*Pn	**Pn**	08 21 52.0	**+1.1**
LPK	**Lapseki**	**1.88**	**78**	PN	**Pn**	08 21 50.9	**0.0**
DION	**Dionisos Attik**	**1.96**	**190**	P	**Pn**	08 21 52.1	**0.0**
DION	**Dionisos Attik**	**1.96**	**190**	P	**Pn**	08 21 52.0	**0.0**
KARY	**Karystos**	**1.98**	**178**	P	**Pn**	08 21 52.4	**+0.1**
KARY	**Karystos**	**1.98**	**178**	P	**Pn**	08 21 52.2	**-0.1**
MAKR	**Makrakomi, Fth**	**1.99**	**240**	P	**Pn**	08 21 53.3	**+0.9**
MAKR	**Makrakomi, Fth**	**1.99**	**240**	P	**Pn**	08 21 53.3	**+0.9**
VIL2	**Platees**	**1.99**	**205**	P	**Pn**	08 21 52.7	**+0.3**
KZN	**Kozani**	**2.00**	**279**	P	**Pn**	08 21 53.4	**+0.8**
UKOP	**Uzunkopru-Edir**	**2.06**	**57**	PN	**Pn**	08 21 53.7	**+0.3**
KKB	**Krupnik**	**2.08**	**333**	P	**Pn**	08 21 54.4	**+0.7**
ATHU	**Athens Univers**	**2.09**	**192**	P	**Pn**	08 21 53.6	**-0.3**
CHOS	**Chios island**	**2.10**	**140**	P	**Pn**	08 21 54.6	**+0.6**
PLD	**Plovdiv**	**2.10**	**7**	PN	**Pn**	08 21 54.3	**+0.3**
EVR	**Evrytania**	**2.25**	**242**	P	**Pn**	08 21 56.7	**+0.5**
EVR	**Evrytania**	**2.25**	**242**	P	**Pn**	08 21 56.4	**+0.2**
ANX	**Ano Chora**	**2.36**	**234**	P	**Pn**	08 21 58.3	**+0.7**
ANX	**Ano Chora**	**2.36**	**234**	P	**Pn**	08 21 57.4	**-0.2**
KALE	**Kalithea**	**2.36**	**227**	P	**Pn**	08 21 57.9	**+0.3**
FNA	**Florina**	**2.40**	**290**	PN	**Pn**	08 21 59.6	**+1.5**
KLV	**Kalavryta, Ach**	**2.61**	**222**	P	**Pn**	08 22 01.3	**+0.2**
DID	**Didima**	**2.65**	**199**	P	**Pn**	08 22 01.6	**+0.0**
VTS	**Vitosha**	**2.73**	**342**	*e*Pn	**Pn**	08 22 04.1	**+1.3**
VTS				*e*Sn	**Sn**	08 22 34.8	**-0.9**
VTS	**Vitosha**	**2.73**	**342**	⇑P	**Pn**	08 22 04.3	**+1.5**
VTS				⇑S	**Sn**	08 22 35.5	**-0.3**
VTS	**Vitosha**	**2.73**	**342**	P	**Pn**	08 22 04.0	**+1.3**
BOSS	**Bosilegrad**	**2.85**	**331**	*e*Pn	**Pn**	08 22 05.6	**+1.3**
BOSS				*e*Sn	**Sn**	08 22 38.1	**-0.4**
APE	**Apeiranthos**	**3.09**	**162**	⇑P	**Pn**	08 22 10.5	**+2.9**
APE				⇑S	**Sn**	08 22 42.6	**-1.8**
ELND	**Elena**	**3.13**	**21**	⇑P	**Pn**	08 22 08.3	**+0.2**
ELND				⇑S	**Sn**	08 22 45.0	**-0.3**
PLVB	**Pleven**	**3.37**	**3**	⇑P	**Pn**	08 22 12.6	**+1.2**
BARS	**Barje**	**3.38**	**327**	*e*Pn	**Pn**	08 22 12.7	**+1.1**
BARS				*e*Sn	**Sn**	08 22 51.7	**0.0**
SZH	**Strazhica**	**3.46**	**20**	P	**Pn**	08 22 13.2	**+0.6**
ZAPS	**Zavoj**	**3.50**	**339**	*e*Pn	**Pn**	08 22 15.2	**+2.0**
ZAPS				*e*Sn	**Sn**	08 22 54.0	**-0.5**
RAZG	**Razgrad**	**3.90**	**24**	⇓P	**Pn**	08 22 19.2	**+0.5**
SELS	**Selova**	**4.01**	**324**	*e*Pn	**Pn**	08 22 20.7	**+0.4**
SELS				*e*Sn	**Sn**	08 23 03.5	**-3.7**
ZAGS	**Zajecar**	**4.11**	**338**	*e*Pn	**Pn**	08 22 21.7	**+0.1**
ZAGS				*e*Sn	**Sn**	08 23 07.8	**-1.7**
BOVS	**Bovan**	**4.12**	**332**	*e*Pn	**Pn**	08 22 23.9	**+2.2**
COPA	**Copaceanca**	**4.17**	**9**	⇑P	**Pg**	08 22 39.4	**+0.5**
SJES	**Sjenica**	**4.61**	**316**	*e*Pn	**Pn**	08 22 27.6	**-1.0**
GRUS	**Gruza**	**4.72**	**326**	*e*Pn	**Pn**	08 22 30.3	**+0.3**
IVAS	**Ivanjica**	**4.74**	**320**	*e*Pn	**Pn**	08 22 31.1	**+0.8**
ICOR	**Ion Corvin**	**4.83**	**31**	⇓P	**Pn**	08 22 32.6	**+1.1**
TRUS	**Trudelj**	**5.12**	**326**	*e*Pn	**Pn**	08 22 36.2	**+0.7**
MDVR	**Moldovita**	**5.15**	**339**	⇑P	**Pn**	08 22 36.3	**+0.4**
DIVS	**Divibare**	**5.21**	**323**	*e*Pn	**Pn**	08 22 37.2	**+0.4**
ARR	**Arges**	**5.35**	**2**	⇓P	**Pn**	08 22 39.9	**+1.2**
HARR	**Harsova**	**5.37**	**28**	⇓P	**Pn**	08 22 40.2	**+1.3**
VOIR		**5.44**	**5**	⇑P	**Pn**	08 22 41.7	**+1.8**
LOT	**Lotru**	**5.45**	**356**	⇑P	**Pn**	08 22 41.2	**+1.2**
MLR	**Muntele Rosu**	**5.60**	**12**	⇑P	**Pn**	08 22 43.1	**+1.0**
CFR	**Carcaliu**	**5.87**	**27**	⇓P	**Pn**	08 22 46.0	**+0.3**
BZS	**Buzias**	**5.95**	**341**	⇑P	**Pn**	08 22 47.3	**+0.5**
PLOR	**Plostina**	**6.07**	**15**	⇑P	**Pn**	08 22 49.3	**+0.8**
VRI	**Vrincioaia**	**6.10**	**16**	⇑P	**Pn**	08 22 50.5	**+1.5**
MDB	**Medias**	**6.12**	**0**	⇑P	**Pn**	08 22 51.0	**+1.7**
RICI	**Ricice**	**6.42**	**305**	P	**Pn**	08 22 56.4	**+3.1**
TESR	**Tescani**	**6.71**	**14**	⇓P	**Pn**	08 22 58.6	**+1.4**
BIZ	**Bicaz**	**7.04**	**10**	⇑P	**Pn**	08 23 03.2	**+1.4**
KIJV	**Kijevo**	**7.13**	**307**	*i* P	**Pn**	08 23 04.8	**+1.7**
ZIRJ	**Zirje**	**7.45**	**302**	*i* P	**Pn**	08 23 08.4	**+1.0**
DUGI	**Dugi Otok**	**7.98**	**303**	*i* P	**Pn**	08 23 18.1	**+3.4**
SORM	**Soroca**	**8.61**	**18**	⇑P	**Pn**	08 23 23.4	**+0.1**
VYHS	**Vyhne**	**9.35**	**337**	*e*PN	**Pn**	08 23 31.8	**-1.7**
VYHS				*e*PG		08 23 43.8	

PRU ***31*** *08:22:37.1±0.0,51°.46N×16°.10E,h0km*
VIE ***31*** *08:22:38.6±0.9,51°.33N×16°.70E,h0km,mb1.9/3,ml3.0/4, Error ellipse: s-maj=10.2km s-min=5.7km az=103.0 34 km NW of Wroclaw Suspected Mining induced.*
ISC 31 08:22:35.2±1.0,**51°.54N**±0°.04×**16°.09E**±0°.03,**h0**km,**n25,**
σ1ᵍ**08**/50,**Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CHVC	**Chvalec**	**0.95**	**182**	*e*PG		**Pg**	08 22 53.7	**+0.3**
CHVC				*e*SG		**Sg**	08 23 05.7	**-0.1**
	comp=Z,55nm,0.3s							
OSTC	**Ostas**	**0.99**	**175**	*e*PG		**Pg**	08 22 54.0	**-0.1**
OSTC				*e*SG		**Sg**	08 23 06.9	**0.0**
	comp=Z,84nm,0.4s							
UPC	**Upice**	**1.03**	**183**	*e*PG		**Pg**	08 22 54.9	**-0.1**
UPC				*e*SG		**Sg**	08 23 07.8	**-0.6**
	comp=Z,163nm,0.5s							
DPC	**Dobruska-Polom**	**1.20**	**173**	*e*PG		**Pg**	08 22 57.5	**-0.7**
DPC				*e*SG		**Sg**	08 23 12.6	**-1.1**
	comp=Z,34nm,0.2s							
PVCC	**Panska Ves**	**1.40**	**224**	*e*PG		**Pn**	08 23 02.0	**0.0**
PVCC				*e*SG		**Sn**	08 23 20.7	**-0.4**
	comp=Z,208nm,0.4s							
BRG	**Berggiesshubel**	**1.51**	**245**	PN		**Pn**	08 23 03.7	**+0.2**
BRG				PG		**Pb**	08 23 05.2	**+1.1**
BRG				SG		**Sn**	08 23 24.8	**+0.9**
	99nm,0.3s							
KRLC	**Kraliky**	**1.53**	**163**	*e*PG		**Pn**	08 23 03.8	**0.0**
KRLC				*e*SG		**Sg**	08 23 23.4	**-0.9**
	comp=Z,46nm,0.6s							
PRA	**Prague**	**1.81**	**216**	*e*SG		**Sg**	08 23 32.9	**-0.4**
	comp=Z,14nm,0.5s							
GOPC	**GO Pecny, Ondr**	**1.83**	**208**	*e*PG		**Pb**	08 23 08.9	**-0.6**
GOPC				*e*SG		**Sb**	08 23 32.9	**0.0**
	comp=Z,24nm,0.6s							
PRU	**Pruhonice**	**1.84**	**213**	*e*PG		**Pb**	08 23 09.4	**-0.3**
PRU				*e*SG		**Sg**	08 23 34.0	**-0.2**
	comp=Z,34nm,0.4s							
CLL	**Collm**	**1.95**	**264**	*e*PN		**Pn**	08 23 11.0	**-0.6**
CLL				*e*Pg		**Pg**	08 23 13.0	**+0.4**
CLL				*i* Sg		**Sg**	08 23 40.0	**+2.2**
	comp=Z,26nm,0.5s							
MORC	**Moravsky Berou**	**1.99**	**152**	*e*PN		**Pn**	08 23 09.3	**-0.9**
MORC				*e*SG		**Sn**	08 23 36.6	**+0.8**
OKC	**Ostrava-Krasne**	**2.15**	**142**	*e*PG		**Pb**	08 23 15.3	**+0.4**
OKC				*e*SG		**Sb**	08 23 43.2	**+1.1**
	comp=Z,31nm,0.5s							
VRAC	**Vranov**	**2.25**	**172**	*e*PN		**Pn**	08 23 14.5	**+0.7**
VRAC				*e*SG		**Sb**	08 23 44.8	**-0.5**
TREC	**Trest**	**2.28**	**190**	*e*SG		**Sb**	08 23 46.6	**+0.6**
	comp=Z,23nm,0.2s							
PBCC	**Pribram**	**2.29**	**217**	*e*PG		**Pb**	08 23 17.4	**0.0**
PBCC				*e*SG		**Sg**	08 23 48.9	**+0.3**
KRUC	**Moravsky**	**2.49**	**175**	*e*PN		**Pn**	08 23 17.0	**0.0**
KRUC				*e*SG		**Sb**	08 23 53.3	**+1.4**
NKC	**Novy Kostel**	**2.65**	**242**	*e*PG		**Sg**	08 23 25.6	**-0.5**
NKC				*e*SG		**Sg**	08 24 00.5	**+0.1**
	comp=Z,30nm,0.3s							
KHC	**Kasperske Hory**	**2.90**	**215**	*e*PN		**Pn**	08 23 23.1	**+0.4**
KHC				*e*PG		**Pb**	08 23 28.7	**+0.9**
KHC				*e*SN		**Sn**	08 23 56.5	**-1.7**
KHC				*e*SG		**Sg**	08 24 06.7	**-1.6**
	comp=Z,19nm,0.5s							
LANS	**Liptovska Anna**	**3.22**	**137**	*e*PG		**Pg**	08 23 39.4	**+2.4**
LANS				*e*SG		**Sg**	08 24 17.8	**-0.9**
MODS	**Modra-Piesok**	**3.26**	**166**	*e*SG		**Sg**	08 24 18.6	**-1.3**
CONA	**Conrad Observa**	**3.62**	**182**	*e*Pn		**Pn**	08 23 33.7	**+1.1**
	comp=Z,0.7nm,0.2s							
CONA				Sg		**Sg**	08 24 30.6	**-0.8**
	comp=Z,20nm,0.5s							
BSD	**Bornholm Skovb**	**3.65**	**349**	*i* P		**Pn**	08 23 32.8	**-0.1**
BSD				*i* S		**Sn**	08 24 13.8	**-2.9**
MOA	**Molln**	**3.88**	**199**	*e*Pn		**Pn**	08 23 36.7	**+0.6**
	comp=Z,1.0nm,0.2s							
MOA				*e*Sg		**Sg**	08 24 38.3	**-1.4**
	comp=Z,6.6nm,0.3s							
ARSA	**Arzberg**	**4.31**	**185**	Sg		**Sg**	08 24 50.4	**-3.2**
	comp=Z,8.9nm,0.6s							

IDC ***31*** *08:32:41.2±1.6,9°.98N×119°.87E,h0km,mb3.7/3, mb1 3.9/3,mb1mx3.4/47,mbtmp3.7/3,Error ellipse: s-maj=413.7km s-min=27.7km az=65.0*
NEIC ***31*** *08:32:43.7±0.8,9°.95N±0°.08×119°.69E±0°.10,h15km±5km, mb4.6/8,Error ellipse: s-maj=15.8km s-min=8.8km az=57.0*
ISC 31 08:32:46.5±1.2,**9°.9N**±0°.2×**119°.7E**±0°.1,**h35**km,**n14,**
σ1ᵍ**13**/14,**mb4.4/7,Sulu Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KKM	**Kota Kinabalu**	**5.13**	**222**	Pn		**Pn**	08 34 01.3	**+0.4**
DAV	**Davao City (W)**	**6.48**	**115**	Pn		**Pn**	08 34 19.0	**-0.3**
SBUM	**Sibu**	**10.46**	**226**	Pn		**Pn**	08 35 13.8	**-0.3**
FAKI	**Fak Fak**	**17.85**	**135**	P		**Pn**	08 36 51.2	**-1.0**
WB0	**Warramunga Arr**	**32.84**	**154**	P		**P**	08 39 17.4	**+0.3**
WB0				IAmb		IAmb	08 39 20.7	
	comp=Z,8.0nm,1.4s							
WRAB	**Tennant Creek**	**32.97**	**154**	P		**P**	08 39 18.4	**+0.2**
WRAB				IAmb		IAmb	08 39 33.9	
	comp=Z,10nm,1.4s							
WRA	**Warramunga Arr**	**32.97**	**154**	P		**P**	08 39 18.6	**+0.4**
	comp=Z,0.6nm,0.5s,baz=336,slow=9.5,SNR=10							
WB2	**Warramunga Arr**	**32.98**	**154**	P		**P**	08 39 18.8	**+0.6**
WB2				IAmb		IAmb	08 39 23.0	
	comp=Z,10nm,1.3s							
WR0	**Warramunga Arr**	**33.07**	**154**	P		**P**	08 39 19.5	**+0.4**
COEN	**Coen**	**33.24**	**135**	P		**P**	08 39 21.6	**+1.0**
COEN				IAmb		IAmb	08 39 25.8	
	comp=Z,14nm,1.4s							
ASAR	**Alice Springs**	**36.13**	**158**	P		**P**	08 39 45.0	**-0.6**
	comp=Z,0.3nm,0.3s,baz=331,slow=9.9,SNR=11							
FORT	**Forrest**	**41.23**	**169**			**P**	08 40 30.9	**+2.8**
NWAO	**Narrogin (SRO)**	**42.64**	**183**	P		**P**	08 40 38.0	**-1.6**
ZALV	**Zalesovo Beam**	**52.01**	**335**	P		**P**	08 41 52.2	**-0.1**
	comp=Z,0.8nm,0.6s,baz=140,slow=7.5,SNR=3.7							

JMA 31 08:36:06.8±0.2,**24°.89N**×**123°.26E,h28**km,**M1.2, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YOJ	**Yonaguni jima**	**0.48**	**208**	P		**Pb**	08 36 16.5	**-0.4**
YOJ				*e*S		**Sb**	08 36 23.7	**0.0**
YOJ	**Yonaguni jima**	**0.48**	**208**	P		**Pb**	08 36 16.5	**-0.3**
JYNG	**Yonagunijimaku**	**0.52**	**213**	P		**Pb**	08 36 17.3	**-0.2**
IRIF	**Iriomote-Funau**	**0.70**	**142**	P		**Pb**	08 36 20.1	**-0.3**
IRIF				*e*S		**Sb**	08 36 29.1	**-0.6**
JKRS	**Kuro-shima**	**0.94**	**133**	P		**Pn**	08 36 24.1	**-0.1**
JKRS				*e*S		**Sb**	08 36 35.9	**-0.7**
JIJ	**Ishigaki jima**	**0.96**	**123**	P		**Pn**	08 36 24.2	**-0.2**
JIJ				S		**Sn**	08 36 35.6	**-1.5**
HATJ	**Hateruma jima**	**0.97**	**149**	*e*S		**Sn**	08 36 36.0	**-1.3**
JISG	**Ishigakijimahi**	**1.00**	**107**	S		**Sn**	08 36 36.9	**-1.3**

INET ***31*** *08:39:39.2,11°.36N×86°.92W,h16km,ML3.4*
IDC ***31*** *08:39:40.9±2.5,11°.32N×86°.90W,h52km±29km,mb3.2/5, mb1 3.7/7,mb1mx3.4/40,mbtmp3.5/7,ML3.5/2,Error ellipse: s-maj=63.0km s-min=17.1km az=33.0*
SNET ***31*** *08:39:40.2±0.7,11°.19N×87°.36W,h35km±999km,ML3.5*
UCR ***31*** *08:39:40.3±0.8,11°.21N×87°.32W,h35km±999km,ML3.4*
ISC 31 08:39:40.3±1.1,**11°.3N**±0°.1×**87°.0W**±0°.1,**h49**km,**n22,**
σ1ᵍ**31**/32,**mb3.6/5,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LCND	**La Caada**	**2.21**	**337**	*e*P		**Pn**	08 40 13.7	**-0.8**
LCND				*e*S		**Sn**	08 40 40.2	**-0.4**
LCND				IAML			08 40 46.6	
	comp=Z,516nm,0.4s							
LCND	**La Caada**	**2.21**	**337**	*e*P		**Pn**	08 40 13.7	**-0.8**
LCND				*e*S		**Sn**	08 40 40.2	**-0.4**
LCND				IAML			08 40 46.6	
	comp=Z,516nm,0.4s							
JTS	**Las Juntas de**	**2.25**	**115**	P		**Pn**	08 40 14.3	**-0.8**
	comp=Z,5.9nm,0.3s,baz=15,slow=13,SNR=56							
JTS				S		**Sn**	08 40 40.9	**-0.8**
	comp=Z,17nm,0.3s,baz=352,slow=20,SNR=5.2							
JUCU	**Jucuarįn**	**2.32**	**329**	*e*P		**Pn**	08 40 15.2	**-0.8**
JUCU				*e*S		**Sn**	08 40 42.0	**-1.4**
JUCU				IAML			08 40 55.9	
	comp=Z,307nm,0.4s							
JUCU	**Jucuarįn**	**2.32**	**329**	*e*P		**Pn**	08 40 15.2	**-0.8**
JUCU				*e*S		**Sn**	08 40 42.0	**-1.4**
JUCU				IAML			08 40 55.9	
	comp=Z,307nm,0.4s							
PACA	**Pacayal**	**2.54**	**330**	*e*P		**Pn**	08 40 18.6	**-0.5**
PACA	**Pacayal**	**2.54**	**330**	*e*P		**Pn**	08 40 18.6	**-0.5**
FAGO	**Alcalda de S**	**2.64**	**336**	*e*P		**Pn**	08 40 19.6	**-0.9**
FAGO				*e*S		**Sn**	08 40 51.5	**+0.2**
FAGO	**Alcalda de S**	**2.64**	**336**	*e*P		**Pn**	08

LCND	**La Caada**	**2.29**	**320**	*e*P		**Pn**	**09 11 33.2**	**+0.4**
LCND				*e*S		**Sn**	**09 12 00.5**	**+0.4**
LCND				IAML			09 12 06.4	
	comp=Z,145nm,0.3s							
LCND	**La Caada**	**2.29**	**320**	*e*P		**Pn**	**09 11 33.2**	**+0.4**
LCND				*e*S		**Sn**	**09 12 00.5**	**+0.4**
LCND				IAML			09 12 06.4	
	comp=Z,145nm,0.3s							
JUCU	**Jucuarın**	**2.49**	**313**	*e*P		**Pn**	**09 11 36.0**	**+0.4**
JUCU				*e*S		**Sn**	**09 12 04.9**	**-0.2**
JUCU				IAML			09 12 07.9	
	comp=Z,169nm,0.3s							
JUCU	**Jucuarın**	**2.49**	**313**	*e*P		**Pn**	**09 11 36.0**	**+0.4**
JUCU				*e*S		**Sn**	**09 12 04.9**	**-0.2**
JUCU				IAML			09 12 07.9	
	comp=Z,169nm,0.3s							
PACA	**Pacayal**	**2.69**	**315**	*e*P		**Pn**	**09 11 39.6**	**+1.2**
PACA	**Pacayal**	**2.69**	**315**	*e*P		**Pn**	**09 11 39.6**	**+1.2**
FAGO	**Alcalda de S**	**2.71**	**322**⇓	*e*P		**Pn**	**09 11 39.3**	**+0.7**
FAGO	**Alcalda de S**	**2.71**	**322**⇓	*e*P		**Pn**	**09 11 39.3**	**+0.7**
COEB	**Comit de Eme**	**2.86**	**313**	*e*P		**Pn**	**09 11 41.1**	**+0.5**
COEB				*e*S		**Sn**	**09 12 13.4**	**-0.7**
COEB	**Comit de Eme**	**2.86**	**313**	*e*P		**Pn**	**09 11 41.1**	**+0.5**
COEB				*e*S		**Sn**	**09 12 13.4**	**-0.7**
LFRS	**El Faro**	**3.33**	**308**	*e*P		**Pn**	**09 11 46.9**	**-0.2**
LFRS	**El Faro**	**3.33**	**308**	*e*P		**Pn**	**09 11 46.9**	**-0.2**
LFRS				*e*S		**Sn**	**09 12 22.9**	**-2.8**
MTO3	**Montecristo**	**4.06**	**314**	*e*P		**Pn**	**09 11 57.5**	**+0.5**
MTO3	**Montecristo**	**4.06**	**314**	*e*P		**Pn**	**09 11 57.5**	**+0.5**

*IDC **31** 09:17:29.0±1.1,19˚.69S×70˚.60W,h0km,mb3.8/4, mb1 4.2/6,mb1mx3.8/28,mbtmp4.1/6,ML4.3/2,MS3.3/4, Ms1 3.3/4,ms1mx3.0/38,Error ellipse: s-maj=36.2km s-min=21.9km az=89.0*

*NEIC **31** 09:17:32.8±1.5,19.81S±0.02×70.56W±0.04,h27km±5km, mb4.1/5,ML4.0(GUC),Error ellipse: s-maj=5.9km s-min=1.2km az=101.0*

*SJA **31** 09:17:32.2±1.1,19˚.78S×70˚.52W,h37km±4km,ML4.1, MW4.2*

*GUC **31** 09:17:34.3±0.6,19˚.79S×70˚.50W,h35km±1km,ML4.1*

ISC 31 09:17:30.8±0.9,19°81S±0'.02×70°56W±0'.04,h14km±5km, n85,σ1°37/106,mb4.0/5,12C-4D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.46**	**63**	*i* P	**Pn**	**09 17 42.4**	**-0.7**
PSGC				*i* S	**Sb**	**09 17 49.0**	**+1.6**
PSGCX	**Pisagua**	**0.46**	**63**		**Pn**	**09 17 42.3**	**-0.7**
PSGCX			Sg		**Sb**	**09 17 48.8**	**+1.4**
PSGCX	**Pisagua**	**0.46**	**63**	*i* P	**Pn**	**09 17 42.4**	**-0.7**
PSGCX				*i* S	**Sb**	**09 17 48.9**	**+1.4**
PSGCX				IAML		09 17 50.8	
	comp=Z,8μm,0.5s						
TA02	**Huaiquique**	**0.61**	**139**⇑	*i* P	**Pn**	**09 17 44.9**	**-0.1**
TA02				*i* S	**Sn**	**09 17 53.6**	**-1.0**
TA02				IAML		09 17 54.0	
	comp=N,27μm,0.1s						
TA01	**Diego Aracena**	**0.83**	**155**⇑	*i* P	**Pn**	**09 17 48.4**	**+0.3**
TA01				*i* S	**Sn**	**09 17 59.5**	**-0.7**
TA01				IAML		09 18 00.4	
	comp=E,6μm,0.5s						
TA01	**Diego Aracena**	**0.83**	**155**		**Pn**	**09 17 48.4**	**+0.3**
TA01			Sg		**Sn**	**09 17 59.4**	**-0.7**
PB11	**IPOC Station P**	**0.85**	**87**	*e*P	**Pn**	**09 17 48.5**	**+0.1**
PB11				*i* S	**Sn**	**09 17 59.1**	**-1.6**
PB11				IAML		09 18 01.0	
	comp=N,20μm,0.4s						
PB11	**IPOC Station P**	**0.85**	**87**		**Pn**	**09 17 48.6**	**+0.1**
PB11			Sg		**Sn**	**09 17 59.4**	**-1.3**
PB11	**IPOC Station P**	**0.85**	**87**	*i* P	**Pn**	**09 17 48.7**	**+0.3**
PB11				*i* S	**Sn**	**09 17 59.0**	**-1.8**
PB11				IAML		09 18 00.5	
	comp=Z,10μm,0.3s						
PATCX	**Punta Patache**	**1.08**	**159**⇑	*i* P	**Pn**	**09 17 52.2**	**+0.7**
PATCX				*i* S	**Sn**	**09 18 06.9**	**+0.6**
PATCX				IAML		09 18 15.0	
	comp=E,4μm,0.5s						
PATCX	**Punta Patache**	**1.08**	**159**		**Pn**	**09 17 52.3**	**+0.7**
PATCX					**Sn**	**09 18 06.4**	**+0.1**
PATCX	**Punta Patache**	**1.08**	**159**	*i* P	**Pn**	**09 17 52.3**	**+0.7**
PATCX				*i* S	**Sn**	**09 18 06.2**	**-0.1**
PATCX				IAML		09 18 08.9	
	comp=Z,2μm,0.3s						
MNMC	**Minye Minye**	**1.13**	**54**⇑	*e*P	**Pn**	**09 17 53.0**	**+0.6**
MNMC				*i* S	**Sn**	**09 18 07.6**	**-0.2**
MNMC				IAML		09 18 10.7	
	comp=N,11μm,0.4s						
MNMC	**Minye Minye**	**1.13**	**54**		**Pn**	**09 17 53.3**	**+0.9**
MNMC					**Sn**	**09 18 08.0**	**+0.1**
MNMCX	**Minye Minye**	**1.13**	**54**	*i* P	**Sn**	**09 17 53.4**	**+0.9**
MNMCX				*i* S	**Sn**	**09 18 08.2**	**+0.3**
MNMCX				IAML		09 18 13.5	
	comp=Z,4μm,0.3s						
PB12	**IPOC Station P**	**1.21**	**10**⇑	*i* P	**Pn**	**09 17 54.1**	**+0.8**
PB12				*i* S	**Sn**	**09 18 09.7**	**+0.2**
PB12				IAML		09 18 12.7	
	comp=E,2μm,0.4s						
PB12	**IPOC Station P**	**1.21**	**10**		**Pn**	**09 17 54.1**	**+0.8**
PB12	**IPOC Station P**	**1.21**	**10**	*i* P	**Pn**	**09 17 54.1**	**+0.8**
PB12				*i* S	**Sn**	**09 18 09.4**	**-0.1**
PB12				IAML		09 18 11.8	
	comp=Z,933nm,0.5s						
GO01	**Chusmiza**	**1.29**	**84**⇓	*i* P	**Pn**	**09 17 56.0**	**+1.2**
GO01				*i* S	**Sn**	**09 18 12.5**	**+0.4**
GO01	**Chusmiza**	**1.29**	**84**		**Pn**	**09 17 56.0**	**+1.2**
PB08	**IPOC Station P**	**1.36**	**104**⇓	*i* P	**Pb**	**09 17 56.8**	**+0.5**
PB08				*i* S	**Sn**	**09 18 14.2**	**+0.5**
PB08				IAML		09 18 17.6	
	comp=E,4μm,0.3s						
PB08	**IPOC Station P**	**1.36**	**104**		**Pb**	**09 17 56.8**	**+0.5**
PB08			Sn		**Sn**	**09 18 14.0**	**+0.2**
PB08	**IPOC Station P**	**1.36**	**104**	*i* P	**Pb**	**09 17 56.9**	**+0.6**
PB08				*i* S	**Sn**	**09 18 13.9**	**+0.2**
PB08				IAML		09 18 17.9	
	comp=Z,3μm,0.4s						
PB01	**IPOC Station P**	**1.59**	**141**⇓	*i* P	**Pg**	**09 18 00.0**	**-1.3**
PB01				*i* S	**Sg**	**09 18 19.9**	**-2.1**
PB01				IAML		09 18 23.7	
	comp=E,3μm,0.3s						
PB01	**IPOC Station P**	**1.59**	**141**		**Pg**	**09 18 00.1**	**-1.3**
PB01			Sn		**Sg**	**09 18 19.7**	**-2.3**
PB02	**IPOC Station P**	**1.63**	**158**⇑	*i* P	**Pg**	**09 18 00.7**	**-1.3**
PB02	**IPOC Station P**	**1.63**	**158**	*i* P	**Pg**	**09 18 00.8**	**-1.3**
PB02				*i* S	**Sb**	**09 18 21.2**	**+0.1**
PB02				IAML		09 18 24.7	
	comp=Z,5μm,0.4s						
PB07	**IPOC Station P**	**2.01**	**162**⇑	*i* P	**Pb**	**09 18 06.1**	**-1.1**
PB07				*i* S	**Sb**	**09 18 31.8**	**-0.4**
PB07				IAML		09 18 39.2	
	comp=E,2μm,0.5s						
PB07	**IPOC Station P**	**2.01**	**162**		**Pb**	**09 18 06.2**	**-1.1**
PB07	**IPOC Station P**	**2.01**	**162**	*i* P	**Pb**	**09 18 06.2**	**-1.1**
PB07				*i* S	**Sn**	**09 18 31.0**	**+1.5**
PB07				IAML		09 18 43.5	
	comp=Z,2μm,0.4s						
PB09	**IPOC Station P**	**2.33**	**148**⇑	*i* P	**Pb**	**09 18 10.8**	**-1.9**
PB09				*i* S	**Sn**	**09 18 39.2**	**+1.8**
PB09				IAML		09 18 48.6	
	comp=N,2μm,0.7s						
PB09	**IPOC Station P**	**2.33**	**148**		**Pb**	**09 18 11.7**	**-1.0**
PB09	**IPOC Station P**	**2.33**	**148**	*i* P	**Pb**	**09 18 11.7**	**-1.0**
PB09				*i* S	**Sb**	**09 18 41.5**	**+0.1**
PB09				IAML		09 18 48.2	
	comp=Z,4μm,0.5s						
PB03	**IPOC Station P**	**2.35**	**162**⇑	*i* P	**Pn**	**09 18 10.8**	**+1.7**
PB03				*i* S	**Sn**	**09 18 39.5**	**+1.5**
PB03				IAML		09 18 47.2	
	comp=E,1μm,0.6s						
PB03	**IPOC Station P**	**2.35**	**162**	*i* P	**Pn**	**09 18 10.9**	**+1.7**
PB03				IAML		09 18 50.4	
	comp=Z,1μm,0.6s						
PB04	**IPOC Station P**	**2.54**	**171**⇓	*i* P	**Pn**	**09 18 12.6**	**+0.9**
PB04				IAML		09 19 00.2	
	comp=N,1μm,0.6s						
PB04	**IPOC Station P**	**2.54**	**171**		**Pn**	**09 18 12.7**	**+0.9**
PB04	**IPOC Station P**	**2.54**	**171**	*i* P	**Pn**	**09 18 12.6**	**+0.9**
PB04				IAML		09 18 58.0	
	comp=Z,948nm,1.3s						
PB06	**IPOC Station P**	**3.03**	**163**⇑	*i* P	**Pn**	**09 18 19.5**	**+1.1**
PB06				IAML		09 19 12.3	
	comp=E,723nm,0.6s						
PB06	**IPOC Station P**	**3.03**	**163**		**Pn**	**09 18 19.6**	**+1.1**
PB06	**IPOC Station P**	**3.03**	**163**	*i* P	**Pn**	**09 18 19.5**	**+1.1**
PB06				IAML		09 19 10.1	
	comp=Z,454nm,0.8s						
PB05	**IPOC Station P**	**3.05**	**174**⇑	*i* P	**Pn**	**09 18 19.0**	**+0.4**
PB05				IAML		09 19 12.3	
	comp=N,576nm,0.6s						
PB05	**IPOC Station P**	**3.05**	**174**	*i* P	**Pn**	**09 18 19.1**	**+0.4**
PB05				IAML		09 19 17.1	
	comp=Z,541nm,0.6s						
LVC	**Limon Verde**	**3.18**	**151**	Pn	**Pn**	**09 18 23.6**	**+2.9**
	comp=Z,16nm,0.3s,baz=330,slow=13,SNR=89						
LVC				Sn	**Sb**	**09 19 02.8**	**-3.4**
	comp=Z,30nm,0.3s,baz=295,slow=23,SNR=7.6						
LVC				LR	LR	09 19 44.7	
	comp=Z,245nm,18.7s,baz=304,slow=41						
LVC	**Limon Verde**	**3.18**	**151**⇑	*i* P	**Pn**	**09 18 23.5**	**+2.7**
LVC				*i* S	**Sn**	**09 19 01.2**	**+2.4**
LVC	**Limon Verde**	**3.18**	**151**	*i* P	**Pn**	**09 18 23.7**	**+2.9**
LVC				IAML		09 19 18.9	
	comp=Z,197nm,0.5s						
PB15	**IPOC Station P**	**3.53**	**164**	*e*P	**Pn**	**09 18 26.6**	**+1.2**
PB15	**IPOC Station P**	**3.53**	**164**		**Pn**	**09 18 26.6**	**+1.2**
PB15	**IPOC Station P**	**3.53**	**164**	*i* P	**Pn**	**09 18 26.4**	**+1.0**
PB15				IAML		09 19 30.3	
	comp=Z,1μm,0.3s						
PB10	**IPOC Station P**	**3.69**	**180**	Pn	**Pn**	**09 18 24.6**	**-2.8**
PB10	**IPOC Station P**	**3.69**	**180**	*i* P	**Pn**	**09 18 27.2**	**-0.2**
PB10				IAML		09 19 48.8	
	comp=Z,105nm,0.7s						
LPAZ	**La Paz**	**4.19**	**34**	Pn	**Pb**	**09 18 41.3**	**-3.4**
	comp=Z,3.8nm,0.3s,baz=190,slow=2.7,SNR=35						
LPAZ				LR	LR	09 20 30.4	
	comp=Z,126nm,20.8s,baz=266,slow=44						
LPAZ	**La Paz**	**4.19**	**34**		**Pb**	**09 18 41.6**	**-3.2**
GO02	**Mina Guanaco**	**5.40**	**171**		**Pn**	**09 18 51.3**	**+0.1**
AC01	**Pan de Azucar**	**6.31**	**180**	Pn	**Pn**	**09 19 03.4**	**0.0**
AC02	**Maricunga**	**7.12**	**170**		**Pn**	**09 19 15.7**	**+0.7**
GO03	**Copiap**	**7.76**	**178**	Pn	**Pn**	**09 19 22.4**	**-0.9**
AC04	**Llanos de Chal**	**8.37**	**183**	Pn	**Pn**	**09 19 28.8**	**-3.0**
AC05	**El Transito**	**8.99**	**178**	Pn	**Pn**	**09 19 39.8**	**-0.6**
SIV	**San Ignacio**	**9.79**	**69**	Pn	**Pn**	**09 19 52.0**	**+0.7**
	comp=Z,5.3nm,0.3s,baz=274,slow=9.4,SNR=83						
SIV				LR	LR	09 24 28.2	
	comp=Z,122nm,20.4s,baz=272,slow=43						
CO01	**Juntas del Tor**	**10.13**	**178**	Pn	**Pn**	**09 19 55.7**	**-0.4**
BO02	**Sierra Bellavi**	**14.93**	**181**	P	**P**	**09 21 09.7**	**+2.7**
H03N1	**Juan Fernandez**	**15.49**	**207**	T	T	09 37 14.9	
	baz=32,slow=74,SNR=122						
H03N2	**Juan Fernandez**	**15.49**	**207**	T	T	09 36 50.6	
	baz=32,SNR=99						
H03N3	**Juan Fernandez**	**15.51**	**207**	T	T	09 37 33.5	
	baz=32,slow=74,SNR=101						
PLCA	**Paso Flores**	**20.86**	**180**	P	Pn	09 22 13.9	-0.9
	comp=Z,1.7nm,0.5s,baz=1.6,slow=14,SNR=7.7						
PLCA	**Paso Flores**	**20.86**	**180**	IAmb	IAmb	09 22 26.4	
	comp=Z,15nm,1.5s						
PTGA	**Pitinga**	**21.61**	**30**	P	**P**	**09 22 20.3**	**-0.2**
	comp=Z,2.0nm,0.3s,baz=218,slow=19,SNR=7.8						
PTGA	**Pitinga**	**21.61**	**30**	P	**P**	**09 22 19.9**	**-0.6**
NATX	**Nacogdoches**	**56.24**	**335**	P	**P**	**09 27 10.1**	**-0.6**
ETX02	**Prairie Street**	**56.27**	**336**	P	**P**	**09 27 09.9**	**-1.0**
SDCO	**Great Sand Dun**	**66.02**	**330**	P	**P**	**09 28 19.2**	**+2.0**
SDCO				IAmb	IAmb	09 28 19.3	
	comp=Z,1.2nm,0.7s						
QSPA	**South Pole Qui**	**70.37**	**180**	P	**P**	**09 28 45.9**	**+1.8**
QSPA				IAmb	IAmb	09 28 59.8	
	comp=Z,1.9nm,1.2s						
TORD	**Torodi Ar. Bea**	**78.26**	**71**	P	**P**	**09 29 29.8**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=253,slow=5.4,SNR=2.1						
TORD				pP	**PcP**	**09 29 37.1**	**-3.0**
	comp=Z,1.1nm,0.4s,baz=260,slow=4.7,SNR=4.9						
YKA	**Yellowknife Ar**	**89.09**	**341**	P	**P**	**09 30 25.3**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=140,slow=5.3,SNR=15						
YKA				pP	**sP**	**09 30 33.8**	**+2.7**
	comp=Z,0.7nm,0.7s,baz=139,slow=5.2,SNR=9.4						
RAO	**Raoul Island**	**94.69**	**237**	LR	LR	10 05 41.1	
	comp=Z,78nm,20.2s,baz=0.5,slow=30						
H11S2	**WAKE ISLAND Hyl**	**126.12**	**279**	T	T	11 55 47.3	
	baz=102,slow=75,SNR=45						
H11S1	**WAKE ISLAND Hyl**	**126.12**	**279**	T	T	11 55 51.5	
	baz=102,slow=75,SNR=29						
H11S3	**WAKE ISLAND Hyl**	**126.13**	**279**	T	T	11 55 49.5	
	baz=102,slow=75,SNR=35						
H11N3	**WAKE ISLAND Hyl**	**126.16**	**280**	T	T	11 56 01.1	
	baz=101,slow=74,SNR=32						
H11N2	**WAKE ISLAND Hyl**	**126.17**	**280**	T	T	11 56 02.2	
	baz=101,slow=74,SNR=36						
H11N1	**WAKE ISLAND Hyl**	**126.17**	**280**	T	T	11 56 03.3	
	baz=101,slow=74,SNR=27						
ASAR	**Alice Springs**	**130.64**	**210**	PKP	**PKPdf**	**09 36 42.2**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=126,slow=1.6,SNR=7.0						
WRA	**Warramunga Arr**	**133.57**	**213**	PKP	**PKPdf**	**09 36 48.1**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=144,slow=1.8,SNR=2.7						
MKAR	**Makanchi Array**	**145.12**	**33**	PKPbc	**PKPbc**	**09 37 07.7**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=304,slow=2.2,SNR=8.1						

*NEIC **31** 09:20:18.5±1.2,17˚.7S×0˚.2×178˚.4W±0˚.1,h603km±8km, mb4.1/21,Error ellipse: s-maj=26.9km s-min=13.2km az=161.0*

*IDC **31** 09:20:25.8±12.0,17˚.79S×178˚.66W,h700km±169km, mb3.2/10,mb1 3.4/10,mb1mx3.2/27,mbtmp4.3/10,Error ellipse: s-maj=55.5km s-min=38.7km az=52.0*

ISC 31 09:20:18.4±0.8,17°7S±0'.2×178°4W±0'.1,h600km,n34, σ0966/34,mb4.1/21,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.36**	**269**	P	**P**	**09 21 40.3**	**+0.5**
ARMA	**Armidale**	**30.03**	**239**	P	**P**	**09 25 40.9**	**+0.3**
ARMA				IAmb	IAmb	09 25 44.6	
	comp=Z,8.0nm,1.1s						
CTA	**Charters Tower**	**33.47**	**260**	P	**P**	**09 26 09.6**	**-0.2**
	comp=Z,3.3nm,0.6s,baz=98,slow=12,SNR=5.4						
CTAO	**Charters Tower**	**33.47**	**260**	P	**P**	**09 26 09.5**	**-0.2**
COEN	**Coen**	**37.09**	**270**	P	**P**	**09 26 40.7**	**+1.0**
STKA	**Stephens Creek**	**38.72**	**241**	P	**P**	**09 26 53.0**	**+0.3**
	comp=Z,2.5nm,0.5s,baz=90,slow=9.2,SNR=16						
STKA	**Stephens Creek**	**38.72**	**241**	P	**P**	**09 26 52.9**	**+0.3**
JAY	**Jayapura**	**42.83**	**286**	P	**P**	**09 27 26.4**	**+1.0**
	comp=Z,4.2nm,0.3s,baz=159,slow=5.1,SNR=5.7						
BBOO	**Buckleboo**	**43.49**	**241**	P	**P**	**09 27 30.1**	**-0.2**
WR0	**Warramunga Arr**	**44.47**	**259**	P	**P**	**09 27 37.2**	**-0.8**
WR0				IAmb	IAmb	09 27 50.3	
	comp=Z,11nm,1.4s						
WB0	**Warramunga Arr**	**44.62**	**260**	P	**P**	**09 27 38.6**	**-0.6**
WB0				IAmb	IAmb	09 27 41.1	
	comp=Z,9.2nm,1.2s						
WB2	**Warramunga Arr**	**44.64**	**259**	P	**P**	**09 27 38.5**	**-0.8**
WB2				IAmb	IAmb	09 27 39.4	
	comp=Z,5.9nm,0.7s						
WRAB	**Tennant Creek**	**44.65**	**259**	P	**P**	**09 27 38.6**	**-0.8**
WRAB				IAmb	IAmb	09 27 39.3	
	comp=Z,5.1nm,0.7s						
WRA	**Warramunga Arr**	**44.66**	**259**	P	**P**	**09 27 38.5**	**-0.9**
	comp=Z,2.4nm,0.4s,baz=92,slow=7.3,SNR=95						
AS31	**Alice Springs**	**44.83**	**254**	P	**P**	**09 27 40.6**	**-0.2**
AS31				IAmb	IAmb	09 27 41.5	
	comp=Z,5.8nm,0.5s						
ASAR	**Alice Springs**	**44.83**	**254**	P	**P**	**09 27 40.5**	**-0.3**
	comp=Z,22nm1,0.7s,baz=87,slow=8.6,SNR=388						
FORT	**Forrest**	**50.08**	**244**	P	**P**	**09 28 19.1**	**-0.7**
KNRA	**Kununurra**	**50.49**	**264**	P	**P**	**09 28 22.5**	**-0.5**
FITZ	**Fitzroy Crossi**	**53.05**	**260**	P	**P**	**09 28 40.8**	**-0.4**
FITZ				IAmb	IAmb	09 28 50.9	
	comp=Z,4.8nm,1.1s						
PSA00	**Pilbara Seismi**	**57.95**	**255**	P	**P**	**09 29 14.8**	**-0.2**
PSA00				IAmb	IAmb	09 29 15.5	
	comp=Z,28nm,1.4s						
MJAR	**Matsushiro Arr**	**67.73**	**323**	P	**P**	**09 30 17.0**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=138,slow=5.9,SNR=5.0						
QSPA	**South Pole Qui**	**72.36**	**180**	P	**P**	**09 30 44.5**	**+0.1**
QSPA				IAmb	IAmb	09 30 49.3	
	comp=Z,7.2nm,1.5s						
NVAR	**Mina Array Bea**	**79.28**	**44**	P	**P**	**09 31 23.2**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=226,slow=8.5,SNR=5.3						
MOD	**Modoc Plateau**	**79.93**	**40**	P	**P**	**09 31 26.9**	**+0.5**
J08A	**Circle Bar Ran**	**81.87**	**40**	P	**P**	**09 31 37.0**	**+0.7**
J08A				IAmb	IAmb	09 31 37.2	
	comp=Z,4.2nm,1.3s						
X16A	**Lo Mia Camp, P**	**82.06**	**50**	P	**P**	**09 31 37.1**	**-0.4**
U15A	**North Rim**	**82.39**	**48**	P	**P**	**09 31 39.3**	**0.0**
LENM	**Lemitar**	**85.26**	**52**	P	**P**	**09 31 52.2**	**-1.1**
ILAR	**Eielson Array**	**85.69**	**13**	P	**P**	**09 31 53.0**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=228,slow=4.7,SNR=4.1						
TX31	**Lajitas Ar. Si**	**85.89**	**58**	P	**P**	**09 31 57.3**	**+1.0**
TX31				IAmb	IAmb	09 31 57.7	
	comp=Z,3.3nm,0.8s						
TX32	**Lajitas Array**	**85.89**	**58**	P	**P**	**09 31 57.2**	**+0.9**
TXAR	**Lajitas Array**	**85.89**	**58**	P	**P**	**09 31 57.1**	**+0.8**
	comp=Z,1.3nm,0.8s,baz=220,slow=6.0,SNR=17						
PDAR	**Pinedale Array**	**87.21**	**43**	P	**P**	**09 32 02.0**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=243,slow=4.0,SNR=2.6						
VLC	**Villacollemand**	**152.59**	**346**		**PKPdf**	**09 39 00.1**	**-0.4**

*KRSC **31** 09:35:11.5±2.1,54˚.97N×165˚.61E,h47km±18km,ML5.0, FELT [III-IV] at Nikolskoe.*

*IDC **31** 09:35:12.2±0.6,55˚.09N×165˚.63E,h0km,mb4.3/30, mb1 4.5/33,mb1mx4.4/56,mbtmp4.4/33,ML4.0/3,MS3.6/28, Ms1 3.6/28,ms1mx3.4/70,Error ellipse: s-maj=16.1km s-min=9.8km az=167.0*

*NEIC **31** 09:35:13.3±1.8,55˚.02N±0˚.09×165˚.63E±0˚.10,h10km±1km, mb4.9/272,Error ellipse: s-maj=14.7km s-min=9.4km az=176.0*

*MOS **31** 09:35:15.3±0.8,55˚.04N×165˚.50E,h42km,mb4.8/44, MS3.6/4,Error ellipse: s-maj=5.0km s-min=4.3km az=63.1*

ISC 31 09:35:14.6±0.3,55°03N±0'.04×165°58E±0'.04,h20km±2km, n762,σ1°04/819,mb4.8/177,MS3.6/31,10C, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.29**	**52**	*e*P	**Pb**	**09 35 20.8**	**-0.3**
BKI				*e*S	**Sb**	**09 35 25.4**	**-0.1**
BKI	**Bering**	**0.29**	**52**	PN	**Pb**	**09 35 20.8**	**-0.3**
KBTR	**Krutoberegovo**	**1.96**	**308**	*e*P	**Pn**	**09 35 44.2**	**-2.4**
KBTR				*e*S	**Sn**	**09 36 07.9**	**-2.7**
KBTR	**Krutoberegovo**	**1.96**	**308**	PN	**Pn**	**09 35 44.2**	**-2.4**
KBTR				S	**Sn**	**09 36 07.9**	**-2.7**
KBG	**Krutoberegovo**	**2.04**	**308**	*e*P	**Pn**	**09 35 45.5**	**-2.2**
KBG				*e*S	**Sn**	**09 36 09.3**	**-3.2**
KBG	**Krutoberegovo**	**2.04**	**308**	PN	**Pn**	**09 35 45.5**	**-2.2**
KBG				S	**Sn**	**09 36 09.3**	**-3.2**
SMKR	**Semkarok**	**2.79**	**306**	*e*P	**Pn**	**09 35 57.7**	**-0.5**
SMKR				*e*S	**Sn**	**09 36 29.0**	**-2.2**
SMKR	**Semkarok**	**2.79**	**306**	PN	**Pn**	**09 35 57.7**	**-0.5**
SMKR				S	**Sn**	**09 36 29.0**	**-2.2**
ZLN	**Zelenaya**	**2.89**	**292**	*e*P	**Pn**	**09 36 00.2**	**+0.7**
ZLN				*e*S	**Sn**	**09 36 36.6**	**+3.0**
ZLN	**Zelenaya**	**2.89**	**292**	PN	**Pn**	**09 36 00.2**	**+0.7**
ZLN				S	**Sn**	**09 36 36.6**	**+3.0**
BDR	**Baidarnaya**	**2.91**	**304**	*e*P	**Pn**	**09 35 59.7**	**0.0**
BDR				*e*S	**Sn**	**09 36 34.4**	**+0.3**
BDR	**Baidarnaya**	**2.91**	**304**	PN	**Pn**	**09 35 59.7**	**0.0**
BDR				S	**Sn**	**09 36 34.4**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**2.92**	**290**	*e*P	**Pn**	**09 36 00.6**	**+0.6**
BZGR				*e*S	**Sn**	**09 36 34.8**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**2.92**	**290**	PN	**Pn**	**09 36 00.6**	**+0.6**
BZGR				S	**Sn**	**09 36 34.8**	**+0.3**
CIRR	**Tsirk**	**2.95**	**294**	*e*P	**Pn**	**09 36 00.6**	**+0.2**
CIRR				*e*S	**Sn**	**09 36 35.6**	**+0.4**
CIRR	**Tsirk**	**2.95**	**294**	PN	**Pn**	**09 36 00.6**	**+0.2**
CIRR				S	**Sn**	**09 36 35.6**	**+0.4**
LGNR	**Loginova**	**2.97**	**293**	*e*P	**Pn**	**09 36 01.5**	**+0.7**
LGNR				*e*S	**Sn**	**09 36 37.5**	**+1.6**
LGNR	**Loginova**	**2.97**	**293**	PN	**Pn**	**09 36 01.5**	**+0.7**
LGNR				S	**Sn**	**09 36 37.5**	**+1.6**
SRKR	**Sorokina**	**2.97**	**305**	*e*P	**Pn**	**09 36 00.4**	**-0.2**
SRKR				*e*S	**Sn**	**09 36 36.0**	**+0.4**
SRKR	**Sorokina**	**2.97**	**305**	PN	**Pn**	**09 36 00.4**	**-0.2**
SRKR				S	**Sn**	**09 36 36.0**	**+0.4**
TUMD	**Tumrok D**	**2.98**	**275**	*e*P	**Pn**	**09 36 01.1**	**+0.4**
TUMD				*e*S	**Sn**	**09 36 34.7**	**-1.1**
BZMR	**Bezymyannaya**	**3.03**	**289

PET comp=Z,900nm,15.0s MLR MLR
PET comp=Z,800nm,14.0s Pn Sn 09 37 13.1 -1.3
KRMR Karymshinskiy 4.92 246 *eP* **Pn 09 36 27.2 -0.1**
KRMR *eS* **Sn 09 37 21.1 -2.5**
KRMR Karymshinskiy 4.92 246 PN **Pn 09 36 27.2 -0.1**
RUS Russkaya 4.94 241 *eP* **Pn 09 36 27.4 -0.1**
RUS *eS* **Sn 09 37 19.6 -4.3**
RUS Russkaya 4.94 241 PN **Pn 09 36 27.4 -0.1**
PEA0B Petropavlovsk- 5.02 251 PN **Pn 09 36 29.2 +0.5**
PEA0B 09 37 26.8
PEA0B Petropavlovsk- 5.02 251 Pn **Pn 09 36 29.2 +0.5**
PEA0B Sn **Sn 09 37 26.8 +0.7**
PETK Petropavlovsk- 5.02 251 Pn **Pn 09 36 29.6 +0.8**
comp=Z,74nm,0.3s,baz=79,slow=17,SNR=542
PETK LR LR 09 38 45.1
comp=Z,349nm,20.8s,baz=84,slow=42
MTVR Mutnovka 5.08 243 *eP* **Pn 09 36 29.7 +0.1**
MTVR *eS* **Sn 09 37 24.6 -3.0**
MTVR Mutnovka 5.08 243 PN **Pn 09 36 29.7 +0.1**
PALN Palana 5.09 325 *eP* **Pn 09 36 29.9 +0.3**
PALN Palana 5.09 325 PN **Pn 09 36 29.9 +0.3**
GRL Gorelyy 5.09 244 *eP* **Pn 09 36 30.5 +0.7**
GRL *eS* **Sn 09 37 27.9 -0.1**
GRL Gorelyy 5.09 244 PN **Pn 09 36 30.5 +0.7**
GRL S **Sn 09 37 27.9 -0.1**
ASAK Asacha 5.27 243 *eP* **Pn 09 36 33.0 +0.7**
ASAK *eS* **Sn 09 37 31.1 -1.3**
ASAK Asacha 5.27 243 PN **Pn 09 36 33.0 +0.7**
TILK Tilichiki 5.44 3 *eP* **Pn 09 36 34.3 -0.1**
TILK Tilichiki 5.44 3 PN **Pn 09 36 34.3 -0.1**
SMY Shemya 5.54 111 PN **Pn 09 36 37.5 +1.7**
SMY Shemya 5.54 111 Pn **Pn 09 36 37.5 +1.7**
SMY Sn **Sn 09 37 37.4 -1.5**
MIPR Malaya Ipel'ka 5.92 246 *eP* **Pn 09 36 42.5 +1.4**
MIPR Malaya Ipel'ka 5.92 246 PN **Pn 09 36 42.5 +1.4**
PAU Pauzhetka 6.36 239 *eP* **Pn 09 36 47.5 +0.5**
PAU Pauzhetka 6.36 239 PN **Pn 09 36 47.5 +0.5**
SKR Severo-Kuril's 7.19 237 *eP* **Pn 09 36 57.9 -0.6**
SKR *eS* **Sn 09 38 14.0 -5.4**
SKR Severo-Kuril's 7.19 237 *e*PN **Pn 09 36 58.5 0.0**
SKR pmax pmax
comp=Z,115nm,0.5s
SKR MLR MLR
comp=Z,200nm,17.0s
SKR MLR MLR
comp=Z,200nm,16.0s
ALID Alaid 7.35 240 *eP* **Pn 09 37 02.7 +1.9**
ALID Alaid 7.35 240 PN **Pn 09 37 02.7 +1.9**
KMSK Kamenskaya 7.47 2 *eP* **Pn 09 37 03.1 +0.9**
KMSK *eS* **Sn 09 38 23.3 -2.8**
KMSK Kamenskaya 7.47 2 PN **Pn 09 37 03.1 +0.9**
MA2 Magadan 9.21 306 LR LR 09 41 26.4
comp=Z,205nm,18.3s,baz=106,slow=41
SEY Seymchan 10.43 325 Pn **Pn 09 37 44.2 +1.5**
comp=Z,0.3nm,0.3s,baz=133,slow=11,SNR=6.1
SEY Seymchan 10.43 325 *i* PN **Pn 09 37 44.1 +1.4**
ADK Adak 11.03 99 PN **Pn 09 37 50.8 -0.3**
ADK Adak 11.03 99 Pn **Pn 09 37 50.8 -0.3**
ATKA Atka Island 12.33 95 Pn **Pn 09 38 09.7 +0.8**
BILL Bilibino 13.06 1*ce*PN **Pn 09 38 20.8 +2.1**
BILL pmax pmax
comp=Z,9.0nm,0.6s
BILL MLR MLR
comp=Z,557nm,17.0s
BILL Bilibino 13.06 1 Pn **Pn 09 38 20.1 +1.5**
NIKH Nikolski High 15.15 87 Pn **Pn 09 38 46.9 -0.2**
UNV Unalaska Valle 16.24 83 Pn **Pn 09 39 00.1 -1.2**
UNV IAmb IAmb 09 39 14.1
comp=Z,86nm,1.0s
YSS Yuzh-Sakhalins 16.43 250 *eP* Pn 09 38 54.2 -9.5
YSS MLR MLR
comp=N,300nm,17.0s
YSS MLR MLR
comp=Z,600nm,17.0s
YSS MLR MLR
comp=E,300nm,16.0s
AKUT Akutan 16.59 81 **P 09 39 07.4 -0.6**
AKUT IAmb IAmb 09 39 18.0
comp=Z,104nm,0.9s
YUK Yuzh-Kuril'sk 16.81 237 *eP* **Pn 09 39 06.4 -2.1**
YUK *i* S **Sn 09 42 16.3 +1.7**
YUK pmax pmax
comp=Z,134nm,0.4s
YUK pmax pmax
comp=E,10.0nm,0.1s
YUK pmax pmax
comp=N,34nm,0.4s
YUK pmax pmax
comp=Z,230nm,1.2s
JKA Kamikawa-asahi 18.38 243 P **Pn 09 39 29.0 +1.0**
JKA Kamikawa-asahi 18.38 243 **Pn 09 39 28.7 +0.7**
JKA IAmb IAmb 09 39 31.7
comp=Z,49nm,1.0s
ASAJ Asahikawa 18.38 243 P **Pn 09 39 29.0 +0.9**
comp=Z,1.3nm,0.3s,baz=76,slow=18,SNR=7.3
ASAJ LR LR 09 46 26.3
comp=Z,170nm,18.5s,baz=66,slow=37
ASAJ Asahikawa 18.38 243 P **Pn 09 39 28.7 +0.7**
ASAJ pmax pmax
comp=Z,49nm,1.0s
SDPT Sand Point 19.28 75 P **Pn 09 39 38.5 -0.2**
SDPT IAmb IAmb 09 39 42.9
comp=Z,138nm,1.4s
ERM Erimo 19.64 238 *i* P **P 09 39 39.5 -2.2**
ERM Erimo 19.64 238 **P 09 39 40.9 -0.8**
ERM IAmb IAmb 09 39 48.5
comp=Z,66nm,1.4s
CNBA Chernabura Isl 19.90 76 P **P 09 39 44.5 0.0**
CNBA IAmb IAmb 09 39 46.8
comp=Z,78nm,1.3s
CHGN Chignik 20.21 72 P **P 09 39 47.7 -0.1**
CHGN IAmb IAmb 09 39 56.8
comp=Z,70nm,0.9s
TTA Tatalina 21.02 52 P **P 09 39 57.6 +0.9**
TTA pmax pmax
comp=Z,24nm,1.1s
TTA Tatalina 21.02 52 P **P 09 39 57.6 +0.9**
KLR Kul'dur 21.41 268 P **P 09 40 03.0 +2.1**
comp=Z,2.5nm,0.8s,baz=70,slow=12,SNR=3.0
KLR LR LR 09 48 59.4
comp=Z,141nm,18.6s,baz=66,slow=39
KLR Kul'dur 21.41 268 *i* P **P 09 40 00.0 -0.9**
KLR pmax pmax
comp=Z,4.0nm,1.0s
RSO Redoubt South 22.59 59 P **P 09 40 14.6 +1.0**
OHAK Old Harbor 22.79 68 P **P 09 40 14.8 -0.7**
OHAK IAmb IAmb 09 40 15.9
comp=Z,52nm,1.0s
TIXI Tiksi 22.82 331 P **P 09 40 15.6 -0.1**
comp=Z,1.5nm,0.5s,baz=115,slow=9.0,SNR=9.0
TIXI LR LR 09 49 00.5
comp=Z,91nm,19.6s,baz=92,slow=36
TIXI Tiksi 22.82 331 *i* P **P 09 40 14.4 -1.3**
TIXI pmax pmax
comp=Z,9.0nm,0.9s
TIXI Tiksi 22.82 331 P **P 09 40 15.5 -0.2**
KDAK Kodiak Island 23.05 66 P **P 09 40 17.5 -0.7**
comp=Z,17nm,0.4s,baz=260,slow=4.0,SNR=40
KDAK Kodiak Island 23.05 66 P **P 09 40 16.8 -1.3**
KDAK pmax pmax
comp=Z,40nm,1.0s
KDAK Kodiak Island 23.05 66 P **P 09 40 16.8 -1.3**
KDAK IAmb IAmb 09 40 19.5
comp=Z,40nm,1.0s
BPAW Bear Paw Mtn. 23.34 50 P **P 09 40 21.4 +0.2**
BPAW IAmb IAmb 09 40 23.5
comp=Z,35nm,1.3s
KTH Kantishna Hill 23.35 51 P **P 09 40 21.4 0.0**
CNPM China Poot 23.45 61 P **P 09 40 22.3 +0.1**
MLY Manley 23.50 47 P **P 09 40 23.4 +0.6**
TRF Thorofare Moun 23.64 51 P **P 09 40 23.2 -1.0**
TRF IAmb IAmb 09 40 26.4
comp=Z,39nm,1.1s
USRK Ussuriysk Ar. 24.07 257 LR LR 09 50 00.7
comp=Z,66nm,18.4s,baz=47,slow=37
MCK McKinley 24.24 51 P **P 09 40 29.7 0.0**
MCK pmax pmax
comp=Z,34nm,1.0s
MCK McKinley 24.24 51 P **P 09 40 29.7 0.0**
MCK IAmb IAmb 09 40 31.3
comp=Z,34nm,1.0s

RND Reindeer 24.28 51 P **P 09 40 29.5 -0.7**
RND pmax pmax
comp=Z,27nm,0.9s
RND Reindeer 24.28 51 P **P 09 40 29.5 -0.7**
RND IAmb IAmb 09 40 31.1
comp=Z,27nm,0.9s
TOLK Toolik Lake Re 24.45 39 P **P 09 40 31.7 0.0**
baz=259,SNR=26
TOLK Toolik Lake Re 24.45 39 P **P 09 40 32.1 +0.4**
TOLK IAmb IAmb 09 40 33.4
comp=Z,46nm,1.2s
MDM Murphy Dome 24.56 48 P **P 09 40 32.7 0.0**
MDM IAmb IAmb 09 40 34.5
comp=Z,37nm,1.2s
KNK Knik Glacier 24.59 56 P **P 09 40 32.2 -0.7**
SML Sawmill 24.61 55 P **P 09 40 32.7 -0.5**
WRH Wood River Hil 24.61 49 P **P 09 40 33.4 +0.3**
TCOL CIGO, UAF Yank 24.72 48 P **P 09 40 34.5 +0.5**
baz=269,SNR=11
COLA College 24.72 48*c i*P **P 09 40 33.4 -0.6**
COLA pmax pmax
comp=Z,33nm,1.1s
COLA College 24.72 48 P **P 09 40 34.4 +0.3**
COLA IAmb IAmb 09 40 36.6
comp=Z,40nm,1.1s
CCB Clear Creek Bu 24.74 48 P **P 09 40 34.4 +0.2**
POKR Poker Plat Res 24.91 47 P **P 09 40 36.3 +0.6**
baz=269,SNR=7.0
DHY Denali Highway 24.96 52 P **P 09 40 35.9 -0.6**
DHY IAmb IAmb 09 40 38.3
comp=Z,18nm,0.7s
SCM Sheep Creek Mo 25.08 55 P **P 09 40 36.8 -0.6**
SCM pmax pmax
comp=Z,52nm,0.8s
SCM Sheep Creek Mo 25.08 55 P **P 09 40 36.8 -0.6**
HDA Harding Lake 25.11 49 P **P 09 40 37.0 -0.5**
baz=271
HDA Harding Lake 25.11 49 P **P 09 40 36.8 -0.7**
HDA IAmb IAmb 09 40 47.1
comp=Z,18nm,0.8s
IL31 25.13 48 P **P 09 40 37.0 -0.7**
IL31 IAmb IAmb 09 40 40.4
comp=Z,29nm,0.9s
ILAR Eielson Array 25.13 48 P **P 09 40 36.8 -1.0**
comp=Z,20nm,0.9s,baz=258,slow=8.7,SNR=109
ILAR LR LR 09 51 29.6
comp=Z,48nm,18.3s,baz=288,slow=39
MDJ Mudanjiang 25.17 261 P **P 09 40 38.5 +0.2**
MDJ IAmb IAmb 09 40 48.8
comp=Z,8.5nm,0.4s
PRP Porcupine Dome 25.71 46 P **P 09 40 43.5 +0.4**
PRP IAmb IAmb 09 41 00.3
comp=Z,31nm,0.9s
FYU Fort Yukon 25.86 44 P **P 09 40 45.0 +0.7**
RIDG Independent Ri 26.06 50 P **P 09 40 45.0 -1.2**
RIDG IAmb IAmb 09 40 53.3
comp=Z,34nm,1.4s
MJAR Matsushiro Arr 26.30 237 P **P 09 40 50.0 +1.4**
comp=Z,4.1nm,0.9s,baz=24,slow=8.1,SNR=15
MJAR LR LR 09 50 41.8
comp=Z,61nm,21.9s,baz=30,slow=35
MJAR Matsushiro Arr 26.30 237 P **P 09 40 50.0 +1.4**
MJB9 Matsu-Tunnel 26.30 237 P **P 09 40 50.0 +1.3**
MJB9 IAmb IAmb 09 41 00.9
comp=Z,14nm,0.7s
MAJO Matsushiro 26.30 237 *i* P **P 09 40 47.4 -1.2**
MAJO pmax pmax
comp=Z,4.0nm,1.0s
MAJO Matsushiro 26.30 237 P **P 09 40 50.0 +1.3**
MAJO IAmb IAmb 09 41 01.1
comp=Z,16nm,0.7s
MAT Matsushiro 26.30 237 P **P 09 40 48.6 0.0**
DOT Dot Lake 26.41 51 P **P 09 40 48.6 -0.8**
SCRK Sand Creek 26.42 50 P **P 09 40 48.2 -1.4**
MENT Mentasta 26.64 52 P **P 09 40 51.3 -0.1**
GLB Gilahina Butte 26.80 55 P **P 09 40 52.6 -0.3**
EGAK Eagle 27.59 48 P **P 09 40 59.0 -0.8**
EGAK IAmb IAmb 09 41 07.9
comp=Z,14nm,0.8s
DAWY Dawson 28.43 49 P **P 09 41 07.2 -0.2**
EPYK Eagle Plains 29.28 44 P **P 09 41 15.8 +0.8**
baz=276,SNR=19
EPYK Eagle Plains 29.28 44 P **P 09 41 15.1 +0.1**
EPYK IAmb IAmb 09 41 16.4
comp=Z,24nm,0.9s
HYT Haines Junctio 29.92 55 P **P 09 41 20.6 -0.2**
HYT IAmb IAmb 09 41 22.4
comp=Z,15nm,0.9s
INK Inuvik 30.33 40 P **P 09 41 24.8 +0.6**
comp=Z,10nm,0.5s,baz=275,slow=6.2,SNR=81
INK Inuvik 30.33 40 P **P 09 41 24.9 +0.6**
INK IAmb IAmb 09 41 25.5
comp=Z,11nm,0.6s
KSRS Korea Array 30.92 251 P **P 09 41 31.8 +2.1**
comp=Z,1.9nm,1.0s,baz=45,slow=9.0,SNR=6.8
KSRS LR LR 09 53 26.4
comp=Z,105nm,18.1s,baz=48,slow=35
JIS Juneau Island 32.21 59 P **P 09 41 41.6 +0.8**
C36M Paulatuk 33.58 37 P **P 09 41 53.2 +0.5**
baz=281,SNR=16
C36M Paulatuk 33.58 37 P **P 09 41 52.6 -0.1**
DLBC Dease Lake 34.28 57 P **P 09 42 01.0 +2.0**
comp=Z,12nm,0.6s,baz=273,slow=5.3,SNR=18
DLBC Dease Lake 34.28 57 P **P 09 41 59.9 +0.8**
DLBC IAmb IAmb 09 42 01.9
comp=Z,13nm,0.7s
H11N2 WAKE ISLAND Hy 35.26 178 T T 10 19 37.4
baz=359,slow=76,SNR=6654
H11N3 WAKE ISLAND Hy 35.27 178 T T 10 19 38.4
baz=359,slow=76,SNR=4155
H11N1 WAKE ISLAND Hy 35.27 178 T T 10 19 37.8
baz=359,slow=76,SNR=5814
ULN Ulaanbaatar 36.20 284*ce*P **P 09 42 14.7 -1.1**
ULN pmax pmax
comp=Z,5.0nm,1.3s
NRIK Noril'sk 36.21 324 P **P 09 42 16.1 +0.7**
comp=Z,5.2nm,1.1s,baz=75,slow=13,SNR=4.9
NRIK LR LR 09 58 16.1
comp=Z,93nm,18.4s,baz=84,slow=38
H11S1 WAKE ISLAND Hy 36.47 178 T T 10 21 12.4
baz=359,slow=76,SNR=418
H11S3 WAKE ISLAND Hy 36.48 178 T T 10 21 09.7
baz=359,slow=76,SNR=217
H11S2 WAKE ISLAND Hy 36.48 178 T T 10 21 14.2
baz=359,slow=76,SNR=391
SONM Songino Array 36.59 284 P **P 09 42 20.8 +1.7**
comp=Z,2.6nm,0.8s,baz=62,slow=9.2,SNR=12
SONM LR LR 10 00 16.9
comp=Z,92nm,18.2s,baz=68,slow=41
ZAK Zakamensk 36.92 289 *eP* **P 09 42 22.9 +1.1**
ZAK pmax pmax
comp=Z,3.0nm,1.0s
HHC Hu-ho-hao-te 37.87 271 *eP* **P 09 42 31.5 +1.5**
HHC *eS* **S 09 48 23.3 +3.2**
HHC pmax pmax
comp=Z,7.0nm,0.9s
HHC pmax pmax
comp=Z,41nm,4.8s
HHC LR LR
comp=N,160nm,17.1s
HHC LR LR
comp=E,130nm,15.1s
HHC LR LR
comp=Z,44nm,16.1s
BBB Bella Bella 38.12 66 LR LR 09 55 53.4
comp=Z,75nm,21.2s,baz=274,slow=33
YKA Yellowknife Ar 39.52 46 P **P 09 42 43.8 +0.4**
comp=Z,10.0nm,0.8s,baz=296,slow=7.7,SNR=109
NJ2 Nanjing 39.92 254 *eP* **P 09 42 46.5 -0.5**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
LLLB Lillooet 42.25 65 P **P 09 43 07.0 +0.9**
PGC Sidney 42.57 68 P **P 09 43 09.5 +0.9**
A04D Lummi Island 42.92 67 P **P 09 43 12.9 +1.4**
baz=307
A05A Maple Falls 43.09 67 P **P 09 43 14.2 +1.4**
NLWA Neilton Lookou 43.10 70 P **P 09 43 14.1 +1.0**
D03D Eldon 43.43 69 P **P 09 43 17.0 +1.4**
baz=308,SNR=5.3
B05A Bryant 43.52 68 P **P 09 43 17.5 +1.1**
baz=307,SNR=9.2
B06A Marblemount 43.69 67 P **P 09 43 18.2 +0.5**
B06A IAmb IAmb 09 43 19.1
comp=Z,12nm,0.6s
E03A Lebam 43.78 70 P **P 09 43 20.0 +1.5**
D04E Lakebay 43.82 69 P **P 09 43 20.7 +1.9**
baz=308
D05A Enumclaw 44.24 69 P **P 09 43 23.3 +1.2**
D05A IAmb IAmb 09 43 24.3
comp=Z,18nm,0.7s
E04D Cinebar 44.32 70 P **P 09 43 23.8 +1.1**
baz=308
LON Longmire 44.60 69 P **P 09 43 26.0 +0.9**
LON pmax pmax
comp=Z,4.0nm,0.8s
LON Longmire 44.60 69 P **P 09 43 26.0 +0.9**
LTY Liberty 44.90 68 P **P 09 43 27.6 +0.1**
B08A Colville Reser 44.93 66 P **P 09 43 28.0 +0.4**
B08A IAmb IAmb 09 43 29.1
comp=Z,14nm,0.7s
LZH Lanzhou 45.55 272 *eP* **P 09 43 33.5 +0.6**
LZH pP sP 09 43 39.0 -0.2
LZH sP pwP 09 43 42.5 -2.3
LZH PP **PcP 09 45 12.8 +1.6**
LZH pmax pmax
comp=Z,12nm,1.3s
LZH pmax pmax
comp=Z,110nm,5.0s
LZH LR LR
comp=N,240nm,15.2s
LZH LR LR
comp=E,220nm,15.2s
LZH LR LR
comp=Z,200nm,15.2s
GTA Gaotai 45.56 278 *eP* **P 09 43 31.0 -1.9**
GTA pP pP 09 43 36.3 -1.3
GTA sP sP 09 43 39.3 +0.1
GTA S **S 09 50 16.5 +2.5**
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA pmax pmax
comp=Z,25nm,6.5s
GTA LR LR
comp=N,230nm,16.8s
GTA LR LR
comp=E,210nm,17.1s
GTA LR LR
comp=Z,140nm,16.2s
DGZ Jazzator, Alta 45.68 297 *i* P **P 09 43 34.2 +0.4**
DGZ pmax pmax
comp=Z,6.0nm,1.0s
SPITS Spitsbergen Ar 45.73 352 P **P 09 43 33.2 -0.4**
comp=Z,15nm,0.9s,baz=67,slow=9.1,SNR=7.4
G05D Wamic, OR 45.82 70 P **P 09 43 35.1 +0.3**
baz=310
C09A Chrisman Ranch 45.83 66 P **P 09 43 35.5 +0.7**
C09A IAmb IAmb 09 43 35.9
comp=Z,10nm,0.7s
NEW Newport 46.14 65 P **P 09 43 37.8 +0.5**
comp=Z,7.1nm,0.7s,baz=308,slow=8.5,SNR=12
NEW Newport 46.14 65 P **P 09 43 37.2 -0.1**
NEW pmax pmax
comp=Z,8.0nm,0.8s
NEW Newport 46.14 65 P **P 09 43 37.6 +0.3**
baz=309,SNR=6.9
NEW Newport 46.14 65 P **P 09 43 37.2 -0.1**
NEW IAmb IAmb 09 43 38.4
comp=Z,8.3nm,0.8s
I04A Tendick Farm, 46.16 73 P **P 09 43 38.2 +0.7**
baz=311
I05D Terrebonne, OR 46.40 71 P **P 09 43 39.6 +0.3**
baz=310
ENH Enshi 46.53 262 P **P 09 43 41.1 +0.6**
J04D Umpqua Nationa 46.69 73 P **P 09 43 43.1 +1.2**
baz=311,SNR=5.1
E09A Wood Farm, Sta 46.71 67 P **P 09 43 42.3 +0.6**
E09A IAmb IAmb 09 43 42.8
comp=Z,15nm,0.9s
PINE Pine Mountain 46.97 72 P **P 09 43 43.6 -0.4**
PINE IAmb IAmb 09 43 46.0
comp=Z,8.6nm,0.9s
J05D Fort Rock, OR 47.14 72 P **P 09 43 46.6 +1.3**
baz=311,SNR=8.7
L04D Klamath Falls 47.26 74 P **P 09 43 47.1 +0.9**
baz=312
WALA Waterton Lakes 47.29 62 P **P 09 43 46.7 +0.3**
K04D Chiloquin, OR 47.29 74 P **P 09 43 47.6 +1.2**
baz=312
F10A Beach Ranch, E 47.55 67 P **P 09 43 48.6 +0.3**
K05A Summer Lake 47.70 73 P **P 09 43 51.0 +1.3**
K05A IAmb IAmb 09 43 51.9
comp=Z,12nm,1.1s
M04C Macdoel 47.81 74 P **P 09 43 50.7 +0.2**
baz=312
N02D Trinity Center 47.87 76 P **P 09 43 52.2 +1.3**
baz=313
JTMT Jette 47.94 64 P **P 09 43 51.9 +0.4**
BMO Blue Mountains 48.24 68 P **P 09 43 53.9 +0.1**
BMO pmax pmax
comp=Z,4.0nm,0.8s
BMO Blue Mountains 48.24 68 P **P 09 43 53.9 +0.1**
MOD Modoc Plateau 48.58 73 P **P 09 43 56.6 +0.1**
MOD IAmb IAmb 09 43 58.2
comp=Z,10nm,0.7s
MSO Missoula 48.72 64 P **P 09 43 57.5 +0.1**
baz=311,SNR=6.8
MSO Missoula 48.72 64 P **P 09 43 57.4 +0.1**
MSO IAmb IAmb 09 43 58.5
comp=Z,11nm,1.1s
O03E Paynes Creek 48.83 76 P **P 09 43 58.5 +0.1**
baz=313
WVOR Wild Horse Val 49.13 72 P **P 09 44 00.4 -0.2**
WVOR pmax pmax
comp=Z,7.0nm,1.0s
WVOR Wild Horse Val 49.13 72 P **P 09 44 00.4 -0.2**
FFC Flin Flon 49.33 50 P **P 09 44 02.0 +0.2**
FFC pmax pmax
comp=Z,8.0nm,0.9s
FFC Flin Flon 49.33 50 P **P 09 44 02.0 +0.2**
WMQ Urumqi 49.33 291 *eP* **P 09 44 04.0 +1.9**
WMQ pmax pmax
comp=Z,14nm,1.1s
WMQ LR LR
comp=N,430nm,17.5s
WMQ LR LR
comp=E,250nm,17.5s
WMQ LR LR
comp=Z,31nm,18.9s
CD2 Chengdu 49.34 267 *eP* **P 09 44 02.0 -0.3**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
KURK Kurchatov 49.41 303*ce*P **P 09 44 02.2 -0.3**
KURK pmax pmax
comp=Z,12nm,1.0s
KURK Kurchatov 49.41 303 P **P 09 44 02.8 +0.3**
ORV Oroville 49.51 76 P **P 09 44 03.5 0.0**
ORV pmax pmax
comp=Z,4.0nm,0.8s
ORV Oroville 49.51 76 P **P 09 44 03.5 0.0**
KURBB Kurchatov Arra 49.52 303 P **P 09 44 03.2 -0.2**
comp=Z,6.7nm,0.7s,baz=54,slow=7.9,SNR=43
FCC Fort Churchill 49.91 42 P **P 09 44 06.2 0.0**
FCC pmax pmax
comp=Z,30nm,0.7s
FCC Fort Churchill 49.91 42 P **P 09 44 06.2 0.0**
MFID Camas Ranch 49.99 69 P **P 09 44 07.6 +0.4**
EGMT Eagleton 50.06 61 P **P 09 44 07.6 0.0**
baz=312,SNR=9.0
EGMT Eagleton 50.06 61 P **P 09 44 07.2 -0.5**
EGMT IAmb IAmb 09 44 08.4
comp=Z,8.7nm,0.8s
LRM Limekiln Ridge 50.16 64 P **P 09 44 08.6 0.0**
MKAR Makanchi Array 50.18 297 P **P 09 44 08.7 +0.2**
comp=Z,1.1nm,0.7s,baz=60,slow=8.5,SNR=7.7
MKAR LR LR 10 05 41.9
comp=Z,64nm,19.4s,baz=28,slow=36
AFDM Forest Hills D 50.23 77 P **P 09 44 09.3 +0.4**
MAKZ Makanchi 50.33 298 P **P 09 44 10.2 +0.6**
MAKZ pmax pmax
comp=Z,5.0nm,1.0s
MAKZ Makanchi 50.33 298 P **P 09 44 10.2 +0.6**
DLMT Dillon 50.39 65 P **P 09 44 10.7 +0.5**
PAHR Pah Rah Range 50.59 75 P **P 09 44 12.5 +0.7**
MCMT McKenzie Canyo 50.62 66 P **P 09 44 12.3 +0.2**
VCNR Virginia City 50.72 75 P **P 09 44 13.8 +0.9**
BOZ Bozeman (W) 50.73 64 P **P 09 44 13.5 +0.7**
BOZ pmax pmax
comp=Z,7.0nm,1.0s
BOZ Bozeman (W) 50.73 64 P **P 09 44 13.5 +0.7**
PNTR Pine Nut 50.89 75 P **P 09 44 15.3 +1.1**
PNTR IAmb IAmb 09 44 22.4

comp=Z,15nm,0.8s
GYA Guiyang 51.04 261 *e*P **P** **09 44 15.0 -0.3**
GYA PP PP 09 46 20.3 +8.6
GYA S **S** **09 51 26.8 -4.7**
GYA Guiyang 51.04 261 SS **SS** **09 55 02.0 -4.3**
GYA pmax pmax
comp=Z,10.0nm,0.5s
GYA pmax pmax
comp=Z,50nm,3.5s
GYA LR LR
comp=N,60nm,6.3s
GYA LR LR
comp=E,90nm,4.1s
GYA LR LR
comp=Z,50nm,8.1s
YERR Yerington 51.17 75 P **P** **09 44 17.1 +0.9**
QLMT Earthquake Lak 51.36 65 P **P** **09 44 18.4 +0.8**
WAKR Walker 51.39 76 P **P** **09 44 18.7 +0.7**
WAKR IAmb IAmb 09 44 20.0
comp=Z,12nm,0.6s
YHB Horse Butte 51.53 65 P **P** **09 44 19.5 +0.5**
SUMG Summit 51.59 9 P **P** **09 44 18.8 -0.4**
SUMG pmax pmax
comp=Z,11nm,1.1s
SUMG Summit 51.59 9 P **P** **09 44 18.8 -0.4**
GCMT Greycliff 51.61 63 P **P** **09 44 20.2 +0.8**
BVAR Borovoye Array 51.67 310 P **P** **09 44 19.3 -0.2**
comp=Z,1.7nm,0.7s,baz=64,slow=10,SNR=7.2
YHH Holmes Hill 51.69 64 P **P** **09 44 20.5 +0.3**
BRVK Borovoye 51.70 310 *ce*P **P** **09 44 19.0 -0.7**
BRVK pmax pmax
comp=Z,5.0nm,1.0s
BRVK Borovoye 51.70 310 P **P** **09 44 19.8 +0.1**
YMR Madison River 51.71 65 P **P** **09 44 21.1 +0.8**
KVN Kaiserville 51.76 74 P **P** **09 44 21.4 +0.8**
KVN pmax pmax
comp=Z,7.0nm,0.7s
KVN Kaiserville 51.76 74 P **P** **09 44 21.4 +0.8**
RYN Ryan 51.82 75 P **P** **09 44 21.7 +0.7**
YNE Yellowstone No 51.97 64 P **P** **09 44 23.2 +0.9**
YPP Pitchstone Pla 52.07 65 P **P** **09 44 24.7 +1.7**
LKWY Lake 52.07 64 P **P** **09 44 24.9 +1.9**
LKWY pmax pmax
comp=Z,12nm,0.9s
LKWY Lake 52.07 64 P **P** **09 44 24.9 +1.9**
LKWY IAmb IAmb 09 44 25.9
comp=Z,12nm,0.8s
NVAR Mina Array Bea 52.08 75 P **P** **09 44 24.0 +0.9**
comp=Z,4.1nm,0.6s,baz=299,slow=7.6,SNR=45
YMP Mirror Lake Pl 52.08 64 P **P** **09 44 24.1 +1.0**
H17A Grant Village 52.10 65 P **P** **09 44 25.4 +2.2**
baz=314,SNR=12
H17A Grant Village 52.10 65 P **P** **09 44 24.8 +1.6**
H17A IAmb IAmb 09 44 26.2
comp=Z,11nm,0.9s
ELK Elko 52.14 71 P **P** **09 44 24.3 +0.7**
ELK pmax pmax
comp=Z,5.0nm,1.1s
ELK Elko 52.14 71 P **P** **09 44 24.2 +0.7**
NV11 Mina Array Sit 52.16 75 P **P** **09 44 23.8 +0.2**
FLWY Flagg Ranch 52.25 65 P **P** **09 44 25.1 +0.8**
FLWY IAmb IAmb 09 44 26.6
comp=Z,14nm,0.8s
IMW Indian Meadow 52.25 65 P **P** **09 44 25.0 +0.6**
IMW IAmb IAmb 09 44 26.4
comp=Z,10nm,0.8s
RLMT Red Lodge 52.27 63 P **P** **09 44 25.7 +1.2**
baz=314,SNR=16
RLMT Red Lodge 52.27 63 P **P** **09 44 25.5 +1.1**
FXWY Fox Creek 52.39 66 P **P** **09 44 25.7 +0.4**
ARCES ARCESS Array B 52.40 343 P **P** **09 44 24.8 0.0**
comp=Z,1.4nm,0.7s,baz=29,slow=10,SNR=5.9
ARCES LR LR 10 09 52.5
comp=Z,56nm,18.1s,baz=48,slow=40
DGMT Dagmar 52.50 57 P **P** **09 44 26.2 +0.3**
baz=314
DGMT Dagmar 52.50 57 P **P** **09 44 26.4 +0.6**
DGMT IAmb IAmb 09 44 26.9
comp=Z,14nm,0.9s
TPAW Teton Pass 52.53 66 P **P** **09 44 27.4 +1.0**
SNOW Snow King Moun 52.65 66 P **P** **09 44 28.2 +0.9**
REDW Red Top Meadow 52.67 66 P **P** **09 44 28.2 +0.8**
LAO LASA Array 52.73 60 P **P** **09 44 28.4 +0.8**
baz=314,SNR=16
LAO LASA Array 52.73 60 P **P** **09 44 28.3 +0.7**
LAO IAmb IAmb 09 44 29.4
comp=Z,21nm,0.9s
VES Vestal, Richgr 53.48 78 P **P** **09 44 33.3 +0.1**
baz=316
HWUT Hardware Ranch 53.52 68 P **P** **09 44 34.6 +1.0**
CWC Cottonwood Cre 53.62 77 P **P** **09 44 35.6 +1.2**
baz=316
GRAC Grapevine Rang 53.62 76 P **P** **09 44 35.8 +1.5**
baz=316,SNR=6.2
R11A Troy Canyon, C 53.64 73 P **P** **09 44 35.3 +0.7**
baz=316,SNR=10
R11A Troy Canyon, C 53.64 73 P **P** **09 44 35.2 +0.7**
BW06 Boulder Array 53.76 65 P **P** **09 44 36.3 +0.8**
baz=315,SNR=10
BW06 Boulder Array 53.76 65 P **P** **09 44 36.0 +0.5**
BW06 IAmb IAmb 09 44 37.1
comp=Z,9.3nm,0.8s
PD31 Pinedale Array 53.76 65 P **P** **09 44 36.1 +0.6**
PD31 IAmb IAmb 09 44 37.1
comp=Z,8.6nm,0.8s
PDAR Pinedale Array 53.76 65 P **P** **09 44 35.9 +0.4**
comp=Z,8.2nm,0.8s,baz=336,slow=3.3,SNR=42
DUG Dugway, Tooele 53.84 70 P **P** **09 44 36.0 0.0**
DUG pmax pmax
comp=Z,9.0nm,1.2s
DUG Dugway, Tooele 53.84 70 P **P** **09 44 37.1 +1.2**
baz=315,SNR=6.5
DUG Dugway, Tooele 53.84 70 P **P** **09 44 36.0 0.0**
ISA Isabella, Lake 53.96 78 P **P** **09 44 36.9 +0.2**
baz=316
CTU Camp Tracy 54.06 69 P **P** **09 44 38.5 +0.8**
ARU Arti 54.11 319 *ce*P **P** **09 44 36.1 -1.4**
ARU pmax pmax
comp=Z,5.0nm,1.3s
MPMC Manual Prospec 54.22 77 P **P** **09 44 39.8 +0.9**
baz=316,SNR=7.1
TPNV Topopah Spring 54.27 75 P **P** **09 44 39.7 +0.5**
TPNV pmax pmax
comp=Z,23nm,1.3s
TPNV Topopah Spring 54.27 75 P **P** **09 44 40.3 +1.2**
baz=316,SNR=14
TPNV Topopah Spring 54.27 75 P **P** **09 44 39.7 +0.5**
FURC Furnace Creek, 54.28 76 P **P** **09 44 40.5 +1.5**
baz=316,SNR=16
JLU Jordanelle 54.29 69 P **P** **09 44 40.1 +0.7**
NLU North Lily Min 54.41 70 P **P** **09 44 41.1 +0.9**
PSUT Pine Spring 54.46 72 P **P** **09 44 41.5 +0.9**
EDW2 Edwards Air Fo 54.79 78 P **P** **09 44 43.6 +0.8**
baz=317
SHOC Shoshone, Teco 55.02 76 P **P** **09 44 45.8 +1.4**
baz=317
DECC Green Verdugo 55.06 79 P **P** **09 44 45.6 +0.9**
baz=317
ULM Lac du Bonnet 55.11 51 P **P** **09 44 45.2 +0.3**
comp=Z,14nm,0.8s,baz=322,slow=7.9,SNR=12
ULM LR LR 10 09 28.1
comp=Z,71nm,18.2s,baz=342,slow=37
ULM Lac du Bonnet 55.11 51 P **P** **09 44 45.2 +0.3**
ULM pmax pmax
comp=Z,18nm,0.9s
ULM Lac du Bonnet 55.11 51 P **P** **09 44 45.1 +0.3**
MDND Maddock 55.13 55 P **P** **09 44 46.0 +0.9**
baz=316,SNR=7.9
MDND Maddock 55.13 55 P **P** **09 44 45.5 +0.5**
QIZ Qiongzhong 55.13 252 P **P** **09 44 43.5 -1.9**
QIZ S **S** **09 52 28.5 +1.4**
QIZ LR LR
comp=N,150nm,16.7s
QIZ LR LR
comp=E,150nm,16.2s
QIZ LR LR
comp=Z,110nm,16.2s
GSC Goldstone, Bar 55.15 77 P **P** **09 44 46.3 +0.8**
GSC pmax pmax
comp=Z,8.0nm,0.8s
GSC Goldstone, Bar 55.15 77 P **P** **09 44 46.6 +1.2**
baz=317,SNR=6.5
GSC Goldstone, Bar 55.15 77 P **P** **09 44 46.3 +0.8**
GSC IAmb IAmb 09 44 47.3
comp=Z,8.3nm,0.8s

SHPR Sheep Range 55.20 75 P **P** **09 44 46.7 +0.8**
RDMU Red Mountain 55.31 67 P **P** **09 44 47.9 +1.2**
TMUT Trail Mountain 55.35 69 P **P** **09 44 48.4 +1.3**
MSU Marysvale 55.39 71 P **P** **09 44 48.8 +1.5**
MSU Marysvale 55.39 71 P **P** **09 44 48.8 +1.5**
K22A Casper 55.42 64 P **P** **09 44 48.4 +1.0**
baz=316,SNR=7.0
K22A Casper 55.42 64 P **P** **09 44 47.6 +0.2**
K22A IAmb IAmb 09 44 49.5
comp=Z,9.8nm,0.9s
CCUT Cedar City 55.44 72 P **P** **09 44 48.5 +0.8**
BFSC Mount Baldy Ra 55.45 78 P **P** **09 44 48.6 +0.9**
baz=317
P17A Butcher Ranch, 55.48 69 P **P** **09 44 48.8 +1.0**
E28A Huff 55.52 57 P **P** **09 44 48.6 +0.8**
SZCU Shurtz Canyon 55.55 72 P **P** **09 44 49.8 +1.3**
RSSD Black Hills 55.64 61 P **P** **09 44 49.2 +0.2**
RSSD pmax pmax
comp=Z,12nm,0.8s
RSSD Black Hills 55.64 61 P **P** **09 44 49.5 +0.5**
baz=316
RSSD Black Hills 55.64 61 P **P** **09 44 49.2 +0.2**
RSSD IAmb IAmb 09 44 50.3
comp=Z,12nm,0.8s
Q16A Castle Valley 55.64 70 P **P** **09 44 50.5 +1.4**
MTPU Mount Pierson 55.73 71 P **P** **09 44 51.1 +1.2**
RWWY Rawlins 55.76 65 P **P** **09 44 49.2 -0.8**
RWWY IAmb IAmb 09 44 50.3
comp=Z,14nm,1.0s
SRU San Rafael Swe 55.85 69 P **P** **09 44 51.8 +1.2**
SRU pmax pmax
comp=Z,33nm,0.7s
SRU San Rafael Swe 55.85 69 P **P** **09 44 51.8 +1.2**
LCMT Little Creek M 55.89 73 P **P** **09 44 52.6 +1.8**
PKCU Pink Cliffs 56.09 72 P **P** **09 44 53.9 +1.4**
KNB Kanab 56.12 73 P **P** **09 44 53.6 +1.1**
KNB Kanab 56.12 73 P **P** **09 44 53.6 +1.1**
GMRC Granite Mounta 56.17 76 P **P** **09 44 53.9 +1.1**
baz=317,SNR=6.7
MURC Murrieta 56.18 78 P **P** **09 44 53.6 +0.8**
baz=318
O20A White River Ci 56.33 67 P **P** **09 44 55.0 +1.0**
baz=316,SNR=22
O20A White River Ci 56.33 67 P **P** **09 44 54.8 +0.8**
AGMN Agassiz Nation 56.54 52 P **P** **09 44 55.4 +0.3**
baz=317,SNR=15
AGMN Agassiz Nation 56.54 52 P **P** **09 44 55.4 +0.3**
AGMN IAmb IAmb 09 44 56.2
comp=Z,15nm,0.9s
BELC Belle Mtn. Jos 56.56 77 P **P** **09 44 55.9 +0.3**
baz=318,SNR=5.1
PFO Pinyon Flats O 56.59 78 P **P** **09 44 56.2 +0.4**
baz=318
TPFO Pinon Flats 56.59 78 P **P** **09 44 56.4 +0.5**
baz=318
U15A North Rim 56.84 73 P **P** **09 44 58.8 +1.1**
IRM Iron Mountain 56.92 76 P **P** **09 44 59.2 +1.1**
baz=318,SNR=5.7
N23A Red Feather La 56.99 65 P **P** **09 44 59.9 +1.1**
baz=317,SNR=14
AAK Ala-Archa 57.06 298 *ce*P **P** **09 44 58.6 -0.5**
AAK pmax pmax
comp=Z,2.0nm,0.7s
AAK Ala-Archa 57.06 298 P **P** **09 44 59.5 +0.4**
BC3 Big Chuckawall 57.12 77 P **P** **09 45 00.2 +0.7**
baz=318
PV23 Carpenter Ridg 57.15 69 P **P** **09 45 00.3 +0.4**
PV23 IAmb IAmb 09 45 01.9
comp=Z,13nm,0.9s
PV22 Blue Mesa, Par 57.20 68 P **P** **09 45 01.0 +0.8**
PV22 IAmb IAmb 09 45 02.1
comp=Z,8.4nm,0.7s
PV04 Paradox Valley 57.24 69 P **P** **09 45 01.0 +0.5**
PV04 IAmb IAmb 09 45 03.0
comp=Z,15nm,0.8s
PV20 West Nyswonger 57.25 69 P **P** **09 45 01.3 +0.8**
PV20 IAmb IAmb 09 45 02.4
comp=Z,14nm,1.1s
PV11 David Mesa, Pa 57.33 69 P **P** **09 45 01.9 +0.8**
PV07 Paradox Valley 57.35 68 P **P** **09 45 02.0 +0.8**
PV07 IAmb IAmb 09 45 05.5
comp=Z,10nm,0.7s
PV18 Skein Mesa, Pa 57.35 69 P **P** **09 45 02.3 +1.0**
PV18 IAmb IAmb 09 45 03.1
comp=Z,15nm,0.9s
PV12 Saucer Basin, 57.35 69 P **P** **09 45 02.1 +0.8**
PV05 Paradox Valley 57.37 69 P **P** **09 45 02.3 +0.9**
PDMCI Parker Dam,Lak 57.38 76 P **P** **09 45 02.2 +1.0**
baz=318
PV03 Paradox Valley 57.38 69 P **P** **09 45 02.2 +0.8**
PV03 IAmb IAmb 09 45 03.3
comp=Z,14nm,0.9s
B35A Bob, Littlefor 57.45 51 P **P** **09 45 01.7 +0.1**
B35A IAmb IAmb 09 45 02.5
comp=Z,7.5nm,0.7s
PV13 Radium Mtn., P 57.46 69 P **P** **09 45 02.4 +0.3**
PV02 Paradox Valley 57.47 69 P **P** **09 45 02.9 +0.7**
PV02 IAmb IAmb 09 45 12.7
comp=Z,16nm,1.2s
PV15 Paradox Valley 57.51 68 P **P** **09 45 03.4 +1.0**
PV15 IAmb IAmb 09 45 04.2
comp=Z,12nm,0.8s
PV01 Paradox Valley 57.61 69 P **P** **09 45 03.9 +0.7**
ISCO Idaho Springs 57.96 65 P **P** **09 45 07.0 +1.4**
ISCO pmax pmax
comp=Z,10.0nm,1.0s
ISCO Idaho Springs 57.96 65 P **P** **09 45 07.1 +1.4**
baz=317,SNR=12
ISCO Idaho Springs 57.96 65 P **P** **09 45 07.0 +1.4**
ISCO IAmb IAmb 09 45 08.2
comp=Z,10nm,1.0s
WUAZ Wupatki 58.01 73 P **P** **09 45 07.4 +1.5**
baz=318,SNR=5.2
WUAZ Wupatki 58.01 73 P **P** **09 45 06.8 +0.9**
WUAZ IAmb IAmb 09 45 08.3
comp=Z,15nm,1.4s
F33A 5 Mile Ranch, 58.15 55 P **P** **09 45 06.7 +0.2**
Y14A Wickenburg 58.28 75 P **P** **09 45 08.5 +0.9**
MVCO Mesa Verde 58.33 69 P **P** **09 45 08.9 +0.7**
baz=318
MVCO Mesa Verde 58.33 69 P **P** **09 45 08.9 +0.7**
KK31 Karatay Array 58.70 301 P **P** **09 45 10.2 -0.2**
KK31 pmax pmax
comp=Z,4.0nm,0.9s
KK31 Karatay Array 58.70 301 P **P** **09 45 10.2 -0.2**
EYMN Ely 58.76 50 P **P** **09 45 10.9 +0.2**
baz=319,SNR=12
EYMN Ely 58.76 50 P **P** **09 45 11.0 +0.2**
X16A Lo Mia Camp, P 58.79 74 P **P** **09 45 12.5 +1.1**
S22A 4UR Ranch, Cre 58.83 68 P **P** **09 45 13.4 +1.6**
baz=318,SNR=12
AKTO Aktyubinsk 58.83 315 P **P** **09 45 12.8 +1.6**
comp=Z,0.7nm,0.3s,baz=45,slow=3.5,SNR=4.8
W18A Petrified Fore 59.21 72 P **P** **09 45 14.7 +0.5**
baz=318
W18A Petrified Fore 59.21 72 P **P** **09 45 14.6 +0.3**
W18A IAmb IAmb 09 45 16.5
comp=Z,8.3nm,1.0s
X18A Snowflake 59.53 72 P **P** **09 45 17.4 +0.9**
X18A IAmb IAmb 09 45 18.8
comp=Z,7.4nm,0.8s
SDCO Great Sand Dun 59.53 67 P **P** **09 45 17.8 +1.2**
baz=318,SNR=8.4
SDCO Great Sand Dun 59.53 67 P **P** **09 45 17.4 +0.8**
FINES FINESS Array B 59.55 339 P **P** **09 45 15.8 -0.2**
comp=Z,2.9nm,0.8s,baz=40,slow=10,SNR=14
FINES LR LR 10 14 27.4
comp=Z,66nm,18.2s,baz=18,slow=40
ECSD EROS Data Cent 59.57 56 P **P** **09 45 16.3 -0.2**
baz=319,SNR=7.2
ECSD EROS Data Cent 59.57 56 P **P** **09 45 16.2 -0.2**
E38A The Farm, Brul 59.75 51 P **P** **09 45 17.6 0.0**
214A Organ Pipe Nat 59.86 77 P **P** **09 45 19.1 +0.5**
baz=319
KSCO Kaye Shedlock' 60.10 64 P **P** **09 45 21.3 +1.1**
baz=318
KSCO Kaye Shedlock' 60.10 64 P **P** **09 45 20.5 +0.2**
KSCO IAmb IAmb 09 45 35.1
comp=Z,18nm,1.4s
SPMN Marine on St. 60.23 53 P **P** **09 45 21.3 +0.4**
baz=320
SPMN Marine on St. 60.23 53 P **P** **09 45 21.4 +0.5**
SPMN IAmb IAmb 09 45 22.0
comp=Z,8.0nm,0.7s
T25A Trinidad 60.56 67 P **P** **09 45 24.4 +0.8**

baz=319
TUC Tucson 60.73 75 P **P** **09 45 25.8 +1.2**
baz=319
I37A Lemond, Waseca 60.87 54 P **P** **09 45 25.9 +0.6**
ANMO Albuquerque 61.12 70 *i* P **P** **09 45 26.0 -1.4**
ANMO pmax pmax
comp=Z,3.0nm,1.0s
ANMO Albuquerque 61.12 70 P **P** **09 45 28.3 +1.0**
baz=319
ANMO Albuquerque 61.12 70 P **P** **09 45 28.3 +1.0**
COWI Conover 61.21 50 P **P** **09 45 27.4 -0.2**
COWI IAmb IAmb 09 45 28.1
comp=Z,5.5nm,0.8s
G40A Rib Lake 61.38 51 P **P** **09 45 28.7 0.0**
CMAR Chiang Mai Arr 61.70 262 LR LR 10 17 09.3
comp=Z,65nm,19.0s,baz=217,slow=41
CBKS Cedar Bluff 61.73 62 P **P** **09 45 31.2 -0.1**
CBKS pmax pmax
comp=Z,9.0nm,0.9s
CBKS Cedar Bluff 61.73 62 P **P** **09 45 31.3 +0.1**
baz=319
CBKS Cedar Bluff 61.73 62 P **P** **09 45 31.2 -0.1**
CBKS IAmb IAmb 09 45 49.5
comp=Z,8.8nm,0.8s
VSU Vasula 62.11 337 *i* P **P** **09 45 32.3 -1.1**
VSU pmax pmax
comp=Z,21nm,0.9s
I40A Norwalk 62.25 52 P **P** **09 45 34.4 -0.2**
SCHQ Schefferville 62.37 31 P **P** **09 45 34.9 -0.4**
comp=Z,5.0nm,0.6s,baz=341,slow=6.9,SNR=18
SCHQ Schefferville 62.37 31 P **P** **09 45 35.0 -0.3**
SCHQ IAmb IAmb 09 45 35.5
comp=Z,6.2nm,0.7s
NB2 NORSAR Subarra 62.51 346 P **P** **09 45 35.6 -0.5**
comp=Z,1.0nm,0.6s,baz=17,slow=6.9
NOA NORSAR Array B 62.51 346 P **P** **09 45 35.6 -0.5**
comp=Z,1.6nm,0.7s,baz=17,slow=6.8,SNR=11
NOA LR LR 10 14 57.9
comp=Z,18nm,18.5s,baz=15,slow=38
OBN Obninsk 62.55 330 *eP* **P** **09 45 36.0 -0.4**
OBN *e* 09 47 54.9
OBN *e*SSS SSS 10 00 48.8
OBN pmax pmax
comp=Z,6.0nm,1.0s
OBN MLR MLR
comp=Z,56nm,16.0s
SCIA State Center 62.58 56 P **P** **09 45 37.2 +0.4**
baz=321
SCIA State Center 62.58 56 P **P** **09 45 36.7 -0.1**
D46A Sault St. Mari 62.77 46 P **P** **09 45 37.0 -1.0**
baz=323
MATQ Matagami 62.99 41 P **P** **09 45 38.4 -1.0**
baz=325
HFS Hagfors 63.02 345 LR LR 10 14 00.1
comp=Z,43nm,20.9s,baz=0.0,slow=37
I42A Draeger Farm, 63.03 51 P **P** **09 45 39.3 -0.5**
I42A IAmb IAmb 09 45 40.2
comp=Z,5.4nm,0.8s
D47A Chapleau 63.03 46 P **P** **09 45 38.8 -1.0**
baz=323,SNR=6.7
E46A Sault Ste Mari 63.08 47 P **P** **09 45 39.1 -0.9**
E46A IAmb IAmb 09 45 39.9
comp=Z,8.5nm,0.7s
H43A Windswept, Lux 63.08 50 P **P** **09 45 39.6 -0.6**
H43A IAmb IAmb 09 45 40.7
comp=Z,9.4nm,0.8s
KSU1 Kansas State U 63.08 60 P **P** **09 45 39.4 -0.9**
baz=320
F45A CMU Biological 63.11 48 P **P** **09 45 40.1 -0.2**
baz=322,SNR=6.9
JFWS Jewell Farm 63.18 53 P **P** **09 45 40.2 -0.6**
JFWS pmax pmax
comp=Z,6.0nm,0.6s
JFWS Jewell Farm 63.18 53 P **P** **09 45 40.1 -0.8**
baz=321
JFWS Jewell Farm 63.18 53 P **P** **09 45 40.2 -0.6**
JFWS IAmb IAmb 09 45 40.8
comp=Z,6.3nm,0.6s
L40A Anamosa 63.40 54 P **P** **09 45 41.5 -0.8**
L40A IAmb IAmb 09 45 42.2
comp=Z,6.0nm,0.8s
E47A Iron Bridge 63.44 46 P **P** **09 45 41.5 -1.0**
baz=323,SNR=10
D48A Paudash Townsh 63.46 45 P **P** **09 45 41.3 -1.3**
baz=324
G45A Suttons Bay 63.56 49 P **P** **09 45 43.1 -0.1**
baz=323
G45A Suttons Bay 63.56 49 P **P** **09 45 43.0 -0.3**
D49A Beulah Townshi 63.57 44 P **P** **09 45 42.2 -1.2**
baz=324
G46A Petoskey 63.68 48 P **P** **09 45 44.0 0.0**
baz=323
LSQQ Lebel-sur-Quev 63.81 41 P **P** **09 45 43.9 -1.0**
baz=325
MSTX Muleshoe 63.84 68 P **P** **09 45 45.8 +0.4**
baz=320
MSTX Muleshoe 63.84 68 P **P** **09 45 45.6 +0.2**
MSTX IAmb IAmb 09 45 46.6
comp=Z,6.5nm,1.1s
E48A Lockeyer 63.88 45 P **P** **09 45 44.2 -1.1**
baz=324,SNR=7.6
CHGQ Chibougamau 64.06 38 P **P** **09 45 45.2 -1.3**
baz=326
H46A Fife Lake 64.15 49 P **P** **09 45 47.3 +0.1**
baz=323
MNTX Cornudas Mount 64.17 71 P **P** **09 45 48.4 +0.9**
baz=320,SNR=14
MNTX Cornudas Mount 64.17 71 P **P** **09 45 48.0 +0.5**
MNTX IAmb IAmb 09 45 49.5
comp=Z,6.4nm,0.9s
GLMI Grayling 64.18 48 P **P** **09 45 47.4 +0.1**
baz=323
F48A Evansville 64.21 46 P **P** **09 45 46.5 -1.1**
baz=324,SNR=8.2
G47A Hillman 64.22 47 P **P** **09 45 46.9 -0.7**
baz=323
D50A G1974 Best Tow 64.26 44 P **P** **09 45 46.4 -1.5**
baz=324
VLDQ Val d'Or 64.41 41 P **P** **09 45 46.5 -2.3**
E50A Wahnapitae 64.50 45 P **P** **09 45 48.2 -1.3**
baz=324
F49A Sandfield 64.50 46 P **P** **09 45 48.4 -1.1**
baz=324,SNR=8.6
I46A Reed City 64.52 49 P **P** **09 45 50.1 +0.5**
baz=323
H48A Harrisville 64.83 47 P **P** **09 45 51.2 -0.4**
baz=324
E51A G1948 Merrick 64.91 44 P **P** **09 45 50.8 -1.4**
baz=325,SNR=5.8
D52A ZEK Kipawa Sen 64.98 43 P **P** **09 45 51.7 -0.9**
baz=325
P40A Paris 64.98 56 P **P** **09 45 52.2 -0.4**
D53A Lac Vacive, Po 65.17 42 P **P** **09 45 52.9 -0.9**
baz=326,SNR=6.5
D53A Lac Vacive, Po 65.17 42 P **P** **09 45 52.9 -0.9**
D53A IAmb IAmb 09 45 53.5
comp=Z,8.8nm,0.9s
F51A Arnstein 65.24 44 P **P** **09 45 52.8 -1.4**
baz=325
WMOK Wichita Mounta 65.34 64 P **P** **09 45 55.3 +0.1**
WMOK pmax pmax
comp=Z,7.0nm,0.9s
WMOK Wichita Mounta 65.34 64 P **P** **09 45 55.3 +0.1**
baz=321,SNR=11
WMOK Wichita Mounta 65.34 64 P **P** **09 45 55.2 +0.1**
WMOK IAmb IAmb 09 45 56.2
comp=Z,6.7nm,0.8s
J47A Sunmer 65.36 49 P **P** **09 45 55.2 +0.1**
baz=323
J47A Sunmer 65.36 49 P **P** **09 45 55.2 +0.1**
HDIL Hopedale 65.48 54 P **P** **09 45 55.6 -0.3**
baz=322,SNR=10
HDIL Hopedale 65.48 54 P **P** **09 45 55.6 -0.3**
D54A Lac Fusel, La 65.51 42 P **P** **09 45 54.9 -1.1**
baz=326
F52A Sundridge 65.58 44 P **P** **09 45 55.4 -1.1**
baz=325,SNR=7.5
I49A Point Hope 65.65 47 P **P** **09 45 56.7 -0.3**
baz=324
K47A Vermontville 65.73 50 P **P** **09 45 57.3 -0.2**
baz=324
E53A Dumoine, Ponti 65.76 43 P **P** **09 45 56.4 -1.2**
baz=326,SNR=5.2
R40A Maddies Statio 65.85 57 P **P** **09 45 57.5 -0.8**
R40A IAmb IAmb 09 45 58.3
comp=Z,8.8nm,0.8s
E54A Lac Daplat, Po 65.90 42 P **P** **09 45 57.0 -1.5**

baz=326
ALGO Algonquin Park 65.96 43 P P 09 45 57.5 -1.4
baz=326
J49A Marlette 65.99 48 P P 09 45 58.3 -0.9
baz=324
K48A Perry 66.01 49 P P 09 45 59.3 0.0
baz=324
D55A Sainte-Anne-du 66.07 41 P P 09 45 58.8 -0.9
baz=327,SNR=6.2
H52A Wyevale 66.30 45 P P 09 45 60.0 -1.1
baz=325,SNR=5.3
D56A ZEC Mazanza, M 66.31 40 P P 09 46 00.1 -1.1
baz=327
K49A Clarkson 66.32 49 P P 09 46 01.9 +0.6
baz=324
G54A Lake Saint Pet 66.40 44 P P 09 46 00.4 -1.4
baz=326
G53A Haliburton 66.42 44 P P 09 46 00.7 -1.2
baz=326,SNR=11
SADO Sadowa 66.50 45 P P 09 46 01.0 -1.4
SADO IAmb IAmb 09 46 01.1
comp=Z,13nm,1.5s
I51A Listowel 66.52 46 P P 09 46 01.9 -0.6
baz=325
CCM Cathedral Cave 66.53 57 P P 09 46 02.2 -0.5
CCM pmax pmax
comp=Z,5.0nm,0.8s
CCM Cathedral Cave 66.53 57 P P 09 46 02.2 -0.5
baz=322
CCM Cathedral Cave 66.53 57 P P 09 46 02.2 -0.5
CCM IAmb IAmb 09 46 02.9
comp=Z,5.0nm,0.8s
ABTX Abilene, Hawle 66.53 66 P P 09 46 02.9 +0.1
ABTX IAmb IAmb 09 46 03.8
comp=Z,11nm,1.2s
HHAR Hobbs 66.60 60 P P 09 46 01.5 -1.7
HHAR IAmb IAmb 09 46 02.6
comp=Z,4.3nm,0.6s
E56A St. Veronique 66.63 41 P P 09 46 02.3 -0.9
baz=327,SNR=5.7
D57A Chemin Vers le 66.66 40 P P 09 46 02.8 -0.6
baz=327,SNR=8.4
F55A Otter Lake 66.72 42 P P 09 46 02.5 -1.3
baz=326
MGMO Mountain Grove 66.74 58 P P 09 46 02.8 -1.3
MGMO IAmb IAmb 09 46 03.4
comp=Z,4.6nm,0.6s
H53A Bobcaygeon 66.89 44 P P 09 46 03.7 -1.1
baz=326
TX31 Lajitas Ar. Si 66.93 72 P P 09 46 06.1 +0.6
TX32 Lajitas Array 66.93 72 P P 09 46 06.2 +0.7
TX32 IAmb IAmb 09 46 07.0
comp=Z,9.5nm,1.1s
TXAR Lajitas Array 66.93 72 P P 09 46 06.0 +0.5
comp=Z,4.4nm,0.7s,baz=301,slow=4.7,SNR=67
G55A Calabogie 67.06 43 P P 09 46 04.5 -1.5
baz=326,SNR=6.8
E57A Chemin Saint G 67.08 40 P P 09 46 05.1 -1.0
baz=327,SNR=5.6
TRQ Mont Tremblant 67.08 41 P P 09 46 05.2 -1.0
U40A Yellville 67.08 59 P P 09 46 05.7 -0.6
baz=322,SNR=7.7
U40A Yellville 67.08 59 P P 09 46 05.6 -0.6
U40A IAmb IAmb 09 46 06.1
comp=Z,7.7nm,1.0s
N48A Decatur 67.18 51 P P 09 46 06.1 -0.7
baz=324,SNR=5.7
P46A Rosedale 67.19 53 P P 09 46 06.6 -0.3
DELO Deloro Mine 67.32 44 P P 09 46 06.5 -1.1
DELO IAmb IAmb 09 46 07.2
comp=Z,7.2nm,0.8s
ORIO Orleans, Innes 67.37 42 P P 09 46 06.2 -1.7
baz=327
T42A Van Buren 67.41 57 P P 09 46 07.1 -1.2
E58A La Victoria 67.43 40 P P 09 46 07.7 -0.6
baz=328
H55A Tweed 67.47 43 P P 09 46 07.5 -1.0
baz=326,SNR=6.4
W39A Magazine 67.54 61 P P 09 46 08.7 -0.4
baz=322
I55A Frankford 67.55 44 P P 09 46 08.0 -1.0
baz=326
O48A Farmland 67.61 51 P P 09 46 08.6 -0.9
baz=324
H56A Elgin 67.79 43 P P 09 46 10.5 -0.1
baz=327
FCAR Ozark Folk Cen 67.81 59 P P 09 46 09.9 -1.0
FCAR IAmb IAmb 09 46 10.7
comp=Z,9.7nm,0.8s
G57A Newington 67.86 42 P P 09 46 09.9 -1.1
baz=327
BLO Bloomington 67.86 53 P P 09 46 10.5 -0.7
BLO pmax pmax
comp=Z,6.0nm,0.7s
BLO Bloomington 67.86 53 P P 09 46 10.4 -0.7
BLO IAmb IAmb 09 46 10.7
comp=Z,6.2nm,0.7s
J54A Appleton 67.94 45 P P 09 46 11.0 -0.5
baz=326
J54A Appleton 67.94 45 P P 09 46 11.0 -0.5
PECO Prince Edward 68.06 44 P P 09 46 11.3 -0.9
F59A Saint Guilaume 68.06 40 P P 09 46 12.0 -0.2
baz=328
N50A Nevada 68.08 50 P P 09 46 12.1 -0.4
baz=325
E60A Ste Agathe de 68.10 39 P P 09 46 11.9 -0.6
baz=329
JCT Junction City 68.12 68 P P 09 46 12.6 -0.3
JCT pmax pmax
comp=Z,7.0nm,1.0s
JCT Junction City 68.12 68 P P 09 46 12.4 -0.5
baz=322
JCT Junction City 68.12 68 P P 09 46 12.6 -0.3
JCT IAmb IAmb 09 46 13.8
comp=Z,7.1nm,0.9s
P48A Milroy 68.13 52 P P 09 46 11.9 -0.9
P48A IAmb IAmb 09 46 12.5
comp=Z,8.7nm,0.7s
MIAR Mount Ida 68.15 61 P P 09 46 13.1 +0.1
MIAR pmax pmax
comp=Z,5.0nm,0.8s
MIAR Mount Ida 68.15 61 P P 09 46 12.9 -0.2
baz=323,SNR=6.0
MIAR Mount Ida 68.15 61 P P 09 46 13.1 +0.1
MIAR IAmb IAmb 09 46 13.3
comp=Z,5.4nm,0.8s
WHAR Wooly Hollow 68.21 59 P P 09 46 12.8 -0.5
WHAR IAmb IAmb 09 46 13.6
comp=Z,6.2nm,0.9s
J55A Hilton 68.28 45 P P 09 46 12.7 -0.9
baz=326,SNR=5.1
J55A Hilton 68.28 45 P P 09 46 12.8 -0.9
N51A Ashland 68.30 49 P P 09 46 13.2 -0.7
baz=325
N51A Ashland 68.30 49 P P 09 46 13.3 -0.7
W41B Gary Mavity, V 68.32 60 P P 09 46 13.4 -0.7
baz=323,SNR=6.3
D62A Allapoint, All 68.34 37 P P 09 46 13.7 -0.2
baz=330
ERPA Erie 68.34 47 P P 09 46 13.6 -0.5
baz=326
ERPA Erie 68.34 47 P P 09 46 13.3 -0.7
L53A Girard 68.36 47 P P 09 46 14.0 -0.2
baz=326
O50A Cable 68.39 50 P P 09 46 14.2 -0.2
baz=325
P49A Miami Univ. Ec 68.39 52 P P 09 46 13.5 -1.0
baz=324
LONY Lake Ozonia 68.42 42 P P 09 46 13.0 -1.5
baz=326
K54A Basiliko Farm, 68.47 46 P P 09 46 14.4 -0.5
baz=326
L54A Sinclairville 68.52 46 P P 09 46 14.6 -0.6
baz=326
AKASG Malin Array Be 68.52 332 P P 09 46 15.6 +0.6
comp=Z,0.6nm,0.4s,baz=27,slow=6.6,SNR=2.9
AKASG LR LR 10 20 00.2
comp=Z,54nm,18.7s,baz=190,slow=39
E62A Clayton Lake 68.57 37 P P 09 46 14.6 -0.9
baz=330
E62A Clayton Lake 68.57 37 P P 09 46 14.6 -0.9
E62A IAmb IAmb 09 46 17.1
comp=Z,11nm,0.9s
X40A Basin Creek Fa 68.57 60 P P 09 46 15.7 +0.1
baz=323
X40A Basin Creek Fa 68.57 60 P P 09 46 14.9 -0.7
ACSO Alum Creek Sta 68.60 50 P P 09 46 14.9 -0.9
baz=325
ACSO Alum Creek Sta 68.60 50 P P 09 46 14.8 -0.9
ACSO IAmb IAmb 09 46 16.1
comp=Z,6.4nm,0.9s
M53A WI Miller and 68.61 48 P P 09 46 15.5 -0.2
baz=326,SNR=6.5
K55A Perry 68.63 45 P P 09 46 15.1 -0.8
baz=325,SNR=7.9
ALLY Alegheny Colle 68.66 47 P P 09 46 15.9 -0.2
J56A Wolcott 68.66 44 P P 09 46 14.9 -1.1
baz=327
J56A Wolcott 68.66 44 P P 09 46 14.9 -1.1
J56A IAmb IAmb 09 46 15.5
comp=Z,9.6nm,0.8s
GEYT Alibeck 68.66 306 LR LR 10 17 44.1
comp=Z,50nm,18.8s,baz=185,slow=37
WVNY West Valley, N 68.67 46 P P 09 46 14.9 -1.3
WVNY IAmb IAmb 09 46 16.7
comp=Z,13nm,1.1s
MMNY Mt. Morris Dam 68.69 45 P P 09 46 15.3 -1.0
WCI Wyandotte Cave 68.73 53 P P 09 46 15.9 -0.6
WCI pmax pmax
comp=Z,8.0nm,0.8s
WCI Wyandotte Cave 68.73 53 P P 09 46 16.0 -0.6
baz=324
WCI Wyandotte Cave 68.73 53 P P 09 46 15.9 -0.6
WCI IAmb IAmb 09 46 17.3
comp=Z,8.1nm,0.8s
P50A Jamestown 68.74 51 P P 09 46 16.1 -0.6
baz=325,SNR=6.3
H58A Gabriels 68.75 42 P P 09 46 15.4 -1.2
baz=328
O51A Pataskala 68.83 50 P P 09 46 16.6 -0.6
baz=325,SNR=5.4
J57A Williamstown 68.89 43 P P 09 46 16.4 -1.0
baz=327
L55A Hinsdale 68.93 46 P P 09 46 17.2 -0.6
baz=326
K56A Middlesex 68.95 45 P P 09 46 17.2 -0.7
baz=327
M54A Oil Creek Stat 68.98 47 P P 09 46 17.4 -0.7
baz=326
M54A Oil Creek Stat 68.98 47 P P 09 46 17.6 -0.5
G61A St-Isidore-de- 69.00 39 P P 09 46 17.7 -0.5
baz=329
N53A Lisbon 69.06 48 P P 09 46 18.1 -0.5
baz=326
E63A Oxbow 69.12 37 P P 09 46 17.7 -1.2
baz=330
O52A Adamsville 69.19 49 P P 09 46 19.1 -0.4
baz=325,SNR=6.5
O52A Adamsville 69.19 49 P P 09 46 19.2 -0.2
J58A Remsen 69.21 43 P P 09 46 18.5 -1.0
baz=328,SNR=5.1
J58A Remsen 69.21 43 P P 09 46 18.2 -1.3
J58A IAmb IAmb 09 46 19.1
comp=Z,8.3nm,0.8s
N54A Moraine State 69.29 47 P P 09 46 19.6 -0.5
baz=326
L56A Greenwood 69.33 45 P P 09 46 19.6 -0.7
baz=327,SNR=8.5
L56A Greenwood 69.33 45 P P 09 46 19.3 -1.0
E64A Bridgewater 69.33 36 P P 09 46 19.4 -0.8
baz=330
T47A Sharon Grove 69.35 55 P P 09 46 20.4 -0.1
O53A New Philadelph 69.36 49 P P 09 46 19.9 -0.5
baz=326
M55A Ridgway 69.39 46 P P 09 46 20.1 -0.5
baz=326,SNR=6.2
M55A Ridgway 69.39 46 P P 09 46 20.1 -0.5
I59A Olmsteadville 69.39 42 P P 09 46 19.2 -1.4
baz=328
G62A West of Eustis 69.42 39 P P 09 46 20.6 -0.2
baz=329
J59A Piesco 69.43 42 P P 09 46 19.6 -1.3
baz=328
J59A Piesco 69.43 42 P P 09 46 19.6 -1.3
J59A IAmb IAmb 09 46 20.2
comp=Z,8.9nm,1.0s
P52A Corning 69.46 50 P P 09 46 20.4 -0.7
baz=325
H61A Lyndonville 69.50 40 P P 09 46 21.0 -0.3
baz=329
F63A Nahmakanta, Br 69.51 38 P P 09 46 20.8 -0.5
baz=330
R50A Paris 69.59 52 P P 09 46 21.8 -0.1
R50A IAmb IAmb 09 46 22.4
comp=Z,6.5nm,0.8s
M56A Emporium 69.62 46 P P 09 46 21.4 -0.6
baz=327
M56A Emporium 69.62 46 P P 09 46 21.3 -0.8
M56A IAmb IAmb 09 46 21.9
comp=Z,13nm,1.1s
F64A Sherman 69.64 37 P P 09 46 21.5 -0.5
baz=330
WVT Waverly 69.70 56 P P 09 46 22.5 -0.1
WVT pmax pmax
comp=Z,8.0nm,0.7s
WVT Waverly 69.70 56 P P 09 46 22.9 +0.2
baz=324
WVT Waverly 69.70 56 P P 09 46 22.5 -0.1
WVT IAmb IAmb 09 46 23.5
comp=Z,8.4nm,0.7s
L57A Andrews Acres 69.73 45 P P 09 46 22.2 -0.6
baz=327
H62A Milan 69.75 40 P P 09 46 22.3 -0.5
baz=329
H62A Milan 69.75 40 P P 09 46 22.3 -0.5
H62A IAmb IAmb 09 46 23.3
comp=Z,9.1nm,0.8s
O54A Avella 69.77 48 P P 09 46 22.8 -0.2
baz=326
N55A Marion Center 69.87 47 P P 09 46 22.9 -0.7
baz=326,SNR=5.4
K59A Cooperstown 69.88 43 P P 09 46 22.6 -1.0
baz=328
I61A Oroboro, Fairl 69.91 41 P P 09 46 23.5 -0.2
baz=329
P53A Whipple 69.91 49 P P 09 46 23.5 -0.3
baz=326
BINY Binghamton 69.91 44 P P 09 46 23.2 -0.6
baz=328
G64A Maxfield 70.02 38 P P 09 46 24.1 -0.4
baz=330
J60A Lant Hill Farm 70.03 42 P P 09 46 23.7 -0.8
baz=328
H63A New Sharon 70.08 39 P P 09 46 24.6 -0.2
baz=330
L58A Harry Jones Me 70.10 44 P P 09 46 24.2 -0.8
baz=328
KIV Kislovodsk 70.14 320↑ eP P 09 46 23.5 -1.8
KIV *e* 09 48 59.7
KIV *e*PPP PPP 09 50 38.8
KIV *e*S **SKiKP 09 56 06.4 -2.9**
KIV pmax pmax
comp=Z,4.0nm,0.9s
M57A Sunshine Farm, 70.17 45 P P 09 46 24.7 -0.7
baz=327
M57A Sunshine Farm, 70.17 45 P P 09 46 24.3 -1.1
M57A IAmb IAmb 09 46 25.4
comp=Z,11nm,0.8s
P54A Burton 70.21 49 P P 09 46 25.4 -0.3
baz=326,SNR=6.3
O55A Ligonier 70.21 47 P P 09 46 24.9 -0.8
baz=326
OXF Oxford 70.25 58 P P 09 46 25.7 -0.3
OXF pmax pmax
comp=Z,21nm,1.0s
OXF Oxford 70.25 58 P P 09 46 26.0 0.0
baz=324
OXF Oxford 70.25 58 P P 09 46 25.7 -0.3
KBZ Khabaz 70.25 320 LR LR 10 20 14.0
comp=Z,49nm,19.0s,baz=32,slow=38
L59A Walton 70.30 43 P P 09 46 25.0 -1.2
baz=328
U49A Red Boiling Sp 70.36 54 P P 09 46 26.2 -0.4
Q53A Leroy 70.37 50 P P 09 46 26.4 -0.3
baz=326,SNR=6.7
T50A Nancy 70.38 53 P P 09 46 25.8 -1.0
I63A Otisfield 70.41 39 P P 09 46 26.0 -0.8
baz=330
M58A Price's Panora 70.42 45 P P 09 46 25.9 -1.1
baz=327
MCWV Mont Chateau 70.43 48 P P 09 46 27.0 0.0
baz=326
MCWV Mont Chateau 70.43 48 P P 09 46 27.1 0.0
MCWV IAmb IAmb 09 46 28.1
comp=Z,6.6nm,0.9s
CLTN Cedars of Leba 70.44 55 P P 09 46 27.0 -0.1
SSPA Standing Stone 70.45 46 P P 09 46 26.9 -0.3
baz=327
O56A Blue Knob Stat 70.47 47 P P 09 46 25.3 -2.0
baz=327
G65A Princeton 70.48 37 P P 09 46 26.8 -0.4
baz=331
G65A Princeton 70.48 37 P P 09 46 26.0 -1.3
G65A IAmb IAmb 09 46 27.7
comp=Z,8.1nm,0.7s
N57A Milroy 70.49 46 P P 09 46 26.6 -0.8
baz=327
V48A Smith Brothers 70.50 55 P P 09 46 27.4 -0.2
V48A IAmb IAmb 09 46 28.2
comp=Z,11nm,0.8s
PLAL Pickwick Lake 70.51 57 P P 09 46 27.2 -0.4
PLAL IAmb IAmb 09 46 28.6
comp=Z,12nm,0.9s
P55A Reedsville 70.57 48 P P 09 46 27.6 -0.4
baz=326
R53A Hurricane 70.61 50 P P 09 46 27.8 -0.4
baz=326,SNR=6.1
R53A Hurricane 70.61 50 P P 09 46 27.9 -0.2
M59A Waymart 70.69 44 P P 09 46 27.5 -1.2
baz=328
N58A Sunbury 70.76 45 P P 09 46 28.0 -1.0
baz=327
Q55A Buckhannon 70.88 49 P P 09 46 30.2 +0.3
baz=326,SNR=6.2
O57A Amberson 70.91 46 P P 09 46 29.6 -0.4
baz=327
P56A Dayton Farm, R 70.99 48 P P 09 46 30.3 -0.2
baz=327
S53A Williamson 71.07 51 P P 09 46 30.8 -0.3
baz=326
R54A Victor 71.16 50 P P 09 46 31.3 -0.3
baz=326,SNR=5.1
SWET Sewanee 71.34 55 P P 09 46 32.1 -0.6
TZTN Tazewell 71.36 53 P P 09 46 32.5 -0.3
baz=326
X48A Hartselle 71.44 56 P P 09 46 32.8 -0.4
X48A IAmb IAmb 09 46 34.0
comp=Z,12nm,1.1s
R55A Marlinton 71.46 49 P P 09 46 33.4 -0.1
baz=326
T53A Wise 71.47 52 P P 09 46 33.5 +0.1
baz=326,SNR=8.0
SOC Sochi 71.54 322 eP P 09 46 31.5 -2.2
SOC *e*PPP PPP 09 50 59.4
SOC *e*S **S 09 55 50.9 -0.4**
SOC *e*SS **SS 10 00 22.5 -2.8**
SOC pmax pmax
comp=Z,17nm,0.7s
V51A Loudon 71.60 54 P P 09 46 34.2 0.0
V51A IAmb IAmb 09 46 35.2
comp=Z,9.6nm,0.9s
W50A Signal Mountai 71.65 55 P P 09 46 34.5 -0.1
CPCT Cooper Cave 71.81 54 P P 09 46 34.8 -0.7
CPCT IAmb IAmb 09 46 36.0
comp=Z,8.4nm,0.9s
T54A Tazewell 71.83 51 P P 09 46 35.3 -0.4
baz=326
146A Union 71.93 59 P P 09 46 36.6 +0.4
Q58A Fox Den Farm, 71.95 47 P P 09 46 35.8 -0.4
baz=327,SNR=6.5
Z47A Carrollton 71.96 58 P P 09 46 36.4 0.0
TKL Tuckaleechee C 71.99 53 P P 09 46 37.0 +0.4
FPAL Fort Paine 72.05 55 P P 09 46 36.7 -0.3
R57A Stanardsville 72.14 48 P P 09 46 37.3 -0.1
baz=327
U54A Nelsons Funny 72.17 51 P P 09 46 37.6 -0.1
baz=326
S56A Natural Bridge 72.20 49 P P 09 46 37.5 -0.4
baz=327
BLA Blacksburg 72.22 50 P P 09 46 37.8 -0.2
BLA pmax pmax
comp=Z,14nm,1.2s
BLA Blacksburg 72.22 50 P P 09 46 37.2 -0.7
baz=327
BLA Blacksburg 72.22 50 P P 09 46 37.8 -0.2
BLA IAmb IAmb 09 46 40.6
comp=Z,14nm,1.2s
Y49A Blount Mountai 72.22 56 P P 09 46 38.1 +0.1
Y49A IAmb IAmb 09 46 38.2
comp=Z,12nm,1.1s
R58A Rapidan 72.36 48 P P 09 46 38.4 -0.3
baz=327
X51A Calhoun 72.38 55 P P 09 46 38.8 -0.2
X51A IAmb IAmb 09 46 39.5
comp=Z,13nm,0.9s
W52A Murphy 72.38 54 P P 09 46 38.6 -0.3
W52A IAmb IAmb 09 46 39.6
comp=Z,9.7nm,0.9s
S57A Dark Hollow, R 72.40 49 P P 09 46 38.9 0.0
baz=327
S57A Dark Hollow, R 72.40 49 P P 09 46 38.3 -0.7
S57A IAmb IAmb 09 46 39.7
comp=Z,11nm,1.1s
U55A TA2, Sparta 72.53 51 P P 09 46 39.7 -0.1
baz=326
LRAL Lakeview Retre 72.61 57 P P 09 46 39.6 -0.7
baz=325,SNR=6.8
LRAL Lakeview Retre 72.61 57 P P 09 46 39.9 -0.5
LRAL IAmb IAmb 09 46 40.1
comp=Z,5.9nm,0.6s
V54A Nebo 72.73 52 P P 09 46 40.8 -0.2
baz=326,SNR=7.8
T57A Hurt 72.91 49 P P 09 46 41.7 -0.3
baz=327
BG3 Lake Jocassee 72.93 53 P P 09 46 41.9 -0.3
U56A King 72.95 50 P P 09 46 41.9 -0.5
baz=327
U56A King 72.95 50 P P 09 46 42.0 -0.3
U56A IAmb IAmb 09 46 42.9
comp=Z,6.3nm,0.7s
V55A Taylorsville 73.00 51 P P 09 46 42.0 -0.5
baz=326
W54A Cherokee Point 73.19 52 P P 09 46 43.3 -0.4
baz=326
U57A Blanch 73.35 50 P P 09 46 44.2 -0.4
baz=327
V56A Mocksville 73.35 51 P P 09 46 44.5 -0.1
baz=327
KMSC Kings Mountain 73.53 52 P P 09 46 45.1 -0.7
baz=327
KMSC Kings Mountain 73.53 52 P P 09 46 45.0 -0.7
X54A Belton 73.55 53 P P 09 46 45.7 -0.1
baz=326,SNR=5.9
KHC Kasperske Hory 73.58 341 eP P 09 46 46.9 +1.1
KHC *e* 09 47 06.6
KHC Kasperske Hory 73.58 341 eP P 09 46 46.9 +1.1
KHC *ex* x 09 47 06.6
V57A Coltrane Farms 73.61 50 P P 09 46 45.6 -0.5
baz=327
GERES GERESS Array B 73.83 341 P P 09 46 48.1 +0.7
comp=Z,0.6nm,0.6s,baz=40,slow=10,SNR=6.5
X55A Gracelyn & Ava 73.95 52 P P 09 46 47.8 -0.4
baz=327
V58A Windy Hill, Pi 73.98 50 P P 09 46 48.3 0.0
baz=327,SNR=5.8
V58A Windy Hill, Pi 73.98 50 P P 09 46 47.9 -0.4
V58A IAmb IAmb 09 46 49.0
comp=Z,10nm,0.8s
152A Waverly Hall 74.01 56 P P 09 46 48.1 -0.5
152A IAmb IAmb 09 46 48.7
comp=Z,10nm,1.0s
W57A Gilead 74.12 51 P P 09 46 48.9 -0.3
baz=327
X56A White Oak 74.21 52 P P 09 46 49.5 -0.2
baz=327
U60A Pendleton 74.26 48 P P 09 46 49.8 -0.1
baz=328
Y55A Saluda 74.29 53 P P 09 46 49.6 -0.6
baz=327
BIRD Birdtown, Kers 74.34 51 P P 09 46 50.3 -0.2
V59A Middlesex 74.39 49 P P 09 46 50.7 +0.1
baz=328
W58A Raeford 74.57 50 P P 09 46 51.7 -0.1
baz=327,SNR=5.3
V60A Jim Taylor Roa 74.81 49 P P 09 46 53.3 +0.1
baz=328
154A Montrose 74.81 55 P P 09 46 52.6 -0.6
TIGA Tifton 75.56 56 P P 09 46 57.9 +0.4
baz=326
255A Hazlehurst 75.68 54 P P 09 46 58.0 -0.2

BRTR	**Keskin Array B**	**77.07**	**324**	LR	LR	10 26 26.7	
	comp=Z,21nm,18.9s,baz=360,slow=40						
WRA	**Warramunga Arr**	**79.29**	**210**	P	**P**	**09 47 18.6**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=25,slow=5.8,SNR=1.9						
PPT	**Papeete**	**81.72**	**137**	LR	LR	10 21 47.9	
	comp=Z,75nm,19.2s,baz=0.5,slow=34						
TEIG	**Tepich**	**82.49**	**65**	LR	LR	10 26 26.9	
	comp=Z,25nm,22.0s,baz=49,slow=37						
ASAR	**Alice Springs**	**82.94**	**209**	P	**P**	**09 47 38.5**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=18,slow=5.0,SNR=9.7						
ASAR				LR	LR	10 25 07.5	
	comp=Z,26nm,19.4s,baz=308,slow=36						
ESDC	**Sonseca Array**	**85.24**	**352**	P	**P**	**09 47 50.0**	**+0.5**
	comp=Z,1.8nm,1.1s,baz=354,slow=4.7,SNR=3.9						
JTS	**Las Juntas de**	**92.51**	**68**	LR	LR	10 31 25.2	
	comp=Z,29nm,21.0s,baz=354,slow=36						
SJG	**San Juan**	**94.96**	**49**	LR	LR	10 35 43.2	
	comp=Z,26nm,18.0s,baz=326,slow=38						

IDC 31 09:42:39.4±1.7, 6°91S×154°73E, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.7/43, mbtmp3.9/4, Error ellipse: s-maj=86.1km s-min=35.3km az=140.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.65**	**235**	P	P	09 47 53.2	+0.5
	2.8nm,0.9s,baz=59,slow=9.3,SNR=4.8						
MKAR	**Makanchi Array**	**83.16**	**319**	P	P	09 55 07.9	+0.3
	0.9nm,0.7s,baz=100,slow=5.3,SNR=8.0						
NVAR	**Mina Array Bea**	**91.88**	**52**	P	P	09 55 50.8	+0.5
	0.3nm,0.6s,baz=260,slow=5.4,SNR=2.9						
YKA	**Yellowknife Ar**	**96.39**	**28**	P	P	09 56 09.9	-0.1
	0.2nm,0.5s,baz=261,slow=4.4,SNR=5.1						
GERES	**GERESS Array B**	**126.84**	**329**	PKP	PKPdf	10 01 45.0	-0.5
	0.2nm,0.4s,baz=116,slow=2.3,SNR=4.5						
TORD	**Torodi Ar. Bea**	**152.75**	**285**	PKPbc	PKPbc	10 02 38.1	-1.2
	0.9nm,0.7s,baz=46,slow=3.0,SNR=4.8						

IDC 31 09:52:22.9±5.3, 5°06S×132°49E, h0km, mb3.8/1, mb1 3.7/3, mb1mx3.4/33, mbtmp3.5/3, ML3.5/2, Error ellipse: s-maj=342.0km s-min=31.3km az=75.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.90**	**173**	Pn	Pn	09 55 53.5	-1.6
	0.2nm,0.3s,baz=354,slow=13,SNR=1.4						
WRA				Sn	Sn	09 58 29.3	-12
	0.1nm,0.3s,baz=347,slow=25,SNR=1.3						
ASAR	**Alice Springs**	**18.55**	**176**	P	Pn	09 56 41.8	+0.3
	0.2nm,0.3s,baz=350,slow=10,SNR=8.8						
MKAR	**Makanchi Array**	**68.00**	**325**	P	P	10 03 24.1	0.0
	0.4nm,0.3s,baz=132,slow=7.9,SNR=7.1						

*NEIC **31** 10:18:05.7±2.9, 35°50N±0°04×97°21W±0°06, h6km±4km, Error ellipse: s-maj=7.4km s-min=5.5km az=79.0*
*TUL **31** 10:18:06.4±2.9, 35°49N±0°03×97°25W±0°05, h7km±6km, ML3.9, Mwr3.7/46(NEIC), Error ellipse: s-maj=6.5km s-min=3.4km az=111.0*
*IDC **31** 10:18:06.4±0.9, 35°62N×97°30W, h0km, mb3.3/2, mb1 3.8/7, mb1mx3.5/55, mbtmp3.5/7, ML3.5/5, MS3.0/4, Ms1 3.0/4, ms1mx2.6/27, Error ellipse: s-maj=14.4km s-min=10.6km az=145.0*
*ANF **31** 10:18:06.0±0.2, 35°49N×97°25W, h5km, ML4.8/17, ML4.9/17, Error ellipse: s-maj=3.0km s-min=2.1km az=161.0*
*NEIC **31** 10:18:06.8, 35°49N×97°25W, h7km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.11; $M_{\theta\theta}$=4.34; $M_{\phi\phi}$=-3.23; $M_{r\theta}$=0.30; $M_{r\phi}$=-2.21; $M_{\theta\phi}$=2.52; Fault plane solution: M_o5.15000×10^{14} NP1:ϕ_s244.53000°, δ65.76000°, λ-159.88000°. NP2:ϕ_s145.97000°, δ71.72000°, λ-25.62000°. Principal axes: T 4.9610, Plg4.0000°, Azm196.0000°; N 0.3637, Plg59.0000°, Azm293.0000°; P -5.3247, Plg31.0000°, Azm104.0000°;*

ISC 31 10:18:06.5±0.9, 35°53N±0°02×97°21W±0°02, h12km±6km, n147, σ1§54/175, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK001	**Jones High Sch**	**0.07**	**299**	Pg	**Pg**	**10 18 08.5**	**-0.5**
OK005	**Luther M Schoo**	**0.13**	**8**		**Pg**	**10 18 10.4**	**+0.7**
ADOK	**Arcadia Dam**	**0.18**	**314**		**Pg**	**10 18 10.6**	**+0.1**
OK009	**Oakdale Elemen**	**0.18**	**288**		**Pg**	**10 18 10.2**	**-0.3**
OKCSW	**OKLAHOMA CITY**	**0.22**	**237**		**Pg**	**10 18 10.2**	**-0.9**
OKCFA	**Oklahoma City**	**0.22**	**240**	Pg	**Pg**	**10 18 10.3**	**-0.9**
FNO	**Franklin**	**0.31**	**210**		**Pg**	**10 18 12.2**	**-0.6**
W35A	**Tecumseh**	**0.47**	**143**		**Pg**	**10 18 15.3**	**-0.3**
X34A	**Smith Ranch, M**	**1.05**	**209**		**Pg**	**10 18 25.8**	**-1.0**
TUL1	**Leonard**	**1.22**	**71**	P	**Pg**	**10 18 29.0**	**-1.0**
	baz=251,SNR=248						
TUL1				S	**Sg**	**10 18 46.1**	**+0.3**
	baz=251						
TUL1	**Leonard**	**1.22**	**71**	Pg	**Pg**	**10 18 29.2**	**-0.7**
T35A	**Sooner Cattle**	**1.50**	**22**		**Pn**	**10 18 33.9**	**+0.6**
WMOK	**Wichita Mounta**	**1.51**	**239**	P	**Pn**	**10 18 32.6**	**-0.7**
	baz=59,SNR=578						
WMOK				S	**Sn**	**10 18 52.5**	**-0.5**
	baz=59						
WMOK	**Wichita Mounta**	**1.51**	**239**	Pg	**Pn**	**10 18 32.7**	**-0.6**
U32A	**Winter Ranch,**	**1.68**	**301**	Pn	**Pn**	**10 18 36.4**	**+0.6**
X37A	**Clayton**	**1.78**	**121**		**Pn**	**10 18 38.2**	**+1.1**
Z35A	**Perchaven, San**	**2.19**	**181**		**Pn**	**10 18 43.4**	**+0.6**
U38A	**Gravette**	**2.47**	**68**		**Pn**	**10 18 48.2**	**+1.6**
HHAR	**Hobbs**	**2.76**	**73**	Pn	**Pn**	**10 18 51.7**	**+1.1**
W39A	**Magazine**	**2.82**	**96**	P	**Pn**	**10 18 52.5**	**+1.1**
	baz=277,SNR=146						
W39A				S	**Sn**	**10 19 27.8**	**+2.4**
	baz=277						
W39A	**Magazine**	**2.82**	**96**		**Pn**	**10 18 52.6**	**+1.1**
Z38A	**Mt. Pleasant**	**2.92**	**140**		**Pn**	**10 18 53.5**	**+0.8**
R32A	**Long Quarter,**	**3.13**	**338**		**Pn**	**10 18 57.3**	**+1.6**
MIAR	**Mount Ida**	**3.14**	**107**	P	**Pn**	**10 18 57.2**	**+1.3**
	baz=288,SNR=144						
MIAR				S	**Sn**	**10 19 36.5**	**+3.2**
	baz=288						
MIAR	**Mount Ida**	**3.14**	**107**	Pn	**Pn**	**10 18 57.4**	**+1.5**
ABTX	**Abilene, Hawle**	**3.53**	**216**	P	**Pn**	**10 19 01.2**	**0.0**
	baz=34,SNR=92						
ABTX				S	**Sn**	**10 19 44.2**	**+1.4**
	baz=34						
ABTX	**Abilene, Hawle**	**3.53**	**216**	Pn	**Pn**	**10 19 01.5**	**+0.3**
WHTX	**Lake Whitney,**	**3.53**	**183**	Pn	**Pn**	**10 19 01.8**	**+0.6**
	baz=2.8,SNR=97						
WHTX				Pb	**Pb**	**10 19 07.7**	**-1.2**
	baz=2.8						
WHTX				Sb	**Sb**	**10 19 53.8**	**+2.0**
	baz=2.8						
WHTX	**Lake Whitney,**	**3.53**	**183**	Pn	**Pn**	**10 19 02.1**	**+0.9**
KSU1	**Kansas State U**	**3.60**	**8**	Pn	**Pn**	**10 19 03.2**	**+1.0**
	baz=188,SNR=22						
KSU1				Pb	**Pb**	**10 19 11.9**	**+1.8**
	baz=188						
KSU1				Sn	**Sn**	**10 19 46.2**	**+1.6**
	baz=188						
KSU1				Sb	**Sg**	**10 19 59.9**	**-2.2**
	baz=188						
KSU1	**Kansas State U**	**3.60**	**8**	Pn	**Pn**	**10 19 02.9**	**+0.7**
U40A	**Yellville**	**3.63**	**76**	P	**Pn**	**10 19 03.4**	**+0.8**
	baz=256,SNR=37						
U40A				Sn	**Sn**	**10 19 48.4**	**+2.9**
	baz=258						
U40A				Sb	**Sg**	**10 20 01.1**	**-2.1**
	baz=258						
U40A	**Yellville**	**3.63**	**76**	Pn	**Pn**	**10 19 03.3**	**+0.8**
237A	**Washetta, Mont**	**3.71**	**161**		**Pn**	**10 19 04.2**	**+0.6**
AMTX	**Amarillo**	**3.71**	**261**	P	**Pn**	**10 19 04.8**	**+1.0**
	baz=79						
AMTX				Sn	**Sn**	**10 19 49.2**	**+1.7**
	baz=79						
AMTX				Sb	**Sb**	**10 19 59.3**	**+2.2**
	baz=79						
X40A	**Basin Creek Fa**	**3.74**	**105**	P	**Pn**	**10 19 04.9**	**+0.8**
	baz=287,SNR=28						
X40A	**Basin Creek Fa**	**3.74**	**105**		**Pn**	**10 19 05.3**	**+1.2**
WLAR	**White Oak Lake**	**3.85**	**117**	Pn	**Pn**	**10 19 06.6**	**+1.0**
CBKS	**Cedar Bluff**	**3.85**	**329**	P	**Pn**	**10 19 06.5**	**+0.9**
	baz=148,SNR=7.5						
CBKS				Sn	**Sn**	**10 19 51.3**	**+0.4**
	baz=148						
CBKS				Sb	**Sg**	**10 20 07.7**	**-2.5**
	baz=148						
CBKS	**Cedar Bluff**	**3.85**	**329**	Pn	**Pn**	**10 19 06.8**	**+1.2**
WHAR	**Wooly Hollow**	**4.03**	**92**	Pn	**Pn**	**10 19 09.2**	**+1.1**
UALR	**University of**	**4.06**	**99**	Pn	**Pn**	**10 19 09.5**	**+1.1**
W41B	**Gary Mavity, V**	**4.07**	**94**	P	**Pn**	**10 19 09.7**	**+1.0**
	baz=276,SNR=62						
W41B				Sn	**Sn**	**10 19 58.4**	**+2.2**
	baz=276						
W41B				Sb	**Sg**	**10 20 13.8**	**-3.5**
	baz=276						
FCAR	**Ozark Folk Cen**	**4.16**	**84**		**Pn**	**10 19 10.5**	**+0.7**
Z41A	**Richland Creek**	**4.29**	**121**	P	**Pn**	**10 19 12.2**	**+0.5**
	baz=303,SNR=18						
Z41A				S	**Sn**	**10 20 01.8**	**+0.2**
	baz=303						
MGMO	**Mountain Grove**	**4.31**	**66**	Pn	**Pn**	**10 19 13.9**	**+2.0**
NATX	**Nacogdoches**	**4.32**	**150**	S	**Sn**	**10 20 01.9**	**-0.4**
	baz=331						
435B	**Jarrell**	**4.74**	**184**	P	**Pn**	**10 19 18.1**	**+0.2**
	baz=3.4,SNR=5.5						
435B				Sb	**Sb**	**10 20 31.5**	**+4.9**
	baz=3.4						
CCAR	**Cane Creek**	**4.76**	**108**	Pn	**Pn**	**10 19 18.9**	**+0.9**
R40A	**Maddies Statio**	**4.83**	**54**		**Pn**	**10 19 19.6**	**+0.6**
MSTX	**Muleshoe**	**4.83**	**253**	P	**Pn**	**10 19 19.5**	**+0.3**
	baz=70,SNR=15						
MSTX				Sn	**Sn**	**10 20 15.5**	**+0.4**
	baz=70						
MSTX				Sb	**Sb**	**10 20 34.6**	**+5.2**
	baz=70						
MSTX	**Muleshoe**	**4.83**	**253**	Pn	**Pn**	**10 19 19.5**	**+0.3**
LCAR	**Lake Charles**	**4.96**	**82**	Pn	**Pn**	**10 19 20.6**	**-0.1**
P38A	**Dawn**	**5.03**	**34**	Pn	**Pn**	**10 19 23.4**	**+1.7**
T42A	**Van Buren**	**5.17**	**71**	Pn	**Pn**	**10 19 24.3**	**+0.6**
N33A	**J Bar K, Exete**	**5.21**	**358**	Pn	**Pn**	**10 19 24.0**	**-0.2**
X43A	**Marvell**	**5.29**	**99**	P	**Pn**	**10 19 26.6**	**+1.2**
	baz=282,SNR=10						
X43A				S	**Sn**	**10 20 28.3**	**+2.0**
	baz=282						
CCM	**Cathedral Cave**	**5.42**	**60**	P	**Pn**	**10 19 28.3**	**+1.2**
	baz=244						
CCM				S	**Sn**	**10 20 31.1**	**+1.7**
	baz=244						
CCM	**Cathedral Cave**	**5.42**	**60**	Pn	**Pn**	**10 19 28.5**	**+1.4**
N35A	**Tabor**	**5.47**	**13**		**Pn**	**10 19 28.2**	**+0.4**
JCT	**Junction City**	**5.48**	**204**	P	**Pn**	**10 19 27.8**	**-0.3**
	baz=22,SNR=9.3						
JCT				S	**Sn**	**10 20 30.3**	**-0.8**
	baz=22						
JCT	**Junction City**	**5.48**	**204**	Pn	**Pn**	**10 19 27.6**	**-0.5**
KSCO	**Kaye Shedlock'**	**5.54**	**310**	P	**Pn**	**10 19 29.3**	**+0.3**
	baz=128,SNR=10						
KSCO				S	**Sn**	**10 20 33.0**	**+0.3**
	baz=128						
KSCO	**Kaye Shedlock'**	**5.54**	**310**	Pn	**Pn**	**10 19 29.4**	**+0.3**
143A	**Socs Landing,**	**5.58**	**119**	Pn	**Pn**	**10 19 28.8**	**-0.5**
P40A	**Paris**	**5.73**	**44**	Pn	**Pn**	**10 19 33.3**	**+1.9**
BGNE	**Belgrade**	**5.92**	**353**	P	**Pn**	**10 19 33.8**	**-0.2**
	baz=173						
BGNE				S	**Sn**	**10 20 39.8**	**-2.0**
	baz=173						
BGNE	**Belgrade**	**5.92**	**353**	Pn	**Pn**	**10 19 33.9**	**-0.2**
T25A	**Trinidad**	**6.03**	**288**	P	**Pn**	**10 19 36.0**	**+0.2**
	baz=104,SNR=15						
N38A	**Joes South For**	**6.12**	**30**	Pn	**Pn**	**10 19 36.9**	**+0.1**
LNXT	**Lenox**	**6.30**	**83**	Pn	**Pn**	**10 19 39.2**	**0.0**
L34A	**Svendsen Farm,**	**6.46**	**6**	Pn	**Pn**	**10 19 40.9**	**-0.6**
VBMS	**Vicksburg**	**6.47**	**119**	P	**Pn**	**10 19 42.0**	**+0.4**
	baz=302						
VBMS				S	**Sn**	**10 20 54.3**	**-1.1**
	baz=302						
OXF	**Oxford**	**6.48**	**97**	P	**Pn**	**10 19 42.2**	**+0.4**
	baz=281,SNR=28						
OXF				S	**Sn**	**10 20 56.0**	**+0.4**
	baz=281						
OXF	**Oxford**	**6.48**	**97**	Pn	**Pn**	**10 19 42.0**	**+0.2**
Y45A	**Yeager Farm, C**	**6.53**	**102**	Pn	**Pn**	**10 19 43.0**	**+0.5**
W45A	**Hickory Valley**	**6.57**	**91**	Pn	**Pn**	**10 19 43.3**	**+0.4**
OGNE	**Ogallala**	**6.61**	**326**	P	**Pn**	**10 19 44.7**	**+1.2**
	baz=144						
OGNE				S	**Sn**	**10 20 56.9**	**-1.9**
	baz=144						
SDCO	**Great Sand Dun**	**7.02**	**291**	P	**Pn**	**10 19 50.4**	**+1.0**
	baz=106,SNR=189						
SDCO	**Great Sand Dun**	**7.02**	**291**	Pn	**Pn**	**10 19 50.6**	**+1.2**
SCIA	**State Center**	**7.09**	**25**	P	**Pn**	**10 19 51.0**	**+0.8**
	baz=207,SNR=6.7						
SCIA				S	**Sn**	**10 21 11.0**	**+0.2**
	baz=207						
SCIA	**State Center**	**7.09**	**25**	Pn	**Pn**	**10 19 51.0**	**+0.8**
K31A	**O'Neill**	**7.19**	**351**	Pn	**Pn**	**10 19 52.1**	**+0.7**
Q24A	**Divide**	**7.20**	**301**	P	**Pn**	**10 19 52.2**	**+0.3**
	baz=116						
146A	**Union**	**7.36**	**111**	Pn	**Pn**	**10 19 54.0**	**+0.2**
Q44A	**Meyer Farm, Va**	**7.36**	**60**	Pn	**Pn**	**10 19 55.0**	**+1.2**
P43A	**Skaggs, Pawnee**	**7.36**	**54**	Pn	**Pn**	**10 19 55.3**	**+1.5**
833A	**Chaparral WMA,**	**7.42**	**195**	P	**Pn**	**10 19 55.9**	**+1.3**
	baz=14						
833A				S	**Sn**	**10 21 16.0**	**-2.7**
	baz=14						
PLAL	**Pickwick Lake**	**7.50**	**92**	Pn	**Pn**	**10 19 55.4**	**-0.3**
ANMO	**Albuquerque**	**7.59**	**268**	Pn	**Pn**	**10 19 58.0**	**+0.9**
	0.2nm,0.3s,baz=90,slow=12,SNR=5.0						
ANMO				Pg	Pg	10 20 24.7	-7.1
	1.8nm,0.3s,baz=77,slow=18,SNR=17						
ANMO				Lg	Lg	10 22 01.9	
	5.3nm,0.3s,baz=2.9,slow=19,SNR=4.7						
ANMO	**Albuquerque**	**7.59**	**268**	P	**Pn**	**10 19 57.4**	**+0.3**
	baz=83						
WVT	**Waverly**	**7.65**	**83**	P	**Pn**	**10 19 57.8**	**+0.1**
	baz=268						
WVT	**Waverly**	**7.65**	**83**	Pn	**Pn**	**10 19 57.5**	**-0.2**
MNTX	**Cornudas Mount**	**7.81**	**243**	P	**Pn**	**10 20 00.3**	**+0.3**
	baz=59,SNR=10						
MNTX	**Cornudas Mount**	**7.81**	**243**	Pn	**Pn**	**10 20 00.3**	**+0.3**
K38A	**Parkersburg**	**7.90**	**25**	Pn	**Pn**	**10 20 01.1**	**-0.1**
ISCO	**Idaho Springs**	**7.91**	**305**	P	**Pn**	**10 20 02.4**	**+0.8**
	baz=120,SNR=7.5						
ISCO				S	**Sn**	**10 21 28.9**	**-2.3**
	baz=120						
ISCO	**Idaho Springs**	**7.91**	**305**	Pn	**Pn**	**10 20 02.1**	**+0.5**
Z47A	**Carrollton**	**7.91**	**104**	Pn	**Pn**	**10 20 01.8**	**+0.5**
HDIL	**Hopedale**	**8.01**	**49**	P	**Pn**	**10 20 04.1**	**+1.4**
	baz=234						
HDIL				S	**Sn**	**10 21 30.3**	**-3.0**
	baz=234						
HDIL	**Hopedale**	**8.01**	**49**	Pn	**Pn**	**10 20 02.4**	**-0.3**
L40A	**Anamosa**	**8.03**	**34**	Pn	**Pn**	**10 20 02.7**	**-0.3**
ECSD	**EROS Data Cent**	**8.21**	**3**	P	**Pn**	**10 20 04.5**	**-0.9**
	baz=184,SNR=17						
ECSD				S	**Sn**	**10 21 34.9**	**-3.3**
	baz=184						
ECSD	**EROS Data Cent**	**8.21**	**3**	Pn	**Pn**	**10 20 04.5**	**-0.9**
TX31	**Lajitas Ar. Si**	**8.24**	**223**	Pn	**Pn**	**10 20 05.5**	**-0.4**
TXAR	**Lajitas Array**	**8.24**	**223**	Pn	**Pn**	**10 20 05.8**	**-0.2**
	0.5nm,0.3s,baz=42,slow=13,SNR=27						
TXAR				Lg	Lg	10 22 24.5	
	4.8nm,0.3s,baz=44,slow=24,SNR=8.6						
TXAR				LR	LR	10 23 30.9	
	comp=Z,93nm,19.3s,baz=0.0,slow=39						
X48A	**Hartselle**	**8.41**	**94**	Pn	**Pn**	**10 20 07.9**	**-0.4**
PHWY	**Pilot Hill**	**8.66**	**314**	Pn	**Pn**	**10 20 12.5**	**+0.6**
N23A	**Red Feather La**	**8.71**	**311**	P	**Pn**	**10 20 14.2**	**+1.6**
	baz=126,SNR=16						
LRAL	**Lakeview Retre**	**8.81**	**103**	P	**Pn**	**10 20 13.8**	**+0.1**
	baz=289						
LRAL	**Lakeview Retre**	**8.81**	**103**	Pn	**Pn**	**10 20 13.9**	**+0.2**
SUSD	**Miller**	**9.01**	**352**	S	**Sn**	**10 21 53.0**	**-4.7**
	baz=171						
Y49A	**Blount Mountai**	**9.05**	**97**	Pn	**Pn**	**10 20 16.9**	**-0.1**
JFWS	**Jewell Farm**	**9.14**	**34**	P	**Pn**	**10 20 18.1**	**-0.1**
	baz=218						
WCI	**Wyandotte Cave**	**9.16**	**70**	P	**Pn**	**10 20 20.3**	**+1.9**
	baz=256						
FPAL	**Fort Paine**	**9.57**	**93**	Pn	**Pn**	**10 20 23.8**	**-0.3**
W50A	**Signal Mountai**	**9.73**	**88**	Pn	**Pn**	**10 20 27.8**	**+1.5**
I40A	**Norwalk**	**9.78**	**29**	Pn	**Pn**	**10 20 26.1**	**-0.8**
RSSD	**Black Hills**	**10.06**	**331**	P	**Pn**	**10 20 31.9**	**+0.9**
	baz=147						
RSSD				S	**Sn**	**10 22 22.2**	**-1.6**
	baz=147						
K22A	**Casper**	**10.14**	**317**	P	**Pn**	**10 20 32.8**	**+0.7**
	baz=132						
SPMN	**Marine on St.**	**10.25**	**18**	P	**Pn**	**10 20 33.0**	**-0.4**
	baz=201,SNR=8.6						
SPMN				S	**Sn**	**10 22 24.0**	**-4.3**
	baz=201						
V51A	**Loudon**	**10.47**	**85**	Pn	**Pn**	**10 20 37.3**	**+0.8**
TKL	**Tuckaleechee C**	**10.95**	**85**	Pn	**Pn**	**10 20 43.2**	**+0.2**
	0.4nm,0.3s,baz=238,slow=10,SNR=7.9						
TKL				Lg	Lg	10 23 48.6	
	3.1nm,0.3s,baz=166,slow=19,SNR=8.3						
TKL	**Tuckaleechee C**	**10.95**	**85**	Pn	**Pn**	**10 20 43.8**	**+0.8**
G40A	**Rib Lake**	**11.10**	**27**	Pn	**Pn**	**10 20 44.6**	**-0.4**
S51A	**Beattyville**	**11.15**	**75**	Pn	**Pn**	**10 20 46.0**	**+0.2**
H43A	**Windswept, Lux**	**11.49**	**36**	Pn	**Pn**	**10 20 49.4**	**-0.9**
GOGA	**Godfrey**	**11.54**	**97**	Pn	**Pn**	**10 20 50.5**	**-0.6**
PDAR	**Pinedale Array**	**12.00**	**311**	Pn	**Pn**	**10 20 57.6**	**+0.1**
	0.2nm,0.3s,baz=125,slow=13,SNR=5.0						
PDAR				Lg	Lg	10 24 24.9	
	1.4nm,0.3s,baz=110,slow=32,SNR=3.5						
COWI	**Conover**	**12.20**	**28**	Pn	**Pn**	**10 20 58.0**	**-2.0**
N50A	**Nevada**	**12.24**	**60**	S	**Sn**	**10 23 11.7**	**-5.4**
	baz=249						
O51A	**Pataskala**	**12.43**	**64**	S	**Sn**	**10 23 21.0**	**-0.8**
	baz=253						
MDND	**Maddock**	**12.44**	**353**	S	Sn	10 23 13.1	-8.7
	baz=171						
K48A	**Perry**	**12.48**	**50**	S	Sn	10 23 15.7	-7.3
	baz=239						
P52A	**Corning**	**12.64**	**67**	P	**Pn**	**10 21 06.2**	**0.0**
	baz=256						
AGMN	**Agassiz Nation**	**12.80**	**4**	P	Pn	10 21 04.3	-4.0
	baz=185,SNR=8.7						
B35A	**Bob, Littlefor**	**13.08**	**10**	Pn	**Pn**	**10 21 09.2**	**-2.9**
EYMN	**Ely**	**13.12**	**17**	P	Pn	10 21 08.7	-3.9
	baz=201,SNR=7.6						
EYMN				S	Sn	10 23 30.8	-7.6
	baz=201						
EYMN	**Ely**	**13.12**	**17**	Pn	**Pn**	**10 21 09.3**	**-3.3**
ULM	**Lac du Bonnet**	**14.75**	**3**	Pn	Pn	10 21 30.2	-4.7
	0.4nm,0.3s,baz=178,slow=14,SNR=4.0						
ULM				Sn	Sn	10 24 05.2	-13
	1.2nm,0.3s,baz=95,slow=21,SNR=2.8						
ULM				Lg	Lg	10 25 46.5	
	0.8nm,0.3s,baz=276,slow=22,SNR=1.9						
ULM				LR	LR	10 27 25.5	
	comp=Z,90nm,18.4s,baz=170,slow=38						
ULM	**Lac du Bonnet**	**14.75**	**3**		Pn	10 21 29.8	-5.0
ELK	**Elko**	**15.11**	**296**	LR	LR	10 28 00.4	
	comp=Z,34nm,19.0s,baz=78,slow=40						
SADO	**Sadowa**	**16.59**	**51**	Sn	Sn	10 24 51.4	-12
	0.5nm,0.3s,baz=241,slow=12,SNR=3.7						
SADO				Lg	Lg	10 26 42.4	
	0.7nm,0.3s,baz=155,slow=18,SNR=3.2						
CMIG	**Matias Romero**	**18.48**	**173**	Pn	**Pn**	**10 22 28.4**	**+5.9**
	0.2nm,0.3s,baz=342,slow=16,SNR=1.7						
YKA	**Yellowknife Ar**	**29.10**	**343**	P	**P**	**10 24 07.0**	**+0.3**
	0.2nm,0.7s,baz=140,slow=8.4,SNR=5.4						
ILAR	**Eielson Array**	**41.50**	**330**	P	**P**	**10 25 55.6**	**+2.4**
	0.3nm,0.6s,baz=110,slow=7.4,SNR=4.1						
NOA	**NORSAR Array B**	**67.67**	**30**	LR	LR	10 57 45.4	
	comp=Z,14nm,18.9s,baz=170,slow=35						

*IDC **31** 10:18:48.9±1.2, 39°00N×106°08E, h0km, mb3.6/6, mb1 3.7/9, mb1mx3.4/61, mbtmp3.5/9, ML3.2/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/43, Error ellipse: s-maj=33.5km s-min=20.5km az=51.0*

ISC 31 10:18:54.2±1.2, 39°1N±0°2×106°1E±0°2, h35km, n10, σ0§40/9, mb3.5/5, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**8.76**	**1**	Pn	**Pn**	**10 20 58.2**	**-0.2**
	0.2nm,0.3s,baz=184,slow=14,SNR=7.1						
SONM				Lg	Lg	10 23 29.2	
	0.4nm,0.3s,baz=190,slow=29,SNR=4.3						
KSRS	**Korea Array**	**17.21**	**89**	P	**Pn**	**10 22 52.3**	**+0.5**
	0.1nm,0.3s,baz=284,slow=11,SNR=5.2						
MKAR	**Makanchi Array**	**19.02**	**302**	P	**P**	**10 23 13.1**	**+0.2**
	0.1nm,0.3s,baz=98,slow=14,SNR=3.6						
ZALV	**Zalesovo Beam**	**20.76**	**323**	P	**P**	**10 23 31.3**	**-0.4**
	1.2nm,0.3s,baz=127,slow=9.8,SNR=5.3						
KURBB	**Kurchatov Arra**	**22.56**	**310**	P	**P**	**10 23 50.9**	**-0.3**
	0.9nm,0.7s,baz=108,slow=12,SNR=7.6						
BVAR	**Borovoye Array**	**28.11**	**312**	P	**P**	**10 24 42.9**	**+0.4**
	1.3nm,0.5s,baz=99,slow=8.9,SNR=7.6						
OBN	**Obninsk**	**47.92**	**314**	LR	LR	10 49 08.3	
	comp=Z,9.4nm,18.8s,baz=160,slow=38						
NOA	**NORSAR Array B**	**58.93**	**326**	P	**P**	**10 28 49.4**	**-0.1**
	0.2nm,0.5s,baz=60,slow=6.9,SNR=3.4						
WRA	**Warramunga Arr**	**64.39**	**150**	P	**P**	**10 29 26.2**	**-0.5**
	0.3nm,0.6s,baz=341,slow=6.5,SNR=4.6						
YKA	**Yellowknife Ar**	**73.62**	**18**

NKC *i* Sg **Sg** 10 37 23.7 -0.8
NKC Novy Kostel 0.08 77 *e*P **Pg** 10 37 22.5 -0.1
NKC Novy Kostel 0.08 77 *e*PG **Pg** 10 37 22.5 -0.1
NKC *e*SG **Sg** 10 37 23.7 -0.8
comp=Z,248µm,0.3s
NKC Novy Kostel 0.08 77 ⇑P **Pg** 10 37 22.7 +0.1
NKC S **Sg** 10 37 23.8 -0.8
WERN Wernitzgruen 0.08 22 *i* Pg **Pg** 10 37 23.3 +0.6
WERN *i* Sg **Sg** 10 37 24.8 +0.2
157µm,0.4s
KVC Kvetna 0.12 95 ⇑P **Pg** 10 37 22.8 -0.3
KVC S **Sg** 10 37 24.0 -1.4
POCW Potky 0.12 31 ⇓P **Sg** 10 37 23.5 +0.4
POCW S **Sg** 10 37 25.2 -0.2
STCW Studenec 0.13 70 ⇑P **Pg** 10 37 23.0 -0.3
STCW S **Sg** 10 37 24.2 -1.4
KACW Kaceov 0.14 121 ⇓P **Pg** 10 37 23.5 +0.1
KACW S **Sg** 10 37 25.2 -0.7
ZHC Zelena Hora 0.15 186 ⇓P **Pb** 10 37 24.8 +0.1
ZHC S **Sb** 10 37 27.3 +1.3
GUNZ Gunzen 0.15 0 *i* Pg **Pb** 10 37 24.5 -0.3
GUNZ *i* Sg **Sg** 10 37 26.6 +0.5
26µm,0.3s
VIEL Selb-Vielitz 0.15 258 *i* Pg **Pb** 10 37 25.5 +0.7
VIEL *i* Sg **Sb** 10 37 28.6 +2.5
KRCW Kraslice 0.17 48 ⇑P **Pg** 10 37 23.8 -0.1
KRCW S **Sg** 10 37 25.7 -1.0
TRIB Obertriebel 0.18 318 *i* Pg **Pb** 10 37 25.7 +0.3
TRIB *i* Sg **Sb** 10 37 28.9 +2.0
43µm,0.2s
MULD Muldenberg 0.20 14 *i* Pg **Pg** 10 37 24.9 +0.5
MULD *i* Sg **Sg** 10 37 27.4 0.0
44µm,0.3s
TANN Tannenbergstha 0.22 23 *i* Pg **Pg** 10 37 24.9 +0.2
TANN *i* Sg **Sg** 10 37 27.4 -0.4
69µm,0.2s
LACW Lazy 0.25 131 ⇓P **Pg** 10 37 25.4 +0.1
LACW S **Sg** 10 37 28.4 -0.4
MANZ Manzenberg 0.27 212 *e*Pg **Pb** 10 37 27.3 +0.5
MANZ *e*Sg **Sb** 10 37 31.6 +0.1
PLN Plauen 0.29 338 *i* Pg **Pb** 10 37 27.2 0.0
PLN *i* Sg **Sb** 10 37 31.5 -0.6
17µm,0.2s
ROTZ Rotzenmuhle 0.46 190 *e*Sg **Sb** 10 37 36.4 -0.3
SCHF Schoenfels 0.46 6 *i* Pg **Pg** 10 37 29.7 +0.6
SCHF *i* Sg **Sg** 10 37 35.7 +0.4
23µm,0.2s
GRZ1 Mausoleum Wald 0.48 352 *i* Pg **Pb** 10 37 30.3 -0.1
GRZ1 *i* Sg **Sg** 10 37 36.5 +0.7
8µm,0.3s
ZEU Talsperre Zeul 0.51 334 *i* Pg **Pb** 10 37 31.2 +0.3
ZEU *i* Sg **Sb** 10 37 38.7 +0.5
MLFH Mildenfurth 0.60 345 *i* Pg **Pb** 10 37 32.5 +0.2
MLFH *i* Sg **Sb** 10 37 40.8 0.0
MOX Moxa 0.63 313 *e*Pg **Pb** 10 37 33.9 +0.9
MOX *e*Sg **Sb** 10 37 42.3 +0.6
GRA1 Grafenberg Arr 0.89 234 Pg **Pn** 10 37 39.1 +0.7
GRF Grafenberg Arr 0.89 234 *e*Pg **Pn** 10 37 39.0 +0.7
GRF *e*Sg **Sn** 10 37 51.7 +0.6
GRF Grafenberg Arr 0.89 234 P **Pn** 10 37 39.1 +0.7
FBE Freiberg 0.96 42 *e*Pg **Pb** 10 37 38.2 -0.4
FBE *e*Sg **Sg** 10 37 49.3 -1.7
GRB2 Grafenberg Arr 1.04 205⇑*e*Pn **Pn** 10 37 41.0 +0.6
GRB2 Sg **Sn** 10 37 55.9 +1.0
WET Wettzell 1.13 161 *e*Pg **Pg** 10 37 41.8 0.0
WET *e*Sg **Sb** 10 37 55.9 -0.3
CLL Collm 1.17 21 *i* Pg **Pg** 10 37 43.1 +0.6
CLL *e* 10 37 45.0
CLL *e*Sglp 10 37 52.0
comp=N,1µm,11.0s
CLL *e*Sglp 10 37 52.0
comp=E,1µm,16.6s
CLL *e*Sglp 10 37 52.0
comp=Z,1µm,10.0s
CLL *i* Sg **Sg** 10 37 57.8 0.0
comp=Z,5µm,0.3s
CLL *e*Lmax 10 37 59.0
CLL Collm 1.17 21 *i* P **Pg** 10 37 43.1 +0.6
CLL *i* 10 37 57.8
CLL Collm 1.17 21 **Pg** 10 37 43.2 +0.6
CLL Sg **Sb** 10 37 57.5 +0.1
PBCC Pribram 1.20 116 *e*PG **Pn** 10 37 41.4 -1.2
PBCC *e*SG **Sb** 10 37 56.2 -1.9
BRG Berggiesshubel 1.22 57 PG **Pn** 10 37 42.6 -0.3
BRG SG **Sb** 10 37 57.6 -1.1
comp=Z,11µm,0.2s
BRG Berggiesshubel 1.22 57 *e*Pg **Pn** 10 37 42.6 -0.3
BRG *e*Sg **Sb** 10 37 57.3 -1.4
BRG Berggiesshubel 1.22 57 P **Pn** 10 37 42.6 -0.3
BRG 10 37 57.6
BRG smax smax
comp=N,11µm,0.2s
GRC1 Grafenberg Arr 1.33 204⇑*i*Pn **Pb** 10 37 44.8 -0.1
GRC1 Sg **Sg** 10 38 04.3 +1.5
KHC Kasperske Hory 1.36 143 *e*P **Pn** 10 37 44.6 -0.2
KHC *e* 10 38 02.2
KHC smax smax
comp=N,4µm,0.4s
KHC Kasperske Hory 1.36 143 *e*PG **Pn** 10 37 44.6 -0.2
KHC *e*SG **Sb** 10 38 02.2 -0.4
comp=N,4µm,0.4s
KHC Kasperske Hory 1.36 143 Pn **Pn** 10 37 44.6 -0.2
KHC Sn **Sb** 10 38 02.3 -0.4
PRA Prague 1.36 95 *e*P **Pn** 10 37 44.1 -0.7
PRA *e* 10 38 01.1
PRA smax smax
comp=N,4µm,1.1s
PRA Prague 1.36 95 *e*PG **Pn** 10 37 44.1 -0.7
PRA *e*SG **Sb** 10 38 01.1 -1.7
comp=N,4µm,1.1s
PRU Pruhonice 1.44 98 *e*P **Pn** 10 37 45.3 -0.6
PRU *e* 10 38 04.2
PRU smax smax
comp=N,5µm,0.4s
PRU Pruhonice 1.44 98 *e*PG **Pn** 10 37 45.3 -0.6
PRU *e*SG **Sn** 10 38 04.2 -0.6
comp=N,5µm,0.4s
PVCC Panska Ves 1.47 77 *e*P **Pn** 10 37 45.9 -0.4
PVCC *e* 10 38 04.8
PVCC smax smax
comp=N,5µm,0.5s
PVCC Panska Ves 1.47 77 *e*PG **Pn** 10 37 45.9 -0.4
PVCC *e*SG **Sn** 10 38 04.8 -0.6
comp=N,5µm,0.5s
GOPC GO Pecny, Ondr 1.61 100 *e*P **Pn** 10 37 47.7 -0.6
GOPC *e* 10 38 08.8
GOPC smax smax
comp=N,3µm,0.5s
GOPC GO Pecny, Ondr 1.61 100 *e*PG **Pn** 10 37 47.7 -0.6
GOPC *e*SG **Sn** 10 38 08.8 -0.2
comp=N,3µm,0.5s
GEC2 GERESS Array S 1.64 146 Pn **Pn** 10 37 48.8 0.0
GEC2 Sn **Sn** 10 38 09.3 -0.4
GERES GERESS Array B 1.64 146 Pn **Pn** 10 37 48.7 0.0
comp=N,892nm,0.3s,baz=330,slow=17,SNR=877
GERES Pg **Pb** 10 37 50.3 +0.1
comp=N,871nm,0.3s,baz=333,slow=17,SNR=627
GERES LR LR 10 37 54.6
comp=N,33nm,21.2s,baz=71,slow=22
GERES Lg Lg 10 38 12.1
comp=N,1µm,0.3s,baz=333,slow=29,SNR=26
WBG Bieber 1.92 270 **Pn** 10 37 53.0 +0.5
SIND Sindeldorf 1.97 245⇑*e*Pn **Pn** 10 37 54.2 +1.1
SIND Pg **Pg** 10 37 58.5 +0.8
SIND Sn **Sn** 10 38 17.7 0.0
SIND Sg **Sg** 10 38 23.9 +0.7
CLZ Clausthal 2.04 324 Pn **Pn** 10 37 54.7 +0.4
CLZ Pg **Pg** 10 37 59.9 +0.7
CLZ Sg **Sg** 10 38 24.8 -0.9
HDH Heidenheim-Cha 2.14 221⇑*e*Pn **Pn** 10 37 55.5 -0.1
TREC Trest 2.25 113 *e*P **Pn** 10 37 57.1 +0.1
TREC *e* 10 38 28.0
TREC smax smax
comp=N,2µm,0.6s
TREC Trest 2.25 113 *e*PN **Pn** 10 37 57.1 +0.1
TREC *e*PG **Pb** 10 37 59.4 -1.1
TREC *e*SG **Sb** 10 38 28.0 -0.2
comp=N,2µm,0.6s
WBA Furth 2.34 257⇓*e*Pn **Pn** 10 37 59.5 +1.2
WBA Sg **Sg** 10 38 36.5 +1.4
TOD Tromm 2.36 256⇓*e*Pn **Pn** 10 37 59.4 +0.8
TOD Pg **Pg** 10 38 05.9 +0.7
TOD Sg **Sg** 10 38 36.7 +0.9

UPC Upice 2.38 82 *e*P **Pb** 10 38 01.7 -1.0
UPC *e* 10 38 32.3
UPC smax smax
comp=N,3µm,0.7s
UPC Upice 2.38 82 *e*PG **Pb** 10 38 01.7 -1.0
UPC *e*SG **Sb** 10 38 32.3 +0.3
comp=N,3µm,0.7s
WBB Darmstadt 2.40 262 Pn **Pn** 10 38 00.2 +1.2
CHVC Chvalec 2.41 80 *e*PN **Pn** 10 37 59.6 +0.3
CHVC *e*SG **Sb** 10 38 33.9 +0.8
comp=N,1µm,0.8s
SWS Schriesheim-Wi 2.46 254 Pn **Pn** 10 38 00.6 +0.6
SWS Sg **Sg** 10 38 39.7 +0.7
TNS Taunus Mts 2.49 272 Pn **Pn** 10 38 01.9 +1.4
TNS Pg **Pg** 10 38 08.2 +0.4
TNS Sg **Sg** 10 38 40.0 -0.1
OSTC Ostas 2.51 81 *e*PN **Pn** 10 38 01.2 +0.5
OSTC *e*SG **Sb** 10 38 36.6 +0.7
comp=N,2µm,0.9s
DPC Dobruska-Polom 2.56 85 *e*P **Pb** 10 38 05.5 -0.5
DPC *e* 10 38 37.9
DPC smax smax
comp=N,1µm,0.3s
DPC Dobruska-Polom 2.56 85 *e*PG **Pb** 10 38 05.5 -0.5
DPC *e*SG **Sb** 10 38 37.9 +0.5
comp=N,1µm,0.3s
KSP Ksiaz 2.60 75 *e*Pb **Pb** 10 38 04.8 -1.8
KSP *e*Pg **Pg** 10 38 08.8 -1.1
KSP *e*Sg **Sb** 10 38 40.1 +1.5
GWBC Aumenau 2.61 275 Pn **Pn** 10 38 03.9 +1.9
BUCH Bad Urach 2.63 229⇑*i*Pn **Pn** 10 38 02.3 0.0
BUCH Sg **Sg** 10 38 46.0 +1.5
BRET Bretten 2.66 244 Pn **Pn** 10 38 03.0 +0.4
BRET Sg **Sg** 10 38 46.6 +1.3
NRDL Niedersach Rie 2.67 329 Pn **Pb** 10 38 05.6 -2.1
NRDL Pg **Pg** 10 38 11.9 +0.7
NRDL Sg **Sg** 10 38 47.2 +1.4
MOA Molln 2.69 151 *e*Pn **Pn** 10 38 03.1 0.0
comp=N,7.3nm,0.1s,SNR=52
MOA Pg **Pg** 10 38 10.0 -1.5
comp=N,45nm,0.1s
MOA *e*Sn **Sn** 10 38 35.3 -0.3
comp=N,177nm,0.3s
MOA Sg **Sg** 10 38 46.9 +0.5
comp=N,603nm,0.3s
TUBL Tuebingen-Lenn 2.72 233 Pn **Pn** 10 38 03.4 -0.1
LBG Lerchenberg 2.78 237⇑*e*Pn **Pn** 10 38 04.4 0.0
LBG Sg **Sg** 10 38 50.1 +0.8
FACH Fachingen 2.79 275 Pn **Pn** 10 38 06.2 +1.8
FACH Sg **Sg** 10 38 50.0 +0.6
KRLC Kraliky 2.87 91 *e*P **Pn** 10 38 05.6 0.0
KRLC *e* 10 38 49.1
KRLC smax smax
comp=N,2µm,0.8s
KRLC Kraliky 2.87 91 *e*PN **Pn** 10 38 05.6 0.0
KRLC *e*SG **Sg** 10 38 49.1 -2.9
comp=N,2µm,0.8s
KRUC Moravsky 2.88 112 *e*PN **Pn** 10 38 05.3 -0.5
KRUC *e*SG **Sb** 10 38 48.3 +1.7
KRUC Moravsky 2.88 112 *e*Pn **Pn** 10 38 05.2 -0.5
baz=296
KRUC *e*SG **Sb** 10 38 48.3 +1.7
comp=N,3µm,0.8s,baz=296
VRAC Vranov 2.91 107 Pn **Pn** 10 38 05.5 -0.6
comp=N,16nm,0.3s,baz=289,slow=14,SNR=51
VRAC Lg Lg 10 38 46.6
comp=N,157nm,0.3s,baz=184,slow=23,SNR=7.8
VRAC LR LR 10 39 06.1
comp=N,41nm,19.0s,baz=270,slow=36
VRAC Vranov 2.91 107 *e*PN **Pn** 10 38 05.5 -0.6
VRAC *e*SG **Sb** 10 38 49.3 +1.9
VRAC Vranov 2.91 107 ⇓P **Sb** 10 38 47.8 +0.5
VRAC Vranov 2.91 107 *e*Pn **Pn** 10 38 05.5 -0.6
baz=290
VRAC *e*SG **Sb** 10 38 49.2 +1.9
comp=N,3µm,0.8s,baz=290
BIW Bindweide 2.92 282 Pn **Pn** 10 38 08.1 +1.8
RETA Reutte 2.92 201⇑*e*Pn **Pn** 10 38 06.0 -0.4
RETA Reutte 2.92 201 *e*Pn **Pn** 10 38 06.0 -0.4
comp=N,42nm,0.4s,SNR=28
RETA Sg **Sg** 10 38 55.3 +1.5
comp=N,2µm,0.6s
WATA Walderalm 2.93 190 *e*Pn **Pn** 10 38 06.3 -0.2
comp=N,23nm,0.1s,SNR=16
WATA *e*Sn **Sn** 10 38 43.0 +1.3
comp=N,699nm,0.3s
WATA *e*Sg **Sg** 10 38 56.6 +2.6
comp=N,704nm,0.3s
UBR Ueberruh 2.93 211⇑*e*Pn **Pn** 10 38 06.0 -0.5
IMS Imsbach 2.93 259 Pn **Pn** 10 38 06.9 +0.5
IMS Sg **Sg** 10 38 54.5 +0.4
KOE Koeppel 2.96 276 *e*Pn **Pn** 10 38 08.5 +1.8
KOE *e*Sn **Sn** 10 38 44.1 +1.9
comp=N,1µm,1.2s
MOTA Moosalm 2.99 196 *e*Pn **Pn** 10 38 06.9 -0.4
comp=N,9.0nm,0.1s,SNR=14
MOTA *e*Sn **Sn** 10 38 43.4 +0.3
comp=N,63nm,0.1s
MOTA Sg **Sg** 10 38 57.3 +1.4
comp=N,1µm,0.6s
WTTA Wattenberg 2.99 189 *e*Pn **Pn** 10 38 07.5 +0.1
comp=N,9.3nm,0.1s,SNR=14
WTTA Pg **Pg** 10 38 17.8 +0.5
comp=N,108nm,0.3s
WTTA *e*Sn **Sn** 10 38 44.4 +1.1
comp=N,127nm,0.4s
WTTA Sg **Sg** 10 38 57.8 +1.8
comp=N,769nm,0.4s
GUT Gutenstein 3.01 226⇑*e*Pn **Pn** 10 38 07.0 -0.6
SQTA Sankt Quirin 3.09 194 *i* Pn **Pn** 10 38 08.5 -0.2
comp=N,11nm,0.1s,SNR=12
SQTA *e*Pg **Pg** 10 38 19.5 +0.4
comp=N,180nm,0.3s
SQTA *e*Sn **Sn** 10 38 47.6 +2.0
comp=N,206nm,0.3s
SQTA Sg **Sg** 10 39 00.6 +1.5
comp=N,741nm,0.4s
ABH Alteburg 3.10 266 Pn **Pn** 10 38 10.4 +1.6
ABH Sg **Sg** 10 39 00.5 +0.9
ABH Alteburg 3.10 266 P **Pn** 10 38 10.8 +2.0
OBER Oberstdorf 3.12 206⇓*e*Pn **Pn** 10 38 08.6 -0.4
RETH Rethem/Aller, 3.13 325 Pn **Pn** 10 38 12.1 +2.9
RETH Sg **Sb** 10 38 55.0 +1.2
LANF Langenberg 3.19 249 Pn **Pn** 10 38 12.7 +2.1
LANF Langenberg 3.19 249 P **Pn** 10 38 11.5 +1.4
LANF Langenberg 3.19 249 S **Sn** 10 38 47.1 -0.9
BGG Burgeitz 3.21 272 *e*Pn **Pn** 10 38 11.7 +1.5
OPP Oppenau 3.21 239⇑*e*Pn **Pn** 10 38 10.1 -0.2
OPP Oppenau 3.21 239 P **Pn** 10 38 10.1 -0.2
OPP S **Sn** 10 38 46.7 -1.7
KBA Koelnbreinsper 3.21 168 *e*Pn **Pn** 10 38 11.5 +1.1
comp=N,87nm,0.4s,SNR=45
KBA *e*Sn **Sn** 10 38 50.2 +1.5
comp=N,69nm,0.3s
PEB Petersbachel 3.21 251 Pn **Pn** 10 38 11.0 +0.7
PEB Sg **Sg** 10 39 04.3 +1.2
BFO Black Forest 3.23 236⇑*i*Pn **Pn** 10 38 10.1 -0.4
BFO Sg **Sg** 10 39 04.7 +1.0
BFO Black Forest 3.23 236 P **Pn** 10 38 10.3 -0.2
BFO Black Forest 3.23 236 Pn **Pn** 10 38 10.3 -0.2
WALHA Wallhausen, DE 3.25 222 Pn **Pn** 10 38 09.8 -1.0
HMES Hamm, Michael- 3.25 298 Pn **Pn** 10 38 13.2 +2.4
HMES Sg **Sg** 10 39 04.3 0.0
CONA Conrad Observa 3.26 133 *i* Pn **Pn** 10 38 10.8 -0.3
comp=N,33nm,0.3s,SNR=44
CONA *e*Pg **Pg** 10 38 20.3 -2.1
comp=N,342nm,0.5s
CONA *e*Sn **Sn** 10 38 50.3 +0.5
comp=N,140nm,0.3s
EMING Emmingen-Lipti 3.27 226 Pn **Pn** 10 38 10.2 -0.9
HOBG Hohbusch 3.27 285 *e*Pn **Pn** 10 38 12.8 +1.7
DAVA Damuels 3.35 210 Pn **Pn** 10 38 11.7 -0.6
DAVA Damuels 3.35 210 *e*Pn **Pn** 10 38 11.8 -0.6
comp=N,32nm,0.3s,SNR=20
DAVA *i* Sn **Sn** 10 38 54.1 +1.9
comp=N,132nm,0.2s
DAVA Sg **Sg** 10 39 09.4 +1.8
comp=N,709nm,0.5s
LAGB Langenfeld Gru 3.36 274 Pn **Pn** 10 38 14.2 +1.9
LAGB Sg **Sg** 10 39 06.5 -1.2
SISB Singen-Schiene 3.37 223 Pn **Pn** 10 38 11.5 -0.9
FETA Feichten 3.37 199 *e*Pn **Pn** 10 38 12.5 -0.1
comp=N,4.3nm,0.1s,SNR=15
FETA *e*Sn **Sn** 10 38 53.6 +1.0

comp=N,42nm,0.3s
FETA *e*Sg **Sg** 10 39 09.3 +1.1
comp=N,402nm,0.5s
AHRW Bad Neuenahr-A 3.38 278 Pn **Pn** 10 38 14.2 +1.6
MORC Moravsky Berou 3.39 95 *e*PN **Pn** 10 38 12.3 -0.6
MORC *e*SG **Sb** 10 39 04.3 +3.0
MORC Moravsky Berou 3.39 95 ⇑P **Sb** 10 39 00.5 -0.8
MORC Moravsky Berou 3.39 95 P **Pn** 10 38 12.2 -0.6
MORC Moravsky Berou 3.39 95 *e*Pn **Pn** 10 38 12.2 -0.6
baz=280
MORC *e*Sg **Sb** 10 39 04.3 +3.0
comp=N,2µm,0.7s,baz=280
MORC Moravsky Berou 3.39 95 Pn **Pn** 10 38 12.2 -0.6
BTEZ Ruhr-Universit 3.43 293 Pn **Pn** 10 38 15.6 +2.3
BKLB Ruhr-Universit 3.44 293 Pn **Pn** 10 38 15.6 +2.3
BUG Bochum--Univer 3.44 293 Pn **Pn** 10 38 15.6 +2.3
BULI Ruhr-Universit 3.44 293 Pn **Pn** 10 38 15.6 +2.1
ABTA Abfaltersbach 3.47 178 *i* Pn **Pn** 10 38 15.4 +1.4
comp=N,37nm,0.3s,SNR=41
ABTA *e*Pg **Pg** 10 38 26.0 -0.5
comp=N,128nm,0.3s
ABTA *e*Sn **Sn** 10 38 57.2 +2.1
comp=N,148nm,0.3s
ABTA Sg **Sg** 10 39 12.4 +0.9
comp=N,2µm,0.9s
LIENZ Kamor/St.Gall 3.48 214 Pn **Pn** 10 38 13.3 -0.8
LIENZ Sn **Sn** 10 38 56.1 +0.9
SLE Schleitheim 3.52 227 Pn **Pn** 10 38 13.2 -1.4
IBBE Ibbenbueren Ea 3.53 308 Pn **Pn** 10 38 16.8 +2.2
STB Steinbach 3.53 278 *e*Pn **Pn** 10 38 16.3 +1.6
STB *e*Sn **Sn** 10 38 57.4 +1.1
comp=N,470nm,0.5s
IBBN Ibbenburen 3.56 308 Pn **Pn** 10 38 16.9 +1.9
BERGE Lenzkirch (DE) 3.60 231⇑*e*Pn **Pn** 10 38 14.7 -1.0
BERGE Sg **Sg** 10 39 15.4 -0.1
WILA Wila 3.60 220 Pn **Pn** 10 38 14.6 -1.1
WILA Sg **Sg** 10 39 17.0 +1.4
RIVT Riveris 3.63 264 Pn **Pn** 10 38 17.6 +1.6
ARSA Arzberg 3.64 143 *i* Pn **Pn** 10 38 17.4 +1.2
comp=N,59nm,0.3s,SNR=53
ARSA *e*Pg **Pg** 10 38 28.2 -1.5
comp=N,146nm,0.4s
ARSA Sg **Sg** 10 39 15.2 -1.7
comp=N,785nm,0.5s
METMA Mettma DE 3.67 229 Pn **Pn** 10 38 15.5 -1.2
KIZ Kirchzarten 3.68 234⇓*i*Pn **Pn** 10 38 16.1 -0.6
KIZ Sg **Sg** 10 39 17.1 -1.0
KIZ Kirchzarten 3.68 234 P **Pn** 10 38 16.0 -0.6
DUP Duppenweiler 3.68 259 Pn **Pn** 10 38 18.7 +2.0
FBB Freiburg im Br 3.68 235 Pn **Pn** 10 38 16.1 -0.6
FBB Sg **Sg** 10 39 16.9 -1.3
ZOU Zoufplan 3.69 173 Pn **Pn** 10 38 18.7 +1.7
MYKA Terra Mystica 3.69 166 *e*Pn **Pn** 10 38 18.1 +1.2
comp=N,12nm,0.2s,SNR=17
MYKA Pg **Pg** 10 38 29.8 -1.0
comp=N,109nm,0.3s
MYKA *e*Sn **Sn** 10 39 01.9 +1.4
comp=N,103nm,0.5s
MYKA Sg **Sg** 10 39 19.2 +0.7
comp=N,229nm,0.4s
WLS Welschbruch 3.72 243 P **Pn** 10 38 18.1 +0.7
WLS S **Sn** 10 38 59.0 -2.2
ZST Bratislava 3.73 121 *e*P **Pn** 10 38 16.0 -1.3
ZST Bratislava 3.73 121 *e*PN **Pn** 10 38 16.0 -1.3
ZST *e*SG **Sb** 10 39 14.7 +3.9
ZST *e*LG Lg 10 39 17.2
MODS Modra-Piesok 3.73 118 *e*P **Pn** 10 38 16.3 -1.1
MODS Modra-Piesok 3.73 118 *e*PN **Pn** 10 38 16.3 -1.1
MODS *e*PG **Pg** 10 38 29.1 -2.2
MODS *e*SG **Sb** 10 39 14.3 +3.5
MODS *e*LG Lg 10 39 17.8
BZER Hinxe 3.73 294 Pn **Pn** 10 38 20.0 +2.6
JAVC Velka Javorina 3.73 109 *e*PN **Pn** 10 38 17.7 +0.1
JAVC *e*SG **Sg** 10 39 18.0 -1.8
SMOL Smolenice 3.74 115 *e*P **Pg** 10 38 30.2 -1.5
SMOL Smolenice 3.74 115 *e*PG **Pg** 10 38 30.2 -1.5
SMOL *e*SG **Sg** 10 39 16.4 -3.7
SMOL *e*LG Lg 10 39 21.2
CDF Champ du Feu 3.77 243 *e*Pn **Pn** 10 38 17.8 -0.2
CDF Champ du Feu 3.77 243 *e*P **Pn** 10 38 19.8 +1.8
CDF *e*Sg **Sg** 10 39 19.8 -1.1
comp=N,763nm,0.5s
OKC Ostrava-Krasne 3.77 94 *e*P **Pb** 10 38 26.7 +0.2
OKC Ostrava-Krasne 3.77 94 *e*PG **Pb** 10 38 26.7 +0.2
OKC *e*SG **Sg** 10 39 17.0 -4.0
comp=N,1µm,0.5s
DAVOX Davos/Dischmat 3.81 206 Pn **Pn** 10 38 18.3 -0.3
comp=N,4.1nm,0.3s,baz=27,slow=12,SNR=47
DAVOX Sn **Sn** 10 39 03.9 +0.6
comp=N,34nm,0.3s,baz=113,slow=12,SNR=8.0
DAVOX Lg Lg 10 39 23.1
comp=N,72nm,0.3s,baz=279,slow=22,SNR=14
DAVOX LR LR 10 39 47.3
comp=N,75nm,21.7s,baz=257,slow=39
FUORN Ofenpass-Fuorn 3.85 202 **Pn** 10 38 19.5 +0.1
PRED Cave del Predi 3.87 167 Pn **Pn** 10 38 21.1 +1.7
KLL Kalltalsperre 3.87 279 *e*Pn **Pn** 10 38 20.9 +1.6
SULZ Cheisacher 3.87 228 Pn **Pn** 10 38 18.3 -1.1
SULZ Sg **Sg** 10 39 25.2 +0.9
CIMO Cimolais 3.91 179 **Pn** 10 38 21.9 +2.0
CIMO Sn **Sn** 10 39 06.9 +1.2
DREG Dreilaegerbach 3.92 279⇑*e*Pn **Pn** 10 38 21.8 +1.7
ENDD Endenburg 3.93 232 Pn **Pn** 10 38 18.8 -1.4
ENDD Sg **Sg** 10 39 25.9 -0.1
ECH Echery 3.94 241 Pn **Pn** 10 38 19.7 -0.5
ECH Echery 3.94 241 P **Pn** 10 38 20.1 -0.2
ECH Echery 3.94 241 Pn **Pn** 10 38 20.1 -0.2
ECH Echery 3.94 241 P **Pn** 10 38 19.8 -0.5
ECH Echery 3.94 241 P **Pn** 10 38 19.7 -0.5
ECH S **Sn** 10 39 04.7 -1.7
SOKA Soboth 3.97 152 *e*Pn **Pn** 10 38 20.5 -0.3
comp=N,13nm,0.3s,SNR=9.5
SOKA *e*Sn **Sn** 10 39 06.2 -1.1
comp=N,61nm,0.5s
OBKA Obir 3.99 157 *i* Pn **Pn** 10 38 21.8 +0.6
comp=N,28nm,0.3s,SNR=20
OBKA Sg **Sg** 10 39 30.2 +2.0
comp=N,644nm,0.7s
WLF Walferdange 4.03 264 Pn **Pn** 10 38 23.1 +1.5
WLF Pg **Pg** 10 38 37.6 +0.5
WLF Sg **Sg** 10 39 29.1 -0.2
WLF Walferdange 4.03 264 Pn **Pn** 10 38 23.5 +2.0
WLF Sg **Sg** 10 39 29.1 -0.2
WLF Walferdange 4.03 264 P **Pn** 10 38 23.0 +1.5
WLF Walferdange 4.03 264 Pn **Pn** 10 38 23.0 +1.5
BHOU Houvegnez 4.06 274 Pn **Pn** 10 38 23.8 +1.8
BHOU Sb **Sb** 10 39 21.7 +1.3
BHOU Sg **Sg** 10 39 32.3 +2.1
MEM Membach 4.06 278 Pn **Pn** 10 38 23.8 +1.8
MEM PnPn **PnPn** 10 38 30.1 +0.9
MEM Sg **Sg** 10 39 31.4 +1.0
MEM Membach 4.06 278⇓*i*Pn **Pn** 10 38 24.0 +2.0
HGN Heimansgroeve 4.12 280 Pn **Pn** 10 38 24.4 +1.6
MOF Molkenrain 4.16 237 Pn **Pn** 10 38 22.7 -0.7
MOF Molkenrain 4.16 237 P **Pn** 10 38 22.8 -0.5
MOZS Mozjanca 4.17 159 *i* Pn **Pn** 10 38 24.6 +1.1
CTI Castel Tesino 4.20 186 P **Pn** 10 38 25.9 +2.0
CTI Castel Tesino 4.20 186 Pn **Pn** 10 38 25.9 +2.0
BALST Balsthal 4.21 229 Pn **Pn** 10 38 22.6 -1.5
BEBN Eben Emael 4.29 280 Pn **Pn** 10 38 26.6 +1.6
BEBN PnPn **Pb** 10 38 33.9 -1.4
BEBN Pg **Pg** 10 38 42.8 +0.8
BEBN sSb **Sb** 10 39 31.0 +4.1
BEBN x 10 39 36.1
BEBN Sg **Sg** 10 39 39.3 +1.8
GKP Gorka Klasztor 4.32 43 *e*Sn **Sn** 10 39 14.8 -0.8
HINF Hinteralfeld 4.33 238 *e*Pn **Pn** 10 38 24.9 -0.8
HINF Hinteralfeld 4.33 238 *e*Pg **Pg** 10 38 43.7 +0.8
HINF *e*Sn **Sn** 10 39 12.2 -3.9
HINF *e*Sg **Sg** 10 39 38.6 -0.4
comp=N,542nm,0.6s
BSTI Sart Tilman 4.34 277 Pn **Pn** 10 38 28.2 +2.4
BSTI sPn **PnPn** 10 38 32.4 -0.6
BSTI PnPn **Pb** 10 38 34.9 -1.4
BSTI sPg **Pg** 10 38 46.9 +3.7
BSTI Sn **Sn** 10 39 19.4 +3.1
BSTI Sg **Sg** 10 39 40.0 +0.6
RGN Rugen 4.38 8 **Pn** 10 38 27.6 +1.3
BOURR Bourrignon 4.40 232 Pn **Pn** 10 38 25.4 -1.2
LJU Ljubljana 4.43 160 *i* Pn **Pn** 10 38 27.9 +0.9
BCLA Clavier 4.51 275 Pn **Pn** 10 38 30.3 +2.3
BCLA PnPn **PnPn** 10 38 36.9 +1.6

BCLA Sn **Sn** 10 39 21.9 +1.5
HAU Haudompre 4.51 243 *e*Pn **Pn** 10 38 27.5 -0.6
HAU Haudompre 4.51 243 *e*P **Pn** 10 38 29.5 +1.4
HAU Haudompre 4.51 243 *e*Pg **Pg** 10 38 46.8 +0.5
HAU *e*Sn **Sn** 10 39 18.0 -2.5
HAU *e*Sg **Sg** 10 39 43.8 -0.9
comp=N,477nm,0.4s
KOGS Kog 4.59 144 *i* Pn **Pn** 10 38 29.9 +0.7
VYHS Vyhne 4.59 110 *e*P **Pn** 10 38 28.3 -0.9
VYHS Vyhne 4.59 110 *e*PN **Pn** 10 38 28.3 -0.9
THEF They Montfort 4.61 247 Pn **Pn** 10 38 30.2 +0.7
THEF They Montfort 4.61 247 P **Pn** 10 38 30.0 +0.5
PAGF Fort de Pagny 4.62 251 *e*Pn **Pn** 10 38 30.5 +0.8
baz=71
PAGF Fort de Pagny 4.62 251 *e*Pg **Pg** 10 38 48.7 +0.2
baz=70
PAGF *e*Sn **Sn** 10 39 20.7 -2.6
PAGF *e*Sg **Sg** 10 39 46.6 -1.8
comp=N,1µm,1.1s
LOMF Lomont 4.63 234 Pn **Pn** 10 38 28.6 -1.3
LOMF Lomont 4.63 234 P **Pn** 10 38 28.7 -1.2
LOMF Lomont 4.63 234 S **Sn** 10 39 21.5 -2.1
LANS Liptovska Anna 4.75 100 *e*P **Pn** 10 38 31.9 +0.4
LANS Liptovska Anna 4.75 100 *e*PN **Pn** 10 38 31.9 +0.4
LANS *e*SG **Sg** 10 39 58.0 -3.9
LANS eLG Lg 10 39 58.0
SALO Salr 4.76 195 **Pn** 10 38 33.6 +2.0
OJC Ojcow 4.79 87 *e*Pn **Pn** 10 38 30.9 -1.2
SKDS Skadanscina 4.81 166 *i* Pn **Pn** 10 38 33.1 +0.9
GIVF Givet 4.83 272 *e*Pn **Pn** 10 38 34.5 +2.0
GIVF Givet 4.83 272 *e*Pg **Pg** 10 38 50.6 -1.8
GIVF *e*Sg **Sg** 10 39 52.9 -2.0
comp=N,872nm,0.7s
BMRD Maredsous 4.85 274 Pn **Pn** 10 38 35.0 +2.2
BMRD PnPn **PnPn** 10 38 42.0 +2.0
BMRD SnSn **Sb** 10 39 41.4 -1.8
BMRD Sg **Sg** 10 39 56.7 +1.0
KALN Kalnik 4.93 144 *i* Pn **Pn** 10 38 34.4 +0.4
PTJ Puntijarka 4.95 149 *e*Pn **Pn** 10 38 34.7 +0.4
DOU Dourbes 4.97 272 Pn **Pn** 10 38 36.5 +2.1
DOU PnPn **PnPn** 10 38 43.0 +1.3
DOU Pb **Pb** 10 38 47.9 +0.9
DOU PbPb **PbPb** 10 38 51.4 +1.3
DOU x x 10 38 54.6
DOU Pg **Pg** 10 38 56.2 +1.0
DOU Sb **Sb** 10 39 47.9 +1.2
DOU sSb **sSb** 10 39 50.4 +0.7
DOU Sg **Sg** 10 40 00.0 +0.4
DOU x x 10 40 06.3
MEZF Maizieres J'vi 5.06 253 *e*Pn **Pn** 10 38 36.3 +0.7
baz=73
MEZF Maizieres J'vi 5.06 253 *e*Pg **Pg** 10 38 57.7 +0.9
baz=74
MEZF *e*Sg **Sg** 10 40 02.2 0.0
comp=N,576nm,0.8s
OZLJ Ozalj 5.06 154 *e*Pn **Pn** 10 38 35.4 -0.3
SENIN Lac Senin/Sane 5.11 223 **Pn** 10 38 36.9 +0.3
BSD Bornholm Skovb 5.15 17 *i* P **Pn** 10 38 34.8 -2.1
BSD *i* S **Sn** 10 39 31.9 -4.3
BSD Bornholm Skovb 5.15 17 *i* P **Pn** 10 38 34.8 -2.1
BSD *i* S **Sn** 10 39 31.9 -4.3
SNF Seneffe 5.16 276 Pn **Pn** 10 38 38.1 +1.1
SNF PnPn **Pb** 10 38 46.7 -3.4
SNF Pg **Pg** 10 38 58.4 -0.4
SNF Sg **Sg** 10 40 05.5 0.0
SFTF Sexfontaines 5.19 250 *e*Pn **Pn** 10 38 37.6 +0.2
baz=70
SFTF Sexfontaines 5.19 250 *e*Pg **Pg** 10 38 58.1 -1.2
SFTF *e*Sg **Sg** 10 40 04.6 -1.8
comp=N,260nm,0.5s
NIE Niedzica 5.22 96 *e*Pn **Pn** 10 38 37.9 -0.1
BAIF Baives 5.23 271 *e*Pn **Pn** 10 38 40.0 +2.1
BAIF Baives 5.23 271 *e*Pg **Pg** 10 38 59.3 -0.7
BAIF *e*Sn **Sn** 10 39 35.3 -2.8
BAIF *e*Sg **Sg** 10 40 05.6 -2.1
comp=N,470nm,0.9s
BRJN Brijuni 5.40 169 *e*Pn **Pn** 10 38 40.7 +0.4
LUNU Lund 5.47 7 P **Pn** 10 38 38.7 -2.5
PSZ Piszkesteto 5.48 112 ⇓P **Pn** 10 38 41.7 +0.2
PSZ Piszkesteto 5.48 112 P **Pn** 10 38 41.2 -0.3
PSZ Piszkesteto 5.48 112 Pn **Pn** 10 38 41.2 -0.3
CABF La Chapelle 5.50 231 *e*Pn **Pn** 10 38 40.7 -1.1
CABF La Chapelle 5.50 231 *e*P **Pn** 10 38 46.6 +4.8
CABF La Chapelle 5.50 231 *e*Pg **Pg** 10 39 04.8 -0.5
CABF *e*Sg **Sg** 10 40 13.7 -2.9
comp=N,495nm,0.8s
KECS Kecovo 5.61 105 *e*P **Pn** 10 38 43.0 -0.1
KECS Kecovo 5.61 105 *e*PN **Pn** 10 38 43.0 -0.1
KECS eLG Lg 10 40 26.6
NVLJ Novalja 5.91 162 *e*Pn **Pn** 10 38 47.3 0.0
ZCCA Zocca 5.94 189 **Pn** 10 38 51.1 +3.3
LPL La Plagne 6.02 221 *e*Pn **Pn** 10 38 49.0 -0.1
LPL La Plagne 6.02 221 *e*Pg **Pg** 10 39 14.8 -0.5
LPL *e*Sg **Sg** 10 40 31.4 -1.9
comp=N,174nm,0.8s
LPG La Plagne 6.03 221 *e*Pn **Pn** 10 38 48.6 -0.7
LPG La Plagne 6.03 221 *e*Pg **Pg** 10 39 14.7 -0.7
LPG *e*Sn **Sn** 10 39 53.9 -4.5
LPG *e*Sg **Sg** 10 40 31.3 -2.2
comp=N,217nm,0.8s
OG35 Corcelles 6.15 230 P **Pn** 10 38 49.1 -1.7
VLC Villacollemand 6.20 193 Pn **Pn** 10 38 53.6 +2.2
MSSA Maissana 6.21 199 Pn **Pn** 10 38 53.5 +2.0
OGMO Fort Saint-Gob 6.29 219 P **Pn** 10 38 52.0 -0.7
LOR Lormes 6.33 245 *e*Pn **Pn** 10 38 52.2 -0.9
baz=75
LOR Lormes 6.33 245 *e*Pg **Pg** 10 39 17.7 -3.5
baz=65
LOR *e*Sn **Sn** 10 40 00.8 -4.6
baz=66
LOR *e*Sg **Sg** 10 40 39.7 -3.4
comp=N,290nm,0.7s,baz=66
LOR Lormes 6.33 245 P **Pn** 10 38 53.2 +0.1
DEL Delary 6.33 8 P **Pn** 10 38 50.8 -2.3
DEL S **Sn** 10 39 58.2 -7.1
OGSM Saint Maurice 6.41 227 P **Pn** 10 38 52.9 -1.4
BNI Bardonecchia 6.42 219 P **Pn** 10 38 54.6 +0.1
BNI Bardonecchia 6.42 219 **Pn** 10 38 54.6 +0.1
BLEU Blekinge 6.45 18 P **Pn** 10 38 53.4 -1.3
DUGI Dugi Otok 6.50 162 *e*Pn **Pn** 10 38 56.0 +0.5
KOLS Kolonicke sedl 6.59 97 *e*P **Pn** 10 38 56.7 0.0
KOLS Kolonicke sedl 6.59 97 *e*PN **Pn** 10 38 56.7 0.0
SSF Saint Saulge 6.64 245 *e*Pn **Pn** 10 38 56.9 -0.5
SSF Saint Saulge 6.64 245 *e*Pg **Pg** 10 39 25.7 -1.4
SSF *e*Sg **Sg** 10 40 49.7 -3.4
comp=N,236nm,0.7s
MBDF Montbardon 6.66 217 *e*Pn **Pn** 10 38 58.2 +0.4
MBDF Montbardon 6.66 217 *e*Pg **Pg** 10 39 26.7 -0.7
MBDF *e*Sg **Sg** 10 40 51.7 -1.9
comp=N,146nm,0.8s
SMF Signal de Mont 6.68 241 *e*Pn **Pn** 10 38 57.6 -0.4
SMF Signal de Mont 6.68 241 *e*Pg **Pg** 10 39 26.0 -1.9
SMF *e*Sn **Sn** 10 40 08.2 -5.8
SMF *e*Sg **Sg** 10 40 50.5 -3.9
comp=N,222nm,0.6s
UZH Uzhgorod 6.69 100 *e*P **Pn** 10 39 01.6 +3.6
UZH *e*S **Sn** 10 40 18.3 +4.2
UZH MLR MLR
comp=N,20nm,1.2s
UZH MLR MLR
comp=E,15nm,1.2s
UZH MLR MLR
comp=Z,14nm,1.2s
OSSC Osservatorio P 6.74 187 **Pn** 10 38 59.0 +0.3
MORI Morici 6.76 159 *e*Pn **Pn** 10 38 59.9 +0.9
ORIF Oris-en-Rattie 6.86 222 *e*Pn **Pn** 10 39 00.2 -0.3
ORIF Oris-en-Rattie 6.86 222 *e*Pg **Pg** 10 39 28.3 -3.1
ORIF *e*Sn **Sn** 10 40 14.0 -4.6
ORIF *e*Sg **Sg** 10 40 56.6 -3.6
comp=Z,204nm,0.7s
AVF Avril sur Loir 6.88 244 *e*Pn **Pn** 10 39 00.0 -0.6
AVF Avril sur Loir 6.88 244 *e*Pg **Pg** 10 39 29.8 -1.8
AVF *e*Sn **Sn** 10 40 13.0 -5.8
AVF *e*Sg **Sg** 10 41 00.6 0.0
comp=Z,172nm,0.7s
VXJU Vaexsjoe 6.89 12 P **Pn** 10 38 58.6 -2.2
ZIRJ Zirje 6.94 160 *i* Pn **Pn** 10 39 02.1 +0.5
MURB Monte Urbino 6.96 179 **Pn** 10 39 03.0 +1.2
CLF Chambon-Foret 6.96 256 **Pn** 10 39 03.1 +1.3
TRPA Tarpa 7.01 103 ⇓P **Pn** 10 39 02.0 -0.4
HYF Humbligny 7.05 249 *e*Pn **Pn** 10 39 02.8 -0.2
HYF Humbligny 7.05 249 *e*Pg **Pg** 10 39 35.3 +0.3
HYF *e*Sg **Sg** 10 41 04.2 -2.0
SBF Sospel 7.18 210 *e*Pn **Pn** 10 39 05.1 +0.3
SBF *e*Sn **Sn** 10 40 20.3 -6.0
comp=Z,119nm,0.7s
BGF Bois d'Agland 7.30 244 *e*Pn **Pn** 10 39 05.9 -0.5
BGF Bois d'Agland 7.30 244 *e*Pg **Pg** 10 39 38.1 -1.5
BGF *e*Sn **Sn** 10 40 23.5 -5.6
BGF *e*Sg **Sg** 10 41 11.2 -2.9
comp=Z,331nm,0.6s
OSKU Oskarshamn 7.34 16 P **Pn** 10 39 05.4 -1.4
SIRR Siria 7.38 119 ⇑P **Pn** 10 39 06.8 -0.7
NRCA Norcia 7.41 176 **Pn** 10 39 08.4 +0.5
VIVF Saint-Julien-l 7.46 227 *e*Pn **Pn** 10 39 07.4 -1.2
VIVF Saint-Julien-l 7.46 227 *e*Pg **Pg** 10 39 42.9 +0.3
VIVF *e*Sn **Sn** 10 40 29.6 -3.4
VIVF *e*Sg **Sg** 10 41 17.3 -1.8
comp=Z,131nm,0.8s
LVV L'vov 7.55 89 *e*P **Pn** 10 39 10.0 +0.2
LVV *e*S **Sn** 10 40 35.0 -0.3
LVV MLR MLR
comp=Z,190nm,1.9s
EKSU Eksjoe 7.58 12 P **Pn** 10 39 08.4 -1.7
HVAR Hvar 7.59 157 *i* Pn **Pn** 10 39 10.8 +0.5
BYXU Byxelkrok 7.61 20 P **Pn** 10 39 09.6 -0.9
ASPU Aespoe 7.64 18 P **Pn** 10 39 09.5 -1.6
DRGR 7.70 112 ⇑P **Pn** 10 39 12.2 +0.3
FRF La Foret Royal 7.71 212 *e*Pn **Pn** 10 39 11.3 -0.8
FRF *e*Sn **Sn** 10 40 36.2 -3.1
comp=Z,30nm,0.5s
SMRF Simiane la Rot 7.76 219 *e*Pn **Pn** 10 39 11.3 -1.4
SMRF Simiane la Rot 7.76 219 *e*Pg **Pg** 10 39 46.7 -1.7
SMRF *e*Sn **Sn** 10 40 35.6 -4.9
SMRF *e*Sg **Sg** 10 41 24.9 -3.9
comp=Z,146nm,1.2s
TCF Toulx Ste Croi 7.81 244 *e*Pn **Pn** 10 39 12.5 -1.0
TCF Toulx Ste Croi 7.81 244 *e*Pg **Pg** 10 39 47.4 -2.1
TCF *e*Sg **Sg** 10 41 25.7 -4.9
comp=Z,131nm,0.7s
VSTU Vaestervik 7.86 17 P **Pn** 10 39 12.2 -1.8
LMR La Mourre 7.96 212 *e*Pn **Pn** 10 39 15.5 +0.1
LMR *e*Sn **Sn** 10 40 39.4 -5.9
comp=Z,8.6nm,0.4s
PGF Pioggiola 8.01 198 *e*Pn **Pn** 10 39 15.8 -0.4
PGF *e*Sn **Sn** 10 40 41.5 -5.2
comp=Z,2.4nm,0.3s
DIVS Divibare 8.04 137 Pn **Pn** 10 39 16.6 -0.1
STON Ston 8.22 151 *e*Pn **Pn** 10 39 21.2 +2.1
INTR Introdacqua 8.28 172 Pn **Pn** 10 39 18.6 -1.3
LDF La Druitiere 8.29 263 *e*Pn **Pn** 10 39 21.0 +1.1
LDF *e*Sg **Sg** 10 41 42.5 -3.1
comp=Z,118nm,0.8s
MDVR Moldovita 8.36 127 ⇓P **Pn** 10 39 21.6 +0.6
LASF Ste Croix 8.43 226 *e*Pn **Pn** 10 39 20.5 -1.4
LASF Ste Croix 8.43 226 *e*Pg **Pg** 10 39 57.4 -3.8
LASF *e*Sn **Sn** 10 40 50.1 -6.8
LASF *e*Sg **Sg** 10 41 46.0 -4.2
comp=Z,47nm,0.7s
FLN La Foliniere 8.47 265 *e*Pn **Pn** 10 39 24.0 +1.6
baz=85
FLN La Foliniere 8.47 265 *e*Pg **Pg** 10 39 57.8 -4.2
baz=84
FLN *e*Sn **Sn** 10 40 52.3 -5.6
FLN *e*Sg **Sg** 10 41 49.7 -1.9
comp=Z,238nm,1.1s,baz=84
CAF Calviac 8.72 237 *e*Pn **Pn** 10 39 25.1 -0.9
CAF Calviac 8.72 237 *e*Pg **Pg** 10 40 02.9 -4.0
CAF *e*Sn **Sn** 10 40 58.7 -5.6
CAF *e*Sg **Sg** 10 42 00.3 +0.5
comp=Z,59nm,0.6s
RJF Les Rejaudoux 8.78 240 *e*Pn **Pn** 10 39 25.8 -1.0
RJF Les Rejaudoux 8.78 240 *e*Pg Pg 10 40 03.4 -4.6
RJF *e*Sg **Sg** 10 41 55.9 -5.8
comp=Z,170nm,1.0s
SGRT San Giovanni R 8.79 163 Pn **Pn** 10 39 26.4 -0.5
GRR Gorron 8.81 263 *e*Pn **Pn** 10 39 28.3 +1.2
GRR *e*Sn **Sn** 10 41 01.5 -4.8
GRR *e*Sg **Sg** 10 41 58.7 -3.9
comp=Z,94nm,0.8s
BUR08 Bucovina Ar. S 8.86 102 Pn **Pn** 10 39 29.9 +2.0
BURAR Bucovina Array 8.88 102 ⇓P **Pn** 10 39 30.3 +2.1
MFF Saint Martin d 9.05 251 *e*Pn **Pn** 10 39 30.0 -0.4
MFF Saint Martin d 9.05 251 *e*Pg Pn 10 40 09.8 +39
MFF *e*Sn **Sn** 10 41 05.1 -7.1
MFF *e*Sg 10 42 05.7
comp=Z,78nm,0.7s
LFF La Frestale 9.44 240 *e*Pn **Pn** 10 39 35.6 -0.2
LFF La Frestale 9.44 240 *e*Pg Pn 10 40 15.7 +40
LFF *e*Sg Sn 10 42 20.7 +59
comp=Z,127nm,0.7s
KONO Kongsberg 9.58 352 *i* P **Pn** 10 39 39.6 +2.0
MTLF Montolieu 9.76 229 *e*Pn **Pn** 10 39 40.0 -0.2
MTLF Montolieu 9.76 229 *e*Pg Pn 10 40 26.3 +46
MTLF *e*Sn **Sn** 10 41 23.9 -5.8
MTLF *e*Sg 10 42 32.5
comp=Z,58nm,1.0s
SGMF Saint Gilles 9.94 264 *e*Pn **Pn** 10 39 43.4 +0.9
SGMF Saint Gilles 9.94 264 *e*P **Pn** 10 39 47.3 +4.8
SGMF *e*Sn **Sn** 10 41 27.9 -6.0
SGMF *e*Sg 10 42 32.5
comp=Z,91nm,0.8s
NACGM Naroch 9.97 56 *e*P Pn 10 40 03.0 +20
NACGM eLQ LQ 10 42 40.0
NACGM eLR LR 10 43 48.0
HFS Hagfors 9.97 4 Pn **Pn** 10 39 41.6 -1.3
comp=Z,0.2nm,0.3s,baz=186,slow=13,SNR=7.0
HFS Sn **Sn** 10 41 29.5 -5.2
comp=Z,1.4nm,0.3s,baz=191,slow=27,SNR=5.9
MLR Muntele Rosu 10.29 112 LR LR 10 43 42.7
comp=Z,123nm,18.2s,baz=296,slow=37
ROSF Rostrenen 10.37 266 *e*Pn **Pn** 10 39 48.9 +0.4
ROSF *e*Sn **Sn** 10 41 37.5 -7.1
ROSF *e*Sg 10 42 46.9
comp=Z,64nm,0.8s
QUIF Quistinic 10.43 263 *e*Pn **Pn** 10 39 49.2 0.0
QUIF Quistinic 10.43 263 *e*P Pn 10 39 56.5 +7.3
QUIF *e*Sn **Sn** 10 41 37.9 -8.0
QUIF *e*Sg 10 42 48.5
comp=Z,48nm,0.7s
NC602 NORSAR Array S 10.55 358 Pn **Pn** 10 39 50.8 -0.1
EKA Eskdalemuir Ar 10.68 305 Pn **Pn** 10 39 53.2 +0.5
baz=115,slow=14,SNR=46
EKA Sn **Sn** 10 41 51.3 -0.9
baz=114,slow=25,SNR=4.1
NAO01 NORSAR Array S 10.68 356 Pn **Pn** 10 39 51.6 -1.1
ESK Eskdalemuir 10.70 304 P **Pn** 10 39 54.1 +1.1
ESK Eskdalemuir 10.70 304 **Pn** 10 39 54.1 +1.1
AKASG Malin Array Be 10.79 81 Pn **Pn** 10 39 52.5 -1.6
comp=Z,1.1nm,0.3s,baz=276,slow=12,SNR=13
AKBB Malin Array Si 10.79 81 P **Pn** 10 39 54.5 +0.4
AKBB Malin Array Si 10.79 81 Pn **Pn** 10 39 54.5 +0.4
NOA NORSAR Array B 10.87 357 Pn **Pn** 10 39 53.6 -1.7
comp=Z,0.1nm,0.3s,baz=183,slow=11,SNR=7.8
NOA Sn **Sn** 10 41 49.6 -7.0
comp=Z,0.1nm,0.3s,baz=162,slow=16,SNR=3.6
NOA LR LR 10 43 40.7
comp=Z,20nm,20.6s,baz=180,slow=35
NC405 NORSAR Array S 10.93 358 Pn **Pn** 10 39 54.8 -1.3
EPF Esparros 10.93 233 *e*Pn **Pn** 10 39 55.4 -0.8
EPF Esparros 10.93 233 *e*Pg Pn 10 40 41.5 +45
EPF *e*Sg 10 43 09.7
comp=Z,52nm,0.9s
NC204 NORSAR Array S 11.12 356 Pn **Pn** 10 40 00.2 +1.5
ETSF Etsaut 11.49 235 *e*Pn **Pn** 10 40 02.9 -1.0
ETSF *e*Sn **Sn** 10 42 04.5 -7.7
ETSF *e*Sg 10 43 20.3
comp=Z,92nm,1.3s
SJPF Ste Jean 11.70 238 *e*Sn **Sn** 10 42 10.8 -6.4
SJPF *e*Sg 10 43 33.7
comp=Z,62nm,1.1s
VSU Vasula 11.76 40 *i* P **Pn** 10 40 09.0 +1.6
FINES FINESS Array B 13.61 29 Pn **Pn** 10 40 29.3 -3.4
comp=Z,0.8nm,0.3s,baz=211,slow=12,SNR=18
FINES Sn Sn 10 42 51.2 -12
comp=Z,1.0nm,0.3s,baz=222,slow=19,SNR=3.0
FIA1 FINESS Array S 13.61 29 **Pn** 10 40 32.1 -0.5
KEST Kesra 14.64 190 LR LR 10 46 05.9
comp=Z,106nm,19.6s,baz=246,slow=36
OBN Obninsk 15.46 62 ⇓*e*P **Pn** 10 40 59.3 +1.6
OBN pmax pmax
comp=Z,6.0nm,0.4s
OBN MLR MLR
comp=Z,82nm,14.0s
ESDC Sonseca Array 15.59 234 Pn **Pn** 10 41 00.2 +0.7
baz=32,slow=15,SNR=4.2
KARP Karpathos 18.20 138 **Pn** 10 41 31.9 -0.5
PVAQ Vaqueiros 19.25 236 P **Pn** 10 41 44.8 -0.3
PVAQ IAmb IAmb 10 41 49.4
comp=Z,35nm,1.5s
ARCES ARCESS Array B 20.38 13 P Pn 10 41 57.6 -0.8
comp=Z,2.2nm,0.8s,baz=193,slow=10.0,SNR=8.0
KIV Kislovodsk 21.50 95‖ *e*P **P** 10 42 10.8 +2.2
KIV *e* 10 42 27.7
KIV *e*S **S** 10 46 10.5 +3.7
KIV pmax pmax
comp=Z,6.0nm,1.2s
KIV MLR MLR
comp=Z,23nm,16.0s
KBZ Khabaz 21.74 96 *i* P **P** 10 42 11.1 0.0
KBZ pmax pmax
comp=Z,3.0nm,1.0s
KIRV Kirov 22.89 54 *i* P **P** 10 42 24.9 +1.7
ARU Arti 27.86 59 LR LR 10 54 18.0
comp=Z,28nm,19.2s,baz=244,slow=36
ARU Arti 27.86 59 *d i* P P 10 43 17.1 +7.9
ARU 10 44 03.6
ARU SS SS 10 49 23.8 -25
ARU pmax pmax
comp=Z,4.0nm,0.9s
AKTO Aktyubinsk 28.82 72 LR LR 10 55 32.0
comp=Z,50nm,18.2s,baz=3.7,slow=38
ILULI Ilulissat 35.07 326 P **P** 10 44 14.3 +1.9
ILULI pmax pmax
comp=Z,12nm,1.0s
ILULI Ilulissat 35.07 326 P **P** 10 44 14.3 +1.9
BRVK Borovoye 35.24 62 P **P** 10 44 14.4 +0.4
BRVK pmax pmax
comp=Z,3.0nm,0.8s
BRVK Borovoye 35.24 62 P **P** 10 44 14.4 +0.4
BRVK IAmb IAmb 10 44 19.1
comp=Z,3.2nm,0.8s
TORD Torodi Ar. Bea 37.98 197 P **P** 10 44 38.5 +0.8
comp=Z,5.8nm,1.2s,baz=8.0,slow=8.3,SNR=11
KK31 Karatay Array 39.66 77 P **P** 10 44 52.2 +0.6
KK31 pmax pmax
comp=Z,1.0nm,1.0s
KK31 Karatay Array 39.66 77 P **P** 10 44 52.2 +0.6
KURK Kurchatov 40.91 63 *i* P **P** 10 45 02.9 +1.2
KURK pmax pmax
comp=Z,2.0nm,1.0s
KURK Kurchatov 40.91 63 P **P** 10 45 03.0 +1.2
KURK IAmb IAmb 10 45 05.9
comp=Z,1.8nm,0.8s
MKAR Makanchi Array 44.92 66 P **P** 10 45 37.7 +3.2
comp=Z,0.3nm,0.5s,baz=287,slow=8.0,SNR=3.3
MKAR LR LR 11 05 15.6
comp=Z,37nm,21.5s,baz=238,slow=37
WMQ Urumqi 49.74 67 *e*P **P** 10 46 15.3 +3.3
WMQ pP sP 10 46 19.5 +2.1
WMQ LR LR
comp=N,20nm,15.7s
WMQ LR LR
comp=E,210nm,18.7s
WMQ LR LR
comp=Z,63nm,18.7s
YKA Yellowknife Ar 60.03 335 P **P** 10 47 27.3 +1.2
comp=Z,0.4nm,0.6s,baz=42,slow=6.6,SNR=14
LZH Lanzhou 64.17 64 *e*P **P** 10 47 54.3 -0.2
LZH pP sP 10 48 00.0 0.0
LZH sP pP 10 48 03.0 +4.5
LZH PP **PP** 10 50 08.0 -7.3
LZH pmax pmax
comp=Z,12nm,1.3s
LZH pmax pmax
comp=Z,51nm,4.9s
LZH LR LR
comp=N,200nm,15.2s
LZH LR LR
comp=E,380nm,16.0s
LZH LR LR
comp=Z,330nm,17.3s
HHC Hu-ho-hao-te 65.09 56 *e*P **P** 10 48 02.5 +2.1
HHC sP sP 10 48 11.8 +5.9
HHC S **S** 10 56 47.5 +4.8
HHC pmax pmax
comp=Z,11nm,0.8s
HHC pmax pmax
comp=Z,23nm,5.0s
HHC LR LR
comp=N,160nm,21.4s
HHC LR LR
comp=E,110nm,18.0s
HHC LR LR
comp=Z,51nm,17.6s
KSRS Korea Array 75.92 48 LR LR 11 26 30.4
comp=Z,58nm,18.1s,baz=185,slow=39
TXAR Lajitas Array 82.67 308 P **P** 10 49 45.8 +2.3
comp=Z,0.3nm,0.8s,baz=44,slow=6.6,SNR=3.4

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*BGR **31** 10:43:56.0±0.2,50.22N×12.45E,h10km±2km, ML3.2/5, Error ellipse: s-maj=2.2km s-min=1.1km az=108.0*
*WBNET **31** 10:43:56.3,50.22N×12.45E,h8km, Ml3.0*
*LDG **31** 10:43:56.6±0.1,50.26N×12.49E,h10km, Ml3.5/23, Error ellipse: s-maj=3.7km s-min=2.4km az=133.0*
*CLL **31** 10:43:56.6±0.3,50.23N×12.44E,h7km±1km, ML2.9/9*
ISC 31 10:43:55.4±0.7,50.21N±0.01×12.38E±0.01,h13km±3km, n108,σ1$20/201,4C-7D,Germany

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VAC	**Vackov**	**0.03**	**358**	⇓P		**Pg**	**10 43 58.1**	**+0.4**
VAC				S		**Sg**	**10 43 59.3**	**0.0**
SKC	**Skalna**	**0.04**	**196**	⇓P		**Pg**	**10 43 58.4**	**+0.7**
SKC				S		**Sg**	**10 43 59.9**	**+0.5**
ROHR	**Rohrbach**	**0.05**	**302**	*i* Pg		**Pg**	**10 43 58.5**	**+0.6**
ROHR				*i* Sg		**Sg**	**10 43 60.0**	**+0.4**
	7µm,0.2s							
NKC	**Novy Kostel**	**0.05**	**62**	*i* Pg		**Pg**	**10 43 57.9**	**0.0**
NKC				*i* Sg		**Sg**	**10 43 59.0**	**-0.7**
NKC	**Novy Kostel**	**0.05**	**62**	*e*PG		**Pg**	**10 43 57.5**	**-0.4**
NKC				*e*SG		**Sg**	**10 43 58.7**	**-1.0**
	comp=Z,12µm,0.2s							
NKC	**Novy Kostel**	**0.05**	**62**	⇓P		**Pg**	**10 43 57.9**	**0.0**
NKC				S		**Sg**	**10 43 59.0**	**-0.7**
LBCW	**Luby**	**0.06**	**21**	⇓P		**Pg**	**10 43 58.2**	**+0.2**
LBCW				S		**Sg**	**10 43 59.5**	**-0.3**
WERN	**Wernitzgruen**	**0.08**	**359**	*i* Pg		**Pg**	**10 43 58.5**	**+0.4**
WERN				*i* Sg		**Sg**	**10 43 60.0**	**-0.2**
	6µm,0.3s							
KVC	**Kvetna**	**0.09**	**92**	⇑P		**Pg**	**10 43 58.0**	**-0.2**
KVC				S		**Sg**	**10 43 59.2**	**-1.1**
STCW	**Studenec**	**0.10**	**61**	⇑P		**Pg**	**10 43 58.2**	**-0.2**
STCW				S		**Sg**	**10 43 59.5**	**-1.1**
KACW	**Kaceov**	**0.11**	**126**	⇓P		**Pg**	**10 43 58.7**	**+0.2**
KACW				S		**Sg**	**10 44 00.4**	**-0.3**
POCW	**Potky**	**0.12**	**16**	⇓P		**Pg**	**10 43 58.8**	**+0.2**
POCW				S		**Sg**	**10 44 00.5**	**-0.4**
ZHC	**Zelena Hora**	**0.15**	**198**	⇑P		**Pb**	**10 44 00.0**	**0.0**
ZHC				S		**Sb**	**10 44 02.5**	**-0.6**
KRCW	**Kraslice**	**0.16**	**38**	⇑P		**Pg**	**10 43 59.1**	**-0.1**
KRCW				S		**Sg**	**10 44 00.9**	**-0.9**
GUNZ	**Gunzen**	**0.16**	**349**	*i* Pg		**Pg**	**10 43 59.7**	**+0.5**
GUNZ				*i* Sg		**Sg**	**10 44 01.9**	**+0.1**
	3µm,0.5s							
VIEL	**Selb-Vielitz**	**0.18**	**263**	*i* Pg		**Pb**	**10 44 00.8**	**+0.1**
VIEL				*i* Sg		**Sb**	**10 44 03.8**	**-0.4**
MULD	**Muldenberg**	**0.20**	**5**	*i* Pg		**Pg**	**10 44 00.2**	**+0.3**
MULD				*i* Sg		**Sg**	**10 44 02.7**	**-0.3**
	2µm,0.5s							
TRIB	**Obertriebel**	**0.21**	**313**	*i* Pg		**Pb**	**10 44 01.0**	**-0.2**
TRIB				*i* Sg		**Sb**	**10 44 04.2**	**-0.8**
	516nm,0.2s							
TANN	**Tannenbergstha**	**0.21**	**14**	*i* Pg		**Pg**	**10 44 00.2**	**+0.1**
TANN				*i* Sg		**Sg**	**10 44 02.7**	**-0.6**
	2µm,0.5s							
LACW	**Lazy**	**0.22**	**135**	⇓P		**Pg**	**10 44 00.6**	**+0.4**
LACW				S		**Sg**	**10 44 03.6**	**+0.1**
MANZ	**Manzenberg**	**0.28**	**218**	*e*Pg		**Pb**	**10 44 02.5**	**+0.1**
MANZ				*e*Sg		**Sb**	**10 44 06.7**	**-0.3**
PLN	**Plauen**	**0.31**	**333**	*i* Pg		**Pb**	**10 44 02.6**	**-0.3**
PLN				*i* Sg		**Sg**	**10 44 06.7**	**+0.7**
	775nm,0.3s							
ROTZ	**Rotzenmuhle**	**0.46**	**194**	*e*Pg		**Pb**	**10 44 05.5**	**+0.2**
ROTZ				*e*Sg		**Sb**	**10 44 11.8**	**-0.2**
SCHF	**Schoenfels**	**0.47**	**2**	*i* Pg		**Pg**	**10 44 05.0**	**+0.3**
SCHF				*i* Sg		**Sg**	**10 44 11.0**	**+0.1**
	2µm,0.4s							
GRZ1	**Mausoleum Wald**	**0.49**	**348**	*i* Pg		**Pg**	**10 44 05.6**	**+0.5**

GRZ1					*i* Sg		**Sg**	10 44 11.8	+0.1
	616nm,0.3s									
ZEU	**Talsperre Zeul**	**0.53**	**331**	*i* Pg			**Pb**	10 44 06.5	-0.1
ZEU				*i* Sg			**Sg**	10 44 13.2	+0.3
MLFH	**Mildenfurth**	**0.61**	**342**	*i* Pg			**Pb**	10 44 07.9	-0.1
MLFH				*e*Sg			**Sg**	10 44 15.5	+0.1
MOX	**Moxa**	**0.66**	**312**	*e*Pg			**Pb**	10 44 09.2	+0.4
GRF	**Grafenberg Arr**	**0.91**	**236**	*e*Pg			**Pn**	10 44 14.3	+0.4
GRF				*e*Sg			**Sn**	10 44 26.6	-0.3
FBE	**Freiberg**	**0.95**	**41**	*e*Pg			**Pg**	10 44 13.5	-0.2
FBE				*e*Sg			**Sg**	10 44 25.0	-1.0
WET	**Wettzell**	**1.11**	**163**	*e*Pg			**Pg**	10 44 17.0	+0.2
PBCC	**Pribram**	**1.17**	**116**	*e*PG			**Pb**	10 44 16.5	-1.0
PBCC				*e*SG			**Sb**	10 44 31.5	-1.0
CLL	**Collm**	**1.17**	**20**	*i* Pg			**Pg**	10 44 18.3	+0.4
CLL				*i*				10 44 20.4		
CLL				*i*				10 44 21.5		
CLL				*i* Sg			**Sn**	10 44 33.5	+0.2
	comp=Z,253nm,0.8s									
CLL				*i*				10 44 37.3		
BRG	**Berggiesshubel**	**1.20**	**56**	*e*Pg			**Pn**	10 44 17.9	0.0
BRG				*e*Sg			**Sb**	10 44 32.4	-1.0
PRA	**Prague**	**1.33**	**95**	*e*PG			**Pn**	10 44 19.4	-0.3
PRA				*e*SG			**Sb**	10 44 36.4	-0.7
	comp=Z,93nm,0.6s									
KHC	**Kasperske Hory**	**1.33**	**144**	*e*PG			**Pn**	10 44 19.8	0.0
KHC				*e*SG			**Sb**	10 44 36.7	-0.6
	comp=Z,161nm,0.3s									
PRU	**Pruhonice**	**1.41**	**98**	*e*PG			**Pn**	10 44 21.0	+0.2
PRU				*e*SG			**Sb**	10 44 39.6	+0.1
	comp=Z,277nm,0.3s									
PVCC	**Panska Ves**	**1.44**	**76**	*e*PG			**Pn**	10 44 21.6	+0.4
PVCC				*e*SG			**Sb**	10 44 40.5	+0.2
	comp=Z,397nm,0.2s									
GOPC	**GO Pecny, Ondr**	**1.58**	**100**	*e*PG			**Pb**	10 44 23.9	-0.6
GOPC				*e*SG			**Sb**	10 44 44.4	0.0
	comp=Z,195nm,0.3s									
GEC2	**GERESS Array S**	**1.61**	**147**	*e*Pn			**Pn**	10 44 23.9	+0.2
GEC2				*e*Sg			**Sg**	10 44 46.6	-0.7
TREC	**Trest**	**2.21**	**113**	*e*PN			**Pn**	10 44 32.5	+0.6
TREC				*e*PG			**Pb**	10 44 34.6	-0.7
TREC				*e*SG			**Sb**	10 45 03.2	+0.6
	comp=Z,60nm,0.2s									
UPC	**Upice**	**2.35**	**81**	*e*PN			**Pn**	10 44 34.1	+0.4
UPC				*e*PG			**Pb**	10 44 37.6	+0.1
UPC				*e*SG			**Sb**	10 45 07.6	+1.2
	comp=Z,139nm,0.7s									
CHVC	**Chvalec**	**2.38**	**79**	*e*PN			**Pn**	10 44 34.9	+0.7
CHVC				*e*PG			**Pb**	10 44 38.3	+0.1
CHVC				*e*SG			**Sb**	10 45 09.1	+1.6
	comp=Z,68nm,0.6s									
OSTC	**Ostas**	**2.48**	**80**	*e*PN			**Pn**	10 44 36.0	+0.5
OSTC				*e*PG			**Pb**	10 44 39.2	-0.6
OSTC				*e*SG			**Sb**	10 45 12.2	+1.9
	comp=Z,55nm,0.3s									
DPC	**Dobruska-Polom**	**2.53**	**85**	*e*PN			**Pn**	10 44 36.9	+0.6
DPC				*e*PG			**Pb**	10 44 40.5	-0.3
DPC				*e*SG			**Sb**	10 45 13.5	+1.6
	comp=Z,81nm,0.5s									
KSP	**Ksiaz**	**2.58**	**74**	*e*Pg			**Pb**	10 44 43.0	+1.5
KSP				*e*Sg			**Sb**	10 45 15.4	+2.3
MOA	**Molln**	**2.67**	**152**	*e*Pn			**Pn**	10 44 38.7	+0.6
	comp=Z,0.8nm,0.1s									
MOA					Sn		**Sb**	10 45 14.8	-0.9
	comp=Z,9.2nm,0.2s									
KRLC	**Kraliky**	**2.84**	**91**	*e*PN			**Pn**	10 44 41.2	+0.7
KRLC				*e*SG			**Sg**	10 45 24.1	-2.3
	comp=Z,50nm,0.3s									
KRUC	**Moravsky**	**2.85**	**112**	*e*PN			**Pn**	10 44 40.7	+0.1
KRUC				*e*SG			**Sb**	10 45 22.1	+1.1
VRAC	**Vranov**	**2.88**	**107**	*e*PN			**Pn**	10 44 41.0	0.0
VRAC				*e*SG			**Sb**	10 45 22.9	+1.2
WATA	**Walderalm**	**2.92**	**191**	*e*Pn			**Pn**	10 44 41.8	0.0
	comp=Z,1.1nm,0.1s									
WATA					*e*Sn		**Sn**	10 45 18.4	+1.6
	comp=Z,53nm,0.3s									
RETA	**Reutte**	**2.93**	**202**	*e*Pn			**Pn**	10 44 41.3	-0.4
	comp=Z,1.3nm,0.1s									
RETA					*e*Pg		**Pg**	10 44 52.1	+0.7
	comp=Z,12nm,0.2s									
RETA					*e*Sg		**Sg**	10 45 30.5	+1.1
	comp=Z,51nm,0.4s									
MOTA	**Moosalm**	**2.99**	**197**	*i* Pn			**Pn**	10 44 42.2	-0.4
	comp=Z,1.5nm,0.1s									
MOTA					*e*Pg		**Pg**	10 44 52.9	+0.2
	comp=Z,15nm,0.3s									
MOTA					*e*Sn		**Sn**	10 45 18.7	+0.3
	comp=Z,5.1nm,0.2s									
MOTA					*e*Sg		**Sg**	10 45 33.0	+1.6
	comp=Z,30nm,0.3s									
WTTA	**Wattenberg**	**2.99**	**190**	*i* Pn			**Pn**	10 44 43.0	+0.3
	comp=Z,0.8nm,0.1s									
WTTA					*i* Sn		**Sn**	10 45 19.7	+1.2
	comp=Z,8.0nm,0.3s									
WTTA					Sg		**Sg**	10 45 34.2	+2.8
	comp=Z,31nm,0.3s									
SQTA	**Sankt Quirin**	**3.09**	**195**	*i* Pn			**Pn**	10 44 44.0	0.0
	comp=Z,0.9nm,0.1s									
SQTA					*e*Pg		**Pg**	10 44 54.6	0.0
	comp=Z,9.8nm,0.2s									
SQTA					*e*Sg		**Sg**	10 45 36.3	+1.7
	comp=Z,40nm,0.4s									
KBA	**Koelnbreinsper**	**3.20**	**168**	*e*Sg			**Sg**	10 45 38.3	+0.2
	comp=Z,26nm,0.4s									
CONA	**Conrad Observa**	**3.23**	**134**	*i* Pn			**Pn**	10 44 46.4	+0.4
	comp=Z,2.2nm,0.3s									
CONA					*e*Pg		**Pg**	10 44 55.6	-1.8
	comp=Z,8.8nm,0.3s									
CONA					*e*Sn		**Sb**	10 45 30.8	-1.2
	comp=Z,44nm,0.3s									
MORC	**Moravsky Berou**	**3.36**	**95**	*e*PN			**Pn**	10 44 47.6	-0.1
MORC				*e*SG			**Sg**	10 45 39.6	-3.6
FETA	**Feichten**	**3.37**	**200**	*e*Pn			**Pn**	10 44 47.8	-0.1
	comp=Z,1.1nm,0.2s									
FETA					*e*Sn		**Sn**	10 45 28.2	+0.3
	comp=Z,1.7nm,0.2s									
FETA					*e*Sg		**Sg**	10 45 44.1	+0.4
	comp=Z,15nm,0.4s									
ABTA	**Abfaltersbach**	**3.47**	**178**	*e*Pn			**Pn**	10 44 51.3	+2.1
	comp=Z,1.4nm,0.2s									
ABTA					*i* Sn		**Sn**	10 45 32.1	+2.0
	comp=Z,6.0nm,0.2s									
ABTA					Sg		**Sg**	10 45 47.1	+0.4
	comp=Z,58nm,0.5s									
ARSA	**Arzberg**	**3.62**	**144**	*e*Pn			**Pn**	10 44 52.9	+1.7
	comp=Z,1.7nm,0.2s									
ARSA					*e*Sg		**Sg**	10 45 48.7	-2.9
	comp=Z,22nm,0.4s									
MYKA	**Terra Mystica**	**3.68**	**166**	*i* Pn			**Pn**	10 44 54.7	+2.7
	comp=Z,1.2nm,0.2s									
MYKA					Sg		**Sg**	10 45 53.2	-0.2
	comp=Z,21nm,0.5s									
MODS	**Modra-Piesok**	**3.69**	**118**	*e*SG			**Sg**	10 45 52.5	-1.5
MODS				*e*LG			Lg	10 45 55.3		
ZST	**Bratislava**	**3.69**	**121**	*e*PN			**Pn**	10 44 52.4	+0.2
ZST				*e*SG			**Sg**	10 45 50.1	-3.9
ZST				*e*LG			Lg	10 45 53.8		
JAVC	**Velka Javorina**	**3.70**	**109**	*e*PN			**Pn**	10 44 53.6	+1.2
JAVC				*e*SG			**Sg**	10 45 53.0	-1.2
OKC	**Ostrava-Krasne**	**3.74**	**94**	*e*SG			**Sg**	10 45 51.9	-3.5
	comp=Z,41nm,0.4s									
CDF	**Champ du Feu**	**3.79**	**244**	*e*Pn			**Pn**	10 44 54.8	+1.2
CDF	**Champ du Feu**	**3.79**	**244**	*e*Pg			**Pg**	10 45 08.8	+0.8
CDF				*e*Sg			**Sg**	10 45 56.8	-0.3
	comp=Z,42nm,0.4s									
OBKA	**Obir**	**3.98**	**158**	*e*Pn			**Pn**	10 44 58.2	+2.1
	comp=Z,1.3nm,0.3s									
OBKA					Sg		**Sg**	10 46 01.9	-1.1
	comp=Z,70nm,0.8s									
HINF	**Hinteralfeld**	**4.35**	**239**	*e*Pn			**Pn**	10 45 01.6	+0.3
HINF	**Hinteralfeld**	**4.35**	**239**	*e*Pg			**Pg**	10 45 19.7	+0.9
HINF				*e*Sn			**Sn**	10 45 50.7	-1.2
HINF				*e*Sg			**Sg**	10 46 14.1	-1.0
	comp=Z,29nm,0.4s									
HAU	**Haudompre**	**4.53**	**243**	*e*Pn			**Pn**	10 45 04.4	+0.6
HAU	**Haudompre**	**4.53**	**243**	*e*Pg			**Pg**	10 45 22.0	-0.2
HAU				*e*Sg			**Sg**	10 46 19.9	-1.0
	comp=Z,40nm,0.4s									
VYHS	**Vyhne**	**4.56**	**110**	*e*PN			**Pn**	10 45 04.1	0.0
PAGF	**Fort de Pagny**	**4.65**	**252**	*e*Pn			**Pn**	10 45 06.7	+1.3
PAGF	**Fort de Pagny**	**4.65**	**252**	*e*Pg			**Pg**	10 45 25.1	+0.7
PAGF				*e*Sg			**Sg**	10 46 23.5	-1.1
	comp=Z,30nm,0.6s									
GIVF	**Givet**	**4.86**	**272**	*e*Sg			**Sg**	10 46 30.0	-1.3
	comp=Z,13nm,0.4s									

MEZF	**Maizieres J'vi**	**5.08**	**253**	*e*Pn			**Pn**	10 45 13.8	+2.5
MEZF	**Maizieres J'vi**	**5.08**	**253**	*e*Pg			**Pg**	10 45 34.7	+2.0
MEZF				*e*Sg			**Sg**	10 46 39.2	+0.7
	comp=Z,12nm,0.5s									
SFTF	**Sexfontaines**	**5.21**	**250**	*e*Pn			**Pn**	10 45 14.7	+1.6
SFTF	**Sexfontaines**	**5.21**	**250**	*e*Pg			**Pg**	10 45 34.9	-0.3
SFTF				*e*Sg			**Sg**	10 46 40.9	-1.7
	comp=Z,17nm,0.4s									
BAIF	**Baives**	**5.26**	**271**	*e*Pn			**Pn**	10 45 14.5	+0.8
BAIF	**Baives**	**5.26**	**271**	*e*Pg			**Pg**	10 45 36.4	+0.4
BAIF				*e*Sg			**Sg**	10 46 42.2	-1.9
	comp=Z,7.0nm,0.4s									
CABF	**La Chapelle**	**5.52**	**232**	*e*Pn			**Pn**	10 45 17.5	+0.1
CABF	**La Chapelle**	**5.52**	**232**	*e*Pg			**Pg**	10 45 41.8	+0.7
CABF				*e*Sg			**Sg**	10 46 51.2	-1.4
	comp=Z,37nm,0.9s									
LPL	**La Plagne**	**6.04**	**221**	*e*Pg			**Pg**	10 45 51.9	+0.9
LPL				*e*Sg			**Sg**	10 47 08.5	-0.6
	comp=Z,1.6nm,0.3s									
LPG	**La Plagne**	**6.04**	**221**	*e*Pn			**Pn**	10 45 25.8	+1.0
LPG	**La Plagne**	**6.04**	**221**	*e*Pg			**Pg**	10 45 51.7	+0.6
LPG				*e*Sg			**Sg**	10 47 08.3	-1.1
	comp=Z,19nm,0.9s									
LOR	**Lormes**	**6.36**	**246**	*e*Pn			**Pn**	10 45 29.3	+0.5
LOR	**Lormes**	**6.36**	**246**	*e*Pg			**Pg**	10 45 55.2	-1.8
LOR				*e*Sg			**Sg**	10 47 16.8	-2.5
	comp=Z,9.2nm,0.3s									
SSF	**Saint Saulge**	**6.67**	**245**	*e*Pn			**Pn**	10 45 33.8	+0.7
SSF	**Saint Saulge**	**6.67**	**245**	*e*Pg			**Pg**	10 46 02.6	-0.4
SSF				*e*Sg			**Sg**	10 47 26.7	-2.6
	comp=Z,11nm,0.5s									
MBDF	**Montbardon**	**6.67**	**217**	*e*Pn			**Pn**	10 45 34.5	+1.3
MBDF	**Montbardon**	**6.67**	**217**	*e*Pg			**Pg**	10 46 04.2	+1.1
SMF	**Signal de Mont**	**6.71**	**241**	*e*Pn			**Pn**	10 45 34.3	+0.7
SMF	**Signal de Mont**	**6.71**	**241**	*e*Pg			**Pg**	10 46 01.7	-2.0
SMF				*e*Sn			**Sn**	10 46 45.9	-3.9
SMF				*e*Sg			**Sg**	10 47 27.5	-3.0
	comp=Z,17nm,0.6s									
ORIF	**Oris-en-Rattie**	**6.88**	**222**	*e*Pg			**Pg**	10 46 05.9	-1.1
ORIF				*e*Sg			**Sg**	10 47 33.5	-2.6
	comp=Z,12nm,0.8s									
AVF	**Avril sur Loir**	**6.90**	**244**	*e*Pn			**Pn**	10 45 37.0	+0.7
AVF	**Avril sur Loir**	**6.90**	**244**	*e*Pg			**Pg**	10 46 06.8	-0.7
AVF				*e*Sg			**Sg**	10 47 37.4	+0.6
	comp=Z,7.5nm,0.6s									
HYF	**Humbligny**	**7.08**	**249**	*e*Pg			**Pg**	10 46 12.1	+1.2
HYF				*e*Sg			**Sg**	10 47 41.3	-1.2
BGF	**Bois d'Agland**	**7.32**	**244**	*e*Pn			**Pn**	10 45 43.2	+1.2
BGF	**Bois d'Agland**	**7.32**	**244**	*e*Pg			**Pg**	10 46 14.8	-0.7
BGF				*e*Sg			**Sg**	10 47 47.7	-2.5
	comp=Z,16nm,0.4s									
VIVF	**Saint-Julien-l**	**7.47**	**227**	*e*Sg			**Sg**	10 47 54.5	-0.6
	comp=Z,1.5nm,0.3s									
TCF	**Toulx Ste Croi**	**7.84**	**244**	*e*Pn			**Pn**	10 45 50.4	+1.3
TCF	**Toulx Ste Croi**	**7.84**	**244**	*e*Pg			**Pg**	10 46 24.5	-0.9
TCF				*e*Sg			**Sg**	10 48 02.7	-4.1
	comp=Z,6.5nm,0.6s									
CAF	**Calviac**	**8.75**	**237**	*e*Sg			**Sg**	10 48 37.4	+1.5
	comp=Z,4.4nm,0.7s									
MFF	**Saint Martin d**	**9.08**	**251**	*e*Sg			Sn	10 48 42.6	+54
	comp=Z,4.4nm,0.7s									
LFF	**La Frestale**	**9.46**	**241**	*e*Sg			Sn	10 48 57.6	+60
	comp=Z,10nm,0.7s									

*IDC **31** 11:11:31.4±2.4, 14°.11N×92°.90W, h0km, mb3.9/5, mb1 4.3/8, mb1mx3.9/36, mbtmp4.0/8, ML4.0/3, MS3.3/4, Ms1 3.3/4, ms1mx2.8/47, Error ellipse: s-maj=56.4km s-min=37.6km az=25.0*
*MEX **31** 11:11:36.1±0.7, 14°.28N×93°.25W, h10km, MD4.1*
*NEIC **31** 11:11:38.2±2.0, 14°.22N±0°.07×93°.08W±0°.06, h37km±7km, Error ellipse: s-maj=11.4km s-min=6.8km az=215.0*
*GCG **31** 11:11:52.9±0.3, 14°.59N×91°.83W, h45km±99km, MD4.3*
ISC 31 11:11:36.7±2.6, 14°.23N±0°.08×93°.10W±0°.07, h29km±17km, n52, σ1°.61/59, mb3.9/14, MS2.9/3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
THIG		**1.05**	**50**	*i* P		**Pn**	**11 11 54.4**	**-1.1**
THIG				*i* S		**Sb**	**11 12 09.4**	**-0.2**
THIG		**1.05**	**50**			**Pn**	**11 11 54.4**	**-1.1**
THIG						**Sb**	**11 12 09.4**	**-0.2**
PCIG		**1.47**	**355**	*e*P		**Pn**	**11 11 59.1**	**-2.1**
PCIG				*i* S		**Sn**	**11 12 15.0**	**-4.5**
PCIG		**1.47**	**355**			**Pn**	**11 11 59.1**	**-2.1**
ERG	**Entre ros, C**	**1.50**	**82**	*e*P		**Pn**	**11 12 01.4**	**-0.2**
STG3	**Santiaguito 3,**	**1.56**	**72**	*e*P		**Pn**	**11 12 02.0**	**-0.7**
FUG	**Fuego 3**	**2.20**	**84**	*e*P		**Pn**	**11 12 10.6**	**-0.9**
CCIG	**Comitan**	**2.24**	**24**	*e*P		**Pn**	**11 12 10.8**	**-1.2**
CCIG				*i* S		**Sn**	**11 12 36.7**	**-2.1**
CCIG	**Comitan**	**2.24**	**24**			**Pn**	**11 12 13.5**	**+1.5**
CCIG					Sn	**Sn**	**11 12 43.3**	**+4.5**
PCG	**Pacaya**	**2.42**	**86**	*e*P		**Pn**	**11 12 14.1**	**-0.4**
TGIG		**2.53**	**359**	*e*P		**Pn**	**11 12 14.5**	**-1.4**
TGIG				*e*S		**Sn**	**11 12 43.4**	**-2.5**
TGIG		**2.53**	**359**			**Pn**	**11 12 16.2**	**+0.3**
TGIG						**Sn**	**11 12 47.6**	**+1.8**
IXG	**Ixpaco**	**2.58**	**91**	*e*P		**Pn**	**11 12 15.5**	**-1.2**
CMIG	**Matias Romero**	**3.32**	**329**	Pn		**Pn**	**11 12 25.9**	**-0.9**
	14nm,0.3s,baz=162,slow=13,SNR=152							
CMIG					Sn	**Sn**	**11 13 05.0**	**-0.3**
	18nm,0.3s,baz=114,slow=19,SNR=11							
CMIG	**Matias Romero**	**3.32**	**329**	*e*P		**Pn**	**11 12 24.5**	**-2.3**
CMIG				*i* S		**Sn**	**11 13 01.0**	**-4.3**
CMIG	**Matias Romero**	**3.32**	**329**			**Pn**	**11 12 25.3**	**-1.4**
TLIG	**Tlapa**	**6.21**	**303**	Pn		**Pn**	**11 13 07.0**	**+0.3**
MATN	**Matagalpa**	**7.09**	**100**	Pn		**Pn**	**11 13 16.9**	**-1.9**
TEIG	**Tepich**	**7.53**	**37**	Pn		**Pn**	**11 13 23.9**	**-0.7**
	10.0nm,0.3s,baz=319,slow=0.4,SNR=36							
TEIG					LR	LR	11 16 43.3	
	comp=Z,224nm,21.3s,baz=229,slow=42							
TEIG	**Tepich**	**7.53**	**37**	Pn		**Pn**	**11 13 24.2**	**-0.4**
MOIG	**Morelia**	**9.44**	**306**	Pn		**Pn**	**11 13 53.6**	**+2.5**
TXAR	**Lajitas Array**	**17.93**	**329**	P		**Pn**	**11 15 44.0**	**-0.1**
	0.1nm,0.3s,baz=152,slow=11,SNR=17							
TX32	**Lajitas Array**	**17.93**	**329**	P		**P**	**11 15 45.5**	**+1.0**
MIAR	**Mount Ida**	**20.23**	**359**	P		**P**	**11 16 11.1**	**+1.5**
MIAR				IAmb		IAmb	11 16 17.3	
	comp=Z,6.0nm,1.0s							
GDL2	**Guadalupe Moun**	**20.64**	**332**	P		**P**	**11 16 15.3**	**+1.2**
MNTX	**Cornudas Mount**	**20.71**	**329**	P		**P**	**11 16 15.9**	**+1.2**
X34A	**Smith Ranch, M**	**20.73**	**349**	P		**P**	**11 16 16.0**	**+1.0**
X34A				IAmb		IAmb	11 16 32.3	
	comp=Z,8.7nm,1.2s							
GOGA	**Godfrey**	**21.00**	**23**	P		**P**	**11 16 18.6**	**+0.7**
GOGA				IAmb		IAmb	11 16 23.0	
	comp=Z,6.3nm,1.1s							
WMOK	**Wichita Mounta**	**21.05**	**347**	P		**P**	**11 16 19.3**	**+0.8**
FNO	**Franklin**	**21.29**	**350**	P		**P**	**11 16 22.7**	**+1.7**
FPAL	**Fort Paine**	**21.32**	**17**	P		**P**	**11 16 23.5**	**+2.1**
FPAL				IAmb		IAmb	11 16 29.5	
	comp=Z,5.7nm,1.0s							
RUSC	**La Rusia**	**21.36**	**111**	P		**P**	**11 16 22.4**	**-0.1**
FCAR	**Ozark Folk Cen**	**21.58**	**2**	P		**P**	**11 16 25.2**	**+1.1**
FCAR				IAmb		IAmb	11 16 26.7	
	comp=Z,4.1nm,0.8s							
HHAR	**Hobbs**	**21.97**	**358**	P		**P**	**11 16 28.9**	**+0.6**
HHAR				IAmb		IAmb	11 16 29.6	
	comp=Z,3.0nm,0.6s							
AMTX	**Amarillo**	**21.97**	**341**	P		**P**	**11 16 29.3**	**+0.9**
AMTX				IAmb		IAmb	11 16 34.4	
	comp=Z,7.3nm,0.7s							
121A	**Cookes Peak, D**	**22.61**	**326**	P		**P**	**11 16 36.2**	**+0.8**
121A				IAmb		IAmb	11 16 38.3	
	comp=Z,7.6nm,0.9s							
TKL	**Tuckaleechee C**	**22.92**	**20**	LR		LR	11 26 13.8	
	comp=Z,44nm,21.7s,baz=191,slow=38							
CCM	**Cathedral Cave**	**23.78**	**4**	P		**P**	**11 16 45.7**	**-1.2**
CCM				IAmb		IAmb	11 16 49.4	
	comp=Z,3.4nm,0.7s							
ANMO	**Albuquerque**	**23.88**	**332**	P		**P**	**11 16 49.3**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=153,slow=12,SNR=6.4							
ANMO	**Albuquerque**	**23.88**	**332**	P		**P**	**11 16 48.0**	**-0.2**
TUC	**Tucson**	**24.18**	**321**	P		**P**	**11 16 50.8**	**+0.1**
TUC				IAmb		IAmb	11 16 54.5	
	comp=Z,4.1nm,1.2s							
SDCO	**Great Sand Dun**	**25.88**	**337**	P		**P**	**11 17 06.7**	**+0.3**
SDCO				IAmb		IAmb	11 17 08.6	
	comp=Z,2.4nm,1.1s							
SJG	**San Juan**	**26.16**	**78**	LR		LR	11 27 25.2	
	comp=Z,34nm,18.7s,baz=131,slow=37							
NVAR	**Mina Array Bea**	**32.83**	**322**	P		**P**	**11 18 10.1**	**+2.0**
	comp=Z,1.1nm,0.7s,baz=132,slow=8.2,SNR=12							

SNOW	**Snow King Moun**	**32.83**	**336**	P			**P**	**11 18 08.5**	**+0.5**
MCMT	**McKenzie Canyo**	**34.80**	**335**	P			**P**	**11 18 26.3**	**+1.1**
SCHQ	**Schefferville**	**45.38**	**21**	LR			LR	11 39 51.4	
	comp=Z,86nm,18.3s,baz=48,slow=37									
YKA	**Yellowknife Ar**	**50.56**	**347**	P			**P**	**11 20 32.0**	**-0.4**
	comp=Z,2.7nm,0.7s,baz=153,slow=7.7,SNR=57									
YKA					PcP		**PcP**	**11 21 49.4**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=157,slow=4.4,SNR=3.9									
IL31		**62.21**	**337**	P			**P**	**11 21 56.4**	**+1.1**
ILAR	**Eielson Array**	**62.21**	**337**	P			**P**	**11 21 56.0**	**+0.6**
	comp=Z,0.9nm,0.9s,baz=147,slow=4.8,SNR=6.6									
FINES	**FINESS Array B**	**90.74**	**25**	P			**P**	**11 24 35.2**	**-1.5**
	comp=Z,1.6nm,0.9s,baz=300,slow=3.8,SNR=4.0									
CMAR	**Chiang Mai Arr**	**145.41**	**340**	PKPbc			**PKPbc**	**11 31 12.2**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=341,slow=3.8,SNR=10									

WBNET 31 11:15:54.2, 50°.23N×12°.45E, h8km, MI1.2, 6C-5D, Germany

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
NKC	**Novy Kostel**	**0.00**	**359**	⇓P		Pg	11 15 55.8	+0.1
LBCW	**Luby**	**0.04**	**328**	⇓P		Pg	11 15 56.1	+0.1
LBCW				S		Sg	11 15 57.4	+0.2
VAC	**Vackov**	**0.05**	**278**	⇓P		Pg	11 15 56.1	+0.1
VAC				S		Sg	11 15 57.3	+0.1
KVC	**Kvetna**	**0.05**	**118**	⇑P		Pg	11 15 56.1	+0.1
KVC				S		Sg	11 15 57.1	-0.2
STCW	**Studenec**	**0.06**	**57**	⇑P		Pg	11 15 56.2	+0.1
STCW				S		Sg	11 15 57.4	0.0
SKC	**Skalna**	**0.08**	**223**	⇑P		Pg	11 15 56.4	0.0
SKC				S		Sg	11 15 57.8	0.0
POCW	**Potky**	**0.09**	**352**	⇓P		Pg	11 15 56.8	+0.2
KACW	**Kaceov**	**0.10**	**152**	⇑P		Pg	11 15 56.7	+0.1
KRCW	**Kraslice**	**0.12**	**27**	⇑P		Pg	11 15 57.0	+0.1
ZHC	**Zelena Hora**	**0.18**	**210**	⇑P		Pg	11 15 58.0	0.0
LACW	**Lazy**	**0.21**	**147**	⇓P		Pg	11 15 58.6	+0.1

*CLL **31** 11:15:56.7±0.3, 50°.23N×12°.44E, h8km±1km, ML2.1/9*
*LDG **31** 11:15:56.3±0.1, 50°.23N×12°.43E, h10km, Ml2.7/10, Error ellipse: s-maj=1.9km s-min=1.5km az=123.0*
*BGR **31** 11:15:56.1±0.2, 50°.22N×12°.44E, h10km, ML2.3/5, Error ellipse: s-maj=2.2km s-min=1.1km az=84.0*
*PRU **31** 11:15:56.3±0.0, 50°.24N×12°.50E, h3km, West Bohemia Swarm*

WBNET 31 11:15:56.3, 50°.23N×12°.45E, h9km, MI1.8, 5C-3D, Germany

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

CDF				*e*Sg		Sg	11 17 56.5	-3.0
	comp=Z,3.4nm,0.3s							
HINF	**Hinteralfeld**	**4.40**	**239**	*e*Pn		Pn	11 17 01.8	-1.5
HINF	**Hinteralfeld**	**4.40**	**239**	*e*Pg		Pg	11 17 17.5	-3.0
HINF				*e*Sn		Sn	11 17 49.4	-5.3
HINF				*e*Sg		Sg	11 18 13.9	-3.6
	comp=Z,4.0nm,0.3s							
HAU	**Haudompre**	**4.58**	**243**	*e*Pn		Pn	11 17 04.0	-1.8
HAU				*e*Sg		Sg	11 18 19.4	-3.9
	comp=Z,3.1nm,0.3s							
GIVF	**Givet**	**4.90**	**271**	*e*Pg		Pg	11 17 26.6	-3.6
GIVF				*e*Sg		Sg	11 18 29.8	-3.9
	comp=Z,2.2nm,0.2s							
SFTF	**Sexfontaines**	**5.26**	**250**	*e*Sg		Sg	11 18 40.7	-4.4
	comp=Z,4.6nm,0.4s							
BAIF	**Baives**	**5.30**	**271**	*e*Pn		Pn	11 17 14.0	-1.6
BAIF	**Baives**	**5.30**	**271**	*e*Pg		Pg	11 17 33.7	-4.1
BAIF				*e*Sg		Sg	11 18 41.9	-4.5
	comp=Z,1.6nm,0.4s							
CABF	**La Chapelle**	**5.57**	**232**	*e*Pg		Pg	11 17 39.1	-3.8
CABF				*e*Sg		Sg	11 18 50.8	-4.2
	comp=Z,0.5nm,0.2s							
LOR	**Lormes**	**6.41**	**246**	*e*Pn		Pn	11 17 28.8	-2.0
LOR	**Lormes**	**6.41**	**246**	*e*Pg		Pg	11 17 54.2	-4.7
	baz=65							
LOR				*e*Sn		Sn	11 18 37.0	-7.0
LOR				*e*Sg		Sg	11 19 16.4	-5.4
	comp=Z,1.6nm,0.4s,baz=65							
SSF	**Saint Saulge**	**6.72**	**245**	*e*Pg		Pg	11 18 00.3	-4.6
SSF				*e*Sg		Sg	11 19 26.1	-5.7
	comp=Z,1.4nm,0.4s							

BGR ***31*** *11:16:05.0±0.2,50°.22N×12°.45E,h10km,ML2.5/5,Error ellipse: s-maj=2.2km s-min=1.1km az=96.0*
WBNET ***31*** *11:16:05.2,50°.23N×12°.44E,h9km,Ml2.3*
CLL ***31*** *11:16:05.6±0.3,50°.23N×12°.44E,h8km±1km,ML2.4/9*
PRU ***31*** *11:16:05.5±0.0,50°.25N×12°.52E,h0km,M2.5,West Bohemia Swarm*
ISC 31 11:16:05.1±0.9,**50°.22N**±0°.02×**12°.47E**±0°.02,**h11**km±3km,
n47,σ0°**78**/79,**4C-4D**,**Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NKC	**Novy Kostel**	**0.02**	**317**	*i* Pg	**Pg**	**11 16 06.9**	**-0.2**
NKC				*i* Sg	**Sg**	**11 16 08.1**	**-0.4**
NKC	**Novy Kostel**	**0.02**	**317**	*e*PG	**Pg**	**11 16 06.5**	**-0.6**
NKC				*e*SG	**Sg**	**11 16 07.8**	**-0.7**
	comp=Z,2µm,0.2s						
NKC	**Novy Kostel**	**0.02**	**317**	↑P	**Pg**	**11 16 07.0**	**-0.2**
NKC				S	**Sg**	**11 16 08.1**	**-0.4**
KVC	**Kvetna**	**0.03**	**113**	↑P	**Pg**	**11 16 07.1**	**-0.1**
KVC				S	**Sg**	**11 16 08.3**	**-0.3**
STCW	**Studenec**	**0.05**	**38**	P	**Pg**	**11 16 07.2**	**-0.1**
STCW				S	**Sg**	**11 16 08.5**	**-0.4**
LBCW	**Luby**	**0.06**	**322**	↓P	**Pg**	**11 16 07.2**	**-0.2**
LBCW				S	**Sg**	**11 16 08.6**	**-0.5**
VAC	**Vackov**	**0.06**	**286**	↓P	**Pg**	**11 16 07.2**	**-0.2**
VAC				S	**Sg**	**11 16 08.4**	**-0.7**
KACW	**Kaceov**	**0.08**	**158**	↓P	**Pg**	**11 16 07.7**	**+0.1**
KACW				S	**Sg**	**11 16 09.4**	**0.0**
SKC	**Skalna**	**0.09**	**235**	↓P	**Pg**	**11 16 07.5**	**-0.1**
SKC				S	**Sg**	**11 16 08.9**	**-0.5**
WERN	**Wernitzgruen**	**0.09**	**319**	*i* Pg	**Pg**	**11 16 07.6**	**-0.2**
WERN				*i* Sg	**Sg**	**11 16 09.1**	**-0.6**
	3µm,0.2s						
ROHR	**Rohrbach**	**0.10**	**279**	*i* Pg	**Pg**	**11 16 07.5**	**-0.3**
ROHR				*i* Sg	**Sg**	**11 16 09.1**	**-0.7**
	2µm,0.2s						
POCW	**Potky**	**0.11**	**345**	P	**Pg**	**11 16 07.9**	**-0.1**
POCW				S	**Sg**	**11 16 09.6**	**-0.4**
KRCW	**Kraslice**	**0.12**	**19**	↑P	**Pg**	**11 16 08.1**	**-0.1**
KRCW				S	**Sg**	**11 16 10.0**	**-0.3**
GUNZ	**Gunzen**	**0.17**	**329**	*i* Pg	**Pg**	**11 16 08.8**	**-0.1**
GUNZ				*i* Sg	**Sg**	**11 16 11.0**	**-0.5**
	691nm,0.2s						
ZHC	**Zelena Hora**	**0.18**	**215**	↑P	**Pg**	**11 16 09.0**	**0.0**
ZHC				S	**Sg**	**11 16 11.5**	**-0.2**
LACW	**Lazy**	**0.20**	**149**	P	**Pg**	**11 16 09.6**	**+0.3**
LACW				S	**Sg**	**11 16 12.6**	**+0.4**
TANN	**Tannenbergstha**	**0.20**	**359**	*i* Pg	**Pg**	**11 16 09.2**	**-0.2**
TANN				*i* Sg	**Sg**	**11 16 11.8**	**-0.5**
	735nm,0.3s						
MULD	**Muldenberg**	**0.20**	**348**	*i* Pg	**Pg**	**11 16 09.2**	**-0.2**
MULD				*i* Sg	**Sg**	**11 16 11.8**	**-0.5**
	725nm,0.2s						
VIEL	**Selb-Vielitz**	**0.24**	**262**	*i* Pg	**Pg**	**11 16 09.8**	**-0.3**
VIEL				*i* Sg	**Sg**	**11 16 12.8**	**-0.6**
TRIB	**Obertriebel**	**0.25**	**302**	*i* Pg	**Pg**	**11 16 10.0**	**-0.3**
TRIB				*i* Sg	**Sg**	**11 16 13.2**	**-0.6**
	136nm,0.1s						
MANZ	**Manzenberg**	**0.33**	**225**	*e*Pg	**Pg**	**11 16 11.5**	**-0.2**
MANZ				*e*Sg	**Sg**	**11 16 15.9**	**-0.3**
PLN	**Plauen**	**0.33**	**323**	*i* Pg	**Pg**	**11 16 11.6**	**-0.2**
PLN				*i* Sg	**Sg**	**11 16 15.8**	**-0.5**
	289nm,0.2s						
SCHF	**Schoenfels**	**0.46**	**355**	*i* Pg	**Pg**	**11 16 14.0**	**-0.2**
SCHF				*i* Sg	**Sg**	**11 16 20.1**	**-0.3**
	513nm,0.2s						
ROTZ	**Rotzenmuhle**	**0.48**	**201**	*e*Sg	**Sg**	**11 16 20.9**	**0.0**
GRZ1	**Mausoleum Wald**	**0.50**	**341**	*i* Pg	**Pg**	**11 16 14.6**	**-0.3**
GRZ1				*i* Sg	**Sg**	**11 16 20.9**	**-0.7**
	153nm,0.2s						
MOX	**Moxa**	**0.69**	**308**	*e*Pg	**Pg**	**11 16 18.1**	**-0.5**
MOX				*e*Sg	**Sg**	**11 16 27.3**	**-0.3**
MOX	**Moxa**	**0.69**	**308**	*e*Sg	**Pg**	**11 16 18.0**	**-0.5**
FBE	**Freiberg**	**0.90**	**38**	*e*Pg	**Pg**	**11 16 22.5**	**0.0**
FBE				*e*Sg	**Sg**	**11 16 34.1**	**-0.2**
GRF	**Grafenberg Arr**	**0.96**	**237**	*e*Pg	**Pg**	**11 16 23.4**	**-0.2**
GRF				*e*Sg	**Sg**	**11 16 35.6**	**-0.6**
WET	**Wettzell**	**1.11**	**166**	*e*Sg	**Sg**	**11 16 40.9**	**+0.1**
PBCC	**Pribram**	**1.12**	**118**	*e*SG	**Sg**	**11 16 40.3**	**-0.9**
CLL	**Collm**	**1.14**	**17**	*i* Pg	**Pn**	**11 16 27.6**	**+0.5**
CLL				*i*		11 16 29.5	
CLL				*i*		11 16 30.8	
CLL				*i* Sg	**Sb**	**11 16 42.8**	**+1.0**
	comp=Z,36nm,0.8s						
BRG	**Berggiesshubel**	**1.15**	**55**	PG	**Pg**	**11 16 27.0**	**-0.2**
BRG				SG	**Sg**	**11 16 41.9**	**-0.2**
	comp=Z,66nm,0.2s						
BRG	**Berggiesshubel**	**1.15**	**55**	*e*Pn	**Pg**	**11 16 27.1**	**0.0**
BRG				*e*Sg	**Sg**	**11 16 41.4**	**-0.6**
PRA	**Prague**	**1.27**	**96**	*e*SG	**Sb**	**11 16 45.5**	**0.0**
	comp=Z,34nm,1.2s						
KHC	**Kasperske Hory**	**1.30**	**146**	*e*PG	**Pn**	**11 16 29.1**	**-0.3**
KHC				*e*SG	**Sb**	**11 16 46.3**	**-0.2**
	comp=Z,28nm,0.2s						
PRU	**Pruhonice**	**1.35**	**99**	*e*PG	**Pn**	**11 16 30.0**	**0.0**
PRU				*e*SG	**Sb**	**11 16 47.8**	**0.0**
	comp=Z,26nm,0.6s						
GOPC	**GO Pecny, Ondr**	**1.52**	**101**	*e*SG	**Sb**	**11 16 53.4**	**+0.6**
	comp=Z,16nm,0.4s						
GEC2	**GERESS Array S**	**1.59**	**149**	*e*Sg	**Sg**	**11 16 55.7**	**-0.5**
UPC	**Upice**	**2.29**	**81**	*e*SG	**Sb**	**11 17 16.8**	**+2.1**
	comp=Z,24nm,1.0s						
CHVC	**Chvalec**	**2.32**	**79**	*e*SG	**Sg**	**11 17 18.5**	**-1.2**
	comp=Z,8.6nm,0.8s						
OSTC	**Ostas**	**2.42**	**81**	*e*SG	**Sb**	**11 17 20.8**	**+2.2**
	comp=Z,11nm,0.8s						
DPC	**Dobruska-Polom**	**2.48**	**85**	*e*SG	**Sb**	**11 17 22.6**	**+2.5**
	comp=Z,10.0nm,0.4s						
KRLC	**Kraliky**	**2.78**	**91**	*e*SG	**Sg**	**11 17 31.9**	**-2.4**
	comp=Z,6.3nm,0.3s						
KRUC	**Moravsky**	**2.80**	**113**	*e*SG	**Sg**	**11 17 33.1**	**-2.0**
VRAC	**Vranov**	**2.83**	**107**	*e*SG	**Sg**	**11 17 34.2**	**-1.6**
MORC	**Moravsky Berou**	**3.30**	**96**	*e*SG	**Sg**	**11 17 48.9**	**-2.2**

NEIC ***31*** *11:41:38.6±2.0,9°.44N±0°.08×126°.6E±0°.1,h10km±1km, mb4.5/42,Error ellipse: s-maj=17.9km s-min=13.3km az=93.0*
MAN ***31*** *11:41:38.7,9°.45N×126°.93E,h19km,mb4.8,ML3.7,MS3.6*
DJA ***31*** *11:41:41.7±2.7,10°N±7°×12°7'E±°,h22km±19km,M4.7/13, mB5.4/3,mb4.7/13,Mw(mB)4.8/3,Mwp5.8/1*
IDC ***31*** *11:41:45.8±3.1,9°.31N×126°.60E,h68km±30km,mb3.9/21, mb1 4.0/23,mb1mx3.9/49,mbtmp4.2/23,ML4.6/2,MS3.3/7, Ms1 3.4/7,ms1mx3.1/58,Error ellipse: s-maj=23.0km s-min=11.6km az=84.0*
ISC 31 11:41:44.6±1.2,**9°.43N**±0°.04×**126°.67E**±0°.07,**h58**km±11km,
n103,σ1§**67**/98,**mb4.3**/40,**6C-1D**,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.22**	**287**	↑*e*P	**Pn**	**11 42 03.4**	**-2.1**
SCPH				*e*S	**Sn**	**11 42 20.8**	**-0.2**
BIPH	**Bislig**	**1.28**	**194**	↑*e*P	Pn	11 42 11.7	+5.4
BIPH				*e*S	**Sn**	**11 42 26.5**	**+4.0**
MSLP	**Maasin**	**1.92**	**291**	*e*P	**Pn**	**11 42 14.5**	**-0.5**
MSLP				*e*S	**Sn**	**11 42 42.6**	**+4.6**
BUKP	**Musuan**	**2.22**	**226**	*e*P	**Pn**	**11 42 17.3**	**-1.8**
BUKP				*e*S	**Sn**	**11 42 48.2**	**+2.8**
DAV	**Davao City (W)**	**2.58**	**205**	P	**Pn**	**11 42 24.1**	**+0.1**
	42nm,0.3s,baz=66,slow=5.0,SNR=1.6						
DAV				LR	LR	11 43 37.2	
	comp=Z,1µm,21.9s,baz=42,slow=46						
DAV	**Davao City (W)**	**2.58**	**205**		**Pn**	**11 42 22.3**	**-1.7**
DMPH	**Davao City--Mi**	**2.60**	**206**	↑*e*P	**Pn**	**11 42 26.2**	**+1.9**
DMPH				*e*S	**Sn**	**11 42 53.6**	**-1.2**
LLP	**Lapu-Lapu**	**2.81**	**288**	*e*P	**Pn**	**11 42 27.6**	**+0.5**
LLP				*e*S	**Sn**	**11 43 03.0**	**+3.2**
KCP	**Kidapawan**	**2.87**	**213**	↑*e*P	**Pn**	**11 42 26.9**	**-1.2**
KCP				*i* S	Sn	11 42 50.6	-11
CTBH	**Cotabato--PC H**	**3.25**	**228**	↑*i* P	**Pn**	**11 42 31.7**	**-1.5**
DDMP	**Don Marcelino,**	**3.44**	**196**	*e*P	**Pn**	**11 42 33.5**	**-2.3**
DDMP				*e*S	**Sn**	**11 43 20.6**	**+5.2**
CNP	**Catarman**	**3.64**	**327**	*e*P	**Pn**	**11 42 37.4**	**-1.2**
CNP				*e*S	**Sn**	**11 43 21.7**	**+1.5**
RCP	**Roxas**	**4.40**	**299**	↑*e*P	**Pn**	**11 42 49.0**	**0.0**
JAP	**San Jose, Anti**	**4.83**	**286**	↓*e*P	**Pn**	**11 42 58.3**	**+3.4**
TGY	**Tagaytay City**	**7.28**	**310**	LR	LR	11 46 32.7	
	comp=Z,339nm,19.8s,baz=134,slow=39						
TNTI	**Ternate**	**8.63**	**175**		**Pn**	**11 43 45.7**	**-1.2**
LBMI	**Labuha**	**10.04**	**175**	P	**Pn**	**11 44 07.4**	**+1.2**
	34nm,0.8s						
MRSI	**Marisa**	**10.07**	**208**	P	**Pn**	**11 44 05.3**	**-1.3**
	1µm28nm,1.0s						
LUWI	**Luwuk**	**11.11**	**201**	Pn	**Pn**	**11 44 18.5**	**-2.3**
SIJI	**Sorong**	**11.21**	**156**	LR	LR	11 49 21.2	
	comp=Z,69nm,19.6s,baz=354,slow=41						
FAKI	**Fak Fak**	**13.47**	**155**	P		11 45 07.7	+7.1
FAKI	**Fak Fak**	**13.47**	**155**	Pn	**Pn**	**11 44 50.7**	**-2.4**
TTSI	**Tana Toraja**	**14.15**	**209**	P	**Pn**	**11 45 02.5**	**+0.3**
	725nm19nm,0.8s						
YULB	**Yu-li**	**14.80**	**340**		**P**	**11 45 13.6**	**-1.8**
BNSI	**Bone**	**15.22**	**206**	P	**P**	**11 45 19.8**	**-0.2**
	52nm,1.0s						
KAPI	**Kappang**	**15.92**	**206**	LR	LR	11 51 57.0	
	comp=Z,123nm,18.7s,baz=56,slow=39						
SBUM	**Sibu**	**15.95**	**245**		**Pn**	**11 45 24.1**	**-1.4**
SMPI	**Sarmi**	**16.51**	**133**	P	**P**	**11 45 33.6**	**-0.7**
	12nm,1.5s						
DLV	**T Lat**	**18.04**	**280**		**P**	**11 45 49.9**	**-1.6**
KSM	**Kuching**	**18.09**	**245**	P	**Pn**	**11 45 53.3**	**+1.2**
JAY	**Jayapura**	**18.34**	**130**	LR	LR	11 54 22.3	
	comp=Z,116nm,18.0s,baz=330,slow=41						
SOEI	**Soe**	**19.21**	**187**	P	**Pn**	**11 46 08.3**	**+2.7**
	48nm,0.9s						
SOEI	**Soe**	**19.21**	**187**	P	**P**	**11 46 03.8**	**-0.4**
SOEI				IAmb	IAmb	11 46 20.5	
	comp=Z,21nm,0.8s						
BATI	**Baumata**	**19.74**	**189**	P	**P**	**11 46 10.2**	**+0.4**
	comp=Z,4.8nm,0.3s,baz=350,slow=1.5,SNR=6.9						
BATI	**Baumata**	**19.74**	**189**	P	**Pn**	**11 46 14.2**	**+2.4**
	comp=Z,37nm,0.9s						
MTN	**Manton Dam**	**22.57**	**169**	P	**P**	**11 46 38.6**	**-1.7**
MTN				IAmb	IAmb	11 46 57.7	
	comp=Z,11nm,0.8s						
JNU	**Nakatsue**	**23.89**	**9**	P	**P**	**11 46 54.6**	**+1.5**
	comp=Z,11nm,1.0s,baz=223,slow=20,SNR=4.3						
JNU	**Nakatsue**	**23.89**	**9**	P	**P**	**11 46 53.0**	**-0.1**
JNU				IAmb	IAmb	11 47 02.1	
	comp=Z,11nm,1.0s						
SLVN	**Son La**	**24.89**	**301**	P	**P**	**11 47 01.5**	**-0.9**
KNRA	**Kununurra**	**25.03**	**175**	P	**P**	**11 47 02.6**	**-0.9**
IPM	**Ipoh**	**25.92**	**261**	P	**P**	**11 47 10.3**	**-1.5**
IPM				IAmb	IAmb	11 47 14.0	
	comp=Z,9.9nm,0.9s						
ENH	**Enshi**	**26.22**	**325**	P	**P**	**11 47 14.4**	**+0.1**
ENH				IAmb	IAmb	11 47 25.0	
	comp=Z,5.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**27.38**	**182**	P	**P**	**11 47 23.5**	**-1.1**
	comp=Z,5.9nm,0.8s,baz=1.4,slow=9.0,SNR=9.5						
FITZ	**Fitzroy Crossi**	**27.38**	**182**	P	**P**	**11 47 24.0**	**-0.6**
FITZ				IAmb	IAmb	11 47 41.0	
	comp=Z,14nm,1.1s						
KMI	**Kunming**	**27.59**	**307**	P	**P**	**11 47 32.5**	**+5.6**
KMI				pP	pP	11 47 39.5	-1.0
KMI				pmax	pmax		
	comp=Z,15nm,0.7s						
KMI				pmax	pmax		
	comp=Z,79nm,5.8s						
KSRS	**Korea Array**	**27.92**	**2**	P	**P**	**11 47 30.7**	**+1.3**
	comp=Z,1.6nm,0.6s,baz=184,slow=10,SNR=12						
CMAR	**Chiang Mai Arr**	**28.33**	**291**	P	**P**	**11 47 33.6**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=109,slow=8.1,SNR=4.3						
CMAR				LR	LR	11 59 19.1	
	comp=Z,44nm,18.5s,baz=140,slow=37						
PSI	**Prapat**	**28.35**	**258**	P	**P**	**11 47 34.1**	**+0.4**
	comp=Z,5.0nm,0.8s,baz=357,slow=1.4,SNR=4.1						
RPSI	**Rantau Prapat**	**28.38**	**258**	P	**P**	**11 47 34.1**	**+0.3**
RPSI	**Rantau Prapat**	**28.38**	**258**	P	**P**	**11 47 33.0**	**-0.8**
RPSI				IAmb	IAmb	11 47 48.8	
	comp=Z,15nm,1.3s						
CHTO	**Chiang Mai**	**28.42**	**292**	P	**P**	**11 47 31.9**	**-2.2**
MJAR	**Matsushiro Arr**	**28.95**	**19**	P	**P**	**11 47 38.4**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=202,slow=9.4,SNR=5.3						
XAN	**Xi'an**	**29.42**	**329**	P	**P**	**11 47 42.4**	**-0.5**
XAN				IAmb	IAmb	11 47 48.7	
	comp=Z,4.3nm,0.6s						
WB0	**Warramunga Arr**	**30.00**	**165**	P	**P**	**11 47 46.2**	**-1.8**
WB0				IAmb	IAmb	11 48 01.7	
	comp=Z,3.5nm,0.7s						
GSI	**Gunungsitoli**	**30.05**	**256**	P	**P**	**11 47 46.1**	**-2.5**
WRA	**Warramunga Arr**	**30.15**	**166**	P	**P**	**11 47 47.5**	**-1.9**
	comp=Z,1.6nm,1.0s,baz=346,slow=9.4,SNR=7.1						
WR0	**Warramunga Arr**	**30.22**	**165**	P	**P**	**11 47 49.4**	**-0.5**
WR0				IAmb	IAmb	11 48 05.9	
	comp=Z,8.9nm,1.3s						
BJT	**Baijiatuan**	**31.86**	**345**	P	**P**	**11 48 04.6**	**+0.3**
AS31	**Alice Springs**	**33.65**	**168**	P	**P**	**11 48 19.1**	**-1.0**
ASAR	**Alice Springs**	**33.65**	**168**	P	**P**	**11 48 18.9**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=0.8,slow=8.5,SNR=12						
USRK	**Ussuriysk Ar.**	**34.94**	**7**	P	**P**	**11 48 32.7**	**+1.7**
	comp=Z,1.6nm,0.6s,baz=183,slow=12,SNR=6.1						
SHL	**Shillong**	**36.70**	**300**	P	**P**	**11 48 45.4**	**-1.2**
HNR	**Hoinara**	**38.06**	**119**	LR	LR	12 01 35.5	
	comp=Z,47nm,21.5s,baz=290,slow=31						
H11S3	**WAKE ISLAND Hy**	**39.79**	**72**	T	T	12 32 10.3	
	baz=262,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	**39.80**	**72**	T	T	12 32 15.5	
	baz=262,slow=75,SNR=14						
H11S2	**WAKE ISLAND Hy**	**39.80**	**72**	T	T	12 32 11.7	
	baz=262,slow=75,SNR=16						
KLR	**Kul'dur**	**39.90**	**5**	P	**P**	**11 49 14.7**	**+1.8**
	comp=Z,1.5nm,0.7s,baz=177,slow=4.4,SNR=6.5						
H11N1	**WAKE ISLAND Hy**	**40.15**	**71**	T	T	12 32 40.6	
	baz=265,slow=74,SNR=35						
H11N2	**WAKE ISLAND Hy**	**40.16**	**71**	T	T	12 32 40.6	
	baz=265,slow=74,SNR=20						
H11N3	**WAKE ISLAND Hy**	**40.17**	**71**	T	T	12 32 43.8	
	baz=265,slow=74,SNR=32						
ULN	**Ulaanbaatar**	**41.74**	**340**	P	**P**	**11 49 28.9**	**+0.7**
ULN				IAmb	IAmb	11 49 29.8	
	comp=Z,3.9nm,0.5s						
SONM	**Songino Array**	**41.94**	**340**	P	**P**	**11 49 30.1**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=153,slow=8.4,SNR=5.0						
BBOO	**Buckleboo**	**42.95**	**168**	P	**P**	**11 49 37.6**	**-0.5**
BBOO				IAmb	IAmb	11 49 42.7	
	comp=Z,22nm,1.2s						
NWAO	**Narrogin (SRO)**	**43.07**	**192**	P	**P**	**11 49 38.7**	**-0.3**
NWAO				IAmb	IAmb	11 49 42.1	
	comp=Z,21nm,1.3s						
STKA	**Stephens Creek**	**43.49**	**161**	P	**P**	**11 49 41.4**	**-1.0**
	comp=Z,1.3nm,0.7s,baz=342,slow=12,SNR=3.0						
STKA	**Stephens Creek**	**43.49**	**161**	P	**P**	**11 49 42.0**	**-0.4**
TLY	**Talaya**	**46.15**	**340**	P	**P**	**11 50 03.8**	**+0.4**
	comp=Z,2.1nm,0.5s,baz=44,slow=1.6,SNR=5.9						
TLY	**Talaya**	**46.15**	**340**	P	**P**	**11 50 03.8**	**+0.4**
TLY				IAmb	IAmb	11 50 06.5	
	comp=Z,2.9nm,0.8s						
MK31	**Makanchi Array**	**52.93**	**323**	P	**P**	**11 50 55.2**	**+0.1**
MK31				IAmb	IAmb	11 50 56.4	
	comp=Z,3.3nm,0.7s						
MKAR	**Makanchi Array**	**52.93**	**323**	P	**P**	**11 50 55.0**	**-0.2**
	comp=Z,3.9nm,0.7s,baz=122,slow=7.9,SNR=42						
MAKZ	**Makanchi**	**53.12**	**323**	P	**P**	**11 50 56.3**	**-0.2**
MAKZ				IAmb	IAmb	11 50 57.4	
	comp=Z,3.3nm,0.7s						
TARG	**Taragay, Kyrgy**	**53.57**	**316**	P	**P**	**11 50 59.3**	**-1.1**
NIL	**Nilore**	**54.53**	**305**	P	**P**	**11 51 06.6**	**-0.5**
ZAA0	**Zalesovo Array**	**55.55**	**331**	P	**P**	**11 51 13.3**	**-0.7**
ZALV	**Zalesovo Beam**	**55.55**	**331**	P	**P**	**11 51 13.3**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=126,slow=7.1,SNR=6.5						
AAK	**Ala-Archa**	**56.20**	**315**	P	**P**	**11 51 19.2**	**+0.2**
KURK	**Kurchatov**	**56.98**	**326**	P	**P**	**11 51 24.1**	**-0.1**
KURK				IAmb	IAmb	11 51 25.0	
	comp=Z,6.5nm,0.8s						
GAR	**Garm**	**58.13**	**310**	P	**P**	**11 51 32.1**	**-0.6**
KBL	**Kabul**	**58.13**	**305**	P	**P**	**11 51 31.4**	**-1.5**
KBL				IAmb	IAmb	11 51 34.6	
	comp=Z,4.3nm,0.8s						
CHGR	**Chuyangaron**	**58.92**	**310**	P	**P**	**11 51 37.1**	**-1.1**
KK31	**Karatay Array**	**59.12**	**315**	P	**P**	**11 51 39.0**	**-0.4**
KK31				IAmb	IAmb	11 51 39.8	
	comp=Z,4.1nm,0.8s						
TIXI	**Tiksi**	**62.18**	**1**	P	**P**	**11 52 00.6**	**+0.9**
BRVK	**Borovoye**	**62.65**	**326**	P	**P**	**11 52 03.0**	**-0.2**
NRIK	**Noril'sk**	**64.92**	**346**	P	**P**	**11 52 19.0**	**+1.2**
	comp=Z,5.6nm,0.6s,baz=128,slow=4.8,SNR=9.7						
ARU	**Arti**	**70.14**	**327**	P	**P**	**11 52 50.0**	**-0.9**
BPAW	**Bear Paw Mtn.**	**78.23**	**26**	P	**P**	**11 53 39.9**	**+1.9**
BPAW				IAmb	IAmb	11 53 49.5	
	comp=Z,7.5nm,1.2s						
RAYN	**Ar Rayn**	**78.25**	**292**	P	**P**	**11 53 37.8**	**-1.2**
RAYN				IAmb	IAmb	11 53 39.2	
	comp=Z,5.1nm,0.7s						
ILAR	**Eielson Array**	**80.02**	**26**	P	**P**	**11 53 49.5**	**+1.8**
	comp=Z,0.5nm,0.7s,baz=228,slow=5.4,SNR=8.1						
ARCES	**ARCESS Array B**	**85.11**	**340**	P	**P**	**11 54 15.0**	**+0.9**
	comp=Z,4.3nm,0.6s,baz=79,slow=6.4,SNR=21						
FIA1	**FINESS Array S**	**86.81**	**332**	P	**P**	**11 54 23.4**	**+0.8**
FIA1				IAmb	IAmb	11 54 30.1	
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**86.81**	**332**	P	**P**	**11 54 22.8**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=81,slow=12,SNR=9.3						
NOA	**NORSAR Array B**	**93.68**	**334**	P	**P**	**11 54 54.0**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=64,slow=4.6,SNR=3.9						
YKA	**Yellowknife Ar**	**94.36**	**24**	P	**P**	**11 54 59.8**	**+1.9**
	comp=Z,0.6nm,0.6s,baz=295,slow=4.2,SNR=11						

WBNET ***31*** *11:46:56.7,50°.23N×12°.44E,h8km,Ml2.4*
LDG ***31*** *11:46:56.0±1.6,50°.32N×12°.97E,h10km,Ml3.0/6,Error ellipse: s-maj=43.1km s-min=31.3km az=158.0*
BGR ***31*** *11:46:56.5±0.2,50°.23N×12°.45E,h10km±1km,ML2.3/5, Error ellipse: s-maj=2.2km s-min=1.1km az=101.0*
PRU ***31*** *11:46:57.0±0.0,50°.23N×12°.52E,h0km,West Bohemia Swarm*
CLL ***31*** *11:46:57.1±0.3,50°.23N×12°.44E,h7km±1km,ML2.2/9*
ISC 31 11:46:57.1±0.8,**50°.23N**±0°.02×**12°.50E**±0°.02,**h9**km±3km,
n61,σ1§**08**/91,**4C-2D**,**Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KVC	**Kvetna**	**0.02**	**162**	P	**Pg**	**11 46 58.5**	**-0.2**
KVC				S	**Sg**	**11 46 59.7**	**-0.1**
STCW	**Studenec**	**0.03**	**18**	P	**Pg**	**11 46 58.7**	**-0.1**
STCW				S	**Sg**	**11 46 59.9**	**-0.1**
NKC	**Novy Kostel**	**0.04**	**279**	*i* Pg	**Pg**	**11 46 58.4**	**-0.4**
NKC				*i* Sg	**Sg**	**11 46 59.4**	**-0.6**
NKC	**Novy Kostel**	**0.04**	**279**	*e*PG	**Pg**	**11 46 58.0**	**-0.8**
NKC				*e*SG	**Sg**	**11 46

DPC	**Dobruska-Polom**	**2.45**	**86**	*e*SG		**Sb**	**11 48 13.9**	**+2.2**
	comp=Z,7.9nm,0.5s								
KRLC	**Kraliky**	**2.76**	**92**	*e*SG		**Sg**	**11 48 24.3**	**-1.2**
	comp=Z,7.9nm,0.5s								
KRUC	**Moravsky**	**2.79**	**113**	*e*SG		**Sg**	**11 48 24.9**	**-1.6**
VRAC	**Vranov**	**2.81**	**108**	*e*SG		**Sg**	**11 48 26.1**	**-1.0**
MORC	**Moravsky Berou**	**3.28**	**96**	*e*SG		**Sg**	**11 48 40.4**	**-2.0**
OKC	**Ostrava-Krasne**	**3.66**	**94**	*e*SG		**Sg**	**11 48 52.2**	**-2.3**
	comp=Z,5.2nm,0.5s								
CDF	**Champ du Feu**	**3.87**	**244**	*e*Pn	Pg		11 48 27.1	+16	
CDF	**Champ du Feu**	**3.87**	**244**	*e*Pg	Pg		11 48 39.5	+28	
CDF				eSg	Sg		11 49 30.2	+29	
	comp=Z,6.3nm,0.3s								
HINF	**Hinteralfeld**	**4.43**	**239**	*e*Pn	Pg		11 48 34.3	+12	
HINF	**Hinteralfeld**	**4.43**	**239**	*e*Pg	Pg		11 48 50.3	+28	
HINF				eSn	**Sg**		**11 49 22.9**	**+3.6**	
HINF				eSg	Sb		11 49 47.7	+39	
	comp=Z,6.1nm,0.3s								
HAU	**Haudompre**	**4.61**	**244**	*e*Pn	Pg		11 48 36.5	+11	
HAU	**Haudompre**	**4.61**	**244**	*e*Pg	Pg		11 48 55.3	+30	
HAU				eSn	**Sg**		**11 49 27.4**	**+2.3**	
HAU				eSg	Sb		11 49 53.9	+40	
	comp=Z,7.5nm,0.3s								
PAGF	**Fort de Pagny**	**4.73**	**252**	eSg	Sg		11 49 54.6	+26	
	comp=Z,6.9nm,0.5s								
CABF	**La Chapelle**	**5.60**	**232**	*e*Pg	Pg		11 49 13.8	+30	
CABF				eSg	Sg		11 50 22.4	+26	
LOR	**Lormes**	**6.44**	**246**	*e*Pg	Pg		11 49 26.2	+26	
LOR				eSg	Sg		11 50 49.4	+26	
	comp=Z,2.8nm,0.5s								
SSF	**Saint Saulge**	**6.75**	**245**	*e*Pn	**Pg**		**11 49 06.5**	**+0.2**	
SSF	**Saint Saulge**	**6.75**	**245**	*e*Pg	Pg		11 49 33.1	+27	
SSF				eSn	**Sb**		**11 50 18.3**	**+3.0**	

ISK 31 11:51:32.4, 40.01N×28.07E, h18km, ML2.2/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GONE	**Gonen-Balikesi**	**0.30**	**277**	PG	Pb	11 51 39.3	+0.1
GONE				SG	Sb	11 51 44.1	+0.4
EDC	**Edincik**	**0.37**	**334**	PG	Pb	11 51 40.8	+0.3
EDC				SG	Sb	11 51 46.4	+0.4
BALB	**Balikesir**	**0.40**	**202**	PG	Pb	11 51 40.9	-0.1
BALB				SG	Sb	11 51 47.3	+0.5
MRMT	**Marmara Adasi**	**0.69**	**328**	PG	Pg	11 51 46.6	+0.5
MRMT				SG	Sn	11 51 57.4	-0.2
ARMT	**Armutlu**	**0.82**	**47**	PG	Pn	11 51 48.8	-0.2
RKY	**Sarkoy-Tekirda**	**0.96**	**315**	PG	Pn	11 51 50.9	-0.1
LPK	**Lapseki**	**1.07**	**290**	PG	Pg	11 51 52.9	-0.2
YLV	**Yalova**	**1.14**	**60**	PN	Pn	11 51 53.3	-0.2
TVSB	**Tavsanli**	**1.21**	**117**	PN	Pn	11 51 54.5	0.0
GELI	**Tayfur-Gelibol**	**1.28**	**288**	PN	Pb	11 51 55.7	-0.3
DKL	**Dikili**	**1.30**	**224**	PN	Pb	11 51 56.1	-0.2
CAVI	**Cavuskoy**	**1.37**	**81**	PN	Pb	11 51 57.3	-0.2

*ATH **31** 11:52:04.0, 40.02N×24.32E, h31km±1km, ML2.6/8, Error ellipse: s-maj=1.5km s-min=0.9km az=331.0*
*THE **31** 11:52:04.5, 40.02N×24.33E, h10km±1km, ML2.4/11, Error ellipse: s-maj=1.8km s-min=0.7km az=348.0*

ISC 31 11:52:04.7±1.3, 40.03N±0.02×24.34E±0.02, h21km±4km, n43, σ0.75/69, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.41**	**319**	P	**Pb**	**11 52 13.0**	**-0.1**
OUR				S	**Sb**	**11 52 18.9**	**+0.1**
	722nm,0.2s						
OUR	**Ouranopolis**	**0.41**	**319**	P	**Pb**	**11 52 13.0**	**-0.1**
OUR				S	**Sb**	**11 52 19.2**	**+0.3**
OUR				AML	AML	11 52 23.6	
	comp=N,1475μm,0.2s						
OUR				AML	AML	11 52 23.7	
	comp=E,1555μm,0.2s						
PAIG	**Paliouri**	**0.51**	**259**	P	**Pb**	**11 52 14.9**	**-0.1**
PAIG				S	**Sb**	**11 52 22.2**	**+0.1**
	comp=E,418nm,0.2s						
PAIG	**Paliouri**	**0.51**	**259**	P	**Pb**	**11 52 14.9**	**-0.1**
PAIG				S	**Sb**	**11 52 22.2**	**+0.1**
PAIG				AML	AML	11 52 25.4	
	comp=N,765μm,0.2s						
PAIG				AML	AML	11 52 25.5	
	comp=E,918μm,0.2s						
THAS	**Thassos island**	**0.65**	**27**	P	**Pn**	**11 52 18.0**	**-0.6**
THAS				S	**Sn**	**11 52 27.1**	**-1.1**
	comp=E,2μm,0.2s						
THAS	**Thassos island**	**0.65**	**27**	P	**Pn**	**11 52 18.2**	**-0.4**
THAS				S	**Sn**	**11 52 27.9**	**-0.3**
THAS				AML	AML	11 52 28.0	
	comp=E,4271μm,0.3s						
THAS				AML	AML	11 52 28.2	
	comp=N,3943μm,0.2s						
LIA	**Limnos Island**	**0.66**	**101**	P	**Pn**	**11 52 18.1**	**-0.7**
LIA				S	**Sb**	**11 52 26.2**	**-0.2**
	comp=N,705nm,0.3s						
LIA	**Limnos Island**	**0.66**	**101**	P	**Pn**	**11 52 18.2**	**-0.6**
LIA				S	**Sb**	**11 52 26.9**	**+0.5**
LIA				AML	AML	11 52 28.3	
	comp=E,994μm,0.3s						
LIA				AML	AML	11 52 28.8	
	comp=N,1818μm,0.3s						
PLG	**Polygyros**	**0.77**	**297**	P	**Pn**	**11 52 19.5**	**-0.8**
PLG				S	**Sb**	**11 52 29.1**	**-0.2**
	comp=N,335nm,0.2s						
PLG	**Polygyros**	**0.77**	**297**	P	**Pn**	**11 52 19.4**	**-0.8**
PLG				S	**Sb**	**11 52 29.3**	**0.0**
PLG				AML	AML	11 52 32.2	
	comp=N,739μm,0.3s						
PLG				AML	AML	11 52 33.0	
	comp=E,571μm,0.2s						
KVLA	**Kavala**	**0.91**	**2**	P	**Pn**	**11 52 21.9**	**-0.3**
KVLA				S	**Sn**	**11 52 34.4**	**-0.2**
KVLA				AML	AML	11 52 35.9	
	comp=E,2406μm,0.3s						
KVLA				AML	AML	11 52 36.3	
	comp=N,1172μm,0.2s						
AOS	**Alonnisos**	**0.93**	**203**	P	**Pb**	**11 52 21.7**	**-0.3**
AOS				S	**Sn**	**11 52 34.9**	**-0.1**
	comp=N,215nm,0.4s						
AOS	**Alonnisos**	**0.93**	**203**	P	**Pn**	**11 52 22.0**	**-0.4**
AOS				S	**Sn**	**11 52 35.2**	**+0.2**
ALNA	**Alonissos**	**0.95**	**203**	P	**Pn**	**11 52 22.3**	**-0.4**
ALNA				S	**Sn**	**11 52 36.1**	**+0.5**
KAVA	**Kavala**	**0.98**	**8**	P	**Pn**	**11 52 23.0**	**-0.1**
KAVA				S	**Sn**	**11 52 37.1**	**+0.7**
	comp=N,385nm,0.2s						
KAVA	**Kavala**	**0.98**	**8**	P	**Pn**	**11 52 23.1**	**-0.1**
KAVA				S	**Sn**	**11 52 35.9**	**-0.4**
KAVA				AML	AML	11 52 37.6	
	comp=E,913μm,0.3s						
KAVA				AML	AML	11 52 38.4	
	comp=N,597μm,0.3s						
SMTH	**Samothraki Isl**	**1.02**	**64**	P	**Pb**	**11 52 23.0**	**-0.6**
SMTH				S	**Sn**	**11 52 37.9**	**+0.6**
	comp=N,130nm,0.3s						
SMTH	**Samothraki Isl**	**1.02**	**64**	P	**Pb**	**11 52 23.0**	**-0.6**
SMTH				S	**Sn**	**11 52 38.2**	**+0.8**
SKIA	**Skiathos**	**1.09**	**218**	P	**Pb**	**11 52 24.6**	**-0.2**
SKIA				S	**Sn**	**11 52 41.3**	**+2.1**
SKIA	**Skiathos**	**1.09**	**218**	P	**Pb**	**11 52 24.6**	**-0.2**
XOR	**Xorichti**	**1.10**	**234**	P	**Pb**	**11 52 24.9**	**-0.1**
XOR				S	**Sn**	**11 52 39.6**	**+0.1**
	comp=N,145nm,0.5s						
XOR	**Xorichti**	**1.10**	**234**	P	**Pb**	**11 52 25.1**	**0.0**
XOR				S	**Sn**	**11 52 39.8**	**+0.3**
HORT	**Hortiatis**	**1.10**	**301**	P	**Pb**	**11 52 25.4**	**+0.3**
HORT				S	**Sn**	**11 52 40.3**	**+0.7**
	comp=N,138nm,0.2s						
HORT	**Hortiatis**	**1.10**	**301**	P	**Pb**	**11 52 25.5**	**+0.3**
HORT				S	**Sn**	**11 52 39.9**	**+0.3**
HORT				AML	AML	11 52 41.7	
	comp=N,271μm,0.1s						
HORT				AML	AML	11 52 43.0	
	comp=E,260μm,0.3s						
NEO	**Neokhori**	**1.12**	**230**	P	**Pb**	**11 52 24.7**	**-0.6**
NEO				S	**Sn**	**11 52 39.6**	**-0.3**
SKY	**Skiros Island**	**1.16**	**172**	P	**Pb**	**11 52 26.1**	**+0.1**
SKY				S	**Sn**	**11 52 42.5**	**+1.7**
SKY	**Skiros Island**	**1.16**	**172**	P	**Pb**	**11 52 26.3**	**+0.3**
GADA	**Gvkgeada**	**1.21**	**82**	P	**Pn**	**11 52 26.3**	**0.0**
GADA				S	**Sn**	**11 52 44.6**	**+2.5**
	comp=E,172nm,0.5s						
THE	**Thessaloniki**	**1.21**	**300**	P	**Pb**	**11 52 27.2**	**+0.4**
SRS	**Serrai**	**1.23**	**333**	P	**Pb**	**11 52 26.9**	**-0.2**
SRS	**Serrai**	**1.23**	**333**	P	**Pb**	**11 52 26.9**	**-0.2**
KYMI	**Kymi, Euboea I**	**1.41**	**188**	P	**Pn**	**11 52 28.9**	**-0.1**
KYMI	**Kymi, Euboea I**	**1.41**	**188**	P	**Pn**	**11 52 28.4**	**-0.6**
MRKA	**Markates**	**1.44**	**204**	P	**Pn**	**11 52 29.1**	**-0.5**
RDO	**Rodhopi**	**1.44**	**39**	P	**Pn**	**11 52 29.4**	**-0.1**
ALN	**Alexandroupoli**	**1.57**	**56**	P	**Pn**	**11 52 31.3**	**+0.1**
KNT	**Kendrikon**	**1.58**	**316**	P	**Pb**	**11 52 32.7**	**-0.4**
MMB	**Musomiste**	**1.63**	**344**	P	**Pn**	**11 52 32.3**	**+0.2**
RZN	**Rozhen**	**1.68**	**10**	P	**Pb**	**11 52 34.0**	**-1.1**
KDZ	**Kurdzhali**	**1.82**	**26**	P	**Pn**	**11 52 34.5**	**-0.2**
AGG	**Agios Georgios**	**1.85**	**238**	P	**Pb**	**11 52 36.0**	**-1.8**
VAY	**Valandovo**	**1.86**	**314**	*i* Pn	**Pb**	**11 52 40.0**	**+2.0**
VAY	**Valandovo**	**1.86**	**314**	*i* Pn	**Pb**	**11 52 40.0**	**+2.0**

*IDC **31** 11:53:45.9±0.5, 18.92N×107.53W, h0km, mb5.0/38, mb1 5.1/41, mb1mx5.0/49, mbtmp5.0/41, ML4.7/4, MS6.0/29, Ms1 6.0/29, ms1mx5.8/38, Error ellipse: s-maj=17.2km s-min=9.5km az=50.0*
*UCR **31** 11:53:45.7±2.4, 18.47N×108.15W, h20km±999km, mb6.2(NEIC)*
*MOS **31** 11:53:46.0±1.1, 18.83N×107.46W, h13km, mb6.1/52, MS6.1/41, Error ellipse: s-maj=7.0km s-min=4.5km az=96.6*
*NEIC **31** 11:53:46.5±1.3, 18.79N±0.07×107.47W±0.07, h5km±1km, mb6.0/615, Ms_20 5.9/802, Mwb6.1/55, Mww6.2, Md6.2/35(MEX), Mwc6.2(GCMT), Error ellipse: s-maj=12.2km s-min=9.8km az=211.0*
*NEIC **31** 11:53:47.4, 18.82N×107.48W, h3km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.15; Mθθ=0.96; Mϕϕ 1.11; Mrθ=0.47; Mrϕ=-1.32; Mθϕ=0.81; Fault plane solution: M₀1.93000×10¹⁸ NP1:ϕs17.64000°, δ84.28000°, λ-28.79000°. NP2:ϕs110.77000°, δ61.36000°, λ-173.48000°. Principal axes: T 1.9002, Plg16.0000°, Azm68.0000°; N 0.0558, Plg61.0000°, Azm187.0000°; P -1.9559, Plg24.0000°, Azm330.0000°;*
*BJI **31** 11:53:48.0±0.0, 18.83N×107.44W, h10km, mB6.4/54, mb5.7/6, Ms6.2/58, Ms7 6.1/55*
*GCMT **31** 11:53:49.5±0.1, 18.99N×107.50W, h17km, MW6.2/162, Moment Tensor Solution. s162,c375; s161,c643; Duration: 3s0 Moment tensor: Scale 10¹⁸Nm; Mrr=0.16±.01; Mθθ-1.45±.01; Mϕϕ 1.61±.01; Mrθ=0.08±.03; Mθϕ=-1.84±.01; Mrϕ 0.05±.03; Best double couple: M₀2.39500×10¹⁸ NP1:ϕs20.00000°, δ88.00000°, λ0.00000°. NP2:ϕs290.00000°, δ90.00000°, λ178.00000°. Principal axes: T 2.4760, Plg2.0000°, Azm245.0000°; N -0.1630, Plg88.0000°, Azm102.0000°; P -2.3140, Plg1.0000°, Azm335.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*MEX **31** 11:53:49.9±1.0, 19.00N×107.33W, h10km, MD6.2*
*NEIC **31** 11:53:50, 18.96N×107.52W, h17km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.22; Mθθ-1.47; Mϕϕ 1.70; Mrθ=-0.18; Mrϕ=-1.91; Mθϕ 0.35; Fault plane solution: M₀2.52000×10¹⁸ NP1:ϕs20.00000°, δ84.00000°, λ5.00000°. NP2:ϕs290.00000°, δ85.00000°, λ174.00000°. Principal axes: T 2.6470, Plg8.0000°, Azm245.0000°; N -0.2770, Plg82.0000°, Azm67.0000°; P -2.3701, Plg0.0000°, Azm335.0000°;*
*NEIC **31** 11:53:55, 18.95N×107.44W, h18km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.04; Mθθ-1.43; Mϕϕ 1.48; Mrθ=-0.53; Mrϕ=-1.49; Mθϕ=0.84, Fault plane solution: M₀2.22000×10¹⁸ NP1:ϕs113.00000°, δ71.00000°, λ-173.00000°. NP2:ϕs21.00000°, δ84.00000°, λ-19.00000°. Principal axes: T 2.1511, Plg9.0000°, Azm69.0000°; N 0.1328, Plg70.0000°, Azm184.0000°; P -2.2839, Plg18.0000°, Azm336.0000°;*

ISC 31 11:53:46.9±0.2, 18.69N±0.03×107.49W±0.03, h10km, n1710, σ2.17/1655, mb6.0/375, MS6.0/507, 11C-10D, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**2.45**	**71**	*e*P	**Pn**	**11 54 22.5**	**-4.4**
CJM				*i* S	**Sn**	**11 54 49.8**	**-7.2**
H06E		**3.25**	**272**	*e*P	Pn	11 54 32.1	-5.8
H06E		**3.25**	**272**		Pn	11 54 32.1	-5.8
H06E1	**SOCORRO T-PHAS**	**3.25**	**272**	Pn	Pn	11 54 32.5	-5.5
H06S1	**SOCORRO T**	**3.28**	**271**	Pn	Pn	11 54 33.2	-5.2
H06S1				T	T	11 57 47.6	
H06S		**3.29**	**271**	*e*P	Pn	11 54 29.9	-8.5
H06S				*e*S	**Sn**	**11 55 14.7**	**-2.9**
H06S		**3.29**	**271**		Pn	11 54 29.9	-8.5
R15V		**3.35**	**81**	*e*P	**Pn**	**11 54 35.9**	**-3.6**
R15V				*e*S	**Sn**	**11 55 14.4**	**-5.0**
R15V		**3.35**	**81**		**Pn**	**11 54 35.9**	**-3.6**
ANIG	**Ahuacatlan**	**3.65**	**49**	*e*P	**Pn**	**11 54 40.7**	**-2.9**
ANIG				*i* S	**Sn**	**11 55 23.2**	**-3.6**
ANIG	**Ahuacatlan**	**3.65**	**49**		**Pn**	**11 54 40.7**	**-2.9**
ANIG					**Sn**	**11 55 23.2**	**-3.6**
MMIG	**Aquila**	**3.96**	**95**	*e*P	**Pn**	**11 54 45.1**	**-2.6**
MMIG	**Aquila**	**3.96**	**95**		**Pn**	**11 54 45.1**	**-2.6**
MAIG	**Mazatlaan**	**4.58**	**12**	*e*P	**Pn**	**11 54 52.3**	**-3.9**
MAIG	**Mazatlaan**	**4.58**	**12**		**Pn**	**11 54 52.3**	**-3.9**
SLBS	**Sierra La Lagu**	**5.47**	**336**	Pn	**Pn**	**11 55 05.5**	**-3.0**
AAIG	**Aguscalientes**	**5.80**	**55**	*e*P	**Pn**	**11 55 12.1**	**-1.1**
LPIG	**La Paz**	**5.99**	**335**	Pn	**Pn**	**11 55 13.0**	**-2.6**
	4.5nm,0.3s,baz=77,slow=1.3,SNR=37						
LPIG				LR	LR	11 57 04.7	
	comp=Z,385μm,18.1s,baz=167,slow=34						
MOIG	**Morelia**	**6.04**	**80**	Pn	**Pn**	**11 55 14.9**	**-1.6**
ZAIG	**Zacatecas**	**6.14**	**48**	*e*P	**Pn**	**11 55 17.0**	**-0.9**
ZAIG	**Zacatecas**	**6.14**	**48**	Pn	**Pn**	**11 55 16.1**	**-1.8**
ARIG	**Puente Sto Nin**	**6.79**	**92**	*e*P	**Pn**	**11 55 26.0**	**-0.7**
ARIG	**Puente Sto Nin**	**6.79**	**92**		**Pn**	**11 55 26.0**	**-0.7**
ATVM	**ATLACOMULCO**	**7.31**	**80**	*e*P	**Pn**	**11 55 34.3**	**+0.3**
ATVM	**ATLACOMULCO**	**7.31**	**80**		**Pn**	**11 55 34.3**	**+0.3**
TOVM	**TOLUCA**	**7.42**	**84**	*e*P	**Pn**	**11 55 35.5**	**0.0**
TOVM	**TOLUCA**	**7.42**	**84**		**Pn**	**11 55 35.5**	**0.0**
MAVM	**Malinalco, Edo**	**7.58**	**87**	*e*P	**Pn**	**11 55 37.5**	**-0.1**
MAVM	**Malinalco, Edo**	**7.58**	**87**		**Pn**	**11 55 37.5**	**-0.1**
UNM	**Universidad Na**	**7.89**	**84**	P	**Pn**	**11 55 42.2**	**+0.2**
UNM	**Universidad Na**	**7.89**	**84**	Pn	**Pn**	**11 55 42.2**	**+0.2**
AMVM	**AMECAMECA**	**8.25**	**86**	*e*P	**Pn**	**11 55 47.3**	**+0.3**
AMVM	**AMECAMECA**	**8.25**	**86**		**Pn**	**11 55 47.3**	**+0.3**
VTVM	**Tizayuca**	**8.31**	**81**	*e*P	**Pn**	**11 55 48.2**	**+0.5**
VTVM	**Tizayuca**	**8.31**	**81**		**Pn**	**11 55 48.2**	**+0.5**
HPIG		**8.37**	**11**	Pn	**Pn**	**11 55 47.1**	**-1.5**
TLIG	**Tlapa**	**8.56**	**96**	*e*P	**Pn**	**11 55 51.5**	**+0.4**
TLIG	**Tlapa**	**8.56**	**96**	Pn	**Pn**	**11 55 51.2**	**+0.1**
FTIG	**Fresnillo de T**	**8.93**	**94**	*e*P	**Pn**	**11 55 56.2**	**+0.1**
HLIG	**Huajuapan de L**	**9.25**	**94**	*e*P	**Pn**	**11 56 00.8**	**+0.3**
TXIG	**Tlaxiaco**	**9.37**	**97**	*e*P	**Pn**	**11 56 02.9**	**+0.7**
SRIG	**Santa Rosalia**	**9.63**	**334**	Pn	**Pn**	**11 56 05.3**	**-0.3**
PEIG	**Puerto Escondi**	**10.23**	**104**	*e*P	**Pn**	**11 56 16.1**	**+2.1**
VHO	**Vista Hermosa**	**10.37**	**97**	*e*P	**Pn**	**11 56 18.2**	**+2.3**
HSIG		**10.75**	**344**	Pn	**Pn**	**11 56 21.6**	**+0.6**
TX31	**Lajitas Ar. Si**	**11.15**	**18**	Pn	**Pn**	**11 56 25.4**	**-1.1**
TX32	**Lajitas Array**	**11.15**	**18**	Pn	**Pn**	**11 56 25.5**	**-1.1**
TXAR	**Lajitas Array**	**11.15**	**18**	Pn	**Pn**	**11 56 25.4**	**-1.1**
	2.1nm,0.3s,baz=203,slow=14,SNR=129						
HUIG	**Huatulco**	**11.26**	**103**	*e*P	**Pn**	**11 56 29.9**	**+1.9**
HUIG	**Huatulco**	**11.26**	**103**		**Pn**	**11 56 29.9**	**+1.9**
CMIG	**Matias Romero**	**12.11**	**96**	Pn	**Pn**	**11 56 40.1**	**+0.5**
	4.4nm,0.3s,baz=284,slow=11,SNR=100						
CMIG				LR	LR	12 00 48.8	
	comp=Z,41μm,19.1s,baz=276,slow=35						
833A	**Chaparral WMA,**	**12.12**	**36**	P	**Pn**	**11 56 39.1**	**-0.6**
	baz=220,SNR=52						
KVTX	**Kingsville**	**12.47**	**43**		**Pn**	**11 56 43.8**	**-0.7**
319A	**Douglas**	**12.73**	**353**		**Pn**	**11 56 48.3**	**+0.1**
MNTX	**Cornudas Mount**	**13.09**	**8**	P	**Pn**	**11 56 53.0**	**0.0**
	baz=189,SNR=124						
MNTX	**Cornudas Mount**	**13.09**	**8**	Pn	**Pn**	**11 56 52.4**	**-0.5**
735A	**Kenedy**	**13.44**	**39**		**Pn**	**11 56 58.5**	**+0.8**
JCT	**Junction City**	**13.65**	**29**	P	**Pn**	**11 57 01.5**	**+0.8**
JCT	**Junction City**	**13.65**	**29**	P	**Pn**	**11 57 01.8**	**+1.2**
	baz=212,SNR=234						
JCT	**Junction City**	**13.65**	**29**		**Pn**	**11 57 01.5**	**+0.8**
GDL2	**Guadalupe Moun**	**13.74**	**11**		**Pn**	**11 57 02.3**	**+0.4**
121A	**Cookes Peak, D**	**13.78**	**359**	P	**Pn**	**11 57 04.0**	**+1.4**
	baz=179,SNR=246						
121A	**Cookes Peak, D**	**13.78**	**359**		**Pn**	**11 57 02.9**	**+0.4**
TUC	**Tucson**	**13.88**	**348**	P	**Pn**	**11 57 03.9**	**+0.1**
TUC	**Tucson**	**13.88**	**348**	P	**Pn**	**11 57 04.7**	**+1.0**
	baz=167						
TUC	**Tucson**	**13.88**	**348**		**Pn**	**11 57 03.9**	**+0.1**
CLNB	**Carlsbad**	**13.90**	**13**		**Pn**	**11 57 03.9**	**-0.2**
214A	**Organ Pipe Nat**	**14.05**	**341**	P	**Pn**	**11 57 07.0**	**+1.0**
	baz=158,SNR=300						
214A	**Organ Pipe Nat**	**14.05**	**341**		**Pn**	**11 57 06.1**	**+0.1**
CPRX	**Cap Rock**	**14.64**	**12**		**Pn**	**11 57 15.2**	**+0.9**
CCIG	**Comitan**	**14.84**	**97**		**Pn**	**11 57 17.1**	**0.0**
435B	**Jarrell**	**15.02**	**35**	P	**Pn**	**11 57 18.6**	**-0.6**
	baz=219,SNR=15						
435B				S	**S**	**12 00 27.4**	**+4.0**
	baz=219						
113A	**Mohawk Valley,**	**15.11**	**339**		**Pn**	**11 57 20.3**	**-0.1**
Y22D	**IRIS PASSCAL I**	**15.33**	**2**	P	**Pn**	**11 57 24.4**	**+1.0**
	baz=182,SNR=18						
Y22D	**IRIS PASSCAL I**	**15.33**	**2**		**Pn**	**11 57 24.2**	**+0.8**
BNM	**Barren Site**	**15.41**	**3**		**Pn**	**11 57 24.1**	**-0.5**
LENM	**Lemitar**	**15.42**	**2**		**Pn**	**11 57 23.1**	**-1.6**
HKT	**Hockley**	**15.43**	**41**	P	**Pn**	**11 57 22.9**	**-1.7**
HKT				pmax	pmax		
	comp=Z,4μm,1.9s						
HKT	**Hockley**	**15.43**	**41**		**Pn**	**11 57 22.9**	**-1.7**
ABTX	**Abilene, Hawle**	**15.56**	**25**	P	**Pn**	**11 57 25.5**	**-1.0**
	baz=209,SNR=87						
ABTX				S	**Sn**	**12 00 26.4**	**+7.4**
	baz=209						
ABTX	**Abilene, Hawle**	**15.56**	**25**		**Pn**	**11 57 25.3**	**-1.2**
ABTX				IAmb	IAmb	11 57 39.1	
	comp=Z,1μm,1.4s						
GLA	**Glamis**	**15.74**	**337**	P	**Pn**	**11 57 29.4**	**+0.6**
GLA				pmax	pmax		
	comp=Z,4μm,1.6s						
GLA	**Glamis**	**15.74**	**337**	P	**Pn**	**11 57 29.8**	**+1.0**
	baz=153,SNR=203						
GLA	**Glamis**	**15.74**	**337**	Pn	**Pn**	**11 57 29.4**	**+0.6**
MSTX	**Muleshoe**	**15.79**	**15**	P	**Pn**	**11 57 28.8**	**-0.6**
	baz=197,SNR=71						
MSTX				S	**S**	**12 00 35.8**	**-3.6**
	baz=197						
MSTX	**Muleshoe**	**15.79**	**15**	Pn	**Pn**	**11 57 28.6**	**-0.8**
IKP	**In-Ko-Pah, Jac**	**15.91**	**333**	P	**Pn**	**11 57 31.7**	**+0.7**
	baz=148,SNR=144						
X18A	**Snowflake**	**15.92**	**353**	IAmb	IAmb	11 57 46.2	
	comp=Z,2μm,1.9s						
SWSC	**Sam W. Stewart**	**16.03**	**334**	P	**Pn**	**11 57 33.1**	**+0.6**
	baz=150,SNR=110						
WHTX	**Lake Whitney,**	**16.04**	**32**	P	**Pn**	**11 57 31.8**	**-0.8**
	baz=217,SNR=71						
WHTX				S	**S**	**12 00 40.5**	**-3.8**
	baz=217						
WHTX	**Lake Whitney,**	**16.04**	**32**		**Pn**	**11 57 31.3**	**-1.3**
WHTX				IAmb	IAmb	11 57 54.3	
	comp=Z,2μm,1.7s						
BAR	**Barrett**	**16.19**	**331**		**Pn**	**11 57 34.4**	**-0.2**
BAR				IAmb	IAmb	11 57 41.7	
	comp=Z,3μm,1.9s						
ANMO	**Albuquerque**	**16.21**	**3**	Pn	**Pn**	**11 57 35.3**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=182,slow=13,SNR=98						
ANMO				LR	LR	12 03 28.9	
	comp=Z,76μm,18.6s,baz=188,slow=36						
ANMO	**Albuquerque**	**16.21**	**3**	*d*	*P*	**11 57 35.6**	**+0.6**
ANMO				pmax	pmax		
	comp=Z,189nm,1.7s						
ANMO	**Albuquerque**	**16.21**	**3**	P	**Pn**	**11 57 35.4**	**+0.4**
	baz=183						
ANMO				S	**S**	**12 00 44.7**	**-3.6**
	baz=183						
ANMO	**Albuquerque**	**16.21**	**3**		**Pn**	**11 57 34.7**	**-0.3**
MONP2	**Monument Peak**	**16.25**	**332**	P	**Pn**	**11 57 36.4**	**+0.8**
	baz=148,SNR=212						
W18A	**Petrified Fore**	**16.48**	**354**	P	**Pn**	**11 57 39.1**	**+0.7**
	baz=172						
W18A				S	**S**	**12 00 49.1**	**-4.5**
	baz=172						
BC3	**Big Chuckawall**	**16.51**	**336**	P	**Pn**	**11 57 39.8**	**+1.0**
	baz=152,SNR=631						
109C	**Camp Elliot, M**	**16.56**	**330**	P	**Pn**	**11 57 39.3**	**+0.1**
	baz=146,SNR=55						
109C	**Camp Elliot, M**	**16.56**	**330**		**Pn**	**11 57 38.8**	**-0.5**
PDMCI	**Parker Dam,Lak**	**16.64**	**340**	P	**Pn**	**11 57 40.9**	**+0.7**
	baz=157,SNR=235						
PDMCI				S	**S**	**12 00 55.2**	**-1.3**
	baz=157						
IRM	**Iron Mountain**	**16.85**	**338**	P	**Pn**	**11 57 43.5**	**+0.6**
	baz=154,SNR=291						
TPFO	**Pinon Flats**	**16.88**	**333**	P	**Pn**	**11 57 44.0**	**+0.6**
	baz=149,SNR=511						
XPFO	**Pion

baz=150,SNR=20
DECC Green Verdugo 18.26 330 P **P** **11 58 01.4 +0.7**
baz=145,SNR=21
TUQ Turquoise Moun 18.27 338 P **P** **11 58 01.6 +0.7**
baz=154,SNR=158
MVCO Mesa Verde 18.47 357 P **P** **11 58 02.7 -0.5**
baz=177,SNR=142
MVCO S **S** **12 01 37.5 +3.3**
baz=177
MVCO Mesa Verde 18.47 357 P **P** **11 58 02.7 -0.5**
GSC Goldstone, Bar 18.49 335 P **Pn** **11 58 03.5 +0.2**
GSC pmax pmax
comp=Z,2µm,2.0s
GSC Goldstone, Bar 18.49 335 P **Pn** **11 58 03.6 +0.3**
baz=151,SNR=72
GSC Goldstone, Bar 18.49 335 P **Pn** **11 58 03.5 +0.2**
GSC IAmb IAmb 11 58 21.8
comp=Z,2µm,1.9s
T25A Trinidad 18.57 8 P **P** **11 58 03.9 -0.4**
baz=189,SNR=66
T25A S **S** **12 01 40.1 +3.8**
baz=189
EDW2 Edwards Air Fo 18.63 332 P **P** **11 58 04.7 0.0**
baz=147,SNR=71
342A Flagon Creek P 18.64 44 P **P** **11 58 04.2 -0.5**
342A IAmb IAmb 11 58 14.9
comp=Z,2µm,1.4s
SCZ2 Santa Cruz Isl 18.70 327 P **P** **11 58 05.6 +0.2**
baz=141
SCZ2 S **S** **12 01 48.3 +10**
baz=141
OSI Osito Audit: C 18.74 330 P **Pn** **11 58 06.8 +0.5**
baz=145,SNR=12
OSI Osito Audit: C 18.74 330 P **Pn** **11 58 06.3 -0.1**
OSI IAmb IAmb 11 58 25.6
comp=Z,1µm,1.8s
FNO Franklin 18.77 26 P **P** **11 58 05.8 -0.4**
SHOC Shoshone, Teco 18.82 337 P **Pn** **11 58 07.4 +0.2**
baz=153,SNR=74
KNB Kanab 18.84 347 P **P** **11 58 07.4 +0.2**
KNB pmax pmax
comp=Z,1µm,1.6s
KNB Kanab 18.84 347 P **P** **11 58 07.3 +0.2**
OKCFA Oklahoma City 18.88 26 P **P** **11 58 06.2 -1.2**
OKCFA IAmb IAmb 11 58 24.3
comp=Z,1µm,1.6s
SHPR Sheep Range 18.99 341 P **P** **11 58 08.5 -0.2**
S22A 4UR Ranch, Cre 18.99 2 P **Pn** **11 58 09.4 -0.2**
baz=182,SNR=155
S22A S **S** **12 01 50.7 +5.9**
baz=182
LRMC Laurel Mtn Rad 19.00 334 P **P** **11 58 09.2 +0.3**
baz=149,SNR=154
SDCO Great Sand Dun 19.06 5 P **P** **11 58 09.4 -0.3**
baz=186,SNR=323
SDCO S **S** **12 01 52.8 +6.6**
baz=186
SDCO Great Sand Dun 19.06 5 P **P** **11 58 09.3 -0.3**
SDCO IAmb IAmb 11 58 22.2
comp=Z,2µm,1.8s
SBC Santa Barbara 19.09 328 P **Pn** **11 58 10.5 0.0**
baz=142,SNR=11
U32A Winter Ranch, 19.14 21 **P** **11 58 10.3 0.0**
U32A IAmb IAmb 11 58 23.8
comp=Z,2µm,1.6s
X37A Clayton 19.16 32 P **P** **11 58 09.6 -0.8**
X37A IAmb IAmb 11 58 21.5
comp=Z,2µm,1.8s
ARVC Arvin 19.21 331 P **P** **11 58 11.5 +0.5**
baz=145,SNR=156
MPMC Manual Prospec 19.42 335 P **P** **11 58 13.5 0.0**
baz=150,SNR=482
PKM Mcpherson Peak 19.49 328 P **P** **11 58 14.6 +0.3**
baz=142,SNR=79
ISA Isabella, Lake 19.50 332 P **P** **11 58 14.5 +0.3**
baz=147,SNR=139
ISA Isabella, Lake 19.50 332 IAmb IAmb 11 58 30.1
comp=Z,1µm,1.6s
FURC Furnace Creek, 19.54 337 P **P** **11 58 15.1 +0.5**
baz=152,SNR=153
Z41A Richland Creek 19.58 39 P **P** **11 58 14.5 -0.6**
baz=226,SNR=52
Z41A S **Sn** **12 01 59.5 +3.2**
baz=226
WLAR White Oak Lake 19.70 38 P **P** **11 58 15.5 -0.9**
MTPU Mount Pierson 19.71 349 **Pn** **11 58 17.6 -0.6**
TPNV Topopah Spring 19.75 339 P **P** **11 58 17.6 +0.5**
baz=154,SNR=308
TPNV Topopah Spring 19.75 339 IAmb IAmb 11 58 32.0
comp=Z,1µm,1.7s
344A Westbrook Farm 19.76 47 P **P** **11 58 16.8 -0.3**
344A IAmb IAmb 11 58 35.6
comp=Z,2µm,1.3s
VES Vestal, Richgr 19.92 331 P **P** **11 58 19.4 +0.6**
baz=146,SNR=534
SMMC Simmler 19.92 329 P **P** **11 58 19.1 +0.2**
baz=143,SNR=33
CWC Cottonwood Cre 19.99 334 P **P** **11 58 20.2 +0.5**
baz=149
TUL1 Leonard 20.02 29 P **P** **11 58 18.3 -1.6**
baz=214,SNR=21
TUL1 S **S** **12 02 04.4 -0.7**
baz=214
TUL1 Leonard 20.02 29 IAmb IAmb 11 58 33.5
comp=Z,1µm,1.8s
MIAR Mount Ida 20.06 35 P **P** **11 58 19.0 -1.4**
baz=222,SNR=54
MIAR S **S** **12 02 06.3 +0.4**
baz=222
MIAR Mount Ida 20.06 35 IAmb IAmb 11 58 54.3
comp=Z,1µm,1.9s
143A Socs Landing, 20.08 43 P **P** **11 58 19.6 -0.9**
GRAC Grapevine Rang 20.19 337 P **P** **11 58 22.4 +0.6**
baz=152,SNR=105
Q24A Divide 20.30 5 P **P** **11 58 23.2 0.0**
baz=186,SNR=12
Q24A S Sn 12 02 16.7 +2.6
baz=186
VBMS Vicksburg 20.36 45 P **P** **11 58 23.4 -0.2**
baz=233,SNR=19
PAGB Antelope Grade 20.38 329 IAmb IAmb 11 58 26.3
comp=Z,2µm,1.8s
PAGB IAMs_20 IAMs_20 12 05 28.9
comp=Z,52µm,20.0s
X40A Basin Creek Fa 20.44 37 P **P** **11 58 22.9 -1.5**
baz=223,SNR=68
X40A S **S** **12 02 14.7 +1.4**
baz=223
W39A Magazine 20.44 34 P **P** **11 58 23.5 -1.0**
baz=220,SNR=44
W39A S **S** **12 02 15.0 +1.6**
baz=220
W39A Magazine 20.44 34 IAmb IAmb 11 58 36.1
comp=Z,1µm,1.6s
W39A IAMs_20 IAMs_20 12 06 47.3
comp=Z,44µm,20.0s
VOG Valley Oaks Go 20.45 332 P **P** **11 58 24.7 +0.2**
baz=146
T35A Sooner Cattle 20.56 26 IAmb IAmb 11 58 36.2
comp=Z,2µm,1.6s
TIN Tinemaha, Big 20.58 335 P **P** **11 58 26.9 +0.8**
baz=150,SNR=34
346A Big Creek Wild 20.61 49 P **P** **11 58 26.0 -0.4**
346A IAmb IAmb 11 58 38.4
comp=Z,2µm,1.6s
KSCO Kaye Shedlock' 20.68 11 P **P** **11 58 27.1 -0.1**
baz=193,SNR=104
KSCO S Sn 12 02 22.1 -0.9
baz=193
KSCO Kaye Shedlock' 20.68 11 IAMs_20 IAMs_20 12 05 24.3
comp=Z,45µm,18.0s
R11A Troy Canyon, C 20.82 342 P **P** **11 58 28.8 0.0**
baz=158,SNR=221
UALR University of 20.92 37 IAmb IAmb 11 58 57.9
comp=Z,851nm,1.6s
PMPB Monarch Peak 21.04 329 IAMs_20 IAMs_20 12 06 06.2
comp=Z,51µm,18.0s
R32A Long Quarter, 21.09 19 IAmb IAmb 11 58 39.9
comp=Z,2µm,1.5s
R32A IAMs_20 IAMs_20 12 06 14.5
comp=Z,56µm,20.0s
ISCO Idaho Springs 21.10 4 P **P** **11 58 31.5 -0.4**
ISCO pmax pmax
comp=Z,661nm,1.6s
ISCO MLR MLR
comp=Z,105µm,21.0s
ISCO Idaho Springs 21.10 4 P **P** **11 58 31.7 -0.2**
baz=185,SNR=91
ISCO S Sn 12 02 31.2 -2.0
baz=185
ISCO Idaho Springs 21.10 4 P **P** **11 58 31.5 -0.4**
U38A Gravette 21.11 31 IAmb IAmb 11 58 42.8
comp=Z,1µm,1.9s
CBKS Cedar Bluff 21.15 17 P **P** **11 58 31.3 -0.9**
CBKS pmax pmax
comp=Z,3µm,1.7s
CBKS MLR MLR
comp=Z,89µm,18.0s
CBKS Cedar Bluff 21.15 17 P **P** **11 58 31.3 -0.9**
baz=201,SNR=32
CBKS S **S** **12 02 28.6 +1.1**
baz=201
CBKS Cedar Bluff 21.15 17 P **P** **11 58 31.3 -0.9**
W41B Gary Mavity, V 21.27 36 P **P** **11 58 32.4 -1.0**
baz=223,SNR=42
W41B S **S** **12 02 32.7 +3.0**
baz=223
MLAC Mammoth, Mammo 21.32 335 P **P** **11 58 34.8 +0.6**
baz=149,SNR=42
WHAR Wooly Hollow 21.33 36 IAmb IAmb 11 58 43.2
comp=Z,2µm,1.6s
OMMB Old Mammoth Mi 21.37 334 IAmb IAmb 11 58 39.7
comp=Z,1µm,1.7s
O20A White River Ci 21.38 358 P **P** **11 58 34.4 -0.3**
baz=178,SNR=202
O20A S Sn 12 02 37.1 -2.7
baz=178
O20A White River Ci 21.38 358 IAmb IAmb 11 59 02.3
comp=Z,1µm,1.8s
O20A IAMs_20 IAMs_20 12 05 43.2
comp=Z,37µm,18.0s
MDPB Devils Postpil 21.42 334 IAmb IAmb 11 58 40.0
comp=Z,691nm,1.5s
MATN Matagalpa 21.52 102 P **P** **11 58 37.9 +1.6**
X43A Marvell 21.61 40 P **P** **11 58 36.5 -0.5**
baz=227,SNR=28
X43A S Sn 12 02 48.0 +3.0
baz=227
NV11 Mina Array Sit 21.75 337 P **P** **11 58 39.1 +0.3**
NV11 IAmb IAmb 11 58 48.3
comp=Z,856nm,1.6s
NV11 IAMs_20 IAMs_20 12 06 23.9
comp=Z,41µm,18.0s
SAO San Andreas Ge 21.79 329 P **P** **11 58 38.6 -0.4**
SAO pmax pmax
comp=Z,1µm,2.0s
SAO MLR MLR
comp=Z,37µm,19.0s
SAO San Andreas Ge 21.79 329 P **P** **11 58 38.6 -0.4**
SAO IAmb IAmb 11 58 42.8
comp=Z,1µm,1.9s
SAO IAMs_20 IAMs_20 12 05 17.3
comp=Z,37µm,19.0s
NVAR Mina Array Bea 21.80 337 P **P** **11 58 39.1 -0.2**
comp=Z,41nm,1.0s,baz=156,slow=8.3,SNR=192
NVAR LR LR 12 06 35.6
comp=Z,39µm,18.3s,baz=149,slow=36
NVAR P3KPbc 12 32 35.0
comp=Z,0.2nm,0.5s,baz=48,slow=2.2,SNR=4.5
U40A Yellville 21.82 33 P **P** **11 58 37.4 -1.9**
baz=220,SNR=31
U40A S **S** **12 02 41.5 +0.9**
baz=220
FCAR Ozark Folk Cen 21.86 35 IAmb IAmb 11 58 48.2
comp=Z,1µm,1.8s
DUG Dugway, Tooele 21.91 349 P **P** **11 58 40.3 -0.2**
baz=166,SNR=187
DUG S Sn 12 02 48.9 -3.6
baz=166
DUG Dugway, Tooele 21.91 349 IAmb IAmb 11 58 59.5
comp=Z,960nm,1.4s
DUG IAMs_20 IAMs_20 12 06 27.5
comp=Z,58µm,19.0s
RYN Ryan 22.06 336 IAMs_20 IAMs_20 12 06 34.9
comp=Z,44µm,21.0s
N23A Red Feather La 22.17 3 P **P** **11 58 43.0 -0.3**
baz=184,SNR=86
N23A S **S** **12 02 52.4 +4.8**
baz=184
KVN Kaiserville 22.28 338 IAmb IAmb 11 58 51.3
comp=Z,2µm,1.9s
WAKR Walker 22.31 335 IAmb IAmb 11 59 05.4
comp=Z,792nm,1.3s
CMB Columbia Colle 22.32 332 IAMs_20 IAMs_20 12 06 20.1
comp=Z,68µm,20.0s
KSU1 Kansas State U 22.42 23 P **P** **11 58 44.5 -1.2**
baz=208,SNR=36
KSU1 S **S** **12 02 53.6 +1.6**
baz=208
HBAR Harrisburg 22.45 38 P **P** **11 58 45.2 -0.9**
HBAR IAmb IAmb 11 59 00.5
comp=Z,802nm,1.3s
OXF Oxford 22.52 42 P **P** **11 58 44.9 -1.9**
baz=230,SNR=29
OXF S **S** **12 02 55.8 +2.0**
baz=230
OXF Oxford 22.52 42 IAmb IAmb 11 59 13.4
comp=Z,766nm,1.3s
ACON Acoyapa 22.52 104 *eP* **P** **11 58 48.9 +1.8**
ACON Acoyapa 22.52 104 P **P** **11 58 48.4 +1.4**
ACON IAmb IAmb 11 58 54.9
comp=Z,1µm,1.6s
MET Memphis--Engin 22.59 40 P **P** **11 58 46.7 -0.8**
PHWY Pilot Hill 22.60 4 IAmb IAmb 11 58 58.5
comp=Z,727nm,1.6s
PHWY IAMs_20 IAMs_20 12 07 13.4
comp=Z,67µm,21.0s
YERR Yerington 22.65 336 IAmb IAmb 11 58 53.7
comp=Z,996nm,1.6s
OGNE Ogallala 22.67 11 P **P** **11 58 47.1 -1.3**
baz=193,SNR=40
OGNE S **S** **12 02 59.4 +2.7**
baz=193
OGNE Ogallala 22.67 11 IAMs_20 IAMs_20 12 07 25.2
comp=Z,80µm,22.0s
NY14 Universidad de 22.68 108 *eP* **P** **11 58 52.7 +4.0**
LPAR Lepanto 22.69 39 P **P** **11 58 48.0 -0.6**
LPAR IAmb IAmb 11 59 33.1
comp=Z,1µm,1.5s
GBS3 Finca Las Img 22.70 107 *eP* **P** **11 58 51.0 +2.1**
LAPC Finca la Perla 22.73 107 *eP* **P** **11 58 51.8 +2.6**
MGMO Mountain Grove 22.73 33 IAmb IAmb 11 59 28.2
comp=Z,608nm,1.6s
BUEV Buena Vista 22.74 107 *eP* **P** **11 58 51.6 +2.2**
GB1A Borinquen Arri 22.74 107 *eP* **P** **11 58 53.3 +3.9**
BUAI Buenos Aires 22.77 107 *eP* **P** **11 58 52.0 +2.2**
GPS3 Bodega del ICE 22.79 107 *eP* **P** **11 58 53.5 +3.5**
GPS1 Guardaparques 22.80 107 *eP* **P** **11 58 54.0 +4.0**
GPS2 Hotel Rincn d 22.80 107 *eP* **P** **11 58 56.0 +5.8**
GUAI GUAI 22.85 108 *eP* **P** **11 58 54.6 +4.1**
PNTR Pine Nut 22.88 335 P **P** **11 58 51.1 +0.2**
LIM1 Limonal 22.91 107 *eP* **P** **11 58 54.0 +2.8**
RWWY Rawlins 22.92 1 IAmb IAmb 11 59 29.6
comp=Z,827nm,1.6s
GUAB Guayabo de Bag 22.93 107 *eP* **P** **11 58 54.6 +3.2**
ELK Elko 22.96 345 P **P** **11 58 51.3 -0.5**
comp=Z,42nm,1.1s,baz=163,slow=9.1,SNR=58
ELK LR LR 12 07 13.3
comp=Z,56µm,19.5s,baz=168,slow=36
ELK Elko 22.96 345 IAmb IAmb 11 59 16.6
comp=Z,847nm,1.9s
ELK IAMs_20 IAMs_20 12 07 01.6
comp=Z,54µm,20.0s
COLC Colonia 22.97 107 *eP* **P** **11 58 54.4 +2.6**
HORNC Hornillas 22.98 107 *eP* **P** **11 58 54.8 +2.9**
451A Vernon 23.01 55 P **P** **11 58 51.3 -0.7**
CUI Cuipilapa 23.01 107 *eP* **P** **11 58 54.8 +2.6**
VCNR Virginia City 23.07 335 IAmb IAmb 11 58 55.8
comp=Z,963nm,1.7s
HWUT Hardware Ranch 23.10 352 IAmb IAmb 11 59 10.4
comp=Z,535nm,1.6s
HWUT IAMs_20 IAMs_20 12 07 18.0
comp=Z,61µm,18.0s
GNAR Gosnell 23.11 38 P **P** **11 58 52.6 -0.4**
GNAR IAmb IAmb 11 59 02.4
comp=Z,977nm,1.5s
ACAL Aguas Claras 23.14 107 *eP* **P** **11 58 56.7 +3.1**
PTEN Parque Tenorio 23.15 107 *eP* **P** **11 58 55.2 +1.5**
ESPN Las Esperanzas 23.25 103 P **P** **11 58 56.1 +1.5**
ESPN IAmb IAmb 11 59 17.2
comp=Z,456nm,1.4s
T42A Van Buren 23.26 35 IAmb IAmb 11 59 33.4
comp=Z,637nm,1.8s
LRAL Lakeview Retre 23.26 48 P **P** **11 58 53.4 -1.2**
baz=237,SNR=37
LRAL S **S** **12 03 10.7 +3.7**
baz=237
LRAL Lakeview Retre 23.26 48 IAmb IAmb 11 59 04.5
comp=Z,727nm,1.2s
PEBM Pemiscott Bayo 23.30 38 P **P** **11 58 54.3 -0.7**
PEBM IAmb IAmb 11 59 16.8
comp=Z,794nm,1.4s
PAHR Pah Rah Range 23.33 336 IAmb IAmb 11 59 10.2
comp=Z,1µm,2.0s
AFDM Forest Hills D 23.33 333 IAmb IAmb 11 59 09.6
comp=Z,659nm,2.0s
AFDM IAMs_20 IAMs_20 12 07 01.9
comp=Z,62µm,19.0s
JTS Las Juntas de 23.34 108 P **P** **11 58 57.7 +2.0**
comp=Z,142nm,1.3s,baz=8.5,slow=9.0,SNR=36
JTS Las Juntas de 23.34 108 *c iP* **P** **11 58 57.1 +1.5**
JTS pmax pmax
comp=Z,994nm,2.2s
JTS Las Juntas de 23.34 108 *eP* **P** **11 58 57.3 +1.6**
JTS Las Juntas de 23.34 108 P **P** **11 58 58.0 +2.3**
JTS IAmb IAmb 11 59 09.2
comp=Z,720nm,1.6s
HALT Halls 23.48 39 P **P** **11 58 55.9 -0.8**
CASO Castillo 23.49 107 *eP* **P** **11 58 59.7 +2.6**
ARE1 Arenal 1 23.49 107 *eP* **P** **11 58 58.0 +1.0**
CEDE Laguna Cedeo 23.49 107 *eP* **P** **11 58 59.1 +2.0**
FORC Fortuna 23.53 107 *eP* **P** **11 59 00.3 +2.8**
N33A J Bar K, Exete 23.60 19 IAMs_20 IAMs_20 12 08 22.6
comp=Z,37µm,18.0s
PENMO Penman 23.67 38 P **P** **11 58 58.1 -0.5**
PENMO IAmb IAmb 11 59 07.6
comp=Z,587nm,1.2s
BEKR Beckworth 23.85 335 IAmb IAmb 11 59 03.1
comp=Z,955nm,1.8s
553A Crawfordville 23.86 57 IAmb IAmb 11 59 29.5
comp=Z,422nm,1.3s
K22A Casper 23.90 2 P **P** **11 58 60.0 -1.0**
baz=182,SNR=68
K22A S **S** **12 03 19.8 +2.5**
baz=182
CCM Cathedral Cave 23.94 33 P **P** **11 58 59.4 -1.8**
CCM pmax pmax
comp=Z,3µm,2.0s
CCM Cathedral Cave 23.94 33 P **P** **11 58 59.3 -1.8**
baz=221
CCM S **S** **12 03 21.8 +4.0**
baz=221
CCM Cathedral Cave 23.94 33 P **P** **11 58 59.4 -1.8**
BGNE Belgrade 24.01 17 P **P** **11 59 00.9 -1.0**
baz=202,SNR=13
BGNE S **S** **12 03 23.5 +4.6**
baz=202
BGNE Belgrade 24.01 17 P **P** **11 59 01.8 -0.1**
X48A Hartselle 24.03 45 IAmb IAmb 11 59 10.7
comp=Z,969nm,1.6s
PD31 Pinedale Array 24.06 356 P **P** **11 59 01.2 -1.3**
PDAR Pinedale Array 24.06 356 P **P** **11 59 00.7 -1.9**
comp=Z,9.8nm,0.8s,baz=164,slow=9.5,SNR=52
PDAR LR LR 12 08 03.6
comp=Z,45µm,19.2s,baz=186,slow=36
BW06 Boulder Array 24.06 356 P **P** **11 59 00.8 -1.8**
baz=175,SNR=22
BW06 S **S** **12 03 22.8 +2.8**
baz=175
BW06 Boulder Array 24.06 356 IAMs_20 IAMs_20 12 07 42.2
comp=Z,52µm,21.0s
ORV Oroville 24.06 333 P **P** **11 59 02.0 -0.3**
ORV pmax pmax
comp=Z,1µm,1.9s
ORV MLR MLR
comp=Z,65µm,19.0s
ORV Oroville 24.06 333 P **P** **11 59 02.0 -0.3**
ORV IAMs_20 IAMs_20 12 07 33.3
comp=Z,65µm,19.0s
Y49A Blount Mountai 24.12 47 P **P** **11 59 01.8 -1.2**
Y49A IAmb IAmb 11 59 12.1
comp=Z,834nm,1.6s
AHID Auburn Hatcher 24.19 354 IAmb IAmb 11 59 38.9
comp=Z,526nm,1.9s
AHID IAMs_20 IAMs_20 12 07 54.7
comp=Z,50µm,19.0s
N35A Tabor 24.32 22 P **P** **11 59 04.8 +0.1**
HOPS Hopland Field 24.33 329 IAmb IAmb 11 59 29.4
comp=Z,667nm,1.8s
HOPS IAMs_20 IAMs_20 12 07 50.6
comp=Z,58µm,19.0s
LCR2 La Lucha 2 24.42 108 *eP* **P** **11 59 06.8 +0.6**
CVTR Volcan Turrial 24.53 107 *eP* **P** **11 59 08.5 +1.1**
WVT Waverly 24.54 41 P **P** **11 59 05.1 -1.7**
WVT pmax pmax
comp=Z,439nm,1.5s
WVT MLR MLR
comp=Z,24µm,21.0s
WVT Waverly 24.54 41 P **P** **11 59 04.9 -1.9**
baz=230
WVT S **S** **12 03 28.7 +1.3**
baz=230
WVT Waverly 24.54 41 P **P** **11 59 05.1 -1.7**
WVT IAmb IAmb 11 59 15.4
comp=Z,439nm,1.5s
T45A Paducah 24.64 38 P **P** **11 59 07.3 -0.3**
152A Waverly Hall 24.73 51 IAmb IAmb 11 59 18.0
comp=Z,798nm,1.7s
S44A Carbondale 24.75 36 P **P** **11 59 08.2 -0.4**
S44A IAmb IAmb 11 59 17.5
comp=Z,855nm,1.9s
S44A IAMs_20 IAMs_20 12 08 25.4
comp=Z,27µm,18.0s
REDW Red Top Meadow 24.76 354 IAmb IAmb 11 59 28.0
comp=Z,772nm,1.6s
REDW IAMs_20 IAMs_20 12 08 22.6
comp=Z,40µm,19.0s
SIUC Southern Illin 24.79 36 IAmb IAmb 11 59 17.7
comp=Z,310nm,1.3s
SIUC IAMs_20 IAMs_20 12 08 24.9
comp=Z,27µm,19.0s
O03E Paynes Creek 24.80 333 P **P** **11 59 08.5 -0.7**
baz=146,SNR=67
SNOW Snow King Moun 24.85 354 IAMs_20 IAMs_20 12 08 15.0
comp=Z,40µm,20.0s
TPAW Teton Pass 24.89 354 IAMs_20 IAMs_20 12 08 06.2
comp=Z,39µm,20.0s
V48A Smith Brothers 24.94 43 IAmb IAmb 11 59 19.3
comp=Z,436nm,1.4s
V48A IAMs_20 IAMs_20 12 09 52.6
comp=Z,40µm,19.0s
K31A O'Neill 24.98 15 P **P** **11 59 09.5 -1.2**
K31A IAMs_20 IAMs_20 12 08 34.1
comp=Z,45µm,21.0s
TIGA Tifton 25.03 55 P **P** **11 59 10.2 -1.0**
baz=245,SNR=39
TIGA S **S** **12 03 42.2 +6.7**
baz=245
FXWY Fox Creek 25.05 354 IAMs_20 IAMs_20 12 08 12.3
comp=Z,35µm,20.0s
FPAL Fort Paine 25.05 47 IAmb IAmb 11 59 21.0
comp=Z,284nm,1.1s
L34A Svendsen Farm, 25.06 20 IAMs_20 IAMs_20 12 08 34.1
comp=Z,49µm,21.0s
656A Willston 25.10 60 IAmb IAmb 11 59 25.1
comp=Z,817nm,1.8s
KCPM Cahto Peak 25.12 330 P **P** **11 59 12.5 +0.4**
KCPM IAmb IAmb 11 59 15.3
comp=Z,644nm,1.8s
KCPM IAMs_20 IAMs_20 12 08 15.5
comp=Z,30µm,18.0s
O02D Mt. Diablo Mer 25.14 332 P **P** **11 59 11.5 -0.8**
baz=144
N38A Joes South For 25.20 26 IAmb IAmb 11 59 21.7
comp=Z,518nm,1.1s
N38A IAMs_20 IAMs_20 12 08 26.9
comp=Z,30µm,22.0s
SWET Sewanee 25.21 45 IAmb IAmb 11 59 29.3
comp=Z,749nm,1.9s
IMW Indian Meadow 25.29 354 IAMs_20 IAMs_20 12 08 20.2
comp=Z,30µm,21.0s
WDC Whiskeytown Da 25.36 332 IAMs_20 IAMs_20 12 08 11.7
comp=Z,49µm,20.0s
FLWY Flagg Ranch 25.46 355 IAMs_20 IAMs_20 12 08 48.5
comp=Z,37µm,18.0s
CLTN Cedars of Leba 25.47 43 P **P** **11 59 14.1 -1.0**
WVOR Wild Horse Val 25.49 341 IAmb IAmb 11 59 33.8
comp=Z,517nm,1.4s
WVOR IAMs_20 IAMs_20 12 09 23.6
comp=Z,26µm,18.0s
RSSD Black Hills 25.52 6 P **P** **11 59 15.1 -0.7**

RSSD					pmax	pmax			
	comp=Z,114nm,1.2s								
RSSD					MLR	MLR			
	comp=Z,27µm,18.0s								
RSSD	**Black Hills**	**25.52**	**6**	P	**P**	**11 59 14.8**	**-1.0**		
	baz=188								
RSSD					S	**S**	**12 03 45.4**	**+2.0**	
	baz=188								
RSSD	**Black Hills**	**25.52**	**6**	P	**P**	**11 59 15.1**	**-0.7**		
RSSD	**Black Hills**	**25.52**	**6**	IAMs_20	IAMs_20	12 08 21.5			
	comp=Z,27µm,18.0s								
T47A	**Sharon Grove**	**25.54**	**40**	IAmb	IAmb	11 59 30.2			
	comp=Z,330nm,1.1s								
MOD	**Modoc Plateau**	**25.58**	**337**	IAmb	IAmb	11 59 20.3			
	comp=Z,427nm,1.6s								
061Z	**Ochoppi**	**25.58**	**69**	P	**P**	**11 59 16.6**	**+0.3**		
X51A	**Calhoun**	**25.59**	**47**	IAmb	IAmb	11 59 50.5			
	comp=Z,938nm,2.0s								
KMRM	**Mail Ridge**	**25.60**	**330**	P	**P**	**11 59 16.0**	**-0.4**		
KMRM				IAmb	IAmb	11 59 20.8			
	comp=Z,645nm,1.5s								
PAYG	**Puerto Ayora**	**25.62**	**137**	P	**P**	**11 59 18.4**	**+1.7**		
PAYG				IAmb	IAmb	11 59 24.4			
	comp=Z,586nm,1.6s								
PAYG	**Puerto Ayora**	**25.62**	**137**	IAMs_20	IAMs_20	12 06 54.8			
	comp=Z,30µm,18.0s								
W50A	**Signal Mountai**	**25.62**	**46**	IAmb	IAmb	11 59 25.4			
	comp=Z,420nm,1.3s								
MFID	**Camas Ranch**	**25.63**	**346**	IAmb	IAmb	11 59 34.4			
	comp=Z,316nm,1.4s								
MFID				IAMs_20	IAMs_20	12 08 48.1			
	comp=Z,46µm,20.0s								
DWPF	**Disney Wildern**	**25.64**	**64**	P	**P**	**11 59 16.8**	**0.0**		
	baz=254								
DWPF				S	**S**	**12 03 52.1**	**+6.9**		
	baz=254								
DWPF	**Disney Wildern**	**25.64**	**64**	P	**P**	**11 59 16.8**	**0.0**		
N02D	**Trinity Center**	**25.75**	**333**	P	**P**	**11 59 16.0**	**-1.8**		
	baz=145,SNR=12								
H17A	**Grant Village**	**25.76**	**355**	P	**P**	**11 59 17.9**	**0.0**		
	baz=173,SNR=35								
H17A	**Grant Village**	**25.76**	**355**	IAmb	IAmb	11 59 41.4			
	comp=Z,663nm,2.0s								
LKWY	**Lake**	**25.91**	**355**	IAmb	IAmb	11 59 54.5			
LKWY	comp=Z,393nm,1.6s			IAMs_20	IAMs_20	12 09 16.1			
	comp=Z,45µm,20.0s								
BRU2	**Volcan**	**25.99**	**109**	*e*P	**P**	**11 59 22.6**	**+2.3**		
GOGA	**Godfrey**	**26.00**	**51**	P	**P**	**11 59 19.0**	**-1.1**		
	baz=242,SNR=38								
GOGA				S	**S**	**12 03 50.1**	**-0.8**		
	baz=242								
GOGA	**Godfrey**	**26.00**	**51**	IAmb	IAmb	11 59 29.0			
	comp=Z,505nm,1.6s								
M04C	**Macdoel**	**26.07**	**335**	P	**P**	**11 59 20.3**	**-0.4**		
	baz=148,SNR=30								
YMP	**Mirror Lake Pl**	**26.07**	**356**	P	**P**	**11 59 20.5**	**-0.4**		
U49A	**Red Boiling Sp**	**26.08**	**43**	IAmb	IAmb	11 59 59.8			
	comp=Z,457nm,2.0s								
U49A				IAMs_20	IAMs_20	12 10 29.9			
	comp=Z,34µm,19.0s								
KHMM	**Horse Mountain**	**26.13**	**331**	IAmb	IAmb	11 59 25.5			
	comp=Z,799nm,1.8s								
SCIA	**State Center**	**26.14**	**25**	P	**P**	**11 59 19.8**	**-1.5**		
	baz=212								
SCIA	**State Center**	**26.14**	**25**	P	**P**	**11 59 20.6**	**-0.6**		
M02C	**Callahan**	**26.16**	**333**	P	**P**	**11 59 20.3**	**-1.1**		
	baz=145,SNR=11								
N41A	**Harden Midland**	**26.18**	**30**	P	**P**	**11 59 21.0**	**-0.6**		
CBCY	**The Bluff, Cay**	**26.20**	**83**	P	**P**	**11 59 22.1**	**+0.1**		
JCC	**Jacoby Creek,**	**26.22**	**331**	IAMs_20	IAMs_20	12 08 52.6			
	comp=Z,58µm,20.0s								
CPCT	**Cooper Cave**	**26.30**	**46**	IAmb	IAmb	11 59 31.3			
	comp=Z,554nm,1.8s								
060A	**Indiantown**	**26.30**	**67**	P	**P**	**11 59 23.2**	**+0.4**		
YBH	**Yreka Blue Hor**	**26.38**	**334**	P	**P**	**11 59 21.8**	**-1.7**		
	comp=Z,9.5nm,0.8s,baz=99,slow=6.7,SNR=16								
YBH				LR	LR	12 09 27.0			
	comp=Z,39µm,21.2s,baz=156,slow=36								
YBH	**Yreka Blue Hor**	**26.38**	**334**	IAMs_20	IAMs_20	12 09 15.6			
	comp=Z,38µm,20.0s								
RLMT	**Red Lodge**	**26.39**	**357**	P	**P**	**11 59 22.8**	**-0.9**		
	baz=176,SNR=33								
RLMT				S	**S**	**12 03 58.5**	**+1.3**		
	baz=176								
RLMT	**Red Lodge**	**26.39**	**357**	IAmb	IAmb	11 59 42.5			
	comp=Z,520nm,1.7s								
K05A	**Summer Lake**	**26.51**	**338**	IAmb	IAmb	11 59 55.6			
	comp=Z,610nm,1.6s								
W52A	**Murphy**	**26.52**	**47**	IAmb	IAmb	11 59 33.4			
	comp=Z,251nm,1.1s								
ECSD	**EROS Data Cent**	**26.59**	**18**	P	**P**	**11 59 24.8**	**-0.5**		
	baz=204,SNR=26								
ECSD				S	**S**	**12 03 57.7**	**-2.3**		
	baz=204								
ECSD	**EROS Data Cent**	**26.59**	**18**	P	**P**	**11 59 24.6**	**-0.6**		
ECSD				IAmb	IAmb	12 00 21.7			
	comp=Z,445nm,2.0s								
V51A	**Loudon**	**26.61**	**46**	IAmb	IAmb	11 59 34.1			
V51A	comp=Z,502nm,1.4s			IAMs_20	IAMs_20	12 11 36.1			
	comp=Z,31µm,19.0s								
L04D	**Klamath Falls**	**26.62**	**335**	P	**P**	**11 59 24.8**	**-0.9**		
	baz=147,SNR=23								
SUSD	**Miller**	**26.65**	**14**	P	**P**	**11 59 26.0**	**+0.2**		
	baz=198								
SUSD				S	**S**	**12 04 00.7**	**-0.2**		
	baz=198								
SUSD	**Miller**	**26.65**	**14**	P	**P**	**11 59 25.1**	**-0.7**		
SUSD				IAmb	IAmb	11 59 36.8			
	comp=Z,467nm,1.4s								
KRMB	**Red Mountain**	**26.73**	**332**	P	**P**	**11 59 25.6**	**-1.1**		
KRMB				IAmb	IAmb	11 59 28.6			
	comp=Z,525nm,1.9s								
KRMB				IAMs_20	IAMs_20	12 09 08.9			
	comp=Z,51µm,20.0s								
K04D	**Chiloquin, OR**	**26.75**	**336**	P	**P**	**11 59 26.3**	**-0.5**		
	baz=149,SNR=16								
K04D				S	**S**	**12 04 06.5**	**+3.8**		
	baz=149								
HDIL	**Hopedale**	**26.82**	**32**	P	**P**	**11 59 25.9**	**-1.5**		
	baz=221,SNR=6.6								
WCI	**Wyandotte Cave**	**26.83**	**39**	P	**P**	**11 59 26.8**	**-0.7**		
WCI				pmax	pmax				
	comp=Z,611nm,1.9s								
WCI				MLR	MLR				
	comp=Z,15µm,19.0s								
WCI	**Wyandotte Cave**	**26.83**	**39**	P	**P**	**11 59 26.8**	**-0.7**		
	baz=229								
WCI				S	**S**	**12 04 05.3**	**+1.4**		
	baz=229								
WCI	**Wyandotte Cave**	**26.83**	**39**	P	**P**	**11 59 26.8**	**-0.7**		
WCI				IAmb	IAmb	11 59 36.7			
	comp=Z,611nm,1.9s								
TKL	**Tuckaleechee C**	**26.92**	**46**	P	**P**	**11 59 27.2**	**-1.1**		
	comp=Z,13nm,1.0s,baz=229,slow=7.5,SNR=15								
TKL	**Tuckaleechee C**	**26.92**	**46**	IAmb	IAmb	11 59 36.9			
	comp=Z,422nm,1.6s								
TKL				IAMs_20	IAMs_20	12 11 31.5			
	comp=Z,26µm,18.0s								
DLMT	**Dillon**	**26.93**	**352**	IAMs_20	IAMs_20	12 09 34.2			
	comp=Z,48µm,20.0s								
K38A	**Parkersburg**	**26.94**	**24**	IAmb	IAmb	12 00 14.9			
	comp=Z,588nm,1.6s								
K38A				IAMs_20	IAMs_20	12 09 33.3			
	comp=Z,38µm,19.0s								
T50A	**Nancy**	**26.98**	**43**	IAMs_20	IAMs_20	12 11 23.0			
	comp=Z,21µm,18.0s								
L40A	**Anamosa**	**27.10**	**27**	IAmb	IAmb	11 59 37.9			
	comp=Z,436nm,1.8s								
J05D	**Fort Rock, OR**	**27.12**	**338**	P	**P**	**11 59 30.3**	**0.0**		
	baz=150,SNR=53								
J05D				S	**S**	**12 04 14.6**	**+5.9**		
	baz=150								
V52A	**Sevierville**	**27.14**	**46**	IAmb	IAmb	11 59 39.0			
	comp=Z,604nm,1.9s								
V52A				IAMs_20	IAMs_20	12 11 38.3			
	comp=Z,28µm,20.0s								
BG3	**Lake Jocassee**	**27.16**	**48**	IAmb	IAmb	11 59 40.1			
	comp=Z,648nm,1.7s								
P46A	**Rosedale**	**27.24**	**36**	IAmb	IAmb	11 59 39.3			
	comp=Z,233nm,1.1s								
P46A				IAMs_20	IAMs_20	12 09 42.0			
	comp=Z,22µm,18.0s								
HODGE	**Hodges**	**27.28**	**50**	IAmb	IAmb	11 59 41.7			
	comp=Z,569nm,1.8s								
BLO	**Bloomington**	**27.32**	**37**	IAmb	IAmb	11 59 40.2			
	comp=Z,411nm,1.8s								
BMO	**Blue Mountains**	**27.34**	**345**	IAMs_20	IAMs_20	12 09 23.4			
	comp=Z,34µm,21.0s								
X54A	**Belton**	**27.34**	**50**	P	**P**	**11 59 31.8**	**-0.3**		
	baz=241,SNR=15								
X54A				S	**S**	**12 04 13.4**	**+1.4**		
	baz=241								
J04D	**Umpqua Nationa**	**27.41**	**336**	P	**P**	**11 59 32.7**	**-0.2**		
	baz=149,SNR=41								
Y55A	**Saluda**	**27.43**	**51**	P	**P**	**11 59 32.3**	**-0.7**		
	baz=243,SNR=18								
Y55A				S	**S**	**12 04 17.2**	**+3.8**		
	baz=243								
Z56A	**Williston**	**27.53**	**53**	P	**P**	**11 59 33.0**	**-0.8**		
	baz=245								
Z56A	**Williston**	**27.53**	**53**	IAMs_20	IAMs_20	12 12 17.3			
	comp=Z,28µm,20.0s								
157A	**Early Branch**	**27.55**	**54**	P	**P**	**11 59 33.5**	**-0.4**		
	baz=246,SNR=8.6								
R49A	**Shelbyville**	**27.55**	**40**	IAmb	IAmb	11 59 42.9			
	comp=Z,350nm,1.8s								
TZTN	**Tazewell**	**27.56**	**45**	P	**P**	**11 59 33.2**	**-0.9**		
	baz=236,SNR=25								
TZTN				S	**S**	**12 04 16.3**	**+0.9**		
	baz=236								
TZTN	**Tazewell**	**27.56**	**45**	IAMs_20	IAMs_20	12 11 27.2			
	comp=Z,31µm,19.0s								
K02D	**Willamette Mer**	**27.57**	**334**	P	**P**	**11 59 34.0**	**-0.2**		
	baz=145,SNR=24								
K02D				S	**S**	**12 04 21.1**	**+5.4**		
	baz=145								
V53A	**Saluda**	**27.59**	**47**	IAmb	IAmb	11 59 43.6			
	comp=Z,415nm,1.9s								
W54A	**Cherokee Point**	**27.74**	**49**	P	**P**	**11 59 35.3**	**-0.4**		
	baz=241,SNR=9.4								
W54A				S	**S**	**12 04 18.9**	**+0.6**		
	baz=241								
L42A	**Oliver, Polo**	**27.75**	**29**	IAmb	IAmb	11 59 43.6			
	comp=Z,519nm,1.2s								
Y56A	**Pelion**	**27.78**	**52**	P	**P**	**11 59 35.5**	**-0.6**		
	baz=244,SNR=5.4								
Y56A				S	**S**	**12 04 23.5**	**+4.6**		
	baz=244								
SFIN	**Lafayette**	**27.83**	**35**	P	**P**	**11 59 35.0**	**-1.4**		
	baz=225,SNR=7.0								
SFIN				S	**S**	**12 04 19.8**	**+0.2**		
	baz=225								
SFIN	**Lafayette**	**27.83**	**35**	IAmb	IAmb	11 59 49.3			
	comp=Z,661nm,1.8s								
X55A	**Gracelyn & Ava**	**27.84**	**50**	P	**P**	**11 59 35.6**	**-1.0**		
	baz=242,SNR=6.3								
X55A				S	**S**	**12 04 22.2**	**+2.3**		
	baz=242								
PAULI	**Pauline**	**27.88**	**50**	IAmb	IAmb	11 59 46.3			
	comp=Z,685nm,1.9s								
LAO	**LASA Array**	**27.94**	**2**	P	**P**	**11 59 36.1**	**-1.3**		
	baz=182,SNR=23								
LAO				S	**S**	**12 04 22.5**	**+1.3**		
	baz=182								
LAO	**LASA Array**	**27.94**	**2**	IAmb	IAmb	11 59 46.2			
	comp=Z,521nm,1.6s								
I04A	**Tendick Farm,**	**28.00**	**337**	P	**P**	**11 59 37.0**	**-0.9**		
	baz=148,SNR=15								
I04A				S	**S**	**12 04 25.6**	**+3.4**		
	baz=148								
Z57A	**Bowman**	**28.02**	**53**	P	**P**	**11 59 37.6**	**-0.6**		
	baz=246,SNR=7.6								
Z57A				S	**S**	**12 04 27.8**	**+5.0**		
	baz=246								
R50A	**Paris**	**28.07**	**41**	IAmb	IAmb	11 59 47.2			
	comp=Z,391nm,1.6s								
J01E	**Myrtle Point**	**28.07**	**334**	P	**P**	**11 59 38.7**	**+0.2**		
	baz=145,SNR=13								
J01E				S	**S**	**12 04 29.3**	**+6.0**		
	baz=145								
M44A	**Midewin, Midew**	**28.07**	**32**	IAmb	IAmb	11 59 46.6			
	comp=Z,566nm,1.8s								
I05D	**Terrebonne, OR**	**28.08**	**339**	P	**P**	**11 59 38.6**	**0.0**		
	baz=151,SNR=18								
I05D				S	**S**	**12 04 26.9**	**+3.4**		
	baz=151								
P48A	**Milroy**	**28.15**	**38**	P	**P**	**11 59 38.1**	**-1.2**		
P48A				IAmb	IAmb	11 59 49.2			
	comp=Z,333nm,1.9s								
G08A	**Pilot Rock**	**28.19**	**343**	IAMs_20	IAMs_20	12 10 56.8			
	comp=Z,28µm,18.0s								
158A	**Hollywood**	**28.19**	**55**	P	**P**	**11 59 39.4**	**-0.3**		
	baz=247								
158A				S	**S**	**12 04 29.6**	**+4.3**		
	baz=247								
JFWS	**Jewell Farm**	**28.21**	**27**	P	**P**	**11 59 38.0**	**-1.8**		
	baz=216,SNR=7.2								
JFWS				S	**S**	**12 04 23.8**	**-1.7**		
	baz=216								
V54A	**Nebo**	**28.25**	**48**	P	**P**	**11 59 39.6**	**-0.7**		
	baz=240,SNR=24								
V54A				S	**S**	**12 04 26.2**	**-0.1**		
	baz=240								
RGRS	**Roger Stewart**	**28.26**	**55**	P	**P**	**11 59 39.6**	**-0.7**		
I03D	**Drain, OR**	**28.28**	**335**	P	**P**	**11 59 40.0**	**-0.3**		
	baz=147,SNR=13								
I03D				S	**S**	**12 04 31.1**	**+4.6**		
	baz=147								
X56A	**White Oak**	**28.30**	**51**	P	**P**	**11 59 39.9**	**-0.8**		
	baz=243,SNR=11								
X56A				S	**S**	**12 04 29.1**	**+2.1**		
	baz=243								
NHSC	**New Hope**	**28.35**	**54**	P	**P**	**11 59 41.2**	**+0.1**		
	baz=246								
NHSC				S	**S**	**12 04 32.9**	**+5.1**		
	baz=246								
E28A	**Huff**	**28.36**	**10**	IAmb	IAmb	11 59 59.3			
	comp=Z,610nm,1.6s								
F10A	**Beach Ranch, E**	**28.37**	**346**	IAMs_20	IAMs_20	12 10 25.7			
	comp=Z,31µm,19.0s								
KMSC	**Kings Mountain**	**28.38**	**49**	P	**P**	**11 59 40.5**	**-0.9**		
	baz=242,SNR=12								
KMSC				S	**S**	**12 04 31.5**	**+3.2**		
	baz=242								
KMSC	**Kings Mountain**	**28.38**	**49**	IAmb	IAmb	11 59 50.7			
	comp=Z,595nm,2.0s								
KMSC				IAMs_20	IAMs_20	12 12 04.7			
	comp=Z,21µm,20.0s								
MTDJ	**Mount Denham**	**28.41**	**86**	P	**P**	**11 59 42.4**	**+0.5**		
BCIP	**Isla Barro Col**	**28.43**	**106**	*e*P	**P**	**11 59 45.8**	**+3.8**		
BCIP	**Isla Barro Col**	**28.43**	**106**	P	**P**	**11 59 42.6**	**+0.6**		
BCIP				pmax	pmax				
	comp=Z,256nm,1.8s								
BCIP	**Isla Barro Col**	**28.43**	**106**	*e*P	**P**	**11 59 45.1**	**+3.2**		
BCIP	**Isla Barro Col**	**28.43**	**106**	P	**P**	**11 59 42.6**	**+0.6**		
ZANG	**Zanguenga, Cho**	**28.48**	**106**	*e*P	**P**	**11 59 45.5**	**+3.0**		
T53A	**Wise**	**28.48**	**45**	P	**P**	**11 59 41.3**	**-1.1**		
	baz=237,SNR=15								
T53A				S	**S**	**12 04 32.2**	**+2.2**		
	baz=237								
MSO	**Missoula**	**28.56**	**351**	P	**P**	**11 59 42.0**	**-0.9**		
	baz=167,SNR=83								
MSO				S	**S**	**12 04 32.2**	**+1.1**		
	baz=167								
MSO	**Missoula**	**28.56**	**351**	IAMs_20	IAMs_20	12 10 22.3			
	comp=Z,38µm,22.0s								
Y57A	**Sumter**	**28.56**	**52**	P	**P**	**11 59 42.5**	**-0.6**		
	baz=245								
Y57A				S	**S**	**12 04 34.6**	**+3.4**		
	baz=245								
Y57A	**Sumter**	**28.56**	**52**	IAmb	IAmb	11 59 52.4			
	comp=Z,526nm,1.8s								
AZU	**Azuero**	**28.58**	**109**	*e*P	**P**	**11 59 43.4**	**0.0**		
P49A	**Miami Univ. Ec**	**28.61**	**39**	P	**P**	**11 59 42.2**	**-1.2**		
	baz=230,SNR=6.3								
P49A				S	**S**	**12 04 32.5**	**+0.6**		
	baz=230								
F33A	**5 Mile Ranch,**	**28.62**	**16**	IAmb	IAmb	11 59 55.9			
	comp=Z,319nm,1.9s								
G06A	**Carlson Farm,**	**28.64**	**340**	IAmb	IAmb	12 00 11.4			
	comp=Z,325nm,1.9s								
G06A				IAMs_20	IAMs_20	12 11 09.9			
	comp=Z,40µm,20.0s								
Z58A	**St. Stephen**	**28.72**	**54**	P	**P**	**11 59 43.9**	**-0.5**		
	baz=246								
Z58A				S	**S**	**12 04 38.9**	**+5.2**		
	baz=246								
U54A	**Nelsons Funny**	**28.72**	**47**	P	**P**	**11 59 43.5**	**-1.0**		
	baz=239,SNR=9.0								
U54A				S	**S**	**12 04 37.0**	**+3.2**		
	baz=239								
U54A	**Nelsons Funny**	**28.72**	**47**	IAMs_20	IAMs_20	12 12 39.6			
	comp=Z,28µm,20.0s								
L44A	**Lake County Fo**	**28.72**	**31**	P	**P**	**11 59 42.7**	**-1.7**		
	baz=221								
L44A				S	**S**	**12 04 33.2**	**-0.4**		
	baz=221								
L44A	**Lake County Fo**	**28.72**	**31**	P	**P**	**11 59 43.3**	**-1.1**		
L44A				IAmb	IAmb	12 00 33.5			
	comp=Z,359nm,1.6s								
H04D	**Lebanon**	**28.74**	**337**	P	**P**	**11 59 43.5**	**-1.0**		
	baz=149,SNR=7.4								
H04D				S	**S**	**12 04 38.2**	**+4.4**		
	baz=149								
BIRD	**Birdtown, Kers**	**28.79**	**51**	IAmb	IAmb	11 59 54.3			
	comp=Z,374nm,1.9s								
BIRD				IAMs_20	IAMs_20	12 13 18.6			
	comp=Z,25µm,21.0s								
V55A	**Taylorsville**	**28.81**	**48**	P	**P**	**11 59 44.3**	**-0.9**		
	baz=241,SNR=7.7								
V55A				S	**S**	**12 04 37.9**	**+2.9**		
	baz=241								
V55A	**Taylorsville**	**28.81**	**48**	IAmb	IAmb	11 59 54.4			
	comp=Z,312nm,1.8s								
V55A				IAMs_20	IAMs_20	12 13 16.2			
	comp=Z,22µm,19.0s								
I02D	**Swisshome**	**28.82**	**335**	P	**P**	**11 59 44.9**	**-0.3**		
	baz=146								
I02D				S	**S**	**12 04 41.7**	**+6.8**		
	baz=146								
O48A	**Farmland**	**28.83**	**37**	P	**P**	**11 59 43.8**	**-1.6**		
	baz=228,SNR=7.3								
O48A				S	**S**	**12 04 35.6**	**+0.3**		
	baz=228								
I40A	**Norwalk**	**28.85**	**26**	IAmb	IAmb	11 59 53.7			
	comp=Z,604nm,1.8s								
G05D	**Wamic, OR**	**28.87**	**340**	P	**P**	**11 59 45.2**	**-0.4**		
	baz=152,SNR=9.7								
W56A	**Indian Trail**	**28.92**	**50**	P	**P**	**11 59 45.0**	**-1.2**		
	baz=243,SNR=6.4								
W56A				S	**S**	**12 04 39.1**	**+2.3**		
	baz=243								
K43A	**Burlington**	**28.92**	**30**	IAmb	IAmb	12 00 48.0			
	comp=Z,446nm,1.6s								
X57A	**Johnson Farm,**	**28.98**	**52**	P	**P**	**11 59 46.2**	**-0.6**		
	baz=244								
X57A				S	**S**	**12 04 40.6**	**+2.8**		
	baz=244								
COR	**Corvallis**	**29.01**	**336**	P	**P**	**11 59 46.8**	**0.0**		
COR				pmax	pmax				
	comp=Z,486nm,1.6s								
COR				MLR	MLR				
	comp=Z,37µm,21.0s								
COR	**Corvallis**	**29.01**	**336**	P	**P**	**11 59 46.8**	**0.0**		
COR				IAmb	IAmb	12 00 04.0			
	comp=Z,486nm,1.6s								
COR	**Corvallis**	**29.01**	**336**	IAMs_20	IAMs_20	12 10 21.8			
	comp=Z,37µm,21.0s								
Y58A	**Scranton**	**29.06**	**53**	P	**P**	**11 59 47.2**	**-0.3**		
	baz=246								
Y58A				S	**S**	**12 04 43.0**	**+4.0**		
	baz=246								
Y58A	**Scranton**	**29.06**	**53**	IAmb	IAmb	11 59 57.0			
	comp=Z,772nm,2.0s								
Z59A	**Georgetown, SC**	**29.09**	**55**	P	**P**	**11 59 47.4**	**-0.4**		
	baz=247								
Z59A				S	**S**	**12 04 43.9**	**+4.3**		
	baz=247								
E09A	**Wood Farm, Sta**	**29.10**	**345**	IAMs_20	IAMs_20	12 10 49.9			
	comp=Z,25µm,19.0s								
S53A	**Williamson**	**29.14**	**44**	P	**P**	**11 59 47.3**	**-0.8**		
	baz=237,SNR=11								
S53A				S	**S**	**12 04 42.6**	**+2.3**		
	baz=237								
SPMN	**Marine on St.**	**29.14**	**22**	P	**P**	**11 59 47.4**	**-0.7**		
	baz=210,SNR=5.9								
SPMN				S	**S**	**12 04 37.4**	**-2.7**		
	baz=210								
SPMN	**Marine on St.**	**29.14**	**22**	IAmb	IAmb	11 59 57.9			
	comp=Z,292nm,1.6s								
SPMN				IAMs_20	IAMs_20	12 10 24.1			
	comp=Z,39µm,18.0s								
T54A	**Tazewell**	**29.17**	**46**	P	**P**	**11 59 47.5**	**-1.0**		
	baz=238,SNR=19								
T54A				S	**S**	**12 04 38.0**	**-2.9**		
	baz=238								
P50A	**Jamestown**	**29.21**	**40**	P	**P**	**11 59 47.7**	**-1.0**		
	baz=231,SNR=9.1								
P50A				S	**S**	**12 04 42.9**	**+1.6**		
	baz=231								
U55A	**TA2, Sparta**	**29.25**	**47**	P	**P**	**11 59 48.3**	**-0.9**		
	baz=240,SNR=6.9								
U55A				S	**S**	**12 04 42.8**	**+0.7**		
	baz=240								
V56A	**Mocksville**	**29.30**	**49**	P	**P**	**11 59 48.4**	**-1.2**		
	baz=242,SNR=8.7								
V56A				S	**S**	**12 04 44.5**	**+1.8**		
	baz=242								
N48A	**Decatur**	**29.30**	**36**	P	**P**	**11 59 47.8**	**-1.7**		
	baz=228,SNR=6.6								
N48A				S	**S**	**12 04 41.9**	**-0.9**		
	baz=228								
EGMT	**Eagleton**	**29.31**	**357**	P	**P**	**11 59 48.8**	**-0.9**		
	baz=176,SNR=27								
EGMT				S	**S**	**12 04 44.2**	**+1.3**		
	baz=176								
EGMT	**Eagleton**	**29.31**	**357**	IAmb	IAmb	12 00 10.7			
	comp=Z,427nm,1.7s								
EGMT				IAMs_20	IAMs_20	12 11 04.1			
	comp=Z,31µm,18.0s								
M47A	**Cromwell**	**29.32**	**35**	P	**P**	**11 59 48.1**	**-1.5**		
	baz=226								
M47A				S	**S**	**12 04 42.6**	**-0.4**		
	baz=226								
HAWA	**Hanford**	**29.36**	**343**	IAMs_20	IAMs_20	12 12 19.7			
	comp=Z,37µm,20.0s								
W57A	**Gilead**	**29.36**	**51**	P	**P**	**11 59 49.0**	**-1.1**		
	baz=243,SNR=7.2								
W57A				S	**S**	**12 04 44.3**	**+0.6**		
	baz=243								
W57A	**Gilead**	**29.36**	**51**	P	**P**	**11 59 49.2**	**-0.9**		
W57A				IAmb	IAmb	11 59 59.0			
	comp=Z,396nm,1.8s								
L46A	**Eue Claire**	**29.42**	**33**	IAMs_20	IAMs_20	12 11 16

	baz=246							
Y59A	**Loris**	**29.70**	**53**	P	**P**	**11 59 52.7**	**-0.4**	
T55A	**Pulaski**	**29.74**	**46**	P	**P**	**11 59 52.7**	**-0.8**	
	baz=239,SNR=11							
T55A				S	**S**	**12 04 52.8**	**+3.0**	
	baz=239							
S54A	**Dingess, Beckl**	**29.74**	**45**	P	**P**	**11 59 52.4**	**-1.1**	
	baz=238,SNR=8.8							
S54A				S	**S**	**12 04 52.8**	**+3.0**	
	baz=238							
S54A	**Dingess, Beckl**	**29.74**	**45**	IAmb	IAmb	12 00 02.6		
	comp=Z,478nm,1.6s							
Q52A	**Bidwell**	**29.77**	**42**	P	**P**	**11 59 52.2**	**-1.5**	
	baz=234,SNR=15							
MDND	**Maddock**	**29.78**	**11**	P	**P**	**11 59 52.0**	**-1.8**	
	baz=195							
MDND				S	**S**	**12 04 48.0**	**-2.1**	
	baz=195							
D08A	**Wollman Farm,**	**29.80**	**344**	IAMs_20	IAMs_20	12 11 19.5		
	comp=Z,23µm,19.0s							
DGMT	**Dagmar**	**29.82**	**4**	P	**P**	**11 59 53.2**	**-0.9**	
	baz=186,SNR=6.4							
DGMT				S	**S**	**12 04 52.6**	**+1.8**	
	baz=186							
V57A	**Coltrane Farms**	**29.85**	**49**	P	**P**	**11 59 53.6**	**-0.8**	
	baz=242,SNR=11							
V57A				S	**S**	**12 04 52.5**	**+1.0**	
	baz=242							
W58A	**Raeford**	**29.86**	**51**	P	**P**	**11 59 53.9**	**-0.7**	
	baz=244,SNR=5.6							
W58A				S	**S**	**12 04 53.8**	**+2.3**	
	baz=244							
BLA	**Blacksburg**	**30.04**	**47**	P	**P**	**11 59 54.7**	**-1.5**	
	baz=240,SNR=18							
BLA				S	**S**	**12 04 56.4**	**+1.9**	
	baz=240							
BLA	**Blacksburg**	**30.04**	**47**	IAmb	IAmb	12 00 05.1		
	comp=Z,437nm,1.9s							
BLA				IAMs_20	IAMs_20	12 13 32.5		
	comp=Z,28µm,22.0s							
ACSO	**Alum Creek Sta**	**30.09**	**39**	P	**P**	**11 59 55.3**	**-1.2**	
	baz=232,SNR=7.4							
ACSO	**Alum Creek Sta**	**30.09**	**39**	IAmb	IAmb	12 00 05.3		
	comp=Z,426nm,1.6s							
X59A	**McDuffie Farm,**	**30.14**	**53**	P	**P**	**11 59 56.6**	**-0.4**	
	baz=246							
X59A				S	**S**	**12 04 57.6**	**+1.7**	
	baz=246							
G40A	**Rib Lake**	**30.15**	**25**	IAmb	IAmb	12 01 01.2		
	comp=Z,300nm,1.6s							
G40A				IAMs_20	IAMs_20	12 10 38.8		
	comp=Z,21µm,20.0s							
R54A	**Victor**	**30.16**	**44**	P	**P**	**11 59 56.2**	**-1.1**	
	baz=237,SNR=12							
R54A				S	**S**	**12 04 56.8**	**+0.4**	
	baz=237							
F04D	**Rainier, OR**	**30.18**	**338**	P	**P**	**11 59 57.2**	**0.0**	
	baz=150							
Q53A	**Leroy**	**30.18**	**43**	P	**P**	**11 59 56.1**	**-1.3**	
	baz=236							
Q53A				S	**S**	**12 04 59.4**	**+2.7**	
	baz=236							
Y60A	**Bolivia**	**30.21**	**54**	P	**P**	**11 59 56.8**	**-0.8**	
	baz=247							
Y60A	**Bolivia**	**30.21**	**54**	IAMs_20	IAMs_20	12 13 35.4		
	comp=Z,20µm,19.0s							
T56A	**Rocky Mt**	**30.22**	**47**	P	**P**	**11 59 56.9**	**-0.8**	
	baz=240,SNR=10							
T56A				S	**S**	**12 05 01.0**	**+3.8**	
	baz=240							
F03A	**Seaside**	**30.24**	**337**	IAMs_20	IAMs_20	12 11 28.4		
	comp=Z,23µm,21.0s							
P52A	**Corning**	**30.25**	**41**	P	**P**	**11 59 56.5**	**-1.5**	
	baz=234,SNR=33							
P52A				S	**S**	**12 04 57.9**	**+0.3**	
	baz=234							
O51A	**Pataskala**	**30.26**	**40**	P	**P**	**11 59 56.6**	**-1.5**	
	baz=232,SNR=12							
O51A				S	**S**	**12 04 58.2**	**+0.3**	
	baz=232							
S55A	**Lewisburg**	**30.27**	**46**	P	**P**	**11 59 57.3**	**-1.0**	
	baz=239							
S55A				S	**S**	**12 04 57.3**	**-0.8**	
	baz=239							
V58A	**Windy Hill, Pi**	**30.29**	**50**	P	**P**	**11 59 57.3**	**-1.0**	
	baz=243,SNR=7.3							
V58A				S	**S**	**12 04 59.3**	**+1.1**	
	baz=243							
V58A	**Windy Hill, Pi**	**30.29**	**50**	IAmb	IAmb	12 00 08.8		
	comp=Z,477nm,1.9s							
N50A	**Nevada**	**30.33**	**38**	P	**P**	**11 59 57.6**	**-1.0**	
	baz=231,SNR=7.6							
N50A				S	**S**	**12 04 59.4**	**+0.5**	
	baz=231							
C09A	**Chrisman Ranch**	**30.34**	**346**	IAMs_20	IAMs_20	12 12 21.6		
	comp=Z,30µm,18.0s							
L48A	**N Adams**	**30.37**	**35**	IAmb	IAmb	12 00 07.4		
	comp=Z,496nm,1.6s							
L48A				IAMs_20	IAMs_20	12 11 43.7		
	comp=Z,20µm,20.0s							
J45A	**Montague**	**30.41**	**31**	P	**P**	**11 59 57.6**	**-1.7**	
	baz=222							
U57A	**Blanch**	**30.42**	**49**	P	**P**	**11 59 58.9**	**-0.6**	
	baz=242,SNR=6.4							
U57A				S	**S**	**12 05 03.5**	**+3.2**	
	baz=242							
E04D	**Cinebar**	**30.44**	**339**	P	**P**	**11 59 59.4**	**-0.1**	
	baz=151,SNR=22							
E04D				S	**S**	**12 05 06.6**	**+6.2**	
	baz=151							
LTY	**Liberty**	**30.47**	**342**	IAmb	IAmb	12 00 14.0		
	comp=Z,391nm,1.8s							
LTY				IAMs_20	IAMs_20	12 12 32.1		
	comp=Z,40µm,20.0s							
W59A	**Clinton**	**30.51**	**52**	S	**S**	**12 05 03.9**	**+2.2**	
	baz=245							
NEW	**Newport**	**30.52**	**347**	P	**P**	**11 59 58.9**	**-1.4**	
	comp=Z,14nm,0.9s,baz=157,slow=9.7,SNR=42							
NEW				LR	LR	12 11 36.1		
	comp=Z,27µm,20.1s,baz=166,slow=35							
NEW	**Newport**	**30.52**	**347**	P	**P**	**11 59 59.3**	**-1.0**	
	baz=162,SNR=24							
NEW				S	**S**	**12 05 03.0**	**+1.2**	
	baz=162							
NEW	**Newport**	**30.52**	**347**	IAMs_20	IAMs_20	12 12 01.3		
	comp=Z,35µm,18.0s							
H43A	**Windswept, Lux**	**30.54**	**28**	P	**P**	**11 59 59.3**	**-1.1**	
H43A				IAmb	IAmb	12 00 08.6		
	comp=Z,328nm,1.8s							
H43A				IAMs_20	IAMs_20	12 11 08.1		
	comp=Z,25µm,22.0s							
K47A	**Vermontville**	**30.56**	**34**	P	**P**	**11 59 59.1**	**-1.6**	
	baz=226,SNR=5.9							
X60A	**Albert Glenn T**	**30.61**	**53**	P	**P**	**12 00 00.6**	**-0.6**	
	baz=247							
X60A				S	**S**	**12 05 06.9**	**+3.5**	
	baz=247							
P53A	**Whipple**	**30.63**	**42**	P	**P**	**12 00 00.1**	**-1.2**	
	baz=235,SNR=18							
P53A				S	**S**	**12 05 02.4**	**-1.2**	
	baz=235							
Q54A	**Coxs Mills**	**30.70**	**43**	P	**P**	**12 00 00.6**	**-1.3**	
	baz=236,SNR=36							
Q54A				S	**S**	**12 05 03.7**	**-1.0**	
	baz=236							
O52A	**Adamsville**	**30.72**	**41**	P	**P**	**12 00 00.3**	**-1.8**	
	baz=234,SNR=27							
O52A				S	**S**	**12 05 03.7**	**-1.2**	
	baz=234							
O52A	**Adamsville**	**30.72**	**41**	IAmb	IAmb	12 00 10.0		
	comp=Z,174nm,1.1s							
T57A	**Hurt**	**30.74**	**48**	P	**P**	**12 00 01.9**	**-0.4**	
	baz=241,SNR=26							
T57A				S	**S**	**12 05 08.1**	**+2.6**	
	baz=241							
E03A	**Lebam**	**30.77**	**338**	IAmb	IAmb	12 00 04.6		
	comp=Z,318nm,1.3s							
E38A	**The Farm, Brul**	**30.78**	**22**	P	**P**	**12 00 02.2**	**-0.3**	
E38A				IAmb	IAmb	12 01 10.2		
	comp=Z,238nm,1.6s							
E38A				IAMs_20	IAMs_20	12 12 21.3		
	comp=Z,49µm,22.0s							
M50A	**Fremont**	**30.79**	**37**	IAmb	IAmb	12 00 10.8		
	comp=Z,336nm,1.2s							
R55A	**Marlinton**	**30.79**	**45**	P	**P**	**12 00 02.1**	**-0.8**	
	baz=238,SNR=22							
R55A				S	**S**	**12 05 07.6**	**+1.2**	
	baz=238							
R55A	**Marlinton**	**30.79**	**45**	IAmb	IAmb	12 00 11.8		
	comp=Z,208nm,1.1s							
D05A	**Enumclaw**	**30.81**	**341**	IAmb	IAmb	12 00 30.0		
	comp=Z,368nm,1.6s							
S56A	**Natural Bridge**	**30.86**	**46**	P	**P**	**12 00 02.3**	**-1.1**	
	baz=240							
S56A				S	**S**	**12 05 08.5**	**+1.2**	
	baz=240							
N51A	**Ashland**	**30.88**	**39**	P	**P**	**12 00 02.0**	**-1.5**	
	baz=232,SNR=6.2							
N51A				S	**S**	**12 05 06.5**	**-1.0**	
	baz=232							
N51A	**Ashland**	**30.88**	**39**	IAMs_20	IAMs_20	12 12 07.4		
	comp=Z,17µm,18.0s							
CAPC	**Capurgana**	**30.90**	**105**	*e*P	**P**	**12 00 05.0**	**+1.1**	
V59A	**Middlesex**	**30.91**	**51**	P	**P**	**12 00 03.2**	**-0.7**	
	baz=244,SNR=9.2							
V59A				S	**S**	**12 05 10.6**	**+2.6**	
	baz=244							
I45A	**Fountain**	**30.93**	**31**	P	**P**	**12 00 02.6**	**-1.3**	
	baz=222							
I45A				S	**S**	**12 05 06.6**	**-1.5**	
	baz=222							
I45A	**Fountain**	**30.93**	**31**	IAMs_20	IAMs_20	12 11 12.4		
	comp=Z,25µm,19.0s							
CNNC	**Cliffs of the**	**30.95**	**52**	P	**P**	**12 00 03.7**	**-0.4**	
	baz=246							
CNNC	**Cliffs of the**	**30.95**	**52**	IAMs_20	IAMs_20	12 14 09.9		
	comp=Z,26µm,20.0s							
U58A	**Oxford**	**30.96**	**49**	P	**P**	**12 00 03.7**	**-0.6**	
	baz=243,SNR=5.4							
U58A				S	**S**	**12 05 09.8**	**+0.9**	
	baz=243							
W60A	**Pink Hill**	**31.00**	**52**	P	**P**	**12 00 03.9**	**-0.8**	
	baz=246							
W60A				S	**S**	**12 05 12.2**	**+2.7**	
	baz=246							
AGMN	**Agassiz Nation**	**31.01**	**15**	P	**P**	**12 00 03.9**	**-0.6**	
	baz=202,SNR=18							
AGMN				S	**S**	**12 05 07.2**	**-2.0**	
	baz=202							
AGMN	**Agassiz Nation**	**31.01**	**15**	IAmb	IAmb	12 00 12.9		
	comp=Z,496nm,1.9s							
AAM	**Ann Arbor**	**31.04**	**36**	P	**P**	**12 00 03.7**	**-1.1**	
	baz=228,SNR=5.0							
D04E	**Lakebay**	**31.05**	**340**	P	**P**	**12 00 05.0**	**+0.2**	
	baz=151,SNR=6.6							
J47A	**Sunmer**	**31.06**	**33**	P	**P**	**12 00 03.7**	**-1.3**	
	baz=225,SNR=5.2							
J47A				S	**S**	**12 05 07.9**	**-2.3**	
	baz=225							
J47A	**Sunmer**	**31.06**	**33**	P	**P**	**12 00 04.2**	**-0.8**	
J47A				IAmb	IAmb	12 00 13.4		
	comp=Z,458nm,1.6s							
J47A				IAMs_20	IAMs_20	12 11 07.9		
	comp=Z,23µm,20.0s							
PTAC	**Punta Ardita,**	**31.07**	**108**	*e*P	P	12 00 10.2	+4.8	
B08A	**Colville Reser**	**31.11**	**345**	IAmb	IAmb	12 00 22.1		
	comp=Z,382nm,1.6s							
B08A				IAMs_20	IAMs_20	12 12 09.2		
	comp=Z,29µm,20.0s							
K48A	**Perry**	**31.12**	**34**	P	**P**	**12 00 04.1**	**-1.6**	
	baz=227,SNR=7.2							
C06D	**Leavenworth**	**31.14**	**342**	P	**P**	**12 00 05.4**	**-0.2**	
	baz=155							
C06D				S	**S**	**12 05 15.5**	**+4.2**	
	baz=155							
O53A	**New Philadelph**	**31.18**	**41**	P	**P**	**12 00 04.4**	**-1.7**	
	baz=234,SNR=12							
O53A				S	**S**	**12 05 09.3**	**-2.9**	
	baz=234							
Q55A	**Buckhannon**	**31.20**	**44**	P	**P**	**12 00 05.1**	**-1.3**	
	baz=237,SNR=16							
Q55A				S	**S**	**12 05 14.1**	**+1.5**	
	baz=237							
N52A	**McGinn's Farm,**	**31.22**	**40**	P	**P**	**12 00 04.8**	**-1.7**	
	baz=233,SNR=5.2							
T58A	**Grand View Acr**	**31.23**	**48**	P	**P**	**12 00 05.9**	**-0.7**	
	baz=242,SNR=9.5							
T58A				S	**S**	**12 05 13.4**	**+0.4**	
	baz=242							
I46A	**Reed City**	**31.24**	**32**	P	**P**	**12 00 04.5**	**-2.2**	
	baz=223							
M51A	**Elyria**	**31.25**	**38**	P	**P**	**12 00 05.3**	**-1.4**	
	baz=231,SNR=5.5							
M51A				S	**S**	**12 05 11.4**	**-1.8**	
	baz=231							
COWI	**Conover**	**31.26**	**25**	P	**P**	**12 00 05.7**	**-1.1**	
COWI				IAmb	IAmb	12 00 15.2		
	comp=Z,584nm,1.9s							
COWI				IAMs_20	IAMs_20	12 11 11.1		
	comp=Z,26µm,20.0s							
P54A	**Burton**	**31.27**	**43**	P	**P**	**12 00 05.6**	**-1.4**	
	baz=236,SNR=25							
P54A				S	**S**	**12 05 12.2**	**-1.6**	
	baz=236							
S57A	**Dark Hollow, R**	**31.32**	**47**	P	**P**	**12 00 06.4**	**-1.0**	
	baz=241,SNR=9.2							
S57A				S	**S**	**12 05 16.7**	**+2.2**	
	baz=241							
S57A	**Dark Hollow, R**	**31.32**	**47**	IAmb	IAmb	12 00 16.4		
	comp=Z,367nm,1.9s							
S57A				IAMs_20	IAMs_20	12 14 34.8		
	comp=Z,25µm,21.0s							
L50A	**Kingsville**	**31.34**	**37**	P	**P**	**12 00 06.3**	**-1.2**	
	baz=230,SNR=5.5							
L50A				S	**S**	**12 05 13.7**	**-0.9**	
	baz=230							
D03D	**Eldon**	**31.47**	**340**	P	**P**	**12 00 08.2**	**-0.4**	
	baz=151,SNR=27							
D03D				S	**S**	**12 05 18.1**	**+1.6**	
	baz=151							
K49A	**Clarkson**	**31.47**	**35**	P	**P**	**12 00 07.2**	**-1.5**	
	baz=228							
K49A				S	**S**	**12 05 15.8**	**-0.8**	
	baz=228							
U59A	**Littleton**	**31.49**	**50**	P	**P**	**12 00 08.1**	**-0.9**	
	baz=244,SNR=6.7							
U59A				S	**S**	**12 05 20.3**	**+3.1**	
	baz=244							
U59A	**Littleton**	**31.49**	**50**	IAmb	IAmb	12 00 18.2		
	comp=Z,263nm,1.6s							
W61A	**Ground Anchor**	**31.60**	**53**	P	**P**	**12 00 09.7**	**-0.1**	
	baz=247							
V60A	**Jim Taylor Roa**	**31.63**	**51**	P	**P**	**12 00 09.7**	**-0.5**	
	baz=246							
V60A	**Jim Taylor Roa**	**31.63**	**51**	P	**P**	**12 00 09.7**	**-0.5**	
V60A				IAmb	IAmb	12 00 19.6		
	comp=Z,294nm,1.6s							
V60A				IAMs_20	IAMs_20	12 14 15.9		
	comp=Z,22µm,21.0s							
B35A	**Bob, Littlefor**	**31.64**	**18**	P	**P**	**12 00 08.5**	**-1.6**	
B35A				IAmb	IAmb	12 00 17.8		
	comp=Z,544nm,1.8s							
J48A	**Bridge Port**	**31.64**	**34**	P	**P**	**12 00 08.7**	**-1.4**	
	baz=227,SNR=6.1							
J48A				S	**S**	**12 05 17.7**	**-1.6**	
	baz=227							
J48A	**Bridge Port**	**31.64**	**34**	IAMs_20	IAMs_20	12 12 29.4		
	comp=Z,19µm,18.0s							
P55A	**Reedsville**	**31.64**	**43**	P	**P**	**12 00 09.1**	**-1.2**	
	baz=237,SNR=16							
P55A				S	**S**	**12 05 19.7**	**+0.2**	
	baz=237							
O54A	**Avella**	**31.66**	**42**	P	**P**	**12 00 08.8**	**-1.6**	
	baz=235,SNR=12							
O54A				S	**S**	**12 05 18.0**	**-1.7**	
	baz=235							
MCWV	**Mont Chateau**	**31.71**	**43**	P	**P**	**12 00 09.6**	**-1.2**	
	baz=237,SNR=8.0							
MCWV	**Mont Chateau**	**31.71**	**43**	IAmb	IAmb	12 00 19.4		
	comp=Z,347nm,1.8s							
LCBC	**Los crdobas,**	**31.72**	**104**	*e*P	**P**	**12 00 13.7**	**+2.6**	
N53A	**Lisbon**	**31.74**	**40**	P	**P**	**12 00 09.4**	**-1.6**	
	baz=234,SNR=5.3							
N53A				S	**S**	**12 05 18.3**	**-2.6**	
	baz=234							
N53A	**Lisbon**	**31.74**	**40**	IAmb	IAmb	12 00 19.3		
	comp=Z,434nm,1.9s							
N53A				IAMs_20	IAMs_20	12 12 56.2		
	comp=Z,20µm,19.0s							
I47A	**Gladwin**	**31.77**	**32**	P	**P**	**12 00 09.8**	**-1.5**	
	baz=225,SNR=5.5							
I47A	**Gladwin**	**31.77**	**32**	IAMs_20	IAMs_20	12 11 39.7		
	comp=Z,21µm,20.0s							
B05A	**Bryant**	**31.80**	**341**	P	**P**	**12 00 10.5**	**-1.0**	
	baz=153,SNR=27							
B05A				S	S	12 05 31.7	+10	
	baz=153							
H46A	**Fife Lake**	**31.80**	**31**	P	**P**	**12 00 09.9**	**-1.7**	
	baz=223,SNR=5.8							
H46A				S	**S**	**12 05 19.3**	**-2.5**	
	baz=223							
Q56A	**Snyder Ridge,**	**31.81**	**44**	P	**P**	**12 00 10.2**	**-1.5**	
	baz=238,SNR=36							
Q56A				S	**S**	**12 05 22.9**	**+0.7**	
	baz=238							
Q56A	**Snyder Ridge,**	**31.81**	**44**	IAmb	IAmb	12 00 20.5		
	comp=Z,258nm,1.4s							
B06A	**Marblemount**	**31.84**	**342**	IAMs_20	IAMs_20	12 14 01.5		
	comp=Z,31µm,19.0s							
M52A	**Chesterland**	**31.86**	**39**	P	**P**	**12 00 11.0**	**-1.2**	
	baz=232,SNR=9.3							
M52A				S	**S**	**12 05 22.1**	**-0.8**	
	baz=232							
M52A	**Chesterland**	**31.86**	**39**	IAMs_20	IAMs_20	12 12 48.5		
	comp=Z,18µm,19.0s							
S58A	**Poland Farm, P**	**31.88**	**48**	P	**P**	**12 00 11.3**	**-1.0**	
	baz=242,SNR=5.1							
S58A				S	**S**	**12 05 25.5**	**+2.4**	
	baz=242							
S58A	**Poland Farm, P**	**31.88**	**48**	IAmb	IAmb	12 00 21.3		
	comp=Z,332nm,1.9s							
S58A				IAMs_20	IAMs_20	12 14 35.3		
	comp=Z,24µm,21.0s							
R57A	**Stanardsville**	**31.88**	**46**	P	**P**	**12 00 11.3**	**-1.1**	
	baz=240,SNR=25							
R57A				S	**S**	**12 05 24.8**	**+1.6**	
	baz=240							
K50A	**Casco**	**31.92**	**36**	P	**P**	**12 00 11.0**	**-1.6**	
	baz=229,SNR=6.6							
K50A	**Casco**	**31.92**	**36**	P	**P**	**12 00 11.1**	**-1.6**	
K50A				IAmb	IAmb	12 00 20.5		
	comp=Z,212nm,1.1s							
T59A	**Double "B" Far**	**31.94**	**49**	P	**P**	**12 00 12.1**	**-0.8**	
	baz=244,SNR=16							
T59A				S	**S**	**12 05 26.4**	**+2.4**	
	baz=244							
T59A	**Double "B" Far**	**31.94**	**49**	IAmb	IAmb	12 00 22.2		
	comp=Z,507nm,1.8s							
G45A	**Suttons Bay**	**31.95**	**30**	P	**P**	**12 00 11.3**	**-1.6**	
	baz=222,SNR=5.9							
G45A				S	**S**	**12 05 22.2**	**-2.0**	
	baz=222							
EYMN	**Ely**	**31.96**	**20**	P	**P**	**12 00 12.7**	**-0.2**	
	baz=210,SNR=29							
EYMN				S	**S**	**12 05 21.4**	**-2.8**	
	baz=210							
U60A	**Pendleton**	**32.00**	**50**	P	**P**	**12 00 12.5**	**-1.0**	
	baz=245,SNR=6.9							
U60A				S	**S**	**12 05 27.9**	**+2.8**	
	baz=245							
J49A	**Marlette**	**32.03**	**35**	P	**P**	**12 00 11.9**	**-1.6**	
	baz=228,SNR=8.3							
J49A				S	**S**	**12 05 24.5**	**-0.9**	
	baz=228							
V61A	**Roper**	**32.15**	**52**	P	**P**	**12 00 14.3**	**-0.5**	
	baz=246,SNR=7.1							
V61A	**Roper**	**32.15**	**52**	IAMs_20	IAMs_20	12 14 40.7		
	comp=Z,21µm,19.0s							
R58B	**Mineral**	**32.17**	**47**	P	**P**	**12 00 13.9**	**-0.9**	
	baz=242,SNR=7.3							
R58B				S	**S**	**12 05 29.0**	**+1.4**	
	baz=242							
R58B	**Mineral**	**32.17**	**47**	IAmb	IAmb	12 00 24.0		
	comp=Z,354nm,1.9s							
R58B				IAMs_20	IAMs_20	12 14 34.9		
	comp=Z,22µm,18.0s							
M53A	**WI Miller and**	**32.21**	**40**	P	**P**	**12 00 13.6**	**-1.6**	
	baz=233,SNR=6.4							
M53A				S	**S**	**12 05 26.1**	**-2.3**	
	baz=233							
R58A	**Rapidan**	**32.24**	**47**	P	**P**	**12 00 14.4**	**-1.1**	
	baz=241,SNR=8.3							
R58A				S	**S**	**12 05 30.2**	**+1.4**	
	baz=241							
D41A	**Chassel**	**32.27**	**25**	IAmb	IAmb	12 00 23.9		
	comp=Z,356nm,1.4s							
D41A				IAMs_20	IAMs_20	12 11 28.9		
	comp=Z,31µm,22.0s							
P56A	**Dayton Farm, R**	**32.29**	**44**	P	**P**	**12 00 14.5**	**-1.4**	
	baz=238,SNR=26							
P56A				S	**S**	**12 05 29.9**	**+0.4**	
	baz=238							
GLMI	**Grayling**	**32.29**	**31**	P	**P**	**12 00 14.4**	**-1.5**	
	baz=224,SNR=5.8							
GLMI	**Grayling**	**32.29**	**31**	IAMs_20	IAMs_20	12 11 55.6		
	comp=Z,24µm,22.0s							
I48A	**Sherman Twp**	**32.30**	**33**	P	**P**	**12 00 14.6**	**-1.3**	
	baz=226,SNR=12							
I48A				S	**S**	**12 05 31.6**	**+2.0**	
	baz=226							
Q57A	**Strasburg**	**32.33**	**45**	P	**P**	**12 00 15.5**	**-0.8**	
	baz=240,SNR=8.8							
Q57A				S	**S**	**12 05 34.4**	**+4.2**	
	baz=240							
H47A	**Mio**	**32.34**	**32**	P	**P**	**12 00 14.4**	**-1.9**	
	baz=224							
N54A	**Moraine State**	**32.35**	**41**	P	**P**	**12 00 14.7**	**-1.8**	
	baz=235,SNR=12							
N54A				S	**S**	**12 05 28.0**	**-2.5**	
	baz=235							
N54A	**Moraine State**	**32.35**	**41**	IAmb	IAmb	12 00 24.8		
	comp=Z,476nm,1.6s							
O55A	**Ligonier**	**32.36**	**43**	P	**P**	**12 00 14.9**	**-1.6**	
	baz=237,SNR=7.9							
O55A				S	**S**	**12 05 27.5**	**-3.2**	
	baz=237							
E43A	**Lone Tree Farm**	**32.37**	**27**	IAmb	IAmb	12 00 24.6		
	comp=Z,343nm,1.9s							
E43A				IAMs_20	IAMs_20	12 12 01.5		
	comp=Z,18µm,19.0s							
A04D	**Lummi Island**	**32.39**	**341**	P	**P**	**12 00 16.5**	**-0.1**	
	baz=152,SNR=9.9							
A04D				S	**S**	**12 05 31.4**	**+0.7**	
	baz=152							
PIZC	**Pizarro, Choco**	**32.42**	**111**	*e*P	**P**	**12 00 22.0**	**+4.7**	
SJCC	**San Jacinto, C**	**32.46**	**101**	*e*P	**P**	**12 00 18.2**	**+0.4**	
U61A	**Possum Corner**	**32.47**	**51**	P	**P**	**12 00 16.9**	**-0.6**	
	baz=246							
U61A	**Possum Corner**	**32.47**	**51**	IAMs_20	IAMs_20	12 15 05.0		
	comp=Z,25µm,20.0s							
S59A	**Mechanicsville**	**32.48**	**48**	P	**P**	**12 00 17.2**	**-0.4**	
	baz=243,SNR=5.4							
S59A				S	**S**	**12 05 36.1**	**+3.5**	
	baz=243							
F45A	**CMU Biological**	**32.50**	**29**	P	**P**	**12 00 16.2**	**-1.5**	
	baz=221,SNR=49							
F45A				S	**S**	**12 05 31.1**	**-1.5**	
	baz=221							
K51A	**Iona Station**	**32.51**	**37**	P	**P**	**12 00 15.8**	**-2.0**	
	baz=231							
V62A	**Hyde County Ai**	**32.52**	**52**	IAMs_20	IAMs_20	12 15 43.6		
	comp=Z,24µm,20.0s							
G46A	**Petoskey**	**32.53**	**30**	P	**P**	**12 00 15.9**	**-2.1**	
	baz=223,SNR=6.1							
I49A	**Point Hope**	**32.59**	**34**	P	**P**	**12 00 17.0**	**-1.5**	
	baz=227,SNR=9.0							
I49A				S	**S**	**12 05 32.4**	**-1.7**	
	baz=227							
T60A	**Surry**	**32.60**	**49**	P	**P**	**12 00 18.0**	**-0.6**	
	baz=244							
CBN	**Corbin Frederi**	**32.63**	**47**	P	**P**	**12 00 18.1**	**-0.9**	
	baz=242,SNR=5.6							
CBN				S	**S**	**12 05 38.3**	**+3.5**	
	baz=242							
CBN

P57A IAMs_20 IAMs_20 12 13 23.4
comp=Z,20µm,18.0s
ULM Lac du Bonnet 32.83 14 P **P** **12 00 18.3 -2.2**
comp=Z,62nm,1.0s,baz=199,slow=9.3,SNR=12
ULM Lac du Bonnet 32.83 14 P **P** **12 00 18.7 -1.8**
ULM pmax pmax
comp=Z,417nm,1.4s
ULM MLR MLR
comp=Z,23µm,22.0s
ULM Lac du Bonnet 32.83 14 P **P** **12 00 18.7 -1.8**
ULM IAmb IAmb 12 00 28.2
comp=Z,417nm,1.4s
ULM IAMs_20 IAMs_20 12 12 07.5
comp=Z,23µm,22.0s
H48A Harrisville 32.85 33 P **P** **12 00 18.5 -2.3**
baz=226,SNR=6.0
H48A S **S** **12 05 38.1 -0.1**
baz=226
H48A Harrisville 32.85 33 P **P** **12 00 19.9 -0.9**
H48A IAmb IAmb 12 00 29.9
comp=Z,307nm,1.6s
H48A IAMs_20 IAMs_20 12 12 42.7
comp=Z,19µm,18.0s
M54A Oil Creek Stat 32.87 40 P **P** **12 00 19.3 -1.6**
baz=235,SNR=20
M54A S **S** **12 05 36.5 -2.1**
baz=235
M54A Oil Creek Stat 32.87 40 IAmb IAmb 12 00 29.2
comp=Z,405nm,1.4s
O56A Blue Knob Stat 32.87 43 P **P** **12 00 19.5 -1.6**
baz=238,SNR=7.3
O56A S **S** **12 05 38.5 -0.1**
baz=238
O56A Blue Knob Stat 32.87 43 IAmb IAmb 12 00 29.5
comp=Z,258nm,1.4s
N55A Marion Center 32.88 42 P **P** **12 00 19.3 -1.8**
baz=236,SNR=47
N55A S **S** **12 05 37.1 -1.6**
baz=236
UREC San Jos de Ur 32.90 105 eP **P** **12 00 22.3 +0.7**
S60A Water View 32.91 48 P **P** **12 00 21.3 -0.1**
baz=244
G47A Hillman 32.92 31 P **P** **12 00 19.7 -1.7**
baz=224,SNR=7.9
G47A S **S** **12 05 37.8 -1.4**
baz=224
SMRC Santa Marta, M 32.96 98 eP **P** **12 00 24.7 +2.6**
K52A Tillsonburg 33.01 38 P **P** **12 00 20.2 -1.9**
baz=232
ERPA Erie 33.03 39 P **P** **12 00 20.6 -1.7**
baz=233,SNR=5.4
ERPA S **S** **12 05 39.4 -1.6**
baz=233
ERPA Erie 33.03 39 IAmb IAmb 12 00 30.5
comp=Z,561nm,1.9s
R60A Leonardtown, M 33.21 48 P **P** **12 00 23.6 -0.4**
baz=243
CBOC Ciudad Bolivar 33.22 109 eP **P** **12 00 28.4 +3.9**
P58A Pank, Wackersv 33.30 45 P **P** **12 00 23.9 -0.8**
baz=240,SNR=9.0
P58A S **S** **12 05 46.2 +1.0**
baz=240
ARGC Ariguani, Magd 33.34 101 eP **P** **12 00 27.1 +1.7**
N56A West Decatur 33.39 42 P **P** **12 00 24.0 -1.6**
baz=237,SNR=5.1
N56A S **S** **12 05 45.9 -0.8**
baz=237
M55A Ridgway 33.40 41 P **P** **12 00 23.8 -1.9**
baz=236,SNR=12
M55A S **S** **12 05 43.7 -3.1**
baz=236
M55A Ridgway 33.40 41 IAMs_20 IAMs_20 12 15 14.5
comp=Z,26µm,18.0s
PLMC San Jos del P 33.40 110 eP **P** **12 00 29.7 +3.7**
J52A Paris 33.43 37 P **P** **12 00 24.1 -1.8**
baz=231,SNR=7.7
J52A S **S** **12 05 45.5 -1.6**
baz=231
Q59A Harwood 33.44 47 P **P** **12 00 24.2 -1.8**
baz=242
Q59A S **S** **12 05 50.4 +3.0**
baz=242
O57A Amberson 33.44 44 P **P** **12 00 24.9 -1.1**
baz=239,SNR=28
O57A S **S** **12 05 47.1 -0.4**
baz=239
I51A Listowel 33.48 36 P **P** **12 00 25.0 -1.3**
baz=230,SNR=9.7
I51A S **S** **12 05 47.1 -0.9**
baz=230
L54A Sinclairville 33.50 39 P **P** **12 00 24.5 -2.0**
baz=234
L54A S **S** **12 05 47.4 -0.9**
baz=234
SSPA Standing Stone 33.50 43 P **P** **12 00 25.2 -1.3**
baz=238
SSPA S **S** **12 05 47.1 -1.3**
baz=238
SSPA Standing Stone 33.50 43 P **P** **12 00 25.8 -0.7**
HELC Santa Helena 33.52 108 eP **P** **12 00 28.9 +1.5**
E46A Sault Ste Mari 33.57 30 IAmb IAmb 12 00 35.2
comp=Z,347nm,1.8s
S61A Accomac 33.60 49 P **P** **12 00 27.4 +0.1**
baz=245
PAC1 Pacto, Paraso 33.60 120 eP **P** **12 00 32.1 +4.3**
YOTC Yotoco, Valle 33.77 112 eP **P** **12 00 30.2 +0.9**
M56A Emporium 33.77 41 P **P** **12 00 27.0 -1.9**
baz=237,SNR=6.8
M56A S **S** **12 05 51.5 -1.1**
baz=237
M56A Emporium 33.77 41 IAmb IAmb 12 00 37.9
comp=Z,238nm,1.6s
N57A Milroy 33.78 43 P **P** **12 00 27.6 -1.4**
baz=238,SNR=12
N57A S **S** **12 05 52.5 -0.2**
baz=238
LLLB Lillooet 33.84 343 IAMs_20 IAMs_20 12 14 32.8
comp=Z,36µm,20.0s
SMLC San Martn de 33.86 102 eP **P** **12 00 30.6 +0.7**
O58A Lewisberry 33.87 44 P **P** **12 00 28.5 -1.3**
baz=240,SNR=17
O58A S **S** **12 05 54.0 -0.1**
baz=240
CUSE Cuicocha Este 33.90 119 eP P 12 00 35.8 +5.0
P59A Jarrettsville 33.95 46 P **P** **12 00 29.5 -0.9**
baz=241,SNR=5.4
P59A S **S** **12 05 56.2 +0.9**
baz=241
BBAC Balboa, Cauca 33.95 116 eP **P** **12 00 33.2 +2.3**
F48A Evansville 34.00 32 P **P** **12 00 29.4 -1.3**
baz=226,SNR=17
F48A S **S** **12 05 55.2 -0.7**
baz=226
L55A Hinsdale 34.01 40 P **P** **12 00 29.3 -1.7**
baz=235,SNR=26
L55A S **S** **12 05 55.6 -0.7**
baz=235
Q60A Greensboro 34.06 47 P **P** **12 00 31.0 -0.4**
baz=243
Q60A Greensboro 34.06 47 IAMs_20 IAMs_20 12 16 06.3
comp=Z,18µm,22.0s
GUY2C Guyana, Caldas 34.08 109 eP **P** **12 00 34.5 +2.2**
D46A Sault St. Mari 34.08 29 P **P** **12 00 29.8 -1.7**
baz=222,SNR=20
D46A S **S** **12 05 55.2 -2.0**
baz=222
K54A Basiliko Farm, 34.09 39 P **P** **12 00 29.6 -2.1**
baz=235,SNR=6.8
K54A S **S** **12 05 56.5 -1.0**
baz=235
R61A Willards 34.11 48 P **P** **12 00 31.7 -0.1**
baz=244
R61A Willards 34.11 48 IAMs_20 IAMs_20 12 15 55.7
comp=Z,16µm,18.0s
E47A Iron Bridge 34.12 30 P **P** **12 00 30.5 -1.3**
baz=224,SNR=19
E47A S **S** **12 05 56.7 -1.2**
baz=224
MVL Millersville 34.19 45 IAmb IAmb 12 00 41.4
comp=Z,440nm,1.7s
MVL IAMs_20 IAMs_20 12 15 48.6
comp=Z,23µm,19.0s
SDDR Presa de Saban 34.23 84 P **P** **12 00 34.3 +1.1**
RREF El Recreo 34.24 110 eP **P** **12 00 36.8 +2.9**
F49A Sandfield 34.24 32 P **P** **12 00 31.3 -1.5**
baz=226,SNR=14
F49A S **S** **12 05 58.6 -1.1**
baz=226
GCUF Volcan Galeras 34.28 117 eP **P** **12 00 37.1 +2.9**
I53A Kortright Cn E 34.29 37 P **P** **12 00 31.6 -1.8**
baz=232
PTBC PUERTO BERRIO, 34.35 106 eP **P** **12 00 35.8 +1.6**
M57A Sunshine Farm, 34.36 42 P **P** **12 00 32.5 -1.4**
baz=238,SNR=7.8
M57A S **S** **12 05 59.4 -2.3**
baz=238
M57A Sunshine Farm, 34.36 42 IAmb IAmb 12 00 42.6
comp=Z,439nm,1.9s
N58A Sunbury 34.37 43 P **P** **12 00 32.3 -1.7**
baz=239,SNR=8.3
N58A S **S** **12 06 01.7 -0.1**
baz=239
N58A Sunbury 34.37 43 IAmb IAmb 12 00 42.4
comp=Z,472nm,1.8s
ANIL Santa Ana 34.37 110 eP **P** **12 00 39.3 +4.7**
NORC Norcasia 34.38 108 eP **P** **12 00 36.5 +2.0**
TOLC Tolima 34.40 110 eP **P** **12 00 38.2 +3.2**
SOTA Rioblanco 34.44 115 eP **P** **12 00 37.8 +2.2**
O59A Robesonia 34.45 45 P **P** **12 00 33.7 -1.1**
baz=241,SNR=6.0
O59A S **S** **12 06 05.6 +2.5**
baz=241
J54A Appleton 34.51 38 P **P** **12 00 33.5 -1.8**
baz=234,SNR=6.7
J54A S **S** **12 06 02.8 -1.1**
baz=234
J54A Appleton 34.51 38 IAMs_20 IAMs_20 12 14 16.9
comp=Z,23µm,18.0s
L56A Greenwood 34.52 41 P **P** **12 00 34.1 -1.3**
baz=237,SNR=6.6
L56A S **S** **12 06 02.5 -1.7**
baz=237
L56A Greenwood 34.52 41 IAMs_20 IAMs_20 12 15 20.1
comp=Z,24µm,18.0s
PCON Cinco Dias 34.52 114 eP **P** **12 00 36.4 +0.1**
K55A Perry 34.54 40 P **P** **12 00 33.7 -1.8**
baz=235,SNR=8.5
K55A S **S** **12 06 01.9 -2.5**
baz=235
MEDO Medina 34.56 39 IAmb IAmb 12 00 43.6
comp=Z,378nm,1.7s
MEDO IAMs_20 IAMs_20 12 14 12.1
comp=Z,19µm,19.0s
P60A Greenville 34.58 46 P **P** **12 00 35.1 -0.8**
baz=242,SNR=6.8
P60A S **S** **12 06 05.8 +0.7**
baz=242
P60A Greenville 34.58 46 IAmb IAmb 12 00 44.8
comp=Z,431nm,1.7s
P60A IAMs_20 IAMs_20 12 15 54.0
comp=Z,20µm,20.0s
D47A Chapleau 34.64 30 P **P** **12 00 34.8 -1.5**
baz=224,SNR=24
D47A S **S** **12 06 05.1 -0.8**
baz=224
H52A Wyevale 34.64 36 P **P** **12 00 35.0 -1.3**
baz=231,SNR=8.3
MMNY Mt. Morris Dam 34.64 40 IAmb IAmb 12 00 44.3
comp=Z,303nm,1.4s
MMNY IAMs_20 IAMs_20 12 14 24.2
comp=Z,16µm,18.0s
E48A Lockeyer 34.68 31 P **P** **12 00 35.7 -1.0**
baz=225,SNR=41
E48A S **S** **12 06 06.0 -0.5**
baz=225
OCAC Ocana 34.75 103 eP **P** **12 00 39.7 +1.8**
PSUB Penn St. - Bra 34.76 46 IAmb IAmb 12 00 46.1
comp=Z,540nm,1.9s
PSUB IAMs_20 IAMs_20 12 16 00.7
comp=Z,19µm,21.0s
ORTC Ortega, Tolima 34.77 111 eP **P** **12 00 40.0 +2.1**
M58A Price's Panora 34.81 43 P **P** **12 00 36.3 -1.6**
baz=239,SNR=6.3
M58A S **S** **12 06 08.5 -0.1**
baz=239
L57A Andrews Acres 34.89 42 P **P** **12 00 36.9 -1.7**
baz=238,SNR=8.9
L57A S **S** **12 06 08.8 -1.0**
baz=238
URIC Uribia, Colomb 34.91 96 eP **P** **12 00 39.0 0.0**
URIC Uribia, Colomb 34.91 96 P **P** **12 00 40.1 +1.1**
K56A Middlesex 34.98 40 P **P** **12 00 37.8 -1.6**
baz=236,SNR=36
K56A S **S** **12 06 09.0 -2.2**
baz=236
O60A Telford 34.98 45 P **P** **12 00 38.5 -0.8**
baz=242,SNR=6.0
O60A S **S** **12 06 12.0 +0.9**
baz=242
J55A Hilton 35.00 39 P **P** **12 00 37.7 -1.8**
baz=235,SNR=5.5
J55A S **S** **12 06 09.2 -2.2**
baz=235
J55A Hilton 35.00 39 IAmb IAmb 12 00 47.4
comp=Z,293nm,1.5s
J55A IAMs_20 IAMs_20 12 14 33.7
comp=Z,21µm,19.0s
N59A State Game Lan 35.03 44 P **P** **12 00 38.5 -1.3**
baz=240,SNR=8.2
N59A S **S** **12 06 12.3 +0.3**
baz=240
N59A State Game Lan 35.03 44 IAmb IAmb 12 00 48.6
comp=Z,480nm,1.9s
N59A IAMs_20 IAMs_20 12 17 33.7
comp=Z,22µm,22.0s
SPBC San Pablo de B 35.06 107 eP **P** **12 00 42.3 +1.8**
SADO Sadowa 35.13 36 IAmb IAmb 12 00 48.8
comp=Z,534nm,1.8s
SADO IAMs_20 IAMs_20 12 16 25.2
comp=Z,20µm,18.0s
BANI BANI 35.17 84 P **P** **12 00 42.2 +0.9**
BETC Betania 35.18 113 eP **P** **12 00 46.0 +4.6**
PRAC Prado 35.18 111 eP **P** **12 00 44.3 +2.9**
ROSC El Rosal 35.18 109 P **P** **12 00 44.6 +2.8**
comp=Z,5.9nm,0.5s,baz=318,slow=7.5,SNR=24
ROSC El Rosal 35.18 109 eP **P** **12 00 45.3 +3.5**
ROSC El Rosal 35.18 109 P **P** **12 00 43.6 +1.7**
ROSC IAmb IAmb 12 00 50.8
comp=Z,516nm,1.8s
PUAC Puerto Asis, P 35.30 117 eP **P** **12 00 44.9 +2.5**
H53A Bobcaygeon 35.33 37 P **P** **12 00 41.0 -1.3**
baz=232,SNR=10
H53A S **S** **12 06 14.1 -2.3**
baz=232
D48A Paudash Townsh 35.34 31 P **P** **12 00 40.7 -1.7**
baz=225,SNR=22
D48A S **S** **12 06 15.3 -1.4**
baz=225
E50A Wahnapitae 35.36 33 P **P** **12 00 41.1 -1.4**
baz=228,SNR=13
E50A S **S** **12 06 15.4 -1.5**
baz=228
GARC Garzon, Huila 35.38 114 eP **P** **12 00 45.7 +2.4**
N60A Cedar Hill Far 35.45 44 P **P** **12 00 42.0 -1.3**
baz=241,SNR=6.2
N60A S **S** **12 06 18.3 -0.1**
baz=241
O61A Allentown 35.45 46 P **P** **12 00 42.7 -0.6**
baz=243
F51A Arnstein 35.45 34 P **P** **12 00 41.7 -1.7**
baz=229,SNR=6.8
F51A S **S** **12 06 17.7 -0.7**
baz=229
K57A Scipio Center 35.49 41 P **P** **12 00 41.9 -1.8**
baz=237,SNR=7.4
K57A S **S** **12 06 18.1 -0.9**
baz=237
BARC Barichara 35.49 105 eP **P** **12 00 46.4 +2.0**
BINY Binghamton 35.54 42 P **P** **12 00 43.0 -1.2**
baz=238,SNR=7.7
BINY S **S** **12 06 19.5 -0.4**
baz=238
BINY Binghamton 35.54 42 IAmb IAmb 12 00 52.8
comp=Z,628nm,1.9s
BINY IAMs_20 IAMs_20 12 15 19.2
comp=Z,23µm,21.0s
L58A Harry Jones Me 35.55 42 P **P** **12 00 43.1 -1.2**
baz=239,SNR=8.0
L58A S **S** **12 06 19.4 -0.6**
baz=239
M59A Waymart 35.56 43 P **P** **12 00 42.9 -1.4**
baz=240,SNR=7.1
M59A S **S** **12 06 18.5 -1.6**
baz=240
SDD Santo Domingo 35.58 84 IAMs_20 IAMs_20 12 17 17.6
comp=Z,18µm,21.0s
J56A Wolcott 35.58 40 P **P** **12 00 42.8 -1.7**
baz=236,SNR=7.0
J56A S **S** **12 06 18.7 -1.6**
baz=236
J56A Wolcott 35.58 40 IAmb IAmb 12 00 52.6
comp=Z,411nm,1.6s
J56A IAMs_20 IAMs_20 12 15 42.2
comp=Z,24µm,18.0s
I55A Frankford 35.63 38 P **P** **12 00 43.0 -1.8**
baz=234,SNR=7.5
I55A S **S** **12 06 19.5 -1.6**
baz=234
D49A Beulah Townshi 35.63 31 P **P** **12 00 43.3 -1.6**
baz=226,SNR=16
D49A S **S** **12 06 19.6 -1.5**
baz=226
G53A Haliburton 35.64 36 P **P** **12 00 43.1 -1.9**
baz=232,SNR=14
G53A S **S** **12 06 21.7 +0.4**
baz=232
PAMC Pamplona, Colo 35.65 104 eP **P** **12 00 47.7 +1.7**
F52A Sundridge 35.68 34 P **P** **12 00 43.4 -1.9**
baz=230,SNR=7.6
F52A S **S** **12 06 21.7 -0.2**
baz=230
BRNJ Basking Ridge 35.71 45 IAmb IAmb 12 00 54.8
comp=Z,605nm,1.9s
CHIC Chingaza 35.80 109 eP **P** **12 00 50.1 +2.9**
DELO Deloro Mine 35.84 37 IAMs_20 IAMs_20 12 17 54.1
comp=Z,18µm,19.0s
RUSC La Rusia 35.86 106 eP **P** **12 00 48.9 +1.1**
RUSC La Rusia 35.86 106 P **P** **12 00 49.1 +1.3**
ODNJ Ogdensburg 35.88 44 IAmb IAmb 12 00 55.7
comp=Z,350nm,1.8s
ODNJ IAMs_20 IAMs_20 12 15 15.2
comp=Z,19µm,18.0s
N61A South Mountain 35.93 45 P **P** **12 00 46.6 -0.8**
baz=242,SNR=6.1
M60A Port Jervis 35.98 44 P **P** **12 00 46.6 -1.3**
baz=241,SNR=6.4
M60A S **S** **12 06 26.6 0.0**
baz=241
K58A Earlville 36.05 41 P **P** **12 00 47.0 -1.5**
baz=238,SNR=12
K58A S **S** **12 06 26.3 -1.4**
baz=238
K58A Earlville 36.05 41 IAmb IAmb 12 00 56.9
comp=Z,346nm,1.6s
K58A IAMs_20 IAMs_20 12 15 21.6
comp=Z,18µm,18.0s
VILC Villavicencio, 36.06 110 eP **P** **12 00 53.6 +4.5**
E51A G1948 Merrick 36.07 33 P **P** **12 00 47.1 -1.6**
baz=229,SNR=20
E51A S **S** **12 06 27.3 -0.6**
baz=229
G54A Lake Saint Pet 36.11 36 P **P** **12 00 47.4 -1.6**
baz=232,SNR=15
G54A S **S** **12 06 27.2 -1.3**
baz=232
H55A Tweed 36.12 38 P **P** **12 00 47.3 -1.7**
baz=234,SNR=7.0
H55A S **S** **12 06 27.1 -1.5**
baz=234
L59A Walton 36.14 43 P **P** **12 00 48.3 -1.1**
baz=240,SNR=9.3
L59A S **S** **12 06 26.7 -2.4**
baz=240
L59A Walton 36.14 43 IAMs_20 IAMs_20 12 16 31.0
comp=Z,29µm,19.0s
CPNY Central Park 36.17 45 IAMs_20 IAMs_20 12 17 12.0
comp=Z,18µm,18.0s
J57A Williamstown 36.18 40 P **P** **12 00 47.8 -1.8**
baz=237,SNR=15
J57A S **S** **12 06 28.0 -1.6**
baz=237
J57A Williamstown 36.18 40 IAmb IAmb 12 00 57.6
comp=Z,287nm,1.4s
J57A IAMs_20 IAMs_20 12 15 22.0
comp=Z,19µm,18.0s
FFC Flin Flon 36.21 5 P **P** **12 00 48.0 -1.7**
FFC pmax pmax
comp=Z,833nm,2.0s
FFC MLR MLR
comp=Z,70nm,19.0s
FFC Flin Flon 36.21 5 P **P** **12 00 48.0 -1.7**
PAL Palisades 36.31 45 P **P** **12 00 49.7 -1.0**
baz=242,SNR=5.7
PAL S **S** **12 06 33.7 +2.2**
baz=242
PAL Palisades 36.31 45 IAmb IAmb 12 00 59.5
comp=Z,541nm,1.8s
PAL IAMs_20 IAMs_20 12 17 26.6
comp=Z,22µm,18.0s
D50A G1974 Best Tow 36.31 32 P **P** **12 00 48.7 -2.0**
baz=228,SNR=11
D50A S **S** **12 06 29.9 -1.6**
baz=228
E52A Mattawa 36.35 34 P **P** **12 00 49.5 -1.6**
baz=230,SNR=14
E52A S **S** **12 06 31.6 -0.6**
baz=230
ALGO Algonquin Park 36.47 35 P **P** **12 00 50.4 -1.7**
baz=232,SNR=10
ALGO S **S** **12 06 33.0 -1.0**
baz=232
D51A Lot 18 Range I 36.50 33 P **P** **12 00 50.8 -1.5**
baz=229,SNR=6.5
D51A S **S** **12 06 34.2 -0.2**
baz=229
M61A Granite Spring 36.54 45 P **P** **12 00 51.4 -1.3**
baz=242,SNR=6.0
M61A S **S** **12 06 35.6 +0.4**
baz=242
K59A Cooperstown 36.55 42 P **P** **12 00 51.1 -1.8**
baz=239,SNR=5.9
K59A S **S** **12 06 33.6 -1.8**
baz=239
N62A Caumsett State 36.57 45 P **P** **12 00 51.7 -1.2**
baz=243
J58A Remsen 36.59 41 P **P** **12 00 51.4 -1.7**
baz=238,SNR=5.8
J58A S **S** **12 06 36.2 +0.3**
baz=238
J58A Remsen 36.59 41 IAMs_20 IAMs_20 12 16 35.9
comp=Z,27µm,19.0s
I57A Carthage 36.67 40 P **P** **12 00 51.8 -2.0**
baz=237,SNR=6.0
I57A S **S** **12 06 38.6 +1.5**
baz=237
H56A Elgin 36.68 38 P **P** **12 00 52.2 -1.6**
baz=235,SNR=8.3
H56A S **S** **12 06 36.2 -0.9**
baz=235
WSPT Westport, CT 36.77 45 IAmb IAmb 12 01 03.3
comp=Z,462nm,1.8s
G55A Calabogie 36.80 37 P **P** **12 00 53.1 -1.7**
baz=234,SNR=8.1
G55A S **S** **12 06 38.3 -0.6**
baz=234
TAMC Tame, Arauca 36.83 105 eP **P** **12 00 58.2 +2.6**
MACC Macarena, Meta 36.83 113 eP **P** **12 00 59.6 +4.1**
KSCT Kent School, K 36.92 44 IAmb IAmb 12 01 04.8
comp=Z,467nm,1.9s
KSCT IAMs_20 IAMs_20 12 17 06.9
comp=Z,30µm,20.0s
D52A ZEK Kipawa Sen 36.92 34 P **P** **12 00 54.4 -1.5**
baz=230,SNR=6.5
D52A S **S** **12 06 39.5 -1.4**
baz=230
E53A Dumoine, Ponti 36.95 35 P **P** **12 00 54.6 -1.5**
baz=232,SNR=12
E53A S **S** **12 06 40.0 -1.2**
baz=232
I58A Old Forge 36.96 40 P **P** **12 00 54.6 -1.6**
baz=238,SNR=7.9
I58A S **S** **12 06 40.6 -0.9**
baz=238
PTLC Puerto Leguiza 37.00 116 eP **P** **12 01 00.7 +3.7**
SDV Santo Domingo 37.03 100 eP **P** **12 00 58.6 +1.1**
SDV Santo Domingo 37.03 100 P **P** **12 00 58.3 +0.8**
K60A Five Rivers En 37.09 43 P **P** **12 00 55.7 -1.7**
baz=240
YLE Yale 37.10 45 IAMs_20 IAMs_20 12 17 47.6
comp=Z,22µm,18.0s
L61A Hillsdale 1, H 37.10 43 P **P** **12 00 55.9 -1.5**
baz=241

L61A S **S** **12 06 46.3 +2.7**
baz=241
J59A **Piesco** **37.13 41** P **P** **12 00 56.0 -1.7**
baz=239,SNR=6.7
J59A S **S** **12 06 43.2 -0.9**
baz=239
J59A **Piesco** **37.13 41** IAMs_20 IAMs_20 12 15 55.2
comp=Z,18µm,20.0s
BBB **Bella Bella** **37.13 339** IAMs_20 IAMs_20 12 16 09.9
comp=Z,20µm,20.0s
M62A **Hamden** **37.19 45** P **P** **12 00 56.9 -1.3**
baz=243
M62A S **S** **12 06 44.8 -0.1**
baz=243
E54A **Lac Daplat, Po** **37.24 35** P **P** **12 00 57.2 -1.4**
baz=232,SNR=8.6
E54A S **S** **12 06 45.1 -0.6**
baz=232
TRY **Troy** **37.29 43** IAMs_20 IAMs_20 12 17 36.5
comp=Z,20µm,19.0s
F55A **Otter Lake** **37.34 37** P **P** **12 00 58.0 -1.5**
baz=234,SNR=6.5
F55A S **S** **12 06 48.6 +1.3**
baz=234
D53A **Lac Vacive, Po** **37.37 34** P **P** **12 00 58.5 -1.2**
baz=231,SNR=9.3
D53A S **S** **12 06 46.9 -0.6**
baz=231
D53A **Lac Vacive, Po** **37.37 34** IAMs_20 IAMs_20 12 16 35.2
comp=Z,23µm,19.0s
PTGC **Puerto Gaitan,** **37.42 108** *e*P **P** **12 01 02.0 +1.4**
K61A **Williamstown** **37.52 43** P **P** **12 00 59.7 -1.4**
baz=241
K61A S **S** **12 06 54.2 +4.2**
baz=241
NCB **Newcomb** **37.57 41** IAMs_20 IAMs_20 12 16 05.8
comp=Z,15µm,20.0s
ORIO **Orleans, Innes** **37.60 38** P **P** **12 00 59.9 -1.7**
baz=235,SNR=5.3
ORIO S **S** **12 06 52.1 +0.9**
baz=235
L62A **Suffield** **37.61 44** P **P** **12 01 00.5 -1.3**
baz=243
ACCN **Adirondack Com** **37.61 42** IAMs_20 IAMs_20 12 17 12.0
comp=Z,25µm,19.0s
I59A **Olmsteadville** **37.69 41** P **P** **12 01 00.3 -2.2**
baz=239,SNR=7.8
I59A S **S** **12 06 51.9 -0.7**
baz=239
LONY **Lake Ozonia** **37.69 39** P **P** **12 01 00.6 -1.9**
baz=237,SNR=6.2
LONY S **S** **12 06 52.3 -0.3**
baz=237
LONY **Lake Ozonia** **37.69 39** IAMs_20 IAMs_20 12 16 16.0
comp=Z,12µm,18.0s
J60A **Lant Hill Farm** **37.70 42** P **P** **12 01 01.1 -1.4**
baz=240,SNR=7.0
J60A S **S** **12 06 52.7 0.0**
baz=240
G57A **Newington** **37.72 38** P **P** **12 01 01.0 -1.7**
baz=236,SNR=7.0
G57A S **S** **12 06 51.4 -1.5**
baz=236
M63A **Gales Ferry** **37.74 45** P **P** **12 01 02.1 -0.7**
baz=244
M63A S **S** **12 06 53.2 -0.1**
baz=244
L61B **Northampton** **37.79 44** P **P** **12 01 02.1 -1.2**
baz=242,SNR=5.9
L61B S **S** **12 06 56.1 +1.9**
baz=242
H58A **Gabriels** **37.83 40** P **P** **12 01 01.9 -1.7**
baz=238,SNR=5.6
H58A S **S** **12 06 54.7 0.0**
baz=238
E55A **Montcerf-Lytto** **37.88 36** P **P** **12 01 02.2 -1.8**
baz=234
E55A S **S** **12 06 54.6 -0.7**
baz=234
D54A **Lac Fusel, La** **37.97 35** P **P** **12 01 01.8 -2.9**
baz=232,SNR=7.2
D54A S **S** **12 06 55.0 -1.7**
baz=232
I60A **Shoreham** **38.08 41** P **P** **12 01 03.8 -1.9**
baz=240,SNR=5.4
I60A S **S** **12 06 59.1 +0.7**
baz=240
K62A **Royalston** **38.18 44** P **P** **12 01 05.6 -1.1**
baz=242
K62A S **S** **12 07 01.9 +1.7**
baz=242
K62A **Royalston** **38.18 44** P **P** **12 01 05.1 -1.6**
L63A **North Scituate** **38.23 45** P **P** **12 01 05.7 -1.4**
baz=244
L63A S **S** **12 07 01.3 +0.5**
baz=244
H59A **Cadyville** **38.24 40** P **P** **12 01 05.5 -1.6**
baz=238,SNR=6.6
H59A S **S** **12 07 03.0 +2.0**
baz=238
F57A **Harrington** **38.28 38** P **P** **12 01 06.0 -1.5**
baz=236
F57A S **S** **12 07 03.8 +2.4**
baz=236
G58A **Ormstown** **38.29 39** P **P** **12 01 06.1 -1.4**
baz=238,SNR=7.5
G58A S **S** **12 07 02.8 +1.2**
baz=238
J61A **Chester** **38.30 42** P **P** **12 01 06.9 -0.7**
baz=241,SNR=6.3
J61A S **S** **12 07 03.6 +1.7**
baz=241
M64A **Tiverton** **38.37 46** P **P** **12 01 07.1 -1.0**
baz=245
M64A S **S** **12 07 03.8 +0.9**
baz=245
FRNY **Flat Rock** **38.41 40** IAMs_20 IAMs_20 12 16 28.9
comp=Z,14µm,21.0s
ATAH **Atahualpa** **38.50 129** P **P** **12 01 12.9 +2.8**
comp=Z,111nm,1.3s,baz=328,slow=14,SNR=16
E56A **St. Veronique** **38.50 37** P **P** **12 01 07.7 -1.6**
baz=235,SNR=6.3
E56A S **S** **12 07 05.1 +0.3**
baz=235
D55A **Sainte-Anne-du** **38.53 36** P **P** **12 01 08.3 -1.3**
baz=234,SNR=9.0
D55A S **S** **12 07 04.9 -0.5**
baz=234
HRV **Adam Dziewonsk** **38.55 44** P **P** **12 01 09.2 -0.6**
HRV pmax pmax
comp=Z,235nm,1.8s
HRV MLR MLR
comp=Z,11µm,18.0s
HRV **Adam Dziewonsk** **38.55 44** P **P** **12 01 08.6 -1.2**
baz=243
HRV S **S** **12 07 08.4 +2.6**
baz=243
HRV **Adam Dziewonsk** **38.55 44** P **P** **12 01 09.2 -0.6**
AOPR **Arecibo Observ** **38.57 84** P **P** **12 01 09.9 -0.3**
HNH **Hanover** **38.65 42** IAMs_20 IAMs_20 12 17 50.3
comp=Z,26µm,18.0s
K63A **Dunstable** **38.66 44** P **P** **12 01 09.7 -0.9**
baz=243,SNR=5.1
K63A S **S** **12 07 08.5 +1.2**
baz=243
WES **Weston** **38.66 44** IAMs_20 IAMs_20 12 16 55.8
comp=Z,14µm,18.0s
VT1 **Waterbury** **38.66 41** IAMs_20 IAMs_20 12 16 49.6
comp=Z,20µm,19.0s
J62A **Henniker** **38.72 43** P **P** **12 01 10.3 -0.9**
baz=242
J62A S **S** **12 07 10.3 +2.1**
baz=242
OBIP **Obispado Ponce** **38.75 84** P **P** **12 01 11.6 -0.1**
M65A **Busby, Falmout** **38.76 46** P **P** **12 01 10.4 -1.1**
baz=245
M65A **Busby, Falmout** **38.76 46** IAMs_20 IAMs_20 12 18 14.5
comp=Z,21µm,21.0s
L64A **Middleborough** **38.78 45** P **P** **12 01 10.9 -0.7**
baz=245
L64A S **S** **12 07 11.0 +1.9**
baz=245
I61A **Oroboro, Fairl** **38.80 42** P **P** **12 01 10.6 -1.2**
baz=241,SNR=5.5
I61A S **S** **12 07 11.4 +1.9**
baz=241
H60A **Morristown** **38.81 41** P **P** **12 01 10.8 -1.2**
baz=240,SNR=5.1
H60A S **S** **12 07 11.3 +1.7**
baz=240
E57A **Chemin Saint G** **38.93 37** P **P** **12 01 11.1 -1.8**
baz=236,SNR=8.2
E57A S **S** **12 07 14.2 +2.8**
baz=236
D56A **ZEC Mazanza, M** **38.95 36** P **P** **12 01 11.4 -1.7**
baz=235,SNR=5.8
D56A S **S** **12 07 12.1 +0.5**
baz=235
LSQQ **Lebel-sur-Quev** **39.00 32** P **P** **12 01 12.1 -1.3**
baz=230
LBNH **Lisbon** **39.13 41** P **P** **12 01 13.8 -0.8**
baz=241,SNR=6.7
LBNH S **S** **12 07 16.8 +2.4**
baz=241
LBNH **Lisbon** **39.13 41** IAMs_20 IAMs_20 12 17 05.2
comp=Z,24µm,18.0s
MATQ **Matagami** **39.13 31** P **P** **12 01 12.9 -1.7**
baz=228,SNR=6.0
MATQ S **S** **12 07 12.9 -1.3**
baz=228
SJG **San Juan** **39.17 84** P **P** **12 01 15.4 +0.2**
comp=Z,69nm,1.0s,baz=269,slow=7.4,SNR=17
SJG **San Juan** **39.17 84** *e*P **P** **12 01 14.2 -1.0**
SJG **San Juan** **39.17 84** P **P** **12 01 14.8 -0.4**
SJG IAmb IAmb 12 01 31.0
comp=Z,538nm,1.8s
J63A **Strafford** **39.22 43** P **P** **12 01 14.8 -0.5**
baz=243,SNR=5.6
J63A S **S** **12 07 18.6 +2.9**
baz=243
H61A **Lyndonville** **39.27 41** P **P** **12 01 15.1 -0.7**
baz=241,SNR=7.2
H61A S **S** **12 07 18.7 +2.1**
baz=241
MOBC **Moresby Island** **39.29 337** IAMs_20 IAMs_20 12 16 09.1
comp=Z,18µm,20.0s
PDPR **Patillas Dam,** **39.30 84** IAmb IAmb 12 01 25.5
comp=Z,555nm,1.7s
G60A **Masonville** **39.30 40** P **P** **12 01 15.2 -0.8**
baz=240,SNR=7.0
G60A S **S** **12 07 20.5 +3.5**
baz=240
I62A **Tamworth** **39.33 42** P **P** **12 01 15.6 -0.7**
baz=242,SNR=6.9
I62A S **S** **12 07 19.7 +2.4**
baz=242
I62A **Tamworth** **39.33 42** IAMs_20 IAMs_20 12 18 19.5
comp=Z,29µm,21.0s
E58A **La Victoria** **39.41 38** P **P** **12 01 15.4 -1.5**
baz=237,SNR=5.8
E58A S **S** **12 07 19.3 +0.8**
baz=237
D57A **Chemin Vers le** **39.42 37** P **P** **12 01 15.0 -2.0**
baz=236,SNR=6.0
D57A S **S** **12 07 18.3 -0.4**
baz=236
F59A **Saint Guilaume** **39.42 39** P **P** **12 01 15.7 -1.3**
baz=238,SNR=5.4
F59A S **S** **12 07 20.9 +2.2**
baz=238
CBYP **Canovanas** **39.43 84** IAmb IAmb 12 01 26.7
comp=Z,664nm,1.8s
BAUV **El Baul** **39.43 99** *e*P **P** **12 01 13.7 -3.7**
HUMP **Col San Antoni** **39.45 84** IAmb IAmb 12 01 32.6
comp=Z,520nm,1.7s
DIB **Dawson Inlet,** **39.52 336** P **P** **12 01 17.7 0.0**
DIB IAMs_20 IAMs_20 12 16 02.3
comp=Z,16µm,20.0s
H02S1 **DAWSON INLET T** **39.52 336** P **P** **12 01 17.9 +0.2**
H02N1 **VAN INLET T-PH** **39.59 336** P **P** **12 01 18.7 +0.3**
MTP **Monte Pirata** **39.74 84** IAmb IAmb 12 01 36.0
comp=Z,800nm,1.6s
H62A **Milan** **39.78 41** P **P** **12 01 18.7 -1.3**
baz=241,SNR=6.4
H62A S **S** **12 07 26.1 +2.0**
baz=241
H62A **Milan** **39.78 41** IAMs_20 IAMs_20 12 17 34.3
comp=Z,28µm,19.0s
G61A **St-Isidore-de-** **39.89 40** P **P** **12 01 20.0 -0.9**
baz=240,SNR=6.6
G61A S **S** **12 07 27.4 +1.6**
baz=240
I63A **Otisfield** **39.89 42** P **P** **12 01 20.2 -0.7**
baz=243,SNR=5.3
I63A S **S** **12 07 28.0 +2.2**
baz=243
I63A **Otisfield** **39.89 42** P **P** **12 01 21.0 0.0**
F60A **Warwick** **39.98 39** P **P** **12 01 19.9 -1.7**
baz=239,SNR=7.2
F60A S **S** **12 07 29.3 +2.2**
baz=239
D58A **Chemin du LacG** **40.03 37** P **P** **12 01 20.7 -1.4**
baz=237,SNR=5.5
D58A S **S** **12 07 29.0 +1.1**
baz=237
LATQ **La Tuque** **40.25 37** P **P** **12 01 23.6 -0.3**
STVI **Saint Thomas** **40.27 83** P **P** **12 01 24.5 +0.1**
STVI IAmb IAmb 12 01 32.9
comp=Z,718nm,2.0s
I64A **Boothbay** **40.45 43** P **P** **12 01 22.8 -2.6**
baz=244
I64A S **S** **12 07 35.0 +1.0**
baz=244
G62A **West of Eustis** **40.47 41** P **P** **12 01 24.4 -1.4**
baz=241,SNR=5.8
G62A S **S** **12 07 37.1 +2.6**
baz=241
G62A **West of Eustis** **40.47 41** IAMs_20 IAMs_20 12 20 11.7
comp=Z,15µm,18.0s
E60A **Ste Agathe de** **40.49 39** P **P** **12 01 24.1 -1.7**
baz=239,SNR=9.0
E60A S **S** **12 07 35.4 +0.8**
baz=239
CDVI **St. Croix** **40.52 84** *e*P **P** **12 01 23.2 -3.3**
F61A **St Evariste** **40.56 40** P **P** **12 01 25.1 -1.3**
baz=240,SNR=6.1
F61A S **S** **12 07 37.1 +1.3**
baz=240
D59A **Saint-Raymond** **40.59 38** P **P** **12 01 25.6 -1.1**
baz=238
BBSR **BB Station** **40.68 62** P **P** **12 01 27.8 +0.2**
BBSR IAmb IAmb 12 01 37.7
comp=Z,438nm,1.5s
WVL **Waterville** **40.72 42** P **P** **12 01 27.5 -0.3**
WVL IAMs_20 IAMs_20 12 19 49.2
comp=Z,27µm,21.0s
CHGQ **Chibougamau** **40.86 33** P **P** **12 01 27.7 -1.1**
baz=232,SNR=17
CHGQ S **S** **12 07 38.7 -1.4**
baz=232
G63A **Kingsbury** **40.99 42** P **P** **12 01 29.0 -1.1**
baz=242,SNR=5.8
G63A S **S** **12 07 43.3 +1.0**
baz=242
H64A **Troy** **41.03 42** P **P** **12 01 29.6 -0.8**
baz=244
H64A S **S** **12 07 44.7 +1.9**
baz=244
D60A **Saint Jean D'O** **41.08 38** P **P** **12 01 28.9 -1.8**
baz=239
D60A S **S** **12 07 43.8 +0.5**
baz=239
E61A **Lac Etchemin** **41.09 39** P **P** **12 01 29.6 -1.3**
baz=240
E61A S **S** **12 07 45.2 +1.5**
baz=240
FCC **Fort Churchill** **41.20 11** P **P** **12 01 30.2 -1.3**
FCC pmax pmax
comp=Z,389nm,1.4s
FCC MLR MLR
comp=Z,28µm,20.0s
FCC **Fort Churchill** **41.20 11** P **P** **12 01 30.2 -1.3**
FCC IAmb IAmb 12 01 39.6
comp=Z,389nm,1.4s
FCC IAMs_20 IAMs_20 12 19 18.9
comp=Z,28µm,20.0s
PKME **Peaks-Kenny Pk** **41.27 41** P **P** **12 01 30.8 -1.4**
baz=243,SNR=5.9
PKME S **S** **12 07 47.4 +1.2**
baz=243
PKME **Peaks-Kenny Pk** **41.27 41** P **P** **12 01 32.4 +0.1**
PKME IAMs_20 IAMs_20 12 18 29.8
comp=Z,23µm,19.0s
F63A **Nahmakanta, Br** **41.59 41** P **P** **12 01 34.8 -0.1**
baz=242,SNR=7.0
F63A S **S** **12 07 51.9 +0.8**
baz=242
F63A **Nahmakanta, Br** **41.59 41** P **P** **12 01 34.8 -0.1**
F63A IAMs_20 IAMs_20 12 19 54.2
comp=Z,24µm,18.0s
G64A **Maxfield** **41.60 42** P **P** **12 01 33.8 -1.3**
baz=243
G64A S **S** **12 07 52.0 +0.8**
baz=243
D61A **St Aubert, Com** **41.66 38** P **P** **12 01 34.4 -1.0**
baz=240
D61A S **S** **12 07 52.7 +0.7**
baz=240
H65A **Eastbrook** **41.68 43** P **P** **12 01 34.5 -1.2**
baz=244
H65A S **S** **12 07 52.9 +0.5**
baz=244
E62A **Clayton Lake** **41.77 40** P **P** **12 01 35.4 -1.0**
baz=241,SNR=6.0
E62A S **S** **12 07 53.8 +0.1**
baz=241
E62A **Clayton Lake** **41.77 40** P **P** **12 01 36.1 -0.3**
E62A IAMs_20 IAMs_20 12 18 34.8
comp=Z,14µm,18.0s
SABA **Saba** **41.98 84** *e*P **P** **12 01 36.0 -2.5**
WRAK **Wrangell Islan** **42.03 340** IAmb IAmb 12 02 01.8
comp=Z,467nm,1.9s
F64A **Sherman** **42.13 41** P **P** **12 01 38.2 -1.2**
baz=243,SNR=6.8
F64A S **S** **12 07 59.7 +0.7**
baz=243
F64A **Sherman** **42.13 41** IAMs_20 IAMs_20 12 18 55.6
comp=Z,23µm,19.0s
EMMW **East Machias** **42.20 43** P **P** **12 01 39.4 -0.5**
EMMW IAMs_20 IAMs_20 12 19 56.3
comp=Z,17µm,21.0s
SEUS **St. Eustatius** **42.25 84** *e*P **P** **12 01 38.3 -2.3**
SEUS **St. Eustatius** **42.25 84** P **P** **12 01 40.1 -0.5**
PCRV **Puerto La Cruz** **42.27 95** P **P** **12 01 41.3 +0.3**
comp=Z,26nm,1.0s,baz=329,slow=7.4,SNR=5.2
D62A **Allapoint, All** **42.27 39** P **P** **12 01 39.5 -1.0**
baz=241,SNR=7.1
D62A S **S** **12 08 01.1 0.0**
baz=241
D62A **Allapoint, All** **42.27 39** P **P** **12 01 39.5 -1.0**
TAOE **Nuku Hiva Isla** **42.27 232** *e*S **S** **12 08 00.0 -1.9**
comp=Z,5µm,25.3s
TAOE *e*LQ LQ 12 11 39.3
comp=Z,28µm,28.2s
TAOE *e*LR LR 12 13 13.3
comp=Z,66µm,25.5s,baz=49
TAOE **Nuku Hiva Isla** **42.27 232** *e*T T 12 46 17.5
comp=Z,350nm,0.3s
PLCV **Puerto La Cruz** **42.32 95** P **P** **12 01 41.3 0.0**
H66A **Whiting** **42.32 43** P **P** **12 01 40.2 -0.7**
baz=245
H66A S **S** **12 08 03.0 +1.1**
baz=245
G65A **Princeton** **42.34 42** P **P** **12 01 38.8 -2.2**
baz=245
G65A S **S** **12 08 03.5 +1.4**
baz=245
G65A **Princeton** **42.34 42** IAMs_20 IAMs_20 12 19 14.0
comp=Z,18µm,19.0s
E63A **Oxbow** **42.34 40** P **P** **12 01 39.9 -1.2**
baz=242,SNR=6.6
E63A S **S** **12 08 03.0 +0.8**
baz=242
E63A **Oxbow** **42.34 40** IAmb IAmb 12 01 50.1
comp=Z,542nm,1.9s
E63A IAMs_20 IAMs_20 12 18 47.1
comp=Z,20µm,21.0s
SKI **Saint Kitts** **42.50 85** *e*P P 12 01 37.3 -5.5
SKI **Saint Kitts** **42.50 85** P **P** **12 01 42.4 -0.3**
SKI pmax pmax
comp=Z,542nm,1.0s
SKI **Saint Kitts** **42.50 85** P **P** **12 01 42.4 -0.3**
E64A **Bridgewater** **42.70 41** P **P** **12 01 43.1 -0.9**
baz=243,SNR=6.1
E64A S **S** **12 08 08.9 +1.4**
baz=243
PQI **Presque Isle** **42.70 40** P **P** **12 01 43.8 -0.2**
PQI IAMs_20 IAMs_20 12 21 51.7
comp=Z,19µm,19.0s
GGN **Saint George** **42.76 43** IAMs_20 IAMs_20 12 19 37.3
comp=Z,17µm,21.0s
D63A **Stockholm** **42.82 40** P **P** **12 01 44.0 -0.9**
baz=242,SNR=6.7
D63A S **S** **12 08 09.3 +0.1**
baz=242
NNA **Nana** **42.93 133** P **P** **12 01 47.1 +0.9**
NNA pmax pmax
comp=Z,324nm,1.6s
NNA **Nana** **42.93 133** P **P** **12 01 47.1 +0.9**
NNA IAmb IAmb 12 01 51.6
comp=Z,324nm,1.6s
NNA **Nana** **42.93 133** IAMs_20 IAMs_20 12 15 34.5
comp=Z,20µm,21.0s
MLYT **Lee's Yard** **43.12 85** *e*P **P** **12 01 50.5 +2.8**
ANWB **Willy Bob** **43.35 84** *e*P **P** **12 01 46.3 -3.3**
ANWB **Willy Bob** **43.35 84** P **P** **12 01 48.7 -0.9**
SIT **Sitka** **43.55 338** IAMs_20 IAMs_20 12 18 38.6
comp=Z,12µm,21.0s
ORIV **Oritupano** **43.75 96** *e*P P 12 01 58.2 +5.3
CBE **Ff, Capester** **43.78 86** *e*P **P** **12 01 51.9 -1.2**
TDBA **Terre de Bas,** **43.79 86** *e*P **P** **12 01 50.2 -3.0**
ABD **La Joyeuse, An** **43.82 85** *e*P **P** **12 01 55.0 +1.6**
YKA **Yellowknife Ar** **44.04 355** P **P** **12 01 51.9 -2.6**
comp=Z,4.7nm,0.8s,baz=167,slow=8.1,SNR=44
YKA PcP **PcP** **12 03 39.4 -0.4**
comp=Z,4.4nm,0.8s,baz=159,slow=3.5,SNR=6.4
YKA LR LR 12 20 17.1
comp=Z,43µm,18.9s,baz=0.0,slow=36
MDVC **Dominica, Viel** **44.05 87** *e*P **P** **12 01 51.6 -3.7**
MAGL **Barre de l'ile** **44.11 86** *e*P **P** **12 01 51.6 -4.1**
DWS **Wesley** **44.15 87** *e*P **P** **12 01 58.5 +2.4**
JIS **Juneau Island** **44.18 340** P **P** **12 01 55.5 -0.2**
JIS IAMs_20 IAMs_20 12 20 24.2
comp=Z,12µm,19.0s
LMN **Caledonia Moun** **44.37 43** IAmb IAmb 12 02 06.4
comp=Z,337nm,1.8s
LMN IAMs_20 IAMs_20 12 21 22.5
comp=Z,23µm,19.0s
GUIV **Guiria** **44.42 94** *e*P **P** **12 01 59.6 +1.4**
FDF **Fort de France** **44.47 88** *e*P **P** **12 01 59.7 +1.0**
FDF **Fort de France** **44.47 88** P **P** **12 01 59.5 +0.8**
FDF pmax pmax
comp=Z,118nm,1.1s
FDF MLR MLR
comp=Z,6µm,19.0s
FDF **Fort de France** **44.47 88** P **P** **12 01 59.5 +0.8**
BESE **Bessie Mountai** **44.57 340** IAMs_20 IAMs_20 12 20 43.6
comp=Z,12µm,19.0s
GRGR **Grenville** **44.57 92** *e*P **P** **12 01 58.2 -1.3**
GRGR **Grenville** **44.57 92** P **P** **12 01 59.9 +0.4**
BIM **Bigot** **44.59 88** *e*P **P** **12 01 58.6 -1.0**
SVB **Belmont** **44.69 90** *e*P **P** **12 02 02.9 +2.5**
GCMP **Grenada, Carri** **44.70 91** *e*P **P** **12 01 59.6 -0.9**
ILAM **Ilet Lapin Mar** **44.72 88** *e*P **P** **12 01 59.6 -1.0**
SLBI **Saint Lucia, B** **44.78 89** *e*P **P** **12 01 57.4 -3.7**
MPOM **Morne Pois Mar** **44.80 88** *e*P **P** **12 02 03.6 +2.3**
MCLT **Moule a Chique** **44.88 89** *e*P **P** **12 02 03.6 +1.6**
SLAC **Saint Lucia, A** **44.88 89** *e*P **P** **12 02 01.6 -0.4**
HLP **Hilina Pali** **45.10 279** P **P** **12 02 04.4 +0.7**
TRN **Trinidad (W)** **45.19 93** *e*P **P** **12 02 05.5 +1.1**
HMH **Humu'ula Sheep** **45.23 279** P **P** **12 02 05.2 +0.2**
AIN **Ainahou** **45.23 279** P **P** **12 02 05.5 +0.6**
MLOA **Mauna Loa Obse** **45.32 279** P **P** **12 02 05.7 -0.2**
MLOA IAMs_20 IAMs_20 12 14 34.6
comp=Z,17µm,18.0s
MWH **Moku'aweowe** **45.35 279** P **P** **12 02 06.2 0.0**
HPAH **Hawaii Prepara** **45.38 280** IAMs_20 IAMs_20 12 15 19.9
comp=Z,17µm,20.0s
KHU **Kahuku** **45.40 279** P **P** **12 02 06.7 +0.4**
KHU pmax pmax
comp=Z,913nm,1.4s
KHU **Kahuku** **45.40 279** P **P** **12 02 06.7 +0.4**
KHU IAMs_20 IAMs_20 12 17 48.6
comp=Z,17µm,20.0s
SKAG **Skagway** **45.42 340** P **P** **12 02 05.4 -0.2**
SKAG IAMs_20 IAMs_20 12 21 29.2
comp=Z,16µm,19.0s
RPN **Rapa Nui** **45.58 182** LR LR 12 16 31.6
comp=Z,10µm,21.6s,baz=3.5,slow=30
RPN **Rapa Nui** **45.58 182** IAMs_20 IAMs_20 12 16 07.4
comp=Z,14µm,21.0s
HLK **Haleakala** **45.81 281** IAMs_20 IAMs_20 12 15 49.3

	comp=Z,19µm,20.0s								
KHLH	**Kahului Airpor**	**45.96**	**281**	P		**P**		**12 02 10.5**	**+0.1**
KHLH				IAMs_20	IAMs_20		12 14 49.3		
	comp=Z,24µm,21.0s								
DHAK	**Deception Hill**	**46.09**	**339**	IAMs_20	IAMs_20		12 19 41.9		
	comp=Z,11µm,20.0s								
BBGH	**Gun Hill**	**46.32**	**90**	IAMs_20	IAMs_20		12 21 21.7		
	comp=Z,12µm,22.0s								
YKU2	**Yakutat**	**46.91**	**338**	IAMs_20	IAMs_20		12 22 42.6		
	comp=Z,10µm,20.0s								
HYT	**Haines Junctio**	**47.16**	**340**	IAmb	IAmb		12 02 37.3		
	comp=Z,179nm,1.5s								
HYT				IAMs_20	IAMs_20		12 19 56.1		
	comp=Z,16µm,21.0s								
OPA	**Opana**	**47.34**	**283**	P		**P**		**12 02 21.6**	**+0.3**
OPA				pmax	pmax				
	comp=Z,371nm,1.4s								
OPA	**Opana**	**47.34**	**283**	P		**P**		**12 02 21.6**	**+0.3**
HON	**Honolulu**	**47.37**	**282**	IAMs_20	IAMs_20		12 15 42.7		
	comp=Z,19µm,22.0s								
KIP	**Kipapa**	**47.37**	**282**	*ce*P		**P**		**12 02 20.0**	**-1.5**
KIP				pmax	pmax				
	comp=Z,279nm,2.5s								
KIP	**Kipapa**	**47.37**	**282**	P		**P**		**12 02 21.5**	**0.0**
KIP	**Kipapa**	**47.37**	**282**	IAMs_20	IAMs_20		12 15 41.7		
	comp=Z,21µm,21.0s								
SCHQ	**Schefferville**	**47.48**	**31**	P		**P**		**12 02 21.1**	**-0.7**
	comp=Z,27nm,1.0s,baz=252,slow=5.2,SNR=11								
SCHQ				LR	LR		12 21 31.1		
	comp=Z,11µm,18.0s,baz=246,slow=35								
SCHQ	**Schefferville**	**47.48**	**31**	P		**P**		**12 02 21.5**	**-0.4**
SCHQ				IAmb	IAmb		12 02 30.1		
	comp=Z,270nm,1.5s								
SCHQ				IAMs_20	IAMs_20		12 19 18.5		
	comp=Z,13µm,21.0s								
PCA	**Pinnacle**	**47.54**	**338**	IAMs_20	IAMs_20		12 20 24.1		
	comp=Z,11µm,21.0s								
MESA	**MESA**	**48.20**	**338**	IAMs_20	IAMs_20		12 20 27.6		
	comp=Z,12µm,19.0s								
YAH	**Yahtse**	**48.25**	**338**	IAmb	IAmb		12 02 46.1		
	comp=Z,263nm,1.6s								
YAH				IAMs_20	IAMs_20		12 20 32.3		
	comp=Z,16µm,21.0s								
WAX	**Waxell Ridge**	**48.71**	**338**	IAMs_20	IAMs_20		12 20 31.4		
	comp=Z,12µm,21.0s								
BARN	**Barnard Glacie**	**48.71**	**339**	IAmb	IAmb		12 02 46.3		
	comp=Z,326nm,1.8s								
BARN				IAMs_20	IAMs_20		12 21 12.0		
	comp=Z,13µm,21.0s								
PTCN	**Pitcairn Islan**	**48.75**	**208**	IAMs_20	IAMs_20		12 17 09.2		
	comp=Z,15µm,22.0s								
KEKH	**Kekaha**	**48.88**	**283**	P		**P**		**12 02 33.6**	**+0.4**
KEKH				IAMs_20	IAMs_20		12 17 44.7		
	comp=Z,16µm,18.0s								
BALM	**Baldy**	**48.94**	**338**	IAmb	IAmb		12 02 50.0		
	comp=Z,188nm,1.4s								
BALM				IAMs_20	IAMs_20		12 21 05.7		
	comp=Z,15µm,21.0s								
RAGM	**Ragged Mountai**	**49.34**	**337**	IAMs_20	IAMs_20		12 22 27.4		
	comp=Z,13µm,18.0s								
VRDI	**Verde Repeater**	**49.46**	**338**	IAmb	IAmb		12 02 53.8		
	comp=Z,168nm,1.4s								
VRDI				IAMs_20	IAMs_20		12 21 19.5		
	comp=Z,11µm,21.0s								
GLB	**Gilahina Butte**	**49.73**	**338**	IAmb	IAmb		12 02 56.7		
	comp=Z,234nm,1.5s								
GLB				IAMs_20	IAMs_20		12 25 28.4		
	comp=Z,10µm,19.0s								
EYAK	**Cordova Ski Ar**	**49.85**	**336**	IAMs_20	IAMs_20		12 20 55.7		
	comp=Z,13µm,20.0s								
HIN	**Hinchinbrook I**	**50.04**	**336**	IAMs_20	IAMs_20		12 20 58.0		
	comp=Z,12µm,20.0s								
DAWY	**Dawson**	**50.21**	**342**	IAmb	IAmb		12 02 58.6		
	comp=Z,208nm,1.6s								
DRLN	**Deer Lake**	**50.21**	**41**	IAMs_20	IAMs_20		12 25 50.0		
	comp=Z,20µm,21.0s								
FID	**Port Fidalgo**	**50.26**	**336**	IAMs_20	IAMs_20		12 21 07.5		
	comp=Z,10µm,21.0s								
PTGA	**Pitinga**	**50.51**	**107**	P		**P**		**12 02 45.9**	**+0.2**
PTGA				IAmb	IAmb		12 02 50.0		
	comp=Z,397nm,1.6s								
PTGA	**Pitinga**	**50.51**	**107**	*e*P		**P**		**12 02 45.4**	**-0.3**
GLI	**Glacier Island**	**50.57**	**336**	IAMs_20	IAMs_20		12 21 16.0		
	comp=Z,9µm,21.0s								
MENT	**Mentasta**	**50.73**	**340**	IAMs_20	IAMs_20		12 22 20.9		
	comp=Z,13µm,22.0s								
HARP	**HAARP**	**50.85**	**338**	IAMs_20	IAMs_20		12 25 36.2		
	comp=Z,12µm,20.0s								
MACA	**Manacapuru-AM**	**50.92**	**110**	*e*P		**P**		**12 02 49.0**	**+0.3**
KDAK	**Kodiak Island**	**51.13**	**331**	P		**P**		**12 02 50.0**	**+0.3**
	comp=Z,68nm,1.1s,baz=171,slow=2.3,SNR=7.5								
KDAK				LR	LR		12 21 22.0		
	comp=Z,17µm,21.4s,baz=137,slow=32								
KDAK	**Kodiak Island**	**51.13**	**331**	P		**P**		**12 02 49.6**	**-0.1**
KDAK				pmax	pmax				
	comp=Z,528nm,1.6s								
KDAK	**Kodiak Island**	**51.13**	**331**	P		**P**		**12 02 49.6**	**-0.1**
KDAK	**Kodiak Island**	**51.13**	**331**	IAMs_20	IAMs_20		12 21 22.2		
	comp=Z,16µm,21.0s								
OHAK	**Old Harbor**	**51.18**	**330**	IAMs_20	IAMs_20		12 21 00.5		
	comp=Z,15µm,22.0s								
EGAK	**Eagle**	**51.25**	**342**	IAMs_20	IAMs_20		12 23 07.8		
	comp=Z,16µm,21.0s								
SCM	**Sheep Creek Mo**	**51.26**	**337**	IAMs_20	IAMs_20		12 21 47.2		
	comp=Z,9µm,22.0s								
EPYK	**Eagle Plains**	**51.32**	**345**	P		**P**		**12 02 50.3**	**-0.8**
	baz=144,SNR=37								
EPYK				S		**S**		**12 10 12.0**	**+2.0**
	baz=144								
DOT	**Dot Lake**	**51.33**	**340**	P		**P**		**12 02 50.7**	**-0.5**
DOT				IAmb	IAmb		12 03 08.2		
	comp=Z,214nm,1.6s								
DOT				IAMs_20	IAMs_20		12 25 09.0		
	comp=Z,13µm,22.0s								
PAX	**Paxson**	**51.34**	**339**	IAMs_20	IAMs_20		12 25 57.9		
	comp=Z,14µm,20.0s								
KNK	**Knik Glacier**	**51.42**	**336**	IAmb	IAmb		12 03 08.0		
	comp=Z,232nm,1.6s								
KNK				IAMs_20	IAMs_20		12 21 52.5		
	comp=Z,9µm,21.0s								
BRLK	**Bradley Lake**	**51.44**	**334**	P		**P**		**12 02 51.6**	**-0.5**
BRLK				IAMs_20	IAMs_20		12 22 56.1		
	comp=Z,9µm,20.0s								
CNPM	**China Poot**	**51.45**	**333**	IAMs_20	IAMs_20		12 21 43.5		
	comp=Z,11µm,21.0s								
SCRK	**Sand Creek**	**51.53**	**340**	P		**P**		**12 02 52.4**	**-0.4**
SCRK				IAmb	IAmb		12 03 07.0		
	comp=Z,315nm,1.8s								
SCRK				IAMs_20	IAMs_20		12 23 55.3		
	comp=Z,13µm,21.0s								
SML	**Sawmill**	**51.62**	**337**	IAMs_20	IAMs_20		12 23 39.6		
	comp=Z,8µm,20.0s								
SAML	**Samuel**	**51.62**	**118**	P		**P**		**12 02 52.9**	**-1.1**
SAML				pmax	pmax				
	comp=Z,346nm,1.5s								
SAML	**Samuel**	**51.62**	**118**	P		**P**		**12 02 52.9**	**-1.1**
SAML				IAmb	IAmb		12 02 56.8		
	comp=Z,346nm,1.5s								
SAML	**Samuel**	**51.62**	**118**	*e*P		**P**		**12 02 53.1**	**-0.8**
XMAS	**Kiritimati**	**51.63**	**257**	P		**P**		**12 02 53.6**	**-0.5**
RIDG	**Independent Ri**	**51.65**	**340**	IAmb	IAmb		12 03 09.7		
	comp=Z,227nm,1.0s								
RIDG				IAMs_20	IAMs_20		12 23 01.3		
	comp=Z,15µm,22.0s								
C36M	**Paulatuk**	**51.67**	**353**	P		**P**		**12 02 52.2**	**-1.4**
	baz=160,SNR=6.5								
C36M				S		**S**		**12 10 15.4**	**+0.8**
	baz=160								
HOM	**Homer**	**51.70**	**333**	IAMs_20	IAMs_20		12 22 02.1		
	comp=Z,9µm,22.0s								
RC01	**Rabbit Creek A**	**51.73**	**335**	IAMs_20	IAMs_20		12 21 47.3		
	comp=Z,10µm,22.0s								
PMR	**Palmer**	**51.79**	**336**	P		**P**		**12 02 54.5**	**0.0**
PMR				pmax	pmax				
	comp=Z,374nm,2.0s								
PMR				MLR	MLR				
	comp=Z,8µm,20.0s								
PMR	**Palmer**	**51.79**	**336**	P		**P**		**12 02 54.5**	**0.0**
PMR				IAmb	IAmb		12 03 07.3		
	comp=Z,374nm,2.0s								
PMR				IAMs_20	IAMs_20		12 26 28.2		
	comp=Z,8µm,20.0s								
GHO	**Glory Hole Cre**	**51.82**	**336**	IAMs_20	IAMs_20		12 22 16.0		
	comp=Z,9µm,22.0s								
AP01	**Chacaltuta**	**51.85**	**133**	IAMs_20	IAMs_20		12 20 21.4		
	comp=Z,12µm,21.0s								
PB12	**IPOC Station P**	**52.03**	**133**	P		**P**		**12 02 57.7**	**+0.7**
PB12				IAmb	IAmb		12 03 03.0		
	comp=Z,385nm,1.8s								
PB12				IAMs_20	IAMs_20		12 20 25.0		
	comp=Z,9µm,21.0s								
LPAZ	**La Paz**	**52.05**	**129**	P		**P**		**12 02 58.3**	**+0.5**
	comp=Z,32nm,0.8s,baz=330,slow=7.8,SNR=56								
LPAZ				LR	LR		12 22 42.9		
	comp=Z,11µm,21.6s,baz=312,slow=33								
LPAZ	**La Paz**	**52.05**	**129**	P		**P**		**12 02 58.1**	**+0.3**
LPAZ				IAmb	IAmb		12 03 02.5		
	comp=Z,407nm,1.9s								
LPAZ	**La Paz**	**52.05**	**129**	*e*P		**P**		**12 02 58.7**	**+0.9**
DHY	**Denali Highway**	**52.06**	**338**	IAMs_20	IAMs_20		12 26 19.4		
	comp=Z,9µm,20.0s								
INK	**Inuvik**	**52.24**	**348**	P		**P**		**12 02 56.8**	**-1.0**
	comp=Z,32nm,0.9s,baz=139,slow=7.5,SNR=52								
INK				LR	LR		12 25 54.6		
	comp=Z,14µm,18.2s,baz=136,slow=37								
INK	**Inuvik**	**52.24**	**348**	IAMs_20	IAMs_20		12 25 36.6		
	comp=Z,18µm,22.0s								
HDA	**Harding Lake**	**52.78**	**340**	P		**P**		**12 03 00.7**	**-1.2**
	baz=131,SNR=12								
HDA	**Harding Lake**	**52.78**	**340**	IAMs_20	IAMs_20		12 25 03.3		
	comp=Z,11µm,18.0s								
RND	**Reindeer**	**52.79**	**338**	IAmb	IAmb		12 03 19.0		
	comp=Z,167nm,1.2s								
RND				IAMs_20	IAMs_20		12 22 59.7		
	comp=Z,10µm,20.0s								
PSGCX	**Pisagua**	**52.84**	**134**	IAMs_20	IAMs_20		12 21 11.6		
	comp=Z,10µm,19.0s								
MNMC	**Minye Minye**	**52.88**	**133**	P		**P**		**12 03 04.5**	**+0.9**
MNMC				IAmb	IAmb		12 03 11.7		
	comp=Z,238nm,1.5s								
MNMC				IAMs_20	IAMs_20		12 20 52.7		
	comp=Z,9µm,22.0s								
IL31		**53.00**	**340**	P		**P**		**12 03 02.0**	**-1.5**
ILAR	**Eielson Array**	**53.00**	**340**	P		**P**		**12 03 02.2**	**-1.3**
	comp=Z,24nm,1.0s,baz=146,slow=5.7,SNR=110								
ILAR				LR	LR		12 26 11.7		
	comp=Z,8µm,18.8s,baz=138,slow=37								
MCK	**McKinley**	**53.02**	**338**	IAmb	IAmb		12 03 35.4		
	comp=Z,161nm,1.3s								
MCK				IAMs_20	IAMs_20		12 28 28.8		
	comp=Z,13µm,19.0s								
PRP	**Porcupine Dome**	**53.08**	**341**	IAmb	IAmb		12 03 20.9		
	comp=Z,373nm,1.9s								
PRP				IAMs_20	IAMs_20		12 26 43.0		
	comp=Z,15µm,19.0s								
WRH	**Wood River Hil**	**53.20**	**339**	IAMs_20	IAMs_20		12 23 33.4		
	comp=Z,12µm,22.0s								
CCB	**Clear Creek Bu**	**53.22**	**340**	IAMs_20	IAMs_20		12 25 26.9		
	comp=Z,11µm,18.0s								
PB11	**IPOC Station P**	**53.27**	**134**	P		**P**		**12 03 06.5**	**+0.1**
PB11				IAMs_20	IAMs_20		12 21 25.1		
	comp=Z,7µm,19.0s								
TRF	**Thorofare Moun**	**53.33**	**338**	IAMs_20	IAMs_20		12 23 16.0		
	comp=Z,11µm,20.0s								
CNBA	**Chernabura Isl**	**53.36**	**325**	P		**P**		**12 03 05.8**	**-0.5**
CNBA				IAmb	IAmb		12 03 08.7		
	comp=Z,500nm,2.0s								
CNBA				IAMs_20	IAMs_20		12 19 55.4		
	comp=Z,12µm,20.0s								
COLA	**College**	**53.38**	**340**	*d i*P		**P**		**12 03 05.0**	**-1.3**
COLA				pmax	pmax				
	comp=Z,86nm,2.3s								
COLA				MLR	MLR				
	comp=Z,8µm,17.0s								
COLA	**College**	**53.38**	**340**	P		**P**		**12 03 05.6**	**-0.7**
COLA				IAmb	IAmb		12 04 23.2		
	comp=Z,217nm,1.8s								
COLA	**College**	**53.38**	**340**	IAMs_20	IAMs_20		12 26 31.3		
	comp=Z,9µm,19.0s								
TCOL	**CIGO, UAF Yank**	**53.38**	**340**	P		**P**		**12 03 04.5**	**-1.9**
	baz=130								
POKR	**Poker Plat Res**	**53.41**	**340**	P		**P**		**12 03 05.6**	**-0.9**
	baz=131,SNR=13								
TA01	**Diego Aracena**	**53.47**	**135**	P		**P**		**12 03 08.0**	**+0.4**
TA01				IAmb	IAmb		12 03 12.7		
	comp=Z,290nm,1.4s								
TA01				IAMs_20	IAMs_20		12 23 03.4		
	comp=Z,8µm,19.0s								
GO01	**Chusmiza**	**53.53**	**133**	P		**P**		**12 03 09.2**	**+0.6**
GO01				IAmb	IAmb		12 03 14.1		
	comp=Z,339nm,1.8s								
GO01				IAMs_20	IAMs_20		12 23 50.3		
	comp=Z,8µm,21.0s								
KTH	**Kantishna Hill**	**53.62**	**338**	IAmb	IAmb		12 03 23.6		
	comp=Z,198nm,1.3s								
KTH				IAMs_20	IAMs_20		12 23 20.6		
	comp=Z,11µm,22.0s								
PATCX	**Punta Patache**	**53.67**	**135**	P		**P**		**12 03 09.6**	**+0.5**
PATCX				IAmb	IAmb		12 03 14.2		
	comp=Z,230nm,1.5s								
PPLA	**Purkeypile**	**53.71**	**336**	IAMs_20	IAMs_20		12 24 57.1		
	comp=Z,7µm,20.0s								
FYU	**Fort Yukon**	**53.72**	**342**	IAmb	IAmb		12 03 30.1		
	comp=Z,375nm,1.5s								
FYU				IAMs_20	IAMs_20		12 27 00.9		
	comp=Z,13µm,20.0s								
PB08	**IPOC Station P**	**53.88**	**134**	P		**P**		**12 03 11.7**	**+0.7**
PB08				IAMs_20	IAMs_20		12 23 51.0		
	comp=Z,8µm,19.0s								
MEH	**Mehetia**	**53.95**	**230**	*e*P		**P**		**12 03 12.9**	**+1.7**
	comp=Z,50nm,1.2s								
BPAW	**Bear Paw Mtn.**	**53.97**	**338**	IAMs_20	IAMs_20		12 25 38.8		
	comp=Z,10µm,18.0s								
PB01	**IPOC Station P**	**54.27**	**135**	P		**P**		**12 03 14.2**	**+0.7**
PB01				IAmb	IAmb		12 03 18.8		
	comp=Z,342nm,1.7s								
A36M	**Sachs Harbour**	**54.29**	**353**	P		**P**		**12 03 11.5**	**-1.4**
	baz=159,SNR=5.6								
MLY	**Manley**	**54.44**	**339**	IAmb	IAmb		12 04 00.9		
	comp=Z,173nm,1.6s								
MLY				IAMs_20	IAMs_20		12 23 58.2		
	comp=Z,13µm,22.0s								
PB07	**IPOC Station P**	**54.48**	**136**	P		**P**		**12 03 15.7**	**+0.5**
PB07				IAmb	IAmb		12 03 20.4		
	comp=Z,162nm,1.3s								
PB07				IAMs_20	IAMs_20		12 21 15.6		
	comp=Z,10µm,20.0s								
TIAR	**Tiarei**	**54.69**	**231**	*e*P		**P**		**12 03 18.3**	**+1.8**
	comp=Z,44nm,1.2s								
PB04	**IPOC Station P**	**54.73**	**137**	IAMs_20	IAMs_20		12 21 08.8		
	comp=Z,14µm,21.0s								
TVO	**Taravao**	**54.76**	**231**	*e*P		**P**		**12 03 19.0**	**+1.9**
	comp=Z,19nm,0.9s								
PPT	**Papeete**	**54.86**	**231**	LR	LR		12 20 18.7		
	comp=Z,14µm,20.4s,baz=44,slow=29								
PPTF	**Pamatai, Papee**	**54.87**	**231**	P		**P**		**12 03 18.6**	**+0.7**
PPTF				IAMs_20	IAMs_20		12 20 08.7		
	comp=Z,17µm,21.0s								
PPT2	**Papeete2**	**54.88**	**231**	*e*S		**S**		**12 10 57.2**	**-2.5**
	comp=Z,13µm,24.2s								
PPT2				*e*LR	LR		12 19 04.9		
	comp=Z,62µm,26.2s,baz=39								
PB09	**IPOC Station P**	**54.96**	**135**	P		**P**		**12 03 20.2**	**+1.6**
PB09				IAMs_20	IAMs_20		12 21 41.7		
	comp=Z,7µm,20.0s								
PB10	**IPOC Station P**	**55.31**	**138**	IAMs_20	IAMs_20		12 21 25.2		
	comp=Z,18µm,22.0s								
PB06	**IPOC Station P**	**55.37**	**136**	P		**P**		**12 03 22.4**	**+0.8**
PB06				IAmb	IAmb		12 03 26.9		
	comp=Z,357nm,1.7s								
PB06				IAMs_20	IAMs_20		12 21 09.8		
	comp=Z,14µm,21.0s								
FALS	**False Pass**	**55.46**	**324**	IAmb	IAmb		12 03 23.4		
	comp=Z,193nm,1.3s								
FALS				IAMs_20	IAMs_20		12 20 56.9		
	comp=Z,9µm,21.0s								
COLD	**Coldfoot**	**55.63**	**341**	IAmb	IAmb		12 03 44.1		
	comp=Z,164nm,1.6s								
COLD				IAMs_20	IAMs_20		12 26 01.4		
	comp=Z,12µm,20.0s								
LVC	**Limon Verde**	**55.74**	**136**	P		**P**		**12 03 25.4**	**+0.9**
LVC				pmax	pmax				
	comp=Z,261nm,1.6s								
LVC	**Limon Verde**	**55.74**	**136**	P		**P**		**12 03 25.4**	**+0.9**
LVC				IAmb	IAmb		12 03 30.5		
	comp=Z,261nm,1.6s								
LVC	**Limon Verde**	**55.74**	**136**	IAMs_20	IAMs_20		12 21 53.5		
	comp=Z,12µm,22.0s								
PB15	**IPOC Station P**	**55.79**	**137**	P		**P**		**12 03 24.8**	**+0.1**
PB15				IAmb	IAmb		12 03 46.4		
	comp=Z,239nm,1.9s								
PB15				IAMs_20	IAMs_20		12 21 52.9		
	comp=Z,15µm,20.0s								
ITTB	**Itaituba**	**55.88**	**109**	*e*P		**P**		**12 03 25.5**	**+0.3**
ITTB				*e*S		**S**		**12 11 04.4**	**-8.7**
MALB	**Monte Alegre**	**56.16**	**105**	*e*P		**P**		**12 03 28.1**	**+0.9**
MALB				*e*S		**S**		**12 11 09.2**	**-7.7**
VILB	**Vilhena**	**56.23**	**120**	*e*P		**P**		**12 03 27.5**	**-0.3**
TOLK	**Toolik Lake Re**	**56.35**	**343**	P		**P**		**12 03 27.2**	**-0.7**
	baz=130,SNR=24								
TOLK				S		**S**		**12 11 23.8**	**+5.8**
	baz=130								
RES	**Resolute Bay**	**56.43**	**4**	P		**P**		**12 03 25.9**	**-2.3**
	comp=Z,11nm,0.9s,baz=203,slow=15,SNR=9.2								
RES				LR	LR		12 26 26.4		
	comp=Z,12µm,21.4s,baz=188,slow=35								
AKUT	**Akutan**	**56.57**	**323**	IAmb	IAmb		12 03 44.6		
	comp=Z,197nm,1.1s								
UNV	**Unalaska Valle**	**56.92**	**323**	IAMs_20	IAMs_20		12 21 44.7		
	comp=Z,11µm,22.0s								
GO02	**Mina Guanaco**	**57.11**	**138**	P		**P**		**12 03 35.3**	**+1.1**
GO02				IAmb	IAmb		12 03 39.9		
	comp=Z,384nm,1.8s								
GO02				IAMs_20	IAMs_20		12 22 09.3		
	comp=Z,13µm,20.0s								
NPGB	**Novo Progresso**	**57.41**	**112**	*e*P		**P**		**12 03 35.0**	**-1.1**
NIKH	**Nikolski High**	**58.10**	**321**	IAMs_20	IAMs_20		12 22 14.8		
	comp=Z,9µm,20.0s								
PTLB	**Pontes e Lacer**	**58.46**	**122**	*e*S		S		12 11 38.3	-8.7
GO03	**Copiap**	**58.48**	**141**	P		**P**		**12 03 44.7**	**+1.3**
GO03				IAmb	IAmb		12 03 56.0		
	comp=Z,201nm,1.8s								
GO03				IAMs_20	IAMs_20		12 22 37.2		
	comp=Z,13µm,20.0s								
TBI	**Tubuai**	**58.52**	**226**	*e*S		**S**		**12 11 44.9**	**-2.7**
	comp=Z,15µm,27.0s								
TBI				*e*LQ	LQ		12 18 31.4		
	comp=Z,8µm,26.0s								
TBI				*e*LR	LR		12 20 40.5		
	comp=Z,47µm,28.2s,baz=46								
TBI	**Tubuai**	**58.52**	**226**	*e*T		T		13 06 42.2	
	comp=Z,16nm,0.2s								
H03N2	**Juan Fernandez**	**58.57**	**152**	T		T		13 07 24.5	
	baz=330,slow=78,SNR=925								
H03N1	**Juan Fernandez**	**58.58**	**152**	T		T		13 07 12.3	
	baz=330,slow=78,SNR=1289								
H03N3	**Juan Fernandez**	**58.59**	**152**	T		T		13 07 11.3	
	baz=330,slow=78,SNR=791								
AC02	**Maricunga**	**58.60**	**139**	P		**P**		**12 03 45.6**	**+0.8**
AC02				IAmb	IAmb		12 03 52.4		
	comp=Z,165nm,1.6s								
AC02				IAMs_20	IAMs_20		12 23 04.1		
	comp=Z,16µm,21.0s								
IVI	**Ivigtut**	**59.14**	**29**	P		**P**		**12 03 47.9**	**+0.4**
IVI				IAmb	IAmb		12 03 56.6		
	comp=Z,250nm,1.5s								
AC05	**El Transito**	**59.38**	**142**	P		**P**		**12 03 51.1**	**+1.3**
GO04	**Tololo Observa**	**60.07**	**143**	P		**P**		**12 03 56.0**	**+1.3**
GO04				IAmb	IAmb		12 03 60.0		
	comp=Z,255nm,1.5s								
RDOG	**Red Dog Mine**	**60.17**	**339**	P		**P**		**12 03 53.8**	**-0.7**
RDOG				IAmb	IAmb		12 04 09.7		
	comp=Z,163nm,1.2s								
RDOG				IAMs_20	IAMs_20		12 28 09.3		
	comp=Z,8µm,22.0s								
SFJD	**Kangerlussuaq**	**60.23**	**22**	LR	LR		12 29 46.5		
	comp=Z,17µm,19.0s,baz=243,slow=36								
SFJD	**Kangerlussuaq**	**60.23**	**22**	P		**P**		**12 03 55.7**	**+0.8**
SFJD				pmax	pmax				
	comp=Z,325nm,1.7s								
SFJD	**Kangerlussuaq**	**60.23**	**22**	P		**P**		**12 03 55.7**	**+0.8**
SFJD	**Kangerlussuaq**	**60.23**	**22**	*i* P		**P**		**12 03 54.4**	**-0.5**
	comp=Z,2µm,20.0s								
CO01	**Juntas del Tor**	**60.33**	**143**	P		**P**		**12 03 57.6**	**+1.2**
CO03	**El Pedregal**	**60.64**	**144**	IAMs_20	IAMs_20		12 24 25.4		
	comp=Z,13µm,19.0s								
CO02	**Combarbal**	**60.74**	**144**	P		**P**		**12 03 59.4**	**+0.3**
CO02				IAmb	IAmb		12 04 05.4		
	comp=Z,229nm,1.6s								
ILULI	**Ilulissat**	**60.99**	**20**	*i* P		**P**		**12 04 00.2**	**+0.1**
ILULI				pmax	pmax				
	comp=Z,220nm,1.5s								
ILULI				MLR	MLR				
	comp=Z,21µm,14.0s								
ILULI	**Ilulissat**	**60.99**	**20**	*i* P		**P**		**12 04 00.2**	**+0.1**
	comp=Z,220nm,1.5s								
	comp=Z,21µm,14.0s								
TULEG	**Thule**	**61.11**	**10**	P		**P**		**12 04 00.7**	**-0.1**
TULEG				IAmb	IAmb		12 04 13.8		
	comp=Z,176nm,1.5s								
ATKA	**Atka Island**	**61.20**	**320**	P		**P**		**12 04 01.3**	**-0.

PCMB	**Pacaembu**	68.06	123	*e*P		**P**		12 04 47.7	+0.6	
SMY	**Shemya**	68.36	320	IAMs_20		IAMs_20		12 27 14.3		
	comp=Z,9µm,22.0s									
PLCA	**Paso Flores**	68.37	151	P		**P**		12 04 50.4	+1.7	
	comp=Z,28nm,1.3s,baz=321,slow=6.3,SNR=8.0									
PLCA				LR		LR		12 28 33.6		
	comp=Z,28µm,18.7s,baz=328,slow=30									
PLCA	**Paso Flores**	68.37	151	P		**P**		12 04 49.1	+0.5	
PLCA				IAmb		IAmb		12 04 54.3		
	comp=Z,184nm,1.8s									
PLCA	**Paso Flores**	68.37	151	*e*P		**P**		12 04 50.9	+2.3	
IPMB	**Ipameri, GO**	68.71	119	*e*P		**P**		12 04 52.8	+1.6	
LL01	**San Ignacio de**	68.85	153	P		**P**		12 04 53.4	+1.9	
LL01				IAmb		IAmb		12 04 58.1		
	comp=Z,214nm,1.7s									
PTGB	**Pitanga**	69.10	127	*e*P		**P**		12 04 54.7	+1.1	
BB19B	**Bebedouro**	69.97	122	*e*P		**P**		12 05 00.1	+1.1	
PCED	**Cedros**	69.98	55	*e*P		**P**		12 04 59.1	+0.3	
	comp=Z,274nm,2.2s									
CALA	**Caldeira**	69.98	55	*e*P		**P**		12 04 58.7	-0.2	
	comp=Z,418nm,1.5s									
HOR	**Horta**	70.05	55	*e*P		**P**		12 04 59.8	+0.6	
	comp=Z,25nm,0.3s									
PCAN	**Candelaria**	70.17	55	*e*P		**P**		12 04 59.7	-0.3	
	comp=Z,281nm,1.5s									
PICO	**Pico**	70.21	55	*e*P		**P**		12 05 00.4	+0.1	
	comp=Z,438nm,2.1s									
FRTB	**Fartura**	70.30	124	*e*P		**P**		12 05 02.2	+1.2	
ROSA	**Rosais**	70.32	55	*e*P		**P**		12 05 00.3	-0.6	
	comp=Z,163nm,1.6s									
SRBC	**Serra Branca**	70.43	54	*e*P		**P**		12 05 01.3	-0.3	
	comp=Z,857nm,1.9s									
ITAB	**Concordia**	70.44	129	*e*P		**P**		12 05 03.9	+2.2	
PMAN	**Manadas**	70.45	55	*e*P		**P**		12 05 01.9	+0.2	
	comp=Z,267nm,2.0s									
PGRA	**Graciosa**	70.48	54	*e*P		**P**		12 05 02.1	+0.2	
	comp=Z,450nm,2.0s									
JANB	**Januaria**	70.68	114	*e*P		**P**		12 05 05.1	+1.7	
SCO	**Scoresbysund**	71.05	21	*i* P		**P**		12 05 05.0	+0.3	
SCO				pmax		pmax				
	comp=Z,210nm,1.6s									
SCO				MLR		MLR				
	comp=Z,22µm,18.0s									
SCO	**Scoresbysund**	71.05	21	*i* P		**P**		12 05 05.0	+0.3	
	comp=Z,214nm,1.6s									
	comp=Z,22µm,18.0s									
LPA	**La Plata**	71.11	139	*e*P		**P**		12 05 09.2	+3.6	
LPA				PPP		PPP		12 09 26.4		
LPA				PKIKP		**PKiKP**		12 11 07.4	-6.4	
LPA				S		**S**		12 14 23.0	+0.7	
LPA				SKIKS				12 18 19.0		
LPA				SS		**SS**		12 18 55.4	-0.8	
AFI	**Afiamalu**	71.14	248	IAMs_20		IAMs_20		12 27 42.6		
	comp=Z,10µm,20.0s									
BILL	**Bilibino**	71.42	337	*d* iP		**P**		12 05 06.1	-0.9	
BILL				pmax		pmax				
	comp=Z,125nm,2.4s									
BILL				MLR		MLR				
	comp=Z,8µm,17.0s									
BILL	**Bilibino**	71.42	337	P		**P**		12 05 06.2	-0.8	
BILL				IAmb		IAmb		12 05 22.6		
	comp=Z,276nm,1.7s									
BILL				IAMs_20		IAMs_20		12 41 34.4		
	comp=Z,8µm,18.0s									
BORG	**Borgarnes**	71.64	27	IAMs_20		IAMs_20		12 32 49.1		
	comp=Z,9µm,21.0s									
DAG	**Danmarks Havn**	71.67	14	*i* P		**P**		12 05 07.6	-0.8	
DAG				pmax		pmax				
	comp=Z,330nm,1.5s									
DAG				MLR		MLR				
	comp=Z,26µm,17.0s									
DAG	**Danmarks Havn**	71.67	14	*i* P		**P**		12 05 07.6	-0.8	
	comp=Z,333nm,1.5s									
	comp=Z,26µm,17.0s									
MC01	**Montes Claros**	71.72	115	*e*P		**P**		12 05 10.8	+1.0	
NOR	**Nord**	71.75	9	*i* P		**P**		12 05 07.6	-1.2	
NOR				pmax		pmax				
	comp=Z,300nm,1.7s									
NOR				MLR		MLR				
	comp=Z,58µm,15.0s									
NOR	**Nord**	71.75	9	*i* P		**P**		12 05 07.6	-1.2	
	comp=Z,297nm,1.7s									
	comp=Z,58µm,15.0s									
NIUE	**Niue**	71.86	242	IAMs_20		IAMs_20		12 27 56.9		
	comp=Z,10µm,21.0s									
PLTB	**Pedras Altas**	72.00	134	*e*P		**P**		12 05 11.9	+0.8	
SPB	**Sao Paulo**	72.11	123	P		**P**		12 05 12.4	+0.6	
SPB				IAmb		IAmb		12 05 16.8		
	comp=Z,274nm,1.4s									
SPB				IAMs_20		IAMs_20		12 34 11.4		
	comp=Z,5µm,21.0s									
SPB	**Sao Paulo**	72.11	123	*e*P		**P**		12 05 13.0	+1.1	
VAO	**Valinhos**	72.18	123	*e*P		**P**		12 05 13.6	+1.1	
PSET	**Sete Cidades**	72.42	55	*e*P		**P**		12 05 13.9	+0.2	
	comp=Z,692nm,1.9s									
CNLB	**Canela**	72.54	130	*e*P		**P**		12 05 16.1	+1.7	
GRON	**Grota Negra**	72.58	55	*e*P		**P**		12 05 14.8	+0.2	
	comp=Z,559nm,1.8s									
PET01	**Itanhaem-SP**	72.58	124	*e*P		**P**		12 05 16.2	+1.5	
CMLA	**Cha da Macela**	72.59	55	*e*P		**P**		12 05 15.0	+0.4	
	comp=Z,613nm,1.9s									
PCALD	**Caldeiras da R**	72.61	55	*e*P		**P**		12 05 15.0	+0.2	
	comp=Z,555nm,1.9s									
BART	**Pico Bartolome**	72.86	55	*e*P		**P**		12 05 15.5	-0.9	
	comp=Z,427nm,1.6s									
BSCB	**Bom Sucesso**	72.99	120	*e*P		**P**		12 05 19.4	+2.1	
BSCB				*e*S		**S**		12 14 38.5	-6.2	
PSMA	**Santa Maria**	73.04	56	*e*P		**P**		12 05 16.8	-0.5	
	comp=Z,248nm,1.9s									
PSMN	**Pico do Norte,**	73.09	56	*e*P		**P**		12 05 17.3	-0.3	
	comp=Z,309nm,1.9s									
PARB	**Paraibuna**	73.42	122	*e*P		**P**		12 05 22.5	+2.7	
GDU01	**Guandu, BA**	74.26	111	*e*P		**P**		12 05 27.2	+2.4	
MAN01	**Angra dos Reis**	74.54	121	*e*P		**P**		12 05 28.5	+2.2	
RCBR	**Riachuelo**	74.59	102	P		**P**		12 05 27.2	+0.4	
RCBR				pmax		pmax				
	comp=Z,294nm,1.5s									
RCBR	**Riachuelo**	74.59	102	P		**P**		12 05 27.2	+0.4	
RCBR				IAmb		IAmb		12 05 31.7		
	comp=Z,294nm,1.4s									
RCBR	**Riachuelo**	74.59	102	*e*P		**P**		12 05 30.3	+3.5	
SJMB	**Sao Joao De Ma**	74.96	116	*e*P		**P**		12 05 31.8	+3.0	
BSFB	**Barra de Sao F**	75.31	116	*e*P		**P**		12 05 33.3	+2.5	
CAM01	**Campos-RJ**	75.95	119	*e*P		**P**		12 05 37.6	+3.2	
KBS	**Kingsbay**	77.14	10	*c* iP		**P**		12 05 42.7	+2.5	
KBS				pmax		pmax				
	comp=Z,290nm,1.9s									
KBS				MLR		MLR				
	comp=Z,18µm,16.0s									
PET	**Petropavlovsk**	77.56	322	*d* iP		**P**		12 05 42.1	-0.9	
PET				*e*				12 08 33.0		
PET				*e*S		**S**		12 15 28.8	-5.5	
PET				*e*PS				12 16 02.2		
PET				*e*PPS		PPS		12 16 24.4		
PET				pmax		pmax				
	comp=Z,2µm,5.8s									
PET				pmax		pmax				
	comp=Z,58nm,2.2s									
PET				pmax		pmax				
	comp=Z,3µm,5.5s									
PET				pmax		pmax				
	comp=Z,800nm,8.6s									
PET				pmax		pmax				
	comp=Z,2µm,5.2s									
PET				MLR		MLR				
	comp=Z,2µm,18.0s									
PET				MLR		MLR				
	comp=Z,2µm,20.0s									
PET	**Petropavlovsk**	77.56	322	P		**P**		12 05 42.7	-0.3	
PET				IAmb		IAmb		12 06 06.5		
	comp=Z,328nm,2.0s									
PET				IAMs_20		IAMs_20		12 32 41.6		
	comp=Z,6µm,22.0s									
SEY	**Seymchan**	78.05	333	P		**P**		12 05 44.8	-0.8	
	comp=Z,15nm,0.8s,baz=111,slow=5.0,SNR=22									
PEA0B	**Petropavlovsk-**	78.10	322	P		**P**		12 05 46.3	+0.3	
PEA0B				pmax		pmax				
	comp=Z,328nm,1.8s									
PEA0B	**Petropavlovsk-**	78.10	322	P		**P**		12 05 46.2	+0.3	
PEA0B				IAmb		IAmb		12 06 06.3		
	comp=Z,328nm,1.8s									
PEA0B				IAMs_20		IAMs_20		12 32 36.7		
	comp=Z,7µm,22.0s									
PETK	**Petropavlovsk-**	78.10	322	P		**P**		12 05 45.1	-0.9	
	comp=Z,17nm,0.8s,baz=91,slow=9.0,SNR=25									
PETK				LR		LR		12 33 44.1		
	comp=Z,4µm,21.8s,baz=80,slow=31									
GO10	**Punta Arenas**	78.18	159	P		**P**		12 05 47.2	+0.9	
SPITS	**Spitsbergen Ar**	78.30	10	P		**P**		12 05 45.8	-0.9	
	comp=Z,8.6nm,0.7s,baz=323,slow=1.3,SNR=7.0									
SKR	**Severo-Kuril's**	79.71	320	*e*P		**P**		12 05 53.3	-1.5	
SKR				*e*S		**S**		12 15 55.5	-1.9	
SKR				*e*PS				12 16 37.8		
SKR				pmax		pmax				
	comp=Z,800nm,5.5s									
SKR				pmax		pmax				
	comp=Z,2µm,5.1s									
SKR				MLR		MLR				
	comp=Z,700nm,21.0s									
SKR				MLR		MLR				
	comp=Z,700nm,20.0s									
MA2	**Magadan**	79.86	330	*d* iP		**P**		12 05 55.1	-0.4	
MA2				pmax		pmax				
	comp=Z,96nm,1.6s									
MA2	**Magadan**	79.86	330	P		**P**		12 05 55.5	0.0	
MA2				IAmb		IAmb		12 06 12.5		
	comp=Z,380nm,1.8s									
MA2				IAMs_20		IAMs_20		12 47 37.5		
	comp=Z,5µm,19.0s									
WAKE	**Wake Island**	80.25	287	IAMs_20		IAMs_20		12 32 33.6		
	comp=Z,8µm,19.0s									
PMOZ	**Porto Moniz, M**	80.34	59	*e*P		P		12 06 07.8	+9.0	
PMOZ	**Porto Moniz, M**	80.34	59	*e*S		S		12 16 15.3	+10	
PMOZ	**Porto Moniz, M**	80.34	59	*e*LR		LR		12 31 36.6		
	comp=Z,3µm,18.0s									
H11S1	**WAKE ISLAND Hy**	80.43	286	T		T		13 35 31.9		
	baz=77,slow=75,SNR=43									
H11S2	**WAKE ISLAND Hy**	80.43	286	T		T		13 35 26.8		
	baz=77,slow=75,SNR=21									
H11S3	**WAKE ISLAND Hy**	80.44	286	T		T		13 35 16.0		
	baz=77,slow=75,SNR=24									
KPL	**Plockton**	80.66	33	*e*P		**P**		12 05 58.2	-1.7	
KPL				IAMs_20		IAMs_20		12 43 04.7		
	comp=Z,13µm,14.4s									
MG01	**Puerto William**	80.81	158	P		**P**		12 06 00.9	+0.4	
MG01				IAmb		IAmb		12 06 08.7		
	comp=Z,169nm,1.6s									
PMPST	**Porto Santo, M**	80.97	58	*e*S		**S**		12 16 13.5	+2.1	
PMPST				*e*SS		SS		12 21 49.2	+24	
PMPS	**Porto Santo**	80.98	58	*e*P		P		12 06 07.8	+5.7	
	comp=Z,364nm,2.0s									
LAWE	**Loch Awe, Argy**	81.17	34	*e*P		**P**		12 06 01.4	-1.1	
LAWE				IAMs_20		IAMs_20		12 40 53.9		
	comp=Z,11µm,16.1s									
CLGH	**Cloghs, Cushen**	81.19	35	*e*P		**P**		12 06 01.5	-1.3	
CLGH				IAMs_20		IAMs_20		12 37 33.2		
	comp=Z,11µm,23.9s									
MSVF	**Nonsavu**	81.63	248	P		**P**		12 06 06.4	+0.6	
MSVF				pmax		pmax				
	comp=Z,151nm,1.4s									
MSVF	**Nonsavu**	81.63	248	P		**P**		12 06 06.4	+0.6	
MSVF				IAmb		IAmb		12 06 25.8		
	comp=Z,151nm,1.4s									
DSB	**Dublin**	81.67	37	IAmb		IAmb		12 06 14.8		
	comp=Z,168nm,1.6s									
DSB				IAMs_20		IAMs_20		12 39 33.6		
	comp=Z,10µm,22.0s									
MCD	**Coleburn Disti**	81.79	32	*e*P		**P**		12 06 05.4	-0.5	
LRW	**Lerwick**	81.80	29	*e*P		**P**		12 06 04.5	-1.4	
LRW				IAMs_20		IAMs_20		12 40 27.5		
	comp=Z,9µm,15.7s									
INVG	**Invergeldie, C**	81.81	33	*e*P		**P**		12 06 05.2	-0.8	
INVG				IAMs_20		IAMs_20		12 43 10.5		
	comp=Z,13µm,19.8s									
GAL1	**Galloway**	82.03	35	*e*P		**P**		12 06 06.7	-0.4	
GAL1				IAMs_20		IAMs_20		12 37 57.5		
	comp=Z,12µm,24.2s									
TIXI	**Tiksi**	82.19	345	P		**P**		12 06 06.0	-1.8	
	comp=Z,6.0nm,0.4s,baz=54,slow=5.5,SNR=45									
TIXI	**Tiksi**	82.19	345	*d* iP		**P**		12 06 05.9	-1.8	
TIXI				pmax		pmax				
	comp=Z,112nm,1.6s									
TIXI				MLR		MLR				
	comp=Z,6µm,21.0s									
TIXI	**Tiksi**	82.19	345	P		**P**		12 06 06.2	-1.5	
TIXI				IAmb		IAmb		12 06 30.2		
	comp=Z,298nm,1.8s									
TIXI				IAMs_20		IAMs_20		12 42 43.4		
	comp=Z,6µm,21.0s									
EFI	**East Falkland**	82.26	151	P		**P**		12 06 09.3	+1.0	
EFI				pmax		pmax				
	comp=Z,368nm,1.9s									
EFI	**East Falkland**	82.26	151	P		**P**		12 06 09.3	+1.0	
IOMK	**Kirk Michael**	82.32	35	*e*P		**P**		12 06 07.6	-1.1	
IOMK				IAMs_20		IAMs_20		12 39 39.1		
	comp=Z,23µm,19.8s									
DRUM	**Mains of Drumt**	82.43	32	*e*P		**P**		12 06 08.1	-1.1	
DRUM				IAMs_20		IAMs_20		12 44 06.5		
	comp=Z,10µm,15.5s									
EDI	**Edinburgh**	82.44	33	*e*P		**P**		12 06 08.5	-0.8	
EDI				IAMs_20		IAMs_20		12 41 41.4		
	comp=Z,10µm,17.8s									
ESK	**Eskdalemuir**	82.66	34	*e*P		**P**		12 06 08.8	-1.7	
ESK				IAMs_20		IAMs_20		12 38 06.9		
	comp=Z,9µm,22.3s									
ESK	**Eskdalemuir**	82.66	34	P		**P**		12 06 11.3	+0.8	
ESK				pmax		pmax				
	comp=Z,488nm,1.8s									
ESK	**Eskdalemuir**	82.66	34	P		**P**		12 06 11.3	+0.8	
ESK	**Eskdalemuir**	82.66	34	IAMs_20		IAMs_20		12 38 11.5		
	comp=Z,8µm,22.0s									
WPS	**Cemaes, Angles**	82.67	36	*e*P		**P**		12 06 09.5	-1.0	
WPS				IAMs_20		IAMs_20		12 39 58.9		
	comp=Z,12µm,19.5s									
EKA	**Eskdalemuir Ar**	82.68	34	P		**P**		12 06 10.7	+0.1	
	comp=Z,20nm,1.3s,baz=320,slow=2.8,SNR=11									
WLF1	**Llynfaes**	82.77	36	*e*P		**P**		12 06 10.1	-1.0	
WLF1				IAMs_20		IAMs_20		12 40 01.7		
	comp=Z,22µm,19.8s									
RSBS	**Rosebush, Pemb**	83.06	37	*e*P		**P**		12 06 12.2	-0.5	
RSBS				IAMs_20		IAMs_20		12 36 48.6		
	comp=Z,12µm,26.0s									
LLW	**Llanuwychllyn**	83.34	36	*e*P		**P**		12 06 13.3	-0.8	
LLW				IAMs_20		IAMs_20		12 40 28.6		
	comp=Z,5µm,21.3s									
HTL	**Hartland**	83.56	38	*e*P		**P**		12 06 14.7	-0.5	
HTL				IAMs_20		IAMs_20		12 40 59.9		
	comp=Z,12µm,17.6s									
FOEL	**Foel Wylfa**	83.59	36	*e*P		**P**		12 06 15.0	-0.4	
FOEL				IAMs_20		IAMs_20		12 40 36.0		
	comp=Z,10µm,19.9s									
HLM1	**Long Mynd**	83.91	36	*e*P		**P**		12 06 16.4	-0.6	
HLM1				IAMs_20		IAMs_20		12 37 03.2		
	comp=Z,12µm,27.8s									
HPK	**Haverah Park**	84.04	35	*e*P		**P**		12 06 16.9	-0.7	
HPK				IAMs_20		IAMs_20		12 39 08.9		
	comp=Z,12µm,22.9s									
MCH1	**Michaelchurch**	84.05	37	*e*P		**P**		12 06 17.1	-0.6	
MCH1				IAMs_20		IAMs_20		12 37 19.5		
	comp=Z,14µm,25.7s									
STNC	**Stoke**	84.06	36	*e*P		**P**		12 06 17.6	-0.2	
STNC				IAMs_20		IAMs_20		12 40 51.2		
	comp=Z,12µm,20.0s									
LBWR	**Ladybower, Pea**	84.21	35	*e*P		**P**		12 06 18.2	-0.3	
LBWR				IAMs_20		IAMs_20		12 40 56.1		
	comp=Z,12µm,20.6s									
MONM	**Monmouth**	84.22	37	*e*P		**P**		12 06 17.0	-1.6	
MONM				IAMs_20		IAMs_20		12 37 24.4		
	comp=Z,14µm,26.3s									
PGAV	**Gavieira, Arco**	84.32	48	*e*P		**P**		12 06 20.1	+0.6	
	comp=Z,224nm,1.8s									
PGAV	**Gavieira, Arco**	84.32	48	*e*S		**S**		12 16 50.2	+4.7	
PGAV				*e*SS		**SS**		12 22 22.3	+7.6	
PGAV	**Gavieira, Arco**	84.32	48	*e*LR		LR		12 33 36.9		
	comp=Z,4µm,18.0s									
PCAB	**Cabril**	84.58	48	*e*P		**P**		12 06 21.4	+0.7	
	comp=Z,301nm,1.6s									
PMAFR	**Mafra**	84.61	51	*e*P		**P**		12 06 21.4	+0.5	
	comp=Z,327nm,1.6s									
PMAFR	**Mafra**	84.61	51	*e*S		**S**		12 16 48.6	+0.3	
PMAFR				*e*SS		**SS**		12 22 24.1	+5.2	
STRD	**Stroud**	84.61	37	*e*P		**P**		12 06 20.1	-0.5	
STRD				IAMs_20		IAMs_20		12 37 35.7		
	comp=Z,14µm,27.4s									
CWF	**Charnwood Fore**	84.71	36	*e*P		**P**		12 06 20.5	-0.5	
CWF				IAMs_20		IAMs_20		12 41 09.8		
	comp=Z,10µm,19.2s									
LIS	**Lisbon**	84.79	51	*e*P		**P**		12 06 21.8	0.0	
LIS				*e*SKSac		**SKSac**		12 16 45.2	-1.2	
LIS				AMS		AMS		12 42 47.6		
	comp=Z,6µm,24.0s									
LIS	**Lisbon**	84.79	51	*e*P		**P**		12 06 21.7	0.0	
LIS				*e*				12 16 45.2		
LIS	**Lisbon**	84.79	51	*e*P		**P**		12 06 24.3	+2.6	
	comp=Z,473nm,1.7s									
PCAS	**Casmilo, Conde**	84.81	50	*e*P		**P**		12 06 21.8	-0.1	
	comp=Z,311nm,1.7s									
PCAS	**Casmilo, Conde**	84.81	50	*e*S		**S**		12 16 50.9	+0.6	
PCAS				*e*SS		**SS**		12 22 31.0	+9.2	
COI	**Coimbra**	84.82	49	*e*S		**S**		12 16 58.4	+8.1	
COI				*e*SS		**SS**		12 22 31.1	+9.2	
COI	**Coimbra**	84.82	49	IAMs_20		IAMs_20		12 40 10.9		
	comp=Z,6µm,21.0s									
PVRL	**Vila Real**	84.95	48	*e*P		**P**		12 06 22.8	+0.2	
	comp=Z,242nm,1.8s									
PVIS	**Viseu**	85.02	49	*e*P		**P**		12 06 24.1	+1.1	
	comp=Z,205nm,1.6s									
PMTG	**Montargil**	85.34	50	*e*P		**P**		12 06 25.3	+0.8	
	comp=Z,211nm,1.9s									
PMTG	**Montargil**	85.34	50	*e*S		**S**		12 16 54.6	-1.0	
PMTG				*e*SS		**SS**		12 22 39.8	+10	
MTE	**Manteigas**	85.38	49	*e*P		**P**		12 06 25.0	+0.2	
	comp=Z,173nm,1.4s									
MTE	**Manteigas**	85.38	49	*e*S		**S**		12 16 54.8	-1.2	
MTE				*e*SS		**SS**		12 22 33.5	+3.3	
MTE				*e*LQ		LQ		12 29 19.7		
MTE				*e*LR		LR		12 34 23.6		
	comp=Z,4µm,18.0s									
MTE	**Manteigas**	85.38	49	P		**P**		12 06 24.7	-0.1	
MTE				IAMs_20		IAMs_20		12 44 32.6		
	comp=Z,4µm,19.0s									
PBRG	**Braganca**	85.45	47	*e*P		**P**		12 06 25.9	+0.8	
	comp=Z,86nm,1.9s									
PNCL	**Nicolau / Gran**	85.45	51	*e*P		**P**		12 06 28.9	+3.8	
	comp=Z,127nm,2.0s									
PNCL	**Nicolau / Gran**	85.45	51	*e*S		**S**		12 16 52.8	-3.8	
PNCL				*e*SS		**SS**		12 22 38.6	+7.3	
MVO	**Moncorvo**	85.47	48	*e*P		**P**		12 06 26.1	+0.8	
	comp=Z,201nm,2.0s									
MVO	**Moncorvo**	85.47	48	*e*S		**S**		12 16 52.9	-4.0	
MVO	**Moncorvo**	85.47	48	*e*LR		LR		12 34 03.3		
	comp=Z,3µm,16.0s									
PTEO	**Sao Teotonio**	85.50	52	*e*P		**P**		12 06 30.0	+4.7	
	comp=Z,180nm,2.3s									
PFVI	**Vila Bisbo**	85.56	52	*e*P		**P**		12 06 29.6	+3.9	
	comp=Z,164nm,1.5s									
PFVI	**Vila Bisbo**	85.56	52	*e*S		**S**		12 17 02.2	+4.4	
PFVI	**Vila Bisbo**	85.56	52	IAMs_20		IAMs_20		12 49 55.9		
	comp=Z,3µm,19.0s									
PCBR	**Castelo Branco**	85.62	50	*e*P		**P**		12 06 30.0	+4.1	
	comp=Z,157nm,1.7s									
MORF	**Marmelete**	85.64	52	*e*P		**P**		12 06 26.0	-0.1	
MORF				*e*SKSac		**SKSac**		12 16 50.8	-1.3	
MORF				AMS		AMS		12 48 15.0		
	comp=Z,4µm,13.9s									
MORF	**Marmelete**	85.64	52	*e*P		**P**		12 06 26.0	-0.1	
MORF				*e*				12 16 50.7		
MORF	**Marmelete**	85.64	52	*e*P		**P**		12 06 25.1	-1.0	
MORF	**Marmelete**	85.64	52	*e*S		**S**		12 17 04.1	+5.5	
EVO	**Evora**	85.69	51	*e*P		**P**		12 06 27.8	+1.5	
	comp=Z,160nm,1.9s									
MESJ	**Messejana**	85.77	52	*e*P		**P**		12 06 26.8	0.0	
MESJ				*e*SKSac		**SKSac**		12 16 51.6	-1.1	
MESJ				AMS		AMS		12 43 37.0		
	comp=Z,6µm,16.7s									
MESJ	**Messejana**	85.77	52	*e*P		**P**		12 06 26.7	0.0	
MESJ				*e*				12 16 51.6		
MESJ	**Messejana**	85.77	52	*e*P		**P**		12 06 28.7	+2.0	
	comp=Z,104nm,1.6s									
WACR	**West Acre**	85.78	35	*e*P		**P**		12 06 26.3	-0.1	
WACR				IAMs_20		IAMs_20		12 40 21.9		
	comp=Z,10µm,22.4s									
PMRV	**Marv??o**	85.83	50	*e*P		**P**		12 06 26.0	-1.0	
	comp=Z,231nm,1.8s									
PMRV	**Marv??o**	85.83	50	*e*S		**S**		12 17 02.9	+2.5	
PMRV				*e*SS		SS		12 22 57.0	+20	
PMRV	**Marv??o**	85.83	50	*e*LR		LR		12 34

comp=Z,5µm,20.0s
PAB San Pablo 87.97 49 P **P** **12 06 37.4 -0.1**
PAB pmax pmax
comp=Z,95nm,1.8s
PAB San Pablo 87.97 49 P **P** **12 06 37.4 -0.1**
PAB IAmb IAmb 12 06 48.3
comp=Z,94nm,1.8s
PAB San Pablo 87.97 49 IAMs_20 IAMs_20 12 44 01.3
comp=Z,4µm,20.0s
ESDC Sonseca Array 88.20 49 P **P** **12 06 39.3 +0.7**
comp=Z,2.8nm,1.1s,baz=306,slow=3.9,SNR=10
ESDC PP **PP** **12 10 06.9 +1.6**
comp=Z,2.6nm,1.2s,baz=300,slow=8.6,SNR=3.0
ESDC LR LR 12 43 49.7
comp=Z,3µm,21.9s,baz=280,slow=34
HFS Hagfors 88.27 25 P **P** **12 06 39.0 +0.6**
comp=Z,2.7nm,0.9s,baz=251,slow=9.2,SNR=3.5
HFS Hagfors 88.27 25 P **P** **12 06 39.0 +0.6**
YUK Yuzh-Kuril'sk 88.58 316 *e*P P 12 06 31.0 -9.1
YUK *e*S **SKSac** **12 17 00.5 -9.1**
YUK *e*SP **SP** **12 18 21.2 -8.0**
YUK *e*SS **SS** **12 23 10.9 -5.7**
YUK pmax pmax
comp=Z,142nm,1.0s
YUK pmax pmax
comp=E,44nm,0.9s
YUK pmax pmax
comp=Z,383nm,3.4s
UCC Uccle 88.72 36 IAMs_20 IAMs_20 12 43 41.9
comp=Z,7µm,20.0s
CLF Chambon-Foret 88.79 39 P **P** **12 06 41.4 +0.3**
CLF IAmb IAmb 12 06 49.6
comp=Z,126nm,1.5s
YSS Yuzh-Sakhalins 89.28 320 *e*P **P** **12 06 42.8 -0.6**
YSS *e* 12 10 13.6
YSS *e* 12 17 14.4
YSS *e*S **S** **12 17 29.0 -4.1**
YSS *e*PS PS 12 18 40.0 +1.5
YSS pmax pmax
comp=Z,2µm,5.6s
YSS Yuzh-Sakhalins 89.28 320 P **P** **12 06 43.7 +0.3**
YSS IAmb IAmb 12 07 02.2
comp=Z,165nm,1.6s
YSS IAMs_20 IAMs_20 12 37 31.5
comp=Z,5µm,21.0s
APA Apatity 89.32 14⇓ *i*P P 12 06 51.3 +8.2
APA *i* 12 10 21.0
APA *i* S **S** **12 17 31.0 -1.7**
APA *i* SS **SS** **12 23 20.0 -6.0**
APA pmax pmax
comp=Z,10.0nm,1.1s
APA MLR MLR
comp=Z,13µm,18.0s
LVZ Lovozero 89.33 13*d* *i*P **P** **12 06 43.6 +0.3**
LVZ pmax pmax
comp=Z,84nm,1.5s
LVZ MLR MLR
comp=Z,7µm,17.0s
LVZ Lovozero 89.33 13 P **P** **12 06 44.5 +1.3**
LVZ IAmb IAmb 12 07 00.9
comp=Z,98nm,1.4s
PMSA Palmer Station 89.59 163 *e*P P 12 06 49.8 +5.6
WLF Walferdange 90.28 37 IAMs_20 IAMs_20 12 45 57.2
comp=Z,6µm,20.0s
ASAJ Asahikawa 90.66 317 P **P** **12 06 50.3 +0.4**
comp=Z,17nm,0.8s,baz=296,slow=4.1,SNR=7.1
GRNR Gornyy 91.06 325 *e*P P 12 06 41.3 -10
GRNR MLR MLR
comp=N,710nm,17.0s
GRNR MLR MLR
comp=Z,1µm,19.0s
ERM Erimo 91.24 315 P **P** **12 06 52.8 +0.2**
ERM pmax pmax
comp=Z,93nm,1.2s
ERM Erimo 91.24 315 P **P** **12 06 52.8 +0.2**
ERM IAmb IAmb 12 07 08.0
comp=Z,93nm,1.1s
ERM Erimo 91.24 315 IAMs_20 IAMs_20 12 40 21.1
comp=Z,6µm,20.0s
BKZ Black Stump Fm 91.28 229 P **P** **12 06 54.1 +1.3**
BKZ IAmb IAmb 12 07 05.1
comp=Z,135nm,1.2s
NRIK Noril'sk 91.55 355 P **P** **12 06 53.1 -0.4**
comp=Z,13nm,0.8s,baz=40,slow=2.5,SNR=20
NRIK PP **PP** **12 10 28.4 -2.4**
comp=Z,1.7nm,0.6s,baz=31,slow=5.0,SNR=3.9
NRIK LR LR 12 50 10.9
comp=Z,9µm,18.8s,baz=30,slow=37
ECH Echery 91.58 37 IAMs_20 IAMs_20 12 46 08.7
comp=Z,7µm,20.0s
BSD Bornholm Skovb 91.78 29 *i*P P 12 06 59.8 +5.0
BSD MLR MLR
comp=Z,8µm,19.0s
BSD Bornholm Skovb 91.78 29 *i*P P 12 06 59.8 +5.0
comp=Z,8µm,19.0s
PATS Pohnpei 91.79 278 IAMs_20 IAMs_20 12 47 11.1
comp=Z,6µm,18.0s
OUZ Omahuta 91.93 234 P **P** **12 06 56.3 +0.5**
FINES FINESS Array B 91.98 20 P **P** **12 06 56.0 +0.4**
comp=Z,1.5nm,0.8s,baz=37,slow=19,SNR=5.2
FINES PP **PP** **12 10 36.9 +2.5**
comp=Z,2.4nm,0.8s,baz=339,slow=10,SNR=5.3
BFZ Birch Farm 92.04 228 P **P** **12 06 56.7 +0.5**
BFZ IAmb IAmb 12 07 09.4
comp=Z,78nm,1.3s
BFO Black Forest 92.19 37 IAMs_20 IAMs_20 12 46 02.8
comp=Z,6µm,20.0s
MOX Moxa 92.75 34 *e*L L 12 50 21.7
comp=Z,7µm,18.8s
RUE Ruedersdorf 92.80 32 *e*P **P** **12 07 01.9 +2.3**
BNI Bardonecchia 92.89 40 IAMs_20 IAMs_20 12 46 56.3
comp=Z,7µm,21.0s
GRA1 Grafenberg Arr 93.07 35 IAMs_20 IAMs_20 12 46 14.7
comp=Z,6µm,21.0s
GRF Grafenberg Arr 93.07 35 *e*P **P** **12 07 01.4 +0.5**
comp=Z,288nm,2.8s,baz=300,slow=4.3
GRF *e*PP **PP** **12 10 41.4 -2.0**
baz=304,slow=7.6
GRF *e*L L 12 46 14.3
comp=Z,6µm,21.9s
CLL Collm 93.09 33 *e*P **P** **12 07 03.0 +2.0**
CLL ⇑*i*P(2) 12 07 07.4
comp=Z,28nm,1.8s
CLL *i* 12 07 12.0
CLL *e* 12 07 21.0
CLL *e* 12 10 17.0
CLL *e*PP **PP** **12 10 44.0 +0.5**
CLL *e*PPmax 12 10 51.0
CLL *e* 12 11 06.0
CLL *e*S **S** **12 18 03.0 -4.7**
CLL *e*SS **SS** **12 24 19.0 -2.2**
CLL *e*SSSS 12 31 18.0
CLL LmV 12 49 00.0
comp=Z,8µm,19.1s
CLL Collm 93.09 33⇑ *i*P P 12 07 07.4 +6.4
CLL *i* 12 07 12.0
CLL *e*S **S** **12 18 03.0 -4.7**
CLL pmax pmax
comp=Z,28nm,1.8s
CLL MLR MLR
comp=Z,8µm,19.1s
TMCR Tamitsa 93.21 14 *e*P **P** **12 07 04.2 +2.9**
TMCR *e*S **SKSac** **12 17 39.1 +3.7**
SLIT Slitere, Latvi 93.31 24 *e*P **P** **12 07 04.3 +2.5**
DZM Mont Dzumac 93.36 248 *e*PP PP 12 10 42.3 -4.9
comp=Z,392nm,25.6s
DZM *e*SKSac **SKSac** **12 17 33.0 -4.8**
comp=Z,913nm,25.8s
DZM Mont Dzumac 93.36 248 *e*PS PS 12 19 26.0 +0.7
comp=Z,3µm,27.2s
DZM *e*SS SS 12 24 27.6 -0.3
comp=Z,5µm,26.9s
DZM *e*LQ LQ 12 33 12.5
comp=Z,2µm,30.8s
DZM *e*LR LR 12 37 05.2
comp=Z,43µm,26.9s,baz=82
DZM Mont Dzumac 93.36 248 P **P** **12 07 05.2 +2.3**
comp=Z,16nm,1.1s,baz=84,slow=2.5,SNR=2.5
DZM Mont Dzumac 93.36 248 P **P** **12 07 03.4 +0.5**
DZM IAmb IAmb 12 07 14.9
comp=Z,75nm,1.3s
NKC Novy Kostel 93.42 34 AMS AMS 12 45 40.0
comp=Z,9µm,21.3s
DAVA Damuels 93.63 37 *es*P **P** **12 07 04.6 +0.8**
comp=Z,52nm,1.7s
BRG Berggiesshubel 93.83 33 *e*P P 12 07 10.0 +5.6
comp=Z,42nm,2.1s
BRG *e* 12 07 24.1
comp=Z,7.3nm,1.1s
BRG SKS 12 10 06.0
BRG PP **PP** **12 10 50.0 +0.7**
BRG S **PS** **12 19 30.0 +1.3**
BRG SS **SS** **12 24 30.0 -1.7**
comp=N,6µm,21.7s
comp=E,5µm,19.1s
comp=Z,8µm,23.9s
BRG Berggiesshubel 93.83 33 *e*P P 12 07 10.0 +5.6
BRG 12 10 50.0
BRG S **PS** **12 19 30.0 +1.3**
BRG SS SS 12 24 30.0 -1.7
BRG pmax pmax
comp=Z,42nm,2.1s
BRG pmax pmax
comp=Z,7.0nm,1.1s
BRG MLR MLR
comp=N,6µm,21.7s
BRG MLR MLR
comp=E,5µm,19.1s
BRG MLR MLR
comp=Z,8µm,23.9s
DAVOX Davos/Dischmat 93.90 38 P **P** **12 07 07.3 +2.1**
comp=Z,5.0nm,0.8s,baz=245,slow=3.2,SNR=6.1
ZEA Zeya 93.94 331 *e*P **P** **12 07 02.4 -2.5**
ZEA *e* 12 10 48.0
ZEA *e* 12 17 37.0
ZEA *e* 12 19 26.0
ZEA pmax pmax
comp=Z,600nm,4.0s
ZEA pmax pmax
comp=Z,190nm,2.0s
RETA Reutte 94.03 37 *es*P **P** **12 07 08.4 +2.9**
comp=Z,55nm,2.1s,SNR=8.4
FUORN Ofenpass-Fuorn 94.21 38 P **P** **12 07 07.2 +0.6**
FUORN IAmb IAmb 12 07 15.7
comp=Z,73nm,1.2s
NNZ Nelson 94.26 228 IAMs_20 IAMs_20 12 42 37.4
comp=Z,7µm,20.0s
PBUR Paburge 94.26 26 *e*P **P** **12 07 08.2 +2.0**
FETA Feichten 94.26 37 *es*P **P** **12 07 08.1 +1.4**
comp=Z,55nm,2.1s,SNR=16
MOTA Moosalm 94.30 37 *es*P **P** **12 07 08.0 +1.1**
comp=Z,66nm,1.8s
PVCC Panska Ves 94.35 33 AMS AMS 12 46 20.0
comp=Z,6µm,20.6s
VSU Vasula 94.39 22 *e*P **P** **12 07 08.5 +1.7**
SQTA Sankt Quirin 94.43 37 *es*P **P** **12 07 08.5 +1.1**
comp=Z,67nm,1.5s,SNR=6.7
KLR Kul'dur 94.43 326 P **P** **12 07 06.8 -0.4**
comp=Z,3.1nm,0.8s,baz=19,slow=5.0,SNR=9.7
KLR PP **PP** **12 10 52.6 -1.3**
comp=Z,1.7nm,0.8s,baz=43,slow=9.6,SNR=6.0
KLR Kul'dur 94.43 326*ce*P **P** **12 07 05.7 -1.5**
KLR pmax pmax
comp=Z,40nm,1.9s
PRA Prague 94.55 33 AMS AMS 12 45 30.0
comp=Z,4µm,23.6s
WATA Walderalm 94.57 37 *es*P **P** **12 07 09.0 +0.9**
comp=Z,54nm,1.6s,SNR=6.1
WTTA Wattenberg 94.64 37 *es*P **P** **12 07 10.3 +1.8**
comp=Z,66nm,1.9s,SNR=7.1
KHC Kasperske Hory 94.65 34 *e*P **P** **12 07 08.6 +0.3**
KHC *e* 12 10 54.1
KHC *e* 12 17 42.7
KHC MLR MLR
comp=Z,7µm,16.8s
KHC Kasperske Hory 94.65 34 *e*P **P** **12 07 08.6 +0.3**
KHC *e*PP **PP** **12 10 54.1 -1.7**
KHC *e*SKS **SKSac** **12 17 42.7 -1.3**
KHC AMS AMS 12 51 00.0
comp=Z,7µm,16.8s
PRU Pruhonice 94.66 33 *e*P P 12 07 18.5 +10
PRU *e* 12 17 43.2
PRU MLR MLR
comp=Z,10µm,23.8s
PRU Pruhonice 94.66 33 *e*SKS **SKSac** **12 17 43.2 -0.7**
PRU AMS AMS 12 45 40.0
comp=Z,10µm,23.8s
GOPC GO Pecny, Ondr 94.83 33 AMS AMS 12 45 40.0
comp=Z,10µm,23.4s
GERES GERESS Array B 94.89 35 P **P** **12 07 11.6 +2.1**
comp=Z,0.5nm,0.8s,baz=313,slow=9.3,SNR=4.2
GERES PP **PP** **12 11 03.7 +6.0**
comp=Z,1.6nm,1.1s,baz=291,slow=5.2,SNR=6.5
GERES PKKP **PKKPbc** **12 24 13.5 +7.0**
comp=Z,0.4nm,0.6s,baz=117,slow=1.5,SNR=4.6
GERES LR LR 12 49 07.4
comp=Z,7µm,18.7s,baz=312,slow=35
MSSA Maissana 95.00 40 IAMs_20 IAMs_20 12 49 40.3
comp=Z,4µm,20.0s
CHVC Chvalec 95.07 32 AMS AMS 12 49 40.0
comp=Z,8µm,19.1s
UPC Upice 95.10 32 *e*P P 12 07 21.8 +12
UPC MLR MLR
comp=Z,8µm,19.2s
UPC Upice 95.10 32 AMS AMS 12 49 40.0
comp=Z,8µm,19.2s
OSTC Ostas 95.17 32 AMS AMS 12 51 10.0
comp=Z,9µm,20.0s
CTI Castel Tesino 95.33 38 P **P** **12 07 11.6 0.0**
CTI Castel Tesino 95.33 38 P **P** **12 07 11.6 0.0**
CTI IAmb IAmb 12 07 19.8
comp=Z,59nm,1.4s
DPC Dobruska-Polom 95.35 32 *e*P **P** **12 07 11.0 -0.5**
DPC MLR MLR
comp=Z,8µm,19.0s
DPC Dobruska-Polom 95.35 32 *e*P **P** **12 07 11.0 -0.5**
DPC AMS AMS 12 49 40.0
comp=Z,8µm,19.0s
HNR Honiara 95.37 262 IAMs_20 IAMs_20 12 40 12.5
comp=Z,6µm,21.0s
ABTA Abfaltersbach 95.43 37 *es*P **P** **12 07 12.9 +0.9**
comp=Z,42nm,1.4s
PABE Paberze 95.45 25 *e*P **P** **12 07 14.4 +2.7**
TREC Trest 95.56 33 AMS AMS 12 46 10.0
comp=Z,10µm,21.9s
VLC Villacollemand 95.61 40 IAMs_20 IAMs_20 12 49 18.7
comp=Z,5µm,20.0s
CIMO Cimalais 95.64 37 IAmb IAmb 12 07 24.3
comp=Z,46nm,1.1s
MQZ McQueen's Vall 95.64 226 IAMs_20 IAMs_20 12 42 28.9
comp=Z,7µm,20.0s
KBA Koelnbreinsper 95.71 36 *es*P **P** **12 07 13.9 +0.5**
comp=Z,17nm,1.3s
KRLC Kraliky 95.76 32 *e*P P 12 07 26.3 +13
KRLC MLR MLR
comp=Z,7µm,17.5s
KRLC Kraliky 95.76 32 *e*P P 12 07 26.3 +13
KRLC AMS AMS 12 50 00.0
comp=Z,7µm,17.5s
MOA Molln 95.77 35 *ep*P **P** **12 07 13.7 +0.3**
comp=Z,9.3nm,1.4s
VRAC Vranov 96.13 33 PP **PP** **12 11 05.0 -2.3**
comp=Z,1.6nm,0.3s,baz=330,slow=5.9,SNR=3.8
VRAC Vranov 96.13 33 *e*P P 12 07 20.7 +5.7
MYKA Terra Mystica 96.14 36 *es*P **P** **12 07 16.7 +1.5**
comp=Z,26nm,1.9s
KRUC Moravsky 96.18 33 *e*P P 12 07 20.1 +4.9
PRED Cave del Predi 96.20 37 IAMs_20 IAMs_20 12 49 50.9
comp=Z,6µm,19.0s
MORC Moravsky Berou 96.33 32 *e*P P 12 07 21.3 +5.4
BOD Bodaibo 96.36 339 *e*P **P** **12 07 13.8 -2.0**
BOD pmax pmax
comp=Z,28nm,1.9s
KLMR Klimovskoe 96.40 16 *e*P **P** **12 07 15.8 -0.1**
KLMR *e* 12 11 12.2
KLMR *e*S **SKSac** **12 17 53.2 +0.6**
KLMR pmax pmax
comp=Z,52nm,1.5s
KLMR MLR MLR
comp=Z,5µm,17.0s
KLMR Klimovskoe 96.40 16 *e*P **P** **12 07 15.9 0.0**
KLMR AMP 12 07 33.5
comp=Z,52nm,1.5s
KLMR *e*PP **PP** **12 11 12.2 +3.4**
KLMR *e*S **SKSac** **12 17 53.2 +0.6**
KLMR *e*S **SKSac** **12 17 53.2 +0.6**
KLMR LQ LQ 12 42 31.4
KLMR LQ LQ 12 42 31.4
KLMR LR LR 12 46 58.0
KLMR AMP 12 49 33.0
comp=Z,5µm,17.3s
CONA Conrad Observa 96.59 34 *es*P **P** **12 07 19.4 +2.2**
comp=Z,10nm,1.5s
OKC Ostrava-Krasne 96.59 32 AMS AMS 12 50 20.0
comp=Z,6µm,18.9s
VOJS Vojsko 96.62 37 *e*P **P** **12 07 17.3 -0.1**
VOJS *e* 12 07 22.9
VOJS *e*PP **PP** **12 11 13.0 +1.8**
VOJS *e*SKSac **SKSac** **12 17 55.8 +1.1**
VOJS *e*S **S** **12 18 38.4 -0.5**
VOJS *e*PS PS 12 20 00.3 +0.6
VOJS *e* 12 20 14.0
VOJS *e* 12 35 58.5
OBKA Obir 96.72 36 *es*P **P** **12 07 19.8 +2.0**
comp=Z,24nm,1.6s
ARSA Arzberg 96.81 35 *es*P **P** **12 07 20.1 +1.9**
comp=Z,5.1nm,1.3s
SOKA Soboth 96.89 36 *es*P **P** **12 07 20.1 +1.5**
comp=Z,25nm,1.4s
SKDS Skadanscina 96.98 37 *i*P **P** **12 07 18.2 -0.8**
NACGM Naroch 97.01 25 *e*P **P** **12 07 16.0 -2.8**
NACGM *e*P **pwP** **12 07 24.0 -0.8**
NACGM *e*PP PKiKP 12 11 40.0 -15
NACGM *e*PPP PPP 12 13 48.0
NACGM *e*SKS **SKSac** **12 18 03.0 +6.9**
NACGM *e*S **SKKSac** **12 18 32.0 +9.4**
NACGM *e*PS PS 12 20 10.0 +6.6
NACGM *e*SS **SS** **12 25 12.0 -4.5**
NACGM *e*SSS SSS 12 29 08.0
NACGM *e*LQ LQ 12 35 11.0
NACGM *e*LR LR 12 44 08.0
NACGM LRM MLR 12 55 22.0
comp=Z,25nm,20.0s
USA0B Ussuriysk Arra 97.17 321 IAMs_20 IAMs_20 12 44 59.5
comp=Z,3µm,21.0s
USRK Ussuriysk Ar. 97.17 321 P **P** **12 07 19.7 -0.2**
comp=Z,3.5nm,0.7s,baz=45,slow=4.3,SNR=6.7
USRK LR LR 12 45 23.0
comp=Z,3µm,20.9s,baz=40,slow=32
MJAR Matsushiro Arr 97.20 312 P **P** **12 07 19.5 -0.6**
comp=Z,5.3nm,0.9s,baz=56,slow=2.6,SNR=24
MJAR PP **PP** **12 11 14.0 -1.9**
comp=Z,4.3nm,1.3s,baz=64,slow=5.7,SNR=4.7
MJAR LR LR 12 41 48.3
comp=Z,5µm,21.9s,baz=75,slow=30
MAJO Matsushiro 97.20 312 P **P** **12 07 20.3 +0.2**
MAJO pmax pmax
comp=Z,18nm,1.0s
MAJO Matsushiro 97.20 312 P **P** **12 07 20.3 +0.2**
MAJO IAMs_20 IAMs_20 12 41 04.3
comp=Z,6µm,22.0s
MAT Matsushiro 97.20 312 P **P** **12 07 19.9 -0.2**
MAT S **S** **12 18 44.6 +0.6**
MJB9 Matsu-Tunnel 97.20 312 P **P** **12 07 20.2 0.0**
FOZ Fox Glacier 97.53 227 IAMs_20 IAMs_20 12 44 16.9
comp=Z,6µm,20.0s
BOJS Bojanci 97.70 37 *e*P Pdif 12 07 22.4 +0.2
BOJS *e* 12 07 28.6
BOJS *e*SKSac **SKSac** **12 18 00.5 +0.5**
BOJS *e*S **ScS** **12 18 48.6 +0.4**
BOJS *e*PS PS 12 20 08.3 -3.1
BOJS *e* 12 20 26.1
BOJS *e* 12 25 20.9
MICGM Minsk 97.74 24 *e*P Pdif 12 07 29.0 +6.8
MICGM *e*PP **PP** **12 11 22.0 +2.7**
MICGM *e*SKS SKSac 12 18 24.0 +24
MICGM *e*S **ScS** **12 18 51.0 +2.9**
MICGM *e*SS **SS** **12 25 22.0 -4.8**
MICGM *e*LR LR 12 46 05.0
MICGM LRM MLR 12 52 40.0
comp=Z,7.7nm,19.0s
MNK Minsk 97.74 24 *e*P Pdif 12 07 29.0 +6.8
MNK *e* 12 11 22.0
MNK *e*S **S** **12 18 51.0 +3.1**
MNK *e*SS **SS** **12 25 22.0 -4.8**
MNK MLR MLR
comp=Z,8µm,19.0s
VYHS Vyhne 97.80 33 *e*P Pdif 12 07 28.9 +6.3
MDJ Mudanjiang 98.33 323 IAMs_20 IAMs_20 12 59 57.7
comp=Z,3µm,18.0s
AQU L'Aquila 98.45 40 IAMs_20 IAMs_20 12 51 24.5
comp=Z,6µm,20.0s
INU Inuyama 98.63 312 IAMs_20 IAMs_20 12 42 08.9
comp=Z,3µm,22.0s
KWP Kalwaria Pacla 98.96 30 IAMs_20 IAMs_20 12 54 09.3
comp=Z,6µm,20.0s
KOLS Kolonicke sedl 99.23 31 *e*PP PP 12 11 43.2 +12
KOLS *e*S **SP** **12 20 20.7 -5.3**
KOLS *e*L L 12 47 53.6
KEST Kesra 99.38 47 P **Pdif** **12 07 31.1 +1.0**
comp=Z,5.9nm,1.0s,baz=285,slow=3.2,SNR=4.9
KEST LR LR 12 53 03.9
comp=Z,3µm,18.8s,baz=262,slow=36
KEST Kesra 99.38 47 P **Pdif** **12 07 30.4 +0.3**
KEST IAMs_20 IAMs_20 12 50 02.0
comp=Z,5µm,20.0s
UZH Uzhgorod 99.44 31 *e*P **Pdif** **12 07 32.3 +2.4**
UZH *i* 12 07 38.3
UZH *i* 12 11 32.2
UZH *e*PPP PPP 12 13 42.3
UZH *e* 12 18 02.7
UZH *e*S **S** **12 18 57.3 -5.2**
UZH MLR MLR
comp=N,800nm,18.5s
UZH MLR MLR
comp=E,1µm,18.5s
UZH MLR MLR
comp=Z,600nm,18.5s
LVV L'vov 99.46 29 *e*P **Pdif** **12 07 28.9 -1.0**
LVV *e* 12 11 30.1
LVV *e* 12 18 06.6
LVV *e*S **S** **12 18 55.5 -7.1**
LVV *e* 12 20 32.1
LVV *e* 12 25 50.2
LVV *e* 12 29 41.1
DCZ Deep Cove 99.92 225 IAMs_20 IAMs_20 12 47 04.2
comp=Z,5µm,19.0s
MOS Moscow 100.20 19 *e*P **Pdif** **12 07 31.1 -2.0**
MOS *e* 12 11 37.2
MOS *e* 12 18 17.1
MOS *e*PS PS 12 20 40.8 +3.1
MOS *e*SS SS 12 25 56.0 -4.9
MOS MLR MLR
comp=Z,8µm,17.0s
MOS MLR MLR
comp=N,8µm,16.0s
SGRT San Giovanni R 100.22 39 IAMs_20 IAMs_20 12 49 00.4
comp=Z,5µm,20.0s
OBN Obninsk 100.38 20 P **Pdif** **12 07 33.4 -0.4**
comp=Z,4.2nm,0.4s,baz=122,slow=18,SNR=1.2
OBN PP **PP** **12 11 40.2 +0.8**
comp=Z,6.7nm,0.4s,baz=340,slow=19,SNR=1.8
OBN Obninsk 100.38 20⇓ *e*P **Pdif** **12 07 32.4 -1.5**
OBN *e* 12 11 40.1
OBN *e*PPP PPP 12 13 53.2
OBN pmax pmax
comp=Z,5.0nm,0.4s
OBN MLR MLR
comp=Z,12µm,18.0s
HIA Hailar 100.42 331 IAMs_20 IAMs_20 13 00 48.1
comp=Z,4µm,19.0s
KIRV Kirov 100.68 12 PP **PP** **12 11 44.6 +3.1**
comp=Z,6.4nm,0.5s,baz=278,slow=23,SNR=6.7
CLTB Caltabellotta 101.02 44 IAMs_20 IAMs_20 12 54 52.0
comp=Z,4µm,20.0s
AKASG Malin Array Be 101.12 26 P **Pdif** **12 07 37.8 +0.5**
comp=Z,0.9nm,0.6s,baz=275,slow=3.6,SNR=1.7
AKASG PP **PP** **12 11 43.9 -1.2**
comp=Z,1.3nm,0.6s,baz=317,slow=6.9,SNR=4.4
CN2 Changchun 101.18 324 *e*P **Pdif** **12 07 37.3 -0.4**
CN2 *e*S **Sdif** **12 19 10.8 -6.4**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,2µm,20.0s
CN2 LR LR
comp=Z,3µm,20.0s
CN2 LR LR
comp=Z,3µm,22.0s
DIVS Divibare 101.22 36 IAMs_20 IAMs_20 12 51 23.7
comp=Z,4µm,20.0s
PDG Podgorica 101.87 37 IAMs_20 IAMs_20 12 52 20.1
comp=Z,6µm,21.0s
TIP Timpagrande 102.37 41 IAMs_20 IAMs_20 12 50 21.3

comp=Z,6µm,22.0s
LHI Lord Howe Isla 102.38 241 IAms_20 IAms_20 12 43 41.6
comp=Z,6µm,22.0s
TAM Tamanrasset 102.67 61 IAms_20 IAms_20 12 54 36.5
comp=Z,3µm,19.0s
WDD Wied Dalam 102.86 45 IAms_20 IAms_20 12 55 10.0
comp=Z,3µm,20.0s
TOC7 Torodi Ar. Sit 103.36 71 IAms_20 IAms_20 12 56 14.1
comp=Z,4µm,21.0s
TOB5 Torodi Ar. Sit 103.37 71 IAms_20 IAms_20 12 59 55.3
comp=Z,4µm,18.0s
TOC5 Torodi Ar. Sit 103.37 71 IAms_20 IAms_20 13 00 04.4
comp=Z,5µm,18.0s
TOB1 Torodi Ar. Sit 103.38 71 IAms_20 IAms_20 12 56 13.5
comp=Z,4µm,21.0s
TOB4 Torodi Ar. Sit 103.38 71 IAms_20 IAms_20 13 00 04.5
comp=Z,4µm,18.0s
TOC1 Torodi Ar. Sit 103.38 71 IAms_20 IAms_20 12 56 13.6
comp=Z,5µm,21.0s
TOA0 Torodi Ar. Sit 103.38 71 IAms_20 IAms_20 12 53 34.7
comp=Z,4µm,21.0s
TORD Torodi Ar. Bea 103.38 71 PP **PP** **12 12 04.1 +0.5**
comp=Z,7.2nm,1.2s,baz=298,slow=7.2,SNR=7.5
TORD PKKP **PKKPdf** **12 23 51.2 +1.2**
comp=Z,1.4nm,1.1s,baz=110,slow=3.6,SNR=3.8
TOA3 Torodi Ar. Sit 103.38 71 IAms_20 IAms_20 12 56 13.7
comp=Z,4µm,21.0s
TOA2 Torodi Ar. Sit 103.39 71 IAms_20 IAms_20 12 53 34.8
comp=Z,4µm,21.0s
TOB3 Torodi Ar. Sit 103.40 71 IAms_20 IAms_20 12 56 14.0
comp=Z,4µm,21.0s
TOC4 Torodi Ar. Sit 103.40 71 IAms_20 IAms_20 13 00 06.0
comp=Z,4µm,18.0s
TOC3 Torodi Ar. Sit 103.41 71 IAms_20 IAms_20 13 00 05.4
comp=Z,4µm,18.0s
MLR Muntele Rosu 103.42 32 Pdiff **Pdif** **12 07 53.9 +6.1**
comp=Z,1.2nm,0.3s,baz=298,slow=19,SNR=3.2
MLR PP **PKiKP** **12 12 10.0 +3.3**
comp=Z,3.0nm,0.9s,baz=109,slow=3.5,SNR=4.5
SNY Shenyang 103.50 323 Pdif **Pdif** **12 07 48.5 +0.4**
SNY SKS 12 18 27.5
SNY SS **SS** **12 26 54.5 +6.8**
SNY AMB AMB
comp=Z,700nm,6.5s
SNY LR LR
comp=Z,1µm,13.7s
SNY LR LR
comp=Z,3µm,18.6s
SNY LR LR
comp=Z,4µm,19.2s
KSRS Korea Array 103.61 318 Pdiff **Pdif** **12 07 52.4 +3.7**
comp=Z,0.5nm,0.7s,baz=47,slow=5.5,SNR=4.5
KIS Kishinev 103.70 29 *e*P **Pdif** **12 07 55.0 +6.1**
KIS Kishinev 103.70 29 *e*PP PKiKP 12 12 20.0 +13
KIS Kishinev 103.70 29 *e*P **Pdif** **12 07 55.0 +6.1**
KIS *e*PPP PPP 12 14 22.0
KIS *e* 12 18 22.0
KIS *e*PS **Sdif** **12 19 30.0 -8.2**
KIS *e*PPS PPS 12 21 20.0
KIS *e*SS **SS** **12 26 52.0 +2.0**
KIS MLR MLR
comp=Z,7µm,16.0s
KIS MLR MLR
comp=N,4µm,16.0s
VTS Vitosha 103.98 35 IAms_20 IAms_20 12 57 04.6
comp=Z,4µm,19.0s
JNU Nakatsue 104.12 313 IAms_20 IAms_20 12 45 37.4
comp=Z,6µm,22.0s
ARU Arti 104.25 8 P **Pdif** **12 07 57.8 +6.7**
ARU *i* 12 12 08.4
ARU 12 19 20.6
ARU PS PS 12 22 12.8 +52
ARU MLR MLR
comp=Z,7µm,23.0s
INCN Inchon 104.41 318 IAms_20 IAms_20 13 05 07.6
comp=Z,3µm,19.0s
TLY Talaya 104.82 341 *c i*P **Pdif** **12 07 56.7 +2.9**
TLY *e* 12 12 11.1
TLY *e* 12 18 35.8
TLY *e*S **Sdif** **12 19 51.4 +4.0**
TLY *e*PS PS 12 21 25.9 -0.9
TLY *e*PPS PPS 12 22 28.3
TLY *e*SS **SS** **12 27 09.1 +4.1**
TLY pmax pmax
comp=Z,16nm,1.0s
TLY Talaya 104.82 341 IAms_20 IAms_20 12 58 38.8
comp=Z,4µm,18.0s
LIT Litokhoron 105.23 38 IAms_20 IAms_20 12 56 44.0
comp=Z,5µm,20.0s
AGG Agios Georgios 105.85 38 IAms_20 IAms_20 12 55 12.5
comp=Z,4µm,21.0s
DL2 Dalian 106.55 322 Pdif **Pdif** **12 08 05.0 +3.3**
DL2 SS SS 12 27 26.5 -2.9
DL2 AMB AMB
comp=Z,370nm,6.5s
DL2 LR LR
comp=Z,2µm,17.8s
DL2 LR LR
comp=Z,2µm,20.9s
DL2 LR LR
comp=Z,4µm,20.0s
ITM Ithomi 106.80 40 IAms_20 IAms_20 12 56 37.8
comp=Z,4µm,22.0s
ZALV Zalesovo Beam 106.89 352 PKiKP **PKiKP** **12 12 13.5 +0.8**
comp=Z,0.4nm,0.4s,baz=17,slow=6.0,SNR=3.7
ZALV PP **PP** **12 12 25.4 -2.3**
comp=Z,1.1nm,0.6s,baz=2.9,slow=5.9,SNR=4.2
ZALV PKKP **PKKPab** **12 23 46.6 -2.2**
comp=Z,0.3nm,0.3s,baz=135,slow=57,SNR=2.7
SONM Songino Array 107.14 337 Pdiff **Pdif** **12 08 04.8 +0.4**
comp=Z,0.2nm,0.5s,baz=26,slow=3.7,SNR=2.1
SONM PKKPbc **PKKPbc** **12 23 30.9 -0.5**
comp=Z,0.9nm,0.9s,baz=222,slow=2.0,SNR=3.5
SIM Simferopol' 107.65 28 P **Pdif** **12 08 23.3 +17**
SIM pmax pmax
comp=Z,221nm,10.9s
EIDS Eidsvold 107.80 249 IAms_20 IAms_20 12 53 54.0
comp=Z,2µm,18.0s
ARMA Armidale 108.36 243 IAms_20 IAms_20 12 48 57.1
comp=Z,4µm,20.0s
BVAR Borovoye Array 108.56 1 Pdiff **Pdif** **12 08 10.8 +0.4**
comp=Z,0.5nm,0.3s,baz=236,slow=41,SNR=2.0
BVAR PP **PP** **12 12 37.9 -2.0**
comp=Z,2.4nm,1.0s,baz=80,slow=3.3,SNR=5.7
BVAR PKKPbc **PKKPbc** **12 23 27.0 0.0**
comp=Z,0.7nm,0.5s,baz=183,slow=5.5,SNR=7.6
QSPA South Pole Qui 108.60 180 IAms_20 IAms_20 13 07 49.3
comp=Z,2µm,19.0s
BJI Beijing 108.80 326 Pdif **Pdif** **12 08 11.5 -0.2**
BJI AMB AMB
comp=Z,210nm,6.9s
BJI LR LR
comp=Z,1µm,21.3s
BJI LR LR
comp=Z,3µm,22.8s
BJI LR LR
comp=Z,5µm,24.1s
BJT Baijiatuau 108.82 326 IAms_20 IAms_20 12 50 58.0
comp=Z,5µm,22.0s
SANT Santorini 109.46 39 IAms_20 IAms_20 12 57 46.1
comp=Z,3µm,21.0s
JOW Kunigami 109.48 308 IAms_20 IAms_20 12 47 07.0
comp=Z,3µm,22.0s
AKTO Aktyubinsk 110.00 10 PP **PP** **12 12 50.1 -0.3**
comp=Z,1.3nm,0.8s,baz=352,slow=7.7,SNR=1.3
AKTO PKKP **PKKPdf** **12 23 38.7 +1.0**
comp=Z,3.2nm,0.9s,baz=160,slow=6.1,SNR=5.9
VNA3 Neumayer Olymp 110.07 160 PKiKP PKiKP 12 12 26.4 +8.3
ILGA Ilgaz 110.51 30 IAms_20 IAms_20 13 07 43.8
comp=Z,3µm,21.0s
HHC Hu-ho-hao-te 110.54 329 *e*PKP **PKiKP** **12 12 19.8 -0.3**
HHC PP **PP** **12 12 55.5 +0.5**
HHC SS SS 12 28 24.3 +1.2
HHC AMB AMB
comp=Z,550nm,6.7s
HHC LR LR
comp=Z,2µm,18.3s
HHC LR LR
comp=Z,2µm,16.1s
HHC LR LR
comp=Z,2µm,19.9s
KURBB Kurchatov Arra 110.78 356 Pdiff **Pdif** **12 08 22.6 +2.3**
comp=Z,0.1nm,0.3s,baz=29,slow=2.1,SNR=1.5
KURBB PP **PP** **12 12 54.8 -1.2**
comp=Z,4.9nm,1.2s,baz=360,slow=5.4,SNR=5.4
KURBB PKKPbc **PKKPbc** **12 23 20.1 +0.3**
comp=Z,1.8nm,0.9s,baz=200,slow=2.8,SNR=9.8
KURBB PKKP **PKKPdf** **12 23 37.5 +1.3**
comp=Z,7.8nm,1.2s,baz=205,slow=3.8,SNR=7.7
ANTO Ankara 110.96 32 IAms_20 IAms_20 13 03 57.0
comp=Z,4µm,19.0s
CTAO Charters Tower 110.99 255 IAms_20 IAms_20 12 49 10.4
comp=Z,4µm,21.0s
KARP Karpathos 111.03 38 IAms_20 IAms_20 12 58 33.6
comp=Z,5µm,22.0s
SOC Sochi 111.11 25 *i* PKiKP **PKiKP** **12 12 18.0 -3.0**
SOC *e* 12 12 57.5
SOC *e*PPP PPP 12 15 17.6
SOC *e*PS **PS** **12 22 30.1 -0.3**
SOC MLR MLR
comp=Z,8µm,16.0s
CAN Canberra 111.37 239 IAms_20 IAms_20 12 49 43.7
comp=Z,5µm,20.0s
BTO Baotou 111.46 330 *e*PKP **PP** **12 12 54.0 -7.6**
BTO *e*PP PP 12 13 57.0 +55
BTO SKS **SKSac** **12 19 04.5 +1.2**
BTO Baotou 111.46 330 SS SS 12 28 04.0 -31
BRTR Keskin Array B 111.49 31 PKKP **PKKPdf** **12 23 34.6 -0.4**
comp=Z,4.6nm,1.2s,baz=184,slow=5.0,SNR=4.9
SSE Sheshan 111.91 316 PKP **PKiKP** **12 12 24.5 +1.7**
SSE AMB AMB
comp=Z,520nm,4.2s
SSE LR LR
comp=Z,900nm,19.9s
SSE LR LR
comp=Z,950nm,21.4s
SSE Sheshan 111.91 316 IAms_20 IAms_20 13 08 23.6
comp=Z,4µm,20.0s
KIV Kislovodsk 111.94 23 IAms_20 IAms_20 13 05 26.7
comp=Z,5µm,18.0s
SNAA Sanae 112.22 161 PKiKP **PKiKP** **12 12 29.2 +7.0**
SNAA Sanae 112.22 161 IAms_20 IAms_20 12 51 28.2
comp=Z,2µm,20.0s
COEN Coen 112.40 262 IAms_20 IAms_20 12 49 13.5
comp=Z,5µm,22.0s
TIY Taiyuan 112.48 327 *e*PKP **PKiKP** **12 12 28.3 +4.5**
TIY PP **PP** **12 13 09.0 0.0**
TIY SS SS 12 28 46.3 -2.9
TIY AMB AMB
comp=Z,530nm,7.6s
TIY LR LR
comp=Z,4µm,17.0s
TIY LR LR
comp=Z,1µm,14.2s
TIY LR LR
comp=Z,5µm,18.2s
NJ2 Nanjing 112.79 318 *e*Pdif **Pdif** **12 08 29.3 -0.3**
NJ2 SKKS 12 20 12.0
NJ2 SS **SS** **12 28 55.5 +1.9**
NJ2 AMB AMB
comp=Z,650nm,5.5s
NJ2 LR LR
comp=Z,2µm,21.3s
NJ2 LR LR
comp=Z,3µm,23.2s
NJ2 LR LR
comp=Z,4µm,21.8s
MKAR Makanchi Array 114.22 353 PKP **PKiKP** **12 12 26.8 -0.1**
comp=Z,0.8nm,0.8s,baz=40,slow=2.1,SNR=5.6
MKAR PP **PP** **12 13 21.3 +0.6**
comp=Z,3.2nm,1.0s,baz=31,slow=2.8,SNR=5.5
MKAR PKKPbc **PKKPbc** **12 23 07.7 -0.6**
comp=Z,2.0nm,0.9s,baz=177,slow=2.4,SNR=11
MAKZ Makanchi 114.25 353 IAms_20 IAms_20 13 02 39.1
comp=Z,5µm,22.0s
MAK Makhachkala 114.48 20 *e*P **Pdif** **12 08 29.0 -7.9**
MAK *e*SS SS 12 29 13.5 -1.1
MAK pmax pmax
comp=Z,231nm,1.3s
MAK MLR MLR
comp=Z,6µm,18.0s
YOJ Yonaguni jima 114.72 309 IAms_20 IAms_20 12 50 43.3
comp=Z,3µm,22.0s
CSS Mathiatis 114.95 35 IAms_20 IAms_20 13 05 31.5
comp=Z,3µm,21.0s
TATO Taipei 115.52 311 IAms_20 IAms_20 12 52 26.2
comp=Z,5µm,22.0s
YHNB Yeheng 115.79 310 IAms_20 IAms_20 12 54 51.4
comp=Z,4µm,21.0s
NACB Ninganchiao 115.93 310 IAms_20 IAms_20 13 00 34.2
comp=Z,3µm,19.0s
WMQ Urumqi 116.25 348 *e*PKP **PKPdf** **12 12 31.5 +0.6**
WMQ PP PP 12 13 45.5 +10
WMQ PKS 12 16 05.8
WMQ AMB AMB
comp=Z,360nm,10.3s
WMQ LR LR
comp=Z,3µm,17.3s
WMQ LR LR
comp=Z,3µm,17.3s
WMQ LR LR
comp=Z,5µm,20.3s
YULB Yu-li 116.62 309 IAms_20 IAms_20 12 58 29.5
comp=Z,2µm,20.0s
WHN Wuhan 116.62 320 PKP **PKiKP** **12 12 32.8 +0.9**
WHN SKKS 12 20 39.8
WHN SS **SS** **12 29 43.5 -0.5**
WHN AMB AMB
comp=Z,2µm,5.3s
WHN LR LR
comp=Z,5µm,16.1s
WHN LR LR
comp=Z,3µm,16.1s
WHN LR LR
comp=Z,7µm,20.5s
SSLB Suanglung 116.63 310 IAms_20 IAms_20 12 52 23.8
comp=Z,3µm,22.0s
GTA Gaotai 116.81 337 PKP PKiKP 12 12 40.5 +8.3
GTA PP **PP** **12 13 44.0 +4.7**
GTA SKS **SKSdf** **12 19 53.5 +8.8**
GTA SKKS **SKKSac** **12 20 39.8 -2.1**
GTA Gaotai 116.81 337 SS SS 12 29 43.0 -2.7
GTA AMB AMB
comp=Z,740nm,10.8s
GTA LR LR
comp=N,3µm,21.9s
GTA LR LR
comp=E,3µm,20.3s
GTA LR LR
comp=Z,5µm,22.5s
NVL N'lazarevskaya 117.03 161 *i* PKIKP PKPpre 12 12 24.4
NVL *e* 12 19 28.9
NVL *e*PS **PKKPdf** **12 23 23.5 -2.7**
NVL *e*SP SP 12 23 28.8 +6.7
NVL *e*SSS SSS 12 34 17.9
NVL MLR MLR
comp=Z,2µm,16.0s
XAN Xi'an 117.12 326 IAms_20 IAms_20 13 08 53.4
comp=Z,4µm,20.0s
TPUB Ta-pu 117.16 310 IAms_20 IAms_20 12 59 07.2
comp=Z,3µm,20.0s
QZH Quanzhou 117.60 312 Pdif **Pdif** **12 08 55.8 +4.7**
QZH S **Sdif** **12 21 40.0 +5.1**
QZH SS **SS** **12 29 53.5 -3.7**
QZH AMB AMB
comp=Z,700nm,5.7s
QZH LR LR
comp=Z,2µm,25.1s
QZH LR LR
comp=Z,1µm,27.0s
QZH LR LR
comp=Z,3µm,27.0s
LZH Lanzhou 117.97 332 *e*PKP **PKPdf** **12 12 30.8 -3.8**
LZH sPKP 12 12 43.0
LZH SKKS 12 20 48.8
LZH AMB AMB
comp=Z,1µm,7.1s
LZH LR LR
comp=Z,4µm,18.9s
LZH LR LR
comp=Z,4µm,19.0s
LZH LR LR
comp=Z,6µm,21.9s
KNMB Chin-men Tao 118.04 312 IAms_20 IAms_20 13 14 16.2
comp=Z,3µm,20.0s
KDJ Kajisay 119.33 356 PKIKP **PKiKP** **12 12 38.0 +0.9**
KDJ Kajisay 119.33 356 **PKiKP** **12 12 38.0 +0.9**
TARG Taragay, Kyrgy 119.69 355 **PKiKP** **12 12 38.4 +0.3**
ENH Enshi 119.69 323 **PKiKP** **12 12 39.0 +1.1**
ENH IAms_20 IAms_20 13 06 21.4
comp=Z,4µm,22.0s
SIJI Sorong 119.76 280 PKP **PKiKP** **12 12 39.6 +1.2**
comp=Z,4.3nm,0.6s,baz=30,slow=7.2,SNR=5.5
SZP Santa 120.68 305 IAms_20 IAms_20 12 53 13.5
comp=Z,3µm,22.0s
WR0 Warramunga Arr 121.75 258 PKPdf **PKiKP** **12 12 42.6 +0.5**
DAV Davao City (W) 121.75 291 IAms_20 IAms_20 12 52 40.9
comp=Z,4µm,22.0s
WB0 Warramunga Arr 121.86 258 **PKiKP** **12 12 43.2 +0.8**
WB5 Warramunga Arr 121.90 258 IAms_20 IAms_20 13 02 18.3
comp=Z,4µm,19.0s
WR2 Warramunga Arr 121.92 258 IAms_20 IAms_20 13 01 17.7
comp=Z,4µm,19.0s
WRAB Tennant Creek 121.92 258 PKIKP **PKiKP** **12 12 43.4 +1.0**
WRAB Tennant Creek 121.92 258 **PKiKP** **12 12 43.4 +1.0**
WB2 Warramunga Arr 121.93 258 **PKiKP** **12 12 43.3 +0.8**
WR1 Warramunga Arr 121.94 258 IAms_20 IAms_20 13 01 16.2
comp=Z,4µm,19.0s
WRA Warramunga Arr 121.94 258 PKP **PKPdf** **12 12 41.7 -0.6**
comp=Z,5.4nm,0.9s,baz=72,slow=1.6,SNR=25
WRA PP **PP** **12 14 12.9 -3.6**
comp=Z,3.2nm,1.1s,baz=80,slow=6.4,SNR=7.8
KSH Kashi 122.00 357 PKP **PKiKP** **12 12 47.5 +5.2**
KSH SKKS 12 21 18.0
KSH SS **SS** **12 30 55.5 +3.4**
KSH AMB AMB
comp=Z,580nm,6.4s
KSH LR LR
comp=Z,2µm,13.0s
KSH LR LR
comp=Z,2µm,12.7s
KSH LR LR
comp=Z,3µm,12.5s
GEYT Alibeck 122.08 13 PKP **PKiKP** **12 12 42.7 +0.3**
comp=Z,1.8nm,0.4s,baz=333,slow=1.7,SNR=6.4
GEYT PKKPbc **PKKPbc** **12 22 40.2 +0.4**
comp=Z,1.0nm,0.5s,baz=182,slow=40,SNR=2.5
KCP Kidapawan 122.22 291 *e*P **PKiKP** **12 12 46.4 +3.1**
CD2 Chengdu 122.25 328 PKP **PKPdf** **12 12 42.5 -0.3**
CD2 SKKS 12 21 17.5
CD2 AMB AMB
comp=Z,1µm,5.5s
CD2 LR LR
comp=Z,4µm,18.0s
CD2 LR LR
comp=Z,7µm,18.4s
CD2 LR LR
comp=Z,5µm,22.4s
HKPS Hong Kong Po S 122.42 313 IAms_20 IAms_20 13 14 48.3
comp=Z,3µm,20.0s
PGP Puerto Galera 122.53 300 *e*P **PKiKP** **12 12 44.3 +0.5**
GAR Garm 122.57 2 **PKiKP** **12 12 44.5 +1.1**
CHGR Chuyangaron 122.87 3 **PKiKP** **12 12 44.7 +0.7**
AS31 Alice Springs 122.90 253 **PKPdf** **12 12 43.3 -0.8**
ASAR Alice Springs 122.91 253 PKP **PKPdf** **12 12 43.1 -1.0**
comp=Z,5.5nm,0.9s,baz=90,slow=2.0,SNR=34
ASAR PKKPbc **PKKPbc** **12 22 39.9 +3.9**
comp=Z,2.0nm,0.8s,baz=261,slow=3.2,SNR=9.4
GYA Guiyang 124.19 323 PKP **PKPdf** **12 12 42.5 -4.2**
GYA SKS **SKSdf** **12 19 53.3 -5.9**
GYA SKKS **SKKSac** **12 21 25.5 -5.1**
GYA SS **SS** **12 31 17.5 -3.9**
GYA AMB AMB
comp=Z,360nm,5.1s
GYA LR LR
comp=Z,1µm,24.0s
GYA LR LR
comp=Z,2µm,20.8s
GYA LR LR
comp=Z,3µm,22.8s
CASY Casey 126.40 198 IAms_20 IAms_20 12 58 24.1
comp=Z,2µm,20.0s
KBL Kabul 126.96 4 IAms_20 IAms_20 13 12 44.0
comp=Z,4µm,20.0s
KMI Kunming 127.44 325 PKP **PKiKP** **12 12 54.3 +0.7**
KMI SKKS 12 21 42.5
KMI AMB AMB
comp=Z,500nm,7.8s
KMI LR LR
comp=Z,2µm,18.6s
KMI LR LR
comp=Z,3µm,21.4s
KMI LR LR
comp=Z,3µm,21.4s
KMI Kunming 127.44 325 IAms_20 IAms_20 13 14 35.5
comp=Z,3µm,21.0s
QIZ Qiongzhong 127.57 314 PKP **PKPdf** **12 12 52.0 -1.2**
QIZ AMB AMB
comp=Z,870nm,5.9s
QIZ LR LR
comp=Z,2µm,16.7s
QIZ LR LR
comp=Z,2µm,17.7s
QIZ LR LR
comp=Z,3µm,30.4s
QIZ Qiongzhong 127.57 314 IAms_20 IAms_20 13 11 07.8
comp=Z,3µm,21.0s
TSUM Tsumeb 128.24 100 **PKiKP** **12 12 56.2 +1.1**
TSUM Tsumeb 128.24 100 IAms_20 IAms_20 13 07 42.8
comp=Z,3µm,20.0s
LSA Lhasa 128.64 339 P **PKiKP** **12 13 04.0 +7.8**
LSA pmax pmax
comp=Z,56nm,1.7s
LSA Lhasa 128.64 339 IAms_20 IAms_20 13 16 55.8
comp=Z,3µm,20.0s
ZIRO ZIRO 129.61 335 *ex* **PKPdf** **12 12 54.7 -2.4**
ZIRO *i* x **PP** **12 15 03.4 -2.5**
SLVN Son La 129.72 321 IAms_20 IAms_20 13 17 36.8
comp=Z,3µm,22.0s
FITZ Fitzroy Crossi 129.74 262 **PKiKP** **12 12 59.4 +1.4**
MPSI Mapaga 129.78 287 PKP **PKPdf** **12 12 57.0 -0.5**
SMLA Simla 130.26 355 *ex* **PKPdf** **12 12 53.0 -4.9**
SMLA *i* x **PP** **12 15 02.5 -7.0**
RAYN Ar Rayn 130.45 33 PKIKP **PKiKP** **12 13 00.5 +1.0**
RAYN Ar Rayn 130.45 33 **PKiKP** **12 13 00.5 +1.0**
RAYN IAms_20 IAms_20 13 15 38.6
comp=Z,3µm,22.0s
MAW Mawson 130.72 175 PKP **PKiKP** **12 12 59.8 +1.3**
comp=Z,12nm,1.1s,baz=114,slow=0.6,SNR=11
MMRI Maumere 130.80 275 IAms_20 IAms_20 13 02 54.8
comp=Z,2µm,21.0s
KOHI KOHIMA 131.11 334 *ex* **PKPdf** **12 12 59.5 -0.4**
TTSI Tana Toraja 131.19 283 PKP **PKPdf** **12 13 00.6 +0.4**
EDFI Ende, Flores 131.35 275 PKP **PKPdf** **12 12 59.1 -1.5**
SPSI Sidrap Palu 131.58 282 PKP **PKiKP** **12 13 02.2 +0.3**
SUR Sutherland 131.83 117 IAms_20 IAms_20 13 04 23.8
comp=Z,4µm,22.0s
SHL Shillong 132.14 336 *i* x **PKPdf** **12 13 02.8 +0.8**
SHL *ex* **PP** **12 15 17.9 -4.3**
DLV T Lat 133.25 308 IAms_20 IAms_20 13 22 05.5
comp=Z,3µm,20.0s
UOSS Minazif 133.81 21 IAms_20 IAms_20 13 19 21.5
comp=Z,3µm,21.0s
CHTO Chiang Mai 134.58 324 PKIKP **PKiKP** **12 13 07.5 -0.4**
CHTO Chiang Mai 134.58 324 **PKiKP** **12 13 07.5 -0.4**
CHTO Chiang Mai 134.58 324 IAms_20 IAms_20 13 18 57.2
comp=Z,3µm,20.0s
CMAR Chiang Mai Arr 134.86 323 PKP **PKPdf** **12 13 06.7 -0.3**
comp=Z,1.8nm,0.8s,baz=354,slow=0.9,SNR=3.4
BOSA Boshof 135.85 112 PKiKP PKPpre 12 13 02.7
comp=Z,4.3nm,1.1s,baz=354,slow=2.1,SNR=3.6
BOSA PKP pPKPdf 12 13 11.3 0.0
comp=Z,8.0nm,1.1s,baz=274,slow=3.6,SNR=5.3
BOSA Boshof 135.85 112 PKIKP **PKPdf** **12 13 09.0 +0.3**
BOSA Boshof 135.85 112 **PKPdf** **12 13 09.0 +0.3**
DESE Dese 136.08 50 *e*P **PKPdf** **12 13 08.7 -1.1**
DESE *e*S SKiKP 12 16 58.7 +11
FURI Furi 136.81 53 IAms_20 IAms_20 13 11 41.0
comp=Z,3µm,21.0s
DAMY Dhamar 136.87 42 IAms_20 IAms_20 13 26 45.7
comp=Z,3µm,21.0s
LSZ Lusaka 137.56 92 IAms_20 IAms_20 13 11 06.4
comp=Z,3µm,21.0s
KSM Kuching 137.78 294 **PKPdf** **12 13 12.5 0.0**
KSM IAms_20 IAms_20 13 11 22.1
comp=Z,2µm,22.0s
ATD Arta Tunnel 138.07 47 IAms_20 IAms_20 13 25 19.2
comp=Z,2µm,18.0s
KMBO Kilima Mbogo 141.27 67 PKP **PKPdf** **12 13 20.0 +0.8**
comp=Z,1.0nm,0.3s,baz=271,slow=1.7,SNR=1.2
KMBO Kilima Mbogo 141.27 67 PKIKP **PKPdf** **12 13 18.6 -0.6**
KMBO Kilima Mbogo 141.27 67 **PKPdf** **12 13 18.6 -0.6**
KMBO Kilima Mbogo 141.27 67 IAms_20 IAms_20 13 26 02.3
comp=Z,2µm,20.0s
RPR Rampur 142.09 350 *e*PKPdf **PKPdf** **12 13 17.0 -3.2**
SRSP Sriramsagar 142.18 351 *e*PKPdf **PKPdf** **12 13 16.9 -3.5**
SRSP IVMs_BB IVMs_BB 13 23 34.3
comp=Z,955nm,18.9s
POO Poona 142.99 358 *i* x **PKPdf** **12 13 16.0 -5.9**

MYKOM	**Kota Tinggi**	**143.06**	**300**	IAMs_20	IAMs_20	13 23 13.1		
	comp=Z,3µm,20.0s							
PVM	**Polavaram**	**143.17**	**345**	*e*PKPdf	**PKPdf**	**12 13 21.3**	**-0.9**
PVM				IVMs_BB	IVMs_BB	13 26 22.5		
	comp=Z,651nm,15.7s							
KLRI	**Killari**	**143.25**	**353**	*e*PKPdf	PKPbc	12 13 19.7	+0.5	
KLRI				IVMs_BB	IVMs_BB	13 18 01.4		
	comp=Z,1µm,24.2s							
KULM	**Kulim**	**143.43**	**308**		**PKPdf**	**12 13 22.2**	**-0.5**	
KULM				IAMs_20	IAMs_20	13 27 48.6		
	comp=Z,3µm,20.0s							
HYBB	**Hyderabad (bro**	**143.62**	**350**	*e*PKPdf	PKPbc	12 13 21.8	+1.5	
HYBB				IVMs_BB	IVMs_BB	13 24 30.3		
	comp=Z,988nm,17.0s							
HYB	**Hyderabad**	**143.63**	**350**	*i* PKP	PKPab	12 13 19.0	-0.5	
HYB				*e*PP	**PP**	**12 16 34.0**	**+0.7**	
HYB	**Hyderabad**	**143.63**	**350**	*ex*	PKPab	12 13 19.9	+0.4	
IPM	**Ipoh**	**143.67**	**307**	IAMs_20	IAMs_20	13 27 57.2		
	comp=Z,4µm,21.0s							
PBA	**Port Blair**	**143.84**	**325**	*ex*	PKPab	12 13 20.1	-0.2	
CISI	**Cisompet, Garu**	**143.95**	**283**	PKP	PKPab	12 13 20.6	-0.3	
CISI	**Cisompet, Garu**	**143.95**	**283**		**PKPdf**	**12 13 23.0**	**-0.7**	
CISI				IAMs_20	IAMs_20	13 12 08.0		
	comp=Z,2µm,22.0s							
SOCY	**Socotra**	**144.29**	**32**	IAMs_20	IAMs_20	13 28 00.3		
	comp=Z,3µm,21.0s							
NJS	**Nagarjunasagar**	**144.34**	**349**	*e*PKPdf	PKPbc	12 13 23.3	+0.9	
NJS				IVMs_BB	IVMs_BB	13 25 08.7		
	comp=Z,778nm,16.0s							
SRLM	**Srisailam**	**144.86**	**349**	*e*PKPbc	**PKPdf**	**12 13 25.2**	**0.0**	
SRLM				IVMs_BB	IVMs_BB	13 24 09.7		
	comp=Z,862nm,22.1s							
ADKI	**Addanki**	**144.90**	**347**	*e*PKPbc	**PKPab**	**12 13 23.0**	**-1.2**	
ADKI				IVMs_BB	IVMs_BB	13 23 55.3		
	comp=Z,675nm,18.1s							
LHMI	**Lhok Sumawe**	**146.16**	**312**	IAMs_20	IAMs_20	13 09 37.9		
	comp=Z,3µm,21.0s							
BKNI	**Bangkinang**	**146.20**	**301**	IAMs_20	IAMs_20	13 30 46.1		
	comp=Z,3µm,22.0s							
URV	**Uravakonda**	**146.25**	**352**	*e*PKPdf	**PKPab**	**12 13 29.5**	**+0.3**	
URV				IVMs_BB	IVMs_BB	13 20 11.1		
	comp=Z,1µm,21.6s							
PSI	**Prapat**	**146.35**	**307**	PKP2	**PKPdf**	**12 13 27.8**	**-0.1**	
RPSI	**Rantau Prapat**	**146.42**	**307**		**PKPdf**	**12 13 27.8**	**-0.1**	
RPSI				IAMs_20	IAMs_20	13 26 25.1		
	comp=Z,3µm,20.0s							
SKHT	**Srikalahasti**	**147.00**	**347**	*e*PKPdf	**PKPbc**	**12 13 31.2**	**+0.5**	
SKHT				IVMs_BB	IVMs_BB	13 26 35.5		
	comp=Z,849nm,18.1s							
MDRS	**Chennai**	**147.53**	**346**	*ex*	**PKPbc**	**12 13 33.1**	**+0.9**	
GSI	**Gunungsitoli**	**148.34**	**306**		**PKPbc**	**12 13 33.4**	**-1.1**	

IDC ***31*** *12:10:27.3±8.8, 51°.99N×178°.75E, h95km±95km, mb2.8/4, mb1 3.3/6, mb1mx3.0/66, mbtmp3.4/6, ML3.3/2, Error ellipse: s-maj=81.6km s-min=40.6km az=155.0*
NEIC ***31*** *12:10:27.5±1.5, 52°.2N±0°.3×178°.56E±0°.10, h113km±28km, Error ellipse: s-maj=42.3km s-min=7.6km az=184.0*
AEIC ***31*** *12:10:28.0±1.6, 52°.2N±0°.2×178°.57E±0°.08, h127km±9km, ML3.0/12, Error ellipse: s-maj=36.2km s-min=3.1km az=189.0*

ISC 31 12:10:28.2±1.0, 52°.3N±0°.2×178°.57E±0°.05, h100km, n19, σ0s92/20, mb3.2/4, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GALAA	**Gareloi Lava P**	**1.73**	**107**		**Pn**	**12 10 57.6**	**+0.4**
GALAA					**Sn**	**12 11 20.3**	**+0.9**
TASE	**Tanaga Southea**	**2.15**	**101**		**Pn**	**12 11 02.3**	**-0.3**
TAFP	**Tanaga Falls P**	**2.16**	**99**		**Pn**	**12 11 02.5**	**-0.3**
TAFP					**Sn**	**12 11 28.8**	**-0.5**
KIMD	**Kanaga Island**	**2.65**	**100**		**Pn**	**12 11 08.6**	**-0.5**
SMY	**Shemya**	**2.77**	**281**		**Pn**	**12 11 09.6**	**-1.1**
SMY					**Sn**	**12 11 43.6**	**+0.1**
ADK	**Adak**	**2.96**	**96**		**Pn**	**12 11 12.7**	**-0.5**
ADK				Sn	**Sn**	**12 11 47.9**	**-0.1**
GSTD	**Great Sitkin T**	**3.26**	**92**		**Pn**	**12 11 17.1**	**-0.3**
ATKA	**Atka Island**	**4.45**	**88**		**Pn**	**12 11 33.4**	**+0.2**
PEA0B	**Petropavlovsk-**	**12.68**	**282**	Pn	**Pn**	**12 13 25.4**	**+0.8**
PETK	**Petropavlovsk-**	**12.68**	**282**	P	**Pn**	**12 13 26.5**	**+1.9**
	0.1nm,0.3s,baz=93,slow=20,SNR=1.9						
KDAK	**Kodiak Island**	**17.33**	**60**	P	**P**	**12 14 23.8**	**+0.4**
	0.7nm,0.3s,baz=270,slow=8.1,SNR=12						
KDAK	**Kodiak Island**	**17.33**	**60**	P	**P**	**12 14 21.5**	**-1.9**
ILAR	**Eielson Array**	**21.59**	**41**	P	**P**	**12 15 10.2**	**+0.8**
	0.2nm,0.7s,baz=250,slow=11,SNR=5.1						
H11N2	**WAKE ISLAND Hy**	**33.76**	**200**	T	T	12 52 16.7	
	baz=11,slow=76,SNR=3.3						
H11N3	**WAKE ISLAND Hy**	**33.77**	**200**	T	T	12 52 18.0	
	baz=11,slow=76,SNR=3.0						
H11N1	**WAKE ISLAND Hy**	**33.78**	**200**	T	T	12 52 18.1	
	baz=11,slow=76,SNR=4.0						
YKA	**Yellowknife Ar**	**35.79**	**47**	P	**P**	**12 17 18.0**	**+0.9**
	0.1nm,0.3s,baz=297,slow=4.7,SNR=5.7						
NVAR	**Mina Array Bea**	**45.05**	**82**	P	**P**	**12 18 33.4**	**-0.6**
	0.3nm,0.6s,baz=300,slow=7.2,SNR=2.6						
TXAR	**Lajitas Array**	**60.11**	**80**	P	**P**	**12 20 23.8**	**-1.2**
	0.1nm,0.5s,baz=288,slow=3.7,SNR=4.0						

NEIC ***31*** *12:43:00.6±1.2, 10°.95S±0°.08×162°.15E±0°.08, h10km±1km, mb4.7/33, Error ellipse: s-maj=16.1km s-min=10.9km az=43.0*
IDC ***31*** *12:43:05.1±2.6, 10°.92S×162°.07E, h36km±19km, mb3.9/13, mb1 4.2/16, mb1mx4.1/28, mbtmp4.2/16, ML4.5/3, Error ellipse: s-maj=23.4km s-min=16.0km az=104.0*
BJI ***31*** *12:43:10.0±0.0, 10°.90S×162°.10E, h73km, mb4.8/5*

ISC 31 12:43:04.4±0.4, 10°.93S±0°.06×162°.15E±0°.07, h36km, n70, σ1s21/67, mb4.5/31, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.63**	**304**	Pn	**Pn**	**12 43 45.6**	**+1.3**
	203nm,0.3s,baz=151,slow=8.7,SNR=21						
HNR				Sn	**Sn**	**12 44 18.4**	**+3.4**
	359nm,0.3s,baz=41,slow=21,SNR=3.7						
HNR	**Honiara**	**2.63**	**304**	*i* P	**Pn**	**12 43 43.5**	**-0.9**
HNR				*e*S	Sn	12 44 04.0	-11
HNR	**Honiara**	**2.63**	**304**	Pn	**Pn**	**12 43 44.4**	**0.0**
HNR				Sn	**Sn**	**12 44 16.7**	**+1.6**
DZM	**Mont Dzumac**	**11.82**	**160**	Pn	**Pn**	**12 45 52.4**	**+1.8**
	0.5nm,0.3s,baz=32,slow=11,SNR=50						
DZM				Sn	**Sn**	**12 48 00.1**	**-1.1**
	0.2nm,0.3s,baz=4.7,slow=23,SNR=1.8						
DZM	**Mont Dzumac**	**11.82**	**160**	Pn	**Pn**	**12 45 51.9**	**+1.3**
RABL	**Rabaul**	**11.95**	**303**	Pn	**Pn**	**12 45 51.0**	**-1.3**
PMG	**Port Moresby**	**14.83**	**275**	Pn	**Pn**	**12 46 30.9**	**-0.8**
TARA	**Tarawa**	**16.24**	**42**	Pn	**Pn**	**12 46 46.7**	**-3.2**
MSVF	**Nonsavu**	**16.82**	**116**		**Pn**	**12 46 56.1**	**-1.2**
EIDS	**Eidsvold**	**17.78**	**215**	P	**Pn**	**12 47 08.0**	**-1.2**
CTA	**Charters Tower**	**17.80**	**237**	P	**P**	**12 47 10.6**	**+0.6**
	2.0nm,0.3s,baz=71,slow=12,SNR=43						
CTAO	**Charters Tower**	**17.80**	**237**		**P**	**12 47 10.3**	**+0.3**
CTAO				IAmb	IAmb	12 47 15.3	
	comp=Z,86nm,0.9s						
PATS	**Pohnpei**	**18.06**	**348**	P	**Pn**	**12 47 12.2**	**-0.4**
PATS				IAmb	IAmb	12 47 19.1	
	comp=Z,136nm,1.4s						
COEN	**Coen**	**18.77**	**259**		**P**	**12 47 19.9**	**-0.8**
ARMA	**Armidale**	**21.72**	**205**	P	**P**	**12 47 52.5**	**-0.2**
SMPI	**Sarmi**	**24.91**	**289**	P	**P**	**12 48 23.8**	**-0.5**
	comp=Z,22nm,0.8s						
WR0	**Warramunga Arr**	**28.05**	**248**	P	**P**	**12 48 51.4**	**-1.2**
WR0				IAmb	IAmb	12 48 53.2	
	comp=Z,12nm,1.2s						
WB0	**Warramunga Arr**	**28.14**	**248**	P	**P**	**12 48 53.0**	**-0.4**
WB0				IAmb	IAmb	12 48 56.3	
	comp=Z,9.4nm,0.9s						
STKA	**Stephens Creek**	**28.19**	**219**	P	**P**	**12 48 54.2**	**+0.4**
	comp=Z,7.1nm,1.0s,baz=11,slow=8.3,SNR=8.7						
STKA				ScP	**ScP**	**12 55 46.1**	**+0.7**
	comp=Z,2.0nm,1.0s,baz=94,slow=6.3,SNR=3.0						
STKA	**Stephens Creek**	**28.19**	**219**	P	**P**	**12 48 53.6**	**-0.2**
WRA	**Warramunga Arr**	**28.23**	**248**	P	**P**	**12 48 53.2**	**-1.0**
	comp=Z,3.0nm,0.7s,baz=78,slow=9.2,SNR=15						
H11S2	**WAKE ISLAND Hy**	**29.58**	**9**	T	T	13 20 01.5	
	baz=188,slow=76,SNR=885						
H11S3	**WAKE ISLAND Hy**	**29.58**	**9**	T	T	13 19 57.4	
	baz=188,slow=76,SNR=640						
H11S1	**WAKE ISLAND Hy**	**29.59**	**9**	T	T	13 19 58.8	
	baz=188,slow=76,SNR=710						
AS31	**Alice Springs**	**29.72**	**241**	P	**P**	**12 49 06.5**	**-0.9**
ASAR	**Alice Springs**	**29.72**	**241**	P	**P**	**12 49 06.3**	**-1.2**
	comp=Z,2.2nm,0.8s,baz=73,slow=9.6,SNR=21						
ASAR				PcP	**PcP**	**12 52 09.5**	**-1.6**
	comp=Z,1.8nm,1.0s,baz=74,slow=3.4,SNR=5.4						
ASAR				ScP	**ScP**	**12 55 51.3**	**+0.8**
	comp=Z,0.7nm,0.9s,baz=87,slow=3.3,SNR=4.1						
MTN	**Manton Dam**	**30.40**	**263**	P	**P**	**12 49 13.0**	**-0.5**
MTN				IAmb	IAmb	12 49 22.6	
	comp=Z,16nm,1.3s						
TOO	**Toolangi**	**30.46**	**207**		**P**	**12 49 13.7**	**-0.1**
TOO				IAmb	IAmb	12 49 27.8	
	comp=Z,16nm,1.4s						
H11N1	**WAKE ISLAND Hy**	**30.81**	**9**	T	T	13 21 33.7	
	baz=188,slow=76,SNR=270						
H11N3	**WAKE ISLAND Hy**	**30.81**	**9**	T	T	13 21 33.8	
	baz=188,slow=76,SNR=376						
H11N2	**WAKE ISLAND Hy**	**30.82**	**9**	T	T	13 21 30.9	
	baz=188,slow=76,SNR=333						
BKZ	**Black Stump Fm**	**30.89**	**158**	P	**P**	**12 49 18.3**	**+0.7**
BKZ				IAmb	IAmb	12 49 26.0	
	comp=Z,21nm,1.4s						
TUWZ	**Tuamarina**	**32.10**	**163**	P	**P**	**12 49 28.1**	**0.0**
BBOO	**Buckleboo**	**32.40**	**224**	P	**P**	**12 49 30.7**	**-0.2**
KNRA	**Kununurra**	**32.81**	**258**	P	**P**	**12 49 34.0**	**-0.6**
FITZ	**Fitzroy Crossi**	**36.01**	**254**	P	**P**	**12 50 01.2**	**-1.2**
FITZ				IAmb	IAmb	12 50 10.9	
	comp=Z,7.6nm,0.9s						
SANI	**Sanana**	**36.96**	**281**	P	**P**	**12 50 06.3**	**-4.2**
	comp=Z,939nmcomp=Z,34nm,1.1s						
FORT	**Forrest**	**37.26**	**233**	P	**P**	**12 50 12.3**	**-0.6**
FORT				IAmb	IAmb	12 50 14.8	
	comp=Z,32nm,1.1s						
MMRI	**Maumere**	**39.38**	**270**	P	**P**	**12 50 29.6**	**-1.3**
EDFI	**Ende, Flores**	**39.90**	**269**	P	P	12 50 46.7	+11
BNSI	**Bone**	**42.13**	**276**	P	**P**	**12 50 54.3**	**+0.6**
	comp=Z,29nm,0.8s						
KAPI	**Kappang**	**42.37**	**275**	P	**P**	**12 50 55.4**	**-0.2**
KAPI				IAmb	IAmb	12 51 03.3	
	comp=Z,34nm,1.2s						
SPSI	**Sidrap Palu**	**42.55**	**276**	P	**P**	**12 50 55.4**	**-1.7**
MPSI	**Mapaga**	**43.46**	**282**	P	P	12 51 16.0	+12
NWAO	**Narrogin (SRO)**	**46.62**	**235**	P	**P**	**12 51 29.2**	**-0.1**
JAGI	**Jajag, Banyuwa**	**47.34**	**269**	P	**P**	**12 51 33.8**	**-1.4**
KKM	**Kota Kinabalu**	**48.73**	**288**	P	**P**	**12 51 45.9**	**-0.2**
KKM				IAmb	IAmb	12 51 53.2	
	comp=Z,10nm,0.9s						
SBUM	**Sibu**	**51.42**	**282**	P	**P**	**12 52 05.5**	**-0.9**
NACB	**Ninganchiao**	**52.79**	**312**	P	**P**	**12 52 16.0**	**-0.4**
KSRS	**Korea Array**	**57.85**	**328**	P	**P**	**12 52 53.9**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=146,slow=6.9,SNR=4.3						
PETK	**Petropavlovsk-**	**63.90**	**357**	P	**P**	**12 53 33.5**	**+0.1**
	comp=Z,7.0nm,0.9s,baz=164,slow=6.9,SNR=7.8						
VNDA	**Vanda**	**66.58**	**180**	P	**P**	**12 53 52.3**	**+1.8**
	comp=Z,1.5nm,0.7s,baz=341,slow=3.5,SNR=7.4						
VNDA	**Vanda**	**66.58**	**180**	P	**P**	**12 53 52.2**	**+1.7**
VNDA				IAmb	IAmb	12 54 04.4	
	comp=Z,3.9nm,0.9s						
CM31	**Chiang Mai Arr**	**68.84**	**295**	P	**P**	**12 54 05.9**	**+0.1**
CM31				IAmb	IAmb	12 54 14.3	
	comp=Z,4.4nm,1.0s						
CMAR	**Chiang Mai Arr**	**68.84**	**295**	P	**P**	**12 54 06.3**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=122,slow=6.6,SNR=5.8						
CHTO	**Chiang Mai**	**68.96**	**295**	P	**P**	**12 54 05.2**	**-1.3**
ULN	**Ulaanbaatar**	**76.17**	**325**	P	**P**	**12 54 50.3**	**+1.3**
ULN				IAmb	IAmb	12 54 59.9	
	comp=Z,6.0nm,1.1s						
SONM	**Songino Array**	**76.52**	**325**	P	**P**	**12 54 52.0**	**+1.1**
	comp=Z,1.1nm,0.7s,baz=150,slow=6.0,SNR=6.2						
YAK	**Yakutsk**	**77.03**	**345**	P	**P**	**12 54 53.8**	**+0.5**
BILL	**Bilibino**	**78.82**	**2**	P	**P**	**12 55 03.6**	**+0.4**
BILL				IAmb	IAmb	12 55 06.8	
	comp=Z,14nm,1.1s						
QSPA	**South Pole Qui**	**79.07**	**180**	P	**P**	**12 55 05.2**	**+0.3**
QSPA				IAmb	IAmb	12 55 17.0	
	comp=Z,12nm,1.1s						
MAW	**Mawson**	**83.49**	**202**	P	**P**	**12 55 29.2**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=72,slow=3.6,SNR=3.6						
ILAR	**Eielson Array**	**84.56**	**20**	P	**P**	**12 55 34.0**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=223,slow=3.4,SNR=6.9						
TIXI	**Tiksi**	**85.33**	**350**	P	**P**	**12 55 37.7**	**+0.4**
TIXI				IAmb	IAmb	12 55 47.0	
	comp=Z,5.6nm,1.2s						
NVAR	**Mina Array Bea**	**88.66**	**51**	P	**P**	**12 55 55.3**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=230,slow=6.9,SNR=4.6						
MKAR	**Makanchi Array**	**91.04**	**317**	P	**P**	**12 56 05.6**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=126,slow=7.3,SNR=3.0						
KSH	**Kashi**	**93.94**	**309**	P	P	12 56 25.8	+6.9
KSH				pmax	pmax		
	comp=Z,22nm,1.2s						
YKA	**Yellowknife Ar**	**96.50**	**28**	P	**P**	**12 56 29.2**	**-0.6**
	comp=Z,0.5nm,0.9s,baz=250,slow=4.9,SNR=6.3						
BOSA	**Boshof**	**122.73**	**226**	PKP	**PKPdf**	**13 01 57.5**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=152,slow=2.0,SNR=4.7						
TORD	**Torodi Ar. Bea**	**160.76**	**279**	PKP	**PKPdf**	**13 03 01.3**	**-0.3**
	comp=Z,1.4nm,1.0s,baz=278,slow=1.2,SNR=3.8						

CRAAG ***31*** *12:51:44.1, 36°.42N×5°.56E, Ml3.2*
MDD ***31*** *12:51:46.5±0.6, 36°.60N×5°.64E, h20km±10km, mb4.2/13, Error ellipse: s-maj=12.6km s-min=9.9km az=29.0, PRXIMO*
LDG ***31*** *12:51:47.2±0.3, 36°.84N×5°.17E, h2km, Ml3.1/6, Error ellipse: s-maj=7.1km s-min=3.9km az=155.0*

ISC 31 12:51:42.8±1.1, 36°.60N±0°.06×5°.55E±0°.04, h10km, n49, σ2s17/54, 1C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DFRA	**Djebel Bou Aff**	**0.27**	**101**	P	**Pb**	**12 51 51.4**	**+1.6**
DFRA	**Djebel Bou Aff**	**0.27**	**101**	P	**Pb**	**12 51 51.4**	**+1.6**
SET	**Setif**	**0.41**	**197**	P	**Pb**	**12 51 51.0**	**-1.3**
SET	**Setif**	**0.41**	**197**	P	**Pb**	**12 51 51.0**	**-1.3**
CASM	**Ain Smara**	**0.83**	**114**	P	**Pn**	**12 52 00.8**	**+0.2**
CASM	**Ain Smara**	**0.83**	**114**	P	**Pn**	**12 52 00.8**	**+0.2**
CTEI	**Djebel Teioual**	**0.87**	**127**	P	**Pn**	**12 52 01.3**	**0.0**
CTEI	**Djebel Teioual**	**0.87**	**127**	P	**Pn**	**12 52 01.3**	**0.0**
ETOS	**Mallorca**	**3.83**	**327**	⇑P	**Pn**	**12 52 43.9**	**+2.0**
	19nm,0.3s,SNR=18						
ETOS				S	**Sn**	**12 53 26.6**	**-0.4**
	19nm,0.4s						
EIBI	**Ibiza**	**4.12**	**307**	P	**Pn**	**12 52 47.8**	**+1.9**
	6.7nm,0.2s,SNR=12						
EIBI				S	**Sn**	**12 53 33.1**	**-1.0**
	5.3nm,0.3s,SNR=6.8						
EBEN2	**Beniarda presa**	**5.01**	**296**	P	**Pn**	**12 52 60.0**	**+1.9**
	6.5nm,0.4s,SNR=7.9						
AFON	**Font Roja**	**5.26**	**295**	P	**Pn**	**12 53 04.6**	**+3.0**
	1.1nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**5.56**	**285**	P	**Pn**	**12 53 07.0**	**+1.4**
	2.6nm,0.3s,SNR=4.5						
EMUR				S	**Sn**	**12 54 08.4**	**-1.2**
	4.5nm,0.6s						
CFON	**Fontmartina**	**5.70**	**336**	P	**Pn**	**12 53 08.6**	**+1.0**
	2.0nm,0.2s,SNR=6.2						
CFON				S	**Sn**	**12 54 11.5**	**-1.6**
	13nm,1.1s						
EPOB	**Poblet**	**5.89**	**325**	P	**Pn**	**12 53 11.4**	**+1.2**
	1.9nm,0.2s,SNR=7.9						
EPOB				S	**Sn**	**12 54 14.4**	**-3.4**
	2.3nm,0.3s						
ERTA	**Horta de San J**	**5.96**	**318**	P	**Pn**	**12 53 13.4**	**+2.2**
	0.9nm,0.2s,SNR=4.0						
ERTA				S	**Sn**	**12 54 17.3**	**-2.3**
	1.3nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**5.99**	**292**	P	**Pn**	**12 53 14.9**	**+3.2**
	3.2nm,0.5s,SNR=6.0						
ETOB				S	**Sn**	**12 54 19.9**	**-0.5**
	15nm,1.3s						
EMOS	**Mosqueruela**	**6.04**	**310**	P	**Pn**	**12 53 14.6**	**+2.3**
	1.3nm,0.2s,SNR=7.9						
EMOS				S	**Sn**	**12 54 19.5**	**-2.1**
	0.5nm,0.2s,SNR=7.9						
PGF	**Pioggiola**	**6.51**	**23**	*e*Pn	**Pn**	**12 53 20.3**	**+1.5**
PGF				*e*Sn	**Sn**	**12 54 29.5**	**-3.7**
	2.6nm,0.3s						
PGF	**Pioggiola**	**6.51**	**23**	P	**Pn**	**12 53 20.3**	**+1.5**
PGF				S	**Sn**	**12 54 29.5**	**-3.7**
	1.3nm,0.3s						
CSOR	**Sort**	**6.71**	**331**	P	**Pn**	**12 53 23.9**	**+2.4**
	2.5nm,0.3s,SNR=12						
CSOR				S	**Sn**	**12 54 36.3**	**-1.6**
	21nm,1.2s						
LMR	**La Mourre**	**6.77**	**6**	*e*Pn	**Pn**	**12 53 22.1**	**-0.1**
LMR				*e*Sn	Sn	12 54 34.7	-4.6
	2.1nm,0.3s						
LMR	**La Mourre**	**6.77**	**6**	P	**Pn**	**12 53 22.1**	**-0.1**
LMR				S	Sn	12 54 34.7	-4.6
	1.1nm,0.3s						
EQES	**Quesada**	**6.99**	**283**	P	**Pn**	**12 53 28.3**	**+3.0**
	2.8nm,0.4s,SNR=7.9						
FRF	**La Foret Royal**	**7.01**	**7**	*e*Pn	**Pn**	**12 53 27.5**	**+2.0**
FRF				*e*Sn	Sn	12 54 40.3	-4.9
	3.2nm,0.3s						
FRF	**La Foret Royal**	**7.01**	**7**	P	**Pn**	**12 53 27.5**	**+2.0**
FRF				S	Sn	12 54 40.3	-4.9
	1.6nm,0.3s						
MTLF	**Montolieu**	**7.21**	**340**	*e*Pn	Pn	12 53 26.4	-1.8
MTLF	**Montolieu**	**7.21**	**340**	*e*P	**Pn**	**12 53 31.7**	**+3.5**
MTLF				*e*Sn	Sn	12 54 41.8	-8.3
	0.9nm,0.2s						
MTLF	**Montolieu**	**7.21**	**340**	P	**Pn**	**12 53 31.7**	**+3.5**
MTLF				S	Sn	12 54 41.8	-8.3
	0.4nm,0.2s						
SMRF	**Simiane la Rot**	**7.37**	**0**	*e*Pn	**Pn**	**12 53 30.3**	**-0.2**
SMRF	**Simiane la Rot**	**7.37**	**0**	*e*P	Pn	12 53 35.7	+5.2
SMRF				*e*Sn	Sn	12 54 47.2	-7.0
SMRF	**Simiane la Rot**	**7.37**	**0**	P	**Pn**	**12 53 30.3**	**-0.2**
SMRF				S	Sn	12 54 47.2	-7.0
SBF	**Sospel**	**7.40**	**11**	*e*Pn	**Pn**	**12 53 31.3**	**+0.4**
SBF	**Sospel**	**7.40**	**11**	*e*P	Pn	12 53 36.8	+5.9
SBF	**Sospel**	**7.40**	**11**	P	**Pn**	**12 53 31.3**	**+0.4**
EPF	**Esparros**	**7.57**	**330**	*e*Pn	Pn	12 53 31.2	-2.1
EPF	**Esparros**	**7.57**	**330**	*e*P	**Pn**	**12 53 36.5**	**+3.2**
EPF				*e*Sn	Sn	12 54 49.7	-10
EPF	**Esparros**	**7.57**	**330**	P	**Pn**	**12 53 36.5**	**+3.2**
EPF				S	Sn	12 54 49.7	-10
LASF	**Ste Croix**	**7.58**	**351**	*e*Pn	**Pn**	**12 53 32.5**	**-0.9**
LASF				*e*Sn	Sn	12 54 52.2	-7.2
	1.9nm,0.3s						
LASF	**Ste Croix**	**7.58**	**351**	P	**Pn**	**12 53 32.5**	**-0.9**
LASF				S	Sn	12 54 52.2	-7.2
	0.9nm,0.3s						
ETSF	**Etsaut**	**7.86**	**325**	*e*Pn	Pn	12 53 35.1	-2.1
ETSF	**Etsaut**	**7.86**	**325**	*e*P	**Pn**	**12 53 40.7**	**+3.5**
ETSF				*e*Sn	Sn	12 54 56.4	-10
ETSF	**Etsaut**	**7.86**	**325**	P	**Pn**	**12 53 40.7**	**+3.5**
ETSF				S	Sn	12 54 56.4	-10
ATE	**Arette**	**8.07**	**325**	P	**Pn**	**12 53 42.3**	**+2.3**
	1.7nm,0.3s,SNR=7.9						
VIVF	**Saint-Julien-l**	**8.28**	**356**	*e*Pn	**Pn**	**12 53 42.3**	**-0.7**
VIVF				*e*Sn	Sn	12 55 09.6	-6.9
	1.9nm,0.3s						
SJPF	**Ste Jean**	**8.34**	**323**	*e*Pn	Pn	12 53 41.4	-2.3
SJPF	**Ste Jean**	**8.34**	**323**	*e*P	**Pn**	**12 53 46.7**	**+3.0**
EALK	**Alkurruntz**	**8.55**	**323**	P	**Pn**	**12 53 49.0**	**+2.3**
	4.4nm,0.4s,SNR=6.6						
EALK				S	**Sn**	**12 55 19.8**	**-3.5**
	0.6nm,0.2s,SNR=7.9						
CAF	**Calviac**	**8.73**	**343**	*e*Pn	Pn	12 53 47.9	-1.2

WBNET ***31*** *13:28:12.0, 50°.23N×12°.44E, h8km, Ml2.0*
BGR ***31*** *13:28:11.9±0.2, 50°.23N×12°.45E, h9km±2km, ML2.6/2, Error ellipse: s-maj=2.2km s-min=2.2km az=104.0*
CLL ***31*** *13:28:12.4±0.3, 50°.23N×12°.44E, h7km±1km, ML2.2/9*

ISC 31 13:28:12.5±1.0, 50°.24N±0°.02×12°.43E±0°.02, h7km±3km, n38, σ0s69/67, 7C-4D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NKC	**Novy Kostel**	**0.01**	**112**	*i* Pg	**Pg**	**13 28 13.6**	**-0.3**
NKC				*i* Sg	**Sg**	**13 28 14.7**	**-0.2**
NKC	**Novy Kostel**	**0.01**	**112**	⇑P	**Pg**	**13 28 13.6**	**-0.3**
NKC				S	**Sg**	**13 28 14.7**	**-0.2**
LBCW	**Luby**	**0.03**	**340**	⇓P	**Pg**	**13 28 13.9**	**-0.2**
LBCW

PLN				*i* Sg		Sg	13 28 22.4	-0.1
	238nm,0.2s							
MANZ	**Manzenberg**	**0.33**	**219**	*e*Pg		**Pg**	**13 28 18.4**	**-0.5**
MANZ				*e*Sg		**Sg**	**13 28 22.8**	**-0.4**
SCHF	**Schoenfels**	**0.44**	**358**	*i* Pg		**Pg**	**13 28 20.6**	**-0.5**
SCHF				*i* Sg		**Sg**	**13 28 26.6**	**-0.2**
	223nm,0.1s							
GRZ1	**Mausoleum Wald**	**0.47**	**344**	*i* Pg		**Pg**	**13 28 21.3**	**-0.4**
ROTZ	**Rotzenmuhle**	**0.49**	**197**	*e*Pg		**Pg**	**13 28 21.3**	**-0.7**
ZEU	**Talsperre Zeul**	**0.52**	**327**	*i* Pg		**Pg**	**13 28 22.2**	**-0.4**
MLFH	**Mildenfurth**	**0.59**	**338**	*e*Pg		**Pg**	**13 28 23.5**	**-0.5**
MOX	**Moxa**	**0.66**	**308**	*e*Pg		**Pg**	**13 28 24.8**	**-0.4**
FBE	**Freiberg**	**0.90**	**40**	*e*Pg		**Pg**	**13 28 29.2**	**-0.7**
GRF	**Grafenberg Arr**	**0.95**	**235**	*e*Pg		**Pg**	**13 28 30.2**	**-0.6**
CLL	**Collm**	**1.13**	**19**	*i* Pg		**Pg**	**13 28 34.0**	**-0.2**
CLL				*i*			13 28 36.1	
CLL				*i*			13 28 37.3	
CLL				*i* Sg		**Sg**	**13 28 48.7**	**-0.2**
WET	**Wettzell**	**1.13**	**165**	*e*Pg		**Pg**	**13 28 33.0**	**-1.3**
WET				*e*Sg		**Sg**	**13 28 48.0**	**-0.9**
BRG	**Berggiesshubel**	**1.16**	**56**	PG		**Pg**	**13 28 33.5**	**-1.1**
BRG				SG		**Sg**	**13 28 48.9**	**-0.8**
	88nm,0.2s							
BRG	**Berggiesshubel**	**1.16**	**56**	*e*Pg		**Pg**	**13 28 33.6**	**-1.1**
BRG				*e*Sg		**Sg**	**13 28 48.5**	**-1.2**
KRUC	**Moravsky**	**2.83**	**113**	*e*PN		**Pn**	**13 28 56.9**	**-1.2**
KRUC				*e*SG		**Sb**	**13 29 39.2**	**+1.0**
VRAC	**Vranov**	**2.86**	**107**	*e*SG		**Sb**	**13 29 39.3**	**+0.4**
MODS	**Modra-Piesok**	**3.68**	**119**	*e*PG		**Pg**	**13 29 25.0**	**+2.0**
MODS				*e*SG		**Sg**	**13 30 12.6**	**+1.9**
ZST	**Bratislava**	**3.68**	**122**	*e*SG		**Sg**	**13 30 12.3**	**+1.6**
VYHS	**Vyhne**	**4.54**	**110**	*e*PN		**Pn**	**13 29 22.8**	**+1.3**
VYHS				*e*SG		**Sg**	**13 30 37.5**	**-0.6**

PRU ***31*** *13:28:17.1±0.0,50°.24N×12°.44E, h0km, West Bohemia Swarm*
LDG ***31*** *13:28:17.4±0.3,50°.26N×12°.51E, h20km±2km, Ml3.5/10, Error ellipse: s-maj=7.7km s-min=4.8km az=141.0*
BGR ***31*** *13:28:18.4±0.2,50°.23N×12°.46E, h11km±1km, ML3.3/5, Error ellipse: s-maj=2.2km s-min=1.1km az=102.0*
VIE ***31*** *13:28:18.4±0.2,50°.16N×12°.45E, h5km±2km, mb2.4/14, ml3.4/16, Error ellipse: s-maj=2.7km s-min=1.9km az=109.0 7 km S of Klingenthal*
CLL ***31*** *13:28:19.2±0.3,50°.23N×12°.44E, h8km±1km, ML3.1/9*
WBNET ***31*** *13:28:19.1,50°.23N×12°.44E, h8km, Ml2.6*

ISC 31 13:28:18.1±0.7,50°.23N±0°.01×12°.41E±0°.01, h15km±3km, n89, σ1°95/174, 8C-2D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
NKC	**Novy Kostel**	**0.02**	**74**	*i* Pg		**Pg**	**13 28 20.5**	**-0.4**
NKC				*i* Sg		**Sg**	**13 28 21.5**	**-1.2**
NKC	**Novy Kostel**	**0.02**	**74**	*e*PG		**Pg**	**13 28 20.1**	**-0.8**
NKC				*e*SG		**Sg**	**13 28 21.3**	**-1.5**
	comp=Z,8µm,0.3s							
NKC	**Novy Kostel**	**0.02**	**74**	⇑P		**Pg**	**13 28 20.5**	**-0.4**
NKC				S		**Sg**	**13 28 21.5**	**-1.2**
VAC	**Vackov**	**0.03**	**290**	⇓P		**Pg**	**13 28 20.7**	**-0.2**
VAC				S		**Sg**	**13 28 21.9**	**-0.9**
LBCW	**Luby**	**0.04**	**359**	⇑P		**Pg**	**13 28 20.7**	**-0.3**
LBCW				S		**Sg**	**13 28 22.0**	**-0.9**
ROHR	**Rohrbach**	**0.06**	**277**	*i* Pg		**Pg**	**13 28 21.1**	**0.0**
ROHR				*i* Sg		**Sg**	**13 28 22.6**	**-0.5**
	10µm,0.2s							
WERN	**Wernitzgruen**	**0.07**	**339**	*i* Pg		**Pg**	**13 28 21.1**	**-0.1**
WERN				*i* Sg		**Sg**	**13 28 22.5**	**-0.7**
	14µm,0.3s							
SKC	**Skalna**	**0.07**	**210**	⇑P		**Pg**	**13 28 21.1**	**0.0**
SKC				S		**Sg**	**13 28 22.6**	**-0.5**
KVC	**Kvetna**	**0.07**	**108**	⇑P		**Pg**	**13 28 20.7**	**-0.5**
KVC				S		**Sg**	**13 28 21.8**	**-1.4**
STCW	**Studenec**	**0.08**	**65**	⇑P		**Pg**	**13 28 20.8**	**-0.5**
STCW				S		**Sg**	**13 28 22.0**	**-1.4**
POCW	**Potky**	**0.09**	**6**	⇑P		**Pg**	**13 28 21.3**	**-0.1**
POCW				S		**Sg**	**13 28 23.0**	**-0.7**
KACW	**Kaceov**	**0.11**	**141**	⇓P		**Pg**	**13 28 21.4**	**-0.2**
KACW				S		**Sg**	**13 28 23.1**	**-0.7**
KRCW	**Kraslice**	**0.13**	**36**	⇑P		**Pg**	**13 28 21.6**	**-0.3**
KRCW				S		**Sg**	**13 28 23.4**	**-0.9**
GUNZ	**Gunzen**	**0.15**	**339**	*i* Pg		**Pg**	**13 28 22.3**	**+0.2**
GUNZ				*i* Sg		**Sg**	**13 28 24.4**	**-0.3**
	4µm,0.2s							
ZHC	**Zelena Hora**	**0.17**	**203**	⇑P		**Pb**	**13 28 22.8**	**-0.2**
ZHC				S		**Sg**	**13 28 25.3**	**+0.1**
MULD	**Muldenberg**	**0.18**	**358**	*i* Pg		**Pg**	**13 28 22.7**	**+0.1**
MULD				*i* Sg		**Sg**	**13 28 25.2**	**-0.5**
	4µm,0.3s							
TANN	**Tannenbergstha**	**0.19**	**9**	*i* Pg		**Pg**	**13 28 22.7**	**0.0**
TANN				*i* Sg		**Sg**	**13 28 25.1**	**-0.7**
	4µm,0.2s							
VIEL	**Selb-Vielitz**	**0.20**	**258**	*i* Pg		**Pg**	**13 28 23.4**	**+0.5**
VIEL				*i* Sg		**Sg**	**13 28 26.4**	**+0.3**
TRIB	**Obertriebel**	**0.22**	**305**	*i* Pg		**Pg**	**13 28 23.6**	**+0.5**
TRIB				*i* Sg		**Sg**	**13 28 26.8**	**+0.3**
	1µm,0.2s							
LACW	**Lazy**	**0.22**	**142**	P		**Pg**	**13 28 23.4**	**+0.2**
LACW				S		**Sg**	**13 28 26.5**	**-0.2**
PLN	**Plauen**	**0.31**	**328**	*i* Pg		**Pg**	**13 28 25.1**	**+0.5**
PLN				*i* Sg		**Sg**	**13 28 29.1**	**+0.1**
	2µm,0.2s							
MANZ	**Manzenberg**	**0.31**	**219**	*e*Pg		**Pb**	**13 28 25.3**	**-0.1**
MANZ				*e*Sg		**Sg**	**13 28 29.7**	**+0.6**
SCHF	**Schoenfels**	**0.45**	**359**	*i* Pg		**Pg**	**13 28 27.5**	**+0.3**
SCHF				*i* Sg		**Sg**	**13 28 33.5**	**+0.2**
	1µm,0.3s							
ROTZ	**Rotzenmuhle**	**0.48**	**196**	*e*Pg		**Pg**	**13 28 27.9**	**+0.2**
ROTZ				*e*Sg		**Sg**	**13 28 34.6**	**+0.5**
GRZ1	**Mausoleum Wald**	**0.48**	**345**	*i* Pg		**Pg**	**13 28 27.7**	**0.0**
GRZ1				*i* Sg		**Sg**	**13 28 34.3**	**0.0**
	806nm,0.2s							
GRZ1	**Mausoleum Wald**	**0.48**	**345**	*i* Sg		**Pg**	**13 28 27.4**	**-0.3**
	135nm,0.2s							
ZEU	**Talsperre Zeul**	**0.53**	**328**	*i* Pg		**Pg**	**13 28 29.1**	**+0.6**
ZEU				*e*Sg		**Sg**	**13 28 35.8**	**+0.3**
ZEU	**Talsperre Zeul**	**0.53**	**328**	*e*Sg		**Pg**	**13 28 29.8**	**+0.4**
MLFH	**Mildenfurth**	**0.60**	**340**	*e*Pg		**Pb**	**13 28 30.4**	**+0.1**
MLFH				*e*Sg		**Sg**	**13 28 38.2**	**+0.2**
MOX	**Moxa**	**0.66**	**310**	*e*Pg		**Pb**	**13 28 31.7**	**+0.5**
MOX				*e*Sg		**Sb**	**13 28 40.9**	**+0.7**
FBE	**Freiberg**	**0.92**	**40**	*e*Pg		**Pg**	**13 28 36.0**	**+0.1**
FBE				*e*Sg		**Sg**	**13 28 47.5**	**-0.4**
GRF	**Grafenberg Arr**	**0.94**	**236**	*e*Pg		**Pn**	**13 28 37.0**	**+0.3**
GRF				*e*Sg		**Sg**	**13 28 49.4**	**+0.8**
WET	**Wettzell**	**1.12**	**164**	*e*Pg		**Pg**	**13 28 39.8**	**0.0**
WET				*e*Sg		**Sg**	**13 28 54.1**	**-0.4**
CLL	**Collm**	**1.15**	**19**	*i* Pg		**Pg**	**13 28 40.9**	**+0.7**
CLL				*i*			13 28 42.9	
CLL				*i*			13 28 44.2	
CLL				*i* Sg		**Sn**	**13 28 55.9**	**+1.0**
	comp=Z,284nm,0.9s							
PBCC	**Pribram**	**1.16**	**117**	*e*PG		**Pb**	**13 28 39.6**	**-0.1**
PBCC				*e*SG		**Sb**	**13 28 54.3**	**-0.2**
BRG	**Berggiesshubel**	**1.17**	**56**	PG		**Pg**	**13 28 40.4**	**-0.2**
BRG				SG		**Sb**	**13 28 55.4**	**+0.4**
	comp=Z,428nm,0.2s							
BRG	**Berggiesshubel**	**1.17**	**56**	*e*Pg		**Pg**	**13 28 40.5**	**-0.2**
BRG				*e*Sg		**Sb**	**13 28 55.1**	**+0.1**
PRA	**Prague**	**1.31**	**96**	*e*PG		**Pb**	**13 28 42.5**	**+0.2**
PRA				*e*SG		**Sb**	**13 28 58.8**	**-0.1**
	comp=Z,148nm,0.8s							
KHC	**Kasperske Hory**	**1.33**	**145**	*e*PG		**Pg**	**13 28 43.3**	**-0.5**
KHC				*e*SG		**Sg**	**13 29 01.1**	**0.0**
	comp=Z,200nm,0.3s							
PRU	**Pruhonice**	**1.39**	**99**	*e*PG		**Pb**	**13 28 43.9**	**+0.2**
PRU				*e*SG		**Sg**	**13 29 02.2**	**-0.8**
	comp=Z,149nm,0.4s							
PVCC	**Panska Ves**	**1.41**	**77**	*e*SG		**Sg**	**13 29 03.1**	**-0.6**
	comp=Z,331nm,0.4s							
GOPC	**GO Pecny, Ondr**	**1.56**	**101**	*e*PG		**Pb**	**13 28 46.8**	**+0.1**
GOPC				*e*SG		**Sg**	**13 29 07.2**	**-1.2**
	comp=Z,108nm,0.4s							
GEC2	**GERESS Array S**	**1.62**	**148**	*e*Sg		**Sb**	**13 29 08.5**	**+0.7**
TREC	**Trest**	**2.20**	**114**	*e*PG		**Pb**	**13 28 57.7**	**+0.1**
TREC				*e*SG		**Sg**	**13 29 27.0**	**-1.8**
	comp=Z,62nm,0.3s							
UPC	**Upice**	**2.32**	**82**	*e*PG		**Pb**	**13 29 00.8**	**+1.2**
UPC				*e*SG		**Sg**	**13 29 30.3**	**-2.4**
	comp=Z,80nm,0.6s							
CHVC	**Chvalec**	**2.36**	**80**	*e*PG		**Pb**	**13 29 01.5**	**+1.3**
CHVC				*e*SG		**Sg**	**13 29 32.4**	**-1.5**
	comp=Z,81nm,0.7s							
OSTC	**Ostas**	**2.46**	**81**	*e*PG		**Pb**	**13 29 02.5**	**+0.6**
OSTC				*e*SG		**Sg**	**13 29 34.8**	**-2.2**
	comp=Z,37nm,0.2s							
DPC	**Dobruska-Polom**	**2.51**	**86**	*e*PG		**Pb**	**13 29 03.3**	**+0.5**
DPC				*e*SG		**Sg**	**13 29 36.3**	**-2.4**
	comp=Z,44nm,0.5s							
KSP	**Ksiaz**	**2.55**	**75**	*e*Sg		**Sg**	**13 29 38.2**	**-1.9**
MOA	**Molln**	**2.67**	**152**	Pn		**Pn**	**13 29 01.3**	**+0.7**
	comp=Z,1.2nm,0.1s,SNR=4.8							
MOA				Sn		**Sn**	**13 29 33.6**	**+0.9**
	comp=Z,3.4nm,0.1s							
KRLC	**Kraliky**	**2.81**	**91**	*e*PG		**Pb**	**13 29 09.4**	**+1.4**
KRLC				*e*SG		**Sg**	**13 29 47.2**	**-1.3**
	comp=Z,69nm,0.9s							
KRUC	**Moravsky**	**2.84**	**113**	*e*PN		**Pn**	**13 29 03.4**	**+0.6**
KRUC				*e*SG		**Sg**	**13 29 46.4**	**-2.8**
VRAC	**Vranov**	**2.86**	**107**	*e*PN		**Pn**	**13 29 03.4**	**+0.3**
VRAC				*e*SG		**Sb**	**13 29 46.5**	**+2.9**
WATA	**Walderalm**	**2.95**	**191**	Pn		**Pn**	**13 29 04.5**	**+0.1**
	comp=Z,3.6nm,0.2s,SNR=4.6							
WATA				*e*Pg		**Pg**	**13 29 14.3**	**-0.3**
	comp=Z,2.7nm,0.1s,SNR=5.2							
WATA				*e*Sn		**Sn**	**13 29 41.6**	**+2.1**
	comp=Z,10nm,0.2s							
WATA				*e*Sg		**Sg**	**13 29 54.1**	**+1.4**
	comp=Z,30nm,0.2s							
RETA	**Reutte**	**2.95**	**202**	*e*Pn		**Pn**	**13 29 04.0**	**-0.4**
	comp=Z,1.7nm,0.1s,SNR=6.1							
RETA				*e*Pg		**Pg**	**13 29 15.1**	**+0.5**
	comp=Z,9.0nm,0.2s,SNR=6.6							
RETA				Sg		**Sg**	**13 29 54.3**	**+1.5**
	comp=Z,45nm,0.4s							
WTTA	**Wattenberg**	**3.01**	**190**	*e*Pn		**Pn**	**13 29 05.7**	**+0.4**
	comp=Z,1.7nm,0.2s							
WTTA				*e*Pg		**Pg**	**13 29 15.5**	**-0.2**
	comp=Z,6.6nm,0.2s							
WTTA				*e*Sn		**Sn**	**13 29 42.9**	**+1.8**
	comp=Z,11nm,0.3s							
WTTA				Sg		**Sg**	**13 29 56.6**	**+1.9**
	comp=Z,28nm,0.3s							
MOTA	**Moosalm**	**3.01**	**197**	Pn		**Pn**	**13 29 05.2**	**-0.1**
	comp=Z,1.6nm,0.1s,SNR=5.1							
MOTA				*e*Pg		**Pg**	**13 29 15.6**	**-0.2**
	comp=Z,16nm,0.3s,SNR=8.6							
MOTA				*e*Sg		**Sg**	**13 29 55.1**	**+0.3**
	comp=Z,28nm,0.5s							
SQTA	**Sankt Quirin**	**3.11**	**195**	*e*Pn		**Pn**	**13 29 07.0**	**+0.3**
	comp=Z,1.6nm,0.2s,SNR=7.1							
SQTA				*e*Pg		**Pg**	**13 29 17.0**	**-0.7**
	comp=Z,20nm,0.4s							
SQTA				Sg		**Sg**	**13 29 59.2**	**+1.1**
	comp=Z,17nm,0.2s							
KBA	**Koelnbreinsper**	**3.21**	**169**	*e*Sg		**Sg**	**13 29 59.5**	**-1.7**
	comp=Z,17nm,0.3s							
CONA	**Conrad Observa**	**3.23**	**134**	*e*Pn		**Pn**	**13 29 10.0**	**+1.8**
	comp=Z,0.6nm,0.1s,SNR=8.5							
CONA				*e*Pg		**Pg**	**13 29 18.3**	**-1.6**
	comp=Z,8.1nm,0.3s							
CONA				Sg		**Sg**	**13 30 00.8**	**-1.0**
	comp=Z,42nm,0.4s							
MORC	**Moravsky Berou**	**3.34**	**96**	*e*PN		**Pn**	**13 29 10.1**	**+0.4**
MORC				*e*SG		**Sg**	**13 30 02.4**	**-2.9**
DAVA	**Damuels**	**3.39**	**211**	*e*Pn		**Pn**	**13 29 10.2**	**-0.3**
	comp=Z,2.1nm,0.2s							
DAVA				Pg		**Pg**	**13 29 23.7**	**+0.7**
	comp=Z,11nm,0.3s							
DAVA				*e*Sn		**Sn**	**13 29 51.6**	**+1.2**
	comp=Z,11nm,0.3s							
DAVA				Sg		**Sg**	**13 30 08.1**	**+1.3**
	comp=Z,16nm,0.2s							
FETA	**Feichten**	**3.40**	**200**	*e*Pn		**Pn**	**13 29 10.5**	**-0.1**
	comp=Z,1.1nm,0.2s,SNR=5.0							
FETA				*e*Sg		**Sg**	**13 30 07.8**	**+0.6**
	comp=Z,7.4nm,0.3s							
ABTA	**Abfaltersbach**	**3.48**	**179**	*i* Pn		**Pn**	**13 29 13.6**	**+1.8**
	comp=Z,2.0nm,0.2s							
ABTA				*e*Sn		**Sn**	**13 29 55.6**	**+2.9**
	comp=Z,5.3nm,0.3s							
ABTA				Sg		**Sg**	**13 30 09.5**	**-0.4**
	comp=Z,36nm,0.4s							
ARSA	**Arzberg**	**3.62**	**144**	*e*Pn		**Pn**	**13 29 14.3**	**+0.7**
	comp=Z,1.1nm,0.3s							
ARSA				*e*Pg		**Pg**	**13 29 25.4**	**-2.0**
	comp=Z,4.2nm,0.4s							
ARSA				Sg		**Sg**	**13 30 11.9**	**-2.5**
	comp=Z,44nm,0.6s							
OKC	**Ostrava-Krasne**	**3.72**	**94**	*e*SG		**Sg**	**13 30 15.0**	**-2.4**
	comp=Z,37nm,0.6s							
CDF	**Champ du Feu**	**3.82**	**244**	*e*Pn		**Pn**	**13 29 16.9**	**+0.5**
CDF	**Champ du Feu**	**3.82**	**244**	*e*Pg		**Pg**	**13 29 31.1**	**-0.1**
CDF				*e*Sn		**Sn**	**13 29 58.4**	**-2.6**
CDF				*e*Sg		**Sg**	**13 30 17.0**	**-3.7**
OBKA	**Obir**	**3.98**	**158**	Pn		**Pn**	**13 29 19.6**	**+1.0**
	comp=Z,0.2nm,0.1s							
OBKA				Sg		**Sg**	**13 30 24.8**	**-1.1**
	comp=Z,38nm,0.6s							
HINF	**Hinteralfeld**	**4.38**	**239**	*e*Pn		**Pn**	**13 29 24.4**	**+0.4**
HINF	**Hinteralfeld**	**4.38**	**239**	*e*Pg		**Pg**	**13 29 40.5**	**-1.5**
HINF				*e*Sg		**Sg**	**13 30 35.1**	**-3.6**
	comp=Z,26nm,0.4s							
HAU	**Haudompre**	**4.56**	**243**	*e*Pn		**Pn**	**13 29 26.4**	**-0.1**
HAU	**Haudompre**	**4.56**	**243**	*e*Pg		**Pg**	**13 29 43.6**	**-1.8**
HAU				*e*Sg		**Sg**	**13 30 41.3**	**-3.1**
	comp=Z,36nm,0.4s							
PAGF	**Fort de Pagny**	**4.68**	**252**	*e*Pg		**Pb**	**13 29 43.5**	**+3.8**
PAGF				*e*Sg		**Sg**	**13 30 43.1**	**-5.1**
GIVF	**Givet**	**4.88**	**271**	*e*Sn		**Sn**	**13 30 21.4**	**-5.6**
GIVF				*e*Sg		**Sb**	**13 30 47.6**	**+6.0**
	comp=Z,12nm,0.3s							
MEZF	**Maizieres J'vi**	**5.11**	**253**	*e*Sg		**Sg**	**13 30 57.0**	**-5.0**
	comp=Z,19nm,0.7s							
BSD	**Bornholm Skovb**	**5.13**	**16**	*i* P		**Pn**	**13 29 35.4**	**+1.2**
BSD				*e*S		**Sn**	**13 30 31.9**	**-1.1**
SFTF	**Sexfontaines**	**5.24**	**250**	*e*Sg		**Sb**	**13 30 59.3**	**+7.3**
	comp=Z,18nm,0.5s							
CABF	**La Chapelle**	**5.55**	**232**	*e*Pn		**Pn**	**13 29 42.4**	**+2.3**
CABF	**La Chapelle**	**5.55**	**232**	*e*Pg		**Pg**	**13 30 02.2**	**-2.1**
CABF				*e*Sg		**Sg**	**13 31 12.7**	**-3.5**
	comp=Z,30nm,0.8s							
LPL	**La Plagne**	**6.07**	**221**	*e*Pg		**Pg**	**13 30 12.0**	**-2.2**
LPL				*e*Sg		**Sg**	**13 31 33.1**	**+0.4**
LPG	**La Plagne**	**6.07**	**221**	*e*Pg		**Pg**	**13 30 11.3**	**-3.0**
LPG				*e*Sg		**Sg**	**13 31 30.7**	**-2.2**
LOR	**Lormes**	**6.38**	**246**	*e*Pn		**Pn**	**13 29 49.2**	**-2.3**
LOR	**Lormes**	**6.38**	**246**	*e*Pg		**Pg**	**13 30 16.4**	**-3.8**
LOR				*e*Sg		**Sg**	**13 31 36.6**	**-6.2**
SSF	**Saint Saulge**	**6.70**	**245**	*e*Pg		**Pg**	**13 30 23.2**	**-3.0**
SSF				*e*Sg		**Sg**	**13 31 47.2**	**-5.7**
SMF	**Signal de Mont**	**6.73**	**241**	*e*Pg		**Pg**	**13 30 22.7**	**-4.2**
SMF				*e*Sg		**Sg**	**13 31 48.8**	**-5.3**
	comp=Z,7.9nm,0.4s							
AVF	**Avril sur Loir**	**6.93**	**244**	*e*Pg		**Pg**	**13 30 27.2**	**-3.5**
AVF				*e*Sg		**Sg**	**13 31 54.5**	**-5.8**
	comp=Z,5.3nm,0.5s							
BGF	**Bois d'Agland**	**7.35**	**244**	*e*Sg		**Sg**	**13 32 08.5**	**-5.3**
	comp=Z,22nm,0.6s							
TCF	**Toulx Ste Croi**	**7.87**	**244**	*e*Sg			13 32 23.2	
	comp=Z,5.0nm,0.5s							

NAO ***31*** *13:45:18.8±1.6,73°.27N×7°.12E, ML3.2*
IDC ***31*** *13:45:20.1±1.2,73°.25N×7°.12E, h0km, mb3.4/4, mb1 3.6/8, mb1mx3.3/44, mbtmp3.4/8, ML2.9/3, MS3.7/2, Ms1 3.7/2, ms1mx3.2/46, Error ellipse: s-maj=27.1km s-min=14.2km az=62.0*
BER ***31*** *13:45:23.9±1.6,73°.35N×7°.80E, h16km, ML2.1, Confirmed Earthquake*

ISC 31 13:45:20.7±0.7,73°.33N±0°.06×7°.63E±0°.07, h13km, n40, σ2°08/45, mb3.4/4, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BJO1	**Bjornoya**	**3.38**	**64**	Pn		**Pn**	**13 46 14.4**	**+1.4**
BJO1	**Bjornoya**	**3.38**	**64**	*e*P		**Pn**	**13 46 14.5**	**+1.5**
HSPB	**Hornsund (broa**	**4.21**	**25**	Pn		**Pn**	**13 46 24.6**	**+0.3**
HSPB	**Hornsund (broa**	**4.21**	**25**	*e*P		**Pn**	**13 46 24.8**	**+0.4**
HSPB				*e*S		**Sn**	**13 47 10.4**	**-2.9**
BRBA	**Barentsburg A**	**5.03**	**16**	Pn		**Pn**	**13 46 35.8**	**+0.3**
BRBA	**Barentsburg A**	**5.03**	**16**	Pn		**Pn**	**13 46 35.8**	**+0.3**
TRO	**Tromso**	**5.17**	**130**	*e*P		**Pn**	**13 46 37.6**	**0.0**
TRO				IAML			13 47 36.6	
	comp=Z,4.7nm,0.4s							
SPA0	**Spitsbergen Ar**	**5.32**	**20**	Pn		**Pn**	**13 46 40.7**	**+1.0**
	baz=197,slow=14							
SPA0	**Spitsbergen Ar**	**5.32**	**20**	Pn		**Pn**	**13 46 40.7**	**+1.0**
	baz=197,slow=14							
SPITS	**Spitsbergen Ar**	**5.32**	**20**	Pn		**Pn**	**13 46 40.6**	**+1.0**
	baz=189,slow=15,SNR=37							
JMIC	**Jan Mayen**	**5.48**	**252**	Pn		**Pn**	**13 46 39.3**	**-2.5**
JMIC	**Jan Mayen**	**5.48**	**252**	Pn		**Pn**	**13 46 39.3**	**-2.5**
HOPEN	**Hopen**	**5.53**	**47**	Pn		**Pn**	**13 46 43.0**	**+0.5**
HOPEN	**Hopen**	**5.53**	**47**	*e*P		**Pn**	**13 46 43.0**	**+0.5**
LOF	**Lofoten**	**5.58**	**157**	*e*P		**Pn**	**13 46 44.6**	**+1.4**
LOF				IAML			13 47 42.1	
	comp=Z,6.9nm,0.6s							
HAMF	**Hammerfest**	**5.66**	**111**	Pn		**Pn**	**13 46 44.8**	**+0.5**
HAMF				Sn		**Sn**	**13 47 44.9**	**-4.0**
HAMF	**Hammerfest**	**5.66**	**111**	*e*P		**Pn**	**13 46 45.3**	**+1.1**
HAMF				*e*S		**Sn**	**13 47 44.6**	**-4.3**
HAMF				IAML			13 47 49.6	
	comp=Z,4.6nm,0.5s							
KBS	**Kingsbay**	**5.72**	**8**	Pn		**Pn**	**13 46 45.8**	**+0.7**
KBS	**Kingsbay**	**5.72**	**8**	*e*P		**Pn**	**13 46 45.9**	**+0.7**
KBS				*e*S		**Sn**	**13 47 45.1**	**-5.4**
STEI	**Steigen**	**5.98**	**151**	*e*P		**Pn**	**13 46 49.5**	**+0.8**
STEI				IAML			13 47 57.5	
	comp=Z,3.4nm,0.7s							
KIF	**Kilpisjarvi**	**6.08**	**129**	*e*P		**Pn**	**13 46 51.3**	**+1.3**
KTK1	**Kautokeino**	**6.64**	**123**	*e*P		**Pn**	**13 46 57.4**	**-0.3**
ARCES	**ARCESS Array B**	**6.84**	**115**	Pn		**Pn**	**13 47 01.9**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=313,slow=12,SNR=11							
ARCES				LR		LR	13 49 27.7	
	comp=Z,261nm,19.2s,baz=120,slow=36							
ARA0	**ARCESS Array S**	**6.84**	**115**	Pn		**Pn**	**13 47 01.7**	**+1.2**
	baz=321,slow=12							
ARA0				Sn		**Sn**	**13 48 13.6**	**-4.5**
	baz=309,slow=18							
ARA0	**ARCESS Array S**	**6.84**	**115**	Pn		**Pn**	**13 47 01.7**	**+1.2**
	baz=321,slow=12							
ARA0				Sn		**Sn**	**13 48 13.6**	**-4.5**
	baz=309,slow=18							
KONS	**Konsvik**	**7.12**	**162**	*e*P		**Pn**	**13 47 04.7**	**+0.4**
SCO	**Scoresbysund**	**9.56**	**267**	*i* P		**Pn**	**13 47 35.2**	**-2.5**
APA0	**Apatity Array**	**10.17**	**112**	Pn		**Pn**	**13 47 45.7**	**-0.3**
	baz=301,slow=14							
APA0	**Apatity Array**	**10.17**	**112**	Pn		**Pn**	**13 47 45.7**	**-0.3**
	baz=301,slow=14							
HFS	**Hagfors**	**13.46**	**167**	Pn		**Pn**	**13 48 30.6**	**-0.4**
	baz=355,slow=14							
HFS	**Hagfors**	**13.46**	**167**	Pn		**Pn**	**13 48 30.5**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=333,slow=12,SNR=5.2							
HFS	**Hagfors**	**13.46**	**167**	Pn		**Pn**	**13 48 30.6**	**-0.4**
	baz=355,slow=14							
FIA0	**FINESS Array S**	**13.78**	**140**	Pn		**Pn**	**13 48 36.0**	**+0.7**
FIA0	**FINESS Array S**	**13.78**	**140**	Pn		**Pn**	**13 48 36.0**	**+0.7**
FINES	**FINESS Array B**	**13.78**	**140**	Pn		**Pn**	**13 48 35.9**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=5.5							
GERES	**GERESS Array B**	**24.72**	**170**	P		**P**	**13 50 44.0**	**+2.7**
	comp=Z,0.2nm,0.5s,baz=12,slow=11,SNR=4.1	

NVAR	**Mina Array Bea**	**127.30**	**34**	PKP	**PKPdf**		**14 29 00.4**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=336,slow=3.3,SNR=3.6								

*IDC **31** 14:19:21.5±3.4, 10.°94N×125.°16E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/46, mbtmp3.5/3, Error ellipse: s-maj=277.9km s-min=29.1km az=65.0*
*MAN **31** 14:19:26.1, 9.°55N×122.°10E, h6km, mb4.8, ML3.7, MS3.7*
ISC 31 14:19:25.8±1.7, **9.°55N**±0.°04×**122.°08E**±0.°06, **h1**km±11km, **n13**, σ0°**72**/19, **mb3.5**/3, **3C-1D**, **Negros**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	**0.62**	**63**	*eP*		**Pg**		**14 19 38.0**	**+0.4**
CNOP				*eS*		**Sg**		**14 19 45.8**	**0.0**
GUIM	**Jordan**	**1.19**	**25**	*eP*		**Pg**		**14 19 48.0**	**-0.5**
GUIM				*eS*		**Sb**		**14 20 04.9**	**0.0**
JAP	**San Jose, Anti**	**1.20**	**354**	⇑*eP*		Pn		14 19 57.2	+7.6
CUYO	**Cuyo Island**	**1.66**	**321**	*eP*		**Pn**		**14 19 56.7**	**+0.6**
CUYO				*eS*		**Sn**		**14 20 18.2**	**+0.1**
LLP	**Lapu-Lapu**	**2.01**	**67**	*eP*		**Pn**		**14 20 01.0**	**+0.1**
LLP				*eS*		**Sn**		**14 20 27.1**	**+0.4**
RCP	**Roxas**	**2.10**	**18**	⇑*eP*		**Pb**		**14 20 03.8**	**-1.0**
RCP				*eS*		**Sb**		**14 20 31.7**	**+0.3**
PAGZ	**Pagadian**	**2.12**	**143**	*eP*		**Pn**		**14 20 02.4**	**0.0**
PAGZ				*eS*		**Sg**		**14 20 35.7**	**+1.6**
MSLP	**Maasin**	**2.80**	**78**	*eP*		**Pn**		**14 20 12.4**	**+0.7**
MSLP				*eS*		**Sn**		**14 20 46.4**	**+0.1**
CTBH	**Cotabato--PC H**	**3.15**	**137**	⇑*iP*		**Pn**		**14 20 16.2**	**-0.4**
KCP	**Kidapawan**	**3.91**	**130**	⇓*eP*		**Pb**		**14 20 34.6**	**-0.9**
WRA	**Warramunga Arr**	**31.69**	**158**	P		**P**		**14 25 50.6**	**-0.5**
	0.3nm,0.6s,baz=345,slow=9.4,SNR=1.6								
ASAR	**Alice Springs**	**34.98**	**161**	P		**P**		**14 26 19.0**	**-0.8**
	0.8nm,0.6s,baz=344,slow=7.2,SNR=10								
MKAR	**Makanchi Array**	**50.17**	**325**	P		**P**		**14 28 23.9**	**+0.9**
	0.5nm,0.7s,baz=120,slow=8.7,SNR=3.7								

*JMA **31** 14:20:59.8±0.1, 24.°56N×121.°55E, h71km±2km, M3.2*
*TAP **31** 14:21:00.3, 24.°61N×121.°57E, h72km, ML3.8, B*
ISC 31 14:20:59.9±1.2, **24.°65N**±0.°02×**121.°56E**±0.°02, **h76**km±4km, **n127**, σ0°**83**/217, **16C-27D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NDT	**Datong Townshi**	**0.06**	**226**	⇑*iP*			**Pn**	**14 21 11.2**	**+0.3**
	baz=280								
NDT				S			**Sn**	**14 21 18.5**	**-0.5**
	baz=280								
TWE	**Neicheng**	**0.12**	**52**	⇑*iP*			**Pn**	**14 21 11.4**	**+0.4**
	baz=43								
TWE				S			**Sn**	**14 21 19.3**	**+0.2**
	baz=43								
NWLT	**Wulai**	**0.14**	**338**	⇑*iP*			**Pn**	**14 21 11.1**	**0.0**
	baz=347								
NWLT				*i* S			**Sn**	**14 21 18.3**	**-1.0**
	baz=347								
YHNB	**Yeheng**	**0.17**	**278**	⇑*iP*			**Pn**	**14 21 11.2**	**-0.1**
	baz=296								
YHNB				S			**Sn**	**14 21 18.6**	**-0.9**
	baz=296								
NSK	**Sanguang**	**0.19**	**279**	⇑*iP*			**Pn**	**14 21 11.2**	**-0.1**
	baz=296								
NSK				S			**Sn**	**14 21 18.9**	**-0.8**
	baz=296								
ILA	**Ilan**	**0.21**	**55**	*eP*			**Pn**	**14 21 11.9**	**+0.6**
	baz=53								
ILA				S			**Sn**	**14 21 20.1**	**+0.5**
	baz=53								
TWC	**Suao**	**0.26**	**98**	⇑*iP*			**Pn**	**14 21 11.8**	**+0.3**
	baz=90								
TWC				S			**Sn**	**14 21 20.1**	**0.0**
	baz=90								
NNS	**Nan Shan**	**0.27**	**220**	⇑*iP*			**Pn**	**14 21 12.1**	**+0.4**
	baz=225								
NNS				*eS*			**Sn**	**14 21 20.7**	**+0.3**
	baz=225								
NNSH	**Datong**	**0.27**	**217**	⇑*iP*			**Pn**	**14 21 12.0**	**+0.2**
	baz=225								
NNSH				*eS*			**Sn**	**14 21 20.1**	**-0.4**
	baz=225								
ENA	**Nanau**	**0.27**	**143**	⇑*iP*			**Pn**	**14 21 11.3**	**-0.3**
	baz=143								
NNSB	**Datong**	**0.27**	**217**	⇑*iP*			**Pn**	**14 21 12.1**	**+0.3**
	baz=224								
NNSB				*eS*			**Sn**	**14 21 20.2**	**-0.3**
	baz=224								
NHDH	**Xindian Distri**	**0.32**	**354**	⇓*iP*			**Pn**	**14 21 12.2**	**+0.2**
	baz=353								
NHDH				S			**Sn**	**14 21 20.2**	**-0.5**
	baz=353								
NTC	**Toucheng**	**0.32**	**49**	*eP*			**Pn**	**14 21 12.0**	**+0.1**
	baz=44								
NTC				S			**Sn**	**14 21 20.4**	**-0.3**
	baz=44								
TWA	**Mucha**	**0.33**	**3**	⇓*iP*			**Pn**	**14 21 12.3**	**+0.2**
	baz=359								
TWA				S			**Sn**	**14 21 20.6**	**-0.3**
	baz=359								
TATO	**Taipei**	**0.34**	**348**	⇓*iP*			**Pn**	**14 21 12.1**	**+0.1**
	baz=355								
TATO				S			**Sn**	**14 21 20.3**	**-0.6**
	baz=355								
WLTB	**Daxi**	**0.35**	**306**	*i* P			**Pn**	**14 21 12.7**	**+0.6**
	baz=310								
EGS		**0.39**	**59**	⇓*iP*			**Pn**	**14 21 13.3**	**+0.9**
	baz=53								
EGS				*eS*			**Sn**	**14 21 22.3**	**+0.7**
	baz=53								
TAP	**Taipei**	**0.40**	**353**	*eP*			**Pn**	**14 21 12.6**	**+0.2**
	baz=357								
TAP				*eS*			**Sn**	**14 21 21.5**	**-0.1**
	baz=357								
TIPB	**Shuangxi**	**0.40**	**36**	⇓*iP*			**Pn**	**14 21 12.9**	**+0.4**
	baz=28								
TIPB				S			**Sn**	**14 21 21.4**	**-0.5**
	baz=28								
ETLH	**Xiulin Townshi**	**0.44**	**190**	⇑*iP*			**Pn**	**14 21 12.8**	**-0.2**
	baz=185								
ETLH				*eS*			**Sn**	**14 21 21.8**	**-0.7**
	baz=185								
NWF	**Wu-fen Shan**	**0.47**	**25**	*eP*			**Pn**	**14 21 12.6**	**-0.6**
	baz=18								
NWF				S			**Sn**	**14 21 22.8**	**-0.1**
	baz=18								
WFSB	**Wu-fen Shan**	**0.47**	**25**	*eP*			**Pn**	**14 21 12.6**	**-0.4**
	baz=18								
WFSB				*i* S			**Sn**	**14 21 22.8**	**+0.1**
	baz=18								
NACB	**Ninganchiao**	**0.47**	**176**	⇑*iP*			**Pn**	**14 21 12.2**	**-0.9**
	baz=171								
NACB				S			**Sn**	**14 21 21.2**	**-1.5**
	baz=171								
NCU	**National Centr**	**0.47**	**314**	*eP*			**Pn**	**14 21 13.6**	**+0.5**
	baz=311								
NCU				*i* S			**Sn**	**14 21 23.1**	**+0.4**
	baz=311								
NCUH	**Zhongli**	**0.47**	**313**	*eP*			**Pn**	**14 21 12.8**	**-0.3**
	baz=310								
NCUH				*eS*			**Sn**	**14 21 22.6**	**-0.1**
	baz=310								
TWS1	**Kuangyinshan**	**0.47**	**344**	⇓*iP*			**Pn**	**14 21 13.6**	**+0.5**
	baz=336								
TWS1				*eS*			**Sn**	**14 21 23.3**	**+0.5**
	baz=336								
LIOB	**Emei**	**0.50**	**270**	P			**Pn**	**14 21 13.6**	**+0.3**
	baz=274								
YM01	**YM01**	**0.50**	**1**	⇓*iP*			**Pn**	**14 21 13.6**	**+0.3**
YM01				S			**Sn**	**14 21 23.0**	**-0.2**
YM10	**YM10**	**0.51**	**360**	⇓*iP*			**Pn**	**14 21 13.8**	**+0.3**
	baz=359								
YM10				S			**Sn**	**14 21 23.0**	**-0.4**
	baz=359								
NSTT	**Nanjuang**	**0.51**	**269**	⇑*iP*			**Pn**	**14 21 13.7**	**+0.3**
	baz=277								
NSTT				*i* S			**Sn**	**14 21 23.3**	**-0.1**
	baz=277								
YM11	**YM11**	**0.52**	**1**	⇓*iP*			**Pn**	**14 21 13.7**	**+0.1**
YM11				*i* S			**Sn**	**14 21 23.4**	**-0.2**
TWT	**Tachien**	**0.53**	**222**	*eP*			**Pn**	**14 21 14.8**	**+1.0**
	baz=232								
TWT				S			**Sn**	**14 21 24.5**	**+0.5**
	baz=232								
NTST	**Danshui**	**0.53**	**349**	⇓*iP*			**Pn**	**14 21 13.9**	**+0.4**
	baz=341								
NTST				*eS*			**Sn**	**14 21 23.7**	**+0.1**
	baz=341								
TWB1	**Santiao Chiao**	**0.53**	**47**	⇓*iP*			**Pn**	**14 21 14.1**	**+0.5**
	baz=40								
TWB1				*i* S			**Sn**	**14 21 23.4**	**-0.2**
	baz=40								
TDCB	**Techi**	**0.54**	**223**	P			**Pn**	**14 21 14.6**	**+0.7**
	baz=233								
TDCB				*eS*			**Sn**	**14 21 24.0**	**0.0**
	baz=233								
ANP	**Anpu**	**0.54**	**356**	⇓*iP*			**Pn**	**14 21 13.8**	**0.0**
	baz=3.0								
ANP				*eS*			**Sn**	**14 21 23.3**	**-0.7**
	baz=3.0								
SBCB	**Hsinchu**	**0.54**	**286**	*eP*			**Pn**	**14 21 14.1**	**+0.4**
	baz=297								
SBCB				S			**Sn**	**14 21 24.2**	**+0.3**
	baz=297								
HSN	**Hsinchu**	**0.56**	**286**	*eP*			**Pn**	**14 21 14.1**	**+0.2**
	baz=301								
HSN				S			**Sn**	**14 21 23.9**	**-0.2**
	baz=301								
TWD	**Chiawan**	**0.56**	**177**	⇑*iP*			**Pn**	**14 21 12.9**	**-1.0**
	baz=169								
TWD				*eS*			**Sn**	**14 21 22.6**	**-1.6**
	baz=169								
WHF	**Hehuan Shan**	**0.57**	**209**	⇑*iP*			**Pn**	**14 21 15.0**	**+0.6**
	baz=205								
WHF				S			**Sn**	**14 21 25.1**	**0.0**
	baz=205								
TWY	**Chenhua**	**0.63**	**3**	⇓*iP*			**Pn**	**14 21 15.0**	**+0.5**
	baz=3.0								
TWY				*eS*			**Sn**	**14 21 24.9**	**-0.4**
	baz=3.0								
HWA	**Hwalien**	**0.67**	**177**	*eP*			**Pn**	**14 21 14.3**	**-0.7**
	baz=176								
HWA				*eS*			**Sn**	**14 21 25.5**	**-0.5**
	baz=176								
WHP	**Taichung City**	**0.67**	**237**	*eP*			**Pn**	**14 21 15.8**	**+0.7**
	baz=247								
WHP				S			**Sn**	**14 21 26.2**	**-0.1**
	baz=247								
CHGB	**Renai**	**0.68**	**211**	⇑*iP*			**Pn**	**14 21 16.2**	**+0.9**
	baz=207								
CHGB				*eS*			**Sn**	**14 21 27.2**	**+0.5**
	baz=207								
NMLH	**Miaoli**	**0.71**	**261**	*eP*			**Pn**	**14 21 16.1**	**+0.7**
	baz=263								
NMLH				*eS*			**Sn**	**14 21 27.1**	**+0.2**
	baz=263								
NSY	**Sanyi**	**0.76**	**253**	⇓*iP*			**Pn**	**14 21 16.7**	**+0.7**
	baz=254								
NSY				*eS*			**Sn**	**14 21 28.7**	**+0.8**
	baz=254								
OWD	**Renai**	**0.77**	**207**	*eP*			**Pn**	**14 21 16.9**	**+0.6**
	baz=208								
OWD				*eS*			**Sn**	**14 21 28.7**	**+0.3**
	baz=208								
TWQ1	**Liyutan**	**0.78**	**248**	*eP*			**Pn**	**14 21 16.5**	**+0.3**
	baz=249								
TWQ1				*eS*			**Sn**	**14 21 28.1**	**-0.1**
	baz=249								
PTSB	**Yuanli**	**0.81**	**256**	*eP*			**Pn**	**14 21 17.0**	**+0.6**
	baz=257								
PTSB				*eS*			**Sn**	**14 21 29.3**	**+0.5**
	baz=257								
ESL	**Shilin**	**0.84**	**188**	*eP*			**Pn**	**14 21 15.4**	**-1.5**
	baz=181								
ESL				*eS*			**Sn**	**14 21 26.3**	**-3.1**
	baz=181								
DPDB	**Guoxing**	**0.84**	**224**	*eP*			**Pn**	**14 21 17.5**	**+0.6**
	baz=234								
DPDB				*eS*			**Sn**	**14 21 30.0**	**+0.4**
	baz=234								
WDJ	**Dajia District**	**0.89**	**251**	P			**Pn**	**14 21 18.1**	**+0.7**
	baz=252								
WDJ				S			**Sn**	**14 21 31.2**	**+0.8**
	baz=252								
TCU	**Taichung**	**0.95**	**239**	P			**Pn**	**14 21 18.7**	**+0.6**
	baz=246								
TCU				*eS*			**Sn**	**14 21 31.6**	**0.0**
	baz=246								
VWDT	**VWDT**	**0.97**	**203**	*i* P			**Pn**	**14 21 19.2**	**+0.8**
	baz=211								
VWDT				*eS*			**Sn**	**14 21 32.4**	**+0.4**
	baz=211								
SMLT	**Sun Moon Lake**	**0.97**	**219**	⇓*iP*			**Pn**	**14 21 19.1**	**+0.6**
	baz=219								
SMLT				*eS*			**Sn**	**14 21 33.1**	**+0.8**
	baz=219								
TYC	**Yuchr**	**0.98**	**221**	⇓*iP*			**Pn**	**14 21 19.1**	**+0.6**
	baz=222								
TYC				*eS*			**Sn**	**14 21 33.0**	**+0.7**
	baz=222								
EGFH	**Guangfu**	**0.98**	**187**	*eP*			**Pn**	**14 21 17.1**	**-1.4**
	baz=182								
EGFH				*eS*			**Sn**	**14 21 30.2**	**-2.2**
	baz=182								
SSLB	**Suanglung**	**1.02**	**213**	⇓*iP*			**Pn**	**14 21 19.6**	**+0.6**
	baz=223								
SSLB				S			**Sn**	**14 21 33.7**	**+0.4**
	baz=223								
WCHH	**Zhanghua**	**1.07**	**239**	*eP*			**Pn**	**14 21 20.0**	**+0.4**
	baz=239								
WCHH				*eS*			**Sn**	**14 21 34.4**	**0.0**
	baz=239								
PCYT	**Pengchaiyu**	**1.08**	**25**	*eP*			**Pn**	**14 21 17.8**	**-2.0**
	baz=25								
WNT	**Mingjian**	**1.11**	**227**	⇓*iP*			**Pn**	**14 21 20.8**	**+0.7**
	baz=236								
WNT				S			**Sn**	**14 21 36.0**	**+0.9**
	baz=236								
WJS	**Zhushan**	**1.12**	**223**	P			**Pn**	**14 21 20.8**	**+0.5**
	baz=233								
WJS				*i* S			**Sn**	**14 21 35.8**	**+0.4**
	baz=233								
WHYT	**Xinyi Township**	**1.15**	**215**	⇓*iP*			**Pn**	**14 21 21.3**	**+0.7**
	baz=215								
WHYT				*eS*			**Sn**	**14 21 37.1**	**+1.0**
	baz=215								
EHY	**Hungye**	**1.16**	**191**	*eP*			**Pn**	**14 21 20.1**	**-0.6**
	baz=183								
HGSD	**Ruisui**	**1.16**	**186**	*eP*			**Pn**	**14 21 20.1**	**-0.5**
	baz=187								
YULB	**Yu-li**	**1.27**	**191**	*eP*			**Pn**	**14 21 21.0**	**-1.2**
	baz=182								
YULB				*eS*			**Sn**	**14 21 36.6**	**-2.3**
	baz=182								
YULB	**Yu-li**	**1.27**	**191**				**Pn**	**14 21 21.0**	**-1.2**
JYNG	**Yonagunijimaku**	**1.27**	**98**	P			**Pn**	**14 21 22.4**	**+0.2**
JYNG				*eS*			**Sn**	**14 21 38.8**	**-0.1**
TWF1	**Yuli**	**1.31**	**191**	*eP*			**Pn**	**14 21 21.8**	**-0.9**
	baz=185								
TWF1				*eS*			**Sn**	**14 21 37.4**	**-2.4**
	baz=185								
CHN5	**Tsauling**	**1.32**	**218**	⇓*iP*			**Pn**	**14 21 23.4**	**+0.5**
	baz=218								
CHN5				*eS*			**Sn**	**14 21 40.7**	**+0.6**
	baz=218								
WGK	**Gukeng**	**1.32**	**224**	⇓*iP*			**Pn**	**14 21 23.5**	**+0.7**
	baz=233								
WGK				*eS*			**Sn**	**14 21 40.9**	**+1.0**
	baz=233								
ALS	**Alishan**	**1.32**	**212**	⇓*iP*			**Pn**	**14 21 23.7**	**+0.6**
	baz=220								
ALS				*eS*			**Sn**	**14 21 41.7**	**+1.2**
	baz=220								
RLNB	**Erlin**	**1.33**	**236**	⇓*iP*			**Pn**	**14 21 23.1**	**+0.2**
	baz=236								
RLNB				*eS*			**Sn**	**14 21 40.2**	**+0.1**
	baz=236								
YOJ	**Yonaguni jima**	**1.33**	**98**	*eP*			**Pn**	**14 21 22.9**	**0.0**
	baz=89								
YOJ				*eS*			**Sn**	**14 21 39.1**	**-1.1**
	baz=89								
YOJ	**Yonaguni jima**	**1.33**	**98**	P			**Pn**	**14 21 23.2**	**+0.3**
YOJ				S			**Sn**	**14 21 39.5**	**-0.7**
WDLH	**Douliu**	**1.33**	**225**	⇓P			**Pn**	**14 21 23.6**	**+0.6**
	baz=225								
WDLH				*eS*			**Sn**	**14 21 40.2**	**0.0**
	baz=225								
WTCT	**Ta-ch'eng**	**1.40**	**237**	*eP*			**Pn**	**14 21 23.8**	**-0.1**
	baz=236								
WTCT				*eS*			**Sn**	**14 21 41.6**	**-0.3**
	baz=236								
FULB	**Fuli**	**1.46**	**190**	*eP*			**Pn**	**14 21 24.0**	**-0.7**
	baz=184								
FULB				*eS*			**Sn**	**14 21 42.7**	**-0.6**
	baz=184								
ELDTW	**Lidau**	**1.53**	**199**	*eP*			**Pn**	**14 21 26.0**	**+0.3**
	baz=191								
CHY	**Chiayi**	**1.54**	**223**	⇓P			**Pn**	**14 21 26.2**	**+0.5**
	baz=231								
CHY				*eS*			**Sn**	**14 21 45.9**	**+0.8**
	baz=231								
CHKT	**Chengkung**	**1.55**	**187**	*eP*			**Pn**	**14 21 25.8**	**0.0**
	baz=186								
CHKT				*eS*			**Sn**	**14 21 44.2**	**-1.0**
	baz=186								
WSF	**Szhu**	**1.58**	**231**	*eP*			**Pn**	**14 21 26.5**	**+0.4**
	baz=230								
WSF				*eS*			**Sn**	**14 21 46.0**	**0.0**
	baz=230								
TPUB	**Ta-pu**	**1.59**	**213**	*eP*			**Pn**	**14 21 26.7**	**+0.4**
	baz=212								
TPUB				*eS*			**Sn**	**14 21 46.4**	**+0.2**
	baz=212								
WTP	**Ta-pu**	**1.64**	**212**	⇓*iP*			**Pn**	**14 21 27.4**	**+0.4**
	baz=212								
WTP				*eS*			**Sn**	**14 21 49.8**	**+2.3**
	baz=212								
STYT	**Tauyuan**	**1.65**	**207**	*eP*			**Pn**	**14 21 27.9**	**+0.7**
	baz=214								
STYT				*eS*			**Sn**	**14 21 48.9**	**+1.2**
	baz=214								
TWK	**Hsinying**	**1.69**	**216**	⇓*iP*			**Pn**	**14 21 27.9**	**+0.2**
	baz=215								
SNST	**Tainan City**	**1.72**	**215**	*eP*			**Pn**	**14 21 28.4**	**+0.4**
	baz=215								
CHN1	**Nanshi**	**1.73**	**213**	*eP*			**Pn**	**14 21 28.7**	**+0.5**
	baz=213								
CHN1				*eS*			**Sn**	**14 21 50.4**	**+0.7**
	baz=213								
CHN8	**Yiju**	**1.79**	**224**	*eP*			**Pn**	**14 21 29.2**	**+0.3**
	baz=232								
CHN8				*eS*			**Sn**	**14 21 51.9**	**+1.0**
	baz=232								
SGST	**Jiashian**	**1.80**	**210**	*eP*			**Pn**	**14 21 28.7**	**-0.3**
	baz=219								
PTTC	**Pingtan**	**1.83**	**298**	*eP*			**Pn**	**14 21 28.4**	**-1.1**
	baz=298								
SLGT	**Liugui**	**1.85**	**207**	*eP*			**Pn**	**14 21 30.5**	**+0.8**
	baz=208								
TWG	**Pinlang**	**1.87**	**194**	*eP*			**Pn**	**14 21 29.1**	**-0.9**
	baz=184								
TWGBT	**Beinan**	**1.87**	**194**	*eP*			**Pn**	**14 21 28.9**	**-1.1**
	baz=184								
TWH	**Lutao**	**1.93**	**182**	*eP*			**Pn**	**14 21 30.0**	**-0.7**
	baz=178								
VWUC	**VWUC**	**1.95**	**281**	*eP*			**Pn**	**14 21 30.7**	**-0.3**
	baz=280								
IRIF	**Iriomote-Funau**	**2.00**	**98**	P			**Pn**	**14 21 31.7**	**0.0**
IRIF				S			**Sn**	**14 21 55.2**	**-0.7**
SSD	**Sandimen**	**2.07**	**204**	*eP*			**Pn**	**14 21 33.6**	**+0.8**
	baz=213								
TWM1	**Shoushan**	**2.09**	**210**	*eP*			**Pn**	**14 21 34.5**	**+1.5**
	baz=218								
MATB	**Ma-tsu**	**2.09**	**316**	*eP*			**Pn**	**14 21 32.6**	**-0.4**
	baz=315								
ECL	**Taimali**	**2.11**	**195**	*eP*			**Pn**	**14 21 34.8**	**+1.5**
	baz=187								
PNG	**Penghu**	**2.12**	**240**	*eP*			**Pn**	**14 21 32.8**	**-0.6**
	baz=239								
PNG				*eS*			**Sn**	**14 21 56.0**	**-2.9**
	baz=239								
HATJ	**Hateruma jima**	**2.13**	**106**	*eS*			**Sn**	**14 21 59.2**	**+0.2**
PHUB	**P'eng-hu**	**2.14**	**239**	P			**Pn**	**14 21 32.6**	**-1.0**
	baz=237								
PHUB				*eS*			**Sn**	**14 21 56.8**	**-2.5**
	baz=237								
MASBT	**Mashibuluo**	**2.20**	**203**	*eP*			**Pn**	**14 21 34.9**	**+0.5**
	baz=212								
MASBT				*eS*			**Sn**	**14 22 00.7**	**0.0**
	baz=212								
WDGT	**Dungji**	**2.22**	**232**	P			**Pn**	**14 21 34.2**	**-0.5**
	baz=231								
WDGT				*eS*			**Sn**	**14 21 59.8**	**-1.5**
	baz=231								
PTMZ	**Houxiangcun**	**2.25**	**281**	*eP*			**Pn**	**14 21 34.8**	**-0.3**
	baz=280								
JKRS	**Kuro-shima**	**2.27**	**100**	P			**Pn**	**14 21 36.0**	**+0.7**
JKRS				S			**Sn**	**14 22 02.1**	**-0.2**
SSPT	**Xinbi**	**2.34**	**203**	*eP*			**Pn**	**14 21 36.5**	**+0.2**
	baz=213								
EAST	**Anshuo**	**2.34**	**196**	*eP*			**Pn**	**14 21 37.8**	**+1.4**
	baz=186								
EAST				*eS*			**Sn**	**14 22 05.5**	**+1.2**
	baz=186								
TAW	**Tawu**	**2.36**	**195**	*eP*			**Pn**	**14 21 38.1**	**+1.5**
	baz=186								
JIJ	**Ishigaki jima**	**2.37**	**96**	P			**Pn**	**14 21 36.8**	**+0.2**
JIJ				S			**Sn**	**14 22 03.5**	**-1.3**
VCHM	**Qimei**	**2.42**	**234**	*eP*			**Pn**	**14 21 36.4**	**-0.9**
	baz=224								
VCHM				*eS*			**Sn**	**14 22 04.2**	**-1.8**
	baz=224								
SCZT	**Fangliau**	**2.42**	**201**	*eP*			**Pn**	**14 21 38.2**	**+0.8**
	baz=211								
LYJJ	**Jianjiangzhen**	**2.50**	**320**	*eP*			**Pn**	**14 21 38.1**	**-0.3**
	baz=319								
JISG	**Ishigakijimahi**	**2.50**	**91**	P			**Pn**	**14 21 39.1**	**+0.6**
JISG				S			**Sn**	**14 22 07.5**	**-0.5**
WLCH	**Liuqiu**	**2.53**	**206**	*eP*			**Pn**	**14 21 39.9**	**+1.1**
	baz=215								
XPSS	**Dashiqiu**	**2.59**	**332**	*eP*			**Pn**	**14 21 39.3**	**-0.3**
	baz=332								
MHZQ	**Yeshan**	**2.71**	**303**	*eP*			**Pn**	**14 21 40.7**	**-0.5**
	baz=302								
TWKBT	**Hengchun**	**2.78**	**195**	*eP*			**Pn**	**14 21 42.8**	**+0.6**
	baz=185								
JTJ	**Tarama**	**2.86**	**89**	P			**Pn**	**14 21 44.4**	**+1.1**
JTJ				S			**Sn**	**14 22 17.9**	**+1.3**
KNM	**Kinmen**	**2.86**	**266**	*eP*			**Pn**	**14 21 44.4**	**+1.2**
	baz=264								
KNMB	**Chin-men Tao**	**2.90**	**267**	*eP*			**Pn**	**14 21 43.0**	**-0.8**
	baz=265								
JIRB	**Irabujima**	**3.29**	**86**	S			**Sn**	**14 22 28.2**	**+1.1**
JMJ	**Miyako jima 2**	**3.40**	**86**	*eP*			**Pn**	**14 21 52.5**	**+1.9**
	baz=87								
JMJ2	**Miyako jima3**	**3.43**	**88**	*eS*			**Sn**	**14 22 31.7**	**+1.2**
ZPLA	**Ao Xicun**	**3

	4.2nm,0.2s,SNR=7.9					
EMUR	**La Murta**	**5.51**	**285**	P	**Pn**	**14 26 32.3 +1.6**
	5.4nm,0.7s,SNR=7.9					
EMUR				S	**Sn**	**14 27 31.6 -1.9**
	0.3nm,0.2s,SNR=7.9					
CFON	**Fontmartina**	**5.67**	**336**	P	**Pn**	**14 26 34.9 +2.0**
	2.2nm,0.2s,SNR=6.2					
CFON				S	**Sn**	**14 27 35.5 -2.0**
	4.5nm,0.6s,SNR=5.6					
EPOB	**Poblet**	**5.86**	**325**	P	**Pn**	**14 26 37.1 +1.7**
	1.6nm,0.2s,SNR=5.6					
EPOB				S	**Sn**	**14 27 39.5 -2.5**
	6.3nm,0.7s					
ERTA	**Horta de San J**	**5.92**	**319**	S	**Sn**	**14 27 41.2 -2.5**
	1.5nm,0.4s,SNR=7.9					
ETOB	**Tobarra**	**5.94**	**292**	P	**Pn**	**14 26 38.9 +2.3**
	1.9nm,0.3s,SNR=7.9					
ETOB				S	**Sn**	**14 27 43.5 -0.7**
	0.6nm,0.2s,SNR=7.9					
EMOS	**Mosqueruela**	**6.00**	**311**	P	**Pn**	**14 26 39.7 +2.3**
	5.6nm,0.7s,SNR=7.9					
EMOS				S	**Sn**	**14 27 43.5 -2.1**
	0.3nm,0.3s,SNR=7.9					
CLLI	**Llivia**	**6.47**	**336**	P	**Pn**	**14 26 47.0 +3.1**
	4.3nm,0.6s,SNR=7.9					
CLLI				S	**Sn**	**14 27 56.2 -1.0**
	0.7nm,0.2s,SNR=7.9					
PGF	**Pioggiola**	**6.53**	**23**	*e*Pn	**Pn**	**14 26 46.3 +1.6**
PGF				*e*Sn	**Sn**	**14 27 55.7 -3.0**
PGF	**Pioggiola**	**6.53**	**23**	P	**Pn**	**14 26 46.3 +1.6**
PGF				S	**Sn**	**14 27 55.7 -3.0**
CSOR	**Sort**	**6.67**	**331**	P	**Pn**	**14 26 49.9 +3.1**
	1.4nm,0.2s,SNR=7.8					
CSOR				S	**Sn**	**14 28 00.4 -2.0**
	4.9nm,0.7s					
LMR	**La Mourre**	**6.77**	**6**	*e*Pn	**Pn**	**14 26 49.4 +1.5**
LMR				*e*Sn	**Sn**	**14 28 01.0 -3.5**
	3.0nm,0.3s					
LMR	**La Mourre**	**6.77**	**6**	P	**Pn**	**14 26 49.4 +1.5**
LMR				S	**Sn**	**14 28 01.0 -3.5**
	1.5nm,0.3s					
EQES	**Quesada**	**6.93**	**283**	P	**Pn**	**14 26 53.6 +3.3**
	0.5nm,0.2s,SNR=5.4					
EQES				S	**Sn**	**14 28 10.0 +1.3**
	6.7nm,0.7s,SNR=4.7					
FRF	**La Foret Royal**	**7.01**	**7**	*e*Pn	**Pn**	**14 26 52.7 +1.5**
FRF				*e*Sn	**Sn**	**14 28 06.7 -3.6**
	4.0nm,0.3s					
FRF	**La Foret Royal**	**7.01**	**7**	P	**Pn**	**14 26 52.7 +1.5**
FRF				S	**Sn**	**14 28 06.7 -3.6**
	2.0nm,0.3s					
MTLF	**Montolieu**	**7.18**	**341**	*e*Pn	**Pn**	**14 26 55.3 +1.7**
MTLF				*e*Sn	**Sn**	**14 28 11.3 -3.4**
	0.5nm,0.2s					
MTLF	**Montolieu**	**7.18**	**341**	P	**Pn**	**14 26 55.3 +1.7**
MTLF				S	**Sn**	**14 28 11.3 -3.4**
	0.2nm,0.2s					
SMRF	**Simiane la Rot**	**7.37**	**1**	*e*Pn	**Pn**	**14 26 58.4 +2.2**
SMRF				*e*Sn	**Sn**	**14 28 15.4 -3.8**
	0.6nm,0.3s					
SMRF	**Simiane la Rot**	**7.37**	**1**	P	**Pn**	**14 26 58.4 +2.2**
SMRF				S	**Sn**	**14 28 15.4 -3.8**
	0.6nm,0.3s					
SBF	**Sospel**	**7.41**	**11**	*e*Pn	**Pn**	**14 26 58.1 +1.4**
SBF				*e*Sn	**Sn**	**14 28 16.2 -4.0**
	1.2nm,0.2s					
SBF	**Sospel**	**7.41**	**11**	P	**Pn**	**14 26 58.1 +1.4**
SBF				S	**Sn**	**14 28 16.2 -4.0**
	0.6nm,0.2s					
EPF	**Esparros**	**7.54**	**330**	*e*Pn	**Pn**	**14 27 01.3 +2.7**
EPF				*e*Sn	**Sn**	**14 28 19.0 -4.6**
	1.4nm,0.3s					
EPF	**Esparros**	**7.54**	**330**	P	**Pn**	**14 27 01.3 +2.7**
EPF				S	**Sn**	**14 28 19.0 -4.6**
	0.7nm,0.3s					
LASF	**Ste Croix**	**7.57**	**351**	*e*Pn	**Pn**	**14 27 00.4 +1.5**
LASF				*e*Sn	**Sn**	**14 28 20.5 -3.7**
	1.7nm,0.3s					
LASF	**Ste Croix**	**7.57**	**351**	P	**Pn**	**14 27 00.4 +1.5**
LASF				S	**Sn**	**14 28 20.5 -3.7**
	0.9nm,0.3s					
ETSF	**Etsaut**	**7.82**	**325**	*e*Pn	**Pn**	**14 27 04.6 +2.1**
ETSF				*e*Sn	**Sn**	**14 28 27.9 -2.6**
	0.8nm,0.3s					
ETSF	**Etsaut**	**7.82**	**325**	P	**Pn**	**14 27 04.6 +2.1**
ETSF				S	**Sn**	**14 28 27.9 -2.6**
	0.4nm,0.3s					
ATE	**Arette**	**8.03**	**326**	P	**Pn**	**14 27 09.3 +4.0**
	1.4nm,0.2s,SNR=7.9					
ATE				S	**Sn**	**14 28 34.9 -0.7**
	0.5nm,0.2s,SNR=7.9					
ESDC	**Sonseca Array**	**8.05**	**295**	Pn	**Pn**	**14 27 06.0 +0.4**
	0.1nm,0.3s,baz=104,slow=13,SNR=2.5					
VIVF	**Saint-Julien-l**	**8.27**	**356**	*e*Pn	**Pn**	**14 27 09.9 +1.4**
VIVF				*e*Sn	**Sn**	**14 28 37.8 -3.6**
	1.0nm,0.2s					
VIVF	**Saint-Julien-l**	**8.27**	**356**	P	**Pn**	**14 27 09.9 +1.4**
VIVF				S	**Sn**	**14 28 37.8 -3.6**
	0.5nm,0.2s					
SJPF	**Ste Jean**	**8.30**	**324**	*e*Pn	**Pn**	**14 27 12.0 +3.1**
SJPF				*e*Sn	**Sn**	**14 28 38.2 -3.9**
	0.7nm,0.3s					
SJPF	**Ste Jean**	**8.30**	**324**	P	**Pn**	**14 27 12.0 +3.1**
SJPF				S	**Sn**	**14 28 38.2 -3.9**
	0.3nm,0.3s					
EALK	**Alkurruntz**	**8.52**	**323**	P	**Pn**	**14 27 15.2 +3.3**
	1.5nm,0.2s,SNR=16					
EALK				S	**Sn**	**14 28 43.0 -4.5**
	53nm,1.8s					
GERES	**GERESS Array B**	**13.63**	**24**	Pn	Pn	14 28 28.1 +6.1
	0.1nm,0.3s,baz=204,slow=12,SNR=1.4					
AKASG	**Malin Array Be**	**22.09**	**43**	P	**P**	**14 30 05.8 +2.3**
	0.5nm,0.3s,baz=239,slow=11,SNR=1.9					
TORD	**Torodi Ar. Bea**	**23.60**	**189**	P	**P**	**14 30 20.1 +0.7**
	0.3nm,0.6s,baz=354,slow=10,SNR=2.2					
MKAR	**Makanchi Array**	**56.11**	**54**	P	**P**	**14 34 49.0 +1.3**
	0.3nm,0.6s,baz=294,slow=7.4,SNR=5.2					
YKA	**Yellowknife Ar**	**70.22**	**335**	P	**P**	**14 36 20.8 -0.1**
	0.2nm,0.5s,baz=50,slow=7.0,SNR=4.8					

*IDC **31** 14:27:29.4±2.7,8˚.95N×125˚.70E,h0km,mb3.5/4, mb1 3.6/4,mb1mx3.4/40,mbtmp3.5/4, Error ellipse: s-maj=185.0km s-min=25.5km az=68.0*
*MAN **31** 14:27:32.2,9˚.44N×126˚.71E,h20km,mb5.2,ML4.2,MS4.3*
ISC 31 14:27:33.2±1.3,9˚41N±0˚06×126˚8E±0˚1,h43km,n10, σ1ᵍ75/14,mb3.5/4,2C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.36**	**286**	⇓*e*P	**Pn**	**14 27 53.8**	**-1.9**
SCPH				*e*S	**Sn**	**14 28 10.8**	**-1.6**
MSLP	**Maasin**	**2.06**	**291**	*e*P	**Pn**	**14 28 04.5**	**-0.8**
MSLP				*e*S	**Sn**	**14 28 31.9**	**+2.2**
BUKP	**Musuan**	**2.30**	**229**	*e*P	**Pn**	**14 28 07.9**	**-0.8**
BUKP				*e*S	**Sn**	**14 28 37.3**	**+1.4**
KCP	**Kidapawan**	**2.93**	**216**	⇑*i*P	Pn	14 28 22.5	+5.1
KCP				*i* S	**Sn**	**14 28 54.5**	**+3.1**
CNP	**Catarman**	**3.73**	**326**	*e*P	**Pn**	**14 28 28.7**	**+0.3**
CNP				*e*S	**Sn**	**14 29 12.2**	**+1.1**
RCP	**Roxas**	**4.54**	**298**	⇑*e*P	**Pn**	**14 28 40.8**	**+1.4**
FITZ	**Fitzroy Crossi**	**27.36**	**182**	P	**P**	**14 33 12.3**	**-2.2**
	2.1nm,1.0s,baz=353,slow=17,SNR=1.6						
WRA	**Warramunga Arr**	**30.09**	**166**	P	**P**	**14 33 40.0**	**+1.2**
	0.6nm,1.0s,baz=343,slow=8.8,SNR=1.9						
ASAR	**Alice Springs**	**33.60**	**168**	P	**P**	**14 34 09.2**	**-0.4**
	0.3nm,0.8s,baz=343,slow=8.7,SNR=6.2						
MKAR	**Makanchi Array**	**53.03**	**323**	P	**P**	**14 36 46.0**	**+0.1**
	0.5nm,0.6s,baz=123,slow=7.5,SNR=7.6						

MAN 31 14:57:29.3,9˚48N×126˚76E,h27km,mb4.8,ML3.7,MS3.6, 2C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.29**	**283**	⇑*e*P	Pn	14 57 50.5	-1.1
SCPH				*e*S	Sn	14 58 08.1	+0.2
MSLP	**Maasin**	**1.98**	**289**	*e*P	Pn	14 58 02.0	+0.9
MSLP				*e*S	Sb	14 58 28.5	-0.6
BUKP	**Musuan**	**2.32**	**227**	*e*P	Pn	14 58 05.8	+0.1
BUKP				*e*S	Sn	14 58 34.5	+1.2
KCP	**Kidapawan**	**2.96**	**214**	⇓*e*P	Pb	14 58 20.1	-1.4
KCP				*i* S	Sn	14 58 48.8	-0.7
CNP	**Catarman**	**3.65**	**326**	*e*P	Pn	14 58 25.1	+1.1
CNP				*e*S	Sn	14 59 07.9	+1.8
RCP	**Roxas**	**4.46**	**298**	⇑*e*P	Pn	14 58 37.7	+2.5

*IDC **31** 15:04:21.7±1.2,6˚.16S×129˚.84E,h200km±13km,mb3.4/8, mb1 3.9/14,mb1mx3.7/30,mbtmp4.4/14, Error ellipse: s-maj=14.7km s-min=8.3km az=88.0*
*NEIC **31** 15:04:23.5±2.1,6˚.13S±0˚.06×129˚.76E±0˚.08,h218km±8km, mb4.5/11, Error ellipse: s-maj=12.0km s-min=8.2km az=102.0*
*DJA **31** 15:04:24.3±0.2,6˚S±3˚×13˚0E±˚,h225km±6km,M4.5/19, mb4.5/19,mB5.0/10,MLv4.7/18,Mw(mB)4.3/10*
ISC 31 15:04:24.6±0.5,6˚12S±0˚.04×129˚.79E±0˚.06,h250km,n53, σ2ᵍ52/61,mb3.8/12,1C,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.59**	**4**	P	**Pn**	**15 05 00.9**	**-2.8**
SAUI	**Saumlaki**	**2.38**	**141**	P	**Pn**	**15 05 08.8**	**-1.9**
SAUI	**Saumlaki**	**2.38**	**141**	Pn	**Pn**	**15 05 09.7**	**-1.0**
SAUI				S	**S**	**15 05 43.5**	**-3.6**
MSAI	**Masohi**	**2.89**	**343**	P	**Pn**	**15 05 13.9**	**-2.1**
AAI	**Ambon**	**2.90**	**327**	P	**Pn**	**15 05 15.0**	**-1.1**
NLAI	**Namlea**	**3.92**	**317**	P	**Pn**	**15 05 28.0**	**+0.4**
FAKI	**Fak Fak**	**4.01**	**38**	P	**Pn**	**15 05 26.0**	**-2.7**
FAKI	**Fak Fak**	**4.01**	**38**	Pn	**Pn**	**15 05 26.6**	**-2.1**
FAKI				S	**S**	**15 06 13.4**	**-6.2**
SIJI	**Sorong**	**5.42**	**16**	P	**Pn**	**15 05 43.5**	**-2.2**
	46nm,0.3s,baz=247,slow=22,SNR=142						
SIJI				S	**S**	**15 06 43.9**	**-6.5**
	27nm,0.3s,baz=80,slow=23,SNR=13						
SANI	**Sanana**	**5.55**	**317**	P	**Pn**	**15 05 47.0**	**-0.2**
	0.2nm623nm30nm,0.8s						
LBMI	**Labuha**	**5.91**	**337**	P	**Pn**	**15 05 51.3**	**-0.4**
	0.6nm925nm64nm,0.6s						
RKPI	**Ransiki, Papua**	**6.33**	**44**	P	**Pn**	**15 05 56.3**	**-0.7**
	2.3nm13µm630nm,0.8s						
SOEI	**Soe**	**6.55**	**236**	P	**Pn**	**15 06 00.2**	**+0.3**
	1.2nm47nm,0.8s						
SOEI	**Soe**	**6.55**	**236**	Pn	**Pn**	**15 05 58.7**	**-1.2**
SOEI				S	**S**	**15 07 10.5**	**-5.7**
MTN	**Manton Dam**	**6.81**	**169**	Pn	**Pn**	**15 06 01.5**	**-1.5**
MTN				S	**S**	**15 07 16.2**	**-5.6**
BBSI	**Bau Bau**	**7.21**	**275**	P	**Pn**	**15 06 09.8**	**+1.7**
	0.0nm5.5nm,1.1s						
TNTI	**Ternate**	**7.26**	**340**	P	**Pn**	**15 06 08.1**	**-0.6**
	0.1nm992nm26nm,0.8s						
TNTI	**Ternate**	**7.26**	**340**	Pn	**Pn**	**15 06 07.2**	**-1.5**
BATI	**Baumata**	**7.30**	**236**	P	**Pn**	**15 06 07.8**	**-1.4**
	12nm,0.3s,baz=97,slow=4.6,SNR=15						
BATI				S	**S**	**15 07 28.5**	**-4.6**
	35nm,0.3s,baz=71,slow=22,SNR=15						
BATI	**Baumata**	**7.30**	**236**	P	**Pn**	**15 06 08.7**	**-0.5**
	0.6nm66nm,0.7s						
MMRI	**Maumere**	**7.90**	**251**	P	**Pn**	**15 06 18.9**	**+2.2**
	0.3nm2µm28nm,1.4s						
EDFI	**Ende, Flores**	**8.45**	**252**	P	**Pn**	**15 06 24.2**	**+0.4**
	7.9nm,0.9s						
KNRA	**Kununurra**	**9.55**	**186**	Pn	**Pn**	**15 06 36.3**	**-1.3**
MRSI	**Marisa**	**10.22**	**310**	P	**P**	**15 06 47.6**	**-3.9**
	22nm,1.2s						
FITZ	**Fitzroy Crossi**	**12.57**	**198**	P	**Pn**	**15 07 13.3**	**-2.0**
	7.9nm,0.3s,baz=32,slow=8.5,SNR=65						
FITZ				S	**S**	**15 09 31.2**	**-4.1**
	5.1nm,0.3s,baz=83,slow=13,SNR=8.2						
FITZ	**Fitzroy Crossi**	**12.57**	**198**		**Pn**	**15 07 13.6**	**-1.8**
KCP	**Kidapawan**	**13.86**	**340**	⇑*i*P	**P**	**15 07 32.2**	**+0.2**
WB0	**Warramunga Arr**	**14.28**	**162**	P	**Pn**	**15 07 35.0**	**-1.3**
WRA	**Warramunga Arr**	**14.43**	**163**	P	**Pn**	**15 07 37.0**	**-1.1**
	2.5nm,0.3s,baz=341,slow=12,SNR=35						
WRA				S	**S**	**15 10 13.9**	**-4.0**
	6.1nm,0.3s,baz=337,slow=21,SNR=7.8						
WB2	**Warramunga Arr**	**14.44**	**163**	Pn	**Pn**	**15 07 36.8**	**-1.4**
WR0	**Warramunga Arr**	**14.51**	**162**	Pn	**Pn**	**15 07 37.8**	**-1.2**
COEN	**Coen**	**15.30**	**122**	P	**Pn**	**15 07 49.2**	**+0.7**
COEN				IAmb	IAmb	15 07 51.0	
	comp=Z,34nm,0.7s						
PMG	**Port Moresby**	**17.51**	**102**	P	**Pn**	**15 08 12.8**	**-1.8**
	comp=Z,1.3nm,0.3s,baz=266,slow=13,SNR=3.0						
PMG	**Port Moresby**	**17.51**	**102**	P	**Pn**	**15 08 13.7**	**-0.9**
PMG				IAmb	IAmb	15 08 30.3	
	comp=Z,25nm,0.8s						
AS31	**Alice Springs**	**17.89**	**168**	P	**Pn**	**15 08 18.2**	**-0.8**
ASAR	**Alice Springs**	**17.89**	**168**	P	**Pn**	**15 08 17.8**	**-1.2**
	comp=Z,4.3nm,0.3s,baz=344,slow=9.4,SNR=140						
ASAR				S	**S**	**15 11 28.7**	**+0.2**
	comp=Z,1.7nm,0.3s,baz=351,slow=20,SNR=27						
PSA00	**Pilbara Seismi**	**18.13**	**211**	P	**Pn**	**15 08 20.3**	**-1.5**
CTA	**Charters Tower**	**21.18**	**132**	P	**P**	**15 08 52.5**	**+1.5**
	comp=Z,16nm,0.7s,baz=304,slow=12,SNR=19						
CTAO	**Charters Tower**	**21.18**	**132**	P	**P**	**15 08 53.7**	**+2.6**
CTAO				IAmb	IAmb	15 08 54.1	
	comp=Z,20nm,0.8s						
MORW	**Morawa**	**26.27**	**208**	P	**P**	**15 09 38.5**	**+1.2**
MORW				IAmb	IAmb	15 09 49.8	
	comp=Z,11nm,1.2s						
STKA	**Stephens Creek**	**27.90**	**158**	P	**P**	**15 09 53.3**	**+1.6**
	comp=Z,1.7nm,0.7s,baz=348,slow=6.9,SNR=5.5						
STKA	**Stephens Creek**	**27.90**	**158**	IAmb	IAmb	15 09 54.5	
	comp=Z,0.5nm,0.8s						
ARMA	**Armidale**	**31.71**	**142**	P	**P**	**15 10 27.9**	**+2.4**
ARMA				IAmb	IAmb	15 10 41.1	
	comp=Z,7.4nm,1.1s						
CMAR	**Chiang Mai Arr**	**39.02**	**309**	P	**P**	**15 11 30.4**	**+2.8**
	comp=Z,0.5nm,0.6s,baz=145,slow=6.8,SNR=6.2						
MJAR	**Matsushiro Arr**	**43.17**	**10**	P	**P**	**15 12 01.6**	**+0.6**
	comp=Z,2.7nm,0.8s,baz=182,slow=9.8,SNR=14						
KSRS	**Korea Array**	**43.38**	**358**	P	**P**	**15 12 04.8**	**+2.1**
	comp=Z,0.3nm,0.4s,baz=169,slow=8.4,SNR=3.1						
THZ	**Tophouse**	**52.17**	**140**	P	**P**	**15 13 12.2**	**+2.2**
THZ				IAmb	IAmb	15 13 30.9	
	comp=Z,26nm,1.5s						
TUWZ	**Tuamarina**	**52.67**	**139**	P	**P**	**15 13 15.4**	**+1.8**
PETK	**Petropavlovsk-**	**63.56**	**18**	P	**P**	**15 14 31.1**	**+2.5**
	comp=Z,1.0nm,0.7s,baz=208,slow=12,SNR=2.4						
MK31	**Makanchi Array**	**67.38**	**327**	P	**P**	**15 14 55.7**	**+2.5**
MKAR	**Makanchi Array**	**67.38**	**327**	P	**P**	**15 14 56.0**	**+2.8**
	comp=Z,1.2nm,0.6s,baz=126,slow=7.8,SNR=16						
ZALV	**Zalesovo Beam**	**70.71**	**334**	P	**P**	**15 15 15.2**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=113,slow=11,SNR=1.9						
QSPA	**South Pole Qui**	**83.85**	**180**	P	**P**	**15 16 27.8**	**+1.7**
QSPA				IAmb	IAmb	15 16 28.9	
	comp=Z,4.1nm,1.4s						

*UCR **31** 15:20:21.5±0.8,13˚.55N×88˚.51W,h3km±3km,ML3.7*
*SNET **31** 15:20:21.1±0.8,13˚.56N×88˚.51W,h1km±2km,ML3.5*
*INET **31** 15:20:22.8,13˚.59N×88˚.54W,h2km,ML3.0*
ISC 31 15:20:21.6±1.0,13˚57N±0˚.04×88˚51W±0˚.03,h5km±9km, n24,σ0ᵍ85/34,4C-6D,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COEB	**Comit de Eme**	**0.08**	**194**	⇑*i*P	**Pg**	**15 20 23.3**	**-0.1**
COEB				*e*S	**Sg**	**15 20 24.7**	**+0.1**
COEB				IAML		15 20 26.2	
	comp=Z,64µm,0.4s						
COEB	**Comit de Eme**	**0.08**	**194**	⇑*i*P	**Pg**	**15 20 23.3**	**-0.1**
COEB				*e*S	**Sg**	**15 20 24.7**	**+0.1**
COEB				IAML		15 20 26.2	
	comp=Z,64µm,0.4s						
TECA	**Tecapa**	**0.08**	**174**	⇓*i*P	**Pg**	**15 20 23.2**	**-0.3**
TECA	**Tecapa**	**0.08**	**174**	⇓*i*P	**Pg**	**15 20 23.2**	**-0.3**
PACA	**Pacayal**	**0.21**	**120**	⇓*e*P	**Pg**	**15 20 26.4**	**+0.6**
PACA				*e*S	**Sg**	**15 20 30.5**	**+1.9**
PACA				IAML		15 20 38.9	
	comp=Z,28µm,0.5s						
PACA	**Pacayal**	**0.21**	**120**	⇓*e*P	**Pg**	**15 20 26.4**	**+0.6**
PACA				*e*S	**Sg**	**15 20 30.5**	**+1.9**
PACA				IAML		15 20 38.9	
	comp=Z,28µm,0.5s						
ALJI	**Alcalda de J**	**0.25**	**193**	*e*P	**Pg**	**15 20 26.8**	**+0.3**
ALJI				*e*S	**Sg**	**15 20 31.4**	**+1.6**
ALJI	**Alcalda de J**	**0.25**	**193**	*e*P	**Pg**	**15 20 26.8**	**+0.3**
ALJI				*e*S	**Sg**	**15 20 31.4**	**+1.6**
BLLM	**Bellamira**	**0.30**	**116**	*e*P	**Pg**	**15 20 27.3**	**0.0**
BLLM	**Bellamira**	**0.30**	**116**	*e*P	**Pg**	**15 20 27.3**	**0.0**
JUCU	**Jucuarįn**	**0.41**	**141**	*e*P	**Pb**	**15 20 29.8**	**-1.5**
JUCU				IAML		15 20 41.3	
	comp=Z,1µm,0.4s						
JUCU	**Jucuarįn**	**0.41**	**141**	*e*P	**Pb**	**15 20 29.8**	**-1.5**
JUCU				IAML		15 20 41.3	
	comp=Z,1µm,0.4s						
FAGO	**Alcalda de S**	**0.41**	**73**	*i* P	**Pb**	**15 20 30.7**	**-0.7**
FAGO				*e*S	**Sb**	**15 20 37.4**	**-0.5**
LFRS	**El Faro**	**0.54**	**275**	⇑*i*P	**Pb**	**15 20 33.3**	**-0.3**
LFRS	**El Faro**	**0.54**	**275**	⇑*i*P	**Pb**	**15 20 33.3**	**-0.3**
LBRS	**Las Brisas**	**0.54**	**288**	*i* P	**Pb**	**15 20 33.2**	**-0.4**
LBRS	**Las Brisas**	**0.54**	**288**	*i* P	**Pb**	**15 20 33.2**	**-0.4**
LCND	**La Caada**	**0.66**	**113**	*e*P	**Pb**	**15 20 34.8**	**-0.8**
LCND	**La Caada**	**0.66**	**113**	*e*P	**Pb**	**15 20 34.8**	**-0.8**
BOQS	**Boqueron**	**0.76**	**282**	*e*P	**Pb**	**15 20 37.2**	**-0.3**
BOQS	**Boqueron**	**0.76**	**282**	*e*P	**Pb**	**15 20 37.2**	**-0.3**
MTO3	**Montecristo**	**1.16**	**315**	⇓*i*P	**Pg**	**15 20 43.7**	**-0.2**
MTO3				*e*S	**Sn**	**15 21 01.1**	**0.0**
MTO3	**Montecristo**	**1.16**	**315**	⇓*i*P	**Pg**	**15 20 43.7**	**-0.2**
MTO3				*e*S	**Sn**	**15 21 01.1**	**0.0**

*IDC **31** 15:20:54.8±1.4,38˚.72N×143˚.19E,h0km,mb3.4/3, mb1 3.6/6,mb1mx3.3/37,mbtmp3.5/6,ML2.8/3, Error ellipse: s-maj=53.4km s-min=23.2km az=112.0*
*JMA **31** 15:21:00.6±0.1,38˚.98N×142˚.42E,h33km±2km,M3.7*
JMA Felt I J1.
ISC 31 15:20:58.2±1.9,38˚99N±0˚.05×142˚56E±0˚.08,h28km±13km, n24,σ1ᵍ84/28,mb3.5/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.70**	**278**	P	**Pb**	**15 21 12.6**	**+0.8**
OFUJ				S	**Sb**	**15 21 20.7**	**-0.4**
MIYJ	**Miyakonagasawa**	**0.82**	**316**	P	**Pn**	**15 21 14.5**	**+0.6**
MIYJ				S	**Sn**	**15 21 24.6**	**-0.6**
JKMT	**Kesennumamotoy**	**0.87**	**259**	P	**Pn**	**15 21 14.8**	**+0.3**
JKMT				S	**Sn**	**15 21 24.5**	**-1.7**
JMK	**Ichinoseki**	**1.05**	**269**	P	**Pn**	**15 21 17.7**	**+0.7**
JMK				S	**Sn**	**15 21 29.8**	**-0.8**
JIO	**Ouri**	**1.09**	**241**	P	**Pn**	**15 21 17.9**	**+0.4**
JIO				S	**Sn**	**15 21 29.9**	**-1.7**
JTH	**Tanohata**	**1.09**	**331**	P	**Pn**	**15 21 19.0**	**+1.3**
JOM	**Ohasama**	**1.10**	**297**	P	**Pn**	**15 21 18.8**	**+1.1**
JOM				S	**Sn**	**15 21 31.9**	**-0.1**
JKZ	**Kuzumaki**	**1.38**	**317**	P	**Pn**	**15 21 23.5**	**+1.9**
JKZ				S	**Sb**	**15 21 40.3**	**-0.3**
JRG	**Rokugo**	**1.55**	**286**	P	**Pb**	**15 21 25.9**	**-0.3**
JRG				*e*S	**Sb**	**15 21 45.1**	**-0.4**
JANG	**Nango**	**1.60**	**330**	P	**Pn**	**15 21 26.8**	**+2.1**
JOU	**Okura**	**1.61**	**248**	P	**Pn**	**15 21 26.0**	**+1.3**
JYK	**Kaneyama**	**1.72**	**268**	P	**Pn**	**15 21 27.7**	**+1.5**
MJAR	**Matsushiro Arr**	**4.22**	**236**	Pn	**Pn**	**15 22 04.3**	**+3.6**
	0.1nm,0.3s,baz=51,slow=12,SNR=22						
ASAJ	**Asahikawa**	**5.13**	**0**	Pn	**Pn**	**15 22 16.6**	**+3.6**
	0.4nm,0.3s,baz=242,slow=14,SNR=5.2						
ASAJ				Sn	**Sb**	**15 23 23.2**	**-5.0**
	1.1nm,0.3s,baz=258,slow=31,SNR=5.8						
JHJ	**Hachijo jima 2**	**6.27**	**202**	Pn	**Pn**	**15 22 29.4**	**+0.6**
	0.7nm,0.3s,baz=15,slow=14,SNR=1.8						
JHJ				Sn	**Sn**	**15 23 38.5**	**-1.0**
	1.7nm,0.3s,baz=34,slow=21,SNR=2.3						
H11N2	**WAKE ISLAND Hy 28.45**	**125**		T	T	15 57 15.8	
	baz=318,slow=75,SNR=42						
H11N1	**WAKE ISLAND Hy 28.46**	**125**		T	T	15 57 19.1	
	baz=318,slow=75,SNR=49						
H11N3	**WAKE ISLAND Hy 28.47**	**125**		T	T	15 57 19.7	
	baz=318,slow=75,SNR=53						
H11S1	**WAKE ISLAND Hy 29.24**	**127**		T	T	15 58 17.7	
	baz=319,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy 29.24**	**127**		T	T	15 58 26.4	
	baz=319,slow=76,SNR=14						
H11S2	**WAKE ISLAND Hy 29.26**	**127**		T	T	15 58 18.6	
	baz=319,slow=76,SNR=13						
ILAR	**Eielson Array**	**47.37**	**33**	P	**P**	**15 29 30.1**	**+0.7**
	0.3nm,0.6s,baz=252,slow=8.6,SNR=3.2						
WRA	**Warramunga Arr**	**59.12**	**189**	P	**P**	**15 30 54.2**	**-2.0**
	0.3nm,0.4s,baz=5.4,slow=10,SNR=2.2						
ASAR	**Alice Springs**	**62.85**	**189**	P	**P**	**15 31 22.0**	**+0.5**
	0.3nm,1.0s,baz=16,slow=12,SNR=4.1						

*JMA **31** 15:22:10.9±0.5,43˚.93N×148˚.44E,h0km,M3.6*
*SKHL **31** 15:22:11.7±0.5,44˚.23N×148˚.79E,h39km±4km,mb4.1/2*
**ISC 31 15:22:08.9±3.0,44˚

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**0.76**	**258**	*iP*	**Pn**	**15 26 41.9**	**+0.2**
GO02				*i* S	**Sn**	**15 26 57.0**	**+0.6**
GO02				IAML		15 26 58.2	
	comp=E,4μm,0.4s						
AC02	**Maricunga**	**1.85**	**190**	*iP*	**Pn**	**15 26 55.0**	**+1.0**
PB15	**IPOC Station P**	**1.90**	**340**	*iP*	**Pn**	**15 26 55.0**	**+0.8**
PB15				*i* S	**Sn**	**15 27 18.9**	**+0.3**
AC01	**Pan de Azucar**	**2.01**	**235**	*eP*	**Pn**	**15 26 55.0**	**-0.4**
PB10	**IPOC Station P**	**2.20**	**312**	*iP*	**Pn**	**15 26 58.4**	**+0.5**
PB10				*i* S	**Sn**	**15 27 23.9**	**-1.4**
LVC	**Limon Verde**	**2.38**	**357**	P	**Pn**	**15 27 01.7**	**+1.1**
	comp=E,6.4nm,0.3s,baz=150,slow=7.2,SNR=25						
LVC				S	**Sn**	**15 27 29.3**	**-0.7**
	comp=E,41nm,0.3s,baz=184,slow=9.7,SNR=22						
PB06	**IPOC Station P**	**2.40**	**342**	*iP*	**Pn**	**15 27 01.3**	**+0.7**
PB06				*i* S	**Sn**	**15 27 30.0**	**-0.1**
PB06				IAML		15 27 36.6	
	comp=N,318nm,0.2s						
PB05	**IPOC Station P**	**2.51**	**328**	*eP*	**Pn**	**15 27 02.3**	**+0.3**
PB05				*i* S	**Sn**	**15 27 31.3**	**-1.2**
PB05				IAML		15 27 38.0	
	comp=N,334nm,0.4s						
GO03	**Copiap**	**2.90**	**207**	*iP*	**Pn**	**15 27 06.6**	**-0.4**
PB04	**IPOC Station P**	**2.94**	**334**	*iP*	**Pn**	**15 27 07.9**	**+0.2**
PB03	**IPOC Station P**	**3.08**	**343**	*iP*	**Pn**	**15 27 09.6**	**+0.2**
PB03				IAML		15 27 51.5	
	comp=E,252nm,0.7s						
PB09	**IPOC Station P**	**3.22**	**352**	*iP*	**Pn**	**15 27 12.3**	**+0.9**
PB07	**IPOC Station P**	**3.42**	**342**	*eP*	**Pn**	**15 27 13.7**	**-0.3**
LPAZ	**La Paz**	**8.69**	**4**	P	**Pn**	**15 28 26.5**	**+0.9**
	comp=E,0.2nm,0.3s,baz=225,slow=1.4,SNR=2.6						
SIV	**San Ignacio**	**11.50**	**40**	P	Pn	15 28 58.7	-4.3
	comp=E,2.6nm,0.3s,baz=251,slow=9.4,SNR=50						
BDFB	**Brasilia**	**21.55**	**68**	P	**P**	**15 30 58.9**	**-3.9**
	comp=E,3.0nm,0.5s,baz=268,slow=9.5,SNR=4.9						
PDAR	**Pinedale Array**	**77.20**	**330**	P	**P**	**15 38 04.8**	**+0.9**
	comp=E,0.4nm,0.4s,baz=133,slow=7.9,SNR=2.8						
TORD	**Torodi Ar. Bea**	**78.43**	**70**	P	**P**	**15 38 11.1**	**+0.1**
	comp=E,1.5nm,0.7s,baz=263,slow=6.6,SNR=7.1						
YKA	**Yellowknife Ar**	**94.52**	**340**	P	**P**	**15 39 30.0**	**+0.8**
	comp=E,0.2nm,0.4s,baz=146,slow=5.0,SNR=5.7						
ASAR	**Alice Springs**	**126.86**	**206**	PKP	**PKiKP**	**15 45 13.8**	**-0.1**
	comp=E,0.4nm,0.8s,baz=137,slow=1.9,SNR=5.6						
ZALV	**Zalesovo Beam**	**145.02**	**27**	PKP	**PKPdf**	**15 45 47.1**	**+1.3**
	comp=E,4.5nm,0.6s,baz=309,slow=4.7,SNR=20						
MKAR	**Makanchi Array**	**148.32**	**39**	PKPbc	**PKiKP**	**15 45 56.5**	**-0.2**
	comp=E,1.8nm,0.7s,baz=316,slow=2.8,SNR=19						

JMA 31 15:31:22.4±0.2, 24°88N×123°30E, h22km, M1.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.49**	**212**	P	Pb	15 31 32.1	-0.3
YOJ				*eS*	Sb	15 31 38.6	-0.6
JYNG	**Yonagunijimaku**	**0.54**	**217**	P	Pb	15 31 33.0	-0.1
JYNG				S	Sb	15 31 40.0	-0.4
IRIF	**Iriomote-Funau**	**0.67**	**144**	P	Pb	15 31 35.1	-0.3
IRIF				S	Sb	15 31 44.4	+0.1
JKRS	**Kuro-shima**	**0.91**	**135**	P	Pb	15 31 39.3	-0.2
JIJ	**Ishigaki jima**	**0.92**	**124**	P	Pb	15 31 39.0	-0.7
JIJ				*eS*	Sb	15 31 51.4	-0.2
HATJ	**Hateruma jima**	**0.94**	**151**	P	Pb	15 31 39.7	-0.3
HATJ				*eS*	Sb	15 31 52.1	+0.1
JISG	**Ishigakijimahi**	**0.96**	**107**	P	Pb	15 31 39.8	-0.6

TAP 31 15:32:20.7, 24°32N×121°44E, h5km±1km, ML0.8, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.12**	**163**	P	Pg	15 32 23.0	-0.1
	baz=162						
ETLH				S	Sg	15 32 24.8	+0.1
	baz=162						
NNSB	**Datong**	**0.12**	**333**	P	Pg	15 32 23.1	-0.1
	baz=333						
NNSB				S	Sg	15 32 24.9	-0.1
	baz=333						
NNSH	**Datong**	**0.12**	**333**	*eP*	Pg	15 32 23.1	-0.2
	baz=333						
NNSH				*eS*	Sg	15 32 25.0	-0.1
	baz=333						
NNS	**Nan Shan**	**0.14**	**332**	P	Pg	15 32 23.4	-0.2
	baz=334						
NNS				S	Sg	15 32 25.6	+0.1
	baz=334						
NACB	**Ninganchiao**	**0.20**	**136**	*eP*	Pg	15 32 24.5	-0.1
	baz=136						
NACB				*eS*	Sg	15 32 27.4	+0.2
	baz=136						
WHF	**Hehuan Shan**	**0.24**	**224**	*eP*	Pg	15 32 24.9	-0.5
	baz=222						
WHF				*eS*	Sg	15 32 28.8	+0.2
	baz=222						
NDT	**Datong Townshi**	**0.29**	**12**	*eP*	Pg	15 32 26.4	0.0
	baz=12						
NDT				*eS*	Sg	15 32 30.5	+0.3
	baz=12						
YHNB	**Yeheng**	**0.36**	**350**	*eP*	Pg	15 32 28.4	+0.7
	baz=349						
YHNB				*eS*	Sg	15 32 32.3	-0.1
	baz=349						
NSK	**Sanguang**	**0.37**	**348**	*eP*	Pg	15 32 27.8	0.0
	baz=348						
NSK				*eS*	Sg	15 32 32.7	+0.1
	baz=348						

*IDC **31** 15:45:45.4±2.1, 14°27S×167°16E, h117km±17km, mb4.0/18, mb1 4.2/20, mb1mx4.2/31, mbtmp4.4/20, MS3.2/4, Ms1 3.2/4, ms1mx2.9/28, Error ellipse: s-maj=18.3km s-min=12.9km az=101.0*

*NEIC **31** 15:45:45.2±1.7, 14°19S±0°08×167°1E±0°1, h116km±6km, mb4.7/37, Error ellipse: s-maj=15.1km s-min=11.5km az=93.0*

ISC 31 15:45:43.5±0.4, 14°12S±0°05×167°24E±0°07, h100km, n117, σ1°37/123, mb4.6/38, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.94**	**185**	P	**Pn**	**15 47 36.1**	**-0.2**
	21nm,0.3s,baz=132,slow=23,SNR=179						
DZM				S	**Sn**	**15 49 12.4**	**+7.8**
	29nm,0.3s,baz=300,slow=21,SNR=8.3						
DZM				LR	LR	15 49 44.2	
	comp=Z,92nm,18.1s,baz=38,slow=31						
DZM	**Mont Dzumac**	**7.94**	**185**	Pn	**Pn**	**15 47 37.2**	**+0.8**
DZM					**Sn**	**15 49 04.0**	**-0.6**
HNR	**Honiara**	**8.53**	**302**	P	**Pn**	**15 47 45.9**	**+1.7**
	29nm,0.3s,baz=202,slow=7.4,SNR=9.5						
HNR				S	**Sn**	**15 49 20.9**	**+2.2**
	74nm,0.3s,baz=149,slow=23,SNR=9.5						
HNR				LR	LR	15 50 48.5	
	comp=Z,80nm,18.3s,baz=149,slow=36						
HNR	**Honiara**	**8.53**	**302**	*eP*	**Pn**	**15 47 45.0**	**+0.7**
HNR	**Honiara**	**8.53**	**302**	Pn	**Pn**	**15 47 44.9**	**+0.7**
EIDS	**Eidsvold**	**18.86**	**231**	P	**P**	**15 49 57.6**	**+1.7**
	baz=19,SNR=50						
EIDS	**Eidsvold**	**18.86**	**231**		**Pn**	**15 49 57.7**	**+0.2**
PMG	**Port Moresby**	**20.20**	**281**	P	**P**	**15 50 12.2**	**+1.7**
	12nm,0.8s,baz=194,slow=1.7,SNR=5.5						
PMG	**Port Moresby**	**20.20**	**281**	P	**P**	**15 50 10.0**	**-0.6**
CTA	**Charters Tower**	**20.91**	**251**	P	**P**	**15 50 18.3**	**+0.2**
	15nm,0.7s,baz=75,slow=12,SNR=23						
CTAO	**Charters Tower**	**20.91**	**251**	P	**P**	**15 50 18.6**	**+0.5**
CTAO				IAmb	IAmb	15 50 18.9	
	comp=Z,15nm,0.7s						
RMQ	**Roma**	**21.22**	**232**	P	**P**	**15 50 22.6**	**+1.2**
	baz=21,SNR=114						
ARMA	**Armidale**	**21.67**	**219**	P	**P**	**15 50 27.1**	**+0.8**
	baz=22,SNR=23						
ARMA	**Armidale**	**21.67**	**219**	P	**P**	**15 50 26.6**	**+0.3**
ARMA				IAmb	IAmb	15 50 28.1	
	comp=Z,29nm,0.8s						
OUZ	**Omahuta**	**21.77**	**166**	P	**P**	**15 50 31.4**	**+4.3**
MTSU	**Mount Surprise**	**22.37**	**257**	P	**P**	**15 50 33.6**	**-0.1**
	baz=22,SNR=40						
COEN	**Coen**	**23.34**	**267**	P	**P**	**15 50 42.4**	**-0.9**
	baz=23,SNR=11						
COEN	**Coen**	**23.34**	**267**	P	**P**	**15 50 43.2**	**-0.1**
COEN				IAmb	IAmb	15 50 45.4	
	comp=Z,20nm,0.9s						
MGCD	**Mangrove Creek**	**24.01**	**215**	P	**P**	**15 50 50.1**	**+1.1**
	baz=24,SNR=20						
QLP	**Quilpie**	**24.82**	**236**	P	**P**	**15 50 56.4**	**-0.1**
	baz=25,SNR=52						
HAZ	**Te Kaha**	**25.34**	**160**	P	**P**	**15 51 02.2**	**+1.2**
PKGZ	**Pakihiroa**	**25.55**	**160**	P	**P**	**15 51 05.4**	**+2.3**
URZ	**Urewera**	**25.58**	**162**	P	**P**	**15 51 03.5**	**+0.2**
PUZ	**Puketiti**	**25.78**	**160**	P	**P**	**15 51 06.2**	**+1.1**
MWZ	**Matawai**	**25.78**	**161**	P	**P**	**15 51 05.0**	**-0.2**
RAHZ	**Arahi**	**26.18**	**162**	P	**P**	**15 51 09.0**	**+0.3**
RIGZ	**Rimuhau**	**26.20**	**161**	P	**P**	**15 51 08.8**	**-0.1**
BKZ	**Black Stump Fm**	**26.25**	**164**	P	**P**	**15 51 09.8**	**+0.4**
BKZ	**Black Stump Fm**	**26.25**	**164**	P	**P**	**15 51 09.9**	**+0.6**
CMSA	**Cobar Meteorol**	**26.27**	**225**	P	**P**	**15 51 09.4**	**-0.2**
	baz=26,SNR=43						
YNG	**Young**	**26.34**	**217**	P	**P**	**15 51 10.8**	**+0.5**
	baz=26,SNR=9.1						
BHHZ	**Black Hill Sta**	**26.44**	**165**	P	**P**	**15 51 12.0**	**+0.9**
CNB	**Canberra Magne**	**26.54**	**214**	P	**P**	**15 51 12.3**	**+0.3**
	baz=26,SNR=8.1						
MCHZ	**McNeill Hill**	**26.56**	**163**	P	**P**	**15 51 12.9**	**+0.7**
CAN	**Canberra**	**26.74**	**215**	P	**P**	**15 51 13.2**	**-0.7**
KAHZ	**Kahuranaki**	**26.94**	**163**	P	**P**	**15 51 15.4**	**-0.2**
QIS	**Mount Isa**	**27.12**	**252**	P	**P**	**15 51 16.1**	**-1.2**
	baz=27,SNR=9.1						
STKA	**Stephens Creek**	**29.36**	**229**	P	**P**	**15 51 37.5**	**+0.3**
	baz=29,SNR=250						
STKA	**Stephens Creek**	**29.36**	**229**	P	**P**	**15 51 37.5**	**+0.3**
	comp=Z,36nm,0.4s,baz=51,slow=9.3,SNR=312						
STKA	**Stephens Creek**	**29.36**	**229**	P	**P**	**15 51 37.6**	**+0.4**
STKA				IAmb	IAmb	15 51 38.4	
	comp=Z,10nm,0.6s						
JCZ	**Jackson Bay**	**29.88**	**178**	P	**P**	**15 51 41.2**	**-0.4**
TOO	**Toolangi**	**30.32**	**216**	P	**P**	**15 51 45.9**	**+0.3**
	baz=30,SNR=10						
TOO	**Toolangi**	**30.32**	**216**	P	**P**	**15 51 45.8**	**+0.2**
TOO				IAmb	IAmb	15 51 46.3	
	comp=Z,16nm,0.7s						
SMPI	**Sarmi**	**30.66**	**291**	P	**P**	**15 51 49.9**	**+1.1**
	comp=Z,19nm,1.2s						
WB0	**Warramunga Arr**	**31.88**	**255**	P	**P**	**15 51 57.5**	**-2.0**
WB0				IAmb	IAmb	15 51 58.4	
	comp=Z,12nm,0.7s						
WB2	**Warramunga Arr**	**31.94**	**255**	P	**P**	**15 51 58.0**	**-2.0**
WRA	**Warramunga Arr**	**31.95**	**255**	P	**P**	**15 51 58.0**	**-2.1**
	comp=Z,5.7nm,0.6s,baz=86,slow=9.3,SNR=54						
WRA				ScP	**ScP**	**15 58 21.4**	**-1.5**
	comp=Z,1.1nm,0.9s,baz=82,slow=3.6,SNR=5.6						
ARPS	**Mount Arapiles**	**31.98**	**221**	P	**P**	**15 52 00.3**	**+0.1**
	baz=32,SNR=34						
HTT	**Hallett**	**32.09**	**228**	P	**P**	**15 52 01.4**	**+0.1**
	baz=32,SNR=37						
AS31	**Alice Springs**	**32.86**	**248**	P	**P**	**15 52 06.1**	**-2.0**
AS31				IAmb	IAmb	15 52 07.5	
	comp=Z,4.9nm,0.5s						
ASAR	**Alice Springs**	**32.86**	**248**	P	**P**	**15 52 06.2**	**-2.0**
	comp=Z,8.0nm,0.5s,baz=76,slow=9.3,SNR=311						
ASAR				ScP	**ScP**	**15 58 23.1**	**-2.8**
	comp=Z,1.3nm,0.9s,baz=99,slow=3.7,SNR=5.5						
MOO	**Moorlands**	**33.11**	**208**	P	**P**	**15 52 10.1**	**+0.1**
	baz=33,SNR=4.5						
TAU	**Tasmania Unive**	**33.42**	**207**	P	**P**	**15 52 12.6**	**-0.1**
TAU				IAmb	IAmb	15 52 20.7	
	comp=Z,10nm,1.1s						
KDU	**Kakadu**	**33.83**	**268**	P	**P**	**15 52 15.4**	**-1.2**
	baz=34,SNR=4.3						
BBOO	**Buckleboo**	**33.93**	**231**	P	**P**	**15 52 17.0**	**-0.2**
	baz=34,SNR=206						
BBOO	**Buckleboo**	**33.93**	**231**	P	**P**	**15 52 17.2**	**0.0**
MTN	**Manton Dam**	**35.11**	**268**	P	**P**	**15 52 27.3**	**-0.3**
	baz=35,SNR=8.1						
MTN	**Manton Dam**	**35.11**	**268**	P	**P**	**15 52 26.7**	**-1.0**
MTN				IAmb	IAmb	15 52 28.6	
	comp=Z,7.5nm,0.7s						
FAKI	**Fak Fak**	**36.29**	**285**	P	**P**	**15 52 37.6**	**-0.1**
FAKI				IAmb	IAmb	15 52 38.2	
	comp=Z,13nm,0.7s						
KNRA	**Kununurra**	**37.18**	**263**	P	**P**	**15 52 44.0**	**-1.3**
	baz=37,SNR=9.2						
KNRA	**Kununurra**	**37.18**	**263**	P	**P**	**15 52 44.1**	**-1.1**
WRKA	**Warakurna**	**38.14**	**247**	P	**P**	**15 52 51.7**	**-1.6**
	baz=38,SNR=75						
FORT	**Forrest**	**39.58**	**239**	P	**P**	**15 53 04.2**	**-1.0**
	baz=39,SNR=35						
FORT	**Forrest**	**39.58**	**239**	P	**P**	**15 53 03.7**	**-1.5**
FITZ	**Fitzroy Crossi**	**40.10**	**259**	P	**P**	**15 53 08.4**	**-1.2**
	baz=40,SNR=7.5						
FITZ	**Fitzroy Crossi**	**40.10**	**259**	P	**P**	**15 53 08.8**	**-0.9**
FITZ				IAmb	IAmb	15 53 09.4	
	comp=Z,7.8nm,0.8s						
SOEI	**Soe**	**42.22**	**271**	P	**P**	**15 53 26.0**	**-1.2**
SOEI				IAmb	IAmb	15 53 35.1	
	comp=Z,15nm,0.8s						
MMRI	**Maumere**	**44.40**	**272**	P	**P**	**15 53 44.3**	**-0.3**
EDFI	**Ende, Flores**	**44.91**	**272**	P	**P**	**15 53 49.6**	**+0.8**
	comp=Z,8.9nm,1.1s						
PSA00	**Pilbara Seismi**	**45.58**	**254**	P	**P**	**15 53 53.3**	**-0.5**
PSA00				IAmb	IAmb	15 53 54.1	
	comp=Z,19nm,0.9s						
MEEK	**Meekatharra**	**46.99**	**247**	P	**P**	**15 54 04.1**	**-0.9**
	baz=47,SNR=26						
KLBR	**Kellerberrin**	**48.37**	**240**	P	**P**	**15 54 13.8**	**-1.7**
	baz=48,SNR=14						
MPSI	**Mapaga**	**49.01**	**283**	P	**P**	**15 54 20.5**	**-0.1**
	comp=Z,14nm,0.8s						
NWAO	**Narrogin (SRO)**	**49.03**	**239**	P	**P**	**15 54 19.1**	**-1.4**
	baz=49,SNR=17						
NWAO	**Narrogin (SRO)**	**49.03**	**239**	P	**P**	**15 54 18.8**	**-1.8**
NWAO	**Narrogin (SRO)**	**49.03**	**239**	P	**P**	**15 54 19.2**	**-1.3**
NWAO				IAmb	IAmb	15 54 19.5	
	comp=Z,17nm,0.6s						
BLDU	**Ballidu**	**49.12**	**242**	P	**P**	**15 54 19.7**	**-1.5**
	baz=49,SNR=4.9						
MORW	**Morawa**	**49.50**	**244**	P	**P**	**15 54 23.0**	**-1.2**
	baz=49,SNR=9.5						
MORW	**Morawa**	**49.50**	**244**	P	**P**	**15 54 23.2**	**-1.0**
MORW				IAmb	IAmb	15 54 23.9	
	comp=Z,16nm,0.7s						
MUN	**Mundaring**	**49.73**	**240**	P	**P**	**15 54 24.7**	**-1.2**
	baz=49,SNR=4.2						
GIRL	**Giralia**	**50.79**	**252**	P	**P**	**15 54 34.0**	**+0.1**
	baz=50,SNR=5.3						
GIRL	**Giralia**	**50.79**	**252**	P	**P**	**15 54 33.6**	**-0.4**
KKM	**Kota Kinabalu**	**54.44**	**288**	P	**P**	**15 55 00.4**	**-0.7**
KKM				IAmb	IAmb	15 55 01.6	
	comp=Z,8.0nm,0.9s						
MJAR	**Matsushiro Arr**	**57.36**	**332**	P	**P**	**15 55 21.3**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=162,slow=7.0,SNR=14						
MAJO	**Matsushiro**	**57.36**	**332**	P	**P**	**15 55 20.0**	**-1.4**
MAJO				IAmb	IAmb	15 55 22.8	
	comp=Z,6.2nm,1.1s						
MJB9	**Matsu-Tunnel**	**57.36**	**332**	P	**P**	**15 55 19.9**	**-1.5**
MJB9				IAmb	IAmb	15 55 30.5	
	comp=Z,2.9nm,0.5s						
MDSI	**Maura Dua**	**62.80**	**272**	P	**P**	**15 55 57.7**	**-1.4**
	comp=Z,10nm,0.7s						
KSRS	**Korea Array**	**63.23**	**326**	P	**P**	**15 56 02.9**	**+1.5**
	comp=Z,2.1nm,0.9s,baz=144,slow=7.7,SNR=12						
VNDA	**Vanda**	**63.46**	**181**	P	**P**	**15 56 02.1**	**-0.3**
	comp=Z,2.4nm,0.7s,baz=358,slow=8.2,SNR=20						
VNDA	**Vanda**	**63.46**	**181**	P	**P**	**15 56 01.9**	**-0.5**
CASY	**Casey**	**64.07**	**202**	P	**P**	**15 56 05.9**	**-0.7**
USRK	**Ussuriysk Ar.**	**66.33**	**333**	P	**P**	**15 56 23.4**	**+2.0**
	comp=Z,2.8nm,0.8s,baz=104,slow=6.1,SNR=2.6						
PETK	**Petropavlovsk-**	**67.46**	**354**	P	**P**	**15 56 29.8**	**+1.4**
	comp=Z,11nm,0.7s,baz=152,slow=9.4,SNR=21						
MA2	**Magadan**	**74.65**	**351**	P	**P**	**15 57 11.7**	**+0.1**
MA2				IAmb	IAmb	15 57 13.2	
	comp=Z,11nm,1.0s						
CMAR	**Chiang Mai Arr**	**74.68**	**294**	P	**P**	**15 57 13.4**	**+0.7**
	comp=Z,2.5nm,0.7s,baz=127,slow=4.6,SNR=24						
CMAR				pP	**pP**	**15 57 40.5**	**+2.8**
	comp=Z,3.6nm,0.9s,baz=117,slow=4.4,SNR=7.5						
CHGN	**Chignik**	**75.81**	**19**	P	**P**	**15 57 18.7**	**+0.4**
CHGN				IAmb	IAmb	15 57 25.7	
	comp=Z,29nm,1.2s						
QSPA	**South Pole Qui**	**75.90**	**180**	P	**P**	**15 57 18.4**	**-0.7**
YAK	**Yakutsk**	**81.44**	**343**	P	**P**	**15 57 50.0**	**+0.9**
SONM	**Songino Array**	**81.99**	**324**	P	**P**	**15 57 52.4**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=144,slow=5.2,SNR=13						
MAW	**Mawson**	**82.43**	**202**	P	**P**	**15 57 54.0**	**-0.4**
	baz=82,SNR=15						
MAW	**Mawson**	**82.43**	**202**	P	**P**	**15 57 52.6**	**-1.7**
	comp=Z,4.2nm,0.7s,baz=126,slow=5.5,SNR=14						
MAW	**Mawson**	**82.43**	**202**	P	**P**	**15 57 54.1**	**-0.3**
ILAR	**Eielson Array**	**85.96**	**18**	P	**P**	**15 58 12.3**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=234,slow=5.5,SNR=11						
ILAR				LR	LR	16 31 40.6	
	comp=Z,20nm,19.9s,baz=186,slow=32						
NVAR	**Mina Array Bea**	**86.90**	**49**	P	**P**	**15 58 18.4**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=258,slow=4.5,SNR=2.6						
NVAR				LR	LR	16 29 54.2	
	comp=Z,18nm,19.3s,baz=320,slow=30						
TIXI	**Tiksi**	**89.37**	**349**	P	**P**	**15 58 28.8**	**+0.4**
SNAA	**Sanae**	**94.15**	**183**	P	**P**	**15 58 48.5**	**-2.2**
VNA3	**Neumayer Olymp**	**94.82**	**181**	P	**P**	**15 58 51.7**	**-2.0**
TXAR	**Lajitas Array**	**96.02**	**61**	P	**P**	**15 59 01.3**	**+1.2**
	comp=Z,0.2nm,0.7s,baz=205,slow=4.0,SNR=1.6						
MKAR	**Makanchi Array**	**96.75**	**316**	P	**P**	**15 59 02.2**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=82,slow=6.3,SNR=18						
ZALV	**Zalesovo Beam**	**96.89**	**324**	P	**P**	**15 59 02.2**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=123,slow=5.5,SNR=4.5						
YKA	**Yellowknife Ar**	**97.03**	**27**	P	**P**	**15 59 04.6**	**+0.9**
	comp=Z,0.2nm,0.7s,baz=250,slow=4.6,SNR=1.9						
ARCES	**ARCESS Array B**	**119.66**	**345**	PKP	**PKPdf**	**16 04 20.8**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=92,slow=2.3,SNR=13						
FINES	**FINESS Array B**	**125.15**	**338**	PKP	**PKPdf**	**16 04 31.1**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=43,slow=2.2,SNR=15						
GERES	**GERESS Array B**	**139.09**	**333**	PKP	**PKPdf**	**16 04 59.4**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=49,slow=3.3,SNR=5.6						
KEST	**Kesra**	**150.72**	**321**	PKPbc	**PKPbc**	**16 05 24.5**	**-0.2**
	comp=Z,4.8nm,0.8s,baz=213,slow=3.2,SNR=7.4						
ESDC	**Sonseca Array**	**153.40**	**345**	PKPbc	**PKPbc**	**16 05 29.0**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=4.1,slow=4.5,SNR=1.7						
TORD	**Torodi Ar. Bea**	**165.91**	**268**	PKPab	**PKPab**	**16 06 37.1**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=94,slow=5.5,SNR=5.2						

*IDC **31** 15:59:37.2±1.5, 30°68S×178°75W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.4/23, mbtmp3.4/2, Error ellipse: s-maj=65.8km s-min=41.8km az=169.0*

*WEL **31** 16:00:22.7±0.6, 32°S±5°×17°7W±1°3, h224km±10km, M4.5/18, mB4.9/10, MLv5.0/18, Mw(mB)4.2/10*

ISC 31 16:00:16.4±0.9, 31°02S±0°09×179°2W±0°2, h350km, n77, σ18°81/77, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.08**	**33**	P	Pn	16 01 15.8	+7.4
GLKZ				S	**S**	**16 01 50.8**	**+0.9**
RIZ	**Raoul Island**	**2.09**	**32**	P	Pn	16 01 15.9	+7.5
RIZ				S	**S**	**16 01 49.1**	**-1.0**
MXZ	**Matakaoa Point**	**6.84**	**197**	P	Pn	16 02 01.5	+4.7
MXZ				S	**S**	**16 03 15.8**	**-2.6**
WMGZ	**Waiomatatini S**	**7.06**	**196**	P	**Pn**	**16 02 03.2**	**+3.8**
WMGZ				S	**S**	**16 03 22.5**	**-0.6**
KUZ	**Kuaotunu**	**7.10**	**215**	P	Pn	16 02 07.0	+7.2
HAZ	**Te Kaha**	**7.16**	**200**	P	**Pn**	**16 02 03.5**	**+2.9**
HAZ				S	**S**	**16 03 22.8**	**-2.5**
PKGZ	**Pakihiroa**	**7.21**	**197**	P	**Pn**	**16 02 03.9**	**+2.7**
PKGZ				S	**S**	**16 03 23.2**	**-3.2**
PUZ	**Puketiti**	**7.34**	**196**	P	**Pn**	**16 02 03.4**	**+0.7**
PUZ				S	**S**	**16 03 26.8**	**-2.3**
RUGZ	**Raukumara Rang**	**7.39**	**200**	P	**Pn**	**16 02 04.7**	**+1.3**
RUGZ				S	**S**	**16 03 26.8**	**-3.6**
OPRZ	**Ohinepanea**	**7.65**	**206**	P	Pn	16 02 11.1	+4.7
CNGZ	**Carnagh Statio**	**7.74**	**195**	P	**Pn**	**16 02 10.9**	**+3.6**
MWZ	**Matawai**	**7.77**	**199**	P	**Pn**	**16 02 08.3**	**+0.5**
TKGZ	**Te Karaka**	**7.79**	**197**	P	**Pn**	**16 02 08.0**	**+0.1**
URZ	**Urewera**	**7.83**	**202**	P	**Pn**	**16 02 08.1**	**-0.3**
KMRZ	**Kaimai**	**7.90**	**209**	P	Pn	16 02 16.0	+6.7
KARZ	**Kaharoa**	**7.93**	**207**	P	Pn	16 02 15.3	+5.7
RAGZ	**Rawiri**	**7.96**	**200**	P	**P**	**16 02 13.9**	**+3.8**
TARZ	**Mount Tarawera**	**8.02**	**205**	P	**P**	**16 02 16.6**	**+2.8**
RIGZ	**Rimuhau**	**8.06**	**197**	P	**P**	**16 02 12.9**	**-1.3**
RRRZ	**Republican Roa**	**8.11**	**205**	P	**P**	**16 02 16.8**	**+2.1**
MUGZ	**Murupara**	**8.14**	**203**	P	**P**	**16 02 13.5**	**-1.6**
RTZ	**Ruatahuna**	**8.20**	**201**	P	**P**	**16 02 15.2**	**-0.5**
HRRZ	**Handcock Road**	**8.23**	**206**	P	**P**	**16 02 18.5**	**+2.4**
PRGZ	**Paritu Road**	**8.24**	**196**	P	**P**	**16 02 17.9**	**+1.7**
SNGZ	**Shannon Statio**	**8.24**	**199

JMA 31 16:15:42.3±0.2, 24°.83N×123°.31E, h27km, M2.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.46**	**217**	P	Pb	16 15 51.6	-0.3
YOJ				*e*S	Sb	16 15 57.9	-0.5
JYNG	**Yonagunijimaku**	**0.50**	**221**	P	Pb	16 15 52.5	-0.1
JYNG				*e*S	Sb	16 15 59.1	-0.5
IRIF	**Iriomote-Funau**	**0.62**	**142**	P	Pb	16 15 54.3	-0.4
IRIF				S	Sb	16 16 03.1	+0.1
JKRS	**Kuro-shima**	**0.87**	**133**	P	Pn	16 15 58.4	-0.3
JKRS				*e*S	Sb	16 16 09.5	-0.5
JIJ	**Ishigaki jima**	**0.89**	**121**	P	Pn	16 15 58.3	-0.7
JIJ				S	Sb	16 16 09.7	-0.9
HATJ	**Hateruma jima**	**0.89**	**150**	P	Pn	16 15 58.8	-0.3
JISG	**Ishigakijimahi**	**0.94**	**105**	P	Pn	16 15 59.0	-0.7
JISG				S	Sb	16 16 11.3	-0.8
JTJ	**Tarama**	**1.28**	**98**	*e*S	Sn	16 16 20.3	-0.4

TAP 31 16:16:36.5, 23°.98N×121°.67E, h18±1km, ML1.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=263	**0.06**	**265**	*e*P	Pg	16 16 40.8	+1.0
TWD	**Chiawan** baz=327	**0.12**	**324**	*e*P	Pg	16 16 40.9	+0.4
TWD	baz=327			*e*S	Sg	16 16 44.0	+0.9
NACB	**Ninganchiao** baz=339	**0.20**	**339**	*e*P	Pg	16 16 42.1	+0.6
NACB	baz=339			*e*S	Sg	16 16 45.8	+0.9
ESL	**Shilin** baz=231	**0.28**	**233**	P	Pg	16 16 42.7	0.0
ESL	baz=231			*e*S	Sb	16 16 47.8	+0.7
ETLH	**Xiulin Townshi** baz=322	**0.28**	**322**	*e*P	Pb	16 16 43.2	+0.2
ETLH	baz=322			*e*S	Sb	16 16 48.2	+0.7
EGFH	**Guangfu** baz=215	**0.38**	**216**	*e*P	Pb	16 16 45.0	+0.1
EGFH	baz=215			*e*S	Sb	16 16 51.6	+1.2
WHF	**Hehuan Shan** baz=293	**0.41**	**294**	P	Pb	16 16 45.7	+0.2
WHF	baz=293			S	Sb	16 16 52.0	+0.5
ENA	**Nanau** baz=8.0	**0.45**	**8**	*e*P	Pb	16 16 46.2	+0.3
ENA	baz=8.0			*e*S	Sb	16 16 53.3	+1.0
CHGB	**Renai** baz=279	**0.46**	**280**	*e*P	Pb	16 16 46.6	+0.3
CHGB	baz=279			*e*S	Sb	16 16 53.7	+0.8
NNSB	**Datong** baz=329	**0.52**	**329**	*e*P	Pb	16 16 47.6	+0.5
NNSB	baz=329			*e*S	Sb	16 16 55.3	+1.0
NNSH	**Datong** baz=329	**0.52**	**329**	*e*P	Pb	16 16 47.5	+0.4
NNSH	baz=329			*e*S	Sb	16 16 55.2	+0.9
NNS	**Nan Shan** baz=329	**0.53**	**329**	*e*P	Pb	16 16 47.6	+0.3
NNS	baz=329			*e*S	Sb	16 16 55.7	+1.0

IDC 31 16:21:02.9±1.3, 17°.21N×46°.34W, h0km, mb3.6/5, mb1 3.9/5, mb1mx3.6/30, mbtmp3.6/5, MS3.2/9, Ms1 3.2/9, ms1mx3.0/35, Error ellipse: s-maj=36.3km s-min=34.6km az=16.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDP	**Montagnes des** comp=Z,77nm,20.5s,baz=52,slow=31	**13.53**	**208**	LR	LR	16 28 02.3	
SJG	**San Juan** comp=Z,71nm,21.8s,baz=116,slow=32	**18.90**	**276**	LR	LR	16 31 10.6	
PTGA	**Pitinga** comp=Z,93nm,19.7s,baz=350,slow=34	**22.32**	**218**	LR	LR	16 33 46.7	
RCBR	**Riachuelo** comp=Z,21nm,20.1s,baz=311,slow=28	**25.11**	**155**	LR	LR	16 32 32.8	
ROSC	**El Rosal** comp=Z,92nm,21.4s,baz=187,slow=34	**30.04**	**249**	LR	LR	16 38 16.6	
LPAZ	**La Paz** 1.0nm,0.7s,baz=21,slow=14,SNR=3.9	**39.62**	**214**	P	P	16 28 37.5	+0.3
H10N3	**ASCENSION HYDR** baz=308,slow=75	**40.12**	**126**	T	T	17 11 22.8	
H10N2	**ASCENSION HYDR** baz=308,slow=75	**40.13**	**126**	T	T	17 11 34.0	
H10N1	**ASCENSION HYDR** baz=308,slow=75	**40.14**	**126**	T	T	17 11 24.3	
H10S3	**ASCENSION HYDR**	**40.70**	**127**	T	T	17 12 02.7	
H10S2	**ASCENSION HYDR**	**40.71**	**127**	T	T	17 12 02.7	
TORD	**Torodi Ar. Bea** 1.0nm,1.1s,baz=280,slow=8.6,SNR=2.2	**46.44**	**88**	P	P	16 29 31.3	-0.7
TORD	comp=Z,77nm,19.5s,baz=190,slow=34			LR	LR	16 47 01.2	
TXAR	**Lajitas Array** 0.3nm,0.8s,baz=116,slow=8.7,SNR=4.3	**53.57**	**294**	P	P	16 30 25.0	-1.2
TXAR	comp=Z,17nm,21.9s,baz=0.0,slow=34			LR	LR	16 51 39.7	
GERES	**GERESS Array B** comp=Z,29nm,18.4s,baz=294,slow=33	**57.58**	**43**	LR	LR	16 52 51.6	
PDAR	**Pinedale Array** comp=Z,17nm,20.9s,baz=96,slow=34	**58.93**	**310**	LR	LR	16 54 02.9	
YKA	**Yellowknife Ar** 0.2nm,0.6s,baz=104,slow=6.4,SNR=1.9	**64.86**	**332**	P	P	16 31 43.2	-0.4
ILAR	**Eielson Array** 0.8nm,0.8s,baz=84,slow=4.4,SNR=5.6	**79.01**	**335**	P	P	16 33 09.8	+1.2

*DSN **31** 16:53:26.5±1.3, 27°.06N×53°.94E, h12km, ML4.2/8, Error ellipse: s-maj=21.1km s-min=4.9km az=7.0*
*TEH **31** 16:53:29.2, 26°.78N×53°.92E, h23km, ML4.1*
*MOS **31** 16:53:29.2±1.1, 26°.58N×53°.90E, h40km, mb4.4/7, Error ellipse: s-maj=11.7km s-min=7.1km az=95.3*
*NEIC **31** 16:53:30.7±1.6, 26°.60N±0°.03×53°.88E±0°.08, h38km±7km, Error ellipse: s-maj=10.4km s-min=4.6km az=83.0*
*IDC **31** 16:53:31.7±1.8, 26°.62N×53°.95E, h47km±20km, mb3.8/20, mb1 4.0/26, mb1mx3.8/42, mbtmp4.1/26, ML3.8/6, MS2.9/4, Ms1 2.9/4, ms1mx2.6/38, Error ellipse: s-maj=16.0km s-min=11.7km az=23.0*
*OMAN **31** 16:53:32.0±1.9, 26°.69N×54°.15E, h10km±40km, ml3.9/17, Error ellipse: s-maj=18.5km s-min=16.3km az=48.0*

ISC 31 16:53:29.5±1.9, 26°.80N±0°.04×53°.94E±0°.05, h20km±9km, n131, σ1ᵎ51/145, mb4.2/37, MS2.8/3, 2C-1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.88**	**308**	*e*Pg	**Pg**	**16 53 45.9**	**-0.7**
LMD1				*e*		16 54 10.5	
LAR1	**LAR**	**0.95**	**24**	*e*Pg	**Pb**	**16 53 48.3**	**+1.0**
LAR1				*e*		16 54 13.6	
JHRM	**Jahrom**	**1.73**	**349**	*e*Pg	**Pn**	**16 54 00.4**	**+1.9**
GENO	**Geno**	**2.08**	**73**	*e*Pn	**Pn**	**16 54 04.3**	**+0.9**
GENO				*e*		16 54 44.5	
JRN	**Qarnain Island**	**2.10**	**208**	*e*Pn	**Pn**	**16 54 03.4**	**-0.1**
SHME	**Shamm** SNR=20	**2.11**	**110**	*e*P	**Pn**	**16 54 03.4**	**-0.3**
SHME				S	**Sn**	**16 54 30.3**	**+0.8**
SHME	**Shamm**	**2.11**	**110**	*e*Pn	**Pn**	**16 54 02.9**	**-0.8**
BANOM	**Banah** SNR=64	**2.29**	**112**	*e*P	**Pn**	**16 54 06.1**	**-0.1**
BANOM	**Banah** SNR=15	**2.29**	**112**	P	**Pn**	**16 54 06.3**	**+0.1**
BANOM				S	**Sn**	**16 54 33.2**	**-0.7**
BANOM	**Banah**	**2.29**	**112**	*e*Pn	**Pn**	**16 54 06.3**	**+0.1**
NAZ	**Nazwa, Dubai** SNR=9.0	**2.38**	**139**	*e*P	**Pn**	**16 54 08.1**	**+0.7**
NAZ	**Nazwa, Dubai** SNR=24	**2.38**	**139**	P	**Pn**	**16 54 09.3**	**+1.9**
NAZ				S	**Sn**	**16 54 39.4**	**+3.3**
NAZ	**Nazwa, Dubai**	**2.38**	**139**	*e*Pn	**Pn**	**16 54 09.1**	**+1.7**
IBND	**Bandar-abas**	**2.40**	**74**	*e*Pn	**Pn**	**16 54 09.1**	**+1.4**
IBND				*e*		16 55 15.2	
AJN	**Ajban**	**2.42**	**157**	P	**Pn**	**16 54 09.8**	**+1.8**
	SNR=9.8						
AJN				S	**Sn**	**16 54 40.3**	**+3.2**
AJN	**Ajban**	**2.42**	**157**	*e*Pn	**Pn**	**16 54 09.7**	**+1.8**
MSFE	**Esma-Masafi** SNR=13	**2.46**	**125**	*e*P	**Pn**	**16 54 08.7**	**+0.2**
MSFE	**Esma-Masafi**	**2.46**	**125**	*e*Pn	**Pn**	**16 54 09.2**	**+0.7**
FAQ	**Al Faqa, Dubai** SNR=9.4	**2.53**	**144**	*e*P	**Pn**	**16 54 10.3**	**+0.8**
FAQ	**Al Faqa, Dubai** SNR=12	**2.53**	**144**	P	**Pn**	**16 54 11.1**	**+1.6**
FAQ	**Al Faqa, Dubai**	**2.53**	**144**	*e*Pn	**Pn**	**16 54 10.9**	**+1.4**
MDH	**Madha** SNR=9.6	**2.59**	**125**	*e*P	**Pn**	**16 54 11.1**	**+0.7**
MDH	**Madha** SNR=14	**2.59**	**125**	P	**Pn**	**16 54 11.8**	**+1.4**
MDH				S	**Sn**	**16 54 42.2**	**+0.9**
MDH	**Madha**	**2.59**	**125**	*e*Pn	**Pn**	**16 54 10.9**	**+0.5**
UOSS	**Minazif** SNR=34	**2.75**	**132**	*e*P	**Pn**	**16 54 13.1**	**+0.6**
UOSS	SNR=20			*e*P	**Pn**	**16 54 13.1**	**+0.6**
UOSS	**Minazif**	**2.75**	**132**	P	**Pn**	**16 54 13.2**	**+0.6**
UOSS	**Minazif**	**2.75**	**132**	*e*Pn	**Pn**	**16 54 12.9**	**+0.4**
UOSS	**Minazif**	**2.75**	**132**	Pn	**Pn**	**16 54 13.0**	**+0.4**
HATD	**Hatta, Dubai** SNR=22	**2.79**	**134**	*e*P	**Pn**	**16 54 14.0**	**+0.9**
HATD	**Hatta, Dubai** SNR=22	**2.79**	**134**	P	**Pn**	**16 54 14.2**	**+1.1**
HATD	**Hatta, Dubai**	**2.79**	**134**	*e*Pn	**Pn**	**16 54 14.4**	**+1.4**
ASHO	**Ashiyiah** SNR=53	**2.84**	**137**	*i* P	**Pn**	**16 54 15.0**	**+1.1**
ASHO	**Ashiyiah** SNR=31	**2.84**	**137**	P	**Pn**	**16 54 14.9**	**+1.1**
ASHO	**Ashiyiah**	**2.84**	**137**	*e*Pn	**Pn**	**16 54 14.9**	**+1.1**
MZWR	**Madinat Zayed**	**3.03**	**181**	*e*Pn	**Pn**	**16 54 17.4**	**+1.1**
ALNE	**Al Ain** SNR=6.9	**3.19**	**149**	*i* P	**Pn**	**16 54 19.7**	**+1.2**
ALNE	**Al Ain**	**3.19**	**149**	*e*Pn	**Pn**	**16 54 20.0**	**+1.5**
KHNJ	**Kahnooj**	**3.54**	**70**	*e*Pn	**Pn**	**16 54 24.3**	**+1.0**
SOHO	**SOHO** SNR=29	**3.54**	**138**	P	**Pn**	**16 54 24.1**	**+0.8**
SOHO	**SOHO**	**3.54**	**138**	*e*Pn	**Pn**	**16 54 24.2**	**+0.8**
NGRK	**Negar Kerman**	**3.75**	**40**	*e*Pn	**Pn**	**16 54 27.8**	**+1.2**
NGRK				*e*		16 54 32.9	
TVBK	**TV Kerman**	**4.03**	**37**	*e*	**Pb**	**16 54 37.2**	**-2.8**
ARQ	**Araqi** SNR=68	**4.17**	**145**	P	**Pn**	**16 54 32.9**	**+0.8**
ARQ				S	**Sn**	**16 55 22.5**	**+2.3**
KHGB	**Koh Gabri**	**4.20**	**31**	*e*Pn	**Pn**	**16 54 35.1**	**+2.4**
UMZA	**Um Al Zommool**	**4.22**	**165**	*e*Pn	**Pn**	**16 54 33.3**	**+0.6**
CHMN	**Cheshme madani**	**4.40**	**45**	*e*Pn	**Pn**	**16 54 38.7**	**+3.2**
CHMN				*e*		16 54 39.8	
HOQ	**Hoqain**	**4.43**	**136**	P	**Pn**	**16 54 36.7**	**+1.1**
HOQ				S	**Sn**	**16 55 26.5**	**-0.1**
IMEH	**Mehriz**	**4.61**	**7**	*e*Pn	**Pn**	**16 54 40.4**	**+2.1**
KLNJ	**Kolanjah**	**4.67**	**334**	*e*Pn	**Pn**	**16 54 39.4**	**+0.2**
BIDO	**Bidbid**	**5.00**	**130**	P	**Pn**	**16 54 43.8**	**+0.3**
BIDO				S	**Sn**	**16 55 41.1**	**+0.3**
BIDO	**Bidbid**	**5.00**	**130**	*e*Pn	**Pn**	**16 54 43.8**	**+0.3**
BSY	**Bisya**	**5.01**	**143**	P	**Pn**	**16 54 44.5**	**+0.9**
BSY				S	**Sn**	**16 55 41.5**	**+0.5**
ISAD	**Sadrabad**	**5.10**	**358**	*e*Pn	**Pn**	**16 54 47.2**	**+2.1**
SMDO	**Samad**	**5.27**	**134**	P	**Pn**	**16 54 48.0**	**+0.7**
SMDO	SNR=24			P	**Pn**	**16 54 48.0**	**+0.7**
SMDO				S	**Sn**	**16 55 48.9**	**+1.3**
WSAR	**Wadi Sarin** 4.3nm,0.3s,baz=321,slow=8.3,SNR=75	**5.54**	**129**	P	**Pn**	**16 54 50.8**	**-0.1**
WSAR	5.2nm,0.3s,baz=102,slow=21,SNR=9.9			S	**Sn**	**16 55 50.9**	**-3.1**
WSAR	comp=Z,135nm,21.6s,baz=324,slow=43			LR	LR	16 57 26.3	
WSAR	**Wadi Sarin**	**5.54**	**129**	P	**Pn**	**16 54 51.0**	**+0.1**
WSAR				S	**Sn**	**16 55 51.2**	**-2.9**
IGAR	**Gharneh**	**5.82**	**344**	*e*Pn	**Pn**	**16 54 56.0**	**+1.1**
JHBN	**Jahan bin**	**6.12**	**333**	*e*Pn	**Pn**	**16 55 01.3**	**+2.2**
WBK	**Wadi Bani Khal** SNR=49	**6.19**	**131**	P	**Pn**	**16 54 59.8**	**-0.1**
WBK				S	**Sn**	**16 56 09.7**	**-0.4**
ANAR	**Anarak**	**6.37**	**358**	*e*Pn	**Pn**	**16 55 03.0**	**+0.6**
AFRZ	**Afriz**	**7.93**	**32**	*e*Pn	**Pn**	**16 55 25.9**	**+2.1**
RAYN	**Ar Rayn** SNR=6.8	**8.31**	**249**	*i* P	**Pn**	**16 55 27.2**	**-1.8**
RAYN	**Ar Rayn**	**8.31**	**249**	P	**Pn**	**16 55 27.4**	**-1.6**
RAYN	**Ar Rayn**	**8.31**	**249**	Pn	**Pn**	**16 55 27.4**	**-1.6**
HSAM	**Samen**	**8.70**	**329**	*e*Pn	**Pn**	**16 55 33.3**	**-1.2**
IDHR	**Dehrash**	**10.20**	**322**	*e*Pn	**Pn**	**16 55 55.0**	**0.0**
GEYT	**Alibeck** 0.4nm,0.3s,baz=170,slow=8.8,SNR=2.2	**11.64**	**17**	P	**Pn**	**16 56 18.7**	**+4.2**
EIL	**Elat** 0.1nm,0.3s,baz=142,slow=12,SNR=2.1	**16.98**	**284**	P	**Pn**	**16 57 26.5**	**+0.6**
MMAI	**Mount Meron Ar** 0.6nm,0.3s,baz=93,slow=13,SNR=2.5	**17.21**	**295**	P	**Pn**	**16 57 30.1**	**+1.2**
ZEI	**Tsey**	**17.93**	**335**	*e*P	**P**	**16 57 42.5**	**+4.2**
ZEI	comp=Z,10.0nm,0.9s			pmax	pmax		
GAR	**Garm**	**18.32**	**44**	P	**Pn**	**16 57 40.3**	**-2.3**
GAR	comp=Z,6.6nm,0.7s			IAmb	IAmb	16 57 47.4	
NCK	**Nalchik**	**18.65**	**336**	*i* P	**Pn**	**16 57 48.5**	**+2.0**
NEY	**Neytrino**	**18.77**	**334**	*i* P	**P**	**16 57 48.5**	**+0.9**
KBZ	**Khabaz** comp=Z,0.3nm,0.3s,baz=116,slow=9.9,SNR=6.8	**19.11**	**335**	P	**Pn**	**16 57 53.1**	**+1.1**
KVAR	**Kislovodsk Arr** baz=267,slow=23,SNR=5.5	**19.38**	**335**	P	**Pn**	**16 57 56.5**	**+1.2**
KIV	**Kislovodsk**	**19.39**	**335**	*d* iP	**Pn**	**16 57 56.4**	**+1.0**
KIV				*e*S	**Sn**	**17 01 29.3**	**-3.0**
KIV	comp=Z,11nm,1.0s			pmax	pmax		
KIV	comp=Z,30nm,19.0s			MLR	MLR		
BRTR	**Keskin Array B** comp=Z,3.7nm,0.8s,baz=132,slow=14,SNR=13	**21.25**	**312**	P	**P**	**16 58 15.1**	**+0.5**
BRTR	comp=Z,25nm,19.5s,baz=124,slow=40			LR	LR	17 07 56.5	
KSH	**Kashi**	**22.31**	**50**	P	**P**	**16 58 23.0**	**-3.0**
KSH				pP	pP	16 58 25.0	-6.6
KSH	comp=Z,27nm,1.4s			pmax	pmax		
KSH	comp=Z,34nm,5.0s			pmax	pmax		
AAK	**Ala-Archa** comp=Z,1.7nm,0.4s,baz=201,slow=9.0,SNR=7.9	**23.04**	**41**	P	**P**	**16 58 35.1**	**+1.5**
AAK	comp=Z,35nm,19.4s,baz=214,slow=39			LR	LR	17 08 45.2	
AAK	**Ala-Archa**	**23.04**	**41**	*ce*P	**P**	**16 58 35.4**	**+1.8**
AAK	comp=Z,6.0nm,1.7s			pmax	pmax		
AAK	**Ala-Archa**	**23.04**	**41**	P	**P**	**16 58 36.3**	**+2.7**
AAK	comp=Z,2.1nm,0.7s			IAmb	IAmb	16 58 37.7	
AKTO	**Aktyubinsk** comp=Z,3.1nm,0.5s,baz=183,slow=8.0,SNR=6.6	**23.80**	**6**	P	**P**	**16 58 41.9**	**+1.0**
AKTO	comp=Z,30nm,18.5s,baz=201,slow=40			LR	LR	17 09 27.1	
VRH	**Novokhopyorsk**	**26.08**	**342**	*e*P	**P**	**16 59 02.7**	**+1.1**
VRH	comp=Z,10.0nm,0.6s			pmax	pmax		
VORD	**Divnogorie**	**26.59**	**339**	*e*P	**P**	**16 59 08.2**	**+2.0**
VORD	comp=Z,10.0nm,1.1s			pmax	pmax		
LPSR	**Galich'ya Gora**	**28.12**	**340**	*e*P	**P**	**16 59 22.8**	**+2.8**
LPSR	comp=Z,10.0nm,1.4s			pmax	pmax		
BRVK	**Borovoye**	**28.92**	**21**	*i* P	**P**	**16 59 29.3**	**+2.2**
BRVK	comp=Z,2.0nm,0.9s			pmax	pmax		
BVAR	**Borovoye Array** comp=Z,1.3nm,0.4s,baz=206,slow=7.2,SNR=12	**28.93**	**21**	P	**P**	**16 59 27.0**	**-0.1**
MLR	**Muntele Rosu** comp=Z,3.2nm,0.8s,baz=332,slow=18,SNR=2.5	**29.08**	**317**	P	**P**	**16 59 30.7**	**+1.9**
ARU	**Arti**	**29.79**	**5**	P	P	16 59 50.3	+16
MAKZ	**Makanchi** comp=Z,3.0nm,1.0s	**29.79**	**41**	P	**P**	**16 59 35.0**	**0.0**
MAKZ				pmax	pmax		
MAKZ	**Makanchi**	**29.79**	**41**	P	**P**	**16 59 35.0**	**0.0**
MAKZ	comp=Z,2.7nm,1.0s			IAmb	IAmb	16 59 39.8	
MK31	**Makanchi Array**	**29.97**	**41**	P	**P**	**16 59 36.8**	**+0.3**
MK31	comp=Z,2.0nm,1.1s			pmax	pmax		
MK31	**Makanchi Array**	**29.97**	**41**	P	**P**	**16 59 36.8**	**+0.3**
MK31	comp=Z,1.5nm,1.1s			IAmb	IAmb	16 59 37.8	
MKAR	**Makanchi Array**	**29.97**	**41**	P	**P**	**16 59 36.8**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=228,slow=11,SNR=12						
KURK	**Kurchatov**	**30.40**	**32**	*i* P	**P**	**16 59 42.3**	**+2.1**
KURK	comp=Z,1.0nm,0.5s			pmax	pmax		
KURK	**Kurchatov**	**30.40**	**32**	P	**P**	**16 59 41.7**	**+1.5**
KURK	comp=Z,1.5nm,0.8s			IAmb	IAmb	16 59 43.5	
AKASG	**Malin Array Be** comp=Z,1.8nm,0.5s,baz=135,slow=8.0,SNR=6.0	**30.41**	**328**	P	**P**	**16 59 39.5**	**-0.8**
BUR08	**Bucovina Ar. S**	**30.65**	**320**	P	**P**	**16 59 43.2**	**+0.6**
KIRV	**Kirov**	**31.92**	**356**	*e*P	**P**	**16 59 53.7**	**+0.2**
DGZ	**Jazzator, Alta**	**34.40**	**39**	*i* P	**P**	**17 00 16.2**	**+0.7**
ZALV	**Zalesovo Beam** comp=Z,10nm,0.5s,baz=234,slow=10,SNR=36	**35.39**	**32**	P	**P**	**17 00 23.8**	**0.0**
KLMR	**Klimovskoe**	**35.43**	**348**	*e*P	**P**	**17 00 21.1**	**-2.9**
KLMR	comp=Z,4.0nm,0.7s			pmax	pmax		
KLMR	**Klimovskoe**	**35.43**	**348**	*e*P	**P**	**17 00 21.1**	**-2.9**
KLMR				AMP		17 00 26.6	
CHVC	**Chvalec**	**37.32**	**320**	*e*P	**P**	**17 00 42.6**	**+2.2**
PRU	**Pruhonice**	**37.97**	**318**	*e*P	**P**	**17 00 47.9**	**+2.1**
PRU	**Pruhonice**	**37.97**	**318**	*e*P	**P**	**17 00 47.9**	**+2.1**
GERES	**GERESS Array B** comp=Z,0.2nm,0.4s,baz=106,slow=6.6,SNR=0.9	**38.06**	**316**	P	**P**	**17 00 45.7**	**-0.9**
KHC	**Kasperske Hory**	**38.23**	**317**	*e*P	**P**	**17 00 47.8**	**-0.3**
KHC	**Kasperske Hory**	**38.23**	**317**	*e*P	**P**	**17 00 47.8**	**-0.3**
WTTA	**Wattenberg** comp=Z,6.6nm,0.6s	**38.87**	**313**	*e*P	**P**	**17 00 52.9**	**-0.7**
SQTA	**Sankt Quirin** comp=Z,8.4nm,0.6s	**39.13**	**313**	*e*P	**P**	**17 00 54.7**	**-1.1**
MOTA	**Moosalm** comp=Z,4.6nm,0.8s	**39.24**	**313**	*e*P	**P**	**17 00 55.3**	**-1.4**
FINES	**FINESS Array B** comp=Z,2.7nm,0.3s,baz=146,slow=9.1,SNR=25	**39.38**	**339**	P	**P**	**17 00 56.9**	**-0.5**
FINES	**FINESS Array B**	**39.38**	**339**	*i* P	**P**	**17 00 59.9**	**+2.5**
FINES	comp=Z,3.0nm,0.3s			pmax	pmax		
CLL	**Collm** comp=Z,3.0nm,0.7s	**39.38**	**320**	*e*pP	pP	17 01 02.0	-1.8
FETA	**Feichten** comp=Z,4.4nm,0.6s	**39.40**	**312**	*e*P	**P**	**17 00 56.7**	**-1.3**
RETA	**Reutte** comp=Z,2.8nm,0.5s	**39.50**	**313**	*e*P	**P**	**17 00 57.6**	**-1.2**
DAVA	**Damuels** comp=Z,7.1nm,0.5s	**40.02**	**313**	*e*P	**P**	**17 01 02.4**	**-0.9**
GTA	**Gaotai**	**40.03**	**60**	*e*P	**P**	**17 01 04.5**	**+1.1**
GTA				pP	sP	17 01 14.0	+2.0
GTA				sP	pP	17 01 18.0	+8.4
GTA	comp=Z,4.0nm,0.8s			pmax	pmax		
NB2	**NORSAR Subarra** comp=Z,1.4nm,0.6s,baz=118,slow=8.6	**44.66**	**332**	P	**P**	**17 01 39.9**	**-0.7**
NOA	**NORSAR Array B** comp=Z,2.4nm,0.7s,baz=120,slow=8.1,SNR=13	**44.66**	**332**	P	**P**	**17 01 39.6**	**-1.0**
SONM	**Songino Array** comp=Z,0.8nm,0.6s,baz=263,slow=7.9,SNR=4.9	**45.70**	**48**	P	**P**	**17 01 48.8**	**-0.5**
ARCES	**ARCESS Array B** comp=Z,1.8nm,0.6s,baz=145,slow=8.4,SNR=21	**45.87**	**347**	P	**P**	**17 01 50.5**	**+0.3**
NRIK	**Noril'sk** comp=Z,2.9nm,0.8s,baz=243,slow=4.5,SNR=2.9	**46.88**	**16**	P	**P**	**17 01 58.2**	**+0.1**
ESDC	**Sonseca Array** comp=Z,0.6nm,0.9s,baz=64,slow=8.2,SNR=3.2	**49.33**	**300**	P	**P**	**17 02 16.7**	**-0.8**
TORD	**Torodi Ar. Bea** comp=Z,1.6nm,0.5s,baz=61,slow=7.5,SNR=19	**50.62**	**265**	P	**P**	**17 02 26.1**	**-1.4**
DBIC	**Dimbokro** comp=Z,5.4nm,0.7s,baz=32,slow=6.0,SNR=5.2	**59.22**	**261**	P	**P**	**17 03 28.9**	**-0.9**
KSRS	**Korea Array** comp=Z,1.0nm,0.6s,baz=277,slow=6.6,SNR=9.4	**62.10**	**60**	P	**P**	**17 03 48.3**	**-0.8**
YKA	**Yellowknife Ar** comp=Z,0.5nm,0.5s,baz=7.2,slow=4.4,SNR=10	**90.54**	**355**	P	**P**	**17 06 29.8**	**0.0**
ASAR	**Alice Springs** comp=Z,0.5nm,0.7s,baz=310,slow=4.3,SNR=9.5	**92.07**	**115**	P	**P**	**17 06 36.1**	**-1.6**
TXAR	**Lajitas Array** comp=Z,0.2nm,0.8s,baz=80,slow=1.0,SNR=2.3	**120.20**	**337**	PKP	**PKPdf**	**17 12 18.4**	**-1.3**

JMA 31 16:58:20.4±0.2, 24°.85N×123°.31E, h24km, M2.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.47**	**215**	P	Pb	16 58 29.8	-0.3
YOJ				*e*S	Sb	16 58 35.9	-0.8
JYNG	**Yonagunijimaku**	**0.52**	**220**	P	Pb	16 58 30.7	-0.2
JYNG				S	Sb	16 58 38.0	0.0
IRIF	**Iriomote-Funau**	**0.64**	**143**	P	Pb	16 58 32.7	-0.2
IRIF				S	Sb	16 58 41.4	-0.1
JKRS	**Kuro-shima**	**0.88**	**134**	P	Pb	16 58 36.7	-0.3
JKRS				S	Sb	16 58 48.2	-0.2
JIJ	**Ishigaki jima**	**0.90**	**122**	P	Pb	16 58 36.6	-0.7
JIJ				S	Sb	16 58 47.8	-1.1
HATJ	**Hateruma jima**	**0.91**	**150**	P	Pb	16 58 37.3	-0.2
HATJ				*e*S	Sb	16 58 48.8	-0.4
JISG	**Ishigakijimahi**	**0.95**	**106**	P	Pb	16 58 37.3	-0.8
JTJ	**Tarama**	**1.28**	**99**	P	Pn	16 58 43.2	+0.4

TAP 31 16:58:37.4, 24°.71N×122°.06E, h47km±1km, ML2.2, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao** baz=240	**0.21**	**242**	*e*P	Pn	16 58 45.3	-0.2
TWC	baz=240			*e*S	Sn	16 58 51.1	-0.1
ILA	**Ilan** baz=280	**0.28**	**281**	*e*P	Pn	16 58 45.8	-0.3
ILA	baz=280			*e*S	Sn	16 58 52.6	+0.4
TWB1	**Santiao Chiao** baz=349	**0.30**	**348**	*e*P	Pn	16 58 46.1	-0.1
TWB1	baz=349			*e*S	Sn	16 58 52.9	+0.4
TIPB	**Shuangxi** baz=321	**0.33**	**321**	*e*P	Pn	16 58 44.7	-1.9
TIPB	baz=321			*e*S	Sn	16 58 52.4	-0.8
TWE	**Neicheng** baz=271	**0.35**	**272**	P	Pn	16 58 46.7	-0.1
TWE	baz=271			S	Sn	16 58 53.1	-0.2
ENA	**Nanau** baz=224	**0.40**	**225**	*e*P	Pn	16 58 46.8	-0.5
ENA	baz=224			*e*S	Sn	16 58 54.0	-0.3
NDT	**Datong Townshi** baz=257	**0.51**	**258**	*e*P	Pn	16 58 48.6	+0.1
NDT	baz=257			*e*S	Sn	16 58 56.3	-0.2
NWLT	**Wulai** baz=277	**0.51**	**278**	*e*P	Pn	16 58 48.8	+0.2
NWLT	baz=277			*e*S	Sn	16 58 56.1	-0.5
NHDH	**Xindian Distri** baz=297	**0.54**	**298**	*e*P	Pn	16 58 48.3	-0

TWD	**Chiawan**	**0.76**	**214**	*eP*	Pn	16 58 54.5 +2.7
	baz=213					
TWD				*eS*	Sn	16 59 03.0 +0.9
	baz=213					
WHF	**Hehuan Shan**	**0.91**	**232**	*eP*	Pn	16 58 54.0 -0.3
	baz=231					
WHF				*eS*	Sn	16 59 06.3 -0.3
	baz=231					
PCYT	**Pengchaiyu**	**0.92**	**1**	*eP*	Pn	16 58 54.2 +0.3
	baz=1.0					
PCYT				*eS*	Sn	16 59 07.0 +1.0
	baz=1.0					
NSTT	**Nanjuang**	**0.96**	**265**	*eP*	Pn	16 58 54.3 -0.2
	baz=265					
NSTT				*eS*	Sn	16 59 05.6 -1.5
	baz=265					
CHGB	**Renai**	**1.03**	**231**	*eP*	Pn	16 58 56.2 +0.5
	baz=231					
CHGB				*eS*	Sn	16 59 09.6 +0.4
	baz=231					
ESL	**Shilin**	**1.06**	**213**	*eP*	Pn	16 58 56.1 +0.2
	baz=212					
ESL				*eS*	Sn	16 59 11.3 +1.8
	baz=212					
DPDB	**Guoxing**	**1.23**	**237**	*eP*	Pn	16 58 58.9 +0.7
	baz=236					
DPDB				*eS*	Sn	16 59 14.5 +0.8
	baz=236					
VWDT	**VWDT**	**1.27**	**221**	*eP*	Pn	16 58 57.7 -1.0
	baz=221					
SMLT	**Sun Moon Lake**	**1.34**	**232**	*eP*	Pn	16 59 00.5 +0.7
	baz=231					
SMLT				*eS*	Sn	16 59 16.5 0.0
	baz=231					
HGSD	**Ruisui**	**1.34**	**206**	*eP*	Pn	16 58 59.7 -0.1
	baz=205					
SSLB	**Suanglung**	**1.36**	**228**	*eP*	Pn	16 59 01.7 +1.7
	baz=227					
SSLB				*eS*	Sn	16 59 16.5 -0.4
	baz=227					
YULB	**Yu-li**	**1.48**	**208**	*eP*	Pn	16 59 00.7 -1.0
	baz=207					
WHYT	**Xinyi Township**	**1.49**	**228**	*eP*	Pn	16 59 02.0 +0.2
	baz=227					
TWF1	**Yuli**	**1.52**	**207**	*eP*	Pn	16 59 02.4 +0.2
	baz=206					
YUS	**Yu-Shan**	**1.58**	**220**	*eP*	Pn	16 59 02.0 -1.4
	baz=219					
ALS	**Alishan**	**1.65**	**224**	*eP*	Pn	16 59 04.0 -0.2
	baz=223					
FULB	**Fuli**	**1.66**	**205**	*eP*	Pn	16 59 02.2 -1.9
	baz=204					
CHN5	**Tsauling**	**1.68**	**229**	*eP*	Pn	16 59 05.4 +1.0
	baz=228					
ELDTW	**Lidau**	**1.79**	**212**	*eP*	Pn	16 59 04.7 -1.2
	baz=211					
TPUB	**Ta-pu**	**1.92**	**223**	*eP*	Pn	16 59 07.8 +0.2
	baz=222					
STYT	**Tauyuan**	**1.95**	**218**	*eP*	Pn	16 59 07.9 -0.1
	baz=217					
WTP	**Ta-pu**	**1.97**	**222**	*eP*	Pn	16 59 08.4 +0.1
	baz=221					
TWK	**Hsinying**	**2.03**	**225**	*eP*	Pn	16 59 09.7 +0.5
	baz=224					
CHN1	**Nanshi**	**2.06**	**223**	*eP*	Pn	16 59 10.1 +0.5
	baz=222					
SGST	**Jiashian**	**2.11**	**220**	*eP*	Pn	16 59 09.4 -0.8
	baz=219					
SLGT	**Liugui**	**2.14**	**217**	P	Pn	16 59 09.9 -0.8
	baz=217					
ECL	**Taimali**	**2.33**	**206**	*eP*	Pn	16 59 12.3 -1.0
	baz=205					
SSD	**Sandimen**	**2.35**	**214**	*eP*	Pn	16 59 12.4 -1.2
	baz=213					
MASBT	**Mashibuluo**	**2.46**	**212**	*eP*	Pn	16 59 13.9 -1.2
	baz=211					
EAST	**Anshuo**	**2.57**	**206**	*eP*	Pn	16 59 14.8 -1.8
	baz=205					

*UCR **31** 16:59:35.9±1.7, 12°.51N×87°.78W, h60$^{km}_{\pm 28}$, ML4.3, MW4.3*
*SNET **31** 16:59:35.7±0.9, 12°.44N×87°.95W, h18$^{km}_{\pm 8}$, ML4.3*
*INET **31** 16:59:37.3, 12°.51N×87°.73W, h33^{km}, ML3.7*

ISC 31 16:59:36.3±1.4, 12°.5N±0°.1×87°.77W±0°.07, h63$^{km}_{\pm 26}$, n43, σ0^{s}69/55, 6D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.72**	**77**	*eP*	**Pn**	**16 59 51.4**	**+0.4**
CNCH	**Conchagua**	**0.74**	**355**	⇓*eP*	**Pn**	**16 59 51.1**	**-0.3**
CNCH				*eS*	**Sn**	**17 00 03.9**	**+1.4**
CNCH				IAML		17 00 06.2	
	comp=Z,377μm,0.1s						
CNCH	**Conchagua**	**0.74**	**355**	⇓*eP*	**Pn**	**16 59 51.1**	**-0.3**
CNCH				*eS*	**Sn**	**17 00 03.9**	**+1.4**
CNCH				IAML		17 00 06.2	
	comp=Z,377μm,0.1s						
LCND	**La Caada**	**0.78**	**351**	⇓*iP*	**Pn**	**16 59 51.5**	**-0.2**
LCND				*eS*	**Sn**	**17 00 03.8**	**+0.7**
LCND				IAML		17 00 05.5	
	comp=Z,4μm,0.2s						
LCND	**La Caada**	**0.78**	**351**	⇓*iP*	**Pn**	**16 59 51.5**	**-0.2**
LCND				*eS*	**Sn**	**17 00 03.8**	**+0.7**
LCND				IAML		17 00 05.5	
	comp=Z,4μm,0.2s						
JUCU	**Jucuarįn**	**0.86**	**327**	*eP*	**Pn**	**16 59 51.9**	**-0.9**
JUCU				*eS*	**Sn**	**17 00 04.0**	**-0.9**
JUCU				IAML		17 00 07.8	
	comp=Z,3μm,0.2s						
JUCU	**Jucuarįn**	**0.86**	**327**	*eP*	**Pn**	**16 59 51.9**	**-0.9**
JUCU				*eS*	**Sn**	**17 00 04.0**	**-0.9**
JUCU				IAML		17 00 07.8	
	comp=Z,3μm,0.2s						
BLLM	**Bellamira**	**1.01**	**333**	*eP*	**Pn**	**16 59 54.5**	**-0.2**
BLLM	**Bellamira**	**1.01**	**333**	*eP*	**Pn**	**16 59 54.5**	**-0.2**
LCY	**Lacayo**	**1.02**	**330**	*eP*	**Pn**	**16 59 54.7**	**-0.3**
LCY	**Lacayo**	**1.02**	**330**	*eP*	**Pn**	**16 59 54.7**	**-0.3**
CNGN	**Cerro Negro**	**1.04**	**92**	*eP*	**Pn**	**16 59 53.4**	**-1.7**
PACA	**Pacayal**	**1.08**	**330**	*eP*	**Pn**	**16 59 55.3**	**-0.3**
PACA				*eS*	**Sn**	**17 00 10.2**	**+0.3**
PACA	**Pacayal**	**1.08**	**330**	*eP*	**Pn**	**16 59 55.3**	**-0.3**
PACA				*eS*	**Sn**	**17 00 10.2**	**+0.3**
ALJI	**Alcalda de J**	**1.11**	**315**	*eP*	**Pn**	**16 59 55.2**	**-0.8**
ALJI				IAML		17 00 12.5	
	comp=Z,2μm,0.3s						
ALJI	**Alcalda de J**	**1.11**	**315**	*eP*	**Pn**	**16 59 55.2**	**-0.8**
ALJI				IAML		17 00 12.5	
	comp=Z,2μm,0.3s						
TECA	**Tecapa**	**1.20**	**323**	*eP*	**Pn**	**16 59 56.8**	**-0.4**
TECA	**Tecapa**	**1.20**	**323**	*eP*	**Pn**	**16 59 56.8**	**-0.4**
FAGO	**Alcalda de S**	**1.20**	**344**	⇓*iP*	**Pn**	**16 59 56.9**	**-0.2**
FAGO	**Alcalda de S**	**1.20**	**344**	⇓*iP*	**Pn**	**16 59 56.9**	**-0.2**
COEB	**Comit de Eme**	**1.22**	**322**	*eP*	**Pn**	**16 59 57.0**	**-0.4**
COEB	**Comit de Eme**	**1.22**	**322**	*eP*	**Pn**	**16 59 57.0**	**-0.4**
LFRS	**El Faro**	**1.66**	**311**	*iP*	**Pn**	**17 00 03.0**	**-0.4**
LFRS	**El Faro**	**1.66**	**311**	*iP*	**Pn**	**17 00 03.0**	**-0.4**
LBRS	**Las Brisas**	**1.73**	**314**	*eP*	**Pn**	**17 00 04.6**	**+0.3**
LBRS	**Las Brisas**	**1.73**	**314**	*eP*	**Pn**	**17 00 04.6**	**+0.3**
MATN	**Matagalpa**	**1.84**	**77**	*eP*	**Pn**	**17 00 05.5**	**-0.3**
BOQS	**Boqueron**	**1.90**	**309**	*eP*	**Pn**	**17 00 06.4**	**-0.3**
BOQS	**Boqueron**	**1.90**	**309**	*eP*	**Pn**	**17 00 06.4**	**-0.3**
CEVE	**Cerro Verde**	**2.22**	**306**	*eP*	**Pn**	**17 00 11.2**	**+0.1**
CEVE	**Cerro Verde**	**2.22**	**306**	*eP*	**Pn**	**17 00 11.2**	**+0.1**
SBLS	**San Blas**	**2.23**	**306**	*eP*	**Pn**	**17 00 11.2**	**+0.1**
SBLS	**San Blas**	**2.23**	**306**	*eP*	**Pn**	**17 00 11.2**	**+0.1**
ACON	**Acoyapa**	**2.59**	**102**	*eP*	**Pn**	**17 00 15.4**	**-0.5**
GB1A	**Borinquen Arri**	**2.88**	**126**	*eP*	**Pn**	**17 00 19.6**	**-0.3**
NY14	**Universidad de**	**2.88**	**130**	*eP*	**Pn**	**17 00 21.8**	**+2.0**
NY14				*eS*	**Sn**	**17 00 53.0**	**-0.3**
LAPC	**Finca la Perla**	**2.88**	**127**	*eP*	**Pn**	**17 00 19.9**	**0.0**
LAPC				*eS*	**Sn**	**17 00 52.6**	**-0.8**
BUAI	**Buenos Aires**	**2.90**	**124**	*eP*	**Pn**	**17 00 21.4**	**+1.4**
BUAI				*eS*	**Sn**	**17 00 53.2**	**-0.6**
LIM1	**Limonal**	**3.06**	**126**	*eP*	**Pn**	**17 00 22.7**	**+0.3**
COLC	**Colonia**	**3.12**	**126**	*eP*	**Pn**	**17 00 23.2**	**0.0**
GUAI	**GUAI**	**3.15**	**135**	*eP*	**Pn**	**17 00 23.8**	**+0.2**
CUI	**Cuipilapa**	**3.16**	**126**	*eP*	**Pn**	**17 00 23.9**	**+0.3**
CUI				*eS*	**Sn**	**17 00 59.5**	**-0.7**
PLVR	**Palo Verde**	**3.21**	**132**	*eP*	**Pn**	**17 00 25.8**	**+1.3**

NNC 31 17:12:21.4±4.9, 37°.35N×80°.03E, h0^{km}, mb3.7, mpv3.4, 2C-2D, Error ellipse: s-maj=56.9km s-min=35.3km az=83.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PDGK	**Podgornoye**	**5.99**	**356**	⇑*P*	Pn	17 13 51.7	+0.2
	1.2nm,0.4s						
PDGK				⇑*S*	Sn	17 15 03.1	+2.2
	16nm,0.6s						
MDOK	**Medeo**	**6.24**	**340**	*Pg*	*Pb*	17 14 13.7	+2.6
	2.8nm,0.5s						
MDOK				⇓*Lg*	*Lg*	17 15 38.5	
	13nm,0.7s						
MK31	**Makanchi Array**	**9.59**	**9**	⇓*P*	Pn	17 14 41.0	+0.3
	0.5nm,0.5s,baz=186,slow=14,SNR=11						
MK31				*S*	Sn	17 16 28.7	-0.4
	2.1nm,0.6s,baz=192,slow=26,SNR=8.7						

MAN 31 17:13:09.8, 9°.35N×126°.83E, h9^{km}, mb4.7, ML3.6, MS3.5, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.39**	**288**	⇓*eP*	Pn	17 13 34.6	-0.8
SCPH				*eS*	Sn	17 13 54.1	+0.3
MSLP	**Maasin**	**2.09**	**292**	*eP*	Pn	17 13 45.6	+0.6
MSLP				*eS*	Sb	17 14 14.2	+0.2
BUKP	**Musuan**	**2.28**	**230**	*eP*	Pn	17 13 47.7	0.0
BUKP				*eS*	Sn	17 14 16.7	+0.8
KCP	**Kidapawan**	**2.90**	**217**	⇑*eP*	Pb	17 14 01.4	-0.3
KCP				*i S*	Sb	17 14 35.2	-2.1
CTBH	**Cotabato--PC H**	**3.32**	**231**	⇑*iP*	Pn	17 14 03.1	+1.2
CNP	**Catarman**	**3.79**	**326**	*eP*	Pn	17 14 09.2	+0.7

IDC 31 17:17:08.2±1.6, 6°.12S×129°.19E, h0^{km}, mb3.8/2, mb1 3.7/5, mb1mx3.4/32, mbtmp3.6/5, ML3.4/3, Error ellipse: s-maj=77.1km s-min=24.4km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.40**	**196**	*P*	Pn	17 20 05.5	-0.6
	0.2nm,0.3s,baz=24,slow=12,SNR=15						
FITZ				*S*	Sn	17 22 00.9	-24
	0.3nm,0.3s,baz=127,slow=20,SNR=7.5						
WRA	**Warramunga Arr**	**14.62**	**160**	*Pn*	Pn	17 20 35.1	-1.5
	0.2nm,0.3s,baz=340,slow=13,SNR=7.6						
WRA				*S*	Sn	17 22 56.0	-24
	0.5nm,0.3s,baz=332,slow=22,SNR=10.0						
ASAR	**Alice Springs**	**18.03**	**166**	*P*	Pn	17 21 20.5	+0.1
	0.1nm,0.3s,baz=343,slow=9.8,SNR=19						
ASAR				*S*	Sn	17 24 19.4	-23
	0.1nm,0.3s,baz=341,slow=23,SNR=6.3						
STKA	**Stephens Creek**	**28.13**	**157**	*P*	P	17 23 02.7	+0.6
	0.5nm,0.5s,baz=333,slow=9.0,SNR=3.7						
MKAR	**Makanchi Array**	**67.05**	**327**	*P*	P	17 28 03.3	-0.1
	0.5nm,0.5s,baz=129,slow=7.9,SNR=7.7						

MAN 31 17:18:49.4, 9°.50N×126°.82E, h31^{km}, mb4.4, ML3.2, MS3.0, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.34**	**282**	⇓*eP*	Pn	17 19 11.2	-0.8
SCPH				*eS*	Sn	17 19 28.5	-0.3
MSLP	**Maasin**	**2.03**	**288**	*eP*	Pn	17 19 22.4	+0.9
MSLP				*eS*	Sn	17 19 47.2	+1.3
BUKP	**Musuan**	**2.37**	**227**	*eP*	Pn	17 19 26.6	+0.5
BUKP				*eS*	Sn	17 19 55.5	+1.4
DMPH	**Davao City--Mi**	**2.73**	**209**	⇑*eP*	Pb	17 19 38.6	+1.1
DMPH				*eS*	Sn	17 19 58.9	-4.0
LLP	**Lapu-Lapu**	**2.93**	**286**	*eP*	Pn	17 19 36.3	+2.5
LLP				*eS*	Sn	17 20 10.8	+2.9
KCP	**Kidapawan**	**3.00**	**215**	⇑*iP*	Pn	17 19 37.5	+2.5
KCP				*i* S	Sn	17 20 11.2	+1.2
CTBH	**Cotabato--PC H**	**3.41**	**229**	⇓*iP*	Pn	17 19 41.2	+0.8
DDMP	**Don Marcelino,**	**3.54**	**198**	*eP*	Pn	17 19 44.3	+2.0
DDMP				*eS*	Sn	17 20 24.1	+0.9
CNP	**Catarman**	**3.67**	**325**	*eP*	Pn	17 19 45.7	+1.7
CNP				*eS*	Sn	17 20 27.5	+1.3
RCP	**Roxas**	**4.50**	**297**	⇓*eP*	Pn	17 19 57.2	+1.8

*IDC **31** 17:31:43.3±0.5, 16°.35N×95°.62E, h0^{km}, mb4.3/33, mb1 4.4/35, mb1mx4.3/48, mbtmp4.3/35, ML3.8/2, MS3.5/8, Ms1 3.5/8, ms1mx3.2/39, Error ellipse: s-maj=14.5km s-min=11.5km az=32.0*
*NDI **31** 17:31:45.7±3.7, 16°.45N×95°.87E, h10^{km}, mb4.9, mb4.7(NEIC)*
*NEIC **31** 17:31:47.3±1.8, 16°.52N±0°.07×95°.68E±0°.08, h22$^{km}_{\pm 4}$, mb4.7/76, Error ellipse: s-maj=11.1km s-min=9.6km az=118.0*

ISC 31 17:31:45.8±0.3, 16°.52N±0°.04×95°.63E±0°.04, h10^{km}, n182, σ1^{s}45/187, mb4.6/83, MS3.7/12, 1C, Near south coast of Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MHMT	**Maesarieng**	**2.75**	**53**	*Pg*	**Pb**	**17 32 36.7**	**+1.6**
MHMT				*Pn*	**Pn**	**17 32 29.0**	**-0.9**
MHMT				*Sg*	**Sg**	**17 33 15.5**	**+1.4**
CM05	**Chiang Mai Arr**	**3.68**	**59**	*Pg*	**Pb**	**17 32 54.5**	**+3.6**
CM05				*Pn*	**Pn**	**17 32 41.7**	**-1.1**
CM02	**Chiang Mai Arr**	**3.69**	**58**	*Pg*	**Pb**	**17 32 55.1**	**+3.9**
CM02				*Pn*	**Pn**	**17 32 41.3**	**-1.7**
CM01	**Chiang Mai Arr**	**3.70**	**59**	*Pg*	**Pb**	**17 32 54.9**	**+3.6**
CM01				*Pn*	**Pn**	**17 32 41.2**	**-1.9**
CM31	**Chiang Mai Arr**	**3.70**	**58**		Pn	17 32 38.9	-4.2
CMAR	**Chiang Mai Arr**	**3.70**	**58**	*Pn*	**Pn**	**17 32 41.3**	**-1.9**
	2.0nm,0.3s,baz=242,slow=15,SNR=43						
CMAR				*Pg*	**Pb**	**17 32 52.6**	**+1.3**
	14nm,0.3s,baz=237,slow=19,SNR=158						
CMAR				*Lg*	*Lg*	17 33 42.4	
	13nm,0.3s,baz=237,slow=31,SNR=5.9						
CMAR				*LR*	LR	17 34 24.1	
	comp=Z,647nm,19.6s,baz=228,slow=42						
CM04	**Chiang Mai Arr**	**3.70**	**59**	*Pg*	**Pb**	**17 32 54.5**	**+3.1**
CM04				*Pn*	**Pn**	**17 32 42.4**	**-0.8**
CM09	**Chiang Mai Arr**	**3.74**	**59**	*Pn*	**Pb**	**17 32 55.5**	**+3.6**
CHTO	**Chiang Mai**	**3.90**	**54**	*Pn*	**Pn**	**17 32 44.4**	**-1.5**
CMMT	**Chiang Mai**	**3.90**	**54**	*Pg*	**Pb**	**17 32 58.8**	**+4.0**
CMMT				*Pn*	**Pn**	**17 32 44.9**	**-1.0**
DGPR	**DIGLIPUR**	**4.22**	**219**	*eP*	**Pn**	**17 32 50.0**	**-0.3**
DGPR				*eS*	**Sn**	**17 33 39.3**	**-0.4**
LAMP	**Lampang**	**4.31**	**62**	*Pg*	**Pb**	**17 33 06.1**	**+4.5**
LAMP				*Pn*	**Pn**	**17 32 50.3**	**-1.2**
UTTA	**Uttaradit**	**4.86**	**75**	*Pg*	**Pg**	**17 33 18.2**	**-0.8**
UTTA				*Pn*	**Pn**	**17 32 56.9**	**-2.2**
PAYA	**Payao**	**4.93**	**54**	*Pg*	Pb	17 33 18.5	+6.2
PAYA				*Pn*	**Pn**	**17 32 58.9**	**-1.1**
PBA	**Port Blair**	**5.59**	**210**	*Pn*	Pn	17 33 08.5	-0.5
KOHI	**KOHIMA**	**9.27**	**351**	*eP*	**Pn**	**17 34 01.4**	**+1.7**
KOHI				*eS*	**Sn**	**17 35 47.4**	**+3.3**
SHL	**Shillong**	**9.66**	**339**	*eP*	**Pn**	**17 34 04.8**	**-0.3**
SHL				*eS*	**Sn**	**17 35 51.8**	**-2.0**
SHL	**Shillong**	**9.66**	**339**	*Pn*	Pn	17 34 03.4	-1.7
BWNR	**Bhubaneshwar**	**10.05**	**293**	*eP*	**Pn**	**17 34 10.9**	**+0.6**
BWNR				*eS*	**Sn**	**17 35 59.0**	**-4.3**
KMI	**Kunming**	**10.84**	**37**	*P*	Pn	17 34 32.0	+11
KMI				*sP*		17 34 46.3	
KMI				*pmax*	*pmax*		
	comp=Z,11nm,0.9s						
KMI				*pmax*	*pmax*		
	comp=Z,96nm,6.5s						
KMI				*LR*	LR		
	comp=N,1μm,13.1s						
KMI				*LR*	LR		
	comp=E,2μm,11.5s						
KMI				*LR*	LR		
	comp=Z,1μm,11.2s						
ZIRO	**ZIRO**	**11.08**	**352**	*eP*	**Pn**	**17 34 24.7**	**+0.1**
ZIRO				*eS*	**Sn**	**17 36 29.1**	**+0.4**
BOK	**Bokaro**	**11.66**	**310**	*eP*	**Pn**	**17 34 34.4**	**+2.0**
BOK				IAmb	IAmb	17 34 36.9	
	comp=Z,27nm,0.3s						
BOK				*eS*	Sn	17 36 37.1	-5.7
ODAN	**Odare**	**12.82**	**325**	*eP*	**Pn**	**17 34 47.4**	**-1.1**
	comp=Z,129nm,0.4s						
TAPN	**Taplejung**	**13.04**	**327**	*eP*	**Pn**	**17 34 50.9**	**-0.6**
	comp=Z,38nm,0.3s						
RAMN	**Ramite**	**13.34**	**323**	*eP*	**Pn**	**17 34 54.5**	**-1.1**
	comp=Z,44nm,0.4s						
LSA	**Lhasa**	**13.75**	**343**	*Pn*	Pn	17 34 58.9	-2.4
QIZ	**Qiongzhong**	**13.77**	**77**	*P*	**Pn**	**17 35 00.5**	**-0.7**
QIZ				*S*	**Sn**	**17 37 31.8**	**-2.5**
QIZ				*LR*	LR		
	comp=N,350nm,11.8s						
QIZ				*LR*	LR		
	comp=E,310nm,16.7s						
QIZ				*LR*	LR		
	comp=Z,290nm,13.2s						
PSI	**Prapat**	**14.01**	**166**	*Pn*	**Pn**	**17 35 03.0**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=360,slow=17,SNR=1.4						
PSI				*LR*	LR	17 39 58.6	
	comp=Z,212nm,19.8s,baz=272,slow=36						
RPSI	**Rantau Prapat**	**14.11**	**166**	*Pn*	**Pn**	**17 35 08.9**	**+2.9**
RPSI	**Rantau Prapat**	**14.11**	**166**		Pn	17 35 03.0	-2.9
JIRN	**Jiri**	**14.12**	**323**	*eP*	**Pn**	**17 35 05.2**	**-1.1**
	comp=Z,63nm,0.3s						
GYA	**Guiyang**	**14.25**	**44**	*eP*	**Pn**	**17 35 12.5**	**+4.6**
GYA				*pP*	P	17 35 22.8	+7.5
GYA				*PP*	PnPn	17 35 30.0	+14
GYA				*S*	Sn	17 37 57.5	+11
GYA				*SS*	**S**	**17 38 07.5**	**+0.6**
GYA				*pmax*	*pmax*		
	comp=Z,10.0nm,0.8s						
GYA				*pmax*	*pmax*		
	comp=Z,60nm,3.5s						
GYA				*LR*	LR		
	comp=N,150nm,4.2s						
GYA				*LR*	LR		
	comp=E,280nm,7.4s						
GYA				*LR*	LR		
	comp=Z,270nm,7.8s						
GUN	**Gumba**	**14.48**	**323**	*eP*	**Pn**	**17 35 10.2**	**-1.1**
	comp=Z,46nm,0.4s						
PKI	**Pulchoki**	**14.51**	**321**	*eP*	**Pn**	**17 35 10.5**	**-1.1**
	comp=Z,30nm,0.3s						
PKIN	**Phulchoki**	**14.52**	**321**	*eP*	**Pn**	**17 35 10.6**	**-1.1**
	comp=Z,52nm,0.3s						
DMN	**Daman**	**14.72**	**320**	*eP*	**Pn**	**17 35 13.5**	**-1.0**
	comp=Z,45nm,0.5s						
GSI	**Gunungsitoli**	**15.24**	**173**	*Pn*	**Pn**	**17 35 22.6**	**+1.3**
GKN	**Gorkha**	**15.29**	**320**	*eP*	**Pn**	**17 35 21.1**	**-0.9**
	comp=Z,89nm,0.2s						
KOLN	**Koldanda**	**15.79**	**317**	*eP*	**Pn**	**17 35 28.7**	**+0.2**
	comp=Z,62nm,0.2s						
DANN	**Dangsing**	**16.08**	**319**	*eP*	**Pn**	**17 35 32.0**	**-0.4**
	comp=Z,40nm,0.3s						
MNSI	**Mandailing Nat**	**16.10**	**166**	*P*	**P**	**17 35 38.7**	**+3.0**
HYB	**Hyderabad**	**16.36**	**276**	*iP*	**Pn**	**17 35 40.0**	**+4.2**
HYB				*eS*	**Sn**	**17 38 37.0**	**-0.6**
PYUN	**Piuthan**	**16.41**	**317**	*eP*	**Pn**	**17 35 37.3**	**+0.8**
	comp=Z,75nm,0.3s						
BHPL	**Bhopal**	**18.37**	**294**	IAmb	IAmb	17 36 13.4	
	comp=Z,8.0nm,0.6s						
ENH	**Enshi**	**18.66**	**40**	*P*	**P**	**17 36 02.6**	**-1.5**
MASI	**Maura Aman, Be**	**20.60**	**161**	*P*	P	17 36 18.9	-6.4
KSM	**Kuching**	**20.79**	**134**	*P*	**P**	**17 36 26.3**	**-1.1**
LZH	**Lanzhou**	**20.82**	**19**	*eP*	**P**	**17 36 29.3**	**+1.6**
LZH				*pP*	sP	17 36 39.5	+7.7
LZH				*sP*	pP	17 36 42.0	+11
LZH				*PP*	**PnPn**	**17 36 46.0**	**0.0**
LZH				*pmax*	*pmax*		
	comp=Z,10.0nm,1.2s						
LZH				*pmax*	*pmax*		
	comp=Z,76nm,4.9s						
LZH				*LR*	LR		
	comp=N,2μm,10.8s						
LZH				*LR*	LR		
	comp=E,1μm,12.5s						
LZH				*LR*	LR		
	comp=Z,2μm,11.4s						
XAN	**Xi'an**	**21.15**	**32**	*P*	**P**	**17 36 33.0**	**+1.8**
XAN				*pP*	sP	17 36 54.0	+19
XAN				*sP*	pP	17 37 05.0	+31
XAN				*S*	**S**	**17 40 20.5**	**-6.0**
XAN				*pmax*	*pmax*		
	comp=Z,32nm,0.9s						
XAN				*pmax*	*pmax*		
	comp=Z,61nm,5.9s						
XAN				*LR*	LR		
	comp=N,540nm,10.8s						
XAN				*LR*	LR		
	comp=E,390nm,10.3s						
XAN				*LR*	LR		
	comp=Z,470nm,13.2s						
XAN	**Xi'an**	**21.15**	**32**		**P**	**17 36 30.3**	**-0.9**
XAN				IAmb	IAmb	17 36 41.5	
	comp=Z,21nm,0.8s						
SBUM	**Sibu**	**21.49**	**129**	*P*	**P**	**17 36 32.4**	**-2.5**
WHN	**Wuhan**	**22.08**	**47**	*P*	P	17 36 52.0	+11
SMLA	**Simla**	**22.24**	**314**	*eP*	**P**	**17 36 44.8**	**+1.9**
SMLA				IAmb	IAmb	17 36 45.5	
	comp=Z,26nm,0.3s						
KKM	**Kota Kinabalu**	**22.68**	**115**	*P*	**P**	**17 36 46.6**	**-1.2**
GTA	**Gaotai**	**23.10**	**8**	⇑*P*	**P**	**17 36 53.0**	**+1.0**
GTA				*pP*	sP	17 37 02.3	+6.1
GTA				*sP*	pP	17 37 06.3	+11
GTA				*S*	**S**	**17 41 01.5**	**-1.9**
GTA				*sS*	sS	17 41 16.3	+7.9
GTA				*SS*	SnSn	17 41 52.0	+16
GTA				*pmax*	*pmax*		
	comp=Z,14nm,1.1s						
GTA				*pmax*	*pmax*		
	comp=Z,38nm,7.1s						
GTA				*LR*	LR		
	comp=N,170nm,14.0s						
GTA				*LR*	LR		
	comp=E,300nm,13.3s						
GTA				*LR*	LR		
	comp=Z,170nm,16.2s						
DHRM	**DHARAMSHALA**	**23.50**	**315**	IAmb	IAmb	17 37 19.2	
	comp=Z,26nm,0.3s						
SZP	**Santa**	**23.76**	**84**	*P*	**P**	**17 36 57.0**	**-1.6**
SSLB	**Suanglung**	**24.82**	**69**	*P*	**P**	**17 37 07.

FRU1	**Bishkek**	**31.75**	**330**	P	**P**	**17 38 09.6**	**-0.7**
FRU1				IAmb	IAmb	17 38 12.4	
	comp=Z,10nm,0.6s						
BTK	**Batken**	**31.85**	**322**	P	**P**	**17 38 11.5**	**+0.3**
CHGR	**Chuyangaron**	**32.00**	**319**	P	P	17 38 10.8	-1.7
CHGR				IAmb	IAmb	17 38 15.7	
	comp=Z,9.7nm,0.9s						
MK31	**Makanchi Array**	**32.16**	**343**	P	**P**	**17 38 13.9**	**+0.2**
MKAR	**Makanchi Array**	**32.16**	**343**	P	**P**	**17 38 14.1**	**+0.4**
	comp=Z,3.2nm,0.6s,baz=158,slow=9.5,SNR=47						
MAKZ	**Makanchi**	**32.26**	**342**	P	**P**	**17 38 14.4**	**-0.2**
SONM	**Songino Array**	**32.47**	**14**	P	**P**	**17 38 17.5**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=187,slow=10,SNR=9.0						
ULN	**Ulaanbaatar**	**32.65**	**14**	P	**P**	**17 38 17.5**	**-0.6**
KSRS	**Korea Array**	**35.27**	**47**	P	**P**	**17 38 41.1**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=241,slow=9.2,SNR=5.3						
KSRS				LR	LR	17 55 11.1	
	comp=Z,116nm,19.3s,baz=241,slow=40						
KURBB	**Kurchatov Arra**	**36.70**	**342**	P	**P**	**17 38 53.2**	**+0.4**
	comp=Z,3.9nm,0.6s,baz=152,slow=8.5,SNR=27						
KURK	**Kurchatov**	**36.75**	**342**	P	**P**	**17 38 53.2**	**-0.1**
KURK				IAmb	IAmb	17 38 54.6	
	comp=Z,5.1nm,0.7s						
ZAA0	**Zalesovo Array**	**38.29**	**350**		**P**	**17 39 06.5**	**+0.2**
ZAA0				IAmb	IAmb	17 39 07.6	
	comp=Z,7.6nm,0.7s						
ZALV	**Zalesovo Beam**	**38.29**	**350**	P	**P**	**17 39 06.8**	**+0.4**
	comp=Z,6.7nm,0.5s,baz=176,slow=9.0,SNR=44						
GEYT	**Alibeck**	**39.23**	**310**	P	**P**	**17 39 15.8**	**+1.3**
	comp=Z,5.3nm,0.7s,baz=132,slow=6.4,SNR=13						
GYA0B	**ALIBECK ARRAY**	**39.23**	**310**	P	**P**	**17 39 15.6**	**+1.1**
GYA0B				IAmb	IAmb	17 39 16.7	
	comp=Z,6.5nm,0.6s						
BVAR	**Borovoye Array**	**41.47**	**337**	P	**P**	**17 39 32.7**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=124,slow=10,SNR=8.0						
BRVK	**Borovoye**	**41.54**	**337**	P	**P**	**17 39 33.2**	**-0.2**
MJAR	**Matsushiro Arr**	**42.58**	**54**	P	**P**	**17 39 43.0**	**+0.8**
	comp=Z,0.8nm,1.0s,baz=268,slow=9.6,SNR=6.6						
MJAR				PcP	**PcP**	**17 41 34.9**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=240,slow=3.9,SNR=6.7						
MJAR				LR	LR	17 58 42.5	
	comp=Z,56nm,19.6s,baz=275,slow=38						
AKTO	**Aktyubinsk**	**45.32**	**327**	P	**P**	**17 40 04.2**	**+0.3**
	comp=Z,2.3nm,0.3s,baz=133,slow=8.6,SNR=12						
ARU	**Arti**	**48.69**	**334**	P	**P**	**17 40 30.3**	**+0.2**
	comp=Z,1.4nm,0.4s,baz=167,slow=6.4,SNR=8.9						
ARU	**Arti**	**48.69**	**334**	P	**P**	**17 40 29.8**	**-0.3**
ARU				IAmb	IAmb	17 40 30.4	
	comp=Z,4.7nm,0.5s						
AKH	**Akhalkalaki**	**51.02**	**310**	P	**P**	**17 40 48.9**	**+0.5**
AKH				IAmb	IAmb	17 40 50.3	
	comp=Z,5.3nm,0.7s						
YAK	**Yakutsk**	**51.40**	**20**	P	**P**	**17 40 49.5**	**-1.1**
YAK				IAmb	IAmb	17 40 50.5	
	comp=Z,5.2nm,0.7s						
KBZ	**Khabaz**	**52.00**	**313**	P	**P**	**17 40 56.0**	**+0.7**
	comp=Z,3.9nm,0.8s,baz=143,slow=7.4,SNR=8.0						
KIV	**Kislovodsk**	**52.20**	**313**	P	**P**	**17 40 57.5**	**+0.5**
WB0	**Warramunga Arr**	**52.45**	**132**	P	**P**	**17 40 57.1**	**-1.9**
WB0				IAmb	IAmb	17 40 59.9	
	comp=Z,6.8nm,0.7s						
WRA	**Warramunga Arr**	**52.53**	**132**	P	P	17 40 57.0	-2.7
	comp=Z,4.8nm,0.7s,baz=315,slow=7.5,SNR=32						
WB2	**Warramunga Arr**	**52.53**	**132**	P	**P**	**17 40 57.8**	**-1.9**
WB2				IAmb	IAmb	17 41 00.6	
	comp=Z,6.6nm,0.8s						
WR0	**Warramunga Arr**	**52.68**	**132**	P	**P**	**17 41 00.5**	**-0.3**
WR0				IAmb	IAmb	17 41 01.6	
	comp=Z,6.6nm,0.7s						
NRIK	**Noril'sk**	**53.04**	**356**	P	**P**	**17 41 02.4**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=157,slow=7.3,SNR=3.8						
NWAO	**Narrogin (SRO)**	**53.33**	**157**	P	**P**	**17 41 05.4**	**+0.1**
NWAO	**Narrogin (SRO)**	**53.33**	**157**	P	**P**	**17 41 05.4**	**+0.1**
NWAO				IAmb	IAmb	17 41 39.3	
	comp=Z,22nm,1.1s						
KIRV	**Kirov**	**53.96**	**332**	P	**P**	**17 41 08.4**	**-1.2**
	comp=Z,8.1nm,0.5s,baz=111,slow=2.3,SNR=5.0						
AS31	**Alice Springs**	**54.71**	**136**	P	**P**	**17 41 14.0**	**-1.6**
ASAR	**Alice Springs**	**54.71**	**136**	P	P	17 41 13.4	-2.2
	comp=Z,2.8nm,1.0s,baz=316,slow=6.8,SNR=24						
ASF	**Jabal al Asfar**	**55.11**	**298**	P	P	17 41 16.9	-1.8
	comp=Z,2.9nm,0.8s,baz=97,slow=9.2,SNR=4.9						
FORT	**Forrest**	**56.43**	**146**	P	**P**	**17 41 27.3**	**-0.5**
FORT				IAmb	IAmb	17 41 49.6	
	comp=Z,12nm,0.9s						
BR131	**Keskin Array S**	**58.18**	**307**	P	**P**	**17 41 39.6**	**-0.8**
BRTR	**Keskin Array B**	**58.18**	**307**	P	**P**	**17 41 39.7**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=111,slow=7.1,SNR=7.9						
BRTR				LR	LR	18 12 57.9	
	comp=Z,26nm,19.1s,baz=141,slow=42						
TIXI	**Tiksi**	**58.52**	**12**	P	**P**	**17 41 40.4**	**-1.6**
TIXI				IAmb	IAmb	17 41 41.9	
	comp=Z,5.9nm,1.0s						
KLMR	**Klimovskoe**	**59.46**	**332**	*e*P	**P**	**17 41 47.3**	**-1.4**
KLMR				AMP		17 41 50.3	
	comp=Z,8.0nm,1.3s						
ELL	**Elmali**	**60.98**	**303**	P	**P**	**17 41 59.2**	**-0.5**
BBOO	**Buckleboo**	**62.45**	**142**	P	**P**	**17 42 09.3**	**-0.1**
BBOO				IAmb	IAmb	17 42 15.5	
	comp=Z,10nm,1.2s						
AKASG	**Malin Array Be**	**62.47**	**319**	P	**P**	**17 42 08.1**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=86,slow=6.6,SNR=7.1						
KARP	**Karpathos**	**63.22**	**302**	P	**P**	**17 42 13.9**	**-0.7**
MLR	**Muntele Rosu**	**64.21**	**313**	P	**P**	**17 42 20.8**	**-0.4**
	comp=Z,5.0nm,0.8s,baz=245,slow=3.0,SNR=5.3						
MLR	**Muntele Rosu**	**64.21**	**313**	P	**P**	**17 42 20.9**	**-0.2**
MLR				IAmb	IAmb	17 42 22.7	
	comp=Z,6.4nm,0.9s						
BUR08	**Bucovina Ar. S**	**64.82**	**315**	P	**P**	**17 42 25.2**	**+0.1**
BUR08				IAmb	IAmb	17 42 28.2	
	comp=Z,5.9nm,1.3s						
IDI	**Anoyia**	**65.08**	**302**	P	P	17 42 25.4	-1.5
	comp=Z,13nm,0.8s,baz=127,slow=12,SNR=3.8						
IDI	**Anoyia**	**65.08**	**302**	P	**P**	**17 42 26.0**	**-1.0**
STKA	**Stephens Creek**	**65.24**	**138**	P	**P**	**17 42 27.2**	**-0.7**
	comp=Z,3.7nm,0.7s,baz=326,slow=4.6,SNR=11						
STKA	**Stephens Creek**	**65.24**	**138**	P	**P**	**17 42 28.3**	**+0.4**
FIA1	**FINESS Array S**	**65.87**	**330**	P	**P**	**17 42 31.0**	**-0.4**
FIA1				IAmb	IAmb	17 42 31.8	
	comp=Z,3.5nm,0.7s						
FINES	**FINESS Array B**	**65.87**	**330**	P	**P**	**17 42 31.4**	**-0.1**
	comp=Z,3.6nm,0.7s,baz=100,slow=5.8,SNR=20						
VTS	**Vitosha**	**66.12**	**310**	P	**P**	**17 42 32.7**	**-1.0**
VTS				IAmb	IAmb	17 42 34.3	
	comp=Z,3.4nm,0.9s						
KEV	**Kevo**	**67.26**	**339**	P	**P**	**17 42 40.3**	**+0.1**
ITM	**Ithomi**	**67.36**	**304**	P	**P**	**17 42 40.4**	**-1.1**
ARCES	**ARCESS Array B**	**67.72**	**339**	P	**P**	**17 42 43.5**	**+0.3**
	comp=Z,3.6nm,0.7s,baz=100,slow=6.8,SNR=13						
ARE0	**ARCESS Array S**	**67.72**	**339**	P	**P**	**17 42 43.1**	**-0.1**
PSZ	**Piszkesteto**	**68.40**	**315**	P	**P**	**17 42 47.0**	**-1.0**
PSZ				IAmb	IAmb	17 42 52.0	
	comp=Z,4.1nm,1.0s						
OJC	**Ojcow**	**68.45**	**318**	P	**P**	**17 42 47.6**	**-0.5**
OJC				IAmb	IAmb	17 42 49.0	
	comp=Z,5.2nm,0.9s						
VYHS	**Vyhne**	**69.10**	**316**	*e*P	**P**	**17 42 51.3**	**-0.9**
PAF	**Port-aux-Franc**	**69.34**	**197**	P	**P**	**17 42 55.6**	**+2.3**
SCTE	**Santa Cesarea**	**69.84**	**307**	P	**P**	**17 42 55.5**	**-1.3**
MORC	**Moravsky Berou**	**69.91**	**318**	P	**P**	**17 42 56.9**	**-0.3**
MORC				IAmb	IAmb	17 42 58.6	
	comp=Z,5.1nm,1.1s						
KRLC	**Kraliky**	**70.39**	**318**	*e*P	**P**	**17 43 00.4**	**+0.2**
KSP	**Ksiaz**	**70.67**	**319**	*e*P	**P**	**17 43 02.1**	**+0.3**
CONA	**Conrad Observa**	**71.11**	**316**	*e*P	**P**	**17 43 05.2**	**+0.6**
	comp=Z,4.1nm,1.1s						
TIP	**Timpagrande**	**71.24**	**306**	P	**P**	**17 43 05.7**	**+0.2**
TIP				IAmb	IAmb	17 43 11.6	
	comp=Z,14nm,1.2s						
TOO	**Toolangi**	**71.35**	**140**	P	**P**	**17 43 07.5**	**+1.5**
ARSA	**Arzberg**	**71.39**	**315**	*e*P	**P**	**17 43 07.1**	**+0.8**
	comp=Z,2.1nm,0.8s						
SPA0	**Spitsbergen Ar**	**71.74**	**348**	P	**P**	**17 43 08.2**	**+0.4**
SPITS	**Spitsbergen Ar**	**71.74**	**348**	P	P	**17 43 08.1**	**+0.3**
	comp=Z,5.4nm,0.9s,baz=106,slow=9.0,SNR=7.7						
SOKA	**Soboth**	**71.77**	**314**	*e*P	**P**	**17 43 08.6**	**-0.1**
	comp=Z,3.3nm,0.9s						
PRU	**Pruhonice**	**71.84**	**318**	*e*P	**P**	**17 43 10.0**	**+1.1**
BRG	**Berggiesshubel**	**72.15**	**319**	*i* P	**P**	**17 43 11.2**	**+0.4**
	comp=Z,5.1nm,0.8s						
MOA	**Molln**	**72.19**	**316**	*e*P	**P**	**17 43 10.6**	**-0.5**
	comp=Z,2.8nm,0.8s						
GEC2	**GERESS Array S**	**72.48**	**317**	P	**P**	**17 43 12.6**	**-0.3**
GEC2				IAmb	IAmb	17 43 14.0	
	comp=Z,4.9nm,0.8s						
GERES	**GERESS Array B**	**72.48**	**317**	P	**P**	**17 43 13.2**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=84,slow=5.5,SNR=36						
KHC	**Kasperske Hory**	**72.53**	**317**	*e*P	**P**	**17 43 12.8**	**-0.3**
KHC	**Kasperske Hory**	**72.53**	**317**	P	**P**	**17 43 12.5**	**-0.6**
CLL	**Collm**	**72.71**	**319**	*e*P	P	17 43 12.0	-2.0
	comp=Z,3.0nm,0.9s						
NC405	**NORSAR Array S**	**72.76**	**330**	P	**P**	**17 43 13.9**	**-0.3**
NC405				IAmb	IAmb	17 43 30.3	
	comp=Z,18nm,1.3s						
PRED	**Cave del Predi**	**72.80**	**314**	P	**P**	**17 43 14.2**	**-0.6**
NC602	**NORSAR Array S**	**72.86**	**329**	P	**P**	**17 43 13.4**	**-1.4**
KBA	**Koelnbreinsper**	**72.89**	**315**	*e*P	**P**	**17 43 15.5**	**+0.1**
	comp=Z,3.5nm,0.9s						
NC303	**NORSAR Array S**	**72.92**	**330**	P	**P**	**17 43 14.8**	**-0.4**
NB2	**NORSAR Subarra**	**73.01**	**330**	P	**P**	**17 43 15.3**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=86,slow=6.2						
NOA	**NORSAR Array B**	**73.01**	**330**	P	**P**	**17 43 15.1**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=88,slow=5.9,SNR=11						
NOA				LR	LR	18 19 40.9	
	comp=Z,24nm,20.2s,baz=210,slow=39						
ZOU	**Zoufplan**	**73.20**	**314**	P	**P**	**17 43 16.0**	**-1.3**
ZOU				IAmb	IAmb	17 43 17.0	
	comp=Z,4.9nm,1.1s						
NC204	**NORSAR Array S**	**73.21**	**330**	P	**P**	**17 43 16.7**	**-0.2**
NBO00	**NORSAR Array S**	**73.22**	**330**	P	**P**	**17 43 17.7**	**+0.8**
AQU	**L'Aquila**	**73.39**	**310**	P	**P**	**17 43 17.5**	**-0.9**
STAL	**STALIGIAL**	**73.41**	**314**	P	**P**	**17 43 17.9**	**-0.5**
STAL				IAmb	IAmb	17 43 19.1	
	comp=Z,10nm,0.9s						
CIMO	**Cimolais**	**73.59**	**314**	P	**P**	**17 43 18.8**	**-0.7**
CIMO				IAmb	IAmb	17 43 19.8	
	comp=Z,5.8nm,0.9s						
WTTA	**Wattenberg**	**74.02**	**315**	*e*P	**P**	**17 43 21.3**	**-0.9**
	comp=Z,2.2nm,0.6s						
MOTA	**Moosalm**	**74.37**	**315**	*e*P	**P**	**17 43 24.0**	**-0.1**
	comp=Z,4.4nm,1.0s						
RETA	**Reutte**	**74.58**	**316**	*e*P	**P**	**17 43 25.0**	**-0.2**
	comp=Z,3.0nm,0.6s						
FETA	**Feichten**	**74.67**	**315**	*e*P	**P**	**17 43 25.3**	**-0.6**
	comp=Z,4.7nm,1.2s						
DAVOX	**Davos/Dischmat**	**75.28**	**315**	P	**P**	**17 43 28.5**	**-1.0**
	comp=Z,2.3nm,0.8s,baz=157,slow=14,SNR=3.7						
ATKA	**Atka Island**	**77.24**	**39**	P	**P**	**17 43 39.9**	**-0.3**
KEST	**Kesra**	**77.59**	**304**	P	**P**	**17 43 42.3**	**-0.3**
	comp=Z,6.1nm,0.9s,baz=171,slow=2.3,SNR=6.6						
KEST	**Kesra**	**77.59**	**304**	P	**P**	**17 43 41.9**	**-0.7**
KEST				IAmb	IAmb	17 43 44.0	
	comp=Z,7.6nm,1.0s						
LBTB	**Lobatse**	**79.72**	**240**	P	**P**	**17 43 53.7**	**-0.8**
LBTB				IAmb	IAmb	17 44 26.7	
	comp=Z,10nm,1.2s						
BOSA	**Boshof**	**81.45**	**237**	P	**P**	**17 44 02.5**	**-1.3**
	comp=Z,2.0nm,0.6s,baz=48,slow=4.6,SNR=7.4						
BOSA				LR	LR	18 18 48.2	
	comp=Z,58nm,18.7s,baz=112,slow=35						
BOSA	**Boshof**	**81.45**	**237**	P	P	17 44 01.6	-2.1
BOSA				IAmb	IAmb	17 44 26.7	
	comp=Z,18nm,1.6s						
EKA	**Eskdalemuir Ar**	**81.48**	**325**	P	**P**	**17 44 03.7**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=84,slow=5.7,SNR=11						
ESK	**Eskdalemuir**	**81.51**	**325**	P	**P**	**17 44 02.9**	**-0.5**
ESK				IAmb	IAmb	17 44 33.2	
	comp=Z,12nm,1.2s						
TAM	**Tamanrasset**	**83.85**	**292**	P	**P**	**17 44 16.3**	**-0.1**
TAM				IAmb	IAmb	17 44 17.8	
	comp=Z,6.8nm,1.4s						
TSUM	**Tsumeb**	**84.53**	**248**	P	**P**	**17 44 19.9**	**0.0**
TSUM				IAmb	IAmb	17 44 32.6	
	comp=Z,6.9nm,1.4s						
ILAR	**Eielson Array**	**86.24**	**22**	P	**P**	**17 44 27.1**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=305,slow=4.4,SNR=6.2						
ESDC	**Sonseca Array**	**86.77**	**310**	P	**P**	**17 44 29.4**	**-1.3**
	comp=Z,2.3nm,0.5s,baz=46,slow=5.1,SNR=5.2						
TORD	**Torodi Ar. Bea**	**90.02**	**284**	P	**P**	**17 44 45.4**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=83,slow=4.6,SNR=3.0						
TXAR	**Lajitas Array**	**130.75**	**22**	PKP	**PKPdf**	**17 50 57.5**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=37,slow=1.0,SNR=3.6						

*JMA **31** 17:45:30.4±0.2, 33°.22N×138°.35E, h290km±4km, M3.3*
*IDC **31** 17:45:31.3±0.6, 33°.51N×138°.05E, h306km±12km, mb3.0/5, mb1 3.1/7, mb1mx2.8/34, mbtmp3.6/7, Error ellipse: s-maj=32.7km s-min=11.4km az=67.0*

ISC 31 17:45:31.2±0.9, 33°.5N±0°.1×138°.1E±0°.1, h300km, n13, σ1s25/17, mb3.4/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHMK	**Hamakita**	**1.36**	**349**	*e*S	**S**	**17 46 47.5**	**+0.8**
HMMJ	**Hamamatsu 2**	**1.40**	**348**	P	**Pn**	**17 46 14.4**	**+0.8**
HMMJ				*e*S	**S**	**17 46 48.1**	**+0.7**
JHJ	**Hachijo jima 2**	**1.48**	**104**	P	**Pn**	**17 46 13.7**	**-0.5**
	28nm,0.3s,baz=106,slow=18,SNR=40						
JHJ				S	**S**	**17 46 51.3**	**+2.9**
	8.6nm,0.3s,baz=76,slow=21,SNR=7.9						
JKN2	**Miekihoku**	**1.67**	**297**	P	**Pn**	**17 46 16.4**	**+1.0**
JNY	**Yasuok**	**1.88**	**355**	P	**Pn**	**17 46 17.8**	**+0.8**
JNY				*e*S	**S**	**17 46 54.4**	**+0.8**
JAO	**Obara**	**1.91**	**340**	P	**Pn**	**17 46 18.2**	**+1.0**
MJAR	**Matsushiro Arr**	**3.06**	**2**	P	**Pn**	**17 46 27.1**	**-0.4**
	0.1nm,0.3s,baz=176,slow=11,SNR=25						
MJAR				S	**S**	**17 47 11.1**	**-1.3**
	0.1nm,0.3s,baz=211,slow=29,SNR=7.5						
KSRS	**Korea Array**	**9.17**	**298**	P	**Pn**	**17 47 39.9**	**+0.8**
	0.2nm,0.3s,baz=114,slow=11,SNR=9.0						
SONM	**Songino Array**	**27.75**	**311**	P	**P**	**17 50 54.1**	**+1.3**
	0.6nm,0.4s,baz=123,slow=10,SNR=3.6						
CMAR	**Chiang Mai Arr**	**37.98**	**257**	P	**P**	**17 52 19.8**	**-1.2**
	0.3nm,0.6s,baz=42,slow=8.2,SNR=4.8						
MKAR	**Makanchi Array**	**43.79**	**305**	P	**P**	**17 53 08.0**	**+0.2**
	0.4nm,0.4s,baz=95,slow=8.9,SNR=8.4						
WRA	**Warramunga Arr**	**53.24**	**184**	P	**P**	**17 54 17.9**	**-1.6**
	0.6nm,0.4s,baz=0.1,slow=7.6,SNR=7.9						
FINES	**FINESS Array B**	**70.66**	**332**	P	**P**	**17 56 14.1**	**-0.1**
	0.6nm,0.4s,baz=64,slow=6.6,SNR=9.3						

IDC 31 18:09:10.3±3.5, 14°.80S×69°.92W, h190km±64km, mb3.0/2, mb1 3.3/3, mb1mx3.1/23, mbtmp3.6/3, Error ellipse: s-maj=186.7km s-min=50.7km az=22.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**2.27**	**131**	P	Pn	18 09 53.3	+1.6
	19nm,0.3s,baz=319,slow=8.4,SNR=297						
LPAZ				S	Sn	18 10 23.8	0.0
	4.0nm,0.3s,baz=309,slow=8.8,SNR=11						
TORD	**Torodi Ar. Bea**	**76.12**	**72**	P	P	18 20 38.3	+0.5
	0.2nm,0.5s,baz=268,slow=5.7,SNR=1.5						
YKA	**Yellowknife Ar**	**84.58**	**341**	P	P	18 21 21.1	-0.7
	0.3nm,0.7s,baz=136,slow=6.0,SNR=4.7						

*WBNET **31** 18:09:31.9, 50°.23N×12°.45E, h8km, Ml2.2*
*BGR **31** 18:09:31.8±0.2, 50°.23N×12°.45E, h9km±2km, ML2.4/5, Error ellipse: s-maj=2.2km s-min=1.1km az=103.0*
*PRU **31** 18:09:31.8±0.0, 50°.20N×12°.43E, h0km, West Bohemia Swarm*
*CLL **31** 18:09:32.4±0.3, 50°.23N×12°.44E, h6km±1km, ML2.1/9*

ISC 31 18:09:31.8±0.8, 50°.23N±0°.02×12°.46E±0°.02, h9km±3km, n39, σ0s28/70, 6C-4D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NKC	**Novy Kostel**	**0.01**	**304**	*i* Pg	**Pg**	**18 09 33.5**	**0.0**
NKC				*i* Sg	**Sg**	**18 09 34.5**	**-0.1**
NKC	**Novy Kostel**	**0.01**	**304**	*e*PG	**Pg**	**18 09 33.0**	**-0.5**
NKC				*e*SG	**Sg**	**18 09 33.9**	**-0.7**
	comp=Z,1μm,0.2s						
NKC	**Novy Kostel**	**0.01**	**304**	⇓P	**Pg**	**18 09 33.5**	**0.0**
NKC				S	**Sg**	**18 09 34.5**	**-0.1**
KVC	**Kvetna**	**0.04**	**121**	⇑P	**Pg**	**18 09 33.7**	**+0.1**
KVC				S	**Sg**	**18 09 34.8**	**-0.1**
STCW	**Studenec**	**0.05**	**47**	⇑P	**Pg**	**18 09 33.8**	**+0.1**
STCW				S	**Sg**	**18 09 35.0**	**-0.1**
LBCW	**Luby**	**0.05**	**320**	⇓P	**Pg**	**18 09 33.8**	**0.0**
LBCW				S	**Sg**	**18 09 35.1**	**-0.1**
VAC	**Vackov**	**0.06**	**280**	⇓P	**Pg**	**18 09 33.7**	**0.0**
VAC				S	**Sg**	**18 09 34.9**	**-0.3**
WERN	**Wernitzgruen**	**0.08**	**317**	*i* Pg	**Pg**	**18 09 34.1**	**0.0**
WERN				*e*Sg	**Sg**	**18 09 35.6**	**-0.2**
	238nm,0.1s						
SKC	**Skalna**	**0.09**	**230**	⇑P	**Pg**	**18 09 34.1**	**0.0**
SKC				S	**Sg**	**18 09 35.6**	**-0.2**
KACW	**Kaceov**	**0.09**	**157**	⇑P	**Pg**	**18 09 34.4**	**+0.2**
KACW				S	**Sg**	**18 09 36.1**	**+0.2**
ROHR	**Rohrbach**	**0.10**	**275**	*i* Pg	**Pg**	**18 09 34.1**	**-0.1**
ROHR				*i* Sg	**Sg**	**18 09 35.6**	**-0.4**
	2μm,0.1s						
POCW	**Potky**	**0.10**	**346**	⇓P	**Pg**	**18 09 34.4**	**+0.1**
POCW				S	**Sg**	**18 09 36.0**	**-0.1**
KRCW	**Kraslice**	**0.11**	**22**	⇑P	**Pg**	**18 09 34.7**	**+0.1**
KRCW				S	**Sg**	**18 09 36.5**	**0.0**
GUNZ	**Gunzen**	**0.16**	**328**	*i* Pg	**Pg**	**18 09 35.4**	**+0.1**
GUNZ				*i* Sg	**Sg**	**18 09 37.5**	**-0.2**
	198nm,0.1s						
ZHC	**Zelena Hora**	**0.18**	**213**	⇑P	**Pg**	**18 09 35.8**	**+0.1**
ZHC				S	**Sg**	**18 09 38.3**	**0.0**
TANN	**Tannenbergstha**	**0.19**	**360**	*i* Pg	**Pg**	**18 09 35.8**	**0.0**
TANN				*i* Sg	**Sg**	**18 09 38.3**	**-0.2**
	360nm,0.2s						
MULD	**Muldenberg**	**0.19**	**348**	*i* Pg	**Pg**	**18 09 35.8**	**0.0**
MULD				*i* Sg	**Sg**	**18 09 38.3**	**-0.2**
	453nm,0.1s						
VIEL	**Selb-Vielitz**	**0.24**	**260**	*i* Sg	**Sg**	**18 09 39.5**	**-0.3**
TRIB	**Obertriebel**	**0.24**	**301**	*i* Pg	**Pg**	**18 09 36.6**	**-0.1**
TRIB				*i* Sg	**Sg**	**18 09 39.8**	**-0.3**
	307nm,0.1s						
PLN	**Plauen**	**0.33**	**323**	*i* Pg	**Pg**	**18 09 38.2**	**0.0**
PLN				*e*Sg	**Sg**	**18 09 42.3**	**-0.3**
	97nm,0.4s						
MANZ	**Manzenberg**	**0.33**	**224**	*e*Pg	**Pg**	**18 09 37.9**	**-0.4**
MANZ				*e*Sg	**Sg**	**18 09 42.6**	**-0.2**
SCHF	**Schoenfels**	**0.45**	**355**	*e*Pg	**Pg**	**18 09 40.6**	**0.0**
SCHF				*i* Sg	**Sg**	**18 09 46.6**	**0.0**
	480nm,0.2s						
ROTZ	**Rotzenmuhle**	**0.49**	**200**	*e*Pg	**Pg**	**18 09 41.3**	**0.0**
ROTZ				*e*Sg	**Sg**	**18 09 47.7**	**0.0**
GRZ1	**Mausoleum Wald**	**0.49**	**342**	*i* Sg	**Sg**	**18 09 47.4**	**-0.5**
	96nm,0.3s						
MOX	**Moxa**	**0.69**	**308**	*e*Sg	**Sg**	**18 09 54.1**	**+0.1**
FBE	**Freiberg**	**0.90**	**39**	*e*Pg	**Pb**	**18 09 49.4**	**-0.1**
FBE				*e*Sg	**Sg**	**18 10 00.8**	**+0.1**
GRF	**Grafenberg Arr**	**0.96**	**237**	*e*Pg	**Pg**	**18 09 50.2**	**-0.1**
GRF				*e*Sg	**Sg**	**18 10 03.1**	**+0.3**
WET	**Wettzell**	**1.12**	**166**	*e*Pn	**Pg**	**18 09 53.2**	**0.0**
WET				*e*Sg	**Sg**	**18 10 07.6**	**-0.1**
PBCC	**Pribram**	**1.13**	**118**	*e*SG	**Sg**	**18 10 07.2**	**-0.9**
	comp=Z,12nm,0.3s						
CLL	**Collm**	**1.14**	**17**	*i* Pg	Pn	**18 09 54.1**	**+0.2**
CLL				*i*		18 09 57.2	
CLL				*i* Sg	**Sn**	**18 10 09.7**	**+0.1**
	comp=Z,30nm,0.3s						
CLL				*i*		18 10 12.7	
BRG	**Berggiesshubel**	**1.15**	**55**	PG	**Pg**	**18 09 53.4**	**-0.4**
BRG				SG	**Sg**	**18 10 08.3**	**-0.3**
	comp=Z,83nm,0.2s						
BRG	**Berggiesshubel**	**1.15**	**55**	*e*Pg	**Pg**	**18 09 53.7**	**-0.1**
BRG				*e*Sg	**Sb**	**18 10 09.0**	**+0.3**
PRA	**Prague**	**1.28**	**96**	*e*SG	**Sn**	**18 10 13.2**	**+0.2**
	comp=Z,7.4nm,0.4s						
KHC	**Kasperske Hory**	**1.31**	**146**	*e*PG	**Pn**	**18 09 56.1**	**-0.2**
KHC				*e*SG	**Sb**	**18 10 13.6**	**0.0**
	comp=Z,16nm,0.3s						
PRU	**Pruhonice**	**1.36

DAV				Sn		**Sb**	**18 15 07.0**	**-0.5**
	22nm,0.3s,baz=295,slow=14,SNR=7.2							
DAV				Lg		Lg	18 15 15.0	
	69nm,0.3s,baz=356,slow=13,SNR=4.1							
DAV	**Davao City (W)**	**2.52 204**				**Pn**	**18 14 32.0**	**0.0**
DMPH	**Davao City--Mi**	**2.54 206**	⇑	*e*	P	**Pg**	**18 14 39.6**	**+0.2**
DMPH					eS	**Sb**	**18 15 08.4**	**+0.4**
LLP	**Lapu-Lapu**	**2.77 290**		*e*	P	**Pb**	**18 14 40.0**	**-0.5**
LLP					eS	**Sg**	**18 15 17.6**	**-2.3**
CTBH	**Cotabato--PC H**	**3.19 228**	⇑	*i*	P	**Pb**	**18 14 44.5**	**-3.0**
DDMP	**Don Marcelino,**	**3.38 195**		*e*	P	**Pn**	**18 14 47.1**	**+3.2**
DDMP					eS	**Sb**	**18 15 31.9**	**-0.4**
CNP	**Catarman**	**3.65 328**		*e*	P	**Pn**	**18 14 50.1**	**+2.6**
CNOP	**Candoni, Negro**	**3.95 277**		*e*	P	**Pn**	**18 14 55.1**	**+3.5**
RCP	**Roxas**	**4.38 300**	⇑	*e*	P	**Pg**	**18 15 13.1**	**-1.6**
TNTI	**Ternate**	**8.59 175**		Pn		**Pn**	**18 15 55.2**	**-0.2**
SIJI	**Sorong**	**11.19 155**		Pn		**Pn**	**18 16 34.7**	**+3.6**
	1.1nm,0.3s,baz=348,slow=23,SNR=5.2							
FAKI	**Fak Fak**	**13.45 155**		Pn		**Pn**	**18 17 01.3**	**-0.7**
BKB	**Balikpapan**	**14.34 223**		Pn		**Pn**	**18 17 15.9**	**+1.7**
TPUB	**Ta-pu**	**14.97 338**		Pn		**Pn**	**18 17 21.1**	**-1.7**
YOJ	**Yonaguni jima**	**15.38 348**		Pn		**Pn**	**18 17 28.1**	**-0.1**
KSM	**Kuching**	**18.03 245**		P		**Pn**	**18 17 58.8**	**-3.0**
SOEI	**Soe**	**19.16 187**		P		**P**	**18 18 14.5**	**-0.3**
SOEI				IAmb		IAmb	18 18 45.4	
	comp=Z,35nm,1.2s							
BATI	**Baumata**	**19.69 189**		P		**Pn**	**18 18 21.8**	**-0.2**
	comp=Z,4.5nm,0.3s,baz=62,slow=4.6,SNR=6.1							
MTN	**Manton Dam**	**22.54 168**				**P**	**18 18 51.1**	**-0.2**
MTN				IAmb		IAmb	18 18 53.3	
	comp=Z,32nm,1.4s							
KNRA	**Kununurra**	**24.99 175**		P		**P**	**18 19 14.9**	**-0.2**
KNRA				IAmb		IAmb	18 19 15.0	
	comp=Z,35nm,1.4s							
MNAI	**Manna**	**27.25 241**		P		**P**	**18 19 34.9**	**-0.8**
FITZ	**Fitzroy Crossi**	**27.33 182**		P		**P**	**18 19 36.6**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=355,slow=4.8,SNR=9.4							
FITZ	**Fitzroy Crossi**	**27.33 182**		P		**P**	**18 19 36.6**	**+0.3**
KMI	**Kunming**	**27.58 308**		P		**P**	**18 19 38.1**	**-0.7**
KMI				IAmb		IAmb	18 19 40.9	
	comp=Z,45nm,1.6s							
CMAR	**Chiang Mai Arr**	**28.30 292**		P		**P**	**18 19 45.1**	**+0.1**
	comp=Z,0.4nm,0.9s,baz=99,slow=7.5,SNR=5.0							
COEN	**Coen**	**28.42 144**		P		**P**	**18 19 46.1**	**0.0**
COEN				IAmb		IAmb	18 20 03.6	
	comp=Z,22nm,1.4s							
WB0	**Warramunga Arr**	**29.97 165**		P		**P**	**18 19 57.8**	**-2.0**
WB0				IAmb		IAmb	18 20 04.9	
	comp=Z,8.9nm,1.4s							
GSI	**Gunungsitoli**	**29.99 256**		P		**P**	**18 19 58.9**	**-1.1**
WRA	**Warramunga Arr**	**30.12 165**		P		**P**	**18 19 59.6**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=349,slow=9.4,SNR=2.7							
WB2	**Warramunga Arr**	**30.12 165**		P		**P**	**18 20 01.2**	**0.0**
WB2				IAmb		IAmb	18 20 04.9	
	comp=Z,17nm,1.6s							
WR0	**Warramunga Arr**	**30.19 165**		P		**P**	**18 20 00.2**	**-1.5**
WR0				IAmb		IAmb	18 20 19.1	
	comp=Z,17nm,1.6s							
PSA00	**Pilbara Seismi**	**31.48 192**		P		**P**	**18 20 12.1**	**-1.0**
PSA00				IAmb		IAmb	18 20 37.9	
	comp=Z,16nm,1.2s							
AS31	**Alice Springs**	**33.61 168**		P		**P**	**18 20 30.3**	**-1.5**
ASAR	**Alice Springs**	**33.62 168**		P		**P**	**18 20 30.7**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=347,slow=6.9,SNR=11							
MORW	**Morawa**	**39.57 195**		P		**P**	**18 21 21.8**	**-0.8**
MORW				IAmb		IAmb	18 21 28.4	
	comp=Z,11nm,1.2s							
H11S3	**WAKE ISLAND Hy**	**39.85**	**72**	T		T	19 04 23.9	
	baz=262,slow=75,SNR=26							
H11S1	**WAKE ISLAND Hy**	**39.86**	**72**	T		T	19 04 25.1	
	baz=262,slow=75,SNR=16							
H11S2	**WAKE ISLAND Hy**	**39.86**	**72**	T		T	19 04 24.8	
	baz=262,slow=75,SNR=14							
KLR	**Kul'dur**	**39.95**	**5**	P		**P**	**18 21 26.9**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=192,slow=16,SNR=1.9							
FORT	**Forrest**	**39.96 178**		P		**P**	**18 21 25.6**	**-0.1**
FORT				IAmb		IAmb	18 21 59.4	
	comp=Z,23nm,1.2s							
ULN	**Ulaanbaatar**	**41.76 340**		P		**P**	**18 21 38.9**	**-1.8**
SONM	**Songino Array**	**41.96 340**		P		**P**	**18 21 42.8**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=331,slow=26,SNR=2.1							
BBOO	**Buckleboo**	**42.92 168**		P		**P**	**18 21 49.1**	**-0.9**
BBOO				IAmb		IAmb	18 22 26.4	
	comp=Z,17nm,1.4s							
NWAO	**Narrogin (SRO)**	**43.02 192**		P		**P**	**18 21 51.3**	**+0.4**
NWAO	**Narrogin (SRO)**	**43.02 192**		P		**P**	**18 21 51.0**	**+0.1**
NWAO				IAmb		IAmb	18 22 30.1	
	comp=Z,60nm,1.5s							
STKA	**Stephens Creek**	**43.46 161**		P		**P**	**18 21 54.4**	**0.0**
	comp=Z,0.4nm,0.4s,baz=347,slow=11,SNR=1.5							
STKA	**Stephens Creek**	**43.46 161**		P		**P**	**18 21 53.7**	**-0.7**
PETK	**Petropavlovsk-**	**50.30**	**24**	P		**P**	**18 22 50.1**	**+2.4**
	comp=Z,1.2nm,0.6s,baz=214,slow=9.2,SNR=2.2							
YAK	**Yakutsk**	**52.59**	**2**	P		**P**	**18 23 05.4**	**+0.8**
YAK				IAmb		IAmb	18 23 38.2	
	comp=Z,4.5nm,0.6s							
MK31	**Makanchi Array**	**52.93 323**		P		**P**	**18 23 07.6**	**0.0**
MKAR	**Makanchi Array**	**52.93 323**		P		**P**	**18 23 07.5**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=122,slow=8.2,SNR=11							
MAKZ	**Makanchi**	**53.13 323**		P		**P**	**18 23 08.4**	**-0.6**
ZALV	**Zalesovo Beam**	**55.56 331**		P		**P**	**18 23 25.7**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=125,slow=7.2,SNR=2.9							
KURK	**Kurchatov**	**56.98 326**		P		**P**	**18 23 36.3**	**-0.5**
KURK				IAmb		IAmb	18 23 37.5	
	comp=Z,2.9nm,0.8s							
BRVK	**Borovoye**	**62.65 326**		P		**P**	**18 24 14.9**	**-0.9**
BRVK				IAmb		IAmb	18 24 16.3	
	comp=Z,2.7nm,1.0s							
LTZ	**Lake Taylor**	**66.54 145**		P		**P**	**18 24 42.2**	**+0.9**
BKZ	**Black Stump Fm**	**66.89 140**		P		**P**	**18 24 44.4**	**+0.8**
MQZ	**McQueen's Vall**	**67.34 146**		P		**P**	**18 24 45.5**	**-0.8**
ARU	**Arti**	**70.15 327**		P		**P**	**18 25 03.0**	**-0.7**
ARU				IAmb		IAmb	18 25 05.5	
	comp=Z,2.4nm,0.5s							
RAYN	**Ar Rayn**	**78.22 292**		P		**P**	**18 25 50.7**	**-0.9**
ARCES	**ARCESS Array B**	**85.14 340**		P		**P**	**18 26 27.1**	**0.0**
	comp=Z,1.0nm,0.4s,baz=80,slow=7.0,SNR=9.0							
FINES	**FINESS Array B**	**86.83 332**		P		**P**	**18 26 35.1**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=75,slow=8.1,SNR=6.9							

SKHL ***31*** *18:13:58.2±0.2, 44°.22N×148°.07E, h50km±4km, mb4.0/2*
JMA ***31*** *18:13:58.2±0.3, 43°.89N×147°.76E, h0km, M3.6*
ISC 31 18:13:55.6±2.7, 44°.20N±0°.10×148°.0E±0°.2, h10km, n13, σ1§32/22, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.04**	**355**	*i*	P		**Pg**	**18 14 15.5**	**-0.1**
KUR					AMB		AMB	18 14 15.8	
	30nm,0.2s								
KUR					eS		**Sg**	**18 14 28.1**	**-1.0**
KUR					A		A	18 14 30.0	
	350nm,0.2s								
KUR					A		A	18 14 30.0	
	400nm,0.2s								
YUK	**Yuzh-Kuril'sk**	**1.55**	**265**	*i*	P		**Pn**	**18 14 23.6**	**+0.4**
YUK					AMB		AMB	18 14 25.4	
	30nm,0.2s								
YUK				*i*	S		**Sn**	**18 14 42.0**	**-1.3**
YUK					A		A	18 14 51.7	
	250nm,0.2s								
YUK					A		A	18 14 51.7	
	340nm,0.2s								
GRPR	**Tuman**	**1.61**	**263**	*e*	S		**Sn**	**18 14 44.0**	**-1.0**
NEM2	**Nemuro 2**	**1.83**	**244**		P		**Pn**	**18 14 27.3**	**+0.2**
NEM2				*e*	S		**Sn**	**18 14 48.1**	**-2.3**
NMR	**Nemuro--Hokkai**	**1.84**	**244**	*i*	P		**Pn**	**18 14 27.9**	**+0.7**
NMR				*e*	S		**Sn**	**18 14 49.8**	**-0.7**
JRA	**Rausu**	**2.09**	**264**		P		**Pn**	**18 14 32.3**	**+1.7**
JNSB	**Nemuroshibetsu**	**2.20**	**260**		P		**Pn**	**18 14 33.8**	**+1.6**
JKHN	**Kushirohamanak**	**2.34**	**242**		P		**Pn**	**18 14 34.8**	**+0.7**
JKHN				*e*	S		**Sn**	**18 15 01.0**	**-1.9**
JNK	**Nakash**	**2.45**	**257**		P		**Pn**	**18 14 37.1**	**+1.5**
JNK				*e*	S		**Sn**	**18 15 05.0**	**-0.6**
JAK	**Akkeshi**	**2.68**	**244**		P		**Pn**	**18 14 39.5**	**+0.7**
JAK				*e*	S		**Sn**	**18 15 10.1**	**-1.2**
JAR	**Ashorobuto**	**3.19**	**255**		P		**Pn**	**18 14 48.0**	**+2.1**
JAR				*e*	S		**Sn**	**18 15 24.9**	**+1.0**
JOB	**Onbets**	**3.29**	**248**		P		**Pn**	**18 14 48.8**	**+1.6**
JOB				*e*	S		**Sn**	**18 15 26.3**	**0.0**
JCH	**Churui**	**3.73**	**246**		P		**Pn**	**18 14 54.2**	**+1.0**

MAN ***31*** *18:17:12.7, 9°.41N×126°.91E, h1km, mb4.7, ML3.5, MS3.4*
NEIC ***31*** *18:17:14.0±2.5, 9°.33N±0°.07×126°.4E±0°.1, h10km±4km, mb4.6/31, Error ellipse: s-maj=15.7km s-min=9.1km az=74.0*
IDC ***31*** *18:17:19.3±2.8, 9°.26N×126°.37E, h48km±29km, mb3.6/15, mb1 3.7/17, mb1mx3.6/51, mbtmp3.9/17, ML4.6/3, MS3.3/1, Ms1 3.3/1, ms1mx2.6/42, Error ellipse: s-maj=31.8km s-min=12.5km az=76.0*
ISC 31 18:17:20.7±1.2, 9°.37N±0°.05×126°.68E±0°.08, h68km±11km, n69, σ2§02/69, mb4.2/29, 1C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.24**	**289**	⇓	*e*	P	**Pn**	**18 17 39.6**	**-2.7**
SCPH						eS	**Sn**	**18 17 59.6**	**+1.2**
MSLP	**Maasin**	**1.95**	**293**		*e*	P	**Pn**	**18 18 17.0**	**-1.0**
MSLP						eS	**Sn**	**18 18 20.7**	**+5.4**
BUKP	**Musuan**	**2.18**	**227**		*e*	P	**Pn**	**18 17 53.6**	**-1.2**
BUKP						eS	**Sn**	**18 18 24.1**	**+3.3**
DAV	**Davao City (W)**	**2.53**	**206**				**Pn**	**18 18 00.6**	**+1.0**
	30nm,0.3s,baz=240,slow=20,SNR=1.8								
DAV						S	Sn	18 18 18.8	-11
	42nm,0.3s,baz=258,slow=16,SNR=2.3								
DAV	**Davao City (W)**	**2.53**	**206**				**Pn**	**18 17 55.3**	**-4.2**
DMPH	**Davao City--Mi**	**2.55**	**207**	⇓	*i*	P	**Pn**	**18 18 01.4**	**+1.6**
DMPH					*i*	S	**Sn**	**18 18 33.2**	**+3.4**
KCP	**Kidapawan**	**2.82**	**214**		*i*	S	**Sn**	**18 18 40.8**	**+4.3**
LLP	**Lapu-Lapu**	**2.83**	**290**		*e*	P	**Pn**	**18 18 03.1**	**-0.6**
LLP						eS	**Sn**	**18 18 41.5**	**+4.7**
CTBH	**Cotabato--PC H**	**3.22**	**229**	⇑	*i*	P	**Pn**	**18 18 08.0**	**-1.0**
CNOP	**Candoni, Negro**	**4.01**	**277**		*e*	P	**Pn**	**18 18 19.5**	**-0.3**
CNOP						eS	**Sn**	**18 19 10.6**	**+5.0**
RCP	**Roxas**	**4.44**	**300**	⇓	*e*	P	Pn	18 18 30.2	+4.6
TGY	**Tagaytay City**	**7.33**	**310**		P		**Pn**	**18 19 01.7**	**-3.6**
	14nm,0.3s,baz=133,slow=19,SNR=1.6								
TGY					LR		LR	18 22 18.8	
	comp=Z,227nm,18.1s,baz=350,slow=42								
TNTI	**Ternate**	**8.57**	**175**		Pn		**Pn**	**18 19 21.0**	**-1.1**
SIJI	**Sorong**	**11.15**	**156**		P		**Pn**	**18 19 55.3**	**-2.1**
	1.0nm,0.3s,baz=306,slow=19,SNR=5.2								
FAKI	**Fak Fak**	**13.41**	**155**		Pn		**Pn**	**18 20 26.3**	**-1.8**
TPUB	**Ta-pu**	**15.02**	**338**		P		**P**	**18 20 51.8**	**-1.3**
YOJ	**Yonaguni jima**	**15.41**	**347**				**Pn**	**18 20 54.3**	**+0.1**
KSM	**Kuching**	**18.07**	**245**		P		**P**	**18 21 21.8**	**-5.2**
SOEI	**Soe**	**19.15**	**187**				**Pn**	**18 21 42.1**	**+1.7**
SOEI					IAmb		IAmb	18 21 51.3	
	comp=Z,25nm,1.0s								
BATI	**Baumata**	**19.68**	**189**		P		**P**	**18 21 44.5**	**0.0**
	comp=Z,3.8nm,0.3s,baz=4.2,slow=5.9,SNR=2.6								
MTN	**Manton Dam**	**22.50**	**169**		P		**P**	**18 22 14.1**	**-0.8**
MTN					IAmb		IAmb	18 22 41.3	
	comp=Z,35nm,1.5s								
KNRA	**Kununurra**	**24.97**	**175**		P		**P**	**18 22 38.5**	**+0.5**
KNRA					IAmb		IAmb	18 22 42.2	
	comp=Z,20nm,1.1s								
FITZ	**Fitzroy Crossi**	**27.31**	**182**		P		**P**	**18 22 59.6**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=13,slow=10,SNR=7.5								
FITZ	**Fitzroy Crossi**	**27.31**	**182**		P		**P**	**18 22 59.7**	**+0.5**
FITZ					IAmb		IAmb	18 23 29.7	
	comp=Z,18nm,1.4s								
PMG	**Port Moresby**	**27.63**	**132**		P		**P**	**18 23 03.3**	**+1.1**
KSRS	**Korea Array**	**27.98**	**2**		P		**P**	**18 23 07.1**	**+2.0**
	comp=Z,0.8nm,1.0s,baz=167,slow=8.2,SNR=4.2								
CMAR	**Chiang Mai Arr**	**28.36**	**292**		P		**P**	**18 23 06.3**	**-2.4**
	comp=Z,0.2nm,0.4s,baz=104,slow=6.6,SNR=2.5								
WB0	**Warramunga Arr**	**29.93**	**165**		P		**P**	**18 23 22.9**	**+0.4**
WB0					IAmb		IAmb	18 23 58.1	
	comp=Z,8.2nm,1.2s								
GSI	**Gunungsitoli**	**30.04**	**256**		P		**P**	**18 23 24.0**	**+0.4**
WRA	**Warramunga Arr**	**30.09**	**166**		P		**P**	**18 23 22.7**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=347,slow=9.4,SNR=2.6								
WB2	**Warramunga Arr**	**30.09**	**165**		P		**P**	**18 23 23.2**	**-0.8**
WB2					IAmb		IAmb	18 23 41.4	
	comp=Z,14nm,1.5s								
WR0	**Warramunga Arr**	**30.15**	**165**		P		**P**	**18 23 23.8**	**-0.7**
WR0					IAmb		IAmb	18 23 32.8	
	comp=Z,13nm,1.6s								
AS31	**Alice Springs**	**33.58**	**168**		P		**P**	**18 23 54.7**	**+0.1**
ASAR	**Alice Springs**	**33.58**	**168**		P		**P**	**18 23 54.4**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=347,slow=7.0,SNR=6.5								
ASAR					PcP		**PcP**	**18 26 33.8**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=2.9,slow=2.9,SNR=4.1								
MORW	**Morawa**	**39.57**	**195**		P		**P**	**18 24 44.6**	**-0.8**
MORW					IAmb		IAmb	18 25 37.2	
	comp=Z,30nm,1.6s								
H11S3	**WAKE ISLAND Hy**	**39.80**	**72**		T		T	19 07 47.3	
	baz=262,slow=70,SNR=23								
H11S1	**WAKE ISLAND Hy**	**39.81**	**72**		T		T	19 07 50.5	
	baz=262,slow=70,SNR=15								
H11S2	**WAKE ISLAND Hy**	**39.81**	**72**		T		T	19 07 47.4	
	baz=262,slow=70,SNR=12								
FORT	**Forrest**	**39.94**	**178**		P		**P**	**18 24 48.1**	**-0.3**
FORT					IAmb		IAmb	18 25 49.1	
	comp=Z,15nm,1.1s								
KLR	**Kul'dur**	**39.96**	**5**		P		**P**	**18 24 50.7**	**+2.3**
	comp=Z,0.6nm,0.5s,baz=132,slow=14,SNR=2.0								
H11N1	**WAKE ISLAND Hy**	**40.16**	**71**		T		T	19 08 24.9	
	baz=269								
H11N2	**WAKE ISLAND Hy**	**40.17**	**71**		T		T	19 08 22.3	
	baz=269								
H11N3	**WAKE ISLAND Hy**	**40.18**	**71**		T		T	19 08 21.4	
	baz=269								
SONM	**Songino Array**	**42.00**	**340**		P		**P**	**18 25 05.6**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=148,slow=11,SNR=3.6								
BBOO	**Buckleboo**	**42.88**	**168**		P		**P**	**18 25 11.6**	**-0.9**
BBOO					IAmb		IAmb	18 25 27.9	
	comp=Z,36nm,1.5s								
NWAO	**Narrogin (SRO)**	**43.01**	**192**		P		**P**	**18 25 12.1**	**-1.5**
STKA	**Stephens Creek**	**43.42**	**161**		P		**P**	**18 25 17.6**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=308,slow=8.4,SNR=3.1								
STKA	**Stephens Creek**	**43.42**	**161**		P		**P**	**18 25 16.6**	**-0.3**
ARMA	**Armidale**	**46.26**	**150**		P		**P**	**18 25 39.0**	**-0.6**
PETK	**Petropavlovsk-**	**50.29**	**24**		P		**P**	**18 26 12.8**	**+2.5**
	comp=Z,0.9nm,0.9s,baz=82,slow=33,SNR=1.7								
MK31	**Makanchi Array**	**52.99**	**323**		P		**P**	**18 26 28.3**	**-2.3**
MKAR	**Makanchi Array**	**52.99**	**323**		P		**P**	**18 26 30.6**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=127,slow=7.9,SNR=10.0								
MAKZ	**Makanchi**	**53.18**	**323**		P		**P**	**18 26 31.8**	**-0.1**
KDJ	**Kajisay**	**54.21**	**316**		P		**P**	**18 26 38.7**	**-1.0**
NIL	**Nilore**	**54.57**	**305**		P		**P**	**18 26 41.4**	**-1.0**
NIL					IAmb		IAmb	18 26 42.9	
	comp=Z,6.5nm,0.8s								
ZALV	**Zalesovo Beam**	**55.61**	**331**		P		**P**	**18 26 48.4**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=126,slow=6.8,SNR=3.8								
KURK	**Kurchatov**	**57.03**	**326**		P		**P**	**18 26 59.5**	**-0.1**
KURK					IAmb		IAmb	18 27 11.8	
	comp=Z,4.6nm,1.0s								
GAR	**Garm**	**58.18**	**310**		P		**P**	**18 27 06.8**	**-1.2**
GAR					IAmb		IAmb	18 27 19.4	
	comp=Z,5.4nm,0.7s								
KK31	**Karatay Array**	**59.17**	**315**		P		**P**	**18 27 13.7**	**-1.0**
TIXI	**Tiksi**	**62.24**	**1**		P		**P**	**18 27 36.8**	**+1.8**
	comp=Z,0.9nm,0.5s,baz=207,slow=4.9,SNR=6.4								
TIXI	**Tiksi**	**62.24**	**1**		P		**P**	**18 27 34.7**	**-0.3**
TIXI					IAmb		IAmb	18 27 53.3	
	comp=Z,3.2nm,1.1s								
BRVK	**Borovoye**	**62.70**	**326**		P		**P**	**18 27 37.3**	**-1.1**
BRVK					IAmb		IAmb	18 27 39.3	
	comp=Z,3.2nm,0.9s								
RPZ	**Rata Peaks**	**66.41**	**146**				**P**	**18 28 04.1**	**+1.3**
BKZ	**Black Stump Fm**	**66.84**	**140**		P		**P**	**18 28 07.9**	**+2.3**
ARU	**Arti**	**70.20**	**327**		P		**P**	**18 28 25.2**	**-1.0**
ARU					IAmb		IAmb	18 28 26.6	
	comp=Z,5.2nm,1.2s								
RAYN	**Ar Rayn**	**78.28**	**292**		P		**P**	**18 29 12.6**	**-1.4**
RAYN					IAmb		IAmb	18 29 34.1	
	comp=Z,4.4nm,1.3s								
ARCES	**ARCESS Array B**	**85.17**	**340**		P		**P**	**18 29 50.5**	**+1.2**
	comp=Z,1.6nm,0.7s,baz=83,slow=6.7,SNR=9.0								
FINES	**FINESS Array B**	**86.87**	**332**		P		**P**	**18 29 59.0**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=186,slow=34,SNR=2.3								
YKA	**Yellowknife Ar**	**94.41**	**24**		P		**P**	**18 30 33.5**	**+0.5**
	comp=Z,0.1nm,0.5s,baz=296,slow=3.8,SNR=3.0								

MAN 31 18:21:08.2, 10°.07N×124°.37E, h18km, mb4.7, ML3.6, MS3.5, 3D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.47**	**301**	⇓	*i*	P	Pg	18 21 17.8	+0.1
LLP					*i*	S	Sb	18 21 25.9	+1.4
MSLP	**Maasin**	**0.48**	**83**		*e*	P	Pb	18 21 19.1	+0.9
MSLP					*e*	S	Sn	18 21 29.1	+0.8
CNOP	**Candoni, Negro**	**1.72**	**262**		*e*	P	Pn	18 21 37.3	+0.1
CNOP					*e*	S	Sb	18 22 00.1	-0.6
RCP	**Roxas**	**2.18**	**313**	⇓	*e*	P	Pb	18 21 47.0	-0.1
CTBH	**Cotabato--PC H**	**2.84**	**183**	⇓	*i*	P	Pn	18 21 53.0	+0.4

KRSC ***31*** *18:26:06.9±2.1, 54°.93N×165°.61E, h38km±14km, ML3.9*
IDC ***31*** *18:26:07.5±1.3, 54°.94N×165°.70E, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.4/54, mbtmp3.6/6, ML2.9/1, MS2.3/1, Ms1 2.3/1, ms1mx2.1/54, Error ellipse: s-maj=88.5km s-min=24.1km az=149.0*
ISC 31 18:26:09.0±1.4, 55°.06N±0°.06×165°.44E±0°.06, h13km±10km, n33, σ1§59/47, mb3.5/5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.34**	**64**		*e*	P	**Pg**	**18 26 15.7**	**-0.1**
BKI					*e*	S	**Sg**	**18 26 20.1**	**-0.3**
KBTR	**Krutoberegovo**	**1.88**	**309**		*e*	P	**Pn**	**18 26 40.0**	**-0.8**
KBTR					*e*	S	**Sn**	**18 27 03.9**	**-0.5**
KBG	**Krutoberegovo**	**1.96**	**309**		*e*	P	**Pn**	**18 26 41.8**	**-0.1**
KBG					*e*	S	**Sn**	**18 27 06.2**	**-0.1**
BZGR	**Bezymyannyi-Gr**	**2.84**	**290**		*e*	P	**Pn**	**18 26 56.3**	**+2.2**
LGNR	**Loginova**	**2.89**	**293**		*e*	P	**Pn**	**18 26 57.4**	**+2.5**
LGNR					*e*	S	**Sn**	**18 27 32.0**	**+2.4**
TUMD	**Tumrok D**	**2.90**	**275**		*e*	P	**Pn**	**18 26 56.5**	**+1.7**
TUMD					*e*	S	**Sn**	**18 27 31.4**	**+1.9**
KLY	**Klyuchi**	**2.99**	**297**		*e*	P	**Pn**	**18 26 56.5**	**+0.5**
KLY					*e*	S	**Sn**	**18 27 31.6**	**-0.1**
KIRR	**Kirishev**	**3.04**	**289**		*e*	P	**Pn**	**18 26 58.6**	**+1.8**
TUMR	**Tumrok**	**3.05**	**276**		*e*	P	**Pn**	**18 26 58.9**	**+2.0**
TUMR					*e*	S	**Sb**	**18 27 37.8**	**-2.4**
KMNR	**Kamenistaya**	**3.05**	**285**		*e*	P	**Pn**	**18 26 59.5**	**+2.5**
KMNR					*e*	S	**Sb**	**18 27 38.5**	**-1.8**
SDLR	**Sedlovina**	**4.25**	**248**		*e*	P	**Pn**	**18 27 14.7**	**+1.3**
SDLR					*e*	S	**Sn**	**18 28 02.5**	**-0.3**
SMAR	**Somma**	**4.30**	**248**		*e*	P	**Pn**	**18 27 15.6**	**+1.4**
SMAR					*e*	S	**Sn**	**18 28 03.8**	**-0.4**
KRER	**Koryakskii**	**4.31**	**249**		*e*	P	**Pn**	**18 27 16.4**	**+2.1**
KRER					*e*	S	**Sn**	**18 28 03.4**	**-1.0**
UGLR	**Uglovaya**	**4.31**	**247**		*e*	P	**Pn**	**18 27 16.0**	**+1.7**
UGLR					*e*	S	**Sn**	**18 28 03.7**	**-0.7**
AVH	**Avacha**	**4.33**	**248**		*e*	P	**Pn**	**18 27 16.4**	**+1.9**
AVH					*e*	S	**Sn**	**18 28 04.5**	**-0.3**
KRX	**Arik**	**4.34**	**250**		*e*	P	**Pn**	**18 27 16.4**	**+1.8**
KRX					*e*	S	**Sn**	**18 28 04.0**	**-1.1**
KOK	**Koryaka**	**4.37**	**249**		*e*	P	**Pn**	**18 27 16.9**	**+1.8**
KOK					*e*	S	**Sn**	**18 28 04.8**	**-1.1**
PET	**Petropavlovsk**	**4.49**	**246**		*e*	P	**Pn**	**18 27 18.3**	**+1.7**

	baz=266								
TWF1	**Yuli**	**0.67**	**211**	*eP*	**Pg**	**18 32 33.4**	**-0.1**
	baz=220								
TWF1				*eS*	**Sb**	**18 32 44.5**	**+0.9**
	baz=220								
NDT	**Datong Townshi**	**0.68**	**348**	P	**Pg**	**18 32 34.1**	**+0.3**
	baz=349								
NDT				*eS*	**Sg**	**18 32 43.2**	**+0.4**
	baz=349								
DPDB	**Guoxing**	**0.68**	**279**	P	**Pg**	**18 32 34.2**	**-0.4**
	baz=279								
DPDB				*eS*	**Sg**	**18 32 43.0**	**+0.3**
	baz=279								
TWC	**Suao**	**0.70**	**14**	*eP*	**Pb**	**18 32 34.4**	**-0.4**
	baz=7.0								
TWC				*eS*	**Sb**	**18 32 44.0**	**-0.5**
	baz=7.0								
TYC	**Yuchr**	**0.74**	**268**	*eP*	**Pg**	**18 32 34.7**	**-0.1**
	baz=279								
TYC				*eS*	**Sg**	**18 32 43.9**	**-0.6**
	baz=279								
WHP	**Taichung City**	**0.74**	**298**	*eP*	**Pb**	**18 32 35.3**	**-0.4**
	baz=290								
WHP				*eS*	**Sb**	**18 32 45.5**	**-0.4**
	baz=290								
WHYT	**Xinyi Township**	**0.78**	**253**	*eP*	**Pb**	**18 32 36.0**	**-0.2**
	baz=260								
WHYT				*eS*	**Sg**	**18 32 45.8**	**0.0**
	baz=260								
YHNB	**Yeheng**	**0.78**	**340**	*eP*	**Pb**	**18 32 35.9**	**-0.4**
	baz=341								
YHNB				*eS*	**Sb**	**18 32 47.4**	**+0.3**
	baz=341								
TWE	**Neicheng**	**0.79**	**0**	P	**Pb**	**18 32 36.1**	**-0.3**
	baz=1.0								
TWE				*eS*	**Sb**	**18 32 47.0**	**-0.1**
	baz=1.0								
YUS	**Yu-Shan**	**0.79**	**236**	P	**Pb**	**18 32 36.6**	**-0.1**
	baz=233								
YUS				*eS*	**Sb**	**18 32 48.4**	**+0.7**
	baz=233								
NSK	**Sanguang**	**0.79**	**339**	*eP*	**Pb**	**18 32 36.2**	**-0.3**
	baz=340								
NSK				*eS*	**Sg**	**18 32 46.2**	**-0.1**
	baz=340								
FULB	**Fuli**	**0.81**	**205**	*eP*	**Pb**	**18 32 37.2**	**+0.6**
	baz=217								
ILA	**Ilan**	**0.83**	**5**	*eP*	**Pn**	**18 32 37.7**	**-0.7**
	baz=356								
NWLT	**Wulai**	**0.86**	**350**	*eP*	**Pb**	**18 32 36.6**	**-0.5**
	baz=350								
NWLT				*eS*	**Sb**	**18 32 48.6**	**-0.6**
	baz=350								
WJS	**Zhushan**	**0.87**	**263**	*eP*	**Pn**	**18 32 38.8**	**-0.1**
	baz=263								
WJS				*eS*	**Sb**	**18 32 50.2**	**+0.8**
	baz=263								
CHKT	**Chengkung**	**0.87**	**199**	*eP*	**Pg**	**18 32 37.6**	**+0.3**
	baz=183								
ALS	**Alishan**	**0.89**	**242**	*eP*	**Pb**	**18 32 38.3**	**-0.1**
	baz=240								
ALS				*eS*	**Sb**	**18 32 50.2**	**-0.3**
	baz=240								
WNT	**Mingjian**	**0.90**	**267**	*eP*	**Pn**	**18 32 39.1**	**-0.2**
	baz=266								
TWQ1	**Liyutan**	**0.92**	**297**	*eP*	**Pn**	**18 32 39.4**	**-0.1**
	baz=298								
NSTT	**Nanjuang**	**0.92**	**319**	*eP*	**Pb**	**18 32 38.8**	**+0.1**
	baz=320								
NSTT				*eS*	**Sb**	**18 32 51.3**	**+0.2**
	baz=320								
LIOB	**Emei**	**0.93**	**320**	*eP*	**Pn**	**18 32 39.2**	**-0.5**
	baz=321								
LIOB				*eS*	**Sg**	**18 32 49.4**	**-1.1**
	baz=321								
TCU	**Taichung**	**0.93**	**284**	*eP*	**Pg**	**18 32 37.6**	**-0.8**
	baz=284								
NTC	**Toucheng**	**0.93**	**9**	*eP*	**Pb**	**18 32 38.8**	**0.0**
	baz=359								
NTC				*eS*	**Sb**	**18 32 51.1**	**-0.2**
	baz=359								
ELDTW	**Lidau**	**0.95**	**219**	*eP*	**Pg**	**18 32 37.8**	**-1.0**
	baz=214								
NSY	**Sanyi**	**0.96**	**300**	*eP*	**Pn**	**18 32 40.2**	**+0.1**
	baz=313								
NSY				*eS*	**Sn**	**18 32 53.3**	**-0.5**
	baz=313								
CHN5	**Tsauling**	**0.96**	**250**	*eP*	**Pn**	**18 32 40.1**	**-0.2**
	baz=256								
NMLH	**Miaoli**	**1.00**	**307**	*eP*	**Pn**	**18 32 40.6**	**-0.1**
	baz=308								
PTSB	**Yuanli**	**1.02**	**301**	*eP*	**Pn**	**18 32 42.0**	**+1.0**
	baz=301								
WCHH	**Zhanghua**	**1.02**	**279**	*eP*	**Pn**	**18 32 41.9**	**+0.9**
	baz=278								
WDJ	**Dajia District**	**1.02**	**294**	*eP*	**Pn**	**18 32 41.4**	**+0.4**
	baz=295								
NHDH	**Xindian Distri**	**1.04**	**353**	*eP*	**Pb**	**18 32 40.1**	**-0.5**
	baz=354								
WGK	**Gukeng**	**1.04**	**257**	*eP*	**Pn**	**18 32 41.6**	**+0.3**
	baz=254								
TIPB	**Shuangxi**	**1.05**	**8**	*eP*	**Pn**	**18 32 41.1**	**-0.3**
	baz=360								
TWA	**Mucha**	**1.05**	**356**	*eP*	**Pn**	**18 32 41.3**	**-0.1**
	baz=358								
SBCB	**Hsinchu**	**1.06**	**324**	*eP*	**Pg**	**18 32 40.9**	**0.0**
	baz=325								
WDLH	**Douliu**	**1.06**	**257**	*eP*	**Pn**	**18 32 41.8**	**+0.3**
	baz=255								
TAP1	**Taipei**	**1.11**	**353**	*eP*	**Pn**	**18 32 42.4**	**+0.2**
	baz=345								
TWB1	**Santiao Chiao**	**1.11**	**15**	*eP*	**Pb**	**18 32 41.0**	**-0.9**
	baz=9.0								
TAP	**Taipei**	**1.11**	**353**	*eP*	**Pn**	**18 32 42.6**	**+0.3**
	baz=345								
NCUH	**Zhongli**	**1.12**	**337**	*eP*	**Pn**	**18 32 43.3**	**+1.0**
	baz=347								
NCUH				*eS*	**Sn**	**18 32 60.0**	**+2.1**
	baz=347								
NCU	**National Centr**	**1.12**	**337**	*eP*	**Pn**	**18 32 43.2**	**+0.8**
	baz=344								
STYT	**Tauyuan**	**1.13**	**228**	*eP*	**Pb**	**18 32 42.2**	**-0.1**
	baz=229								
TPUB	**Ta-pu**	**1.14**	**237**	*eP*	**Pg**	**18 32 42.6**	**+0.1**
	baz=233								
NWF	**Wu-fen Shan**	**1.14**	**5**	*eP*	**Pn**	**18 32 42.9**	**+0.2**
	baz=6.0								
WFSB	**Wu-fen Shan**	**1.14**	**5**	*eP*	**Pg**	**18 32 43.1**	**+0.6**
	baz=7.0								
WTP	**Ta-pu**	**1.18**	**235**	*eP*	**Pg**	**18 32 43.5**	**+0.2**
	baz=240								
TWS1	**Kuangyinshan**	**1.19**	**349**	*eP*	**Pg**	**18 32 43.8**	**+0.5**
	baz=350								
RLNB	**Erlin**	**1.20**	**268**	*eP*	**Pn**	**18 32 41.6**	**-1.7**
	baz=269								
YM01	**YM01**	**1.21**	**356**	*eP*	**Pg**	**18 32 44.4**	**+0.6**
	baz=8.0								
CHY	**Chiayi**	**1.22**	**250**	*eP*	**Pg**	**18 32 44.3**	**+0.4**
	baz=246								
YM10	**YM10**	**1.22**	**356**	*eP*	**Pn**	**18 32 43.0**	**-0.8**
	baz=345								
TWG	**Pinlang**	**1.23**	**206**	*eP*	**Pn**	**18 32 42.9**	**-1.0**
	baz=200								
TWGBT	**Beinan**	**1.23**	**206**	*eP*	**Pn**	**18 32 42.1**	**-1.8**
	baz=200								
YM11	**YM11**	**1.23**	**356**	*eP*	**Pg**	**18 32 44.8**	**+0.5**
	baz=8.0								
NTST	**Danshui**	**1.24**	**351**	*eP*	**Pg**	**18 32 44.7**	**+0.2**
	baz=352								
TWK	**Hsinying**	**1.27**	**239**	*eP*	**Pg**	**18 32 45.1**	**+0.2**
	baz=235								
JYNG	**Yonagunijimaku**	**1.28**	**66**	P	**Pn**	**18 32 44.4**	**-0.1**
JYNG				*eS*	**Sg**	**18 33 01.6**	**-0.1**
CHN1	**Nanshi**	**1.28**	**235**	*eP*	**Pg**	**18 32 45.2**	**+0.1**
	baz=239								
SNST	**Tainan City**	**1.28**	**237**	*eP*	**Pg**	**18 32 45.6**	**+0.4**
	baz=241								
SGST	**Jiashian**	**1.30**	**230**	*eP*	**Pn**	**18 32 44.5**	**-0.4**
	baz=223								
SLGT	**Liugui**	**1.32**	**225**	*eP*	**Pn**	**18 32 45.1**	**0.0**
	baz=222								
YOJ	**Yonaguni jima**	**1.34**	**66**	P	**Pb**	**18 32 45.8**	**+0.1**
YOJ				*eS*	**Sg**	**18 33 04.6**	**+1.0**
TWY	**Chenhua**	**1.34**	**357**	*eP*	**Pg**	**18 32 47.1**	**+0.8**
	baz=346								
WSF	**Szhu**	**1.35**	**258**	*eP*	**Pg**	**18 32 47.1**	**+0.6**
	baz=256								
ECL	**Taimali**	**1.48**	**206**	*eP*	**Pn**	**18 32 45.9**	**-1.4**
	baz=182								
SSD	**Sandimen**	**1.51**	**219**	*eP*	**Pb**	**18 32 48.7**	**-0.1**
	baz=212								
TWM1	**Shoushan**	**1.59**	**226**	*eP*	**Pg**	**18 32 51.5**	**+0.5**
	baz=220								
MASBT	**Mashibuluo**	**1.62**	**216**	*eP*	**Pn**	**18 32 48.7**	**-0.5**
	baz=197								
EAST	**Anshuo**	**1.71**	**206**	*eP*	**Pn**	**18 32 49.5**	**-1.0**
	baz=183								
SCZT	**Fangliau**	**1.83**	**212**	*eP*	**Pn**	**18 32 52.0**	**-0.1**
	baz=191								
IRIF	**Iriomote-Funau**	**1.93**	**78**	P	**Pn**	**18 32 52.8**	**-0.6**
IRIF				*eS*	**Sn**	**18 33 17.4**	**-0.4**
WDGT	**Dungji**	**1.96**	**250**	*eP*	**Pn**	**18 32 54.2**	**+0.4**
	baz=248								
PHUB	**P'eng-hu**	**1.96**	**258**	*eP*	**Pn**	**18 32 54.6**	**+0.7**
	baz=256								
JISG	**Ishigakijimahi**	**2.50**	**74**	P	**Pn**	**18 33 01.3**	**0.0**

IDC ***31*** *18:33:05.0±0.4, 9˚.28N×126˚.47E, h0km, mb4.5/36, mb1 4.5/37, mb1mx4.5/41, mbtmp4.5/37, ML4.5/1, MS4.2/10, Ms1 4.2/10, ms1mx3.9/50, Error ellipse: s-maj=16.4km s-min=9.0km az=82.0*

NEIC ***31*** *18:33:05.7±2.2, 9˚.42N±0˚.05×126˚.62E±0˚.06, h10km±1km, mb5.1/168, Error ellipse: s-maj=10.5km s-min=9.2km az=267.0*

MOS ***31*** *18:33:06.0±1.2, 9˚.29N×126˚.56E, h24km, mb5.1/12, Error ellipse: s-maj=9.2km s-min=5.2km az=110.4*

MAN ***31*** *18:33:08.2, 9˚.34N×126˚.73E, h18km, mb5.6, ML4.6, MS4.9*

GCMT ***31*** *18:33:11.7±0.2, 9˚.39N±0˚.01×126˚.69E±0˚.02, h22km±1km, MW5.1/101, Moment Tensor Solution. s44,c51; s101,c139; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.93±.25; Mθθ=0.84±.13; Mϕϕ3.76±.17; Mrθ2.10±.27; Mθϕ-1.46±.08; Mϕr-2.88±.29; Best double couple: Mo5.09200×10¹⁶ NP1:ϕs187.00000°, δ27.00000°, λ-53.00000°. NP2:ϕs327.00000°, δ69.00000°, λ-107.00000°. Principal axes: T 5.5450, Plg22.0000°, Azm70.0000°; N -0.9120, Plg16.0000°, Azm333.0000°; P -4.6380, Plg62.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***31*** *18:33:12.1±0.5, 9˚N±4˚×12˚7E±˚, h48km±4km, M4.6/61, mb4.8/61, mB5.2/31, MLv4.6/2, Mw(mB)4.6/31, Mwp5.1/2*

KLM ***31*** *18:33:16.0, 9˚.59N×126˚.69E, h90km, mb4.8*

ISC 31 18:33:09.1±0.8, 9˚32N±0˚02×126˚59E±0˚04, h30km±5km, n401, σ2ş01/431, mb4.9/140, MS4.2/19, 13C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
BIPH	**Bislig**	**1.15**	**191**	*eP*		Pb 18 33 38.7	+8.2
BIPH				*eS*		**Sb 18 33 52.8**	**+7.7**
SCPH	**Surigao**	**1.18**	**293**	*eP*		**Pb 18 33 31.1**	**+0.3**
SCPH				*eS*		**Sb 18 33 48.5**	**+2.8**
MSLP	**Maasin**	**1.88**	**295**	*eP*		**Pb 18 33 41.7**	**-1.2**
MSLP				*eS*		**Sb 18 34 08.4**	**+2.4**
BUKP	**Musuan**	**2.08**	**227**	*eP*		**Pb 18 33 44.8**	**-1.5**
BUKP				*eS*		**Sb 18 34 12.4**	**+0.6**
MATI	**Mati**	**2.38**	**188**	*eP*		**Pn 18 33 46.8**	**+0.6**
MATI				*eS*		**Sb 18 34 19.9**	**-0.5**
DAV	**Davao City (W)**	**2.45**	**204**	Pn		**Pb 18 33 51.0**	**-1.5**
	118nm,0.3s,baz=79,slow=6.1,SNR=31						
DAV				Sn		**Sn 18 34 14.7**	**-1.4**
	174nm,0.3s,baz=69,slow=12,SNR=8.0						
DAV				Lg		Lg 18 34 27.3	
	275nm,0.3s,baz=355,slow=23,SNR=8.1						
DAV				LR		LR 18 34 58.1	
	comp=Z,19μm,21.6s,baz=30,slow=48						
DAV	**Davao City (W)**	**2.45**	**204**	P		**Pn 18 33 47.6**	**+0.4**
DAV	**Davao City (W)**	**2.45**	**204**			**Pb 18 33 50.0**	**-2.6**
DMPH	**Davao City--Mi**	**2.47**	**206**	*eP*		**Pb 18 33 52.6**	**-0.3**
DMPH				*i* S		**Sb 18 34 21.3**	**-1.6**
KCP	**Kidapawan**	**2.74**	**213**	*i* P		**Pn 18 33 53.6**	**+2.5**
KCP				*i* S		**Sb 18 34 30.9**	**+0.3**
LLP	**Lapu-Lapu**	**2.77**	**291**	*eP*		**Pb 18 33 55.2**	**-2.7**
LLP				*eS*		**Sb 18 34 31.4**	**0.0**
DDMP	**Don Marcelino,**	**3.31**	**195**	*eP*		**Pn 18 34 00.1**	**+1.1**
DDMP				*eS*		**Sn 18 34 42.1**	**+4.7**
SKMP	**Bagumbayan, Su**	**3.44**	**216**	*eP*		**Pn 18 34 01.4**	**+0.7**
PAGZ	**Pagadian**	**3.49**	**245**	*eP*		**Pn 18 34 04.6**	**+3.2**
PAGZ				*eS*		**Sn 18 34 46.3**	**+4.5**
GSPH	**General Santos**	**3.60**	**207**	*iP*		**Pn 18 34 06.4**	**+3.3**
CNP	**Catarman**	**3.69**	**329**	*eP*		**Pn 18 34 07.0**	**+2.9**
CNP				*eS*		**Sn 18 34 49.9**	**+3.3**
CNOP	**Candoni, Negro**	**3.92**	**278**	*eP*		**Pn 18 34 10.1**	**+2.7**
CNOP				*eS*		**Sb 18 34 59.0**	**-5.7**
GUIM	**Jordan**	**4.14**	**289**	*eP*		**Pn 18 34 13.1**	**+2.7**
GUIM				*eS*		**Sn 18 34 57.4**	**-0.5**
RCP	**Roxas**	**4.38**	**301**	*eP*		**Pn 18 34 18.0**	**+4.3**
JAP	**San Jose, Anti**	**4.78**	**288**	*eP*		**Pn 18 34 21.8**	**+2.6**
PVCP	**Virac**	**4.87**	**331**	*eP*		**Pn 18 34 23.3**	**+2.9**
PVCP				*eS*		**Sb 18 35 33.5**	**+1.7**
ZCP	**Zamboanga City**	**5.06**	**242**	*eP*		Pb 18 34 31.6	-5.4
CUYO	**Cuyo Island**	**5.69**	**286**	*eP*		**Pn 18 34 36.1**	**+4.4**
BOAC	**Boac**	**6.21**	**312**	*eP*		**Pn 18 34 42.8**	**+4.0**
SJMP	**San Jose**	**6.21**	**301**	*eP*		**Pn 18 34 43.0**	**+4.2**
PGP	**Puerto Galera**	**6.91**	**307**	*eP*		Pn 18 34 55.8	+7.3
POLP	**Polilio Island**	**7.04**	**320**	*eP*		**Pn 18 34 51.2**	**+1.1**
TGY	**Tagaytay City**	**7.29**	**311**	Pn		Pn 18 35 00.4	+6.7
	23nm,0.3s,baz=138,slow=9.3,SNR=9.4						
BALP	**Baler**	**8.04**	**323**	*eP*		**Pn 18 35 04.9**	**+1.0**
BALP				*eS*		**Sn 18 36 27.6**	**-6.3**
TNTI	**Ternate**	**8.53**	**175**	P		**Pn 18 35 13.6**	**+2.9**
	2μm162nm,1.3s						
TNTI	**Ternate**	**8.53**	**175**	Pn		**Pn 18 35 11.2**	**+0.5**
KMSI	**Cibinong**	**9.07**	**197**	P		Pn 18 35 23.3	+5.2
	2μm237nm,0.8s						
MRSI	**Marisa**	**9.93**	**208**	P		**Pn 18 35 34.0**	**+4.1**
	2μm846nm96nm,0.9s						
LBMI	**Labuha**	**9.94**	**175**	P		**Pn 18 35 31.6**	**+1.6**
	2μm155nm,1.0s						
SZP	**Santa**	**10.12**	**325**	Pn		**Pn 18 35 33.8**	**+1.3**
KKM	**Kota Kinabalu**	**10.78**	**253**	Pn		**Pn 18 35 41.6**	**-0.1**
LUWI	**Luwuk**	**10.98**	**200**	P		**Pn 18 35 48.0**	**+3.8**
	2μm240nm,1.0s						
LUWI	**Luwuk**	**10.98**	**200**	Pn		**Pn 18 35 43.7**	**-0.5**
MPSI	**Mapaga**	**11.14**	**217**	P		**Pn 18 35 50.5**	**+4.1**
	2μm441nm11nm,1.1s						
SIJI	**Sorong**	**11.15**	**155**	Pn		**Pn 18 35 47.9**	**+1.4**
	3.6nm,0.3s,baz=331,slow=11,SNR=1.1						
SIJI				Sn		**Sn 18 37 42.8**	**-7.5**
	1.1nm,0.3s,baz=258,slow=23,SNR=1.8						
SANI	**Sanana**	**11.31**	**183**	P		**Pn 18 35 50.0**	**+1.1**
	888nm81nm,1.0s						
NLAI	**Namlea**	**12.49**	**178**	P		**Pn 18 36 07.3**	**+2.4**
	48nm,0.8s						
MSAI	**Masohi**	**12.80**	**169**	P		**Pn 18 36 13.6**	**+4.4**
	205nm14nm,0.6s						
AAI	**Ambon**	**13.02**	**173**	P		**Pn 18 36 16.1**	**+3.9**
	66nm,0.9s						
FAKI	**Fak Fak**	**13.41**	**155**	P		**Pn 18 36 17.2**	**-0.3**
	1μm71nm,1.3s						
FAKI	**Fak Fak**	**13.41**	**155**	Pn		**Pn 18 36 18.0**	**+0.5**
TTSI	**Tana Toraja**	**14.02**	**209**	P		**P 18 36 30.5**	**-2.8**
	1μm88nm,1.0s						
BKB	**Balikpapan**	**14.27**	**223**	P		**P 18 36 34.2**	**-2.0**
SPSI	**Sidrap Palu**	**14.85**	**208**	P		**P 18 36 40.6**	**-2.0**
	1μm40nm,0.8s						
YULB	**Yu-li**	**14.88**	**341**	Pn		**Pn 18 36 38.3**	**+0.8**
TPUB	**Ta-pu**	**15.02**	**338**			**Pn 18 36 41.5**	**+2.0**
BNSI	**Bone**	**15.09**	**206**	P		**P 18 36 44.6**	**-0.6**
	2μm232nm,1.1s						
SSLB	**Suanglung**	**15.36**	**340**			**Pn 18 36 45.0**	**+1.1**
YOJ	**Yonaguni jima**	**15.44**	**348**	P		**Pn 18 36 44.5**	**-0.3**
YOJ				pmax	pmax		
	comp=Z,94nm,0.7s						
YOJ	**Yonaguni jima**	**15.44**	**348**			**Pn 18 36 44.5**	**-0.3**
YOJ				IAmb	IAmb	18 37 43.8	
	comp=Z,94nm,0.7s						
NACB	**Ninganchiao**	**15.52**	**343**	Pn		**Pn 18 36 45.5**	**-0.4**
KAPI	**Kappang**	**15.79**	**206**	Pn		**P 18 36 52.3**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=23,slow=7.7,SNR=8.5						
KAPI				LR		LR 18 43 28.0	
	comp=Z,904nm,19.8s,baz=24,slow=40						
KAPI	**Kappang**	**15.79**	**206**	P		**Pn 18 36 51.1**	**+1.7**
KAPI				pmax	pmax		
	comp=Z,75nm,1.3s						
KAPI	**Kappang**	**15.79**	**206**	Pn		**Pn 18 36 51.1**	**+1.7**
SBUM	**Sibu**	**15.83**	**245**			**P 18 36 52.4**	**-1.2**
SBUM	**Sibu**	**15.83**	**245**	P		**P 18 36 59.0**	**+5.5**
BKSI	**Bulukumba**	**15.91**	**204**	P		**P 18 36 53.9**	**-0.5**
	comp=Z,632nmcomp=Z,50nm,1.0s						
YHNB	**Yeheng**	**16.05**	**343**	Pn		**Pn 18 36 52.0**	**-0.9**
KBKI	**Kotabaru**	**16.28**	**220**	P		**P 18 37 00.8**	**+2.3**
	comp=Z,713nmcomp=Z,97nm,0.9s						
SMPI	**Sarmi**	**16.50**	**132**	P		**P 18 37 00.4**	**-0.5**
	comp=Z,828nmcomp=Z,44nm,1.6s						
KNMB	**Chin-men Tao**	**16.97**	**334**			**Pn 18 37 03.6**	**-0.8**
QZH	**Quanzhou**	**17.30**	**335**	P		**P 18 37 14.5**	**+4.8**
QZH				S		**Sn 18 40 22.5**	**+2.3**
QZH				LR		LR	
	comp=N,490nm,18.0s						
QZH				LR		LR	
	comp=E,490nm,22.7s						
QZH				LR		LR	
	comp=Z,820nm,19.4s						
JOW	**Kunigami**	**17.49**	**5**	P		**P 18 37 16.5**	**+4.7**
	baz=134,slow=16,SNR=2.9						
JOW	**Kunigami**	**17.49**	**5**	Pn		**Pn 18 37 08.5**	**-2.3**
KSM	**Kuching**	**17.97**	**245**	P		**Pn 18 37 15.9**	**-1.1**
KSM	**Kuching**	**17.97**	**245**	P		**P 18 37 23.0**	**+5.7**
DLV	**T Lat**	**17.98**	**280**	P		**Pn 18 37 14.3**	**-2.9**
GENI	**Genyem**	**17.98**	**131**	P		**P 18 37 18.8**	**+1.5**
	comp=Z,1μmcomp=Z,72nm,0.8s						
JAY	**Jayapura**	**18.34**	**129**	P		**Pn 18 37 26.5**	**+5.0**
	comp=Z,0.2nm,0.3s,baz=227,slow=9.6,SNR=6.9						
JAY				LR		LR 18 44 17.0	
	comp=Z,873nm,18.2s,baz=304,slow=36						
JAY	**Jayapura**	**18.34**	**129**	P		**Pn 18 37 23.1**	**+1.7**
	comp=Z,308nmcomp=Z,17nm,1.2s						
MMRI	**Maumere**	**18.36**	**194**	P		**Pn 18 37 24.9**	**+3.3**
	comp=Z,1μmcomp=Z,118nm,1.0s						
MMRI	**Maumere**	**18.36**	**194**			**P 18 37 20.7**	**-0.8**
MMRI				IAmb	IAmb	18 37 42.0	
	comp=Z,98nm,0.9s						
GUMO	**Guam**	**18.41**	**75**	P		**P 18 37 20.3**	**-1.8**
GUMO				pmax	pmax		
	comp=Z,178nm,1.5s						
GUMO	**Guam**	**18.41**	**75**	P		**P 18 37 20.3**	**-1.8**
GUMO				IAmb	IAmb	18 37 24.7	
	comp=Z,178nm,1.4s						
EDFI	**Ende, Flores**	**18.61**	**195**	P		**Pn 18 37 27.3**	**+2.6**
	comp=Z,416nmcomp=Z,24nm,0.8s						
QIZ	**Qiongzhong**	**18.87**	**303**	P		**P 18 37 26.0**	**-1.1**
QIZ				S		**Sn 18 40 58.0**	**-0.3**
QIZ				pmax	pmax		
	comp=Z,11nm,1.0s						
QIZ				LR		LR	
	comp=N,890nm,15.2s						
QIZ				LR		LR	
	comp=E,1μm,18.1s						
QIZ				LR		LR	
	comp=Z,2μm,19.1s						
QIZ	**Qiongzhong**	**18.87**	**303**	P		**P 18 37 26.5**	**-0.6**
SOEI	**Soe**	**19.09**	**187**	P		**Pn 18 37 33.9**	**+3.3**
	comp=Z,1μmcomp=Z,117nm,0.8s						
SOEI	**Soe**	**19.09**	**187**	P		**P 18 37 30.0**	**+0.3**
SOEI				IAmb	IAmb	18 37 58.7	
	comp=Z,188nm,1.2s						
BATI	**Baumata**	**19.62**	**189**	P		**Pn 18 37 37.5**	**+0.7**
	comp=Z,18nm,0.3s,baz=64,slow=1.6,SNR=22						
BATI				LR		LR 18 45 47.4	
	comp=Z,900nm,19.7s,baz=350,slow=39						
BATI	**Baumata**	**19.62**	**189**	P		**Pn 18 37 38.9**	**+2.1**
	comp=Z,1μmcomp=Z,165nm,0.9s						
PLAI	**Plampang**	**20.05**	**206**	P		Pn 18 37 44.3	+2.3
	comp=Z,130nm,0.8s						
SSE	**Sheshan**	**22.24**	**348**	P		**P 18 38 06.8**	**+3.3**
SSE				sP		**pwP 18 38 15.8**	**-1.0**
SSE				S		**S 18 42 06.0**	**-0.7**
SSE				pmax	pmax		
	comp=Z,15nm,1.0s						
SSE				pmax	pmax		
	comp=Z,120nm,3.5s						
SSE				LR	LR		
	comp=N,380nm,15.6s						
SSE	**Sheshan**	**22.24**	**348**	P		**P 18 38 01.6**	**-1.8**
SSE				IAmb	IAmb	18 38 16.3	
	comp=Z,48nm,0.8s						
MTN	**Manton Dam**	**22.48**	**168**	P		**P 18 38 06.5**	**+0.3**
MTN				IAmb	IAmb	18 38 16.2	
	comp=Z,39nm,0.8s						
SMRI	**Semarang**	**22.88**	**225**	P		**P 18 38 13.5**	**+3.0**
	comp=Z,87nm,1.9s						
SMRI	**Semarang**	**22.88**	**225**	P		**P 18 38 11.3**	**+0.8**
NJ2	**Nanjing**	**23.73**	**344**	*eP*		**P 18 38 21.0**	**+2.3**
NJ2				S		**S 18 42 39.3**	**+7.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,310nm,3.6s						
NJ2				LR	LR		
	comp=N,800nm,15.6s						
NJ2				LR	LR		
	comp=E,440nm,11.8s						
NJ2				LR	LR		
	comp=Z,1μm,17.0s						
MYKOM	**Kota Tinggi**	**23.82**	**253**	P		**P 18 38 19.2**	**-0.6**
MYKOM	**Kota Tinggi**	**23.82**	**253**	P		**P 18 38 23.0**	**+3.2**
WHN	**Wuhan**	**24.00**	**333**	P		P 18 38 33.0	+12
WHN				S		**S 18 42 42.5**	**+6.0**
WHN				LR	LR		
	comp=N,420nm,10.4s						
WHN				LR	LR		
	comp=E,1μm,15.6s						
WHN				LR	LR		
	comp=Z,2μm,17.5s						
JNU	**Nakatsue**	**24.01**	**9**	P		**P 18 38 21.9**	**+0.5**
	comp=Z,14nm,0.9s,baz=205,slow=4.1,SNR=8.5						
JNU				LR	LR	18 49 31.8	
	comp=Z,400nm,18.1s,baz=168

KSRS ScP **ScP** **18 45 53.5 +2.5**
comp=Z,0.7nm,0.8s,baz=199,slow=2.9,SNR=3.0
KSRS LR LR 18 52 27.4
comp=Z,476nm,18.0s,baz=176,slow=41
KS19 Wonju Array Si 28.08 2 P **P** **18 38 57.6 -0.5**
MNSI Mandailing Nat 28.18 254 P **P** **18 39 01.6 +2.3**
comp=Z,13nm,0.5s
PSI Prapat 28.25 258 P **P** **18 39 00.6 +0.6**
comp=Z,12nm,0.6s,baz=1.5,slow=1.1,SNR=10
PSI Prapat 28.25 258 P **P** **18 39 00.3 +0.3**
PSI pmax pmax
comp=Z,34nm,1.2s
RPSI Rantau Prapat 28.27 258 P **P** **18 39 00.3 +0.2**
RPSI IAmb IAmb 18 39 07.3
comp=Z,34nm,1.2s
CM31 Chiang Mai Arr 28.29 292 P **P** **18 39 00.1 -0.2**
CMAR Chiang Mai Arr 28.29 292 P **P** **18 39 01.3 +1.0**
comp=Z,1.9nm,0.9s,baz=108,slow=7.2,SNR=17
CMAR PcP **PcP** **18 42 14.4 +1.3**
comp=Z,0.9nm,0.8s,baz=85,slow=1.7,SNR=4.4
CMAR ScP **ScP** **18 45 53.2 +1.0**
comp=Z,0.5nm,0.7s,baz=74,slow=1.2,SNR=4.2
CHTO Chiang Mai 28.39 292 P **P** **18 39 00.1 -1.0**
CHTO pmax pmax
comp=Z,7.0nm,1.3s
CHTO Chiang Mai 28.39 292 P **P** **18 39 00.1 -1.0**
COEN Coen 28.39 144 P **P** **18 39 01.3 +0.2**
MAJO Matsushiro 29.08 19 P **P** **18 39 02.6 -4.4**
MAJO pmax pmax
comp=Z,3.0nm,0.8s
MAJO Matsushiro 29.08 19 P **P** **18 39 02.6 -4.4**
MJAR Matsushiro Arr 29.08 20 P **P** **18 39 06.3 -0.7**
comp=Z,1.9nm,0.9s,baz=195,slow=8.7,SNR=10
MJAR PcP **PcP** **18 42 15.9 +1.1**
comp=Z,0.3nm,0.5s,baz=215,slow=3.1,SNR=3.8
MJAR ScP **ScP** **18 45 59.9 +5.5**
comp=Z,0.2nm,0.5s,baz=221,slow=2.2,SNR=2.0
MJB9 Matsu-Tunnel 29.08 19 P **P** **18 39 05.6 -1.5**
KCSI Kotacane, Aceh 29.20 260 P **P** **18 39 10.4 +2.1**
comp=Z,29nm,0.9s
XAN Xi'an 29.47 329 P **P** **18 39 10.0 -0.6**
XAN pP sP 18 39 20.8 0.0
XAN sP pwP 18 39 25.8 +1.3
XAN S **S** **18 43 57.3 -5.9**
XAN pmax pmax
comp=Z,6.0nm,0.7s
XAN LR LR
comp=N,430nm,17.4s
XAN LR LR
comp=E,450nm,19.5s
XAN LR LR
comp=Z,540nm,17.4s
XAN Xi'an 29.47 329 P **P** **18 39 08.5 -2.1**
XAN pmax pmax
comp=Z,6.0nm,0.7s
XAN Xi'an 29.47 329 P **P** **18 39 08.4 -2.1**
LHMI Lhok Sumawe 29.67 264 P **P** **18 39 09.5 -3.1**
WB0 Warramunga Arr 29.91 165 P **P** **18 39 13.0 -1.6**
WB0 IAmb IAmb 18 40 20.7
comp=Z,67nm,1.9s
GSI Gunungsitoli 29.94 256 P **P** **18 39 15.8 +0.9**
comp=Z,224nm,1.0s
GSI Gunungsitoli 29.94 256 P **P** **18 39 14.6 -0.4**
GSI IAmb IAmb 18 39 17.5
comp=Z,39nm,0.8s
WRAB Tennant Creek 30.06 165*ce*P **P** **18 39 14.5 -1.4**
WRAB pmax pmax
comp=Z,14nm,1.7s
WRAB Tennant Creek 30.06 165 P **P** **18 39 14.9 -1.0**
WRAB IAmb IAmb 18 40 18.3
comp=Z,16nm,0.8s
WRA Warramunga Arr 30.07 165 P **P** **18 39 14.2 -1.7**
comp=Z,3.9nm,0.6s,baz=348,slow=9.3,SNR=28
WRA PcP **PcP** **18 42 18.1 +0.6**
comp=Z,0.9nm,0.6s,baz=13,slow=2.2,SNR=1.9
WB2 Warramunga Arr 30.07 165 P **P** **18 39 13.4 -2.5**
WR0 Warramunga Arr 30.13 165 P **P** **18 39 15.2 -1.3**
PSAD1 Pilbara Seismi 31.30 192 P **P** **18 39 26.4 -0.4**
PSAD1 IAmb IAmb 18 39 32.6
comp=Z,80nm,1.8s
PSAC1 Pilbara Seismi 31.38 192 P **P** **18 39 26.5 -1.0**
PSAC1 IAmb IAmb 18 39 29.3
comp=Z,30nm,1.1s
PSAC2 Pilbara Seismi 31.39 192 P **P** **18 39 26.9 -0.7**
PSAC2 IAmb IAmb 18 39 51.5
comp=Z,64nm,1.5s
PSAB2 Pilbara Seismi 31.39 192 **P** **18 39 28.2 +0.7**
PSAB2 IAmb IAmb 18 39 31.8
comp=Z,17nm,0.8s
PSAA2 Pilbara Seismi 31.40 192 P **P** **18 39 27.5 -0.1**
PSAA2 IAmb IAmb 18 39 29.9
comp=Z,18nm,0.8s
PSA00 Pilbara Seismi 31.41 192 P **P** **18 39 28.2 +0.4**
PSA00 IAmb IAmb 18 39 30.0
comp=Z,17nm,0.8s
PSAB1 Pilbara Seismi 31.41 192 P **P** **18 39 27.3 -0.4**
PSAB1 IAmb IAmb 18 39 30.0
comp=Z,15nm,0.8s
PSAA3 Pilbara Seismi 31.41 192 P **P** **18 39 26.4 -1.4**
PSAA3 IAmb IAmb 18 39 32.0
comp=Z,16nm,0.8s
PSAA1 Pilbara Seismi 31.41 192 P **P** **18 39 27.2 -0.6**
PSAA1 IAmb IAmb 18 39 30.1
comp=Z,18nm,0.8s
PSAB3 Pilbara Seismi 31.43 192 P **P** **18 39 27.8 -0.2**
PSAB3 IAmb IAmb 18 39 29.8
comp=Z,17nm,0.9s
PSAD2 Pilbara Seismi 31.43 192 P **P** **18 39 27.2 -0.7**
PSAD3 Pilbara Seismi 31.49 192 P **P** **18 39 28.5 0.0**
PSAD3 IAmb IAmb 18 39 34.2
comp=Z,79nm,1.6s
BJT Baijiatuau 31.95 345 P **P** **18 39 31.1 -1.2**
BJT pmax pmax
comp=Z,31nm,1.4s
BJT Baijiatuau 31.95 345 P **P** **18 39 31.1 -1.2**
BJT IAmb IAmb 18 39 44.7
comp=Z,31nm,1.4s
BJI Beijing 31.96 345 P **P** **18 39 33.3 +0.9**
BJI S **S** **18 44 42.5 +0.5**
BJI pmax pmax
comp=Z,10.0nm,1.1s
BJI LR LR
comp=N,330nm,14.8s
BJI LR LR
comp=E,190nm,16.3s
BJI LR LR
comp=Z,230nm,22.7s
PBA Port Blair 33.35 277 P P 18 39 44.2 -0.6
AS31 Alice Springs 33.56 168 P **P** **18 39 45.2 -1.4**
ASAR Alice Springs 33.56 168 P **P** **18 39 45.6 -1.0**
comp=Z,2.0nm,0.5s,baz=355,slow=6.6,SNR=44
ASAR PcP **PcP** **18 42 27.3 +0.4**
comp=Z,1.2nm,0.6s,baz=343,slow=2.3,SNR=4.5
ASAR ScP **ScP** **18 46 12.2 +2.6**
comp=Z,0.4nm,0.9s,baz=344,slow=3.6,SNR=2.0
ASAR LR LR 18 54 54.0
comp=Z,260nm,19.6s,baz=337,slow=39
LZH Lanzhou 33.73 326 *eP* **P** **18 39 47.5 -0.7**
LZH pP pP 18 39 53.0 -2.4
LZH sS S 18 45 16.3 +6.4
LZH SS **SnSn** **18 47 22.8 +7.3**
LZH pmax pmax
comp=Z,11nm,1.0s
LZH pmax pmax
comp=Z,60nm,4.9s
LZH LR LR
comp=N,1μm,16.1s
LZH LR LR
comp=E,810nm,15.5s
LZH LR LR
comp=Z,540nm,16.3s
GIRL Giralia 34.00 201 P **P** **18 39 51.2 +0.8**
HHC Hu-ho-hao-te 34.11 339 *eP* **P** **18 39 51.0 -0.3**
HHC sP pP 18 39 57.0 -1.6
HHC S **S** **18 45 16.8 +1.3**
HHC sS sS 18 45 27.5 -0.3
HHC Hu-ho-hao-te 34.11 339 ScS ScS 18 50 08.3 -5.2
HHC pmax pmax
comp=Z,11nm,1.0s
HHC pmax pmax
comp=Z,60nm,5.1s
HHC LR LR
comp=N,260nm,17.3s
HHC LR LR
comp=E,250nm,14.5s
HHC LR LR
comp=Z,260nm,17.7s
CTA Charters Tower 35.06 147 P **P** **18 40 00.1 +0.5**
comp=Z,5.9nm,0.7s,baz=336,slow=10,SNR=10
CTAO Charters Tower 35.06 147 P **P** **18 39 59.2 -0.4**
CTAO pmax pmax
comp=Z,24nm,1.2s
CTAO Charters Tower 35.06 147 P **P** **18 39 59.2 -0.4**
CTAO IAmb IAmb 18 40 28.0
comp=Z,24nm,1.1s
USA0B Ussuriysk Arra 35.06 7 P **P** **18 39 57.3 -2.0**
USA0B pmax pmax
comp=Z,13nm,1.1s
USA0B Ussuriysk Arra 35.06 7 P **P** **18 39 57.3 -2.0**
USRK Ussuriysk Ar. 35.06 7 P **P** **18 40 01.2 +1.8**
comp=Z,6.2nm,0.7s,baz=200,slow=8.2,SNR=12
USRK LR LR 18 53 55.8
comp=Z,274nm,21.3s,baz=175,slow=36
MDJ Mudanjiang 35.26 4 P **P** **18 40 00.6 -0.4**
MDJ IAmb IAmb 18 40 14.3
comp=Z,34nm,1.2s
ERM Erimo 35.68 21 P **P** **18 40 03.1 -1.6**
ERM pmax pmax
comp=Z,34nm,1.1s
ERM Erimo 35.68 21 P **P** **18 40 03.1 -1.6**
ERM IAmb IAmb 18 40 04.7
comp=Z,34nm,1.1s
SHL Shillong 36.69 301 P **P** **18 40 13.0 -0.8**
SHL pmax pmax
comp=Z,20nm,1.0s
SHL Shillong 36.69 301 P **P** **18 40 13.0 -0.8**
SHL IAmb IAmb 18 40 28.9
comp=Z,20nm,1.0s
ASAJ Asahikawa 37.35 19 P **P** **18 40 19.9 +0.9**
comp=Z,5.8nm,0.6s,baz=228,slow=4.4,SNR=8.0
HNR Honiara 38.08 118 P **P** **18 40 24.8 -0.7**
HNR Honiara 38.08 118 P **P** **18 40 24.8 -0.7**
GTA Gaotai 38.33 326 *eP* **P** **18 40 27.5 0.0**
GTA pP pP 18 40 31.0 -3.8
GTA sP sP 18 40 33.8 -3.9
GTA PcP **PcP** **18 42 41.5 +0.5**
GTA S **S** **18 46 23.5 +3.2**
GTA sS sS 18 46 40.3 +6.9
GTA SS **SS** **18 49 09.0 -0.6**
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,36nm,7.5s
GTA LR LR
comp=N,550nm,20.6s
GTA LR LR
comp=E,470nm,19.0s
GTA LR LR
comp=Z,670nm,17.1s
LSA Lhasa 38.83 306 P **P** **18 40 30.3 -2.0**
LSA pmax pmax
comp=Z,11nm,1.2s
LSA Lhasa 38.83 306 P **P** **18 40 30.3 -2.0**
MORW Morawa 39.50 195 P **P** **18 40 37.4 +0.2**
MORW IAmb IAmb 18 40 39.3
comp=Z,32nm,1.1s
FORT Forrest 39.90 178 P **P** **18 40 40.1 -0.4**
H11S3 WAKE ISLAND Hy 39.90 72 T T 19 23 42.9
baz=262,slow=75,SNR=131
H11S1 WAKE ISLAND Hy 39.91 72 T T 19 23 45.1
baz=262,slow=75,SNR=92
H11S2 WAKE ISLAND Hy 39.91 72 T T 19 23 41.8
baz=262,slow=75,SNR=90
KLR Kul'dur 40.01 5 P **P** **18 40 41.5 +0.3**
comp=Z,2.0nm,0.6s,baz=196,slow=4.8,SNR=8.1
KLR Kul'dur 40.01 5 *eP* **P** **18 40 41.8 +0.6**
KLR pmax pmax
comp=Z,5.0nm,1.2s
HIA Hailar 40.23 353 P **P** **18 40 41.3 -1.7**
HIA pmax pmax
comp=Z,11nm,1.1s
HIA Hailar 40.23 353 P **P** **18 40 41.3 -1.7**
H11N1 WAKE ISLAND Hy 40.26 71 T T 19 24 19.1
baz=265,slow=74,SNR=107
H11N2 WAKE ISLAND Hy 40.27 71 T T 19 24 19.6
baz=265,slow=74,SNR=64
H11N3 WAKE ISLAND Hy 40.28 71 T T 19 24 16.2
baz=265,slow=74,SNR=77
TAPN Taplejung 40.80 301 *eP* **P** **18 40 48.1 -0.4**
comp=Z,10nm,0.4s
ODAN Odare 40.92 300 *eP* **P** **18 40 49.0 -0.4**
comp=Z,39nm,0.7s
RAMN Ramite 41.62 300 *eP* **P** **18 40 55.0 -0.1**
comp=Z,28nm,0.8s
ULN Ulaanbaatar 41.81 340*ce*P **P** **18 40 57.0 +0.7**
ULN pmax pmax
comp=Z,3.0nm,0.6s
ULN Ulaanbaatar 41.81 340 P **P** **18 40 55.2 -1.1**
EIDS Eidsvold 41.93 146 P **P** **18 40 56.9 -0.5**
SONM Songino Array 42.01 340 P **P** **18 40 57.1 -0.8**
comp=Z,0.9nm,0.5s,baz=163,slow=8.9,SNR=6.1
SONM PcP **PcP** **18 42 54.1 +1.5**
comp=Z,0.3nm,0.4s,baz=132,slow=2.1,SNR=1.8
SONM ScP **ScP** **18 46 44.8 +3.7**
comp=Z,0.6nm,0.4s,baz=132,slow=2.1,SNR=1.8
JIRN Jiri 42.18 301 *eP* **P** **18 40 59.6 -0.3**
comp=Z,50nm,0.5s
GUN Gumba 42.52 301 *eP* **P** **18 41 02.1 -0.5**
comp=Z,37nm,0.7s
PKI Pulchoki 42.82 301 *eP* **P** **18 41 04.1 -0.9**
comp=Z,10nm,0.5s
PKIN Phulchoki 42.83 301 *eP* **P** **18 41 03.9 -1.1**
comp=Z,13nm,0.6s
BBOO Buckleboo 42.86 168 P **P** **18 41 04.4 -0.4**
BBOO IAmb IAmb 18 41 20.7
comp=Z,29nm,0.8s
NWAO Narrogin (SRO) 42.95 192 P **P** **18 41 05.4 -0.1**
comp=Z,30nm,0.6s,baz=23,slow=7.7,SNR=31
NWAO Narrogin (SRO) 42.95 192 P **P** **18 41 06.0 +0.5**
NWAO IAmb IAmb 18 41 07.9
comp=Z,61nm,1.1s
NWAO Narrogin (SRO) 42.95 192 P **P** **18 41 05.7 +0.2**
NWAO IAmb IAmb 18 41 07.9
comp=Z,54nm,1.1s
DMN Daman 43.08 301 *eP* **P** **18 41 06.8 -0.3**
STKA Stephens Creek 43.41 161 P **P** **18 41 08.7 -0.6**
comp=Z,4.2nm,0.6s,baz=327,slow=6.7,SNR=13
STKA Stephens Creek 43.41 161 P **P** **18 41 08.8 -0.4**
ZEA Zeya 44.30 1 *eP* **P** **18 41 13.0 -3.1**
ZEA pmax pmax
comp=Z,14nm,1.2s
ZEA MLR MLR
comp=Z,600nm,18.0s
ZEA MLR MLR
comp=N,400nm,18.0s
KOLN Koldanda 44.41 300 *eP* **P** **18 41 17.2 -0.5**
comp=N,27nm,0.7s
DANN Dangsing 44.44 301 *eP* **P** **18 41 17.3 -0.7**
comp=N,30nm,0.6s
PYUN Piuthan 45.02 301 *eP* **P** **18 41 22.1 -0.4**
comp=N,27nm,0.6s
ARMA Armidale 46.26 150 P **P** **18 41 30.2 -1.9**
ARMA IAmb IAmb 18 41 41.4
comp=Z,44nm,1.8s
HYB Hyderabad 47.31 285 *i* P **P** **18 41 42.0 +1.5**
WMQ Urumqi 48.16 322 *eP* **P** **18 41 46.8 +0.1**
WMQ pP pP 18 41 52.0 -2.1
WMQ LR LR
comp=N,610nm,20.9s
WMQ LR LR
comp=E,220nm,16.9s
WMQ LR LR
comp=Z,450nm,18.3s
CAN Canberra 49.20 156 P **P** **18 41 52.4 -2.3**
CAN pmax pmax
comp=Z,24nm,1.1s
CAN Canberra 49.20 156 P **P** **18 41 52.4 -2.3**
CAN IAmb IAmb 18 42 17.6
comp=Z,24nm,1.1s
BOD Bodaibo 49.35 351 *eP* **P** **18 41 56.8 +1.3**
BOD pmax pmax
comp=Z,15nm,1.5s
TOO Toolangi 49.90 160 P **P** **18 42 00.3 +0.3**
TOO pmax pmax
comp=Z,49nm,1.7s
TOO Toolangi 49.90 160 P **P** **18 42 00.3 +0.3**
TOO IAmb IAmb 18 42 12.7
comp=Z,49nm,1.6s
DZM Mont Dzumac 50.01 129 P **P** **18 42 00.9 -0.3**
PEA0B Petropavlovsk- 50.37 24 P **P** **18 42 02.0 -1.4**
PEA0B pmax pmax
comp=Z,35nm,1.5s
PEA0B Petropavlovsk- 50.37 24 P **P** **18 42 02.0 -1.4**
PEA0B IAmb IAmb 18 42 32.3
comp=Z,34nm,1.5s
PETK Petropavlovsk- 50.37 24 P **P** **18 42 05.0 +1.6**
comp=Z,2.3nm,0.6s,baz=200,slow=5.5,SNR=8.2
PETK PcP **PcP** **18 43 23.2 +1.6**
comp=Z,1.2nm,0.6s,baz=194,slow=4.9,SNR=1.2
PET Petropavlovsk 50.69 24 *eP* **P** **18 42 07.6 +1.8**
PET *eS* **S** **18 49 18.6 -0.3**
PET MLR MLR
comp=Z,300nm,18.0s
PET Petropavlovsk 50.69 24 P **P** **18 42 04.5 -1.3**
PET IAmb IAmb 18 42 22.9
comp=Z,33nm,1.5s
YAK Yakutsk 52.66 2 P **P** **18 42 21.1 +0.9**
comp=Z,2.8nm,0.4s,baz=206,slow=9.6,SNR=4.3
YAK LR LR 19 05 15.5
comp=Z,199nm,20.4s,baz=197,slow=37
YAK Yakutsk 52.66 2 *eP* **P** **18 42 20.8 +0.5**
YAK pmax pmax
comp=Z,11nm,1.1s
YAK pmax pmax
comp=N,8.0nm,1.2s
YAK pmax pmax
comp=E,3.0nm,1.4s
YAK Yakutsk 52.66 2 P **P** **18 42 19.1 -1.2**
YAK IAmb IAmb 18 42 32.6
comp=Z,22nm,1.0s
MK31 Makanchi Array 52.97 323 P **P** **18 42 22.4 -0.5**
MK31 pmax pmax
comp=Z,4.0nm,0.7s
MK31 Makanchi Array 52.97 323 P **P** **18 42 22.4 -0.5**
MKAR Makanchi Array 52.97 323 P **P** **18 42 22.9 0.0**
comp=Z,4.5nm,0.6s,baz=122,slow=7.8,SNR=49
MKAR Makanchi Array 52.97 323 P **P** **18 42 23.0 0.0**
MAKZ Makanchi 53.16 323 P **P** **18 42 24.2 -0.1**
MAKZ pmax pmax
comp=Z,5.0nm,0.7s
MAKZ Makanchi 53.16 323 P **P** **18 42 24.2 -0.1**
MA2 Magadan 53.36 15 P **P** **18 42 22.9 -2.7**
MA2 Magadan 53.36 15 P **P** **18 42 22.9 -2.7**
MA2 IAmb IAmb 18 43 40.6
comp=Z,62nm,1.7s
TARG Taragay, Kyrgy 53.59 316 P **P** **18 42 26.1 -2.0**
KSH Kashi 54.09 312 P **P** **18 42 33.5 +2.0**
KSH sP pwP 18 42 46.5 +3.2
KSH pmax pmax
comp=Z,13nm,0.8s
KSH pmax pmax
comp=Z,140nm,5.1s
KDJ Kajisay 54.18 316 P **P** **18 42 30.4 -1.7**
KDJ pmax pmax
comp=Z,4.0nm,0.7s
KDJ Kajisay 54.18 316 P **P** **18 42 30.4 -1.7**
NIL Nilore 54.52 305 P **P** **18 42 33.6 -1.0**
NIL pmax pmax
comp=Z,61nm,1.4s
NIL Nilore 54.52 305 P **P** **18 42 33.5 -1.0**
TAU Tasmania Unive 55.32 162 P **P** **18 42 38.8 -1.2**
TAU pmax pmax
comp=Z,59nm,1.6s
TAU Tasmania Unive 55.32 162 P **P** **18 42 38.8 -1.2**
TAU IAmb IAmb 18 42 40.5
comp=Z,59nm,1.6s
KZA Kyzart 55.49 315 P **P** **18 42 42.5 +0.6**
SNR=7.7
ZAA0 Zalesovo Array 55.60 331 P **P** **18 42 40.6 -1.4**
ZALV Zalesovo Beam 55.60 331 P **P** **18 42 40.6 -1.3**
comp=Z,1.3nm,0.5s,baz=111,slow=8.1,SNR=7.2
KBK Karagaybulak 55.91 316 P **P** **18 42 44.9 +0.3**
SNR=6.3
UCH Uchtor 56.06 315 P **P** **18 42 46.2 +0.2**
SNR=17
AAK Ala-Archa 56.22 316*ce*P **P** **18 42 47.5 +0.7**
AAK pmax pmax
comp=Z,4.0nm,1.3s
AAK Ala-Archa 56.22 316 P **P** **18 42 46.3 -0.5**
AML Almayashu 56.60 315 P **P** **18 42 49.9 +0.1**
SNR=8.7
SEY Seymchan 56.66 14 *i* P **P** **18 42 51.2 +1.9**
EKS2 Erkin-Say 56.72 315 P **P** **18 42 50.1 -0.2**
SNR=9.1
KURK Kurchatov 57.02 326*ce*P **P** **18 42 50.9 -1.2**
KURK pmax pmax
comp=Z,18nm,1.3s
KURK Kurchatov 57.02 326 P **P** **18 42 51.0 -1.2**
KURK IAmb IAmb 18 42 57.1
comp=Z,11nm,0.8s
MSVF Nonsavu 57.50 118 P **P** **18 42 54.4 -1.7**
MSVF pmax pmax
comp=Z,28nm,1.1s
MSVF Nonsavu 57.50 118 P **P** **18 42 54.4 -1.7**
MSVF IAmb IAmb 18 43 18.7
comp=Z,28nm,1.1s
BTK Batken 58.04 312 P **P** **18 42 58.2 -1.4**
BTK pmax pmax
comp=Z,15nm,1.3s
BTK Batken 58.04 312 P **P** **18 42 58.2 -1.4**
BTK IAmb IAmb 18 43 13.9
comp=Z,15nm,1.3s
KBL Kabul 58.12 305 P **P** **18 42 58.8 -1.7**
KBL pmax pmax
comp=Z,7.0nm,0.6s
KBL Kabul 58.12 305 P **P** **18 42 58.8 -1.7**
KBL IAmb IAmb 18 43 15.9
comp=Z,6.7nm,0.6s
GAR Garm 58.13 310 P **P** **18 42 59.2 -1.2**
GAR IAmb IAmb 18 43 19.0
comp=Z,17nm,0.7s
CHGR Chuyangaron 58.93 310 P **P** **18 43 04.9 -1.0**
CHGR IAmb IAmb 18 43 11.8
comp=Z,17nm,0.7s
KK31 Karatay Array 59.13 315 P **P** **18 43 05.9 -1.2**
KK31 pmax pmax
comp=Z,5.0nm,0.8s
KK31 Karatay Array 59.13 315 P **P** **18 43 05.9 -1.2**
TIXI Tiksi 62.29 1 P **P** **18 43 27.7 -0.3**
TIXI pmax pmax
comp=Z,17nm,1.1s
TIXI Tiksi 62.29 1 P **P** **18 43 27.7 -0.3**
TIXI IAmb IAmb 18 43 35.1
comp=Z,17nm,1.1s
BRVK Borovoye 62.69 326 P **P** **18 43 30.1 -1.0**
BRVK pmax pmax
comp=Z,8.0nm,0.8s
BRVK Borovoye 62.69 326 P **P** **18 43 30.1 -1.0**
BRVK IAmb IAmb 18 43 32.5
comp=Z,8.0nm,0.8s
GSTR Great Sitkin T 62.93 36 P **P** **18 43 33.6 +0.9**
HRA Herat 63.65 304 P **P** **18 43 37.7 -0.4**
HRA IAmb IAmb 18 44 36.2
comp=Z,14nm,1.8s
BILL Bilibino 64.22 15*ce*P **P** **18 43 41.6 +0.7**
BILL pmax pmax
comp=Z,12nm,1.7s
BILL Bilibino 64.22 15 P **P** **18 43 40.9 -0.1**
NRIK Noril'sk 65.00 346 P **P** **18 43 46.3 +0.3**
comp=Z,7.5nm,0.6s,baz=127,slow=8.5,SNR=14
QRZ Quartz Range 65.42 143 P **P** **18 43 47.7 -1.4**
HIZ Hauiti 65.44 140 P **P** **18 43 49.1 -0.3**
DCZ Deep Cove 65.59 150 P **P** **18 43 50.5 +0.4**
NNZ Nelson 66.16 143 P **P** **18 43 54.5 +0.5**
THZ Tophouse 66.22 144 P **P** **18 43 54.0 -0.4**
LBZ Lake Benmore 66.40 147 P **P** **18 43 55.6 +0.2**
RPZ Rata Peaks 66.43 146 P **P** **18 43 55.8 +0.2**
LTZ Lake Taylor 66.50 145 P **P** **18 43 56.6 +0.5**
OXZ Oxford 66.72 146 P **P** **18 43 59.1 +1.7**
BKZ Black Stump Fm 66.86 140 P **P** **18 43 59.8 +1.3**
CMWZ Cape Campbell 66.99 143 P **P** **18 43 58.9 -0.3**
KHZ Kahutara 67.00 144 P **P** **18 43 58.4 -0.8**
SNZO South Karori 67.01 142 P **P** **18 43 57.9 -1.4**
GEYT Alibeck 67.36 307 P **P** **18 44 02.0 +0.2**
comp=Z,1.0nm,0.6s,baz=83,slow=15,SNR=2.7
MSWZ Moikau Station 67.40 142 P **P** **18 44 04.4 +2.5**
BFZ Birch Farm 67.58 141 P **P** **18 44 06.3 +3.3**
UOSS Minazif 68.39 293 P **P** **18 44 07.1 -1.4**
UOSS IAmb IAmb 18 44 09.7
comp=Z,9.5nm,1.2s
SVE Sverdlovsk 69.17 328 *eP* **P** **18 44 12.4 -0.3**
SVE pmax pmax
comp=Z,18nm,1.1s
GAMB Gambell 69.39 25 P **P** **18 44 13.5 -0.3**
ARU Arti 70.18 327*d* *i*P **P** **18 44 18.1 -0.8**
ARU 18 44 37.9

ARU 18 46 54.7
ARU S **S** 18 53 30.0 +1.6
ARU SS **SS** 18 57 54.9 -3.6
ARU pmax pmax
comp=Z,8.0nm,0.7s
ARU MLR MLR
comp=Z,170nm,21.0s
ARU Arti 70.18 327 P **P** 18 44 17.2 -1.7
ARU IAmb IAmb 18 44 19.4
comp=Z,7.8nm,0.6s
SOCY Socotra 71.19 280 P **P** 18 44 24.4 -1.6
SDPT Sand Point 72.69 35 P **P** 18 44 35.3 +1.3
CNBA Chernabura Isl 73.12 36 P **P** 18 44 38.2 +1.6
CHGN Chignik 73.98 34 P **P** 18 44 42.9 +1.3
MAK Makhachkala 75.73 312 *e*P P 18 44 46.2 -5.8
MAK *e*S **S** 18 54 25.9 -6.0
MAK pmax pmax
comp=Z,194nm,1.1s
CASY Casey 76.32 187 P **P** 18 44 54.8 0.0
CASY IAmb IAmb 18 45 06.6
comp=Z,17nm,0.9s
OHAK Old Harbor 76.87 33 P **P** 18 44 57.5 -0.7
KDAK Kodiak Island 77.28 33 P **P** 18 44 59.3 -1.2
KDAK Kodiak Island 77.28 33 P **P** 18 44 59.3 -1.2
RSO Redoubt South 77.34 30 P **P** 18 44 59.3 -1.7
PPLA Purkeypile 77.76 28 P **P** 18 45 02.0 -1.3
PPLA IAmb IAmb 18 47 31.7
comp=Z,43nm,1.6s
RAYN Ar Rayn 78.21 292 P **P** 18 45 05.3 -1.2
RAYN pmax pmax
comp=Z,11nm,0.7s
RAYN Ar Rayn 78.21 292 P **P** 18 45 05.3 -1.2
RAYN IAmb IAmb 18 45 07.2
comp=Z,11nm,0.7s
BPAW Bear Paw Mtn. 78.36 26 P **P** 18 45 06.5 +0.1
BPAW IAmb IAmb 18 45 20.2
comp=Z,45nm,1.4s
ZEI Tsey 78.38 312 *e*P **P** 18 45 06.8 -0.5
ZEI pmax pmax
comp=Z,13nm,1.1s
TRF Thorofare Moun 78.64 27 P **P** 18 45 10.0 +1.7
TRF IAmb IAmb 18 45 22.4
comp=Z,31nm,1.5s
KBZ Khabaz 79.08 313 P **P** 18 45 10.8 0.0
comp=Z,2.4nm,0.9s,baz=56,slow=7.3,SNR=2.2
KIV Kislovodsk 79.22 313⇑*e*P **P** 18 45 10.1 -1.6
KIV *e* 18 45 20.1
KIV *e* 18 48 10.3
KIV pmax pmax
comp=Z,9.0nm,1.3s
KIV Kislovodsk 79.22 313 P **P** 18 45 10.3 -1.4
KIV IAmb IAmb 18 45 48.6
comp=Z,10nm,1.0s
MCK McKinley 79.26 27 P **P** 18 45 10.6 -0.8
MCK pmax pmax
comp=Z,33nm,1.2s
MCK McKinley 79.26 27 P **P** 18 45 10.6 -0.8
MCK IAmb IAmb 18 45 24.3
comp=Z,34nm,1.2s
RND Reindeer 79.29 27 P **P** 18 45 12.4 +0.7
RND pmax pmax
comp=Z,26nm,1.4s
RND Reindeer 79.29 27 P **P** 18 45 12.4 +0.7
RND IAmb IAmb 18 45 25.1
comp=Z,26nm,1.4s
KNK Knik Glacier 79.46 29 P **P** 18 45 12.3 -0.3
CCB Clear Creek Bu 79.76 26 P **P** 18 45 14.1 0.0
CCB IAmb IAmb 18 45 28.9
comp=Z,29nm,1.8s
DHY Denali Highway 79.96 27 P **P** 18 45 15.4 0.0
DHY IAmb IAmb 18 45 42.8
comp=Z,28nm,1.6s
HDA Harding Lake 80.13 26 P **P** 18 45 15.0 -1.1
HDA IAmb IAmb 18 45 30.3
comp=Z,35nm,1.7s
IL31 80.15 26 P **P** 18 45 15.9 -0.2
IL31 IAmb IAmb 18 45 28.4
comp=Z,19nm,1.6s
ILAR Eielson Array 80.15 26 P **P** 18 45 16.9 +0.7
comp=Z,1.5nm,0.6s,baz=253,slow=5.4,SNR=19
FID Port Fidalgo 80.44 30 P **P** 18 45 16.6 -1.3
KLMR Klimovskoe 80.50 330 *e*P **P** 18 45 17.4 -0.7
KLMR pmax pmax
comp=Z,15nm,0.7s
KLMR Klimovskoe 80.50 330 *e*P **P** 18 45 17.4 -0.7
KLMR AMP 18 45 19.0
comp=Z,15nm,0.7s
TMCR Tamitsa 81.05 334 *e*P **P** 18 45 20.9 -0.1
TMCR pmax pmax
comp=Z,11nm,0.4s
RIDG Independent Ri 81.08 27 P **P** 18 45 20.9 -0.4
RIDG IAmb IAmb 18 45 34.4
comp=Z,32nm,1.2s
DOT Dot Lake 81.43 27 P **P** 18 45 22.0 -1.1
DOT IAmb IAmb 18 45 36.4
comp=Z,12nm,1.2s
SCRK Sand Creek 81.44 26 P **P** 18 45 22.5 -0.8
SCRK IAmb IAmb 18 45 36.7
comp=Z,26nm,1.4s
GLB Gilahina Butte 81.69 29 P **P** 18 45 22.2 -2.4
GLB IAmb IAmb 18 47 41.6
comp=Z,35nm,1.4s
VRDI Verde Repeater 81.88 29 P **P** 18 45 23.3 -2.4
VRDI IAmb IAmb 18 45 38.1
comp=Z,48nm,1.6s
LVZ Lovozero 82.16 338 P **P** 18 45 26.5 -0.4
LVZ Lovozero 82.16 338 P **P** 18 45 26.5 -0.4
LVZ IAmb IAmb 18 48 28.0
comp=Z,45nm,1.5s
WAX Waxell Ridge 82.24 30 P **P** 18 45 26.9 -0.6
BARN Barnard Glacie 82.76 29 P **P** 18 45 32.9 +2.5
BARN IAmb IAmb 18 45 45.6
comp=Z,16nm,0.8s
ABPO Ambohimpanom 83.09 249 P **P** 18 45 33.2 +0.4
ABPO pmax pmax
comp=Z,12nm,1.1s
ABPO Ambohimpanom 83.09 249 P **P** 18 45 33.2 +0.4
ABPO IAmb IAmb 18 45 35.9
comp=Z,12nm,1.1s
DAWY Dawson 83.45 26 P **P** 18 45 33.5 -0.1
DAWY IAmb IAmb 18 45 47.8
comp=Z,22nm,1.2s
EPYK Eagle Plains 84.21 24 P **P** 18 45 36.9 -0.6
EPYK IAmb IAmb 18 45 51.0
comp=Z,27nm,1.2s
KEV Kevo 84.62 340 P **P** 18 45 39.5 0.0
KEV pmax pmax
comp=Z,70nm,1.7s
KEV Kevo 84.62 340 P **P** 18 45 39.5 0.0
DHAK Deception Hill 84.74 31 P **P** 18 45 39.9 -0.4
HYT Haines Junctio 84.81 29 P **P** 18 45 41.5 +0.8
HYT IAmb IAmb 18 45 55.2
comp=Z,22nm,1.1s
SPA0 Spitsbergen Ar 85.00 349 P **P** 18 45 41.3 0.0
INK Inuvik 85.04 22 P **P** 18 45 42.1 +0.5
comp=Z,1.8nm,0.6s,baz=328,slow=4.2,SNR=7.3
INK Inuvik 85.04 22 P **P** 18 45 41.6 +0.1
INK pmax pmax
comp=Z,25nm,1.3s
INK Inuvik 85.04 22 P **P** 18 45 41.6 +0.1
INK IAmb IAmb 18 45 54.9
comp=Z,25nm,1.3s
ARCES ARCESS Array B 85.18 340 P **P** 18 45 42.2 -0.1
comp=Z,5.4nm,0.6s,baz=81,slow=5.8,SNR=32
ARE0 ARCESS Array S 85.18 340 P **P** 18 45 42.5 +0.2
BRTR Keskin Array B 86.37 309 P **P** 18 45 48.6 -0.4
comp=Z,0.4nm,0.5s,baz=108,slow=5.9,SNR=2.5
FIA1 FINESS Array S 86.87 332 P **P** 18 45 49.7 -1.0
FIA1 IAmb IAmb 18 45 55.8
comp=Z,12nm,1.2s
FINES FINESS Array B 86.87 332 P **P** 18 45 50.8 0.0
comp=Z,3.3nm,0.8s,baz=86,slow=5.9,SNR=13
CSS Mathiatis 87.38 305 P **P** 18 45 53.1 -0.8
AKASG Malin Array Be 87.49 321 P **P** 18 45 54.4 +0.5
comp=Z,1.2nm,0.5s,baz=65,slow=5.1,SNR=2.5
AKBB Malin Array Si 87.49 321*e*P **P** 18 45 55.7 +1.7
C36M Paulatuk 88.02 20 P **P** 18 45 57.1 +1.0
C36M IAmb IAmb 18 46 11.5
comp=Z,9.5nm,0.9s
MAW Mawson 88.92 200 P **P** 18 46 00.3 0.0
comp=Z,1.6nm,0.7s,baz=308,slow=1.6,SNR=3.1
MAW Mawson 88.92 200 P **P** 18 46 01.2 +0.9
VNDA Vanda 88.96 173 P **P** 18 46 00.8 +0.5
comp=Z,2.7nm,0.8s,baz=314,slow=4.9,SNR=6.5
VNDA Vanda 88.96 173 P **P** 18 46 00.5 +0.2
VNDA pmax pmax
comp=Z,6.0nm,0.9s
VNDA Vanda 88.96 173 P **P** 18 46 00.5 +0.2
VNDA IAmb IAmb 18 46 13.4
comp=Z,6.1nm,0.9s
KMBO Kilima Mbogo 89.52 269 P **P** 18 46 06.3 +1.7
comp=Z,0.7nm,0.3s,baz=45,slow=21,SNR=2.3
KMBO Kilima Mbogo 89.52 269 P **P** 18 46 04.6 -0.1
KMBO pmax pmax
comp=Z,10.0nm,1.3s
KMBO Kilima Mbogo 89.52 269 P **P** 18 46 04.6 -0.1
KMBO IAmb IAmb 18 46 19.8
comp=Z,9.9nm,1.2s
BUR08 Bucovina Ar. S 90.75 318 P **P** 18 46 07.3 -2.3
RES Resolute Bay 92.37 10 P **P** 18 46 17.6 +1.2
RES pmax pmax
comp=Z,6.0nm,0.9s
RES Resolute Bay 92.37 10 P **P** 18 46 17.6 +1.2
RES IAmb IAmb 18 46 30.3
comp=Z,6.4nm,0.9s
NB2 NORSAR Subarra 93.74 334 P **P** 18 46 22.8 -0.2
comp=Z,0.4nm,0.7s,baz=63,slow=4.4
NOA NORSAR Array B 93.74 334 P **P** 18 46 23.2 +0.2
comp=Z,0.7nm,0.8s,baz=64,slow=4.8,SNR=3.8
TULEG Thule 93.81 4 P **P** 18 46 23.7 +0.7
TULEG IAmb IAmb 18 46 32.0
comp=Z,6.3nm,0.8s
NC204 NORSAR Array S 93.83 334 P **P** 18 46 23.5 +0.1
YKA Yellowknife Ar 94.49 24 P **P** 18 46 27.3 +1.0
comp=Z,1.5nm,0.7s,baz=299,slow=4.3,SNR=14
LIT Litokhoron 94.65 312 P **P** 18 46 25.5 -2.2
LIT Litokhoron 94.65 312 P **P** 18 46 25.5 -2.2
CLL Collm 97.04 325 *e*P Pdif 18 46 39.0 +0.7
CLL *e*S **S** 18 57 57.0 -2.1
CLL *e*SSSS 19 11 36.0
CLL LmV 19 34 00.0
comp=Z,200nm,19.7s
GERES GERESS Array B 97.63 322 P Pdif 18 46 41.4 +0.3
comp=Z,0.3nm,0.6s,baz=348,slow=30,SNR=2.4
TXAR Lajitas Array 118.20 50 PKP **PKiKP** 18 51 54.7 +0.4
comp=Z,0.4nm,0.7s,baz=258,slow=1.4,SNR=4.9
TORD Torodi Ar. Bea 120.90 291 PKP **PKiKP** 18 51 59.8 +0.1
comp=Z,0.6nm,0.5s,baz=37,slow=2.4,SNR=6.8
S51A Beattyville 125.41 29 PKPpre 18 51 58.2
PLCA Paso Flores 145.22 157 PKPbc **PKPdf** 18 52 45.4 +1.1
comp=Z,4.1nm,0.8s,baz=195,slow=6.3,SNR=4.5
PLCA Paso Flores 145.22 157 PKIKP **PKPbc** 18 52 43.7 -0.3
PLCA Paso Flores 145.22 157 **PKPbc** 18 52 43.7 -0.3
SJG San Juan 149.98 25 PKPbc **PKiKP** 18 53 00.2 +1.6
comp=Z,4.4nm,0.3s,baz=45,slow=4.3,SNR=2.3
SJG San Juan 149.98 25 PKIKP **PKiKP** 18 52 59.1 +0.6
SJG San Juan 149.98 25 **PKiKP** 18 52 59.1 +0.6
LPAZ La Paz 164.07 117 PKPab **PKPab** 18 54 07.7 +3.1
comp=Z,1.8nm,0.9s,baz=204,slow=2.7,SNR=2.3
LPAZ La Paz 164.07 117 PKP2 **PKPab** 18 54 06.6 +1.9
LPAZ La Paz 164.07 117 **PKPab** 18 54 06.6 +1.9
PTGA Pitinga 169.26 38 PKPab **PKPab** 18 54 28.5 +1.8
comp=Z,1.1nm,0.4s,baz=307,slow=22,SNR=1.5
PTGA Pitinga 169.26 38 **PKPab** 18 54 26.7 0.0

*IDC **31** 18:42:11.6±1.1,9.°73N×126.°71E,h0km,mb3.5/6, mb1 3.7/8,mb1mx3.4/45,mbtmp3.6/8,ML3.8/2,Error ellipse: s-maj=40.0km s-min=15.5km az=87.0*
ISC 31 18:42:17.5±1.0,9.°67N±0.°08×126.°8E±0.°1,h43km,n14, σ2s26/14,mb3.6/6,3C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.30**	**275**⇑	*e*P		**Pn**	**18 42 36.5**	**-2.7**
SCPH				*e*S		**Sn**	**18 42 52.5**	**-2.9**
DAV	**Davao City (W)**	**2.86**	**205**	Pn		**Pn**	**18 42 59.7**	**-0.9**
	20nm,0.3s,baz=28,slow=15,SNR=1.2							
DAV				Lg		Lg	18 43 42.5	
	31nm,0.3s,baz=265,slow=21,SNR=4.0							
LLP	**Lapu-Lapu**	**2.87**	**283**	*e*P		**Pn**	**18 43 01.4**	**+0.7**
LLP				*e*S		**Sn**	**18 43 39.4**	**+5.3**
DMPH	**Davao City--Mi**	**2.88**	**207**⇑	*i*P		Pn	18 43 07.2	+6.3
DMPH				*i*S		**Sn**	**18 43 36.1**	**+1.8**
KCP	**Kidapawan**	**3.14**	**213**‖	*e*P		Pn	18 43 13.6	+9.0
KCP				*i*S		Sn	18 43 56.3	+15
CTBH	**Cotabato--PC H**	**3.51**	**226**⇑	*i*P		Pn	18 43 05.0	-4.6
RCP	**Roxas**	**4.41**	**296**‖	*e*P		**Pn**	**18 43 22.6**	**+0.7**
SIJI	**Sorong**	**11.38**	**157**	Pn		**Pn**	**18 44 58.6**	**+1.0**
	0.4nm,0.3s,baz=163,slow=22,SNR=2.1							
SIJI				Sn		Sn	18 46 50.5	-13
	0.3nm,0.3s,baz=190,slow=23,SNR=1.6							
FITZ	**Fitzroy Crossi**	**27.62**	**182**	P		**P**	**18 48 01.3**	**+0.2**
	1.7nm,0.8s,baz=14,slow=8.3,SNR=1.0							
WRA	**Warramunga Arr**	**30.35**	**166**	P		**P**	**18 48 27.4**	**+1.9**
	0.5nm,0.5s,baz=347,slow=9.4,SNR=3.1							
ASAR	**Alice Springs**	**33.86**	**168**	P		**P**	**18 48 55.0**	**-1.2**
	0.1nm,0.4s,baz=347,slow=7.0,SNR=5.1							
SONM	**Songino Array**	**41.76**	**339**	P		**P**	**18 50 02.2**	**-0.5**
	0.2nm,0.3s,baz=150,slow=6.5,SNR=1.4							
MKAR	**Makanchi Array**	**52.82**	**323**	P		**P**	**18 51 28.2**	**-0.5**
	0.3nm,0.4s,baz=124,slow=8.1,SNR=8.6							
FINES	**FINESS Array B**	**86.66**	**332**	P		**P**	**18 54 56.2**	**-0.3**
	0.8nm,0.9s,baz=67,slow=5.0,SNR=4.1							

*ATA **31** 18:46:12.6±2.0,39.°70N×42.°89E,h0km±6km,ML2.2, MW4.6*
*ISK **31** 18:46:14.4,39.°70N×42.°91E,h8km,ML2.6/12*
ISC 31 18:46:13.6±1.3,39.74N±0.°03×42.88E±0.°03,h4km±11km, n19,σ0s76/26,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AGRB	**Hanur-Agry**	**0.18**	**152**	PG		**Pg**	**18 46 17.7**	**+0.5**
EATA	**Eleskirt**	**0.33**	**293**	*e*P		**Pg**	**18 46 20.2**	**+0.2**
EATA				*e*S		**Sb**	**18 46 27.5**	**-0.5**
EATA				IAML			18 46 31.9	
	comp=Z,154nm,0.6s							
TUTA	**Tutak**	**0.34**	**189**	*e*P		**Pg**	**18 46 20.4**	**+0.3**
TUTA				*e*S		**Sg**	**18 46 25.2**	**+0.6**
TUTA				IAML			18 46 26.6	
	comp=Z,594nm,0.6s							
MLAZ	**Malazgirt-MUS**	**0.65**	**203**	PG		**Pb**	**18 46 26.9**	**-0.7**
MLAZ				SG		**Sb**	**18 46 36.2**	**-0.8**
DYDN	**Diyadin**	**0.65**	**107**	*e*P		**Pb**	**18 46 26.6**	**-1.1**
DYDN				*e*S		**Sb**	**18 46 37.1**	**-0.2**
DYDN				IAML			18 46 40.3	
	comp=Z,74nm,0.4s							
HOMI	**Horasan**	**0.81**	**293**	*e*P		**Pg**	**18 46 28.0**	**-1.1**
HOMI				*e*S		**Sn**	**18 46 44.9**	**+0.1**
KOPR	**Koprukoy-ERZUR**	**0.83**	**288**	PG		**Pb**	**18 46 31.3**	**+0.6**
SENK	**Senkaya-Erzuru**	**0.92**	**334**	PG		**Pn**	**18 46 33.4**	**-0.2**
CLDR	**Caldiran**	**1.00**	**126**	PG		**Pb**	**18 46 33.0**	**-0.6**
TASB	**TASBURUN-IGDIR**	**1.07**	**76**	PG		**Pn**	**18 46 35.4**	**-0.1**
EAK	**Akyaka**	**1.10**	**30**	*e*P		**Pb**	**18 46 35.8**	**+0.4**
VRTB	**Varto-Mus**	**1.24**	**243**	PN		**Pn**	**18 46 38.1**	**+0.2**
TVAN	**Van**	**1.27**	**161**	*e*P		**Pb**	**18 46 37.4**	**-0.9**
TVAN				*e*S		**Sn**	**18 46 57.2**	**+1.2**
TVAN				IAML			18 47 05.0	
	comp=Z,22nm,0.5s							
GURO	**Guroymak-BITLI**	**1.35**	**209**	PN		**Pb**	**18 46 39.6**	**0.0**
AKDM	**Akdamar-Van**	**1.41**	**177**	PN		**Pb**	**18 46 40.2**	**-0.3**
GEVA	**Gevas**	**1.43**	**174**	*e*P		**Pn**	**18 46 39.6**	**-0.9**
GEVA				*e*S		**Sn**	**18 47 01.8**	**+1.9**
GEVA				IAML			18 47 05.7	
	comp=Z,17nm,0.7s							
KARO	**Karliova-Bingo**	**1.48**	**254**	PN		**Pb**	**18 46 41.7**	**-0.1**
YEDI	**Yedisu-Bingol**	**1.83**	**261**	PN		**Pb**	**18 46 47.6**	**-0.1**
BNGB	**Bingl**	**1.86**	**247**	PN		**Pb**	**18 46 47.9**	**-0.4**

*BJI **31** 18:46:42.1±0.0,8.°89N×126.°71E,h10km,mB5.1/49, mb4.9/73,Ms4.8/67,Ms7 4.7/62*
*IDC **31** 18:46:46.4±0.4,9.°28N×126.°34E,h0km,mb4.8/38, mb1 4.8/39,mb1mx4.8/42,mbtmp4.8/39,ML3.7/1,MS4.4/19, Ms1 4.4/19,ms1mx4.1/56,Error ellipse: s-maj=16.0km s-min=8.9km az=72.0*
*NEIC **31** 18:46:48.9±1.9,9.°36N±0.°05×126.°52E±0.°07,h16km±2km, mb5.2/165,Error ellipse: s-maj=10.7km s-min=7.6km az=79.0*
*MAN **31** 18:46:50.1,9.°39N×126.°77E,h116km,mb5.7,ML4.8, MS5.1*
*MOS **31** 18:46:50.2±0.9,9.°37N×126.°31E,h36km,mb5.4/37, MS4.7/11,Error ellipse: s-maj=8.6km s-min=4.3km az=113.6*

*GCMT **31** 18:46:53.9±0.2,9.°42N±0.°01×126.°70E±0.°01,h20km, MW5.2/129,Moment Tensor Solution. s94,c137; s129,c206; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.73±.02; Mθθ-0.03±.01; Mφφ-0.70±.01; Mrθ-0.26±.03; Mrφ0.23±.01; Mθφ0.53±.03; Best double couple: M0.95600×10^17 NP1:φs169.00000°,δ26.00000°, λ101.00000°. NP2:φs337.00000°,δ64.00000°,λ85.00000°. Principal axes: T 0.9390, Plg71.0000°, Azm236.0000°; N 0.0360, Plg5.0000°, Azm340.0000°; P -0.9740, Plg19.0000°, Azm71.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KLM **31** 18:46:54.0,9.°45N×126.°97E,h63km,mb5.3*
*DJA **31** 18:46:57.4±0.4,9.°N±2.°×12.°7E±.°,h83km±3km,M4.8/84, mb5.0/84,mB5.4/43,MLv4.5/2,Mw(mB)4.8/43*
ISC 31 18:46:50.7±0.4,9.°40N±0.°02×126.°61E±0.°03,h27km±2km, h27km:pP-P,n676,σ1s59/723,mb5.2/181,MS4.6/50, 33C-11D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.17**	**289**‖	*e*P		**Pb**	**18 47 12.1**	**-0.2**
SCPH				*e*S		**Sb**	**18 47 29.5**	**+2.4**
BIPH	**Bislig**	**1.23**	**192**⇑	*i*P		Pb	18 47 21.1	+7.8
BIPH				*i*S		**Sb**	**18 47 36.7**	**+7.9**
MSLP	**Maasin**	**1.88**	**293**	*e*P		**Pb**	**18 47 23.3**	**-1.1**
MSLP				*e*S		**Sb**	**18 47 50.9**	**+3.5**
BUKP	**Musuan**	**2.15**	**226**	*e*P		**Pb**	**18 47 27.2**	**-1.8**
BUKP				*e*S		**Sb**	**18 47 56.6**	**+1.3**
MATI	**Mati**	**2.46**	**188**	*e*P		**Pn**	**18 47 28.3**	**-0.8**
MATI				*e*S		**Sn**	**18 47 57.5**	**-0.8**
DAV	**Davao City (W)**	**2.52**	**204**	Pn		**Pn**	**18 47 33.9**	**-1.5**
	95nm,0.3s,baz=58,slow=2.4,SNR=15							
DAV				Sn		**Sn**	**18 48 00.6**	**+0.6**
	186nm,0.3s,baz=43,slow=16,SNR=6.0							
DAV				Lg		Lg	18 48 11.2	
	386nm,0.3s,baz=103,slow=19,SNR=8.0							
DAV				LR		LR	18 48 40.0	
	comp=Z,28μm,19.8s,baz=43,slow=49							
DAV	**Davao City (W)**	**2.52**	**204**⇑	*e*P		**Pn**	**18 47 30.9**	**+0.8**
DAV	**Davao City (W)**	**2.52**	**204**			**Pn**	**18 47 31.1**	**+1.0**
DMPH	**Davao City--Mi**	**2.54**	**205**⇑	*e*P		**Pb**	**18 47 36.1**	**+0.4**
DMPH				*i*S		Sb	18 48 20.2	+14
LLP	**Lapu-Lapu**	**2.76**	**290**⇑	*e*P		**Pn**	**18 47 36.1**	**+2.8**
LLP				*i*S		**Sb**	**18 48 13.4**	**+0.5**
KCP	**Kidapawan**	**2.81**	**213**‖	*e*P		**Pn**	**18 47 35.8**	**+1.7**
KCP				*i*S		**Sb**	**18 48 14.7**	**+0.5**
CTBH	**Cotabato--PC H**	**3.18**	**227**‖	*e*P		**Pn**	**18 47 41.5**	**+2.4**
DDMP	**Don Marcelino,**	**3.39**	**195**	*e*P		**Pn**	**18 47 42.9**	**+1.0**
DDMP				*e*S		**Sn**	**18 48 20.9**	**-0.4**
SKMP	**Bagumbayan, Su**	**3.51**	**216**	*e*P		**Pn**	**18 47 45.0**	**+1.3**
PAGZ	**Pagadian**	**3.54**	**245**	*e*P		**Pn**	**18 47 46.8**	**+2.7**
PAGZ				*e*S		**Sn**	**18 48 29.4**	**+4.3**
CNOP	**Candoni, Negro**	**3.94**	**277**	*e*P		**Pn**	**18 47 52.0**	**+2.5**
CNOP				*e*S		**Sn**	**18 48 39.5**	**+4.6**
GUIM	**Jordan**	**4.14**	**288**	*e*P		**Pn**	**18 47 55.0**	**+2.7**
GUIM				*e*S		**Sn**	**18 48 44.1**	**+4.2**
JAP	**San Jose, Anti**	**4.78**	**287**‖	*e*P		Pn	18 48 06.3	+5.2
PVCP	**Virac**	**4.82**	**330**	*e*P		**Pn**	**18 48 03.8**	**+2.2**
PVCP				*e*S		**Sb**	**18 49 10.7**	**+1.4**
ZCP	**Zamboanga City**	**5.11**	**242**‖	*e*P		**Pn**	**18 48 10.3**	**+4.7**
CUYO	**Cuyo Island**	**5.69**	**285**	*e*P		**Pn**	**18 48 16.4**	**+2.7**
BOAC	**Boac**	**6.17**	**311**	*e*P		**Pn**	**18 48 21.8**	**+1.5**
SJMP	**San Jose**	**6.19**	**300**	*e*P		**Pn**	**18 48 23.4**	**+2.9**
BUSP	**Coron**	**6.81**	**293**	*e*P		**Pn**	**18 48 32.0**	**+3.0**
LQP	**Lukban**	**6.83**	**314**	*e*P		**Pn**	**18 48 30.8**	**+1.4**
POLP	**Polilio Island**	**7.00**	**320**	*e*P		**Pn**	**18 48 33.0**	**+1.5**
POLP				*e*S		**Sn**	**18 49 51.7**	**+1.4**
TGY	**Tagaytay City**	**7.26**	**311**	Pn		**Pn**	**18 48 39.1**	**+3.8**
	36nm,0.3s,baz=116,slow=3.9,SNR=9.6							
TGY				LR		LR	18 51 42.4	
	comp=Z,6μm,20.3s,baz=125,slow=42							
BALP	**Baler**	**7.99**	**323**	*e*P		**Pn**	**18 48 45.2**	**-0.1**
BALP				*e*S		**Sn**	**18 50 10.6**	**-4.3**
TNTI	**Ternate**	**8.60**	**175**	P		**Pn**	**18 48 56.8**	**+3.2**
	3μm136nm,1.5s							
TNTI	**Ternate**	**8.60**	**175**	Pn		**Pn**	**18 48 53.2**	**-0.4**
CAUP	**Cauayan**	**8.83**	**329**	*e*P		**Pn**	**18 48 56.5**	**-0.2**
SMPP	**San Manuel, Pa**	**8.86**	**320**	*e*P		**Pn**	**18 48 57.5**	**+0.3**
SCZP	**Santa Cruz**	**9.11**	**315**	*e*P		**Pn**	**18 49 05.1**	**+4.6**
KMSI	**Cibinong**	**9.14**	**197**	P		**Pn**	**18 49 03.9**	**+2.9**
	2μm243nm,0.8s							
BOLP	**Bolinao**	**9.53**	**317**	*e*P		**Pn**	**18 49 05.9**	**-0.4**
APYP	**Conner**	**9.90**	**329**	*e*P		**Pn**	**18 49 10.3**	**-1.1**
MRSI	**Marisa**	**10.00**	**208**	P		**Pn**	**18 49 12.9**	**+0.1**
LBMI	**Labuha**	**10.01**	**175**	P		**Pn**	**18 49 11.3**	**-1.6**
ABRA	**Dolores**	**10.01**	**326**	*e*P		**Pn**	**18 49 13.1**	**+0.3**
SZP	**Santa**	**10.07**	**324**			**Pn**	**18 49 13.3**	**+0.5**
KKM	**Kota Kinabalu**	**10.82**	**253**	Pn		**Pn**	**18 49 23.0**	**-1.2**
LUWI	**Luwuk**	**11.05**	**200**	P		Pn	18 49 41.6	+14
LUWI	**Luwuk**	**11.05**	**200**	Pn		**Pn**	**18 49 25.9**	**-1.3**
SIJI	**Sorong**	**11.20**	**155**	Pn		**Pn**	**18 49 30.9**	**+1.6**
	4.6nm,0.3s,baz=189,slow=18,SNR=18							
SIJI				Sn		Sn	18 51 24.6	-9.1
	0.9nm,0.3s,baz=172,slow=23,SNR=1.3							
SANI	**Sanana**	**11.39**	**183**	P		**Pn**	**18 49 34.1**	**+2.3**
	925nm67nm,1.2s							
NLAI	**Namlea**	**12.56**	**178**	P		**Pn**	**18 49 50.8**	**+3.0**
	839nm64nm,0.8s							
MSAI	**Masohi**	**12.87**	**170**	P		**P**	**18 50 06.1**	**+3.5**
FAKI	**Fak Fak**	**13.46**	**155**	P		**P**	**18 50 05.2**	**-4.0**
	2μm80nm,1.6s							
FAKI	**Fak Fak**	**13.46**	**155**	Pn		**Pn**	**18 49 59.6**	**-0.6**
SMKI	**Samarinda**	**13.54**	**224**	P		P	18 50 21.5	+11
TTSI	**Tana Toraja**	**14.09**	**209**	P		**P**	**18 50 14.7**	**-1.5**
	1μm78nm,1.0s							
TWG	**Pinlang**	**14.37**	**339**			**Pn**	**18 50 13.2**	**+0.7**
YULB	**Yu-li**	**14.82**	**341**	P		**Pn**	**18 50 19.8**	**+1.2**
SPSI	**Sidrap Palu**	**14.92**	**207**	P		**P**	**18 50 26.6**	**+1.2**
	2μm62nm,1.4s							
TPUB	**Ta-pu**	**14.97**	**338**	Pn		**Pn**	**18 50 21.9**	**+1.2**
BNSI	**Bone**	**15.16**	**206**	P		**P**	**18 50 28.5**	**+0.4**
	3μm143nm,1.1s							
SSLB	**Suanglung**	**15.30**	**340**			**P**	**18 50 28.6**	**-1.0**
NACB	**Ninganchiao**	**15.46**	**343**	Pn		**Pn**	**18 50 26.1**	**-0.9**
KAPI	**Kappang**	**15.86**	**206**	Pn		**P**	**18 50 34.3**	**-1.6**
	2.7nm,0.3s,baz=358,slow=12,SNR=5.5							
KAPI				LR		LR	18 56 59.1	
	comp=Z,1μm,20.6s,baz=30,slow=39							
KAPI	**Kappang**	**15.86**	**206**	P		**P**	**18 50 34.3**	**-1.6**
KAPI				pmax	pmax			
	comp=Z,44nm,1.1s							
KAPI	**Kappang**	**15.86**	**206**			**P**	**18 50 34.3**	**-1.6**
SBUM	**Sibu**	**15.88**	**245**			**Pn**	**18 50 27.5**	**-5.1**
SBUM	**Sibu**	**15.88**	**245**	P		**P**	**18 50 41.0**	**+4.9**
BKSI	**Bulukumba**	**15.98**	**204**	P		**P**	**18 50 38.8**	**+1.6**
	comp=Z,1μmcomp=Z,44nm,0.8s							
YHNB	**Yeheng**	**15.99**	**342**			**P**	**18 50 36.9**	**-0.4**
KBKI	**Kotabaru**	**16.35**	**220**	P		**P**	**18 50 44.3**	**+3.0**
	comp=Z,998nmcomp=Z,90nm,0.9s							
SMPI	**Sarmi**	**16.53**	**133**	P		**P**	**18 50 43.7**	**+0.4**
	comp=Z,2μmcomp=Z,86nm,1.7s							
KNMB	**Chin-men Tao**	**16.91**	**333**	Pn		**Pn**	**18 50 45.5**	**-0.1**
QZH	**Quanzhou**	**17.25**	**335**	P		**P**	**18 50 52.0**	**+0.9**
QZH				S		**S**	**18 54 07.0**	**-2.5**
QZH				LR	LR			
	comp=Z,2μm,17.1s		

comp=Z,467nmcomp=Z,36nm,0.9s
QIZ Qiongzhong 18.85 302 P **P** **18 51 09.0 +0.1**
QIZ pP **pP** **18 51 13.0 -2.1**
QIZ S **Sn** **18 54 40.0 +0.1**
QIZ PcP **PcP** **18 55 29.5 -5.8**
QIZ pmax pmax
comp=Z,20nm,0.8s
QIZ pmax pmax
comp=Z,770nm,9.1s
QIZ LR LR
comp=Z,1µm,16.7s
QIZ LR LR
comp=Z,2µm,17.5s
QIZ LR LR
comp=Z,3µm,17.1s
QIZ Qiongzhong 18.85 302 **P** **18 51 09.3 +0.4**
SOEI Soe 19.17 187 P **Pn** **18 51 17.5 +4.0**
comp=Z,3µmcomp=Z,200nm,0.9s
SOEI Soe 19.17 187 P **Pn** **18 51 14.0 +0.5**
BATI Baumata 19.69 189 P **Pn** **18 51 19.4 -0.4**
comp=Z,25nm,0.3s,baz=41,slow=3.2,SNR=27
BATI S **Sn** **18 55 00.2 -0.1**
comp=Z,0.8nm,0.3s,baz=167,slow=18,SNR=2.1
BATI LR LR 18 59 39.7
comp=Z,689nm,18.9s,baz=10.0,slow=40
BATI Baumata 19.69 189 P **Pn** **18 51 19.3 -0.4**
comp=Z,1µmcomp=Z,114nm,0.7s
PLAI Plampang 20.13 206 P Pn 18 51 28.1 +3.3
comp=Z,1µmcomp=Z,96nm,0.8s
WBSI Waikabubak, Su 20.23 201 P Pn 18 51 25.9 -0.2
comp=Z,95nm,0.8s
JAGI Jajag, Banyuwa 21.65 215 P **P** **18 51 43.1 +3.7**
comp=Z,53nm,1.9s
JAGI Jajag, Banyuwa 21.65 215 P **P** **18 51 40.5 +1.1**
SSE Sheshan 22.18 348 P **P** **18 51 45.8 +1.0**
SSE S **S** **18 55 48.0 +0.2**
SSE pmax pmax
comp=Z,27nm,0.9s
SSE pmax pmax
comp=Z,290nm,4.3s
SSE LR LR
comp=Z,670nm,14.9s
SSE LR LR
comp=Z,320nm,14.0s
SSE Sheshan 22.18 348 P **P** **18 51 45.0 +0.2**
SSE IAmb IAmb 18 52 01.5
comp=Z,120nm,1.0s
TPI Tanjungpandan 22.42 238 P **P** **18 51 50.6 +3.0**
comp=Z,34nm,0.8s
MTN Manton Dam 22.55 168 P **P** **18 51 48.1 -0.9**
baz=22,SNR=40
MTN Manton Dam 22.55 168 P **P** **18 51 48.8 -0.1**
MTN IAmb IAmb 18 52 30.5
comp=Z,94nm,1.2s
KDU Kakadu 22.70 165 P **P** **18 51 49.2 -1.3**
baz=23,SNR=35
SMRI Semarang 22.94 225 P **P** **18 51 49.3 -3.9**
NJ2 Nanjing 23.66 343 *e*P **P** **18 52 00.5 +0.3**
NJ2 pP **pP** **18 52 04.3 -2.1**
NJ2 S **S** **18 56 19.3 +5.9**
NJ2 sS **sS** **18 56 28.0 +4.3**
NJ2 pmax pmax
comp=Z,76nm,0.9s
NJ2 pmax pmax
comp=Z,560nm,3.5s
NJ2 LR LR
comp=Z,1µm,19.4s
NJ2 LR LR
comp=Z,500nm,17.1s
NJ2 LR LR
comp=Z,2µm,17.5s
MYKOM Kota Tinggi 23.86 253 P **P** **18 52 01.8 -0.4**
MYKOM Kota Tinggi 23.86 253 P **P** **18 52 05.0 +2.8**
JNU Nakatsue 23.94 9 P **P** **18 52 03.3 +0.5**
comp=Z,45nm,0.8s,baz=206,slow=3.1,SNR=38
JNU LR LR 19 01 33.3
comp=Z,590nm,20.5s,baz=186,slow=37
JNU Nakatsue 23.94 9 P **P** **18 52 02.6 -0.2**
JNU IAmb IAmb 18 52 08.6
comp=Z,76nm,1.1s
WHN Wuhan 23.95 333 P **P** **18 52 02.8 -0.1**
WHN S **S** **18 56 23.5 +5.5**
WHN LR LR
comp=Z,2µm,18.7s
WHN LR LR
comp=Z,4µm,18.5s
WHN LR LR
comp=Z,4µm,17.5s
LEM Lembang 24.86 230 P **P** **18 52 11.8 +0.3**
comp=Z,18nm,0.7s,baz=343,slow=23,SNR=1.5
SLVN Son La 24.86 301 P **P** **18 52 10.8 -0.6**
PMBI Palembang 24.97 242 P **P** **18 52 17.4 +5.0**
comp=Z,212nm,0.8s
KNRA Kununurra 25.00 175 P **P** **18 52 11.6 -1.0**
baz=25,SNR=44
KNRA Kununurra 25.00 175 P **P** **18 52 11.4 -1.2**
KNRA IAmb IAmb 18 52 30.6
comp=Z,69nm,0.7s
GYA Guiyang 25.39 315 *e*P **P** **18 52 16.0 -0.3**
GYA PP **PnPn** **18 52 50.5 -1.3**
GYA S **S** **18 56 43.5 +1.9**
GYA pmax pmax
comp=Z,10.0nm,0.5s
GYA pmax pmax
comp=Z,530nm,12.0s
GYA LR LR
comp=Z,860nm,16.6s
GYA LR LR
comp=Z,1µm,17.3s
GYA LR LR
comp=Z,1µm,18.7s
KULM Kulim 26.06 263 P **P** **18 52 20.8 -1.6**
KULM Kulim 26.06 263 P **P** **18 52 23.0 +0.7**
ENH Enshi 26.21 325 P **P** **18 52 21.4 -2.2**
MDSI Maura Dua 26.27 239 P **P** **18 52 24.0 -0.1**
comp=Z,28nm,1.1s
LHSI Lahat 26.49 241 P **P** **18 52 27.8 +1.6**
comp=Z,37nm,1.0s
JHJ Hachijo jima 2 26.56 25 P **P** **18 52 27.8 +1.2**
comp=Z,33nm,0.8s,baz=224,slow=17,SNR=2.8
JHJ LR LR 19 01 12.5
comp=Z,767nm,21.8s,baz=262,slow=32
KASI Kota Agung 26.56 237 P **P** **18 52 27.1 +0.3**
comp=Z,65nm,0.9s
LWLI Liwa 26.65 238 P **P** **18 52 28.7 +1.0**
comp=Z,2µmcomp=Z,152nm,0.9s
TJN Taejon 26.87 1*ce*P **P** **18 52 28.7 -0.6**
BKNI Bangkinang 27.00 252 P **P** **18 52 29.8 -1.0**
BKNI IAmb IAmb 18 53 12.6
comp=Z,108nm,1.3s
FITZ Fitzroy Crossi 27.34 182 P **P** **18 52 32.6 -1.0**
baz=27,SNR=49
FITZ Fitzroy Crossi 27.34 182 P **P** **18 52 32.5 -1.0**
comp=Z,46nm,0.9s,baz=357,slow=7.5,SNR=45
FITZ Fitzroy Crossi 27.34 182 P **P** **18 52 32.7 -1.0**
FITZ IAmb IAmb 18 52 47.9
comp=Z,49nm,0.8s
INU Inuyama 27.53 19 P **P** **18 52 35.3 0.0**
KRJI Kerinci 27.53 247 P **P** **18 52 32.1 -3.5**
comp=Z,2µmcomp=Z,73nm,0.5s
KMI Kunming 27.57 308 P **P** **18 52 39.5 +3.5**
KMI pmax pmax
comp=Z,18nm,0.6s
KMI pmax pmax
comp=Z,560nm,14.3s
KMI LR LR
comp=Z,790nm,19.0s
KMI LR LR
comp=Z,940nm,17.9s
KMI LR LR
comp=Z,1µm,17.8s
PMG Port Moresby 27.70 132 P **P** **18 52 37.0 0.0**
comp=Z,20nm,0.8s,baz=19,slow=4.2,SNR=5.8
PMG Port Moresby 27.70 132 P **P** **18 52 36.1 -0.9**
PMG pmax pmax
comp=Z,138nm,1.7s
PMG Port Moresby 27.70 132 P **P** **18 52 36.1 -0.9**
PMG IAmb IAmb 18 52 41.6
comp=Z,138nm,1.7s
KSRS Korea Array 27.96 2 P **P** **18 52 40.2 +1.1**
comp=Z,12nm,0.8s,baz=179,slow=9.9,SNR=63
KSRS PcP **PcP** **18 55 55.2 +1.2**
comp=Z,1.2nm,0.9s,baz=175,slow=3.1,SNR=3.1
KSRS ScP **ScP** **18 59 35.5 +2.2**
comp=Z,0.7nm,0.8s,baz=177,slow=3.6,SNR=4.4
KSRS LR LR 19 05 24.4
comp=Z,913nm,19.1s,baz=176,slow=40
KSRS PKKP **PKKPdf** **19 18 37.1 +3.2**
comp=Z,0.8nm,0.9s,baz=176,slow=3.3,SNR=4.7
INCN Inchon 27.96 0 P **P** **18 52 39.1 -0.1**
INCN pmax pmax
comp=Z,11nm,0.8s
INCN Inchon 27.96 0 P **P** **18 52 39.1 -0.1**
KS19 Wonju Array Si 28.01 2 P **P** **18 52 39.7 +0.2**
TIA Tai'an 28.05 344 P **P** **18 52 40.3 +0.3**
TIA pmax pmax
comp=Z,33nm,0.9s
MNSI Mandailing Nat 28.22 254 P **P** **18 52 41.8 +0.1**
comp=Z,52nm,0.6s
PSI Prapat 28.28 258 P **P** **18 52 42.2 -0.2**
comp=Z,19nm,0.7s,baz=187,slow=0.2,SNR=7.2
PSI LR LR 19 06 36.4
comp=Z,755nm,18.3s,baz=81,slow=42
PSI Prapat 28.28 258 P **P** **18 52 42.2 -0.2**
PSI pmax pmax
comp=Z,127nm,1.5s
CM31 Chiang Mai Arr 28.29 292 P **P** **18 52 41.9 -0.4**
CMAR Chiang Mai Arr 28.29 292 P **P** **18 52 41.3 -1.0**
comp=Z,2.6nm,0.9s,baz=106,slow=7.1,SNR=24
CMAR PcP **PcP** **18 55 55.5 +0.2**
comp=Z,0.7nm,0.7s,baz=50,slow=1.6,SNR=2.8
CMAR ScP **ScP** **18 59 35.9 +1.2**
comp=Z,2.1nm,1.1s,baz=72,slow=1.6,SNR=7.2
CMAR LR LR 19 04 30.1
comp=Z,1µm,18.3s,baz=178,slow=38
RPSI Rantau Prapat 28.31 258 P **P** **18 52 41.1 -1.3**
RPSI Rantau Prapat 28.31 258 P **P** **18 52 42.2 -0.3**
CHTO Chiang Mai 28.38 292 P **P** **18 52 41.3 -1.8**
CHTO pmax pmax
comp=Z,10.0nm,1.0s
CHTO Chiang Mai 28.38 292 P **P** **18 52 41.3 -1.8**
COEN Coen 28.43 144 P **P** **18 52 43.6 0.0**
KRVT Keravat (AS076 28.76 117 LR LR 19 03 57.2
comp=Z,404nm,18.4s,baz=291,slow=36
MAJO Matsushiro 29.00 20 P **P** **18 52 46.9 -1.6**
MAJO pmax pmax
comp=Z,11nm,1.0s
MAJO Matsushiro 29.00 20 P **P** **18 52 46.9 -1.6**
MAT Matsushiro 29.00 20 P **P** **18 52 47.3 -1.2**
MAT S **S** **18 57 39.4 +1.3**
MJAR Matsushiro Arr 29.00 20 P **P** **18 52 47.6 -0.9**
comp=Z,6.7nm,0.9s,baz=196,slow=9.3,SNR=24
MJAR PcP **PcP** **18 55 57.7 +1.0**
comp=Z,4.0nm,0.9s,baz=184,slow=3.0,SNR=9.0
MJAR LR LR 19 04 35.9
comp=Z,649nm,18.6s,baz=195,slow=37
MJB9 Matsu-Tunnel 29.01 19 P **P** **18 52 48.0 -0.5**
MJB9 PcP **PcP** **18 55 57.5 +0.7**
KCSI Kotacane, Aceh 29.23 260 P **P** **18 52 50.3 -0.4**
comp=Z,764nmcomp=Z,36nm,0.7s
SISI Saibi 29.41 250 P **P** **18 52 51.8 -0.5**
comp=Z,22nm,0.7s
XAN Xi'an 29.42 329 P **P** **18 52 50.5 -1.7**
XAN pmax pmax
comp=Z,19nm,0.8s
XAN LR LR
comp=Z,750nm,17.3s
XAN LR LR
comp=Z,1µm,15.7s
XAN LR LR
comp=Z,2µm,15.7s
XAN Xi'an 29.42 329 P **P** **18 52 50.7 -1.6**
XAN pmax pmax
comp=Z,29nm,1.2s
XAN Xi'an 29.42 329 P **P** **18 52 50.7 -1.6**
XAN IAmb IAmb 18 53 23.7
comp=Z,29nm,1.2s
LHMI Lhok Sumawe 29.70 264 P **P** **18 52 54.7 -0.2**
DL2 Dalian 29.72 352 P **P** **18 52 56.5 +1.8**
DL2 pmax pmax
comp=Z,39nm,0.7s
WB0 Warramunga Arr 29.98 165 P **P** **18 52 55.4 -1.8**
WB0 IAmb IAmb 18 53 49.6
comp=Z,20nm,0.8s
GSI Gunungsitoli 29.98 256 P **P** **18 52 56.8 -0.6**
comp=Z,473nm,0.8s
GSI Gunungsitoli 29.98 256 P **P** **18 52 56.5 -0.9**
WRAB Tennant Creek 30.12 165*ce*P **P** **18 52 56.2 -2.3**
WRAB pmax pmax
comp=Z,11nm,1.3s
WRA Warramunga Arr 30.13 165 P **P** **18 52 56.8 -1.8**
comp=Z,5.4nm,0.8s,baz=348,slow=9.5,SNR=21
WRA Warramunga Arr 30.13 165 *i* P **P** **18 52 56.7 -1.8**
WRA pmax pmax
comp=Z,3.0nm,0.5s
WB2 Warramunga Arr 30.13 165 P **P** **18 52 57.0 -1.6**
WR0 Warramunga Arr 30.20 165 P **P** **18 52 56.8 -2.4**
WR0 IAmb IAmb 18 53 54.9
comp=Z,73nm,1.8s
TIY Taiyuan 30.96 338 *e*P **P** **18 53 08.5 +2.7**
TIY S **S** **18 58 06.0 -2.9**
TIY pmax pmax
comp=Z,21nm,0.5s
TIY pmax pmax
comp=Z,300nm,11.3s
TIY LR LR
comp=Z,1µm,19.2s
TIY LR LR
comp=Z,350nm,13.9s
TIY LR LR
comp=Z,470nm,16.5s
PSA00 Pilbara Seismi 31.48 192 P **P** **18 53 09.7 -0.8**
BJT Baijiatuau 31.88 345 P **P** **18 53 14.2 +0.4**
BJT pmax pmax
comp=Z,33nm,0.9s
BJT Baijiatuau 31.88 345 P **P** **18 53 14.2 +0.4**
BJT IAmb IAmb 18 53 15.4
comp=Z,33nm,0.9s
BJI Beijing 31.90 345 P **P** **18 53 14.5 +0.5**
BJI S **S** **18 58 25.0 +1.6**
BJI pmax pmax
comp=Z,38nm,1.1s
BJI LR LR
comp=Z,480nm,14.6s
BJI LR LR
comp=Z,440nm,14.3s
BJI LR LR
comp=Z,430nm,21.8s
QIS Mount Isa 32.39 157 P **P** **18 53 17.4 -1.1**
baz=32,SNR=14
SNY Shenyang 32.41 356 ⇑P **P** **18 53 19.5 +1.1**
SNY S **S** **18 58 33.3 +2.0**
SNY pmax pmax
comp=Z,31nm,1.2s
SNY pmax pmax
comp=Z,240nm,4.7s
SNY LR LR
comp=Z,720nm,16.3s
SNY LR LR
comp=Z,670nm,16.7s
SNY LR LR
comp=Z,1µm,17.7s
MTSU Mount Surprise 32.46 147 P **P** **18 53 19.6 +0.4**
baz=32,SNR=9.4
PBA Port Blair 33.36 277 P P 18 53 25.9 -1.2
PBA IAmb IAmb 18 53 30.4
comp=Z,76nm,1.4s
AS31 Alice Springs 33.62 168 P **P** **18 53 27.6 -1.7**
ASAR Alice Springs 33.62 168 P **P** **18 53 27.7 -1.6**
comp=Z,2.6nm,0.5s,baz=352,slow=6.6,SNR=51
ASAR PcP **PcP** **18 56 09.4 +0.1**
comp=Z,1.7nm,0.5s,baz=0.4,slow=3.4,SNR=2.2
ASAR ScP **ScP** **18 59 52.2 0.0**
comp=Z,1.0nm,0.9s,baz=23,slow=5.3,SNR=4.3
LZH Lanzhou 33.68 326 *e*P **P** **18 53 32.5 +2.7**
LZH pP pP 18 53 36.0 -0.3
LZH sP sP 18 53 38.0 -1.1
LZH PP **PP** **18 54 49.0 +2.7**
LZH pmax pmax
comp=Z,17nm,1.1s
LZH pmax pmax
comp=Z,140nm,4.3s
LZH LR LR
comp=Z,2µm,17.7s
LZH LR LR
comp=Z,1µm,17.9s
LZH LR LR
comp=Z,1µm,18.5s
HHC Hu-ho-hao-te 34.05 339 *e*P **P** **18 53 33.5 +0.6**
HHC sP sP 18 53 43.0 +0.8
HHC PP **PP** **18 54 53.5 +3.2**
HHC S **S** **18 59 00.5 +3.5**
HHC ScS **ScS** **19 03 54.3 -1.4**
HHC pmax pmax
comp=Z,17nm,0.9s
HHC pmax pmax
comp=Z,120nm,7.1s
HHC LR LR
comp=Z,540nm,17.3s
HHC LR LR
comp=Z,390nm,15.9s
HHC LR LR
comp=Z,520nm,15.3s
GIRL Giralia 34.07 201 P **P** **18 53 34.5 +1.4**
baz=34,SNR=3.8
WRKA Warakurna 34.26 177 P **P** **18 53 34.1 -0.6**
baz=34,SNR=31
CN2 Changchun 34.29 359 *e*P **P** **18 53 35.5 +0.7**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
BTO Baotou 34.40 337 *e*P **P** **18 53 33.8 -2.1**
USA0B Ussuriysk Arra 34.99 7 P **P** **18 53 41.5 +0.7**
USA0B pmax pmax
comp=Z,23nm,0.9s
USA0B Ussuriysk Arra 34.99 7 P **P** **18 53 41.5 +0.7**
USA0B IAmb IAmb 18 53 51.4
comp=Z,23nm,0.9s
USRK Ussuriysk Ar. 34.99 7 P **P** **18 53 42.4 +1.6**
comp=Z,21nm,0.8s,baz=192,slow=8.0,SNR=37
USRK LR LR 19 07 26.4
comp=Z,439nm,20.6s,baz=172,slow=35
CTA Charters Tower 35.10 147 P **P** **18 53 42.8 +0.7**
comp=Z,8.0nm,0.5s,baz=323,slow=10,SNR=21
CTAO Charters Tower 35.10 147 P **P** **18 53 42.8 +0.7**
CTAO pmax pmax
comp=Z,29nm,1.2s
CTAO Charters Tower 35.10 147 P **P** **18 53 42.8 +0.7**
CTAO IAmb IAmb 18 54 22.0
comp=Z,29nm,1.2s
MDJ Mudanjiang 35.19 4 P **P** **18 53 44.3 +1.8**
MDJ pmax pmax
comp=Z,34nm,1.2s
MDJ pmax pmax
comp=Z,270nm,5.7s
MDJ Mudanjiang 35.19 4 P **P** **18 53 43.1 +0.6**
MDJ IAmb IAmb 18 53 49.8
comp=Z,45nm,1.0s
ERM Erimo 35.61 21 P **P** **18 53 47.2 +1.0**
ERM Erimo 35.61 21 P **P** **18 53 47.1 +1.0**
ERM IAmb IAmb 18 54 58.9
comp=Z,73nm,1.4s
TEY Ternei 36.55 12⇓ *e*P **P** **18 53 55.8 +1.7**
TEY pmax pmax
comp=N,10.0nm,1.0s
TEY pmax pmax
comp=Z,30nm,0.9s
MEEK Meekatharra 36.65 192 P **P** **18 53 54.7 -0.6**
baz=37,SNR=34
SHL Shillong 36.67 301 P **P** **18 53 54.2 -1.5**
SHL pmax pmax
comp=Z,41nm,0.7s
SHL Shillong 36.67 301 P **P** **18 53 54.2 -1.5**
SHL IAmb IAmb 18 53 56.4
comp=Z,40nm,0.7s
ASAJ Asahikawa 37.27 19 P **P** **18 54 02.8 +2.4**
comp=Z,25nm,0.9s,baz=246,slow=22,SNR=9.0
ASAJ LR LR 19 09 45.3
comp=Z,662nm,19.0s,baz=213,slow=37
HNR Honiara 38.09 118 LR LR 19 08 06.6
comp=Z,279nm,21.6s,baz=292,slow=33
GTA Gaotai 38.29 326 ⇑P **P** **18 54 08.5 -0.7**
GTA pP pP 18 54 12.5 -3.3
GTA sP sP 18 54 15.0 -3.5
GTA PcP **PcP** **18 56 23.3 +0.3**
GTA ScP **ScP** **19 00 12.3 +3.0**
GTA pmax pmax
comp=Z,8.0nm,1.1s
GTA pmax pmax
comp=Z,100nm,6.5s
GTA LR LR
comp=Z,740nm,16.8s
GTA LR LR
comp=Z,980nm,16.8s
GTA LR LR
comp=Z,1µm,17.5s
LSA Lhasa 38.81 306 P **P** **18 54 14.9 +0.8**
LSA Lhasa 38.81 306 P **P** **18 54 13.5 -0.6**
LSA pmax pmax
comp=Z,20nm,1.1s
LSA Lhasa 38.81 306 P **P** **18 54 13.4 -0.6**
MORW Morawa 39.58 195 P **P** **18 54 19.5 -0.4**
baz=40,SNR=30
MORW Morawa 39.58 195 P **P** **18 54 19.3 -0.6**
QLP Quilpie 39.65 155 P **P** **18 54 20.0 -0.5**
baz=40,SNR=3.8
H11S3 WAKE ISLAND Hy 39.86 72 T T 19 37 18.5
baz=262,slow=75,SNR=58
H11S1 WAKE ISLAND Hy 39.87 72 T T 19 37 17.9
baz=262,slow=75,SNR=50
H11S2 WAKE ISLAND Hy 39.87 72 T T 19 37 19.6
baz=262,slow=75,SNR=70
YSS Yuzh-Sakhalins 39.88 17 *e*P **P** **18 54 24.2 +2.0**
YSS *e* 18 54 35.6
YSS pmax pmax
comp=Z,40nm,0.9s
YSS Yuzh-Sakhalins 39.88 17 P **P** **18 54 23.1 +0.9**
YSS IAmb IAmb 18 54 28.4
comp=Z,35nm,0.9s
KLR Kul'dur 39.94 5*ce*P **P** **18 54 23.8 +1.1**
comp=Z,4.8nm,0.6s,baz=180,slow=6.4,SNR=20
KLR Kul'dur 39.94 5*ce*P **P** **18 54 23.2 +0.5**
FORT Forrest 39.97 178 P **P** **18 54 22.6 -0.5**
baz=40,SNR=75
FORT Forrest 39.97 178 P **P** **18 54 22.5 -0.6**
FORT IAmb IAmb 18 54 55.5
comp=Z,87nm,1.1s
HIA Hailar 40.16 353 P **P** **18 54 25.0 +0.5**
HIA pmax pmax
comp=Z,16nm,0.8s
HIA Hailar 40.16 353 P **P** **18 54 25.0 +0.5**
H11N1 WAKE ISLAND Hy 40.22 71 T T 19 37 53.6
baz=265,slow=74,SNR=128
H11N2 WAKE ISLAND Hy 40.23 71 T T 19 37 58.6
baz=265,slow=74,SNR=79
H11N3 WAKE ISLAND Hy 40.24 71 T T 19 38 02.8
baz=265,slow=74,SNR=121
TAPN Taplejung 40.78 301 *e*P **P** **18 54 29.6 -0.8**
comp=Z,30nm,0.4s
BLDU Ballidu 40.90 193 P **P** **18 54 31.1 +0.3**
baz=41,SNR=36
ODAN Odare 40.90 300 *e*P **P** **18 54 30.6 -0.7**
comp=Z,133nm,0.6s
RAMN Ramite 41.60 300 *e*P **P** **18 54 36.3 -0.8**
comp=Z,76nm,0.6s
KLBR Kellerberrin 41.63 191 P **P** **18 54 36.3 -0.5**
baz=42,SNR=26
ULN Ulaanbaatar 41.76 340*ce*P **P** **18 54 37.8 -0.1**
ULN pmax pmax
comp=Z,19nm,1.3s
ULN Ulaanbaatar 41.76 340 P **P** **18 54 37.3 -0.6**
ULN P **P** **18 54 37.8 -0.1**
SONM Songino Array 41.95 340 P **P** **18 54 39.4 -0.1**
comp=Z,2.8nm,0.5s,baz=156,slow=9.6,SNR=16
SONM ScP **ScP** **19 00 26.0 +2.6**
comp=Z,0.3nm,0.3s,baz=146,slow=3.1,SNR=2.3
EIDS Eidsvold 41.98 146 P **P** **18 54 39.0 -0.8**
GRNR Gornyy 42.04 9⇓ *i*P **P** **18 54 41.4 +1.4**
GRNR pmax pmax
comp=Z,10.0nm,1.1s
GRNR MLR MLR
comp=Z,660nm,17.0s
JIRN Jiri 42.16 301 *e*P **P** **18 54 41.1 -0.7**
comp=Z,180nm,0.5s
MUN Mundaring 42.33 193 P **P** **18 54 42.4 -0.1**
baz=42,SNR=31
GUN Gumba 42.50 301 *e*P **P** **18 54 43.5 -1.0**
comp=Z,97nm,0.7s
PKI Pulchoki 42.80 301 *e*P **P** **18 54 45.4 -1.5**
comp=Z,35nm,0.6s
PKIN Phulchoki 42.81 301 *e*P **P** **18 54 45.4 -1.6**
comp=Z,32nm,0.5s
BBOO Buckleboo 42.92 168 P **P** **18 54 46.7 -0.7**
baz=43,SNR=21
BBOO Buckleboo 42.92 168 P **P** **18 54 46.5 -0.9**
BBOO IAmb IAmb 18 54 59.2
comp=Z,38nm,0.8s
NWAO Narrogin (SRO) 43.02 192 P **P** **18 54 48.1 0.0**
baz=43,SNR=35

NWAO Narrogin (SRO) 43.02 192 LR LR 19 16 23.0
comp=Z,208nm,18.8s,baz=340,slow=42
NWAO Narrogin (SRO) 43.02 192 P **P** **18 54 48.2 0.0**
NWAO pmax pmax
comp=Z,100nm,1.2s
NWAO Narrogin (SRO) 43.02 192 P **P** **18 54 48.2 0.0**
NWAO lAmb lAmb 18 54 50.0
comp=Z,100nm,1.2s
NWAO Narrogin (SRO) 43.02 192 P **P** **18 54 47.9 -0.3**
NWAO lAmb lAmb 18 54 50.0
comp=Z,79nm,1.2s
DMN Daman 43.07 301 *e*P **P** **18 54 47.6 -1.4**
comp=Z,27nm,0.6s
STKA Stephens Creek 43.47 161 P **P** **18 54 50.6 -1.1**
baz=44,SNR=13
STKA Stephens Creek 43.47 161 P **P** **18 54 50.8 -1.1**
comp=Z,4.8nm,0.6s,baz=345,slow=8.1,SNR=21
STKA LR LR 19 19 20.9
comp=Z,275nm,18.3s,baz=331,slow=45
STKA Stephens Creek 43.47 161 P **P** **18 54 50.7 -1.1**
STKA pmax pmax
comp=Z,3.0nm,0.8s
STKA Stephens Creek 43.47 161 P **P** **18 54 50.7 -1.1**
GKN Gorkha 43.58 301 *e*P **P** **18 54 51.5 -1.5**
comp=Z,38nm,0.6s
CIT Chita 43.82 348 *e*P **P** **18 54 56.2 +1.7**
CIT *e* 18 55 05.9
CIT *e* 18 55 11.6
CIT pmax pmax
comp=Z,102nm,1.1s
HTT Hallett 44.17 165 P **P** **18 54 57.2 -0.2**
baz=44,SNR=8.0
ZEA Zeya 44.22 1 *e*P **P** **18 54 57.6 0.0**
ZEA pmax pmax
comp=N,35nm,1.0s
ZEA pmax pmax
comp=Z,50nm,1.2s
ZEA MLR MLR
comp=Z,1μm,18.0s
ZEA MLR MLR
comp=N,800nm,16.0s
ZEA MLR MLR
comp=E,400nm,16.0s
KOLN Koldanda 44.39 300 *e*P **P** **18 54 58.6 -1.0**
comp=E,89nm,0.7s
DANN Dangsing 44.42 301 *e*P **P** **18 54 58.7 -1.2**
comp=E,110nm,0.6s
PYUN Piuthan 45.00 300 *e*P **P** **18 55 03.2 -1.3**
comp=E,140nm,0.9s
ZAK Zakamensk 45.20 339 *e*P **P** **18 55 05.2 -0.3**
ZAK pmax pmax
comp=Z,7.0nm,1.1s
TLY Talaya 46.17 340 P **P** **18 55 13.4 +0.4**
comp=Z,9.3nm,0.8s,baz=353,slow=4.0,SNR=4.1
TLY LR LR 19 15 10.1
comp=Z,296nm,21.1s,baz=144,slow=37
TLY Talaya 46.17 340 *e*P **P** **18 55 13.2 +0.1**
TLY *e*S **S** **19 01 58.9 +1.3**
TLY pmax pmax
comp=Z,17nm,0.7s
TLY MLR MLR
comp=Z,1μm,17.0s
TLY Talaya 46.17 340 P **P** **18 55 12.3 -0.8**
TLY lAmb lAmb 18 55 45.7
comp=Z,17nm,1.0s
ARMA Armidale 46.31 150 P **P** **18 55 13.5 -1.1**
baz=46,SNR=3.8
ARMA Armidale 46.31 150 P **P** **18 55 15.9 +1.3**
ARMA lAmb lAmb 18 55 30.6
comp=Z,38nm,1.4s
MOY Mondy 47.08 338 *e*P **P** **18 55 20.8 +0.5**
MOY pmax pmax
comp=Z,3.0nm,1.0s
HYB Hyderabad 47.32 285 *i* P **P** **18 55 21.0 -1.6**
ARPS Mount Arapiles 48.10 164 P **P** **18 55 28.2 -0.1**
baz=48,SNR=16
WMQ Urumqi 48.12 322 *e*P **P** **18 55 29.5 +1.0**
WMQ LR LR
comp=Z,970nm,20.5s
WMQ LR LR
comp=Z,720nm,15.9s
WMQ LR LR
comp=Z,850nm,19.1s
WMQ Urumqi 48.12 322 P **P** **18 55 27.5 -1.0**
WMQ pmax pmax
comp=Z,11nm,0.6s
WMQ Urumqi 48.12 322 P **P** **18 55 27.5 -1.0**
WMQ lAmb lAmb 18 55 30.5
comp=Z,11nm,0.6s
CAN Canberra 49.25 156 P **P** **18 55 37.7 +0.5**
CAN pmax pmax
comp=Z,89nm,1.6s
CAN Canberra 49.25 156 P **P** **18 55 37.7 +0.5**
BOD Bodaibo 49.28 351 *e*P **P** **18 55 38.3 +1.2**
BOD pmax pmax
comp=Z,46nm,1.0s
TOO Toolangi 49.95 160 P **P** **18 55 43.2 +0.7**
baz=50,SNR=9.5
TOO Toolangi 49.95 160 P **P** **18 55 43.0 +0.4**
TOO pmax pmax
comp=Z,43nm,1.5s
TOO Toolangi 49.95 160 P **P** **18 55 43.0 +0.4**
TOO lAmb lAmb 18 56 40.2
comp=Z,43nm,1.5s
DZM Mont Dzumac 50.04 129 *e*P **P** **18 55 43.2 -0.3**
comp=Z,16nm,0.7s
DZM *e*S **S** **19 02 53.0 -0.3**
comp=Z,444nm,27.4s
DZM *e*LR LR 19 09 58.8
comp=Z,639nm,25.6s
DZM Mont Dzumac 50.04 129 P **P** **18 55 44.2 +0.6**
DZM lAmb lAmb 18 55 59.5
comp=Z,31nm,1.3s
PEA0B Petropavlovsk- 50.30 24 *c*e P **P** **18 55 46.4 +1.5**
PEA0B Petropavlovsk- 50.30 24 P **P** **18 55 46.0 +1.1**
PEA0B lAmb lAmb 18 56 01.9
comp=Z,51nm,1.3s
PETK Petropavlovsk- 50.30 24 P **P** **18 55 46.8 +1.9**
comp=Z,8.3nm,0.7s,baz=195,slow=6.8,SNR=20
PETK PcP **PcP** **18 57 04.0 +0.6**
comp=Z,4.7nm,0.8s,baz=216,slow=3.5,SNR=1.9
PET Petropavlovsk 50.62 24 *e*P **P** **18 55 49.7 +2.4**
PET *e*S **S** **19 03 00.9 +0.6**
PET pmax pmax
comp=Z,10.0nm,0.8s
PET Petropavlovsk 50.62 24 P **P** **18 55 47.7 +0.4**
PET lAmb lAmb 18 55 58.5
comp=Z,17nm,0.9s
DGZ Jazzator, Alta 51.68 328 *i* P **P** **18 55 55.4 -0.2**
DGZ pmax pmax
comp=Z,4.0nm,1.0s
ZSN Zaisan 51.77 325 *e*P **P** **18 55 54.1 -2.1**
ZSN Zaisan 51.77 325 *e*P **P** **18 55 54.0 -2.1**
YAK Yakutsk 52.59 2 P **P** **18 56 02.5 +0.6**
comp=Z,12nm,0.6s,baz=9.9,slow=2.3,SNR=18
YAK Yakutsk 52.59 2 *e*P **P** **18 56 02.1 +0.2**
YAK *e**PP **sP** **18 56 09.9 -0.8**
YAK *e* 18 57 12.9
YAK *e* 18 57 58.8
YAK *e*S **S** **19 03 25.3 -1.8**
YAK *e**SS **sS** **19 03 38.8 +1.3**
YAK *e* 19 05 44.1
YAK *e*SS **SS** **19 07 03.1 -2.5**
YAK pmax pmax
comp=Z,29nm,0.9s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK pmax pmax
comp=N,17nm,1.0s
YAK pmax pmax
comp=Z,57nm,3.2s
YAK smax smax
comp=N,107nm,2.8s
YAK smax smax
comp=E,67nm,2.6s
YAK MLR MLR
comp=Z,347nm,20.0s
YAK MLR MLR
comp=N,148nm,20.0s
YAK MLR MLR
comp=E,148nm,21.0s
YAK Yakutsk 52.59 2 P **P** **18 56 02.0 +0.1**
MK31 Makanchi Array 52.92 323 *e*P **P** **18 56 04.0 -0.7**
MK31 Makanchi Array 52.92 323 P **P** **18 56 03.3 -1.4**
MK31 lAmb lAmb 18 56 05.6
comp=Z,13nm,0.7s

MKAR Makanchi Array 52.92 323 P **P** **18 56 04.0 -0.7**
comp=Z,17nm,0.7s,baz=128,slow=7.7,SNR=152
MKAR ScP **ScP** **19 01 09.5 +0.2**
comp=Z,0.5nm,0.7s,baz=103,slow=4.6,SNR=3.1
MKAR Makanchi Array 52.92 323 P **P** **18 56 04.0 -0.7**
PDGK Podgornoye 53.07 318 P **P** **18 56 05.3 -0.7**
MAKZ Makanchi 53.12 323 P **P** **18 56 04.7 -1.4**
MAKZ pmax pmax
comp=Z,56nm,1.5s
MAKZ Makanchi 53.12 323 P **P** **18 56 04.7 -1.4**
MAKZ lAmb lAmb 18 56 08.3
comp=Z,56nm,1.5s
MA2 Magadan 53.29 15 *c*e P **P** **18 56 07.9 +0.8**
MA2 pmax pmax
comp=Z,34nm,1.7s
MA2 Magadan 53.29 15 P **P** **18 56 07.5 +0.4**
MA2 lAmb lAmb 18 56 13.4
comp=Z,20nm,1.0s
UZB Uzynbulak 53.30 318 *e*P **P** **18 56 06.4 -1.4**
comp=Z,8.0nm,0.7s
UZB *e*LR LR 19 20 08.5
UZB Uzynbulak 53.30 318 *e*P **P** **18 56 06.3 -1.4**
UZB pmax pmax
comp=Z,8.0nm,0.7s
PRZ Przheval'sk 53.45 317 P **P** **18 56 08.4 -0.4**
PRZ pmax pmax
comp=Z,24nm,0.7s
PRZ Przheval'sk 53.45 317 P **P** **18 56 08.4 -0.4**
PRZ lAmb lAmb 18 56 12.0
comp=Z,24nm,0.7s
TARG Taragay, Kyrgy 53.56 316 P **P** **18 56 08.2 -1.8**
SATY Saty 53.68 317⇑ *e*P **P** **18 56 09.3 -1.1**
comp=Z,7.8nm,0.8s
SATY Saty 53.68 317 *c*e P **P** **18 56 09.3 -1.1**
SATY pmax pmax
comp=Z,8.0nm,0.8s
KSH Kashi 54.06 312 P **P** **18 56 14.5 +1.1**
KSH pP pP 18 56 20.8 +0.8
KSH PP **PP** **18 58 22.0 +7.0**
KSH S **S** **19 03 48.5 +0.2**
KSH SS **SS** **19 07 32.5 +2.5**
KSH pmax pmax
comp=Z,41nm,1.1s
KSH pmax pmax
comp=Z,120nm,5.8s
KSH LR LR
comp=Z,230nm,6.4s
KSH LR LR
comp=Z,260nm,7.2s
KSH LR LR
comp=Z,530nm,9.4s
KDJ Kajisay 54.14 316 P **P** **18 56 13.2 -0.7**
KDJ pmax pmax
comp=Z,13nm,0.7s
KDJ Kajisay 54.14 316 P **P** **18 56 13.2 -0.7**
KDJ lAmb lAmb 18 56 16.2
comp=Z,12nm,0.7s
NIL Nilore 54.50 305 P **P** **18 56 15.7 -0.8**
NIL pmax pmax
comp=Z,71nm,0.9s
NIL Nilore 54.50 305 P **P** **18 56 15.7 -0.8**
MDOK Medeo 54.63 317 *e*P **P** **18 56 16.3 -1.2**
MDOK Medeo 54.63 317 *e*P **P** **18 56 16.2 -1.2**
AAA Alma-Ata 54.74 317 *e*P **P** **18 56 16.7 -1.4**
AAA Alma-Ata 54.74 317 *e*P **P** **18 56 16.7 -1.4**
ULHL Ulahol 54.83 316 P **P** **18 56 19.0 0.0**
SNR=10
TAU Tasmania Unive 55.38 162 P **P** **18 56 22.6 +0.1**
TAU pmax pmax
comp=Z,78nm,1.8s
TAU Tasmania Unive 55.38 162 P **P** **18 56 22.6 +0.1**
TAU lAmb lAmb 18 57 00.7
comp=Z,78nm,1.8s
KUU Kurty 55.39 318⇑ *e*P **P** **18 56 21.4 -1.4**
comp=Z,32nm,0.8s
KUU Kurty 55.39 318 *c*e P **P** **18 56 21.3 -1.4**
KUU pmax pmax
comp=Z,32nm,0.8s
KZA Kyzart 55.46 315 P **P** **18 56 23.3 -0.5**
SNR=28
TKM2 Tokmak 2 55.52 316 P **P** **18 56 23.3 -0.7**
SNR=24
ZAA0 Zalesovo Array 55.55 331 P **P** **18 56 21.9 -1.8**
ZALV Zalesovo Beam 55.55 331 P **P** **18 56 22.2 -1.5**
comp=Z,5.7nm,0.5s,baz=125,slow=6.3,SNR=33
KBK Karagaybulak 55.87 316 P **P** **18 56 26.6 +0.2**
SNR=23
UCH Uchtor 56.02 315 P **P** **18 56 27.8 0.0**
SNR=68
CHMS Chumysh 56.13 316 P **P** **18 56 27.7 -0.4**
SNR=16
AAK Ala-Archa 56.18 315 P **P** **18 56 28.0 -0.6**
comp=Z,6.5nm,0.8s,baz=128,slow=8.5
AAK Ala-Archa 56.18 315 P **P** **18 56 28.3 -0.4**
SNR=8.5
AAK Ala-Archa 56.18 315 *i* P **P** **18 56 28.0 -0.6**
SNR=10
AAK Ala-Archa 56.18 315 P **P** **18 56 27.7 -0.9**
AAK pmax pmax
comp=Z,14nm,1.1s
AAK Ala-Archa 56.18 315 P **P** **18 56 27.7 -0.9**
USP Ospenovka 56.40 316 P **P** **18 56 29.2 -0.8**
SNR=15
AML Almayashu 56.56 315 P **P** **18 56 31.4 -0.3**
SNR=35
SEY Seymchan 56.58 14 *i* P **P** **18 56 32.8 +1.9**
EKS2 Erkin-Say 56.69 315 P **P** **18 56 31.8 -0.4**
SNR=33
ARSB Arslanbob 56.81 314 P **P** **18 56 32.0 -1.1**
ARSB Arslanbob 56.81 314 P **P** **18 56 32.0 -1.1**
KURK Kurchatov 56.97 326 *c*e P **P** **18 56 32.7 -1.2**
KURK pmax pmax
comp=Z,58nm,1.3s
KURK Kurchatov 56.97 326 P **P** **18 56 32.6 -1.3**
KURK lAmb lAmb 18 56 36.5
comp=Z,38nm,0.9s
KURBB Kurchatov Arra 56.98 326 P **P** **18 56 32.5 -1.4**
comp=Z,14nm,0.7s,baz=124,slow=7.2,SNR=5.8
KURBB Kurchatov Arra 56.98 326 P **P** **18 56 32.2 -1.7**
BTLS Baital 57.34 318⇑ *i* P **P** **18 56 35.4 -1.2**
comp=Z,6.7nm,0.6s
BTLS Baital 57.34 318 *c i* P **P** **18 56 35.4 -1.2**
BTLS pmax pmax
comp=Z,7.0nm,0.6s
MSVF Nonsavu 57.51 118 P **P** **18 56 39.5 +1.2**
MSVF pmax pmax
comp=Z,43nm,1.1s
MSVF Nonsavu 57.51 118 P **P** **18 56 39.5 +1.2**
MSVF lAmb lAmb 18 56 53.2
comp=Z,43nm,1.1s
BTK Batken 58.01 312 P **P** **18 56 39.9 -1.6**
BTK pmax pmax
comp=Z,29nm,1.2s
BTK Batken 58.01 312 P **P** **18 56 39.9 -1.6**
BTK lAmb lAmb 18 56 43.4
comp=Z,29nm,1.2s
KBL Kabul 58.10 305 P **P** **18 56 40.9 -1.5**
KBL Kabul 58.10 305 P **P** **18 56 40.9 -1.5**
KBL lAmb lAmb 18 57 02.9
comp=Z,20nm,0.8s
GAR Garm 58.11 310 P **P** **18 56 40.7 -1.6**
DZA Taraz 58.46 315 *e*P **P** **18 56 43.4 -1.3**
DZA Taraz 58.46 315 *e*P **P** **18 56 43.3 -1.3**
CHGR Chuyangaron 58.90 310 P **P** **18 56 46.5 -1.3**
KK31 Karatay Array 59.10 315 P **P** **18 56 47.1 -1.9**
KK31 pmax pmax
comp=Z,15nm,0.7s
KK31 Karatay Array 59.10 315 P **P** **18 56 47.1 -1.9**
KK31 lAmb lAmb 18 56 48.9
comp=Z,15nm,0.7s
IUG Iuzhnay 59.16 314⇑ *e*P **P** **18 56 48.5 -1.0**
IUG Iuzhnay 59.16 314 *c*e P **P** **18 56 48.5 -1.0**
CHM Chimkent 59.52 314 *e*P **P** **18 56 50.0 -2.0**
CHM Chimkent 59.52 314 *e*P **P** **18 56 49.9 -2.0**
OTUK Ortayu 59.62 321 P **P** **18 56 51.1 -1.4**
BRZS Berezniki 60.07 323⇑ *e*P **P** **18 56 54.5 -1.0**
comp=Z,12nm,0.6s
BRZS Berezniki 60.07 323 *c*e P **P** **18 56 54.5 -1.0**
BRZS pmax pmax
comp=Z,12nm,0.6s
TIXI Tiksi 62.22 1 P **P** **18 57 09.6 0.0**
TIXI pmax pmax
comp=Z,71nm,1.2s
TIXI Tiksi 62.22 1 P **P** **18 57 09.6 0.0**
BVAR Borovoye Array 62.57 326 P **P** **18 57 11.8 -0.6**
comp=Z,14nm,0.7s,baz=123,slow=7.8,SNR=105
BRVK Borovoye 62.64 326 P **P** **18 57 11.7 -1.1**
BRVK pmax pmax
comp=Z,26nm,0.8s
BRVK Borovoye 62.64 326 P **P** **18 57 11.7 -1.1**
HRA Herat 63.63 304 P **P** **18 57 18.6 -1.5**
HRA lAmb lAmb 18 57 30.2
comp=Z,7.9nm,0.7s
ATKA Atka Island 63.97 36 P **P** **18 57 23.0 +1.4**
BILL Bilibino 64.15 15⇑ *e*P **P** **18 57 23.4 +0.8**
BILL pmax pmax
comp=Z,37nm,1.7s
BILL Bilibino 64.15 15 P **P** **18 57 23.0 +0.5**
BILL lAmb lAmb 18 57 48.9
comp=Z,24nm,1.1s
NRIK Noril'sk 64.94 346 P **P** **18 57 28.0 +0.3**
comp=Z,18nm,0.6s,baz=132,slow=6.3,SNR=28
QRZ Quartz Range 65.46 143 P **P** **18 57 31.6 +0.1**
HIZ Hauiti 65.48 140 P **P** **18 57 31.0 -0.7**
DCZ Deep Cove 65.64 150 P **P** **18 57 33.5 +1.0**
FOZ Fox Glacier 65.68 147 P **P** **18 57 32.9 0.0**
MLZ Mavora Lakes 66.05 149 P **P** **18 57 34.5 -0.8**
NNZ Nelson 66.21 143 P **P** **18 57 35.4 -0.9**
THZ Tophouse 66.27 144 P **P** **18 57 36.1 -0.6**
RPZ Rata Peaks 66.47 146 LR LR 19 26 51.5
comp=Z,131nm,19.6s,baz=308,slow=36
RPZ Rata Peaks 66.47 146 P **P** **18 57 37.8 -0.2**
LTZ Lake Taylor 66.55 145 P **P** **18 57 39.4 +0.9**
LTZ lAmb lAmb 18 57 52.9
comp=Z,34nm,1.1s
BKZ Black Stump Fm 66.90 140 P **P** **18 57 41.3 +0.4**
BKZ lAmb lAmb 18 57 54.9
comp=Z,30nm,1.0s
KHZ Kahutara 67.04 144 P **P** **18 57 41.6 0.0**
SNZO South Karori 67.06 142 P **P** **18 57 41.7 0.0**
NIKH Nikolski High 67.31 36 P **P** **18 57 46.7 +3.5**
GEYT Alibeck 67.33 307 P **P** **18 57 43.4 -0.3**
comp=Z,4.0nm,0.8s,baz=131,slow=4.5,SNR=8.7
GYA0B ALIBECK ARRAY 67.33 307 P **P** **18 57 43.1 -0.6**
GYA0B lAmb lAmb 18 58 02.1
comp=Z,26nm,1.3s
PLWZ Palliser 67.54 142 P **P** **18 57 44.9 +0.1**
BFZ Birch Farm 67.62 141 P **P** **18 57 46.1 +0.8**
BANOM Banah 68.29 294 P **P** **18 57 49.6 -0.4**
UOSS Minazif 68.38 293 P **P** **18 57 50.5 0.0**
UOSS Minazif 68.38 293 P **P** **18 57 49.0 -1.5**
UOSS lAmb lAmb 18 57 52.3
comp=Z,9.4nm,0.7s
MSFE Esma-Masafi 68.42 294 P **P** **18 57 50.9 +0.1**
SHME Shamm 68.43 294 P **P** **18 57 52.5 +1.7**
HATD Hatta, Dubai 68.45 293 *i* P **P** **18 57 50.2 -0.7**
SNR=11
ASHO Ashiyiah 68.52 293 *i* P **P** **18 57 50.3 -1.1**
SNR=14
NIUE Niue 68.64 115 P **P** **18 57 51.2 -1.0**
SVE Sverdlovsk 69.12 327 *de*P **P** **18 57 54.0 -0.5**
SVE *e*S **S** **19 06 55.2 -3.1**
SVE pmax pmax
comp=Z,44nm,1.0s
SVE MLR MLR
comp=Z,436nm,17.0s
SHAO Shalim 69.16 286 P **P** **18 57 55.6 +0.2**
AKTO Aktyubinsk 69.21 320 P **P** **18 57 54.1 -1.0**
baz=107,slow=11
MCQ Macquarie Isla 69.23 161 P **P** **18 57 54.5 -0.5**
baz=69,SNR=3.4
GAMB Gambell 69.32 25 P **P** **18 57 57.5 +2.0**
ARU Arti 70.14 327 P **P** **18 57 59.7 -1.0**
baz=104,slow=8.1
ARU Arti 70.14 327 *c i* P **P** **18 57 59.5 -1.3**
ARU pmax pmax
comp=Z,50nm,1.3s
ARU Arti 70.14 327 P **P** **18 57 59.2 -1.5**
SOCY Socotra 71.20 280 P **P** **18 58 06.5 -1.6**
SDPT Sand Point 72.62 35 P **P** **18 58 16.8 +1.1**
CHGN Chignik 73.91 34 P **P** **18 58 23.7 +0.4**
CHGN lAmb lAmb 18 58 53.3
comp=Z,28nm,1.0s
RDOG Red Dog Mine 74.09 22 P **P** **18 58 25.6 +1.3**
RDOG lAmb lAmb 18 58 43.5
comp=Z,34nm,1.4s
AKT Akhty 75.52 310 *e*P **P** **18 58 32.2 -1.0**
AKT *e* 18 58 45.1
AKT pmax pmax
comp=Z,12nm,0.8s
MAK Makhachkala 75.70 312 *e*P P 18 58 26.8 -7.2
MAK *e*PPP PPP 19 03 02.9
MAK *e*S **S** **19 08 06.6 -7.4**
MAK pmax pmax
comp=Z,164nm,1.1s
MAK MLR MLR
comp=Z,326nm,14.0s
TTA Tatalina 75.94 27 P **P** **18 58 35.6 +0.5**
TTA Tatalina 75.94 27 P **P** **18 58 35.6 +0.5**
CASY Casey 76.39 187 P **P** **18 58 37.3 -0.1**
CASY lAmb lAmb 18 58 48.8
comp=Z,19nm,0.7s
OHAK Old Harbor 76.80 33 P **P** **18 58 39.8 -0.1**
OHAK lAmb lAmb 18 58 55.2
comp=Z,55nm,1.4s
GROC Groznyy 76.95 312 *e*P **P** **18 58 40.0 -1.1**
GROC *e* 18 58 50.6
GROC *e*S **S** **19 08 28.8 +1.0**
GROC pmax pmax
comp=Z,27nm,0.8s
KDAK Kodiak Island 77.21 33 P **P** **18 58 43.6 +1.4**
KDAK pmax pmax
comp=Z,160nm,1.9s
KDAK Kodiak Island 77.21 33 P **P** **18 58 43.6 +1.4**
PPLA Purkeypile 77.68 28 P **P** **18 58 44.1 -0.9**
PPLA lAmb lAmb 18 59 14.9
comp=Z,40nm,1.4s
HOM Homer 77.78 31 P **P** **18 58 46.3 +0.9**
CNPM China Poot 77.98 31 P **P** **18 58 47.8 +1.2**
RAYN Ar Rayn 78.21 292 *i* P **P** **18 58 47.0 -1.5**
SNR=55
RAYN Ar Rayn 78.21 292 P **P** **18 58 47.1 -1.5**
RAYN pmax pmax
comp=Z,21nm,0.7s
RAYN Ar Rayn 78.21 292 P **P** **18 58 47.1 -1.5**
RAYN lAmb lAmb 18 58 49.5
comp=Z,21nm,0.7s
BPAW Bear Paw Mtn. 78.29 26 P **P** **18 58 49.7 +1.5**
BPAW lAmb lAmb 18 58 54.6
comp=Z,34nm,1.2s
KTH Kantishna Hill 78.29 27 P **P** **18 58 47.8 -0.5**
KTH lAmb lAmb 18 59 08.3
comp=Z,33nm,1.4s
ZEI Tsey 78.35 312 *e*P **P** **18 58 47.9 -1.3**
ZEI pmax pmax
comp=Z,19nm,0.9s
MLY Manley 78.44 25 P **P** **18 58 50.3 +1.3**
NCK Nalchik 78.55 313 *i* P **P** **18 58 48.9 -1.2**
TRF Thorofare Moun 78.57 27 P **P** **18 58 50.5 +0.6**
TRF lAmb lAmb 18 59 53.7
comp=Z,37nm,1.5s
AKH Akhalkalaki 78.71 310 P **P** **18 58 50.3 -0.9**
AKH pmax pmax
comp=Z,16nm,0.9s
AKH Akhalkalaki 78.71 310 P **P** **18 58 50.3 -0.9**
AKH lAmb lAmb 18 58 52.3
comp=Z,16nm,0.9s
COLD Coldfoot 78.76 23 P **P** **18 58 51.9 +1.2**
KBZ Khabaz 79.04 313 P **P** **18 58 52.2 -0.5**
comp=Z,6.7nm,0.9s,baz=139,slow=2.3,SNR=7.4
KBZ Khabaz 79.04 313 *c*e P **P** **18 58 52.6 -0.1**
TOLK Toolik Lake Re 79.06 22 P **P** **18 58 54.2 +1.8**
baz=268
TOLK Toolik Lake Re 79.06 22 P **P** **18 58 53.7 +1.3**
TOLK lAmb lAmb 18 58 55.2
comp=Z,14nm,0.8s
PMR Palmer 79.07 29 P **P** **18 58 52.2 -0.3**
PMR pmax pmax
comp=Z,43nm,1.4s
PMR Palmer 79.07 29 P **P** **18 58 52.2 -0.3**
PMR lAmb lAmb 18 58 58.0
comp=Z,43nm,1.4s
MCK McKinley 79.18 27 P **P** **18 58 53.4 +0.2**
MCK pmax pmax
comp=Z,47nm,1.2s
MCK McKinley 79.18 27 P **P** **18 58 53.4 +0.2**
MCK lAmb lAmb 18 59 02.2
comp=Z,47nm,1.2s
KIV Kislovodsk 79.19 313 P **P** **18 58 53.7 +0.1**

KIV	**Kislovodsk**	**79.19**	**313**	⇓	*eP*		**P**	18 58 51.5	**-2.1**
KIV					*e*			18 59 04.6	
KIV					*e*			19 01 54.6	
KIV					*eS*		**S**	**19 08 54.4**	**+2.3**
KIV					pmax		pmax		
	comp=Z,10.0nm,0.6s								
KIV					MLR		MLR		
	comp=Z,172nm,19.0s								
KIV	**Kislovodsk**	**79.19**	**313**		P		**P**	**18 58 51.7**	**-1.9**
KIV					IAmb		IAmb	18 59 06.5	
	comp=Z,13nm,0.8s								
RND	**Reindeer**	**79.22**	**27**		P		**P**	**18 58 54.1**	**+0.7**
RND					pmax		pmax		
	comp=Z,44nm,1.4s								
RND	**Reindeer**	**79.22**	**27**		P		**P**	**18 58 54.1**	**+0.7**
RND					IAmb		IAmb	18 58 59.6	
	comp=Z,44nm,1.4s								
KNK	**Knik Glacier**	**79.39**	**29**		P		**P**	**18 58 55.2**	**+0.9**
SML	**Sawmill**	**79.45**	**29**		P		**P**	**18 58 55.2**	**+0.6**
SML					IAmb		IAmb	18 59 01.3	
	comp=Z,35nm,1.0s								
MDM	**Murphy Dome**	**79.50**	**26**		P		**P**	**18 58 55.5**	**+0.6**
VRH	**Novokhopyorsk**	**79.55**	**320**		*eP*		**P**	**18 58 53.6**	**-1.7**
VRH					pmax		pmax		
	comp=Z,10.0nm,0.8s								
WRH	**Wood River Hil**	**79.56**	**26**		P		**P**	**18 58 55.1**	**0.0**
WRH					IAmb		IAmb	18 59 16.0	
	comp=Z,56nm,1.7s								
CCB	**Clear Creek Bu**	**79.68**	**26**		P		**P**	**18 58 56.1**	**+0.3**
CCB					IAmb		IAmb	18 59 02.0	
	comp=Z,28nm,1.6s								
HDA	**Harding Lake**	**80.06**	**26**		P		**P**	**18 58 58.0**	**+0.2**
	baz=271								
HDA	**Harding Lake**	**80.06**	**26**		P		**P**	**18 58 57.3**	**-0.6**
IL31		**80.08**	**26**		P		**P**	**18 58 57.9**	**0.0**
IL31					IAmb		IAmb	18 59 04.7	
	comp=Z,34nm,1.9s								
ILAR	**Eielson Array**	**80.08**	**26**		P		**P**	**18 58 58.1**	**+0.2**
	comp=Z,3.5nm,0.8s,baz=243,slow=6.2,SNR=30								
KLMR	**Klimovskoe**	**80.45**	**330**		*eP*		**P**	**18 58 58.6**	**-1.4**
KLMR					pmax		pmax		
	comp=Z,35nm,0.7s								
KLMR	**Klimovskoe**	**80.45**	**330**		*eP*		**P**	**18 58 58.6**	**-1.4**
KLMR					AMP			18 59 00.8	
	comp=Z,35nm,0.7s								
FYU	**Fort Yukon**	**80.72**	**24**		P		**P**	**18 59 02.3**	**+1.0**
FYU					IAmb		IAmb	18 59 20.9	
	comp=Z,36nm,1.4s								
TMCR	**Tamitsa**	**80.99**	**334**		*eP*		**P**	**18 59 00.7**	**-2.1**
TMCR					pmax		pmax		
	comp=Z,39nm,1.1s								
VORD	**Divnogorie**	**81.09**	**320**		*eP*		**P**	**18 59 01.2**	**-2.4**
VORD					pmax		pmax		
	comp=Z,9.0nm,0.6s								
LPSR	**Galich'ya Gora**	**81.21**	**322**		*eP*		**P**	**18 59 02.2**	**-2.0**
LPSR					pmax		pmax		
	comp=Z,20nm,0.8s								
DOT	**Dot Lake**	**81.36**	**27**		P		**P**	**18 59 05.3**	**+0.5**
DOT					IAmb		IAmb	18 59 10.8	
	comp=Z,16nm,1.1s								
SOC	**Sochi**	**81.36**	**313**		*eP*		**P**	**18 59 01.9**	**-3.3**
SOC					*e*			19 02 17.9	
SOC					*eS*		**S**	**19 09 17.4**	**+2.7**
SOC					*eSS*		**SS**	**19 14 31.1**	**+0.4**
SCRK	**Sand Creek**	**81.37**	**26**		P		**P**	**18 59 05.7**	**+0.6**
SCRK					IAmb		IAmb	18 59 11.1	
	comp=Z,20nm,1.4s								
MOS	**Moscow**	**81.74**	**325**		*eP*		**P**	**18 59 04.3**	**-2.7**
MOS					*eS*		**S**	**19 09 12.6**	**-5.5**
MOS					pmax		pmax		
	comp=Z,36nm,0.7s								
LVZ	**Lovozero**	**82.11**	**338**		*ceP*		**P**	**18 59 07.8**	**-0.9**
LVZ					pmax		pmax		
	comp=Z,45nm,1.3s								
LVZ	**Lovozero**	**82.11**	**338**		P		**P**	**18 59 08.3**	**-0.4**
LVZ					IAmb		IAmb	18 59 13.1	
	comp=Z,40nm,1.1s								
OBN	**Obninsk**	**82.40**	**325**		*c iP*		**P**	**18 59 09.1**	**-1.3**
OBN					*e*			18 59 19.1	
OBN					*e*			19 02 19.3	
OBN					*eS*		**S**	**19 09 27.8**	**+3.0**
OBN					*eSS*		**SS**	**19 14 46.0**	**+0.5**
OBN					pmax		pmax		
	comp=Z,27nm,1.3s								
OBN					MLR		MLR		
	comp=Z,410nm,17.0s								
EGAK	**Eagle**	**82.53**	**26**		P		**P**	**18 59 11.9**	**+0.9**
EGAK					IAmb		IAmb	18 59 48.1	
	comp=Z,36nm,1.6s								
APA	**Apatity**	**82.61**	**337**	⇓	*iP*		**P**	**18 59 10.8**	**-0.5**
APA					pmax		pmax		
	comp=Z,19nm,0.8s								
APA					MLR		MLR		
	comp=Z,600nm,17.0s								
BARN	**Barnard Glacie**	**82.69**	**29**		P		**P**	**18 59 14.3**	**+2.1**
BARN					IAmb		IAmb	18 59 16.0	
	comp=Z,21nm,0.8s								
ANN	**Anapa**	**82.88**	**314**		*eP*		**P**	**18 59 11.7**	**-1.4**
ANN					*eS*		**S**	**19 09 25.1**	**-5.1**
ANN					pmax		pmax		
	comp=Z,53nm,1.1s								
ABPO	**Ambohimpanom**	**83.14**	**249**		P		**P**	**18 59 13.4**	**-1.8**
ABPO					pmax		pmax		
	comp=Z,14nm,1.0s								
ABPO	**Ambohimpanom**	**83.14**	**249**		P		**P**	**18 59 13.4**	**-1.8**
ABPO					IAmb		IAmb	18 59 29.1	
	comp=Z,14nm,1.0s								
DAWY	**Dawson**	**83.37**	**26**		P		**P**	**18 59 16.7**	**+1.3**
GAZ	**Gaziantep**	**83.92**	**307**		P		**P**	**18 59 18.6**	**-0.3**
GAZ					IAmb		IAmb	18 59 26.2	
	comp=Z,22nm,1.0s								
EPYK	**Eagle Plains**	**84.13**	**24**		P		**P**	**18 59 20.4**	**+1.2**
	baz=280								
EPYK	**Eagle Plains**	**84.13**	**24**		P		**P**	**18 59 20.5**	**+1.2**
HYT	**Haines Junctio**	**84.73**	**29**		P		**P**	**18 59 23.8**	**+1.3**
HYT					IAmb		IAmb	18 59 25.6	
	comp=Z,19nm,0.9s								
SPA0	**Spitsbergen Ar**	**84.93**	**349**		P		**P**	**18 59 23.2**	**+0.2**
SPA0					IAmb		IAmb	18 59 37.0	
	comp=Z,26nm,0.9s								
SPA0	**Spitsbergen Ar**	**84.93**	**349**		*eP*		**P**	**18 59 22.9**	**-0.1**
INK	**Inuvik**	**84.97**	**22**		P		**P**	**18 59 24.1**	**+0.7**
	comp=Z,9.0nm,0.9s,baz=261,slow=5.2								
INK	**Inuvik**	**84.97**	**22**		P		**P**	**18 59 23.9**	**+0.6**
INK					pmax		pmax		
	comp=Z,32nm,1.3s								
INK	**Inuvik**	**84.97**	**22**		P		**P**	**18 59 23.9**	**+0.6**
INK					IAmb		IAmb	18 59 29.5	
	comp=Z,32nm,1.3s								
ARCES	**ARCESS Array B**	**85.12**	**340**		P		**P**	**18 59 23.6**	**-0.6**
	comp=Z,10.0nm,0.5s,baz=79,slow=6.2,SNR=85								
ARE0	**ARCESS Array S**	**85.12**	**340**		P		**P**	**18 59 23.5**	**-0.6**
ARE0	**ARCESS Array S**	**85.12**	**340**		*eP*		**P**	**18 59 23.7**	**-0.5**
SIM	**Simferopol'**	**85.20**	**315**	*d*	*iP*		**P**	**18 59 24.3**	**-0.7**
SIM					S		**S**	**19 09 53.1**	**-0.5**
SIM					pmax		pmax		
	comp=Z,18nm,0.8s								
HAMF	**Hammerfest**	**85.45**	**341**		*eP*		**P**	**18 59 24.9**	**-0.9**
HSPB	**Hornsund (broa**	**85.55**	**348**		*eP*		**P**	**18 59 26.1**	**0.0**
KTK1	**Kautokeino**	**86.04**	**339**		*eP*		**P**	**18 59 27.8**	**-0.9**
HEF	**Hetta**	**86.06**	**339**		*eP*		**P**	**18 59 27.7**	**-1.1**
BR131	**Keskin Array S**	**86.34**	**309**		P		**P**	**18 59 29.5**	**-1.5**
BR131					pmax		pmax		
	comp=Z,4.0nm,0.9s								
BR131	**Keskin Array S**	**86.34**	**309**		P		**P**	**18 59 29.5**	**-1.5**
BRTR	**Keskin Array B**	**86.34**	**309**		P		**P**	**18 59 29.4**	**-1.5**
	comp=Z,1.7nm,0.7s,baz=115,slow=4.9,SNR=8.4								
A36M	**Sachs Harbour**	**86.64**	**17**		P		**P**	**18 59 33.7**	**+2.1**
	baz=290								
FIA1	**FINESS Array S**	**86.81**	**332**		P		**P**	**18 59 31.8**	**-0.8**
FIA1					IAmb		IAmb	18 59 32.8	
	comp=Z,26nm,1.1s								
FINES	**FINESS Array B**	**86.81**	**332**		P		**P**	**18 59 31.7**	**-0.9**
	comp=Z,12nm,0.9s,baz=90,slow=6.7,SNR=43								
PPT2	**Papeete2**	**86.98**	**108**		*eS*		**S**	**19 10 12.4**	**+0.4**
	comp=Z,156nm,25.0s								
PPT2	**Papeete2**	**86.98**	**108**		*eLR*		LR	19 27 11.6	
	comp=Z,340nm,22.8s								
TRO	**Tromso**	**87.31**	**340**		*eP*		**P**	**18 59 33.6**	**-1.2**
CSS	**Mathiatis**	**87.36**	**305**		P		**P**	**18 59 34.7**	**-1.2**
AKASG	**Malin Array Be**	**87.45**	**321**		P		**P**	**18 59 35.4**	**-0.5**
	comp=Z,3.1nm,0.7s,baz=66,slow=5.7,SNR=9.2								
AKBB	**Malin Array Si**	**87.45**	**321**	*c*	*eP*		**P**	**18 59 35.8**	**-0.1**
AKBB	**Malin Array Si**	**87.45**	**321**		P		**P**	**18 59 33.9**	**-2.0**
AKBB					IAmb		IAmb	19 00 07.9	
	comp=Z,26nm,1.6s								
NOR	**Nord**	**87.47**	**355**		*i P*		**P**	**18 59 35.2**	**-0.3**
NOR					pmax		pmax		
	comp=Z,12nm,1.1s								
NOR	**Nord**	**87.47**	**355**		*i P*		**P**	**18 59 35.2**	**-0.3**
	comp=Z,12nm,1.1s								
C36M	**Paulatuk**	**87.95**	**20**		P		**P**	**18 59 39.0**	**+1.1**
	baz=292								
C36M	**Paulatuk**	**87.95**	**20**		P		**P**	**18 59 38.2**	**+0.3**
C36M					IAmb		IAmb	18 59 40.4	
	comp=Z,16nm,0.9s								
TBI	**Tubuai**	**88.17**	**114**		*eS*		**S**	**19 10 23.5**	**+0.5**
	comp=Z,390nm,25.0s								
TBI	**Tubuai**	**88.17**	**114**		*eLR*		LR	19 27 46.2	
	comp=Z,394nm,24.0s,baz=290								
MAW	**Mawson**	**89.00**	**200**		P		**P**	**18 59 41.2**	**-1.5**
	baz=89,SNR=4.4								
MAW	**Mawson**	**89.00**	**200**		P		**P**	**18 59 42.1**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=100,slow=8.8,SNR=7.0								
MAW	**Mawson**	**89.00**	**200**		P		**P**	**18 59 42.3**	**-0.4**
MAW					pmax		pmax		
	comp=Z,4.0nm,1.3s								
MAW	**Mawson**	**89.00**	**200**		P		**P**	**18 59 42.3**	**-0.4**
VNDA	**Vanda**	**89.03**	**173**		P		**P**	**18 59 42.4**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=291,slow=4.6,SNR=7.0								
VNDA	**Vanda**	**89.03**	**173**		P		**P**	**18 59 42.0**	**-0.8**
VNDA					pmax		pmax		
	comp=Z,8.0nm,1.0s								
VNDA	**Vanda**	**89.03**	**173**		P		**P**	**18 59 42.0**	**-0.8**
VNDA					IAmb		IAmb	19 00 13.7	
	comp=Z,7.9nm,1.0s								
STEI	**Steigen**	**89.18**	**339**		*eP*		**P**	**18 59 42.2**	**-1.6**
KMBO	**Kilima Mbogo**	**89.55**	**269**		P		**P**	**18 59 47.1**	**+0.1**
	comp=Z,4.7nm,0.9s,baz=342,slow=5.6,SNR=7.4								
KMBO	**Kilima Mbogo**	**89.55**	**269**		P		**P**	**18 59 47.3**	**+0.3**
KMBO	**Kilima Mbogo**	**89.55**	**269**		P		**P**	**18 59 44.4**	**-2.5**
KMBO					pmax		pmax		
	comp=Z,14nm,1.3s								
KMBO	**Kilima Mbogo**	**89.55**	**269**		P		**P**	**18 59 44.4**	**-2.5**
KMBO					IAmb		IAmb	19 00 08.9	
	comp=Z,14nm,1.2s								
BUR08	**Bucovina Ar. S**	**90.72**	**318**		P		**P**	**18 59 50.4**	**-1.1**
DAG	**Danmarks Havn**	**91.66**	**352**	⇑	*iP*		**P**	**18 59 54.5**	**-0.7**
DAG	**Danmarks Havn**	**91.66**	**352**	⇑	*iP*		**P**	**18 59 54.5**	**-0.7**
NSS	**Namsos**	**91.81**	**337**		*eP*		**P**	**18 59 53.3**	**-2.8**
RES	**Resolute Bay**	**92.29**	**10**		P		**P**	**18 59 58.8**	**+0.7**
	comp=Z,14nm,0.8s,baz=292,slow=5.2,SNR=15								
RES	**Resolute Bay**	**92.29**	**10**		P		**P**	**18 59 58.6**	**+0.5**
RES					pmax		pmax		
	comp=Z,15nm,0.8s								
RES	**Resolute Bay**	**92.29**	**10**		P		**P**	**18 59 58.6**	**+0.5**
UZH	**Uzhgorod**	**92.32**	**320**		*eP*		**P**	**18 59 55.6**	**-3.2**
NC405	**NORSAR Array S**	**93.44**	**334**		P		**P**	**19 00 02.0**	**-1.7**
NB2	**NORSAR Subarra**	**93.69**	**334**		P		**P**	**19 00 02.7**	**-2.2**
	comp=Z,4.9nm,1.0s,baz=62,slow=5.3								
NOA	**NORSAR Array B**	**93.69**	**334**		P		**P**	**19 00 03.5**	**-1.4**
	comp=Z,1.5nm,0.7s,baz=64,slow=4.6,SNR=6.1								
DOMB	**Dombas**	**94.13**	**335**		*eP*		**P**	**19 00 06.0**	**-0.9**
YKA	**Yellowknife Ar**	**94.42**	**24**		P		**P**	**19 00 09.2**	**+1.1**
	comp=Z,3.9nm,0.7s,baz=298,slow=4.4,SNR=42								
OKC	**Ostrava-Krasne**	**94.52**	**322**		AMS		AMS	19 45 50.0	
	comp=Z,200nm,17.3s								
TAOE	**Nui Hiva Isla**	**94.59**	**98**		*eLR*		LR	19 30 19.5	
	comp=Z,644nm,33.2s								
MORC	**Moravsky Berou**	**94.91**	**322**		*eP*		**P**	**19 00 10.2**	**-0.5**
AKN	**Aaknes**	**94.91**	**336**		*eP*		**P**	**19 00 10.0**	**-0.4**
SKAR	**Skarslia**	**95.11**	**334**		*eP*		**P**	**19 00 09.7**	**-1.7**
JAVC	**Velka Javorina**	**95.15**	**321**		*eP*		**P**	**19 00 12.6**	**+0.7**
KRLC	**Kraliky**	**95.26**	**323**		*eP*		P	19 00 21.1	+8.7
KRLC					MLR		MLR		
	comp=Z,300nm,18.8s								
KRLC	**Kraliky**	**95.26**	**323**		*epP*		**pP**	**19 00 21.1**	**+1.6**
KRLC					AMS		AMS	19 47 40.0	
	comp=Z,300nm,18.8s								
OSTC	**Ostas**	**95.42**	**323**		AMS		AMS	19 49 50.0	
	comp=Z,200nm,14.8s								
DPC	**Dobruska-Polom**	**95.43**	**323**		AMS		AMS	19 54 10.0	
	comp=Z,300nm,16.5s								
CHVC	**Chvalec**	**95.50**	**323**		AMS		AMS	19 47 00.0	
	comp=Z,300nm,15.8s								
VRAC	**Vranov**	**95.65**	**322**		*eP*		**P**	**19 00 13.9**	**-0.2**
KRUC	**Moravsky**	**95.86**	**322**		*eP*		**P**	**19 00 14.7**	**-0.4**
KULLO	**Kullorsuaq**	**96.15**	**1**	⇑	*iP*		**P**	**19 00 15.6**	**-0.2**
KULLO					pmax		pmax		
	comp=Z,16nm,1.1s								
KULLO	**Kullorsuaq**	**96.15**	**1**	⇑	*iP*		**P**	**19 00 15.6**	**-0.2**
	comp=Z,16nm,1.1s								
TREC	**Trest**	**96.33**	**322**		AMS		AMS	19 49 30.0	
	comp=Z,300nm,16.4s								
PVCC	**Panska Ves**	**96.40**	**323**		AMS		AMS	19 46 40.0	
	comp=Z,300nm,17.5s								
GOPC	**GO Pecny, Ondr**	**96.51**	**323**		AMS		AMS	19 51 30.0	
	comp=Z,300nm,18.4s								
PRU	**Pruhonice**	**96.63**	**323**		*eP*		**P**	**19 00 19.9**	**+1.4**
PRU					MLR		MLR		
	comp=Z,300nm,17.3s								
PRU	**Pruhonice**	**96.63**	**323**		*eP*		**P**	**19 00 19.9**	**+1.4**
PRU					AMS		AMS	19 51 00.0	
	comp=Z,300nm,17.3s								
BRG	**Berggiesshubel**	**96.63**	**324**		*eP*		**P**	**19 00 18.6**	**+0.1**
	comp=Z,7.1nm,1.5s								
BRG	**Berggiesshubel**	**96.63**	**324**		S		**S**	**19 11 43.0**	**+4.9**
BRG	**Berggiesshubel**	**96.63**	**324**		*eP*		**P**	**19 00 18.6**	**+0.1**
BRG					pmax		pmax		
	comp=Z,7.0nm,1.5s								
PRA	**Prague**	**96.66**	**323**		AMS		AMS	19 51 00.0	
	comp=Z,200nm,17.1s								
CLL	**Collm**	**97.00**	**325**		*esP*		**sP**	**19 00 28.0**	**-1.1**
CLL					*eS*		**S**	**19 11 42.0**	**+0.8**
CLL					*eSS*		**SS**	**19 18 18.0**	**+1.0**
CLL					*eSSS*		SSS	19 21 48.0	
CLL					LmV			19 50 00.0	
	comp=Z,400nm,18.1s								
PBCC	**Pribram**	**97.07**	**323**		*eP*		Pdif	19 00 22.5	+1.8
KHC	**Kasperske Hory**	**97.54**	**322**		*eP*		**P**	**19 00 20.0**	**-2.7**
KHC					*e*			19 00 28.1	
KHC					MLR		MLR		
	comp=Z,400nm,17.0s								
KHC	**Kasperske Hory**	**97.54**	**322**		*eP*		**P**	**19 00 20.0**	**-2.7**
KHC					*epP*		**pP**	**19 00 28.1**	**-1.8**
KHC					AMS		AMS	19 53 10.0	
	comp=Z,400nm,17.0s								
GEC2	**GERESS Array S**	**97.58**	**322**		P		**P**	**19 00 22.0**	**-1.0**
GERES	**GERESS Array B**	**97.58**	**322**		P		**P**	**19 00 22.4**	**-0.6**
	comp=Z,1.3nm,1.0s,baz=79,slow=6.9,SNR=7.8								
SUMG	**Summit**	**97.62**	**356**		*i P*		Pdif	19 00 23.8	+0.7
SUMG					pmax		pmax		
	comp=Z,11nm,0.9s								
SUMG	**Summit**	**97.62**	**356**		*i P*		Pdif	19 00 23.8	+0.7
	comp=Z,11nm,0.9s								
NVAR	**Mina Array Bea**	**103.19**	**47**		Pdiff		**Pdif**	**19 00 50.0**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=258,slow=5.9,SNR=3.9								
NVAR					PKKP		**PKKPdf**	**19 16 53.7**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=111,slow=4.9,SNR=2.7								
PDAR	**Pinedale Array**	**107.15**	**40**		PKKP		**PKKPdf**	**19 16 44.6**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=123,slow=4.8,SNR=6.1								
MNTX	**Cornudas Mount**	**115.67**	**48**				**PKPdf**	**19 05 31.5**	**+0.2**
JFWS	**Jewell Farm**	**118.03**	**30**		PKIKP		**PKPdf**	**19 05 34.5**	**-1.0**
JFWS	**Jewell Farm**	**118.03**	**30**				**PKPdf**	**19 05 34.5**	**-1.0**
TX31	**Lajitas Ar. Si**	**118.14**	**50**		PKPdf		**PKPdf**	**19 05 36.2**	**-0.1**
TX32	**Lajitas Array**	**118.14**	**50**		PKPdf		**PiKP**	**19 05 36.5**	**+0.3**
TXAR	**Lajitas Array**	**118.14**	**50**		PKP		**PiKP**	**19 05 36.7**	**+0.5**
	comp=Z,1.5nm,0.9s,baz=340,slow=0.8,SNR=12								
TXAR					PKKPab		**PKKPab**	**19 15 57.9**	**-1.3**
	comp=Z,0.2nm,0.7s,baz=125,slow=3.7,SNR=4.7								
L40A	**Anamosa**	**118.17**	**31**		PKPdf		**PKPdf**	**19 05 35.6**	**-0.2**
L42A	**Oliver, Polo**	**119.00**	**30**				**PKPdf**	**19 05 37.3**	**-0.1**
K43A	**Burlington**	**119.12**	**29**				**PKPdf**	**19 05 37.1**	**-0.5**
R40A	**Maddies Statio**	**120.29**	**35**				**PKPdf**	**19 05 39.5**	**-0.5**
U38A	**Gravette**	**120.31**	**38**				**PKPdf**	**19 05 39.5**	**-0.7**
JCT	**Junction City**	**120.36**	**46**		PKIKP		**PKPdf**	**19 05 39.0**	**-1.4**
JCT	**Junction City**	**120.36**	**46**		P		**PiKP**	**19 05 41.1**	**+0.6**
	baz=304								
JCT	**Junction City**	**120.36**	**46**		PKPdf		**PKPdf**	**19 05 39.0**	**-1.4**
TORD	**Torodi Ar. Bea**	**120.90**	**291**		PKP		**PKPdf**	**19 05 40.2**	**-1.5**
	comp=Z,1.1nm,0.8s,baz=49,slow=1.7,SNR=6.3								
TORD					PKKPab		**PKKPab**	**19 15 47.8**	**+0.9**
	comp=Z,1.0nm,0.9s,baz=294,slow=3.1,SNR=3.5								
CCM	**Cathedral Cave**	**121.03**	**34**		PKIKP		**PKiKP**	**19 05 41.7**	**+0.1**
CCM	**Cathedral Cave**	**121.03**	**34**		PKPdf		**PKiKP**	**19 05 41.7**	**+0.1**
U40A	**Yellville**	**121.28**	**37**		P		**PKPdf**	**19 05 42.0**	**0.0**
	baz=313								
U40A	**Yellville**	**121.28**	**37**		PKPdf		**PKPdf**	**19 05 41.6**	**-0.4**
W39A	**Magazine**	**121.50**	**38**		P		**PiKP**	**19 05 43.0**	**+0.5**
	baz=312								
W39A	**Magazine**	**121.50**	**38**				**PKPdf**	**19 05 42.4**	**0.0**
T42A	**Van Buren**	**121.84**	**35**				**PKPdf**	**19 05 42.9**	**-0.1**
FCAR	**Ozark Folk Cen**	**122.03**	**37**				**PKPdf**	**19 05 43.4**	**0.0**
MIAR	**Mount Ida**	**122.05**	**39**		PKIKP		**PKiKP**	**19 05 44.3**	**+0.7**
MIAR	**Mount Ida**	**122.05**	**39**		PKPdf		**PKiKP**	**19 05 44.3**	**+0.7**
OLIL	**Olney**	**122.23**	**32**		PKPdf		**PKPdf**	**19 05 43.8**	**+0.1**
LCAR	**Lake Charles**	**122.48**	**36**		PKPdf		**PKPdf**	**19 05 44.2**	**-0.1**
O49A	**Covington**	**122.96**	**28**				**PKPdf**	**19 05 44.9**	**-0.2**
WCI	**Wyandotte Cave**	**123.54**	**31**		PKIKP		**PiKP**	**19 05 46.7**	**+0.2**
WCI	**Wyandotte Cave**	**123.54**	**31**		PKPdf		**PiKP**	**19 05 46.7**	**+0.2**
P50A	**Jamestown**	**123.67**	**28**		P		**PiKP**	**19 05 47.1**	**+0.4**
	baz=323								
J59A	**Piesco**	**123.99**	**18**				**PiKP**	**19 05 47.2**	**0.0**
WVT	**Waverly**	**124.31**	**34**		PKIKP		**PKPdf**	**19 05 46.9**	**-0.9**
WVT	**Waverly**	**124.31**	**34**		P		**PiKP**	**19 05 48.0**	**-0.1**
	baz=318								
WVT	**Waverly**	**124.31**	**34**		PKPdf		**PKPdf**	**19 05 46.9**	**-0.9**
L57A	**Andrews Acres**	**124.51**	**21**		P		**PiKP**	**19 05 48.4**	**0.0**
	baz=332								
OXF	**Oxford**	**124.58**	**36**		PKIKP		**PKPdf**	**19 05 47.1**	**-1.2**
OXF	**Oxford**	**124.58**	**36**				**PKPdf**	**19 05 47.1**	**-1.2**
P53A	**Whipple**	**124.86**	**26**				**PiKP**	**19 05 49.2**	**+0.2**
Q52A	**Bidwell**	**124.90**	**27**		P		**PKPdf**	**19 05 49.0**	**+0.1**
	baz=325								
PLAL	**Pickwick Lake**	**125.01**	**35**				**PKPdf**	**19 05 48.2**	**-1.0**
U49A	**Red Boiling Sp**	**125.11**	**32**				**PKPdf**	**19 05 49.2**	**-0.1**
O55A	**Ligonier**	**125.13**	**24**		P		**PiKP**	**19 05 50.6**	**+1.0**
	baz=328								
CLTN	**Cedars of Leba**	**125.14**	**33**		PKPdf		**PKPdf**	**19 05 49.4**	**0.0**
V48A	**Smith Brothers**	**125.14**	**33**				**PKPdf**	**19 05 49.0**	**-0.4**
T50A	**Nancy**	**125.21**	**31**				**PKPdf**	**19 05 49.6**	**+0.2**
S51A	**Beattyville**	**125.34**	**29**		PKPdf		**PKPdf**	**19 05 49.9**	**+0.2**
Q55A	**Buckhannon**	**125.83**	**26**		P		**PiKP**	**19 05 52.1**	**+1.1**
	baz=327								
SWET	**Sewanee**	**126.02**	**33**		PKPdf		**PKPdf**	**19 05 51.1**	**-0.1**
W50A	**Signal Mountai**	**126.36**	**33**				**PKPdf**	**19 05 51.9**	**+0.1**
V51A	**Loudon**	**126.40**	**31**				**PiKP**	**19 05 52.0**	**-0.2**
CPCT	**Cooper Cave**	**126.58**	**32**		PKPdf		**PKPdf**	**19 05 51.9**	**-0.3**
V52A	**Sevierville**	**126.75**	**31**				**PiKP**	**19 05 52.9**	**-0.1**
T54A	**Tazewell**	**126.76**	**28**		P		**PiKP**	**19 05 53.4**	**+0.4**
	baz=325								
Y49A	**Blount Mountai**	**126.77**	**34**				**PKPdf**	**19 05 51.3**	**-1.3**
TKL	**Tuckaleechee C**	**126.81**	**31**		PKIKP		**PKPdf**	**19 05 52.7**	**+0.1**
TKL	**Tuckaleechee C**	**126.81**	**31**				**PKPdf**	**19 05 52.7**	**+0.1**
LRAL	**Lakeview Retre**	**127.04**	**36**		PKPdf		**PKPdf**	**19 05 52.9**	**-0.2**
W52A	**Murphy**	**127.17**	**32**				**PKPdf**	**19 05 53.6**	**+0.2**
V53A	**Saluda**	**127.28**	**30**				**PKPdf**	**19 05 52.4**	**-1.2**
V54A	**Nebo**	**127.62**	**29**		P		**PiKP**	**19 05 55.2**	**+0.5**
	baz=324								
V55A	**Taylorsville**	**127.91**	**29

baz=262
NWLT Wulai 0.48 284 *e*S Sb 18 58 53.2 -0.1
baz=284
NSK Sanguang 0.60 272 *e*S Sb 18 58 56.0 -0.8
baz=271
NACB Ninganchiao 0.62 219 *e*P Pb 18 58 47.8 -0.5
baz=218
NACB *e*S Sg 18 58 55.9 +0.7
baz=218
NNSB Datong 0.62 248 *e*P Pb 18 58 48.6 +0.1
baz=248
NNSB *e*S Sb 18 58 58.2 +0.8
baz=248
NNSH Datong 0.62 248 *e*P Pb 18 58 48.1 -0.4
baz=248
NNSH *e*S Sb 18 58 57.9 +0.5
baz=248
NNS Nan Shan 0.63 250 *e*S Sb 18 58 57.9 +0.3
baz=249
YM01 YM01 0.63 320 *e*P Pb 18 58 48.8 +0.2
baz=320
YM01 *e*S Sb 18 58 58.8 +1.1
baz=320
ETLH Xiulin Townshi 0.67 227 *e*P Pb 18 58 48.8 -0.4
baz=227
ETLH *e*S Sb 18 58 58.8 +0.2
baz=227
WHF Hehuan Shan 0.86 233 *e*P Pb 18 58 52.4 -0.2
baz=232
WHF *e*S Sb 18 59 03.7 -0.7
baz=232

BJI ***31*** *18:58:30.8±0.0, 9˚14N×126˚58E, h13km, mB5.2/35, mb4.8/62, Ms4.9/45, Ms7 4.6/44*
NEIC ***31*** *18:58:32.8±1.9, 9˚36N±0˚06×126˚58E±0˚07, h10km±1km, mb5.1/152, Error ellipse: s-maj=12.7km s-min=9.7km az=71.0*
MAN ***31*** *18:58:33.0, 9˚46N×126˚72E, h0km, mb5.1, ML4.0, MS4.1*
MOS ***31*** *18:58:33.4±0.9, 9˚30N×126˚49E, h27km, mb5.4/16, Error ellipse: s-maj=9.4km s-min=5.0km az=112.6*
IDC ***31*** *18:58:35.3±5.2, 9˚23N×126˚42E, h23km±34km, mb4.5/40, mb1 4.6/43, mb1mx4.6/50, mbtmp4.7/43, ML3.2/2, Error ellipse: s-maj=13.9km s-min=7.4km az=80.0*
DJA ***31*** *18:58:38.8±0.4, 9˚N±2˚×12˚7E±˚, h45km±4km, M4.7/73, mb5.0/73, mB5.3/29, MLv4.6/2, Mw(mB)4.7/29*
GCMT ***31*** *18:58:38.8±0.3, 9˚38N±0.03×126˚78E±0˚02, h28km, MW5.1/103, Moment Tensor Solution. s36,c39; s103,c155; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr6.40±.31; Mθθ-1.32±.17; Mϕϕ-5.08±.19; Mrθ-0.16±.30; Mθϕ-0.39±.12; Mϕr2.22±.25; Best double couple: M○6.17300×10^16^ NP1:ϕs188.00000°, δ35.00000°, λ94.00000°. NP2:ϕs3.00000°, δ55.00000°, λ87.00000°. Principal axes: T 6.8210, Plg79.0000°, Azm261.0000°; N -1.2960, Plg2.0000°, Azm5.0000°; P -5.5250, Plg10.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
KLM ***31*** *18:58:41.0, 9˚30N×126˚98E, h86km, mb5.1*
ISC 31 18:58:35.4±0.6, 9˚37N±0˚03×126˚68E±0˚04, h25km±4km, n505,σ1§52/522, mb5.1/156**, 10C-9D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.22**	**195**	⇑*i*P		Pb	18 59 06.2	+8.3
BIPH				*i* S		**Sb**	**18 59 21.1**	**+7.9**
SCPH	**Surigao**	**1.24**	**289**	⇑*e*P		**Pb**	**18 58 58.7**	**+0.5**
SCPH				*e*S		**Sb**	**18 59 16.5**	**+2.8**
MSLP	**Maasin**	**1.94**	**293**	*e*P		**Pb**	**18 59 09.1**	**-1.1**
MSLP				*e*S		**Sb**	**18 59 36.4**	**+2.4**
BUKP	**Musuan**	**2.18**	**227**	*e*P		**Pn**	**18 59 12.0**	**+1.9**
BUKP				*e*S		**Sb**	**18 59 42.1**	**+1.3**
DAV	**Davao City (W)**	**2.53**	**205**	Pn		**Pb**	**18 59 18.8**	**-1.4**
	103nm,0.3s,baz=62,slow=3.3,SNR=23							
DAV				Lg		Lg	18 59 51.8	
	244nm,0.3s,baz=97,slow=21,SNR=3.7							
DAV	**Davao City (W)**	**2.53**	**205**	⇑*e*P		**Pn**	**18 59 15.1**	**+0.2**
DAV	**Davao City (W)**	**2.53**	**205**			**Pn**	**18 59 16.9**	**+2.0**
DMPH	**Davao City--Mi**	**2.55**	**207**	⇑*i*P		**Pb**	**18 59 21.6**	**+1.0**
DMPH				*e*S		**Sb**	**18 59 52.2**	**+0.7**
KCP	**Kidapawan**	**2.83**	**214**	‖*e*P		**Pn**	**18 59 21.4**	**+2.4**
KCP				*i* S		**Sb**	**18 59 59.3**	**-0.1**
LLP	**Lapu-Lapu**	**2.83**	**290**	*e*P		**Pb**	**18 59 22.3**	**-3.0**
LLP				*e*S		**Sb**	**19 00 00.5**	**+1.0**
CTBH	**Cotabato--PC H**	**3.22**	**229**	‖*e*P		**Pn**	**18 59 26.4**	**+2.1**
PAGZ	**Pagadian**	**3.59**	**245**	*e*P		**Pn**	**18 59 32.8**	**+3.3**
GSPH	**General Santos**	**3.69**	**208**	⇑*i*P		**Pn**	**18 59 34.1**	**+3.2**
CNP	**Catarman**	**3.69**	**328**	*e*P		**Pn**	**18 59 32.4**	**+1.5**
CNP				*e*S		**Sb**	**19 00 23.5**	**-0.8**
CNOP	**Candoni, Negro**	**4.01**	**277**	*e*P		**Pn**	**18 59 37.5**	**+2.3**
CNOP				*e*S		**Sn**	**19 00 24.8**	**+3.5**
GUIM	**Jordan**	**4.21**	**288**	*e*P		**Pn**	**18 59 40.0**	**+2.0**
GUIM				*e*S		**Sn**	**19 00 30.8**	**+4.3**
RCP	**Roxas**	**4.44**	**300**	⇑*e*P		**Pn**	**18 59 43.6**	**+2.5**
JAP	**San Jose, Anti**	**4.86**	**287**	⇑*e*P		Pb	18 59 53.9	-5.9
ZCP	**Zamboanga City**	**5.16**	**242**	‖*e*P		Pn	18 59 57.2	+6.1
OTRP	**Odiongan**	**5.45**	**303**	*e*P		Pn	18 59 59.9	+4.8
CUYO	**Cuyo Island**	**5.76**	**285**	*e*P		**Pn**	**19 00 02.5**	**+3.1**
SJMP	**San Jose**	**6.26**	**300**	*e*P		**Pn**	**19 00 09.9**	**+3.7**
LQP	**Lukban**	**6.89**	**314**	*e*P		**Pn**	**19 00 16.8**	**+1.7**
TGY	**Tagaytay City**	**7.33**	**310**	Pn		Pn	19 00 25.7	+4.8
	28nm,0.3s,baz=122,slow=5.1,SNR=1.6							
TGY				Sn		**Sn**	**19 01 46.8**	**+3.5**
	23nm,0.3s,baz=279,slow=8.4,SNR=1.2							
TNTI	**Ternate**	**8.57**	**175**	P		**Pn**	**19 00 39.8**	**+1.9**
	2μm185nm,1.3s							
TNTI	**Ternate**	**8.57**	**175**	Pn		**Pn**	**19 00 37.9**	**0.0**
KMSI	**Cibinong**	**9.14**	**197**	P		**Pn**	**19 00 49.2**	**+3.4**
	2μm172nm,0.7s							
LBMI	**Labuha**	**9.98**	**175**	P		**Pn**	**19 00 59.0**	**+1.8**
	76nm,0.7s							
MRSI	**Marisa**	**10.02**	**208**	P		**Pn**	**19 00 58.3**	**+0.6**
	1μm83nm,1.1s							
SZP	**Santa**	**10.13**	**324**	Pn		**Pn**	**19 01 01.9**	**+2.6**
KKM	**Kota Kinabalu**	**10.88**	**253**	Pn		**Pn**	**19 01 09.7**	**0.0**
LUWI	**Luwuk**	**11.05**	**201**	P		Pn	19 01 17.6	+5.6
	2μm154nm,1.2s							
LUWI	**Luwuk**	**11.05**	**201**	Pn		**Pn**	**19 01 13.2**	**+1.3**
SIJI	**Sorong**	**11.15**	**156**	Pn		**Pn**	**19 01 14.9**	**+1.5**
	4.6nm,0.3s,baz=342,slow=13,SNR=16							
SANI	**Sanana**	**11.37**	**183**	P		**Pn**	**19 01 17.0**	**+0.7**
	992nm70nm,0.9s							
NLAI	**Namlea**	**12.54**	**178**	P		**Pn**	**19 01 33.3**	**+1.1**
	739nm48nm,0.8s							
MSAI	**Masohi**	**12.83**	**170**	P		Pn	19 01 41.7	+5.4
	15nm,0.9s							
AAI	**Ambon**	**13.06**	**173**	P		**Pn**	**19 01 43.1**	**+3.7**
	902nm42nm,0.9s							
FAKI	**Fak Fak**	**13.41**	**155**	P		**Pn**	**19 01 45.2**	**+0.9**
	58nm,1.4s							
FAKI	**Fak Fak**	**13.41**	**155**	Pn		**Pn**	**19 01 43.9**	**-0.4**
TTSI	**Tana Toraja**	**14.10**	**209**	P		**P**	**19 01 58.0**	**-3.1**
	1μm68nm,1.0s							
BKB	**Balikpapan**	**14.37**	**223**	Pn		**Pn**	**19 01 55.2**	**-2.1**
TWG	**Pinlang**	**14.41**	**339**			**Pn**	**19 01 59.1**	**+1.2**
YULB	**Yu-li**	**14.86**	**340**			**P**	**19 02 07.9**	**-1.6**
SPSI	**Sidrap Palu**	**14.93**	**208**	P		**P**	**19 02 09.2**	**-1.1**
	1μm60nm,0.9s							
TPUB	**Ta-pu**	**15.01**	**338**			**P**	**19 02 09.5**	**-1.7**
BNSI	**Bone**	**15.17**	**206**	P		**P**	**19 02 11.3**	**-1.6**
	2μm88nm,1.3s							
SSLB	**Suanglung**	**15.34**	**340**			**P**	**19 02 14.1**	**-0.8**
NACB	**Ninganchiao**	**15.50**	**342**			**Pn**	**19 02 13.9**	**+1.5**
KAPI	**Kappang**	**15.87**	**206**	Pn		**Pn**	**19 02 18.0**	**+0.8**
	baz=202,slow=8.1,SNR=1.4							
KAPI	**Kappang**	**15.87**	**206**	P		**Pn**	**19 02 18.4**	**+1.2**
KAPI				pmax		pmax		
	comp=Z,173nm,2.0s							
KAPI	**Kappang**	**15.87**	**206**			**Pn**	**19 02 18.4**	**+1.2**
KAPI				IAmb		IAmb	19 03 00.7	
	comp=Z,173nm,1.9s							
SBUM	**Sibu**	**15.93**	**245**			**P**	**19 02 20.7**	**-0.8**
SBUM	**Sibu**	**15.93**	**245**	P		**P**	**19 02 25.0**	**+3.5**
BKSI	**Bulukumba**	**15.99**	**204**	P		**P**	**19 02 22.3**	**+0.2**
	comp=Z,32nm,0.9s							
YHNB	**Yeheng**	**16.03**	**342**			**P**	**19 02 22.5**	**-0.1**
TATO	**Taipei**	**16.29**	**343**			**P**	**19 02 24.7**	**-0.6**
TATO						IAmb	19 02 26.5	
	comp=Z,154nm,1.5s							
KBKI	**Kotabaru**	**16.38**	**220**	P		**P**	**19 02 28.8**	**+2.4**
	comp=Z,579nmcomp=Z,62nm,0.7s							
SMPI	**Sarmi**	**16.47**	**133**	P		**P**	**19 02 26.4**	**-1.0**
	comp=Z,73nm,1.4s							
KNMB	**Chin-men Tao**	**16.96**	**333**			**P**	**19 02 33.8**	**+1.0**
JOW	**Kunigami**	**17.43**	**5**	P		**P**	**19 02 40.9**	**+2.8**
	comp=Z,0.1nm,0.3s,baz=186,slow=14,SNR=4.9							
JOW	**Kunigami**	**17.43**	**5**			**Pn**	**19 02 37.1**	**+0.2**
GENI	**Genyem**	**17.94**	**131**	P		**P**	**19 02 46.0**	**+2.3**
	comp=Z,3μmcomp=Z,70nm,0.8s							
DLV	**T Lat**	**18.06**	**280**	P		**Pn**	**19 02 44.2**	**-0.7**
KSM	**Kuching**	**18.07**	**245**	P		**Pn**	**19 02 44.9**	**0.0**
KSM	**Kuching**	**18.07**	**245**	P		**P**	**19 02 50.0**	**+4.8**
JAY	**Jayapura**	**18.30**	**130**	P		**Pn**	**19 02 49.5**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=251,slow=7.4,SNR=7.4							
JAY	**Jayapura**	**18.30**	**130**	P		**Pn**	**19 02 49.6**	**+1.9**
	comp=Z,19nm,1.2s							
MMRI	**Maumere**	**18.43**	**194**			**P**	**19 02 47.5**	**-1.6**
MMRI					IAmb	IAmb	19 03 14.1	
	comp=Z,84nm,0.9s							
EDFI	**Ende, Flores**	**18.68**	**196**	P		**Pn**	**19 02 55.2**	**+2.9**
	comp=Z,22nm,0.7s							
QIZ	**Qiongzhong**	**18.92**	**302**	P		**P**	**19 02 52.5**	**-1.9**
QIZ				S		**Sn**	**19 06 27.0**	**+0.6**
QIZ				pmax		pmax		
	comp=Z,13nm,1.6s							
QIZ				LR		LR		
	comp=Z,1μm,14.7s							
QIZ				LR		LR		
	comp=Z,1μm,18.6s							
QIZ				LR		LR		
	comp=Z,1μm,19.6s							
QIZ	**Qiongzhong**	**18.92**	**302**			**P**	**19 02 53.9**	**-0.5**
SOEI	**Soe**	**19.15**	**187**	P		**Pn**	**19 03 00.0**	**+1.9**
	comp=Z,2μmcomp=Z,176nm,1.1s							
SOEI	**Soe**	**19.15**	**187**			**Pn**	**19 02 58.5**	**+0.4**
SOEI					IAmb	IAmb	19 03 44.6	
	comp=Z,132nm,0.8s							
BATI	**Baumata**	**19.68**	**189**	P		**P**	**19 03 02.5**	**-0.3**
	comp=Z,12nm,0.3s,baz=359,slow=4.5,SNR=16							
BATI				S		**S**	**19 06 40.0**	**-3.6**
	comp=Z,1.3nm,0.3s,baz=31,slow=17,SNR=1.4							
BATI	**Baumata**	**19.68**	**189**	P		**Pn**	**19 03 04.1**	**-0.2**
	comp=Z,890nmcomp=Z,88nm,0.8s							
PLAI	**Plampang**	**20.14**	**206**	P		Pn	19 03 11.8	+2.1
	comp=Z,149nm,0.8s							
SSE	**Sheshan**	**22.21**	**347**	P		**P**	**19 03 31.3**	**+1.3**
SSE				pmax		pmax		
	comp=Z,26nm,0.7s							
SSE	**Sheshan**	**22.21**	**347**	P		**P**	**19 03 28.4**	**-1.7**
SSE				IAmb		IAmb	19 03 35.4	
	comp=Z,60nm,0.9s							
TPI	**Tanjungpandan**	**22.46**	**238**	P		**P**	**19 03 36.9**	**+4.0**
	comp=Z,42nm,0.9s							
MTN	**Manton Dam**	**22.51**	**169**	P		**P**	**19 03 33.6**	**+0.3**
	baz=23,SNR=12							
MTN	**Manton Dam**	**22.51**	**169**	P		**P**	**19 03 32.6**	**-0.7**
MTN					IAmb	IAmb	19 03 37.4	
	comp=Z,45nm,0.8s							
KDU	**Kakadu**	**22.66**	**165**	P		**P**	**19 03 34.7**	**-0.2**
	baz=23,SNR=12							
SMRI	**Semarang**	**22.97**	**225**	P		**P**	**19 03 37.5**	**-0.8**
SMRI					IAmb	IAmb	19 04 05.1	
	comp=Z,119nm,1.1s							
UGM	**Wanagama**	**23.53**	**224**	P		**P**	**19 03 44.0**	**+0.1**
NJ2	**Nanjing**	**23.71**	**343**	*e*P		**P**	**19 03 46.8**	**+1.5**
NJ2				pP		**sP**	**19 03 53.0**	**-0.6**
NJ2				sP		**pwP**	**19 03 57.0**	**-1.8**
NJ2				pmax		pmax		
	comp=Z,60nm,1.0s							
NJ2				LR		LR		
	comp=Z,540nm,11.1s							
NJ2				LR		LR		
	comp=Z,1μm,11.6s							
NJ2				LR		LR		
	comp=Z,810nm,14.9s							
MYKOM	**Kota Tinggi**	**23.92**	**253**	P		**P**	**19 03 46.5**	**-1.0**
MYKOM					IAmb	IAmb	19 03 50.8	
	comp=Z,50nm,0.9s							
MYKOM	**Kota Tinggi**	**23.92**	**253**	P		**P**	**19 03 49.0**	**+1.4**
JNU	**Nakatsue**	**23.95**	**9**	P		**P**	**19 03 49.3**	**+1.5**
	comp=Z,17nm,0.8s,baz=183,slow=5.5,SNR=15							
JNU	**Nakatsue**	**23.95**	**9**	P		**P**	**19 03 47.5**	**-0.2**
WHN	**Wuhan**	**24.00**	**333**	‖P		**P**	**19 03 48.8**	**+0.7**
LEM	**Lembang**	**24.89**	**230**	P		**P**	**19 03 53.6**	**-3.1**
	comp=Z,16nm,0.9s,baz=318,slow=24,SNR=2.5							
SLVN	**Son La**	**24.93**	**301**	P		**P**	**19 03 55.3**	**-1.6**
KNRA	**Kununurra**	**24.97**	**175**	P		**P**	**19 03 56.8**	**-0.3**
	baz=25,SNR=26							
KNRA	**Kununurra**	**24.97**	**175**	P		**P**	**19 03 56.2**	**-0.9**
KNRA					IAmb	IAmb	19 04 15.5	
	comp=Z,53nm,0.8s							
PMBI	**Palembang**	**25.02**	**242**	P		**P**	**19 03 56.5**	**-1.0**
GYA	**Guiyang**	**25.46**	**314**	*e*P		**P**	**19 04 01.0**	**-0.6**
GYA				pmax		pmax		
	comp=Z,10.0nm,0.5s							
KULM	**Kulim**	**26.12**	**263**	P		**P**	**19 04 06.2**	**-1.5**
KULM	**Kulim**	**26.12**	**263**	P		**P**	**19 04 09.0**	**+1.3**
ENH	**Enshi**	**26.27**	**325**	P		**P**	**19 04 06.1**	**-2.8**
MDSI	**Maura Dua**	**26.31**	**239**	P		**P**	**19 04 10.1**	**+0.8**
	comp=Z,1μmcomp=Z,27nm,1.4s							
JHJ	**Hachijo jima 2**	**26.55**	**25**	P		**P**	**19 04 13.9**	**+2.6**
	comp=Z,27nm,0.7s,baz=103,slow=2.2,SNR=3.8							
JHJ2	**Mitsune**	**26.56**	**25**	P		**P**	**19 04 11.0**	**-0.4**
KASI	**Kota Agung**	**26.60**	**237**	P		**P**	**19 04 14.4**	**+2.5**
	comp=Z,60nm,1.2s							
LWLI	**Liwa**	**26.69**	**239**	P		**P**	**19 04 15.6**	**+2.7**
	comp=Z,101nm,0.7s							
MNAI	**Manna**	**27.30**	**241**	P		**P**	**19 04 16.3**	**-2.0**
FITZ	**Fitzroy Crossi**	**27.31**	**182**	P		**P**	**19 04 18.4**	**+0.1**
	baz=28,SNR=23							
FITZ	**Fitzroy Crossi**	**27.31**	**182**	P		**P**	**19 04 16.2**	**-2.1**
	comp=Z,42nm,0.8s,baz=351,slow=5.2,SNR=18							
FITZ	**Fitzroy Crossi**	**27.31**	**182**	P		**P**	**19 04 18.0**	**-0.2**
FITZ					IAmb	IAmb	19 04 22.7	
	comp=Z,60nm,1.0s							
INU	**Inuyama**	**27.53**	**19**	P		**P**	**19 04 20.4**	**+0.3**
KMI	**Kunming**	**27.64**	**308**	P		**P**	**19 04 24.5**	**+3.1**
KMI				pmax		pmax		
	comp=Z,16nm,0.5s							
KMI				pmax		pmax		
	comp=Z,630nm,12.2s							
KMI				LR		LR		
	comp=Z,790nm,15.3s							
KMI				LR		LR		
	comp=Z,800nm,18.3s							
KMI				LR		LR		
	comp=Z,770nm,15.9s							
PMG	**Port Moresby**	**27.64**	**132**	P		**P**	**19 04 21.8**	**+0.5**
	comp=Z,13nm,0.8s,baz=193,slow=14,SNR=2.3							
PMG	**Port Moresby**	**27.64**	**132**	P		**P**	**19 04 21.1**	**-0.2**
PMG				pmax		pmax		
	comp=Z,48nm,1.3s							
PMG	**Port Moresby**	**27.64**	**132**	P		**P**	**19 04 21.1**	**-0.2**
PMG				IAmb		IAmb	19 04 40.6	
	comp=Z,48nm,1.2s							
KSRS	**Korea Array**	**27.98**	**2**	P		**P**	**19 04 25.5**	**+1.4**
	comp=Z,5.1nm,0.8s,baz=181,slow=9.5,SNR=23							
KS19	**Wonju Array Si**	**28.03**	**2**	P		**P**	**19 04 25.3**	**+0.8**
TIA	**Tai'an**	**28.09**	**343**	P		**P**	**19 04 26.0**	**+0.8**
TIA				pmax		pmax		
	comp=Z,29nm,1.0s							
MNSI	**Mandailing Nat**	**28.28**	**254**	P		**P**	**19 04 28.1**	**+1.1**
	comp=Z,35nm,0.6s							
PSI	**Prapat**	**28.34**	**258**	P		**P**	**19 04 25.5**	**-2.2**
	comp=Z,28nm,0.8s,baz=1.1,slow=2.9,SNR=22							
PSI	**Prapat**	**28.34**	**258**	P		**P**	**19 04 26.9**	**-0.8**
PSI				pmax		pmax		
	comp=Z,56nm,1.0s							
CM31	**Chiang Mai Arr**	**28.36**	**292**	P		**P**	**19 04 27.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**28.36**	**292**	P		**P**	**19 04 28.1**	**+0.4**
	comp=Z,4.3nm,0.9s,baz=104,slow=7.1,SNR=29							
CMAR				PcP		**PcP**	**19 07 41.9**	**+1.6**
	comp=Z,2.1nm,0.9s,baz=91,slow=3.1,SNR=4.3							
RPSI	**Rantau Prapat**	**28.37**	**258**	P		**P**	**19 04 26.9**	**-0.9**
RPSI					IAmb	IAmb	19 04 29.7	
	comp=Z,56nm,1.0s							
COEN	**Coen**	**28.38**	**145**	P		**P**	**19 04 26.6**	**-1.3**
	baz=28,SNR=4.4							
COEN	**Coen**	**28.38**	**145**	P		**P**	**19 04 28.7**	**+0.9**
COEN					IAmb	IAmb	19 04 37.5	
	comp=Z,48nm,1.6s							
CHTO	**Chiang Mai**	**28.45**	**292**	P		**P**	**19 04 27.8**	**-0.8**
CHTO				pmax		pmax		
	comp=Z,11nm,1.2s							
CHTO	**Chiang Mai**	**28.45**	**292**	P		**P**	**19 04 27.8**	**-0.8**
TSI	**Tuntungan**	**28.52**	**260**	P		P	19 04 35.1	+5.9
	comp=Z,49nm,1.4s							
MAJO	**Matsushiro**	**29.00**	**19**	P		**P**	**19 04 32.4**	**-0.8**
MAJO				pmax		pmax		
	comp=Z,7.0nm,0.9s							
MAJO	**Matsushiro**	**29.00**	**19**	P		**P**	**19 04 32.4**	**-0.8**
MAT	**Matsushiro**	**29.00**	**19**	P		**P**	**19 04 32.3**	**-1.0**
MJAR	**Matsushiro Arr**	**29.00**	**19**	P		**P**	**19 04 33.4**	**+0.1**
	comp=Z,2.9nm,0.9s,baz=195,slow=9.4,SNR=14							
MJAR				PcP		**PcP**	**19 07 43.2**	**+1.7**
	comp=Z,3.1nm,0.9s,baz=196,slow=3.7,SNR=5.0							
MJB9	**Matsu-Tunnel**	**29.01**	**19**	P		**P**	**19 04 32.3**	**-1.0**
KCSI	**Kotacane, Aceh**	**29.29**	**260**	P		**P**	**19 04 36.5**	**+0.4**
	comp=Z,55nm,0.9s							
SISI	**Saibi**	**29.46**	**250**	P		**P**	**19 04 38.2**	**+0.6**
	comp=Z,28nm,0.7s							
XAN	**Xi'an**	**29.48**	**329**	P		**P**	**19 04 36.0**	**-1.5**
XAN				pmax		pmax		
	comp=Z,12nm,0.7s							
XAN				LR		LR		
	comp=Z,2μm,16.9s							
XAN				LR		LR		
	comp=Z,850nm,14.1s							
XAN				LR		LR		
	comp=Z,2μm,15.7s							
XAN	**Xi'an**	**29.48**	**329**	P		**P**	**19 04 35.3**	**-2.2**
XAN				pmax		pmax		
	comp=Z,8.0nm,0.8s							
XAN	**Xi'an**	**29.48**	**329**	P		**P**	**19 04 35.3**	**-2.2**
LHMI	**Lhok Sumawe**	**29.77**	**264**	P		**P**	**19 04 38.8**	**-1.5**
WB0	**Warramunga Arr**	**29.94**	**165**	P		**P**	**19 04 39.9**	**-1.8**
GSI	**Gunungsitoli**	**30.04**	**256**	P		**P**	**19 04 43.3**	**+0.6**
	comp=Z,364nm,0.8s							
GSI	**Gunungsitoli**	**30.04**	**256**	P		**P**	**19 04 41.7**	**-1.0**
WRAB	**Tennant Creek**	**30.09**	**165**	P		**P**	**19 04 42.2**	**-0.8**
WRAB				pmax		pmax		
	comp=Z,20nm,0.7s							
WRAB	**Tennant Creek**	**30.09**	**165**	P		**P**	**19 04 42.2**	**-0.8**
WRAB				IAmb		IAmb	19 05 23.5	
	comp=Z,20nm,0.7s							
WRA	**Warramunga Arr**	**30.09**	**166**	P		**P**	**19 04 41.2**	**-1.8**
	comp=Z,7.6nm,0.8s,baz=346,slow=9.4,SNR=16							
WB2	**Warramunga Arr**	**30.09**	**165**	P		**P**	**19 04 42.0**	**-1.1**
WR0	**Warramunga Arr**	**30.16**	**165**	P		**P**	**19 04 41.7**	**-1.9**
PSA00	**Pilbara Seismi**	**31.47**	**192**	P		**P**	**19 04 53.2**	**-2.0**
PSA00					IAmb	IAmb	19 04 56.2	
	comp=Z,39nm,0.8s							
BJT	**Baijiatuao**	**31.92**	**345**	P		**P**	**19 04 58.9**	**-0.1**
BJT				pmax		pmax		
	comp=Z,51nm,1.3s							
BJT	**Baijiatuao**	**31.92**	**345**	P		**P**	**19 04 58.9**	**-0.1**
BJT					IAmb	IAmb	19 05 01.7	
	comp=Z,50nm,1.3s							
BJI	**Beijing**	**31.94**	**345**	P		**P**	**19 05 00.3**	**+1.2**
BJI				S		**S**	**19 10 05.8**	**-3.1**
BJI				pmax		pmax		
	comp=Z,29nm,1.1s							
BJI				LR		LR		
	comp=Z,480nm,15.3s							
BJI				LR		LR		
	comp=Z,560nm,12.1s							
BJI				LR		LR		
	comp=Z,410nm,32.2s							
QIS	**Mount Isa**	**32.35**	**157**	P		**P**	**19 05 02.2**	**-0.7**
	baz=32,SNR=16							
MTSU	**Mount Surprise**	**32.41**	**147**	P		**P**	**19 05 02.5**	**-1.0**
	baz=32,SNR=4.9							
AS31	**Alice Springs**	**33.59**	**168**	P		**P**	**19 05 12.1**	**-1.6**
ASAR	**Alice Springs**	**33.59**	**168**	P		**P**	**19 05 12.4**	**-1.3**
	comp=Z,2.9nm,0.4s,baz=353,slow=6.7,SNR=64							
LZH	**Lanzhou**	**33.74**	**326**	*e*P		**P**	**19 05 17.0**	**+1.9**
LZH				pP		pP	19 05 20.8	-0.2
LZH				sP		sP	19 05 24.0	+0.6
LZH				pmax		pmax		
	comp=Z,17nm,1.1s							
LZH				pmax		pmax		
	comp=Z,160nm,4.9s							
LZH				LR		LR		
	comp=Z,3μm,18.4s							
LZH				LR		LR		
	comp=Z,2μm,18.4s							
LZH				LR		LR		
	comp=Z,3μm,18.8s							
GIRL	**Giralia**	**34.07**	**201**	P		**P**	**19 05 18.5**	**+0.6**
HHC	**Hu-ho-hao-te**	**34.09**	**339**	*e*P		**P**	**19 05 19.5**	**+1.4**
HHC				sP		sP	19 05 26.8	+0.3
HHC				PP		**PP**	**19 06 34.3**	**-1.2**
HHC				S		**S**	**19 10 46.0**	**+3.4**
HHC				pmax		pmax		
	comp=Z,14nm,0.9s							
HHC				pmax		pmax		
	comp=Z,71nm,5.9s							
HHC				LR		LR		
	comp=Z,550nm,16.4s							
HHC				LR		LR		
	comp=Z,830nm,15.1s							
HHC				LR		LR		
	comp=Z,750nm,15.7s							
WRKA	**Warakurna**	**34.24**	**177**	P		**P**	**19 05 18.9**	**-0.5**
	baz=34,SNR=29							
CN2	**Changchun**	**34.32**	**358**	*e*P		P	19 05 24.5	+4.7
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
USA0B	**Ussuriysk Arra**	**35.00**	**7**	P		**P**	**19 05 25.5**	**-0.2**
USA0B				pmax		pmax		
	comp=Z,20nm,0.9s							
USA0B	**Ussuriysk Arra**	**35.00**	**7**	P		**P**	**19 05 25.5**	**-0.2**
USA0B				IAmb		IAmb	19 05 39.8	
	comp=Z,20

baz=40,SNR=22
FORT Forrest 39.94 178 P **P** **19 06 07.4 -0.3**
KLR Kul'dur 39.96 5 P **P** **19 06 09.4 +1.8**
comp=Z,3.9nm,0.6s,baz=192,slow=4.9,SNR=14
H11N1 WAKE ISLAND Hy 40.16 71 T T 19 49 52.3
baz=271
H11N2 WAKE ISLAND Hy 40.17 71 T T 19 49 51.0
baz=271
H11N3 WAKE ISLAND Hy 40.18 71 T T 19 49 54.5
baz=271
HIA Hailar 40.19 353 P **P** **19 06 10.2 +0.6**
HIA pmax pmax
comp=Z,16nm,0.7s
HIA Hailar 40.19 353 P **P** **19 06 10.2 +0.6**
HIA IAmb IAmb 19 07 34.2
comp=Z,16nm,0.7s
TAPN Taplejung 40.85 301 *e*P **P** **19 06 15.3 -0.5**
comp=Z,40nm,0.8s
BLDU Ballidu 40.89 193 P **P** **19 06 15.8 +0.2**
baz=41,SNR=5.7
ODAN Odare 40.97 300 *e*P **P** **19 06 15.9 -0.8**
comp=Z,117nm,0.7s
KLBR Kellerberrin 41.62 191 P **P** **19 06 21.4 -0.1**
baz=42,SNR=15
RAMN Ramite 41.67 300 *e*P **P** **19 06 21.4 -1.1**
comp=Z,45nm,0.7s
ULN Ulaanbaatar 41.80 340 P **P** **19 06 23.1 +0.1**
ULN pmax pmax
comp=Z,10.0nm,0.6s
ULN Ulaanbaatar 41.80 340 P **P** **19 06 23.1 +0.1**
ULN **P** **19 06 23.6 +0.6**
EIDS Eidsvold 41.92 146 P **P** **19 06 24.4 +0.3**
baz=42,SNR=4.1
EIDS Eidsvold 41.92 146 P **P** **19 06 23.7 -0.5**
SONM Songino Array 41.99 340 P **P** **19 06 25.3 +0.6**
comp=Z,2.3nm,0.6s,baz=157,slow=9.3,SNR=12
GRNR Gornyy 42.05 9 *i*P **P** **19 06 25.9 +1.0**
GRNR pmax pmax
comp=Z,8.0nm,0.9s
GRNR MLR MLR
comp=Z,370nm,18.0s
JIRN Jiri 42.23 301 *e*P **P** **19 06 26.1 -1.1**
comp=Z,93nm,0.7s
MUN Mundaring 42.32 193 P **P** **19 06 27.3 +0.1**
baz=43,SNR=16
GUN Gumba 42.57 301 *e*P **P** **19 06 28.8 -1.1**
comp=Z,109nm,0.8s
PKI Pulchoki 42.87 301 *e*P **P** **19 06 31.0 -1.3**
comp=Z,32nm,0.8s
PKIN Phulchoki 42.88 301 *e*P **P** **19 06 31.1 -1.2**
comp=Z,29nm,0.7s
BBOO Buckleboo 42.89 168 P **P** **19 06 31.6 -0.3**
baz=43,SNR=14
BBOO Buckleboo 42.89 168 P **P** **19 06 31.4 -0.4**
BBOO IAmb IAmb 19 06 36.8
comp=Z,50nm,1.1s
NWAO Narrogin (SRO) 43.02 192 P **P** **19 06 33.4 +0.5**
baz=43,SNR=8.7
NWAO Narrogin (SRO) 43.02 192 P **P** **19 06 33.1 +0.2**
NWAO pmax pmax
comp=Z,64nm,0.7s
NWAO Narrogin (SRO) 43.02 192 P **P** **19 06 33.1 +0.2**
NWAO Narrogin (SRO) 43.02 192 P **P** **19 06 33.4 +0.5**
NWAO IAmb IAmb 19 07 56.9
comp=Z,52nm,0.7s
DMN Daman 43.14 301 *e*P **P** **19 06 33.3 -1.1**
comp=Z,41nm,1.0s
STKA Stephens Creek 43.43 161 P **P** **19 06 35.6 -0.6**
baz=44,SNR=12
STKA Stephens Creek 43.43 161 P **P** **19 06 35.6 -0.6**
comp=Z,3.9nm,0.4s,baz=340,slow=7.3,SNR=19
STKA Stephens Creek 43.43 161 P **P** **19 06 35.6 -0.6**
STKA pmax pmax
comp=Z,3.0nm,0.9s
STKA Stephens Creek 43.43 161 P **P** **19 06 35.6 -0.6**
GKN Gorkha 43.65 301 *e*P **P** **19 06 37.2 -1.2**
comp=Z,28nm,0.8s
CIT Chita 43.86 348 *e*P **P** **19 06 41.6 +2.0**
CIT *e* 19 06 53.0
CIT pmax pmax
comp=Z,88nm,1.3s
HTT Hallett 44.13 165 P **P** **19 06 43.6 +1.6**
baz=44,SNR=6.6
ZEA Zeya 44.25 0 *e*P **P** **19 06 43.0 +0.4**
ZEA pmax pmax
comp=Z,21nm,1.2s
KOLN Koldanda 44.46 300 *e*P **P** **19 06 43.8 -1.2**
comp=Z,119nm,0.8s
DANN Dangsing 44.49 301 *e*P **P** **19 06 43.9 -1.4**
comp=Z,84nm,0.7s
CMSA Cobar Meteorol 44.57 157 P **P** **19 06 44.7 -0.7**
baz=45,SNR=6.2
PYUN Piuthan 45.07 300 *e*P **P** **19 06 48.9 -1.0**
comp=Z,147nm,0.9s
ZAK Zakamensk 45.24 339 *e*P **P** **19 06 50.9 +0.2**
ZAK pmax pmax
comp=Z,4.0nm,1.3s
TLY Talaya 46.21 340 P **P** **19 06 58.9 +0.7**
comp=Z,8.0nm,0.7s,baz=12,slow=3.7,SNR=5.2
TLY Talaya 46.21 340 *e*P **P** **19 06 59.1 +0.9**
TLY pmax pmax
comp=Z,13nm,0.7s
TLY Talaya 46.21 340 P **P** **19 06 58.2 0.0**
ARMA Armidale 46.26 150 P **P** **19 07 00.5 +1.5**
ARMA IAmb IAmb 19 07 10.2
comp=Z,50nm,1.8s
TARA Tarawa 46.68 97 P **P** **19 07 00.9 -1.6**
MOY Mondy 47.12 338 *e*P **P** **19 07 06.6 +1.1**
HYB Hyderabad 47.39 285 *i*P **P** **19 07 09.0 +1.0**
HYB *e*S **S** **19 14 07.0 +6.0**
ARPS Mount Arapiles 48.06 164 P **P** **19 07 13.6 +0.8**
baz=48,SNR=5.7
WMQ Urumqi 48.17 322 *e*P **P** **19 07 15.3 +1.5**
WMQ LR LR
comp=Z,2μm,19.1s
WMQ LR LR
comp=Z,750nm,17.1s
WMQ LR LR
comp=Z,1μm,21.5s
WMQ Urumqi 48.17 322 P **P** **19 07 11.8 -1.9**
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ Urumqi 48.17 322 P **P** **19 07 11.8 -1.9**
WMQ IAmb IAmb 19 07 56.6
comp=Z,14nm,0.7s
CAN Canberra 49.20 156 P **P** **19 07 22.8 +1.1**
CAN pmax pmax
comp=Z,61nm,1.6s
CAN Canberra 49.20 156 P **P** **19 07 22.8 +1.1**
CAN IAmb IAmb 19 08 57.6
comp=Z,61nm,1.6s
BOD Bodaibo 49.31 351 *e*P **P** **19 07 22.1 -0.1**
BOD pmax pmax
comp=Z,38nm,1.4s
TOO Toolangi 49.91 160 P **P** **19 07 27.8 +0.8**
TOO pmax pmax
comp=Z,61nm,1.8s
TOO Toolangi 49.91 160 P **P** **19 07 27.8 +0.8**
TOO IAmb IAmb 19 07 39.6
comp=Z,61nm,1.8s
DZM Mont Dzumac 49.97 129 P **P** **19 07 29.4 +1.5**
comp=Z,3.7nm,0.6s,baz=262,slow=22,SNR=1.9
DZM Mont Dzumac 49.97 129 P **P** **19 07 28.8 +0.9**
DZM IAmb IAmb 19 08 01.7
comp=Z,25nm,1.3s
PEA0B Petropavlovsk- 50.29 24 P **P** **19 07 29.8 +0.1**
PEA0B pmax pmax
comp=Z,122nm,2.0s
PEA0B Petropavlovsk- 50.29 24 P **P** **19 07 29.8 +0.1**
PETK Petropavlovsk- 50.29 24 P **P** **19 07 32.3 +2.6**
comp=Z,3.5nm,0.6s,baz=198,slow=3.5,SNR=9.9
PET Petropavlovsk 50.61 24 *e*P **P** **19 07 34.1 +2.0**
PET pmax pmax
comp=Z,14nm,1.1s
PET Petropavlovsk 50.61 24 P **P** **19 07 34.0 +1.9**
PET IAmb IAmb 19 09 05.2
comp=Z,65nm,1.7s
LHI Lord Howe Isla 51.13 144 P **P** **19 07 37.2 +0.9**
DGZ Jazzator, Alta 51.74 328 *i*P **P** **19 07 41.0 +0.2**
DGZ pmax pmax
comp=Z,2.0nm,0.4s
YAK Yakutsk 52.61 2 P **P** **19 07 48.1 +1.3**
comp=Z,5.6nm,0.5s,baz=163,slow=3.8,SNR=14
YAK Yakutsk 52.61 2 P **P** **19 07 47.1 +0.3**
YAK pmax pmax
comp=Z,51nm,1.1s

YAK Yakutsk 52.61 2 P **P** **19 07 47.1 +0.3**
MK31 Makanchi Array 52.98 323 *e*P **P** **19 07 49.7 -0.3**
MK31 Makanchi Array 52.98 323 P **P** **19 07 49.0 -1.0**
MK31 IAmb IAmb 19 07 51.3
comp=Z,15nm,0.8s
MKAR Makanchi Array 52.98 323 P **P** **19 07 49.4 -0.6**
comp=Z,17nm,0.8s,baz=121,slow=6.8,SNR=144
PDGK Podgornoye 53.13 318 P **P** **19 07 50.7 -0.5**
MAKZ Makanchi 53.17 323 P **P** **19 07 50.5 -0.9**
MAKZ pmax pmax
comp=Z,24nm,1.1s
MAKZ Makanchi 53.17 323 P **P** **19 07 50.5 -0.9**
MAKZ IAmb IAmb 19 07 52.7
comp=Z,24nm,1.1s
MA2 Magadan 53.29 15 *i*P **P** **19 07 51.9 -0.1**
MA2 pmax pmax
comp=Z,7.0nm,0.7s
MA2 Magadan 53.29 15 P **P** **19 07 52.6 +0.7**
MA2 IAmb IAmb 19 09 17.4
comp=Z,14nm,0.7s
PRZ Przheval'sk 53.51 317 P **P** **19 07 53.6 -0.5**
PRZ pmax pmax
comp=Z,23nm,0.8s
PRZ Przheval'sk 53.51 317 P **P** **19 07 53.6 -0.5**
PRZ IAmb IAmb 19 09 21.7
comp=Z,22nm,0.8s
TARG Taragay, Kyrgy 53.62 316 P **P** **19 07 54.2 -1.1**
TARG IAmb IAmb 19 09 28.6
comp=Z,12nm,1.0s
KSH Kashi 54.13 312 P **P** **19 08 00.0 +1.4**
KSH pP sP 19 08 05.8 -1.2
KSH PP **PP** **19 10 04.0 +3.6**
KSH S **S** **19 15 34.3 +0.2**
KSH SS **SS** **19 19 21.0 +5.0**
KSH pmax pmax
comp=Z,37nm,1.1s
KSH pmax pmax
comp=Z,180nm,4.3s
KSH LR LR
comp=Z,320nm,6.3s
KSH LR LR
comp=Z,300nm,7.8s
KSH LR LR
comp=Z,470nm,8.7s
KDJ Kajisay 54.20 316 P **P** **19 07 57.9 -1.3**
KDJ pmax pmax
comp=Z,14nm,0.9s
KDJ Kajisay 54.20 316 P **P** **19 07 57.9 -1.3**
KDJ IAmb IAmb 19 08 00.6
comp=Z,14nm,0.8s
NIL Nilore 54.57 305 P **P** **19 08 00.3 -1.5**
NIL pmax pmax
comp=Z,75nm,0.8s
NIL Nilore 54.57 305 P **P** **19 08 00.3 -1.5**
ULHL Ulhol 54.90 316 P **P** **19 08 04.4 +0.2**
SNR=5.5
TAU Tasmania Unive 55.34 162 P **P** **19 08 08.0 +1.0**
TAU pmax pmax
comp=Z,42nm,1.5s
TAU Tasmania Unive 55.34 162 P **P** **19 08 08.0 +1.0**
TAU IAmb IAmb 19 09 56.3
comp=Z,42nm,1.4s
KZA Kyzart 55.52 315 P **P** **19 08 09.4 +0.4**
SNR=30
TKM2 Tokmak 2 55.59 316 P **P** **19 08 08.9 -0.4**
SNR=19
ZAA0 Zalesovo Array 55.60 331 P **P** **19 08 07.1 -1.8**
ZALV Zalesovo Beam 55.60 331 P **P** **19 08 07.8 -1.1**
comp=Z,5.4nm,0.8s,baz=115,slow=7.1,SNR=23
KBK Karagaybulak 55.94 316 P **P** **19 08 12.1 +0.4**
SNR=16
UCH Uchtor 56.09 315 P **P** **19 08 13.0 -0.1**
SNR=55
CHMS Chumysh 56.19 316 P **P** **19 08 13.4 0.0**
SNR=10
FRU1 Bishkek 56.21 316 P **P** **19 08 12.6 -0.9**
FRU1 pmax pmax
comp=Z,12nm,0.8s
FRU1 Bishkek 56.21 316 P **P** **19 08 12.6 -0.9**
FRU1 IAmb IAmb 19 09 52.0
comp=Z,12nm,0.8s
AAK Ala-Archa 56.24 315 P **P** **19 08 13.0 -0.8**
comp=Z,4.0nm,0.7s,baz=142,slow=9.2,SNR=12
AAK Ala-Archa 56.24 315 P **P** **19 08 14.2 +0.3**
SNR=5.8
AAK Ala-Archa 56.24 315 *i*P **P** **19 08 14.2 +0.3**
SNR=6.8
AAK Ala-Archa 56.24 315 *d*iP **P** **19 08 14.1 +0.2**
AAK pmax pmax
comp=Z,5.0nm,0.8s
AAK Ala-Archa 56.24 315 P **P** **19 08 13.1 -0.8**
AAK IAmb IAmb 19 08 26.1
comp=Z,35nm,1.9s
USP Ospenovka 56.46 316 P **P** **19 08 15.4 +0.1**
SNR=8.5
DGAR Diego Garcia 56.53 255 P **P** **19 08 14.6 -1.6**
DGAR pmax pmax
comp=Z,249nm,1.1s
DGAR Diego Garcia 56.53 255 P **P** **19 08 14.6 -1.6**
SEY Seymchan 56.59 14 *i*P **P** **19 08 18.0 +2.2**
AML Almayashu 56.63 315 P **P** **19 08 16.6 -0.4**
SNR=36
EKS2 Erkin-Say 56.75 315 P **P** **19 08 17.4 -0.1**
SNR=38
KURK Kurchatov 57.03 326 *e*iP **P** **19 08 18.0 -1.1**
KURK Kurchatov 57.03 326 P **P** **19 08 18.5 -0.6**
KURK IAmb IAmb 19 08 20.3
comp=Z,38nm,0.9s
KURBB Kurchatov Arra 57.03 326 P **P** **19 08 18.6 -0.6**
comp=Z,15nm,0.8s,baz=126,slow=6.7,SNR=98
KURBB Kurchatov Arra 57.03 326 P **P** **19 08 18.2 -0.9**
MSVF Nonsavu 57.44 118 P **P** **19 08 23.8 +1.2**
MSVF pmax pmax
comp=Z,965nm,0.7s
MSVF Nonsavu 57.44 118 P **P** **19 08 23.8 +1.2**
SMY Shemya 57.69 32 P **P** **19 08 24.8 +1.1**
SMY pmax pmax
comp=Z,76nm,1.2s
SMY Shemya 57.69 32 P **P** **19 08 24.8 +1.1**
BTK Batken 58.08 312 P **P** **19 08 25.8 -1.0**
BTK pmax pmax
comp=Z,14nm,0.9s
BTK Batken 58.08 312 P **P** **19 08 25.8 -1.0**
BTK IAmb IAmb 19 08 29.1
comp=Z,14nm,0.9s
KBL Kabul 58.17 305 P **P** **19 08 26.4 -1.3**
KBL pmax pmax
comp=Z,19nm,0.8s
KBL Kabul 58.17 305 P **P** **19 08 26.4 -1.3**
KBL IAmb IAmb 19 08 29.5
comp=Z,19nm,0.8s
GAR Garm 58.17 310 P **P** **19 08 25.6 -1.9**
CHGR Chuyangaron 58.97 310 P **P** **19 08 31.4 -1.7**
KK31 Karatay Array 59.16 315 *i*P **P** **19 08 32.9 -1.4**
KK31 Karatay Array 59.16 315 P **P** **19 08 32.8 -1.4**
KK31 IAmb IAmb 19 09 57.2
comp=Z,17nm,0.8s
OTUK Ortayu 59.68 321 P **P** **19 08 36.7 -1.0**
TIXI Tiksi 62.24 1 P **P** **19 08 54.5 -0.1**
TIXI pmax pmax
comp=Z,27nm,0.8s
TIXI Tiksi 62.24 1 P **P** **19 08 54.5 -0.1**
TIXI IAmb IAmb 19 09 08.2
comp=Z,27nm,0.8s
BRVK Borovoye 62.70 326 *i*P **P** **19 08 57.3 -0.7**
BRVK Borovoye 62.70 326 P **P** **19 08 56.9 -1.1**
BRVK IAmb IAmb 19 08 59.2
comp=Z,29nm,0.8s
HRA Herat 63.69 304 P **P** **19 09 03.3 -2.0**
HRA IAmb IAmb 19 09 08.0
comp=Z,7.3nm,0.7s
ATKA Atka Island 63.95 36 P **P** **19 09 04.8 -1.5**
BILL Bilibino 64.16 15 *c*iP **P** **19 09 07.8 +0.4**
BILL *e* 19 09 44.5
BILL *e* 19 11 29.4
BILL *e*S **SKSac** **19 18 50.1 -9.3**
BILL pmax pmax
comp=Z,26nm,1.7s
BILL MLR MLR
comp=Z,841nm,21.0s
BILL Bilibino 64.16 15 P **P** **19 09 08.2 +0.8**
BILL IAmb IAmb 19 10 39.9
comp=Z,14nm,0.8s
NRIK Noril'sk 64.98 346 P **P** **19 09 13.6 +0.9**
comp=Z,16nm,0.7s,baz=131,slow=6.3,SNR=20

QRZ Quartz Range 65.40 143 P **P** **19 09 15.7 -0.2**
HIZ Hauiti 65.42 140 P **P** **19 09 15.5 -0.6**
DCZ Deep Cove 65.59 150 P **P** **19 09 16.0 -1.0**
DCZ IAmb IAmb 19 11 17.4
comp=Z,57nm,1.4s
MLZ Mavora Lakes 66.00 149 P **P** **19 09 21.4 +1.7**
NNZ Nelson 66.15 143 P **P** **19 09 21.8 +1.0**
THZ Tophouse 66.21 144 P **P** **19 09 21.3 +0.1**
THZ IAmb IAmb 19 11 03.4
comp=Z,20nm,0.8s
LBZ Lake Benmore 66.40 147 P **P** **19 09 22.2 -0.1**
RPZ Rata Peaks 66.42 146 P **P** **19 09 22.8 +0.4**
comp=Z,15nm,0.7s,baz=126,slow=8.8,SNR=4.1
RPZ Rata Peaks 66.42 146 P **P** **19 09 22.5 0.0**
LTZ Lake Taylor 66.49 145 P **P** **19 09 23.1 +0.1**
LTZ IAmb IAmb 19 09 25.2
comp=Z,43nm,1.3s
TUWZ Tuamarina 66.61 143 P **P** **19 09 23.5 -0.2**
OXZ Oxford 66.71 146 P **P** **19 09 23.2 -1.2**
BKZ Black Stump Fm 66.84 140 P **P** **19 09 25.6 +0.2**
BKZ IAmb IAmb 19 10 50.6
comp=Z,40nm,1.0s
KHZ Kahutara 66.99 144 P **P** **19 09 26.0 0.0**
KHZ IAmb IAmb 19 09 54.0
comp=Z,27nm,1.1s
SNZO South Karori 67.00 143 P **P** **19 09 27.2 +1.1**
MSWZ Moikau Station 67.39 142 P **P** **19 09 27.3 -1.4**
GEYT Alibeck 67.40 307 P **P** **19 09 28.7 -0.3**
comp=Z,4.8nm,0.7s,baz=158,slow=4.3,SNR=12
GYA0B ALIBECK ARRAY 67.40 307 P **P** **19 09 28.0 -1.0**
PLWZ Palliser 67.48 142 P **P** **19 09 28.3 -1.0**
BFZ Birch Farm 67.56 141 P **P** **19 09 29.2 -0.5**
BFZ IAmb IAmb 19 10 47.8
comp=Z,41nm,1.1s
BANOM Banah 68.36 294 *i*P **P** **19 09 35.3 +0.1**
SNR=7.0
UOSS Minazif 68.45 293 P **P** **19 09 32.7 -3.0**
UOSS Minazif 68.45 293 P **P** **19 09 33.1 -2.7**
HATD Hatta, Dubai 68.52 293 P **P** **19 09 35.6 -0.6**
ASHO Ashiyiah 68.59 293 *i*P **P** **19 09 36.2 -0.5**
SNR=11
SVE Sverdlovsk 69.18 327 *de*P **P** **19 09 39.8 +0.1**
SVE pmax pmax
comp=Z,43nm,1.2s
ASUD Al Ashush, Dub 69.25 293 P **P** **19 09 39.4 -1.4**
AKUT Akutan 69.36 36 P **P** **19 09 42.4 +1.6**
ARU Arti 70.19 327 *d*iP **P** **19 09 45.1 -0.8**
ARU 19 12 17.4
ARU S **S** **19 18 59.5 +3.7**
ARU SS **SS** **19 23 28.9 +3.0**
ARU pmax pmax
comp=Z,21nm,0.7s
ARU Arti 70.19 327 P **P** **19 09 44.4 -1.5**
SOCY Socotra 71.27 280 P **P** **19 09 51.6 -1.8**
SOCY IAmb IAmb 19 09 53.1
comp=Z,22nm,0.9s
SDPT Sand Point 72.60 35 P **P** **19 10 01.4 +1.0**
CHGN Chignik 73.89 34 P **P** **19 10 08.3 +0.3**
CHGN IAmb IAmb 19 11 32.5
comp=Z,23nm,1.0s
AKT Akhty 75.59 310 *e*P **P** **19 10 16.6 -1.8**
AKT *e* 19 10 29.0
AKT pmax pmax
comp=Z,12nm,1.0s
CASY Casey 76.38 187 P **P** **19 10 21.7 -0.4**
CASY IAmb IAmb 19 11 46.3
comp=Z,15nm,1.0s
GROC Groznyy 77.01 312 *e*P **P** **19 10 25.8 -0.5**
GROC *e* 19 10 37.4
GROC *e* 19 13 17.6
GROC pmax pmax
comp=Z,22nm,0.9s
TBLG Delisi 77.83 311 P **P** **19 10 30.4 -0.6**
TBLG pmax pmax
comp=Z,21nm,0.8s
TBLG Delisi 77.83 311 P **P** **19 10 30.4 -0.6**
TBLG IAmb IAmb 19 11 54.4
comp=Z,22nm,0.8s
RAYN Ar Rayn 78.28 292 *i*P **P** **19 10 32.5 -1.3**
SNR=48
RAYN Ar Rayn 78.28 292 P **P** **19 10 32.2 -1.6**
RAYN pmax pmax
comp=Z,25nm,0.7s
RAYN Ar Rayn 78.28 292 P **P** **19 10 32.2 -1.6**
RAYN IAmb IAmb 19 11 56.7
comp=Z,25nm,0.7s
BPAW Bear Paw Mtn. 78.28 26 P **P** **19 10 34.0 +1.0**
BPAW IAmb IAmb 19 11 59.0
comp=Z,22nm,0.9s
ZEI Tsey 78.41 312 *e*P **P** **19 10 32.3 -2.1**
ZEI pmax pmax
comp=Z,17nm,0.7s
AKH Akhalkalaki 78.77 310 P **P** **19 10 36.0 -0.4**
AKH pmax pmax
comp=Z,21nm,0.9s
AKH Akhalkalaki 78.77 310 P **P** **19 10 36.0 -0.4**
AKH IAmb IAmb 19 12 00.6
comp=Z,21nm,0.9s
TOLK Toolik Lake Re 79.05 22 P **P** **19 10 39.2 +2.0**
baz=268
TOLK Toolik Lake Re 79.05 22 P **P** **19 10 38.4 +1.2**
TOLK IAmb IAmb 19 12 03.6
comp=Z,48nm,1.5s
KBZ Khabaz 79.11 313 P **P** **19 10 37.4 -0.4**
comp=Z,6.9nm,0.9s,baz=14,slow=0.5,SNR=8.2
MCK McKinley 79.17 27 P **P** **19 10 37.9 0.0**
MCK pmax pmax
comp=Z,24nm,0.9s
MCK McKinley 79.17 27 P **P** **19 10 37.9 0.0**
MCK IAmb IAmb 19 12 03.2
comp=Z,24nm,0.9s
KIV Kislovodsk 79.25 313 *i*P **P** **19 10 39.4 +0.5**
SNR=5.3
KIV Kislovodsk 79.25 313 *de*P **P** **19 10 38.4 -0.4**
KIV *e* 19 10 50.3
KIV *e* 19 13 39.1
KIV pmax pmax
comp=Z,14nm,0.9s
KIV Kislovodsk 79.25 313 P **P** **19 10 38.0 -0.9**
KIV IAmb IAmb 19 10 40.6
comp=Z,15nm,0.8s
WRH Wood River Hil 79.55 26 P **P** **19 10 39.7 -0.2**
WRH IAmb IAmb 19 12 04.5
comp=Z,46nm,1.8s
VRH Novokhopyorsk 79.61 320 *e*P **P** **19 10 38.0 -2.5**
VRH pmax pmax
comp=Z,20nm,0.8s
CCB Clear Creek Bu 79.68 26 P **P** **19 10 41.0 +0.5**
CCB IAmb IAmb 19 12 07.9
comp=Z,20nm,1.4s
HDA Harding Lake 80.05 26 P **P** **19 10 43.1 +0.5**
baz=271
HDA Harding Lake 80.05 26 P **P** **19 10 42.1 -0.5**
IL31 80.07 26 P **P** **19 10 42.8 +0.1**
IL31 IAmb IAmb 19 11 03.4
comp=Z,41nm,2.0s
ILAR Eielson Array 80.07 26 P **P** **19 10 43.7 +0.9**
comp=Z,1.6nm,0.6s,baz=228,slow=7.5,SNR=14
KLMR Klimovskoe 80.50 330 *e*P **P** **19 10 44.1 -1.0**
KLMR pmax pmax
comp=Z,40nm,0.9s
KLMR Klimovskoe 80.50 330 *e*P **P** **19 10 44.2 -0.9**
KLMR AMP 19 10 45.8
comp=Z,40nm,0.9s
FYU Fort Yukon 80.71 24 P **P** **19 10 45.9 -0.2**
FYU IAmb IAmb 19 10 49.1
comp=Z,23nm,1.3s
RIDG Independent Ri 80.99 27 P **P** **19 10 47.7 -0.1**
TMCR Tamitsa 81.04 334 *e*P **P** **19 10 46.3 -1.6**
LPSR Galich'ya Gora 81.27 322 *e*P **P** **19 10 48.3 -1.0**
LPSR pmax pmax
comp=Z,30nm,0.8s
SCRK Sand Creek 81.36 26 P **P** **19 10 51.1 +1.3**
MOS Moscow 81.80 325 *e*P **P** **19 10 50.8 -1.3**
MOS pmax pmax
comp=Z,40nm,0.7s
LVZ Lovozero 82.15 338 P **P** **19 10 54.1 +0.3**
LVZ pmax pmax
comp=Z,64nm,1.4s
LVZ Lovozero 82.15 338 P **P** **19 10 54.1 +0.3**
OBN Obninsk 82.45 325 *d*iP **P** **19 10 55.1 -0.4**
OBN *e* 19 11 05.3
OBN *e* 19 14 02.5
OBN *e*S **S** **19 21 04.6 -5.8**

OBN					pmax	pmax		
	comp=Z,17nm,1.1s							
DAWY	**Dawson**	**83.36**	**26**	P	**P**		**19 11 00.8**	**+0.6**
DAWY				IAmb	IAmb		19 12 26.8	
	comp=Z,34nm,1.4s							
GAZ	**Gaziantep**	**83.99**	**307**	P	**P**		**19 11 02.4**	**-1.6**
EPYK	**Eagle Plains**	**84.13**	**24**	P	**P**		**19 11 06.2**	**+2.1**
	baz=280							
EPYK	**Eagle Plains**	**84.13**	**24**	P	**P**		**19 11 04.0**	**-0.1**
HYT	**Haines Junctio**	**84.72**	**29**	P	**P**		**19 11 07.8**	**+0.6**
HYT				IAmb	IAmb		19 12 34.0	
	comp=Z,19nm,0.8s							
INK	**Inuvik**	**84.97**	**22**	P	**P**		**19 11 08.2**	**0.0**
INK				pmax	pmax			
	comp=Z,38nm,1.4s							
INK	**Inuvik**	**84.97**	**22**	P	**P**		**19 11 08.2**	**0.0**
INK				IAmb	IAmb		19 12 33.9	
	comp=Z,38nm,1.4s							
SPA0	**Spitsbergen Ar**	**84.97**	**349**	P	**P**		**19 11 07.4**	**-0.7**
SPA0				IAmb	IAmb		19 11 09.5	
	comp=Z,33nm,1.1s							
ARCES	**ARCESS Array B**	**85.17**	**340**	P	**P**		**19 11 09.0**	**-0.2**
	comp=Z,9.3nm,0.7s,baz=70,slow=7.0,SNR=28							
ARE0	**ARCESS Array S**	**85.17**	**340**	P	**P**		**19 11 08.0**	**-1.2**
BR131	**Keskin Array S**	**86.41**	**309**	P	**P**		**19 11 14.8**	**-1.4**
BR131				pmax	pmax			
	comp=Z,4.0nm,0.9s							
BR131	**Keskin Array S**	**86.41**	**309**	P	**P**		**19 11 14.8**	**-1.4**
BRTR	**Keskin Array B**	**86.41**	**309**	P	**P**		**19 11 15.4**	**-0.8**
	comp=Z,1.8nm,0.8s,baz=145,slow=6.8,SNR=11							
FIA1	**FINESS Array S**	**86.86**	**332**	P	**P**		**19 11 17.1**	**-0.6**
FIA1				IAmb	IAmb		19 12 41.1	
	comp=Z,20nm,1.0s							
FINES	**FINESS Array B**	**86.87**	**332**	P	**P**		**19 11 17.3**	**-0.3**
	comp=Z,7.1nm,0.8s,baz=101,slow=8.0,SNR=30							
NOR	**Nord**	**87.50**	**355**	*i* P	**P**		**19 11 20.3**	**-0.2**
NOR				pmax	pmax			
	comp=Z,11nm,1.1s							
NOR	**Nord**	**87.50**	**355**	*i* P	**P**		**19 11 20.3**	**-0.2**
	comp=Z,11nm,1.1s							
NOR				*i*			19 12 43.2	
AKASG	**Malin Array Be**	**87.51**	**321**	P	**P**		**19 11 20.1**	**-1.0**
	comp=Z,4.0nm,0.8s,baz=70,slow=4.7,SNR=12							
AKBB	**Malin Array Si**	**87.51**	**321**	P	**P**		**19 11 19.2**	**-1.8**
AKBB				pmax	pmax			
	comp=Z,7.0nm,1.0s							
AKBB	**Malin Array SI**	**87.51**	**321**	P	**P**		**19 11 19.2**	**-1.8**
AKBB				IAmb	IAmb		19 11 21.8	
	comp=Z,7.0nm,0.9s							
VNDA	**Vanda**	**88.99**	**173**	P	**P**		**19 11 26.8**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=323,slow=5.6,SNR=6.3							
VNDA	**Vanda**	**88.99**	**173**	P	**P**		**19 11 27.3**	**-0.2**
VNDA				pmax	pmax			
	comp=Z,5.0nm,0.9s							
VNDA	**Vanda**	**88.99**	**173**	P	**P**		**19 11 27.3**	**-0.2**
VNDA				IAmb	IAmb		19 11 46.6	
	comp=Z,5.3nm,0.8s							
MAW	**Mawson**	**89.00**	**200**	P	**P**		**19 11 27.4**	**-0.2**
	comp=Z,2.3nm,0.8s,baz=65,slow=4.4,SNR=0.3							
MAW	**Mawson**	**89.00**	**200**	P	**P**		**19 11 26.7**	**-0.9**
MAW				pmax	pmax			
	comp=Z,4.0nm,1.3s							
MAW	**Mawson**	**89.00**	**200**	P	**P**		**19 11 26.7**	**-0.9**
KMBO	**Kilima Mbogo**	**89.61**	**269**	P	**P**		**19 11 32.4**	**+0.3**
	comp=Z,3.6nm,0.8s,baz=36,slow=5.2,SNR=8.9							
KMBO	**Kilima Mbogo**	**89.61**	**269**	P	**P**		**19 11 31.5**	**-0.6**
KMBO				pmax	pmax			
	comp=Z,12nm,1.3s							
KMBO	**Kilima Mbogo**	**89.61**	**269**	P	**P**		**19 11 31.4**	**-0.6**
KMBO				IAmb	IAmb		19 11 33.0	
	comp=Z,12nm,1.3s							
BUR08	**Bucovina Ar. S**	**90.78**	**318**	P	**P**		**19 11 36.8**	**+0.2**
BUR08				IAmb	IAmb		19 13 05.5	
	comp=Z,6.8nm,1.2s							
DAG	**Danmarks Havn**	**91.69**	**352**	*i* P	**P**		**19 11 40.0**	**-0.1**
DAG				pmax	pmax			
	comp=Z,18nm,1.0s							
DAG	**Danmarks Havn**	**91.69**	**352**	*i* P	**P**		**19 11 40.0**	**-0.1**
	comp=Z,18nm,1.0s							
DAG				*i*			19 13 02.1	
KWP	**Kalwaria Pacla**	**91.83**	**321**	P	**P**		**19 11 40.6**	**-0.8**
KWP				pmax	pmax			
	comp=Z,45nm,0.5s							
KWP	**Kalwaria Pacla**	**91.83**	**321**	P	**P**		**19 11 40.6**	**-0.8**
RES	**Resolute Bay**	**92.31**	**10**	P	**P**		**19 11 43.7**	**+0.7**
RES				pmax	pmax			
	comp=Z,18nm,0.8s							
RES	**Resolute Bay**	**92.31**	**10**	P	**P**		**19 11 43.7**	**+0.7**
UZH	**Uzhgorod**	**92.38**	**320**	*eP*	**P**		**19 11 40.5**	**-3.4**
UZH				*i*			19 11 49.0	
UZH				*i*			19 11 54.6	
NB2	**NORSAR Subarra**	**93.74**	**334**	P	**P**		**19 11 48.7**	**-1.2**
	comp=Z,1.1nm,0.8s,baz=64,slow=4.6							
NOA	**NORSAR Array B**	**93.74**	**334**	P			**19 11 49.2**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=65,slow=4.7,SNR=7.2							
YKA	**Yellowknife Ar**	**94.41**	**24**	P	**P**		**19 11 53.4**	**+0.5**
	comp=Z,2.3nm,0.7s,baz=297,slow=4.3,SNR=31							
JAVC	**Velka Javorina**	**95.21**	**321**	*eP*	**P**		**19 11 58.1**	**+1.1**
KRUC	**Moravsky**	**95.92**	**322**	*eP*	**P**		**19 11 59.0**	**-1.2**
GERES	**GERESS Array B**	**97.64**	**322**	P	**P**		**19 12 07.6**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=74,slow=4.7,SNR=6.2							
MNTX	**Cornudas Mount**	**115.63**	**48**			**PKPdf**	**19 17 17.1**	**+1.0**
TXAR	**Lajitas Array**	**118.10**	**50**	PKP		**PKPdf**	**19 17 20.7**	**-0.3**
	comp=Z,1.1nm,0.9s,baz=226,slow=1.1,SNR=9.3							
R40A	**Maddies Statio**	**120.27**	**35**			**PKPdf**	**19 17 24.5**	**-0.3**
U38A	**Gravette**	**120.29**	**38**			**PKPdf**	**19 17 25.0**	**+0.1**
JCT	**Junction City**	**120.33**	**46**	PKIKP		**PKiKP**	**19 17 25.8**	**+0.5**
JCT	**Junction City**	**120.33**	**46**	P		**PKiKP**	**19 17 26.5**	**+1.2**
	baz=304							
JCT	**Junction City**	**120.33**	**46**	PKPdf		**PKiKP**	**19 17 25.8**	**+0.5**
TORD	**Torodi Ar. Bea**	**120.97**	**291**	PKP		**PKPdf**	**19 17 25.3**	**-1.4**
	comp=Z,2.1nm,0.8s,baz=42,slow=2.0,SNR=8.1							
CCM	**Cathedral Cave**	**121.01**	**34**	P		**PKiKP**	**19 17 27.5**	**+1.2**
	baz=315							
U40A	**Yellville**	**121.26**	**37**	P		**PKiKP**	**19 17 27.0**	**+0.1**
	baz=313							
U40A	**Yellville**	**121.26**	**37**	PKPdf		**PKPdf**	**19 17 26.4**	**-0.4**
E57A	**Chemin Saint G**	**121.42**	**17**	P		**PKiKP**	**19 17 27.4**	**+0.4**
	baz=336							
W39A	**Magazine**	**121.47**	**39**	P		**PKiKP**	**19 17 28.1**	**+0.7**
	baz=312							
833A	**Chaparral WMA,**	**121.82**	**48**	P		**PKiKP**	**19 17 30.2**	**+2.1**
	baz=303							
T42A	**Van Buren**	**121.82**	**35**			**PKPdf**	**19 17 27.6**	**-0.2**
FCAR	**Ozark Folk Cen**	**122.01**	**37**			**PKPdf**	**19 17 28.3**	**+0.1**
MIAR	**Mount Ida**	**122.03**	**39**	PKIKP		**PKiKP**	**19 17 29.1**	**+0.7**
MIAR	**Mount Ida**	**122.03**	**39**	P		**PKiKP**	**19 17 29.5**	**+1.1**
	baz=311							
MIAR	**Mount Ida**	**122.03**	**39**	PKPdf		**PKiKP**	**19 17 29.1**	**+0.7**
LCAR	**Lake Charles**	**122.45**	**36**			**PKPdf**	**19 17 28.0**	**-1.0**
J58A	**Remsen**	**123.84**	**19**	P		**PKiKP**	**19 17 32.3**	**+0.5**
	baz=334							
M54A	**Oil Creek Stat**	**123.88**	**24**	P		**PKiKP**	**19 17 32.5**	**+0.6**
	baz=328							
J59A	**Piesco**	**123.99**	**18**	P		**PKiKP**	**19 17 32.8**	**+0.7**
	baz=335							
I60A	**Shoreham**	**124.02**	**17**	P		**PKiKP**	**19 17 32.9**	**+0.8**
	baz=336							
G65A	**Princeton**	**124.18**	**12**	P		**PKiKP**	**19 17 33.1**	**+0.7**
	baz=343							
WVT	**Waverly**	**124.29**	**34**	PKIKP		**PKPdf**	**19 17 32.6**	**+0.1**
WVT	**Waverly**	**124.29**	**34**	P		**PKiKP**	**19 17 33.3**	**+0.5**
	baz=318							
WVT	**Waverly**	**124.29**	**34**	PKPdf		**PKPdf**	**19 17 32.6**	**+0.1**
P52A	**Corning**	**124.40**	**27**	P		**PKiKP**	**19 17 33.2**	**+0.2**
	baz=325							
OXF	**Oxford**	**124.56**	**36**	P		**PKiKP**	**19 17 34.5**	**+1.1**
	baz=315							
BINY	**Binghamton**	**124.64**	**20**	P		**PKiKP**	**19 17 34.7**	**+1.2**
	baz=333							
J61A	**Chester**	**124.69**	**17**	P		**PKiKP**	**19 17 34.6**	**+1.2**
	baz=337							
P53A	**Whipple**	**124.85**	**26**	P		**PKiKP**	**19 17 35.0**	**+1.2**
	baz=326							
P53A	**Whipple**	**124.85**	**26**			**PKPdf**	**19 17 33.8**	**+0.3**
PLAL	**Pickwick Lake**	**124.99**	**35**	PKPdf		**PKiKP**	**19 17 34.2**	**0.0**
U49A	**Red Boiling Sp**	**125.10**	**32**			**PKPdf**	**19 17 34.3**	**+0.2**
CLTN	**Cedars of Leba**	**125.13**	**33**			**PKPdf**	**19 17 34.2**	**+0.1**
V48A	**Smith Brothers**	**125.13**	**33**			**PKiKP**	**19 17 34.8**	**+0.2**
T50A	**Nancy**	**125.19**	**31**			**PKiKP**	**19 17 34.9**	**+0.3**
SSPA	**Standing Stone**	**125.31**	**23**	P		**PKiKP**	**19 17 35.3**	**+0.5**
	baz=330							
Q54A	**Coxs Mills**	**125.51**	**26**	P		**PKiKP**	**19 17 35.6**	**+0.4**
	baz=326							
Q55A	**Buckhannon**	**125.82**	**26**	P		**PKiKP**	**19 17 36.9**	**+1.1**
	baz=327							
P56A	**Dayton Farm, R**	**125.91**	**24**	P		**PKiKP**	**19 17 37.2**	**+1.2**
	baz=328							
TZTN	**Tazewell**	**126.21**	**30**			**PKPdf**	**19 17 34.8**	**-1.5**
W50A	**Signal Mountai**	**126.34**	**33**			**PKPdf**	**19 17 36.6**	**0.0**
LRAL	**Lakeview Retre**	**127.02**	**36**	P		**PKiKP**	**19 17 39.3**	**+0.9**
	baz=317							
LRAL	**Lakeview Retre**	**127.02**	**36**			**PKiKP**	**19 17 38.5**	**+0.2**
V53A	**Saluda**	**127.27**	**30**			**PKPdf**	**19 17 38.5**	**+0.1**
T57A	**Hurt**	**127.85**	**26**	P		**PKiKP**	**19 17 40.4**	**+0.4**
	baz=327							
X55A	**Gracelyn & Ava**	**128.80**	**30**	P		**PKiKP**	**19 17 42.0**	**+0.1**
	baz=323							
PLCA	**Paso Flores**	**145.23**	**157**	PKPbc		**PKPdf**	**19 18 12.1**	**+0.7**
	comp=Z,6.9nm,0.8s,baz=187,slow=4.4,SNR=9.1							
PLCA	**Paso Flores**	**145.23**	**157**	PKIKP		**PKPdf**	**19 18 11.9**	**+0.6**
PLCA	**Paso Flores**	**145.23**	**157**			**PKPdf**	**19 18 11.9**	**+0.6**
LC01	**Cunco**	**146.22**	**153**			**PKPbc**	**19 18 14.5**	**+0.5**
DR12	**Loma Pena Alta**	**147.85**	**29**			**PKiKP**	**19 18 20.6**	**-0.6**
BI02	**San Fabin de**	**148.32**	**152**			**PKPbc**	**19 18 20.9**	**+0.8**
OBIP	**Obispado Ponce**	**149.77**	**26**			**PKPbc**	**19 18 24.1**	**0.0**
PDPR	**Patillas Dam,**	**150.03**	**25**	PKPdf		**PKPdf**	**19 18 17.4**	**-2.4**
PDPR						**PKPbc**	**19 18 24.9**	**+0.2**
MTP	**Monte Pirata**	**150.15**	**24**	PKPdf		**PKPdf**	**19 18 17.4**	**-2.6**
MTP						**PKPbc**	**19 18 25.4**	**+0.4**
STVI	**Saint Thomas**	**150.16**	**23**			**PKPbc**	**19 18 23.6**	**-1.4**
SDV	**Santo Domingo**	**154.98**	**44**	PKPdf		**PKPdf**	**19 18 25.2**	**-2.3**
SDV						**PKiKP**	**19 18 36.6**	**+0.4**
RUSC	**La Rusia**	**155.15**	**53**	PKPdf		**PKPdf**	**19 18 24.0**	**-4.1**
RUSC						**pPKPdf**	**19 18 32.6**	**-1.9**
RUSC						**PKPab**	**19 18 51.9**	**-0.8**
RCBR	**Riachuelo**	**162.38**	**280**	PKPab		**PKPab**	**19 19 23.7**	**+0.1**
	comp=Z,11nm,0.9s,baz=343,slow=6.1,SNR=2.9							
RCBR	**Riachuelo**	**162.38**	**280**	PKP2		**PKPab**	**19 19 23.5**	**-0.1**
RCBR	**Riachuelo**	**162.38**	**280**			**PKPab**	**19 19 23.5**	**-0.1**
LPAZ	**La Paz**	**164.02**	**117**	PKPab		**PKPab**	**19 19 33.6**	**+2.3**
	comp=Z,1.4nm,0.7s,baz=216,slow=1.2,SNR=4.1							
LPAZ	**La Paz**	**164.02**	**117**	PKP2		**PKPab**	**19 19 32.7**	**+1.3**
LPAZ	**La Paz**	**164.02**	**117**			**PKPab**	**19 19 32.7**	**+1.3**
SIV	**San Ignacio**	**169.98**	**132**	PKP		**PKPdf**	**19 18 43.1**	**+1.2**
	comp=Z,2.0nm,1.0s,baz=227,slow=1.1,SNR=4.8							

JMA 31 18:58:56.1±0.2, 24°.90N×123°.39E, h29km, M1.5,
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.56**	**218**	P	Pb	18 59 07.0	-0.4
YOJ				S	Sb	18 59 14.4	-0.7
JYNG	**Yonagunijimaku**	**0.60**	**222**	P	Pb	18 59 07.9	-0.3
JYNG				*e*S	Sb	18 59 15.9	-0.5
IRIF	**Iriomote-Funau**	**0.64**	**151**	P	Pb	18 59 08.5	-0.3
IRIF				S	Sb	18 59 17.7	+0.2
JKRS	**Kuro-shima**	**0.87**	**139**	P	Pn	18 59 12.2	-0.1
JKRS				S	Sb	18 59 23.4	-0.5
JIJ	**Ishigaki jima**	**0.87**	**128**	P	Pn	18 59 11.8	-0.6
JISG	**Ishigakijimahi**	**0.89**	**110**	*e*S	Sb	18 59 23.7	-0.9
HATJ	**Hateruma jima**	**0.92**	**156**	P	Pn	18 59 13.0	-0.1

*BJI **31** 18:59:49.9±0.0, 8°.91N×126°.72E, h5km, mB5.2/28, mb4.9/47, Ms4.9/27, Ms7 4.7/27*
*IDC **31** 18:59:54.6±0.4, 9°.31N×126°.39E, h0km, mb4.8/37, mb1 4.9/38, mb1mx4.8/48, mbtmp4.8/38, ML5.5/1, Error ellipse: s-maj=16.5km s-min=9.3km az=77.0*
*MOS **31** 18:59:56.3±0.9, 9°.30N×126°.45E, h26km, mb5.3/19, Error ellipse: s-maj=11.1km s-min=5.5km az=108.2*
*NEIC **31** 18:59:56.0±1.6, 9°.40N±0°.06×126°.46E±0°.08, h10km±1km, mb5.0/107, Error ellipse: s-maj=14.1km s-min=9.9km az=257.0*
*MAN **31** 18:59:58.2, 9°.43N×126°.89E, h88km, mb5.2, ML4.1, MS4.3*
*GCMT **31** 19:00:02.0±0.3, 9°.40N±0°.03×126°.59E±0°.02, h33km, MW5.2/76, Moment Tensor Solution. s22,c22; s76,c102; Duration: 1!0 Moment tensor: Scale 10^17 Nm; Mrr 0.99±.05; Mθθ -0.28±.03; Mϕϕ -0.70±.03; Mrθ 0.04±.03; Mrϕ 0.07±.02; Mθϕ 0.09±.02; Best double couple: M=0.85600×10^17 NP1:ϕ=168.00000°, δ=42.00000°, λ=86.00000°. NP2:ϕ=353.00000°, δ=48.00000°, λ=93.00000°. Principal axes: T 0.9930, Plg86.0000°, Azm303.0000°; N -0.2740, Plg2.0000°, Azm171.0000°; P -0.7200, Plg3.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KLM **31** 19:00:15.0, 9°.38N×126°.73E, h192km, mb5.3*

ISC 31 19:00:00.9±0.8, 9°.37N±0°.04×126°.57E±0°.05, h45km±6km, n383, σ1°60/409, mb5.0/114, 5C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.14**	**291**	*eP*	**Pn**	**19 00 20.9**	**+0.5**
SCPH				*e*S	**Sn**	**19 00 37.5**	**+2.7**
BIPH	**Bislig**	**1.19**	**190**	*iP*	Pn	19 00 29.7	+8.5
BIPH				*i*S	**Sn**	**19 00 44.2**	**+7.8**
MSLP	**Maasin**	**1.85**	**295**	*eP*	**Pn**	**19 00 32.1**	**+2.0**
MSLP				*e*S	**Sn**	**19 00 58.1**	**+5.8**
BUKP	**Musuan**	**2.10**	**225**	*eP*	**Pn**	**19 00 36.0**	**+2.4**
BUKP				*e*S	**Sn**	**19 01 04.5**	**+6.0**
DAV	**Davao City (W)**	**2.48**	**203**	Pn	**Pn**	**19 00 42.2**	**+3.3**
	40nm,0.3s,baz=23,SNR=1.0						
DAV				Lg	Lg	19 01 13.7	
	baz=274,slow=23,SNR=1.1						
DAV	**Davao City (W)**	**2.48**	**203**	*eP*	**Pn**	**19 00 37.1**	**-1.8**
DAV	**Davao City (W)**	**2.48**	**203**		**Pn**	**19 00 42.8**	**+3.9**
DMPH	**Davao City--Mi**	**2.50**	**205**	*eP*	Pn	19 00 44.0	+4.9
DMPH				*e*S	**Sn**	**19 01 15.5**	**+7.1**
LLP	**Lapu-Lapu**	**2.73**	**290**	*eP*	**Pn**	**19 00 45.4**	**+3.2**
LLP				*e*S	**Sn**	**19 01 21.7**	**+7.7**
DDMP	**Don Marcelino,**	**3.35**	**195**	*eP*	**Sn**	**19 01 31.8**	**+2.5**
PAGZ	**Pagadian**	**3.49**	**245**	*eP*	**Pn**	**19 00 56.4**	**+3.7**
PAGZ				*e*S	**Sn**	**19 01 36.0**	**+3.2**
GUIM	**Jordan**	**4.11**	**288**	*eP*	**Pn**	**19 01 03.6**	**+2.4**
GUIM				*e*S	**Sn**	**19 01 54.4**	**+6.3**
BUSP	**Coron**	**6.78**	**293**	*eP*	**Pn**	**19 01 40.6**	**+2.6**
LQP	**Lukban**	**6.82**	**314**	*eP*	**Pn**	**19 01 38.5**	**-0.1**
ENPP	**El Nido**	**7.26**	**285**	*eP*	**Pn**	**19 01 47.3**	**+2.8**
TNTI	**Ternate**	**8.57**	**175**	Pn	**Pn**	**19 02 02.4**	**-0.2**
CAUP	**Cauayan**	**8.83**	**329**	*eP*	**Pn**	**19 02 06.1**	**+0.1**
SZP	**Santa**	**10.07**	**325**	Pn	**Pn**	**19 02 18.4**	**-4.6**
KKM	**Kota Kinabalu**	**10.77**	**253**	Pn	**Pn**	**19 02 28.4**	**-4.3**
LUWI	**Luwuk**	**11.01**	**200**	Pn	**Pn**	**19 02 31.8**	**-4.0**
SIJI	**Sorong**	**11.19**	**155**	Pn	**Pn**	**19 02 39.4**	**+1.0**
	6.2nm,0.3s,baz=149,slow=23,SNR=9.0						
FAKI	**Fak Fak**	**13.46**	**155**	Pn	**Pn**	**19 03 05.8**	**-3.5**
TWG	**Pinlang**	**14.38**	**339**	Pn	**Pn**	**19 03 21.0**	**-0.8**
YULB	**Yu-li**	**14.83**	**341**	Pn	**Pn**	**19 03 23.7**	**-4.1**
TPUB	**Ta-pu**	**14.98**	**338**	Pn	**Pn**	**19 03 26.3**	**-3.4**
SSLB	**Suanglung**	**15.31**	**340**	Pn	**Pn**	**19 03 33.7**	**-0.4**
YOJ	**Yonaguni jima**	**15.39**	**348**	P	**Pn**	**19 03 34.2**	**-0.9**
YOJ				pmax	pmax		
	comp=Z,77nm,0.9s						
YOJ	**Yonaguni jima**	**15.39**	**348**	Pn	**Pn**	**19 03 34.2**	**-0.9**
YOJ				IAmb	IAmb	19 03 44.6	
	comp=Z,77nm,0.9s						
KAPI	**Kappang**	**15.82**	**206**	P	**Pn**	**19 03 41.1**	**+0.4**
KAPI				pmax	pmax		
	comp=Z,34nm,1.1s						
KAPI	**Kappang**	**15.82**	**206**		**Pn**	**19 03 41.0**	**+0.4**
SBUM	**Sibu**	**15.83**	**245**	Pn	**Pn**	**19 03 36.2**	**-4.7**
YHNB	**Yeheng**	**16.00**	**343**		**Pn**	**19 03 43.2**	**+0.2**
SAUI	**Saumlaki**	**17.87**	**165**	P	**Pn**	**19 04 03.5**	**-2.8**
DLV	**T Lat**	**17.95**	**280**	P	**Pn**	**19 04 05.2**	**-2.4**
KSM	**Kuching**	**17.97**	**245**	P	**P**	**19 04 07.7**	**0.0**
KSM	**Kuching**	**17.97**	**245**	P	**P**	**19 04 13.0**	**+5.3**
JAY	**Jayapura**	**18.38**	**129**	P	**Pn**	**19 04 14.6**	**+2.0**
	comp=Z,0.5nm,0.3s,baz=339,slow=10,SNR=4.1						
QIZ	**Qiongzhong**	**18.83**	**302**	P	**P**	**19 04 17.5**	**+0.4**
QIZ				S	**Sn**	**19 07 48.3**	**+0.4**
QIZ				pmax	pmax		
	comp=Z,14nm,1.0s						
QIZ				LR	LR		
	comp=Z,990nm,12.9s						
QIZ				LR	LR		
	comp=Z,2μm,14.7s						
QIZ				LR	LR		
	comp=Z,5μm,16.7s						
QIZ	**Qiongzhong**	**18.83**	**302**	P	**P**	**19 04 15.5**	**-1.6**
SOEI	**Soe**	**19.13**	**187**	P	**P**	**19 04 20.1**	**-0.5**
SOEI				IAmb	IAmb	19 04 33.4	
	comp=Z,90nm,0.7s						
BATI	**Baumata**	**19.66**	**189**	P	**P**	**19 04 25.9**	**-0.3**
	comp=Z,15nm,0.3s,baz=6.8,slow=4.5,SNR=5.4						
SSE	**Sheshan**	**22.19**	**348**	P	**P**	**19 04 54.0**	**+0.6**
SSE				pmax	pmax		
	comp=Z,19nm,0.8s						
SSE	**Sheshan**	**22.19**	**348**	P	**P**	**19 04 51.0**	**-2.4**
SSE				IAmb	IAmb	19 04 57.1	
	comp=Z,69nm,1.0s						
MTN	**Manton Dam**	**22.53**	**168**	P	**P**	**19 04 54.8**	**-2.3**
MTN				IAmb	IAmb	19 05 06.8	
	comp=Z,43nm,0.6s						
NJ2	**Nanjing**	**23.68**	**344**	*eP*	**P**	**19 05 08.8**	**+0.3**
NJ2				sP	**pP**	**19 05 15.0**	**-4.0**
NJ2				pmax	pmax		
	comp=Z,72nm,1.0s						
NJ2				LR	LR		
	comp=Z,2μm,12.3s						
NJ2				LR	LR		
	comp=Z,2μm,12.8s						
NJ2				LR	LR		
	comp=Z,980nm,17.0s						
MYKOM	**Kota Tinggi**	**23.81**	**253**	P	**P**	**19 05 10.7**	**+0.8**
MYKOM				IAmb	IAmb	19 05 13.0	
	comp=Z,41nm,0.8s						
MYKOM	**Kota Tinggi**	**23.81**	**253**	P	**P**	**19 05 13.0**	**+3.1**
JNU	**Nakatsue**	**23.97**	**9**	P	**P**	**19 05 11.1**	**-0.2**
	comp=Z,40nm,0.9s,baz=144,slow=3.1,SNR=8.4						
JNU	**Nakatsue**	**23.97**	**9**	P	**P**	**19 05 10.9**	**-0.4**
JNU				IAmb	IAmb	19 05 13.2	
	comp=Z,50nm,1.0s						
SLVN	**Son La**	**24.84**	**301**	P	**P**	**19 05 19.3**	**0.0**
SLVN				IAmb	IAmb	19 05 35.3	
	comp=Z,25nm,1.0s						
KNRA	**Kununurra**	**24.98**	**175**	P	**P**	**19 05 19.3**	**-1.2**
GYA	**Guiyang**	**25.38**	**315**	*eP*	**P**	**19 05 22.3**	**-2.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KULM	**Kulim**	**26.01**	**263**	P	**P**	**19 05 28.5**	**-1.5**
ENH	**Enshi**	**26.21**	**325**	P	**P**	**19 05 30.2**	**-1.4**
JHJ2	**Mitsune**	**26.61**	**25**	P	**P**	**19 05 35.1**	**0.0**
JHJ2				IAmb	IAmb	19 05 39.6	
	comp=Z,42nm,1.0s						
MNAI	**Manna**	**27.20**	**241**	P	**P**	**19 05 38.7**	**-1.9**
FITZ	**Fitzroy Crossi**	**27.30**	**182**	P	**P**	**19 05 40.8**	**-0.7**
	comp=Z,41nm,0.8s,baz=341,slow=1.4,SNR=9.8						
FITZ	**Fitzroy Crossi**	**27.30**	**182**	P	**P**	**19 05 41.5**	**0.0**
FITZ				IAmb	IAmb	19 05 44.9	
	comp=Z,43nm,0.8s						
KMI	**Kunming**	**27.55**	**308**	P	**P**	**19 05 43.5**	**-0.5**
KMI				pP	pP	19 05 47.3	-7.7
KMI				sP	pwP	19 05 48.5	-10
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
KMI				pmax	pmax		
	comp=Z,430nm,10.2s						
KMI				LR	LR		
	comp=Z,790nm,14.1s						
KMI				LR	LR		
	comp=Z,750nm,16.6s						
KMI				LR	LR		
	comp=Z,930nm,16.6s						
INU	**Inuyama**	**27.57**	**19**	P	**P**	**19 05 44.1**	**+0.3**
INU				IAmb	IAmb	19 05 44.6	
	comp=Z,12nm,0.7s						
PMG	**Port Moresby**	**27.71**	**132**	P	**P**	**19 05 43.0**	**-2.3**
PMG				pmax	pmax		
	comp=Z,26nm,1.0s						
PMG	**Port Moresby**	**27.71**	**132**	P	**P**	**19 05 43.0**	**-2.3**
PMG				IAmb	IAmb	19 05 45.5	
	comp=Z,26nm,0.9s						
KSRS	**Korea Array**	**27.99**	**2**	P	**P**	**19 05 46.7**	**-0.8**
	comp=Z,8.9nm,0.7s,baz=184,slow=9.5,SNR=14						
KS19	**Wonju Array Si**	**28.04**	**2**	P	**P**	**19 05 46.3**	**-1.6**
KS19				IAmb	IAmb	19 05 50.1	
	comp=Z,18nm,0.9s						
TIA	**Tai'an**	**28.07**	**344**	P

GIRL	Giralia	34.03	201		P		P	19 06 40.2	-0.6	
HHC	Hu-ho-hao-te	34.06	339		eP		P	19 06 41.8	+0.7	
HHC					PP		PnPn	19 07 53.8	-1.8	
HHC					S		S	19 12 08.5	+4.8	
HHC					pmax	pmax				
	comp=Z,14nm,0.8s									
HHC					pmax	pmax				
	comp=Z,98nm,8.1s									
HHC					LR	LR				
	comp=Z,540nm,15.7s									
HHC					LR	LR				
	comp=Z,830nm,16.7s									
HHC					LR	LR				
	comp=Z,760nm,16.7s									
CN2	Changchun	34.32	359		eP		P	19 06 40.0	-3.1	
CN2					pmax	pmax				
	comp=Z,10.0nm,0.6s									
USA0B	Ussuriysk Arra	35.02	7		P		P	19 06 49.0	-0.2	
USA0B					pmax	pmax				
	comp=Z,23nm,1.0s									
USA0B	Ussuriysk Arra	35.02	7		P		P	19 06 49.0	-0.2	
USA0B					IAmb	IAmb		19 06 51.6		
	comp=Z,23nm,0.9s									
USRK	Ussuriysk Ar.	35.02	7		P		P	19 06 49.9	+0.7	
	comp=Z,15nm,0.8s,baz=191,slow=6.0,SNR=9.1									
CTA	Charters Tower	35.10	147		P		P	19 06 50.1	-0.1	
	comp=Z,12nm,0.7s,baz=331,slow=11,SNR=8.1									
CTAO	Charters Tower	35.10	147		P		P	19 06 50.3	+0.1	
CTAO					pmax	pmax				
	comp=Z,15nm,0.8s									
CTAO	Charters Tower	35.10	147				P	19 06 50.3	+0.1	
CTAO					IAmb	IAmb		19 06 52.6		
	comp=Z,15nm,0.8s									
MDJ	Mudanjiang	35.22	4		P		P	19 06 49.4	-1.5	
MDJ					IAmb	IAmb		19 06 53.7		
	comp=Z,34nm,1.0s									
TEY	Ternei	36.58	12		eP		P	19 07 04.2	+1.7	
SHL	Shillong	36.65	301		P		P	19 07 02.6	-1.0	
SHL					pmax	pmax				
	comp=Z,42nm,0.8s									
SHL	Shillong	36.65	301		P		P	19 07 02.6	-1.0	
ASAJ	Asahikawa	37.32	19		P		P	19 07 10.3	+1.5	
	comp=Z,21nm,0.7s,baz=236,slow=9.8,SNR=8.7									
LSA	Lhasa	38.79	306		P		P	19 07 21.9	-0.1	
LSA					pmax	pmax				
	comp=Z,10.0nm,0.7s									
LSA	Lhasa	38.79	306		P		P	19 07 21.9	-0.1	
MORW	Morawa	39.54	195		P		P	19 07 26.7	-0.9	
YSS	Yuzh-Sakhalins	39.91	17		eP		P	19 07 32.7	+2.2	
FORT	Forrest	39.94	178		P		P	19 07 29.8	-1.1	
KLR	Kul'dur	39.97	5		P		P	19 07 32.2	+1.2	
	comp=Z,5.8nm,0.5s,baz=181,slow=5.8,SNR=11									
KLR	Kul'dur	39.97	5	*i*	P		P	19 07 31.4	+0.4	
KLR					pmax	pmax				
	comp=Z,6.0nm,0.6s									
HIA	Hailar	40.18	353		P		P	19 07 33.0	+0.2	
HIA					pmax	pmax				
	comp=Z,16nm,0.7s									
HIA	Hailar	40.18	353		P		P	19 07 33.0	+0.2	
TAPN	Taplejung	40.76	301		eP		P	19 07 37.7	-0.5	
	comp=Z,26nm,0.4s									
ODAN	Odare	40.88	300		eP		P	19 07 38.5	-0.7	
	comp=Z,112nm,0.7s									
RAMN	Ramite	41.58	300		eP		P	19 07 44.6	-0.3	
	comp=Z,56nm,0.6s									
ULN	Ulaanbaatar	41.77	340		P		P	19 07 45.1	-0.9	
ULN					pmax	pmax				
	comp=Z,10.0nm,0.6s									
ULN	Ulaanbaatar	41.77	340		P		P	19 07 45.0	-0.9	
ULN							P	19 07 45.5	-0.6	
ULN							P	19 07 45.6	-0.4	
SONM	Songino Array	41.96	340		P		P	19 07 47.7	+0.1	
	comp=Z,4.3nm,0.8s,baz=154,slow=10.0,SNR=4.3									
SONM					PcP		PcP	19 09 42.7	+0.4	
	comp=Z,2.8nm,0.9s,baz=175,slow=4.7,SNR=2.3									
EIDS	Eidsvold	41.98	146		P		P	19 07 47.5	-0.3	
EIDS					IAmb	IAmb		19 07 48.3		
	comp=Z,22nm,1.1s									
GRNR	Gornyy	42.07	9	↓	*i* P		P	19 07 48.3	0.0	
GRNR					pmax	pmax				
	comp=Z,10.0nm,0.8s									
GRNR					MLR	MLR				
	comp=Z,430nm,13.0s									
JIRN	Jiri	42.14	301		eP		P	19 07 49.1	-0.5	
	comp=Z,124nm,0.6s									
GUN	Gumba	42.48	301		eP		P	19 07 51.8	-0.6	
	comp=Z,98nm,0.7s									
PKI	Pulchoki	42.78	301		eP		P	19 07 53.6	-1.2	
	comp=Z,27nm,0.7s									
PKIN	Phulchoki	42.79	301		eP		P	19 07 53.7	-1.1	
	comp=Z,31nm,0.7s									
BBOO	Buckleboo	42.91	168		P		P	19 07 55.4	+0.1	
BBOO					IAmb	IAmb		19 07 55.9		
	comp=Z,42nm,1.1s									
NWAO	Narrogin (SRO)	42.99	192		P		P	19 07 55.7	-0.2	
NWAO					pmax	pmax				
	comp=Z,64nm,0.7s									
NWAO	Narrogin (SRO)	42.99	192		P		P	19 07 55.7	-0.2	
NWAO	Narrogin (SRO)	42.99	192		P		P	19 07 55.1	-0.8	
DMN	Daman	43.04	301		eP		P	19 07 55.8	-1.0	
	comp=Z,30nm,0.8s									
STKA	Stephens Creek	43.46	161		P		P	19 07 58.9	-0.8	
	comp=Z,11nm,0.8s,baz=28,slow=6.5,SNR=5.9									
STKA	Stephens Creek	43.46	161		P		P	19 07 59.5	-0.2	
GKN	Gorkha	43.55	301		eP		P	19 07 59.8	-1.0	
	comp=Z,21nm,0.6s									
CIT	Chita	43.84	348		eP		P	19 08 04.1	+1.5	
CIT					e			19 08 16.1		
CIT					pmax	pmax				
	comp=Z,80nm,1.1s									
KOLN	Koldanda	44.37	300		eP		P	19 08 06.9	-0.5	
	comp=Z,105nm,0.8s									
DANN	Dangsing	44.40	301		eP		P	19 08 07.0	-0.8	
	comp=Z,76nm,0.8s									
PYUN	Piuthan	44.98	301		eP		P	19 08 12.0	-0.3	
	comp=Z,142nm,0.9s									
TLY	Talaya	46.18	340		P		P	19 08 21.9	+0.7	
	comp=Z,7.7nm,0.7s,baz=186,slow=5.8,SNR=5.6									
TLY	Talaya	46.18	340		eP		P	19 08 21.7	+0.5	
TLY					pmax	pmax				
	comp=Z,17nm,0.7s									
TLY	Talaya	46.18	340		P		P	19 08 21.5	+0.4	
TLY					IAmb	IAmb		19 08 23.4		
	comp=Z,7.7nm,0.8s									
ARMA	Armidale	46.31	150		P		P	19 08 23.0	+0.4	
ARMA					IAmb	IAmb		19 08 41.5		
	comp=Z,11nm,0.9s									
HYB	Hyderabad	47.28	285	*i*	P		P	19 08 31.0	+0.6	
WMQ	Urumqi	48.11	322		eP		P	19 08 37.8	+1.4	
WMQ					pP	pP		19 08 42.5	-5.1	
WMQ					pmax	pmax				
	comp=Z,17nm,0.7s									
WMQ					LR	LR				
	comp=Z,1μm,19.9s									
WMQ					LR	LR				
	comp=Z,690nm,19.9s									
WMQ					LR	LR				
	comp=Z,1μm,19.9s									
WMQ	Urumqi	48.11	322		P		P	19 08 36.6	+0.1	
WMQ					pmax	pmax				
	comp=Z,18nm,1.1s									
WMQ	Urumqi	48.11	322		P		P	19 08 36.5	+0.1	
WMQ					IAmb	IAmb		19 08 53.6		
	comp=Z,18nm,1.1s									
CAN	Canberra	49.24	156		P		P	19 08 45.9	+0.8	
CAN					pmax	pmax				
	comp=Z,13nm,0.9s									
CAN	Canberra	49.24	156		P		P	19 08 45.9	+0.8	
CAN					IAmb	IAmb		19 09 03.5		
	comp=Z,13nm,0.9s									
BOD	Bodaibo	49.30	351		eP		P	19 08 46.0	+0.8	
BOD					pmax	pmax				
	comp=Z,38nm,1.2s									
TOO	Toolangi	49.94	160		P		P	19 08 51.5	+1.1	
TOO					pmax	pmax				
	comp=Z,7.0nm,0.8s									
TOO	Toolangi	49.94	160		P		P	19 08 51.5	+1.1	
DZM	Mont Dzumac	50.05	129		P		P	19 08 52.4	+0.8	
	comp=Z,5.3nm,0.6s,baz=256,slow=9.3,SNR=6.2									
DZM	Mont Dzumac	50.05	129		P		P	19 08 52.2	+0.6	
PEA0B	Petropavlovsk-	50.34	24		P		P	19 08 55.4	+2.1	
PEA0B					IAmb	IAmb		19 09 08.4		
	comp=Z,20nm,0.9s									
PEA0B					PcP		PcP	19 10 12.6	+1.2	
PETK	Petropavlovsk-	50.34	24		P		P	19 08 55.2	+2.0	
	comp=Z,10.0nm,0.7s,baz=194,slow=6.5,SNR=9.1									
PETK					PcP		PcP	19 10 12.4	+1.1	
	comp=Z,4.5nm,0.6s,baz=197,slow=4.3,SNR=4.9									
PET	Petropavlovsk	50.66	25		eP		P	19 08 56.9	+1.3	
PET					pmax	pmax				
	comp=Z,18nm,1.1s									
PET	Petropavlovsk	50.66	25		P		P	19 08 56.7	+1.1	
PET					IAmb	IAmb		19 08 57.8		
	comp=Z,19nm,1.1s									
LHI	Lord Howe Isla	51.19	144		P		P	19 09 00.6	+0.7	
YAK	Yakutsk	52.62	2		P		P	19 09 11.2	+1.2	
	comp=Z,17nm,0.7s,baz=269,slow=1.3,SNR=7.4									
YAK	Yakutsk	52.62	2		eP		P	19 09 09.9	-0.1	
YAK					e			19 09 25.1		
YAK					pmax	pmax				
	comp=Z,38nm,1.0s									
YAK					pmax	pmax				
	comp=N,18nm,1.0s									
YAK					pmax	pmax				
	comp=E,8.0nm,1.5s									
YAK					pmax	pmax				
	comp=Z,38nm,0.9s									
YAK					pmax	pmax				
	comp=N,19nm,1.4s									
YAK					pmax	pmax				
	comp=E,9.0nm,1.4s									
YAK	Yakutsk	52.62	2		P		P	19 09 10.2	+0.2	
YAK					IAmb	IAmb		19 09 27.6		
	comp=Z,36nm,0.9s									
MK31	Makanchi Array	52.92	323		P		P	19 09 12.0	-0.6	
MK31					pmax	pmax				
	comp=Z,14nm,0.8s									
MK31	Makanchi Array	52.92	323		P		P	19 09 12.0	-0.6	
MK31					IAmb	IAmb		19 09 13.9		
	comp=Z,14nm,0.8s									
MKAR	Makanchi Array	52.92	323		P		P	19 09 12.4	-0.2	
	comp=Z,16nm,0.7s,baz=126,slow=7.3,SNR=12									
MKAR					PcP		PcP	19 10 20.8	-0.4	
	comp=Z,2.9nm,0.6s,baz=123,slow=6.1,SNR=1.7									
MAKZ	Makanchi	53.11	323		P		P	19 09 13.5	-0.6	
MAKZ					pmax	pmax				
	comp=Z,15nm,0.7s									
MAKZ	Makanchi	53.11	323		P		P	19 09 13.4	-0.6	
MAKZ					IAmb	IAmb		19 09 14.8		
	comp=Z,15nm,0.7s									
MA2	Magadan	53.33	15		P		P	19 09 16.2	+0.9	
	comp=Z,12nm,0.6s,baz=218,slow=11,SNR=5.9									
MA2					PcP		PcP	19 10 23.4	+1.0	
	comp=Z,12nm,0.8s,baz=235,slow=2.8,SNR=4.2									
MA2	Magadan	53.33	15		P		P	19 09 16.0	+0.6	
MA2							PcP	19 10 23.9	+1.5	
PRZ	Przheval'sk	53.44	317		P		P	19 09 17.5	+0.8	
PRZ					pmax	pmax				
	comp=Z,23nm,0.8s									
PRZ	Przheval'sk	53.44	317		P		P	19 09 17.5	+0.8	
TARG	Taragay, Kyrgy	53.55	316		P		P	19 09 18.1	+0.3	
KSH	Kashi	54.05	312		P		P	19 09 21.5	+0.3	
KSH					sP	pP		19 09 29.3	-3.2	
KSH					PP	PP		19 11 25.8	+2.8	
KSH					S	S		19 16 54.0	-0.5	
KSH					pmax	pmax				
	comp=Z,26nm,1.0s									
KSH					pmax	pmax				
	comp=Z,250nm,6.1s									
KSH					LR	LR				
	comp=Z,180nm,9.5s									
KSH					LR	LR				
	comp=Z,270nm,8.7s									
KSH					LR	LR				
	comp=Z,440nm,14.0s									
KDJ	Kajisay	54.13	316		P		P	19 09 21.4	-0.4	
KDJ					pmax	pmax				
	comp=Z,12nm,0.7s									
KDJ	Kajisay	54.13	316		P		P	19 09 21.4	-0.4	
KDJ					IAmb	IAmb		19 09 22.8		
	comp=Z,12nm,0.7s									
NIL	Nilore	54.48	305		P		P	19 09 23.7	-0.6	
NIL					pmax	pmax				
	comp=Z,53nm,0.8s									
NIL	Nilore	54.48	305		P		P	19 09 23.7	-0.6	
ZAA0	Zalesovo Array	55.55	331		P		P	19 09 30.5	-1.1	
ZALV	Zalesovo Beam	55.55	331		P		P	19 09 30.8	-0.9	
	comp=Z,5.4nm,0.5s,baz=123,slow=6.1,SNR=9.3									
AAK	Ala-Archa	56.17	316		P		P	19 09 35.8	-0.7	
	comp=Z,5.0nm,0.6s,baz=135,slow=12,SNR=4.6									
AAK	Ala-Archa	56.17	316	*i*	P		P	19 09 35.2	-1.2	
AAK					pmax	pmax				
	comp=Z,4.0nm,0.6s									
AAK	Ala-Archa	56.17	316		P		P	19 09 35.3	-1.2	
KURK	Kurchatov	56.97	326	*i*	P		P	19 09 41.4	-0.4	
KURK					pmax	pmax				
	comp=Z,25nm,0.7s									
KURK	Kurchatov	56.97	326		P		P	19 09 41.6	-0.2	
KURBB	Kurchatov Arra	56.98	326		P		P	19 09 41.5	-0.4	
	comp=Z,16nm,0.7s,baz=124,slow=7.4,SNR=14									
MSVF	Nonsavu	57.54	118		P		P	19 09 47.5	+1.1	
MSVF					pmax	pmax				
	comp=Z,40nm,1.0s									
MSVF	Nonsavu	57.54	118		P		P	19 09 47.5	+1.1	
KBL	Kabul	58.08	305		P		P	19 09 49.6	-0.6	
KBL					pmax	pmax				
	comp=Z,17nm,0.6s									
KBL	Kabul	58.08	305		P		P	19 09 49.6	-0.6	
KBL					IAmb	IAmb		19 09 52.0		
	comp=Z,17nm,0.6s									
CHGR	Chuyangaron	58.88	310		P		P	19 09 54.7	-0.9	
TIXI	Tiksi	62.25	1		P		P	19 10 17.8	+0.1	
TIXI					pmax	pmax				
	comp=Z,27nm,0.9s									
TIXI	Tiksi	62.25	1		P		P	19 10 17.8	+0.1	
BRVK	Borovoye	62.64	326	*c*	iP		P	19 10 20.0	-0.7	
BRVK					pmax	pmax				
	comp=Z,25nm,0.7s									
BRVK	Borovoye	62.64	326		P		P	19 10 20.1	-0.6	
HRA	Herat	63.61	304		P		P	19 10 26.9	-0.9	
BILL	Bilibino	64.19	15	*i*	P		P	19 10 31.8	+1.1	
BILL					pmax	pmax				
	comp=Z,21nm,1.4s									
NRIK	Noril'sk	64.96	346		P		P	19 10 36.3	+0.7	
	comp=Z,21nm,0.6s,baz=112,slow=7.0,SNR=13									
RPZ	Rata Peaks	66.48	146		P		P	19 10 46.2	+0.3	
	comp=Z,10nm,0.5s,baz=326,slow=3.2,SNR=6.5									
BKZ	Black Stump Fm	66.91	140		P		P	19 10 49.0	+0.3	
GEYT	Alibeck	67.32	307		P		P	19 10 51.1	-0.4	
	comp=Z,5.1nm,0.8s,baz=144,slow=3.3,SNR=4.3									
SVE	Sverdlovsk	69.12	328	*de*	P		P	19 11 02.3	0.0	
SVE					pmax	pmax				
	comp=Z,41nm,1.0s									
ARU	Arti	70.14	327	*i*	P		P	19 11 07.8	-0.8	
ARU					pmax	pmax				
	comp=Z,22nm,0.9s									
CHGN	Chignik	73.95	34		P		P	19 11 31.5	+0.1	
RDOG	Red Dog Mine	74.13	22		P		P	19 11 33.6	+1.3	
RDOG					IAmb	IAmb		19 11 34.8		
	comp=Z,12nm,0.8s									
AKT	Akhty	75.51	310		eP		P	19 11 40.8	-0.1	
AKT					e			19 11 52.7		
AKT					pmax	pmax				
	comp=Z,17nm,1.0s									
MAK	Makhachkala	75.68	312		eP		P	19 11 35.1	-6.6	
MAK					eS		S	19 21 13.0	-7.0	
MAK					eSS		SS	19 26 08.3	-3.7	
MAK					pmax	pmax				
	comp=Z,134nm,0.9s									
MAK					MLR	MLR				
	comp=Z,518nm,18.0s									
TTA	Tatalina	75.99	27		P		P	19 11 43.5	+0.3	
TTA					pmax	pmax				
	comp=Z,9.0nm,1.1s									
TTA	Tatalina	75.99	27		P		P	19 11 43.5	+0.3	
TTA					IAmb	IAmb		19 11 46.1		
	comp=Z,9.0nm,1.1s									
CASY	Casey	76.36	187		P		P	19 11 44.9	0.0	
TBLG	Delisi	77.75	311		P		P	19 11 53.2	-0.3	
TBLG					pmax	pmax				
	comp=Z,21nm,0.8s									
TBLG	Delisi	77.75	311		P		P	19 11 53.1	-0.3	
RAYN	Ar Rayn	78.18	292				P	19 11 55.7	-0.5	
ZEI	Tsey	78.33	312		eP		P	19 11 55.7	-1.2	
ZEI					pmax	pmax				
	comp=Z,18nm,0.8s									
AKH	Akhalkalaki	78.69	310		P		P	19 11 58.7	-0.2	
AKH					pmax	pmax				
	comp=Z,21nm,0.9s									
AKH	Akhalkalaki	78.69	310		P		P	19 11 58.7	-0.2	
KBZ	Khabaz	79.03	313		P		P	19 12 00.1	-0.3	
	comp=Z,6.0nm,0.9s,baz=153,slow=0.8,SNR=4.8									
TOLK	Toolik Lake Re	79.10	22		P		P	19 12 02.5	+2.1	
	baz=268									
TOLK	Toolik Lake Re	79.10	22		P		P	19 12 02.1	+1.6	
PMR	Palmer	79.12	29		P		P	19 12 00.7	+0.2	
PMR	Palmer	79.12	29		P		P	19 12 00.7	+0.2	
PMR					IAmb	IAmb		19 12 02.8		
	comp=Z,16nm,0.8s									
KIV	Kislovodsk	79.17	313	*de*	P		P	19 12 01.9	+0.5	
KIV					*e*S		SKSac	19 22 16.2	+2.2	
KIV					pmax	pmax				
	comp=Z,13nm,0.9s									
KIV					MLR	MLR				
	comp=Z,452nm,18.0s									
MCK	McKinley	79.23	27		P		P	19 12 01.3	+0.1	
MCK					pmax	pmax				
	comp=Z,24nm,0.9s									
MCK	McKinley	79.23	27		P		P	19 12 01.3	+0.1	
VRH	Novokhopyorsk	79.54	320		eP		P	19 12 01.4	-1.7	
VRH					pmax	pmax				
	comp=Z,10.0nm,0.8s									
WRH	Wood River Hil	79.61	26		P		P	19 12 03.9	+0.7	
WRH					IAmb	IAmb		19 12 05.4		
	comp=Z,13nm,1.2s									
CCB	Clear Creek Bu	79.73	26		P		P	19 12 04.0	+0.2	
HDA	Harding Lake	80.10	26		P		P	19 12 06.5	+0.6	
	baz=271									
HDA	Harding Lake	80.10	26		P		P	19 12 05.2	-0.7	
HDA					IAmb	IAmb		19 12 07.6		
	comp=Z,7.2nm,0.6s									
IL31		80.12	26		P		P	19 12 05.4	-0.5	
ILAR	Eielson Array	80.12	26		P		P	19 12 06.5	+0.5	
	comp=Z,4.4nm,0.6s,baz=239,slow=5.6,SNR=10									
KLMR	Klimovskoe	80.45	330		eP		P	19 12 06.4	-1.3	
KLMR					pmax	pmax				
	comp=Z,36nm,0.8s									
KLMR	Klimovskoe	80.45	330		eP		P	19 12 06.5	-1.3	
KLMR					AMP			19 12 09.2		
	comp=Z,36nm,0.8s									
TMCR	Tamitsa	81.00	334		eP		P	19 12 09.7	-0.9	
TMCR					pmax	pmax				
	comp=Z,25nm,0.5s									
LPSR	Galich'ya Gora	81.20	322		eP		P	19 12 10.7	-1.3	
LPSR					pmax	pmax				
	comp=Z,20nm,0.8s									
SCRK	Sand Creek	81.42	26		P		P	19 12 12.5	-0.5	
SCRK					IAmb	IAmb		19 12 15.5		
	comp=Z,12nm,1.0s									
OBN	Obninsk	82.39	325	*de*	P		P	19 12 17.6	-0.5	
OBN					*e*SS		SS	19 27 52.5	+0.5	
OBN					pmax	pmax				
	comp=Z,13nm,1.1s									
BARN	Barnard Glacie	82.74	29		P		P	19 12 21.7	+1.5	
GAZ	Gaziantep	83.91	307		P		P	19 12 26.2	-0.3	
EPYK	Eagle Plains	84.18	24		P		P	19 12 28.8	+1.6	
	baz=280									
EPYK	Eagle Plains	84.18	24		P		P	19 12 28.2	+1.0	
HYT	Haines Junctio	84.78	29		P		P	19 12 32.3	+1.8	
SPA0	Spitsbergen Ar	84.95	349		eP		P	19 12 31.3	+0.3	
INK	Inuvik	85.01	22		P		P	19 12 31.9	+0.6	
INK					pmax	pmax				
	comp=Z,18nm,1.1s									
INK	Inuvik	85.01	22		P		P	19 12 31.9	+0.6	
INK					IAmb	IAmb		19 12 34.5		
	comp=Z,18nm,1.1s									
ARCES	ARCESS Array B	85.14	340		P		P	19 12 32.0	0.0	
	comp=Z,16nm,0.6s,baz=79,slow=6.9,SNR=21									
ARE0	ARCESS Array S	85.14	340		P		P	19 12 31.2	-0.7	
ARE0	ARCESS Array S	85.14	340		eP		P	19 12 32.3	+0.4	
HAMF	Hammerfest	85.47	341		eP		P	19 12 33.5	0.0	
KTK1	Kautokeino	86.05	339		eP		P	19 12 36.6	+0.1	
BRTR	Keskin Array B	86.33	309		P		P	19 12 37.5	-1.1	
	comp=Z,2.0nm,0.9s,baz=118,slow=4.5,SNR=5.7									
FIA1	FINESS Array S	86.82	332		P		P	19 12 40.0	-0.3	
FINES	FINESS Array B	86.82	332		P		P	19 12 39.8	-0.6	
	comp=Z,12nm,0.8s,baz=95,slow=6.3,SNR=11									
TRO	Tromso	87.32	340		eP		P	19 12 41.9	-0.8	
AKASG	Malin Array Be	87.44	321		P		P	19 12 42.2	-1.4	
	comp=Z,2.7nm,0.6s,baz=74,slow=5.2,SNR=6.0									
C36M	Paulatuk	87.99	20		P		P	19 12 46.9	+1.1	
	baz=291									
C36M	Paulatuk	87.99	20		P		P	19 12 46.5	+0.6	
VNDA	Vanda	89.00	173		P		P	19 12 50.0	-0.4	
	comp=Z,5.0nm,1.0s,baz=334,slow=2.3,SNR=3.8									
STEI	Steigen	89.19	339		eP		P	19 12 50.8	-0.8	
KMBO	Kilima Mbogo	89.50	269		P		P	19 12 55.7	+1.3	
	comp=Z,3.8nm,0.8s,baz=28,slow=4.8,SNR=5.6									
KMBO	Kilima Mbogo	89.50	269		P		P	19 12 54.0	-0.5	
KMBO					pmax	pmax				
	comp=Z,8.0nm,1.2s									
KMBO	Kilima Mbogo	89.50	269		P		P	19 12 54.0	-0.5	
KMBO					IAmb	IAmb		19 12 56.0		
	comp=Z,8.2nm,1.1s									
LOF	Lofoten	89.70	340		eP		P	19 12 53.6	-0.3	
BUR08	Bucovina Ar. S	90.71	318		P		P	19 12 58.1	-1.2	
NSS	Namsos	91.82	337		eP		P	19 13 03.4	-0.5	
RES	Resolute Bay	92.33	10		P		P	19 13 05.9	-0.1	
RES					pmax	pmax				
	comp=Z,18nm,0.8s									
RES	Resolute Bay	92.33	10		P		P	19 13 05.9	-0.1	
TBLU	Trondheim	93.08	336		eP		P	19 13 09.0	-0.7	
NC602	NORSAR Array S	93.69	334		eP		P	19 13 11.9	-0.6	
NB2	NORSAR Subarra	93.69	334		P		P	19 13 11.5	-1.2	
	comp=Z,4.0nm,0.9s,baz=64,slow=4.6									
NB2	NORSAR

U40A	Yellville	121.33	37	PKPdf	PKiKP	19 18 50.0	+0.1	
W39A	Magazine	121.55	38	P	PKiKP	19 18 51.2	+0.9	
	baz=312							
L48A	N Adams	121.56	27		PKiKP	19 18 50.4	+0.3	
T42A	Van Buren	121.89	35		PKiKP	19 18 51.2	+0.3	
FCAR	Ozark Folk Cen	122.08	37		PKPdf	19 18 50.9	-0.3	
MIAR	Mount Ida	122.10	39	PKiKP	PKiKP	19 18 51.8	+0.4	
MIAR	Mount Ida	122.10	39	P	PKiKP	19 18 52.5	+1.1	
	baz=312							
MIAR	Mount Ida	122.10	39	PKPdf	PKiKP	19 18 51.8	+0.4	
OLIL	Olney	122.28	32		PKiKP	19 18 52.2	+0.6	
SIUC	Southern Illin	122.44	33		PKiKP	19 18 52.4	+0.4	
N49A	Columbus Grove	122.49	27		PKPdf	19 18 51.8	0.0	
LCAR	Lake Charles	122.53	36		PKiKP	19 18 52.6	+0.4	
WCI	Wyandotte Cave	123.59	31	PKiKP	PKiKP	19 18 54.5	+0.3	
WCI	Wyandotte Cave	123.59	31	P	PKiKP	19 18 54.7	+0.5	
	baz=320							
WCI	Wyandotte Cave	123.59	31	PKPdf	PKiKP	19 18 54.5	+0.3	
J58A	Remsen	123.88	19	P	PKiKP	19 18 55.7	+1.0	
	baz=334							
M54A	Oil Creek Stat	123.93	24	P	PKiKP	19 18 55.4	+0.6	
	baz=328							
WVT	Waverly	124.36	34	PKiKP	PKiKP	19 18 55.9	+0.1	
WVT	Waverly	124.36	34	P	PKiKP	19 18 56.4	+0.6	
	baz=316							
WVT	Waverly	124.36	34	PKPdf	PKiKP	19 18 55.9	+0.1	
P52A	Corning	124.45	27	P	PKiKP	19 18 56.2	+0.2	
	baz=325							
OXF	Oxford	124.63	36	PKiKP	PKPdf	19 18 56.1	0.0	
OXF	Oxford	124.63	36	P	PKiKP	19 18 57.1	+0.7	
	baz=315							
OXF	Oxford	124.63	36		PKPdf	19 18 56.1	0.0	
O54A	Avella	124.76	25	P	PKiKP	19 18 57.3	+0.8	
	baz=327							
O54A	Avella	124.76	25		PKiKP	19 18 56.7	+0.2	
P53A	Whipple	124.90	26		PKiKP	19 18 57.5	+0.7	
Q52A	Bidwell	124.94	27	P	PKiKP	19 18 57.3	+0.4	
	baz=325							
PLAL	Pickwick Lake	125.06	35	PKPdf	PKPdf	19 18 56.9	0.0	
U49A	Red Boiling Sp	125.16	32		PKiKP	19 18 57.5	+0.1	
CLTN	Cedars of Leba	125.19	33	PKPdf	PKiKP	19 18 57.4	-0.1	
V48A	Smith Brothers	125.19	33		PKPdf	19 18 57.0	-0.1	
T50A	Nancy	125.25	31		PKiKP	19 18 57.5	-0.1	
SSPA	Standing Stone	125.36	23		PKiKP	19 18 57.6	-0.1	
S51A	Beattyville	125.38	29	PKPdf	PKiKP	19 18 57.8	-0.1	
Q55A	Buckhannon	125.87	26	P	PKiKP	19 18 59.5	+0.7	
	baz=327							
X48A	Hartselle	126.02	34		PKPdf	19 18 58.4	-0.3	
SWET	Sewanee	126.06	33		PKPdf	19 18 59.1	+0.2	
W50A	Signal Mountai	126.41	33		PKiKP	19 19 00.4	+0.4	
V51A	Loudon	126.44	31		PKiKP	19 19 00.3	+0.4	
CPCT	Cooper Cave	126.63	32	PKPdf	PKiKP	19 19 00.7	+0.3	
V52A	Sevierville	126.80	31		PKiKP	19 19 00.9	+0.2	
TKL	Tuckaleechee C	126.85	31	PKiKP	PKiKP	19 19 00.8	0.0	
TKL	Tuckaleechee C	126.85	31		PKiKP	19 19 00.8	0.0	
PSUB	Penn St. - Bra	126.88	21		PKPdf	19 18 58.5	-1.7	
LRAL	Lakeview Retre	127.09	36	P	PKiKP	19 19 02.3	+0.9	
	baz=317							
LRAL	Lakeview Retre	127.09	36	PKPdf	PKPdf	19 19 00.2	-0.6	
R57A	Stanardsville	127.12	25	P	PKiKP	19 19 02.7	+1.4	
	baz=328							
V53A	Saluda	127.33	30		PKPdf	19 19 01.1	-0.2	
T56A	Rocky Mt	127.53	27	P	PKiKP	19 19 02.4	+0.2	
	baz=326							
V55A	Taylorsville	127.95	29		PKPdf	19 19 01.9	-0.6	
KMSC	Kings Mountain	128.47	29		PKPdf	19 19 02.6	-0.9	
PAULI	Pauline	128.49	30		PKPdf	19 19 02.3	-1.1	
V57A	Coltrane Farms	128.59	27	P	PKiKP	19 19 05.3	+1.0	
	baz=326							
HODGE	Hodges	128.74	31		PKiKP	19 19 04.6	0.0	
X55A	Gracelyn & Ava	128.86	30	P	PKiKP	19 19 05.7	+0.9	
	baz=323							
X56A	White Oak	129.14	30	P	PKiKP	19 19 06.5	+1.1	
	baz=324							
Y55A	Saluda	129.18	31	P	PKiKP	19 19 06.0	+0.5	
	baz=323							
Z57A	Bowman	130.26	30	P	PKiKP	19 19 09.3	+1.6	
	baz=324							
PLCA	Paso Flores	145.27	157	PKPbc	PKPdf	19 19 34.8	+0.6	
	comp=Z,11nm,0.9s,baz=268,slow=1.4,SNR=5.7							
PLCA	Paso Flores	145.27	157	PKiKP	PKPdf	19 19 34.5	+0.3	
PLCA	Paso Flores	145.27	157		PKPdf	19 19 34.5	+0.3	
LC01	Cunco	146.27	154	PKPdf	PKPbc	19 19 37.3	+0.3	
SDDR	Presa de Saban	146.78	32		PKPbc	19 19 39.8	-0.5	
DR12	Loma Pena Alta	147.91	29		PKiKP	19 19 43.6	-0.5	
BI02	San Fabin de	148.37	152		PKPbc	19 19 43.7	+0.7	
SJG	San Juan	149.95	25	PKiKP	PKPdf	19 19 41.5	-1.0	
SJG						19 19 48.4		
SJG	San Juan	149.95	25	PKPdf	PKPdf	19 19 41.5	-1.0	
SJG					PKiKP	19 19 48.4	+0.1	
PDPR	Patillas Dam,	150.09	25	PKPdf	PKPdf	19 19 41.0	-1.7	
PDPR					PKPbc	19 19 47.8	+0.1	
STVI	Saint Thomas	150.20	22	PKPdf	PKPdf	19 19 41.8	-1.0	
STVI					PKiKP	19 19 48.5	-0.2	
URIC	Uribia, Colomb	152.10	42		PKiKP	19 19 53.1	+0.3	
SDV	Santo Domingo	155.06	44		PKPbc	19 19 59.4		
LPAZ	La Paz	164.11	117	PKPab	PKPab	19 20 57.7	+3.0	
	comp=Z,4.0nm,0.8s,baz=227,slow=3.8,SNR=5.1							
LPAZ	La Paz	164.11	117	PKPab	PKPab	19 20 58.0	+3.3	
PTGA	Pitinga	169.24	38	PKPab	PKPab	19 21 16.9	+0.4	
	comp=Z,6.5nm,0.8s,baz=321,slow=2.6,SNR=6.6							
PTGA	Pitinga	169.24	38		PKPab	19 21 16.4	0.0	

*IDC **31** 19:03:16.0±0.4, 9.°34N×126.°56E, h0km, mb4.5/35, mb1 4.6/38, mb1mx4.6/51, mbtmp4.5/38, ML5.4/2, MS4.4/2, Ms1 4.4/2, ms1mx3.7/47, Error ellipse: s-maj=17.6km s-min=9.4km az=84.0*

*NEIC **31** 19:03:17.6±1.9, 9.°33N±0.°06×126.°52E±0.°09, h10km±1km, mb5.0/92, Error ellipse: s-maj=15.0km s-min=10.2km az=80.0*

*MOS **31** 19:03:19.3±1.1, 9.°29N×126.°69E, h33km, mb5.1/21, Error ellipse: s-maj=17.2km s-min=8.4km az=95.8*

*MAN **31** 19:03:20.4, 9.°40N×126.°66E, h15km, mb4.6, ML3.5, MS3.3*

*BJI **31** 19:03:21.0±0.0, 9.°30N×126.°50E, h37km, mB5.2/32, mb4.6/46, Ms5.0/32, Ms7 4.7/32*

*DJA **31** 19:03:25.3±0.5, 9.°N±4.°×12.°7E±.°, h42km±6km, M4.8/18, mb4.8/18, mB5.1/6, MLv5.1/3, Mw(mB)4.5/6*

ISC 31 19:03:18.2±0.9, 9.°31N±0.°03×126.°51E±0.°04, h10km±5km, n295,σ1°§68/301, mb4.8/97, 8C-7D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	1.11	295	⇓	eP	Pn	19 03 41.1	+1.4
SCPH					eS	Sn	19 03 59.1	+4.0
BIPH	Bislig	1.13	187	⇑	iP	Pn	19 03 49.2	+9.2
BIPH					i S	Sn	19 04 03.2	+7.6
MSLP	Maasin	1.82	297		eP	Pg	19 03 52.4	-0.7
MSLP					eS	Sg	19 04 19.2	+2.4
BUKP	Musuan	2.02	225		eP	Pg	19 03 55.7	-1.2
BUKP					eS	Sg	19 04 24.5	+1.4
MATI	Mati	2.36	186		eP	Pn	19 03 57.7	+0.7
DAV	Davao City (W)	2.41	203		Pn	Pb	19 04 02.1	+0.5
	193nm,0.3s,baz=251,slow=3.7,SNR=9.2							
DAV					Sn	Sg	19 04 35.1	-0.6
	322nm,0.3s,baz=315,slow=22,SNR=3.4							
DAV	Davao City (W)	2.41	203	⇑	eP	Pb	19 04 02.4	+0.8
DAV	Davao City (W)	2.41	203	⇑		Pb	19 04 01.4	-0.3
DMPH	Davao City--Mi	2.42	204	⇑	eP	Pg	19 04 03.5	-1.3
DMPH					eS	Sg	19 04 36.5	+0.3
KCP	Kidapawan	2.68	212	⇓	eP	Pg	19 04 11.5	+1.8
KCP					i S	Sg	19 04 42.1	-2.4
LLP	Lapu-Lapu	2.70	292		eP	Pb	19 04 06.2	-0.4
LLP					eS	Sb	19 04 40.9	+1.1
CTBH	Cotabato--PC H	3.05	227	⇑	iP	Pb	19 04 10.3	-2.3
DDMP	Don Marcelino,	3.28	194		eP	Pb	19 04 13.3	-3.2
PAGZ	Pagadian	3.42	245		eP	Pb	19 04 16.6	-2.2
PAGZ					eS	Sb	19 04 59.8	-0.7
GSPH	General Santos	3.56	206	⇑	iP	Pn	19 04 16.8	+3.2
CNP	Catarman	3.66	330		eP	Pn	19 04 17.5	+2.6
CNP					eS	Sn	19 05 00.7	+2.5
CNOP	Candoni, Negro	3.85	278		eP	Pb	19 04 21.6	-4.7
CNOP					eS	Sn	19 05 06.7	+3.9
GUIM	Jordan	4.08	289		eP	Pb	19 04 25.4	-4.7
GUIM					eS	Sb	19 05 14.2	-5.3
RCP	Roxas	4.32	301	⇓	eP	Pn	19 04 28.7	+4.7
JAP	San Jose, Anti	4.71	288	⇑	eP	Pn	19 04 33.8	+4.4
PVCP	Virac	4.84	332		eP	Pn	19 04 34.8	+3.7
PVCP					eS	Sb	19 05 44.7	+3.1
ZCP	Zamboanga City	4.99	242	⇓	eP	Pg	19 04 51.9	-1.9
SJMP	San Jose	6.15	301		eP	Pn	19 04 54.1	+5.0
BOAC	Boac	6.16	312		eP	Pn	19 04 53.8	+4.6
BOAC					eS	Sg	19 07 14.8	+39
LQP	Lukban	6.81	315		eP	Pn	19 05 03.5	+5.0
TGY	Tagaytay City	7.24	312	Pn	Pn	19 05 09.8	+5.6
	31nm,0.3s,baz=36,slow=16,SNR=2.4							
TNTI	Ternate	8.53	174		P	Pn	19 05 25.7	+3.9
	127nm,1.9s							
TNTI	Ternate	8.53	174	Pn	Pn	19 05 23.8	+2.0	
CAUP	Cauayan	8.85	329	eP	Pn	19 05 28.0	+1.7	
KMSI	Cibinong	9.04	196	P	Pn	19 05 33.7	+4.9	
	184nm,0.8s							
MRSI	Marisa	9.88	208	P	Pn	19 05 44.0	+3.6	
	75nm,0.6s							
SZP	Santa	10.09	325	Pn	Pn	19 05 45.3	+2.1	
KKM	Kota Kinabalu	10.71	253	Pn	Pn	19 05 54.3	+2.5	
LUWI	Luwuk	10.94	200	Pn	Pn	19 05 56.8	+1.9	
SIJI	Sorong	11.17	155	Pn	Pn	19 05 59.0	+0.9	
	8.9nm,0.3s,baz=324,slow=17,SNR=12							
SANI	Sanana	11.30	183	P	Pn	19 06 01.4	+1.6	
NLAI	Namlea	12.48	177	P	Pn	19 06 19.2	+3.2	
	813nm42nm,0.5s							
MSAI	Masohi	12.80	169	P	Pn	19 06 24.7	+4.3	
	264nm17nm,0.9s							
FAKI	Fak Fak	13.43	155	P	Pn	19 06 30.2	+1.2	
	61nm,1.5s							
FAKI	Fak Fak	13.43	155	Pn	Pn	19 06 30.5	+1.5	
TTSI	Tana Toraja	13.97	209	P	P	19 06 42.8	-1.6	
	88nm,0.6s							
TWG	Pinlang	14.41	339	Pn	Pn	19 06 45.3	+2.9	
SPSI	Sidrap Palu	14.80	207	P	P	19 06 53.3	-0.3	
	1µm54nm,0.8s							
YULB	Yu-li	14.87	341	Pn	Pn	19 06 50.6	+2.1	
TPUB	Ta-pu	15.01	339	P	P	19 06 55.0	-1.0	
BNSI	Bone	15.04	205	P	P	19 06 57.1	+0.8	
	2µm168nm,1.3s							
SSLB	Suanglung	15.34	340		P	19 06 59.8	+0.1	
KAPI	Kappang	15.74	206	Pn	P	19 07 04.5	+0.4	
	0.7nm,0.3s,baz=54,slow=14,SNR=5.0							
KAPI	Kappang	15.74	206	P	P	19 07 02.8	-1.4	
KAPI				pmax	pmax			
	comp=Z,137nm,1.7s							
KAPI	Kappang	15.74	206		P	19 07 02.8	-1.4	
KAPI				IAmb	IAmb	19 07 24.2		
	comp=Z,137nm,1.7s							
SBUM	Sibu	15.76	245	P	P	19 07 03.6	-0.7	
BKSI	Bulukumba	15.87	204	P	P	19 07 04.7	-0.8	
	comp=Z,42nm,0.8s							
YHNB	Yeheng	16.04	343		P	19 07 06.3	-1.2	
KBKI	Kotabaru	16.22	220	P	P	19 07 12.8	+3.3	
	comp=Z,676nmcomp=Z,80nm,1.2s							
KSM	Kuching	17.90	245		P	19 07 28.9	+0.9	
DLV	T Lat	17.91	280	P	P	19 07 29.1	+0.8	
MMRI	Maumere	18.33	194	P	P	19 07 38.0	+5.2	
	comp=Z,160nm,1.1s							
JAY	Jayapura	18.39	129	P	P	19 07 33.0	-0.5	
	comp=Z,0.3nm,0.3s,baz=273,slow=6.2,SNR=5.3							
JAY	Jayapura	18.39	129	P	P	19 07 33.0	-0.5	
EDFI	Ende, Flores	18.57	195	P	Pn	19 07 39.8	+4.0	
	comp=Z,28nm,0.7s							
QIZ	Qiongzhong	18.81	303	P	Pn	19 07 40.0	+1.4	
QIZ				S	Sn	19 11 10.0	+0.8	
QIZ				pmax	pmax			
	comp=Z,21nm,1.3s							
QIZ				LR	LR			
	comp=Z,1µm,13.7s							
QIZ				LR	LR			
	comp=Z,3µm,16.7s							
QIZ				LR	LR			
	comp=Z,5µm,16.7s							
SOEI	Soe	19.07	187	P	P	19 07 40.6	-0.5	
SOEI				IAmb	IAmb	19 08 31.9		
	comp=Z,124nm,0.9s							
BATI	Baumata	19.59	188	P	Pn	19 07 48.3	+0.3	
	comp=Z,266nm,0.3s,baz=337,slow=2.2,SNR=12							
BATI	Baumata	19.59	188	P	Pn	19 07 47.6	-0.4	
	comp=Z,118nm,0.6s							
PLAI	Plampang	20.01	206	P	Pn	19 07 55.0	+2.1	
	comp=Z,112nm,0.7s							
JAGI	Jajag, Banyuwa	21.53	215	P	P	19 08 08.6	+1.0	
JAGI				IAmb	IAmb	19 08 17.6		
	comp=Z,67nm,1.3s							
SSE	Sheshan	22.24	348	P	P	19 08 15.8	+0.7	
SSE				pmax	pmax			
	comp=Z,10.0nm,0.7s							
SSE	Sheshan	22.24	348	P	P	19 08 15.5	+0.4	
SSE				IAmb	IAmb	19 08 20.3		
	comp=Z,45nm,0.7s							
MTN	Manton Dam	22.48	168	P	P	19 08 19.3	+1.4	
	baz=23,SNR=6.8							
MTN	Manton Dam	22.48	168	P	P	19 08 17.5	-0.4	
MTN				IAmb	IAmb	19 08 40.1		
	comp=Z,34nm,0.8s							
KDU	Kakadu	22.64	165	P	P	19 08 19.9	+0.4	
	baz=23,SNR=8.0							
NJ2	Nanjing	23.72	344	eP	P	19 08 32.0	+1.6	
NJ2				pP	pwP	19 08 39.3	+2.7	
NJ2				pmax	pmax			
	comp=Z,24nm,1.2s							
NJ2				pmax	pmax			
	comp=Z,300nm,3.8s							
NJ2				LR	LR			
	comp=Z,1µm,22.3s							
NJ2				LR	LR			
	comp=Z,1µm,14.2s							
NJ2				LR	LR			
	comp=Z,2µm,19.9s							
MYKOM	Kota Tinggi	23.74	253	P	P	19 08 31.1	+0.2	
WHN	Wuhan	23.98	333	P	P	19 08 44.3	+11	
JNU	Nakatsue	24.04	9	P	P	19 08 32.5	-1.1	
	comp=Z,16nm,0.8s,baz=197,slow=4.8,SNR=9.1							
JNU	Nakatsue	24.04	9	P	P	19 08 32.9	-0.6	
JNU				IAmb	IAmb	19 08 40.1		
	comp=Z,27nm,0.9s							
LEM	Lembang	24.73	230	P	P	19 08 41.7	+1.6	
	comp=Z,36nm,0.9s,baz=150,slow=23,SNR=5.0							
SLVN	Son La	24.82	301	P	P	19 08 40.5	-0.3	
SLVN				IAmb	IAmb	19 09 01.4		
	comp=Z,39nm,1.5s							
KNRA	Kununurra	24.93	175	P	P	19 08 41.3	-0.4	
	baz=25,SNR=7.4							
KNRA	Kununurra	24.93	175	P	P	19 08 40.5	-1.2	
CISI	Cisompet, Garu	25.05	229	P	P	19 08 42.4	-0.6	
GYA	Guiyang	25.38	315	eP	P	19 08 53.8	+7.9	
GYA				pmax	pmax			
	comp=Z,10.0nm,0.5s							
BLSI	Bandar Lampung	25.72	236	P	P	19 08 53.5	+4.5	
KULM	Kulim	25.95	263	P	P	19 08 50.7	-0.4	
ENH	Enshi	26.22	325	P	P	19 08 53.0	-0.4	
JHJ2	Mitsune	26.68	25	P	P	19 08 58.0	+0.5	
JHJ2				IAmb	IAmb	19 09 50.8		
	comp=Z,71nm,1.2s							
FITZ	Fitzroy Crossi	27.25	182	P	P	19 09 02.3	-0.4	
	baz=27,SNR=14							
FITZ	Fitzroy Crossi	27.25	182	P	P	19 09 02.2	-0.4	
	comp=Z,22nm,0.7s,baz=278,slow=1.7,SNR=12							
FITZ	Fitzroy Crossi	27.25	182		P	19 09 02.1	-0.6	
FITZ				IAmb	IAmb	19 09 10.2		
	comp=Z,31nm,0.7s							
KMI	Kunming	27.54	308	P	P	19 09 10.0	+4.4	
KMI				pmax	pmax			
	comp=Z,23nm,0.5s							
KMI				pmax	pmax			
	comp=Z,360nm,12.3s							
KMI				LR	LR			
	comp=Z,1µm,15.2s							
KMI				LR	LR			
	comp=Z,800nm,15.1s							
KMI				LR	LR			
	comp=Z,1µm,18.2s							
KSRS	Korea Array	28.05	2	P	P	19 09 09.7	0.0	
	comp=Z,3.6nm,0.8s,baz=181,slow=9.3,SNR=8.2							
KS19	Wonju Array Si	28.09	2	P	P	19 09 10.3	+0.2	
KS19				IAmb	IAmb	19 09 16.9		
	comp=Z,14nm,0.9s							
PSI	Prapat	28.17	258	P	P	19 09 12.5	+1.3	
	comp=Z,11nm,0.5s,baz=1.0,slow=3.8,SNR=9.9							
PSI	Prapat	28.17	258	P	P	19 09 10.6	-0.6	
PSI				pmax	pmax			
	comp=Z,71nm,1.4s							
RPSI	Rantau Prapat	28.19	258	P	P	19 09 10.6	-0.7	
RPSI				IAmb	IAmb	19 09 15.5		
	comp=Z,71nm,1.4s							
CM31	Chiang Mai Arr	28.23	292	P	P	19 09 11.2	-0.3	
CMAR	Chiang Mai Arr	28.23	292	P	P	19 09 12.2	+0.7	
	comp=Z,0.8nm,0.7s,baz=79,slow=1.2,SNR=4.8							
CHTO	Chiang Mai	28.32	292	P	P	19 09 12.4	0.0	
CHTO				pmax	pmax			
	comp=Z,7.0nm,1.0s							
CHTO	Chiang Mai	28.32	292	P	P	19 09 12.4	0.0	
MAT	Matsushiro	29.12	20	P	P	19 09 17.5	-1.8	
XAN	Xi'an	29.44	329	P	P	19 09 23.3	+1.1	
XAN				pmax	pmax			
	comp=Z,14nm,0.9s							
XAN				LR	LR			
	comp=Z,1µm,15.2s							
XAN				LR	LR			
	comp=Z,2µm,16.3s							
XAN				LR	LR			
	comp=Z,2µm,17.2s							
XAN	Xi'an	29.44	329	P	P	19 09 21.2	-1.0	
XAN				pmax	pmax			
	comp=Z,14nm,1.0s							
XAN	Xi'an	29.44	329	P	P	19 09 21.2	-1.0	
GSI	Gunungsitoli	29.86	256	P	P	19 09 25.5	-0.6	
WRA	Warramunga Arr	30.07	165	P	P	19 09 25.5	-2.4	
	comp=Z,4.5nm,0.6s,baz=347,slow=9.4,SNR=4.7							
WB2	Warramunga Arr	30.08	165	P	P	19 09 25.3	-2.6	
WB2				IAmb	IAmb	19 09 39.8		
	comp=Z,12nm,0.7s							
PSA00	Pilbara Seismi	31.38	192	P	P	19 09 38.5	-0.9	
PSA00				IAmb	IAmb	19 09 56.3		
	comp=Z,64nm,1.6s							
BJT	Baijiatuan	31.94	345	P	P	19 09 43.9	-0.2	
BJT				pmax	pmax			
	comp=Z,25nm,1.3s							
BJT	Baijiatuan	31.94	345	P	P	19 09 43.9	-0.2	
BJT				IAmb	IAmb	19 09 55.1		
	comp=Z,25nm,1.3s							
BJI	Beijing	31.96	345	P	P	19 09 44.3	0.0	
BJI				pmax	pmax			
	comp=Z,6.0nm,0.6s							
QIS	Mount Isa	32.36	157	P	P	19 09 46.7	-1.3	
	baz=32,SNR=11							
MTSU	Mount Surprise	32.45	147	P	P	19 09 48.8	0.0	
	baz=33,SNR=5.6							
AS31	Alice Springs	33.56	168	P	P	19 09 57.9	-0.6	
ASAR	Alice Springs	33.56	168	P	P	19 09 56.9	-1.7	
	comp=Z,3.8nm,0.6s,baz=355,slow=7.2,SNR=4.4							
LZH	Lanzhou	33.70	326	eP	P	19 10 01.0	+1.2	
LZH				pP	pwP	19 10 14.5	+8.2	
LZH				sP	sP	19 10 19.0	+16	
LZH				PP	PnPn	19 11 10.8	-1.0	
LZH				pmax	pmax			
	comp=Z,12nm,1.1s							
LZH				pmax	pmax			
	comp=Z,69nm,4.3s							
LZH				LR	LR			
	comp=Z,1µm,15.7s							
LZH				LR	LR			
	comp=Z,1µm,14.6s							
LZH				LR	LR			
	comp=Z,1µm,15.2s							
GIRL	Giralia	33.96	201	P	P	19 10 01.9	0.0	
HHC	Hu-ho-hao-te	34.09	340	eP	P	19 10 04.3	+1.2	
HHC				eS	S	19 15 30.8	+1.8	
HHC				pmax	pmax			
	comp=Z,14nm,0.9s							
HHC				pmax	pmax			
	comp=Z,190nm,8.8s							
HHC				LR	LR			
	comp=Z,550nm,15.9s							
HHC				LR	LR			
	comp=Z,820nm,15.1s							
HHC				LR	LR			
	comp=Z,760nm,15.9s							
WRKA	Warakurna	34.18	177	P	P	19 10 03.7	-0.3	
	baz=34,SNR=8.2							
CN2	Changchun	34.37	359	eP	P	19 10 06.0	+0.7	
CN2				pmax	pmax			
	comp=Z,10.0nm,0.7s							
USRK	Ussuriysk Ar.	35.08	7	P	P	19 10 10.8	-0.6	
	comp=Z,6.6nm,0.8s,baz=186,slow=8.9,SNR=8.8							
CTA	Charters Tower	35.09	146	P	P	19 10 11.7	-0.1	
	comp=Z,9.2nm,0.9s,baz=329,slow=10,SNR=3.7							
MDJ	Mudanjiang	35.28	4	P	P	19 10 13.2	+0.1	
MDJ				IAmb	IAmb	19 10 21.7		
	comp=Z,23nm,0.9s							
MEEK	Meekatharra	36.55	192	P	P	19 10 23.8	-0.5	
	baz=37,SNR=6.6							
SHL	Shillong	36.62	301	P	P	19 10 24.4	-0.8	
SHL				pmax	pmax			
	comp=Z,20nm,0.9s							
SHL	Shillong	36.62	301	P	P	19 10 24.4	-0.8	
SHL				IAmb	IAmb	19 10 47.9		
	comp=Z,20nm,0.9s							
TEY	Ternei	36.65	12	⇓	eP	P	19 10 27.9	+3.1
TEY				pmax	pmax			
	comp=Z,20nm,1.5s							
TEY				pmax	pmax			
	comp=N,20nm,1.3s							
ASAJ	Asahikawa	37.39	19	P	P	19 10 29.4	-1.7	
	comp=N,15nm,0.8s,baz=258,slow=3.5,SNR=7.1							
GTA	Gaotai	38.30	326	eP	P	19 10 43.5	+4.3	
GTA				pP	pwP	19 10 49.5	+3.8	
GTA				sP	sP	19 10 53.0	+11	
GTA				pmax	pmax			
	comp=N,3.0nm,0.7s							
GTA				LR	LR			
	comp=N,1µm,19.0s							
GTA				LR	LR			
	comp=N,1µm,20.9s							
GTA				LR	LR			
	comp=N,2µm,16.8s							
LSA	Lhasa	38.78	306	P	P	19 10 44.1	+0.4	
LSA				pmax	pmax			
	comp=Z,32nm,1.7s							
LSA	Lhasa	38.78	306	P	P	19 10 44

	comp=Z,500nm,16.0s							
MUN	**Mundaring**	**42.22**	**193**	P		**P**	**19 11 11.1**	**-0.4**
	baz=42,SNR=15							
GUN	**Gumba**	**42.46**	**301**	*e*P		**P**	**19 11 12.7**	**-1.3**
	comp=Z,68nm,1.1s							
PKI	**Pulchoki**	**42.76**	**301**	*e*P		**P**	**19 11 15.5**	**-0.9**
	comp=Z,17nm,0.7s							
PKIN	**Phulchoki**	**42.77**	**301**	*e*P		**P**	**19 11 15.4**	**-1.1**
	comp=Z,14nm,0.6s							
BBOO	**Buckleboo**	**42.86**	**168**	P		**P**	**19 11 16.0**	**-0.7**
	baz=43,SNR=16							
BBOO	**Buckleboo**	**42.86**	**168**	P		**P**	**19 11 15.8**	**-1.0**
BBOO				IAmb		IAmb	19 11 21.7	
	comp=Z,26nm,0.6s							
NWAO	**Narrogin (SRO)**	**42.92**	**191**	P		**P**	**19 11 17.0**	**-0.2**
	baz=43,SNR=20							
NWAO	**Narrogin (SRO)**	**42.92**	**191**	P		**P**	**19 11 16.9**	**-0.2**
	comp=Z,22nm,0.5s,baz=32,slow=8.7,SNR=16							
NWAO	**Narrogin (SRO)**	**42.92**	**191**	P		**P**	**19 11 16.8**	**-0.4**
NWAO				pmax		pmax		
	comp=Z,108nm,1.4s							
NWAO	**Narrogin (SRO)**	**42.92**	**191**	P		**P**	**19 11 16.8**	**-0.4**
DMN	**Daman**	**43.02**	**301**	*e*P		**P**	**19 11 18.0**	**-0.5**
	comp=Z,23nm,0.9s							
STKA	**Stephens Creek**	**43.42**	**161**	P		**P**	**19 11 20.1**	**-1.2**
	baz=44,SNR=7.7							
STKA	**Stephens Creek**	**43.42**	**161**	P		**P**	**19 11 19.9**	**-1.4**
	comp=Z,6.5nm,0.8s,baz=342,slow=6.6,SNR=5.6							
STKA	**Stephens Creek**	**43.42**	**161**	P		**P**	**19 11 19.7**	**-1.6**
STKA				pmax		pmax		
	comp=Z,4.0nm,1.1s							
STKA	**Stephens Creek**	**43.42**	**161**	P		**P**	**19 11 19.7**	**-1.6**
GKN	**Gorkha**	**43.54**	**301**	*e*P		**P**	**19 11 21.4**	**-1.1**
CIT	**Chita**	**43.88**	**348**	*e*P		**P**	**19 11 25.7**	**+0.9**
CIT				*e*			19 11 30.8	
CIT				*e*			19 11 43.7	
HTT	**Hallett**	**44.12**	**165**	P		**P**	**19 11 26.8**	**0.0**
	baz=44,SNR=6.1							
KOLN	**Koldanda**	**44.35**	**300**	*e*P		**P**	**19 11 28.8**	**-0.4**
	comp=Z,46nm,0.7s							
DANN	**Dangsing**	**44.38**	**301**	*e*P		**P**	**19 11 28.1**	**-1.4**
	comp=Z,39nm,0.6s							
PYUN	**Piuthan**	**44.96**	**301**	*e*P		**P**	**19 11 33.1**	**-0.9**
	comp=Z,84nm,1.0s							
TLY	**Talaya**	**46.21**	**340**	P		**P**	**19 11 44.2**	**+0.9**
	comp=Z,3.3nm,0.6s,baz=326,slow=2.2,SNR=3.9							
TLY	**Talaya**	**46.21**	**340**	*i* P		**P**	**19 11 45.2**	**+1.9**
TLY				pmax		pmax		
	comp=Z,5.0nm,0.8s							
TLY	**Talaya**	**46.21**	**340**	P		**P**	**19 11 43.4**	**+0.1**
TLY				IAmb		IAmb	19 12 02.8	
	comp=Z,12nm,1.0s							
HYB	**Hyderabad**	**47.24**	**285**	*i* P		**P**	**19 11 53.0**	**+1.1**
ARPS	**Mount Arapiles**	**48.05**	**163**	P		**P**	**19 11 58.1**	**+0.4**
	baz=48,SNR=9.7							
WMQ	**Urumqi**	**48.12**	**322**	*e*P		**P**	**19 11 59.0**	**+0.6**
WMQ				pP		pwP	19 12 11.8	+6.8
WMQ				LR		LR		
	comp=Z,1μm,19.7s							
WMQ				LR		LR		
	comp=Z,750nm,19.9s							
WMQ				LR		LR		
	comp=Z,950nm,19.9s							
BOD	**Bodaibo**	**49.35**	**351**	*e*P		**P**	**19 12 08.1**	**+0.6**
BOD				pmax		pmax		
	comp=Z,23nm,1.6s							
TOO	**Toolangi**	**49.91**	**160**	P		**P**	**19 12 12.2**	**+0.1**
	baz=50,SNR=5.1							
TOO	**Toolangi**	**49.91**	**160**	P		**P**	**19 12 12.0**	**-0.1**
TOO				pmax		pmax		
	comp=Z,31nm,1.6s							
TOO	**Toolangi**	**49.91**	**160**	P		**P**	**19 12 12.0**	**-0.1**
TOO				IAmb		IAmb	19 12 19.4	
	comp=Z,31nm,1.6s							
PETK	**Petropavlovsk-**	**50.41**	**24**	P		**P**	**19 12 16.1**	**+0.4**
	comp=Z,5.2nm,0.7s,baz=198,slow=6.5,SNR=7.6							
PETK				LR		LR	19 32 18.3	
	comp=Z,417nm,21.4s,baz=225,slow=35							
PET	**Petropavlovsk**	**50.73**	**25**	*e*P		**P**	**19 12 17.3**	**-0.8**
PET				pmax		pmax		
	comp=Z,19nm,1.7s							
PET	**Petropavlovsk**	**50.73**	**25**	P		**P**	**19 12 17.6**	**-0.5**
PET				IAmb		IAmb	19 12 19.9	
	comp=Z,24nm,1.2s							
YAK	**Yakutsk**	**52.67**	**2**	P		**P**	**19 12 32.8**	**+0.4**
	comp=Z,2.3nm,0.3s,baz=213,slow=2.5,SNR=3.4							
YAK	**Yakutsk**	**52.67**	**2**	*e*P		**P**	**19 12 32.2**	**-0.2**
YAK				pmax		pmax		
	comp=Z,29nm,1.1s							
YAK				pmax		pmax		
	comp=N,20nm,1.1s							
YAK				pmax		pmax		
	comp=E,6.0nm,1.1s							
YAK	**Yakutsk**	**52.67**	**2**	P		**P**	**19 12 32.3**	**-0.1**
YAK				IAmb		IAmb	19 12 44.8	
	comp=Z,22nm,0.9s							
MK31	**Makanchi Array**	**52.93**	**323**	P		**P**	**19 12 34.0**	**-0.7**
MK31				pmax		pmax		
	comp=Z,5.0nm,0.8s							
MK31	**Makanchi Array**	**52.93**	**323**	P		**P**	**19 12 34.0**	**-0.7**
MKAR	**Makanchi Array**	**52.93**	**323**	P		**P**	**19 12 33.8**	**-0.9**
	comp=Z,4.5nm,0.6s,baz=121,slow=6.9,SNR=12							
MAKZ	**Makanchi**	**53.12**	**323**	P		**P**	**19 12 35.0**	**-1.1**
MAKZ				pmax		pmax		
	comp=Z,9.0nm,1.2s							
MAKZ	**Makanchi**	**53.12**	**323**	P		**P**	**19 12 35.0**	**-1.1**
MA2	**Magadan**	**53.39**	**15**	*i* P		**P**	**19 12 38.0**	**+0.2**
MA2				pmax		pmax		
	comp=Z,5.0nm,0.7s							
TARG	**Taragay, Kyrgy**	**53.55**	**316**	P		**P**	**19 12 38.4**	**-1.4**
KSH	**Kashi**	**54.05**	**312**	P		P	19 12 48.5	+5.4
KSH				sP		pwP	19 13 03.3	+13
KSH				PP		PP	**19 14 50.8**	**+6.2**
KSH				S		**S**	**19 20 22.3**	**+2.7**
KSH				SS		**SKiKP**	**19 23 56.8**	**+0.6**
KSH				pmax		pmax		
	comp=Z,14nm,0.7s							
KSH				pmax		pmax		
	comp=Z,110nm,4.8s							
KSH				LR		LR		
	comp=Z,180nm,8.8s							
KSH				LR		LR		
	comp=Z,340nm,8.3s							
KSH				LR		LR		
	comp=Z,220nm,11.0s							
NIL	**Nilore**	**54.47**	**305**	P		**P**	**19 12 45.4**	**-0.8**
NIL				pmax		pmax		
	comp=Z,40nm,1.1s							
NIL	**Nilore**	**54.47**	**305**	P		**P**	**19 12 45.4**	**-0.8**
ZAA0	**Zalesovo Array**	**55.58**	**332**	P		**P**	**19 12 51.5**	**-2.3**
ZALV	**Zalesovo Beam**	**55.58**	**332**	P		**P**	**19 12 51.9**	**-1.8**
	comp=Z,1.2nm,0.3s,baz=129,slow=7.0,SNR=5.6							
AAK	**Ala-Archa**	**56.17**	**316**	P		**P**	**19 12 58.2**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=177,slow=8.6,SNR=2.4							
AAK	**Ala-Archa**	**56.17**	**316**	*i* P		**P**	**19 12 57.6**	**-0.9**
AAK				pmax		pmax		
	comp=Z,6.0nm,1.7s							
AAK	**Ala-Archa**	**56.17**	**316**	P		**P**	**19 12 57.5**	**-1.0**
AAK				IAmb		IAmb	19 13 15.5	
	comp=Z,29nm,1.9s							
SEY	**Seymchan**	**56.69**	**14**	*i* P		**P**	**19 13 02.9**	**+1.3**
KURK	**Kurchatov**	**56.99**	**326**	*i* P		**P**	**19 13 02.8**	**-1.1**
KURK				pmax		pmax		
	comp=Z,15nm,1.0s							
KURK	**Kurchatov**	**56.99**	**326**	P		**P**	**19 13 03.1**	**-0.8**
KURK				IAmb		IAmb	19 13 15.0	
	comp=Z,16nm,0.9s							
KURBB	**Kurchatov Arra**	**56.99**	**326**	P		**P**	**19 13 03.0**	**-0.9**
	comp=Z,5.2nm,0.6s,baz=123,slow=7.0,SNR=11							
BTK	**Batken**	**57.99**	**312**	P		**P**	**19 13 10.4**	**-0.9**
BTK				pmax		pmax		
	comp=Z,8.0nm,0.7s							
BTK	**Batken**	**57.99**	**312**	P		**P**	**19 13 10.4**	**-0.9**
BTK				IAmb		IAmb	19 13 23.7	
	comp=Z,7.6nm,0.7s							
KBL	**Kabul**	**58.07**	**305**	P		**P**	**19 13 10.7**	**-1.4**
KBL				pmax		pmax		
	comp=Z,20nm,1.3s							
KBL	**Kabul**	**58.07**	**305**			**P**	**19 13 10.7**	**-1.4**
KBL				IAmb		IAmb	19 13 26.3	
	comp=Z,20nm,1.3s							
GAR	**Garm**	**58.09**	**310**			**P**	**19 13 10.7**	**-1.4**
CHGR	**Chuyangaron**	**58.88**	**310**	P		**P**	**19 13 16.4**	**-1.1**
KK31	**Karatay Array**	**59.09**	**315**	P		**P**	**19 13 17.5**	**-1.3**
KK31				pmax		pmax		
	comp=Z,9.0nm,1.1s							
KK31	**Karatay Array**	**59.09**	**315**			**P**	**19 13 17.5**	**-1.3**
KK31				IAmb		IAmb	19 13 29.7	
	comp=Z,9.5nm,1.1s							
TIXI	**Tiksi**	**62.30**	**1**	*i* P		**P**	**19 13 39.4**	**-0.7**
TIXI				pmax		pmax		
	comp=Z,31nm,1.6s							
TIXI	**Tiksi**	**62.30**	**1**	P		**P**	**19 13 39.5**	**-0.7**
BRVK	**Borovoye**	**62.66**	**326**	*i* P		**P**	**19 13 41.7**	**-1.2**
BRVK				pmax		pmax		
	comp=Z,13nm,1.2s							
BRVK	**Borovoye**	**62.66**	**326**	P		**P**	**19 13 42.2**	**-0.7**
BRVK				IAmb		IAmb	19 13 53.9	
	comp=Z,10nm,0.9s							
HRA	**Herat**	**63.59**	**304**	P		**P**	**19 13 48.4**	**-1.3**
BILL	**Bilibino**	**64.26**	**15**	*i* P		**P**	**19 13 52.9**	**-0.3**
BILL				pmax		pmax		
	comp=Z,11nm,1.2s							
BILL	**Bilibino**	**64.26**	**15**	P		**P**	**19 13 53.1**	**-0.2**
BILL				IAmb		IAmb	19 14 05.0	
	comp=Z,17nm,1.0s							
NRIK	**Noril'sk**	**65.00**	**346**	P		**P**	**19 13 57.0**	**-1.0**
	comp=Z,5.0nm,0.6s,baz=129,slow=9.2,SNR=5.1							
GEYT	**Alibeck**	**67.31**	**307**	P		**P**	**19 14 12.3**	**-1.2**
	comp=Z,1.4nm,0.8s,baz=44,slow=39,SNR=2.6							
GYA0B	**ALIBECK ARRAY**	**67.31**	**307**	P		**P**	**19 14 11.7**	**-1.8**
GYA0B				IAmb		IAmb	19 16 36.8	
	comp=Z,4.8nm,0.7s							
UOSS	**Minazif**	**68.32**	**293**	P		**P**	**19 14 18.6**	**-1.5**
SVE	**Sverdlovsk**	**69.14**	**328**	*e*P		**P**	**19 14 24.1**	**-0.5**
SVE				pmax		pmax		
	comp=Z,20nm,1.3s							
ARU	**Arti**	**70.15**	**327**	*c i* P		**P**	**19 14 29.2**	**-1.7**
ARU							19 17 05.4	
ARU				S		**S**	**19 23 42.0**	**0.0**
ARU				SS		**SS**	**19 28 18.0**	**+6.2**
ARU				pmax		pmax		
	comp=Z,5.0nm,0.6s							
ARU	**Arti**	**70.15**	**327**	P		**P**	**19 14 29.1**	**-1.7**
SOCY	**Socotra**	**71.12**	**280**	P		**P**	**19 14 35.4**	**-2.2**
AKT	**Akhty**	**75.50**	**310**	*e*P		**P**	**19 15 00.6**	**-2.5**
AKT				*e*			19 15 13.8	
AKT				pmax		pmax		
	comp=Z,8.0nm,0.9s							
CASY	**Casey**	**76.30**	**187**	P		**P**	**19 15 06.0**	**-0.8**
GROC	**Groznyy**	**76.93**	**312**	*e*P		**P**	**19 15 09.3**	**-1.7**
GROC				*e*			19 15 21.3	
GROC				*e*S		**S**	**19 24 57.7**	**-1.5**
GROC				pmax		pmax		
	comp=Z,20nm,0.6s							
TBLG	**Delisi**	**77.74**	**311**	P		**P**	**19 15 15.0**	**-0.7**
TBLG				pmax		pmax		
	comp=Z,14nm,0.6s							
TBLG	**Delisi**	**77.74**	**311**	P		**P**	**19 15 14.9**	**-0.7**
RAYN	**Ar Rayn**	**78.15**	**292**	P		**P**	**19 15 16.5**	**-1.8**
RAYN				pmax		pmax		
	comp=Z,14nm,0.8s							
RAYN	**Ar Rayn**	**78.15**	**292**	P		**P**	**19 15 16.5**	**-1.8**
ZEI	**Tsey**	**78.33**	**312**	*e*P		**P**	**19 15 17.2**	**-1.9**
ZEI				pmax		pmax		
	comp=Z,10.0nm,0.8s							
BPAW	**Bear Paw Mtn.**	**78.41**	**26**	P		**P**	**19 15 19.4**	**+0.5**
KIV	**Kislovodsk**	**79.17**	**313**	*c i* P		**P**	**19 15 21.8**	**-1.8**
KIV				*e*			19 15 32.0	
KIV				*e*			19 18 20.7	
KIV				*e*S		**SKSac**	**19 25 42.0**	**+2.1**
KIV				pmax		pmax		
	comp=Z,6.0nm,1.0s							
KIV				MLR		MLR		
	comp=Z,446nm,18.0s							
TOLK	**Toolik Lake Re**	**79.17**	**22**	P		**P**	**19 15 23.2**	**+0.2**
MCK	**McKinley**	**79.30**	**27**	P		**P**	**19 15 23.3**	**-0.5**
MCK	**McKinley**	**79.30**	**27**	P		**P**	**19 15 23.3**	**-0.5**
MCK				IAmb		IAmb	19 18 00.6	
	comp=Z,15nm,0.8s							
CCB	**Clear Creek Bu**	**79.80**	**26**	P		**P**	**19 15 24.9**	**-1.5**
HDA	**Harding Lake**	**80.18**	**26**	P		**P**	**19 15 27.8**	**-0.7**
HDA				IAmb		IAmb	19 17 57.7	
	comp=Z,9.0nm,0.8s							
IL31		**80.20**	**26**	P		**P**	**19 15 28.2**	**-0.3**
IL31				IAmb		IAmb	19 15 41.8	
	comp=Z,13nm,1.4s							
ILAR	**Eielson Array**	**80.20**	**26**	P		**P**	**19 15 28.4**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=237,slow=5.2,SNR=12							
KLMR	**Klimovskoe**	**80.47**	**330**	*e*P		**P**	**19 15 27.9**	**-2.2**
KLMR				pmax		pmax		
	comp=Z,32nm,1.3s							
KLMR	**Klimovskoe**	**80.47**	**330**	*e*P		**P**	**19 15 28.0**	**-2.2**
KLMR				AMP			19 15 43.7	
	comp=Z,32nm,1.3s							
TMCR	**Tamitsa**	**81.03**	**334**	*e*P		**P**	**19 15 32.9**	**-0.1**
TMCR				pmax		pmax		
	comp=Z,10.0nm,0.5s							
SCRK	**Sand Creek**	**81.49**	**26**	P		**P**	**19 15 35.5**	**-0.2**
OBN	**Obninsk**	**82.41**	**325**	*de*P		**P**	**19 15 39.2**	**-1.3**
OBN				*e*			19 15 45.2	
OBN				*e*			19 18 45.7	
OBN				*e*S		**S**	**19 25 59.2**	**+2.6**
OBN				pmax		pmax		
	comp=Z,6.0nm,1.1s							
OBN				MLR		MLR		
	comp=Z,444nm,19.0s							
BARN	**Barnard Glacie**	**82.81**	**29**	P		**P**	**19 15 42.3**	**-0.4**
ABPO	**Ambohimpanom**	**83.01**	**249**	P		**P**	**19 15 42.5**	**-2.1**
ABPO				pmax		pmax		
	comp=Z,29nm,1.6s							
ABPO	**Ambohimpanom**	**83.01**	**249**	P		**P**	**19 15 42.5**	**-2.1**
ABPO				IAmb		IAmb	19 15 52.7	
	comp=Z,29nm,1.6s							
DAWY	**Dawson**	**83.49**	**26**			**P**	**19 15 45.8**	**-0.2**
EPYK	**Eagle Plains**	**84.25**	**24**			**P**	**19 15 49.9**	**0.0**
KEV	**Kevo**	**84.61**	**340**	P		**P**	**19 15 51.9**	**+0.4**
KEV				pmax		pmax		
	comp=Z,102nm,1.9s							
KEV	**Kevo**	**84.61**	**340**	P		**P**	**19 15 51.9**	**+0.4**
HYT	**Haines Junctio**	**84.86**	**29**	P		**P**	**19 15 53.3**	**+0.2**
SPA0	**Spitsbergen Ar**	**85.00**	**349**	P		**P**	**19 15 52.7**	**-0.7**
INK	**Inuvik**	**85.08**	**22**	P		**P**	**19 15 53.5**	**-0.4**
INK				pmax		pmax		
	comp=Z,35nm,1.4s							
INK	**Inuvik**	**85.08**	**22**			**P**	**19 15 53.5**	**-0.4**
ARCES	**ARCESS Array B**	**85.17**	**340**	P		**P**	**19 15 53.2**	**-1.2**
	comp=Z,5.6nm,0.7s,baz=81,slow=6.1,SNR=11							
ARE0	**ARCESS Array S**	**85.17**	**340**	P		**P**	**19 15 52.2**	**-2.2**
BR131	**Keskin Array S**	**86.32**	**309**	P		**P**	**19 16 01.1**	**+0.2**
BR131				pmax		pmax		
	comp=Z,4.0nm,1.0s							
BR131	**Keskin Array S**	**86.32**	**309**			**P**	**19 16 01.1**	**+0.2**
BRTR	**Keskin Array B**	**86.32**	**309**	P		**P**	**19 16 00.0**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=103,slow=4.5,SNR=5.4							
BRTR				LR		LR	19 58 48.0	
	comp=Z,194nm,21.2s,baz=62,slow=39							
FIA1	**FINESS Array S**	**86.84**	**332**	P		**P**	**19 16 02.1**	**-0.6**
FINES	**FINESS Array B**	**86.84**	**332**	P		**P**	**19 16 00.7**	**-2.1**
	comp=Z,1.8nm,0.4s,baz=56,slow=4.7,SNR=7.3							
CSS	**Mathiatis**	**87.32**	**305**	P		**P**	**19 16 04.4**	**-1.3**
AKASG	**Malin Array Be**	**87.45**	**321**	P		**P**	**19 16 04.1**	**-1.8**
	comp=Z,1.2nm,0.6s,baz=62,slow=5.2,SNR=3.2							
MAW	**Mawson**	**88.88**	**200**	P		**P**	**19 16 11.2**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=45,slow=2.7,SNR=3.1							
MAW	**Mawson**	**88.88**	**200**	P		**P**	**19 16 11.4**	**-0.9**
VNDA	**Vanda**	**88.95**	**173**	P		**P**	**19 16 12.5**	**+0.1**
	comp=Z,2.4nm,0.6s,baz=315,slow=6.9,SNR=8.0							
VNDA	**Vanda**	**88.95**	**173**	P		**P**	**19 16 12.8**	**+0.3**
KMBO	**Kilima Mbogo**	**89.45**	**269**	P		**P**	**19 16 15.3**	**-1.2**
	comp=Z,1.5nm,0.7s,baz=47,slow=23,SNR=2.9							
ELL	**Elmali**	**89.73**	**307**	P		**P**	**19 16 16.5**	**-0.8**
ELL				pmax		pmax		
	comp=Z,108nm,1.5s							
ELL	**Elmali**	**89.73**	**307**	P		**P**	**19 16 16.5**	**-0.8**
BUR08	**Bucovina Ar. S**	**90.71**	**318**	P		**P**	**19 16 22.6**	**+1.0**
UZH	**Uzhgorod**	**92.32**	**320**	*e*P		**P**	**19 16 28.0**	**-0.8**
UZH				*i*			19 16 40.2	
NB2	**NORSAR Subarra**	**93.72**	**334**	P		**P**	**19 16 34.0**	**-1.1**
	comp=Z,2.5nm,0.9s,baz=64,slow=4.6							
NOA	**NORSAR Array B**	**93.72**	**334**	P		**P**	**19 16 33.1**	**-2.0**
	comp=Z,0.7nm,0.9s,baz=170,slow=13,SNR=2.4							
NC204	**NORSAR Array S**	**93.81**	**334**			**P**	**19 16 35.8**	**+0.3**
YKA	**Yellowknife Ar**	**94.53**	**24**	P		**P**	**19 16 37.7**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=297,slow=4.2,SNR=9.7							
CLL	**Collm**	**97.01**	**325**	*e*P		**P**	**19 16 50.0**	**-0.2**
GERES	**GERESS Array B**	**97.59**	**322**	P		Pdif	19 16 53.0	-0.1
	comp=Z,0.1nm,0.3s,baz=344,slow=38,SNR=2.1							
TORD	**Torodi Ar. Bea**	**120.84**	**291**	PKP		**PKPdf**	**19 22 10.0**	**-1.7**
	comp=Z,0.8nm,0.7s,baz=65,slow=1.9,SNR=3.5							
VBMS	**Vicksburg**	**125.64**	**39**			PKPpre	19 22 12.7	
PLCA	**Paso Flores**	**145.24**	**157**	PKPbc		**PKPab**	**19 22 56.2**	**-0.1**
	comp=Z,5.9nm,0.9s,baz=295,slow=6.9,SNR=4.2							
PLCA	**Paso Flores**	**145.24**	**157**	PKIKP		**PKPbc**	**19 22 55.7**	**-0.5**
PLCA	**Paso Flores**	**145.24**	**157**			**PKPbc**	**19 22 55.7**	**-0.5**

BJI ***31*** *19:05:31.4±0.0, 8.85N×126.95E, h20km, mB5.2/30, mb4.8/50, Ms5.0/36, Ms7 4.8/35*
IDC ***31*** *19:05:34.5±0.4, 9.38N×126.56E, h0km, mb4.8/35, mb1 4.9/37, mb1mx4.8/47, mbtmp4.8/37, ML5.1/3, MS4.6/27, Ms1 4.6/27, ms1mx4.4/48, Error ellipse: s-maj=15.1km s-min=8.4km az=81.0*
MOS ***31*** *19:05:36.7±1.0, 9.29N×126.61E, h33km, mb5.2/21, MS4.8/7, Error ellipse: s-maj=16.5km s-min=12.1km az=98.2*
NEIC ***31*** *19:05:36.0±1.6, 9.38N±0.06×126.56E±0.07, h11km±3km, mb5.1/123, Error ellipse: s-maj=10.5km s-min=9.3km az=73.0*
MAN ***31*** *19:05:36.6, 9.42N×126.97E, h29km, mb5.5, ML4.5, MS4.8*
GCMT ***31*** *19:05:39.0±0.2, 9.29N±0.01×126.60E±0.02, h26km, MW5.2/108, Moment Tensor Solution. s58,c67; s108,c168; Duration: 1ᵗ0 Moment tensor: Scale 10¹⁶ Nm; Mrr4.48±.26; Mθθ-5.44±.16; Mφφ0.96±.18; Mrθ0.83±.22; Mθφ2.36±.10; Mφr-5.31±.37; Best double couple: Mo7.62800×10¹⁶ NP1:φ260.00000°, δ41.00000°, λ35.00000°. NP2:φ142.00000°, δ68.00000°, λ125.00000°. Principal axes: T 8.3530, Plg53.0000°, Azm295.0000°; N -1.4460, Plg32.0000°, Azm307.0000°; P -6.9030, Plg15.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA ***31*** *19:05:43.3±0.4, 9°N±3°×12°7E±°, h44km±4km, M4.8/39, mb5.0/39, mB5.5/34, MLv3.5/1, Mw(mB)5.0/34, Mwp6.3/1*
KLM ***31*** *19:05:43.0, 9.80N×126.93E, h61km, mb5.2*
ISC 31 19:05:38.5±0.7, 9°40N±0.03×126°65E±0.04, h26km±4km, n393, σ1ᵗ575/403, mb5.0/128, MS4.7/43, 9C-6D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.20**	**289**	*e*P	**Pn**	**19 05 59.9**	**+0.3**
SCPH				*e*S	**Sb**	**19 06 17.9**	**+2.2**
BIPH	**Bislig**	**1.24**	**193**	*i*P	Pb	19 06 08.1	+6.9
BIPH				*i* S	**Sb**	**19 06 22.8**	**+6.0**
MSLP	**Maasin**	**1.91**	**293**	*e*P	**Pb**	**19 06 12.2**	**-0.4**
MSLP				*e*S	**Sb**	**19 06 38.6**	**+2.6**
BUKP	**Musuan**	**2.17**	**226**	*e*P	**Pn**	**19 06 14.9**	**+1.8**
BUKP				*e*S	**Sn**	**19 06 41.9**	**+2.8**
MATI	**Mati**	**2.47**	**189**	*e*P	**Pn**	**19 06 17.3**	**+0.3**
MATI				*e*S	**Sn**	**19 06 46.1**	**-0.3**
DAV	**Davao City (W)**	**2.54**	**205**	Pn	**Pn**	**19 06 20.3**	**+2.2**
	314nm,0.3s,baz=237,slow=2.7,SNR=10.0						
DAV				Sn	**Sb**	**19 06 52.7**	**-1.6**
	534nm,0.3s,baz=272,slow=19,SNR=2.3						
DAV				LR	LR	19 07 29.9	
	comp=Z,42μm,21.9s,baz=13,slow=46						
DAV	**Davao City (W)**	**2.54**	**205**	*e*P	**Pn**	**19 06 17.6**	**-0.5**
DAV	**Davao City (W)**	**2.54**	**205**		**Pn**	**19 06 19.2**	**+1.1**
DMPH	**Davao City--Mi**	**2.56**	**206**	*e*P	**Pb**	**19 06 22.2**	**-1.6**
DMPH				*e*S	**Sb**	**19 06 54.3**	**-0.5**
LLP	**Lapu-Lapu**	**2.79**	**289**	*e*P	**Pb**	**19 06 25.1**	**-2.6**
LLP				*e*S	**Sb**	**19 07 02.0**	**+0.5**
KCP	**Kidapawan**	**2.83**	**213**	*e*P	**Pb**	**19 06 29.2**	**+0.8**
KCP				*i* S	**Sb**	**19 07 03.3**	**+0.7**
CTBH	**Cotabato--PC H**	**3.21**	**226**	*i*P	**Pn**	**19 06 29.4**	**+2.1**
DDMP	**Don Marcelino,**	**3.40**	**196**	*e*P	**Pn**	**19 06 33.2**	**+3.3**
DDMP				*e*S	**Sn**	**19 07 11.4**	**+1.8**
SKMP	**Bagumbayan, Su**	**3.54**	**216**	*e*P	**Pn**	**19 06 31.9**	**+0.1**
PAGZ	**Pagadian**	**3.58**	**245**	*e*P	**Pn**	**19 06 35.3**	**+3.0**
PAGZ				*e*S	**Sn**	**19 07 16.8**	**+3.1**
CNP	**Catarman**	**3.66**	**328**	*e*P	**Pn**	**19 06 35.9**	**+2.5**
CNP				*e*S	**Sn**	**19 07 18.8**	**+3.1**
GSPH	**General Santos**	**3.69**	**207**	*i*P	**Pn**	**19 06 35.5**	**+1.4**
GUIM	**Jordan**	**4.18**	**287**	*e*P	**Pn**	**19 06 43.5**	**+2.9**
GUIM				*e*S	**Sn**	**19 07 35.8**	**+7.2**
RCP	**Roxas**	**4.40**	**300**	*e*P	**Pn**	**19 06 46.7**	**+3.1**
JAP	**San Jose, Anti**	**4.82**	**287**	*e*P	**Pb**	**19 06 58.7**	**-3.5**
ZCP	**Zamboanga City**	**5.14**	**242**	*e*P	**Pb**	**19 07 05.3**	**-2.5**
SJMP	**San Jose**	**6.22**	**300**	*e*P	**Pn**	**19 07 12.8**	**+4.1**
BUSP	**Coron**	**6.84**	**293**	*e*P	**Pn**	**19 07 20.8**	**+3.6**
LQP	**Lukban**	**6.85**	**314**	*e*P	Pn	19 07 22.8	+5.3
TGY	**Tagaytay City**	**7.29**	**310**	LR	LR

	comp=Z,126nm,0.4s								
GUMO	**Guam**	**18.34**	**75**	P	**Pn**	**19 09 51.2**	**+0.1**		
JAY	**Jayapura**	**18.34**	**130**	P	**Pn**	**19 09 52.5**	**+1.2**		
	comp=Z,0.8nm,0.3s,baz=323,slow=5.1,SNR=5.0								
JAY	**Jayapura**	**18.34**	**130**	P	**Pn**	**19 09 52.2**	**+1.0**		
	comp=Z,934nmcomp=Z,37nm,1.9s								
MMRI	**Maumere**	**18.44**	**194**	P	**Pn**	**19 09 55.5**	**+3.0**		
	comp=Z,5µmcomp=Z,236nm,0.7s								
MMRI	**Maumere**	**18.44**	**194**	P	**Pn**	**19 09 53.1**	**+0.7**		
MMRI				IAmb	IAmb	19 10 11.4			
	comp=Z,206nm,0.9s								
EDFI	**Ende, Flores**	**18.69**	**195**	P	**Pn**	**19 09 58.5**	**+2.9**		
	comp=Z,702nmcomp=Z,50nm,0.7s								
QIZ	**Qiongzhong**	**18.88**	**302**	P	**Pn**	**19 09 58.0**	**+0.3**		
QIZ				S	**Sn**	**19 13 28.5**	**+0.1**		
QIZ				PcP	**PcP**	**19 14 23.0**	**-0.2**		
QIZ				pmax	pmax				
	comp=Z,920nm,12.3s								
QIZ				LR	LR				
	comp=Z,2µm,15.7s								
QIZ				LR	LR				
	comp=Z,4µm,15.2s								
QIZ				LR	LR				
	comp=Z,5µm,16.9s								
QIZ	**Qiongzhong**	**18.88**	**302**	P	**P**	**19 09 55.9**	**-1.2**		
SOEI	**Soe**	**19.17**	**187**	P	Pn	19 10 13.3	+12		
SOEI	**Soe**	**19.17**	**187**		**Pn**	**19 10 02.1**	**+0.7**		
BATI	**Baumata**	**19.70**	**189**	P	**Pn**	**19 10 07.3**	**-0.2**		
	comp=Z,52nm,0.3s,baz=268,slow=0.8,SNR=20								
BATI				LR	LR	19 18 09.3			
	comp=Z,2µm,20.8s,baz=16,slow=38								
BATI	**Baumata**	**19.70**	**189**	P	**Pn**	**19 10 08.1**	**+0.5**		
	comp=Z,3µmcomp=Z,426nm,0.8s								
PLAI	**Plampang**	**20.14**	**206**	P	Pn	19 10 15.6	+2.8		
	comp=Z,3µmcomp=Z,348nm,0.7s								
WBSI	**Waikabubak, Su**	**20.25**	**201**	P	Pn	19 10 16.5	+2.4		
	comp=Z,116nm,0.8s								
KMMI	**Kalianget**	**20.65**	**218**	P	Pn	19 10 19.2	+0.4		
	comp=Z,178nm,0.8s								
JAGI	**Jajag, Banyuwa**	**21.68**	**215**	P	**P**	**19 10 31.4**	**+4.0**		
	comp=Z,99nm,1.1s								
JAGI	**Jajag, Banyuwa**	**21.68**	**215**	P	**P**	**19 10 30.0**	**+2.6**		
JAGI				IAmb	IAmb	19 10 50.4			
	comp=Z,76nm,0.8s								
SSE	**Sheshan**	**22.18**	**348**	P	**P**	**19 10 33.5**	**+0.8**		
SSE				S	**S**	**19 14 39.0**	**+3.3**		
SSE				pmax	pmax				
	comp=Z,29nm,0.8s								
SSE				pmax	pmax				
	comp=Z,240nm,4.7s								
SSE				LR	LR				
	comp=Z,720nm,15.1s								
SSE				LR	LR				
	comp=Z,610nm,15.3s								
SSE	**Sheshan**	**22.18**	**348**	P	**P**	**19 10 30.8**	**-1.9**		
SSE				IAmb	IAmb	19 10 38.0			
	comp=Z,64nm,0.9s								
MTN	**Manton Dam**	**22.54**	**169**	P	**P**	**19 10 37.4**	**+0.8**		
	baz=23,SNR=9.9								
MTN	**Manton Dam**	**22.54**	**169**	P	**P**	**19 10 35.8**	**-0.9**		
MTN				IAmb	IAmb	19 10 58.1			
	comp=Z,78nm,0.7s								
KDU	**Kakadu**	**22.69**	**165**	P	**P**	**19 10 37.4**	**-0.8**		
	baz=23,SNR=15								
SMRI	**Semarang**	**22.97**	**225**	P	**P**	**19 10 45.8**	**+4.6**		
	comp=Z,209nm,1.0s								
SMRI	**Semarang**	**22.97**	**225**	P	**P**	**19 10 40.7**	**-0.6**		
UGM	**Wanagama**	**23.53**	**224**	P	**P**	**19 10 46.3**	**-0.5**		
NJ2	**Nanjing**	**23.67**	**343**	*e*P	**P**	**19 10 49.3**	**+1.3**		
NJ2				sP	**pP**	**19 10 54.0**	**+0.2**		
NJ2				S	**S**	**19 15 08.0**	**+6.6**		
NJ2				pmax	pmax				
	comp=Z,52nm,0.9s								
NJ2				pmax	pmax				
	comp=Z,540nm,5.1s								
NJ2				LR	LR				
	comp=Z,2µm,17.1s								
NJ2				LR	LR				
	comp=Z,1µm,15.6s								
NJ2				LR	LR				
	comp=Z,2µm,19.9s								
MYKOM	**Kota Tinggi**	**23.90**	**253**	P	**P**	**19 10 50.7**	**+0.4**		
MYKOM				IAmb	IAmb	19 11 03.9			
	comp=Z,163nm,1.6s								
MYKOM	**Kota Tinggi**	**23.90**	**253**	P	**P**	**19 10 53.0**	**+2.6**		
JNU	**Nakatsue**	**23.93**	**9**	P	**P**	**19 10 50.1**	**-0.4**		
	comp=Z,53nm,0.9s,baz=210,slow=6.0,SNR=17								
JNU				LR	LR	19 21 32.4			
	comp=Z,1µm,18.4s,baz=168,slow=40								
JNU	**Nakatsue**	**23.93**	**9**	P	**P**	**19 10 50.1**	**-0.4**		
JNU				IAmb	IAmb	19 10 53.7			
	comp=Z,70nm,1.0s								
WHN	**Wuhan**	**23.96**	**333**	P	**P**	**19 10 53.0**	**+2.2**		
WHN				S	**S**	**19 15 15.0**	**+9.0**		
WHN				LR	LR				
	comp=Z,4µm,15.9s								
WHN				LR	LR				
	comp=Z,3µm,14.0s								
WHN				LR	LR				
	comp=Z,5µm,17.3s								
KGM	**Kluang**	**24.32**	**254**	P	**P**	**19 10 56.0**	**+1.6**		
LEM	**Lembang**	**24.88**	**230**	P	**P**	**19 11 00.2**	**+0.6**		
	comp=Z,86nm,1.0s,baz=310,slow=21,SNR=4.7								
SLVN	**Son La**	**24.89**	**301**	P	**P**	**19 10 59.4**	**-0.1**		
KNRA	**Kununurra**	**25.00**	**175**	P	**P**	**19 10 59.5**	**-0.8**		
	baz=25,SNR=23								
KNRA	**Kununurra**	**25.00**	**175**	P	**P**	**19 10 59.5**	**-0.8**		
CISI	**Cisompet, Garu**	**25.21**	**229**	P	**P**	**19 11 00.5**	**-1.9**		
GYA	**Guiyang**	**25.42**	**314**	*e*P	**P**	**19 11 06.5**	**+2.2**		
GYA				pmax	pmax				
	comp=Z,10.0nm,0.5s								
KULM	**Kulim**	**26.10**	**263**	P	**P**	**19 11 10.4**	**-0.1**		
KULM				IAmb	IAmb	19 11 24.5			
	comp=Z,24nm,0.9s								
KULM	**Kulim**	**26.10**	**263**	P	**P**	**19 11 14.0**	**+3.6**		
ENH	**Enshi**	**26.23**	**325**	P	**P**	**19 11 10.5**	**-1.0**		
JHJ	**Hachijo jima 2**	**26.54**	**25**	P	**P**	**19 11 14.6**	**+0.4**		
	comp=Z,36nm,0.7s,baz=233,slow=23,SNR=4.0								
JHJ				LR	LR	19 19 49.4			
	comp=Z,2µm,21.6s,baz=222,slow=32								
JHJ2	**Mitsune**	**26.55**	**25**	P	**P**	**19 11 13.5**	**-0.8**		
FITZ	**Fitzroy Crossi**	**27.34**	**182**	P	**P**	**19 11 20.8**	**-0.7**		
	baz=27,SNR=15								
FITZ	**Fitzroy Crossi**	**27.34**	**182**	P	**P**	**19 11 20.6**	**-0.9**		
	comp=Z,69nm,0.9s,baz=12,slow=9.1,SNR=15								
FITZ				LR	LR	19 24 13.4			
	comp=Z,382nm,20.1s,baz=63,slow=41								
FITZ	**Fitzroy Crossi**	**27.34**	**182**	P	**P**	**19 11 20.5**	**-0.9**		
FITZ				IAmb	IAmb	19 11 25.2			
	comp=Z,58nm,0.8s								
INU	**Inuyama**	**27.51**	**19**	P	**P**	**19 11 23.4**	**+0.5**		
KMI	**Kunming**	**27.59**	**308**	P	**P**	**19 11 29.5**	**+5.4**		
KMI				pmax	pmax				
	comp=Z,16nm,0.5s								
KMI				pmax	pmax				
	comp=Z,350nm,11.2s								
KMI				LR	LR				
	comp=Z,1µm,13.7s								
KMI				LR	LR				
	comp=Z,950nm,16.6s								
KMI				LR	LR				
	comp=Z,2µm,16.9s								
PMG	**Port Moresby**	**27.68**	**132**	P	**P**	**19 11 23.9**	**-0.8**		
	comp=Z,15nm,0.6s,baz=5.6,slow=6.4,SNR=7.3								
PMG	**Port Moresby**	**27.68**	**132**	P	**P**	**19 11 23.8**	**-0.8**		
PMG				pmax	pmax				
	comp=Z,30nm,1.0s								
PMG	**Port Moresby**	**27.68**	**132**	P	**P**	**19 11 23.8**	**-0.8**		
PMG				IAmb	IAmb	19 12 10.4			
	comp=Z,30nm,1.0s								
KSRS	**Korea Array**	**27.96**	**2**	P	**P**	**19 11 27.9**	**+1.1**		
	comp=Z,12nm,0.9s,baz=185,slow=9.6,SNR=14								
KSRS				LR	LR	19 24 45.6			
	comp=Z,2µm,18.0s,baz=178,slow=41								
KSRS	**Korea Array**	**27.96**	**2**	P	**P**	**19 11 28.0**	**+1.1**		
KS19	**Wonju Array Si**	**28.00**	**2**	P	**P**	**19 11 27.9**	**+0.7**		
KS19				IAmb	IAmb	19 11 44.0			
	comp=Z,20nm,0.9s								
TIA	**Tai'an**	**28.06**	**343**	P	**P**	**19 11 28.5**	**+0.6**		
TIA				pmax	pmax				
	comp=Z,18nm,0.8s								
PSI	**Prapat**	**28.32**	**258**	P	**P**	**19 11 29.9**	**-0.6**		
	comp=Z,52nm,1.1s,baz=1.1,slow=1.4,SNR=12								
PSI				LR	LR	19 24 32.7			
	comp=Z,2µm,20.1s,baz=88,slow=40								
PSI	**Prapat**	**28.32**	**258**	P	**P**	**19 11 29.4**	**-1.1**		
PSI				pmax	pmax				
	comp=Z,129nm,1.4s								
CM31	**Chiang Mai Arr**	**28.32**	**292**	P	**P**	**19 11 30.4**	**0.0**		
CM31				IAmb	IAmb	19 12 01.9			
	comp=Z,28nm,1.4s								
CMAR	**Chiang Mai Arr**	**28.32**	**292**	P	**P**	**19 11 29.8**	**-0.6**		
	comp=Z,2.9nm,0.8s,baz=99,slow=5.2,SNR=6.1								
CMAR				PcP	**PcP**	**19 14 43.6**	**+0.5**		
	comp=Z,1.1nm,0.8s,baz=130,slow=0.8,SNR=2.8								
CMAR				LR	LR	19 23 20.9			
	comp=Z,2µm,18.1s,baz=165,slow=38								
RPSI	**Rantau Prapat**	**28.34**	**258**	P	**P**	**19 11 29.4**	**-1.2**		
CHTO	**Chiang Mai**	**28.41**	**292**	P	**P**	**19 11 31.2**	**0.0**		
CHTO				pmax	pmax				
	comp=Z,9.0nm,1.0s								
CHTO	**Chiang Mai**	**28.41**	**292**	P	**P**	**19 11 31.2**	**0.0**		
COEN	**Coen**	**28.42**	**145**	P	**P**	**19 11 31.6**	**+0.4**		
	baz=28,SNR=5.5								
COEN	**Coen**	**28.42**	**145**	P	**P**	**19 11 31.2**	**0.0**		
COEN				IAmb	IAmb	19 12 01.0			
	comp=Z,26nm,0.8s								
TSI	**Tuntungan**	**28.50**	**260**	P	P	19 11 37.6	+5.6		
	comp=Z,67nm,1.4s								
KRVT	**Keravat (AS076**	**28.73**	**117**	LR	LR	19 22 40.2			
	comp=Z,698nm,19.4s,baz=292,slow=36								
MJAR	**Matsushiro Arr**	**28.99**	**19**	P	**P**	**19 11 35.4**	**-0.8**		
	comp=Z,7.5nm,0.9s,baz=194,slow=9.0,SNR=8.5								
MJAR				PcP	**PcP**	**19 14 44.6**	**+0.1**		
	comp=Z,1.4nm,0.6s,baz=204,slow=3.7,SNR=4.8								
MJAR				LR	LR	19 23 21.7			
	comp=Z,860nm,18.5s,baz=200,slow=37								
MAJO	**Matsushiro**	**28.99**	**19**	P	**P**	**19 11 35.4**	**-0.7**		
MAJO				pmax	pmax				
	comp=Z,10.0nm,1.0s								
MAJO	**Matsushiro**	**28.99**	**19**	P	**P**	**19 11 35.4**	**-0.7**		
MAT	**Matsushiro**	**28.99**	**19**	P	**P**	**19 11 36.0**	**-0.1**		
MAT				S	**S**	**19 16 26.0**	**+0.3**		
MJB9	**Matsu-Tunnel**	**28.99**	**19**	P	**P**	**19 11 35.9**	**-0.2**		
KCSI	**Kotacane, Aceh**	**29.26**	**260**	P	**P**	**19 11 40.6**	**+1.8**		
	comp=Z,52nm,0.7s								
XAN	**Xi'an**	**29.44**	**329**	P	**P**	**19 11 40.0**	**-0.2**		
XAN				pmax	pmax				
	comp=Z,19nm,0.8s								
XAN				LR	LR				
	comp=Z,1µm,16.3s								
XAN				LR	LR				
	comp=Z,1µm,14.9s								
XAN				LR	LR				
	comp=Z,1µm,15.2s								
XAN	**Xi'an**	**29.44**	**329**	P	**P**	**19 11 39.2**	**-1.0**		
XAN				pmax	pmax				
	comp=Z,13nm,0.7s								
XAN	**Xi'an**	**29.44**	**329**	P	**P**	**19 11 39.2**	**-1.0**		
SISI	**Saibi**	**29.44**	**250**	P	**P**	**19 11 43.4**	**+3.0**		
	comp=Z,35nm,1.2s								
WB0	**Warramunga Arr**	**29.97**	**165**	P	**P**	**19 11 43.0**	**-1.9**		
WB0				IAmb	IAmb	19 12 44.1			
	comp=Z,32nm,0.8s								
GSI	**Gunungsitoli**	**30.01**	**256**	P	**P**	**19 11 44.1**	**-1.3**		
GSI				IAmb	IAmb	19 11 46.8			
	comp=Z,65nm,1.0s								
WRAB	**Tennant Creek**	**30.12**	**165**	P	**P**	**19 11 45.3**	**-0.9**		
WRAB				pmax	pmax				
	comp=Z,33nm,1.1s								
WRAB	**Tennant Creek**	**30.12**	**165**	P	**P**	**19 11 45.3**	**-0.9**		
WRAB				IAmb	IAmb	19 12 49.0			
	comp=Z,33nm,1.1s								
WRA	**Warramunga Arr**	**30.12**	**165**	P	**P**	**19 11 44.9**	**-1.5**		
	comp=Z,7.0nm,0.6s,baz=346,slow=9.1,SNR=5.4								
WRA				LR	LR	19 27 19.4			
	comp=Z,416nm,18.3s,baz=10.0,slow=43								
WB2	**Warramunga Arr**	**30.13**	**165**	P	**P**	**19 11 45.1**	**-1.2**		
WB2				IAmb	IAmb	19 12 14.6			
	comp=Z,21nm,0.7s								
WR0	**Warramunga Arr**	**30.19**	**165**	P	**P**	**19 11 45.3**	**-1.6**		
WR0				IAmb	IAmb	19 12 39.0			
	comp=Z,17nm,0.8s								
PSA00	**Pilbara Seismi**	**31.49**	**192**	P	**P**	**19 11 57.5**	**-0.9**		
BJT	**Baijiatuan**	**31.89**	**345**	P	**P**	**19 12 01.6**	**-0.1**		
BJT				pmax	pmax				
	comp=Z,19nm,0.9s								
BJT	**Baijiatuan**	**31.89**	**345**	P	**P**	**19 12 01.6**	**-0.1**		
BJT				IAmb	IAmb	19 12 16.8			
	comp=Z,19nm,0.9s								
BJI	**Beijing**	**31.91**	**345**	P	**P**	**19 12 03.3**	**+1.5**		
BJI				S	**S**	**19 17 13.3**	**+2.0**		
BJI				pmax	pmax				
	comp=Z,14nm,1.0s								
BJI				LR	LR				
	comp=Z,730nm,16.5s								
BJI				LR	LR				
	comp=Z,780nm,16.5s								
BJI				LR	LR				
	comp=Z,580nm,26.5s								
QIS	**Mount Isa**	**32.38**	**157**	P	**P**	**19 12 05.2**	**-1.1**		
	baz=32,SNR=18								
MTSU	**Mount Surprise**	**32.45**	**147**	P	**P**	**19 12 06.6**	**-0.3**		
	baz=33,SNR=11								
AS31	**Alice Springs**	**33.62**	**168**	P	**P**	**19 12 15.8**	**-1.2**		
ASAR	**Alice Springs**	**33.62**	**168**	P	**P**	**19 12 16.0**	**-1.0**		
	comp=Z,4.5nm,0.5s,baz=17,slow=11,SNR=13								
ASAR				PcP	**PcP**	**19 14 56.5**	**-0.6**		
	comp=Z,2.6nm,0.6s,baz=351,slow=2.9,SNR=2.8								
ASAR				LR	LR	19 29 53.5			
	comp=Z,463nm,18.7s,baz=337,slow=43								
LZH	**Lanzhou**	**33.70**	**326**	*e*P	**P**	**19 12 19.3**	**+1.5**		
LZH				pP	pP	19 12 24.5	+0.3		
LZH				sP	sP	19 12 27.3	+1.0		
LZH				PP	**PP**	**19 13 34.0**	**-0.3**		
LZH				pmax	pmax				
	comp=Z,10.0nm,1.1s								
LZH				pmax	pmax				
	comp=Z,92nm,4.3s								
LZH				LR	LR				
	comp=Z,2µm,16.3s								
LZH				LR	LR				
	comp=Z,1µm,15.2s								
LZH				LR	LR				
	comp=Z,1µm,17.3s								
VLA	**Vladivostok**	**33.90**	**7**	*i* P	**P**	**19 12 21.9**	**+2.7**		
VLA				pmax	pmax				
	comp=Z,14nm,1.0s								
HHC	**Hu-ho-hao-te**	**34.06**	**339**	*e*P	**P**	**19 12 21.8**	**+1.0**		
HHC				sP	pwP	19 12 31.8	-3.1		
HHC				S	**S**	**19 17 48.8**	**+3.8**		
HHC				SS	**SS**	**19 19 59.5**	**-13**		
HHC				ScS	**ScS**	**19 22 44.3**	**+0.7**		
HHC				pmax	pmax				
	comp=Z,9.0nm,0.9s								
HHC				pmax	pmax				
	comp=Z,140nm,6.9s								
HHC				LR	LR				
	comp=Z,550nm,16.7s								
HHC				LR	LR				
	comp=Z,830nm,15.7s								
HHC				LR	LR				
	comp=Z,750nm,15.1s								
GIRL	**Giralia**	**34.09**	**201**	P	**P**	**19 12 21.4**	**+0.4**		
	baz=34,SNR=4.8								
WRKA	**Warakurna**	**34.26**	**177**	P	**P**	**19 12 21.8**	**-0.8**		
	baz=34,SNR=12								
CN2	**Changchun**	**34.29**	**358**	*e*P	**P**	**19 12 24.5**	**+1.9**		
CN2				pmax	pmax				
	comp=Z,10.0nm,0.6s								
USA0B	**Ussuriysk Arra**	**34.98**	**7**	P	**P**	**19 12 29.0**	**+0.4**		
USA0B				pmax	pmax				
	comp=Z,22nm,0.9s								
USA0B	**Ussuriysk Arra**	**34.98**	**7**	P	**P**	**19 12 28.9**	**+0.4**		
USA0B				IAmb	IAmb	19 12 32.5			
	comp=Z,22nm,0.8s								
USRK	**Ussuriysk Ar.**	**34.98**	**7**	P	**P**	**19 12 28.8**	**+0.2**		
	comp=Z,26nm,0.9s,baz=188,slow=6.7,SNR=14								
USRK				LR	LR	19 25 15.7			
	comp=Z,791nm,21.8s,baz=169,slow=34								
CTA	**Charters Tower**	**35.09**	**147**	P	**P**	**19 12 29.9**	**+0.2**		
	comp=Z,18nm,0.6s,baz=321,slow=10,SNR=21								
CTA	**Charters Tower**	**35.09**	**147**	P	**P**	**19 12 30.0**	**+0.2**		
CTAO	**Charters Tower**	**35.09**	**147**	P	**P**	**19 12 30.1**	**+0.3**		
CTAO				pmax	pmax				
	comp=Z,22nm,0.7s								
CTAO	**Charters Tower**	**35.09**	**147**	P	**P**	**19 12 30.1**	**+0.3**		
CTAO				IAmb	IAmb	19 12 31.9			
	comp=Z,22nm,0.7s								
MDJ	**Mudanjiang**	**35.18**	**4**	P	**P**	**19 12 31.2**	**+0.9**		
MDJ				IAmb	IAmb	19 12 45.6			
	comp=Z,35nm,1.0s								
MEEK	**Meekatharra**	**36.66**	**192**	P	**P**	**19 12 42.2**	**-1.0**		
	baz=37,SNR=19								
SHL	**Shillong**	**36.70**	**300**	P	**P**	**19 12 42.2**	**-1.6**		
SHL				pmax	pmax				
	comp=Z,52nm,1.0s								
SHL	**Shillong**	**36.70**	**300**	P	**P**	**19 12 42.2**	**-1.6**		
SHL				IAmb	IAmb	19 12 57.8			
	comp=Z,52nm,1.0s								
ASAJ	**Asahikawa**	**37.26**	**19**	P	**P**	**19 12 49.8**	**+1.7**		
	comp=Z,50nm,0.9s,baz=237,slow=8.2,SNR=15								
ASAJ				LR	LR	19 28 50.6			
	comp=Z,2µm,18.7s,baz=206,slow=37								
HNR	**Honiara**	**38.07**	**119**	LR	LR	19 26 39.0			
	comp=Z,405nm,21.2s,baz=287,slow=33								
GTA	**Gaotai**	**38.30**	**326**	*e*P	**P**	**19 12 55.0**	**-2.2**		
GTA				pmax	pmax				
	comp=Z,3.0nm,0.8s								
GTA				LR	LR				
	comp=Z,1µm,16.2s								
GTA				LR	LR				
	comp=Z,2µm,16.5s								
GTA				LR	LR				
	comp=Z,2µm,16.2s								
LSA	**Lhasa**	**38.84**	**306**	P	**P**	**19 13 01.7**	**-0.5**		
LSA				pmax	pmax				
	comp=Z,9.0nm,0.7s								
LSA	**Lhasa**	**38.84**	**306**	P	**P**	**19 13 01.7**	**-0.5**		
MORW	**Morawa**	**39.59**	**195**	P	**P**	**19 13 07.6**	**-0.2**		
	baz=40,SNR=19								
MORW	**Morawa**	**39.59**	**195**	P	**P**	**19 13 07.0**	**-0.8**		
MORW				IAmb	IAmb	19 13 09.0			
	comp=Z,55nm,1.0s								
H11S3	**WAKE ISLAND Hy**	**39.82**	**72**	T	T	19 56 18.1			
	baz=262,slow=75,SNR=51								
H11S1	**WAKE ISLAND Hy**	**39.84**	**72**	T	T	19 56 13.1			
	baz=262,slow=75,SNR=46								
H11S2	**WAKE ISLAND Hy**	**39.84**	**72**	T	T	19 56 12.6			
	baz=262,slow=75,SNR=71								
YSS	**Yuzh-Sakhalins**	**39.86**	**17**	*e*P	**P**	**19 13 11.4**	**+1.5**		
YSS				MLR	MLR				
	comp=Z,1µm,12.0s								
KLR	**Kul'dur**	**39.93**	**5**	P	**P**	**19 13 11.4**	**+1.0**		
	comp=Z,7.2nm,0.6s,baz=173,slow=5.3,SNR=14								
KLR				LR	LR	19 31 19.6			
	comp=Z,712nm,18.1s,baz=196,slow=39								
KLR	**Kul'dur**	**39.93**	**5**	*i* P	**P**	**19 13 11.9**	**+1.5**		
KLR				pmax	pmax				
	comp=Z,8.0nm,0.6s								
FORT	**Forrest**	**39.97**	**178**	P	**P**	**19 13 10.8**	**-0.2**		
	baz=40,SNR=26								
FORT	**Forrest**	**39.97**	**178**	P	**P**	**19 13 10.2**	**-0.7**		
HIA	**Hailar**	**40.16**	**353**	P	**P**	**19 13 12.6**	**+0.2**		
HIA				pmax	pmax				
	comp=Z,13nm,0.5s								
HIA	**Hailar**	**40.16**	**353**	P	**P**	**19 13 12.6**	**+0.2**		
HIA				IAmb	IAmb	19 13 45.5			
	comp=Z,13nm,0.5s								
H11N1	**WAKE ISLAND Hy**	**40.19**	**71**	T	T	19 56 46.7			
	baz=265,slow=74,SNR=67								
H11N2	**WAKE ISLAND Hy**	**40.19**	**71**	T	T	19 56 46.8			
	baz=265,slow=74,SNR=40								
H11N3	**WAKE ISLAND Hy**	**40.20**	**71**	T	T	19 56 54.0			
	baz=265,slow=74,SNR=62								
TAPN	**Taplejung**	**40.81**	**301**	*e*P	**P**	**19 13 17.7**	**-0.7**		
	comp=Z,16nm,0.4s								
BLDU	**Ballidu**	**40.91**	**193**	P	**P**	**19 13 18.0**	**-0.7**		
	baz=41,SNR=14								
ODAN	**Odare**	**40.93**	**300**	*e*P	**P**	**19 13 19.4**	**0.0**		
	comp=Z,74nm,0.7s								
RAMN	**Ramite**	**41.63**	**300**	*e*P	**P**	**19 13 25.4**	**+0.3**		
	comp=Z,34nm,0.6s								
KLBR	**Kellerberrin**	**41.64**	**191**	P	**P**	**19 13 23.5**	**-1.2**		
	baz=42,SNR=21								
ULN	**Ulaanbaatar**	**41.76**	**340**	P	**P**	**19 13 25.2**	**-0.6**		
ULN				pmax	pmax				
	comp=Z,16nm,1.0s								
ULN	**Ulaanbaatar**	**41.76**	**340**	P	**P**	**19 13 25.2**	**-0.6**		
EIDS	**Eidsvold**	**41.96**	**146**	P	**P**	**19 13 28.3**	**+0.8**		
	baz=42,SNR=4.6								
EIDS	**Eidsvold**	**41.96**	**146**	P	**P**	**19 13 26.8**	**-0.7**		
SONM	**Songino Array**	**41.96**	**340**	P	**P**	**19 13 27.7**	**+0.3**		
	comp=Z,1.9nm,0.7s,baz=152,slow=8.1,SNR=7.4								
SONM				ScP	**ScP**	**19 12 12.6**	**+1.4**		
	comp=Z,1.6nm,0.9s,baz=158,slow=5.0,SNR=4.5								
SONM				LR	LR	19 33 40.5			
	comp=Z,1µm,18.9s,baz=158,slow=40								
GRNR	**Gornyy**	**42.03**	**9**	*i* P	**P**	**19 13 29.9**	**+2.2**		
GRNR				pmax	pmax				
	comp=Z,10.0nm,1.1s								
GRNR				MLR	MLR				
	comp=Z,860nm,20.0s								
JIRN	**Jiri**	**42.19**	**301**	*e*P	**P**	**19 13 29.9**	**+0.1**		
	comp=Z,90nm,0.6s								
MUN	**Mundaring**	**42.34**	**193**	P	**P**	**19 13 30.1**	**-0.3**		
	baz=42,SNR=21								
GUN	**Gumba**	**42.53**	**301**	*e*P	**P**	**19 13 32.7**	**+0.1**		
	comp=Z,67nm,0.6s								
PKI	**Pulchoki**	**42.83**	**301**	*e*P	**P**	**19 13 34.4**	**-0.6**		
	comp=Z,29nm,0.8s								
PKIN	**Phulchoki**	**42.84**	**301**	*e*P	**P**	**19 13 34.7**	**-0.3**		
	comp=Z,26nm,0.5s								
BBOO	**Buckleboo**	**42.92**	**168**	P	**P**	**19 13 34.3**	**-0.8**		
	baz=43,SNR=12								
BBOO	**Buckleboo**	**42.92**	**168**	P

comp=Z,129nm,18.8s,baz=326,slow=37
PEA0B Petropavlovsk- 50.28 24 P **P** **19 14 31.9 -0.7**
PEA0B pmax pmax
comp=Z,32nm,1.1s
PEA0B Petropavlovsk- 50.28 24 P **P** **19 14 31.9 -0.7**
PEA0B lAmb lAmb 19 14 45.8
comp=Z,32nm,1.1s
PETK Petropavlovsk- 50.28 24 P **P** **19 14 33.2 +0.6**
comp=Z,14nm,0.7s,baz=194,slow=5.9,SNR=16
PET Petropavlovsk 50.60 24 *e*P **P** **19 14 37.0 +2.0**
PET pmax pmax
comp=Z,20nm,1.1s
PET Petropavlovsk 50.60 24 P **P** **19 14 34.9 -0.1**
PET lAmb lAmb 19 14 59.1
comp=Z,67nm,1.7s
YAK Yakutsk 52.58 2 P **P** **19 14 49.5 -0.1**
comp=Z,4.9nm,0.3s,baz=348,slow=3.0,SNR=9.4
YAK Yakutsk 52.58 2 *e*P **P** **19 14 50.0 +0.4**
YAK *e**PP **sP** **19 14 58.2 -0.4**
YAK *e* 19 15 59.5
YAK *e* 19 16 44.2
YAK *e*S **S** **19 22 12.9 -2.0**
YAK *e**SS sS 19 22 32.2 +7.0
YAK *e* 19 24 35.8
YAK *e*SS **SS** **19 25 51.5 -1.8**
YAK pmax pmax
comp=Z,42nm,1.0s
YAK pmax pmax
comp=N,22nm,1.3s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=Z,92nm,4.0s
YAK pmax pmax
comp=N,79nm,4.0s
YAK pmax pmax
comp=E,85nm,4.6s
YAK smax smax
comp=E,111nm,2.8s
YAK smax smax
comp=N,49nm,2.5s
YAK MLR MLR
comp=Z,579nm,21.0s
YAK MLR MLR
comp=N,503nm,16.0s
YAK MLR MLR
comp=E,225nm,17.0s
YAK Yakutsk 52.58 2 P **P** **19 14 49.6 -0.1**
YAK lAmb lAmb 19 14 52.9
comp=Z,29nm,0.8s
MK31 Makanchi Array 52.94 323 P **P** **19 14 51.5 -1.2**
MK31 pmax pmax
comp=Z,9.0nm,0.8s
MK31 Makanchi Array 52.94 323 P **P** **19 14 51.5 -1.2**
MKAR Makanchi Array 52.94 323 P **P** **19 14 52.1 -0.5**
comp=Z,6.4nm,0.5s,baz=118,slow=5.7,SNR=19
MAKZ Makanchi 53.13 323 P **P** **19 14 52.6 -1.5**
MAKZ pmax pmax
comp=Z,14nm,1.0s
MAKZ Makanchi 53.13 323 P **P** **19 14 52.6 -1.5**
MAKZ lAmb lAmb 19 15 27.7
comp=Z,14nm,0.9s
MA2 Magadan 53.27 15 *i*P **P** **19 14 56.2 +1.4**
MA2 pmax pmax
comp=Z,11nm,0.6s
MA2 Magadan 53.27 15 P **P** **19 14 55.0 +0.2**
MA2 lAmb lAmb 19 15 08.6
comp=Z,18nm,0.7s
PRZ Przheval'sk 53.47 317 P **P** **19 14 56.3 -0.5**
PRZ pmax pmax
comp=Z,11nm,0.7s
PRZ Przheval'sk 53.47 317 P **P** **19 14 56.3 -0.5**
PRZ lAmb lAmb 19 15 08.8
comp=Z,11nm,0.7s
TARG Taragay, Kyrgy 53.58 316 P **P** **19 14 57.8 -0.1**
KSH Kashi 54.09 312 P **P** **19 15 02.8 +1.5**
KSH pmax pmax
comp=Z,11nm,0.6s
KSH pmax pmax
comp=Z,310nm,5.8s
KDJ Kajisay 54.16 316 P **P** **19 15 01.5 -0.4**
KDJ pmax pmax
comp=Z,9.0nm,0.8s
KDJ Kajisay 54.16 316 P **P** **19 15 01.5 -0.4**
KDJ lAmb lAmb 19 15 40.0
comp=Z,9.1nm,0.8s
NIL Nilore 54.53 305 P **P** **19 15 03.7 -0.8**
NIL pmax pmax
comp=Z,38nm,0.8s
NIL Nilore 54.53 305 P **P** **19 15 03.7 -0.8**
ZAA0 Zalesovo Array 55.56 331 P **P** **19 15 10.0 -1.6**
ZALV Zalesovo Beam 55.56 331 P **P** **19 15 09.9 -1.7**
comp=Z,2.3nm,0.4s,baz=130,slow=7.0,SNR=12
ZALV LR LR 19 39 58.5
comp=Z,506nm,20.1s,baz=122,slow=37
AAK Ala-Archa 56.20 315 P **P** **19 15 16.2 -0.4**
comp=Z,2.7nm,0.6s,baz=52,slow=4.7,SNR=4.2
AAK Ala-Archa 56.20 315 P **P** **19 15 16.1 -0.4**
AAK pmax pmax
comp=Z,42nm,2.0s
AAK Ala-Archa 56.20 315 P **P** **19 15 16.1 -0.5**
AAK lAmb lAmb 19 16 00.1
comp=Z,42nm,2.0s
SEY Seymchan 56.57 14 *i*P **P** **19 15 20.3 +1.7**
KURK Kurchatov 56.99 326 P **P** **19 15 21.2 -0.6**
KURK pmax pmax
comp=Z,21nm,1.0s
KURK Kurchatov 56.99 326 P **P** **19 15 21.2 -0.6**
KURK lAmb lAmb 19 15 56.6
comp=Z,21nm,0.9s
KURBB Kurchatov Arra 57.00 326 P **P** **19 15 21.4 -0.5**
comp=Z,8.1nm,0.6s,baz=125,slow=7.2,SNR=19
MSVF Nonsavu 57.48 118 P **P** **19 15 26.3 +0.4**
MSVF pmax pmax
comp=Z,214nm,0.2s
MSVF Nonsavu 57.48 118 P **P** **19 15 26.3 +0.4**
KBL Kabul 58.13 305 P **P** **19 15 29.1 -1.3**
KBL pmax pmax
comp=Z,12nm,1.0s
KBL Kabul 58.13 305 P **P** **19 15 29.1 -1.3**
KBL lAmb lAmb 19 15 50.4
comp=Z,12nm,0.9s
GAR Garm 58.13 310 P **P** **19 15 28.7 -1.6**
CHGR Chuyangaron 58.92 310 P **P** **19 15 34.6 -1.1**
KK31 Karatay Array 59.12 315 P **P** **19 15 35.6 -1.4**
KK31 pmax pmax
comp=Z,8.0nm,0.7s
KK31 Karatay Array 59.12 315 P **P** **19 15 35.6 -1.4**
KK31 lAmb lAmb 19 15 50.7
comp=Z,7.9nm,0.7s
TIXI Tiksi 62.21 1 *i*P **P** **19 15 57.1 -0.3**
TIXI pmax pmax
comp=Z,28nm,1.0s
TIXI Tiksi 62.21 1 P **P** **19 15 57.3 -0.1**
TIXI lAmb lAmb 19 16 00.3
comp=Z,26nm,1.0s
BRVK Borovoye 62.66 326 *i*P **P** **19 15 59.7 -1.1**
BRVK pmax pmax
comp=Z,7.0nm,0.7s
BRVK Borovoye 62.66 326 P **P** **19 16 00.2 -0.6**
BILL Bilibino 64.14 15 *i*P **P** **19 16 10.7 +0.4**
BILL pmax pmax
comp=Z,11nm,0.7s
BILL Bilibino 64.14 15 P **P** **19 16 10.9 +0.6**
BILL lAmb lAmb 19 16 20.2
comp=Z,24nm,1.1s
NRIK Noril'sk 64.95 346 P **P** **19 16 15.8 +0.2**
comp=Z,11nm,0.5s,baz=116,slow=8.1,SNR=16
RPZ Rata Peaks 66.46 146 P **P** **19 16 26.7 +1.0**
comp=Z,21nm,0.5s,baz=295,slow=3.4,SNR=13
RPZ Rata Peaks 66.46 146 P **P** **19 16 26.3 +0.6**
GEYT Alibeck 67.36 307 P **P** **19 16 31.4 -0.3**
comp=Z,3.4nm,0.7s,baz=197,slow=4.6,SNR=2.1
GEYT LR LR 19 49 49.3
comp=Z,571nm,18.7s,baz=60,slow=39
GYA0B ALIBECK ARRAY 67.36 307 P **P** **19 16 31.3 -0.4**
GYA0B lAmb lAmb 19 17 09.3
comp=Z,10nm,0.9s
UOSS Minazif 68.41 293 P **P** **19 16 36.3 -2.2**
UOSS lAmb lAmb 19 16 45.4
comp=Z,22nm,1.5s
SVE Sverdlovsk 69.14 327↑ *e*P **P** **19 16 41.5 -0.9**
SVE pmax pmax
comp=Z,21nm,0.9s
ARU Arti 70.15 327 *c i*P **P** **19 16 46.9 -1.8**
ARU 19 17 09.2
ARU 19 19 21.6
ARU S **S** **19 25 59.2 +0.9**
ARU SS **SS** **19 30 27.9 -0.4**
ARU pmax pmax
comp=Z,9.0nm,0.5s
ARU Arti 70.15 327 P **P** **19 16 47.2 -1.4**
SOCY Socotra 71.24 280 P **P** **19 16 54.3 -1.9**
SDPT Sand Point 72.60 35 P **P** **19 17 04.1 +0.6**
CHGN Chignik 73.88 34 P **P** **19 17 11.8 +0.9**
AKT Akhty 75.55 310 *e*P **P** **19 17 19.5 -1.6**
AKT *e* 19 17 32.3
AKT pmax pmax
comp=Z,10.0nm,1.1s
TTA Tatalina 75.93 27 P **P** **19 17 24.3 +1.4**
TTA pmax pmax
comp=Z,24nm,1.5s
TTA Tatalina 75.93 27 P **P** **19 17 24.2 +1.4**
TTA lAmb lAmb 19 17 37.3
comp=Z,24nm,1.5s
CASY Casey 76.40 187 P **P** **19 17 24.2 -1.0**
CASY lAmb lAmb 19 17 37.0
comp=Z,21nm,0.8s
TBLG Delisi 77.79 311 P **P** **19 17 33.0 -0.7**
TBLG pmax pmax
comp=Z,14nm,0.6s
TBLG Delisi 77.79 311 P **P** **19 17 33.0 -0.7**
TBLG lAmb lAmb 19 17 48.5
comp=Z,14nm,0.6s
RAYN Ar Rayn 78.24 292 P **P** **19 17 34.8 -1.8**
RAYN pmax pmax
comp=Z,14nm,0.8s
RAYN Ar Rayn 78.24 292 P **P** **19 17 34.8 -1.8**
RAYN lAmb lAmb 19 17 52.6
comp=Z,14nm,0.8s
BPAW Bear Paw Mtn. 78.27 26 lAmb lAmb 19 17 50.0
comp=Z,22nm,1.0s
ZEI Tsey 78.37 312 *e*P **P** **19 17 33.8 -3.3**
ZEI pmax pmax
comp=Z,11nm,0.4s
MLY Manley 78.42 25 P **P** **19 17 37.4 +0.6**
MLY lAmb lAmb 19 17 55.8
comp=Z,14nm,1.0s
TOLK Toolik Lake Re 79.04 22 lAmb lAmb 19 17 55.9
comp=Z,23nm,1.1s
MCK McKinley 79.17 27 P **P** **19 17 41.4 +0.6**
MCK pmax pmax
comp=Z,62nm,1.6s
MCK McKinley 79.17 27 P **P** **19 17 41.4 +0.6**
MCK lAmb lAmb 19 18 24.1
comp=Z,62nm,1.6s
KIV Kislovodsk 79.21 313 *de*P **P** **19 17 41.3 -0.3**
KIV *e* 19 17 50.6
KIV *e* 19 20 44.6
KIV *e*S S 19 27 29.6 -11
KIV pmax pmax
comp=Z,7.0nm,1.1s
KIV MLR MLR
comp=Z,331nm,19.0s
KNK Knik Glacier 79.37 29 P **P** **19 17 42.5 +0.4**
KNK lAmb lAmb 19 17 49.5
comp=Z,43nm,1.2s
WRH Wood River Hil 79.54 26 P **P** **19 17 43.6 +0.8**
VRH Novokhopyorsk 79.57 320 *e*P **P** **19 17 42.6 -0.6**
VRH pmax pmax
comp=Z,10.0nm,1.4s
CCB Clear Creek Bu 79.67 26 P **P** **19 17 43.5 0.0**
CCB lAmb lAmb 19 17 58.8
comp=Z,24nm,1.4s
HDA Harding Lake 80.04 26 P **P** **19 17 45.8 +0.3**
IL31 80.06 26 P **P** **19 17 45.9 +0.3**
ILAR Eielson Array 80.06 26 P **P** **19 17 45.3 -0.4**
comp=Z,3.2nm,0.7s,baz=243,slow=6.1,SNR=13
KLMR Klimovskoe 80.46 330 *e*P **P** **19 17 45.5 -2.4**
KLMR pmax pmax
comp=Z,17nm,0.6s
KLMR Klimovskoe 80.46 330 *e*P **P** **19 17 45.5 -2.4**
KLMR AMP 19 18 00.0
comp=Z,17nm,0.6s
RIDG Independent Ri 80.98 27 lAmb lAmb 19 18 18.3
comp=Z,21nm,0.6s
TMCR Tamitsa 81.01 334 *e*P **P** **19 17 49.5 -1.2**
TMCR pmax pmax
comp=Z,8.0nm,0.5s
LPSR Galich'ya Gora 81.23 322 *e*P **P** **19 17 50.9 -1.2**
LPSR pmax pmax
comp=Z,20nm,0.7s
SCRK Sand Creek 81.35 26 P **P** **19 17 53.9 +1.1**
SCRK lAmb lAmb 19 18 06.6
comp=Z,10nm,1.0s
OBN Obninsk 82.41 325↓ *e*P **P** **19 17 58.6 +0.3**
OBN *e* 19 21 07.9
OBN *e*S S 19 28 02.1 -11
OBN pmax pmax
comp=Z,7.0nm,1.0s
OBN MLR MLR
comp=Z,482nm,18.0s
EGAK Eagle 82.51 26 P **P** **19 18 00.1 +1.4**
EGAK lAmb lAmb 19 18 13.9
comp=Z,18nm,1.1s
ABPO Ambohimpanom 83.17 249 P **P** **19 18 01.5 -1.6**
ABPO pmax pmax
comp=Z,10.0nm,1.0s
ABPO Ambohimpanom 83.17 249 P **P** **19 18 01.5 -1.6**
ABPO lAmb lAmb 19 18 43.2
comp=Z,9.7nm,1.0s
DAWY Dawson 83.36 26 P **P** **19 18 03.9 +0.8**
DAWY lAmb lAmb 19 18 17.7
comp=Z,39nm,1.5s
EPYK Eagle Plains 84.12 24 P **P** **19 18 07.5 +0.5**
KEV Kevo 84.57 340 P **P** **19 18 09.2 +0.1**
KEV pmax pmax
comp=Z,104nm,1.9s
KEV Kevo 84.57 340 P **P** **19 18 09.2 +0.1**
HYT Haines Junctio 84.71 29 P **P** **19 18 12.1 +1.9**
HYT lAmb lAmb 19 18 14.7
comp=Z,21nm,0.9s
SPA0 Spitsbergen Ar 84.94 349 P **P** **19 18 10.7 -0.2**
INK Inuvik 84.95 22 P **P** **19 18 11.8 +0.8**
INK pmax pmax
comp=Z,35nm,1.4s
INK Inuvik 84.95 22 P **P** **19 18 11.8 +0.8**
INK lAmb lAmb 19 18 26.7
comp=Z,35nm,1.4s
ARCES ARCESS Array B 85.14 340 P **P** **19 18 11.4 -0.5**
comp=Z,7.7nm,0.7s,baz=82,slow=6.2,SNR=21
ARCES LR LR 19 58 50.8
comp=Z,337nm,20.8s,baz=94,slow=38
ARE0 ARCESS Array S 85.14 340 P **P** **19 18 11.5 -0.5**
BR131 Keskin Array S 86.37 309 P **P** **19 18 18.6 -0.3**
BR131 pmax pmax
comp=Z,4.0nm,1.0s
BR131 Keskin Array S 86.37 309 P **P** **19 18 18.6 -0.3**
BRTR Keskin Array B 86.37 309 P **P** **19 18 17.9 -1.0**
comp=Z,0.5nm,0.5s,baz=132,slow=2.3,SNR=5.5
FIA1 FINESS Array S 86.83 332 P **P** **19 18 19.8 -0.7**
FIA1 lAmb lAmb 19 18 34.9
comp=Z,9.4nm,0.8s
FINES FINESS Array B 86.83 332 P **P** **19 18 19.8 -0.7**
comp=Z,2.3nm,0.4s,baz=79,slow=4.7,SNR=10
PPT2 Papeete2 86.95 108 *e*LR LR 19 45 38.4
comp=Z,717nm,23.5s,baz=282
CSS Mathiatis 87.38 305 P **P** **19 18 22.9 -0.9**
AKASG Malin Array Be 87.47 321 P **P** **19 18 23.6 -0.3**
comp=Z,1.4nm,0.5s,baz=61,slow=4.7,SNR=2.9
AKASG LR LR 19 58 15.2
comp=Z,432nm,20.8s,baz=50,slow=36
AKBB Malin Array Si 87.47 321 P **P** **19 18 23.4 -0.4**
AKBB pmax pmax
comp=Z,30nm,1.9s
AKBB Malin Array Si 87.47 321 P **P** **19 18 23.4 -0.4**
AKBB lAmb lAmb 19 18 58.5
comp=Z,30nm,1.9s
C36M Paulatuk 87.93 20 P **P** **19 18 26.1 +0.5**
TBI Tubuai 88.14 114 *e*LR LR 19 46 09.4
comp=Z,524nm,24.0s,baz=295
MAW Mawson 89.01 200 P **P** **19 18 32.5 +1.8**
comp=Z,1.7nm,0.6s,baz=54,slow=5.0,SNR=5.0
MAW Mawson 89.01 200 P **P** **19 18 31.2 +0.6**
MAW pmax pmax
comp=Z,4.0nm,1.2s
MAW Mawson 89.01 200 P **P** **19 18 31.1 +0.6**
VNDA Vanda 89.02 173 LR LR 19 59 29.9
comp=Z,186nm,18.6s,baz=340,slow=36
KMBO Kilima Mbogo 89.58 269 P **P** **19 18 34.5 -0.5**
comp=Z,1.0nm,0.4s,baz=46,slow=17,SNR=2.5
KMBO LR LR 19 58 56.1
comp=Z,215nm,18.3s,baz=90,slow=36
KMBO Kilima Mbogo 89.58 269 P **P** **19 18 34.4 -0.5**
KMBO pmax pmax
comp=Z,16nm,1.3s
KMBO Kilima Mbogo 89.58 269 P **P** **19 18 34.4 -0.5**
KMBO lAmb lAmb 19 18 49.9
comp=Z,16nm,1.3s
ELL Elmali 89.79 307 P **P** **19 18 34.8 -0.5**
ELL pmax pmax
comp=Z,217nm,1.9s
ELL Elmali 89.79 307 P **P** **19 18 34.8 -0.5**
BUR08 Bucovina Ar. S 90.74 318 P **P** **19 18 39.7 +0.2**
DAG Danmarks Havn 91.66 352 *i*P **P** **19 18 41.0 -2.0**
DAG Danmarks Havn 91.66 352 *i*P **P** **19 18 41.0 -2.0**
RES Resolute Bay 92.28 10 P **P** **19 18 46.9 +1.0**
RES pmax pmax
comp=Z,10.0nm,0.8s
RES Resolute Bay 92.28 10 P **P** **19 18 46.9 +1.0**
RES lAmb lAmb 19 18 48.2
comp=Z,10nm,0.8s
NC405 NORSAR Array S 93.45 334 P **P** **19 18 52.1 +0.5**
NB2 NORSAR Subarra 93.70 334 P **P** **19 18 50.6 -2.2**
comp=Z,2.2nm,0.6s,baz=66,slow=4.6
NOA NORSAR Array B 93.70 334 P **P** **19 18 50.2 -2.5**
comp=Z,0.1nm,0.5s,baz=331,slow=22,SNR=3.3
YKA Yellowknife Ar 94.40 24 P **P** **19 18 56.6 +0.7**
comp=Z,4.3nm,0.7s,baz=297,slow=4.3,SNR=23
TAOE Nuku Hiva Isla 94.55 98 *e*LR LR 19 49 10.6
comp=Z,718nm,24.7s
TXAR Lajitas Array 118.11 50 PKP **PKiKP** **19 24 25.0 +1.0**
comp=Z,0.8nm,0.5s,baz=347,slow=0.8,SNR=14
TORD Torodi Ar. Bea 120.93 291 PKP **PKiKP** **19 24 31.5 +1.8**
comp=Z,3.8nm,0.8s,baz=52,slow=1.8,SNR=8.7
U40A Yellville 121.26 37 **PKiKP** **19 24 29.8 -0.1**
T42A Van Buren 121.82 35 **PKiKP** **19 24 30.9 0.0**
WCI Wyandotte Cave 123.52 31 PKIKP **PKiKP** **19 24 34.8 +0.5**
WCI Wyandotte Cave 123.52 31 **PKiKP** **19 24 34.8 +0.5**
WVT Waverly 124.29 34 PKIKP **PKiKP** **19 24 36.0 +0.2**
WVT Waverly 124.29 34 **PKiKP** **19 24 36.0 +0.2**
PLAL Pickwick Lake 124.99 35 **PKiKP** **19 24 37.4 +0.1**
TKL Tuckaleechee C 126.78 31 PKIKP **PKiKP** **19 24 40.7 -0.1**
TKL Tuckaleechee C 126.78 31 **PKiKP** **19 24 40.7 -0.1**
PLCA Paso Flores 145.26 157 PKPbc **PKPab** **19 25 14.0 -0.1**
comp=Z,8.2nm,0.9s,baz=203,slow=3.1,SNR=9.2
PLCA Paso Flores 145.26 157 PKIKP **PKPdf** **19 25 14.9 +0.5**
PLCA Paso Flores 145.26 157 **PKPdf** **19 25 14.9 +0.5**
LC01 Cunco 146.26 153 **PKPab** **19 25 18.0 +0.1**
SDDR Presa de Saban 146.71 32 **PKPbc** **19 25 19.1 +0.1**
DR12 Loma Pena Alta 147.84 29 **PKPbc** **19 25 22.8 +0.6**
BI02 San Fabin de 148.36 152 **PKiKP** **19 25 23.9 -0.8**
PDPR Patillas Dam, 150.02 25 **PKPbc** **19 25 27.8 +0.1**
MTP Monte Pirata 150.14 24 **PKiKP** **19 25 28.8 0.0**
VA03 San Esteban 151.84 148 **PKiKP** **19 25 33.3 +1.2**
URIC Uribia, Colomb 152.02 42 **PKPbc** **19 25 32.4 0.0**
SDV Santo Domingo 154.98 44 **PKiKP** **19 25 39.4 +0.2**

TAP 31 19:06:47.3, 23.96N × 121.62E, h11 km, ML1.9, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
HWA	**Hwalien**	**0.02**	**319**	*i*P	P	Pg	19 06 49.9	+0.6
	baz=337							
HWA					S	Sg	19 06 51.4	+0.8
	baz=337							
TWD	**Chiawan**	**0.12**	**350**		P	Pb	19 06 51.0	-0.6
	baz=353							
TWD					S	Sg	19 06 53.6	+1.1
	baz=353							
NACB	**Ninganchiao**	**0.21**	**354**		P	Pg	19 06 52.5	+0.7
	baz=353							
NACB					S	Sg	19 06 55.8	+0.9
	baz=353							
ESL	**Shilin**	**0.23**	**229**		P	Pg	19 06 52.7	+0.6
	baz=227							
ESL					S	Sg	19 06 56.4	+1.2
	baz=227							
ETLH	**Xiulin Townshi**	**0.27**	**333**		P	Pb	19 06 53.8	-0.5
	baz=332							
ETLH					S	Sb	19 06 58.1	-0.9
	baz=332							
EGFH	**Guangfu**	**0.34**	**211**		P	Pb	19 06 54.9	-0.5
	baz=211							
EGFH					S	Sb	19 07 00.4	-0.4
	baz=211							
WHF	**Hehuan Shan**	**0.37**	**299**		P	Pb	19 06 55.8	-0.4
	baz=299							
WHF					S	Sb	19 07 01.6	-0.6
	baz=299							
CHGB	**Renai**	**0.42**	**284**		P	Pb	19 06 56.9	0.0
	baz=283							
CHGB					S	Sb	19 07 02.9	-0.4
	baz=283							
ENA	**Nanau**	**0.48**	**13**		P	Pb	19 06 57.5	-0.2
	baz=14							
ENA					S	Sb	19 07 04.6	-0.2
	baz=14							
VWDT	**VWDT**	**0.48**	**245**		P	Pb	19 06 58.4	+0.6
	baz=244							
VWDT					eS	Sb	19 07 05.5	+0.6
	baz=244							
TDCB	**Techi**	**0.51**	**305**		eS	Sb	19 07 05.8	-0.1
	baz=304							
NNSB	**Datong**	**0.51**	**335**		P	Pb	19 06 58.7	+0.3
	baz=335							
NNSB					eS	Sb	19 07 06.8	+0.9
	baz=335							
NNSH	**Datong**	**0.51**	**335**		P	Pb	19 06 59.1	+0.7
	baz=335							
NNSH					eS	Sb	19 07 06.8	+0.9
	baz=335							
NNS	**Nan Shan**	**0.53**	**335**		S	Sb	19 07 06.1	-0.2
	baz=335							
SSLB	**Suanglung**	**0.63**	**254**		eP	Pb	19 07 00.6	+0.2
	baz=254							
SSLB					eS	Sb	19 07 08.7	-0.6
	baz=254							
DPDB	**Guoxing**	**0.64**	**277**		eP	Pb	19 07 00.4	-0.1
	baz=276							
DPDB					eS	Sb	19 07 09.9	+0.4
	baz=276							
YULB	**Yu-li**	**0.64**	**208**		eS	Sb	19 07 09.7	+0.2
	baz=207							
NDT	**Datong Townshi**	**0.65**	**351**		eP	Pb	19 07 01.1	+0.5
	baz=351							
NDT					eS	Sb	19 07 10.3	+0.7
	baz=351							
TWC	**Suao**	**0.68**	**18**		eS	Sb	19 07 10.6	+0.1
	baz=18							
WHP	**Taichung City**	**0.69**	**297**		eS	Sb	19 07 11.9	+0.9
	baz=297							
YHNB	**Yeheng**	**0.74**	**343**		eP	Pb	19 07 02.6	+0.4
	baz=342							
YHNB					eS	Sb	19 07 12.9	+0.5
	baz=342							
NSK	**Sanguang**	**0.75**	**342**		eP	Pn	19 07 03.3	-0.6
	baz=341							
NSK					eS	Sb	19 07 13.0	+0.3
	baz=341							
TWE	**Neicheng**	**0.76**	**3**		eP	Pb	19 07 02.9	+0.4
	baz=4.0							
TWE					eS	Sb	19 07 13.7	+0.8
	baz=4.0							
ILA	**Ilan**	**0.81**	**8**		eS	Sn	19 07 15.5	-1.1
	baz=8.0							
TIPB	**Shuangxi**	**1.02**	**11**		eS	Sb	19 07 20.5	0.0
	baz=10.0							

JMA 31 19:07:22.3, 0.1, 24.90N × 123.33E, h22 km, 5 km, M1.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
YOJ	**Yonaguni jima**	**0.52**	**214**		P	Pb	19 07 32.5	-0.3
YOJ					eS	Sb	19 07 39.5	-0.5
JYNG	**Yonagunijimaku**	**0.57**	**218**		P	Pb	19 07 33.3	-0.3
JYNG					eS	Sb	19 07 40.7	-0.6
IRIF	**Iriomote-Funau**	**0.67**	**147**		P	Pb	19 07 34.8	-0.5
IRIF					eS	Sb	19 07 44.3	+0.1
JKRS	**Kuro-shima**	**0.90**	**137**		P	Pb	19 07 38.9	-0.4
JKRS					S	Sb	19 07 50.6	-0.3
JIJ	**Ishigaki jima**	**0.91**	**126**		P	Pb	19 07 39.0	-0.4
JIJ					S	Sb	19 07 50.8	-0.3
HATJ	**Hateruma jima**	**0.94**	**153**		P	Pb	19 07 39.9	-0.1

HATJ S Sb 19 07 51.5 -0.6
JISG Ishigakijimahi 0.94 109 P Pb 19 07 39.4 -0.6
JISG *e*S Sb 19 07 51.8 -0.3

BJI ***31*** *19:08:57.3±0.0, 19°.66S×177°.09W, h345km, mB5.3/18, mb4.8/44*
MOS ***31*** *19:09:00.5±0.8, 19°.89S×177°.42W, h376km, mb4.9/14, Error ellipse: s-maj=9.8km s-min=7.9km az=21.9*
IDC ***31*** *19:09:01.0±0.7, 19°.89S×177°.39W, h370km±6km, mb4.5/34, mb1 4.6/36, mb1mx4.5/42, mbtmp5.3/36, Error ellipse: s-maj=9.4km s-min=7.4km az=157.0*
NEIC ***31*** *19:09:01.8±1.4, 19°.875S±0°.09×177°.39W±0°.09, h381km±5km, mb5.0/171, Error ellipse: s-maj=13.0km s-min=12.8km az=92.0*
ISC 31 19:09:00.4±0.4, 19°.98S±0°.04×177°.33W±0°.05, h369km±4km, h369km: pP-P, n627, σ1§12/657, mb5.1/173, 49C-24D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**4.92**	**296**	P		**Pn**	**19 10 20.6**	**+0.5**
MSVF	**Nonsavu**	**4.92**	**296**			**Pn**	**19 10 20.6**	**+0.5**
NIUE	**Niue**	**7.04**	**84**			**Pn**	**19 10 41.4**	**-2.3**
AFI	**Afiamalu**	**8.04**	**42**	P		Pn	19 10 49.6	-5.9
AFI	**Afiamalu**	**8.04**	**42**			Pn	19 10 49.6	-6.0
RIZ	**Raoul Island**	**9.24**	**183**	S		**S**	**19 12 48.6**	**-6.5**
RAO	**Raoul Island**	**9.24**	**183**	S		**S**	**19 12 50.3**	**-4.8**
	82nm,0.3s,baz=112,slow=23,SNR=1.9							
GLKZ	**Green Lake**	**9.26**	**183**	P		**Pn**	**19 11 10.7**	**+1.2**
GLKZ				S		S	19 12 35.5	-20
FUNA	**Funafuti**	**11.88**	**343**			**P**	**19 11 39.3**	**-0.7**
DZM	**Mont Dzumac**	**15.29**	**259**	*e*P		**Pn**	**19 12 20.0**	**-0.3**
	1μm,1.1s							
DZM	**Mont Dzumac**	**15.29**	**259**	P		**P**	**19 12 19.2**	**+1.6**
	0.8nm,0.3s,baz=276,slow=10,SNR=7.8							
DZM				S		**S**	**19 15 02.0**	**+1.1**
	baz=194,slow=18,SNR=4.1							
DZM	**Mont Dzumac**	**15.29**	**259**	P		**P**	**19 12 18.7**	**+1.2**
RAR	**Rarotonga**	**16.48**	**97**	P		**P**	**19 12 30.9**	**+0.6**
	1.6nm,0.3s,baz=81,slow=23,SNR=3.5							
RAR	**Rarotonga**	**16.48**	**97**	P		**P**	**19 12 31.2**	**+0.9**
RAR				pmax	pmax			
	comp=Z,85nm,1.1s							
RAR	**Rarotonga**	**16.48**	**97**	P		**P**	**19 12 31.2**	**+0.9**
RAR				IAmb	IAmb		19 12 38.0	
	comp=Z,85nm,1.1s							
OUZ	**Omahuta**	**17.16**	**206**	P		**P**	**19 12 39.0**	**+1.6**
OUZ	**Omahuta**	**17.16**	**206**	P		**P**	**19 12 39.4**	**+2.0**
OUZ				IAmb	IAmb		19 12 45.9	
	comp=Z,47nm,0.8s							
WCZ	**Waipu Caves**	**17.50**	**203**	P		**P**	**19 12 41.6**	**+0.6**
KUZ	**Kuaotunu**	**17.77**	**199**	P		**P**	**19 12 45.1**	**+1.2**
MXZ	**Matakaoa Point**	**17.93**	**191**	P		**P**	**19 12 47.9**	**+2.4**
MXZ	**Matakaoa Point**	**17.93**	**191**	P		**P**	**19 12 46.8**	**+1.3**
MXZ				IAmb	IAmb		19 12 47.3	
	comp=Z,118nm,1.2s							
WMGZ	**Waiomatatini S**	**18.16**	**191**	P		**P**	**19 12 49.6**	**+1.6**
HAZ	**Te Kaha**	**18.21**	**192**	P		**P**	**19 12 49.2**	**+0.6**
PKGZ	**Pakihiroa**	**18.28**	**192**	P		**P**	**19 12 50.4**	**+1.0**
PUZ	**Puketiti**	**18.43**	**191**	P		**P**	**19 12 51.1**	**+0.2**
RUGZ	**Raukumara Rang**	**18.44**	**193**	P		**P**	**19 12 50.3**	**-0.8**
KMRZ	**Kaimai**	**18.74**	**197**	P		**P**	**19 12 55.7**	**+1.5**
TOZ	**Tahuroa Road**	**18.75**	**198**	P		**P**	**19 12 57.7**	**+3.4**
CNGZ	**Carnagh Statio**	**18.84**	**191**	P		**P**	**19 12 57.7**	**+2.5**
URZ	**Urewera**	**18.84**	**194**	P		**P**	**19 12 56.4**	**+1.1**
URZ				S		**S**	**19 16 06.0**	**-3.4**
MUGZ	**Murupara**	**19.13**	**194**	P		**P**	**19 12 59.9**	**+1.6**
HRRZ	**Handcock Road**	**19.16**	**195**	P		**P**	**19 12 59.6**	**+1.0**
PRRZ	**Plateau Road**	**19.24**	**195**	P		**P**	**19 13 00.6**	**+1.2**
MTHZ	**Maungataniwha**	**19.47**	**194**	P		**P**	**19 13 02.8**	**+1.0**
MTHZ				S		**S**	**19 16 19.4**	**-0.7**
RAHZ	**Arahi**	**19.48**	**193**	P		**P**	**19 12 59.5**	**-2.4**
HIZ	**Hauiti**	**19.67**	**198**	P		**P**	**19 13 06.7**	**+3.0**
HIZ	**Hauiti**	**19.67**	**198**	P		**P**	**19 13 06.0**	**+2.2**
HIZ				IAmb	IAmb		19 13 07.1	
	comp=Z,78nm,1.1s							
NMHZ	**Naumai**	**19.71**	**194**	P		**P**	**19 13 06.3**	**+2.0**
RATZ	**Rangitukua**	**19.74**	**196**	P		**P**	**19 13 06.4**	**+1.8**
BKZ	**Black Stump Fm**	**19.85**	**194**	P		**P**	**19 13 03.8**	**-1.8**
MCHZ	**McNeill Hill**	**20.07**	**194**	P		**P**	**19 13 09.1**	**+1.5**
TUVZ	**Tukino**	**20.15**	**196**	P		**P**	**19 13 08.6**	**+0.1**
PKVZ	**Pokaka**	**20.25**	**197**	P		**P**	**19 13 09.0**	**-0.4**
VRZ	**Vera Road**	**20.26**	**198**	P		**P**	**19 13 13.3**	**+3.9**
KRHZ	**Kereru**	**20.33**	**194**	P		**P**	**19 13 10.9**	**+0.8**
KAHZ	**Kahuranaki**	**20.36**	**193**	P		**P**	**19 13 11.5**	**+1.1**
KHEZ	**Kahui Hut**	**20.64**	**199**	P		**P**	**19 13 18.2**	**+5.3**
DVHZ	**Dannevirke**	**21.00**	**194**	P		**P**	**19 13 16.7**	**+0.6**
ANWZ	**Angora Road**	**21.09**	**193**	P		**P**	**19 13 17.5**	**+0.7**
PRWZ	**Pori Road**	**21.29**	**194**	P		**P**	**19 13 20.8**	**+2.1**
BFZ	**Birch Farm**	**21.35**	**194**	P		**P**	**19 13 17.4**	**-1.9**
SNZO	**South Karori**	**22.32**	**196**	P		**P**	**19 13 28.4**	**+0.5**
SNZO				IAmb	IAmb		19 13 36.5	
	comp=Z,84nm,1.1s							
PLWZ	**Palliser**	**22.42**	**195**	P		**P**	**19 13 29.0**	**0.0**
QRZ	**Quartz Range**	**22.51**	**200**	P		**P**	**19 13 30.9**	**+1.1**
NNZ	**Nelson**	**22.60**	**198**	P		**P**	**19 13 31.6**	**+1.1**
NNZ				IAmb	IAmb		19 13 34.1	
	comp=Z,31nm,0.7s							
TARA	**Tarawa**	**23.26**	**335**	P		**P**	**19 13 35.8**	**-1.1**
KHZ	**Kahutara**	**23.66**	**197**	P		**P**	**19 13 40.7**	**+0.6**
KHZ				IAmb	IAmb		19 13 46.4	
	comp=Z,27nm,0.6s							
LHI	**Lord Howe Isla**	**24.11**	**237**	P		**P**	**19 13 46.0**	**+1.6**
LHI				IAmb	IAmb		19 13 46.8	
	comp=Z,82nm,0.8s							
HNR	**Honiara**	**24.32**	**292**	P		**P**	**19 13 45.9**	**-0.5**
	comp=Z,210nm,0.9s,baz=147,slow=2.3,SNR=4.4							
HNR	**Honiara**	**24.32**	**292**	*e*P		**P**	**19 13 43.0**	**-3.5**
HNR	**Honiara**	**24.32**	**292**	P		**P**	**19 13 45.0**	**-1.5**
RPZ	**Rata Peaks**	**25.59**	**200**	P		**P**	**19 13 58.4**	**+1.0**
	comp=Z,33nm,0.6s,baz=332,slow=1.3,SNR=17							
PAE	**Paea**	**26.35**	**90**	*e*P		**P**	**19 14 04.9**	**+0.4**
	comp=Z,21nm,1.1s							
PPT2	**Papeete2**	**26.37**	**89**	*e*P		**P**	**19 14 05.4**	**+0.6**
	comp=Z,139nm,1.3s							
PPT	**Papeete**	**26.37**	**89**	P		**P**	**19 14 05.6**	**+0.8**
	comp=Z,94nm,0.8s,baz=102,slow=6.0,SNR=7.6							
PPTF	**Pamatai, Papee**	**26.38**	**89**	P		**P**	**19 14 05.5**	**+0.6**
PPTF				IAmb	IAmb		19 14 09.2	
	comp=Z,107nm,0.9s							
TIAR	**Tiarei**	**26.59**	**89**	*e*P		**P**	**19 14 07.4**	**+0.7**
	comp=Z,39nm,1.0s							
TVO	**Taravao**	**26.64**	**90**	*e*P		**P**	**19 14 07.6**	**+0.4**
	comp=Z,18nm,0.8s							
DCZ	**Deep Cove**	**28.46**	**203**	P		**P**	**19 14 23.9**	**+1.1**
DCZ				IAmb	IAmb		19 14 25.1	
	comp=Z,36nm,0.8s							
XMAS	**Kiritimati**	**29.32**	**44**	P		**P**	**19 14 30.4**	**-0.4**
EIDS	**Eidsvold**	**29.59**	**254**	P		**P**	**19 14 33.4**	**+0.3**
	baz=30,SNR=26							
EIDS	**Eidsvold**	**29.59**	**254**	P		**P**	**19 14 33.6**	**+0.5**
EIDS				IAmb	IAmb		19 14 34.4	
	comp=Z,107nm,0.7s							
ARMA	**Armidale**	**29.86**	**243**	P		**P**	**19 14 36.8**	**+1.4**
	baz=30,SNR=39							
ARMA	**Armidale**	**29.86**	**243**	P		**P**	**19 14 36.6**	**+1.2**
MGCD	**Mangrove Creek**	**31.02**	**238**	P		**P**	**19 14 46.8**	**+1.4**
	baz=31,SNR=39							
RMQ	**Roma**	**31.77**	**252**	P		**P**	**19 14 53.3**	**+1.3**
	baz=32,SNR=44							
KWAJ	**Kwajalein Atol**	**32.22**	**331**	P		**P**	**19 14 56.1**	**+0.2**
KWAJ				pmax	pmax			
	comp=Z,318nm,0.8s							
KWAJ	**Kwajalein Atol**	**32.22**	**331**	P		**P**	**19 14 56.1**	**+0.2**
CNB	**Canberra Magne**	**33.04**	**235**	P		**P**	**19 15 04.0**	**+1.1**
	baz=33,SNR=27							
CAN	**Canberra**	**33.32**	**236**	P		**P**	**19 15 06.0**	**+0.7**
CAN				pmax	pmax			
	comp=Z,128nm,0.9s							
CAN	**Canberra**	**33.32**	**236**	P		**P**	**19 15 06.0**	**+0.7**
CAN				IAmb	IAmb		19 15 07.6	
	comp=Z,128nm,0.9s							
RABL	**Rabaul**	**33.61**	**294**	P		**P**	**19 15 07.2**	**-0.8**
RABL				IAmb	IAmb		19 15 25.9	
	comp=Z,81nm,0.6s							
KRVT	**Keravat (AS076**	**33.67**	**294**	P		**P**	**19 15 06.3**	**-2.1**
	comp=Z,217nm,0.9s,baz=159,slow=4.4,SNR=7.6							
CTA	**Charters Tower**	**34.17**	**263**	P		**P**	**19 15 12.9**	**+0.2**
	comp=Z,609nm,0.5s,baz=89,slow=10,SNR=656							
CTAO	**Charters Tower**	**34.17**	**263**	P		**P**	**19 15 13.3**	**+0.6**
CTAO				pmax	pmax			
	comp=Z,636nm,0.7s							
CTAO	**Charters Tower**	**34.17**	**263**	P		**P**	**19 15 13.3**	**+0.6**
CMSA	**Cobar Meteorol**	**35.08**	**243**	P		**P**	**19 15 20.8**	**+0.5**
	baz=35,SNR=103							
QLP	**Quilpie**	**35.81**	**252**	P		**P**	**19 15 26.8**	**+0.3**
	baz=36,SNR=14							
PATS	**Pohnpei**	**35.84**	**316**	P		**P**	**19 15 26.3**	**-0.6**
PATS				IAmb	IAmb		19 15 27.3	
	comp=Z,57nm,0.8s							
PMG	**Port Moresby**	**35.85**	**282**	P		**P**	**19 15 26.7**	**-0.2**
	comp=Z,171nm,0.8s,baz=94,slow=5.3,SNR=34							
PMG	**Port Moresby**	**35.85**	**282**	P		**P**	**19 15 26.7**	**-0.2**
PMG				pmax	pmax			
	comp=Z,196nm,0.9s							
PMG	**Port Moresby**	**35.85**	**282**	P		**P**	**19 15 26.7**	**-0.2**
MTSU	**Mount Surprise**	**36.25**	**266**	P		**P**	**19 15 30.4**	**+0.1**
	baz=36,SNR=121							
TOO	**Toolangi**	**36.71**	**233**	P		**P**	**19 15 34.4**	**+0.5**
	baz=37,SNR=17							
TOO	**Toolangi**	**36.71**	**233**	P		**P**	**19 15 34.4**	**+0.5**
TOO				pmax	pmax			
	comp=Z,72nm,0.7s							
TOO	**Toolangi**	**36.71**	**233**	P		**P**	**19 15 34.4**	**+0.5**
TOO				IAmb	IAmb		19 15 35.2	
	comp=Z,72nm,0.7s							
MOO	**Moorlands**	**37.31**	**225**	P		**P**	**19 15 39.7**	**+0.9**
	baz=37,SNR=3.8							
TAU	**Tasmania Unive**	**37.43**	**224**	P		**P**	**19 15 40.3**	**+0.5**
TAU				pmax	pmax			
	comp=Z,24nm,0.6s							
TAU	**Tasmania Unive**	**37.43**	**224**	P		**P**	**19 15 40.3**	**+0.5**
TAU				IAmb	IAmb		19 15 41.6	
	comp=Z,24nm,0.6s							
COEN	**Coen**	**38.18**	**273**	P		**P**	**19 15 46.4**	**0.0**
	baz=38,SNR=30							
COEN	**Coen**	**38.18**	**273**	P		**P**	**19 15 46.4**	**0.0**
COEN				IAmb	IAmb		19 15 47.5	
	comp=Z,134nm,0.9s							
STKA	**Stephens Creek**	**38.58**	**244**	P		**P**	**19 15 50.2**	**+0.7**
	baz=39,SNR=55							
STKA	**Stephens Creek**	**38.58**	**244**	P		**P**	**19 15 50.0**	**+0.5**
	comp=Z,132nm,0.6s,baz=93,slow=10.0,SNR=55							
STKA	**Stephens Creek**	**38.58**	**244**	P		**P**	**19 15 50.1**	**+0.7**
STKA				pmax	pmax			
	comp=Z,30nm,0.8s							
STKA	**Stephens Creek**	**38.58**	**244**	P		**P**	**19 15 50.1**	**+0.7**
STKA				IAmb	IAmb		19 15 51.0	
	comp=Z,30nm,0.8s							
ARPS	**Mount Arapiles**	**39.30**	**236**	P		**P**	**19 15 55.8**	**+0.6**
	baz=39,SNR=7.9							
QIS	**Mount Isa**	**40.32**	**261**	P		**P**	**19 16 03.3**	**-0.5**
	baz=40,SNR=8.9							
HTT	**Hallett**	**41.02**	**242**	P		**P**	**19 16 09.9**	**+0.5**
	baz=41,SNR=34							
WAKE	**Wake Island**	**42.06**	**337**	P		**P**	**19 16 17.9**	**+0.2**
WAKE				IAmb	IAmb		19 16 18.6	
	comp=Z,116nm,0.7s							
BBOO	**Buckleboo**	**43.34**	**243**	P		**P**	**19 16 27.7**	**-0.1**
	baz=43,SNR=53							
BBOO	**Buckleboo**	**43.34**	**243**	P		**P**	**19 16 27.8**	**-0.1**
JAY	**Jayapura**	**44.48**	**288**	P		**P**	**19 16 37.0**	**-0.1**
	comp=Z,94nm,0.5s,baz=148,slow=2.8,SNR=121							
JAY	**Jayapura**	**44.48**	**288**	P		**P**	**19 16 37.0**	**-0.1**
	comp=Z,83nm,0.6s							
GENI	**Genyem**	**44.93**	**287**	P		**P**	**19 16 40.9**	**+0.4**
	comp=Z,3μmcomp=Z,209nm,0.9s							
WR0	**Warramunga Arr**	**45.11**	**261**	IAmb	IAmb		19 16 42.8	
	comp=Z,108nm,1.1s							
AS31	**Alice Springs**	**45.25**	**256**	P		**P**	**19 16 42.7**	**-0.3**
ASAR	**Alice Springs**	**45.25**	**256**	P		**P**	**19 16 42.9**	**-0.1**
	comp=Z,518nm,0.7s,baz=89,slow=8.2,SNR=858							
ASAR				ScP		**ScP**	**19 21 32.6**	**-0.1**
	comp=Z,5.9nm,0.9s,baz=100,slow=3.6,SNR=7.5							
ASAR				S		**S**	**19 22 53.2**	**-1.8**
	comp=Z,14nm,0.7s,baz=93,slow=16,SNR=23							
WRAB	**Tennant Creek**	**45.29**	**261**	*d* iP		**P**	**19 16 42.3**	**-1.0**
WRAB				pmax	pmax			
	comp=Z,35nm,0.3s							
WRAB	**Tennant Creek**	**45.29**	**261**	P		**P**	**19 16 42.2**	**-1.0**
WRA	**Warrnunga Arr**	**45.30**	**261**	P		**P**	**19 16 42.4**	**-0.9**
	comp=Z,113nm,0.6s,baz=97,slow=7.0,SNR=155							
WRA				S		**S**	**19 22 53.2**	**-2.6**
	comp=Z,2.1nm,0.8s,baz=66,slow=15,SNR=3.1							
SMPI	**Sarmi**	**46.50**	**287**	P		**P**	**19 16 52.5**	**-0.2**
	comp=Z,91nm,0.9s							
KDU	**Kakadu**	**48.57**	**271**	P		**P**	**19 17 07.9**	**-0.5**
	baz=49,SNR=61							
SRPI	**Serui, Papua**	**48.78**	**286**	P		**P**	**19 17 11.6**	**+1.6**
	comp=Z,0.2nm,0.4s							
MTN	**Manton Dam**	**49.79**	**270**	P		**P**	**19 17 16.6**	**-1.0**
	baz=50,SNR=114							
MTN	**Manton Dam**	**49.79**	**270**	P		**P**	**19 17 16.8**	**-0.7**
GUMO	**Guam**	**49.96**	**309**	P		**P**	**19 17 18.6**	**-0.1**
GUMO				pmax	pmax			
	comp=Z,345nm,0.8s							
GUMO	**Guam**	**49.96**	**309**	P		**P**	**19 17 18.6**	**-0.1**
FORT	**Forrest**	**50.08**	**246**	P		**P**	**19 17 18.9**	**-0.5**
	baz=50,SNR=108							
FORT	**Forrest**	**50.08**	**246**	P		**P**	**19 17 19.0**	**-0.5**
WRKA	**Warakurna**	**50.22**	**254**	P		**P**	**19 17 20.6**	**-0.1**
	baz=50,SNR=147							
SAUI	**Saumlaki**	**51.07**	**276**	P		**P**	**19 17 27.6**	**+0.5**
KNRA	**Kununurra**	**51.33**	**266**	P		**P**	**19 17 28.6**	**-0.3**
	baz=51,SNR=96							
KNRA	**Kununurra**	**51.33**	**266**	P		**P**	**19 17 28.6**	**-0.3**
FAKI	**Fak Fak**	**52.00**	**282**	P		**P**	**19 17 33.4**	**-0.5**
	comp=Z,221nm,1.1s							
FAKI	**Fak Fak**	**52.00**	**282**	P		**P**	**19 17 33.4**	**-0.5**
BNDI	**Bandanaira**	**53.56**	**279**	P		**P**	**19 17 46.7**	**+1.5**
	comp=Z,7μmcomp=Z,713nm,0.6s							
SIJI	**Sorong**	**53.72**	**284**	P		**P**	**19 17 46.5**	**+0.1**
	comp=Z,663nm,0.8s,baz=89,slow=5.9,SNR=264							
FITZ	**Fitzroy Crossi**	**53.72**	**262**	P		**P**	**19 17 46.4**	**+0.1**
	baz=54,SNR=72							
FITZ	**Fitzroy Crossi**	**53.72**	**262**	P		**P**	**19 17 46.3**	**+0.1**
	comp=Z,49nm,0.5s,baz=109,slow=4.3,SNR=99							
FITZ	**Fitzroy Crossi**	**53.72**	**262**	P		**P**	**19 17 46.2**	**0.0**
FITZ				IAmb	IAmb		19 17 48.3	
	comp=Z,67nm,0.7s							
MSAI	**Masohi**	**54.90**	**280**	P		**P**	**19 17 54.2**	**-0.5**
	comp=Z,1μmcomp=Z,153nm,0.6s							
AAI	**Ambon**	**55.45**	**280**	P		**P**	**19 17 58.1**	**-0.5**
	comp=Z,5μmcomp=Z,392nm,0.7s							
NLAI	**Namlea**	**56.63**	**280**	P		**P**	**19 18 06.9**	**0.0**
	comp=Z,3μmcomp=Z,391nm,0.8s							
SOEI	**Soe**	**57.12**	**271**	P		**P**	**19 18 11.8**	**+1.4**
	comp=Z,6μmcomp=Z,499nm,0.6s							
SOEI	**Soe**	**57.12**	**271**	P		**P**	**19 18 11.8**	**+1.4**
LBMI	**Labuha**	**57.26**	**283**	P		**P**	**19 18 11.7**	**+0.5**
	comp=Z,3μmcomp=Z,404nm,0.9s							
BATI	**Baumata**	**57.55**	**270**	P		**P**	**19 18 14.8**	**+1.6**
	comp=Z,329nm,0.8s,baz=151,slow=1.7,SNR=50							
BATI	**Baumata**	**57.55**	**270**	P		**P**	**19 18 14.9**	**+1.6**
	comp=Z,2μmcomp=Z,189nm,0.7s							
TNTI	**Ternate**	**57.94**	**284**	P		**P**	**19 18 16.2**	**+0.2**
	comp=Z,3μmcomp=Z,385nm,1.1s							
TNTI	**Ternate**	**57.94**	**284**	P		**P**	**19 18 16.2**	**+0.2**
SANI	**Sanana**	**58.11**	**280**	P		**P**	**19 18 16.6**	**-0.5**
	comp=Z,3μmcomp=Z,435nm,0.9s							
PSA00	**Pilbara Seismi**	**58.40**	**256**	P		**P**	**19 18 18.6**	**-0.5**
VNDA	**Vanda**	**58.48**	**185**	P		**P**	**19 18 20.6**	**+2.0**
	comp=Z,3.8nm,0.6s,baz=357,slow=8.3,SNR=6.5							
VNDA	**Vanda**	**58.48**	**185**	P		**P**	**19 18 20.9**	**+2.3**
VNDA				pmax	pmax			
	comp=Z,11nm,1.2s							
VNDA	**Vanda**	**58.48**	**185**	P		**P**	**19 18 20.9**	**+2.3**
MBWA	**Marble Bar**	**58.58**	**257**	P		**P**	**19 18 20.1**	**-0.2**
MEEK	**Meekatharra**	**58.69**	**250**	P		**P**	**19 18 20.0**	**-0.9**
	baz=59,SNR=15							
KLBR	**Kellerberrin**	**58.85**	**245**	P		**P**	**19 18 21.6**	**-0.3**
	baz=59,SNR=13							
NWAO	**Narrogin (SRO)**	**59.16**	**243**	P		**P**	**19 18 23.0**	**-1.0**
	baz=59,SNR=5.3							
NWAO	**Narrogin (SRO)**	**59.16**	**243**	P		**P**	**19 18 24.2**	**+0.1**
	comp=Z,43nm,0.9s,baz=96,slow=7.0,SNR=8.6							
NWAO	**Narrogin (SRO)**	**59.16**	**243**	P		**P**	**19 18 23.9**	**-0.1**
NWAO				IAmb	IAmb		19 18 25.7	
	comp=Z,67nm,1.1s							
MMRI	**Maumere**	**59.37**	**272**	P		**P**	**19 18 25.2**	**-0.5**
	comp=Z,3μmcomp=Z,304nm,0.9s							
MMRI	**Maumere**	**59.37**	**272**	P		**P**	**19 18 25.0**	**-0.6**
BLDU	**Ballidu**	**59.84**	**246**	P		**P**	**19 18 28.0**	**-0.7**
	baz=60,SNR=15							
EDFI	**Ende, Flores**	**59.85**	**271**	P		**P**	**19 18 28.4**	**-0.6**
	comp=Z,1μmcomp=Z,138nm,1.0s							
MUN	**Mundaring**	**60.12**	**244**	P		**P**	**19 18 30.6**	**+0.2**
	baz=60,SNR=9.2							
MORW	**Morawa**	**60.61**	**247**	P		**P**	**19 18 33.3**	**-0.5**
	baz=61,SNR=14							
MORW	**Morawa**	**60.61**	**247**	P		**P**	**19 18 33.6**	**-0.2**
MORW				IAmb	IAmb		19 18 34.3	
	comp=Z,54nm,1.1s							
WSI	**Waingapu**	**60.88**	**270**	P		**P**	**19 18 36.2**	**+0.4**
	comp=Z,6μmcomp=Z,555nm,0.7s							
KMSI	**Cibinong**	**60.97**	**282**	P		**P**	**19 18 36.7**	**+0.3**
	comp=Z,2μmcomp=Z,254nm,0.9s							
LUWI	**Luwuk**	**61.46**	**280**	P		**P**	**19 18 40.3**	**+0.6**
	comp=Z,4μmcomp=Z,401nm,1.0s							
LUWI	**Luwuk**	**61.46**	**280**	P		**P**	**19 18 40.2**	**+0.5**
WBSI	**Waikabubak, Su**	**61.74**	**270**	P		**P**	**19 18 41.8**	**+0.2**
	comp=Z,134nm,0.7s							
DAV	**Davao City (W)**	**62.25**	**290**	P		**P**	**19 18 45.3**	**+0.4**
	comp=Z,300nm,0.5s,baz=73,slow=2.3,SNR=8.0							
DAV	**Davao City (W)**	**62.25**	**290**	P		**P**	**19 18 45.1**	**+0.2**
BKSI	**Bulukumba**	**62.42**	**274**	P		**P**	**19 18 45.6**	**-0.4**
	comp=Z,46nm,0.6s							
KCP	**Kidapawan**	**62.66**	**289**	*i* P		**P**	**19 18 48.0**	**+0.4**
BNSI	**Bone**	**62.74**	**275**	P		**P**	**19 18 48.5**	**+0.4**
	comp=Z,136nm,1.2s							
MRSI	**Marisa**	**62.81**	**281**	P		**P**	**19 18 48.3**	**-0.2**
	comp=Z,122nm,1.0s							
KAPI	**Kappang**	**62.87**	**275**	P		**P**	**19 18 48.9**	**0.0**
	comp=Z,29nm,0.6s,baz=121,slow=3.2,SNR=14							
KAPI	**Kappang**	**62.87**	**275**	P		**P**	**19 18 48.7**	**-0.3**
KAPI				IAmb	IAmb		19 18 49.4	
	comp=Z,35nm,0.8s							
SPSI	**Sidrap Palu**	**63.21**	**276**	P		**P**	**19 18 50.1**	**-1.1**
	comp=Z,85nm,0.9s							
GIRL	**Giralia**	**63.30**	**254**	P		**P**	**19 18 52.7**	**+1.0**
	baz=63,SNR=8.6							
GIRL	**Giralia**	**63.30**	**254**	P		**P**	**19 18 52.5**	**+0.9**
TTSI	**Tana Toraja**	**63.48**	**277**	P		**P**	**19 18 56.9**	**+4.0**
CTBH	**Cotabato--PC H**	**63.50**	**289**	*i* P		**P**	**19 18 53.5**	**+0.4**
PLAI	**Plampang**	**63.50**	**270**	P		**P**	**19 18 52.8**	**-0.3**
	comp=Z,328nm,0.8s							
MPSI	**Mapaga**	**64.64**	**280**	P		**P**	**19 19 00.2**	**-0.2**
	comp=Z,142nm,1.1s							
CASY	**Casey**	**64.70**	**205**	P		**P**	**19 19 00.4**	**+0.5**
CASY				IAmb	IAmb		19 19 02.4	
	comp=Z,26nm,1.1s							
DNP	**Denpasar**	**65.96**	**269**	P		**P**	**19 19 10.4**	**+1.6**
	comp=Z,368nm,0.9s							
RCP	**Roxas**	**66.78**	**293**	*e* P		**P**	**19 19 14.4**	**+0.5**
JHJ2	**Mitsune**	**66.80**	**322**	P		**P**	**19 19 13.7**	**+0.1**
KBKI	**Kotabaru**	**66.81**	**275**	P		**P**	**19 19 15.1**	**+1.0**
	comp=Z,793nmcomp=Z,74nm,1.1s							
JHJ	**Hachijo jima 2**	**66.82**	**322**	P		**P**	**19 19 13.6**	**-0.2**
	comp=Z,142nm,0.4s,baz=167,slow=6.2,SNR=39							
JAGI	**Jajag, Banyuwa**	**67.02**	**269**	P		**P**	**19 19 14.4**	**-1.1**
	comp=Z,187nm,0.9s							
JAGI	**Jajag, Banyuwa**	**67.02**	**269**	P		**P**	**19 19 14.3**	**-1.2**
SPMM	**Sapulut**	**69.48**	**283**	P		**P**	**19 19 31.0**	**+0.4**
TGY	**Tagaytay City**	**69.52**	**294**	P		**P**	**19 19 31.1**	**+0.4**
	comp=Z,86nm,0.4s,baz=160,slow=1.9,SNR=7.5							
INU	**Inuyama**	**70.02**	**322**	P		**P**	**19 19 31.9**	**-1.4**
INU				IAmb	IAmb		19 19 34.5	
	comp=Z,26nm,1.0s							
QSPA	**South Pole Qui**	**70.08**	**180**	P		**P**	**19 19 34.9**	**+1.5**
	comp=Z,30nm,0.7s,baz=18,slow=0.6,SNR=66							
**Q

MWC	Mount Wilson	77.99	47	IAmb	IAmb	19 20 22.0			
	comp=Z,19nm,0.8s								
VES	Vestal, Richgr	78.22	45	P	P	19 20 21.5	+1.3		
	baz=235								
VLA	Vladivostok	78.23	325	*i* P	P	19 20 20.2	+0.1		
VLA				pmax	pmax				
	comp=Z,15nm,1.0s								
MURC	Murrieta	78.24	48	P	P	19 20 22.3	+1.8		
	baz=236								
MSHR	Mys Shultsa	78.27	324	*i* P	P	19 20 21.2	+0.8		
MSHR				pmax	pmax				
	comp=Z,19nm,1.1s								
BFSC	Mount Baldy Ra	78.27	47	P	P	19 20 22.2	+1.4		
	baz=236,SNR=5.5								
MONP2	Monument Peak	78.39	49	P	P	19 20 23.2	+1.7		
	baz=237								
EDW2	Edwards Air Fo	78.41	46	P	P	19 20 23.1	+1.7		
	baz=236,SNR=18								
O02D	Mt. Diablo Mer	78.48	40	P	P	19 20 23.8	+2.1		
	baz=231								
IKP	In-Ko-Pah, Jac	78.48	49	P	P	19 20 23.7	+1.8		
	baz=237								
LHSI	Lahat	78.51	270	P	P	19 20 23.1	+0.7		
	comp=Z,50nm,1.2s								
ISA	Isabella, Lake	78.52	45	P	P	19 20 23.1	+1.0		
ISA				pmax	pmax				
	comp=Z,17nm,1.0s								
ISA	Isabella, Lake	78.52	45	P	P	19 20 24.0	+1.9		
	baz=235,SNR=7.9								
ISA	Isabella, Lake	78.52	45	P	P	19 20 23.1	+1.0		
ISA				IAmb	IAmb	19 20 24.6			
	comp=Z,17nm,0.9s								
SLBS	Sierra La Lagu	78.70	60	P	P	19 20 23.0	-0.3		
SLBS				IAmb	IAmb	19 20 25.6			
	comp=Z,12nm,0.8s								
PFO	Pinyon Flats O	78.76	48	P	P	19 20 25.2	+1.8		
	baz=237								
TPFO	Pinon Flats	78.76	48	P	P	19 20 25.2	+1.7		
	baz=237								
SWSC	Sam W. Stewart	78.86	49	P	P	19 20 25.5	+1.7		
	baz=237								
USRK	Ussuriysk Ar.	78.89	325	P	P	19 20 24.5	+0.8		
	comp=Z,13nm,1.0s,baz=133,slow=3.2,SNR=19								
USA0B	Ussuriysk Arra	78.90	325	P	P	19 20 24.1	+0.4		
USA0B				pmax	pmax				
	comp=Z,34nm,1.2s								
USA0B	Ussuriysk Arra	78.90	325	P	P	19 20 24.1	+0.4		
USA0B				IAmb	IAmb	19 20 26.0			
	comp=Z,34nm,1.1s								
O03E	Paynes Creek	79.14	40	P	P	19 20 26.5	+1.2		
	baz=232								
TPRI	Tanjung Pinang	79.18	275	P	P	19 20 27.4	+1.4		
CWC	Cottonwood Cre	79.23	45	P	P	19 20 27.1	+1.2		
	baz=235								
MDPB	Devils Postpil	79.26	43	IAmb	IAmb	19 20 28.5			
	comp=Z,14nm,0.9s								
BELC	Belle Mtn. Jos	79.29	48	P	P	19 20 28.0	+1.7		
	baz=237,SNR=13								
MPMC	Manual Prospec	79.41	45	P	P	19 20 28.3	+1.3		
	baz=236,SNR=5.7								
GSC	Goldstone, Bar	79.45	46	P	P	19 20 28.7	+1.7		
	baz=236,SNR=6.3								
TIN	Tinemaha, Big	79.48	44	P	P	19 20 29.1	+1.9		
	baz=235								
BC3	Big Chuckawall	79.49	48	P	P	19 20 29.3	+2.0		
	baz=238								
HEC	Hector,Ludlow	79.51	47	P	P	19 20 29.0	+1.6		
	baz=237,SNR=7.1								
WAKR	Walker	79.54	43	IAmb	IAmb	19 20 30.2			
	comp=Z,13nm,0.9s								
DLV	T Lat	79.57	287	IAmb	IAmb	19 20 30.3			
	comp=Z,31nm,0.9s								
GLA	Glamis	79.61	49	P	P	19 20 30.1	+2.2		
	baz=238								
GLA	Glamis	79.61	49	IAmb	IAmb	19 20 31.0			
	comp=Z,21nm,1.1s								
PNTR	Pine Nut	79.78	42	IAmb	IAmb	19 20 31.3			
	comp=Z,20nm,0.8s								
YERR	Yerington	79.94	42	IAmb	IAmb	19 20 31.5			
	comp=Z,11nm,0.6s								
GMRC	Granite Mounta	79.95	47	P	P	19 20 31.5	+1.7		
	baz=237,SNR=5.5								
IRM	Iron Mountain	79.97	48	P	P	19 20 31.7	+1.9		
	baz=238,SNR=9.3								
L04D	Klamath Falls	80.03	38	P	P	19 20 31.3	+1.3		
	baz=232								
M04C	Macdoel	80.04	39	P	P	19 20 31.8	+1.7		
	baz=232								
NJ2	Nanjing	80.04	309	*e*P	P	19 20 31.5	+1.4		
NJ2				pmax	pmax				
	comp=Z,31nm,0.9s								
FURC	Furnace Creek,	80.05	45	P	P	19 20 31.7	+1.7		
	baz=236								
MYKOM	Kota Tinggi	80.11	276	IAmb	IAmb	19 20 32.6			
	comp=Z,44nm,1.0s								
MYKOM	Kota Tinggi	80.11	276	P	P	19 20 32.0	+1.1		
TUQ	Turquoise Moun	80.12	47	P	P	19 20 32.5	+1.9		
	baz=237								
Y12C	Blythe	80.19	49	P	P	19 20 33.1	+2.2		
	baz=238								
NVAR	Mina Array Bea	80.22	43	P	P	19 20 32.6	+1.4		
	comp=Z,5.1nm,0.8s,baz=222,slow=9.2,SNR=27								
NVAR				pP	pP	19 21 54.3	-0.1		
	comp=Z,1.9nm,1.0s,baz=235,slow=8.2,SNR=2.0								
NV11	Mina Array Sit	80.31	43	P	P	19 20 32.0	+0.3		
HSIG		80.44	54	IAmb	IAmb	19 20 34.7			
	comp=Z,12nm,0.8s								
MDJ	Mudanjiang	80.46	325	IAmb	IAmb	19 20 34.3			
	comp=Z,35nm,1.0s								
214A	Organ Pipe Nat	80.50	51	P	P	19 20 34.9	+2.2		
	baz=239								
214A	Organ Pipe Nat	80.50	51	IAmb	IAmb	19 20 35.8			
	comp=Z,17nm,1.1s								
TPNV	Topopah Spring	80.73	45	P	P	19 20 35.5	+1.6		
	baz=236								
PDMCI	Parker Dam,Lak	80.76	48	P	P	19 20 36.0	+2.1		
	baz=238								
J04D	Umpqua Nationa	80.78	37	P	P	19 20 36.1	+2.1		
	baz=232								
I04A	Tendick Farm,	80.96	37	P	P	19 20 35.9	+1.2		
	baz=231								
SHPR	Sheep Range	81.22	46	P	P	19 20 36.6	+0.1		
J05D	Fort Rock, OR	81.31	38	P	P	19 20 38.7	+1.9		
	baz=232								
PINE	Pine Mountain	81.79	38	P	P	19 20 40.6	+1.4		
PINE				IAmb	IAmb	19 20 42.6			
	comp=Z,12nm,0.8s								
R11A	Troy Canyon, C	81.94	44	P	P	19 20 41.4	+1.2		
	baz=237								
TUC	Tucson	82.17	52	P	P	19 20 42.6	+1.3		
TUC				pmax	pmax				
	comp=Z,24nm,0.9s								
TUC	Tucson	82.17	52	P	P	19 20 43.8	+2.5		
	baz=241								
TUC	Tucson	82.17	52	P	P	19 20 42.6	+1.3		
TUC				IAmb	IAmb	19 20 44.8			
	comp=Z,24nm,0.9s								
BKNI	Bangkinang	82.25	273	P	P	19 20 42.3	+0.2		
BKNI				IAmb	IAmb	19 20 46.0			
	comp=Z,45nm,0.9s								
MAW	Mawson	82.26	200	P	P	19 20 41.4	+0.3		
	baz=82,SNR=7.8								
MAW	Mawson	82.26	200	P	P	19 20 41.0	-0.1		
	comp=Z,4.3nm,0.6s,baz=140,slow=7.6,SNR=7.4								
MAW	Mawson	82.26	200	P	P	19 20 41.5	+0.4		
MAW				pmax	pmax				
	comp=Z,1.0nm,0.7s								
MAW	Mawson	82.26	200	P	P	19 20 41.5	+0.4		
CN2	Changchun	82.28	322	⇓P	P	19 20 42.0	+0.5		
CN2				pmax	pmax				
	comp=Z,30nm,0.8s								
CN2				pmax	pmax				
	comp=Z,300nm,5.0s								
WVOR	Wild Horse Val	82.33	40	P	P	19 20 43.2	+1.2		
WVOR				pmax	pmax				
	comp=Z,6.0nm,0.9s								
WVOR	Wild Horse Val	82.33	40	P	P	19 20 43.2	+1.2		
KLR	Kul'dur	82.41	329	P	P	19 20 42.3	+0.3		
	comp=Z,2.7nm,0.6s,baz=120,slow=6.0,SNR=7.5								
X16A	Lo Mia Camp, P	82.73	50	IAmb	IAmb	19 20 47.5			
	comp=Z,15nm,0.9s								
319A	Douglas	82.83	53	IAmb	IAmb	19 20 48.2			
	comp=Z,43nm,0.9s								
U15A	North Rim	83.15	47	IAmb	IAmb	19 20 49.4			
	comp=Z,12nm,0.7s								
WUAZ	Wupatki	83.33	49	P	P	19 20 49.4	+2.1		
	baz=240								
MA2	Magadan	83.46	344	P	P	19 20 45.9	-1.2		
	comp=Z,8.4nm,0.7s,baz=122,slow=4.2,SNR=4.9								
MA2	Magadan	83.46	344	*i* P	P	19 20 45.4	-1.7		
MA2				pmax	pmax				
	comp=Z,7.0nm,0.7s								
MA2	Magadan	83.46	344	P	P	19 20 46.1	-1.0		
MA2				IAmb	IAmb	19 20 46.9			
	comp=Z,10nm,0.7s								
ELK	Elko	83.47	43	P	P	19 20 48.6	+0.6		
ELK				pmax	pmax				
	comp=Z,5.0nm,0.9s								
ELK	Elko	83.47	43	P	P	19 20 48.6	+0.6		
HPIG		83.62	59	P	P	19 20 49.6	+0.7		
HPIG				IAmb	IAmb	19 20 51.4			
	comp=Z,12nm,0.8s								
MNSI	Mandailing Nat	83.78	273	P	P	19 20 49.4	-0.4		
G08A	Pilot Rock	83.82	37	P	P	19 20 50.4	+0.9		
B05A	Bryant	83.94	34	P	P	19 20 51.6	+1.8		
	baz=231								
KULM	Kulim	84.33	278	IAmb	IAmb	19 20 54.4			
	comp=Z,23nm,0.9s								
KULM	Kulim	84.33	278	P	P	19 20 54.0	+1.4		
121A	Cookes Peak, D	84.50	53	P	P	19 20 55.6	+2.3		
	baz=242,SNR=8.5								
121A	Cookes Peak, D	84.50	53	P	P	19 20 54.6	+1.4		
121A				IAmb	IAmb	19 20 56.6			
	comp=Z,12nm,0.9s								
RPSI	Rantau Prapat	85.04	275	P	P	19 20 55.6	-0.5		
RPSI				IAmb	IAmb	19 20 56.9			
	comp=Z,29nm,1.1s								
PSI	Prapat	85.08	275	P	P	19 20 55.5	-0.9		
	comp=Z,9.6nm,0.7s,baz=180,slow=6.2,SNR=9.3								
PSI	Prapat	85.08	275	P	P	19 20 55.6	-0.9		
PSI				pmax	pmax				
	comp=Z,29nm,1.1s								
B08A	Colville Reser	85.45	35	P	P	19 20 57.1	-0.3		
TRF	Thorofare Moun	85.81	12	IAmb	IAmb	19 20 58.7			
	comp=Z,28nm,0.8s								
GSI	Gunungsitoli	85.83	273	P	P	19 21 00.1	+0.1		
GSI				IAmb	IAmb	19 21 02.1			
	comp=Z,42nm,1.0s								
MNTX	Cornudas Mount	85.94	54	P	P	19 21 02.0	+1.9		
	baz=244,SNR=17								
MNTX	Cornudas Mount	85.94	54	P	P	19 21 01.5	+1.4		
MNTX				IAmb	IAmb	19 21 02.5			
	comp=Z,8.7nm,0.7s								
BJT	Baijiatuau	85.96	315	P	P	19 20 59.7	-0.3		
BJT				pmax	pmax				
	comp=Z,11nm,0.7s								
BJT	Baijiatuau	85.96	315	P	P	19 20 59.7	-0.3		
BJT				IAmb	IAmb	19 21 01.1			
	comp=Z,11nm,0.7s								
BJI	Beijing	85.97	315	P	P	19 21 00.5	+0.5		
BJI				pmax	pmax				
	comp=Z,15nm,0.7s								
SEY	Seymchan	86.02	347	P	P	19 20 58.9	-0.8		
	comp=Z,16nm,0.7s,baz=147,slow=5.3,SNR=15								
SEY	Seymchan	86.02	347	*i* P	P	19 20 59.0	-0.7		
RND	Reindeer	86.06	12	IAmb	IAmb	19 21 00.8			
	comp=Z,45nm,1.1s								
BNM	Barren Site	86.10	52	P	P	19 21 02.0	+0.9		
TX31	Lajitas Ar. Si	86.25	57	IAmb	IAmb	19 21 04.9			
	comp=Z,40nm,0.9s								
TXAR	Lajitas Array	86.25	57	P	P	19 21 02.9	+1.1		
	comp=Z,12nm,0.9s,baz=220,slow=6.2,SNR=63								
TXAR				pP	pP	19 22 26.6	+0.4		
	comp=Z,3.5nm,1.1s,baz=204,slow=2.7,SNR=3.3								
ENH	Enshi	86.27	304	IAmb	IAmb	19 21 03.2			
	comp=Z,37nm,1.1s								
MCK	McKinley	86.33	12	IAmb	IAmb	19 21 01.9			
	comp=Z,23nm,0.9s								
ANMO	Albuquerque	86.59	51	P	P	19 21 04.2	+0.8		
ANMO				pmax	pmax				
	comp=Z,4.0nm,0.8s								
ANMO	Albuquerque	86.59	51	P	P	19 21 04.7	+1.3		
	baz=243								
ANMO	Albuquerque	86.59	51	P	P	19 21 04.2	+0.8		
GYA	Guiyang	86.94	299	*e*P	P	19 21 06.0	+0.8		
GYA				pmax	pmax				
	comp=Z,10.0nm,0.5s								
MCMT	McKenzie Canyo	87.15	40	P	P	19 21 06.9	+1.0		
WRH	Wood River Hil	87.16	12	P	P	19 21 04.4	-0.8		
WRH				IAmb	IAmb	19 21 05.7			
	comp=Z,24nm,1.1s								
HDA	Harding Lake	87.34	13	P	P	19 21 05.3	-0.7		
	baz=208								
HDA	Harding Lake	87.34	13	IAmb	IAmb	19 21 06.1			
	comp=Z,9.4nm,0.8s								
CCB	Clear Creek Bu	87.38	12	IAmb	IAmb	19 21 05.9			
	comp=Z,9.7nm,0.7s								
ZEA	Zeya	87.49	331	*e*P	P	19 21 08.0	+1.1		
COLA	College	87.57	12	*i* P	P	19 21 06.2	-0.8		
COLA				pmax	pmax				
	comp=Z,15nm,0.9s								
MDM	Murphy Dome	87.57	12	IAmb	IAmb	19 21 06.9			
	comp=Z,11nm,0.9s								
DLMT	Dillon	87.59	40	P	P	19 21 09.0	+1.2		
S22A	4UR Ranch, Cre	87.60	48	P	P	19 21 09.6	+1.3		
	baz=243								
IL31		87.67	13	P	P	19 21 06.3	-1.1		
ILAR	Eielson Array	87.67	13	P	P	19 21 06.5	-1.1		
	comp=Z,4.1nm,0.8s,baz=229,slow=5.1,SNR=13								
ILAR				pP	pP	19 22 32.6	+0.3		
	comp=Z,0.4nm,0.8s,baz=324,slow=36,SNR=1.5								
ILAR				PP	PP	19 24 39.4	0.0		
	comp=Z,2.2nm,1.0s,baz=219,slow=7.3,SNR=4.8								
IMW	Indian Meadow	87.84	42	P	P	19 21 10.4	+1.2		
POKR	Poker Plat Res	87.87	12	P	P	19 21 07.4	-1.0		
	baz=208								
BW06	Boulder Array	88.16	43	P	P	19 21 12.3	+1.7		
	baz=241								
PDAR	Pinedale Array	88.16	43	P	P	19 21 10.9	+0.3		
	comp=Z,2.5nm,0.8s,baz=184,slow=2.7,SNR=9.7								
XAN	Xi'an	88.32	307	P	P	19 21 12.0	+0.6		
XAN				pmax	pmax				
	comp=Z,35nm,1.2s								
XAN	Xi'an	88.32	307	P	P	19 21 12.0	+0.6		
XAN				pmax	pmax				
	comp=Z,38nm,1.1s								
XAN	Xi'an	88.32	307	P	P	19 21 12.0	+0.6		
XAN				IAmb	IAmb	19 21 13.4			
	comp=Z,38nm,1.1s								
SNAA	Sanae	88.51	178	P	P	19 21 11.6	0.0		
SNAA	Sanae	88.51	178	P	P	19 21 11.8	+0.1		
SNAA				pmax	pmax				
	comp=Z,4.0nm,0.7s								
SNAA	Sanae	88.51	178	P	P	19 21 11.8	+0.1		
SDCO	Great Sand Dun	88.54	49	P	P	19 21 14.2	+1.5		
	baz=243								
BILL	Bilibino	88.59	354	*i* P	P	19 21 11.4	-0.4		
BILL				pmax	pmax				
	comp=Z,24nm,2.7s								
BILL	Bilibino	88.59	354	P	P	19 21 11.3	-0.4		
VNA3	Neumayer Olymp	88.61	176	P	P	19 21 12.4	+0.3		
DAWY	Dawson	88.79	16	P	P	19 21 12.7	-0.2		
DAWY				IAmb	IAmb	19 21 13.9			
	comp=Z,9.8nm,0.9s								
WALA	Waterton Lakes	88.80	36	P	P	19 21 14.2	+0.9		
MSTX	Muleshoe	88.90	53	P	P	19 21 15.6	+1.4		
	baz=245								
YNE	Yellowstone No	88.98	41	P	P	19 21 14.2	-0.2		
T25A	Trinidad	89.05	50	P	P	19 21 16.1	+1.2		
	baz=244								
VNA2	Neumayer--Watz	89.06	177	P	P	19 21 14.8	+0.6		
	baz=184,slow=3.6								
833A	Chaparral WMA,	89.25	60	P	P	19 21 17.5	+1.7		
	baz=247								
VNA1	Neumayer--Stat	89.28	176	P	P	19 21 15.8	+0.6		
HHC	Hu-ho-hao-te	89.45	314	*e*P	P	19 21 17.3	+0.7		
HHC				*e*S	S	19 31 34.5	-0.3		
HHC				pmax	pmax				
	comp=Z,8.0nm,0.9s								
HHC				pmax	pmax				
	comp=Z,160nm,5.7s								
KMI	Kunming	89.68	297	P	P	19 21 20.0	+1.8		
KMI				pmax	pmax				
	comp=Z,26nm,0.9s								
KMI				pmax	pmax				
	comp=Z,2μm,14.0s								
KMI				LR	LR				
	comp=Z,480nm,14.4s								
KMI				LR	LR				
	comp=Z,340nm,11.7s								
KMI				LR	LR				
	comp=Z,230nm,11.9s								
AMTX	Amarillo	90.10	53	P	P	19 21 20.9	+1.1		
	baz=246								
AMTX	Amarillo	90.10	53	P	P	19 21 20.0	+0.3		
AMTX				IAmb	IAmb	19 21 21.5			
	comp=Z,7.0nm,0.7s								
CM31	Chiang Mai Arr	90.54	289	P	P	19 21 23.1	+1.1		
CM31				IAmb	IAmb	19 21 24.6			
	comp=Z,30nm,1.1s								
CMAR	Chiang Mai Arr	90.54	289	P	P	19 21 22.8	+0.8		
	comp=Z,15nm,1.0s,baz=115,slow=2.9,SNR=61								
CMAR				pP	pP	19 22 49.0	+1.5		
	comp=Z,0.3nm,0.4s,baz=107,slow=38,SNR=1.7								
CMAR				PP	PP	19 25 07.3	+4.3		
	comp=Z,1.1nm,0.8s,baz=128,slow=4.9,SNR=4.6								
CMAR	Chiang Mai Arr	90.54	289	*i* P	P	19 21 23.3	+1.3		
CMAR				pmax	pmax				
	comp=Z,16nm,1.0s								
CHTO	Chiang Mai	90.66	290	P	P	19 21 23.1	+0.6		
CHTO				pmax	pmax				
	comp=Z,27nm,1.1s								
CHTO	Chiang Mai	90.66	290	P	P	19 21 23.1	+0.6		
CHTO				IAmb	IAmb	19 21 24.7			
	comp=Z,26nm,1.1s								
ABTX	Abilene, Hawle	90.74	56	P	P	19 21 24.0	+1.3		
	baz=247								
ABTX	Abilene, Hawle	90.74	56	P	P	19 21 22.8	+0.1		
ABTX				IAmb	IAmb	19 21 24.7			
	comp=Z,12nm,0.8s								
EPYK	Eagle Plains	91.32	15	P	P	19 21 24.6	0.0		
	baz=218								
EPYK	Eagle Plains	91.32	15	P	P	19 21 24.3	-0.2		
EPYK				IAmb	IAmb	19 21 25.2			
	comp=Z,13nm,0.8s								
YAK	Yakutsk	91.87	338	P	P	19 21 26.1	-1.0		
YAK				pmax	pmax				
	comp=Z,5.0nm,0.7s								
YAK	Yakutsk	91.87	338	P	P	19 21 26.1	-1.0		
RSSD	Black Hills	92.35	44	P	P	19 21 29.7	-0.3		
RSSD				pmax	pmax				
	comp=Z,5.0nm,1.0s								
RSSD	Black Hills	92.35	44	P	P	19 21 31.0	+1.0		
	baz=244								
RSSD	Black Hills	92.35	44	P	P	19 21 29.7	-0.3		
LZH	Lanzhou	92.96	307	⇑P	P	19 21 34.5	+1.5		
LZH				pP	pP	19 23 00.5	+1.6		
LZH				sP	sP	19 23 32.5	-4.5		
LZH				pmax	pmax				
	comp=Z,24nm,1.3s								
LZH				pmax	pmax				
	comp=Z,93nm,5.4s								
INK	Inuvik	93.61	15	IAmb	IAmb	19 21 38.5			
	comp=Z,8.0nm,1.0s								
ULN	Ulaanbaatar	95.39	319	*i* P	P	19 21 43.1	-0.7		
ULN				pmax	pmax				
	comp=Z,6.0nm,1.1s								
SONM	Songino Array	95.78	319	P	P	19 21 45.0	-0.5		
	comp=Z,1.0nm,0.5s,baz=141,slow=5.1,SNR=7.3								
SONM				PP	PP	19 25 44.7	+1.4		
	comp=Z,1.3nm,0.8s,baz=123,slow=7.8,SNR=4.3								
YKA	Yellowknife Ar	95.78	25	P	P	19 21 44.8	-0.2		
	comp=Z,2.0nm,0.9s,baz=233,slow=4.8,SNR=9.1								
GTA	Gaotai	97.14	309	*e*P	P	19 21 51.5	-0.4		
GTA				pmax	pmax				
	comp=Z,3.0nm,1.1s								
TIXI	Tiksi	98.41	345	*i* P	Pdif	19 21 56.3	-0.3		
TIXI				pmax	pmax				
	comp=Z,4.0nm,1.8s								
ZALV	Zalesovo Beam	110.49	321	PKiKP	PKiKP	19 26 47.7	-1.4		
	comp=Z,1.5nm,0.6s,baz=230,slow=0.8,SNR=8.3								
ZALV				PP	PP	19 27 27.9	-3.8		
	comp=Z,1.4nm,0.8s,baz=107,slow=5.1,SNR=4.1								
MKAR	Makanchi Array	111.30	314	PKiKP	PKiKP	19 26 49.5	-1.5		
	comp=Z,1.4nm,0.6s,baz=203,slow=0.6,SNR=15								
MKAR				PP	PP	19 27 34.0	-3.8		
	comp=Z,2.5nm,1.0s,baz=102,slow=10,SNR=6.8								
KK31	Karatay Array	119.42	309	PKiKP	PKPdf	19 27 05.9	-0.8		
KK31	Karatay Array	119.42	309	PKPdf	PKPdf	19 27 05.8	-0.8		
GAR	Garm	119.45	304	PKPdf	PKPdf	19 27 05.8	-1.2		
ARU	Arti	125.13	326	*i* PKiKP	PKPdf	19 27 16.3	-0.8		
ARU						19 29 13.7			
ARU						19 33 52.4			
ARU	Arti	125.13	326	PKPdf	PKPdf	19 27 16.4	-0.8		
BOSA	Boshof	126.99	205	PKP	PKPdf	19 27 21.7	-0.2		
	comp=Z,2.2nm,0.7s,baz=141,slow=4.3,SNR=5.1								
BOSA	Boshof	126.99	205	PKiKP	PKPdf	19 27 22.3	+0.4		
BOSA	Boshof	126.99	205		PKPdf	19 27 22.3	+0.4		
ARCES	ARCESS Array B	128.53	350	PKP	PKPdf	19 27 22.8	-0.5		
	comp=Z,3.7nm,0.6s,baz=14,slow=1.6,SNR=28								
ARCES				SKPbc	SKPbc	19 30 09.3			
	comp=Z,5.4nm,0.9s,baz=32,slow=4.8,SNR=10								
GEYT	Alibeck	129.03	303	PKP	PKPdf	19 27 23.9	-1.3		
	comp=Z,1.0nm,0.6s,baz=354,slow=1.5,SNR=2.4								
GEYT				PP	sPKPdf	19 29 34.9	+2.8		
	comp=Z,0.6nm,0.4s,baz=4.2,slow=40,SNR=2.7								
FINES	FINESS Array B	135.45	344	PKP	PKPdf	19 27 35.8	-0.8		
	comp=Z,1.9nm,0.6s,baz=18,slow=4.0,SNR=9.4								
FINES				SKPbc	SKPbc	19 30 31.9	-0.4		
	comp=Z,3.4nm,0.9s,baz=15,slow=2.2,SNR=6.4								
OBN	Obninsk	136.60	332	*ce*PKiKP	PKPdf	19 27 39.2	+0.3		
OBN				*e*		19 29 06.1			
OBN				*e*		19 30 23.0			
OBN				*e*PPP	PPP	19 33 29.1			
OBN				pmax	pmax				
	comp=Z,7.0nm,0.5s								
NB2	NORSAR Subarr	138.54	354	PKP	PKPpre	19 27 34.2			
	comp=Z,0.9nm,0.6s,baz=19,slow=3.7								
NOA	NORSAR Array B	138.54	354	PKhKP	PKPpre	19 27 34.7			
	comp=Z,1.2nm,0.7s,baz=22,slow=3.9,SNR=7.2								
KBZ	Khabaz	138.99	314	SKPbc	SKPbc	19 30 41.2	-2.0		
	comp=Z,4.8nm,0.9s,

ASSE	**Asse, Remlinge**	**147.31**	**351**	*e*PKPbc	**PKPbc**	**19 28 00.4**	**-0.4**
	baz=16,slow=2.5						
UZH	**Uzhgorod**	**147.34**	**336**	*e*PKIKP	**PKPdf**	**19 27 57.4**	**-0.7**
UZH				*i*		19 28 02.3	
KSP	**Ksiaz**	**147.38**	**344**	*e*PKP	**PKPbc**	**19 28 01.2**	**0.0**
ODBI	**Odobesti**	**147.38**	**328**	⇑P	**PKPab**	**19 28 05.7**	**+1.4**
NIE	**Niedzica**	**147.42**	**338**	*e*PKP	**PKPbc**	**19 28 02.0**	**+0.7**
ANTO	**Ankara**	**147.46**	**314**	⇑P	**PKPbc**	**19 28 02.2**	**+0.4**
ANTO	**Ankara**	**147.46**	**314**	PKP2	**PKPbc**	**19 28 01.4**	**-0.4**
ANTO	**Ankara**	**147.46**	**314**		**PKPbc**	**19 28 01.4**	**-0.4**
VRI	**Vrincioaia**	**147.47**	**328**	⇑P	**PKPbc**	**19 28 01.7**	**+0.1**
VRI	**Vrincioaia**	**147.47**	**328**	⇑PKP2	**PKPbc**	**19 28 01.7**	**+0.1**
BR231	**Keskin MP Arra**	**147.49**	**314**		**PKPbc**	**19 28 01.7**	**-0.2**
IBBN	**Ibbenburen**	**147.50**	**354**	*e*PKPbc	**PKPbc**	**19 28 01.1**	**-0.3**
	baz=16,slow=2.5						
IBBN				*e*PKPab	**PKPab**	**19 28 04.2**	**-0.3**
	baz=14,slow=4.2						
PLOR	**Plostina**	**147.52**	**328**	⇓P	**PKPab**	**19 28 05.6**	**+0.7**
PLOR	**Plostina**	**147.52**	**328**	⇓PKP2	**PKPab**	**19 28 05.6**	**+0.7**
CLZ	**Clausthal**	**147.64**	**351**	*e*PKPbc	**PKPbc**	**19 28 02.0**	**+0.1**
	baz=16,slow=2.5						
CLZ				*e*PKPab	**PKPab**	**19 28 04.9**	**-0.3**
	baz=14,slow=4.2						
TRPA	**Tarpa**	**147.65**	**335**	⇑P	**PKPbc**	**19 28 02.0**	**+0.1**
HARR	**Harsova**	**147.65**	**325**	⇑P	**PKPbc**	**19 28 02.4**	**+0.4**
HARR	**Harsova**	**147.65**	**325**	⇑PKP2	**PKPbc**	**19 28 02.4**	**+0.4**
OSTC	**Ostas**	**147.66**	**344**	⇑*e*PKP	**PKPbc**	**19 28 02.4**	**+0.4**
OSTC				*e*PKPAB	**PKPab**	**19 28 05.5**	**+0.2**
CHVC	**Chvalec**	**147.67**	**344**	⇑*e*PKP	**PKPbc**	**19 28 02.1**	**+0.1**
CHVC				*e*PKPAB	**PKPab**	**19 28 05.5**	**+0.2**
CLL	**Collm**	**147.70**	**348**	⇓*i*PKPbc	**PKiKP**	**19 28 02.8**	**-0.8**
	comp=Z,22nm,0.7s						
CLL				⇑*i*PKPab	**PKPab**	**19 28 05.7**	**+0.3**
	comp=Z,17nm,0.7s						
CLL				*e*pPKPab	**pPKPab**	**19 29 35.0**	**+2.6**
CLL				*i* SKPdf	**SKPdf**	**19 30 59.5**	**+2.6**
CLL				*i* SKPbc	**SKiKP**	**19 31 06.3**	**+2.2**
	comp=Z,9.0nm,1.5s						
CLL	**Collm**	**147.70**	**348**	PKP2	**PKPbc**	**19 28 02.3**	**+0.4**
CLL	**Collm**	**147.70**	**348**		**PKPbc**	**19 28 02.3**	**+0.4**
UPC	**Upice**	**147.76**	**344**	*e*PKP2	**PKPbc**	**19 28 02.3**	**+0.1**
UPC	**Upice**	**147.76**	**344**	⇑*e*PKP	**PKPbc**	**19 28 02.3**	**+0.1**
UPC				*e*PKPAB	**PKPab**	**19 28 05.9**	**+0.2**
DPC	**Dobruska-Polom**	**147.82**	**344**	*e*PKP2	**PKPbc**	**19 28 02.5**	**+0.1**
DPC	**Dobruska-Polom**	**147.82**	**344**	⇑*e*PKP	**PKPbc**	**19 28 02.5**	**+0.1**
DPC				*e*PKPAB	**PKPab**	**19 28 06.4**	**+0.4**
BRG	**Berggiesshubel**	**147.91**	**347**	*i* PKP	**PKPdf**	**19 27 59.2**	**+0.2**
	comp=Z,3.5nm,1.1s						
BRG	**Berggiesshubel**	**147.91**	**347**	*i* PKP	**PKPbc**	**19 28 02.4**	**-0.1**
	comp=Z,13nm,0.8s						
BRG	**Berggiesshubel**	**147.91**	**347**	*i* PKP	**PKPab**	**19 28 06.0**	**-0.3**
	comp=Z,15nm,0.8s						
BRG				*e*pPKP	**pPKPdf**	**19 29 22.2**	**-7.0**
	comp=Z,4.4nm,1.1s						
BRG				*e*SKP		19 31 06.4	
	comp=Z,5.1nm,1.1s						
	comp=N,383nm,22.1s						
	comp=E,147nm,16.9s						
	comp=Z,428nm,20.6s						
BRG	**Berggiesshubel**	**147.91**	**347**	*e*PKPbc	**PKPbc**	**19 28 02.5**	**-0.1**
	baz=16,slow=2.5						
BRG				*e*PKPab	**PKPab**	**19 28 06.0**	**-0.3**
	baz=14,slow=4.2						
BRG	**Berggiesshubel**	**147.91**	**347**	*i* PKIKP	**PKPdf**	**19 27 59.2**	**+0.2**
BRG				*i*		19 28 06.0	
BRG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,13nm,0.8s						
BRG				pmax	pmax		
	comp=Z,15nm,0.8s						
BRG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BRG				pmax	pmax		
	comp=N,5.0nm,1.1s						
BRG				MLR	MLR		
	comp=N,383nm,22.1s						
BRG				MLR	MLR		
	comp=E,147nm,16.9s						
BRG				MLR	MLR		
	comp=Z,428nm,20.6s						
LANS	**Liptovska Anna**	**147.93**	**339**	*e*PKP2	**PKiKP**	**19 28 03.7**	**-0.6**
LANS	**Liptovska Anna**	**147.93**	**339**	*e*PKP	**PKiKP**	**19 28 03.7**	**-0.6**
KRLC	**Kraliky**	**147.94**	**343**	*e*PKIKP	**PKPdf**	**19 27 59.0**	**-0.1**
KRLC				*e*		19 28 06.7	
KRLC	**Kraliky**	**147.94**	**343**	*e*PKPDF	**PKPdf**	**19 27 59.0**	**-0.1**
KRLC				⇑*e*PKP	**PKPbc**	**19 28 02.7**	**0.0**
KRLC				*e*PKPAB	**PKPab**	**19 28 06.7**	**+0.2**
GTTG	**Gottingen**	**147.99**	**351**	*e*PKPbc	**PKPbc**	**19 28 02.5**	**-0.1**
	baz=16,slow=2.5						
GTTG				*e*PKPab	**PKPab**	**19 28 06.3**	**-0.2**
	baz=14,slow=4.2						
MORC	**Moravsky Berou**	**147.99**	**342**	*e*PKP	**PKPbc**	**19 28 02.7**	**-0.1**
MORC	**Moravsky Berou**	**147.99**	**342**	PKP2	**PKPbc**	**19 28 02.3**	**-0.5**
MORC	**Moravsky Berou**	**147.99**	**342**		**PKPbc**	**19 28 02.3**	**-0.5**
FBE	**Freiberg**	**147.99**	**347**	*e*PKPbc	**PKPbc**	**19 28 03.1**	**+0.3**
	baz=16,slow=2.5						
FBE				*e*PKPab	**PKPab**	**19 28 06.6**	**+0.1**
	baz=14,slow=4.2						
NEUB	**Neuenburg**	**148.02**	**349**	*e*PKPbc	**PKPbc**	**19 28 02.8**	**0.0**
	baz=16,slow=2.5						
NEUB				*e*PKPab	**PKPab**	**19 28 06.3**	**-0.4**
	baz=14,slow=4.2						
PVCC	**Panska Ves**	**148.09**	**346**	*e*PKP2	**PKPbc**	**19 28 03.5**	**+0.5**
PVCC	**Panska Ves**	**148.09**	**346**	⇑*e*PKP	**PKPbc**	**19 28 03.5**	**+0.5**
PVCC				*e*PKPAB	**PKPab**	**19 28 07.3**	**+0.3**
PVCC				*ex*	x	19 28 10.7	
MLR	**Muntele Rosu**	**148.13**	**328**	⇓P	**PKPbc**	**19 28 02.9**	**-0.5**
MLR	**Muntele Rosu**	**148.13**	**328**	⇓PKP2	**PKPbc**	**19 28 02.9**	**-0.5**
MDUB	**Mudurnu**	**148.22**	**316**		**PKPbc**	**19 28 03.5**	**-0.2**
SECR		**148.39**	**328**	⇑P	**PKPbc**	**19 28 04.1**	**+0.2**
LEHL	**Lehliu**	**148.39**	**326**	⇑P	**PKPab**	**19 28 09.1**	**+0.8**
BUG	**Bochum--Univer**	**148.40**	**355**	*e*PKPbc	**PKPbc**	**19 28 03.4**	**-0.3**
	baz=16,slow=2.5						
BUG				*e*PKPab	**PKPab**	**19 28 07.5**	**-0.7**
	baz=14,slow=4.2						
SULR		**148.54**	**327**	⇓P	**PKPbc**	**19 28 04.4**	**+0.1**
PRA	**Prague**	**148.55**	**345**	*e*PKP2	**PKPbc**	**19 28 04.3**	**+0.1**
PRA	**Prague**	**148.55**	**345**	⇑*e*PKP	**PKPbc**	**19 28 04.3**	**+0.1**
MOX	**Moxa**	**148.59**	**349**	*e*PKPbc	**PKPbc**	**19 28 04.2**	**-0.1**
	baz=16,slow=2.5						
PRU	**Pruhonice**	**148.60**	**345**	*e*PKP2	**PKPbc**	**19 28 04.3**	**0.0**
PRU	**Pruhonice**	**148.60**	**345**	⇑*e*PKP	**PKPbc**	**19 28 04.3**	**0.0**
PRU				*e*PKPAB	**PKPab**	**19 28 08.9**	**-0.2**
VOIR		**148.60**	**329**	⇓P	**PKPbc**	**19 28 05.0**	**+0.4**
VOIR		**148.60**	**329**	⇓PKP2	**PKPbc**	**19 28 05.0**	**+0.4**
GOPC	**GO Pecny, Ondr**	**148.61**	**345**	*e*PKP2	**PKPbc**	**19 28 04.5**	**+0.1**
GOPC	**GO Pecny, Ondr**	**148.61**	**345**	⇑*e*PKP	**PKPbc**	**19 28 04.5**	**+0.1**
GOPC				*e*PKPAB	**PKPab**	**19 28 09.4**	**+0.2**
DRGR		**148.64**	**333**	⇑P	**PKPbc**	**19 28 04.7**	**+0.1**
DRGR		**148.64**	**333**	⇑PKP2	**PKPbc**	**19 28 04.7**	**+0.1**
PLN	**Plauen**	**148.65**	**348**	*e*PKPbc	**PKPbc**	**19 28 04.4**	**-0.1**
	baz=16,slow=2.5						
TANN	**Tannenbergstha**	**148.66**	**348**	*e*PKPbc	**PKPbc**	**19 28 04.4**	**-0.1**
	baz=16,slow=2.5						
VRAC	**Vranov**	**148.69**	**342**	*e*PKP	**PKPbc**	**19 28 04.4**	**-0.2**
VRAC	**Vranov**	**148.69**	**342**	⇑P	**PKPbc**	**19 28 04.9**	**+0.3**
VRAC	**Vranov**	**148.69**	**342**	⇑PKP2	**PKPbc**	**19 28 04.9**	**+0.3**
VYHS	**Vyhne**	**148.71**	**339**	*e*PKP2	**PKPbc**	**19 28 04.7**	**0.0**
VYHS	**Vyhne**	**148.71**	**339**	*e*PKP	**PKPbc**	**19 28 04.7**	**0.0**
GUNZ	**Gunzen**	**148.73**	**348**	*e*PKPbc	**PKPbc**	**19 28 04.8**	**+0.1**
	baz=16,slow=2.5						
GUNZ				*e*PKPab	**PKPab**	**19 28 09.5**	**-0.1**
	baz=14,slow=4.2						
JAVC	**Velka Javorina**	**148.77**	**341**	*e*PKP	**PKiKP**	**19 28 05.8**	**-0.2**
WERN	**Wernitzgruen**	**148.79**	**348**	*e*PKPbc	**PKPbc**	**19 28 05.0**	**+0.2**
	baz=16,slow=2.5						
PSZ	**Piszkesteto**	**148.83**	**337**	⇑P	**PKPbc**	**19 28 05.2**	**+0.2**
PSZ	**Piszkesteto**	**148.83**	**337**	PKP2	**PKPbc**	**19 28 04.7**	**-0.3**
PSZ	**Piszkesteto**	**148.83**	**337**		**PKPbc**	**19 28 04.7**	**-0.3**
ARR	**Arges**	**148.85**	**329**	⇑P	**PKiKP**	**19 28 06.2**	**-0.1**
KRUC	**Moravsky**	**148.97**	**342**	*e*PKP	**PKPbc**	**19 28 05.1**	**-0.1**
TREC	**Trest**	**149.00**	**344**	*e*PKP2	**PKPbc**	**19 28 05.4**	**0.0**
TREC	**Trest**	**149.00**	**344**	⇑*e*PKP	**PKPbc**	**19 28 05.4**	**0.0**
TREC				*e*PKPAB	**PKPab**	**19 28 10.5**	**-0.3**
PBCC	**Pribram**	**149.01**	**346**	⇑*e*PKP	**PKPbc**	**19 28 05.4**	**0.0**
PBCC				*e*PKPAB	**PKPab**	**19 28 10.7**	**-0.1**
MANZ	**Manzenberg**	**149.13**	**348**	*e*PKPbc	**PKPbc**	**19 28 05.8**	**+0.1**
	baz=16,slow=2.5						
AHRW	**Bad Neuenahr-A**	**149.31**	**354**	*e*PKPbc	**PKPbc**	**19 28 05.9**	**-0.1**
	baz=16,slow=2.5						
MODS	**Modra-Piesok**	**149.32**	**341**	*e*PKP2	**PKPbc**	**19 28 06.0**	**-0.2**
MODS	**Modra-Piesok**	**149.32**	**341**	*e*PKP	**PKPbc**	**19 28 06.0**	**-0.2**
ROTZ	**Rotzenmuhle**	**149.32**	**348**	*e*PKPbc	**PKPbc**	**19 28 06.1**	**0.0**
	baz=16,slow=2.5						
MEM	**Membach**	**149.32**	**356**	PKiKP	**PKPbc**	**19 28 05.7**	**-0.4**
BSTI	**Sart Tilman**	**149.38**	**356**	PKiKP	**PKPbc**	**19 28 06.2**	**0.0**
LEF	**Lefka**	**149.41**	**306**	⇓P	**PKPbc**	**19 28 06.4**	**-0.3**
TNS	**Taunus Mts**	**149.48**	**353**	*e*PKPbc	**PKPbc**	**19 28 06.5**	**0.0**
	baz=16,slow=2.5						
TNS				*e*PKPab	**PKPab**	**19 28 12.3**	**-0.5**
	baz=14,slow=4.2						
SIRR	**Siria**	**149.50**	**334**	⇑P	**PKPbc**	**19 28 07.0**	**+0.3**
SNF	**Seneffe**	**149.51**	**358**	PKiKP	**PKPbc**	**19 28 06.2**	**-0.3**
ZST	**Bratislava**	**149.53**	**341**	*e*PKP2	**PKPab**	**19 28 13.5**	**+0.5**
ZST	**Bratislava**	**149.53**	**341**	*e*PKP	**PKPab**	**19 28 13.5**	**+0.5**
GRA1	**Grafenberg Arr**	**149.58**	**349**		**PKPbc**	**19 28 06.8**	**0.0**
GRF	**Grafenberg Arr**	**149.58**	**349**	*e*PKPbc	**PKPbc**	**19 28 06.8**	**0.0**
	baz=16,slow=2.5						
GRF				*e*PKPab	**PKPab**	**19 28 13.2**	**0.0**
	baz=14,slow=4.2						
GRF	**Grafenberg Arr**	**149.58**	**349**	PKP2	**PKPbc**	**19 28 06.8**	**0.0**
KHC	**Kasperske Hory**	**149.63**	**346**	PKHKP	**PKPdf**	**19 28 01.4**	**-0.5**
KHC						19 28 14.0	
KHC	**Kasperske Hory**	**149.63**	**346**	*e*PKPDF	**PKPdf**	**19 28 01.4**	**-0.5**
KHC				⇑*e*PKP	**PKPbc**	**19 28 06.9**	**-0.1**
KHC				*e*PKPAB	**PKPab**	**19 28 14.1**	**+0.7**
KHC				*e*pPKP	**pPKPab**	**19 29 40.5**	**+0.6**
KHC	**Kasperske Hory**	**149.63**	**346**	PKPdf	**PKPdf**	**19 28 01.4**	**-0.5**
KHC				PKPbc	**PKPbc**	**19 28 06.8**	**-0.1**
KHC				PKPab	**PKPab**	**19 28 14.0**	**+0.7**
BMRD	**Maredsous**	**149.70**	**357**	PKiKP	**PKPbc**	**19 28 06.8**	**-0.1**
BMRD				PKPab	**PKPab**	**19 28 12.9**	**-0.6**
GZR	**Gura Zlata**	**149.70**	**331**	⇑P	**PKPbc**	**19 28 07.0**	**-0.2**
GZR	**Gura Zlata**	**149.70**	**331**	⇑PKIKP	**PKPbc**	**19 28 07.0**	**-0.2**
WET	**Wettzell**	**149.77**	**347**	*e*PKPbc	**PKPbc**	**19 28 07.2**	**0.0**
	baz=16,slow=2.5						
WET				*e*PKPab	**PKPab**	**19 28 14.0**	**0.0**
	baz=14,slow=4.2						
GEC2	**GERESS Array S**	**149.87**	**345**	*e*PKPbc	**PKPbc**	**19 28 07.5**	**-0.1**
	baz=16,slow=2.5						
GEC2				*e*PKPab	**PKPab**	**19 28 14.3**	**-0.2**
	baz=14,slow=4.2						
GEC2	**GERESS Array S**	**149.87**	**345**		**PKPbc**	**19 28 06.6**	**-1.0**
GEC2				PKPab	**PKPab**	**19 28 14.5**	**0.0**
GERES	**GERESS Array B**	**149.87**	**345**	PKPbc	**PKPbc**	**19 28 06.6**	**-1.0**
	comp=Z,14nm,0.8s,baz=101,slow=0.7,SNR=32						
DOU	**Dourbes**	**149.91**	**358**	PKPdf	**PKPdf**	**19 28 01.6**	**-0.6**
DOU				PKiKP	**PKPbc**	**19 28 07.2**	**-0.2**
DOU				PKPab	**PKPab**	**19 28 13.1**	**-1.3**
BZS	**Buzias**	**150.04**	**333**	⇑P	**PKPbc**	**19 28 08.0**	**0.0**
BZS	**Buzias**	**150.04**	**333**	⇑PKHKP	**PKPbc**	**19 28 08.0**	**0.0**
CONA	**Conrad Observa**	**150.14**	**342**	*i* PKiKP	**PKPbc**	**19 28 08.2**	**0.0**
	comp=Z,18nm,0.6s,SNR=20						
WLF	**Walferdange**	**150.25**	**355**	PKiKP	**PKPbc**	**19 28 08.6**	**+0.2**
WLF				PKPab	**PKPab**	**19 28 14.0**	**-1.9**
WLF				*x*	x	19 28 15.5	
WLF	**Walferdange**	**150.25**	**355**	*e*PKPbc	**PKiKP**	**19 28 08.8**	**-0.1**
	baz=16,slow=2.5						
WLF				*e*PKPab	**PKPab**	**19 28 16.0**	**+0.1**
	baz=14,slow=4.2						
WLF	**Walferdange**	**150.25**	**355**	PKIKP	**PKPbc**	**19 28 08.5**	**+0.2**
WLF						19 28 16.1	
WLF	**Walferdange**	**150.25**	**355**		**PKPbc**	**19 28 08.5**	**+0.2**
WLF				PKPab	**PKPab**	**19 28 16.1**	**+0.2**
HERR	**Herculane**	**150.26**	**331**	⇑P	**PKPbc**	**19 28 08.2**	**-0.2**
PLVB	**Pleven**	**150.28**	**327**	⇓P	**PKPbc**	**19 28 08.7**	**+0.1**
BANR	**Banloc**	**150.43**	**333**	⇓P	**PKiKP**	**19 28 09.4**	**0.0**
MOA	**Molln**	**150.65**	**344**	*i* PKPbc	**PKPbc**	**19 28 08.9**	**-0.5**
	comp=Z,6.4nm,0.6s,SNR=6.9						
ARSA	**Arzberg**	**150.85**	**342**	*i* PKPbc	**PKPbc**	**19 28 09.1**	**-0.7**
	comp=Z,3.7nm,0.8s						
MANT	**Manisa**	**151.00**	**315**		**PKPbc**	**19 28 10.1**	**-0.6**
FUR	**Furstenfeldbru**	**151.03**	**348**	*e*PKPbc	**PKPbc**	**19 28 10.1**	**-0.1**
	baz=16,slow=2.5						
RJOB	**Jochberg**	**151.12**	**346**	*e*PKPbc	**PKPbc**	**19 28 10.0**	**-0.5**
	baz=16,slow=2.5						
BFO	**Black Forest**	**151.35**	**352**	*e*PKPbc	**PKPbc**	**19 28 10.7**	**-0.3**
	baz=16,slow=2.5						
BFO	**Black Forest**	**151.35**	**352**	PKIKP	**PKPbc**	**19 28 10.3**	**-0.6**
BFO	**Black Forest**	**151.35**	**352**		**PKPbc**	**19 28 10.3**	**-0.6**
SOKA	**Soboth**	**151.51**	**342**	*i* PKPbc	**PKPbc**	**19 28 10.5**	**-1.0**
	comp=Z,11nm,0.9s,SNR=6.1						
VTS	**Vitosha**	**151.55**	**327**	⇑P	**PKPbc**	**19 28 11.7**	**0.0**
VTS	**Vitosha**	**151.55**	**327**	⇑PKIKP	**PKPbc**	**19 28 11.7**	**0.0**
KBA	**Koelnbreinsper**	**151.60**	**345**	*i* PKPbc	**PKPbc**	**19 28 10.5**	**-1.2**
	comp=Z,10.0nm,0.6s,SNR=9.4						
UBR	**Ueberruh**	**151.72**	**349**	*e*PKPbc	**PKPbc**	**19 28 11.4**	**-0.5**
	baz=16,slow=2.5						
WATA	**Walderalm**	**151.77**	**347**	*i* PKPbc	**PKPbc**	**19 28 11.3**	**-0.8**
	comp=Z,9.0nm,0.6s,SNR=5.5						
RETA	**Reutte**	**151.78**	**348**	*i* PKPbc	**PKPbc**	**19 28 11.4**	**-0.7**
	comp=Z,3.8nm,0.6s						
OBKA	**Obir**	**151.81**	**342**	*i* PKPbc	**PKPbc**	**19 28 10.5**	**-1.6**
	comp=Z,5.7nm,0.8s						
WTTA	**Wattenberg**	**151.82**	**347**	*i* PKiKP	**PKPbc**	**19 28 11.7**	**-0.5**
	comp=Z,20nm,0.6s,SNR=10						
MOTA	**Moosalm**	**151.85**	**348**	*i* PKPbc	**PKPbc**	**19 28 11.4**	**-0.9**
	comp=Z,9.7nm,0.8s,SNR=5.6						
MYKA	**Terra Mystica**	**151.94**	**344**	*i* PKPbc	**PKPbc**	**19 28 11.0**	**-1.4**
	comp=Z,9.0nm,0.6s						
SQTA	**Sankt Quirin**	**151.95**	**348**	*i* PKPbc	**PKPbc**	**19 28 11.8**	**-0.6**
	comp=Z,12nm,0.6s,SNR=6.2						
CLF	**Chambon-Foret**	**152.02**	**1**		**PKiKP**	**19 28 12.6**	**0.0**
ABTA	**Abfaltersbach**	**152.12**	**345**	*i* PKPbc	**PKPbc**	**19 28 11.6**	**-1.2**
	comp=Z,18nm,0.6s,SNR=8.5						
PRED	**Cave del Predi**	**152.14**	**344**		**PKPab**	**19 28 22.7**	**-1.3**
DAVA	**Damuels**	**152.14**	**349**	*i* PKPbc	**PKPbc**	**19 28 12.3**	**-0.6**
	comp=Z,12nm,0.8s,SNR=6.3						
FETA	**Feichten**	**152.24**	**348**	*i* PKiKP	**PKPbc**	**19 28 12.6**	**-0.5**
	comp=Z,8.3nm,0.7s						
CIMO	**Cimolais**	**152.54**	**345**		**PKPbc**	**19 28 12.7**	**-1.0**
FUORN	**Ofenpass-Fuorn**	**152.71**	**349**		**PKPbc**	**19 28 13.9**	**-0.4**
ESDC	**Sonseca Array**	**159.56**	**15**	PKP	**PKPdf**	**19 28 15.1**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=358,slow=5.2,SNR=2.8						
ESDC				PKPab	**PKPab**	**19 28 55.4**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=20,slow=4.7,SNR=5.0						
KEST	**Kesra**	**163.25**	**341**	PKPab	**PKPab**	**19 29 11.9**	**-0.4**
	comp=Z,4.5nm,0.7s,baz=117,slow=1.0,SNR=8.9						
TORD	**Torodi Ar. Bea**	**173.14**	**172**	PKPab	**PKPab**	**19 29 56.9**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=172,slow=4.1,SNR=6.2						
TORD				SKP	**SKPdf**	**19 31 23.4**	**+1.0**
	comp=Z,1.2nm,0.9s,baz=151,slow=3.4,SNR=3.7						

WBNET 31 19:11:23.2, 50.23N×12.45E, h8km, Ml0.1, 6C-3D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NKC	**Novy Kostel**	**0.00**	**237**	⇑P	Pg	19 11 24.9	+0.1
NKC				S	Sg	19 11 26.0	+0.2
LBCW	**Luby**	**0.04**	**323**	⇓P	Pg	19 11 25.1	+0.1
LBCW				S	Sg	19 11 26.5	+0.3
VAC	**Vackov**	**0.05**	**272**	⇓P	Pg	19 11 25.1	+0.1
VAC				S	Sg	19 11 26.3	0.0
KVC	**Kvetna**	**0.05**	**124**	S	Sg	19 11 26.3	-0.1
STCW	**Studenec**	**0.05**	**61**	⇑P	Pg	19 11 25.1	+0.1
STCW				S	Sg	19 11 26.4	0.0
SKC	**Skalna**	**0.09**	**222**	⇑P	Pg	19 11 25.5	0.0
SKC				S	Sg	19 11 27.0	0.0
POCW	**Potky**	**0.09**	**350**	⇑P	Pg	19 11 25.7	+0.2
POCW				S	Sg	19 11 27.4	+0.2
KACW	**Kaceov**	**0.10**	**154**	⇓P	Pg	19 11 25.7	+0.1
KACW				S	Sg	19 11 27.4	+0.1
KRCW	**Kraslice**	**0.11**	**28**	⇑P	Pg	19 11 26.0	+0.1
KRCW				S	Sg	19 11 27.8	+0.1
ZHC	**Zelena Hora**	**0.19**	**209**	⇑P	Pg	19 11 27.1	0.0

*PRU **31** 19:11:27.1±0.0, 50.22N×12.50E, h0km, West Bohemia Swarm*

WBNET 31 19:11:26.1, 50.23N×12.45E, h9km, Ml0.9, 5C-4D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NKC	**Novy Kostel**	**0.00**	**48**	*e*PG	Pg	19 11 27.5	-0.2
NKC				*e*SG	Sg	19 11 28.5	-0.4
	comp=Z,39nm,0.2s						
NKC	**Novy Kostel**	**0.00**	**48**	⇑P	Pg	19 11 27.8	+0.1
NKC				S	Sg	19 11 28.9	+0.1
LBCW	**Luby**	**0.04**	**327**	⇓P	Pg	19 11 28.1	+0.1
LBCW				S	Sg	19 11 29.4	+0.2
VAC	**Vackov**	**0.04**	**274**	⇓P	Pg	19 11 28.0	+0.1
VAC				S	Sg	19 11 29.3	0.0
STCW	**Studenec**	**0.06**	**60**	⇑P	Pg	19 11 28.1	0.0
STCW				S	Sg	19 11 29.3	-0.2
SKC	**Skalna**	**0.08**	**221**	⇓P	Pg	19 11 28.4	0.0
SKC				S	Sg	19 11 29.9	0.0
POCW	**Potky**	**0.09**	**352**	⇑P	Pg	19 11 28.7	+0.2
POCW				S	Sg	19 11 30.3	+0.1
KACW	**Kaceov**	**0.10**	**153**	⇓P	Pg	19 11 28.6	+0.1
KACW				S	Sg	19 11 30.4	0.0
KRCW	**Kraslice**	**0.11**	**28**	⇑P	Pg	19 11 28.9	+0.1
KRCW				S	Sg	19 11 30.7	-0.1
ZHC	**Zelena Hora**	**0.18**	**209**	⇑P	Pg	19 11 30.0	0.0
CLL	**Collm**	**1.13**	**18**	*i* Pg	Pn	19 11 48.3	+0.1
CLL				*i*		19 11 50.3	
CLL				*i* Sg	Sn	19 12 03.6	-0.2
CLL	**Collm**	**1.13**	**18**	*i* Sg	Sg	19 11 58.0	-4.6
CLL	**Collm**	**1.13**	**18**	*i* Sg	Sn	19 12 06.8	+3.0
CLL	**Collm**	**1.13**	**18**	*e*Sg	Sn	19 12 11.0	+7.2
KHC	**Kasperske Hory**	**1.32**	**146**	*e*PG	Pb	19 11 51.1	-0.1
KHC				*e*SG	Sb	19 12 08.4	+0.1
PRU	**Pruhonice**	**1.37**	**99**	*e*SG	Sg	19 12 10.2	0.0
	comp=Z,1.1nm,0.7s						
GOPC	**GO Pecny, Ondr**	**1.54**	**101**	*e*SG	Sb	19 12 14.5	0.0

*IDC **31** 19:13:04.1±2.0, 9.01N×126.74E, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.7/45, mbtmp4.0/5, Error ellipse: s-maj=207.6km s-min=30.5km az=69.0*
*MAN **31** 19:13:09.5, 9.44N×126.78E, h17km, mb4.9, ML3.8, MS3.8*

ISC 31 19:13:08.3±3.5, 9.43N±0.04×126.76E±0.09, h9km±22km, n16, σ1s40/23, mb4.1/5, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.30**	**286**	⇓*e*P	**Pn**	**19 13 32.1**	**-0.6**
SCPH				*e*S	**Sn**	**19 13 50.4**	**+0.2**
MSLP	**Maasin**	**2.00**	**291**	*e*P	**Pb**	**19 13 43.8**	**-1.1**
MSLP				*e*S	**Sb**	**19 14 09.9**	**0.0**
BUKP	**Musuan**	**2.27**	**228**	*e*P	**Pn**	**19 13 46.8**	**+0.7**
BUKP				*e*S	**Sn**	**19 14 15.7**	**+1.3**
MATI	**Mati**	**2.51**	**191**	*e*P	**Pn**	**19 13 49.4**	**0.0**
MATI				*e*S	**Sb**	**19 14 22.5**	**-2.2**
DMPH	**Davao City--Mi**	**2.63**	**208**	⇑*e*P	**Pb**	**19 13 56.5**	**+0.7**

	baz=297					
ENA	**Nanau**	**0.78 256**	P	Pn	19 37 37.3	+0.5
	baz=255					
ENA			S	Sn	19 37 50.3	+0.7
	baz=255					
TWE	**Neicheng**	**0.82 277**	P	Pn	19 37 37.8	+0.5
	baz=276					
TWE			S	Sn	19 37 51.2	+0.8
	baz=276					
NWF	**Wu-fen Shan**	**0.84 302**	*e*P	Pn	19 37 38.4	+0.8
	baz=302					
NWF			*e*S	Sn	19 37 52.2	+1.2
	baz=302					
NDT	**Datong Townshi**	**0.96 269**	P	Pn	19 37 39.8	+1.0
	baz=268					
NDT			S	Sn	19 37 54.6	+1.5
	baz=268					
TWA	**Mucha**	**0.96 292**	*e*P	Pn	19 37 39.3	+0.4
	baz=291					
TWA			*e*S	Sn	19 37 53.5	+0.3
	baz=291					
NWLT	**Wulai**	**0.98 279**	P	Pn	19 37 39.4	+0.3
	baz=279					
NWLT			S	Sn	19 37 53.9	+0.3
	baz=279					
NACB	**Ninganchiao**	**0.99 244**	*e*P	Pn	19 37 38.8	-0.4
	baz=243					
NACB			*e*S	Sn	19 37 53.4	-0.3
	baz=243					
NHDH	**Xindian Distri**	**1.01 290**	*e*P	Pn	19 37 39.8	+0.4
	baz=289					
NHDH			S	Sn	19 37 54.1	+0.1
	baz=289					
TWD	**Chiawan**	**1.04 239**	P	Pn	19 37 39.3	-0.4
	baz=238					
TWD			S	Sn	19 37 54.6	0.0
	baz=238					
YM01	**YM01**	**1.05 300**	P	Pn	19 37 40.4	+0.5
	baz=300					
YM01			*e*S	Sn	19 37 55.4	+0.4
	baz=300					
YM11	**YM11**	**1.05 301**	*e*P	Pn	19 37 40.5	+0.5
	baz=301					
YM10	**YM10**	**1.06 300**	*i* P	Pn	19 37 40.6	+0.5
	baz=300					
ETLH	**Xiulin Townshi**	**1.07 248**	*e*P	Pn	19 37 40.2	0.0
	baz=247					
ETLH			*e*S	Sn	19 37 55.6	+0.1
	baz=247					
YHNB	**Yeheng**	**1.08 273**	*e*P	Pn	19 37 41.0	+0.6
	baz=272					
YHNB			*e*S	Sn	19 37 56.6	+0.8
	baz=272					
NNSB	**Datong**	**1.09 260**	*e*P	Pn	19 37 40.8	+0.2
	baz=259					
NNSB			*e*S	Sn	19 37 56.2	+0.1
	baz=259					
NNSH	**Datong**	**1.09 260**	P	Pn	19 37 40.8	+0.3
	baz=259					
NNSH			S	Sn	19 37 56.3	+0.2
	baz=259					
NNS	**Nan Shan**	**1.10 261**	P	Pn	19 37 40.9	+0.3
	baz=260					
NNS			S	Sn	19 37 57.0	+0.7
	baz=260					
NSK	**Sanguang**	**1.10 273**	*i* P	Pn	19 37 41.1	+0.5
	baz=272					
NSK			S	Sn	19 37 56.7	+0.5
	baz=272					
TWS1	**Kuangyinshan**	**1.15 295**	*e*S	Sn	19 37 57.6	+0.6
	baz=294					
WHF	**Hehuan Shan**	**1.28 249**	*i* P	Pn	19 37 43.0	-0.1
	baz=248					
WHF			S	Sn	19 38 00.1	-0.5
	baz=248					
ESL	**Shilin**	**1.31 232**	*e*P	Pn	19 37 42.4	-0.7
	baz=231					
ESL			*e*S	Sn	19 37 59.2	-1.3
	baz=231					
TDCB	**Techi**	**1.33 254**	*e*S	Sn	19 38 01.2	-0.1
	baz=254					
CHGB	**Renai**	**1.39 247**	*e*P	Pn	19 37 44.4	+0.2
	baz=246					
CHGB			*e*S	Sn	19 38 02.7	+0.1
	baz=246					
EGFH	**Guangfu**	**1.41 228**	*e*P	Pn	19 37 43.7	-0.6
	baz=227					
EGFH			*e*S	Sn	19 38 01.2	-1.5
	baz=227					
NSTT	**Nanjuang**	**1.43 271**	*e*P	Pn	19 37 45.0	+0.5
	baz=270					
NSTT			*i* S	Sn	19 38 03.3	+0.2
	baz=270					
WHP	**Taichung City**	**1.52 257**	*e*P	Pn	19 37 46.8	+1.0
	baz=256					
WHP			*e*S	Sn	19 38 06.0	+0.7
	baz=256					
HGSD	**Ruisui**	**1.53 223**	*e*P	Pn	19 37 45.6	-0.2
	baz=222					
HGSD			*e*S	Sn	19 38 05.1	-0.5
	baz=222					
VWDT	**VWDT**	**1.56 237**	*e*P	Pn	19 37 46.4	+0.1
	baz=236					
VWDT			*e*S	Sn	19 38 05.6	-0.6
	baz=236					
DPDB	**Guoxing**	**1.61 249**	P	Pn	19 37 47.6	+0.7
	baz=248					
DPDB			*e*S	Sn	19 38 08.5	+1.2
	baz=248					
NMLH	**Miaoli**	**1.62 267**	*e*S	Sn	19 38 07.7	+0.2
	baz=267					
YULB	**Yu-li**	**1.69 224**	*e*P	Pn	19 37 46.8	-1.0
	baz=223					
YULB			*e*S	Sn	19 38 07.4	-1.7
	baz=223					
SMLT	**Sun Moon Lake**	**1.69 245**	P	Pn	19 37 49.1	+1.1
	baz=244					
SMLT			S	Sn	19 38 11.2	+1.9
	baz=244					
SSLB	**Suanglung**	**1.69 241**	*e*P	Pn	19 37 48.5	+0.5
	baz=240					
SSLB			*e*S	Sn	19 38 09.4	+0.2
	baz=240					
TWF1	**Yuli**	**1.71 223**	*e*P	Pn	19 37 47.5	-0.8
	baz=222					
TWF1			*e*S	Sn	19 38 07.9	-1.9
	baz=222					
WHYT	**Xinyi Township**	**1.82 240**	*e*P	Pn	19 37 50.8	+1.2
	baz=239					
WHYT			*e*S	Sn	19 38 13.1	+0.9
	baz=239					
FULB	**Fuli**	**1.83 220**	*e*P	Pn	19 37 50.5	+0.7
	baz=219					
FULB			*e*S	Sn	19 38 11.8	-0.8
	baz=219					
WJS	**Zhushan**	**1.86 245**	*e*S	Sn	19 38 14.7	+1.6
	baz=244					
WNT	**Mingjian**	**1.87 247**	*e*S	Sn	19 38 14.9	+1.5
	baz=246					
ALS	**Alishan**	**1.95 236**	*e*P	Pn	19 37 51.9	+0.3
	baz=235					
ALS			*e*S	Sn	19 38 16.5	+0.7
	baz=235					
CHN5	**Tsauling**	**2.00 240**	P	Pn	19 37 53.3	+1.2
	baz=239					
CHN5			S	Sn	19 38 17.9	+1.2
	baz=239					
ELDTW	**Lidau**	**2.01 225**	*e*P	Pn	19 37 52.0	-0.2
	baz=224					
ELDTW			*e*S	Sn	19 38 15.1	-1.7
	baz=224					
STYT	**Tauyuan**	**2.20 229**	*e*S	Sn	19 38 22.5	+1.2
	baz=228					
TPUB	**Ta-pu**	**2.21 234**	*e*S	Sn	19 38 22.4	+1.0
	baz=233					
WTP	**Ta-pu**	**2.25 233**	*e*P	Pn	19 37 57.1	+1.8
	baz=232					
WTP			S	Sn	19 38 23.3	+0.9
	baz=232					
TWK	**Hsinying**	**2.33 235**	*e*S	Sn	19 38 24.7	+0.3
	baz=234					
CHN1	**Nanshi**	**2.35 233**	*e*S	Sn	19 38 26.4	+1.6
	baz=232					
SLGT	**Liugui**	**2.39 228**	*e*P	Pn	19 37 58.3	+1.1
	baz=227					
SLGT			*e*S	Sn	19 38 26.4	+0.7
	baz=227					

JMA 31 19:37:50.7±0.1, 24°.94N×123°.38E, h26km±5km, M2.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.58**	**215**	P	Pb	19 38 02.0	-0.3
YOJ				S	Sb	19 38 09.8	-0.4
JYNG	**Yonagunijimaku**	**0.63**	**219**	P	Pb	19 38 02.8	-0.3
JYNG				*e*S	Sb	19 38 11.2	-0.3
IRIF	**Iriomote-Funau**	**0.68**	**152**	P	Pb	19 38 03.6	-0.4
IRIF				S	Sb	19 38 12.8	-0.2
JIJ	**Ishigaki jima**	**0.90**	**129**	P	Pn	19 38 07.1	-0.6
JIJ				S	Sb	19 38 18.1	-1.2
JKRS	**Kuro-shima**	**0.90**	**141**	P	Pn	19 38 07.4	-0.3
JKRS				S	Sb	19 38 19.4	0.0
JISG	**Ishigakijimahi**	**0.92**	**112**	P	Pn	19 38 07.3	-0.6
JISG				*e*S	Sb	19 38 19.6	-0.1
HATJ	**Hateruma jima**	**0.96**	**156**	*e*S	Sb	19 38 20.4	-0.6

*IDC **31** 19:41:07.7±0.8, 9°.66N×126°.89E, h0km, mb3.7/12, mb1 3.9/14, mb1mx3.7/55, mbtmp3.8/14, ML4.5/2, Error ellipse: s-maj=38.8km s-min=13.7km az=83.0*
*NEIC **31** 19:41:09.0±2.8, 9°.63N±0°.04×126°.6E±0°.1, h10km±1km, mb4.2/17, Error ellipse: s-maj=22.7km s-min=7.0km az=86.0*
*MAN **31** 19:41:11.3, 9°.47N×126°.75E, h24km, mb5.0, ML3.9, MS4.0*
ISC 31 19:41:08.8±2.0, 9°.61N±0°.04×126°.70E±0°.07, h11km±12km, n47, σ1°63/50, mb4.0/18, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.21**	**278**	ǁ*e*P	**Pg**	**19 41 33.6**	**+1.6**
SCPH				*e*S	**Sn**	**19 41 50.7**	**+2.7**
BUKP	**Musuan**	**2.36**	**223**	*e*P	**Pn**	**19 41 46.9**	**-0.7**
BUKP				*e*S	**Sn**	**19 42 16.3**	**-0.2**
DAV	**Davao City (W)**	**2.75**	**204**	Pn	**Pb**	**19 41 56.4**	**-1.6**
	41nm,0.3s,baz=358,slow=3.1,SNR=1.7						
DAV				Sn	**Sb**	**19 42 30.0**	**-1.8**
	74nm,0.3s,baz=93,slow=22,SNR=5.0						
DAV	**Davao City (W)**	**2.75**	**204**		**Pn**	**19 41 52.8**	**-0.1**
DAV				Sn	**Sn**	**19 42 26.9**	**+0.7**
DMPH	**Davao City--Mi**	**2.77**	**205**	*e*P	**Pn**	**19 41 54.7**	**+1.5**
DMPH				*e*S	**Sn**	**19 42 26.4**	**-0.2**
LLP	**Lapu-Lapu**	**2.79**	**285**	*e*P	**Pb**	**19 41 58.1**	**-0.5**
LLP				*e*S	**Sb**	**19 42 33.7**	**+1.0**
CTBH	**Cotabato--PC H**	**3.39**	**226**	ǁ*i*P	**Pn**	**19 42 02.5**	**+0.8**
CNP	**Catarman**	**3.51**	**325**	*e*P	**Pb**	**19 42 07.9**	**-3.0**
CNP				*e*S	**Sb**	**19 42 50.8**	**-2.8**
DDMP	**Don Marcelino,**	**3.62**	**196**	*e*P	**Pn**	**19 42 04.7**	**0.0**
DDMP				*e*S	**Sn**	**19 42 42.1**	**-5.3**
PAGZ	**Pagadian**	**3.72**	**242**	*e*P	**Pn**	**19 42 04.7**	**-1.5**
PAGZ				*e*S	**Sn**	**19 42 51.1**	**+1.1**
RCP	**Roxas**	**4.35**	**297**	ǁ*e*P	**Pb**	**19 42 21.4**	**-3.8**
TNTI	**Ternate**	**8.80**	**176**	Pn	**Pn**	**19 43 17.9**	**+1.9**
SBUM	**Sibu**	**16.05**	**245**	Pn	**Pn**	**19 44 55.2**	**+0.5**
BATI	**Baumata**	**19.91**	**189**	P	**Pn**	**19 45 43.0**	**+0.7**
	2.0nm,0.3s,baz=332,slow=6.9,SNR=6.5						
MTN	**Manton Dam**	**22.73**	**169**	P	**P**	**19 46 12.4**	**+1.4**
KNRA	**Kununurra**	**25.20**	**175**	P	**P**	**19 46 35.6**	**+0.9**
KNRA				IAmb	IAmb	19 46 36.6	
	comp=Z,9.5nm,0.9s						
FITZ	**Fitzroy Crossi**	**27.55**	**182**	P	**P**	**19 46 57.4**	**+1.6**
	comp=Z,1.5nm,0.6s,baz=129,slow=6.2,SNR=1.8						
FITZ	**Fitzroy Crossi**	**27.55**	**182**	P	**P**	**19 46 55.3**	**-0.5**
FITZ				IAmb	IAmb	19 47 13.1	
	comp=Z,3.1nm,0.9s						
WB0	**Warramunga Arr**	**30.16**	**165**	P	**P**	**19 47 19.3**	**+0.3**
WB0				IAmb	IAmb	19 47 33.3	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	**30.31**	**166**	P	**P**	**19 47 19.4**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=347,slow=9.4,SNR=1.5						
ASAR	**Alice Springs**	**33.81**	**168**	P	**P**	**19 47 50.8**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=353,slow=7.5,SNR=6.0						
H11S3	**WAKE ISLAND Hy**	**39.71**	**73**	T	T	20 31 43.0	
	baz=262,slow=75,SNR=7.3						
H11S1	**WAKE ISLAND Hy**	**39.72**	**73**	T	T	20 31 44.4	
	baz=262,slow=75,SNR=4.9						
H11S2	**WAKE ISLAND Hy**	**39.72**	**73**	T	T	20 31 44.8	
	baz=262,slow=75,SNR=7.3						
MORW	**Morawa**	**39.80**	**195**	P	**P**	**19 48 41.2**	**-0.9**
H11N1	**WAKE ISLAND Hy**	**40.06**	**71**	T	T	20 32 13.4	
	baz=264,slow=74,SNR=5.2						
H11N2	**WAKE ISLAND Hy**	**40.07**	**71**	T	T	20 32 11.4	
	baz=264,slow=74,SNR=5.2						
H11N3	**WAKE ISLAND Hy**	**40.08**	**71**	T	T	20 32 14.2	
	baz=264,slow=74,SNR=4.6						
SONM	**Songino Array**	**41.78**	**339**	P	**P**	**19 48 58.8**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=184,slow=10,SNR=2.7						
BBOO	**Buckleboo**	**43.11**	**168**	P	**P**	**19 49 09.1**	**-0.1**
BBOO				IAmb	IAmb	19 49 19.6	
	comp=Z,3.0nm,0.9s						
STKA	**Stephens Creek**	**43.64**	**162**	P	**P**	**19 49 15.8**	**+2.3**
	comp=Z,0.9nm,0.6s,baz=295,slow=9.3,SNR=2.8						
STKA	**Stephens Creek**	**43.64**	**162**	P	**P**	**19 49 12.4**	**-1.1**
TLY	**Talaya**	**46.00**	**340**	P	**P**	**19 49 31.9**	**-0.2**
MK31	**Makanchi Array**	**52.81**	**323**	P	**P**	**19 50 24.1**	**-0.2**
MKAR	**Makanchi Array**	**52.81**	**323**	P	**P**	**19 50 25.3**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=116,slow=8.2,SNR=6.9						
MAKZ	**Makanchi**	**53.00**	**323**	P	**P**	**19 50 25.7**	**0.0**
KURK	**Kurchatov**	**56.85**	**326**	P	**P**	**19 50 53.2**	**-0.1**
KURK				IAmb	IAmb	19 50 55.5	
	comp=Z,2.2nm,1.0s						
KURBB	**Kurchatov Arra**	**56.86**	**325**	P	**P**	**19 50 54.4**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=122,slow=7.3,SNR=5.9						
TIXI	**Tiksi**	**62.00**	**1**	P	**P**	**19 51 30.1**	**+1.4**
	comp=Z,1.5nm,0.3s,baz=194,slow=2.0,SNR=12						
TIXI	**Tiksi**	**62.00**	**1**	P	**P**	**19 51 30.7**	**+2.1**
TIXI				IAmb	IAmb	19 51 32.6	
	comp=Z,3.5nm,1.1s						
BVAR	**Borovoye Array**	**62.45**	**325**	P	**P**	**19 51 32.9**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=113,slow=12,SNR=5.1						
ARU	**Arti**	**70.01**	**327**	P	**P**	**19 52 20.3**	**-0.1**
ARU				IAmb	IAmb	19 52 27.0	
	comp=Z,2.1nm,1.0s						
RAYN	**Ar Rayn**	**78.21**	**292**	P	**P**	**19 53 07.8**	**-1.2**
RAYN				IAmb	IAmb	19 53 09.7	
	comp=Z,2.2nm,1.2s						
ILAR	**Eielson Array**	**79.85**	**26**	P	**P**	**19 53 16.6**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=295,slow=4.9,SNR=1.6						
ARCES	**ARCESS Array B**	**84.96**	**340**	P	**P**	**19 53 45.0**	**+1.2**
	comp=Z,0.9nm,0.4s,baz=234,slow=24,SNR=6.0						
FINES	**FINESS Array B**	**86.67**	**332**	P	**P**	**19 53 52.1**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=98,slow=7.9,SNR=3.7						
K05A	**Summer Lake**	**99.49**	**44**	P	**Pdif**	**19 54 54.7**	**+2.3**

*IDC **31** 19:44:37.1±0.4, 9°.34N×126°.41E, h0km, mb4.6/41, mb1 4.7/44, mb1mx4.6/55, mbtmp4.6/44, ML4.5/3, MS4.4/3, Ms1 4.4/3, ms1mx3.6/56, Error ellipse: s-maj=15.0km s-min=8.9km az=78.0*
*NEIC **31** 19:44:38.6±1.2, 9°.35N±0°.06×126°.47E±0°.09, h10km±1km, mb5.0/114, Error ellipse: s-maj=14.5km s-min=9.6km az=90.0*
*MOS **31** 19:44:40.3±1.0, 9°.30N×126°.40E, h34km, mb5.2/25, Error ellipse: s-maj=9.6km s-min=4.6km az=113.1*
*DJA **31** 19:44:42.3±0.4, 10°N±3′×12°.7E±′, h54km±4km, M4.3/48, mb4.8/48, mB5.2/26, MLv3.0/1, Mw(mB)4.5/26, Mwp7.0/1*
*MAN **31** 19:44:42.1, 9°.40N×126°.75E, h80km, mb5.6, ML4.6, MS5.0*
MAN Intensity I - Surigao City.
*GCMT **31** 19:44:44.6±0.2, 9°.37N±0°.02×126°.62E±0°.02, h21km, MW5.1/101, Moment Tensor Solution. s65,c77; s101,c142; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.40±.20; Mθθ-0.15±.12; Mφφ-4.25±.14; Mrθ-1.14±.27; Mθφ0.64±.08; Mφr2.76±.24; Best double couple: M₀5.29500×10¹⁶ NP1:φ₁179.00000°, δ29.00000°, λ103.00000°. NP2:φ₂344.00000°, δ62.00000°, λ83.00000°. Principal axes: T 5.3600, Plg72.0000°, Azm238.0000°; N -0.1310, Plg6.0000°, Azm347.0000°; P -5.2300, Plg17.0000°, Azm79.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KLM **31** 19:44:47.0, 9°.53N×126°.86E, h89km, mb4.9*
ISC 31 19:44:43.8±0.8, 9°.38N±0°.03×126°.65E±0°.05, h48km±7km, n435, σ1°69/450, mb4.9/135, 18C-6D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.22**	**289**	ǁ*e*P	**Pn**	**19 45 03.7**	**-0.7**
SCPH				*e*S	**Sn**	**19 45 20.2**	**+0.4**
BIPH	**Bislig**	**1.22**	**194**	ǁ*i*P	Pn	19 45 12.4	+8.0
MSLP	**Maasin**	**1.92**	**293**	*e*P	**Pn**	**19 45 14.7**	**+0.6**
MSLP				*e*S	**Sn**	**19 45 40.4**	**+3.4**
MATI	**Mati**	**2.45**	**189**	*e*P	**Pn**	**19 45 19.8**	**-1.5**
DAV	**Davao City (W)**	**2.53**	**205**	Pn	**Pn**	**19 45 22.2**	**-0.1**
	54nm,0.3s,baz=250,slow=2.5,SNR=2.7						
DAV				Sn	**Sn**	**19 45 51.5**	**-0.4**
	167nm,0.3s,baz=44,slow=10,SNR=9.7						
DAV				LR	LR	19 46 20.7	
	comp=Z,9μm,18.9s,baz=32,slow=43						
DAV	**Davao City (W)**	**2.53**	**205**	P	**Pn**	**19 45 19.4**	**-2.9**
DAV	**Davao City (W)**	**2.53**	**205**		**Pn**	**19 45 23.1**	**+0.7**
DAV					**Sn**	**19 45 45.7**	**-6.3**
DMPH	**Davao City--Mi**	**2.54**	**207**	ǁ*e*P	**Pn**	**19 45 26.5**	**+3.8**
DMPH				*i* S	**Sn**	**19 45 58.1**	**+5.7**
LLP	**Lapu-Lapu**	**2.81**	**290**	*e*P	**Pn**	**19 45 27.3**	**+1.0**
LLP				*e*S	**Sn**	**19 46 03.0**	**+4.1**
KCP	**Kidapawan**	**2.82**	**213**	ǁ*i*P	**Pn**	**19 45 27.8**	**+1.4**
KCP				*i* S	**Sn**	**19 46 05.9**	**+6.8**
CTBH	**Cotabato--PC H**	**3.20**	**228**	ǁ*e*P	**Pn**	**19 45 32.1**	**+0.5**
DDMP	**Don Marcelino,**	**3.38**	**196**	*e*P	**Pn**	**19 45 35.4**	**+1.2**
DDMP				*e*S	**Sn**	**19 46 14.8**	**+1.8**
SKMP	**Bagumbayan, Su**	**3.52**	**217**	*e*P	**Pn**	**19 45 36.9**	**+0.8**
PAGZ	**Pagadian**	**3.57**	**245**	*e*P	**Pn**	**19 45 38.0**	**+1.3**
PAGZ				*e*S	**Sn**	**19 46 19.9**	**+2.2**
CNP	**Catarman**	**3.68**	**328**	*e*P	**Pb**	**19 45 37.7**	**-0.5**
CNP				*e*S	**Sn**	**19 46 21.7**	**+1.4**
GSPH	**General Santos**	**3.68**	**207**	ǁ*i*P	**Pn**	**19 45 38.2**	**-0.1**
CNOP	**Candoni, Negro**	**3.98**	**277**	*e*P	**Pn**	**19 45 42.9**	**+0.6**
CNOP				*e*S	**Sn**	**19 46 30.9**	**+3.1**
GUIM	**Jordan**	**4.19**	**288**	*e*P	**Pn**	**19 45 45.6**	**+0.4**
GUIM				*e*S	**Sn**	**19 46 35.8**	**+2.9**
RCP	**Roxas**	**4.42**	**300**	ǁ*e*P	**Pn**	**19 45 50.2**	**+1.9**
JAP	**San Jose, Anti**	**4.83**	**287**	ǁ*e*P	**Pn**	**19 45 57.1**	**+3.1**
PVCP	**Virac**	**4.86**	**330**	*e*P	**Pn**	**19 45 54.7**	**+0.4**
PVCP				*e*S	Sn	19 47 01.7	+12
OTRP	**Odiongan**	**5.43**	**304**	*e*P	**Pn**	**19 46 04.3**	**+2.1**
OTRP				*e*S	**Sn**	**19 47 07.6**	**+4.1**
CUYO	**Cuyo Island**	**5.74**	**285**	*e*P	**Pn**	**19 46 07.2**	**+0.7**
BOAC	**Boac**	**6.22**	**311**	*e*P	**Pn**	**19 46 14.2**	**+1.1**
SJMP	**San Jose**	**6.24**	**300**	*e*P	**Pn**	**19 46 14.4**	**+1.1**
SJMP				*e*S	Sn	19 47 43.5	+20
BUSP	**Coron**	**6.86**	**293**	*e*P	**Pn**	**19 46 23.8**	**+1.4**
LQP	**Lukban**	**6.87**	**314**	*e*P	**Pn**	**19 46 22.7**	**+0.5**
POLP	**Polilio Island**	**7.04**	**320**	*e*P	**Pn**	**19 46 23.9**	**-0.5**
POLP				*e*S	**Sn**	**19 47 42.5**	**-0.6**
TGY	**Tagaytay City**	**7.31**	**311**	Pn	**Pn**	**19 46 31.3**	**+3.3**
	18nm,0.3s,baz=160,slow=4.9,SNR=14						
TGY				LR	LR	19 49 31.2	
	comp=Z,3μm,20.0s,baz=120,slow=41						
ENPP	**El Nido**	**7.34**	**285**	*e*P	**Pn**	**19 46 28.3**	**-0.2**
BALP	**Baler**	**8.04**	**322**	*e*P	**Pn**	**19 46 35.9**	**-2.0**
BALP				*e*S	**Sn**	**19 48 00.2**	**-7.4**
TNTI	**Ternate**	**8.58**	**175**	P	**Pn**	**19 46 50.1**	**+4.7**
	1μm86nm,1.5s						
TNTI	**Ternate**	**8.58**	**175**	Pn	**Pn**	**19 46 42.5**	**-2.9**
KMSI	**Cibinong**	**9.14**	**197**	P	Pn	19 46 58.9	+5.8
	1μm153nm,1.0s						
APYP	**Conner**	**9.94**	**329**	*e*P	**Pn**	**19 47 02.8**	**-1.2**
APYP				*e*S	**Sn**	**19 48 49.9**	**-4.4**
LBMI	**Labuha**	**9.98**	**175**	P	**Pn**	**19 47 05.0**	**+0.3**
	1μm40nm,0.7s						
MRSI	**Marisa**	**10.01**	**208**	P	Pn	19 47 10.9	+5.9
	578nm65nm,1.1s						
ABRA	**Dolores**	**10.05**	**326**	*e*P	Pn	19 47 01.5	-4.1
SZP	**Santa**	**10.12**	**324**		Pn	19 47 01.8	-4.6
KKM	**Kota Kinabalu**	**10.86**	**253**	Pn	**Pn**	**19 47 12.8**	**-4.0**
LUWI	**Luwuk**	**11.05**	**201**	P	Pn	19 47 24.3	+5.0
	2μm90nm,1.0s						
LUWI	**Luwuk**	**11.05**	**201**		**Pn**	**19 47 15.8**	**-3.5**
SIJI	**Sorong**	**11.17**	**155**	Pn	**Pn**	**19 47 20.9**	**0.0**
	2.8nm,0.3s,baz=326,slow=18,SNR=14						
MPSI	**Mapaga**	**11.22**	**217**	P	**Pn**	**19 47 26.1**	**+4.5**
	9.4nm,1.1s						
SANI	**Sanana**	**11.37**	**183**	P	**Pn**	**19 47 27.8**	**+4.1**
	793nm31nm,0.7s						
NLAI	**Namlea**	**12.54**	**178**	P	Pn	19 47 45.0	+5.4
	554nm32nm,0.8s						
MSAI	**Masohi**	**12.84**	**170**	P	**P**	**19 47 49.1**	**-4.3**
	219nm15nm,0.7s						
AAI	**Ambon**	**13.07**	**173**	P	**P**	**19 47 52.6**	**-3.3**
	1μm36nm,1.0s						
FAKI	**Fak Fak**	**13.43**	**155**	P	**Pn**	**19 47 53.5**	**+1.7**
	1μm39nm,0.9s						
FAKI	**Fak Fak**	**13.43**	**155**	Pn	**Pn**	**19 47 49.8**	**-2.0**
SMKI	**Samarinda**	**13.55**	**224**	P	**P**	**19 48 00.5**	**-0.8**
	117nm,0.7s						
TTSI	**Tana Toraja**	**14.09**	**209**	P	**P**	**19 48 08.4**	**+1.0**
	44nm,1.0s						
TWG	**Pinlang**	**14.40**	**339**	Pn	**Pn**	**19 48 03.6**	**-1.3**
YULB	**Yu-li**	**14.85**	**340**		**Pn**	**19 48 09.6**	**-1.3**
SPSI	**Sidrap Palu**	**14.92**	**208**	P	**P**	**19 48 16.9**	**+0.3**
	779nm37nm,1.4s						
TPUB	**Ta-pu**	**15.00**	**338**		**Pn**	**19 48 15.4**	**+2.6**
BNSI	**Bone**	**15.16**	**206**	P	**P**	**19 48 20.1**	**+0.9**
	1μm87nm,1.2s						
SSLB	**Suanglung**	**15.33**	**340**		**Pn**	**19 48 19.3**	**+2.1**
NACB	**Ninganchiao**	**15.49**	**342**	P	**P**	**19 48 21.8**	**-1.0**
KAPI	**Kappang**	**15.86**	**206**	Pn	**Pn**	**19 48 24.3**	**+0.3**
	0.2nm,0.3s,baz=270,slow=13,SNR=2.1						
KAPI	**Kappang**	**15.86**	**206**	P	**Pn**	**19 48 24.6**	**+0.6**
KAPI				pmax	pmax		
	comp=Z,36nm,1.2s						
KAPI	**Kappang**	**15.86**	**206**		**Pn**	**19 48 24.6**	**+0.6**
SBUM	**Sibu**	**15.91**	**245**	P	**P**	**19 48 26.4**	**-1.2**
SBUM				IAmb	IAmb	19 48 38.9	
	comp=Z,98nm,1.2s						
SBUM	**Sibu**	**15.91**	**245**	P	**P**	**19 48 31.0**	**+3.4**
BKSI	**Bulukumba**	**15.99**	**204**	P	**P**	**19 48 33.0**	**+4.6**
	comp=Z,21nm,0.9s						
YHNB	**Yeheng**	**16.02**	**342**	P	**Pn**	**19 48 27.7**	**+1.6**
KBKI	**Kotabaru**	**16.36**	**220**	P	**P**	**19 48 37.6**	**+5.0**
	comp=Z,48nm,1.3s						
**SMP

comp=Z,106nm,1.5s
KDU Kakadu 22.67 165 P P 19 49 40.3 -1.0
baz=23,SNR=16
SMRI Semarang 22.96 225 P P 19 49 43.1 -1.2
SMRI lAmb lAmb 19 50 05.7
comp=Z,102nm,1.1s
TPRI Tanjung Pinang 23.57 250 P P 19 49 52.4 +2.1
comp=Z,916nmcomp=Z,40nm,1.5s
NJ2 Nanjing 23.70 343 *eP* **P 19 49 51.5 +0.2**
NJ2 pP pP 19 49 54.5 -7.4
NJ2 S **S 19 54 09.3 +6.3**
NJ2 pmax pmax
comp=Z,42nm,0.8s
NJ2 pmax pmax
comp=Z,580nm,7.6s
NJ2 LR LR
comp=N,1µm,10.0s
NJ2 LR LR
comp=E,400nm,8.5s
NJ2 LR LR
comp=Z,2µm,9.0s
MYKOM Kota Tinggi 23.90 253 P P 19 49 51.8 -1.6
MYKOM lAmb lAmb 19 49 55.7
comp=Z,57nm,0.9s
MYKOM Kota Tinggi 23.90 253 P P 19 49 55.0 +1.6
JNU Nakatsue 23.95 9 P P 19 49 53.9 +0.2
comp=Z,21nm,0.9s,baz=195,slow=4.4,SNR=18
JNU Nakatsue 23.95 9 P P 19 49 53.5 -0.2
JNU lAmb lAmb 19 49 59.9
comp=Z,38nm,1.0s
WHN Wuhan 23.99 333 P P 19 49 54.8 +0.8
LEM Lembang 24.88 230 P P 19 50 03.1 +0.6
comp=Z,9.8nm,0.6s,baz=163,slow=19,SNR=3.7
SLVN Son La 24.91 301 P P 19 50 01.1 -1.5
SLVN lAmb lAmb 19 50 17.8
comp=Z,66nm,1.7s
KNRA Kununurra 24.98 175 P P 19 50 02.4 -0.7
baz=25,SNR=23
KNRA Kununurra 24.98 175 P P 19 50 02.3 -0.9
KNRA lAmb lAmb 19 50 05.5
comp=Z,41nm,0.8s
PMBI Palembang 25.00 242 P P 19 50 03.0 -0.4
GYA Guiyang 25.44 314 *eP* **P 19 50 06.0 -1.4**
GYA pmax pmax
comp=Z,10.0nm,0.5s
KULM Kulim 26.10 263 P P 19 50 12.4 -1.0
ENH Enshi 26.25 325 P P 19 50 12.6 -2.1
MDSI Maura Dua 26.30 239 P P 19 50 15.8 +0.7
comp=Z,18nm,1.3s
LWLI Liwa 26.68 238 P P 19 50 19.6 +0.9
comp=Z,98nm,0.8s
TJN Taejon 26.89 1 *ceP* **P 19 50 22.8 +2.6**
BKNI Bangkinang 27.03 252 P P 19 50 19.2 -2.7
FITZ Fitzroy Crossi 27.32 182 P P 19 50 24.0 -0.3
baz=28,SNR=24
FITZ Fitzroy Crossi 27.32 182 P P 19 50 24.2 -0.1
comp=Z,29nm,0.8s,baz=11,slow=12,SNR=27
FITZ Fitzroy Crossi 27.32 182 P P 19 50 23.5 -0.8
FITZ lAmb lAmb 19 50 27.7
comp=Z,43nm,1.0s
INU Inuyama 27.53 19 P P 19 50 26.1 0.0
KSRS Korea Array 27.98 2 P P 19 50 31.1 +1.2
comp=Z,5.4nm,0.7s,baz=180,slow=10,SNR=28
KS19 Wonju Array Si 28.02 2 P P 19 50 29.9 -0.5
TIA Tai'an 28.09 343 P P 19 50 31.3 +0.3
TIA pmax pmax
comp=Z,21nm,0.9s
MNSI Mandailing Nat 28.26 254 P P 19 50 31.9 -0.9
comp=Z,33nm,0.5s
PSI Prapat 28.32 258 P P 19 50 32.8 -0.7
comp=Z,15nm,0.8s,baz=1.9,slow=2.5,SNR=18
PSI Prapat 28.32 258 P P 19 50 32.4 -1.1
PSI pmax pmax
comp=Z,111nm,1.6s
CM31 Chiang Mai Arr 28.34 292 P P 19 50 31.8 -1.6
CMAR Chiang Mai Arr 28.34 292 P P 19 50 32.9 -0.6
comp=Z,2.7nm,0.9s,baz=102,slow=6.7,SNR=14
CMAR PcP **PcP 19 53 45.5 0.0**
comp=Z,0.3nm,0.5s,baz=67,slow=2.3,SNR=1.6
CMAR ScP **ScP 19 57 25.6 +2.6**
comp=Z,0.4nm,0.4s,baz=78,slow=2.1,SNR=5.3
RPSI Rantau Prapat 28.35 258 P P 19 50 32.4 -1.2
CHTO Chiang Mai 28.43 292 P P 19 50 33.2 -1.1
CHTO pmax pmax
comp=Z,6.0nm,0.9s
CHTO Chiang Mai 28.43 292 P P 19 50 33.2 -1.1
MAT Matsushiro 29.01 19 P P 19 50 38.6 -0.6
MJAR Matsushiro Arr 29.01 19 P P 19 50 38.3 -0.9
comp=Z,2.7nm,1.0s,baz=195,slow=9.6,SNR=11
MJAR PcP **PcP 19 53 48.1 +1.1**
comp=Z,1.7nm,0.7s,baz=197,slow=3.3,SNR=6.4
KCSI Kotacane, Aceh 29.27 260 P P 19 50 41.5 -0.3
comp=Z,33nm,0.8s
XAN Xi'an 29.46 329 P P 19 50 41.5 -1.9
XAN pP pwP 19 50 58.8 -2.7
XAN sP sP 19 51 06.8 +7.7
XAN pmax pmax
comp=Z,13nm,0.6s
XAN LR LR
comp=N,1µm,18.6s
XAN LR LR
comp=E,1µm,18.4s
XAN LR LR
comp=Z,1µm,14.7s
XAN Xi'an 29.46 329 P P 19 50 41.4 -1.9
XAN pmax pmax
comp=Z,8.0nm,0.7s
XAN Xi'an 29.46 329 P P 19 50 41.4 -1.9
WB0 Warramunga Arr 29.95 165 P P 19 50 46.0 -1.6
GSI Gunungsitoli 30.02 256 P P 19 50 48.5 +0.1
comp=Z,337nm,1.0s
GSI Gunungsitoli 30.02 256 P P 19 50 47.1 -1.3
WRAB Tennant Creek 30.09 165 P P 19 50 47.5 -1.5
WRAB pmax pmax
comp=Z,22nm,1.2s
WRAB Tennant Creek 30.09 165 P P 19 50 47.5 -1.5
WRAB lAmb lAmb 19 51 17.4
comp=Z,22nm,1.2s
WRA Warramunga Arr 30.10 165 P P 19 50 47.5 -1.5
comp=Z,3.7nm,0.9s,baz=343,slow=9.5,SNR=12
WB2 Warramunga Arr 30.10 165 P P 19 50 47.5 -1.5
WB2 lAmb lAmb 19 51 17.4
comp=Z,21nm,1.2s
WR0 Warramunga Arr 30.17 165 P P 19 50 48.0 -1.7
PSA00 Pilbara Seismi 31.47 192 P P 19 51 00.2 -0.9
PSA00 lAmb lAmb 19 51 01.8
comp=Z,28nm,0.8s
BJT Baijiatuau 31.91 345 P P 19 51 04.5 -0.3
BJT pmax pmax
comp=Z,29nm,1.1s
BJT Baijiatuau 31.91 345 P P 19 51 04.5 -0.3
BJT lAmb lAmb 19 51 06.4
comp=Z,28nm,1.1s
BJI Beijing 31.93 345 P P 19 51 05.3 +0.3
BJI S **S 19 56 15.8 +3.0**
BJI pmax pmax
comp=Z,25nm,1.0s
BJI LR LR
comp=N,230nm,5.6s
BJI LR LR
comp=E,320nm,14.0s
BJI LR LR
comp=Z,210nm,29.4s
QIS Mount Isa 32.36 157 P P 19 51 08.7 -0.2
baz=32,SNR=13
MTSU Mount Surprise 32.42 147 P P 19 51 10.5 +0.9
baz=32,SNR=4.8
AS31 Alice Springs 33.59 168 P P 19 51 18.3 -1.5
ASAR Alice Springs 33.60 168 P P 19 51 18.6 -1.1
comp=Z,1.7nm,0.8s,baz=14,slow=9.4,SNR=18
LZH Lanzhou 33.72 326 *eP* **P 19 51 19.8 -1.1**
LZH pP pP 19 51 27.3 -4.4
LZH sP pwP 19 51 29.5 -10
LZH PP **PP 19 52 38.8 +0.9**
LZH pmax pmax
comp=Z,13nm,1.1s
LZH pmax pmax
comp=Z,110nm,5.4s
LZH LR LR
comp=N,1µm,17.3s
LZH LR LR
comp=E,960nm,15.2s
LZH LR LR
comp=Z,680nm,18.5s
GIRL Giralia 34.07 201 P P 19 51 22.7 -1.1
HHC Hu-ho-hao-te 34.08 339 *eP* **P 19 51 24.5 +0.6**
HHC *eS* **S 19 56 51.5 +5.0**
HHC Hu-ho-hao-te 34.08 339 ScS ScS 20 01 42.3 -1.7
HHC pmax pmax
comp=Z,8.0nm,0.7s
HHC pmax pmax
comp=Z,190nm,6.8s
HHC LR LR
comp=N,790nm,16.5s
HHC LR LR
comp=E,720nm,14.1s
HHC LR LR
comp=Z,1µm,14.7s
WRKA Warakurna 34.24 177 P P 19 51 25.0 -0.3
baz=34,SNR=24
CN2 Changchun 34.31 358 *eP* **P 19 51 22.5 -3.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
USA0B Ussuriysk Arra 35.00 7 P P 19 51 30.8 -0.8
USA0B pmax pmax
comp=Z,18nm,1.0s
USA0B Ussuriysk Arra 35.00 7 P P 19 51 30.8 -0.8
USA0B lAmb lAmb 19 51 45.8
comp=Z,18nm,1.0s
USRK Ussuriysk Ar. 35.00 7 P P 19 51 31.7 +0.1
comp=Z,10.0nm,0.8s,baz=196,slow=8.2,SNR=21
CTA Charters Tower 35.06 147 P P 19 51 32.1 -0.3
comp=Z,7.3nm,0.8s,baz=320,slow=9.0,SNR=5.8
MDJ Mudanjiang 35.20 4 P P 19 51 33.4 0.0
MDJ lAmb lAmb 19 51 47.8
comp=Z,47nm,1.2s
MEEK Meekatharra 36.64 192 P P 19 51 45.7 -0.2
baz=37,SNR=18
SHL Shillong 36.72 301 P P 19 51 44.8 -2.0
SHL pmax pmax
comp=Z,34nm,0.8s
SHL Shillong 36.72 301 P P 19 51 44.8 -2.0
SHL lAmb lAmb 19 51 47.3
comp=Z,34nm,0.8s
ASAJ Asahikawa 37.28 19 P P 19 51 51.8 +0.6
comp=Z,17nm,1.0s,baz=190,slow=6.4,SNR=5.7
GTA Gaotai 38.33 326 ⇑ **P P 19 51 59.3 -0.9**
GTA pP pP 19 52 03.8 -7.4
GTA sP pwP 19 52 06.3 -12
GTA PcP **PcP 19 54 14.8 +1.4**
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA LR LR
comp=N,640nm,18.1s
GTA LR LR
comp=E,640nm,18.7s
GTA LR LR
comp=Z,930nm,17.1s
LSA Lhasa 38.85 306 P P 19 52 03.9 -1.3
LSA pmax pmax
comp=Z,7.0nm,0.8s
LSA Lhasa 38.85 306 P P 19 52 03.9 -1.3
MORW Morawa 39.57 195 P P 19 52 10.5 0.0
baz=40,SNR=13
MORW Morawa 39.57 195 P P 19 52 10.1 -0.4
MORW lAmb lAmb 19 52 11.7
comp=Z,28nm,0.9s
H11S3 WAKE ISLAND Hy 39.82 72 T T 20 35 10.0
baz=262,slow=75,SNR=66
H11S1 WAKE ISLAND Hy 39.83 72 T T 20 35 12.1
baz=262,slow=75,SNR=50
H11S2 WAKE ISLAND Hy 39.84 72 T T 20 35 11.0
baz=262,slow=75,SNR=62
FORT Forrest 39.95 178 P P 19 52 13.8 +0.2
baz=40,SNR=12
FORT Forrest 39.95 178 P P 19 52 13.1 -0.5
FORT lAmb lAmb 19 52 26.5
comp=Z,41nm,0.8s
KLR Kul'dur 39.95 5 P P 19 52 13.7 +0.2
comp=Z,3.9nm,0.6s,baz=203,slow=6.1,SNR=15
KLR Kul'dur 39.95 5 *ceP* **P 19 52 15.0 +1.5**
HIA Hailar 40.18 353 P P 19 52 15.4 0.0
HIA pmax pmax
comp=Z,20nm,1.2s
HIA Hailar 40.18 353 P P 19 52 15.4 0.0
H11N1 WAKE ISLAND Hy 40.19 71 T T 20 35 53.2
baz=265,slow=74,SNR=64
H11N2 WAKE ISLAND Hy 40.19 71 T T 20 35 47.9
baz=265,slow=74,SNR=63
H11N3 WAKE ISLAND Hy 40.20 71 T T 20 35 50.4
baz=265,slow=74,SNR=66
TAPN Taplejung 40.83 301 *eP* **P 19 52 20.4 -1.0**
BLDU Ballidu 40.89 193 P P 19 52 21.6 +0.2
baz=41,SNR=12
ODAN Odare 40.95 300 *eP* **P 19 52 21.4 -1.0**
comp=Z,83nm,0.7s
KLBR Kellerberrin 41.62 191 P P 19 52 27.2 -0.2
baz=42,SNR=19
RAMN Ramite 41.65 300 *eP* **P 19 52 27.3 -0.8**
comp=Z,25nm,0.6s
ULN Ulaanbaatar 41.79 340 *ceP* **P 19 52 29.2 +0.4**
ULN pmax pmax
comp=Z,6.0nm,0.6s
ULN Ulaanbaatar 41.79 340 P P 19 52 28.7 -0.1
SONM Songino Array 41.98 340 P P 19 52 30.2 -0.2
comp=Z,2.0nm,0.6s,baz=155,slow=9.0,SNR=15
SONM PcP **PcP 19 54 25.4 +0.4**
comp=Z,1.8nm,0.8s,baz=174,slow=5.1,SNR=2.0
GRNR Gornyy 42.05 9 ⇓ *iP* **P 19 52 33.1 +2.4**
GRNR pmax pmax
comp=Z,7.0nm,1.1s
GRNR MLR MLR
comp=Z,360nm,15.0s
JIRN Jiri 42.21 301 *eP* **P 19 52 31.9 -0.9**
comp=Z,99nm,0.6s
MUN Mundaring 42.32 193 P P 19 52 33.1 0.0
baz=43,SNR=11
GUN Gumba 42.55 301 *eP* **P 19 52 34.4 -1.1**
comp=Z,77nm,0.9s
PKI Pulchoki 42.85 301 *eP* **P 19 52 36.4 -1.5**
comp=Z,23nm,0.6s
PKIN Phulchoki 42.86 301 *eP* **P 19 52 36.3 -1.7**
comp=Z,17nm,0.6s
BBOO Buckleboo 42.90 168 P P 19 52 37.7 -0.1
baz=43,SNR=14
BBOO Buckleboo 42.90 168 P P 19 52 37.4 -0.4
BBOO lAmb lAmb 19 52 56.3
comp=Z,24nm,0.8s
NWAO Narrogin (SRO) 43.01 192 P P 19 52 38.9 +0.2
baz=43,SNR=13
NWAO Narrogin (SRO) 43.01 192 P P 19 52 38.0 -0.7
NWAO pmax pmax
comp=Z,72nm,1.0s
NWAO Narrogin (SRO) 43.01 192 P P 19 52 38.0 -0.7
DMN Daman 43.11 301 *eP* **P 19 52 38.5 -1.5**
comp=Z,26nm,0.8s
STKA Stephens Creek 43.44 161 P P 19 52 42.2 +0.1
baz=44,SNR=6.9
STKA Stephens Creek 43.44 161 P P 19 52 41.8 -0.3
comp=Z,3.4nm,0.7s,baz=331,slow=8.6,SNR=6.3
STKA Stephens Creek 43.44 161 P P 19 52 41.2 -1.0
STKA pmax pmax
comp=Z,3.0nm,1.1s
STKA Stephens Creek 43.44 161 P P 19 52 41.2 -1.0
GKN Gorkha 43.62 301 *eP* **P 19 52 42.5 -1.5**
comp=Z,22nm,0.6s
CIT Chita 43.85 348 *eP* **P 19 52 46.6 +1.3**
CIT *e* 19 52 58.1
CIT pmax pmax
comp=Z,67nm,1.6s
HTT Hallett 44.14 165 P P 19 52 49.0 +1.1
baz=44,SNR=5.1
ZEA Zeya 44.24 1 *eP* **P 19 52 48.2 -0.1**
ZEA pmax pmax
comp=Z,23nm,1.0s
KOLN Koldanda 44.44 300 *eP* **P 19 52 49.6 -1.0**
comp=Z,83nm,0.8s
DANN Dangsing 44.47 301 *eP* **P 19 52 49.5 -1.4**
comp=Z,58nm,0.7s
PYUN Piuthan 45.05 300 *eP* **P 19 52 54.5 -1.0**
comp=Z,87nm,0.8s
TLY Talaya 46.20 340 P P 19 53 03.9 0.0
comp=Z,9.3nm,0.7s,baz=287,slow=5.5,SNR=4.4
TLY Talaya 46.20 340 *i P* **P 19 53 04.3 +0.4**
TLY pmax pmax
comp=Z,10.0nm,0.8s
TLY Talaya 46.20 340 P P 19 53 03.3 -0.7
TLY lAmb lAmb 19 53 46.1
comp=Z,9.7nm,0.8s
MOY Mondy 47.11 338 *eP* **P 19 53 11.7 +0.5**
HYB Hyderabad 47.37 285 *i P* **P 19 53 11.0 -2.6**
ARPS Mount Arapiles 48.07 164 P P 19 53 18.8 +0.2
baz=48,SNR=6.4
WMQ Urumqi 48.16 322 *eP* **P 19 53 20.5 +1.1**
WMQ pP pP 19 53 24.5 -6.2
WMQ LR LR
comp=N,620nm,15.9s
WMQ LR LR
comp=E,480nm,13.1s
WMQ LR LR
comp=Z,630nm,17.5s
WMQ Urumqi 48.16 322 P P 19 53 18.3 -1.1
WMQ pmax pmax
comp=Z,10.0nm,0.4s
WMQ Urumqi 48.16 322 P P 19 53 18.3 -1.1
CAN Canberra 49.22 156 P P 19 53 27.2 -0.4
CAN pmax pmax
comp=Z,63nm,1.7s
CAN Canberra 49.22 156 P P 19 53 27.2 -0.4
BOD Bodaibo 49.31 351 *eP* **P 19 53 28.8 +0.9**
BOD pmax pmax
comp=Z,31nm,1.4s
TOO Toolangi 49.92 160 P P 19 53 32.5 -0.4
TOO pmax pmax
comp=Z,61nm,1.9s
TOO Toolangi 49.92 160 P P 19 53 32.5 -0.4
PEA0B Petropavlovsk- 50.29 24 P P 19 53 35.4 -0.1
PEA0B pmax pmax
comp=Z,29nm,1.2s
PEA0B Petropavlovsk- 50.29 24 P 19 53 35.4 -0.1
PEA0B lAmb lAmb 19 53 55.9
comp=Z,29nm,1.2s
PETK Petropavlovsk- 50.29 24 P P 19 53 37.0 +1.5
comp=Z,2.6nm,0.6s,baz=197,slow=3.5,SNR=13
PETK PcP **PcP 19 54 54.8 +1.0**
comp=Z,5.9nm,1.0s,baz=200,slow=5.8,SNR=2.2
PET Petropavlovsk 50.62 24 *eP* P 19 53 46.9 +9.0
PET pmax pmax
comp=Z,7.0nm,0.7s
DGZ Jazzator, Alta 51.72 328 *i P* **P 19 53 46.3 -0.2**
DGZ pmax pmax
comp=Z,1.0nm,0.4s
YAK Yakutsk 52.60 2 P P 19 53 53.5 +1.0
comp=Z,7.0nm,0.6s,baz=206,slow=3.1,SNR=10
YAK Yakutsk 52.60 2 *eP* **P 19 53 53.0 +0.5**
YAK *e* 19 54 01.3
YAK pmax pmax
comp=Z,26nm,1.2s
YAK pmax pmax
comp=E,3.0nm,1.3s
YAK pmax pmax
comp=N,15nm,1.0s
YAK pmax pmax
comp=Z,34nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.4s
YAK pmax pmax
comp=N,31nm,1.3s
YAK Yakutsk 52.60 2 P P 19 53 52.8 +0.2
YAK lAmb lAmb 19 54 02.6
comp=Z,31nm,1.0s
MK31 Makanchi Array 52.96 323 P P 19 53 54.8 -0.8
MK31 pmax pmax
comp=Z,10.0nm,0.7s
MK31 Makanchi Array 52.96 323 P P 19 53 54.8 -0.8
MK31 lAmb lAmb 19 53 56.5
comp=Z,9.8nm,0.7s
MKAR Makanchi Array 52.96 323 P P 19 53 54.9 -0.6
comp=Z,12nm,0.7s,baz=123,slow=8.0,SNR=104
PDGK Podgornoye 53.11 318 P P 19 53 55.7 -1.1
MAKZ Makanchi 53.16 323 P P 19 53 55.8 -1.2
MAKZ pmax pmax
comp=Z,11nm,0.7s
MAKZ Makanchi 53.16 323 P P 19 53 55.8 -1.2
MAKZ lAmb lAmb 19 53 57.5
comp=Z,11nm,0.7s
MA2 Magadan 53.29 15 *ceP* **P 19 54 00.7 +3.0**
MA2 pmax pmax
comp=Z,34nm,2.5s
PRZ Przheval'sk 53.49 317 P P 19 53 59.6 -0.1
PRZ pmax pmax
comp=Z,18nm,0.8s
PRZ Przheval'sk 53.49 317 P P 19 53 59.6 -0.1
PRZ lAmb lAmb 19 54 01.1
comp=Z,18nm,0.8s
TARG Taragay, Kyrgy 53.60 316 P P 19 53 59.9 -1.0
TARG lAmb lAmb 19 54 20.3
comp=Z,12nm,1.1s
KSH Kashi 54.11 312 P P 19 54 05.3 +1.1
KSH sP pP 19 54 13.0 -3.4
KSH PP **PP 19 56 10.0 +3.9**
KSH S **S 20 01 39.0 +1.3**
KSH Kashi 54.11 312 SS **SS 20 05 22.8 +3.0**
KSH pmax pmax
comp=Z,48nm,1.3s
KSH pmax pmax
comp=Z,67nm,4.0s
KSH LR LR
comp=N,130nm,5.9s
KSH LR LR
comp=E,130nm,4.2s
KSH LR LR
comp=Z,190nm,5.3s
KDJ Kajisay 54.19 316 P P 19 54 03.8 -1.0
KDJ pmax pmax
comp=Z,13nm,0.8s
KDJ Kajisay 54.19 316 P P 19 54 03.8 -1.0
KDJ lAmb lAmb 19 54 05.4
comp=Z,13nm,0.8s
NIL Nilore 54.55 305 P P 19 54 06.0 -1.4
NIL pmax pmax
comp=Z,42nm,0.8s
NIL Nilore 54.55 305 P P 19 54 06.0 -1.4
KZA Kyzart 55.50 315 P P 19 54 14.7 +0.1
SNR=19
TKM2 Tokmak 2 55.57 316 P P 19 54 14.2 -0.6
SNR=14
ZAA0 Zalesovo Array 55.59 331 P P 19 54 13.2 -1.3
ZALV Zalesovo Beam 55.59 331 P P 19 54 13.2 -1.3
comp=Z,4.0nm,0.5s,baz=119,slow=6.9,SNR=23
KBK Karagaybulak 55.92 316 P P 19 54 17.6 +0.3
SNR=11
UCH Uchtor 56.07 315 P P 19 54 18.7 0.0
SNR=37
CHMS Chumysh 56.17 316 P P 19 54 18.3 -0.7
SNR=9.8
FRU1 Bishkek 56.19 316 P P 19 54 18.5 -0.6
FRU1 pmax pmax
comp=Z,11nm,0.5s
FRU1 Bishkek 56.19 316 P P 19 54 18.5 -0.6
FRU1 lAmb lAmb 19 54 30.7
comp=Z,11nm,0.5s
AAK Ala-Archa 56.22 315 P P 19 54 18.7 -0.7
comp=Z,3.3nm,0.6s,baz=119,slow=6.9,SNR=12
AAK Ala-Archa 56.22 315 *ceP* **P 19 54 19.3 -0.2**
AAK pmax pmax
comp=Z,5.0nm,0.7s
AAK Ala-Archa 56.22 315 P P 19 54 18.6 -0.9
USP Ospenovka 56.44 316 P P 19 54 20.7 -0.2
SNR=7.6
SEY Seymchan 56.59 14 P P 19 54 22.3 +0.8
comp=Z,5.1nm,0.9s,baz=211,slow=4.0,SNR=8.5
SEY PcP **PcP 19 55 19.3 +1.8**
comp=Z,4.7nm,0.6s,baz=239,slow=1.6,SNR=5.8
AML Almayashu 56.61 315 P P 19 54 22.2 -0.3
SNR=26
EKS2 Erkin-Say 56.73 315 P P 19 54 22.9 -0.1
SNR=24
KURK Kurchatov 57.01 326 *ceP* **P 19 54 24.3 -0.4**
KURK pmax pmax
comp=Z,40nm,1.3s
KURK Kurchatov 57.01 326 P P 19 54 23.6 -1.0
KURBB Kurchatov Arra 57.02 326 P P 19 54 24.0 -0.7
comp=Z,11nm,0.7s,baz=127,slow=6.7,SNR=92
KURBB Kurchatov Arra 57.02 326 P P 19 54 23.5 -1.2
BTK Batken 58.06 312 P P 19 54 31.1 -1.3
BTK pmax pmax
comp=Z,14nm,1.0s
BTK Batken 58.06 312 P P 19 54 31.1 -1.3
BTK lAmb lAmb 19 54 37.6
comp=Z,14nm,0.9s
KBL Kabul 58.15 305 P P 19 54 31.8 -1.5
KBL pmax pmax
comp=Z,12nm,0.6s
KBL Kabul 58.15 305 P P 19 54 31.8 -1.5
KBL lAmb lAmb 19 54 34.7
comp=Z,12nm,0.6s
GAR Garm 58.15 310 P P 19 54 31.8 -1.3

CHGR	**Chuyangaron**	**58.95**	**310**	P		**P**		**19 54 36.9**	**-1.7**
KK31	**Karatay Array**	**59.15**	**315**	P		**P**		**19 54 38.3**	**-1.5**
KK31	**Karatay Array**	**59.15**	**315**	P		**P**		**19 54 38.6**	**-1.2**
KK31				IAmb		IAmb		19 54 39.9	
	comp=Z,12nm,0.8s								
OTUK	**Ortayu**	**59.66**	**321**	P		**P**		**19 54 41.9**	**-1.4**
TIXI	**Tiksi**	**62.23**	**1**	P		**P**		**19 55 00.8**	**+0.5**
	comp=Z,12nm,0.8s,baz=167,slow=3.8,SNR=41								
TIXI	**Tiksi**	**62.23**	**1**	*ce*P		**P**		**19 55 01.0**	**+0.8**
TIXI				pmax		pmax			
	comp=Z,31nm,1.3s								
TIXI	**Tiksi**	**62.23**	**1**	P		**P**		**19 55 00.2**	**0.0**
BVAR	**Borovoye Array**	**62.61**	**326**	P		**P**		**19 55 02.8**	**-0.3**
	comp=Z,9.4nm,0.7s,baz=120,slow=8.8,SNR=66								
BRVK	**Borovoye**	**62.68**	**326**	*c* iP		**P**		**19 55 03.1**	**-0.5**
BRVK				pmax		pmax			
	comp=Z,22nm,0.8s								
BRVK	**Borovoye**	**62.68**	**326**	P		**P**		**19 55 02.8**	**-0.8**
HRA	**Herat**	**63.67**	**304**	P		**P**		**19 55 09.2**	**-1.6**
BILL	**Bilibino**	**64.16**	**15**	*de*P		**P**		**19 55 14.7**	**+1.6**
BILL				*e*				19 55 50.4	
BILL				*e*				19 57 40.2	
BILL				*e*S		S		20 04 03.4	+17
BILL				pmax		pmax			
	comp=Z,9.0nm,1.3s								
BILL	**Bilibino**	**64.16**	**15**	P		**P**		**19 55 14.1**	**+1.0**
BILL				IAmb		IAmb		19 55 29.6	
	comp=Z,15nm,1.1s								
NRIK	**Noril'sk**	**64.97**	**346**	P		**P**		**19 55 18.9**	**+0.6**
	comp=Z,15nm,0.7s,baz=124,slow=6.6,SNR=22								
GEYT	**Alibeck**	**67.38**	**307**	P		**P**		**19 55 32.5**	**-2.0**
	comp=Z,3.9nm,0.8s,baz=155,slow=4.9,SNR=11								
GYA0	**ALIBECK ARRAY**	**67.38**	**307**	P		**P**		**19 55 33.9**	**-0.6**
GYA0B	**ALIBECK ARRAY**	**67.38**	**307**	P		**P**		**19 55 33.6**	**-0.8**
GYA0B				IAmb		IAmb		19 55 40.5	
	comp=Z,7.8nm,1.0s								
UOSS	**Minazif**	**68.43**	**293**	P		**P**		**19 55 39.7**	**-1.6**
UOSS				IAmb		IAmb		19 56 02.6	
	comp=Z,6.7nm,0.9s								
SVE	**Sverdlovsk**	**69.16**	**327**	*de*P		**P**		**19 55 44.9**	**-0.3**
SVE				pmax		pmax			
	comp=Z,30nm,1.0s								
AKTO	**Aktyubinsk**	**69.25**	**320**	P		**P**		**19 55 44.6**	**-1.2**
	comp=Z,6.7nm,0.8s,baz=106,slow=8.0,SNR=21								
ARU	**Arti**	**70.18**	**327**	P		**P**		**19 55 50.2**	**-1.2**
	comp=Z,6.2nm,0.5s,baz=127,slow=2.6,SNR=47								
ARU	**Arti**	**70.18**	**327**	*c* iP		**P**		**19 55 50.4**	**-1.0**
ARU								19 56 13.5	
ARU								19 58 24.7	
ARU				PPP		PPP		20 00 06.4	
ARU				S		**S**		**20 05 02.6**	**+3.3**
ARU				SS		**SS**		**20 09 33.1**	**+3.3**
ARU				pmax		pmax			
	comp=Z,22nm,0.7s								
ARU	**Arti**	**70.18**	**327**	P		**P**		**19 55 50.3**	**-1.2**
SOCY	**Socotra**	**71.25**	**280**	P		**P**		**19 55 56.4**	**-2.5**
KIRV	**Kirov**	**75.40**	**328**	P		**P**		**19 56 20.8**	**-1.5**
	comp=Z,36nm,0.7s,baz=80,slow=3.3,SNR=22								
KIRV				LR		LR		20 31 00.9	
	comp=Z,170nm,18.2s,baz=148,slow=37								
AKT	**Akhty**	**75.57**	**310**	*e*P		**P**		**19 56 23.4**	**-0.4**
AKT				*e*				19 56 35.3	
AKT				pmax		pmax			
	comp=Z,10.0nm,1.1s								
CASY	**Casey**	**76.38**	**187**	P		**P**		**19 56 27.5**	**-0.2**
CASY				IAmb		IAmb		19 56 40.5	
	comp=Z,11nm,0.9s								
TBLG	**Delisi**	**77.81**	**311**	P		**P**		**19 56 36.0**	**-0.4**
TBLG				pmax		pmax			
	comp=Z,15nm,0.8s								
TBLG	**Delisi**	**77.81**	**311**	P		**P**		**19 56 36.0**	**-0.4**
TBLG				IAmb		IAmb		19 56 37.1	
	comp=Z,15nm,0.8s								
RAYN	**Ar Rayn**	**78.25**	**292**	P		**P**		**19 56 37.7**	**-1.5**
RAYN				pmax		pmax			
	comp=Z,19nm,0.7s								
RAYN	**Ar Rayn**	**78.25**	**292**	P		**P**		**19 56 37.7**	**-1.5**
BPAW	**Bear Paw Mtn.**	**78.29**	**26**	P		**P**		**19 56 40.4**	**+1.8**
BPAW				IAmb		IAmb		19 56 41.6	
	comp=Z,17nm,1.0s								
ZEI	**Tsey**	**78.39**	**312**	*e*P		**P**		**19 56 37.1**	**-2.7**
ZEI				pmax		pmax			
	comp=Z,12nm,0.6s								
AKH	**Akhalkalaki**	**78.75**	**310**	P		**P**		**19 56 41.5**	**-0.3**
AKH				pmax		pmax			
	comp=Z,15nm,0.9s								
AKH	**Akhalkalaki**	**78.75**	**310**	P		**P**		**19 56 41.5**	**-0.3**
AKH				IAmb		IAmb		19 56 43.3	
	comp=Z,15nm,0.9s								
TOLK	**Toolik Lake Re**	**79.06**	**22**	P		**P**		**19 56 45.1**	**+2.4**
	baz=268								
TOLK	**Toolik Lake Re**	**79.06**	**22**	P		**P**		**19 56 44.0**	**+1.2**
TOLK				IAmb		IAmb		19 56 57.6	
	comp=Z,11nm,0.8s								
KBZ	**Khabaz**	**79.09**	**313**	P		**P**		**19 56 42.7**	**-0.6**
	comp=Z,4.9nm,0.9s,baz=207,slow=1.1,SNR=5.6								
KBZ	**Khabaz**	**79.09**	**313**	*ce*P		**P**		**19 56 43.6**	**+0.3**
MCK	**McKinley**	**79.18**	**27**	P		**P**		**19 56 44.5**	**+1.0**
MCK				pmax		pmax			
	comp=Z,13nm,0.8s								
MCK	**McKinley**	**79.18**	**27**	P		**P**		**19 56 44.5**	**+1.0**
MCK				IAmb		IAmb		19 56 45.8	
	comp=Z,13nm,0.8s								
RND	**Reindeer**	**79.21**	**27**	P		**P**		**19 56 44.8**	**+1.0**
RND				pmax		pmax			
	comp=Z,20nm,1.2s								
RND	**Reindeer**	**79.21**	**27**	P		**P**		**19 56 44.8**	**+1.0**
RND				IAmb		IAmb		19 56 46.5	
	comp=Z,20nm,1.2s								
KIV	**Kislovodsk**	**79.23**	**313**	*d* iP		**P**		**19 56 44.1**	**-0.2**
KIV				*e*				19 59 46.0	
KIV				*e*PPP		PPP		20 01 34.1	
KIV				*e*S		**S**		**20 06 38.1**	**-2.9**
KIV				pmax		pmax			
	comp=Z,14nm,0.9s								
KIV	**Kislovodsk**	**79.23**	**313**	P		**P**		**19 56 43.7**	**-0.6**
KIV				IAmb		IAmb		19 56 45.5	
	comp=Z,12nm,0.8s								
VRH	**Novokhopyorsk**	**79.59**	**320**	*e*P		**P**		**19 56 44.4**	**-1.5**
VRH				pmax		pmax			
	comp=Z,20nm,0.9s								
CCB	**Clear Creek Bu**	**79.68**	**26**	P		**P**		**19 56 46.6**	**+0.5**
HDA	**Harding Lake**	**80.05**	**26**	P		**P**		**19 56 49.5**	**+1.3**
	baz=271								
HDA	**Harding Lake**	**80.05**	**26**	P		**P**		**19 56 48.9**	**+0.7**
HDA				IAmb		IAmb		19 57 03.0	
	comp=Z,40nm,2.0s								
IL31		**80.08**	**26**	P		**P**		**19 56 49.7**	**+1.5**
IL31				IAmb		IAmb		19 59 10.5	
	comp=Z,27nm,2.0s								
ILAR	**Eielson Array**	**80.08**	**26**	P		**P**		**19 56 48.8**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=239,slow=5.6,SNR=21								
KLMR	**Klimovskoe**	**80.49**	**330**	*e*P		**P**		**19 56 49.5**	**-1.0**
KLMR				pmax		pmax			
	comp=Z,26nm,0.7s								
KLMR	**Klimovskoe**	**80.49**	**330**	*e*P		**P**		**19 56 49.5**	**-1.0**
KLMR				AMP				19 56 51.1	
	comp=Z,26nm,0.7s								
RIDG	**Independent Ri**	**81.00**	**27**	P		**P**		**19 56 54.6**	**+1.3**
TMCR	**Tamitsa**	**81.03**	**334**	*e*P		**P**		**19 56 52.7**	**-0.7**
TMCR				pmax		pmax			
	comp=Z,21nm,0.7s								
LPSR	**Galich'ya Gora**	**81.25**	**322**	*e*P		**P**		**19 56 53.6**	**-1.2**
LPSR				pmax		pmax			
	comp=Z,20nm,0.8s								
SCRK	**Sand Creek**	**81.37**	**26**	P		**P**		**19 56 56.9**	**+1.5**
SCRK				IAmb		IAmb		19 57 07.9	
	comp=Z,19nm,1.5s								
MOS	**Moscow**	**81.78**	**325**	*e*P		**P**		**19 56 54.0**	**-3.5**
OBN	**Obninsk**	**82.44**	**325**	*e*P		**P**		**19 57 01.2**	**+0.2**
OBN				*e*				19 57 06.6	
OBN				*e*				20 00 07.7	
OBN				*e*PPP		PPP		20 01 57.9	
OBN				*e*S		**S**		**20 07 08.3**	**-5.4**
OBN				pmax		pmax			
	comp=Z,13nm,1.0s								
ANN	**Anapa**	**82.92**	**314**	*e*P		P		19 57 09.7	+6.0
ANN				pmax		pmax			
	comp=Z,60nm,1.0s								
ABPO	**Ambohimpanom**	**83.17**	**249**	P		**P**		**19 57 04.0**	**-1.7**
ABPO				pmax		pmax			
	comp=Z,20nm,1.5s								
ABPO	**Ambohimpanom**	**83.17**	**249**	P		**P**		**19 57 04.0**	**-1.7**
ABPO				IAmb		IAmb		19 57 07.9	
	comp=Z,20nm,1.4s								
DAWY	**Dawson**	**83.37**	**26**	P		**P**		**19 57 06.7**	**+1.0**
DAWY				IAmb		IAmb		19 57 21.5	
	comp=Z,11nm,1.0s								
GAZ	**Gaziantep**	**83.97**	**307**	P		**P**		**19 57 08.7**	**-0.8**
EPYK	**Eagle Plains**	**84.13**	**24**	P		**P**		**19 57 11.7**	**+2.1**
	baz=280								
EPYK	**Eagle Plains**	**84.13**	**24**	P		**P**		**19 57 10.9**	**+1.4**
KEV	**Kevo**	**84.60**	**340**	P		**P**		**19 57 11.4**	**-0.4**
KEV	**Kevo**	**84.60**	**340**	P		**P**		**19 57 11.4**	**-0.4**
HYT	**Haines Junctio**	**84.73**	**29**	P		**P**		**19 57 14.5**	**+1.7**
HYT				IAmb		IAmb		19 57 16.6	
	comp=Z,8.9nm,0.9s								
SPA0	**Spitsbergen Ar**	**84.96**	**349**	P		**P**		**19 57 13.7**	**+0.1**
SPA0	**Spitsbergen Ar**	**84.96**	**349**	*e*P		**P**		**19 57 14.2**	**+0.6**
INK	**Inuvik**	**84.97**	**22**	P		**P**		**19 57 14.4**	**+0.7**
	comp=Z,7.7nm,1.0s,baz=264,slow=7.1,SNR=9.0								
INK	**Inuvik**	**84.97**	**22**	P		**P**		**19 57 14.9**	**+1.3**
INK				IAmb		IAmb		19 57 16.5	
	comp=Z,22nm,1.3s								
ARCES	**ARCESS Array B**	**85.16**	**340**	P		**P**		**19 57 14.7**	**+0.1**
	comp=Z,12nm,0.6s,baz=80,slow=6.7,SNR=54								
ARE0	**ARCESS Array S**	**85.16**	**340**	P		**P**		**19 57 14.5**	**-0.2**
ARE0	**ARCESS Array S**	**85.16**	**340**	*e*P		**P**		**19 57 15.2**	**+0.5**
HAMF	**Hammerfest**	**85.48**	**341**	*e*P		**P**		**19 57 16.5**	**+0.3**
KTK1	**Kautokeino**	**86.07**	**339**	*e*P		**P**		**19 57 18.0**	**-1.2**
BR131	**Keskin Array S**	**86.39**	**309**	P		**P**		**19 57 21.5**	**-0.1**
BR131				pmax		pmax			
	comp=Z,17nm,1.8s								
BR131	**Keskin Array S**	**86.39**	**309**	P		**P**		**19 57 21.5**	**-0.1**
BR131				IAmb		IAmb		19 57 57.8	
	comp=Z,17nm,1.8s								
BRTR	**Keskin Array B**	**86.39**	**309**	P		**P**		**19 57 19.9**	**-1.7**
	comp=Z,1.5nm,0.8s,baz=92,slow=5.2,SNR=7.9								
FIA1	**FINESS Array S**	**86.85**	**332**	P		**P**		**19 57 22.8**	**-0.3**
FIA1				IAmb		IAmb		19 57 23.8	
	comp=Z,17nm,1.0s								
FINES	**FINESS Array B**	**86.85**	**332**	P		**P**		**19 57 22.2**	**-0.9**
	comp=Z,7.7nm,0.8s,baz=96,slow=5.9,SNR=40								
TRO	**Tromso**	**87.34**	**340**	*e*P		**P**		**19 57 24.6**	**-0.8**
CSS	**Mathiatis**	**87.40**	**305**	P		**P**		**19 57 25.6**	**-0.8**
AKASG	**Malin Array Be**	**87.49**	**321**	P		**P**		**19 57 24.5**	**-2.0**
	comp=Z,2.3nm,0.5s,baz=70,slow=4.7,SNR=9.9								
AKBB	**Malin Array Si**	**87.49**	**321**	P		**P**		**19 57 25.8**	**-0.7**
AKBB				pmax		pmax			
	comp=Z,9.0nm,1.3s								
AKBB	**Malin Array Si**	**87.49**	**321**	P		**P**		**19 57 25.8**	**-0.7**
AKBB				IAmb		IAmb		19 57 26.6	
	comp=Z,8.9nm,1.3s								
NOR	**Nord**	**87.50**	**355**	*i* P		**P**		**19 57 25.3**	**-0.6**
NOR				pmax		pmax			
	comp=Z,14nm,1.3s								
NOR	**Nord**	**87.50**	**355**	*i* P		**P**		**19 57 25.3**	**-0.6**
	comp=Z,14nm,1.3s								
C36M	**Paulatuk**	**87.95**	**20**	P		**P**		**19 57 29.8**	**+1.6**
	baz=291								
C36M	**Paulatuk**	**87.95**	**20**	P		**P**		**19 57 29.1**	**+0.8**
MAW	**Mawson**	**88.99**	**200**	P		**P**		**19 57 32.6**	**-0.5**
	comp=Z,2.7nm,0.9s,baz=270,slow=22,SNR=3.9								
MAW	**Mawson**	**88.99**	**200**	P		**P**		**19 57 32.9**	**-0.2**
VNDA	**Vanda**	**89.00**	**173**	P		**P**		**19 57 32.7**	**-0.3**
	comp=Z,1.8nm,1.0s,baz=284,slow=6.6,SNR=4.2								
VNDA	**Vanda**	**89.00**	**173**	P		**P**		**19 57 33.3**	**+0.4**
VNDA				IAmb		IAmb		19 57 46.0	
	comp=Z,11nm,1.1s								
STEI	**Steigen**	**89.22**	**339**	*e*P		**P**		**19 57 33.0**	**-1.3**
KMBO	**Kilima Mbogo**	**89.59**	**269**	P		**P**		**19 57 37.2**	**-0.2**
	comp=Z,3.4nm,0.9s,baz=54,slow=6.6,SNR=6.0								
KMBO	**Kilima Mbogo**	**89.59**	**269**	P		**P**		**19 57 36.8**	**-0.6**
KMBO				pmax		pmax			
	comp=Z,13nm,1.3s								
KMBO	**Kilima Mbogo**	**89.59**	**269**	P		**P**		**19 57 36.8**	**-0.6**
KMBO				IAmb		IAmb		19 57 38.6	
	comp=Z,12nm,1.3s								
MOR8	**Moi Rana**	**90.21**	**338**	*e*P		**P**		**19 57 37.4**	**-1.6**
BUR08	**Bucovina Ar. S**	**90.76**	**318**	P		**P**		**19 57 41.8**	**-0.2**
DAG	**Danmarks Havn**	**91.68**	**352**	*i* P		**P**		**19 57 45.3**	**-0.3**
DAG				pmax		pmax			
	comp=Z,23nm,1.3s								
DAG	**Danmarks Havn**	**91.68**	**352**	*i* P		**P**		**19 57 45.3**	**-0.3**
	comp=Z,23nm,1.3s								
KWP	**Kalwaria Pacla**	**91.81**	**321**	P		**P**		**19 57 46.2**	**-0.6**
KWP				pmax		pmax			
	comp=Z,10.0nm,1.0s								
KWP	**Kalwaria Pacla**	**91.81**	**321**	P		**P**		**19 57 46.2**	**-0.6**
KWP				IAmb		IAmb		19 57 57.1	
	comp=Z,10nm,1.0s								
ALN	**Alexandroupoli**	**91.84**	**312**	P		**P**		**19 57 45.3**	**-1.8**
ALN				pmax		pmax			
	comp=Z,16nm,0.8s								
ALN	**Alexandroupoli**	**91.84**	**312**	P		**P**		**19 57 45.3**	**-1.8**
RES	**Resolute Bay**	**92.31**	**10**	P		**P**		**19 57 49.7**	**+1.2**
RES				pmax		pmax			
	comp=Z,12nm,0.8s								
RES	**Resolute Bay**	**92.31**	**10**	P		**P**		**19 57 49.7**	**+1.2**
UZH	**Uzhgorod**	**92.36**	**320**	*e*P		**P**		**19 57 46.5**	**-2.8**
UZH				*i*				19 58 00.0	
NC405	**NORSAR Array S**	**93.47**	**334**	P		**P**		**19 57 52.7**	**-1.5**
NB2	**NORSAR Subarra**	**93.72**	**334**	P		**P**		**19 57 54.0**	**-1.4**
	comp=Z,4.0nm,0.9s,baz=66,slow=4.6								
NOA	**NORSAR Array B**	**93.72**	**334**	P		**P**		**19 57 53.8**	**-1.6**
	comp=Z,1.6nm,0.8s,baz=65,slow=4.6,SNR=9.0								
YKA	**Yellowknife Ar**	**94.41**	**24**	P		**P**		**19 57 59.3**	**+0.8**
	comp=Z,2.4nm,0.8s,baz=296,slow=4.3,SNR=22								
SKAR	**Skarslia**	**95.15**	**334**	*e*P		**P**		**19 58 02.1**	**+0.2**
CLL	**Collm**	**97.04**	**325**	*e*(P)		Pdif		19 58 13.0	+2.3
SUMG	**Summit**	**97.64**	**356**	*i* P		Pdif		19 58 13.7	+0.2
SUMG	**Summit**	**97.64**	**356**	*i* P		Pdif		19 58 13.7	+0.2
TX32	**Lajitas Array**	**118.12**	**50**	PKPdf		**PKiKP**		**20 03 27.7**	**+1.2**
TXAR	**Lajitas Array**	**118.12**	**50**	PKP		**PKiKP**		**20 03 27.5**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=219,slow=1.3,SNR=11								
JCT	**Junction City**	**120.34**	**46**	PKIKP		**PKiKP**		**20 03 31.4**	**+0.7**
JCT	**Junction City**	**120.34**	**46**	P		**PKiKP**		**20 03 32.2**	**+1.5**
	baz=304								
JCT	**Junction City**	**120.34**	**46**	PKPdf		**PKiKP**		**20 03 31.4**	**+0.7**
TORD	**Torodi Ar. Bea**	**120.95**	**291**	PKP		**PKPdf**		**20 03 31.4**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=61,slow=1.6,SNR=6.5								
CCM	**Cathedral Cave**	**121.02**	**34**	P		**PKiKP**		**20 03 32.9**	**+1.2**
	baz=315								
U40A	**Yellville**	**121.27**	**37**	P		**PKiKP**		**20 03 33.1**	**+0.8**
	baz=313								
U40A	**Yellville**	**121.27**	**37**	PKPdf		**PKiKP**		**20 03 32.7**	**+0.4**
W39A	**Magazine**	**121.48**	**39**	P		**PKiKP**		**20 03 33.4**	**+0.7**
	baz=312								
T42A	**Van Buren**	**121.83**	**35**			**PKiKP**		**20 03 33.9**	**+0.5**
MIAR	**Mount Ida**	**122.04**	**39**	P		**PKiKP**		**20 03 35.5**	**+1.7**
	baz=312								
WVT	**Waverly**	**124.30**	**34**	PKIKP		**PKiKP**		**20 03 39.1**	**+0.9**
WVT	**Waverly**	**124.30**	**34**	P		**PKiKP**		**20 03 39.2**	**+1.0**
	baz=318								
WVT	**Waverly**	**124.30**	**34**	PKPdf		**PKiKP**		**20 03 39.1**	**+0.9**
PLAL	**Pickwick Lake**	**125.00**	**35**	PKPdf		**PKiKP**		**20 03 39.8**	**+0.1**
V48A	**Smith Brothers**	**125.14**	**33**			**PKPdf**		**20 03 39.6**	**0.0**
LRAL	**Lakeview Retre**	**127.03**	**36**	P		**PKiKP**		**20 03 44.8**	**+1.1**
	baz=317								
PLCA	**Paso Flores**	**145.24**	**157**	PKPbc		**PKPdf**		**20 04 17.0**	**+0.3**
	comp=Z,5.1nm,0.8s,baz=11,slow=1.7,SNR=6.3								
PLCA	**Paso Flores**	**145.24**	**157**			**PKPdf**		**20 04 17.2**	**+0.5**
SDDR	**Presa de Saban**	**146.73**	**32**			**PKiKP**		**20 04 22.9**	**+0.2**
DR12	**Loma Pena Alta**	**147.85**	**29**			**PKiKP**		**20 04 26.5**	**-0.1**
PDPR	**Patillas Dam,**	**150.04**	**25**			**PKiKP**		**20 04 30.8**	**-0.2**
STVI	**Saint Thomas**	**150.16**	**23**			**PKiKP**		**20 04 31.0**	**-0.3**
SJCC	**San Jacinto, C**	**151.04**	**49**	*e*P		**PKiKP**		**20 04 33.7**	**+0.4**
DBBC	**Dabeiba**	**152.00**	**55**	*e*P		**PKPbc**		**20 04 33.2**	**-1.8**
URIC	**Uribia, Colomb**	**152.03**	**42**	*e*P		**PKiKP**		**20 04 36.2**	**+1.0**
UREC	**San Jos de Ur**	**152.11**	**53**	*e*P		**PKiKP**		**20 04 36.2**	**+0.8**
SMLC	**San Martn de**	**152.58**	**49**	*e*P		**PKiKP**		**20 04 36.3**	**-0.1**
OCAC	**Ocana**	**153.50**	**49**	*e*P		**PKPdf**		**20 04 33.5**	**+2.7**
YOTC	**Yotoco, Valle**	**153.51**	**61**	*e*P		**PKiKP**		**20 04 39.0**	**+0.5**
BBAC	**Balboa Cauca**	**153.63**	**66**	*e*P		**PKPbc**		**20 04 35.7**	**-3.1**
GUY2C	**Guyana, Caldas**	**153.69**	**57**	*e*P		**PKPdf**		**20 04 33.8**	**+2.3**
RREF	**El Recreo**	**153.89**	**58**	*e*P		**PKiKP**		**20 04 41.8**	**+1.9**
TOLC	**Tolima**	**154.08**	**59**	*e*P		**PKiKP**		**20 04 41.7**	**+1.7**
SOTA	**Rioblanco**	**154.16**	**65**	*e*P		**PKPbc**		**20 04 39.6**	**-0.7**
SPBC	**San Pablo de B**	**154.51**	**55**	*e*P		**PKPdf**		**20 04 36.1**	**+4.0**
BARC	**Barichara**	**154.66**	**52**	*e*P		**PKiKP**		**20 04 42.4**	**+1.4**
SDV	**Santo Domingo**	**154.99**	**44**			**PKPdf**		**20 04 31.9**	**-1.0**
RUSC	**La Rusia**	**155.16**	**53**	*e*P		PKPdf		20 04 41.4	+7.9
RUSC	**La Rusia**	**155.16**	**53**			PKPdf		20 04 43.3	+10
LPAZ	**La Paz**	**164.04**	**117**	PKP		**PKPdf**		**20 04 44.8**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=58,slow=1.3,SNR=4.4								
LPAZ				PKPab					
	comp=Z,1.4nm,0.8s,baz=22,slow=7.8,SNR=2.2								
LPAZ	**La Paz**	**164.04**	**117**	PKIKP		**PKPdf**		**20 04 44.3**	**+0.7**
LPAZ	**La Paz**	**164.04**	**117**			**PKPdf**		**20 04 44.3**	**+0.7**

NEIC ***31*** *19:46:41.4±1.5, 9.°51N±0.°07×126.°34E±0.°09, h10km±1km, mb4.5/19, Error ellipse: s-maj=15.9km s-min=11.4km az=78.0*

IDC ***31*** *19:46:42.6±0.8, 9.°98N×126.°43E, h0km, mb4.2/13, mb1 4.3/13, mb1mx4.0/55, mbtmp4.2/13, Error ellipse: s-maj=44.7km s-min=18.0km az=79.0*

ISC 31 19:46:45.5±0.6, 9.°47N±0.°06×126.°64E±0.°08, h43km, n45, σ1↑90/38, mb4.3/22, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SCPH	**Surigao**	**1.17**	**285**	↓*e*P		**Pn**	**19 47 05.2**	**-0.2**
SCPH				*e*S		**Sn**	**19 47 22.9**	**+2.7**
DAV	**Davao City (W)**	**2.61**	**204**	Pn		**Pn**	**19 47 23.8**	**-1.3**
DMPH	**Davao City--Mi**	**2.62**	**205**	↑*i*P		**Pn**	**19 47 27.8**	**+2.4**
DMPH				*i* S		**Sn**	**19 48 00.6**	**+4.6**
LLP	**Lapu-Lapu**	**2.76**	**288**	*e*P		**Pn**	**19 47 27.2**	**-0.1**
LLP				*e*S		**Sn**	**19 48 05.1**	**+5.8**
SZP	**Santa**	**10.03**	**324**	Pn		Pn	19 49 01.5	-5.5
LUWI	**Luwuk**	**11.13**	**200**	Pn		**Pn**	**19 49 22.0**	**-0.1**
FAKI	**Fak Fak**	**13.52**	**155**	Pn		**Pn**	**19 49 55.3**	**+0.4**
KSM	**Kuching**	**18.08**	**245**	Pn		**P**	**19 50 48.5**	**-5.0**
SOEI	**Soe**	**19.25**	**187**	P		**Pn**	**19 51 08.4**	**+0.6**
SOEI				IAmb		IAmb	19 51 13.2	
	comp=Z,70nm,1.4s							
KNRA	**Kununurra**	**25.08**	**175**	P		**P**	**19 52 04.4**	**-1.7**
FITZ	**Fitzroy Crossi**	**27.41**	**182**	P		P	19 52 35.5	+8.3
	comp=Z,12nm,0.8s,baz=41,slow=9.3,SNR=4.1							
FITZ	**Fitzroy Crossi**	**27.41**	**182**	P		**P**	**19 52 25.8**	**-1.4**
FITZ				IAmb		IAmb	19 52 33.5	
	comp=Z,19nm,1.4s							
GSI	**Gunungsitoli**	**30.02**	**256**	P		**P**	**19 52 49.8**	**-0.8**
GSI				IAmb		IAmb	19 52 53.4	
	comp=Z,13nm,1.0s							
WB0	**Warramunga Arr**	**30.04**	**165**	P		**P**	**19 52 51.7**	**+1.1**
WB0				IAmb		IAmb	19 52 57.6	
	comp=Z,8.4nm,1.1s							
WRA	**Warramunga Arr**	**30.20**	**165**	P		P	19 52 58.9	+6.9
	comp=Z,1.1nm,0.6s,baz=331,slow=11,SNR=1.4							
WB2	**Warramunga Arr**	**30.20**	**165**	P		**P**	**19 52 53.0**	**+1.0**
WB2				IAmb		IAmb	19 53 00.5	
	comp=Z,6.5nm,0.8s							
USRK	**Ussuriysk Ar.**	**34.91**	**7**	P		**P**	**19 53 33.2**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=231,slow=40,SNR=2.9							
MORW	**Morawa**	**39.66**	**195**	P		**P**	**19 54 11.8**	**-1.6**
MORW				IAmb		IAmb	19 54 12.1	
	comp=Z,24nm,1.4s							
H11S3	**WAKE ISLAND Hy**	**39.81**	**73**	T		T	20 37 24.0	
H11S1	**WAKE ISLAND Hy**	**39.82**	**73**	T		T	20 37 24.0	
H11S2	**WAKE ISLAND Hy**	**39.82**	**73**	T		T	20 37 25.2	
H11N1	**WAKE ISLAND Hy**	**40.

-1.5098, Plg21.0000°, Azm91.0000°;
ISC 31 19:53:53.3±0.3,9°32N±0'04×126°61E±0'05,h43km,n203,
σ1878/204,mb4.7/86,2C-5D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.15**	**192**	*eP*	**Sn**	**19 54 22.8**	**-4.8**
SCPH	**Surigao**	**1.19**	**293**	*eP*	**Pn**	**19 54 13.8**	**+0.3**
MSLP	**Maasin**	**1.90**	**295**	*eP*	**Pn**	**19 54 25.0**	**+1.7**
MSLP				*eS*	**Sn**	**19 54 51.0**	**+4.9**
BUKP	**Musuan**	**2.09**	**227**	*eP*	**Pn**	**19 54 27.8**	**+1.9**
BUKP				*eS*	**Sn**	**19 54 53.9**	**+3.1**
MATI	**Mati**	**2.38**	**188**	*eP*	**Pn**	**19 54 29.8**	**-0.1**
MATI				*eS*	Sn	19 54 41.3	-17
DAV	**Davao City (W)**	**2.45**	**205**	Pn	Pn	19 54 34.1	+3.2
	37nm,0.3s,baz=79,slow=5.2,SNR=7.0						
DAV	**Davao City (W)**	**2.45**	**205**	*eP*	**Pn**	**19 54 29.3**	**-1.6**
DAV	**Davao City (W)**	**2.45**	**205**		**Pn**	**19 54 30.9**	**+0.1**
KCP	**Kidapawan**	**2.74**	**213**	*eP*	**Pn**	**19 54 37.0**	**+2.1**
LLP	**Lapu-Lapu**	**2.78**	**291**	*eP*	**Pn**	**19 54 37.8**	**+2.4**
DDMP	**Don Marcelino,**	**3.31**	**196**	*eP*	Pn	19 54 34.5	-8.2
CNP	**Catarman**	**3.70**	**329**	*eP*	**Pn**	**19 54 47.6**	**-0.4**
RCP	**Roxas**	**4.40**	**301**	*eP*	Pn	19 55 02.4	+4.7
JAP	**San Jose, Anti**	**4.80**	**288**	*eP*	Pn	19 55 07.8	+4.6
ZCP	**Zamboanga City**	**5.07**	**242**	*eP*	Pn	19 55 22.6	+16
LQP	**Lukban**	**6.88**	**314**	*eP*	**Pn**	**19 55 33.4**	**+1.5**
TGY	**Tagaytay City**	**7.31**	**311**	Pn	Pn	19 55 40.9	+3.2
	baz=121,slow=7.0,SNR=5.2						
TNTI	**Ternate**	**8.52**	**175**	Pn	**Pn**	**19 55 53.3**	**-1.0**
LBMI	**Labuha**	**9.93**	**175**	P	Pn	19 56 23.0	+9.5
SZP	**Santa**	**10.13**	**324**		**Pn**	**19 56 14.1**	**-2.3**
KKM	**Kota Kinabalu**	**10.80**	**253**	Pn	**Pn**	**19 56 25.0**	**-0.5**
LUWI	**Luwuk**	**10.98**	**201**	Pn	**Pn**	**19 56 25.7**	**-2.1**
SIJI	**Sorong**	**11.13**	**155**	Pn	**Pn**	**19 56 31.8**	**+1.8**
	1.5nm,0.3s,baz=344,slow=12,SNR=8.7						
FAKI	**Fak Fak**	**13.39**	**155**	Pn	**Pn**	**19 57 01.5**	**+0.6**
BKB	**Balikpapan**	**14.28**	**223**	P	**P**	**19 57 17.8**	**-1.5**
TWG	**Pinlang**	**14.44**	**339**	P	**P**	**19 57 17.1**	**-3.9**
YULB	**Yu-li**	**14.89**	**341**	P	**P**	**19 57 23.7**	**-2.4**
TPUB	**Ta-pu**	**15.04**	**338**		**P**	**19 57 25.8**	**-1.9**
SSLB	**Suanglung**	**15.37**	**340**		**P**	**19 57 31.1**	**-0.4**
YOJ	**Yonaguni jima**	**15.45**	**348**		**P**	**19 57 30.5**	**-1.7**
YOJ				IAmb	IAmb	19 57 43.6	
	comp=Z,65nm,0.9s						
NACB	**Ninganchiao**	**15.53**	**343**		**P**	**19 57 32.7**	**-0.4**
KAPI	**Kappang**	**15.79**	**206**		**P**	**19 57 34.4**	**-1.7**
SBUM	**Sibu**	**15.85**	**245**		**P**	**19 57 37.0**	**+0.3**
SBUM				IAmb	IAmb	19 57 49.0	
	comp=Z,34nm,1.1s						
SBUM	**Sibu**	**15.85**	**245**	P	P	19 57 42.0	+5.3
YHNB	**Yeheng**	**16.06**	**343**	Pn	**Pn**	**19 57 35.0**	**-1.3**
JOW	**Kunigami**	**17.49**	**5**	P	**P**	**19 57 54.1**	**-0.8**
KSM	**Kuching**	**17.99**	**245**	P	**P**	**19 58 00.4**	**0.0**
KSM	**Kuching**	**17.99**	**245**	P	P	19 58 06.0	+5.6
DLV	**T Lat**	**18.00**	**280**		**P**	**19 57 59.3**	**-1.5**
JAY	**Jayapura**	**18.32**	**129**	P	**Pn**	**19 58 06.1**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=123,slow=3.9,SNR=2.7						
MMRI	**Maumere**	**18.36**	**194**	P	**Pn**	**19 58 04.0**	**-0.8**
MMRI				IAmb	IAmb	19 58 19.1	
	comp=Z,96nm,1.5s						
QIZ	**Qiongzhong**	**18.89**	**303**	P	**Pn**	**19 58 10.0**	**-1.2**
QIZ				S	**S**	**20 01 49.5**	**+6.6**
QIZ				PcP	PcP	20 02 49.3	+14
QIZ				pmax	pmax		
	comp=Z,640nm,11.8s						
QIZ				LR	LR		
	comp=N,3μm,17.2s						
QIZ				LR	LR		
	comp=E,4μm,15.2s						
QIZ				LR	LR		
	comp=Z,6μm,17.7s						
QIZ	**Qiongzhong**	**18.89**	**303**	P	**Pn**	**19 58 09.5**	**-1.7**
SOEI	**Soe**	**19.09**	**187**	P	**Pn**	**19 58 19.2**	**+5.4**
SOEI	**Soe**	**19.09**	**187**	P	**Pn**	**19 58 14.0**	**+0.2**
SOEI				IAmb	IAmb	19 58 34.0	
	comp=Z,33nm,0.8s						
BATI	**Baumata**	**19.61**	**189**	P	**Pn**	**19 58 19.6**	**-0.3**
	comp=Z,7.9nm,0.3s,baz=60,slow=3.2,SNR=14						
JAGI	**Jajag, Banyuwa**	**21.59**	**215**	P	**P**	**19 58 40.6**	**+1.0**
JAGI				IAmb	IAmb	19 58 59.4	
	comp=Z,76nm,1.4s						
MTN	**Manton Dam**	**22.47**	**168**	P	**P**	**19 58 49.5**	**+0.4**
MTN				IAmb	IAmb	19 58 51.9	
	comp=Z,93nm,1.9s						
MYKOM	**Kota Tinggi**	**23.84**	**253**	P	**P**	**19 59 04.2**	**+1.5**
MYKOM				IAmb	IAmb	19 59 06.4	
	comp=Z,39nm,1.2s						
MYKOM	**Kota Tinggi**	**23.84**	**253**	P	**P**	**19 59 05.0**	**+2.3**
JNU	**Nakatsue**	**24.02**	**9**	P	**P**	**19 59 03.8**	**-0.5**
	comp=Z,16nm,1.0s,baz=205,slow=23,SNR=12						
JNU	**Nakatsue**	**24.02**	**9**	P	**P**	**19 59 04.0**	**-0.2**
JNU				IAmb	IAmb	19 59 05.4	
	comp=Z,21nm,1.0s						
SLVN	**Son La**	**24.90**	**301**	P	**P**	**19 59 12.4**	**-0.1**
SLVN				IAmb	IAmb	19 59 28.0	
	comp=Z,9.8nm,0.9s						
KNRA	**Kununurra**	**24.92**	**175**	P	**P**	**19 59 13.1**	**+0.5**
CISI	**Cisompet, Garu**	**25.13**	**229**	P	**P**	**19 59 17.3**	**+2.7**
GYA	**Guiyang**	**25.44**	**315**	*eP*	**P**	**19 59 14.0**	**-3.5**
GYA				S	**S**	**20 03 45.5**	**+3.8**
GYA				SS	**SnSn**	**20 04 43.0**	**+5.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA				pmax	pmax		
	comp=Z,680nm,10.7s						
GYA				LR	LR		
	comp=N,4μm,14.5s						
GYA				LR	LR		
	comp=E,3μm,17.1s						
GYA				LR	LR		
	comp=Z,5μm,15.9s						
KULM	**Kulim**	**26.05**	**263**		**P**	**19 59 24.8**	**+1.8**
KULM				IAmb	IAmb	19 59 38.9	
	comp=Z,15nm,1.4s						
ENH	**Enshi**	**26.27**	**325**	P	**P**	**19 59 23.3**	**-1.5**
MNAI	**Manna**	**27.21**	**241**	P	**P**	**19 59 33.4**	**+0.1**
FITZ	**Fitzroy Crossi**	**27.26**	**182**	P	**P**	**19 59 33.6**	**0.0**
	comp=Z,8.2nm,0.5s,baz=3.1,slow=8.8,SNR=17						
FITZ	**Fitzroy Crossi**	**27.26**	**182**	P	**P**	**19 59 34.0**	**+0.3**
FITZ				IAmb	IAmb	19 59 38.5	
	comp=Z,28nm,1.2s						
INU	**Inuyama**	**27.60**	**19**		**P**	**19 59 36.5**	**-0.2**
KMI	**Kunming**	**27.61**	**308**	P	**P**	**19 59 38.8**	**+1.6**
KMI				pP	pP	19 59 39.0	-9.1
KMI				PP	PnPn	20 00 09.5	-14
KMI				S	**S**	**20 04 19.0**	**+2.8**
KMI				sS	sS	20 04 22.3	-11
KMI				pmax	pmax		
	comp=Z,32nm,0.5s						
KMI				pmax	pmax		
	comp=Z,250nm,6.6s						
KMI				LR	LR		
	comp=N,3μm,18.8s						
KMI				LR	LR		
	comp=E,3μm,18.1s						
KMI				LR	LR		
	comp=Z,4μm,23.6s						
PMG	**Port Moresby**	**27.65**	**132**	LR	LR	20 12 44.2	
	comp=Z,2μm,18.1s,baz=332,slow=41						
PMG	**Port Moresby**	**27.65**	**132**		**P**	**19 59 37.6**	**+0.3**
PMG				IAmb	IAmb	19 59 43.2	
	comp=Z,25nm,1.1s						
KSRS	**Korea Array**	**28.04**	**2**	P	**P**	**19 59 41.2**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=22,slow=17,SNR=4.3						
KS19	**Wonju Array Si**	**28.08**	**2**	P	**P**	**19 59 41.2**	**+0.2**
TIA	**Tai'an**	**28.13**	**344**	SS	SS	20 06 13.8	-10
RPSI	**Rantau Prapat**	**28.29**	**258**		**P**	**19 59 43.9**	**+0.9**
RPSI				IAmb	IAmb	19 59 45.4	
	comp=Z,23nm,1.1s						
CM31	**Chiang Mai Arr**	**28.31**	**292**	P	**P**	**19 59 41.6**	**-1.7**
CMAR	**Chiang Mai Arr**	**28.31**	**292**	P	**P**	**19 59 43.4**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=101,slow=7.6,SNR=7.6						
COEN	**Coen**	**28.37**	**144**		**P**	**19 59 45.2**	**+1.4**
CHTO	**Chiang Mai**	**28.41**	**292**		**P**	**19 59 42.3**	**-1.7**
MJAR	**Matsushiro Arr**	**29.08**	**19**	P	**P**	**19 59 49.5**	**-0.3**
	comp=Z,1.7nm,1.0s,baz=192,slow=9.1,SNR=6.9						
MAJO	**Matsushiro**	**29.08**	**19**		**P**	**19 59 49.9**	**+0.1**
MJB9	**Matsu-Tunnel**	**29.08**	**19**		**P**	**19 59 49.5**	**-0.4**
XAN	**Xi'an**	**29.49**	**329**	P	**P**	**19 59 51.3**	**-2.2**
XAN				pP	**pP**	**20 00 03.8**	**-0.2**
XAN				sP	**sP**	**20 00 10.5**	**+1.8**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
XAN				LR	LR		
	comp=N,4μm,15.2s						
XAN				LR	LR		
	comp=E,3μm,16.7s						
XAN				LR	LR		
	comp=Z,7μm,15.7s						
XAN	**Xi'an**	**29.49**	**329**	P	**P**	**19 59 51.9**	**-1.6**
LHMI	**Lhok Sumawe**	**29.69**	**264**	P	**P**	**19 59 54.4**	**-1.0**
WB0	**Warramunga Arr**	**29.90**	**165**	P	**P**	**19 59 56.1**	**-1.2**
WB0				IAmb	IAmb	19 59 57.4	
	comp=Z,16nm,1.5s						
GSI	**Gunungsitoli**	**29.96**	**256**	P	**P**	**19 59 57.4**	**-0.5**
GSI	**Gunungsitoli**	**29.96**	**256**	P	**P**	**19 59 58.0**	**+0.1**
WRAB	**Tennant Creek**	**30.05**	**165**	P	**P**	**19 59 58.3**	**-0.3**
WRA	**Warramunga Arr**	**30.06**	**165**	P	**P**	**19 59 58.1**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=348,slow=9.4,SNR=7.1						
WB2	**Warramunga Arr**	**30.06**	**165**	P	**P**	**19 59 57.4**	**-1.2**
WB2				IAmb	IAmb	20 00 10.9	
	comp=Z,38nm,2.0s						
WR0	**Warramunga Arr**	**30.12**	**165**	P	**P**	**19 59 58.5**	**-0.7**
WR0				IAmb	IAmb	20 00 14.4	
	comp=Z,24nm,1.6s						
PSA00	**Pilbara Seismi**	**31.41**	**192**	P	**P**	**20 00 10.1**	**-0.4**
PSA00				IAmb	IAmb	20 00 12.0	
	comp=Z,18nm,1.1s						
BJT	**Baijiatuan**	**31.96**	**345**	P	**P**	**20 00 14.4**	**-0.7**
BJT				IAmb	IAmb	20 00 29.8	
	comp=Z,11nm,0.9s						
BJI	**Beijing**	**31.98**	**345**	P	**P**	**20 00 15.5**	**+0.2**
BJI				S	S	20 05 37.8	+14
BJI				pmax	pmax		
	comp=Z,11nm,1.2s						
BJI				LR	LR		
	comp=N,2μm,18.9s						
BJI				LR	LR		
	comp=E,960nm,21.1s						
BJI				LR	LR		
	comp=Z,1μm,22.2s						
AS31	**Alice Springs**	**33.55**	**168**	P	**P**	**20 00 28.8**	**-0.5**
ASAR	**Alice Springs**	**33.55**	**168**	P	**P**	**20 00 28.9**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=352,slow=8.0,SNR=13						
LZH	**Lanzhou**	**33.74**	**326**	*eP*	**P**	**20 00 31.5**	**+0.4**
LZH				pP	**pP**	**20 00 35.3**	**-6.3**
LZH				sP	pwP	20 00 38.3	-8.2
LZH				PP	**PP**	**20 01 49.5**	**+1.5**
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
LZH				LR	LR		
	comp=N,4μm,17.0s						
LZH				LR	LR		
	comp=E,3μm,16.9s						
LZH				LR	LR		
	comp=Z,3μm,16.3s						
GIRL	**Giralia**	**34.00**	**201**	P	**P**	**20 00 33.1**	**0.0**
HHC	**Hu-ho-hao-te**	**34.12**	**339**	*eP*	**P**	**20 00 36.5**	**+2.3**
HHC				S	**S**	**20 06 01.0**	**+3.6**
HHC				SS	**SnSn**	**20 08 07.0**	**-1.0**
HHC	**Hu-ho-hao-te**	**34.12**	**339**	ScS	ScS	20 10 58.3	+3.6
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,69nm,7.4s						
HHC				LR	LR		
	comp=N,2μm,14.5s						
HHC				LR	LR		
	comp=E,810nm,14.7s						
HHC				LR	LR		
	comp=Z,2μm,17.1s						
CTA	**Charters Tower**	**35.04**	**147**	P	**P**	**20 00 42.9**	**+0.6**
	comp=Z,7.3nm,1.0s,baz=320,slow=10,SNR=5.7						
USRK	**Ussuriysk Ar.**	**35.07**	**7**	P	**P**	**20 00 43.3**	**+1.1**
	comp=Z,6.5nm,0.8s,baz=182,slow=7.8,SNR=12						
SHL	**Shillong**	**36.70**	**301**	P	**P**	**20 00 55.5**	**-1.2**
ASAJ	**Asahikawa**	**37.35**	**19**	P	**P**	**20 01 03.9**	**+2.2**
	comp=Z,7.4nm,0.9s,baz=239,slow=9.5,SNR=7.2						
GTA	**Gaotai**	**38.35**	**326**	*eP*	**P**	**20 01 09.3**	**-1.1**
GTA				pP	**pP**	**20 01 14.0**	**-7.1**
GTA				sP	pwP	20 01 16.5	-9.3
GTA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LSA	**Lhasa**	**38.85**	**306**	P	**P**	**20 01 14.2**	**-1.0**
MORW	**Morawa**	**39.50**	**195**	P	**P**	**20 01 20.3**	**+0.4**
MORW				IAmb	IAmb	20 01 21.8	
	comp=Z,23nm,1.2s						
FORT	**Forrest**	**39.89**	**178**	P	**P**	**20 01 23.6**	**+0.4**
FORT				IAmb	IAmb	20 01 41.8	
	comp=Z,20nm,0.6s						
YSS	**Yuzh-Sakhalins**	**39.95**	**17**	P	**P**	**20 01 24.0**	**+0.6**
YSS				IAmb	IAmb	20 01 33.3	
	comp=Z,25nm,1.1s						
KLR	**Kul'dur**	**40.02**	**5**	P	**P**	**20 01 25.2**	**+1.2**
	comp=Z,2.2nm,0.6s,baz=155,slow=5.9,SNR=10.0						
TAPN	**Taplejung**	**40.82**	**301**	*eP*	**P**	**20 01 30.5**	**-0.8**
	comp=Z,7.4nm,0.4s						
ODAN	**Odare**	**40.94**	**300**	*eP*	**P**	**20 01 31.3**	**-1.0**
	comp=Z,33nm,0.7s						
RAMN	**Ramite**	**41.64**	**300**	*eP*	**P**	**20 01 37.4**	**-0.6**
	comp=Z,16nm,0.6s						
ULN	**Ulaanbaatar**	**41.83**	**340**	P	**P**	**20 01 38.8**	**-0.3**
SONM	**Songino Array**	**42.02**	**340**	P	**P**	**20 01 39.5**	**-1.2**
	comp=Z,1.5nm,0.9s,baz=156,slow=9.5,SNR=5.6						
JIRN	**Jiri**	**42.20**	**301**	*eP*	**P**	**20 01 41.9**	**-0.8**
	comp=Z,36nm,0.5s						
GUN	**Gumba**	**42.54**	**301**	*eP*	**P**	**20 01 44.4**	**-1.1**
	comp=Z,34nm,0.8s						
PKI	**Pulchoki**	**42.83**	**301**	*eP*	**P**	**20 01 46.4**	**-1.4**
	comp=Z,8.5nm,0.6s						
PKIN	**Phulchoki**	**42.85**	**301**	*eP*	**P**	**20 01 46.3**	**-1.6**
	comp=Z,6.7nm,0.5s						
BBOO	**Buckleboo**	**42.85**	**168**	P	**P**	**20 01 47.8**	**+0.4**
BBOO				IAmb	IAmb	20 02 01.0	
	comp=Z,16nm,1.1s						
NWAO	**Narrogin (SRO)**	**42.95**	**192**	P	**P**	**20 01 49.4**	**+1.2**
	comp=Z,15nm,0.8s,baz=23,slow=8.1,SNR=15						
NWAO	**Narrogin (SRO)**	**42.95**	**192**	P	**P**	**20 01 49.3**	**+1.2**
NWAO				IAmb	IAmb	20 02 03.7	
	comp=Z,23nm,1.0s						
DMN	**Daman**	**43.10**	**301**	*eP*	**P**	**20 01 48.7**	**-1.2**
STKA	**Stephens Creek**	**43.40**	**161**	P	**P**	**20 01 52.5**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=330,slow=10,SNR=3.6						
STKA	**Stephens Creek**	**43.40**	**161**	P	**P**	**20 01 50.7**	**-1.1**
GKN	**Gorkha**	**43.61**	**301**	*eP*	**P**	**20 01 52.6**	**-1.3**
KOLN	**Koldanda**	**44.43**	**300**	*eP*	**P**	**20 01 59.5**	**-1.0**
	comp=Z,44nm,0.8s						
DANN	**Dangsing**	**44.45**	**301**	*eP*	**P**	**20 01 59.4**	**-1.4**
	comp=Z,31nm,0.7s						
PYUN	**Piuthan**	**45.04**	**301**	*eP*	**P**	**20 02 04.6**	**-0.8**
	comp=Z,61nm,0.9s						
TLY	**Talaya**	**46.24**	**340**	P	**P**	**20 02 14.0**	**-0.2**
TLY				IAmb	IAmb	20 02 26.9	
	comp=Z,11nm,1.5s						
ARMA	**Armidale**	**46.25**	**150**	P	**P**	**20 02 16.4**	**+1.7**
ARMA				IAmb	IAmb	20 02 18.8	
	comp=Z,17nm,1.4s						
WMQ	**Urumqi**	**48.17**	**322**	*eP*	**P**	**20 02 30.5**	**+1.0**
WMQ				pP	**pP**	**20 02 34.3**	**-6.3**
WMQ				sP	**pwP**	**20 02 38.5**	**-6.5**
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.8s						
WMQ				LR	LR		
	comp=N,3μm,15.7s						
WMQ				LR	LR		
	comp=E,2μm,14.1s						
WMQ				LR	LR		
	comp=Z,2μm,18.9s						
WMQ	**Urumqi**	**48.17**	**322**	P	**P**	**20 02 29.1**	**-0.4**
WMQ				IAmb	IAmb	20 02 48.6	
	comp=Z,5.4nm,0.5s						
CAN	**Canberra**	**49.18**	**156**		**P**	**20 02 38.1**	**+0.8**
TOO	**Toolangi**	**49.88**	**160**	P	**P**	**20 02 43.6**	**+1.0**
TOO				IAmb	IAmb	20 02 59.1	
	comp=Z,17nm,1.2s						
PEA0B	**Petropavlovsk-**	**50.37**	**24**	P	**P**	**20 02 47.4**	**+1.3**
PEA0B				IAmb	IAmb	20 02 58.6	
	comp=Z,18nm,1.3s						
PETK	**Petropavlovsk-**	**50.37**	**24**	P	**P**	**20 02 47.9**	**+1.8**
	comp=Z,2.7nm,0.7s,baz=176,slow=4.5,SNR=6.3						
YAK	**Yakutsk**	**52.66**	**2**	P	**P**	**20 03 03.9**	**+0.9**
	comp=Z,3.4nm,0.3s,baz=176,slow=3.1,SNR=12						
MK31	**Makanchi Array**	**52.98**	**323**	P	**P**	**20 03 04.8**	**-0.9**
MK31				IAmb	IAmb	20 03 06.6	
	comp=Z,5.0nm,0.8s						
MKAR	**Makanchi Array**	**52.98**	**323**	P	**P**	**20 03 05.3**	**-0.4**
	comp=Z,6.5nm,0.9s,baz=121,slow=7.8,SNR=41						
MAKZ	**Makanchi**	**53.17**	**323**	P	**P**	**20 03 06.5**	**-0.7**
MAKZ				IAmb	IAmb	20 03 08.1	
	comp=Z,9.8nm,1.1s						
PRZ	**Przheval'sk**	**53.50**	**317**	P	**P**	**20 03 09.5**	**-0.3**
PRZ				IAmb	IAmb	20 03 11.2	
	comp=Z,7.8nm,0.8s						
NIL	**Nilore**	**54.54**	**305**	P	**P**	**20 03 16.6**	**-0.8**
ZAA0	**Zalesovo Array**	**55.62**	**331**	P	**P**	**20 03 23.4**	**-1.3**
ZALV	**Zalesovo Beam**	**55.62**	**331**	P	**P**	**20 03 23.6**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=121,slow=7.5,SNR=8.9						
UCH	**Uchtor**	**56.08**	**315**	P	**P**	**20 03 29.3**	**+0.5**
	SNR=19						
FRU1	**Bishkek**	**56.20**	**316**	P	**P**	**20 03 28.6**	**-0.6**
FRU1				IAmb	IAmb	20 03 43.1	
	comp=Z,6.8nm,0.5s						
AAK	**Ala-Archa**	**56.23**	**316**	P	**P**	**20 03 31.4**	**+1.9**
	comp=Z,0.9nm,0.4s,baz=128,slow=14,SNR=5.5						
AAK	**Ala-Archa**	**56.23**	**316**	P	**P**	**20 03 29.2**	**-0.3**
AML	**Almaayahu**	**56.62**	**315**	P	**P**	**20 03 32.8**	**+0.2**
	SNR=10.0						
SEY	**Seymchan**	**56.66**	**14**	P	**P**	**20 03 34.7**	**+2.7**
	comp=Z,1.0nm,0.3s,baz=232,slow=8.1,SNR=4.9						
KURK	**Kurchatov**	**57.04**	**326**	P	**P**	**20 03 33.8**	**-1.0**
KURK				IAmb	IAmb	20 03 35.2	
	comp=Z,14nm,0.9s						
BTK	**Batken**	**58.06**	**312**	P	**P**	**20 03 41.6**	**-0.8**
BTK				IAmb	IAmb	20 03 58.5	
	comp=Z,12nm,1.2s						
KBL	**Kabul**	**58.14**	**305**	P	**P**	**20 03 42.5**	**-0.8**
KBL				IAmb	IAmb	20 03 50.2	
	comp=Z,6.5nm,0.8s						
GAR	**Garm**	**58.15**	**310**	P	**P**	**20 03 42.3**	**-0.9**
CHGR	**Chuyangaron**	**58.95**	**310**	P	**P**	**20 03 48.1**	**-0.6**
KK31	**Karatay Array**	**59.15**	**315**	P	**P**	**20 03 49.1**	**-0.8**
KK31				IAmb	IAmb	20 03 49.9	
	comp=Z,7.0nm,0.9s						
TIXI	**Tiksi**	**62.29**	**1**	P	**P**	**20 04 11.3**	**+0.7**
	comp=Z,8.2nm,0.9s,baz=155,slow=4.1,SNR=22						
TIXI	**Tiksi**	**62.29**	**1**	P	**P**	**20 04 11.0**	**+0.3**
BRVK	**Borovoye**	**62.70**	**326**	P	**P**	**20 04 13.7**	**-0.1**
HRA	**Herat**	**63.67**	**304**	P	**P**	**20 04 20.1**	**-0.7**
HRA				IAmb	IAmb	20 04 26.5	
	comp=Z,3.1nm,0.9s						
ATKA	**Atka Island**	**64.04**	**36**	P	**P**	**20 04 22.3**	**-0.3**
BILL	**Bilibino**	**64.23**	**15**	P	**P**	**20 04 23.4**	**-0.2**
BILL				IAmb	IAmb	20 04 25.7	
	comp=Z,8.9nm,1.1s						
NRIK	**Noril'sk**	**65.01**	**346**	P	**P**	**20 04 29.0**	**+0.4**
	comp=Z,7.0nm,0.8s,baz=132,slow=5.1,SNR=9.6						
THZ	**Tophouse**	**66.21**	**144**	P	**P**	**20 04 37.3**	**+0.4**
LBZ	**Lake Benmore**	**66.39**	**147**	P	**P**	**20 04 38.3**	**+0.4**
RPZ	**Rata Peaks**	**66.41**	**146**	P	**P**	**20 04 38.6**	**+0.5**
LTZ	**Lake Taylor**	**66.49**	**145**	P	**P**	**20 04 39.4**	**+0.7**
OXZ	**Oxford**	**66.70**	**146**	P	**P**	**20 04 40.3**	**+0.4**
BKZ	**Black Stump Fm**	**66.85**	**140**	P	**P**	**20 04 41.8**	**+0.8**
GEYT	**Alibeck**	**67.38**	**307**	P	**P**	**20 04 44.5**	**0.0**
	comp=Z,1.7nm,0.7s,baz=69,slow=9.7,SNR=5.1						
GYA0B	**ALIBECK ARRAY**	**67.38**	**307**	P	**P**	**20 04 43.4**	**-1.1**
GYA0B				IAmb	IAmb	20 04 51.2	
	comp=Z,3.7nm,0.8s						
UOSS	**Minazif**	**68.41**	**293**	P	**P**	**20 04 51.4**	**+0.2**
UOSS				IAmb	IAmb	20 04 56.1	
	comp=Z,5.6nm,1.1s						
AKTO	**Aktyubinsk**	**69.26**	**320**	P	**P**	**20 04 55.6**	**-0.4**
	comp=Z,3.4nm,0.9s,baz=106,slow=6.6,SNR=8.1						
AKTO				LR	LR	20 35 01.5	
	comp=Z,422nm,21.9s,baz=107,slow=36						
ARU	**Arti**	**70.20**	**327**	P	**P**	**20 05 00.8**	**-0.8**
	comp=Z,1.8nm,0.4s,baz=107,slow=4.1,SNR=13						
ARU	**Arti**	**70.20**	**327**	P	**P**	**20 04 59.9**	**-1.8**
ARU				IAmb	IAmb	20 05 01.5	
	comp=Z,7.8nm,0.7s						
SDPT	**Sand Point**	**72.69**	**35**	P	**P**	**20 05 17.5**	**+0.9**
KIRV	**Kirov**	**75.43**	**328**	P	**P**	**20 05 32.3**	**-0.2**
	comp=Z,20nm,0.9s,baz=189,slow=1.7,SNR=11						
CASY	**Casey**	**76.31**	**187**	P	**P**	**20 05 38.2**	**+0.9**
CASY				IAmb	IAmb	20 05 54.9	
	comp=Z,4.1nm,0.8s						
KDAK	**Kodiak Island**	**77.28**	**33**	P	**P**	**20 05 43.7**	**+0.7**
	comp=Z,6.7nm,0.9s,baz=246,slow=4.4,SNR=6.0						
KDAK	**Kodiak Island**	**77.28**	**33**	IAmb	IAmb	20 05 48.0	
	comp=Z,87nm,1.7s						
RAYN	**Ar Rayn**	**78.23**	**292**	P	**P**	**20 05 48.6**	**-0.6**
RAYN				IAmb	IAmb	20 05 49.5	
	comp=Z,7.9nm,0.8s						
BPAW	**Bear Paw Mtn.**	**78.36**	**26**	P	**P**	**20 05 50.1**	**+1.1**
BPAW				IAmb	IAmb	20 06 04.0	
	comp=Z,10nm,1.0s						
KBZ	**Khabaz**	**79.09**	**313**	P	**P**	**20 05 52.6**	**-0.8**
	comp=Z,4.

λ69.00000°. NP2:φ8.12.00000°,δ68.00000°,λ99.00000°. Principal axes: T 1.7470, Plg65.0000°, Azm298.0000°; N 0.2860, Plg8.0000°, Azm189.0000°; P -2.0310, Plg23.0000°, Azm96.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

DJA ***31*** *19:54:19.1±0.7, 9°N±4°×12°7E±°, h36km±6km, M5.3/83, mb5.2/83, mB5.7/53, MLv6.2/1, Mw(mB)5.2/53, Mwp5.6/3*

KLM ***31*** *19:54:19.0, 9.71N×126.65E, h96km, mb5.3*

ISC 31 19:54:19.4±0.5, 9°27N±0°03×126°57E±0°04, h33km±1km, h33km:pP-P, n819, σ1§66/643, mb5.2/169, **MS5.1**/250, **25C-9D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.18**	**295**	⇓	*e*P		Pn	19 54 30.1	-10
SCPH					*e*S		**Sb**	**19 54 59.6**	**+3.4**
DAV	**Davao City (W)**	**2.40**	**204**		Pn		**Pb**	**19 55 01.9**	**0.0**
	310nm,0.3s,baz=56,slow=6.4,SNR=15								
DAV					Sn		**Sb**	**19 55 31.3**	**+0.1**
	578nm,0.3s,baz=104,slow=18,SNR=6.4								
DAV					LR		LR	19 56 07.7	
	comp=Z,63μm,20.8s,baz=40,slow=48								
DAV	**Davao City (W)**	**2.40**	**204**				**Pn**	**19 54 57.7**	**+1.3**
DMPH	**Davao City--Mi**	**2.42**	**206**		*e*P		**Pb**	**19 55 02.7**	**+0.4**
DMPH					*e*S		**Sb**	**19 55 32.5**	**+0.8**
KCP	**Kidapawan**	**2.68**	**213**		*i* S		**Sb**	**19 55 37.1**	**-2.3**
LLP	**Lapu-Lapu**	**2.77**	**292**		*e*P		**Pb**	**19 55 05.0**	**-3.2**
LLP					*e*S		**Sb**	**19 55 43.2**	**+1.5**
CTBH	**Cotabato--PC H**	**3.07**	**229**	⇑	*i*P		**Pn**	**19 55 08.6**	**+3.0**
GSPH	**General Santos**	**3.55**	**207**	⇑	*i*P		**Pn**	**19 55 16.4**	**+4.0**
GSPH					*i* S		**Sb**	**19 56 03.6**	**-0.8**
TGY	**Tagaytay City**	**7.31**	**312**		Pn		Pn	19 56 09.3	+5.3
	11nm,0.3s,baz=125,slow=19,SNR=5.2								
TNTI	**Ternate**	**8.48**	**175**		P		**Pn**	**19 56 20.1**	**0.0**
	4μm395nm,0.9s								
TNTI	**Ternate**	**8.48**	**175**		Pn		**Pn**	**19 56 19.0**	**-1.1**
KMSI	**Cibinong**	**9.02**	**197**		P		Pn	19 56 34.2	+6.8
	3μm363nm,0.7s								
MRSI	**Marisa**	**9.88**	**208**		P		**Pn**	**19 56 42.2**	**+3.0**
	2μm165nm,0.6s								
LUWI	**Luwuk**	**10.92**	**200**		P		**Pn**	**19 56 57.8**	**+4.3**
	6μm280nm,1.1s								
MPSI	**Mapaga**	**11.09**	**217**		P		**Pn**	**19 56 58.0**	**+2.2**
	24nm,0.8s								
SIJI	**Sorong**	**11.11**	**155**		Pn		**Pn**	**19 56 57.5**	**+1.4**
	11nm,0.3s,baz=323,slow=12,SNR=20								
SIJI	**Sorong**	**11.11**	**155**				**Pn**	**19 56 57.5**	**+1.4**
SANI	**Sanana**	**11.26**	**183**		P		**Pn**	**19 56 57.5**	**-0.7**
	2μm159nm,0.7s								
NLAI	**Namlea**	**12.44**	**178**		P		**Pn**	**19 57 14.2**	**-0.1**
	1μm111nm,0.7s								
MSAI	**Masohi**	**12.76**	**169**		P		**Pn**	**19 57 19.2**	**+0.6**
	459nm30nm,0.8s								
AAI	**Ambon**	**12.98**	**173**		P		**Pn**	**19 57 22.2**	**+0.6**
	87nm,0.7s								
RKPI	**Ransiki, Papua**	**13.12**	**144**		P		**Pn**	**19 57 23.6**	**-0.1**
	12μm205nm,1.0s								
FAKI	**Fak Fak**	**13.37**	**155**		P		**Pn**	**19 57 25.8**	**-1.2**
	3μm110nm,0.8s								
FAKI	**Fak Fak**	**13.37**	**155**		Pn		**Pn**	**19 57 26.7**	**-0.3**
SMKI	**Samarinda**	**13.42**	**224**		P		**Pn**	**19 57 30.9**	**+3.2**
	4μm204nm,0.9s								
TTSI	**Tana Toraja**	**13.96**	**209**		P		**Pn**	**19 57 38.5**	**+3.4**
	3μm207nm,1.5s								
SRPI	**Serui, Papua**	**14.68**	**138**		P		**P**	**19 57 47.9**	**-2.8**
	24nm0.2nm,0.9s								
SPSI	**Sidrap Palu**	**14.79**	**208**		P		**P**	**19 57 49.4**	**-2.5**
	4μm153nm,1.1s								
YULB	**Yu-li**	**14.92**	**341**		P		**Pn**	**19 57 49.1**	**+1.0**
BNSI	**Bone**	**15.03**	**206**		P		**Pn**	**19 57 50.8**	**+1.2**
	5μm200nm,1.1s								
BBSI	**Bau Bau**	**15.20**	**195**		P		**P**	**19 57 56.1**	**-0.3**
	98nm12nm,1.0s								
KAPI	**Kappang**	**15.74**	**206**		Pn		**P**	**19 58 05.4**	**+3.0**
	1.2nm,0.3s,baz=34,slow=5.2,SNR=8.7								
KAPI	**Kappang**	**15.74**	**206**		P		**P**	**19 58 01.2**	**-1.2**
KAPI					pmax		pmax		
	comp=Z,71nm,0.9s								
KAPI	**Kappang**	**15.74**	**206**				**P**	**19 58 01.2**	**-1.2**
BKSI	**Bulukumba**	**15.86**	**204**		P		**P**	**19 58 05.2**	**+1.4**
	comp=Z,2μmcomp=Z,74nm,1.1s								
YHNB	**Yeheng**	**16.09**	**343**		Pn		**Pn**	**19 58 02.6**	**-0.7**
KBKI	**Kotabaru**	**16.23**	**220**		P		**P**	**19 58 10.6**	**+2.7**
	comp=Z,2μmcomp=Z,158nm,0.8s								
SMPI	**Sarmi**	**16.48**	**132**		P		**Pn**	**19 58 06.6**	**-1.7**
	comp=Z,6μmcomp=Z,2μmcomp=Z,93nm,1.1s								
QZH	**Quanzhou**	**17.34**	**335**		P		**Pn**	**19 58 16.8**	**-2.1**
QZH					S		**Sn**	**20 01 33.8**	**+2.9**
QZH					LR		LR		
	comp=Z,7μm,19.4s								
QZH					LR		LR		
	comp=Z,1μm,14.2s								
QZH					LR		LR		
	comp=Z,8μm,16.6s								
GENI	**Genyem**	**17.96**	**130**		P		**Pn**	**19 58 22.6**	**-4.2**
	comp=Z,10μmcomp=Z,6μmcomp=Z,202nm,1.3s								
DLV	**T Lat**	**17.97**	**280**		P		**Pn**	**19 58 25.9**	**-1.1**
MMRI	**Maumere**	**18.31**	**194**		P		**Pn**	**19 58 34.7**	**+3.7**
	comp=Z,3μmcomp=Z,309nm,1.0s								
JAY	**Jayapura**	**18.32**	**129**		P		**P**	**19 58 30.2**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=299,slow=11,SNR=18								
JAY	**Jayapura**	**18.32**	**129**		P		**P**	**19 58 28.2**	**-2.9**
	comp=Z,2μmcomp=Z,52nm,1.1s								
JAY	**Jayapura**	**18.32**	**129**		P		**P**	**19 58 30.2**	**-0.8**
EDFI	**Ende, Flores**	**18.55**	**195**		P		**Pn**	**19 58 34.8**	**+0.7**
	comp=Z,719nmcomp=Z,42nm,0.7s								
BATI	**Baumata**	**19.57**	**189**		P		**Pn**	**19 58 46.6**	**+0.4**
	comp=Z,43nm,0.3s,baz=330,slow=1.4,SNR=20								
BATI	**Baumata**	**19.57**	**189**		P		**Pn**	**19 58 46.6**	**+0.4**
SSE	**Sheshan**	**22.28**	**348**		P		**P**	**19 59 13.8**	**-0.1**
SSE					sP		**sP**	**19 59 23.5**	**-1.5**
SSE					pmax		pmax		
	comp=Z,68nm,1.2s								
SSE					pmax		pmax		
	comp=Z,510nm,3.8s								
SSE					LR		LR		
	comp=Z,1μm,14.5s								
SSE	**Sheshan**	**22.28**	**348**		P		**P**	**19 59 13.5**	**-0.4**
SSE					IAmb		IAmb	19 59 17.7	
	comp=Z,172nm,1.1s								
MTN	**Manton Dam**	**22.44**	**168**		P		**P**	**19 59 16.4**	**+0.7**
	baz=22								
MTN	**Manton Dam**	**22.44**	**168**		P		**P**	**19 59 15.9**	**+0.2**
KDU	**Kakadu**	**22.59**	**165**		P		**P**	**19 59 17.0**	**-0.3**
	baz=23								
SMRI	**Semarang**	**22.83**	**225**		P		**P**	**19 59 20.3**	**+0.4**
TPRI	**Tanjung Pinang**	**23.45**	**251**		P		**P**	**19 59 27.9**	**+1.7**
	comp=Z,2μmcomp=Z,46nm,1.8s								
NJ2	**Nanjing**	**23.77**	**344**		*e*P		**P**	**19 59 29.0**	**0.0**
NJ2					pmax		pmax		
	comp=Z,110nm,0.9s								
NJ2					LR		LR		
	comp=Z,3μm,14.7s								
NJ2					LR		LR		
	comp=Z,2μm,12.8s								
NJ2					LR		LR		
	comp=Z,4μm,19.4s								
MYKOM	**Kota Tinggi**	**23.79**	**253**		P		**P**	**19 59 29.8**	**+0.4**
WHN	**Wuhan**	**24.04**	**333**	⇓	*i*P		**P**	**19 59 31.5**	**0.0**
WHN					pmax		pmax		
	comp=Z,74nm,1.1s								
WHN					pmax		pmax		
	comp=Z,1μm,4.7s								
WHN					LR		LR		
	comp=Z,5μm,12.7s								
WHN					LR		LR		
	comp=Z,5μm,19.9s								
WHN					LR		LR		
	comp=Z,11μm,17.9s								
JNU	**Nakatsue**	**24.06**	**9**		P		**P**	**19 59 31.7**	**-0.1**
	comp=Z,64nm,0.9s,baz=170,slow=5.5,SNR=25								
JNU	**Nakatsue**	**24.06**	**9**		P		**P**	**19 59 31.2**	**-0.7**
JNU					IAmb		IAmb	19 59 33.1	
	comp=Z,86nm,1.0s								
LEM	**Lembang**	**24.75**	**230**		P		**P**	**19 59 40.0**	**+1.6**
	comp=Z,117nm,1.0s,baz=152,slow=22,SNR=5.7								
LEM	**Lembang**	**24.75**	**230**		P		**P**	**19 59 40.0**	**+1.6**
LEM	**Lembang**	**24.75**	**230**		P		**P**	**19 59 40.0**	**+1.6**
PMBI	**Palembang**	**24.87**	**242**		P		**P**	**19 59 37.6**	**-1.7**
	comp=Z,5μmcomp=Z,270nm,1.2s								
PMBI	**Palembang**	**24.87**	**242**		P		**P**	**19 59 39.2**	**-0.1**
KNRA	**Kununurra**	**24.89**	**175**		P		**P**	**19 59 39.4**	**0.0**
	baz=25,SNR=11								
KNRA	**Kununurra**	**24.89**	**175**		P		**P**	**19 59 39.3**	**0.0**
SLVN	**Son La**	**24.89**	**301**		P		**P**	**19 59 38.0**	**-1.5**
CISI	**Cisompet, Garu**	**25.07**	**229**		P		**P**	**19 59 41.5**	**+0.3**
	comp=Z,2μmcomp=Z,131nm,1.0s								
CISI	**Cisompet, Garu**	**25.07**	**229**		P		**P**	**19 59 41.7**	**+0.5**
DBJI	**Dramaga**	**25.24**	**232**		P		**P**	**19 59 42.8**	**+0.1**
	comp=Z,70nm,1.6s								
CNJI	**Cibinong**	**25.43**	**230**		P		**P**	**19 59 46.7**	**+2.4**
	comp=Z,2μmcomp=Z,198nm,1.2s								
BLSI	**Bandar Lampung**	**25.75**	**236**		P		**P**	**19 59 48.4**	**+1.1**
	comp=Z,3μmcomp=Z,165nm,0.8s								
KULM	**Kulim**	**26.00**	**263**		P		**P**	**19 59 49.0**	**-0.7**
KULM	**Kulim**	**26.00**	**263**		P		**P**	**19 59 53.0**	**+3.4**
MDSI	**Maura Dua**	**26.17**	**239**		P		**P**	**19 59 51.3**	**+0.2**
	comp=Z,920nmcomp=Z,61nm,1.2s								
ENH	**Enshi**	**26.29**	**325**		P		**P**	**19 59 50.3**	**-1.7**
ENH					IAMs_20		IAMs_20	20 11 19.3	
	comp=Z,5μm,18.0s								
LHSI	**Lahat**	**26.40**	**241**		P		**P**	**19 59 51.9**	**-1.3**
	comp=Z,2μmcomp=Z,63nm,0.8s								
KASI	**Kota Agung**	**26.46**	**237**		P		**P**	**19 59 55.9**	**+2.2**
	comp=Z,67nm,0.8s								
LWLI	**Liwa**	**26.55**	**239**		P		**P**	**19 59 54.2**	**-0.5**
	comp=Z,2μmcomp=Z,252nm,0.9s								
BKNI	**Bangkinang**	**26.92**	**252**		P		**P**	**19 59 57.5**	**-0.4**
BKNI					IAmb		IAmb	20 00 48.8	
	comp=Z,110nm,1.3s								
TJN	**Taejon**	**26.99**	**1**		*ce*P		**P**	**20 00 00.3**	**+2.1**
FITZ	**Fitzroy Crossi**	**27.21**	**182**		P		**P**	**20 00 01.5**	**+1.1**
	baz=27								
FITZ	**Fitzroy Crossi**	**27.21**	**182**		P		**P**	**20 00 01.4**	**+1.0**
	comp=Z,67nm,0.7s,baz=22,slow=7.4,SNR=21								
FITZ					LR		LR	20 12 44.6	
	comp=Z,952nm,18.1s,baz=51,slow=41								
FITZ	**Fitzroy Crossi**	**27.21**	**182**		P		**P**	**20 00 00.6**	**+0.2**
FITZ					IAmb		IAmb	20 00 08.9	
	comp=Z,75nm,0.8s								
KRJI	**Kerinci**	**27.44**	**247**		P		**P**	**20 00 07.0**	**+4.3**
	comp=Z,4μmcomp=Z,188nm,0.8s								
KMI	**Kunming**	**27.61**	**308**		P			20 00 13.0	+8.8
KMI					pP		pwP	20 00 34.3	+17
KMI					PP		**PnPn**	**20 00 57.3**	**+7.1**
KMI					S		**S**	**20 04 46.3**	**+2.2**
KMI					sS		sS	20 05 10.5	+11
KMI					SS		**SS**	**20 06 33.3**	**-7.8**
KMI					pmax		pmax		
	comp=Z,19nm,0.5s								
KMI					pmax		pmax		
	comp=Z,580nm,7.0s								
KMI					LR		LR		
	comp=N,3μm,15.3s								
KMI					LR		LR		
	comp=E,3μm,17.7s								
KMI					LR		LR		
	comp=Z,4μm,17.1s								
KMI	**Kunming**	**27.61**	**308**		IAMs_20		IAMs_20	20 10 51.1	
	comp=Z,4μm,20.0s								
PMG	**Port Moresby**	**27.65**	**132**		P		**P**	**20 00 03.5**	**-0.9**
	comp=Z,41nm,1.0s,baz=27,slow=9.8,SNR=6.2								
PMG	**Port Moresby**	**27.65**	**132**		*ce*P		**P**	**20 00 06.4**	**+2.0**
PMG					pmax		pmax		
	comp=Z,239nm,1.3s								
KSRS	**Korea Array**	**28.08**	**2**		P		**P**	**20 00 08.7**	**+0.7**
	comp=Z,13nm,0.9s,baz=176,slow=10.0,SNR=19								
KSRS					PcP		**PcP**	**20 03 22.5**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=170,slow=3.7,SNR=2.3								
KSRS					ScP		**ScP**	**20 07 03.4**	**+2.7**
	comp=Z,1.6nm,0.8s,baz=184,slow=2.6,SNR=8.4								
KSRS	**Korea Array**	**28.08**	**2**		P		**P**	**20 00 08.7**	**+0.7**
MNSI	**Mandailing Nat**	**28.15**	**254**		P		**P**	**20 00 09.4**	**+0.5**
	comp=Z,1μmcomp=Z,34nm,0.5s								
TIA	**Tai'an**	**28.16**	**344**		P		**P**	**20 00 08.5**	**-0.2**
TIA					S		**S**	**20 04 57.0**	**+5.0**
TIA					pmax		pmax		
	comp=Z,48nm,1.0s								
TIA					pmax		pmax		
	comp=Z,580nm,7.4s								
TIA					LR		LR		
	comp=Z,2μm,14.2s								
TIA					LR		LR		
	comp=Z,1μm,15.2s								
TIA					LR		LR		
	comp=Z,3μm,21.6s								
PSI	**Prapat**	**28.22**	**259**		P		**P**	**20 00 11.6**	**+1.9**
	comp=Z,41nm,0.8s,baz=0.7,slow=2.6,SNR=12								
PSI	**Prapat**	**28.22**	**259**		P		**P**	**20 00 11.6**	**+1.9**
PSI					pmax		pmax		
	comp=Z,89nm,1.0s								
RPSI	**Rantau Prapat**	**28.24**	**258**		P		**P**	**20 00 09.8**	**+0.1**
RPSI					IAmb		IAmb	20 00 14.8	
	comp=Z,89nm,1.0s								
RPSI	**Rantau Prapat**	**28.24**	**258**		P		**P**	**20 00 11.6**	**+1.8**
CM31	**Chiang Mai Arr**	**28.29**	**292**		P		**P**	**20 00 09.8**	**-0.4**
CM31					IAmb		IAmb	20 00 31.5	
	comp=Z,135nm,1.9s								
CMAR	**Chiang Mai Arr**	**28.29**	**292**		P		**P**	**20 00 10.6**	**+0.4**
	comp=Z,4.6nm,0.9s,baz=107,slow=6.8,SNR=8.4								
CMAR					PcP		**PcP**	**20 03 24.1**	**+1.2**
	comp=Z,3.6nm,0.8s,baz=97,slow=1.8,SNR=1.4								
CMAR					ScP		**ScP**	**20 07 03.9**	**+2.1**
	comp=Z,4.1nm,1.1s,baz=88,slow=1.3,SNR=8.7								
CMAR	**Chiang Mai Arr**	**28.29**	**292**		*ce*P		**P**	**20 00 11.3**	**+1.1**
CMAR					pmax		pmax		
	comp=Z,5.0nm,0.9s								
CMAR	**Chiang Mai Arr**	**28.29**	**292**		P		**P**	**20 00 10.6**	**+0.4**
CHTO	**Chiang Mai**	**28.39**	**293**		P		**P**	**20 00 10.1**	**-0.9**
CHTO					pmax		pmax		
	comp=Z,18nm,1.1s								
CHTO	**Chiang Mai**	**28.39**	**293**		P		**P**	**20 00 10.1**	**-0.9**
TSI	**Tuntungan**	**28.40**	**260**		P		**P**	**20 00 13.1**	**+2.0**
	comp=Z,113nm,1.1s								
MJAR	**Matsushiro Arr**	**29.13**	**20**		P		**P**	**20 00 16.0**	**-1.4**
	comp=Z,7.5nm,0.9s,baz=197,slow=9.4,SNR=18								
MJAR					PcP		**PcP**	**20 03 25.7**	**+0.9**
	comp=Z,4.9nm,0.8s,baz=183,slow=2.8,SNR=7.8								
MJAR					ScP		**ScP**	**20 07 08.3**	**+4.2**
	comp=Z,0.4nm,0.8s,baz=10.0,slow=14,SNR=2.3								
MJAR	**Matsushiro Arr**	**29.13**	**20**		P		**P**	**20 00 16.0**	**-1.4**
MJAR	**Matsushiro Arr**	**29.13**	**20**		P		**P**	**20 00 16.0**	**-1.4**
MAJO	**Matsushiro**	**29.13**	**19**		*i* P		**P**	**20 00 16.9**	**-0.5**
MAJO					pmax		pmax		
	comp=Z,6.0nm,1.1s								
MAT	**Matsushiro**	**29.13**	**19**		P		**P**	**20 00 15.8**	**-1.6**
MAT					S		S	20 05 28.2	+21
KCSI	**Kotacane, Aceh**	**29.17**	**261**		P		**P**	**20 00 18.5**	**+0.5**
	comp=Z,962nmcomp=Z,52nm,1.0s								
SISI	**Saibi**	**29.33**	**250**		P		**P**	**20 00 20.1**	**+0.7**
	comp=Z,40nm,0.7s								
XAN	**Xi'an**	**29.50**	**329**		P		**P**	**20 00 18.5**	**-2.3**
XAN					pP		**sP**	**20 00 31.3**	**-0.9**
XAN					sP		**pwP**	**20 00 37.3**	**+4.1**
XAN					pmax		pmax		
	comp=Z,25nm,0.8s								
XAN					LR		LR		
	comp=Z,4μm,15.2s								
XAN					LR		LR		
	comp=Z,3μm,15.2s								
XAN					LR		LR		
	comp=Z,7μm,15.9s								
XAN	**Xi'an**	**29.50**	**329**		P		**P**	**20 00 18.7**	**-2.1**
XAN					pmax		pmax		
	comp=Z,19nm,0.8s								
XAN					MLR		MLR		
	comp=Z,2μm,20.0s								
XAN	**Xi'an**	**29.50**	**329**		P		**P**	**20 00 18.7**	**-2.1**
DL2	**Dalian**	**29.84**	**352**		P		**P**	**20 00 24.8**	**+1.2**
DL2					S		**S**	**20 05 21.0**	**+2.7**
DL2					pmax		pmax		
	comp=Z,33nm,0.9s								
DL2					pmax		pmax		
	comp=Z,510nm,8.6s								
DL2					LR		LR		
	comp=Z,1μm,15.3s								
DL2					LR		LR		
	comp=Z,2μm,18.0s								
DL2					LR		LR		
	comp=Z,2μm,14.2s								
WB0	**Warramunga Arr**	**29.87**	**165**		P		**P**	**20 00 22.8**	**-1.3**
WB0					IAmb		IAmb	20 00 48.3	
	comp=Z,31nm,0.8s								
GSI	**Gunungsitoli**	**29.91**	**256**		P		**P**	**20 00 23.6**	**-1.0**
WRAB	**Tennant Creek**	**30.02**	**165**		*ce*P		**P**	**20 00 27.8**	**+2.4**
WRAB					pmax		pmax		
	comp=Z,11nm,0.6s								
WRAB	**Tennant Creek**	**30.02**	**165**		P		**P**	**20 00 24.2**	**-1.2**
WRAB					IAmb		IAmb	20 00 42.7	
	comp=Z,32nm,0.9s								
WRA	**Warramunga Arr**	**30.02**	**165**		P		**P**	**20 00 23.6**	**-1.9**
	comp=Z,7.7nm,0.6s,baz=347,slow=9.9,SNR=6.9								
WRA	**Warramunga Arr**	**30.02**	**165**		P		**P**	**20 00 23.6**	**-1.9**
WB2	**Warramunga Arr**	**30.03**	**165**		P		**P**	**20 00 24.2**	**-1.3**
WB2					IAmb		IAmb	20 00 44.5	
	comp=Z,61nm,1.2s								
WR0	**Warramunga Arr**	**30.09**	**165**		P		**P**	**20 00 25.7**	**-0.4**
TIY	**Taiyuan**	**31.05**	**338**		*e*P		P	20 00 29.5	-5.0
TIY					PP		**PP**	**20 01 42.0**	**-3.0**
TIY					S		**S**	**20 05 36.3**	**-1.3**
TIY					sS		ScP	20 06 31.5	-39
TIY					SS		**SnSn**	**20 07 34.0**	**+14**
TIY					pmax		pmax		
	comp=Z,13nm,0.5s								
TIY					pmax		pmax		
	comp=Z,370nm,5.7s								
TIY					LR		LR		
	comp=N,1μm,11.9s								
TIY					LR		LR		
	comp=E,2μm,13.1s								
TIY					LR		LR		
	comp=Z,2μm,14.6s								
PSA00	**Pilbara Seismi**	**31.36**	**192**		P		**P**	**20 00 37.1**	**-0.1**
PATS	**Pohnpei**	**31.52**	**92**		IAMs_20		IAMs_20	20 12 59.8	
	comp=Z,4μm,19.0s								
BJT	**Baijiatuao**	**31.99**	**345**		P		**P**	**20 00 42.2**	**-0.3**
BJT					pmax		pmax		
	comp=Z,73nm,1.2s								
BJT					MLR		MLR		
	comp=Z,2μm,20.0s								
BJT	**Baijiatuao**	**31.99**	**345**		P		**P**	**20 00 42.2**	**-0.3**
BJT					IAmb		IAmb	20 00 45.8	
	comp=Z,73nm,1.2s								
QIS	**Mount Isa**	**32.30**	**157**		P		**P**	**20 00 44.4**	**-1.1**
	baz=32								
SNY	**Shenyang**	**32.53**	**356**	⇓	P		**P**	**20 00 48.5**	**+1.2**
SNY					S		**S**	**20 06 00.0**	**-0.3**
SNY					pmax		pmax		
	comp=Z,39nm,0.9s								
SNY					pmax		pmax		
	comp=Z,440nm,9.0s								
SNY					LR		LR		
	comp=Z,2μm,14.7s								
SNY					LR		LR		
	comp=Z,2μm,16.2s								
SNY					LR		LR		
	comp=Z,4μm,15.7s								
PBA	**Port Blair**	**33.33**	**277**		P		**P**	**20 00 53.8**	**-0.9**
PBA					IAmb		IAmb	20 01 30.6	
	comp=Z,52nm,1.0s								
AS31	**Alice Springs**	**33.52**	**168**		P		**P**	**20 00 55.4**	**-0.7**
ASAR	**Alice Springs**	**33.52**	**168**		P		**P**	**20 00 54.9**	**-1.3**
	comp=Z,7.8nm,0.6s,baz=352,slow=6.5,SNR=13								
ASAR					PcP		**PcP**	**20 03 36.6**	**0.0**
	comp=Z,3.7nm,0.7s,baz=349,slow=3.2,SNR=4.1								
ASAR					ScP		**ScP**	**20 07 22.2**	**+3.3**
	comp=Z,0.4nm,0.6s,baz=123,slow=27,SNR=1.6								
ASAR	**Alice Springs**	**33.52**	**168**		P		**P**	**20 00 54.9**	**-1.3**
GIRL	**Giralia**	**33.94**	**201**		P		**P**	**20 01 00.4**	**+0.6**
WRKA	**Warakurna**	**34.15**	**177**		P		**P**	**20 01 01.2**	**-0.4**
	baz=34								
HHC	**Hu-ho-hao-te**	**34.15**	**340**		*e*P		P	**20 01 00.8**	**-0.8**
HHC					sP		**pP**	**20 01 10.5**	**+0.8**
HHC					S		**S**	**20 06 28.5**	**+2.8**
HHC					pmax		pmax		
	comp=Z,16nm,1.1s								
HHC					pmax		pmax		
	comp=Z,390nm,8.1s								
HHC					LR		LR		
	comp=Z,2μm,14.7s								
HHC					LR		LR		
	comp=Z,820nm,15.1s								
HHC					LR		LR		
	comp=Z,2μm,17.1s								
CN2	**Changchun**	**34.41**	**359**		*e*P		P	20 01 10.0	+6.4
CN2					*es*P		PP	20 01 52.3	-30
CN2					*e*S		**S**	**20 06 33.5**	**+4.0**
CN2					pmax		pmax		
	comp=Z,10.0nm,0.6s								
CN2					pmax		pmax		
	comp=Z,100nm,4.0s								
BTO	**Baotou**	**34.49**	**337**		*e*P		**P**	**20 01 03.3**	**-1.2**
BTO					S		S	20 06 21.0	-10
CTA	**Charters Tower**	**35.03**	**147**		P		**P**	**20 01 08.4**	**-0.8**
	comp=Z,9.8nm,0.8s,baz=308,slow=8.2,SNR=10.0								
CTAO	**Charters Tower**	**35.03**	**147**		P		**P**	**20 01 09.0**	**-0.3**
CTAO					pmax		pmax		
	comp=Z,54nm,1.3s								
CTAO					MLR		MLR		
	comp=Z,2μm,18.0s								
CTAO	**Charters Tower**	**35.03**	**147**		P		**P**	**20 01 09.0**	**-0.3**
CTAO					IAmb		IAmb	20 01 23.5	
	comp=Z,54nm,1.3s								
USRK	**Ussuriysk Ar.**	**35.11**	**7**		P		**P**	**20 01 09.8**	**+0.1**
	comp=Z,28nm,0.9s,baz=191,slow=7.6,SNR=20								
USRK	**Ussuriysk Ar.**	**35.11**	**7**		P		**P**	**20 01 09.8**	**+0.1

KUR e 20 03 55.0
KUR i S S 20 07 57.6 -0.7
KUR MLR MLR
comp=Z,900nm,16.0s
KUR MLR MLR
comp=E,1μm,18.0s
KUR MLR MLR
comp=N,300nm,12.0s
HIA Hailar 40.27 353 P P 20 01 52.7 -0.6
HIA pmax pmax
comp=Z,35nm,1.0s
HIA MLR MLR
comp=Z,2μm,18.0s
HIA Hailar 40.27 353 P P 20 01 52.7 -0.6
HIA Hailar 40.27 353 IAMs_20 IAMs_20 20 21 01.3
comp=Z,2μm,18.0s
H11N1 WAKE ISLAND Hy 40.30 70 T T 20 45 27.2
baz=265,slow=74,SNR=147
H11N2 WAKE ISLAND Hy 40.31 70 T T 20 45 27.6
baz=265,slow=74,SNR=92
H11N3 WAKE ISLAND Hy 40.32 70 T T 20 45 28.5
baz=265,slow=74,SNR=124
BLDU Ballidu 40.77 193 P P 20 01 58.1 +0.5
baz=41,SNR=14
KLBR Kellerberrin 41.50 191 P P 20 02 04.0 +0.4
baz=42,SNR=17
ULN Ulaanbaatar 41.85 340*ce*P P 20 02 07.6 +1.1
ULN pmax pmax
comp=Z,19nm,0.7s
ULN Ulaanbaatar 41.85 340 P P 20 02 05.8 -0.7
ULN Ulaanbaatar 41.85 340 IAMs_20 IAMs_20 20 22 16.7
comp=Z,2μm,19.0s
EIDS Eidsvold 41.90 146 P P 20 02 06.7 -0.3
EIDS IAmb IAmb 20 02 11.9
comp=Z,154nm,1.9s
SONM Songino Array 42.05 340 P P 20 02 08.3 +0.3
comp=Z,4.9nm,0.5s,baz=157,slow=8.9,SNR=13
SONM PcP **PcP** 20 04 03.3 +0.7
comp=Z,3.2nm,1.0s,baz=156,slow=2.5,SNR=1.6
SONM ScP **ScP** 20 07 52.7 +1.9
comp=Z,0.9nm,0.7s,baz=202,slow=1.6,SNR=4.9
SONM Songino Array 42.05 340 P P 20 02 08.3 +0.3
GRNR Gornyy 42.16 9 ǁ *i*P P 20 02 09.8 +1.0
GRNR pmax pmax
comp=Z,20nm,1.2s
GRNR MLR MLR
comp=Z,680nm,16.0s
MUN Mundaring 42.20 193 P P 20 02 09.3 0.0
baz=42,SNR=15
BBOO Buckleboo 42.82 168 P P 20 02 14.8 +0.5
baz=43,SNR=6.5
BBOO Buckleboo 42.82 168 P P 20 02 14.1 -0.3
BBOO IAmb IAmb 20 02 34.4
comp=Z,65nm,1.0s
NWAO Narrogin (SRO) 42.90 192 P P 20 02 15.3 +0.4
baz=43,SNR=14
NWAO Narrogin (SRO) 42.90 192 P P 20 02 15.0 +0.1
comp=Z,53nm,0.6s,baz=6.2,slow=8.1,SNR=22
NWAO Narrogin (SRO) 42.90 192 P P 20 02 15.1 +0.1
NWAO pmax pmax
comp=Z,60nm,0.8s
NWAO Narrogin (SRO) 42.90 192 P P 20 02 15.1 +0.2
NWAO IAmb IAmb 20 02 27.9
comp=Z,60nm,0.8s
STKA Stephens Creek 43.37 161 P P 20 02 17.7 -1.1
comp=Z,15nm,0.7s,baz=339,slow=8.9,SNR=12
STKA Stephens Creek 43.37 161 P P 20 02 18.7 -0.1
STKA pmax pmax
comp=Z,6.0nm,0.8s
STKA Stephens Creek 43.37 161 P P 20 02 18.7 -0.1
CIT Chita 43.93 348 *e*P P 20 02 24.0 +0.9
CIT *e* 20 02 36.2
CIT pmax pmax
comp=Z,148nm,1.6s
HTT Hallett 44.07 165 P P 20 02 24.4 0.0
baz=44,SNR=6.4
ZEA Zeya 44.34 1 *e*P P 20 02 26.6 +0.3
ZEA *e* 20 12 24.0
ZEA pmax pmax
comp=N,64nm,1.8s
ZEA pmax pmax
comp=Z,110nm,1.8s
ZEA MLR MLR
comp=Z,3μm,18.0s
ZEA MLR MLR
comp=N,2μm,17.0s
ZAK Zakamensk 45.29 339 *e*P P 20 02 32.8 -1.3
ZAK pmax pmax
comp=Z,10.0nm,1.2s
TLY Talaya 46.26 340 P P 20 02 42.2 +0.5
comp=Z,16nm,0.7s,baz=201,slow=4.5,SNR=16
TLY Talaya 46.26 340*c i*P P 20 02 40.6 -1.1
TLY *e* 20 04 30.6
TLY *e*S S 20 09 25.8 -0.4
TLY *e*SS ScS 20 12 36.7 +2.2
TLY pmax pmax
comp=Z,40nm,1.1s
TLY MLR MLR
comp=Z,4μm,17.0s
TLY Talaya 46.26 340 P P 20 02 41.5 -0.2
TLY IAmb IAmb 20 03 17.9
comp=Z,24nm,0.9s
TLY IAMs_20 IAMs_20 20 25 16.4
comp=Z,2μm,19.0s
MOY Mondy 47.17 338 *e*P P 20 02 49.4 +0.5
MOY pmax pmax
comp=Z,52nm,3.5s
HYB Hyderabad 47.31 285 *i* P P 20 02 50.0 -0.4
SKR Severo-Kuril's 47.95 25 *e*P P 20 02 53.8 -0.9
SKR MLR MLR
comp=Z,500nm,18.0s
SKR MLR MLR
comp=Z,400nm,17.0s
ARPS Mount Arapiles 47.99 163 P P 20 02 56.7 +1.5
baz=48,SNR=6.3
WMQ Urumqi 48.18 322 P P 20 02 55.8 -1.0
WMQ pmax pmax
comp=Z,51nm,1.5s
WMQ MLR MLR
comp=Z,2μm,19.0s
WMQ Urumqi 48.18 322 P P 20 02 55.8 -1.0
WMQ IAmb IAmb 20 02 58.8
comp=Z,51nm,1.5s
CAN Canberra 49.16 156 P P 20 03 04.4 +0.1
CAN pmax pmax
comp=Z,148nm,1.9s
CAN Canberra 49.16 156 P P 20 03 04.3 +0.1
BOD Bodaibo 49.39 351 *e*P P 20 03 07.0 +1.3
BOD pmax pmax
comp=Z,66nm,1.4s
TOO Toolangi 49.86 160 P P 20 03 09.9 +0.3
TOO pmax pmax
comp=Z,50nm,1.3s
TOO Toolangi 49.86 160 P P 20 03 09.9 +0.3
TOO IAmb IAmb 20 03 23.3
comp=Z,50nm,1.3s
DZM Mont Dzumac 49.99 129 *e*P P 20 03 12.0 +1.0
comp=Z,52nm,1.1s
DZM *e*S S 20 10 20.5 +0.6
comp=Z,2μm,25.6s
DZM *e*LR LR 20 17 30.4
comp=Z,2μm,25.6s
DZM Mont Dzumac 49.99 129 P P 20 03 11.6 +0.6
comp=Z,7.3nm,0.7s,baz=113,slow=18,SNR=3.1
DZM Mont Dzumac 49.99 129 P P 20 03 10.9 0.0
PEA0B Petropavlovsk- 50.42 24*ce*P P 20 03 15.9 +2.2
PEA0B Petropavlovsk- 50.42 24 IAMs_20 IAMs_20 20 28 11.1
comp=Z,2μm,18.0s
PETK Petropavlovsk- 50.42 24 P P 20 03 14.3 +0.7
comp=Z,14nm,0.8s,baz=199,slow=6.5,SNR=16
PETK Petropavlovsk- 50.42 24 P P 20 03 14.3 +0.7
PET Petropavlovsk 50.74 24 *e*P P 20 03 17.1 +1.1
PET *e*S S 20 10 29.5 +0.2
PET *e* 20 13 00.7
PET pmax pmax
comp=Z,29nm,0.9s
PET MLR MLR
comp=Z,900nm,20.0s
DGZ Jazzator, Alta 51.76 329 *i* P P 20 03 23.9 -0.1
DGZ pmax pmax
comp=Z,4.0nm,0.4s
ZSN Zaisan 51.84 325 *e*P P 20 03 23.7 -0.8
comp=Z,51nm,4.3s
ZSN Zaisan 51.84 325 *e*P P 20 03 23.6 -0.8
ZSN pmax pmax
comp=Z,51nm,4.3s

YAK Yakutsk 52.71 2 P P 20 03 30.1 -0.5
comp=Z,5.9nm,0.3s,baz=206,slow=3.9,SNR=15
YAK Yakutsk 52.71 2 *e*P P 20 03 30.6 +0.1
YAK *e**PP sP 20 03 42.0 -0.8
YAK *e* 20 04 41.1
YAK *e*S S 20 10 53.4 -2.6
YAK *e**SS sS 20 11 12.9 +2.4
YAK *e* 20 13 12.2
YAK *e*SS SS 20 14 27.1 -7.6
YAK pmax pmax
comp=Z,62nm,1.2s
YAK pmax pmax
comp=E,9.0nm,1.5s
YAK pmax pmax
comp=N,37nm,1.0s
YAK pmax pmax
comp=Z,102nm,3.5s
YAK pmax pmax
comp=N,88nm,3.5s
YAK pmax pmax
comp=E,45nm,2.8s
YAK smax smax
comp=E,191nm,2.9s
YAK smax smax
comp=N,103nm,2.8s
YAK MLR MLR
comp=Z,960nm,21.0s
YAK MLR MLR
comp=N,885nm,17.0s
YAK MLR MLR
comp=E,429nm,18.0s
MK31 Makanchi Array 52.99 323 P P 20 03 31.8 -1.2
MK31 pmax pmax
comp=Z,16nm,0.7s
MK31 Makanchi Array 52.99 323 P P 20 03 31.8 -1.2
MKAR Makanchi Array 52.99 323 P P 20 03 31.7 -1.3
comp=Z,15nm,0.6s,baz=123,slow=6.4,SNR=34
MKAR Makanchi Array 52.99 323 P P 20 03 31.7 -1.3
MAKZ Makanchi 53.19 323 P P 20 03 33.1 -1.3
MAKZ pmax pmax
comp=Z,22nm,0.6s
MAKZ MLR MLR
comp=Z,2μm,20.0s
MAKZ Makanchi 53.19 323 P P 20 03 33.1 -1.3
MAKZ IAmb IAmb 20 03 35.5
comp=Z,22nm,0.6s
MAKZ IAMs_20 IAMs_20 20 25 09.3
comp=Z,2μm,20.0s
UZB Uzynbulak 53.36 318 *e*P P 20 03 34.4 -1.6
comp=Z,8.7nm,0.6s
UZB Uzynbulak 53.36 318 *e*P P 20 03 34.4 -1.6
UZB pmax pmax
comp=Z,9.0nm,0.6s
MA2 Magadan 53.41 15 P P 20 03 34.8 -1.0
comp=Z,18nm,0.9s,baz=170,slow=4.5,SNR=9.6
MA2 Magadan 53.41 15*ce*P P 20 03 37.6 +1.8
MA2 pmax pmax
comp=Z,12nm,0.7s
PRZ Przheval'sk 53.51 317 P P 20 03 36.5 -0.6
PRZ pmax pmax
comp=Z,74nm,1.4s
PRZ MLR MLR
comp=Z,2μm,22.0s
PRZ Przheval'sk 53.51 317 P P 20 03 36.5 -0.6
PRZ IAmb IAmb 20 03 38.7
comp=Z,74nm,1.4s
PRZ IAMs_20 IAMs_20 20 28 00.8
comp=Z,2μm,22.0s
TARG Taragay, Kyrgy 53.61 316 P P 20 03 37.0 -1.1
TARG IAmb IAmb 20 04 04.6
comp=Z,63nm,1.7s
SATY Saty 53.73 317 *e*P P 20 03 37.3 -1.4
comp=Z,7.6nm,0.6s
SATY Saty 53.73 317 *e*P P 20 03 37.3 -1.4
SATY pmax pmax
comp=Z,8.0nm,0.6s
KSH Kashi 54.11 312 P P 20 03 42.8 +1.3
KSH sP **pP** 20 03 52.0 +1.5
KSH S S 20 11 14.0 -2.2
KSH pmax pmax
comp=Z,59nm,1.3s
KSH pmax pmax
comp=Z,370nm,4.7s
KSH LR LR
comp=Z,450nm,6.4s
KSH LR LR
comp=Z,170nm,11.6s
KSH LR LR
comp=Z,590nm,10.2s
KDJ Kajisay 54.20 316 P P 20 03 41.2 -0.9
KDJ pmax pmax
comp=Z,23nm,1.0s
KDJ MLR MLR
comp=Z,2μm,21.0s
KDJ Kajisay 54.20 316 P P 20 03 41.2 -0.9
KDJ IAmb IAmb 20 03 43.4
comp=Z,23nm,1.0s
NIL Nilore 54.53 305 P P 20 03 43.4 -1.1
NIL pmax pmax
comp=Z,77nm,0.8s
NIL Nilore 54.53 305 P P 20 03 43.4 -1.1
MDOK Medeo 54.69 317 *e*P P 20 03 44.7 -1.0
MDOK Medeo 54.69 317 *e*P P 20 03 44.6 -1.0
AAA Alma-Ata 54.80 317 *e*P P 20 03 44.8 -1.5
AAA Alma-Ata 54.80 317 *e*P P 20 03 45.8 -0.5
AAA *e*S S 20 11 32.0 +6.9
AAA pmax pmax
comp=Z,200nm,6.8s
AAA smax smax
comp=N,300nm,11.0s
ULHL Ulahol 54.89 316 P P 20 03 47.9 +0.7
SNR=11
TAU Tasmania Unive 55.28 162 P P 20 03 49.8 +0.2
TAU pmax pmax
comp=Z,38nm,1.2s
TAU Tasmania Unive 55.28 162 P P 20 03 49.8 +0.2
TAU IAmb IAmb 20 04 03.1
comp=Z,38nm,1.2s
KUU Kurty 55.45 318 *e*P P 20 03 49.3 -1.6
comp=Z,42nm,0.8s
KUU Kurty 55.45 318 *e*P P 20 03 49.3 -1.6
KUU pmax pmax
comp=Z,42nm,0.8s
KZA Kyzart 55.52 315 P P 20 03 53.1 +1.2
SNR=8.4
TKM2 Tokmak 2 55.58 316 P P 20 03 51.1 -1.1
SNR=9.8
ZAA0 Zalesovo Array 55.63 332 P P 20 03 51.1 -0.9
ZAA0 IAMs_20 IAMs_20 20 29 21.1
comp=Z,1μm,18.0s
ZALV Zalesovo Beam 55.63 332 P P 20 03 50.7 -1.3
comp=Z,8.4nm,0.4s,baz=127,slow=7.1,SNR=31
ZALV ScP **ScP** 20 08 50.2 +2.1
comp=Z,0.3nm,0.3s,baz=333,slow=17,SNR=2.0
ZALV PKP2bc 20 34 15.9
comp=Z,0.6nm,0.7s,baz=292,slow=4.7,SNR=4.5
ZALV Zalesovo Beam 55.63 332 P P 20 03 50.7 -1.3
KBK Karagaybulak 55.93 316 P P 20 03 55.5 +0.9
SNR=7.3
SEM Semipalatinsk 55.99 326 *e*P P 20 03 53.2 -1.9
SEM Semipalatinsk 55.99 326 *e*P P 20 03 53.1 -1.9
CHMS Chumysh 56.19 316 P P 20 03 56.5 +0.2
SNR=8.2
FRU1 Bishkek 56.20 316 P P 20 03 55.6 -0.8
FRU1 pmax pmax
comp=Z,19nm,1.1s
FRU1 MLR MLR
comp=Z,2μm,19.0s
FRU1 Bishkek 56.20 316 P P 20 03 55.6 -0.8
AAK Ala-Archa 56.24 316 P P 20 03 55.6 -1.2
comp=Z,7.4nm,0.7s,baz=123,slow=6.7,SNR=13
AAK Ala-Archa 56.24 316 P P 20 03 56.7 -0.1
SNR=5.2
AAK Ala-Archa 56.24 316 P P 20 03 52.9 -3.9
AAK Ala-Archa 56.24 316*ce*P P 20 03 58.1 +1.3
AAK pmax pmax
comp=Z,19nm,1.7s
AAK Ala-Archa 56.24 316 P P 20 03 56.1 -0.7
AAK IAmb IAmb 20 04 09.3
comp=Z,54nm,1.8s
USP Ospenovka 56.45 316 P P 20 03 56.7 -1.5
SNR=7.5
SEY Seymchan 56.71 14 P P 20 04 00.1 +0.5
comp=Z,18nm,1.1s,baz=257,slow=4.2,SNR=11
SEY Seymchan 56.71 14 *i* P P 20 04 00.9 +1.3
SEY Seymchan 56.71 14 P P 20 04 00.1 +0.5

EKS2 Erkin-Say 56.74 315 P P 20 03 59.3 -1.1
SNR=7.4
KURK Kurchatov 57.05 326*ce*P P 20 04 02.7 +0.5
KURK pmax pmax
comp=Z,72nm,1.3s
KURK Kurchatov 57.05 326 P P 20 04 01.6 -0.6
KURK Kurchatov 57.05 326 IAMs_20 IAMs_20 20 30 50.5
comp=Z,1μm,18.0s
BTLS Baital 57.40 318 *e*P P 20 04 02.7 -2.1
comp=Z,6.3nm,0.5s
BTLS Baital 57.40 318 *e*P P 20 04 02.7 -2.1
BTLS pmax pmax
comp=Z,6.0nm,0.5s
MSVF Nonsavu 57.49 118 P P 20 04 06.8 +0.9
MSVF pmax pmax
comp=Z,50nm,0.9s
MSVF Nonsavu 57.49 118 P P 20 04 06.8 +0.9
BTK Batken 58.06 312 P P 20 04 09.3 -0.3
BTK pmax pmax
comp=Z,38nm,1.3s
BTK MLR MLR
comp=Z,2μm,18.0s
BTK Batken 58.06 312 P P 20 04 09.3 -0.3
BTK IAmb IAmb 20 04 22.2
comp=Z,38nm,1.3s
KBL Kabul 58.14 305 P P 20 04 09.4 -1.0
KBL pmax pmax
comp=Z,21nm,0.7s
KBL MLR MLR
comp=Z,1μm,20.0s
KBL Kabul 58.14 305 P P 20 04 09.4 -1.0
KBL IAmb IAmb 20 04 22.8
comp=Z,21nm,0.7s
KBL IAMs_20 IAMs_20 20 31 09.6
comp=Z,1μm,20.0s
GAR Garm 58.15 310 P P 20 04 09.9 -0.5
DZA Taraz 58.52 315 *e*P P 20 04 10.6 -2.1
DZA Taraz 58.52 315 *e*P P 20 04 10.6 -2.1
CHGR Chuyangaron 58.94 310 P P 20 04 14.8 -1.0
KK31 Karatay Array 59.16 315 P P 20 04 16.0 -1.2
KK31 pmax pmax
comp=Z,24nm,1.0s
KK31 Karatay Array 59.16 315 P P 20 04 16.0 -1.2
KK31 IAmb IAmb 20 04 17.9
comp=Z,24nm,0.9s
IUG Iuzhnay 59.22 314 *e*P P 20 04 16.3 -1.5
IUG Iuzhnay 59.22 314 *e*P P 20 04 16.2 -1.5
TAS Tashkent 59.52 313 P P 20 04 20.1 +0.4
TAS pmax pmax
comp=Z,41nm,0.8s
TAS MLR MLR
comp=Z,2μm,20.0s
TAS Tashkent 59.52 313 P P 20 04 20.1 +0.4
TAS IAMs_20 IAMs_20 20 32 41.8
comp=Z,1μm,20.0s
CHM Chimkent 59.57 314 *e*P P 20 04 18.8 -1.3
CHM Chimkent 59.57 314 *e*P P 20 04 18.7 -1.3
BRZS Berezniki 60.14 323 *e*P P 20 04 21.9 -2.0
comp=Z,16nm,0.7s
BRZS Berezniki 60.14 323 *e*P P 20 04 21.8 -2.0
BRZS pmax pmax
comp=Z,16nm,0.7s
TIXI Tiksi 62.34 1 P P 20 04 38.0 -0.2
comp=Z,33nm,0.9s,baz=159,slow=5.2,SNR=20
TIXI Tiksi 62.34 1*ce*P P 20 04 39.3 +1.1
TIXI pmax pmax
comp=Z,30nm,0.8s
TIXI Tiksi 62.34 1 P P 20 04 38.2 0.0
TIXI IAMs_20 IAMs_20 20 32 15.5
comp=Z,2μm,19.0s
BRVK Borovoye 62.72 326 P P 20 04 39.8 -1.3
BRVK pmax pmax
comp=Z,34nm,0.8s
BRVK MLR MLR
comp=Z,1μm,19.0s
BRVK Borovoye 62.72 326 P P 20 04 39.8 -1.3
BRVK Borovoye 62.72 326 IAMs_20 IAMs_20 20 30 58.4
comp=Z,1μm,19.0s
HRA Herat 63.66 304 P P 20 04 46.8 -1.2
BILL Bilibino 64.28 15*ce*P P 20 04 51.8 +0.6
BILL pmax pmax
comp=Z,29nm,1.7s
NRIK Noril'sk 65.05 346 P P 20 04 55.6 -0.6
comp=Z,25nm,0.7s,baz=121,slow=7.9,SNR=18
WSAR Wadi Sarin 66.18 291 P P 20 05 02.8 -1.5
comp=Z,9.0nm,0.6s,baz=151,slow=4.6,SNR=13
ASHT Ashkhabad 67.16 307 IAMs_20 IAMs_20 20 38 57.5
comp=Z,1μm,20.0s
GEYT Alibeck 67.37 307 P P 20 05 10.6 -1.2
comp=Z,3.7nm,0.7s,baz=104,slow=4.7,SNR=8.4
GEYT Alibeck 67.37 307 P P 20 05 10.6 -1.2
GYA0B ALIBECK ARRAY 67.37 307 P P 20 05 10.1 -1.6
GYA0B IAmb IAmb 20 05 54.5
comp=Z,22nm,1.1s
NIKH Nikolski High 67.43 36 IAMs_20 IAMs_20 20 29 19.8
comp=Z,1μm,22.0s
BANOM Banah 68.30 294 P P 20 05 16.9 -0.9
MDH Madha 68.30 294 P P 20 05 15.5 -2.2
UOSS Minazif 68.39 293 P P 20 05 16.1 -2.2
UOSS Minazif 68.39 293 P P 20 05 17.3 -1.0
UOSS IAmb IAmb 20 05 28.2
comp=Z,14nm,0.7s
MSFE Esma-Masafi 68.43 294 P P 20 05 16.2 -2.4
SHME Shamm 68.44 294 P P 20 05 16.9 -1.8
HATD Hatta, Dubai 68.46 293 *i* P P 20 05 17.0 -1.7
SNR=7.9
ASHO Ashiyiah 68.52 293 *i* P P 20 05 18.4 -0.8
SNR=9.2
ALNE Al Ain 68.81 292 *i* P P 20 05 19.3 -1.7
SNR=8.5
UNV Unalaska Valle 69.01 36 IAMs_20 IAMs_20 20 30 28.5
comp=Z,1μm,21.0s
SVE Sverdlovsk 69.20 328*de*P P 20 05 21.8 -0.9
SVE *e*S S 20 14 25.1 -1.3
SVE pmax pmax
comp=Z,64nm,1.4s
SVE MLR MLR
comp=Z,1μm,16.0s
AKTO Aktyubinsk 69.27 320 P P 20 05 22.8 -0.5
comp=Z,3.3nm,0.4s,baz=103,slow=6.8,SNR=14
ARU Arti 70.21 327 P P 20 05 26.8 -2.2
comp=Z,7.7nm,0.5s,baz=128,slow=4.3,SNR=15
ARU Arti 70.21 327*c i*P P 20 05 28.7 -0.3
ARU 20 05 51.0
ARU 20 08 05.2
ARU PPP PPP 20 09 42.1
ARU S S 20 14 40.5 +2.2
ARU 20 15 29.5
ARU SS SS 20 19 07.2 -1.4
ARU pmax pmax
comp=Z,27nm,0.7s
ARU MLR MLR
comp=Z,923nm,16.0s
ARU Arti 70.21 327 P P 20 05 27.4 -1.6
ARU IAMs_20 IAMs_20 20 35 25.6
comp=Z,989nm,20.0s
FALS False Pass 70.99 35 IAMs_20 IAMs_20 20 31 22.8
comp=Z,1μm,22.0s
SOCY Socotra 71.18 280 P P 20 05 33.5 -2.3
CHGN Chignik 74.03 34 IAmb IAmb 20 05 53.1
comp=Z,26nm,0.9s
KIRV Kirov 75.44 328 P P 20 05 58.2 -1.7
comp=Z,4.6nm,0.7s,baz=94,slow=3.8,SNR=17
AKT Akhty 75.57 310 *e*P P 20 05 59.8 -1.4
AKT *e* 20 06 12.6
AKT *e* 20 08 47.0
AKT pmax pmax
comp=Z,28nm,1.2s
MAK Makhachkala 75.75 312 *e*P P 20 05 56.9 -5.1
MAK *e*S S 20 15 36.5 -5.2
MAK *e*SS SS 20 20 29.3 -4.3
MAK *e*SSS SSS 20 23 51.5
MAK pmax pmax
comp=Z,255nm,1.5s
TTA Tatalina 76.07 27 P P 20 06 04.1 +0.5
TTA Tatalina 76.07 27 P P 20 06 04.1 +0.5
CASY Casey 76.27 187 P P 20 06 04.7 +0.3
CASY IAmb IAmb 20 06 17.7
comp=Z,41nm,1.1s
OHAK Old Harbor 76.92 33 IAMs_20 IAMs_20 20 33 51.5
comp=Z,891nm,22.0s
GROC Groznyy 77.00 312 *e*P P 20 06 08.6 -0.5
GROC *e* 20 06 21.4
GROC pmax pmax
comp=Z,21nm,0.6s

KDAK Kodiak Island 77.33 33 P **P** **20 06 10.2 -0.5**
comp=Z,14nm,0.8s,baz=15,slow=4.0,SNR=5.3
KDAK Kodiak Island 77.33 33 P **P** **20 06 10.3 -0.4**
KDAK pmax pmax
comp=Z,34nm,1.0s
KDAK Kodiak Island 77.33 33 P **P** **20 06 10.3 -0.4**
KDAK IAmb IAmb 20 06 13.0
comp=Z,34nm,1.0s
TBLG Delisi 77.81 311 P **P** **20 06 13.6 -0.2**
TBLG pmax pmax
comp=Z,26nm,0.8s
TBLG Delisi 77.81 311 P **P** **20 06 13.6 -0.2**
TBLG IAmb IAmb 20 06 26.2
comp=Z,26nm,0.8s
MLY Manley 78.56 25 P **P** **20 06 18.1 +0.6**
MLY IAmb IAmb 20 06 32.4
comp=Z,17nm,0.8s
NCK Nalchik 78.60 313 *i* P **P** **20 06 16.4 -1.7**
NCK pmax pmax
comp=Z,8.0nm,0.9s
TRF Thorofare Moun 78.70 27 IAmb IAmb 20 06 33.7
comp=Z,87nm,1.8s
AKH Akhalkalaki 78.75 310 P **P** **20 06 19.2 0.0**
AKH pmax pmax
comp=Z,21nm,0.9s
AKH MLR MLR
comp=Z,1µm,21.0s
AKH Akhalkalaki 78.75 310 P **P** **20 06 19.2 0.0**
AKH IAmb IAmb 20 06 32.3
comp=Z,20nm,0.9s
COLD Coldfoot 78.89 23 P **P** **20 06 20.6 +1.4**
KBZ Khabaz 79.09 313 P **P** **20 06 20.2 -0.5**
comp=Z,8.6nm,1.0s,baz=99,slow=2.7,SNR=7.3
KBZ Khabaz 79.09 313 *ce* P **P** **20 06 21.4 +0.7**
TOLK Toolik Lake Re 79.18 22 P **P** **20 06 22.7 +1.9**
baz=268
PMR Palmer 79.19 29 IAmb IAmb 20 06 34.3
comp=Z,29nm,1.0s
KIV Kislovodsk 79.24 313 *ce* P **P** **20 06 22.2 +0.5**
KIV *e* 20 06 33.4
KIV *e* 20 09 20.7
KIV *e* SS SS 20 21 29.0 +2.5
KIV pmax pmax
comp=Z,32nm,1.7s
KIV MLR MLR
comp=Z,1µm,16.0s
KIV Kislovodsk 79.24 313 P **P** **20 06 20.9 -0.8**
KIV IAmb IAmb 20 06 34.5
comp=Z,21nm,0.8s
MCK McKinley 79.31 27 IAmb IAmb 20 06 35.4
comp=Z,28nm,0.7s
RND Reindeer 79.34 27 P **P** **20 06 22.5 +0.7**
RND pmax pmax
comp=Z,36nm,1.2s
RND Reindeer 79.34 27 P **P** **20 06 22.5 +0.7**
RND IAmb IAmb 20 06 38.9
comp=Z,36nm,1.2s
SML Sawmill 79.58 29 IAmb IAmb 20 06 41.9
comp=Z,34nm,0.8s
VRH Novokhopyorsk 79.62 320 *e* P **P** **20 06 21.5 -1.9**
VRH pmax pmax
comp=Z,20nm,1.0s
CCB Clear Creek Bu 79.81 26 P **P** **20 06 24.6 +0.4**
CCB IAmb IAmb 20 06 38.2
comp=Z,59nm,1.8s
HDA Harding Lake 80.18 26 P **P** **20 06 26.2 0.0**
baz=271
DAMY Dhamar 80.20 283 P **P** **20 06 27.2 -0.5**
DAMY IAMs_20 IAMs_20 20 41 14.6
comp=Z,808nm,21.0s
IL31 80.20 26 P **P** **20 06 26.5 +0.2**
ILAR Eielson Array 80.20 26 P **P** **20 06 25.7 -0.7**
comp=Z,3.7nm,0.9s,baz=280,slow=8.6,SNR=4.8
VORD Divnogorie 81.16 320 *e* P **P** **20 06 30.1 -1.6**
VORD pmax pmax
comp=Z,10.0nm,0.9s
LPSR Galich'ya Gora 81.28 322 *e* P **P** **20 06 30.8 -1.5**
LPSR pmax pmax
comp=Z,20nm,0.8s
SCRK Sand Creek 81.50 26 IAmb IAmb 20 06 49.0
comp=Z,43nm,1.6s
GLB Gilahina Butte 81.75 29 P **P** **20 06 35.5 +0.8**
GLB IAmb IAmb 20 06 54.2
comp=Z,35nm,1.1s
MOS Moscow 81.82 325 *e* P **P** **20 06 31.5 -3.6**
MOS *e* 20 06 44.6
MOS *e* S **S** **20 16 39.8 -6.2**
MOS pmax pmax
comp=Z,36nm,0.9s
MOS MLR MLR
comp=E,500nm,16.0s
MOS MLR MLR
comp=Z,600nm,16.0s
ATD Arta Tunnel 82.09 280 P **P** **20 06 37.1 -0.3**
comp=Z,4.3nm,0.3s,baz=298,slow=12,SNR=4.4
ATD Arta Tunnel 82.09 280 P **P** **20 06 36.9 -0.5**
LVZ Lovozero 82.20 338 *ce* P **P** **20 06 38.8 +1.9**
LVZ pmax pmax
comp=Z,51nm,1.3s
LVZ Lovozero 82.20 338 P **P** **20 06 36.6 -0.3**
WAX Waxell Ridge 82.29 30 IAMs_20 IAMs_20 20 37 46.2
comp=Z,700nm,18.0s
OBN Obninsk 82.47 325 P **P** **20 06 37.3 -1.2**
comp=Z,2.6nm,0.5s,baz=38,slow=6.7,SNR=2.0
OBN Obninsk 82.47 325‖ *e* P **P** **20 06 38.0 -0.5**
OBN *e* 20 06 48.6
OBN *e* S S 20 16 42.8 -10
OBN *e* SS **SS** **20 22 10.3 -3.5**
OBN pmax pmax
comp=Z,32nm,1.3s
OBN MLR MLR
comp=Z,772nm,17.0s
OBN Obninsk 82.47 325 P **P** **20 06 37.2 -1.2**
EGAK Eagle 82.65 26 P **P** **20 06 39.8 +0.5**
EGAK IAmb IAmb 20 06 54.3
comp=Z,14nm,0.8s
APA Apatity 82.71 337↓ *i* P **P** **20 06 39.0 -0.5**
APA pmax pmax
comp=Z,23nm,0.8s
APA MLR MLR
comp=Z,1µm,17.0s
ANN Anapa 82.93 314 *e* P P 20 06 32.5 -8.6
ANN *e* S **S** **20 16 53.0 -4.8**
ANN pmax pmax
comp=Z,122nm,1.9s
OPO Ambohidratompo 83.00 250 P **P** **20 06 40.3 -1.9**
comp=Z,7.5nm,0.8s,baz=88,slow=6.8,SNR=7.7
OPO Ambohidratompo 83.00 250 P **P** **20 06 40.3 -1.9**
ABPO Ambohimpanom 83.06 249 P **P** **20 06 41.3 -1.2**
ABPO pmax pmax
comp=Z,18nm,0.9s
ABPO Ambohimpanom 83.06 249 P **P** **20 06 41.3 -1.2**
ABPO IAmb IAmb 20 06 54.6
comp=Z,18nm,0.8s
HOPEN Hopen 83.73 347 *e* P **P** **20 06 45.5 +0.9**
GAZ Gaziantep 83.96 307 IAmb IAmb 20 06 59.6
comp=Z,27nm,0.8s
EPYK Eagle Plains 84.26 24 P **P** **20 06 48.6 +1.0**
baz=280
KEV Kevo 84.66 340 IAMs_20 IAMs_20 20 49 23.4
comp=Z,856nm,20.0s
SPA0 Spitsbergen Ar 85.04 349 *e* P **P** **20 06 51.3 0.0**
INK Inuvik 85.10 22 P **P** **20 06 50.3 -1.4**
comp=Z,13nm,0.9s,baz=260,slow=6.7,SNR=16
ARCES ARCESS Array B 85.22 340 P **P** **20 06 51.5 -0.9**
comp=Z,15nm,0.6s,baz=83,slow=6.0,SNR=26
ARCES ARCESS Array B 85.22 340 P **P** **20 06 51.5 -0.9**
ARE0 ARCESS Array S 85.22 340 *e* P **P** **20 06 52.1 -0.2**
HAMF Hammerfest 85.55 341 *e* P **P** **20 06 53.0 -0.9**
KBS Kingsbay 85.55 350 *ce* P **P** **20 06 57.6 +3.8**
KBS pmax pmax
comp=Z,18nm,1.7s
KBS Kingsbay 85.55 350 IAMs_20 IAMs_20 20 48 24.8
comp=Z,1µm,21.0s
KBS Kingsbay 85.55 350 *e* P **P** **20 06 54.5 +0.7**
HSPB Hornsund (broa 85.66 348 *e* P **P** **20 06 55.1 +0.8**
ILGA Ilgaz 86.12 311 IAMs_20 IAMs_20 20 51 33.0
comp=Z,607nm,19.0s
KTK1 Kautokeino 86.14 339 *e* P **P** **20 06 56.3 -0.6**
BR131 Keskin Array S 86.39 309 P **P** **20 06 58.2 -0.7**
BR131 pmax pmax
comp=Z,6.0nm,0.8s
BR131 Keskin Array S 86.39 309 P **P** **20 06 58.2 -0.7**
BRTR Keskin Array B 86.39 309 P **P** **20 06 58.0 -0.9**
comp=Z,1.9nm,0.8s,baz=123,slow=4.8,SNR=6.5
BRTR Keskin Array B 86.39 309 P **P** **20 06 58.0 -0.9**
A36M Sachs Harbour 86.77 17 P **P** **20 07 02.2 +2.3**
baz=290
FIA1 FINESS Array S 86.90 332 P **P** **20 06 59.8 -1.0**
FIA1 IAmb IAmb 20 07 12.8
comp=Z,32nm,0.9s
FINES FINESS Array B 86.90 332 P **P** **20 07 00.3 -0.5**
comp=Z,5.3nm,0.5s,baz=73,slow=4.5,SNR=16
FINES FINESS Array B 86.90 332 P **P** **20 07 00.3 -0.5**
PPT2 Papeete2 86.98 108 *eS* **S** **20 17 36.9 -2.2**
comp=Z,464nm,25.0s
PPT2 Papeete2 86.98 108 *eLR* LR 20 34 30.0
comp=Z,1µm,22.8s,baz=291
TRO Tromso 87.41 340 *eP* **P** **20 07 02.8 -0.3**
AKASG Malin Array Be 87.52 321 P **P** **20 07 02.9 -1.0**
comp=Z,2.3nm,0.6s,baz=68,slow=5.1,SNR=9.1
AKASG Malin Array Be 87.52 321 P **P** **20 07 02.9 -1.0**
AKBB Malin Array Si 87.52 321 *ce* P **P** **20 07 04.1 +0.1**
AKBB Malin Array Si 87.52 321 P **P** **20 07 02.7 -1.3**
AKBB IAMs_20 IAMs_20 20 49 22.4
comp=Z,838nm,19.0s
NOR Nord 87.59 355 *i* P **P** **20 07 03.6 -0.2**
NOR pmax pmax
comp=Z,15nm,1.0s
NOR Nord 87.59 355 *i* P **P** **20 07 03.6 -0.2**
comp=Z,15nm,1.0s
C36M Paulatuk 88.08 20 P **P** **20 07 06.7 +0.5**
baz=291
C36M Paulatuk 88.08 20 P **P** **20 07 06.5 +0.2**
C36M IAmb IAmb 20 07 08.0
comp=Z,18nm,0.8s
TBI Tubuai 88.16 114 *eS* **S** **20 17 47.8 -2.2**
comp=Z,517nm,26.0s
TBI Tubuai 88.16 114 *eLR* LR 20 35 10.0
comp=Z,1µm,23.8s,baz=295
MAW Mawson 88.87 200 P **P** **20 07 11.1 +1.2**
comp=Z,4.3nm,0.7s,baz=66,slow=5.2,SNR=9.4
MAW Mawson 88.87 200 P **P** **20 07 11.3 +1.4**
MAW pmax pmax
comp=Z,12nm,1.3s
MAW Mawson 88.87 200 P **P** **20 07 11.3 +1.4**
VNDA Vanda 88.91 173 P **P** **20 07 09.8 -0.1**
comp=Z,4.3nm,0.7s,baz=315,slow=4.7,SNR=7.6
VNDA Vanda 88.91 173 P **P** **20 07 10.1 +0.1**
VNDA pmax pmax
comp=Z,23nm,1.2s
VNDA Vanda 88.91 173 P **P** **20 07 10.1 +0.1**
VNDA IAmb IAmb 20 07 23.2
comp=Z,23nm,1.2s
DLBC Dease Lake 89.09 31 P **P** **20 07 10.8 -0.6**
comp=Z,3.4nm,0.9s,baz=205,slow=5.9,SNR=4.2
STEI Steigen 89.28 339 *eP* **P** **20 07 10.9 -1.0**
KMBO Kilima Mbogo 89.50 269 P **P** **20 07 14.1 -0.3**
comp=Z,4.8nm,0.9s,baz=57,slow=10,SNR=8.1
KMBO Kilima Mbogo 89.50 269 P **P** **20 07 13.6 -0.8**
KMBO pmax pmax
comp=Z,26nm,1.3s
KMBO MLR MLR
comp=Z,800nm,20.0s
KMBO Kilima Mbogo 89.50 269 P **P** **20 07 13.6 -0.8**
KMBO IAmb IAmb 20 07 27.5
comp=Z,26nm,1.3s
KMBO Kilima Mbogo 89.50 269 IAMs_20 IAMs_20 20 48 26.5
comp=Z,754nm,20.0s
LOF Lofoten 89.78 340 *eP* **P** **20 07 13.3 -0.9**
VRI Vrincioaia 90.19 316⇓ P **P** **20 07 18.1 +1.3**
MOR8 Moi Rana 90.27 338 *eP* **P** **20 07 15.3 -1.4**
BURAR Bucovina Array 90.78 318⇑ P **P** **20 07 18.9 -0.7**
BUR08 Bucovina Ar. S 90.78 318 P **P** **20 07 18.6 -1.0**
DAG Danmarks Havn 91.77 352 *i* P **P** **20 07 21.7 -1.7**
DAG Danmarks Havn 91.77 352 *i* P **P** **20 07 21.7 -1.7**
KWP Kalwaria Pacla 91.84 321 P **P** **20 07 23.8 -0.5**
KWP pmax pmax
comp=Z,38nm,1.4s
KWP MLR MLR
comp=Z,800nm,18.0s
KWP Kalwaria Pacla 91.84 321 P **P** **20 07 23.8 -0.5**
KWP IAMs_20 IAMs_20 20 54 33.8
comp=Z,786nm,18.0s
NSS Namsos 91.91 337 *eP* **P** **20 07 24.3 +0.1**
UZH Uzhgorod 92.39 320 *eP* **P** **20 07 25.3 -1.5**
UZH *i* 20 07 35.2
RES Resolute Bay 92.42 10 P **P** **20 07 26.0 -0.4**
comp=Z,21nm,0.8s,baz=309,slow=5.4,SNR=18
RES Resolute Bay 92.42 10 P **P** **20 07 27.0 +0.6**
RES pmax pmax
comp=Z,41nm,0.8s
RES Resolute Bay 92.42 10 P **P** **20 07 27.0 +0.6**
DRGR 92.64 318⇑ P **P** **20 07 26.1 -2.1**
TBLU Trondheim 93.16 336 *eP* **P** **20 07 29.4 -0.6**
NC602 NORSAR Array S 93.77 334 *eP* **P** **20 07 33.0 +0.1**
NB2 NORSAR Subarra 93.78 334 P **P** **20 07 31.4 -1.6**
comp=Z,5.3nm,0.8s,baz=64,slow=4.6
NB2 NORSAR Subarra 93.78 334 P **P** **20 07 31.4 -1.6**
baz=64,slow=4.6
NOA NORSAR Array B 93.78 334 P **P** **20 07 31.7 -1.3**
comp=Z,2.2nm,0.7s,baz=65,slow=4.6,SNR=9.6
TULEG Thule 93.86 4 P **P** **20 07 32.2 -0.9**
TULEG IAmb IAmb 20 07 46.2
comp=Z,13nm,0.9s
PSZ Piszkesteto 94.13 320 IAMs_20 IAMs_20 20 58 12.5
comp=Z,646nm,18.0s
YKA Yellowknife Ar 94.54 24 P **P** **20 07 36.3 -0.1**
comp=Z,6.2nm,0.7s,baz=298,slow=4.4,SNR=21
YKA PKKPbc **PKKPbc** **20 24 43.6 +6.4**
comp=Z,0.2nm,0.5s,baz=137,slow=2.5,SNR=5.5
YKA Yellowknife Ar 94.54 24 P **P** **20 07 36.3 -0.1**
MOL Molde 94.58 336 *eP* **P** **20 07 36.3 -0.3**
OKC Ostrava-Krasne 94.58 322 AMS AMS 20 55 40.0
comp=Z,700nm,16.7s
TAOE Nuku Hiva Isla 94.61 98 *eS* **S** **20 18 49.8 +0.6**
comp=Z,465nm,25.5s
TAOE Nuku Hiva Isla 94.61 98 *eLR* LR 20 38 01.6
comp=Z,2µm,30.7s,baz=283
MORC Moravsky Berou 94.97 322 *eP* **P** **20 07 38.7 -0.1**
JAVC Velka Javorina 95.22 321 *eP* **P** **20 07 40.7 +0.8**
DIVS Divibare 95.27 316 IAMs_20 IAMs_20 20 58 28.0
comp=Z,502nm,18.0s
KRLC Kraliky 95.33 322 *eP* **P** **20 07 44.7 +4.3**
KRLC MLR MLR
comp=Z,600nm,16.0s
KRLC Kraliky 95.33 322 *eP* **P** **20 07 44.7 +4.3**
KRLC AMS AMS 20 56 30.0
comp=Z,600nm,16.0s
OSTC Ostas 95.49 323 AMS AMS 20 57 20.0
comp=Z,800nm,17.7s
DPC Dobruska-Polom 95.50 323 AMS AMS 20 55 50.0
comp=Z,700nm,16.5s
RGN Rugen 95.56 327 IAMs_20 IAMs_20 20 54 36.1
comp=Z,609nm,20.0s
CHVC Chvalec 95.57 323 AMS AMS 20 57 40.0
comp=Z,800nm,15.6s
UPC Upice 95.63 323 AMS AMS 20 57 30.0
comp=Z,800nm,16.0s
VRAC Vranov 95.72 322 *eP* **P** **20 07 42.0 -0.1**
KRUC Moravsky 95.93 322 *eP* **P** **20 07 42.6 -0.5**
NLWA Neilton Lookou 96.15 40 IAMs_20 IAMs_20 20 46 04.7
comp=Z,632nm,20.0s
TIR Tirane 96.21 313 IAMs_20 IAMs_20 20 58 13.8
comp=Z,542nm,19.0s
KULLO Kullorsuaq 96.27 1 *i* P **P** **20 07 44.3 +0.2**
KULLO pmax pmax
comp=Z,19nm,0.9s
KULLO Kullorsuaq 96.27 1 *i* P **P** **20 07 44.3 +0.2**
comp=Z,18nm,0.9s
TREC Trest 96.40 322 AMS AMS 20 56 30.0
comp=Z,900nm,18.0s
PVCC Panska Ves 96.47 323 AMS AMS 21 00 10.0
comp=Z,500nm,15.6s
GOPC GO Pecny, Ondr 96.58 323 AMS AMS 20 58 20.0
comp=Z,800nm,17.2s
ASK Askoy 96.62 335 *eP* **P** **20 07 46.3 +0.4**
E03A Lebam 96.64 41 IAMs_20 IAMs_20 20 41 26.0
comp=Z,634nm,22.0s
PRU Pruhonice 96.70 323 AMS AMS 20 58 20.0
comp=Z,900nm,16.9s
BRG Berggiesshubel 96.70 324 *i* P P 20 07 59.6 +13
comp=Z,3.9nm,0.6s
PRA Prague 96.73 323 AMS AMS 20 58 20.0
comp=Z,500nm,16.5s
CLL Collm 97.07 325 *ePP* **PP** **20 11 48.0 +4.1**
CLL *eS* **S** **20 19 09.0 +0.1**
CLL *eSS* **SS** **20 25 54.0 +8.8**
SYO Syowa Base 97.50 201‖ *eP* Pdif 20 07 52.2 +2.5
SYO Syowa Base 97.50 201‖ *eP* Pdif 20 08 08.6 +19
F04A Amboy 97.61 41 P **P** **20 07 50.7 0.0**
F04A IAmb IAmb 20 07 53.3
comp=Z,12nm,0.9s
KHC Kasperske Hory 97.61 322 AMS AMS 20 58 20.0
comp=Z,800nm,18.3s
GERES GERESS Array B 97.65 322 P **P** **20 07 50.4 -0.7**
comp=Z,0.8nm,0.3s,baz=334,slow=16,SNR=12
GERES GERESS Array B 97.65 322 P **P** **20 07 50.4 -0.7**
LON Longmire 97.69 40 IAMs_20 IAMs_20 20 42 34.6
comp=Z,578nm,22.0s
SUMG Summit 97.74 355 *i* P Pdif 20 07 51.6 +0.3
SUMG pmax pmax
comp=Z,21nm,1.1s
SUMG Summit 97.74 355 *i* P Pdif 20 07 51.6 +0.3
comp=Z,21nm,1.1s
NKC Novy Kostel 97.83 324 AMS AMS 20 57 20.0
comp=Z,700nm,18.4s
LTY Liberty 98.22 39 IAMs_20 IAMs_20 20 50 04.5
comp=Z,643nm,19.0s
E07A Sunnyside 99.01 40 IAMs_20 IAMs_20 20 50 20.4
comp=Z,541nm,19.0s
G06A Carlson Farm, 99.03 41 IAMs_20 IAMs_20 20 49 36.1
comp=Z,526nm,20.0s
F07A Phinny Hill Vi 99.23 40 IAMs_20 IAMs_20 20 53 25.2
comp=Z,471nm,19.0s
HAWA Hanford 99.28 40 IAMs_20 IAMs_20 20 49 20.5
comp=Z,559nm,20.0s
PINE Pine Mountain 99.38 43 IAMs_20 IAMs_20 20 48 13.7
comp=Z,568nm,20.0s
CIMO Cimolais 99.46 320 IAMs_20 IAMs_20 21 01 33.2
comp=Z,735nm,20.0s
E08A Dider Farm, El 99.54 40 IAMs_20 IAMs_20 20 49 39.4
comp=Z,571nm,20.0s
K05A Summer Lake 99.82 44 IAMs_20 IAMs_20 20 49 18.3
comp=Z,625nm,19.0s
E09A Wood Farm, Sta 100.10 39 IAMs_20 IAMs_20 20 51 03.2
comp=Z,528nm,19.0s
AQU L'Aquila 100.39 316 IAMs_20 IAMs_20 20 55 43.4
comp=Z,617nm,22.0s
F10A Beach Ranch, E 100.91 40 IAMs_20 IAMs_20 20 51 28.6
comp=Z,563nm,20.0s
J08A Circle Bar Ran 101.20 42 IAMs_20 IAMs_20 21 02 49.8
comp=Z,484nm,18.0s
OSSC Osservatorio P 101.37 318 IAMs_20 IAMs_20 20 59 52.2
comp=Z,591nm,19.0s
PRMA PARMA 101.46 319 IAMs_20 IAMs_20 21 02 32.4
comp=Z,607nm,19.0s
RUBR Rubicon Trail 101.73 47 IAMs_20 IAMs_20 20 43 52.3
comp=Z,599nm,21.0s
ECH Echery 101.84 323 IAMs_20 IAMs_20 20 59 20.1
comp=Z,559nm,18.0s
CMB Columbia Colle 101.94 48 IAMs_20 IAMs_20 20 49 10.0
comp=Z,735nm,20.0s
VCNR Virginia City 102.00 47 IAMs_20 IAMs_20 20 51 14.4
comp=Z,664nm,20.0s
PNTR Pine Nut 102.11 47 IAMs_20 IAMs_20 20 51 04.5
comp=Z,510nm,20.0s
YERR Yerington 102.41 47 IAMs_20 IAMs_20 20 49 49.4
comp=Z,563nm,21.0s
WAKR Walker 102.46 47 IAMs_20 IAMs_20 20 49 53.6
comp=Z,683nm,20.0s
MDPB Devils Postpil 103.05 48 IAMs_20 IAMs_20 20 50 15.4
comp=Z,646nm,19.0s
RYN Ryan 103.07 47 IAMs_20 IAMs_20 20 50 17.7
comp=Z,574nm,20.0s
KVN Kaiserville 103.20 46 IAMs_20 IAMs_20 20 51 06.2
comp=Z,507nm,18.0s
NVAR Mina Array Bea 103.30 47 PKKPbc PKKPbc 20 24 23.6 +11
comp=Z,0.7nm,0.7s,baz=143,slow=4.3,SNR=6.1
ISA Isabella, Lake 104.26 50 IAMs_20 IAMs_20 20 49 52.5
comp=Z,651nm,20.0s
PASC Pasadena Art C 105.04 51 IAMs_20 IAMs_20 20 51 24.6
comp=Z,544nm,20.0s
R11A Troy Canyon, C 105.28 46 IAMs_20 IAMs_20 20 52 02.3
comp=Z,551nm,19.0s
TPNV Topopah Spring 105.39 48 IAMs_20 IAMs_20 20 53 07.4
comp=Z,613nm,19.0s
GSC Goldstone, Bar 105.65 49 IAMs_20 IAMs_20 21 02 39.4
comp=Z,554nm,19.0s
IMW Indian Meadow 105.83 39 IAMs_20 IAMs_20 20 47 02.7
comp=Z,521nm,21.0s
FXWY Fox Creek 105.90 40 IAMs_20 IAMs_20 20 47 01.6
comp=Z,680nm,22.0s
TPAW Teton Pass 106.02 40 IAMs_20 IAMs_20 20 46 55.9
comp=Z,644nm,22.0s
REDW Red Top Meadow 106.15 40 IAMs_20 IAMs_20 20 47 11.2
comp=Z,543nm,22.0s
SHPR Sheep Range 106.37 48 IAMs_20 IAMs_20 20 48 11.4
comp=Z,639nm,22.0s
HWUT Hardware Ranch 106.55 42 IAMs_20 IAMs_20 20 52 05.3
comp=Z,465nm,21.0s
PFO Pinyon Flats O 106.58 51 IAMs_20 IAMs_20 20 52 11.5
comp=Z,556nm,20.0s
XPFO Pion Flat 106.59 51 IAMs_20 IAMs_20 20 52 11.5
comp=Z,544nm,20.0s
BW06 Boulder Array 107.27 40 IAMs_20 IAMs_20 20 47 47.9
comp=Z,597nm,22.0s
PDAR Pinedale Array 107.27 40 PKKPbc PKKPbc 20 24 08.2 +7.9
comp=Z,1.3nm,0.8s,baz=126,slow=7.1,SNR=6.5
W13A Hualapai Mount 107.91 49 IAMs_20 IAMs_20 20 54 18.1
comp=Z,467nm,20.0s
Y12C Blythe 108.00 50 IAMs_20 IAMs_20 20 48 28.8
comp=Z,595nm,22.0s
GLA Glamis 108.06 51 IAMs_20 IAMs_20 20 52 54.4
comp=Z,439nm,18.0s
K22A Casper 109.22 39 IAMs_20 IAMs_20 20 57 43.5
comp=Z,472nm,19.0s
RWWY Rawlins 109.32 40 IAMs_20 IAMs_20 20 49 04.2
comp=Z,624nm,22.0s
WUAZ Wupatki 109.56 47 IAMs_20 IAMs_20 20 53 53.7
comp=Z,574nm,20.0s
PV14 Lion Creek, Pa 109.84 44 IAMs_20 IAMs_20 20 49 14.7
comp=Z,587nm,21.0s
X16A Lo Mia Camp, P 110.01 48 IAMs_20 IAMs_20 20 54 37.8
comp=Z,586nm,20.0s
PV12 Saucer Basin, 110.02 44 IAMs_20 IAMs_20 20 48 33.4
comp=Z,455nm,18.0s
PV07 Paradox Valley 110.07 43 IAMs_20 IAMs_20 20 48 12.5
comp=Z,536nm,21.0s
PV13 Radium Mtn., P 110.09 44 IAMs_20 IAMs_20 21 08 05.2
comp=Z,378nm,18.0s
ULM Lac du Bonnet 110.17 27 IAMs_20 IAMs_20 21 00 40.2
comp=Z,480nm,20.0s
SNAA Sanae 110.50 195 IAMs_20 IAMs_20 20 54 05.1
comp=Z,516nm,20.0s
W18A Petrified Fore 110.93 47 IAMs_20 IAMs_20 20 56 43.9
comp=Z,518nm,19.0s
X18A Snowflake 111.06 48 IAMs_20 IAMs_20 20 54 47.2
comp=Z,599nm,20.0s
ISCO Idaho Springs 111.36 41 IAMs_20 IAMs_20 20 51 21.3
comp=Z,546nm,22.0s
AGMN Agassiz Nation 111.55 29 IAMs_20 IAMs_20 21 01 17.8
comp=Z,445nm,20.0s
SDCO Great Sand Dun 112.55 43 IAMs_20 IAMs_20 20 57 07.0
comp=Z,478nm,21.0s
HSIG 112.77 53 IAMs_20 IAMs_20 21 09 44.5
comp=Z,466nm,19.0s
319A Douglas 113.02 50 IAMs_20 IAMs_20 20 57 26.6
comp=Z,659nm,20.0s
ANMO Albuquerque 113.36 46 IAMs_20 IAMs_20 20 56 47.9
comp=Z,425nm,19.0s
PAB San Pablo 113.47 320 IAMs_20 IAMs_20 21 07 52.3
comp=Z,554nm,18.0s
KSCO Kaye Shedlock' 113.72 40 IAMs_20 IAMs_20 20 56 25.6
comp=Z,562nm,20.0s
ECSD EROS Data Cent 114.30 33 IAMs_20 IAMs_20 21 03 39.0
comp=Z,431nm,20.0s
E38A The Farm, Brul 114.80 28 IAMs_20 IAMs_20 21 12 10.5
comp=Z,388nm,19.0s
SCHQ Schefferville 115.15 9 IAMs_20 IAMs_20 21 11 48.7
comp=Z,449nm,18.0s
COWI Conover 116.28 27 IAMs_20 IAMs_20 21 12 43.6
comp=Z,517nm,19.0s
G40A Rib Lake 116.42 28 **PKiKP** **20 13 00.3 +0.2**
SFS San Fernando 116.46 319 IAMs_20 IAMs_20 21 09 59.5
comp=Z,492nm,19.0s
R32A Long Quarter, 116.52 39 IAMs_20 IAMs_20 21 12 47.6
comp=Z,458nm,19.0s
N35A Tabor 116.76 35 IAMs_20 IAMs_20 21 08 56.3
comp=Z,483nm,21.0s
E43A Lone Tree Farm 117.00 25 IAMs_20 IAMs_20 21 02 53.3
comp=Z,360nm,19.0s
I40A Norwalk 117.25 29 IAMs_20 IAMs_20 21 04 40.7
comp=Z,503nm,20.0s
KSU1 Kansas State U 117.36 37 IAMs_20 IAMs_20 21 03 53.4
comp=Z,425nm,21.0s
D46A Sault St. Mari 117.79 23 P **PKiKP** **20 13 03.3 +0.6**
baz=326
E46A Sault Ste Mari 118.11 24 IAMs_20 IAMs_20 21 06 34.5

comp=Z,507nm,20.0s
JFWS **Jewell Farm** **118.16** **30** PKIKP **PKPdf** **20 13 03.2 -0.2**
JFWS MLR MLR
comp=Z,400nm,18.0s
JFWS **Jewell Farm** **118.16** **30** **PKPdf** **20 13 03.2 -0.2**
JFWS **Jewell Farm** **118.16** **30** IAMs_20 IAMs_20 21 14 08.8
comp=Z,421nm,18.0s
TXAR **Lajitas Array** **118.25** **50** PKKPbc PKKPbc 20 23 24.8 +1.7
comp=Z,0.4nm,0.8s,baz=110,slow=5.6,SNR=4.6
WMOK **Wichita Mounta** **118.72** **42** P **PKiKP** **20 13 05.4 +0.5**
baz=307
T35A **Sooner Cattle** **118.82** **39** IAMs_20 IAMs_20 21 01 34.6
comp=Z,422nm,19.0s
E48A **Lockeyer** **118.84** **22** P **PKiKP** **20 13 05.5 +0.8**
baz=327
D50A **G1974 Best Tow** **119.09** **20** P **PKiKP** **20 13 05.3 +0.1**
baz=330
I45A **Fountain** **119.18** **27** IAMs_20 IAMs_20 21 15 53.1
comp=Z,381nm,19.0s
GLMI **Grayling** **119.24** **25** IAMs_20 IAMs_20 21 14 34.7
comp=Z,373nm,19.0s
K43A **Burlington** **119.25** **29** IAMs_20 IAMs_20 21 06 24.4
comp=Z,449nm,20.0s
E50A **Wahnapitae** **119.42** **21** P **PKiKP** **20 13 06.8 +1.0**
baz=329
J45A **Montague** **119.58** **27** IAMs_20 IAMs_20 21 15 25.9
comp=Z,505nm,18.0s
P40A **Paris** **119.67** **34** IAMs_20 IAMs_20 21 13 15.3
comp=Z,355nm,19.0s
D52A **ZEK Kipawa Sen** **119.74** **19** P **PKiKP** **20 13 06.6 +0.1**
baz=332
E51A **G1948 Merrick** **119.76** **20** P **PKiKP** **20 13 07.1 +0.6**
baz=330
L44A **Lake County Fo** **119.85** **29** IAMs_20 IAMs_20 21 06 40.3
comp=Z,485nm,20.0s
D53A **Lac Vacive, Po** **119.88** **19** P **PKiKP** **20 13 07.3 +0.6**
baz=332
D53A **Lac Vacive, Po** **119.88** **19** IAMs_20 IAMs_20 21 13 08.8
comp=Z,444nm,19.0s
TUL1 **Leonard** **119.91** **39** IAMs_20 IAMs_20 21 00 20.4
comp=Z,473nm,19.0s
F51A **Arnstein** **120.13** **21** P **PKiKP** **20 13 07.5 +0.3**
baz=330
D54A **Lac Fusel, La** **120.14** **18** P **PKiKP** **20 13 07.4 +0.2**
baz=333
E52A **Mattawa** **120.26** **20** P **PKiKP** **20 13 08.2 +0.7**
baz=331
HDIL **Hopedale** **120.39** **31** IAMs_20 IAMs_20 21 04 07.9
comp=Z,433nm,21.0s
R40A **Maddies Statio** **120.41** **35** IAMs_20 IAMs_20 21 14 32.1
comp=Z,393nm,19.0s
U38A **Gravette** **120.43** **38** **PKiKP** **20 13 08.4 +0.3**
J47A **Sunmer** **120.43** **26** IAMs_20 IAMs_20 21 07 12.4
comp=Z,477nm,20.0s
F52A **Sundridge** **120.46** **21** P **PKiKP** **20 13 08.4 +0.5**
baz=330
JCT **Junction City** **120.48** **46** PKIKP **PKiKP** **20 13 08.8 +0.4**
JCT MLR MLR
comp=Z,400nm,19.0s
JCT **Junction City** **120.48** **46** P **PKiKP** **20 13 09.2 +0.8**
baz=304
JCT **Junction City** **120.48** **46** **PKiKP** **20 13 08.8 +0.4**
JCT IAMs_20 IAMs_20 21 12 12.6
comp=Z,382nm,19.0s
E53A **Dumoine, Ponti** **120.51** **19** P **PKPdf** **20 13 07.6 -0.3**
baz=332
D55A **Sainte-Anne-du** **120.61** **17** P **PKiKP** **20 13 08.4 +0.3**
baz=335
I49A **Point Hope** **120.70** **24** IAMs_20 IAMs_20 21 11 01.3
comp=Z,400nm,19.0s
D56A **ZEC Mazanza, M** **120.80** **17** P **PKiKP** **20 13 09.0 +0.4**
baz=336
TOA0 **Torodi Ar. Sit** **120.90 291** **PKPdf** **20 13 09.4 0.0**
TORD **Torodi Ar. Bea** **120.90 291** PKP **PKPdf** **20 13 07.8 -1.7**
comp=Z,3.6nm,0.7s,baz=32,slow=1.9,SNR=7.5
TORD PKKPbc **PKKPab** **20 23 14.9 +0.4**
comp=Z,1.4nm,0.8s,baz=270,slow=3.7,SNR=5.3
TORD **Torodi Ar. Bea** **120.90 291** **PKPdf** **20 13 07.8 -1.7**
LATQ **La Tuque** **121.03** **15** P **PKiKP** **20 13 09.1 +0.2**
baz=338
CCM **Cathedral Cave** **121.15** **34** PKIKP **PKiKP** **20 13 09.8 +0.3**
CCM MLR MLR
comp=Z,400nm,20.0s
CCM **Cathedral Cave** **121.15** **34** P **PKiKP** **20 13 09.6 +0.1**
baz=315
CCM **Cathedral Cave** **121.15** **34** **PKiKP** **20 13 09.8 +0.3**
CCM **Cathedral Cave** **121.15** **34** IAMs_20 IAMs_20 21 05 00.7
comp=Z,410nm,20.0s
E56A **St. Veronique** **121.17** **17** P **PKPdf** **20 13 09.2 +0.1**
baz=335
G54A **Lake Saint Pet** **121.23** **20** P **PKiKP** **20 13 09.9 +0.5**
baz=331
D58A **Chemin du LacG** **121.27** **15** P **PKiKP** **20 13 10.1 +0.6**
baz=338
G53A **Haliburton** **121.28** **21** P **PKiKP** **20 13 10.2 +0.7**
baz=331
U40A **Yellville** **121.40** **37** P **PKiKP** **20 13 10.3 +0.3**
baz=313
SADO **Sadowa** **121.41** **21** IAMs_20 IAMs_20 21 10 20.6
comp=Z,461nm,20.0s
E57A **Chemin Saint G** **121.55** **17** P **PKiKP** **20 13 10.7 +0.7**
baz=336
L48A **N Adams** **121.64** **27** IAMs_20 IAMs_20 21 09 10.5
comp=Z,508nm,20.0s
H53A **Bobcaygeon** **121.78** **21** P **PKiKP** **20 13 11.4 +0.9**
baz=331
G55A **Calabogie** **121.81** **19** P **PKiKP** **20 13 11.3 +0.7**
baz=333
PLVO **Plevna** **121.88** **20** IAMs_20 IAMs_20 21 16 45.0
comp=Z,439nm,18.0s
N47A **Urbana** **121.91** **28** IAMs_20 IAMs_20 21 08 32.7
comp=Z,400nm,19.0s
MIAR **Mount Ida** **122.17** **39** P **PKiKP** **20 13 12.8 +1.2**
baz=312
237A **Washetta, Mont** **122.35** **43** IAMs_20 IAMs_20 20 57 28.7
comp=Z,586nm,22.0s
WHAR **Wooly Hollow** **122.46** **37** IAMs_20 IAMs_20 21 04 37.8
comp=Z,416nm,19.0s
E61A **Lac Etchemin** **122.48** **14** P **PKiKP** **20 13 12.5 +0.6**
baz=340
G57A **Newington** **122.49** **18** P **PKiKP** **20 13 12.1 +0.3**
baz=335
S44A **Carbondale** **122.51** **33** IAMs_20 IAMs_20 21 13 19.4
comp=Z,318nm,18.0s
LCAR **Lake Charles** **122.60** **36** **PKPdf** **20 13 12.1 -0.1**
X40A **Basin Creek Fa** **122.67** **39** P **PKiKP** **20 13 12.5 0.0**
baz=312
E63A **Oxbow** **122.96** **12** IAMs_20 IAMs_20 21 10 05.6
comp=Z,552nm,21.0s
PARMO **Parma** **122.98** **35** IAMs_20 IAMs_20 21 18 28.9
comp=Z,402nm,19.0s
E64A **Bridgewater** **123.08** **12** P **PKiKP** **20 13 13.4 +0.3**
baz=343
P48A **Milroy** **123.14** **29** IAMs_20 IAMs_20 21 17 56.6
comp=Z,361nm,18.0s
USIN **University of** **123.16** **32** IAMs_20 IAMs_20 21 11 22.2
comp=Z,386nm,19.0s
PENMO **Penman** **123.20** **35** IAMs_20 IAMs_20 21 09 56.9
comp=Z,434nm,19.0s
M52A **Chesterland** **123.30** **25** IAMs_20 IAMs_20 21 12 29.0
comp=Z,406nm,21.0s
I57A **Carthage** **123.33** **19** P **PKiKP** **20 13 14.1 +0.5**
baz=334
H58A **Gabriels** **123.35** **18** P **PKiKP** **20 13 13.9 +0.2**
baz=335
ERPA **Erie** **123.36** **23** IAMs_20 IAMs_20 21 17 14.6
comp=Z,389nm,19.0s
LNXT **Lenox** **123.53** **35** IAMs_20 IAMs_20 21 10 27.5
comp=Z,441nm,19.0s
HKT **Hockley** **123.58** **45** PKIKP **PKiKP** **20 13 16.4 +2.0**
HKT **Hockley** **123.58** **45** **PKiKP** **20 13 16.4 +2.0**
M53A **WI Miller and** **123.66** **24** P **PKiKP** **20 13 14.4 0.0**
baz=327
WCI **Wyandotte Cave** **123.67** **31** PKIKP **PKPdf** **20 13 14.1 -0.1**
WCI MLR MLR
comp=Z,400nm,20.0s
WCI **Wyandotte Cave** **123.67** **31** P **PKiKP** **20 13 15.0 +0.6**
baz=320
WCI **Wyandotte Cave** **123.67** **31** PKPdf **PKPdf** **20 13 14.1 -0.1**
WCI **Wyandotte Cave** **123.67** **31** IAMs_20 IAMs_20 21 08 29.6
comp=Z,404nm,20.0s
ACSO **Alum Creek Sta** **123.67** **27** P **PKiKP** **20 13 14.7 +0.3**
baz=324
J57A **Williamstown** **123.69** **20** IAMs_20 IAMs_20 21 08 05.7
comp=Z,444nm,20.0s
ALLY **Alegheny Colle** **123.70** **24** IAMs_20 IAMs_20 21 10 02.5
comp=Z,468nm,20.0s
HALT **Halls** **123.75** **35** IAMs_20 IAMs_20 21 10 23.4
comp=Z,422nm,19.0s
N52A **McGinn's Farm,** **123.76** **26** P **PKiKP** **20 13 15.0 +0.4**
baz=326
P50A **Jamestown** **123.80** **28** P **PKiKP** **20 13 15.0 +0.4**
baz=323
VT1 **Waterbury** **123.85** **17** IAMs_20 IAMs_20 21 12 10.9
comp=Z,442nm,20.0s
PKME **Peaks-Kenny Pk** **123.86** **13** IAMs_20 IAMs_20 21 09 39.7
comp=Z,457nm,21.0s
L55A **Hinsdale** **123.90** **22** P **PKiKP** **20 13 15.7 +0.9**
baz=330
O51A **Pataskala** **123.91** **27** P **PKiKP** **20 13 15.6 +0.8**
baz=325
J58A **Remsen** **123.96** **19** P **PKiKP** **20 13 15.6 +0.7**
baz=334
MET **Memphis--Engin** **123.97** **36** IAMs_20 IAMs_20 21 18 57.3
comp=Z,497nm,19.0s
M54A **Oil Creek Stat** **124.01** **24** P **PKiKP** **20 13 15.7 +0.6**
baz=328
M54A **Oil Creek Stat** **124.01** **24** IAMs_20 IAMs_20 21 12 05.7
comp=Z,396nm,19.0s
I59A **Olmsteadville** **124.01** **18** P **PKiKP** **20 13 15.2 +0.3**
baz=336
J59A **Piesco** **124.12** **18** P **PKiKP** **20 13 16.2 +1.0**
baz=335
J59A **Piesco** **124.12** **18** IAMs_20 IAMs_20 21 08 53.9
comp=Z,454nm,20.0s
N53A **Lisbon** **124.12** **25** P **PKiKP** **20 13 15.8 +0.5**
baz=327
N53A **Lisbon** **124.12** **25** IAMs_20 IAMs_20 21 17 42.9
comp=Z,460nm,20.0s
I60A **Shoreham** **124.14** **17** P **PKiKP** **20 13 16.0 +0.8**
baz=336
T47A **Sharon Grove** **124.18** **32** IAMs_20 IAMs_20 21 07 13.6
comp=Z,374nm,20.0s
P51A **Williamsport** **124.24** **28** P **PKiKP** **20 13 15.9 +0.4**
baz=324
P51A **Williamsport** **124.24** **28** IAMs_20 IAMs_20 21 09 55.4
comp=Z,479nm,20.0s
O52A **Adamsville** **124.27** **26** P **PKiKP** **20 13 16.2 +0.6**
baz=326
O52A **Adamsville** **124.27** **26** IAMs_20 IAMs_20 21 15 45.0
comp=Z,374nm,21.0s
G65A **Princeton** **124.30** **12** P **PKiKP** **20 13 16.0 +0.6**
baz=343
N54A **Moraine State** **124.34** **24** IAMs_20 IAMs_20 21 12 42.6
comp=Z,530nm,20.0s
K58A **Earlville** **124.38** **20** P **PKiKP** **20 13 16.7 +0.9**
baz=333
WVT **Waverly** **124.43** **34** P **PKiKP** **20 13 16.4 +0.4**
baz=318
WVL **Waterville** **124.44** **14** IAMs_20 IAMs_20 21 12 33.9
comp=Z,465nm,20.0s
Q51A **Bebles** **124.47** **28** IAMs_20 IAMs_20 21 11 03.6
comp=Z,392nm,21.0s
P52A **Corning** **124.53** **27** P **PKiKP** **20 13 16.3 +0.2**
baz=325
M56A **Emporium** **124.60** **22** P **PKiKP** **20 13 16.5 +0.2**
baz=330
M56A **Emporium** **124.60** **22** IAMs_20 IAMs_20 21 18 32.3
comp=Z,400nm,19.0s
H65A **Eastbrook** **124.64** **13** P **PKiKP** **20 13 16.5 +0.4**
baz=342
OXF **Oxford** **124.70** **36** PKIKP **PKiKP** **20 13 16.8 +0.2**
OXF **Oxford** **124.70** **36** P **PKiKP** **20 13 16.9 +0.3**
baz=315
OXF **Oxford** **124.70** **36** **PKiKP** **20 13 16.8 +0.2**
143A **Socs Landing,** **124.75** **39** IAMs_20 IAMs_20 21 04 52.6
comp=Z,475nm,21.0s
BINY **Binghamton** **124.77** **20** IAMs_20 IAMs_20 21 11 34.3
comp=Z,396nm,18.0s
O54A **Avella** **124.84** **25** P **PKiKP** **20 13 17.1 +0.4**
baz=327
P53A **Whipple** **124.98** **26** P **PKiKP** **20 13 17.7 +0.7**
baz=326
Q52A **Bidwell** **125.02** **27** P **PKPdf** **20 13 16.8 0.0**
baz=325
TRY **Troy** **125.04** **18** IAMs_20 IAMs_20 21 14 32.3
comp=Z,434nm,20.0s
L59A **Walton** **125.09** **20** IAMs_20 IAMs_20 21 13 07.9
comp=Z,475nm,20.0s
K61A **Williamstown** **125.22** **18** P **PKiKP** **20 13 18.5 +1.1**
baz=336
U49A **Red Boiling Sp** **125.24** **32** IAMs_20 IAMs_20 21 15 29.4
comp=Z,439nm,19.0s
V48A **Smith Brothers** **125.27** **33** IAMs_20 IAMs_20 21 15 32.4
comp=Z,345nm,19.0s
T50A **Nancy** **125.33** **31** IAMs_20 IAMs_20 21 18 21.7
comp=Z,434nm,19.0s
SSPA **Standing Stone** **125.45** **23** IAMs_20 IAMs_20 21 16 56.7
comp=Z,402nm,19.0s
S51A **Beattyville** **125.46** **29** IAMs_20 IAMs_20 21 11 54.9
comp=Z,442nm,20.0s
N57A **Milroy** **125.47** **22** P **PKiKP** **20 13 18.7 +0.8**
baz=330
O56A **Blue Knob Stat** **125.50** **24** IAMs_20 IAMs_20 21 16 41.2
comp=Z,374nm,20.0s
Q54A **Coxs Mills** **125.64** **26** P **PKiKP** **20 13 18.7 +0.4**
baz=326
HRV **Adam Dziewonsk** **125.87** **16** P **PKiKP** **20 13 19.5 +0.8**
baz=338
Q55A **Buckhannon** **125.96** **26** P **PKiKP** **20 13 19.3 +0.2**
baz=327
N59A **State Game Lan** **125.98** **21** IAMs_20 IAMs_20 21 12 53.5
comp=Z,509nm,21.0s
KSCT **Kent School, K** **126.01** **18** IAMs_20 IAMs_20 21 15 02.0
comp=Z,438nm,19.0s
P56A **Dayton Farm, R** **126.04** **24** P **PKiKP** **20 13 19.9 +0.8**
baz=329
ODNJ **Oqdensburg** **126.23** **20** IAMs_20 IAMs_20 21 19 32.0
comp=Z,446nm,20.0s
146A **Union** **126.23** **38** IAMs_20 IAMs_20 21 06 43.6
comp=Z,444nm,20.0s
Q56A **Snyder Ridge,** **126.29** **25** P **PKiKP** **20 13 20.4 +0.8**
baz=328
Q56A **Snyder Ridge,** **126.29** **25** IAMs_20 IAMs_20 21 13 34.3
comp=Z,431nm,19.0s
TZTN **Tazewell** **126.35** **30** P **PKiKP** **20 13 20.1 +0.2**
baz=326
S54A **Dingess, Beckl** **126.40** **27** IAMs_20 IAMs_20 21 14 43.6
comp=Z,460nm,20.0s
W50A **Signal Mountai** **126.48** **33** IAMs_20 IAMs_20 20 59 50.5
comp=Z,380nm,21.0s
V51A **Loudon** **126.52** **31** IAMs_20 IAMs_20 21 03 46.3
comp=Z,416nm,21.0s
PAL **Palisades** **126.53** **19** IAMs_20 IAMs_20 21 10 39.8
comp=Z,484nm,21.0s
R55A **Manton** **126.53** **26** P **PKiKP** **20 13 21.5 +1.3**
baz=327
WSPT **Westport, CT** **126.56** **19** IAMs_20 IAMs_20 21 12 43.7
comp=Z,477nm,20.0s
CPCT **Cooper Cave** **126.71** **32** IAMs_20 IAMs_20 21 20 45.2
comp=Z,459nm,19.0s
FPAL **Fort Paine** **126.82** **33** IAMs_20 IAMs_20 21 16 19.5
comp=Z,331nm,19.0s
V52A **Sevierville** **126.88** **31** IAMs_20 IAMs_20 21 20 09.6
comp=Z,444nm,19.0s
Q58A **Fox Den Farm,** **126.99** **24** P **PKiKP** **20 13 21.5 +0.5**
baz=330
P60A **Greenville** **127.00** **21** IAMs_20 IAMs_20 21 13 17.7
comp=Z,439nm,20.0s
R57A **Stanardsville** **127.20** **25** P **PKiKP** **20 13 22.1 +0.6**
baz=328
T55A **Pulaski** **127.20** **27** P **PKiKP** **20 13 22.5 +1.0**
baz=326
U54A **Nelsons Funny** **127.20** **29** IAMs_20 IAMs_20 21 14 53.0
comp=Z,396nm,20.0s
X51A **Calhoun** **127.21** **33** IAMs_20 IAMs_20 21 21 14.7
comp=Z,410nm,19.0s
BLA **Blacksburg** **127.29** **27** P **PKiKP** **20 13 22.3 +0.6**
baz=326
BLA **Blacksburg** **127.29** **27** IAMs_20 IAMs_20 21 11 39.0
comp=Z,441nm,21.0s
V53A **Saluda** **127.40** **30** IAMs_20 IAMs_20 21 10 15.5
comp=Z,401nm,20.0s
S57A **Dark Hollow, R** **127.47** **25** IAMs_20 IAMs_20 21 12 27.6
comp=Z,472nm,20.0s
U55A **TA2, Sparta** **127.58** **28** P **PKiKP** **20 13 22.4 0.0**
baz=325
T56A **Rocky Mt** **127.61** **27** P **PKiKP** **20 13 22.6 +0.2**
baz=326
V54A **Nebo** **127.74** **29** P **PKiKP** **20 13 23.4 +0.8**
baz=324
R58B **Mineral** **127.75** **24** P **PKiKP** **20 13 23.3 +0.8**
baz=329
R58B **Mineral** **127.75** **24** IAMs_20 IAMs_20 21 12 25.8
comp=Z,449nm,20.0s
S58A **Poland Farm, P** **127.98** **25** P **PKiKP** **20 13 24.2 +1.2**
baz=329
V55A **Taylorsville** **128.03** **29** P **PKiKP** **20 13 24.1 +0.9**
baz=324
V55A **Taylorsville** **128.03** **29** IAMs_20 IAMs_20 21 21 49.9
comp=Z,415nm,19.0s
V56A **Mocksville** **128.41** **28** P **PKiKP** **20 13 24.7 +0.7**
baz=325
U57A **Blanch** **128.42** **27** P **PKiKP** **20 13 25.0 +1.0**
baz=327
X54A **Belton** **128.51** **31** P **PKiKP** **20 13 25.4 +1.3**
baz=323
KMSC **Kings Mountain** **128.55** **29** P **PKiKP** **20 13 25.3 +1.0**
baz=324
PAULI **Pauline** **128.57** **30** IAMs_20 IAMs_20 21 13 48.4
comp=Z,461nm,20.0s
152A **Waverly Hall** **128.72** **34** IAMs_20 IAMs_20 21 09 01.9
comp=Z,396nm,20.0s
T59A **Double "B" Far** **128.73** **25** P **PKiKP** **20 13 25.7 +1.1**
baz=329
U58A **Oxford** **128.80** **26** P **PKiKP** **20 13 25.7 +1.0**
baz=328
GOGA **Godfrey** **128.83** **33** P **PKiKP** **20 13 26.0 +1.2**
baz=321
GOGA **Godfrey** **128.83** **33** IAMs_20 IAMs_20 21 14 36.6
comp=Z,372nm,19.0s
X55A **Gracelyn & Ava** **128.94** **30** P **PKiKP** **20 13 25.6 +0.5**
baz=323
V58A **Windy Hill, Pi** **129.05** **27** IAMs_20 IAMs_20 21 20 41.6
comp=Z,463nm,20.0s
U59A **Littleton** **129.16** **25** IAMs_20 IAMs_20 21 11 41.2
comp=Z,429nm,20.0s
W57A **Gilead** **129.18** **28** P **PKiKP** **20 13 25.8 +0.3**
baz=326
X56A **White Oak** **129.22** **30** P **PKiKP** **20 13 26.2 +0.6**
baz=324
BIRD **Birdtown, Kers** **129.37** **29** IAMs_20 IAMs_20 21 16 44.4
comp=Z,395nm,19.0s
V59A **Middlesex** **129.46** **26** P **PKiKP** **20 13 26.5 +0.5**
baz=328
352A **Blakely** **129.49** **35** IAMs_20 IAMs_20 21 08 35.5
comp=Z,485nm,20.0s
154A **Montrose** **129.64** **33** IAMs_20 IAMs_20 21 15 12.1
comp=Z,376nm,20.0s
Y57A **Sumter** **129.91** **29** IAMs_20 IAMs_20 21 16 14.8
comp=Z,445nm,18.0s
X58A **Rowland** **129.97** **28** IAMs_20 IAMs_20 21 16 48.2
comp=Z,416nm,19.0s
255A **Hazlehurst** **130.51** **33** IAMs_20 IAMs_20 21 15 46.1
comp=Z,498nm,21.0s
NHSC **New Hope** **130.75** **30** IAMs_20 IAMs_20 21 16 40.2
comp=Z,455nm,20.0s
Y60A **Bolivia** **130.95** **27** IAMs_20 IAMs_20 21 19 29.9
comp=Z,394nm,20.0s
PLCA **Paso Flores** **145.18 157** PKPbc **PKPdf** **20 13 54.9 +0.8**
comp=Z,8.6nm,0.7s,baz=221,slow=3.9,SNR=3.2
PLCA **Paso Flores** **145.18 157** **PKPdf** **20 13 54.9 +0.8**
BCIP **Isla Barro Col** **147.96** **56** *eP* PKPab 20 14 15.9 +11
SJG **San Juan** **150.03** **25** PKIKP **PKPbc** **20 14 07.5 -0.1**
SJG **San Juan** **150.03** **25** **PKPbc** **20 14 07.5 -0.1**
CAPC **Capurgana** **150.27** **54** *eP* **PKiKP** **20 14 10.0 +0.9**
MTP **Monte Pirata** **150.29** **24** **PKPbc** **20 14 07.4 -0.8**
SJCC **San Jacinto, C** **151.17** **49** *eP* **PKiKP** **20 14 11.5 +0.5**
SMRT **St. Maarten** **151.23** **19** IAMs_20 IAMs_20 21 15 29.0
comp=Z,389nm,22.0s
PEL **Peldehue** **151.41 149** PKIKP **PKiKP** **20 14 11.4 +0.4**
PEL **Peldehue** **151.41 149** **PKiKP** **20 14 11.4 +0.4**
ARGC **Ariguani, Magd** **151.88** **48** *eP* **PKPbc** **20 14 09.7 -2.3**
DBBC **Dabeiba** **152.12** **55** *eP* **PKiKP** **20 14 14.6 +1.5**
URIC **Uribia, Colomb** **152.17** **42** *eP* **PKiKP** **20 14 13.9 +0.9**
GR1C **Gorgona, Isla** **152.50** **65** *eP* **PKiKP** **20 14 14.2 +0.5**
SMLC **San Martn de** **152.71** **49** *eP* **PKiKP** **20 14 14.5 +0.3**
MALC **Bahia Malaga** **152.76** **62** *eP* **PKiKP** **20 14 16.3 +2.0**
CBOC **Ciudad Bolivar** **152.93** **57** *eP* **PKPdf** **20 14 06.2 -1.2**
HELC **Santa Helena** **153.15** **56** *eP* **PKiKP** **20 14 16.9 +1.4**
OCAC **Ocana** **153.64** **49** *eP* **PKiKP** **20 14 17.6 +1.4**
YOTC **Yotoco, Valle** **153.64** **61** *eP* **PKPdf** **20 14 10.4 +2.0**
GUY2C **Guyana, Caldas** **153.82** **57** *eP* **PKiKP** **20 14 17.1 0.0**
GCUF **Volcan Galeras** **154.00** **68** *eP* **PKPab** **20 14 32.4 +1.6**
RREF **El Recreo** **154.01** **58** *eP* **PKPbc** **20 14 14.7 -2.9**
NORC **Norcasia** **154.04** **56** *eP* **PKiKP** **20 14 17.4 +0.4**
BRRC **Barranca, Sant** **154.06** **52** *eP* **PKPdf** **20 14 08.9 +0.1**
TOLC **Tolima** **154.20** **59** *eP* **PKiKP** **20 14 19.9 +2.2**
SOTA **Rioblanco** **154.28** **65** *eP* **PKiKP** **20 14 20.6 +2.5**
PCCN **Cinco Dias** **154.38** **64** *eP* **PKiKP** **20 14 20.3 +1.9**
ORTC **Ortega, Tolima** **154.62** **60** *eP* **PKiKP** **20 14 19.2 +1.0**
SPBC **San Pablo de B** **154.64** **55** *eP* **PKiKP** **20 14 19.4 +1.1**
PAMC **Pamplona, Colo** **154.68** **50** *eP* **PKiKP** **20 14 20.2 +1.3**
BARC **Barichara** **154.78** **52** *eP* **PKiKP** **20 14 19.1 +0.3**
SDV **Santo Domingo** **155.12** **44** PKP **PKPdf** **20 14 11.2 +0.6**
comp=Z,4.5nm,0.7s,baz=285,slow=7.8,SNR=4.7
SDV **Santo Domingo** **155.12** **44** PKPdf **PKPdf** **20 14 11.7 +1.1**
SDV **Santo Domingo** **155.12** **44** **PKPdf** **20 14 11.2 +0.6**
RUSC **La Rusia** **155.29** **53** *eP* PKPdf 20 14 21.5 +10
CHIC **Chingaza** **155.50** **57** *eP* **PKPdf** **20 14 13.6 +2.3**
RCBR **Riachuelo** **162.29 280** PKPab **PKPab** **20 15 05.2 -0.9**
comp=Z,6.3nm,0.7s,baz=32,slow=4.7,SNR=2.0
LPAZ **La Paz** **164.07 117** PKP **PKPdf** **20 14 22.1 +0.9**
comp=Z,3.9nm,0.9s,baz=68,slow=2.3,SNR=11
LPAZ PKPab **PKPab** **20 15 16.9 +2.4**
comp=Z,5.2nm,0.8s,baz=233,slow=4.3,SNR=5.9
LPAZ **La Paz** **164.07 117** PKIKP **PKPdf** **20 14 22.2 +1.0**
LPAZ **La Paz** **164.07 117** **PKPdf** **20 14 22.2 +1.0**
PTGA **Pitinga** **169.31 38** PKPab **PKPab** **20 15 36.7 0.0**
comp=Z,6.6nm,0.8s,baz=336,slow=4.4,SNR=6.4
PTGA **Pitinga** **169.31 38** **PKPab** **20 15 37.3 +0.5**
SIV **San Ignacio** **170.00 133** PKP **PKPdf** **20 14 25.8 +0.9**
comp=Z,1.6nm,0.7s,baz=164,slow=1.8,SNR=6.4
SIV **San Ignacio** **170.00 133** **PKPdf** **20 14 25.8 +0.9**
BDFB **Brasilia** **171.75 219** PKPab **PKPab** **20 15 46.1 -1.6**
comp=Z,2.5nm,0.6s,baz=122,slow=14,SNR=2.0
BDFB **Brasilia** **171.75 219** PKP2 **PKPab** **20 15 47.4 -0.3**
BDFB **Brasilia** **171.75 219** **PKPab** **20 15 47.4 -0.3**

WBNET 31 19:55:02.4,50°23N×12°45E,h9km,MI2.1,6C-4D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NKC	**Novy Kostel**	**0.00**	**359**	↑P	Pg	19 55 04.1	0.0
NKC				S	Sg	19 55 05.2	+0.1
LBCW	**Luby**	**0.04**	**328**	↓P	Pg	19 55 04.3	+0.1
VAC	**Vackov**	**0.05**	**278**	↓P	Pg	19 55 04.3	+0.1
VAC				S	Sg	19 55 05.6	0.0
KVC	**Kvetna**	**0.05**	**118**	↑P	Pg	19 55 04.2	-0.1
STCW	**Studenec**	**0.06**	**57**	↑P	Pg	19 55 04.4	0.0
SKC	**Skalna**	**0.08**	**223**	↑P	Pg	19 55 04.7	0.0
SKC				S	Sg	19 55 06.2	0.0
POCW	**Potky**	**0.09**	**352**	↓P	Pg	19 55 05.0	+0.1
KACW	**Kaceov**	**0.10**	**152**	↑P	Pg	19 55 04.9	+0.1
KACW				S	Sg	19 55 06.6	+0.1
KRCW	**Kraslice**	**0.12**	**27**	↑P	Pg	19 55 05.2	0.0
KRCW				S	Sg	19 55 07.1	0.0
ZHC	**Zelena Hora**	**0.18**	**210**	↓P	Pg	19 55 06.3	+0.1

*LDG **31** 19:55:01.3±0.1,50°22N×12°40E,h10km,MI2.8/3,Error ellipse: s-maj=3.0km s-min=2.0km az=141.0*
*WBNET **31** 19:55:02.8,50°23N×12°45E,h9km,MI2.6*
*PRU **31** 19:55:02.7±0.0,50°22N×12°49E,h3km, West Bohemia Swarm*
*BGR **31** 19:55:02.6±0.3,50°23N×12°44E,h11km±2km,ML2.5/5, Error ellipse: s-maj=2.2km s-min=2.2km az=85.0*
*CLL **31** 19:55:03.2±0.4,50°23N×12°45E,h7km±1km,ML2.4/9*

ISC 31 19:55:02.3±0.7,50°22N±0°02×12°47E±0°02,h13km±3km, n62,σ1°69/122,5C-1D,Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NKC	**Novy Kostel**	**0.02**	**322**	*i* Pg	**Pg**	**19 55 04.5**	**-0.3**
NKC				*i* Sg	**Sg**	**19 55 05.5**	**-0.8**
NKC	**Novy Kostel**	**0.02**	**322**	*e*PG	**Pg**	**19 55 03.9**	**-0.8**
NKC				*e*SG	**Sg**	**19 55 05.0**	**-1.4**
	comp=Z,2μm,0.2s						
NKC	**Novy Kostel**	**0.02**	**322**	↑P	**Pg**	**19 55 04.5**	**-0.3**
NKC				S	**Sg**	**19 55 05.6**	**-0.8**
KVC	**Kvetna**	**0.03**	**109**	P	**Pg**	**19 55 04.6**	**-0.2**
KVC				S	**Sg**	**19 55 05.8**	**-0.7**
STCW	**Studenec**	**0.05**	**38**	P	**Pg**	**19 55 04.7**	**-0.2**
STCW				S	**Sg**	**19 55 06.0**	**-0.8**
LBCW	**Luby**	**0.06**	**324**	↑P	**Pg**	**19 55 04.7**	**-0.3**
LBCW				S	**Sg**	**19 55 06.1**	**-0.8**
VAC	**Vackov**	**0.06**	**288**	↓P	**Pg**	**19 55 04.7**	**-0.3**

VAC S Sg 19 55 05.9 -0.9
KACW Kaceov 0.08 157 ⇑P Pg 19 55 05.3 +0.2
KACW S Sg 19 55 07.0 -0.1
SKC Skalna 0.08 236 ⇑P Pg 19 55 05.0 -0.1
SKC S Sg 19 55 06.6 -0.6
WERN Wernitzgruen 0.09 320 *i* Pg Pg 19 55 05.1 -0.2
WERN *i* Sg Sg 19 55 06.5 -0.9
3µm,0.1s
ROHR Rohrbach 0.10 280 *i* Pg Pg 19 55 05.0 -0.3
ROHR *i* Sg Sg 19 55 06.6 -0.9
4µm,0.1s
POCW Potky 0.11 346 P Pg 19 55 05.3 -0.2
POCW S Sg 19 55 07.0 -0.7
KRCW Kraslice 0.12 19 ⇑P Pg 19 55 05.6 -0.1
KRCW S Sg 19 55 07.4 -0.6
GUNZ Gunzen 0.17 329 *i* Pg Pg 19 55 06.2 -0.1
GUNZ *i* Sg Sg 19 55 08.5 -0.7
301nm,0.3s
TANN Tannenbergstha 0.20 359 *i* Pg Pg 19 55 06.7 -0.1
TANN *i* Sg Sg 19 55 09.2 -0.7
897nm,0.1s
MULD Muldenberg 0.20 348 *i* Pg Pg 19 55 06.7 -0.1
MULD *i* Sg Sg 19 55 09.2 -0.7
567nm,0.3s
VIEL Selb-Vielitz 0.24 263 *i* Pg Pg 19 55 07.3 -0.1
VIEL *i* Sg Sg 19 55 10.4 -0.5
TRIB Obertriebel 0.25 303 *i* Pg Pg 19 55 07.5 -0.1
TRIB *i* Sg Sg 19 55 10.7 -0.6
679nm,0.1s
PLN Plauen 0.34 324 *i* Pg Pg 19 55 09.1 0.0
PLN *i* Sg Sg 19 55 13.5 -0.3
242nm,0.1s
SCHF Schoenfels 0.46 355 *i* Pg Pg 19 55 11.5 0.0
SCHF *i* Sg Sg 19 55 17.5 -0.2
334nm,0.2s
GRZ1 Mausoleum Wald 0.50 342 *i* Pg Pg 19 55 12.1 -0.1
GRZ1 *i* Sg Sg 19 55 18.4 -0.5
109nm,0.1s
ZEU Talsperre Zeul 0.55 326 *i* Pg Pg 19 55 13.0 -0.1
ZEU eSg Sg 19 55 20.4 -0.1
MLFH Mildenfurth 0.62 337 *i* Pg Pg 19 55 14.5 0.0
MLFH eSg Sg 19 55 22.4 -0.4
MOX Moxa 0.69 309 eSg Sg 19 55 24.6 -0.3
GRF Grafenberg Arr 0.96 237 eSg Sb 19 55 33.8 +0.5
WET Wettzell 1.11 166 eSg Sn 19 55 38.6 0.0
PBCC Pribram 1.12 118 ePG Pb 19 55 23.1 -0.4
PBCC eSG Sb 19 55 37.6 -0.4
comp=Z,32nm,0.3s
CLL Collm 1.14 17 *i* Pg Pg 19 55 24.7 +0.4
CLL *e* 19 55 27.0
CLL *i* Sg Sn 19 55 39.8 +0.3
comp=Z,44nm,0.2s
CLL LmV 20 11 00.0
comp=Z,500nm,18.2s
BRG Berggiesshubel 1.15 54 PG Pn 19 55 24.0 0.0
BRG SG Sg 19 55 39.1 -0.3
comp=Z,36nm,0.3s
PRA Prague 1.27 96 eSG Sn 19 55 42.8 +0.2
comp=Z,15nm,0.5s
KHC Kasperske Hory 1.30 146 ePG Pn 19 55 26.2 0.0
KHC eSG Sg 19 55 44.2 -0.1
comp=Z,28nm,0.3s
PRU Pruhonice 1.35 99 ePG Pb 19 55 27.5 0.0
PRU eSG Sg 19 55 46.1 +0.2
comp=Z,43nm,0.5s
PVCC Panska Ves 1.38 76 ePG Pb 19 55 28.2 +0.3
PVCC eSG Sg 19 55 47.0 +0.2
comp=Z,50nm,0.2s
GOPC GO Pecny, Ondr 1.52 101 eSG Sg 19 55 50.7 -0.7
comp=Z,27nm,0.4s
GEC2 GERESS Array S 1.59 149 eSG Sg 19 55 54.1 +0.7
TREC Trest 2.16 114 ePG Pb 19 55 42.0 +0.7
TREC eSG Sg 19 56 10.1 -1.7
comp=Z,19nm,0.2s
UPC Upice 2.29 81 ePG Pb 19 55 44.5 +1.1
UPC eSG Sg 19 56 13.8 -2.0
comp=Z,10nm,0.4s
CHVC Chvalec 2.33 79 ePG Pb 19 55 43.7 -0.3
CHVC eSG Sg 19 56 15.8 -1.2
comp=Z,6.6nm,0.6s
OSTC Ostas 2.42 80 ePG Pb 19 55 46.7 +1.0
OSTC eSG Sg 19 56 18.6 -1.5
comp=Z,6.6nm,0.3s
DPC Dobruska-Polom 2.48 85 ePG Pb 19 55 46.9 +0.3
DPC eSG Sg 19 56 19.8 -2.0
comp=Z,8.7nm,0.3s
KSP Ksiaz 2.52 74 eSg Sg 19 56 22.6 -0.7
MOA Molln 2.65 153 ePn Pn 19 55 45.4 +0.7
comp=Z,0.1nm,0.1s
MOA ePg Pg 19 55 51.6 -1.5
comp=Z,1.7nm,0.1s
MOA eSg Sg 19 56 27.1 -0.2
comp=Z,2.7nm,0.2s
KRLC Kraliky 2.78 91 ePG Pb 19 55 51.4 -0.4
KRLC eSG Sg 19 56 31.2 -0.3
comp=Z,8.6nm,0.5s
KRUC Moravsky 2.80 113 ePN Pn 19 55 47.2 +0.5
KRUC eSG Sg 19 56 29.9 -2.4
VRAC Vranov 2.83 107 ePN Pn 19 55 47.4 +0.3
VRAC eSG Sb 19 56 29.9 +2.9
WATA Walderalm 2.94 192 ePn Pn 19 55 48.4 -0.4
comp=Z,0.5nm,0.1s
WATA eSn Sn 19 56 24.6 +0.6
comp=Z,8.9nm,0.2s
WATA Sg Sg 19 56 38.9 +2.1
comp=Z,7.8nm,0.2s
WTTA Wattenberg 3.01 191 *i* Pn Pn 19 55 49.9 +0.1
comp=Z,0.1nm,0.1s
WTTA ePg Pg 19 55 59.6 -0.3
comp=Z,1.2nm,0.2s
WTTA eSn Sn 19 56 26.3 +0.6
comp=Z,2.7nm,0.3s
WTTA Sg Sg 19 56 41.1 +2.3
comp=Z,4.6nm,0.3s
MOTA Moosalm 3.01 198 ePn Pn 19 55 49.4 -0.4
comp=Z,0.2nm,0.1s
SQTA Sankt Quirin 3.11 196 *i* Pn Pn 19 55 50.9 -0.2
comp=Z,0.6nm,0.2s
SQTA ePg Pg 19 56 01.3 -0.6
comp=Z,3.2nm,0.3s
SQTA *i* Sn Sn 19 56 28.7 +0.5
comp=Z,2.0nm,0.2s
SQTA eSg Sg 19 56 42.7 +0.5
comp=Z,9.1nm,0.3s
KBA Koelnbreinsper 3.19 169 *i* Pn Pn 19 55 53.9 +1.6
comp=Z,1.0nm,0.3s
KBA eSg Sg 19 56 43.0 -1.8
comp=Z,1.1nm,0.2s
CONA Conrad Observa 3.20 134 ePn Pn 19 55 54.0 +1.7
comp=Z,0.2nm,0.1s
CONA ePg Pg 19 56 02.1 -1.4
comp=Z,1.2nm,0.2s
MORC Moravsky Berou 3.30 96 ePN Pn 19 55 53.8 +0.1
MORC eSG Sg 19 56 46.2 -2.1
FETA Feichten 3.40 200 ePn Pn 19 55 54.9 -0.2
comp=Z,0.1nm,0.1s
FETA *i* Sn Sn 19 56 35.3 0.0
comp=Z,0.2nm,0.1s
FETA eSg Sg 19 56 51.0 -0.5
comp=Z,0.5nm,0.1s
ABTA Abfaltersbach 3.47 179 *i* Pn Pn 19 55 58.4 +2.4
comp=Z,0.1nm,0.1s
ABTA eSn Sn 19 56 37.4 +0.4
comp=Z,1.1nm,0.2s
ABTA eSg Sg 19 56 53.8 0.0
comp=Z,3.9nm,0.3s
ARSA Arzberg 3.59 145 ePn Pn 19 55 59.5 +1.9
comp=Z,0.5nm,0.2s
ARSA Sg Sg 19 56 55.5 -2.1
comp=Z,4.8nm,0.4s
MODS Modra-Piesok 3.65 119 eSG Sg 19 56 56.8 -2.6
ZST Bratislava 3.65 122 eSG Sg 19 56 56.8 -2.6
OKC Ostrava-Krasne 3.68 94 eSG Sg 19 56 58.8 -1.6
comp=Z,7.8nm,0.4s
CDF Champ du Feu 3.85 244 ePg Pb 19 56 11.7 +1.7
CDF eSn Sn 19 56 39.5 -6.8
CDF eSg Sb 19 57 00.8 +4.3
comp=Z,4.5nm,0.3s
HINF Hinteralfeld 4.41 239 ePg Pb 19 56 22.2 +2.7
HINF eSn Sn 19 56 53.5 -6.5
HINF eSg Sg 19 57 18.9 -4.8
comp=Z,3.7nm,0.3s
HAU Haudompre 4.59 244 eSn Sn 19 56 57.5 -6.9
HAU eSg Sb 19 57 22.2 +4.5
comp=Z,2.8nm,0.2s

CABF La Chapelle 5.57 232 *e*Sg Sg 19 57 56.5 -4.6

IDC ***31*** *20:02:51.4±0.6,9.25N×126.41E,h0km,mb4.1/17, mb1 4.1/19,mb1mx3.9/69,mbtmp4.1/19,ML3.6/2,Error ellipse: s-maj=34.2km s-min=13.2km az=78.0*
NEIC ***31*** *20:02:52.9±2.0,9.38N±0.08×126.7E±0.1,h10km±1km, mb4.6/20,Error ellipse: s-maj=20.0km s-min=14.3km az=93.0*
MAN ***31*** *20:02:55.6,9.48N×126.92E,h41km,mb5.1,ML4.0,MS4.1*
ISC 31 20:02:52.9±1.7,9.44N±0.03×126.66E±0.06,h9km±10km, n61,σ1§97/63,mb4.3/24,5C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.21**	**286**	⇓*e*P		**Pg**		**20 03 19.2**	**+3.0**
SCPH				*e*S		**Sn**		**20 03 38.2**	**+5.7**
BIPH	**Bislig**	**1.29**	**193**	⇑*e*P		Pg		20 03 26.3	+8.6
BIPH				*e*S		**Sg**		**20 03 40.2**	**+5.7**
MSLP	**Maasin**	**1.91**	**291**	*e*P		**Pn**		**20 03 30.1**	**+0.6**
MSLP				*e*S		**Sb**		**20 03 52.2**	**+0.3**
BUKP	**Musuan**	**2.22**	**226**	*e*P		**Pb**		**20 03 32.4**	**-0.9**
BUKP				*e*S		**Sg**		**20 04 03.1**	**-1.3**
DAV	**Davao City (W)**	**2.59**	**205**	Pn		**Pb**		**20 03 39.7**	**+0.1**
	66nm,0.3s,baz=26,slow=3.4,SNR=1.9								
DAV				Sn		**Sb**		**20 04 09.6**	**-2.0**
	58nm,0.3s,baz=279,slow=20,SNR=1.9								
DAV	**Davao City (W)**	**2.59**	**205**			**Pb**		**20 03 36.5**	**-3.1**
DMPH	**Davao City--Mi**	**2.61**	**206**	⇑*e*P		**Pb**		**20 03 39.3**	**-0.6**
DMPH				*e*S		**Sb**		**20 04 11.6**	**-0.5**
LLP	**Lapu-Lapu**	**2.80**	**288**	*e*P		**Pb**		**20 03 42.8**	**-0.3**
LLP				*e*S		**Sg**		**20 04 21.9**	**-1.0**
KCP	**Kidapawan**	**2.88**	**213**	⇓*e*P		**Pb**		**20 03 41.7**	**-2.8**
KCP				*i* S		**Sb**		**20 04 18.1**	**-1.8**
CTBH	**Cotabato--PC H**	**3.26**	**227**	⇑*i*P		**Pb**		**20 03 47.8**	**-3.2**
CNP	**Catarman**	**3.62**	**327**	*e*P		**Pb**		**20 03 52.7**	**-4.5**
CNP				*e*S		**Sn**		**20 04 35.6**	**+3.4**
GSPH	**General Santos**	**3.74**	**207**	⇑*i*P		**Pb**		**20 03 59.5**	**+0.1**
RCP	**Roxas**	**4.39**	**299**	⇑*e*P		**Pb**		**20 04 06.5**	**-3.8**
LUBP	**Lubang**	**7.60**	**305**	*e*P		**Pg**		**20 05 17.5**	**-1.0**
TNTI	**Ternate**	**8.64**	**175**	Pn		**Pn**		**20 04 59.1**	**+0.8**
SIJI	**Sorong**	**11.22**	**156**	Pn		**Pn**		**20 05 33.6**	**-0.1**
	0.6nm,0.3s,baz=200,slow=22,SNR=2.1								
SBUM	**Sibu**	**15.95**	**245**	P		**P**		**20 06 39.6**	**-1.8**
JAY	**Jayapura**	**18.35**	**130**	P		**P**		**20 07 08.0**	**0.0**
	0.1nm,0.3s,baz=305,slow=7.8,SNR=4.1								
BATI	**Baumata**	**19.75**	**189**	P		**Pn**		**20 07 23.2**	**-1.6**
	3.5nm,0.3s,baz=88,slow=3.0,SNR=6.6								
MTN	**Manton Dam**	**22.58**	**169**	P		**P**		**20 07 52.5**	**-1.3**
MTN				lAmb		lAmb		20 08 09.0	
	comp=Z,25nm,1.2s								
JNU	**Nakatsue**	**23.88**	**9**	P		**P**		**20 08 09.3**	**+2.4**
	comp=Z,2.6nm,0.8s,baz=151,slow=5.0,SNR=3.5								
JNU	**Nakatsue**	**23.88**	**9**	P		**P**		**20 08 06.8**	**-0.2**
KNRA	**Kununurra**	**25.05**	**175**	P		**P**		**20 08 16.5**	**-1.2**
FITZ	**Fitzroy Crossi**	**27.39**	**182**	P		**P**		**20 08 37.6**	**-1.3**
	comp=Z,2.6nm,0.5s,baz=136,slow=11,SNR=2.5								
FITZ	**Fitzroy Crossi**	**27.39**	**182**	P		**P**		**20 08 37.4**	**-1.4**
FITZ				lAmb		lAmb		20 08 45.8	
	comp=Z,9.4nm,0.8s								
KSRS	**Korea Array**	**27.91**	**2**	P		**P**		**20 08 46.1**	**+2.7**
	comp=Z,0.8nm,0.8s,baz=180,slow=11,SNR=4.4								
WB0	**Warramunga Arr**	**30.01**	**165**	P		**P**		**20 08 59.7**	**-2.5**
WB0				lAmb		lAmb		20 09 03.0	
	comp=Z,14nm,1.3s								
GSI	**Gunungsitoli**	**30.04**	**256**	P		**P**		**20 09 01.8**	**-0.8**
WRA	**Warramunga Arr**	**30.16**	**166**	P		**P**		**20 09 01.1**	**-2.5**
	comp=Z,1.7nm,0.8s,baz=345,slow=9.6,SNR=3.0								
PSA00	**Pilbara Seismi**	**31.54**	**192**	P		**P**		**20 09 14.7**	**-1.1**
AS31	**Alice Springs**	**33.66**	**168**	P		**P**		**20 09 33.1**	**-1.2**
ASAR	**Alice Springs**	**33.66**	**168**	P		**P**		**20 09 32.5**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=349,slow=6.9,SNR=7.9								
USRK	**Ussuriysk Ar.**	**34.93**	**7**	P		**P**		**20 09 47.9**	**+2.8**
	comp=Z,1.0nm,0.6s,baz=172,slow=29,SNR=2.8								
MORW	**Morawa**	**39.64**	**195**	P		**P**		**20 10 24.5**	**-0.7**
MORW				lAmb		lAmb		20 10 33.4	
	comp=Z,27nm,1.4s								
H11S3	**WAKE ISLAND Hy**	**39.79**	**72**	T		T		20 53 31.2	
H11S1	**WAKE ISLAND Hy**	**39.80**	**72**	T		T		20 53 31.2	
H11S2	**WAKE ISLAND Hy**	**39.81**	**72**	T		T		20 53 27.2	
	SNR=12								
H11N1	**WAKE ISLAND Hy**	**40.15**	**71**	T		T		20 54 02.3	
H11N2	**WAKE ISLAND Hy**	**40.16**	**71**	T		T		20 54 02.3	
H11N3	**WAKE ISLAND Hy**	**40.17**	**71**	T		T		20 54 02.3	
BBOO	**Buckleboo**	**42.96**	**168**	P		**P**		**20 10 51.1**	**-1.4**
NWAO	**Narrogin (SRO)**	**43.08**	**192**	P		**P**		**20 10 52.0**	**-1.4**
	comp=Z,8.5nm,0.9s,baz=40,slow=4.3,SNR=5.8								
NWAO	**Narrogin (SRO)**	**43.08**	**192**	P		**P**		**20 10 52.2**	**-1.2**
MK31	**Makanchi Array**	**52.91**	**323**	P		**P**		**20 12 10.0**	**+0.4**
MKAR	**Makanchi Array**	**52.91**	**323**	P		**P**		**20 12 09.8**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=121,slow=8.1,SNR=11								
ZALV	**Zalesovo Beam**	**55.53**	**351**	P		**P**		**20 12 27.6**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=188,slow=9.0,SNR=2.4								
KURK	**Kurchatov**	**56.96**	**326**	P		**P**		**20 12 39.2**	**+0.5**
KURK				lAmb		lAmb		20 12 40.0	
	comp=Z,3.8nm,0.8s								
KURBB	**Kurchatov Arra**	**56.97**	**326**	P		**P**		**20 12 38.5**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=126,slow=6.8,SNR=11								
GAR	**Garm**	**58.12**	**310**	P		**P**		**20 12 48.6**	**+1.4**
GAR				lAmb		lAmb		20 12 58.9	
	comp=Z,6.5nm,0.8s								
TIXI	**Tiksi**	**62.17**	**1**	P		**P**		**20 13 14.8**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=150,slow=8.9,SNR=4.2								
TIXI	**Tiksi**	**62.17**	**1**	P		**P**		**20 13 14.6**	**+0.4**
TIXI				lAmb		lAmb		20 13 27.9	
	comp=Z,6.7nm,1.1s								
BRVK	**Borovoye**	**62.63**	**326**	P		**P**		**20 13 18.2**	**+0.5**
BRVK				lAmb		lAmb		20 13 18.9	
	comp=Z,2.9nm,0.8s								
NRIK	**Noril'sk**	**64.91**	**346**	P		**P**		**20 13 33.1**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=355,slow=20,SNR=11								
ARU	**Arti**	**70.12**	**327**	P		**P**		**20 14 05.7**	**0.0**
	comp=Z,0.3nm,0.3s,baz=320,slow=18,SNR=4.1								
ARU	**Arti**	**70.12**	**327**	P		**P**		**20 14 05.8**	**+0.2**
ARU				lAmb		lAmb		20 14 17.2	
	comp=Z,3.1nm,0.7s								
RAYN	**Ar Rayn**	**78.24**	**292**	P		**P**		**20 14 52.6**	**-1.1**
RAYN				lAmb		lAmb		20 14 54.1	
	comp=Z,2.3nm,0.8s								
ILAR	**Eielson Array**	**80.01**	**26**	P		**P**		**20 15 03.5**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=224,slow=5.7,SNR=4.2								
ARCES	**ARCESS Array B**	**85.10**	**340**	P		**P**		**20 15 30.0**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=85,slow=7.4,SNR=5.4								
ARE0	**ARCESS Array S**	**85.10**	**340**	P		**P**		**20 15 29.7**	**+0.7**
FINES	**FINESS Array B**	**86.80**	**332**	P		**P**		**20 15 37.1**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=70,slow=4.1,SNR=5.0								
YKA	**Yellowknife Ar**	**94.35**	**24**	P		**P**		**20 16 13.9**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=302,slow=4.2,SNR=6.7								

IDC ***31*** *20:07:13.7±2.5,24.51S×179.68W,h492km±27km, mb3.8/13,mb1 3.9/14,mb1mx3.5/49,mbtmp4.6/14,Error ellipse: s-maj=18.9km s-min=15.7km az=42.0*
NEIC ***31*** *20:07:13.2±1.8,24.5S±0.1×179.6W±0.2,h492km±9km, mb4.5/19,Error ellipse: s-maj=22.4km s-min=18.3km az=66.0*
ISC 31 20:07:13.2±0.7,24.66S±0.07×179.6W±0.1,h490km,n54, σ1§69/59,mb4.4/21,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.81**	**162**	P		**P**		**20 08 37.1**	**-0.8**
GLKZ	**Green Lake**	**4.82**	**162**	P		**P**		**20 08 39.5**	**+1.6**
GLKZ				S		**S**		**20 09 47.6**	**+0.5**
MSVF	**Nonsavu**	**7.23**	**342**	P		**P**		**20 09 00.3**	**-1.3**
OUZ	**Omahuta**	**12.06**	**208**	P		**P**		**20 09 55.5**	**+3.2**
OUZ	**Omahuta**	**12.06**	**208**	P		**P**		**20 09 55.8**	**+3.5**
DZM	**Mont Dzumac**	**13.07**	**279**	P		**P**		**20 10 04.4**	**+1.1**
	1.0nm,0.3s,baz=95,slow=17,SNR=9.9								
DZM	**Mont Dzumac**	**13.07**	**279**	P		**P**		**20 10 04.9**	**+1.5**
PUZ	**Puketiti**	**13.49**	**187**	P		**P**		**20 10 10.4**	**+2.9**
PUZ				S		**S**		**20 12 26.6**	**-4.8**
URZ	**Urewera**	**13.84**	**191**	P		**P**		**20 10 12.8**	**+1.6**
URZ				S		**S**		**20 12 32.3**	**-5.6**
MWZ	**Matawai**	**13.85**	**189**	P		**P**		**20 10 13.4**	**+2.1**
MWZ				S		**S**		**20 12 34.7**	**-3.5**
HATZ	**Hinemaiaia**	**14.65**	**193**	P		**P**		**20 10 21.0**	**+1.3**
BKZ	**Black Stump Fm**	**14.83**	**192**	P		**P**		**20 10 22.5**	**+0.8**
BKZ				S		**S**		**20 12 56.4**	**-0.8**
BKZ	**Black Stump Fm**	**14.83**	**192**	P		**P**		**20 10 24.1**	**+2.4**
MOVZ	**Moawhango**	**15.22**	**194**	P		**P**		**20 10 28.2**	**+2.5**
BHHZ	**Black Hill Sta**	**15.23**	**193**	P		**P**		**20 10 26.0**	**+0.2**
KRHZ	**Kereru**	**15.32**	**192**	P		**P**		**20 10 28.2**	**+1.4**

KAHZ Kahuranaki 15.38 190 P P 20 10 29.9 +2.5
LTZ Lake Taylor 19.28 198 P P 20 11 05.9 +0.2
RPZ Rata Peaks 20.49 200 P P 20 11 17.2 +0.5
11nm,0.6s,baz=261,slow=0.3,SNR=8.7
RPZ Rata Peaks 20.49 200 P P 20 11 17.0 +0.4
RPZ lAmb lAmb 20 11 22.0
comp=Z,30nm,1.3s
EIDS Eidsvold 26.55 262 P P 20 12 11.6 +0.6
EIDS lAmb lAmb 20 12 12.6
comp=Z,20nm,1.3s
CTA Charters Tower 31.84 271 P P 20 12 57.9 +0.7
comp=Z,18nm,0.4s,baz=94,slow=11,SNR=79
CTAO Charters Tower 31.84 271 P P 20 12 57.8 +0.5
PMG Port Moresby 35.09 290 P P 20 13 23.5 -1.2
comp=Z,16nm,0.7s,baz=118,slow=9.8,SNR=5.4
PMG Port Moresby 35.09 290 P P 20 13 24.6 -0.1
PMG lAmb lAmb 20 13 25.4
comp=Z,17nm,0.8s
COEN Coen 36.59 280 P P 20 13 37.8 +0.6
COEN lAmb lAmb 20 13 40.1
comp=Z,19nm,1.2s
AS31 Alice Springs 42.27 261 P P 20 14 23.4 +0.3
ASAR Alice Springs 42.27 261 P P 20 14 23.0 -0.1
comp=Z,2.0nm,0.5s,baz=91,slow=6.4,SNR=28
ASAR S S 20 20 07.0 -0.9
comp=Z,0.4nm,0.8s,baz=94,slow=18,SNR=4.2
WR0 Warramunga Arr 42.53 267 P P 20 14 24.6 -0.5
WR0 lAmb lAmb 20 14 24.9
comp=Z,18nm,1.4s
WB2 Warramunga Arr 42.71 267 P P 20 14 26.0 -0.5
WB2 lAmb lAmb 20 14 26.4
comp=Z,13nm,0.5s
WB0 Warramunga Arr 42.72 267 P P 20 14 25.9 -0.7
WB0 lAmb lAmb 20 14 26.7
comp=Z,13nm,0.7s
WRA Warramunga Arr 42.72 267 P P 20 14 26.1 -0.6
comp=Z,11nm,0.6s,baz=98,slow=8.3,SNR=53
JAY Jayapura 44.15 294 P P 20 14 36.4 -1.4
comp=Z,8.3nm,0.5s,baz=153,slow=1.0,SNR=22
MTN Manton Dam 47.87 275 P P 20 15 05.2 -1.1
MTN lAmb lAmb 20 15 07.3
comp=Z,18nm,1.2s
KNRA Kununurra 49.05 270 P P 20 15 15.0 0.0
FITZ Fitzroy Crossi 51.13 266 P P 20 15 30.7 +0.4
comp=Z,6.6nm,0.6s,baz=102,slow=11,SNR=9.7
FITZ Fitzroy Crossi 51.13 266 P P 20 15 30.3 0.0
FAKI Fak Fak 51.15 287 P P 20 15 29.8 -0.7
FAKI lAmb lAmb 20 15 39.3
comp=Z,12nm,1.0s
SIJI Sorong 53.02 289 P P 20 15 43.4 -0.6
comp=Z,28nm,0.7s,baz=130,slow=5.0,SNR=18
SOEI Soe 55.27 275 P P 20 16 00.9 +0.8
BATI Baumata 55.64 274 P P 20 16 03.7 +1.1
comp=Z,14nm,0.5s,baz=154,slow=4.9,SNR=5.1
MORW Morawa 56.95 250 P P 20 16 11.3 -0.1
QSPA South Pole Qui 65.43 180 P P 20 17 08.1 +1.5
comp=Z,1.6nm,0.7s,baz=352,slow=1.2,SNR=7.9
QSPA South Pole Qui 65.43 180 P P 20 17 08.7 +2.0
KKM Kota Kinabalu 69.47 287 P P 20 17 32.1 -0.2
KKM lAmb lAmb 20 17 35.0
comp=Z,9.7nm,0.9s
KSM Kuching 72.59 280 P P 20 17 50.6 0.0
KSM lAmb lAmb 20 17 51.3
comp=Z,9.1nm,0.7s
MJAR Matsushiro Arr 72.72 326 P P 20 17 49.6 -1.3
comp=Z,1.7nm,0.8s,baz=155,slow=6.5,SNR=12
CMAR Chiang Mai Arr 90.13 290 P P 20 19 22.3 +1.4
comp=Z,0.5nm,0.8s,baz=147,slow=4.1,SNR=5.9
TXAR Lajitas Array 90.53 58 P P 20 19 23.1 +0.4
comp=Z,0.3nm,0.8s,baz=224,slow=5.2,SNR=4.4
FINES FINESS Array B 139.28 341 PKP **PKiKP** 20 25 45.0 -0.8
comp=Z,1.0nm,0.9s,baz=64,slow=4.4,SNR=2.8
HFS Hagfors 143.36 349 PKhKP PKPpre 20 25 47.6
comp=Z,1.0nm,0.4s,baz=67,slow=3.9,SNR=12
AKASG Malin Array Be 145.80 327 PKPbc **PKPdf** 20 25 54.6 -0.6
comp=Z,1.3nm,0.5s,baz=45,slow=4.2,SNR=6.7
BRTR Keskin Array B 148.32 306 PKPbc **PKPbc** 20 26 03.2 -0.8
comp=Z,0.4nm,0.6s,baz=141,slow=4.8,SNR=2.2
MMAI Mount Meron Ar 148.34 293 PKPbc **PKiKP** 20 26 05.1 -0.4
comp=Z,1.4nm,0.4s,baz=83,slow=6.8,SNR=9.1

IDC ***31*** *20:07:07.6±0.6,9.30N×126.46E,h0km,mb4.1/26, mb1 4.2/26,mb1mx4.0/61,mbtmp4.1/26,Error ellipse: s-maj=24.1km s-min=12.5km az=83.0*
NEIC ***31*** *20:07:08.9±1.3,9.35N±0.07×126.6E±0.1,h10km±1km, mb4.6/43,Error ellipse: s-maj=19.4km s-min=12.1km az=279.0*
MAN ***31*** *20:07:10.8,9.49N×126.92E,h20km,mb4.3,ML3.1,MS2.9*
ISC 31 20:07:13.3±0.4,9.40N±0.04×126.77E±0.07,h41km,n105, σ1§87/103,mb4.4/44,5C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.27**	**198**	⇑*e*P		Pn		20 07 42.1	+7.4
BIPH				*e*S		**Sn**		**20 07 57.2**	**+6.6**
SCPH	**Surigao**	**1.32**	**287**	⇓*e*P		**Pn**		**20 07 34.8**	**-0.4**
SCPH				*e*S		**Sn**		**20 07 54.1**	**+2.6**
MSLP	**Maasin**	**2.02**	**291**	*e*P		**Pn**		**20 07 46.2**	**+1.4**
MSLP				*e*S		**Sn**		**20 08 14.0**	**+5.2**
BUKP	**Musuan**	**2.27**	**228**	*e*P		**Pn**		**20 07 48.2**	**-0.1**
BUKP				*e*S		**Sn**		**20 08 19.8**	**+4.7**
DAV	**Davao City (W)**	**2.60**	**207**	Pn		Pn		20 07 58.7	+5.8
	78nm,0.3s,baz=75,slow=4.0,SNR=2.4								
DAV	**Davao City (W)**	**2.60**	**207**			**Pn**		**20 07 51.5**	**-1.4**
DMPH	**Davao City--Mi**	**2.62**	**209**	⇑*e*P		**Pn**		**20 07 56.5**	**+3.4**
DMPH				*e*S		**Sn**		**20 08 28.6**	**+4.8**
KCP	**Kidapawan**	**2.90**	**215**	⇑*e*P		**Pn**		**20 07 58.9**	**+1.8**
KCP				*i* S		**Sn**		**20 08 35.6**	**+4.8**
LLP	**Lapu-Lapu**	**2.91**	**288**	*e*P		**Pn**		**20 07 58.4**	**+1.3**
LLP				*e*S		**Sn**		**20 08 35.6**	**+4.8**
CNP	**Catarman**	**3.72**	**326**	*e*P		**Pn**		**20 08 08.7**	**+0.5**
CNP				*e*S		**Sn**		**20 08 52.3**	**+1.6**
GSPH	**General Santos**	**3.75**	**209**	⇑*i*P		Pn		20 08 14.8	+5.9
RCP	**Roxas**	**4.50**	**299**	⇑*e*P		**Pn**		**20 08 20.6**	**+1.7**
LQP	**Lukban**	**6.94**	**313**	*e*P		**Pn**		**20 08 51.6**	**-1.1**
TGY	**Tagaytay City**	**7.38**	**310**	Pn		Pn		20 09 06.0	+7.4
	70nm,0.3s,baz=287,slow=4.8,SNR=5.4								
TNTI	**Ternate**	**8.59**	**176**	Pn		**Pn**		**20 09 12.8**	**-2.4**
LUWI	**Luwuk**	**11.11**	**201**	Pn		**Pn**		**20 09 47.2**	**-2.5**
SIJI	**Sorong**	**11.14**	**156**	Pn		**Pn**		**20 09 52.4**	**+2.2**
	1.0nm,0.3s,baz=335,slow=23,SNR=5.0								
TPUB	**Ta-pu**	**15.02**	**338**			**P**		**20 10 46.9**	**-0.7**
SBUM	**Sibu**	**16.03**	**245**	P		**Pn**		**20 10 56.8**	**+0.8**
KSM	**Kuching**	**18.17**	**245**	P		**P**		**20 11 19.3**	**-3.3**
MMRI	**Maumere**	**18.48**	**194**	P		**P**		**20 11 21.5**	**-4.5**
MMRI				lAmb		lAmb		20 11 34.2

comp=Z,1.4nm,0.6s,baz=347,slow=9.2,SNR=6.7
WB2 Warramunga Arr 30.10 166 P **P** 20 13 18.8 -0.4
WB2 IAmb IAmb 20 13 29.9
comp=Z,8.1nm,1.2s
GSI Gunungsitoli 30.13 256 P **P** 20 13 18.9 -0.6
BJT Baijiatuau 31.92 345 P **P** 20 13 34.7 -0.3
BJT IAmb IAmb 20 13 39.1
comp=Z,12nm,1.4s
AS31 Alice Springs 33.60 168 P **P** 20 13 49.1 -0.8
ASAR Alice Springs 33.60 168 P **P** 20 13 48.9 -1.0
comp=Z,0.7nm,0.4s,baz=349,slow=7.1,SNR=17
SHL Shillong 36.80 300 P **P** 20 14 15.5 -2.2
SHL IAmb IAmb 20 14 28.9
comp=Z,11nm,1.0s
LSA Lhasa 38.93 306 P **P** 20 14 35.4 -0.6
MORW Morawa 39.62 195 P **P** 20 14 40.5 -0.6
MORW IAmb IAmb 20 14 45.2
comp=Z,14nm,1.1s
H11S3 WAKE ISLAND Hy 39.70 72 T T 20 57 41.4
baz=262,slow=75,SNR=11
H11S1 WAKE ISLAND Hy 39.72 72 T T 20 57 42.5
baz=262,slow=75,SNR=7.9
H11S2 WAKE ISLAND Hy 39.72 72 T T 20 57 42.8
baz=262,slow=75,SNR=12
KLR Kul'dur 39.92 5 P **P** 20 14 45.3 +1.9
comp=Z,0.9nm,0.4s,baz=163,slow=5.2,SNR=4.1
FORT Forrest 39.97 178 P **P** 20 14 43.1 -0.8
H11N1 WAKE ISLAND Hy 40.07 71 T T 20 58 14.8
baz=264,slow=74,SNR=15
H11N2 WAKE ISLAND Hy 40.08 71 T T 20 58 17.7
baz=264,slow=74,SNR=12
H11N3 WAKE ISLAND Hy 40.09 71 T T 20 58 16.0
baz=264,slow=74,SNR=16
ODAN Odare 41.03 300 *eP* **P** 20 14 52.1 -1.1
comp=Z,18nm,0.6s
RAMN Ramite 41.73 300 *eP* **P** 20 14 58.1 -0.9
comp=Z,10nm,0.6s
ULN Ulaanbaatar 41.80 340 P **P** 20 14 59.2 +0.1
JIRN Jiri 42.29 301 *eP* **P** 20 15 02.7 -1.0
comp=Z,27nm,0.6s
GUN Gumba 42.63 301 *eP* **P** 20 15 05.3 -1.1
comp=Z,21nm,0.8s
BBOO Buckleboo 42.90 168 P **P** 20 15 07.4 -0.6
BBOO IAmb IAmb 20 15 19.0
comp=Z,8.3nm,0.8s
PKI Pulchoki 42.93 301 *eP* **P** 20 15 07.2 -1.6
PKIN Phulchoki 42.94 301 *eP* **P** 20 15 07.2 -1.6
comp=Z,5.2nm,0.5s
NWAO Narrogin (SRO) 43.06 192 P **P** 20 15 09.1 -0.2
comp=Z,19nm,0.3s,baz=44,slow=6.7,SNR=6.1
NWAO Narrogin (SRO) 43.06 192 P **P** 20 15 07.9 -1.4
STKA Stephens Creek 43.43 162 P **P** 20 15 12.2 0.0
KOLN Koldanda 44.52 300 *eP* **P** 20 15 20.3 -1.2
comp=Z,15nm,0.6s
DANN Dangsing 44.55 301 *eP* **P** 20 15 20.4 -1.4
comp=Z,14nm,0.5s
PYUN Piuthan 45.13 300 *eP* **P** 20 15 25.3 -1.0
comp=Z,15nm,0.4s
PETK Petropavlovsk- 50.23 24 P **P** 20 16 07.8 +2.6
comp=Z,1.2nm,0.7s,baz=220,slow=11,SNR=2.3
MK31 Makanchi Array 53.01 323 P **P** 20 16 25.5 -0.6
MKAR Makanchi Array 53.01 323 P **P** 20 16 25.8 -0.4
comp=Z,2.4nm,0.7s,baz=125,slow=8.4,SNR=17
MAKZ Makanchi 53.20 323 P **P** 20 16 26.7 -0.9
KDJ Kajisay 54.25 316 P **P** 20 16 35.2 -0.2
NIL Nilore 54.62 305 P **P** 20 16 37.4 -0.8
ZALV Zalesovo Beam 55.62 331 P **P** 20 16 44.0 -0.9
comp=Z,0.7nm,0.4s,baz=115,slow=6.5,SNR=4.2
AAK Ala-Archa 56.28 315 P **P** 20 16 49.8 -0.3
comp=Z,0.9nm,0.3s,baz=152,slow=13,SNR=3.9
AAK Ala-Archa 56.28 315 P **P** 20 16 48.7 -1.4
KURK Kurchatov 57.06 326 P **P** 20 16 54.8 -0.4
KURK IAmb IAmb 20 17 08.9
comp=Z,7.1nm,1.1s
KURBB Kurchatov Arra 57.06 326 P **P** 20 16 54.8 -0.5
comp=Z,2.2nm,0.7s,baz=124,slow=7.0,SNR=19
BTK Batken 58.12 312 P **P** 20 17 02.3 -0.7
BTK IAmb IAmb 20 17 08.3
comp=Z,5.1nm,1.1s
GAR Garm 58.22 310 P **P** 20 17 02.5 -1.3
KBL Kabul 58.23 305 P **P** 20 17 02.1 -1.9
KBL IAmb IAmb 20 17 06.4
comp=Z,3.9nm,0.5s
CHGR Chuyangaron 59.02 310 P **P** 20 17 08.4 -0.9
KK31 Karatay Array 59.21 315 P **P** 20 17 09.9 -0.6
KK31 IAmb IAmb 20 17 10.2
comp=Z,2.4nm,0.8s
TIXI Tiksi 62.21 1 P **P** 20 17 31.7 +1.4
comp=Z,2.0nm,0.5s,baz=212,slow=4.5,SNR=11
TIXI Tiksi 62.21 1 P **P** 20 17 31.3 +1.0
TIXI IAmb IAmb 20 17 34.1
comp=Z,6.1nm,1.3s
BVAR Borovoye Array 62.65 326 P **P** 20 17 33.5 -0.1
comp=Z,2.2nm,0.8s,baz=116,slow=8.9,SNR=17
BRVK Borovoye 62.73 326 P **P** 20 17 33.9 -0.2
BRVK IAmb IAmb 20 17 45.9
comp=Z,4.0nm,0.8s
HRA Herat 63.75 304 P **P** 20 17 40.9 -0.6
HRA IAmb IAmb 20 17 42.9
comp=Z,2.2nm,0.6s
NRIK Noril'sk 64.97 346 P **P** 20 17 49.8 +1.2
comp=Z,2.5nm,0.6s,baz=153,slow=3.9,SNR=4.2
AKTO Aktyubinsk 69.30 320 P **P** 20 18 16.0 -0.4
comp=Z,0.9nm,0.6s,baz=79,slow=8.7,SNR=3.6
ARU Arti 70.22 327 P **P** 20 18 21.0 -0.9
comp=Z,1.0nm,0.4s,baz=94,slow=5.4,SNR=8.7
ARU Arti 70.22 327 P **P** 20 18 21.1 -0.8
CASY Casey 76.42 187 P **P** 20 18 57.6 -0.6
CASY IAmb IAmb 20 19 10.6
comp=Z,3.8nm,0.8s
RAYN Ar Rayn 78.35 292 P **P** 20 19 09.0 -1.0
ILAR Eielson Array 80.00 26 P **P** 20 19 19.1 +0.9
comp=Z,0.2nm,0.5s,baz=8.1,slow=39,SNR=2.5
KLMR Klimovskoe 80.52 330 *e* **P** 20 19 19.8 -1.2
KLMR AMP 20 19 23.1
comp=Z,17nm,1.5s
SPITS Spitsbergen Ar 84.96 349 P **P** 20 19 43.3 -0.5
comp=Z,2.1nm,0.6s,baz=103,slow=2.7,SNR=5.0
ARCES ARCESS Array B 85.17 340 P **P** 20 19 44.4 -0.6
comp=Z,1.1nm,0.5s,baz=80,slow=6.3,SNR=14
FIA1 FINESS Array S 86.88 332 P **P** 20 19 53.9 +0.4
FIA1 IAmb IAmb 20 20 06.1
comp=Z,3.8nm,0.9s
FINES FINESS Array B 86.88 332 P **P** 20 19 54.5 +0.9
comp=Z,0.5nm,0.3s,baz=73,slow=4.7,SNR=12
VNDA Vanda 89.01 173 P **P** 20 20 03.4 +0.1
comp=Z,0.6nm,0.6s,baz=333,slow=15,SNR=2.0
VNDA Vanda 89.01 173 P **P** 20 20 03.0 -0.3
VNDA IAmb IAmb 20 20 12.3
comp=Z,2.8nm,1.2s
HFS Hagfors 93.04 333 P **P** 20 20 22.5 0.0
comp=Z,0.8nm,0.7s,baz=61,slow=12,SNR=1.6
YKA Yellowknife Ar 94.34 24 P **P** 20 20 30.1 +1.8
comp=Z,0.4nm,0.6s,baz=297,slow=4.4,SNR=4.4
TORD Torodi Ar. Bea 121.04 291 PKP **PKPdf** 20 26 01.8 -0.7
comp=Z,0.5nm,0.8s,baz=227,slow=49,SNR=2.9

*PRU **31** 20:07:17.9±0.0,5, 50.2°E×12.8°N, 48 km, 2 h, West Bohemia Swarm*
WBNET 31 20:07:17.4,50.24°N×12.44°E,h8km,MI1.3,6C-4D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NKC	**Novy Kostel**	**0.01**	**131**	*e*	PG	Pg	20 07 18.7	-0.2
NKC				*e*	SG	Sg	20 07 19.8	-0.2
	comp=Z,113nm,0.3s							
NKC	**Novy Kostel**	**0.01**	**131**	↑	P	Pg	20 07 19.0	+0.1
NKC					S	Sg	20 07 20.1	+0.1
LBCW	**Luby**	**0.03**	**327**	↓	P	Pg	20 07 19.2	+0.1
LBCW					S	Sg	20 07 20.5	+0.2
VAC	**Vackov**	**0.04**	**268**	↓	P	Pg	20 07 19.2	+0.1
VAC					S	Sg	20 07 20.4	+0.1
STCW	**Studenec**	**0.06**	**66**	↑	P	Pg	20 07 19.3	0.0
STCW					S	Sg	20 07 20.5	-0.2
KVC	**Kvetna**	**0.06**	**123**	↓	P	Pg	20 07 19.2	0.0
KVC					S	Sg	20 07 20.4	-0.2
POCW	**Potky**	**0.08**	**354**	↑	P	Pg	20 07 19.8	+0.2
POCW					S	Sg	20 07 21.4	+0.1
SKC	**Skalna**	**0.09**	**217**	↑	P	Pg	20 07 19.7	+0.1
SKC					S	Sg	20 07 21.2	0.0
KACW	**Kaceov**	**0.11**	**152**	↓	P	Pg	20 07 20.0	+0.1
KACW					S	Sg	20 07 21.7	+0.1
KRCW	**Kraslice**	**0.11**	**31**	↑	P	Pg	20 07 20.1	+0.1
KRCW					S	Sg	20 07 21.9	0.0
ZHC	**Zelena Hora**	**0.19**	**207**	↑	P	Pg	20 07 21.3	+0.1
ZHC					S	Sg	20 07 23.9	0.0
CLL	**Collm**	**1.13**	**18**	*i*	Pg	Pn	20 07 39.6	+0.1
CLL				*i*			20 07 41.4	
CLL				*i*			20 07 42.5	
CLL				*i*	Sg	Sb	20 07 54.5	+0.5
	comp=Z,3.0nm,0.5s							
PBCC	**Pribram**	**1.15**	**118**	*e*	PG	Pg	20 07 38.7	-0.7
PBCC				*e*	SG	Sg	20 07 54.0	-0.2
	comp=Z,1.3nm,0.5s							
KHC	**Kasperske Hory**	**1.33**	**146**	*e*	P	Pg	20 07 42.5	-0.4
KHC				*e*		Sg	20 07 59.7	-0.5
KHC	**Kasperske Hory**	**1.33**	**146**	*e*	PG	Pb	20 07 42.5	-0.1
KHC				*e*	SG	Sb	20 07 59.7	-0.1
	comp=Z,2.0nm,0.3s							
PRU	**Pruhonice**	**1.38**	**100**	*e*	P	Pg	20 07 42.4	-1.4
PRU				*e*		Sb	20 08 01.2	+0.2
PRU	**Pruhonice**	**1.38**	**100**	*e*	PG	Pn	20 07 42.4	-0.5
PRU				*e*	SG	Sn	20 08 01.2	0.0
	comp=Z,2.3nm,0.5s							
GOPC	**GO Pecny, Ondr**	**1.55**	**101**	*e*	SG	Sb	20 08 05.9	-0.1
	comp=Z,1.6nm,0.2s							

*IDC **31** 20:11:49.6±1.7, 9.64°N×127.53°E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/59, mbtmp3.6/5, ML4.4/1, Error ellipse: s-maj=65.6km s-min=23.7km az=73.0*
*NEIC **31** 20:11:51.9±0.9, 9.5°N±0.1°×127.2°E±0.2, h10km±1km, mb4.3/10, Error ellipse: s-maj=28.8km s-min=15.4km az=113.0*
*MAN **31** 20:11:56.7, 9.26°N×126.54°E, h1km, mb4.2, ML3.0, MS2.7*
ISC 31 20:11:56.8±1.0, 9°46N±0.07°×126°9E±0.1, h41km, n20, σ1s55/24, mb4.0/10, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SCPH	**Surigao**	**1.41**	**283**	↓	*e*P	**Pn**	**20 12 19.1**	**-0.9**
SCPH					*e*S	**Sn**	**20 12 37.0**	**-0.4**
DAV	**Davao City (W)**	**2.70**	**209**		Pn	**Pn**	**20 12 41.3**	**+3.5**
	40nm,0.3s,baz=129,slow=15,SNR=1.3							
DAV					Sn	**Sn**	**20 13 10.0**	**+0.7**
	149nm,0.3s,baz=49,slow=3.9,SNR=3.4							
DAV	**Davao City (W)**	**2.70**	**209**			**Pn**	**20 12 38.0**	**+0.2**
DAV					Sn	**Sn**	**20 13 12.6**	**+3.3**
DMPH	**Davao City--Mi**	**2.73**	**210**	*e*	P	**Pn**	**20 12 38.1**	**0.0**
DMPH				*e*	S	**Sn**	**20 13 08.2**	**-1.7**
CTBH	**Cotabato--PC H**	**3.43**	**230**	↑	*i*P	**Pn**	**20 12 46.5**	**-1.2**
RCP	**Roxas**	**4.57**	**297**	↑	*e*P	**Pn**	**20 13 05.9**	**+2.4**
KNRA	**Kununurra**	**25.05**	**176**		P	**P**	**20 17 16.6**	**-0.7**
KNRA					IAmb	IAmb	20 17 35.0	
	comp=Z,14nm,1.1s							
FITZ	**Fitzroy Crossi**	**27.41**	**183**		P	**P**	**20 17 38.3**	**-0.4**
FITZ					IAmb	IAmb	20 17 46.4	
	comp=Z,8.9nm,1.2s							
WB0	**Warramunga Arr**	**29.97**	**166**		P	**P**	**20 17 59.9**	**-1.6**
WB0					IAmb	IAmb	20 18 07.6	
	comp=Z,5.5nm,1.4s							
WRA	**Warramunga Arr**	**30.13**	**166**		P	**P**	**20 18 01.0**	**-1.9**
	comp=Z,0.4nm,0.6s,baz=349,slow=9.0,SNR=2.3							
AS31	**Alice Springs**	**33.63**	**168**		P	**P**	**20 18 32.9**	**-0.7**
ASAR	**Alice Springs**	**33.63**	**168**		P	**P**	**20 18 32.9**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=350,slow=6.9,SNR=5.0							
FORT	**Forrest**	**40.03**	**178**		P	**P**	**20 19 27.3**	**-0.6**
FORT					IAmb	IAmb	20 19 41.6	
	comp=Z,15nm,1.1s							
BBOO	**Buckleboo**	**42.94**	**169**		P	**P**	**20 19 51.1**	**-0.7**
NWAO	**Narrogin (SRO)**	**43.14**	**192**		P	**P**	**20 19 52.7**	**-0.7**
MK31	**Makanchi Array**	**53.03**	**323**		P	**P**	**20 21 10.8**	**+1.0**
MKAR	**Makanchi Array**	**53.03**	**323**		P	**P**	**20 21 09.7**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=120,slow=7.2,SNR=3.6							
KURBB	**Kurchatov Arra**	**57.08**	**325**		P	**P**	**20 21 39.5**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=124,slow=6.1,SNR=4.1							
RAYN	**Ar Rayn**	**78.43**	**292**		P	**P**	**20 23 53.0**	**-0.9**
RAYN					IAmb	IAmb	20 23 55.1	
	comp=Z,1.8nm,1.0s							
MAW	**Mawson**	**89.15**	**200**		P	**P**	**20 24 49.6**	**+2.0**
MAW					IAmb	IAmb	20 24 51.7	
	comp=Z,0.9nm,1.2s							

IDC 31 20:22:21.6±1.2, 19.43°N×144.65°E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.6/49, mbtmp3.8/9, Error ellipse: s-maj=45.1km s-min=28.6km az=63.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSRS	**Korea Array**	**23.14**	**324**		P	P	20 27 29.9	+0.5
	1.0nm,0.8s,baz=150,slow=8.9,SNR=5.5							
STKA	**Stephens Creek**	**51.10**	**183**		P	P	20 31 25.9	-0.1
	0.4nm,0.3s,baz=338,slow=12,SNR=3.5							
ZALV	**Zalesovo Beam**	**56.83**	**322**		P	P	20 32 07.4	-0.4
	0.2nm,0.3s,baz=207,slow=32,SNR=2.0							
MKAR	**Makanchi Array**	**57.24**	**314**		P	P	20 32 11.9	+1.1
	0.3nm,0.6s,baz=94,slow=7.8,SNR=3.5							
KURBB	**Kurchatov Arra**	**60.11**	**318**		P	P	20 32 31.0	+0.3
	1.0nm,0.5s,baz=94,slow=7.7,SNR=8.2							
YKA	**Yellowknife Ar**	**77.81**	**28**		P	P	20 34 21.0	+0.4
	0.5nm,0.6s,baz=287,slow=5.6,SNR=4.8							
ARCES	**ARCESS Array B**	**81.49**	**342**		P	P	20 34 40.0	-0.5
	1.2nm,0.8s,baz=67,slow=9.3,SNR=5.6							
FINES	**FINESS Array B**	**85.80**	**335**		P	P	20 35 01.1	-1.6
	0.4nm,0.4s,baz=71,slow=5.6,SNR=9.2							
TXAR	**Lajitas Array**	**98.24**	**55**		P	Pdif	20 36 02.1	+0.6
	0.1nm,0.5s,baz=310,slow=3.4,SNR=2.5							

*IDC **31** 20:23:33.5±0.7, 9.34°N×126.83°E, h0km, mb4.1/13, mb1 4.3/14, mb1mx3.9/44, mbtmp4.2/14, ML5.2/1, Error ellipse: s-maj=31.0km s-min=13.9km az=72.0*
*NEIC **31** 20:23:35.1±1.3, 9.43°N±0.07°×126.8°E±0.1, h10km±1km, mb4.5/27, Error ellipse: s-maj=17.7km s-min=11.3km az=83.0*
*MAN **31** 20:23:35.9, 9.37°N×127.10°E, h32km, mb5.0, ML3.9, MS4.0*
ISC 31 20:23:40.4±1.3, 9°37N±0.05°×126°89E±0.09, h53km±12km, n64, σ1s29/67, mb4.3/25, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BIPH	**Bislig**	**1.29**	**204**	↑	*e*P	Pn	20 24 08.8	+6.7
BIPH					*e*S	**Sn**	**20 24 22.9**	**+4.5**
MSLP	**Maasin**	**2.14**	**291**		*e*P	**Pn**	**20 24 12.3**	**-1.3**
MSLP					*e*S	**Sn**	**20 24 40.5**	**+1.5**
BUKP	**Musuan**	**2.34**	**231**		*e*P	**Pn**	**20 24 15.0**	**-1.4**
BUKP					*e*S	**Sn**	**20 24 45.0**	**+1.0**
MATI	**Mati**	**2.49**	**195**		*e*P	**Pn**	**20 24 15.7**	**-2.8**
MATI					*e*S	**Sn**	**20 24 45.1**	**-2.6**
DAV	**Davao City (W)**	**2.63**	**210**		Pn	**Pn**	**20 24 20.8**	**+0.4**
	93nm,0.3s,baz=82,slow=14,SNR=10							
DAV					Sn	**Sn**	**20 24 50.7**	**-0.4**
	62nm,0.3s,baz=238,slow=22,SNR=1.5							
DAV	**Davao City (W)**	**2.63**	**210**			**Pn**	**20 24 19.8**	**-0.6**
DAV					Sn	**Sn**	**20 24 50.3**	**-0.8**
DMPH	**Davao City--Mi**	**2.65**	**211**	↑	*e*P	**Pn**	**20 24 21.3**	**+0.6**
DMPH					*e*S	**Sn**	**20 24 53.4**	**+1.7**
KCP	**Kidapawan**	**2.95**	**217**	↓	*e*P	**Pn**	**20 24 23.7**	**-1.1**
KCP					*i* S	**Sn**	**20 25 03.6**	**+4.6**
LLP	**Lapu-Lapu**	**3.03**	**288**		*e*P	**Pn**	**20 24 25.2**	**-0.6**
GSPH	**General Santos**	**3.79**	**211**	↑	*i*P	**Pn**	**20 24 38.0**	**+1.6**
CNP	**Catarman**	**3.81**	**325**		*e*P	**Pn**	**20 24 36.1**	**-0.3**
CNP					*e*S	**Sn**	**20 25 20.3**	**+0.3**
RCP	**Roxas**	**4.62**	**298**	↓	*e*P	**Pn**	**20 24 48.6**	**+1.0**
LQP	**Lukban**	**7.04**	**312**		*e*P	**Pn**	**20 25 21.5**	**+0.4**
TNTI	**Ternate**	**8.56**	**177**		Pn	**Pn**	**20 25 40.5**	**-1.2**
SZP	**Santa**	**10.25**	**323**		Pn	**Pn**	**20 26 02.9**	**-2.0**
SIJI	**Sorong**	**11.07**	**157**		Pn	**Pn**	**20 26 17.5**	**+1.4**
	1.3nm,0.3s,baz=341,slow=21,SNR=8.4							
FAKI	**Fak Fak**	**13.33**	**156**		Pn	**Pn**	**20 26 47.2**	**+0.2**
SBUM	**Sibu**	**16.12**	**246**			**P**	**20 27 25.9**	**-0.2**
KSM	**Kuching**	**18.26**	**246**		P	**Pn**	**20 27 50.8**	**+0.7**
MMRI	**Maumere**	**18.48**	**195**		P	**P**	**20 27 50.6**	**-1.5**
MMRI					IAmb	IAmb	20 28 07.2	
	comp=Z,23nm,0.9s							
SOEI	**Soe**	**19.18**	**188**			**P**	**20 27 59.5**	**-0.5**
SOEI					IAmb	IAmb	20 28 08.8	
	comp=Z,21nm,0.8s							
BATI	**Baumata**	**19.71**	**189**		P	**Pn**	**20 28 06.2**	**-1.3**
	comp=Z,7.2nm,0.3s,baz=359,slow=3.8,SNR=13							
MTN	**Manton Dam**	**22.47**	**169**		P	**P**	**20 28 36.0**	**+0.7**
MTN					IAmb	IAmb	20 28 38.8	
	comp=Z,18nm,1.0s							
KNRA	**Kununurra**	**24.96**	**176**		P	**P**	**20 28 59.1**	**0.0**
FITZ	**Fitzroy Crossi**	**27.32**	**183**		P	**P**	**20 29 20.0**	**-0.4**
	comp=Z,13nm,0.8s,baz=3.9,slow=9.7,SNR=19							
FITZ	**Fitzroy Crossi**	**27.32**	**183**		P	**P**	**20 29 19.5**	**-0.9**
FITZ					IAmb	IAmb	20 29 24.5	
	comp=Z,14nm,0.8s							
PSI	**Prapat**	**28.55**	**259**		P	**P**	**20 29 31.3**	**-0.3**
	comp=Z,6.2nm,0.8s,baz=3.2,slow=1.6,SNR=5.8							
CMAR	**Chiang Mai Arr**	**28.55**	**291**		P	**P**	**20 29 30.4**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=104,slow=8.1,SNR=5.0							
RPSI	**Rantau Prapat**	**28.57**	**258**		P	**P**	**20 29 31.1**	**-0.6**
RPSI					IAmb	IAmb	20 29 33.5	
	comp=Z,7.0nm,0.9s							
WB0	**Warramunga Arr**	**29.89**	**166**		P	**P**	**20 29 42.3**	**-0.9**
WB0					IAmb	IAmb	20 29 43.0	
	comp=Z,4.7nm,1.1s							
WRA	**Warramunga Arr**	**30.04**	**166**		P	**P**	**20 29 43.2**	**-1.4**
	comp=Z,1.8nm,0.7s,baz=346,slow=9.4,SNR=9.4							
WB2	**Warramunga Arr**	**30.05**	**166**		P	**P**	**20 29 43.9**	**-0.7**
WB2					IAmb	IAmb	20 29 56.0	
	comp=Z,4.1nm,0.8s							
GSI	**Gunungsitoli**	**30.24**	**256**		P	**P**	**20 29 45.3**	**-1.2**
AS31	**Alice Springs**	**33.55**	**168**		P	**P**	**20 30 14.9**	**-0.4**
ASAR	**Alice Springs**	**33.55**	**168**		P	**P**	**20 30 14.4**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=352,slow=7.0,SNR=28							
ASAR					PcP	**PcP**	**20 32 55.9**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=341,slow=2.6,SNR=5.4							
SHL	**Shillong**	**36.91**	**300**		P	**P**	**20 30 43.7**	**-0.9**
SHL					IAmb	IAmb	20 30 45.6	
	comp=Z,5.3nm,0.8s							
H11S3	**WAKE ISLAND Hy**	**39.60**	**72**		T	T	21 14 18.6	
	baz=262,slow=75,SNR=10							
H11S1	**WAKE ISLAND Hy**	**39.62**	**72**		T	T	21 14 09.5	
	baz=262,slow=75,SNR=5.4							
H11S2	**WAKE ISLAND Hy**	**39.62**	**72**		T	T	21 14 09.8	
	baz=262,slow=75,SNR=8.3							
MORW	**Morawa**	**39.62**	**195**		P	**P**	**20 31 07.1**	**0.0**
MORW					IAmb	IAmb	20 31 08.1	
	comp=Z,7.2nm,0.8s							
FORT	**Forrest**	**39.94**	**178**		P	**P**	**20 31 09.7**	**+0.1**
H11N1	**WAKE ISLAND Hy**	**39.97**	**71**		T	T	21 14 44.6	
	baz=262,slow=74,SNR=7.6							
H11N2	**WAKE ISLAND Hy**	**39.98**	**71**		T	T	21 14 43.8	
H11N3	**WAKE ISLAND Hy**	**39.99**	**71**		T	T	21 14 44.9	
	baz=251,slow=74,SNR=7.4							
BBOO	**Buckleboo**	**42.85**	**169**		P	**P**	**20 31 34.0**	**+0.6**
BBOO					IAmb	IAmb	20 31 35.4	
	comp=Z,13nm,1.0s							
NWAO	**Narrogin (SRO)**	**43.06**	**192**		P	**P**	**20 31 35.6**	**+0.5**
STKA	**Stephens Creek**	**43.37**	**162**		P	**P**	**20 31 37.9**	**+0.2**
	comp=Z,3.7nm,1.1s,baz=354,slow=6.9,SNR=5.2							
MK31	**Makanchi Array**	**53.10**	**323**		P	**P**	**20 32 52.4**	**-0.3**
MKAR	**Makanchi Array**	**53.10**	**323**		P	**P**	**20 32 53.2**	**+0.5**
	comp=Z,2.1nm,0.7s,baz=124,slow=8.0,SNR=22							
NIL	**Nilore**	**54.74**	**305**		P	**P**	**20 33 04.4**	**-0.4**
ZAA0	**Zalesovo Array**	**55.70**	**331**		P	**P**	**20 33 10.9**	**-0.3**
ZALV	**Zalesovo Beam**	**55.70**	**331**		P	**P**	**20 33 11.1**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=103,slow=9.7,SNR=4.7							
KURK	**Kurchatov**	**57.15**	**326**		P	**P**	**20 33 21.7**	**+0.1**
KURK					IAmb	IAmb	20 33 25.0	
	comp=Z,5.6nm,0.9s							
KURBB	**Kurchatov Arra**	**57.15**	**325**		P	**P**	**20 33 21.4**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=130,slow=6.7,SNR=14							
GAR	**Garm**	**58.33**	**310**		P	**P**	**20 33 30.3**	**-0.1**
GAR					IAmb	IAmb	20 33 41.5	
	comp=Z,7.3nm,0.9s							
KK31	**Karatay Array**	**59.31**	**315**		P	**P**	**20 33 36.6**	**-0.4**
BRVK	**Borovoye**	**62.81**	**325**		P	**P**	**20 34 00.9**	**+0.4**
BRVK					IAmb	IAmb	20 34 02.0	
	comp=Z,3.8nm,0.8s							
ARU	**Arti**	**70.30**	**327**		P	**P**	**20 34 48.3**	**+0.1**
ARU					IAmb	IAmb	20 35 00.8	
	comp=Z,2.3nm,0.7s							
RAYN	**Ar Rayn**	**78.47**	**292**		P	**P**	**20 35 36.0**	**-0.4**
RAYN					IAmb	IAmb	20 35 36.6	
	comp=Z,2.8nm,0.7s							
ILAR	**Eielson Array**	**79.98**	**26**		P	**P**	**20 35 44.4**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=258,slow=4.5,SNR=2.0							
ARCES	**ARCESS Array B**	**85.24**	**340**		P	**P**	**20 36 12.3**	**+1.3**
	comp=Z,1.4nm,0.7s,baz=82,slow=6.5,SNR=7.7							
FIA1	**FINESS Array S**	**86.96**	**332**		P	**P**	**20 36 20.4**	**+0.7**
FINES	**FINESS Array B**	**86.96**	**332**		P	**P**	**20 36 20.2**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=53,slow=2.7,SNR=5.1							
YKA	**Yellowknife Ar**	**94.32**	**24**		P	**P**	**20 36 56.2**	**+2.2**
	comp=Z,0.2nm,0.5s,baz=297,slow=4.1,SNR=2.6							

*GCG **31** 20:28:46.4±0.3, 15.88°N×91.92°W, h135km±78km, MD3.9*
*MEX **31** 20:28:46.9±0.5, 14.77°N×92.61°W, h167km±9km, MD3.7*
ISC 31 20:28:46.9±1.8, 14.7°N±0.1°×92.7°W±0.1°, h150km, n7, σ0s86/11, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STG3	**Santiaguito 3,**	**1.05**	**91**	*e*	P	**Pn**	**20 29 12.7**	**+0.3**
STG3				*e*	S	**Sn**	**20 29 33.1**	**+1.4**
PCIG		**1.10**	**331**	*i*	P	**Pn**	**20 29 12.8**	**+0.2**
PCIG				*e*	S	**Sn**	**20 29 33.1**	**+0.8**
CCIG	**Comitan**	**1.62**	**18**	*e*	P	**Pn**	**20 29 18.3**	**+0.4**
CCIG				*i*	S	**Sn**	**20 29 40.7**	**-1.0**
FUG	**Fuego 3**	**1.78**	**99**	*e*	S	**Sn**	**20 29 44.0**	**-0.9**
TGIG		**2.08**	**348**	*i*	P	**Pn**	**20 29 23.5**	**+0.5**
IXG	**Ixpaco**	**2.22**	**104**	*e*	P

comp=Z,9.8nm,1.3s
WRA Warramunga Arr 30.01 166 P **P** **20 40 54.1 -1.2**
comp=Z,0.4nm,0.6s,baz=349,slow=9.2,SNR=3.0
WB2 Warramunga Arr 30.01 165 P **P** **20 40 53.5 -1.8**
WB2 IAmb IAmb 20 41 06.9
comp=Z,9.3nm,1.4s
GSI Gunungsitoli 30.03 256 P **P** **20 40 54.8 -0.8**
AS31 Alice Springs 33.51 168 P **P** **20 41 26.1 +0.1**
ASAR Alice Springs 33.51 168 P **P** **20 41 24.4 -1.7**
comp=Z,0.4nm,0.4s,baz=348,slow=7.0,SNR=8.8
USRK Ussuriysk Ar. 35.08 7 P **P** **20 41 38.0 -1.4**
comp=Z,1.8nm,0.6s,baz=149,slow=44,SNR=2.2
SHL Shillong 36.79 301 P **P** **20 41 54.7 +0.1**
SHL IAmb IAmb 20 42 14.0
comp=Z,3.1nm,0.8s
MORW Morawa 39.50 195 P **P** **20 42 17.2 +0.1**
FORT Forrest 39.86 178 P **P** **20 42 19.9 -0.1**
FORT IAmb IAmb 20 42 27.5
comp=Z,12nm,0.9s
KLR Kul'dur 40.03 5 LR LR 20 59 10.4
comp=Z,53nm,19.2s,baz=103,slow=37
H11N1 WAKE ISLAND Hy 40.18 70 T T 21 26 02.8
baz=265,slow=74,SNR=7.9
H11N2 WAKE ISLAND Hy 40.19 70 T T 21 26 01.9
baz=265,slow=74,SNR=5.5
H11N3 WAKE ISLAND Hy 40.20 70 T T 21 26 01.6
baz=265,slow=74,SNR=10
BBOO Buckleboo 42.81 168 P **P** **20 42 44.8 +0.5**
BBOO IAmb IAmb 20 42 55.5
comp=Z,9.2nm,1.2s
NWAO Narrogin (SRO) 42.94 192 P **P** **20 42 45.7 +0.4**
STKA Stephens Creek 43.35 161 P **P** **20 42 48.9 +0.2**
comp=Z,0.8nm,0.5s,baz=96,slow=11,SNR=1.5
STKA Stephens Creek 43.35 161 P **P** **20 42 48.7 0.0**
MK31 Makanchi Array 53.05 323 P **P** **20 44 03.1 -0.4**
MK31 IAmb IAmb 20 44 05.2
comp=Z,2.9nm,1.4s
MKAR Makanchi Array 53.05 323 P **P** **20 44 01.9 -1.7**
comp=Z,0.7nm,0.6s,baz=120,slow=7.4,SNR=8.0
MAKZ Makanchi 53.25 323 P **P** **20 44 03.7 -1.3**
ZALV Zalesovo Beam 55.68 331 P **P** **20 44 19.5 -3.0**
comp=Z,0.3nm,0.3s,baz=134,slow=4.3,SNR=2.1
KURK Kurchatov 57.10 326 P **P** **20 44 31.7 -1.0**
KURK IAmb IAmb 20 44 44.9
comp=Z,5.5nm,1.4s
RAR Rarotonga 78.27 114 LR LR 21 15 51.4
comp=Z,142nm,21.1s,baz=267,slow=31
RAYN Ar Rayn 78.32 292 P **P** **20 46 46.7 -0.5**
RAYN IAmb IAmb 20 46 57.2
comp=Z,2.0nm,0.7s
KVAR Kislovodsk Arr 79.31 313 LR LR 21 24 51.8
comp=Z,61nm,19.1s,baz=284,slow=38
ILAR Eielson Array 80.14 26 P **P** **20 46 57.5 +1.3**
comp=Z,0.4nm,0.7s,baz=170,slow=17,SNR=4.3
ARCES ARCESS Array B 85.25 340 P **P** **20 47 23.0 +0.2**
comp=Z,0.6nm,0.6s,baz=82,slow=6.1,SNR=6.6
FINES FINESS Array B 86.94 332 P **P** **20 47 31.2 -0.1**
comp=Z,0.5nm,0.6s,baz=109,slow=4.6,SNR=5.5
YKA Yellowknife Ar 94.48 24 P **P** **20 48 07.2 +0.8**
comp=Z,0.4nm,0.6s,baz=294,slow=3.8,SNR=4.3
TORD Torodi Ar. Bea 121.01 291 PKP **PKPdf** **20 53 40.0 -0.1**
comp=Z,0.3nm,0.8s,baz=278,slow=31,SNR=2.0

*IDC **31** 20:51:31.1±1.7,9.°28N×126.°44E,h0km,mb3.6/5,*
mb1 3.8/5,mb1mx3.4/50,mbtmp3.6/5,MS3.9/1,Ms1 3.9/1,
ms1mx2.7/48,Error ellipse: s-maj=191.2km s-min=24.1km az=69.0
*NEIC **31** 20:51:32.9±1.1,9.°33N±0.°09×126.°5E±0.°1,h10km±2km,*
mb4.4/12,Error ellipse: s-maj=23.9km s-min=7.3km az=55.0
*MAN **31** 20:51:34.4,9.°43N×126.°90E,h24km,mb4.8,ML3.7,MS3.6*
ISC 31 20:51:33.3±2.0,9.°28N±0.°04×126.°62E±0.°08,h12km±11km,
n28,σ1°22/34,mb4.2/11,1C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SCPH	**Surigao**	**1.22**	**294**	⇓	*eP*	**Pg**	**20 51 57.9**	**+1.0**
SCPH					*eS*	**Sn**	**20 52 15.4**	**+2.7**
MSLP	**Maasin**	**1.94**	**296**		*eP*	**Pg**	**20 52 09.7**	**-0.8**
MSLP					*eS*	**Sg**	**20 52 35.4**	**-0.3**
BUKP	**Musuan**	**2.08**	**228**		*eP*	**Pg**	**20 52 12.5**	**-0.7**
BUKP					*eS*	**Sg**	**20 52 42.2**	**+1.9**
DAV	**Davao City (W)**	**2.43**	**205**			**Pn**	**20 52 12.9**	**+0.1**
KCP	**Kidapawan**	**2.72**	**214**	⇓	*iP*	**Pg**	**20 52 26.3**	**+0.8**
KCP					*i S*	**Sb**	**20 52 57.9**	**+2.6**
LLP	**Lapu-Lapu**	**2.81**	**292**		*eP*	**Pb**	**20 52 22.5**	**-1.1**
LLP					*eS*	**Sb**	**20 52 58.2**	**+0.2**
CTBH	**Cotabato--PC H**	**3.12**	**229**	⇑	*iP*	**Pb**	**20 52 27.2**	**-1.5**
PAGZ	**Pagadian**	**3.51**	**246**		*eP*	**Pb**	**20 52 32.6**	**-2.7**
PAGZ					*eS*	**Sb**	**20 53 16.8**	**-1.1**
CNP	**Catarman**	**3.74**	**329**		*eP*	**Pn**	**20 52 32.5**	**+1.6**
CNP					*eS*	**Sn**	**20 53 15.7**	**+0.8**
RCP	**Roxas**	**4.44**	**301**	⇓	*eP*	**Pb**	**20 52 50.6**	**-0.6**
BATI	**Baumata**	**19.58**	**189**		LR	LR	21 04 07.5	
comp=Z,317nm,19.0s,baz=193,slow=39								
KNRA	**Kunumurra**	**24.89**	**175**		P	**P**	**20 56 56.2**	**0.0**
FITZ	**Fitzroy Crossi**	**27.22**	**182**		P	**P**	**20 57 18.1**	**+0.8**
FITZ					IAmb	IAmb	20 57 32.9	
comp=Z,5.3nm,1.0s								
WB0	**Warramunga Arr**	**29.86**	**165**		P	**P**	**20 57 40.5**	**-0.3**
WB0					IAmb	IAmb	20 57 47.8	
comp=Z,6.0nm,1.2s								
GSI	**Gunungsitoli**	**29.96**	**256**		P	**P**	**20 57 41.7**	**-0.1**
WRA	**Warramunga Arr**	**30.02**	**165**		P	**P**	**20 57 41.9**	**-0.2**
comp=Z,0.3nm,0.6s,baz=347,slow=9.8,SNR=1.8								
WB2	**Warramunga Arr**	**30.02**	**165**		P	**P**	**20 57 42.5**	**+0.3**
WB2					IAmb	IAmb	20 57 50.3	
comp=Z,8.5nm,1.3s								
ASAR	**Alice Springs**	**33.51**	**168**		P	**P**	**20 58 13.1**	**+0.2**
comp=Z,0.3nm,0.7s,baz=346,slow=7.1,SNR=6.0								
MORW	**Morawa**	**39.47**	**195**		P	**P**	**20 59 04.4**	**+0.8**
MORW					IAmb	IAmb	20 59 17.0	
comp=Z,27nm,1.5s								
BBOO	**Buckleboo**	**42.81**	**168**		P	**P**	**20 59 32.0**	**+0.9**
BBOO					IAmb	IAmb	20 59 35.6	
comp=Z,19nm,1.4s								
NWAO	**Narrogin (SRO)**	**42.91**	**192**		P	**P**	**20 59 31.4**	**-0.5**
STKA	**Stephens Creek**	**43.36**	**161**		P	**P**	**20 59 36.4**	**+0.8**
MK31	**Makanchi Array**	**53.02**	**323**		P	**P**	**21 00 49.4**	**-0.8**
MKAR	**Makanchi Array**	**53.02**	**323**		P	**P**	**21 00 48.6**	**-1.6**
comp=Z,0.2nm,0.4s,baz=129,slow=8.9,SNR=4.8								
KURK	**Kurchatov**	**57.08**	**326**		P	**P**	**21 01 18.5**	**-0.9**
RAYN	**Ar Rayn**	**78.26**	**292**		P	**P**	**21 03 32.7**	**-1.1**
RAYN					IAmb	IAmb	21 03 35.1	
comp=Z,1.3nm,0.8s								
ARCES	**ARCESS Array B**	**85.24**	**340**		P	**P**	**21 04 09.4**	**-0.2**
comp=Z,2.0nm,1.1s,baz=64,slow=8.7,SNR=1.8								
FINES	**FINESS Array B**	**86.92**	**332**		P	**P**	**21 04 17.6**	**-0.4**
comp=Z,0.2nm,0.4s,baz=67,slow=6.8,SNR=5.6								

*IDC **31** 20:54:35.5±1.2,9.°45N×127.°09E,h0km,mb4.0/10,*
mb1 4.2/11,mb1mx3.8/53,mbtmp4.1/11,ML4.8/1,MS3.1/1,
Ms1 3.1/1,ms1mx2.6/46,Error ellipse: s-maj=78.2km s-min=14.5km az=74.0
*NEIC **31** 20:54:37.0±1.2,9.°48N±0.°09×127.°1E±0.°2,h10km±1km,*
mb4.3/19,Error ellipse: s-maj=26.0km s-min=14.2km az=107.0
*MAN **31** 20:54:38.0,9.°35N×127.°10E,h66km,mb4.9,ML3.8,MS3.8*
ISC 31 20:54:39.4±2.1,9.°34N±0.°04×127.°04E±0.°08,h24km±14km,
n44,σ1°09/52,mb4.2/18,2C-2D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSLP	**Maasin**	**2.29**	**290**		*eP*	**Pn**	**20 55 15.1**	**-0.5**
MSLP					*eS*	**Sn**	**20 55 42.8**	**-0.2**
BUKP	**Musuan**	**2.43**	**234**		*eP*	**Pn**	**20 55 17.2**	**-0.4**
BUKP					*eS*	**Sn**	**20 55 47.3**	**+0.7**
MATI	**Mati**	**2.50**	**198**		*eP*	**Pn**	**20 55 18.1**	**-0.5**
MATI					*eS*	**Sn**	**20 55 46.0**	**-2.3**
DAV	**Davao City (W)**	**2.67**	**213**		Pn	**Pb**	**20 55 27.2**	**+0.6**
47nm,0.3s,baz=241,slow=22,SNR=4.4								
DAV					Sn	**Sb**	**20 56 00.2**	**+1.2**
39nm,0.3s,baz=65,slow=22,SNR=7.3								
DAV	**Davao City (W)**	**2.67**	**213**			**Pn**	**20 55 23.2**	**+2.3**
DAV					Sn	**Sb**	**20 55 57.5**	**-1.5**
DMPH	**Davao City--Mi**	**2.70**	**214**	⇑	*eP*	**Pb**	**20 55 25.7**	**-1.3**
DMPH					*eS*	**Sn**	**20 55 55.7**	**+2.5**
KCP	**Kidapawan**	**3.01**	**220**	⇓	*eP*	**Pn**	**20 55 25.9**	**+0.3**
KCP					*i S*	**Sn**	**20 55 59.1**	**-1.9**
LLP	**Lapu-Lapu**	**3.18**	**288**		*eP*	**Pn**	**20 55 27.7**	**-0.2**
LLP					*eS*	**Sn**	**20 56 06.6**	**+1.5**
CTBH	**Cotabato--PC H**	**3.47**	**233**	⇑	*iP*	**Pn**	**20 55 32.0**	**+0.1**
PAGZ	**Pagadian**	**3.90**	**248**		*eP*	**Pn**	**20 55 37.1**	**-0.7**
PAGZ					*eS*	**Sn**	**20 56 23.0**	**+0.1**
CNP	**Catarman**	**3.92**	**324**		*eP*	**Pn**	**20 55 38.2**	**+0.1**
CNP					*eS*	**Sn**	**20 56 22.7**	**-0.7**
RCP	**Roxas**	**4.76**	**298**	⇓	*eP*	**Pn**	**20 55 53.0**	**+3.3**
SIJI	**Sorong**	**10.98**	**157**		Pn	Pn	20 57 21.0	+6.0
0.4nm,0.3s,baz=191,slow=22,SNR=1.8								
SBUM	**Sibu**	**16.24**	**246**			**Pn**	**20 58 26.2**	**+0.1**
MMRI	**Maumere**	**18.48**	**195**		P	**Pn**	**20 58 55.2**	**+1.2**
MMRI					IAmb	IAmb	20 58 59.8	
comp=Z,20nm,1.0s								
SOEI	**Soe**	**19.16**	**188**		P	**P**	**20 58 59.8**	**-1.6**
SOEI					IAmb	IAmb	20 59 17.3	
comp=Z,17nm,1.0s								
BATI	**Baumata**	**19.70**	**190**		P	**Pn**	**20 59 09.7**	**+0.9**
comp=Z,2.5nm,0.3s,baz=174,slow=21,SNR=3.3								
KNRA	**Kununurra**	**24.91**	**176**		P	**P**	**21 00 01.4**	**+0.7**
FITZ	**Fitzroy Crossi**	**27.29**	**183**		P	**P**	**21 00 22.6**	**+0.4**
comp=Z,3.9nm,0.7s,baz=39,slow=3.7,SNR=6.3								
FITZ	**Fitzroy Crossi**	**27.29**	**183**		P	**P**	**21 00 22.2**	**-0.1**
FITZ					IAmb	IAmb	21 00 32.6	
comp=Z,5.2nm,1.0s								
PMG	**Port Moresby**	**27.35**	**132**		LR	LR	21 11 36.9	
comp=Z,38nm,21.0s,baz=161,slow=37								
WB0	**Warramunga Arr**	**29.81**	**166**		P	**P**	**21 00 44.9**	**+0.2**
WB0					IAmb	IAmb	21 00 55.6	
comp=Z,4.6nm,1.1s								
WRA	**Warramunga Arr**	**29.97**	**166**		P	**P**	**21 00 46.2**	**+0.1**
comp=Z,1.2nm,1.0s,baz=348,slow=9.3,SNR=4.5								
WB2	**Warramunga Arr**	**29.97**	**166**		P	**P**	**21 00 46.6**	**+0.5**
WB2					IAmb	IAmb	21 00 59.2	
comp=Z,7.1nm,1.4s								
ASAR	**Alice Springs**	**33.48**	**169**		P	**P**	**21 01 17.4**	**+0.5**
comp=Z,0.3nm,0.4s,baz=248,slow=11,SNR=9.3								
MORW	**Morawa**	**39.63**	**195**		P	**P**	**21 02 09.9**	**+0.7**
FORT	**Forrest**	**39.90**	**179**		P	**P**	**21 02 12.5**	**+1.0**
BBOO	**Buckleboo**	**42.78**	**169**		P	**P**	**21 02 36.1**	**+0.9**
BBOO					IAmb	IAmb	21 02 47.7	
comp=Z,7.8nm,1.3s								
NWAO	**Narrogin (SRO)**	**43.05**	**192**		P	**P**	**21 02 37.5**	**+0.1**
comp=Z,6.3nm,0.7s,baz=27,slow=7.2,SNR=5.7								
NWAO	**Narrogin (SRO)**	**43.05**	**192**		P	**P**	**21 02 37.8**	**+0.4**
STKA	**Stephens Creek**	**43.28**	**162**		P	**P**	**21 02 39.8**	**+0.6**
comp=Z,1.4nm,0.8s,baz=345,slow=6.5,SNR=4.6								
STKA	**Stephens Creek**	**43.28**	**162**		P	**P**	**21 02 39.9**	**+0.7**
MK31	**Makanchi Array**	**53.22**	**323**		P	**P**	**21 03 55.5**	**-0.4**
MKAR	**Makanchi Array**	**53.22**	**323**		P	**P**	**21 03 54.8**	**-1.1**
comp=Z,1.3nm,0.7s,baz=123,slow=8.1,SNR=17								
KURK	**Kurchatov**	**57.26**	**326**		P	**P**	**21 04 24.4**	**-0.5**
KURK					IAmb	IAmb	21 04 25.4	
comp=Z,4.3nm,1.1s								
KURBB	**Kurchatov Arra**	**57.27**	**325**		P	**P**	**21 04 24.3**	**-0.6**
comp=Z,1.2nm,0.5s,baz=127,slow=6.6,SNR=12								
KK31	**Karatay Array**	**59.44**	**315**		P	**P**	**21 04 40.0**	**-0.3**
TIXI	**Tiksi**	**62.27**	**1**		P	**P**	**21 04 59.4**	**+0.4**
TIXI					IAmb	IAmb	21 05 01.7	
comp=Z,1.9nm,0.8s								
BVAR	**Borovoye Array**	**62.86**	**325**		P	**P**	**21 05 03.0**	**-0.2**
comp=Z,1.0nm,0.7s,baz=110,slow=11,SNR=6.9								
BRVK	**Borovoye**	**62.93**	**325**		P	**P**	**21 05 03.1**	**-0.6**
BRVK					IAmb	IAmb	21 05 03.8	
comp=Z,2.5nm,0.8s								
ARU	**Arti**	**70.42**	**327**		P	**P**	**21 05 50.9**	**-0.6**
ARU					IAmb	IAmb	21 05 52.9	
comp=Z,2.5nm,0.9s								
RAYN	**Ar Rayn**	**78.62**	**292**		P	**P**	**21 06 38.2**	**-1.6**
RAYN					IAmb	IAmb	21 06 38.9	
comp=Z,2.3nm,0.8s								
ARCES	**ARCESS Array B**	**85.33**	**340**		P	**P**	**21 07 14.1**	**-0.1**
comp=Z,1.1nm,0.6s,baz=86,slow=7.4,SNR=7.1								
FINES	**FINESS Array B**	**87.07**	**332**		P	**P**	**21 07 22.5**	**-0.3**
comp=Z,1.1nm,0.8s,baz=77,slow=5.5,SNR=6.4								

*IDC **31** 21:00:43.1±2.6,52.°66N×160.°28E,h0km,mb3.5/7,*
mb1 3.6/7,mb1mx3.3/59,mbtmp3.5/7,Error ellipse:
s-maj=55.0km s-min=30.7km az=125.0
*KRSC **31** 21:00:49.2±1.1,52.°55N×159.°89E,h28km±13km,ML3.7*
ISC 31 21:00:45.6±1.6,52.°56N±0.°04×160.°17E±0.°05,h17km±9km,
n48,σ1°26/68,mb3.5/7,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.55**	**350**		*eP*	**Pn**	**21 01 01.2**	**+2.5**
SPN					*eS*	**Sn**	**21 01 09.3**	**+1.8**
NLC	**Nalytchevo**	**0.80**	**321**		*eP*	**Pn**	**21 01 03.6**	**+1.6**
NLC					*eS*	**Sn**	**21 01 13.7**	**+0.2**
DALK	**Dalny**	**0.99**	**299**		*eP*	**Pn**	**21 01 05.3**	**+0.7**
DALK					*eS*	**Sb**	**21 01 16.2**	**-0.7**
RUS	**Russkaya**	**1.02**	**264**		*eP*	**Pn**	**21 01 05.3**	**+0.1**
RUS					*eS*	**Sb**	**21 01 16.6**	**-1.4**
PET	**Petropavlovsk**	**1.04**	**298**		*eP*	**Pg**	**21 01 06.0**	**+0.3**
PET					*eS*	**Sb**	**21 01 17.4**	**-1.0**
UGLR	**Uglovaya**	**1.05**	**309**		*eP*	**Pn**	**21 01 07.1**	**+1.5**
UGLR					*eS*	**Sg**	**21 01 19.6**	**-0.1**
SDLR	**Sedlovina**	**1.06**	**313**		*eP*	**Pg**	**21 01 07.3**	**+1.0**
SMAR	**Somma**	**1.09**	**311**		*eP*	**Pg**	**21 01 07.8**	**+1.0**
AVH	**Avacha**	**1.12**	**310**		*eP*	**Pg**	**21 01 08.1**	**+0.7**
AVH					*eS*	**Sn**	**21 01 21.8**	**+0.1**
KRER	**Koryakskii**	**1.14**	**312**		*eP*	**Pg**	**21 01 08.6**	**+0.8**
KRER					*eS*	**Sn**	**21 01 22.6**	**+0.2**
KOK	**Koryaka**	**1.19**	**309**		*eP*	**Pg**	**21 01 09.2**	**+0.6**
MTVR	**Mutnovka**	**1.22**	**267**		*eP*	**Pg**	**21 01 08.8**	**-0.4**
MTVR					*eS*	**Sb**	**21 01 22.8**	**-1.0**
KRX	**Arik**	**1.23**	**312**		*eP*	**Pg**	**21 01 09.5**	**+0.2**
KRX					*eS*	**Sb**	**21 01 23.9**	**-0.1**
KRMR	**Karymshinskiy**	**1.27**	**283**		*eP*	**Pg**	**21 01 09.8**	**-0.4**
KRMR					*eS*	**Sb**	**21 01 24.2**	**-1.0**
GRL	**Gorelyy**	**1.28**	**271**		*eP*	**Pg**	**21 01 10.0**	**-0.4**
GRL					*eS*	**Sb**	**21 01 25.0**	**-0.6**
ASAK	**Asacha**	**1.40**	**264**		*eP*	**Pb**	**21 01 11.7**	**+0.3**
ASAK					*eS*	**Sn**	**21 01 28.1**	**-0.5**
KII	**Karymskiy**	**1.55**	**344**		*eP*	**Pg**	**21 01 16.0**	**+0.6**
KII					*eS*	**Sg**	**21 01 35.6**	**+0.1**
PETK	**Petropavlovsk-**	**1.60**	**291**		Pn	**Pb**	**21 01 14.4**	**-0.3**
35nm,0.3s,baz=108,slow=19,SNR=230								
PETK					Sn	**Sn**	**21 01 31.4**	**-2.0**
26nm,0.3s,baz=85,slow=18,SNR=5.4								
APC	**Apacha**	**1.87**	**283**		*eP*	**Pb**	**21 01 19.3**	**0.0**
APC					*eS*	**Sn**	**21 01 40.4**	**+0.4**
MIPR	**Malaya Ipel'ka**	**2.11**	**264**		*eP*	**Pb**	**21 01 23.1**	**-0.3**
MIPR					*S*	**Sb**	**21 01 47.9**	**-1.4**
PAU	**Pauzhetka**	**2.35**	**244**		P	**Pb**	**21 01 26.1**	**-1.3**
KZV	**Kizimen**	**2.56**	**2**		*eP*	**Pb**	**21 01 31.5**	**+0.3**
KZV					*eS*	**Sb**	**21 02 02.3**	**-0.2**
TUMD	**Tumrok D**	**2.66**	**3**		*eP*	**Pb**	**21 01 33.1**	**+0.4**
TUMD					*eS*	**Sb**	**21 02 04.8**	**-0.2**
TUMR	**Tumrok**	**2.73**	**360**		*eP*	**Pb**	**21 01 33.9**	**-0.2**
TUMR					*eS*	**Sb**	**21 02 05.8**	**-1.5**
SKR	**Severo-Kuril's**	**3.15**	**235**		P	**Pn**	**21 01 37.2**	**+2.8**
SKR					*S*	**Sn**	**21 02 12.2**	**+0.7**
KMNR	**Kamenistaya**	**3.21**	**1**		*eP*	**Pb**	**21 01 40.8**	**-1.4**
BZGR	**Bezymyannyi-Gr**	**3.41**	**5**		*eP*	**Pb**	**21 01 44.4**	**-1.1**
BZGR					*S*	**Sb**	**21 02 25.7**	**-0.9**
KIRR	**Kirishev**	**3.41**	**2**		P	**Pb**	**21 01 43.9**	**-1.7**
KPT	**Kopyto**	**3.42**	**0**		P	**Pb**	**21 01 44.0**	**-1.7**
BZWR	**Bezymyannyi-We**	**3.42**	**3**		*eP*	**Pb**	**21 01 44.9**	**-0.9**
ZLN	**Zelenaya**	**3.49**	**6**		P	**Pb**	**21 01 46.7**	**-0.2**
LGNR	**Loginova**	**3.55**	**5**		P	**Pb**	**21 01 47.6**	**-0.5**
LGNR					*S*	**Sb**	**21 02 29.7**	**-1.2**
KRSR	**Krestovskiy**	**3.68**	**3**		P	**Pb**	**21 01 48.3**	**-1.8**
SRDR	**Sredinnyy**	**3.78**	**356**		P	**Pb**	**21 01 48.3**	**-3.6**
KBTR	**Krutoberegovo**	**3.97**	**22**		P	**Pb**	**21 01 51.8**	**-3.3**
BDR	**Baidarnaya**	**4.07**	**8**		P	**Pb**	**21 01 56.3**	**-0.5**
SMKR	**Semkarok**	**4.11**	**10**		P	**Pb**	**21 01 55.1**	**-2.3**
SRKR	**Sorokina**	**4.15**	**8**		*eP*	**Pb**	**21 01 56.5**	**-1.6**
MJAR	**Matsushiro Arr**	**22.25**	**233**		P	**P**	**21 05 42.9**	**+1.4**
0.7nm,0.5s,baz=15,slow=10,SNR=5.5								
H11N2	**WAKE ISLAND Hy**	**33.18**	**168**		T	T	21 43 05.0	
baz=352,slow=76,SNR=21								
H11N3	**WAKE ISLAND Hy**	**33.19**	**168**		T	T	21 43 12.5	
baz=352,slow=76,SNR=16								
H11N1	**WAKE ISLAND Hy**	**33.19**	**168**		T	T	21 43 21.0	
baz=352,slow=76,SNR=26								
KURBB	**Kurchatov Arra**	**48.16**	**302**		P	**P**	**21 09 22.6**	**-1.9**
0.4nm,0.4s,baz=60,slow=7.6,SNR=3.5								
MKAR	**Makanchi Array**	**48.43**	**296**		P	**P**	**21 09 25.1**	**-1.6**
0.3nm,0.6s,baz=70,slow=8.4,SNR=2.7								
CMAR	**Chiang Mai Arr**	**58.12**	**258**		P	**P**	**21 10 39.2**	**+1.0**
0.3nm,0.7s,baz=28,slow=6.4,SNR=3.5								
FINES	**FINESS Array B**	**60.63**	**337**		P	**P**	**21 10 55.1**	**+0.2**
0.3nm,0.4s,baz=54,slow=9.7,SNR=3.8								
NOA	**NORSAR Array B**	**64.07**	**344**		P	**P**	**21 11 18.7**	**+0.6**
0.3nm,0.8s,baz=23,slow=6.0,SNR=1.8								
AKASG	**Malin Array Be**	**69.10**	**329**		P	**P**	**21 11 50.1**	**-0.2**
0.3nm,0.4s,baz=18,slow=37,SNR=2.1								

*IDC **31** 21:04:27.6±1.0,5.°42N×127.°10E,h0km,mb3.8/8,*
mb1 4.0/10,mb1mx3.6/58,mbtmp3.9/10,ML3.8/2,Error ellipse: s-maj=59.0km s-min=15.8km az=70.0
*DJA **31** 21:04:30.8±1.8,6.°N±14.°×12.°7E±.°,h37km±72km,M4.2/11,*
mB4.9/4,mb4.4/9,MLv4.1/11,Mw(mB)4.1/4
*MAN **31** 21:04:30.8,5.°28N×126.°97E,h5km,mb4.8,ML3.6,MS3.6*
*NEIC **31** 21:04:35.3±2.1,5.°31N±0.°08×127.°13E±0.°04,h65km±9km,*
mb4.2/17,Error ellipse: s-maj=11.7km s-min=4.9km az=198.0
ISC 31 21:04:34.8±1.3,5.°29N±0.°06×127.°01E±0.°09,h58km±13km,
n47,σ1°43/52,mb3.9/13,4C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.53**	**302**		*eP*	**Pn**	**21 04 58.1**	**-1.7**
DDMP					*eS*	**Sn**	**21 05 17.1**	**-1.6**
MATI	**Mati**	**1.81**	**336**		*eP*	**Pn**	**21 05 02.3**	**-1.4**
MATI					*eS*	**Sn**	**21 05 26.5**	**+0.8**
GSPH	**General Santos**	**2.20**	**291**	⇑	*iP*	**Pn**	**21 05 06.9**	**-2.2**
GSPH					*i S*	**Sn**	**21 05 30.9**	**-4.4**
DAV	**Davao City (W)**	**2.27**	**321**		Pn	**Pn**	**21 05 09.9**	**-0.1**
128nm,0.3s,baz=320,slow=2.3,SNR=2.9								
DAV					Sn	**Sn**	**21 05 40.7**	**+3.8**
28nm,0.3s,baz=273,slow=22,SNR=7.9								
DAV	**Davao City (W)**	**2.27**	**321**			**Pn**	**21 05 10.8**	**+0.8**
DMPH	**Davao City--Mi**	**2.33**	**320**	⇑	*iP*	Pn	21 05 13.1	+2.4
DMPH					*eS*	**Sn**	**21 05 41.3**	**+3.1**
KCP	**Kidapawan**	**2.56**	**312**	⇑	*iP*	**Pn**	**21 05 13.5**	**-0.6**
KCP					*i S*	**Sn**	**21 05 45.3**	**+1.1**
SKMP	**Bagumbayan, Su**	**2.74**	**297**		*eP*	**Pn**	**21 05 16.0**	**-0.5**
SKMP					*eS*	**Sn**	**21 05 49.5**	**+1.0**
CTBH	**Cotabato--PC H**	**3.35**	**305**	⇑	*iP*	**Pn**	**21 05 24.1**	**-0.7**
TNTI	**Ternate**	**4.50**	**175**		P	**Pn**	**21 05 41.4**	**+0.9**
TNTI	**Ternate**	**4.50**	**175**		Pn	**Pn**	**21 05 41.0**	**+0.5**
KMSI	**Cibinong**	**5.57**	**213**		P	**Pn**	**21 05 55.2**	**0.0**
0.3nm64nm,0.6s								
LBMI	**Labuha**	**5.90**	**175**		P	**Pn**	**21 06 00.7**	**+0.9**
0.2nm46nm,0.8s								
MRSI	**Marisa**	**6.96**	**227**		P	**Pn**	**21 06 13.8**	**-0.4**
0.3nm846nm52nm,0.6s								
SANI	**Sanana**	**7.36**	**188**		P	**Pn**	**21 06 20.3**	**+0.6**
0.2nm19nm,0.7s								
SIJI	**Sorong**	**7.45**	**145**		Pn	**Pn**	**21 06 19.8**	**-1.2**
1.6nm,0.3s,baz=338,slow=19,SNR=6.9								
LUWI	**Luwuk**	**7.58**	**214**		P	**Pn**	**21 06 23.0**	**+0.3**
0.2nm1µm57nm,0.9s								
LUWI	**Luwuk**	**7.58**	**214**		Pn	**Pn**	**21 06 24.9**	**+2.2**
NLAI	**Namlea**	**8.47**	**179**		P	**Pn**	**21 06 35.0**	**+0.1**
668nm21nm,0.6s								
MPSI	**Mapaga**	**8.64**	**236**		P	**Pn**	**21 06 36.4**	**-0.8**
FAKI	**Fak Fak**	**9.69**	**147**		Pn	**Pn**	**21 06 50.1**	**-1.4**
KKM	**Kota Kinabalu**	**10.77**	**275**		Pn	**Pn**	**21 07 07.4**	**+0.9**
KAPI	**Kappang**	**12.54**	**215**		Pn	**Pn**	**21 07 30.2**	**-0.3**
0.5nm,0.3s,baz=139,slow=1.2,SNR=4

BKZ	Black Stump Fm	16.76	201	Pn		Pn	21 12 06.8	-1.3
HIZ	Hauiti	16.77	206	Pn		Pn	21 12 05.9	-2.4
HIZ				IAmb		IAmb	21 12 16.7	
	comp=Z,62nm,1.2s							
BFZ	Birch Farm	18.21	199	P		Pn	21 12 25.0	-1.2
MSWZ	Moikau Station	19.19	201	P		P	21 12 36.3	-0.8
SNZO	South Karori	19.28	202	P		P	21 12 37.4	-0.7
PLWZ	Palliser	19.33	200	P		P	21 12 38.2	-0.4
TUWZ	Tuamarina	19.65	203	P		P	21 12 39.6	-2.6
NNZ	Nelson	19.68	205	P		P	21 12 40.4	-2.0
NNZ				IAmb		IAmb	21 12 44.2	
	comp=Z,25nm,1.1s							
QRZ	Quartz Range	19.68	207	P		P	21 12 42.3	-0.2
QRZ				IAmb		IAmb	21 13 00.5	
	comp=Z,23nm,1.0s							
CMWZ	Cape Campbell	19.84	202	P		P	21 12 43.9	-0.3
THZ	Tophouse	20.33	205	P		P	21 12 48.2	-1.4
KHZ	Kahutara	20.66	203	P		P	21 12 51.8	-1.3
KHZ				IAmb		IAmb	21 12 55.7	
	comp=Z,20nm,1.0s							
KNTN	Kanton	21.15	12	P		P	21 12 53.3	-5.2
LTZ	Lake Taylor	21.44	204	P		P	21 13 01.3	-0.3
OXZ	Oxford	22.00	204	P		P	21 13 05.8	-1.7
OXZ				IAmb		IAmb	21 13 19.7	
	comp=Z,9.3nm,0.5s							
MQZ	McQueen's Vall	22.11	202	P		P	21 13 07.9	-0.7
MQZ				IAmb		IAmb	21 13 22.0	
	comp=Z,15nm,1.2s							
RPZ	Rata Peaks	22.70	205	P		P	21 13 13.8	-1.3
RPZ				IAmb		IAmb	21 13 26.3	
	comp=Z,18nm,1.1s							
FOZ	Fox Glacier	23.05	207	P		P	21 13 18.8	+0.1
FOZ				IAmb		IAmb	21 13 27.7	
	comp=Z,32nm,1.1s							
LBZ	Lake Benmore	23.61	205	P		P	21 13 24.0	-0.3
LBZ				IAmb		IAmb	21 13 31.5	
	comp=Z,9.4nm,1.2s							
ODZ	Otahua Downs	23.99	204	P		P	21 13 26.7	-1.2
ODZ				IAmb		IAmb	21 13 29.6	
	comp=Z,13nm,1.1s							
TBI	Tubuai	24.25	95	*e*LR		LR	21 19 11.2	
	comp=Z,215nm,27.8s							
TBI	Tubuai	24.25	95	*e*T		T	21 38 03.7	
	comp=Z,27nm,0.3s							
WKZ	Wanaka	24.44	207	P		P	21 13 31.9	-0.2
WKZ				IAmb		IAmb	21 13 37.6	
	comp=Z,23nm,1.2s							
MLZ	Mavora Lakes	25.25	207	P		P	21 13 39.3	-0.2
PAE	Paea	25.33	81	*e*T		T	21 39 25.3	
	comp=Z,12nm,0.3s							
PPT2	Papeete2	25.36	81	*e*LQ		LQ	21 18 36.0	
	comp=Z,334nm,25.5s							
PPT2				*e*LR		LR	21 19 52.1	
	comp=Z,241nm,25.8s							
PPT2	Papeete2	25.36	81	*e*T		T	21 39 28.0	
	comp=Z,14nm,0.4s							
PPT	Papeete	25.36	81	LR		LR	21 20 45.3	
	comp=Z,64nm,21.9s,baz=224,slow=30							
PPTF	Pamatai, Papee	25.37	81	P		P	21 13 40.0	-0.8
TVO	Taravao	25.59	82	*e*T		T	21 39 44.4	
	comp=Z,2.2nm,0.3s							
DCZ	Deep Cove	25.74	208	P		P	21 13 43.6	-0.2
DCZ				IAmb		IAmb	21 13 56.5	
	comp=Z,14nm,1.0s							
MEH	Mehetia	26.64	83	*e*T		T	21 41 03.3	
	comp=Z,60nm,0.3s							
HNR	Honiara	27.05	297	LR		LR	21 23 48.6	
	comp=Z,42nm,18.1s,baz=204,slow=35							
ARMA	Armidale	29.61	250	P		P	21 14 19.0	+0.1
ARMA				IAmb		IAmb	21 14 35.1	
	comp=Z,6.6nm,0.8s							
CTA	Charters Tower	35.22	268	P		P	21 15 07.9	-0.1
	comp=Z,5.0nm,0.3s,baz=90,slow=10,SNR=14							
CTAO	Charters Tower	35.22	268	P		P	21 15 08.1	+0.1
TOO	Toolangi	35.74	238	P		P	21 15 11.3	-1.0
TOO				IAmb		IAmb	21 15 17.6	
	comp=Z,11nm,1.1s							
TAOE	Nuku Hiva Isla	37.22	73	*e*T		T	21 54 17.4	
	comp=Z,115nm,0.3s							
STKA	Stephens Creek	38.28	248	P		P	21 15 33.1	-0.9
	comp=Z,0.7nm,0.3s,baz=342,slow=5.2,SNR=3.1							
STKA	Stephens Creek	38.28	248	IAmb		IAmb	21 15 37.2	
	comp=Z,0.7nm,1.0s							
COEN	Coen	39.79	277	P		P	21 15 46.8	0.0
BBOO	Buckleboo	42.98	247	P		P	21 16 11.9	-0.9
AS31	Alice Springs	45.76	259	P		P	21 16 35.5	+0.2
ASAR	Alice Springs	45.76	259	P		P	21 16 34.0	-1.3
	comp=Z,3.6nm,1.0s,baz=94,slow=8.2,SNR=22							
ASAR				LR		LR	21 34 04.3	
	comp=Z,95nm,18.8s,baz=121,slow=34							
WR0	Warramunga Arr	45.97	265	P		P	21 16 35.2	-1.7
WR0				IAmb		IAmb	21 16 43.5	
	comp=Z,4.7nm,1.0s							
WB2	Warramunga Arr	46.14	265	P		P	21 16 36.4	-1.8
WB2				IAmb		IAmb	21 16 37.7	
	comp=Z,4.8nm,0.8s							
WRAB	Tennant Creek	46.15	265	P		P	21 16 35.2	-3.1
WB0	Warramunga Arr	46.15	265	P		P	21 16 36.9	-1.4
WB0				IAmb		IAmb	21 16 50.3	
	comp=Z,7.6nm,0.8s							
WRA	Warramunga Arr	46.16	265	P		P	21 16 36.4	-2.0
	comp=Z,3.3nm,0.7s,baz=90,slow=6.3,SNR=21							
FORT	Forrest	49.90	249	P		P	21 17 06.3	-0.9
KNRA	Kununurra	52.43	268	P		P	21 17 25.0	-1.4
FITZ	Fitzroy Crossi	54.58	264	P		P	21 17 41.6	-0.5
	comp=Z,2.1nm,0.7s,baz=61,slow=7.5,SNR=6.0							
FITZ	Fitzroy Crossi	54.58	264	IAmb		IAmb	21 17 57.2	
	comp=Z,6.1nm,1.1s							
CASY	Casey	61.97	206	P		P	21 18 34.7	+1.7
CASY				IAmb		IAmb	21 18 47.6	
	comp=Z,4.4nm,0.8s							
QSPA	South Pole Qui	66.43	180	P		P	21 19 02.6	+0.1
MAW	Mawson	79.26	199	P		P	21 20 19.0	+0.6
	comp=Z,1.7nm,0.5s,baz=134,slow=8.3,SNR=8.4							
MAW				LR		LR	21 53 38.1	
	comp=Z,72nm,19.7s,baz=248,slow=34							
PETK	Petropavlovsk-	79.81	344	P		P	21 20 21.1	-0.3
	comp=Z,3.0nm,1.0s,baz=141,slow=9.6,SNR=4.1							
KSRS	Korea Array	80.52	318	LR		LR	21 51 21.9	
	comp=Z,19nm,20.9s,baz=265,slow=32							
NVAR	Mina Array Bea	82.02	42	P		P	21 20 34.9	+1.0
	comp=Z,1.1nm,0.8s,baz=233,slow=8.7,SNR=7.0							
H03S2	Juan Fernandez	82.63	124	T		T	22 52 19.2	
	baz=245,slow=74,SNR=186							
H03S1	Juan Fernandez	82.64	124	T		T	22 52 06.1	
	baz=245,slow=74,SNR=187							
USRK	Ussuriysk Ar.	82.64	325	P		P	21 20 38.1	+1.4
	comp=Z,1.6nm,0.9s,baz=175,slow=29,SNR=2.7							
H03S3	Juan Fernandez	82.65	124	T		T	22 52 04.8	
	baz=245,slow=74,SNR=178							
H03N2	Juan Fernandez	82.78	123	T		T	22 52 31.9	
	baz=250,slow=73,SNR=105							
H03N3	Juan Fernandez	82.78	123	T		T	22 52 04.6	
	baz=250,slow=73,SNR=166							
H03N1	Juan Fernandez	82.80	123	T		T	22 52 24.0	
	baz=250,slow=73,SNR=93							
SNAA	Sanae	84.81	178	P		P	21 20 48.6	+0.9
SNAA	Sanae	84.81	178	P		P	21 20 48.7	+1.1
SNAA				IAmb		IAmb	21 20 49.5	
	comp=Z,6.1nm,1.0s							
VNA3	Neumayer Olymp	84.87	176	P		P	21 20 48.6	+0.7
VNA1	Neumayer--Stat	85.55	176	P		P	21 20 52.5	+1.3
TXAR	Lajitas Array	87.15	56	P		P	21 21 01.6	+1.6
	comp=Z,1.1nm,0.8s,baz=210,slow=8.3,SNR=13							
ILAR	Eielson Array	90.96	12	P		P	21 21 18.0	+1.0
	comp=Z,0.8nm,1.1s,baz=318,slow=32,SNR=1.8							
CMAR	Chiang Mai Arr	92.97	289	P		P	21 21 28.6	+1.4
	comp=Z,1.1nm,0.9s,baz=117,slow=3.0,SNR=9.0							
ZALV	Zalesovo Beam	114.14	320	PKP		PKPdf	21 26 51.0	-1.5
	comp=Z,0.3nm,0.3s,baz=327,slow=27,SNR=1.7							
MKAR	Makanchi Array	114.75	312	PKP		PKiKP	21 26 53.4	-0.5
	comp=Z,0.4nm,0.8s,baz=243,slow=2.2,SNR=2.9							
KURBB	Kurchatov Arra	117.66	316	PKP		PKPdf	21 26 58.3	-1.1
	comp=Z,0.6nm,1.2s,baz=316,slow=29,SNR=2.1							
BVAR	Borovoye Array	122.72	319	PKP		PKiKP	21 27 08.6	-0.6
	comp=Z,0.3nm,0.5s,baz=215,slow=44,SNR=2.3							
ARU	Arti	128.88	324	PKP		PKPdf	21 27 19.9	-0.8
	comp=Z,0.3nm,0.5s,baz=108,slow=19,SNR=1.2							
ARCES	ARCESS Array B	132.35	350	PKP		PKPdf	21 27 25.2	-1.7
	comp=Z,3.3nm,1.1s,baz=129,slow=1.3,SNR=2.3							
FINES	FINESS Array B	139.32	344	PKP		PKiKP	21 27 40.7	-1.7
	comp=Z,0.4nm,0.5s,baz=145,slow=37,SNR=1.9							
NB2	NORSAR Subarra	142.31	354	PKP		PKiKP	21 27 54.9	+6.3
	comp=Z,0.7nm,0.6s,baz=17,slow=2.6							
NOA	NORSAR Array B	142.31	354	PKP		PKPdf	21 27 45.9	+0.4
	comp=Z,0.3nm,0.7s,baz=259,slow=19,SNR=1.8							
AKASG	Malin Array Be	146.70	331	PKPbc		PKPbc	21 27 54.5	-0.5
	comp=Z,1.8nm,0.5s,baz=42,slow=4.1,SNR=8.8							
EKA	Eskdalemuir Ar	147.91	8	PKPbc		PKPbc	21 27 58.0	-0.3
	comp=Z,1.8nm,0.8s,baz=15,slow=3.5,SNR=6.5							
BRTR	Keskin Array B	150.36	310	PKPbc		PKiKP	21 28 05.0	-0.9
	comp=Z,0.7nm,0.7s,baz=160,slow=4.7,SNR=4.3							
OSTC	Ostas	151.53	344	*e*PKP		PKPab	21 28 22.1	+6.3
CHVC	Chvalec	151.54	344	*e*PKP		PKPab	21 28 21.6	+5.7
CLL	Collm	151.54	348	*i* PKPbc		PKPab	21 28 08.9	+1.1
	comp=Z,6.0nm,1.1s							
CLL	Collm	151.54	348	⇓*i* PKPbc		PKPab	21 28 22.3	+6.5
	comp=Z,16nm,0.7s							
UPC	Upice	151.63	344	*e*PKP		PKPab	21 28 22.1	+5.9
OKC	Ostrava-Krasne	151.64	341	*e*PKP		PKPab	21 28 21.8	+5.5
DPC	Dobruska-Polom	151.69	343	*e*PKP		PKPab	21 28 22.3	+5.8
BRG	Berggiesshubel	151.77	347	*e*PKP		PKiKP	21 28 08.6	+0.2
	comp=Z,3.9nm,0.9s							
BRG	Berggiesshubel	151.77	347	*i* PKP		PKPab	21 28 22.2	+5.5
	comp=Z,15nm,0.7s							
KRLC	Kralicky	151.82	343	*e*PKP		PKPab	21 28 21.7	+4.6
PVCC	Panska Ves	151.96	346	*e*PKP		PKPab	21 28 22.8	+5.2
PRA	Prague	152.42	346	*e*PKP		PKPab	21 28 23.6	+4.1
PRU	Pruhonice	152.47	345	*e*PKP		PKPab	21 28 23.6	+3.9
PRU				*ex*		x	21 28 39.6	
GOPC	GO Pecny, Ondr	152.48	345	*e*PKP		PKPab	21 28 23.9	+4.1
PBCC	Pribram	152.88	346	*e*PKP		PKPab	21 28 24.7	+3.2
KHC	Kasperske Hory	153.49	346	*e*PKP		PKPab	21 28 25.2	+1.1
KHC				*ex*		x	21 28 35.0	
GERES	GERESS Array B	153.73	346	PKPbc		PKiKP	21 28 12.7	+0.1
	comp=Z,0.2nm,0.3s,baz=48,slow=2.0,SNR=4.8							

IDC 31 21:24:54.7±2.6, 4°48N×93°20E, h0km, mb3.6/3, mb1 3.7/5, mb1mx3.4/44, mbtmp3.6/5, ML3.8/2, MS3.5/1, Ms1 3.5/1, ms1mx2.7/47, Error ellipse: s-maj=68.8km s-min=36.2km az=33.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	5.95	106	Pn	Pn	21 26 24.5	+0.3
	2.0nm,0.3s,baz=360,slow=5.0,SNR=13						
PSI				Sn	Sn	21 27 30.3	-2.8
	1.4nm,0.3s,baz=180,slow=18,SNR=2.8						
CMAR	Chiang Mai Arr	14.99	22	Pn	Pn	21 28 29.1	+1.1
	0.1nm,0.3s,baz=255,slow=37,SNR=3.3						
H08S2	Diego Garcia H	23.91	240	T	T	21 55 16.8	
	baz=61,slow=75,SNR=20						
H08S3	Diego Garcia H	23.91	240	T	T	21 55 16.8	
	baz=61,slow=75,SNR=23						
H08S1	Diego Garcia H	23.93	240	T	T	21 55 16.8	
	baz=61,slow=75,SNR=17						
MKAR	Makanchi Array	43.20	349	P	P	21 32 56.9	-0.6
	0.3nm,0.7s,baz=179,slow=10,SNR=3.8						
ZALV	Zalesovo Beam	49.79	354	P	P	21 33 48.8	-0.2
	0.6nm,0.5s,baz=179,slow=7.4,SNR=3.9						
ZALV				LR	LR	21 57 21.7	
	comp=Z,47nm,19.1s,baz=272,slow=39						
GERES	GERESS Array B	79.73	319	P	P	21 37 05.1	+0.3
	0.6nm,0.8s,baz=88,slow=4.1,SNR=5.3						

SJA 31 21:25:44.6±0.6, 35°94S×73°51W, h68km±14km, ML3.4, MW3.6
GUC 31 21:25:46.6±0.6, 36°09S×73°24W, h42km±3km, ML3.2
ISC 31 21:25:43.9±2.6, 36°08S±0°04×73°3W±0°1, h13km±18km, n13, σ0°73/20, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CCSP	San Pedro de C	0.78	171	*e*P	Pn	21 26 00.6	+0.1
CCSP				*i* S	Sn	21 26 10.9	-1.0
BI03	Tigo	0.79	166	*e*P	Pn	21 26 00.4	-0.3
BI03				*e*S	Sn	21 26 11.7	-0.7
LAJA	Laja	1.28	160	*e*P	Pb	21 26 07.9	0.0
LAJA				*e*S	Sb	21 26 24.4	+0.2
LAJA				IAML		21 26 29.2	
	comp=E,722nm,0.2s						
GO05	Huala	1.52	46	*e*P	Pb	21 26 11.6	-0.5
GO05				*i* S	Sb	21 26 31.1	-0.1
GO05				IAML		21 26 38.2	
	comp=N,468nm,0.3s						
GO05	Huala	1.52	46	*i* P	Pb	21 26 11.8	-0.2
GO05				*e*S	Sg	21 26 32.8	-0.2
BI02	San Fabin de	1.71	111	*e*P	Pn	21 26 13.9	+0.5
BI02				*e*S	Sn	21 26 34.9	-0.4
BI02				IAML		21 26 37.7	
	comp=E,795nm,0.5s						
CANA	Caviahue	2.53	136	*i* P	Pb	21 26 29.1	0.0
CANA				*e*S	Sb	21 27 01.3	+1.1
CANA				IAML		21 27 10.9	
	comp=Z,114nm,0.8s						
EDS3	Malargue	3.15	86	*i* P	Pb	21 26 40.2	+0.3
PUMA	Malargue	3.16	81	*i* P	Pb	21 26 38.8	-1.1
LAMA	Las Malvinas	3.50	72	*i* P	Pb	21 26 44.6	-1.0
ROC1	El Roble	3.61	32	*i* P	Pn	21 26 40.5	+0.8
PEL	Peldehue	3.62	37	*i* P	Pn	21 26 40.8	+1.2
PLCA	Paso Flores	5.11	156	*i* P	Pn	21 27 01.1	+0.9
PLCA				IAML		21 28 21.8	
	comp=Z,25nm,3.4s						

IDC 31 21:44:58.8±26.0, 32°69S×109°70W, h0km, mb3.8/3, mb1 4.3/3, mb1mx3.9/18, mbtmp3.8/3, MS3.8/1, Ms1 3.8/1, ms1mx3.2/15, Error ellipse: s-maj=688.5km s-min=283.5km az=152.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROSC	El Rosal	50.20	49	LR	LR	22 13 07.1	
	comp=Z,88nm,18.1s,baz=188,slow=34						
TXAR	Lajitas Array	61.95	6	P	P	21 55 20.4	-0.1
	0.7nm,0.9s,baz=189,slow=5.1,SNR=4.5						
NVAR	Mina Array Bea	71.21	353	P	P	21 56 19.7	0.0
	1.1nm,0.8s,baz=180,slow=7.1,SNR=5.9						
PDAR	Pinedale Array	75.09	0	P	P	21 56 42.6	+0.1
	1.2nm,0.8s,baz=155,slow=7.4,SNR=7.6						

PRU 31 21:45:00.0±0.0, 50°26N×12°47E, h2km, West Bohemia Swarm
WBNET 31 21:44:59.7, 50°24N×12°45E, h7km, MI0.9, 4C-6D, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NKC	Novy Kostel	0.00	190	*e*PG	Pg	21 45 00.6	-0.4
NKC				*e*SG	Sg	21 45 01.9	0.0
	comp=Z,19nm,0.2s						
NKC	Novy Kostel	0.00	190	⇓P	Pg	21 45 01.2	+0.1
NKC				S	Sg	21 45 02.1	+0.1
LBCW	Luby	0.04	320	⇓P	Pg	21 45 01.4	+0.2
LBCW				S	Sg	21 45 02.6	+0.2
VAC	Vackov	0.05	268	⇓P	Pg	21 45 01.4	+0.1
VAC				S	Sg	21 45 02.5	+0.1
STCW	Studenec	0.05	64	⇓P	Pg	21 45 01.4	+0.1
STCW				S	Sg	21 45 02.5	-0.1
KVC	Kvetna	0.05	126	⇓P	Pg	21 45 01.4	0.0
KVC				S	Sg	21 45 02.4	-0.1
POCW	Potky	0.08	350	⇓P	Pg	21 45 02.0	+0.2
POCW				S	Sg	21 45 03.5	+0.2
SKC	Skalna	0.09	220	⇑P	Pg	21 45 01.9	+0.1
SKC				S	Sg	21 45 03.4	+0.1
KACW	Kaceov	0.10	155	⇑P	Pg	21 45 02.2	+0.1
KACW				S	Sg	21 45 03.9	+0.2
KRCW	Kraslice	0.11	29	⇑P	Pg	21 45 02.3	+0.1
KRCW				S	Sg	21 45 04.0	0.0
ZHC	Zelena Hora	0.19	208	⇑P	Pg	21 45 03.6	+0.1
ZHC				S	Sg	21 45 06.2	+0.1
CLL	Collm	1.13	18	*i* Pg	Pb	21 45 21.5	0.0
CLL				*i* Sg	Sn	21 45 37.1	-0.5
KHC	Kasperske Hory	1.33	146	*e*SG	Sn	21 45 42.5	-0.1
PRU	Pruhonice	1.37	100	*e*SG	Sb	21 45 43.3	0.0
GOPC	GO Pecny, Ondr	1.54	101	*e*SG	Sb	21 45 48.6	+0.4

MOS 31 21:45:05.5±1.0, 52°32N×177°71E, h153km, mb4.2/9, Error ellipse: s-maj=10.0km s-min=8.1km az=106.1
IDC 31 21:45:06.9±2.9, 52°41N×177°67E, h149km±26km, mb3.8/26, mb1 4.0/28, mb1mx3.8/56, mbtmp4.3/28, Error ellipse: s-maj=15.1km s-min=8.4km az=163.0
AEIC 31 21:45:07.0±1.9, 52°45N±0°09×177°69E±0°08, h144km±4km, Error ellipse: s-maj=13.7km s-min=7.2km az=184.0
NEIC 31 21:45:06.1±1.4, 52°3N±0°1×177°72E±0°08, h148km±5km, mb4.5/133, Error ellipse: s-maj=17.0km s-min=7.1km az=184.0
ISC 31 21:45:06.3±0.4, 52°25N±0°08×177°71E±0°03, h150km, n266, σ1°00/264, mb4.3/111, 10C-4D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GALAA	Gareloi Lava P	2.23	101		Pn	21 45 43.9	-0.2
GAEA	Gareloi East	2.24	101		Pn	21 45 44.5	+0.3
SMY	Shemya	2.26	284	P	Pn	21 45 43.2	-1.1
SMY						21 46 12.3	
SMY	Shemya	2.26	284	Pn	Pn	21 45 43.2	-1.1
SMY				Sn	Sn	21 46 12.3	-1.4
TASE	Tanaga Southea	2.66	97		Pn	21 45 49.2	-0.2
TASE					Sn	21 46 22.2	-0.4
TAFP	Tanaga Falls P	2.68	96		Pn	21 45 49.1	-0.5
TAFP					Sn	21 46 22.7	-0.3
TAPA	Tanaga Point A	2.80	97		Pn	21 45 50.7	-0.4
KICM	Kanaga Island	3.16	94		Pn	21 45 55.7	+0.1
KIKV	Kanaga Island	3.18	95		Pn	21 45 55.8	-0.1
ADK	Adak	3.48	94	P	Pn	21 45 58.9	-0.8
ADK	Adak	3.48	94		Pn	21 45 58.9	-0.8
GSTD	Great Sitkin T	3.79	91		Pn	21 46 02.9	-0.9
GSTD					Sn	21 46 46.9	-1.5
GSTR	Great Sitkin T	3.84	90	Pn	Pn	21 46 03.5	-0.9
GSMY	Great Sitkin M	3.85	91		Pn	21 46 04.5	+0.1
ATKA	Atka Island	4.98	87	Pn	Pn	21 46 18.5	-0.7
KOFP	Korovin Flat P	5.03	86		Pn	21 46 20.5	+0.4
UNV	Unalaska Valle	9.64	74		Pn	21 47 21.9	+0.5
PET	Petropavlovsk	11.61	281	*e*P	Pn	21 47 46.8	-0.4
PET				*e*S	Sn	21 49 49.7	-5.6
PET				pmax	pmax		
	comp=Z,15nm,1.3s						
PEA0B	Petropavlovsk-	12.17	282	P	Pn	21 47 54.8	+0.2
PEA0B	Petropavlovsk-	12.17	282	Pn	Pn	21 47 54.8	+0.2
PETK	Petropavlovsk-	12.17	282	P	Pn	21 47 56.1	+1.6
	comp=Z,2.1nm,0.3s,baz=90,slow=20,SNR=40						
PETK				S	Sn	21 50 06.0	-3.0
	comp=Z,0.8nm,0.3s,baz=206,slow=30,SNR=2.6						
BILL	Bilibino	16.78	345	*i* P	Pn	21 48 53.3	+1.2
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BILL	Bilibino	16.78	345	P	Pn	21 48 52.9	+0.8
TTA	Tatalina	17.54	42	P	Pn	21 49 01.1	-0.2
TTA	Tatalina	17.54	42	P	Pn	21 49 01.1	-0.2
KDAK	Kodiak Island	17.82	60	P	P	21 49 02.1	-1.1
	comp=Z,2.5nm,0.3s,baz=251,slow=5.6,SNR=30						
KDAK	Kodiak Island	17.82	60	P	P	21 49 01.6	-1.6
KDAK				IAmb	IAmb	21 49 02.5	
	comp=Z,30nm,1.2s						
RDOG	Red Dog Mine	18.41	23	P	P	21 49 09.8	+0.3
CNPM	China Poot	18.74	55	P	P	21 49 13.6	+0.3
BRLK	Bradley Lake	18.95	54	P	P	21 49 15.3	-0.2
BRLK				IAmb	IAmb	21 49 19.5	
	comp=Z,28nm,0.7s						
SEW	Seward	19.72	54	P	P	21 49 24.6	+0.8
RC01	Rabbit Creek A	19.76	51	P	P	21 49 25.4	+1.2
RC01				IAmb	IAmb	21 49 28.4	
	comp=Z,25nm,0.6s						
KTH	Kantishna Hill	19.91	43	P	P	21 49 25.8	-0.1
BPAW	Bear Paw Mtn.	20.07	42	P	P	21 49 27.4	-0.2
KNK	Knik Glacier	20.43	50	P	P	21 49 30.6	-0.8
KNK				IAmb	IAmb	21 49 35.4	
	comp=Z,51nm,1.4s						
SML	Sawmill	20.57	49	P	P	21 49 33.2	+0.2
SML				IAmb	IAmb	21 49 36.6	
	comp=Z,33nm,1.0s						
RND	Reindeer	20.74	44	P	P	21 49 35.2	+0.4
RND				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RND	Reindeer	20.74	44	P	P	21 49 35.2	+0.4
GLI	Glacier Island	20.99	52	P	P	21 49 36.1	-1.3
GLI				IAmb	IAmb	21 49 40.2	
	comp=Z,26nm,0.6s						
SCM	Sheep Creek Mo	21.04	49	P	P	21 49 38.2	+0.1
SCM				pmax	pmax		
	comp=Z,22nm,0.8s						
SCM	Sheep Creek Mo	21.04	49	P	P	21 49 38.2	+0.1
SCM				IAmb	IAmb	21 49 41.4	
	comp=Z,22nm,0.8s						
DHY	Denali Highway	21.30	46	P	P	21 49 39.8	-1.0
MDM	Murphy Dome	21.49	41	P	P	21 49 43.5	+0.7
ILAR	Eielson Array	21.98	42	P	P	21 49 46.0	-1.8
	comp=Z,1.4nm,0.6s,baz=246,slow=8.4,SNR=14						
ILAR	Eielson Array	21.98	42	P	P	21 49 46.0	-1.8
RAGM	Ragged Mountai	22.12	54	P	P	21 49 49.0	-0.3
TOLK	Toolik Lake Re	22.58	31	P	P	21 49 54.3	+0.7
TOLK				IAmb	IAmb	21 49 55.9	
	comp=Z,8.5nm,0.6s						
GLB	Gilahina Butte	22.64	51	P	P	21 49 55.1	+0.7
GLB				IAmb	IAmb	21 49 56.3	
	comp=Z,15nm,0.7s						
VRDI	Verde Repeater	22.79	52	P	P	21 49 56.5	+0.6

TJN	**Taejon**	**38.52**	**266**	*ce*P		**P**	**21 52 15.3 +1.5**
JNU	**Nakatsue**	**38.56**	**259**	P		**P**	**21 52 15.1 +0.8**
JNU				IAmb		IAmb	21 52 17.0	
	comp=Z,6.8nm,0.9s							
WALA	**Waterton Lakes**	**42.01**	**66**	P		**P**	**21 52 41.7 -0.9**
MCCM	**Marconi Confer**	**42.96**	**85**	P		**P**	**21 52 48.8 -1.4**
ULN	**Ulaanbaatar**	**43.93**	**294**	*ce*P		**P**	**21 52 58.5 +0.5**
ULN				pmax		pmax		
	comp=Z,5.0nm,2.5s							
SONM	**Songino Array**	**44.31**	**294**	P		**P**	**21 53 01.5 +0.5**
	comp=Z,2.2nm,0.5s,baz=56,slow=8.6,SNR=5.6							
HHC	**Hu-ho-hao-te**	**45.37**	**283**	*e*P		**P**	**21 53 11.3 +1.8**
HHC				pP		pP	21 53 41.0 -1.3	
HHC				S		**S**	**21 59 38.3 -0.7**	
HHC				pmax		pmax		
	comp=Z,7.0nm,0.9s							
HHC				pmax		pmax		
	comp=Z,37nm,5.7s							
NVAR	**Mina Array Bea**	**45.58**	**81**	P		**P**	**21 53 12.2 +0.9**
	comp=Z,1.3nm,0.7s,baz=292,slow=7.5,SNR=10.0							
NJ2	**Nanjing**	**46.64**	**268**	*e*P		**P**	**21 53 18.5 -0.9**
R11A	**Troy Canyon, C**	**47.27**	**79**	P		**P**	**21 53 25.0 +0.6**
PDAR	**Pinedale Array**	**48.09**	**71**	P		**P**	**21 53 30.8 +0.1**
	comp=Z,1.0nm,0.6s,baz=308,slow=4.9,SNR=7.4							
GSC	**Goldstone, Bar**	**48.52**	**83**	P		**P**	**21 53 34.6 +0.7**
GSC				pmax		pmax		
	comp=Z,3.0nm,0.6s							
GSC	**Goldstone, Bar**	**48.52**	**83**	P		**P**	**21 53 34.6 +0.7**
CCUT	**Cedar City**	**49.13**	**79**	P		**P**	**21 53 35.1 -3.6**
SPA0	**Spitsbergen Ar**	**49.34**	**355**	P		**P**	**21 53 39.5 0.0**
SPA0				IAmb		IAmb	21 53 40.6	
	comp=Z,18nm,1.2s							
ULM	**Lac du Bonnet**	**51.00**	**56**	P		**P**	**21 53 52.6 +0.3**
	comp=Z,2.3nm,0.3s,baz=321,slow=8.3,SNR=2.7							
ULM	**Lac du Bonnet**	**51.00**	**56**	P		**P**	**21 53 52.6 +0.3**
ULM				pmax		pmax		
	comp=Z,4.0nm,0.6s							
ULM	**Lac du Bonnet**	**51.00**	**56**	IAmb		IAmb	21 53 53.1	
	comp=Z,3.7nm,0.6s							
YULB	**Yu-li**	**51.40**	**258**	P		**P**	**21 53 54.8 -0.9**
YULB				IAmb		IAmb	21 53 56.6	
	comp=Z,9.6nm,1.1s							
PV13	**Radium Mtn., P**	**51.45**	**75**	IAmb		IAmb	21 53 57.1	
	comp=Z,4.6nm,0.6s							
PV02	**Paradox Valley**	**51.47**	**75**	P		**P**	**21 53 56.8 +0.4**
PV02				IAmb		IAmb	21 54 02.3	
	comp=Z,14nm,0.9s							
ZALV	**Zalesovo Beam**	**51.84**	**311**	P		**P**	**21 53 57.8 -0.7**
	comp=Z,0.4nm,0.4s,baz=48,slow=5.0,SNR=2.7							
AGMN	**Agassiz Nation**	**52.22**	**57**	P		**P**	**21 54 01.1 -0.3**
LZH	**Lanzhou**	**53.07**	**283**	*e*P		**P**	**21 54 06.5 -1.5**
LZH				pP		pP	21 54 41.5 -0.2	
LZH				sP		sP	21 54 58.3 +0.3	
LZH				PP		**PP**	**21 56 13.3 +4.2**	
LZH				pmax		pmax		
	comp=Z,10.0nm,1.0s							
LZH				pmax		pmax		
	comp=Z,74nm,4.9s							
214A	**Organ Pipe Nat**	**53.23**	**84**	P		**P**	**21 54 06.7 -2.4**
GTA	**Gaotai**	**53.23**	**289**	*e*P		**P**	**21 54 10.0 +0.9**
GTA				pP		pP	21 54 40.8 -2.0	
GTA				sP		sP	21 54 57.5 -1.6	
GTA				PcP		**PcP**	**21 55 14.8 -0.2**	
GTA				pmax		pmax		
	comp=Z,7.0nm,0.8s							
B35A	**Bob, Littlefor**	**53.28**	**56**	P		**P**	**21 54 08.5 -0.7**
B35A				IAmb		IAmb	21 54 09.8	
	comp=Z,3.6nm,0.7s							
EYMN	**Ely**	**54.68**	**55**	P		**P**	**21 54 19.3 -0.1**
EYMN				IAmb		IAmb	21 54 20.7	
	comp=Z,5.0nm,0.7s							
F36A	**Milaca**	**55.01**	**59**	P		**P**	**21 54 20.8 -1.0**
F36A				IAmb		IAmb	21 54 23.0	
	comp=Z,3.2nm,0.5s							
E38A	**The Farm, Brul**	**55.54**	**57**	P		**P**	**21 54 25.4 -0.1**
KURK	**Kurchatov**	**56.83**	**311**	*ce*P		**P**	**21 54 34.6 0.0**
KURK				pmax		pmax		
	comp=Z,7.0nm,1.3s							
KURK	**Kurchatov**	**56.83**	**311**	P		**P**	**21 54 34.4 -0.2**
KURK				IAmb		IAmb	21 54 35.7	
	comp=Z,8.0nm,1.1s							
ARCES	**ARCESS Array B**	**56.84**	**349**	P		**P**	**21 54 33.6 -0.8**
	comp=Z,2.4nm,0.7s,baz=31,slow=8.5,SNR=10							
WMQ	**Urumqi**	**57.04**	**300**	*e*P		**P**	**21 54 39.0 +2.7**
COWI	**Conover**	**57.12**	**56**	P		**P**	**21 54 36.4 -0.4**
COWI				IAmb		IAmb	21 54 37.9	
	comp=Z,4.7nm,0.8s							
N35A	**Tabor**	**57.23**	**64**	P		**P**	**21 54 37.7 +0.1**
MK31	**Makanchi Array**	**57.78**	**306**	P		**P**	**21 54 40.9 -0.5**
MK31				pmax		pmax		
	comp=Z,2.0nm,0.6s							
MK31	**Makanchi Array**	**57.78**	**306**	P		**P**	**21 54 40.9 -0.5**
MKAR	**Makanchi Array**	**57.78**	**306**	P		**P**	**21 54 40.9 -0.5**
	comp=Z,1.5nm,0.4s,baz=52,slow=5.9,SNR=28							
I40A	**Norwalk**	**57.87**	**59**	P		**P**	**21 54 42.4 +0.4**
I40A				IAmb		IAmb	21 54 43.2	
	comp=Z,8.6nm,0.8s							
MSTX	**Muleshoe**	**57.89**	**75**	P		**P**	**21 54 41.5 -0.9**
MSTX				IAmb		IAmb	21 54 43.0	
	comp=Z,4.3nm,0.7s							
MNTX	**Cornudas Mount**	**57.92**	**78**	P		**P**	**21 54 42.9 +0.4**
MAKZ	**Makanchi**	**57.93**	**306**	P		**P**	**21 54 41.9 -0.5**
MAKZ				pmax		pmax		
	comp=Z,3.0nm,0.7s							
MAKZ	**Makanchi**	**57.93**	**306**	P		**P**	**21 54 41.9 -0.5**
MAKZ				IAmb		IAmb	21 54 42.6	
	comp=Z,3.0nm,0.7s							
E43A	**Lone Tree Farm**	**58.01**	**54**	P		**P**	**21 54 43.3 +0.4**
E43A				IAmb		IAmb	21 54 44.2	
	comp=Z,6.8nm,0.6s							
JFWS	**Jewell Farm**	**58.74**	**59**	P		**P**	**21 54 47.1 -0.9**
JFWS				pmax		pmax		
	comp=Z,5.0nm,0.6s							
JFWS	**Jewell Farm**	**58.74**	**59**	P		**P**	**21 54 47.1 -0.9**
JFWS				IAmb		IAmb	21 54 48.5	
	comp=Z,5.2nm,0.6s							
I42A	**Draeger Farm,**	**58.76**	**58**	P		**P**	**21 54 47.7 -0.4**
I42A				IAmb		IAmb	21 54 49.2	
	comp=Z,7.5nm,0.7s							
BRVK	**Borovoye**	**58.82**	**318**	*ce*P		**P**	**21 54 48.6 +0.1**
BRVK				pmax		pmax		
	comp=Z,3.0nm,0.6s							
BRVK	**Borovoye**	**58.82**	**318**	P		**P**	**21 54 48.9 +0.5**
BRVK				IAmb		IAmb	21 54 49.6	
	comp=Z,5.2nm,0.6s							
H43A	**Windswept, Lux**	**58.94**	**56**	P		**P**	**21 54 49.9 +0.5**
P38A	**Dawn**	**59.25**	**64**	P		**P**	**21 54 50.8 -0.8**
WMOK	**Wichita Mounta**	**59.70**	**71**	P		**P**	**21 54 54.8 0.0**
WMOK				pmax		pmax		
	comp=Z,2.0nm,0.5s							
WMOK	**Wichita Mounta**	**59.70**	**71**	P		**P**	**21 54 54.8 0.0**
K43A	**Burlington**	**59.89**	**58**	P		**P**	**21 54 55.8 -0.1**
P40A	**Paris**	**60.13**	**63**	IAmb		IAmb	21 54 57.9	
	comp=Z,5.9nm,0.6s							
W35A	**Tecumseh**	**60.51**	**70**	P		**P**	**21 55 00.6 +0.3**
TX31	**Lajitas Ar. Si**	**60.64**	**79**	P		**P**	**21 55 01.7 +0.4**
TX31				IAmb		IAmb	21 55 02.5	
	comp=Z,5.3nm,0.6s							
TX32	**Lajitas Array**	**60.64**	**79**	P		**P**	**21 55 01.9 +0.5**
TXAR	**Lajitas Array**	**60.64**	**79**	P		**P**	**21 55 01.9 +0.6**
	comp=Z,1.3nm,0.5s,baz=304,slow=5.1,SNR=32							
TXAR	**Lajitas Array**	**60.64**	**79**	P		**P**	**21 55 02.0 +0.6**
ARU	**Arti**	**60.70**	**326**	*d* i P		**P**	**21 55 02.3 +1.1**
ARU				*PP		**pP**	**21 55 34.2 -1.1**	
ARU							21 55 43.6	
ARU							21 57 15.4	
ARU				S		**S**	**22 03 08.4 +2.8**	
ARU				SS		**SS**	**22 07 08.9 +3.2**	
ARU				pmax		pmax		
	comp=Z,6.0nm,0.9s							
ARU	**Arti**	**60.70**	**326**	P		**P**	**21 55 01.8 +0.6**
ARU				IAmb		IAmb	21 55 02.6	
	comp=Z,5.2nm,0.8s							
HDIL	**Hopedale**	**60.90**	**61**	P		**P**	**21 55 03.0 +0.1**
M44A	**Midewin, Midew**	**60.97**	**59**	P		**P**	**21 55 02.9 -0.4**
U38A	**Gravette**	**61.02**	**67**	P		**P**	**21 55 02.8 -0.9**
VLDQ	**Val d'Or**	**61.32**	**48**	P		**P**	**21 55 03.2 -2.3**
VLDQ				IAmb		IAmb	21 55 09.4	
	comp=Z,5.7nm,1.3s							
U40A	**Yellville**	**61.94**	**66**	P		**P**	**21 55 09.2 -0.7**
U40A				IAmb		IAmb	21 55 10.6	
	comp=Z,8.1nm,1.4s							
SFIN	**Lafayette**	**62.20**	**59**	P		**P**	**21 55 11.3 -0.2**
P46A	**Rosedale**	**62.69**	**60**	P		**P**	**21 55 13.9 -0.9**
WHAR	**Wooly Hollow**	**63.03**	**67**	P		**P**	**21 55 16.0 -1.1**
WHAR				IAmb		IAmb	21 55 16.8	
	comp=Z,3.7nm,0.9s							
WCI	**Wyandotte Cave**	**64.19**	**60**	P		**P**	**21 55 25.6 +0.9**
WCI				pmax		pmax		
	comp=Z,6.0nm,0.8s							
WCI	**Wyandotte Cave**	**64.19**	**60**	P		**P**	**21 55 25.6 +0.9**
WCI				IAmb		IAmb	21 55 26.9	
	comp=Z,6.3nm,0.8s							
N51A	**Ashland**	**64.25**	**56**	P		**P**	**21 55 22.9 -2.2**
FINES	**FINESS Array B**	**64.42**	**345**	P		**P**	**21 55 25.4 -0.3**
	comp=Z,1.2nm,0.3s,baz=10,slow=7.2,SNR=31							
AAK	**Ala-Archa**	**64.62**	**307**	*ce*P		**P**	**21 55 28.9 +1.3**
AAK				pmax		pmax		
	comp=Z,3.0nm,1.0s							
AAK	**Ala-Archa**	**64.62**	**307**	P		**P**	**21 55 28.4 +0.8**
AAK				IAmb		IAmb	21 55 28.7	
	comp=Z,2.5nm,0.6s							
T47A	**Sharon Grove**	**64.66**	**62**	P		**P**	**21 55 27.1 -0.6**
P51A	**Williamsport**	**64.97**	**57**	P		**P**	**21 55 29.2 -0.5**
P51A				IAmb		IAmb	21 55 31.6	
	comp=Z,9.0nm,1.0s							
LSA	**Lhasa**	**65.11**	**287**	IAmb		IAmb	21 55 33.8	
	comp=Z,6.1nm,0.6s							
SIJI	**Sorong**	**65.69**	**233**	P		**P**	**21 55 35.9 +1.3**
	comp=Z,16nm,0.6s,baz=20,slow=5.8,SNR=12							
V48A	**Smith Brothers**	**65.73**	**63**	P		**P**	**21 55 34.2 -0.5**
V48A				IAmb		IAmb	21 55 35.3	
	comp=Z,3.8nm,0.8s							
CLTN	**Cedars of Leba**	**65.74**	**62**	IAmb		IAmb	21 55 36.2	
	comp=Z,6.9nm,0.7s							
T50A	**Nancy**	**65.86**	**60**	IAmb		IAmb	21 55 36.3	
	comp=Z,4.4nm,0.5s							
KK31	**Karatay Array**	**66.18**	**310**	P		**P**	**21 55 37.8 +0.4**
KK31				pmax		pmax		
	comp=Z,3.0nm,0.7s							
KK31	**Karatay Array**	**66.18**	**310**	P		**P**	**21 55 37.8 +0.4**
KK31				IAmb		IAmb	21 55 38.5	
	comp=Z,2.8nm,0.7s							
NC303	**NORSAR Array S**	**66.35**	**353**	P		**P**	**21 55 37.7 -0.5**
R53A	**Hurricane**	**66.40**	**58**	P		**P**	**21 55 38.3 -0.6**
NC405	**NORSAR Array S**	**66.43**	**353**	P		**P**	**21 55 39.0 +0.3**
NB201	**NORSAR Array S**	**66.53**	**353**	P		**P**	**21 55 39.7 +0.3**
NB2	**NORSAR Subarra**	**66.54**	**353**	P		**P**	**21 55 39.2 -0.3**
	comp=Z,2.4nm,0.5s,baz=8.6,slow=6.5							
NOA	**NORSAR Array B**	**66.54**	**353**	P		**P**	**21 55 39.6 +0.2**
	comp=Z,0.9nm,0.3s,baz=2.4,slow=5.7,SNR=22							
NAO01	**NORSAR Array S**	**66.76**	**353**	P		**P**	**21 55 40.3 -0.5**
SHL	**Shillong**	**67.73**	**283**	P		**P**	**21 55 47.6 -0.1**
SHL				pmax		pmax		
	comp=Z,7.0nm,1.0s							
SHL	**Shillong**	**67.73**	**283**	P		**P**	**21 55 47.6 -0.1**
SHL				IAmb		IAmb	21 55 48.5	
	comp=Z,7.1nm,1.0s							
BTK	**Batken**	**68.38**	**308**	P		**P**	**21 55 51.4 -0.1**
BTK				pmax		pmax		
	comp=Z,3.0nm,0.8s							
BTK	**Batken**	**68.38**	**308**	P		**P**	**21 55 51.4 -0.1**
CHTO	**Chiang Mai**	**68.51**	**273**	P		**P**	**21 55 52.3 -0.1**
CHTO				pmax		pmax		
	comp=Z,5.0nm,1.2s							
CHTO	**Chiang Mai**	**68.51**	**273**	P		**P**	**21 55 52.3 -0.1**
V55A	**Taylorsville**	**68.66**	**59**	P		**P**	**21 55 53.5 +0.4**
V55A				IAmb		IAmb	21 55 56.3	
	comp=Z,9.7nm,1.3s							
CM31	**Chiang Mai Arr**	**68.78**	**273**	P		**P**	**21 55 54.5 +0.4**
CM31				IAmb		IAmb	21 55 55.6	
	comp=Z,4.3nm,0.6s							
CMAR	**Chiang Mai Arr**	**68.78**	**273**	P		**P**	**21 55 55.0 +0.9**
	comp=Z,2.3nm,0.5s,baz=29,slow=6.7,SNR=29							
CMAR	**Chiang Mai Arr**	**68.78**	**273**	P		**P**	**21 55 55.0 +0.9**
TAPN	**Taplejung**	**68.87**	**288**	*e*P		**P**	**21 55 56.0 +1.1**
	comp=Z,7.6nm,0.3s							
GOGA	**Godfrey**	**69.31**	**62**	P		**P**	**21 55 56.7 -0.4**
GOGA				pmax		pmax		
	comp=Z,7.0nm,1.5s							
GOGA	**Godfrey**	**69.31**	**62**	P		**P**	**21 55 56.7 -0.4**
GOGA				IAmb		IAmb	21 56 03.5	
	comp=Z,7.4nm,1.4s							
HODGE	**Hodges**	**69.33**	**61**	P		**P**	**21 55 56.9 -0.4**
HODGE				IAmb		IAmb	21 55 58.4	
	comp=Z,7.3nm,0.6s							
ODAN	**Odare**	**69.43**	**287**	*e*P		**P**	**21 55 58.5 +0.2**
GAR	**Garm**	**69.44**	**307**	P		**P**	**21 55 57.8 -0.3**
GAR				IAmb		IAmb	21 55 59.1	
	comp=Z,8.2nm,0.5s							
GUN	**Gumba**	**69.52**	**289**	*e*P		**P**	**21 55 59.9 +0.9**
	comp=Z,36nm,0.4s							
JIRN	**Jiri**	**69.53**	**289**	*e*P		**P**	**21 56 00.0 +0.9**
	comp=Z,33nm,0.5s							
RAMN	**Ramite**	**69.82**	**288**	*e*P		**P**	**21 56 01.4 +0.7**
	comp=Z,27nm,0.5s							
W57A	**Gilead**	**69.83**	**59**	P		**P**	**21 55 59.8 -0.5**
W57A				IAmb		IAmb	21 56 06.6	
	comp=Z,5.7nm,1.1s							
BIRD	**Birdtown, Kers**	**69.98**	**59**	P		**P**	**21 56 00.5 -0.7**
BIRD				IAmb		IAmb	21 56 14.8	
	comp=Z,8.9nm,1.3s							
PKI	**Pulchoki**	**70.05**	**289**	*e*P		**P**	**21 56 02.9 +0.7**
	comp=Z,14nm,0.5s							
PKIN	**Phulchoki**	**70.05**	**289**	*e*P		**P**	**21 56 02.8 +0.7**
	comp=Z,19nm,0.5s							
GKN	**Gorkha**	**70.17**	**290**	*e*P		**P**	**21 56 03.4 +0.7**
	comp=Z,17nm,0.6s							
DMN	**Daman**	**70.20**	**290**	*e*P		**P**	**21 56 03.8 +0.8**
	comp=Z,7.6nm,0.5s							
DANN	**Dangsing**	**70.41**	**291**	*e*P		**P**	**21 56 05.2 +0.9**
	comp=Z,32nm,0.8s							
KOLN	**Koldanda**	**70.94**	**291**	*e*P		**P**	**21 56 08.1 +0.6**
	comp=Z,12nm,0.7s							
PYUN	**Piuthan**	**71.04**	**291**	*e*P		**P**	**21 56 08.8 +0.7**
NIL	**Nilore**	**72.12**	**302**	P		**P**	**21 56 15.5 +1.3**
NIL				pmax		pmax		
	comp=Z,6.0nm,0.6s							
NIL	**Nilore**	**72.12**	**302**	P		**P**	**21 56 15.5 +1.3**
NIL				IAmb		IAmb	21 56 15.6	
	comp=Z,5.5nm,0.6s							
KBL	**Kabul**	**73.58**	**305**	P		**P**	**21 56 22.4 -0.6**
KBL				pmax		pmax		
	comp=Z,5.0nm,0.8s							
KBL	**Kabul**	**73.58**	**305**	P		**P**	**21 56 22.4 -0.6**
AKASG	**Malin Array Be**	**74.01**	**340**	P		**P**	**21 56 24.9 0.0**
	comp=Z,2.3nm,0.4s,baz=25,slow=5.9,SNR=7.7							
AKASG	**Malin Array Be**	**74.01**	**340**	P		**P**	**21 56 25.0 0.0**
AKBB	**Malin Array Si**	**74.01**	**340**	*ce*P		**P**	**21 56 25.6 +0.6**
AKBB	**Malin Array Si**	**74.01**	**340**	P		**P**	**21 56 23.7 -1.3**
AKBB				IAmb		IAmb	21 56 25.9	
	comp=Z,5.3nm,0.7s							
KOLS	**Kolonicke sedl**	**77.05**	**344**	*e*P		**P**	**21 56 43.3 +1.0**
KOLS				pmax		pmax		
	comp=Z,2.0nm,0.6s							
KOLS	**Kolonicke sedl**	**77.05**	**344**	*e*P		**P**	**21 56 43.3 +1.0**
LANS	**Liptovska Anna**	**77.29**	**346**	*e*P		**P**	**21 56 45.4 +1.7**
LANS				pmax		pmax		
	comp=Z,3.0nm,0.6s							
LANS	**Liptovska Anna**	**77.29**	**346**	*e*P		**P**	**21 56 45.4 +1.7**
BUR08	**Bucovina Ar. S**	**77.75**	**341**	P		**P**	**21 56 46.8 +0.5**
BUR08				IAmb		IAmb	21 56 48.1	
	comp=Z,5.5nm,0.8s							
BURAR	**Bucovina Array**	**77.77**	**341**	⇓P		**P**	**21 56 47.3 +0.8**
VYHS	**Vyhne**	**78.03**	**346**	*e*P		**P**	**21 56 48.4 +0.6**
VYHS				pmax		pmax		
	comp=Z,2.0nm,1.0s							
VYHS	**Vyhne**	**78.03**	**346**	*e*P		**P**	**21 56 48.4 +0.6**
KHC	**Kasperske Hory**	**78.10**	**349**	*ce*P		**P**	**21 56 49.7 +1.5**
KHC				pmax		pmax		
	comp=Z,12nm,2.5s							
KHC	**Kasperske Hory**	**78.10**	**349**	*e*P		**P**	**21 56 48.8 +0.6**
GIRR	**Girov**	**78.14**	**340**	⇓P		**P**	**21 56 48.7 +0.3**
GEC2	**GERESS Array S**	**78.36**	**349**	P		**P**	**21 56 49.7 0.0**
GERES	**GERESS Array B**	**78.36**	**349**	P		**P**	**21 56 49.5 -0.2**
	comp=Z,0.5nm,0.6s,baz=17,slow=6.2,SNR=7.0							
CONA	**Conrad Observa**	**79.00**	**348**	*e*P		**P**	**21 56 54.5 +1.3**
	comp=Z,3.1nm,1.3s							
DRGR		**79.03**	**343**	⇓P		**P**	**21 56 54.2 +0.8**
MLR	**Muntele Rosu**	**79.65**	**340**	P		**P**	**21 56 57.8 +0.9**
MLR				pmax		pmax		
	comp=Z,9.0nm,1.5s							
MLR	**Muntele Rosu**	**79.65**	**340**	P		**P**	**21 56 57.8 +0.9**
ARSA	**Arzberg**	**79.71**	**348**	*i* P		**P**	**21 56 58.3 +1.3**
	comp=Z,3.0nm,0.9s							
KNRA	**Kununurra**	**79.80**	**228**	P		**P**	**21 56 58.0 +0.3**
RETA	**Reutte**	**80.02**	**351**	*e*PcP		**P**	**21 57 01.0 +2.3**
	comp=Z,0.6nm,0.5s							
WATA	**Walderalm**	**80.08**	**350**	*e*P		**P**	**21 56 59.8 +0.7**
	comp=Z,1.9nm,0.5s							
KBA	**Koelnbreinsper**	**80.15**	**349**	*e*P		**P**	**21 57 00.9 +1.4**
	comp=Z,7.6nm,0.6s							
WTTA	**Wattenberg**	**80.15**	**350**	*e*P		**P**	**21 57 00.6 +1.1**
	comp=Z,3.0nm,0.5s,SNR=5.5							
SQTA	**Sankt Quirin**	**80.24**	**351**	*i* P		**P**	**21 57 00.8 +0.9**
	comp=Z,3.2nm,0.8s							
SOKA	**Soboth**	**80.34**	**348**	*e*P		**P**	**21 57 01.8 +1.4**
	comp=Z,2.6nm,0.5s,SNR=7.9							
BZS	**Buzias**	**80.37**	**343**	⇑P		**P**	**21 56 59.9 -0.6**
GZR	**Gura Zlata**	**80.37**	**342**	⇑P		**P**	**21 57 01.6 +1.0**
FETA	**Feichten**	**80.48**	**351**	*i* P		**P**	**21 57 02.2 +0.9**
	comp=Z,1.2nm,0.6s							
OBKA	**Obir**	**80.56**	**348**	*e*P		**P**	**21 57 02.9 +1.3**
	comp=Z,2.7nm,0.4s,SNR=5.2							
ABTA	**Abfaltersbach**	**80.57**	**350**	*i* P		**P**	**21 57 02.4 +0.8**
	comp=Z,1.2nm,0.6s							
PRED	**Cave del Predi**	**80.75**	**349**	P		**P**	**21 57 02.4 -0.2**
FUORN	**Ofenpass-Fuorn**	**80.92**	**351**	P		**P**	**21 57 04.6 +0.9**
WB0	**Warramunga Arr**	**81.02**	**221**	P		**P**	**21 57 03.4 -0.7**
WB0				IAmb		IAmb	21 57 05.3	
	comp=Z,6.7nm,0.8s							
WR0	**Warramunga Arr**	**81.13**	**221**	P		**P**	**21 57 05.1 +0.4**
WR0				IAmb		IAmb	21 57 08.4	
	comp=Z,9.5nm,1.1s							
WB2	**Warramunga Arr**	**81.19**	**221**	P		**P**	**21 57 04.9 -0.1**
WB2				IAmb		IAmb	21 57 05.7	
	comp=Z,7.3nm,1.1s							
WRA	**Warramunga Arr**	**81.20**	**221**	P		**P**	**21 57 05.7 +0.6**
	comp=Z,3.9nm,0.6s,baz=33,slow=6.1,SNR=12							
HYB	**Hyderabad**	**81.88**	**288**	*i* P		P	21 57 03.0 -6.0	
DIVS	**Divibare**	**82.12**	**344**	P		**P**	**21 57 10.6 +0.7**
GSI	**Gunungsitoli**	**82.93**	**263**	P		**P**	**21 57 14.2 -0.2**
VTS	**Vitosha**	**82.96**	**341**	P		**P**	**21 57 13.3 -1.0**
VTS				pmax		pmax		
	comp=Z,2.0nm,0.8s							
VTS	**Vitosha**	**82.96**	**341**	P		**P**	**21 57 13.3 -1.0**
ZCCA	**Zocca**	**83.10**	**350**	P		**P**	**21 57 15.8 +0.9**
ZCCA				IAmb		IAmb	21 57 34.1	
	comp=Z,12nm,1.5s							
BRTR	**Keskin Array B**	**83.22**	**333**	P		**P**	**21 57 15.6 -0.2**
	comp=Z,1.0nm,0.7s,baz=64,slow=2.9,SNR=4.9							
MSSA	**Maissana**	**83.27**	**351**	P		**P**	**21 57 15.1 -0.7**
MSSA				IAmb		IAmb	21 57 34.1	
	comp=Z,7.5nm,1.0s							
FITZ	**Fitzroy Crossi**	**83.34**	**229**	P		**P**	**21 57 16.6 +0.4**
FITZ				IAmb		IAmb	21 57 26.7	
	comp=Z,7.5nm,1.2s							
VLC	**Villacollemand**	**83.35**	**351**	P		**P**	**21 57 16.9 +0.7**
VLC				IAmb		IAmb	21 57 22.7	
	comp=Z,9.7nm,1.2s							
NRCA	**Norcia**	**84.36**	**349**	P		**P**	**21 57 21.7 +0.3**
NRCA				IAmb		IAmb	21 57 23.9	
	comp=Z,8.2nm,0.9s							
ASAR	**Alice Springs**	**84.72**	**220**	P		**P**	**21 57 24.3 +1.1**
	comp=Z,1.6nm,0.6s,baz=24,slow=5.1,SNR=9.8							
TOO	**Toolangi**	**93.76**	**205**	P		**P**	**21 58 06.1 +0.5**
TOO				pmax		pmax		
	comp=Z,6.0nm,1.0s							
TOO	**Toolangi**	**93.76**	**205**	P		**P**	**21 58 06.1 +0.5**
TOO				IAmb		IAmb	21 58 18.8	
	comp=Z,6.0nm,1.0s							
TORD	**Torodi Ar. Bea**	**114.78**	**356**	PKP		**PKiKP**	**22 03 28.2 -0.8**
	comp=Z,0.4nm,0.3s,baz=17,slow=2.3,SNR=11							
DBIC	**Dimbokro**	**121.27**	**3**	PKP		**PKPdf**	**22 03 41.4 -0.2**
	comp=Z,3.1nm,0.7s,baz=150,slow=11,SNR=2.0							
MAW	**Mawson**	**145.84**	**218**	PKPbc		**PKPab**	**22 04 26.7 -0.3**
	comp=Z,2.8nm,0.5s,baz=131,slow=5.0,SNR=12							
MAW	**Mawson**	**145.84**	**218**			**PKPab**	**22 04 27.0 -0.1**
BOSA	**Boshof**	**148.76**	**308**	PKPbc		**PKPbc**	**22 04 36.2 +0.5**
	comp=Z,2.1nm,0.6s,baz=17,slow=4.6,SNR=10.0							

INET ***31*** *21:45:49.5, 12°.55N×88°.07W, h33km, ML3.9*
UCR ***31*** *21:45:52.0±1.0, 12°.48N×87°.96W, h22km±13km, ML3.7*
SNET ***31*** *21:45:52.4±0.6, 12°.52N×87°.92W, h32km±3km, ML3.7*

ISC 31 21:45:51.9±4.4, 12°.5N±0°.2×87°.9W±0°.1, h50km, n22, σ0°.28/30, 6C-10D, Near coast of Nicaragua

| Code | Station Name | Δ° | AZ° | Phase | ID | Op | IS

CNP	**Catarman**	**3.65**	**327**	*eP*		**Pn**	**21 50 05.7**	**+0.7**
CNP				*eS*		**Sn**	**21 50 48.4**	**+1.6**
GSPH	**General Santos**	**3.76**	**208**	*iP*		**Pn**	**21 50 10.6**	**+3.9**
CNOP	**Candoni, Negro**	**4.02**	**276**	*eP*		**Pn**	**21 50 10.5**	**+0.3**
CNOP				*eS*		**Sn**	**21 50 57.1**	**+1.0**
RCP	**Roxas**	**4.42**	**299**	*eP*		**Pn**	**21 50 18.5**	**+2.8**
JAP	**San Jose, Anti**	**4.86**	**286**	*eP*		**Pn**	**21 50 25.4**	**+3.8**
LQP	**Lukban**	**6.86**	**313**	*eP*		**Pn**	**21 50 51.7**	**+2.3**
TNTI	**Ternate**	**8.64**	**176**	P		**Pn**	**21 51 15.9**	**+2.3**
	1µm26nm, 0.7s							
TNTI	**Ternate**	**8.64**	**176**	Pn		**Pn**	**21 51 13.2**	**-0.4**
KMSI	**Cibinong**	**9.22**	**197**	P		**Pn**	**21 51 24.2**	**+2.7**
	66nm, 0.6s							
LBMI	**Labuha**	**10.05**	**175**	P		**Pn**	**21 51 36.0**	**+3.1**
	34nm, 0.8s							
MRSI	**Marisa**	**10.09**	**208**	P		**Pn**	**21 51 36.8**	**+3.3**
	2µm28nm, 0.9s							
LUWI	**Luwuk**	**11.13**	**201**	P		**Pn**	**21 51 51.3**	**+3.6**
	64nm, 0.8s							
SIJI	**Sorong**	**11.21**	**156**	Pn		**Pn**	**21 51 50.7**	**+1.9**
	2.3nm,0.3s,baz=329,slow=23,SNR=6.8							
SANI	**Sanana**	**11.44**	**184**	P		**Pn**	**21 51 51.3**	**-0.7**
	27nm, 0.6s							
NLAI	**Namlea**	**12.61**	**178**	P		**Pn**	**21 52 08.9**	**+1.0**
	559nm16nm, 0.6s							
TTSI	**Tana Toraja**	**14.18**	**209**	P		**Pn**	**21 52 32.0**	**+2.7**
	36nm, 0.8s							
TPUB	**Ta-pu**	**14.95**	**338**			**P**	**21 52 43.0**	**-1.5**
SPSI	**Sidrap Palu**	**15.01**	**208**	P		P	21 52 51.9	+6.8
BNSI	**Bone**	**15.24**	**206**	P		**P**	**21 52 46.2**	**-1.5**
	559nm56nm, 1.0s							
KAPI	**Kappang**	**15.95**	**206**	Pn		**Pn**	**21 52 53.4**	**+0.8**
	0.3nm,0.3s,baz=190,slow=4.6,SNR=4.0							
KAPI				LR		LR	21 59 32.8	
	comp=Z,94nm,18.6s,baz=40,slow=40							
SBUM	**Sibu**	**15.98**	**245**			**Pn**	**21 52 51.3**	**-1.7**
BKSI	**Bulukumba**	**16.07**	**204**	P		**Pn**	**21 52 54.1**	**0.0**
	14nm, 0.7s							
SMPI	**Sarmi**	**16.50**	**133**	P		**Pn**	**21 52 58.3**	**-1.2**
	640nm9.7nm,0.8s							
KSM	**Kuching**	**18.13**	**245**	P		**P**	**21 53 17.9**	**-1.8**
JAY	**Jayapura**	**18.33**	**130**	LR		LR	22 00 05.4	
	comp=Z,137nm,20.8s,baz=325,slow=36							
SOEI	**Soe**	**19.23**	**187**	P		**Pn**	**21 53 32.2**	**-1.0**
SOEI				IAmb		IAmb	21 53 51.7	
	comp=Z,26nm,0.6s							
BATI	**Baumata**	**19.75**	**189**	P		**Pn**	**21 53 38.4**	**-0.9**
	comp=Z,12nm,0.3s,baz=349,slow=0.4,SNR=14							
BATI	**Baumata**	**19.75**	**189**	P		**P**	**21 53 37.2**	**-0.4**
	comp=Z,44nm,0.6s							
NJ2	**Nanjing**	**23.64**	**343**	*eP*		**P**	**21 54 18.5**	**0.0**
NJ2				pmax		pmax		
	comp=Z,3.0nm,0.5s							
NJ2				pmax		pmax		
	comp=Z,5.0nm,0.5s							
JNU	**Nakatsue**	**23.88**	**9**	P		**P**	**21 54 20.9**	**+0.2**
	comp=Z,8.8nm,0.9s,baz=161,slow=4.5,SNR=8.1							
JNU				LR		LR	22 05 02.8	
	comp=Z,52nm,19.0s,baz=184,slow=40							
WHN	**Wuhan**	**23.95**	**333**	P		**P**	**21 54 22.5**	**+1.2**
WHN				pmax		pmax		
	comp=Z,20nm,0.7s							
LEM	**Lembang**	**24.96**	**230**	LR		LR	22 05 30.2	
	comp=Z,108nm,18.2s,baz=174,slow=40							
KNRA	**Kununurra**	**25.04**	**175**	P		**P**	**21 54 31.3**	**-0.1**
JHJ	**Hachijo jima 2**	**26.47**	**25**	LR		LR	22 05 31.2	
	comp=Z,43nm,18.7s,baz=73,slow=37							
FITZ	**Fitzroy Crossi**	**27.39**	**182**	P		**P**	**21 54 51.7**	**-0.9**
	comp=Z,4.8nm,0.3s,baz=5.7,slow=7.9,SNR=25							
FITZ	**Fitzroy Crossi**	**27.39**	**182**	P		**P**	**21 54 53.0**	**+0.4**
FITZ				IAmb		IAmb	21 54 56.1	
	comp=Z,12nm,0.9s							
KRJI	**Kerinci**	**27.63**	**247**	P		**P**	**21 54 56.4**	**+1.4**
	comp=Z,2µmcomp=Z,70nm,0.5s							
KSRS	**Korea Array**	**27.91**	**2**	P		**P**	**21 54 57.7**	**+0.7**
	comp=Z,2.8nm,1.0s,baz=177,slow=12,SNR=11							
KSRS				LR		LR	22 07 12.7	
	comp=Z,49nm,18.2s,baz=180,slow=39							
CMAR	**Chiang Mai Arr**	**28.35**	**291**	P		**P**	**21 55 01.2**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=100,slow=6.9,SNR=6.2							
CMAR				ScP		**ScP**	**22 01 52.8**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=204,slow=1.2,SNR=4.7							
CMAR				LR		LR	22 07 08.5	
	comp=Z,68nm,18.1s,baz=205,slow=38							
PSI	**Prapat**	**28.38**	**258**	P		**P**	**21 55 01.2**	**-0.5**
	comp=Z,2.3nm,0.4s,baz=0.4,slow=11,SNR=4.6							
MJAR	**Matsushiro Arr**	**28.93**	**19**	P		**P**	**21 55 05.3**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=198,slow=8.8,SNR=6.1							
MJAR				LR		LR	22 06 51.1	
	comp=Z,50nm,18.4s,baz=210,slow=37							
WRA	**Warramunga Arr**	**30.16**	**166**	P		**P**	**21 55 15.4**	**-1.8**
	comp=Z,0.7nm,0.5s,baz=348,slow=9.5,SNR=9.8							
BJI	**Beijing**	**31.88**	**345**	P		**P**	**21 55 33.0**	**+0.8**
BJI				pmax		pmax		
	comp=Z,5.0nm,1.2s							
AS31	**Alice Springs**	**33.65**	**168**	P		**P**	**21 55 48.1**	**+0.2**
ASAR	**Alice Springs**	**33.65**	**168**	P		**P**	**21 55 46.1**	**-1.8**
	comp=Z,1.1nm,0.4s,baz=349,slow=7.1,SNR=16							
USRK	**Ussuriysk Ar.**	**34.93**	**7**	P		**P**	**21 55 59.8**	**+1.1**
	comp=Z,4.2nm,0.8s,baz=195,slow=9.6,SNR=10							
SHL	**Shillong**	**36.72**	**300**	P		**P**	**21 56 12.4**	**-2.2**
SHL				IAmb		IAmb	21 56 29.2	
	comp=Z,5.8nm,0.7s							
GTA	**Gaotai**	**38.30**	**326**	*eP*		**P**	**21 56 26.3**	**-1.4**
GTA				pP		pP	21 56 30.3	-7.7
GTA				sP		sP	21 56 33.5	-9.0
GTA				pmax		pmax		
	comp=Z,2.0nm,1.0s							
MORW	**Morawa**	**39.65**	**195**	P		**P**	**21 56 37.6**	**-1.3**
MORW				IAmb		IAmb	21 56 40.9	
	comp=Z,28nm,1.3s							
H11S3	**WAKE ISLAND Hy**	**39.75**	**72**	T		T	22 39 50.1	
	baz=262,slow=75,SNR=26							
H11S1	**WAKE ISLAND Hy**	**39.77**	**72**	T		T	22 39 40.3	
	baz=262,slow=75,SNR=27							
H11S2	**WAKE ISLAND Hy**	**39.77**	**72**	T		T	22 39 43.0	
	baz=262,slow=75,SNR=24							
FORT	**Forrest**	**40.01**	**178**	P		**P**	**21 56 41.2**	**-0.7**
FORT				IAmb		IAmb	21 56 46.9	
	comp=Z,15nm,0.7s							
H11N1	**WAKE ISLAND Hy**	**40.12**	**71**	T		T	22 40 16.7	
	baz=265,slow=74,SNR=21							
H11N2	**WAKE ISLAND Hy**	**40.13**	**71**	T		T	22 40 17.4	
	baz=265,slow=74,SNR=14							
H11N3	**WAKE ISLAND Hy**	**40.14**	**71**	T		T	22 40 18.2	
	baz=265,slow=74,SNR=21							
BBOO	**Buckleboo**	**42.96**	**168**	P		**P**	**21 57 05.4**	**-0.6**
BBOO				IAmb		IAmb	21 57 17.6	
	comp=Z,15nm,0.7s							
NWAO	**Narrogin (SRO)**	**43.09**	**192**	P		**P**	**21 57 06.7**	**-0.3**
NWAO	**Narrogin (SRO)**	**43.09**	**192**	P		**P**	**21 57 06.9**	**-0.2**
NWAO				IAmb		IAmb	21 57 23.7	
	comp=Z,36nm,1.4s							
STKA	**Stephens Creek**	**43.49**	**161**	P		**P**	**21 57 10.0**	**-0.3**
	comp=Z,1.5nm,0.4s,baz=349,slow=8.3,SNR=6.8							
STKA	**Stephens Creek**	**43.49**	**161**	P		**P**	**21 57 10.6**	**+0.3**
WMQ	**Urumqi**	**48.13**	**322**	*eP*		**P**	**21 57 48.0**	**+1.1**
WMQ				sP		pP	21 57 54.5	-3.0
WMQ				pmax		pmax		
	comp=Z,24nm,3.6s							
WMQ				LR		LR		
	comp=N,56nm,16.5s							
WMQ				LR		LR		
	comp=E,150nm,24.7s							
WMQ				LR		LR		
	comp=Z,190nm,18.7s							
PETK	**Petropavlovsk-**	**50.21**	**24**	P		**P**	**21 58 04.9**	**+2.3**
	comp=Z,3.0nm,0.8s,baz=187,slow=6.9,SNR=5.8							
MK31	**Makanchi Array**	**52.94**	**323**	P		**P**	**21 58 22.5**	**-0.6**
MKAR	**Makanchi Array**	**52.94**	**323**	P		**P**	**21 58 22.8**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=122,slow=8.1,SNR=22							
MAKZ	**Makanchi**	**53.13**	**323**	P		**P**	**21 58 22.9**	**-1.6**
KSH	**Kashi**	**54.10**	**312**	P		P	21 58 40.5	+8.6
KSH				pmax		pmax		
	comp=Z,130nm,2.2s							
KSH				pmax		pmax		
	comp=Z,100nm,6.8s							
NIL	**Nilore**	**54.55**	**305**	P		**P**	**21 58 33.5**	**-1.6**
ZALV	**Zalesovo Beam**	**55.55**	**331**	P		**P**	**21 58 40.6**	**-1.3**
	comp=Z,0.6nm,0.4s,baz=111,slow=8.1,SNR=4.4							
KURK	**Kurchatov**	**56.98**	**326**	P		**P**	**21 58 50.9**	**-1.3**
KURK				IAmb		IAmb	21 59 07.0	
	comp=Z,4.4nm,0.9s							
MSVF	**Nonsavu**	**57.46**	**118**	P		**P**	**21 58 56.2**	**0.0**
GAR	**Garm**	**58.14**	**310**	P		**P**	**21 59 00.2**	**-0.5**
CHGR	**Chuyangaron**	**58.94**	**310**	P		**P**	**21 59 05.3**	**-1.0**

KK31	**Karatay Array**	**59.13**	**315**	P		**P**	**21 59 06.4**	**-1.0**
KK31				IAmb		IAmb	21 59 10.4		
	comp=Z,1.9nm,0.7s								
TIXI	**Tiksi**	**62.16**	**1**	P		**P**	**21 59 28.2**	**+0.7**
TIXI				IAmb		IAmb	21 59 29.6		
	comp=Z,4.7nm,0.8s								
BRVK	**Borovoye**	**62.65**	**326**	P		**P**	**21 59 29.8**	**-1.4**
BRVK				IAmb		IAmb	21 59 32.1		
	comp=Z,2.7nm,0.8s								
NRIK	**Noril'sk**	**64.91**	**346**	P		**P**	**21 59 45.4**	**-0.4**
	comp=Z,2.6nm,0.7s,baz=156,slow=6.9,SNR=5.3								
GEYT	**Alibeck**	**67.38**	**307**	P		**P**	**22 00 01.0**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=316,slow=56,SNR=2.6								
ARU	**Arti**	**70.14**	**327**	P		**P**	**22 00 17.9**	**-1.1**
ARU				IAmb		IAmb	22 00 23.6		
	comp=Z,3.6nm,0.6s								
CASY	**Casey**	**76.45**	**187**	P		**P**	**22 00 56.7**	**+0.9**
CASY				IAmb		IAmb	22 01 07.3		
	comp=Z,5.8nm,0.9s								
RAYN	**Ar Rayn**	**78.27**	**292**	P		**P**	**22 01 06.7**	**-0.4**
RAYN				IAmb		IAmb	22 01 07.4		
	comp=Z,3.1nm,0.7s								
ILAR	**Eielson Array**	**79.99**	**26**	P		**P**	**22 01 16.7**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=230,slow=5.1,SNR=7.3								
EPYK	**Eagle Plains**	**84.05**	**24**	P		**P**	**22 01 38.8**	**+1.8**
EPYK				IAmb		IAmb	22 01 39.7		
	comp=Z,7.3nm,1.1s								
INK	**Inuvik**	**84.89**	**22**	P		**P**	**22 01 41.7**	**+0.6**
INK				IAmb		IAmb	22 01 44.0		
	comp=Z,6.3nm,1.2s								
ARCES	**ARCESS Array B**	**85.11**	**340**	P		**P**	**22 01 42.8**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=83,slow=7.1,SNR=11								
BRTR	**Keskin Array B**	**86.38**	**309**	P		**P**	**22 01 47.7**	**-1.6**
	comp=Z,0.6nm,0.8s,baz=307,slow=2.0,SNR=2.7								
FINES	**FINESS Array B**	**86.81**	**332**	P		**P**	**22 01 51.0**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=79,slow=4.3,SNR=9.1								
NOA	**NORSAR Array B**	**93.68**	**334**	LR		LR	22 47 48.2		
	comp=Z,16nm,19.4s,baz=195,slow=38								
YKA	**Yellowknife Ar**	**94.33**	**24**	P		**P**	**22 02 27.6**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=292,slow=4.2,SNR=9.3								
TXAR	**Lajitas Array**	**118.04**	**50**	PKP		**PKiKP**	**22 07 54.6**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=0.0,slow=1.3,SNR=3.6								
TORD	**Torodi Ar. Bea**	**120.96**	**291**	PKP		**PKiKP**	**22 07 59.9**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=0.0,slow=40,SNR=3.0								

*IDC **31** 21:57:08.1±0.6, 9.°31N×126.°37E, h0km, mb4.1/16, mb1 4.2/16, mb1mx4.0/49, mbtmp4.1/16, MS2.9/1, Ms1 2.9/1, ms1mx2.5/44, Error ellipse: s-maj=33.0km s-min=13.3km az=78.0*

*NEIC **31** 21:57:09.5±1.8, 9.°43N±0.°04×126.°55E±0.°09, h10km±1km, mb4.6/60, Error ellipse: s-maj=15.5km s-min=7.6km az=268.0*

*MAN **31** 21:57:10.6, 9.°45N×126.°87E, h19km, mb4.9, ML3.9, MS3.9*

ISC 31 21:57:12.1±1.7, 9.°42N±0.°04×126.°71E±0.°06, h27km±12km, n118, σ1°71/121, mb4.5/44, 2C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.26**	**287**	*eP*		**Pn**	**21 57 34.3**	**+0.4**
SCPH				*eS*		**Sn**	**21 57 51.2**	**+1.2**
BIPH	**Bislig**	**1.27**	**196**	*eP*		Pb	21 57 43.8	+8.3
BIPH				*eS*		**Sb**	**21 57 59.6**	**+8.1**
MSLP	**Maasin**	**1.96**	**291**	*eP*		**Pn**	**21 57 45.4**	**+1.8**
MSLP				*eS*		**Sb**	**21 58 10.8**	**-0.4**
BUKP	**Musuan**	**2.24**	**227**	*eP*		**Pn**	**21 57 49.5**	**+2.0**
BUKP				*eS*		**Sn**	**21 58 18.1**	**+3.9**
MATI	**Mati**	**2.50**	**190**	*eP*		**Pn**	**21 57 50.8**	**-0.2**
MATI				*eS*		**Sn**	**21 58 19.9**	**-0.7**
DAV	**Davao City (W)**	**2.59**	**206**	Pn		**Pn**	**21 57 54.3**	**+2.0**
	50nm,0.3s,baz=58,slow=9.9,SNR=7.6							
DAV				Sn		**Sb**	**21 58 29.2**	**0.0**
	92nm,0.3s,baz=61,slow=22,SNR=6.5							
DAV	**Davao City (W)**	**2.59**	**206**			**Pn**	**21 57 51.1**	**-1.1**
DMPH	**Davao City--Mi**	**2.61**	**207**	*eP*		**Pb**	**21 57 56.9**	**-1.3**
DMPH				*eS*		**Sb**	**21 58 29.1**	**-0.7**
LLP	**Lapu-Lapu**	**2.85**	**289**	*eP*		**Pn**	**21 57 58.2**	**+2.4**
LLP				*eS*		**Sn**	**21 58 34.1**	**+4.8**
KCP	**Kidapawan**	**2.88**	**214**	*iP*		**Pn**	**21 57 58.6**	**+2.2**
KCP				*i*	S	**Sb**	**21 58 35.2**	**-2.5**
CTBH	**Cotabato--PC H**	**3.27**	**228**	*iP*		**Pn**	**21 58 03.4**	**+1.7**
DDMP	**Don Marcelino,**	**3.44**	**197**	*eP*		**Pn**	**21 58 05.5**	**+1.5**
DDMP				*eS*		**Sn**	**21 58 46.8**	**+3.0**
PAGZ	**Pagadian**	**3.64**	**245**	*eP*		**Pn**	**21 58 08.5**	**+1.7**
PAGZ				*eS*		**Sn**	**21 58 52.2**	**+3.3**
CNP	**Catarman**	**3.67**	**327**	*eP*		**Pn**	**21 58 09.1**	**+1.9**
CNP				*eS*		**Sn**	**21 58 52.8**	**+3.2**
RCP	**Roxas**	**4.44**	**299**	*eP*		Pn	21 58 22.9	+5.1
TGY	**Tagaytay City**	**7.32**	**310**	LR		LR	22 01 50.1	
	comp=Z,105nm,21.5s,baz=122,slow=40							
TNTI	**Ternate**	**8.61**	**176**	Pn		**Pn**	**21 59 14.2**	**-0.9**
SZP	**Santa**	**10.12**	**324**	Pn		**Pn**	**21 59 32.3**	**-3.4**
KKM	**Kota Kinabalu**	**10.93**	**253**	Pn		Pn	21 59 39.6	-7.3
LUWI	**Luwuk**	**11.11**	**201**	Pn		**Pn**	**21 59 46.4**	**-2.9**
FAKI	**Fak Fak**	**13.44**	**156**	Pn		**Pn**	**22 00 19.8**	**-1.4**
BKB	**Balikpapan**	**14.43**	**223**	Pn		**Pn**	**22 00 33.8**	**-0.9**
YULB	**Yu-li**	**14.83**	**340**	Pn		**Pn**	**22 00 39.0**	**-1.1**
TPUB	**Ta-pu**	**14.98**	**338**			**P**	**22 00 45.3**	**-2.1**
SSLB	**Suanglung**	**15.31**	**340**			**P**	**22 00 50.5**	**-0.6**
YOJ	**Yonaguni jima**	**15.37**	**347**			**P**	**22 00 51.3**	**-0.4**
YOJ				IAmb		IAmb	22 01 04.5	
	comp=Z,41nm,1.0s							
NACB	**Ninganchiao**	**15.47**	**342**			**P**	**22 00 51.1**	**-1.7**
KSM	**Kuching**	**18.12**	**245**			**Pn**	**22 01 22.0**	**-0.1**
QIZ	**Qiongzhong**	**18.92**	**302**	P		**P**	**22 01 31.9**	**+0.8**
SOEI	**Soe**	**19.20**	**187**	P		**Pn**	**22 01 35.7**	**+0.5**
SOEI				IAmb		IAmb	22 01 48.5	
	comp=Z,20nm,0.8s							
BATI	**Baumata**	**19.73**	**189**	P		**P**	**22 01 40.7**	**+0.8**
	comp=Z,9.8nm,0.3s,baz=12,slow=1.5,SNR=9.9							
MTN	**Manton Dam**	**22.55**	**169**	P		**P**	**22 02 12.1**	**+1.8**
MTN				IAmb		IAmb	22 02 30.1	
	comp=Z,12nm,0.8s							
JNU	**Nakatsue**	**23.90**	**9**	P		**P**	**22 02 28.9**	**+5.2**
	comp=Z,6.1nm,0.9s,baz=188,slow=17,SNR=4.7							
JNU	**Nakatsue**	**23.90**	**9**	P		**P**	**22 02 25.8**	**+2.0**
KNRA	**Kununurra**	**25.02**	**175**	P		**P**	**22 02 33.4**	**-0.6**
KNRA				IAmb		IAmb	22 02 50.0	
	comp=Z,12nm,0.8s							
KULM	**Kulim**	**26.16**	**263**	P		**P**	**22 02 42.8**	**-1.7**
FITZ	**Fitzroy Crossi**	**27.36**	**182**	P		**P**	**22 02 55.2**	**0.0**
	comp=Z,7.0nm,0.5s,baz=6.0,slow=8.5,SNR=21							
KSRS	**Korea Array**	**27.93**	**2**	P		**P**	**22 03 02.1**	**+2.0**
	comp=Z,0.8nm,0.5s,baz=181,slow=9.1,SNR=6.5							
CMAR	**Chiang Mai Arr**	**28.37**	**291**	P		**P**	**22 03 03.6**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=22,slow=38,SNR=2.7							
COEN	**Coen**	**28.39**	**145**	P		**P**	**22 03 05.2**	**+0.7**
COEN				IAmb		IAmb	22 03 16.7	
	comp=Z,7.0nm,0.9s							
WB0	**Warramunga Arr**	**29.97**	**165**	P		**P**	**22 03 17.5**	**-1.0**
GSI	**Gunungsitoli**	**30.08**	**256**	P		**P**	**22 03 19.3**	**-0.3**
WRA	**Warramunga Arr**	**30.13**	**166**	P		**P**	**22 03 18.8**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=348,slow=9.4,SNR=8.0							
WB2	**Warramunga Arr**	**30.13**	**166**	P		**P**	**22 03 18.9**	**-1.0**
WR0	**Warramunga Arr**	**30.19**	**165**	P		**P**	**22 03 19.9**	**-0.5**
PSA00	**Pilbara Seismi**	**31.53**	**192**	P		**P**	**22 03 31.2**	**-1.0**
PSA00				IAmb		IAmb	22 03 32.9	
	comp=Z,6.7nm,0.8s							
AS31	**Alice Springs**	**33.62**	**168**	P		**P**	**22 03 50.8**	**+0.3**
ASAR	**Alice Springs**	**33.62**	**168**	P		**P**	**22 03 49.9**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=353,slow=6.8,SNR=15							
ASAR				PcP		**PcP**	**22 06 30.4**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=355,slow=3.1,SNR=4.7							
CTAO	**Charters Tower**	**35.07**	**147**	P		**P**	**22 04 03.9**	**+0.8**
CTAO				IAmb		IAmb	22 04 16.3	
	comp=Z,12nm,1.1s							
SHL	**Shillong**	**36.74**	**300**	P		**P**	**22 04 16.6**	**-1.0**
SHL				IAmb		IAmb	22 04 18.0	
	comp=Z,6.6nm,0.7s							
MORW	**Morawa**	**39.62**	**195**	P		**P**	**22 04 40.5**	**-1.0**
MORW				IAmb		IAmb	22 04 55.5	
	comp=Z,11nm,1.1s							
H11S3	**WAKE ISLAND Hy**	**39.75**	**72**	T		T	22 47 45.0	
	baz=262,slow=75,SNR=22							
H11S1	**WAKE ISLAND Hy**	**39.77**	**72**	T		T	22 47 44.4	
	baz=262,slow=75,SNR=20							
H11S2	**WAKE ISLAND Hy**	**39.77**	**72**	T		T	22 47 46.4	
	baz=262,slow=75,SNR=23							
KLR	**Kul'dur**	**39.91**	**5**	P		**P**	**22 04 45.0**	**+1.3**
	comp=Z,0.8nm,0.5s,baz=172,slow=8.6,SNR=5.6							
FORT	**Forrest**	**39.99**	**178**	P		**P**	**22 04 44.6**	**0.0**
FORT				IAmb		IAmb	22 04 57.2	
	comp=Z,12nm,0.7s							
H11N1	**WAKE ISLAND Hy**	**40.12**	**71**	T		T	22 48 13.8	
	baz=264,slow=74,SNR=33							
H11N2	**WAKE ISLAND Hy**	**40.12**	**71**	T		T	22 48 13.4	
	baz=264,slow=74,SNR=25							
H11N3	**WAKE ISLAND Hy**	**40.13**	**71**	T		T	22 48 15.9	
	baz=264,slow=74,SNR=38							
TAPN	**Taplejung**	**40.86**	**301**	*eP*		**P**	**22 04 51.7**	**-0.6**
	comp=Z,6.8nm,0.4s							
ODAN	**Odare**	**40.98**	**300**	*eP*		**P**	**22 04 52.5**	**-0.7**
RAMN	**Ramite**	**41.68**	**300**	*eP*		**P**	**22 04 58.7**	**-0.3**
	comp=Z,5.1nm,0.4s							
JIRN	**Jiri**	**42.24**	**301**	*eP*		**P**	**22 05 03.0**	**-0.7**
	comp=Z,18nm,0.3s							
GUN	**Gumba**	**42.58**	**301**	*eP*		**P**	**22 05 05.9**	**-0.5**
	comp=Z,12nm,0.6s							
PKI	**Pulchoki**	**42.87**	**301**	*eP*		**P**	**22 05 08.2**	**-0.6**
	comp=Z,2.7nm,0.3s							
PKIN	**Phulchoki**	**42.89**	**301**	*eP*		**P**	**22 05 08.4**	**-0.5**
	comp=Z,3.5nm,0.3s							
BBOO	**Buckleboo**	**42.93**	**168**	P		**P**	**22 05 08.9**	**+0.2**
BBOO				IAmb		IAmb	22 05 20.8	
	comp=Z,8.2nm,0.7s							
NWAO	**Narrogin (SRO)**	**43.07**	**192**	P		**P**	**22 05 09.6**	**-0.3**
NWAO				IAmb		IAmb	22 05 17.2	
	comp=Z,10nm,0.8s							
NWAO	**Narrogin (SRO)**	**43.07**	**192**	P		**P**	**22 05 09.9**	**+0.1**
NWAO				IAmb		IAmb	22 05 25.0	
	comp=Z,11nm,1.1s							
STKA	**Stephens Creek**	**43.46**	**161**	P		**P**	**22 05 13.0**	**0.0**
	comp=Z,0.9nm,0.4s,baz=339,slow=9.3,SNR=6.4							
KOLN	**Koldanda**	**44.47**	**300**	*eP*		**P**	**22 05 19.8**	**-1.7**
	comp=Z,12nm,0.7s							
DANN	**Dangsing**	**44.49**	**301**	*eP*		**P**	**22 05 20.5**	**-1.3**
	comp=Z,13nm,0.5s							
TOO	**Toolangi**	**49.94**	**160**	P		**P**	**22 06 03.9**	**+0.2**
TOO				IAmb		IAmb	22 06 10.4	
	comp=Z,5.3nm,1.1s							
PETK	**Petropavlovsk-**	**50.23**	**24**	P		**P**	**22 06 09.1**	**+3.4**
	comp=Z,0.9nm,0.8s,baz=104,slow=13,SNR=2.0							
MKAR	**Makanchi Array**	**52.97**	**323**	P		**P**	**22 06 25.3**	**-1.1**
	comp=Z,1.5nm,0.5s,baz=126,slow=7.6,SNR=32							
MAKZ	**Makanchi**	**53.16**	**323**	P		**P**	**22 06 27.4**	**-0.4**
MAKZ				IAmb		IAmb	22 06 28.1	
	comp=Z,2.4nm,0.5s							
KDJ	**Kajisay**	**54.20**	**316**	P		**P**	**22 06 33.9**	**-1.7**
KDJ				IAmb		IAmb	22 06 35.7	
	comp=Z,5.0nm,0.9s							
NIL	**Nilore**	**54.57**	**305**	P		**P**	**22 06 37.7**	**-0.6**
ZALV	**Zalesovo Beam**	**55.58**	**331**	P		**P**	**22 06 43.5**	**-1.7**
	comp=Z,0.9nm,0.4s,baz=126,slow=5.9,SNR=6.1							
KURK	**Kurchatov**	**57.01**	**326**	P		**P**	**22 06 55.2**	**-0.3**
KURK				IAmb		IAmb	22 06 55.8	
	comp=Z,3.0nm,0.8s							
BTK	**Batken**	**58.07**	**312**	P		**P**	**22 07 02.3**	**-1.0**
GAR	**Garm**	**58.17**	**310**	P		**P**	**22 07 02.6**	**-1.4**
GAR				IAmb

	143µm,0.3s								
ZKR	**Zakros**	**0.42**	**51**	P	**Pg**	**22 08 36.8**	**-0.5**		
ZKR				S	**Sg**	**22 08 42.7**	**-0.2**		
ZKR				AML	AML	22 08 44.9			
ZKR				AML	AML	22 08 45.0			
ZKR	**Zakros**	**0.42**	**51**	PG	**Pg**	**22 08 36.9**	**-0.3**		
ZKR				SG	**Sb**	**22 08 43.9**	**-0.4**		
ZKR	**Zakros**	**0.42**	**51**	⇑P	**Pg**	**22 08 36.8**	**-0.5**		
ZKR				S	**Sb**	**22 08 43.6**	**-0.7**		
ZKR				AML	AML	22 08 44.4			
	397nm,0.3s								
ZKR				AML	AML	22 08 44.4			
	397nm,0.3s								
ZKR				AML	AML	22 08 44.6			
	172nm,0.3s								
ZKR				AML	AML	22 08 44.6			
	172nm,0.3s								
LAST	**Lasithi**	**0.42**	**318**	P	**Pg**	**22 08 37.0**	**-0.2**		
LAST				S	**Sb**	**22 08 43.9**	**-0.5**		
	26µm,0.6s								
LAST	**Lasithi**	**0.42**	**318**	P	**Pg**	**22 08 37.1**	**-0.2**		
LAST				S	**Sg**	**22 08 42.1**	**-0.9**		
NPS	**Neapolis**	**0.45**	**337**	P	**Pg**	**22 08 37.3**	**-0.5**		
NPS				S	**Sb**	**22 08 44.9**	**-0.2**		
	26µm,0.4s								
NPS	**Neapolis**	**0.45**	**337**	P	**Pg**	**22 08 37.3**	**-0.5**		
NPS				S	**Sg**	**22 08 42.0**	**-1.7**		
NPS				AML	AML	22 08 46.0			
	comp=N,42932µm,0.4s								
NPS				AML	AML	22 08 46.7			
	comp=E,61572µm,0.3s								
HRKL	**Herakleio**	**0.75**	**308**	P	**Pg**	**22 08 42.7**	**-0.7**		
HRKL				S	**Sn**	**22 08 55.9**	**-0.4**		
	comp=E,25µm,0.7s								
HRKL	**Herakleio**	**0.75**	**308**	PG	**Pg**	**22 08 43.3**	**-0.1**		
HRKL				SG	**Sn**	**22 08 55.2**	**-1.1**		
KSTL	**Kastelli Herak**	**0.77**	**306**	P	Pg	22 08 38.9	-4.8		
KSTL				S	**Sg**	**22 08 48.1**	**-5.7**		
IACM	**Heraklion**	**0.77**	**307**	P	**Pg**	**22 08 43.0**	**-0.7**		
IACM				S	**Sn**	**22 08 57.0**	**+0.3**		
	comp=E,80µm,0.6s								
IACM	**Heraklion**	**0.77**	**307**	P	**Pg**	**22 08 43.6**	**-0.1**		
IACM				S	**Sg**	**22 08 53.4**	**-0.4**		
IACM				AML	AML	22 09 03.5			
IACM				AML	AML	22 09 11.1			
SIVA	**Sivas**	**0.85**	**282**	P	**Pg**	**22 08 44.7**	**-0.6**		
SIVA				S	**Sb**	**22 08 56.8**	**+0.1**		
	comp=E,27µm,0.7s								
SIVA	**Sivas**	**0.85**	**282**	P	**Pg**	**22 08 45.0**	**-0.3**		
SIVA				S	**Sb**	**22 08 57.5**	**+0.8**		
SIVA				AML	AML	22 09 03.7			
	comp=N,38504µm,0.8s								
SIVA				AML	AML	22 09 09.0			
	comp=E,66112µm,0.7s								
IDI	**Anoyia**	**0.88**	**300**	P	**Pg**	**22 08 44.4**	**-1.5**		
IDI				S	**Sb**	**22 08 58.5**	**+0.8**		
	comp=E,6µm,0.5s								
IDI	**Anoyia**	**0.88**	**300**	Pn	**Pg**	**22 08 44.7**	**-1.3**		
	comp=E,121nm,0.3s,baz=118,slow=15,SNR=496								
IDI				LR	LR	22 08 52.4			
	comp=E,129nm,19.1s,baz=318,slow=30								
IDI				Sn	**Sb**	**22 08 58.4**	**+0.7**		
	comp=E,498nm,0.3s,baz=201,slow=22,SNR=16								
IDI	**Anoyia**	**0.88**	**300**	P	**Pg**	**22 08 45.0**	**-1.0**		
IDI				S	**Sg**	**22 08 57.1**	**-0.4**		
IDI				AML	AML	22 09 00.7			
	comp=N,14623µm,0.6s								
IDI				AML	AML	22 09 07.4			
	comp=E,11310µm,0.7s								
IDI	**Anoyia**	**0.88**	**300**	⇑P	**Pg**	**22 08 44.5**	**-1.4**		
IDI				⇑S	**Sg**	**22 08 56.1**	**-1.4**		
IDI	**Anoyia**	**0.88**	**300**	PG	**Pg**	**22 08 44.6**	**-1.3**		
IDI	**Anoyia**	**0.88**	**300**	Pg	**Pg**	**22 08 44.5**	**-1.4**		
TMBK	**Timbaki Herakl**	**0.90**	**285**	P	**Pb**	**22 08 45.6**	**-0.6**		
PRNS	**Prines Rethymn**	**1.20**	**296**	P	**Pb**	**22 08 51.5**	**+0.1**		
KARP	**Karpathos**	**1.30**	**57**	P	**Pn**	**22 08 52.0**	**-0.7**		
KARP	**Karpathos**	**1.30**	**57**	P	**Pn**	**22 08 52.6**	**-0.1**		
KARP				S	**Sg**	**22 09 10.9**	**+0.1**		
KARP				AML	AML	22 09 19.1			
	comp=N,30712µm,0.6s								
KARP				AML	AML	22 09 20.2			
	comp=E,28024µm,0.6s								
KARP	**Karpathos**	**1.30**	**57**	PN	**Pb**	**22 08 53.2**	**+0.1**		
KARP				SN	**Sg**	**22 09 11.2**	**+0.5**		
KARP	**Karpathos**	**1.30**	**57**	⇑P	**Pn**	**22 08 52.2**	**-0.5**		
KARP				S	**Sg**	**22 09 10.8**	**+0.1**		
KARP				AML	AML	22 09 18.5			
	comp=E,30nm,0.6s								
KARP				AML	AML	22 09 18.5			
	comp=E,30nm,0.6s								
KARP				AML	AML	22 09 19.8			
	comp=E,28nm,0.6s								
KARP				AML	AML	22 09 19.8			
	comp=E,28nm,0.6s								
KARP	**Karpathos**	**1.30**	**57**		**Pn**	**22 08 50.8**	**-1.9**		
GVD	**Gavdhos**	**1.43**	**270**	P	**Pg**	**22 08 56.0**	**-0.4**		
GVD	**Gavdhos**	**1.43**	**270**	P	**Pg**	**22 08 56.7**	**+0.4**		
GVD				AML	AML	22 09 29.5			
	comp=E,19676µm,1.0s								
GVD				AML	AML	22 09 29.9			
	comp=N,11002µm,0.6s								
GVD	**Gavdhos**	**1.43**	**270**	PN	**Pg**	**22 08 55.9**	**-0.4**		
VAM	**Vamos**	**1.44**	**293**	P	**Pn**	**22 08 54.4**	**-0.2**		
VAM	**Vamos**	**1.44**	**293**	P	**Pb**	**22 08 55.3**	**-0.2**		
VAM				S	**Sg**	**22 09 15.1**	**-0.2**		
VAM				AML	AML	22 09 30.1			
	comp=N,9441µm,0.5s								
VAM				AML	AML	22 09 31.6			
	comp=E,11889µm,0.8s								
ANAF	**Anafi Island**	**1.50**	**358**	P	**Pn**	**22 08 55.6**	**+0.1**		
ANAF				S	**Sb**	**22 09 16.2**	**+0.6**		
	comp=E,28µm,0.4s								
ANAF	**Anafi Island**	**1.50**	**358**	P	**Pn**	**22 08 56.0**	**+0.5**		
ANAF				S	**Sn**	**22 09 14.9**	**0.0**		
ANAF				AML	AML	22 09 21.4			
	comp=N,72684µm,0.4s								
ANAF				AML	AML	22 09 23.1			
	comp=E,43245µm,0.4s								
THR6	**Thira Island,**	**1.54**	**347**	P	**Pn**	**22 08 55.6**	**-0.4**		
SANT	**Santorini**	**1.54**	**349**	P	**Pn**	**22 08 56.3**	**+0.2**		
SANT				S	**Sg**	**22 09 17.9**	**-0.8**		
	comp=E,10µm,0.6s								
SANT	**Santorini**	**1.54**	**349**	P	**Pn**	**22 08 56.3**	**+0.2**		
SANT				S	**Sb**	**22 09 16.9**	**+0.1**		
SANT				AML	AML	22 09 21.3			
	comp=E,28505µm,0.4s								
SANT				AML	AML	22 09 22.9			
	comp=N,11240µm,0.8s								
SANT	**Santorini**	**1.54**	**349**	⇑P	**Pn**	**22 08 56.3**	**+0.2**		
SANT				⇓S	**Sg**	**22 09 17.9**	**-0.8**		
SANT	**Santorini**	**1.54**	**349**	PN	**Pb**	**22 08 57.2**	**-0.1**		
SANT				SN	**Sb**	**22 09 17.6**	**+0.8**		
SANT	**Santorini**	**1.54**	**349**		**Pn**	**22 08 56.0**	**0.0**		
SNT3	**Karterados, Sa**	**1.59**	**349**	P	**Pn**	**22 08 57.0**	**+0.4**		
SNT3				S	**Sg**	**22 09 20.0**	**0.0**		
	comp=N,14µm,0.7s								
THR3	**Thira Island,**	**1.59**	**348**	P	**Pn**	**22 08 56.3**	**-0.4**		
SNT1	**Gialos, Santor**	**1.59**	**348**	P	**Pn**	**22 08 56.8**	**+0.1**		
SNT1				S	**Sb**	**22 09 17.9**	**-0.3**		
	comp=N,14µm,0.8s								
SFIR	**Foira Santorin**	**1.60**	**349**	P	**Pn**	**22 08 57.1**	**+0.3**		
SFIR				S	**Sg**	**22 09 19.9**	**-0.5**		
	comp=N,22µm,0.5s								
THR7	**Fira-Santorini**	**1.60**	**349**	P	**Pn**	**22 08 56.8**	**0.0**		
THR5	**Thira Island,**	**1.61**	**346**	P	**Pn**	**22 08 56.9**	**0.0**		
THT2	**Imerovigli**	**1.61**	**348**	P	**Pn**	**22 08 57.2**	**+0.2**		
THT2	**Imerovigli**	**1.61**	**348**	PN	**Pb**	**22 08 57.8**	**-0.7**		
THT2				SN	**Sb**	**22 09 19.6**	**+0.8**		
IMMV	**Iera Moni Meta**	**1.63**	**292**	P	**Pb**	**22 08 58.0**	**-0.7**		
IMMV	**Iera Moni Meta**	**1.63**	**292**	P	**Pb**	**22 08 59.0**	**+0.2**		
IMMV				AML	AML	22 09 35.6			
	comp=N,11571µm,1.1s								
IMMV				AML	AML	22 09 46.8			
	comp=E,12404µm,0.9s								
IMMV	**Iera Moni Meta**	**1.63**	**292**	PN	**Pb**	**22 08 58.6**	**-0.1**		
SAP3	**Santorini-Thir**	**1.63**	**346**	P	**Pn**	**22 08 57.1**	**-0.1**		
CMBO	**Columbo, Santo**	**1.65**	**348**	P	**Pn**	**22 08 57.6**	**+0.1**		
CMBO	**Columbo, Santo**	**1.65**	**348**	P	**Pn**	**22 08 58.2**	**+0.7**		
CMBO				AML	AML	22 09 27.2			
	comp=E,28176µm,0.4s								
CMBO				AML	AML	22 09 29.1			
	comp=N,21290µm,0.7s								
KNDR	**Palaiochora Ch**	**1.79**	**283**	P	**Pb**	**22 09 01.7**	**+0.2**		
KNDR	**Palaiochora Ch**	**1.79**	**283**	PN	**Pb**	**22 09 01.5**	**0.0**		

IOSP	**Ios island**	**1.92**	**347**	P	**Pn**	**22 09 01.2**	**0.0**		
IOSP	**Ios island**	**1.92**	**347**	P	**Pn**	**22 09 01.4**	**+0.2**		
IOSP				S	**Sn**	**22 09 25.4**	**+0.2**		
IOSP				AML	AML	22 09 30.6			
	comp=E,9895µm,0.7s								
IOSP				AML	AML	22 09 37.4			
	comp=N,8151µm,0.6s								
AMGA	**Amorgos Island**	**1.98**	**2**	P	**Pn**	**22 09 01.7**	**-0.3**		
AMGA				S	**Sb**	**22 09 28.4**	**-0.8**		
	comp=N,4µm,0.6s								
AMGA	**Amorgos Island**	**1.98**	**2**	P	**Pn**	**22 09 02.1**	**+0.1**		
AMGA				S	**Sn**	**22 09 26.7**	**+0.1**		
AMGA				AML	AML	22 09 31.4			
	comp=E,7962µm,0.7s								
AMGA				AML	AML	22 09 31.9			
	comp=N,5854µm,0.5s								
NISR	**Nisiros**	**2.05**	**31**	P	**Pn**	**22 09 04.2**	**+1.2**		
NISR	**Nisiros**	**2.05**	**31**	P	**Pn**	**22 09 03.9**	**+0.9**		
KOSK	**Kos Island**	**2.12**	**26**	P	**Pn**	**22 09 04.5**	**+0.6**		
KOSK	**Kos Island**	**2.12**	**26**	PN	**Pn**	**22 09 05.4**	**+1.5**		
MHLO	**Agia Marina, M**	**2.17**	**328**	P	**Pn**	**22 09 05.2**	**+0.6**		
MHLO	**Agia Marina, M**	**2.17**	**328**	P	**Pn**	**22 09 06.0**	**+1.4**		
MHLA	**Plaka, Milos I**	**2.21**	**329**	P	**Pn**	**22 09 06.6**	**+1.4**		
MHLA				AML	AML	22 09 53.0			
	comp=E,6421µm,1.2s								
MHLA				AML	AML	22 09 55.4			
	comp=N,7626µm,1.1s								
APE	**Apeiranthos**	**2.23**	**354**	P	**Pn**	**22 09 05.3**	**-0.2**		
APE	**Apeiranthos**	**2.23**	**354**	P	**Pn**	**22 09 05.7**	**+0.2**		
APE				S	**Sn**	**22 09 32.8**	**0.0**		
APE				AML	AML	22 09 36.9			
	comp=E,2913µm,0.6s								
APE				AML	AML	22 09 42.0			
	comp=N,3303µm,0.9s								
APE	**Apeiranthos**	**2.23**	**354**	⇓P	**Pn**	**22 09 05.6**	**+0.2**		
APE				⇓S	**Sb**	**22 09 37.6**	**+1.2**		
APE	**Apeiranthos**	**2.23**	**354**	PN	**Pn**	**22 09 06.8**	**+1.3**		
APE	**Apeiranthos**	**2.23**	**354**	*c* iP	**Pn**	**22 09 05.5**	**0.0**		
APE	**Apeiranthos**	**2.23**	**354**	⇑P	**Pn**	**22 09 05.5**	**0.0**		
APE				AML	AML	22 09 36.5			
	comp=N,2.9nm,0.6s								
APE				AML	AML	22 09 41.6			
	comp=N,3.3nm,0.9s								
ANKY	**Antikythira Is**	**2.30**	**297**	P	**Pb**	**22 09 08.5**	**-1.6**		
ANKY				AML	AML	22 10 00.5			
	comp=E,4705µm,0.8s								
ANKY				AML	AML	22 10 02.4			
	comp=N,2987µm,0.9s								
ARG	**Arkhangelos**	**2.32**	**53**	PN	**Pn**	**22 09 07.6**	**+0.9**		
DAT	**Datca**	**2.35**	**37**	P	**Pn**	**22 09 08.3**	**+1.0**		
DAT	**Datca**	**2.35**	**37**	PN	**Pn**	**22 09 08.9**	**+1.6**		
DATC	**Datca-Mugla**	**2.42**	**38**	PN	**Pn**	**22 09 09.5**	**+1.4**		
BODT	**Bodrum**	**2.52**	**28**	P	**Pn**	**22 09 10.2**	**+0.8**		
BODT	**Bodrum**	**2.52**	**28**	PN	**Pn**	**22 09 11.1**	**+1.7**		
SERI	**Serifos**	**2.55**	**335**	P	**Pn**	**22 09 10.4**	**+0.5**		
SERI	**Serifos**	**2.55**	**335**	P	**Pn**	**22 09 10.6**	**+0.8**		
SERI				AML	AML	22 09 53.2			
	comp=N,1320µm,1.0s								
SERI				AML	AML	22 10 02.4			
	comp=E,1134µm,0.5s								
KTHA	**Kythira Island**	**2.65**	**303**	P	**Pn**	**22 09 12.7**	**+1.4**		
KTHA	**Kythira Island**	**2.65**	**303**	P	**Pn**	**22 09 12.7**	**+1.4**		
KTHA	**Kythira Island**	**2.65**	**303**	PN	**Pn**	**22 09 12.9**	**+1.6**		
MRSB	**Marmaris-Mugla**	**2.68**	**45**	PN	**Pn**	**22 09 13.6**	**+1.9**		
SMG	**Samos**	**2.97**	**16**	P	**Pn**	**22 09 16.0**	**+0.4**		
SMG	**Samos**	**2.97**	**16**	P	**Pn**	**22 09 16.0**	**+0.4**		
VLI	**Veliai**	**3.00**	**309**	P	**Pn**	**22 09 17.3**	**+1.3**		
VLI	**Veliai**	**3.00**	**309**	P	**Pn**	**22 09 17.3**	**+1.3**		
DALY	**Dalyan (Mula)**	**3.02**	**49**	PN	**Pn**	**22 09 18.2**	**+1.9**		
TURN	**Turunc**	**3.03**	**47**	PN	**Pn**	**22 09 14.6**	**-1.8**		
YER	**Yerkesik**	**3.03**	**40**	P	**Pn**	**22 09 18.3**	**+1.8**		
YER	**Yerkesik**	**3.03**	**40**	PN	**Pn**	**22 09 18.5**	**+2.0**		
GCAM	**G?zelcaml?**	**3.06**	**21**	PN	**Pn**	**22 09 18.5**	**+1.6**		
FETY	**Fethiye**	**3.19**	**55**	P	**Pn**	**22 09 19.6**	**+0.9**		
FETY	**Fethiye**	**3.19**	**55**	PN	**Pn**	**22 09 19.9**	**+1.2**		
KRND	**KRANIDI**	**3.33**	**320**	P	**Pn**	**22 09 22.4**	**+1.9**		
KRND	**KRANIDI**	**3.33**	**320**	P	**Pn**	**22 09 22.5**	**+1.9**		
KARY	**Karystos**	**3.37**	**341**	P	**Pn**	**22 09 22.4**	**+1.4**		
KARY	**Karystos**	**3.37**	**341**	P	**Pn**	**22 09 22.5**	**+1.4**		
DID	**Didima**	**3.38**	**322**	P	**Pn**	**22 09 22.9**	**+1.7**		
DID	**Didima**	**3.38**	**322**	P	**Pn**	**22 09 23.0**	**+1.7**		
AKAS	**Kas**	**3.38**	**65**	PN	**Pn**	**22 09 23.1**	**+1.7**		
SLUM	**Salum**	**3.39**	**189**	P	**Pn**	**22 09 22.1**	**+0.7**		
	baz=190								
SLUM				S	**Sn**	**22 10 04.6**	**+3.2**		
	baz=190								
VLY	**Voula,Athens**	**3.41**	**332**	P	**Pn**	**22 09 23.9**	**+2.1**		
VLY	**Voula,Athens**	**3.41**	**332**	P	**Pn**	**22 09 23.9**	**+2.1**		
AYDB	**Zeytinkoy-Aydi**	**3.51**	**28**	PN	**Pn**	**22 09 24.9**	**+1.7**		
ATHU	**Athens Univers**	**3.52**	**333**	P	**Pn**	**22 09 25.5**	**+2.3**		
ATHU	**Athens Univers**	**3.52**	**333**	P	**Pn**	**22 09 24.7**	**+1.5**		
CHOS	**Chios island**	**3.53**	**3**	P	**Pn**	**22 09 24.6**	**+1.1**		
CHOS	**Chios island**	**3.53**	**3**	P	**Pn**	**22 09 24.1**	**+0.6**		
PTL	**Penteli**	**3.56**	**334**	P	**Pn**	**22 09 25.5**	**+1.7**		
PTL	**Penteli**	**3.56**	**334**	P	**Pn**	**22 09 25.5**	**+1.7**		
DION	**Dionisos Attik**	**3.56**	**335**	P	**Pn**	**22 09 25.7**	**+1.9**		
DION	**Dionisos Attik**	**3.56**	**335**	P	**Pn**	**22 09 25.7**	**+1.9**		
BLCB	**Balcova**	**3.66**	**15**	P	**Pn**	**22 09 26.0**	**+0.9**		
VLX	**Vlachokerasia**	**3.75**	**313**	P	**Pn**	**22 09 28.2**	**+1.7**		
VLX	**Vlachokerasia**	**3.75**	**313**	P	**Pn**	**22 09 28.4**	**+1.9**		
ELL	**Elmali**	**3.82**	**59**	P	**Pn**	**22 09 29.3**	**+1.9**		
ELL	**Elmali**	**3.82**	**59**	Pn	**Pn**	**22 09 29.3**	**+1.9**		
VILL	**Villia**	**3.88**	**329**	P	**Pn**	**22 09 30.4**	**+2.3**		
LOUT	**Loutraki**	**3.88**	**325**	P	**Pn**	**22 09 30.5**	**+2.3**		
LOUT	**Loutraki**	**3.88**	**325**	P	**Pn**	**22 09 30.3**	**+2.1**		
PYL	**PYLOS**	**3.89**	**303**	P	**Pn**	**22 09 29.2**	**+0.9**		
LTK	**Loutraki**	**3.91**	**325**	P	**Pn**	**22 09 30.7**	**+2.1**		
LTK	**Loutraki**	**3.91**	**325**	P	**Pn**	**22 09 30.7**	**+2.1**		
ITM	**Ithomi**	**3.92**	**307**	P	**Pn**	**22 09 30.8**	**+2.1**		
ITM	**Ithomi**	**3.92**	**307**	P	**Pn**	**22 09 30.6**	**+1.9**		
ITM	**Ithomi**	**3.92**	**307**	Pn	**Pn**	**22 09 31.5**	**+2.8**		
TRIP	**Tripoli**	**3.92**	**314**	P	**Pn**	**22 09 30.7**	**+1.9**		
TRIP	**Tripoli**	**3.92**	**314**	P	**Pn**	**22 09 31.0**	**+2.2**		
VIL2	**Platees**	**3.94**	**329**	P	**Pn**	**22 09 30.2**	**+1.3**		
KYMI	**Kymi, Euboea I**	**4.02**	**340**	P	**Pn**	**22 09 31.5**	**+1.4**		
KYMI	**Kymi, Euboea I**	**4.02**	**340**	P	**Pn**	**22 09 31.2**	**+1.1**		
PROD	**Prodromos**	**4.13**	**326**	P	**Pn**	**22 09 33.7**	**+2.0**		
GUR	**Goura**	**4.17**	**319**	P	**Pn**	**22 09 33.8**	**+1.6**		
GUR	**Goura**	**4.17**	**319**	P	**Pn**	**22 09 33.8**	**+1.6**		
MANT	**Manisa**	**4.25**	**30**	Pn	**Pn**	**22 09 35.6**	**+2.3**		
AMT	**Artemida-Makis**	**4.27**	**310**	P	**Pn**	**22 09 36.3**	**+2.7**		
KULA	**Kula-Manisa**	**4.31**	**31**	P	**Pn**	**22 09 36.3**	**+2.2**		
KLV	**Kalavryta, Ach**	**4.35**	**318**	P	**Pn**	**22 09 36.0**	**+1.4**		
KLV	**Kalavryta, Ach**	**4.35**	**318**	P	**Pn**	**22 09 36.1**	**+1.4**		
SIGR	**SIGRI**	**4.35**	**0**	P	**Pn**	**22 09 35.0**	**+0.4**		
SIGR	**SIGRI**	**4.35**	**0**	P	**Pn**	**22 09 35.2**	**+0.6**		
PRK	**Paraskevi**	**4.40**	**5**	P	**Pn**	**22 09 36.9**	**+1.6**		
PRK	**Paraskevi**	**4.40**	**5**	P	**Pn**	**22 09 37.5**	**+2.2**		
LKR	**Lokris**	**4.42**	**330**	P	**Pn**	**22 09 37.5**	**+2.0**		
LKR	**Lokris**	**4.42**	**330**	P	**Pn**	**22 09 37.7**	**+2.2**		
DRO	**Drossia**	**4.54**	**314**	P	**Pn**	**22 09 39.4**	**+2.2**		
DRO	**Drossia**	**4.54**	**314**	P	**Pn**	**22 09 39.9**	**+2.7**		
AOS	**Alonnisos**	**4.58**	**341**	P	**Pn**	**22 09 39.5**	**+1.7**		
LAKA	**Lakka**	**4.58**	**319**	P	**Pn**	**22 09 39.4**	**+1.5**		
LAKA	**Lakka**	**4.58**	**319**	P	**Pn**	**22 09 39.7**	**+1.8**		
KALE	**Kalithea**	**4.61**	**321**	P	**Pn**	**22 09 39.9**	**+1.6**		
TRIZ	**Trizonia**	**4.63**	**320**	P	**Pn**	**22 09 40.0**	**+1.7**		
AXAR	**Agios Charalam**	**4.66**	**328**	P	**Pn**	**22 09 41.0**	**+2.1**		
AXAR	**Agios Charalam**	**4.66**	**328**	P	**Pn**	**22 09 41.0**	**+2.1**		
SERG	**Sergoula**	**4.67**	**321**	P	**Pn**	**22 09 40.2**	**+1.2**		
SERG	**Sergoula**	**4.67**	**321**	P	**Pn**	**22 09 40.3**	**+1.3**		
SKIA	**Skiathos**	**4.70**	**337**	P	**Pn**	**22 09 41.7**	**+2.2**		
OSC1	**CSNet OBS 1**	**4.72**	**105**	P	**Pn**	**22 09 38.5**	**-1.2**		
OSC1				S	**Sn**	**22 10 32.9**	**-1.3**		
RLS	**Riolos of Patr**	**4.75**	**314**	P	**Pn**	**22 09 43.0**	**+2.9**		
EFP	**Efpalio**	**4.76**	**320**	P	**Pn**	**22 09 41.7**	**+1.5**		
EFP	**Efpalio**	**4.76**	**320**	P	**Pn**	**22 09 41.7**	**+1.5**		
ISP	**Isparta**	**4.81**	**51**	P	**Pn**	**22 09 44.2**	**+3.1**		
ISP	**Isparta**	**4.81**	**51**	Pn	**Pn**	**22 09 44.2**	**+3.1**		
ANX	**Ano Chora**	**4.88**	**321**	P	**Pn**	**22 09 43.9**	**+2.0**		
ANX	**Ano Chora**	**4.88**	**321**	P	**Pn**	**22 09 43.2**	**+1.3**		
NEO	**Neokhori**	**4.91**	**336**	P	**Pn**	**22 09 44.8**	**+2.5**		
XOR	**Xorichti**	**4.97**	**336**	P	**Pn**	**22 09 45.7**	**+2.5**		
AGG	**Agios Georgios**	**5.02**	**327**	P	**Pn**	**22 09 45.4**	**+1.6**		
AGG	**Agios Georgios**	**5.02**	**327**	P	**Pn**	**22 09 45.8**	**+2.0**		
AGG	**Agios Georgios**	**5.02**	**327**	P	**Pn**	**22 09 46.0**	**+2.2**		
AGG	**Agios Georgios**	**5.02**	**327**	Pn	**Pn**	**22 09 46.0**	**+2.2**		
MAKR	**Makrakomi, Fth**	**5.10**	**326**	P	**Pn**	**22 09 47.3**	**+2.4**		
MAKR	**Makrakomi, Fth**	**5.10**	**326**	P	**Pn**	**22 09 47.5**	**+2.6**		
PVO	**Paravola**	**5.10**	**319**	P	**Pn**	**22 09 48.3**	**+3.4**		
EVR	**Evrytania**	**5.18**	**323**	P	**Pn**	**22 09 48.2**	**+2.1**		

PAIG	**Paliouri**	**5.35**	**342**	P	**Pn**	**22 09 49.9**	**+1.6**		
AKMS	**Akamas**	**5.35**	**86**	P	**Pn**	**22 09 47.1**	**-1.3**		
NATA	**Nata**	**5.55**	**89**	P	**Pn**	**22 09 50.0**	**-1.1**		
NATA				S	**Sn**	**22 10 54.8**	**0.0**		
ALFC	**Alefka**	**5.57**	**85**	⇑P	**Pn**	**22 09 50.2**	**-1.2**		
SWA2		**5.60**	**183**	P	**Pn**	**22 09 52.4**	**+0.6**		
	baz=184								
SWA2				S	**Sn**	**22 10 56.0**	**0.0**		
	baz=184								
THL	**Klokotos Trika**	**5.60**	**328**	P	**Pn**	**22 09 53.7**	**+1.9**		
THL	**Klokotos Trika**	**5.60**	**328**	P	**Pn**	**22 09 53.3**	**+1.5**		
OSC2	**CSNet OBS 4**	**5.64**	**106**	P	**Pn**	**22 09 50.8**	**-1.5**		
OSC2				S	**Sn**	**22 10 55.3**	**-1.6**		
LEF	**Lefka**	**5.81**	**85**	⇑P	**Pn**	**22 09 55.4**	**+0.8**		
SZAC	**Souni**	**5.81**	**89**	⇓P	**Pn**	**22 09 53.6**	**-1.1**		
LIT	**Litokhoron**	**5.87**	**334**	P	**Pn**	**22 09 57.6**	**+2.1**		
LIT	**Litokhoron**	**5.87**	**334**	P	**Pn**	**22 09 58.8**	**+3.3**		
LIT	**Litokhoron**	**5.87**	**334**		**Pn**	**22 09 58.8**	**+3.3**		
ASGA	**Asgata**	**6.11**	**88**	P	**Pn**	**22 09 57.7**	**-1.0**		
CSS	**Mathiatis**	**6.17**	**87**	Pn	**Pn**	**22 09 58.5**	**-1.2**		
CSS				Sn	**Sn**	**22 11 08.2**	**-1.8**		
CSS	**Mathiatis**	**6.17**	**87**	⇑P	**Pn**	**22 09 58.3**	**-1.4**		
CSS	**Mathiatis**	**6.17**	**87**		**Pn**	**22 09 58.4**	**-1.2**		
ATHAL	**Athalassa**	**6.22**	**85**	P	**Pn**	**22 09 59.9**	**-0.4**		
RDO	**Rodhopi**	**6.29**	**358**	P	**Pn**	**22 10 02.5**	**+1.2**		
MVOU	**Mavrovouni**	**6.42**	**86**	⇑P	**Pn**	**22 10 02.5**	**-0.5**		
SRS	**Serrai**	**6.50**	**345**	P	**Pn**	**22 10 06.1**	**+2.0**		
HNAT	**Natroun**	**6.60**	**141**	P	**Pn**	**22 10 05.7**	**+0.2**		
	baz=142								
HNAT				S	**Sn**	**22 11 20.7**	**+0.1**		
	baz=142								
GRG	**Griva**	**6.67**	**337**	P	**Pn**	**22 10 09.1**	**+2.6**		
KNT	**Kendrikon**	**6.71**	**341**	P	**Pn**	**22 10 10.0**	**+3.0**		
KDZ	**Kurdzhali**	**6.80**	**357**	*i* P	**Pn**	**22 10 11.6**	**+3.4**		
RZN	**Rozhen**	**6.88**	**353**	*i* P	**Pn**	**22 10 12.9**	**+3.4**		
FNA	**Florina**	**6.89**	**331**	P	**Pn**	**22 10 12.9**	**+3.4**		
FNA	**Florina**	**6.89**	**331**	Pn	**Pn**	**22 10 12.9**	**+3.4**		
MMB	**Musomiste**	**6.93**	**347**	*i* P	**

TRPA	Tarpa	13.49	351	⇑P		Pn		22 11 42.1	+2.3
PSZ	Piszkesteto	13.79	343	⇑P		Pn		22 11 44.6	+0.7
UZH	Uzhgorod	14.02	350	*e*P		P		22 11 52.2	-2.7
KOLS	Kolonicke sedl	14.31	350	*e*P		P		22 11 58.0	-0.2
KOLS	Kolonicke sedl	14.31	350	*e*PN		P		22 11 58.0	-0.2
SOKA	Soboth	14.35	329	Pn		Pn		22 11 54.2	+2.6
	comp=E,7.6nm,0.8s								
OBKA	Obir	14.43	327	Pn		Pn		22 11 54.9	+2.2
	comp=E,5.4nm,0.8s								
ARSA	Arzberg	14.61	331	*e*Pn		Pn		22 11 55.5	+0.4
	comp=E,5.5nm,1.0s								
CONA	Conrad Observa	15.03	333	*e*Pn		Pn		22 12 01.1	+0.2
	comp=E,6.3nm,1.2s								
ZOU	Zoufplan	15.20	324	IAmb		IAmb		22 12 11.7	
	comp=Z,13nm,0.9s								
CIMO	Cimolais	15.29	323	IAmb		IAmb		22 12 11.4	
	comp=Z,18nm,1.6s								
AKH	Akhalkalaki	15.36	60	⇓P		P		22 12 08.0	-2.1
AKH	Akhalkalaki	15.36	60	P		P		22 12 08.2	-1.9
AKH				pmax		pmax			
	comp=Z,42nm,1.5s								
AKH	Akhalkalaki	15.36	60	Pn		P		22 12 08.2	-1.9
AKH				IAmb		IAmb		22 12 09.0	
	comp=Z,42nm,1.5s								
KBA	Koelnbreinsper	15.40	326	Pn		Pn		22 12 06.8	+0.9
	comp=E,8.9nm,1.0s								
CTI	Castel Tesino	15.51	320	P		P		22 12 11.5	-0.2
CTI				pmax		pmax			
	comp=Z,12nm,1.2s								
CTI	Castel Tesino	15.51	320			P		22 12 11.5	-0.2
ABTA	Abfaltersbach	15.56	324	*e*Pn		Pn		22 12 09.0	+1.2
	comp=Z,7.3nm,0.8s								
NEY	Neytrino	15.56	52	*i* P		P		22 12 11.2	-1.1
NEY				pmax		pmax			
	comp=Z,4.0nm,0.9s								
MOA	Molln	15.59	330	*e*Pn		Pn		22 12 09.6	+1.3
	comp=E,3.8nm,0.8s								
MSSA	Maissana	15.70	312	IAmb		IAmb		22 12 12.6	
	comp=Z,12nm,0.7s								
KRUC	Moravsky	15.82	337	*e*P		Pn		22 12 12.7	+1.6
SALO	Salr	15.85	317	IAmb		IAmb		22 12 17.1	
	comp=Z,30nm,0.8s								
KIV	Kislovodsk	15.87	50	P		P		22 12 15.9	+0.3
KIV	Kislovodsk	15.87	50	*de*P		P		22 12 16.1	+0.5
KIV				pmax		pmax			
	comp=Z,13nm,0.8s								
KIV				MLR		MLR			
	comp=Z,47nm,15.0s								
KIV	Kislovodsk	15.87	50	P		P		22 12 16.2	+0.6
KIV				IAmb		IAmb		22 12 18.3	
	comp=Z,19nm,0.9s								
KVAR	Kislovodsk Arr	15.87	50	Pn		P		22 12 17.6	+2.0
	baz=254,slow=22,SNR=7.6								
KBZ	Khabaz	15.89	51	Pn		P		22 12 16.9	+1.1
	comp=Z,1.0nm,0.3s,baz=205,slow=4.6,SNR=28								
KBZ	Khabaz	15.89	51	*ce*P		P		22 12 16.7	+1.0
VRAC	Vranov	15.97	338	Pn		Pn		22 12 14.4	+1.3
	comp=Z,0.3nm,0.3s,baz=149,slow=10,SNR=10								
VRAC				LR		LR		22 18 47.3	
	comp=Z,88nm,20.1s,baz=167,slow=39								
VRAC	Vranov	15.97	338	*e*P		Pn		22 12 14.3	+1.2
VRAC	Vranov	15.97	338	⇑P		Pn		22 12 13.9	+0.8
VRAC	Vranov	15.97	338	P		Pn		22 12 14.4	+1.3
OJC	Ojcow	15.98	346	P		P		22 12 16.8	+0.1
OJC				pmax		pmax			
	comp=Z,3.0nm,0.7s								
OJC	Ojcow	15.98	346	Pn		P		22 12 16.8	+0.1
AKASG	Malin Array Be	16.03	8	Pn		Pn		22 12 14.1	+0.2
	comp=Z,3.1nm,0.3s,baz=197,slow=11,SNR=12								
AKASG				Sn		Sn		22 15 17.4	+6.0
	comp=Z,0.1nm,0.3s,baz=187,slow=22,SNR=4.9								
AKASG	Malin Array Be	16.03	8	P		Pn		22 12 14.1	+0.2
AKBB	Malin Array Si	16.03	8	P		P		22 12 17.5	+0.3
AKBB				pmax		pmax			
	comp=Z,11nm,0.7s								
AKBB	Malin Array Si	16.03	8	P		P		22 12 17.5	+0.3
AKBB				IAmb		IAmb		22 12 23.2	
	comp=Z,11nm,0.7s								
MORC	Moravsky Berou	16.11	340	*e*P		Pn		22 12 15.2	+0.3
ZEI	Tsey	16.14	55	*e*P		Pn		22 12 16.9	+1.3
ZEI				pmax		pmax			
	comp=Z,14nm,0.6s								
TREC	Trest	16.32	335	*e*P		P		22 12 19.9	-0.6
TREC	Trest	16.32	335	*e*P		P		22 12 19.9	-0.6
WTTA	Wattenberg	16.34	324	*e*Pn		Pn		22 12 16.9	-1.2
	comp=Z,14nm,1.1s								
TBLG	Delisi	16.35	60	P		P		22 12 21.0	+0.1
TBLG				pmax		pmax			
	comp=Z,36nm,1.5s								
TBLG	Delisi	16.35	60			P		22 12 20.9	+0.1
TBLG				IAmb		IAmb		22 12 23.0	
	comp=Z,36nm,1.5s								
WATA	Walderalm	16.43	324	*e*Pn		Pn		22 12 17.9	-1.2
	comp=Z,11nm,1.0s								
SQTA	Sankt Quirin	16.53	323	*e*Pn		Pn		22 12 19.0	-1.3
	comp=Z,7.6nm,0.9s								
KRLC	Kraliky	16.59	339	*e*P		P		22 12 23.1	-0.4
KRLC	Kraliky	16.59	339	*e*P		P		22 12 23.1	-0.4
GERES	GERESS Array B	16.61	331	Pn		Pn		22 12 21.4	+0.1
	comp=Z,0.2nm,0.3s,baz=142,slow=11,SNR=17								
GERES				LR		LR		22 20 35.1	
	comp=Z,105nm,18.7s,baz=162,slow=44								
GERES	GERESS Array B	16.61	331	P		Pn		22 12 21.5	+0.1
FUORN	Ofenpass-Fuorn	16.62	320			P		22 12 25.0	+0.9
FUORN				IAmb		IAmb		22 12 40.1	
	comp=Z,13nm,0.8s								
FETA	Feichten	16.63	322	P		P		22 12 24.1	-0.1
	comp=Z,13nm,1.2s								
GOF	Gofitskoye	16.65	47	⇑*e*P		P		22 12 25.3	+1.2
GOF				pmax		pmax			
	comp=Z,40nm,0.9s								
MOTA	Moosalm	16.66	323	*e*Pn		Pn		22 12 22.1	0.0
	comp=Z,7.1nm,1.0s								
KHC	Kasperske Hory	16.89	331	*ce*P		Pn		22 12 25.2	+0.3
KHC				pmax		pmax			
	comp=Z,18nm,1.3s								
KHC	Kasperske Hory	16.89	331	*e*P		P		22 12 26.8	-0.1
KHC				*ep*P		sP		22 12 32.0	-0.2
DAVOX	Davos/Dischmat	16.92	320	Pn		Pn		22 12 26.2	+0.8
	comp=Z,0.5nm,0.3s,baz=131,slow=17,SNR=7.7								
DAVOX				LR		LR		22 20 43.1	
	comp=Z,140nm,21.6s,baz=90,slow=44								
DAVOX	Davos/Dischmat	16.92	320	P		Pn		22 12 26.2	+0.8
RETA	Reutte	16.93	323	Pn		Pn		22 12 25.2	-0.2
	comp=Z,6.1nm,1.5s								
DPC	Dobruska-Polom	16.97	339	*e*P		P		22 12 27.1	-0.6
DPC	Dobruska-Polom	16.97	339	*e*P		P		22 12 27.1	-0.6
GOPC	GO Pecny, Ondr	17.09	335	*e*P		Pn		22 12 25.1	-2.2
GOPC	GO Pecny, Ondr	17.09	335	*e*P		Pn		22 12 25.1	-2.2
PBCC	Pribram	17.18	333	*e*P		P		22 12 30.2	+0.2
OSTC	Ostas	17.19	339	*e*P		Pn		22 12 28.7	+0.2
PRU	Pruhonice	17.24	335	*e*P		Pn		22 12 27.3	-1.8
DAVA	Damuels	17.25	321	*e*Pn		Pn		22 12 29.9	+0.5
	comp=Z,5.8nm,0.7s								
CHVC	Chvalec	17.26	339	*e*P		Pn		22 12 29.6	+0.1
BTLR	Botlikh	17.69	58	*i* P		P		22 12 36.5	+0.7
BNI	Bardonecchia	17.83	311	P		P		22 12 39.6	+2.2
BNI				pmax		pmax			
	comp=Z,14nm,1.4s								
BNI	Bardonecchia	17.83	311	P		P		22 12 39.6	+2.2
SENIN	Lac Senin/Sane	18.12	315	IAmb		IAmb		22 12 53.0	
	comp=Z,17nm,0.8s								
BRG	Berggiesshubel	18.19	335	*e*P		Pn		22 12 40.7	-0.2
	comp=Z,5.7nm,1.5s								
BRG	Berggiesshubel	18.19	335	*e*P		Pn		22 12 40.7	-0.2
BRG				pmax		pmax			
	comp=Z,6.0nm,1.5s								
AKT	Akhty	18.43	62	*e*P		P		22 12 43.9	-0.1
AKT				pmax		pmax			
	comp=Z,7.0nm,0.6s								
MAK	Makhachkala	18.68	58	*e*P		P		22 12 46.1	-0.5
MAK				*e*S		Sn		22 16 16.8	+1.2
MAK				pmax		pmax			
	comp=Z,328nm,1.5s								
MAK				MLR		MLR			
	comp=Z,100nm,16.0s								
BFO	Black Forest	18.72	321	P		P		22 12 46.8	-0.2
BFO				pmax		pmax			
	comp=Z,4.0nm,0.7s								
BFO	Black Forest	18.72	321	P		P		22 12 46.8	-0.2
CLL	Collm	18.88	335	*i* P		P		22 12 48.4	-0.3
	comp=Z,8.0nm,0.9s								
CLL				*e*PP		PnPn		22 13 00.0	-1.6
SUW	Suwalki	19.25	355	IAmb		IAmb		22 13 09.4	
	comp=Z,34nm,0.8s								

IIGN	Ignalina	20.50	1	*e*P		P		22 13 07.1	+0.7
IIGN				IAmb		IAmb		22 13 18.2	
	comp=Z,7.0nm,0.9s								
RAYN	Ar Rayn	20.52	118	*i* P		Pn		22 13 08.5	-0.6
	SNR=8.5								
RAYN	Ar Rayn	20.52	118	P		Pn		22 13 09.3	+0.2
RAYN				pmax		pmax			
	comp=Z,5.0nm,0.7s								
RAYN	Ar Rayn	20.52	118			Pn		22 13 09.3	+0.2
WLF	Walferdange	20.67	322	P		P		22 13 08.6	+0.3
WLF				pmax		pmax			
	comp=Z,11nm,0.9s								
WLF	Walferdange	20.67	322	P		P		22 13 08.6	+0.3
WLF				IAmb		IAmb		22 13 21.8	
	comp=Z,11nm,0.9s								
PABE	Paberze	20.69	357	*e*P		P		22 13 08.5	+0.1
PABE				IAmb		IAmb		22 13 23.6	
	comp=Z,17nm,0.7s								
ISAL	Salakas	20.72	0	*e*P		P		22 13 09.3	+0.6
ISAL				IAmb		IAmb		22 13 31.0	
	comp=Z,12nm,1.0s								
PBUR	Paburge	21.34	354	*e*P		P		22 13 12.7	-2.7
TAM	Tamanrasset	21.42	241	P		P		22 13 18.8	+2.1
TAM				pmax		pmax			
	comp=Z,5.0nm,0.8s								
TAM	Tamanrasset	21.42	241	P		P		22 13 18.8	+2.1
OBN	Obninsk	21.59	17	*i* *e*P		P		22 13 19.5	+1.4
OBN				*e*				22 13 44.2	
OBN				*e*S		Sn		22 17 21.9	-3.5
OBN				pmax		pmax			
	comp=Z,3.0nm,0.7s								
BSD	Bornholm Skovb	21.63	343	*e*P		P		22 13 14.8	-3.7
BSD	Bornholm Skovb	21.63	343	*i* P		P		22 13 14.8	-3.7
CLF	Chambon-Foret	21.92	314	P		P		22 13 21.9	+0.2
UCC	Uccle	22.28	322	P		P		22 13 26.0	+0.5
UCC				pmax		pmax			
	comp=Z,88nm,1.8s								
UCC	Uccle	22.28	322	P		P		22 13 26.0	+0.5
MOS	Moscow	22.41	18	*e*P		P		22 13 39.4	+12
VSU	Vasula	23.63	1	*e*P		P		22 13 40.8	+1.5
VSU				IAmb		IAmb		22 13 57.3	
	comp=Z,24nm,0.9s								
ESDC	Sonseca Array	24.13	290	P		P		22 13 44.5	+0.1
	comp=Z,2.6nm,0.6s,baz=81,slow=9.3,SNR=17								
MDT	Midelt	25.32	274	P		P		22 13 55.4	+0.1
	comp=Z,3.5nm,0.8s,baz=80,slow=7.5,SNR=4.6								
GEYT	Alibeck	26.11	74	P		P		22 14 02.6	+0.2
	comp=Z,10nm,0.6s,baz=292,slow=7.8,SNR=25								
GYA0B	ALIBECK ARRAY	26.11	74	P		P		22 14 04.0	+1.6
HFS	Hagfors	26.50	346	P		P		22 14 04.4	-1.2
	comp=Z,1.3nm,0.6s,baz=115,slow=10,SNR=5.5								
HFS				LR		LR		22 24 55.8	
	comp=Z,63nm,18.3s,baz=161,slow=37								
HFS	Hagfors	26.50	346	P		P		22 14 04.4	-1.2
FINES	FINESS Array B	26.61	0	P		P		22 14 04.9	-1.7
	comp=Z,0.8nm,0.3s,baz=158,slow=11,SNR=13								
FINES				LR		LR		22 25 27.8	
	comp=Z,62nm,19.6s,baz=182,slow=38								
FINES	FINESS Array B	26.61	0	P		P		22 14 04.9	-1.7
KLMR	Klimovskoe	27.48	15	*e*P		P		22 14 11.8	-2.6
KLMR				pmax		pmax			
	comp=Z,8.0nm,1.4s								
KLMR	Klimovskoe	27.48	15	*e*P		P		22 14 11.9	-2.5
KLMR				AMP				22 14 13.8	
	comp=Z,8.0nm,1.4s								
MSFE	Esma-Masafi	27.81	102	P		P		22 14 18.7	+0.9
NOA	NORSAR Array B	27.84	345	P		P		22 14 18.8	+1.1
	comp=Z,0.2nm,0.5s,baz=35,slow=20,SNR=2.6								
NOA				LR		LR		22 27 46.6	
	comp=Z,56nm,18.4s,baz=175,slow=42								
NOA	NORSAR Array B	27.84	345	P		P		22 14 18.8	+1.1
HATD	Hatta, Dubai	28.03	103	*i* P		P		22 14 20.3	+0.6
	SNR=5.8								
UOSS	Minazif	28.03	102	P		P		22 14 20.1	+0.3
UOSS	Minazif	28.03	102	P		P		22 14 20.5	+0.7
ASHO	Ashiyiah	28.04	103	P		P		22 14 20.3	+0.4
AKTO	Aktyubinsk	28.06	46	P		P		22 14 19.4	-0.4
	comp=Z,3.5nm,0.4s,baz=245,slow=6.9,SNR=20								
AKTO				LR		LR		22 27 20.2	
	comp=Z,56nm,21.0s,baz=266,slow=40								
AKTO	Aktyubinsk	28.06	46	P		P		22 14 19.4	-0.4
EKA	Eskdalemuir Ar	28.61	325	P		P		22 14 24.2	-0.3
	comp=Z,1.6nm,0.6s,baz=121,slow=10,SNR=14								
EKA	Eskdalemuir Ar	28.61	325	P		P		22 14 24.3	-0.3
HRA	Herat	29.87	80	P		P		22 14 37.1	+0.8
HRA				IAmb		IAmb		22 14 40.9	
	comp=Z,3.3nm,0.7s								
TOA0	Torodi Ar. Sit	30.71	231	P		P		22 14 44.2	+0.6
TORD	Torodi Ar. Bea	30.71	231	P		P		22 14 44.0	+0.4
	comp=Z,8.1nm,0.6s,baz=35,slow=8.7,SNR=80								
TORD				LR		LR		22 29 28.0	
	comp=Z,84nm,19.4s,baz=320,slow=41								
ARU	Arti	30.98	36	*ce*P		P		22 14 45.3	-0.3
ARU				pmax		pmax			
	comp=Z,8.0nm,1.7s								
ARU	Arti	30.98	36	P		P		22 14 44.9	-0.7
ARU				IAmb		IAmb		22 14 46.3	
	comp=Z,5.9nm,1.1s								
SVE	Sverdlovsk	32.18	36	*e*P		P		22 14 55.9	-0.2
SVE				pmax		pmax			
	comp=Z,8.0nm,1.1s								
ARCES	ARCESS Array B	34.74	360	P		P		22 15 16.2	-2.1
	comp=Z,1.1nm,0.4s,baz=174,slow=9.3,SNR=14								
ARCES	ARCESS Array B	34.74	360	P		P		22 15 16.2	-2.1
KK31	Karatay Array	35.36	63	IAmb		IAmb		22 15 25.3	
	comp=Z,4.9nm,0.7s								
GAR	Garm	35.54	70	IAmb		IAmb		22 15 52.9	
	comp=Z,7.1nm,0.8s								
BTK	Batkeli	35.80	68	IAmb		IAmb		22 15 32.6	
	comp=Z,2.9nm,0.6s								
BRVK	Borovoye	36.11	46	*ce*P		P		22 15 30.3	0.0
BRVK				pmax		pmax			
	comp=Z,8.0nm,1.7s								
BRVK	Borovoye	36.11	46	P		P		22 15 30.7	+0.5
BRVK				IAmb		IAmb		22 15 31.4	
	comp=Z,7.7nm,1.3s								
AAK	Ala-Archa	38.31	63	*i* P		P		22 15 49.9	+0.7
	SNR=6.7								
AAK	Ala-Archa	38.31	63	*ce*P		P		22 15 50.4	+1.2
AAK				pmax		pmax			
	comp=Z,8.0nm,1.7s								
AAK	Ala-Archa	38.31	63	P		P		22 15 50.5	+1.3
AAK				IAmb		IAmb		22 16 04.0	
	comp=Z,5.4nm,0.7s								
FRU1	Bishkek	38.39	63	IAmb		IAmb		22 15 53.8	
	comp=Z,8.3nm,0.8s								
NIL	Nilore	38.94	78	P		P		22 15 55.5	+1.0
NIL				pmax		pmax			
	comp=Z,11nm,1.1s								
NIL	Nilore	38.94	78	P		P		22 15 55.5	+1.0
NIL				IAmb		IAmb		22 16 05.0	
	comp=Z,11nm,1.1s								
DBIC	Dimbokro	39.80	232	P		P		22 16 00.7	-1.1
	comp=Z,4.3nm,0.8s,baz=38,slow=12,SNR=3.7								
DBIC	Dimbokro	39.80	232	P		P		22 16 00.7	-1.1
DBIC				pmax		pmax			
	comp=Z,73nm,2.0s								
KSH	Kashi	39.81	68	P		P		22 16 00.3	-1.5
KSH				pmax		pmax			
	comp=Z,23nm,1.2s								
KSH				pmax		pmax			
	comp=Z,170nm,4.7s								
TIC	Toumodi	39.93	233	*e*P		P		22 16 03.4	+0.5
KIC	Kosan Boka	39.96	232	*e*P		P		22 16 02.9	-0.2
	comp=Z,16nm,0.7s								
LIC	Lamto	40.25	232	*e*P		P		22 16 06.3	+0.8
	comp=Z,36nm,1.0s								
KURK	Kurchatov	40.95	51	P		P		22 16 11.2	+0.2
KURK				pmax		pmax			
	comp=Z,8.0nm,0.8s								
KURK	Kurchatov	40.95	51	P		P		22 16 11.2	+0.2
KURK				IAmb		IAmb		22 16 11.9	
	comp=Z,7.8nm,0.8s								
MAKZ	Makanchi	43.27	56	P		P		22 16 30.3	+0.3
MAKZ				pmax		pmax			
	comp=Z,6.0nm,0.7s								
MAKZ	Makanchi	43.27	56	P		P		22 16 30.3	+0.3
MAKZ				IAmb		IAmb		22 16 32.1	
	comp=Z,5.8nm,0.7s								
MK31	Makanchi Array	43.49	56	⇑*e*P		P		22 16 32.2	+0.4
MKAR	Makanchi Array	43.49	56	P		P		22 16 32.1	+0.4
	comp=Z,13nm,0.6s,baz=279,slow=6.7,SNR=178								
MKAR	Makanchi Array	43.49	56	*ce*P		P		22 16 32.0	+0.2
MKAR				pmax		pmax			
	comp=Z,13nm,0.6s								

ZAA0	Zalesovo Array	44.83	46	P		P		22 16 42.0	-0.3
ZAA0				IAmb		IAmb		22 16 58.8	
	comp=Z,3.6nm,0.6s								
ZALV	Zalesovo Beam	44.83	46	P		P		22 16 41.8	-0.6
	comp=Z,3.8nm,0.5s,baz=265,slow=9.1,SNR=23								
ZALV				LR		LR		22 40 29.3	
	comp=Z,47nm,18.2s,baz=248,slow=43								
ZALV	Zalesovo Beam	44.83	46	*i* P		P		22 16 41.7	-0.6
ZALV				pmax		pmax			
	comp=Z,4.0nm,0.5s								
DGZ	Jazzator, Alta	46.64	52	*i* P		P		22 16 57.4	+0.5
DGZ				pmax		pmax			
	comp=Z,3.0nm,0.7s								
NRIK	Noril'sk	47.93	25	LR		LR		22 42 06.6	
	comp=Z,40nm,18.4s,baz=348,slow=42								
PYUN	Piuthan	48.66	81	*e*P		P		22 17 13.4	+0.4
	comp=Z,41nm,0.6s								
DANN	Dangsing	49.19	81	*e*P		P		22 17 17.8	+0.7
	comp=Z,57nm,0.6s								
KOLN	Koldanda	49.29	81	*e*P		P		22 17 17.9	+0.1
	comp=Z,18nm,0.8s								
SUMG	Summit	49.46	339	*i* P		P		22 17 16.6	-2.1
SUMG	Summit	49.46	339	*i* P		P		22 17 16.6	-2.1
GKN	Gorkha	50.04	81	*e*P		P		22 17 23.3	-0.1
	comp=Z,17nm,0.5s								
DMN	Daman	50.58	81	*e*P		P		22 17 27.7	+0.1
	comp=Z,24nm,0.7s								
PKIN	Phulchoki	50.83	81	*e*P		P		22 17 29.0	-0.5
	comp=Z,21nm,0.9s								
PKI	Pulchoki	50.84	81	*e*P		P		22 17 29.4	-0.3
	comp=Z,20nm,0.8s								
GUN	Gumba	51.08	80	*e*P		P		22 17 31.5	0.0
	comp=Z,20nm,0.7s								
JIRN	Jiri	51.44	80	*e*P		P		22 17 34.2	0.0
	comp=Z,28nm,0.7s								
RAMN	Ramite	52.06	81	*e*P		P		22 17 38.8	+0.1
	comp=Z,10nm,0.6s								
ODAN	Odare	52.74	81	*e*P		P		22 17 43.5	-0.3
	comp=Z,8.8nm,0.6s								
TAPN	Taplejung	52.79	80	*e*P		P		22 17 43.7	-0.6
	comp=Z,8.1nm,0.5s								
GTA	Gaotai	57.63	62	*e*P		P		22 18 15.8	-3.0
GTA				pP		pP		22 18 19.3	-3.6
GTA				sP		sP		22 18 22.0	-2.4
GTA				pmax		pmax			
	comp=Z,3.0nm,1.0s								
SONM	Songino Array	59.26	51	P		P		22 18 30.2	+0.2
	comp=Z,0.8nm,0.5s,baz=284,slow=7.9,SNR=3.8								
SONM	Songino Array	59.26	51	P		P		22 18 30.2	+0.2
ULN	Ulaanbaatar	59.67	50	*i* P		P		22 18 33.0	+0.1
ULN				pmax		pmax			
	comp=Z,3.0nm,0.8s								
TIXI	Tiksi	61.26	21	*ce*P		P		22 18 44.2	+1.0
TIXI				pmax		pmax			
	comp=Z,2.0nm,0.9s								
TIXI	Tiksi	61.26	21	P		P		22 18 44.7	+1.5
TIXI				IAmb		IAmb		22 18 46.1	
	comp=Z,2.4nm,0.5s								
BOSA	Boshof	63.12	181	P		P		22 18 57.3	+1.1
	comp=Z,2.7nm,0.9s,baz=16,slow=7.9,SNR=4.5								
BOSA	Boshof	63.12	181	P		P		22 18 57.3	+1.1
BOSA				pmax		pmax			
	comp=Z,46nm,1.8s								
BOSA	Boshof	63.12	181	IAmb		IAmb		22 18 59.8	
	comp=Z,46nm,1.8s								
SCHQ	Schefferville	63.77	320	P		P		22 18 60.0	-0.2
	comp=Z,5.5nm,0.5s,baz=88,slow=3.9,SNR=16								
SCHQ	Schefferville	63.77	320	P		P		22 19 00.1	-0.2
CMAR	Chiang Mai Arr	66.06	84	P		P		22 19 15.5	-0.2
	comp=Z,1.2nm,0.7s,baz=301,slow=8.0,SNR=16								
CMAR	Chiang Mai Arr	66.06	84	P		P		22 19 15.5	-0.2
XAN	Xi'an	66.48	64	P		P		22 19 18.3	+0.1
XAN				pP		sP		22 19 32.0	+8.0
XAN				pmax		pmax			
	comp=Z,8.0nm,0.6s								
XAN				LR		LR			
	comp=E,95nm,17.3s								
XAN				LR		LR			
	comp=Z,110nm,21.7s								
WHN	Wuhan	72.19	65	P		P		22 19 53.0	-0.5
KLR	Kul'dur	73.64	41	*ce*P		P		22 20 00.8	-1.1
USRK	Ussuriysk Ar.	76.67	45	P		P		22 20 18.9	-0.5
	comp=Z,4.0nm,0.7s,baz=285,slow=5.2,SNR=6.1								
USRK				LR		LR		22 58 38.7	
	comp=Z,50nm,18.5s,baz=300,slow=39								
USRK	Ussuriysk Ar.	76.67	45	P		P		22 20 18.9	-0.5
YKA	Yellowknife Ar	77.91	342	P		P		22 20 25.4	-0.5
	comp=Z,0.4nm,0.6s,baz=33,slow=5.3,SNR=4.7								
YKA	Yellowknife Ar	77.91	342	P		P		22 20 25.5	-0.5

REMY					AML	AML			
	comp=N,94µm,0.4s								
REMY					AML	AML			
	comp=N,94µm,0.4s								
REMY					AML	AML			
	comp=E,76µm,0.4s								
SALAN	**Lac Salanfe**	**0.45**	**32**	⇑Pg	**Pg**		**22 09 27.6**	**-0.5**	
SALAN				⇑Pg	**Pg**		**22 09 27.6**	**-0.5**	
	comp=E,0.1nm,SNR=37								
LSD	**Lago del Serru**	**0.46**	**130**	⇓Pg	**Pg**		**22 09 28.3**	**0.0**	
	comp=E,0.1nm,SNR=98								
LSD				⇓Pg	**Pg**		**22 09 28.3**	**0.0**	
LSD				Sg	**Sg**		**22 09 34.4**	**-0.2**	
LSD	**Lago del Serru**	**0.46**	**130**	P	**Pg**		**22 09 28.3**	**0.0**	
LSD				S	**Sg**		**22 09 34.3**	**-0.3**	
LSD	**Lago del Serru**	**0.46**	**130**	P	**Pg**		**22 09 28.3**	**0.0**	
LSD				S	**Sg**		**22 09 34.4**	**-0.2**	
LSD				AML	AML				
	comp=E,65µm,0.3s								
LSD				AML	AML				
	comp=N,57µm,1.6s								
LSD	**Lago del Serru**	**0.46**	**130**	P	**Pg**		**22 09 28.3**	**0.0**	
OG02	**Monnetier-Morn**	**0.49**	**324**	Sg	**Sg**		**22 09 34.9**	**-0.3**	
	SNR=28								
OG02				Sg	**Sg**		**22 09 34.9**	**-0.3**	
OGMO	**Fort Saint-Gob**	**0.56**	**176**	Pg	**Pg**		**22 09 30.0**	**0.0**	
OGMO				Sg	**Sg**		**22 09 37.0**	**-0.3**	
GRYON	**Gryon**	**0.59**	**34**	Sg	**Sg**		**22 09 37.8**	**-0.8**	
GRYON				Sg	**Sg**		**22 09 37.8**	**-0.8**	
	SNR=27								
DIX	**Grande Dixence**	**0.63**	**59**	Pg	**Pg**		**22 09 31.1**	**-0.3**	
DIX				Pg	**Pg**		**22 09 31.1**	**-0.3**	
	comp=N,0.1nm,SNR=52								
DIX	**Grande Dixence**	**0.63**	**59**	P	**Pg**		**22 09 31.1**	**-0.3**	
DIX				S	**Sg**		**22 09 39.3**	**-0.5**	
GDM	**Grand'Maison**	**0.67**	**213**	Pg	**Pg**		**22 09 31.6**	**-0.5**	
GDM				Sg	**Sg**		**22 09 39.9**	**-1.0**	
OGSM	**Saint Maurice**	**0.67**	**257**	Pg	**Pg**		**22 09 32.3**	**+0.1**	
OGSM				Sg	**Sg**		**22 09 41.4**	**+0.3**	
CIRO	**Champorcher**	**0.68**	**103**	Pg	**Pg**		**22 09 31.9**	**-0.4**	
CIRO				Pg	**Pg**		**22 09 31.9**	**-0.4**	
	SNR=8.6								
CIRO	**Champorcher**	**0.68**	**103**	P	**Pg**		**22 09 31.8**	**-0.5**	
CIRO				S	**Sg**		**22 09 40.2**	**-1.0**	
CIRO	**Champorcher**	**0.68**	**103**	P	**Pg**		**22 09 31.9**	**-0.4**	
CIRO				S	**Sg**		**22 09 40.6**	**-0.7**	
CIRO	**Champorcher**	**0.68**	**103**	P	**Pg**		**22 09 31.9**	**-0.4**	
BNI	**Bardonecchia**	**0.71**	**177**	Pg	**Pg**		**22 09 32.6**	**-0.3**	
	SNR=23								
BNI				Pg	**Pg**		**22 09 32.6**	**-0.3**	
BNI	**Bardonecchia**	**0.71**	**177**	P	**Pg**		**22 09 32.6**	**-0.3**	
BNI				S	**Sg**		**22 09 42.3**	**0.0**	
BNI				AML	AML				
	comp=N,9µm,1.4s								
BNI				AML	AML				
	comp=N,9µm,1.4s								
BNI				AML	AML				
	comp=E,14µm,1.0s								
RSP	**Reno Superiore**	**0.76**	**144**	Sg	**Sg**		**22 09 43.4**	**-0.3**	
RSP				Sg	**Sg**		**22 09 43.4**	**-0.3**	
	comp=E,0.1nm,SNR=68								
RSP	**Reno Superiore**	**0.76**	**144**	P	**Pg**		**22 09 33.7**	**-0.2**	
RSP				S	**Sg**		**22 09 43.1**	**-0.6**	
SENIN	**Lac Senin/Sane**	**0.76**	**37**	⇑Pg	**Pg**		**22 09 33.3**	**-0.6**	
SENIN				⇑Pg	**Pg**		**22 09 33.3**	**-0.6**	
	SNR=33								
SENIN				PmP			22 09 37.0		
OG35	**Corcelles**	**0.79**	**291**	⇓Pg	**Pg**		**22 09 34.4**	**-0.1**	
	SNR=41								
OG35				⇓Pg	**Pg**		**22 09 34.4**	**-0.1**	
OG35	**Corcelles**	**0.79**	**291**	Pg	**Pg**		**22 09 34.4**	**-0.1**	
OG35				Sg	**Sg**		**22 09 45.0**	**+0.1**	
GRN	**Grenoble**	**0.81**	**231**	Pg	**Pg**		**22 09 34.8**	**0.0**	
GIMEL	**St. Georges /**	**0.81**	**342**	Pn	**Pg**		**22 09 34.7**	**-0.2**	
GIMEL				Pn	**Pg**		**22 09 34.7**	**-0.2**	
	comp=E,0.1nm,SNR=60								
GIMEL	**St. Georges /**	**0.81**	**342**	P	**Pg**		**22 09 34.7**	**-0.2**	
GIMEL				AML	AML				
	comp=N,39µm,0.3s								
GIMEL				AML	AML				
	comp=E,43µm,0.5s								
TRAV	**Traversella**	**0.82**	**107**	Pn	**Pg**		**22 09 34.5**	**-0.5**	
TRAV				Pn	**Pg**		**22 09 34.5**	**-0.5**	
	SNR=20								
TRAV	**Traversella**	**0.82**	**107**	P	**Pg**		**22 09 34.5**	**-0.5**	
TRAV				S	**Sg**		**22 09 44.9**	**-0.9**	
TRAV	**Traversella**	**0.82**	**107**	P	**Pg**		**22 09 34.6**	**-0.4**	
TRAV	**Traversella**	**0.82**	**107**	P	**Pg**		**22 09 34.6**	**-0.5**	
TRAV				AML	AML				
	comp=E,21µm,0.2s								
TRAV				AML	AML				
	comp=N,18µm,0.2s								
RRL	**Rocca Remolon**	**0.85**	**172**	P	**Pg**		**22 09 35.5**	**-0.1**	
RRL				S	**Sg**		**22 09 46.1**	**-0.6**	
RRL	**Rocca Remolon**	**0.85**	**172**	P	**Pg**		**22 09 35.4**	**-0.2**	
SATI	**Passo dei Sala**	**0.87**	**82**	Pn	**Pg**		**22 09 35.2**	**-0.8**	
	SNR=10								
SATI				Pn	**Pg**		**22 09 35.2**	**-0.8**	
SATI	**Passo dei Sala**	**0.87**	**82**	P	**Pg**		**22 09 35.2**	**-0.8**	
SATI				S	**Sg**		**22 09 46.0**	**-1.5**	
CABF	**La Chapelle**	**0.93**	**336**	*e*Pg	**Pg**		**22 09 36.8**	**-0.3**	
CABF	**La Chapelle**	**0.93**	**336**	*e*P	**Pn**		**22 09 38.6**	**+0.5**	
CABF				*e*Sg	**Sg**		**22 09 48.6**	**-0.7**	
CABF				*e*Sn	**Sb**		**22 09 50.9**	**+1.4**	
	comp=N,3.0nm,0.2s								
LKBD	**Leukerbad**	**0.93**	**48**	Pn	**Pg**		**22 09 37.0**	**-0.2**	
LKBD				Pn	**Pg**		**22 09 37.0**	**-0.2**	
	SNR=8.0								
MMK	**Mattmark**	**0.97**	**72**	Pn	**Pg**		**22 09 37.5**	**-0.5**	
MMK				Pn	**Pg**		**22 09 37.5**	**-0.5**	
	SNR=14								
MMK	**Mattmark**	**0.97**	**72**	P	**Pg**		**22 09 37.3**	**-0.6**	
ORIF	**Oris-en-Rattie**	**1.00**	**212**	*e*Pg	**Pg**		**22 09 37.5**	**-0.8**	
ORIF				*e*Sg	**Sg**		**22 09 50.6**	**-0.7**	
	comp=N,3.9nm,0.2s								
ORIF	**Oris-en-Rattie**	**1.00**	**212**	P	**Pg**		**22 09 37.2**	**-1.1**	
ORIF	**Oris-en-Rattie**	**1.00**	**212**	Pg	**Pg**		**22 09 37.4**	**-1.0**	
ORIF				Sg	**Sg**		**22 09 50.6**	**-0.7**	
BHB	**Bricherasio**	**1.02**	**154**	P	**Pg**		**22 09 38.7**	**-0.1**	
BHB				S	**Sg**		**22 09 51.6**	**-0.6**	
MBDF	**Montbardon**	**1.04**	**175**	*e*Pg	**Pg**		**22 09 38.4**	**-0.8**	
MBDF	**Montbardon**	**1.04**	**175**	*e*Pn	**Pb**		**22 09 39.3**	**+0.2**	
MBDF				*e*Sg	**Sg**		**22 09 52.0**	**-0.7**	
	comp=N,2.0nm,0.2s								
MBDF				*e*Sn	**Sb**		**22 09 53.7**	**+1.0**	
VIVF	**Saint-Julien-l**	**1.65**	**237**	*e*Pn	**Pn**		**22 09 47.3**	**-0.6**	
VIVF	**Saint-Julien-l**	**1.65**	**237**	*e*Pg	**Pb**		**22 09 49.6**	**+0.1**	
VIVF				*e*Sn	**Sn**		**22 10 07.6**	**-1.5**	
	comp=N,12nm,0.2s								
VIVF				*e*Sg	**Sb**		**22 10 11.3**	**+1.0**	
SBF	**Sospel**	**1.98**	**163**	*e*Pn	**Pn**		**22 09 52.3**	**-0.2**	
SBF	**Sospel**	**1.98**	**163**	*e*Pg	**Pb**		**22 09 56.2**	**+1.1**	
SBF				*e*Sn	**Sn**		**22 10 15.5**	**-1.7**	
SBF				*e*Sg	**Sb**		**22 10 21.1**	**+1.3**	
	comp=N,1.6nm,0.2s								
HINF	**Hinteralfeld**	**2.06**	**4**	*e*Pn	**Pn**		**22 09 53.6**	**0.0**	
HINF	**Hinteralfeld**	**2.06**	**4**	*e*Pg	**Pg**		**22 09 58.1**	**-0.6**	
HINF				*e*Sn	**Sn**		**22 10 18.8**	**-0.4**	
HINF				*e*Sg	**Sg**		**22 10 24.2**	**-1.2**	
	comp=N,1.3nm,0.2s								
SMF	**Signal de Mont**	**2.13**	**296**	*e*Pn	**Pn**		**22 09 53.6**	**-0.9**	
SMF	**Signal de Mont**	**2.13**	**296**	*e*Pg	**Pb**		**22 09 58.8**	**+1.2**	
SMF				*e*Sn	**Sn**		**22 10 19.0**	**-1.8**	
SMF				*e*Sg	**Sb**		**22 10 26.0**	**+2.0**	
	comp=N,2.0nm,0.2s								
FRF	**La Foret Royal**	**2.20**	**180**	*e*Pg	**Pg**		**22 10 00.7**	**-0.6**	
HAU	**Haudompre**	**2.25**	**355**	*e*Pn	**Pn**		**22 09 55.7**	**-0.5**	
HAU	**Haudompre**	**2.25**	**355**	*e*Pg	**Pg**		**22 10 01.4**	**-0.9**	
HAU				*e*Sn	**Sn**		**22 10 22.8**	**-1.1**	
HAU				*e*Sg	**Sg**		**22 10 30.6**	**-0.9**	
	comp=N,3.0nm,0.2s								
LOR	**Lormes**	**2.44**	**309**	*e*Pn	**Pn**		**22 09 57.6**	**-1.1**	
LOR	**Lormes**	**2.44**	**309**	*e*Pg	**Pb**		**22 10 04.3**	**+1.4**	
LOR				*e*Sn	**Sn**		**22 10 26.6**	**-1.8**	
	comp=N,1.4nm,0.2s								
LOR				*e*Sg	**Sb**		**22 10 34.8**	**+2.0**	
AVF	**Avril sur Loir**	**2.50**	**296**	*e*Pg	**Pb**		**22 10 05.3**	**+1.5**	
AVF				*e*Sn	**Sn**		**22 10 28.0**	**-1.8**	
AVF				*e*Sg	**Sg**		**22 10 37.3**	**-2.0**	
	comp=N,2.0nm,0.3s								
SSF	**Saint Saulge**	**2.52**	**302**	*e*Pn	**Pn**		**22 09 59.6**	**-0.3**	
SSF	**Saint Saulge**	**2.52**	**302**	*e*Pg	**Pg**		**22 10 06.4**	**-1.1**	
SSF				*e*Sn	**Sn**		**22 10 28.2**	**-2.3**	
SSF				*e*Sg	**Sb**		**22 10 37.8**	**+2.5**	
	comp=N,1.1nm,0.2s								
LASF	**Ste Croix**	**2.59**	**230**	*e*Pg	**Pb**		**22 10 07.3**	**+1.8**	
LASF				*e*Sn	**Sn**		**22 10 30.4**	**-1.9**	
LASF				*e*Sg	**Sb**		**22 10 39.6**	**+2.3**	
	comp=N,1.5nm,0.3s								
SFTF	**Sexfontaines**	**2.68**	**337**	*e*Pn	**Pn**		**22 10 01.7**	**-0.3**	
SFTF				*e*Sn	**Sn**		**22 10 32.7**	**-1.6**	
SFTF				*e*Sg	**Sg**		**22 10 43.0**	**-2.1**	
	comp=N,2.2nm,0.2s								
BGF	**Bois d'Agland**	**2.75**	**288**	*e*Pn	**Pn**		**22 10 02.1**	**-0.9**	
BGF	**Bois d'Agland**	**2.75**	**288**	*e*Pg	**Pb**		**22 10 09.8**	**+1.6**	
BGF				*e*Sn	**Sn**		**22 10 34.3**	**-1.8**	
BGF				*e*Sg	**Sb**		**22 10 44.7**	**+2.9**	
	comp=N,1.2nm,0.2s								
MEZF	**Maizieres J'vi**	**2.95**	**339**	*e*Sg	**Sg**		**22 10 51.8**	**-1.9**	
	comp=N,2.1nm,0.3s								
HYF	**Humbligny**	**3.14**	**300**	*e*P	**Pn**		**22 10 10.6**	**+2.2**	
HYF	**Humbligny**	**3.14**	**300**	*e*Pg	**Pb**		**22 10 17.1**	**+2.2**	
HYF				*e*Sn	**Sn**		**22 10 43.2**	**-2.6**	
HYF				*e*Sg	**Sb**		**22 10 56.7**	**+3.6**	

*IDC **31** 22:24:49.6±3.0, 38°.73N×71°.36E, h0km, mb3.6/7, mb1 3.6/9, mb1mx3.4/41, mbtmp3.5/9, ML2.9/2, Error ellipse: s-maj=67.5km s-min=21.9km az=155.0*
*KRNET **31** 22:24:56.2±0.1, 39°.30N×70°.63E, h8km, mb3.8*
*ISU **31** 22:24:57.1, 39°.41N×70°.72E, h5km*
*SOME **31** 22:24:59.5, 39°.50N×70°.77E, h10km*
*NNC **31** 22:25:01.9±1.0, 39°.56N×70°.62E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=7.4km s-min=4.5km az=23.0*

ISC 31 22:24:54.8±1.2, 39°.34N±0°.03×70°.68E±0°.03, h0km±8km, n60, σ2s19/84, mb3.5/7, 21C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**0.44**	**220**	⇑*e*P	**Pg**		**22 25 03.8**	**+0.6**
	baz=19							
GAR				⇑*e*S	**Sg**		**22 25 08.8**	**0.0**
	baz=19							
BTK	**Batken**	**0.73**	**8**	⇑*i*P	**Pn**		**22 25 11.0**	**-1.4**
	baz=11							
BTK				⇑*i*S	**Sb**		**22 25 21.5**	**+0.6**
	baz=11							
BTK	**Batken**	**0.73**	**8**	*i*P	**Pb**		**22 25 10.6**	**+0.2**
BTK				*i*S	**Sb**		**22 25 21.0**	**+0.1**
CHMI	**Chimion**	**1.14**	**35**	*i*P	**Pn**		**22 25 20.0**	**+2.1**
CHMI				*i*S	**Sg**		**22 25 30.5**	**-0.8**
CHGR	**Chuyangaron**	**1.37**	**241**	⇑*i*P	**Pn**		**22 25 20.7**	**-0.4**
	baz=41							
CHGR				⇑*i*S	**Sg**		**22 25 39.0**	**+0.4**
	baz=41							
FRG	**Fergana**	**1.63**	**31**	*i*P	**Pn**		**22 25 24.1**	**-0.7**
FRG				*i*S	**Sn**		**22 25 43.2**	**-3.3**
ANR	**Andizhan**	**1.92**	**42**	*e*P	**Pg**		**22 25 35.4**	**+3.9**
ANR				*e*S	**Sg**		**22 26 03.7**	**+7.4**
TAS	**Tashkent**	**2.25**	**332**	⇑*i*P	**Pb**		**22 25 36.5**	**+0.2**
	baz=34							
TAS				⇑*i*S	**Sg**		**22 26 05.8**	**-1.2**
	baz=34							
TAS	**Tashkent**	**2.25**	**332**	*e*P	**Pg**		**22 25 38.3**	**+0.4**
TAS				*e*S	**Sg**		**22 26 09.0**	**+2.0**
CHRV	**Charvak**	**2.37**	**347**	*e*P	**Pg**		**22 25 39.4**	**-0.7**
CHRV				*e*S	**Sg**		**22 26 11.6**	**+0.8**
ARK	**Arkit**	**2.65**	**21**	⇑*i*P	**Pb**		**22 25 42.5**	**-0.6**
	baz=22							
ARK				⇑*i*S	**Sb**		**22 26 15.6**	**-0.5**
	baz=22							
ARK	**Arkit**	**2.65**	**21**	*e*P	**Pg**		**22 25 46.3**	**+0.8**
ARK				*e*S	**Sg**		**22 26 21.0**	**+1.2**
ARSB	**Arslanbob**	**2.65**	**41**	⇑*i*P	**Pb**		**22 25 43.0**	**-0.2**
	baz=41							
ARSB				⇑*i*S	**Sb**		**22 26 16.3**	**-0.1**
	baz=41							
IUG	**Iuzhnay**	**2.85**	**350**	*e*P	**Pg**		**22 25 49.3**	**0.0**
	19nm,0.4s							
IUG				*e*S	**Sg**		**22 26 25.9**	**-0.5**
	372nm,0.7s							
IUG	**Iuzhnay**	**2.85**	**350**	Pg	**Pg**		**22 25 49.3**	**0.0**
	19nm,0.4s							
IUG				Lg	Lg		22 26 25.9	
	372nm,0.7s							
DZA	**Taraz**	**3.59**	**8**	*e*P	**Pg**		**22 26 04.2**	**+0.7**
	29nm,0.1s							
DZA				*e*S	**Sg**		**22 26 51.2**	**+1.2**
	147nm,0.6s							
DZA	**Taraz**	**3.59**	**8**	Pg	**Pg**		**22 26 04.2**	**+0.7**
	29nm,0.1s							
DZA				Lg	Lg		22 26 51.2	
	147nm,0.6s							
AML	**Almayashu**	**3.61**	**38**	⇓*i*P	**Pb**		**22 25 56.3**	**-3.4**
	baz=39							
AML				⇓*i*S	**Sb**		**22 26 39.4**	**-4.8**
	baz=39							
AML	**Almayashu**	**3.61**	**38**	P	**Pb**		**22 25 57.9**	**-1.8**
	SNR=15							
BRLS	**Borolday**	**3.74**	**350**	*e*P	**Pb**		**22 26 01.5**	**-0.2**
	8.8nm,0.4s							
BRLS				*e*S	**Sb**		**22 26 47.1**	**-0.6**
	119nm,0.8s							
BRLS	**Borolday**	**3.74**	**350**	Pg	**Pb**		**22 26 01.5**	**-0.2**
	8.8nm,0.4s							
BRLS				Lg	Lg		22 26 47.1	
	119nm,0.8s							
KK31	**Karatay Array**	**3.77**	**358**	⇑Pn	**Pb**		**22 25 58.5**	**-3.6**
	2.8nm,0.4s,baz=177,slow=12,SNR=93							
KK31				Lg	Lg		22 26 54.6	
	24nm,0.5s,baz=184,slow=26,SNR=9.0							
MRKS	**Merke**	**3.91**	**29**	*e*P	**Pg**		**22 26 10.4**	**+0.7**
	51nm,0.7s							
MRKS				*e*S	**Sg**		**22 27 02.0**	**+1.6**
	39nm,0.4s							
MRKS	**Merke**	**3.91**	**29**	Pg	**Pg**		**22 26 10.4**	**+0.7**
	51nm,0.7s							
MRKS				Lg	Lg		22 27 02.0	
	39nm,0.4s							
EKS2	**Erkin-Say**	**4.07**	**34**	P	**Pb**		**22 26 05.2**	**-2.1**
	SNR=5.3							
UCH	**Uchtor**	**4.10**	**44**	⇓*i*P	**Pb**		**22 26 03.5**	**-4.6**
	baz=44							
UCH				⇓*i*S	**Sn**		**22 26 51.4**	**+3.4**
	baz=44							
UCH	**Uchtor**	**4.10**	**44**	P	**Pb**		**22 26 04.7**	**-3.3**
	SNR=12							
AAK	**Ala-Archa**	**4.38**	**40**	P	**Pb**		**22 26 08.1**	**-4.6**
	SNR=11							
KZA	**Kyzart**	**4.42**	**50**	⇑*i*P	**Pn**		**22 26 07.3**	**+3.8**
	baz=50							
KZA				⇑*i*S	**Sn**		**22 26 58.7**	**+2.8**
	baz=50							
KZA	**Kyzart**	**4.42**	**50**	P	**Pb**		**22 26 11.4**	**-2.2**
	SNR=13							
KBK	**Karagaybulak**	**4.63**	**43**	⇑*i*P	Pn		22 26 10.5	+4.4
	baz=43							
KBK				⇑*i*S	**Sn**		**22 27 03.5**	**+2.9**
	baz=43							
KBK	**Karagaybulak**	**4.63**	**43**	P	**Pb**		**22 26 12.4**	**-4.5**
	SNR=14							
CHMS	**Chumysh**	**4.78**	**39**	⇑*i*P	Pn		22 26 12.5	+4.5
	baz=39							
CHMS				⇑*i*S	**Sn**		**22 27 06.8**	**+2.7**
	baz=39							
CHMS	**Chumysh**	**4.78**	**39**	P	Pb		22 26 13.7	-5.7
	SNR=11							
USP	**Ospenovka**	**4.87**	**35**	P	Pn		22 26 14.4	+5.2
	SNR=16							
TKM2	**Tokmak 2**	**5.16**	**44**	P	Pn		22 26 19.2	+5.9
	SNR=31							
KST	**Kastek**	**5.44**	**45**	*e*P	**Pg**		**22 26 38.3**	**-0.7**
	7.4nm,0.4s							
KST				*e*S	**Sg**		**22 27 49.9**	**+0.4**
	17nm,0.6s							
KST	**Kastek**	**5.44**	**45**	Pg	**Pg**		**22 26 38.3**	**-0.7**
	7.4nm,0.4s							
KST				Lg	Lg		22 27 49.9	
	17nm,0.6s							
DGS	**Degeres**	**5.47**	**43**	*e*P	**Pg**		**22 26 40.1**	**+0.5**
	8.6nm,0.5s							
DGS				*e*S	**Sg**		**22 27 53.2**	**+2.8**
	16nm,0.6s							
DGS	**Degeres**	**5.47**	**43**	Pg	**Pg**		**22 26 40.1**	**+0.5**
	8.6nm,0.5s							
DGS				Lg	Lg		22 27 53.3	
	16nm,0.6s							
KRBS	**Karabastau**	**5.75**	**39**	*e*P	**Pg**		**22 26 43.3**	**-1.6**
	1.9nm,0.4s							
KRBS				*e*S	**Sg**		**22 27 57.9**	**-1.4**
	4.7nm,0.6s							
IZV	**Izvestkoviy**	**5.80**	**49**	*e*P	**Pg**		**22 26 46.5**	**+0.5**
	3.7nm,0.6s							
IZV				*e*S	**Sg**		**22 28 03.6**	**+2.4**
	10nm,0.7s							
IZV	**Izvestkoviy**	**5.80**	**49**	Pg	**Pg**		**22 26 46.5**	**+0.5**
	3.7nm,0.6s							
IZV				Lg	Lg		22 28 03.6	
	10nm,0.7s							
MDOK	**Medeo**	**6.13**	**49**	*e*P	**Pg**		**22 26 51.0**	**-1.3**
	4.3nm,0.7s							
MDOK				*e*S	**Sg**		**22 28 11.3**	**-0.5**
	5.7nm,0.7s							
MDOK	**Medeo**	**6.13**	**49**	Pn	Pn		22 26 32.6	+5.8
	2.1nm,0.6s							
MDOK				⇑Pg	**Pg**		**22 26 53.6**	**+1.3**
	4.3nm,0.6s							
MDOK				Lg	Lg		22 28 12.8	
	12nm,0.8s							
MDOK	**Medeo**	**6.13**	**49**	Pg	**Pg**		**22 26 51.0**	**-1.3**
	4.3nm,0.7s							
MDOK				Lg	Lg		22 28 11.3	
	5.7nm,0.7s							
KUU	**Kurty**	**6.22**	**41**	*e*P	**Pg**		**22 26 51.8**	**-2.1**
	2.5nm,0.7s							
KUU				*e*S	**Sg**		**22 28 13.1**	**-1.5**
	8.0nm,0.5s							
KUU	**Kurty**	**6.22**	**41**	Pg	**Pg**		**22 26 51.8**	**-2.1**
	2.5nm,0.7s							
KUU				Lg	Lg		22 28 13.0	
	8.0nm,0.5s							
BTLS	**Baital**	**6.22**	**23**	*e*P	**Pg**		**22 26 50.8**	**-3.1**
	3.0nm,0.8s							
BTLS				*e*S	**Sg**		**22 28 11.0**	**-3.6**
	7.7nm,0.6s							
KTBS	**Karatobe**	**6.28**	**44**	Pg	**Pg**		**22 26 54.1**	**-0.9**
	3.9nm,0.5s							
KTBS				Lg	Lg		22 28 17.1	
	15nm,0.7s							
PDGK	**Podgornoye**	**7.74**	**56**	⇓Pn	Pn		22 26 54.7	+6.0
	1.0nm,0.6s							
PDGK				⇑Lg	Lg		22 29 03.5	
	6.5nm,0.9s							
GEYT	**Alibeck**	**9.93**	**266**	Pn	**Pn**		**22 27 19.5**	**+0.8**
	0.2nm,0.3s,baz=155,slow=7.6,SNR=2.6							
GEYT				Sn	**Sn**		**22 29 11.1**	**+0.2**
	0.3nm,0.3s,baz=132,slow=44,SNR=1.5							
MKAR	**Makanchi Array**	**11.29**	**45**	Pn	**Pn**		**22 27 35.5**	**-1.8**
	0.0nm,0.3s,baz=92,slow=17,SNR=2.2							
MKAR				Lg	Lg		22 30 36.8	
	0.0nm,0.3s,baz=246,slow=12,SNR=1.9							
BRTR	**Keskin Array B**	**28.44**	**283**	P	**P**		**22 30 53.7**	**+2.4**
	0.6nm,0.7s,baz=112,slow=9.4,SNR=3.8							
FINES	**FINESS Array B**	**35.02**	**324**	P	**P**		**22 31 50.5**	**+1.9**
	0.7nm,0.6s,baz=128,slow=12,SNR=4.9							
HFS	**Hagfors**	**40.71**	**320**	P	**P**		**22 32 38.2**	**+1.5**
	1.4nm,0.5s,baz=95,slow=11,SNR=14							
NOA	**NORSAR Array B**	**41.99**	**321**	P	**P**		**22 32 48.1**	**+0.8**
	0.4nm,0.7s,baz=93,slow=8.1,SNR=2.8							
EKA	**Eskdalemuir Ar**	**50.10**	**314**	P	**P**		**22 33 51.6**	**+0.4**
	0.3nm,0.6s,baz=83,slow=7.8,SNR=3.8							
TORD	**Torodi Ar. Bea**	**65.57**	**267**	P	**P**		**22 35 38.9**	**-1.6**
	0.6nm,0.8s,baz=243,slow=11,SNR=2.5							
ILAR	**Eielson Array**	**72.12**	**16**	P	**P**		**22 36 16.5**	**-4.1**
	0.1nm,0.6s,baz=335,slow=4.0,SNR=1.9							

*ISK **31** 22:35:32.3, 40°.37N×25°.92E, h16km, ML2.8/19*
*ATH **31** 22:35:32.7, 40°.38N×25°.81E, h30km±1km, ML2.6/7, Error ellipse: s-maj=2.1km s-min=1.0km az=251.0*
*THE **31** 22:35:33.0, 40°.37N×25°.90E, h10km±1km, ML2.5/8, Error ellipse: s-maj=1.5km s-min=0.7km az=352.0*
*SOF **31** 22:35:34.3, 40°.45N×25°.75E, h23km, MD2.6*

ISC 31 22:35:32.8±0.8, 40°.38N±0°.02×25°.90E±0°.02, h16km±6km, n57, σ0s59/80, 2C-1D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.19**	**180**		P	**Pg**	**22 35 37.5**	**+0.1**
GADA					S	**Sg**	**22 35 40.3**	**-0.1**
	3µm,0.2s							
GADA	**Gvkgeada**	**0.19**	**180**		PG	**Pg**	**22 35 37.5**	**+0.1**
GADA					SG	**Sg**	**22 35 40.4**	**0.0**
SMTH	**Samothraki Isl**	**0.29**	**288**		P	**Pg**	**22 35 39.1**	**0.0**
SMTH					S	**Sg**	**22 35 43.7**	**+0.3**
	1µm,0.1s							
SMTH	**Samothraki Isl**	**0.29**	**288**		P	**Pg**	**22 35 39.2**	**0.0**
SMTH					S	**Sg**	**22 35 43.4**	**-0.1**
SMTH					AML	AML	22 35 44.1	
	comp=E,3228µm,0.1s							
SMTH					AML	AML	22 35 44.5

KAVA				S	**Sb**	**22 36 10.9**	**-0.1**
KAVA				AML	AML	22 36 13.4	
	comp=N,272µm,0.3s						
KAVA				AML	AML	22 36 16.2	
	comp=E,264µm,0.2s						
KVLA	**Kavala**	**1.28**	**296**	P	**Pn**	**22 35 55.5**	**-0.5**
MRMT	**Marmara Adasi**	**1.31**	**80**	PN	**Pn**	**22 35 56.2**	**-0.4**
KDZ	**Kurdzhali**	**1.32**	**344**	*i* P	**Pb**	**22 35 57.0**	**-0.2**
KDZ	**Kurdzhali**	**1.32**	**344**	PN	**Pn**	**22 35 56.6**	**0.0**
GONE	**Gonen-Balikesi**	**1.41**	**103**	PN	**Pn**	**22 35 57.5**	**-0.3**
OUR	**Ouranopolis**	**1.47**	**269**	P	**Pn**	**22 35 58.1**	**-0.5**
OUR	**Ouranopolis**	**1.47**	**269**	P	**Pn**	**22 35 57.6**	**-1.0**
OUR	**Ouranopolis**	**1.47**	**269**	PN	**Pn**	**22 35 58.1**	**-0.5**
EDC	**Edincik**	**1.50**	**91**	PN	**Pn**	**22 35 58.7**	**-0.4**
DKL	**Dikili**	**1.52**	**149**	PN	**Pn**	**22 35 59.7**	**+0.4**
RZN	**Rozhen**	**1.58**	**326**	*i* P	**Pn**	**22 36 00.9**	**+0.5**
CRLT	**Corlu**	**1.58**	**61**	PN	**Pn**	**22 35 59.9**	**-0.3**
EDRB	**Edirne**	**1.60**	**23**	PN	**Pn**	**22 36 00.4**	**0.0**
DIM	**Dimitrovgrad**	**1.69**	**351**	*i* P	**Pb**	**22 36 02.7**	**-0.8**
BALB	**Balikesir**	**1.69**	**115**	PN	**Pn**	**22 36 01.2**	**-0.5**
PAIG	**Paliouri**	**1.76**	**256**	P	**Pn**	**22 36 02.1**	**-0.5**
PLG	**Polygyros**	**1.87**	**271**	P	**Pn**	**22 36 03.9**	**-0.3**
SRS	**Serrai**	**1.90**	**294**	P	**Pn**	**22 36 04.5**	**-0.1**
CHOS	**Chios island**	**1.99**	**176**	P	**Pn**	**22 36 06.3**	**+0.4**
CHOS	**Chios island**	**1.99**	**176**	PN	**Pn**	**22 36 06.3**	**+0.4**
MMB	**Musomiste**	**2.04**	**307**	*i* P	**Pn**	**22 36 06.6**	**+0.1**
KKB	**Krupnik**	**2.59**	**306**	*eP*	**Pn**	**22 36 14.3**	**+0.2**
VTS	**Vitosha**	**3.00**	**319**	⇓P	**Sg**	**22 37 07.2**	**-2.0**
PLVB	**Pleven**	**3.15**	**343**	⇓P	**Sn**	**22 37 02.0**	**+3.0**
BLKB	**Belogradchik**	**4.03**	**325**	⇑S	**Sg**	**22 37 40.3**	**-2.0**

DJA 31 22:49:14.2±0.9, 3°N±7°×12°4E±°, h306km±9km, M3.9/7, mB4.6/1, mb3.8/3, MLv4.0/7, Mw(mB)3.9/1, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
MRSI	**Marisa**	**3.58**	**224**	P	Pn	22 50 16.4		+0.1
TNTI	**Ternate**	**3.73**	**128**	P	Pn	22 50 18.5		+0.6
TNTI				S	S	22 51 09.3		+0.4
LBMI	**Labuha**	**4.81**	**140**	P	Pn	22 50 29.7		-0.1
SANI	**Sanana**	**5.33**	**163**	P	Pn	22 50 34.4		-1.5
	0.3nm1µm23nm,0.8s							

*IDC **31** 22:57:19.2±1.0, 5°.70N×126°.84E, h0km, mb4.0/8, mb1 4.2/8, mb1mx3.7/37, mbtmp4.0/8, MS3.1/5, Ms1 3.2/5, ms1mx2.8/42, Error ellipse: s-maj=80.0km s-min=16.6km az=65.0*

*MAN **31** 22:57:23.1, 5°.39N×126°.49E, h1km, mb4.8, ML3.7, MS3.7*

*NEIC **31** 22:57:26.8±1.9, 5°.68N±0°.09×126°.8E±0°.1, h58km±8km, mb4.3/17, Error ellipse: s-maj=18.1km s-min=9.5km az=59.0*

ISC 31 22:57:27.4±1.0, 5°.59N±0°.06×126°.63E±0°.08, h65km±10km, n44, σ1§74/43, mb4.2/16, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
DDMP	**Don Marcelino,**	**1.04**	**299**	*eP*	**Pn**	**22 57 42.8**		**-3.5**
DDMP				*eS*	**Sn**	**22 57 57.5**		**-2.9**
MATI	**Mati**	**1.40**	**345**	*eP*	**Pn**	**22 57 52.4**		**+1.4**
MATI				*eS*	**Sn**	**22 58 13.3**		**+4.7**
DAV	**Davao City (W)**	**1.80**	**325**	Pn	**Pn**	**22 57 56.2**		**-0.1**
	59nm,0.3s,baz=132,slow=4.6,SNR=6.4							
DAV				Sn	**Sn**	**22 58 20.8**		**+2.5**
	84nm,0.3s,baz=130,slow=18,SNR=6.0							
DMPH	**Davao City--Mi**	**1.85**	**323**	⇑*eP*	**Pn**	**22 57 59.4**		**+2.3**
DMPH				*eS*	Sn	22 58 30.3		+11
KCP	**Kidapawan**	**2.08**	**313**	⇑*eP*	**Pn**	**22 57 58.7**		**-1.5**
KCP				*i* S	**Sn**	**22 58 28.6**		**+3.6**
SKMP	**Bagumbayan, Su**	**2.27**	**294**	*eP*	**Pn**	**22 58 02.1**		**-0.6**
SKMP				*eS*	**Sn**	**22 58 31.1**		**+1.5**
CTBH	**Cotabato--PC H**	**2.87**	**305**	⇑*eP*	**Pn**	**22 58 11.1**		**+0.3**
LLP	**Lapu-Lapu**	**5.39**	**331**	*eP*	Pn	22 58 51.4		+6.1
LUWI	**Luwuk**	**7.63**	**210**	Pn	**Pn**	**22 59 18.3**		**+2.3**
SIJI	**Sorong**	**7.91**	**144**	Pn	**Pn**	**22 59 19.4**		**-0.5**
	1.2nm,0.3s,baz=352,slow=9.8,SNR=3.6							
FAKI	**Fak Fak**	**10.15**	**146**	Pn	**Pn**	**22 59 48.3**		**-2.2**
KAPI	**Kappang**	**12.57**	**213**	LR	LR	23 04 41.0		
	comp=Z,70nm,20.8s,baz=58,slow=35							
SAUI	**Saumlaki**	**14.26**	**161**	Pn	**Pn**	**23 00 46.2**		**0.0**
SBUM	**Sibu**	**14.70**	**258**	Pn	**Pn**	**23 00 52.9**		**+0.9**
KSM	**Kuching**	**16.79**	**257**		**P**	**23 01 20.5**		**+0.8**
MTN	**Manton Dam**	**18.85**	**166**	P	**P**	**23 01 41.9**		**-0.5**
YHNB	**Yeheng**	**19.63**	**346**	P	**P**	**23 01 51.0**		**+0.1**
YHNB				IAmb	IAmb	23 01 55.9		
	comp=Z,11nm,1.1s							
KNRA	**Kununurra**	**21.23**	**174**	P	**P**	**23 02 08.0**		**-0.2**
KNRA				IAmb	IAmb	23 02 21.8		
	comp=Z,16nm,0.9s							
COEN	**Coen**	**25.43**	**140**	P	**P**	**23 02 47.1**		**-2.2**
COEN				IAmb	IAmb	23 02 49.6		
	comp=Z,13nm,1.1s							
WB0	**Warramunga Arr**	**26.33**	**163**	P	**P**	**23 02 57.4**		**0.0**
WRA	**Warramunga Arr**	**26.48**	**164**	P	**P**	**23 03 00.3**		**+1.5**
	comp=Z,3.7nm,0.5s,baz=343,slow=10,SNR=13							
WB2	**Warramunga Arr**	**26.48**	**164**	P	**P**	**23 02 59.3**		**+0.5**
WB2				IAmb	IAmb	23 03 14.6		
	comp=Z,6.4nm,1.0s							
CMAR	**Chiang Mai Arr**	**29.88**	**298**	P	**P**	**23 03 29.8**		**+0.6**
	comp=Z,0.4nm,0.4s,baz=104,slow=6.0,SNR=4.1							
CMAR				LR	LR	23 15 42.2		
	comp=Z,35nm,18.1s,baz=205,slow=37							
ASAR	**Alice Springs**	**29.93**	**167**	P	**P**	**23 03 29.4**		**-0.1**
	comp=Z,0.8nm,0.6s,baz=346,slow=7.3,SNR=10.0							
ASAR				PcP	**PcP**	**23 06 31.4**		**+0.4**
	comp=Z,0.8nm,0.6s,baz=352,slow=2.4,SNR=9.9							
MJAR	**Matsushiro Arr**	**32.59**	**17**	LR	LR	23 16 39.0		
	comp=Z,31nm,21.5s,baz=270,slow=36							
FORT	**Forrest**	**36.19**	**178**	P	**P**	**23 04 24.9**		**+1.0**
SHL	**Shillong**	**38.72**	**305**	P	**P**	**23 04 45.4**		**-0.3**
USA0B	**Ussuriysk Arra**	**38.74**	**6**	P	**P**	**23 04 43.2**		**-2.2**
USA0B				IAmb	IAmb	23 04 55.8		
	comp=Z,2.9nm,0.8s							
BBOO	**Buckleboo**	**39.22**	**167**	P	**P**	**23 04 49.9**		**+0.4**
BBOO				IAmb	IAmb	23 05 04.8		
	comp=Z,6.3nm,1.1s							
STKA	**Stephens Creek**	**39.90**	**160**	P	**P**	**23 04 54.3**		**-0.8**
	comp=Z,3.6nm,0.8s,baz=341,slow=7.8,SNR=8.3							
STKA				LR	LR	23 23 02.7		
	comp=Z,34nm,19.2s,baz=118,slow=39							
STKA	**Stephens Creek**	**39.90**	**160**	IAmb	IAmb	23 04 56.2		
	comp=Z,0.8nm,0.8s							
ASAJ	**Asahikawa**	**40.86**	**18**	LR	LR	23 21 08.9		
	comp=Z,34nm,19.8s,baz=241,slow=35							
H11N1	**WAKE ISLAND Hy**	**41.59**	**67**	T	T	23 49 39.7		
	baz=255,slow=75,SNR=9.5							
H11N2	**WAKE ISLAND Hy**	**41.60**	**67**	T	T	23 49 40.1		
	baz=255,slow=75,SNR=6.2							
H11N3	**WAKE ISLAND Hy**	**41.60**	**67**	T	T	23 49 40.1		
	baz=255,slow=75,SNR=7.6							
ARMA	**Armidale**	**43.07**	**148**	P	**P**	**23 05 21.5**		**+0.2**
ARMA				IAmb	IAmb	23 05 28.9		
	comp=Z,5.1nm,0.9s							
MK31	**Makanchi Array**	**55.98**	**325**	P	**P**	**23 07 00.3**		**+1.1**
MKAR	**Makanchi Array**	**55.98**	**325**	P	**P**	**23 07 00.1**		**+0.8**
	comp=Z,1.1nm,0.5s,baz=118,slow=7.5,SNR=13							
MKAR				PcP	**PcP**	**23 07 57.6**		**+0.5**
	comp=Z,0.7nm,0.7s,baz=143,slow=2.6,SNR=4.0							
ZALV	**Zalesovo Beam**	**58.90**	**333**	P	**P**	**23 07 19.9**		**+0.4**
	comp=Z,0.6nm,0.4s,baz=125,slow=5.2,SNR=3.1							
KURK	**Kurchatov**	**60.13**	**327**	P	**P**	**23 07 28.3**		**+0.2**
KURK				IAmb	IAmb	23 07 43.3		
	comp=Z,2.9nm,0.8s							
KBL	**Kabul**	**60.33**	**307**	P	**P**	**23 07 26.5**		**-3.6**
BRVK	**Borovoye**	**65.79**	**327**	P	**P**	**23 08 06.8**		**+1.2**
BRVK				IAmb	IAmb	23 08 24.2		
	comp=Z,1.7nm,0.7s							
ARCES	**ARCESS Array B**	**88.68**	**340**	P	**P**	**23 10 14.2**		**+0.9**
	comp=Z,1.5nm,0.8s,baz=85,slow=7.4,SNR=5.9							
FINES	**FINESS Array B**	**90.16**	**332**	P	**P**	**23 10 21.1**		**+0.7**
	comp=Z,0.8nm,0.7s,baz=58,slow=7.2,SNR=5.9							

*BJI **31** 23:17:37.8±0.0, 9°.14N×126°.53E, h10km, mB4.8/34, mb4.8/47, Ms4.2/27, Ms7 4.0/27*

*IDC **31** 23:17:39.0±0.4, 9°.29N×126°.36E, h0km, mb4.6/42, mb1 4.7/44, mb1mx4.6/58, mbtmp4.6/44, ML4.4/2, MS3.7/25, Ms1 3.7/25, ms1mx3.7/34, Error ellipse: s-maj=16.0km s-min=9.4km az=84.0*

*MAN **31** 23:17:40.3, 9°.33N×126°.74E, h1km, mb5.3, ML4.3, MS4.4*

*NEIC **31** 23:17:40.3±1.7, 9°.31N±0°.06×126°.52E±0°.08, h10km±1km, mb4.9/108, Error ellipse: s-maj=13.6km s-min=10.8km az=94.0*

*DJA **31** 23:17:42.1±0.5, 10°N±3°×12°7E±°, h19km±4km, M4.3/28, mb4.7/28, mB5.0/11, MLv4.1/2, Mw(mB)4.3/11*

ISC 31 23:17:40.8±0.9, 9°32N±0°.02×126°52E±0°.04, h12km±5km, n260, σ1§39/267, mb4.8/98, MS3.9/29, 3C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
SCPH	**Surigao**	**1.12**	**295**	⇑*eP*	**Pn**	**23 18 05.0**		**+2.7**
SCPH				*eS*	**Sn**	**23 18 23.4**		**+5.8**
BIPH	**Bislig**	**1.14**	**188**	⇓*eP*	Pn	23 18 13.5		+11
BIPH				*eS*	Sn	23 18 27.7		+10
MSLP	**Maasin**	**1.83**	**297**	*eP*	**Pg**	**23 18 16.4**		**+0.6**
MSLP				*eS*	**Sg**	**23 18 42.3**		**+2.8**
BUKP	**Musuan**	**2.03**	**225**	*eP*	**Pg**	**23 18 18.8**		**-0.9**
BUKP				*eS*	**Sg**	**23 18 46.4**		**+0.3**
MATI	**Mati**	**2.37**	**186**	*eP*	**Pn**	**23 18 20.7**		**+1.2**
MATI				*eS*	**Sb**	**23 18 52.8**		**+0.1**
DAV	**Davao City (W)**	**2.42**	**203**	Pn	**Pb**	**23 18 25.0**		**+0.8**
	68nm,0.3s,baz=326,slow=2.8,SNR=8.1							
DAV				Sn	**Sb**	**23 18 55.5**		**+1.4**
	175nm,0.3s,baz=286,slow=19,SNR=6.9							
DAV				LR	LR	23 19 20.8		
	comp=Z,2µm,19.1s,baz=3.0,slow=44							
DAV	**Davao City (W)**	**2.42**	**203**	P	**Pn**	**23 18 20.6**		**+0.4**
DAV	**Davao City (W)**	**2.42**	**203**		**Pg**	**23 18 25.7**		**-1.5**
DMPH	**Davao City--Mi**	**2.43**	**204**	⇓*eP*	**Pg**	**23 18 27.7**		**+0.2**
DMPH				*i* S	**Sg**	**23 18 58.6**		**-0.5**
KCP	**Kidapawan**	**2.69**	**212**	⇑*iP*	**Pb**	**23 18 27.8**		**-1.2**
KCP				*i* S	**Sg**	**23 19 06.1**		**-1.3**
LLP	**Lapu-Lapu**	**2.71**	**292**	*eP*	**Pb**	**23 18 29.2**		**0.0**
LLP				*eS*	**Sg**	**23 19 05.5**		**-2.3**
CTBH	**Cotabato--PC H**	**3.06**	**227**	⇑*eP*	**Pb**	**23 18 33.1**		**-2.2**
PAGZ	**Pagadian**	**3.43**	**245**	*eP*	**Pb**	**23 18 39.2**		**-2.3**
PAGZ				*eS*	**Sb**	**23 19 20.6**		**-2.6**
CNP	**Catarman**	**3.66**	**330**	*eP*	**Pn**	**23 18 40.3**		**+3.0**
CNP				*eS*	**Sg**	**23 19 37.3**		**-1.1**
CNOP	**Candoni, Negro**	**3.86**	**278**	*eP*	**Pb**	**23 18 44.8**		**-4.1**
CNOP				*eS*	**Sn**	**23 19 28.7**		**+3.3**
GUIM	**Jordan**	**4.08**	**289**	*eP*	**Pn**	**23 18 47.2**		**+4.1**
GUIM				*eS*	**Sb**	**23 19 39.3**		**-2.8**
RCP	**Roxas**	**4.33**	**301**	⇓*eP*	**Pb**	**23 18 52.2**		**-4.7**
JAP	**San Jose, Anti**	**4.72**	**288**	⇓*eP*	**Pb**	**23 18 58.9**		**-4.7**
PVCP	**Virac**	**4.84**	**332**	*eP*	**Pn**	**23 18 57.6**		**+4.0**
PVCP				*eS*	**Sb**	**23 20 06.7**		**+2.8**
TGY	**Tagaytay City**	**7.25**	**312**	LR	LR	23 22 34.9		
	comp=Z,1µm,20.5s,baz=120,slow=42							
TNTI	**Ternate**	**8.53**	**174**	P	**Pn**	**23 19 48.7**		**+4.4**
	62nm,0.8s							
TNTI	**Ternate**	**8.53**	**174**	Pn	**Pn**	**23 19 43.5**		**-0.7**
SMPP	**San Manuel, Pa**	**8.86**	**321**	*eP*	**Pn**	**23 19 50.5**		**+1.7**
SMPP				*eS*	**Sg**	**23 22 32.5**		**+7.2**
MRSI	**Marisa**	**9.89**	**208**	P	**Pn**	**23 20 05.7**		**+2.7**
	64nm,1.0s							
KKM	**Kota Kinabalu**	**10.72**	**253**	Pn	**Pn**	**23 20 14.9**		**+0.6**
LUWI	**Luwuk**	**10.95**	**200**	Pn	**Pn**	**23 20 16.4**		**-1.0**
SIJI	**Sorong**	**11.17**	**155**	Pn	**Pn**	**23 20 23.5**		**+3.0**
	1.8nm,0.3s,baz=296,slow=4.7,SNR=8.4							
SIJI				LR	LR	23 25 24.5		
	comp=Z,296nm,19.5s,baz=320,slow=42							
FAKI	**Fak Fak**	**13.43**	**155**	P	P	23 21 09.6		+8.8
YULB	**Yu-li**	**14.86**	**341**	P	**P**	**23 21 15.9**		**-0.8**
TPUB	**Ta-pu**	**15.01**	**339**		**P**	**23 21 17.3**		**-1.0**
TPUB				IAmb	IAmb	23 21 36.7		
	comp=Z,25nm,0.8s							
SSLB	**Suanglung**	**15.34**	**340**	Pn	**Pn**	**23 21 18.1**		**+0.8**
NACB	**Ninganchiao**	**15.50**	**343**	Pn	**Pn**	**23 21 17.7**		**-1.7**
SBUM	**Sibu**	**15.77**	**245**	Pn	**Pn**	**23 21 22.8**		**-0.1**
YHNB	**Yeheng**	**16.04**	**343**	P	**Pn**	**23 21 26.1**		**-0.2**
YHNB				IAmb	IAmb	23 21 39.6		
	comp=Z,46nm,1.0s							
SMPI	**Sarmi**	**16.54**	**132**	P	**P**	**23 21 34.5**		**-0.9**
	comp=Z,397nmcomp=Z,23nm,1.5s							
QZH	**Quanzhou**	**17.28**	**335**	P	**Pn**	**23 21 42.0**		**0.0**
KSM	**Kuching**	**17.91**	**245**	P	**P**	**23 21 52.5**		**+2.0**
DLV	**T Lat**	**17.91**	**280**		**P**	**23 21 52.0**		**+1.2**
MMRI	**Maumere**	**18.34**	**194**		**Pn**	**23 21 54.9**		**-0.2**
MMRI				IAmb	IAmb	23 22 12.8		
	comp=Z,39nm,0.7s							
JAY	**Jayapura**	**18.38**	**129**	P	**P**	**23 21 57.5**		**+1.6**
	comp=Z,0.2nm,0.3s,baz=284,slow=6.5,SNR=5.8							
JAY				LR	LR	23 28 52.6		
	comp=Z,292nm,18.0s,baz=326,slow=36							
JAY	**Jayapura**	**18.38**	**129**	P	**P**	**23 21 56.8**		**+1.0**
	comp=Z,187nmcomp=Z,8.7nm,0.9s							
QIZ	**Qiongzhong**	**18.81**	**303**	P	**Pn**	**23 22 01.5**		**+0.5**
QIZ				S	**Sn**	**23 25 31.5**		**-0.1**
QIZ				pmax	pmax			
	comp=Z,18nm,0.8s							
QIZ				LR	LR			
	comp=Z,230nm,17.2s							
QIZ				LR	LR			
	comp=Z,270nm,15.7s							
QIZ				LR	LR			
	comp=Z,380nm,21.6s							
QIZ	**Qiongzhong**	**18.81**	**303**	P	**P**	**23 21 59.9**		**-0.6**
SOEI	**Soe**	**19.08**	**187**	P	**Pn**	**23 22 04.2**		**-0.1**
SOEI				IAmb	IAmb	23 22 23.1		
	comp=Z,34nm,0.6s							
BATI	**Baumata**	**19.60**	**188**	P	**Pn**	**23 22 10.6**		**+0.1**
	comp=Z,7.8nm,0.3s,baz=99,slow=6.9,SNR=7.3							
BATI	**Baumata**	**19.60**	**188**	P	**Pn**	**23 22 10.0**		**-0.5**
	comp=Z,58nm,0.9s							
MTN	**Manton Dam**	**22.49**	**168**	P	**P**	**23 22 41.2**		**+0.9**
MTN				IAmb	IAmb	23 22 55.3		
	comp=Z,83nm,1.4s							
SMRI	**Semarang**	**22.82**	**225**	P	**P**	**23 22 43.6**		**-0.4**
SMRI				IAmb	IAmb	23 23 01.7		
	comp=Z,49nm,0.8s							
NJ2	**Nanjing**	**23.71**	**344**	*eP*	**P**	**23 22 53.8**		**+1.1**
NJ2				pmax	pmax			
	comp=Z,41nm,0.8s							
JNU	**Nakatsue**	**24.03**	**9**	P	**P**	**23 22 56.3**		**+0.5**
	comp=Z,13nm,0.9s,baz=201,slow=3.1,SNR=12							
JNU				LR	LR	23 31 37.8		
	comp=Z,108nm,21.9s,baz=188,slow=35							
JNU	**Nakatsue**	**24.03**	**9**	P	**P**	**23 22 56.0**		**+0.2**
JNU				IAmb	IAmb	23 22 57.6		
	comp=Z,21nm,1.0s							
SLVN	**Son La**	**24.82**	**301**	P	**P**	**23 23 03.6**		**+0.3**
SLVN				IAmb	IAmb	23 23 06.5		
	comp=Z,12nm,0.9s							
KNRA	**Kununurra**	**24.93**	**175**	P	**P**	**23 23 04.9**		**+0.8**
KNRA				IAmb	IAmb	23 23 16.4		
	comp=Z,25nm,0.6s							
GYA	**Guiyang**	**25.38**	**315**	*eP*	**P**	**23 23 07.0**		**-1.3**
GYA				PP	**PnPn**	**23 23 43.8**		**+0.5**
GYA				S	**S**	**23 27 34.3**		**-0.6**
GYA				pmax	pmax			
	comp=Z,10.0nm,0.5s							
GYA				pmax	pmax			
	comp=Z,80nm,5.1s							
GYA				LR	LR			
	comp=Z,210nm,16.4s							
GYA				LR	LR			
	comp=Z,180nm,16.6s							
GYA				LR	LR			
	comp=Z,370nm,17.3s							
KULM	**Kulim**	**25.96**	**263**	P	**P**	**23 23 13.4**		**-0.2**
FITZ	**Fitzroy Crossi**	**27.25**	**182**	P	**P**	**23 23 25.3**		**+0.2**
	comp=Z,16nm,0.7s,baz=353,slow=8.9,SNR=18							
FITZ	**Fitzroy Crossi**	**27.25**	**182**	P	**P**	**23 23 25.3**		**+0.2**
FITZ				IAmb	IAmb	23 23 28.8		
	comp=Z,20nm,0.9s							
INU	**Inuyama**	**27.63**	**19**	P	**P**	**23 23 28.6**		**+0.2**
PMG	**Port Moresby**	**27.72**	**132**	P	**P**	**23 23 30.0**		**+0.6**
PMG				IAmb	IAmb	23 23 38.6		
	comp=Z,24nm,1.1s							
KSRS	**Korea Array**	**28.04**	**2**	P	**P**	**23 23 33.4**		**+1.4**
	comp=Z,6.3nm,0.7s,baz=183,slow=10,SNR=30							
KSRS				LR	LR	23 36 58.6		
	comp=Z,156nm,18.8s,baz=186,slow=41							
KS19	**Wonju Array Si**	**28.09**	**2**	P	**P**	**23 23 32.2**		**-0.2**
KS19				IAmb	IAmb	23 23 34.4		
	comp=Z,7.9nm,0.7s							
MNSI	**Mandailing Nat**	**28.11**	**254**	P	**P**	**23 23 35.1**		**+2.2**
	comp=Z,19nm,0.9s							
PSI	**Prapat**	**28.18**	**258**	P	**P**	**23 23 34.1**		**+0.4**
	comp=Z,15nm,0.7s,baz=3.8,slow=0.3,SNR=12							
RPSI	**Rantau Prapat**	**28.20**	**258**	P	**P**	**23 23 34.4**		**+0.7**
RPSI				IAmb	IAmb	23 23 36.5		
	comp=Z,21nm,0.8s							
CM31	**Chiang Mai Arr**	**28.23**	**292**	P	**P**	**23 23 34.1**		**+0.1**
CMAR	**Chiang Mai Arr**	**28.23**	**292**	P	**P**	**23 23 34.0**		**0.0**
	comp=Z,3.3nm,0.9s,baz=106,slow=7.0,SNR=21							
CMAR				PcP	**PcP**	**23 26 48.4**		**+0.8**
	comp=Z,1.6nm,0.9s,baz=68,slow=0.8,SNR=7.2							
CMAR				LR	LR	23 35 30.2		
	comp=Z,209nm,18.1s,baz=182,slow=38							
CHTO	**Chiang Mai**	**28.33**	**292**	P	**P**	**23 23 34.7**		**-0.1**
COEN	**Coen**	**28.42**	**144**	P	**P**	**23 23 35.9**		**+0.3**
KRVT	**Keravat (AS076**	**28.80**	**117**	LR	LR	23 35 18.3		
	comp=Z,76nm,18.3s,baz=284,slow=37							
MAJO	**Matsushiro**	**29.11**	**20**	P	**P**	**23 23 40.8**		**-0.8**
MAT	**Matsushiro**	**29.11**	**20**	P	**P**	**23 23 41.1**		**-0.4**
MJAR	**Matsushiro Arr**	**29.11**	**20**	P	**P**	**23 23 41.2**		**-0.3**
	comp=Z,2.3nm,0.7s,baz=193,slow=9.1,SNR=16							
MJAR				LR	LR	23 35 22.4		
	comp=Z,74nm,19.1s,baz=220,slow=36							
MJB9	**Matsu-Tunnel**	**29.11**	**20**	P	**P**	**23 23 41.5**		**-0.1**
KCSI	**Kotacane, Aceh**	**29.13**	**260**	P	**P**	**23 23 42.9**		**+0.9**
	comp=Z,27nm,0.9s							
XAN	**Xi'an**	**29.44**	**329**	P	**P**	**23 23 44.3**		**-0.3**
XAN				pmax	pmax			
	comp=Z,10.0nm,0.6s							
XAN				pmax	pmax			
	comp=Z,92nm,8.8s							
XAN				LR	LR			
	comp=Z,230nm,16.3s							
XAN				LR	LR			
	comp=Z,150nm,15.2s							
XAN				LR	LR			
	comp=Z,310nm,18.4s							
XAN	**Xi'an**	**29.44**	**329**	P	**P**	**23 23 43.0**		**-1.6**
XAN				IAmb	IAmb	23 23 45.2		
	comp=Z,6.3nm,0.6s							
GSI	**Gunungsitoli**	**29.87**	**256**	P	**P**	**23 23 49.7**		**+1.1**
	comp=Z,242nm,0.9s							
GSI	**Gunungsitoli**	**29.87**	**256**	P	**P**	**23 23 48.4**		**-0.2**
WB0	**Warramunga Arr**	**29.92**	**165**	P	**P**	**23 23 47.9**		**-1.0**
WRA	**Warramunga Arr**	**30.08**	**165**	P	**P**	**23 23 49.3**		**-0.9**
	comp=Z,1.8nm,0.7s,baz=347,slow=9.3,SNR=7.3							
WB2	**Warramunga Arr**	**30.08**	**165**	P	**P**	**23 23 49.1**		**-1.2**
PATS	**Pohnpei**	**31.57**	**92**	P	**P**	**23 24 03.0**		**-0.5**
BJT	**Baijiatuau**	**31.93**	**345**	P	**P**	**23 24 06.0**		**-0.5**
BJT				IAmb	IAmb	23 24 08.3		
	comp=Z,14nm,0.7s							
BJI	**Beijing**	**31.95**	**345**	P	**P**	**23 24 07.3**		**+0.7**
BJI				pmax	pmax			
	comp=Z,19nm,1.0s							
ASAR	**Alice Springs**	**33.57**	**168**	P	**P**	**23 24 19.8**		**-1.1**
	comp=Z,1.8nm,0.8s,baz=345,slow=7.3,SNR=22							
ASAR				PcP	**PcP**	**23 27 01.4**		**-0.2**
	comp=Z,1.2nm,0.6s,baz=353,slow=2.3,SNR=6.3							
ASAR				LR	LR	23 40 04.2		
	comp=Z,60nm,18.1s,baz=336,slow=40							
LZH	**Lanzhou**	**33.70**	**326**	*eP*	**P**	**23 24 23.3**		**+1.2**
LZH				pP	pwP	23 24 27.5		-1.4
LZH				sP	sP	23 24 30.5		+5.4
LZH				pmax	pmax			
	comp=Z,18nm,1.1s							
LZH				pmax	pmax			
	comp=Z,90nm,4.9s							
LZH				LR	LR			
	comp=Z,200nm,16.8s							
LZH				LR	LR			
	comp=Z,250nm,17.0s							
LZH				LR	LR			
	comp=Z,250nm,17.9s							
USA0B	**Ussuriysk Arra**	**35.08**	**7**	P	**P**	**23 24 34.0**		**+0.2**
USA0B				IAmb	IAmb	23 24 42.3		
	comp=Z,9.1nm,0.8s							
USRK	**Ussuriysk Ar.**	**35.08**	**7**	P	**P**	**23 24 34.5**		**+0.7**
	comp=Z,6.7nm,0.8s,baz=185,slow=8.7,SNR=19							
US

TLY					IAmb	IAmb	23 26 09.0	
	comp=Z,7.2nm,0.7s							
WMQ	**Urumqi**	**48.12**	**322**	*e*P	**P**	**P**	**23 26 21.8**	**+1.0**
WMQ					LR	LR		
	comp=Z,200nm,14.3s							
WMQ					LR	LR		
	comp=Z,160nm,20.9s							
WMQ					LR	LR		
	comp=Z,280nm,20.9s							
TOO	**Toolangi**	**49.91**	**160**	P	**P**	**P**	**23 26 36.0**	**+1.6**
TOO					IAmb	IAmb	23 26 46.7	
	comp=Z,11nm,1.1s							
DZM	**Mont Dzumac**	**50.06**	**129**	*e*P	**P**	**P**	**23 26 35.1**	**-0.8**
	comp=Z,11nm,0.8s							
DZM	**Mont Dzumac**	**50.06**	**129**	*e*LR	LR	LR	23 41 10.8	
	comp=Z,121nm,24.6s							
PEA0B	**Petropavlovsk-**	**50.40**	**24**	P	**P**	**P**	**23 26 39.7**	**+1.7**
PEA0B					IAmb	IAmb	23 26 47.7	
	comp=Z,15nm,1.1s							
PETK	**Petropavlovsk-**	**50.40**	**24**	P	**P**	**P**	**23 26 40.0**	**+2.0**
	comp=Z,3.2nm,0.7s,baz=198,slow=7.4,SNR=6.9							
PETK					PcP	**PcP**	**23 27 57.0**	**+0.7**
	comp=Z,2.6nm,0.6s,baz=201,slow=5.1,SNR=3.0							
PETK					LR	LR	23 50 25.4	
	comp=Z,44nm,18.1s,baz=239,slow=39							
YAK	**Yakutsk**	**52.67**	**2**	P	**P**	**P**	**23 26 55.1**	**+0.4**
	comp=Z,5.8nm,0.3s,baz=359,slow=2.5,SNR=5.4							
YAK	**Yakutsk**	**52.67**	**2**	P	**P**	**P**	**23 26 54.9**	**+0.1**
YAK					IAmb	IAmb	23 27 11.4	
	comp=Z,16nm,0.7s							
MK31	**Makanchi Array**	**52.93**	**323**	IAmb	IAmb	IAmb	23 26 58.2	
	comp=Z,11nm,0.8s							
MKAR	**Makanchi Array**	**52.93**	**323**	P	**P**	**P**	**23 26 56.7**	**-0.3**
	comp=Z,12nm,0.6s,baz=123,slow=8.0,SNR=115							
MKAR					PcP	**PcP**	**23 28 05.3**	**-0.7**
	comp=Z,5.4nm,0.9s,baz=119,slow=7.1,SNR=4.3							
MKAR					LR	LR	23 51 20.8	
	comp=Z,120nm,19.7s,baz=122,slow=38							
MAKZ	**Makanchi**	**53.12**	**323**	P	**P**	**P**	**23 26 58.3**	**-0.2**
MAKZ					IAmb	IAmb	23 26 59.2	
	comp=Z,12nm,0.6s							
MA2	**Magadan**	**53.38**	**15**	P	**P**	**P**	**23 27 01.8**	**+1.7**
MA2					IAmb	IAmb	23 27 02.5	
	comp=Z,10nm,0.7s							
PRZ	**Przheval'sk**	**53.44**	**317**	P	**P**	**P**	**23 27 00.5**	**-0.6**
TARG	**Taragay, Kyrgy**	**53.55**	**316**	P	**P**	**P**	**23 27 02.2**	**+0.1**
TARG					IAmb	IAmb	23 27 13.4	
	comp=Z,16nm,1.3s							
KSH	**Kashi**	**54.05**	**312**	P	**P**	**P**	**23 27 07.0**	**+1.5**
KSH				sP	pwP		23 27 15.0	+2.5
KSH				PP	**PP**		**23 29 12.5**	**+5.5**
KSH				S	**S**		**23 34 41.5**	**-0.3**
KSH				pmax	pmax			
	comp=Z,62nm,1.6s							
KSH				pmax	pmax			
	comp=Z,110nm,6.5s							
KSH				LR	LR			
	comp=Z,75nm,4.3s							
KSH				LR	LR			
	comp=Z,75nm,4.1s							
KSH				LR	LR			
	comp=Z,230nm,5.5s							
KDJ	**Kajisay**	**54.13**	**316**	P	**P**	**P**	**23 27 05.5**	**-0.6**
KDJ					IAmb	IAmb	23 27 07.2	
	comp=Z,9.3nm,0.8s							
NIL	**Nilore**	**54.47**	**305**	P	**P**	**P**	**23 27 08.5**	**-0.1**
ULHL	**Ulahol**	**54.83**	**316**	P	**P**	**P**	**23 27 11.4**	**+0.2**
	SNR=5.7							
FUNA	**Funafuti**	**55.38**	**107**	P	**P**	**P**	**23 27 14.4**	**-0.9**
KZA	**Kyzart**	**55.45**	**315**	P	**P**	**P**	**23 27 16.7**	**+0.7**
	SNR=13							
TKM2	**Tokmak 2**	**55.52**	**316**	P	**P**	**P**	**23 27 16.5**	**+0.3**
	SNR=9.4							
ZAA0	**Zalesovo Array**	**55.58**	**332**	IAmb	IAmb	IAmb	23 27 16.1	
	comp=Z,5.3nm,0.9s							
ZALV	**Zalesovo Beam**	**55.58**	**332**	P	**P**	**P**	**23 27 15.0**	**-1.1**
	comp=Z,3.3nm,0.5s,baz=117,slow=6.8,SNR=20							
ZALV					LR	LR	23 53 45.1	
	comp=Z,100nm,18.2s,baz=87,slow=39							
KBK	**Karagaybulak**	**55.87**	**316**	P	**P**	**P**	**23 27 19.0**	**+0.3**
	SNR=9.3							
UCH	**Uchtor**	**56.02**	**315**	P	**P**	**P**	**23 27 20.7**	**+0.6**
	SNR=28							
CHMS	**Chumysh**	**56.12**	**316**	P	**P**	**P**	**23 27 20.1**	**-0.3**
	SNR=5.5							
FRU1	**Bishkek**	**56.14**	**316**	P	**P**	**P**	**23 27 19.3**	**-1.2**
FRU1					IAmb	IAmb	23 27 22.2	
	comp=Z,10nm,1.1s							
AAK	**Ala-Archa**	**56.17**	**316**	P	**P**	**P**	**23 27 20.4**	**-0.5**
USP	**Ospenovka**	**56.39**	**316**	P	**P**	**P**	**23 27 22.1**	**-0.1**
	SNR=8.5							
AML	**Almayashu**	**56.56**	**315**	P	**P**	**P**	**23 27 24.3**	**+0.4**
	SNR=14							
EKS2	**Erkin-Say**	**56.68**	**315**	P	**P**	**P**	**23 27 24.4**	**0.0**
	SNR=14							
SEY	**Seymchan**	**56.68**	**14**	P	**P**	**P**	**23 27 25.6**	**+1.7**
	comp=Z,4.8nm,0.7s,baz=219,slow=6.1,SNR=15							
KURK	**Kurchatov**	**56.99**	**326**	P	**P**	**P**	**23 27 26.0**	**-0.3**
KURBB	**Kurchatov Arra**	**56.99**	**326**	P	**P**	**P**	**23 27 25.9**	**-0.4**
	comp=Z,12nm,0.5s,baz=123,slow=7.0,SNR=120							
BTK	**Batken**	**58.00**	**312**	P	**P**	**P**	**23 27 32.3**	**-1.4**
BTK					IAmb	IAmb	23 27 36.0	
	comp=Z,12nm,1.2s							
KBL	**Kabul**	**58.07**	**305**	P	**P**	**P**	**23 27 33.5**	**-1.0**
KBL					IAmb	IAmb	23 27 35.9	
	comp=Z,8.0nm,0.6s							
GAR	**Garm**	**58.09**	**310**	P	**P**	**P**	**23 27 33.8**	**-0.6**
KK31	**Karatay Array**	**59.09**	**315**	P	**P**	**P**	**23 27 40.7**	**-0.5**
KK31					IAmb	IAmb	23 27 41.6	
	comp=Z,8.7nm,0.9s							
TIXI	**Tiksi**	**62.30**	**1**	P	**P**	**P**	**23 28 03.3**	**+0.8**
	comp=Z,14nm,0.8s,baz=154,slow=2.0,SNR=31							
TIXI	**Tiksi**	**62.30**	**1**	P	**P**	**P**	**23 28 02.8**	**+0.3**
BVAR	**Borovoye Array**	**62.59**	**326**	P	**P**	**P**	**23 28 04.3**	**-0.5**
	comp=Z,8.9nm,0.7s,baz=120,slow=8.8,SNR=80							
BRVK	**Borovoye**	**62.66**	**326**	P	**P**	**P**	**23 28 04.9**	**-0.4**
HRA	**Herat**	**63.59**	**304**	P	**P**	**P**	**23 28 10.3**	**-1.8**
HRA					IAmb	IAmb	23 28 12.6	
	comp=Z,2.9nm,0.7s							
ATKA	**Atka Island**	**64.09**	**36**	P	**P**	**P**	**23 28 14.0**	**-0.7**
BILL	**Bilibino**	**64.25**	**15**	P	**P**	**P**	**23 28 16.1**	**+0.5**
BILL					IAmb	IAmb	23 28 28.9	
	comp=Z,7.5nm,0.9s							
NRIK	**Noril'sk**	**64.99**	**346**	P	**P**	**P**	**23 28 20.8**	**+0.4**
	comp=Z,11nm,0.5s,baz=127,slow=6.7,SNR=33							
NRIK					LR	LR	23 59 57.7	
	comp=Z,116nm,18.4s,baz=142,slow=39							
GEYT	**Alibeck**	**67.31**	**307**	P	**P**	**P**	**23 28 36.1**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=131,slow=4.1,SNR=7.1							
GEYT					LR	LR	00 02 49.0	
	comp=Z,91nm,18.8s,baz=155,slow=40							
GYA0B	**ALIBECK ARRAY**	**67.31**	**307**	P	**P**	**P**	**23 28 34.5**	**-1.4**
GYA0B					IAmb	IAmb	23 28 42.6	
	comp=Z,4.5nm,0.8s							
BANOM	**Banah**	**68.24**	**294**	P	**P**	**P**	**23 28 41.8**	**-0.2**
UOSS	**Minazif**	**68.33**	**293**	P	**P**	**P**	**23 28 41.5**	**-1.1**
UOSS	**Minazif**	**68.33**	**293**	P	**P**	**P**	**23 28 40.3**	**-2.2**
UOSS					IAmb	IAmb	23 28 43.5	
	comp=Z,6.6nm,0.7s							
SHME	**Shamm**	**68.38**	**294**	P	**P**	**P**	**23 28 41.5**	**-1.4**
HATD	**Hatta, Dubai**	**68.39**	**293**	*i* P	**P**	**P**	**23 28 42.6**	**-0.3**
	SNR=8.8							
ASHO	**Ashiyiah**	**68.46**	**293**	*i* P	**P**	**P**	**23 28 42.7**	**-0.7**
	SNR=7.2							
ALNE	**Al Ain**	**68.75**	**292**	*i* P	**P**	**P**	**23 28 44.7**	**-0.5**
	SNR=10							
NAZ	**Nazwa, Dubai**	**68.82**	**293**	P	**P**	**P**	**23 28 45.7**	**+0.1**
AKTO	**Aktyubinsk**	**69.21**	**320**	P	**P**	**P**	**23 28 46.2**	**-1.3**
	comp=Z,4.6nm,0.8s,baz=83,slow=5.4,SNR=11							
ARU	**Arti**	**70.15**	**327**	P	**P**	**P**	**23 28 51.8**	**-1.4**
	comp=Z,5.8nm,0.6s,baz=107,slow=2.8,SNR=39							
ARU	**Arti**	**70.15**	**327**	P	**P**	**P**	**23 28 52.3**	**-0.9**
SOCY	**Socotra**	**71.13**	**280**	P	**P**	**P**	**23 28 58.1**	**-1.9**
SOCY					IAmb	IAmb	23 29 11.8	
	comp=Z,13nm,0.9s							
CHGN	**Chignik**	**74.02**	**34**	P	**P**	**P**	**23 29 16.9**	**+0.6**
KIRV	**Kirov**	**75.38**	**328**	P	**P**	**P**	**23 29 23.6**	**-0.5**
	comp=Z,32nm,0.7s,baz=264,slow=1.7,SNR=21							
CASY	**Casey**	**76.31**	**187**	P	**P**	**P**	**23 29 28.8**	**-0.4**
CASY					IAmb	IAmb	23 29 44.2	
	comp=Z,6.3nm,0.8s							
TBLG	**Delisi**	**77.74**	**311**	P	**P**	**P**	**23 29 37.9**	**-0.1**
RAYN	**Ar Rayn**	**78.15**	**292**	*i* P	**P**	**P**	**23 29 40.0**	**-0.6**
	SNR=8.5							
RAYN	**Ar Rayn**	**78.15**	**292**	P	**P**	**P**	**23 29 40.1**	**-0.6**
TRF	**Thorofare Moun**	**78.68**	**27**	P	**P**	**P**	**23 29 43.2**	**+0.3**
TRF					IAmb	IAmb	23 29 57.1	
	comp=Z,19nm,1.3s							
AKH	**Akhalkalaki**	**78.69**	**310**	P	**P**	**P**	**23 29 43.8**	**+0.3**
AKH					IAmb	IAmb	23 29 44.9	
	comp=Z,12nm,0.8s							
KBZ	**Khabaz**	**79.03**	**313**	P	**P**	**P**	**23 29 44.5**	**-0.4**
	comp=Z,4.7nm,0.9s,baz=101,slow=4.1,SNR=5.3							
TOLK	**Toolik Lake Re**	**79.16**	**22**	P	**P**	**P**	**23 29 46.1**	**+0.8**
TOLK					IAmb	IAmb	23 29 48.4	
	comp=Z,12nm,1.2s							
KIV	**Kislovodsk**	**79.17**	**313**	P	**P**	**P**	**23 29 46.1**	**+0.1**
KIV	**Kislovodsk**	**79.17**	**313**	P	**P**	**P**	**23 29 46.5**	**+0.5**
KIV					IAmb	IAmb	23 29 47.1	
	comp=Z,12nm,0.8s							
SML	**Sawmill**	**79.56**	**29**	P	**P**	**P**	**23 29 47.9**	**+0.3**
SML					IAmb	IAmb	23 30 04.8	
	comp=Z,28nm,1.3s							
CCB	**Clear Creek Bu**	**79.79**	**26**	P	**P**	**P**	**23 29 49.0**	**+0.3**
DHY	**Denali Highway**	**80.00**	**27**	P	**P**	**P**	**23 29 50.9**	**+0.8**
SCM	**Sheep Creek Mo**	**80.04**	**29**	P	**P**	**P**	**23 29 50.4**	**+0.1**
HDA	**Harding Lake**	**80.17**	**26**	P	**P**	**P**	**23 29 50.7**	**-0.1**
HDA					IAmb	IAmb	23 30 03.5	
	comp=Z,5.0nm,0.6s							
IL31		**80.19**	**26**	P	**P**	**P**	**23 29 50.2**	**-0.6**
ILAR	**Eielson Array**	**80.19**	**26**	P	**P**	**P**	**23 29 50.9**	**0.0**
	comp=Z,1.5nm,0.8s,baz=240,slow=4.5,SNR=19							
KLMR	**Klimovskoe**	**80.47**	**330**	*e*P	**P**	**P**	**23 29 50.9**	**-1.6**
KLMR					AMP		23 29 52.8	
	comp=Z,20nm,0.7s							
RIDG	**Independent Ri**	**81.11**	**27**	P	**P**	**P**	**23 29 56.1**	**+0.2**
RIDG					IAmb	IAmb	23 30 11.6	
	comp=Z,11nm,1.0s							
SCRK	**Sand Creek**	**81.48**	**26**	P	**P**	**P**	**23 29 58.8**	**+0.9**
WAX	**Waxell Ridge**	**82.28**	**30**	P	**P**	**P**	**23 30 02.2**	**0.0**
OBN	**Obninsk**	**82.41**	**325**	P	**P**	**P**	**23 30 01.6**	**-1.3**
	comp=Z,1.2nm,0.4s,baz=76,slow=15,SNR=3.8							
BARN	**Barnard Glacie**	**82.80**	**29**	P	**P**	**P**	**23 30 07.1**	**+2.0**
BARN					IAmb	IAmb	23 30 21.0	
	comp=Z,9.8nm,0.7s							
GAZ	**Gaziantep**	**83.90**	**307**	P	**P**	**P**	**23 30 09.1**	**-2.0**
EPYK	**Eagle Plains**	**84.24**	**24**	P	**P**	**P**	**23 30 13.1**	**+0.9**
KEV	**Kevo**	**84.61**	**340**	P	**P**	**P**	**23 30 13.6**	**-0.3**
ASF	**Jabal al Asfar**	**84.79**	**302**	P	**P**	**P**	**23 30 15.8**	**0.0**
	comp=Z,27nm,0.9s,baz=137,slow=11,SNR=2.1							
SPA0	**Spitsbergen Ar**	**84.99**	**349**	*e*P	**P**	**P**	**23 30 16.1**	**+0.4**
SPITS	**Spitsbergen Ar**	**84.99**	**349**	P	**P**	**P**	**23 30 15.3**	**-0.5**
	comp=Z,3.0nm,0.6s,baz=98,slow=6.0,SNR=13							
INK	**Inuvik**	**85.07**	**22**	P	**P**	**P**	**23 30 14.9**	**-1.4**
INK					IAmb	IAmb	23 30 18.5	
	comp=Z,10nm,1.1s							
ARCES	**ARCESS Array B**	**85.17**	**340**	P	**P**	**P**	**23 30 16.7**	**0.0**
	comp=Z,12nm,0.6s,baz=82,slow=7.0,SNR=64							
ARE0	**ARCESS Array S**	**85.17**	**340**	P	**P**	**P**	**23 30 15.7**	**-1.0**
ARE0	**ARCESS Array S**	**85.17**	**340**	*e*P	**P**	**P**	**23 30 16.5**	**-0.2**
HAMF	**Hammerfest**	**85.50**	**341**	*e*P	**P**	**P**	**23 30 18.0**	**-0.3**
HSPB	**Hornsund (broa**	**85.60**	**348**	*e*P	**P**	**P**	**23 30 19.7**	**+1.0**
MMAI	**Mount Meron Ar**	**85.92**	**303**	P	**P**	**P**	**23 30 21.3**	**0.0**
	comp=Z,2.5nm,0.6s,baz=78,slow=4.4,SNR=4.5							
ILGA	**Ilgaz**	**86.06**	**311**	P	**P**	**P**	**23 30 20.1**	**-1.9**
ILGA					IAmb	IAmb	23 30 22.4	
	comp=Z,10nm,1.0s							
KTK1	**Kautokeino**	**86.08**	**339**	*e*P	**P**	**P**	**23 30 21.0**	**-0.3**
BR131	**Keskin Array S**	**86.32**	**309**	P	**P**	**P**	**23 30 21.8**	**-1.5**
BRTR	**Keskin Array B**	**86.32**	**309**	P	**P**	**P**	**23 30 22.2**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=113,slow=5.2,SNR=6.6							
BRTR					LR	LR	00 14 37.1	
	comp=Z,43nm,19.2s,baz=80,slow=40							
EIL	**Elat**	**86.81**	**299**	P	**P**	**P**	**23 30 25.0**	**-0.7**
	comp=Z,5.9nm,0.7s,baz=310,slow=1.2,SNR=7.1							
FIA1	**FINESS Array S**	**86.84**	**332**	P	**P**	**P**	**23 30 24.0**	**-1.1**
FIA1					IAmb	IAmb	23 30 25.4	
	comp=Z,12nm,1.0s							
FINES	**FINESS Array B**	**86.84**	**332**	P	**P**	**P**	**23 30 24.6**	**-0.5**
	comp=Z,4.8nm,0.7s,baz=76,slow=4.6,SNR=49							
FINES					LR	LR	00 12 56.5	
	comp=Z,72nm,18.7s,baz=90,slow=38							
PPT	**Papeete**	**87.04**	**108**	LR	LR	LR	00 02 22.6	
	comp=Z,43nm,18.9s,baz=10,slow=31							
PPT2	**Papeete2**	**87.04**	**108**	*e*LR	LR	LR	23 58 30.6	
	comp=Z,72nm,23.0s							
CSS	**Mathiatis**	**87.33**	**305**	P	**P**	**P**	**23 30 27.3**	**-0.9**
TRO	**Tromso**	**87.35**	**340**	*e*P	**P**	**P**	**23 30 26.7**	**-0.7**
AKASG	**Malin Array Be**	**87.45**	**321**	P	**P**	**P**	**23 30 27.0**	**-1.3**
	comp=Z,2.1nm,0.5s,baz=69,slow=5.8,SNR=6.0							
AKASG					LR	LR	00 14 14.6	
	comp=Z,44nm,18.9s,baz=230,slow=39							
NOR	**Nord**	**87.54**	**355**	*i* P	**P**	**P**	**23 30 27.5**	**-0.7**
C36M	**Paulatuk**	**88.05**	**20**	P	**P**	**P**	**23 30 31.5**	**+0.7**
TBI	**Tubuai**	**88.22**	**114**	*e*LR	LR	LR	23 58 58.5	
	comp=Z,103nm,26.2s							
VNDA	**Vanda**	**88.96**	**173**	LR	LR	LR	00 13 00.5	
	comp=Z,51nm,18.1s,baz=233,slow=37							
DIB	**Dawson Inlet,**	**89.13**	**36**	P	**P**	**P**	**23 30 34.0**	**-2.3**
STEI	**Steigen**	**89.22**	**339**	*e*P	**P**	**P**	**23 30 35.0**	**-1.4**
DAG	**Danmarks Havn**	**91.72**	**352**	*i* P	**P**	**P**	**23 30 47.0**	**-0.9**
	comp=Z,4.6nm,0.9s							
KWP	**Kalwaria Pacla**	**91.78**	**321**	P	**P**	**P**	**23 30 47.1**	**-1.6**
NSS	**Namsos**	**91.85**	**337**	*e*P	**P**	**P**	**23 30 46.8**	**-1.8**
RES	**Resolute Bay**	**92.39**	**10**	P	**P**	**P**	**23 30 50.5**	**-0.4**
NB2	**NORSAR Subarra**	**93.72**	**334**	P	**P**	**P**	**23 30 56.4**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=65,slow=4.6							
NOA	**NORSAR Array B**	**93.72**	**334**	P	**P**	**P**	**23 30 55.6**	**-1.9**
	comp=Z,1.6nm,0.9s,baz=62,slow=4.7,SNR=6.7							
NOA					LR	LR	00 17 37.2	
	comp=Z,39nm,18.0s,baz=70,slow=38							
NC204	**NORSAR Array S**	**93.80**	**334**	P	**P**	**P**	**23 30 56.3**	**-1.6**
NC204					IAmb	IAmb	23 31 00.6	
	comp=Z,9.6nm,1.2s							
IDI	**Anoyia**	**94.03**	**307**	P	**P**	**P**	**23 30 58.9**	**-0.6**
YKA	**Yellowknife Ar**	**94.52**	**24**	P	**P**	**P**	**23 31 01.8**	**+0.8**
	comp=Z,3.7nm,0.9s,baz=296,slow=4.3,SNR=26							
GERES	**GERESS Array B**	**97.59**	**322**	P	**P**	**P**	**23 31 14.7**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=64,slow=7.6,SNR=4.8							
TXAR	**Lajitas Array**	**118.26**	**50**	PKP	**PKPdf**		**23 36 28.8**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=188,slow=7.6,SNR=6.6							
JCT	**Junction City**	**120.48**	**46**		**PKiKP**		**23 36 33.5**	**+0.3**
TORD	**Torodi Ar. Bea**	**120.84**	**291**	PKP	**PKPdf**		**23 36 32.9**	**-1.3**
	comp=Z,1.6nm,0.8s,baz=43,slow=1.6,SNR=7.5							
U40A	**Yellville**	**121.40**	**37**	PKPdf	**PKPdf**		**23 36 33.7**	**-1.0**
WVT	**Waverly**	**124.42**	**34**	PKPdf	**PKPdf**		**23 36 39.9**	**-0.6**
PLAL	**Pickwick Lake**	**125.12**	**35**	PKPdf	**PKPdf**		**23 36 41.9**	**+0.1**
PLCA	**Paso Flores**	**145.24**	**157**	PKPbc	**PKPab**		**23 37 18.8**	**+0.1**
	comp=Z,4.6nm,0.8s,baz=160,slow=5.0,SNR=6.0							
LPAZ	**La Paz**	**164.13**	**117**	PKP	**PKPdf**		**23 37 46.3**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=68,slow=4.7,SNR=4.3							

*UPP **31** 23:40:59.2±0.1, 67.83N×20.20E, h1km, ML1.8, Explosion*
*HEL **31** 23:40:59.8±0.1, 67.83N×20.21E, h0km, ML1.9, ML1.6(UPP), Explosion*
*IDC **31** 23:41:01.4±1.5, 67.95N×19.80E, h0km, mb1 2.6/3, mb1mx2.6/34, mbtmp2.5/3, ML1.7/3, Error ellipse: s-maj=25.8km s-min=8.1km az=123.0*

ISC 31 23:40:58.8±0.8, 67.80N±0.03×20.26E±0.03, h0km, n26, σ1s13/34, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.16**	**11**	P		**Pg**		**23 41 02.0**	**+0.1**
KUA				S		**Sg**		**23 41 04.0**	**0.0**
KUA	**Kurravaara**	**0.16**	**11**	*i* P		**Pg**		**23 41 02.0**	**+0.1**
KUA				*i* S		**Sg**		**23 41 04.0**	**0.0**
KOVU	**Salmi**	**0.43**	**355**	P		**Pg**		**23 41 06.7**	**-0.3**
KOVU				S		**Sg**		**23 41 12.0**	**-0.5**
KOVU	**Salmi**	**0.43**	**355**	*i* P		**Pg**		**23 41 06.7**	**-0.3**
KOVU				*i* S		**Sg**		**23 41 12.0**	**-0.5**
NIKU	**Nikkaluokta**	**0.47**	**279**	P		**Pg**		**23 41 07.6**	**-0.2**
NIKU				S		**Sg**		**23 41 13.8**	**-0.1**
NIKU	**Nikkaluokta**	**0.47**	**279**	*i* P		**Pg**		**23 41 07.6**	**-0.2**
NIKU				*i* S		**Sg**		**23 41 13.8**	**-0.1**
DUNU	**Dundret**	**0.69**	**170**	S		**Sb**		**23 41 22.4**	**-1.4**
DUNU	**Dundret**	**0.69**	**170**	*i* S		**Sb**		**23 41 22.4**	**-1.4**
LANU	**Lannavaara**	**0.70**	**68**	P		**Pg**		**23 41 12.5**	**+0.2**
LANU	**Lannavaara**	**0.70**	**68**	*e*P		**Pg**		**23 41 12.4**	**+0.2**
MASU	**Masugnsbyn**	**0.75**	**116**	P		**Pb**		**23 41 13.9**	**-0.9**
MASU	**Masugnsbyn**	**0.75**	**116**	*i* P		**Pb**		**23 41 13.9**	**-0.9**
KIF	**Kilpisjarvi**	**1.23**	**9**	*e*P		**Pg**		**23 41 22.4**	**+0.1**
KIF				MSG				23 41 35.6	
	comp=Z,7.8nm,0.2s								
KIF	**Kilpisjarvi**	**1.23**	**9**	*e*P		**Pn**		**23 41 22.9**	**-0.3**
PAJU	**Pajala**	**1.35**	**124**	P		**Pn**		**23 41 24.4**	**-0.5**
PAJU	**Pajala**	**1.35**	**124**	*e*P		**Pn**		**23 41 24.4**	**-0.5**
HEF	**Hetta**	**1.42**	**63**	*e*P		**Pn**		**23 41 25.2**	**-0.6**
HEF	**Hetta**	**1.42**	**63**	*e*P		**Pn**		**23 41 25.3**	**-0.5**
ERTU	**Ertsjaerv**	**1.46**	**148**	*e*P		**Pb**		**23 41 26.2**	**-0.7**
TOF	**Tornio**	**2.35**	**135**	*e*PB		**Pb**		**23 41 41.5**	**-0.5**
TOF				*e*SG		**Sg**		**23 42 13.8**	**-0.5**
TOF				MSG				23 42 15.5	
	comp=Z,7.9nm,0.2s								
SGF	**Sodankyl**	**2.43**	**96**	*e*PB		**Pb**		**23 41 42.2**	**-1.1**
RNF	**Rovaniemi**	**2.54**	**115**	*e*PB		**Pb**		**23 41 43.9**	**-1.4**
ARCES	**ARCESS Array B**	**2.59**	**45**	Pn		**Pn**		**23 41 43.5**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=227,slow=15,SNR=9.2								
ARCES				Pg		**Pg**		**23 41 49.3**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=225,slow=15,SNR=19								
ARCES				Lg		Lg		23 42 22.8	
	comp=Z,3.4nm,0.3s,baz=228,slow=24,SNR=7.1								
FINES	**FINESS Array B**	**6.85**	**156**	Pn		Pn		23 42 47.5	+7.1
	comp=Z,0.1nm,0.3s,baz=346,slow=14,SNR=4.2								
FINES				Sn		**Sn**		**23 44 00.6**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=343,slow=19,SNR=1.7								
FINES				Lg		Lg		23 44 39.5	
	comp=Z,0.3nm,0.3s,baz=347,slow=25,SNR=7.7								
NOA	**NORSAR Array B**	**7.82**	**214**	Pn		**Pn**		**23 42 53.9**	**+0.1**
	comp=Z,0.0nm,0.3s,baz=27,slow=9.9,SNR=2.0								
NOA				Lg		Lg		23 45 08.4	
	comp=Z,0.0nm,0.3s,baz=320,slow=17,SNR=3.9								
CLL	**Collm**	**16.92**	**196**	*i* Sg		**S**		**23 48 20.6**	**+4.8**

*IDC **31** 23:56:38.3±0.5, 9.30N×126.40E, h0km, mb4.4/23, mb1 4.5/24, mb1mx4.4/41, mbtmp4.4/24, ML3.4/1, MS3.6/21, Ms1 3.6/21, ms1mx3.4/47, Error ellipse: s-maj=22.0km s-min=10.9km az=81.0*
*NEIC **31** 23:56:39.2±1.8, 9.41N±0.06×126.51E±0.10, h10km±1km, mb4.8/65, Error ellipse: s-maj=16.2km s-min=10.8km az=82.0*
*MAN **31** 23:56:39.0, 9.36N×126.78E, h1km, mb4.7, ML3.7, MS3.6*
*DJA **31** 23:56:41.7±0.4, 10.1N±4.4×12.7E±, h10km, M4.4/19, mb4.7/19, mB5.2/6, MLv4.1/2, Mw(mB)4.6/6, Mwp5.5/2*

ISC 31 23:56:39.3±1.6, 9.42N±0.03×126.55E±0.05, h9km±9km, n155, σ1s77/150, mb4.7/55, MS3.6/18, 5C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.11**	**289**	*e*P		**Pn**		**23 57 04.2**	**+3.2**
SCPH				eS		**Sn**		**23 57 22.1**	**+5.7**
MSLP	**Maasin**	**1.81**	**293**	*e*P		**Pg**		**23 57 15.5**	**+1.3**
MSLP				*e*S		**Sg**		**23 57 41.8**	**+4.1**
BUKP	**Musuan**	**2.13**	**224**	*e*P		**Pb**		**23 57 18.2**	**+0.2**
BUKP				*e*S		**Sg**		**23 57 45.6**	**-2.1**
MATI	**Mati**	**2.48**	**187**	*e*P		**Pn**		**23 57 20.7**	**+0.9**
MATI				*e*S		**S

SHL					IAmb	IAmb	00 03 48.1		
	comp=Z,18nm,0.7s								
HNR	**Honiara**	**38.16**	**118**		LR	LR	00 18 00.6		
	comp=Z,46nm,20.8s,baz=284,slow=34								
MORW	**Morawa**	**39.59**	**195**		P	**P**	**00 04 10.6**	**-0.5**	
MORW					IAmb	IAmb	00 04 26.1		
	comp=Z,19nm,1.2s								
H11S3	**WAKE ISLAND Hy**	**39.90**	**72**		T	T	00 47 13.6		
	baz=262,slow=75,SNR=35								
H11S1	**WAKE ISLAND Hy**	**39.91**	**72**		T	T	00 47 17.6		
	baz=262,slow=75,SNR=29								
H11S2	**WAKE ISLAND Hy**	**39.92**	**72**		T	T	00 47 15.7		
	baz=262,slow=75,SNR=38								
KLR	**Kul'dur**	**39.92**	**5**		LR	LR	00 23 27.3		
	comp=Z,67nm,18.6s,baz=190,slow=40								
FORT	**Forrest**	**39.99**	**178**		P	**P**	**00 04 14.8**	**+0.4**	
FORT					IAmb	IAmb	00 04 21.8		
	comp=Z,21nm,0.7s								
HIA	**Hailar**	**40.12**	**353**		P	**P**	**00 04 17.0**	**+1.6**	
HIA					IAmb	IAmb	00 04 18.0		
	comp=Z,8.0nm,0.5s								
H11N1	**WAKE ISLAND Hy**	**40.26**	**71**		T	T	00 47 47.7		
	baz=265,slow=74,SNR=35								
H11N2	**WAKE ISLAND Hy**	**40.27**	**71**		T	T	00 47 49.4		
	baz=265,slow=74,SNR=23								
H11N3	**WAKE ISLAND Hy**	**40.28**	**71**		T	T	00 47 48.3		
	baz=265,slow=74,SNR=28								
ULN	**Ulaanbaatar**	**41.71**	**340**		P	**P**	**00 04 29.5**	**+0.9**	
ULN						**P**	**00 04 29.7**	**+1.0**	
ULN					IAmb	IAmb	00 04 30.9		
	comp=Z,6.1nm,0.6s								
SONM	**Songino Array**	**41.91**	**340**		P	**P**	**00 04 31.2**	**+1.0**	
	comp=Z,1.2nm,0.5s,baz=147,slow=10,SNR=2.9								
SONM					LR	LR	00 23 12.8		
	comp=Z,85nm,19.9s,baz=173,slow=38								
BBOO	**Buckleboo**	**42.96**	**168**		P	**P**	**00 04 38.1**	**-0.7**	
BBOO					IAmb	IAmb	00 04 45.5		
	comp=Z,35nm,1.4s								
NWAO	**Narrogin (SRO)**	**43.04**	**192**		P	**P**	**00 04 39.0**	**-0.4**	
	comp=Z,16nm,0.6s,baz=31,slow=8.1,SNR=13								
NWAO	**Narrogin (SRO)**	**43.04**	**192**		P	**P**	**00 04 39.5**	**+0.2**	
NWAO	**Narrogin (SRO)**	**43.04**	**192**		P	**P**	**00 04 39.2**	**-0.2**	
NWAO					IAmb	IAmb	00 04 40.9		
	comp=Z,56nm,1.2s								
STKA	**Stephens Creek**	**43.51**	**161**		P	**P**	**00 04 43.0**	**-0.2**	
	comp=Z,2.3nm,0.6s,baz=329,slow=9.6,SNR=7.3								
TLY	**Talaya**	**46.12**	**340**		LR	LR	00 25 27.3		
	comp=Z,37nm,19.6s,baz=136,slow=37								
PEA0B	**Petropavlovsk-**	**50.29**	**24**		P	**P**	**00 05 36.3**	**+0.2**	
PEA0B					IAmb	IAmb	00 05 43.9		
	comp=Z,15nm,1.2s								
PETK	**Petropavlovsk-**	**50.29**	**24**		P	**P**	**00 05 39.3**	**+3.2**	
	comp=Z,3.2nm,0.7s,baz=196,slow=6.0,SNR=8.0								
PET	**Petropavlovsk**	**50.62**	**25**		P	**P**	**00 05 37.0**	**-1.5**	
MK31	**Makanchi Array**	**52.87**	**323**		P	**P**	**00 05 56.0**	**+0.6**	
MK31					IAmb	IAmb	00 05 57.5		
	comp=Z,7.4nm,0.7s								
MKAR	**Makanchi Array**	**52.87**	**323**		P	**P**	**00 05 56.2**	**+0.7**	
	comp=Z,8.8nm,0.7s,baz=123,slow=8.1,SNR=106								
MKAR					LR	LR	00 30 19.8		
	comp=Z,96nm,19.3s,baz=119,slow=38								
MAKZ	**Makanchi**	**53.06**	**323**		P	**P**	**00 05 57.5**	**+0.6**	
MAKZ					IAmb	IAmb	00 05 58.4		
	comp=Z,7.5nm,0.8s								
MA2	**Magadan**	**53.28**	**15**		P	**P**	**00 05 58.8**	**+0.6**	
MA2					IAmb	IAmb	00 06 02.1		
	comp=Z,19nm,1.1s								
KDJ	**Kajisay**	**54.09**	**316**		P	**P**	**00 06 02.8**	**-1.9**	
KDJ					IAmb	IAmb	00 06 07.3		
	comp=Z,15nm,1.3s								
NIL	**Nilore**	**54.44**	**305**		P	**P**	**00 06 07.4**	**+0.1**	
ULHL	**Ulahol**	**54.77**	**316**		P	**P**	**00 06 10.7**	**+0.9**	
	SNR=5.6								
KZA	**Kyzart**	**55.40**	**315**		P	**P**	**00 06 15.9**	**+1.4**	
	SNR=8.1								
TKM2	**Tokmak 2**	**55.47**	**316**		P	**P**	**00 06 15.5**	**+0.7**	
	SNR=6.2								
ZAA0	**Zalesovo Array**	**55.50**	**331**		P	**P**	**00 06 14.3**	**-0.1**	
ZALV	**Zalesovo Beam**	**55.50**	**331**		P	**P**	**00 06 14.4**	**-0.1**	
	comp=Z,2.0nm,0.5s,baz=124,slow=6.8,SNR=14								
ZALV					LR	LR	00 32 44.2		
	comp=Z,68nm,18.3s,baz=86,slow=39								
KBK	**Karagaybulak**	**55.82**	**316**		P	**P**	**00 06 18.5**	**+1.3**	
	SNR=7.8								
UCH	**Uchtor**	**55.97**	**315**		P	**P**	**00 06 19.9**	**+1.2**	
	SNR=20								
USP	**Ospenovka**	**56.34**	**316**		P	**P**	**00 06 21.3**	**+0.5**	
	SNR=5.5								
AML	**Almayashu**	**56.51**	**315**		P	**P**	**00 06 23.6**	**+1.1**	
	SNR=9.0								
EKS2	**Erkin-Say**	**56.63**	**315**		P	**P**	**00 06 23.9**	**+0.9**	
	SNR=8.7								
KURK	**Kurchatov**	**56.92**	**326**		P	**P**	**00 06 25.0**	**+0.3**	
KURK					IAmb	IAmb	00 06 26.1		
	comp=Z,16nm,0.8s								
BTK	**Batken**	**57.95**	**312**		P	**P**	**00 06 31.4**	**-0.9**	
BTK					IAmb	IAmb	00 06 46.5		
	comp=Z,5.1nm,0.5s								
KBL	**Kabul**	**58.04**	**305**		P	**P**	**00 06 33.0**	**-0.1**	
KBL					IAmb	IAmb	00 06 35.5		
	comp=Z,6.3nm,0.6s								
GAR	**Garm**	**58.05**	**310**		P	**P**	**00 06 33.0**	**-0.1**	
GAR					IAmb	IAmb	00 06 34.0		
	comp=Z,20nm,1.0s								
CHGR	**Chuyangaron**	**58.84**	**310**		P	**P**	**00 06 39.7**	**+1.1**	
KK31	**Karatay Array**	**59.04**	**315**		P	**P**	**00 06 40.2**	**+0.4**	
KK31					IAmb	IAmb	00 06 40.8		
	comp=Z,5.8nm,0.9s								
TIXI	**Tiksi**	**62.19**	**1**		P	**P**	**00 07 01.0**	**+0.3**	
TIXI					IAmb	IAmb	00 07 03.2		
	comp=Z,11nm,0.8s								
BRVK	**Borovoye**	**62.59**	**326**		P	**P**	**00 07 04.0**	**+0.3**	
NRIK	**Noril'sk**	**64.90**	**346**		P	**P**	**00 07 19.9**	**+1.3**	
	comp=Z,8.1nm,0.6s,baz=118,slow=7.9,SNR=29								
NRIK					LR	LR	00 38 56.1		
	comp=Z,77nm,18.1s,baz=147,slow=39								
GEYT	**Alibeck**	**67.28**	**307**		P	**P**	**00 07 35.0**	**+0.4**	
	comp=Z,2.0nm,0.8s,baz=204,slow=3.3,SNR=5.1								
GEYT					LR	LR	00 41 48.2		
	comp=Z,46nm,18.9s,baz=155,slow=40								
ARU	**Arti**	**70.08**	**327**		P	**P**	**00 07 51.5**	**-0.2**	
ARU					IAmb	IAmb	00 07 52.4		
	comp=Z,11nm,0.7s								
CASY	**Casey**	**76.41**	**187**		P	**P**	**00 08 28.7**	**0.0**	
CASY					IAmb	IAmb	00 08 31.2		
	comp=Z,3.6nm,0.8s								
PAF	**Port-aux-Franc**	**76.43**	**214**		P	**P**	**00 08 28.2**	**-0.9**	
RSO	**Redoubt South**	**77.27**	**30**		P	**P**	**00 08 34.4**	**+0.2**	
RAYN	**Ar Rayn**	**78.14**	**292**		P	**P**	**00 08 39.0**	**-0.5**	
AKH	**Akhalkalaki**	**78.65**	**310**		P	**P**	**00 08 41.4**	**-0.8**	
AKH					IAmb	IAmb	00 08 44.1		
	comp=Z,9.3nm,0.8s								
KBZ	**Khabaz**	**78.99**	**313**		LR	LR	00 48 04.5		
	comp=Z,41nm,18.2s,baz=82,slow=39								
PMR	**Palmer**	**79.07**	**29**		P	**P**	**00 08 43.2**	**-0.6**	
KIV	**Kislovodsk**	**79.13**	**313**		P	**P**	**00 08 42.9**	**-1.7**	
KIV					IAmb	IAmb	00 08 46.0		
	comp=Z,6.4nm,0.8s								
MCK	**McKinley**	**79.19**	**27**		P	**P**	**00 08 44.4**	**0.0**	
MCK					IAmb	IAmb	00 08 53.4		
	comp=Z,20nm,1.4s								
RND	**Reindeer**	**79.22**	**27**		P	**P**	**00 08 44.9**	**+0.2**	
RND					IAmb	IAmb	00 08 59.6		
	comp=Z,12nm,1.2s								
HDA	**Harding Lake**	**80.06**	**26**		P	**P**	**00 08 48.2**	**-0.9**	
IL31		**80.08**	**26**		P	**P**	**00 08 50.7**	**+1.5**	
ILAR	**Eielson Array**	**80.08**	**26**		P	**P**	**00 08 50.8**	**+1.5**	
	comp=Z,2.0nm,1.1s,baz=232,slow=4.9,SNR=12								
RIDG	**Independent Ri**	**81.00**	**27**		P	**P**	**00 08 54.6**	**+0.3**	
RIDG					IAmb	IAmb	00 08 57.7		
	comp=Z,5.5nm,0.8s								
RAGM	**Ragged Mountai**	**81.28**	**30**		P	**P**	**00 08 53.8**	**-2.0**	
EGAK	**Eagle**	**82.53**	**26**		P	**P**	**00 09 02.8**	**+0.6**	
EGAK					IAmb	IAmb	00 09 06.8		
	comp=Z,5.4nm,0.9s								
BARN	**Barnard Glacie**	**82.70**	**29**		P	**P**	**00 09 02.4**	**-1.1**	
GAZ	**Gaziantep**	**83.86**	**307**		P	**P**	**00 09 07.4**	**-2.4**	
GAZ					IAmb	IAmb	00 09 11.3		
	comp=Z,13nm,1.0s								
EPYK	**Eagle Plains**	**84.13**	**24**		P	**P**	**00 09 11.7**	**+1.1**	
KEV	**Kevo**	**84.52**	**340**		P	**P**	**00 09 12.2**	**-0.2**	
INK	**Inuvik**	**84.97**	**22**		P	**P**	**00 09 14.9**	**+0.3**	
INK					IAmb	IAmb	00 09 17.7		
	comp=Z,8.2nm,1.1s								
ARCES	**ARCESS Array B**	**85.08**	**340**		P	**P**	**00 09 15.9**	**+0.7**	
	comp=Z,8.1nm,0.6s,baz=82,slow=6.4,SNR=41								
ARE0	**ARCESS Array S**	**85.08**	**340**		P	**P**	**00 09 15.4**	**+0.2**	
BRTR	**Keskin Array B**	**86.28**	**309**		P	**P**	**00 09 21.2**	**-0.8**	
	comp=Z,0.8nm,0.7s,baz=100,slow=3.7,SNR=4.4								
FIA1	**FINESS Array S**	**86.77**	**332**		P	**P**	**00 09 23.4**	**-0.3**	
FIA1					IAmb	IAmb	00 09 24.6		
	comp=Z,6.9nm,1.0s								
FINES	**FINESS Array B**	**86.77**	**332**		P	**P**	**00 09 23.7**	**0.0**	
	comp=Z,3.8nm,0.8s,baz=75,slow=4.1,SNR=26								
FINES					LR	LR	00 51 54.9		
	comp=Z,53nm,18.2s,baz=60,slow=38								
AKASG	**Malin Array Be**	**87.39**	**321**		P	**P**	**00 09 26.4**	**-0.5**	
	comp=Z,0.7nm,0.5s,baz=67,slow=5.6,SNR=4.1								
AKASG					LR	LR	00 52 03.1		
	comp=Z,29nm,18.1s,baz=240,slow=38								
C36M	**Paulatuk**	**87.94**	**20**		P	**P**	**00 09 30.4**	**+1.2**	
C36M					IAmb	IAmb	00 09 32.0		
	comp=Z,9.8nm,1.0s								
VNDA	**Vanda**	**89.06**	**173**		LR	LR	00 48 55.2		
	comp=Z,20nm,19.0s,baz=248,slow=35								
BBB	**Bella Bella**	**91.86**	**36**		P	**P**	**00 09 44.3**	**-3.6**	
RES	**Resolute Bay**	**92.28**	**10**		P	**P**	**00 09 47.4**	**-1.9**	
RES					IAmb	IAmb	00 09 52.1		
	comp=Z,6.3nm,0.8s								
NB2	**NORSAR Subarra**	**93.64**	**334**		P	**P**	**00 09 55.4**	**-0.6**	
	comp=Z,0.7nm,0.7s,baz=63,slow=4.6								
NOA	**NORSAR Array B**	**93.64**	**334**		P	**P**	**00 09 55.0**	**-1.0**	
	comp=Z,0.7nm,0.8s,baz=62,slow=4.6,SNR=4.2								
NOA					LR	LR	00 55 02.9		
	comp=Z,32nm,20.7s,baz=195,slow=37								
YKA	**Yellowknife Ar**	**94.42**	**24**		P	**P**	**00 10 00.9**	**+1.5**	
	comp=Z,2.8nm,0.8s,baz=300,slow=4.4,SNR=22								
SYO	**Syowa Base**	**97.63**	**201**	*ie*	P	P	00 10 08.2	-5.6	
SYO	**Syowa Base**	**97.63**	**201**	*ie*	P	Pdif	00 10 14.2	+0.3	
TXAR	**Lajitas Array**	**118.17**	**50**		PKP	**PKiKP**	**00 15 28.5**	**+0.8**	
	comp=Z,0.4nm,0.8s,baz=339,slow=3.2,SNR=4.6								
JCT	**Junction City**	**120.39**	**46**			**PKiKP**	**00 15 33.8**	**+1.9**	
TORD	**Torodi Ar. Bea**	**120.84**	**291**		PKP	**PKPdf**	**00 15 32.6**	**-0.4**	
	comp=Z,1.1nm,0.7s,baz=35,slow=2.2,SNR=4.7								
U40A	**Yellville**	**121.30**	**37**			**PKiKP**	**00 15 33.8**	**+0.2**	
PLCA	**Paso Flores**	**145.32**	**157**		PKPbc	**PKPdf**	**00 16 18.5**	**+0.5**	
	comp=Z,1.5nm,0.5s,baz=240,slow=6.0,SNR=5.1								

ISC Computed Locations for May 2014

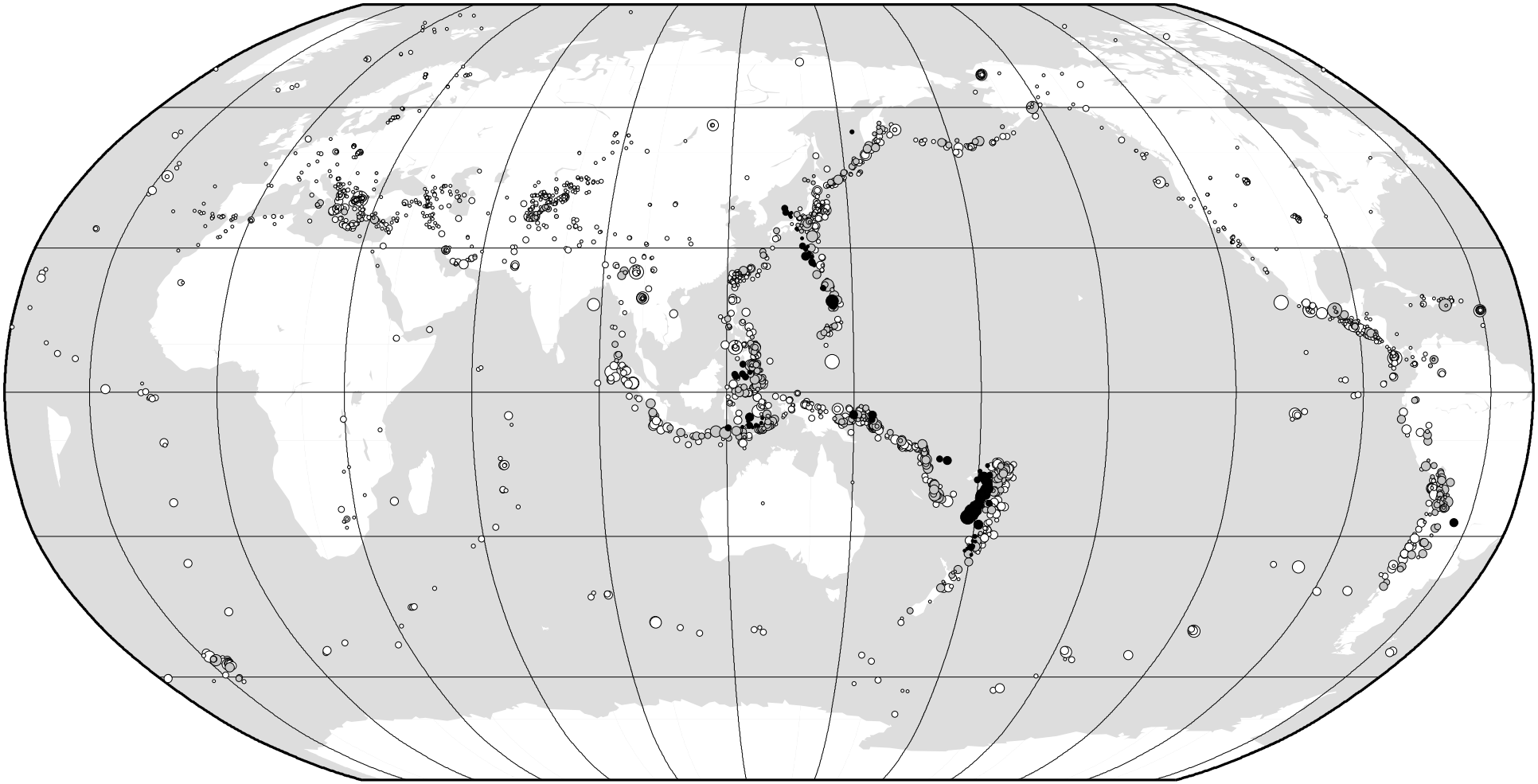

Depth (km)	0-70	70-300	>300
M=8	○	○	●
M=6.5	○	○	●
M=4	○	○	●

Robinson Projection, centred on 0˚N,130˚E

3316 Events